Texas Department of Transportation

PARIS DISTRICT
NOEL PARAMANANTHAM, P.E., DISTRICT ENGINEER

DESIGN SCHEMATIC
GRAYSON COUNTY
FM SPUR 121

FROM COLLIN CO RD 60 TO FM 121
Project Length = 4.5 Miles
CSJ = 0091-10-211

COUNTY: GRAYSON
DATE: JULY 2020

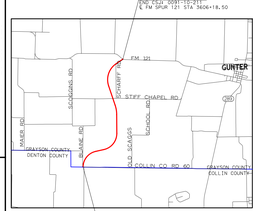
GRAYSON COUNTY
FM SPUR 121

ROLL 1 OF 4

DESIGN SPEEDS

DESIGN SPEEDS AND FUNCTIONAL CLASSIFICATIONS:

MAINLANES: RURAL MAJOR COLLECTOR: HORIZONTAL	-	50 MPH
MAINLANES: RURAL MAJOR COLLECTOR: VERTICAL	-	50 MPH
CROSS STREETS	-	30 MPH



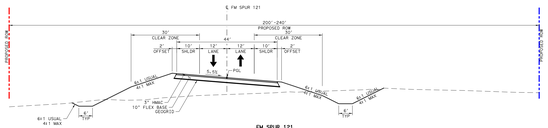
PRELIMINARY
SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS RESULTING FROM PUBLIC INPUT AND TECHNICAL REVIEW

SCHEMATIC PREPARED BY:
DGE
REGISTRATION NUMBER F-1046
FOR INTERIM REVIEW ONLY. NOT FOR PERMIT, BIDDING OR CONSTRUCTION.
Preparer to enter TPP# 13746 or Submitter's TxDOT ID#
BRIAN BIENHOFF — 144722
SIGNATURE — P.E. NUMBER
STONI LAIRMORE — 144722
SIGNATURE — P.E. NUMBER
DATE — DATE

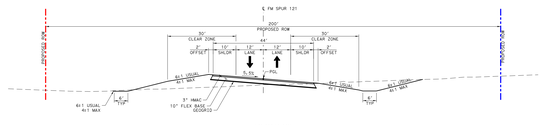
HORIZONTAL SCALE
0 40' 80' 160' 320' 640'
VERTICAL SCALE
0 4' 8' 16' 32' 64'

ROLL 1 OF 4

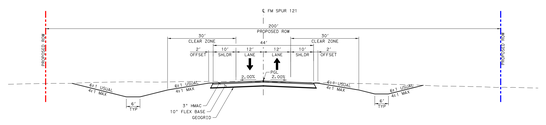
BGE, Inc.
2595 Dallas Parkway, Suite 101, Frisco, TX 75034
Tel: 972-464-4800 ● www.bgeinc.com
TBPE Registration No. F-1046



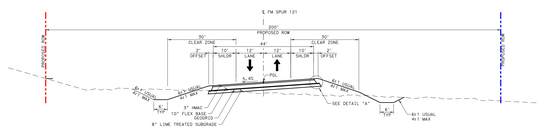
FM SPUR 121
STA 3569+85.60 TO STA 3592+33



FM SPUR 121
STA 3592+33 TO STA 3668+32



FM SPUR 121
STA 3668+32 TO STA 3743+58
STA STA 3742+06 TO STA 3745+06
STA 3811+75 TO STA 3847+42



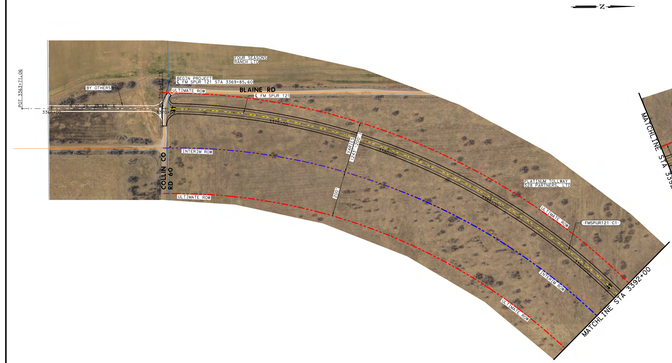
FM SPUR 121
STA 3423+58 TO STA 3462+06

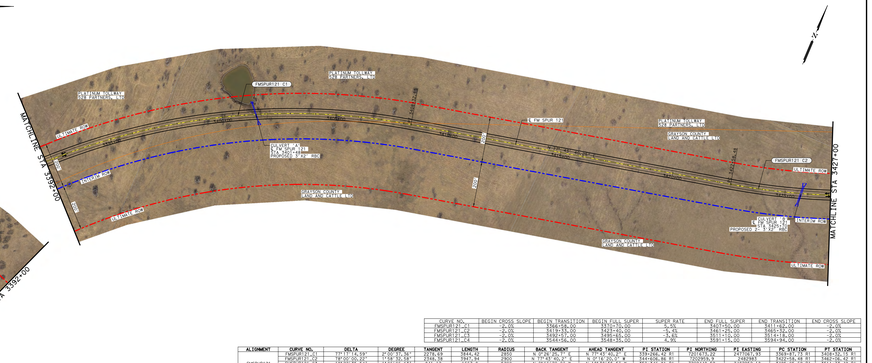
PLAN LEGEND

- PROPOSED ℄
- ULTIMATE ROW
- INTERIM ROW
- PARCEL BOUNDARY
- DRAINAGE CULVERT
- FEMA ZONE A
- PROPOSED DIRECTION OF TRAVEL
- HORIZONTAL CURVE ID

ROLL INDEX

ROLL 1	FM SPUR 121	BEGIN TO 3427+00
ROLL 2	FM SPUR 121	3427+00 TO 3488+00
ROLL 3	FM SPUR 121	3488+00 TO 3550+00
ROLL 4	FM SPUR 121	3550+00 TO END PROJECT




EXISTING ROW
EXISTING ROW
EXISTING ROW

Texas Department of Transportation

PARIS DISTRICT
NOEL PARAMANANTHAM, P.E., DISTRICT ENGINEER

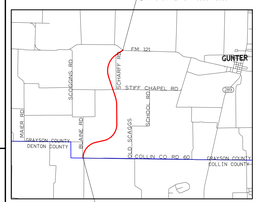
DESIGN SCHEMATIC
GRAYSON COUNTY
FM SPUR 121

FROM COLLIN CO RD 60 TO FM 121
Project Length = 4.5 Miles
CSJ = 0091-10-211

DESIGN SPEEDS

DESIGN SPEEDS AND FUNCTIONAL CLASSIFICATIONS=

WAYLANDS (RURAL MAJOR COLLECTOR) HORIZONTAL	-	50 MPH
WAYLANDS (RURAL MAJOR COLLECTOR) VERTICAL	-	50 MPH
CROSS STREETS	-	50 MPH



PRELIMINARY
SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS RESULTING FROM PUBLIC INPUT AND TECHNICAL REVIEW

SCHEMATIC PREPARED BY:
[signature]
JOE
REGISTRATION NUMBER F-1046
FOR INTERIM REVIEW ONLY, NOT FOR PERMIT, CONSTRUCTION OR RECORDATION PURPOSES
Released for or under the authority of Joe Stroh on 07-01-2020
BRIAN BLANKENSHIP — 134772 — P.E. NUMBER
STEPHEN LAIRMORE — 137164 — P.E. NUMBER
WINTER — DATE

HORIZONTAL SCALE
0 40 80 160 240 320
VERTICAL SCALE
0 4 8 16 24 32

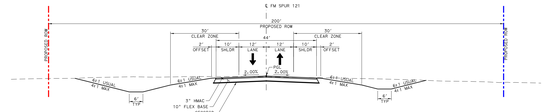
ROLL 2 OF 4

BGE, Inc.
2595 Dallas Parkway, Suite 101, Frisco, TX 75034
Tel: 972-464-8800 ★ www.bgeinc.com
TBPE Registration No. F-1046

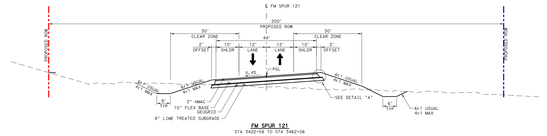
COUNTY: GRAYSON
DATE: JULY 2020

GRAYSON COUNTY
FM SPUR 121

ROLL 2 OF 4



FM SPUR 121
STA 3422+58 TO STA 3462+06
STA STA 3462+06 TO STA 3496+06
STA 3517+75 TO STA 3547+62



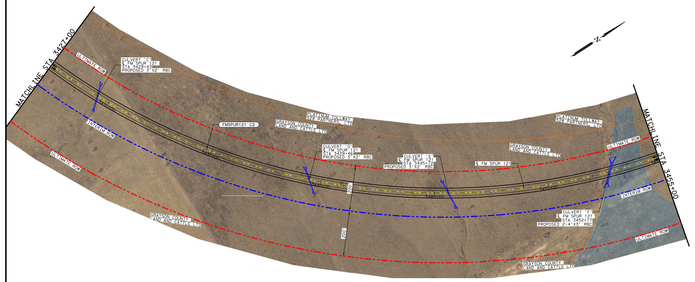
FM SPUR 121
STA 3422+58 TO STA 3462+06

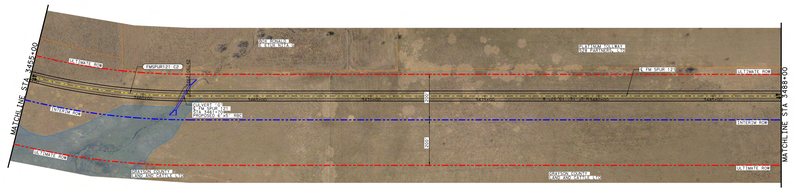
PLAN LEGEND

- PROPOSED ℄
- ULTIMATE ROW
- INTERIM ROW
- PARCEL BOUNDARY
- DRAINAGE CULVERT
- FDMA ZONE A
- PROPOSED DIRECTION OF TRAVEL
- HORIZONTAL CURVE ID

ROLL INDEX

ROLL 1	FM SPUR 121	BEGIN TO STA 3427+00
ROLL 2	FM SPUR 121	STA 3427+00 TO STA 3488+00
ROLL 3	FM SPUR 121	STA 3488+00 TO STA 3550+00
ROLL 4	FM SPUR 121	STA 3550+00 TO END PROJECT

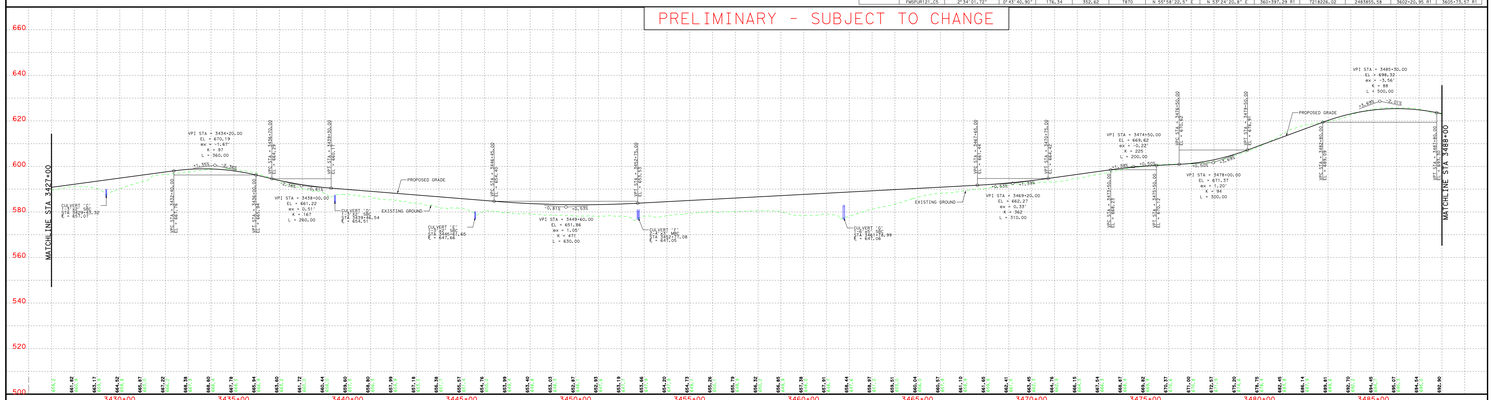




CURVE ID	BEGIN CROSS SLOPE	BEGIN TRANSITION	BEGIN FULL SUPER	SUPER RATE	END FULL SUPER	END TRANSITION	END CROSS SLOPE
CMSPUR121-C1	-2.0%	3446+50.00	3447+50.00	2.6%	3521+50.00	3522+50.00	-2.0%
CMSPUR121-C2	-2.0%	3496+06.00	3497+06.00	2.6%	3521+50.00	3522+50.00	-2.0%
CMSPUR121-C3	-2.0%	3496+67.00	3498+67.00	2.6%	3537+75.00	3541+75.00	-2.0%
CMSPUR121-C4	-2.0%	3496+06.00	3498+06.00	2.6%	3537+75.00	3539+75.00	-2.0%

ALIGNMENT	CURVE NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT	AHEAD TANGENT	PT STATION	PT NORTHING	PT EASTING	PC STATION	PT STATION
FMSPUR121	CMSPUR121-C1	18°41'35.54"LT	11°26'45.6"	493.77	1001.18	500	N 71°41'52.46" E	N 90°23'28.00" E	3521+50.18	7235868.72	2483161.18	3511+56.41	3521+56.41
	CMSPUR121-C2	18°41'35.54"LT	11°26'45.6"	493.77	1001.18	500	N 71°41'52.46" E	N 90°23'28.00" E	3522+50.18	7235868.72	2483161.18	3512+56.41	3522+56.41
	CMSPUR121-C3	18°41'35.54"LT	11°26'45.6"	1041.18	2082.36	500	N 71°41'52.46" E	N 90°23'28.00" E	3537+75.00	7235868.72	2483161.18	3495+92.82	3515+75.18
	CMSPUR121-C4	18°41'35.54"LT	11°26'45.6"	1041.18	2082.36	500	N 71°41'52.46" E	N 90°23'28.00" E	3539+75.00	7235868.72	2483161.18	3497+92.82	3517+75.18

PRELIMINARY - SUBJECT TO CHANGE



Texas Department of Transportation

PARIS DISTRICT
NOEL PARAMANANTHAM, P.E., DISTRICT ENGINEER

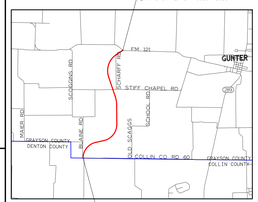
DESIGN SCHEMATIC
GRAYSON COUNTY
FM SPUR 121

FROM COLLIN CO RD 60 TO FM 121
Project Length = 4.5 Miles
CSJ = 0091-10-211

DESIGN SPEEDS

DESIGN SPEEDS AND FUNCTIONAL CLASSIFICATIONS=

MAINLANES: RURAL MAJOR COLLECTOR: HORIZONTAL	= 50 MPH
MAINLANES: RURAL MAJOR COLLECTOR: VERTICAL	= 50 MPH
CROSS STREETS	= 30 MPH



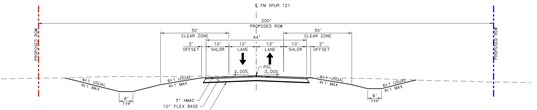
PRELIMINARY
SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS RESULTING FROM PUBLIC INPUT AND TECHNICAL REVIEW

SCHEMATIC PREPARED BY:
[signature]
[date]
REGISTRATION NUMBER F-1046
FOR INTERIM REVIEW ONLY, NOT FOR PERMIT, CONSTRUCTION OR BIDDING PURPOSES
Prepared by or under the direct supervision of:
BRIAN BLANKENSHIP 134772
NAME P.E. NUMBER
STEPHEN LAFRANCHI 134772
NAME P.E. NUMBER
[date]
DATE

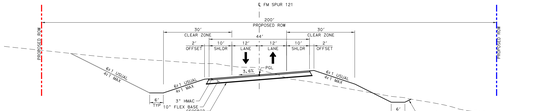
HORIZONTAL SCALE
0 40 80 120 160
VERTICAL SCALE
0 4 8 12 16

ROLL 3 OF 4

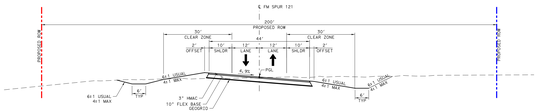
BGE, Inc.
2595 Dallas Parkway, Suite 101, Frisco, TX 75034
Tel: 972-464-8800 ● www.bgeinc.com
TBPE Registration No. F-1046



FM SPUR 121
STA 3408+32 TO STA 3422+58
STA 3433+00 TO STA 3448+00
STA 3517+75 TO STA 3547+42



FM SPUR 121
STA 3488+08 TO STA 3511+73



FM SPUR 121
STA 3547+42 TO STA 3590+41

PLAN LEGEND

- PROPOSED ℄
- ULTIMATE ROW
- INTERIM ROW
- PARCEL BOUNDARY
- DRAINAGE CULVERT
- FEMA ZONE A
- PROPOSED DIRECTION OF TRAVEL
- HORIZONTAL CURVE ID (EX: V-1-C-1)

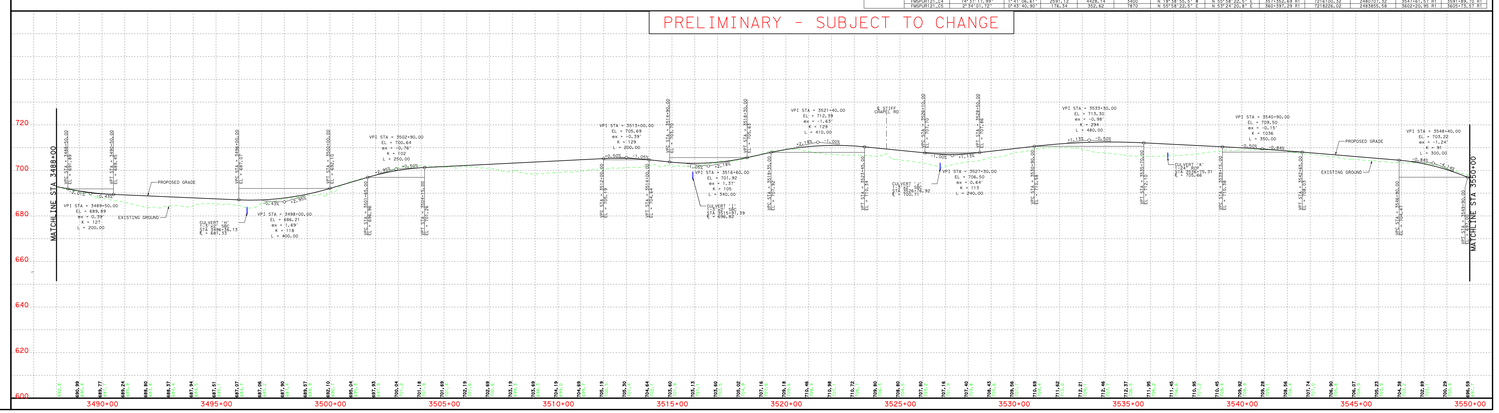
ROLL INDEX

- ROLL 1: FM SPUR 121 BEGIN TO STA 3427+00
- ROLL 2: FM SPUR 121 STA 3427+00 TO STA 3488+00
- ROLL 3: FM SPUR 121 STA 3488+00 TO STA 3550+00
- ROLL 4: FM SPUR 121 STA 3550+00 TO END PROJECT

ALIGNMENT	CURVE NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT	AHEAD TANGENT	PT STATION	PT NORTHING	PT EASTING	PC STATION	PT STATION
FMSPUR121	FMSPUR121-C1	19°41'39.5"RT	11°26'45.0"	1054.78	2062.92	500	N 19°41'39.5" W	S 00°00'00.0" E	3427+04.78	7012026.78	2496966.92	3416+41.86	3427+04.78
	FMSPUR121-C2	19°41'39.5"LT	11°26'45.0"	1054.78	2062.92	500	S 19°41'39.5" E	N 00°00'00.0" W	3467+97.70	7010999.58	2496966.92	3457+34.78	3468+97.70
	FMSPUR121-C3	19°41'39.5"RT	11°26'45.0"	1054.78	2062.92	500	N 19°41'39.5" W	S 00°00'00.0" E	3488+00.00	7009971.80	2496966.92	3477+37.00	3488+00.00
	FMSPUR121-C4	19°41'39.5"LT	11°26'45.0"	1054.78	2062.92	500	S 19°41'39.5" E	N 00°00'00.0" W	3528+63.92	7008944.58	2496966.92	3518+00.00	3529+63.92

ALIGNMENT	CURVE NO.	BEGIN CROSS SLOPE	BEGIN TRANSITION	BEGIN FULL SUPER	SUPER RATE	END FULL SUPER	END TRANSITION	END CROSS SLOPE
FMSPUR121	FMSPUR121-C1	-2.0%	3398+54.00	3408+54.00	7.4%	3427+04.78	3437+04.78	-2.0%
	FMSPUR121-C2	-2.0%	3447+97.70	3457+97.70	7.4%	3468+97.70	3478+97.70	-2.0%
	FMSPUR121-C3	-2.0%	3468+00.00	3478+00.00	7.4%	3488+00.00	3498+00.00	-2.0%
	FMSPUR121-C4	-2.0%	3508+63.92	3518+63.92	7.4%	3529+63.92	3539+63.92	-2.0%

PRELIMINARY - SUBJECT TO CHANGE



Texas Department of Transportation

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NOEL PARAMANANTHAM, P.E., DISTRICT ENGINEER

DESIGN SCHEMATIC
GRAYSON COUNTY
FM SPUR 121

FROM COLLIN CO RD 60 TO FM 121
Project Length = 4.5 Miles
CSJ = 0091-10-211

DESIGN SPEEDS

DESIGN SPEEDS AND FUNCTIONAL CLASSIFICATIONS*

WAYLAND'S (RURAL MAJOR COLLECTOR) HORIZONTAL	- 50 MPH
WAYLAND'S (RURAL MAJOR COLLECTOR) VERTICAL	- 50 MPH
CROSS STREETS	- 30 MPH

PRELIMINARY
SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS RESULTING FROM PUBLIC INPUT AND TECHNICAL REVIEW

SCHEMATIC PREPARED BY:
JOE
REGISTRATION NUMBER P-1046
FOR INTERIM REVIEW ONLY, NOT FOR PERMIT, CONSTRUCTION OR BIDDING PURPOSES
Prepared by or under the supervision of:
STAMP NAME/TITLE DATE

BRIAN BLANKENSHIP 134772
SIGNATURE P.E. NUMBER
STONE LAYMORE
NAME P.E. NUMBER
WATER
DATE

HORIZONTAL SCALE
0 40' 80' 160' 240' 320'
VERTICAL SCALE
0 4' 8' 16' 24' 32'

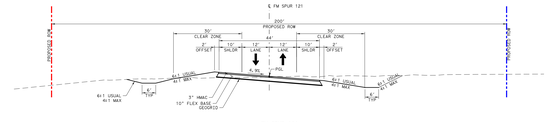
ROLL 4 OF 4

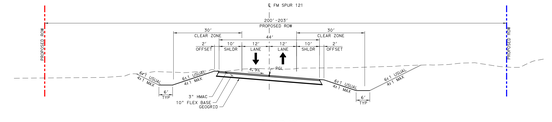
BGE, Inc.
2595 Dallas Parkway, Suite 101, Frisco, TX 75034
Tel: 972-464-8800 ● www.bgeinc.com
TBPE Registration No. F-1046

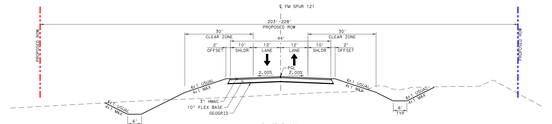
COUNTY: GRAYSON
DATE: JULY 2020

GRAYSON COUNTY
FM SPUR 121

ROLL 4 OF 4





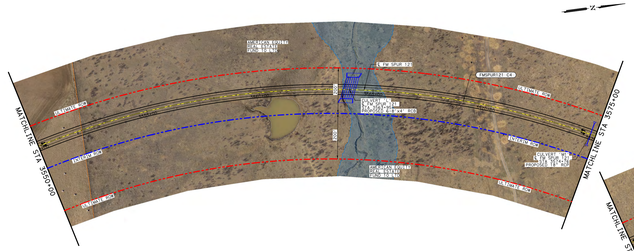


PLAN LEGEND

- PROPOSED ℄
- ULTIMATE ROW
- INTERIM ROW
- PARCEL BOUNDARY
- DRAINAGE CULVERT
- FDOM ZONE A
- PROPOSED DIRECTION OF TRAVEL
- HORIZONTAL CURVE ID

ROLL INDEX

ROLL 1	FM SPUR 121	BEGIN TO STA 3547+00
ROLL 2	FM SPUR 121	STA 3547+00 TO 3488+00
ROLL 3	FM SPUR 121	3488+00 TO 3550+00
ROLL 4	FM SPUR 121	3550+00 TO END PROJECT



CURVE ID	BEGIN CROSS SLOPE	BEGIN TRANSITION	BEGIN FULL SUPER	SUPER RATE	END FULL SUPER	END TRANSITION	END CROSS SLOPE
FMSPUR121-C1	-2.0%	5496+00.00	5501+00.00	2.0%	5521+00.00	5526+00.00	-2.0%
FMSPUR121-C2	-2.0%	5586+00.00	5591+00.00	2.0%	5611+00.00	5616+00.00	-2.0%
FMSPUR121-C3	-2.0%	5686+00.00	5691+00.00	2.0%	5711+00.00	5716+00.00	-2.0%
FMSPUR121-C4	-2.0%	5696+00.00	5701+00.00	2.0%	5721+00.00	5726+00.00	-2.0%

ALIGNMENT	CURVE NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT	AHEAD TANGENT	PT STATION	PT NORTHING	PT EASTING	PC STATION	PT STATION
FMSPUR121	FMSPUR121-C1	18°41'39.54"	4°47'32.74"	1052.18	1961.00	1196.00	S 71°18'30.46" E	S 89°59'50.00" E	5521+50.64	7433606.18	2423855.38	5496+89.46	5526+50.64
	FMSPUR121-C2	18°41'39.54"	4°47'32.74"	1052.18	1961.00	1196.00	S 71°18'30.46" E	S 89°59'50.00" E	5611+50.64	7433606.18	2423855.38	5586+89.46	5616+50.64
	FMSPUR121-C3	18°41'39.54"	4°47'32.74"	1052.18	1961.00	1196.00	S 71°18'30.46" E	S 89°59'50.00" E	5711+50.64	7433606.18	2423855.38	5686+89.46	5716+50.64
	FMSPUR121-C4	18°41'39.54"	4°47'32.74"	1052.18	1961.00	1196.00	S 71°18'30.46" E	S 89°59'50.00" E	5721+50.64	7433606.18	2423855.38	5696+89.46	5726+50.64

PRELIMINARY - SUBJECT TO CHANGE