95% SUBMITTAL

SHEET 2 OF 8

Texas Department of Transportation

LUFKIN DISTRICT
CSJ: 0176-02-118

STATE OF TEXAS
PRELIMINARY DESIGN SCHEMATIC FOR:
US 59

ANGELINA COUNTY

APPROX LENGTH OF PROJECT : 12,936 FT = 2.45 MI
FROM FM 2021 TO 0.34 NORTH OF LP 287

CHERYL P. FLOOD, PE, DISTRICT ENGINEER, LUFKIN DISTRICT

US 59 TRAFFIC VOLUMES:

EXISTING	(2016 ADT):	26,265
PROJECTED	(2042 ADT):	39,915
	(2052 ADT):	45,165

BEGIN PROJECT CSJ 0176-02-118 STA 255+15.00 R1
END PROJECT CSJ 0176-02-118 STA 333+00.00 R2

EXCEPTION: NONE
EQUATIONS: YES
RAILROAD CROSSING: NONE

ROADWAY	ROADWAY CLASSIFICATION	SPEED DESIGN
MAINLANES	FREEWAY	60 MPH
RAMPS	FREEWAY	45 MPH
FRONTAGE ROADS	COLLECTOR	45 MPH
MAJOR CROSS STREETS	COLLECTOR	40 MPH
LOCAL ROAD	LOCAL	30 MPH
ROLLING TERRAIN		

e_{MAX} = 6%

EQUATION:
Sta 372+24.24 BK =
Sta 324+13.83 AH

PRELIMINARY
Document incomplete: not intended for permit, bidding or construction.
Engineer: GEMAR GARYL, P.E.
P.E. Serial No. 91581
Date: 11/29/2018

HORIZONTAL: 1" = 100'
VERTICAL: 1" = 10'

NOT A BIDDING DOCUMENT

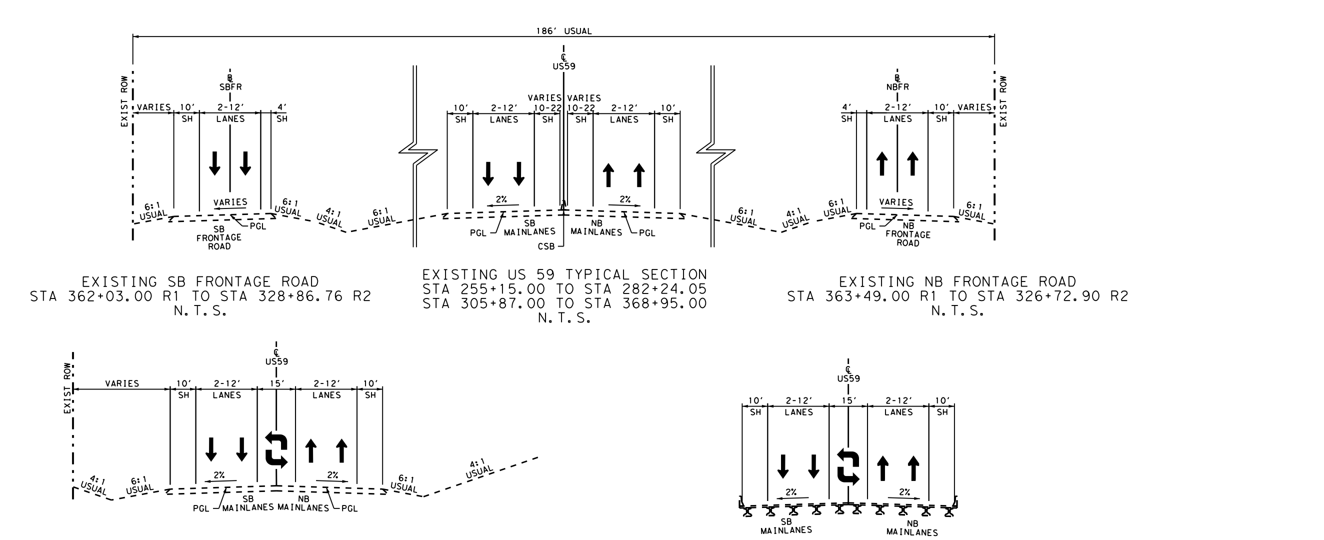
ATKINS
11801 Domain boulevard, Suite 500
Austin, Texas, 78758
512-327-6840 PH
512-327-2453 FX
TBPE REG. #F-474

11/29/2018
...\P1\US59+WA1+P1+02+Half.dgn

HORIZ 0' 50' 100'
VERT 0' 5' 10'

PLAN VIEW LEGEND
- FLOODPLAIN
- EXISTING ROW
- PARCELS
- PROPOSED ROW
- CONTROL OF ACCESS
- PAVEMENT REMOVAL
- MAINLANES
- RAMPS
- FRONTAGE ROADS
- RAISED MEDIAN GORE
- PROPOSED BRIDGES
- SIDEWALKS
- POTENTIAL WATERS OF THE US
- CEMETERIES
- H HISTORICAL MARKER
- OIL/GAS WELLS
- TCEQ PWS WELLS
- LANE (TRAFFIC DIR)
- EXISTING TOPO
- PROPOSED LIGHT POLES

MATCHLINE STA 300+00



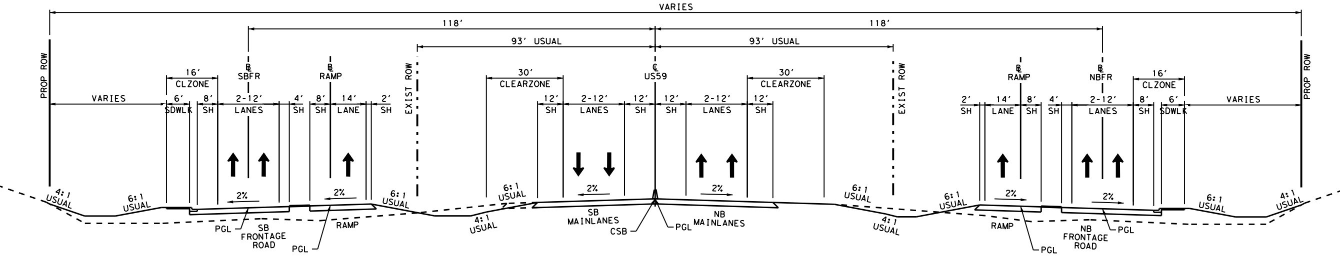
EXISTING SB FRONTAGE ROAD
STA 362+03.00 R1 TO STA 328+86.76 R2
N.T.S.

EXISTING US 59 TYPICAL SECTION
STA 255+15.00 TO STA 282+24.05
STA 305+87.00 TO STA 368+95.00
N.T.S.

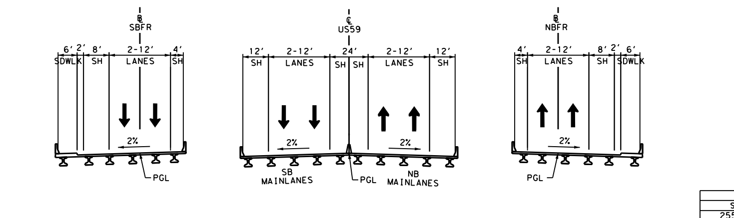
EXISTING NB FRONTAGE ROAD
STA 363+49.00 R1 TO STA 326+72.90 R2
N.T.S.

EXISTING US 59 TYPICAL SECTION
STA 282+24.05 TO STA 302+75.00
N.T.S.

EXISTING US 59 TYPICAL SECTION
STA 302+75.00 TO STA 305+87.00
N.T.S.



PROPOSED US 59 TYPICAL SECTION
N.T.S.



PROPOSED US 59 BRIDGE TYPICAL SECTION
N.T.S.

US 59 NB MAINLANES	
STATION	CROSS SLOPE
255+15.00	MATCH EXIST
261+26.99	-2.00%
262+46.99	2.00%
262+58.99	2.40%
277+46.72	2.40%
277+58.72	2.00%
278+78.72	-2.00%
368+95.17	MATCH EXIST

US 59 SB MAINLANES	
STATION	CROSS SLOPE
255+15.00	MATCH EXIST
261+26.99	-2.00%
262+58.99	-2.40%
277+46.72	-2.40%
278+78.72	-2.00%
368+95.17	MATCH EXIST

US 59 NBFR	
STATION	CROSS SLOPE
1279+21.95	-2.00%
1357+57.64	-2.00%
1358+90.98	-3.00%
1369+74.31	-3.00%
1371+07.64	-2.00%
1374+49.16	MATCH EXIST

US 59 SBFR	
STATION	CROSS SLOPE
2265+28.95	-2.00%
2276+40.00	-2.00%
2277+20.00	2.00%
2280+00.00	2.00%
2280+80.00	-2.00%
2355+95.24	-2.00%
2357+01.91	2.00%
2364+97.71	2.00%
2366+04.38	-2.00%
2381+37.59	MATCH EXIST

US 59 RRLP (LT)	
STATION	CROSS SLOPE
3265+28.95	2.00%
3275+85.66	2.00%
3277+92.06	2.00%
3279+50.43	2.00%
3280+73.50	2.00%
3283+82.74	2.00%
3285+05.81	2.00%
3285+11.59	-2.00%
3286+26.91	2.00%
3300+34.32	2.00%
3302+11.37	-4.40%
3304+11.37	-4.40%
3307+52.73	2.00%
3308+12.75	2.00%

US 59 RRLP (RT)	
STATION	CROSS SLOPE
3265+28.95	-2.00%
3275+85.66	-2.00%
3277+92.06	-2.00%
3279+50.43	-2.00%
3280+73.50	-2.00%
3283+82.74	-2.00%
3285+05.81	-2.00%
3285+11.59	-2.00%
3286+34.66	-2.00%
3308+12.75	-2.00%

US 59 NBEXRP1	
STATION	CROSS SLOPE
13+04.00	2.00%
14+47.38	2.00%
15+81.09	-2.48%

US 59 SBENRP1	
STATION	CROSS SLOPE
13+23.27	-2.00%
14+01.05	-2.00%
15+06.83	-5.40%
17+19.39	-5.40%
19+04.00	-2.67%

RAMP CRV DATA

US59*NBEXRP01-1
PI STATION = 12+33.06
DELTA = 2° 24' 20.22" (RT)
DEGREE OF CURVE = 0° 30' 58.24"
TANGENT = 233.06
LENGTH = 466.04
RADIUS = 11,100.00
PC STATION = 10+00.00
PT STATION = 14+66.04

US59*NBEXRP01-2
PI STATION = 18+35.43
DELTA = 6° 53' 14.03" (LT)
DEGREE OF CURVE = 1° 57' 43.86"
TANGENT = 226.92
LENGTH = 452.93
RADIUS = 2,920.00
PC STATION = 16+08.51
PT STATION = 20+61.43

US59*NBEXRP01-3
PI STATION = 22+10.92
DELTA = 1° 32' 35.08" (LT)
DEGREE OF CURVE = 0° 30' 58.24"
TANGENT = 149.48
LENGTH = 298.94
RADIUS = 11,100.00
PC STATION = 20+61.43
PT STATION = 23+60.38

US59*NBEXRP02-1
PI STATION = 19+56.24
DELTA = 9° 10' 24.39" (LT)
DEGREE OF CURVE = 1° 08' 45.30"
TANGENT = 401.12
LENGTH = 800.53
RADIUS = 5,000.00
PC STATION = 15+55.11
PT STATION = 23+55.65

US59*NBENRP02-2
PI STATION = 34+42.13
DELTA = 3° 41' 56.35" (LT)
DEGREE OF CURVE = 0° 30' 58.24"
TANGENT = 358.43
LENGTH = 716.61
RADIUS = 11,100.00
PC STATION = 30+83.70
PT STATION = 38+00.31

US59*SBENRP01-1
PI STATION = 12+35.55
DELTA = 2° 57' 26.61" (LT)
DEGREE OF CURVE = 0° 40' 36.97"
TANGENT = 218.49
LENGTH = 436.88
RADIUS = 8,464.00
PC STATION = 10+17.06
PT STATION = 14+53.94

US59*SBENRP01-2
PI STATION = 16+04.21
DELTA = 8° 35' 38.23" (LT)
DEGREE OF CURVE = 2° 51' 53.24"
TANGENT = 150.27
LENGTH = 299.99
RADIUS = 2,000.00
PC STATION = 14+53.94
PT STATION = 17+53.92

US59*SBENRP01-3
PI STATION = 25+10.96
DELTA = 1° 15' 21.92" (RT)
DEGREE OF CURVE = 0° 30' 58.24"
TANGENT = 121.68
LENGTH = 243.34
RADIUS = 11,100.00
PC STATION = 23+89.28
PT STATION = 26+32.63

RAMP CRV DATA

US59*SBENRP02-1
PI STATION = 11+54.32
DELTA = 0° 01' 30.70" (LT)
DEGREE OF CURVE = 0° 04' 35.02"
TANGENT = 16.49
LENGTH = 32.98
RADIUS = 75,000.00
PC STATION = 11+37.83
PT STATION = 11+70.81

US59*SBENRP02-2
PI STATION = 24+33.61
DELTA = 1° 01' 38.64" (RT)
DEGREE OF CURVE = 0° 20' 13.32"
TANGENT = 152.42
LENGTH = 304.84
RADIUS = 17,000.00
PC STATION = 22+81.19
PT STATION = 25+86.02

US59*SBENRP02-3
PI STATION = 34+97.70
DELTA = 0° 08' 37.65" (RT)
DEGREE OF CURVE = 0° 30' 58.24"
TANGENT = 13.93
LENGTH = 27.86
RADIUS = 11,100.00
PC STATION = 34+83.77
PT STATION = 35+11.63

ML CRV DATA

US59*CL-1
PI STATION = 270+04.92
DELTA = 10° 17' 42.91" (LT)
DEGREE OF CURVE = 0° 40' 26.64"
TANGENT = 765.73
LENGTH = 1,527.33
RADIUS = 8,500.00
PC STATION = 262+39.19
PT STATION = 277+66.52

US59*CL-2
PI STATION = 310+67.78
DELTA = 12° 15' 39.89" (RT)
DEGREE OF CURVE = 0° 21' 29.16"
TANGENT = 1,718.53
LENGTH = 3,423.94
RADIUS = 16,000.00
PC STATION = 293+49.24
PT STATION = 327+73.18

US59*CL-3
PI STATION = 362+71.78
DELTA = 6° 25' 37.15" (RT)
DEGREE OF CURVE = 0° 20' 13.32"
TANGENT = 954.46
LENGTH = 1,906.93
RADIUS = 17,000.00
PC STATION = 353+17.32
PT STATION = 372+24.24

ST CRV DATA

US59*SPENCE-1
PI STATION = 0+84.72
DELTA = 53° 16' 11.38" (LT)
DEGREE OF CURVE = 45° 50' 11.84"
TANGENT = 62.69
LENGTH = 116.22
RADIUS = 125.00
PC STATION = 0+22.03
PT STATION = 1+38.24

FR CRV DATA

US59*RRLP-1
PI STATION = 3271+18.77
DELTA = 12° 09' 54.92" (RT)
DEGREE OF CURVE = 1° 08' 45.30"
TANGENT = 532.81
LENGTH = 1,061.62
RADIUS = 5,000.00
PC STATION = 3265+85.96
PT STATION = 3276+47.58

US59*RRLP-2
PI STATION = 3281+15.23
DELTA = 153° 03' 59.16" (LT)
DEGREE OF CURVE = 67° 24' 24.48"
TANGENT = 354.96
LENGTH = 227.08
RADIUS = 85.00
PC STATION = 3277+60.27
PT STATION = 3279+87.35

US59*RRLP-3
PI STATION = 3285+10.94
DELTA = 45° 36' 57.63" (LT)
DEGREE OF CURVE = 57° 17' 44.81"
TANGENT = 42.05
LENGTH = 79.61
RADIUS = 100.00
PC STATION = 3284+68.89
PT STATION = 3285+48.51

US59*RRLP-4
PI STATION = 3290+84.22
DELTA = 1° 08' 44.75" (RT)
DEGREE OF CURVE = 0° 43' 40.90"
TANGENT = 78.69
LENGTH = 157.38
RADIUS = 7,870.00
PC STATION = 3290+05.52
PT STATION = 3291+62.90

US59*RRLP-5
PI STATION = 3296+84.33
DELTA = 1° 08' 44.75" (LT)
DEGREE OF CURVE = 0° 43' 40.90"
TANGENT = 78.69
LENGTH = 157.38
RADIUS = 7,870.00
PC STATION = 3296+05.64
PT STATION = 3297+63.02

US59*RRLP-6
PI STATION = 3304+46.92
DELTA = 3° 46' 41.04" (LT)
DEGREE OF CURVE = 0° 30' 58.24"
TANGENT = 366.10
LENGTH = 731.93
RADIUS = 11,100.00
PC STATION = 3300+80.82
PT STATION = 3308+12.75

US59*NBFR-1
PI STATION = 1310+55.10
DELTA = 12° 15' 39.89" (RT)
DEGREE OF CURVE = 0° 21' 38.73"
TANGENT = 1,705.86
LENGTH = 3,398.69
RADIUS = 15,882.00
PC STATION = 1293+49.24
PT STATION = 1327+47.93

US59*NBFR-2
PI STATION = 1364+35.02
DELTA = 12° 52' 20.73" (RT)
DEGREE OF CURVE = 1° 08' 45.30"
TANGENT = 564.04
LENGTH = 1,123.33
RADIUS = 5,000.00
PC STATION = 1358+70.98
PT STATION = 1369+94.31

FR CRV DATA

US59*SBFR-1
PI STATION = 2269+94.28
DELTA = 10° 17' 42.91" (LT)
DEGREE OF CURVE = 1° 08' 45.30"
TANGENT = 450.43
LENGTH = 898.43
RADIUS = 5,000.00
PC STATION = 2265+43.85
PT STATION = 2274+42.28

US59*SBFR-2
PI STATION = 2310+60.88
DELTA = 12° 53' 39.89" (RT)
DEGREE OF CURVE = 0° 21' 19.72"
TANGENT = 1,731.21
LENGTH = 3,449.19
RADIUS = 16,118.00
PC STATION = 2293+29.67
PT STATION = 2327+78.86

US59*SBFR-3
PI STATION = 2361+00.00
DELTA = 4° 16' 22.49" (RT)
DEGREE OF CURVE = 0° 30' 58.24"
TANGENT = 414.09
LENGTH = 827.80
RADIUS = 11,100.00
PC STATION = 2356+85.91
PT STATION = 2365+13.71

US59*SBFR-4
PI STATION = 2371+76.89
DELTA = 3° 07' 36.90" (LT)
DEGREE OF CURVE = 0° 30' 58.24"
TANGENT = 302.97
LENGTH = 605.78
RADIUS = 11,100.00
PC STATION = 2368+73.92
PT STATION = 2374+79.70

Texas Department of Transportation

LUFKIN DISTRICT
CSJ: 0176-02-118

STATE OF TEXAS
PRELIMINARY DESIGN SCHEMATIC FOR:
US 59

ANGELINA COUNTY

APPROX LENGTH OF PROJECT : 12,936 FT = 2.45 MI
FROM FM 2021 TO 0.34 NORTH OF LP 287

CHERYL P. FLOOD, PE, DISTRICT ENGINEER, LUFKIN DISTRICT

NOT A BIDDING DOCUMENT

ATKINS

95% SUBMITTAL

SHEET 2 OF 8