



### Appendix A – Detailed Cost Estimates

BIA 2 - KYLE TO SD 44 RAISE PLANNING GRANT BUDGET	
DESCRIPTION OF WORK	AMOUNT
PROJECT MANAGEMENT	\$ 80,769.23
CADASTRAL SURVEY	\$ 170,000.00
TOPOGRAPHIC TARGETS AND DETAILED SURVEY	\$ 100,000.00
LIDAR SURVEY	\$ 50,000.00
CULTURAL RESOURCE SURVEY	\$ 70,000.00
WETLAND DELINEATION AND THREATENED ENDANGERD SPECIES SURVEY	\$ 70,000.00
GEOTECHNICAL INVESTIGATION AND PAVEMENT RECOMMENDATIONS	\$ 20,000.00
PRELIMINARY ENGINEERING DESIGN	\$ 350,000.00
FINAL ENGINEERING DESIGN	\$ 400,000.00
ENVIRONMENTAL ASSESSMENT AND AGENCY CONSULTATIONS	\$ 70,000.00
STAKEHOLDER AND PUBLIC MEETINGS	\$ 50,000.00
COST ESTIMATES	\$ 30,000.00
UTILITY IMPACTS IDENTIFIED AND PLANS/AGREEMENTS FOR RELOCATION	\$ 50,000.00
EXHIBITS AND APPRAISALS	\$ 220,000.00
SUBTOTAL =	\$ 1,730,769.23
TRIBAL EMPLOYMENT RIGHTS OFFICE FEE (TERO - 4%) =	\$ 69,230.77
RAISE PLANNING AND PRECONSTRUCTION TOTAL BUDGET =	\$ 1,800,000.00
ROAD RIGHT-OF-WAY AND EASEMENT ACQUISITION (TTP FUNDED) =	\$ 750,000.00
TOTAL =	\$ 2,550,000.00

**BIA 2 - KYLE TO SD 44 - RAISE GRANT COMPLETE PROJECT RECONSTRUCTION COST  
ENGINEER'S PROBABLE CONSTRUCTION COST (20.7 MILES)**

ITEM NUMBER	ITEM	QUANTITY	UNIT	ESTIMATED BID PRICE	TOTAL COSTS
004E0040	MAINTENANCE OF TRAFFIC	1	LS	\$ 240,000.00	\$ 240,000.00
009E0010	MOBILIZATION	1	LS	\$ 3,520,000.00	\$ 3,520,000.00
009E3200	CONSTRUCTION STAKING	1	LS	\$ 430,000.00	\$ 430,000.00
100E0100	CLEARING	1	LS	\$ 50,000.00	\$ 50,000.00
110E0130	REMOVE TRAFFIC SIGN	75	EACH	\$ 17.90	\$ 1,342.50
110E0135	REMOVE DELINEATOR	20	EACH	\$ 17.40	\$ 348.00
110E0300	REMOVE CONCRETE CURB AND/OR GUTTER	200	FT	\$ 10.50	\$ 2,100.00
110E0500	REMOVE PIPE CULVERT	3,500	FT	\$ 21.10	\$ 73,850.00
110E0550	REMOVE CATTLE GUARD	8	EACH	\$ 3,000.00	\$ 24,000.00
110E0570	REMOVE FENCE POST	50	EACH	\$ 25.00	\$ 1,250.00
110E0600	REMOVE FENCE	160,000	FT	\$ 0.60	\$ 96,000.00
110E0730	REMOVE BEAM GUARDRAIL	500	FT	\$ 5.50	\$ 2,750.00
110E1010	REMOVE ASPHALT CONCRETE PAVEMENT	2,000	SQYD	\$ 6.20	\$ 12,400.00
110E1100	REMOVE CONCRETE PAVEMENT	1,200	SQYD	\$ 15.60	\$ 18,720.00
110E1130	REMOVE CONCRETE DRIVEWAY PAVEMENT	300	SQYD	\$ 15.60	\$ 4,680.00
110E1140	REMOVE CONCRETE SIDEWALK	200	SQYD	\$ 15.60	\$ 3,120.00
110E7040	REMOVE GATE FOR RESET	2	EACH	\$ 375.00	\$ 750.00
120E0010	UNCLASSIFIED EXCAVATION	1,999,500	CUYD	\$ 4.40	\$ 8,798,000.00
120E1000	MUCK EXCAVATION	2,000	CUYD	\$ 15.00	\$ 30,000.00
120E6400	WATER	30,000	MGAL	\$ 22.20	\$ 666,000.00
230E0010	PLACING TOPSOIL	240,000	CUYD	\$ 2.50	\$ 600,000.00
260E1010	BASE COURSE	152,000	TON	\$ 21.50	\$ 3,268,000.00
260E1210	BASE COURSE FOR CULVERT BEDDING	8,500	TON	\$ 21.50	\$ 182,750.00
260E3010	GRAVEL SURFACING	5,000	TON	\$ 35.50	\$ 177,500.00
260E3050	SURFACING, SALVAGED ASPHALT AND GRANULAR BASE MIX	30,000	TON	\$ 10.00	\$ 300,000.00
270E0040	SALVAGE AND STOCKPILE ASPHALT MIX AND GRANULAR BASE MATERIAL	187,000	TON	\$ 8.00	\$ 1,496,000.00
320E1200	ASPHALT CONCRETE COMPOSITE	106,000	TON	\$ 90.00	\$ 9,540,000.00
332E0010	COLD MILLING ASPHALT CONCRETE	292,000	SQYD	\$ 2.00	\$ 584,000.00
320E7012	GRIND 12" RUMBLE STRIP IN ASPHALT CONCRETE	39.4	MILE	\$ 1,200.00	\$ 47,280.00
380E4050	8" PCC FILLET SECTION	1,500	SQYD	\$ 115.10	\$ 172,650.00
421E0100	PIPE CULVERT UNDERCUT	5,000	CUYD	\$ 25.00	\$ 125,000.00
421E0200	BOX CULVERT UNDERCUT	4,340	CUYD	\$ 65.00	\$ 282,100.00
450E0000	SMALL AND MEDIUM RCP CULVERTS	1	LS	\$ 1,900,000.00	\$ 1,900,000.00
450E8900	BRIDGE REMOVAL AND REPLACE WITH BOX CULVERT *	1	LS	\$ 1,050,000.00	\$ 1,050,000.00
451E0301	PIPE ENCASEMENT	2	EACH	\$ 1,429.60	\$ 2,859.20
560E0142	10'X10'PRECAST CONCRETE BOX CULVERT, FURNISH	1,320	FT	\$ 1,000.00	\$ 1,320,000.00
560E0143	10'X10'PRECAST CONCRETE BOX CULVERT, INSTALL	1,320	FT	\$ 200.00	\$ 264,000.00
560E1142	10'X10'PRECAST CONCRETE BOX CULVERT END SECTION, FURNISH	12	EACH	\$ 14,000.00	\$ 168,000.00
560E1143	10'X10'PRECAST CONCRETE BOX CULVERT END SECTION, INSTALL	12	EACH	\$ 2,000.00	\$ 24,000.00
560E2178	2-12'X12'PRECAST CONCRETE BOX CULVERT, FURNISH	880	FT	\$ 1,400.00	\$ 1,232,000.00
560E2179	2-12'X12'PRECAST CONCRETE BOX CULVERT, INSTALL	880	FT	\$ 300.00	\$ 264,000.00
560E3178	2-12'X12'PRECAST CONCRETE BOX CULVERT END SECTION, FURNISH	8	EACH	\$ 25,000.00	\$ 200,000.00
560E3179	2-12'X12'PRECAST CONCRETE BOX CULVERT END SECTION, INSTALL	8	EACH	\$ 4,000.00	\$ 32,000.00
610E0124	24' CATTLE GUARD WITH WINGS	8	EACH	\$ 27,000.00	\$ 216,000.00
610E0130	30' CATTLE GUARD WITH WINGS	5	EACH	\$ 30,000.00	\$ 150,000.00
620E0020	TYPE 2 RIGHT-OF-WAY FENCE	210,000	FT	\$ 2.30	\$ 483,000.00
620E0510	TYPE 1 TEMPORARY FENCE	150,000	FT	\$ 1.10	\$ 165,000.00
620E1020	2 POST PANEL	700	EACH	\$ 160.00	\$ 112,000.00
620E1030	3 POST PANEL	220	EACH	\$ 190.00	\$ 41,800.00
620E2016	16' TUBULAR GATE	2	EACH	\$ 600.00	\$ 1,200.00
620E2100	RESET GATE	2	EACH	\$ 300.00	\$ 600.00
632E1320	2.0" X 2.0" PERFORATED TUBE POST	3,000	FT	\$ 26.50	\$ 79,500.00
632E1510	6" X 6" WOOD POST	40	FT	\$ 25.00	\$ 1,000.00
632E1650	NO PASSING ZONE REFERENCE POST	60	EACH	\$ 60.00	\$ 3,600.00
632E1700	MILEPOST - NON-INTERSTATE MILEAGE REFERENCE MARKER	35	EACH	\$ 75.00	\$ 2,625.00
632E2022	4" x 4" WHITE DELINEATOR BACK TO BACK WITH 1.12 LB/FT POST	580	EACH	\$ 21.80	\$ 12,644.00
632E2207	4" TUBULAR WHITE DELINEATOR REFLECTOR	25	EACH	\$ 19.70	\$ 492.50

**BIA 2 - KYLE TO SD 44 - RAISE GRANT COMPLETE PROJECT RECONSTRUCTION COST  
ENGINEER'S PROBABLE CONSTRUCTION COST (20.7 MILES)**

ITEM NUMBER	ITEM	QUANTITY	UNIT	ESTIMATED BID PRICE	TOTAL COSTS
632E2510	TYPE 2 OBJECT MARKER BACK TO BACK	300	EACH	\$ 33.00	\$ 9,900.00
632E3203	FLAT ALUMINUM SIGN, NONREMOVABLE COPY HIGH INTENSITY	2,300	SQFT	\$ 23.00	\$ 52,900.00
632E3520	REMOVE, SALVAGE, RELOCATE, AND RESET TRAFFIC SIGN	5	EACH	\$ 94.00	\$ 470.00
633E0010	COLD APPLIED PLASTIC PAVEMENT MARKING, 4"	14,000	FT	\$ 4.00	\$ 56,000.00
633E0030	COLD APPLIED PLASTIC PAVEMENT MARKING, 24"	400	FT	\$ 23.00	\$ 9,200.00
633E1300	PAVEMENT MARKING PAINT, WHITE	640	GAL	\$ 16.30	\$ 10,432.00
633E1305	PAVEMENT MARKING PAINT, YELLOW	250	GAL	\$ 16.50	\$ 4,125.00
633E5000	GROOVING FOR COLD APPLIED PLASTIC PAVEMENT MARKING, 4"	14,000	FT	\$ 1.10	\$ 15,400.00
633E5015	GROOVING FOR COLD APPLIED PLASTIC PAVEMENT MARKING, 24"	400	FT	\$ 6.40	\$ 2,560.00
634E0010	FLAGGING	24,000	HOUR	\$ 24.00	\$ 576,000.00
634E0020	PILOT CAR	4,800	HOUR	\$ 40.00	\$ 192,000.00
634E0110	TRAFFIC CONTROL SIGNS	1,500	SQFT	\$ 4.70	\$ 7,050.00
634E0120	TRAFFIC CONTROL, MISCELLANEOUS	1	LS	\$ 30,000.00	\$ 30,000.00
634E0260	TYPE 3 BARRICADE, 6' SINGLE SIDED	18	EACH	\$ 127.90	\$ 2,302.20
634E0630	TEMPORARY PAVEMENT MARKING	42	MILE	\$ 1,000.00	\$ 42,000.00
635E0000	ROADWAY AND PATHWAY LIGHTING	1	LS	\$ 450,000.00	\$ 450,000.00
635E0100	PEDESTRIAN FLASHING BEACONS	2	EACH	\$ 15,000.00	\$ 30,000.00
635E0200	REMOTE WEATHER MONITORING STATION **	3	EACH	\$ 150,000.00	\$ 450,000.00
650E0060	TYPE B66 CONCRETE CURB AND GUTTER	11,400	FT	\$ 27.30	\$ 311,220.00
650E4660	TYPE P6 CONCRETE GUTTER	200	FT	\$ 27.70	\$ 5,540.00
650E6080	8" CONCRETE VALLEY GUTTER	300	SQYD	\$ 90.50	\$ 27,150.00
651E0040	4" CONCRETE SIDEWALK	50,000	SQFT	\$ 6.40	\$ 320,000.00
651E7000	TYPE 1 DETECTABLE WARNINGS	800	SQFT	\$ 65.00	\$ 52,000.00
670E1010	2' X 3' TYPE B INLET	7	EACH	\$ 3,000.00	\$ 21,000.00
670E1030	5.5' X 3' TYPE B INLET	5	EACH	\$ 7,400.00	\$ 37,000.00
720E1015	BANK AND CHANNEL PROTECTION GABION	2,000	CUYD	\$ 310.00	\$ 620,000.00
730E0200	TYPE A PERMANENT SEED MIXTURE	9,000	LB	\$ 25.00	\$ 225,000.00
730E0251	SPECIAL PERMANENT SEED MIXTURE 1 (WETLAND)	120	LB	\$ 260.00	\$ 31,200.00
731E0200	FERTILIZING	300	TON	\$ 1,000.00	\$ 300,000.00
732E0100	MULCHING	800	TON	\$ 252.80	\$ 202,240.00
734E0103	TYPE 3 EROSION CONTROL BLANKET	75,000	SQYD	\$ 2.60	\$ 195,000.00
734E0154	12" DIAMETER EROSION CONTROL WATTLE	50,000	FT	\$ 5.40	\$ 270,000.00
734E0400	ROCK CHECK DAM	100	CUYD	\$ 95.00	\$ 9,500.00
734E0845	SEDIMENT CONTROL AT TYPE B INLET WITH FRAME AND GRATE	12	EACH	\$ 165.00	\$ 1,980.00
831E0110	TYPE B DRAINAGE FABRIC	4,000	SQYD	\$ 5.00	\$ 20,000.00
831E0200	WOVEN SEPARATOR FABRIC	500,000	SQYD	\$ 3.00	\$ 1,500,000.00
831E1010	BIAXIAL GEOGRID REINFORCEMENT FOR CULVERTS	6,500	SQYD	\$ 4.00	\$ 26,000.00
831E1020	TRIAxIAL GEOGRID REINFORCEMENT FOR ROAD STRUCTURE	6,500	SQYD	\$ 4.10	\$ 26,650.00
900E0010	REFURBISH SINGLE MAILBOX	25	EACH	\$ 246.70	\$ 6,167.50
900E1080	ORANGE PLASTIC SAFETY FENCE	5,000	FT	\$ 6.40	\$ 32,000.00
900E1350	TEMPORARY SURFACING	50,000	TON	\$ 8.00	\$ 400,000.00
900E9998	TOURISM INTERPRETIVE SIGNS	1	LS	\$ 80,000.00	\$ 80,000.00
900E9999	CONTRACTOR TESTING	1	LS	\$ 450,000.00	\$ 450,000.00
ESTIMATED CONSTRUCTION COST =					\$ 45,587,000.00
CONSTRUCTION OBSERVATION 2% =					\$ 919,900.00
POWER POLES RELOCATION =					\$ 243,100.00
RURAL WATER ADJUSTMENTS =					\$ 200,000.00
TELECOMMUNICATIONS RELOCATION =					\$ 500,000.00
TOTAL ESTIMATED CONSTRUCTION COST =					\$ 47,450,000.00
DESIGN ENGINEERING 4% =					\$ 1,800,000.00
ROAD RIGHT-OF-WAY AND EASEMENTS =					\$ 750,000.00
TOTAL ESTIMATED PROJECT COST =					\$ 50,000,000.00

QUANTITIES AND COSTS ARE BASED ON DESIGN QUANTITIES AND ACTUAL BID COSTS FOR SIMILAR RECENT PROJECT NEAR THIS PROJECT

\* REFERENCE POTATO CREEK BRIDGE A028 COST ESTIMATE

\*\* COST BASED ON AVERAGE OF USDOT UNIT COST ENTRIES FOR ENVIRONMENTAL SENSING STATION (WEATHER STATION)



## Appendix B – Detailed Project Schedule

BIA 2 Rural Safety and Regional Access Project		
Detailed Project Schedule		
Activity	Planned Start Date	Planned End Date
<b>PRE-PROJECT WORK:</b>		
Permissions to Survey	4/15/2020	12/31/2020
Kyle Pathway	5/1/2021	8/31/2021
BIA 2 Obstruction Removal Project	8/1/2021	12/31/2022
<b>RAISE PLANNING PROJECT:</b>		
FHWA & Oglala Sioux Tribe RAISE Planning Agreement Signed		March 2022
Planning and Preconstruction for BIA 2 Reconstruction:	April 2022	December 2025
Cadastral Survey	3/1/2022	12/31/2022
Environmental Investigations - Desktop Survey	3/1/2022	5/31/2022
Topographic Targets and LiDAR Survey	3/1/2022	12/31/2022
Cultural Resource Site Survey	6/1/2022	12/31/2022
Wetland Delineation and Threatened Endangered Species Site Survey	6/1/2022	12/31/2022
Geotechnical Investigation & Pavement Recommendations	4/1/2022	6/30/2022
NEPA Scoping	5/1/2022	6/30/2022
Preliminary Engineering Design	7/1/2022	12/31/2023
Horizontal Alignments, Vertical Profiles, and Typical Sections	7/1/2022	7/31/2022
Grading Design	8/1/2022	12/31/2023
Hydrology and Hydraulics Design	9/1/2022	11/30/2022
Potato Creek Bridge Replacement Design	3/1/2023	6/30/2023
BIA 2 Realignment Project Design (0.4-Mile Segment within 20.7-Mile Project)	10/1/2023	12/31/2024
Submittal of NEPA Checklist to FHWA Tribal Environmental Coordinator for BIA 2 Realignment Segment	1/1/2024	2/28/2024
Completion of NEPA for BIA 2 Realignment Project		March 2024
Appraisals for BIA 2 Realignment Segment	3/1/2024	6/30/2024
Submit Appraisals to BIA for Review and Approval for Trust Land for BIA 2 Realignment Segment	7/1/2024	12/31/2024
PS&E Approval for BIA 2 Realignment (0.4-Mile Segment)		December 2024
Public and Stakeholder Meetings	11/1/2022	12/31/2022
NEPA Agency Consultations	11/1/2022	6/30/2023
Submittal of Preliminary Engineering Plans to OSTDOT for Review		December 2023
Submittal of NEPA Checklist to FHWA Tribal Environmental Coordinator for Entire Project		July 2024
Environmental Review, Comments, and Resubmittals	7/1/2024	12/31/2024
Completion of NEPA for Entire Project		December 2024
Final Engineering Design	4/1/2024	12/31/2025
Utility Impacts Identified and Plans/Agreements for Relocation	1/1/2025	12/31/2025
OSTDOT Final Review	7/1/2025	9/30/2025
BIA & FHWA Review	7/1/2025	9/30/2025
Appraisals for Trust and Fee Land	1/1/2025	6/30/2025
Submit Appraisals to BIA for Review and Approval for Trust Land	7/1/2025	12/31/2025
Right-of-Way, Easement, and Temporary Construction Easement Exhibits	1/1/2025	12/31/2025
PS&E Approval		December 2025
<b>BIA 2 Right-of-way Acquisition Project</b>		
BIA 2 Realignment Project Area (0.4-Mile Segment)	July 2024	February 2025
Right-of-way Acquisition Fee Land	7/1/2024	12/31/2021
Right-of-way Acquisition Trust Land	1/1/2025	2/28/2025
BIA 2- Kyle to SD44 (Remaining 20.3-Miles)	January 2026	December 2026
Right-of-way Acquisition Fee Land	1/1/2026	6/30/2026
Right-of-way Acquisition Trust Land	7/1/2026	12/31/2026



## Appendix C – Selection Criteria Benefits Tables

**Table C-1 Safety Project Primary Benefits**

Description of Work	Resulting Safety Improvement
Remote weather monitoring station installation	Travelers real-time transportation information on road condition, travelers can choose not to travel if road conditions show dangerous, reduce crash potential during inclement weather
BIA 2 improvements in Kyle, center turn lane and improved intersections	Better controlled turning movements, improved intersections resulting in reduced crash potential
BIA 2 improvements in Kyle, pedestrian infrastructure with crosswalks, signage, beacons, and ADA compliance	Safe spaces for residents of all ages and mobility, removes pedestrian traffic from road lanes, controlled pedestrian crossings, beacons warn drivers to stop, safer access for persons with disabilities
BIA 2 improvements in Kyle, pathway and roadway lighting	Roadway lighting at intersections reduce crash potential, pathway lighting increases safety and reduces crime at night
BIA 2 wider road top	Increased safety for all vehicles including trucks, transit, school, and tourism busses
BIA 2 improved horizontal and vertical alignment	Increased sight distance and less winding roadway, safe intersections, improved access for trucks, reduced crashes at curves
BIA 2 with safer & higher design speed	Emergency response personnel safety
BIA 2 snow storage in ditches and snow face where needed	Less snow drifting, safer road during inclement weather
BIA 2 improved surface	Consistent surface and less bumps causing vehicle movement
BIA 2 shoulders and pull-offs	Safe space for mail carriers, school buses, emergency and road maintenance personnel, and pedestrians
OST Transit bus stops	Improvement to existing bus stops and/or new stop locations to be incorporated as identified by OST Transit, moving busses off the highway and establishing safe areas to pickup/drop off passengers
BIA 2 safety edge and flattened side slopes	Increased ability to recover vehicle to road top
BIA 2 rumble strips, epoxy striping, and signage	Warning to drivers crossing rumble strips, improved striping and signage, reduced crashes
BIA 2 scenic byway overlooks and pull-off sites	Specific sites for tourists to pull-off in safe locations separated from highway traffic
BIA 2 improved access to the Veterans Cemetery	Improved sight distance, safer access to cemetery
BIA 2 Potato Creek bridge replaced with box culvert	Enables road alignment to adjust and remove reduce sag curve, widen roadway, improve side slopes, and improve sight distance
BIA 2 Trail	Safe space for pedestrians walking or biking, refuge from high speed traffic & trucks
BIA 2 Trail	Safe space for equestrian use



Table C-2 Environmental Sustainability Project Primary Benefits:

Description of Work	Resulting Environmental Sustainability
BIA 2 improvements transform BIA 2 to arterial route it is intended for	Travelers currently avoiding BIA 2 and driving on longer alternate routes will use BIA 2, thereby reducing travel time, mileage and resulting fuel consumption
Recycle existing asphalt for up to 20% of aggregate in new asphalt concrete pavement	Recycling existing asphalt reduces landfills, reduces aggregate quantity mined, reduces fuel used to deliver aggregate to project site, and reduces project cost
Recycle existing base course for a portion of new base course	Recycling existing base course reduces aggregate quantity mined, reduces delivery fuel consumption, and reduces project cost
Recycle remaining existing base course and asphalt for approaches and temporary surfacing	Using the remaining recycled asphalt and base course in lieu of gravel surfacing will reduce mining, fossil fuel consumption from mining and hauling, and project cost
Aggregates meeting specifications for the project can be mined within half mile	Use of aggregates from Tribal mines adjacent to the project will reduce project cost, fossil fuel consumption by reducing haul from 90 to 1 mile, provide economic benefit to the Tribe by selling their own aggregate, and providing much needed jobs in the region
BIA 2 improvements in Kyle, upgrade lighting to LED	Lighting upgrade to LED will provide better, adequate lighting meeting current standards, reduction in power usage and resulting lower utility costs to the Tribe
Wetland preservation sites	Protection of existing wetlands and mitigation bank for project and future projects
BIA 2 improvements support mineral development adjacent to project	Tribal mineral mines will be used for Reservation wide projects reducing costs, hauling, and fuel consumption for years to come
BIA 2 improvements support agriculture along the project and in the region	Corn producers in the region provide for South Dakota's ethanol production, 6th in the nation



**Table C-3 Quality of Life Project Primary Benefits:**

Description of Work	Resulting Quality of Life Improvement
BIA 2 improvements in Kyle, center turn lane and improved intersections	Less traffic congestion, controlled movements, more efficient travel and time savings
BIA 2 improvements in Kyle, pedestrian infrastructure with crosswalks, signage, beacons, and ADA compliance	Safe spaces for residents of all ages and mobility, separation from vehicular traffic, residents' access to Tribal transit, schools, grocery, healthcare, financial institutions, businesses, other housing areas, and people with disabilities have more access to goods & services
BIA 2 improvements in Kyle, pathway and roadway lighting	Residents have safe access to Tribal services, meal programs, school activities after dark, deters crime after dark
BIA 2 improvements in Kyle, curb & gutter and storm sewer	Improved drainage, removal of ponding areas causing muddy silted conditions on sidewalks and at approaches, removal of mosquito breeding areas
BIA 2 with safer, higher posted speed	More efficient travel and time savings
BIA 2 with safer, higher posted speed	Better connection to northeastern region of Pine Ridge Indian Reservation, Food Distribution Program in Wanblee
BIA 2 with safer & higher design speed	Emergency response time decreased
BIA 2 safer arterial highway	Less crashes and increases to life expectancy average, better access to employment, education, goods & services
BIA 2 increased sight distance, shoulders, and snow storage	Ease and safety for road maintenance crews to plow snow, less snow drifting due to larger ditches
BIA 2 improved surface	Vehicle maintenance cost reduction for residents, schools, agriculture, mining, and transit
BIA 2 shoulders and pull-offs	Convenient mail carrier and school bus pull-offs, safe parking on shoulder
BIA 2 flattened side slopes	Reduced damage to road maintenance mowers
BIA 2 better access for existing mining and agricultural businesses	Tribe and local businesses grow and increase jobs for Tribal members
BIA 2 scenic byway overlooks and pull-off sites	Picturesque overlooks and pull-off sites for visitors and opportunities for local artisans to set up sales sites
BIA 2 improved access to the Lakota Freedom Veterans Cemetery	Improved, safer access to cemetery, encourage visitors to site
OST Transit bus stops	Better access for Tribal members
BIA 2 Trail	Pedestrian refuge from high speed traffic & trucks
BIA 2 Trail	Equestrian use
Remote weather monitoring station installation	Travelers real-time transportation information on road condition



**Table C-4 Economic Competitiveness Project Primary Benefits:**

<b>Description of Work</b>	<b>Resulting Economic Growth</b>
BIA 2 improvements in Kyle	Welcoming to tourists
BIA 2 scenic byway overlooks and pull-off sites	Specific sites for tourists to pull-off in safe locations separated from highway traffic, featured in maps of scenic byway, sites for future tourism related businesses, growth of tourism industry
BIA 2 improved access to the Veterans Cemetery	Better access to tourists
BIA 2 Trail	Connection to tourism sites and marketing of trail with scenic byway promotions
BIA 2 Trail	Tourism use of equestrian trail along Crazy Horse Scenic Byway
BIA 2 wider road top, shoulders, improved intersections	Support growth of trucking for mining and agricultural industries
Transit bus stops improved and incorporated into the Project	Enables Tribal members from across the Reservation to access existing and planned amenities and businesses

**Table C-5 State of Good Repair Project Primary Benefits:**

<b>Description of Work</b>	<b>Resulting State of Good Repair</b>
BIA 2 Trail	Hard surface can be added in future
BIA 2 Pavement Section Replacement	Use of geotextiles along with base course and asphalt concrete will extend pavement structure life span
BIA 2 curb & gutter and storm sewer	Use of concrete for curb & gutter and storm sewer will extend life of asset
BIA 2 lighting	LED lighting is less cost and 10-15-year life
BIA 2 concrete culverts crossing road	Use of concrete for culverts with all joints tied will have 100-year life span
BIA 2 replace existing narrow bridge	Replace functionally obsolete bridge with concrete box culvert to have 100-year life span
BIA 2 graded road geometry	100-year life span
BIA 2 safety edge and rumble strips	Last as long as pavement structure
BIA 2 epoxy striping	3-year design life compared to 1-year of standard paint



**Table C-6 Partnership Project Secondary Benefits:**

<b>Description of Partnership/Support</b>	<b>Resulting Benefits from Partnerships and Support</b>
OSTDOT collaboration with SDDOT and Jackson Highway Superintendent	The OSTDOT will collaborate and partner with SDDOT and Jackson County Highway Department to design roadway intersections of other jurisdictions.
Project Support	The Project is supported by state and local representatives as well as Tribal Districts and local communities. State and local support ensures project success.
OSTDOT collaboration with Pine Ridge Area Chamber of Commerce and OST Department of Tourism	The OSTDOT will collaborate with Pine Ridge Area Chamber of Commerce and OST Department of Tourism for Crazy Horse Scenic Byway pull-offs and overlook sites to be incorporated into the Project.
OSTDOT collaboration with OST Transit	The OSTDOT will collaborate with the OST Transit to determine locations to incorporate transit stops along the Project corridor such as Kyle and Potato Creek communities and the Lakota Freedom Veterans Cemetery.

**Table C-7 Innovation Project Secondary Benefits:**

<b>Description of Work</b>	<b>Benefits from Innovative Technologies, Innovative Project Delivery, and Innovative Project Financing</b>
Installation of Remote Weather Monitoring Station	Travelers will have access to real-time transportation information on road condition, will fill in traveler information gaps within Pine Ridge Indian Reservation
Lidar and GPS Survey	Use of the most innovative survey techniques available enable faster survey of existing conditions and preliminary engineering design can begin sooner
BIA 2 road structure use of geotextile separation fabric between subgrade and base course	Use of geotextile under base course separates base course from silty subgrade and prevents contamination, provides complete salvage of materials in future, and provides strength where gaps in subgrade strength exist
BIA 2 road structure use of triaxial geogrid between layers of base course	Use of triaxial geogrid will be evaluated for use in the road structure to increase strength and longevity of road structure and reduce base course and asphalt concrete thickness. Evaluation will include life-cycle cost analysis.
BIA 2 road structure use of recycled asphalt from the existing road	Cold milling and stockpiling the top of existing asphalt surface to be used in the new asphalt concrete will decrease cost of asphalt and decrease project delivery time due to not hauling 20% of new aggregate from 90 miles away.
Use of precast concrete in lieu of cast-in-place for culverts and storm sewer	Use of precast allows for quicker project delivery, and less traffic detours



Table C-7 Innovation Project Secondary Benefits (Continued):

Description of Work	Benefits from Innovative Technologies, Innovative Project Delivery, and Innovative Project Financing
LED lights in Kyle	Highly efficient LED lights will replace existing old and inefficient and inadequate lighting in Kyle saving in future utility costs
Epoxy paint for lane striping	Use of epoxy paint, a higher quality and longer lasting paint, will be used on this project. The paint lasts three years versus the standard paint specified which only last one year
Rapid Flashing Pedestrian Beacons in Kyle at Oglala Lakota College and Head Start crossing	Flashing beacons along with crosswalk will provide safety for the pedestrians crossing BIA 2 to go to the Oglala Lakota College and Head Start facilities. Also, students living at the college will be able to safely cross BIA 2 to access the gas station, transit bus stop, healthcare clinic, post office, bank, restaurants, movie theater, and grocery store.
Rumble strips and safety edges	Innovative construction methods including rumble strips and safety edges will be used in construction to provide rumble warning to drivers leaving the driving lane and additional safety at the shoulder safety edge which enables drivers to recover from leaving the road top
Project phases	Project will be designed so that it can be broken into construction segments or completed as one
Planning for BIA 2 Realignment Project	The first phase of construction will be the BIA 2 Realignment Project which received construction funding and not planning funds. RAISE funds will be used to expedite the planning and preconstruction activities for the 0.4-mile project east of Kyle



RAISE PLANNING GRANT APPLICATION

**BIA 2 Rural Safety and Regional Access Project**

## **Appendix D – OSTDOT Assurance and Wage Certification**



**OGLALA SIOUX TRIBE  
TRANSPORTATION DEPARTMENT**



David A. Kelly  
Director

Emma Featherman Sam  
Transit Coordinator

Lynda Red Eagle  
Admin Assistant/Pgrm  
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Tonia Ecoffey  
GPS/GIS Coordinator  
Highway Safety Liaison

July 1, 2021

Peter Paul Montgomery Buttigieg, Secretary  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

**RE: Oglala Sioux Tribe RAISE Planning Grant Application for the BIA 2 Rural Safety and Regional Access Project**

Dear Secretary Buttigieg:

On behalf of the Oglala Sioux Tribe of the Pine Ridge Indian Reservation, please accept this letter as formal assurance of completing right-of-way acquisition to support the BIA 2 Rural Safety and Regional Access Project. If awarded RAISE planning grant funds, a follow up project named BIA 2 Right-of-way Acquisition will be completed with Tribal Transportation Program (TTP) funds as evidenced by the recently submitted 2021-2025 TTIP.

This project seeks to improve public safety, stimulate the local economy, reduce travel time, and create jobs by reconstructing 20.7 miles of arterial transportation corridor on BIA 2, which stretches from Kyle, South Dakota to South Dakota Highway 44. This request of RAISE funds is for planning and preconstruction activities and does not include right-of-way acquisition.

As the Director of the Department of Transportation, it is my duty to oversee fiscal management of TTP funds. The Oglala Sioux Tribe Department of Transportation (OSTDOT) has extremely limited funding, but because the BIA 2 Rural Safety and Regional Access Project is a significant project, the OSTDOT has committed \$750,000 in TTP funding from fiscal year 2024 to acquire right-of-way and temporary construction easements through a separate project following the RAISE funded planning project.

If you have any questions, please do not hesitate to contact myself or Tonya Huber, PE, with KLJ. Mrs. Huber can be reached at 605-721-5553 and [tonya.huber@kljeng.com](mailto:tonya.huber@kljeng.com).

Sincerely,

David A. Kelly  
Director



**OGLALA SIOUX TRIBE  
TRANSPORTATION DEPARTMENT**



David A. Kelly  
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July 1, 2021

Peter Paul Montgomery Buttigieg, Secretary  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

**RE: Federal Wage Rate Requirements: BIA 2 Rural Safety and Regional Access Project**

Dear Secretary Buttigieg:

On behalf of the Oglala Sioux Tribe of the Pine Ridge Indian Reservation, please accept this letter as formal assurance that the Oglala Sioux Tribe understands the Federal wage rate requirements included in subchapter IV of chapter 31. of title 40, U.S.C., apply to all projects receiving funds under this program, and apply to all parts of the project, whether funded with RAISE Transportation Discretionary Grant funds, other Federal funds, or non-Federal funds.

If you have any questions, please do not hesitate to contact myself or Tonya Huber, PE, with KLJ. Mrs. Huber can be reached at 605-721-5553 and [tonya.huber@kljeng.com](mailto:tonya.huber@kljeng.com).

Sincerely,

David A. Kelly  
Director