

PRELIMINARY PAVING ANALYSIS FOR:
SILVERHAWK PUBLIC ROAD DEDICATION

SILVERHAWK PHASE I - N.W. 172ND
BETWEEN HAWKS TREE LN. & WHITE
HAWK DR.

JULY 2017



SUBMITTED BY:



ENGINEERING | SURVEYING | PLANNING

SMITH ROBERTS BALDISCHWILER, LLC

100 N.E. 5TH STREET | OKLAHOMA CITY, OK 73104 | 405.840.7094

SRB PROJECT #115193

CITY OF OKLAHOMA CITY

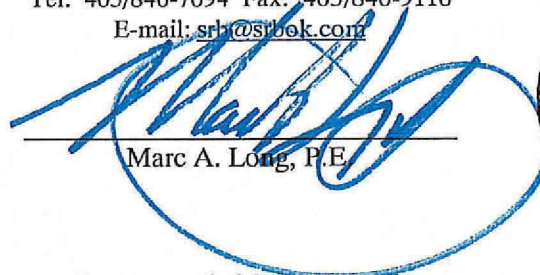
APPROVAL SHEET

PRELIMINARY REPORT
Silverhawk Phase I- N.W. 172nd
Between Hawks Tree LN. and White Hawk Dr.

Prepared By:

SMITH ROBERTS BALDISCHWILER, LLC

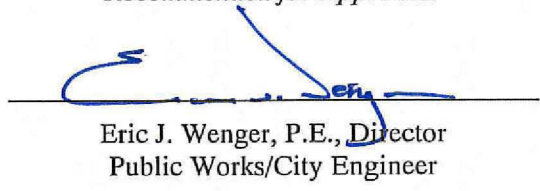
Consulting Engineers – Certificate of Authorization No. 3949
100 N. E. 5th Street , Oklahoma City, Oklahoma 73104
Tel: 405/840-7094 Fax: 405/840-9116
E-mail: srb@srbok.com



Marc A. Long, P.E.




Recommended for Approval:



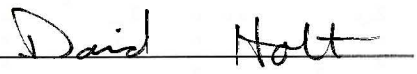
Eric J. Wenger, P.E., Director
Public Works/City Engineer

APPROVED by the Council and signed by the Mayor of the City of Oklahoma City this 14th day of August, 20 18.


ATTEST:


City Clerk





REVIEWED as to form and legality.



Assistant Municipal Counselor

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SCOPE

Silverhawk Phase I is a residential development located at approximately Northwest 178th and North Pennsylvania Avenue. Within this residential addition, there is a small portion of the roadways, which were initially identified as a "Private Street and Public Utility Easement". This area is generally described as N.W. 172nd Street, between Hawks Tree Lane and White Hawk Drive. Smith Robert Baldischwiler, LLC (SRB) was contacted by the Silverhawk Home Owners Association (HOA) for the purpose of evaluating the existing condition of these "private roadways". It is the desire of this HOA to present these findings to the City of Oklahoma City (OKC) as a good faith effort to pursue the dedication of these roadways and improvements for public use. This report will identify what improvements will be recommended to be addressed by the HOA and also includes an estimate of construction costs for bringing the streets to acceptable standard for dedication to OKC.

COST ESTIMATE

Estimated construction cost for the street repair: \$104,650.00

Total cost (Option 1 with contingency, testing, administration, printing, and design.): **\$132,254.50**

Detailed cost estimate listed in Appendix B

SCHEDULE — BID AND CONSTRUCTION

This report will provide Silverhawk HOA a document for submission to OKC, for their review. And if it is the desire of the HOA to pursue this dedication of roadways, understanding the cost of required improvements, this is the expected time considerations for the project:

From time of approval by the homeowners of Silverhawk, Phase I:

- 90 calendar days for preliminary plans
- 60 calendar days for final plans
- 45-60 calendar days for construction

RECOMMENDATION

1. Pavement removal, stabilization, and pavement replacement on N.W. 172nd Street for approximately 200 feet. Sta. 0+00 to Sta. 2+00.
2. Routing, preparations, and crack sealing of all pavements
3. Edge milling and thin asphalt overlay (1 1/4") of entire surface of roadways.
4. Removal and replacement of noncompliant wheelchair ramps. Installation of two (2) new ADA compliant ramps.
5. Recommend that the City of Oklahoma City proceed with the acceptance process for Silverhawk, PH 1.

SITE MAP

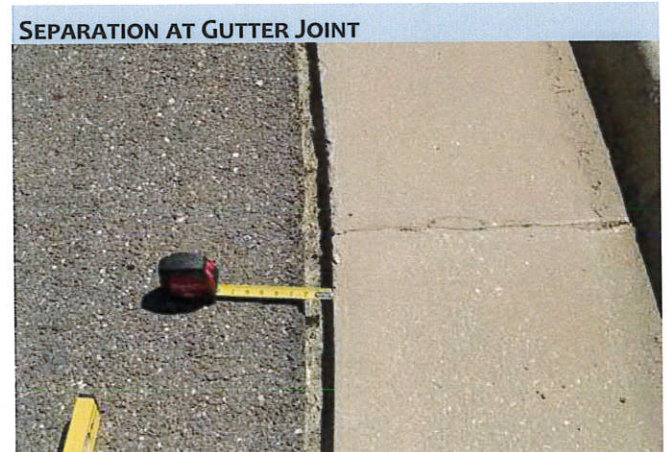
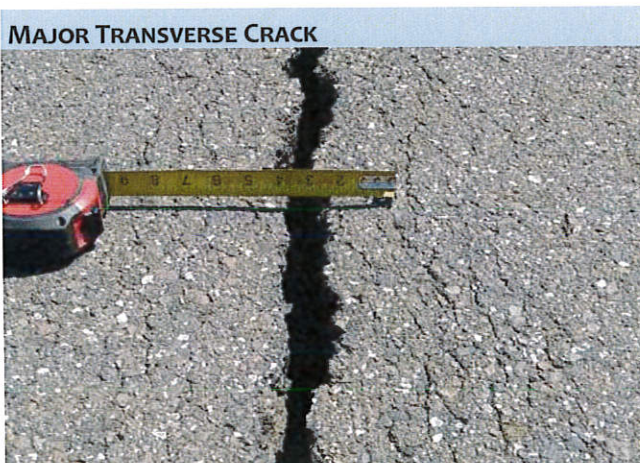
AERIAL LOCATION MAP



EXISTING PAVING CONDITIONS

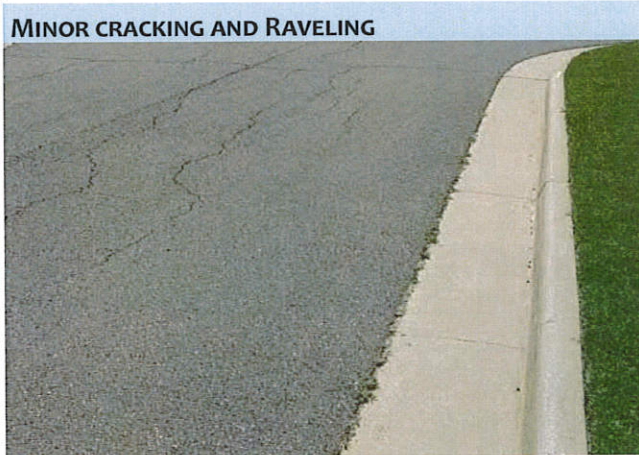
This evaluation of the Silverhawk, Phase I roadway's include N. W. 172nd Street, between Hawk's Tree Lane and White Hawk Drive, as well as approximately 165 feet on Hawk's Tree Lane and White Hawk Drive. Currently there is a controlled gate on White Hawk Drive and a locked gate with pedestrian entrance on Hawk's Tree Lane; if accepted by OKC these appurtenances shall be removed when final acceptance by OKC is accomplished. The typical sections for all of these roadways are a 26' Roadway with 2'-8" Curb and Gutter Section and 22' of 5 1/4" Asphalt pavement. The typical section indicates 3 1/4" asphalt base course (Type "A") and a 2" asphalt surface course (Type "B"). NOTE: Cores were not taken to verify these thicknesses for the pavements. There is a 6" Stabilized Base which extends the entire width of the pavements section, and 10" behind the back of curb. It was not determined prior to design the type of "stabilization" utilized in this application.

The current pavement condition of the roadway's mentioned within this report in Fair condition. One section of pavement (approx. 200' in length) within the N.W. 172nd Street, which is described along the stationing of the as-built plan set as Sta. 0+00 to Sta. 2+00 is in Poor condition and needs to be removed and replaced. There is considerable transverse cracking, varying in condition and widths, which needs to be addressed for maintenance purposes. This cracking is normally caused by fatigue in the subgrade or can be caused by expansive soils below the 6" modification that has reacted to climatological conditions over the life of the pavements. Also, there is separation between the face of the gutter section and the pavement, this also is in need of sealing as a corrective action. We have also recognized random cracking on the gutter sections which will require routing and sealing for correction. The cracking has been exposed to the climatological conditions, without maintenance and needs to be addressed.



EXISTING PAVING CONDITIONS

The surface condition of the asphalt shows considerable oxidation and some areas are beginning to show evidence of larger sized aggregate raveling from the surface. This condition is generally seen in pavements that may not have the annual average daily traffic (AADT) to keep the bituminous materials active; which is a condition generally seen in limited access paving areas. Due to the evidence of stability in the pavement section, once cracks are addressed, there should be a cold milling of the pavement along the gutter joint with a thin asphalt overlay to the existing surface which will provide protection for extended life.

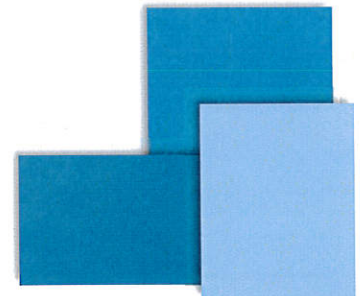


There are two ramps within the area of evaluation that were initially intended for handicap access to the sidewalks, but are no longer in compliance with ADA regulations. These ramps will need to be replaced, and additional ramps in a close proximity for the purpose of crossing the street will also need to be added. Two (2) ramps removed and replaced and Two (2) ramps constructed.

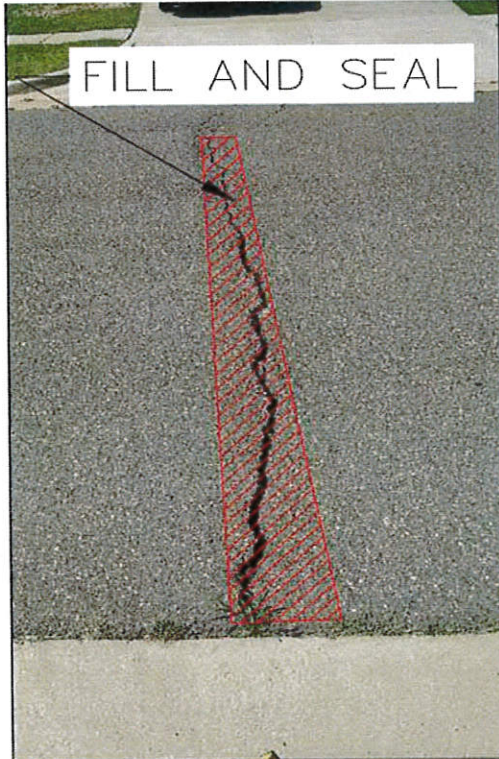
NON COMPLIANT WHEEL CHAIR RAMP



Existing sidewalk is the four (4') width with non-compliant ramps. The ramps for the entire addition will need to be brought into compliance with current ADA requirements.



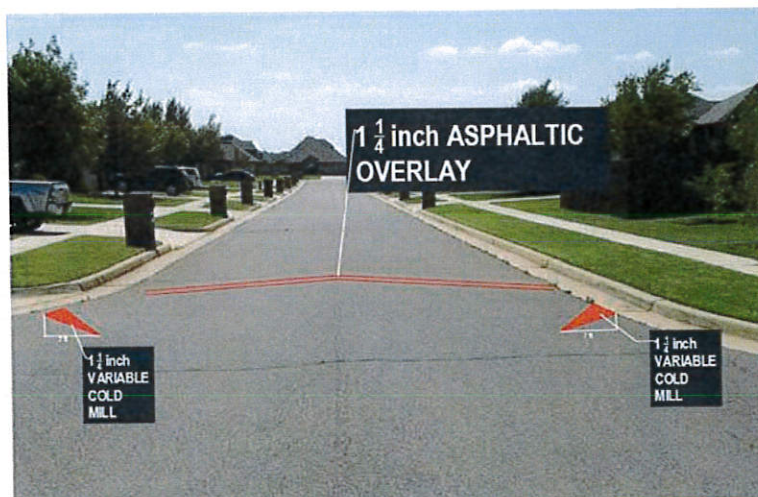
DESIGN PARAMETERS - CRACK SEALING AND PAVEMENT REHABILITATION



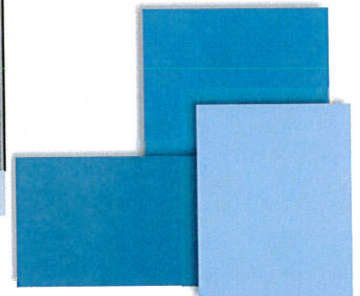
MAJOR CRACK REPAIR



REMOVE AND REPLACE PAVEMENT



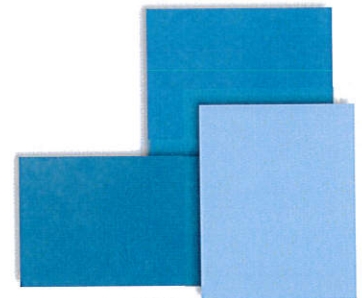
EDGE MILLING AND THIN OVERLAY (1 1/4')



The White Hawk, Phase I addition was established in 2008 and included within its boundaries a private section of pavement. It was established as a Neighborhood Association Residential Area located just south of N.W. 178th on North Pennsylvania Avenue. For this transfer of Private facilities to become Public maintained roadway to be accomplished, upgrading to the current City of Oklahoma City standards for the neighborhoods infrastructure must occur. This report addresses the existing condition of the streets within the neighborhood. This report makes recommendations for the repair of the streets with a estimated construction cost.

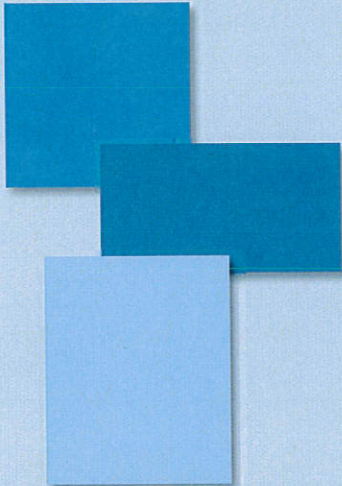
It is the recommendation of Smith Roberts Baldischwiler LLC, based on the observations of the Silverhawk infrastructure, that the following actions are taken.

1. Pavement removal, stabilization, and pavement replacement on N.W. 172nd Street for approximately 200 feet. Sta. 0+00 to Sta. 2+00.
2. Routing, preparations, and crack sealing of all pavements
3. Edge milling and thin asphalt overlay (1 1/4) of entire surface of roadways.
4. Removal and replacement of noncompliant wheelchair ramps. Installation of two (2) new ADA compliant ramps.
5. Recommend that the City of Oklahoma City proceed with the acceptance process for Silverhawk PH 1.



Appendix A

SILVERHAWK PHASE 1 AS-BUILT PLANS



Date	2005
Sheet Number	5

Drawn by	CCC
Checked by	P. HAGEN
Job Number	05010200
Contact Person	P. HAGEN

OVERALL PAVING AND GRADING PLAN

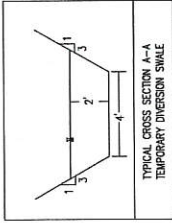
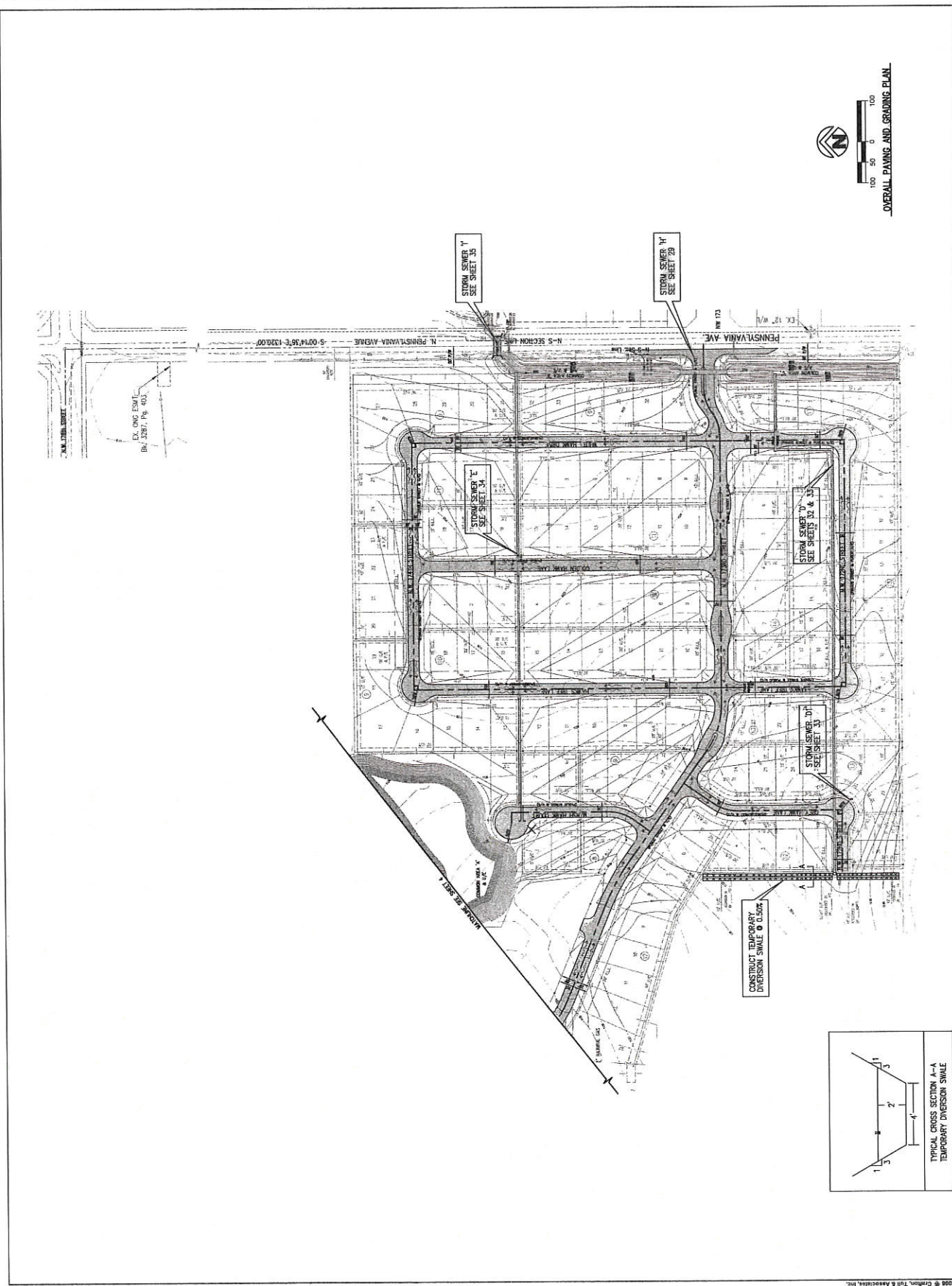
Revision	AS-BUILT 11-16-2007

SILVERHAWK
 PHASE I
 OKLAHOMA CITY, OK


Craton, Tull & Associates, Inc.
 405 N. Main Street, Suite 200 Oklahoma City, OK 73127
 405.757.5270 Fax: 405.757.5275 www.cratontull.com
 Engineers & Surveyors



OVERALL PAVING AND GRADING PLAN

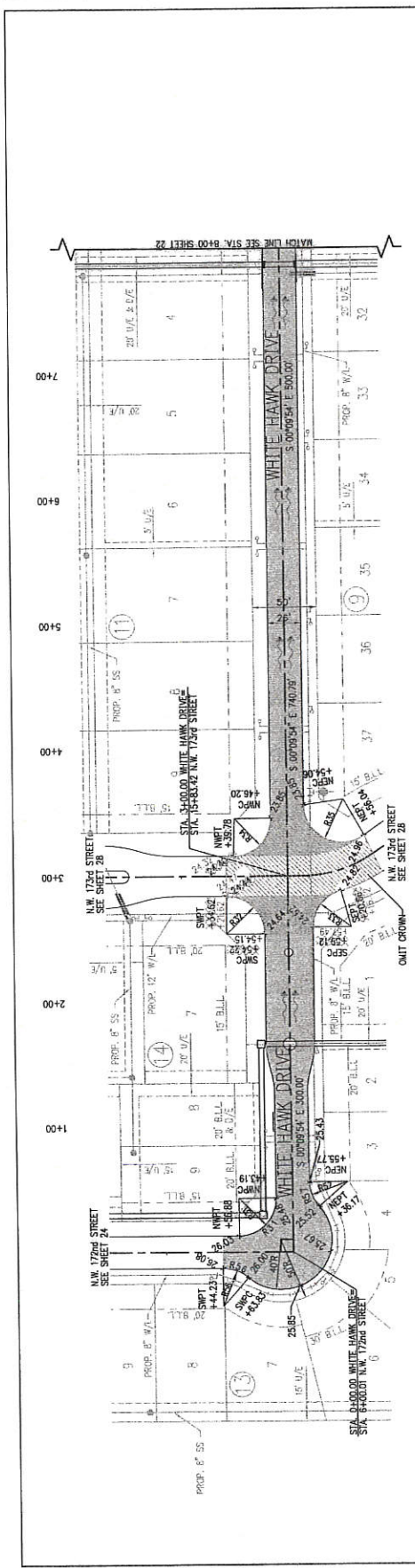


Engineers & Surveyors

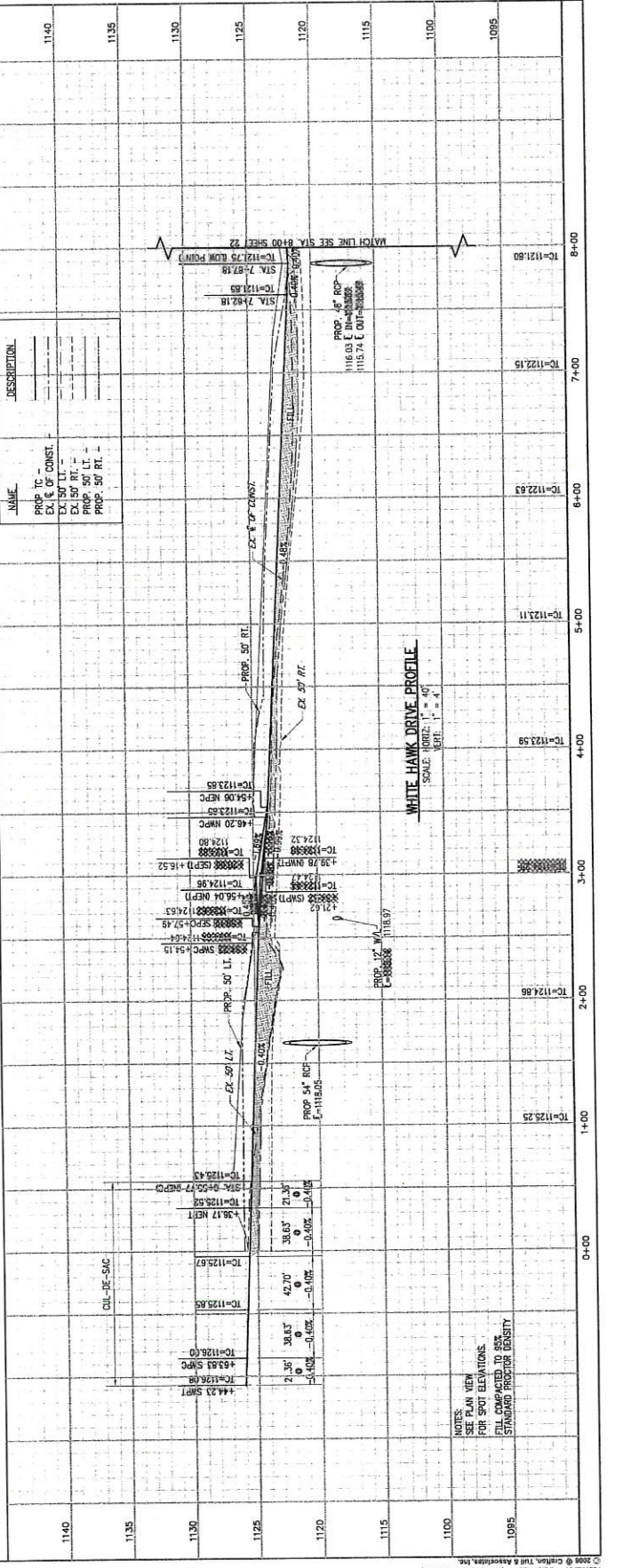


Craton, Tull & Associates, Inc.
405 N. Mackajun, Suite 200 Oklahoma City, OK 73127
405.787.8270 Fax: 405.787.8276 www.ctaonline.com

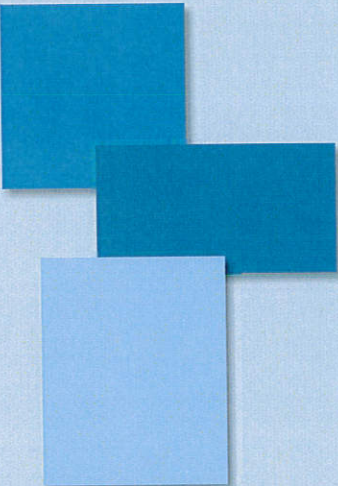
DATE: 5/25/2006



NAME	DESCRIPTION
R31	PROF. TO CONST.
R32	EX. 50' LT.
R33	EX. 50' RT.
R34	PROF. 50' LT.
R35	PROF. 50' RT.



NUMBER	DELTA ANGLE	RADIUS	LENGTH	DELTA ANGLE	RADIUS	LENGTH	DELTA ANGLE	RADIUS	LENGTH	DELTA ANGLE	RADIUS	LENGTH			
R31	90°15'33"	30.00	47.26	R32	89°52'51"	30.00	47.06	R33	74°45'07"	30.00	39.14	R34	90°15'33"	30.00	47.26
R35	125°11'33"	30.00	65.55	R36	40°47'13"	30.00	21.36	R37	40°47'13"	30.00	21.36	R38	40°47'13"	30.00	21.36
R39	103°11'13"	30.00	65.55	R40	40°47'13"	30.00	21.36	R41	40°47'13"	30.00	21.36	R42	40°47'13"	30.00	21.36



ESTIMATED COSTS

July 25th, 2017

SILVERHAWK, PH. I - N.W. 172ND, HAWKS TREE LANE & WHITE HAWK DRIVE

COST ESTIMATE FOR STREET REPAIR

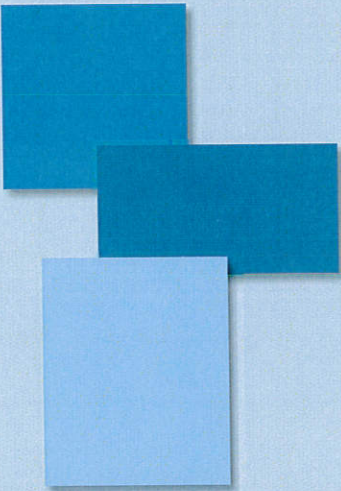
Item No.	Section	Description	Units	Estimated Unit Price	Estimated Quantity	Estimated Price
1	301-07	Asphalt Concrete Type D (70-28)	TON	\$ 110.00	250.0	\$ 27,500.00
2	301-31	Asphalt Concrete Type A (64-22)(5")	TON	\$ 100.00	150.0	\$ 15,000.00
3	309-08	Cold Milling Asphalt (Varies 0-1 1/4")	SY	\$ 3.00	2500.0	\$ 7,500.00
4	310-01	Joint Rehabilitation	LF	\$ 3.00	1600.0	\$ 4,800.00
5	801-03	Mobilization	LS	\$ 8,500.00	1.0	\$ 8,500.00
6	801-04	Pre & Post Construction Video	LS	\$ 1,000.00	1.0	\$ 1,000.00
7	812-04	Asphalt Pavement Removal	SY	\$ 15.00	500.0	\$ 7,500.00
8	814-00	Pavement Cut and Repair (Block Joint Repair, Full Depth)	LF	\$ 20.00	550.0	\$ 11,000.00
9	816-01	Remove Sidewalk	SY	\$ 25.00	40.0	\$ 1,000.00
10	823-00	Sidewalk (5')	SY	\$ 60.00	40.0	\$ 2,400.00
11	830-00	ADA Curb Ramp	EA	\$ 1,200.00	4.0	\$ 4,800.00
TOTAL ESTIMATED STREET REPAIR CONSTRUCTION COST						\$ 91,000.00

Contingency (15%)	\$ 13,650.00
Testing (3%)*	\$ 3,139.50
Administration (10%)*	\$ 10,465.00
Advertising/Printing Costs*	\$ 2,000.00
Engineering/Surveying Costs*	\$ 12,000.00
ESTIMATED TOTAL COSTS	\$ 132,254.50

*Project and Contract Administrative Fees from OKC

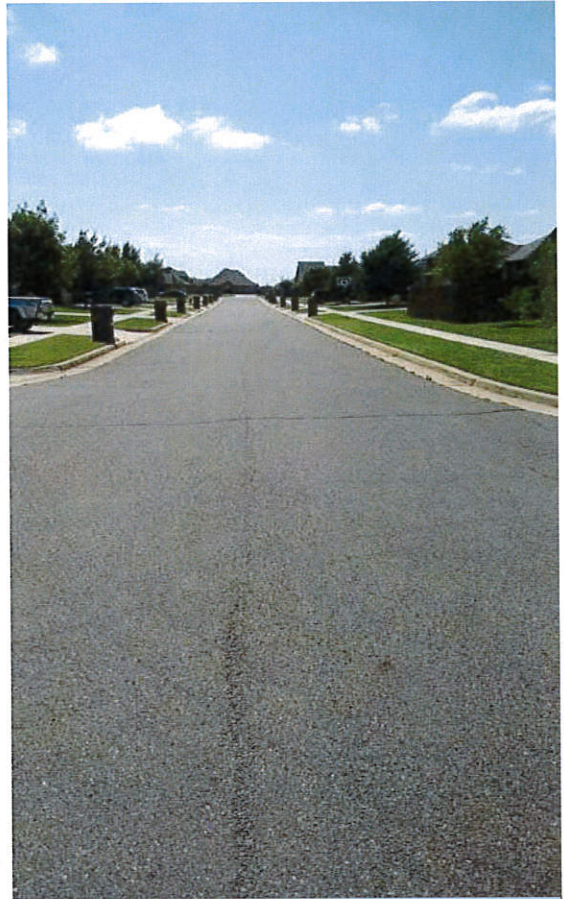
Appendix C

SILVERHAWK CONDITION PHOTOS

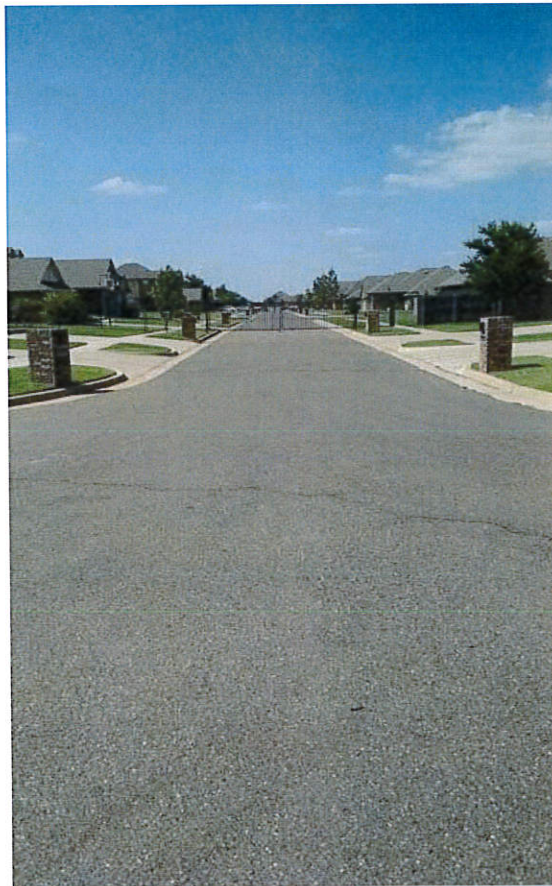




WHITE HAWK DRIVE



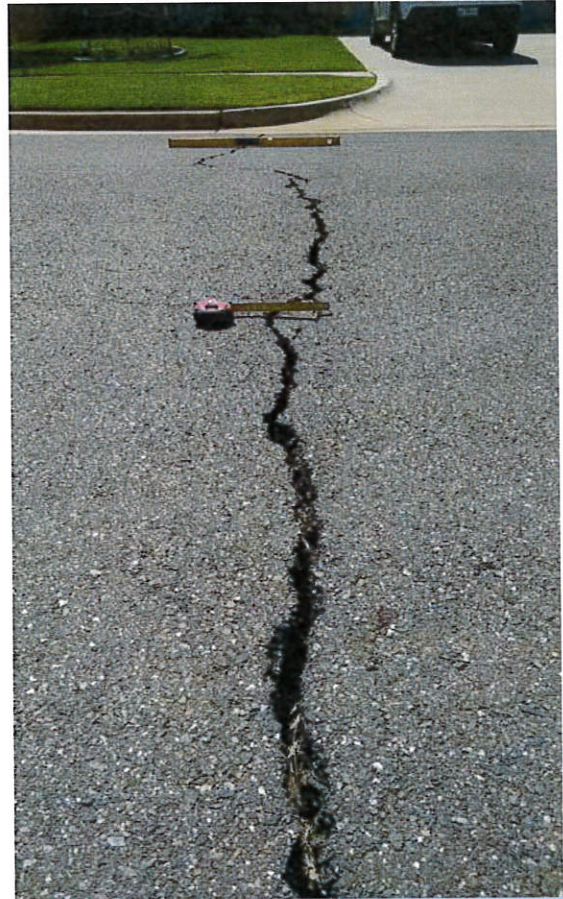
N.W. 172ND STREET



HAWK'S TREE LANE



MAJOR CRACK (BLOCK JOINT REPAIR)



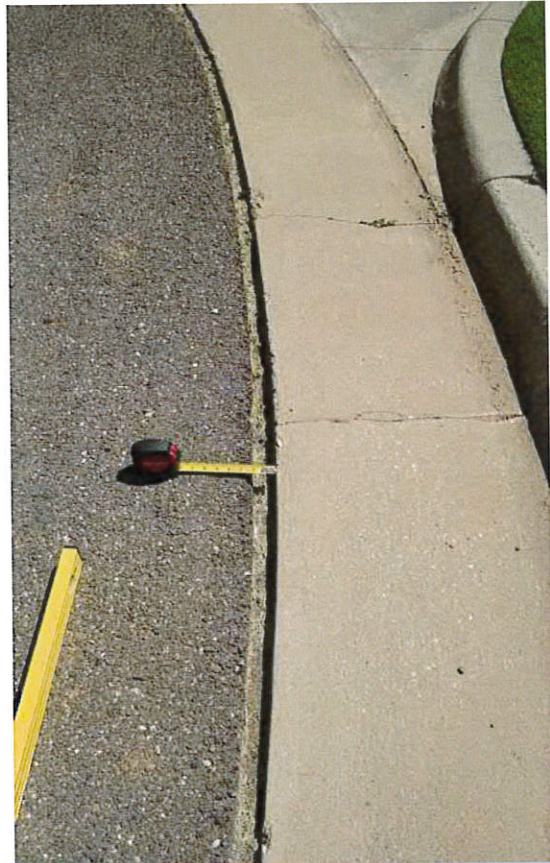
MAJOR CRACK (BLOCK JOINT REPAIR)



MINOR CRACKING AND PAVEMENT PROFILE



NON COMPLIANT WHEEL CHAIR RAMP



SEPARATION AT GUTTER JOINT



DRIVEWAY SEPARATION AND GUTTER CRACKING