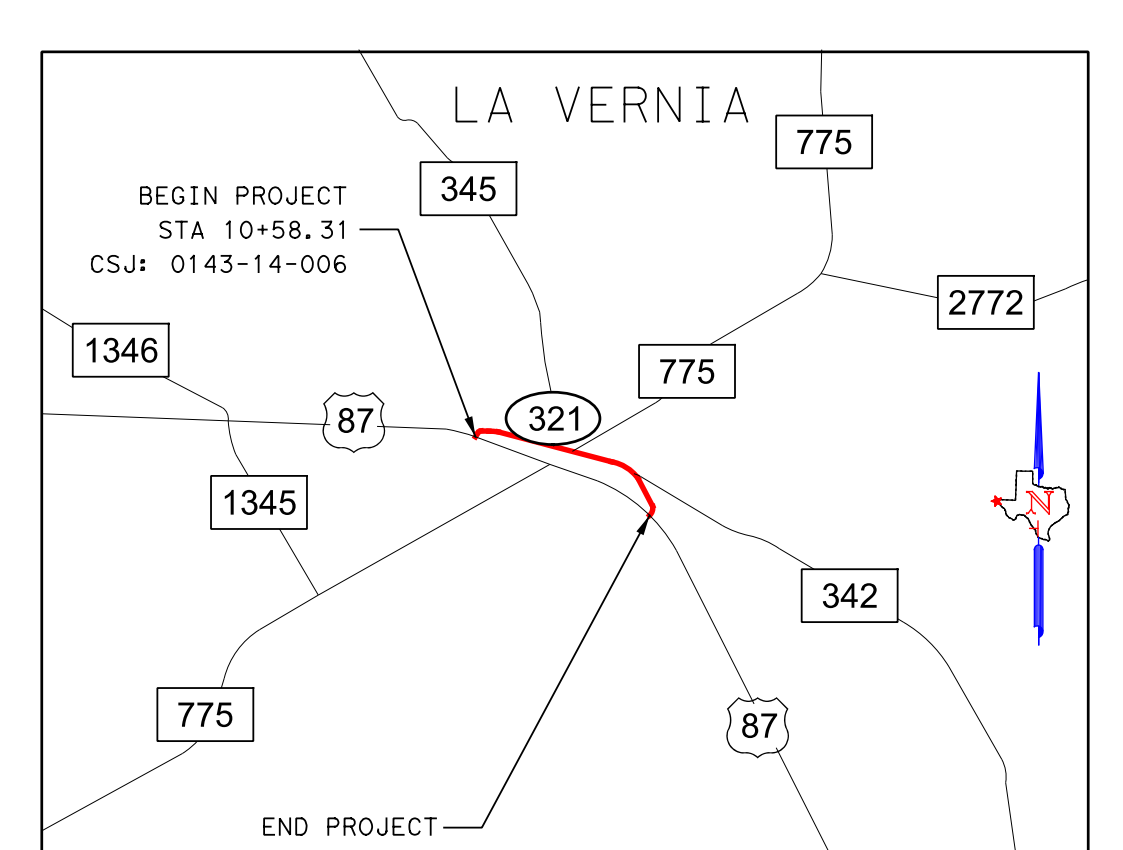
TEXAS DEPARTMENT OF TRANSPORTATION
SCHEMATIC LAYOUT
LOOP 321 - WILSON COUNTY
OFFICE OF THE DISTRICT ENGINEER
SAN ANTONIO, TEXAS

CONTROL: 0143 SECTION: 14 JOB: 006
FROM US 87 TO US 87 EAST
PROJECT LENGTH = 0.75 MILES

ROLL 1 OF 1

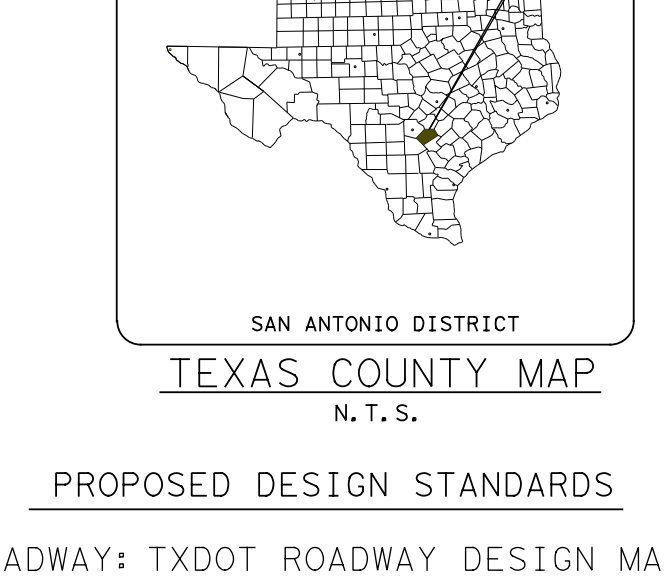
DESIGN SPEEDS AND FUNCTIONAL CLASSIFICATIONS:

LP321 (URBAN MAJOR COLLECTOR) = 30 MPH
COUNTY ROAD 342 (RURAL MINOR COLLECTOR) = 30 MPH



LA VERNIA
775
345
2772
1346
87
321
775
1345
342
775
87
BEGIN PROJECT
STA 10+58.31
CSJ: 0143-14-006
END PROJECT
STA 50+23.23
CSJ: 0143-14-006

VICINITY MAP
N.T.S.



WILSON COUNTY, TEXAS
SAN ANTONIO DISTRICT

TEXAS COUNTY MAP
N.T.S.

PROPOSED DESIGN STANDARDS

ROADWAY: TXDOT ROADWAY DESIGN MANUAL
OCT 2014 REVISION
CHAPTER 3; SECTION 2;
URBAN STREETS
CHAPTER 3; SECTION 4;
TWO-LANE RURAL HIGHWAYS

TRAFFIC: TMUTCD 2011 EDITION &
APPLICABLE TRAFFIC STANDARDS

H&H: TXDOT HYDRAULIC DESIGN MANUAL
JULY 2016 REVISION

CORRECT:

_______________________, 2021

TRANSPORTATION PLANNING DIRECTOR

CORRECT:

_______________________, 2021

DIRECTOR OF TRANSPORTATION PLANNING AND DEVELOPMENT

RECOMMENDED FOR APPROVAL:

_______________________, 2021

DISTRICT ENGINEER

CONCURRENCE BY DESIGN DIVISION

Texas Department of Transportation
SAN ANTONIO DISTRICT
GINA GALLEGOS, P.E. DISTRICT ENGINEER

© 2021 by Texas Department of Transportation all rights reserved

HALFF
TBPE, FIRM #F-312
100 NE LOOP 410, SUITE 200
SAN ANTONIO, TEXAS 78216
TEL (210) 798-1895
FAX (210) 798-1896

STATE	STATE DISTRICT		COUNTY	DATE	
TEXAS	SAT		WILSON	8/12/2021	
CONT.	SECT.	JOB	HIGHWAY NO.	DRAWN BY:	TMM
0143	14	006	LP 321	CHECK BY:	CG

LEGEND:

- EXISTING ROW
- PROPOSED ROW
- PROP ALLEY EASEMENT (BY LA VERNIA)
- PROPOSED CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED RETAINING WALL
- EXISTING PROPERTY LINE
- EXISTING STONE RETAINING WALL
- EXISTING STONE RETAINING WALL TO REMAIN
- PROPOSED CENTERLINE/BASELINE
- PROPOSED PAVEMENT MARKING
- 🟨 PROPOSED MAIN LANE
- 🟪 PROPOSED PARKING
- 🟩 PROPOSED DRIVEWAY
- 🟧 PROPOSED SIDEWALK
- ⬜ EXISTING SIDEWALK
- 🟥 PROPOSED ADA SIDEWALK CURB RAMP
- PROPOSED PEDESTRIAN HANDRAIL
- PAVEMENT TO BE REMOVED
- PROPOSED CULVERTS
- EXISTING CULVERTS
- ➡ PROPOSED TRAFFIC FLOW
- CROSS DRAINAGE FLOW
- XX PROPERTY ID
- Ⓝ PROPOSED TURN BAYS
- ### PROPOSED CURVE DATA LABEL

UTILITIES LEGEND:

- TELEPHONE LINE (T)
- FIBER OPTIC/CABLE TV LINE (FO/C)
- WATER LINE (W)
- WASTEWATER LINE (WW)
- FORCE MAIN LINE (FM)
- GAS LINE (G)
- ELECTRIC LINE (E)

ABBREVIATION	DEFINITION
ℬ	BASELINE
℄	CENTERLINE
CSJ	CONTROL SECTION JOB
EL	ELEVATION
FL	FLOW LINE ELEVATION
EXIST	EXISTING
LT	LEFT
NTS	NOT TO SCALE
PROP	PROPOSED
ROW	RIGHT-OF-WAY
RT	RIGHT
SDWK	SIDEWALK
STA	STATION
TxDOT	TEXAS DEPARTMENT OF TRANSPORTATION
VAR	VARIES

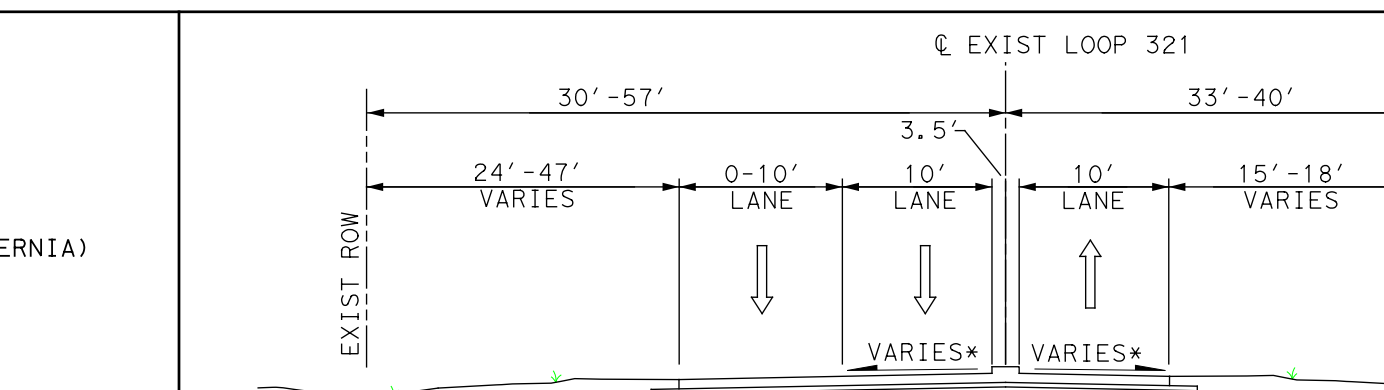
0 25 50 100 200
HORIZ SCALE IN FEET

0 5 10 20
VERT SCALE IN FEET

"THE SEAL ORIGINALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHAD R. GARDINER, P.E. 93793 ON 8/12/2021. THIS DOCUMENT IS NOT INTENDED FOR CONSTRUCTION OR BIDDING PURPOSES." TBPE FIRM #F-312.

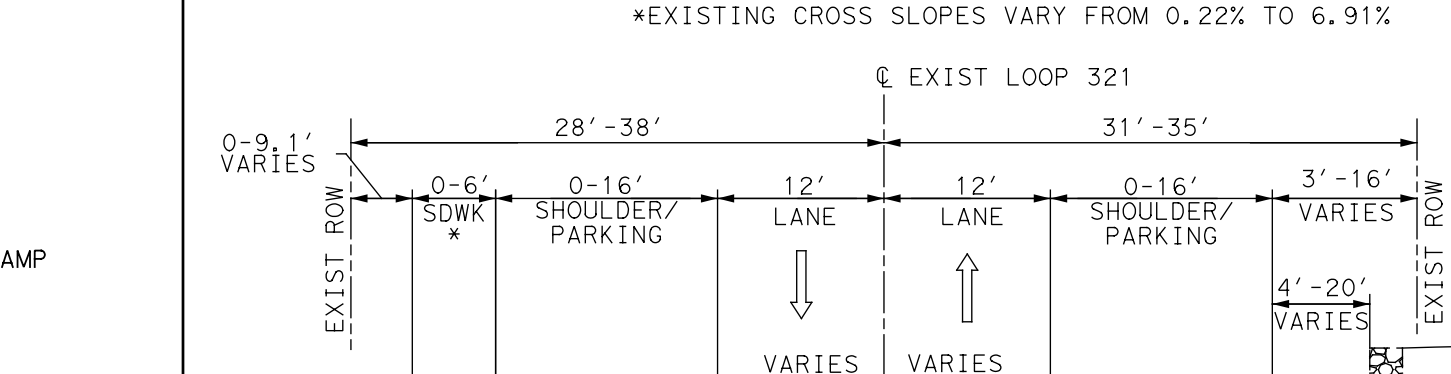
CHAD R. GARDINER
93793

Chad R. Gardiner



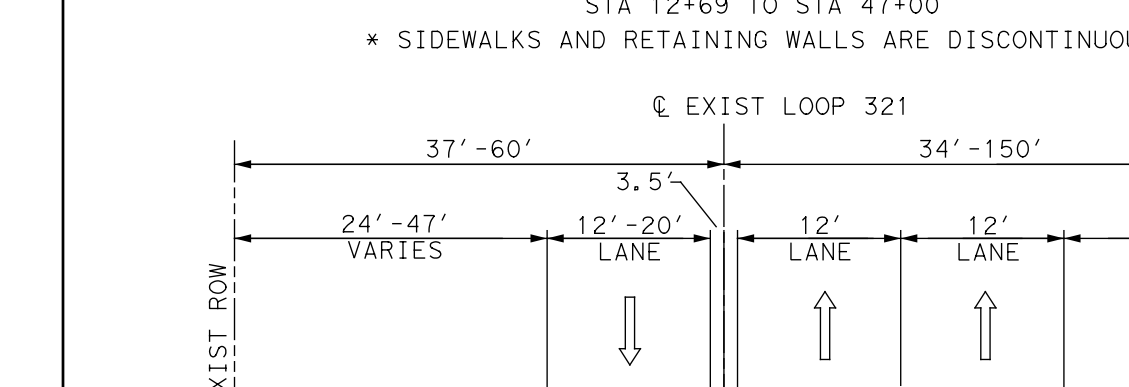
℄ EXIST LOOP 321
30′-57′
33′-40′
3.5′
24′-47′ VARIES
0-10′ LANE
10′ LANE
10′ LANE
15′-18′ VARIES
VARIES*
VARIES*
EXIST ROW
EXIST ROW

EXISTING LOOP 321 TYPICAL SECTION
STA 10+58 TO STA 12+69
*EXISTING CROSS SLOPES VARY FROM 0.22% TO 6.91%



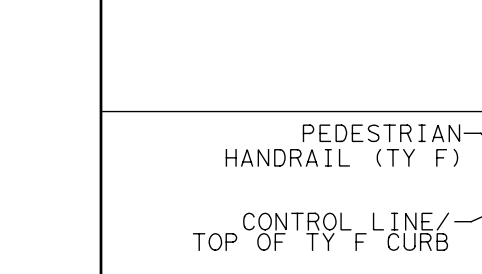
℄ EXIST LOOP 321
28′-38′
31′-35′
0-9.1′ VARIES
0-6′ SDWK *
0-16′ SHOULDER/ PARKING
12′ LANE
12′ LANE
0-16′ SHOULDER/ PARKING
3′-16′ VARIES
4′-20′ VARIES
VARIES
VARIES
EXIST ROW
EXIST ROW
EXISTING STONE RETAINING WALL*

EXISTING LOOP 321 TYPICAL SECTION
STA 12+69 TO STA 47+00
* SIDEWALKS AND RETAINING WALLS ARE DISCONTINUOUS



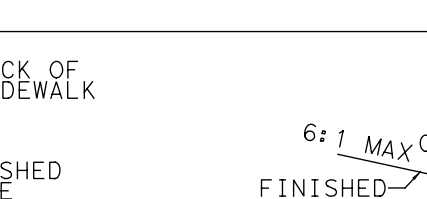
℄ EXIST LOOP 321
37′-60′
34′-150′
3.5′
24′-47′ VARIES
12′-20′ LANE
12′ LANE
12′ LANE
15′-18′ VARIES
VARIES
VARIES
EXIST ROW
EXIST ROW

EXISTING LOOP 321 TYPICAL SECTION
STA 47+00 TO STA 50+23



PEDESTRIAN HANDRAIL (TY F)
BACK OF SIDEWALK
CONTROL LINE/ TOP OF TY F CURB
FINISHED GRADE
6:1 MAX
TOP OF FOOTING
BOTTOM OF FOOTING
VARIES
8"

TY-F SIDEWALK WALL DETAIL
N.T.S.
SEE PLAN VIEW FOR LOCATIONS

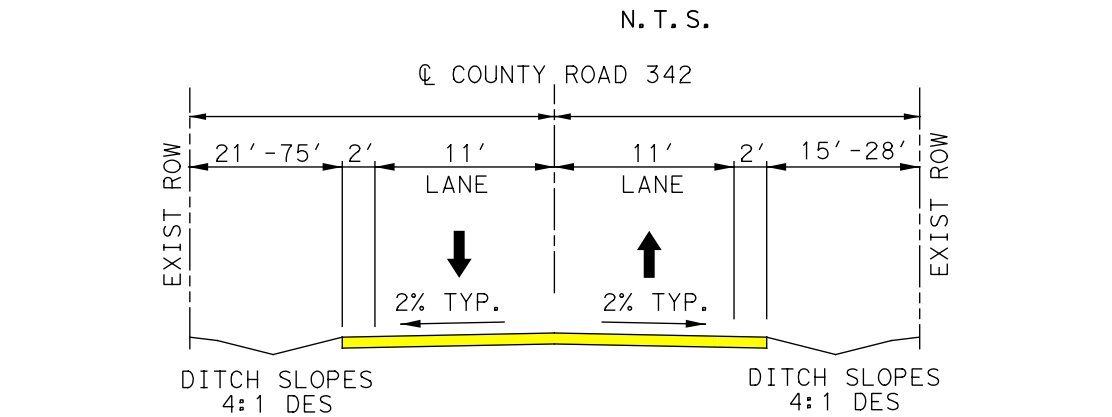


6:1 MAX
0.67′
FINISHED GRADE
BACK OF SIDEWALK

TY-C SIDEWALK WALL DETAIL
N.T.S.
SEE PLAN VIEW FOR LOCATIONS

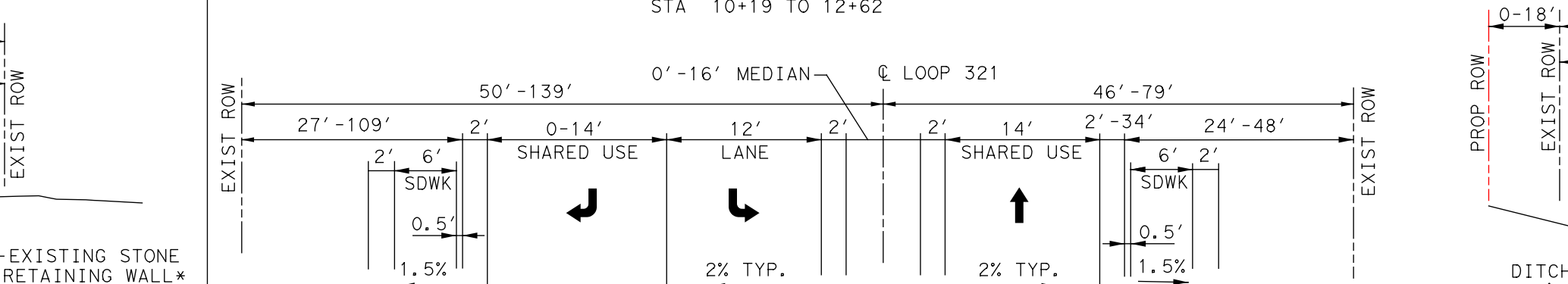
TYPICAL SECTION NOTES (GENERAL):
1) PAVEMENT CROSS SLOPE VARIATIONS FROM 2% TYPICAL DEPICTED IN SUPERELEVATION TABLE AND CROSS SECTIONS
2) PROPOSED SIDEWALK WIDTHS AND LP 321 OFFSETS MAY VARY DURING DEVELOPMENT OF PS&E
3) WHEN ADJACENT TO A DITCH, A 2′ OFFSET IS DESIRABLE FROM EDGE OF SIDEWALK TO TOP OF DITCH SLOPE (OFFSET MAY VARY BASED ON SITE CONDITIONS)

TYPICAL SECTIONS
N.T.S.



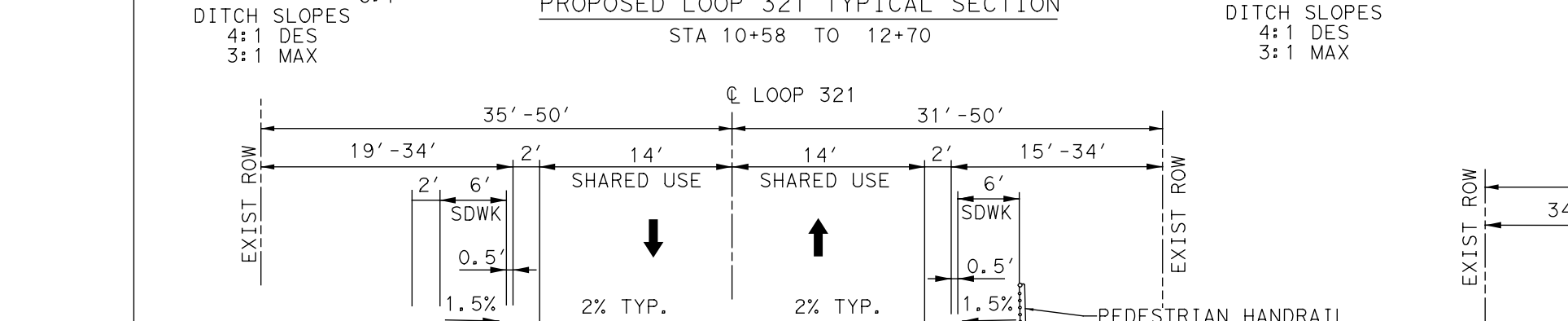
℄ COUNTY ROAD 342
21′-75′
2′
11′ LANE
11′ LANE
2′
15′-28′
2% TYP.
2% TYP.
EXIST ROW
EXIST ROW
DITCH SLOPES 4:1 DES 3:1 MAX
DITCH SLOPES 4:1 DES 3:1 MAX

PROPOSED COUNTY ROAD 342 TYPICAL SECTION
STA 10+19 TO 12+62



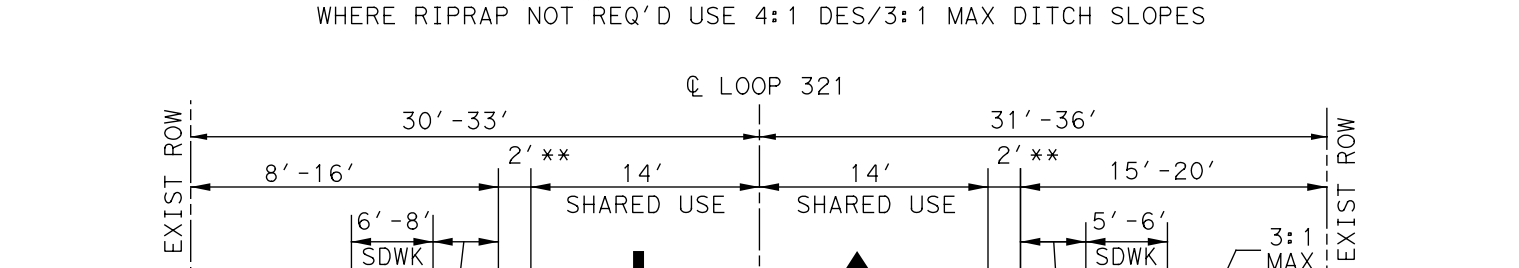
0′-16′ MEDIAN
℄ LOOP 321
50′-139′
46′-79′
27′-109′
2′
6′ SDWK
0.5′
1.5%
2′
0-14′ SHARED USE
12′ LANE
2′
2′
14′ SHARED USE
2′-34′
6′ 2′ SDWK
24′-48′
2% TYP.
2% TYP.
2% TYP.
0.5′
1.5%
6:1
6:1
EXIST ROW
EXIST ROW
DITCH SLOPES 4:1 DES 3:1 MAX

PROPOSED LOOP 321 TYPICAL SECTION
STA 10+58 TO 12+70



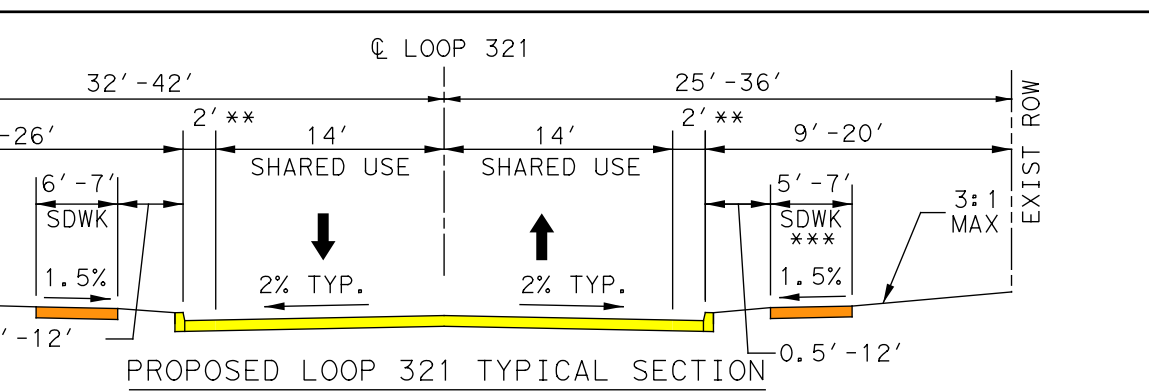
℄ LOOP 321
35′-50′
31′-50′
19′-34′
2′
6′ SDWK
0.5′
1.5%
14′ SHARED USE
14′ SHARED USE
2′
15′-34′
6′ SDWK
0.5′
1.5%
2% TYP.
2% TYP.
6:1
2:1 MAX RIPRAP
PEDESTRIAN HANDRAIL
FLUME
EXIST ROW
EXIST ROW
DITCH SLOPES 4:1 DES 3:1 MAX

PROPOSED LOOP 321 TYPICAL SECTION
STA 12+70 TO 18+52
2:1 MAX RIPRAP SLOPE & FLUME STA 12+90 TO 15+75
WHERE RIPRAP NOT REQ'D USE 4:1 DES/3:1 MAX DITCH SLOPES



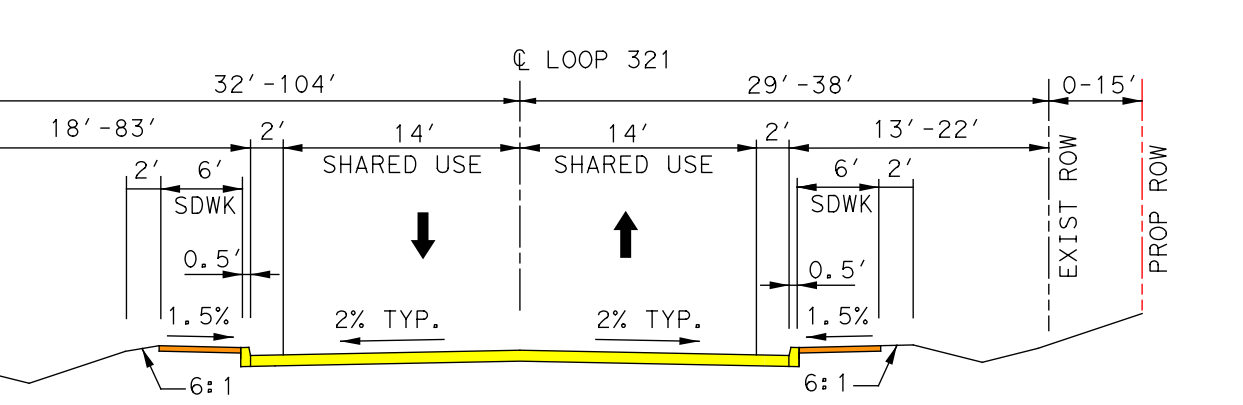
℄ LOOP 321
30′-33′
31′-36′
8′-16′
6′-8′ SDWK
1.5%
2′**
14′ SHARED USE
14′ SHARED USE
2′**
15′-20′
5′-6′ SDWK ***
1.5%
2% TYP.
2% TYP.
3:1 MAX
3:1 MAX
0.5′-8.5′
0.5′-8′
EXISTING STONE RETAINING WALL TO REMAIN*
EXIST ROW
EXIST ROW

PROPOSED LOOP 321 TYPICAL SECTION
STA 18+52 TO 25+08
*EXISTING STONE WALL TO REMAIN FROM STA 21+32 TO 22+56 & STA 23+77 TO 25+08
**VARIATIONS FOR ON-STREET PARKING SHOWN IN SEPARATE TYPICAL SECTION
***SOUTH SIDEWALK LOCATED TO THE RIGHT OF EXISTING STONE WALL FROM STA 21+32 TO 22+56



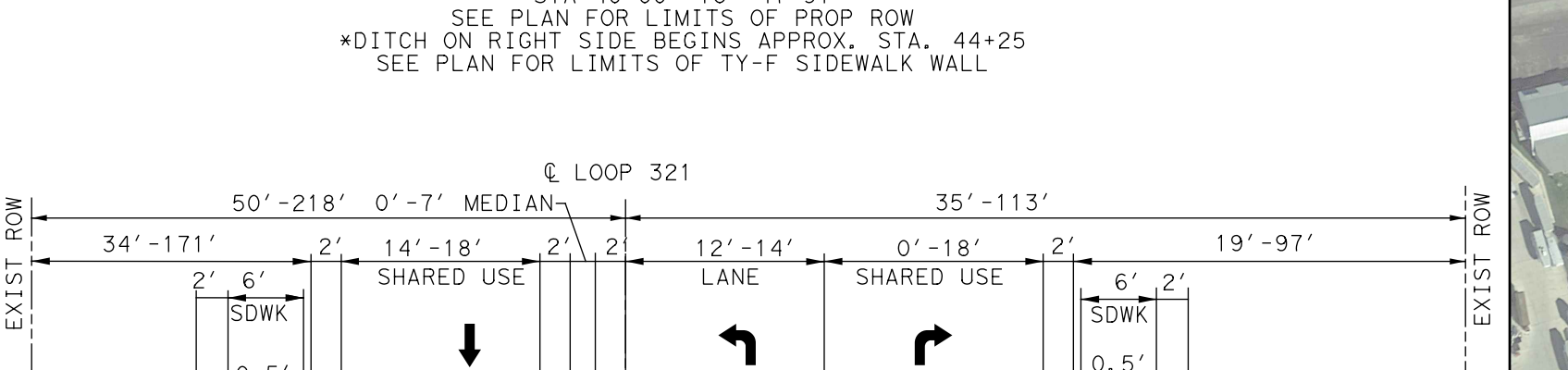
℄ LOOP 321
32′-42′
25′-36′
11′-26′
2′**
6′-7′ SDWK
1.5%
14′ SHARED USE
14′ SHARED USE
2′**
9′-20′
5′-7′ SDWK ***
1.5%
2% TYP.
2% TYP.
3:1* MAX
3:1 MAX
0.5′-12′
0.5′-12′
EXIST ROW
EXIST ROW

PROPOSED LOOP 321 TYPICAL SECTION
STA 25+08 TO 40+00
*BEGIN DITCH ON LEFT SIDE APPROX. STA. 38+00
**VARIATIONS FOR ON-STREET PARKING SHOWN IN SEPARATE TYPICAL SECTION (BELOW)



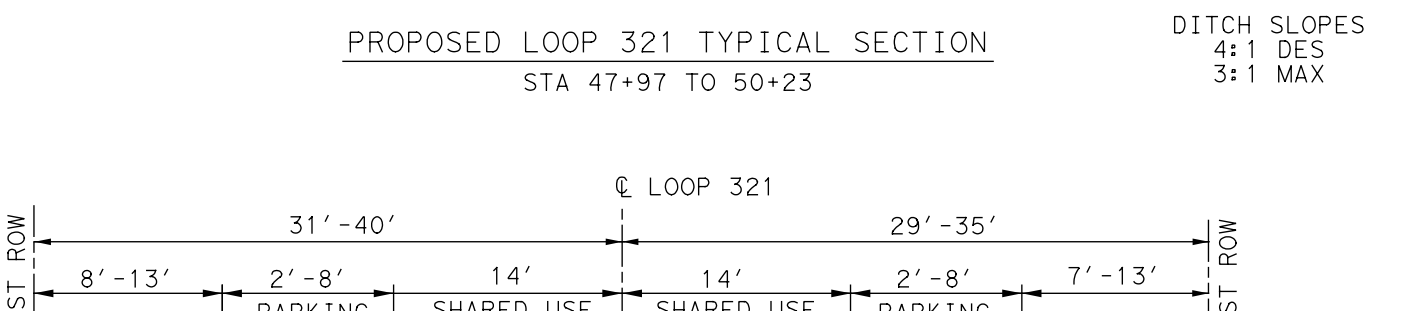
℄ LOOP 321
0-18′
32′-104′
29′-38′
0-15′
18′-83′
2′
6′ SDWK
0.5′
1.5%
14′ SHARED USE
14′ SHARED USE
2′
13′-22′
6′ 2′ SDWK
0.5′
1.5%
2% TYP.
2% TYP.
6:1
6:1
PROP ROW
EXIST ROW
EXIST ROW
PROP ROW
DITCH SLOPES 4:1 DES 3:1 MAX
DITCH SLOPES* 4:1 DES 3:1 MAX

PROPOSED LOOP 321 TYPICAL SECTION
STA 40+00 TO 47+97
SEE PLAN FOR LIMITS OF PROP ROW
*DITCH ON RIGHT SIDE BEGINS APPROX. STA. 44+25
SEE PLAN FOR LIMITS OF TY-F SIDEWALK WALL



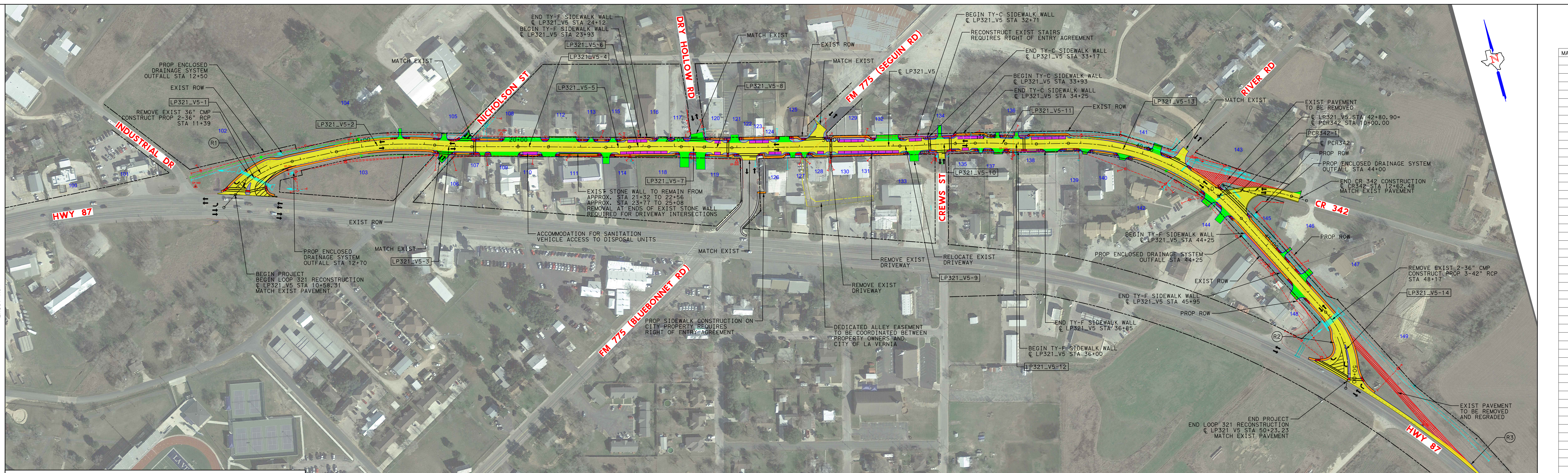
℄ LOOP 321
50′-218′
0′-7′ MEDIAN
35′-113′
34′-171′
2′ 6′ SDWK
0.5′
1.5%
2′
14′-18′ SHARED USE
2′
2′
12′-14′ LANE
0′-18′ SHARED USE
2′
6′ 2′ SDWK
0.5′
1.5%
19′-97′
2% TYP.
2% TYP.
EXIST ROW
EXIST ROW
DITCH SLOPES 4:1 DES 3:1 MAX 2:1 RIP RAP
DITCH SLOPES 4:1 DES 3:1 MAX

PROPOSED LOOP 321 TYPICAL SECTION
STA 47+97 TO 50+23



℄ LOOP 321
31′-40′
29′-35′
8′-13′
6′ SDWK
1.5%
2′-8′ PARKING *
14′ SHARED USE
14′ SHARED USE
2′-8′ PARKING *
7′-13′
5′-7′ SDWK
1.5%
2% TYP.
2% TYP.
2% TYP.
2% TYP.
0.5′-6.3′
3:1 MAX
0.5′-6.3′
3:1 MAX
EXIST ROW
EXIST ROW

PROPOSED LOOP 321 TYPICAL SECTION
AT ON-STREET PARKING LOCATIONS
*ON STREET PARKING IS SLOPED IN THE SAME DIRECTION AS ROADWAY AT LOCATIONS WHERE INLETS ARE PLACED



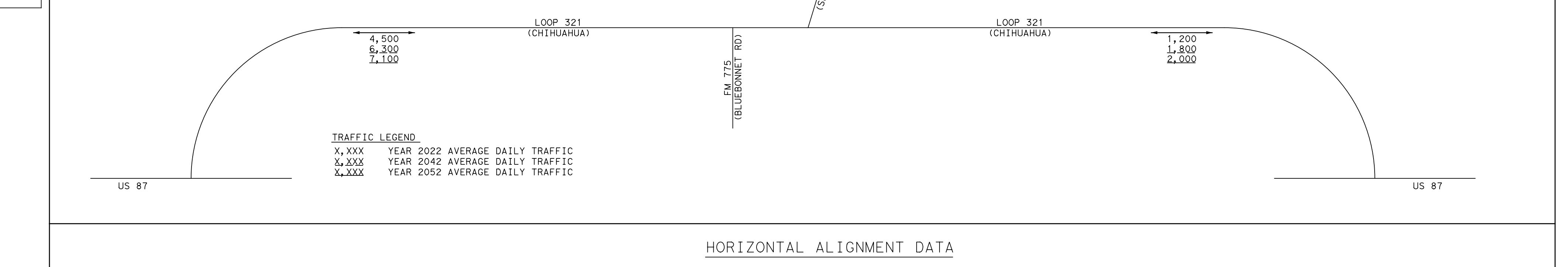
HWY 87
INDUSTRIAL DR
NICHOLSON ST
DRY HOLLOW RD
FM 775 (BLUEBONNET RD)
FM 775 (SEGUIN RD)
CREWS ST
RIVER RD
CR 342
HWY 87
PROP ENCLOSED DRAINAGE SYSTEM OUTFALL STA 12+50
EXIST ROW
LP321_V5-1
REMOVE EXIST 36" CMP CONSTRUCT PROP 2-36" RCP STA 11+39
R1
LP321_V5-2
MATCH EXIST
END TY-F SIDEWALK WALL ℄ LP321_V5 STA 24+12
BEGIN TY-F SIDEWALK WALL ℄ LP321_V5 STA 23+93
LP321_V5-6
LP321_V5-4
LP321_V5-5
LP321_V5-3
LP321_V5-7
LP321_V5-8
MATCH EXIST
EXIST ROW
PROP ENCLOSED DRAINAGE SYSTEM OUTFALL STA 12+70
BEGIN PROJECT BEGIN LOOP 321 RECONSTRUCTION ℄ LP321_V5 STA 10+58.31 MATCH EXIST PAVEMENT
MATCH EXIST
EXIST STONE WALL TO REMAIN FROM APPROX. STA 21+32 TO 22+56 APPROX. STA 23+77 TO 25+08 REMOVAL AT ENDS OF EXIST STONE WALL REQUIRED FOR DRIVEWAY INTERSECTIONS
ACCOMMODATION FOR SANITATION VEHICLE ACCESS TO DISPOSAL UNITS
MATCH EXIST
PROP SIDEWALK CONSTRUCTION ON CITY PROPERTY REQUIRES RIGHT OF ENTRY AGREEMENT
DEDICATED ALLEY EASEMENT TO BE COORDINATED BETWEEN PROPERTY OWNERS AND CITY OF LA VERNIA
REMOVE EXIST DRIVEWAY
REMOVE EXIST DRIVEWAY
RELOCATE EXIST DRIVEWAY
LP321_V5-9
BEGIN TY-C SIDEWALK WALL ℄ LP321_V5 STA 32+71
RECONSTRUCT EXIST STAIRS REQUIRES RIGHT OF ENTRY AGREEMENT
END TY-C SIDEWALK WALL ℄ LP321_V5 STA 33+17
BEGIN TY-C SIDEWALK WALL ℄ LP321_V5 STA 33+93
END TY-C SIDEWALK WALL ℄ LP321_V5 STA 34+25
℄ LP321_V5
LP321_V5-10
LP321_V5-11
EXIST ROW
LP321_V5-12
BEGIN TY-F SIDEWALK WALL ℄ LP321_V5 STA 36+00
END TY-F SIDEWALK WALL ℄ LP321_V5 STA 36+85
LP321_V5-13
MATCH EXIST
EXIST PAVEMENT TO BE REMOVED
℄ LP321_V5 STA 42+80.90= ℄ PCR342 STA 10+00.00
PCR342-1
℄ PCR342
PROP ROW
PROP ENCLOSED DRAINAGE SYSTEM OUTFALL STA 44+00
END CR 342 CONSTRUCTION ℄ CR342 STA 12+62.48 MATCH EXIST PAVEMENT
BEGIN TY-F SIDEWALK WALL ℄ LP321_V5 STA 44+25
PROP ENCLOSED DRAINAGE SYSTEM OUTFALL STA 44+25
PROP ROW
EXIST ROW
END TY-F SIDEWALK WALL ℄ LP321_V5 STA 45+95
PROP ROW
REMOVE EXIST 2-36" CMP CONSTRUCT PROP 3-42" RCP STA 48+17
LP321_V5-14
R2
END PROJECT END LOOP 321 RECONSTRUCTION ℄ LP321 V5 STA 50+23.23 MATCH EXIST PAVEMENT
EXIST PAVEMENT TO BE REMOVED AND REGRADED
R3
15+00
20+00
30+00
40+00
50+00
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149

DRIVEWAY NOTES:
1) PROPOSED DRIVEWAY RECONSTRUCTION OUTSIDE OF TXDOT ROW TO BE COORDINATED WITH PROPERTY OWNERS THROUGH RIGHT OF ENTRY AGREEMENT
2) PROPOSED DRIVEWAYS TO BE DESIGNED PER TxDOT ROADWAY DESIGN MANUAL CRITERIA

PROPERTY OWNERS

MAP ID	OWNER	PROPERTY ADDRESS
100	GUERRERO JOVITA H.	11940 US HWY 87 W
101	GUERRERO JOVITA H.	13520 US HWY 87 W
102	HUGHES DANIEL & MARY	124 INDUSTRIAL DRIVE
103	RACKLER DONALD W.	13378 US HWY 87 W
104	PATRICK TROY & JIMMIE	317 W CHIHUAHUA STREET
105	HOPE ASSEMBLY OF GOD OF LA VERNIA	313 W CHIHUAHUA STREET
106	MAZURA JAMES P	13330 US HWY 87 W
107	PLUM 191, LTD.	70 COUNTY ROAD 337
108	LA VERNIA MINISTERIAL ALLIANCE	229 W CHIHUAHUA STREET
109	CURRIER DARYL C.	402 W CHIHUAHUA STREET
110	OMAR SMITH ENTERPRISES, INC.	129 US HWY 87 W
111	LA VERNIA SQUARE, INC.	127 US HWY 87 W
112	GAULKE MARY MONICA	217 W CHIHUAHUA STREET
113	PIERCE BEVERLY & SCHNITZ SEBE	213 W CHIHUAHUA STREET
114	STANUSH PROPERTIES, L.L.P.	13212 US HWY 87 W
115	DOEGE JACK D. & PAULA K.	209 W CHIHUAHUA STREET
116	RAMZINSKI PROPERTIES, LLC	207 W CHIHUAHUA STREET
117	WELLS FARGO BANK	203 W CHIHUAHUA STREET
118	RACKLER DONALD W.	NOT AVAILABLE
119	EASTIN CHESTER D.	100 W CHIHUAHUA STREET
120	WELLS FARGO BANK	119 W CHIHUAHUA STREET
121	THE STATE BANK OF LA VERNIA	207 W CHIHUAHUA STREET
122	ROSE WILL	115 W CHIHUAHUA STREET
123	ROSE WILL	111 W CHIHUAHUA STREET
124	SCULL FRED & GAIL	109 W CHIHUAHUA STREET
125	RACKLER DON WAYNE	107 W CHIHUAHUA STREET
126	CITY OF LA VERNIA	202 E CHIHUAHUA STREET
127	CITY OF LA VERNIA	202 E CHIHUAHUA STREET
128	SANTOS ATILANO & MARGARET, SANTOS ALFRED & NORMA	106 E CHIHUAHUA STREET
129	JOHANSON HAROLD K. & REBECCA S.	203 E CHIHUAHUA STREET
130	EWALD KOEPP	110 E CHIHUAHUA STREET
131	KOLODZIEJ ALPHONSE & ELAINE	112 E CHIHUAHUA STREET
132	WEST ROBERT P. & JERRILYN	2015 E CHIHUAHUA STREET
133	BLB PROPERTIES, L.L.C.	114 E CHIHUAHUA STREET
134	HUSE EBBIE JANET	207 E CHIHUAHUA STREET
135	OCHOA THOMAS & DELORES	202 E CHIHUAHUA STREET
136	RICHTER DENNIS & SUSAN	209 E CHIHUAHUA STREET
137	LINDSEY MEGAN	12992 US HWY 87 W
138	MOCZYGEMBA AUGUST JR.	NOT AVAILABLE
139	ADVANCED ESCROW, L.L.C.	12966 US HWY 87 W
140	PRIMITIVE BAPTIST CHURCH	218 E CHIHUAHUA STREET
141	WISEMAN WALTER R.	213 E CHIHUAHUA STREET
142	COVARRUBIAS MARTIN & MARIA L.	12942 US HWY 87 W
143	WATCO TANKS, INC.	4166 COUNTY ROAD 342
144	SALINAS MONICA A.	12826 US HWY 87 W
145	ENGLAND DEANNA L.	217 E CHIHUAHUA STREET
146	KIOLBASSA QUITEN C. & MELISSA A.	4109 COUNTY ROAD 342
147	COSTELLO JOE L. & HOLLY	225 E CHIHUAHUA STREET
148	MARIA & ARTHUR SALINAS	12826 US HIGHWAY 87
149	BLANDFORD JOHN K. & BENJAMIN E.	229 E CHIHUAHUA STREET

TRAFFIC DIAGRAM



FM 775 (SEGUIN RD)
LOOP 321 (CHIHUAHUA)
4,500
6,300
7,100
FM 775 (BLUEBONNET RD)
LOOP 321 (CHIHUAHUA)
LOOP 321 (CHIHUAHUA)
1,200
1,800
2,000
US 87
US 87

TRAFFIC LEGEND
X,XXX YEAR 2022 AVERAGE DAILY TRAFFIC
X,XXX YEAR 2042 AVERAGE DAILY TRAFFIC
X,XXX YEAR 2052 AVERAGE DAILY TRAFFIC

HORIZONTAL ALIGNMENT DATA

LOOP 321 (CHIHUAHUA) CURVES

CURVE	NORTHING	EASTING	P.I. STATION	DELTA (LT/RT)	DEGREE OF CURVATURE	RADIUS (FT)	TANGENT (FT)	EXTERNAL (FT)	LENGTH (FT)	CHORD BEARING	CHORD LENGTH (FT)	TANGENT BEARING	FORWARD TANGENT DISTANCE (FT)	P.C. STATION	P.T. STATION
LP321_V5-1	13,680,517.23	2,249,215.12	11+69.21	36° 07′ 46.91″ (RT)	16° 51′ 06.12″	340.00	110.90	17.63	214.40	N 74° 42′ 55.30″ E	210.86	S 87° 13′ 11.25″ E	144.90	10+58.31	12+72.71
LP321_V5-2	13,680,497.11	2,249,629.41	15+76.59	16° 54′ 07.90″ (RT)	5° 21′ 17.08″	1,070.00	158.98	11.75	315.65	S 78° 46′ 07.30″ E	314.51	S 70° 19′ 03.35″ E	0.00	14+17.61	17+33.26
LP321_V5-3	13,680,423.46	2,249,835.31	17+92.96	4° 33′ 30.70″ (LT)	3° 49′ 10.99″	1,500.00	59.70	1.19	119.34	S 72° 35′ 48.70″ E	119.31	S 74° 52′ 34.05″ E	147.46	17+33.26	18+52.60
LP321_V5-4	13,680,356.79	2,250,081.99	20+48.43	0° 27′ 42.67″ (RT)	0° 28′ 38.87″	12,000.00	48.37	0.10	96.73	S 74° 38′ 42.71″ E	96.73	S 74° 24′ 51.38″ E	184.44	20+00.06	20+96.79
LP321_V5-5	13,680,284.08	2,250,342.67	23+19.06	2° 53′ 20.59″ (LT)	3° 49′ 10.99″	1,500.00	37.83	0.48	75.64	S 75° 51′ 31.68″ E	75.63	S 77° 18′ 11.97″ E	0.00	22+81.23	23+56.87
LP321_V5-6	13,680,268.97	2,250,409.75	23+87.80	2° 21′ 46.65″ (RT)	3° 49′ 10.99″	1,500.00	30.94	0.32	61.86	S 76° 07′ 18.65″ E	61.86	S 74° 56′ 25.33″ E	103.40	23+56.87	24+18.73
LP321_V5-7	13,680,224.54	2,250,574.87	25+58.79	2° 47′ 58.55″ (RT)	3° 49′ 10.99″	1,500.00	36.65	0.45	73.29	S 73° 32′ 26.05″ E	73.29	S 72° 08′ 26.77″ E	0.00	25+22.13	25+95.42
LP321_V5-8	13,680,199.69	2,250,652.00	26+39.80	3° 23′ 21.31″ (LT)	3° 49′ 10.99″	1,500.00	44.38	0.66	88.73	S 73° 50′ 07.43″ E	88.72	S 75° 31′ 48.08″ E	537.15	25+95.42	26+84.15
LP321_V5-9	13,680,042.45	2,251,261.29	32+69.03	3° 38′ 44.52″ (LT)	3° 49′ 10.99″	1,500.00	47.74	0.76	95.44	S 77° 21′ 10.35″ E	95.43	S 79° 10′ 32.61″ E	0.00	32+21.30	33+16.74
LP321_V5-10	13,680,025.80	2,251,348.39	33+57.67	3° 07′ 34.77″ (RT)	3° 49′ 10.99″	1,500.00	40.93	0.56	81.85	S 77° 36′ 45.22″ E	81.84	S 76° 02′ 57.84″ E	63.84	33+16.74	33+98.59
LP321_V5-11	13,679,988.78	2,251,497.41	35+11.20	3° 43′ 28.20″ (RT)	3° 49′ 10.99″	1,500.00	48.77	0.79	97.51	S 74° 11′ 13.74″ E	97.49	S 72° 19′ 29.64″ E	0.00	34+62.43	35+59.94
LP321_V5-12	13,679,959.07	2,251,590.64	36+09.02	3° 44′ 52.80″ (LT)	3° 49′ 10.99″	1,500.00	49.08	0.80	98.12	S 74° 11′ 56.04″ E	98.10	S 76° 04′ 22.44″ E	102.29	35+59.94	36+58.06
LP321_V5-13	13,679,842.83	2,252,059.39	40+91.93	49° 09′ 15.40″ (RT)	7° 54′ 10.32″	725.00	331.58	72.23	621.98	S 51° 29′ 44.74″ E	603.08	S 26° 55′ 07.04″ E	403.05	37+60.35	43+82.33
LP321_V5-14	13,679,061.80	2,252,455.95	49+26.70	54° 23′ 47.29″ (RT)	20° 50′ 05.38″	275.00	141.32	34.19	261.08	S 0° 16′ 46.60″ W	251.39	S 27° 28′ 40.25″ W	--	47+85.38	50+46.46

CROSS-STREET CURVES

CURVE	NORTHING	EASTING	P.I. STATION	DELTA (LT/RT)	DEGREE OF CURVATURE	RADIUS	TANGENT	EXTERNAL	LENGTH	CHORD BEARING	CHORD LENGTH (FT)	TANGENT BEARING	FORWARD TANGENT DISTANCE	P.C. STATION	P.T. STATION
PCR342-1	13,679,638.52	2,252,279.15	11+21.81	33° 52′ 28.4246″ (RT)	14° 19′ 26.2016″	400.00	121.81	18.14	236.49	S 75° 07′ 56.2719″ E	233.06	S 58° 11′ 42.0595″ E	--	10+00.00	12+36.49

TURN BAYS

RIGHT TURN LANE BAY LENGTHS

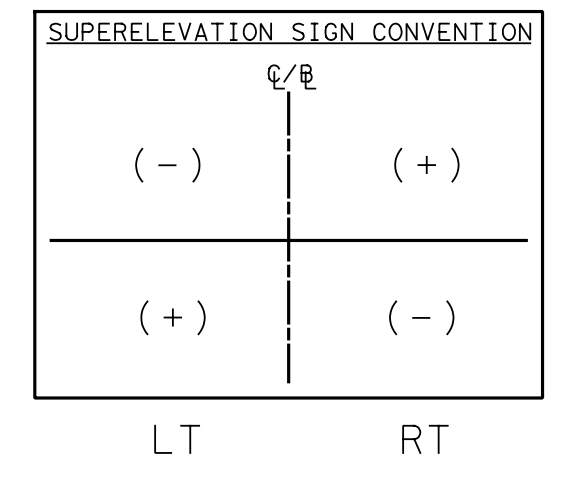
TURN LANE	TAPER LENGTH (FT)	DECELERATION LENGTH (FT)	STORAGE LENGTH (FT)	TOTAL LENGTH (FT)
R1	50	164	30	194
R2	50	126	30	156
R3	100	528	30	558

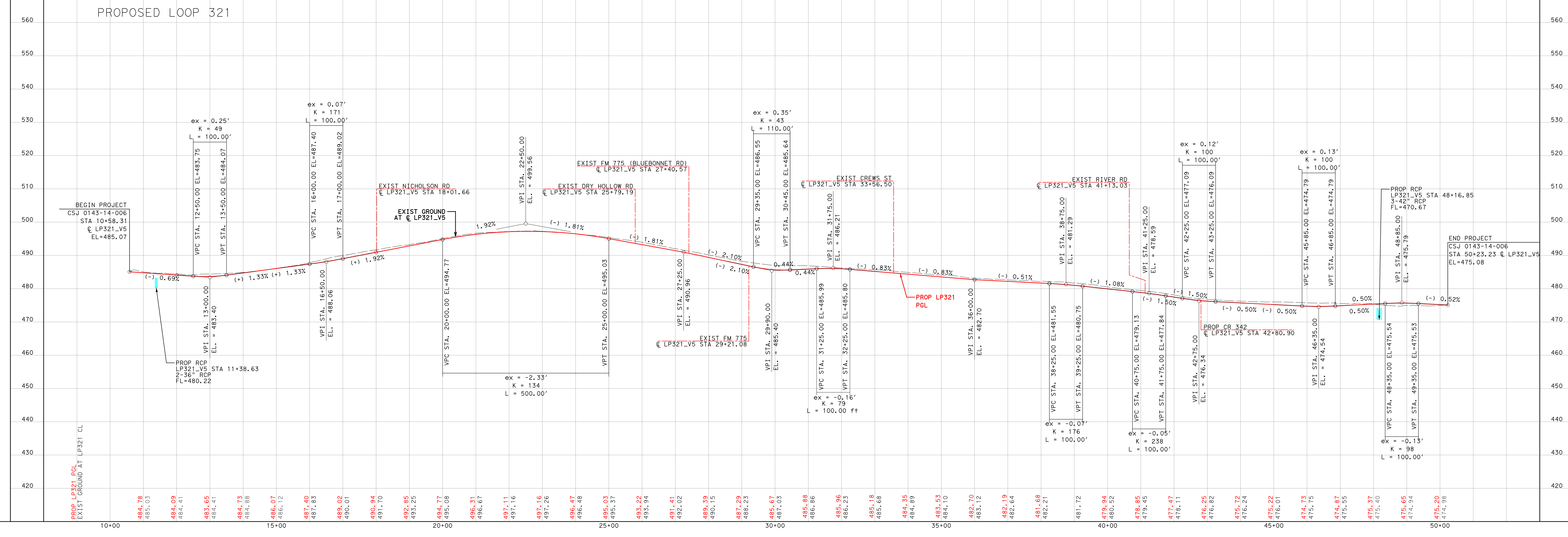
SUPERELEVATION

BASELINE	BEGIN TRANSITION		END TRANSITION	
	STA	e	STA	e
LP321_V5* (LT)	10+59.00	0.30%	11+17.00	2.00%
LP321_V5* (RT)	11+50.00	-0.30%	12+74.00	-2.00%
LP321_V5 (RT)	19+78.00	-2.00%	20+75.00	2.00%
LP321_V5 (RT)	26+00.00	2.00%	26+97.00	-2.00%
LP321_V5 (LT)	32+03.00	2.00%	33+00.00	-2.00%
LP321_V5 (LT)	34+00.00	-2.00%	34+97.00	2.00%
LP321_V5 (LT)	46+98.00	2.00%	47+95.00	-2.00%
LP321_V5* (RT)	47+63.00	-2.00%	50+23.00	0.30%
LP321_V5* (LT)	48+79.00	-2.00%	50+23.00	0.50%

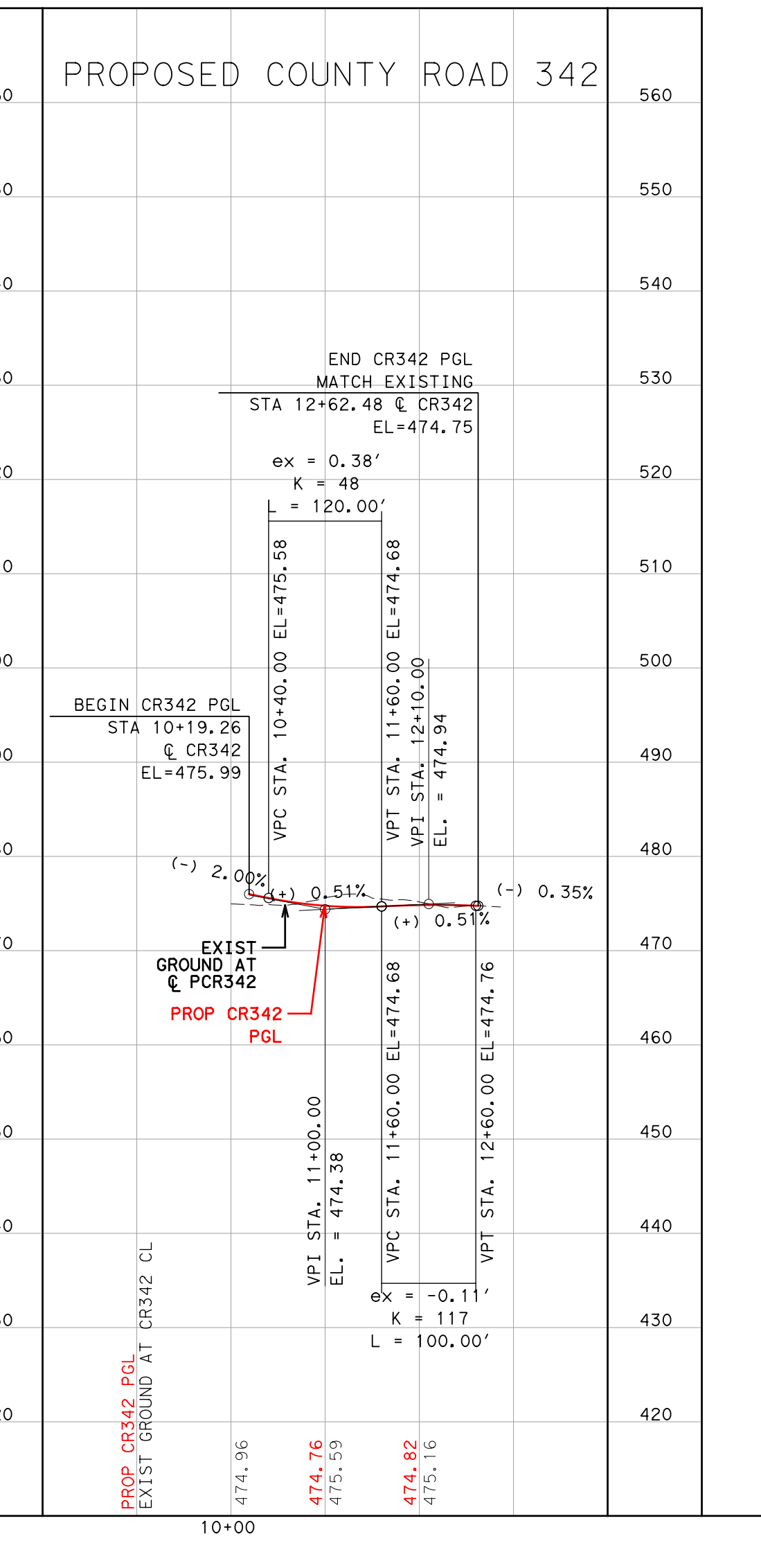
*CROSS SLOPE TO FACILITATE LP 321 INTERSECTION GRADING AT EXISTING US 87. INTERSECTION GRADING DETAILS TO BE DEVELOPED DURING PS&E PHASE.

SUPERELEVATION SIGN CONVENTION





PROPOSED LOOP 321
560
550
540
530
520
510
500
490
480
470
460
450
440
430
420
BEGIN PROJECT CSJ 0143-14-006 STA 10+58.31 ℄ LP321_V5 EL=485.07
(-) 0.69%
PROP RCP LP321_V5 STA 11+38.63 2-36" RCP FL=480.22
ex = 0.25′ K = 49 L = 100.00′
VPC STA. 12+50.00 EL=483.75
VPT STA. 13+50.00 EL=484.07
VPI STA. 13+00.00 EL. = 483.40
(+) 1.33%
(+) 1.33%
ex = 0.07′ K = 171 L = 100.00′
VPC STA. 16+00.00 EL=487.40
VPT STA. 17+00.00 EL=489.02
VPI STA. 16+50.00 EL. = 488.06
(+) 1.92%
EXIST NICHOLSON RD ℄ LP321_V5 STA 18+01.66
EXIST GROUND AT ℄ LP321_V5
1.92%
VPI STA. 22+50.00 EL. = 499.56
VPC STA. 20+00.00 EL=494.77
VPT STA. 25+00.00 EL=495.03
ex = -2.33′ K = 134 L = 500.00′
(-) 1.81%
(-) 1.81%
EXIST DRY HOLLOW RD ℄ LP321_V5 STA 25+79.19
EXIST FM 775 (BLUEBONNET RD) ℄ LP321_V5 STA 27+40.57
VPI STA. 27+25.00 EL. = 490.96
(-) 2.10%
(-) 2.10%
EXIST FM 775 ℄ LP321_V5 STA 29+21.08
ex = 0.35′ K = 43 L = 110.00′
VPC STA. 29+35.00 EL=486.55
VPT STA. 30+45.00 EL=485.64
VPI STA. 29+90.00 EL. = 485.40
0.44%
0.44%
VPI STA. 31+75.00 EL. = 486.21
VPC STA. 31+25.00 EL=485.99
VPT STA. 32+25.00 EL=485.80
ex = -0.16′ K = 79 L = 100.00 ft
EXIST CREWS ST ℄ LP321_V5 STA 33+56.50
(-) 0.83%
(-) 0.83%
PROP LP321 PGL
VPI STA. 36+00.00 EL. = 482.70
(-) 0.51%
EXIST RIVER RD ℄ LP321_V5 STA 41+13.03
VPI STA. 38+75.00 EL. = 481.29
VPC STA. 38+25.00 EL=481.55
VPT STA. 39+25.00 EL=480.75
ex = -0.07′ K = 176 L = 100.00′
(-) 1.08%
VPI STA. 41+25.00 EL. = 478.59
VPC STA. 40+75.00 EL=479.13
VPT STA. 41+75.00 EL=477.84
ex = -0.05′ K = 238 L = 100.00′
(-) 1.50%
(-) 1.50%
ex = 0.12′ K = 100 L = 100.00′
VPC STA. 42+25.00 EL=477.09
VPT STA. 43+25.00 EL=476.09
VPI STA. 42+75.00 EL. = 476.34
PROP CR 342 ℄ LP321_V5 STA 42+80.90
(-) 0.50%
(-) 0.50%
ex = 0.13′ K = 100 L = 100.00′
VPC STA. 45+85.00 EL=474.79
VPT STA. 46+85.00 EL=474.79
VPI STA. 46+35.00 EL. = 474.54
0.50%
0.50%
PROP RCP LP321_V5 STA 48+16.85 3-42" RCP FL=470.67
VPI STA. 48+85.00 EL. = 475.79
VPC STA. 48+35.00 EL=475.54
VPT STA. 49+35.00 EL=475.53
ex = -0.13′ K = 98 L = 100.00′
(-) 0.52%
END PROJECT CSJ 0143-14-006 STA 50+23.23 ℄ LP321_V5 EL=475.08
PROP LP321 PGL
EXIST GROUND AT LP321 CL
484.78 485.03
484.09 484.41
483.65 484.41
484.73 484.88
486.07 486.12
487.40 487.83
489.02 490.01
490.94 491.70
492.85 493.25
494.77 495.08
496.31 496.67
497.11 497.16
497.16 497.26
496.47 496.48
495.03 495.37
493.22 493.94
491.41 492.02
489.39 490.15
487.29 488.23
485.67 487.03
485.88 486.86
485.96 486.23
485.18 485.68
484.35 484.89
483.53 484.10
482.70 483.12
482.19 482.64
481.68 482.21
481.72
479.94 480.52
478.85 479.45
477.47 478.11
476.25 476.82
475.72 476.24
475.22 476.01
474.73 475.75
474.87 475.55
475.37 475.40
475.65 474.94
475.20 474.98
10+00
15+00
20+00
25+00
30+00
35+00
40+00
45+00
50+00



PROPOSED COUNTY ROAD 342
560
550
540
530
520
510
500
490
480
470
460
450
440
430
420
BEGIN CR342 PGL STA 10+19.26 ℄ CR342 EL=475.99
(-) 2.00%
EXIST GROUND AT ℄ PCR342
PROP CR342 PGL
ex = 0.38′ K = 48 L = 120.00′
VPC STA. 10+40.00 EL=475.58
VPT STA. 11+60.00 EL=474.68
VPI STA. 11+00.00 EL. = 474.38
(+) 0.51%
(+) 0.51%
VPC STA. 11+60.00 EL=474.68
VPI STA. 12+10.00 EL. = 474.94
VPT STA. 12+60.00 EL=474.76
ex = -0.11′ K = 117 L = 100.00′
END CR342 PGL MATCH EXISTING STA 12+62.48 ℄ CR342 EL=474.75
(-) 0.35%
PROP CR342 PGL
EXIST GROUND AT CR342 CL
474.96
474.76 475.59
474.82 475.16
10+00