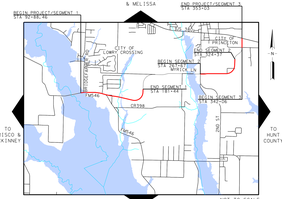
FM 546 / CR 400

PHASE I: EASTERN SEGMENT DESIGN SCHEMATIC
FROM WEST OF BRIDGEFARMER ROAD TO US 380
IN LOWRY CROSSING & PRINCETON, TEXAS

ROADWAY FUNCTIONAL CLASSIFICATION:	URBAN PRINCIPAL ARTERIAL
ROADWAY CONSTRUCTION TYPE:	RECONSTRUCTION/NEW FACILITY
DESIGN SPEED (PRINCIPAL ARTERIAL):	
FROM BEGIN TO STA 182+04	50 MPH
FROM STA 182+04 TO END	45 MPH
DESIGN SPEED (BRIDGEFARMER RD):	20 MPH
DESIGN SPEED (THE CROSSING DR):	20 MPH
DESIGN SPEED (FM 546 CONNECTOR):	35 MPH
DESIGN SPEED (LAKE MEADOWS):	20 MPH
DESIGN SPEED (DOVE HILL TRAIL/CR 452):	20 MPH
NET LENGTH OF PROJECT:	2.96 MILES
BRIDGE LENGTH:	130 FEET
SCHEMATIC SCALE:	HORIZ: 1"=100' VERT: 1"=10'
AERIAL PHOTO DATE:	2020
HORIZONTAL:	NAD 83 (2011)
VERTICAL:	NAVD 88
GRID TO SURFACE SCALE FACTOR:	1.000152710
EMAX USED:	62

LOCATION MAP



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

SCHEMATIC PREPARED BY:
ROSA PLENNER, P.E.
REGISTRAR NO. CHAPTER F-1046
FOR INTERIM REVIEW ONLY, NOT FOR PERMITTING, BIDDING OR CONSTRUCTION.
PRESENT BY OR UNDER THE SUPERVISION OF:
ROSA PLENNER 107648
NAME P.E. NUMBER
SAMANTHA DELEON 136439
NAME P.E. NUMBER
11/14/2022
DATE

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

SHEET 1 OF 4

100% DESIGN SCHEMATIC SUBMITTAL

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

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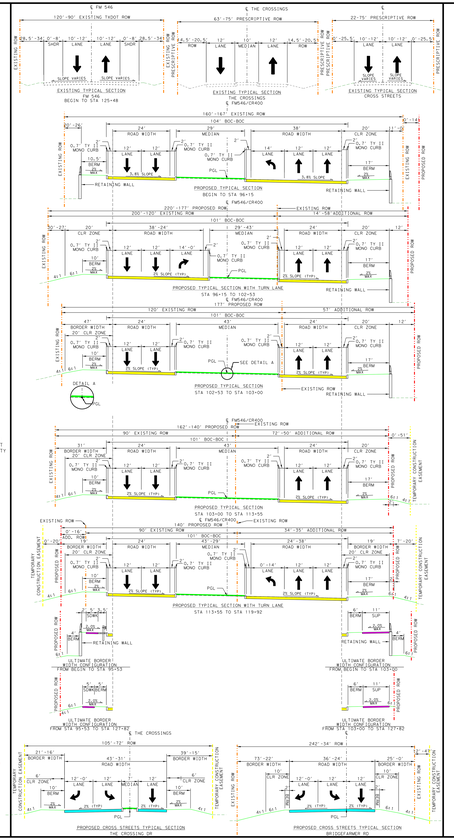

PLAN LEGEND

- PROPOSED ℄
- PROPOSED ROW
- EXISTING TXDOT ROW
- TEMPORARY CONSTRUCTION EASEMENT
- PAVING BY OTHERS
- PARCEL BOUNDARY
- RETAINING WALL
- CITY AND ETJ BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE
- PROPOSED CROSS-STREETS
- REMOVALS
- IMPACTED STRUCTURES
- FEMA FLOODPLAIN
- EXISTING SIGNALIZED INTERSECTIONS
- PROPOSED SIGNALIZED INTERSECTIONS
- DIRECTION OF TRAVEL
- PARCEL NUMBER
- HORIZONTAL CURVE ID
- FLOW ARROWS
- CHANNEL GRADING
- PROPOSED FLOWLINE DROP INLETS

UTILITIES LEGEND

B UTILITIES

- TELEPHONE - AT&T
- FIBER - AT&T
- CABLE TV - SUDDENLINK
- TELEPHONE - SUDDENLINK
- WASTEWATER - NTMWD
- WATER - CULLEOKA WSC
- ELECTRIC - ONCOR

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- STORM SEWER - CITY OF PRINCETON
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- WATER - WILLOW WATER
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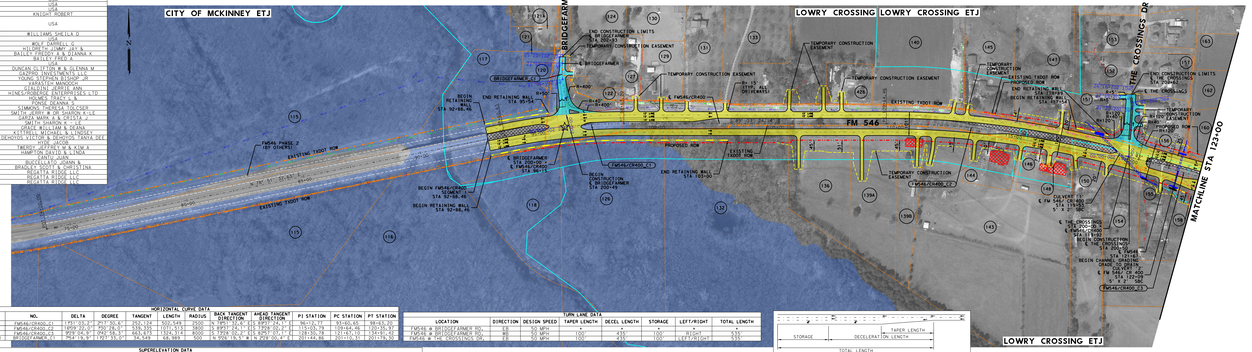
- OVERHEAD CABLE TV - CHARTER
- OVERHEAD CABLE TV - SUDDENLINK
- OVERHEAD FIBER - SUDDENLINK
- OVERHEAD ELECTRIC - ONCOR
- OVERHEAD ELECTRIC - TNMP

GENERAL NOTES:

1. SCHEMATICS ARE BASED ON AERIAL SURVEYS DATED JANUARY 2020 AND RECORD PLANS.
2. OWNERSHIP INFORMATION SHOWN ON SCHEMATICS WAS OBTAINED FROM COLLIN COUNTY APPRAISAL DISTRICT (JANUARY 2022).
3. DESIGN MANUALS USED: TxDOT ROADWAY DESIGN MANUAL (2020)
4. SUPERELEVATION AXIS OF ROTATION IS ABOUT THE POL.
5. APPROXIMATE 100 YEAR FLOODPLAIN LIMITS ARE BASED ON FEMA FIRM PANELS 48085C0430J.
6. CONCEPTUAL ROADWAY CLEARANCE (SIGNS) ARE NOT SHOWN AND WILL BE DEVELOPED DURING THE PS&E PHASE OF THE PROJECT.
7. ROADWAY MEASUREMENTS ARE FROM BOC TO BOC UNLESS OTHERWISE STATED.
8. PARCEL DATA OBTAINED FROM COUNTY APPRAISAL DISTRICTS. PARCEL LINES ARE ADJUSTED ACCORDINGLY TO THE PROPOSED ROADWAY IMPROVEMENTS AND BASED OFF FIELD SURVEY AND PROPERTY RECORDS.
9. LAKE MEADOWS PROFILE AND DESIGN IS BASED ON ESTIMATED PROFILE FROM THE NEIGHBORHOOD.
10. FM 546/CR 400 ASSUMES WIDENING ON FM 982

ROLL INDEX

ROLL 1:	FM 546/CR400 BEGIN TO 123+00
ROLL 2:	FM 546/CR400 STA 123+00 TO STA 170+00
ROLL 3:	FM 546/CR400 STA 170+00 TO STA 304+00
ROLL 4:	FM 546/CR400 STA 304+00 TO END



PARCEL NO.	PARCEL ID	OWNER
115	1084863	USA
116	1084864	USA
117	1084865	USA
118	2137821	USA
119	2137822	USA
120	2137823	USA
121A	1084836	KNIGHT ROBERT
122	1084837	USA
	1084838	USA
124	2137824	WILLIAMS SHIRLY V
125	1084839	USA
49	1076759	BOLF JAMES L
50	2137825	ELLIOTT ELIZABETH L JR &
150	2136245	BAILEY FRECKY A & ELENNA K
151	2136246	BAILEY FRECKY A
152	2136247	
153	1067621	DUNCAN SLITTON B & ELENNA M
154	2136248	DUNCAN SLITTON B & ELENNA M
42	1031283	YOUNG SUZANNE A
159A	2816783	LAFAYETTE MANDOCHI
159B	2816784	LAFAYETTE MANDOCHI
41	1076758	HINES/GREENFIELD PROPERTIES LTD
142	2136256	HOLMES DAVID A II
143	2136257	HOLMES DAVID A II
144	2136258	JAMES ROBERT & BRIDGETTE
145	2136259	SMITH JOSHUA & ALLISON K
146	2136260	GARCIA MARK A & CRISTINA J
148	1084840	HALL ROBERT L
149	2136261	GARCIA MARK A & CRISTINA J
163	1084841	KIRKPATRICK WILLIAM & DAVINA
164	1830863	DEHOYOS VICTOR & DEYOSUS TANYA DEE
165	1084842	
152	2137826	MEJIA JOSEPH & ELISA A
151	1139881	THAMPSON DAVID & LINDA
154	2137827	
155	2137828	BUCKALEW JOHN L
156	2137832	BRADLEY SCOTT & CHRISTINA
164	2137829	SCOTT & SCOTT LLC
165	2137830	SCOTT & SCOTT LLC
166	2137831	SCOTT & SCOTT LLC

ALIGNMENT	NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT DIRECTION	AHEAD TANGENT DIRECTION	PI STATION	PC STATION	PT STATION
FM546/CR400	FM546/CR400-1	17°41'33.9"	2°17'30.5"	252.14	503.949	2500	N 20°41'21.1"E	N 38°22'54.9"E	36+13.71	31+60.85	36+64.80
FM546/CR400	FM546/CR400-2	11°03'12.0"	1°02'28.4"	97.00	193.971	5500	N 38°22'54.9"E	N 49°26'06.9"E	119+02.24	118+44.46	120+38.42
FM546/CR400	FM546/CR400-3	9°29'06.9"	0°38'29.5"	83.93	167.914	8000	N 49°26'06.9"E	N 40°03'07.1"E	169+35.78	167+51.92	169+19.82
BRIDGEFARMER	BRIDGEFARMER-1	90°00'00.0"	11°27'33.0"	10.00	15.708	80.00	S 00°00'00.0"E	S 90°00'00.0"E	0+10.00	0+00.00	0+15.71

HORIZONTAL CURVE DATA

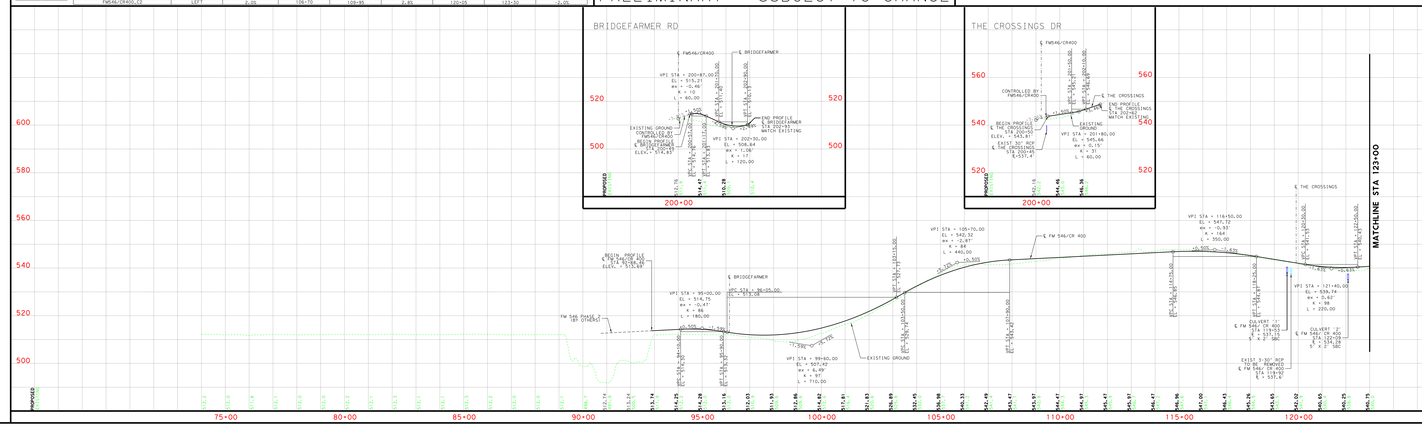
SUPERELEVATION DATA									
CURVE_NO.	LANE	BEGIN CROSS SLOPE	BEGIN TRANSITION	BEGIN FULL SUPER	SUPER RATE	END FULL SUPER	END TRANSITION	END CROSS SLOPE
FM546/CR400-C1	RIGHT	-2.0%	89+00	92+95	5.8%	98+25	102+15	-2.0%
FM546/CR400-C1	LEFT	-2.0%	89+00	92+95	5.8%	98+25	102+15	-2.0%
FM546/CR400-C2	RIGHT	-2.0%	166+10	168+35	2.8%	170+25	172+15	-2.0%
FM546/CR400-C2	LEFT	-2.0%	166+10	168+35	2.8%	170+25	172+15	-2.0%

TURN LANE DATA							
LOCATION	DIRECTION	DESIGN SPEED	TAPER LENGTH	DECEL LENGTH	STORAGE	LEFT/RIGHT	TOTAL LENGTH
FM546 @ BRIDGEFARMER RD	EB	50 MPH	100'	415'	100'	RIGHT	615'
FM546 @ BRIDGEFARMER RD	WB	50 MPH	100'	415'	100'	RIGHT	615'
FM546 @ THE CROSSINGS DR	EB	35 MPH	100'	250'	100'	LEFT/RIGHT	450'

TAPER LENGTH
STORAGE DECELERATION LENGTH
TOTAL LENGTH

CROSS SLOPE
S100_CONVERSION

PRELIMINARY - SUBJECT TO CHANGE



COLLIN COUNTY
FM546/CR400 PHASE I: EASTERN SEGMENT DESIGN SCHEMATIC
COUNTY: COLLIN
DATE: NOV. 2022
ROLL 1 OF 4
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Tel: 972-464-4800 ● www.bgeinc.com
TBPE Registration No. F-1046
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FM 546 / CR 400

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FROM WEST OF BRIDGEFARMER ROAD TO US 380
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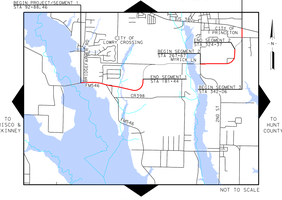
VERTICAL:	NAVD 88
GRID TO SURFACE SCALE FACTOR:	1.000152710
EMAX USED:	62

LOCATION MAP



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

SCHEMATIC PREPARED BY
FOR INTERIM REVIEW ONLY, NOT FOR PERMITTING, BIDDING OR CONSTRUCTION.
PRELIMINARY PLAN SUBMITTED FOR REVIEW ONLY
11/14/2022
DATE

NAME	P.E. NUMBER
ROSA PLENDER	107648
SAMANTHA DELEON	136439

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

SHEET 2 OF 4

100% DESIGN SCHEMATIC SUBMITTAL

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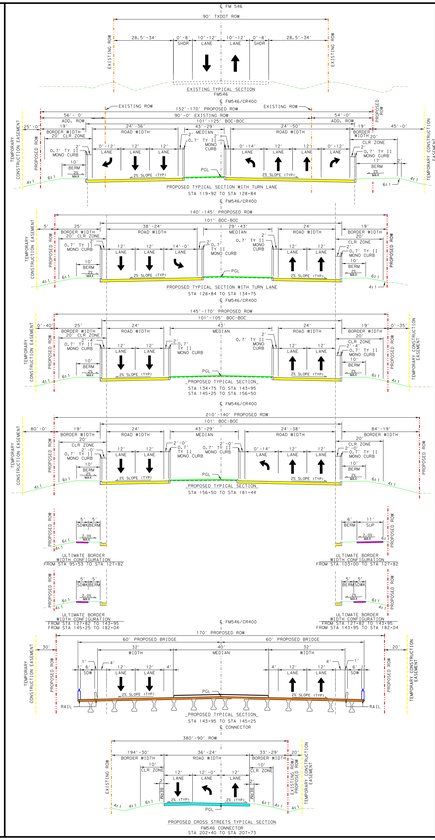

PLAN LEGEND

- PROPOSED ℄
- PROPOSED ROW
- EXISTING TXDOT ROW
- TEMPORARY CONSTRUCTION EASEMENT
- PAVING BY OTHERS
- PARCEL BOUNDARY
- RETAINING WALL
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UTILITIES LEGEND

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- TELEPHONE - AT&T
- FIBER - AT&T
- CABLE TV - SUDDENLINK
- TELEPHONE - SUDDENLINK
- WASTEWATER - NTMWD
- WATER - CULLEDKA WSC
- ELECTRIC - ONCOR

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- TELEPHONE - SUDDENLINK
- WATER - CITY OF PRINCETON
- WATER - CULLEDKA WSC
- WATER - WILLIAM WATER
- FIBER - AT&T
- WASTEWATER - NORTH TEXAS MUNICIPAL WATER DISTRICT
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- ELECTRIC - ONCOR
- OVERHEAD TELEPHONE - AT&T
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- OVERHEAD CABLE TV - SUDDENLINK
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GENERAL NOTES:

1. SCHEMATICS ARE BASED ON AERIAL SURVEYS DATED JANUARY 2020 AND RECORD PLANS.
2. OWNERSHIP INFORMATION SHOWN ON SCHEMATIC WAS OBTAINED FROM COLLIN COUNTY APPRAISAL DISTRICT (JANUARY 2022).
3. DESIGN MANUALS USED: TxDOT ROADWAY DESIGN MANUAL (2020)
4. SUPERELEVATION AXIS OF ROTATION IS ABOUT THE POL.
5. APPROXIMATE 100 YEAR FLOODPLAIN LIMITS ARE SHOWN ON THE PROPOSED PROFILE SHEETS.
6. CONVENTIONAL ROADWAY LIGHTING (SMALL LIGHTS) ARE NOT SHOWN AND WILL BE DEVELOPED DURING THE PS&E PHASE OF THE PROJECT.
7. ROADWAY MEASUREMENTS ARE FROM BOC TO BOC UNLESS OTHERWISE STATED.
8. PARCEL DATA OBTAINED FROM COUNTY APPRAISAL DISTRICTS. ESTIMATED PARCEL REQUIREMENT TO THE PROPOSED ROADWAY IMPROVEMENTS ARE BASED OFF FIELD SURVEY AND PROPERTY RECORDS.
9. LAKE MEADOWS PROFILE AND DESIGN IS BASED ON ESTIMATED PROFILE TO MATCH THE NEIGHBORHOOD.
10. FM 546/CR 400 ASSUMES WIDENING ON FM 982

ROLL INDEX

- ROLL 1: FM 546/CR400 BEGIN TO 123+00
- ROLL 2: FM 546/CR400 STA 123+00 TO STA 170+00
- ROLL 3: FM 546/CR400 STA 170+00 TO STA 304+00
- ROLL 4: FM 546/CR400 STA 304+00 TO END

SUPERELEVATION DATA

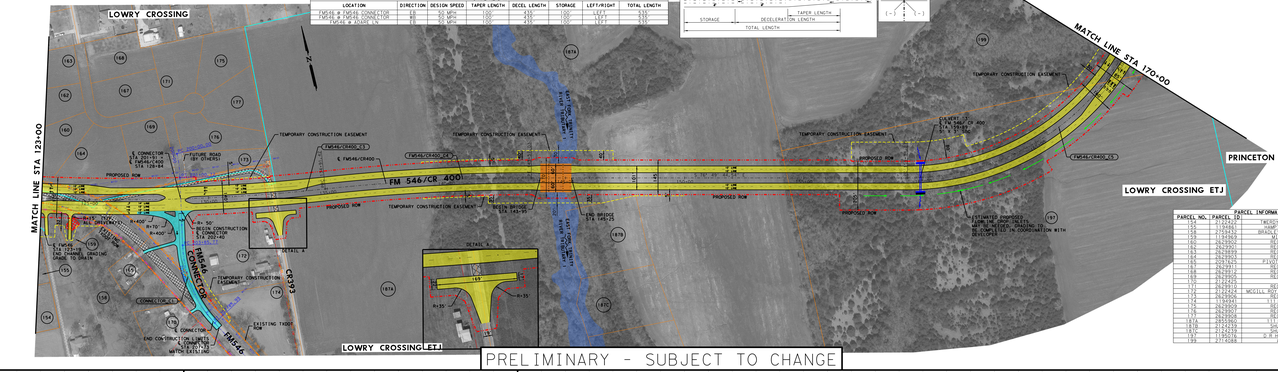
CURVE_NO.	LANE	BEGIN CROSS SLOPE	BEGIN TRANSITION	BEGIN FULL SUPER	SUPER RATE	END FULL SUPER	END TRANSITION	END CROSS SLOPE
FM546/CR400-C2	RIGHT	-2.00%	124+00	125+50	4.8%	150+00	151+50	-2.00
FM546/CR400-C2	LEFT	-2.00%	124+00	125+50	4.8%	150+00	151+50	-2.00
FM546/CR400-C5	LEFT/RIGHT	-2.00%	174+00	175+50	4.8%	192+00	193+50	-2.00

HORIZONTAL CURVE DATA

ALIGNMENT	NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT DIRECTION	AHEAD TANGENT DIRECTION	PI STATION	PC STATION	PT STATION
FM546/CR400	FM546/CR400-C5	90°19'29.8"	262°18'0.1"	863.07	1324.11	6000	S 89°29'41.1" W	N 89°09'11.9" W	180+35.78	191+81.10	194+81.94
FM546/CR400	FM546/CR400-C6	13°46'12.4"	9°33'0.0"	1,146.24	2,291.99	600	N 89°09'11.9" W	N 75°23'0.5" W	202+28.23	213+76.22	236+20.22
FM546/CR400	FM546/CR400-C7	14°04'48.1"	9°33'0.0"	1,146.24	2,291.99	600	N 75°23'0.5" W	N 61°18'12.4" W	237+66.21	249+14.20	271+58.20
CONNECTOR	CONNECTOR-C1	14°05'48.5"	95°32'0.0"	50.529	100.272	60	S 89°35'5.8" W	N 75°29'37.3" W	200+55.76	203+06.03	207+06.04
CONNECTOR	CONNECTOR-C2	90°03'37.1"	114°35'0.1"	183.991	360.119	50	S 75°29'37.3" W	N 89°26'45.1" W	205+76.79	209+36.91	213+36.94

TURN LANE DATA

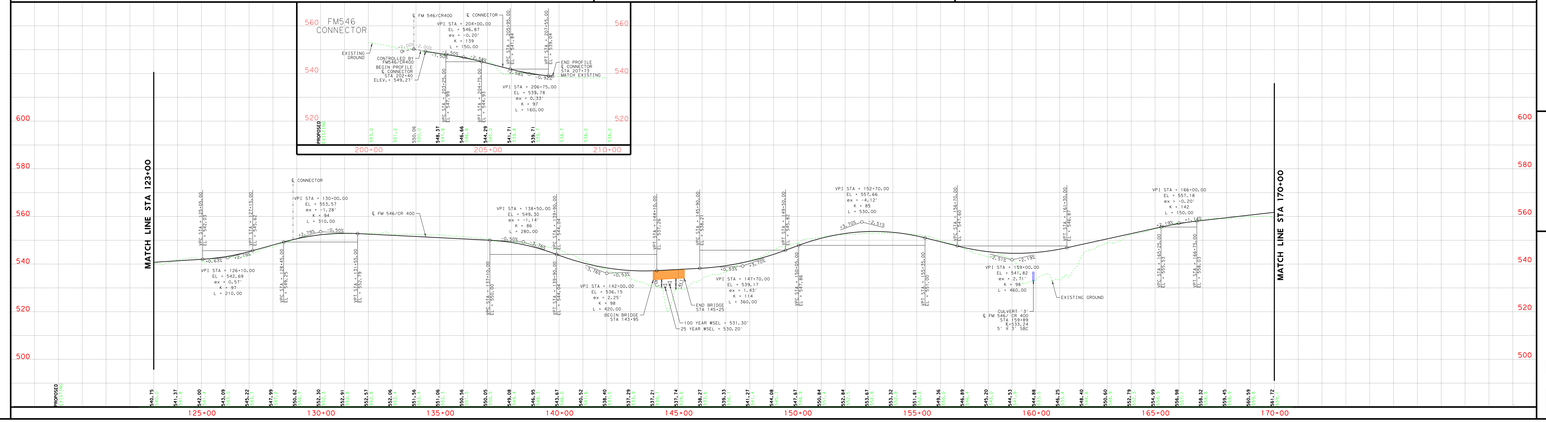
LOCATION	DIRECTION	DESIGN SPEED	TAPER LENGTH	DECEL LENGTH	STORAGE	LEFT/RIGHT	TOTAL LENGTH
FM546 @ FM546 CONNECTOR	EB	50 MPH	100'	410'	100'	187.5'	510'
FM546 @ FM546 CONNECTOR	WB	50 MPH	100'	410'	100'	187.5'	510'
FM546 @ CR398 (S)	EB	50 MPH	100'	410'	100'	187.5'	510'



PARCEL INFORMATION

PARCEL NO.	PARCEL ID	OWNER
154	2142424	BRENDT, JUSTIN L M & KIM E
155	2142424	BRENDT, JUSTIN L M & KIM E
156	2142424	BRENDT, JUSTIN L M & KIM E
159	1.43963	MOLYER HOMES LLC
160	1.43963	MOLYER HOMES LLC
161	1.43963	MOLYER HOMES LLC
162	2528890	REALTA 8 FIVE LLC
163	2528890	REALTA 8 FIVE LLC
164	2528890	REALTA 8 FIVE LLC
165	2528890	REALTA 8 FIVE LLC
167	2529311	REALTA 8 FIVE LLC
168	2529311	REALTA 8 FIVE LLC
169	2529311	REALTA 8 FIVE LLC
170	2529311	REALTA 8 FIVE LLC
171	2142424	N/A
172	2142424	JEKAETLA STONE LLC
173	2142424	MCGILL ROY L & MINDY LIFE ESTATE
174	2142424	111 BLUEBONNET LLC
175	2142424	111 BLUEBONNET LLC
176	2142424	111 BLUEBONNET LLC
177	2142424	111 BLUEBONNET LLC
178	2142424	111 BLUEBONNET LLC
187A	2142424	111 BLUEBONNET LLC
188	2142424	111 BLUEBONNET LLC
189	2142424	SPACE 2 BRAND LLC
190	2142424	SPACE 2 BRAND LLC
191	1.96016	D R PORTER - TEXAS LTD
192	2170026	PJR GROUP LLC

PRELIMINARY - SUBJECT TO CHANGE



COLLIN COUNTY
FM546/CR400 PHASE I: EASTERN SEGMENT DESIGN SCHEMATIC
COUNTY: COLLIN
DATE: NOV. 2022
ROLL 2 OF 4
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FM 546 / CR 400

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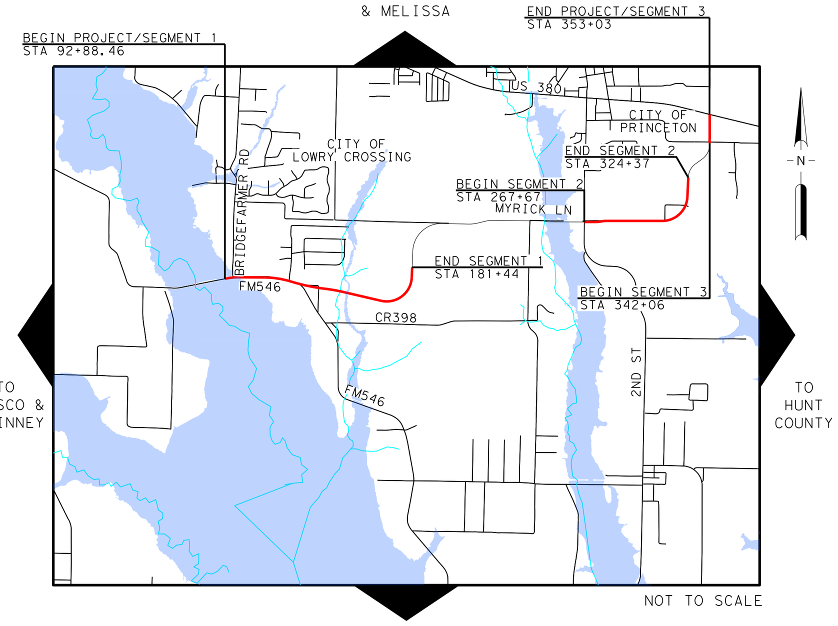
EMAX USED:	6%

LOCATION MAP



NOT TO SCALE

PRELIMINARY
SUBJECT TO CHANGE BASED
ON FURTHER DEVELOPMENTS
RESULTING FROM PUBLIC
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SCHEMATIC PREPARED BY:
BGE, INC.
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NAME	P.E. NUMBER
ROSA PLESNER	107648
SAMANTHA DELEON	136439

DATE: 11/16/2022

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

SHEET 3 OF 4

100% DESIGN SCHEMATIC SUBMITTAL

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COLLIN COUNTY
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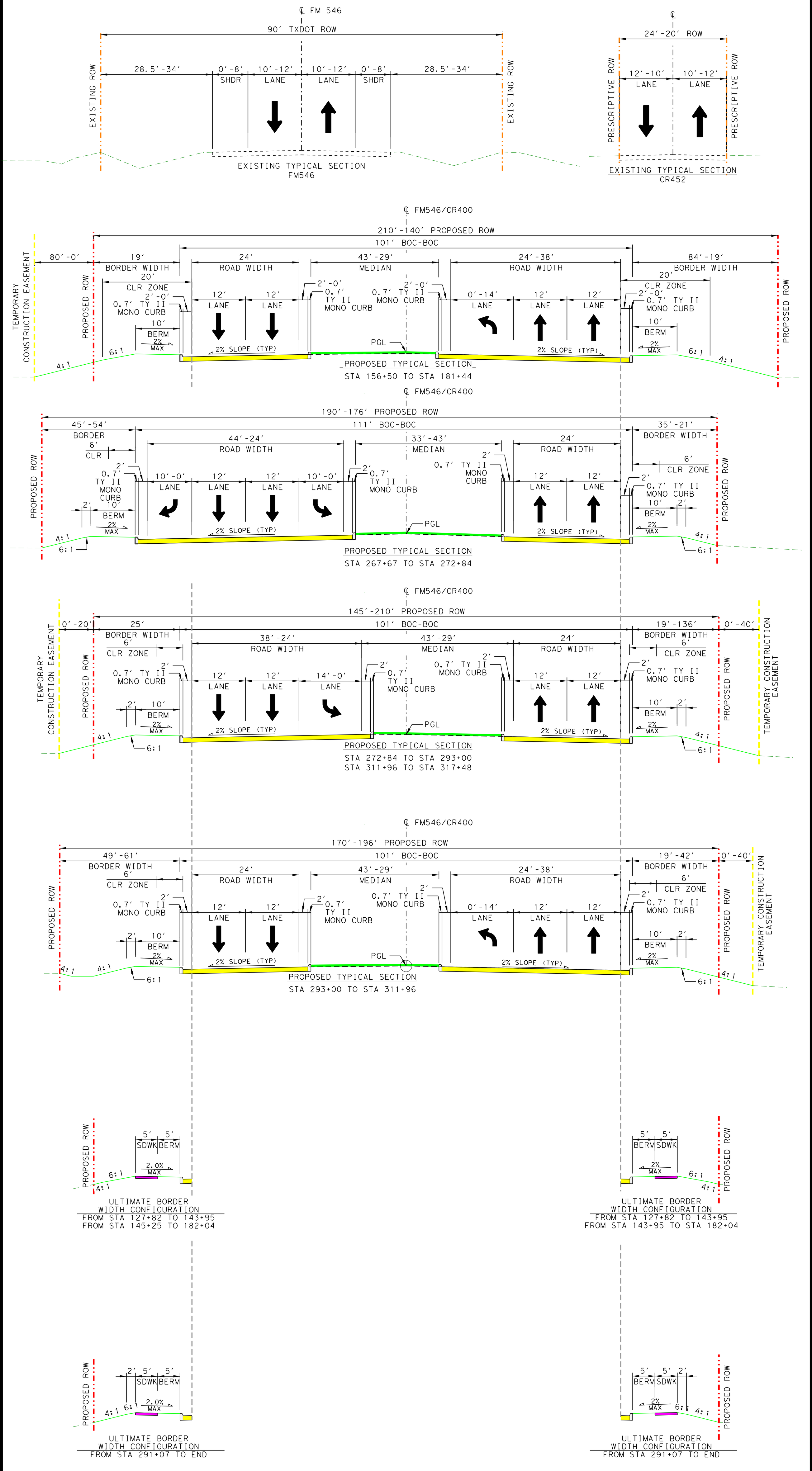
ROLL 3 OF 4



PLAN LEGEND

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- EXISTING TXDOT ROW
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- PAVING BY OTHERS
- PARCEL BOUNDARY
- RETAINING WALL
- CITY AND ETJ BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE
- PROPOSED CROSS-STREETS
- REMOVALS
- IMPACTED STRUCTURES
- FEMA FLOODPLAIN
- EXISTING SIGNALIZED INTERSECTIONS
- PROPOSED SIGNALIZED INTERSECTIONS
- DIRECTION OF TRAVEL
- PARCEL NUMBER
- HORIZONTAL CURVE ID
- FLOW ARROWS
- CHANNEL GRADING
- PROPOSED FLOWLINE DROP INLETS

UTILITIES LEGEND

B UTILITIES

- T1 — TELEPHONE - AT&T
- FOC1 — FIBER - AT&T
- CATV5 — CABLE TV - SUDDENLINK
- T5 — TELEPHONE - SUDDENLINK
- WW1 — WASTEWATER - NTMWD
- W3 — WATER - CULLEOKA WSC
- E1 — ELECTRIC - ONCOR

D UTILITIES

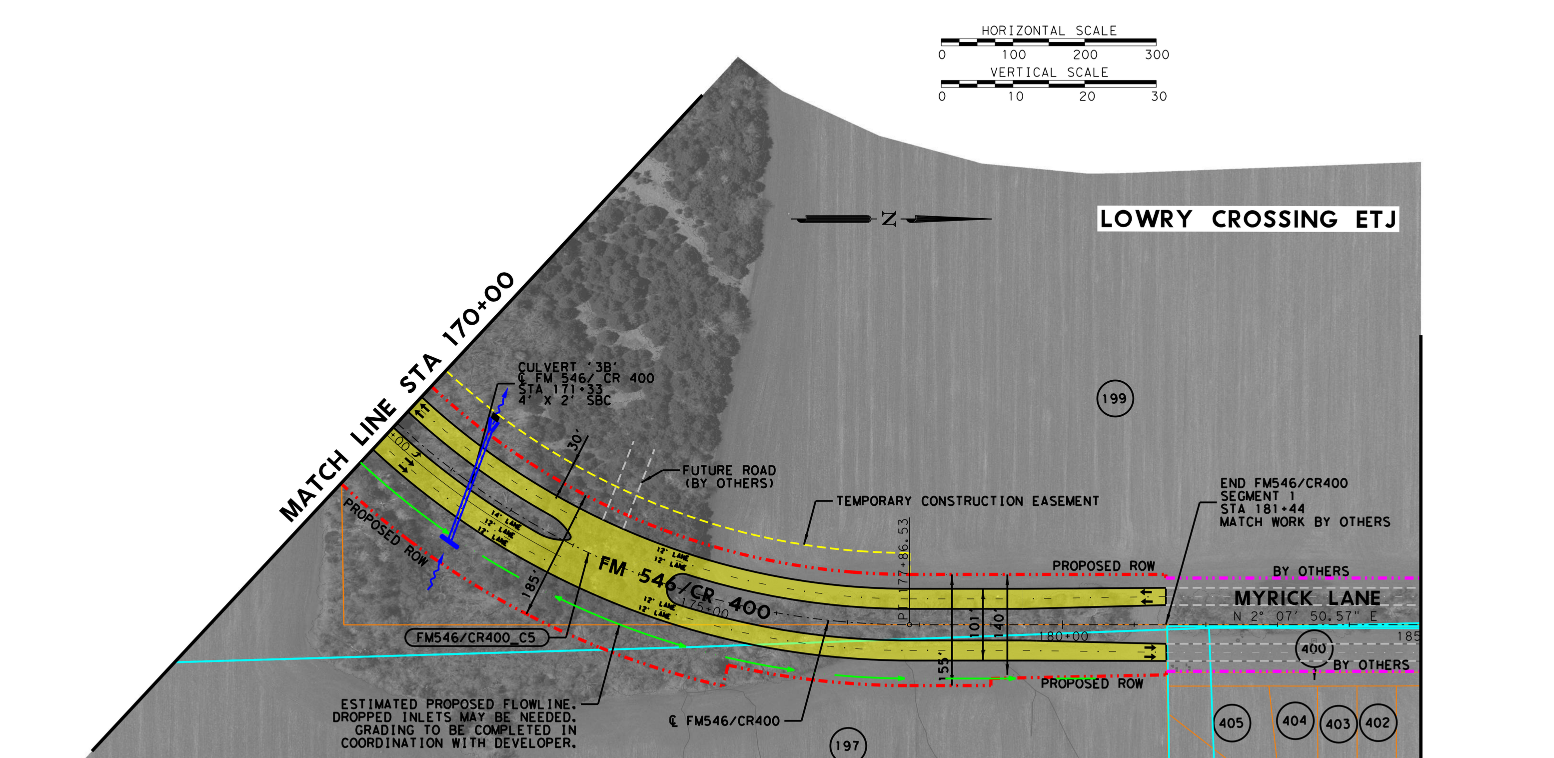
- STM — STORM SEWER - CITY OF PRINCETON
- T1(D) — TELEPHONE - AT&T
- T5(D) — TELEPHONE - SUDDENLINK
- W2(D) — WATER - CITY OF PRINCETON
- W3(D) — WATER - CULLEOKA WSC
- W4(D) — WATER - MILLIGAN WATER
- FOC1(D) — FIBER - AT&T
- WW1(D) — WASTERWATER - NORTH TEXAS MUNICIPAL WATER DISTRICT
- CATV5(D) — CABLE TV - SUDDENLINK
- E1(D) — ELECTRIC - ONCOR
- OHT1 — OVERHEAD TELEPHONE - AT&T
- OHCATV2 — OVERHEAD CABLE TV - CHARTER
- OHCATV5 — OVERHEAD CABLE TV - SUDDENLINK
- OHFOC5 — OVERHEAD FIBER - SUDDENLINK
- OE1 — OVERHEAD ELECTRIC - ONCOR
- OE2 — OVERHEAD ELECTRIC - TNMP

GENERAL NOTES:

1. SCHEMATICS ARE BASED ON AERIAL SURVEYS DATED AUGUST 2020 AND RECORD PLANS.
2. OWNERSHIP INFORMATION SHOWN ON SCHEMATIC WAS OBTAINED FROM COLLIN COUNTY APPRASIAL DISTRICT (JANUARY 2022).
3. DESIGN MANUALS USED: TxDOT ROADWAY DESIGN MANUAL (2020)
4. SUPERELEVATION AXIS OF ROTATION IS ABOUT THE PGL.
5. APPROXIMATE 100 YEAR FLOODPLAIN LIMITS ARE BASED UPON FEMA FLOOD INSURANCE RATE MAPS.
6. CONVENTIONAL ROADWAY SIGNAGE (SMALL SIGNS) ARE NOT SHOWN AND WILL BE DEVELOPED DURING THE PS&E PHASE OF THE PROJECT.
7. ROADWAY MEASUREMENTS ARE FROM BOC TO BOC UNLESS OTHERWISE STATED.
8. PARCEL DATA OBTAINED FROM COUNTY APPRAISAL DISTRICTS (GIS) - PROPERTY LOCATIONS ADJACENT TO THE PROPOSED ROADWAY IMPROVEMENTS ARE BASED OFF FIELD SURVEY AND PROPERTY RECORDS.
9. LAKE MEADOWS PROFILE AND DESIGN IS BASED ON ESTIMATED PROFILE FROM THE NEIGHBORHOOD.
10. FM 546/CR 400 ASSUMES WIDENING ON FM 982

ROLL INDEX

ROLL 1: FM 546/CR400 BEGIN TO 123+00
ROLL 2: FM 546/CR400 STA 123+00 TO STA 170+00
ROLL 3: FM 546/CR400 STA 170+00 TO STA 304+00
ROLL 4: FM 546/CR400 STA 304+00 TO END



PARCEL INFORMATION		
PARCEL NO.	PARCEL ID	OWNER
197	1195076	D R HORTON - TEXAS LTD
199	2714088	AJE GROUP LLC
400	2849490	D R HORTON - TEXAS LTD
401	2849489	D R HORTON - TEXAS LTD
402	2849488	D R HORTON - TEXAS LTD
403	2849487	D R HORTON - TEXAS LTD
404	2849486	D R HORTON - TEXAS LTD
405	2849485	D R HORTON - TEXAS LTD
406	2849484	D R HORTON - TEXAS LTD
407	2849483	D R HORTON - TEXAS LTD
408	2849595	D R HORTON - TEXAS LTD
409	2849564	D R HORTON - TEXAS LTD
410	2849482	D R HORTON - TEXAS LTD
411	2849481	D R HORTON - TEXAS LTD

HORIZONTAL CURVE DATA

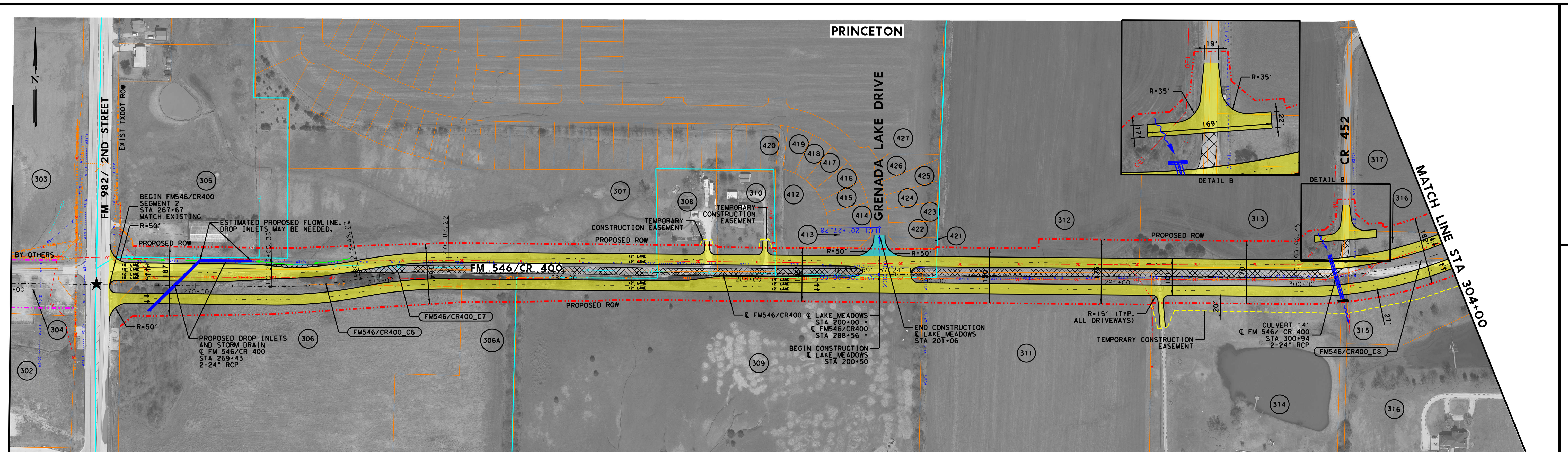
ALIGNMENT	NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT DIRECTION	AHEAD TANGENT DIRECTION	PI STATION	PC STATION	PT STATION
FM546/CR400	FM546/CR400_C5	101°02'24.9"	5°27'24.3"	1274.664	1851.659	1050	S 76°49'44.5" E	N 2°07'50.6" E	172+09.53	159+34.87	177+86.53

TURN LANE DATA

LOCATION	DIRECTION	DESIGN SPEED	TAPER LENGTH	DECEL LENGTH	STORAGE	LEFT/RIGHT	TOTAL LENGTH
FM546 @ ADARE LN	EB	50 MPH	100'	435'	100'	LEFT	535'

SUPERELEVATION DATA

CURVE_NO.	BEGIN CROSS SLOPE	BEGIN TRANSITION	BEGIN FULL SUPER	SUPER RATE	END FULL SUPER	END TRANSITION	END CROSS SLOPE
FM546/CR400_C5	-2.0%	154+60	159+85	5.8%	177+35	182+60	-2.0%



PARCEL INFORMATION		
PARCEL NO.	PARCEL ID	OWNER
302	2137870	CALDWELL DURRIE LEE
303	2137849	PRINCETON ISD
304	2137876	CALDWELL DURRIE LEE
305	2683645	NIELL PROPERTIES - FARM SERIES LLC
306	2810061	SOUTH LOOP CENTER LLC
306A	2840356	ONCOR ELECTRIC DELIVERY COMPANY LLC
307	2785246	AJFUND LLC
308	2138508	BECKWITH EARL LYNN & PATRICIA
309	2719036	CORE PBSFR PRINCETON 982 LLC
310	2089397	FARNSWORTH DEAN L JR & MADISON
310A	2828225	PULTE HOMES OF TEXAS LP
311	1202736	AJE GROUP LLC
312	2724918	PENUMUDI VIJAYA KUMAR
313	2724942	POOSARLA SUREKHA & SRINIVASA RAJA
314	1202727	COBBLE KEVIN L &
315	2550926	STEPAN CHARLES W & SARAH J
316	2573570	CIMLER FAMILY TRUST &
317	2137623	KAYASA FAMILY LTD &

PARCEL INFORMATION		
PARCEL NO.	PARCEL ID	OWNER
412	2857785	PULTE HOMES OF TEXAS LP
413	2857792	PULTE HOMES OF TEXAS LP
414	2857791	PULTE HOMES OF TEXAS LP
415	2857790	PULTE HOMES OF TEXAS LP
416	2857789	PULTE HOMES OF TEXAS LP
417	2857788	PULTE HOMES OF TEXAS LP
418	2857787	PULTE HOMES OF TEXAS LP
419	2857786	PULTE HOMES OF TEXAS LP
420	2857784	PULTE HOMES OF TEXAS LP
421	2857886	PULTE HOMES OF TEXAS LP
422	2857885	PULTE HOMES OF TEXAS LP
423	2857884	PULTE HOMES OF TEXAS LP
424	2857883	PULTE HOMES OF TEXAS LP
425	2857882	PULTE HOMES OF TEXAS LP
426	2857881	PULTE HOMES OF TEXAS LP
427	2828225	PULTE HOMES OF TEXAS LP

SUPERELEVATION DATA

LOCATION	BEGIN FULL SUPER	SUPER RATE	END FULL SUPER	END TRANSITION	END CROSS SLOPE
FM 546 @ FM 982 / 2ND ST	267+67	1.5%	270+00	273+50	-2.0%

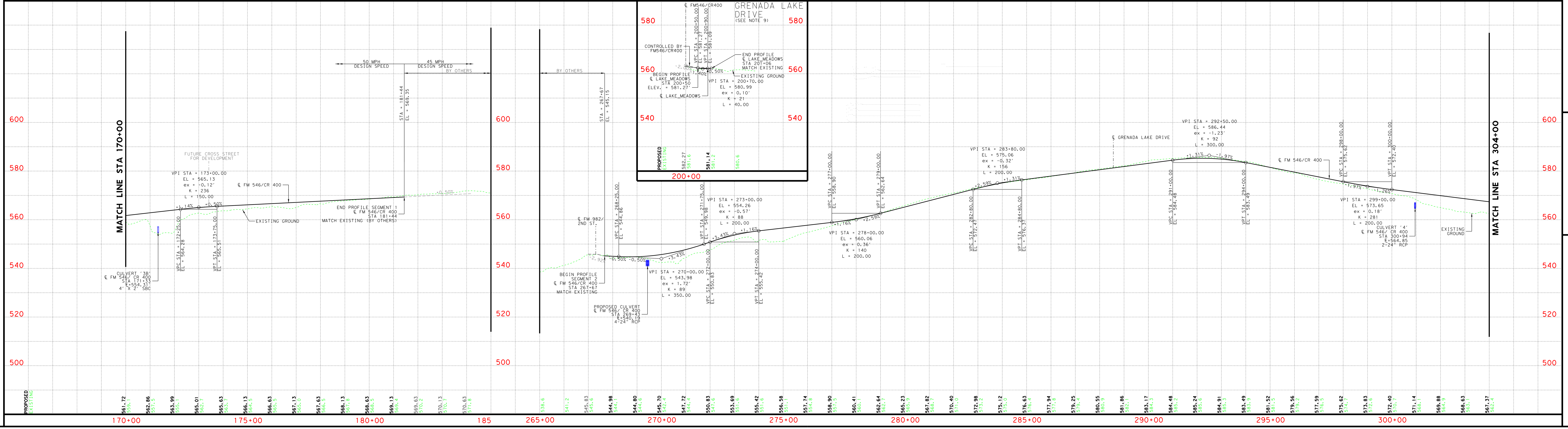
TURN LANE DATA

LOCATION	DIRECTION	DESIGN SPEED	TAPER LENGTH	DECEL LENGTH	STORAGE	LEFT/RIGHT	TOTAL LENGTH
FM546 @ FM982	WB	45 MPH	100'	345'	100'	RIGHT	445'
FM546 @ FM982	WB	45 MPH	150'	345'	100'	LEFT	445'
FM546 @ LAKE MEADOWS	WB	45 MPH	100'	245'	100'	LEFT	345'

HORIZONTAL CURVE DATA

ALIGNMENT	NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT DIRECTION	AHEAD TANGENT DIRECTION	PI STATION	PC STATION	PT STATION
FM546/CR400	FM546/CR400_C6	11°35'13.4"	4°46'28.7"	121.754	242.679	1200	S 89°50'03.8" E	N 78°34'42.9" E	273+27.10	272+05.35	274+48.02
FM546/CR400	FM546/CR400_C7	11°25'14.4"	4°46'28.7"	119.994	239.194	1200	N 78°34'42.9" E	N 89°59'57.2" E	275+68.02	274+48.02	276+87.22
FM546/CR400	FM546/CR400_C8	87°14'41.1"	5°27'24.3"	1000.683	1598.843	1050	N 89°59'57.2" E	N 2°45'16.2" E	309+97.13	299+96.45	315+95.29

PRELIMINARY - SUBJECT TO CHANGE

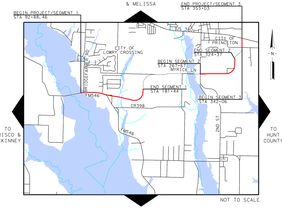


FM 546 / CR 400

PHASE I: EASTERN SEGMENT DESIGN SCHEMATIC
FROM WEST OF BRIDGEFARMER ROAD TO US 380
IN LOWRY CROSSING & PRINCETON, TEXAS

ROADWAY FUNCTIONAL CLASSIFICATION:	URBAN PRINCIPAL ARTERIAL
ROADWAY CONSTRUCTION TYPE:	RECONSTRUCTION/NEW FACILITY
DESIGN SPEED (PRINCIPAL ARTERIAL):	
FROM BEGIN TO STA 182+04	50 MPH
FROM STA 182+04 TO END	45 MPH
DESIGN SPEED (BRIDGEFARMER RD):	20 MPH
DESIGN SPEED (THE CROSSING DR):	20 MPH
DESIGN SPEED (FM 546 CONNECTOR):	35 MPH
DESIGN SPEED (LAKE MEADOWS):	20 MPH
DESIGN SPEED (DOVE HILL TRAIL/CR 452):	20 MPH
NET LENGTH OF PROJECT:	2.96 MILES
BRIDGE LENGTH:	130 FEET
SCHEMATIC SCALE:	HORIZ: 1"=100' VERT: 1"=10'
AERIAL PHOTO DATE:	2020
HORIZONTAL:	NAD 83 (2011)
VERTICAL:	NAVD 88
GRID TO SURFACE SCALE FACTOR:	1.000152710
EMAX USED:	6%

LOCATION MAP



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

SCHEMATIC PREPARED BY:
ROSA PLENDER
REGISTRAN UNDER F-1046
FOR INTERIM REVIEW ONLY, NOT FOR PERMITTING, BIDDING OR CONSTRUCTION.
PRESENTED BY OR UNDER THE SUPERVISION OF:
ROSA PLENDER 107648
NAME P.E. NUMBER
SAMANTHA DELEON 136439
NAME P.E. NUMBER
11/14/2022
DATE

HORIZONTAL SCALE
0 150 300 600
VERTICAL SCALE
0 5 10 20 30

SHEET 4 OF 4

100% DESIGN SCHEMATIC SUBMITTAL

BGE, Inc.
2995 Dallas Parkway, Suite 101, Frisco, TX 75034
Tel: 972-464-4800 ▪ www.bgeinc.com
TBPE Registration No. F-1046

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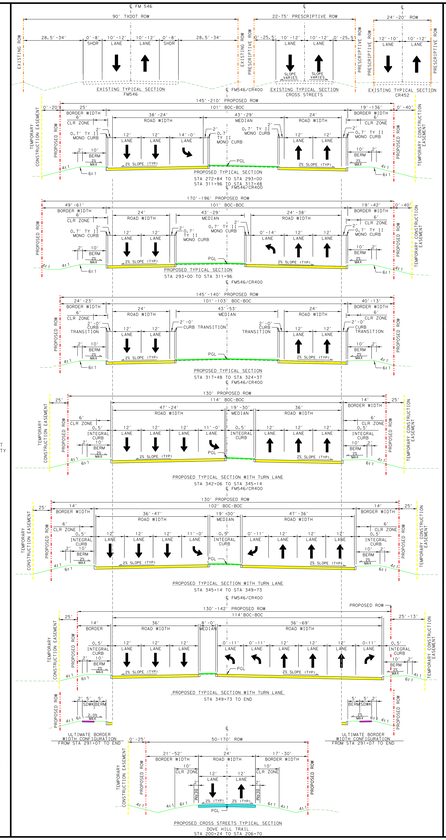


PLAN LEGEND

- PROPOSED ℄
- PROPOSED ROW
- EXISTING TXDOT ROW
- TEMPORARY CONSTRUCTION EASEMENT
- PAVING BY OTHERS
- PARCEL BOUNDARY
- RETAINING WALL
- CITY AND ETJ BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED BRIDGE
- PROPOSED CROSS-STREETS
- REMOVALS
- IMPACTED STRUCTURES
- FEMA FLOODPLAIN
- EXISTING SIGNALIZED INTERSECTIONS
- PROPOSED SIGNALIZED INTERSECTIONS
- DIRECTION OF TRAVEL
- PARCEL NUMBER (10)
- HORIZONTAL CURVE ID (X-X-X)
- FLOW ARROWS
- CHANNEL GRADING
- PROPOSED FLOWLINE DROP INLETS

UTILITIES LEGEND

B UTILITIES

- TELEPHONE - AT&T
- FIBER - AT&T
- CABLE TV - SUDDENLINK
- TELEPHONE - SUDDENLINK
- WASTEWATER - NTMWD
- WATER - CULLEOKA WSC
- ELECTRIC - ONCOR

D UTILITIES

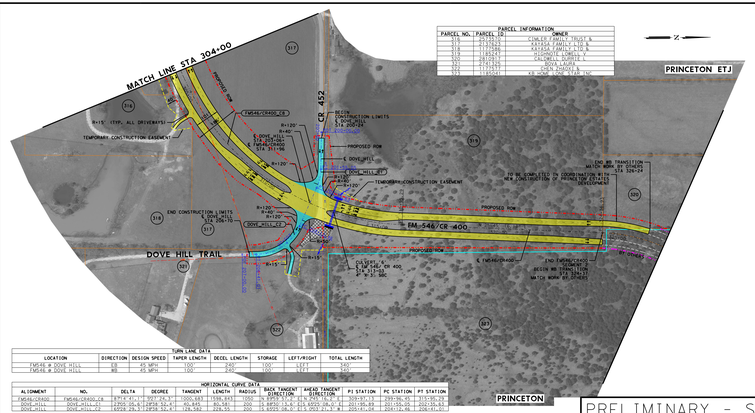
- STORM SEWER - CITY OF PRINCETON
- TELEPHONE - AT&T
- TELEPHONE - SUDDENLINK
- WATER - CITY OF PRINCETON
- WATER - CULLEOKA WSC
- WATER - WILLIAM WARN WATER
- FIBER - AT&T
- WATER - NORTH TEXAS MUNICIPAL WATER DISTRICT
- CABLE TV - SUDDENLINK
- ELECTRIC - ONCOR
- OVERHEAD TELEPHONE - AT&T
- OVERHEAD CABLE TV - CHARTER
- OVERHEAD CABLE TV - SUDDENLINK
- OVERHEAD FIBER - SUDDENLINK
- OVERHEAD ELECTRIC - ONCOR
- OVERHEAD ELECTRIC - TNMP

GENERAL NOTES:

1. SCHEMATICS ARE BASED ON AERIAL SURVEYS DATED AUGUST 2020 AND RECORD PLANS.
2. OWNERSHIP INFORMATION SHOWN ON SCHEMATIC WAS OBTAINED FROM COLLIN COUNTY APPRAISAL DISTRICT (JANUARY 2022).
3. DESIGN MANUALS USED: TxDOT ROADWAY DESIGN MANUAL (2020).
4. SUPERELEVATION RATE OF ROTATION IS ABOUT THE POL.
5. APPROXIMATE 100 YEAR FLOODPLAIN LIMITS ARE BASED ON FEMA FIRM PANELS 48085C0430J.
6. CONVENTIONAL ROADWAY LIGHTING (SIGNAL LIGHTS) ARE NOT SHOWN AND WILL BE DEVELOPED DURING THE PS&E PHASE OF THE PROJECT.
7. ROADWAY MEASUREMENTS ARE FROM BOC TO BOC UNLESS OTHERWISE STATED.
8. PARCEL DATA OBTAINED FROM COUNTY APPRAISAL DISTRICT. PARCEL NUMBERS ARE ASSIGNED ACCORDING TO THE PROPOSED ROADWAY IMPROVEMENTS AND BASED OFF FIELD SURVEY AND PROPERTY RECORDS.
9. LAKE MEADOWS PROFILE AND DESIGN IS BASED ON ESTIMATED PROFILE FROM THE NEIGHBORHOOD.
10. FM 546/CR 400 ASSUMES WIDENING ON FM 982

ROLL INDEX

ROLL 1:	FM 546/CR400 BEGIN TO 123+00
ROLL 2:	FM 546/CR400 STA 123+00 TO STA 170+00
ROLL 3:	FM 546/CR400 STA 170+00 TO STA 304+00
ROLL 4:	FM 546/CR400 STA 304+00 TO END



PARCEL NO.	PARCEL ID	OWNER
317	2531316	CONNER FAMILY TRUST & KAYSAR FAMILY LLC & KAYSAR FAMILY II LP
318	1120586	KAYSAR FAMILY II LP
319	1120594	KAYSAR FAMILY LLC
320	2531332	FRICHOU LORI A
321	2741545	DOVE LAURA
322	2741561	DOVE LAURA
323	1120541	KS JOINT VENTURE LTD

LOCATION	DIRECTION	DESIGN SPEED	TAPER LENGTH	DECEL LENGTH	STORAGE	LEFT/RIGHT	TOTAL LENGTH
FM546 @ DOVE HILL	EB	45 MPH	100	200	100	LT	300
FM546 @ DOVE HILL	WB	45 MPH	100	200	100	LT	300

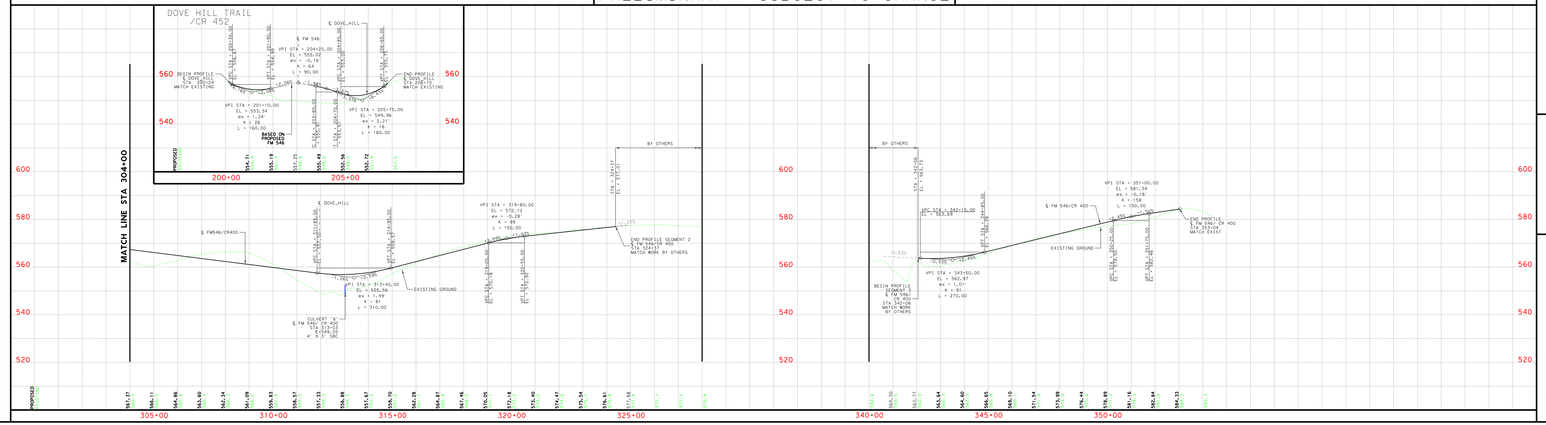
ALIGNMENT	NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT DIRECTION	AHEAD TANGENT DIRECTION	PI STATION	PC STATION	PT STATION
FM546/CR400	FM546/CR400-CR	47°14'41.1"	W01°24'E	1005.68	1958.843	1000	N 49°53'17.1" E	N 2°38'24.0" E	305+57.13	299+96.45	315+56.28
DOVE HILL	DOVE HILL-LT	42°05'06.5"	S89°52'E	84.84	164.58	200	N 2°38'24.0" E	N 45°13'18.5" E	201+15.05	200+30.21	203+01.67
DOVE HILL	DOVE HILL-LT	42°05'06.5"	S89°52'E	84.84	164.58	200	N 45°13'18.5" E	N 2°38'24.0" E	205+71.95	204+87.11	207+52.37

PARCEL NO.	PARCEL ID	OWNER
504	2531324	KB HOME LONE STAR INC
505	2531341	PLAZA AT PRINCETON VENTURES LLC
506	2531359	MCCLURE JOHN D
507	2531367	NEL ENTERPRISES LP
508	2531375	PRICE LEE LTD

LOCATION	DIRECTION	DESIGN SPEED	TAPER LENGTH	DECEL LENGTH	STORAGE	LEFT/RIGHT	TOTAL LENGTH
FM546 @ CR456	EB	45 MPH	100	0	100	LT/RT	200
FM546 @ PRINCETON PROGRESSO	EB	45 MPH	100	0	100	LT/RT	200
FM546 @ PRINCETON PROGRESSO	WB	45 MPH	100	0	100	LT/RT	200
FM546 @ UNIVERSITY DR	EB	45 MPH	100	100	100	LT/RT	300
FM546 @ UNIVERSITY DR	WB	45 MPH	100	100	100	LT/RT	300
FM546 @ UNIVERSITY DR	WB	45 MPH	100	100	100	RT	300

ALIGNMENT	NO.	DELTA	DEGREE	TANGENT	LENGTH	RADIUS	BACK TANGENT DIRECTION	AHEAD TANGENT DIRECTION	PI STATION	PC STATION	PT STATION
FM546/CR400	FM546/CR400-CR	50°04'15.5"	W11°06'E	217.09	423.08	500	N 2°38'24.0" E	N 52°42'39.5" E	342+06.50	340+20.91	344+43.99
FM546/CR400	FM546/CR400-CLS	50°04'15.5"	W11°06'E	226.42	441.00	500	N 52°42'39.5" E	N 2°38'24.0" E	344+53.99	344+43.99	348+84.99

PRELIMINARY - SUBJECT TO CHANGE



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2995 Dallas Parkway, Suite 101, Frisco, TX 75034
Tel: 972-464-4800 ▪ www.bgeinc.com
TBPE Registration No. F-1046

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COLLIN COUNTY
FM546/CR400 PHASE I: EASTERN SEGMENT DESIGN SCHEMATIC
COUNTY: COLLIN
DATE: NOV. 2022
ROLL 4 OF 4
11/14/2022 3:39:56 PM
FTTS: CD4250CH04802