

## PROJECT REPORT

DATE:	April 22, 2025
NAME	Bristol Ponds Channel / Patty Pitcock
ADDRESS / LOCATION	North of Washington St. West of Elm Pl. (West of 1730 S Elm Pl.)
WATERSHED	Haikey Creek
ESTIMATE	\$230,000
CASE NO.	25-006

### DESCRIPTION

Bristol Ponds is located North of Washington St. and West of Elm Pl. Bristol Ponds subdivision was platted and designed in 2005 and is the most recent development in its respective drainage area. Bristol Ponds is a private, gated subdivision.

The Bristol Ponds south detention area was designed to act as a conveyance area, provide additional storage for offsite stormwater runoff, and to serve as a private amenity to the Bristol Ponds subdivision. Reserve H, which contains the detention pond, is privately owned and maintained by the Bristol Ponds HOA.

The channel flows between Bristol Ponds and Village Park subdivisions and conveys offsite runoff through the Bristol Ponds detention area as designed. Per original design plans, the flow is 345 CFS with velocities that vary from 4-15 FPS (erosive) and are conveyed through the channel towards the detention area prior to the Bristol Ponds development. Actual flows range from 363-403 CFS. The concrete lined channel does not extend to the pond as designed and energy dissipators were not constructed per plan. Current conditions of the channel and pond appear to be in part, a result of erosive velocities of stormwater flows.

Neither offsite development nor actions by the City have been linked to the current concerns of the applicant. However, the channel flowing into Bristol Ponds detention area is now owned by the City of Broken Arrow. The City owns the channel between Bristol Ponds and Elm Place. The City owns property adjacent to Reserve H. The pond, its structures, and utilities are privately owned by the Bristol Ponds POA.

The project is currently in design and at approximately 60% complete. Project number is SW25080.

Construction is anticipated to occur summer 2025.

Staff is requesting \$230,000.00 in construction funds.

Case No. 25-006

**BENEFIT**

Erosion mitigation to ensure that the drainage system is functioning as designed with respect to volume capacity and velocity.

**RECOMMENDATION**

Staff recommends approval of \$230,000.00 in funds to construct erosion mitigation in the Bristol Ponds south detention pond and in the channel between Elm Pl. and Bristol Ponds south detention area.

**COMPLETED BY: Sarah Walters****DATE: 04/22/2025**


# City of Broken Arrow

Drainage Advisory Committee



## APPLICATION

DATE:	October 22, 2024
OWNER NAME:	Bristol Ponds/City of Broken Arrow
PHONE NUMBER:	918-808-3290
EMAIL ADDRESS:	pattijpit@hotmail.com
OWNER MAILING ADDRESS:	905 W Urbana St BA, Ok 74012
ADDRESS OF PROPERTY WITH DRAINAGE PROBLEM:	Bristol Ponds south pond to the side of Arvest Bank running east tp Elm
LOCATION OF DRAINAGE ISSUE ON PROPERTY:	see above

DESCRIPTION OF PROBLEM:	(*PHOTOS SHOULD ACCOMPANY APPLICATION)
<p>Per communication with Mr. Wilson, we, as a homeowners group, were urged to complete this form for consideration of assistance since the city is involved and met with us previously. Per his last email, in October, "the city has reviewed existing plans for the concrete channel and Bristol Ponds subdivision. The plans for the channel DO SHOW velocities leaving Elm Place to be erosive. There is riprap included to slow the velocities down. Also, plans for Bristol Ponds showed more energy dissipators at the end of the channel. From aerial photos, it appears these dissipators were not ever constructed. Mr. Wilson recommended that we, as homeowners, complete this form.</p> <p>The south bank of our pond, has rapidly deteriorated due to this absence of dissipators. We realize natural erosion will occur over time, but within this last year, it has deteriorated more than the 5 years beforehand combined. We are hoping for some options to limit/lessen our concerns. Part of the land on the south bank belongs to the city per what we have been told.</p> <p>Charles and Patti Pitcock</p> <p>Signature:  October 22, 2024</p>	

RETURN TO STORMWATER DIVISION MANAGER'S OFFICE, PO BOX 610 Broken Arrow, OK 74013



# Aerial Map

IMPROVEMENTS NOT CONSTRUCTED PER  
BRISTOL PONDS DEVELOPMENT PLANS

S. ELM PLACE

E. 91st St.

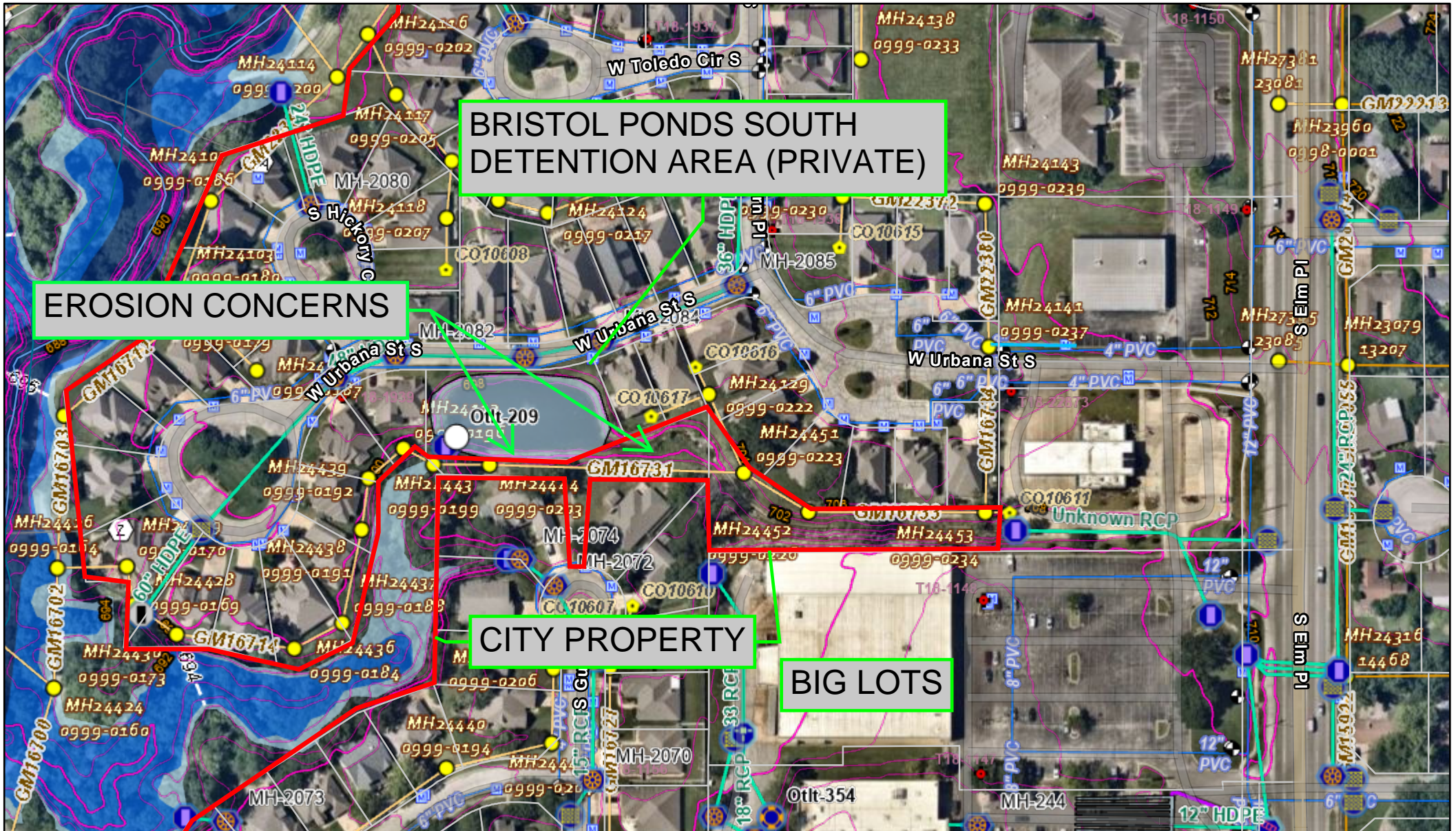
Google Earth




























1000 ft



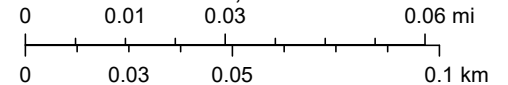
# Utility Map



10/14/2024, 9:39:07 AM

-  Parcels
  BMP Boundary
  Pipe
  Wall
  Fitting
 
-  Blue Line Streams (ODOT)
  Linear Drain
  Gravity
  Unknown
  Wye
  Junction Box
-  FEMA Streams
  Slotted Drain
  Catch Basin
  Headwall
  Outlet
  Manhole
-  Address Points
  Open Channel
  Drop Inlet
 
 Pipe Outlet
  Manhole
-  Spillway Channel

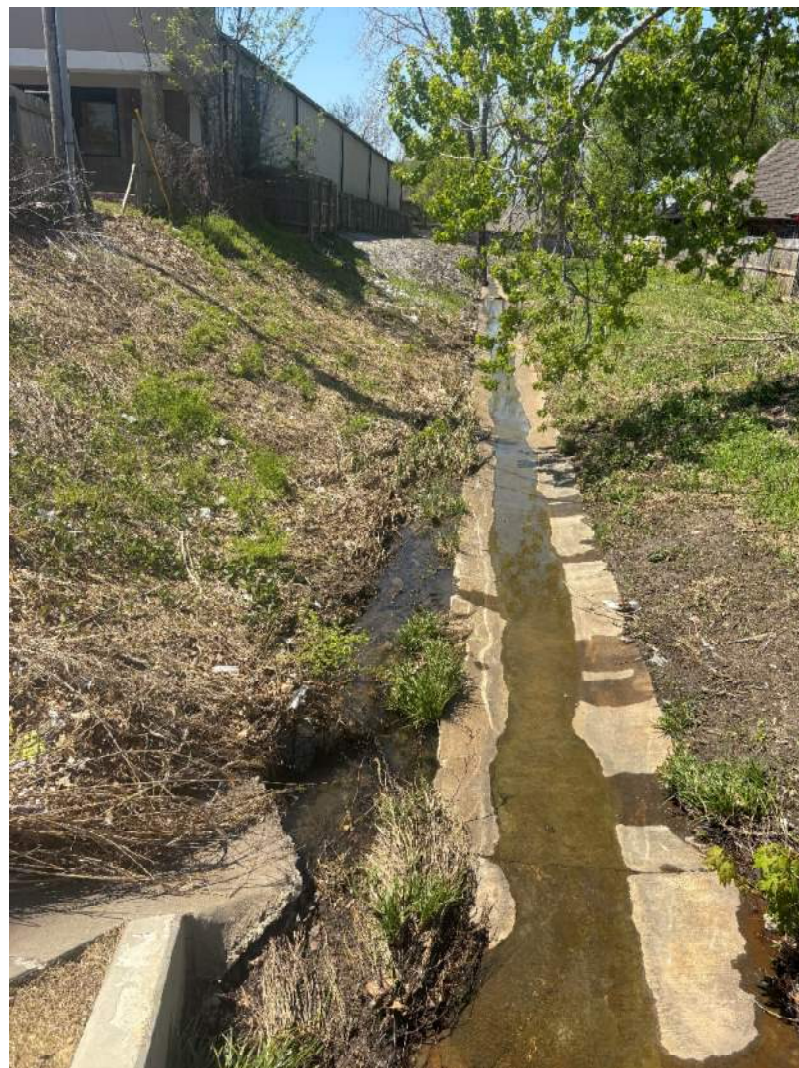
1:2,257



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© OpenStreetMap contributors, and the GIS User Community, City of Tulsa, US  
Census Bureau, INCOG, & unknown, City of Broken Arrow Geospatial Services  
Division

City of Broken Arrow









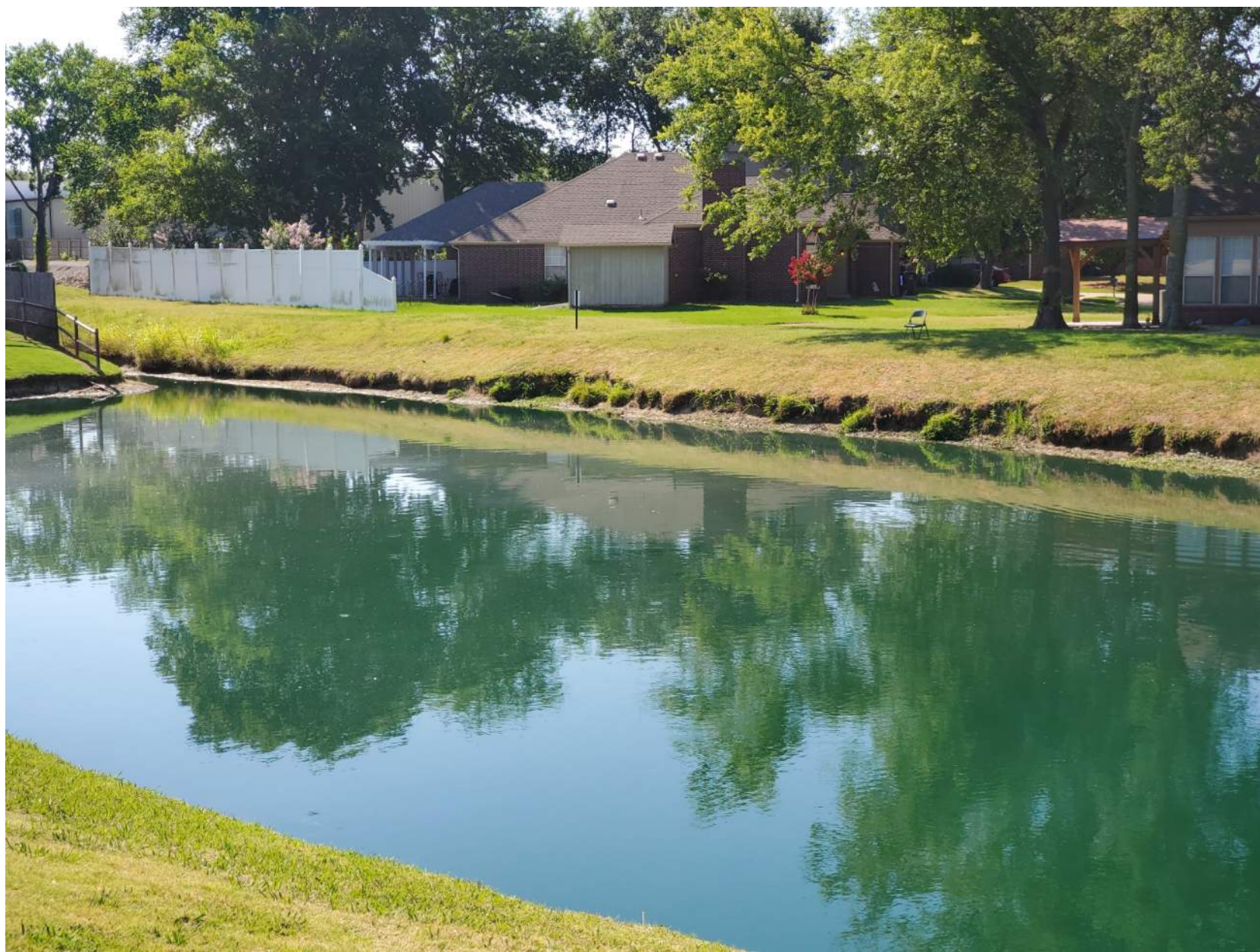












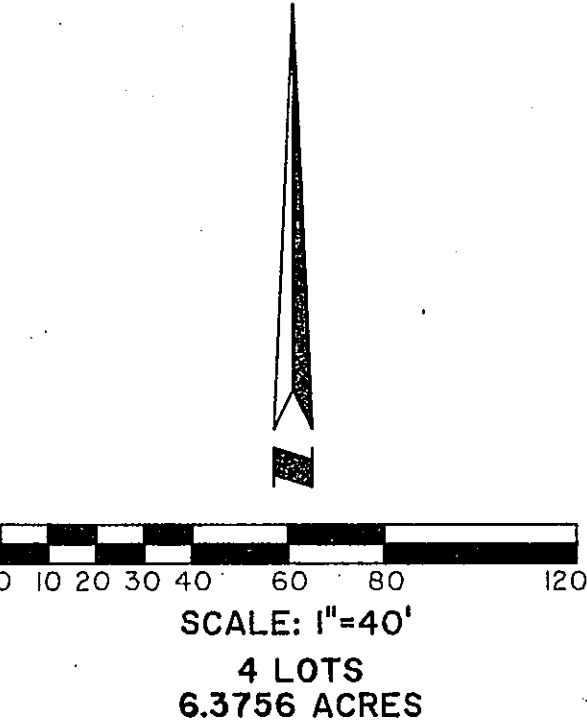
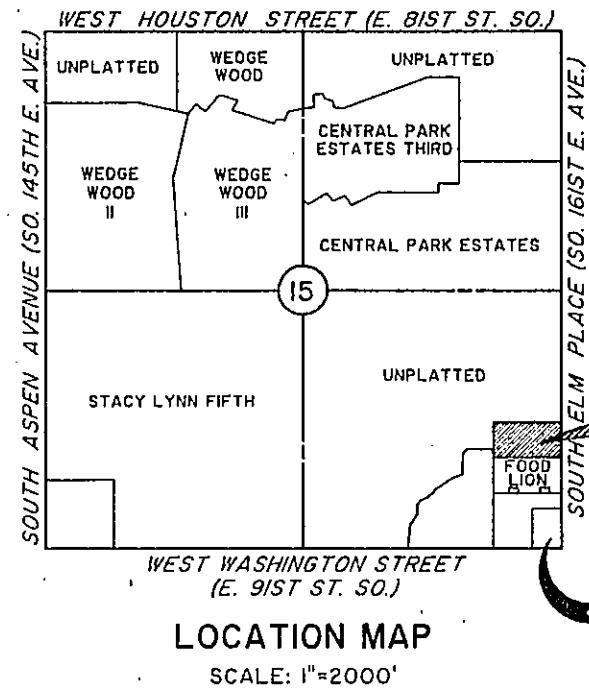






# METROLAND COMMERCIAL CENTER

R 14 E



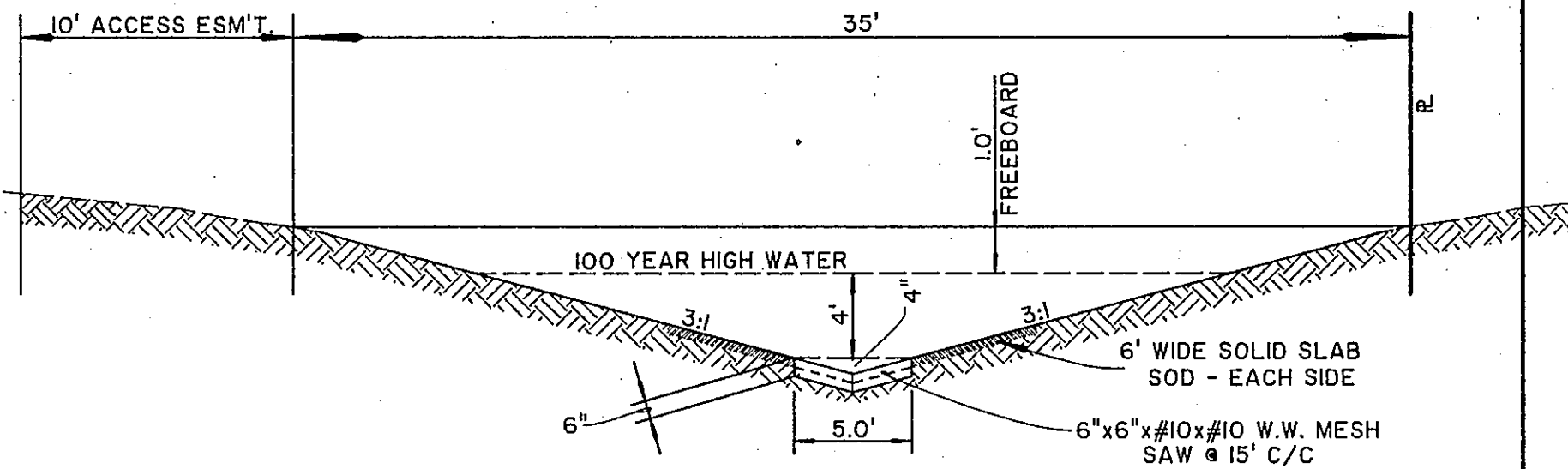
- LEGEND**
- B.L. - DENOTES BUILDING LINE
  - U/E - DENOTES UTILITY EASEMENT
  - L.A. - DENOTES LIMITS OF ACCESS
  - L.N.A. - DENOTES LIMITS OF NO ACCESS
  - D/E - DENOTES DRAINAGE EASEMENT
  - P - DENOTES PAVING
  - T.C. - DENOTES TOP OF CURB
  - N.G. - DENOTES NATURAL GROUND
  - - DENOTES SOIL BORING
  - R/W - DENOTES RIGHT-OF-WAY
  - ▨ - DENOTES STRAW BALES
  - - DENOTES SILT FENCE

OWNER:

METROLAND DEVELOPMENT  
AN OKLAHOMA GENERAL PARTNERSHIP  
9168 SOUTH FLORENCE PLACE  
TULSA, OKLAHOMA 74137  
TEL. (918) 481-8838

ENGINEERS:

COX & ASSOCIATES, INC.  
7935 EAST 57TH STREET SOUTH  
TULSA, OKLAHOMA 74145  
TEL. (918) 664-3337



NOTE:  
EXISTING 7'x4' R.C.B.  
ON 0.80%  
V = 13.2 F.P.S.  
Q = 346 C.F.S.

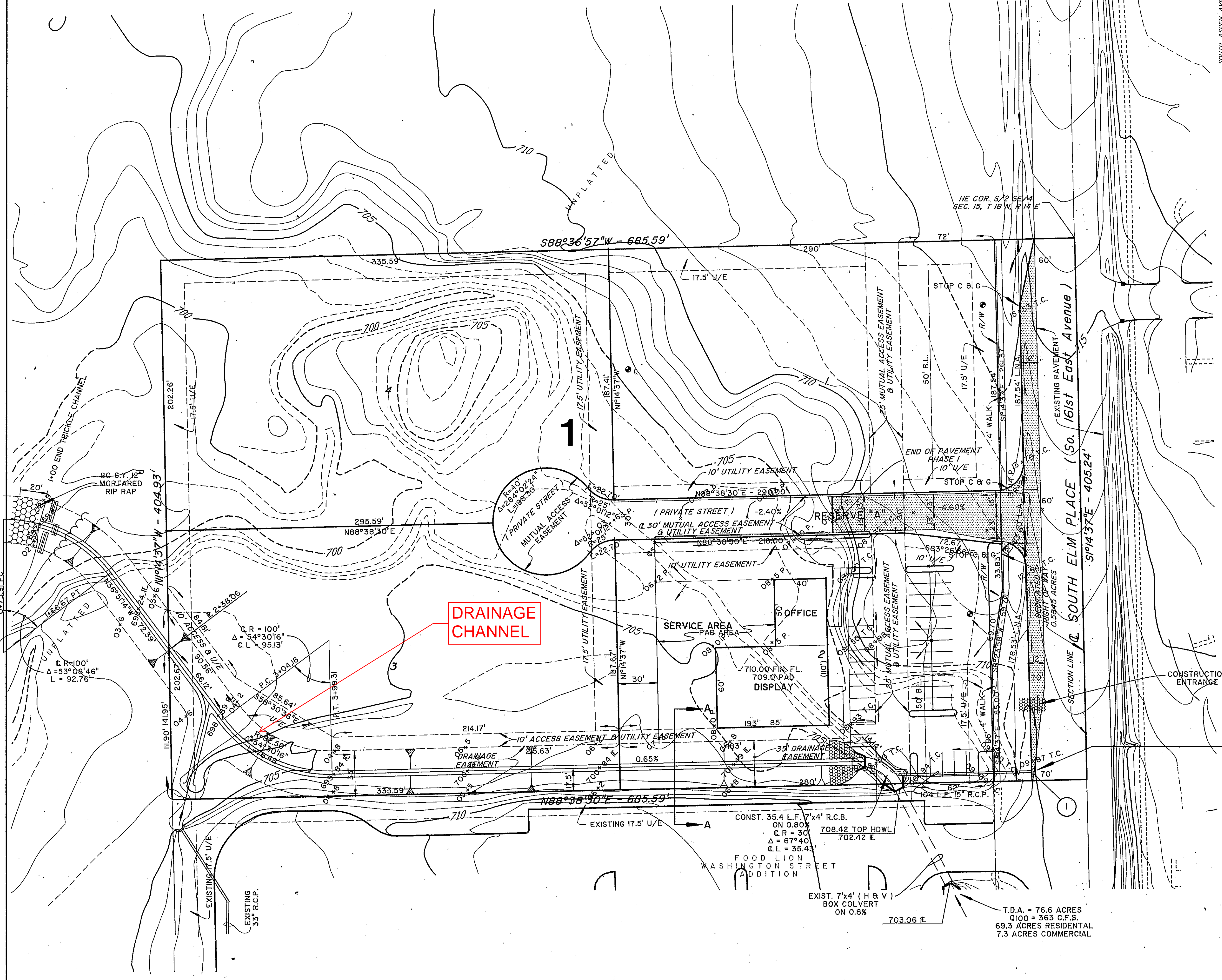
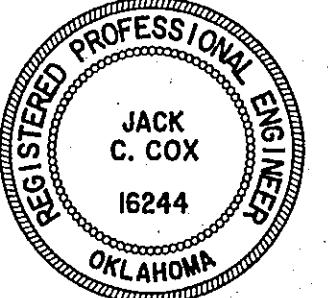
**SECTION A-A  
PAVED DITCH  
CROSS SECTION**  
SCALE 1" = 4' H. & V.

D.A. = 76.6 ACRES  
Q100 = 363 C.F.S.  
Q10 = 203 C.F.S.  
FLOW DEPTH = 4.33 FT.  
AREA = 69.64 SQ. FT.  
WP = 30.30 FT.  
SLOPE = 0.65%  
N = 0.035  
V = 5.96 F.P.S.  
Q = 415 C.F.S.  
QREQ = 363 C.F.S.

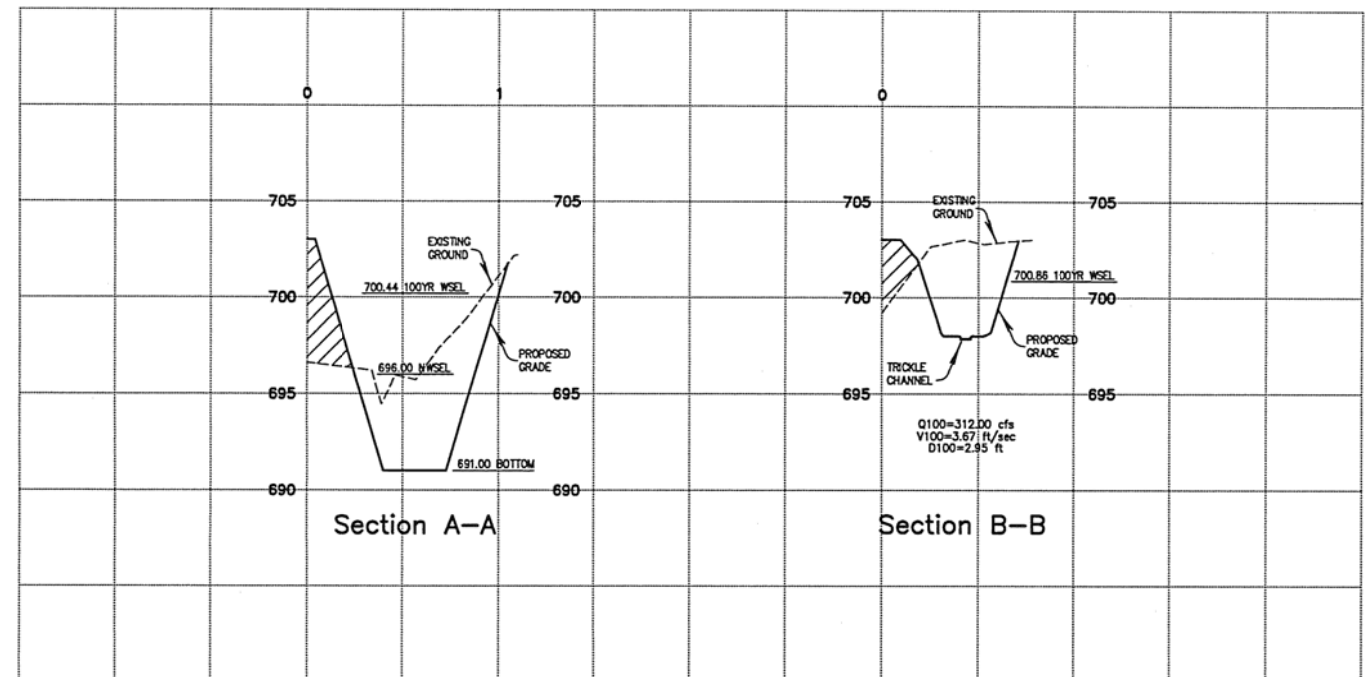
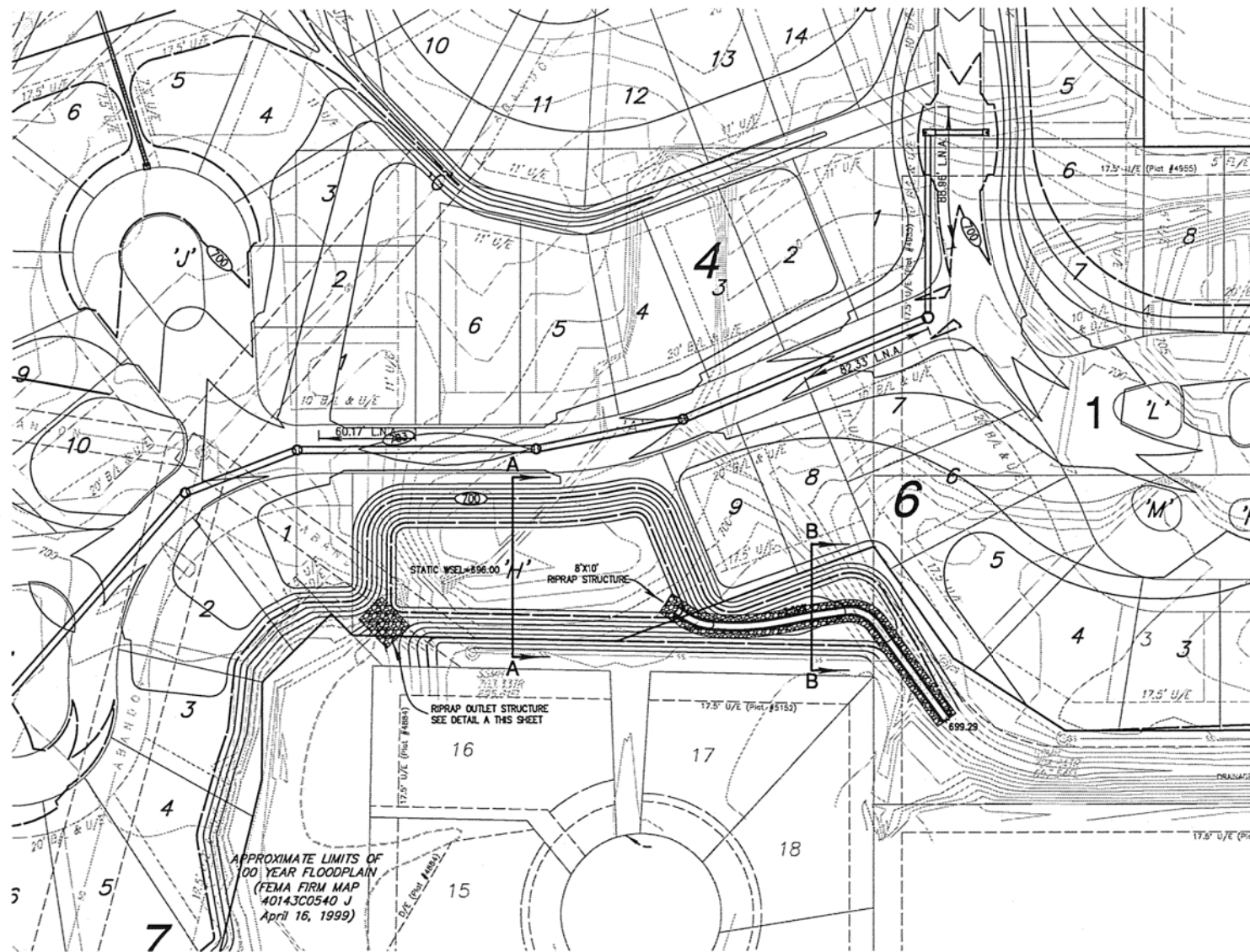
BENCH MARK: 5/8" REBAR - ALUM. CAP  
STAMPED "106", 11.5' WEST OF ELM  
PLACE & 75' NORTH OF TOLEDO PLACE  
ELEVATION 715.97 U.S.G.S. DATUM.

0+07.00  
D.G.D.I.  
D.A. = 0.94 AC.  
**CITY OF BROKEN ARROW**  
ENGINEERING DEPARTMENT  
No Exceptions Taken  
Make Corrections Noted  
Revised and Resubmit  
City Engineer  
DATE 09-21-93

GRADING & DRAINAGE PLAN		
METROLAND COMMERCIAL CENTER LOT 2, BLOCK 1		
CITY OF BROKEN ARROW, OKLAHOMA		
PLANS & ESTIMATES PREPARED BY: 664-3337 COX & ASSOCIATES, INC. ENGINEERS 7935 East 57th Street South Tulsa, Oklahoma 74145		
REVISION	BY	DATE
PLAN SCALE: 1" = 40'		
DR. BY: CK. BY: APP. BY: DATE: SEQ. NO.		
PROFILE SCALE: Horizontal: Vertical: RECOMMENDED: CITY ENGINEER		
FILE: DRAWING: DATE: ATLAS PAGE NO. SHEET 1 OF 6 SHEETS		





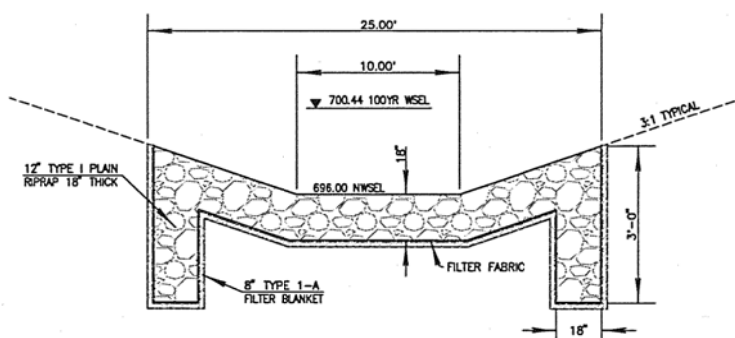


DETENTION DATA SUMMARY

RETURN PERIOD	5 YEAR	10 YEAR	25 YEAR	50 YEAR	100 YEAR	500 YEAR
DETENTION VOLUME (acre-ft)	1.34	1.56	1.77	1.95	2.12	2.52
PEAK INFLOW (cfs)	149.5	194.8	238.5	275.7	311.9	395.6
PEAK OUTFLOW (cfs)	147.8	192.7	236.1	273.0	308.7	391.8
PEAK ELEVATION (ft)	698.71	699.24	699.71	700.09	700.44	701.20

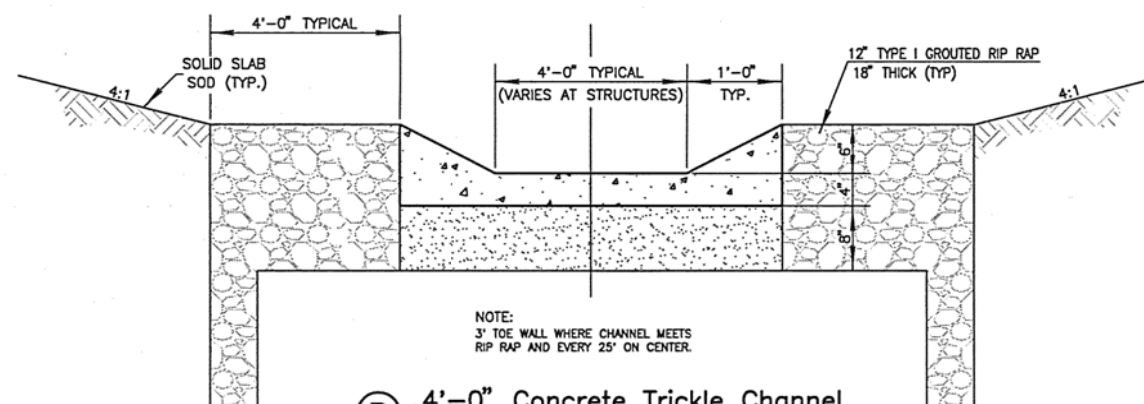
GENERAL NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT OKLAHOMA STANDARD SPECIFICATION.
2. REINFORCING STEEL IN BOTTOM SLAB SHALL BE SUPPORTED ON METAL BAR CHAIRS. CHAIRS SHALL BE SUPPORTED ON TIMBER PLANK OR CLASS 'C' CONCRETE STRIPS SPACED AT 4' CENTER TO CENTER. THE TOP OF SUPPORTS SHALL BE AT THE ELEVATION OF THE BOTTOM OF THE FOOTING.
3. REINFORCING STEEL IN TOP SLAB SHALL BE SUPPORTED ON METAL BAR CHAIRS SPACED AT 4' CENTER TO CENTER.
4. ALL CONCRETE EDGES SHALL HAVE A 1 1/2 INCH CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. ALL CHAMFER STRIPS SHALL BE SIZED LUMBER.
5. ALL REINFORCING STEEL SHALL BE GRADE 60 AND HAVE A 2 INCH MINIMUM CLEARANCE UNLESS OTHERWISE SHOWN ON THE PLANS.
6. REINFORCING STEEL IN THE WALLS SHALL BE HELD IN PLACE BY METAL BAR CHAIRS. MAXIMUM SPACING OF CHAIRS SHALL BE 6' CENTER TO CENTER.
7. COST OF METAL CHAIRS, WOOD PLANK, OR CONCRETE STRIPS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.
8. ROUGHEN SURFACE AT ALL CONSTRUCTION JOINTS.
9. ALL BAR BEND DIMENSIONS ARE OUT TO OUT.
10. MINIMUM REINFORCING STEEL LAP 4'-0" UNLESS OTHERWISE SHOWN (ALL COST BID FOR REINFORCING STEEL).
11. CONCRETE RETAINING WALLS SHALL BE STAINED UPON COMPLETION OF DETENTION FACILITY WITH COLOR OF STAIN TO BE SELECTED BY OWNER (ALL COSTS INCLUDED IN PRICE BID FOR CLASS A CONCRETE).



NOTE:  
TYPE 1-A FILTER BLANKET SHALL CONSIST OF 4 INCHES "UPPER" COURSE AND 4 INCHES "LOWER" COURSE BACKING AS SPECIFIED BY ODOT, SECT. 713.03

**A Rip Rap Outlet Structure**  
SCALE: NONE



NOTE:  
3' TOE WALL WHERE CHANNEL MEETS RIP RAP AND EVERY 25' ON CENTER.

**B 4'-0" Concrete Trickle Channel**  
SCALE: N.T.S.



DATE: 7-1-05

Case # PT04-130 Development # 04-175

Bristol Ponds

Detention Facility Plan (South)

City of Broken Arrow, Oklahoma

PLANS AND ESTIMATE PREPARED BY: **HRA** HALL, ROSENBAUM, ALMON & ASSOCIATES, INC.  
1913 WEST TACOMA - SUITE C VOICE: (918) 258-3737  
BROKEN ARROW, OKLAHOMA 74015 FAX: (918) 258-2554  
CIVIL 3641 EXP. DATE: 8-30-2005

PLAN SCALE	WO NO. 10693 FILE 1814.1520	APPROVED
1"=50'	DRAFTED BY: RWB	
DATE 12/22/04		
PROFILE SCALE	RECOMMENDED	
HORIZONTAL:	RECOMMENDED	
1"=50'	DEVELOPMENT SERVICES	
RECOMMENDED		
VERTICAL:	ENGINEERING SERVICES	
1"=5'		
FILE:	DRAWING:	DATE:
ATLAS PAGE NO: 999		SHEET 8 OF 13 SHEETS

ALL CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH CURRENT CITY OF BROKEN ARROW ENGINEERING DEPARTMENT SPECIFICATIONS, INCLUDING O.D.O.T. 1999 EDITION AND APPLICABLE SUPPLEMENTS.

REVISION	BY	DATE

Call Okie !

EXISTING UNDERGROUND LINES HAVE BEEN SHOWN TO THE EXTENT KNOWN. BEFORE YOU DIG, CONTACT OKLAHOMA ONE-CALL: 1-800-522-6543.

PATH: K:\10693\storm\FILE: SD pond.dwg  
DATE: Jul 01, 2005 4:22PM



