NCC Fall 2023 State Reports on Pay Items, Pay Adjustments, Workmanship and Non-compliance

Tuesday, September 05, 2023

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31

Total Responses

Date Created: Wednesday, August 02, 2023

Complete Responses: 31

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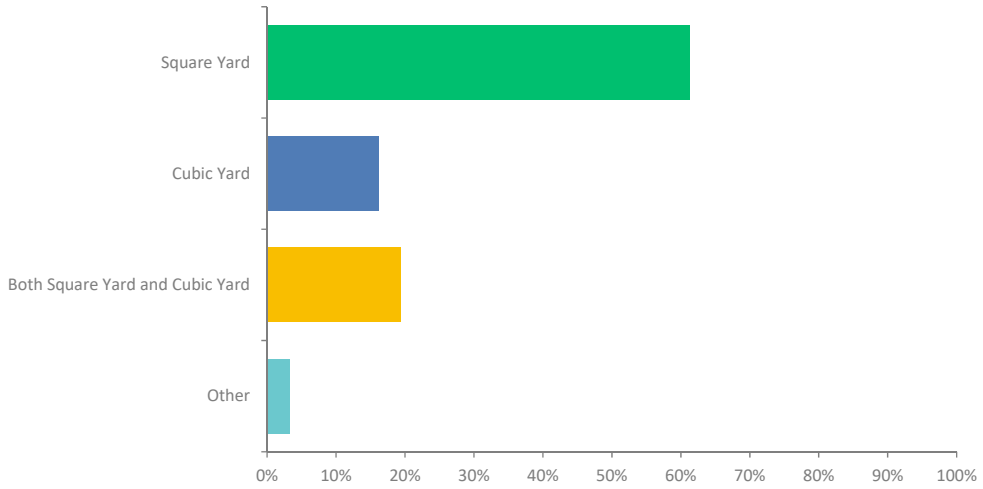
Disclaimer:
Information presented here is based upon review, interpretation and summarization of the survey responses.

Q2: How does your Agency pay for concrete pavement?

Answered: 31 Skipped: 0



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Q2: How does your Agency pay for concrete pavement?

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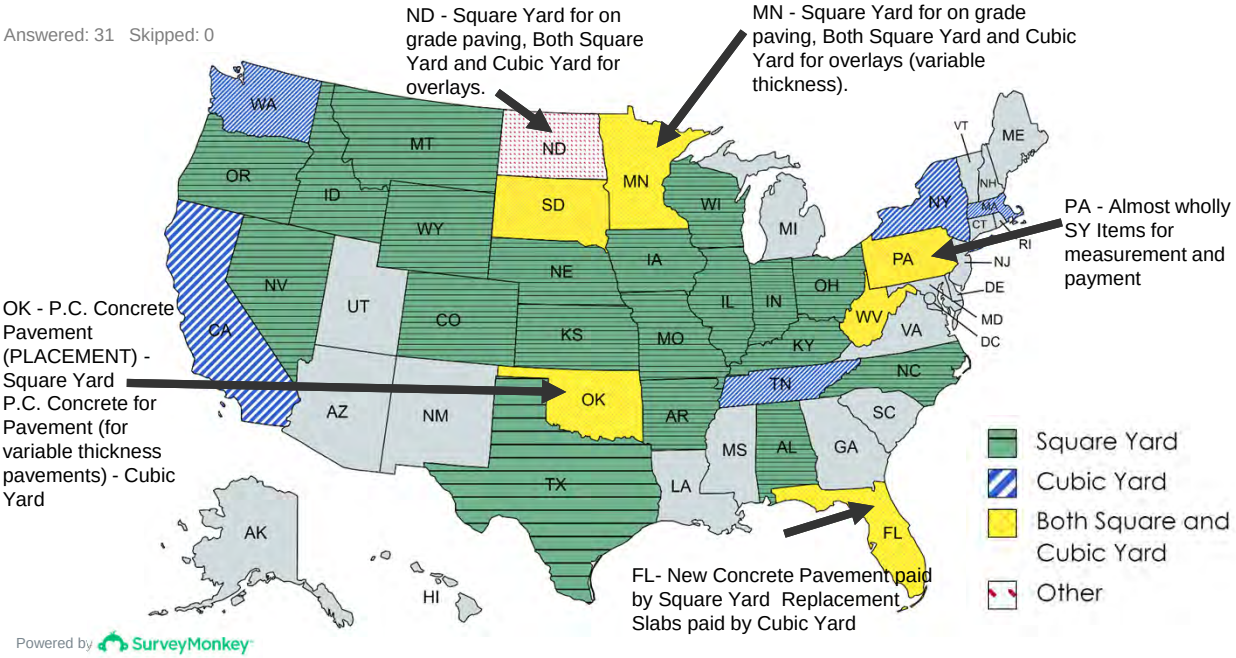

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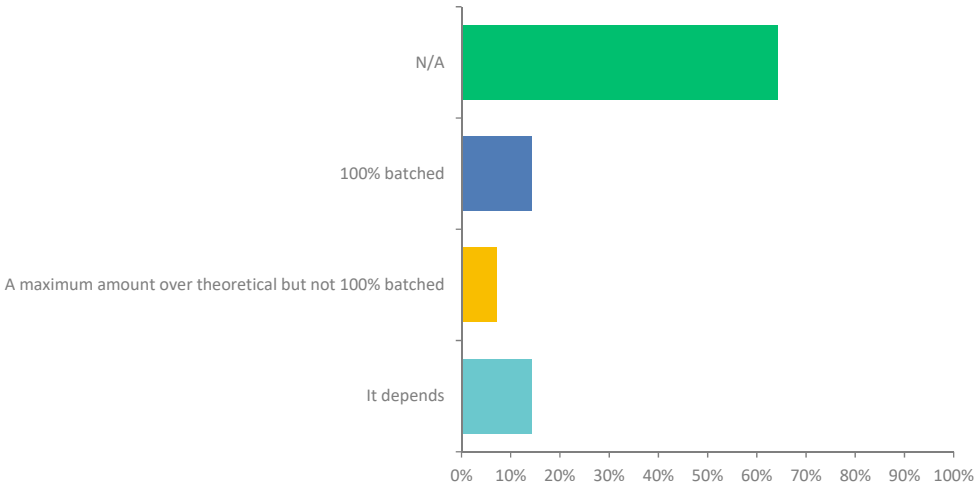
Q3: If your Agency pays by Cubic Yards minus waste, do you pay for 100% of concrete placed or do you cap off the maximum amount of concrete paid?

Answered: 28 Skipped: 3



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Q3: If your Agency pays by Cubic Yards minus waste, do you pay for 100% of concrete placed or do you cap off the maximum amount of concrete paid?

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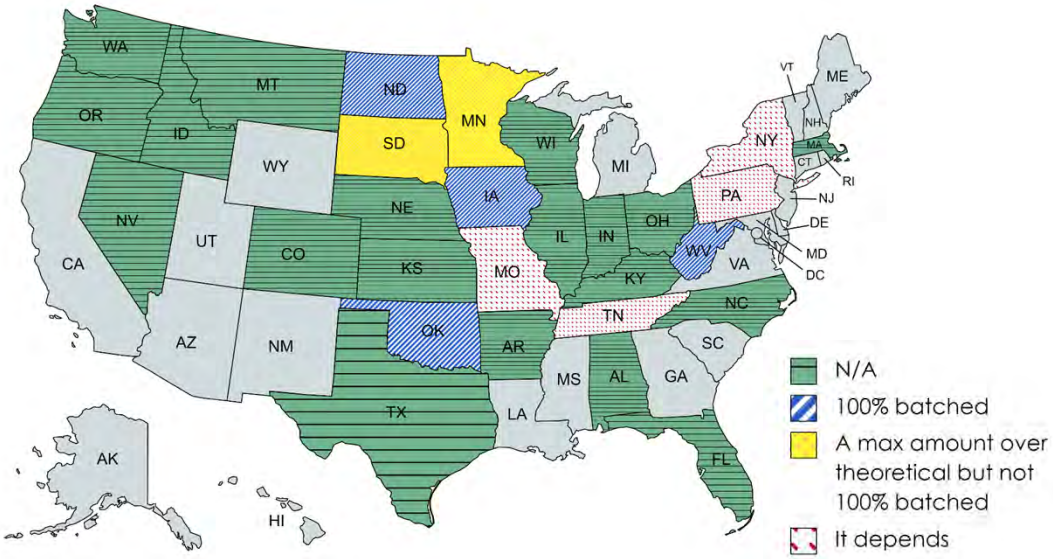

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Q3: If your Agency pays by Cubic Yards minus waste, do you pay for 100% of concrete placed or do you cap off the maximum amount of concrete paid?

Agency	Remark
MN	Due to variations in the asphalt or asphalt bond breaker Layer, the Contractor may request additional volume up to 102 percent of the Engineer's field calculated final volume of Structural Concrete, Structural Concrete High-early¸ or both for the entire Project. If the Engineer finds the Contractor's request for the additional final volume valid, the Engineer will pay for the additional volume up to 102 percent of the calculated quantity for the entire Project.
MO	Pay the plan quantity unless changed by a change order.
NY	Currently, concrete is paid for based on the quantity included in the contract. Overages are not currently paid.
PA	Adjustments are made per the contract but would be on what is placed. Again, for pavements almost exclusively SY pay items.
TN	TDOT Standard Specifications, Chapter 604.30: Computed dimensions from Plans or directed in writing by the Engineer. Adjustable estimate for fillet.

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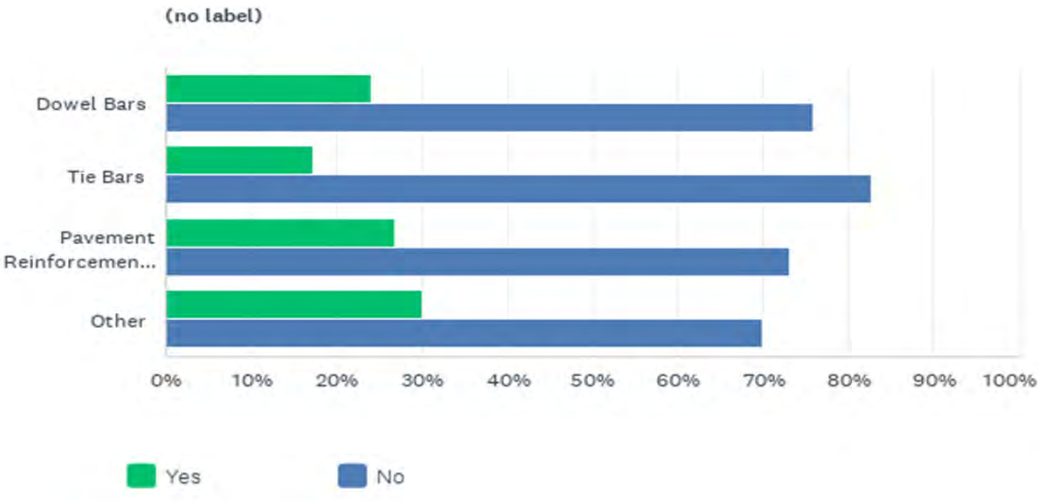
Q4: Does your Agency separately pay for dowel bars and reinforcing steel?

Answered: 31 Skipped: 0



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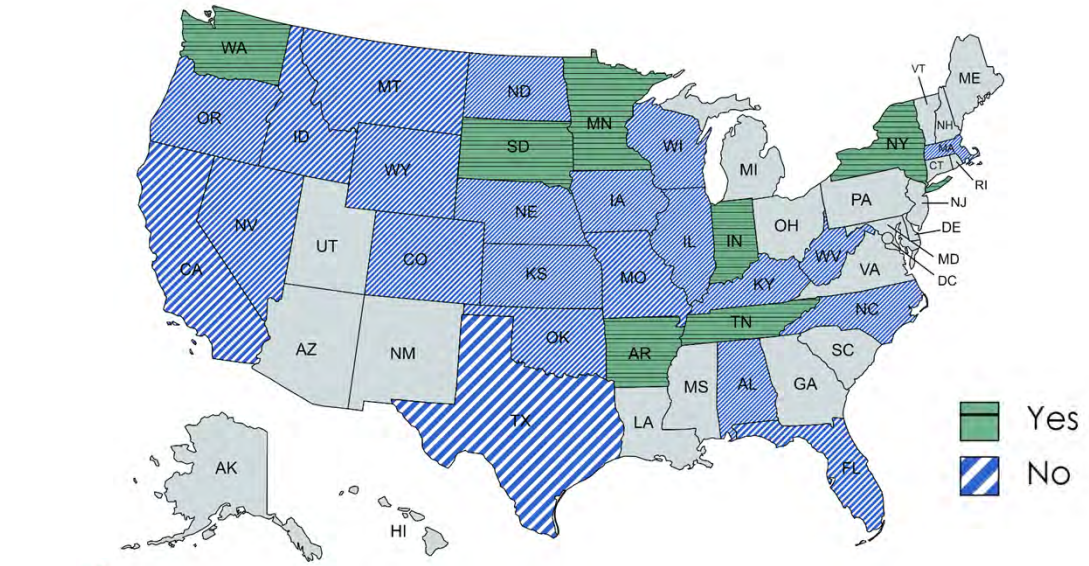
Q4: Does your Agency separately pay for dowel bars?

Answered: 31 Skipped: 0



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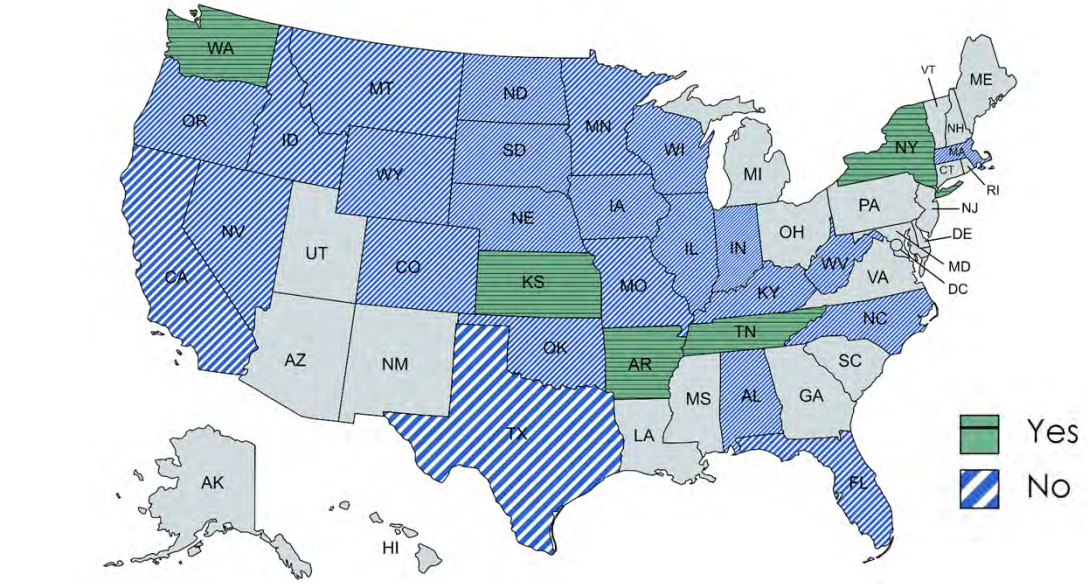
Q4: Does your Agency separately pay for tie bars?

Answered: 31 Skipped: 0



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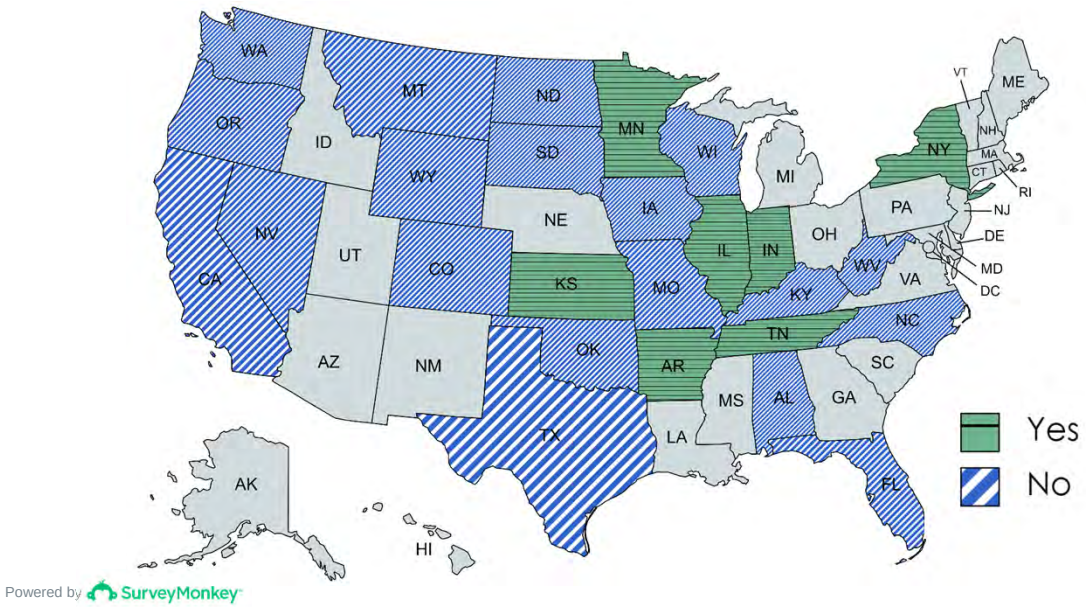
Q4: Does your Agency separately pay for pavement reinforcement not including tie bars?

Answered: 31 Skipped: 0



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Q4: Does your Agency separately pay for dowel bars and reinforcing steel?

Agency	Remark
NY	Pavement Reinforcement not including tie bars - slabs containing reinforcement are paid separately from unreinforced slabs to allow contractors to bid different for the steel price. The concrete and steel used in these slabs is paid as a single unit though. Additional bar reinforcement placed at corners of structures/ dead ended longitudinal joints are paid as a separate item.
WA	We only pay for tie bars if they are being placed in existing concrete (widening) and a drill hole is required.
WI	The department will pay separately for tie bars and dowel bars used to connect the work to concrete not placed under the contract under the Drilled Tie Bars and Drilled Dowel Bars bid items.

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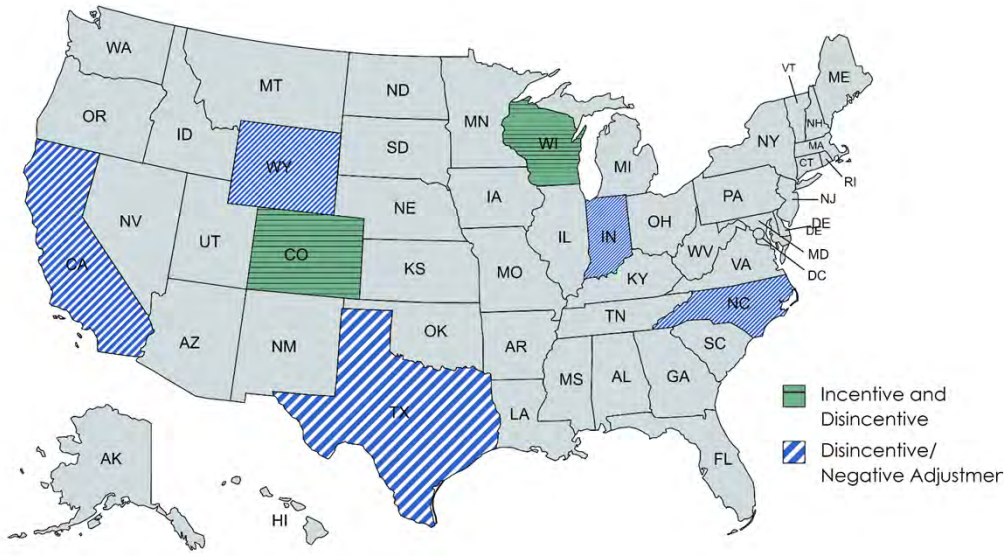
Q5: Does your Agency use incentives/disincentives (I/DI) or pay adjustments for concrete pavement? FLEXURAL STRENGTH

Answered: 30 Skipped: 1



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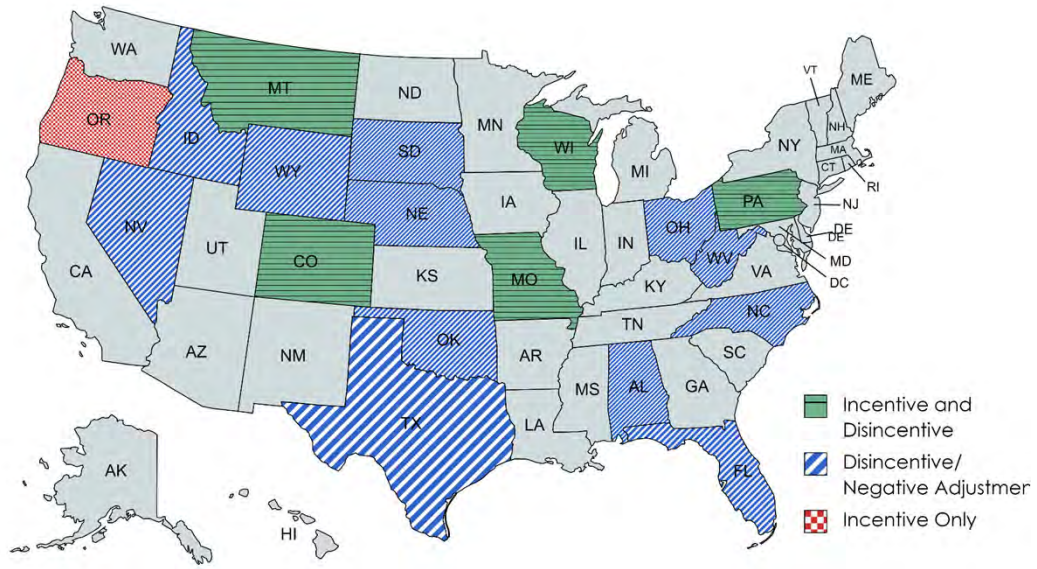
Q5: Does your Agency use incentives/disincentives (I/DI) or pay adjustments for concrete pavement? COMPRESSIVE STRENGTH

Answered: 30 Skipped: 1



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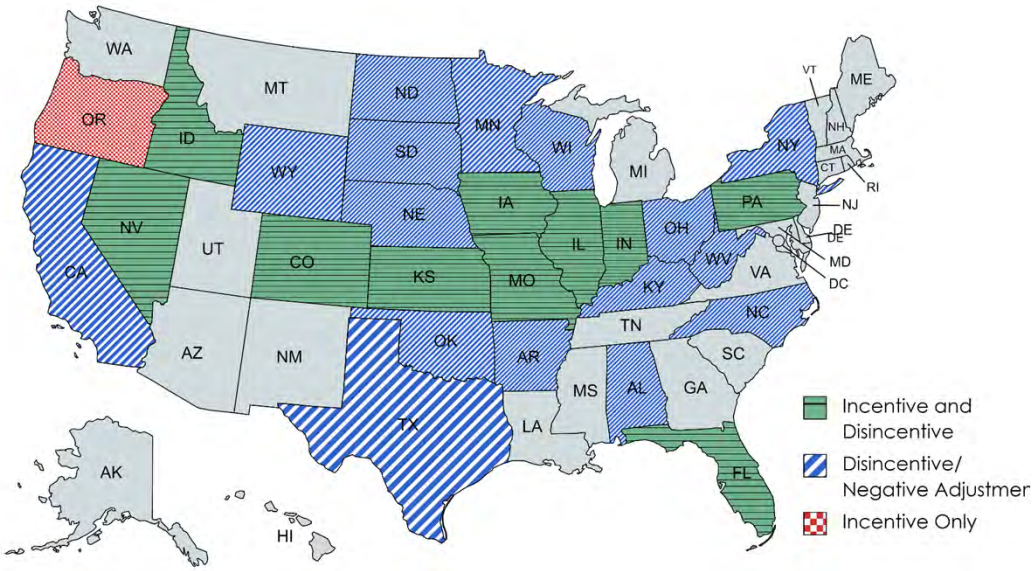
Q5: Does your Agency use incentives/disincentives (I/DI) or pay adjustments for concrete pavement? PAVEMENT THICKNESS

Answered: 30 Skipped: 1



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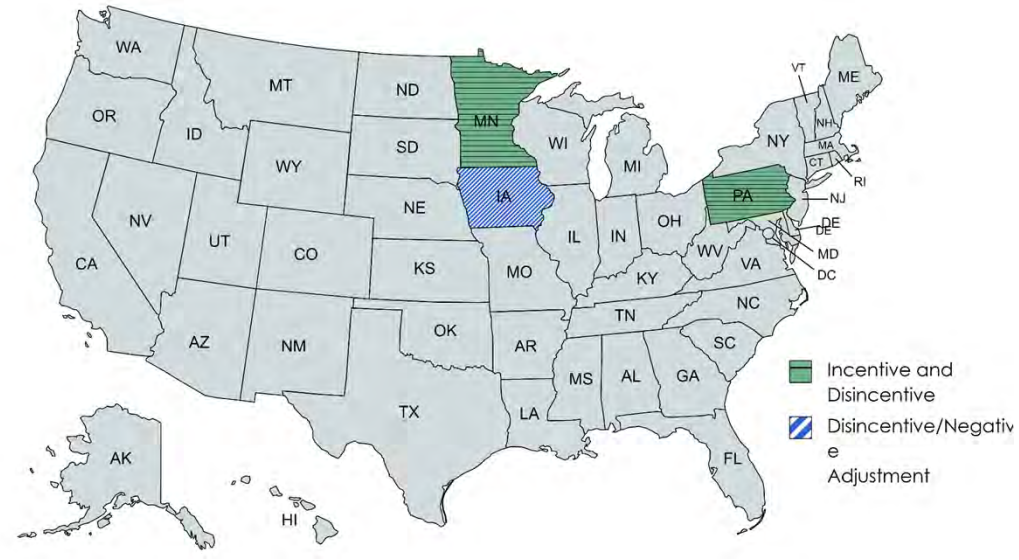
Q5: Does your Agency use incentives/disincentives (I/DI) or pay adjustments for concrete pavement? W/C Ratio

Answered: 30 Skipped: 1



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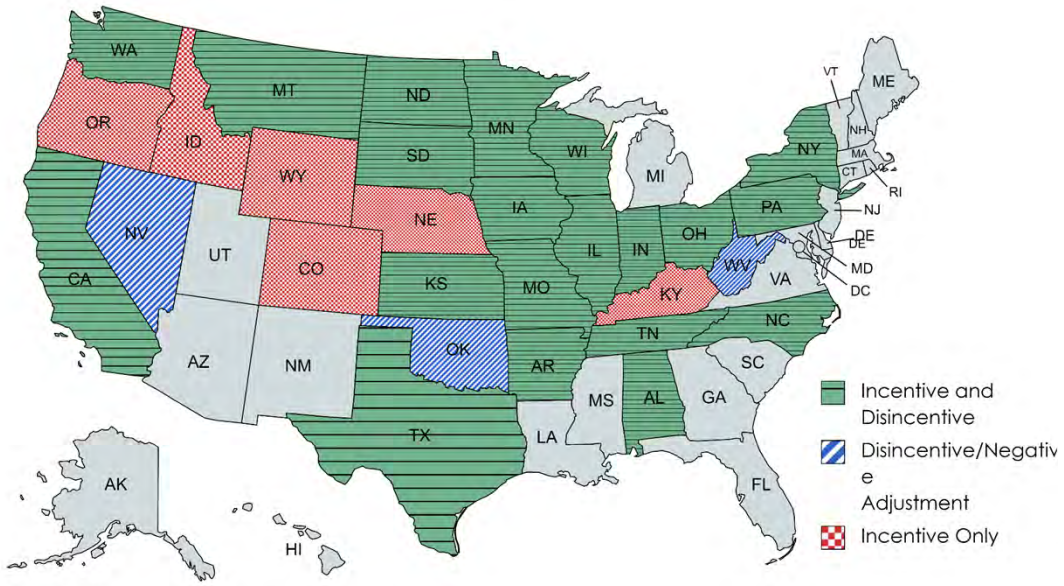
Q5: Does your Agency use incentives/disincentives (I/DI) or pay adjustments for concrete pavement? SMOOTHNESS

Answered: 30 Skipped: 1



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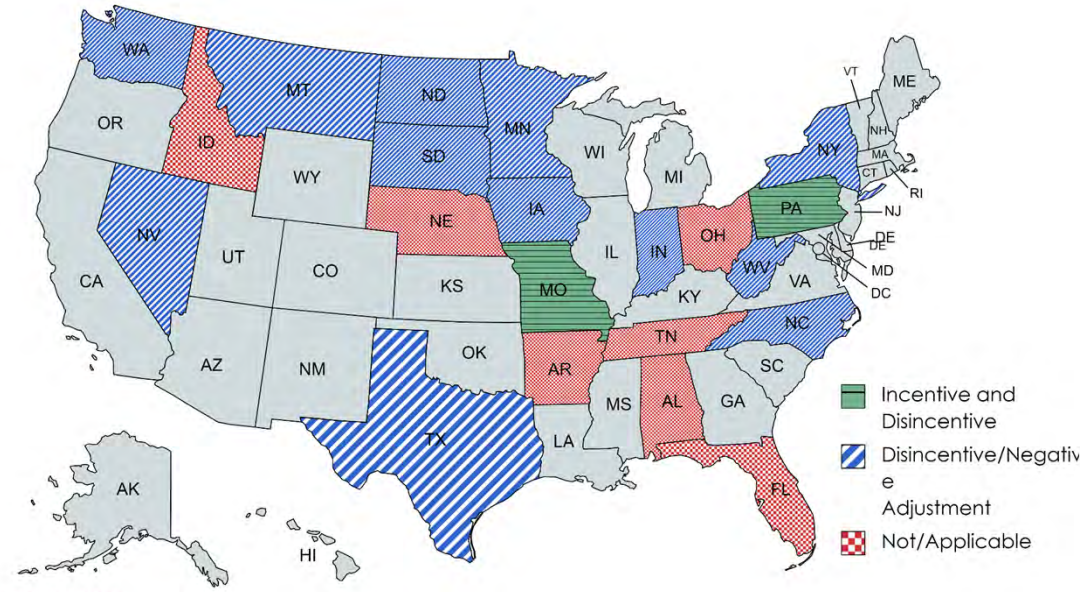
Q5: Does your Agency use incentives/disincentives (I/DI) or pay adjustments for concrete pavement? AREAS OF LOCALIZED ROUGHNESS

Answered: 30 Skipped: 1



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Q5: Does your Agency use incentives/disincentives (I/DI) or pay adjustments for concrete pavement? OTHER COMMENTS

Agency	Remark
AL	Price adjustment information for concrete pavement can be found in ALDOT spec book in subarticle 450.08(b). https://www.dot.state.al.us/publications/Construction/pdf/Specifications/2022/SpecBookComplete.pdf
FL	Compressive Strength - there is a pay reduction if concrete doesn't meet the required strength. See FDOT Standard Spec 346-11.3. Pavement Thickness - pay can be reduced or increased within certain specified parameters based on average thickness of the project. Other - we have incentives for smoothness, but currently we use the California Profilograph, however we are incorporating IRI specs for asphalt pavements and plan to move to concrete pavements sometime in the future. Other areas not suitable for testing with Profilograph are checked with 10ft staraightedge, but no incentives/disincentives are related to those test results.
IL	Placement/alignment of dowels inserted by DBI can have a "deficiency deduction" applied: $500.00 total once 25 bars have been cut to correct unacceptable joints, and $20.00 per additional bar thereafter.

Q5: Does your Agency use incentives/disincentives (I/DI) or pay adjustments for concrete pavement? OTHER COMMENTS

Agency	Remark
KY	Negative Adjustment for thickness deficiencies.
MA	MassDOT is just starting to procure concrete pavement contracts. At this time, we do not have I/DI or pay adjustments, but the goal is to get there, just like we do with Hot Mix Asphalt pavement.
MT	Air content and permeability incentive and disincentive.
NC	Pay Factor (%) = 100.0 − (650 − Flexural Strength) Pay Factor (%) = 100.0 − [0.05× (4,500 −Compressive Strength)] Pay Factor (%) = 110 − [50× (Plan Thickness − Average Core Thickness)
NY	IRI currently has an incentive/ disincentive structure associated with it. SR testing has a negative pay adjustment for results below the design specification for Performance Engineered Mixes (PEM) only. This is going to be expanded to include a disincentive for low compressive strength as well in the future. Pavements placed thinner than specified are rejected and can be removed and replaced at the contractors expense.

Q5: Does your Agency use incentives/disincentives (I/DI) or pay adjustments for concrete pavement? OTHER COMMENTS

Agency	Remark
OH	https://www.dot.state.oh.us/Divisions/ConstructionMgt/Specification%20Files/PN420_0120 2023_for_2023.pdf Proposal Note 420 contains guidance on smoothness requirements. ASTM E 1926 is used for 0.10 mile sections. Areas of localized roughness requires corrective action.
OK	(Section 414.06 (R) Acceptance of Pavement) "Determination of acceptability and pay factors for gradation, air content, strength, and thickness will be made in accordance with Table 414:2, "Acceptance Schedule.""
OR	See 2024 OSSC Section 00755.55
PA	Payment based on compressive strength, depth, and air content. Long life concrete also has an optional w/c incentive. Ride incentive separate pay item, performed using light weight profiler. Payment prorated based on IRI per lot.

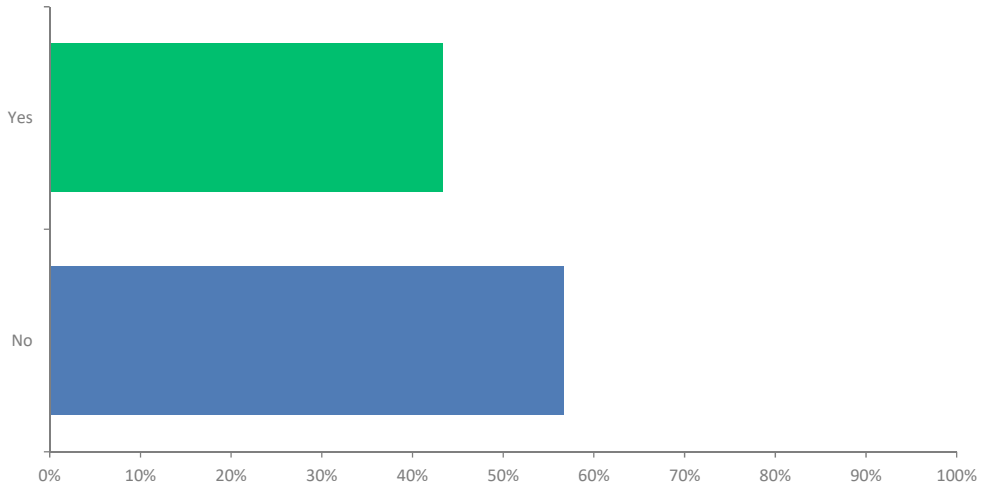
Q5: Does your Agency use incentives/disincentives (I/DI) or pay adjustments for concrete pavement? OTHER COMMENTS

Answered: 30 Skipped: 1

Agency	Remark
TN	TDOT Standard Specification, Chapter 501.17 reference to IRI/MRI as either an incentive (+ pay) or disincentive for rigid pavement via pay factor adjustment and/or corrective action. Different considerations for Ramps <40 mph and mainline/auxiliary lanes/ramps >40 mph reference to Figure 501.17-1 in TDOT Specifications.
WI	Other: WisDOT has Adjusting Pay for Pavement Crack Repairs.
WY	Other: air content.

Q6: Do you have a separate pay item for Incentives/Disincentives/Pay Adjustments?

Answered: 30 Skipped: 1



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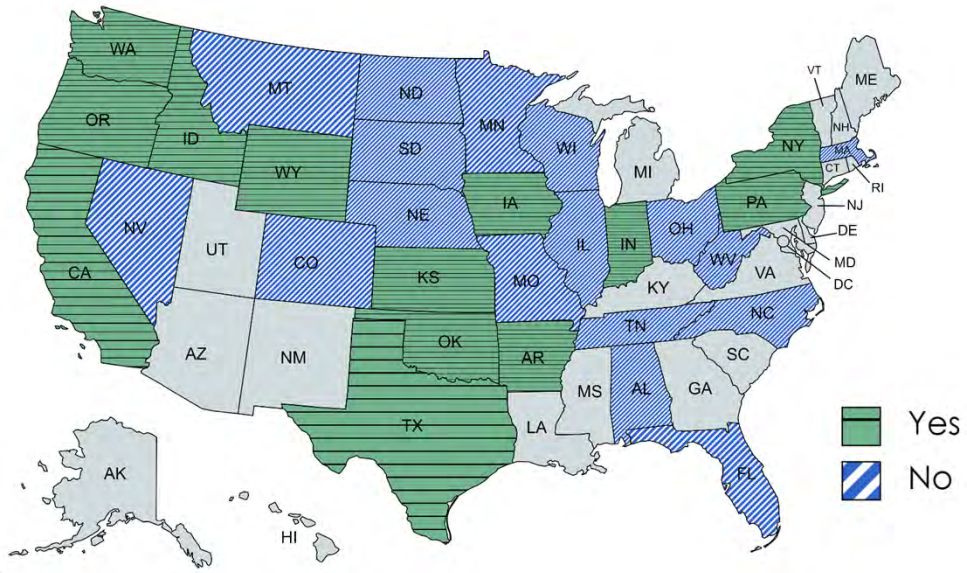
Q6: Do you have a separate pay item for Incentives/Disincentives/Pay Adjustments?

Answered: 30 Skipped: 1



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Q6: Do you have a separate pay item for Incentives/Disincentives/Pay Adjustments?

Agency	Remark
AR	Incentive payments will be accomplished by change order and will be shown on the final estimate as a separate item increase.
CA	It is a separate item that comes from supplemental funds.
IA	Bid items are included for thickness and smoothness I/D
ID	We create non-bid items for incentives, disincentives and pay adjustments.
IN	All contracts with PCCP include the item “Quality Adjustments, PCCP”. The total dollar amount for the sum of all adjustments including strength, smoothness, thickness and air content is paid under this item
KS	Bid items for Concrete Pavement Composite Pay Adjustment (comp strength & thickness), Concrete Pavement Smoothness, Concrete Pavement Thickness
NY	Pavement Ride Quality is its own standard specification with pay items.

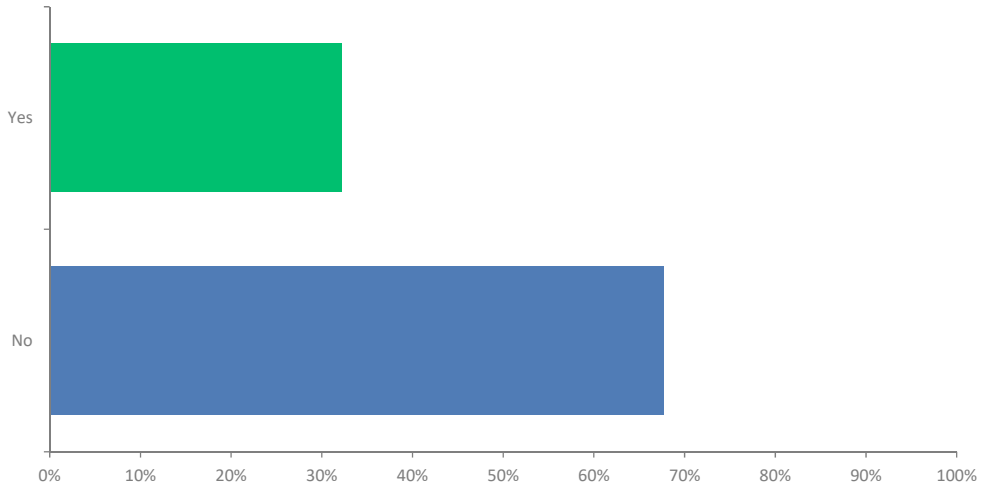
Q6: Do you have a separate pay item for Incentives/Disincentives/Pay Adjustments?

Answered: 31 Skipped: 0

Agency	Remark
OK	Disincentives and pay adjustments for material deductions or additions are applied by Pay item adjustments on estimates. Incentives are added and paid through change orders. (Section 108.08)
PA	Long life concrete also has an optional w/c incentive. Ride incentive separate pay item, performed using light weight profiler. Payment prorated based on IRI per lot.
TX	Separate pay item for ride quality.
WA	Pay Item “Ride Smoothness Compliance Adjustment”, by calculation.
WY	It's a "999 item"--kind of a sub-pay item since it is separate from the contract bid item amount.

Q7: Does your Agency use the same smoothness equations for concrete and asphalt?

Answered: 31 Skipped: 0



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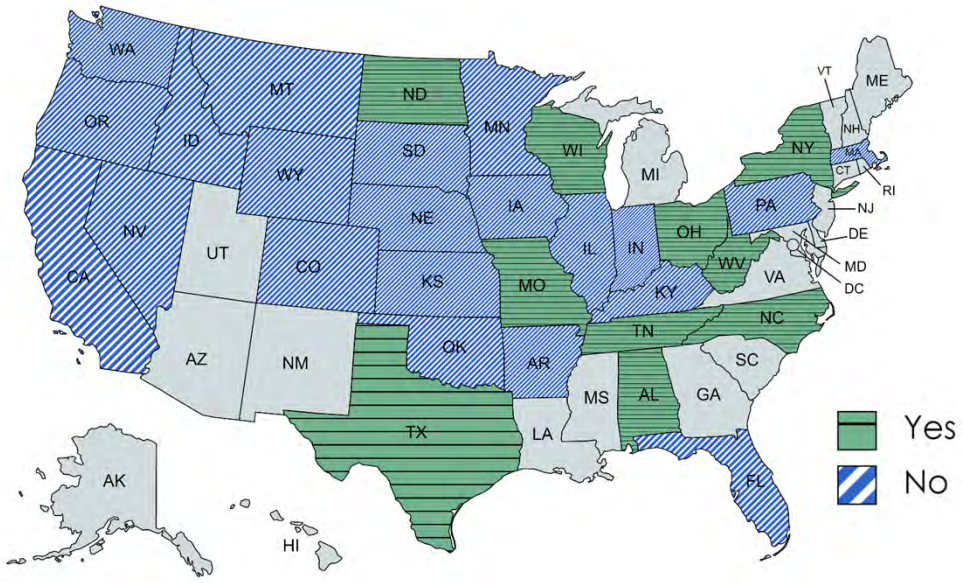
Q7: Does your Agency use the same smoothness equations for concrete and asphalt?

Answered: 31 Skipped: 0



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Q7: Does your Agency use the same smoothness equations for concrete and asphalt?

Agency	Remark
CO	The smoothness targets are the same, but the pay levels are different.
FL	We're in the midst of piloting and transition to IRI for asphalt and are just starting to look at concrete, but as we move to IRI specs for concrete pavements, we'll be exploring the possibility of using the same IRI limits, Incentives and Disincentives for asphalt and concrete pavements
MO	Require same IRI values for full depth pavement, regardless if concrete or asphalt.
NE	NE - While we use the same criterial for smoothness (MRI) and for bump & dip correction criteria, the incentive/disincentive schedule is more lenient because PCCP has tining and joint that inherently adds to surface roughness.
NY	Currently we have 2 levels, 1 and 2 depending on the facility type. IRI scale for PCC is 5 IRI higher than for asphalt pavements in both scales.
OR	Thresholds are the same, concrete incentive and disincentive is 50% greater than asphalt due to longer service life

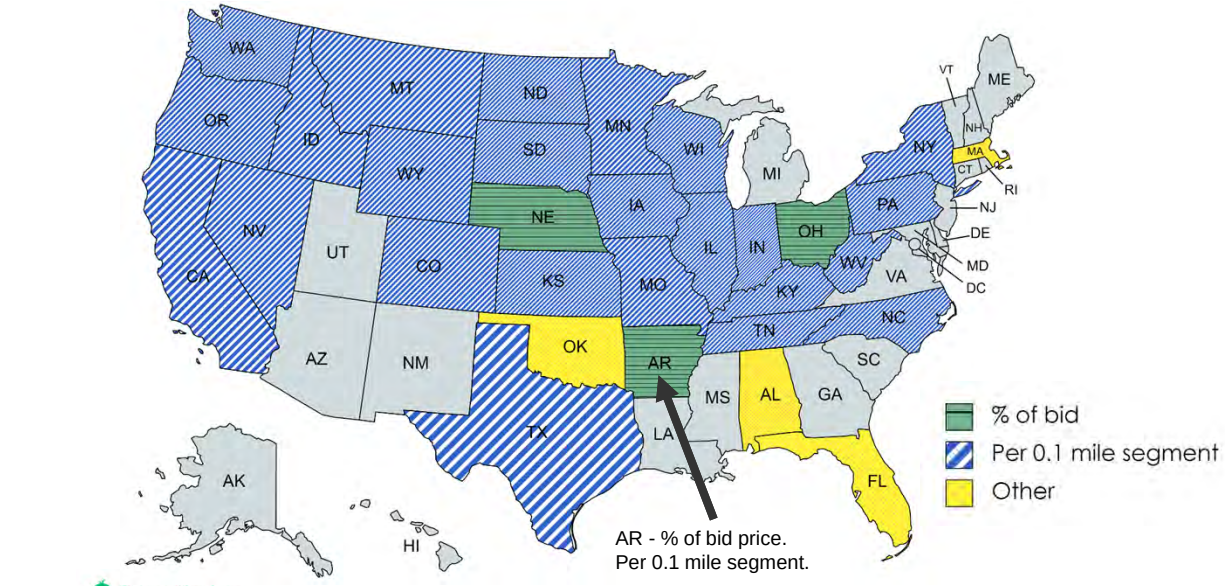
Q7: Does your Agency use the same smoothness equations for concrete and asphalt?

Answered: 31 Skipped: 0

Agency	Remark
PA	IRI tables the same, lot sizes the same, but concrete IRI incentive pay tables for concrete paving are 2.5-3 times that of asphalt.
WI	The pay equations are same for the groups of IRI values.

Q8: What do you base your concrete pavement smoothness incentives on?

Answered: 31 Skipped: 0



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Q8: What do you base your concrete pavement smoothness incentives on?

Agency	Remark
FL	Currently the smoothness incentive is based on the profile index provided by the California Profilograph
MA	Not applicable at this time
NE	International Roughness Index A(1.06) + B(1.04) + C(1.02) + D(1.00) + E(0.97) + F(0.94) + G(0.92) + H(0.90) Pay Factor = A + B + C + D + E + F + G + H Where: A = Length of pavement with an IRI of 0 to 43 inches per mile B = Length of pavement with an IRI greater than 43 to 56 inches per mile C = Length of pavement with an IRI greater than 56 to 68 inches per mile D = Length of pavement with an IRI greater than 68 to 99 inches per mile E = Length of pavement with an IRI greater than 99 to 105 inches per mile F = Length of pavement with an IRI greater than 105 to 111 inches per mile G = Length of pavement with an IRI greater than 111 to 117 inches per mile H = Length of pavement with an IRI greater than 117 to 124 inches per mile
OK	Smoothness Pay Adjustments per 2019 Special Provision 430-2QA "The Department will base pay adjustments for smoothness of pavements on the initial profile indices determined before corrective actions."

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Q9: What are your Agency's thresholds for concrete pavement smoothness?

State	Minimum IRI/MRI for full incentive/pay adjustment	Maximum IRI/MRI for full disincentive/pay adjustment	Zero payment threshold for IRI/MRI	IRI/MRI where corrective action (diamond grinding) is required
AL	35	90	90	Above 90
AR	2” per mile per 0.1 mile section	7” per mile per 0.1 mile section		over 7” per mile per 0.1 mile section
CO	40	No disincentives	55-70 in/mile for full pay	70
IA	47.5		57.5 to 75 MRI	>90
ID	<40	40	Schedule I 60.0 in/mi, Sch II 70.0 in/mi	80
IL	45	>100.0	>45.0 to 75.0	>75.0
IN	60-70 is a 1.00 pay factor	> 90 is a 0.95 pay factor and the segment must be corrected to 90 or less		>90
KS	< 6.0 in./mi./lane per 0.1 mi. section (Avg. PI)	6.0 in./mi./lane per 0.1 mi. section (Avg. PI)	18.0 in./mi./lane per 0.1 mi. section (Avg. PI)	30.1 in./mi./lane per 0.1 mi. section
KY	60	80	N/A	91

Q9: What are your Agency's thresholds for concrete pavement smoothness?

State	Minimum IRI/MRI for full incentive/pay adjustment	Maximum IRI/MRI for full disincentive/pay adjustment	Zero payment threshold for IRI/MRI	IRI/MRI where corrective action (diamond grinding) is required
MN	45	85	65	85
MO	54.1	80.1	Must take corrective action (i.e., diamond grinding) to ≤ 80	When above 80 corrective action is required.
NC	45	90	55.1-70.0	>90.1
ND	36	68	50.1 – 54.0	68
NE	43	124	No I or D when IRI is between 68 and 99	IRI > 124 inches/mile
NY	50 (Level 1) 57 (Level 2)	95	Zero payment/ break even is between 65 and 74 in/mi	Anything over 95 is C/A. A larger penalty in lieu of diamond grinding can be negotiated at contract level.
OH	<35	90	N/A	70-90 allows grinding (lose incentive, grind out of disincentive. Greater than 90 requires corrective action plan.
OR	35	95		greater than 95

Q9: What are your Agency's thresholds for concrete pavement smoothness?

State	Minimum IRI/MRI for full incentive/pay adjustment	Maximum IRI/MRI for full disincentive/pay adjustment	Zero payment threshold for IRI/MRI	IRI/MRI where corrective action (diamond grinding) is required
OK	(> 45 mph): PI of 15.0 or less (≤45 mph and ramps): PI of 19.0 or less	(> 45 mph): PI of 47.0 or more (≤ 45 mph and ramps): PI of 51.0 or more	(> 45 mph): "Correct PI >46.9 to 35.0 in/mi and (≤ 45 mph and ramps) Correct PI > 50.9 to 39.0 in/mi or less	"If the PI exceeds 5 in per mile, grind individual high points in excess of 0.3 in across the entire lane width." Section 425.05 (3)(a)

OK - Profile Index (in/mi)2 (greater than 45 mph) "Correct pavement extents with profile indices greater than 46.9 in/mi to 35.0 in/mi or less at no additional expense to the Department. The required correction will not increase payment unless deficient sections are removed or overlaid. Failure to correct to 35.0 in/mi will result in zero payment for the affected extents." and Profile Index (in/mi)2 (45 mph or less and ramps) Correct pavement extents with profile indices greater than 50.9 in/mi to 39.0 in/mi or less at no additional expense to the Department. The required correction will not increase payment unless deficient sections are removed or overlaid. Failure to correct to 39.0 in/mi will result in zero payment for the affected extents.

Q9: What are your Agency's thresholds for concrete pavement smoothness?

State	Minimum IRI/MRI for full incentive/pay adjustment	Maximum IRI/MRI for full disincentive/pay adjustment	Zero payment threshold for IRI/MRI	IRI/MRI where corrective action (diamond grinding) is required
OK	(> 45 mph): PI of 15.0 or less (≤45 mph and ramps): PI of 19.0 or less	(> 45 mph): PI of 47.0 or more (≤ 45 mph and ramps): PI of 51.0 or more	(> 45 mph): "Correct PI >46.9 to 35.0 in/mi and (≤ 45 mph and ramps) Correct PI > 50.9 to 39.0 in/mi or less	"If the PI exceeds 5 in per mile, grind individual high points in excess of 0.3 in across the entire lane width." Section 425.05 (3)(a)
PA	35			If over 90 corrective action required
SD	35	90.1	55.1 to 70	Bump Locations based on ALR
TN	55	90, 100	175, 220 for individual IRI section (0.1 mile)	90, 100
TX	60	65 in/mile for Pay Schedule 1, and 75 for Pay Schedule 2	N/A	95 in/mile
WA	<30	30		
WI	<50	100 in/mile to 140 in/mile	≥55 to < 85 in/mi	140 in/mile
WY	<60	No disincentives	>95	80

Q9: What are your Agency's equations concrete pavement smoothness?

State	Equations for Concrete Pavement Smoothness
ID	1. Schedule I Projects. a. For an IRI between 60.0 inches per mile per 0.1 mile and 40.0 inches per mile per 0.1 mile, use the following formula: Profile incentive = (60.0 - Section IRI) x $85.00. b. For an IRI less than 40.0 inches per mile per 0.1 mile, the profile incentive is $1,700 for each 0.1 mile section. c. For an IRI greater than 60.0 inches per mile per 0.1 mile, a profile incentive payment will not be made. 2. Schedule II Projects. a. For an IRI between 70.0 inches per mile per 0.1 mile and 40.0 inches per mile per 0.1 mile, use the following formula: Profile Incentive = (70.0 - Section IRI) x $45.00. b. For an IRI less than 40.0 inches
IL	Incentive: + (45 – MRI) × $60.00 (max $1200.00); Disincentive: – (MRI – 75) × $37.50; MRI >100.0: -$750.00
IN	qs = (PFs – 1.00) x A x U
KY	See Kentucky Specifications Section 501.05.02.
MN	2892.50 – 44.500 × Smoothness
MO	See Section 610 of the Standard Specifications
NC	for MRI between 45.1 - 55.0 PA=600-(10*MRI); for MRI between70.1 - 90.0 PA-650-(10*MRI)
NY	See Section 610 of the Standard Specifications

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Q9: What are your Agency's equations concrete pavement smoothness?

State	Equations for Concrete Pavement Smoothness
OH	ASTM E 1926
OK	"Ensure a pavement with a profile index of 5 in [125 mm] or less per mile using a 0.2 in [5 mm] blanking width. Profile ground surfaces in two passes; one at 3 ft [0.9 m] and one at 9 ft [2.7 m] from the edge of each driving lane. Average the profilograph readings from the two passes to obtain the profile index for each lane." Section 425.05 (3)(a)
OR	Y = (- $36 × X) + $2,160 for incentive, Y = (- $36 × X) + $2,340 for disincentive
WI	Ride 2.01
WY	{1-[(0.85 - %ISS)/0.35]} * SEGSUM

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Q10: What are your Agency's exclusions for Pavement Smoothness?

Agency	Remark
AR	Profile begins 25ft from structure or end of pavement
CA	Several (see spec)
CO	expansion joint, railroad crossing, cattle guard, bus pad, manhole, gutter pan and intersection (where there is a planned breakpoint in the profile grade line in the direction of traffic)
IA	Determine an MRI using the latest version of the ProVAL "Ride Quality" or "Smoothness Assurance" analysis and following the procedures shown in Materials I.M. 341, Appendix A for each segment of finished pavement surface with a posted speed over 45 mph except for: a. Roads intersecting the mainline pavement less than 600 feet in length. b. Road connections 150 feet before an intersection that end at a stop sign (or a yield sign at roundabouts). c. Twenty feet on either side of bridges, bridge approaches, existing EF joints, manholes, or water valve boxes in the lane that the obstruction is located. d. Ramps and loops. e. Bridge approaches (evaluated according to Section 2428 of the Standard Specificatons). f. Storage lanes, turn lanes, and other auxiliary lanes less than 1000 feet. g. Pavement less than 8.5 feet in width. h. Single lift pavement overlays 2 inches thick or less, unless the existing surface has been corrected by milling or scarification. i. Single lift pavement overlays 2 inches thick or less placed directly on PCC pavement. j. Paved shoulders. k. Detour pavement. l. Crossovers. m. Individual sections of pavement less than 100 feet in length. n. Roundabouts

Q10: What are your Agency's exclusions for Pavement Smoothness?

Agency	Remark
ID	A profile is not required in the following areas of pavement: a. Pavement on horizontal curves having a centerline radius of curve less than 1,000 feet and pavement within the superelevation transition of such curves. b. Pavement within 50 feet of a transverse joint that separates the pavement from an existing pavement not constructed under the contract. c. Pavement for ramps, approaches, structure decks, city streets, or county roads. d. Pavement within 50 feet of a transverse joint that separates the pavement from a structure deck or an approach slab.
IL	The following are only tested with a 16-ft straightedge: Low-speed mainline pavement consists of pavements, ramps, and loops with a posted speed limit of 45 mph or less. And Miscellaneous Pavement, such as: a. Pavement on horizontal curves with a centerline radius of curvature of less than or equal to 1,000 ft (300 m) and the pavement within the superelevation transition of such curves; b. Pavement on vertical curves having a length less than or equal to 200 ft (60 m) in combination with an algebraic change in tangent grade greater than or equal to 3 percent as may occur on urban ramps or other constricted-space facilities; c. The first and last 50 ft (15 m) of a pavement section where the Contractor is not responsible for the adjoining surface; d. Intersections and the 25 ft (7.6 m) before and after an intersection or end of radius return; e. Variable width pavements; f. Side street returns, to the end of radius return; g. Crossovers; h. Pavement connector for bridge approach slab; i. Bridge approach slab; j. Pavement that must be constructed in segments of 600 ft (180 m) or less; k. Pavement within 25 ft (7.6 m) of manholes, utility structures, at-grade railroad crossings, or other appurtenances; l. Turn lanes; and m. Pavement within 5 ft (1.5 m) of jobsite sampling locations for HMA volumetric testing that fall within the wheel path.

Q10: What are your Agency's exclusions for Pavement Smoothness?

Agency	Remark
IN	The 16 ft straightedge or the Inertial Profiler Simulating the 16 ft straightedge (with MOT) must be used at the following locations: 1. All mainline traveled way lanes shorter than 0.5 mi. 2. All mainline traveled way lanes at locations exempted from inertial profiler operation in accordance with ITM 917. 3. All mainline traveled way lanes within smoothness sections with posted speed limits less than or equal to 45 mph throughout the entire section length. 4. All tapers. 5. All ramps.470 6. All turn lanes, including bi-directional left turn lanes shorter than 0.5 mi. 7. All acceleration and deceleration lanes associated with ramps with posted speeds of 45 mph or less. 8. All shoulders. 9. All intersections with significant change in cross slope.
KS	Bridge decks, acceleration & deceleration lanes @ at-grade intersections, turning lanes, shoulders, horizontal curves <1000 ft. radius & superelevation transition of said curves, pavement sections <50 ft., sideroads <250 ft.
MN	Areas with a posted vehicle speed less than or equal to 45 mph.
MO	See Section 610.4.2.2 for exclusions. We ten situations where profiling is not required.
NC	50ft before/ after bridge approaches, railroad tracks, or similar interruptions. Ramps, loops, turn lanes also excluded. Not all contracts have a smoothness spec in them.

Q10: What are your Agency's exclusions for Pavement Smoothness?

Agency	Remark
ND	The Engineer will profile the finished surface to determine the pavement ride quality. The Engineer will not profile the following leave outs: 1)Bridge decks; 2)Side roads and approaches; 3)Shoulders, ramps and gore areas; 4)At grade railroad crossings; 5)The beginning and end of the project; 6)Where utility appurtenances are placed in the wheel paths of the lanes; 7)Finished surfaces 20 feet before and after the excluded areas shown in 1, 4, 5, and 6; and 8)Where safety and the roadway geometrics do not allow the proper operating speed for the profiler to collect data. The Engineer will determine the location of these areas.
NV	25' before and after bridge decks, shoulders, curves with large radiuses.
NY	Ride quality is applied to anything longer than 1320 feet in length on Interstate and Arterial pavement projects with a speed limit greater than 45 mph. 25 feet on each side of any utility/ drainage structure or bridge is omitted, and anything within 200 feet of a traffic control device is omitted.
OH	one centerline mile of continuous paving, bridge decks and intersections do not break the mile. Ramps that are greater than a half-mile, any interstate to interstate ramp regardless of length, acceleration and deceleration lanes regardless of length. Turn lanes, shoulders, crossovers and bridge decks.
OK	2019 Special Provision 430-2QA The following are tested but are excluded from the profile index calculations for pay adjustments: A) For a secondary street, the 25 ft that ties into an existing primary street as determined by the Engineer, B) The 25 ft that ties into existing bridges or approach slabs (this does not apply to new bridge construction), and C) The 25 ft at the beginning and ending stations of the project (this does not apply to multiple adjoining projects in a single contract)

Q10: What are your Agency's exclusions for Pavement Smoothness?

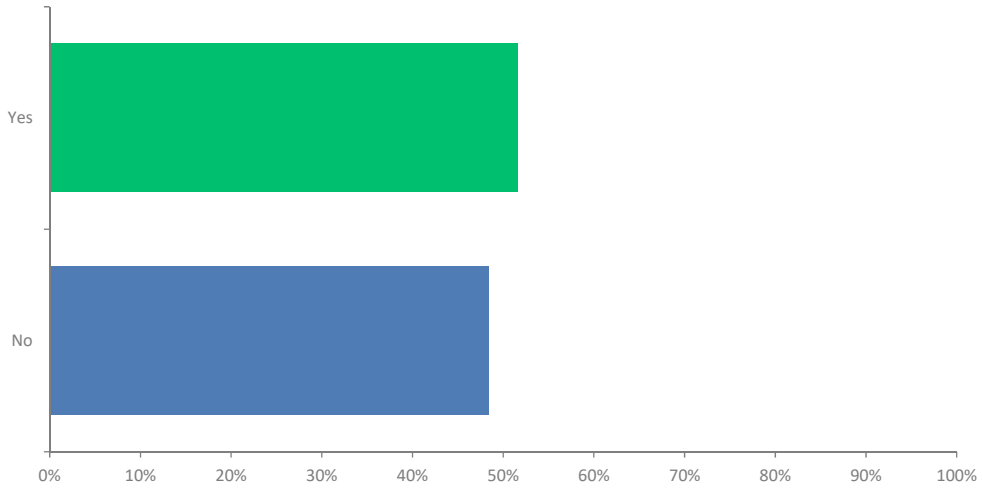
Agency	Remark
OR	The following areas of Pavement are excluded from IRI smoothness requirements: • Profiles extending beyond the Project ends. • Bridge decks, Bridge approach slabs, and Pavement within 50 feet of Bridge approach slabs. • First and last 50 feet of the paving limits of the Project. • The 50 feet before and after no Work areas within the Project limits. • Ramps and auxiliary lanes, with a posted speed of less than 35 mph. • Shoulders. • First 200 feet of entry ramps and the last 200 feet of exit ramps. • The 25 feet before and after Utility appurtenances in the Traffic Lane. • Continuous portions of Traffic Lanes with less than 0.05 mile between excluded areas. • Portions of the Project with posted speed limits less than 35 mph.
PA	Bridge decks. Ramps less than 1,500 feet in length. Tapered pavements less than 12 feet wide. Shoulders, medians, and other pavement surfaces indicated. Partial lots less than 100 feet.
SD	1. Bridge decks, approach slabs, and a distance of 100 feet from the end of the bridge (or approach slab if applicable); 2. Ramps, acceleration lanes, deceleration lanes, turning lanes, and any lane less than 0.3 miles in length; 3. Shoulders and gore areas; 4. Driving lanes within 6 feet of existing curb and gutter sections (curb and gutter to remain in place); 5. Sections with a speed limit of less than 45 mph; 6. The first or last 100 feet of a pavement where the Contractor is not responsible for the adjoining in place pavement; 7. A distance of 100 feet from railroad crossings; and, 8. A distance of 200 feet before stop signs at an intersection.

Q10: What are your Agency's exclusions for Pavement Smoothness?

Agency	Remark
WA	Ramps, shoulders, tapers, and lanes less than 0.25 mile in length. • The first 100 feet after the start of the paving operations. 3. The last 100 feet prior to the end of the paving operation. 4. The first 100 feet on each side of bridge Structures and bridge approach slabs.
WI	Areas near bridges, roundabouts, and for pavements within 150 ft of the point of curvature of roundabout intersections
WV	Single Lane road or under 25 mph
WY	Bridge decks, shoulders, parking lanes, medians, width transitions, accel/decel/turning lanes less than 200 ft long. Intersections <40 mph. Horizontal curves with CL radius of curvature <1000 ft. Manholes and inlets.

Q11: Does your Agency allow the Contractor to grind into smoothness incentives/pay adjustments?

Answered: 31 Skipped: 0



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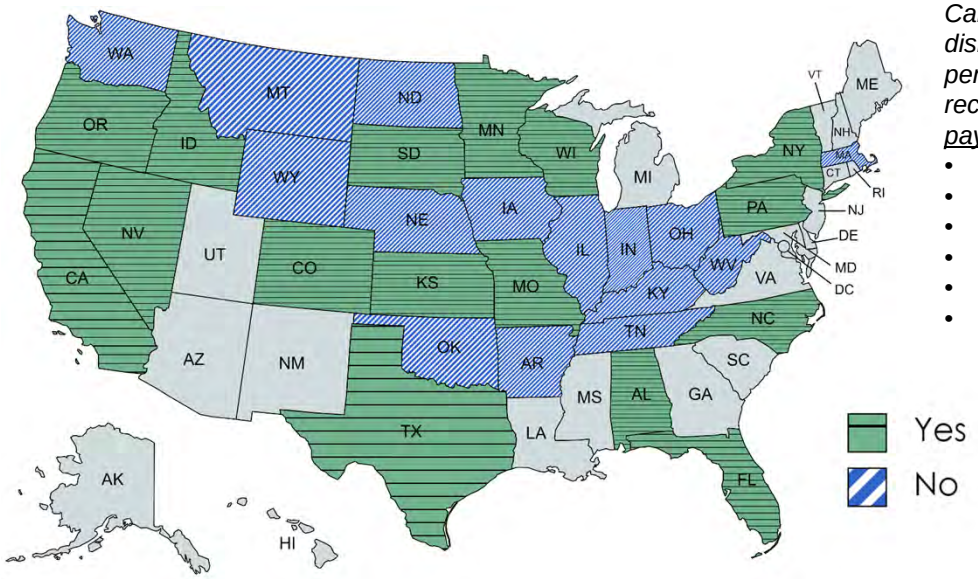
Q11: Does your Agency allow the Contractor to grind into smoothness incentives/pay adjustments?

Answered: 31 Skipped: 0



Can grind out of disincentive or penalty to receive full payment

- Oregon,
- Alabama
- Tennessee
- Arkansas
- Ohio
- North Dakota

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Q11: Does your Agency allow the Contractor to grind into smoothness incentives/pay adjustments?

Agency	Remark
AL	Grinding may occur as long as the total amount of carbonate stone in the mix doesn't exceed the percentage allowed based on the table in subarticle 450.02(b). Contractor cannot receive more than 100% pay if grinding occurs.
AR	can be ground into full payment, but not incentive
CA	Yes if they meet the thickness requirement.
CO	The contractor may grind prior to acceptance.
FL	We grind all of our concrete pavements and the smoothness values (Profile Index) used for pay adjustments are obtained after grinding.
ID	Schedule II project adjoining existing pavements may be revised to a Schedule I project provided the adjoining pavement is ground and maintained at the minimum specified thickness.
KS	If contractor elects or is required to grind entire project, pay adjustment is based on average profile index after all grinding is performed.

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Q11: Does your Agency allow the Contractor to grind into smoothness incentives/pay adjustments?

Agency	Remark
MN	If they grind it, regardless of why, we give them the incentive after grinding.
MO	MoDOT allows the contractor can elect to diamond the entire project to achieve smoothness.
NC	For areas of violating MRI and localized roughness, grinding is an approved method for addressing “rough” spots.
ND	No, but they can grind out of deduct.
NE	Only in tenth-mile segment having an IRI 0f 99 to < 124 inches per mile.
NV	If smoothness requirements are now met, contractor can profile grind to meet requirements.
NY	When grinding, the contractor is allowed to bump grind one area per 1/10th mile not exceeding 20% of the pavement surface per 1/10th mile. If the area does exceed 20%, the contractor is required to grind the full 1/10th mile pavement lot.
OH	Can grind out of a disincentive situation.

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Q11: Does your Agency allow the Contractor to grind into smoothness incentives/pay adjustments?

Agency	Remark
OR	grinding can reduce penalty to no-pay, but can not be used to increase incentive
PA	The incentive payment for a lot subjected to corrective action will be determined using Table A and the IRI for the lot after the Contractor completes corrective action.
SD	Contractor can grind before the DOT performs the profile testing. If DOT tests for smoothness and requires grinding then the incentive cannot be improved.
TN	Technically, we allow the contractor to grind to achieve 100% pay instead of a disincentive.
TX	Corrective actions are allowed to correct localized roughness and IRI deficiencies.
WI	Correct to an IRI of 85 in/mile using whichever of the following methods the engineer approves: - Diamond grinding, conforming to 420.3.1 through 420.3.4, of the full lane width of the riding surface including adjustment of the paved shoulders. - Remove and replace the full lane width of the riding surface.

Q12: What are your Agency's thresholds for concrete pavement areas of localized roughness (ALR)?

State	Acceptable	Corrective Work/ Monetary Deduction	Corrective Work
AR			high points more than 0.3” in 25ft; low points more than 0.25” in 10ft
CA	160 in/mi		>160 in/mil
IA	<200 MRI	200 to 250 -$15 or Grind	>250 MRI
ID		1/4 inch	
IL			any 25 ft (7.6 m) interval with an ALR in excess of 200 in./mile (3,200 mm/km)
IN	160 in/mi or less in each wheel path	N/A	>160 in/mi IRI up to 190 in/mi corrective grinding up to ¼ inch depth, > 190 in/mi and more than ¼ in depth grinding required remove and replace pavement
MN	< 175	175 - 225	225

Q12: What are your Agency's thresholds for concrete pavement areas of localized roughness (ALR)?

State	Acceptable	Corrective Work/ Monetary Deduction	Corrective Work
MO	See comments	See Section 610.4.5.4 and 610.4.6.4	bump grind
NC	2018 - <150 in/mi 2024 - <165 in/mi Harmonized with asphalt ALR for 2024	2018 – 150 in/mi 2024 – 165 in/mi	Approve by Engineer
ND	80 in/mile @ 25'	Corrective action required	Grinding
NV	175.000 in/mi		
NY	<135 in/mi	135 in/mi or higher	
OH	160 in/mi in 125 feet.	>160 in/mi in 125 feet.	>160 in/mi in 125 feet.
OK	PI <0.60 inch in 25 foot span per 2019 Special Provision 430-2QA		See comments

Q12: What are your Agency's thresholds for concrete pavement areas of localized roughness (ALR)?

State	Acceptable	Corrective Work/ Monetary Deduction	Corrective Work
OR	<160 in/mi over 25 feet base		
PA		See comments	See comments
SD	140 or less	140.1 – 180	180 or greater
TN			175, 220 for individual IRI section (0.1 mile)
TX	bumps and dips less than 0.15 in	bumps and dips greater than 0.15 in	bumps and dips greater than 0.15 in
WI	200 in/mile	See comments	<140 in/mile
WV	45 mph - 80 in/mi >45 mph 135 in/mi		
WY	60-80 IRI	>0.3 inch in 25 ft	

Q12: What are your Agency's thresholds for concrete pavement areas of localized roughness (ALR)? OTHER COMMENTS

Agency	Remark
MO	Acceptable - Any length of pavement with a continous 25-foot average IRI measured in the right wheel path over 125 (over 45 m.p.h.)
OK	Other - “Reduce surfaces having individual bumps in excess of 0.60 inch in a 25 foot span” per 2019 Special Provision 430-2QA
PA	Corrective Work - Any individual bump (must grind) exists in the lot where the irregularity is more than 1/4 inch when tested with a 10-foot straightedge. Other - Unless the Department and Contractor agree to leave a defective lot in place as specified in Section 507.4, remove and replace defective areas and retest the ride-quality lot. After corrective action, the Contractor may leave a defective lot in place if the District Executive provides written approval and the Contractor accepts a $4,000 downward adjustment (rebate) of the amount paid for the lot. Costs associated with evaluating pavement ride quality will not be paid for separately.
WI	Corrective Work/Monetary Deduction - For each area that exceeds 200 in/mile, the engineer will do one of the following: 1. Direct the contractor to correct the area to minimize the effect on the ride. 2. Leave the area of localized roughness in place with no pay reduction. 3. Assess a pay reduction for each area in each wheel path as follows: Length <=25 feet: (localized roughness in/mile - 200) dollars/foot or $250 whichever is least Length >25 feet: (localized roughness in/mile - 200) dollars/foot or 10 dollars/foot whichever is least

Q13: What are your Agency's exclusions for ALR?

Agency	Remark
CA	Same as for IRI (Q10)
CO	We found that ALR was unnecessary if you set the 0.1 mile limit low. What used to ALRs are ground by the contractor to get under the 0.1 mile limit.
IA	2. Determine ALR using the latest version of the ProVAL “Smoothness Assurance” analysis and following the procedures shown in Materials I.M. 341, Appendix A for each segment of finished pavement surface with a posted or advisory speed over 35 mph except for: a. Side road connections 150 feet before an intersection that end at a stop sign (or a yield sign at roundabouts). b. Twenty feet on either side of bridges, bridge approaches, manholes, existing EF joints, or water valve boxes in the lane that the obstruction is located. c. Bridge approaches (evaluated according to Section 2428 of the Standard Specifications). d. Pavement less than 8.5 feet in width. e. Paved shoulders (unless used as a temporary driving surface). f. Detour pavement. g. Crossovers. h. Individual sections of pavement less than 50 feet in length.
IL	Any Miscellaneous Pavement (see Q10) in a section with speed limit >45 mph.
IN	If there is only one ALR in any two-lane mile section, then no smoothness correction will be required if the ALR does not exceed 190 in./mi and the overall segment smoothness when calculating incentive of the two-lane mile section does not require any corrective action.

Q13: What are your Agency's exclusions for ALR?

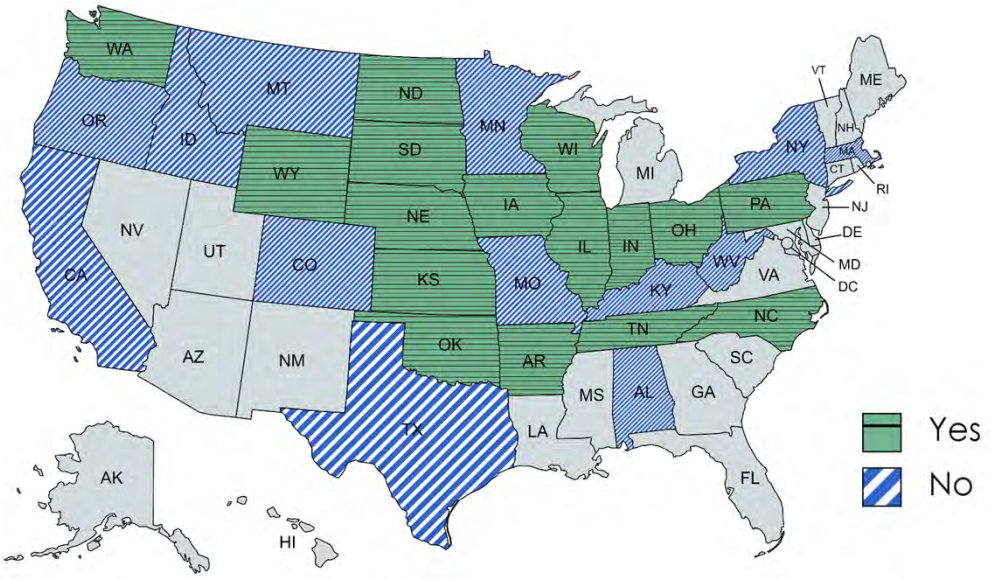
Agency	Remark
KS	If contractor is required to continuously grind, exclusions include: those listed in #10, intersections constructed with multiple transitions for drainage, when transitioning from a ground area to an unground area.
MN	Areas with a posted vehicle speed less than or equal to 35 mph, areas with a cautionary vehicle speed less than or equal to 35 mph, Turn Lanes, crossovers, 20 feet on either side of obstructions in lane that obstruction is located, Side Streets, side connections, 150 feet before stop signs at an Intersection, 150 feet before yield signs at a roundabout, Bridge decks, approach panels, 20 feet from Bridge decks or approach panels, 20 feet from terminal headers tying into existing pavement, aved Shoulders, Doweled Shoulders less than 10 feet in width, Undoweled Shoulders, Headers adjacent to colored concrete
ND	The Engineer will profile the finished surface to determine the pavement ride quality. The Engineer will not profile the following leave outs: 1) Bridge decks; 2) Side roads and approaches; 3) Shoulders, ramps and gore areas; 4) At grade railroad crossings; 5) The beginning and end of the project; 6) Where utility appurtenances are placed in the wheel paths of the lanes; 7) Finished surfaces 20 feet before and after the excluded areas shown in 1, 4, 5, and 6; and 8) Where safety and the roadway geometrics do not allow the proper operating speed for the profiler to collect data. The Engineer will determine the location of these areas.

Q13: What are your Agency's exclusions for ALR?

Agency	Remark
NV	25' before and after bridge decks, shoulders, curves with large radiuses.
NY	Localized roughness is not recorded for anything not tested for IRI. Sections less than 1320 ft, speed limits below 45 mph, and anything within 200 ft of a traffic control device.
OH	turn lane, bridge deck, shoulder, crossovers.
OR	Same as for IRI (Q10)
PA	Small areas, gores, medians, shoulders.
SD	Same as for IRI (Q10)
WI	The department will not reduce pay for localized roughness within HMA IV and PCC IV segments or on pavements within 25 feet of bridges, bridge approaches, or railroad crossings not constructed under the contract. The engineer may direct straightedging under 415.3.10 or 450.3.2.9 for pavement excluded from localized roughness under 740.3.4.2(1), for bridges, for roundabouts, and for pavements within 150 feet of the points of curvature of roundabout intersections.
WY	Bridge Decks

Q14: Does your Agency have smoothness requirements for bridges?

Answered: 30 Skipped: 1



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Q14: Does your Agency have smoothness requirements for bridges?

Agency	Remark
AL	Optional Incentive for bridges over 150ft long. Overall smoothness requirements. Incentive Only – from less than/equal to 15" per mile to less than 3" per mile.
IA	100 ft lead in 100 ft. lead out joints & approached bumps and dips only New Bridge Decks Bridge Deck Overlays Initial Profile Index Inches Per Mile Per Segment Dollars Per Segment Initial Profile Index Inches Per Mile Per Segment Dollars Per Segment 0 - 6.0 6000 0 - 2.0 2000 6.1 - 12.0 3000 2.1 - 4.0 1000 12.1 - 22.0 Unit Price 4.1 - 15.0 Unit Price Table 2428.05-2: Price Reduction New Bridge Decks Bridge Deck Overlays Profile Index Inches Per Mile Per Segment Dollars Per Segment Profile Index Inches Per Mile Per Segment Dollars Per Segment 22.1 - 30.0 2000 15.1 - 20.0 1000 30.1 - 35.0 4000 20.1 - 25.0 2000 35.1 - 40.0 6000 25.1 - 30.0 3000 over 40.0 (a) over 30.0 (a) (a) Correction is required to an index of 15.0 inches per mile for overlays and to an index of 22.0 inches per mile for new decks.
IL	Paraphrased from Article 503.16(a)(4): The entire surface shall be tested by means of a 16-ft straightedge. Variations shall not exceed 3/16 in.; those that do shall be removed by grinding or cutting.
IN	16 ft straightedge for bridge decks and 10 ft straightedge for RCBA with a tolerance of 1/8 inch or less for both
KS	Correct variations exceeding 1/8" per 10 ft.

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Q14: Does your Agency have smoothness requirements for bridges?

Agency	Remark
NC	i. Lead-in/Lead-out distance requirements. The runup and runout distances should be sufficient to obtain operating speed and to slow down after testing is completed. ii. Bridge Deck, joints, and approaches localized roughness threshold (Threshold is 1/8" deviation in 10 feet.) i. Every bridge gets tested with a rolling 10' straightedge (Threshold is 1/8" deviation in 10 ft) ii. For bridges over 1500' (or if required by contract), IRI is required (including approach slabs) a. Localized Roughness Requirements i. Type 1: Area having a local IRI value greater than 180 in/mile based on a 25-foot analysis segment not containing a bridge expansion joint. ii. Type 2: Area having a local IRI value greater than 250 in/mile based on a 25-foot analysis segment containing a bridge expansion joint. iii. Overall smoothness requirements? i. MRI after Completion [Inches Per Mile] Acceptance Per Travel Lane (0.05-mile section) i. Less than or equal to 120.0 Acceptable ii. Greater than 120.0 Corrective Work Required
ND	The bridge is treated as a full encounter, the structure is profiled prior to construction and lot value is established for the new structure. The contractor is required to meet that overall smoothness as one lot.

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Q14: Does your Agency have smoothness requirements for bridges?

Agency	Remark
NE	Profile index no greater than 0.50 inch/100 feet (12 mm/30 m). The smoothness test will be conducted by Department personnel using a 12-foot (4 m) California type profilograph.
NV	Test the finished concrete surfaces as well as pavement within 50 feet of the leading edge and within 50 feet of the trailing edge of the bridge deck (including approach slabs) by means of an inertial profiler or multipurpose surface profiler according to Test Method No. Nev. T448 Section II. The maximum allowable International Roughness Index (IRI) for localized roughness is 175.000 inches/mile. Locate and correct areas exceeding profile requirements by grinding. Obtain a minimum of two profiles per traffic lane and one profile for each shoulder. Obtain the profile runs parallel to and in the direction of traffic. Measure the profiles within each traffic lane 3 feet from the respective left or right traffic lane lines. Measure the profiles within each shoulder approximately 3 feet from the curb or rail face. Where the combined width of the bridge deck and/or approach slab shoulder and adjacent traffic lane is 16 feet or less, the profile measurement for that shoulder is not required. When a straightedge 12 feet long is laid on the finished surface both perpendicular and parallel with the centerline of the bridge deck and approach slabs, the surface shall not vary by more than 0.25 inch from the lower edge of the straightedge. When the bridge deck and approach slab concrete are indicated to be covered by plantmix bituminous surfacing, measure and correct the pavement surface according to Subsections 402.03.05 and 403.03.04. The first sentence of the ninth full paragraph on page 237 of the Standard Specifications is hereby deleted and the following substituted therefore: Perform grinding in accordance with Subsection 402.03.05.

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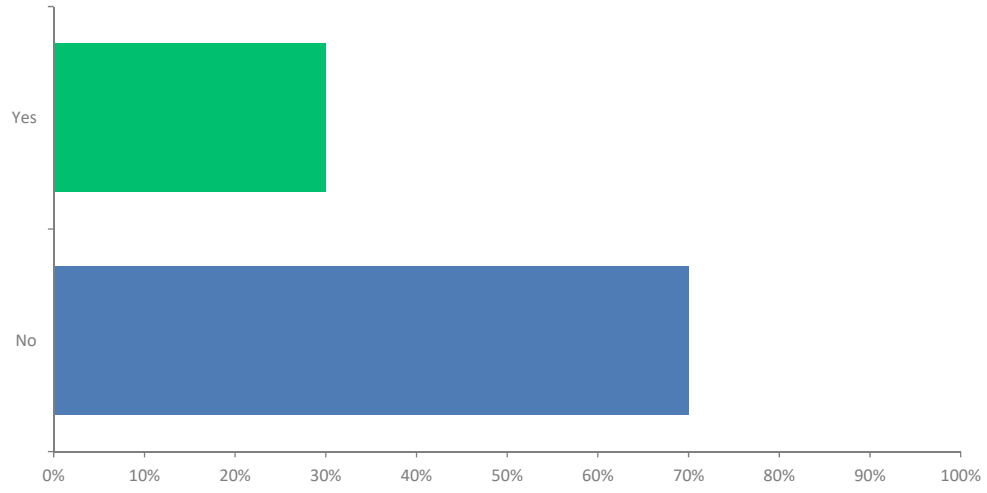
Q14: Does your Agency have smoothness requirements for bridges?

Agency	Remark
OH	25 foot lead-in/lead-out 250 foot before and after for start and end of profile. 600 IRI for localized roughness https://www.dot.state.oh.us/Divisions/ConstructionMgt/Specification%20Files/PN555_01152021_for_2023.pdf Positive pay adjustment when IRI is less than 250 post correction without steel armor joint and less than 300 with the steel armor joint.
OK	Reduce extent of bridge decks and approach slabs having indices in excess of acceptable limits in Table 430:3 Class I to a Profile Index of 36.0 in/mi or less, or Table 430:3 Class II to a Profile Index of 40.0 in/mi or less as applicable per 2019 Special Provision 430-2QA Reduce surfaces having individual bumps in excess of 0.60 inch in a 25 foot span to a Profile Index below 0.60 inch in 25 foot span per 2019 Special Provision 430-2QA
SD	Have done one test project and doing a few more this season. Special provision is still being developed.
TN	TDOT Standard Specifications, Chapter 604.27 describes rideability testing and lots. A lot is described as a 150' lead in and 150' lead out plus the length of the bridge unless a shorter distance is specified by the Engineer or the Plans. Testing to be completed per lane. Max IRI of 130 in/mi per lane.
WA	An acceptable surface shall be one free from deviations of more than 1/8-inch under the 10-foot straightedge.
WI	Only by special provisions
WY	0.25 inch in 10 ft

Q15: If you use Incentives/Disincentives/Pay Adjustments, has your Agency made updates to the dollar amounts due to inflation over time?

Answered: 30 Skipped: 1



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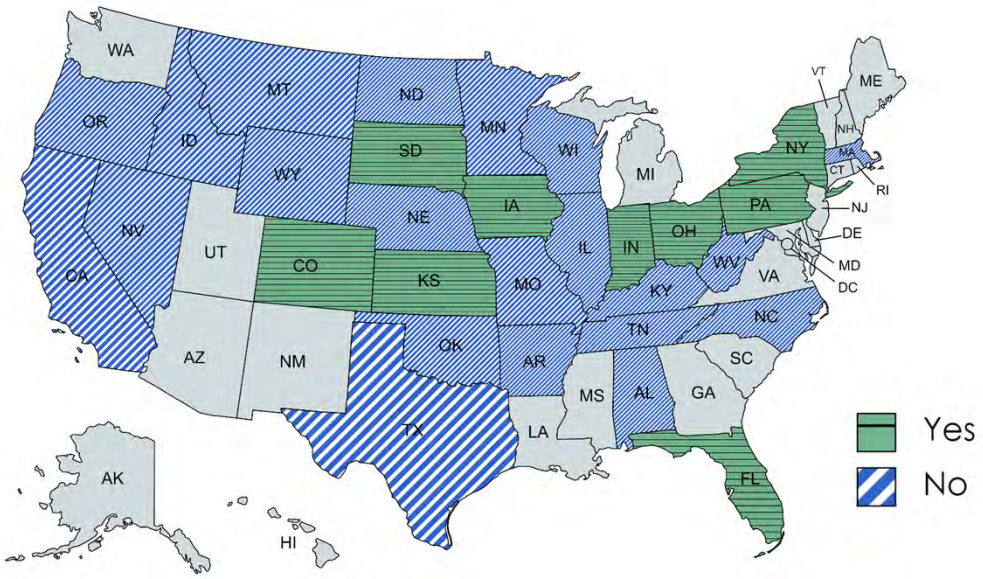
Q15: If you use Incentives/Disincentives/Pay Adjustments, has your Agency made updates to the dollar amounts due to inflation over time?

Answered: 30 Skipped: 1



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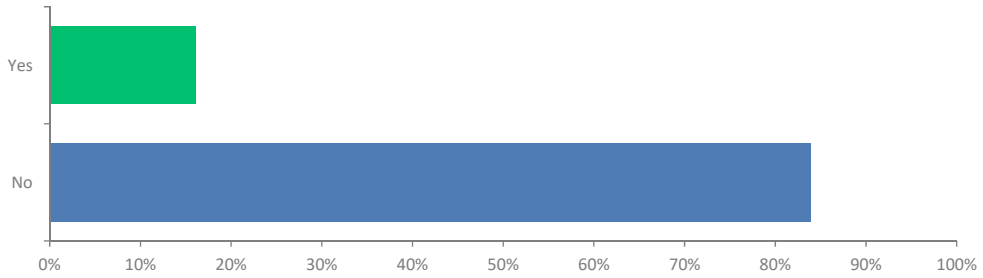
Q15: If you use Incentives/Disincentives/Pay Adjustments, has your Agency made updates to the dollar amounts due to inflation over time?

Agency	Remark
AR	No. Percentage based
CO	Infrequent. Contractors have said the payment is not a motivating factor. Performing corrective work exceeds the payment
FL	The Concrete Pavement Smoothness Incentive is a percentage increase of the unit price, so in as much as contractor's bid prices are updated due to inflation, yes the incentive is updated due to inflation.
IA	Increased smoothness incentives. Thickness is max 103% of SY unit price
IN	The Smoothness equation utilizes the bid unit price for of the material, so any inflation is accounted for
NE	PFs are based on percentages so they self-adjust.
NY	Pay adjustment scales are based on a fixed percent of the item price, causing it to adjust with inflation
PA	Always a topic with both industries.

Q16: Does your Agency use any other incentives/disincentives/pay adjustments not mentioned in this survey?

Answered: 31 Skipped: 0



MN - Well Graded Aggregate I/D, Quality aggregate I/D
OK - Gradation and Air Content. per Section 414.06 (R) Acceptance of Pavement
SD - We have price adjustment tables for most tests that fail specifications.
WY - Aggregate gradation, entrained air content, and joint sealant installation quality.

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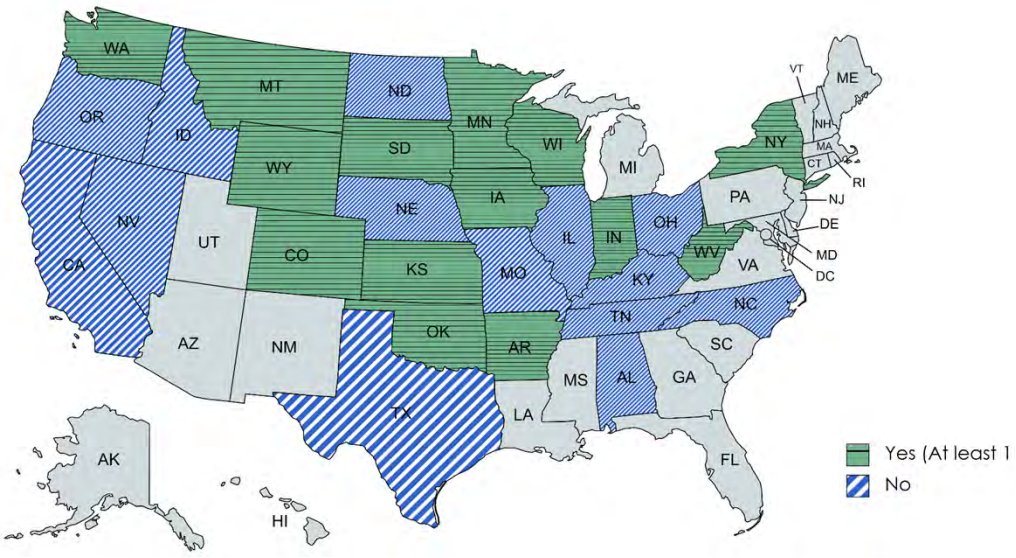
Q17: Does your Agency have price deductions for non-compliance of AIR CONTENT for concrete pavement, bridges and general concrete?

Answered: 31 Skipped: 0



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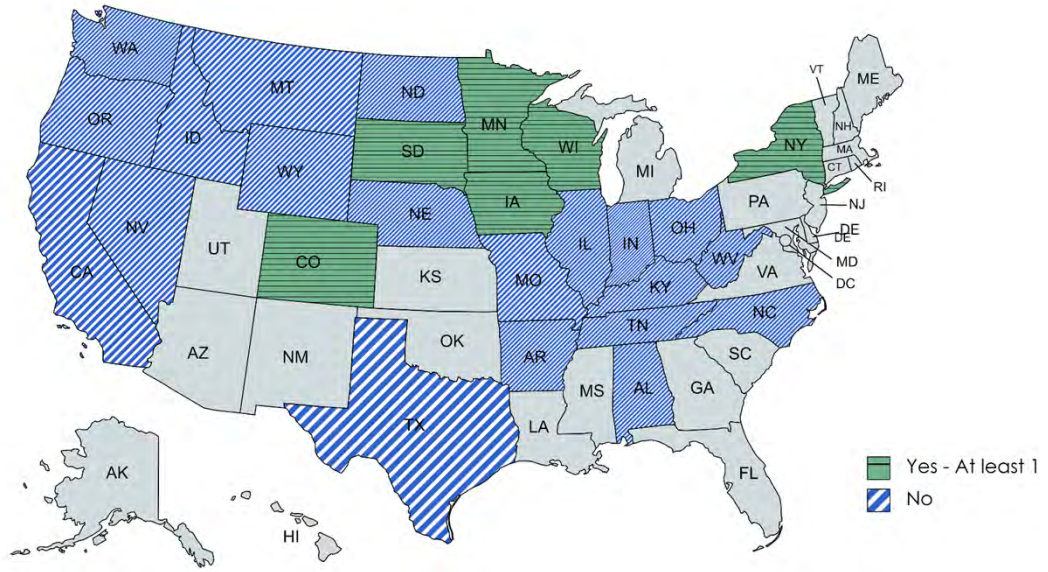
Q17: Does your Agency have price deductions for non-compliance of SLUMP for concrete pavement, bridges and general concrete?

Answered: 31 Skipped: 0



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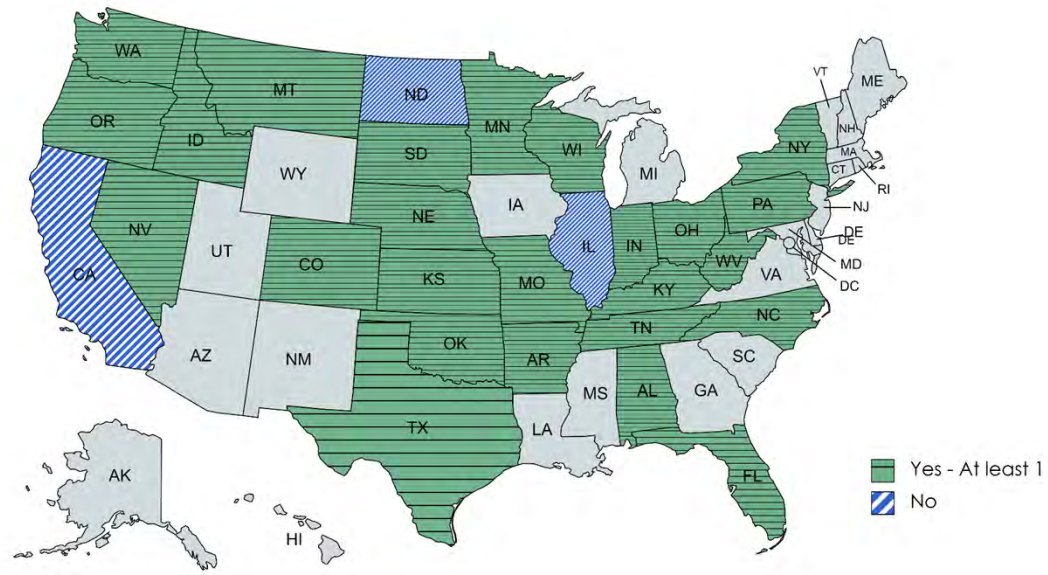
Q17: Does your Agency have price deductions for non-compliance of STRENGTH for concrete pavement, bridges and general concrete?

Answered: 31 Skipped: 0



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Q17: Does your Agency have price deductions for non-compliance of materials and concrete properties?

Answered: 31 Skipped: 0

Property	States
Resistivity – Pavement, Bridge, General	NY, MT (Bridge Only)
Permeability – Pavement, Bridge, General	WV, MT (Bridge Only), TX (General Only)
W/C Ratio - Pavement, Bridge, General	PA (long life concrete), IA, MN (Pavement Only)
Aggregate Quality – Pavement, Bridge, General	SD, MN
Gradation – Pavement	SD, OK, MT, IA, KY, WY
Gradation – Bridge	SD, MT, MN, IA, KY, WY
Gradation - General	SD, MT, MN, IA, KY
Combined Gradation - Pavement, Bridge, General	MT, MN (Bridge and General)

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Q18: Please provide a link to your Agency price adjustments for materials and concrete properties.

Agency	Remark
AL	https://www.dot.state.al.us/publications/Construction/pdf/Specifications/2022/SpecBookComplete.pdf (Sections 450, 501)
AR	https://www.ardot.gov/wp-content/uploads/2020/10/2014SpecBook.pdf - Pg 359/890; Pg 701/890
CO	https://www.codot.gov/business/designsupport/cdot-construction-specifications/2023-construction-specifications/2023-specs-book/2023-division-600
FL	See Spec 346-11: https://www.fdot.gov/programmanagement/implemented/specbooks/default.shtm See Spec 346-12 for pay reductions for plastic properties: https://www.fdot.gov/programmanagement/implemented/specbooks/default.shtm
IA	Air Content and W/C Ratio -https://iowadot.gov/erl/current/CM/content/Appendix%202-34(C).htm Slump - https://iowadot.gov/erl/current/CM/content/Appendix%202-34(B).htm Gradation - https://iowadot.gov/erl/current/CM/content/Appendix%202-34(A).htm

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Q18: Please provide a link to your Agency price adjustments for materials and concrete properties.

Agency	Remark
ID	https://apps.itd.idaho.gov/Apps/manuals/SpecBook/SpecBook23.pdf
IN	See section 501.28: https://www.in.gov/dot/div/contracts/standards/book/sep23/500-2024.pdf
KS	Handled on case by case basis @ district level when determined it can be left in place
KY	Strength - Kentucky Method
MN	https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=12292457
MO	See Section 502.15.4 at https://www.modot.org/sites/default/files/documents/2023%20Missouri%20Standard%20-%20MHTC%20%29July%202023%29-signed.pdf
MT	Section 551.03.8 https://www.mdt.mt.gov/other/webdata/external/const/specifications/2020/SPEC-BOOK/2020-SPEC-BOOK-V4-0.pdf

Q18: Please provide a link to your Agency price adjustments for materials and concrete properties.

Agency	Remark
NC	Strength – Not published
NV	https://www.dot.nv.gov/doing-business/contractors-construction/contract-services/standard-specifications-and-plans Section 501
OH	https://www.dot.state.oh.us/Divisions/ConstructionMgt/Specification%20Files/1102_01212022_for_2023.pdf
OK	https://oklahoma.gov/content/dam/ok/en/odot/documents/c_manuals/specbook/2019--full-spec-web-version.pdf Section 414.06 (R) Acceptance of Pavement and Section 509.06 Basis of Payment (Bridge)
OR	CON-CAL - https://www.oregon.gov/odot/Construction/Pages/Resources.aspx
PA	for specs: https://www.dot.state.pa.us/public/PubsForms/Publications/Pub_408/408_2020/408_2020.pdf for material properties: https://www.dot.state.pa.us/public/PubsForms/Publications/PUB_19/Pub 19.pdf

Q18: Please provide a link to your Agency price adjustments for materials and concrete properties.

Answered: 31 Skipped: 0

Agency	Remark
SD	https://dot.sd.gov/doing-business/contractors/price-adjustment-guidelines
TN	https://www.tn.gov/content/dam/tn/tdot/construction/supplemental-specifications/const_2021_ss/Const_2021_600SS.pdf
TX	https://ftp.dot.state.tx.us/pub/txdot-info/cmd/cserve/specs/2014/standard/s421.pdf
WA	5-05.3(4)A Acceptance of Portland Cement or Blended Hydraulic Cement Concrete Pavement https://wsdot.wa.gov/publications/manuals/fulltext/M41-10/Division5.pdf
WI	Air Content and Slump - 810.5.1.2 (https://wisconsindot.gov/rdwy/cmm/cm-08-10.pdf) Strength - 715.5.2 and 715.5.3 (https://wisconsindot.gov/rdwy/stndspec/ss-07-15.pdf) Temperature (810.5.1.3) and Time Limit (810.5.1.4) (https://wisconsindot.gov/rdwy/cmm/cm-08-10.pdf)

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Q18: Please provide a link to your Agency price adjustments for materials and concrete properties.

Answered: 31 Skipped: 0

Agency	Remark
WV	https://transportation.wv.gov/highways/TechnicalSupport/specifications/Documents/2023_Standard_(12-16-22).pdf
WY	Section 414.5.3 https://www.dot.state.wy.us/files/live/sites/wydot/files/shared/Construction/2021%20Standard%20Specifications/Wyoming%202021%20Standard%20Specifications%20for%20Road%20and%20Bridge%20Construction.pdf

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Q19: What does your Agency require be done when you have random cracking (please describe/include spec language)? IN PAVEMENTS

Answered: 31 Skipped: 0

Agency	Remark
AL	Investigate possible causes, suggest course of action based on severity (seal, overlay, replace, etc.)
CA	Stop production and investigate (see spec)
CO	https://www.codot.gov/business/designsupport/cdot-construction-specifications/2023-construction-specifications/2023-specs-book/2023-division-400 Section 412.16
FL	Typically it is full slab remove and replace (see FDOT Spec 350-1), but we have, on occasion, allowed some partial slab removal/replacements.
IA	https://iowadot.gov/erl/current/CM/content/CM%209.50.htm

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Q19: What does your Agency require be done when you have random cracking (please describe/include spec language)? IN PAVEMENTS

Agency	Remark
IL	Excerpt from Article 420.05(c)(1): When uncontrolled cracking occurs in the pavement slab, the pavement will be evaluated for acceptance according to the following. a. General Conditions. No section of pavement less than 6 ft (1.8 m) in length will be allowed to remain in place. Pavement removal and replacement shall be according to Section 442 applicable to the pavement design being repaired. b. Crack within Joint Area. The sawing of any joint shall be omitted if an uncontrolled crack occurs within 3 in. (75 mm) of either side of the joint prior to the time of sawing. Sawing shall be discontinued when a crack develops ahead of the saw. Uncontrolled cracks within this 3 in. (75 mm) limit will be considered an acceptable joint. c. Crack on One Side of Joint. If an uncontrolled crack develops on one side of the contraction joint, more than 3 in. (75 mm) from the joint and less than 6 ft (1.8 m) from the same joint, a minimum of 6 ft (1.8 m) of pavement removal and replacement will be required. d. Cracks on Both Sides of Joint. If cracking occurs on both sides of the joint, more than 3 in. (75 mm) from the joint, the dowel bar assembly and a minimum of 3 ft (1 m) of pavement each side of the joint shall be removed and replaced. e. Crack in Mid-Panel Area. If an uncontrolled crack develops on one side of the contraction joint in the mid panel area between 6 ft (1.8 m) from the joint and the midpoint of the panel, the entire panel shall be replaced on that side of the joint within the lane containing the cracking.

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Q19: What does your Agency require be done when you have random cracking (please describe/include spec language)? IN PAVEMENTS

Agency	Remark
IN	See section 503.06: https://www.in.gov/dot/div/contracts/standards/book/sep23/500-2024.pdf
KS	Remove & replace
MA	Repair using approved products
MN	Repair or replace pavement with random or uncontrolled cracks as directed by the Engineer. If repairing the pavement as directed by the Engineer, use a dowel bar load transfer technique in accordance with the Concrete pavement rehabilitation details. Submit the intended repair technique to the Engineer for approval. Perform pavement repairs at no additional cost to the Department. If the repair fails, replace the pavement at no additional cost to the Department. The Engineer will accept repairs in accordance with 1516, “Acceptance.”
MO	No specific wording. The resident engineer will negotiate with the contractor on how to resolve the issue. Depends on the type, size and location of the cracking.
ND	Remove and replace.
NE	Removal if random crack is within two feet of the longitudinal and transverse joints. Depending on the location and type of crack (ex. – corner, transverse crack, etc.), the crack will be stitched and sealed.

Q19: What does your Agency require be done when you have random cracking (please describe/include spec language)? IN PAVEMENTS

Agency	Remark
NV	Remove and replace
NY	Contractor is required to remove and replace under damaged and defective concrete
OK	“The Resident Engineer may reject pavement slabs with unsound concrete, uncontrolled cracking, malfunctioning sawed joints, spalling, honeycombing, surface irregularities, insufficient thickness, or other deficiencies associated with poor quality pavements.” per Section 414.04 (R)
OR	Within 28 Days after concrete placement and before opening the Pavement to Public Traffic, the Engineer will perform a Pavement crack survey. Clean the Pavement before the crack survey. Pavement with uncontrolled longitudinal cracks which are visible without magnification will be considered unacceptable and be repaired or removed as determined by the Engineer. Perform all remedial Work at the no additional cost to the Agency.
PA	Depends on nature of crack minor cracking seal w/ HWMM, Remove & Replace with patch, possible DBR with polyurethane stabilization.
SD	Repair or correction of uncontrolled cracks shall be as directed by the Engineer and at the expense of the Contractor. Refer to section 380.3.L

Q19: What does your Agency require be done when you have random cracking (please describe/include spec language)? IN PAVEMENTS

Agency	Remark
TN	In pavements – TDOT Standard Specifications, Chapter 501.15: Transverse Contraction Joints / Not to be formed unless specified.
TX	slab replacement
WA	Cracked panels, spalled panels or panels that otherwise do not meet Contract requirements shall be replaced or repaired as specified at no expense to the Contracting Agency. Defective panels shall be repaired in accordance with Section 5-01.3(4) and the following: 1. Partial panel replacement meeting the requirements of Section 5-01.3(4)B will be allowed if approved by the Engineer. 2. Materials for replacement panels shall be in accordance with Section 5-05.2. Concrete mix design used for replacement panels shall be in accordance with Sections 5-05.3(1) and 5-05.3(2). 3. Damaged base or subbase shall be replaced using the same material and thickness as required by the contract for the cement concrete pavement replaced. There shall be no additional compensation for replacing the base or subbase.

Q19: What does your Agency require be done when you have random cracking (please describe/include spec language)? IN PAVEMENTS

Agency	Remark
WI	It depends on the type of cracking. Cracking addressed in CMM 424.6 Concrete Transverse Crack Repair. Repair options per table 424.2 Transverse Crack Repair Options and 424.3 Transverse Cracking Policy for New PCC Pavements
WV	Cracks are mapped; evaluated for severity, and price adjustments issued
WY	"The engineer may isolate and reject obviously defective material and pavement without regard to testing procedures." (We usually recommend they seal cracks with a methacrylate.)

Q19: What does your Agency require be done when you have random cracking (please describe/include spec language)? IN BRIDGE DECKS

Agency	Remark
AL	Investigate possible causes, suggest course of action based on severity (seal, overlay, replace, etc.)
CA	Treat with methacrylate resin
CO	https://www.codot.gov/business/designsupport/cdot-construction-specifications/2023-construction-specifications/2023-specs-book/2023-division-600
ID	Decks that have excessive cracking or cracking that jeopardizes the structural integrity of the deck may be determined unacceptable and require removal. On completion of the wet cure of the last section overlaid, immediately treat visible cracking with a 2-component modified methacrylate penetrating sealer. Spread sand over areas on surface where sealer has puddled in an amount to ensure adequate skid resistance
KS	Determine cause and assess deduct or Remove & replace
MA	Repair using approved products
MN	Seal and sealing material dependent on crack width and severity of cracking

Q19: What does your Agency require be done when you have random cracking (please describe/include spec language)? IN BRIDGE DECKS

Answered: 31 Skipped: 0

Agency	Remark
MO	No specific wording. The resident engineer will negotiate with the contractor on how to resolve the issue. Depends on the type, size and location of the cracking.
NC	if widespread, Area Engineer analyzes and typically recommends silane or other treatment to seal cracks. If localized or small number, will typically have contractor to gravity feed epoxy to fill and seal these cracks.
ND	Large cracking issues are rare,
NE	All cracks are sealed
NV	Epoxy inject
NY	sealer or epoxy injection
OH	Item 519 (typically HMWM) https://www.dot.state.oh.us/Divisions/ConstructionMgt/OnlineDocs/Specifications/2023CMS/2023_CMS_07212023_for_web_Letter%20size.pdf

Q19: What does your Agency require be done when you have random cracking (please describe/include spec language)? IN BRIDGE DECKS

Agency	Remark
OR	After correcting non-specification surface Tolerance according to 00540.55 and after texturing the deck surface according to 00540.50(c), seal all visible cracks as follows: • In areas where cracks are 10 feet or more apart, seal each crack separately. • In areas where the cracks are numerous or are less than 10 feet apart, seal the entire area where the cracks occur. Seal with a low modulus concrete and crack sealer. Perform crack sealing Work at no additional cost to the Agency. Complete all crack sealing Work before opening to traffic. If the Bridge is opened to traffic at the Contractor's request before completing 00540.55 496 crack sealing, all additional traffic control to complete crack sealing will be at no additional cost to the Agency.
PA	Minor: HWMM. Major: Epoxy surface treatment.
SD	Determined per Occurrence
TX	Epoxy seal
WI	Crack survey (CMM 525.3.1) and crack sealing (CMM 525.3.2)
WV	Cracks are mapped; evaluated for severity, and price adjustments issued
WY	"Remove and repair areas with a significant number and size of cracks.....For cracks greater than 6 mil wide, that are not significant enough to require removal of the overlay, fill them completely with crack filler....If there is cracking throughout the deck, apply a crack healer/penetrating sealer to the entire deck surface."

Q19: What does your Agency require be done when you have random cracking (please describe/include spec language)? IN FLATWORK and OTHER STRUCTURES

Answered: 31 Skipped: 0

Agency	Remark
AL	Investigate possible causes, suggest course of action based on severity (seal, overlay, replace, etc.)
CO	https://www.codot.gov/business/designsupport/cdot-construction-specifications/2023-construction-specifications/2023-specs-book/2023-division-600
KS	In flatwork – remove and replace In other structures - Determine cause and assess deduct or Remove & replace
MA	Repair using approved products
MO	In flatwork - No specific wording. The resident engineer will negotiate with the contractor on how to resolve the issue. Depends on the type, size and location of the cracking.
NC	In flatwork - if crack is straight, typically we will have contractor saw and seal additional joint. If not, remove and replace section where crack is. In other structures - depends on location and width, but if wide enough we will have contractor to epoxy inject cracks.

Q19: What does your Agency require be done when you have random cracking (please describe/include spec language)? IN FLATWORK and OTHER STRUCTURES

Agency	Remark
ND	In flatwork - Remove and replace
NE	Parking lots – see pavements In other structures – case by case
NV	In flatwork – epoxy inject
NY	In flatwork – sealer or epoxy injection
OR	Usually nothing unless its severe and will effect service life
PA	In flatwork - HWMM, route & seal, Remove & Replace In other structures - Many treatments as named above and possible bagged treatments for vertical/overhead.
SD	Determined per Occurrence
TX	In flatwork – epoxy seal In other structures – depends on cause of cracking, but usually epoxy injection
WV	In flatwork - Cracks are mapped; evaluated for severity, and price adjustments issued In other structures - Evaluated by the Engineer of Record for rejection.

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Q20: Do you have specific workmanship language (straightedge, surface tearing, concrete uniformity, scaling, pop-outs, etc.) for concrete pavements in your spec?

Agency	Remark
AL	Yes
AR	"… the slab shall be tested…for trueness, using a straightedge."; "Straightedge testing and surface correction shall continue until the entire surface conforms to the required grade and section."
FL	Yes. FDOT Spec 352 is our concrete grinding spec which is applied to all concrete pavements. Spec 352 contains the smoothness specifications.
ID	Use a 10-foot straightedge on the surface at locations determined by the Engineer. When the straightedge is laid on finished pavement in a direction parallel with centerline or perpendicular to centerline, locate surface areas that vary more than 1/4 inch from the lower edge. Remove high points that cause the surface to exceed these tolerances by grinding.

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Q20: Do you have specific workmanship language (straightedge, surface tearing, concrete uniformity, scaling, pop-outs, etc.) for concrete pavements in your spec?

Answered: 31 Skipped: 0

Agency	Remark
IL	Article 420.09(c) Straightedge Testing and Surface Correction. After the floating has been completed, but while the concrete is still plastic, the surface of the concrete shall be tested for trueness with a 10 ft (3 m) straightedge. The straightedge shall be held in contact with the surface in successive positions parallel to the pavement centerline and the whole area gone over from one side of the slab to the other, advancing along the pavement in successive stages of 1/2 the length of the straightedge or less. Any depressions found shall be immediately filled with freshly mixed concrete, struck off, consolidated and refinished. High areas shall be cut down and refinished. Special attention shall be given to ensure that the surface across joints meets the requirements for smoothness. Straightedge testing of the surface shall continue until the entire surface is found to be free from variations from the straightedge, and the slab conforms to the required grade and cross section. When the hand method using a hand-operated longitudinal float is permitted and surface corrections made as specified in Article 420.09(b), straightedge testing may be eliminated.
KS	Workmanship language in Construction Manual

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Q20: Do you have specific workmanship language (straightedge, surface tearing, concrete uniformity, scaling, pop-outs, etc.) for concrete pavements in your spec?

Agency	Remark
MN	The Engineer may use the 10 foot straightedge as necessary to determine any defects in the hardened concrete. When measuring the hardened concrete using the straightedge, the Engineer will: Measure the hardened concrete for surface deviations greater than 1/4 inch in 10 feet. Evaluate transverse joints by centering the straightedge longitudinally across the transverse joint.
NC	Straightedge (1/8” in 10’ deviation on Pavement not included with profiler)
ND	Yes
NE	Finished concrete shall be of uniform density with no segregation, honeycombing, or large voids.
NY	Contractors are held to a ¼” in 15 ft longitudinal and ¼” in 10 ft transverse surface tolerance. We require trial batches for High Early Strength mixes to have a trial slab placed by the crew that will be placing in the field to demonstrate they are able to work with a mix before being on a project.
OH	use of 10 foot straightedge for trueness. Uniform gritty surface and tining 3/4 inch apart and 1/8 inch deep and wide.

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Q20: Do you have specific workmanship language (straightedge, surface tearing, concrete uniformity, scaling, pop-outs, etc.) for concrete pavements in your spec?

Agency	Remark
OK	Straightedge – "Test for surface smoothness by placing a straightedge between two contacts on the finished surface and measuring the distance from the surface to the straightedge." per Section 401.04 A. Tolerances (1) and Concrete uniformity – "To achieve thorough consolidation and uniformity of the pavement, ensure the spud-type hand operated vibrators have a frequency rating of at least 3,500 impulses per minute." per Section 414.03 (2) Fixed Form Method (b)
OR	12 foot straightedge
PA	Yes, see attached Spec's many treatments used, as noted in #19.
SD	Yes
TN	General Comments in TDOT Standard Specifications, Chapter 105.01 – Stopping work, 105.12 regarding removal due to workmanship.
WI	Yes, workmanship is discussed in Construction and Materials Manual (CMM 424.5 Deficiencies and Probable Causes)
WV	Yes, its found in 501.12.6 Standard Specification
WY	Sort of: "Replace areas with uncontrolled cracking, corner cracks, rough areas that grinding does not correct, or other unacceptable pavement sections. Replace full panels to the existing joints."

Q21: Do you have specific workmanship language (straightedge, surface tearing, concrete uniformity, scaling, pop-outs, etc.) for bridges in your spec?

Agency	Remark
AL	Yes
AR	"… the entire surface shall be checked…for trueness using a 10' (3 m) metal straightedge."; "As soon as the surface has set sufficiently…it shall be straightedged in both directions…"
IL	Article 503.16(a)(2) Straightedge Testing and Surface Correction. After the finishing has been completed and while the concrete is still plastic, the surface shall be tested for trueness with a 10 ft (3 m) straightedge, or a hand-operated longitudinal float having blades a minimum of 10 ft (3 m) in length and 6 in. (150 mm) in width. The Contractor shall furnish and use an accurate 10 ft (3 m) straightedge or float which has a handle not less than 3 ft (1 m) longer than 1/2 the pour width. The straightedge or float shall be held in contact with the surface and passed gradually from one side of the superstructure to the other. Advance along the surface shall be in successive stages of not more than 1/2 the length of the straightedge or float. Any depressions found shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished.
KS	Workmanship language in Construction Manual
MO	No specific wording. The resident engineer will negotiate with the contractor on how to resolve the issue.

Q21: Do you have specific workmanship language (straightedge, surface tearing, concrete uniformity, scaling, pop-outs, etc.) for bridges in your spec?

Agency	Remark
NC	Yes – Straightedge (1/8” in 10’ deviation on bridge decks….1/4” in 10’ on barrier wall)
ND	Yes
NE	Yes
NY	Machine finishing shall be used throughout all superstructure concrete placement operations, with the exception of areas which are inaccessible to finishing machines. In areas which are inaccessible to finishing machines, use of approved manual vibratory equipped power screeds may be used, with written approval of the D.C. E. S. Surfaces shall be finished to a surface tolerance of 3/8 inch in 10 feet. The surface tolerance shall be verified by the Engineer with an approved straightedge not less than 10 feet long. The straightedge shall be furnished by the Contractor who shall maintain it in good condition at the paving site at all times. Hand finishing shall be allowed only in areas inaccessible to finishing machines or manually driven vibratory-equipped power screeds. Hand finishing shall be performed in the same sequence and manner as machine finishing, unless otherwise permitted by the Engineer. Hand finishing shall be performed in such a manner as to produce a concrete surface with quality and uniformity identical to that produced by the finishing machine. Hand screeds or bullfloats shall be magnesium and 10 inches, or more, in width. Care shall be taken not to overwork the concrete surface during any finishing operation. Upon completion of screeding, surfaces which will be overlaid with portland cement concrete shall be textured to conform to §557-3.07

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Q21: Do you have specific workmanship language (straightedge, surface tearing, concrete uniformity, scaling, pop-outs, etc.) for bridges in your spec?

Agency	Remark
OH	511 uniformity and broom finish aside from smooth finish on gutter line.
OK	Surface Tearing- “Make the bottom face of this screed at least 5 in wide with a turned-up or rounded leading edge to prevent surface tearing.” per Section 505.03 (3) Special Notes for High Density Concrete
OR	12 foot straightedge, After the deck roadway concrete has been screeded with a finishing machine conforming to 00540.24, float, if necessary, to produce a uniform surface, according to 00540.55.If the Work does not conform to the prescribed limits, stop the operation until revised methods, changes in Equipment, or correction of procedures are approved for trial. Also stop the revised operation if it does not produce a specified surface.
PA	Yes, see attached Spec’s many treatments used, as noted in #19.
SD	Yes
TN	General Comments in TDOT Standard Specifications, Chapter 105.01 – Stopping work, 105.12 regarding removal due to workmanship.

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Q21: Do you have specific workmanship language (straightedge, surface tearing, concrete uniformity, scaling, pop-outs, etc.) for bridges in your spec?

Answered: 31 Skipped: 0

Agency	Remark
WI	Yes, CMM 525 Bridge Decks
WV	Yes
WY	Not a lot specifically, but our specs are pretty prescriptive overall. See Section 513.4.12.2: https://www.dot.state.wy.us/files/live/sites/wydot/files/shared/Construction/2021%20Standard%20Specifications/Wyoming%202021%20Standard%20Specifications%20for%20Road%20and%20Bridge%20Construction.pdf

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Q22: Do you have specific workmanship language (straightedge, surface tearing, concrete uniformity, scaling, pop-outs, etc.) for flatwork in your spec?

Agency	Remark
KS	Workmanship language in Construction Manual
MA	No specific workmanship language, however we specify general workmanship requirements.
MN	The Engineer will use a 10 foot straightedge to measure surface tolerance. The Department considers vertical deviations in the surface greater than 3/16 inch and line deviations greater than 1/2 inch from the required location as unacceptable Work. Remove and replace unacceptable Work as directed by the Engineer.
MO	No specific wording. The resident engineer will negotiate with the contractor on how to resolve the issue.
ND	Yes
NY	“Ensure workers installing pedestrian facilities are familiar with the requirements for those facilities under the Americans with Disabilities Act. Provide an American Concrete Institute (ACI) Certified Concrete Flatwork Technician to perform all finishing. When the contract includes 10 cubic yards or more of sidewalk and driveway concrete, provide an ACI Certified Concrete Flatwork Finisher to directly supervise all finishing. Provide proof of ACI flatwork certification to the Engineer prior to concrete placement.”

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Q22: Do you have specific workmanship language (straightedge, surface tearing, concrete uniformity, scaling, pop-outs, etc.) for flatwork in your spec?

Agency	Remark
OH	608.03 strike off with a template and smooth it with a float to obtain a sandy texture. 1/4 in radius tool on the edge.
OK	"…broom-finish or burlap-drag the final surface of concrete sidewalks, driveways, and divider strips, or complete as directed by the Resident Engineer. Connect the old and new pavement with a sawed joint." per Section 610.04 (A)
OR	Remove forms, if any, from Structures after the concrete has taken its initial set and while the concrete is still green. Repair minor defects with mortar containing one part portland cement and two parts Sand. Do not plaster exposed surfaces. The top and face of Structures shall be true and straight, free from humps, sags, or other irregularities. The surface shall not vary more than 1/4 inch from the edge of 12 foot long straightedge laid on the top or face of the Structure, except in curves. Furnish the straightedge and operate it as directed. Unless otherwise shown or directed, tool edges to 1/4 inch radius.
PA	Yes, see attached Spec's many treatments used, as noted in #19.
SD	Yes
TN	General Comments in TDOT Standard Specifications, Chapter 105.01 – Stopping work, 105.12 regarding removal due to workmanship.
WV	Yes

Q23: Any Additional Comments?

Agency	Remark
PA	Contractor has to provide certified finishers for concrete work, Sec. 704 CEMENT CONCRETE: Concrete Finisher Certification. Provide ACI certified Flatwork Finishers, ACI certified Advanced Flatwork Finishers, or National Ready-Mix Concrete Association (NRMCA) certified Exterior Flatwork Finishers to control finishing of each concrete placement operation for all concrete finishing work associated with the following Sections: 501 502 505 506 516 518 519 520 523 525 527 530 540 545 548 623 630 633 640 641 658 676 695 852 910 1001 1040 1042 1090 A minimum of 60 percent of the finishers finishing concrete on each concrete placement must possess at least one of the identified flatwork finisher certification types, unless approved by the Representative. Provide proof of flatwork finisher certification to the Representative before concrete placement.
TN	We do not have specific language for workmanship in the concrete chapters of our specifications (500s, 600s).
IA	workmanship covered in general requirements - not specific to work type https://iowadot.gov/erl/current/GS/content/1105.htm
IL	Link to current Standard Specifications from which all Article references were made: https://public.powerdms.com/IDOT/documents/1945348/Standard%20Specifications%20for%20Road%20and%20Bridge%20Construction%202022