

Construction of two lane with paved shoulder of Kohima- Bypass Road connecting NH-39(New NH-02), NH-150 (New NH-02), NH-61 (New NH- 29) and NH- 39 (New NH-02) from design km 0.00 to design Km 10.500 (Design Length- 10.500 Km) in the state of Nagaland under SARDP –NE on EPC Mode (Package I)

Schedule-H
Kohima Bypass Package I

(See Clauses 10.1 (iv) and 19.3)

Contract Price Weightages

1. The Contract Price for this Agreement is Rs. _____ Crore rupees.

Proportions of the Contract Price for different stages of Construction of the Project Highway shall be as specified below:

Item	Weightage in % of CP	Stage for Payment	Percentage weightage
1	2	3	4
Road Works including Culverts, widening and repair of culverts	30.18	A- Widening and strengthening of existing road	
		(1) Earthwork up to top of the sub- grade including excavation in soil, soft rock and hard rock, removal of unserviceable soil etc.	-
		(2) Sub-base Course	-
		(3) Non bituminous Base course	-
		(4) Bituminous Base course	-
		(5) Wearing Coat	-
		(6) Widening and repair of culverts	-
		B.1- Reconstruction/New 2-Lane Realignment / Bypass (Flexible Pavement)	-
		(1) Earthwork up to top of the sub- grade including excavation in soil, soft rock and hard rock, removal of unserviceable soil etc.	38.86
		(2) Sub-base Course	12.48
		(3) Non bituminous Base course	15.09
		(4) Bituminous Base course	16.03
		(5) Wearing Coat	7.48
		B.2- Reconstruction/New 2-Lane Realignment / Bypass (Rigid Pavement)	-
		(1) Earthwork up to top of the sub- grade	-
		(2) Sub-base Course	-
		(3) Dry Lean Concrete (DLC) Course	-

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		(4) Pavement Quality Control (PQC) Course	-
		C.1- Reconstruction/ New Service Road/ Slip Road (Flexible Pavement)	-
		(1) Earthwork up to top of the sub- grade	-
		(2) Sub-base Course	-
		(3) Non bituminous Base course	-
		(4) Bituminous Base course	-
		(5) Wearing Coat	-
		C.2- Reconstruction/New Service road (Rigid Pavement)	-
		(1) Earthwork up to top of the sub- grade	-
		(2) Sub-base Course	-
		(3) Dry Lean Concrete (DLC) Course	-
		(4) Pavement Quality Control (PQC) Course	-
		D- Reconstruction & New Culverts on existing road, realignments, bypasses	
		(1) Hume Pipe Culverts (length < 6m)	-
		(2) Box Culverts (length <6m)	10.06
Minor bridge/ Underpasses/ Overpasses	1.30	A.1- Widening and repairs of Minor Bridges (length > 6m & < 60m)	
		A.2- New Minor bridges (length >6 m and < 60 m)	
		(1) Foundation: On completion of the foundation work including foundations for wing and return walls	-
		(2) Sub-structure: On completion of abutments, piers upto the abutment / pier cap	-
		(3) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion etc complete in all respect.	-

		(4) Approaches: On completion of approaches including Retaining walls, stone pitching, protection works complete in all respect, and fit for use	-
		(5) Guide Bunds and River Training Works: On completion of Guide Bunds and river training works complete in all respects	-
		B.1- Widening and repairs of underpasses/overpasses	-
		B.2- New Underpasses/Overpasses	
		(1) Foundation: On completion of the foundation work including foundations for wing and return walls	14.79
		(2) Sub-structure: On completion of abutments, piers upto the abutment/ pier cap	22.18
		(3) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion in all respect.	59.06
		(4) Approaches : On completion of approaches including Retaining walls / Reinforced earth walls, stone pitching, protection works complete in all respect and fit for use	3.97
Major bridge(length>60 m) works and ROB/RUB/ elevated sections/flyovers including viaducts, if any	50.12	A.1- Widening and repairs of Major Bridges	
		(1) Foundation	
		(2) Sub-structure	-
		(3) Super-structure (including bearings)	-
		(4) Wearing Coat including expansion joints	-
		(5) Miscellaneous Items like hand rails, crash barrier, road markings etc.	-
		(6) Wing walls/return walls upto top	-

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	(7) Guide bunds, River Training works etc.	-
	(8) Approaches (including Retaining walls, stone pitching and protection works)	-
	A.2- New Major Bridges	-
	(1) Foundation: Foundation for abutment , piers	17.21
	(2) Sub-structure: Sub structure for abutment, piers upto abutment / pier cap level	21.37
	(3) Super-structure: including girder, deck slab, bearings (excluding wearing coat and expansion joints)	
	a) Super structure: casting of girder / fabrication of girders (steel)	19.91
	b) Super structure: casting of segments	0.00
	c) Super structure: erection of girders, deck slab and bearings	29.87
	(4) Other Ancillary work: wearing coat, expansion joints, hand rails, crash barriers, tests on completion etc complete in all respect	5.70
	(5) Miscellaneous works including Approaches: stone pitching, protection work excluding retaining wall / reinforced earth walls etc	1.77
	(6) Wing walls/return walls upto full height	2.40
	(7) Guide bunds, River Training works etc.	0.00
	(8) Retaining walls / Reinforced earth walls etc	
	a) Panel Casting	0.00
	b) Erection of panel / construction of retaining wall	1.77
	B.1- Widening and repairs of	
	(a) ROB	
	(b) RUB	
	(1) Foundations	
	(2) Sub-Structure	-
	(3) Super-Structure (Including bearings)	-

	(4) Wearing Coat (a) in case of ROB-wearing coat including expansion joints complete in all respects as specified and	-
	(b) in case of RUB-rigid pavement under RUB including drainage facility complete in all respects as specified	-
	(5) Miscellaneous Items like hand rails, crash barrier, road markings etc.	-
	(6) Wing walls/Return walls	-
	(7) Approaches (including Retaining walls, stone pitching, protection works etc.)	-
	B.2- New ROB/RUB	-
	(1) Foundations: Foundation for abutment, piers	
	(2) Sub-Structure: Sub structure for abutment, piers upto abutment / pier cap level	-
	(3) Super-Structure: including girder, deck slab, bearings(excluding wearing cost and expansion joints)	-
	a) Super structure: casting of girder / fabrication of girders (steel)	
	b) Super structure: casting of segments	
	c) Super structure: erection of girders, deck slab and bearings	
	(4) Other Ancillary work: wearing coat, expansion joints, hand rails, crash barriers, tests on completion etc complete in all respect	-
	(5) Miscellaneous works including Approaches: stone pitching, protection work excluding retaining wall / reinforced earth walls etc	-
	(6) Wing walls/return walls upto full height	-
	(7) Guide bunds, River Training works etc.	-

	(8) Retaining walls / Reinforced earth walls etc	-
	a) Panel Casting	
	b) Erection of panel / construction of retaining wall	
	C.1- Widening and repair of Elevated Section / Flyovers / Grade Separators	-
	(1) Foundations	
	(2) Sub-Structure	-
	(3) Super-Structure (Including bearings)	-
	(4) Wearing Coat including expansion joints	-
	(5) Miscellaneous Items like hand rails, crash barrier, road markings etc.	-
	(6) Wing walls/Return walls	-
	(7) Approaches (including Retaining/ Reinforced earth walls, stone pitching, protection works etc.)	-
	C.2- New Elevated Section / Flyovers / Grade Separators	-
	(1) Foundations: Foundation for abutment, piers	
	(2) Sub-Structure: Sub structure for abutment, piers upto abutment / pier cap level	-
	(3) Super-Structure: including girder, deck slab, bearings(excluding wearing cost and expansion joints)	-
	a) Super structure: casting of girder / fabrication of girders (steel)	
	b) Super structure: casting of segments	
	c) Super structure: erection of girders, deck slab and bearings	
	(4) Other Ancillary work: wearing coat, expansion joints, hand rails, crash barriers, tests on completion	-

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		etc complete in all respect	
		(5) Miscellaneous works including Approaches: stone pitching, protection work excluding retaining wall / reinforced earth walls etc	-
		(6) Wing walls/return walls upto full height	-
		(7) Guide bunds, River Training works etc.	-
		(8) Retaining walls / Reinforced earth walls etc	
		a) Panel Casting	
		b) Erection of panel / construction of retaining wall	-
Other Works	18.40	(i) Toll Plaza	-
		(ii) Road side drains	-
		Lined Drain	3.04
		Unlined Drain	-
		(iii) Road signs markings, Km stones, safety Devices etc.	3.42
		(iv) Project facilities	-
		a) Bus Bays & Bus shelters	2.63
		b) Truck lay byes	-
		c) Rest areas	-
		d) Junction	1.63
		(v) Road side plantation	0.49
		(vi) Protection Works other than approaches to the bridges, elevated sections/ flyover/ grade separators and ROBs/ RUBs	-
		(a) W-Beam Crash Barrier	2.36
		(b)Retaining Wall	22.66
		(c)Breast Wall	46.27
		(d) Seeding and Mulching	4.15
		(vii) Other Slope protection technique to be executed by Contractor	13.35
		(viii) Safety & Traffic Management during const.	-

Procedure of estimating the value of work done.

(i) Roadworks

Procedure for estimating the value of road work done shall be as follows:

Table 1.3.1

Stage for Payment	Percentage weightage	Payment Procedure
A- Widening and strengthening of existing road		
(1) Earthwork up to top of the sub- grade including excavation in soil, soft rock and hard rock, removal of unserviceable soil etc.	-	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 500m. In case of hill cutting, the payment procedure will be as under: Hill cutting: 40% of weightage of A (1) Preparation of subgrade: 60% of weightage of A (1)
(2) Sub-base Course	-	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 500m.
(3) Non bituminous Base course		
(4) Bituminous Base course		
(5) Wearing Coat		
(6) Widening and repair of culverts	-	Cost of completed culverts shall be determined on pro rata basis with respect to the total number of culverts. Payment shall be made on the completion of at least five culverts.
B.1- Reconstruction/New 2-Lane Realignment / Bypass (Flexible Pavement)	-	
(1) Earthwork up to top of the sub- grade including excavation in soil, soft rock and hard rock, removal of unserviceable soil etc.	38.86	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 500m. In case of hill cutting, the payment procedure will be as under: Hill cutting: 40% of weightage of B.1 (1) Preparation of subgrade: 60% of weightage of B.1 (1)

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Stage for Payment	Percentage weightage	Payment Procedure
(2) Sub-base Course	12.48	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 500m.
(3) Non bituminous Base course	15.09	
(4) Bituminous Base course	16.03	
(5) Wearing Coat	7.48	
B.2- Reconstruction/New 2-Lane Realignment / Bypass (Rigid Pavement)	-	
(1) Earthwork up to top of the sub- grade	-	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 500m. In case of hill cutting, the payment procedure will be as under: Hill cutting: 40% of weightage of B.2 (2) Preparation of subgrade: 60% of weightage of B.2 (2)
(2) Sub-base Course		Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 500m.
(3) Dry Lean Concrete (DLC) Course		
(4) Pavement Quality Control (PQC) Course		
C.1- Reconstruction/ New Service Road/ Slip Road (Flexible Pavement)	-	
(1) Earthwork up to top of the sub- grade	-	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 500m. In case of hill cutting, the payment procedure will be as under: Hill cutting: 40% of weightage of C.1 (1) Preparation of subgrade: 60% of weightage of C.1 (1)
(2) Sub-base Course	-	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 500m.
(3) Non bituminous Base course	-	
(4) Bituminous Base course	-	
(5) Wearing Coat	-	
C.2- Reconstruction/New Service road (Rigid Pavement)	-	

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Stage for Payment	Percentage weightage	Payment Procedure
(1) Earthwork up to top of the sub-grade	-	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 500m. In case of hill cutting, the payment procedure will be as under: Hill cutting: 40% of weightage of C.2 (2) Preparation of subgrade: 60% of weightage of C.2 (2)
(2) Sub-base Course	-	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 500m.
(3) Dry Lean Concrete (DLC) Course	-	
(4) Pavement Quality Control (PQC) Course	-	
D- Reconstruction & New Culverts on existing road, realignments, bypasses Culverts (length <6m)		
(1) Hume Pipe Culverts (length < 6m)		Cost of each culvert shall be determined on pro rata basis with respect to the total number of culverts. Payment shall be made on the completion of at least 01 (one) culvert
(2) Box Culverts (length < 6m)	10.06	

@ For example, if the total length of bituminous work to be done is 100 km, the cost per km of bituminous work shall be determined as follows:

$$\text{Cost per km} = P \times \text{weightage for road work} \times \text{weightage for bituminous work} \times (1/L)$$

Where

P = Contract Price

L = Total equivalent 2-Lane length in km as defined above

Similarly, the rates per km for other stages shall be worked out accordingly.

Note: The length affected due to law and order problems or litigation during execution including the length not handed over to the Contractor under clause 8.3 of this Contract Agreement due to which the Contractor is unable to execute the work, may be deducted from the total project length for payment purposes. The total length calculated here is only for payment purposes and will not affect and referred in other clauses of the Contract Agreement

(ii) Minor Bridges and Underpasses/Overpasses

Procedure for estimating the value of Minor bridge and Underpasses/Overpasses shall be as stated in table 1.3.2:

Table 1.3.2

Stage for Payment	Percentage weightage	Payment Procedure
A.1- Widening and repairs of Minor Bridges (length >60 & <60m)	0	Cost of each minor bridges shall be determined on pro rata basis with respect to the total linear length of the minor bridges. Payment shall be made on completion of widening and repair works of a minor bridge
A.2- New Minor bridges (length >6 m and < 60 m)		Cost of each minor bridges shall be determined on pro rata basis with respect to the total linear length of the minor bridges.
(1) Foundation: On completion of foundation work including foundation for wing and return walls	0	(1) Foundation: Payment against foundation shall be made on pro-rata basis on completion of at least two foundations. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub structure: On completion of abutments, piers upto the abutment / pier cap.	0	(2) Sub structure: Payment against sub structure shall be made on pro-rata basis on completion of at least two sub structures upto abutment / pier cap level of each bridge.
(3) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion etc complete in all respect.	0	(3) Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super structure of at least one span in all respects as specified in the column of "Stage of Payment" in this sub-clause.
(4) Approaches: On completion of approaches including Retaining walls, stone pitching, protection works complete in all respect and fit for use	0	(4) Approaches: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of approaches in all respect as specified in the column of "Stage of Payment" in this sub-clause.

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Stage for Payment	Percentage weightage	Payment Procedure
(5) Guide Bunds and River Training Works: On completion of Guide Bunds and river training works complete in all respects	0	(5) Guide Bunds and River Training works: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of Guide Bunds and River training Works in all respects as specified
B.1- Widening and repairs of underpasses / overpasses	0	Cost of each underpass / overpass shall be determined on pro rata basis with respect to the total linear length of the underpasses / overpasses. Payment shall be made on completion of widening & repair works of a underpass / overpass.
B.2- New Underpasses / Overpasses		Cost of each underpass / overpass shall be determined on pro rata basis with respect to the total linear length of the underpasses / overpasses.
(1) Foundation: On completion of the foundation work including foundations for wing and return walls.	14.79	(1) Foundation: Payment against foundation shall be made on pro-rata basis on completion of at least two foundations. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub structure: On completion of abutments, piers upto the abutment / pier cap	22.18	(2) Sub structure: Payment against sub structure shall be made on pro-rata basis on completion of at least two substructures upto abutment / pier cap level of each underpass / overpass.
(3) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion in all respect.	59.06	(3) Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super structure of at least one span in all respects as specified in the column of "Stage of Payment" in this sub-clause.
(4) Approaches : On completion of approaches including Retaining walls / Reinforced earth walls, stone pitching, protection works complete in all respect and fit for use	3.97	(4) Approaches: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of approaches in all respect as specified in the column of "Stage of Payment" in this sub- clause.

(iii) Major Bridgeworks, ROB/RUB and Structures

Procedure for estimating the value of Major Bridge works, ROB/RUB and Structures Work shall be as stated in table 1.3.3:

Table 1.3.3

Stage of Payment	Weightage	Payment Procedure
A.1- Widening and repairs of Major Bridges		
(1) Foundation:	0	(1) Foundation: Cost of each Major Bridge shall be determined on pro rata basis with respect to the total linear length (m) of the Major Bridge. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the major Bridge subject to completion of atleast two foundations of the major bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure:	0	(2) Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of major bridge subject to completion of atleast two sub structures of abutment / pier cap level of the major bridge
(3) Super-structure (including bearings)	0	(3) Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super structure including bearings of atleast one span in all respects as specified.
(4) Wearing Coat including expansion joints	0	(4) Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like hand rails, crash barrier, road markings etc.	0	(5) Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls upto top	0	(6) Wing walls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.

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Stage of Payment	Weightage	Payment Procedure
(7) Guide bunds, River Training works etc.	0	(7) Guide Bunds, River Training works: Payments shall be made on completion of all guide bunds/river training works etc. complete in all respects as specified.
(8) Approaches (including Retaining walls, stone pitching and protection works)	0	(8) Approaches: Payments shall be made on completion of both approaches including stone pitching and protection works etc complete in all respects as specified
A.2- New Major Bridges		Cost of each structure shall be determined on prorata basis in respect to total linear length (m) of all the structures. Payment shall be made on completion of each stage of structures as per weightage given in this table.
(1) Foundation: Foundation for abutment, piers	17.21	(1) Foundation: Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of a bridge as per weightage given in this table, subject to completion of atleast two foundations in all respect. In case load testing is required for foundation, the trigger for first payment shall include load testing also where specified.
(2) Sub-structure: Sub-structure for abutment, piers up to abutment / pier cap level	21.37	(2) Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of a bridge as per weightage given in this table, subject to completion of atleast two sub structures upto abutment/pier cap level of a bridge
(3) Super-structure: including girder, deck slab, bearings (excluding wearing coat and expansion joints)		
a) Super structure: casting of girder / fabrication of girder (steel)	19.91	(a) Super-structure (casting of girder): Unit of measurement is numbers. Payment against casing of girders shall be made on pro-rata basis with respect to total numbers of girders required in the structures on completion of a stage i.e. not less than completion of casting of at least 5 (five) girders of the structure.
b) Super structure: casting of segments	0.00	(b) Super-structure (casting of segments): Unit of measurement is numbers. Payment against casing of segments shall be made on pro-rata basis with respect to total numbers of segments required in the structures on completion of a stage i.e. not less than completion of casting of at least 10 (ten) segments of the structure.

Stage of Payment	Weightage	Payment Procedure
c) Super structure: erection of girders, deck slab and bearings	29.87	(c) Super-structure (erection of girders, deck slab and bearings): Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super structure including bearing of at least one span in all respect as specified
(4) Other Ancillary works: wearing coat, expansion joints, hand rails, crash barriers, tests on completion etc. complete in all respect	5.70	Payment shall be made on pro rata basis on completion of the stage in all respect as specified for each structure.
(5) Miscellaneous works including Approaches: stone pitching, protection works excluding retaining walls / reinforced earth walls etc.	1.77	Payments shall be made on pro rata basis on completion of the stage in all respect as specified for each structure.
(6) Wing walls/return wall up to full height	2.40	Wing / return wall upto full height: Payments shall be made on completion of all wing / return walls for a bridge as per weightage given in this table, complete in all respects as specified.
(7) Guide bunds, River Training works etc.	0.00	Payments shall be made on pro rata basis on completion of the stage in all respect as specified for each structure.
(8) Retaining wall / reinforced earth walls etc		
a) Panel Casting	0.00	a) Panel casting: Unit of measurement is area in sqm. Payments against casing of panels shall be made on pro rata basis with respect to total area panels required for the structure on completion of a stage i.e. not less than completion of casting of 25% of scope of the RE wall panel of each bridge.
b) Erection of panel / construction of retaining wall	1.77	b) Erection of panel / Construction of retaining wall: Unit of measurement is area in sqm. Payments shall be made on pro rata basis on completion of stage i.e. completion of erection of panels / construction of retaining wall complete in all respect for atleast 25% of scope of work for each structure.
B.1- Widening and repairs of		
(a) ROB		
(b) RUB		

Stage of Payment	Weightage	Payment Procedure
(1) Foundation	0	(1) Foundation: Cost of each ROB/RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROB/RUB. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the ROB/RUB subject to completion of atleast two foundations of the ROB/RUB. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure	0	(2) Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of ROB/RUB subject to completion of atleast two sub structures of abutment/pier cap level of the ROB/RUB
(3) Super-structure (including bearing)	0	(3) Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super structure including bearings of atleast one span in all respects as specified.
(4) Wearing Coat (a) in case of RoB – wearing coat including expansion joints complete in all respect as specified and (b) in case of RUB - rigid pavement under RUB including drainage facility in all respect as specified	0	(4) Wearing Coat: Payment shall be made on completion of (a) in case of ROB-wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB - rigid pavement under RUB including drainage facility complete in all respects as specified.
(5) Miscellaneous Items like hand rails, crash barrier, road markings etc.	0	(5) Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	0	(6) Wing walls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Approaches (including Retaining walls, stone pitching and protection works)	0	(7) Approaches: Payments shall be made on completion of both approaches including stone pitching and protection works etc complete in all respects as specified

Stage of Payment	Weightage	Payment Procedure
B.2- New ROB/ RUB		Cost of each structure shall be determined on pro rata basis in respect to the total linear length (m) of all the structures. Payment shall be made on completion of each stage of a structure as per weightage given in this table.
(1) Foundation: Foundation for abutment / pier	0.00	(1) Foundation: Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the ROB/RUB as per weightage given in this table, subject to completion of atleast two foundations in all respect. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified
(2) Sub-structure: sub structure for abutment, piers upto abutment / pier cap level	0.00	(2) Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of a ROB/RUB as per weightage given in this table, subject to completion of atleast two sub structures of abutment/pier cap level of a ROB/RUB
(3) Super-structure including girder, deck slab, bearings (excluding wearing coat and expansion joints)		
a) Super structure: casting of girders / fabrication of girders (steel)	0.00	(a) Super-structure (casting of girder): Unit of measurement is numbers. Payment against casing of girders shall be made on pro-rata basis with respect to total numbers of girders required in the structures on completion of a stage i.e. not less than completion of casting of at least 5 (five) girders of the structure.
b) Super structure: casting of segments	0.00	(b) Super-structure (casting of segments): Unit of measurement is numbers. Payment against casing of segments shall be made on pro-rata basis with respect to total numbers of segments required in the structures on completion of a stage i.e. not less than completion of casting of at least 10 (ten) segments of the structure.
c) Super structure: erection of girders, deck slab and bearings	0.00	(c) Super-structure (erection of girders, deck slab and bearings): Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super structure including bearing of at least one span in all respect as specified

Construction of two lane with paved shoulder of Kohima- Bypass Road connecting NH-39(New NH-02), NH-150 (New NH-02), NH-61 (New NH- 29) and NH- 39 (New NH-02) from design km 0.00 to design Km 10.500 (Design Length- 10.500 Km) in the state of Nagaland under SARDP –NE on EPC Mode (Package I)

Stage of Payment	Weightage	Payment Procedure
(4) Other Ancillary works: wearing coat, expansion joints, hand rails, crash barriers, tests on completion etc complete in all respect	0.00	Payment shall be made on pro rata basis on completion of the stage in all respect as specified for each structure.
(5) Miscellaneous works including Approaches: stone pitching, protection works excluding retaining walls / reinforced earth walls etc.	0.00	Payments shall be made on pro rata basis on completion of the stage in all respect as specified for each structure.
(6) Wing walls/return wall upto full height	0.00	Wing / return wall upto full height: Payments shall be made on completion of all wing / return walls for each ROB / RUB as per weightage given in this table, complete in all respects as specified.
(7) Retaining wall / reinforced earth walls etc		
a) Panel Casting	0.00	a) Panel casting: Unit of measurement is area in sqm. Payments against casing of panels shall be made on pro rata basis with respect to total area panels required for the structure on completion of a stage i.e. not less than completion of casting of 25% of scope of the RE wall panel of each bridge.
b) Erection of panel / construction of retaining wall	0.00	b) Erection of panel / Construction of retaining wall: Unit of measurement is area in sqm. Payments shall be made on pro rata basis on completion of stage i.e. completion of erection of panels / construction of retaining wall complete in all respect for atleast 25% of scope of work for each ROB/RUB.
C.1- Widening and repairs of Elevated Section / Flyovers / Grade Separators		

Stage of Payment	Weightage	Payment Procedure
(1) Foundation	0	(1) Foundation: Cost of each structure shall be determined on pro rata basis with respect to the total linear length (m) of the structure. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the structure subject to completion of atleast two foundations of the structure. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure	0	(2) Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of the structure subject to completion of atleast two sub structures of abutment/pier cap level of the structure.
(3) Super-structure (including bearing)	0	(3) Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of atleast one span in all respects as specified.
(4) Wearing Coat including expansion joints	0	(4) Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified
(5) Miscellaneous Items like hand rails, crash barrier, road markings etc.	0	(5) Miscellaneous: Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	0	(6) Wing walls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Approaches (including Retaining walls, stone pitching and protection works)	0	(7) Approaches: Payments shall be made on completion of both approaches including stone pitching and protection works etc complete in all respects as specified
C.2- New Elevated Section/ Flyovers/ Grade Separators		Cost of each structure shall be determined on pro rata basis in respect to the total linear length (m) of all the structures. Payment shall be made on completion of each stage of a structure as per weightage given in this table.

Stage of Payment	Weightage	Payment Procedure
(1) Foundation: Foundation for abutment / pier	0.00	(1) Foundation: Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of each structure as per weightage given in this table, subject to completion of atleast two foundations in all respect. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified
(2) Sub-structure: sub structure for abutment, piers upto abutment / pier cap level	0.00	(2) Sub-structure: Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of each structure as per weightage given in this table, subject to completion of atleast two sub structures of abutment/pier cap level of each structure.
(3) Super-structure including girder, deck slab, bearings (excluding wearing coat and expansion joints)		
a) Super structure: casting of girders / fabrication of girders (steel)	0.00	(a) Super-structure (casting of girder): Unit of measurement is numbers. Payment against casing of girders shall be made on pro-rata basis with respect to total numbers of girders required in the structures on completion of a stage i.e. not less than completion of casting of at least 5 (five) girders of the structure.
b) Super structure: casting of segments	0.00	(b) Super-structure (casting of segments): Unit of measurement is numbers. Payment against casing of segments shall be made on pro-rata basis with respect to total numbers of segments required in the structures on completion of a stage i.e. not less than completion of casting of at least 10 (ten) segments of the structure.
c) Super structure: erection of girders, deck slab and bearings	0.00	(c) Super-structure (erection of girders, deck slab and bearings): Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super structure including bearing of at least one span in all respect as specified

Construction of two lane with paved shoulder of Kohima- Bypass Road connecting NH-39(New NH-02), NH-150 (New NH-02), NH-61 (New NH- 29) and NH- 39 (New NH-02) from design km 0.00 to design Km 10.500 (Design Length- 10.500 Km) in the state of Nagaland under SARDP –NE on EPC Mode (Package I)

Stage of Payment	Weightage	Payment Procedure
(4) Other Ancillary works: wearing coat, expansion joints, hand rails, crash barriers, tests on completion etc complete in all respect	0.00	Payment shall be made on pro rata basis on completion of the stage in all respect as specified for each structure.
(5) Miscellaneous works including Approaches: stone pitching, protection works excluding retaining walls / reinforced earth walls etc.	0.00	Payments shall be made on pro rata basis on completion of the stage in all respect as specified for each structure.
(6) Wing walls/return wall upto full height	0	(6) Wing / return wall upto full height: Payments shall be made on completion of all wing walls/return walls for each structure as per weightage given in this table, complete in all respects as specified.
(7) Retaining wall / reinforced earth walls etc		
a) Panel Casting	0.00	a) Panel casting: Unit of measurement is area in sqm. Payments against casing of panels shall be made on pro rata basis with respect to total area panels required for the structure on completion of a stage i.e. not less than completion of casting of 25% of scope of the RE wall panel of each bridge.
b) Erection of panel / construction of retaining wall	0.00	b) Erection of panel / Construction of retaining wall: Unit of measurement is area in sqm. Payments shall be made on pro rata basis on completion of stage i.e. completion of erection of panels / construction of retaining wall complete in all respect for atleast 25% of scope of work for each ROB/RUB.

Note: (1) In case of innovative Major Bridge projects like cable suspension/cable stayed/ Extra Dozed and exceptionally long span bridges, the schedule may be modified as per site requirements before bidding with due approval of DG (RD) & SS, MoRT&H.

(2) The Schedule for exclusive tunnel projects may be prepared as per site requirements before bidding with due approval of DG (RD) & SS, MoRT&H.

(iv) Other works.

Procedure for estimating the value of other works done shall be as stated in table

1.3.4:

Table 1.3.4

Stage for Payment	Percentage weightage	Payment Procedure
(i) Toll Plaza	-	Payment of Toll Plaza shall be made on Pro rata basis as per following completed stages: (i) Rigid pavement upto DLC (LHS) - 12.5% (ii) Rigid pavement upto DLC (RHS) - 12.5% (iii) PQC (LHS) - 25% (iv) PQC (RHS) - 25% (v) Admin Building, Maintenance Building and Misc Works - 10% (vi) Canopy, Toll Booths, Safety Items, Misc Works - 12.5% (vii) Toll Plaza Tunnel - 2.5%
(ii) Road side drains	-	Unit of measurement is linear length in km. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 5% (five per cent) of the total length.
Lined Drain	3.04	
Unlined Drain	-	
(iii) Road signs markings, Km stones, safety Devices etc.	3.42	
(iv) Project facilities	-	Payment shall be made on pro rata basis for completed facilities.
a) Bus Bays	2.63	
b) Truck lay byes	-	
c) Rest areas	-	
d) Junctions	1.63	
(v) Road side plantation	0.49	
(vi) Repair of Protection Works other than approaches to the bridges, elevated sections/ flyover/ grade separators and ROBs/ RUBs	-	Unit of measurement is linear length. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 5% (Five per cent) of the total length.
(a) W-Beam Crash Barrier	2.36	
(b) Retaining Wall	22.66	
(c) Breast Wall	46.27	
(d) Seeding and Mulching	4.15	Unit of measurement is linear length. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 5% (Five percent) of the total length & area of not less than 10% of the total area.

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(vii) Other Slope protection technique to be executed by Contractor	13.35	Unit of measurement is linear length. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 5% (Five per cent) of the total length.
(viii) Safety & Traffic Management during const.	-	Payment shall be made on prorate basis every six months.

Note 1: The weightage for the stages of superstructure for New Major Bridges, New RoB / RUB, New Elevated sections / flyover / grade separators as mentioned in sl no 3 of A2, B2 & C2 of Table 1.3.3 will be as under:

- a) Casting of girders – 40%
- b) Erection of girders – 60%
- c) Casting of segments – 40%
- d) Erection of segments – 60%

Note 2: The weightage for the Retaining walls / Reinforced Earth walls for New Major Bridges, New RoB / RUB, New Elevated sections / flyover / grade separators as mentioned in sl no 8 of A2 and sl no 7 of B2 & C2 respectively of Table 1.3.3 will be as under:

- a) Casting of Panels – 40%
- b) Erection of Panels – 60%

Note 3: The weightage pertaining to the sub stage of Toll Plaza mentioned in sl no (i) of other works as in table 1.3.4 will be as under:

- a) Rigid pavement upto DLC (LHS) -12.5%
- b) Rigid pavement upto DLC (RHS) – 12.5%
- c) PQC (LHS) – 25%
- d) PQC (RHS) – 25%
- e) Admin Building, Maintenance Building & Misc Works – 10%
- f) Canopy, Toll Booth, Safety items & Misc works – 12.5%
- g) Toll Plaza Tunnel – 2.5%

2. Procedure for payment for Maintenance during DLP:-

- (a) The cost for maintenance shall be as stated in Clause 14.1 (v).
- (b) Payment for Maintenance shall be made in accordance with the provisions of Article 14 and Article 19.