

PROJECT REPORT

DATE:	June 24, 2025
NAME	Tyler Yoak
ADDRESS / LOCATION	Indian Springs County Club
WATERSHED	Arkansas River
ESTIMATE	\$150,000
CASE NO.	26-015

DESCRIPTION

Indian Springs Country Club is experiencing erosion on the golf course where a 48-inch pipe daylighted out of the hillside between #8 and #6 fairway. The pipe collects water from the subdivision to the north. The pipe has broken apart in several places and is disconnected from the headwall. This appears to be causing downstream erosion along the hillside. Last spring, the subdivision to the north, Indian Springs 2nd Addition, experienced street flooding. This subdivision connects to broken drain pipe, likely causing the stormwater to be impeded. The City spoke with the residents in the neighborhood, and it has been noted that the problem was worse than ever in the Spring of 2025. The city had record rainfall during that time. The downstream condition of the pipe could also be a contributing factor of the flooding in the Indian Springs neighborhood. The drainage analysis shows that approximately 18 acres, approximately 90 cfs, drains to one single inlet on Fairway Dr.

Design is complete and the plans have been through utility coordination. During utility coordination, ONG noted conflicts with the proposed system along Fairway Dr. Relocation of the gas line is scheduled, at the earliest, for January 2027.

The golf course continues to experience significant erosion in the meantime. Staff originally requested \$125,000.00 for survey and construction funds at the July 2025 DAC meeting and was approved at Council on August 19, 2025. The amount of erosion was underestimated when Staff originally asked for additional construction funds, thus increasing the costs.

Staff is requesting an additional \$150,000 for the improvements on the golf course. Since the work in the neighborhood is within City right-of-way, and not private property, other potential funds could be used for that work. This project will be completed in 2 phases with the golf course work being completed first. The improvements to the storm pipe should help with the flooding in the street until additional storm sewer can be installed along Fairway Dr.

Original Case No. 25-015

Case No. 26-015

BENEFIT

Mitigate the erosion on the Indian Springs Golf Course that appears to be caused by a public storm system. There is potential that the pipe improvements should also improve the drainage in the subdivision.

RECOMMENDATION

Approve the request for expenditure of an additional \$150,000 for construction funds for drainage improvements along the Indian Springs Golf Course.

COMPLETED BY: **Sarah Walters**

DATE: 7/14/2026

Walters, Sarah

From: Wilson, Patrick
Sent: Monday, June 23, 2025 9:48 AM
To: Walters, Sarah
Subject: FW: *NEW SUBMISSION* Drainage Advisory Committee Project Application

Patrick Wilson, P.E., CFM

*Stormwater Division Manager
Engineering and Construction Department*

City of Broken Arrow

485 N. Poplar Ave.

Broken Arrow, OK 74012

Office: 918-259-7000 ext. 5243 | Fax: 918-259-8453

pwilson@brokenarrowok.gov | www.brokenarrowok.gov



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From: BrokenArrowOK.gov webmaster <webmaster@brokenarrowok.gov>
Sent: Saturday, June 21, 2025 10:45 AM
To: Wilson, Patrick <PWilson@brokenarrowok.gov>; Engineering & Stormwater <engineering.stormwater@brokenarrowok.gov>
Subject: *NEW SUBMISSION* Drainage Advisory Committee Project Application

Drainage Advisory Committee Project Application

Submission #: 4133909
IP Address: 172.59.124.132
Submission Date: 06/21/2025 10:44
Survey Time: 1 day, 3 minutes, 51 seconds

You have a new online form submission.

Note: all answers displaying "*****" are marked as sensitive and must be viewed after your login.

Owner Name

Tyler Yoak

Phone

(918) 630-4480

Email

tyoak@indianspringsclub.com

Owner Mailing Address

PO Box 3367
Broken Arrow, OK 74013

Address of Property with Drainage Problem

16006 E 131st St S
Broken Arrow, OK

Location of Drainage Issue on Property

Between the #8 and #6 fairways on the River course. Near where the unnamed south-running road spur comes off of Fairway Dr.

Description of Problem

48" drain pipe comes out of hillside between #8 and #6 fairways. This pipe almost entirely receives stormwater from the neighborhood to the north. As stormwater has increased, the load on the pipe caused it come off of its footing and disconnect from the weir. Because of this, stormwater does not follow the intended flow and has caused significant erosion to the hillside. With the significant rains we've had in the past 3 months, there has been flooding in the neighborhood to the north that uses this drain pipe, likely because drainage is impeded. After speaking with concerned residents whose properties flooded, they said it was worse than ever now. The BA Stormwater Project Manager visited the site and she agrees it's a dangerous situation. We put up a warning fence to keep people away from the gulch it has created but with the recent waters, the erosion has worsened, eating away more of the hill, causing our fence to collapse into the hole.

Please attach photos depicting the Drainage Issue

[Erosion1.jpg](#)

[Erosion2.jpg](#)

[Erosion3.jpg](#)

[Erosion4.jpg](#)

Thank you,

City of Broken Arrow

This is an automated message generated by Granicus. Please do not reply directly to this email.

Aerial Map

Legend

W. Jasper St. (E. 131st St. S.)

Street
Flooding

Broken Storm
Pipe



Stormwater Utility Map



6/24/2025 2:54 PM

BA_Contours_2017

Type

- 1 FT
- 5 FT
- Sections (PLSS)
- Address Points
- Detention Pond

Culvert

- Unknown

Pipe Culvert

- Pipe Arch Culvert
- Box Culvert
- Arch Culvert
- Bridge Culvert

Linear Drain

- Unknown
- Trench Drain
- Slotted Drain

Pipe

- Unknown

Open Channel

- Unknown
- Aqueduct Channel
- Spillway Channel
- Natural Channel
- Ditch Channel
- Roadside Gutter

BMP Inlet

- Unknown
- Apron Inlet
- Pipe Inlet
- Channel Inlet

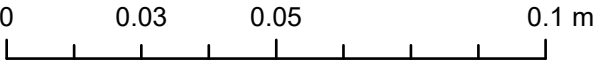
Gravity

- Force Main
- Perforated

BMP Point

- Unknown
- Detention
- Dry Basin
- Treatment
- Wet Basin
- Bed Filter

This map's utility information is for general purposes only. The City of Broken Arrow makes no warranties regarding its accuracy, completeness, or reliability. Use of this information is at risk.



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TO THE CITY OF BROKEN ARROW, TULSA COUNTY, OKLAHOMA, A SUBDIVISION OF
A PART OF THE NE $\frac{1}{4}$, OF SEC. 10, AND A PART OF THE NW $\frac{1}{4}$, OF SEC. 11, TOWN
SHIP 17-NORTH, RANGE 14-EAST.

OWNER
INDIAN SPRINGS ESTATES INC.
301 Philhower Building
Tulsa, Oklahoma

September 3, 1970

J-B ENGINEERING CO.
3827 E. 31st Street So.
Tulsa, Oklahoma
Reg Number: 70-P3-2473

Curve Data for Cul-De-Sac		
Curve	Radius	Angle
A	30'	30° 53' 17"
B	30'	253° 44' 54"
C	30'	38° 32' 17"

SCALE: 1:100

CERTIFICATE OF APPROVAL
I HEREBY CERTIFY THAT THIS
PLAN WAS APPROVED BY THE
BROKEN ARROW PLANNING
COMMISSION ON _____

I, J. Lee Coleman, a Registered Professional Engineer and a Registered Land Surveyor of the State of Oklahoma, do hereby certify that I have carefully and accurately surveyed and sketched into lots, blocks, and streets, the real estate and premises designated as "INDIAN SPRINGS SHOOTING ADDITION", as addition to Tulsa County, State of Oklahoma, and that the above plat is a true representation of said survey showing the length, width, and depth of all lots and blocks, and names, width, boundaries and

IN WITNESS WHEREOF, I have hereunto set my hand and official seal at Tulsa, Tulsa County, Oklahoma, this 27 day of January, 1935.

STATE OF OKLAHOMA
COUNTY OF TULSA

Before me, the undersigned, a Notary Public in and for said County and State on this 27th day of February, 1927, personally appeared Joe S. Donnellan, to me known to be the identical person who subscribed his name to the foregoing instrument and acknowledged to me that he executed the same as his free and voluntary act and deed and as the Free and Voluntary act and deed of himself, his heirs, assigns, personal representatives, executors, administrators, etc., for the purpose therein expressed.

Witness my hand and seal this 27th day of February, A.D. 1927.

My Commission expires _____

Kenneth P. West.

J-S ENGINEERING CO.
[Signature]
Registered Prof. Engineer, Registered Land Surveyor

Kenneth D. West
Salesman

CERTIFICATE OF DESIGNATION

© 2001 Blackwell Science Ltd

*INDIAN SPRINGS SECOND ADDITION

END OF ALL. FROM BY TERRY FERGUSON.

WHEATON, INDIAN SPRINGS ESTATES, INC., an Oklahoma Corporation, is owner of the following described land in the County of Tulsa, State of Oklahoma, to-wit:

[illegible]

AND SUCCESSORS, THE UNDERSIGNED, INDIAN OIL CORPORATION, INC., an Oklahoma Corporation does hereby dedicate for public use all of the interests as shown on Exhibit A and does hereby covenant, the title to all of the land covered by said exhibit, and for the purpose of providing an orderly development of the land thereon, and in order to provide adequate restrictive covenants for the mutual benefit of itself and its successors in title to the sub divisions of said land (hereinafter referred to as Lots) the undersigned does hereby impose the following restrictions and reservations and create the following easements, which shall be binding upon it, its successors, and assigns.

These covenants are to run with the land and shall be binding on all parties and all persons claiming under them until December 1, 1955, at which time said covenants shall be automatically extended for successive periods of ten (10) years, unless by vote of a majority of the then owners of the lots it is agreed to change said covenants in whole or in part.

If the parties hereto, or its heirs, shall violate or attempt to violate any of the covenants herein, it shall be lawful for any other person or persons seeking any real property situated in said development or subdivision to prosecute any proceedings at law or in equity against the parties or persons or persons violating or attempting to violate any such covenant and either to prevent him or them from so doing or to recover damages or costs incurred by reason of such violation or to enforce specific performance of the provisions of this agreement which shall remain in full force and effect.

1. All plans and specifications must be submitted to the Developer or his duly authorized representative for written approval prior to start of construction.
2. Duplication of plans will be permitted only where there is at least four homesites (lots) between locations for such duplication of floor plan with a complete change of exterior styling will be permitted where at least one homesite is between the locations.
3. All homesites in the tract shall be shown and described as residential homesites. No structure shall be erected, altered, placed or permitted to remain on any homesite which exceeds two stories in height, and all residences must have a prior design for not less than two years attached to the residence. Any detached structure to be built on the homesite such as golf cart storage buildings, covered entertainment areas, etc., shall conform to the basic styling of the dwelling thereon, and the plans for such structures must be submitted to the Developer for approval prior to exterior construction. Garages, in addition to a two car garage will be permitted only if placed where they will not be between the residence and any street adjoining the property.
4. No building or part thereof, except open porches and terraces shall be constructed and maintained on any homesite nearer to the front property line than the building lines shown on the recorded plat of said addition, and no residence shall be built closer than 100' (22 feet to any side lot line on one side and twelve (12) feet on the other side, thus requiring a combined total of at least twenty (22) feet between the residence and both side lot lines.
5. No residence previously used shall be moved on to any homesite in this residential development.
6. Floor area requirements. All square footage requirements are exclusive of porches and porches. All homesites shall have a minimum of 2700 square feet of living area (measured over masonry), for one story residences. For two story or one and one half story residences a minimum of 1300 square feet will be required on the ground floor, with a total of 3500 square feet.
7. a. All exterior foundations shall be of brick or stone. No concrete blocks, poured concrete or any other foundation will be approved.
b. The exterior of all structures erected on any homesite shall be constructed of a minimum of 50% masonry, measurements for computing the 50% masonry may exclude windows, doors, covered porches and patio areas, and shall apply to the first floor of the story or one and one half story residences.
8. Roofs: No composition shingles will be permitted on any structure erected on any homesite, however certain now existing and future types of synthetic or natural roofing materials may be used upon the written approval of the Developer. Other roofing materials shall be restricted to:
a. Cedar Shingles
b. Slate
c. "Built up roof", tar and gravel will be permitted on contemporary style residences.
Any other roofing materials recommended to be used must be approved by the Developer prior to start of construction.
9. Entrances, screens and exterior millwork will be closely examined to insure sound architectural practices. No metal shutter will be permitted.
10. Walls, driveways and patios must be shown on plat plan accompanying house plans when submitted to the Developer prior to start of construction. No white cast walls or driveways will be permitted. Materials may be brick, concrete, or asphalt. Silver gravel may be used for walkways when compatible to design of residence.
11. a. No fences over ten feet (10') feet in height will be permitted on any homesite, (except for privacy screening adjacent to patios). No fencing which is more than two (2) feet in height will be allowed on or near property lines adjacent to golf course.
b. Ornamental fences only, not exceeding three feet in height, compatible to the architecture of the residence, constructed of brick, stone, tile and stone, brick and frame, stone and frame, or split rails may be built forward of the building line shown on plat.
12. No noxious or offensive trade or activity shall be carried on upon any homesite nor shall anything be done thereon that may be or may be come an annoyance or a nuisance to the neighborhood.
13. No animals, livestock, or poultry of any kind shall be raised, bred or kept on any homesite, except that dogs, cats, or other household pets may be kept provided that they are not kept, bred, or maintained for any commercial purpose.
14. No sign of any kind shall be displayed to the public view on any lot except one professional sign of not more than one square foot, one sign of not more than five square feet advertising the property for sale or rent, or signs, used by a builder to advertise the property during the construction and sales period.
15. No trailer, basement, tent, shack, garage, barn or other outbuilding type structure erected on or moved onto any homesite in this residential development shall at anytime be used as a residence, either temporarily or permanently.
16. No homesite will be used for the storage of materials for a period of greater than 30 days prior to the start of construction and when the construction shall be completed within 9 months. All homesites shall be maintained in a neat and orderly condition at all times.
17. The undersigned owner further dedicates to the public for public use forever the easements and rights of way as shown and designated on the plat for the several purposes of constructing, maintaining, operating, repairing, replacing any and all public utilities including the storm and sanitary sewer, telephone lines, electric power lines, transformers, gas lines, and water lines, together with all fixtures, and equipment for each of such facilities and any other appurtenances therewith, with the right of ingress and egress upon said easements and right of way for the uses and purposes aforesaid, together with similar rights in each and all of the streets shown on said plat ENJOINED. HOWEVER, that the undersigned owner hereby reserves the right to construct, maintain, operate, lay and relay water lines and sewer lines together with the right of ingress and egress for such construction, maintenance, operation, laying and replacing, sewer, water and gas along all of the public streets, alleys or easements shown on said plat, and/or sewer services to the area included in said plat and to any other areas.

WITNESS our hands and seal this 5 day of February, 1920, at Tulsa, Tulsa County, Oklahoma.

APPROVED: W.H. Collins

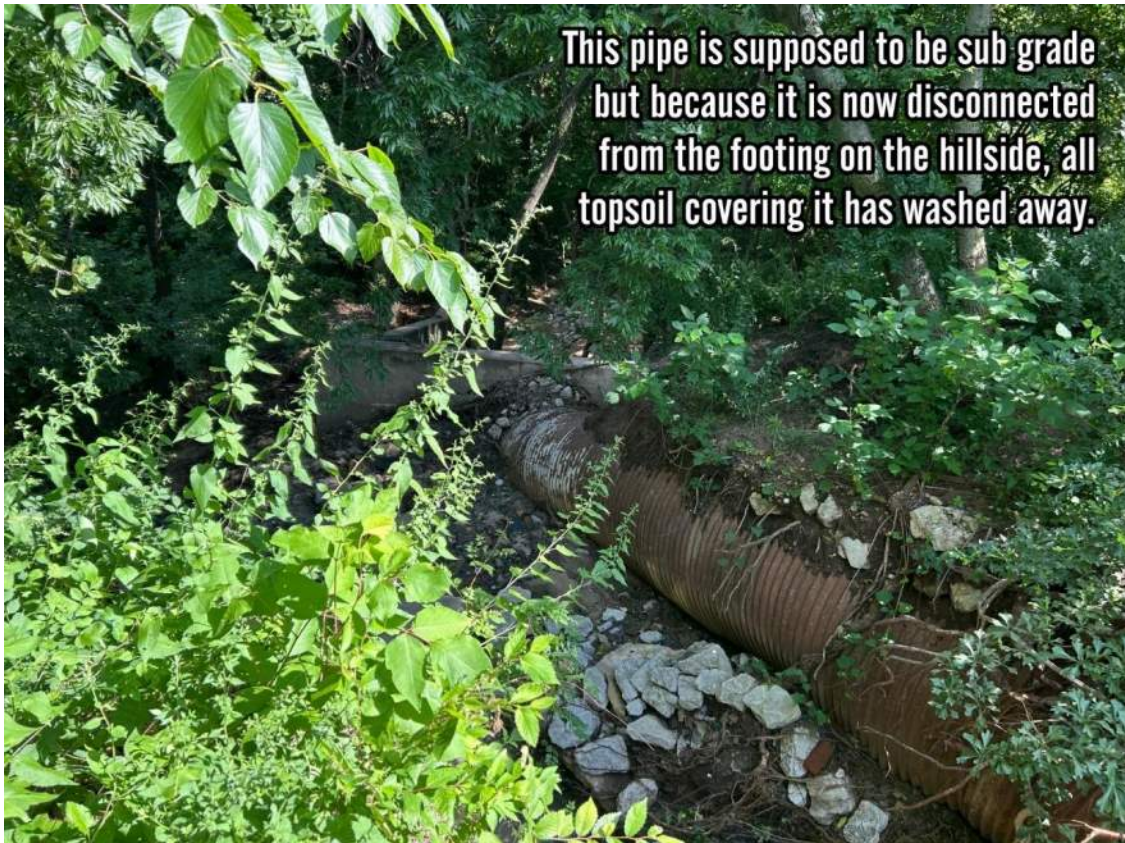
STATE OF DELAWARE
COUNTY OF NEW CASTLE

[illegible]

**This is the area where the pipe is disconnected from the hillside footing.
This is the source of the erosion.
It is 15' - 20' below the #8 fairway.**

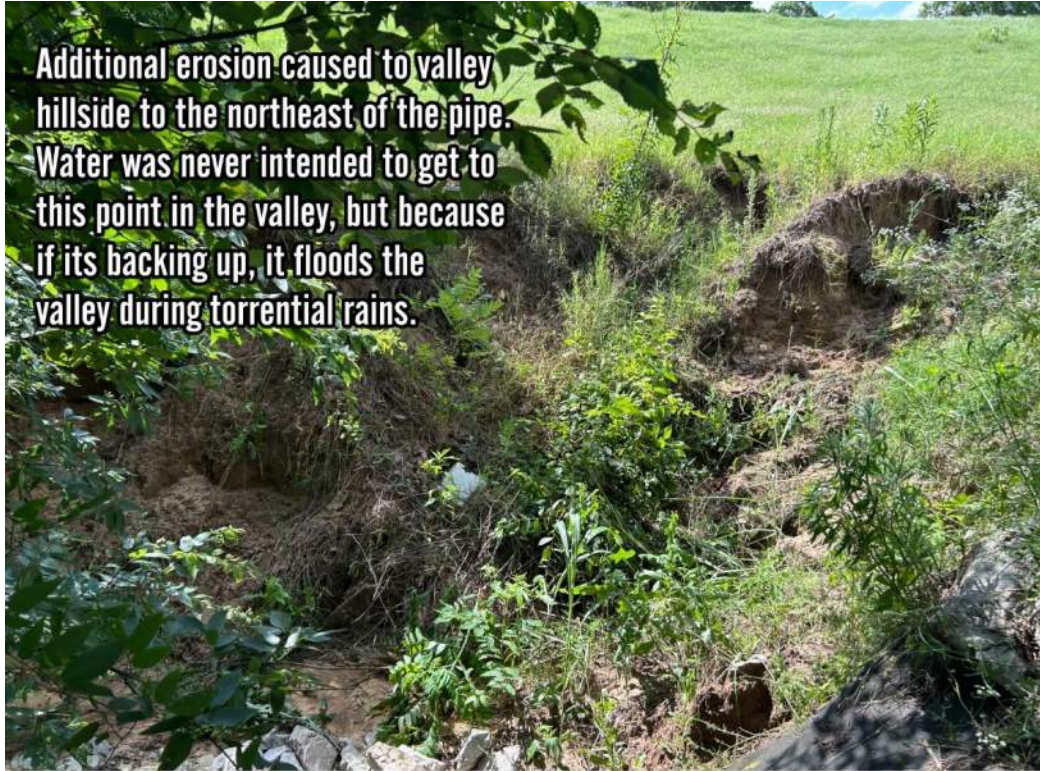


**This pipe is supposed to be sub grade
but because it is now disconnected
from the footing on the hillside, all
topsoil covering it has washed away.**

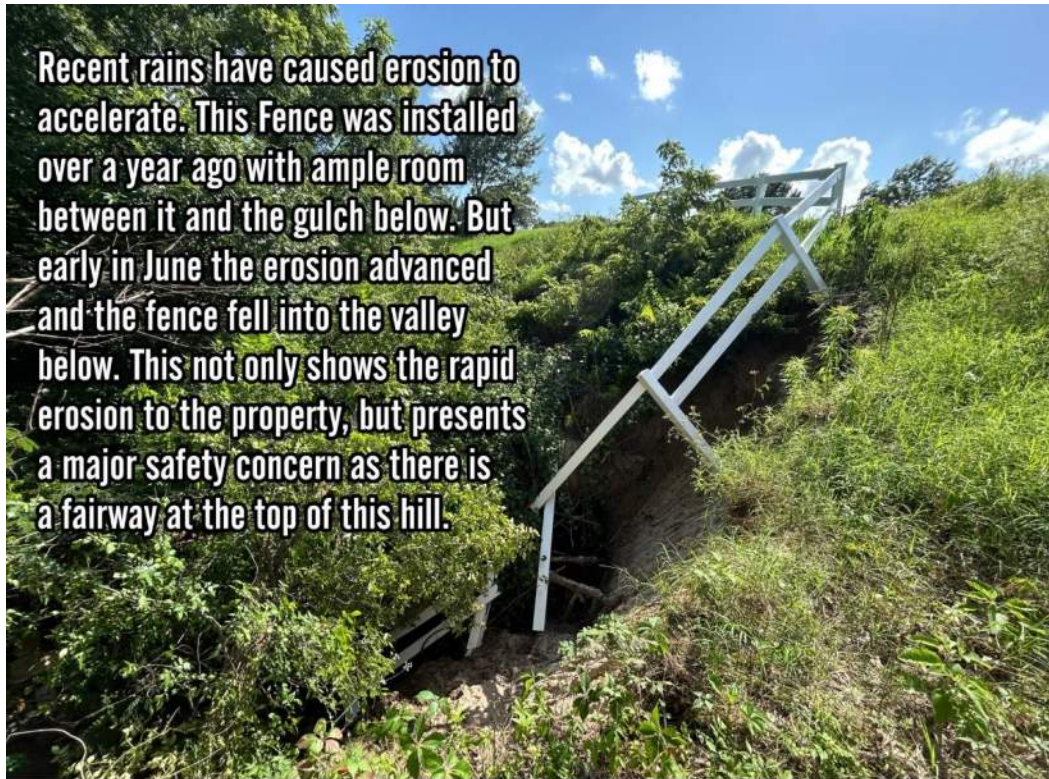




Additional erosion caused to valley
hillside to the northeast of the pipe.
Water was never intended to get to
this point in the valley, but because
if its backing up, it floods the
valley during torrential rains.



Recent rains have caused erosion to accelerate. This Fence was installed over a year ago with ample room between it and the gulch below. But early in June the erosion advanced and the fence fell into the valley below. This not only shows the rapid erosion to the property, but presents a major safety concern as there is a fairway at the top of this hill.





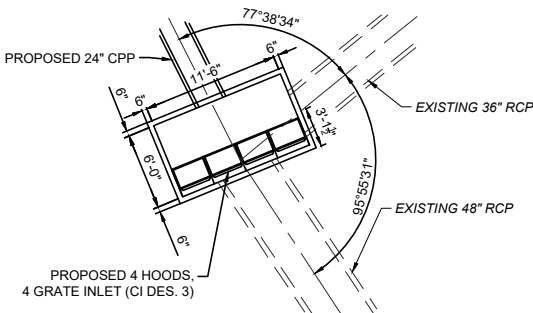
TO BE DONE
AT A LATER
TIME

CAUTION!!!
EXISTING 6" WATERLINE
WITHIN VICINITY OF PROJECT.
ANY DAMAGES TO
EXISTING WATERLINE
SHALL BE REPAIRED AT THE
CONTRACTOR'S EXPENSE.

WARNING!!!
EXISTING GAS LINE
WITHIN VICINITY
OF PROJECT. PROCEED
WITH CAUTION.

NOTE:
CONTRACTOR IS RESPONSIBLE FOR
ALL EXPENSES INCURRED BY GAS
RELOCATION AND WATER SERVICE
LINE RELOCATION.

SPECIAL CI INLET DES. 3.
SEE DETAIL A THIS SHEET.



A INLET Ac
CICI DES. 3 WITH A 11.5' x 6'
JUNCTION BOX DETAIL
SCALE: 1"=4'

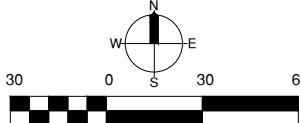
CAUTION!!!
EXISTING 8" SANITARY
SEWER WITHIN VICINITY
OF PROJECT. ANY DAMAGES TO
EXISTING SEWER SHALL BE
REPAIRED AT THE CONTRACTOR'S
EXPENSE.

NOTE:
EXISTING WATER
METER TO BE PROTECTED.
SERVICE LINE TO BE LOWERED
IF DEEMED NECESSARY BY CITY
OF BROKEN ARROW. CONTRACTOR
TO COORDINATE WITH THE CITY

NOTE:
EXISTING ASPHALT
ROAD. ANY DAMAGES
TO EXISTING ROAD
SHALL BE REPAIRED AT THE
CONTRACTOR'S EXPENSE

NEW MANHOLE
AND 48 IN. PIPE.

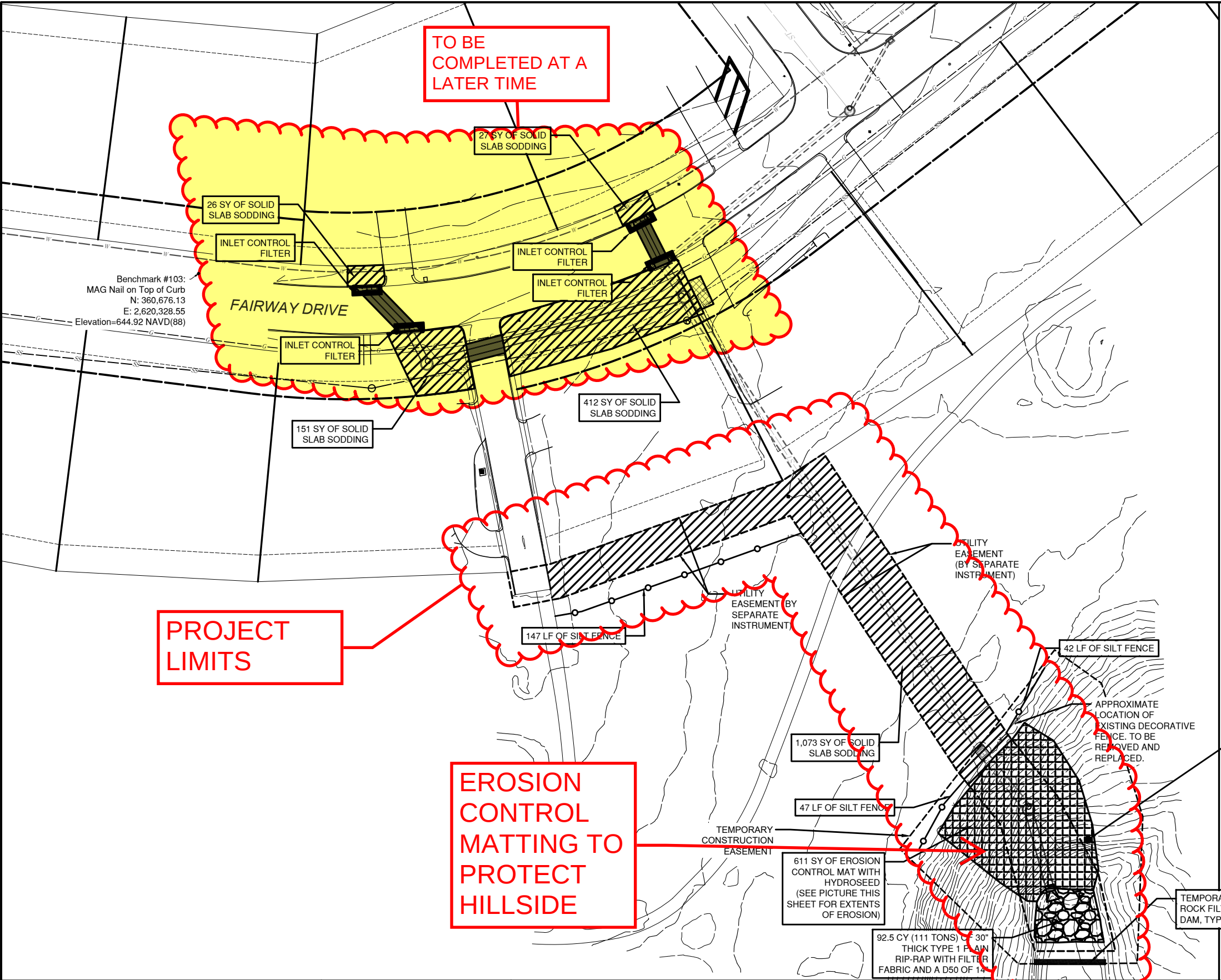
NEW END
SECTION AND
NEW RIP-RAP



**INDIAN SPRINGS
STORM SEWER IMPROVEMENTS**

STORM SEWER PLAN

DATE	REVISIONS	DESIGN SAW	DRAFTED SAW	DATE 10/2025
		REVIEWED PPW	PROJECT NO. SW26100	
		APPROVED CB	SHEET OF 11	



Legend	
	SOLID SLAB SODDING
	RIP-RAP
	EROSION CONTROL MAT (WOOD FIBER BLANKET) WITH HYDROSEED
	PAVEMENT CUT AND REPAIR (BA STD. ST-07)
	DRIVEWAY CUT AND REPAIR (BA STD. ST-15)
	TEMPORARY INLET SEDIMENT FILTER
	TEMPORARY ROCK FILTER DAM (ODOT STD. TRFD-0)
	SILT FENCE (ODOT STD. RSF-0)

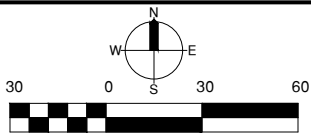


PICTURE 1: EXTENTS OF EROSION ALONG SLOPE



BROKEN ARROW

Where Opportunity lives



INDIAN SPRINGS

STORM SEWER IMPROVEMENTS

EROSION CONTROL PLAN

DATE	REVISIONS	DESIGN	DRAFTED	DATE
		SAW	SAW	10/2025
		REVIEWED	PROJECT NO.	
		PPW	SW26100	
		APPROVED	SHEET	5
		CB	OF	11