

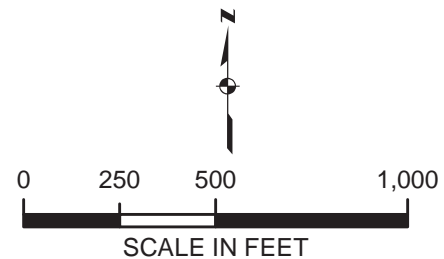
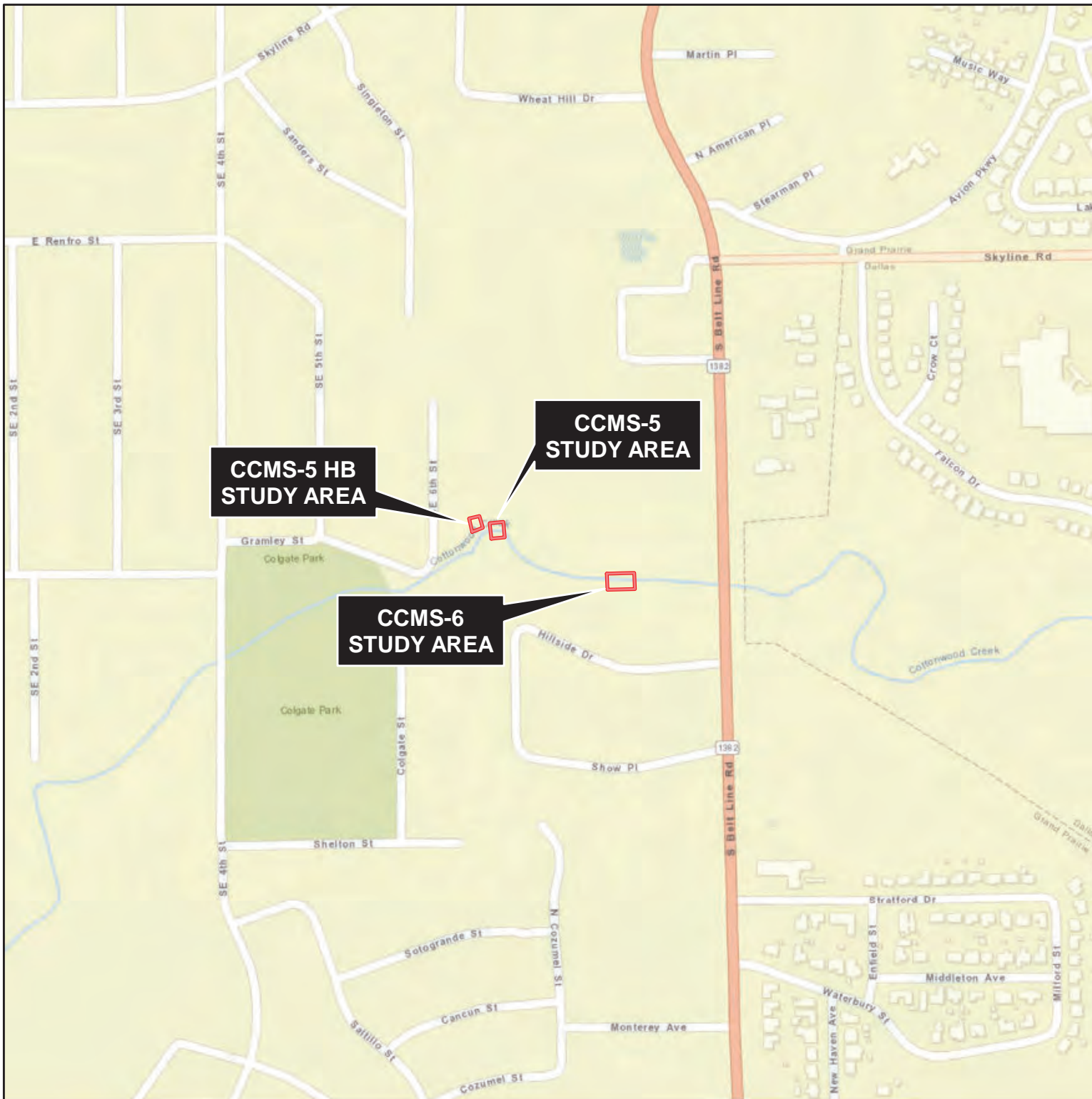


LEGEND	
	STUDY AREAS
NOTES:	
1. Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community	
2.	
3.	

COTTONWOOD AND FISH CREEK STREAM STABILITY IMPROVEMENTS
Project Number: <USACE #>
Date: 11/2019 AVO: 35502
LOCATION MAP
FIGURE 1




LEGEND

STUDY AREAS

NOTES:

1. Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community
- 2.
- 3.

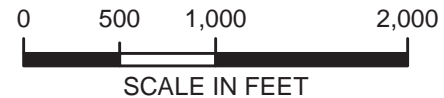
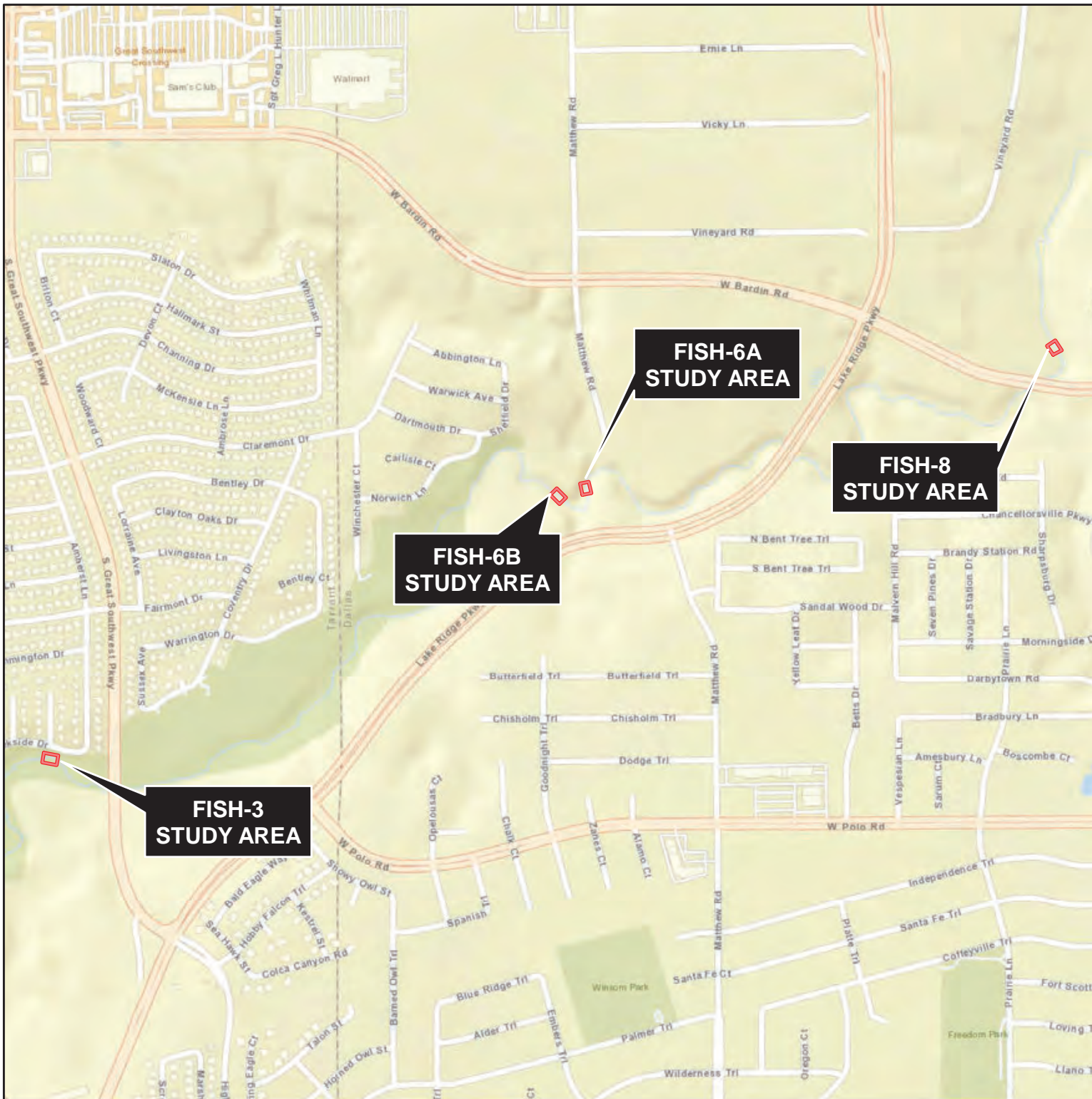
**COTTONWOOD AND FISH CREEK
STREAM STABILITY IMPROVEMENTS**

Project Number: <USACE #>


Date: 11/2019 AVO: 35502

**COTTONWOOD CREEK
VICINITY MAP**

FIGURE 2



LEGEND

 STUDY AREAS

NOTES:
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 2.
 3.

**COTTONWOOD AND FISH CREEK
 STREAM STABILITY IMPROVEMENTS**

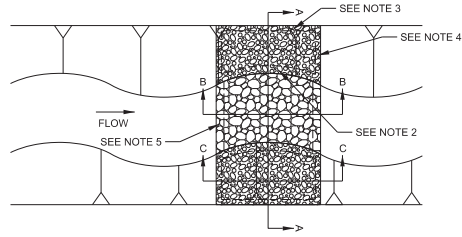
Project Number: <USACE #>

Date: 11/2019 AVO: 35502

FISH CREEK
 VICINITY MAP

FIGURE 2

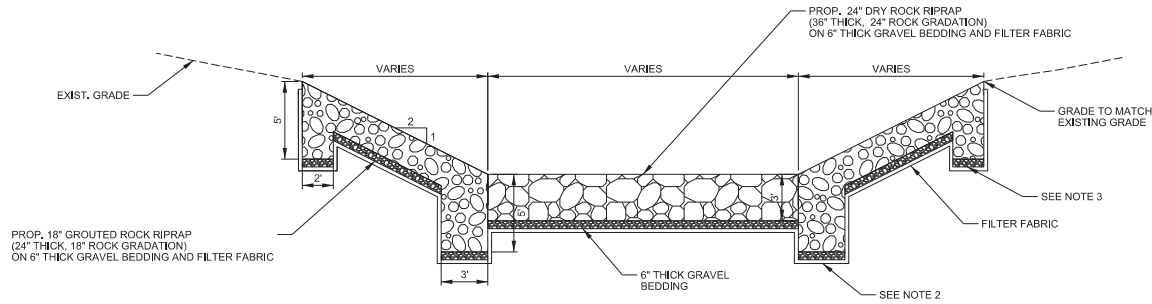




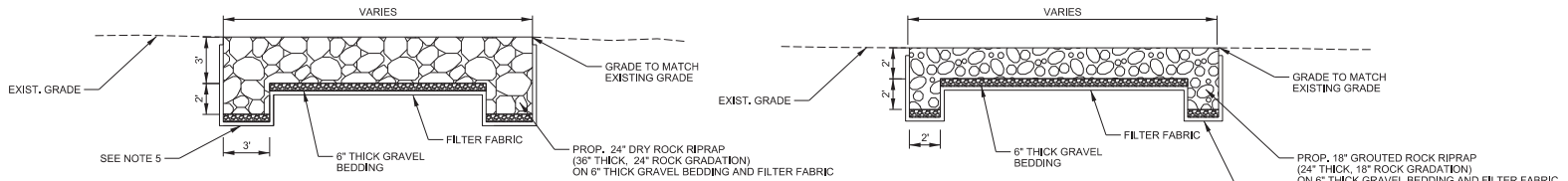
TYPICAL ROCK CHUTE
PLAN VIEW
N.T.S.

NOTES:

1. DISTURBED AREAS NOT STABILIZED BY RIPRAP SHALL BE GRADED AT MIN. SLOPE OF 1% AND MAX SLOPE OF 25% (4H TO 1V).
2. 3' WIDE, 5' DEEP 18" GROUDED ROCK TOE WALL REQUIRED ALONG ALL TOE OF SLOPE EXCEPT WHERE NOTED OTHERWISE.
3. 2' WIDE, 5' DEEP 18" GROUDED ROCK TOE WALL REQUIRED ALONG ALL TOP OF SLOPE EXCEPT WHERE OTHERWISE NOTED.
4. 2' WIDE, 4' DEEP 18" GROUDED ROCK TOE WALL REQUIRED ALONG ALL EDGE OF RIPRAP SLOPES EXCEPT WHERE OTHERWISE NOTED.
5. 3' WIDE, 5' DEEP 24" DRY ROCK TOE WALL REQUIRED ALONG UPSTREAM AND DOWNSTREAM EDGE OF RIPRAP IN BED OF CREEK EXCEPT WHERE OTHERWISE NOTED.



CROSS SECTION "A"
N.T.S.



CROSS SECTION "B"
N.T.S.

CROSS SECTION "C"
N.T.S.

LEGEND



PROPOSED DRY
ROCK RIPRAP

PROPOSED GROUDED
ROCK RIPRAP

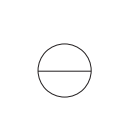
COTTONWOOD AND FISH CREEK
STREAM STABILITY
GRAND PAIRE, TEXAS



Revision No.	Date	Description

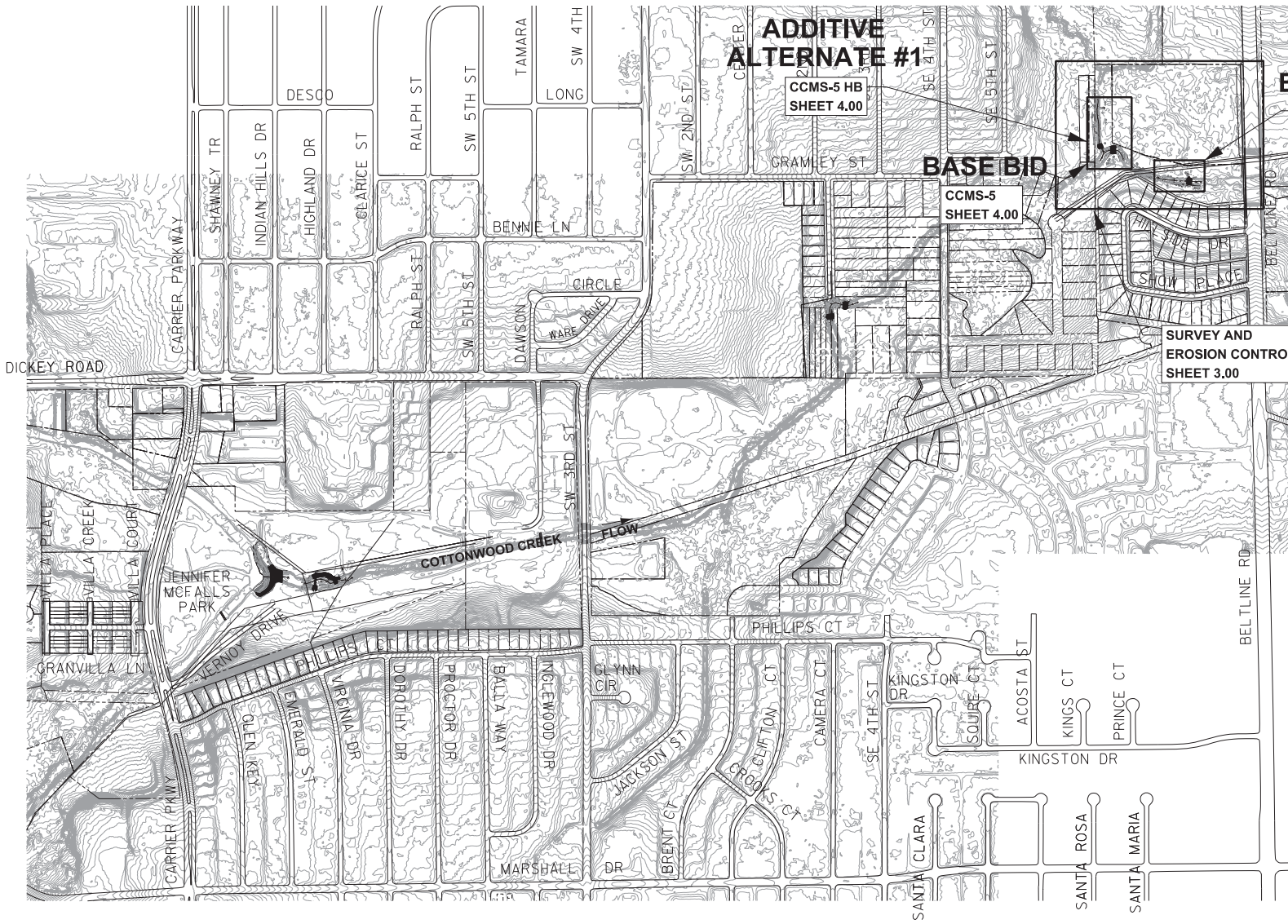
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STEPHEN CHAMBERS, SEISS
NAME: FILE NO.:
DATE: DATE PLOTTED: 04/05/2019

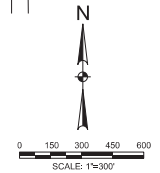


Project No.: 35502
Issued: 02/27/2019
Drawn By: NMM
Checked By: SBC
Scale: AS SHOWN
Sheet Title: COTTONWOOD AND FISH CREEK TYPICAL DETAILS

C0.03
Sheet Number



CITY OF GRAND PRAIRIE, TEXAS
COTTONWOOD CREEK



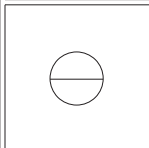
COTTONWOOD AND FISH CREEK
STREAM STABILITY
Grand Prairie
GRAND PRAIRIE, TEXAS



Revision No.	Date	Description

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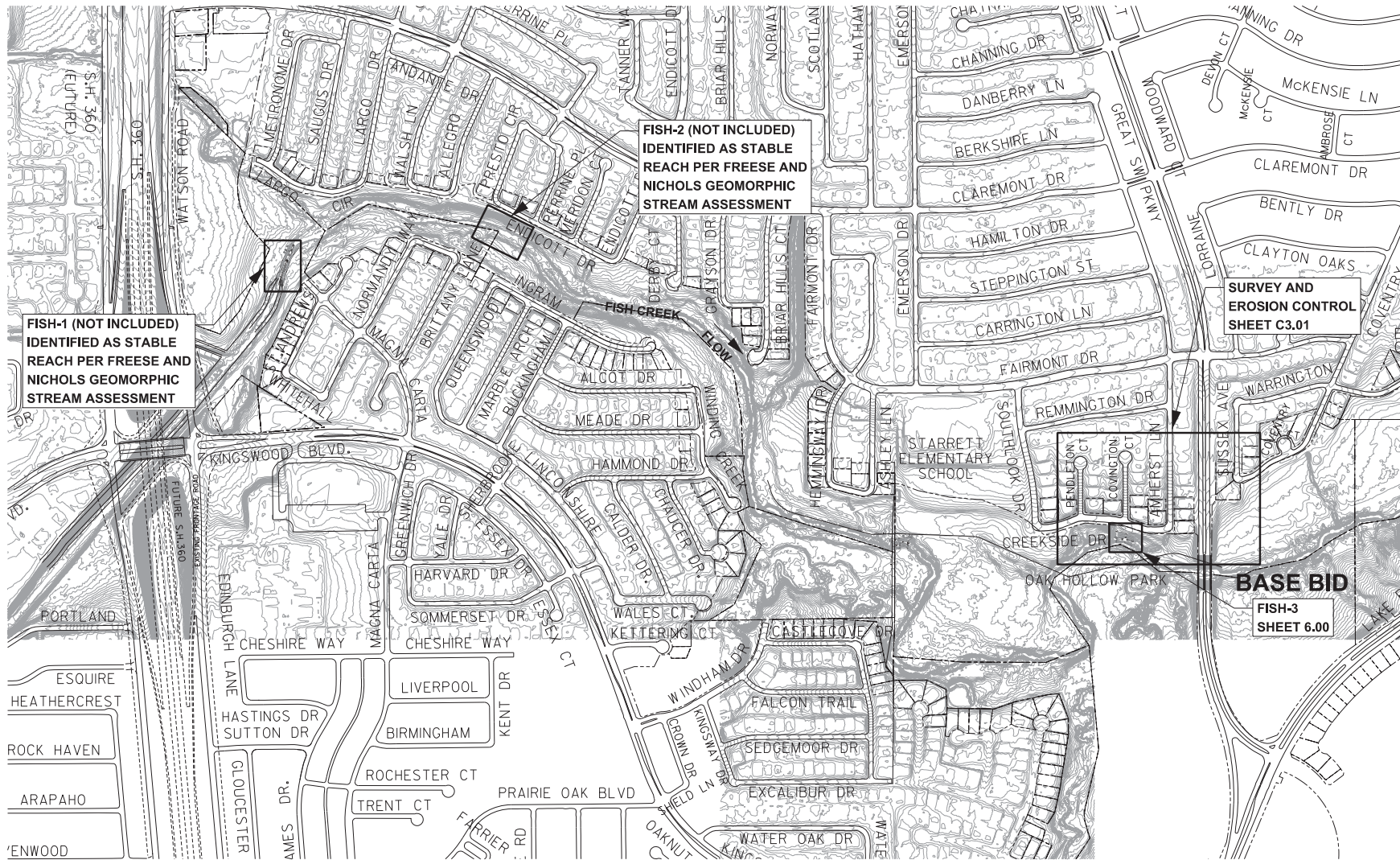
STEPHEN CHAMBERS 8888
NAME FLS, N/A
TYPE (TRIP #) 602024



Project No: 35502
Issued: 02/27/2019
Drawn By: NMM
Checked By: SBC
Scale: AS SHOWN
Sheet Title
COTTONWOOD CREEK
PROJECT LAYOUT

C1.00
Sheet Number

FILE #SD-692



FISH-1 (NOT INCLUDED)
IDENTIFIED AS STABLE
REACH PER FREESE AND
NICHOLS GEOMORPHIC
STREAM ASSESSMENT

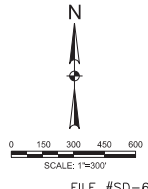
FISH-2 (NOT INCLUDED)
IDENTIFIED AS STABLE
REACH PER FREESE AND
NICHOLS GEOMORPHIC
STREAM ASSESSMENT

**SURVEY AND
EROSION CONTROL
SHEET C3.01**

**BASE BID
FISH-3
SHEET 6.00**

MATCH LINE; SEE SHEET C1.02

CITY OF GRAND PRAIRIE, TEXAS
FISH CREEK

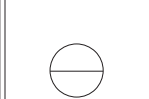


COTTONWOOD AND FISH CREEK
STREAM STABILITY



Revision No.	Date	Description

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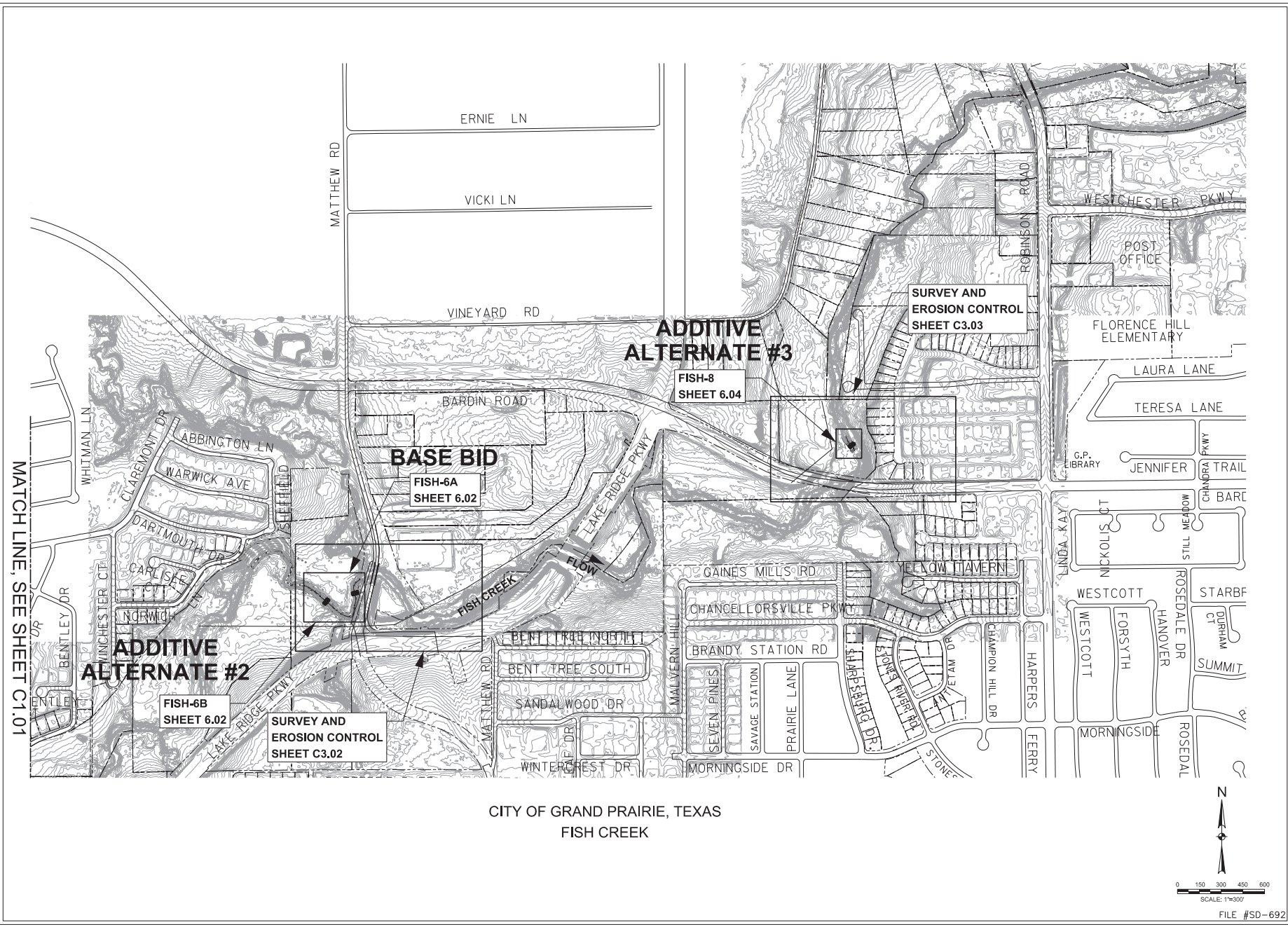


Project No.: 35502
Issued: 02/27/2019
Drawn By: NMM
Checked By: SBC
Scale: AS SHOWN
Sheet Title
FISH CREEK
PROJECT LAYOUT
1 OF 2

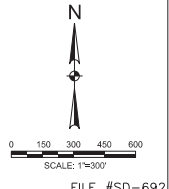
C1.01
Sheet Number

GRAND PRAIRIE, TEXAS





CITY OF GRAND PRAIRIE, TEXAS
FISH CREEK

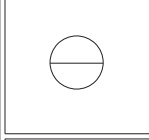


COTTONWOOD AND FISH CREEK
STREAM STABILITY
Grand Prairie, Texas



Revision No.	Date	Description

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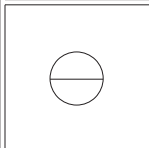
Project No.:	35502
Issued:	02/2/2019
Drawn By:	NMM
Checked By:	SBC
Scale:	AS SHOWN
Sheet Title:	FISH CREEK PROJECT LAYOUT 2 OF 2
Sheet Number:	C1.02

FILE #SD-692

Revision No.	Date	Description

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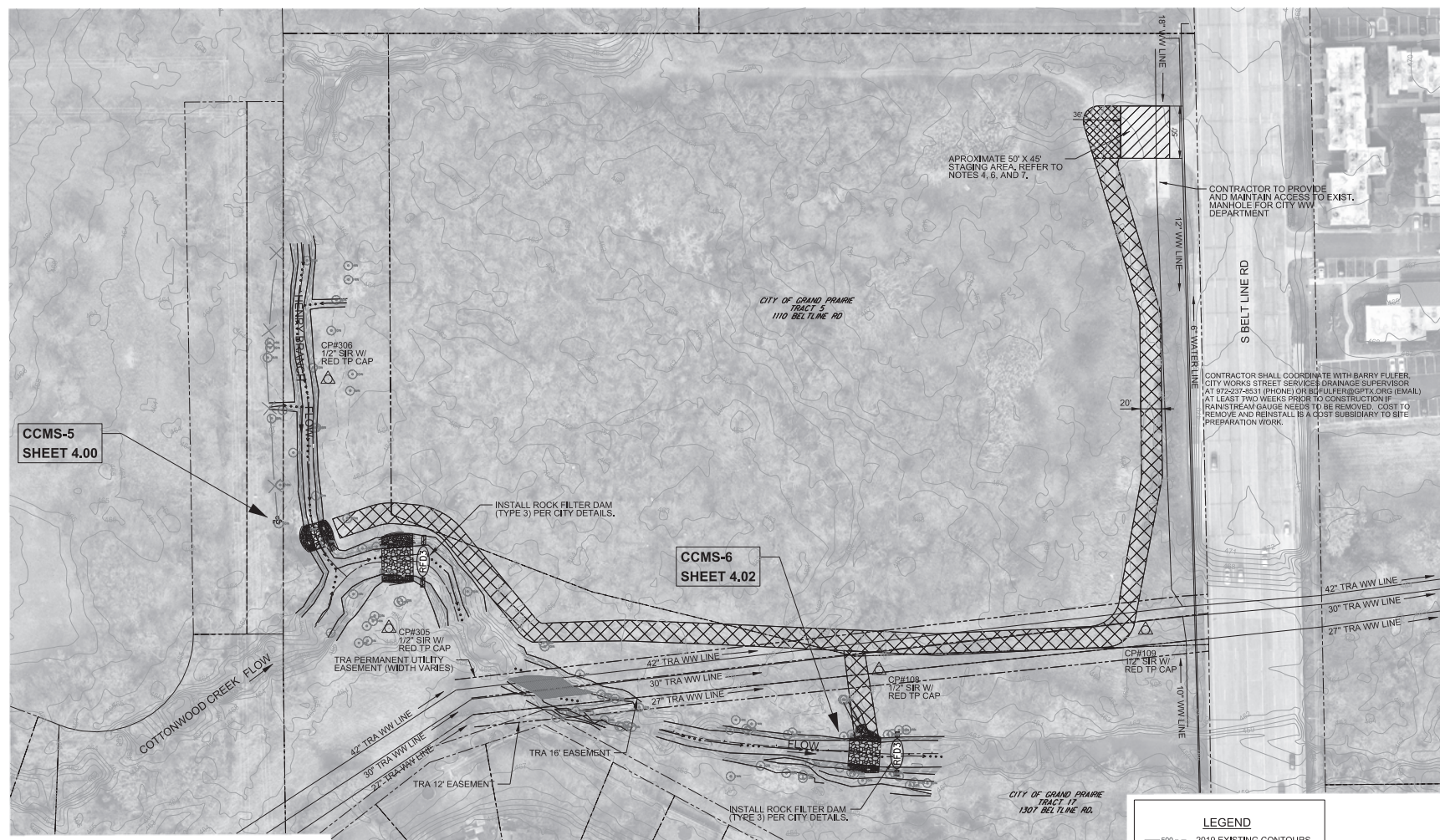
STEPHEN CHAMBERS: 0000
NAME: S.E., P.E.
TYPE TWO (PLOT): 000000



Project No.: 35502
Issued: 02/27/2019
Drawn By: NMM
Checked By: SBC
Scale: AS SHOWN

Sheet Title
COTTONWOOD CREEK
SURVEY AND EROSION

C3.00
Sheet Number



CCMS-5
SHEET 4.00

CCMS-6
SHEET 4.02

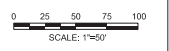
STAGING AREA (SY)	ACCESS ROUTE (SY)	% AREA COVERED BY TREES TO BE CLEARED
250	3050	75%

LEGEND

- 500 --- 2019 EXISTING CONTOURS
- 500 --- 2016 EXISTING CONTOURS
- - - - - EXISTING PROPERTY LINE
- ▲ SURVEY CONTROL POINTS
- △ CP#120 1/2" SIR WITH RED TP CAP
- ▨ ROCK FILTER DAM TYPE 3
- ▨ PROPOSED STAGING AREA
- ▨ ACCESS ROUTE
- ▨ STABILIZED CONSTRUCTION ENTRANCE/EXIT

SURVEY CONTROL POINTS

POINT NO.	NORTHING	EASTING	DESCRIPTION	ELEVATION
108	6953483.43	2431474.58	SIRTP4	462.26
109	6953522.30	2431731.00	SIRTP4	463.12
305	6953523.93	2431002.78	SIRTP4	464.76
306	6953523.93	2431002.78	SIRTP4	464.76



FILE #SD-692

2016 contours generated from 2016 City of Grand Prairie LIDAR by Moxim & Greed.

2019 contours are from on-the-ground survey was performed by Halff Associates, Inc.

The Basis of Bearing for the 2019 contours is the Texas Coordinate System, North Central Zone 4202, North American Datum of 1983, 2011 adjustment. All distances are surface distances. Surface Adjustment Scale Factor: 1.000136506

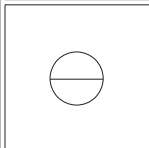
1. PROPOSED ACCESS ROUTE IS APPROXIMATE. CONTRACTOR SHALL MODIFY THE ACCESS ROUTE SUCH THAT 6" CALIPER TREES AND LARGER ARE PRESERVED. CONTRACTOR SHALL CLEAR BRUSH AND PRUNE TREES AS REQUIRED FOR ACCESS. CLEARING AND PRUNING SHALL BE COORDINATED WITH THE CITY.
2. CONTRACTOR SHALL ESTABLISH GRASS ON DISTURBED AREAS BY SODDING BERMUDA GRASS EXCEPT FOR WOODED AREAS NOT COVERED BY GRASS PRIOR TO CONSTRUCTION AND WHERE GRASS GERMINATION IS PREVENTED BY NATURAL SITE CONDITIONS.
3. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS AND AREAS USED FOR ACCESS AND STAGING TO EQUAL OR BETTER CONDITIONS AFTER CONSTRUCTION IS COMPLETE.

4. THIS PLAN SHOWS POTENTIAL AREAS FOR CONTRACTOR'S STAGING. ACTUAL CONTRACTOR'S STAGING AREA TO BE DETERMINED ON SITE AND APPROVED BY CITY.
5. EXISTING WATER AND WASTEWATER LINES SHOWN ARE BASED ON GIS DATA PROVIDED BY THE CITY AND LIMITED SURVEY OF APPURTENANCES WITHIN TOPOGRAPHIC SURVEY LIMITS.
6. CONTRACTOR SHALL TAKE PHOTOS AND VIDEO OF SITE, INCLUDING STAGING AREAS, PRIOR TO CONSTRUCTION.
7. CONTRACTOR SHALL PREPARE AND PROVIDE TO THE CITY EMERGENCY OPERATION AND EVACUATION PLAN FOR EACH STAGING AREA IN FLOOD AND FLOODWAY PRIOR TO IMPLEMENTATION.

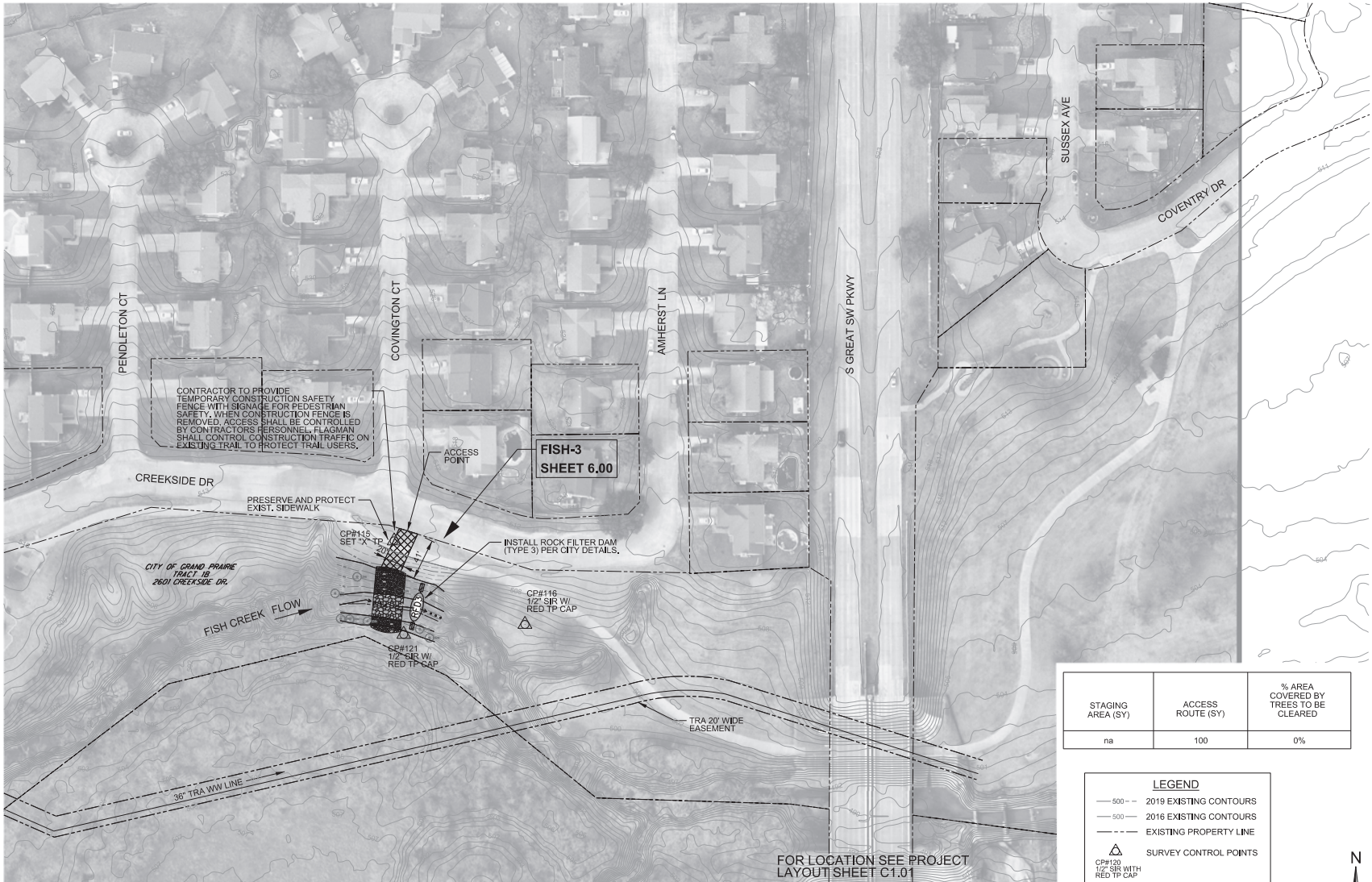
Revision No.	Date	Description

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STEPHEN CHAMBERS: 0828
NAME: J.E. WEAVER
DATE: 02/27/2019
TYPE: (P) (S) (C)



Project No.: 35502
Issued: 02/27/2019
Drawn By: NMM
Checked By: SBC
Scale: AS SHOWN
Sheet Title: FISH CREEK SURVEY AND EROSION CONTROL 1 OF 3
C3.01
Sheet Number



CONTRACTOR TO PROVIDE TEMPORARY CONSTRUCTION SAFETY FENCE WITH SIGNAGE FOR PEDESTRIAN SAFETY. WHEN CONSTRUCTION FENCE IS REMOVED, ACCESS SHALL BE CONTROLLED BY CONTRACTORS PERSONNEL. FLAGMAN SHALL CONTROL CONSTRUCTION TRAFFIC ON EXISTING TRAIL TO PROTECT TRAIL USERS.

FISH-3
SHEET 6.00

INSTALL ROCK FILTER DAM (TYPE 3) PER CITY DETAILS.

CP#116
1/2" SIR W/
RED TP CAP

CP#115
SET

CP#120
1/2" SIR W/
RED TP CAP

FOR LOCATION SEE PROJECT LAYOUT SHEET C1.01

- PROPOSED ACCESS ROUTE IS APPROXIMATE. CONTRACTOR SHALL MODIFY THE ACCESS ROUTE SUCH THAT 6" CALIBER TREES AND LARGER ARE PRESERVED. CONTRACTOR SHALL CLEAR BRUSH AND PRUNE TREES AS REQUIRED FOR ACCESS. CLEARING AND PRUNING SHALL BE COORDINATED WITH THE CITY.
- CONTRACTOR SHALL ESTABLISH GRASS ON DISTURBED AREAS BY SODDING BERMUUDA GRASS EXCEPT FOR WOODED AREAS NOT COVERED BY GRASS PRIOR TO CONSTRUCTION AND WHERE GRASS GERMINATION IS PREVENTED BY NATURAL SITE CONDITIONS.
- CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS AND AREAS USED FOR ACCESS AND STAGING TO EQUAL OR BETTER CONDITIONS AFTER CONSTRUCTION IS COMPLETE.
- EXISTING WATER AND WASTEWATER LINES SHOWN ARE BASED ON GIS DATA PROVIDED BY THE CITY AND LIMITED SURVEY OF APPURTENANCES WITHIN TOPGRAPHIC SURVEY LIMITS.
- CONTRACTOR SHALL TAKE PHOTOS AND VIDEO OF SITE INCLUDING STAGING AREAS, PRIOR TO CONSTRUCTION.

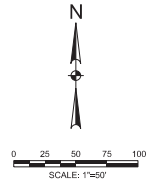
2016 contours generated from 2016 City of Grand Prairie LIDAR by Moxim & Greed.
2019 contours are from on-the-ground survey performed by Halff Associates, Inc.
The Basis of Bearing for the 2019 contours is the Texas Coordinate System, North Central Zone 4202, North American Datum of 1983, 2011 adjustment. All distances are surface distances.
Surface Adjustment Scale Factor: 1.000136506

SURVEY CONTROL POINTS				
POINT NO.	NORTHING	EASTING	DESCRIPTION	ELEVATION
115	6927112.06	2417014.15	SXTP	513.2
116	6927028.65	2417144.67	SIRTP4	502.77
121	6927018.75	2417023.63	SIRTP4	501.01

STAGING AREA (SY)	ACCESS ROUTE (SY)	% AREA COVERED BY TREES TO BE CLEARED
na	100	0%

LEGEND

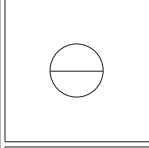
- 500 --- 2019 EXISTING CONTOURS
- 500 --- 2016 EXISTING CONTOURS
- EXISTING PROPERTY LINE
- △ SURVEY CONTROL POINTS
- CP#120 1/2" SIR W/ RED TP CAP
- RFD ROCK FILTER DAM TYPE 3
- ACCESS ROUTE
- STABILIZED CONSTRUCTION ENTRANCE/EXIT



FILE #SD-692

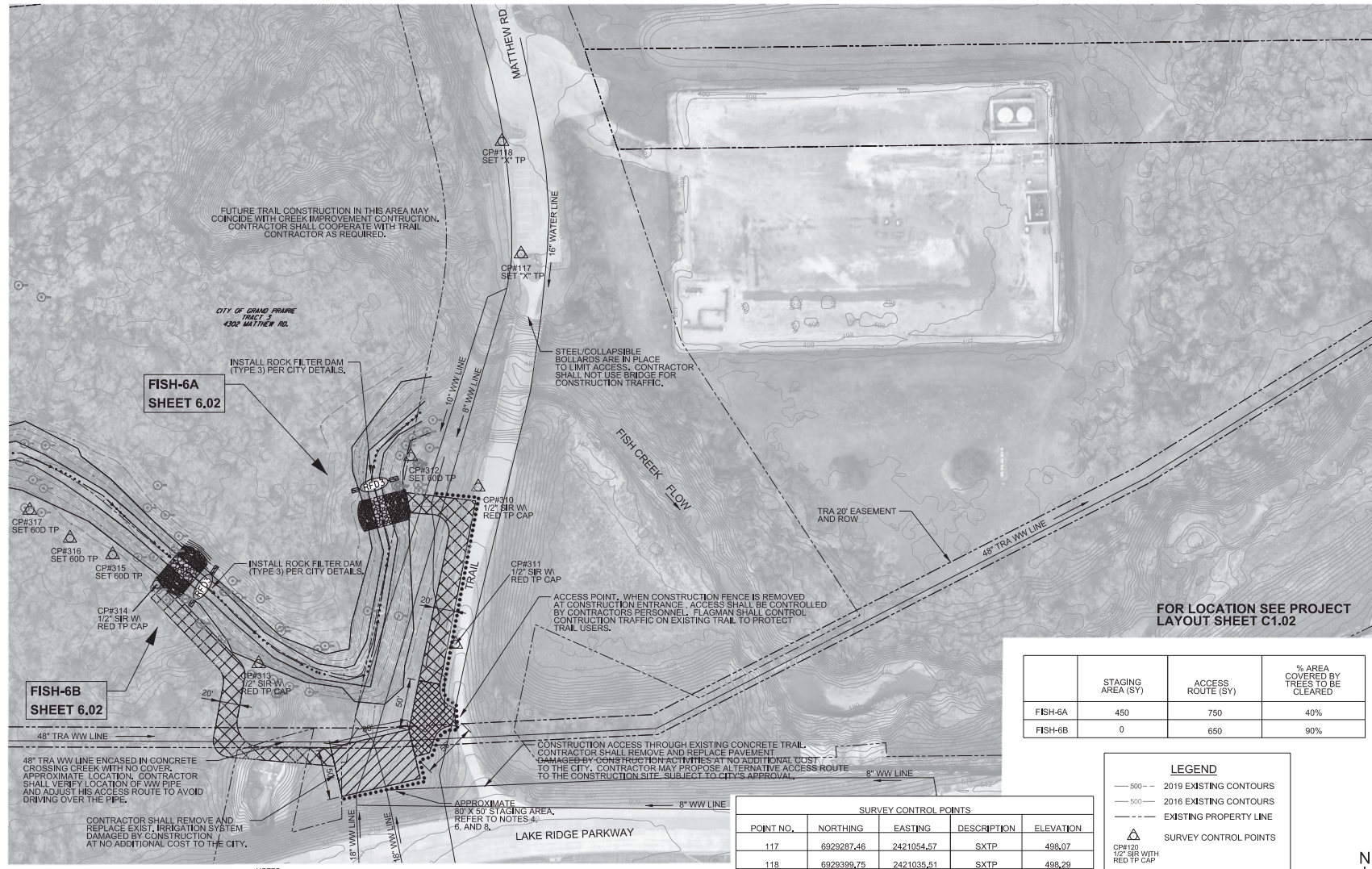
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STEPHEN CHAMBERS 0000
NAME TEL NO
10000 W. BRIDGES BLVD DALLAS, TEXAS 75243 972.961.4100



Project No.: 35502
Issued: 02/20/19
Drawn By: NMM
Checked By: SBC
Scale: AS SHOWN
Sheet Title

FISH CREEK
SURVEY AND EROSION CONTROL 2 OF 3
C3.02
Sheet Number



FOR LOCATION SEE PROJECT LAYOUT SHEET C1.02

	STAGING AREA (SY)	ACCESS ROUTE (SY)	% AREA COVERED BY TREES TO BE CLEARED
FISH-6A	450	750	40%
FISH-6B	0	650	90%

LEGEND

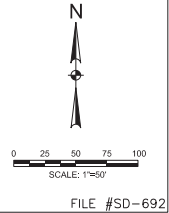
- 500 — 2019 EXISTING CONTOURS
- 500 — 2016 EXISTING CONTOURS
- - - - - EXISTING PROPERTY LINE
- ▲ SURVEY CONTROL POINTS
- ▲ CP#120 1/2" SIR W/ RED TP CAP
- (RFD) ROCK FILTER DAM TYPE 3
- ▨ PROPOSED STAGING AREA
- ▧ ACCESS ROUTE
- ▩ STABILIZED CONSTRUCTION ENTRANCE/EXIT
- TEMPORARY CONSTRUCTION SAFETY FENCE

SURVEY CONTROL POINTS

POINT NO.	NORTHING	EASTING	DESCRIPTION	ELEVATION
117	6929287.46	2421054.57	SXTP	498.07
118	6929399.75	2421035.51	SXTP	498.29
310	6929054.99	2421011.68	SIRTP4	498.57
311	6928898.28	2420989.26	SIRTP4	503.53
312	6929085.50	2420944.38	SNTF	492.12
313	6928878.82	2420792.75	SIRTP4	491.57
314	6928958.02	2420691.22	SIRTP4	493.55
315	6928987.41	2420646.86	SNTF	495.98
316	6929003.97	2420604.33	SNTF	497.68
317	6929031.82	2420584.24	SNTF	497.83

- NOTES:**
- PROPOSED ACCESS ROUTE IS APPROXIMATE. CONTRACTOR SHALL MODIFY THE ACCESS ROUTE SUCH THAT 6" CALIBER TREES AND LARGER ARE PRESERVED. CONTRACTOR SHALL CLEAR BRUSH AND PRUNE TREES AS REQUIRED FOR ACCESS. CLEARING AND PRUNING SHALL BE COORDINATED WITH THE CITY.
 - CONTRACTOR SHALL ESTABLISH GRASS ON DISTURBED AREAS BY SOEDING BERBERA GRASS EXCEPT FOR WOODED AREAS NOT COVERED BY GRASS PRIOR TO CONSTRUCTION AND WHERE GRASS GERMINATION IS PREVENTED BY NATURAL SITE CONDITIONS.
 - CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS AND AREAS USED FOR ACCESS AND STAGING TO EQUAL OR BETTER CONDITIONS AFTER CONSTRUCTION IS COMPLETE.
 - THIS PLAN SHOWS POTENTIAL AREAS FOR CONTRACTOR'S STAGING. ACTUAL CONTRACTOR'S STAGING AREA TO BE DETERMINED ON SITE AND APPROVED BY CITY.
 - EXISTING WATER AND WASTEWATER LINES SHOWN ARE BASED ON GIS DATA PROVIDED BY THE CITY AND LIMITED SURVEY OF APPURTENANCES WITHIN TOPOGRAPHIC SURVEY LIMITS.
 - CONTRACTOR SHALL TAKE PHOTOS AND VIDEO OF SITE, INCLUDING STAGING AREAS, PRIOR TO CONSTRUCTION.
 - CONTRACTOR SHALL COORDINATE WITH CITY PARKS DEPARTMENT TO LOCATE ANY SPRINKLERS AND IRRIGATION SYSTEMS AND REPAIR ANY DAMAGES AT NO ADDITIONAL COST TO THE CITY.
 - CONTRACTOR SHALL PREPARE AND PROVIDE TO THE CITY EMERGENCY OPERATION AND EVACUATION PLAN FOR EACH STAGING AREA IN FLOODPLAIN/LOWDOWN PRIOR TO IMPLEMENTATION.

2016 contours generated from 2016 City of Grand Prairie LIDAR by Moxim & Greed.
2019 contours are from on-the-ground survey was performed by Halff Associates, Inc.
The Basis of Bearing for the 2019 contours is the Texas Coordinate System, North Central Zone 4202, North American Datum of 1983, 2011 adjustment. All distances are surface distances.
Surface Adjustment Scale Factor: 1.000136506

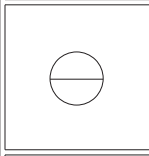


FILE #SD-692

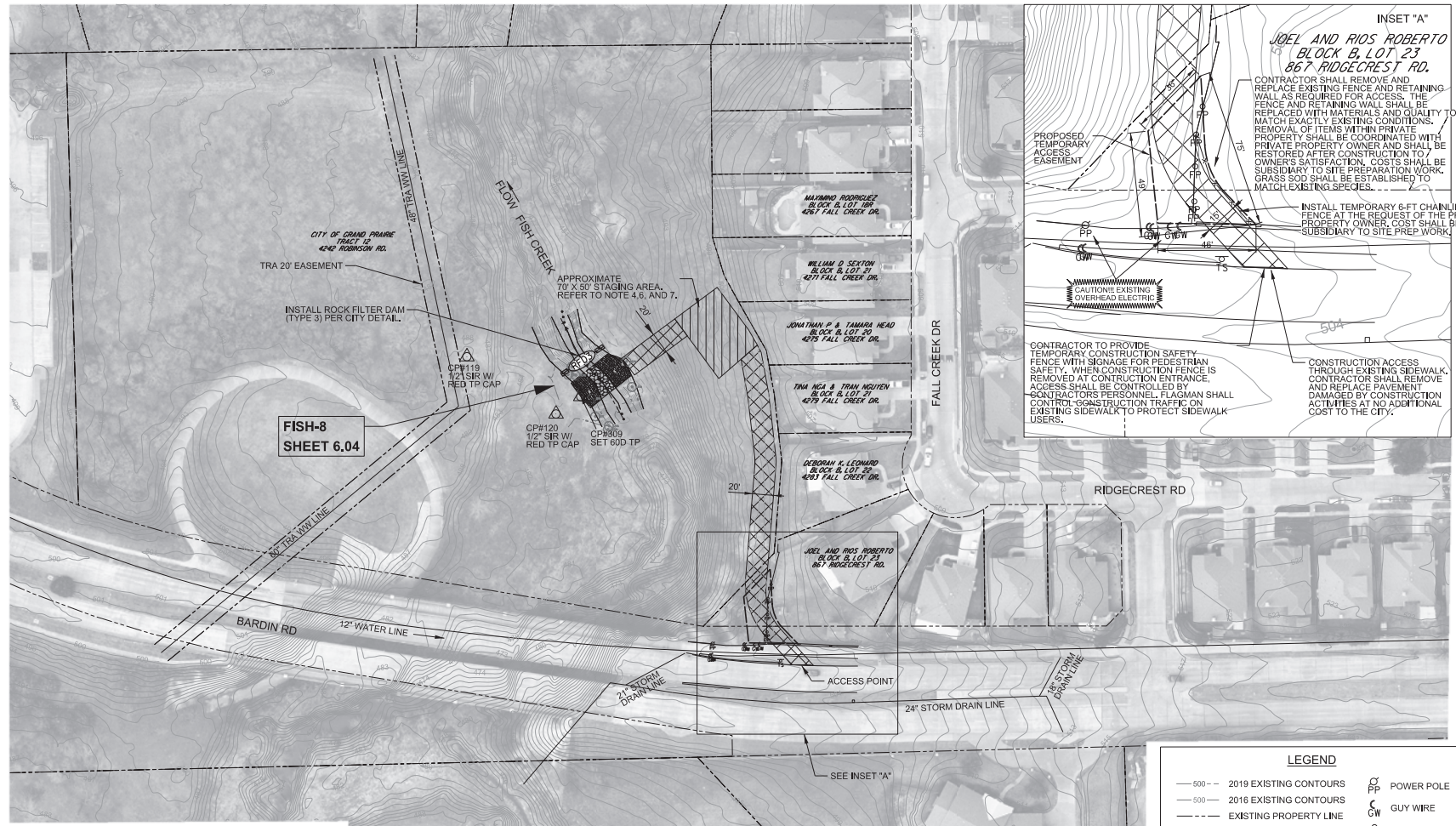
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STEPHEN CHAMBERS 0000
NAME J.E. WEAVER
TYPE (PROJ) 01/2016



Project No.: 35502
Issued: 02/2/2019
Drawn By: NMM
Checked By: SBC
Scale: AS SHOWN
Sheet Title
**FISH CREEK
SURVEY AND EROSION
CONTROL 3 OF 3**
C3.03
Sheet Number



**FISH-8
SHEET 6.04**

**FOR LOCATION SEE PROJECT
LAYOUT SHEET C1.02**

STAGING AREA (SY)	ACCESS ROUTE (SY)	% AREA COVERED BY TREES TO BE CLEARED
400	775	50%

NOTES:

- PROPOSED ACCESS ROUTE IS APPROXIMATE. CONTRACTOR SHALL MODIFY THE ACCESS ROUTE SUCH THAT 6" CALIBER TREES AND LARGER ARE PRESERVED. CONTRACTOR SHALL CLEAR BRUSH AND PRUNE TREES AS REQUIRED FOR ACCESS. CLEARING AND PRUNING SHALL BE COORDINATED WITH THE CITY.
- CONTRACTOR SHALL ESTABLISH GRASS ON DISTURBED AREAS BY SOODING BERMUDA GRASS EXCEPT FOR WOODED AREAS NOT COVERED BY GRASS PRIOR TO CONSTRUCTION AND WHERE GRASS GERMINATION IS PREVENTED BY NATURAL SITE CONDITIONS.
- CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS AND AREAS USED FOR ACCESS AND STAGING TO EQUAL OR BETTER CONDITIONS AFTER CONSTRUCTION IS COMPLETE.
- THIS PLAN SHOWS POTENTIAL AREAS FOR CONTRACTOR'S STAGING. ACTUAL CONTRACTOR'S STAGING AREA TO BE DETERMINED ON SITE AND APPROVED BY CITY.
- EXISTING WATER AND WASTEWATER LINES SHOWN ARE BASED ON GIS DATA PROVIDED BY THE CITY AND LIMITED SURVEY OF APPURTENANCES WITHIN TOPGRAPHIC SURVEY LIMITS.
- CONTRACTOR SHALL TAKE PHOTOS AND VIDEO OF SITE, INCLUDING STAGING AREAS, PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PREPARE AND PROVIDE TO THE CITY EMERGENCY OPERATION AND EVACUATION PLAN FOR EACH STAGING AREA IN FLOODPLAIN/FLOODWAY PRIOR TO IMPLEMENTATION.

2016 contours generated from 2016 City of Grand Prairie LIDAR by Moxim & Greed.
2019 contours are from on-the-ground survey performed by Halff Associates, Inc.
The Basis of Bearing for the 2019 contours is the Texas Coordinate System, North Central Zone 4202, North American Datum of 1983, 2011 adjustment. All distances are surface distances.
Surface Adjustment Scale Factor: 1.000136506

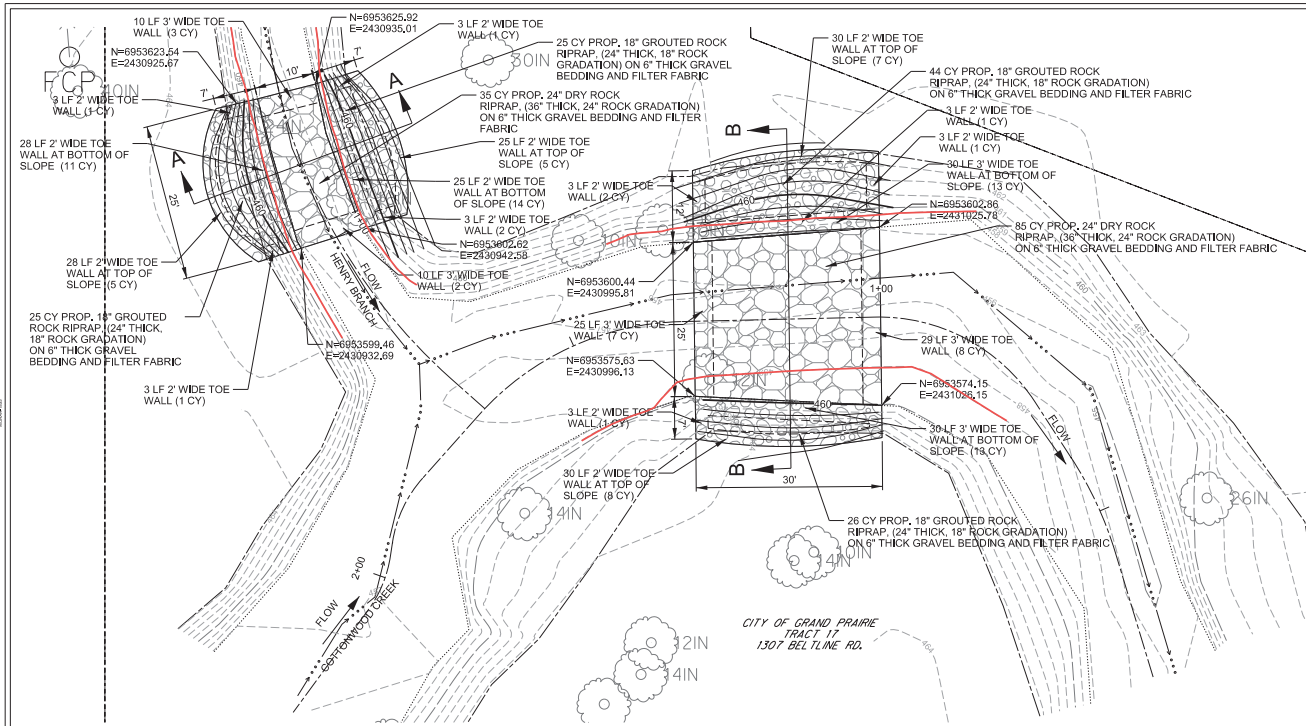
SURVEY CONTROL POINTS				
POINT NO.	NORTHING	EASTING	DESCRIPTION	ELEVATION
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120	6930017.64	2424295.58	SIRTP4	480.09
309	6930034.13	2424319.04	SNTP	479.20

LEGEND

- 500 -- 2019 EXISTING CONTOURS
- 500 - - 2016 EXISTING CONTOURS
- - - - EXISTING PROPERTY LINE
- CP#119 1/2" SIR W/ RED TP CAP SURVEY CONTROL POINTS
- CP#120 1/2" SIR W/ RED TP CAP SURVEY CONTROL POINTS
- CP#309 SET 60D TP SURVEY CONTROL POINTS
- ROCK FILTER DAM TYPE 3
- PROPOSED STAGING AREA
- ACCESS ROUTE
- STABILIZED CONSTRUCTION ENTRANCE/EXIT
- PROPOSED TEMPORARY ACCESS EASEMENT
- TEMPORARY CHAINLINK FENCE
- POWER POLE
- GUY WIRE
- FENCE POST
- TRAFFIC SIGN

SCALE: 1"=50'

FILE #SD-692



**CCMS-5 HENRY BRANCH
ADDITIVE ALTERNATE #1**

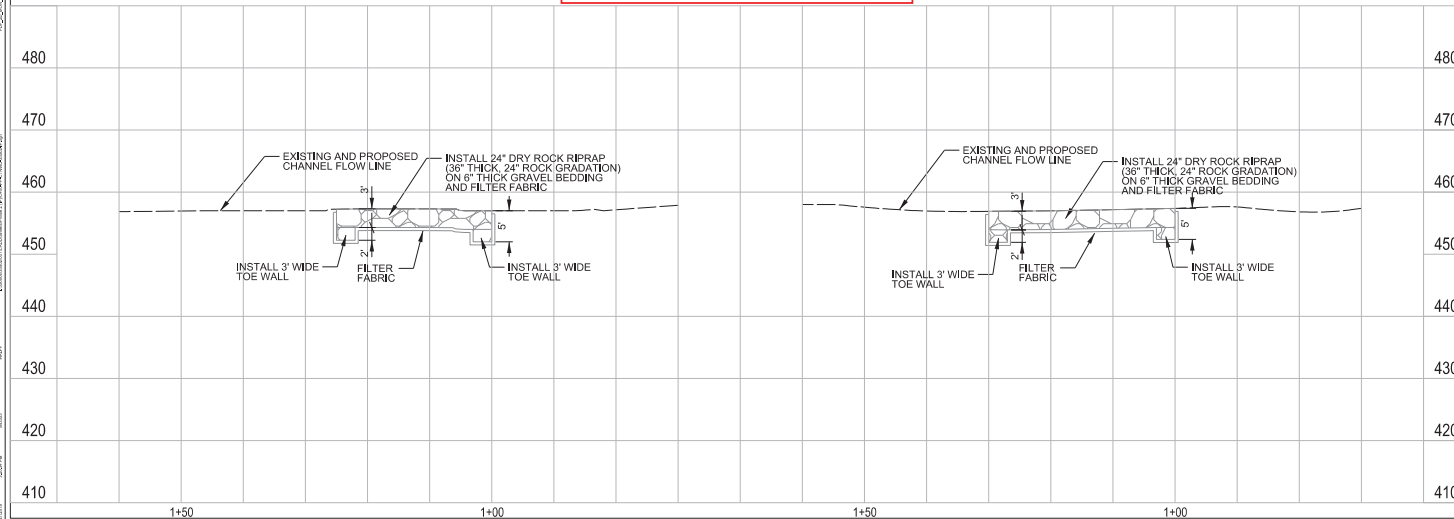
Notes have been added to provide clarity for permit review and are not part of the design drawings for construction.

**CCMS-5 FISH CREEK
BASE BID**

- NOTES:**
- SEE SHEET C1.00 FOR PROJECT LAYOUT.
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 - PROPOSED ROCK RIPRAP ADJACENT TO UTILITIES SHALL BE PLACED BY HAND.
 - DISTURBED AREAS NOT STABILIZED BY RIPRAP SHALL BE GRADED AT MIN. SLOPE OF 1% AND MAX SLOPE OF 25% (4H TO 1V) UNLESS INDICATED ON THE PLANS.
 - VOLUME OF TOE WALLS CALCULATED FROM BOTTOM OF RIPRAP.

GENERAL UTILITY NOTES:

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LEGEND

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- 502 --- 2019 EXIST. CONTOUR (MINOR)
- 500 — 2016 EXIST. CONTOURS
- 502 — PROPOSED CONTOUR (MAJOR)
- 502 — PROPOSED CONTOUR (MINOR)
- ● ● ● — FLOWLINE
- × × × FENCE
- - - - - TOP OF SLOPE
- TOE OF SLOPE
- — — — — TOE WALL
- SANITARY SEWER MANHOLE
- EXISTING TREE
- ◻ PROPOSED GROUDED ROCK RIPRAP
- ◻ PROPOSED DRY ROCK RIPRAP

ALL IMPROVEMENTS ARE WITHIN FLOODPLAIN AND FLOODWAY. REFER TO FIRM MAP #48113C0455M EFF. 3/21/2019

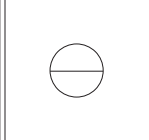
FILE #SD-692

**COTTONWOOD AND FISH CREEK
STREAM STABILITY**
 GRAND PRAIRIE, TEXAS

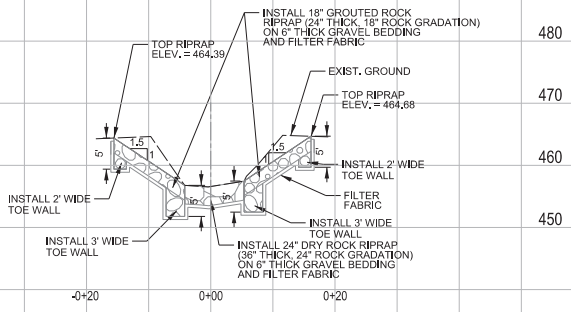
HALFF
 CONSULTING ENGINEERS
 1307 BELTLINE RD.
 GRAND PRAIRIE, TEXAS 75050

Revision No.	Date	Description

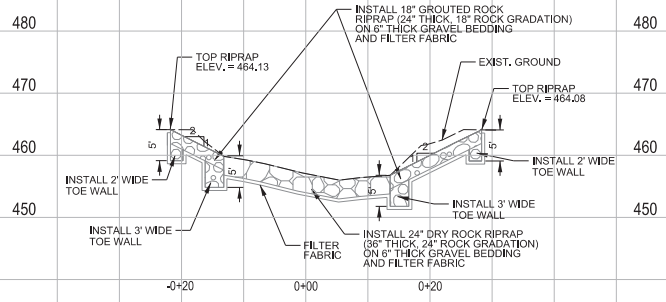
PRELIMINARY
 FOR INTERIM REVIEW ONLY
 THESE DOCUMENTS ARE FOR PRELIMINARY REVIEW ONLY. THEY ARE NOT TO BE USED FOR CONSTRUCTION. ANY CHANGES TO THESE DOCUMENTS SHALL BE MADE BY THE ENGINEER.



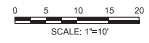
Project No.:	35502
Issued:	02/2/2019
Drawn By:	NMM
Checked By:	SBC
Scale:	AS SHOWN
Sheet Title:	COTTONWOOD CREEK PLAN AND PROFILE CCMS-5
C4.00	Sheet Number



CCMS-5 HENRY BRANCH
CROSS SECTION A-A



CCMS-5 FISH CREEK
CROSS SECTION B-B




- NOTES:
1. ALL CROSS-SECTIONS FACE UPSTREAM.
 2. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE TO CHANNEL WITH MINIMUM SLOPES OF 1%.
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LEGEND

-  PROPOSED DRY ROCK RIPRAP
-  EXISTING CONCRETE RIPRAP

**COTTONWOOD AND FISH CREEK
STREAM STABILITY**
 GRAND PRAIRIE, TEXAS



Revision No.	Date	Description

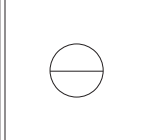
PRELIMINARY

FOR INTERIM REVIEW ONLY

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STEPHEN CRAWFORD 2020
NAME TITLE

DATE 02/27/2019
TIME 10:00 AM

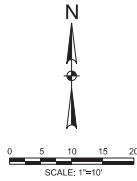
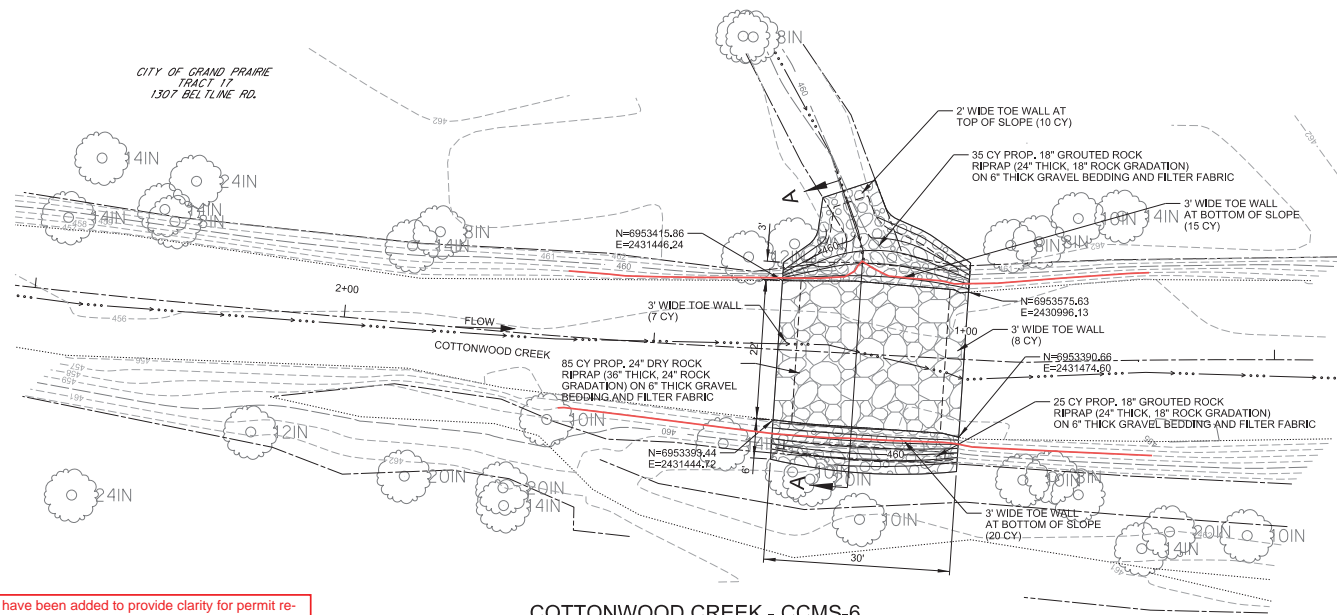


Project No.: 35502
 Issued: 02/27/2019
 Drawn By: NMM
 Checked By: SBC
 Scale: AS SHOWN

Sheet Title
**COTTONWOOD CREEK
CCMS-5
CROSS SECTIONS**

C4.01
 Sheet Number

CITY OF GRAND PRAIRIE
TRACT 17
1307 BELTLINE RD.

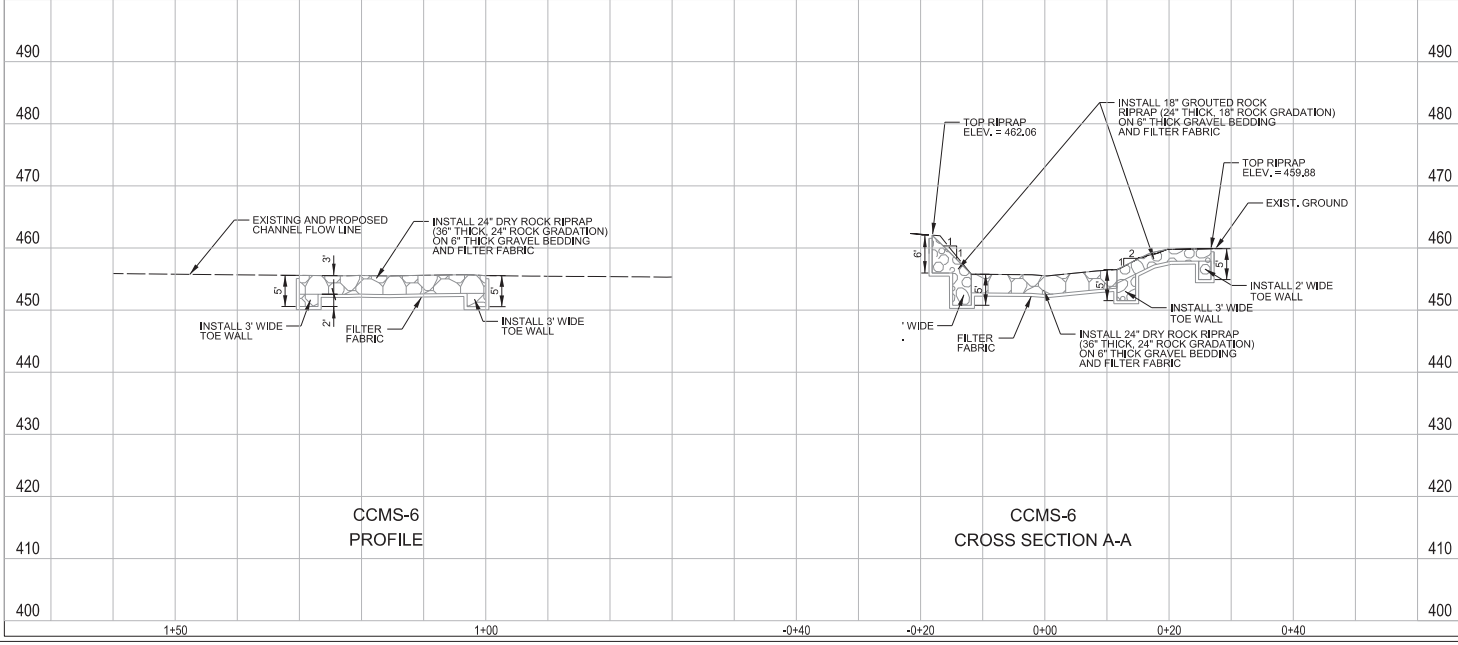


- NOTES:
- SEE SHEET C1.00 FOR PROJECT LAYOUT.
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Notes have been added to provide clarity for permit review and are not part of the design drawings for construction.

COTTONWOOD CREEK - CCMS-6
BASE BID



- LEGEND
- 500 --- 2019 EXIST. CONTOUR (MAJOR)
 - 502 --- 2019 EXIST. CONTOUR (MINOR)
 - 500 --- 2016 EXIST. CONTOURS
 - 500 --- PROPOSED CONTOUR (MAJOR)
 - 502 --- PROPOSED CONTOUR (MINOR)
 - FLOWLINE
 - FENCE
 - TOP OF SLOPE
 - TOE OF SLOPE
 - TOE WALL
 - SSMH SANITARY SEWER MANHOLE
 - EXISTING TREE
 - PROPOSED GROUDED ROCK RIPRAP
 - PROPOSED DRY ROCK RIPRAP

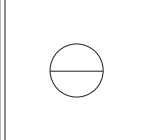
COTTONWOOD AND FISH CREEK
STREAM STABILITY
GRAND PRAIRIE, TEXAS

HALFF
CONSULTANTS, INC.
REGISTERED PROFESSIONAL ENGINEERS
STATE OF TEXAS
1987 FIRM #012

Revision No.	Date	Description

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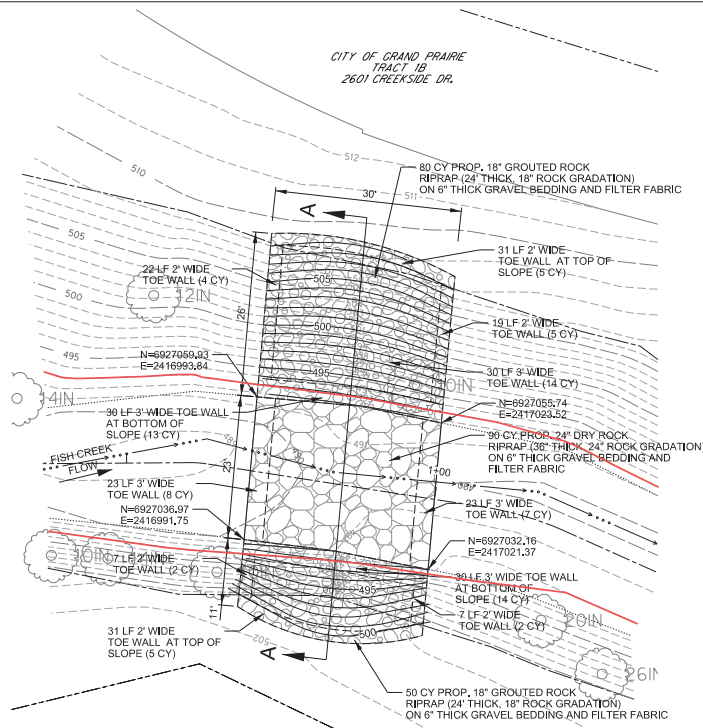
STEPHEN CRAMER, 8829
NAME, P.E. NO.
1987 FIRM #012, 870394



Project No.: 35502
Issued: 02/2/2019
Drawn By: NMM
Checked By: SBC
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Sheet Title: COTTONWOOD CREEK PLAN AND PROFILE CCMS-6

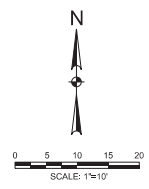
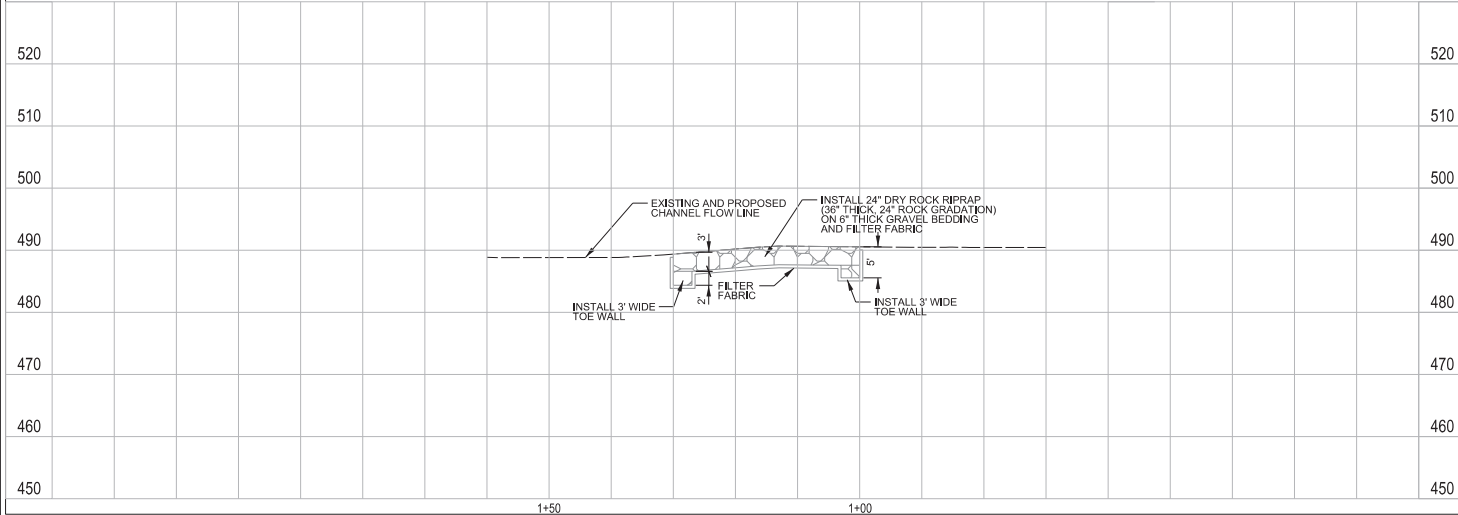
C4.02
Sheet Number

CITY OF GRAND PRAIRIE
TRACT 1B
2601 CREEKSIDE DR.



**FISH CREEK - FISH - 3
BASE BID**

Notes have been added to provide clarity for permit review and are not part of the design drawings for construction.



- NOTES:
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- 500 — PROPOSED CONTOUR (MAJOR)
- 502 — PROPOSED CONTOUR (MINOR)
- FLOWLINE
- x—x— FENCE
- TOP OF SLOPE
- TOE OF SLOPE
- TOE WALL
- SSM# SANITARY SEWER MANHOLE
- EXISTING TREE
- PROPOSED GROUDED ROCK RIPRAP
- PROPOSED DRY ROCK RIPRAP

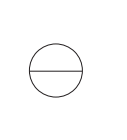
ALL IMPROVEMENTS ARE WITHIN FLOODPLAIN AND FLOODWAY. REFER TO FIRM MAP 48439C0370L EFF. 3/21/2019.

COTTONWOOD AND FISH CREEK
STREAM STABILITY
GRAND PRAIRIE, TEXAS



Revision No.	Date	Description

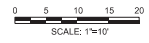
PRELIMINARY
FOR INTERIM REVIEW ONLY
THESE DOCUMENTS ARE FOR INTERIM REVIEW AND NOT RECONSIDERED FOR CONSTRUCTION. ANY CHANGES, ADDITIONS, OR DELETIONS SHALL BE MADE BY OR UNDER THE SUPERVISION OF:



Project No.: 35502
Issued: 9/27/2019
Drawn By: NMM
Checked By: SBC
Scale: AS SHOWN

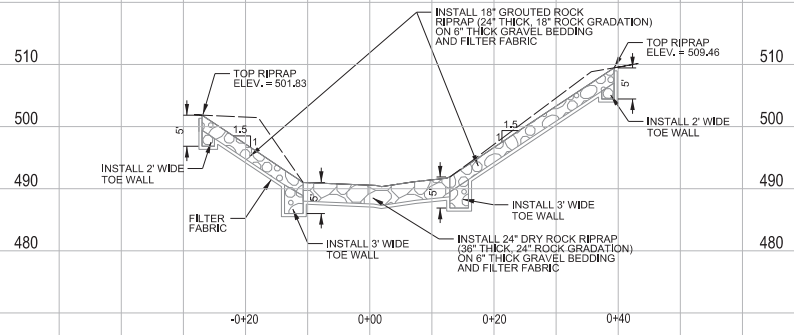
Sheet Title
FISH CREEK
PLAN AND PROFILE
FISH-3

C6.00
Sheet Number



- NOTES:**
1. ALL CROSS-SECTIONS FACE UPSTREAM.
 2. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE TO CHANNEL WITH MINIMUM SLOPES OF 1%.
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FISH-3
CROSS SECTION A-A

LEGEND

-  PROPOSED DRY ROCK RIPRAP
-  EXISTING CONCRETE RIPRAP

**COTTONWOOD AND FISH CREEK
STREAM STABILITY**
 GRAND PRAIRIE, TEXAS

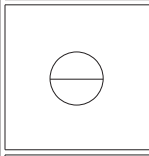


Revision No.	Date	Description

PRELIMINARY

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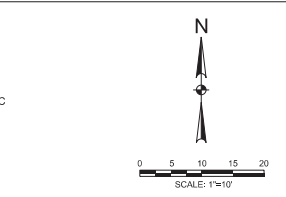
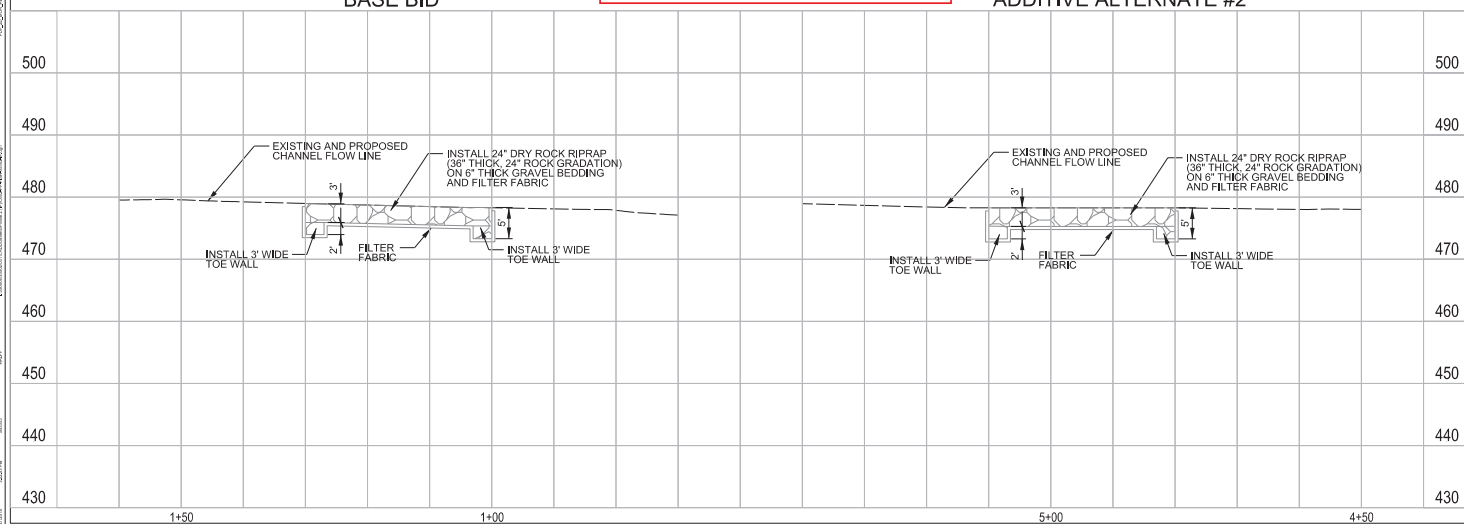
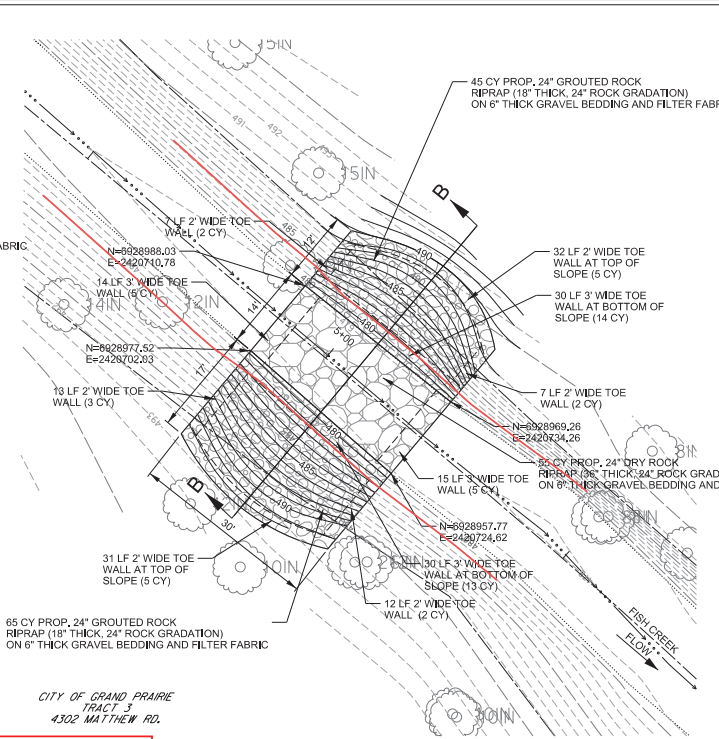
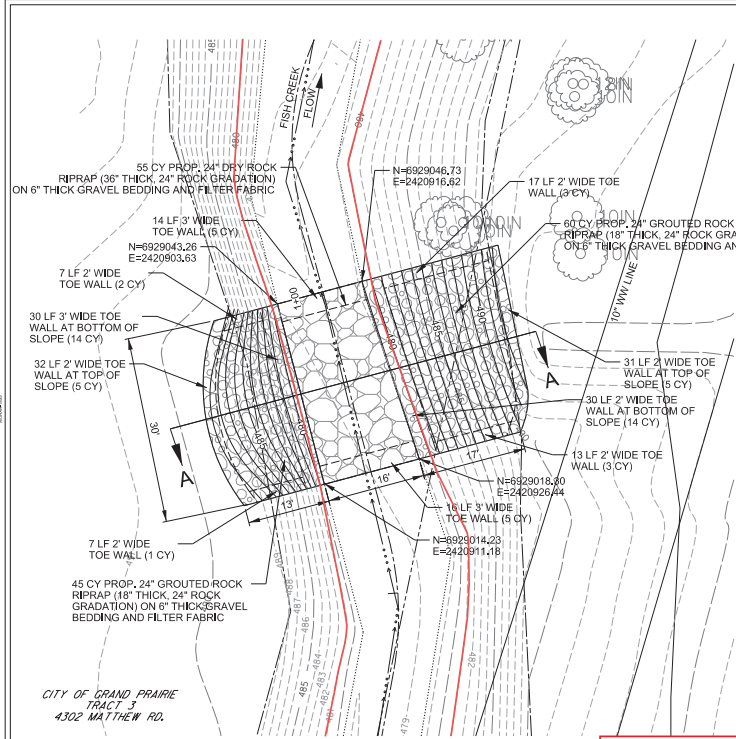
STEPHEN CRAWFORD 2020
 NAME TITLE
 DATE 02/27/2019
 TIME 10:00 (AM)



Project No.: 35502
 Issued: 02/27/2019
 Drawn By: NMM
 Checked By: SBC
 Scale: AS SHOWN

Sheet Title
**FISH CREEK
CROSS SECTIONS
FISH-3**

C6.01
 Sheet Number



- NOTES:**
- SEE SHEET C1,02 FOR PROJECT LAYOUT.
 - CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE TO CHANNEL WITH MINIMUM SLOPES OF 1%.
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 - EXISTING TREE
 - PROPOSED GROUDED ROCK RIPRAP
 - PROPOSED DRY ROCK RIPRAP

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**COTTONWOOD AND FISH CREEK
STREAM STABILITY**

GRAND PRAIRIE, TEXAS

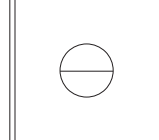


Revision No.	Date	Description

PRELIMINARY

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STEPHEN CRAWFORD 2800
NAME PROJECT
DATE 02/27/2019
TIME 10:00 AM

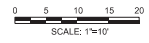
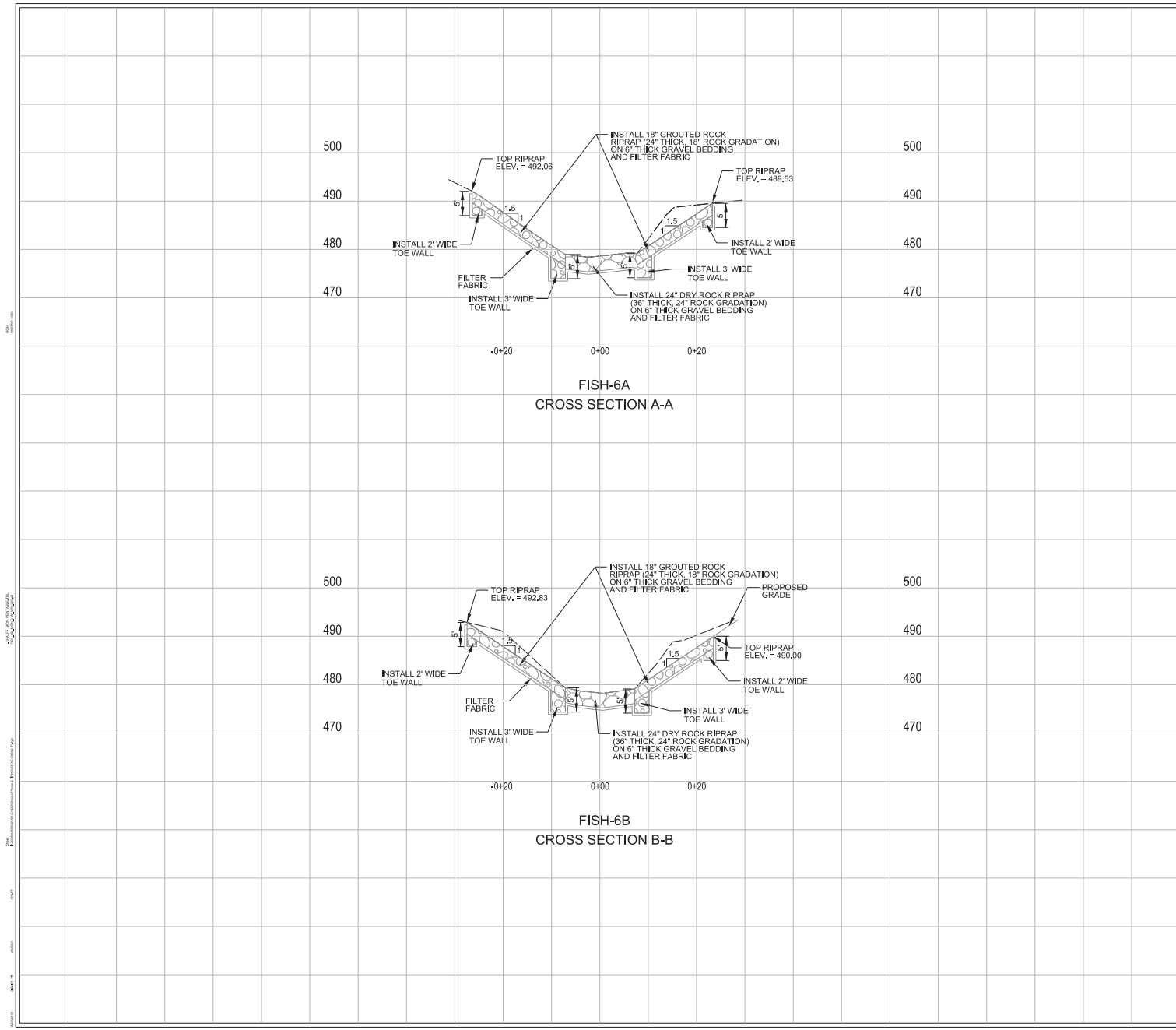


Project No.:	35502
Issued:	02/27/2019
Drawn By:	NAM
Checked By:	SBC
Scale:	AS SHOWN

Sheet Title
**FISH CREEK
PLAN AND PROFILE
FISH-6**

C6.02
Sheet Number

FILE #SD-692



NOTES:

1. ALL CROSS-SECTIONS FACE UPSTREAM.
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LEGEND



PROPOSED DRY ROCK RIPRAP



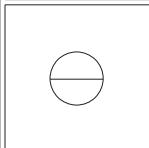
EXISTING CONCRETE RIPRAP

**COTTONWOOD AND FISH CREEK
STREAM STABILITY**
 GRAND PRAIRIE, TEXAS



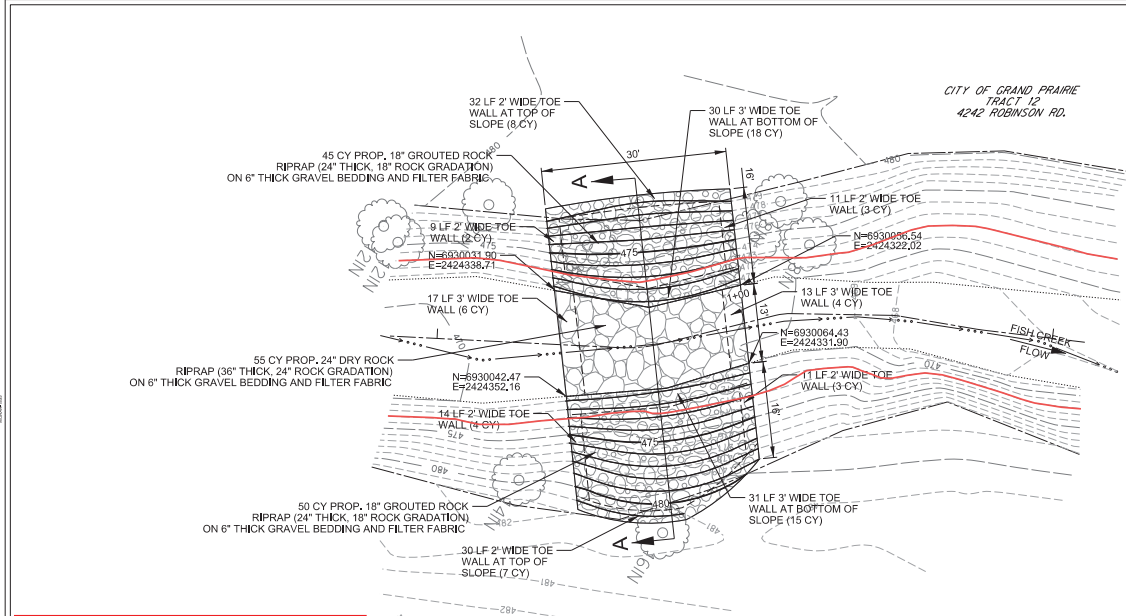
Revision No.	Date	Description

PRELIMINARY
 FOR INTERIM REVIEW ONLY
 THESE DOCUMENTS ARE FOR INTERIM REVIEW AND NOT FOR PERMANENT RECORD. PERMANENT RECORDS SHALL BE PROVIDED BY THE CONTRACTOR. THE ENGINEER SHALL BE NOTIFIED WHEN PROPOSED IMPROVEMENTS CONFLICT WITH EXISTING UTILITIES.



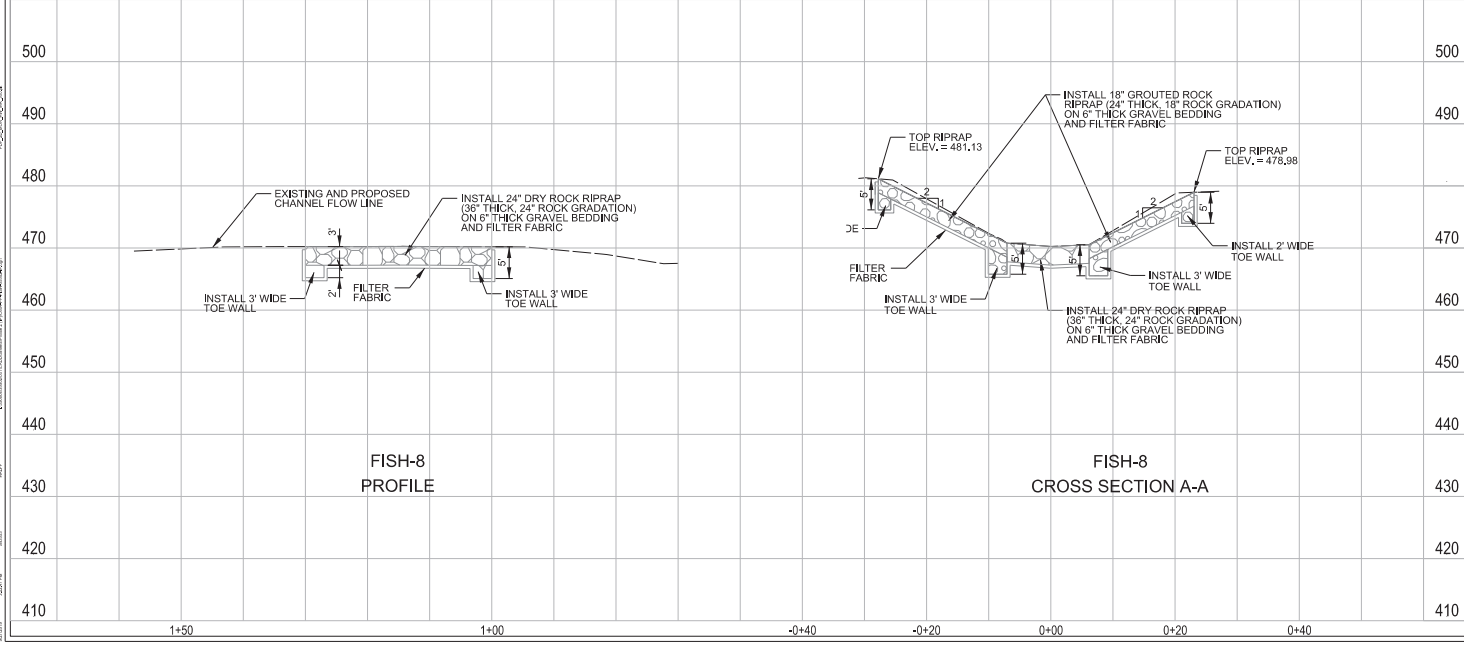
Project No.:	35502
Issued:	02/27/2019
Drawn By:	NMM
Checked By:	SBC
Scale:	AS SHOWN
Sheet Title:	FISH CREEK FISH-6 CROSS SECTIONS

C6.03
 Sheet Number



Notes have been added to provide clarity for permit review and are not part of the design drawings for construction.

**FISH CREEK - FISH-8
ADDITIVE ALTERNATE #3**



- NOTES:**
1. SEE SHEET C1.02 FOR PROJECT LAYOUT.
 2. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE TO CHANNEL WITH MINIMUM SLOPES OF 1%.
 3. PROPOSED ROCK RIPRAP ADJACENT TO UTILITIES SHALL BE PLACED BY HAND.
 4. DISTURBED AREAS NOT STABILIZED BY RIPRAP SHALL BE GRADED AT MIN. SLOPE OF 1% AND MAX SLOPE OF 25% (4H TO 1V).
 5. VOLUME OF TOE WALLS CALCULATED FROM BOTTOM OF RIPRAP.

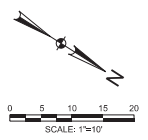
GENERAL UTILITY NOTES:

THE LOCATIONS, ELEVATIONS, AND SIZES OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE CITY AND UTILITY COMPANY RECORDS AND PLANS, AND ARE CONSIDERED APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ADJACENT AND/OR CONFLICTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE CONTRACTOR SHALL PRESERVE AND PROTECT PUBLIC UTILITIES AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTOR'S OPERATION SHALL BE RESTORED AT HIS EXPENSE. THE ENGINEER SHALL BE NOTIFIED WHEN PROPOSED IMPROVEMENTS CONFLICT WITH EXISTING UTILITIES.

LEGEND

- 500 --- 2019 EXIST. CONTOUR (MAJOR)
- 502 --- 2019 EXIST. CONTOUR (MINOR)
- 500 --- 2016 EXIST. CONTOURS
- 500 — PROPOSED CONTOUR (MAJOR)
- 502 — PROPOSED CONTOUR (MINOR)
- FLOWLINE
- FENCE
- TOP OF SLOPE
- TOE OF SLOPE
- TOE WALL
- SSMH SANITARY SEWER MANHOLE
- EXISTING TREE
- PROPOSED GROUDED ROCK RIPRAP
- PROPOSED DRY ROCK RIPRAP

ALL IMPROVEMENTS ARE WITHIN FLOODPLAIN AND FLOODWAY. REFER TO FIRM MAP 48113C0445L EFF. 3/21/19



**COTTONWOOD AND FISH CREEK
STREAM STABILITY**

GRAND PRAIRIE, TEXAS



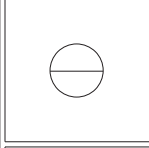
Revision No.	Date	Description

PRELIMINARY

FOR INTERIM REVIEW ONLY

THESE DOCUMENTS AND REPRESENTING HEREON ARE NOT VALID FOR REGULATORY APPROVAL. THE ENGINEER HAS CONDUCTED THE NECESSARY FIELD SURVEYS AND/OR CONSULTATIONS BY OR UNDER THE SUPERVISION OF:

DATE: 02/27/2019



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C6.04

Sheet Number