APPENDIX B

30% PRELIMINARY DESIGN - TO SUPPORT THE ENVIRONMENTAL ASSESSMENT

TRES PALACIOS CREEK CHANNELIZATION PROJECT

30% PRELIMINARY DESIGN - TO SUPPORT THE ENVIRONMENTAL ASSESSMENT
NOT FOR BIDDING OR CONSTRUCTION

A Joint Project By The City of El Campo & Wharton County, Texas
Funded in Part With a Severe Repetative Loss Grant
from FEMA and the Texas Water Development Board

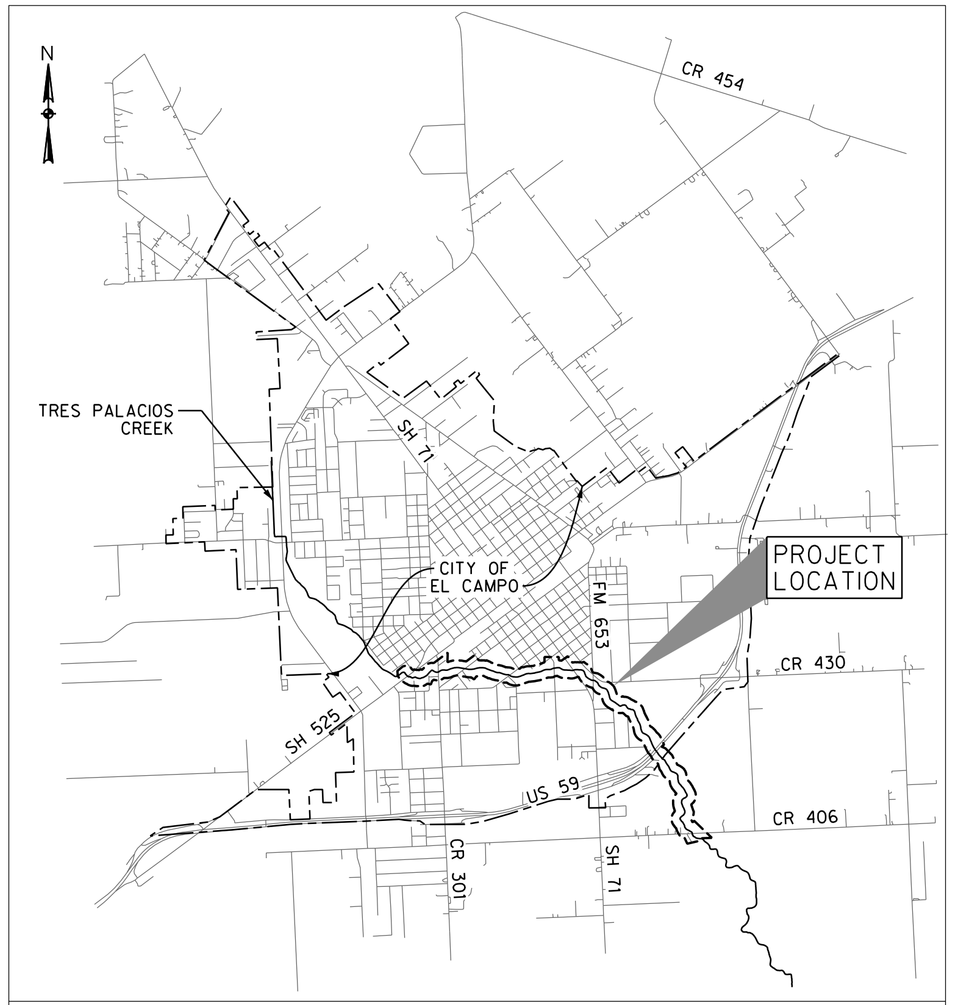
PRELIMINARY - FOR INTERIM REVIEW ONLY
These documents are for Review Purposes only, not for Construction.
They were prepared by, or under the supervision of:

MARK W. McGRAW P.E. # 83967 05/16/2012
HALFF ASSOCIATES TBPE FIRM #F-312

NOT FOR CONSTRUCTION

SHEET INDEX

1	COVER SHEET
2	GENERAL NOTES
3	TYPICAL SECTIONS
4	PROJECT LAYOUT
5-7	CHANNEL CENTERLINE CONTROL DATA
8-21	PLAN & PROFILE



LOCATION MAP N.T.S.

HALFF
4030 WEST BRAKER LANE, SUITE 450
AUSTIN, TEXAS 78759-5356
TEL (512) 252-8184
FAX (512) 252-8141

TBPE FIRM #F-312

SUBMITTED 05/16/2012

GENERAL NOTES:

1. THE CONTRACTOR SHALL VIDEO ALL POTENTIALLY IMPACTED PRIVATE PROPERTY AREAS PRIOR TO WORK. VIDEOS SHALL INCLUDE DATE NOTATION AND AUDIO IDENTIFICATION OF PROPERTY ADDRESS. THIS PRE-CONSTRUCTION VIDEO TAPING SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT. A COPY SHALL BE PROVIDED TO THE CITY OF EL CAMPO PUBLIC WORKS DEPT.

2. THE CONTRACTOR SHALL UTILIZE THE CITY OF EL CAMPO STANDARD DETAILS AS APPLICBLE TO THE WORK CONTAINED HEREIN. THE STANDARD DETAILS ARE NOT INCLUDED IN THESE PLANS.

3. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 8:00 AM TO 5:00 PM UNLESS APPROVED OR DIRECTED BY THE ENGINEER. CONTRACTOR IS RESPONSIBLE FOR HOME OWNER NOTIFICATION.

4. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER AND SEWER CONNECTIONS TO HOMES/BUSINESSES IN WORKING ORDER AT ALL TIMES, EXCEPT FOR BRIEF INTERRUPTIONS IN SERVICE FOR SERVICES TO BE REINSTATED. IN NO CASE SHALL SERVICES BE ALLOWED TO REMAIN OUT OF SERVICE OVERNIGHT.

5. ALL BARRICADES, WARNING SIGNS, LIGHT DEVICES, ETC., FOR THE GUIDANCE AND PROTECTION OF TRAFFIC AND PEDESTRIANS MUST CONFORM TO THE LATEST TXDOT STANDARDS.

6. CONTRACTOR SHALL BECOME FAMILIAR WITH THE TERMS AND CONDITIONS SETFORTH IN PERMANENT DRAINAGE EASEMENTS. INGRESS AND EGRESS IS ALLOWED ON PRIVATE PROPERTY IN ORDER TO ACCESS TEMPORARY CONSTRUCTION EASEMENTS. IN THE AREAS WHERE NO CONSTRUCTION EASEMENTS ARE AVAILABLE, CONTRACTOR SHALL LIMIT ACTIVITIES TO WITHIN THE EXISTING DRAINAGE/UTILITY EASEMENT.

7. THE CONTRACTOR SHALL REMOVE FROM THE PROJECT AREA ALL SURPLUS MATERIAL. THIS SHALL BE INCIDENTAL AND NOT A SEPARATE PAY ITEM. SURPLUS MATERIALS FROM EXCAVATION INCLUDING CONCRETE, TRASH, ETC., SHALL BE PROPERLY DISPOSED OF AT A SITE APPROVED BY THE ENGINEER.

8. CONTRACTOR SHALL SAWCUT EXISTING CURB AND GUTTER, PAVEMENT, DRIVEWAYS, AND SIDEWALKS AT AREAS WHERE PAVEMENT OR CONCRETE IS TO BE REMOVED. SAWCUTS WILL BE CONSIDERED SUBSIDIARY TO THE PROJECT. CONTRACTOR SHALL PROVIDE COMPACTED SELECT MATERIAL AS NEEDED TO REPAIR DAMAGED DRIVES, STREETS, WALKS AND PATIOS. SAWCUTS SHALL BE FULL DEPTH.

9. THE CONTRACTOR SHALL PRESERVE AND PROTECT OR REMOVE AND REPLACE (WITH PRIOR APPROVAL OF AFFECTED PROPERTY OWNER) ANY TREES, SHRUBS, HEDGES, RETAINING WALLS, LANDSCAPING, BUILDINGS, FENCES, WALKS, ETC. IN OR NEAR PROPOSED CONSTRUCTION AREA. THIS WORK SHALL BE CONSIDERED INCIDENTAL AND NOT A SEPARATE PAY ITEM.

10. NO EXCESS EXCAVATED MATERIAL SHALL BE DEPOSITED IN LOW AREAS OR ALONG NATURAL DRAINAGE WAYS.

11. NO FILL SHALL BE PLACED WITHIN THE 100-YEAR FLOOD PLAIN.

12. NO MATERIAL MAY BE STORED WITHIN THE 100-YEAR FLOOD PLAIN.

13. CONTRACTOR SHALL SUBMIT WRITTEN REQUEST TO THE ENGINEER AND LANDOWNER FOR APPROVAL OF ALL AREAS TO BE USED FOR STAGING, MOBILIZATION, EQUIPMENT AND MATERIAL STORAGE AND GENERAL PROJECT CONSTRUCTION MANAGEMENT. REQUEST SHALL BE SUBMITTED TO THE ENGINEER AND LANDOWNER WITHIN 5 DAYS OF NOTICE TO PROCEED. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM ALL AFFECTED LAND OWNERS PRIOR TO BEGINNING CONSTRUCTION.

14. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND SIDEWALKS ADJACENT TO PROJECT FREE OF MUD AND DEBRIS FROM THE CONSTRUCTION. CONTRACTOR SHALL USE A CONSTRUCTION ENTRANCE, SEE DETAIL SHEET 3.

15. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING GENERAL SAFETY AT AND ADJACENT TO THE PROJECT AREA, INCLUDING THE PERSONAL SAFETY OF THE CONSTRUCTION CREW AND GENERAL PUBLIC AND THE SAFETY OF PUBLIC AND PRIVATE PROPERTY.

16. CONTRACTOR SHALL VERIFY THE ELEVATION, CONFIGURATION, AND ANGULATION OF EXISTING LINES PRIOR TO CONSTRUCTION. SUCH VERIFICATION SHALL BE CONSIDERED AS SUBSIDIARY TO THE COST OF PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

17. THE LOCATION OF DRIVEWAYS, STEPS, RETAINING WALLS, ETC. AND ALL WATER, SANITARY SEWER, STORM SEWER, TELEPHONE, GAS, ELECTRIC AND CABLE TELEVISION UTILITIES, AS SHOWN ON THESE PLANS ARE APPROXIMATE. ACONSULTATION WITH THE PROPERTY OWNERS AND THE RESPECTIVE UTILITY COMPANIES.

18. CONTRACTOR SHALL HAVE UTILITY COMPANIES LOCATE AND MARK ALL UNDERGROUND FACILITIES PRIOR TO BEGINNING CONSTRUCTION.

WHARTON COUNTY ELECRIC COOPERATIVE (979)543-6271 SOUTHWESTERN BELL 1-800-395-0440 CHARTER COMMUNICATIONS (817) 509-2225 CITY OF EL CAMPO WATER & SEWER (979) 541-5075 CENTRAL CONTROL TRINITY RIVER AUTHORITY (817) 467-4343

19. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL UTILITY POLES, GAS MAINS, TELEPHONE CABLES, SANITARY SEWER LINES, TESCO CABLES, DRAINAGE PIPES, UTILITY SERVICES AND ALL OTHER UTILITIES, AND STRUCTURES BOTH ABOVE AND BELOW GROUND DURING CONSTRUCTION. THE CONTRACTOR IS LIABLE FOR ALL DAMAGES DONE TO SUCH EXISTING FACILITIES AS A RESULT OF THE CONTRACTORS OPERATIONS. THIS WORK SHALL BE CONSIDERED INCIDENTAL AND NOT A SEPARATE PAY ITEM.

20. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED WORK UTILIZING A TRENCH SAFETY PLAN, PREPARED BY THE CONTRACTOR FOR THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR ALL TRENCH SAFETY OF TRENCHES 5 FT IN DEPTH OR GREATER.

21. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE (MIN. 2% SLOPE) FOR ADJACENT PROPERTIES TO THE PROPOSED CHANNEL IMPROVEMENTS.

22. CONTRACTOR SHALL INSTALL A CHAIN LINK FENCE TO REPLACE EXISTING CHAIN LINK AND WIRE FENCES CONTRACTOR SHALL INSTALL A WOODEN FENCE TO REPLACE ALL EXISTING WOODEN FENCES. WOOD FENCES SHALL CONSIST OF SPRUCE, CEDAR, OR WHITE PINE TO MATCH EXISTING FENCE MATERIALS. A CHAIN LINK FENCE SHALL BE USED FOR TEMPORARY CONSTRUCTION.

23. SELECT COMPACTED FILL (OR "COMPACTED FILL") SHALL CONSIST OF TYPE "B" OR "C" BACKFILL (SANDY GRAVEL) AS SPECIFIED IN CITY OF EL CAMPO STANDARD SPECIFICATIONS.

24. CONTRACTOR SHALL PRESERVE THE EXISTING FLOWLINE OF THE CHANNEL AND PERFORM GRADING AND FILL OPERATIONS ONLY ON SLOPES AND AT THE TOE OF SLOPES AS INDICATED.

25. NO GRADING OR DISTURBANCE SHALL BE ALLOWED IN THE CHANNEL BELOW THE ORDINARY HIGH WATER MARK ELEVATION WITH THE EXCEPTION OF SPECIFICALLY NOTED DEBRIS & SEDIMENT. SUCH WORK SHALL BE FIRST COORDINATED WITH AND DONE WHILE THE INSPECTOR IS ON THE PROJECT.

TRES PALACIOS CR. CHANNELIZATION PROJECT

30% PRELIMINARY DESIGN TO SUPPORT THE ENVIRONMENTAL ASSESSMENT

CITY OF EL CAMPO
315 E. JACKSON ST.
EL CAMPO, TX 77437

WHARTON COUNTY
2617 MILAM ST.
WHARTON, TX 77488

HALFF
4030 WEST BRAKER LANE, SUITE 450
AUSTIN, TEXAS 78759-5356
TEL (512) 252-8084
FAX (512) 252-8141
TBPE FIRM #F-312

Revision		
No.	Date	Description

PRELIMINARY
FOR REVIEW ONLY

THESE DOCUMENTS ARE FOR INTERIM REVIEW AND NOT INTENDED FOR PERMIT OR CONSTRUCTION PURPOSES. THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

MARK W. MCGRAW — 83967
NAME — P.E. NO.

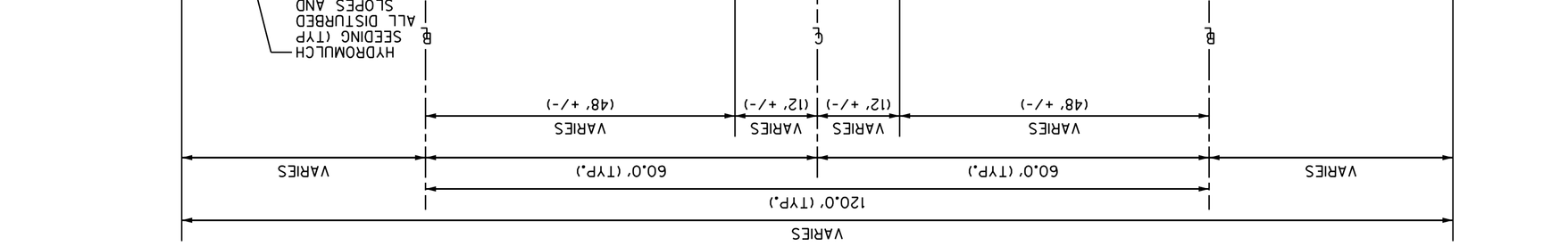
05/16/12
DATE

Project No.:	27773
Issued:	05 / 16 / 12
Drawn By:	RSB
Checked By:	MWM
Scale:	AS NOTED

Sheet Title

GENERAL NOTES

ah2413 HALFF i:\27000s\27773\cadd\Sheets\C0.10-GN-27773.dgn Sheet PDF_2D_MON_FW_150.plt

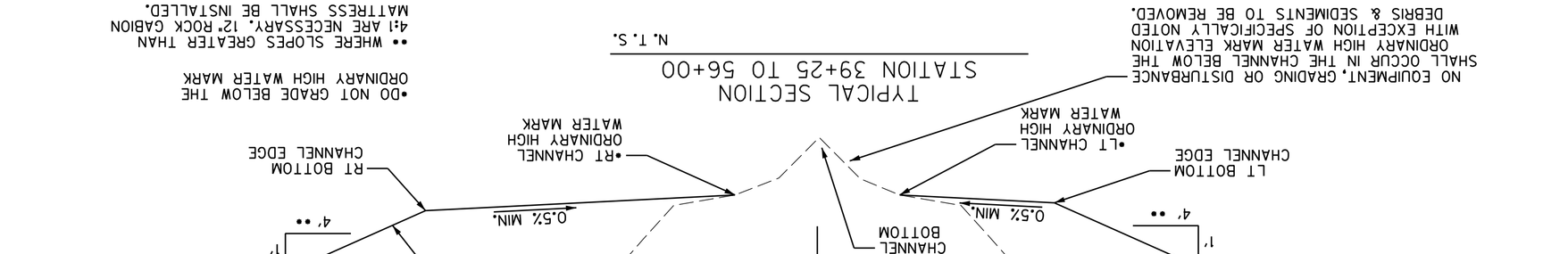


TYPICAL SECTION
STATION 1+72 TO 36+25
N. T. S.

NO EQUIPMENT, GRADING OR DISTURBANCE SHALL OCCUR IN THE CHANNEL BELOW THE ORDINARY HIGH WATER MARK ELEVATION WITH EXCEPTION OF SPECIFICALLY NOTED DEBRIS & SEDIMENTS TO BE REMOVED.

•DO NOT GRADE BELOW THE ORDINARY HIGH WATER MARK

•• WHERE SLOPES GREATER THAN 4:1 ARE NECESSARY, 12" ROCK GABION MATTRESS SHALL BE INSTALLED.

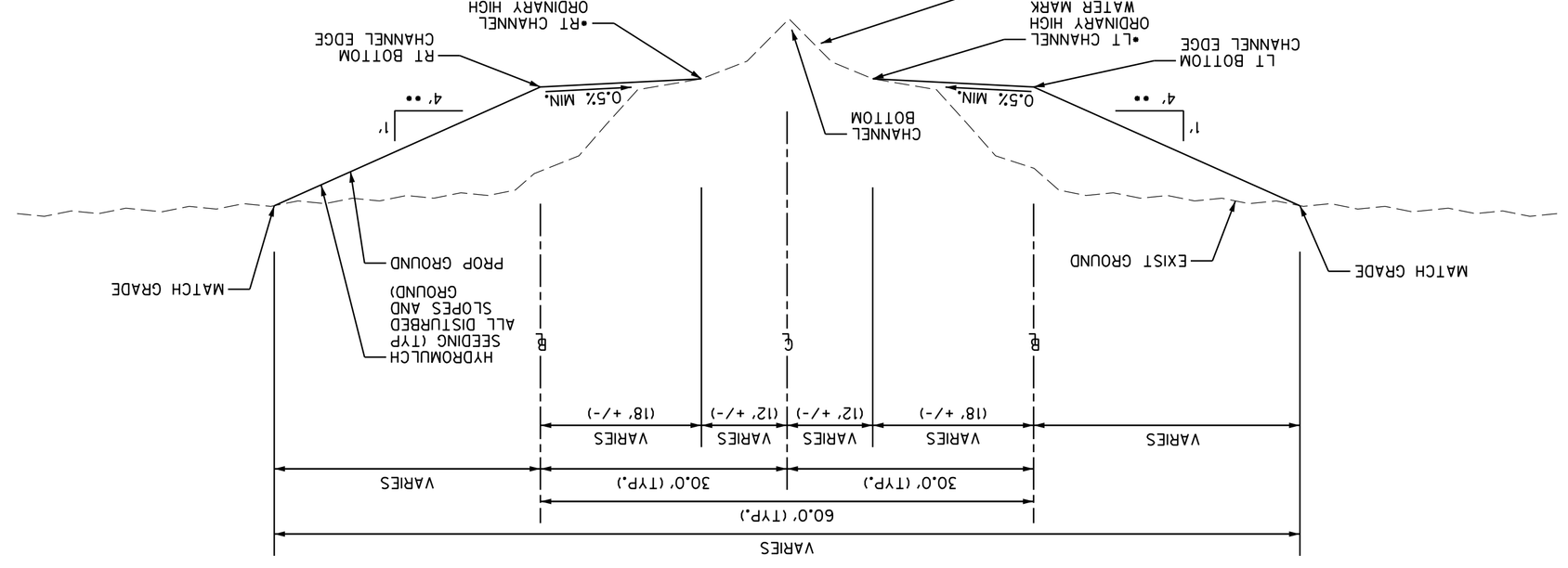


TYPICAL SECTION
STATION 39+25 TO 56+00
N. T. S.

NO EQUIPMENT, GRADING OR DISTURBANCE SHALL OCCUR IN THE CHANNEL BELOW THE ORDINARY HIGH WATER MARK ELEVATION WITH EXCEPTION OF SPECIFICALLY NOTED DEBRIS & SEDIMENTS TO BE REMOVED.

•DO NOT GRADE BELOW THE ORDINARY HIGH WATER MARK

•• WHERE SLOPES GREATER THAN 4:1 ARE NECESSARY, 12" ROCK GABION MATTRESS SHALL BE INSTALLED.



TYPICAL SECTION
STATION 56+00 TO 140+00
N. T. S.

NO EQUIPMENT, GRADING OR DISTURBANCE SHALL OCCUR IN THE CHANNEL BELOW THE ORDINARY HIGH WATER MARK ELEVATION WITH EXCEPTION OF SPECIFICALLY NOTED DEBRIS & SEDIMENTS TO BE REMOVED.

•DO NOT GRADE BELOW THE ORDINARY HIGH WATER MARK

•• WHERE SLOPES GREATER THAN 4:1 ARE NECESSARY, 12" ROCK GABION MATTRESS SHALL BE INSTALLED.

PRELIMINARY
FOR REVIEW ONLY

THESE DOCUMENTS ARE FOR INTERIM REVIEW AND NOT INTENDED FOR PERMIT OR CONSTRUCTION PURPOSES. THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

MARK W. MCGRAW 83987
NAME P.E. NO.
05/16/12
DATE

Revision		
No.	Date	Description

HALFF
4030 WEST BRAKER LANE, SUITE 400
AUSTIN, TEXAS 78759-5356
TEL (512) 777-4380
FAX (512) 252-8141
TBPE FIRM #F-312

CITY OF EL CAMPO
315 E. JACKSON ST.
EL CAMPO, TX 77437

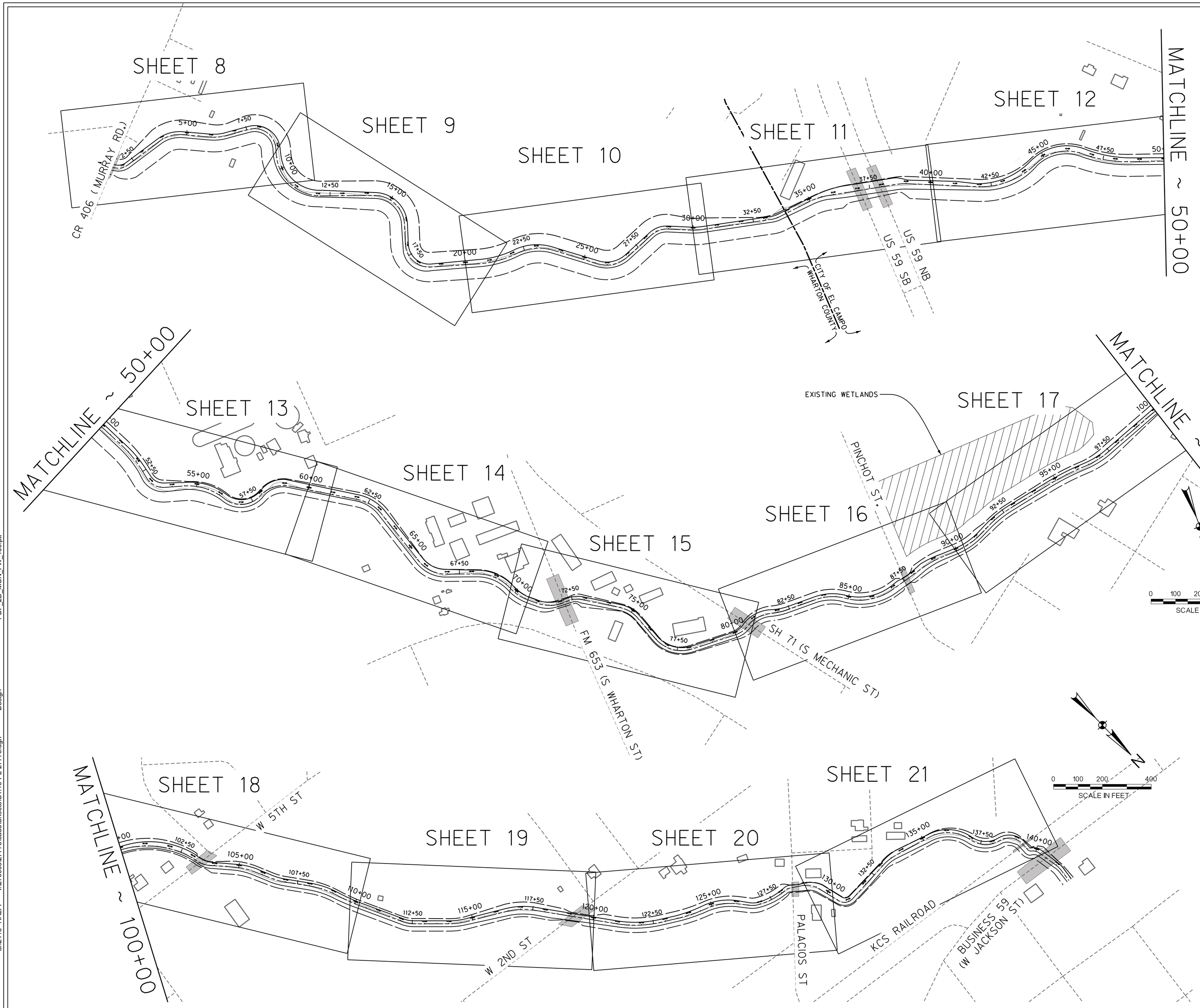
WHARTON COUNTY
536 E. MILAM ST.
WHARTON, TX 77488

TRES PALACIOS CR. CHANNELIZATION PROJECT

30% PRELIMINARY DESIGN
TO SUPPORT THE
ENVIRONMENTAL ASSESSMENT

Project No.: 27773
Issued: 05 / 16 / 12
Drawn By: RSB
Checked By: MWM
Scale: AS NOTED
Sheet Title
TYPICAL SECTIONS

ah2413 HALFF I:\27000s\27773\cadd\Sheets\C1.01-TY-27773.dgn Sheet PDF_2D_MON_FW_150.pltt



LEGEND

- EXIST CONTOUR
- PROP CONTOUR
- EXIST CHANNEL CENTERLINE
- 1+00 PROP CHANNEL CENTERLINE
- ORDINARY HIGH WATER MARK EDGE
- PROP TOE CHANNEL 4:1 SLOPE
- PROPERTY BOUNDARY
- EXIST BRIDGE
- EXIST BUILDING

NATIONAL GEODETIC SURVEY MONUMENTS
NO. A 575; DISK SET IN HWY 71 BRIDGE ABUTMENT (SOUTH END OF SOUTH WINGWALL OF SOUTHEAST ABUTMENT, APPROX. 17-FEET SW OF HWY CENTERLINE)
N= 4,153,286.0
E= 866,136.4
ELEV= 101.9

NO. W 1506; STAINLESS STEEL ROD.
(57.0 FT SOUTHEAST OF THE CENTERLINE OF HIGHWAY 252, 130 FT NORTHEAST OF THE SOUTHEAST END OF THE NORTHEAST ABUTMENT OF A BRIDGE OVER TRES PALACIOS CREEK, 41.5 FT NORTHWEST OF THE NORTHWEST RAIL OF THE SOUTHERN PACIFIC RAILROAD, 50.5 FT SOUTHWEST OF THE EXTENDED CENTERLINE OF AVENUE I)
N= 4,153,280.
E= 864,470.
ELEV= 98.09

TRES PALACIOS CR. CHANNELIZATION PROJECT

30% PRELIMINARY DESIGN TO SUPPORT THE ENVIRONMENTAL ASSESSMENT

CITY OF EL CAMPO
315 E. JACKSON ST.
EL CAMPO, TX 77437

WHARTON COUNTY
2617 MILAM ST.
WHARTON, TX 77488

HALFF
4030 WEST BRAKER LANE, SUITE 450
AUSTIN, TEXAS 78759-5356
TEL (512) 252-8184
FAX (512) 252-8141
TBPE FIRM #F-312

Revision		
No.	Date	Description

PRELIMINARY
FOR REVIEW ONLY

THESE DOCUMENTS ARE FOR INTERIM REVIEW AND NOT INTENDED FOR PERMIT OR CONSTRUCTION PURPOSES. THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

MARK W. MCGRAW — 83967
NAME — P.E. NO.
05/16/12
DATE

Project No.:	27773
Issued:	05 / 16 / 12
Drawn By:	RSB
Checked By:	MWM
Scale:	AS NOTED

Sheet Title
PROJECT LAYOUT / SURVEY CONTROL

4 OF 21
Sheet Number

ah2413 HALFF i:\27000s\27773\cadd\Sheets\C1.10-PL-27773.dgn Design PDF_2D_MON_FW_150.plt

Beginning chain TPCL description
==========

Point TPCL0001 N 13,620,665.14 E 2,845,703.43 Sta 1+00.00

Course from TPCL0001 to PC TPCL-1 N 15° 13' 49.55" W Dist 68.39

Curve Data
•----------•

Curve TPCL-1
P.I. Station 1+95.56 N 13,620,757.34 E 2,845,678.33
Delta = 46° 55' 16.70" (LT)
Degree = 91° 31' 24.07"
Tangent = 27.17
Length = 51.27
Radius = 62.60
External = 5.64
Long Chord = 49.85
Mid. Ord. = 5.18
P.C. Station 1+68.39 N 13,620,731.13 E 2,845,685.46
P.T. Station 2+19.66 N 13,620,770.04 E 2,845,654.30
C.C. N 13,620,714.68 E 2,845,625.06
Back = N 15° 13' 49.55" W
Ahead = N 62° 09' 06.25" W
Chord Bear = N 38° 41' 27.90" W

Course from PT TPCL-1 to PC TPCL-2 N 62° 09' 06.25" W Dist 162.82

Curve Data
•----------•

Curve TPCL-2
P.I. Station 4+35.15 N 13,620,870.70 E 2,845,463.76
Delta = 41° 41' 22.23" (RT)
Degree = 41° 24' 57.27"
Tangent = 52.68
Length = 100.66
Radius = 138.34
External = 9.69
Long Chord = 98.45
Mid. Ord. = 9.05
P.C. Station 3+82.48 N 13,620,846.09 E 2,845,510.34
P.T. Station 4+83.14 N 13,620,920.05 E 2,845,445.35
C.C. N 13,620,968.42 E 2,845,574.96
Back = N 62° 09' 06.25" W
Ahead = N 20° 27' 44.02" W
Chord Bear = N 41° 18' 25.14" W

Course from PT TPCL-2 to PC TPCL-3 N 20° 27' 44.02" W Dist 112.17

Curve Data
•----------•

Curve TPCL-3
P.I. Station 6+30.84 N 13,621,058.44 E 2,845,393.71
Delta = 20° 55' 52.33" (LT)
Degree = 29° 47' 03.47"
Tangent = 35.53
Length = 70.28
Radius = 192.37
External = 3.25
Long Chord = 69.89
Mid. Ord. = 3.20
P.C. Station 5+95.31 N 13,621,025.14 E 2,845,406.13
P.T. Station 6+65.58 N 13,621,085.09 E 2,845,370.22
C.C. N 13,620,957.89 E 2,845,225.90
Back = N 20° 27' 44.02" W
Ahead = N 41° 23' 36.35" W
Chord Bear = N 30° 55' 40.19" W

Course from PT TPCL-3 to PC TPCL-4 N 41° 23' 36.35" W Dist 113.88

Curve Data
•----------•

Curve TPCL-4
P.I. Station 8+86.51 N 13,621,250.83 E 2,845,224.14
Delta = 101° 41' 43.46" (RT)
Degree = 65° 44' 36.14"
Tangent = 107.04
Length = 154.69
Radius = 87.15
External = 50.88
Long Chord = 135.17
Mid. Ord. = 32.13
P.C. Station 7+79.47 N 13,621,170.53 E 2,845,294.91
P.T. Station 9+34.15 N 13,621,303.86 E 2,845,317.12
C.C. N 13,621,228.15 E 2,845,360.29
Back = N 41° 23' 36.35" W
Ahead = N 60° 18' 07.11" E
Chord Bear = N 9° 27' 15.38" E

Course from PT TPCL-4 to PC TPCL-5 N 60° 18' 07.11" E Dist 25.93

Curve Data
•----------•

Curve TPCL-5
P.I. Station 11+24.92 N 13,621,398.37 E 2,845,482.83
Delta = 84° 07' 53.28" (LT)
Degree = 31° 22' 11.86"
Tangent = 164.83
Length = 268.19
Radius = 182.65
External = 63.38
Long Chord = 244.74
Mid. Ord. = 47.05
P.C. Station 9+60.08 N 13,621,316.70 E 2,845,339.64
P.T. Station 12+28.28 N 13,621,549.15 E 2,845,416.23
C.C. N 13,621,475.36 E 2,845,249.15
Back = N 60° 18' 07.11" E
Ahead = N 23° 49' 46.17" W
Chord Bear = N 18° 14' 10.47" E

Course from PT TPCL-5 to PC TPCL-6 N 23° 49' 46.17" W Dist 207.87

Curve Data
•----------•

Curve TPCL-6
P.I. Station 15+50.65 N 13,621,844.05 E 2,845,285.98
Delta = 85° 53' 23.74" (RT)
Degree = 46° 34' 04.25"
Tangent = 114.51
Length = 184.44
Radius = 123.04
External = 45.04
Long Chord = 167.65
Mid. Ord. = 32.97
P.C. Station 14+36.14 N 13,621,739.29 E 2,845,332.25
P.T. Station 16+20.58 N 13,621,897.70 E 2,845,387.15
C.C. N 13,621,789.00 E 2,845,444.80
Back = N 23° 49' 46.17" W
Ahead = N 62° 03' 37.57" E
Chord Bear = N 19° 06' 55.70" E

Course from PT TPCL-6 to PC TPCL-7 N 62° 03' 37.57" E Dist 82.01

Curve Data
•----------•

Curve TPCL-7
P.I. Station 18+02.91 N 13,621,983.13 E 2,845,548.23
Delta = 91° 16' 46.77" (LT)
Degree = 58° 24' 26.59"
Tangent = 100.31
Length = 156.28
Radius = 98.10
External = 42.21
Long Chord = 140.27
Mid. Ord. = 29.51
P.C. Station 17+02.60 N 13,621,936.13 E 2,845,459.61
P.T. Station 18+58.88 N 13,622,070.68 E 2,845,499.26
C.C. N 13,622,022.79 E 2,845,413.64
Back = N 62° 03' 37.57" E
Ahead = N 29° 13' 09.20" W
Chord Bear = N 16° 25' 14.18" E

Course from PT TPCL-7 to PC TPCL-8 N 29° 13' 09.20" W Dist 195.18

Curve Data
•----------•

Curve TPCL-8
P.I. Station 21+39.00 N 13,622,315.16 E 2,845,362.51
Delta = 23° 18' 10.23" (LT)
Degree = 13° 54' 28.91"
Tangent = 84.95
Length = 167.55
Radius = 411.96
External = 8.67
Long Chord = 166.40
Mid. Ord. = 8.49
P.C. Station 20+54.05 N 13,622,241.02 E 2,845,403.98
P.T. Station 22+21.60 N 13,622,366.85 E 2,845,295.10
C.C. N 13,622,039.92 E 2,845,044.44
Back = N 29° 13' 09.20" W
Ahead = N 52° 31' 19.43" W
Chord Bear = N 40° 52' 14.32" W

Curve Data
•----------•

Curve TPCL-9
P.I. Station 23+00.33 N 13,622,416.81 E 2,845,234.26
Delta = 42° 04' 25.21" (RT)
Degree = 27° 59' 26.57"
Tangent = 78.73
Length = 150.31
Radius = 204.70
External = 14.62
Long Chord = 146.96
Mid. Ord. = 13.64
P.C. Station 22+21.60 N 13,622,366.85 E 2,845,295.10
P.T. Station 23+71.92 N 13,622,494.66 E 2,845,222.57
C.C. N 13,622,525.04 E 2,845,425.00
Back = N 50° 36' 33.94" W
Ahead = N 8° 32' 08.73" W
Chord Bear = N 29° 34' 21.34" W

Course from PT TPCL-9 to PC TPCL-10 N 8° 32' 08.73" W Dist 188.79

Curve Data
•----------•

Curve TPCL-10
P.I. Station 26+21.86 N 13,622,741.84 E 2,845,185.47
Delta = 51° 28' 21.45" (LT)
Degree = 45° 09' 38.22"
Tangent = 61.16
Length = 113.98
Radius = 126.87
External = 13.97
Long Chord = 110.18
Mid. Ord. = 12.59
P.C. Station 25+60.70 N 13,622,681.36 E 2,845,194.55
P.T. Station 26+74.68 N 13,622,772.41 E 2,845,132.50
C.C. N 13,622,662.52 E 2,845,069.08
Back = N 8° 32' 08.73" W
Ahead = N 60° 00' 30.18" W
Chord Bear = N 34° 16' 19.46" W

Course from PT TPCL-10 to PC TPCL-11 N 60° 00' 30.18" W Dist 137.83

Curve Data
•----------•

Curve TPCL-11
P.I. Station 28+75.60 N 13,622,872.84 E 2,844,958.48
Delta = 38° 21' 00.63" (RT)
Degree = 31° 34' 43.34"
Tangent = 63.09
Length = 121.44
Radius = 181.44
External = 10.66
Long Chord = 119.19
Mid. Ord. = 10.07
P.C. Station 28+12.51 N 13,622,841.30 E 2,845,013.13
P.T. Station 29+33.95 N 13,622,931.48 E 2,844,935.20
C.C. N 13,622,998.45 E 2,845,103.83
Back = N 60° 00' 30.18" W
Ahead = N 21° 39' 29.55" W
Chord Bear = N 40° 49' 59.87" W

Curve Data
•----------•

Curve TPCL-12
P.I. Station 30+11.40 N 13,623,003.46 E 2,844,906.62
Delta = 11° 33' 53.02" (LT)
Degree = 7° 29' 30.75"
Tangent = 77.44
Length = 154.36
Radius = 764.77
External = 3.91
Long Chord = 154.10
Mid. Ord. = 3.89
P.C. Station 29+33.95 N 13,622,931.48 E 2,844,935.20
P.T. Station 30+88.31 N 13,623,068.25 E 2,844,864.18
C.C. N 13,622,649.23 E 2,844,224.42
Back = N 21° 39' 29.55" W
Ahead = N 33° 13' 22.56" W
Chord Bear = N 27° 26' 26.06" W

Course from PT TPCL-12 to PC TPCL-13 N 33° 13' 22.56" W Dist 179.21

Curve Data
•----------•

Curve TPCL-13
P.I. Station 33+11.95 N 13,623,255.33 E 2,844,741.65
Delta = 17° 33' 07.11" (LT)
Degree = 19° 54' 37.01"
Tangent = 44.43
Length = 88.16
Radius = 287.77
External = 3.41
Long Chord = 87.81
Mid. Ord. = 3.37
P.C. Station 32+67.53 N 13,623,218.17 E 2,844,765.99
P.T. Station 33+55.68 N 13,623,283.43 E 2,844,707.24
C.C. N 13,623,060.50 E 2,844,525.26
Back = N 33° 13' 22.56" W
Ahead = N 50° 46' 29.68" W
Chord Bear = N 41° 59' 56.12" W

Course from PT TPCL-13 to PC TPCL-14 N 50° 46' 29.68" W Dist 207.00

Curve Data
•----------•

Curve TPCL-14
P.I. Station 35+87.83 N 13,623,430.22 E 2,844,527.40
Delta = 16° 04' 57.35" (RT)
Degree = 32° 11' 40.10"
Tangent = 25.14
Length = 49.95
Radius = 177.97
External = 1.77
Long Chord = 49.79
Mid. Ord. = 1.75
P.C. Station 35+62.68 N 13,623,414.33 E 2,844,546.88
P.T. Station 36+12.64 N 13,623,450.90 E 2,844,513.09
C.C. N 13,623,552.19 E 2,844,659.42
Back = N 50° 46' 29.68" W
Ahead = N 34° 41' 32.33" W
Chord Bear = N 42° 44' 01.00" W

Course from PT TPCL-14 to PC TPCL-15 N 34° 41' 32.33" W Dist 237.06

Curve Data
•----------•

Curve TPCL-15
P.I. Station 38+73.53 N 13,623,665.41 E 2,844,364.60
Delta = 11° 46' 42.40" (RT)
Degree = 24° 48' 02.45"
Tangent = 23.83
Length = 47.49
Radius = 231.03
External = 1.23
Long Chord = 47.41
Mid. Ord. = 1.22
P.C. Station 38+49.70 N 13,623,645.82 E 2,844,378.16
P.T. Station 38+97.19 N 13,623,687.36 E 2,844,355.32
C.C. N 13,623,777.31 E 2,844,568.12
Back = N 34° 41' 32.33" W
Ahead = N 22° 54' 49.93" W
Chord Bear = N 28° 48' 11.13" W

Course from PT TPCL-15 to PC TPCL-16 N 22° 54' 49.93" W Dist 349.12

Curve Data
•----------•

Curve TPCL-16
P.I. Station 43+45.76 N 13,624,097.97 E 2,844,175.10
Delta = 50° 11' 58.43" (LT)
Degree = 26° 59' 11.56"
Tangent = 99.45
Length = 186.02
Radius = 212.31
External = 22.14
Long Chord = 180.12
Mid. Ord. = 20.05
P.C. Station 42+46.31 N 13,624,008.93 E 2,844,219.39
P.T. Station 44+32.33 N 13,624,120.94 E 2,844,078.33
C.C. N 13,623,914.36 E 2,844,029.31
Back = N 26° 26' 58.41" W
Ahead = N 76° 38' 56.83" W
Chord Bear = N 51° 32' 57.62" W

Curve Data
•----------•

Curve TPCL-17
P.I. Station 45+50.45 N 13,624,148.21 E 2,843,963.40
Delta = 71° 43' 15.77" (RT)
Degree = 35° 03' 41.68"
Tangent = 118.12
Length = 204.56
Radius = 163.41
External = 38.22
Long Chord = 191.46
Mid. Ord. = 30.98
P.C. Station 44+32.33 N 13,624,120.94 E 2,844,078.33
P.T. Station 46+36.89 N 13,624,265.90 E 2,843,953.26
C.C. N 13,624,279.94 E 2,844,116.07
Back = N 76° 38' 56.83" W
Ahead = N 4° 55' 41.07" W
Chord Bear = N 40° 47' 18.95" W

Curve Data
•----------•

Curve TPCL-18
P.I. Station 47+51.07 N 13,624,379.66 E 2,843,943.45
Delta = 21° 41' 17.56" (LT)
Degree = 9° 36' 44.41"
Tangent = 114.18
Length = 225.63
Radius = 596.07
External = 10.84
Long Chord = 224.28
Mid. Ord. = 10.64
P.C. Station 46+36.89 N 13,624,265.90 E 2,843,953.26
P.T. Station 48+62.51 N 13,624,481.74 E 2,843,892.29
C.C. N 13,624,214.69 E 2,843,359.39
Back = N 4° 55' 41.07" W
Ahead = N 26° 36' 58.62" W
Chord Bear = N 15° 46' 19.84" W

Course from PT TPCL-18 to PC TPCL-19 N 26° 36' 58.62" W Dist 256.98

Curve Data
•----------•

Curve TPCL-19
P.I. Station 51+96.87 N 13,624,780.66 E 2,843,742.50
Delta = 16° 48' 29.02" (RT)
Degree = 10° 56' 21.87"
Tangent = 77.38
Length = 153.65
Radius = 523.76
External = 5.69
Long Chord = 153.10
Mid. Ord. = 5.62
P.C. Station 51+19.49 N 13,624,711.48 E 2,843,777.16
P.T. Station 52+73.14 N 13,624,856.91 E 2,843,729.31
C.C. N 13,624,946.13 E 2,844,245.41
Back = N 26° 36' 58.62" W
Ahead = N 9° 48' 29.61" W
Chord Bear = N 18° 12' 44.12" W

Curve Data
•----------•

Curve TPCL-20
P.I. Station 53+31.05 N 13,624,913.98 E 2,843,719.45
Delta = 60° 19' 29.43" (LT)
Degree = 57° 29' 38.41"
Tangent = 57.91
Length = 104.92
Radius = 99.66
External = 15.61
Long Chord = 100.14
Mid. Ord. = 13.49
P.C. Station 52+73.14 N 13,624,856.91 E 2,843,729.31
P.T. Station 53+78.06 N 13,624,933.66 E 2,843,664.98
C.C. N 13,624,839.93 E 2,843,631.12
Back = N 9° 48' 29.61" W
Ahead = N 70° 07' 59.04" W
Chord Bear = N 39° 58' 14.32" W

Course from PT TPCL-20 to PC TPCL-21 N 70° 07' 59.04" W Dist 96.56

Curve Data
•----------•

Curve TPCL-21
P.I. Station 55+50.88 N 13,624,992.39 E 2,843,502.45
Delta = 41° 03' 05.89" (RT)
Degree = 28° 07' 59.17"
Tangent = 76.25
Length = 145.92
Radius = 203.66
External = 13.81
Long Chord = 142.82
Mid. Ord. = 12.93
P.C. Station 54+74.63 N 13,624,966.47 E 2,843,574.17
P.T. Station 56+20.54 N 13,625,059.02 E 2,843,465.39
C.C. N 13,625,158.01 E 2,843,643.38
Back = N 70° 07' 59.04" W
Ahead = N 29° 04' 53.15" W
Chord Bear = N 49° 36' 26.09" W

Curve Data
•----------•

Curve TPCL-22
P.I. Station 57+38.19 N 13,625,161.84 E 2,843,408.21
Delta = 88° 50' 34.16" (LT)
Degree = 47° 43' 39.70"
Tangent = 117.65
Length = 186.15
Radius = 120.05
External = 48.04
Long Chord = 168.05
Mid. Ord. = 34.31
P.C. Station 56+20.54 N 13,625,059.02 E 2,843,465.39
P.T. Station 58+06.69 N 13,625,106.74 E 2,843,304.26
C.C. N 13,625,000.67 E 2,843,360.48
Back = N 29° 04' 53.15" W
Ahead = S 62° 04' 32.69" W
Chord Bear = N 73° 30' 10.23" W

Curve Data
•----------•

Curve TPCL-23
P.I. Station 58+69.28 N 13,625,077.43 E 2,843,248.96
Delta = 57° 21' 53.51" (RT)
Degree = 50° 04' 56.32"
Tangent = 62.59
Length = 114.54
Radius = 114.40
External = 16.00
Long Chord = 109.82
Mid. Ord. = 14.04
P.C. Station 58+06.69 N 13,625,106.74 E 2,843,304.26
P.T. Station 59+21.23 N 13,625,108.20 E 2,843,194.45
C.C. N 13,625,207.83 E 2,843,250.69
Back = S 62° 04' 32.69" W
Ahead = N 60° 33' 33.80" W
Chord Bear = N 89° 14' 30.56" W

Course from PT TPCL-23 to PC TPCL-24 N 60° 33' 33.80" W Dist 277.14

Curve Data
•----------•

Curve TPCL-24
P.I. Station 62+63.62 N 13,625,276.49 E 2,842,896.28
Delta = 43° 01' 23.05" (RT)
Degree = 34° 36' 29.29"
Tangent = 65.25
Length = 124.31
Radius = 165.56
External = 12.40
Long Chord = 121.41
Mid. Ord. = 11.53
P.C. Station 61+98.37 N 13,625,244.42 E 2,842,953.10
P.T. Station 63+22.68 N 13,625,338.71 E 2,842,876.62
C.C. N 13,625,388.59 E 2,843,034.48
Back = N 60° 33' 33.80" W
Ahead = N 17° 32' 10.75" W
Chord Bear = N 39° 02' 52.28" W

Course from PT TPCL-24 to PC TPCL-25 N 17° 32' 10.75" W Dist 245.93

TRES PALACIOS CR. CHANNELIZATION PROJECT
30% PRELIMINARY DESIGN TO SUPPORT THE ENVIRONMENTAL ASSESSMENT

CITY OF EL CAMPO
315 E. JACKSON ST.
EL CAMPO, TX 77437

WHARTON COUNTY
2617 MILL AVE.
WHARTON, TX 77488

HALFF
4030 WEST BRAKER LANE, SUITE 450
AUSTIN, TEXAS 78759-5356
PH (512) 777-1254
FAX (512) 252-8141
TBPE FIRM #F-312

Revision		
No.	Date	Description

PRELIMINARY
FOR REVIEW ONLY

THESE DOCUMENTS ARE FOR INTERIM REVIEW AND NOT INTENDED FOR PERMIT OR CONSTRUCTION PURPOSES. THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

MARK W. MCGRAW — NAME
83967 — P.E. NO.
05/16/12 — DATE

Project No.:	27773
Issued:	05 / 16 / 12
Drawn By:	RSB
Checked By:	MWM
Scale:	AS NOTED

Sheet Title
CHANNEL CENTERLINE CONTROL DATA

ah2413 HALFF i:\27000s\27773\cadd\Sheets\C1.20-CD-27773.dgn Sheet PDF_2D_MON_FW_150.plt

Curve Data

Curve TPCL-25
P.I. Station 66+36.42 N 13,625,637.86 E 2,842,782.09
Delta = 52° 04' 08.33" (LT)
Degree = 41° 16' 53.40"
Tangent = 67.80
Length = 126.13
Radius = 138.79
External = 15.67
Long Chord = 121.84
Mid. Ord. = 14.08
P.C. Station 65+68.62 N 13,625,573.21 E 2,842,802.51
P.T. Station 66+94.75 N 13,625,661.49 E 2,842,718.54
C.C. N 13,625,531.39 E 2,842,670.17
Back = N 17° 32' 10.75" W
Ahead = N 69° 36' 19.08" W
Chord Bear = N 43° 34' 14.92" W

Course from PT TPCL-25 to PC TPCL-26 N 69° 36' 19.08" W Dist 126.82

Curve Data

Curve TPCL-26
P.I. Station 69+03.19 N 13,625,734.12 E 2,842,523.17
Delta = 47° 33' 56.14" (RT)
Degree = 30° 56' 07.81"
Tangent = 81.62
Length = 152.76
Radius = 185.21
External = 17.19
Long Chord = 148.38
Mid. Ord. = 15.73
P.C. Station 68+21.57 N 13,625,705.68 E 2,842,599.67
P.T. Station 69+75.32 N 13,625,809.78 E 2,842,492.54
C.C. N 13,625,879.28 E 2,842,664.22
Back = N 69° 36' 19.08" W
Ahead = N 22° 02' 22.94" W
Chord Bear = N 45° 49' 21.01" W

Curve Data

Curve TPCL-27
P.I. Station 70+19.77 N 13,625,850.98 E 2,842,475.86
Delta = 27° 18' 07.55" (LT)
Degree = 31° 18' 19.05"
Tangent = 44.45
Length = 87.21
Radius = 183.02
External = 5.32
Long Chord = 86.39
Mid. Ord. = 5.17
P.C. Station 69+75.32 N 13,625,809.78 E 2,842,492.54
P.T. Station 70+62.54 N 13,625,879.94 E 2,842,442.14
C.C. N 13,625,741.10 E 2,842,322.89
Back = N 22° 02' 22.94" W
Ahead = N 49° 20' 30.49" W
Chord Bear = N 35° 41' 26.72" W

Course from PT TPCL-27 to PC TPCL-28 N 49° 20' 30.50" W Dist 36.54

Curve Data

Curve TPCL-28
P.I. Station 71+58.45 N 13,625,942.43 E 2,842,369.38
Delta = 40° 39' 29.51" (LT)
Degree = 35° 45' 17.91"
Tangent = 59.37
Length = 113.71
Radius = 160.25
External = 10.64
Long Chord = 111.34
Mid. Ord. = 9.98
P.C. Station 70+99.08 N 13,625,903.75 E 2,842,414.42
P.T. Station 72+12.79 N 13,625,942.43 E 2,842,310.01
C.C. N 13,625,782.19 E 2,842,310.01
Back = N 49° 20' 30.49" W
Ahead = Due West
Chord Bear = N 69° 40' 15.25" W

Course from PT TPCL-28 to PC TPCL-29 Due West Dist 20.77

Curve Data

Curve TPCL-29
P.I. Station 72+64.20 N 13,625,942.43 E 2,842,258.60
Delta = 32° 30' 20.17" (RT)
Degree = 54° 31' 33.66"
Tangent = 30.63
Length = 59.61
Radius = 105.08
External = 4.37
Long Chord = 58.82
Mid. Ord. = 4.20
P.C. Station 72+33.56 N 13,625,942.43 E 2,842,289.24
P.T. Station 72+93.18 N 13,625,958.90 E 2,842,232.77
C.C. N 13,626,047.51 E 2,842,289.24
Back = Due West
Ahead = N 57° 29' 39.83" W
Chord Bear = N 73° 44' 49.92" W

Course from PT TPCL-29 to PC TPCL-30 N 57° 29' 39.83" W Dist 156.46

Curve Data

Curve TPCL-30
P.I. Station 74+93.26 N 13,626,066.42 E 2,842,064.03
Delta = 37° 38' 45.58" (RT)
Degree = 44° 46' 10.94"
Tangent = 43.62
Length = 84.09
Radius = 127.98
External = 7.23
Long Chord = 82.58
Mid. Ord. = 6.84
P.C. Station 74+49.64 N 13,626,042.97 E 2,842,100.82
P.T. Station 75+33.72 N 13,626,107.45 E 2,842,049.22
C.C. N 13,626,150.90 E 2,842,169.60
Back = N 57° 29' 39.83" W
Ahead = N 19° 50' 54.25" W
Chord Bear = N 38° 40' 17.04" W

Course from PT TPCL-30 to PC TPCL-31 N 19° 50' 54.25" W Dist 111.46

Curve Data

Curve TPCL-31
P.I. Station 77+40.94 N 13,626,302.36 E 2,841,978.86
Delta = 67° 32' 08.72" (LT)
Degree = 40° 00' 14.05"
Tangent = 95.76
Length = 168.82
Radius = 143.23
External = 29.07
Long Chord = 159.22
Mid. Ord. = 24.16
P.C. Station 76+45.18 N 13,626,212.29 E 2,842,011.38
P.T. Station 78+14.00 N 13,626,306.73 E 2,841,883.20
C.C. N 13,626,163.66 E 2,841,876.66
Back = N 19° 50' 54.25" W
Ahead = N 87° 23' 02.97" W
Chord Bear = N 53° 36' 58.61" W

Course from PT TPCL-31 to PC TPCL-32 N 87° 23' 02.97" W Dist 184.30

Curve Data

Curve TPCL-32
P.I. Station 80+30.59 N 13,626,316.62 E 2,841,666.84
Delta = 34° 20' 52.23" (LT)
Degree = 54° 50' 18.14"
Tangent = 32.29
Length = 62.63
Radius = 104.48
External = 4.88
Long Chord = 61.70
Mid. Ord. = 4.66
P.C. Station 79+98.30 N 13,626,315.14 E 2,841,699.09
P.T. Station 80+60.93 N 13,626,299.63 E 2,841,639.37
C.C. N 13,626,210.77 E 2,841,694.32
Back = N 87° 23' 02.97" W
Ahead = S 58° 16' 04.80" W
Chord Bear = S 75° 26' 30.92" W

Curve Data

Curve TPCL-33
P.I. Station 81+20.00 N 13,626,268.57 E 2,841,589.14
Delta = 47° 53' 35.89" (RT)
Degree = 43° 04' 57.68"
Tangent = 59.06
Length = 111.17
Radius = 132.99
External = 12.53
Long Chord = 107.96
Mid. Ord. = 11.45
P.C. Station 80+60.93 N 13,626,299.63 E 2,841,639.37
P.T. Station 81+72.10 N 13,626,285.01 E 2,841,532.41
C.C. N 13,626,412.74 E 2,841,569.43
Back = S 58° 16' 04.80" W
Ahead = N 73° 50' 19.30" W
Chord Bear = S 82° 12' 52.75" W

Curve Data

Curve TPCL-34
P.I. Station 82+06.85 N 13,626,294.68 E 2,841,499.03
Delta = 15° 11' 23.33" (LT)
Degree = 21° 58' 56.50"
Tangent = 34.75
Length = 69.10
Radius = 260.64
External = 2.31
Long Chord = 68.90
Mid. Ord. = 2.29
P.C. Station 81+72.10 N 13,626,285.01 E 2,841,532.41
P.T. Station 82+41.20 N 13,626,295.27 E 2,841,464.28
C.C. N 13,626,034.67 E 2,841,459.86
Back = N 73° 50' 19.30" W
Ahead = N 89° 01' 42.63" W
Chord Bear = N 81° 26' 00.97" W

Course from PT TPCL-34 to PC TPCL-35 N 89° 01' 42.63" W Dist 124.19

Curve Data

Curve TPCL-35
P.I. Station 84+28.00 N 13,626,298.44 E 2,841,277.50
Delta = 34° 48' 13.64" (RT)
Degree = 28° 40' 48.48"
Tangent = 62.61
Length = 121.35
Radius = 199.78
External = 9.58
Long Chord = 119.49
Mid. Ord. = 9.14
P.C. Station 83+65.39 N 13,626,297.38 E 2,841,340.11
P.T. Station 84+86.74 N 13,626,335.04 E 2,841,226.71
C.C. N 13,626,497.12 E 2,841,343.50
Back = N 89° 01' 42.63" W
Ahead = N 54° 13' 28.99" W
Chord Bear = N 71° 37' 35.81" W

Curve Data

Curve TPCL-36
P.I. Station 85+96.74 N 13,626,399.35 E 2,841,137.46
Delta = 50° 47' 09.12" (LT)
Degree = 24° 43' 32.31"
Tangent = 110.00
Length = 205.40
Radius = 231.73
External = 24.78
Long Chord = 198.74
Mid. Ord. = 22.39
P.C. Station 84+86.74 N 13,626,335.04 E 2,841,226.71
P.T. Station 86+92.14 N 13,626,370.86 E 2,841,031.22
C.C. N 13,626,147.04 E 2,841,091.24
Back = N 54° 13' 28.99" W
Ahead = S 74° 59' 21.89" W
Chord Bear = N 79° 37' 03.55" W

Course from PT TPCL-36 to PC TPCL-37 S 74° 59' 21.89" W Dist 154.14

Curve Data

Curve TPCL-37
P.I. Station 88+90.64 N 13,626,319.45 E 2,840,839.49
Delta = 13° 35' 58.91" (RT)
Degree = 15° 24' 00.22"
Tangent = 44.36
Length = 88.31
Radius = 372.05
External = 2.64
Long Chord = 88.10
Mid. Ord. = 2.62
P.C. Station 88+46.28 N 13,626,330.94 E 2,840,882.34
P.T. Station 89+34.59 N 13,626,318.36 E 2,840,795.14
C.C. N 13,626,690.29 E 2,840,785.98
Back = S 74° 59' 21.89" W
Ahead = S 88° 35' 20.79" W
Chord Bear = S 81° 47' 21.34" W

Course from PT TPCL-37 to PC TPCL-38 S 88° 35' 20.79" W Dist 58.09

Curve Data

Curve TPCL-38
P.I. Station 90+54.46 N 13,626,315.40 E 2,840,675.31
Delta = 23° 39' 42.33" (LT)
Degree = 19° 25' 45.72"
Tangent = 61.77
Length = 121.78
Radius = 294.89
External = 6.40
Long Chord = 120.92
Mid. Ord. = 6.26
P.C. Station 89+92.68 N 13,626,316.93 E 2,840,737.06
P.T. Station 91+14.47 N 13,626,289.23 E 2,840,619.36
C.C. N 13,626,022.12 E 2,840,744.33
Back = S 88° 35' 20.79" W
Ahead = S 64° 55' 38.47" W
Chord Bear = S 76° 45' 29.63" W

Course from PT TPCL-38 to PC TPCL-39 S 64° 55' 38.47" W Dist 51.94

Curve Data

Curve TPCL-39
P.I. Station 92+25.56 N 13,626,242.15 E 2,840,518.73
Delta = 14° 14' 35.43" (RT)
Degree = 12° 06' 00.13"
Tangent = 59.16
Length = 117.71
Radius = 473.52
External = 3.68
Long Chord = 117.41
Mid. Ord. = 3.65
P.C. Station 91+66.40 N 13,626,267.22 E 2,840,572.32
P.T. Station 92+84.12 N 13,626,231.03 E 2,840,460.62
C.C. N 13,626,696.12 E 2,840,371.66
Back = S 64° 55' 38.47" W
Ahead = S 79° 10' 13.90" W
Chord Bear = S 72° 02' 56.19" W

Course from PT TPCL-39 to PC TPCL-40 S 79° 10' 13.90" W Dist 171.27

Curve Data

Curve TPCL-40
P.I. Station 95+43.10 N 13,626,182.37 E 2,840,206.25
Delta = 9° 02' 21.91" (RT)
Degree = 5° 09' 49.10"
Tangent = 87.71
Length = 175.06
Radius = 1,109.60
External = 3.46
Long Chord = 174.88
Mid. Ord. = 3.45
P.C. Station 94+55.38 N 13,626,198.85 E 2,840,292.40
P.T. Station 96+30.44 N 13,626,179.63 E 2,840,118.59
C.C. N 13,627,288.69 E 2,840,083.93
Back = S 79° 10' 13.90" W
Ahead = S 88° 12' 35.81" W
Chord Bear = S 83° 41' 24.86" W

Curve Data

Curve TPCL-41
P.I. Station 96+88.87 N 13,626,177.81 E 2,840,060.19
Delta = 18° 17' 50.08" (LT)
Degree = 15° 47' 33.91"
Tangent = 58.43
Length = 115.86
Radius = 362.80
External = 4.67
Long Chord = 115.37
Mid. Ord. = 4.62
P.C. Station 96+30.44 N 13,626,179.63 E 2,840,118.59
P.T. Station 97+46.30 N 13,626,157.74 E 2,840,005.32
C.C. N 13,625,817.01 E 2,840,129.92
Back = S 88° 12' 35.81" W
Ahead = S 69° 54' 45.74" W
Chord Bear = S 79° 03' 40.78" W

Course from PT TPCL-41 to PC TPCL-42 S 69° 54' 45.74" W Dist 234.36

Curve Data

Curve TPCL-42
P.I. Station 101+69.00 N 13,626,012.56 E 2,839,608.33
Delta = 54° 16' 06.87" (RT)
Degree = 15° 35' 26.13"
Tangent = 188.34
Length = 348.09
Radius = 367.50
External = 45.45
Long Chord = 335.22
Mid. Ord. = 40.45
P.C. Station 99+80.66 N 13,626,077.25 E 2,839,785.21
P.T. Station 103+28.75 N 13,626,118.38 E 2,839,452.52
C.C. N 13,626,422.40 E 2,839,658.99
Back = S 69° 54' 45.74" W
Ahead = N 55° 49' 07.39" W
Chord Bear = N 82° 57' 10.83" W

Curve Data

Curve TPCL-43
P.I. Station 103+54.13 N 13,626,132.63 E 2,839,431.53
Delta = 30° 00' 20.05" (LT)
Degree = 60° 30' 18.10"
Tangent = 25.38
Length = 49.59
Radius = 94.70
External = 3.34
Long Chord = 49.03
Mid. Ord. = 3.23
P.C. Station 103+28.75 N 13,626,118.38 E 2,839,452.52
P.T. Station 103+78.34 N 13,626,134.48 E 2,839,406.22
C.C. N 13,626,040.04 E 2,839,399.32
Back = N 55° 49' 07.39" W
Ahead = N 85° 49' 27.45" W
Chord Bear = N 70° 49' 17.42" W

Course from PT TPCL-43 to PC TPCL-44 N 85° 49' 27.44" W Dist 102.28

Curve Data

Curve TPCL-44
P.I. Station 105+22.48 N 13,626,144.98 E 2,839,262.46
Delta = 16° 50' 04.85" (RT)
Degree = 20° 15' 10.27"
Tangent = 41.86
Length = 83.12
Radius = 282.90
External = 3.08
Long Chord = 82.82
Mid. Ord. = 3.05
P.C. Station 104+80.62 N 13,626,141.93 E 2,839,304.21
P.T. Station 105+63.74 N 13,626,159.99 E 2,839,223.38
C.C. N 13,626,424.08 E 2,839,324.81
Back = N 85° 49' 27.45" W
Ahead = N 68° 59' 22.59" W
Chord Bear = N 77° 24' 25.02" W

Course from PT TPCL-44 to PC TPCL-45 N 68° 59' 22.59" W Dist 81.54

Curve Data

Curve TPCL-45
P.I. Station 106+71.17 N 13,626,198.50 E 2,839,123.09
Delta = 11° 44' 43.34" (LT)
Degree = 22° 45' 58.78"
Tangent = 25.89
Length = 51.59
Radius = 251.67
External = 1.33
Long Chord = 51.50
Mid. Ord. = 1.32
P.C. Station 106+45.29 N 13,626,189.22 E 2,839,147.25
P.T. Station 106+96.88 N 13,626,202.67 E 2,839,097.54
C.C. N 13,625,954.29 E 2,839,057.02
Back = N 68° 59' 22.59" W
Ahead = N 80° 44' 05.93" W
Chord Bear = N 74° 51' 44.26" W

Course from PT TPCL-45 to PC TPCL-46 N 80° 44' 05.93" W Dist 102.99

Curve Data

Curve TPCL-46
P.I. Station 108+60.74 N 13,626,229.05 E 2,838,935.82
Delta = 19° 04' 45.62" (RT)
Degree = 15° 49' 03.12"
Tangent = 60.87
Length = 120.62
Radius = 362.23
External = 5.08
Long Chord = 120.06
Mid. Ord. = 5.01
P.C. Station 107+99.86 N 13,626,219.25 E 2,838,995.90
P.T. Station 109+20.49 N 13,626,257.96 E 2,838,882.24
C.C. N 13,626,576.76 E 2,839,054.22
Back = N 80° 44' 05.93" W
Ahead = N 61° 39' 20.30" W
Chord Bear = N 71° 11' 43.12" W

Curve Data

Curve TPCL-47
P.I. Station 109+72.89 N 13,626,282.83 E 2,838,836.12
Delta = 7° 52' 18.31" (LT)
Degree = 7° 31' 21.90"
Tangent = 52.40
Length = 104.64
Radius = 761.63
External = 1.80
Long Chord = 104.56
Mid. Ord. = 1.80
P.C. Station 109+20.49 N 13,626,257.96 E 2,838,882.24
P.T. Station 110+25.12 N 13,626,301.16 E 2,838,787.03
C.C. N 13,625,587.63 E 2,838,520.64
Back = N 61° 39' 20.30" W
Ahead = N 69° 31' 38.61" W
Chord Bear = N 65° 35' 29.46" W

Course from PT TPCL-47 to PC TPCL-48 N 69° 31' 38.61" W Dist 185.89

Curve Data

Curve TPCL-48
P.I. Station 112+33.92 N 13,626,374.19 E 2,838,591.42
Delta = 20° 28' 21.39" (LT)
Degree = 45° 10' 45.41"
Tangent = 22.90
Length = 45.31
Radius = 126.82
External = 2.05
Long Chord = 45.07
Mid. Ord. = 2.02
P.C. Station 112+11.02 N 13,626,366.18 E 2,838,612.88
P.T. Station 112+56.33 N 13,626,374.19 E 2,838,568.52
C.C. N 13,626,247.37 E 2,838,568.52
Back = N 69° 31' 38.61" W
Ahead = Due West
Chord Bear = N 79° 45' 49.31" W

Course from PT TPCL-48 to PC TPCL-49 Due West Dist 145.72

TRES PALACIOS CR. CHANNELIZATION PROJECT

30% PRELIMINARY DESIGN TO SUPPORT THE ENVIRONMENTAL ASSESSMENT

CITY OF EL CAMPO
315 E. JACKSON ST.
EL CAMPO, TX 77437

WHARTON COUNTY
2617 MILAM AVE.
WHARTON, TX 77488

HALFF
4030 WEST BRAKER LANE, SUITE 450
AUSTIN, TEXAS 78759-5356
TEL (512) 777-1254
FAX (512) 252-8141
TBPE FIRM #F-312

Revision		
No.	Date	Description

PRELIMINARY
FOR REVIEW ONLY

THESE DOCUMENTS ARE FOR INTERIM REVIEW AND NOT INTENDED FOR PERMIT OR CONSTRUCTION PURPOSES. THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

MARK W. MCGRAW — NAME
83967 — P.E. NO.
05/16/12 — DATE

Project No.:	27773
Issued:	05 / 16 / 12
Drawn By:	RSB
Checked By:	MWM
Scale:	AS NOTED

Sheet Title
CHANNEL CENTERLINE CONTROL DATA

ah2413 HALFF i:\27000s\27773\cadd\Sheets\C1.20-CD-27773.dgn Sheet PDF_2D_MON_FW_150.plt