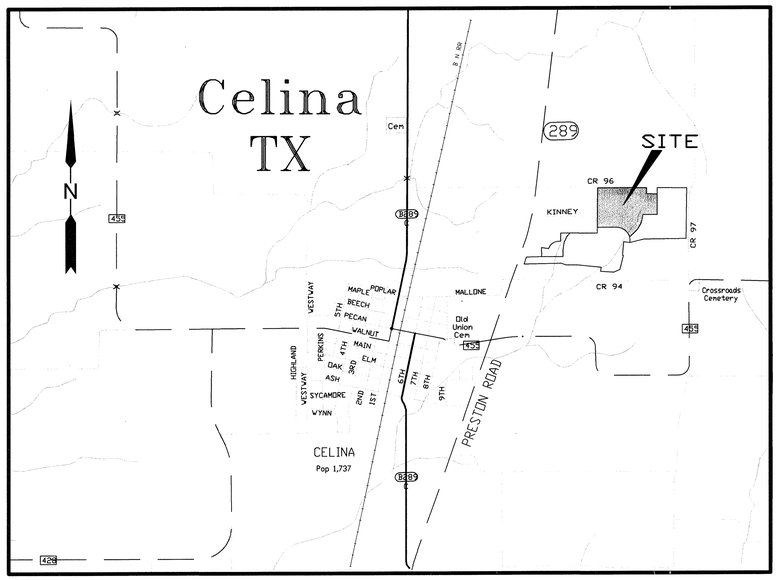
CONSTRUCTION PLANS
FOR
HERITAGE
PHASE 2
CITY OF CELINA
COLLIN COUNTY, TEXAS



LOCATION MAP
NOT TO SCALE

INDEX

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D1–D4	STANDARD DETAIL SHEETS

DEVELOPER:
WILBOW CORPORATION, INC.
9330 LBJ FREEWAY STE. 745, LOCKBOX 68
DALLAS, TEXAS 75243
(972) 994-1672

ENGINEER \ SURVEYOR:
JONES & BOYD, INC.
17090 DALLAS PARKWAY, SUITE 200
DALLAS, TEXAS 75248
(972) 248-7676

GENERAL NOTE

ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE CITY OF CELINA STANDARD CONSTRUCTION DETAILS FOR PAVING, DRAINAGE, WATER & SANITARY SEWER FACILITIES AND BE INSTALLED IN ACCORDANCE WITH THE CITY SPECIFICATIONS AND STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION FOR NORTH CENTRAL TEXAS PUBLISHED BY NCTCOG. THESE SPECIFICATIONS SHALL BE MADE PART OF THESE PLANS. ALL WORK SHALL BE INSPECTED BY THE CITY OF CELINA PUBLIC WORKS INSPECTORS.

RECORD DOCUMENTS
THESE RECORD DOCUMENTS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. JONES & BOYD, INC., HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION, UNLESS OTHERWISE NOTED ON THESE DOCUMENTS. JONES & BOYD, INC., SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE INCORPORATED AS A RESULT OF ERRONEOUS INFORMATION PROVIDED BY OTHERS.

JONES & BOYD, INC.
BY: _____
DATE: 10-11-04

2/24/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Jeffery M. Winkler, P.E. 90358. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.

FOR CONSTRUCTION

HERITAGE – PHASE 2
JBI Job No. – WI 401

P-200402-02

Filed for Record in:
Collin County, McKinney TX
Honorable Brenda Taylor
Collin County Clerk

On May 05 2004 @ 12:42pm

Doc/Num : 2004- 0065219

Recording/Type:PL
Receipt #: 17555 31.00

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

NORTH

LOCATION MAP
NOT TO SCALE

Celina TX

SITE

PRESTON ROAD

MORGAN LAKE ESTATES
PHASE I
CAB.I, PAGE 591
DOC.# 95-0032612
ZONED: R1-L

Existing Perscriptive Easement
COUNTY ROAD 96

W. H. Herron Survey, Abstract No. 380

Martha Herron Survey, Abstract No. 415

KIRK'S ROCKIN K RANCH
AND LAND COMPANY
80.0 ACRES
VOL.4443, PG.190
NOT ZONED

COUNTY ROAD 96 (UNDEDICATED R.O.W.)

Sanitation Easement
150 foot radius from
well head
Vol.2281, Pg.380

Martha Herron Survey, Abstract No. 415

Hugh C. Routh Survey, Abstract No. 765

Point of Beginning
Northwest corner of H.C. Routh Survey, Abstract No. 765

1/2" IRF

S89°55'38"E 1414.67'

5' FENCE EASEMENT TO HOA

ETJ

CELINA CITY LIMIT

2.264 Acre R.O.W. Dedication to City of Celina

20' Water Easement Vol.2281, Pg.380

COUNTY ROAD 96

S00°04'17"W 175.20'
CITY OF CELINA
1.207 ACRES
DOC.# 93-0099849

S89°55'37"E 300.00'

S00°04'22"W 154.84'

Δ=00°26'40"
R=1220.00'
L=9.46'
T=4.73'
C.B.=N88°23'33"E
CH=9.46'

STREET EASEMENT (BY SEPARATE INSTRUMENT)

CELINA 21 ASSOCIATION
20.1220 ACRES
VOL.2914,PG.216
NOT ZONED

1176.89'

CARUTH LANE

BLOCK "A"

BLOCK "B"

BLOCK "C"

BLOCK "D"

BLOCK "E"

BLOCK "F"

BLOCK "G"

KERR LANE

S00°04'22"W 370.64'

WILBOW-CELINA DEVELOPMENT CORP.
VOLUME 5202, PAGE 5393
D.R.C.C.T.

BATEMAN LANE

STANFORD LANE

TIDWELL LANE

BOUNDS LANE

MISSOURI STREET

HERITAGE, PHASE 1
CABINET O, PAGE 591
P.R.C.C.T.

N00°20'04"E 1176.89'

20' Water Easement
Vol.2281, Pg.380

BAO QING HUANG
LUME 4889, PAGE 5140
18.143 ACRES
NOT ZONED

JOHNNY A. ROLLER, JR.
1.000 ACRE
VOL.2455,PG.0337
NOT ZONED

N89°39'57"W 195.00'

S00°20'03"W 9.90'

N89°38'10"W 550.06'

N22°52'23"E 138.03'

S22°52'23"W 357.49'

S00°04'22"W 154.97'

N89°55'38"W 550.54'

S00°04'22"W 0.28'

S00°57'14"W 125.02'

Δ=22°48'01"
R=300.00'
L=119.38'
T=60.49'
C.B.=S11°28'22"W
CH=118.60'

Δ=00°13'14"
R=1715.00'
L=6.60'
T=3.30'
C.B.=S89°57'45"W
CH=6.60'

Δ=00°02'01"
R=1590.00'
L=0.93'
T=0.47'
C.B.=S89°44'55"W
CH=0.93'

Δ=28°36'45"
R=315.00'
L=157.31'
T=80.33'
C.B.=S37°10'45"W
CH=155.68'

S51°29'08"W 14.64'

Δ=50°03'08"
R=290.00'
L=253.34'
T=135.39'
C.B.=N57°03'29"W
CH=245.36'

Δ=83°31'02"
R=20.00'
L=29.15'
T=17.86'
C.B.=S09°43'37"W
CH=26.64'

STREET EASEMENT (BY SEPARATE INSTRUMENT)

60' ROW 30' 30'

30' ROW

LINE TABLE

LINE	BEARING	LENGTH
L1	S67°07'37"E	20.33'
L2	N34°25'28"E	16.96'
L3	N34°25'28"E	16.96'
L4	N51°29'08"E	14.64'
L5	S00°04'22"W	84.40'
L6	N00°04'22"E	57.95'
L7	S67°07'37"E	5.33'
L8	S67°07'37"E	5.33'
L9	N22°52'23"E	221.14'
L10	S00°04'22"W	9.34'
L11	S89°55'38"E	11.48'
L12	S89°55'38"E	420.54'
L13	N00°21'50"E	59.04'
L14	N72°46'10"E	100.00'
L15	N03°47'54"W	47.08'
L16	N22°52'23"E	204.85'
L17	N34°25'28"E	34.98'
L18	S51°29'08"W	32.66'
L19	S00°04'22"W	145.85'
L20	S00°04'22"W	118.58'
L21	N72°46'10"E	24.78'

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHD. BEARING	CHORD
C1	169.03'	285.00'	32°49'44"	86.90'	S16°38'19"W	166.72'
C2	165.67'	305.00'	31°07'20"	84.93'	N15°38'02"E	163.64'
C3	95.57'	180.00'	30°25'21"	48.94'	N74°42'58"W	94.46'
C4	79.85'	150.00'	30°25'21"	40.79'	S74°42'58"E	78.71'
C5	94.57'	300.00'	18°03'40"	47.68'	S81°02'32"W	94.18'
C6	94.57'	300.00'	18°03'40"	47.68'	N81°02'32"E	94.18'
C7	117.86'	300.00'	22°30'33"	59.70'	N78°22'54"W	117.10'
C8	9.46'	1560.00'	0°20'51"	4.73'	N89°53'57"E	9.46'
C9	40.51'	1250.00'	1°51'25"	20.26'	N89°08'40"E	40.51'
C10	29.15'	20.00'	83°31'02"	17.86'	N76°11'00"E	26.64'
C11	57.46'	285.00'	11°33'06"	28.83'	N28°38'56"E	57.36'
C12	63.51'	315.00'	11°33'06"	31.86'	N28°38'56"E	63.40'
C13	29.15'	20.00'	83°31'02"	17.86'	S07°20'03"E	26.64'
C14	20.73'	290.00'	4°05'44"	10.37'	N47°02'42"W	20.72'
C15	29.15'	20.00'	83°31'02"	17.86'	S86°45'21"E	26.64'
C16	142.32'	285.00'	28°36'45"	72.68'	N37°10'45"E	140.85'
C17	107.44'	270.00'	22°48'01"	54.44'	N11°28'22"E	106.74'
C18	35.88'	20.00'	102°47'37"	25.05'	N51°19'26"W	31.26'
C19	18.35'	330.00'	3°11'11"	9.18'	N78°52'21"E	18.35'
C20	28.74'	20.00'	82°20'48"	17.49'	S39°17'33"W	26.33'
C21	77.77'	180.00'	24°45'14"	39.50'	N10°29'46"E	77.18'
C22	31.12'	20.00'	89°09'30"	19.71'	N45°20'53"W	28.08'
C23	61.89'	150.00'	23°38'31"	31.39'	N11°03'07"E	61.46'
C24	129.64'	330.00'	22°30'33"	65.67'	N78°22'54"W	128.81'
C25	106.07'	270.00'	22°30'33"	53.73'	N78°22'54"W	105.39'
C26	185.67'	325.00'	32°43'58"	95.45'	S16°35'48"W	183.16'
C27	150.43'	265.00'	32°31'29"	77.30'	S16°38'26"W	148.42'
C28	182.48'	335.00'	31°12'34"	93.56'	N15°40'39"E	180.23'
C29	148.91'	275.00'	31°01'33"	76.33'	N15°35'09"E	147.10'
C30	85.11'	270.00'	18°03'40"	42.91'	N81°02'32"E	84.76'
C31	104.02'	330.00'	18°03'40"	52.45'	S81°02'32"W	103.59'
C32	58.98'	270.00'	12°31'00"	29.61'	S83°48'52"W	58.87'
C33	9.46'	1530.00'	0°21'15"	4.73'	N89°53'44"E	9.46'
C34	9.46'	1590.00'	0°20'27"	4.73'	N89°54'09"E	9.46'
C35	9.46'	1405.00'	0°23'08"	4.73'	N89°52'48"E	9.46'
C36	40.51'	1280.00'	1°48'48"	20.26'	N89°09'58"E	40.51'
C37	40.51'	1220.00'	1°54'09"	20.26'	N89°07'17"E	40.51'
C38	63.72'	120.00'	30°25'21"	32.63'	S74°42'58"E	62.97'
C39	111.50'	210.00'	30°25'21"	57.10'	N74°42'58"W	110.20'
C40	79.65'	150.00'	30°25'21"	40.79'	N74°42'58"W	78.71'
C41	25.53'	180.00'	8°07'38"	12.79'	S63°34'07"E	25.51'
C42	184.59'	545.00'	17°18'14"	92.93'	N81°25'16"E	183.87'
C43	40.98'	455.00'	5°09'36"	20.50'	S75°20'58"W	40.96'
C44	71.29'	165.00'	24°45'14"	36.21'	N10°29'46"E	70.73'
C45	60.48'	300.00'	11°33'06"	30.34'	N28°38'56"E	60.38'
C46	149.81'	300.00'	28°36'45"	76.50'	N37°10'45"E	148.26'
C47	113.41'	285.00'	22°48'01"	57.47'	N11°28'22"E	112.67'
C48	151.00'	500.00'	17°18'14"	76.08'	N81°25'16"E	150.43'

* Denotes change per "Certificate of Correction" filed in Volume 5779, Page 3163 Collin County Deed Records

⊡ Denotes change per "Certificate of Correction" filed in Volume 5811, Page 5230

NOTE: ALL BOUNDARY CORNERS ARE 1/2" IRON ROD SET UNLESS OTHERWISE NOTED.

NOTE: Lots 33-44, Block A, Lots 1-13, Block G, Lots 1-25, Block E, Lots 1-9, Block F, Lots 1-7 & 24-30, Block D, Lots 10-25, Block C, and Lots 7-11, block B are Type I lots; Lots 45 & 46, Block A, Lot 6, Block B, and Lots 1-9, Block C are Type II lots; Lot 47, Block A and Lots 1-5, Block B are Type III lots.

LOT SUMMARY

TYPE	AREA	TYPICAL	PHASE 2
I	7,500 S.F.	60'X125'	94
II	20,000 S.F.	100'X200'	12
III	43,560 S.F.	210'X200'	6
		TOTAL	112

FINAL PLAT

HERITAGE PHASE 2

112 RESIDENTIAL LOTS
1 OPEN SPACE LOT

BEING 41.544 ACRES OF LAND
OUT OF THE
HUGH C. ROUTH SURVEY, ABSTRACT NO. 765

CITY OF CELINA
COLLIN COUNTY, TEXAS

WILBOW - CELINA DEVELOPMENT CORP. OWNER/DEVELOPER
9330 LBJ Freeway, Suite 745, Lockbox 68
Dallas, TX 75243
(972) 479-0697

JONES & BOYD, INC. SURVEYOR/ENGINEER
16800 Dallas Parkway, Suite 240
Dallas, Texas 75248
(972)248-7676

March 19, 2004

Sheet 1 of 2

P-2004012-02
569 CA

Plot Info: Drawing: H:\Projects\W4401\dwg\XW4401PTPHS2.dwg Drawing Info: JMW Plotted by: seh Plot date: 3/19/04 Plot time: 9:57 am

Filed for Record in:
Collin County, McKinney TX
Honorable Brenda Taylor
Collin County Clerk

On May 05 2004 At 12:42pm

Doc/Num : 2004- 0065219

Recording/Type:PL 31.00
Receipt #: 17555

OWNER'S CERTIFACATION

STATE OF TEXAS~

COUNTY OF COLLIN~

WHEREAS, WILBOW-CELINA DEVELOPMENT CORPORATION is the owner of a 41.544 acre tract of land in the City of Celina, Collin County, Texas, a part of the Hugh C. Routh Survey, Abstract No. 765, and being a part of that 134.258 acre tract of land conveyed to Wilbow-Celina Development Corporation as recorded in Volume 5202, Page 5393, Collin County Deed Records, and being further described as follows:

BEGINNING at a one-half inch iron rod found at the most northerly northwest corner of said 134.258 acre tract, said point being the northeast corner of Collin County School Land Survey No. 15, Abstract No. 170, the northwest corner of said Hugh C. Routh Survey, and being in the south line of Morgan Lake Estates No. 1, an addition to the City of Celina as recorded in Collin County Clerks File No. 95-0032612 and in Cabinet I, Page 591 of the Plat Records of Collin County, Texas, said point also being the northeast corner of a tract of land conveyed to Celina 21 Association as recorded in Volume 2914, Page 216, Collin County Deed Records;

THENCE South 89 degrees 55 minutes 38 seconds East, 1414.67 along the north line of said 134.258 acre tract to a one-half inch iron rod found for corner, said point being the northwest corner of a 1.207 acre tract of land conveyed to the City of Celina in Collin County Clerks File No. 93-0099849;

THENCE South 00 degrees 04 minutes 17 seconds West, 175.20 feet along the west line of said 1.207 acre tract to a one-half inch iron rod found at the southwest corner of said 1.207 acre tract of land;

THENCE South 89 degrees 55 minutes 37 seconds East, 300.00 feet along the south line of said 1.207 acre tract to a one-half inch iron rod found at the southeast corner of said 1.207 acre tract of land;

THENCE South 00 degrees 04 minutes 22 seconds West, 154.84 feet to a one-half inch iron rod set for corner;

THENCE Northeasterly, 9.46 feet along a non-tangent curve to the left which has a central angle of 00 degrees 26 minutes 40 seconds, a radius of 1220.00 feet, a tangent of 4.73 feet, and whose chord bears North 88 degrees 23 minutes 33 seconds East, 9.46 feet to a one-half inch iron rod set for corner;

THENCE South 00 degrees 04 minutes 22 seconds West, 370.64 feet to a one-half inch iron rod set for corner;

THENCE Southwesterly, 0.93 feet along a non-tangent curve to the right which has a central angle of 00 degrees 02 minutes 01 seconds, a radius of 1590.00 feet, a tangent of 0.47 feet, and whose chord bears South 89 degrees 44 minutes 55 seconds West, 0.93 feet to a one-half inch iron rod set for corner;

THENCE South 00 degrees 57 minutes 14 seconds West, 125.02 feet to a one-half inch iron rod set for corner;

THENCE Southwesterly, 6.60 feet along a non-tangent curve to the right which has a central angle of 00 degrees 13 minutes 14 seconds, a radius of 1715.00 feet, a tangent of 3.30 feet, and whose chord bears South 89 degrees 57 minutes 45 seconds West, 6.60 feet to a one-half inch iron rod set for corner;

THENCE North 89 degrees 55 minutes 38 seconds West, 550.54 feet to a one-half inch iron rod set for corner;

THENCE South 00 degrees 04 minutes 22 seconds West, 0.28 feet to a one-half inch iron rod set for corner;

THENCE Southwesterly, 119.38 feet along a curve to the right which has a central angle of 22 degrees 48 minutes 01 seconds, a radius of 300.00 feet, a tangent of 60.49 feet, and whose chord bears South 11 degrees 28 minutes 22 seconds West, 118.60 feet to a one-half inch iron rod set for corner;

THENCE South 22 degrees 52 minutes 23 seconds West, 357.49 feet to a one-half inch iron rod set for corner;

THENCE Southwesterly, 157.31 feet along a curve to the right which has a central angle of 28 degrees 36 minutes 45 seconds, a radius of 315.00 feet, a tangent of 80.33 feet, and whose chord bears South 37 degrees 10 minutes 45 seconds West, 155.68 feet to a one-half inch iron rod set for corner;

THENCE South 51 degrees 29 minutes 08 seconds West, 14.64 feet to a one-half inch iron rod set for corner;

THENCE Southwesterly, 29.15 feet along a curve to the left which has a central angle of 83 degrees 31 minutes 02 seconds, a radius of 20.00 feet, a tangent of 17.86 feet, and whose chord bears South 09 degrees 43 minutes 37 seconds West, 26.64 feet to a one-half inch iron rod set for corner in the north line of Heritage, Phase 1, an addition to the City of Celina as recorded in Cabinet O, Page 591, Collin County Plat Records;

THENCE along the north line of said Heritage, Phase 1 as follows:
Northwesterly, 253.34 feet along a non-tangent curve to the left which has a central angle of 50 degrees 03 minutes 08 seconds, a radius of 290.00 feet, a tangent of 135.39 feet, and whose chord bears North 57 degrees 03 minutes 29 seconds West, 245.36 feet to a one-half inch iron rod found for corner;

THENCE North 22 degrees 52 minutes 23 seconds East, 138.03 feet to a one-half inch iron rod found for corner;

THENCE North 89 degrees 38 minutes 10 seconds West, 550.06 feet to a one-half inch iron rod found for corner;

THENCE South 00 degrees 20 minutes 03 seconds West, 9.90 feet to a one-half inch iron rod found for corner;

THENCE North 89 degrees 39 minutes 57 seconds West, 195.00 feet to a one-half inch iron rod found for corner in the east line of an 18.143 acre tract of land conveyed to Bao Qing Huang as recorded in Volume 4889, Page 5140, Collin County Deed Records, said point being in the west line of said 134.258 acre tract;

THENCE North 00 degrees 20 minutes 04 seconds East, 1176.89 feet along the west line of said 134.258 acre tract to the POINT OF BEGINNING and containing 1,809,676 square feet or 41.544 acres of land.

OWNER'S DEDICATION

NOW THEREFORE KNOW ALL MEN BY THESE PRESENTS:

That WILBOW-CELINA DEVELOPMENT CORPORATION, acting herein by and through his (its) duly authorized officer(s), does hereby adopt this plat designating the herein above described property as HERITAGE, PHASE 2, an addition to the City of Celina, Texas, and does hereby dedicate, in fee simple, to the public use forever, the streets, rights-of-way, and other public improvements shown thereon. The streets and alleys, if any, are dedicated for street purposes. The easements and public use areas as shown are dedicated for the public use forever for the purposes indicated on this plat. No buildings, fences, trees, shrubs or other improvements or growths shall be constsructed or placed upon, over or across the easements as shown except that landscape improvements may be placed in landscape easements, if approved by the City Council of the City of Celina. In addition, utility easements may also be used for the mutual use and accommodation of all public utilities desiring to use or using the same unless the easement limits the use to particular utilities, said use by public utilities being subordinate to the public's and City of Celina's use thereof. The City of Celina and public utility entities shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs or other improvements or growths which may in any way endanger or interfere with the construction, maintenance, or efficiency of their respective systems in said easements. The City of Celina and public utility entities shall at all times have the full right of ingress and egress to or from their respective easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, reading meters, and adding to or removing all or parts of their respective systems without the necessity at any time procuring permission from anyone.

This plat approved subject to all platting ordinances, rules, regulations and resolutions of the City of Celina, Texas.

Witness, my hand, this the 22nd day of March, 2004.

BY: _____
Authorized Signature of Owner

Chas E. Fitzgerald, President
Printed Name and Title

State of Texas
County of Dallas :

Before me, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared Chas E. Fitzgerald, President, Owner, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purpose and considerations therein expressed.

Given under my hand and seal of office, this 22nd day of March, 2004.

Greg W Gitcho
My Commission Expires
August 03, 2005

_____
Notary Public in and for the State of Texas

KNOW ALL MEN BY THESE PRESENTS:

That I, STEVEN E. HINES, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown therein as "set" were properly placed under my personal supervision in accordance with the Subdivision Ordinance of the City of Celina.

_____
Steven E. Hines, R.P.L.S. No. 5380

STATE OF TEXAS
REGISTERED
STEVEN E. HINES
5380
PROFESSIONAL
LAND SURVEYOR

State of Texas :
County of Dallas :

Before me, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared STEVEN E. HINES, Registered Professional Land Surveyor, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purpose and considerations therein expressed.

Given under my hand and seal of office, this 22nd day of MARCH, 2004.

_____
Notary Public in and for the State of Texas

NOTARY PUBLIC STATE OF TEXAS
STEFFANI ANNE STARRY
Notary Public, State of Texas
My Commission Expires
November 22, 2006

FINAL PLAT

Approved by the City of Celina for filing at the office of the County Clerk of Collin County, Texas.

RECOMMENDED BY: Planning and Zoning Commission
City of Celina, Texas

_____ 01-29-04
Signature of Chairperson Date of Recommendation

APPROVED BY: City Council
City of Celina, Texas

_____ 2/23/04
Signature of Mayor Date of Approval

ATTEST:

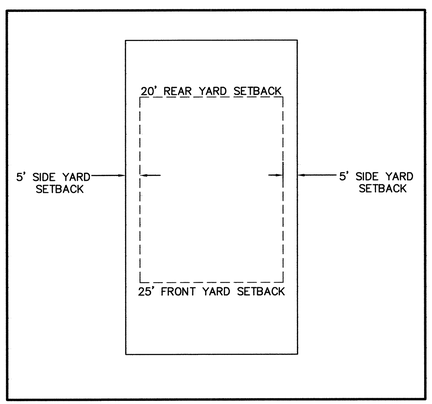
Vicki Faulkner 2/23/04
City Secretary Date

This property is located in the corporate limits [or the extraterritorial jurisdiction] of the City of Celina, Collin County, Texas.

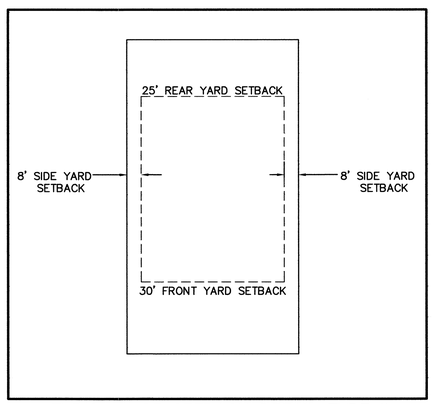
_____ 4/28/04
Mayor, City of Celina Date

ATTEST:

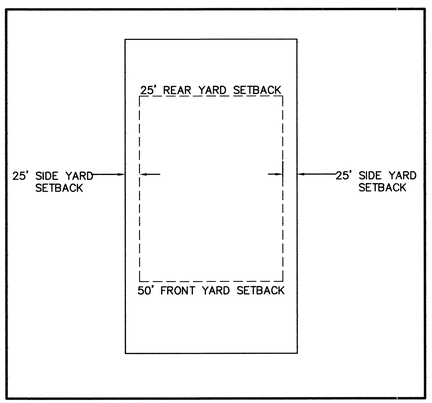
Vicki Faulkner 4/28/04
City Secretary, City of Celina Date



TYPICAL LOT SETBACK DETAIL TYPE I



TYPICAL LOT SETBACK DETAIL TYPE II



TYPICAL LOT SETBACK DETAIL TYPE III

FINAL PLAT

HERITAGE PHASE 2

112 RESIDENTIAL LOTS
1 OPEN SPACE LOT

BEING 41.544 ACRES OF LAND
OUT OF THE
HUGH C. ROUTH SURVEY, ABSTRACT NO. 765

CITY OF CELINA
COLLIN COUNTY, TEXAS

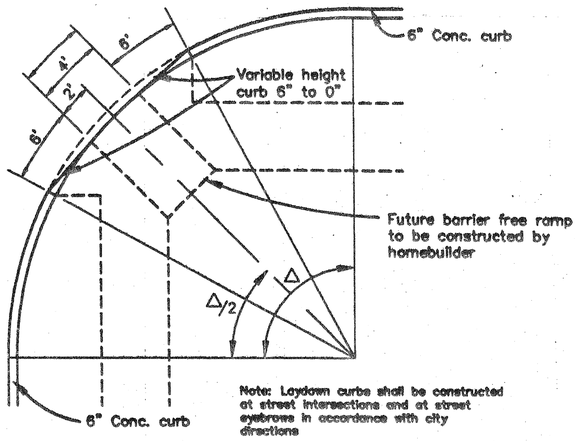
WILBOW - CELINA DEVELOPMENT CORP. OWNER/DEVELOPER
9330 LBJ Freeway, Suite 745, Lockbox 68
Dallas, TX 75243 (972) 479-0697

JONES & BOYD, INC. SURVEYOR/ENGINEER
16800 Dallas Parkway, Suite 240
Dallas, Texas 75248 (972)248-7676

March 19, 2004 Sheet 2 of 2

P-200402-02

Plot Info: Drawing: H:\projects\W401\dwg\XW401PTPHS2.dwg Plotted by: seh Plot date: 3/19/04 Plot time: 9:55 am
Drawing Info: JMW H:\Projects\W401\dwg\XW401PTPHS2.dwg



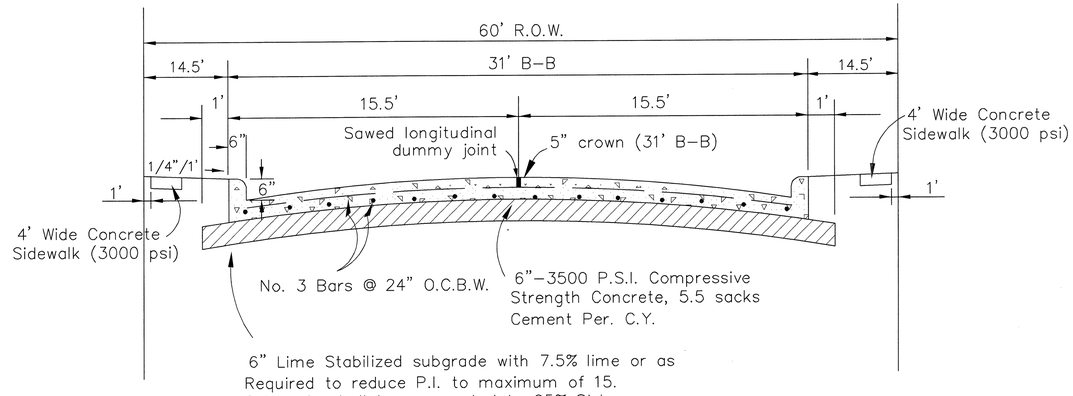
LAYDOWN CURB DETAIL

N.T.S.

NOTES:

ALL CONSTRUCTION MUST MEET CITY OF CELINA'S ORDINANCES.

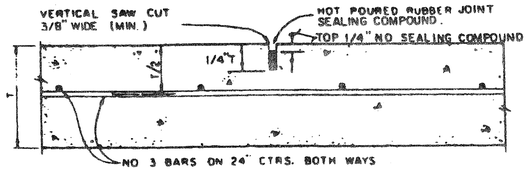
SAWED DUMMY JOINTS SHALL BE SPACED AT 15-FEET FOR 6-INCH PAVEMENT AND 20-FEET FOR 8-INCH PAVEMENT.



CITY OF CELINA
STREET PAVEMENT DETAIL

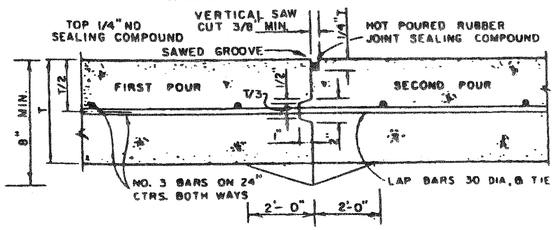
N.T.S.

NOTE: Spacing of Sawed Dummy Joints Shall be 15 Feet for 6" Paving and 20 Feet for 8" Paving.



T = PAVEMENT THICKNESS

SAWED DUMMY JOINT



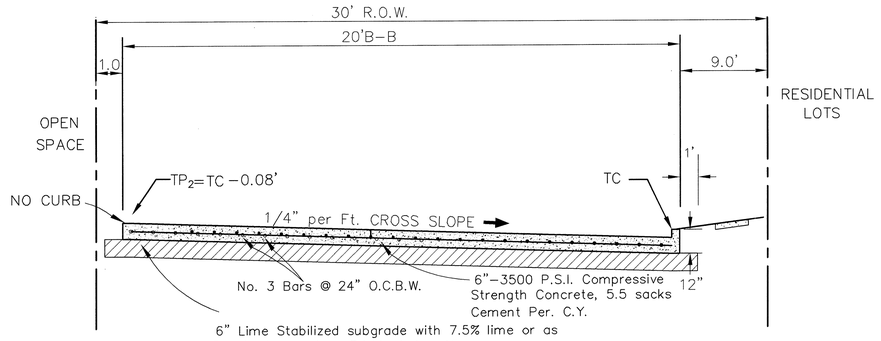
CONSTRUCTION JOINT FOR PAVEMENTS

TRANSVERSE AND LONGITUDINAL JOINTS

NOTE: CONTRACTOR SHALL PROTECT KEYWAY PRIOR TO SECOND POUR. IF LONGITUDINAL KEYWAY IS DAMAGED, CONTRACTOR SHALL REPAIR WITH THE USE OF LONGITUDINAL BUTT JOINT. DRILL DOWELS INTO FIRST POUR.

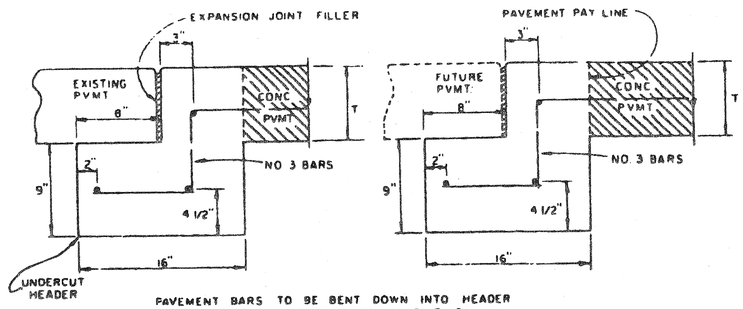
T = PAVEMENT THICKNESS

THICKENED EDGES ARE REQUIRED FOR FUTURE WIDENING ONLY.



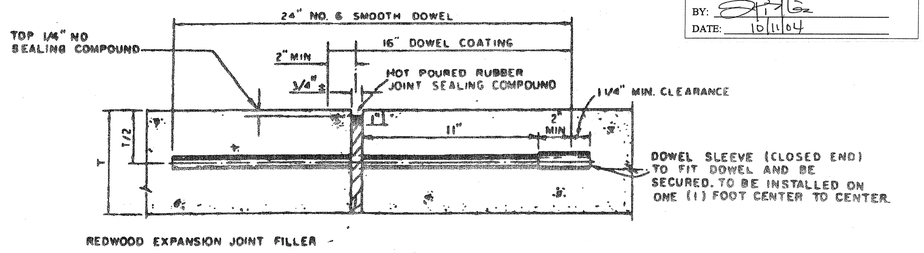
TYPICAL PAVING SECTION FOR BOUNDS LANE COUPLET

N.T.S.



PAVEMENT BARS TO BE BENT DOWN INTO HEADER HEADER AND PAVEMENT TO BE MONOLITHIC

STREET HEADER



TRANSVERSE EXPANSION JOINT

(SPACED 600 FT. MAXIMUM, LOCATE AT INTERSECTIONS)

T = PAVEMENT THICKNESS

NOTE:
DOWELS & REINFORCING BARS SHALL BE SUPPORTED BY A BASKET OR OTHER APPROVED DEVICE.

RECORD DOCUMENTS
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JONES & BOYD, INC.
BY: [signature]
DATE: 10/11/04

BENCHMARKS:

1. " ☐ Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. " ☐ Cut on top centerline headwall on Northeast corner Missouri Eest and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Removed conc. turn around detail per city comments	SJS	1/27/04

1/27/04 STATE OF TEXAS JEFFERY M. WINKLER 90358 LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Jeffery M. Winkler, P.E. 90358. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.

FOR APPROVAL

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

PAVING DETAILS

HERITAGE, PHASE 2

CITY OF CELINA
COLLIN COUNTY, TEXAS

PROJECT NO. W1401

SHEET NO. 3

JMW H:\Projects\W1401\dwg\Phase 2\W1401DET.dwg

P-200402-02

"*" Denotes location where Paving Contractor shall construct a "Lay Down" Curb for the construction of a Barrier Free Ramp per City of Celina Standards.

Barrier Free Ramp & Sidewalks to be constructed by Homebuilder unless otherwise noted.

See Sanitary Sewer Sheets 29 thru 36 for Manhole Rim Elevation Adjustments.

CAUTION: Existing underground utilities. Contractor to call for locates (1-800-DIG-TESS) and field verify the location of all existing utilities prior to excavation.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

10+45.09 Begin Pvmt. Conn. to Ex. concrete street header. TC=767.88

Sta. 10+48 Remove 31 L.F. of post-mounted metal beam guardrail street barricade.

12+10.00 STANFORD LANE= 1+00 TIDWELL LANE

15+22.72 STANFORD LANE= 1+00.00 BATEMAN LANE

15+82.04 LT. 8' C.I. #A19 TC=770.57 FL=766.57

Δ=32°49'44" R=295.00' L=169.03' T=86.90' CB=S16°38'19"W CH=166.72'

Δ=31°07'20" R=305.00' L=165.67' T=84.93' CB=N15°38'02"E CH=163.64'

Note: Improvements to County Road 96 to be by others. Per "PD" dated April 9, 2002. Improvements to C.R. 96 shall not be required to construct Block A, Lot 47 or Block B, Lot 1.

19+24.97 STANFORD LANE= 1+00.00 CARUTH LANE

21+64.97 End Pvmt. Const. Std. Conc. Street Header. TC=773.49

EX. STANFORD LANE

STANFORD LANE

FUTURE COUNTY ROAD 96

BLOCK "A"

EX. 8" S.S.

11+74.48 C.R. RT. TC=768.54

11+94.49 C.P.I. RT. TC=768.64

12+45.48 C.R. RT. TC=768.89

12+25.49 C.P.I. RT. TC=768.79

14+87.38 C.R. RT. TC=770.10

15+07.31 C.P.I. RT. TC=770.20

15+82.04 RT. 8' C.I. #A18 TC=770.57 FL=766.57

15+59.33 C.R. RT. TC=770.46

15+38.29 C.P.I. RT. TC=770.36

STA. 17+17.24, 43.42'RT. CONST. 2'x2' "Y" INLET TOP = 770.40 THROAT = 769.40 FL = 766.40

18+89.47 C.R. RT. TC=772.11

19+09.47 C.P.I. RT. TC=772.21

19+60.47 C.R. RT. TC=772.47

19+40.47 C.P.I. RT. TC=772.37

STA. 21+67.97 CONST. 31 L.F. OF POST MOUNTED METAL BEAM GUARDRAIL STREET BARRICADE W/REFLECTIVE TAPE PER CITY STANDARDS

HERITAGE PHASE 1

PHASE 1 PHASE 2

TIDWELL LANE

BATEMAN LANE

CARUTH LANE

60' R.O.W. 14.5' 15.5' 15.5' 14.5' 31' B-B

75' R.O.W. DEDICATION

SEE SHEET 9 FOR TIDWELL LANE

SEE SHEET 7 & 8 FOR BATEMAN LANE

SEE SHEET 5 & 6 FOR CARUTH LANE

STANFORD LANE

STA. 10+45.09 BEGIN PHASE 2 PVMT. CONN. TO EX. CONC STREET HEADER

EX. GROUND @ LT. R.O.W.

PROP. TOP OF CURB LT. & RT.

EXIST. TOP OF CURB LT. & RT.

COMPACTED FILL TO 95% STD. PROCTOR DENSITY (-3 to +3 Moisture Range)

EX. GROUND @ RT. R.O.W.

STA. 21+64.97 END PVMT. CONST. STD. CONC. STREET HEADER

0.50%

770

760

STA: 11+74.48 C.R. RT. TC=768.54

STA: 11+94.49 C.P.I. RT. TC=768.64

STA: 12+25.49 C.P.I. RT. TC=768.79

STA: 12+45.49 C.P.I. RT. TC=768.89

STA: 14+87.31 C.R. RT. TC=770.10

STA: 15+07.31 C.P.I. RT. TC=770.20

STA: 15+38.29 C.P.I. RT. TC=770.36

STA: 15+58.29 C.R. RT. TC=770.46

STA: 18+89.47 C.R. RT. TC=772.11

STA: 19+09.47 C.P.I. RT. TC=772.21

STA: 19+40.47 C.P.I. RT. TC=772.37

STA: 19+60.47 C.R. RT. TC=772.47

EX. TC=767.41 EX. TC=767.66 EX. TC=767.88 TC=767.88 TC=767.91 TC=768.16 TC=768.41 TC=768.66 TC=768.91 TC=769.16 TC=769.41 TC=769.66 TC=769.91 TC=770.16 TC=770.41 TC=770.66 TC=770.91 TC=771.16 TC=771.41 TC=771.66 TC=771.91 TC=772.16 TC=772.41 TC=772.66 TC=772.91 TC=773.16 TC=773.41 TC=773.49

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00

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JONES & BOYD, INC.
BY:
DATE: 10/11/04

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri Eest and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Modified guardrail notes per city comments	SJS	1/27/04

1/27/04 STATE OF TEXAS JEFFERY M. WINKLER 90358 LICENSED PROFESSIONAL ENGINEER

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FOR APPROVAL

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414
- Engineering
- Planning
- Landscape Architecture
- Surveying

PAVING PLAN & PROFILE
STANFORD LANE
HERITAGE, PHASE 2
City of Celina, Collin County, Texas

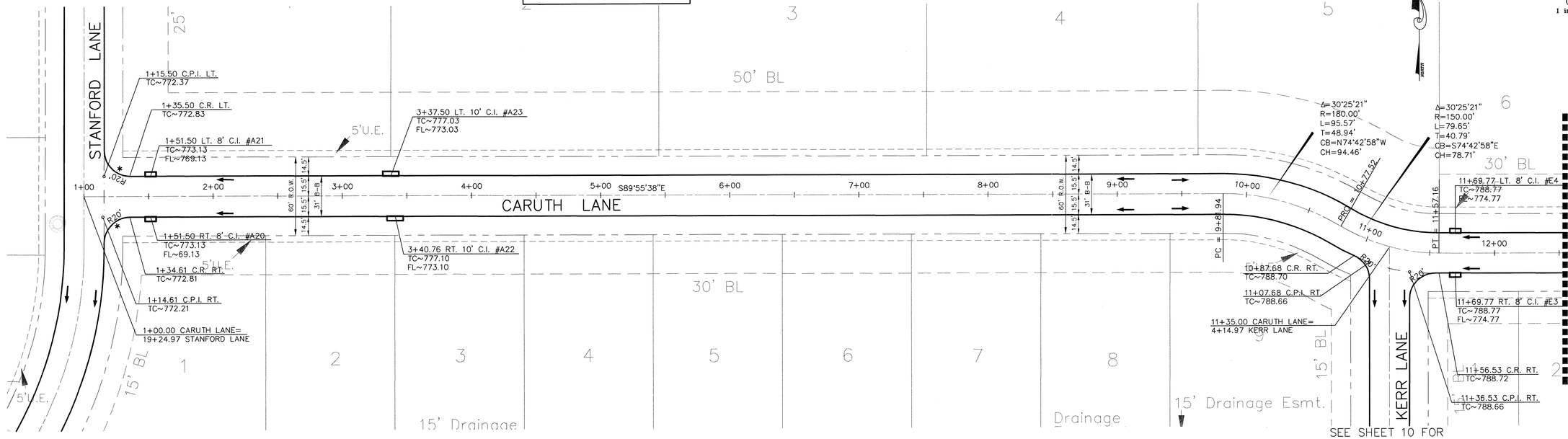
PROJECT NO. W1401
SHEET NO. 4

P-200402-02

Plot Info: Drawing: H:\projects\W1401\dwg\Phase 2\W1401PV-Ph2.dwg Plotted by: ss Plot date: 1/27/04 Plot time: 11:06 am

"*" Denotes location where Paving Contractor shall construct a "Lay Down" Curb for the construction of a Barrier Free Ramp per City of Celina Standards.

Barrier Free Ramp & Sidewalks to be constructed by Homebuilder unless otherwise noted.



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

RECORD DOCUMENTS

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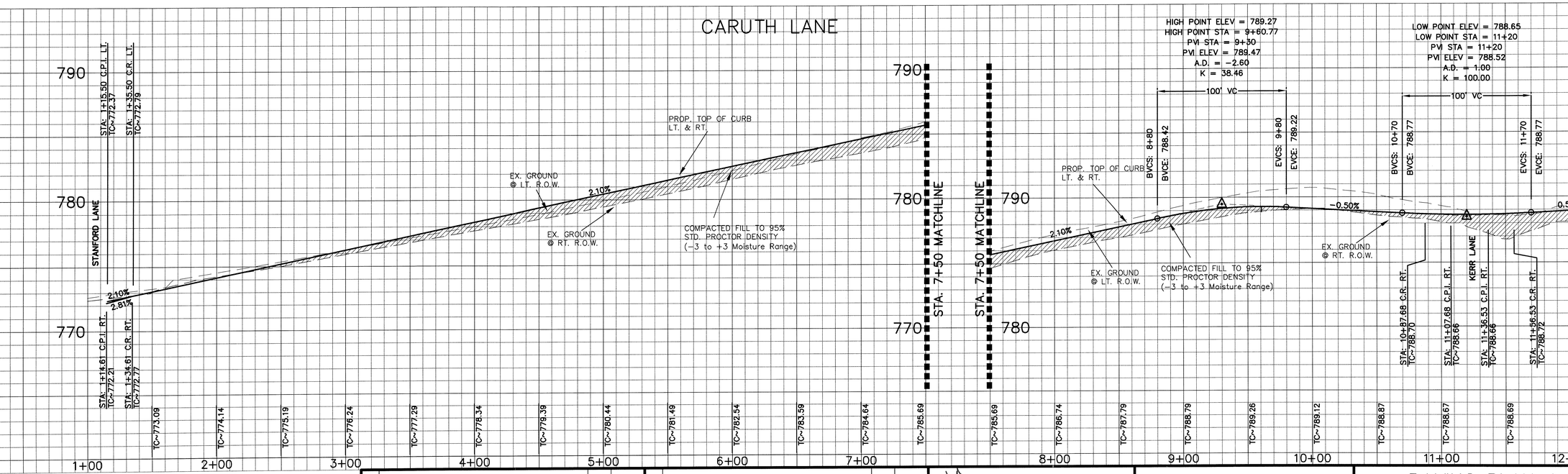
JONES & BOYD, INC.
BY:
DATE: 6/11/04



BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

1/27/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER
FOR APPROVAL

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16800 Dallas Parkway, Suite 240
Dallas, Texas 75248
Tel: 972-248-TC~7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

PAVING PLAN & PROFILE

CARUTH LANE (1+00 TO 13+00)

HERITAGE, PHASE 2

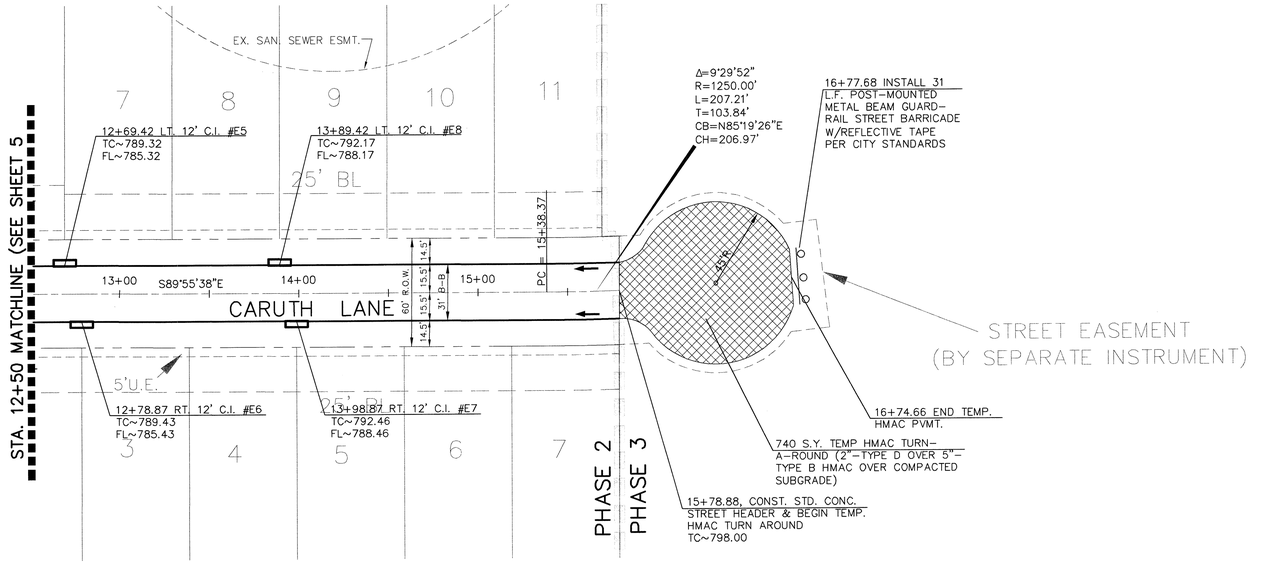
City of Celina, Collin County, Texas

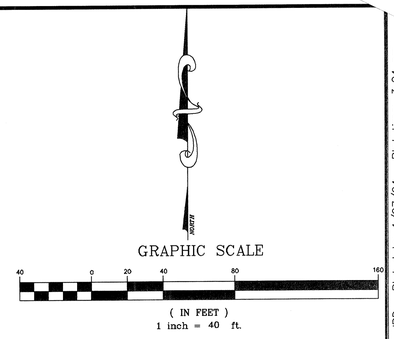
PROJECT NO. W1401

SHEET NO. 5

P-200402-02

Plot Info: Drawing: H:\projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg Plotted by: JRD Plot date: 1/27/04 Plot time: 3:26 pm
Drawing Info: JRD H:\projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg 1/27/04 3:21 pm





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Barrier Free Ramp & Sidewalks to be constructed by Homebuilder unless otherwise noted.

RECORD DOCUMENTS

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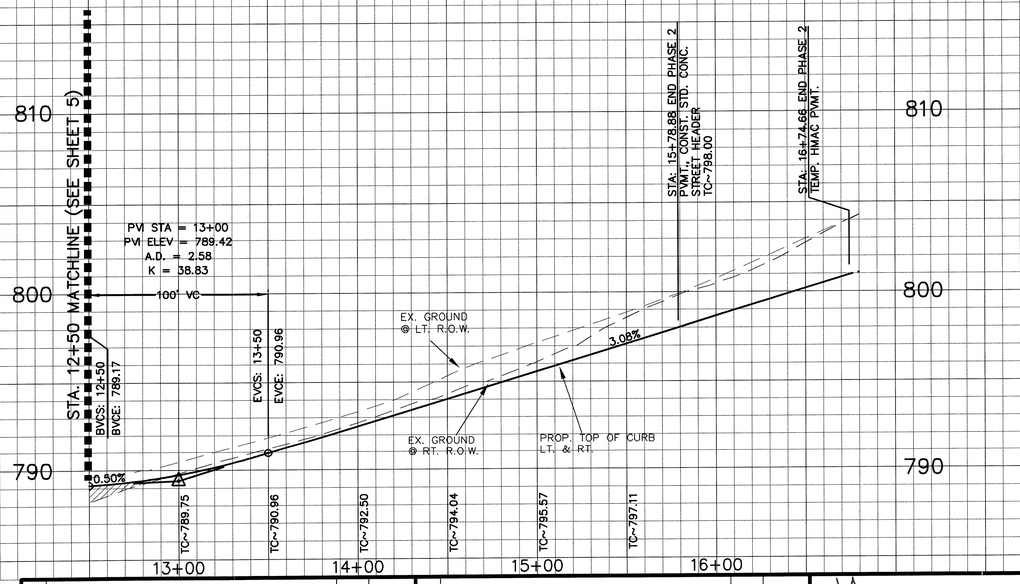
JONES & BOYD, INC.
BY: _____
DATE: 1/11/04



BENCHMARKS:

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2. "□" Cut on top centerline headwall on Northeast corner Missouri Eest and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
2	Added inlets E7 & E8	JRD	1/27/04
1	Modified temp. turn around per city comments	SJS	1/27/04

1/27/04 STATE OF TEXAS JEFFERY M. WINKLER 90358 LICENSED PROFESSIONAL ENGINEER

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FOR APPROVAL

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

PAVING PLAN & PROFILE

CARUTH LANE (13+00 TO END)

HERITAGE, PHASE 2

City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 6

Plot info: Drawing: H:\projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg Plotted by: JRD Plot date: 1/27/04 Plot time: 3:24 pm
Drawing Info: JRD H:\projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg 1/27/04 3:21 pm

P-200402-02

"*" Denotes location where Paving Contractor shall construct a "Lay Down" Curb for the construction of a Barrier Free Ramp per City of Celina Standards.

Barrier Free Ramp & Sidewalks to be constructed by Homebuilder unless otherwise noted.

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JONES & BOYD, INC.

BY: _____

DATE: 10/11/04

NORTH

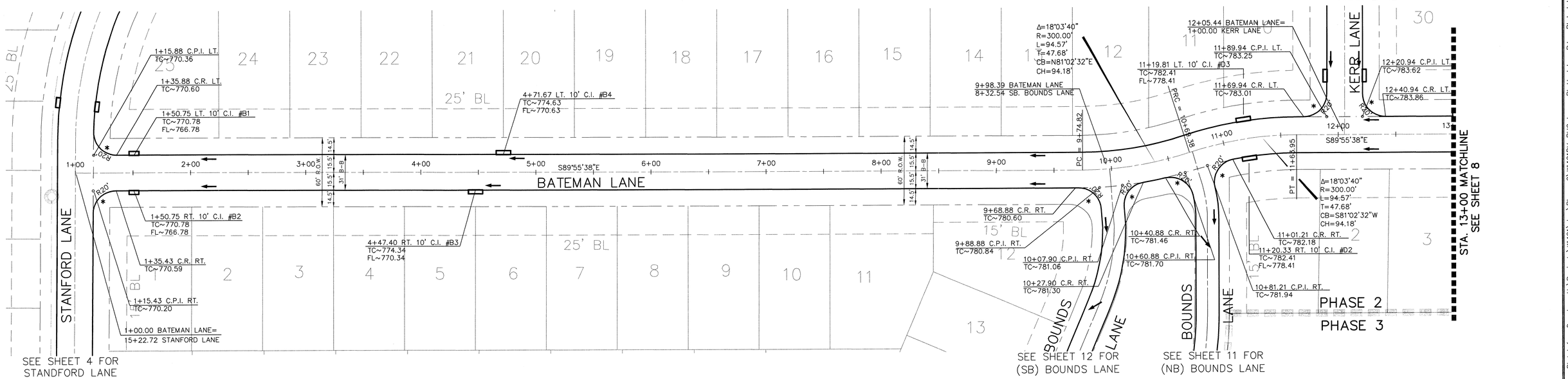
GRAPHIC SCALE

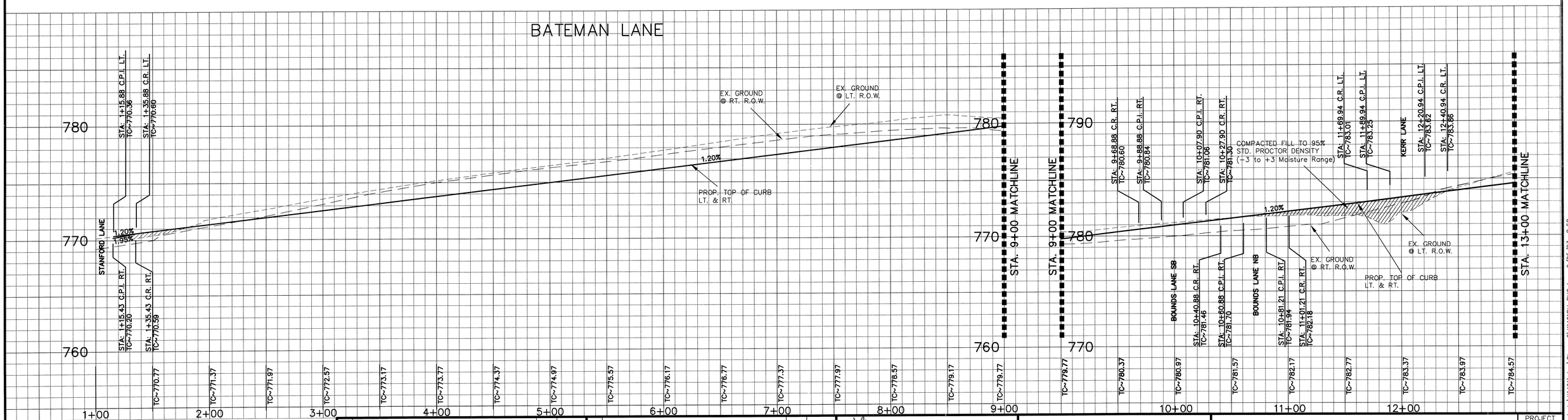
40 0 20 40 80 160

(IN FEET)

1 inch = 40 ft.

SEE SHEET 10 FOR KERR LANE





BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri Eest and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
PROFESSIONAL ENGINEER
FOR REVIEW

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17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

PAVING PLAN & PROFILE

BATEMAN LANE

HERITAGE, PHASE 2

City of Celina, Collin County, Texas

PROJECT NO. W1401

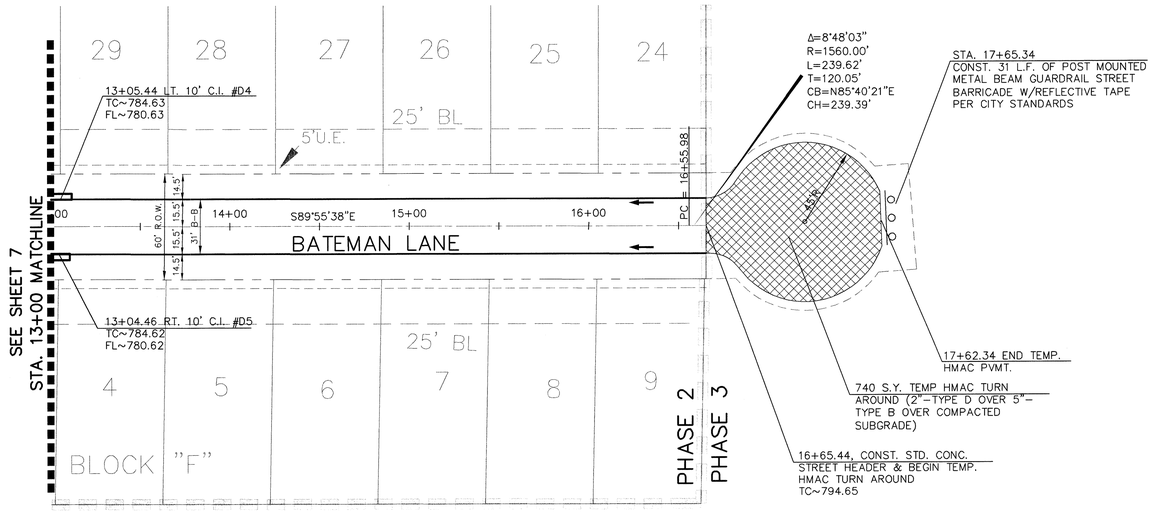
SHEET NO. 7

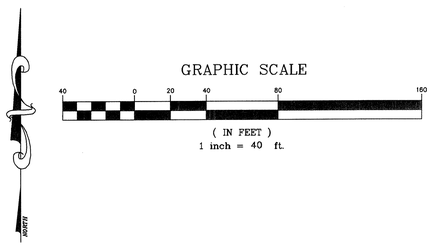
P-200402-02

Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg Plotted by: BJ Plot date: 9/25/03 Plot time: 8:58 am
Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg Plotted by: BJ Plot date: 9/25/03 Plot time: 9:02 am

"*" Denotes location where Paving Contractor shall construct a "Lay Down" Curb for the construction of a Barrier Free Ramp per City of Celina Standards.

Barrier Free Ramp & Sidewalks to be constructed by Homebuilder unless otherwise noted.





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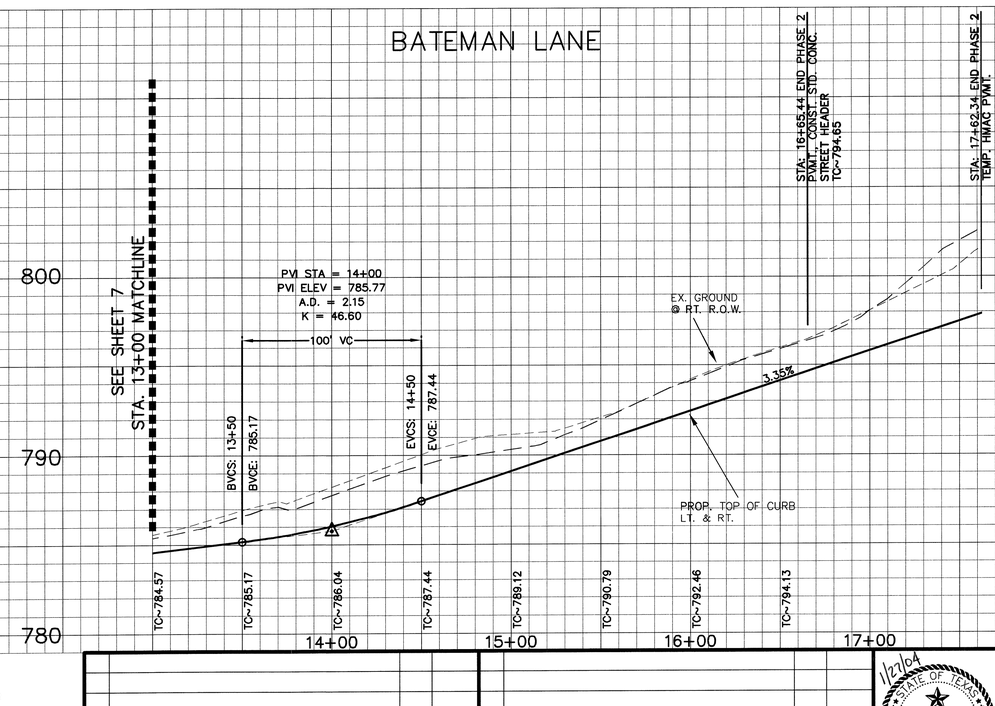
JONES & BOYD, INC.
BY: _____
DATE: 6/11/04

BATEMAN LANE



BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri Eest and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Modified temp. turn around per city comments	SJS	1/27/04

1/27/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

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FOR APPROVAL

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

PAVING PLAN & PROFILE

BATEMAN LANE

HERITAGE, PHASE 2

City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 8

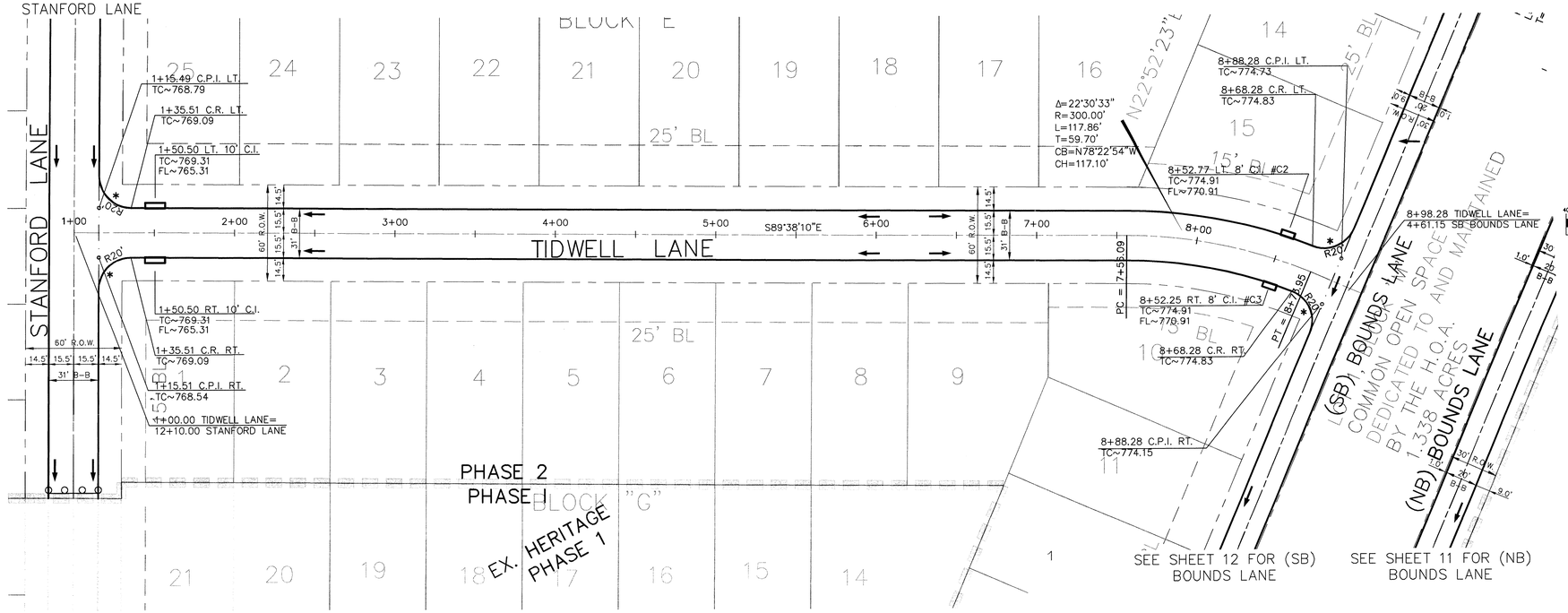
P-200402-02

Plot info: Drawing: H:\projects\W401\dwg\Phase 2\W401PV-PH2.dwg Plotted by: ss Plot date: 1/27/04 Plot time: 11:06 am

SEE SHEET 4 FOR STANFORD LANE

"*" Denotes location where Paving Contractor shall construct a "Lay Down" Curb for the construction of a Barrier Free Ramp per City of Celina Standards.

Barrier Free Ramp & Sidewalks to be constructed by Homebuilder unless otherwise noted.



GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

RECORD DOCUMENTS

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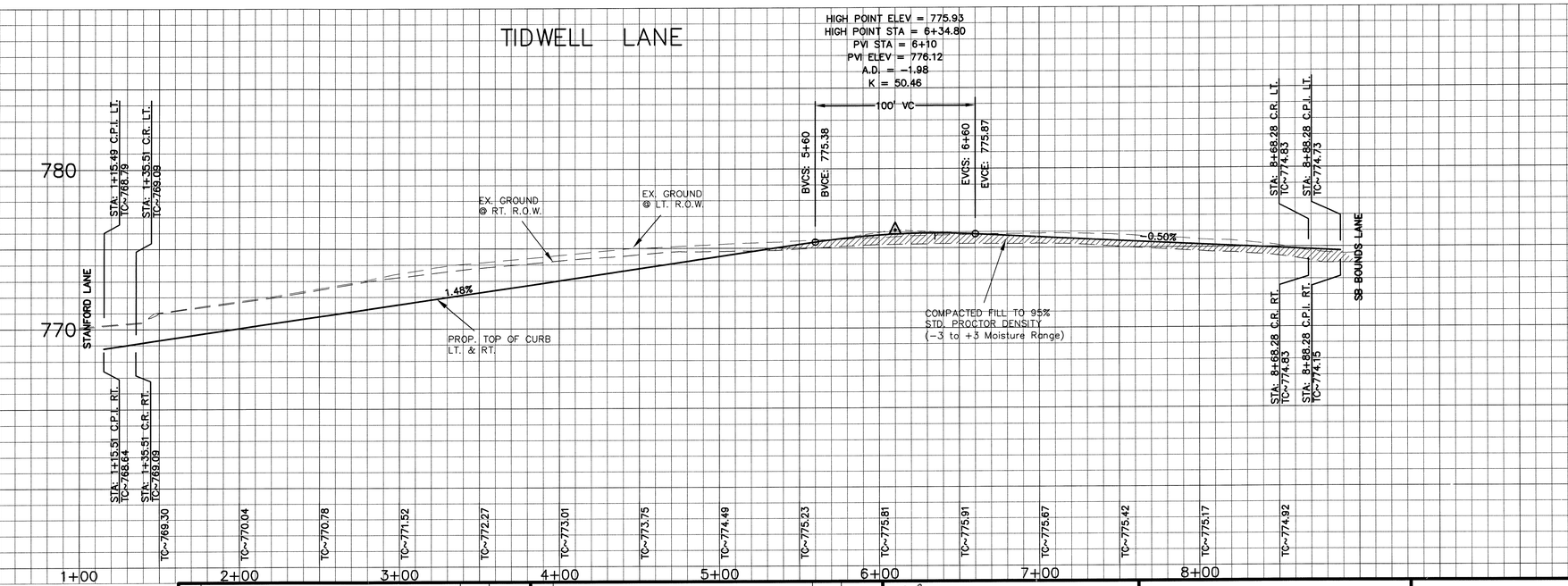
JONES & BOYD, INC.
BY: _____
DATE: 9/11/04



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NO.	REVISIONS DURING CONSTRUCTION	BY	DATE	NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED PROFESSIONAL ENGINEER

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FOR REVIEW

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Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

PAVING PLAN & PROFILE

TIDWELL LANE

HERITAGE, PHASE 2

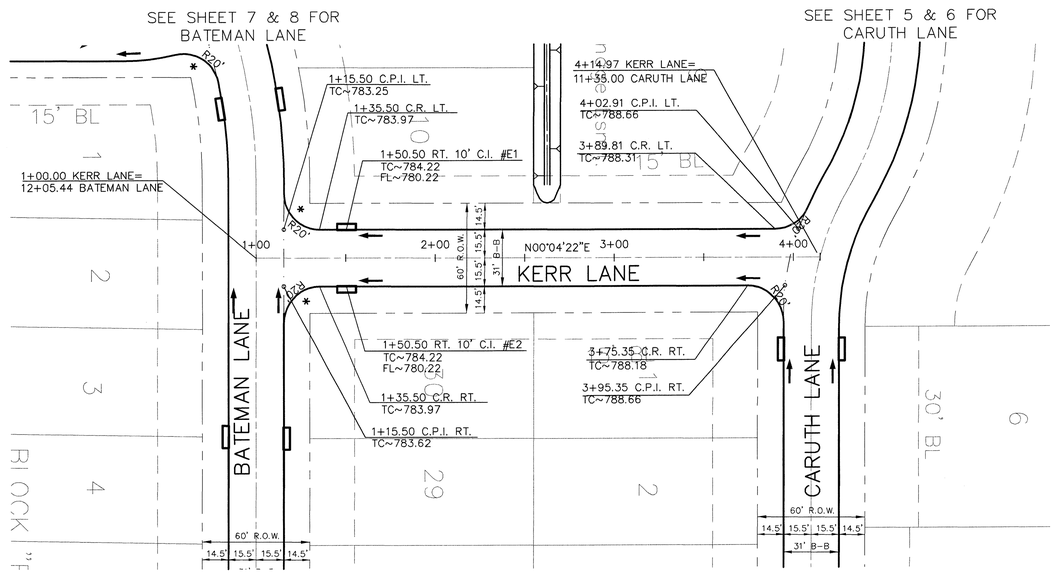
City of Celina, Collin County, Texas

PROJECT NO. W1401

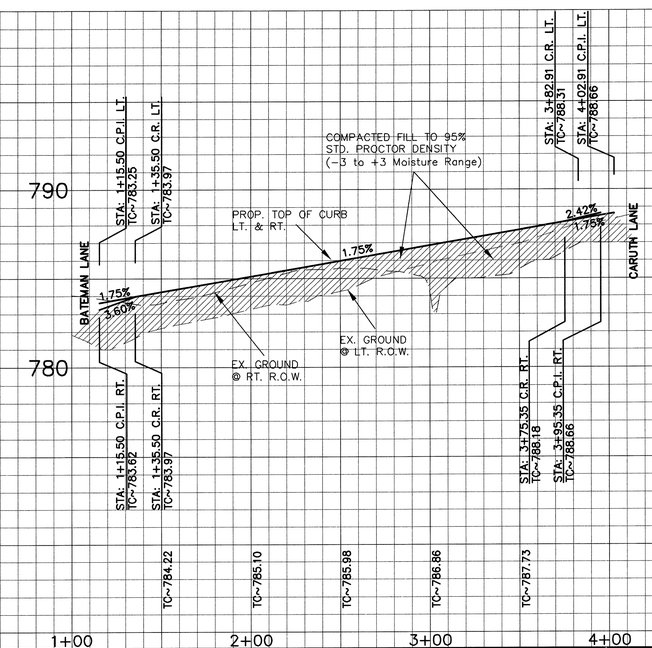
SHEET NO. 9

P-200402-02

Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg Plotted by: BJ Plot date: 9/25/03 Plot time: 9:24 am
Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg 9/25/03 9:18 am



KERR LANE



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NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED PROFESSIONAL ENGINEER

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FOR REVIEW

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- Engineering
- Planning
- Landscape Architecture
- Surveying

PAVING PLAN & PROFILE

KERR LN., BREWER LN., & CLAYTON LN.

HERITAGE, PHASE 2

City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 10

NORTH

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

RECORD DOCUMENTS

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JONES & BOYD, INC.
BY:
DATE: 10/11/04

Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg Plotted by: BJ Plot date: 9/25/03 Plot time: 9:26 am
Drawing Info: BJ H:\Projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg 9/25/03 9:18 am

P-200402-02

SEE SHEET 9 FOR TIDWELL LANE

SEE SHEET 7 & 8 FOR BATEMAN LANE

PHASE 2

PHASE 1

1+41.82 25.82' LT.
CONST. 2'x2' "Y" INLET
TOP=770.02
THROAT=768.43
FL =765.43

1+15.17 C.P.I. LT.
TC~769.77

1+00.00 NB BOUNDS LANE=
8+17.01 MISSOURI LANE

1+14.50 NB BOUNDS LANE
SAWCUT & REMOVE 56 L.F.
EX. CONC. CURB.
CONN. TO EX. PVMT. W/
LONGITUDINAL BUTT JOINT

EX. MISSOURI STREET

1+35.17 C.R. LT.
BEGIN CURB TRANS.
TC~770.60

END TRANS. @ 1+62.69

Δ=28°36'45"
R=296.00'
L=147.82'
T=75.48'
CB=N37°10'45"E
CH=146.29'

2+86.99 (NB) BOUNDS LANE=
1+00.00 BREWER LANE

LOT "X", BLOCK M
COMMON OPEN SPACE
DEDICATED TO AND MAINTAINED
BY THE H.O.A.
1.338 ACRES

(SB) BOUNDS LANE

6+33.87 (NB) BOUNDS LANE=
1+00.00 CLAYTON LANE

Δ=22°48'01"
R=281.00'
L=111.82'
T=56.66'
CB=N11°28'22"E
CH=111.08'

Δ=16°37'20"
R=110.00'
L=31.91'
T=16.07'
CB=N08°14'18"W
CH=31.80'

8+87.12 C.R. LT.
END CURB TRANS.
TC~781.97

9+07.12 C.P.I. LT.
TC~781.70

NO CURB

N22°52'23"E

N60°04'22"E

30' R.O.W.
9.0'
20'
B-B
1.0'

PI = 3+10.65

PC = 6+62.89

PT = 7+79.72

PT = 8+43.63

PC = 8+60.95

1+34.38 C.R. RT.
TC~770.18

1+15.47 C.P.I. RT.
TC~769.62

2+52.33 C.R. RT.
TC~770.73

2+72.33 C.P.I. RT.
TC~770.87

1+49.38 RT. 10' C.I. #D1
TC~770.47
FL~766.47

TC= 771.58

TC= 771.59

3+22.35 C.R. RT.
TC~771.22

3+02.35 C.P.I. RT.
TC~771.08

2+85.65 49.42 RT.
2'X2' "Y" INLET
TOP~772.68
THROAT~771.63
FL~768.68

2+86.99 . 28.70' RT.
CONST. STD. CONC. STREET
HEADER.

FUTURE HERITAGE
PHASE 3

5+98.44 C.R. RT.
TC~775.75

6+18.44 C.P.I. RT.
TC~776.15

TC= 777.41

6+33.87 31.80' RT.
CONST. STD. CONC. STREET
HEADER.

TC= 777.24

6+33.35 52.37' RT.
5'X5' "Y" INLET
TOP~776.45
THROAT~775.53
FL~772.45

6+69.46 C.R. RT.
TC~777.17

6+49.46 C.P.I. RT.
TC~776.77

8+87.27 C.R. RT.
TC~781.55

9+07.27 C.P.I. RT.
TC~781.94

9+22.61 (NB) BOUNDS LANE=
10+60.88 BATEMAN LANE

PHASE 2
PHASE 3

KERR LANE

SEE SHEET 10 FOR KERR LANE

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

RECORD DOCUMENTS
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JONES & BOYD, INC.
BY:
DATE: 10/11/04

NB BOUNDS LANE

PVI STA = 2+50
PVI ELEV = 772.93
A.D. = -1.54
K = 65.12
100' VC

PVI STA = 5+00
PVI ELEV = 774.20
A.D. = 1.50
K = 66.58
100' VC

PVI STA = 2+50
PVI ELEV = 772.52
A.D. = -1.54
K = 65.12
100' VC

PVI STA = 5+00
PVI ELEV = 773.78
A.D. = 1.50
K = 66.58
100' VC

780

770

STA: 1+15.17 C.P.I. LT.
TC~769.77

STA: 1+35.17 C.R. LT.
TC~770.60

STA: 8+87.12 C.R. LT.
TC~781.97

STA: 9+07.12 C.P.I. LT.
TC~781.70

BVCS: 2+00
BVCE: 771.92

EVCS: 3+00
EVCE: 773.19

BVCS: 4+50
BVCE: 773.95

EVCS: 5+50
EVCE: 775.20

PROP. TOP OF CURB LT.

COMPACTED FILL TO 95% STD. PROCTOR DENSITY (-3 to +3 Moisture Range)

EX. GROUND @ RT. R.O.W.

0.50% LT.
0.50% RT.

2.01% LT.
2.01% RT.

1.35'

BATEMAN LANE

PROP. TOP OF CURB RT.

COMPACTED FILL TO 95% STD. PROCTOR DENSITY (-3 to +3 Moisture Range)

STA: 8+87.27 C.R. RT.
TC~781.55

STA: 9+07.27 C.P.I. RT.
TC~781.94

4.16%
2.82%
2.04% LT.
2.04% RT.

MISSOURI LANE

BREWER LANE

CLAYTON LANE

EX. GROUND @ LT. R.O.W.

PROP. TOP OF CURB RT.

STA: 1+15.47 C.P.I. RT.
TC~769.62

STA: 1+35.47 C.R. RT.
TC~770.18

STA: 2+52.33 C.R. RT.
TC~770.73

STA: 2+72.33 C.P.I. RT.
TC~770.87

STA: 3+02.35 C.P.I. RT.
TC~771.08

STA: 3+22.35 C.R. RT.
TC~771.22

STA: 5+98.44 C.R. RT.
TC~775.75

STA: 6+18.44 C.P.I. RT.
TC~776.15

STA: 6+49.46 C.P.I. RT.
TC~776.77

STA: 6+69.46 C.R. RT.
TC~777.17

BVCS: 2+00
BVCE: 771.50

EVCS: 3+00
EVCE: 772.77

BVCS: 4+50
BVCE: 773.53

EVCS: 5+50
EVCE: 774.78

TC(L)~770.90
TC(R)~770.48

TC(L)~771.92
TC(R)~771.50

TC(L)~772.74
TC(R)~772.33

TC(L)~773.19
TC(R)~772.77

TC(L)~773.44
TC(R)~773.02

TC(L)~773.69
TC(R)~773.28

TC(L)~773.95
TC(R)~773.53

TC(L)~774.39
TC(R)~773.97

TC(L)~775.20
TC(R)~774.78

TC(L)~776.21
TC(R)~775.79

TC(L)~777.21
TC(R)~776.79

TC(L)~778.22
TC(R)~777.79

TC(L)~779.22
TC(R)~778.80

TC(L)~780.22
TC(R)~779.80

TC(L)~781.23
TC(R)~780.80

TC(L)~782.23
TC(R)~781.80

1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

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FOR REVIEW

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Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

PAVING PLAN & PROFILE

NB BOUNDS LANE

HERITAGE, PHASE 2

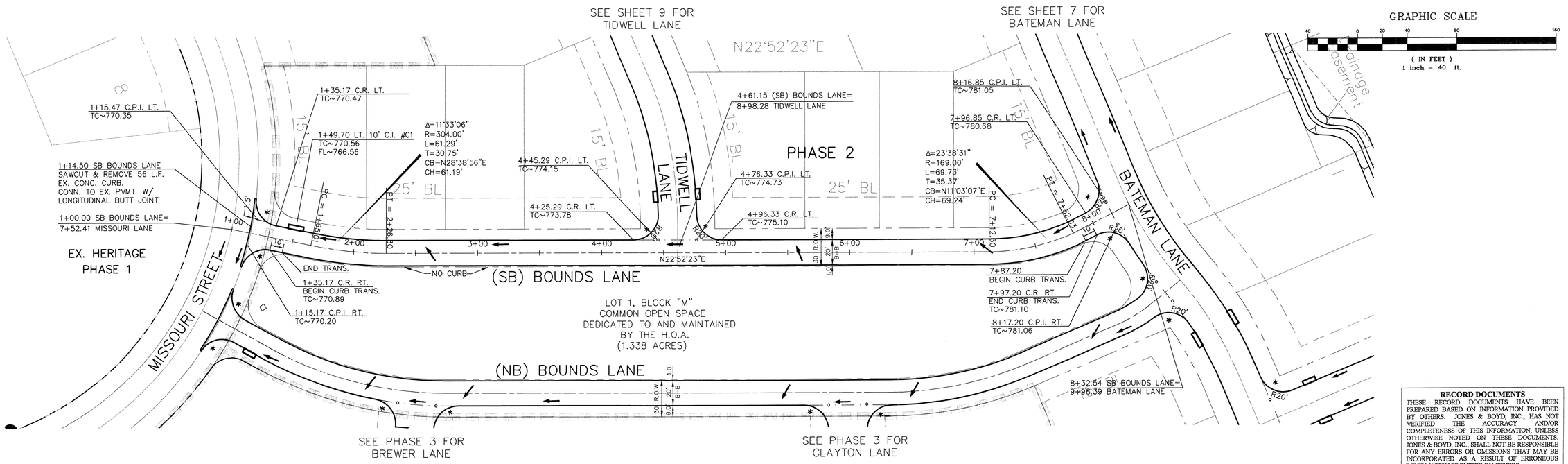
City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 11

P-200402-02

Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg Plotted by: BJ Plot date: 9/25/03 Plot time: 10:04 am
Drawing Info: BJ H:\Projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg 9/25/03 9:18 am



NORTH

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

RECORD DOCUMENTS

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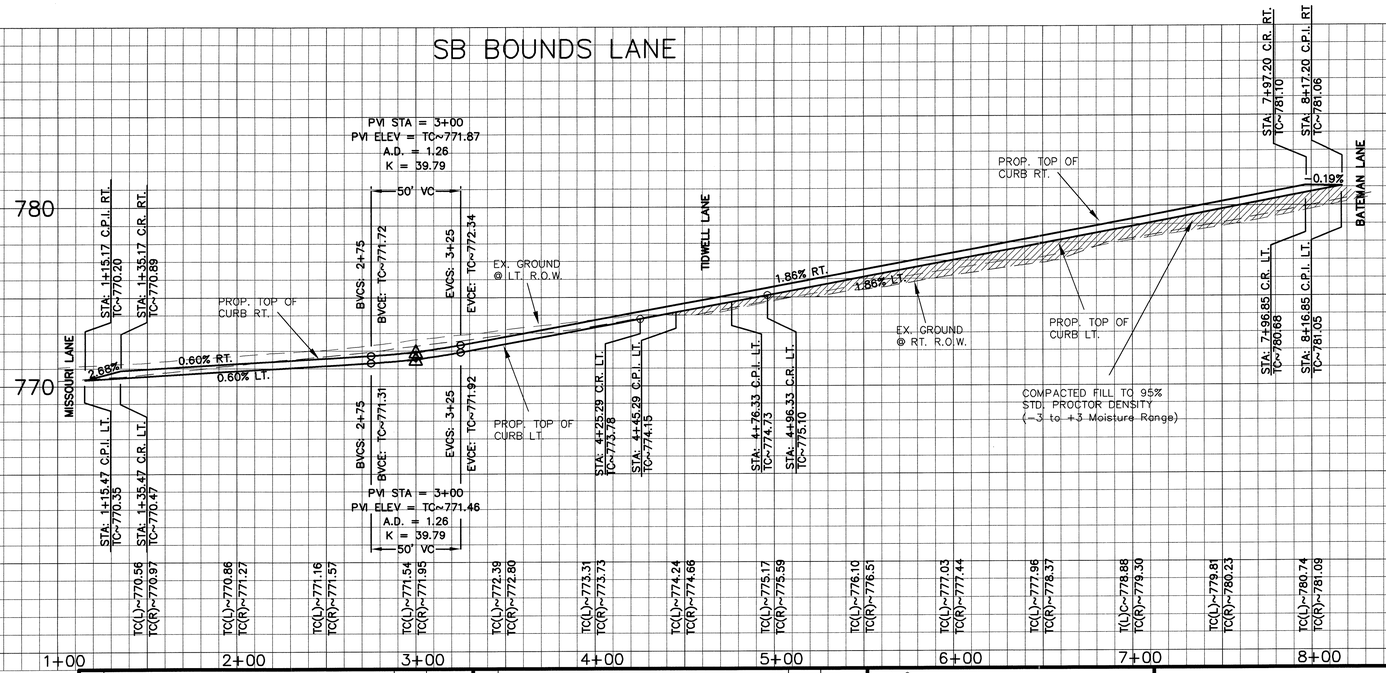
JONES & BOYD, INC.
BY:
DATE: 10/11/04

SB BOUNDS LANE



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NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
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- Landscape Architecture
- Surveying

PAVING PLAN & PROFILE

SB BOUNDS LANE

HERITAGE, PHASE 2

City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 12

P-200402-02

Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401PV-PH2.dwg 9/25/03 10:16 am Plotted by: BJ Plot date: 9/25/03 Plot time: 10:19 am

ZONED

5' FENCE EASEMENT TO HOA

2.264 Acre R.O.W. Dedication to City of Celina

STANFORD LANE

CARUTH LANE

BATEMAN LANE

KERR LANE

CHANNEL "A"

BLOCK "A"

BLOCK "B"

BLOCK "C"

15' Drainage Easement

15' Drainage Esmt.

Drainage Easement

MATCHLINE (SEE SHEET 15)

MATCHLINE (SEE SHEET 14)

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

LEGEND

715	EX. CONTOUR INTERVAL
× 689.3	PROP. FINISH GRADE
FP=691.4	PROP. FINISH PAD ELEVATION
TW 691.0 BW 689.0	PROPOSED WALL TOP OF WALL\ BOT. OF WALL
	PROPOSED WALL(INSTALLED BY DEVELOPER)
	PROP. VALLEY GUTTER
	PROP. DRAINAGE SWALE W/ FLOW DIRECTION
	PROP. STREET DRAINAGE FLOW DIRECTION
	PROP. LOT DRAINAGE FLOW DIRECTION

RECORD DOCUMENTS

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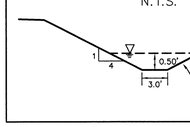
JONES & BOYD, INC.

BY: _____

DATE: 10/11/04

STORM CHANNEL "A" SECTION

SECTION A–A
N.T.S.



Ditch Drainage Information
Depth of Flow = 0.50 ft.
Channel Velocity = 3.02 fps
Q_{100} = 6.6 cfs
n = 0.030
Slope = 1.50%

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NO.	REVISIONS DURING CONSTRUCTION	BY	DATE
1	As–built Pad Elevations as of 9/14/04	CMR	9/16/04

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Updated pad elevations	JRD	1/27/04

STATE OF TEXAS
JEFFREY P. MILES
80253
LICENSED PROFESSIONAL ENGINEER

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- Engineering
- Planning
- Landscape Architecture
- Surveying

LOT GRADING PLAN

NORTH PORTION

HERITAGE, PHASE 2

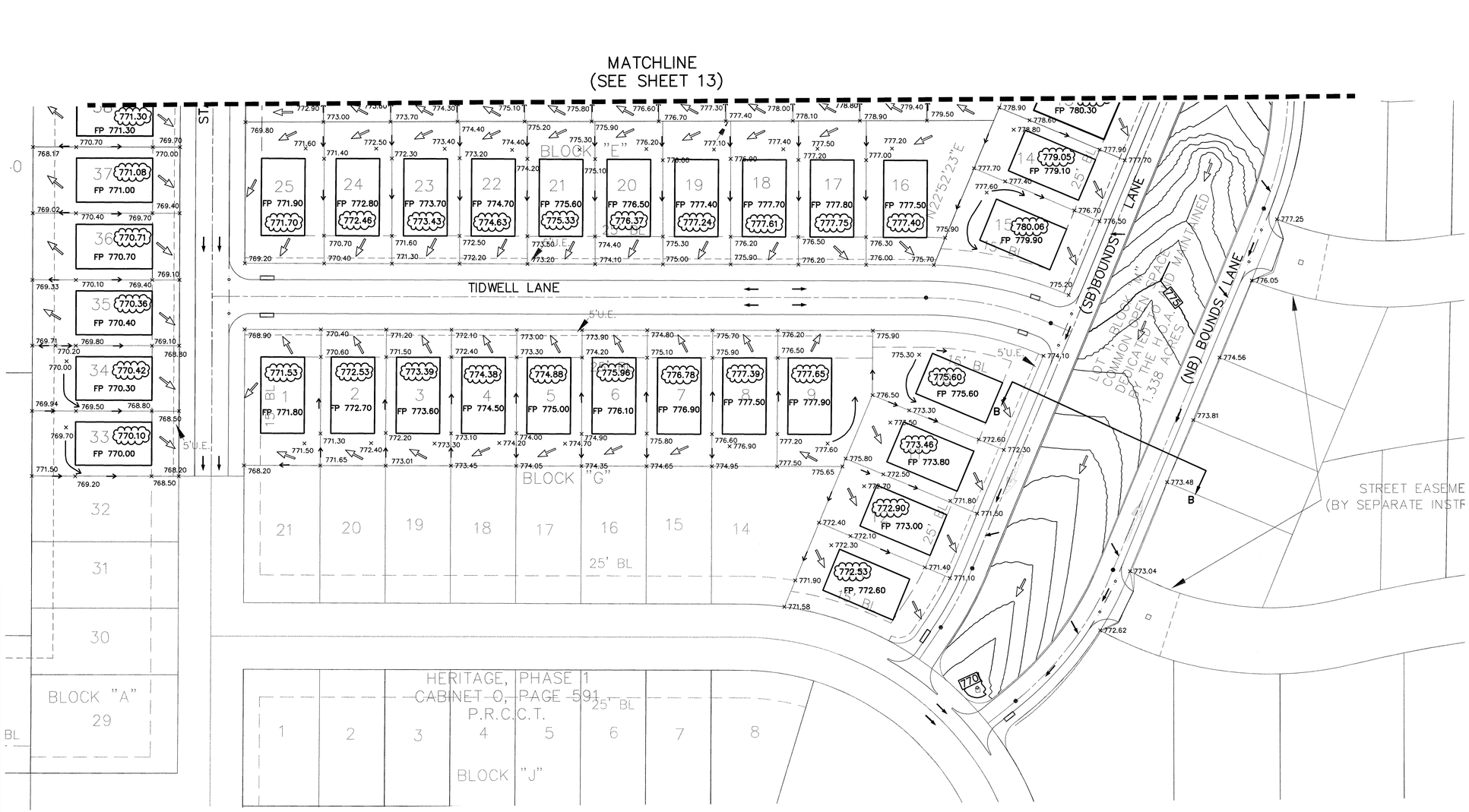
City of Celina, Collin County, Texas

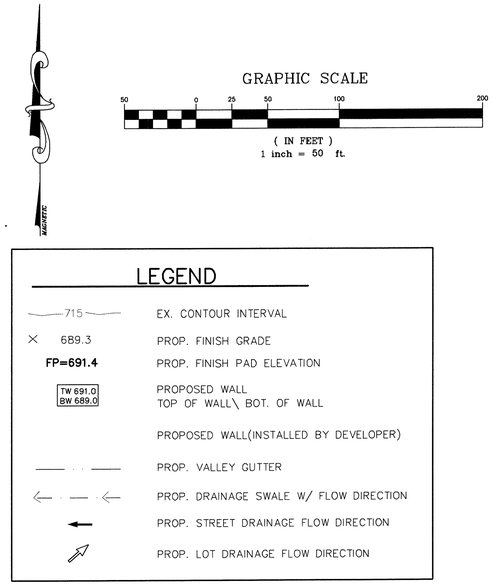
PROJECT NO. W1401

SHEET NO. 13

P-200402-02

Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W401GR-PH2.dwg Plotted by: cmr Plot date: 10/11/2004 Plot time: 9:48 am
Drawing Info:





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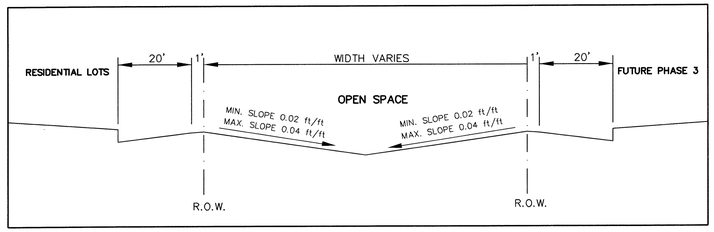
JONES & BOYD, INC.
BY: [signature]
DATE: 10/11/04

SECTION B–B



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NO.	REVISIONS DURING CONSTRUCTION	BY	DATE
1	As-built Pad Elevations as of 9/14/04	CMR	9/16/04

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Updated pad elevations	JRD	1/27/04

STATE OF TEXAS
JEFFREY P. MILES
80253
LICENSED PROFESSIONAL ENGINEER

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[signature] 10/11/04 RECORD DRAWING

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414
Engineering
Planning
Landscape Architecture
Surveying

LOT GRADING PLAN
SOUTH PORTION
HERITAGE, PHASE 2
City of Celina, Collin County, Texas

PROJECT NO. WI401
SHEET NO. 14

Drawing Info:
Plot Info: Drawing: H:\Projects\WI401\dwg\Phase 2\WI401GR-PH2.dwg Plotted by: cmr Plot date: 10/11/2004 Plot time: 9:48 am

P-200402-02

UNTY ROAD 96 (UNDEDICATED R.O.W.)

MATCHLINE (SEE SHEET 13)

MATCHLINE (SEE SHEET 14)

CARUTH LANE

BATEMAN LANE

KERR LANE

FUTURE HERITAGE PHASE 3

LIMITS OF EXCAVATION

STREET EASEMENT (BY SEPARATE INSTRUMENT)

WILLOW CREEK DEVELOPMENT CORP. VOLUME 5208, PAGE 303 D.R.C.C.T.

NOTE:
23 LOTS WITHIN PHASE 3 TO BE ROUGH CUT AS SHOWN ON THIS SHEET FOR BALANCE OF EARTHWORK

RECORD DOCUMENTS

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JONES & BOYD, INC.
BY: _____
DATE: 10/11/04

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

LEGEND

715	EX. CONTOUR INTERVAL
×689.3	PROP. FINISH GRADE
FP=691.4	PROP. FINISH PAD ELEVATION
TW 691.0 / BW 689.0	PROPOSED WALL TOP OF WALL \ BOT. OF WALL
	PROPOSED WALL(INSTALLED BY DEVELOPER)
	PROP. VALLEY GUTTER
	PROP. DRAINAGE SWALE W/ FLOW DIRECTION
	PROP. STREET DRAINAGE FLOW DIRECTION
	PROP. LOT DRAINAGE FLOW DIRECTION

BENCHMARKS:

1. "D" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "D" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE
1	As-built Pad Elevations as of 9/14/04	CMR	9/16/04

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

STATE OF TEXAS
JEFFREY P. MILES
80253
LICENSED PROFESSIONAL ENGINEER

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10/11/04 RECORD DRAWING

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Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

LOT GRADING PLAN

EAST PORTION

HERITAGE, PHASE 2

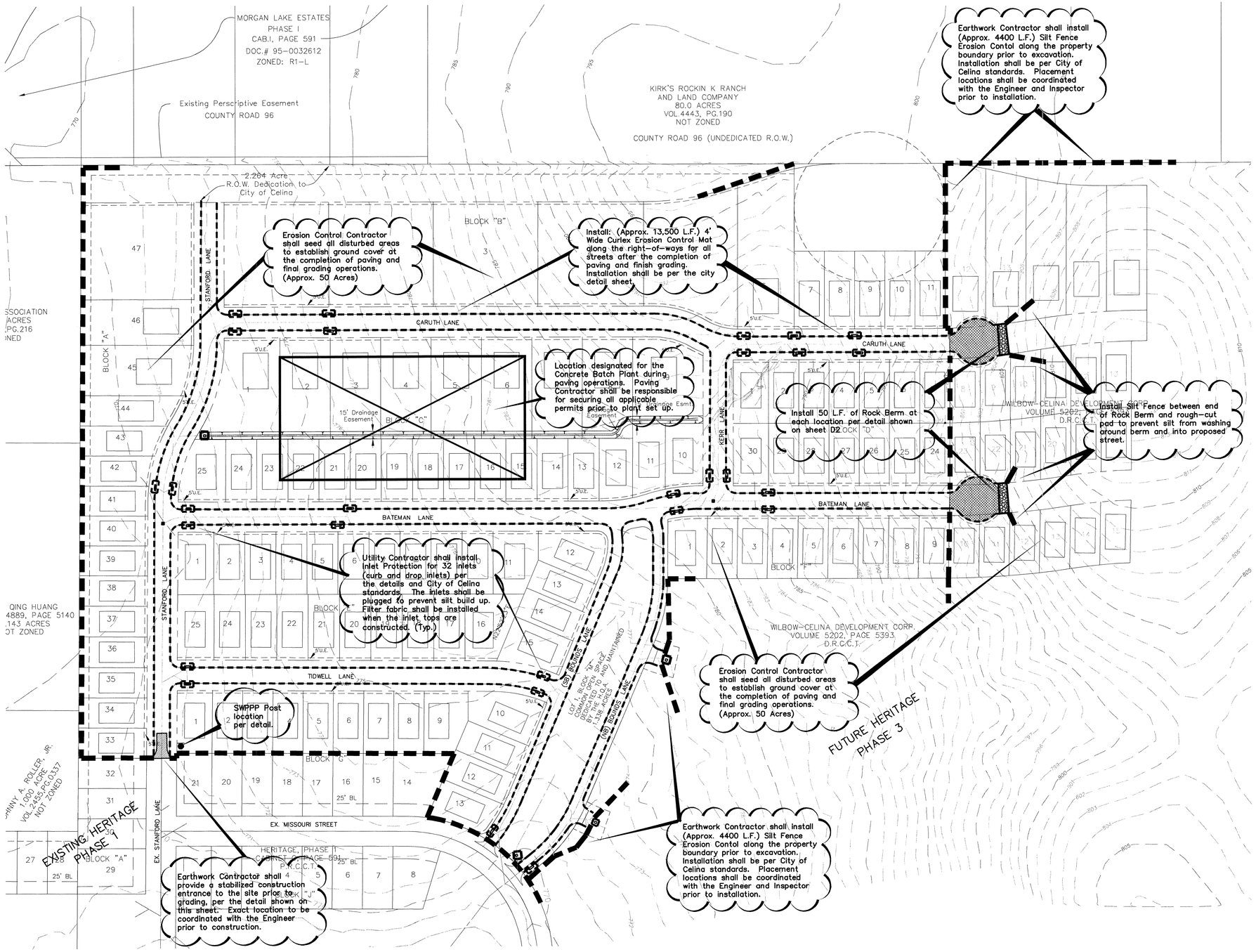
City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 15

P-200402-02

Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401GR-PH2.dwg Plotted by: cmr Plot date: 10/11/2004 Plot time: 9:48 am
Drawing Info:



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

All Erosion Control Measures shall be constructed per City of Celina standards and the details shown on sheet D2.

All Erosion Control Measures Shall Be Maintained Until Ground Cover Is Established. This Includes Grassing of All Areas Disturbed During Construction.

LEGEND

- 625 — Existing ground contours & elevations
- Inlet Protection by Utility/Paving Contractor
- Silt Fence by Erosion Control Contractor Prior to Excavation
- Curlex Erosion Control Mat After Paving
- Direction of Flow for Proposed Grading
- Rock Berm

RECORD DOCUMENTS

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JONES & BOYD, INC.
BY:
DATE: 1/27/04

BENCHMARKS:

1. "D" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "D" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Add inlets E7 & E8	JRD	1/27/04

1/27/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

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FOR APPROVAL

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- Engineering
- Planning
- Landscape Architecture
- Surveying

EROSION CONTROL PLAN

HERITAGE, PHASE 2

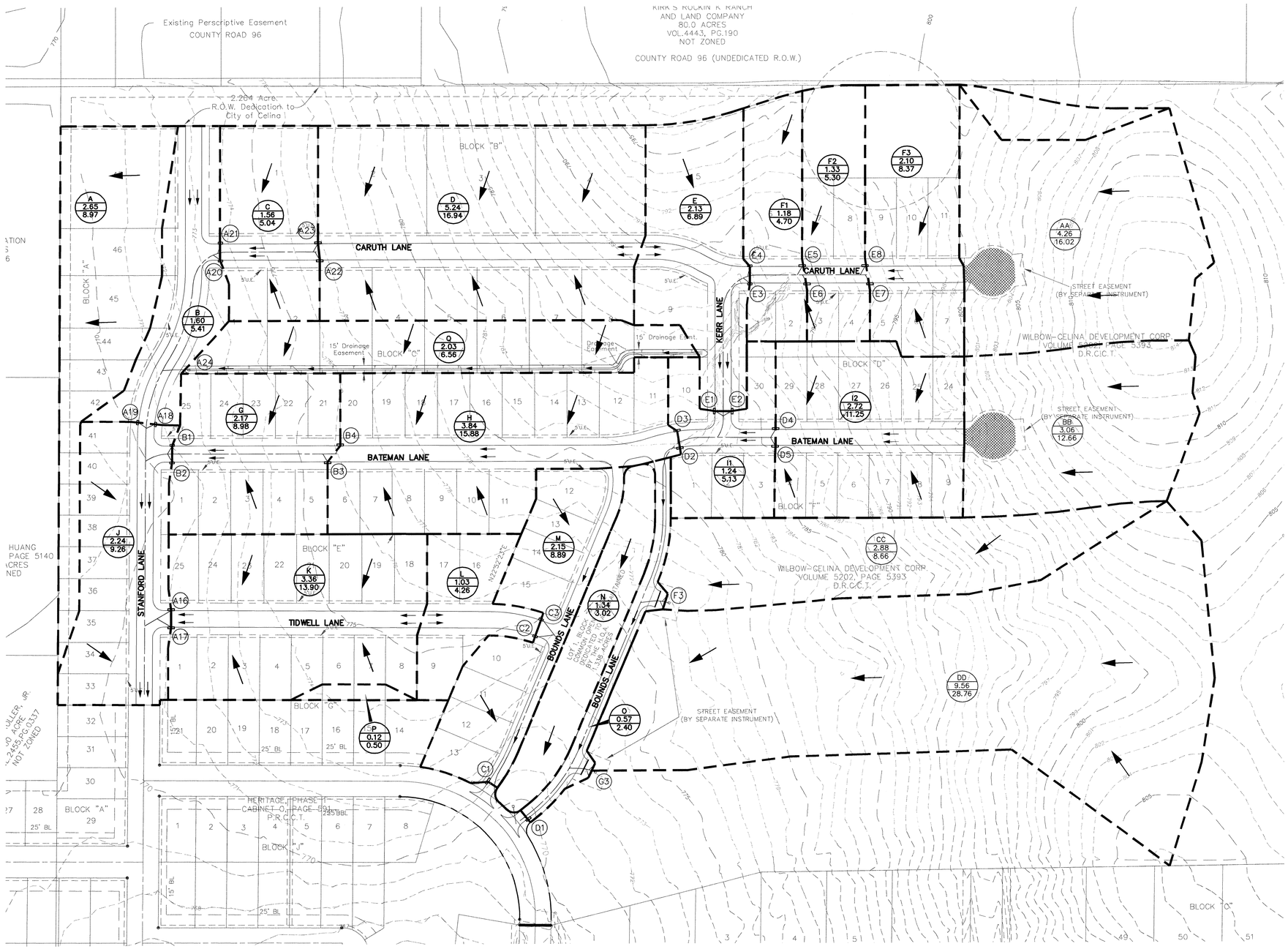
City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 16

Plot Info: Drawing: H:\projects\W1401\dwg\Phase 2\W1401ER-PH2.dwg Plotted by: JRD Plot date: 1/27/04 Plot time: 3:53 pm
Drawing Info: JRD H:\projects\W1401\dwg\Phase 2\W1401ER-PH2.dwg 1/27/04 3:53 pm

P-200402-02



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

RUNOFF CALCULATIONS

Drainage Basin	Area (Acres)	Runoff Coeff.	Intensity (in./hr.)	Time Conc. (min.)	Discharge (c.f.s.)
	"A"	"C."	"I"	"Tc"	"Q"
A	2.65	0.45	7.52	15.0	8.97
B	1.60	0.45	7.52	15.0	5.41
C	1.56	0.43	7.52	15.0	5.04
D	5.24	0.43	7.52	15.0	16.94
E	2.13	0.43	7.52	15.0	6.89
F1	1.18	0.53	7.52	15.0	4.70
F2	1.33	0.53	7.52	15.0	5.30
F3	2.10	0.53	7.52	15.0	8.37
G	2.17	0.55	7.52	15.0	8.98
H	3.84	0.55	7.52	15.0	15.88
I1	1.24	0.55	7.52	15.0	5.13
I2	2.72	0.55	7.52	15.0	11.25
J	2.24	0.55	7.52	15.0	9.26
K	3.36	0.55	7.52	15.0	13.90
L	1.03	0.55	7.52	15.0	4.26
M	2.15	0.55	7.52	15.0	8.89
N	1.34	0.30	7.52	15.0	3.02
O	0.58	0.55	7.52	15.0	2.40
P	0.12	0.55	7.52	15.0	0.50
Q	2.03	0.43	7.52	15.0	6.56
AA	4.26	0.50	7.52	15.0	16.02
BB	3.06	0.55	7.52	15.0	12.66
CC	2.88	0.40	7.52	15.0	8.66
DD	9.56	0.40	7.52	15.0	28.76

Drainage Theory

Rational Method

Q = C*I*A

Q ~ Flow in c.f.s.(100-year Frequency)

I ~ 100 yr. Intensity for Tc = 15 min (7.52 in./hr)

A ~ Area (Ac.)

C ~ Coefficient of runoff (varies)

LEGEND

- F / 6.11 / 24.0 — AREA DESIGNATION / AREA (ACRES) / 100-YEAR FLOW (CFS)
- PROPOSED DRAINAGE DIVIDE
- INLET
- A1 — INLET DESIGNATOR
- PROPOSED FLOW ARROW
- EXISTING CONTOUR

RECORD DOCUMENTS

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JONES & BOYD, INC.

BY: _____

DATE: 1/27/04

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
2	ADDED AREA F3	JRD	1/27/04
1	CHANGED C FACTOR TO 0.40 FOR OFFSITE AREAS	JRD	1/27/04

1/27/04 — STATE OF TEXAS — JEFFERY M. WINKLER — 90358 — LICENSED PROFESSIONAL ENGINEER — FOR APPROVAL

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Jones & Boyd, Inc.
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Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
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- Surveying

DRAINAGE AREA MAP

HERITAGE, PHASE 2

City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 17

Plot Info: Drawing: H:\projects\W1401\dwg\Phase 2\W1401DA-PH2.dwg Plotted by: JRD Plot date: 1/27/04 Plot time: 1:50 pm
Plot Info: Drawing Info: JRD H:\projects\W1401\dwg\Phase 2\W1401DA-PH2.dwg 1/27/04 1:50 pm Plot date: 1/27/04 Plot time: 3:30 pm

P-200402-02

INLET		AREA RUNOFF Q=CIA														SELECTED INLET				
No.	Location	Drainage Area No.	Design Storm Freq. (yrs.)	Time of Conc. (min.)	Intensity I (in./hr.)	Runoff Coeff. "C"	Area (Ac.)	Q (c.f.s.)	Crossover (c.f.s.)	Inlet Bypass (c.f.s.)	From	Total Gutter Flow (c.f.s.)	Gutter Slope (%)	Street Capacity to TC (c.f.s.)	Crown Type	Length "Li" (Feet)	Type	Inlet Capacity (c.f.s.)	Carry-Over Downstream (c.f.s.)	Q100
A16	1+50.48 LT. TIDWELL LANE	K	100	15	7.52	0.55	1.80	7.4	-0.2	0.0	NA	7.2	1.5	24.6	5" Para.	12	Std-Grade	8.1	0.0	7.2
A17	1+50.48 RT. TIDWELL LANE	K	100	15	7.52	0.55	1.68	6.9	0.2	0.0	NA	7.1	1.5	24.6	5" Para.	12	Std-Grade	8.1	0.0	7.1
A18	15+82.04 RT. STANFORD LANE	B	100	15	7.52	0.50	0.83	3.1	0.0	0.0	NA	3.1	0.5	14.4	5" Para.	8	Std-Grade	5.5	0.0	3.1
A19	15+82.04 LT. STANFORD LANE	B	100	15	7.52	0.50	0.77	2.9	0.0	0.0	NA	2.9	0.5	14.4	5" Para.	8	Std-Grade	5.5	0.0	2.9
A20	1+51.50 RT. CARUTH LANE	C	100	15	7.52	0.43	0.53	1.7	0.0	0.8	NA	2.5	2.1	29.4	5" Para.	8	Std-Grade	4.8	0.0	2.5
A21	1+51.50 LT. CARUTH LANE	C	100	15	7.52	0.43	1.03	3.3	0.0	0.9	NA	4.2	2.1	29.4	5" Para.	8	Std-Grade	4.8	0.0	4.2
A22	3+40.76 RT. CARUTH LANE	D	100	15	7.52	0.43	1.80	5.8	2.6	0.0	NA	8.4	2.1	29.4	5" Para.	12	Std-Grade	7.6	0.8	7.6
A23	3+37.50 LT. CARUTH LANE	D	100	15	7.52	0.43	3.44	11.1	-2.6	0.0	NA	8.5	2.1	29.4	5" Para.	12	Std-Grade	7.6	0.9	7.6
A24	NA	Q	100	15	7.52	0.43	2.03	6.6	0.0	0.0	NA	6.6	NA	NA	NA	2'x2'	Y-Inlet	11.2	0.0	6.6
B1	1+50.75 LT. BATEMAN LANE	G	100	15	7.52	0.55	1.07	4.4	0.0	0.0	B3	4.4	1.2	22.2	5" Para.	8	Std-Grade	5.2	0.0	4.4
B2	1+50.75 RT. BATEMAN LANE	G	100	15	7.52	0.55	1.10	4.5	0.0	0.0	B4	4.5	1.2	22.2	5" Para.	8	Std-Grade	5.2	0.0	4.5
B3	4+47.40 RT. BATEMAN LANE	H	100	15	7.52	0.55	1.58	6.5	1.4	0.0	NA	7.9	1.2	22.2	5" Para.	12	Std-Grade	8.5	0.0	7.9
B4	4+71.67 LT. BATEMAN LANE	H	100	15	7.52	0.55	2.26	9.3	-1.4	0.0	NA	7.9	1.2	22.2	5" Para.	12	Std-Grade	8.5	0.0	7.9
C1	1+50.38 LT. SB BOUNDS LANE	M	100	15	7.52	0.55	2.15	8.9	0.0	0.0	NA	8.9	0.6	9.5	Super	12	Std-Grade	9.0	0.0	8.9
C2	8+52.77 LT. TIDWELL LANE	L	100	15	7.52	0.55	0.61	2.5	0.0	0.0	NA	2.5	0.5	14.4	5" Para.	8	Std-Grade	5.5	0.0	2.5
C3	8+52.25 RT. TIDWELL LANE	L	100	15	7.52	0.55	0.42	1.7	0.0	0.0	NA	1.7	0.5	14.4	5" Para.	8	Std-Grade	5.5	0.0	1.7
D1	1+49.38 RT. NB BOUNDS LANE	O	100	15	7.52	0.55	1.47	6.1	0.0	0.0	NA	6.1	2.0	17.5	Super	10	Std-Grade	7.1	0.0	6.1
D2	11+20.33 RT. BATEMAN LANE	I1	100	15	7.52	0.55	0.69	2.9	-0.3	5.9	D5	8.5	1.2	22.2	5" Para.	12	Std-Grade	8.5	0.0	8.5
D3	11+19.81 LT. BATEMAN LANE	I1	100	15	7.52	0.55	0.55	2.3	0.3	5.9	D4	8.5	1.2	22.2	5" Para.	12	Std-Grade	8.5	0.0	8.5
D4	13+04.46 RT. BATEMAN LANE	I2/BB	100	15	7.52	0.55	2.99	12.4	0.3	0.0	NA	12.7	3.4	37.2	5" Para.	12	Std-Grade	6.8	5.9	6.8
D5	13+05.44 LT. BATEMAN LANE	I2/BB	100	15	7.52	0.55	3.15	13.0	-0.3	0.0	NA	12.7	3.4	37.2	5" Para.	12	Std-Grade	6.8	5.9	6.8
E1	1+50.50 LT KERR LANE	E	100	15	7.52	0.43	1.72	5.6	-0.5	0.0	E4	5.1	1.8	26.8	5" Para.	10	Std-Grade	6.6	0.0	5.1
E2	1+50.50 RT. KERR LANE	E	100	15	7.52	0.43	0.56	1.8	0.5	0.0	E3	2.3	1.8	26.8	5" Para.	10	Std-Grade	6.6	0.0	2.3
E3	11+69.67 RT. CARUTH LANE	F1	100	15	7.52	0.53	0.32	1.3	0.7	0.6	E5	2.6	0.5	14.4	5" Para.	8	Std-Grade	5.5	0.0	2.6
E4	11+69.67 LT. CARUTH LANE	F1	100	15	7.52	0.53	0.86	3.4	-0.7	0.6	E6	3.3	0.5	14.4	5" Para.	8	Std-Grade	5.5	0.0	3.3
E5	12+69.42 LT. CARUTH LANE	F2	100	15	7.52	0.53	0.99	3.9	-1.3	5.0	NA	7.6	3.1	35.8	5" Para.	12	Std-Grade	7.0	0.6	7.0
E6	12+78.87 RT. CARUTH LANE	F2	100	15	7.52	0.53	0.34	1.4	1.3	4.9	NA	7.6	3.1	35.8	5" Para.	12	Std-Grade	7.0	0.6	7.0
E7	13+98.87 RT. CARUTH LANE	F3/AA	100	15	7.52	0.50	2.23	8.4	3.5	0.0	NA	11.9	3.1	35.8	5" Para.	12	Std-Grade	7.0	4.9	7.0
E8	13+89.42 LT. CARUTH LANE	F3/AA	100	15	7.52	0.50	4.13	15.5	-3.5	0.0	NA	12.0	3.1	35.8	5" Para.	12	Std-Grade	7.0	5.0	7.0
F1	NA	CC	100	15	7.52	0.40	2.88	8.7	0.0	0.0	NA	8.7	NA	NA	NA	2'x2'	Y-Inlet	11.2	0.0	8.7
G1	NA	DD	100	15	7.52	0.40	9.56	28.8	0.0	0.0	NA	28.8	NA	NA	NA	5'x5'	Y-Inlet	28.0	0.8	28.0
H1	NA	N	100	15	7.52	0.40	1.34	4.0	0.0	0.0	NA	4.0	NA	NA	NA	2'x2'	Y-Inlet	11.2	0.0	4.0

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JONES & BOYD, INC.

BY: _____

DATE: 10/11/04

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	ADDED INLET E7 & E8	JRD	1/27/04

1/27/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

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FOR APPROVAL

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- Engineering
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- Landscape Architecture
- Surveying

INLET CALCULATIONS

PROJECT NO. WI401

HERITAGE, PHASE 2

City of Celina, Collin County, Texas

SHEET NO. 18

P-200402-02

Plot Info: Drawing: H:\projects\WI401\dwg\Phase 2\WI401DA-PH2.dwg Plotted by: JRD Plot date: 1/27/04 Plot time: 3:29 pm
Drawing Info: JRD H:\projects\WI401\dwg\Phase 2\WI401DA-PH2.dwg 1/27/04 1:50 pm

Uptream Station	Downstream Station	Pipe Length, L	Dr. Area	Area (Ac)	Runoff Coeff © *	Increm. CA	Accum. CA	Time @ upstream station	Design Storm (Yrs)	Intensity (in/hr)	Runoff (cfs)	Slope Hydraulic Gradient, S	Pipe D (in)	Velocity (fps)	"L" X "S"	Flow Time (min)	Time @ downstream station
Line "A"																	
1164.66	1161.41	3.25	LAT A22	2.35	0.43	1.01	1.01	15.00	100	7.52	7.6	0.0011	24	2.42	0.00	0.02	15.02
1161.41	982.04	179.37	LAT A23	2.35	0.43	1.01	2.02	15.02	100	7.52	15.2	0.0045	24	4.84	0.81	0.62	15.64
982.04	979.04	3.00		0.00	0.43	0.00	2.02	15.64	100	7.44	15.0	0.0013	30	3.06	0.00	0.02	15.66
979.04	969.67	9.37	LAT A21	1.30	0.43	0.56	2.58	15.66	100	7.44	19.2	0.0022	30	3.91	0.02	0.04	15.70
969.67	724.30	245.37	LAT A20	0.78	0.43	0.34	2.92	15.66	100	7.44	21.7	0.0028	30	4.42	0.68	0.93	16.58
724.30	611.44	112.86	LAT A24	2.06	0.43	0.89	3.80	15.70	100	7.44	28.3	0.0047	30	5.76	0.53	0.33	16.02
611.44	608.44	3.00		0.00	0.43	0.00	3.80	15.70	100	7.44	28.3	0.0018	36	4.00	0.01	0.01	15.71
608.44	607.39	1.05	LAT A19	0.80	0.50	0.40	4.20	15.71	100	7.44	31.2	0.0022	36	4.42	0.00	0.00	15.71
607.39	547.11	60.28	LAT A18	0.82	0.50	0.41	4.61	15.71	100	7.44	34.3	0.0026	36	4.85	0.16	0.21	15.92
547.11	544.11	3.00		0.00	0.55	0.00	4.61	15.92	100	7.41	34.2	0.0011	42	3.55	0.00	0.01	15.93
544.11	234.24	309.87	LINE B	6.10	0.55	3.36	7.97	15.93	100	7.41	59.0	0.0034	42	6.14	1.06	0.84	16.78
234.24	231.24	3.00		0.00	0.55	0.00	7.97	16.78	100	7.31	58.2	0.0023	45	5.27	0.01	0.01	16.79
231.24	100.00	131.24	LAT A16	3.55	0.55	1.95	9.92	16.79	100	7.31	72.5	0.0036	45	6.56	0.47	0.33	17.12
Lat "A16"																	
158.30	130.29	28.01	INLET A16	1.75	0.55	0.96	0.96	15.00	100	7.52	7.2	0.0047	18	4.10	0.13	0.11	15.11
130.29	127.29	3.00		0.00	0.55	0.00	0.96	15.11	100	7.51	7.2	0.0021	21	3.00	0.01	0.02	15.13
127.29	100.00	27.29	LAT A17	1.72	0.55	0.95	1.91	15.13	100	7.50	14.3	0.0081	21	5.95	0.22	0.08	15.21
Line "B"																	
465.59	444.33	21.26	LAT B4	1.90	0.55	1.05	1.05	15.00	100	7.52	7.9	0.0056	18	4.45	0.12	0.08	15.08
444.33	441.33	3.00		0.00	0.55	0.00	1.05	15.08	100	7.51	7.8	0.0024	21	3.26	0.01	0.02	15.10
441.33	147.68	293.65	LAT B3	1.93	0.55	1.06	2.11	15.10	100	7.51	15.8	0.0099	21	6.58	2.91	0.74	15.84
147.68	144.68	3.00		0.00	0.55	0.00	2.11	15.84	100	7.42	15.6	0.0048	24	4.98	0.01	0.01	15.85
144.68	100.00	44.68	LATS B1/B2	2.23	0.55	1.23	3.33	15.85	100	7.42	24.7	0.0119	24	7.87	0.53	0.09	15.94
Line "C"																	
440.03	137.39	302.64	LAT C2	1.02	0.55	0.56	0.56	15.00	100	7.52	4.2	0.0016	18	2.39	0.49	2.11	17.11
137.39	134.39	3.00		0.00	0.55	0.00	0.56	17.11	100	7.27	4.1	0.0007	21	1.70	0.00	0.03	17.14
134.39	100.00	34.39	LAT C1	2.32	0.55	1.28	1.84	17.14	100	7.27	13.3	0.0071	21	5.55	0.24	0.10	17.25
Lat "C2"																	
144.69	109.63	35.06	INLET C2	0.60	0.55	0.33	0.33	15.00	100	7.52	2.5	0.0006	18	1.40	0.02	0.42	15.42
109.63	100.00	9.63	LAT C3	0.42	0.55	0.23	0.56	15.42	100	7.47	4.2	0.0016	18	2.37	0.02	0.07	15.48
Lat "C3"																	
132.85	100.00	32.85	INLET C3	0.40	0.55	0.22	0.22	15.00	100	7.52	1.7	0.0002	18	0.94	0.01	0.58	15.58

Uptream Station	Downstream Station	Pipe Length, L	Dr. Area	Area (Ac)	Runoff Coeff © *	Increm. CA	Accum. CA	Time @ upstream station	Design Storm (Yrs)	Intensity (in/hr)	Runoff (cfs)	Slope Hydraulic Gradient, S	Pipe D (in)	Velocity (fps)	"L" X "S"	Flow Time (min)	Time @ downstream station
Line "D"																	
1868.10	1867.13	0.97	LAT D5	1.65	0.55	0.91	0.91	15.00	100	7.52	6.8	0.0042	18	3.86	0.00	0.00	15.00
1867.13	1769.32	97.81	LAT D4	1.65	0.55	0.91	1.82	15.00	100	7.52	13.6	0.0168	18	7.72	1.64	0.21	15.21
1769.32	1766.32	3.00		0.00	0.55	0.00	1.82	15.21	100	7.50	13.6	0.0004	36	1.92	0.00	0.03	15.24
1766.32	1691.39	74.93	LINE E	9.97	0.55	5.48	7.30	15.24	100	7.49	54.7	0.0067	36	7.74	0.50	0.16	15.40
1691.39	1676.75	14.64	LAT D3	2.10	0.55	1.16	8.45	15.40	100	7.47	63.2	0.0089	36	8.94	0.13	0.03	15.43
1676.75	1372.45	304.30	LAT D2	2.08	0.55	1.14	9.60	15.43	100	7.47	71.7	0.0115	36	10.14	3.50	0.50	15.93
1372.45	1369.45	3.00		0.00	0.55	0.00	9.60	15.93	100	7.41	71.1	0.0034	45	6.44	0.01	0.01	15.93
1369.45	1028.08	341.37	LINE F	7.40	0.55	4.07	13.67	15.93	100	7.41	101.3	0.0070	45	9.17	2.38	0.62	16.55
1028.08	1025.08	3.00		0.00	0.55	0.00	13.67	16.55	100	7.34	100.3	0.0048	48	7.98	0.01	0.01	16.56
1025.08	896.68	128.40	LINE G	9.48	0.55	5.21	18.88	16.56	100	7.34	138.5	0.0093	48	11.02	1.19	0.19	16.75
896.68	886.30	10.38	LAT D1	1.62	0.55	0.89	19.77	16.75	100	7.31	144.6	0.0101	48	11.51	0.10	0.02	16.77
Line "E"																	
595.23	585.77	9.46	LAT E5	1.69	0.55	0.93	0.93	15.00	100	7.52	7.0	0.0044	18	3.96	0.04	0.04	15.04
585.77	433.16	152.61	LAT E6	1.69	0.55	0.93	1.86	15.00	100	7.52	14.0	0.0176	18	7.91	2.69	0.32	15.32
433.16	430.16	3.00		0.00	0.55	0.00	1.86	15.32	100	7.48	13.9	0.0020	27	3.50	0.01	0.01	15.34
430.16	421.32	8.84	LAT E4	2.05	0.55	1.13	2.99	15.34	100	7.48	22.3	0.0052	27	5.62	0.05	0.03	15.36
421.32	146.63	274.69	LAT E3	2.15	0.55	1.18	4.17	15.36	100	7.48	31.2	0.0101	27	7.84	2.77	0.58	15.95
146.63	143.63	3.00		0.00	0.55	0.00	4.17	15.95	100	7.41	30.9	0.0056	30	6.29	0.02	0.01	15.95
143.63	100.00	43.63	LATS E1/E2	2.52	0.55	1.39	5.56	15.95	100	7.41	41.1	0.0100	30	8.38	0.44	0.09	16.04
Line "F"																	
154.89	144.89	10.00	INLET F3	2.88	0.30	0.86	0.86	15.00	100	7.52	6.5	0.0038	18	3.68	0.04	0.05	15.05
144.89	141.89	3.00	FUTURE	1.82	0.55	1.00	1.87	15.05	100	7.5'	14.0	0.0020	27	3.52	0.01	0.01	15.06
141.89	137.22	4.67	LAT F2 (FUT.)	1.95	0.55	1.07	2.94	15.06	100	7.51	22.1	0.0051	27	5.55	0.02	0.01	15.07
137.22	100.00	37.22	LAT F1 (FUT.)	1.96	0.55	1.08	4.02	15.06	100	7.51	30.2	0.0094	27	7.59	0.35	0.08	15.14
Lat "F1"																	
118.62	100.00	18.62	FUTURE	1.95	0.55	1.07	1.07	15.00	100	7.52	8.1	0.0059	18	4.56	0.11	0.07	15.07
Lat "F2"																	
117.53	100.00	17.53	FUTURE	1.95	0.55	1.07	1.07	15.00	100	7.52	8.1	0.0059	18	4.56	0.10	0.06	15.06
Line "G"																	
150.95	140.95	10.00	INLET G3	9.56	0.30	2.87	2.87	15.00	100	7.52	21.6	0.0419	18	12.20	0.42	0.01	15.01
140.95	137.95	3.00	FUTURE	1.36	0.55	0.75	3.62	15.01	100	7.52	27.2	0.0077	27	6.84	0.02	0.01	15.02
137.95	132.44	5.51	LAT G2 (FUT.)	1.34	0.55	0.74	4.35	15.02	100	7.52	32.7	0.0111	27	8.23	0.06	0.01	15.03
132.44	100.00	32.44	LAT G1 (FUT.)	1.32	0.55	0.73	5.08	15.03	100	7.52	38.2	0.0151	27	9.60	0.49	0.06	15.09
Lat "G1"																	
118.91	100.00	18.91	FUTURE	1.33	0.55	0.73	0.73	15.00	100	7.52	5.5	0.0027	18	3.11	0.05	0.10	15.10
Lat "G2"																	
117.53	100.00	17.53	FUTURE	1.33	0.55	0.73	0.73	15.00	100	7.52	5.5	0.0027	18	3.11	0.05	0.09	15.09

RECORD DOCUMENTS

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JONES & BOYD, INC.
BY: _____
DATE: 10/11/04

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Jeffery M. Winkler, P.E. 90358. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.
FOR REVIEW

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

STORM CALCULATIONS

PROJECT NO. W1401

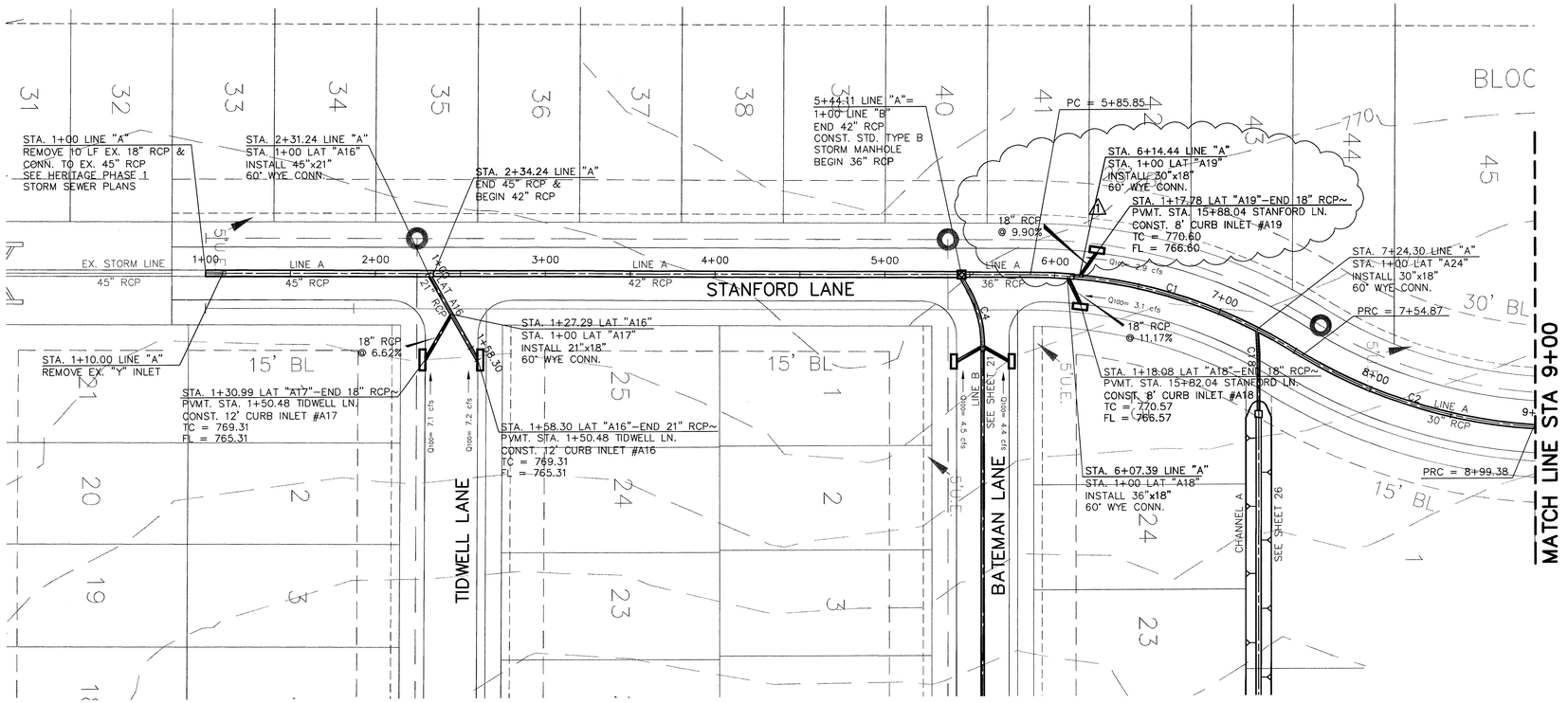
HERITAGE, PHASE 2

City of Celina, Collin County, Texas

SHEET NO. 19

P-200402-02

Plot info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401DA-PH2.dwg Plotted by: JRD Plot date: 9/24/03 Plot time: 11:39 pm
Drawing Info: JRD H:\Projects\W1401\dwg\Phase 2\W1401DA-PH2.dwg 9/24/03 10:59 pm



CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHD. BEARING	CHORD
C1	169.03'	295.00'	32°49'44"	86.90'	S16°38'19"W	166.72'
C2	144.50'	305.00'	27°08'45"	73.63'	N17°37'20"E	143.16'
C3	97.59'	65.00'	86°01'25"	60.64'	S47°03'40"W	88.68'
C4	33.74'	65.00'	29°44'19"	17.26'	S75°12'13"W	33.36'
C5	45.66'	65.00'	40°14'46"	23.82'	S11°36'31"W	44.72'
C6	46.38'	300.00'	8°51'31"	23.24'	N27°18'08"E	46.34'
C8	149.81'	300.00'	28°36'45"	76.50'	N37°10'45"E	148.26'
C9	25.17'	65.00'	22°11'26"	12.75'	N77°47'55"W	25.02'
C10	5.35'	300.00'	1°01'18"	2.68'	S67°12'51"E	5.35'
C11	27.04'	65.00'	23°50'15"	13.72'	N85°12'02"W	26.85'
C12	5.65'	300.00'	1°04'45"	2.83'	S73°49'17"E	5.65'
C13	113.41'	285.00'	22°48'01"	57.47'	N11°28'22"E	112.67'
C14	102.10'	65.00'	90°00'00"	65.00'	S45°04'22"W	91.92'
C15	34.03'	65.00'	30°00'00"	17.42'	N15°04'22"E	33.65'
C16	102.10'	65.00'	90°00'00"	65.00'	S45°04'22"W	91.92'
C17	33.59'	1250.00'	1°32'22"	16.79'	N89°18'11"E	33.58'
C18	3.69'	65.00'	3°15'00"	1.84'	S88°26'52"W	3.69'

RECORD DOCUMENTS

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JONES & BOYD, INC.
BY:
DATE: 6/11/04

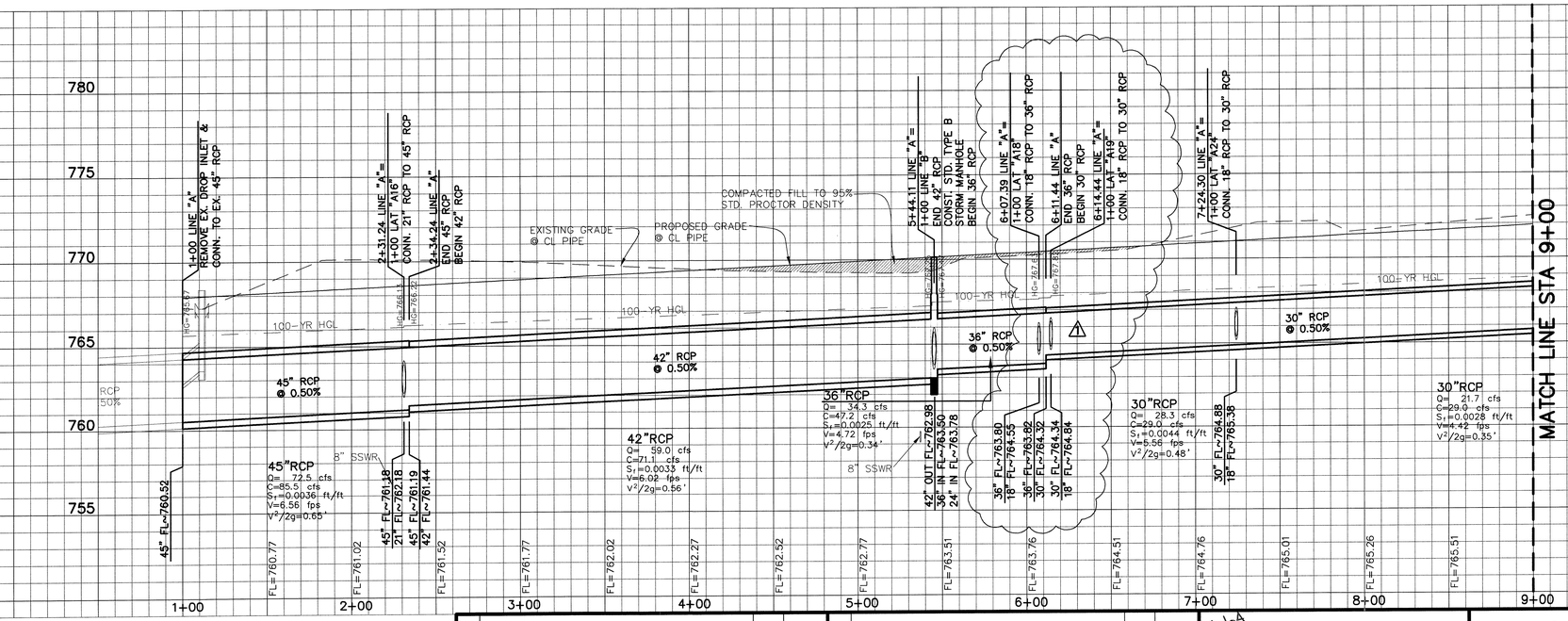
NORTH

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

STORM LINE "A"



BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE
1	Moved inlet and lateral #A19	JRD	4/06/04

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Add Type B Manhole	SJS	1/27/04

4/8/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED PROFESSIONAL ENGINEER

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FOR CONSTRUCTION

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

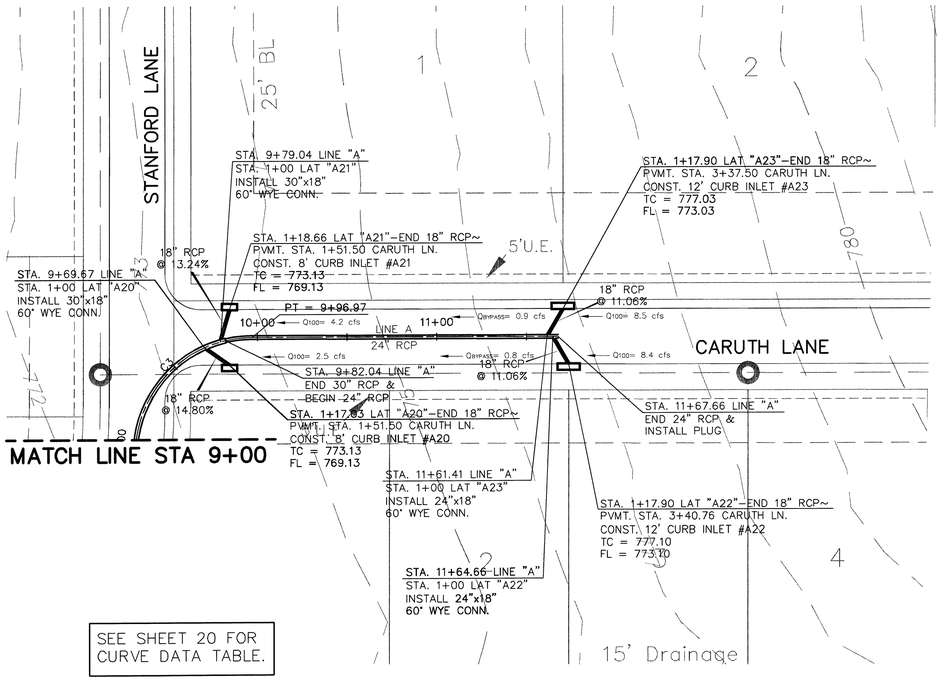
- Engineering
- Planning
- Landscape Architecture
- Surveying

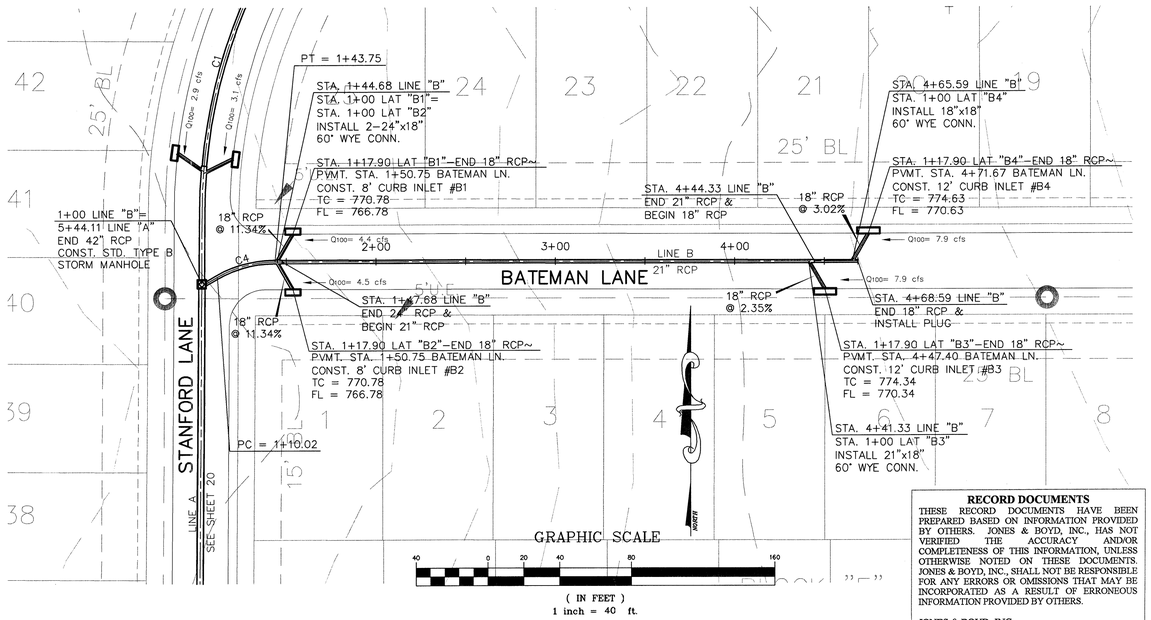
STORM SEWER PLAN & PROFILE
LINE "A" (STA 1+00–9+00)
HERITAGE, PHASE 2
City of Celina, Collin County, Texas

PROJECT NO. W1401
SHEET NO. 20

Plot info: Drawing: H:\projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg Plotted by: JRD Plot date: 4/6/04 Plot time: 5:04 pm
Drawing info: JRD H:\projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg 4/6/04 5:04 pm

P-200402-02





RECORD DOCUMENTS

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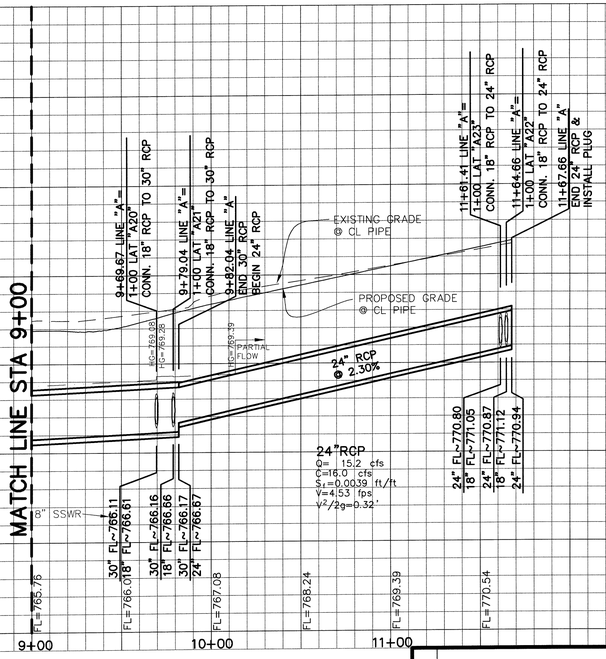
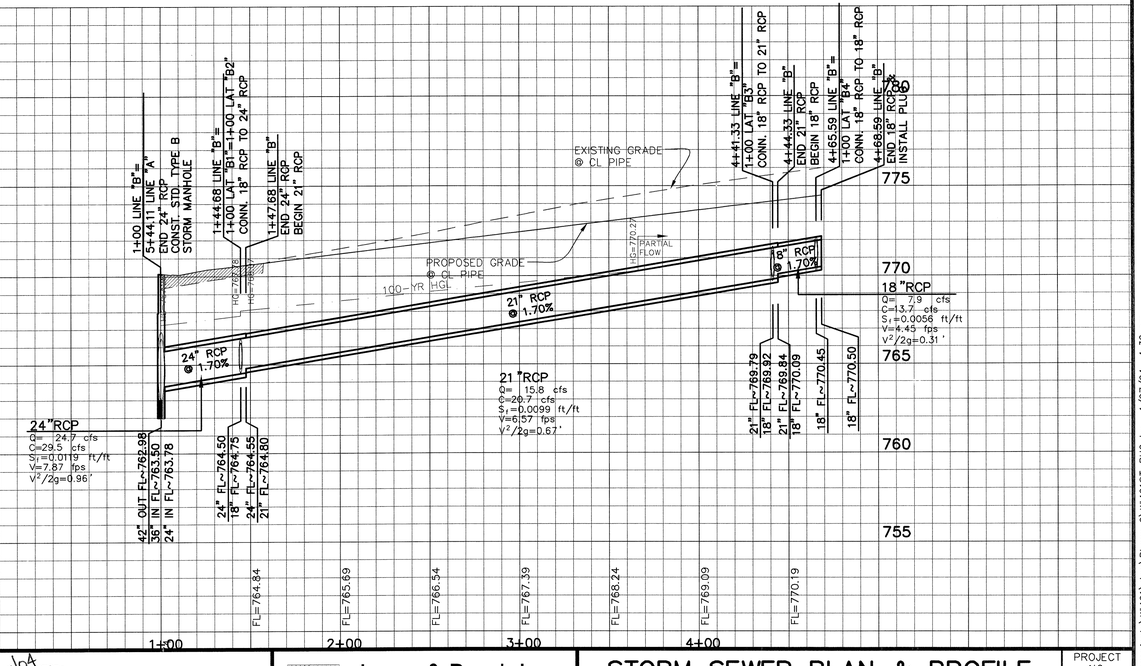
JONES & BOYD, INC.
BY: _____
DATE: 10/11/04

STORM LINE "A"



STORM LINE "B"



BENCHMARKS:

1. "D" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "D" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE
1	Add Type B Manhole	SJS	1/27/04

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

12/6/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED PROFESSIONAL ENGINEER

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FOR APPROVAL

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

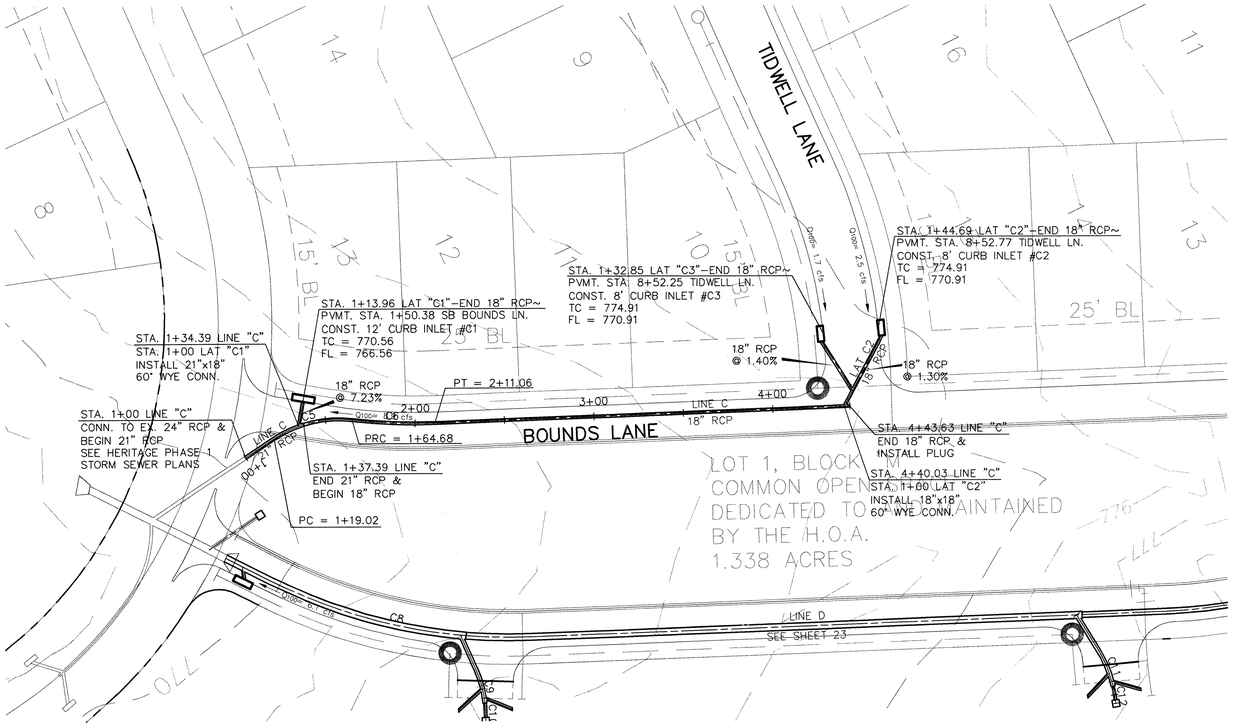
- Engineering
- Planning
- Landscape Architecture
- Surveying

STORM SEWER PLAN & PROFILE
LINE "A" (STA 9+00 TO END) & LINE "B"
HERITAGE, PHASE 2
City of Celina, Collin County, Texas

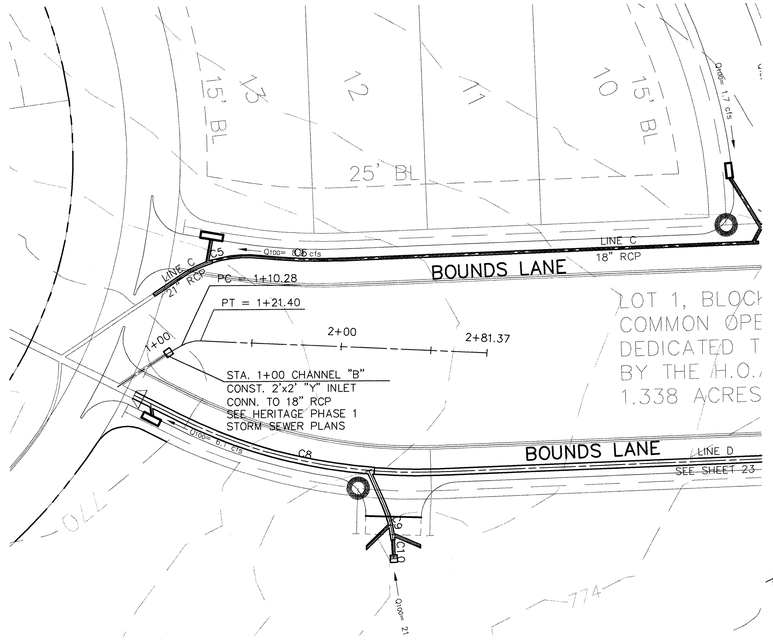
PROJECT NO. W1401
SHEET NO. 21

P-200402-02

Plot Info: Drawing Info: J:\RD H:\projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg 1/27/04 4:30 pm Plotted by: JRD Plot date: 1/27/04 Plot time: 4:34 pm



STORM LINE "C"



CHANNEL "B"

RECORD DOCUMENTS

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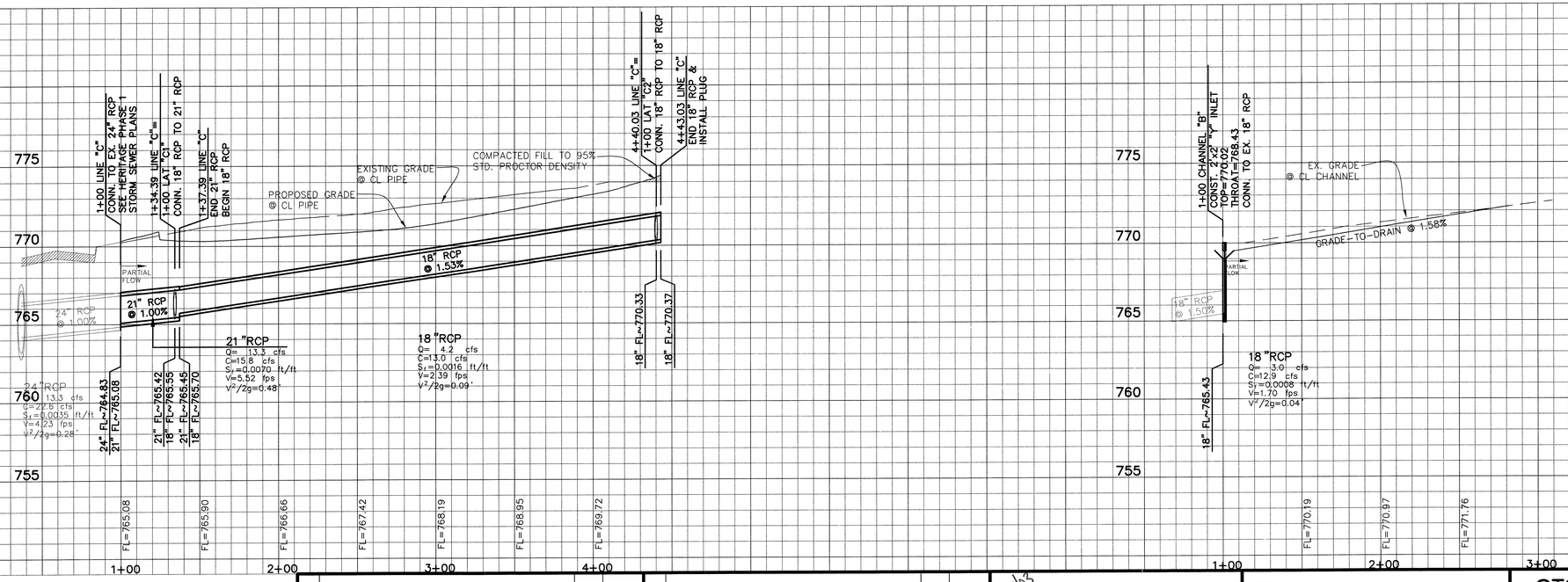
JONES & BOYD, INC.
BY: _____
DATE: 10/11/04

SEE SHEET 20 FOR CURVE DATA TABLE.

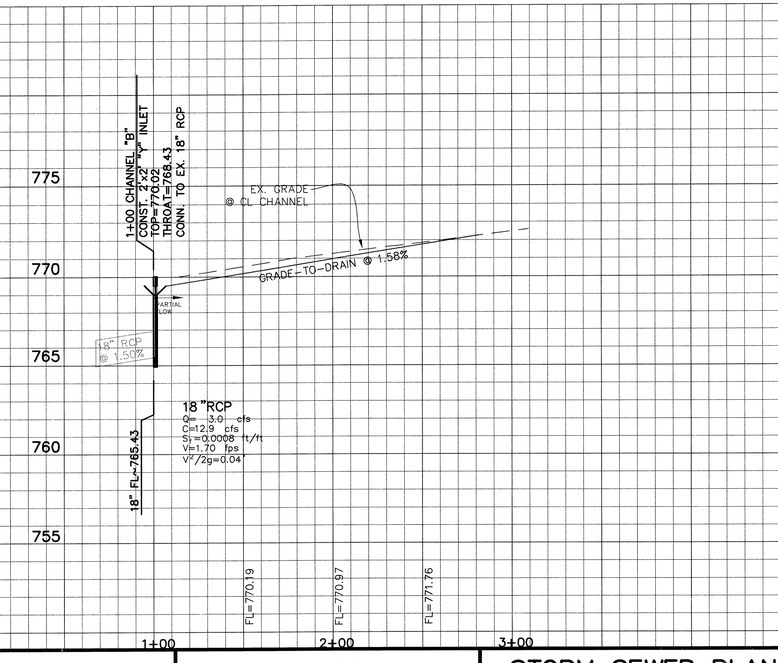
GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.



STORM LINE "C"



CHANNEL "B"

BENCHMARKS:

1. "C" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "D" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE	NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

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FOR REVIEW

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

STORM SEWER PLAN & PROFILE

LINE "C' @ CHANNEL "B"

HERITAGE, PHASE 2

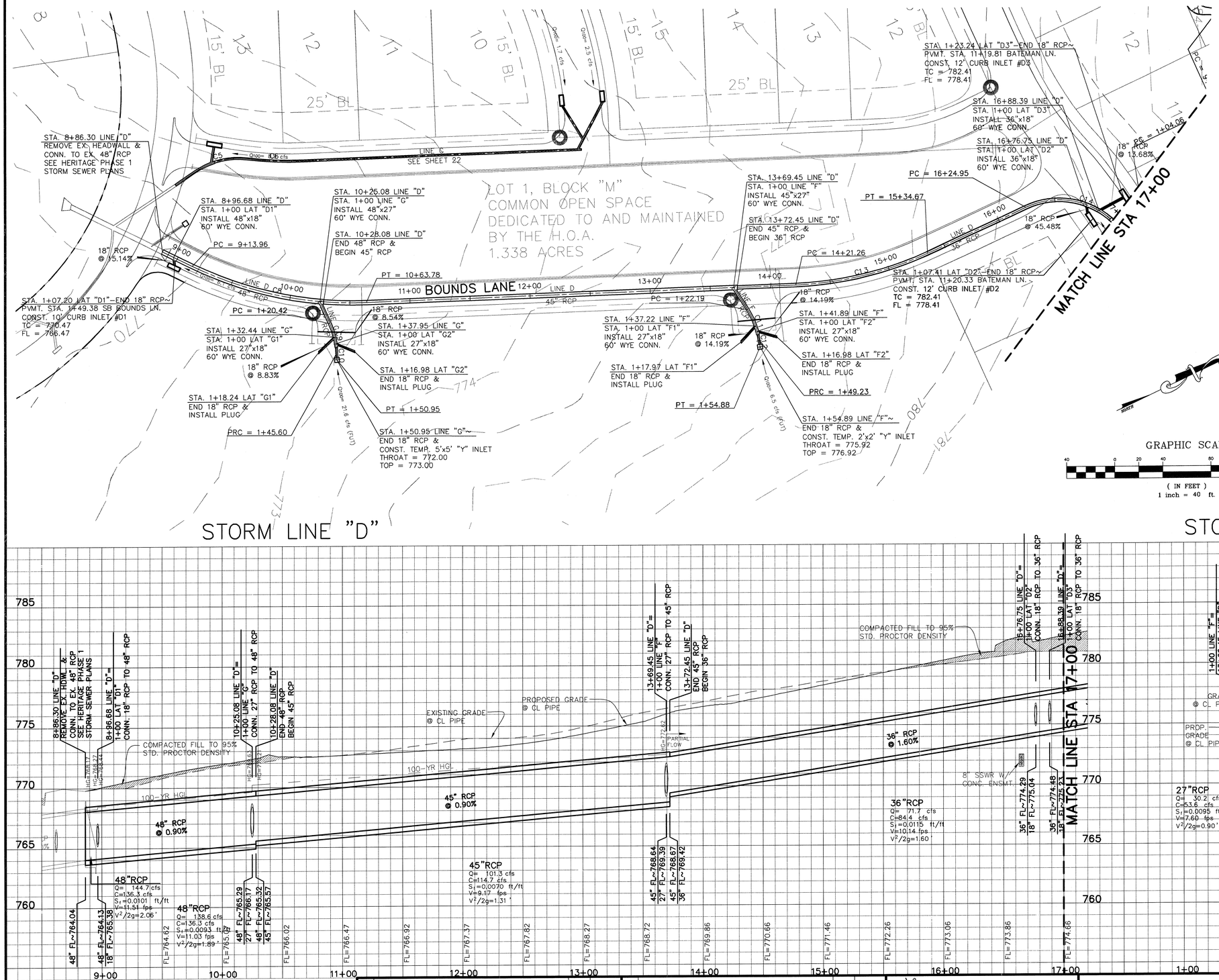
City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 22

P-200402-02

Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg Drawing Info: JRD Plotted by: JRD Plot date: 9/24/03 Plot time: 11:29 pm



SEE SHEET 20 FOR CURVE DATA TABLE.

RECORD DOCUMENTS

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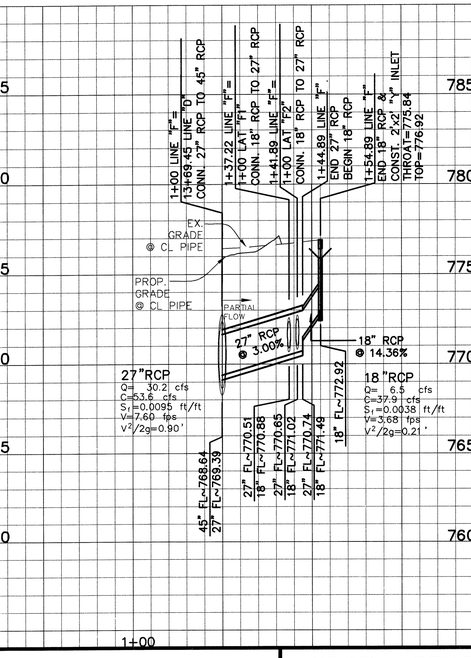
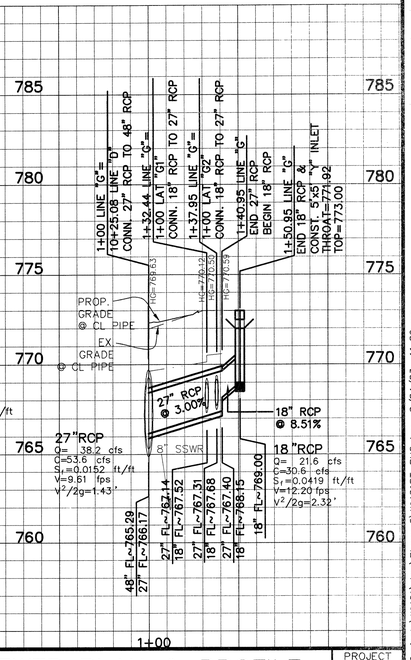
JONES & BOYD, INC.
BY: _____
DATE: 10/11/04

STORM LINE "D"

STORM LINE "F"



STORM LINE "G"



BENCHMARKS:

1. "D" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "D" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE	NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER
9/25/03

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FOR REVIEW

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

STORM SEWER PLAN & PROFILE

LINE "D" (STA 8+86.30 TO 17+00), "F", & "G"

HERITAGE, PHASE 2

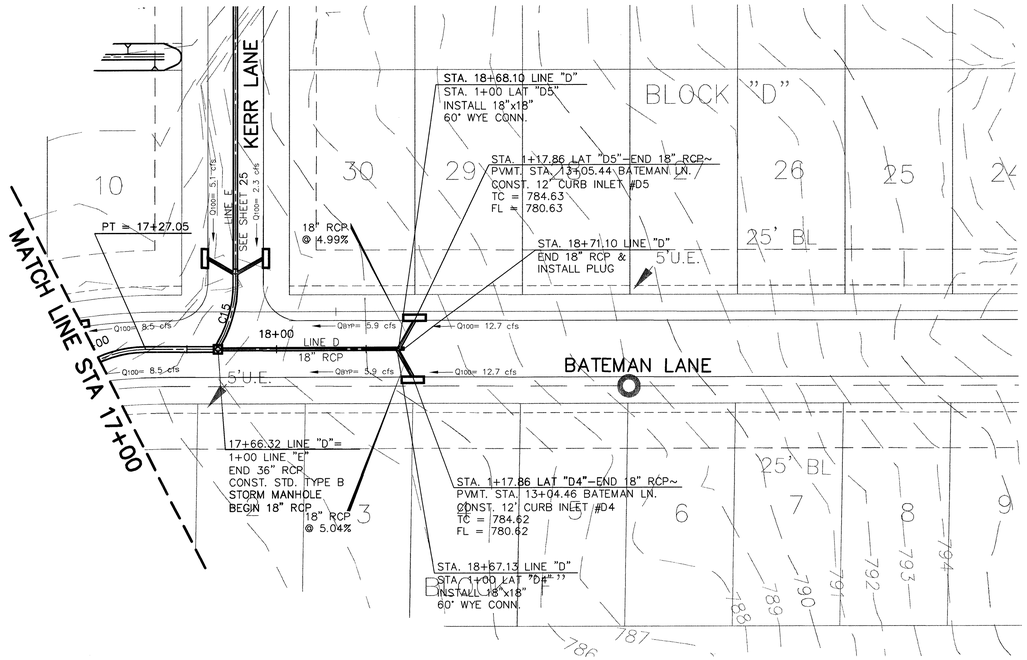
City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 23

P-200402-02

Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg Plotted by: JRD Plot date: 9/24/03 Plot time: 11:37 pm
Plot Info: JRD H:\Projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg 9/24/03 11:29 pm



SEE SHEET 20 FOR CURVE DATA TABLE.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

RECORD DOCUMENTS

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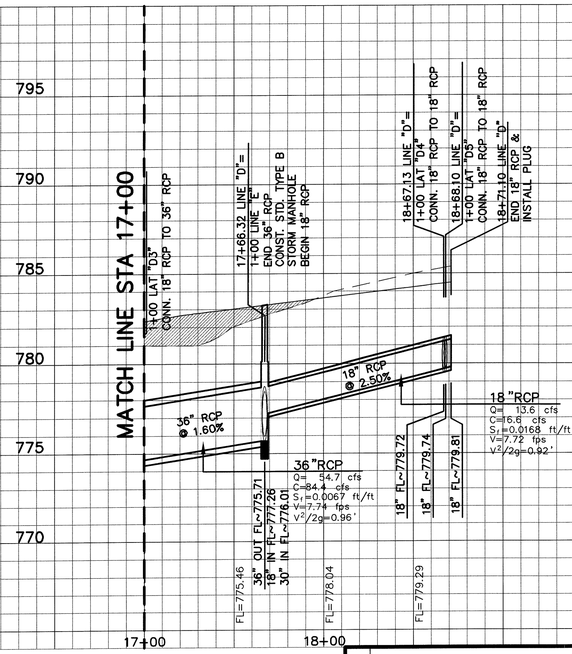
JONES & BOYD, INC.
BY: _____
DATE: 1/27/04

STORM LINE "D"



BENCHMARKS:

1. "D" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "D" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Add Type B Manhole	SJS	1/27/04

1/27/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED PROFESSIONAL ENGINEER

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FOR APPROVAL

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

STORM SEWER PLAN & PROFILE

LINE "D" (STA. 17+00 TO END)

HERITAGE, PHASE 2

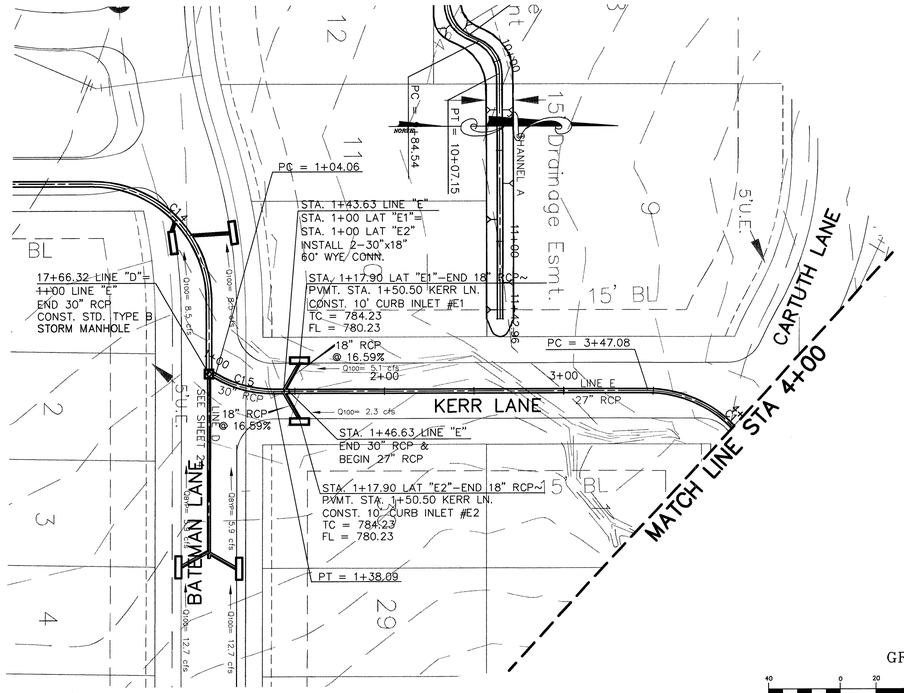
City of Celina, Collin County, Texas

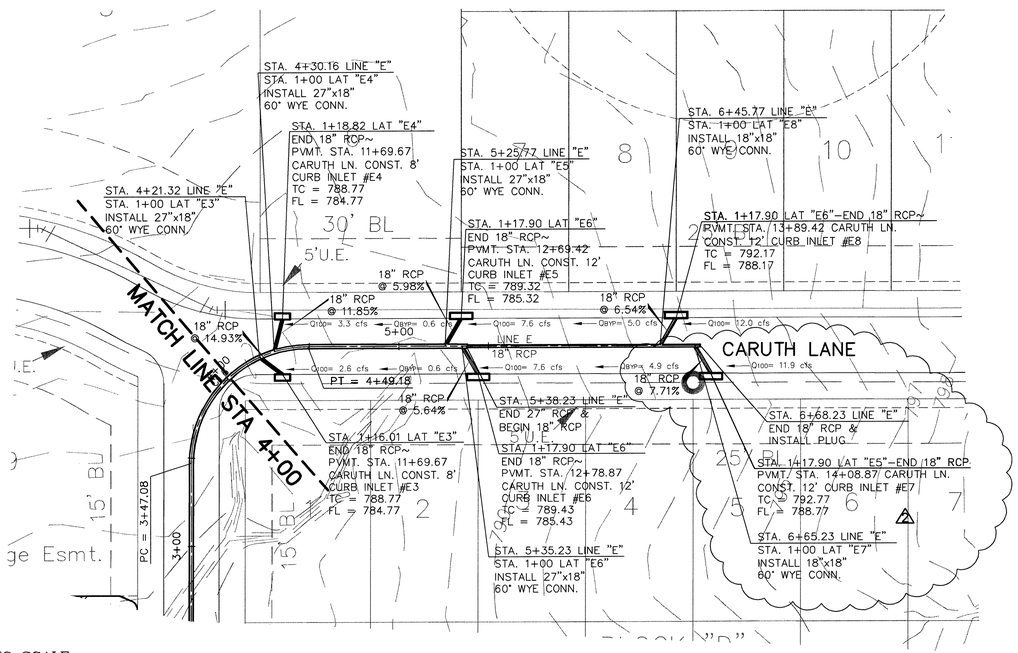
PROJECT NO. W1401

SHEET NO. 24

P-200402-02

Plot Info: Drawing: H:\projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg Plotted by: JRD Plot date: 1/27/04 Plot time: 4:37 pm
Drawing Info: JRD H:\projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg 1/27/04 4:30 pm





GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

SEE SHEET 20 FOR CURVE DATA TABLE.

RECORD DOCUMENTS

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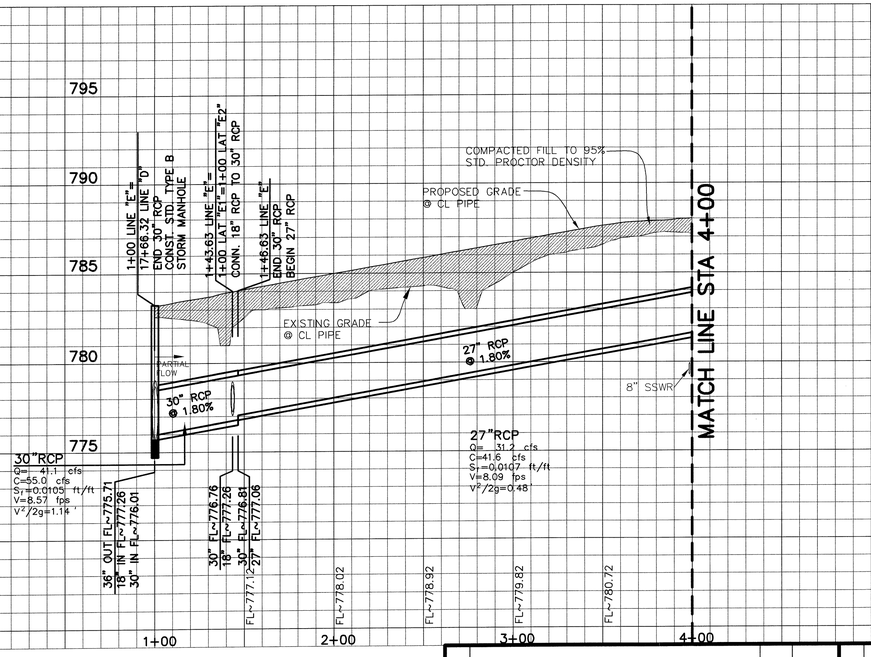
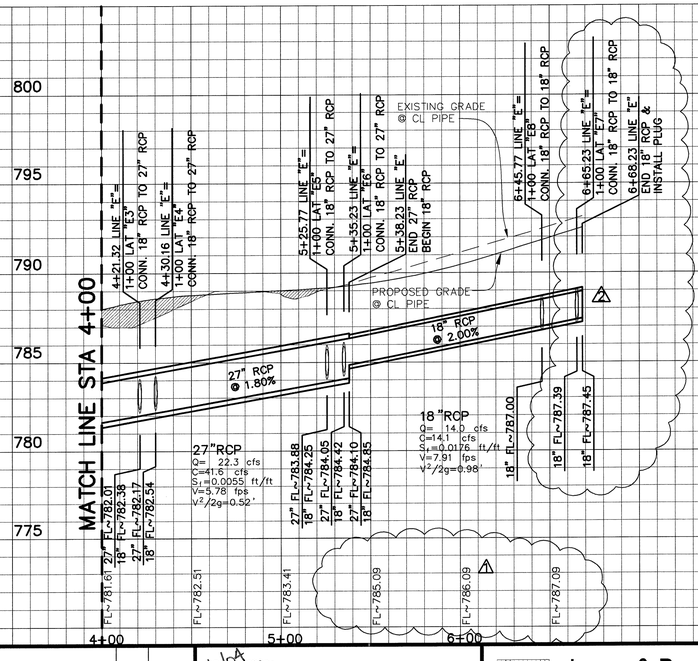
JONES & BOYD, INC.
BY:
DATE: 10/11/04

STORM LINE "E"





BENCHMARKS:

1. "D" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "D" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE
2	Moved inlet and lateral #E7	JRD	4/6/04
1	Revised Line "E" FL's (STA. 5+38.23 to 6+58.23)	JRD	3/1/04

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
2	Add Type B Manhole	SJS	1/27/04
1	Extended Line "E"	JRD	1/27/04

4/8/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER
FOR CONSTRUCTION

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Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
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Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

STORM SEWER PLAN & PROFILE
LINE "E"
HERITAGE, PHASE 2
City of Celina, Collin County, Texas

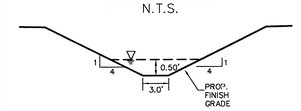
PROJECT NO. W1401
SHEET NO. 25

P-200402-02

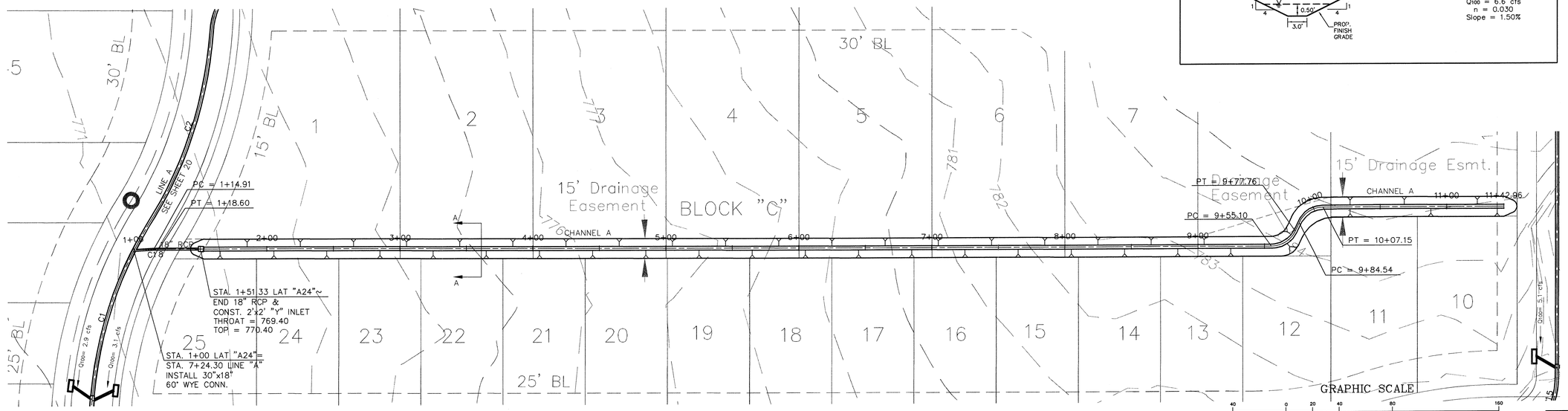
Plot Info: Drawing: H:\projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg Plotted by: JRD Plot date: 4/6/04 Plot time: 5:04 pm
Drawing Info: JRD H:\projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg 4/6/04 5:04 pm

STORM CHANNEL "A" SECTION

SECTION A–A
N.T.S.

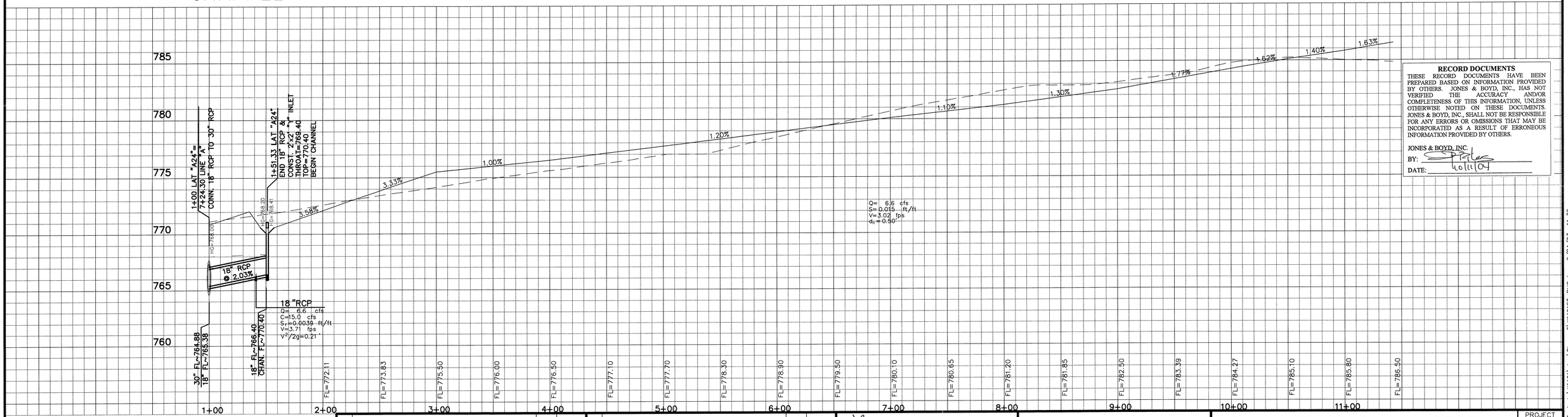


Ditch Drainage Information
Depth of Flow = 0.50 ft.
Channel Velocity = 3.02 fps
Q_{100} = 6.6 cfs
n = 0.030
Slope = 1.50%



SEE SHEET 20 FOR CURVE DATA TABLE.

CHANNEL "A"



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JONES & BOYD, INC.
BY: _____
DATE: 10/11/04

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED PROFESSIONAL ENGINEER

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FOR REVIEW

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

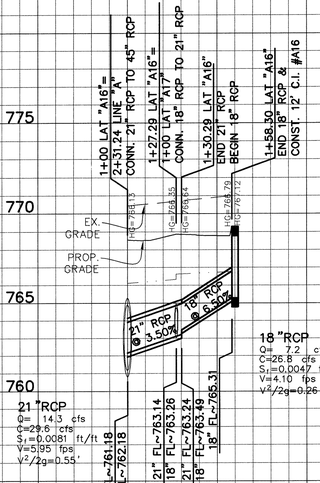
STORM SEWER PLAN & PROFILE
LAT "A24" & CHANNEL "A"
HERITAGE, PHASE 2
City of Celina, Collin County, Texas

PROJECT NO. W1401
SHEET NO. 26

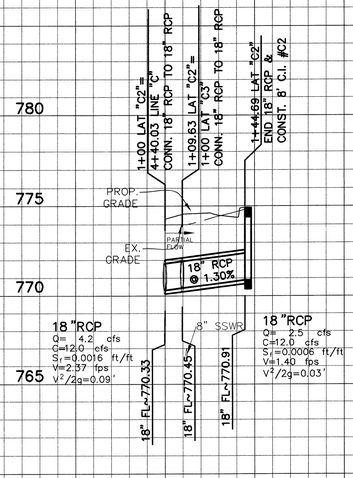
P-200402-02

Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg 9/24/03 11:38 pm Plotted by: cjb Plot date: 9/25/03 Plot time: 9:12 am
Drawing Info: JRD H:\Projects\W1401\dwg\Phase 2\W1401ST-PH2.dwg 9/24/03 11:38 pm

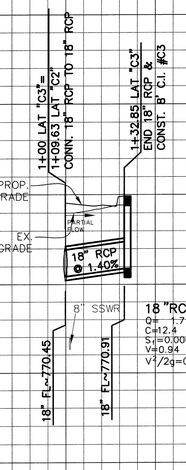
LATERAL "A16"



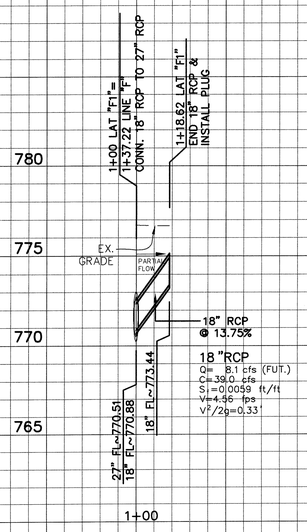
LATERAL "C2"



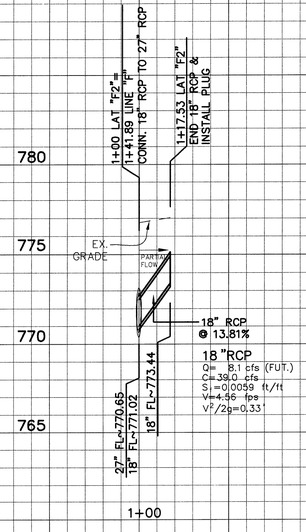
LATERAL "C3"



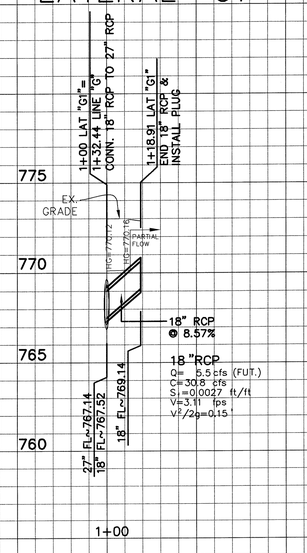
LATERAL "F1"



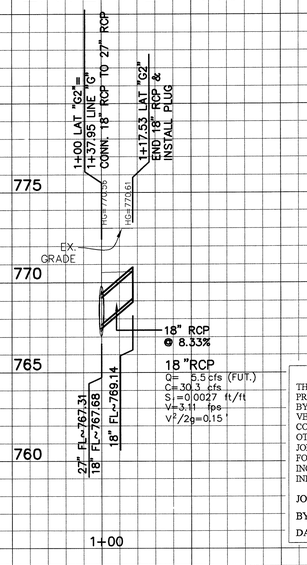
LATERAL "F2"



LATERAL "G1"



LATERAL "G2"



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JONES & BOYD, INC.
BY:
DATE: 10/11/04

0 20 40 80
(IN FEET)
1 inch = 40 ft. Horiz.
1 inch = 4 ft. Vert.

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

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FOR REVIEW

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

STORM SEWER PROFILES

LATERALS A16, C2, C3, F1, F2, G1, & G2

HERITAGE, PHASE 2

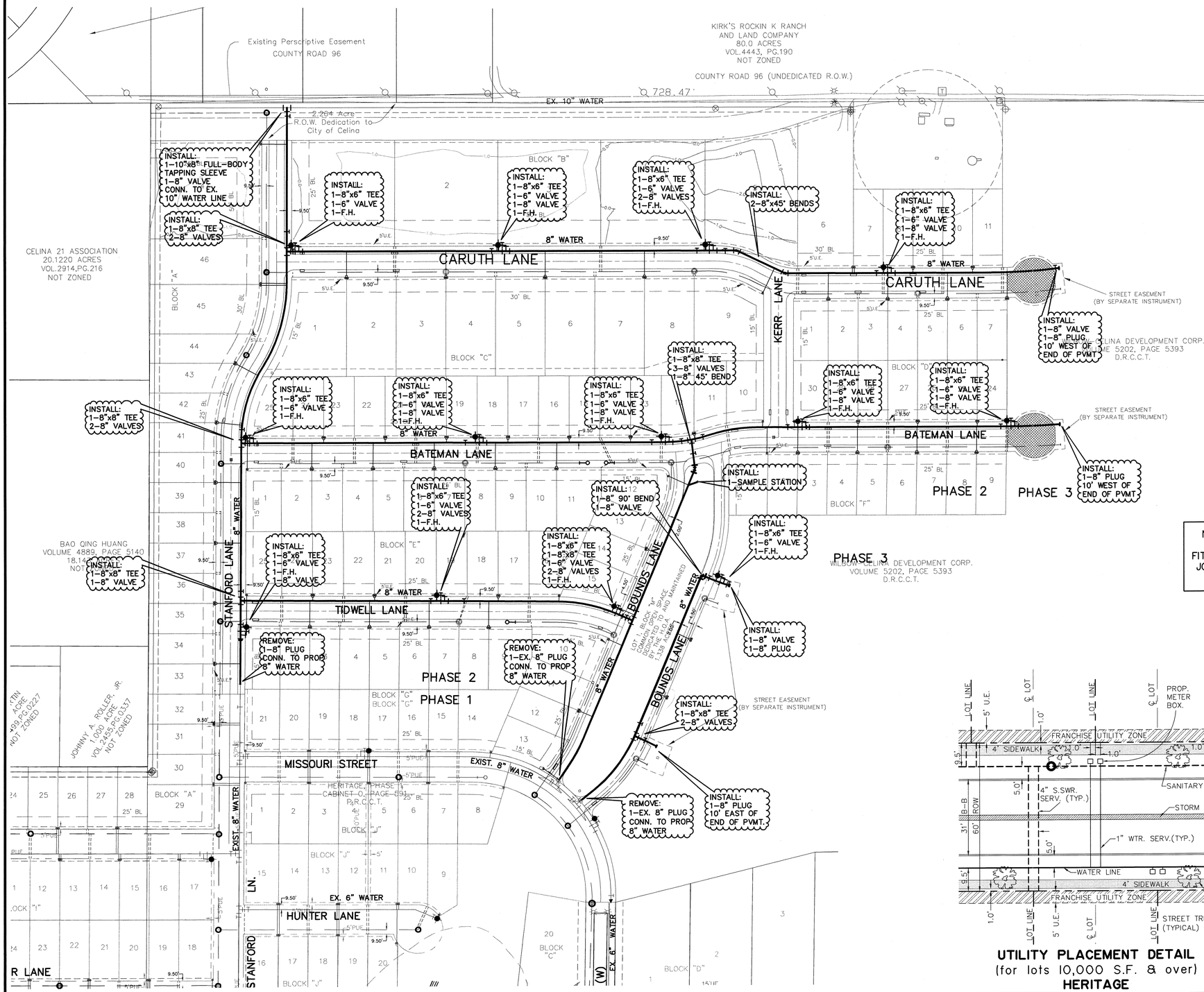
City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 27

P-200402-02

Plot Info: Drawing: H:\Projects\W1401\Dwg\Phase 2\W1401ST-PH2.dwg Plotted by: JRD Plot date: 9/24/03 Plot time: 11:34 pm
Drawing Info: JRD H:\Projects\W1401\Dwg\Phase 2\W1401ST-PH2.dwg 9/24/03 11:29 pm



SCHEDULE OF WATER SERVICES

23 PROP. 1" SERVICE	LOTS 45–47 BLK A LOTS 1–7 BLK B LOTS 9, 10 & 25 BLK C LOT 30 BLK D LOTS 1,12,15,16 & 25 BLK E LOT 1 BLK F LOTS 1,10 & 13 BLK G
47 PROP. 1" SERVICE w/ ¾" BULLHEAD CONNECTION per CITY STANDARDS.	LOTS 33–44 BLK A LOTS 8–11 BLK B LOTS 1–8 & 11–24 BLK C LOTS 1–8 & 24–29 BLK D LOTS 2–11,13,14,17–24 BLK E LOTS 2–9 BLK F LOTS 2–9,11 & 12 BLK G LOTS 1–4 BLK H (future lots)

N

100 0 50 100 200
(IN FEET)
1 inch = 100 ft.

CAUTION!!!!
EXISTING UNDERGROUND UTILITIES.
CONTRACTOR TO FIELD VERIFY
LOCATION PRIOR TO CONSTRUCTION.

RECORD DOCUMENTS
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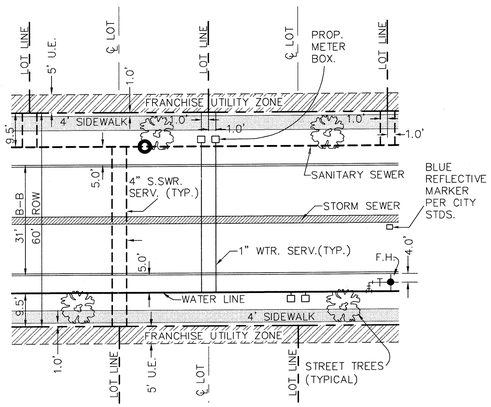
JONES & BOYD, INC.
BY: _____
DATE: 10/11/04

NOTE: ALL FIRE HYDRANTS SHALL BE CLOW AND ALL FITTING SHALL BE MECHANICAL JOINTS AND RESTRAINED PER CITY STANDARDS.

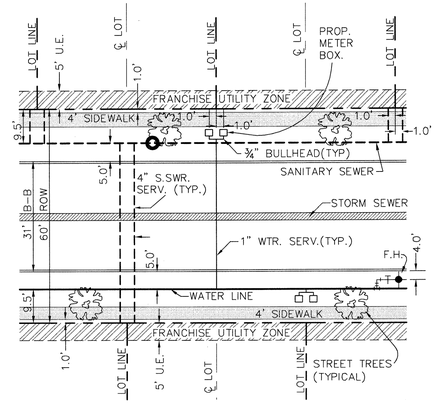
NOTE:
EMBEDMENT FOR WATER LINES SHALL BE CLASS "B+".

LEGEND

- FH — Exist. Fire Hydrant
- WTR MH — Exist. Water Manhole
- Exist. Sanitary Sewer Manhole
- Exist. Storm Sewer
- WV — Exist. Water Valve
- PP — Exist. Utility pole
- TEL PED — Exist. Telephone Pedestal
- Prop. Sanitary Sewer Main & Flow Direction
- Prop. Sanitary Sewer Manhole
- Prop. Sanitary Sewer Cleanout
- Prop. Storm Sewer
- Prop. Fire Hydrant
- Prop. Water Meter
- Prop. Irrigation Meter
- Prop. Water Line & Valve



UTILITY PLACEMENT DETAIL
(for lots 10,000 S.F. & over)
HERITAGE
SCALE: 1"=20'



UTILITY PLACEMENT DETAIL
(for lots less than 10,000 S.F.)
HERITAGE
SCALE: 1"=20'

BENCHMARKS:

1. "D" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "D" Cut on top centerline headwall on Northeast corner Missouri Eest and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE
1	RECORD DRAWINGS: CHANGED WATER SERVICES	CMR	10/7/04
	BLOCK C, NOTE REVISION, SAMPLE STATION		

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
3	Added Fire hydrant note	CJB	2/23/04
2	Changed Water services to Bullhead connections	CJB	2/23/04
1	Added 10"x8" tapping sleeve & valve to north conn.	SJS	1/27/04

STATE OF TEXAS
JEFFREY P. MILES
80253
LICENSED
PROFESSIONAL ENGINEER

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10/11/04 RELEASED FOR DRAWING

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414
• Engineering • Planning • Landscape Architecture • Surveying

WATER PLAN

HERITAGE, PHASE 2

City of Celina, Collin County, Texas

PROJECT NO. W1401
SHEET NO. 28A

P-200402-02

Drawing Info: cmr H:\Projects\W401\dwg\Phase 2\W401WTR-P2.dwg 1=40 10/11/2004 9:42 am Plot Info: Drawing: H:\Projects\W401\dwg\Phase 2\W401WTR-P2.dwg Plotted by: cmr Plot date: 10/11/2004 Plot time: 9:42 am

DOC.# 95-0032612
ZONED: R1-L

Existing Perscriptive Easement
COUNTY ROAD 96

KIRK'S ROCKIN K RANCH
AND LAND COMPANY
80.0 ACRES
VOL.4443, PG.190
NOT ZONED

COUNTY ROAD 96 (UNDEDICATED R.O.W.)

CELINA 21 ASSOCIATION
20.1220 ACRES
VOL.2914,PG.215
NOT ZONED

2.204 ACRE R.O.W. Dedication to City of Celina

TANK

WILBOW-CELINA DEVELOPMENT CORP.
VOLUME 5202, PAGE 5393
D.R.C.C.T.

WILBOW-CELINA DEVELOPMENT CORP.
VOLUME 5202, PAGE 5393
D.R.C.C.T.

BLOCK "B"
BLOCK "C"
BLOCK "D"
BLOCK "F"
BLOCK "G"

CARUTH LANE
KERR LANE
BATEMAN LANE
TIDWELL LANE
STANFORD LANE
BOUNDS LANE

PHASE 1
PHASE 2
PHASE 3

26+08.84 LN "E" STUB @ 0.33% END & PLUG

23+75.88 LN "E"= EXIST. 4' DIA. M.H. (By others)

1+00.00 LN "P"= 20+60.38 LN "E" CONN. TO EX. 4' DIA. MH.

PT = 20+41.53

18+87.48 LN "E" EXIST. 4' DIA. M.H. (By others)

PRC = 18+87.48

4+61.26 LN "P" CONST. STD 4' DIA. MH.

9+61.30 LN "P" CONST. STD 4' DIA. MH.

8+37.04 LN "L" CONST. S.S. CO.

7+22.30 LN "L"= 1+00.00 LN. "S" CONST. STD 4' DIA. MH.

5+91.79 LN "O" CONST. STD 4' DIA. MH.

8+22.30 LN "O" CONST. S.S. CO.

PC = 1+17+08.08

1+00.00 LN "O" 16+58.12 LN "E" CONN. TO EX. 4' DIA. MH.

1+00.00 LN "M" 13+45.51 LN "E"= CONN. TO EX. 4' DIA. MH.

5+80.63 LN "M" CONST. STD 4' DIA. MH.

3+02.29 LN "N" CONST. S.S. CO.

14+18.90 LN "P" CONST. STD 4' DIA. MH.

17+06.96 LN "P" END & PLUG 8" 10' FROM END OF PVMT. @ 0.50%

5+38.36 LN "S" CONST. STD. 4' DIA. M.H.

8+87.62 LN "S" END & PLUG 8" 10' FROM END OF PVMT. @ 0.50%

1+10.00 LN "T" 10 L.F. STUBOUT (E) @ 0.50% END & PLUG

1+00.00 LN "N"= 3+58.35 LN. "L" CONST. STD 4' DIA. MH.

5+41.30 LN "K"= 1+00.00 LN. "T" CONST. STD 4' DIA. MH.

1+10.00 LN "U" 10 L.F. STUBOUT @ 0.50% END & PLUG

1+93.42 LN "K"= 1+00.00 LN. "U" CONST. STD 4' DIA. MH.

0+55.00 LN "L" REMOVE PLUG & CONN. TO EX. STUB OUT @ 0.50%

PT 3+61.60 LN "J"= 0+00 LN "L" EXIST. 4' DIA. MH.

0+55.00 LN "K" REMOVE PLUG & CONN. TO EX. STUB OUT @ 0.50%

2+69.46 LN "J"= 0+00 LN "K" EXIST. 4' DIA. MH.

Δ=32°34'19" R=315.66' L=179.39' T=92.19'
Δ=29°07'44" R=190.33' L=96.76' T=49.45'
Δ=16°05'42" R=320.70' L=90.09' T=45.34'
Δ=22°52'23" R=200.00' L=79.84' T=40.46'
Δ=18°07'11" R=279.50' L=88.39' T=44.57'
Δ=8°39'56" R=1125.17' L=170.18' T=85.25'
Δ=8°48'03" R=1580.50' L=242.77' T=121.62'
Δ=22°30'33" R=279.50' L=109.80' T=55.62'
Δ=11°19'54" R=295.10' L=58.36' T=29.28'
Δ=7°57'21" R=324.14' L=45.01' T=22.54'
Δ=20°39'24" R=305.29' L=110.07' T=55.64'
Δ=60°13'43" R=248.86' L=261.60' T=144.34' CB=N27°32'25"W CH=249.72'

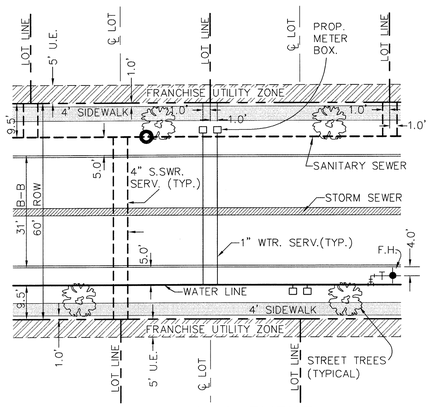
NOTE:
EMBEDMENT FOR SANITARY SEWER LINES SHALL BE CLASS "H"

(IN FEET)
1 inch = 100 ft.

CAUTION!!!!
EXISTING UNDERGROUND UTILITIES.
CONTRACTOR TO FIELD VERIFY
LOCATION PRIOR TO CONSTRUCTION.

UTILITY PLACEMENT HERITAGE

SCALE: 1"=20'



LEGEND

- FH — Exist. Fire Hydrant
- WTR MH — Exist. Water Manhole
- Exist. Sanitary Sewer Manhole
- Exist. Storm Sewer
- WV — Exist. Water Valve
- PP — Exist. Utility pole
- TEL PED — Exist. Telephone Pedestal
- Prop. Sanitary Sewer Main & Flow Direction
- Prop. Sanitary Sewer Manhole
- Prop. Sanitary Sewer Cleanout
- Prop. Storm Sewer
- Prop. Fire Hydrant
- Prop. Water Meter
- Prop. Irrigation Meter
- Prop. Water Line & Valve

RECORD DOCUMENTS

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JONES & BOYD, INC.
BY:
DATE: 10/11/04

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Moved Line M MH to lot line	SJS	1/27/04

STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED PROFESSIONAL ENGINEER

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FOR APPROVAL

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

SANITARY SEWER PLAN

HERITAGE, PHASE 2

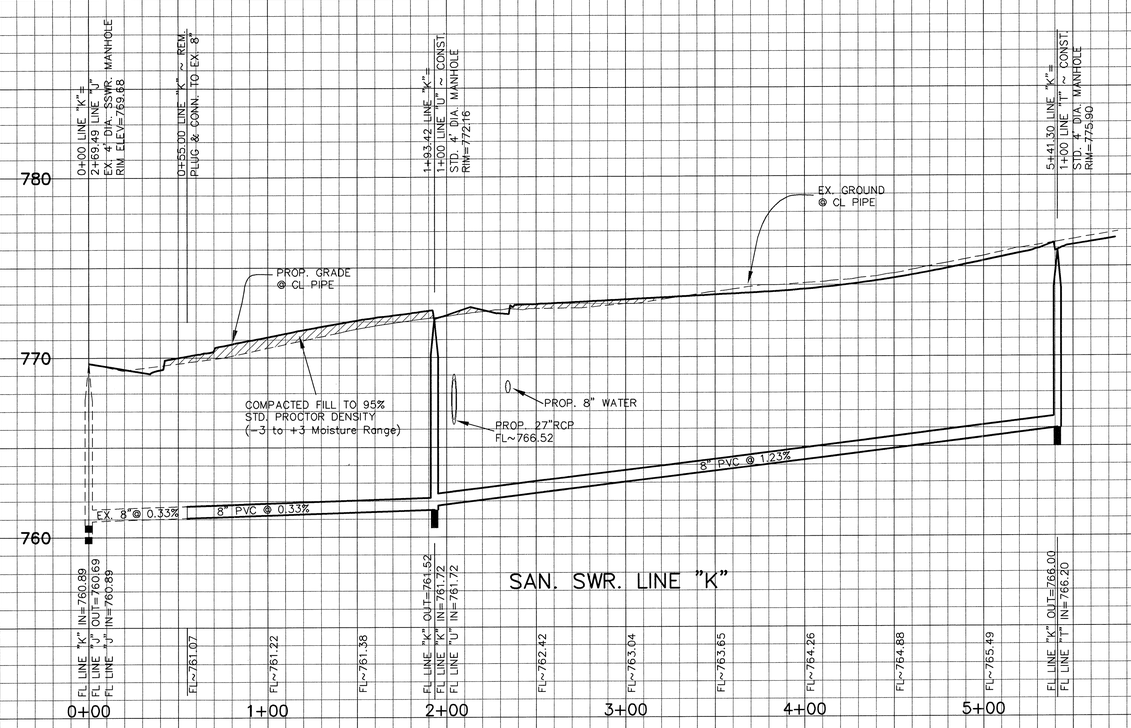
City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 28B

P-200402-02

Plot info: Drawing: H:\projects\W1401\dwg\Phase 2\W401SWR-PH2.dwg Plotted by: ss Plot date: 1/27/04 Plot time: 12:06 pm
Drawing Info: jrd H:\projects\W1401\dwg\Phase 2\W401SWR-PH2.dwg 1/14/04 8:22 pm



SAN. SWR. LINE "K"

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JONES & BOYD, INC.
BY: _____
DATE: 10/11/04

CAUTION!!!
EXISTING UNDERGROUND UTILITIES.
CONTRACTOR TO FIELD VERIFY
LOCATION PRIOR TO CONSTRUCTION.

HORIZONTAL SCALE 1"=40'
VERTICAL SCALE 1"=4'

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri Eest and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

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- Surveying

SANITARY SEWER PROFILES

LINE K

HERITAGE, PHASE 2

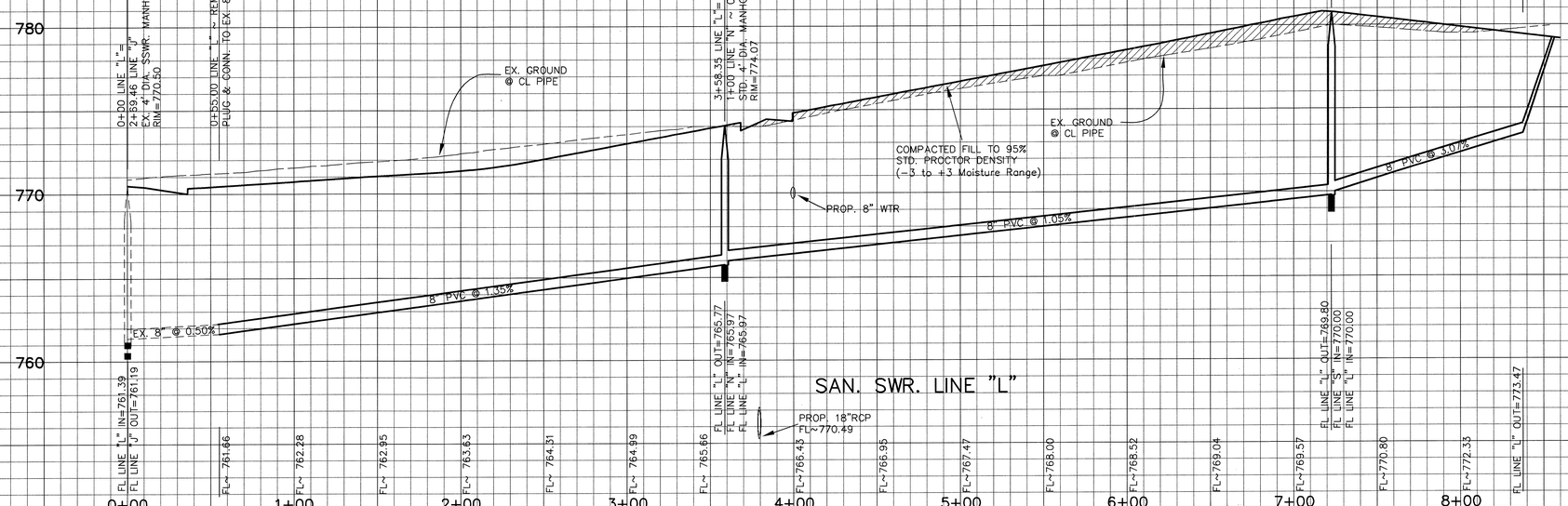
City of Celina, Collin County. Texas

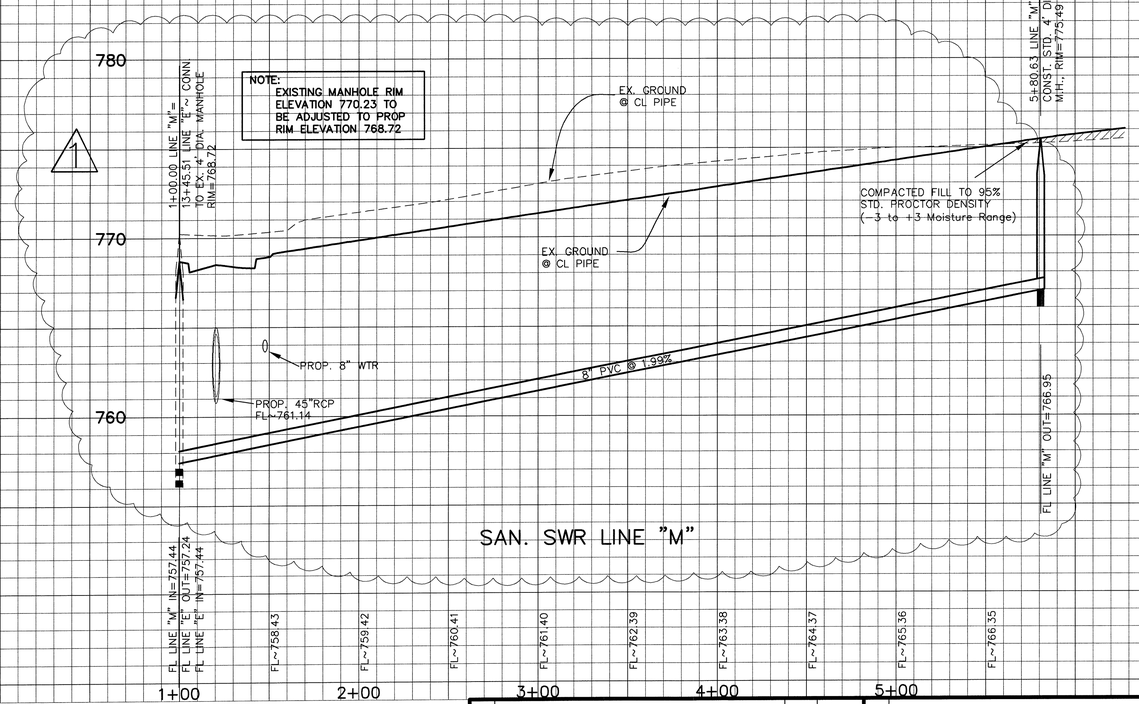
PROJECT NO. WI401

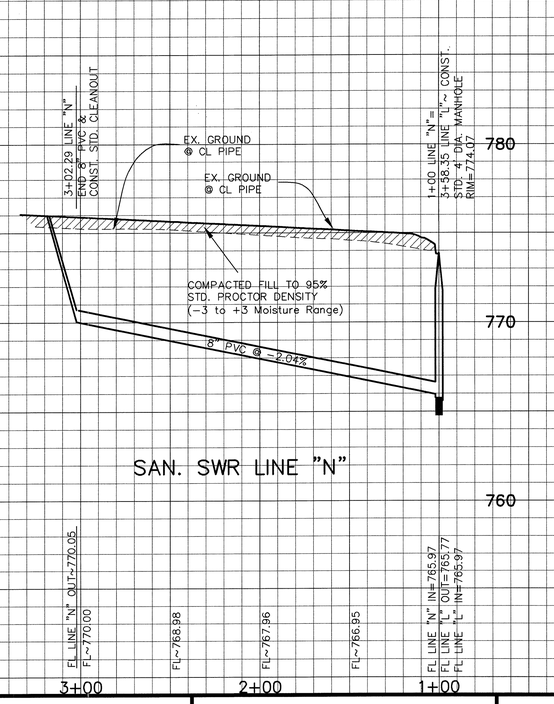
SHEET NO. 29

P-200402-02

Plot Info: Drawing: H:\Projects\WI401\dwg\Phase 2\WI401SWR-PH2.dwg Plotted by: JRD Plot date: 9/8/03 Plot time: 11:57 am
Drawing Info: BJ H:\Projects\WI401\dwg\Phase 2\WI401SWR-PH2.dwg 9/8/03 11:40 am







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JONES & BOYD, INC.
BY:
DATE: 10/11/04

CAUTION!!!!
EXISTING UNDERGROUND UTILITIES.
CONTRACTOR TO FIELD VERIFY
LOCATION PRIOR TO CONSTRUCTION.

HORIZONTAL SCALE 1"=40'
VERTICAL SCALE 1"=4'

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE
1	Revised grade on Line "M" to 1.99%	JRD	3/1/04

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Changed Line M profile to reflect MH move to lot line	SJS	1/27/04

3/2/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

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- Engineering
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SANITARY SEWER PROFILES

LINES L, M & N

HERITAGE, PHASE 2

City of Celina, Collin County, Texas

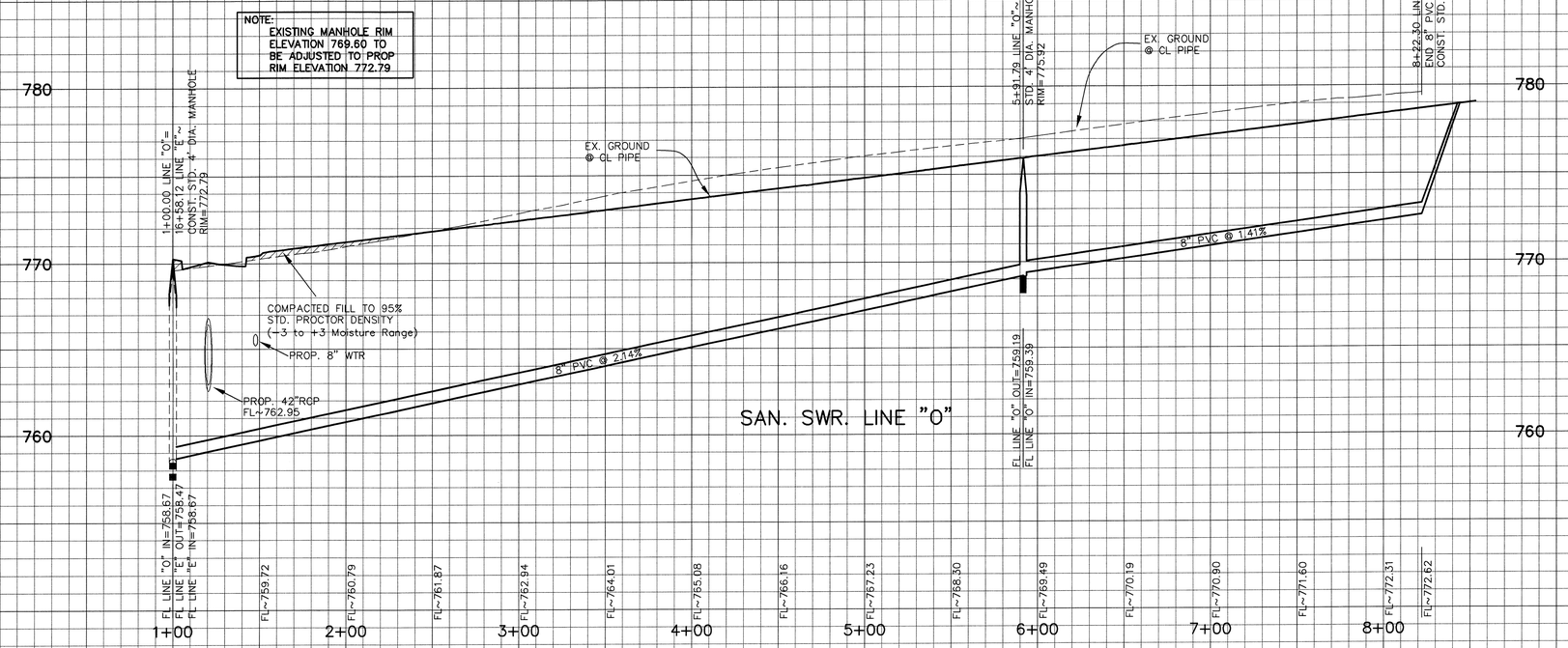
PROJECT NO. W1401

SHEET NO. 30

P-200402-02

Plot Info: Drawing Info: JRD H:\projects\W1401\dwg\Phase 2\W1401SWR-PH2.dwg 3/2/04 9:12 am Plot Info: Drawing: H:\projects\W1401\dwg\Phase 2\W1401SWR-PH2.dwg Plotted by: JRD Plot date: 3/2/04 Plot time: 9:29 am

NOTE:
EXISTING MANHOLE RIM ELEVATION 769.60 TO BE ADJUSTED TO PROP RIM ELEVATION 772.79



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JONES & BOYD, INC.
BY: _____
DATE: 10/11/04

CAUTION!!!!
EXISTING UNDERGROUND UTILITIES.
CONTRACTOR TO FIELD VERIFY
LOCATION PRIOR TO CONSTRUCTION.

HORIZONTAL SCALE 1"=40'
VERTICAL SCALE 1"=4'

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

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SANITARY SEWER PROFILES

LINE O

HERITAGE, PHASE 2

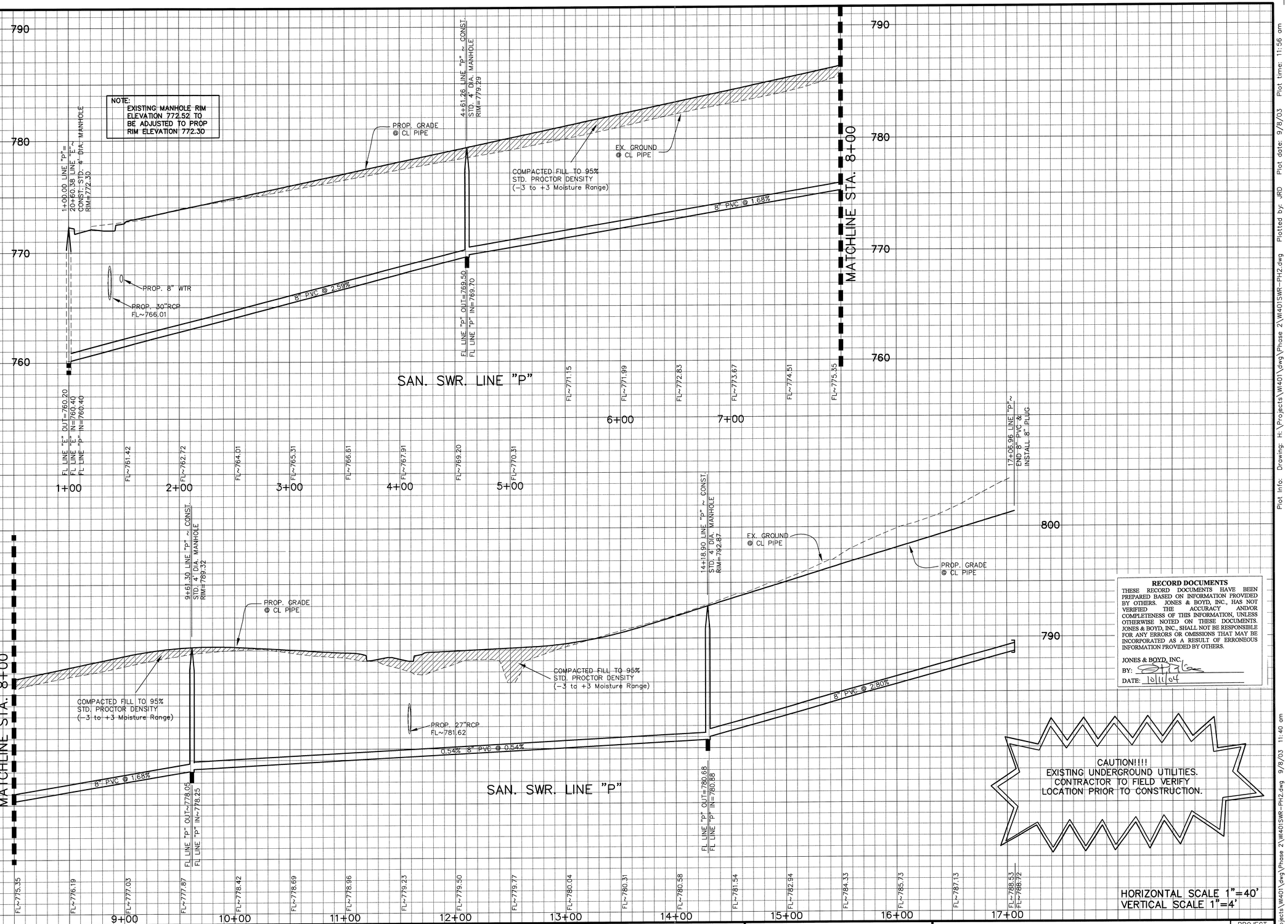
City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 31

P-200402-02

Plot Info: Drawing: H:\Projects\W1401\dwg\Phase 2\W1401SWR-PH2.dwg Plotted by: JRD Plot date: 9/8/03 Plot time: 11:57 am
Drawing Info: BJ H:\Projects\W1401\dwg\Phase 2\W1401SWR-PH2.dwg 9/8/03 11:40 am



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JONES & BOYD, INC.
BY:
DATE: 10/11/04

CAUTION!!!!
EXISTING UNDERGROUND UTILITIES.
CONTRACTOR TO FIELD VERIFY LOCATION PRIOR TO CONSTRUCTION.

HORIZONTAL SCALE 1"=40'
VERTICAL SCALE 1"=4'

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

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- Engineering
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SANITARY SEWER PROFILES

LINE P

HERITAGE, PHASE 2

City of Celina, Collin County, Texas

PROJECT NO. WI401

SHEET NO. 32

Plot Info: Drawing: H:\Projects\WI401\dwg\Phase 2\WI401SWR-PH2.dwg Plotted by: JRD Plot date: 9/8/03 Plot time: 11:56 am
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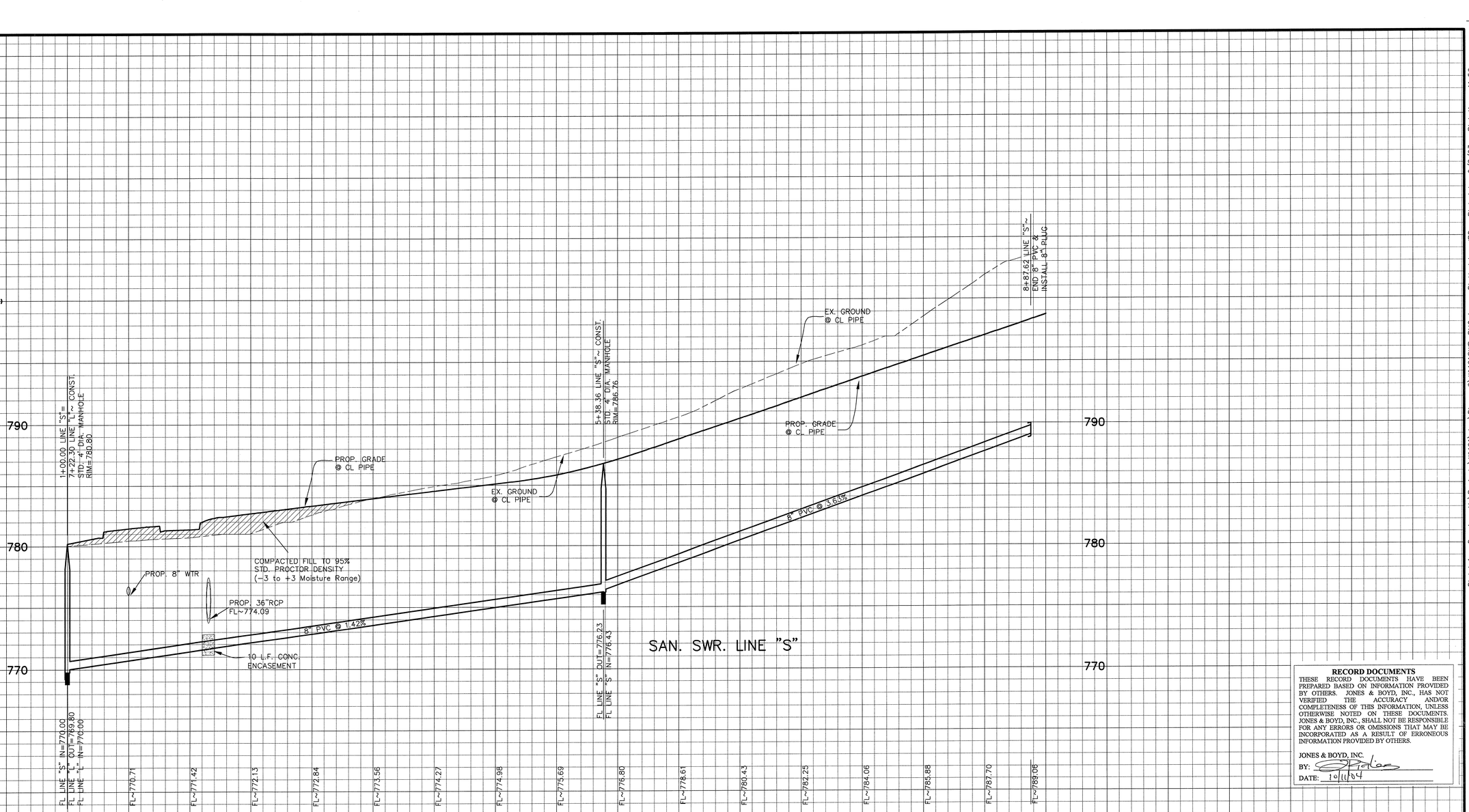
P-200402-02



SAN. SWR. LINE "S"

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JONES & BOYD, INC.
BY:
DATE: 10/14/04

CAUTION!!!!
EXISTING UNDERGROUND UTILITIES.
CONTRACTOR TO FIELD VERIFY
LOCATION PRIOR TO CONSTRUCTION.

HORIZONTAL SCALE 1"=40'
VERTICAL SCALE 1"=4'

BENCHMARKS:

1. "D" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "D" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED PROFESSIONAL ENGINEER
FOR REVIEW

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- Engineering
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- Surveying

SANITARY SEWER PROFILES

LINE S

HERITAGE, PHASE 2

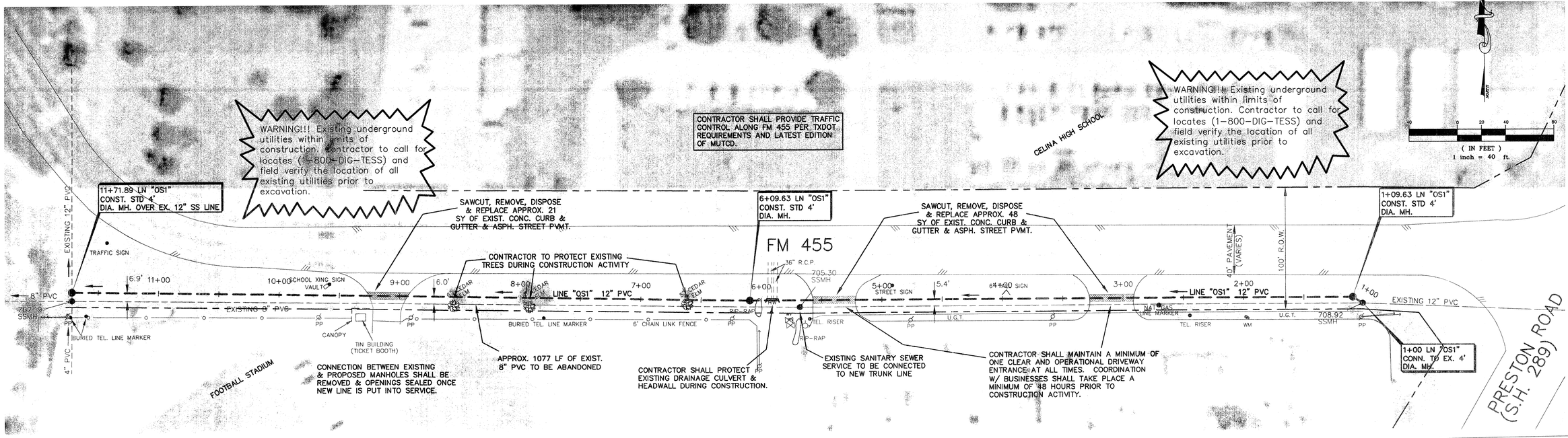
City of Celina, Collin County, Texas

PROJECT NO. WI401

SHEET NO. 33

P-200402-02

Plot Info: Drawing: H:\Projects\WI401\dwg\Phase 2\WI401SWR-PH2.dwg 9/8/03 11:40 am Plotted by: JRD Plot date: 9/8/03 Plot time: 11:56 am



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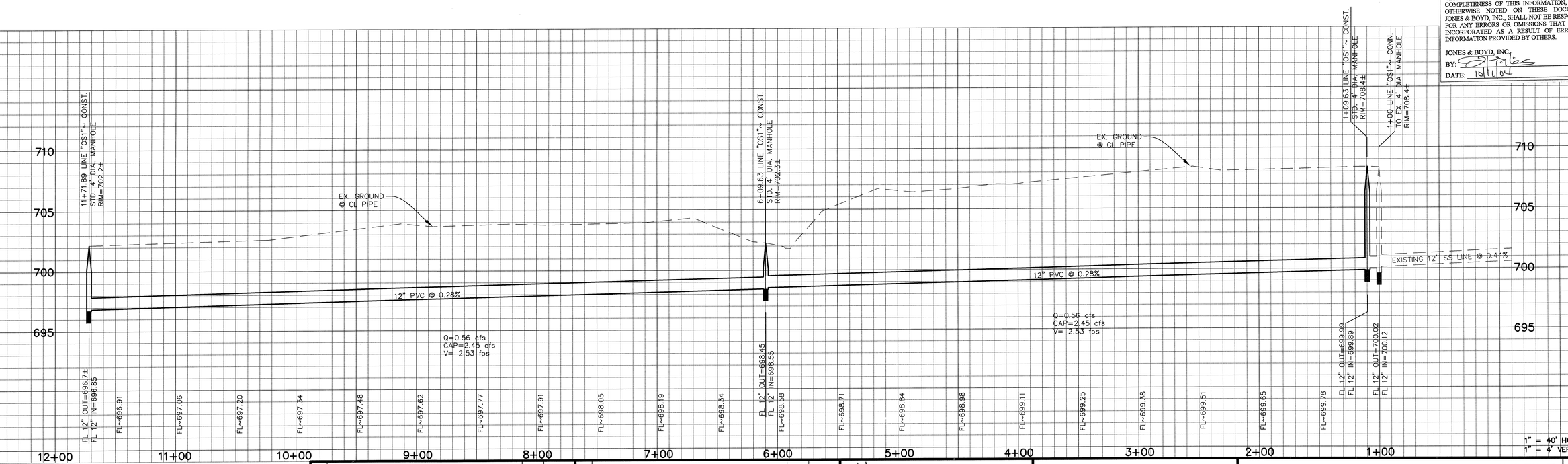
JONES & BOYD, INC.
BY:
DATE: 10/11/04



BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

1/14/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED PROFESSIONAL ENGINEER

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- Engineering
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- Surveying

SANITARY SEWER PLAN & PROFILE

OFFSITE LINE "OS1"

HERITAGE, PHASE 2

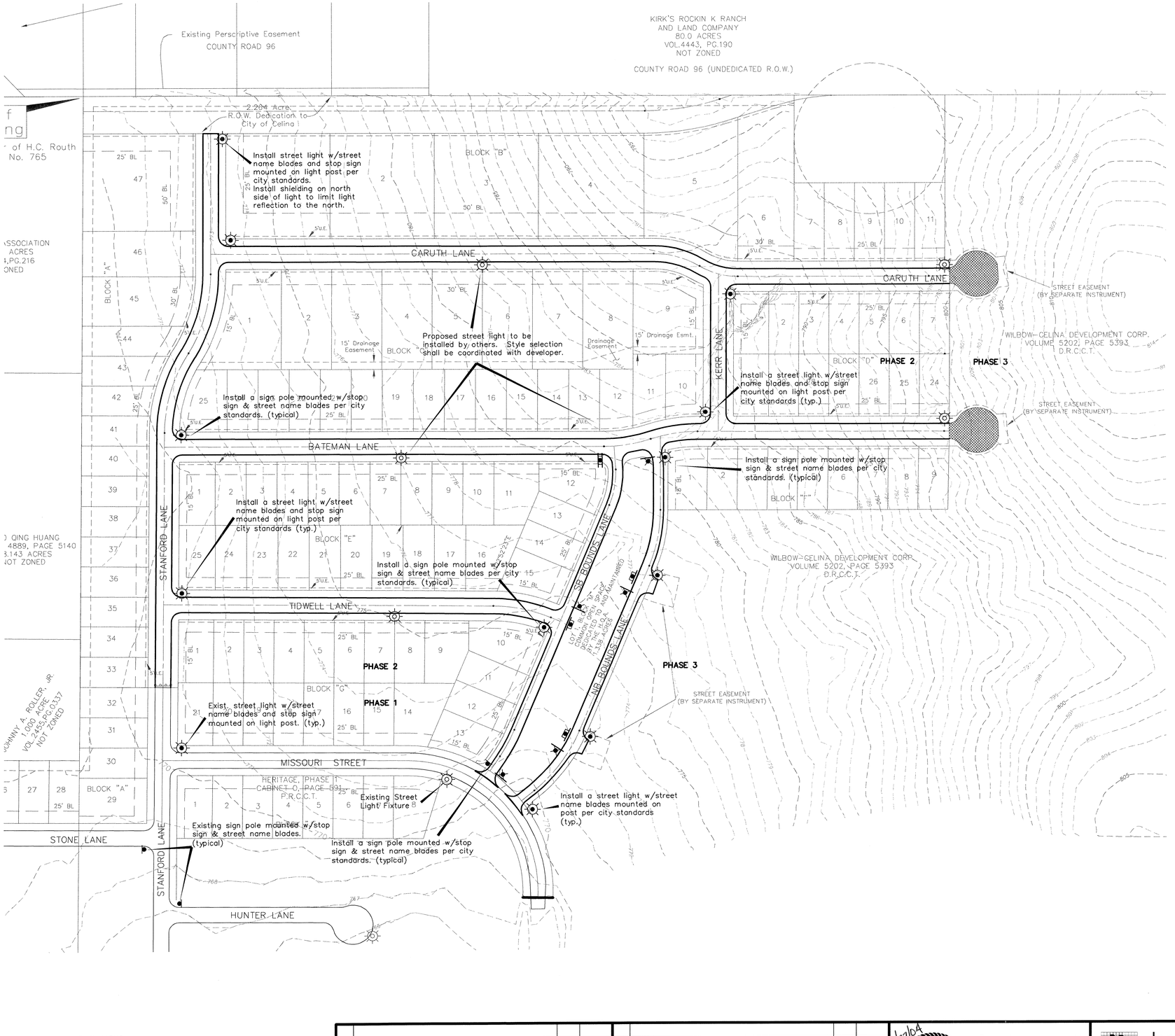
City of Celina, Collin County, Texas

PROJECT NO. WI401

SHEET NO. 33A

P-200402-02

Plot Info: Drawing: H:\projects\WI401\dwg\Phase 2\WI401SWR-PH2.dwg Plotted by: jrd Plot date: 1/14/04 8:16 pm
Drawing Info: jrd H:\projects\WI401\dwg\Phase 2\WI401SWR-PH2.dwg 1/14/04 8:16 pm Plotted by: jrd Plot date: 1/14/04 Plot time: 8:16 pm



NOTE:
The BOUNDS LANE couplet is designed to be one-way traffic. The west side is intended to travel south and the east side is intended to travel north.

NOTE: Reflective markers are to be placed in road to mark fire hydrant locations as shown on Detail Sheet D1.

LEGEND

- Proposed Stop/Street Name Sign Location
- Proposed Street Light Location
- Proposed Street Light/Stop Sign/ Street Name Sign Location (U.N.O.)
- Proposed "ONE-WAY" Traffic sign location
- Proposed "WRONG WAY" Traffic sign location
- Denotes direction sign is intended to face

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JONES & BOYD, INC.
BY:
DATE: 1/27/04

N

100 50 0 100
SCALE 1"=100' FEET

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Modified light/sign placement per city comments	SJS	1/27/04

1/27/04
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

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Dallas, Texas 75248
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Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

TRAFFIC SIGNAGE & ILLUMINATION

HERITAGE PHASE 2

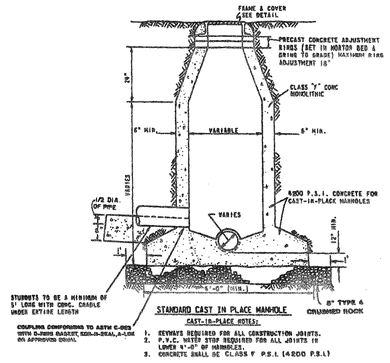
City of Celina, Collin County, Texas

PROJECT NO. W1401

SHEET NO. 34

P-200402-02

Plot info: Drawing: H:\projects\W1401\dwg\Phase 2\W1401LTC-PH2.dwg Plotted by: ss Plot date: 1/27/04 Plot time: 12:24 pm
Drawing Info: ss H:\projects\W1401\dwg\Phase 2\W1401LTC-PH2.dwg 1/27/04 12:27 pm



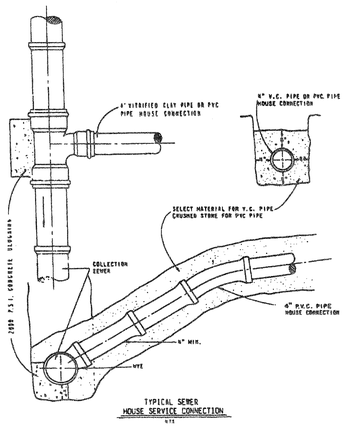
STANDARD CAST IN PLACE MANHOLE

CAST-IN-PLACE NOTES:

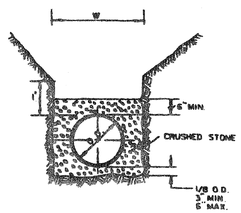
1. EXCAVATE REQUIRED FOR ALL CONSTRUCTION JOINTS.
2. P.V.C. WATER STOP REQUIRED FOR ALL JOINTS IN LOWER 4'-0" OF MANHOLE.
3. CONCRETE SHALL BE CL.A3S F P.S.I. (4200 P.S.I.)

GENERAL NOTES

1. All Sanitary Sewer Pipe Shall Be Vitrified Clay Or PVC SDR-35 Pipe. Other Pipes Shall Be Subject To Approval By The City Engineer
2. Sanitary Sewer Pipe Joints Shall Conform To Current ASTM Designations For Vitrified Clay Pipe And For PVC Pipe
3. All Sanitary Sewer Laterals Shall Include 6" Tee Wye Bend, Pipe And Stopper Installed 10' Feet Downstream From The Water Main Service On Each Lot, Unless Otherwise Indicated On Plans. 6" Laterals Require Min. 24 Inch Sewer Pipe
4. Unless Otherwise Noted, All Material And Construction Shall Conform To The Standard Specifications And/or Special Provisions.
5. In The Event An Item Is Not Covered In Specifications, The City Engineer Decision Shall Apply
6. Drop Manholes Required For Connection Of 18" Or Greater.
7. All Manholes Shall Be Vacuum Tested In Accordance With The Specs.
8. All Pipes Entering & Leaving A Manhole Shall Be Cradled For A Distance Of 5' Outside of M.H.

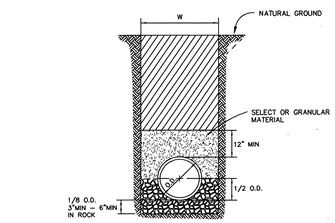


TYPICAL SEWER HOUSE SERVICE CONNECTION.



CLASS H EMBEDMENT P.V.C. PIPE ONLY

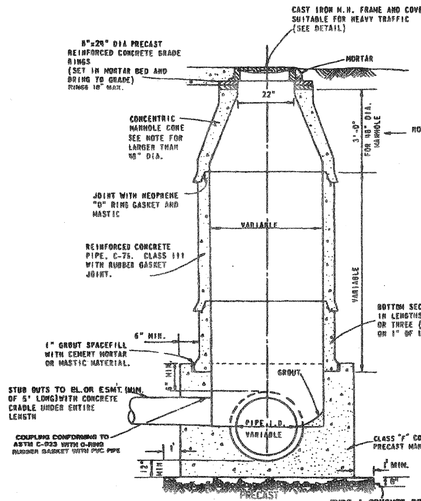
STD. P.V.C. SEWER INSTALLATION
STD. P.V.C., R.C.C.P. & DUCTILE WATER INSTALLATION.



NOTE: DEPTH OF TRENCH BELOW PIPE SHALL BE:
3" (MIN) FOR PIPE 27" AND SMALLER
4" (MIN) FOR PIPE 30" TO 60"
6" (MIN) FOR PIPE 66" AND LARGER

CLASS B+ EMBEDMENT

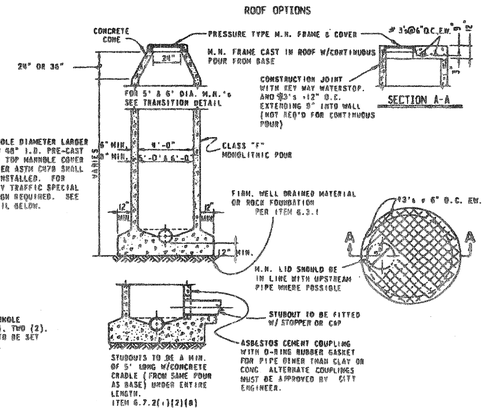
STD. P.V.C. WATER INSTALLATION
STD. R.C.C.P. & DUCTILE WATER INSTALLATION

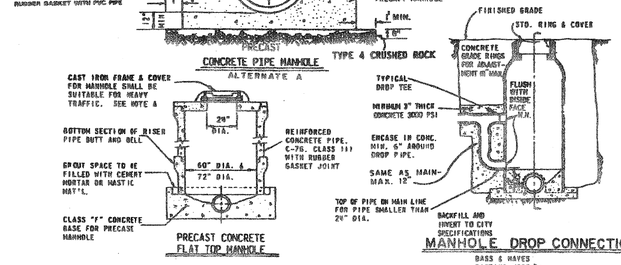


CONCRETE PIPE MANHOLE

NOTE A: MANHOLE DIAMETER LARGER THAN 48" I.D. PRE-CAST FLAT TOP MANHOLE COMES AS PER ASTM C478 SHALL BE INSTALLED. FOR HEAVY TRAFFIC SPECIAL DESIGN REQUIRED. SEE DETAIL BELOW.

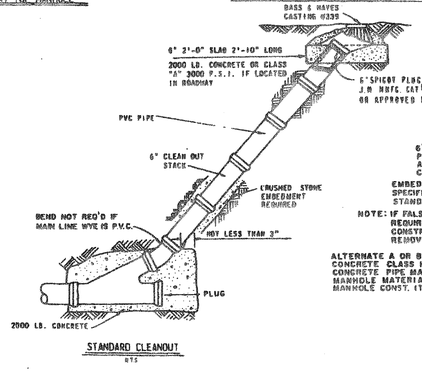
ROOF OPTIONS





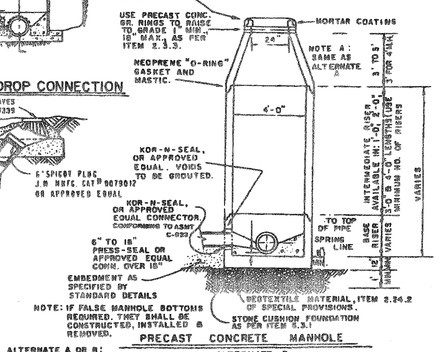
PRECAST CONCRETE FLAT TOP MANHOLE

MANHOLE DROP CONNECTION



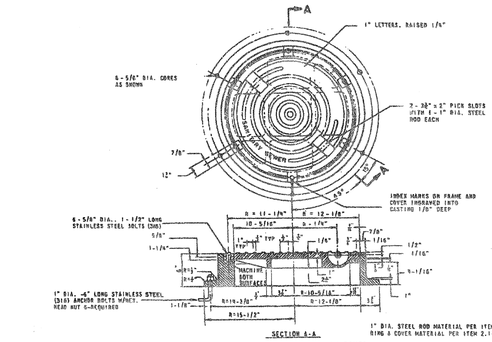
STANDARD CLEANOUT

NOTE: Shallower Parallel Line Required When Flow Line Of Sanitary Sewer Exceeds 12 Ft. Depth. Vertical Drop Connections Not Permitted.

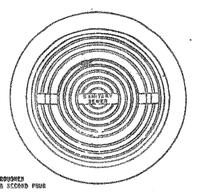


ALTERNATE A OR B:
CONCRETE CLASS ITEM 7.4.3
CONCRETE PIPE MATERIAL ITEM 2.12.4
MANHOLE MATERIAL ITEM 2.19
MANHOLE CONST. ITEM 9.7.2.(1)(1)(3)

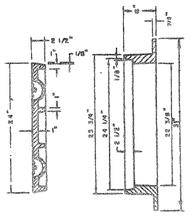
PRECAST CONCRETE MANHOLE ALTERNATE B



PRESSURE TYPE MANHOLE RING AND COVER

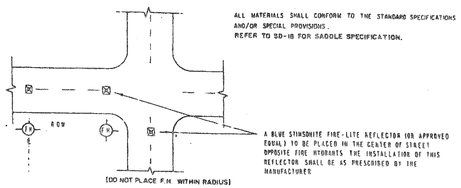


KEYWAY WITH WATERSTOP



MANHOLE RING AND COVER

PROVIDE WITH PICK SLOTS ONLY
S AND M 400-24 OR EQUAL



TYPICAL FIRE HYDRANT REFLECTOR INSTALLATION
(NO SCALE)

GENERAL NOTES:

ALL CALCULATIONS ARE BASED ON TOTAL INTERNAL PRESSURE OF 150 PSI

ALLOWABLE SOIL BEARING PRESSURES MUST BE AT LEAST ONE TON PER SQUARE FOOT FOR THE THRUST BLOCKS SHOWN. IN SOILS OF LESSER CAPACITY, INCREASE SIZE AND BEARING AREA PROPORTIONATELY. VOLUMES OF VERTICAL BEND THRUST BLOCKS ARE KEY VOLUMES OF CONCRETE TO BE FURNISHED AND THE CORRESPONDING WEIGHT OF THE CONCRETE (AT A MINIMUM) EQUALS THE VERTICAL COMPONENT OF THRUST ON THE VERTICAL BEND. ALL BEARING SURFACES OF THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.

CONCRETE FOR BLOCKING SHALL BE MINIMUM 2500 PSI CONCRETE

DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER BUT SHALL NOT BE LESS THAN THE DIMENSIONS SHOWN HERE

POLYPIG SHALL BE PULLED THROUGH WATER LINES BEFORE LINES ARE ACCEPTED BY CITY.

WATER METER BOXES SHALL BE PROTECTED BY A 6"-CURB OR BALLARDS WHEN PLACED IN A PAVED AREA

RECORD DOCUMENTS

THESE RECORD DOCUMENTS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. JONES & BOYD, INC., HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION, UNLESS OTHERWISE NOTED ON THESE DOCUMENTS. JONES & BOYD, INC., SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE INCORPORATED AS A RESULT OF ERRONEOUS INFORMATION PROVIDED BY OTHERS.

JONES & BOYD, INC.
BY:
DATE: 10/1/04

BENCHMARKS:

1. " ⊡ Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. " ⊡ Cut on top centerline headwall on Northeast corner Missouri Eest and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Changed water line embedment to Class B+	SJS	1/27/04

1/27/04 STATE OF TEXAS JEFFERY M. WINKLER 90358 LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Jeffery M. Winkler, P.E. 90358. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.

FOR APPROVAL

Jones & Boyd, Inc.
17090 Dallas Parkway, Suite 200
Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

WATER & SANITARY SEWER DETAILS

HERITAGE, PHASE 2

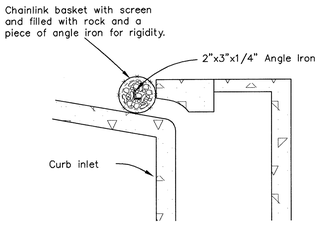
CITY OF CELINA
COLLIN COUNTY, TEXAS

PROJECT NO. W1401

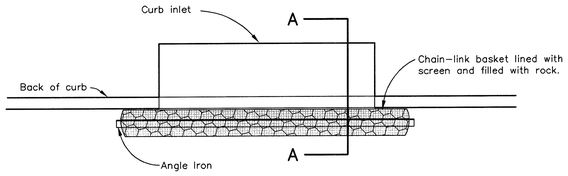
SHEET NO. D1

P-200402-02

ss H:\projects\W1401\dwg\Phase 2\W1401DET.dwg 1/27/04 11:21 am



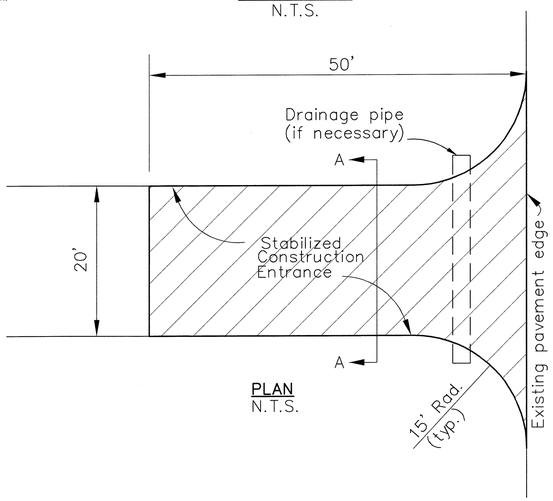
SECTION A–A
N.T.S.



INLET EROSION PROTECTION

PLAN VIEW
N.T.S.

SECTION A–A
N.T.S.

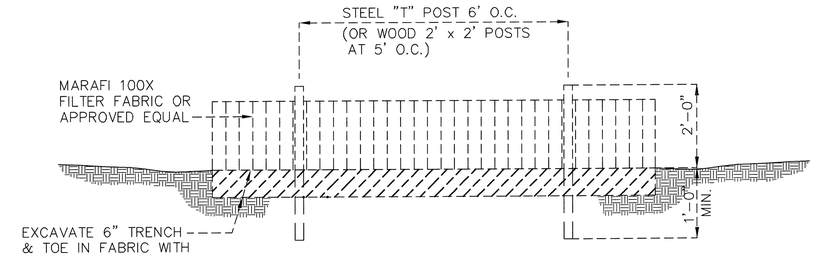


PLAN
N.T.S.

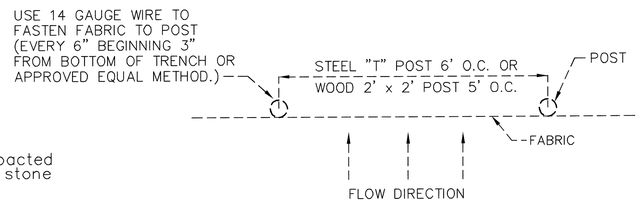
STABILIZED CONSTRUCTION ENTRANCE

STABILIZED CONST. ENTRANCE GENERAL NOTES:

1. Crushed stone for construction entrance shall be 2"–3" at greatest dimension and shall be installed to a compacted depth of six inches.
2. Filter fabric is to be Marafi 100X or equal. (Marafi, Inc.: 800–438–1855)
3. If construction entrance crosses a drainage ditch, swale, etc., a drainage pipe shall be installed with min. 12 inches cover of crushed stone.



ELEVATION



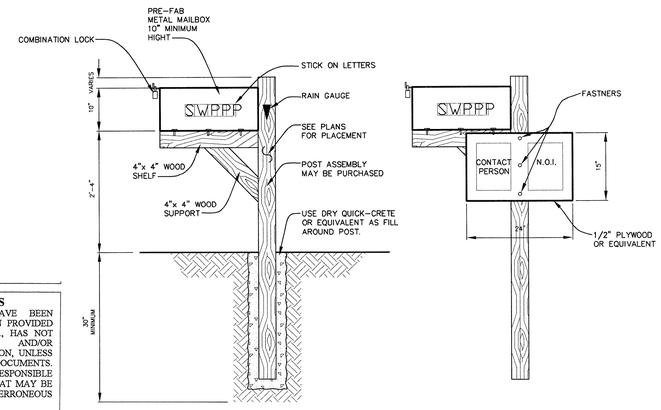
PLAN VIEW
SILT FENCE DETAIL

SILT FENCE GENERAL NOTES:

1. Steel posts which support the silt fence shall be installed on a slight angle toward the anticipated runoff source.
2. The toe of the silt fence shall be trenched in with a spade or mechanical trencher, so that the downslope face of the trench is flat and perpendicular to the line of flow.
3. The trench should be a minimum of six inches deep and four inches wide to allow for the silt fence to be laid in the ground and backfilled.
4. Silt fence should be securely fastened to each support post.
5. Inspection shall be frequent and repair or replacement shall be made promptly as needed.
6. Silt fence shall be removed when it has served its usefulness, so as not to block or impede storm flow or drainage.
7. Sediment trapped by this practice shall be disposed of in an approved site in a manner that will not contribute to additional siltation.
8. Accumulated silt shall be removed when it reaches a depth of six inches and disposed of in an approved spoil site or as in No. 7 above.
9. At point of surface flow concentration reinforce silt fence with wire mesh backing on downstream side of fence.
10. Filter fabric is to be Marafi 100X or approved equal. (Marafi, Inc.: 800–438–1855)

GENERAL NOTES FOR THE EROSION CONTROL PLAN

1. All operators and/or contractors shall conform to the terms and conditions of the National Pollution Discharge Elimination Systems (NPDES) General Permit as published in the Federal Register, Vol. 63, No. 128, July 6, 1998, by the Environmental Protection Agency (EPA).
2. The Notice of Intent (NOI), as required by the General Permit, must be properly displayed on site at all times by each operator.
3. All releases of reportable quantities of hazardous substances shall be reported immediately to the facility operator and EPA.
4. The Contractor shall inspect the site at least once every fourteen days and within 24 hours of a 1/2–inch or greater rainfall event. The Contractor shall document the results. Copies of the inspection reports shall accompany the Contractor's monthly pay request. The Contractor shall not be paid until said reports are presented to the Owner/Owner's Represenative. The Earthwork Contractor shall be responsible for inspection until the Utility Contractor begins his work. The Utility Contractor shall be responsible for inspections until the Paving Contractor begins his work. The Paving Contractor shall be responsible for inspections until the Earthwork Contractor begins lot benching operations. The Earthwork Contractor shall make remaining inspections until project is accepted by the City.
5. Modifications to the Storm Water Pollution Prevention Plan shall be implemented and be in–place within a seven calendar day period.
6. If any contractor sees a violation by an operator or another contractor, he shall notify the operator and contractor in violation, as well as the facility operator.
7. Erosion control shall be installed prior to any grading.
8. Accumulated silt deposits shall be removed from silt fences and hay bale dikes when silt depth reaches six inches. Removal of silt deposits by the contractor shall be incidental to the performance of the contract and a separate bid item shall not be included.
9. The contractor shall add or delete erosion protection at the request and direction of the Operator or the City.
10. After installation of pavement, final lot benching and general cleanup, the grass groundcover shall be established in all street parkways, lots and all other disturbed areas. Materials shall be as specified in Item 2.15 and seeding shall be in accordance with Item 3.10 of the NCTCOG Standard Specifications. Depending upon schedule for house construction, grass establishment may be waived on a single lot basis if house construction begins immediately on that lot.
11. It shall be the contractor's responsibility to control and limit silt and sediment leaving the site. Specifically, the contractor shall protect all public streets, alleys, streams and storm drainage systems from erosion deposits.
12. If any erosion control is removed for construction and/or access purposes, the contractor shall replace it at the end of the work day.
13. It shall be the contractor's responsibility to provide a dumpster (or equal) to collect solid waste materials during construction.



TYPICAL SWPPP POST DETAIL
N.T.S.

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JONES & BOYD, INC.
BY:
DATE: 10/11/04

BENCHMARKS:

1. "□" Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "□" Cut on top centerline headwall on Northeast corner Missouri East and Redbud Road. Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE

NO.	REVISIONS DURING PLAN REVIEW	BY	DATE
1	Revised Inlet Erosion Protection per staff comment	JMW	11/8/03

1/21/04 STATE OF TEXAS JEFFERY M. WINKLER 90358 LICENSED PROFESSIONAL ENGINEER

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FOR APPROVAL

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Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414
▪ Engineering ▪ Planning ▪ Landscape Architecture ▪ Surveying

EROSION CONTROL DETAILS

PROJECT NO. WI401

HERITAGE, PHASE 2

SHEET NO. D2

City of Celina, Collin County, Texas

Plot Info: Drawing: H:\Projects\WI401\dwg\Phase 2\WI401ER–PH2.dwg Plotted by: JMW Plot date: 1/27/04 Plot time: 2:47 pm
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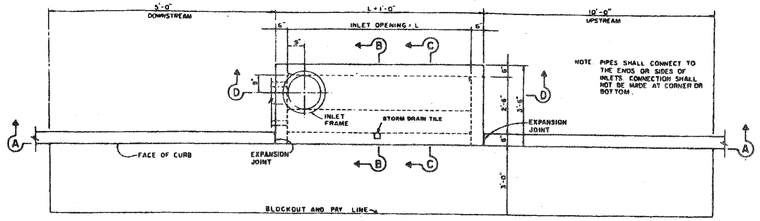
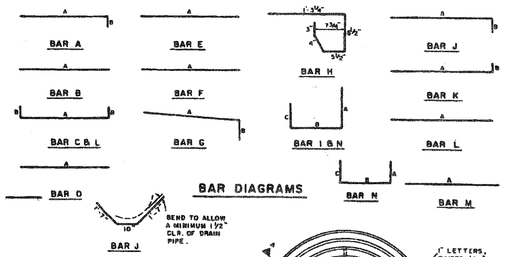
P-200402-02



PLAN - STANDARD INLET



BAR DIAGRAMS

REINFORCING STEEL SCHEDULE

DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8" IN.)	NO. REQ'D.	BAR DIMENSIONS A	B	C
6	A	3	8	3'-3"	0'-3"	-
	B	3	1	4'-10"	"	-
	C	3	10	6'-11"	0'-8"	-
	D	4	3	4'-8"	-	-
	F	4	1	3'-3"	-	-
	G	3	5	5'-0"	1'-3"	-
	H	3	3	*	*	*
	M	3	3	3'-3"	3'-3"	3'-3"
8	A	3	12	3'-3"	0'-3"	-
	B	3	1	6'-10"	"	-
	C	3	19	8'-11"	0'-8"	-
	D	4	3	6'-8"	"	-
	F	4	1	3'-3"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	4	*	*	*
	M	3	4	3'-3"	3'-3"	3'-3"
10	A	3	10	3'-3"	0'-3"	-
	B	3	2	8'-10"	"	-
	C	4	14	10'-5"	0'-6"	-
	D	4	4	4'-8"	-	-
	E	5	6	10'-5"	"	-
	G	3	3	2'-0"	1'-3"	-
	H	3	15	*	*	*
	I	4	8	4'-8"	3'-6"	3'-3"
	L	4	3	5'-3"	"	"

* SEE DIAGRAM FOR DIMENSIONS 4, 6, 8 AND 10' INLETS

NOTES FOR PRECAST INLET

(1) THE FLOOR OF THE EXCAVATION MUST PROVIDE A FIRM, LEVEL BED FOR THE BASE SECTION TO REST UPON.

(2) A MINIMUM OF 6 INCHES OF 1" DIAMETER (MAXIMUM) ROCK OR GRAVEL SHALL BE USED TO PREPARE THE BEDDING TO FINAL GRADE OR IN LIEU OF THIS, AT LEAST 6 INCHES OF 2-SACK CEMENT STABILIZED SAND SHALL BE USED TO PREPARE THE BEDDING TO GRADE. CEMENT STABILIZED SAND SHALL BE ALLOWED TO SET BY KEEPING HOLE PUMPED DRY.

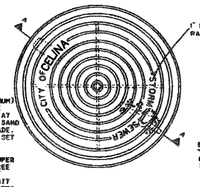
(3) AFTER CASTING HAS BEEN INSTALLED ON THE PROPER BEDDING, THE BACKFILL MATERIAL, WHICH IS FREE FLOWING AND CLEAR OF ROCKS, IN EXCESS OF 6" DIAMETER AND OTHER LUMPS WHICH WOULD PROHIBIT PROPER COMPACTION, SHALL BE COMMENCED IN LIFTS OF NO MORE THAN 18". THE MATERIAL USED FOR BACKFILL SHOULD BE OF A TYPE SUITABLE TO OBTAIN THE DENSITY REQUIREMENTS FOR THE SPECIFIC JOB.

(4) PRECAST INLETS MUST BE APPROVED BY CITY ENGINEER.

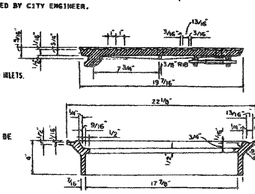
(5) CONCRETE TO BE MIN. 4200 PSI.

(6) LOCKING DEVICE IS REQUIRED ON ALL STORM SEWER LINE.

(7) "NO DUMPING" WARNING PLAQUE TO BE INSTALLED ON ALL STANDARD AND RECESSED INLETS.

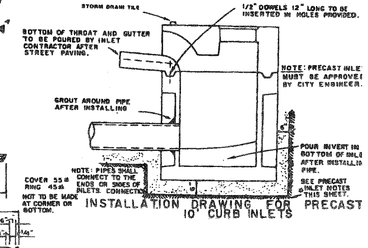


PLAN OF FRAME

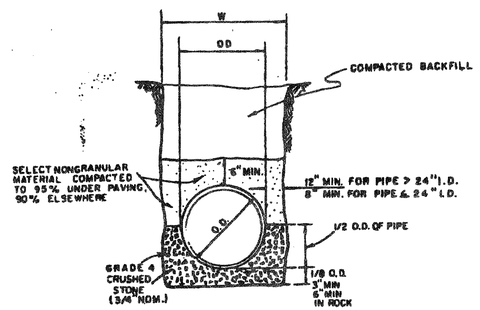


SECTION OF FRAME AND COVER

INLET FRAME AND COVER

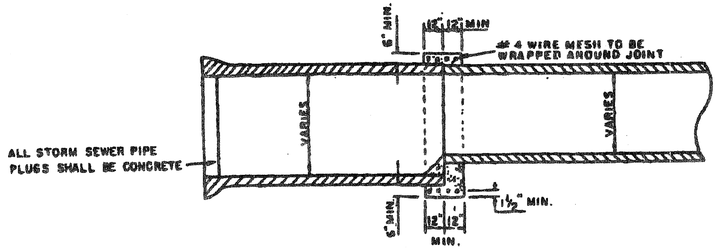


INSTALLATION DRAWING FOR PRECAST 10' CURB INLETS



STORM SEWER PIPE BEDDING DETAIL

DEPTH OF TRENCH BELOW PIPE:
3" MIN. FOR 21" PIPE & SMALLER
4" MIN. FOR 30" TO 60" PIPE
6" MIN. FOR 66" PIPE & LARGER

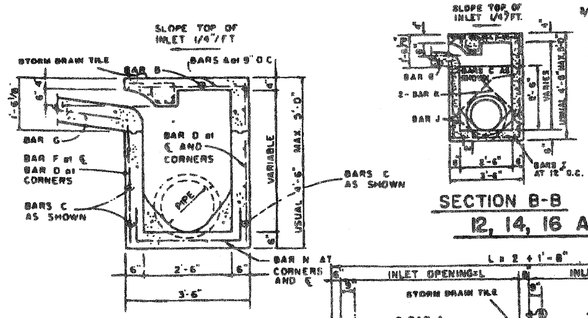


DETAIL OF CONCRETE COLLAR FOR PIPE CONNECTIONS

BENCHMARKS:

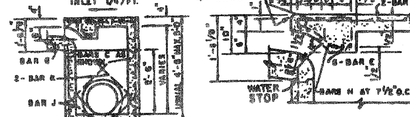
1. "□ Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road. Elev. 764.92'
2. "□ Cut on top centerline headwall on Northeast corner Missouri Eest and Redbud Road. Elev. 764.92'

6, 8 AND 10 FOOT INLETS



SECTION B-B

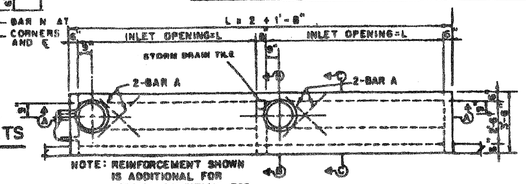
8 AND 10 FT. INLETS



SECTION B-B

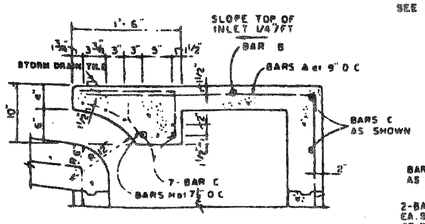
12, 14, 16 AND 20 FOOT INLETS

SECTION C-C



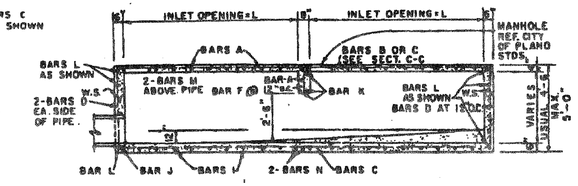
PLAN

12 FOOT INLETS



SECTION C-C

8 AND 10 FOOT INLETS



SECTION D-D

12 FOOT INLETS

REINFORCING STEEL SCHEDULE

DOUBLE INLETS

DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH L	BAR TYPE	BAR DIA. (1/8" IN.)	NO. REQD.	BAR DIMENSIONS A	B	C
6 FT.	A	3	18	3'-3"	0'-3"	-
	B	3	2	4'-10"	"	-
	C	4	18	6'-11"	0'-8"	-
	D	4	3	4'-8"	-	-
	F	4	2	3'-3"	-	-
	G	3	6	5'-0"	1'-3"	-
	H	3	3	*	*	*
	M	3	18	3'-3"	3'-3"	3'-3"
	I	4	12	4'-8"	3'-6"	3'-3"
	L	4	3	5'-3"	"	"
	J	5	6	5'-3"	0'-6"	-
	K	5	6	5'-3"	0'-6"	-
	N	4	2	4'-8"	3'-2"	4'-8"
8 FT.	A	3	19	3'-3"	0'-3"	-
	B	3	2	6'-10"	"	-
	C	4	18	8'-11"	0'-8"	-
	D	4	3	6'-8"	"	-
	F	4	2	3'-3"	-	-
	G	3	6	2'-0"	1'-3"	-
	H	3	15	*	*	*
	M	3	18	3'-3"	3'-3"	3'-3"
	I	4	20	4'-8"	3'-2"	3'-2"
	J	5	8	"	"	"
	K	5	6	5'-3"	0'-6"	-
	L	4	3	5'-3"	"	"
	N	4	2	4'-8"	3'-2"	4'-8"
10 FT.	A	3	23	3'-3"	0'-3"	-
	B	3	2	8'-10"	"	-
	C	4	18	11'-4"	0'-8"	-
	D	4	3	8'-8"	"	-
	F	4	2	11'-4"	-	-
	G	3	6	2'-0"	1'-3"	-
	H	3	15	2'-0"	1'-3"	-
	M	3	22	"	"	"
	I	4	20	4'-8"	3'-2"	3'-2"
	J	5	8	"	"	"
	K	5	6	5'-3"	0'-6"	-
	L	4	3	5'-3"	"	"
	N	4	2	4'-8"	3'-2"	4'-8"

* SEE DIAGRAM FOR DIMENSIONS
# FIELD CUT AS REQD. TO ACCOMMODATE DRAIN PIPE.

12' INLETS

RECORD DOCUMENTS

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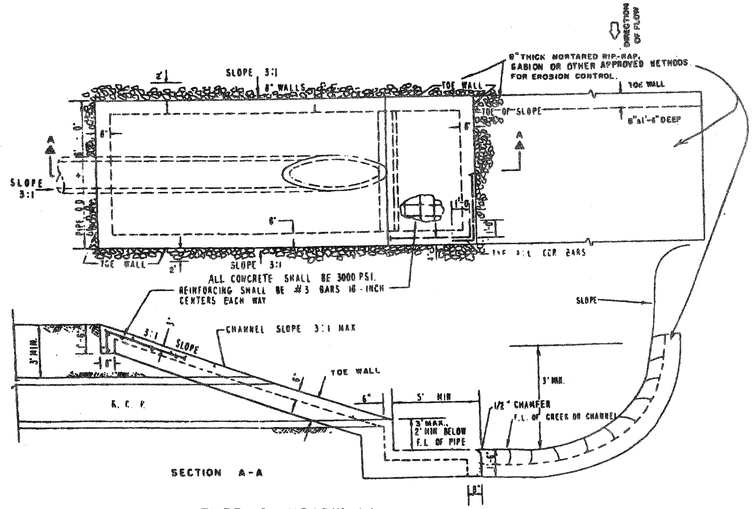
BY: [signature]
DATE: 10/11/04



TYPE C HEADWALL

CAN BE MODIFIED WITH PERMISSION OF CITY ENGINEER

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE	NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/23/05
STATE OF TEXAS
JEFFERY M. WINKLER
90358
LICENSED
PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Jeffery M. Winkler, P.E. 90358. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.

FOR REVIEW

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Dallas, Texas 75248
Tel: 972-248-7676
Fax: 972-248-1414

- Engineering
- Planning
- Landscape Architecture
- Surveying

STORM WATER DETAILS

HERITAGE, PHASE 2

CITY OF CELINA
COLLIN COUNTY, TEXAS

PROJECT NO. W1401

SHEET NO. D3

P-200402-02

BJ H:\Projects\W1401\dwg\Phase 2\W1401DET.dwg 9/8/03 10:56 am

TABLE OF DIMENSIONS AND QUANTITIES FOR TWO TYPE A HEADWALLS

No. of Pipes	Diam of Pipes	G	K	T	E	H	W	Bars A1 4-#3 Lgth	Bars A1 Wt	Bars A2 #3 @ 18"± No	Bars A2 Lgth	Bars A2 Wt	Bars E 4-#5 Lgth	Bars E Wt	Bars F1 @ 12"± No	Bars F1 Size	Bars F1 Lgth	Bars F1 Wt	Bars F2 @ 12"± No	Bars F2 Size	Bars F2 Lgth	Bars F2 Wt	Total Steel LBS.	Total Conc. C.Y.
1	12"	~	12"	9"	1'-9"	2'-6"	7'-0"	6'-8"	10	8	2'-6"	8	6'-8"	28	12	#4	2'-11"	23	12	#4	3'-8"	29	98	1.48
2	"	10"	"	"	"	"	8'-10"	8'-6"	13	"	"	"	8'-6"	35	14	"	"	27	14	"	"	34	117	1.81
3	"	"	"	"	"	"	10'-8"	10'-4"	16	"	"	"	10'-4"	43	16	"	"	31	16	"	"	39	137	2.15
4	"	"	"	"	"	"	12'-6"	12'-2"	18	"	"	"	12'-2"	51	18	"	"	35	18	"	"	44	156	2.48
1	15"	~	12"	9"	1'-9"	2'-9"	8'-3"	7'-11"	12	8	3'-0"	9	7'-11"	33	12	#4	3'-2"	25	12	#4	3'-11"	31	110	1.82
2	"	1'-0"	"	"	"	"	10'-6"	10'-2"	15	"	"	"	10'-2"	42	14	"	"	30	14	"	"	37	133	2.24
3	"	"	"	"	"	"	12'-9"	12'-5"	19	"	"	"	12'-5"	52	16	"	"	34	16	"	"	42	156	2.66
4	"	"	"	"	"	"	15'-0"	14'-8"	22	"	"	"	14'-8"	61	18	"	"	38	18	"	"	47	177	3.09
1	18"	~	12"	9"	1'-9"	3'-0"	9'-6"	9'-2"	14	8	3'-8"	11	9'-2"	38	20	#4	3'-5"	46	20	#4	4'-2"	56	165	2.19
2	"	1'-2"	"	"	"	"	12'-2"	11'-10"	18	"	"	"	11'-10"	49	22	"	"	50	22	"	"	61	189	2.70
3	"	"	"	"	"	"	14'-10"	14'-6"	22	"	"	"	14'-6"	60	24	"	"	55	24	"	"	67	215	3.21
4	"	"	"	"	"	"	17'-6"	17'-2"	26	"	"	"	17'-2"	72	26	"	"	59	26	"	"	72	240	3.73
1	24"	~	12"	9"	2'-0"	3'-6"	12'-0"	11'-8"	18	8	4'-6"	14	11'-8"	49	24	#4	3'-11"	63	24	#4	4'-11"	79	223	3.17
2	"	1'-5"	"	"	"	"	15'-5"	15'-1"	23	"	"	"	15'-1"	63	26	"	"	68	26	"	"	85	253	3.89
3	"	"	"	"	"	"	18'-10"	18'-6"	28	"	"	"	18'-6"	77	28	"	"	73	28	"	"	92	284	4.62
4	"	"	"	"	"	"	22'-3"	21'-11"	33	"	"	"	21'-11"	91	30	"	"	79	30	"	"	99	316	5.35
1	30"	~	12"	9"	2'-3"	4'-0"	14'-6"	14'-2"	21	16	5'-6"	33	14'-2"	59	28	#4	4'-5"	83	28	#4	5'-8"	106	302	4.31
2	"	1'-8"	"	"	"	"	18'-8"	18'-4"	28	"	"	"	18'-4"	76	32	"	"	94	32	"	"	121	352	5.28
3	"	"	"	"	"	"	22'-10"	22'-6"	34	"	"	"	22'-6"	94	36	"	"	106	36	"	"	136	403	6.26
4	"	"	"	"	"	"	27'-0"	26'-8"	40	"	"	"	26'-8"	111	40	"	"	118	40	"	"	152	454	7.24
1	36"	~	12"	12"	2'-6"	4'-6"	17'-0"	16'-8"	25	16	6'-6"	39	16'-8"	70	32	#4	5'-2"	111	32	#4	6'-8"	143	388	6.40
2	"	1'-11"	"	"	"	"	21'-11"	21'-7"	32	"	"	"	21'-7"	90	36	"	"	124	36	"	"	160	445	7.89
3	"	"	"	"	"	"	26'-10"	26'-6"	40	"	"	"	26'-6"	111	40	"	"	138	40	"	"	178	506	9.37
4	"	"	"	"	"	"	31'-9"	31'-5"	47	"	"	"	31'-5"	131	44	"	"	152	44	"	"	196	565	10.85
1	42"	~	12"	12"	2'-9"	5'-0"	19'-6"	19'-2"	29	16	7'-6"	45	19'-2"	80	36	#4	5'-8"	136	36	#4	7'-5"	178	468	8.10
2	"	2'-2"	"	"	"	"	25'-2"	24'-10"	37	"	"	"	24'-10"	104	40	"	"	152	40	"	"	198	536	9.96
3	"	"	"	"	"	"	30'-10"	30'-6"	46	"	"	"	30'-6"	127	44	"	"	167	44	"	"	218	603	11.80
4	"	"	"	"	"	"	36'-6"	36'-2"	54	"	"	"	36'-2"	151	48	"	"	182	48	"	"	238	670	13.68
1	48"	~	15"	12"	3'-0"	5'-9"	23'-0"	22'-8"	34	24	8'-9"	79	22'-8"	95	40	#5	6'-5"	288	40	#5	8'-5"	351	827	10.74
2	"	2'-5"	"	"	"	"	29'-5"	29'-1"	44	"	"	"	29'-1"	121	44	"	"	295	44	"	"	386	925	13.08
3	"	"	"	"	"	"	35'-10"	35'-6"	53	"	"	"	35'-6"	148	48	"	"	321	48	"	"	422	1023	15.43
4	"	"	"	"	"	"	42'-3"	41'-11"	63	"	"	"	41'-11"	175	52	"	"	348	52	"	"	457	1122	17.77
1	54"	~	15"	12"	3'-3"	6'-3"	25'-6"	25'-2"	38	24	9'-9"	88	25'-2"	105	44	#5	6'-11"	318	44	#5	9'-2"	421	970	12.87
2	"	2'-10"	"	"	"	"	32'-10"	32'-6"	49	"	"	"	32'-6"	136	50	"	"	361	50	"	"	478	1112	15.77
3	"	"	"	"	"	"	40'-2"	39'-10"	60	"	"	"	39'-10"	166	56	"	"	404	56	"	"	536	1254	18.66
4	"	"	"	"	"	"	47'-6"	47'-2"	71	"	"	"	47'-2"	197	62	"	"	447	62	"	"	593	1396	21.55
1	60"	~	15"	12"	3'-6"	6'-9"	28'-0"	27'-8"	42	24	10'-9"	97	27'-8"	115	48	#5	7'-5"	371	48	#5	9'-11"	497	1122	15.20
2	"	3'-0"	"	"	"	"	36'-0"	35'-8"	54	"	"	"	35'-8"	149	54	"	"	418	54	"	"	559	1277	18.55
3	"	"	"	"	"	"	44'-0"	43'-8"	66	"	"	"	43'-8"	182	60	"	"	464	60	"	"	621	1430	21.89
4	"	"	"	"	"	"	52'-0"	51'-8"	78	"	"	"	51'-8"	216	66	"	"	511	66	"	"	683	1585	25.24
1	66"	~	15"	12"	3'-9"	7'-3"	30'-6"	30'-2"	45	32	11'-9"	141	30'-2"	126	52	#5	7'-11"	430	52	#5	10'-8"	579	1321	17.72
2	"	3'-1"	"	"	"	"	39'-1"	38'-9"	58	"	"	"	38'-9"	162	58	"	"	479	58	"	"	645	1485	21.49
3	"	"	"	"	"	"	47'-8"	47'-4"	78	"	"	"	47'-4"	198	64	"	"	529	64	"	"	712	1651	25.27
4	"	"	"	"	"	"	56'-3"	55'-11"	84	"	"	"	55'-11"	233	70	"	"	578	70	"	"	779	1815	29.05
1	72"	~	15"	12"	4'-0"	7'-9"	33'-0"	32'-8"	49	32	12'-9"	153	32'-8"	136	56	#5	8'-5"	492	56	#5	11'-5"	667	1497	20.42
2	"	3'-2"	"	"	"	"	42'-2"	41'-10"	63	"	"	"	41'-10"	175	62	"	"	544	62	"	"	738	1673	24.66
3	"	"	"	"	"	"	51'-4"	51'-0"	77	"	"	"	51'-0"	219	68	"	"	597	68	"	"	810	1850	28.89
4	"	"	"	"	"	"	60'-6"	60'-2"	90	"	"	"	60'-2"	251	74	"	"	650	74	"	"	881	2025	33.12

TABLE OF DIMENSIONS AND QUANTITIES FOR TWO TYPE B HEADWALLS

REINFORCING STEEL AND QUANTITIES FOR TWO HEADWALLS

No. of Pipes	Diam. of Pipes	G	K	X	H	Y	W	Bars A1-Ax #4 @ 12"± No	Av Lgth	Wt	Bars B #3 @ 18"± No	Lgth	Wt	Bars B1-Bx #3 @ 18"± No	Av Lgth	Wt	C=2'-0" #4 @ 12"± No	Wt	Bars D1-Dx #3 @ 12"± No	Av Lgth	Wt	Bars E 8-#5 Lgth	Wt	Bars F No	Size	Lgth	Wt	Bars G 4-#3 Lgth	Wt	Bars S 12-#4 Lgth	Wt	Bars V1-Vx #4 @ 12"± No	Av Lgth	Wt	Bars W 4-#5 Lgth	Wt	*Total Steel LBS.	*Total Conc. C.Y.
1	12"	~	12"	2'-4"	2'-0"	1'-0"	2'-4"	2	2'-8"	4	6	2'-6"	6	–	–	–	4	5	–	–	–	2'-0"	17	8	#4	2'-2"	12	2'-8"	4	8"	5	4	2'-11"	8	1'-8"	7	68	.52
2	"	10"	"	4'-2"	"	"	4'-2"	"	4'-6"	6	8	"	8	–	–	–	"	"	–	–	–	3'-10"	32	12	"	"	17	4'-6"	7	"	"	"	"	"	"	"	95	.82
3	"	"	"	6'-0"	"	"	6'-0"	"	6'-4"	8	10	"	9	–	–	–	"	"	–	–	–	5'-8"	47	16	"	"	23	6'-4"	10	"	"	"	"	"	"	"	122	1.11
4	"	"	"	7'-10"	"	"	7'-10"	"	8'-2"	11	12	"	11	–	–	–	"	"	–	–	–	7'-6"	63	20	"	"	29	8'-2"	12	"	"	"	"	"	"	"	151	1.40
1	15"	~	12"	2'-7½"	2'-3"	1'-6"	3'-2½"	4	3'-0"	8	6	3'-0"	7	4	1'-10"	3	8	11	–	–	–	2'-3"	19	8	#4	2'-5"	13	3'-7"	5	1'-3"	10	8	3'-0"	16	2'-3"	9	101	.75
2	"	1'-0"	"	4'-10½"	"	"	5'-5½"	"	5'-3"	14	8	"	9	"	"	"	"	"	–	–	–	4'-6"	38	12	"	"	19	5'-10"	9	"	"	"	"	"	"	"	138	1.16
3	"	"	"	7'-1½"	"	"	7'-8½"	"	7'-6"	20	10	"	11	"	"	"	"	"	–	–	–	6'-9"	56	16	"	"	26	8'-1"	12	"	"	"	"	"	"	"	174	1.57
4	"	"	"	9'-4½"	"	"	9'-11½"	"	9'-9"	26	14	"	16	"	"	"	"	"	–	–	–	9'-0"	75	20	"	"	32	10'-4"	16	"	"	"	"	"	"	"	214	1.98
1	18"	~	12"	2'-11"	2'-6"	2'-0"	4'-0⅜"	4	3'-10"	10	6	3'-6"	8	4	1'-10"	3	8	11	4	1'-0"	2	2'-7"	22	8	#4	2'-8"	14	4'-5"	7	1'-10"	15	12	3'-2"	25	2'-11"	12	129	1.00
2	"	1'-2"	"	5'-7"	"	"	6'-8⅜"	"	6'-6"	17	8	"	11	"	"	"	"	"	"	"	"	5'-3"	44	12	"	"	21	7'-1"	11	"	"	"	"	"	"	"	172	1.55
3	"	"	"	8'-3"	"	"	9'-4⅞"	"	9'-2"	25	12	"	16	"	"	"	"	"	"	"	"	7'-11"	66	16	"	"	29	9'-9"	15	"	"	"	"	"	"	"	219	2.11
4	"	"	"	10'-11"	"	"	12'-0⅞"	"	11'-10"	32	16	"	21	"	"	"	"	"	"	"	"	10'-7"	88	20	"	"	36	12'-5"	19	"	"	"	"	"	"	"	264	2.65
1	24"	~	12"	3'-6"	3'-0"	3'-0"	5'-9¾"	6	5'-0"	20	6	4'-6"	10	4	1'-10"	3	8	11	4	1'-0"	2	3'-2"	26	8	#4	3'-2"	17	6'-2"	9	3'-0"	24	16	3'-5"	37	4'-2"	17	176	1.62
2	"	1'-5"	"	6'-11"	"	"	9'-2¾"	"	8'-5"	34	10	"	17	"	"	"	"	"	"	"	"	6'-7"	55	12	"	"	25	9'-7"	14	"	"	"	"	"	"	"	239	2.46
3	"	"	"	10'-4"	"	"	12'-7¾"	"	11'-10"	47	16	"	27	"	"	"	"	"	"	"	"	9'-10"	82	16	"	"	34	13'-0"	20	"	"	"	"	"	"	"	304	3.32
4	"	"	"	13'-9"	"	"	16'-0¾"	"	15'-3"	61	20	"	34	"	"	"	"	"	"	"	"	13'-5"	112	20	"	"	42	16'-5"	25	"	"	"	"	"	"	"	368	4.18
1	30"	~	12"	4'-1"	3'-6"	4'-0"	7'-6⅝"	8	6'-2"	33	6	5'-6"	12	8	3'-1"	9	12	16	8	2'-2"	7	3'-9"	31	8	#4	3'-8"	20	7'-11"	12	4'-2"	33	20	3'-8"	49	5'-5"	23	245	2.34
2	"	1'-8"	"	8'-3"	"	"	11'-8⅝"	"	10'-4"	55	12	"	25	"	"	"	"	"	"	"	"	7'-11"	56	16	"	"	39	12'-1"	18	"	"	"	"	"	"	"	340	3.58
3	"	"	"	12'-5"	"	"	15'-10⅝"	"	14'-6"	77	18	"	37	"	"	"	"	"	"	"	"	12'-1"	101	24	"	"	59	16'-3"	24	"	"	"	"	"	"	"	435	4.80
4	"	"	"	16'-7"	"	"	20'-0⅝"	"	18'-8"	100	24	"	50	"	"	"	"	"	"	"	"	16'-3"	136	32	"	"	78	20'-5"	31	"	"	"	"	"	"	"	532	6.04
1	36"	~	12"	4'-8"	4'-0"	5'-0"	9'-3½"	10	7'-4"	49	8	6'-6"	20	8	3'-1"	9	12	16	8	2'-2"	7	4'-4"	36	8	#4	4'-2"	22	9'-8"	15	5'-4"	43	24	3'-11"	63	6'-8"	28	308	3.23
2	"	1'-11"	"	9'-7"	"	"	14'-2½"	"	12'-3"	82	14	"	34	"	"	"	"	"	"	"	"	9'-3"	77	16	"	"	45	14'-7"	22	"	"	"	"	"	"	"	426	4.89
3	"	"	"	14'-6"	"	"	19'-1½"	"	17'-2"	115	20	"	49	"	"	"	"	"	"	"	"	14'-2"	118	24	"	"	67	19'-6"	29	"	"	"	"	"	"	"	544	6.55
4	"	"	"	19'-5"	"	"	24'-0½"	"	22'-1"	147	28	"	68	"	"	"	"	"	"	"	"	19'-1"	159	32	"	"	89	24'-5"	37	"	"	"	"	"	"	"	666	8.22
1	42"	~	12"	5'-3"	4'-6"	6'-0"	11'-0¼"	12	8'-6"	68	8	7'-6"	23	12	4'-5"	20	16	21	12	3'-3"	15	4'-11"	41	8	#4	4'-8"	25	11'-5"	17	6'-5"	51	28	4'-2"	78	7'-11"	33	392	4.23
2	"	2'-2"	"	10'-11"	"	"	16'-8¼"	"	14'-2"	114	16	"	45	"	"	"	"	"	"	"	"	10'-7"	88	16	"	"	50	17'-1"	26	"	"	"	"	"	"	"	541	6.40
3	"	"	"	16'-7"	"	"	22'-4¼"	"	19'-10"	159	24	"	68	"	"	"	"	"	"	"	"	16'-3"	136	24	"	"	75	22'-9"	34	"	"	"	"	"	"	"	690	8.56
4	"	"	"	22'-3"	"	"	28'-0¼"	"	25'-6"	204	32	"	90	"	"	"	"	"	"	"	"	21'-11"	183	32	"	"	100	28'-5"	43	"	"	"	"	"	"	"	838	10.74
1	48"	~	15"	5'-10"	5'-3"	7'-0"	12'-9⅛"	14	9'-8"	90	10	8'-6"	32	12	4'-5"	20	16	21	12	3'-4"	15	5'-6"	46	8	#5	5'-5"	45	13'-2"	20	7'-7"	61	32	4'-5"	94	9'-3"	39	483	5.43
2	"	2'-5"	"	12'-3"	"	"	19'-2⅛"	"	16'-1"	150	18	"	58	"	"	"	"	"	"	"	"	11'-11"	99	16	"	"	90	19'-7"	29	"	"	"	"	"	"	"	676	8.25
3	"	"	"	18'-8"	"	"	25'-7⅛"	"	22'-6"	210	26	"	83	"	"	"	"	"	"	"	"	18'-4"	153	24	"	"	136	26'-0"	39	"	"	"	"	"	"	"	871	11.07
4	"	"	"	25'-1"	"	"	32'-0⅛"	"	28'-11"	270	36	"	115	"	"	"	"	"	"	"	"	24'-9"	207	32	"	"	181	32'-5"	49	"	"	"	"	"	"	"	1072	13.89
1	54"	~	15"	6'-5"	5'-9"	8'-0"	14'-6"	16	10'-10"	116	10	9'-6"	36	12	4'-5"	20	20	27	16	4'-5"	27	6'-1"	51	8	#5	5'-11"	49	14'-10"	22	8'-9"	70	40	4'-8"	125	10'-5"	43	586	6.71
2	"	2'-10"	"	13'-9"	"	"	21'-10"	"	18'-2"	194	20	"	71	"	"	"	"	"	"	"	"	13'-5"	112	20	"	"	123	22'-2"	33	"	"	"	"	"	"	"	845	10.28
3	"	"	"	21'-1"	"	"	29'-2"	"	25'-6"	273	30	"	107	"	"	"	"	"	"	"	"	20'-9"	173	32	"	"	198	29'-6"	44	"	"	"	"	"	"	"	1107	13.84
4	"	"	"	28'-5"	"	"	36'-6"	"	32'-10"	351	40	"	143	"	"	"	"	"	"	"	"	28'-1"	234	44	"	"	272	36'-10"	55	"	"	"	"	"	"	"	1367	17.42
1	60"	~	15"	7'-0"	6'-3"	9'-0"	16'-2⅞"	18	12'-0"	144	10	10'-6"	39	16	5'-9"	35	20	27	16	4'-5"	27	6'-8"	56	8	#5	6'-5"	54	16'-7"	25	9'-11"	80	44	4'-11"	145	11'-8"	49	681	8.11
2	"	3'-0"	"	15'-0"	"	"	24'-2⅞"	"	20'-0"	240	22	"	87	"	"	"	"	"	"	"	"	14'-8"	122	20	"	"	134	25'-7"	38	"	"	"	"	"	"	"	[illegible]	[illegible]
3	"	"	"	23'-0"	"	"	32'-2⅞"	"	28'-0"	337	32	"	126	"	"	"	"	"	"	"	"	22'-8"	189	32	"	"	214	32'-7"	49	"	"	"	"	"	[illegible]	[illegible]	[illegible]	[illegible]
4	"	"	"	31'-0"	"	"	40'-2⅞"	"	36'-5"	438	44	"	174	"	"	"	"	"	"	"	"	30'-8"	256	44	"	"	295	40'-8"	61	"	"	"	"	"	[illegible]	[illegible]	[illegible]	[illegible]
1	66"	~	15"	7'-7"	6'-9"	10'-0"	17'-11⅜"	20	13'-2"	176	12	11'-6"	52	16	5'-9"	35	24	32	20	5'-7"	42	7'-3"	60	8	#5	6'-11"	58	18'-4"	28	11'-1"	89	48	5'-2"	166	[illegible]	[illegible]	[illegible]	[illegible]
2	"	3'-1"	"	16'-2"	"	"	26'-6⅜"	"	21'-9"	231	24	"	104	"	"	"	"	"	"	"	"	15'-10"	132	20	"	"	144	26'-11"	40	"	"	"	"	"	[illegible]	[illegible]	[illegible]	[illegible]
3	"	"	"	24'-9"	"	"	35'-1⅜"	"	30'-4"	405	34	"	147	"	"	"	"	"	"	"	"	24'-5"	204	32	"	"	231	35'-6"	53	"	"	"	"	"	[illegible]	[illegible]	[illegible]	[illegible]
4	"	"	"	33'-4"	"	"	43'-8⅜"	"	39'-8"	530	46	"	199	"	"	"	"	"	"	"	"	33'-0"	275	44	"	"	318	44'-2"	67	"	"	"	"	"	[illegible]	[illegible]	[illegible]	[illegible]
1	72"	~	15"	8'-2"	7'-3"	11'-0"	19'-8⅝"	22	14'-4"	211	12	12'-6"	56	16	5'-9"	35	24	32	20	5'-7"	42	7'-10"	65	8	#5	7'-5"	62	20'-1"	30	12'-3"	98	52	5'-5"	186	[illegible]	[illegible]	[illegible]	[illegible]
2	"	3'-2"	"	17'-4"	"	"	28'-10⅝"	"	23'-6"	345	24	"	113	"	"	"	"	"	"	"	"	17'-0"	142	20	"	"	155	29'-3"	44	"	"	"	"	"	[illegible]	[illegible]	[illegible]	[illegible]
3	"	"	"	26'-6"	"	"	38'-0⅝"	"	32'-10"	482	38	"	179	"	"	"	"	"	"	"	"	26'-2"	218	32	"	"	248	38'-5"	58	"	"	"	"	"	[illegible]	[illegible]	[illegible]	[illegible]
4	"	"	"	35'-8"	"	"	47'-2⅝"	"	41'-10"	615	50	"	235	"	"	"	"	"	"	"	"	35'-4"	295	44	"	"	341	47'-8"	72	"	"	"	"	"	[illegible]	[illegible]	[illegible]	[illegible]

RECORD DOCUMENTS

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JONES & BOYD, INC.
BY: (signature)
DATE: 10/11/04

*Concrete Quantities increase slightly for metal pipe installations.

GENERAL NOTES :-

All exposed corners shall be chamfered ¾".

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete. Total Quantities include one 20 diameter lap for all bars over 60'-0" in length.

TEXAS HIGHWAY DEPARTMENT

CONCRETE HEADWALLS FOR PIPE CULVERTS

12 TO 72 INCHES IN DIAMETER

CH-11

DN. T.H.D.	DRAWING	DATE	
CK. DN. T.H.D.	Original	Feb. 1950	
TW. M.D.A.			
CK. DW. K.M.	Rev. 11-67 Concrete		
TR. O.C.K.			
CK. TR. M.D.A.			

BENCHMARKS:

1. " ☐ Cut on top centerline headwall on Northeast corner Missouri West and Redbud Road.
Elev. 764.92'
2. " ☐ Cut on top centerline headwall on Northeast corner Missouri Eest and Redbud Road.
Elev. 764.92'

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE	NO.	REVISIONS DURING PLAN REVIEW	BY	DATE

9/25/03 — STATE OF TEXAS — JEFFERY M. WINKLER — 90358 — LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Jeffery M. Winkler, P.E. 90358. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.

FOR REVIEW

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- Planning
- Landscape Architecture
- Surveying

TXDOT DETAIL SHEET
HEADWALLS FOR PIPE CULVERTS
HERITAGE, PHASE 2
CITY OF CELINA
COLLIN COUNTY, TEXAS

PROJECT NO. WI401
SHEET NO. D4

BJ H:\Projects\WI401\dwg\Phase 2\WI401DET.dwg 9/8/03 10:56 am

P-200402-02