Texas Department of Transportation

COUNTY: GRAYSON
DATE: JULY 2020

GRAYSON COUNTY
FM SPUR 121

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

DATE: $DATE$
TIME: $TIME$
USER: $USER$
FILE NAME: $FILES$
PENTABLE: $PENTBLS$
SCALE: $SCALESHORT$
PLOT DRIVER: $PLTDRVS$

Texas Department of Transportation

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

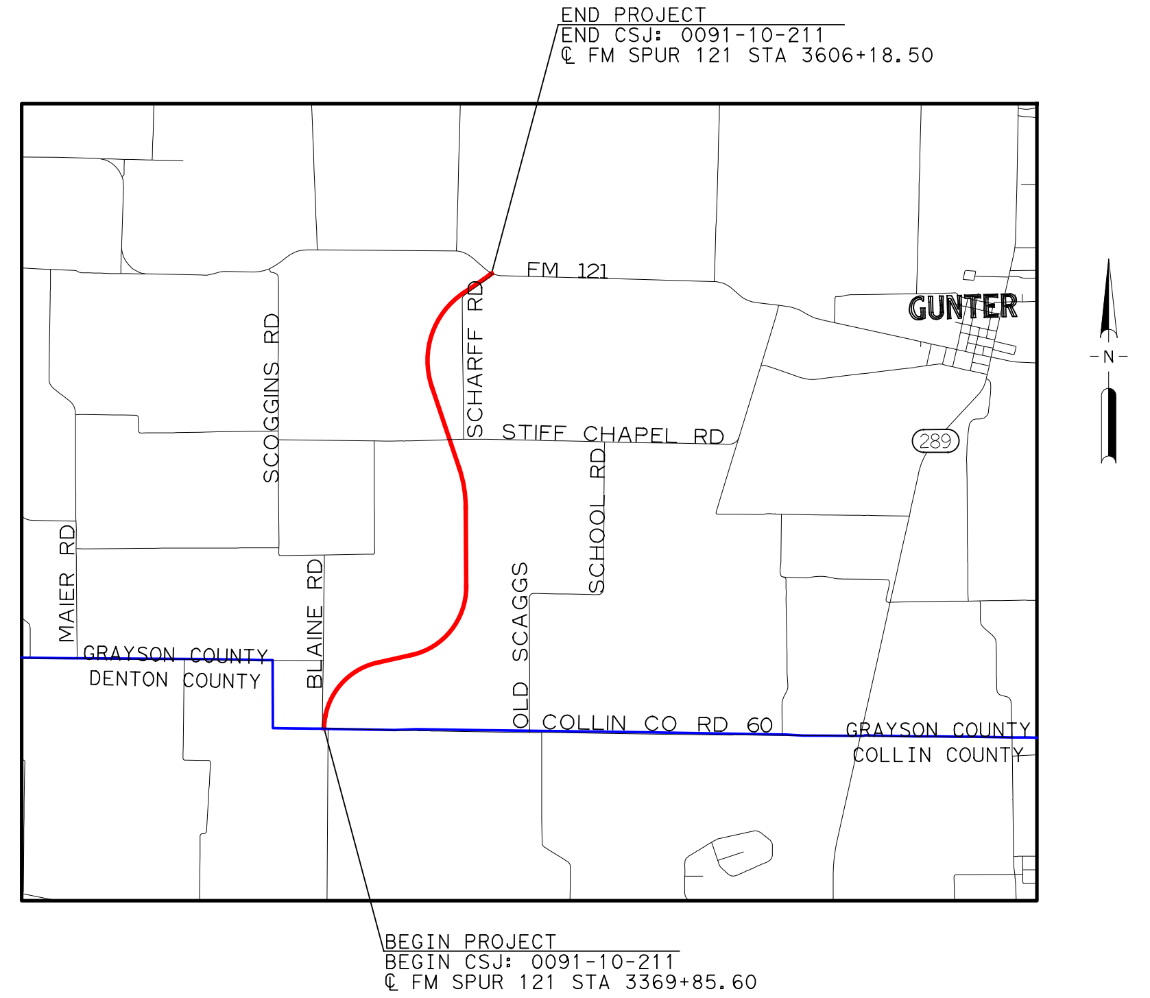
DESIGN SCHEMATIC
GRAYSON COUNTY
FM SPUR 121

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:

BGE, INC.
REGISTRATION NUMBER F-1046

FOR INTERIM REVIEW ONLY. NOT FOR PERMITTING, BIDDING OR CONSTRUCTION.

Prepared by or under the Direct Supervision of:

NAME	P.E. NUMBER
BRIAN REINHARDT	104773
STONEY SKIDMORE	106316

$DATE$
DATE

HORIZONTAL SCALE
0 50 100 200 300
VERTICAL SCALE
0 5 10 20 30

ROLL 1 OF 4

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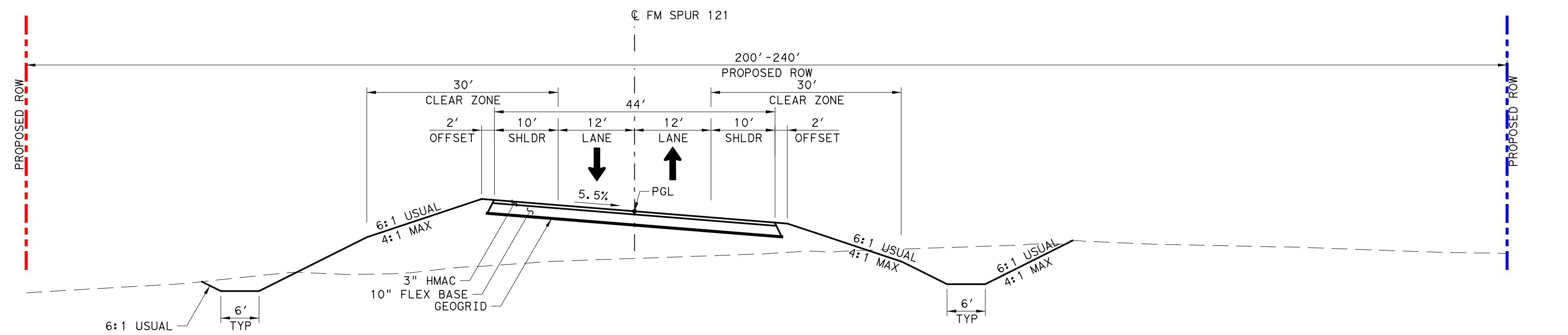
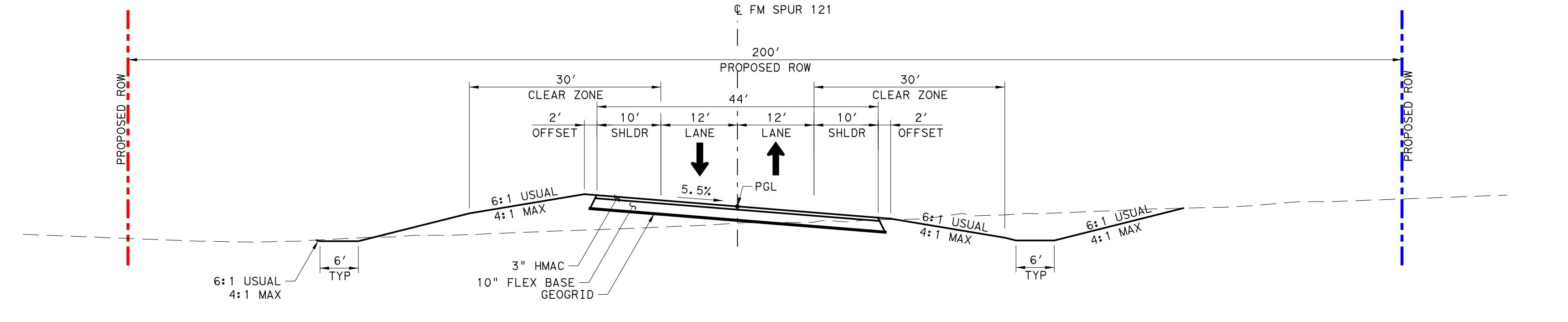
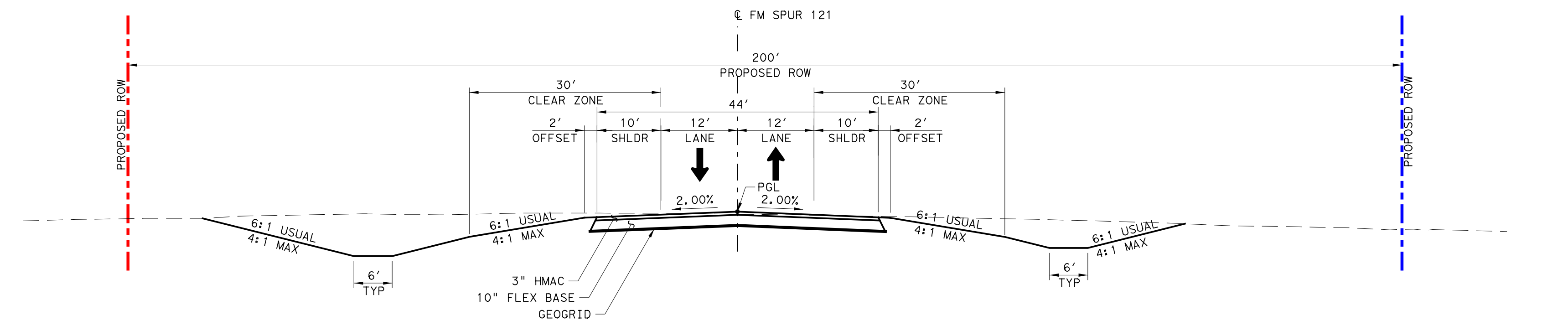


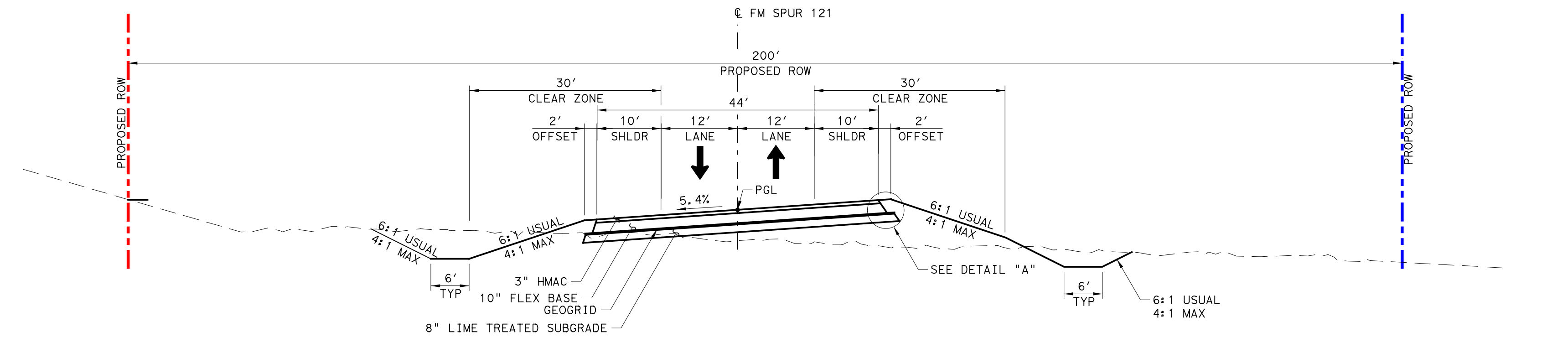
FM SPUR 121
STA 3369+86 TO STA 3392+33



FM SPUR 121
STA 3392+33 TO STA 3408+32



FM SPUR 121
STA 3408+32 TO STA 3422+58
STA STA 3462+06 TO STA 3495+06
STA 3511+73 TO STA 3547+62



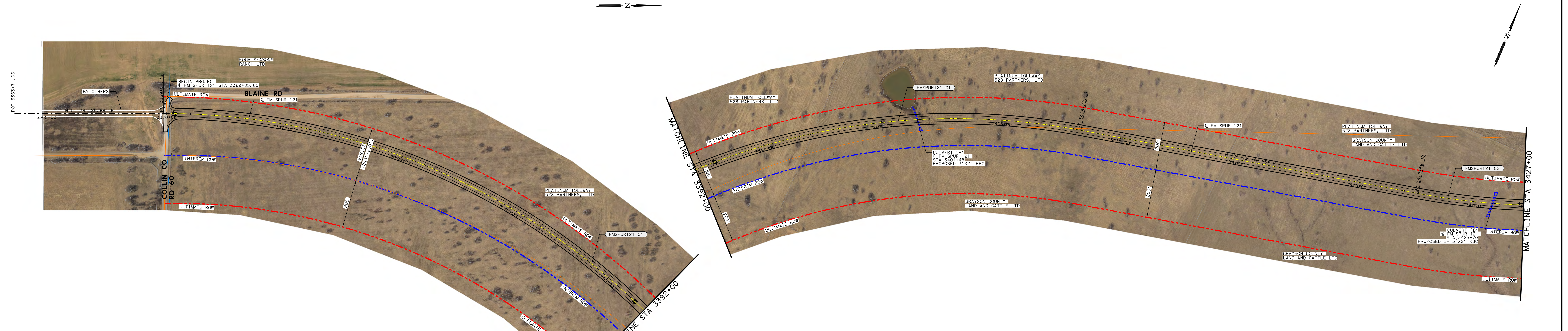
FM SPUR 121
STA 3422+58 TO STA 3462+06

PLAN LEGEND

— - — -	PROPOSED ℄
🟥 — - —	ULTIMATE ROW
🟦 — - —	INTERIM ROW
—	PARCEL BOUNDARY
—	DRAINAGE CULVERT
▭	FEMA ZONE A
←	PROPOSED DIRECTION OF TRAVEL
XX-XX-X	HORIZONTAL CURVE ID

ROLL INDEX

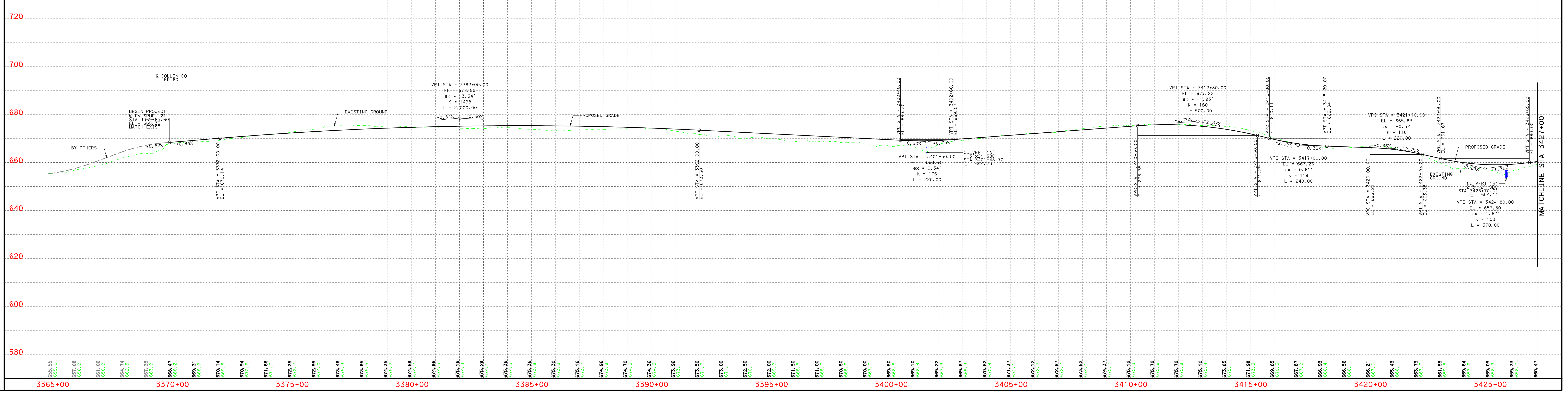
- ROLL 1: FM SPUR 121 BEGIN TO 3427+00
- ROLL 2: FM SPUR 121 3427+00 TO 3488+00
- ROLL 3: FM SPUR 121 3488+00 TO 3550+00
- ROLL 4: FM SPUR 121 3550+00 TO END PROJECT



CURVE NO.	BEGIN CROSS SLOPE	BEGIN TRANSITION	BEGIN FULL SUPER	SUPER RATE	END FULL SUPER	END TRANSITION	END CROSS SLOPE
FMSPUR121_C1	-2.0%	3366+58.00	3370+70.00	5.5%	3407+50.00	3411+62.00	-2.0%
FMSPUR121_C2	-2.0%	3419+33.00	3423+40.00	-5.4%	3461+25.00	3465+32.00	-2.0%
FMSPUR121_C3	-2.0%	3492+57.00	3495+65.00	-3.6%	3511+10.00	3514+18.00	-2.0%
FMSPUR121_C4	-2.0%	3544+56.00	3548+35.00	4.9%	3591+15.00	3594+94.00	-2.0%

ALIGNMENT	CURVE NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT	AHEAD TANGENT	PI STATION	PI NORTHING	PI EASTING	PC STATION	PT STATION
FMSPUR121	FMSPUR121_C1	77° 17' 14.59"	2° 00' 37.36"	2278.69	3844.42	2850	N 0° 26' 25.7" E	N 77° 43' 40.2" E	339+266.42 R1	7201673.22	2477067.93	3369+87.73 R1	3408+32.15 R1
	FMSPUR121_C2	78° 00' 00.22"	1° 58' 32.58"	2348.38	3947.94	2900	N 77° 43' 40.2" E	N 0° 16' 20.0" W	344+606.86 R1	7202959.9	2482983	3422+58.48 R1	3462+06.42 R1
	FMSPUR121_C3	18° 22' 35.54"	1° 06' 06.63"	841.12	1667.8	5200	N 0° 16' 20.0" W	N 18° 38' 55.5" W	350+346.81 R1	7209448.59	2482952.18	3495+05.69 R1	3511+73.49 R1
	FMSPUR121_C4	74° 37' 17.99"	1° 41' 06.61"	2591.12	4428.14	3400	N 18° 38' 55.5" W	N 55° 58' 22.5" E	357+352.69 R1	7216100.32	2480707.32	3547+61.57 R1	3591+89.70 R1
	FMSPUR121_C5	2° 34' 01.72"	0° 43' 40.90"	176.34	352.62	7870	N 55° 58' 22.5" E	N 53° 24' 20.8" E	360+397.29 R1	7218226.02	2483855.58	3602+20.95 R1	3605+73.57 R1

PRELIMINARY - SUBJECT TO CHANGE



COUNTY: GRAYSON
DATE: JULY 2020

GRAYSON COUNTY
FM SPUR 121

ROLL 2 OF 4

Texas Department of Transportation

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

DESIGN SCHEMATIC
GRAYSON COUNTY
FM SPUR 121

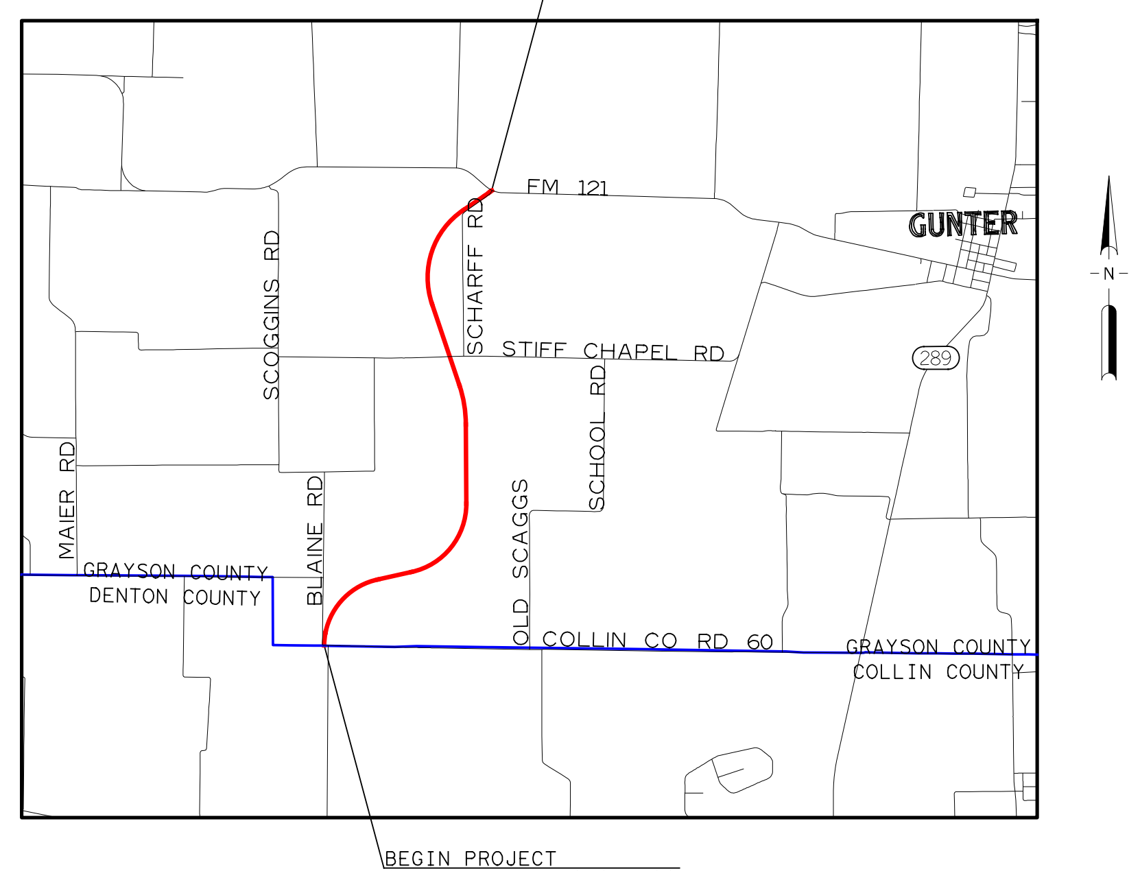
FROM COLLIN CO RD 60 TO FM 121
Project Length = 4.5 Miles
CSJ # 0091-10-211

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

END PROJECT
END CSJ: 0091-10-211
℄ FM SPUR 121 STA 3606+18.50



BEGIN PROJECT
BEGIN CSJ: 0091-10-211
℄ FM SPUR 121 STA 3369+85.60

PRELIMINARY
SUBJECT TO CHANGE BASED
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RESULTING FROM PUBLIC
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SCHEMATIC PREPARED BY:

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Direct Supervision of:

NAME	P.E. NUMBER
BRIAN REINHARDT	104773
STONEY SKIDMORE	106316

$DATE$
DATE

HORIZONTAL SCALE
0 50 100 200 300

VERTICAL SCALE
0 5 10 20 30

ROLL 2 OF 4

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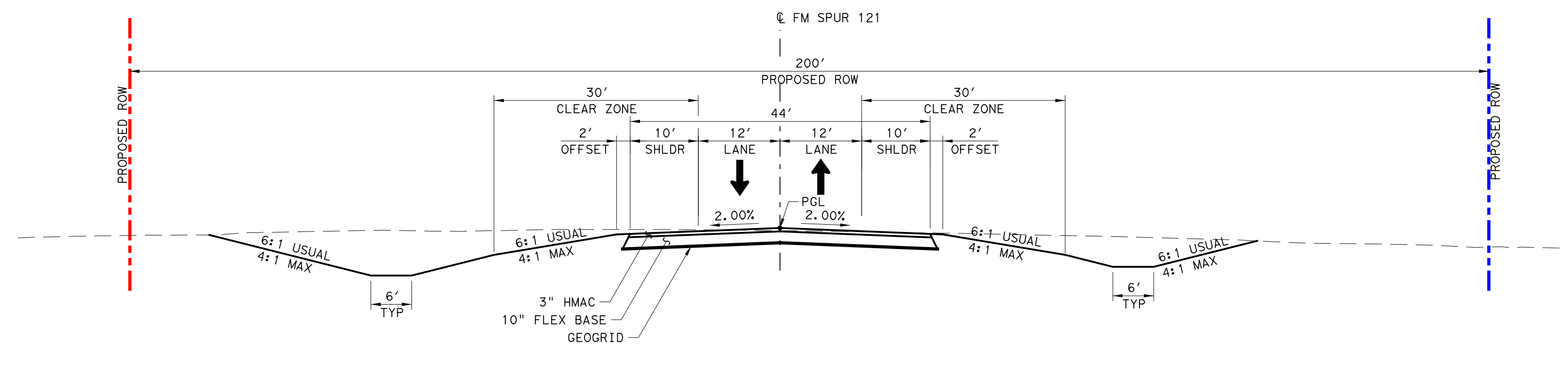
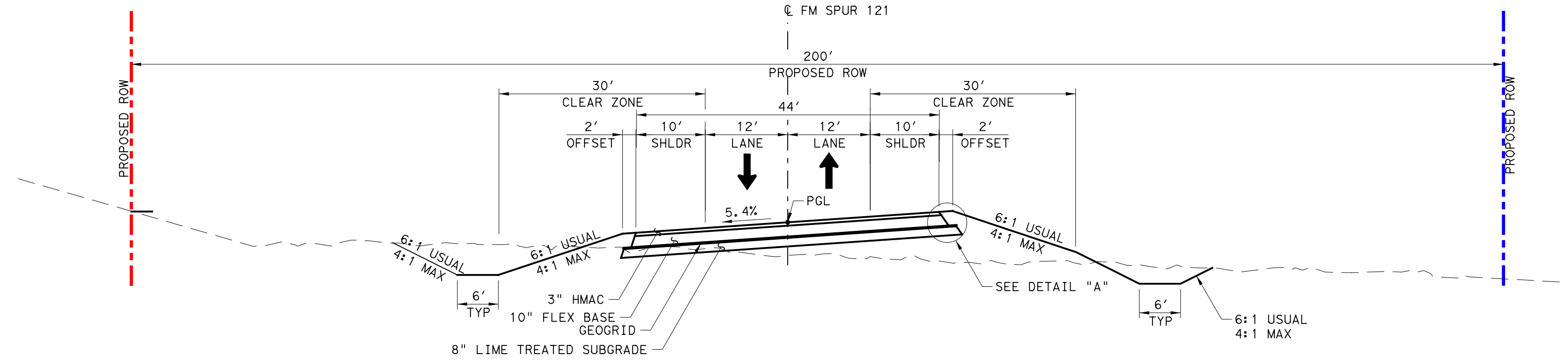
Copyright 2020



FM SPUR 121
STA 3408+32 TO STA 3422+58
STA STA 3462+06 TO STA 3495+06
STA 3511+73 TO STA 3547+62



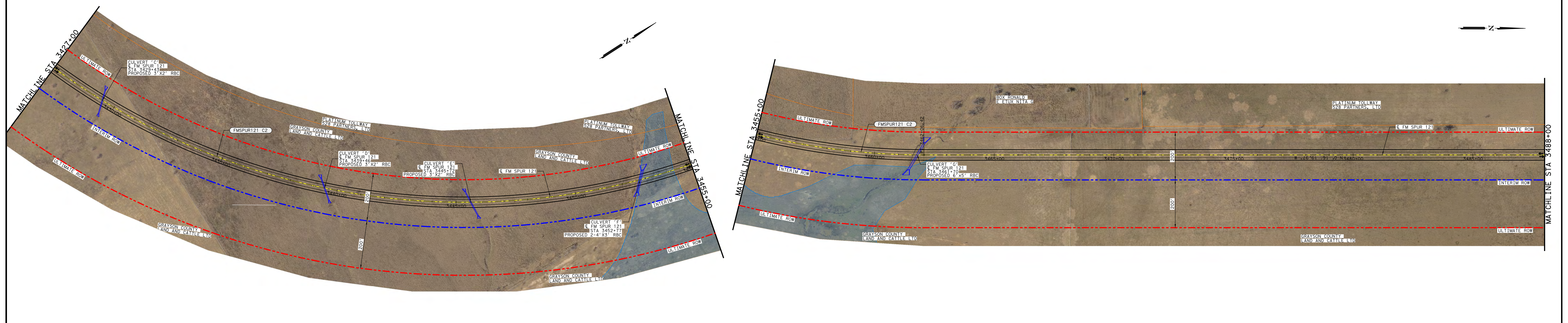
FM SPUR 121
STA 3422+58 TO STA 3462+06

PLAN LEGEND

— - — -	PROPOSED ℄
🟥 — - —	ULTIMATE ROW
🟦 — - —	INTERIM ROW
—	PARCEL BOUNDARY
—	DRAINAGE CULVERT
▭	FEMA ZONE A
←	PROPOSED DIRECTION OF TRAVEL
(XX-XX-X)	HORIZONTAL CURVE ID

ROLL INDEX

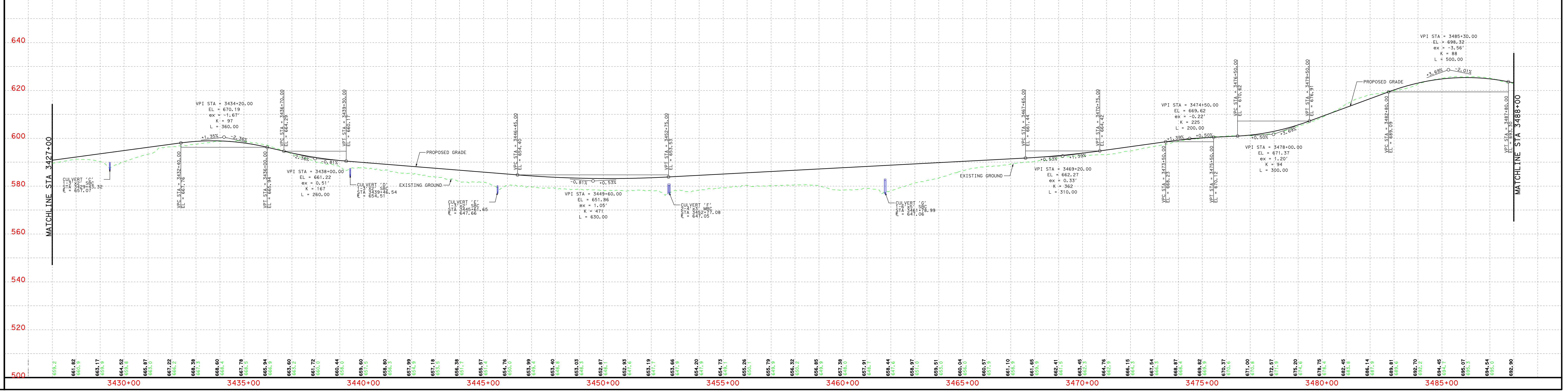
ROLL 1:	FM SPUR 121 BEGIN TO 3427+00
ROLL 2:	FM SPUR 121 3427+00 TO 3488+00
ROLL 3:	FM SPUR 121 3488+00 TO 3550+00
ROLL 4:	FM SPUR 121 3550+00 TO END PROJECT



CURVE NO.	BEGIN CROSS SLOPE	BEGIN TRANSITION	BEGIN FULL SUPER	SUPER RATE	END FULL SUPER	END TRANSITION	END CROSS SLOPE
FMSPUR121_C1	-2.0%	3366+58.00	3370+70.00	5.5%	3407+50.00	3411+62.00	-2.0%
FMSPUR121_C2	-2.0%	3419+33.00	3423+40.00	-5.4%	3461+25.00	3465+32.00	-2.0%
FMSPUR121_C3	-2.0%	3492+57.00	3495+65.00	-3.6%	3511+10.00	3514+18.00	-2.0%
FMSPUR121_C4	-2.0%	3544+56.00	3548+35.00	4.9%	3591+15.00	3594+94.00	-2.0%

ALIGNMENT	CURVE NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT	AHEAD TANGENT	PI STATION	PI NORTHING	PI EASTING	PC STATION	PT STATION
FMSPUR121	FMSPUR121_C1	77°17'14.59"	2°00'37.36"	2278.69	3844.42	2850	N 0°26'25.7" E	N 77°43'40.2" E	339+266.42 R1	7201673.22	2477067.93	3369+87.73 R1	3408+32.15 R1
	FMSPUR121_C2	78°00'00.22"	1°58'32.58"	2348.38	3947.94	2900	N 77°43'40.2" E	N 0°16'20.0" W	344+606.86 R1	7202959.9	2482983	3422+58.48 R1	3462+06.42 R1
	FMSPUR121_C3	18°22'35.54"	1°06'06.63"	841.12	1667.8	5200	N 0°16'20.0" W	N 18°38'55.5" W	350+346.81 R1	7209448.59	2482952.18	3495+05.69 R1	3511+73.49 R1
	FMSPUR121_C4	74°37'17.99"	1°41'06.61"	2591.12	4428.14	3400	N 18°38'55.5" W	N 55°58'22.5" E	357+352.69 R1	7216100.32	2480707.32	3547+61.57 R1	3591+89.70 R1
	FMSPUR121_C5	2°34'01.72"	0°43'40.90"	176.34	352.62	7870	N 55°58'22.5" E	N 53°24'20.8" E	360+397.29 R1	7218226.02	2483855.58	3602+20.95 R1	3605+73.57 R1

PRELIMINARY - SUBJECT TO CHANGE



COUNTY: GRAYSON
DATE: JULY 2020

GRAYSON COUNTY
FM SPUR 121

ROLL 3 OF 4

Texas Department of Transportation

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

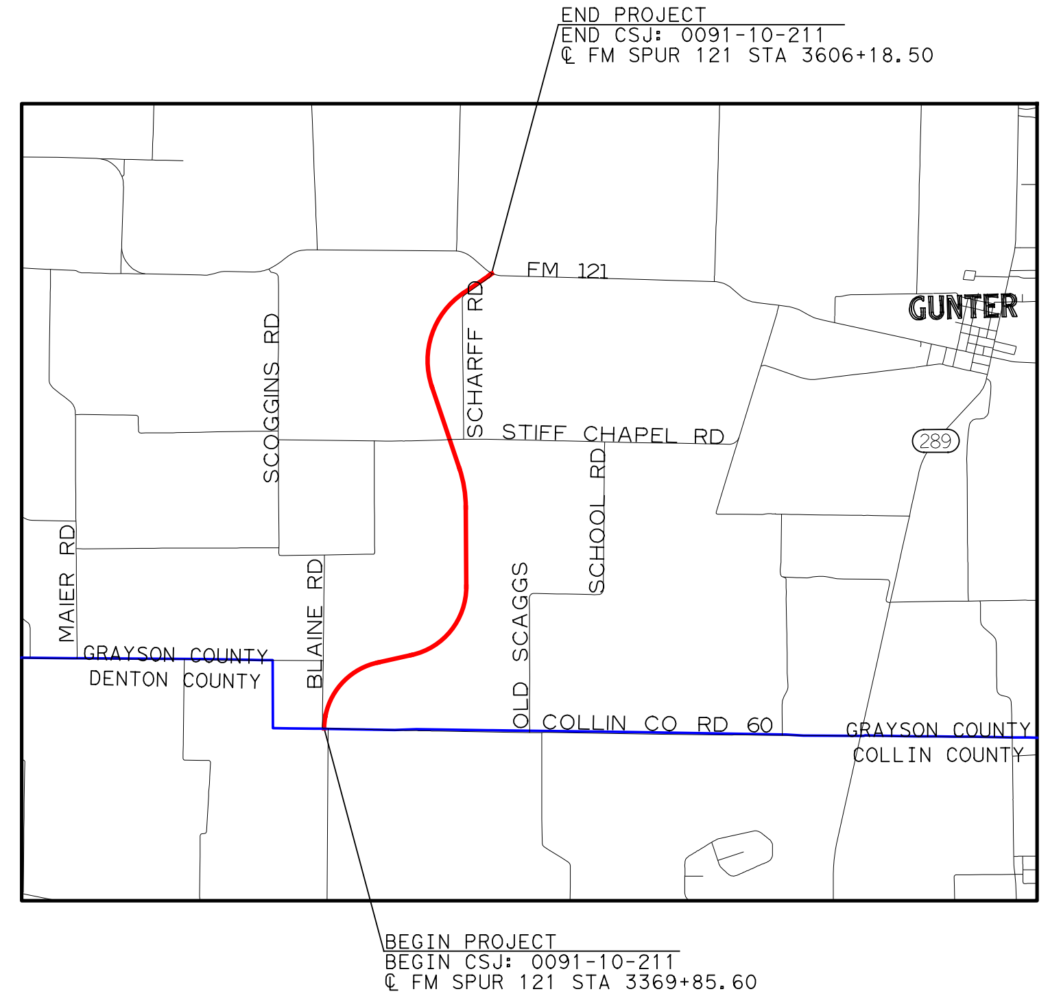
DESIGN SCHEMATIC
GRAYSON COUNTY
FM SPUR 121

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
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SCHEMATIC PREPARED BY:
BGE, INC.
REGISTRATION NUMBER F-1046
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Prepared by or under the Direct Supervision of:

NAME	P.E. NUMBER
BRIAN REINHARDT	104773
STONEY SKIDMORE	106316

$DATE$
DATE

HORIZONTAL SCALE
0 50 100 200 300
VERTICAL SCALE
0 5 10 20 30

ROLL 3 OF 4

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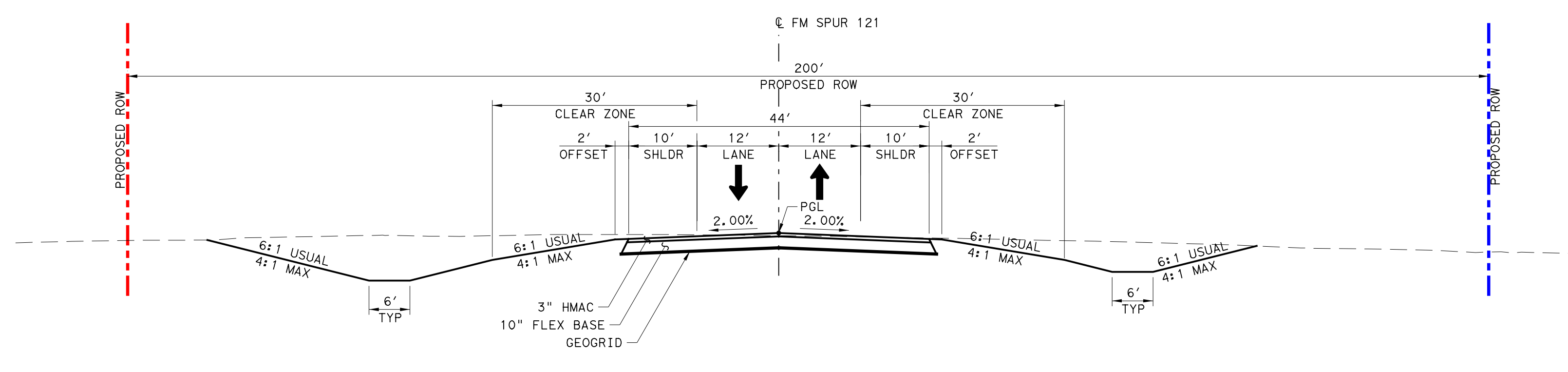
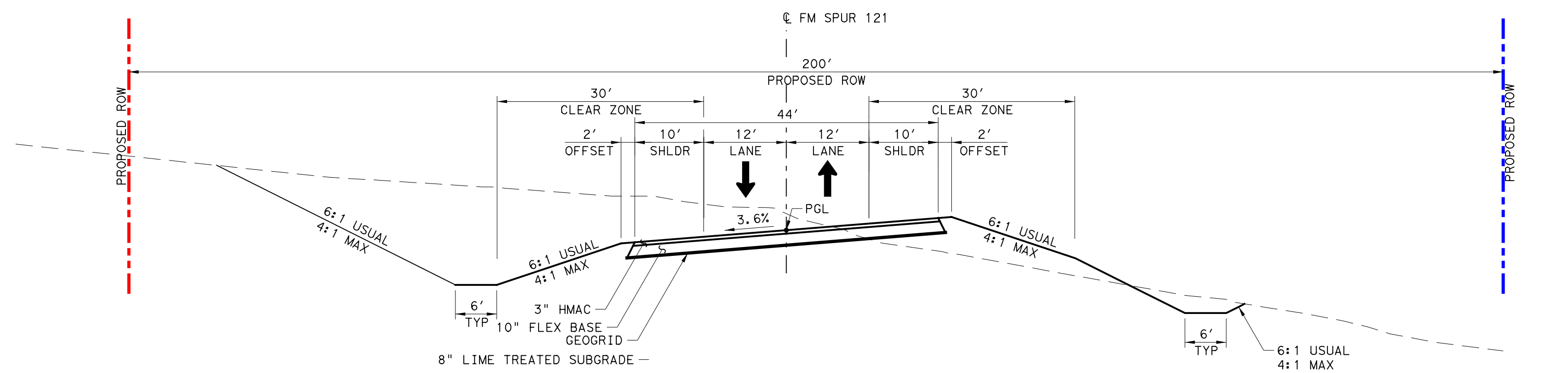
Tel: 972-464-4800 • www.bgeinc.com
TBPE Registration No. F-1046

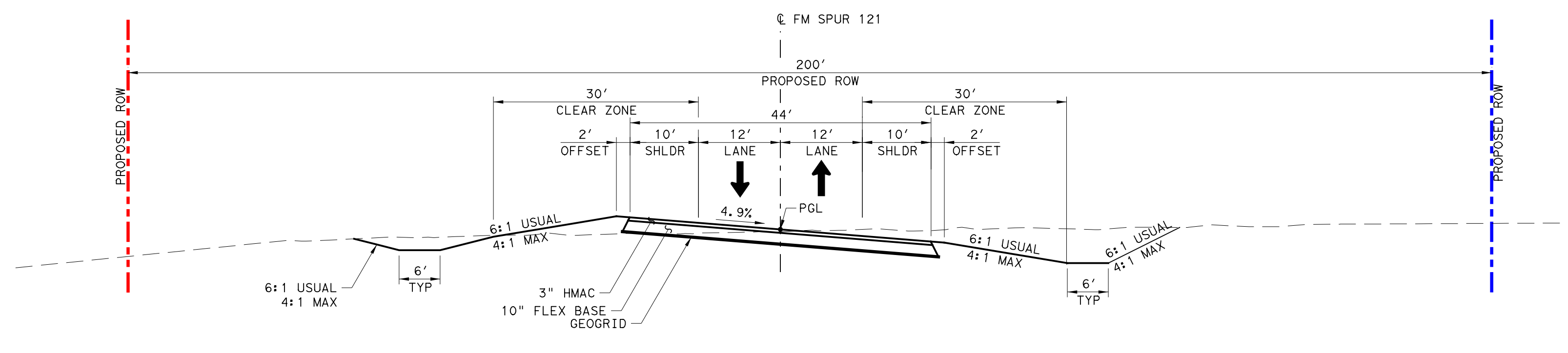
DATE: $DATE$
TIME: $TIME$
USER: $USER$
FILE NAME: $FILES$
PENTABLE: $PENTBLS$
SCALE: $SCALESHORT$
PLOT DRIVER: $PLTDRVS$



FM SPUR 121
STA 3408+32 TO STA 3422+58
STA STA 3462+06 TO STA 3495+06
STA 3511+73 TO STA 3547+62



FM SPUR 121
STA 3495+06 TO STA 3511+73



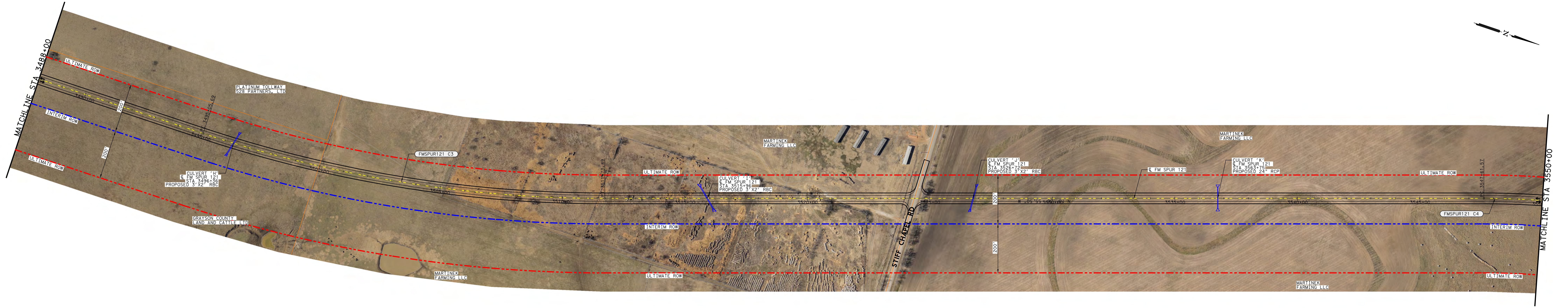
FM SPUR 121
STA 3547+62 TO STA 3590+41

PLAN LEGEND

— - — -	PROPOSED ℄
🟥 — - —	ULTIMATE ROW
🟦 — - —	INTERIM ROW
—	PARCEL BOUNDARY
▬	DRAINAGE CULVERT
▭	FEMA ZONE A
←	PROPOSED DIRECTION OF TRAVEL
(XX-XX-X)	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



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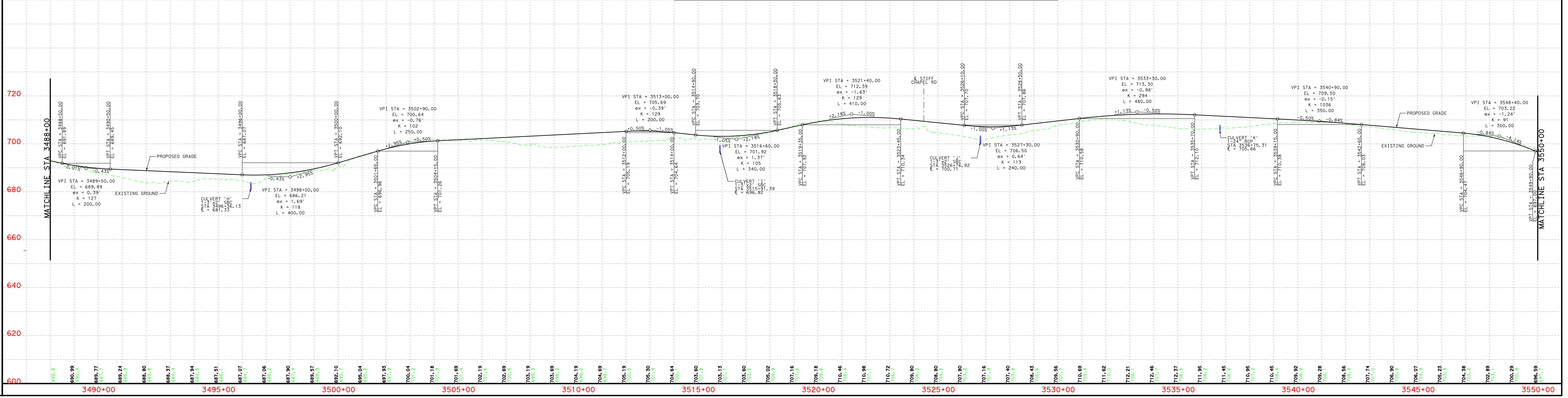
PRELIMINARY - SUBJECT TO CHANGE



Texas Department of Transportation

COUNTY: GRAYSON
DATE: JULY 2020

GRAYSON COUNTY
FM SPUR 121

ROLL 4 OF 4

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PENTABLE: $PENTBLS$
SCALE: $SCALESHORT$
PLOT DRIVER: $PLTDRVS$

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:

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MAINLANES (RURAL MAJOR COLLECTOR) VERTICAL	- 50 MPH
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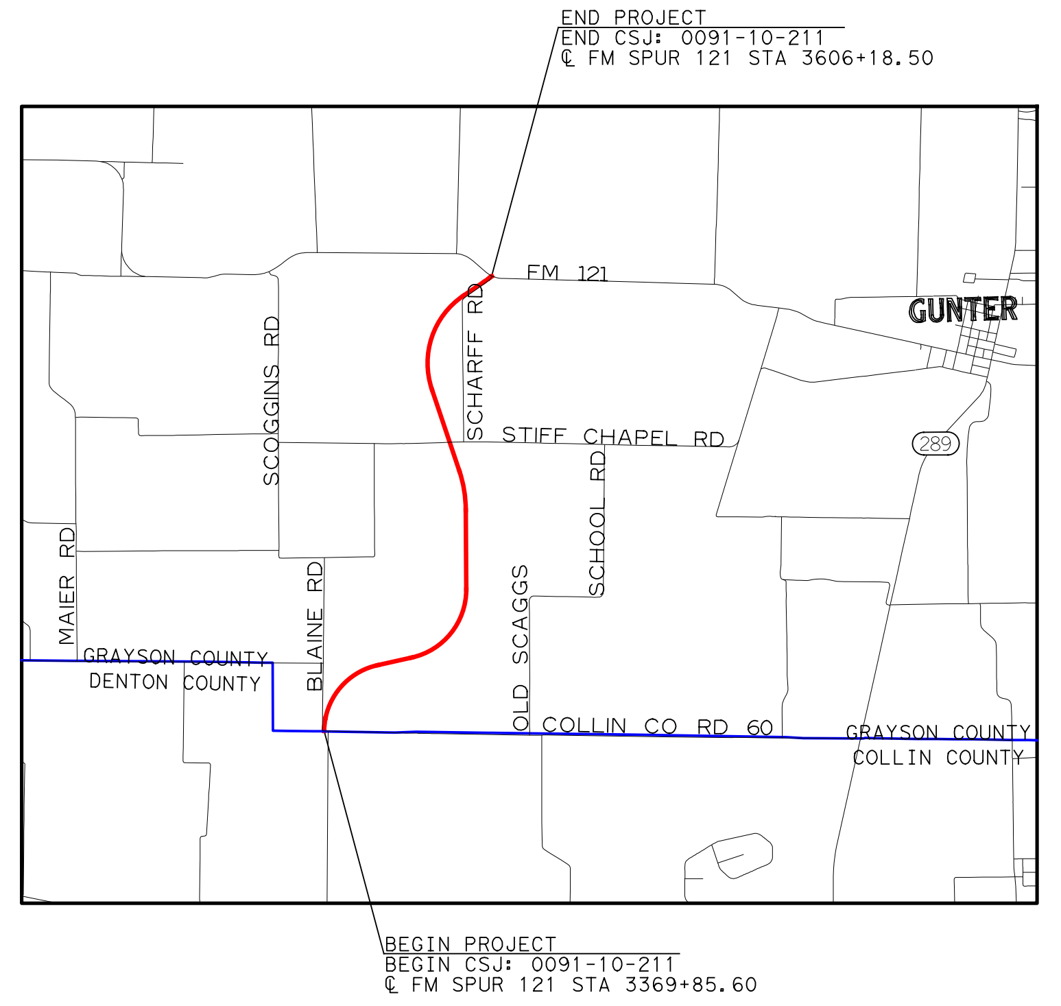

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Direct Supervision of:

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BRIAN REINHARDT	104773
STONEY SKIDMORE	106316

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HORIZONTAL SCALE
0 50 100 200 300
VERTICAL SCALE
0 5 10 20 30

ROLL 4 OF 4

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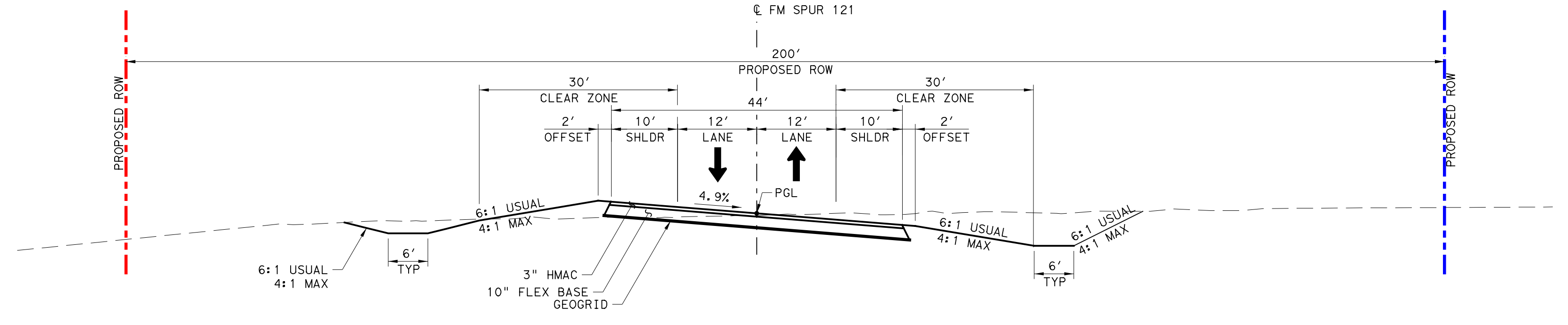
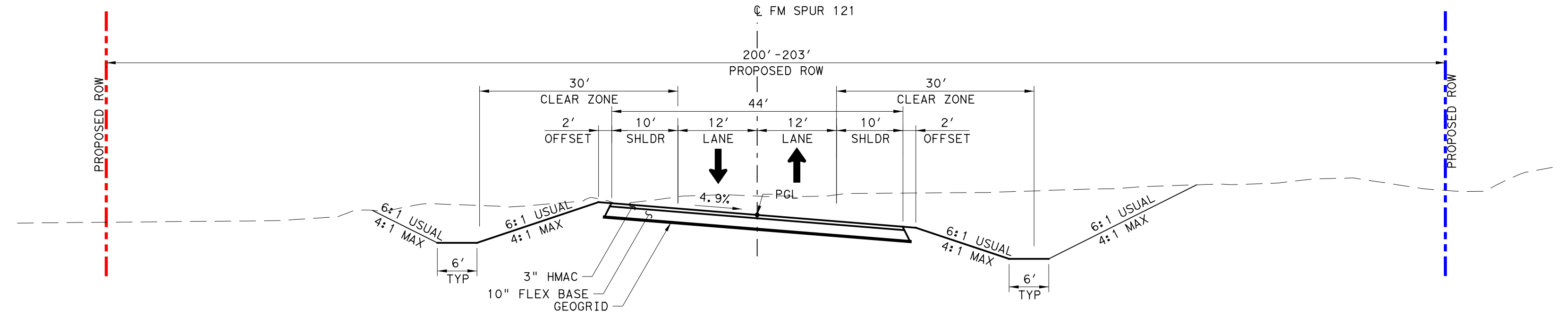
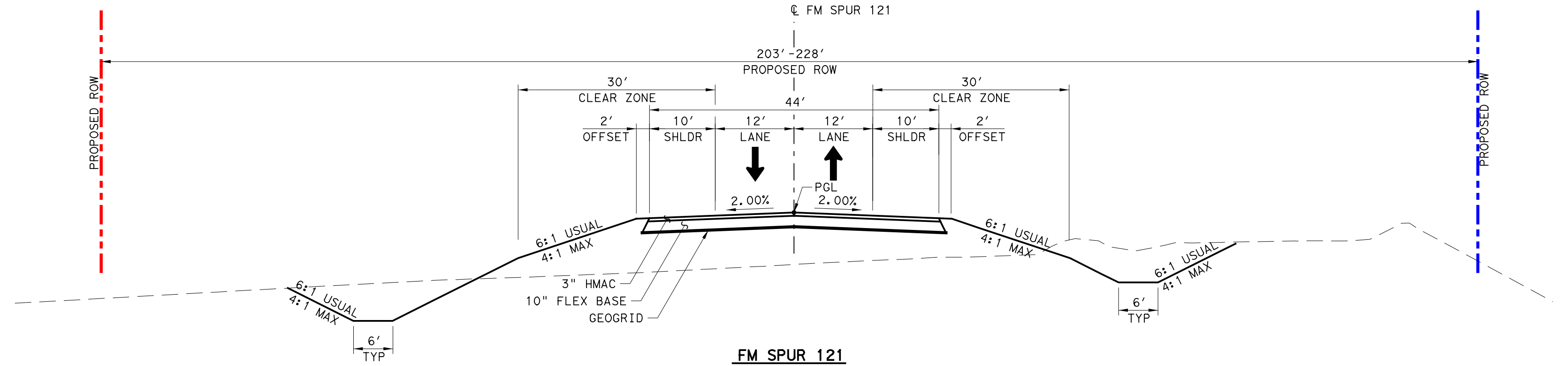


FM SPUR 121
STA 3547+62 TO STA 3590+41



FM SPUR 121
STA 3590+41 TO STA 3591+90



FM SPUR 121
STA 3591+90 TO STA 3606+19

PLAN LEGEND

— - — - — -	PROPOSED ℄
— - - — - -	ULTIMATE ROW
— - - — - -	INTERIM ROW
——	PARCEL BOUNDARY
——	DRAINAGE CULVERT
▭	FEMA ZONE A
←	PROPOSED DIRECTION OF TRAVEL
(XX-XX-X)	HORIZONTAL CURVE ID

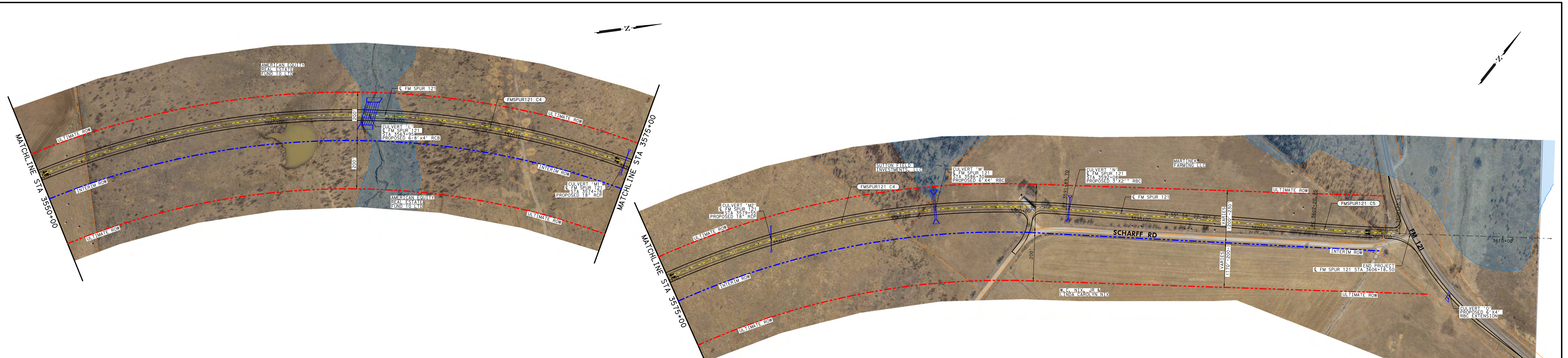
ROLL INDEX

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



CURVE NO.	BEGIN CROSS SLOPE	BEGIN TRANSITION	BEGIN FULL SUPER	SUPER RATE	END FULL SUPER	END TRANSITION	END CROSS SLOPE
FMSPUR121_C1	-2.0%	3366+58.00	3370+70.00	5.5%	3407+50.00	3411+62.00	-2.0%
FMSPUR121_C2	-2.0%	3419+33.00	3423+40.00	-5.4%	3461+25.00	3465+32.00	-2.0%
FMSPUR121_C3	-2.0%	3492+57.00	3495+65.00	-3.6%	3511+10.00	3514+18.00	-2.0%
FMSPUR121_C4	-2.0%	3544+56.00	3548+35.00	4.9%	3591+15.00	3594+94.00	-2.0%

ALIGNMENT	CURVE NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT	AHEAD TANGENT	PI STATION	PI NORTHING	PI EASTING	PC STATION	PT STATION
FMSPUR121	FMSPUR121_C1	77°17'14.59"	2°00'37.36"	2278.69	3844.42	2850	N 0°26'25.7" E	N 77°43'40.2" E	339+266.42 R1	7201673.22	2477067.93	3369+87.73 R1	3408+32.15 R1
	FMSPUR121_C2	78°00'00.22"	1°58'32.58"	2348.38	3947.94	2900	N 77°43'40.2" E	N 0°16'20.0" W	344+606.86 R1	7202959.9	2482983	3422+58.48 R1	3462+06.42 R1
	FMSPUR121_C3	18°22'35.54"	1°06'06.63"	841.12	1667.8	5200	N 0°16'20.0" W	N 18°38'55.5" W	350+346.81 R1	7209448.59	2482952.18	3495+05.69 R1	3511+73.49 R1
	FMSPUR121_C4	74°37'17.99"	1°41'06.61"	2591.12	4428.14	3400	N 18°38'55.5" W	N 55°58'22.5" E	357+352.69 R1	7216100.32	2480707.32	3547+61.57 R1	3591+89.70 R1
	FMSPUR121_C5	2°34'01.72"	0°43'40.90"	176.34	352.62	7870	N 55°58'22.5" E	N 53°24'20.8" E	360+397.29 R1	7218226.02	2483855.58	3602+20.95 R1	3605+73.57 R1

PRELIMINARY - SUBJECT TO CHANGE