

Transportation Alternatives Program Instructions and Application For projects in the Tulsa Urbanized Area

A Grant Program of Moving Ahead for Progress in the 21st Century (MAP-21)
U.S. Department of Transportation
Federal Highway Administration

BROKEN ARROW CREEK TRAIL PHASE 2







Indian Nations Council of Governments (INCOG)
Transportation Planning Division
2 W. 2nd Street, Suite 800
Tulsa, OK 74103-3116



Final version - 3/30/16

FFY 2015-2016 Transportation Alternatives Program Application INCOG Urbanized Area

Part I: Applicant Information

Project Title	Broken Arrow Creek Trail – Phase 2
Project Location (must be principally in the Tulsa Urbanized Area)	City of Broken Arrow, Oklahoma
Sponsor (must be eligible sponsor under Section C)	City of Broken Arrow
Sponsor Contact Name	Roger Hughes
Sponsor Contact Title	Project Engineer
Address	P.O. Box 610, Broken Arrow, OK 74013
Phone	918-259-2400 x 5260
Email	rhughes@brokenarrowok.gov

Part II: Project Financial Information

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	Sponsor Funds (20% minimum)	Federal Funds	Total
Amount	\$264,207.28	\$792,621.84	\$1,056,829.12
Percentage	25%	75%	100%
Pro	ject Category	Small (≤\$75,000 Feder _X_ Large (\$75,001 - \$500	,
	if multiple applications are ed from one entity)		

The City of Broken Arrow and our consultants have looked at alternatives to reduce the overall cost of the project to get the total federal request below \$500,000. While we have implemented significant cost savings and reductions, our request is for \$792,621.89. We looked at an alternate alignment, but it was not viewed as a viable option for cost savings due to many water crossings and right-of-way issues. We believe the project should be the size and quality we have suggested to serve as a successful connector link in Broken Arrow's community master trail plan. The city understands the federal funds limit. If the project is awarded with \$500,000 maximum federal funding, then the City of Broken Arrow is prepared to make up the funding difference in order to have the project constructed.

Certification:

I certify that <u>City of Broken Arrow</u> supports the proposed project, has the legal authority to pledge matching funds, and has the legal authority to apply for state or federal funds. I further certify that matching funds are available or will be available for the proposed project.

Signature		Date:	
Printed Name:	Thomas D. Hendrix	Title:	Engineering Division Manager

Part III: Project Technical Information

Required elements (attach additional pages)

- 1. Resolution from governing body indicating support for the project and commitment of non-federal matching funds and ongoing maintenance of the proposed project
- 2. Detailed, complete and realistic project budget
- 3. Project map. Ensure that the project is inside the <u>Urbanized Area</u>

Optional elements (attach additional pages)

- 1. Conceptual design plans showing a rendering of the project
- 2. Photos of existing conditions at the project site
- 3. Demographic information showing the population served
- 4. Letters of support from community organizations
- 1. Describe your project (location, project type, length)

Phase 2 of the Broken Arrow Creek Trail will be a shared use path with the trail edge a minimum distance of 5'-0" off of the road. The majority will be 10' wide asphalt placed on a 6" aggregate base and an 8" compacted sub-grade. Additionally, there will be concrete ADA curb ramps and one creek crossing. All trail and at grade street crossings will be appropriately marked with signs and pavement markings/striping in accordance with the current editions of both the American Association of Highway and Transportation Officials (AASHTO) and the Manual on Uniform Traffic Control Devices (MUTCD).

The proposed alignment for Phase 2 of the Broken Arrow Creek Trail is approximately 0.86 miles in length. It will connect to the Phase 1 (funded & in design phase) portion of the Broken Arrow Creek Trail at the northwest corner of Ithica Place & S. 1st Place intersection. It will extend north along the west side of S. 1st Place approximately 200 linear feet to a pedestrian bridge that will traverse Sequoyah Creek. It then will continue north past the First Baptist Church on relatively flat ground. The next three properties (A New Leaf, Broken Arrow Municipal Court, and Broken Arrow Street & Stormwater) all have parking lots in close proximity to S. 1st Place. So the alignment will be located closer to the road over an existing drainage ditch for approximately 1000 linear feet. This will require the installation of curb and gutter along the road, reinforced concrete pipe below the trail, and other various drainage structures. Continuing north at the Kingdom Hall of Jehovah's Witness, the alignment will be located further off the road on relatively flat ground. The next 300 linear feet of alignment passes by Swanda Acres neighborhood, and will be located closer to the road over an existing drainage ditch due to limited right of way. Again this will require curb and gutter along the road, reinforced concrete pipe below the trail, and other various drainage structures. The final neighborhood the alignment will pass is Arrow Acres. Ample right of way will allow the alignment to be further off the road on relatively flat ground. Lastly the alignment will cross E. Washington Street, and connect to an existing trail located in Arrowhead Park, which connects to Oak Crest Elementary School.

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2. Describe how the project fits into existing plans and how the public has been engaged in the project planning. What project planning has taken place prior to this application?

The planning process for the Phase 2 trail began by reviewing the 2013 Broken Arrow Creek Trail conceptual plan submitted in the FFY 2015-2016 Transportation Alternatives Program Application. The GO Plan (a comprehensive bicycle and pedestrian regional master plan) was also referenced during the design process, and the trail alignment complies with the GO Plan. It defines Broken Arrow's community master trail plan, illustrating both existing and proposed bicycle facilities. To date, alternative corridors have been explored, and extensive site investigation of the entire project area have been conducted.

Multiple meetings to propose and review the alignments for Phase 2 of the Broken Arrow Creek Trail have been conducted. Input was directly sought from both Broken Arrow's Engineering and Parks & Recreation departments. Phase 2 of the Broken Arrow Creek Trail will serve as a key linkage that eventually provide alternative transportation alternatives from the Liberty Parkway Trail to the heart of the community, including The Rose District, Broken Arrow Northeastern State University, Tulsa River Parks, and Sand Springs.

3. Describe any safety benefits the project will achieve. Is there evidence of crash experience that would benefit pedestrians or bicyclists?

Phase 2 of the Broken Arrow Creek Trail will provide a safe, alternative transportation solution for Broken Arrow citizens because the of the trail alignment's separation from the street. This will greatly reduce the amount of interactions between trail users and vehicular traffic. Refer to the ODOT 2014 crash data attachment for statistical information. Of particular safety importance is the fact that 3 public schools and one public park will all be connected by this trail. A safe environment for children to utilize the facility is paramount. Additional safety along the trail will be provided through the use of signage, striping marked street crossings with curb ramps, and drainage enhancements. All aspects of the design will be in compliance with the current editions of the American Association of Highway and Transportation Officials (AASHTO), the Manual on Uniform Traffic Control Devices (MUTCD), and the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG).

4. How does the project benefit your community? How are destinations within the community connected by the project? How might people use the project as a transportation alternative to get to work, school or to make personal trips.

According to the 2014 Census Bureau American Community Survey, 6.9% of Broken Arrow citizens are disabled under the age of 65 and 10.4% of the local citizens are over the age of 65. These citizens coupled with other non-driving pedestrians rely on pedestrian friendly means of transportation and will benefit from the Tap improvement funds.

Phase 2 of the Broken Arrow Creek Trail will provide pedestrian and bicycle access to 6 adjacent neighborhoods, as well as connect into Broken Arrow's existing trail system. Citizens can utilize this trail as an alternate transportation mode for both daily commuting and recreational purposes. Multiple public and private facilities will be directly connected to the trail, including: Oak Crest Elementary School, B.A. Municipal Court, B.A. Street & Stormwater Department, Arrowhead Park, Faith Baptist Church, and Kingdom Hall of Jehovah's Witnesses. In addition, there will be multiple indirect connections via adjoining trails, including: the Broken Arrow Rose District, Broken Arrow Freshman Academy, Arrow Springs Elementary School, Tulsa Tech Broken Arrow Campus, Northeastern State University Broken Arrow Campus, the Liberty Trail, City of Tulsa, City of Jenks, and City of Sand Springs.

5. Does the sponsor have control of the right-of-way for the project? If so, has the ROW been acquired in accord with the Federal Uniform Relocation Assistance and Acquisition Policies Act?

The City has right-of-way for 3,500 linear feet of the trail alignment. The remaining 1,000 linear feet spans 2 properties: Faith Baptist Church and Kingdom Hall of Jehovah's Witnesses. The property owners will be contacted (in accord with the Federal Uniform Relocation Assistance and Acquisition Policies Act) to acquire easements in written format. In the event that easements cannot be acquired, then the alignment will be relocated within the City's right-of-way along S. 1st Place. The trail will have to traverse drainage ditches in several areas due to limited right of way access. Most of the streets intersecting the proposed multi-use trail consist of moderate to high vehicular traffic. Along the alignment there will be a total of 3 at-grade street crossings and one grade separated crossing over Sequoyah Creek.

6. Describe the proposed ownership and maintenance responsibilities for the project once it is completed.

The maintenance of the trail will be handled by the City of Broken Arrow Parks and Recreation Department. Funding will be budgeted for routine maintenance, including mowing and cleanup. The maintenance of the drainage enhancements will be handled by the Streets and Stormwater Department.

7. Use this space to provide any additional details that relate to the rating criteria that were not addressed in the questions above.

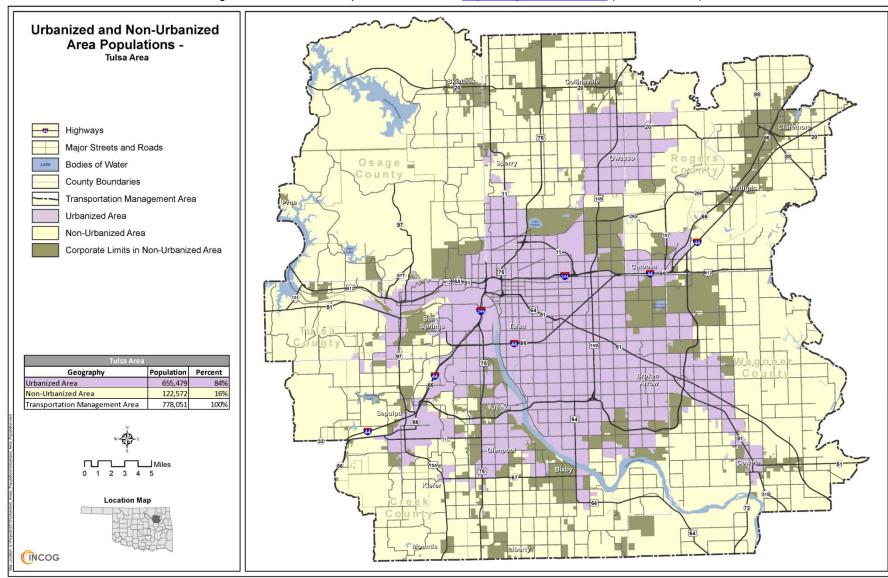
The Broken Arrow Creek Trail Phase 2 will be a continuation of approximately 30 miles of continuous trails that form the spine of the regional trail system and connect the surround communities, including Sand Springs, Jenks, Tulsa, and Broken Arrow.

- 8. Attach maps, budget estimates, and resolution from local governing body. List attachments here:
 - a. Broken Arrow Creek Trail Phase 2 Overall Plan Sheet (1 Sheet)
 - b. Broken Arrow Creek Trail Phase 2 Conceptual Plan (2 Sheets)
 - c. Conceptual Illustrations of Trail and Bikeway (2 Sheets)
 - d. Existing conditions photographs (4 Sheets)
 - e. Cost Estimate for Alignment (1 Sheet)
 - f. ODOT 2014 crash data (9 Sheets)

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APPENDIX A – TULSA URBANIZED AREA (2010 Census Defined)

All applications submitted under this program must be in the <u>urbanized area</u> shown on this map in purple A digital version of this map can be found at: http://bit.ly/TULUZAMAP (case sensitive)



City of Broken Arrow Resolution No. 920 Resolution to Request Programming of Tulsa Urbanized Area Transportation Alternatives Funds

WHEREAS, Transportation Alternatives Urbanized Area funds have been made available for transportation improvements within the Tulsa Urbanized Area; and

WHEREAS, The <u>City of Broken Arrow</u> has selected a project described as follows: <u>Broken Arrow Creek Trail</u>

Phase 2, extending from the intersection of Ithica Place and South First Place north to Arrowhead Park on the north side of the intersection of South First Place and East Washington Street; and

WHEREAS, the selected project is consistent with the local comprehensive plan, including applicable Major Street and Highway Plan Element or the Tulsa Regional Bicycle / Pedestrian Master Plan (GO Plan), as applicable, and the Regional Transportation Plan; and

WHEREAS, the engineer's preliminary estimate of cost is \$\(\frac{1}{2}\),056,829.12\), and Federal participation under the terms of the federal law, Moving Ahead for Progress in the 21st Century (MAP-21) relating to Transportation Alternatives Urbanized Area funds are hereby requested for funding of \(\frac{75}{2}\) percent of the project cost; and

WHEREAS, the <u>City of Broken Arrow</u> proposes to use <u>2014 Quality of Life General Obligation Bonds</u> funds for the balance of the project costs; and

WHEREAS, the <u>City of Broken Arrow</u> agrees to provide for satisfactory maintenance after completion, and to furnish the necessary right-of-way clear and unobstructed; and

WHEREAS, the <u>City of Broken Arrow</u> has required matching funds available and further agrees to deposit with the Oklahoma Department of Transportation said matching funds within thirty (30) days after approval by the Federal Highway Administration.

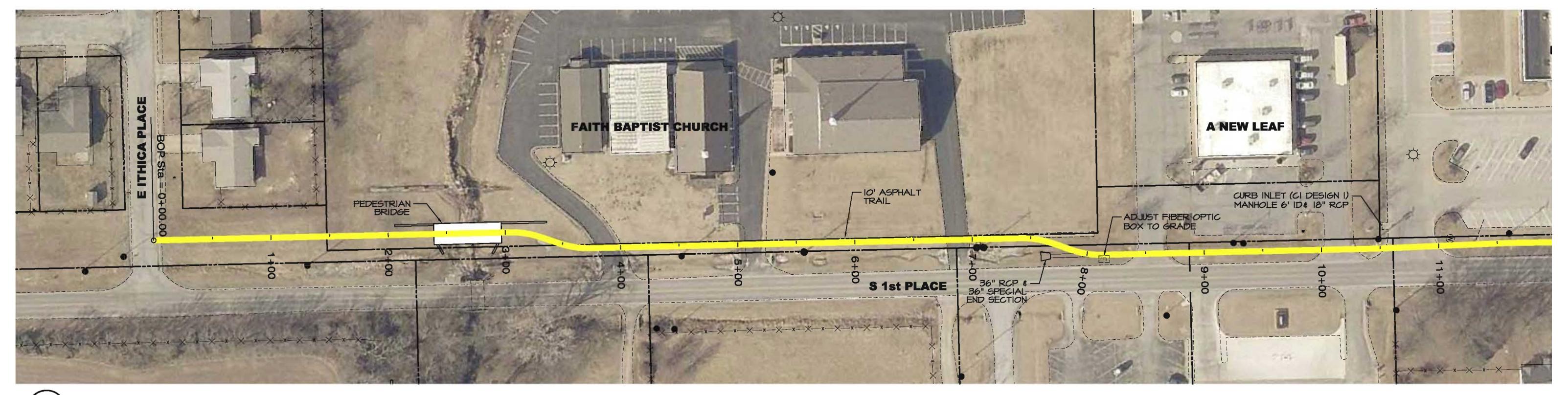
NOW, THEREFORE, BE IT RESOLVED: That the Indian Nations Council of Governments is hereby requested to program this project into the Transportation Improvement Program for the Tulsa Transportation Management Area; and

BE IT FURTHER RESOLVED: That upon inclusion in the Transportation Improvement Program, the Oklahoma Transportation Commission is hereby requested to concur in the programming and selection of this project and to submit the same to the Federal Highway Administration for its approval.

	ATTEST:
Mayor	City Clerk



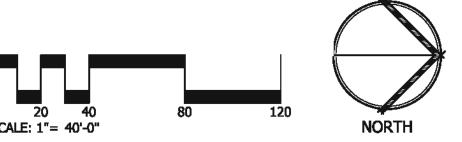








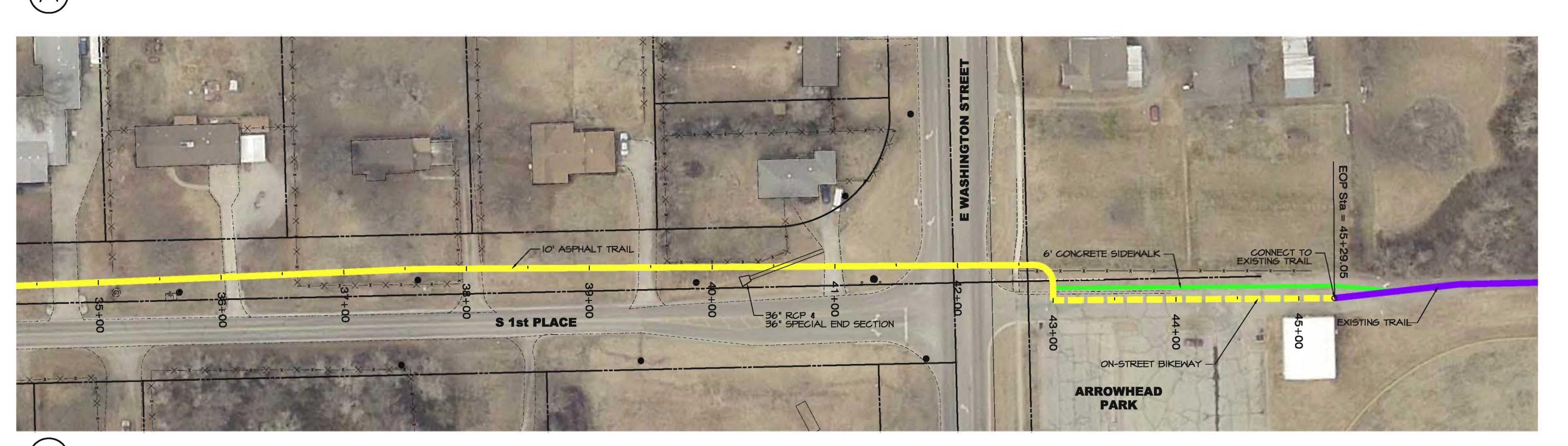


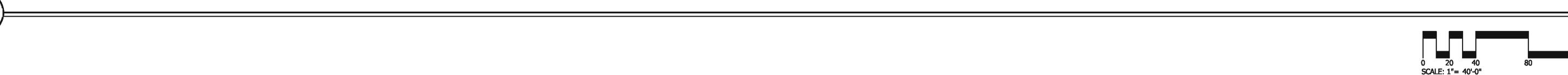


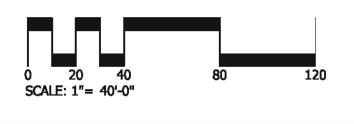








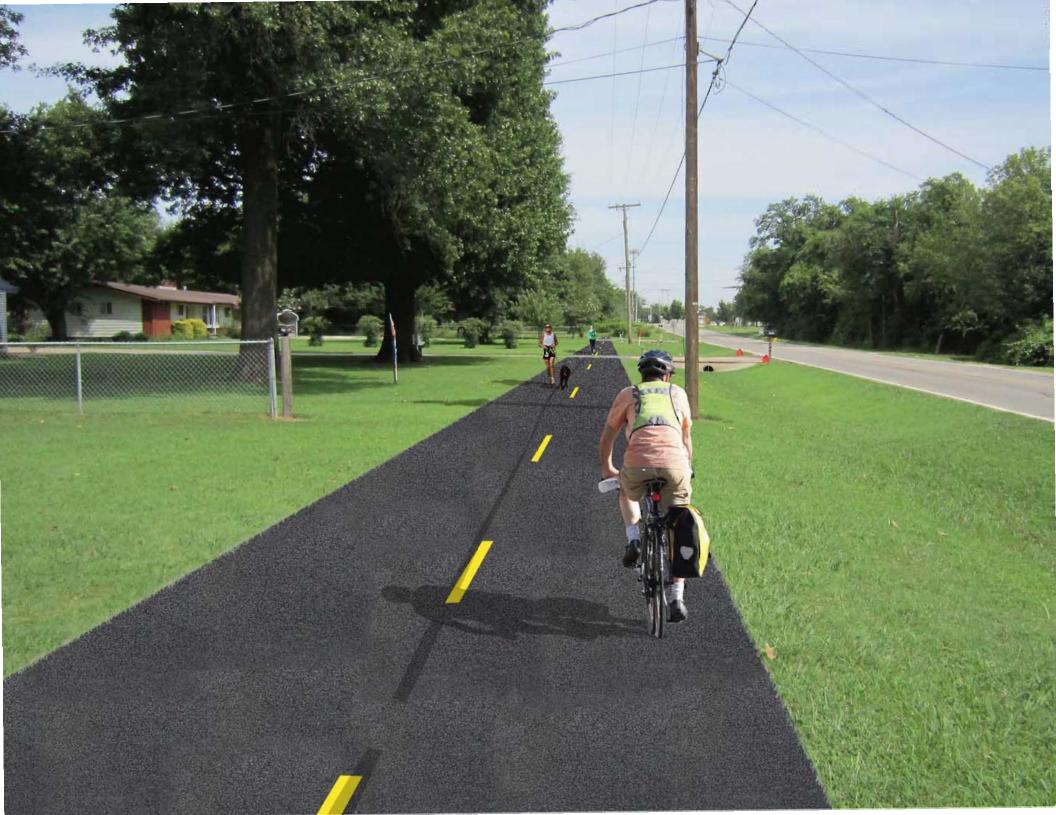
















North side of Ithica Pl. - Looking north



Faith Baptist Church south driveway - Looking north



Faith Baptist Church drainage structure at south driveway - looking south



Faith Baptist Church existing utilities at center driveway- Looking south



Pedestrian bridge location - Looking south



Faith Baptist Church existing sidewalk at south driveway - Looking south



Faith Baptist Church center driveway - looking south



Faith Baptist Church existing sidewalk at center driveway - looking south



Faith Baptist Church - Looking south



A New Leaf north driveway - Looking south



Municipal Court south driveway - looking south



Municipal Court north driveway- Looking north



A New Leaf south driveway - Looking south



Drainage structures at Municipal Court south driveway - Looking north west



Drainage structure at Municipal Court south driveway - Looking west



Drain pipe at Municipal Court north driveway - Looking west



Police Station south - Looking south



Police Station north driveway- Looking south



Drainage Channel at Kingdom Hall of Jehovah's Witnesses - Looking west



Kingdom Hall of Jehovah's Witnesses - Looking south



Police Station north driveway- Looking north



Property along 91st Pl. - Looking south



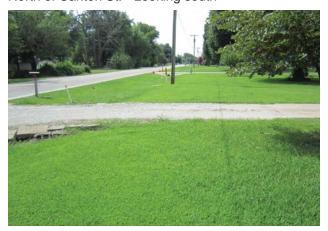
Fiber Optics Utility at Kingdom Hall of Jehovah's Witnesses - Looking south



Canton St. - Looking south



North of Canton St. - Looking south



1st Pl. driveway - Looking south



1st PI. fence encroachment - Looking south



Southwest corner of 91st St. & 1st Pl. - Looking north



North of Canton St. - Looking north



1st Pl. driveway - Looking north



1st Pl. driveway - Looking south

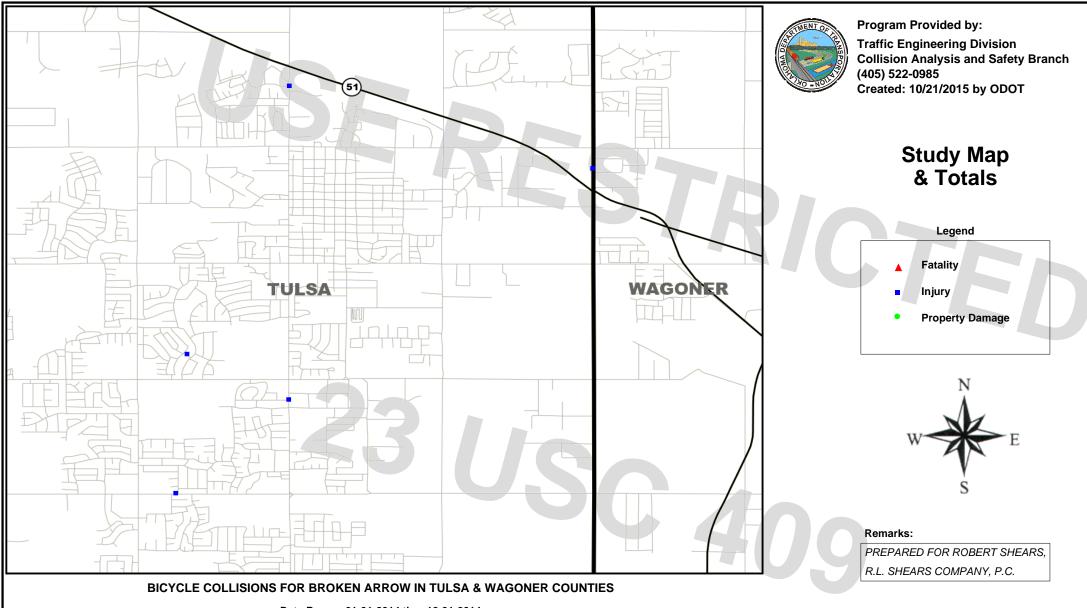


Northwest corner of 91st St. & 1st Pl. - Looking south

ENGINEER'S ESTIMATE BROKEN ARROW CREEK TRAIL PHASE 2 09 SEPTEMBER 2015

ITEM#	SPEC NUMBER	ITEM DESCRIPTION	UNIT	QUAN.	UNIT PRICE	AMOUNT
	201 (B)	SELECTIVE CLEARING	LSUM	1	\$5,000.00	\$5,000.00
	202 (A)	UNCLASSIFIED EXCAVATION	CY	993	\$12.00	\$11,916.00
	202 (D)	UNCLASSIFIED BORROW	CY	4257	\$16.00	\$68,112.00
	221 (C)	TEMPORARY SILT FENCE	LF	4997	\$2.00	\$9,994.00
	230 (A)	BERMUDA GRASS SOLID SLAB SOD	SY	10237	\$2.00	\$20,474.00
	303 (A)	AGGREGATE BASE - TYPE A	CY	1181	\$42.00	\$49,602.00
	310 (B)	SUBGRADE METHOD B	SY	5003	\$1.75	\$8,755.25
	325	SEPARATOR FABRIC	SY	500	\$2.50	\$1,250.00
	326 (B)	GEOGRID REINFORCEMENT	SY	500	\$3.50	\$1,750.00
	411 (C)	ASPHALTIC CONCRETE TYPE C	TON	667	\$80.00	\$53,360.00
	414 (B)	ASPHALT CONCRETE PAVING - PAVEMENT REPAIR	SY	309	\$85.00	\$26,265.00
		TYPE I-A PLAIN RIPRAP 12"	TON	24	\$70.00	\$1,680.00
		FILTER FABRIC (RIPRAP)	SY	19	\$35.00	\$665.00
	609 (B)	COMBINED CURB AND GUTTER (6" BARRIER)	LF	1058	\$21.00	\$22,218.00
		5" CONCRETE PAVEMENT	SY	276	\$50.00	\$13,800.00
	(/	6" CONCRETE DRIVEWAY H.E.S.	SY	943	\$75.00	\$70,725.00
	610 (I)	TACTILE WARNING DEVICE	SF	139	\$35.00	\$4,865.00
		MANHOLE 6' ID	EA	7	\$4,000.00	\$28,000.00
		INLET (CI DESIGN 1)	EA	4	\$4,600.00	\$18,400.00
		ADDITIONAL DEPTH INLET (CI DESIGN 1)	VF	6	\$400.00	\$2,400.00
	. ,	ADJUST FIBER OPTIC BOX TO GRADE	EA	2	\$1,000.00	\$2,000.00
		ADJUST WATER VALVE BOX TO GRADE	EA	4	\$350.00	\$1,400.00
	613 (A)	18" ROUND REINFORCED CONCRETE PIPE	LF	122	\$50.00	\$6,100.00
	613 (A)	36" ROUND REINFORCED CONCRETE PIPE	LF	1581	\$70.00	\$110,670.00
	613 (C)	18" SPECIAL END SECTION OF REINFORCED CONCRETE	EA	1	\$650.00	\$650.00
	613 (C)	36" SPECIAL END SECTION OF REINFORCED CONCRETE	EA	5	\$750.00	\$3,750.00
	619 (B)	REMOVAL OF CURB	LF	52	\$3.50	\$182.00
		REMOVAL OF DRIVEWAY	SY	663	\$12.00	\$7,956.00
	(/	REMOVAL OF ROADWAY	SY LF	309	\$19.00	\$5,871.00
		PIPE RAILING (TGIC POLYESTER POWDER COAT)	LF LF	79 268	\$65.00	\$5,135.00
	625 (B)	REMOVE AND RECONSTRUCT FENCE		268	\$22.00	\$5,896.00 \$9,500.00
	642 (B) 850 (A)	CONSTRUCTION STAKING LEVEL II SHEET ALUMINUM SIGNS	LSUM SF	35	\$9,500.00 \$26.00	\$9,500.00
	()	FLANGE CHANNEL POST	LF	128	\$16.00	\$2,048.00
		TRAFFIC STRIPE (PAINT) (4" WIDE) (WHITE)	LF	130	\$1.00	\$130.00
		TRAFFIC STRIPE (PAINT) (4" WIDE) (WHITE) TRAFFIC STRIPE (PAINT) (4" WIDE)(YELLOW)	LF	1359	\$1.60	\$2,174.40
		TRAFFIC STRIPE (FAINT) (4" WIDE)(TELLOW) TRAFFIC STRIPE (THERMOPLASTIC) (4" WIDE)(WHITE)	LF	2088	\$2.85	\$5,950.80
	855 (A)		EA		\$400.00	\$3,200.00
	855 (D)	TRAFFIC STRIPE (SYMBOLS) CONSTRUCTION TRAFFIC CONTROL	LSUM	8	\$8.000.00	\$8,000.00
	880 (J)	REMOVABLE BOLLARDS			\$8,000.00	\$8,000.00
	SP SP	(PL) DOUBLE SIDED FIBERGLASS SIGN WITH FRAME	EA EA	8	\$3,000.00	\$4,800.00
	SP SP	JUMBO SPLIT RAIL FENCE	LF	320		
		PROJECT SIGN			\$20.00 \$500.00	\$6,400.00 \$1,000.00
	SP SP	PREFABRICATED BRIDGE	EA LF	2	\$2.000.00	\$1,000.00
	641	MOBILIZATION	LSUM	54 1	\$2,000.00 \$21,658.63	
	041	INIODILIZATION	LSUIVI	l l	φ∠1,000.03	\$21,658.63

BASE SUB-TOTAL \$748,613.08 20% CONTINGENCY \$149,722.62 SURVEY \$12,500.00 DESIGN \$93,576.64 \$10.578 \$10.500.00 \$10.500.00 \$10.500.00 \$10.500.00 \$10.500.00 \$10.500.00 \$10.500.00



Date Range: 01-01-2014 thru 12-31-2014

			2014*			
	Fat	Incap Inj	Non-Incap Inj	Poss Inj	PD	Tot
Collisions		3	1	1		5
Persons		3	1	1		5

^{*} DENOTES A YEAR FOR WHICH DATA MAY BE INCOMPLETE.

			Study Tota	I		
	Fatality	Incapacitating Injury	Non-Incapacitating Injury	Possible Injury	Property Damage	Total
Collisions		3	1	1		5
Persons		3	1	1		5



STUDY TOTALS - BY CITY AND HWY CLASS

BICYCLE COLLISIONS FOR BROKEN ARROW IN TULSA & WAGONER COUNTIES Date Range: 01-01-2014 Thru 12-31-2014

Program Provided by: Traffic Engineering Division Collision Analysis and Safety Branch (405) 522-0985

Created: 10/21/2015 by ODOT

RICTED

County: (72) TULSA

	Н	IGHWAY	COLLISIO	NS	CIT	Y STREE	T COLLISIONS	cou	NTY ROA	D COLLIS	SIONS	TOTAL COLLISIONS				
	Fat	lnj *	PD	Tot	Fat	lnj *	PD Tot	Fat	lnj *	PD	Tot	Fat	lnj *	PD	Tot	
(60) BROKEN ARROW						5	5						5		5	



BICYCLE COLLISIONS FOR BROKEN ARROW IN TULSA & WAGONER COUNTIES Date Range: 01-01-2014 Thru 12-31-2014

(405) 522-0985 Created: 10/21/2015 by ODOT

Traffic Engineering Division

Collision Analysis and Safety Branch

Program Provided by:

Collisions By Type Of Collision

	oilisions			ilision					
Type Of Collision			14*				Total		
	Fat	lnj *	PD	Tot	Fat	lnj *	PD	Tot	Pct
Rear-End (front-to-rear)									
Head-On (front-to-front)									
Right Angle									
Angle Turning									
Other Angle									
Sideswipe Same Direction									
Sideswipe Opposite Direction									
Fixed Object									
Pedestrian									
Pedal Cycle		5		5		5		5	100.0
Animal									
Overturn/Rollover									
Vehicle-Train									
Other Single Vehicle Crash									
Other									
Total		5		5		5		5	100
Percent		100.0		100.0		100.0		100	

Units By Unit Type

Unit Type		20	14*						
Unit Type	Fat	lnj *	PD	Tot	Fat	lnj *	PD	Tot	Pct
Train									
Pedestrian									
Animal									
Pedal Cycle		5		5		5		5	50.0
Parked Vehicle									
CMV									
Other Single Vehicle		5		5		5		5	50.0
Other Multi-Vehicle									
Total		10		10		10		10	100
Percent		100.0		100.0		100.0		100	





BICYCLE COLLISIONS FOR BROKEN ARROW IN TULSA & WAGONER COUNTIES Date Range: 01-01-2014 Thru 12-31-2014

Program Provided by: Traffic Engineering Division Collision Analysis and Safety Branch (405) 522-0985

Created: 10/21/2015 by ODOT

Vehicles By Vehicle Type

	VCI	20	014*	ie Type			Total		
Vehice Type	Fat	Inj*	PD	Tot	Fat	lnj *	PD	Tot	Pct
Passenger Vehicle-2 Door									
Passenger Vehicle-4 Door			1	1			1	1	20.0
Passenger Vehicle-Convertible		1							
Pickup Truck		†	1	1			1	1	20.0
Single-Unit Truck (2 axles)									
Single-Unit Truck (3 or more axles)									
School Bus									
Truck/Trailer									
Truck-Tractor (bobtail)									
Truck-Tractor/Semi-Trailer									
Truck-Tractor/Double									
Truck-Tractor/Triple									
Bus/Large Van (9-15 seats)									
Bus (16+ seats)									
Motorcycle									
Motor Scooter/Moped									
Motor Home									
Farm Machinery					4				
ATV									
Sport Utility Vehicle (SUV)			2	2			2	2	40.0
Passenger Van									
Truck More Than 10,000 lbs.									
Van (10,000 lbs. or less)			1	1			1	1	20.0
Other									
Total			5	5			5	5	100
Percent			100.0	100.0			100.0	100	



BICYCLE COLLISIONS FOR BROKEN ARROW IN TULSA & WAGONER COUNTIES Date Range: 01-01-2014 Thru 12-31-2014

Program Provided by: Traffic Engineering Division Collision Analysis and Safety Branch (405) 522-0985

Created: 10/21/2015 by ODOT

Day And Time Of Occurrence Of Collisions

											ŀ	lour Of	The Da	ay												
Day						Α	M											ı	PM							
_	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	Tot	Pcnt
Sunday								1												7					1	20.0
Monday						1																			1	20.0
Tuesday																										
Wednesday																										
Thursday																							/			
Friday													1												1	20.0
Saturday											1	1													2	40.0
		Earl	y Morni	ing - Su	nrise		Morning Peak				Mid	Mornin	g/After	noon			PM Pea	ık		Evening - Late Night					Tot	100
Total				1				1					3												5	
Percent			20	0.0				20.0				60	0.0												100	

Roadway/Lighting

			ghting Conditio	ns			
Roadway Conditions	Daylight	Darkness	Twilight	Lighted	Unknown	Total	Percent
Dry	4		1			5	100.0
Wet (Water)							
Ice, Snow, or Slush							
Mud, Dirt, Gravel, or Sand							
Other							
Total	4		1			5	100
Percent	80.0		20.0			100	

Weather Conditions

Weather Conditions	Total	Percent
Clear	5	100.0
Clouds Present		
Raining/Fog		
Snowing/Sleet/Hail		
Other		
Total	5	100



BICYCLE COLLISIONS FOR BROKEN ARROW IN TULSA & WAGONER COUNTIES Date Range: 01-01-2014 Thru 12-31-2014

Program Provided by: Traffic Engineering Division Collision Analysis and Safety Branch (405) 522-0985

Created: 10/21/2015 by ODOT

Drivers By Driver Conditions

	Anna	rently N	ormal			Alcohol	Involve	d		Sloo	p Suspe	acted	Drug	Use Ind	licated	Unkna	own Cor	ndition			Total		
Unsafe/Unlawful	Appa	Territy 14	Ormai	Abil	ity Impa	aired	Od	or Detec	cted	Siec	p Suspe	cieu	Diug	OSC IIIu	icaleu	Olikiik	JWII COI	idition			IOtai		
	Fat	lnj *	PD	Fat	lnj *	PD	Fat	lnj *	PD	Fat	lnj *	PD	Fat	lnj*	PD	Fat	lnj *	PD	Fat	lnj *	PD	Total	Pcnt
Failed to Yield		1																		1		1	20.0
Failed to Stop																							
Failed to Signal																							
Improper Turn																							
Improper Start																			7				
Improper Stop																							
Improper Backing																							
Improper Parking																							
Improper Passing																							
Improper Lane Change																							
Left of Center																							
Following Too Close																							
Unsafe Speed		1																		1		1	20.0
DWI																							
Inattention																							
Negligent Driving																							
Defective Vehicle																							
Wrong Way							48				7												
No Improper Action		3																		3		3	60.0
Other																							
Total		5																		5		5	100
Percent		100.0											7							100.0		100	

Severities Indicate Highest Severity in Collision

Collisions By Special Feature

Special Feature		Total								
Special realure	Fat	lnj *	PD	Tot						
Bridge										
Work Zone										
Cross Median										
Train Collision										



HIGHWAY SYSTEM COLLISION LISTING

BICYCLE COLLISIONS FOR BROKEN ARROW IN TULSA & WAGONER COUNTIES Date Range: 01-01-2014 Thru 12-31-2014

Program Provided by: Traffic Engineering Division Collision Analysis and Safety Branch (405) 522-0985

Created: 10/21/2015 by ODOT

RICTED

Cnty	City	cs	Int.	Mile	Location	Features	Int.	Dir.	Dir.	#	#	#	Type of Collision	Unsafe	Lighting	Roadway	Severity	Date
		#	#	Post			Related	1	2	Veh.	lnj.*	Fat.		Unlawful	Cond.	Cond.		

-No Highway Collisions Found-

23 USC 409



CITY STREET COLLISION LISTING

County: TULSA

City: 60 - BROKEN ARROWSICYCLE COLLISIONS FOR BROKEN ARROW IN TULSA & WAGONER COUNTIES

Date Range: 01-01-2014 Thru 12-31-2014

Program Provided by: Traffic Engineering Division Collision Analysis and Safety Branch (405) 522-0985

Created: 10/21/2015 by ODOT

STREET ONE	INTERSECTING STREET	INTERSECTION	UFC/	U/R	Feature	DIR1	DIR2	#	#	#	TYPE OF COLLISION	UNSAFE	LIGHT	ROAD	SEVERITY	DATE
		RELATION	RFC	MP				VEH	INJ*	FAT		UNLAWFUL	Cond.	Cond.		
5330-POPLAR	2200-101 ST. S. (YES	U38	7.74		W		1	1	7	PEDAL-CYCLE	NO-IMP-ACT	DYLGT	DRY	I INJ	2014-05-0
5335-PINE	2430-TOLEDO PL.	YES				N	-	1	1		PEDAL-CYCLE	NO-IMP-ACT	DYLGT	DRY	I INJ	2014-04-1
												,				
5500-ELM PL.	2277-ATLANTA CT.	YES	U53	3.81		E	-	1	1		PEDAL-CYCLE	F-YIELD	DYLGT	DRY	N-I INJ	2014-04-2
5500-ELM PL.	2855-QUEENS ST.	YES	U53	6.53		W	-	1	1		PEDAL-CYCLE	NO-IMP-ACT	DYLGT	DRY	P INJ	2014-08-1
5900-193 E. AVE-CO. LN(2490-ARCHDALE ST.	NORTH	U55	7.83		S	-	1	1		PEDAL-CYCLE	UNSAF-SPD	DAWN	DRY	I INJ	2014-02-2

23 USC 409



STUDY CRITERIA

BICYCLE COLLISIONS FOR BROKEN ARROW IN TULSA & WAGONER COUNTIES Date Range: 01-01-2014 Thru 12-31-2014

Program Provided by: Traffic Engineering Division Collision Analysis and Safety Branch (405) 522-0985

Created: 10/21/2015 by ODOT

ROADWAY / REGION

	QUERY OVER		SELECTIONS
1	City		County: 72, City: 60
2	City		County: 73, City: 60

DATE

Date Range	01-01-2014 to 12-31-2014
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REPORT SECTIONS

		- Unit Type
Collision Map & Study Totals	(Included)	ome type
Collision Analysis Tables	(Included)	
- Totals By City, Hwy Class	Checked	REPORT FORMAT OPTIONS
- Other Analysis Tables	Checked	Print Watermark
Collision Listing	(Included)	Print DPS Case Numbers
- Highway Collision Listing	Checked, By Control Section	
- City Street Collision Listing	Checked	
- County Road Collision Listing	Checked	
Query Criteria	(Included)	
		SC 409

FILTER COLLISIONS

Roadway Type	All Collision Data
Incl. Hwy/Hwy Jct ID Colls	Checked
Unit Fields	
- Unit Type	B, Z

REPORT FORMAT OPTIONS

Print Watermark	Checked	
Print DPS Case Numbers	Unchecked	