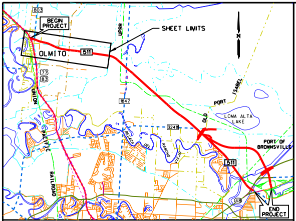

803
BEGIN PROJECT
SHEET LIMITS
OLMITO
511
77
83
UPRR
UNION
PACIFIC
RAILROAD
1847
PORT
ISABEL
OLD
LOMA ALTA LAKE
3248
RESACA DEL RANCHO VIEJO
PORT OF BROWNSVILLE
511
48
END PROJECT
N

VICINITY MAP

NTS

TEXAS DEPARTMENT OF TRANSPORTATION

SCHEMATIC LAYOUT

OFFICE OF DISTRICT ENGINEER
PHARR DISTRICT

FM 511
CAMERON COUNTY

LIMITS: FROM: US 77/83
TO: SH 48

C-S-J: 0684-01-046

LENGTH: 9.6 MILES

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

FUNCTIONAL CLASSIFICATION: FREEWAY
HIGHWAY TYPE: SUBURBAN ROADWAY

$e_{max} = 6\%$

DESIGN STANDARDS:
TxDOT ROADWAY DESIGN MANUAL (JULY 2006)

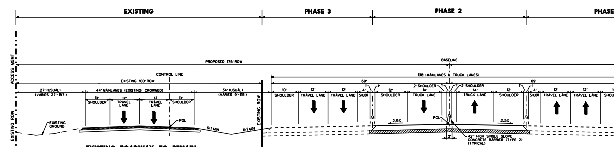
9/11/2006

THE SEAL APPEARING ON THIS
DOCUMENT WAS AUTHORIZED BY
SAMUEL M. WATSON, P.E. #73121
ON SEPTEMBER 8, 2006

SAMUEL M. WATSON
73121

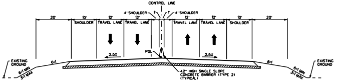
MACTEC
3520 EXECUTIVE CENTER DRIVE
SUITE 200
AUSTIN, TX 78731
(512) 795-0360

ROLL 1 OF 5 (PHASE 1 & 2)

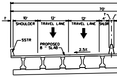

EXISTING
PHASE 3
PHASE 2
PHASE
ACCESS MGMT
EXISTING ROW
PROPOSED 175' ROW
CONTROL LINE
EXISTING 100' ROW
27' (USUAL)
(VARIES 27'-157')
44' MAINLANES (EXISTING: CROWNED)
34' (USUAL)
(VARIES 9'-115')
10'
SHOULDER
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
EXISTING GROUND
PGL
6:1 MIN
6:1 MIN
EXISTING ROW
BASELINE
138' (MAINLANES & TRUCK LANES)
69'
69'
10'
SHOULDER
12'
TRAVEL LANE
12'
TRAVEL LANE
4'
SHLDR
1'
1'
12'
SHOULDER
2' SHOULDER
14'
TRUCK LANE
1'
1'
2' SHOULDER
14'
TRUCK LANE
12'
SHOULDER
1'
1'
4'
SHLDR
12'
TRAVEL LANE
12'
TRAVEL LANE
2.5%
2.5%
PGL
2'
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)

EXISTING ROADWAY TO REMAIN

PROPOSED FM 511
TYPICAL SECTION
NTS


CONTROL LINE
4' SHOULDER
1'
1'
4' SHOULDER
20'
10'
SHOULDER
12'
TRAVEL LANE
12'
TRAVEL LANE
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
20'
PGL
2.5%
2.5%
EXISTING GROUND
6:1
6:1 MIN
3:1 MAX
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)
6:1
6:1 MIN
3:1 MAX
EXISTING GROUND

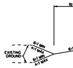
PROPOSED SH 48
TYPICAL SECTION
NTS


70'
1'
10'
SHOULDER
12'
TRAVEL LANE
12'
TRAVEL LANE
4'
SHLDR
SSTR
PROPOSED 8" SLAB
2.5%

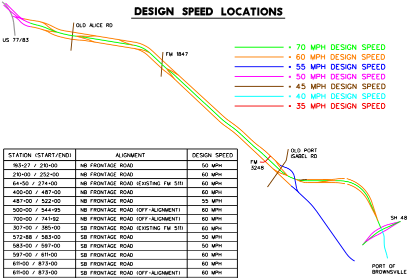
PROPOSED

FM 511 TRAFFIC VOLUMES

YEAR	ADT	% TRUCKS
2005 (CORRIDOR)	13,400	18.2
2025 (FRONTAGE ROAD ONLY)	2,600	10.1
2025 (MAINLANES ONLY)	21,500	1.2
2025 (TRUCK LANES ONLY)	4,800	100.0


15'
EXISTING GROUND
6:1 MIN
4:1 MAX
6:1 MIN
4:1 MAX
6:1

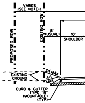
DESIGN SPEED LOCATIONS


US 77/83
OLD ALICE RD
FM 1847
FM 3248
OLD PORT ISABEL RD
SH 48
PORT OF BROWNSVILLE

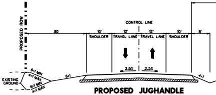
- 70 MPH DESIGN SPEED
- 60 MPH DESIGN SPEED
- 55 MPH DESIGN SPEED
- 50 MPH DESIGN SPEED
- 45 MPH DESIGN SPEED
- 40 MPH DESIGN SPEED
- 35 MPH DESIGN SPEED

STATION (START/END)	ALIGNMENT	DESIGN SPEED
193+27 / 210+00	NB FRONTAGE ROAD	50 MPH
210+00 / 252+00	NB FRONTAGE ROAD	60 MPH
64+50 / 274+00	NB FRONTAGE ROAD (EXISTING FM 511)	60 MPH
400+00 / 487+00	NB FRONTAGE ROAD	60 MPH
487+00 / 522+00	NB FRONTAGE ROAD	55 MPH
500+00 / 544+95	NB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
700+00 / 741+92	NB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
307+00 / 385+00	SB FRONTAGE ROAD (EXISTING FM 511)	60 MPH
572+88 / 583+00	SB FRONTAGE ROAD	50 MPH
583+00 / 597+00	SB FRONTAGE ROAD	50 MPH
597+00 / 611+00	SB FRONTAGE ROAD	60 MPH
611+00 / 873+00	SB FRONTAGE ROAD	60 MPH
611+00 / 873+00	SB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
600+00 / 645+47	SB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
1045+00 / 1513+00	TRUCK & MAINLANES	70 MPH
1513+00 / 1548+25	PORT ACCESS ROAD	40 MPH
385+00 / 497+98	CURB SEGMENT	55 MPH
	MAINLINE RAMPS	60 MPH
	SH 48	70 MPH
	SH 48 RAMPS	50 MPH
	OLD ALICE ROAD	45 MPH
	FM 1847	60 MPH
	FM 3248	35 MPH
	OLD PORT ISABEL ROAD	45 MPH
	DIRECT CONNECTORS	50 MPH

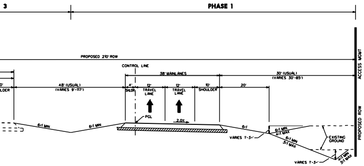
• NOTE: PROW WIDTH VARIES FROM 59.15' TO 0' FROM STA 394+50 TO 426+06.24, RESPECTIVELY; NO PROW NEEDED (WIDTH = 0) FROM STA 426+06.24 TO END CONST.

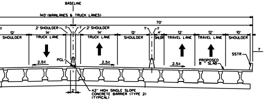

VARIES (SEE NOTE•)
PROPOSED ROW
EXISTING ROW
8' (USUAL)
10'
SHOULDER
EXISTING GROUND
3:1 MAX
4:1 MAX
CURB & GUTTER TYPE "B" (MOUNTABLE) (TYP)

(SOUT


PROPOSED ROW
CONTROL LINE
30'
10'
SHOULDER
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
8'
2.5%
2.5%
EXISTING GROUND
6:1 MIN
4:1 MAX
6:1 MIN
4:1 MAX
6:1
4:1

PROPOSED JUGHANDLE

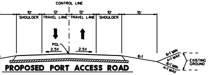

3
PHASE 1
PROPOSED 210' ROW
CONTROL LINE
38' MAINLANES
30' (USUAL)
(VARIES 30'-85')
ACCESS MGMT
PROPOSED ROW
0'
LDER
48' (USUAL)
(VARIES 9'-117')
4'
SHLDR
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
20'
PGL
2.0%
6:1 MIN
6:1 MIN
6:1
6:1 MIN
4:1 MAX
6:1 MIN
3:1 MAX
VARIES 1'-3'+
EXISTING GROUND
4:1 MIN
3:1 MAX
VARIES 1'-3'+


BASELINE
140' (MAINLANES & TRUCK LANES)
70'
1'
12'
SHOULDER
2' SHOULDER
1'
1'
2' SHOULDER
14'
TRUCK LANE
14'
TRUCK LANE
12'
SHOULDER
1'
1'
4'
SHLDR
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
1'
2.5%
PGL
2.5%
2.5%
PROPOSED 8 " SLAB
SSTR
2'
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)

FM 511 OVERPASS (MAINLANES & TRUCKLANES)

TYPICAL SECTION

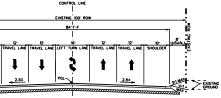
NTS


CONTROL LINE
10'
SHOULDER
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
15'
PGL
2.5%
2.5%
6:1
6:1 MIN
4:1 MAX
6:1 MIN
4:1 MAX
EXISTING GROUND

PROPOSED PORT ACCESS ROAD

STA 35+50 TO 40+50 AND
STA 58+50 TO 64+50
TYPICAL SECTION

NTS

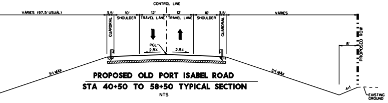

CONTROL LINE
EXISTING 100' ROW
84' F-F
12'
TRAVEL LANE
12'
TRAVEL LANE
16'
LEFT TURN LANE
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
8'
(USUAL)
EXISTING ROW
PGL
2.5%
2.5%
3:1 MAX
4:1 MAX
EXISTING GROUND

PROPOSED FM 511 CURBED SEGMENT

H OF OLD PORT ISABEL ROAD TO SH 48)

TYPICAL SECTION

NTS


CONTROL LINE
VARIES (97.5' USUAL)
3.5'
GUARDRAIL
10'
SHOULDER
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
3.5'
GUARDRAIL
VARIES
PGL
2.5%
2.5%
10:1
10:1
3:1 MAX
3:1 MAX
8'
PROPOSED ROW
4:1
EXISTING GROUND

PROPOSED OLD PORT ISABEL ROAD

STA 40+50 TO 58+50 TYPICAL SECTION

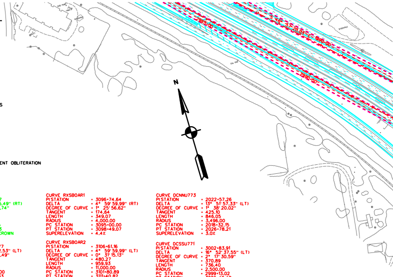
NTS

SCALE

0 100 200 300 400 500

LEGEND

— — —	PROPOSED ROW
— — —	PROPOSED ROW BY OTHERS
— · — ·	EXISTING ROW
—II—	ACCESS DENIAL LINE
——	PROPERTY LINE
— — ESMT — —	EASEMENT LINE
— — DRN ESMT — —	DRAINAGE EASEMENT LINE BY OTHERS
——	PROPOSED MAINLANE
——	PROPOSED FRONTAGE ROAD
——	PROPOSED RAMP
——	PROPOSED INTERSECTING ROAD
——	PROPOSED BRIDGE LIMIT/CONCRETE BARRIER/DRAINAGE STRUCTURES
— · — ·	PROPOSED MAINLANE ALIGNMENT
— · — ·	PROPOSED FRONTAGE ROAD ALIGNMENT
— · — ·	PROPOSED RAMP/DIRECT CONNECTOR ALIGNMENT
— · — ·	INTERSECTING ROAD ALIGNMENT
——	PROPOSED DESIGN BY OTHERS
- - - -	PROPOSED PHASE 3 RAMP/DIRECT CONNECTOR
🟨	PHASE 1
🟦	PHASE 2
▨	PAVEMENT OBLITERATION



CURVE BL__51P1	
PISTATION	1015+16.91
DELTA	12° 35' 21.51" (RT)
DEGREE OF CURVE	2° 02' 46.60"
TANGENT	308.86
LENGTH	615.23
RADIUS	2,800.00
PC STATION	1012+08.05
PT STATION	1018+23.28

CURVE BL__51P2	
PISTATION	1022+46.87
DELTA	13° 48' 05.04" (LT)
DEGREE OF CURVE	1° 38' 13.28"
TANGENT	423.59
LENGTH	843.08
RADIUS	3,500.00
PC STATION	1018+23.28
PT STATION	1026+66.36
SUPERELEVATION	4.9%

CURVE BL__51P4	
PISTATION	1038+60.34
DELTA	13° 08' 53.68" (RT)
DEGREE OF CURVE	1° 35' 45.54"
TANGENT	413.73
LENGTH	823.83
RADIUS	3,590.00
PC STATION	1034+46.61
PT STATION	1042+70.44
SUPERELEVATION	4.9%

CURVE BL__51P5	
PISTATION	1059+19.10
DELTA	16° 27' 28.62" (LT)
DEGREE OF CURVE	1° 04' 51.79"
TANGENT	766.48
LENGTH	1,522.40
RADIUS	5,300.00
PC STATION	1051+52.62
PT STATION	1066+75.02
SUPERELEVATION	3.6%

CURVE BL__51P6	
PISTATION	1077+55.22
DELTA	3° 18' 41.33" (LT)
DEGREE OF CURVE	0° 31' 15.13"
TANGENT	317.97
LENGTH	635.76
RADIUS	11,000.00
PC STATION	1074+37.25
PT STATION	1080+73.01
SUPERELEVATION	NORMAL CROWN

CURVE BL__51P7	
PISTATION	1090+74.59
DELTA	2° 18' 41.33" (RT)
DEGREE OF CURVE	0° 31' 15.13"
TANGENT	221.92
LENGTH	443.77
RADIUS	11,000.00
PC STATION	1088+52.68
PT STATION	1092+96.45
SUPERELEVATION	NORMAL CROWN

CURVE FRSB5109	
PISTATION	581+11.32
DELTA	17° 36' 46.80" (RT)
DEGREE OF CURVE	5° 27' 24.27"
TANGENT	162.67
LENGTH	322.78
RADIUS	1,050.00
PC STATION	579+48.65
PT STATION	582+71.43
SUPERELEVATION	5.8%

CURVE FRSB5110	
PISTATION	590+91.36
DELTA	21° 55' 51.57" (LT)
DEGREE OF CURVE	2° 36' 15.67"
TANGENT	426.26
LENGTH	842.09
RADIUS	2,200.00
PC STATION	586+65.10
PT STATION	595+07.19
SUPERELEVATION	4.1%

CURVE FRSB5111	
PISTATION	605+23.89
DELTA	16° 15' 14.92" (RT)
DEGREE OF CURVE	1° 38' 13.28"
TANGENT	499.81
LENGTH	992.91
RADIUS	3,500.00
PC STATION	600+24.08
PT STATION	610+16.99
SUPERELEVATION	3.9%

CURVE FRSB5112	
PISTATION	627+01.10
DELTA	12° 57' 28.62" (LT)
DEGREE OF CURVE	1° 08' 45.30"
TANGENT	567.82
LENGTH	1,130.79
RADIUS	5,000.00
PC STATION	621+33.28
PT STATION	632+64.07
SUPERELEVATION	3.7%

CURVE FRSB51R3	
PISTATION	644+47.36
DELTA	9° 14' 25.49" (LT)
DEGREE OF CURVE	0° 31' 49.86"
TANGENT	872.78
LENGTH	1,741.78
RADIUS	10,800.00
PC STATION	635+74.57
PT STATION	653+16.35
SUPERELEVATION	NORMAL CROWN

CURVE FRSB51R4	
PISTATION	660+63.47
DELTA	4° 44' 25.49" (RT)
DEGREE OF CURVE	0° 19' 02.74"
TANGENT	747.12
LENGTH	1,493.38
RADIUS	18,050.00
PC STATION	653+16.35
PT STATION	668+09.73
SUPERELEVATION	NORMAL CROWN

CURVE RENBOAR1	
PISTATION	2001+40.77
DELTA	5° 22' 22.53" (LT)
DEGREE OF CURVE	1° 54' 35.49"
TANGENT	140.77
LENGTH	281.33
RADIUS	3,000.00
PC STATION	2000+00.00
PT STATION	2002+81.33
SUPERELEVATION	4.3%

CURVE RENBOAR2	
PISTATION	2009+73.56
DELTA	5° 22' 22.53" (RT)
DEGREE OF CURVE	0° 42' 58.31"
TANGENT	375.38
LENGTH	750.20
RADIUS	8,000.00
PC STATION	2005+98.18
PT STATION	2013+48.38
SUPERELEVATION	REVERSE CROWN

CURVE RXNBOAR1	
PISTATION	2044+17.23
DELTA	3° 39' 29.70" (RT)
DEGREE OF CURVE	1° 16' 23.66"
TANGENT	143.71
LENGTH	287.32
RADIUS	4,500.00
PC STATION	2042+73.52
PT STATION	2045+60.84
SUPERELEVATION	4.0%

CURVE RXNBOAR2	
PISTATION	2058+93.27
DELTA	20° 06' 58.33" (LT)
DEGREE OF CURVE	1° 16' 23.66"
TANGENT	798.18
LENGTH	1,579.92
RADIUS	4,500.00
PC STATION	2050+95.10
PT STATION	2066+75.02
SUPERELEVATION	4.0%

CURVE RESBOAR1	
PISTATION	3056+79.15
DELTA	16° 27' 28.62" (RT)
DEGREE OF CURVE	0° 57' 17.75"
TANGENT	867.71
LENGTH	1,723.47
RADIUS	6,000.00
PC STATION	3048+11.44
PT STATION	3065+34.91
SUPERELEVATION	3.2%

CURVE RXSBOAR1	
PISTATION	3096+74.64
DELTA	4° 59' 59.99" (RT)
DEGREE OF CURVE	1° 25' 56.62"
TANGENT	174.64
LENGTH	349.07
RADIUS	4,000.00
PC STATION	3095+00.00
PT STATION	3098+49.07
SUPERELEVATION	4.4%

CURVE RXSBOAR2	
PISTATION	3106+61.16
DELTA	4° 59' 59.99" (LT)
DEGREE OF CURVE	0° 31' 15.13"
TANGENT	480.27
LENGTH	959.93
RADIUS	11,000.00
PC STATION	3101+80.89
PT STATION	3111+40.82
SUPERELEVATION	NORMAL CROWN

CURVE FRNB5111	
PISTATION	208+40.48
DELTA	1° 53' 37.68" (RT)
DEGREE OF CURVE	0° 39' 58.43"
TANGENT	142.14
LENGTH	284.26
RADIUS	8,600.00
PC STATION	206+98.34
PT STATION	209+82.59
SUPERELEVATION	NORMAL CROWN

CURVE FRNB5112	
PISTATION	227+49.00
DELTA	10° 02' 32.47" (RT)
DEGREE OF CURVE	1° 33' 25.02"
TANGENT	323.33
LENGTH	645.00
RADIUS	3,680.00
PC STATION	224+25.67
PT STATION	230+70.67
SUPERELEVATION	3.8%

CURVE FRNB5113	
PISTATION	245+58.88
DELTA	17° 27' 28.62" (LT)
DEGREE OF CURVE	1° 25' 56.62"
TANGENT	614.16
LENGTH	1,218.80
RADIUS	4,000.00
PC STATION	239+44.72
PT STATION	251+63.52
SUPERELEVATION	3.6%

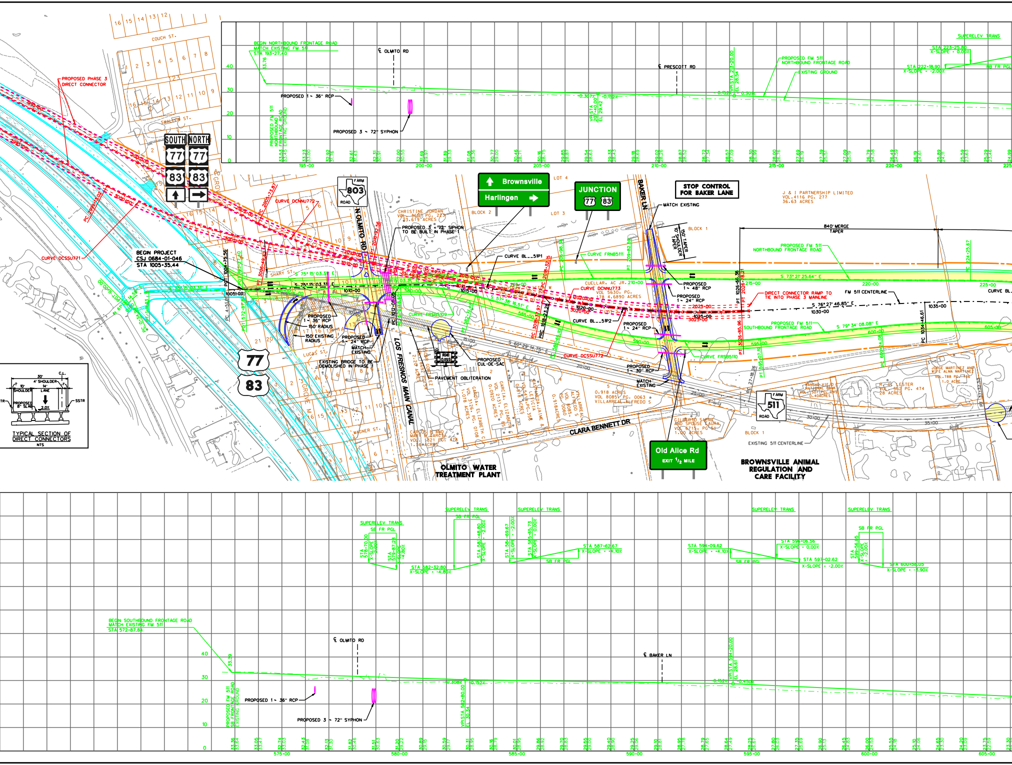
CURVE DCNNU772	
PISTATION	2008+34.84
DELTA	15° 38' 29.48" (LT)
DEGREE OF CURVE	3° 00' 56.04"
TANGENT	260.97
LENGTH	518.69
RADIUS	1,900.00
PC STATION	2005+73.87
PT STATION	2010+92.56
SUPERELEVATION	4.5%

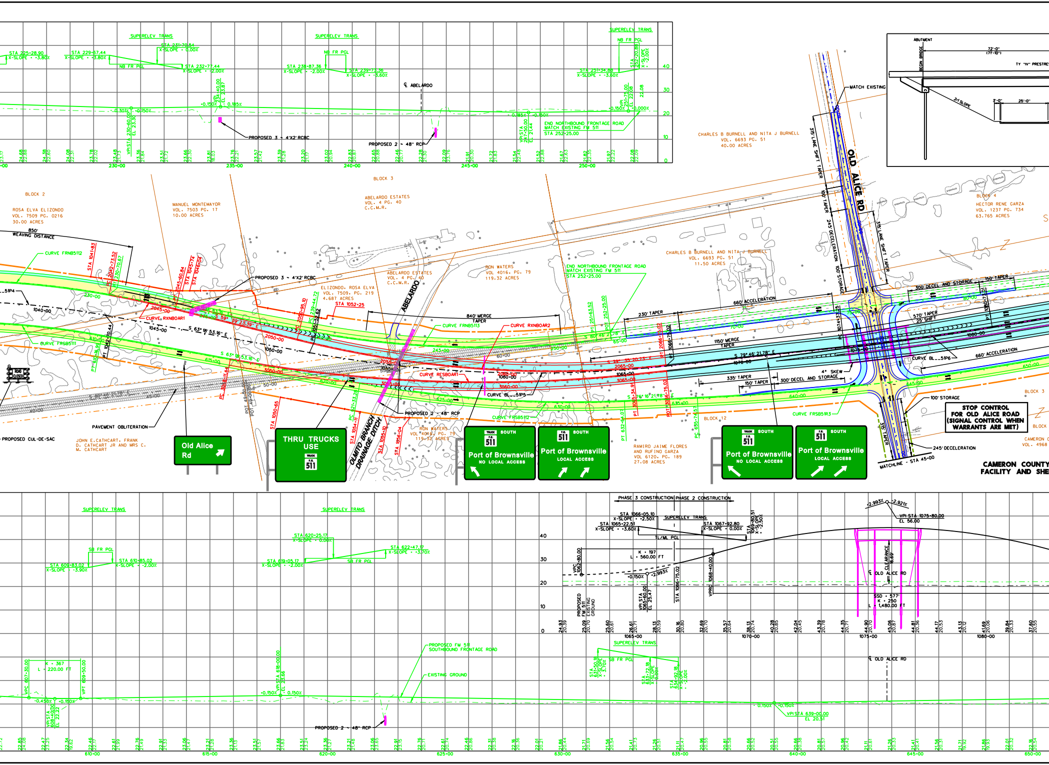
CURVE DCNNU773	
PISTATION	2022+57.26
DELTA	13° 51' 57.33" (LT)
DEGREE OF CURVE	1° 38' 20.02"
TANGENT	425.10
LENGTH	846.05
RADIUS	3,496.00
PC STATION	2018+32.15
PT STATION	2026+78.21
SUPERELEVATION	3.0%

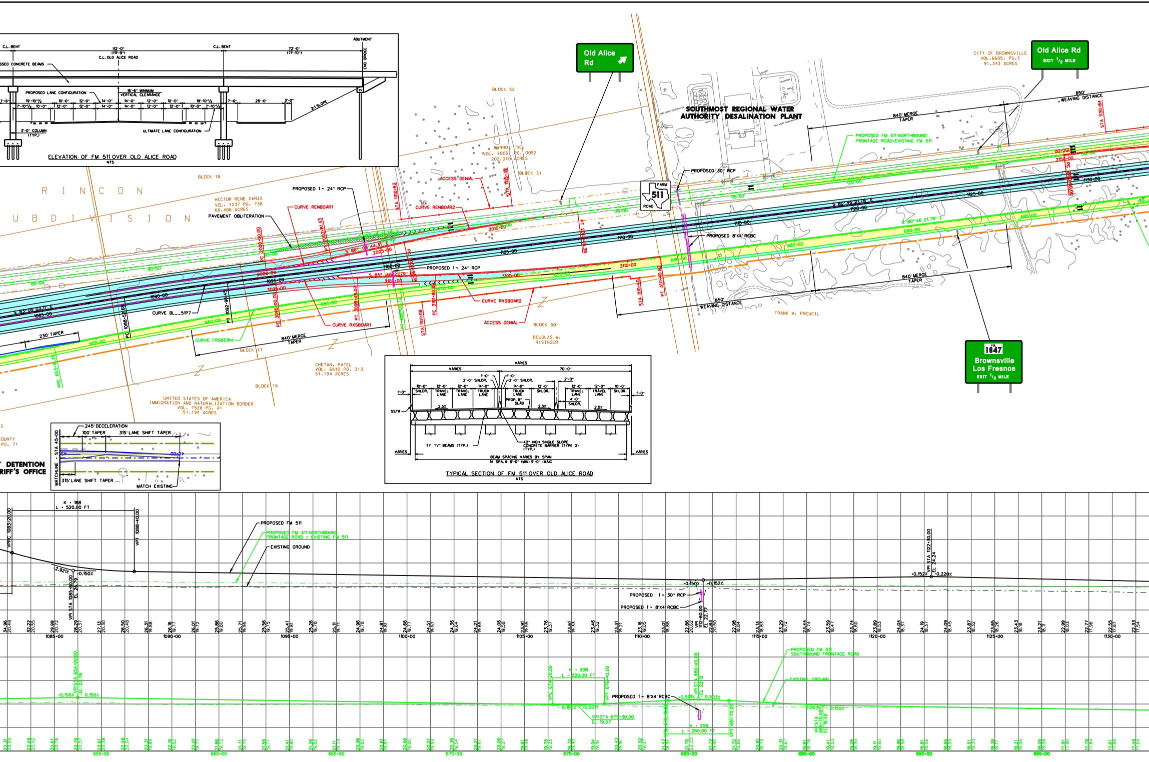
CURVE DCSSU771	
PISTATION	3002+83.91
DELTA	16° 52' 37.55" (LT)
DEGREE OF CURVE	2° 17' 30.59"
TANGENT	370.89
LENGTH	736.40
RADIUS	2,500.00
PC STATION	2999+13.02
PT STATION	3006+49.42
SUPERELEVATION	3.8%

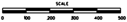
CURVE DCSSU772	
PISTATION	3022+64.04
DELTA	13° 51' 57.33" (LT)
DEGREE OF CURVE	1° 38' 06.55"
TANGENT	426.08
LENGTH	847.99
RADIUS	3,504.00
PC STATION	3018+37.97
PT STATION	3026+85.96
SUPERELEVATION	3.0%

CURVE RXNB1841	
PISTATION	2152+82.62
DELTA	4° 02' 47.45" (RT)
DEGREE OF CURVE	0° 42' 58.31"
TANGENT	282.62
LENGTH	565.00
RADIUS	8,000.00
PC STATION	2150+00.00
PT STATION	2155+65.00
SUPERELEVATION	REVERSE CROWN


BEGIN NORTHBOUND FRONTAGE ROAD
MATCH EXISTING FM 511
STA 193+27.40
℄ OLMITO RD
℄ PRESCOTT RD
PROPOSED 1 ~ 36" RCP
PROPOSED 3 ~ 72" SYPHON
PROPOSED FM 511 NORTHBOUND FRONTAGE ROAD
EXISTING GROUND
SUPERELEV TRANS
STA 223+25.80
X-SLOPE = 0.00%
STA 222+18.90
X-SLOPE = -2.00%
NB FR PGL
195+00
200+00
205+00
210+00
215+00
220+00
PROPOSED PHASE 3 DIRECT CONNECTOR
CURVE DCSSU771
CURVE DCNNU772
CURVE DCNNU773
CURVE DCSSU772
BEGIN PROJECT
CSJ 0684-01-046
STA 1005+35.44
SOUTH 77 83
NORTH 77 83
FARM 803 ROAD
N OLMITO RD
Brownsville
Harlingen
JUNCTION 77 83
STOP CONTROL FOR BAKER LANE
BAKER LN
MATCH EXISTING
J & I PARTNERSHIP LIMITED
VOL. 4116 PG. 277
36.63 ACRES
840' MERGE TAPER
PROPOSED FM 511 NORTHBOUND FRONTAGE ROAD
S 73° 21' 25.64" E
FM 511 CENTERLINE
DIRECT CONNECTOR RAMP TO TIE INTO PHASE 3 MAINLINE
S 76° 27' 46.85" E
PROPOSED FM 511 SOUTHBOUND FRONTAGE ROAD
S 79° 34' 08.08" E
CURVE BL__51P1
CURVE BL__51P2
CURVE FRNB5111
CURVE FRSB5110
CURVE FRSB5109
PROPOSED 1 ~ 48" RCP
PROPOSED 1 ~ 24" RCP
PROPOSED 1 ~ 30" RCP
PROPOSED 3 ~ 72" SIPHON TO BE BUILT IN PHASE 1
PROPOSED 1 ~ 36" RCP
150' RADIUS
150' EXISTING RADIUS
PROPOSED 1 ~ 24" RCP
MATCH EXISTING
EXISTING BRIDGE TO BE DEMOLISHED IN PHASE I
PROPOSED CUL-DE-SAC
PAVEMENT OBLITERATION
LOS FRESNOS MAIN CANAL
CHRISTINE JORDAN
CUELLAR, AC JR.
VILLAREAL, ALFREDO S
GILBERTO SAENZ AND SPOUSE LAURA
JORGE MARTINEZ AND WIFE ALMA MARTINEZ
COUCH ST.
SHALLOW ST.
SHARY ST.
LUCAS ST.
WAGNER ST.
CLARA BENNETT DR
FARM 511 ROAD
EXISTING 511 CENTERLINE
Old Alice Rd
EXIT 1/2 MILE
OLMITO WATER TREATMENT PLANT
BROWNSVILLE ANIMAL REGULATION AND CARE FACILITY
BLOCK 1
BLOCK 2
LOT 3
LOT 4
77
83
TYPICAL SECTION OF DIRECT CONNECTORS
NTS
30'
C.L.
4' SHOULDER
10' SHOULDER
14' LANE
2.0%
PROPOSED 8" SLAB
SSTR
SUPERELEV TRANS
SB FR PGL
STA 578+70.00
STA 579+87.28
STA 582+32.80
X-SLOPE = -4.80%
STA 583+46.80
X-SLOPE = -2.00%
STA 585+69.67
STA 585+65.73
X-SLOPE = 0.00%
STA 587+62.67
X-SLOPE = +4.10%
STA 594+09.62
X-SLOPE = +4.10%
STA 596+06.56
X-SLOPE = 0.00%
STA 597+02.62
X-SLOPE = -2.00%
STA 599+56.05
STA 600+58.05
X-SLOPE = -3.90%
BEGIN SOUTHBOUND FRONTAGE ROAD
MATCH EXISTING FM 511
STA 572+87.84
℄ OLMITO RD
℄ BAKER LN
PROPOSED 1 ~ 36" RCP
PROPOSED 3 ~ 72" SYPHON
PROPOSED FM 511 SB FRONTAGE ROAD
EXISTING GROUND
575+00
580+00
585+00
590+00
595+00
600+00
605+00
40
30
20
10
0

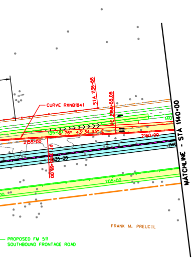

SUPERELEV TRANS
STA 225+28.90 X-SLOPE = -3.80%
STA 229+67.44 X-SLOPE = -3.80%
NB FR PGL
STA 231+70.84 X-SLOPE = 0.00%
STA 232+77.44 X-SLOPE = -2.00%
STA 238+87.36 X-SLOPE = -2.00%
STA 239+73.36 X-SLOPE = -3.80%
STA 251+35.86 X-SLOPE = -3.80%
℄ ABELARDO
PROPOSED 3 - 4'X2' RCBC
PROPOSED 2 - 48" RCP
END NORTHBOUND FRONTAGE ROAD
MATCH EXISTING FM 511
STA 252+25.00
230+00
235+00
240+00
245+00
250+00
BLOCK 2
BLOCK 3
BLOCK 4
BLOCK 12
ROSA ELVA ELIZONDO
VOL. 7509 PG. 0216
30.00 ACRES
MANUEL MONTEMAYOR
VOL. 7503 PG. 17
10.00 ACRES
ABELARDO ESTATES
VOL. 4 PG. 40
C.C.M.R.
CHARLES B BURNELL AND NITA J BURNELL
VOL. 6693 PG. 51
40.00 ACRES
11.50 ACRES
HECTOR RENE GARZA
VOL. 1237 PG. 734
63.765 ACRES
RON WATERS
VOL 4016, PG. 79
119.32 ACRES
ELIZONDO, ROSA ELVA
VOL. 7509 PG. 219
4.687 ACRES
RAMIRO JAIME FLORES
AND RUFINO GARZA
VOL 6120, PG. 189
27.08 ACRES
JOHN E.CATHCART, FRANK
D. CATHCART JR AND MRS C.
M. CATHCART
850' WEAVING DISTANCE
CURVE FRNB5112
CURVE FRSB5111
CURVE RXNBOAR1
CURVE RXNBOAR2
CURVE FRNB5113
CURVE RESBOAR1
CURVE BL_51P5
CURVE BL_51P6
CURVE FRSB5112
CURVE FRSB5113
ABELARDO
OLD ALICE RD
OLMITO BRANCH DRAINAGE DITCH
840' MERGE TAPER
230' TAPER
660' ACCELERATION
1150' MERGE TAPER
335' TAPER
150' TAPER
300' DECEL AND STORAGE
300' DECEL AND STORAGE
150' TAPER
570' TAPER
25' SHIFT
660' ACCELERATION
4° SKEW
100' STORAGE
245' DECELERATION
315' LANE SHIFT TAPER
MATCH EXISTING
MATCHLINE - STA 45+00
PAVEMENT OBLITERATION
PROPOSED CUL-DE-SAC
S 63° 18' 53.16" E
S 79° 46' 21.78" E
STOP CONTROL FOR OLD ALICE ROAD (SIGNAL CONTROL WHEN WARRANTS ARE MET)
Old Alice Rd
THRU TRUCKS USE 511
TRUCK SOUTH 511 Port of Brownsville NO LOCAL ACCESS
SOUTH 511 Port of Brownsville LOCAL ACCESS
CAMERON COUNTY FACILITY AND SHE
ABUTMENT
BEGIN BRIDGE
72'-0" (7T-10")
TY "IV" PRESTRE
2:1 SLOPE
3'-0"
25'-0"
PHASE 3 CONSTRUCTION
PHASE 2 CONSTRUCTION
STA 1066+05.10 X-SLOPE = -2.50%
STA 1065+22.51 X-SLOPE = -3.60%
STA 1067+92.80 X-SLOPE = 0.00%
TL/ML PGL
K = 197
L = 560.00 FT
VPI STA 1075+80.00
EL 56.00
+2.993%
-2.921%
℄ OLD ALICE RD
SSD = 577'
K = 250
L = 1,480.00 FT
1065+00
1070+00
1075+00
1080+00
STA 620+25.17 X-SLOPE = 0.00%
STA 622+47.17 X-SLOPE = -3.70%
STA 609+83.02 X-SLOPE = -3.90%
STA 610+85.02 X-SLOPE = -2.00%
STA 619+05.17 X-SLOPE = -2.00%
SB FR PGL
K = 367
L = 220.00 FT
PROPOSED FM 511 SOUTHBOUND FRONTAGE ROAD
EXISTING GROUND
VPI STA 639+00.00
EL 20.31
610+00
615+00
620+00
625+00
630+00
635+00
640+00
645+00
650+00

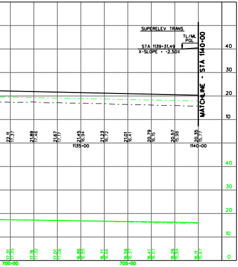

ELEVATION OF FM 511 OVER OLD ALICE ROAD
NTS
C.L. BENT
112'-0"
C.L. OLD ALICE ROAD
72'-0"
ABUTMENT
END BRIDGE
PROPOSED LANE CONFIGURATION
16'-6" MINIMUM VERTICAL CLEARANCE
ULTIMATE LANE CONFIGURATION
3'-0" COLUMN (TYP.)
2:1 SLOPE
TYPICAL SECTION OF FM 511 OVER OLD ALICE ROAD
NTS
VARIES
70'-0"
SHLDR.
TRAVEL LANE
TRUCK LANE
PROP. 8" SLAB
SSTR
TY "IV" BEAMS (TYP.)
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYP.)
BEAM SPACING VARIES BY SPAN
14 SPA. @ 8'-0" (MIN) 9'-0" (MAX)
Old Alice Rd
Old Alice Rd
EXIT 1/2 MILE
FM 1847
Brownsville
Los Fresnos
EXIT 1/2 MILE
FARM 511 ROAD
SOUTHMOST REGIONAL WATER AUTHORITY DESALINATION PLANT
CITY OF BROWNSVILLE
VOL. 6605, PG. 3
91.343 ACRES
RINCON SUBDIVISION
BLOCK 32
BLOCK 31
BLOCK 30
BLOCK 18
BLOCK 17
BLOCK 16
HECTOR RENE GARZA
VOL. 1237 PG. 738
66.406 ACRES
NARRO, INC.
VOL. 7005, PG. 0052
202.070 ACRES
CHETAN. PATEL
VOL. 6812 PG. 313
51.194 ACRES
UNITED STATES OF AMERICA
IMMIGRATION AND NATURALIZATION BORDER
VOL. 7528 PG. 41
51.194 ACRES
DOUGLAS W. RISINGER
FRANK M. PREUCIL
DETENTION
SHERIFF'S OFFICE
PAVEMENT OBLITERATION
PROPOSED 1 - 24" RCP
PROPOSED 30" RCP
PROPOSED 8'X4' RCBC
ACCESS DENIAL
CURVE RENBOAR1
CURVE RENBOAR2
CURVE RXSBOAR1
CURVE RXSBOAR2
CURVE BL_51P7
CURVE FRSB5184
PROPOSED FM 511 NORTHBOUND FRONTAGE ROAD/EXISTING FM 511
S 80°46'21.78" E
840' MERGE TAPER
850' WEAVING DISTANCE
230' TAPER
245' DECELERATION
100' TAPER
315' LANE SHIFT TAPER
MATCHLINE - STA 45+00
MATCH EXISTING
K = 188
L = 520.00 FT
VPRC 1083+20.00
VPI STA 1085+80.00
EL 28.79
VPT 1088+40.00
-2.921%
-0.150%
PROPOSED FM 511
PROPOSED FM 511 NORTHBOUND FRONTAGE ROAD / EXISTING FM 511
EXISTING GROUND
PROPOSED 1 - 30" RCP
PROPOSED 1 - 8'X4' RCBC
VPI STA 1112+60.00
EL 22.77
-0.150%
+0.152%
VPI STA 1122+30.00
EL 24.24
+0.152%
-0.220%
1085+00
1090+00
1095+00
1100+00
1105+00
1110+00
1115+00
1120+00
1125+00
1130+00
PROPOSED FM 511 SOUTHBOUND FRONTAGE ROAD
EXISTING GROUND
VPI STA 654+00.00
EL 22.76
+0.150%
-0.150%
K = 338
L = 220.00 FT
VPC 674+20.00
VPT 676+40.00
VPI STA 675+30.00
EL 19.57
PROPOSED 1 - 8'X4' RCBC
VPI STA 680+40.00
EL 22.12
K = 259
L = 260.00 FT
VPC 679+10.00
VPT 681+70.00
+0.503%
-0.503%
VPI STA 685+70.00
EL 19.46
655+00
660+00
665+00
670+00
675+00
680+00
685+00
690+00
695+00

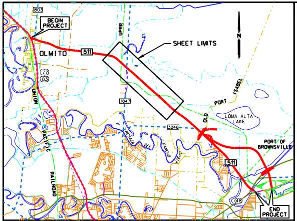

SCALE
0
100
200
300
400
500

LEGEND

— —	PROPOSED ROW
— —	PROPOSED ROW BY OTHERS
- · -	EXISTING ROW
—III—	ACCESS DENIAL LINE
—	PROPERTY LINE
— ESMT —	EASEMENT LINE
- - DRN ESMT - -	DRAINAGE EASEMENT LINE BY OTHERS
—	PROPOSED MAINLANE
—	PROPOSED FRONTAGE ROAD
—	PROPOSED RAMP
—	PROPOSED INTERSECTING ROAD
—	PROPOSED BRIDGE LIMIT/CONCRETE BARRIER/DRAINAGE STRUCTURES
— · —	PROPOSED MAINLANE ALIGNMENT
— · —	PROPOSED FRONTAGE ROAD ALIGNMENT
— · —	PROPOSED RAMP/DIRECT CONNECTOR ALIGNMENT
— · —	INTERSECTING ROAD ALIGNMENT
—	PROPOSED DESIGN BY OTHERS
- - -	PROPOSED PHASE 3 RAMP/DIRECT CONNECTOR
🟨	PHASE 1
▨	PAVEMENT OBLITERATION
🟦	PHASE 2


CURVE RXNB1841
STA 1136+88
PC 2158+55.05
135+00
S 76° 43' 34.33" E
140
2155+00
2160+00
PT 2155+65.00
1135+00
1140
705+00
00
MATCHLINE - STA 1140+00
FRANK M. PREUCIL
PROPOSED FM 511
SOUTHBOUND FRONTAGE ROAD




BEGIN PROJECT
OLMITO
SHEET LIMITS
UPRR
PORT
ISABEL
LOMA ALTA LAKE
PORT OF BROWNSVILLE
UNION PACIFIC RAILROAD
OLD
RANCHO VIEJO
END PROJECT
803
511
77
83
1847
3248
48
N

VICINITY MAP

NTS

TEXAS DEPARTMENT OF TRANSPORTATION

SCHEMATIC LAYOUT

OFFICE OF DISTRICT ENGINEER
PHARR DISTRICT

FM 511
CAMERON COUNTY

LIMITS: FROM: US 77/83
TO: SH 48

C-S-J: 0684-01-046

LENGTH: 9.6 MILES

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

FUNCTIONAL CLASSIFICATION: FREEWAY
HIGHWAY TYPE: SUBURBAN ROADWAY

e_{max} = 6%

DESIGN STANDARDS:
TxDOT ROADWAY DESIGN MANUAL (JULY 2006)

9/11/2006

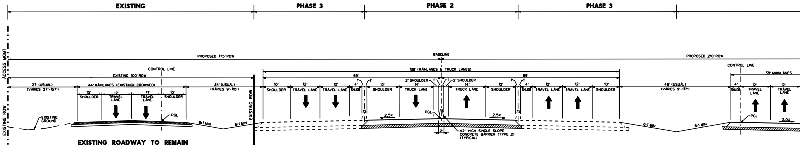
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SAMUEL M. WATSON, P.E. #73121 ON SEPTEMBER 8, 2006

SAMUEL M. WATSON
73121

MACTEC

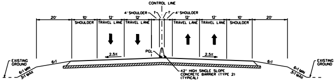
3520 EXECUTIVE CENTER DRIVE
SUITE 200
AUSTIN, TX 78731
(512) 795-0360

ROLL 2 OF 5 (PHASE 1 & 2)


EXISTING
PHASE 3
PHASE 2
PHASE 3
ACCESS MGMT
EXISTING ROW
PROPOSED 175' ROW
BASELINE
PROPOSED 210' ROW
CONTROL LINE
EXISTING 100' ROW
138' (MAINLANES & TRUCK LANES)
27' (USUAL) (VARIES 27'-157')
44' MAINLANES (EXISTING CROWNED)
34' (USUAL) (VARIES 9'-115')
48' (USUAL) (VARIES 9'-117')
38' MAINLANES
SHOULDER
TRAVEL LANE
TRUCK LANE
SHLDR
2' SHOULDER
PCL
EXISTING GROUND
6:1 MIN
2.5%
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)
EXISTING ROADWAY TO REMAIN

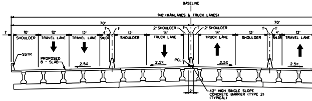
PROPOSED FM 511
TYPICAL SECTION

NTS


CONTROL LINE
4' SHOULDER
20'
10' SHOULDER
12' TRAVEL LANE
EXISTING GROUND
6:1
6:1 MIN
3:1 MAX
2.5%
PCL
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)

PROPOSED SH 48
TYPICAL SECTION

NTS

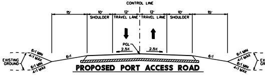

BASELINE
140' (MAINLANES & TRUCK LANES)
70'
SHOULDER
TRAVEL LANE
TRUCK LANE
SHLDR
2' SHOULDER
SSTR
PROPOSED 8" SLAB
2.5%
PCL
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)

PROPOSED FM 511 OVERPASS (MAINLANES & TRUCKLANES)
TYPICAL SECTION

NTS

FM 511 TRAFFIC VOLUMES

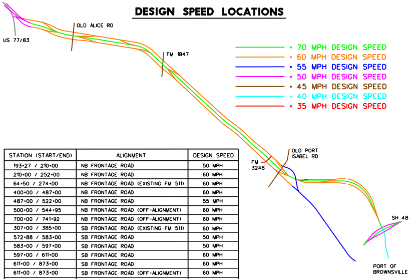
YEAR	ADT	% TRUCKS
2005 (CORRIDOR)	13,400	18.2
2025 (FRONTAGE ROAD ONLY)	2,600	10.1
2025 (MAINLANES ONLY)	21,500	1.2
2025 (TRUCK LANES ONLY)	4,800	100.0


CONTROL LINE
15'
10' SHOULDER
12' TRAVEL LANE
PCL
2.5%
EXISTING GROUND
6:1
6:1 MIN
4:1 MAX

PROPOSED PORT ACCESS ROAD
STA 35+50 TO 40+50 AND
STA 58+50 TO 64+50
TYPICAL SECTION

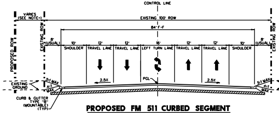
NTS

DESIGN SPEED LOCATIONS


US 77/83
OLD ALICE RD
FM 1847
FM 3248
OLD PORT ISABEL RD
SH 48
PORT OF BROWNSVILLE
70 MPH DESIGN SPEED
60 MPH DESIGN SPEED
55 MPH DESIGN SPEED
50 MPH DESIGN SPEED
45 MPH DESIGN SPEED
40 MPH DESIGN SPEED
35 MPH DESIGN SPEED

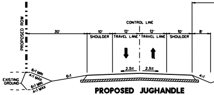
STATION (START/END)	ALIGNMENT	DESIGN SPEED
193+27 / 210+00	NB FRONTAGE ROAD	50 MPH
210+00 / 252+00	NB FRONTAGE ROAD	60 MPH
64+50 / 274+00	NB FRONTAGE ROAD (EXISTING FM 511)	60 MPH
400+00 / 487+00	NB FRONTAGE ROAD	60 MPH
487+00 / 522+00	NB FRONTAGE ROAD	55 MPH
500+00 / 544+95	NB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
700+00 / 741+92	NB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
307+00 / 385+00	SB FRONTAGE ROAD (EXISTING FM 511)	60 MPH
572+88 / 583+00	SB FRONTAGE ROAD	50 MPH
583+00 / 597+00	SB FRONTAGE ROAD	50 MPH
597+00 / 611+00	SB FRONTAGE ROAD	60 MPH
611+00 / 873+00	SB FRONTAGE ROAD	60 MPH
611+00 / 873+00	SB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
600+00 / 645+47	SB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
1045+00 / 1513+00	TRUCK & MAINLANES	70 MPH
1513+00 / 1548+25	PORT ACCESS ROAD	40 MPH
385+00 / 497+98	CURB SEGMENT	55 MPH
	MAINLINE RAMPS	60 MPH
	SH 48	70 MPH
	SH 48 RAMPS	50 MPH
	OLD ALICE ROAD	45 MPH
	FM 1847	60 MPH
	FM 3248	35 MPH
	OLD PORT ISABEL ROAD	45 MPH
	DIRECT CONNECTORS	50 MPH

* NOTE: PROW WIDTH VARIES FROM 59.15' TO 0' FROM STA 394+50 TO 426+06.24, RESPECTIVELY; NO PROW NEEDED (WIDTH = 0) FROM STA 426+06.24 TO END CONST.

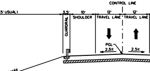

CONTROL LINE
VARIES (SEE NOTE*)
EXISTING 100' ROW
84' F-F
PROPOSED ROW
EXISTING ROW
SHOULDER
TRAVEL LANE
LEFT TURN LANE
PCL
2.5%
EXISTING GROUND
CURB & GUTTER TYPE "B" (MOUNTABLE) (TYP)
4:1 MAX
6:1 MIN

PROPOSED FM 511 CURBED SEGMENT
(SOUTH OF OLD PORT ISABEL ROAD TO SH 48)
TYPICAL SECTION

NTS

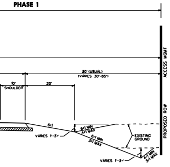

PROPOSED ROW
CONTROL LINE
30'
10' SHOULDER
12' TRAVEL LANE
8'
EXISTING GROUND
6:1
6:1 MIN
4:1 MAX
4:1
2.5%

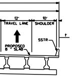
PROPOSED JUGHANDLE

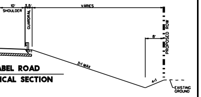

CONTROL LINE
VARIES (97.5' USUAL)
3.5'
10' SHOULDER
12' TRAVEL LANE
GUARDRAIL
PCL
2.5%
3:1 MAX

PROPOSED OLD PORT ISA
STA 40+50 TO 58+50 TYP

NTS


PHASE 1
ACCESS MGMT
30' (USUAL)
(VARIES 30'-85')
10'
SHOULDER
20'
6:1
6:1 MIN
4:1 MAX
6:1 MIN
3:1 MAX
VARIES 1'-3'
EXISTING GROUND
PROPOSED ROW
VARIES 1'-3'
4:1 MIN
3:1 MAX


12'
TRAVEL LANE
10'
SHOULDER
PROPOSED 8" SLAB
SSTR
1'


10'
SHOULDER
3.5'
VARIES
GUARDRAIL
PROPOSED ROW
8'
3:1 MAX
4:1
EXISTING GROUND
EXISTING GROUND
EXISTING GROUND

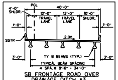
ABEL ROAD
ICAL SECTION

SCALE
0 100 200 300 400 500

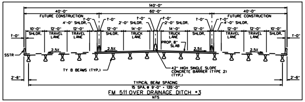
LEGEND

- PROPOSED ROW
- EXISTING ROW
- ACCESS DENIAL LINE
- PROPERTY LINE
- EASEMENT LINE
- PROPOSED MAINLANE
- PROPOSED FRONTAGE ROAD
- PROPOSED RAMP
- PROPOSED INTERSECTING ROAD
- PROPOSED BRIDGE LIMIT/CONCRETE BARRIER/DRAINAGE STRUCTURES
- PROPOSED MAINLANE ALIGNMENT
- PROPOSED FRONTAGE ROAD ALIGNMENT
- PROPOSED RAMP/DIRECT CONNECTOR ALIGNMENT
- INTERSECTING ROAD ALIGNMENT

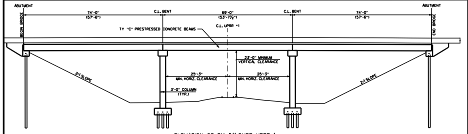
🟨 PHASE 1
▨ PAVEMENT OBLITERATION
🟦 PHASE 2


PGL
4'-0"
SHLDR.
40'-0"
12'-0"
TRAVEL LANE
12'-0"
TRAVEL LANE
10'-0"
SHLDR.
1'-0"
1'-0"
2.0%
SSTR
3'-0"
3'-0"
TY B BEAMS (TYP.)
TYPICAL BEAM SPACING
4 SPA. @ 8'-6" = 34'-0"

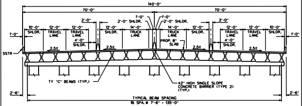
SB FRONTAGE ROAD OVER DRAINAGE DITCH #3
NTS


140'-0"
40'-0"
FUTURE CONSTRUCTION
60'-0"
40'-0"
FUTURE CONSTRUCTION
4'-0" SHLDR.
1'-0"
2'-0" SHLDR.
2'-0" SHLDR.
4'-0" SHLDR.
10'-0"
SHLDR.
12'-0"
TRAVEL LANE
12'-0"
TRAVEL LANE
12'-0"
SHLDR.
14'-0"
TRUCK LANE
14'-0"
TRUCK LANE
12'-0"
SHLDR.
12'-0"
TRAVEL LANE
12'-0"
TRAVEL LANE
10'-0"
SHLDR.
1'-0"
PROP. 8" SLAB
2.5%
2.5%
2.5%
2.5%
SSTR
TY B BEAMS (TYP.)
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYP.)
2'-6"
2'-6"
TYPICAL BEAM SPACING
15 SPA. @ 9'-0" = 135'-0"

FM 511 OVER DRAINAGE DITCH #3
NTS


ABUTMENT
BEGIN BRIDGE
74'-0"
(57'-6")
C.L. BENT
69'-0"
(53'-7½")
C.L. UPRR #1
C.L. BENT
74'-0"
(57'-6")
ABUTMENT
END BRIDGE
TY "C" PRESTRESSED CONCRETE BEAMS
23'-0" MINIMUM VERTICAL CLEARANCE
2:1 SLOPE
25'-3"
MIN. HORIZ. CLEARANCE
25'-3"
MIN. HORIZ. CLEARANCE
3'-0" COLUMN (TYP.)
2:1 SLOPE

ELEVATION OF FM 511 OVER UPRR#1
NTS


140'-0"
70'-0"
70'-0"
2'-0"
1'-0"
2'-0" SHLDR.
1'-0"
2'-0" SHLDR.
2'-0"
10'-0"
SHLDR.
12'-0"
TRAVEL LANE
12'-0"
TRUCK LANE
4'-0"
SHLDR.
12'-0"
SHLDR.
14'-0"
TRUCK LANE
PROP. 8" SLAB
14'-0"
TRUCK LANE
12'-0"
SHLDR.
12'-0"
TRUCK LANE
4'-0"
SHLDR.
12'-0"
TRAVEL LANE
10'-0"
SHLDR.
1'-0"
1'-0"
2.5%
2.5%
2.5%
2.5%
SSTR
TY "C" BEAMS (TYP.)
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYP.)
2'-6"
2'-6"
TYPICAL BEAM SPACING
18 SPA. @ 7'-6" = 135'-0"

TYPICAL SECTION OF FM 511 OVER UPRR#1
NTS

CURVE BL__51P8
PI STATION = 1157+26.27
DELTA = 33° 53' 27.74" (RT)
DEGREE OF CURVE = 1° 38' 13.28"
TANGENT = 1,066.42
LENGTH = 2,070.29
RADIUS = 3,500.00
PC STATION = 1146+59.85
PT STATION = 1167+30.13
SUPERELEVATION = 4.9%

CURVE BL__51P9
PI STATION = 1192+66.17
DELTA = 4° 47' 42.39" (LT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 460.57
LENGTH = 920.59
RADIUS = 11,000.00
PC STATION = 1188+05.61
PT STATION = 1197+26.20
SUPERELEVATION = NORMAL CROWN

CURVE BL__51P10
PI STATION = 1201+86.77
DELTA = 4° 47' 42.39" (RT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 460.57
LENGTH = 920.59
RADIUS = 11,000.00
PC STATION = 1197+26.20
PT STATION = 1206+46.80
SUPERELEVATION = NORMAL CROWN

CURVE BL__51P11
PI STATION = 1248+37.65
DELTA = 2° 00' 00.00" (LT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 192.01
LENGTH = 383.97
RADIUS = 11,000.00
PC STATION = 1246+45.64
PT STATION = 1250+29.61
SUPERELEVATION = NORMAL CROWN

CURVE BL__51P12
PI STATION = 1255+53.95
DELTA = 2° 00' 00.00" (RT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 192.01
LENGTH = 383.97
RADIUS = 11,000.00
PC STATION = 1253+61.95
PT STATION = 1257+45.92
SUPERELEVATION = NORMAL CROWN

CURVE BL__51P13
PI STATION = 1280+56.13
DELTA = 7° 20' 00.00" (LT)
DEGREE OF CURVE = 0° 47' 25.03"
TANGENT = 464.6
LENGTH = 927.93
RADIUS = 7,250.00
PC STATION = 1275+91.53
PT STATION = 1285+19.46
SUPERELEVATION = 2.8%

CURVE BL__51P14
PI STATION = 1298+72.45
DELTA = 7° 20' 00.00" (RT)
DEGREE OF CURVE = 0° 30' 54.90"
TANGENT = 712.60
LENGTH = 1423.25
RADIUS = 11,120.00
PC STATION = 1291+59.85
PT STATION = 1305+83.11
SUPERELEVATION = NORMAL CROWN

CURVE FRSB5115
PI STATION = 723+51.74
DELTA = 33° 53' 27.74" (RT)
DEGREE OF CURVE = 1° 38' 13.28"
TANGENT = 1,066.42
LENGTH = 2,070.29
RADIUS = 3,500.00
PC STATION = 712+85.32
PT STATION = 733+55.60
SUPERELEVATION = 4.9%

CURVE FRSB5116
PI STATION = 746+80.28
DELTA = 2° 00' 00.00" (LT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 192.01
LENGTH = 383.97
RADIUS = 11,000.00
PC STATION = 744+88.27
PT STATION = 748+72.24
SUPERELEVATION = NORMAL CROWN

CURVE FRSB5117
PI STATION = 760+04.39
DELTA = 3° 58' 58.87" (LT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 382.50
LENGTH = 764.69
RADIUS = 11,000.00
PC STATION = 756+21.89
PT STATION = 763+86.57
SUPERELEVATION = NORMAL CROWN

CURVE FRSB5118
PI STATION = 769+61.43
DELTA = 5° 58' 58.87" (RT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 574.85
LENGTH = 1,148.66
RADIUS = 11,000.00
PC STATION = 763+86.57
PT STATION = 775+35.23
SUPERELEVATION = NORMAL CROWN

CURVE FRSB51110
PI STATION = 815+43.17
DELTA = 5° 05' 46.49" (LT)
DEGREE OF CURVE = 1° 25' 56.62"
TANGENT = 178.01
LENGTH = 355.79
RADIUS = 4,000.00
PC STATION = 813+65.16
PT STATION = 817+20.94
SUPERELEVATION = 4.4%

CURVE FRSB51111
PI STATION = 822+63.42
DELTA = 5° 05' 46.49" (RT)
DEGREE OF CURVE = 1° 25' 56.62"
TANGENT = 178.01
LENGTH = 355.79
RADIUS = 4,000.00
PC STATION = 820+85.41
PT STATION = 824+41.19
SUPERELEVATION = 4.4%

CURVE FRSB51112
PI STATION = 850+54.91
DELTA = 7° 20' 00.00" (LT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 704.91
LENGTH = 1407.89
RADIUS = 11,000.00
PC STATION = 843+50.00
PT STATION = 857+57.90
SUPERELEVATION = NORMAL CROWN

CURVE FRSB51113
PI STATION = 865+72.87
DELTA = 7° 20' 00.00" (RT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 704.91
LENGTH = 1406.93
RADIUS = 11,000.00
PC STATION = 858+67.95
PT STATION = 872+75.85
SUPERELEVATION = NORMAL CROWN

CURVE FRNB5131
PI STATION = 405+05.85
DELTA = 7° 20' 00.00" (LT)
DEGREE OF CURVE = 1° 38' 13.28"
TANGENT = 224.29
LENGTH = 447.97
RADIUS = 3,500.00
PC STATION = 402+81.56
PT STATION = 407+29.52
SUPERELEVATION = 4.9%

CURVE FRNB5132
PI STATION = 425+73.53
DELTA = 7° 20' 00.00" (RT)
DEGREE OF CURVE = 0° 30' 35.10"
TANGENT = 720.29
LENGTH = 1438.62
RADIUS = 11,240.00
PC STATION = 418+53.23
PT STATION = 432+91.85
SUPERELEVATION = NORMAL CROWN

CURVE TASNRR21
PI STATION = 3807+73.23
DELTA = 3° 01' 26.85" (RT)
DEGREE OF CURVE = 1° 37' 49.80"
TANGENT = 92.76
LENGTH = 185.47
RADIUS = 3,514.00
PC STATION = 3806+80.47
PT STATION = 3808+65.94
SUPERELEVATION = 3.9%

CURVE TASNRR22
PI STATION = 3820+60.84
DELTA = 3° 00' 49.83" (LT)
DEGREE OF CURVE = 0° 40' 26.64"
TANGENT = 223.61
LENGTH = 447.11
RADIUS = 8,500.00
PC STATION = 3818+37.23
PT STATION = 3822+84.34
SUPERELEVATION = NORMAL CROWN

CURVE TASNRR23
PI STATION = 3826+50.18
DELTA = 42° 53' 57.91" (LT)
DEGREE OF CURVE = 32° 44' 25.60"
TANGENT = 68.76
LENGTH = 131.03
RADIUS = 175.00
PC STATION = 3825+81.43
PT STATION = 3827+12.46
SUPERELEVATION = NORMAL CROWN

CURVE TASNRR24
PI STATION = 3833+45.73
DELTA = 141° 07' 31.77" (LT)
DEGREE OF CURVE = 127° 19' 26.24"
TANGENT = 127.52
LENGTH = 110.84
RADIUS = 45.00
PC STATION = 3832+18.21
PT STATION = 3833+29.05
SUPERELEVATION = NORMAL CROWN

CURVE TASNRR25
PI STATION = 3838+65.97
DELTA = 4° 16' 30.02" (LT)
DEGREE OF CURVE = 1° 38' 13.28"
TANGENT = 130.63
LENGTH = 261.15
RADIUS = 3,500.00
PC STATION = 3837+35.34
PT STATION = 3839+96.48
SUPERELEVATION = 3.0%

CURVE TASNRR26
PI STATION = 3845+12.52
DELTA = 8° 17' 22.70" (RT)
DEGREE OF CURVE = 1° 37' 49.80"
TANGENT = 254.65
LENGTH = 508.41
RADIUS = 3,514.00
PC STATION = 3842+57.87
PT STATION = 3847+66.28
SUPERELEVATION = 3.9%

CURVE TANSRR21
PI STATION = 2418+23.97
DELTA = 11° 53' 04.73" (RT)
DEGREE OF CURVE = 1° 08' 45.30"
TANGENT = 520.43
LENGTH = 1,037.13
RADIUS = 5,000.00
PC STATION = 2413+03.54
PT STATION = 2423+40.67
SUPERELEVATION = 2.2%

CURVE TANSRR22
PI STATION = 2432+33.91
DELTA = 47° 26' 25.25" (LT)
DEGREE OF CURVE = 32° 44' 25.60"
TANGENT = 76.89
LENGTH = 144.90
RADIUS = 175.00
PC STATION = 2431+57.02
PT STATION = 2433+01.92
SUPERELEVATION = NORMAL CROWN

CURVE TANSRR23
PI STATION = 2439+27.15
DELTA = 137° 04' 19.33" (LT)
DEGREE OF CURVE = 127° 19' 26.24"
TANGENT = 114.45
LENGTH = 107.66
RADIUS = 45.00
PC STATION = 2438+12.70
PT STATION = 2439+20.35
SUPERELEVATION = NORMAL CROWN

CURVE TANSRR24
PI STATION = 2442+93.97
DELTA = 5° 02' 27.84" (LT)
DEGREE OF CURVE = 0° 42' 58.31"
TANGENT = 352.16
LENGTH = 703.87
RADIUS = 8,000.00
PC STATION = 2439+41.81
PT STATION = 2446+45.68
SUPERELEVATION = NORMAL CROWN

CURVE TANSRR25
PI STATION = 2458+95.26
DELTA = 1° 37' 12.79" (RT)
DEGREE OF CURVE = 1° 08' 45.30"
TANGENT = 70.70
LENGTH = 141.39
RADIUS = 5,000.00
PC STATION = 2458+24.56
PT STATION = 2459+65.95
SUPERELEVATION = 2.2%

CURVE RENB1841
PI STATION = 2210+30.93
DELTA = 4° 00' 00.00" (LT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 384.13
LENGTH = 767.94
RADIUS = 11,000.00
PC STATION = 2206+46.80
PT STATION = 2214+14.74
SUPERELEVATION = NORMAL CROWN

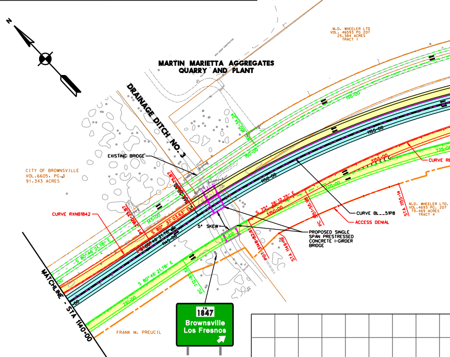
CURVE RENB1842
PI STATION = 2221+48.79
DELTA = 4° 00.00.00" (RT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 384.13
LENGTH = 767.94
RADIUS = 11,000.00
PC STATION = 2217+64.66
PT STATION = 2225+32.61
SUPERELEVATION = NORMAL CROWN

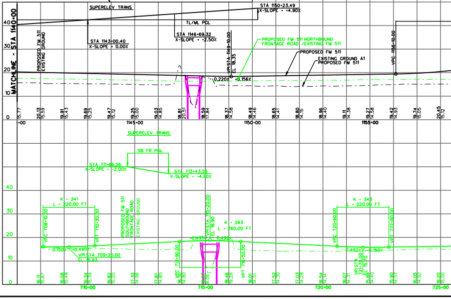
CURVE RESB1841
PI STATION = 3160+97.56
DELTA = 28° 33' 18.70" (RT)
DEGREE OF CURVE = 1° 32' 54.72"
TANGENT = 941.5776
LENGTH = 1,844.01
RADIUS = 3,700.00
PC STATION = 3151+55.98
PT STATION = 3170+00.00
SUPERELEVATION = 4.7%

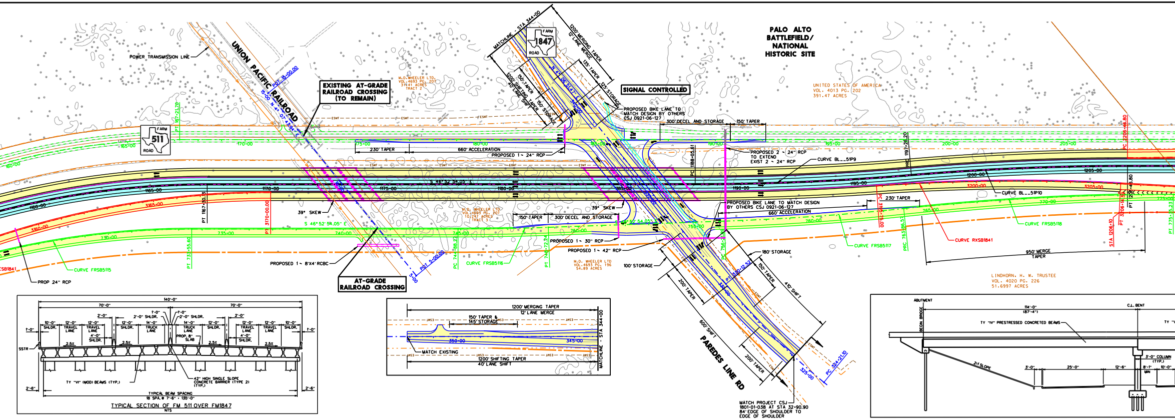
CURVE RXSB1841
PI STATION = 3200+95.44
DELTA = 7° 00' 27.13" (RT)
DEGREE OF CURVE = 0° 40' 26.64"
TANGENT = 520.44
LENGTH = 1039.59
RADIUS = 8,500.00
PC STATION = 3195+75.00
PT STATION = 3206+14.59
SUPERELEVATION = REVERSE CROWN

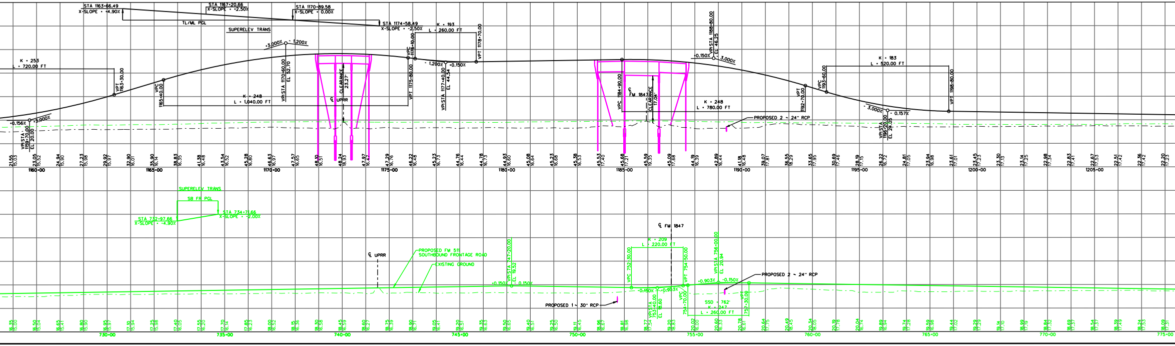
CURVE RXSB1842
PI STATION = 3214+76.65
DELTA = 3° 00' 00.00" (LT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 288.05
LENGTH = 575.96
RADIUS = 11,000.00
PC STATION = 3211+88.60
PT STATION = 3217+64.56
SUPERELEVATION = NORMAL CROWN

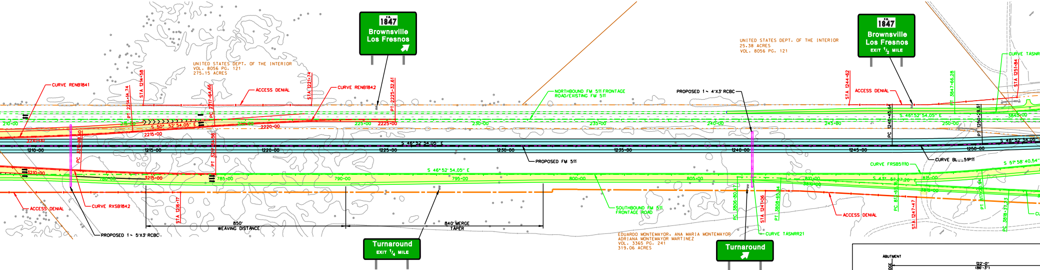
CURVE RXNB1842
PI STATION = 2161+95.59
DELTA = 3° 53' 29.29" (LT)
DEGREE OF CURVE = 0° 34' 17.71"
TANGENT = 340.54
LENGTH = 680.82
RADIUS = 10,024.00
PC STATION = 2158+55.05
PT STATION = 2165+35.87
SUPERELEVATION = NORMAL CROWN


N
M.D. WHEELER LTD
VOL. 4659 PG 207
25.384 ACRES
TRACT 1
MARTIN MARIETTA AGGREGATES
QUARRY AND PLANT
DRAINAGE DITCH NO. 3
EXISTING BRIDGE
CITY OF BROWNSVILLE
VOL. 6605, PG. 3
91.343 ACRES
1150+00
1155+00
1145+00
1140+00
CURVE RXNB1842
S 80° 46' 21.78" E
S 80° 37' 03.63" E
S 75° 26' 12.75" E
CURVE BL__51P8
ACCESS DENIAL
5° SKEW
PROPOSED SINGLE SPAN PRESTRESSED CONCRETE I-GIRDER BRIDGE
CURVE RE
M.D. WHEELER LTD.
VOL. 4693 PG. 207
79.469 ACRES
TRACT 4
MATCHLINE - STA 1140+00
FRANK M. PREUCIL
FM 1847
Brownsville
Los Fresnos

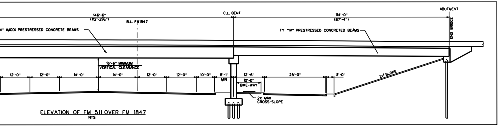



POWER TRANSMISSION LINE
UNION PACIFIC RAILROAD
POT 15+00.00
15+00
N 4° 07' 43.94" E
EXISTING AT-GRADE RAILROAD CROSSING (TO REMAIN)
FARM 511 ROAD
FARM 1847 ROAD
MATCHLINE - STA 344+00
1200' MERGING TAPER 12' LANE MERGE
135' TAPER
125' STORAGE
1200' SHIFTING TAPER 40' LANE SHIFT
150' TAPER
150' STORAGE
N 4° 06' 51.47" E
340+00
SIGNAL CONTROLLED
PROPOSED BIKE LANE TO MATCH DESIGN BY OTHERS CSJ 0921-06-127
300' DECEL AND STORAGE
150' TAPER
PALO ALTO BATTLEFIELD/ NATIONAL HISTORIC SITE
UNITED STATES OF AMERICA VOL. 4013 PG. 202 391.47 ACRES
M.D. WHEELER LTD. VOL.4693 PG. 207 31.41 ACRES TRACT 2
M.D. WHEELER LTD. VOL.4693 PG. 207 10.247 ACRES TRACT 3
M.D. WHEELER LTD VOL.4693 PG. 196 54.89 ACRES
LINDHORN, H. W. TRUSTEE VOL. 4020 PG. 226 51.6997 ACRES
ESMT
PT 1167+21.70
160+00
165+00
170+00
175+00
180+00
185+00
190+00
195+00
200+00
205+00
230' TAPER
660' ACCELERATION
PROPOSED 1 ~ 24" RCP
PROPOSED 2 ~ 24" RCP TO EXTEND EXIST 2 ~ 24" RCP
CURVE BL__51P9
CURVE BL__51P10
PC 1188+05.61
PRC 1197+26.20
PC 2205+46.80
S 46° 52' 54.05" E
1160+00
1165+00
1170+00
1175+00
1180+00
1185+00
1190+00
1195+00
1200+00
1205+00
3160+00
3165+00
3200+00
3205+00
PT 1167+30.13
PT 3170+00.00
39° SKEW
S 46° 52' 54.05" E
730+00
735+00
740+00
745+00
750+00
755+00
760+00
765+00
770+00
775+00
PT 733+55.60
PC 744+88.23
PT 748+72.24
PC 756+
PC 3195+75.00
PRC 763+86.57
STA 1206+10
PT 3206+14.59
PT 1206+46.80
PT 775+35.23
150' TAPER
300' DECEL AND STORAGE
PROPOSED 1 ~ 30" RCP
PROPOSED 1 ~ 42" RCP
PROPOSED 1 ~ 8'X4' RCBC
PROP 24" RCP
CURVE FRSB5115
CURVE FRSB5116
CURVE FRSB5117
CURVE FRSB5118
CURVE RXSB1841
POT 5+00.00
5+00
AT-GRADE RAILROAD CROSSING
PROPOSED BIKE LANE TO MATCH DESIGN BY OTHERS CSJ 0921-06-127
230' TAPER
660' ACCELERATION
950' MERGE TAPER
180' STORAGE
100' STORAGE
150' TAPER
410' SHIFT
200' TAPER
600' SHIFT
200' TAPER
PT 330+12.52
330+00
325+00
PC 324+21.10
PAREDES LINE RD
MATCH PROJECT CSJ 1801-01-038 AT STA 32+90.90 84' EDGE OF SHOULDER TO EDGE OF SHOULDER
140'-0"
70'-0"
70'-0"
1'-0"
2'-0" SHLDR.
2'-0"
10'-0" SHLDR.
12'-0" TRAVEL LANE
12'-0" TRAVEL LANE
4'-0" SHLDR.
12'-0" SHLDR.
14'-0" TRUCK LANE
PROP. 8" SLAB
2.5%
SSTR
TY "VI" (MOD) BEAMS (TYP.)
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYP.)
2'-6"
TYPICAL BEAM SPACING 18 SPA. @ 7'-6" = 135'-0"
TYPICAL SECTION OF FM 511 OVER FM1847
NTS
1200' MERGING TAPER 12' LANE MERGE
150' TAPER & 145' STORAGE
350+00
345+00
MATCH EXISTING
1200' SHIFTING TAPER 40' LANE SHIFT
MATCHLINE - STA 344+00
IMS3
ABUTMENT
BEGIN BRIDGE
114'-0" (87'-4")
C.L. BENT
TY "IV" PRESTRESSED CONCRETED BEAMS
2:1 SLOPE
3'-0"
25'-0"
12'-6"
8'-1" MIN
10'-0"
3'-0" COLUMN (TYP.)


STA 1163+66.49 X-SLOPE = -4.90%
STA 1167+20.66 X-SLOPE = -2.50%
STA 1170+89.58 X-SLOPE = 0.00%
STA 1174+58.49 X-SLOPE = -2.50%
TL/ML PGL
SUPERELEV TRANS
K = 253 L = 720.00 FT
K = 248 L = 1,040.00 FT
K = 193 L = 260.00 FT
K = 248 L = 780.00 FT
K = 183 L = 520.00 FT
-0.156%
+3.000%
-1.200%
+0.150%
-3.000%
-0.157%
VPI STA 1159+70.00 EL 20.00
VPT 1163+30.00
VPC 1165+40.00
VPI STA 1170+60.00 EL 52.70
VPT 1175+80.00
VPC 1176+10.00
VPI STA 1177+40.00 EL 44.54
VPT 1178+70.00
VPC 1184+90.00
VPI STA 1188+80.00 EL 46.25
VPT 1192+70.00
VPC 1193+60.00
VPI STA 1196+20.00 EL 24.05
VPT 1198+80.00
℄ UPRR
CLEARANCE 23.27'
℄ FM 1847
CLEARANCE 17.04'
PROPOSED 2 ~ 24" RCP
21.55 15.03
23.05 15.52
24.94 15.90
27.23 15.98
29.92 15.97
32.90 16.01
35.90 16.14
38.83 16.35
41.38 16.48
43.54 16.52
45.28 16.80
46.63 16.97
47.57 16.65
48.10 16.51
48.24 18.93
47.97 16.47
47.29 16.76
46.22 16.48
45.23 16.73
44.76 16.44
44.78 16.73
44.93 16.60
45.08 16.64
45.23 16.68
45.38 16.53
45.53 17.40
45.68 17.21
45.59 19.35
45.09 17.68
44.19 16.39
42.89 16.44
41.18 16.48
39.07 17.81
36.55 18.29
33.65 17.95
30.69 17.46
28.19 17.15
26.22 16.72
24.81 17.05
23.94 16.98
23.61 17.01
23.45 17.23
23.30 17.13
23.14 17.25
22.98 17.34
22.83 17.41
22.67 17.53
22.51 17.42
22.36 17.42
22.20 17.23
1160+00
1165+00
1170+00
1175+00
1180+00
1185+00
1190+00
1195+00
1200+00
1205+00
SUPERELEV TRANS
SB FR PGL
STA 732+97.66 X-SLOPE = -4.90%
STA 734+71.66 X-SLOPE = -2.00%
℄ UPRR
PROPOSED FM 511 SOUTHBOUND FRONTAGE ROAD
EXISTING GROUND
VPI STA 747+20.00 EL 19.52
+0.150%
-0.150%
PROPOSED 1 ~ 30" RCP
℄ FM 1847
K = 209 L = 220.00 FT
VPC 752+30.00
VPI STA 753+40.00 EL 18.60
VPT 754+50.00
-0.150%
+0.903%
VPC 754+70.00
VPI STA 756+00.00 EL 20.94
VPT 757+30.00
+0.903%
-0.150%
SSD = 762'
K = 247
L = 260.00 FT
PROPOSED 2 ~ 24" RCP
16.35 15.00
16.50 15.04
16.65 15.41
16.80 15.90
16.95 15.97
17.10 15.94
17.25 15.98
17.40 16.05
17.55 16.20
17.70 16.14
17.85 16.23
18.00 16.52
18.15 16.36
18.30 16.58
18.45 16.59
18.60 16.27
18.75 16.39
18.90 16.71
19.05 16.41
19.20 16.51
19.35 16.63
19.50 16.65
19.40 16.51
19.25 16.50
19.11 16.45
18.96 16.67
18.81 16.98
18.77 17.54
19.20 18.83
20.02 16.00
20.60 16.33
20.78 16.61
20.64 17.75
20.49 18.45
20.34 18.05
20.19 17.78
20.04 16.74
19.89 16.94
19.74 17.28
19.59 16.98
19.44 17.02
19.29 17.29
19.14 17.10
18.99 17.19
18.84 17.32
18.69 17.37
18.54 17.37
18.39 17.49
18.24 17.53
18.09 17.31
730+00
735+00
740+00
745+00
750+00
755+00
760+00
765+00
770+00
775+00

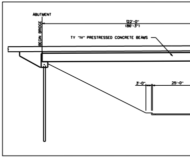


F.M. 1847
Brownsville
Los Fresnos
UNITED STATES DEPT. OF THE INTERIOR
VOL. 8056 PG. 121
275.15 ACRES
CURVE RENB1841
ACCESS DENIAL
CURVE RENB1842
STA 1214+58
STA 1221+74
PT 2225+32.61
PT 2214+14.74
PC 2217+64.66
S 50° 52' 54.05" E
2215+00
2220+00
225+00
2225+00
230+00
235+00
240+00
245+00
250+00
NORTHBOUND FM 511 FRONTAGE ROAD/EXISTING FM 511
PROPOSED 1 ~ 4'X3' RCBC
UNITED STATES DEPT. OF THE INTERIOR
25.38 ACRES
VOL. 8056 PG. 121
EXIT 1/2 MILE
STA 1244+62
ACCESS DENIAL
PT 3847+66.26
STA 1251+84
CURVE TASNR
PC 1245+45.64
PT 1250+29.61
S 46°52'54.05" E
S 46° 52' 54.05" E
1210+00
1215+00
1220+00
1225+00
1230+00
1235+00
1240+00
1245+00
1250+00
PROPOSED FM 511
CURVE BL...51P11
S 51° 58' 40.54" E
CURVE FRSB51110
S 43° 51' 27.20" E
PC 3213+83.30
PT 3218+51.56
3210+00
3215+00
780+00
785+00
790+00
795+00
800+00
805+00
810+00
815+00
ACCESS DENIAL
CURVE RXSB1842
STA 1216+17
850'
WEAVING DISTANCE
840' MERGE TAPER
PROPOSED 1 ~ 5'X3' RCBC
SOUTHBOUND FM 511 FRONTAGE ROAD
EDUARDO MONTEMAYOR, ANA MARIA MONTEMAYOR
ADRIANA MONTEMAYOR MARTINEZ
VOL. 3365 PG. 241
319.06 ACRES
PC 3806+80.41
STA 1241+06
PT 3808+65.54
CURVE TASNRR21
PC 811+65.85
STA 1247+47
PT 817+35.84
PC 3818+37.75
ACCESS DENIAL
Turnaround
EXIT 1/4 MILE
Turnaround

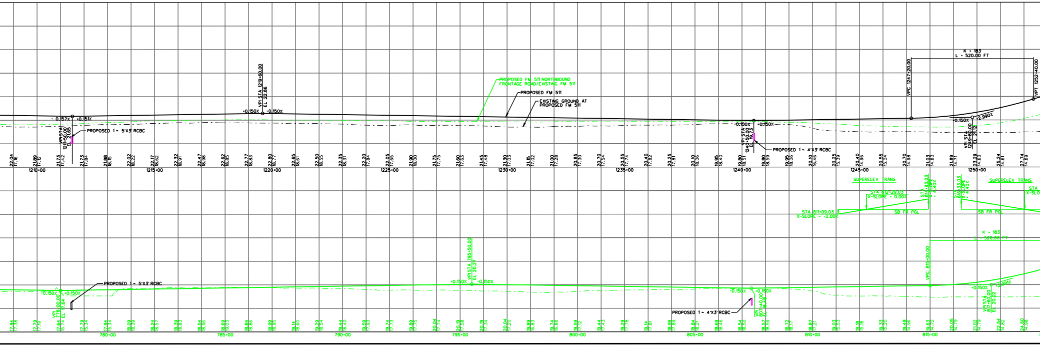


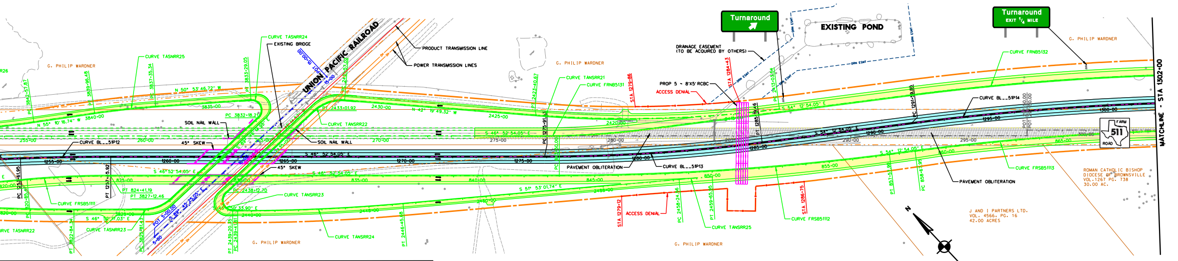
146'-6"
(112'-2¾")
B.L. FM1847
C.L. BENT
114'-0"
(87'-4")
ABUTMENT
END BRIDGE
"IV" (MOD) PRESTRESSED CONCRETE BEAMS
TY "IV" PRESTRESSED CONCRETE BEAMS
16'-6" MINIMUM VERTICAL CLEARANCE
12'-0"
12'-0"
14'-0"
14'-0"
12'-0"
12'-0"
10'-0"
8'-1" MIN
12'-6"
10'-0" BIKE-WAY
25'-0"
3'-0"
2:1 SLOPE
2% MAX CROSS-SLOPE

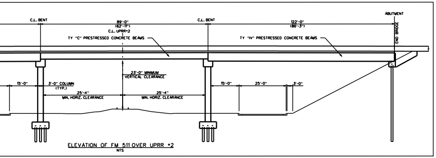
ELEVATION OF FM 511 OVER FM 1847
NTS



ABUTMENT
BEGIN BRIDGE
122'-0"
(86'-3")
TY "IV" PRESTRESSED CONCRETE BEAMS
3'-0"
25'-0"

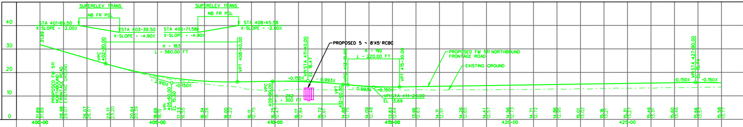


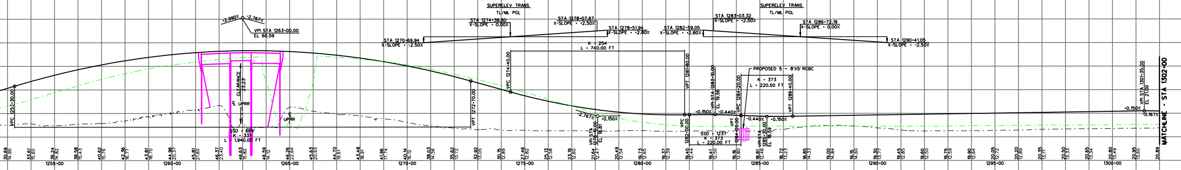

UNION PACIFIC RAILROAD
EXISTING POND
Turnaround
Turnaround EXIT 1/4 MILE
CURVE TASNRR24
EXISTING BRIDGE
PRODUCT TRANSMISSION LINE
POWER TRANSMISSION LINES
CURVE TASNRR25
G. PHILIP WARDNER
DRAINAGE EASEMENT (TO BE ACQUIRED BY OTHERS)
PROP 5 ~ 8'X5' RCBC
ACCESS DENIAL
CURVE TANSRR21
CURVE FRNB5131
CURVE FRNB5132
CURVE BL__51P14
SOIL NAIL WALL
45° SKEW
CURVE BL__51P12
CURVE TANSRR22
PAVEMENT OBLITERATION
CURVE BL__51P13
CURVE FRSB5113
CURVE FRSB5111
CURVE TANSRR23
CURVE TANSRR24
CURVE TANSRR25
CURVE FRSB5112
ROMAN CATHOLIC BISHOP DIOCESE OF BROWNSVILLE VOL. 1267 PG. 738 30.00 AC.
J AND I PARTNERS LTD. VOL. 4566, PG. 16 42.00 ACRES
FARM 511 ROAD
N
MATCHLINE - STA 1302+00

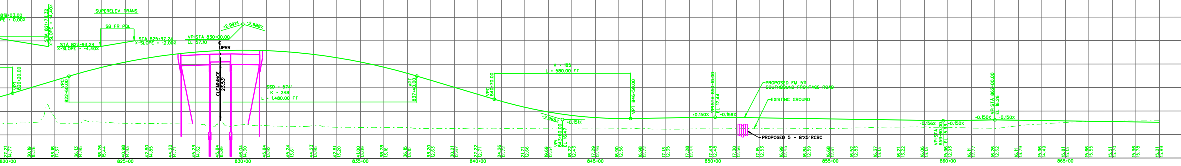

C.L. BENT
89'-0" (62'-11")
C.L. UPRR#2
C.L. BENT
122'-0" (86'-3")
ABUTMENT
END BRIDGE
TY "C" PRESTRESSED CONCRETE BEAMS
TY "IV" PRESTRESSED CONCRETE BEAMS
23'-0" MINIMUM VERTICAL CLEARANCE
15'-0"
3'-0" COLUMN (TYP.)
25'-4" MIN. HORIZ. CLEARANCE
25'-4" MIN. HORIZ. CLEARANCE
15'-0"
25'-0"
3'-0"

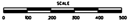
ELEVATION OF FM 511 OVER UPRR #2

NTS


SUPERELEV TRANS
NB FR PGL
STA 401+65.50 X-SLOPE = -2.00%
STA 403+39.50 X-SLOPE = -4.90%
STA 405+71.58 X-SLOPE = -4.90%
STA 408+45.58 X-SLOPE = -2.00%
K = 183
L = 560.00 FT
PROPOSED 5 ~ 8'X5' RCBC
K = 192
L = 220.00 FT
PROPOSED FM 511 NORTHBOUND FRONTAGE ROAD
EXISTING GROUND
PROPOSED FM 511 NORTHBOUND FRONTAGE ROAD EXISTING GROUND
40
30
20
10
0
400+00
405+00
410+00
415+00
420+00
425+00

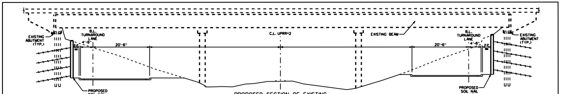

VPI STA 1263+00.00 EL 60.59
+2.990%
-2.767%
SUPERELEV TRANS TL/ML PGL
STA 1270+69.94 X-SLOPE = -2.50%
STA 1274+38.80 X-SLOPE = 0.00%
STA 1278+07.67 X-SLOPE = +2.50%
STA 1278+51.94 X-SLOPE = +2.80%
STA 1282+59.05 X-SLOPE = +2.80%
STA 1283+03.32 X-SLOPE = +2.50%
STA 1286+72.19 X-SLOPE = 0.00%
STA 1290+41.05 X-SLOPE = -2.50%
K = 254
L = 740.00 FT
CLEARANCE 23.23
UPRR
SSD = 669'
K = 337
L = 1,940.00 FT
PROPOSED 5 ~ 8'X5' RCBC
K = 373
L = 220.00 FT
SSD = 1237'
K = 373
L = 220.00 FT
VPI STA 1301+35.00 EL 21.00
-0.440%
+0.150%
-0.167%
1255+00
1260+00
1265+00
1270+00
1275+00
1280+00
1285+00
1290+00
1295+00
1300+00
MATCHLINE - STA 1302+00


SUPERELEV TRANS
SB FR PGL
STA 823+93.24 X-SLOPE = -4.40%
STA 825+37.24 X-SLOPE = -2.00%
VPI STA 830+00.00 EL 57.10
+2.991%
-2.988%
UPRR
CLEARANCE 23.53
SSD = 574'
K = 248
L = 1,480.00 FT
K = 185
L = 580.00 FT
PROPOSED FM 511 SOUTHBOUND FRONTAGE ROAD
EXISTING GROUND
PROPOSED 5 ~ 8'X5' RCBC
820+00
825+00
830+00
835+00
840+00
845+00
850+00
855+00
860+00
865+00


SCALE
0
100
200
300
400
500

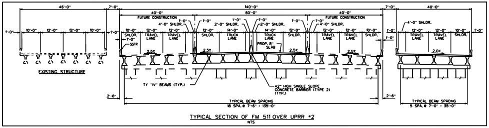
LEGEND

━ ━	PROPOSED ROW
– · –	EXISTING ROW
—‖—	ACCESS DENIAL LINE
——	PROPERTY LINE
— ESMT —	EASEMENT LINE
——	PROPOSED MAINLANE
——	PROPOSED FRONTAGE ROAD
——	PROPOSED RAMP
——	PROPOSED INTERSECTING ROAD
——	PROPOSED BRIDGE LIMIT/CONCRETE BARRIER/DRAINAGE STRUCTURES
– · –	PROPOSED MAINLANE ALIGNMENT
– · –	PROPOSED FRONTAGE ROAD ALIGNMENT
– · –	PROPOSED RAMP/DIRECT CONNECTOR ALIGNMENT
– · –	INTERSECTING ROAD ALIGNMENT
🟨	PHASE 1
▨	PAVEMENT OBLITERATION
🟦	PHASE 2


EXISTING ABUTMENT (TYP.)
B.L. TURNAROUND LANE
4'-6"
20'-6"
C.L. UPRR #2
EXISTING BEAM
PROPOSED SOIL NAIL WALL

PROPOSED SECTION OF EXISTING FM511 BRIDGE OVER UPRR #2

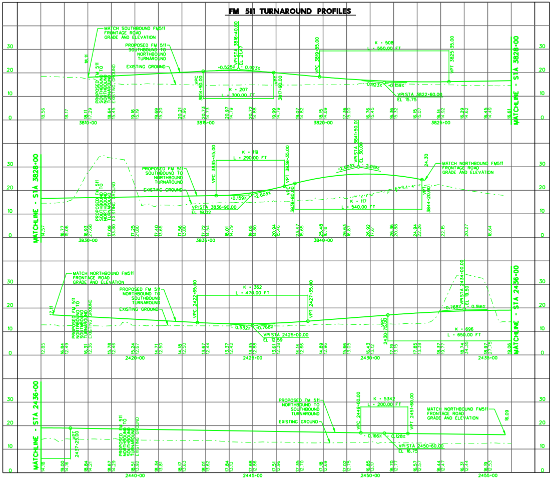
NTS

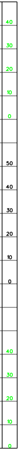

46'-0"
7'-0"
140'-0"
40'-0"
60'-0"
FUTURE CONSTRUCTION
4'-0" SHLDR.
2'-0" SHLDR.
1'-0"
10'-0"
12'-0"
14'-0"
SHLDR.
TRAVEL LANE
TRUCK LANE
SSTR
PROP. 8" SLAB
2.5%
2.0%
EXISTING STRUCTURE
TY "IV" BEAMS (TYP.)
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYP.)
2'-6"
TYPICAL BEAM SPACING
18 SPA. @ 7'-6" = 135'-0"
5 SPA. @ 7'-0" = 35'-0"

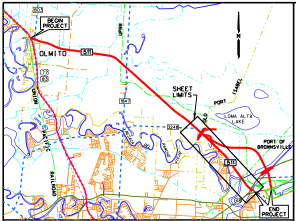
TYPICAL SECTION OF FM 511 OVER UPRR #2

NTS

FM 511 TURNAROUND PROFILES






BEGIN PROJECT
803
OLMITO
511
77
83
UNION
UPRR
SHEET LIMITS
PORT
ISABEL
LOMA ALTA LAKE
1847
3248
OLD
PACIFIC
RAILROAD
PORT OF BROWNSVILLE
48
END PROJECT
N

VICINITY MAP
NTS

TEXAS DEPARTMENT OF TRANSPORTATION

SCHEMATIC LAYOUT

OFFICE OF DISTRICT ENGINEER
PHARR DISTRICT

FM 511
CAMERON COUNTY

LIMITS: FROM: US 77/83
TO: SH 48

C-S-J: 0684-01-046

LENGTH: 9.6 MILES

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

FUNCTIONAL CLASSIFICATION: FREEWAY
HIGHWAY TYPE: SUBURBAN ROADWAY

$e_{max} = 6\%$

DESIGN STANDARDS:
TxDOT ROADWAY DESIGN MANUAL (JULY 2006)

9/11/2006

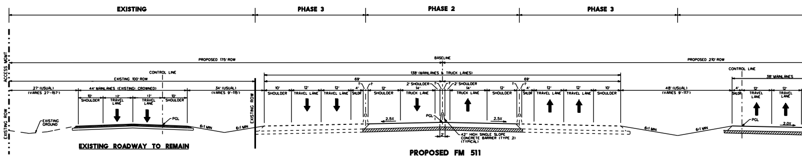
THE SEAL APPEARING ON THIS
DOCUMENT WAS AUTHORIZED BY
SAMUEL M. WATSON, P.E. #73121
ON SEPTEMBER 8, 2006

SAMUEL M. WATSON
73121

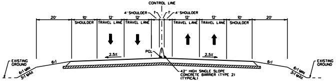
MACTEC

3520 EXECUTIVE CENTER DRIVE
SUITE 200
AUSTIN, TX 78731
(512) 795-0360

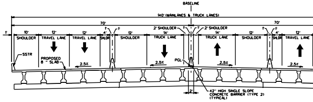
ROLL 3 OF 5 (PHASE 1 & 2)


EXISTING
PHASE 3
PHASE 2
PHASE 3
PROPOSED 175' ROW
BASELINE
PROPOSED 210' ROW
CONTROL LINE
EXISTING 100' ROW
138' (MAINLANES & TRUCK LANES)
27' (USUAL) (VARIES 27'-157')
44' MAINLANES (EXISTING CROWNED)
34' (USUAL) (VARIES 9'-115')
48' (USUAL) (VARIES 9'-117')
38' MAINLANES
SHOULDER
TRAVEL LANE
TRUCK LANE
SHLDR
PGL
2.5%
2.0%
6:1 MIN
EXISTING GROUND
ACCESS MGMT
EXISTING ROW
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)
EXISTING ROADWAY TO REMAIN

PROPOSED FM 511
TYPICAL SECTION
NTS


CONTROL LINE
20'
10' SHOULDER
12' TRAVEL LANE
4' SHOULDER
PGL
2.5%
6:1
6:1 MIN
3:1 MAX
EXISTING GROUND
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)

PROPOSED SH 48
TYPICAL SECTION
NTS

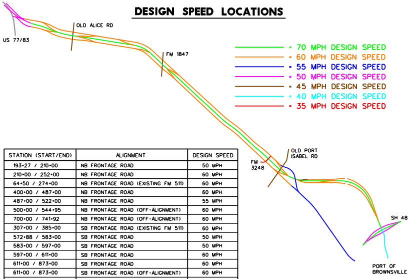

BASELINE
140' (MAINLANES & TRUCK LANES)
70'
SHOULDER
TRAVEL LANE
TRUCK LANE
SHLDR
SSTR
PROPOSED 8" SLAB
PGL
2.5%
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)

PROPOSED FM 511 OVERPASS (MAINLANES & TRUCKLANES)
TYPICAL SECTION
NTS

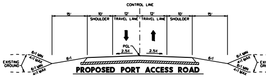
FM 511 TRAFFIC VOLUMES

YEAR	ADT	% TRUCKS
2005 (CORRIDOR)	13,400	18.2
2025 (FRONTAGE ROAD ONLY)	2,600	10.1
2025 (MAINLANES ONLY)	21,500	1.2
2025 (TRUCK LANES ONLY)	4,800	100.0

DESIGN SPEED LOCATIONS

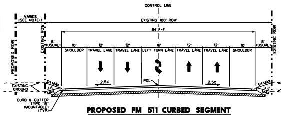

US 77/83
OLD ALICE RD
FM 1847
FM 3248
OLD PORT ISABEL RD
SH 48
PORT OF BROWNSVILLE
70 MPH DESIGN SPEED
60 MPH DESIGN SPEED
55 MPH DESIGN SPEED
50 MPH DESIGN SPEED
45 MPH DESIGN SPEED
40 MPH DESIGN SPEED
35 MPH DESIGN SPEED

STATION (START/END)	ALIGNMENT	DESIGN SPEED
193+27 / 210+00	NB FRONTAGE ROAD	50 MPH
210+00 / 252+00	NB FRONTAGE ROAD	60 MPH
64+50 / 274+00	NB FRONTAGE ROAD (EXISTING FM 511)	60 MPH
400+00 / 487+00	NB FRONTAGE ROAD	60 MPH
487+00 / 522+00	NB FRONTAGE ROAD	55 MPH
500+00 / 544+95	NB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
700+00 / 741+92	NB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
307+00 / 385+00	SB FRONTAGE ROAD (EXISTING FM 511)	60 MPH
572+88 / 583+00	SB FRONTAGE ROAD	50 MPH
583+00 / 597+00	SB FRONTAGE ROAD	50 MPH
597+00 / 611+00	SB FRONTAGE ROAD	60 MPH
611+00 / 873+00	SB FRONTAGE ROAD	60 MPH
611+00 / 873+00	SB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
600+00 / 645+47	SB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
1045+00 / 1513+00	TRUCK & MAINLANES	70 MPH
1513+00 / 1548+25	PORT ACCESS ROAD	40 MPH
385+00 / 497+98	CURB SEGMENT	55 MPH
	MAINLINE RAMPS	60 MPH
	SH 48	70 MPH
	SH 48 RAMPS	50 MPH
	OLD ALICE ROAD	45 MPH
	FM 1847	60 MPH
	FM 3248	35 MPH
	OLD PORT ISABEL ROAD	45 MPH
	DIRECT CONNECTORS	50 MPH

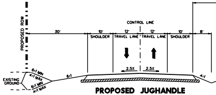

CONTROL LINE
15'
10' SHOULDER
12' TRAVEL LANE
PGL
2.5%
6:1
6:1 MIN
4:1 MAX
EXISTING GROUND

PROPOSED PORT ACCESS ROAD
STA 35+50 TO 40+50 AND
STA 58+50 TO 64+50
TYPICAL SECTION
NTS

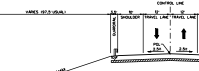
* NOTE: PROW WIDTH VARIES FROM 59.15' TO 0'
FROM STA 394+50 TO 426+06.24, RESPECTIVELY;
NO PROW NEEDED (WIDTH = 0) FROM
STA 426+06.24 TO END CONST.


CONTROL LINE
EXISTING 100' ROW
84' F-F
VARIES (SEE NOTE*)
8' (USUAL)
10' SHOULDER
12' TRAVEL LANE
16' LEFT TURN LANE
PGL
2.5%
3:1 MAX
4:1 MAX
EXISTING GROUND
CURB & GUTTER TYPE "B" (MOUNTABLE) (TYP)
PROPOSED ROW
EXISTING ROW

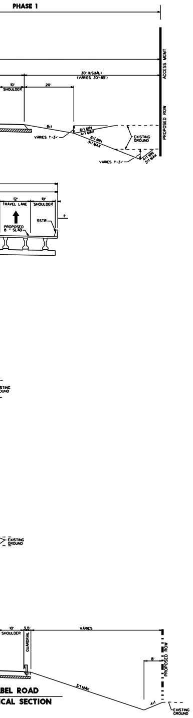
PROPOSED FM 511 CURBED SEGMENT
(SOUTH OF OLD PORT ISABEL ROAD TO SH 48)
TYPICAL SECTION
NTS


PROPOSED ROW
CONTROL LINE
30'
8'
10' SHOULDER
12' TRAVEL LANE
2.5%
6:1
6:1 MIN
4:1 MAX
4:1
EXISTING GROUND

PROPOSED JUGHANDLE


CONTROL LINE
VARIES (97.5' USUAL)
3.5'
10' SHOULDER
12' TRAVEL LANE
GUARDRAIL
PGL
2.5%
3:1 MAX

PROPOSED OLD PORT ISA
STA 40+50 TO 58+50 TYP
NTS


PHASE 1
30' (USUAL)
(VARIES 30'-85')
10'
SHOULDER
20'
6:1
6:1 MIN
4:1 MAX
6:1 MIN
3:1 MAX
VARIES 1'-3'+'
EXISTING GROUND
VARIES 1'-3'+'
4:1 MIN
3:1 MAX
ACCESS MGMT
PROPOSED ROW
12'
TRAVEL LANE
10'
SHOULDER
SSTR
1'
PROPOSED 8 " SLAB
EXISTING GROUND
EXISTING GROUND
10'
SHOULDER
3.5'
GUARDRAIL
VARIES
PROPOSED ROW
8'
3:1 MAX
4:1
EXISTING GROUND

BEL ROAD
CAL SECTION

SCALE
0 100 200 300 400 500

LEGEND

- PROPOSED ROW
- PROPOSED ROW BY OTHERS
- EXISTING ROW
- ACCESS DENIAL LINE
- PROPERTY LINE
- EASEMENT LINE
- DRAINAGE EASEMENT LINE BY OTHERS
- PROPOSED MAINLANE
- PROPOSED FRONTAGE ROAD
- PROPOSED RAMP
- PROPOSED INTERSECTING ROAD
- PROPOSED BRIDGE LIMIT/CONCRETE BARRIER/DRAINAGE STRUCTURES
- PROPOSED MAINLANE ALIGNMENT
- PROPOSED FRONTAGE ROAD ALIGNMENT
- PROPOSED RAMP/DIRECT CONNECTOR ALIGNMENT
- INTERSECTING ROAD ALIGNMENT

🟨 PHASE 1 🟦 PHASE 2 ▨ PAVEMENT OBLITERATION

CURVE BL__51EA1
PI STATION = 386+71.28
DELTA = 2° 42' 15.36" (LT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 259.63
LENGTH = 519.18
RADIUS = 11,000.00
PC STATION = 384+11.64
PT STATION = 389+30.82
SUPERELEVATION = NORMAL CROWN

CURVE BL__51EA2
PI STATION = 391+90.46
DELTA = 2° 42' 15.36" (RT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 259.64
LENGTH = 519.18
RADIUS = 11,000.00
PC STATION = 389+30.82
PT STATION = 394+50.00
SUPERELEVATION = NORMAL CROWN

CURVE BL__51EA3
PI STATION = 420+53.25
DELTA = 11° 39' 50.25" (RT)
DEGREE OF CURVE = 0° 42' 58.31"
TANGENT = 817.12
LENGTH = 1,628.60
RADIUS = 8,000.00
PC STATION = 412+36.13
PT STATION = 428+64.72
SUPERELEVATION = NORMAL CROWN

CURVE BL__51E6
PI STATION = 493+88.70
DELTA = 25° 11' 15.95" (LT)
DEGREE OF CURVE = 1° 58' 57.72"
TANGENT = 645.62
LENGTH = 1,270.38
RADIUS = 2,889.79
PC STATION = 487+43.08
PT STATION = 500+13.46
SUPERELEVATION = 4%

CURVE IR__3242
PI STATION = 42+95.57
DELTA = 49° 33' 05.45" (LT)
DEGREE OF CURVE = 12° 43' 56.62"
TANGENT = 207.70
LENGTH = 389.18
RADIUS = 450.00
PC STATION = 40+87.88
PT STATION = 44+77.05
SUPERELEVATION = 5.9%

CURVE BL__51P15
PI STATION = 1326+39.10
DELTA = 4° 34' 18.61" (LT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 439.10
LENGTH = 877.73
RADIUS = 11,000.00
PC STATION = 1322+00.00
PT STATION = 1330+77.73
SUPERELEVATION = NORMAL CROWN

CURVE BL__51P16
PI STATION = 1335+16.83
DELTA = 4° 34' 18.61" (RT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 439.10
LENGTH = 877.73
RADIUS = 11,000.00
PC STATION = 1330+77.73
PT STATION = 1339+55.46
SUPERELEVATION = NORMAL CROWN

CURVE BL__51P17
PI STATION = 1383+41.23
DELTA = 43° 07' 05.95" (LT)
DEGREE OF CURVE = 1° 16' 23.66"
TANGENT = 1,777.97
LENGTH = 3,386.51
RADIUS = 4,500.00
PC STATION = 1365+63.26
PT STATION = 1399+49.76
SUPERELEVATION = 4.10%

CURVE MLNB5111
PI STATION = 4383+25.03
DELTA = 43° 07' 05.95" (LT)
DEGREE OF CURVE = 1° 17' 05.81"
TANGENT = 1,761.77
LENGTH = 3,355.65
RADIUS = 4,459.00
PC STATION = 4365+63.26
PT STATION = 4399+18.91
SUPERELEVATION = 4.1%

CURVE MLSB5111
PI STATION = 5383+57.43
DELTA = 43° 07' 05.95" (LT)
DEGREE OF CURVE = 1° 15' 42.28"
TANGENT = 1,794.17
LENGTH = 3,417.36
RADIUS = 4,541.00
PC STATION = 5365+63.26
PT STATION = 5399+80.62
SUPERELEVATION = 4.1%

CURVE FRNB5133
PI STATION = 451+71.47
DELTA = 6° 28' 02.17" (LT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 621.47
LENGTH = 1241.62
RADIUS = 11,000.00
PC STATION = 445+50.00
PT STATION = 457+91.63
SUPERELEVATION = NORMAL CROWN

CURVE FRNB5134
PI STATION = 464+13.10
DELTA = 6° 28' 02.17" (RT)
DEGREE OF CURVE = 0° 31' 15.13"
TANGENT = 621.47
LENGTH = 1241.62
RADIUS = 11,000.00
PC STATION = 457+91.63
PT STATION = 470+33.25
SUPERELEVATION = NORMAL CROWN

CURVE FRNB5137
PI STATION = 791+00.80
DELTA = 23° 12' 00.00" (LT)
DEGREE OF CURVE = 5° 12' 31.35"
TANGENT = 225.80
LENGTH = 445.41
RADIUS = 1,100.00
PC STATION = 788+75.00
PT STATION = 793+20.41
SUPERELEVATION = 6.0%

CURVE FRNB5138
PI STATION = 802+01.45
DELTA = 47° 32' 52.52" (RT)
DEGREE OF CURVE = 5° 12' 31.35"
TANGENT = 484.56
LENGTH = 912.85
RADIUS = 1,100.00
PC STATION = 797+16.89
PT STATION = 806+29.74
SUPERELEVATION = 6.0%

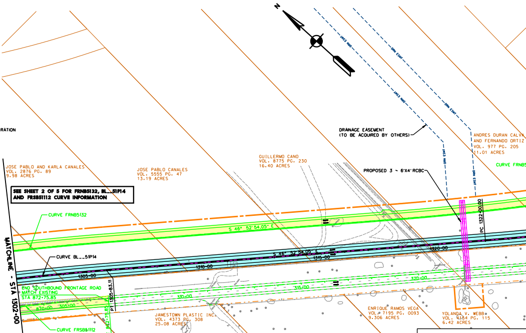
CURVE FRNB5139
PI STATION = 820+26.27
DELTA = 24° 20' 52.52" (LT)
DEGREE OF CURVE = 5° 12' 31.35"
TANGENT = 237.31
LENGTH = 467.45
RADIUS = 1,100.00
PC STATION = 817+88.97
PT STATION = 822+56.42
SUPERELEVATION = 6.0%

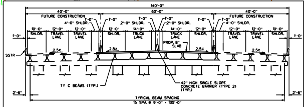
CURVE RXNB5131
PI STATION = 2504+03.68
DELTA = 5° 46' 38.77" (RT)
DEGREE OF CURVE = 0° 42' 58.31"
TANGENT = 403.68
LENGTH = 806.68
RADIUS = 8,000.00
PC STATION = 2500+00.00
PT STATION = 2508+06.68
SUPERELEVATION = NORMAL CROWN

CURVE RXNB5132
PI STATION = 2516+98.52
DELTA = 19° 50' 53.18" (LT)
DEGREE OF CURVE = 1° 45' 19.39"
TANGENT = 571.07
LENGTH = 1,130.70
RADIUS = 3,264.00
PC STATION = 2511+27.45
PT STATION = 2522+58.15
SUPERELEVATION = 4.1%

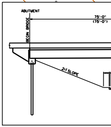
CURVE RESB3241
PI STATION = 3504+45.48
DELTA = 10° 10' 57.64" (LT)
DEGREE OF CURVE = 1° 08' 45.30"
TANGENT = 445.48
LENGTH = 888.61
RADIUS = 5,000.00
PC STATION = 3500+00.00
PT STATION = 3508+88.61
SUPERELEVATION = 4.1%

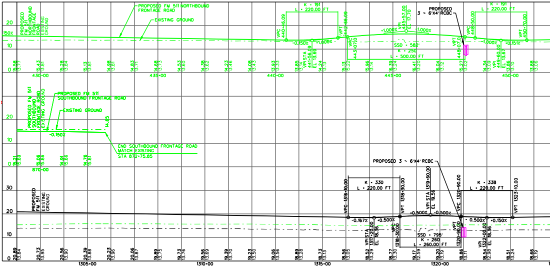
CURVE RENB5131
PI STATION = 2691+88.32
DELTA = 20° 55' 20.06" (LT)
DEGREE OF CURVE = 1° 45' 19.39"
TANGENT = 602.66
LENGTH = 1,191.89
RADIUS = 3,264.00
PC STATION = 2685+85.66
PT STATION = 2697+77.55
SUPERELEVATION = 4.1%

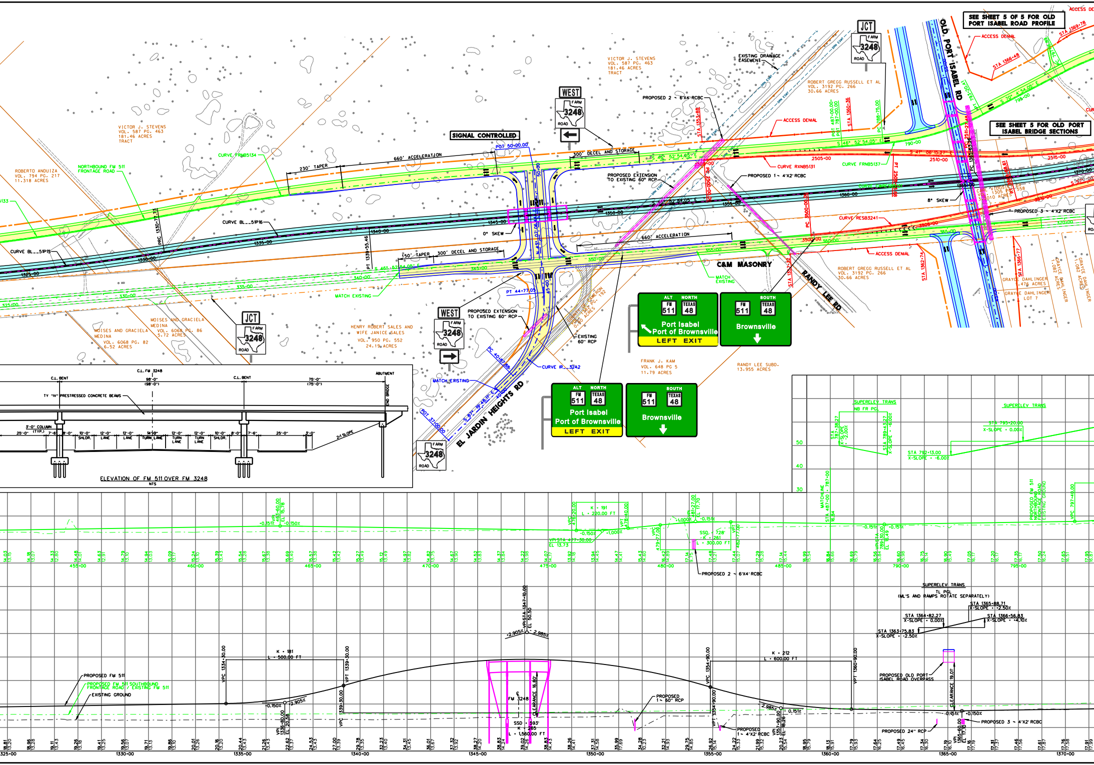

N
DRN ESMT
DRAINAGE EASEMENT
(TO BE ACQUIRED BY OTHERS)
ANDRES DURAN CALVA
AND FERNANDO ORTIZ
VOL. 977 PG. 205
11.01 ACRES
CURVE FRNB5
GUILLERMO CANO
VOL. 8775 PG. 230
16.40 ACRES
JOSE PABLO AND KARLA CANALES
VOL. 2876 PG. 89
9.98 ACRES
JOSE PABLO CANALES
VOL. 5555 PG. 47
13.19 ACRES
SEE SHEET 2 OF 5 FOR FRNB5132, BL__51P14
AND FRSB51112 CURVE INFORMATION
PROPOSED 3 ~ 6'X4' RCBC
CURVE FRNB5132
S 46° 52' 54.05" E
PC 1322+00.00
1320+00
CURVE BL__51P14
S 46° 52' 54.05" E
1315+00
1310+00
1305+00
320+00
315+00
310+00
END SOUTHBOUND FRONTAGE ROAD
MATCH EXISTING
STA 872+75.85
870+00
305+00
PT 1305+83.11
PT 872+75.85
MATCHLINE - STA 1302+00
CURVE FRSB51112
JAMESTOWN PLASTIC INC.
VOL. 4373 PG. 308
25.08 ACRES
ENRIQUE RAMOS VEGA
VOL. 7195 PG. 0093
9.306 ACRES
YOLANDA V. WEBB
VOL. 4154 PG. 115
6.42 ACRES
ROMAN CATHOLIC BISHOP OF
DIOCESE OF BROWNSVILLE
VOL.1267 PG. 738
30.00 AC.

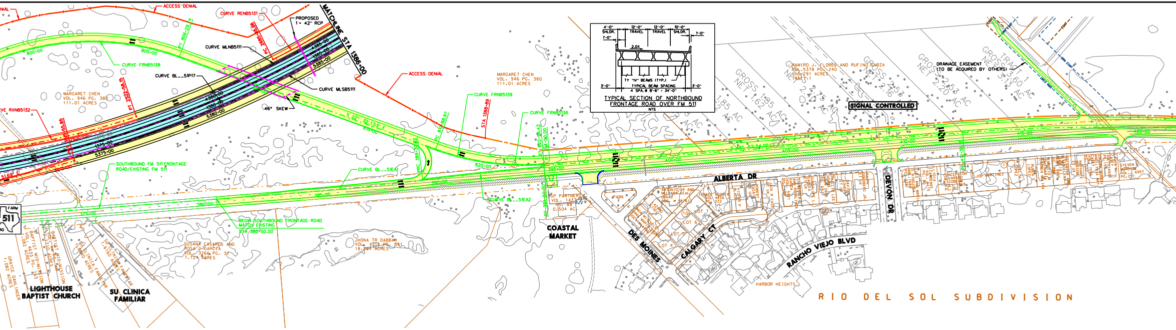

140'-0"
40'-0"
FUTURE CONSTRUCTION
60'-0"
40'-0"
FUTURE CONSTRUCTION
1'-0"
4'-0" SHLDR.
1'-0"
1'-0"
2'-0" SHLDR.
1'-0"
2'-0" SHLDR.
1'-0"
1'-0"
4'-0" SHLDR.
10'-0"
SHLDR.
12'-0"
TRAVEL LANE
12'-0"
TRAVEL LANE
12'-0"
SHLDR.
14'-0"
TRUCK LANE
14'-0"
TRUCK LANE
12'-0"
SHLDR.
12'-0"
TRAVEL LANE
12'-0"
TRAVEL LANE
10'-0"
SHLDR.
1'-0"
1'-0"
PROP. 8" SLAB
2.5%
2.5%
2.5%
2.5%
SSTR
TY C BEAMS (TYP.)
42" HIGH SINGLE SLOPE
CONCRETE BARRIER (TYPE 2)
(TYP.)
2'-6"
2'-6"
TYPICAL BEAM SPACING
15 SPA. @ 9'-0" = 135'-0"

TYPICAL SECTION OF FM 511 OVER FM 3248
NTS


ABUTMENT
BEGIN BRIDGE
75'-0"
(75'-0")
2:1 SLOPE

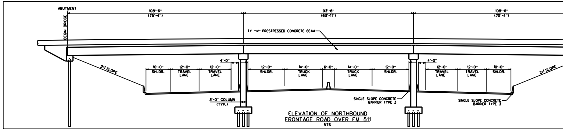



SEE SHEET 5 OF 5 FOR OLD PORT ISABEL ROAD PROFILE
SEE SHEET 5 FOR OLD PORT ISABEL BRIDGE SECTIONS
OLD PORT ISABEL RD
ACCESS DENIAL
STA 1366+48
STA 1369+78
JCT
FARM ROAD 3248
WEST
SIGNAL CONTROLLED
VICTOR J. STEVENS VOL. 587 PG. 463 181.46 ACRES TRACT
ROBERTO ANDUIZA VOL. 794 PG. 217 11.318 ACRES
NORTHBOUND FM 511 FRONTAGE ROAD
CURVE FRNB5134
230' TAPER
660' ACCELERATION
300' DECEL AND STORAGE
POT 50+00.00
EXISTING DRAINAGE EASEMENT
PROPOSED 2 ~ 6'X4' RCBC
ROBERT GREGG RUSSELL ET AL VOL. 3192 PG. 266 30.66 ACRES
PROPOSED EXTENSION TO EXISTING 60" RCP
PROPOSED 1 ~ 4'X2' RCBC
CURVE RXNB5131
CURVE FRNB5137
2505+00
2510+00
2515+00
S 46° 52' 54.05" E
790+00
795+00
8° SKEW
PROPOSED 3 ~ 4'X2' RCBC
CURVE BL_51P16
CURVE BL_51P15
1325+00
1330+00
1335+00
1340+00
1345+00
1350+00
1355+00
1360+00
1365+00
1370+00
0° SKEW
PRC 1350+77.75
PT 1339+55.46
660' ACCELERATION
150' TAPER
300' DECEL AND STORAGE
CURVE RESB3241
3500+00
3505+00
C&M MASONRY
MATCH EXISTING
RANDY LEE RD
ACCESS DENIAL
ROBERT GREGG RUSSELL ET AL VOL. 3192 PG. 266 30.66 ACRES
GRAYCE DAHLINGER .476 ACRES
GRAYCE DAHLINGER LOT 7
MOISES AND GRACIELA MEDINA VOL. 6068 PG. 82 6.52 ACRES
MOISES AND GRACIELA MEDINA VOL. 6068 PG. 86 5.72 ACRES
HENRY ROBERT SALES AND WIFE JANICE SALES VOL. 950 PG. 552 24.19 ACRES
PT 44+77.05
PROPOSED EXTENSION TO EXISTING 60" RCP
EXISTING 60" RCP
CURVE IR_3242
MATCH EXISTING
POT 37+00.00
PC 40+87.88
EL JARDIN HEIGHTS RD
FRANK J. KAM VOL. 648 PG 5 11.79 ACRES
RANDY LEE SUBD. 13.955 ACRES
ALT NORTH FM 511 TEXAS 48 Port Isabel Port of Brownsville LEFT EXIT
SOUTH FM 511 TEXAS 48 Brownsville
ALT NORTH FM 511 TEXAS 48 Port Isabel Port of Brownsville LEFT EXIT
SOUTH FM 511 TEXAS 48 Brownsville
C.L. FM 3248
C.L. BENT
ABUTMENT
98'-0" (98'-0")
75'-0" (75'-0")
TY "IV" PRESTRESSED CONCRETE BEAMS
END BRIDGE
3'-0" COLUMN (TYP.)
25'-0"
7'-6"
8'-0"
10'-0" SHLDR.
12'-0" LANE
12'-0" LANE
14'-0" TURN LANE
12'-0" TURN LANE
12'-0" TURN LANE
10'-0" SHLDR.
2:1 SLOPE
ELEVATION OF FM 511 OVER FM 3248
NTS
SUPERELEV TRANS NB FR PG
SUPERELEV TRANS
STA 785+20.00 X-SLOPE = 0.00%
STA 792+13.00 X-SLOPE = -6.00%
50
40
30
K = 191 L = 220.00 FT
SSD = 728' K = 261 L = 300.00 FT
455+00
460+00
465+00
470+00
475+00
480+00
485+00
790+00
795+00
PROPOSED 2 ~ 6'X4' RCBC
SUPERELEV TRANS TL PGL (ML'S AND RAMPS ROTATE SEPARATELY)
STA 1365+88.71 X-SLOPE = +2.50%
STA 1364+82.27 X-SLOPE = 0.00%
STA 1366+56.83 X-SLOPE = +4.10%
STA 1363+75.83 X-SLOPE = -2.50%
VPI STA 1347+10.00 EL 50.50
-2.905%
2.985%
K = 181 L = 500.00 FT
K = 212 L = 600.00 FT
VPC 1334+30.00
VPT 1339+30.00
VPC 1354+90.00
VPT 1360+90.00
PROPOSED FM 511
PROPOSED FM 511 SOUTHBOUND FRONTAGE ROAD / EXISTING FM 511
EXISTING GROUND
-0.150%
2.905%
FM 3248
CLEARANCE 16.80'
SSD = 593' K = 265 L = 1,560.00 FT
PROPOSED 1 ~ 60" RCP
PROPOSED 1 ~ 4'X2' RCBC
PROPOSED OLD PORT ISABEL ROAD OVERPASS
CLEARANCE 19.01'
-0.151%
-0.150%
PROPOSED 3 ~ 4'X2' RCBC
PROPOSED 24" RCP
1325+00
1330+00
1335+00
1340+00
1345+00
1350+00
1355+00
1360+00
1365+00
1370+00


ACCESS DENIAL
CURVE RENB5131
PROPOSED 1 - 42" RCP
MATCHLINE STA 1386+00
CURVE MLNB5111
CURVE FRNB5138
CURVE BL_51P17
CURVE MLSB5111
46° SKEW
CURVE RXNB5132
MARGARET CHEN VOL. 946 PG. 380 111.01 ACRES
5380+00
5375+00
1380+00
1375+00
800+00
805+00
810+00
815+00
820+00
ACCESS DENIAL
CURVE FRNB5139
STA 1388+89
CURVE FRNB5136
SOUTHBOUND FM 511 FRONTAGE ROAD/EXISTING FM 511
CURVE BL_51EA1
CURVE BL_51EA2
BEGIN SOUTHBOUND FRONTAGE ROAD MATCH EXISTING STA 380+50.00
380+00
385+00
390+00
395+00
400+00
405+00
410+00
415+00
420+00
JHONA TR DABBAH VOL. 1318 PG. 681 18.284 ACRES
SUSANA CASARES AND ROSA C. GARCIA VOL. 3266 PG. 37 7.126 ACRES
SP PARTNERS VOL. 14 PG. 88 0.504 AC
COASTAL MARKET
LIGHTHOUSE BAPTIST CHURCH
SU CLINICA FAMILIAR
FARM 511
ALBERTA DR
DES MOINES
CALGARY CT
RANCHO VIEJO BLVD
DEVON DR
PARK
HARBOR HEIGHTS
RIO DEL SOL SUBDIVISION
SIGNAL CONTROLLED
RAMIRO J. FLORES AND RUFINO GARZA VOL. 5378 PG. 240 11.6291 ACRES TRACT 1
DRAINAGE EASEMENT (TO BE ACQUIRED BY OTHERS)
GROSS 1.85 AC NET 1.62 AC
GROSS 2.75 AC NET 2.40 AC
GROSS 2.53 AC NET 2.20 AC
GROSS 3.60 AC NET 3.13 AC
4'-0" SHLDR.
12'-0" TRAVEL
12'-0" TRAVEL
10'-0" SHLDR.
2.0%
TY "IV" BEAMS (TYP.)
TYPICAL BEAM SPACING 4 SPA. @ 8'-6" = 34'-0"
3'-0"

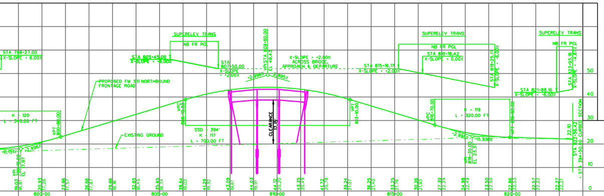
TYPICAL SECTION OF NORTHBOUND FRONTAGE ROAD OVER FM 511

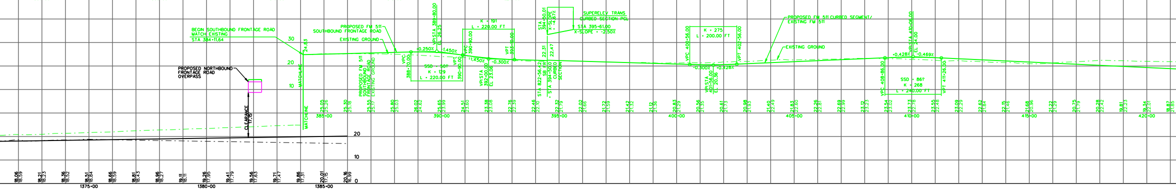
NTS

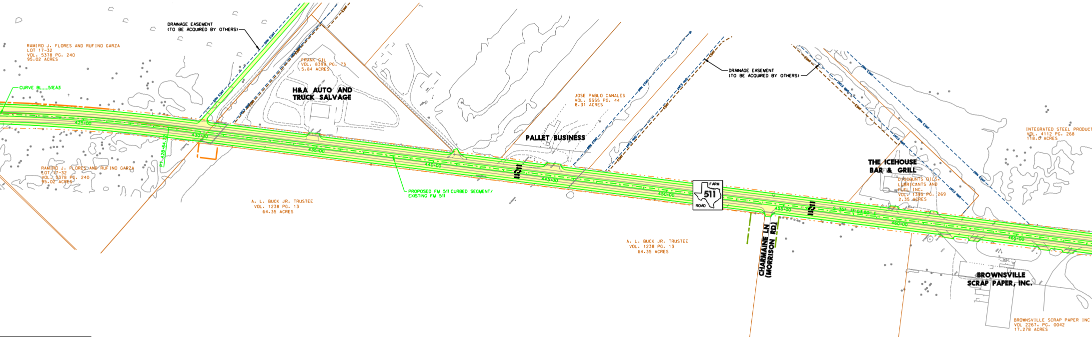

ABUTMENT
BEGIN BRIDGE
108'-6" (75'-4")
93'-6" (63'-11")
108'-6" (75'-4")
TY "IV" PRESTRESSED CONCRETE BEAM
2:1 SLOPE
10'-0" SHLDR.
12'-0" TRAVEL LANE
12'-0" TRAVEL LANE
4'-0"
12'-0" SHLDR.
14'-0" TRUCK LANE
6'-0"
14'-0" TRUCK LANE
12'-0" SHLDR.
3'-0" COLUMN (TYP.)
SINGLE SLOPE CONCRETE BARRIER TYPE 3

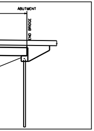
ELEVATION OF NORTHBOUND FRONTAGE ROAD OVER FM 511

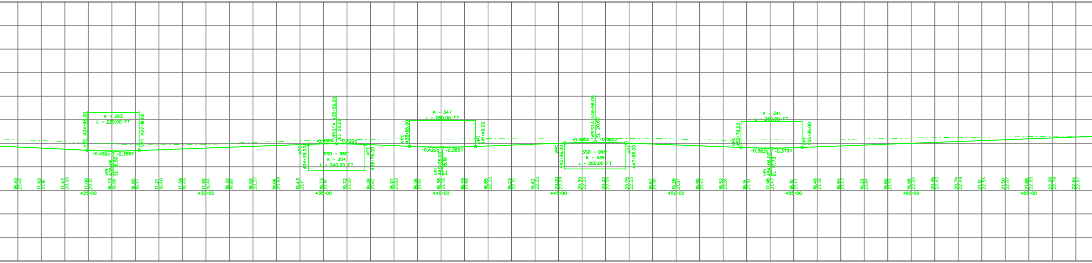
NTS

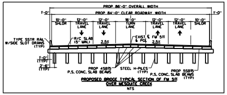




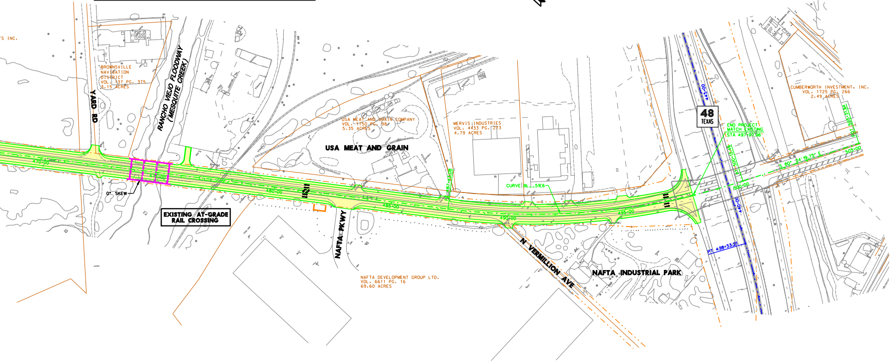

DRAINAGE EASEMENT
(TO BE ACQUIRED BY OTHERS)
RAMIRO J. FLORES AND RUFINO GARZA
LOT 17-32
VOL. 5378 PG. 240
95.02 ACRES
CURVE BL__51EA3
FRANK GIL
VOL. 8399 PG. 73
5.84 ACRES
H&A AUTO AND
TRUCK SALVAGE
DRN ESMT
425+00
430+00
435+00
440+00
445+00
450+00
455+00
460+00
465+00
PT 428+64.72
RAMIRO J. FLORES AND RUFINO GARZA
LOT 17-32
VOL. 5378 PG. 240
95.02 ACRES
A. L. BUCK JR. TRUSTEE
VOL. 1238 PG. 13
64.35 ACRES
PROPOSED FM 511 CURBED SEGMENT/
EXISTING FM 511
JOSE PABLO CANALES
VOL. 5555 PG. 44
8.31 ACRES
PALLET BUSINESS
DRAINAGE EASEMENT
(TO BE ACQUIRED BY OTHERS)
FARM
511
ROAD
A. L. BUCK JR. TRUSTEE
VOL. 1238 PG. 13
64.35 ACRES
CHARMAINE LN
(MORRISON RD)
S 35° 13'03.80" E
THE ICEHOUSE
BAR & GRILL
DISCOUNTS OILS,
LUBRICANTS AND
FUEL INC.
VOL. 1395 PG. 269
2.35 ACRES
INTEGRATED STEEL PRODUCT
VOL. 4112 PG. 268
118.0 ACRES
BROWNSVILLE
SCRAP PAPER, INC.
BROWNSVILLE SCRAP PAPER INC
VOL 2267, PG. 0042
17.278 ACRES


ABUTMENT
END BRIDGE




PROP 86'-0" OVERALL WIDTH
PROP 84'-0" CLEAR ROADWAY WIDTH
1'-0"
1'-0"
10'-0" SHLDR
12'-0" TRAVEL LANE
12'-0" TRAVEL LANE
16'-0" TURN LANE
12'-0" TRAVEL LANE
12'-0" TRAVEL LANE
10'-0" SHLDR
TYPE SSTR RAIL W/SIDE SLOT DRAINS (TYP)
R/C SLAB (5" MIN.)
2.5%
EXIST ℄ FM 511 & PGL
2.5%
1'-0" (TYP)
2'-6" (TYP)
PROP 4SB15 P.S. CONC. SLAB BEAMS
STEEL H-PILES (TYP)
PROP 5SB15 P.S. CONC. SLAB BEAMS (TYP)

PROPOSED BRIDGE TYPICAL SECTION OF FM 511 OVER MESQUITE CREEK
NTS


N
TS INC.
BROWNSVILLE NAVIGATION DISTRICT VOL. 137 PG. 375 3.15 ACRES
YARD RD
RANCHO VIEJO FLOODWAY (MESQUITE CREEK)
470+00
475+00
0° SKEW
EXISTING AT-GRADE RAIL CROSSING
480+00
USA MEAT AND GRAIN COMPANY VOL. 1750 PG. 98 5.35 ACRES
USA MEAT AND GRAIN
NAFTA PKWY
485+00
PI 487+43.08
MERVIS INDUSTRIES VOL. 4433 PG. 273 4.79 ACRES
NAFTA DEVELOPMENT GROUP LTD. VOL. 6611 PG. 16 69.60 ACRES
CURVE BL_51E6
490+00
N VERMILLION AVE
495+00
NAFTA INDUSTRIAL PARK
48 TEXAS
445+00
440+00
PT 438+33.21
END PROJECT MATCH EXISTING STA 497+97.96
PT 500+13.46
500+00
S 60° 24' 19.75" E
505+00
POT 505+31.84
CUMBERWORTH INVESTMENT, INC. VOL. 1725 PG. 266 2.49 ACRES

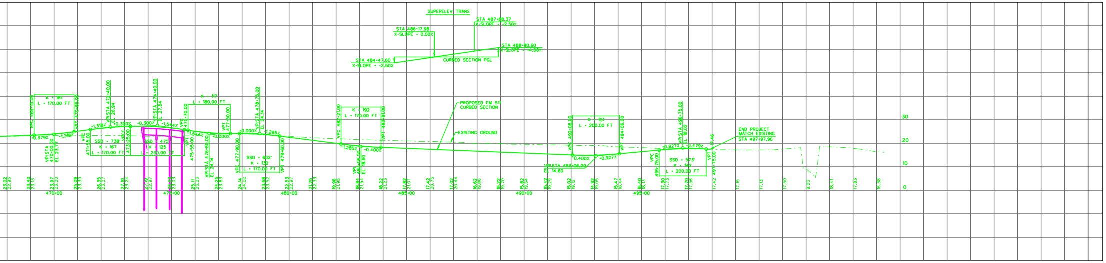
SCALE
0 100 200 300 400 500

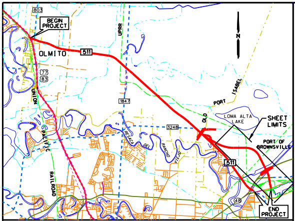
LEGEND

- PROPOSED ROW
- PROPOSED ROW BY OTHERS
- EXISTING ROW
- ACCESS DENIAL LINE
- PROPERTY LINE
- ESMT EASEMENT LINE
- DRN ESMT DRAINAGE EASEMENT LINE BY OTHERS
- PROPOSED MAINLANE
- PROPOSED FRONTAGE ROAD
- PROPOSED RAMP
- PROPOSED INTERSECTING ROAD
- PROPOSED BRIDGE LIMIT/CONCRETE BARRIER/DRAINAGE STRUCTURES
- PROPOSED MAINLANE ALIGNMENT
- PROPOSED FRONTAGE ROAD ALIGNMENT
- PROPOSED RAMP/DIRECT CONNECTOR ALIGNMENT
- INTERSECTING ROAD ALIGNMENT

🟨 PHASE 1 ▨ PAVEMENT OBLITERATION

🟦 PHASE 2




803
BEGIN PROJECT
OLMITO
511
77
83
UPRR
UNION
PACIFIC
RAILROAD
1847
3248
RESACA
DEL
RANCHO
VIEJO
OLD
PORT
ISABEL
LOMA ALTA LAKE
SHEET LIMITS
PORT OF BROWNSVILLE
511
48
END PROJECT
N

VICINITY MAP

NTS

TEXAS DEPARTMENT OF TRANSPORTATION

SCHEMATIC LAYOUT

OFFICE OF DISTRICT ENGINEER
PHARR DISTRICT

FM 511
CAMERON COUNTY

LIMITS: FROM: US 77/83
TO: SH 48

C-S-J: 0684-01-046

LENGTH: 9.6 MILES

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

FUNCTIONAL CLASSIFICATION: FREEWAY
HIGHWAY TYPE: SUBURBAN ROADWAY

e_{max} = 6%

DESIGN STANDARDS:
TxDOT ROADWAY DESIGN MANUAL (JULY 2006)

9/11/2006

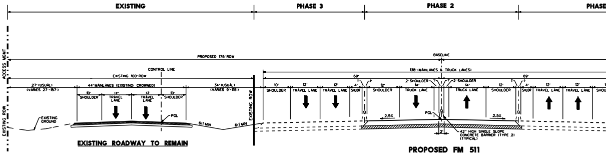
THE SEAL APPEARING ON THIS
DOCUMENT WAS AUTHORIZED BY
SAMUEL M. WATSON, P.E. #73121
ON SEPTEMBER 8, 2006

SAMUEL M. WATSON
73121

MACTEC

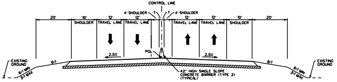
3520 EXECUTIVE CENTER DRIVE
SUITE 200
AUSTIN, TX 78731
(512) 795-0360

ROLL 4 OF 5 (PHASE 1 & 2)


EXISTING
PHASE 3
PHASE 2
PHASE
ACCESS MGMT
EXISTING ROW
PROPOSED 175' ROW
CONTROL LINE
EXISTING 100' ROW
27' (USUAL) (VARIES 27'-157')
44' MAINLANES (EXISTING: CROWNED)
34' (USUAL) (VARIES 9'-115')
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
10' SHOULDER
EXISTING GROUND
PGL
6:1 MIN
6:1 MIN
EXISTING ROW
EXISTING ROADWAY TO REMAIN
BASELINE
138' (MAINLANES & TRUCK LANES)
69'
69'
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
4' SHLDR
1'
12' SHOULDER
2' SHOULDER
14' TRUCK LANE
14' TRUCK LANE
2' SHOULDER
12' SHOULDER
4' SHLDR
12' TRAVEL LANE
12' TRAVEL LANE
SHOULDER
2.5%
2.5%
PGL
2'
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)

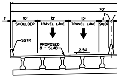
PROPOSED FM 511
TYPICAL SECTION

NTS


CONTROL LINE
4' SHOULDER
1'
1'
4' SHOULDER
20'
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
12' TRAVEL LANE
12' TRAVEL LANE
10' SHOULDER
20'
EXISTING GROUND
6:1
6:1 MIN
3:1 MAX
2.5%
PGL
2.5%
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)
6:1
6:1 MIN
3:1 MAX
EXISTING GROUND

PROPOSED SH 48
TYPICAL SECTION

NTS

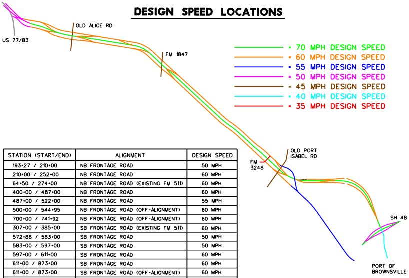

70'
1'
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
4' SHLDR
1'
SSTR
PROPOSED 8" SLAB
2.5%

PROPOSED

FM 511 TRAFFIC VOLUMES

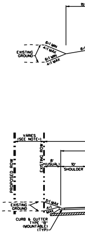
YEAR	ADT	% TRUCKS
2005 (CORRIDOR)	13,400	18.2
2025 (FRONTAGE ROAD ONLY)	2,600	10.1
2025 (MAINLANES ONLY)	21,500	1.2
2025 (TRUCK LANES ONLY)	4,800	100.0

DESIGN SPEED LOCATIONS

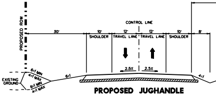

US 77/83
OLD ALICE RD
FM 1847
70 MPH DESIGN SPEED
60 MPH DESIGN SPEED
55 MPH DESIGN SPEED
50 MPH DESIGN SPEED
45 MPH DESIGN SPEED
40 MPH DESIGN SPEED
35 MPH DESIGN SPEED
FM 3248
OLD PORT ISABEL RD
SH 48
PORT OF BROWNSVILLE

STATION (START/END)	ALIGNMENT	DESIGN SPEED
193+27 / 210+00	NB FRONTAGE ROAD	50 MPH
210+00 / 252+00	NB FRONTAGE ROAD	60 MPH
64+50 / 274+00	NB FRONTAGE ROAD (EXISTING FM 511)	60 MPH
400+00 / 487+00	NB FRONTAGE ROAD	60 MPH
487+00 / 522+00	NB FRONTAGE ROAD	55 MPH
500+00 / 544+95	NB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
700+00 / 741+92	NB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
307+00 / 385+00	SB FRONTAGE ROAD (EXISTING FM 511)	60 MPH
572+88 / 583+00	SB FRONTAGE ROAD	50 MPH
583+00 / 597+00	SB FRONTAGE ROAD	50 MPH
597+00 / 611+00	SB FRONTAGE ROAD	60 MPH
611+00 / 873+00	SB FRONTAGE ROAD	60 MPH
611+00 / 873+00	SB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
600+00 / 645+47	SB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
1045+00 / 1513+00	TRUCK & MAINLANES	70 MPH
1513+00 / 1548+25	PORT ACCESS ROAD	40 MPH
385+00 / 497+98	CURB SEGMENT	55 MPH
	MAINLINE RAMPS	60 MPH
	SH 48	70 MPH
	SH 48 RAMPS	50 MPH
	OLD ALICE ROAD	45 MPH
	FM 1847	60 MPH
	FM 3248	35 MPH
	OLD PORT ISABEL ROAD	45 MPH
	DIRECT CONNECTORS	50 MPH

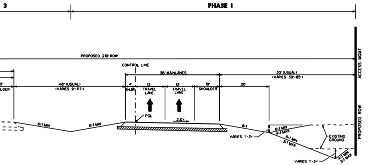
* NOTE: PROW WIDTH VARIES FROM 59.15' TO 0' FROM STA 394+50 TO 426+06.24, RESPECTIVELY; NO PROW NEEDED (WIDTH = 0) FROM STA 426+06.24 TO END CONST.

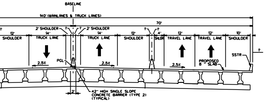

EXISTING GROUND
6:1 MIN
4:1 MAX
6:1 MIN
4:1 MAX
6:1
VARIES (SEE NOTE*)
PROPOSED ROW
EXISTING ROW
8' (USUAL)
10' SHOULDER
EXISTING GROUND
3:1 MAX
4:1 MAX
CURB & GUTTER TYPE "B" (MOUNTABLE) (TYP)

(SOUT

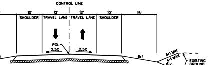

PROPOSED ROW
CONTROL LINE
30'
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
10' SHOULDER
8'
2.5%
2.5%
EXISTING GROUND
6:1 MIN
4:1 MAX
6:1 MIN
4:1 MAX
6:1
4:1

PROPOSED JUGHANDLE

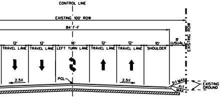

3
PHASE 1
PROPOSED 210' ROW
CONTROL LINE
38' MAINLANES
30' (USUAL) (VARIES 30'-85')
48' (USUAL) (VARIES 9'-117')
4' SHLDR
12' TRAVEL LANE
12' TRAVEL LANE
10' SHOULDER
20'
PGL
2.0%
6:1 MIN
6:1 MIN
6:1
6:1 MIN 4:1 MAX
6:1 MIN 3:1 MAX
4:1 MIN 3:1 MAX
VARIES 1'-3'+
EXISTING GROUND
ACCESS MGMT
PROPOSED ROW


BASELINE
140' (MAINLANES & TRUCK LANES)
70'
2' SHOULDER
1'
12' SHOULDER
14' TRUCK LANE
14' TRUCK LANE
12' SHOULDER
4' SHLDR
12' TRAVEL LANE
12' TRAVEL LANE
10' SHOULDER
2.5%
PGL
SSTR
PROPOSED 8 " SLAB
2'
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)

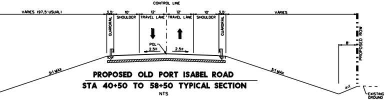
FM 511 OVERPASS (MAINLANES & TRUCKLANES)
TYPICAL SECTION
NTS


CONTROL LINE
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
10' SHOULDER
15'
PGL
2.5%
2.5%
6:1
6:1 MIN 4:1 MAX
6:1 MIN 4:1 MAX
EXISTING GROUND

PROPOSED PORT ACCESS ROAD
STA 35+50 TO 40+50 AND STA 58+50 TO 64+50 TYPICAL SECTION
NTS


CONTROL LINE
EXISTING 100' ROW
84' F-F
12' TRAVEL LANE
12' TRAVEL LANE
16' LEFT TURN LANE
12' TRAVEL LANE
12' TRAVEL LANE
10' SHOULDER
8' (USUAL)
EXISTING ROW
PGL
2.5%
2.5%
3:1 MAX
4:1 MAX
EXISTING GROUND

PROPOSED FM 511 CURBED SEGMENT
H OF OLD PORT ISABEL ROAD TO SH 48)
TYPICAL SECTION
NTS


CONTROL LINE
VARIES (97.5' USUAL)
3.5'
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
10' SHOULDER
3.5'
VARIES
GUARDRAIL
GUARDRAIL
PGL
2.5%
2.5%
10:1
10:1
3:1 MAX
3:1 MAX
8'
4:1
PROPOSED ROW
EXISTING GROUND

PROPOSED OLD PORT ISABEL ROAD
STA 40+50 TO 58+50 TYPICAL SECTION
NTS

SCALE
0 100 200 300 400 500

LEGEND

— — —	PROPOSED ROW
— — —	PROPOSED PORT ACCESS ROAD SET-ASIDE AREA
— · — ·	EXISTING ROW
—II—	ACCESS DENIAL LINE
——	PROPERTY LINE
— ESMT —	EASEMENT LINE
——	PROPOSED MAINLANE
——	PROPOSED FRONTAGE ROAD
——	PROPOSED RAMP
——	PROPOSED INTERSECTING ROAD
——	PROPOSED BRIDGE LIMIT/CONCRETE BARRIER/DRAINAGE STRUCTURES
— · — ·	PROPOSED MAINLANE ALIGNMENT
— · — ·	PROPOSED FRONTAGE ROAD ALIGNMENT
— · — ·	PROPOSED RAMP/DIRECT CONNECTOR ALIGNMENT
— · — ·	INTERSECTING ROAD ALIGNMENT
🟨	PHASE 1
▨	PAVEMENT OBLITERATION
🟦	PHASE 2

CURVE MLNB5111
PI STATION = 4383+25.03
DELTA = 43° 07' 05.95" (LT)
DEGREE OF CURVE = 1° 17' 05.81"
TANGENT = 1,761.77
LENGTH = 3,355.65
RADIUS = 4,459.00
PC STATION = 4365+63.26
PT STATION = 4399+18.91
SUPERELEVATION = 4.1%

CURVE MLSB5111
PI STATION = 5383+57.43
DELTA = 43° 07' 05.95" (LT)
DEGREE OF CURVE = 1° 15' 42.28"
TANGENT = 1,794.17
LENGTH = 3,417.36
RADIUS = 4,541.00
PC STATION = 5365+63.26
PT STATION = 5399+80.62
SUPERELEVATION = 4.1%

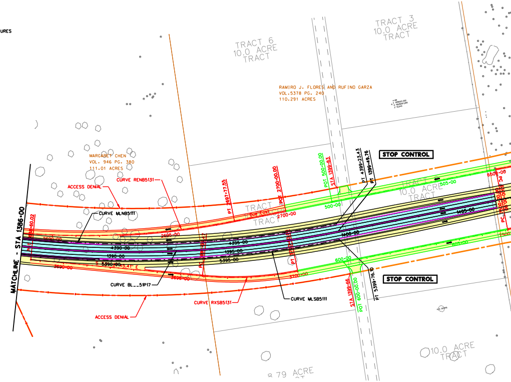
CURVE BL__51P17
PI STATION = 1383+41.23
DELTA = 43° 07' 05.95" (LT)
DEGREE OF CURVE = 1° 16' 23.66"
TANGENT = 1,777.97
LENGTH = 3,386.50
RADIUS = 4,500.00
PC STATION = 1365+63.26
PT STATION = 1399+49.76
SUPERELEVATION = 4.1%

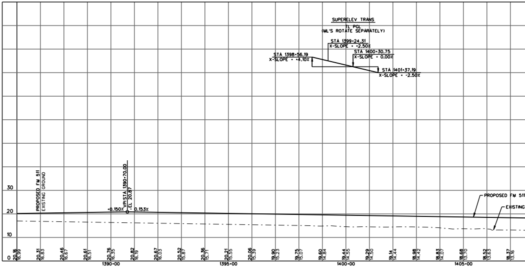
CURVE PDBL__51P18
PI STATION = 1460+64.29
DELTA = 67° 06' 45.13" (RT)
DEGREE OF CURVE = 1° 38' 13.28"
TANGENT = 2,321.54
LENGTH = 4,099.67
RADIUS = 3,500.00
PC STATION = 1437+42.74
PT STATION = 1478+42.42
SUPERELEVATION = 4.9%

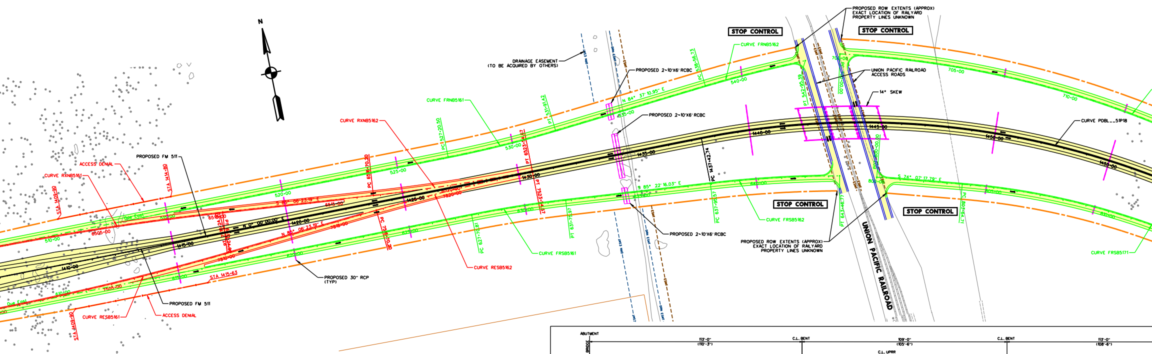
CURVE BL__51P19
PI STATION = 1519+03.30
DELTA = 3° 35' 16.61" (RT)
DEGREE OF CURVE = 1° 08' 04.45"
TANGENT = 158.1710
LENGTH = 316.2386
RADIUS = 5,050.00
PC STATION = 1517+45.13
PT STATION = 1520+61.37
SUPERELEVATION = NORMAL CROWN

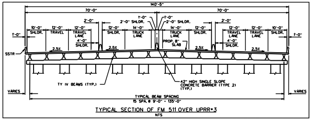
CURVE BL__51P20
PI STATION = 1525+49.24
DELTA = 15° 46' 11.80" (RT)
DEGREE OF CURVE = 4° 46' 28.73"
TANGENT = 166.19
LENGTH = 330.28
RADIUS = 1,200.00
PC STATION = 1523+83.05
PT STATION = 1527+13.33
SUPERELEVATION = 4.5%

CURVE BL__51P21
PI STATION = 1541+25.47
DELTA = 13° 42' 08.10" (LT)
DEGREE OF CURVE = 1° 32' 54.72"
TANGENT = 444.5471
LENGTH = 884.8527
RADIUS = 3,700.00
PC STATION = 1536+80.92
PT STATION = 1545+65.77
SUPERELEVATION = NORMAL CROWN


MATCHLINE - STA 1386+00
TRACT 6 10.0 ACRE TRACT
TRACT 3 10.0 ACRE TRACT
RAMIRO J. FLORES AND RUFINO GARZA
VOL.5378 PG. 240
110.291 ACRES
MARGARET CHEN
VOL. 946 PG. 380
111.01 ACRES
ACCESS DENIAL
CURVE RENB5131
CURVE MLNB5111
PT 2697+77.55
POT 2700+00.00
2700+00
2695+00
2690+00
3690+00
3695+00
3700+00
PT 3700+00.00
4390+00
4395+00
1390+00
1395+00
1400+00
1405+00
5390+00
5395+00
TRACT 4 10.0 ACRE TRACT
POT 500+00.00
STA 1399+83
500+00
505+00
PT 4399+23.43
PT 1399+49.76
STOP CONTROL
600+00
605+00
POT 600+00.00
STA 1399+66
PT 5399+76.10
STOP CONTROL
6500+00
7500+00
CURVE BL__51P17
CURVE RXSB5131
ACCESS DENIAL
CURVE MLSB5111
TRACT 2 10.0 ACRE TRACT
10.0 ACRE TRACT
8.79 ACRE

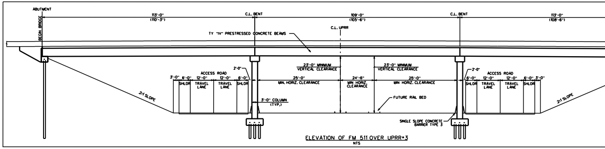



N
STOP CONTROL
STOP CONTROL
STOP CONTROL
STOP CONTROL
PROPOSED ROW EXTENTS (APPROX)
EXACT LOCATION OF RAILYARD
PROPERTY LINES UNKNOWN
DRAINAGE EASEMENT
(TO BE ACQUIRED BY OTHERS)
PROPOSED 2-10'X6' RCBC
PROPOSED 2-10'X6' RCBC
PROPOSED 2-10'X6' RCBC
CURVE FRNB5162
CURVE FRNB5161
CURVE RXNB5162
CURVE RXNB5161
CURVE FRSB5162
CURVE FRSB5161
CURVE RESB5162
CURVE RESB5161
CURVE FRSB5171
CURVE PDBL_51P18
UNION PACIFIC RAILROAD
ACCESS ROADS
14° SKEW
ACCESS DENIAL
ACCESS DENIAL
PROPOSED FM 511
PROPOSED FM 511
PROPOSED 30" RCP
(TYP)
N 84° 37' 10.95" E
S 85° 06' 23.19" E
N 85° 22' 16.03" E
N 0° 00' 00.00" E
N 85° 06' 23.19" E
S 74° 07' 17.79" E
PC 1457+42.74
STA 1414+90
STA 1409+90
STA 1409+90
STA 1415+63
1410+00
1415+00
1420+00
1425+00
1430+00
1435+00
1440+00
1445+00
1450+00
1455+00
UNION PACIFIC RAILROAD
BROWNSVILLE NAVIGATION DISTRICT
LOT 1-16
84.62 ACRES


140'-5"
70'-0"
70'-0"
2'-0"
1'-0"
2'-0" SHLDR.
1'-0"
2'-0" SHLDR.
2'-0"
1'-0"
10'-0" SHLDR.
12'-0" TRAVEL
12'-0" TRAVEL LANE
4'-0" SHLDR.
12'-0" SHLDR.
14'-0" TRUCK LANE
14'-0" TRUCK LANE
12'-0" SHLDR.
12'-0" TRAVEL LANE
12'-0" TRAVEL LANE
10'-0" SHLDR.
4'-0" SHLDR.
1'-0"
PROP. 8" SLAB
SSTR
2.5%
2.5%
2.5%
2.5%
TY IV BEAMS (TYP.)
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYP.)
VARIES
VARIES
TYPICAL BEAM SPACING
15 SPA. @ 9'-0" = 135'-0"

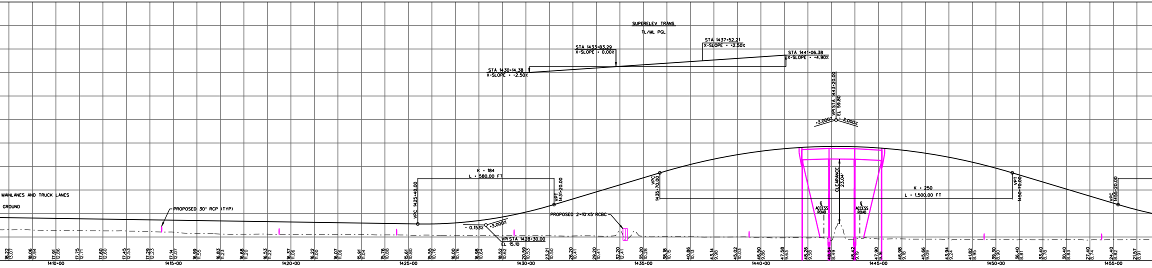
TYPICAL SECTION OF FM 511 OVER UPRR#3

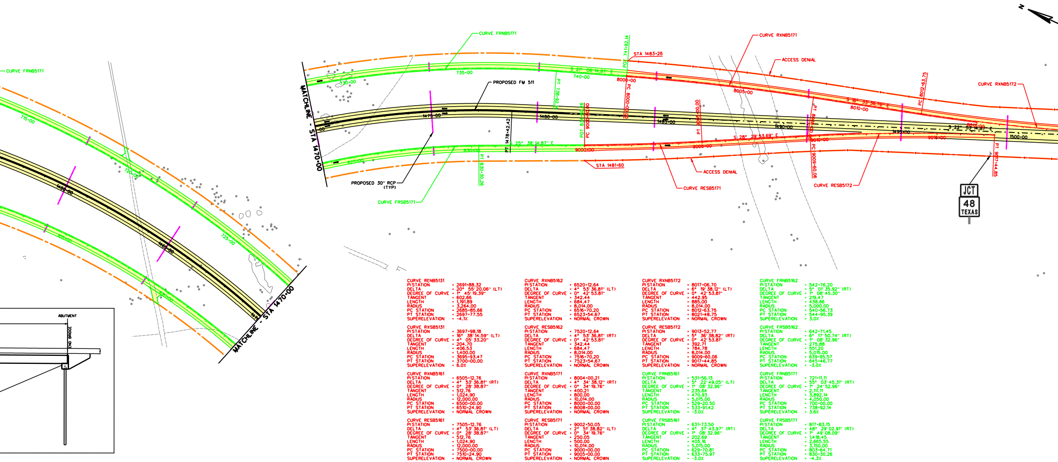
NTS


ABUTMENT
BEGIN BRIDGE
113'-0"
(110'-3")
C.L. BENT
109'-0"
(105'-6")
C.L. BENT
113'-0"
(108'-6")
C.L. UPRR
TY "IV" PRESTRESSED CONCRETE BEAMS
2'-0"
ACCESS ROAD
3'-0" 6'-0" 12'-0" 12'-0" 6'-0"
SHLDR TRAVEL LANE TRAVEL LANE SHLDR
23'-0" MINIMUM VERTICAL CLEARANCE
23'-0" MINIMUM VERTICAL CLEARANCE
25'-0" MIN. HORIZ. CLEARANCE
24'-6" MIN HORIZ. CLEARANCE
25'-0" MIN HORIZ. CLEARANCE
2'-0"
ACCESS ROAD
6'-0" 12'-0" 12'-0" 6'-0" 3'-0"
SHLDR TRAVEL LANE TRAVEL LANE SHLDR
2:1 SLOPE
2:1 SLOPE
3'-0" COLUMN (TYP.)
FUTURE RAIL BED
SINGLE SLOPE CONCRETE BARRIER TYPE 3

ELEVATION OF FM 511 OVER UPRR#3

NTS




N
CURVE FRNB5171
715+00
720+00
725+00
1460+00
1465+00
815+00
820+00
MATCHLINE - STA 1470+00
MATCHLINE - STA 1470+00
ABUTMENT
END BRIDGE
CURVE FRNB5171
730+00
735+00
740+00
S 21° 08' 14.87" E
POT 741+92.14
STA 1483+26
8000+00
PC 8000+00.00
PROPOSED FM 511
PT 738+92.14
1475+00
1480+00
POT 834+80.26
PC 9000+00.00
PT 1478+42.42
S 25° 38' 14.87" E
825+00
830+00
PT 830+30.26
9000+00
STA 1481+60
PROPOSED 30" RCP (TYP)
CURVE FRSB5171
CURVE RXNB5171
ACCESS DENIAL
8005+00
8010+00
S 16° 33' 36.76" E
PC 8012+63.75
CURVE RXNB5172
1485+00
PT 9005+00.00
1490+00
PT 8008+00.00
1495+00
8015+00
S 22° 53' 14.87" E
1500+00
S 28° 29' 53.69" E
9005+00
9010+00
PC 9009+60.06
9015+00
PT 9017+44.85
ACCESS DENIAL
CURVE RESB5171
CURVE RESB5172
JCT
48
TEXAS

CURVE RENB5131
PI STATION = 2691+88.32
DELTA = 20° 55' 20.06" (LT)
DEGREE OF CURVE = 1° 45' 19.39"
TANGENT = 602.66
LENGTH = 1,191.89
RADIUS = 3,264.00
PC STATION = 2685+85.66
PT STATION = 2697+77.55
SUPERELEVATION = -4.1%

CURVE RXSB5131
PI STATION = 3697+98.18
DELTA = 16° 38' 14.59" (LT)
DEGREE OF CURVE = 4° 05' 33.20"
TANGENT = 204.70
LENGTH = 406.53
RADIUS = 1,400.00
PC STATION = 3695+93.47
PT STATION = 3700+00.00
SUPERELEVATION = 6.0%

CURVE RXNB5161
PI STATION = 6505+12.76
DELTA = 4° 53' 36.81" (RT)
DEGREE OF CURVE = 0° 28' 38.87"
TANGENT = 512.76
LENGTH = 1,024.90
RADIUS = 12,000.00
PC STATION = 6500+00.00
PT STATION = 6510+24.90
SUPERELEVATION = NORMAL CROWN

CURVE RESB5161
PI STATION = 7505+12.76
DELTA = 4° 53' 36.81" (LT)
DEGREE OF CURVE = 0° 28' 38.87"
TANGENT = 512.76
LENGTH = 1,024.90
RADIUS = 12,000.00
PC STATION = 7500+00.00
PT STATION = 7510+24.90
SUPERELEVATION = NORMAL CROWN

CURVE RXNB5162
PI STATION = 6520+12.64
DELTA = 4° 53' 36.81" (LT)
DEGREE OF CURVE = 0° 42' 53.81"
TANGENT = 342.44
LENGTH = 684.47
RADIUS = 8,014.00
PC STATION = 6516+70.20
PT STATION = 6523+54.67
SUPERELEVATION = NORMAL CROWN

CURVE RESB5162
PI STATION = 7520+12.64
DELTA = 4° 53' 36.81" (RT)
DEGREE OF CURVE = 0° 42' 53.81"
TANGENT = 342.44
LENGTH = 684.47
RADIUS = 8,014.00
PC STATION = 7516+70.20
PT STATION = 7523+54.67
SUPERELEVATION = NORMAL CROWN

CURVE RXNB5171
PI STATION = 8004+00.21
DELTA = 4° 34' 38.12" (RT)
DEGREE OF CURVE = 0° 34' 19.76"
TANGENT = 400.21
LENGTH = 800.00
RADIUS = 10,014.00
PC STATION = 8000+00.00
PT STATION = 8008+00.00
SUPERELEVATION = NORMAL CROWN

CURVE RESB5171
PI STATION = 9002+50.05
DELTA = 2° 51' 38.82" (LT)
DEGREE OF CURVE = 0° 34' 19.76"
TANGENT = 250.05
LENGTH = 500.00
RADIUS = 10,014.00
PC STATION = 9000+00.00
PT STATION = 9005+00.00
SUPERELEVATION = NORMAL CROWN

CURVE RXNB5172
PI STATION = 8017+06.70
DELTA = 6° 19' 38.12" (LT)
DEGREE OF CURVE = 0° 42' 53.81"
TANGENT = 442.95
LENGTH = 885.00
RADIUS = 8,014.00
PC STATION = 8012+63.75
PT STATION = 8021+48.75
SUPERELEVATION = NORMAL CROWN

CURVE RESB5172
PI STATION = 9013+52.77
DELTA = 5° 36' 38.82" (RT)
DEGREE OF CURVE = 0° 42' 53.81"
TANGENT = 392.71
LENGTH = 784.78
RADIUS = 8,014.00
PC STATION = 9009+60.06
PT STATION = 9017+44.85
SUPERELEVATION = NORMAL CROWN

CURVE FRNB5161
PI STATION = 531+56.13
DELTA = 5° 22' 49.05" (LT)
DEGREE OF CURVE = 1° 08' 32.96"
TANGENT = 235.64
LENGTH = 470.93
RADIUS = 5,015.00
PC STATION = 529+20.50
PT STATION = 533+91.42
SUPERELEVATION = -3.0%

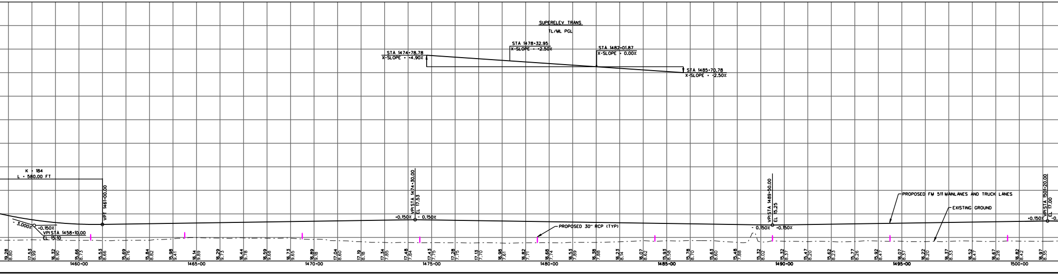
CURVE FRSB5161
PI STATION = 631+73.50
DELTA = 4° 37' 43.97" (RT)
DEGREE OF CURVE = 1° 08' 32.96"
TANGENT = 202.69
LENGTH = 405.16
RADIUS = 5,015.00
PC STATION = 629+70.81
PT STATION = 633+75.97
SUPERELEVATION = -3.0%

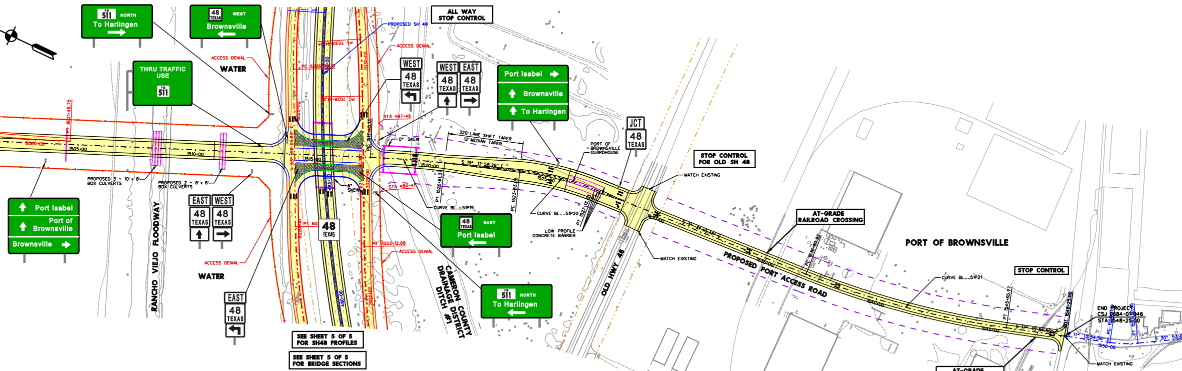
CURVE FRNB5162
PI STATION = 542+76.20
DELTA = 5° 01' 35.92" (RT)
DEGREE OF CURVE = 1° 08' 45.30"
TANGENT = 219.47
LENGTH = 438.66
RADIUS = 5,000.00
PC STATION = 540+56.73
PT STATION = 544+95.39
SUPERELEVATION = 3.0%

CURVE FRSB5162
PI STATION = 642+71.45
DELTA = 6° 17' 50.74" (RT)
DEGREE OF CURVE = 1° 08' 32.96"
TANGENT = 275.88
LENGTH = 551.20
RADIUS = 5,015.00
PC STATION = 639+95.57
PT STATION = 645+46.77
SUPERELEVATION = -3.0%

CURVE FRNB5171
PI STATION = 721+11.11
DELTA = 55° 03' 45.31" (RT)
DEGREE OF CURVE = 1° 24' 52.96"
TANGENT = 2,111.11
LENGTH = 3,892.14
RADIUS = 4,050.00
PC STATION = 700+00.00
PT STATION = 738+92.14
SUPERELEVATION = 3.6%

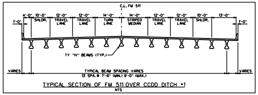
CURVE FRSB5171
PI STATION = 817+83.15
DELTA = 48° 29' 02.91" (RT)
DEGREE OF CURVE = 1° 49' 08.09"
TANGENT = 1,418.45
LENGTH = 2,665.55
RADIUS = 3,150.00
PC STATION = 803+64.71
PT STATION = 830+30.26
SUPERELEVATION = -4.3%


SUPERELEV TRANS
TL/ML PGL
STA 1474+78.78
X-SLOPE = +4.90%
STA 1478+32.95
X-SLOPE = +2.50%
STA 1482+01.87
X-SLOPE = 0.00%
STA 1485+70.78
X-SLOPE = -2.50%
K = 184
L = 580.00 FT
- 3.000%
+0.150%
VPI STA 1458+10.00
EL 15.10
VPT 1461+00.00
VPI STA 1474+30.00
EL 17.53
+0.150%
- 0.150%
PROPOSED 30" RCP (TYP)
VPI STA 1489+50.00
EL 15.25
- 0.150%
+0.150%
PROPOSED FM 511 MAINLANES AND TRUCK LANES
EXISTING GROUND
VPI STA 1501+20.00
EL 17.00
+0.150%
19.28 8.80
17.53 8.99
16.32 8.90
15.66 8.73
15.53 8.66
15.69 8.76
15.84 8.82
15.98 9.41
16.14 9.89
16.29 9.73
16.44 9.78
16.59 9.68
16.73 9.65
16.89 9.18
17.04 8.60
17.19 8.18
17.34 7.85
17.48 7.84
17.43 7.75
17.28 7.75
17.13 7.70
16.98 7.61
16.82 7.71
16.68 7.74
16.53 7.89
16.38 7.88
16.23 8.14
16.07 8.62
15.93 8.58
15.78 8.70
15.63 8.60
15.48 7.88
15.32 8.02
15.32 8.37
15.47 8.20
15.62 8.23
15.77 8.26
15.92 8.47
16.07 8.37
16.22 8.20
16.37 8.33
16.52 8.47
16.67 8.28
16.82 8.42
16.97 8.35
1460+00
1465+00
1470+00
1475+00
1480+00
1485+00
1490+00
1495+00
1500+00

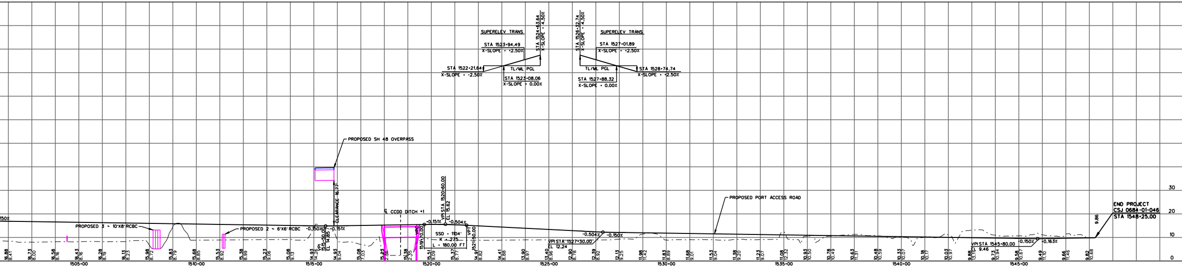

F.M. 511 NORTH To Harlingen
48 TEXAS WEST Brownsville
THRU TRAFFIC USE F.M. 511
ALL WAY STOP CONTROL
PROPOSED SH 48
ACCESS DENIAL
WATER
PC 6026+78.10
PT 7030+94.54
PC 7028+51.28
7030+00
PT 8021+48.75
8020+00
1505+00
1510+00
1515+00
6025+00
490+00
485+00
480+00
7025+00
7020+00
6020+00
PT 1517+45.13
N 63° 56' 05.83" E
STA 487+46
STA 484+41
0° SKEW
6° SKEW
PROPOSED 3 - 10' x 8' BOX CULVERTS
PROPOSED 2 - 6' x 6' BOX CULVERTS
Port Isabel
Port of Brownsville
Brownsville
EAST 48 TEXAS
WEST 48 TEXAS
RANCHO VIEJO FLOODWAY
ACCESS DENIAL
WATER
PT 602
48 TEXAS
PT 7022+12.68
ACCESS DENIAL
EAST 48 TEXAS
WEST 48 TEXAS
WEST 48 TEXAS
EAST 48 TEXAS
Port Isabel
Brownsville
To Harlingen
320' LANE SHIFT TAPER
12' MEDIAN TAPER
1520+00
S 19° 17' 58.26" E
PT 1520+61.37
PC 1523+83.05
1525+00
CURVE BL__51P19
CURVE BL__51P20
PT 1527+13.55
LOW PROFILE CONCRETE BARRIER
48 TEXAS EAST Port Isabel
F.M. 511 NORTH To Harlingen
CAMERON COUNTY DRAINAGE DISTRICT DITCH #1
PORT OF BROWNSVILLE GUARDHOUSE
JCT 48 TEXAS
STOP CONTROL FOR OLD SH 48
MATCH EXISTING
OLD HWY 48
MATCH EXISTING
1530+00
S 3° 31' 46.46" E
AT-GRADE RAILROAD CROSSING
PROPOSED PORT ACCESS ROAD
1535+00
PC 1536+80.92
PORT OF BROWNSVILLE
STOP CONTROL
CURVE BL__51P21
1540+00
PT 1545+65.77
1545+00
S 17° 13' 54.56" E
POT 1548+25.00
END PROJECT CSJ 0684-01-046 STA 1548+25.00
PC
PT
S 30° 53'
1550+00
MATCH EXISTING
AT-GRADE RAILROAD CROSSING

SEE SHEET 5 OF 5 FOR SH48 PROFILES

SEE SHEET 5 OF 5 FOR BRIDGE SECTIONS


C.L. FM 511
4'-0"
10'-0" SHLDR.
12'-0" TRAVEL LANE
12'-0" TRAVEL LANE
14'-0" TURN LANE
14'-0" STRIPED MEDIAN
12'-0" TRAVEL LANE
12'-0" TRAVEL LANE
10'-0" SHLDR.
13'-0"
1'-0"
1'-0"
TY "IV" BEAMS (TYP.)
VARIES
VARIES
TYPICAL BEAM SPACING VARIES
13 SPA. @ 7'-6" (MIN.) 9'-0" (MAX.)

TYPICAL SECTION OF FM 511 OVER CCDD DITCH #1
NTS



SCALE

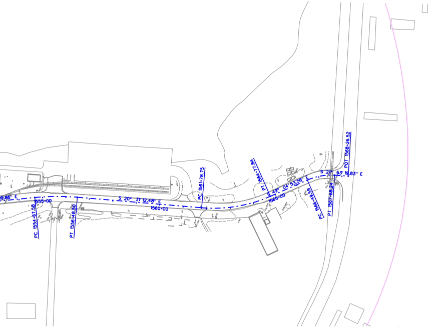
0 100 200 300 400 500

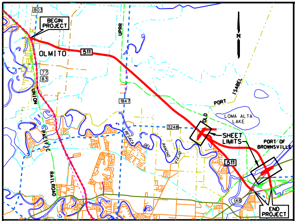
LEGEND

PROPOSED ROW
PROPOSED PORT ACCESS ROAD SET-ASIDE AREA
EXISTING ROW
ACCESS DENIAL LINE
PROPERTY LINE
ESMT EASEMENT LINE
PROPOSED MAINLANE
PROPOSED FRONTAGE ROAD
PROPOSED RAMP
PROPOSED INTERSECTING ROAD
PROPOSED BRIDGE LIMIT/CONCRETE BARRIER/DRAINAGE STRUCTURES
PROPOSED MAINLANE ALIGNMENT
PROPOSED FRONTAGE ROAD ALIGNMENT
PROPOSED RAMP/DIRECT CONNECTOR ALIGNMENT
INTERSECTING ROAD ALIGNMENT

🟨 PHASE 1 ▨ PAVEMENT OBLITERATION

🟦 PHASE 2


9.86" E
PC 1554+67.58
1555+00
PT 1556+48.50
S 20° 31' 12.48" E
1560+00
PC 1561+78.75
PT 1564+77.84
S 49° 04' 53.56" E
1565+00
PC 1566+49.59
PT 1567+68.24
S 21° 53' 19.83" E
POT 1568+26.52


803
BEGIN PROJECT
OLMITO
511
77
83
UPRR
UNION
PACIFIC
RAILROAD
1847
PORT
ISABEL
OLD
LOMA ALTA LAKE
3248
RESACA
RANCHO
VIEJO
SHEET LIMITS
PORT OF BROWNSVILLE
511
48
END PROJECT
N

VICINITY MAP
NTS

TEXAS DEPARTMENT OF TRANSPORTATION

SCHEMATIC LAYOUT

OFFICE OF DISTRICT ENGINEER
PHARR DISTRICT

FM 511
CAMERON COUNTY

LIMITS: FROM: US 77/83
TO: SH 48

C-S-J: 0684-01-046

LENGTH: 9.6 MILES

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

FUNCTIONAL CLASSIFICATION: FREEWAY
HIGHWAY TYPE: SUBURBAN ROADWAY

e_{max}= 6%

DESIGN STANDARDS:
TxDOT ROADWAY DESIGN MANUAL (JULY 2006)

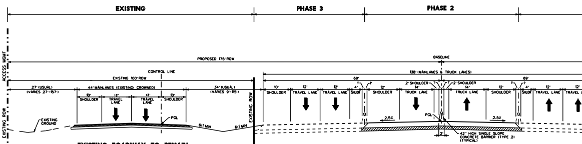
9/11/2006

THE SEAL APPEARING ON THIS
DOCUMENT WAS AUTHORIZED BY
SAMUEL M. WATSON, P.E. #73121
ON SEPTEMBER 8, 2006

SAMUEL M. WATSON
73121

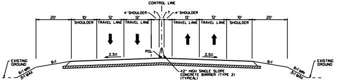
MACTEC
3520 EXECUTIVE CENTER DRIVE
SUITE 200
AUSTIN, TX 78731
(512) 795-0360

ROLL 5 OF 5 (PHASE 1 & 2)

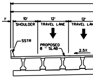

EXISTING
PHASE 3
PHASE 2
ACCESS MGMT
EXISTING ROW
PROPOSED 175' ROW
CONTROL LINE
EXISTING 100' ROW
27' (USUAL) (VARIES 27'-157')
44' MAINLANES (EXISTING: CROWNED)
34' (USUAL) (VARIES 9'-115')
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
10' SHOULDER
EXISTING GROUND
PGL
6:1 MIN
6:1 MIN
EXISTING ROW
BASELINE
138' (MAINLANES & TRUCK LANES)
69'
69'
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
4' SHLDR
1'
1'
12' SHOULDER
14' TRUCK LANE
2' SHOULDER
2' SHOULDER
14' TRUCK LANE
12' SHOULDER
4' SHLDR
12' TRAVEL LANE
12' TRAVEL LANE
2.5%
2.5%
PGL
2'
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)

EXISTING ROADWAY TO REMAIN

PROPOSED FM 511
TYPICAL SECTION
NTS


CONTROL LINE
4' SHOULDER
1'
1'
4' SHOULDER
20'
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
12' TRAVEL LANE
12' TRAVEL LANE
10' SHOULDER
20'
2.5%
2.5%
PGL
EXISTING GROUND
6:1
6:1 MIN
3:1 MAX
6:1
6:1 MIN
3:1 MAX
EXISTING GROUND
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)

PROPOSED SH 48
TYPICAL SECTION
NTS

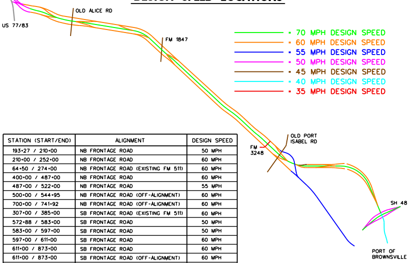

1'
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
SSTR
PROPOSED 8 " SLAB
2.5%

PROP

FM 511 TRAFFIC VOLUMES

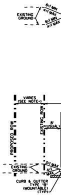
YEAR	ADT	% TRUCKS
2005 (CORRIDOR)	13,400	18.2
2025 (FRONTAGE ROAD ONLY)	2,600	10.1
2025 (MAINLANES ONLY)	21,500	1.2
2025 (TRUCK LANES ONLY)	4,800	100.0

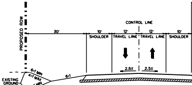
DESIGN SPEED LOCATIONS


US 77/83
OLD ALICE RD
FM 1847
FM 3248
OLD PORT ISABEL RD
SH 48
PORT OF BROWNSVILLE
- 70 MPH DESIGN SPEED
- 60 MPH DESIGN SPEED
- 55 MPH DESIGN SPEED
- 50 MPH DESIGN SPEED
- 45 MPH DESIGN SPEED
- 40 MPH DESIGN SPEED
- 35 MPH DESIGN SPEED

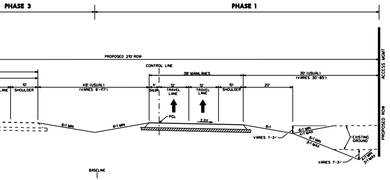
STATION (START/END)	ALIGNMENT	DESIGN SPEED
193+27 / 210+00	NB FRONTAGE ROAD	50 MPH
210+00 / 252+00	NB FRONTAGE ROAD	60 MPH
64+50 / 274+00	NB FRONTAGE ROAD (EXISTING FM 511)	60 MPH
400+00 / 487+00	NB FRONTAGE ROAD	60 MPH
487+00 / 522+00	NB FRONTAGE ROAD	55 MPH
500+00 / 544+95	NB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
700+00 / 741+92	NB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
307+00 / 385+00	SB FRONTAGE ROAD (EXISTING FM 511)	60 MPH
572+88 / 583+00	SB FRONTAGE ROAD	50 MPH
583+00 / 597+00	SB FRONTAGE ROAD	50 MPH
597+00 / 611+00	SB FRONTAGE ROAD	60 MPH
611+00 / 873+00	SB FRONTAGE ROAD	60 MPH
611+00 / 873+00	SB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
600+00 / 645+47	SB FRONTAGE ROAD (OFF-ALIGNMENT)	60 MPH
1045+00 / 1513+00	TRUCK & MAINLANES	70 MPH
1513+00 / 1548+25	PORT ACCESS ROAD	40 MPH
385+00 / 497+98	CURB SEGMENT	55 MPH
	MAINLINE RAMPS	60 MPH
	SH 48	70 MPH
	SH 48 RAMPS	50 MPH
	OLD ALICE ROAD	45 MPH
	FM 1847	60 MPH
	FM 3248	35 MPH
	OLD PORT ISABEL ROAD	45 MPH
	DIRECT CONNECTORS	50 MPH

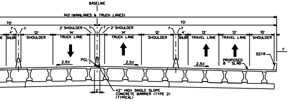
* NOTE: PROW WIDTH VARIES FROM 59.15' TO 0'
FROM STA 394+50 TO 426+06.24, RESPECTIVELY;
NO PROW NEEDED (WIDTH = 0) FROM
STA 426+06.24 TO END CONST.


EXISTING GROUND
6:1 MIN
4:1 MAX
6:1 MIN
4:1 MAX
VARIES (SEE NOTE*)
PROPOSED ROW
EXISTING ROW
8' (USUAL)
EXISTING GROUND
3:1 MAX
4:1 MAX
CURB & GUTTER TYPE "B" (MOUNTABLE) (TYP)


PROPOSED ROW
CONTROL LINE
30'
10' SHOULDER
12' TRAVEL LANE
12' TRAVEL LANE
10' SHOULDER
2.5%
2.5%
6:1
6:1 MIN
4:1 MAX
6:1 MIN
4:1 MAX
EXISTING GROUND

PROPOSED JUGHANDLE

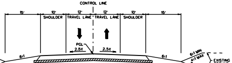

PHASE 3
PHASE 1
PROPOSED 210' ROW
CONTROL LINE
38' MAINLANES
30' (USUAL)
(VARIES 30'-85')
10'
SHOULDER
48' (USUAL)
(VARIES 9'-117')
4'
SHLDR
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
20'
PGL
2.0%
6:1 MIN
6:1 MIN
6:1
6:1 MIN
4:1 MAX
6:1 MIN
3:1 MAX
4:1 MIN
3:1 MAX
VARIES 1'-3'+
VARIES 1'-3'+
EXISTING GROUND
ACCESS MGMT
PROPOSED ROW


BASELINE
140' (MAINLANES & TRUCK LANES)
70'
70'
1'
4'
SHLDR
12'
SHOULDER
2' SHOULDER
14'
TRUCK LANE
2' SHOULDER
14'
TRUCK LANE
12'
SHOULDER
4'
SHLDR
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
2.5%
2.5%
2.5%
PGL
SSTR
PROPOSED 8 " SLAB
1'
2'
42" HIGH SINGLE SLOPE CONCRETE BARRIER (TYPE 2) (TYPICAL)

OSED FM 511 OVERPASS (MAINLANES & TRUCKLANES)

TYPICAL SECTION

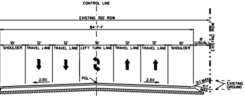
NTS


CONTROL LINE
15'
10'
SHOULDER
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
15'
PGL
2.5%
2.5%
6:1
6:1
6:1 MIN
4:1 MAX
6:1 MIN
4:1 MAX
EXISTING GROUND

PROPOSED PORT ACCESS ROAD

STA 35+50 TO 40+50 AND STA 58+50 TO 64+50 TYPICAL SECTION

NTS

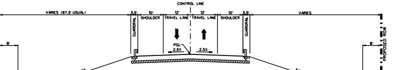

CONTROL LINE
EXISTING 100' ROW
84' F-F
10'
SHOULDER
12'
TRAVEL LANE
12'
TRAVEL LANE
16'
LEFT TURN LANE
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
8' (USUAL)
EXISTING ROW
PGL
2.5%
2.5%
3:1 MAX
4:1 MAX
EXISTING GROUND

PROPOSED FM 511 CURBED SEGMENT

(SOUTH OF OLD PORT ISABEL ROAD TO SH 48)

TYPICAL SECTION

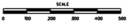
NTS


CONTROL LINE
VARIES (97.5' USUAL)
VARIES
3.5'
10'
SHOULDER
12'
TRAVEL LANE
12'
TRAVEL LANE
10'
SHOULDER
3.5'
GUARDRAIL
GUARDRAIL
PGL
2.5%
2.5%
8'
8'
3:1 MAX
3:1 MAX
4:1
4:1
PROPOSED ROW
EXISTING GROUND

PROPOSED OLD PORT ISABEL ROAD

STA 40+50 TO 58+50 TYPICAL SECTION

NTS


SCALE
0
100
200
300
400
500

LEGEND

— — —	PROPOSED ROW
— — —	PROPOSED PORT ACCESS ROAD SET-ASIDE AREA
— · — · —	EXISTING ROW
—‖—	ACCESS DENIAL LINE
———	PROPERTY LINE
— ESMT —	EASEMENT LINE
———	PROPOSED MAINLANE
———	PROPOSED FRONTAGE ROAD
———	PROPOSED RAMP
———	PROPOSED INTERSECTING ROAD
———	PROPOSED BRIDGE LIMIT/CONCRETE BARRIER/DRAINAGE STRUCTURES
— · — · —	PROPOSED MAINLANE ALIGNMENT
— · — · —	PROPOSED FRONTAGE ROAD ALIGNMENT
— · — · —	PROPOSED RAMP/DIRECT CONNECTOR ALIGNMENT
— · — · —	INTERSECTING ROAD ALIGNMENT
🟨	PHASE 1
▨	PAVEMENT OBLITERATION
🟦	PHASE 2

CURVE BL__S482
PI STATION = 474+32.60
DELTA = 37° 07' 38.22" (RT)
DEGREE OF CURVE = 1° 00' 00.00"
TANGENT = 1,924.17
LENGTH = 3,712.73
RADIUS = 5,729.58
PC STATION = 455+08.43
PT STATION = 492+21.16
SUPERELEVATION = 3.3%

CURVE IR__OPI1
PI STATION = 63+09.94
DELTA = 25° 37' 12.14" (LT)
DEGREE OF CURVE = 8° 40' 52.24"
TANGENT = 150.07
LENGTH = 295.12
RADIUS = 660.00
PC STATION = 61+59.87
PT STATION = 64+54.99
SUPERELEVATION = 6.0%

CURVE R_WBS481
PI STATION = 6014+65.08
DELTA = 24° 21' 08.43" (RT)
DEGREE OF CURVE = 2° 12' 13.26"
TANGENT = 561.01
LENGTH = 1,105.07
RADIUS = 2,600.00
PC STATION = 6009+04.07
PT STATION = 6020+09.15
SUPERELEVATION = 4.8%

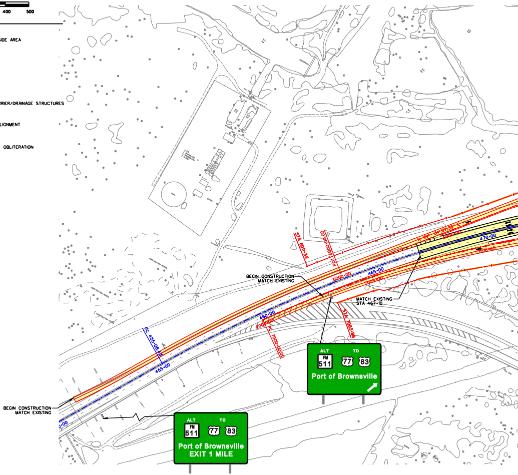
CURVE R_WBS482
PI STATION = 6028+85.83
DELTA = 9° 29' 59.09" (RT)
DEGREE OF CURVE = 2° 17' 30.59"
TANGENT = 207.73
LENGTH = 414.50
RADIUS = 2,500.00
PC STATION = 6026+78.10
PT STATION = 6030+92.60
SUPERELEVATION = 4.8%

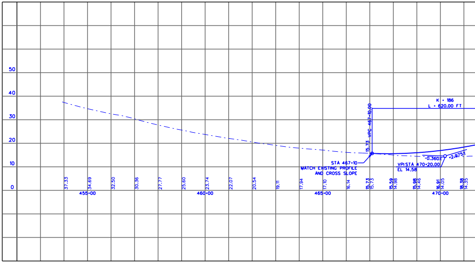
CURVE R_WBS483
PI STATION = 6041+94.50
DELTA = 5° 12' 50.10" (LT)
DEGREE OF CURVE = 0° 31' 49.86"
TANGENT = 491.74
LENGTH = 982.80
RADIUS = 10,800.00
PC STATION = 6037+02.76
PT STATION = 6046+85.56
SUPERELEVATION = NORMAL CROWN

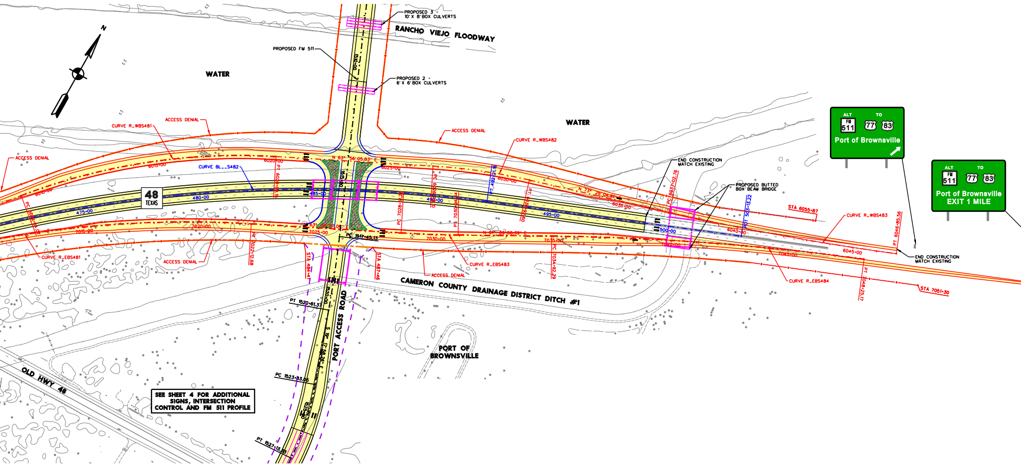
CURVE R_EBS481
PI STATION = 7011+29.18
DELTA = 28° 10' 21.77" (RT)
DEGREE OF CURVE = 1° 16' 23.66"
TANGENT = 1,129.18
LENGTH = 2,212.68
RADIUS = 4,500.00
PC STATION = 7000+00.00
PT STATION = 7022+12.68
SUPERELEVATION = 3.3%

CURVE R_EBS483
PI STATION = 7029+72.83
DELTA = 2° 47' 06.67" (LT)
DEGREE OF CURVE = 1° 08' 45.30"
TANGENT = 121.55
LENGTH = 243.05
RADIUS = 5,000.00
PC STATION = 7028+51.28
PT STATION = 7030+94.34
SUPERELEVATION = 3.0%

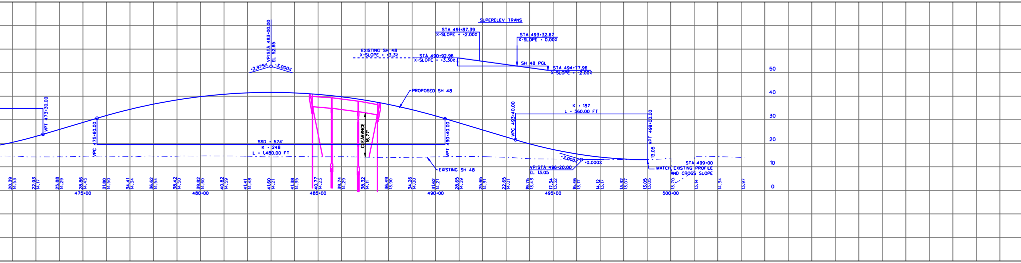
CURVE R_EBS484
PI STATION = 7041+59.58
DELTA = 7° 04' 16.19" (RT)
DEGREE OF CURVE = 0° 31' 49.86"
TANGENT = 667.29
LENGTH = 1,332.88
RADIUS = 10,800.00
PC STATION = 7034+92.29
PT STATION = 7048+25.17
SUPERELEVATION = NORMAL CROWN

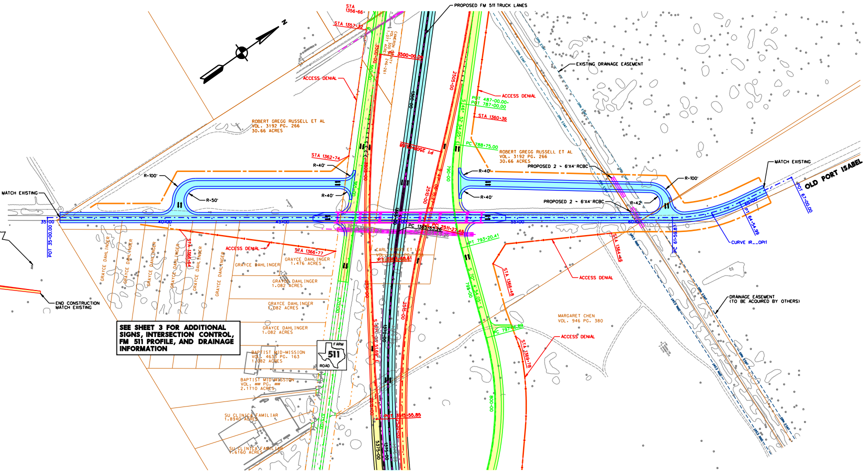

STA 6011+33
POT 6000+00.00
N 39° 34' 57.39" E
6005+00
470+00
7010+00
BEGIN CONSTRUCTION
MATCH EXISTING
6000+00
465+00
7005+00
MATCH EXISTING
STA 467+10
460+00
7000+00
PC 7000+00.00
STA 7003+88
PC 455+08.43
455+00
BEGIN CONSTRUCTION
MATCH EXISTING
ALT
FM 511
TO
77
83
Port of Brownsville
ALT
FM 511
TO
77
83
Port of Brownsville
EXIT 1 MILE



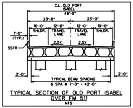

N
PROPOSED 3 - 10' X 8' BOX CULVERTS
RANCHO VIEJO FLOODWAY
PROPOSED FM 511
PROPOSED 2 - 6' X 6' BOX CULVERTS
WATER
WATER
ACCESS DENIAL
CURVE R_WBS481
CURVE R_WBS482
CURVE R_WBS483
CURVE R_EBS481
CURVE R_EBS483
CURVE R_EBS484
CURVE BL_S482
48
TEXAS
475+00
480+00
485+00
490+00
495+00
500+00
6015+00
6020+00
6025+00
6030+00
6035+00
6040+00
6045+00
7020+00
7025+00
7030+00
7035+00
7040+00
7045+00
N 63° 56' 05.83" E
N 73° 26' 04.91" E
PT 1517+45.13
PT 1520+61.37
PC 1523+83.05
PT 1527+13.85
STA 484+41
STA 487+46
STA 6055+87
STA 7061+30
PT 6046+85.56
PT 7048+25.17
END CONSTRUCTION MATCH EXISTING
END CONSTRUCTION MATCH EXISTING
PROPOSED BUTTED BOX BEAM BRIDGE
ALT FM 511 TO 77 83
Port of Brownsville
ALT FM 511 TO 77 83
Port of Brownsville
EXIT 1 MILE
CAMERON COUNTY DRAINAGE DISTRICT DITCH #1
PORT ACCESS ROAD
PORT OF BROWNSVILLE
OLD HWY 48

SEE SHEET 4 FOR ADDITIONAL SIGNS, INTERSECTION CONTROL AND FM 511 PROFILE


SUPERELEV TRANS
STA 491+87.39
X-SLOPE = +2.00%
STA 493+32.67
X-SLOPE = 0.00%
EXISTING SH 48
X-SLOPE = +3.3%
STA 490+92.96
X-SLOPE = +3.30%
SH 48 PGL
STA 494+77.96
X-SLOPE = -2.00%
VPI STA 483+00.00
EL 52.65
+2.975%
-3.000%
PROPOSED SH 48
VPT 473+30.00
VPC 475+60.00
VPT 490+40.00
VPC 493+40.00
VPT 499+00.00
SSD = 574'
K = 248
L = 1,480.00 FT
K = 187
L = 560.00 FT
CLEARANCE 16.77'
-3.000%
+0.000%
13.05
EXISTING SH 48
VPI STA 496+20.00
EL 13.05
MATCH EXISTING PROFILE AND CROSS SLOPE
STA 499+00
50
40
30
20
10
0
475+00
480+00
485+00
490+00
495+00
500+00

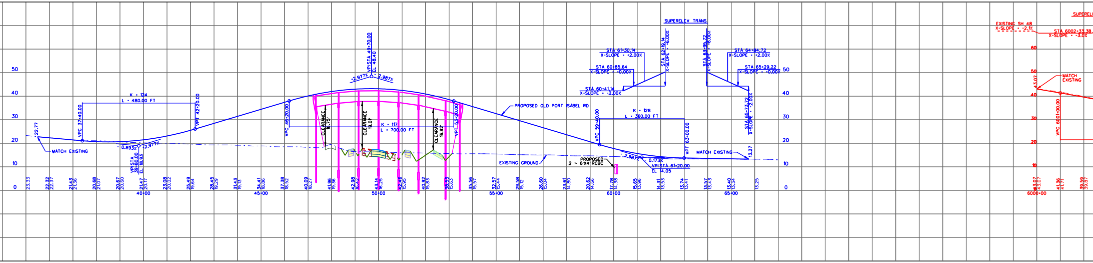

PROPOSED FM 511 TRUCK LANES
EXISTING DRAINAGE EASEMENT
ACCESS DENIAL
ROBERT GREGG RUSSELL ET AL
VOL. 3192 PG. 266
30.66 ACRES
PROPOSED 2 ~ 6'X4' RCBC
MATCH EXISTING
OLD PORT ISABEL RD
R=100'
R=50'
R=40'
R=42'
STA 1356+66
STA 1357+32
STA 1360+36
STA 1362+74
STA 1366+77
STA 1366+46
STA 1368+48
STA 1369+78
PC 788+75.00
PT 793+20.41
PC 797+16.60
POT 487+00.00=
POT 787+00.00
POT 35+00.00
POT 67+00.00
PC 1365+63.26
PC 2511+27.48
PT 61+59.87
PT 64+54.89
CURVE IR__OPI1
GRAYCE DAHLINGER
1.476 ACRES
1.082 ACRES
CARL MILLER ET UX
BAPTIST MID-MISSION
VOL. 4630 PG. 163
2.1710 ACRES
SU CLINICA FAMILIAR
1.8940 ACRES
7.6160 ACRES
MARGARET CHEN
VOL. 946 PG. 380
DRAINAGE EASEMENT
(TO BE ACQUIRED BY OTHERS)
END CONSTRUCTION
MATCH EXISTING
FARM 511 ROAD
35+00
40+00
45+00
50+00
55+00
60+00
65+00
N

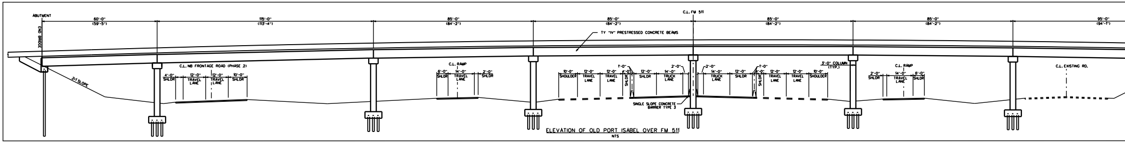
SEE SHEET 3 FOR ADDITIONAL SIGNS, INTERSECTION CONTROL, FM 511 PROFILE, AND DRAINAGE INFORMATION


C.L. OLD PORT ISABEL
46'-0"
23'-0"
23'-0"
10'-0"
SHLDR.
12'-0"
TRAVEL LANE
12'-0"
TRAVEL LANE
10'-0"
SHLDR.
1'-0"
(TYP.)
SSTR
2.5%
2.5%
2'-0"
2'-0"
TYPICAL BEAM SPACING
6 SPA. @ 7'-0" = 42'-0"

TYPICAL SECTION OF OLD PORT ISABEL OVER FM 511

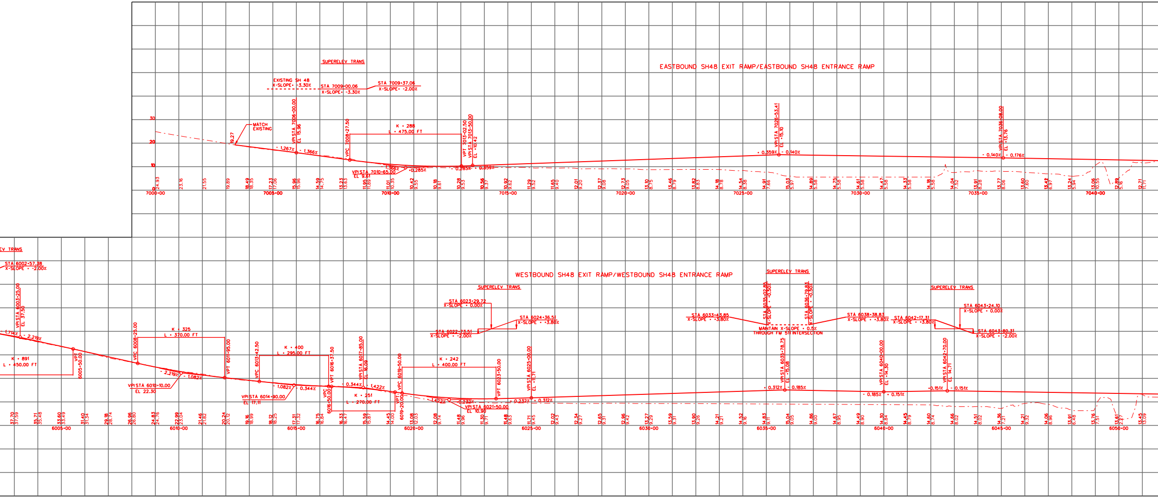
NTS

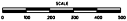

SUPERELEV TRANS
STA 60+41.14
X-SLOPE = -2.00%
STA 60+85.64
X-SLOPE = +0.00%
STA 61+30.14
X-SLOPE = +2.00%
STA 62+19.14
X-SLOPE = +6.00%
STA 63+95.72
X-SLOPE = +6.00%
STA 64+84.72
X-SLOPE = +2.00%
STA 65+29.22
X-SLOPE = +0.00%
STA 65+73.72
X-SLOPE = -2.00%
VPI STA 49+70.00
EL 48.40
-2.977%
2.987%
K = 124
L = 480.00 FT
VPC 37+40.00
VPT 42+20.00
VPI STA 39+80.00
EL 18.93
-0.893%
2.977%
VPC 46+20.00
VPT 53+20.00
K = 117
L = 700.00 FT
CLEARANCE 16.75
CLEARANCE 19.01
CLEARANCE 16.92
PROPOSED OLD PORT ISABEL RD
K = 128
L = 360.00 FT
VPC 59+40.00
VPT 63+00.00
VPI STA 61+20.00
EL 14.05
-2.987%
-0.173%
PROPOSED
2 ~ 6'X4' RCBC
EXISTING GROUND
MATCH EXISTING
22.77
13.27
40+00
45+00
50+00
55+00
60+00
65+00
0
10
20
30
40
50
EXISTING SH 48
X-SLOPE = -2.1%
STA 6002+33.38
X-SLOPE = -3.0%
MATCH EXISTING
VPC 6001+00.00
6000+00
SUPERELEV


ABUTMENT
60'-0" (59'-5")
115'-0" (113'-4")
85'-0" (84'-2")
85'-0" (84'-2")
85'-0" (84'-2")
85'-0" (84'-2")
95'-0" (94'-1")
C.L. FM 511
TY "IV" PRESTRESSED CONCRETE BEAMS
C.L. NB FRONTAGE ROAD (PHASE 2)
2:1 SLOPE
4'-0" SHLDR
12'-0" TRAVEL LANE
12'-0" TRAVEL LANE
10'-0" SHLDR
C.L. RAMP
6'-0" SHLDR
14'-0" TRAVEL LANE
2'-0" SHLDR
10'-0" SHOULDER
12'-0" TRAVEL LANE
12'-0" TRAVEL LANE
1'-0"
4'-0" SHLDR
12'-0" SHLDR
14'-0" TRUCK LANE
2'-0"
SINGLE SLOPE CONCRETE BARRIER TYPE 3
14'-0" TRUCK LANE
12'-0" SHLDR
6'-0" SHLDR
12'-0" TRAVEL LANE
12'-0" TRAVEL LANE
10'-0" SHOULDER
3'-0" COLUMN (TYP.)
C.L. RAMP
2'-0" SHLDR
14'-0" TRAVEL LANE
6'-0" SHLDR
C.L. EXISTING RD.

ELEVATION OF OLD PORT ISABEL OVER FM 511

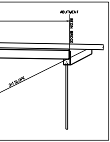
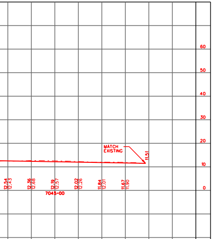
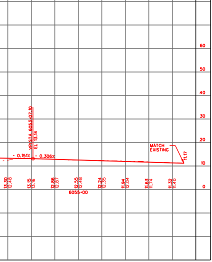
NTS


EASTBOUND SH48 EXIT RAMP/EASTBOUND SH48 ENTRANCE RAMP
SUPERELEV TRANS
EXISTING SH 48 X-SLOPE= -3.30%
STA 7009+00.06 X-SLOPE= -3.30%
STA 7009+37.06 X-SLOPE= -2.00%
MATCH EXISTING
VPI STA 7006+00.00 EL 15.96
- 1.267%
- 1.366%
VPC 7008+27.50
K = 288
L = 475.00 FT
VPT 7013+02.50
VPI STA 7013+50.00 EL = 10.42
VPI STA 7010+65.00 EL 9.61
-1.366%
+0.285%
+0.285%
+ 0.359%
VPI STA 7028+53.41 EL =15.10
+ 0.359%
- 0.140%
VPI STA 7036+08.00 EL =13.76
- 0.140%
- 0.176%
30
20
10
0
7000+00
7005+00
7010+00
7015+00
7020+00
7025+00
7030+00
7035+00
7040+00
WESTBOUND SH48 EXIT RAMP/WESTBOUND SH48 ENTRANCE RAMP
SUPERELEV TRANS
STA 6002+57.38 X-SLOPE = -2.00%
VPI STA 6003+25.00 EL 37.50
-1.714%
- 2.219%
K = 891
L = 450.00 FT
VPT 6005+50.00
VPC 6008+25.00
K = 325
L = 370.00 FT
VPT 6011+95.00
- 2.219%
- 1.082%
VPI STA 6010+10.00 EL 22.30
VPC 6013+42.50
K = 400
L = 295.00 FT
VPT 6016+37.50
- 1.082%
- 0.344%
VPI STA 6014+90.00 EL 17.11
VPC 6016+50.00
K = 251
L = 270.00 FT
VPI STA 6017+85.00 EL 16.09
- 0.344%
- 1.422%
VPT 6019+20.00
VPC 6019+50.00
K = 242
L = 400.00 FT
- 1.422%
+ 0.232%
VPI STA 6021+50.00 EL 10.90
VPT 6023+50.00
STA 6023+29.72 X-SLOPE = 0.00%
STA 6022+73.51 X-SLOPE = -2.00%
STA 6024+36.51 X-SLOPE = +3.80%
VPI STA 6025+00.00 EL =11.71
+ 0.232%
+ 0.312%
STA 6033+43.85 X-SLOPE = +3.80%
STA 6035+02.85 X-SLOPE = -0.50%
STA 6036+79.83 X-SLOPE = -0.50%
MAINTAIN X-SLOPE = 0.5% THROUGH FM 511 INTERSECTION
STA 6038+38.83 X-SLOPE = +3.80%
STA 6042+17.31 X-SLOPE = +3.80%
STA 6043+24.10 X-SLOPE = 0.00%
STA 6043+80.31 X-SLOPE = -2.00%
VPI STA 6035+78.75 EL =15.08
+ 0.312%
- 0.185%
VPI STA 6040+00.00 EL =14.30
- 0.185%
+ 0.151%
VPI STA 6042+70.00 EL =14.71
+ 0.151%
- 0.151%
6005+00
6010+00
6015+00
6020+00
6025+00
6030+00
6035+00
6040+00
6045+00
6050+00


SCALE
0
100
200
300
400
500

LEGEND

— — —	PROPOSED ROW
— — —	PROPOSED PORT ACCESS ROAD SET-ASIDE AREA
— · — ·	EXISTING ROW
—Ⅲ—	ACCESS DENIAL LINE
——	PROPERTY LINE
— ESMT —	EASEMENT LINE
——	PROPOSED MAINLANE
——	PROPOSED FRONTAGE ROAD
——	PROPOSED RAMP
——	PROPOSED INTERSECTING ROAD
——	PROPOSED BRIDGE LIMIT/CONCRETE BARRIER/DRAINAGE STRUCTURES
— · — ·	PROPOSED MAINLANE ALIGNMENT
— · — ·	PROPOSED FRONTAGE ROAD ALIGNMENT
— · — ·	PROPOSED RAMP/DIRECT CONNECTOR ALIGNMENT
— · — ·	INTERSECTING ROAD ALIGNMENT
🟨	PHASE 1
▨	PAVEMENT OBLITERATION
🟦	PHASE 2


ABUTMENT
BEGIN BRIDGE
2:1 SLOPE