Beginning chain WURZBACH description

Point 100 X 2,147,176.3796 Y 13,720,262.7020 Sta 10+00.00

Course from 100 to 101 N 25° 29′ 02.96" E Dist 4,521.1649

Point 101 X 2,149,121.6626 Y 13,724,343.9770 Sta 55+21.16

Course from 101 to PC WURZBACH-1 N 24° 46′ 00.37" E Dist 2,080.1592

Curve Data

Curve WURZBACH-1
P.I. Station 87+04.77 X 2,150,455.3351 Y 13,727,234.7539
Delta = 51° 25′ 07.17" (LT)
Degree = 2° 30′ 00.00"
Tangent = 1,103.4435
Length = 2,056.7464
Radius = 2,291.8312
External = 251.8036
Long Chord = 1,988.4194
Mid. Ord. = 226.8766
P.C. Station 76+01.32 X 2,149,993.0944 Y 13,726,232.8044
P.T. Station 96+58.07 X 2,149,960.3849 Y 13,728,220.9547
C.C. X 2,147,912.0645 Y 13,727,192.9110
Back = N 24° 46′ 00.37" E
Ahead = N 26° 39′ 06.80" W
Chord Bear = N 0° 56′ 33.21" W

Course from PT WURZBACH-1 to 102 N 26° 39′ 06.80" W Dist 706.8837

Point 102 X 2,149,643.2990 Y 13,728,852.7309 Sta 103+64.95

Ending chain WURZBACH description

Beginning profile HW*PROP description:

		STATION	ELEV	GRADE	TOTAL L	BACK L	AHEAD L
VPI	1	68+50.00	721.7900				
VPC		75+75.00	714.1035	-1.0602	K = 192.6		
Low Point		77+79.22	713.0209				
VPI	2	78+00.00	711.7180		450.0000	225.0000	225.0000
VPT		80+25.00	714.5890	1.2760			
VPC		80+75.00	715.2270	1.2760	K = 164.8		
VPI	3	81+50.00	716.1840		150.0000	75.0000	75.0000
VPT		82+25.00	717.8234	2.1860			
VPI	4	88+33.00	731.1141	2.1860			

Ending profile HW*PROP description

Beginning chain RAMP1 description

Point 110 X 2,150,042.7036 Y 13,726,193.5281 Sta 10+00.00

Course from 110 to PC RAMP1-1 N 24° 46′ 00.37" E Dist 238.4816

Curve Data

Curve RAMP1-1
P.I. Station 14+14.34 X 2,150,216.2817 Y 13,726,569.7585
Delta = 60° 45′ 27.29" (RT)
Degree = 19° 05′ 54.94"
Tangent = 175.8597
Length = 318.1259
Radius = 300.0000
External = 47.7451
Long Chord = 303.4287
Mid. Ord. = 41.1897
P.C. Station 12+38.48 X 2,150,142.6096 Y 13,726,410.0743
P.T. Station 15+56.61 X 2,150,391.6051 Y 13,726,583.4818
C.C. X 2,150,415.0158 Y 13,726,284.3966
Back = N 24° 46′ 00.37" E
Ahead = N 85° 31′ 27.66" E
Chord Bear = N 55° 08′ 44.02" E

Ending chain RAMP1 description

Beginning chain RAMP2 description

Point 111 X 2,150,371.8136 Y 13,726,628.8537 Sta 10+00.00

Course from 111 to 112 S 88° 49′ 38.44" W Dist 2.2061

Point 112 X 2,150,369.6079 Y 13,726,628.8085 Sta 10+02.21

Course from 112 to PC RAMP2-1 N 83° 15′ 43.86" W Dist 98.9582

Curve Data

Curve RAMP2-1
P.I. Station 11+82.55 X 2,150,190.5126 Y 13,726,649.9672
Delta = 94° 40′ 27.70" (RT)
Degree = 76° 23′ 39.74"
Tangent = 81.3826
Length = 123.9285
Radius = 75.0000
External = 35.6713
Long Chord = 110.3032
Mid. Ord. = 24.1738
P.C. Station 11+01.16 X 2,150,271.3332 Y 13,726,640.4189
P.T. Station 12+25.09 X 2,150,206.6154 Y 13,726,729.7409
C.C. X 2,150,280.1326 Y 13,726,714.9009
Back = N 83° 15′ 43.86" W
Ahead = N 11° 24′ 43.84" E
Chord Bear = N 35° 55′ 30.01" W

Ending chain RAMP2 description

Beginning profile RAMP2 description:

		STATION	ELEV	GRADE	TOTAL L	BACK L	AHEAD L
VPI	1	10+00.00	709.3300				
VPC		10+87.50	713.2208	4.4467	K = 56.2	SSD = 548.0	
VPI	2	11+50.00	716.0000		125.0000	62.5000	62.5000
VPT		12+12.50	717.3900	2.2240			
VPI	3	12+25.09	717.6700	2.2240			

Ending profile RAMP2 description

Beginning profile RAMP1 description:

		STATION	ELEV	GRADE	TOTAL L	BACK L	AHEAD L
VPI	1	10+00.00	714.1800				
VPI	2	11+00.00	713.9700	-0.2100			
VPI	3	12+00.00	714.1200	0.1500			
VPI	4	12+38.48	714.2700	0.3898			
VPC		13+09.07	714.5452	0.3898	K = 26.7	SSD = 338.0	
High Point		13+19.48	714.5655				
VPI	5	13+59.07	714.7401		100.0000	50.0000	50.0000
VPT		14+09.07	713.0619	-3.3563			
VPI	6	15+00.00	710.0100	-3.3563			
VPI	7	15+56.61	708.1100	-3.3564			

Ending profile RAMP1 description

Beginning chain RITTIMAN description

Point 103 X 2,149,551.1626 Y 13,726,541.9744 Sta 10+00.00

Course from 103 to PC RITTIMAN-1 N 89° 15′ 54.69" E Dist 222.1856

Curve Data

Curve RITTIMAN-1
P.I. Station 12+78.11 X 2,149,829.2534 Y 13,726,545.5411
Delta = 6° 24′ 07.98" (LT)
Degree = 5° 43′ 46.48"
Tangent = 55.9281
Length = 111.7398
Radius = 1,000.0000
External = 1.5628
Long Chord = 111.6816
Mid. Ord. = 1.5603
P.C. Station 12+22.19 X 2,149,773.3299 Y 13,726,544.8239
P.T. Station 13+33.93 X 2,149,884.7481 Y 13,726,552.4898
C.C. X 2,149,760.5054 Y 13,727,544.7416
Back = N 89° 15′ 54.69" E
Ahead = N 82° 51′ 46.72" E
Chord Bear = N 86° 03′ 50.70" E

Course from PT RITTIMAN-1 to 104 N 82° 51′ 46.72" E Dist 169.0972

Point 104 X 2,150,052.5351 Y 13,726,573.4988 Sta 15+03.02

Course from 104 to 105 N 88° 04′ 16.81" E Dist 129.8574

Point 105 X 2,150,182.3189 Y 13,726,577.8692 Sta 16+32.88

Course from 105 to PC RITTIMAN-2 N 81° 57′ 57.38" E Dist 153.5226

Curve Data

Curve RITTIMAN-2
P.I. Station 18+46.56 X 2,150,393.9013 Y 13,726,607.7335
Delta = 7° 38′ 53.04" (RT)
Degree = 6° 21′ 58.31"
Tangent = 60.1571
Length = 120.1355
Radius = 900.0000
External = 2.0082
Long Chord = 120.0464
Mid. Ord. = 2.0038
P.C. Station 17+86.40 X 2,150,334.3346 Y 13,726,599.3258
P.T. Station 19+06.54 X 2,150,454.0571 Y 13,726,608.1387
C.C. X 2,150,460.1202 Y 13,725,708.1592
Back = N 81° 57′ 57.38" E
Ahead = N 89° 36′ 50.41" E
Chord Bear = N 85° 47′ 23.90" E

Course from PT RITTIMAN-2 to 106 N 89° 36′ 50.41" E Dist 883.3655

Point 106 X 2,151,337.4025 Y 13,726,614.0898 Sta 27+89.90

Ending chain RITTIMAN description

Beginning profile RITT_PROP description:

		STATION	ELEV	GRADE	TOTAL L	BACK L	AHEAD L
VPI	1	14+30.52	713.7882				
VPC		14+37.50	713.6266	-2.3146	K = 25.7		
Low Point		14+97.02	712.9378				
VPI	2	15+00.00	712.1800		125.0000	62.5000	62.5000
VPT		15+62.50	713.7717	2.5467			
VPC		15+75.00	714.0900	2.5467	K = 22.9	SSD = 239.8	
High Point		16+33.35	714.8330				
VPI	3	16+50.00	716.0000		150.0000	75.0000	75.0000
VPT		17+25.00	713.0000	-4.0000			
VPC		17+50.00	712.0000	-4.0000	K = 93.4		
VPI	4	18+50.00	708.0000		200.0000	100.0000	100.0000
VPT		19+50.00	706.1409	-1.8591			
VPI	5	21+50.00	702.4228	-1.8591			

Ending profile RITT_PROP description

STATE OF TEXAS
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FORT SAM HOUSTON TRANSPORTATION PROJECTS

HORIZONTAL ALIGNMENT DATA SHEET

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc	DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH / CHKD. BY: RE	SHEET NO.: 139

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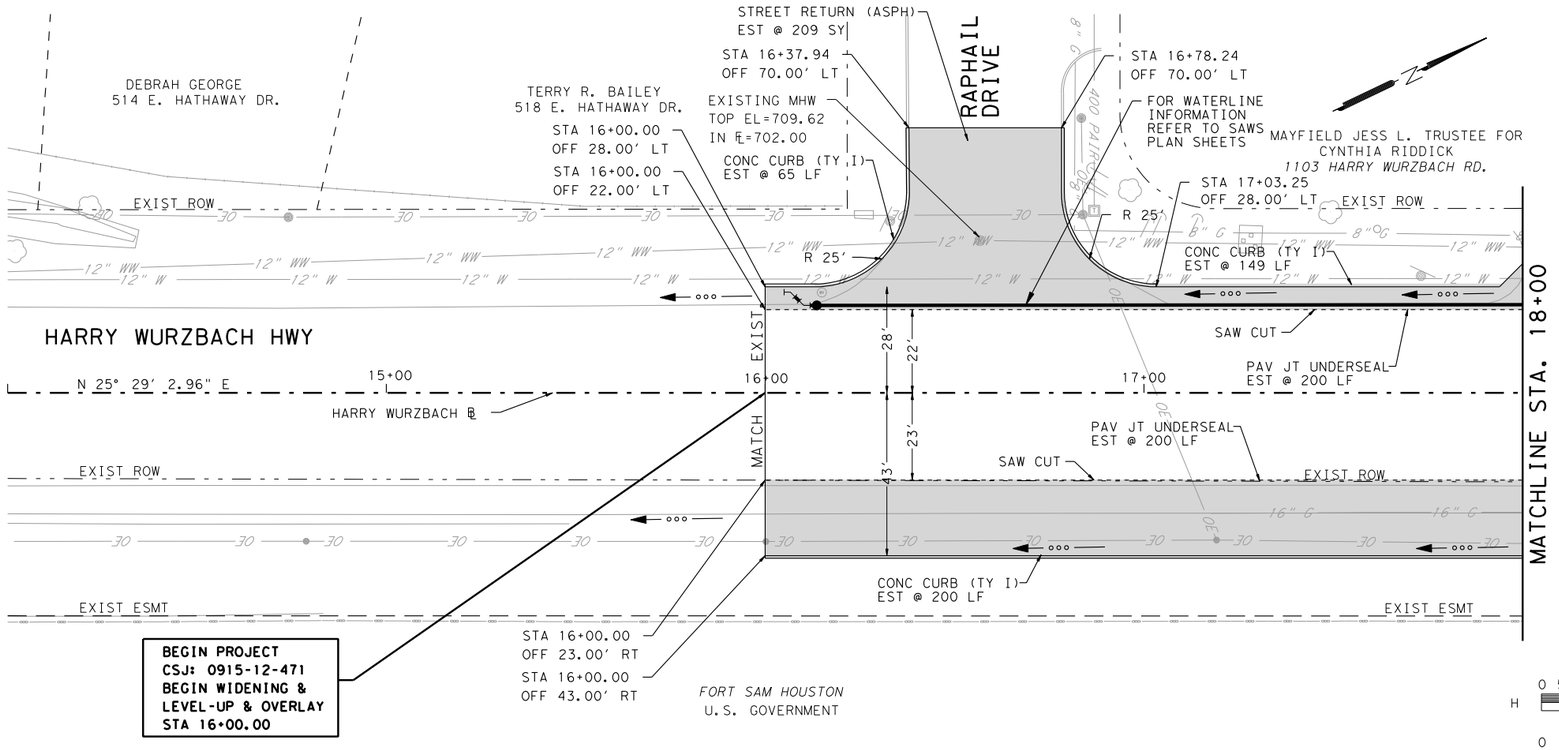

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER FL LEFT
- GUTTER FL RIGHT

H 0 5 10 20 40 60 — 1" = 40'

V 0 5 10 15 — 1" = 10'

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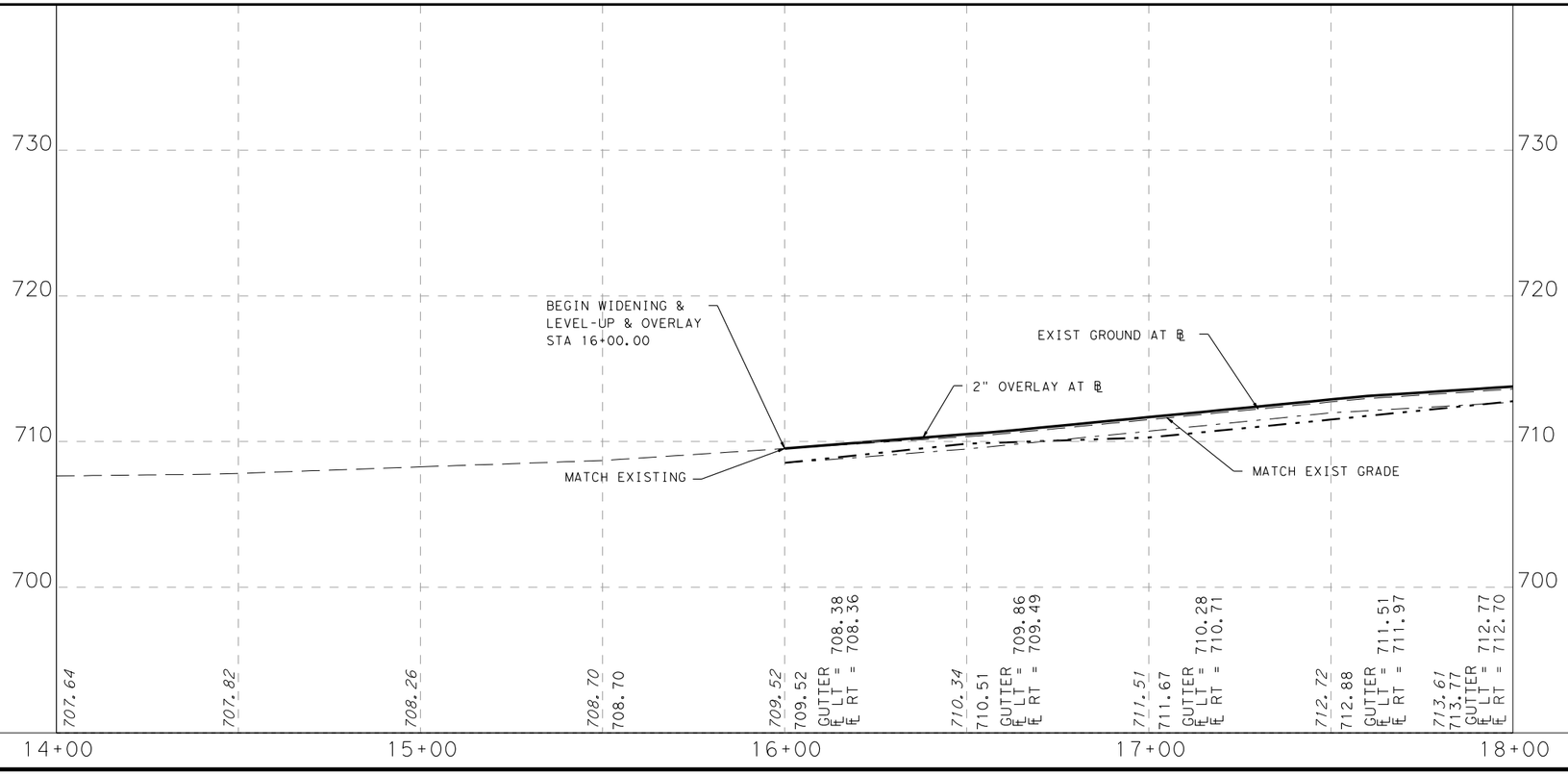

CSJ 915-12-471

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	2.00
EXCAVATION (ROADWAY)	CY	153.00
SUBGRADE WIDENING (ORD COMP)	STA	2.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	901.67
LIME (HYDRATED LIME (DRY))	TON	33.90
LIME TRT (EXST MATL) (6")	SY	901.67
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	538.53
AGGR (TY-PB GR-4)	CY	17.95
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	55.00
D-GR HMA(QCQA) TY-B PG64-22	TON	572.51
D-GR HMA(QCQA) TY-C PG64-22	TON	197.46
PLANE ASPH CONC PAV(0" TO 2")	SY	1,000.00
PAV JT UNDERSEAL (48")	LF	400.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	414.00
DRIVEWAYS (CONC)	SY	0.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	0.00
CONC DIRECTIONAL ISLAND	SY	0.00

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PLAN AND PROFILE

BURR RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 140

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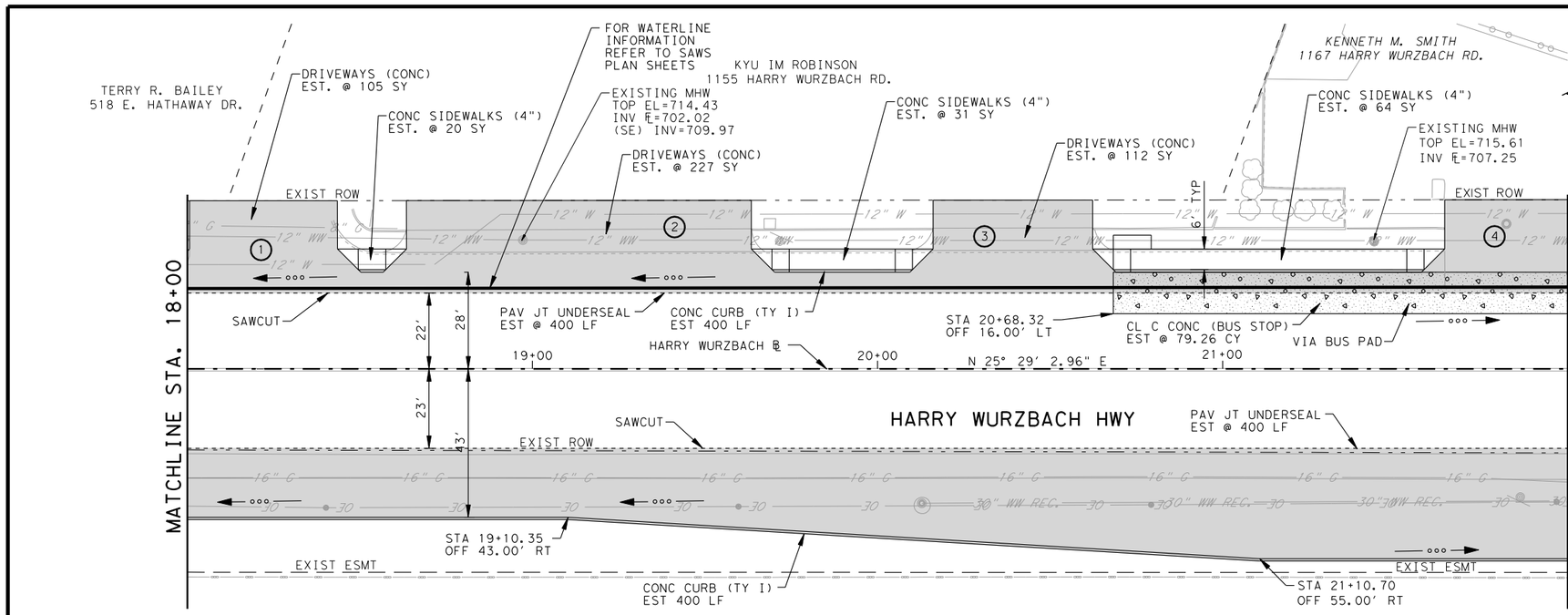

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER FL LEFT
- GUTTER FL RIGHT

H: 0 5 10 20 40 60 — 1" = 40'

V: 0 5 10 15 — 1" = 10'

STATE OF TEXAS
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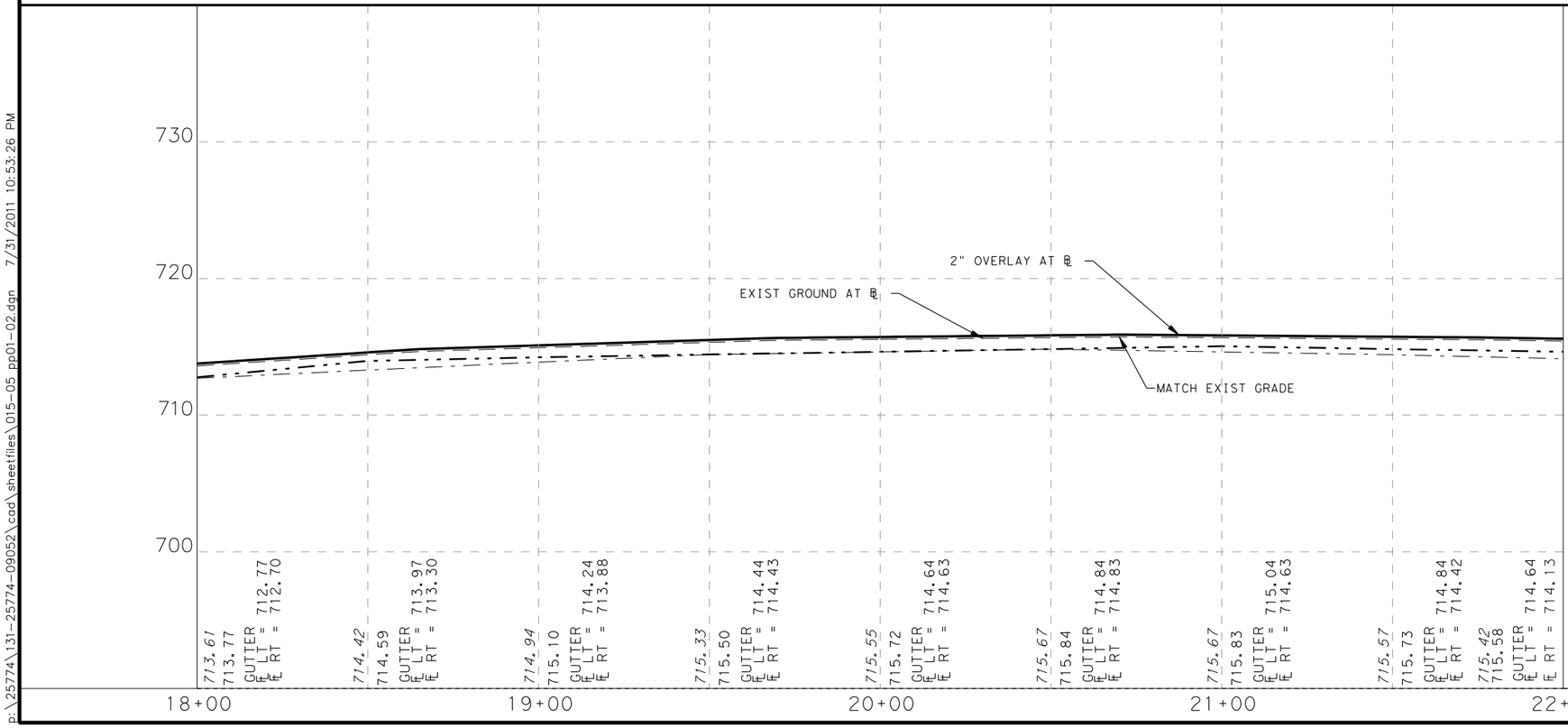

CSJ 915-12-471

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	4.00
EXCAVATION (ROADWAY)	CY	411.00
SUBGRADE WIDENING (ORD COMP)	STA	4.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	1,622.89
LIME (HYDRATED LIME (DRY))	TON	61.02
LIME TRT (EXST MATL) (6")	SY	1,622.89
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	1,022.43
AGGR (TY-PB GR-4)	CY	34.08
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	110.00
D-GR HMA(QCQA) TY-B PG64-22	TON	1,019.19
D-GR HMA(QCQA) TY-C PG64-22	TON	374.89
PLANE ASPH CONC PAV(0" TO 2")	SY	2,000.00
PAV JT UNDERSEAL (48")	LF	800.00
CL C CONC (BUS STOP)	CY	79.26
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	800.00
DRIVEWAYS (CONC)	SY	444.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	104.00
CONC DIRECTIONAL ISLAND	SY	0.00

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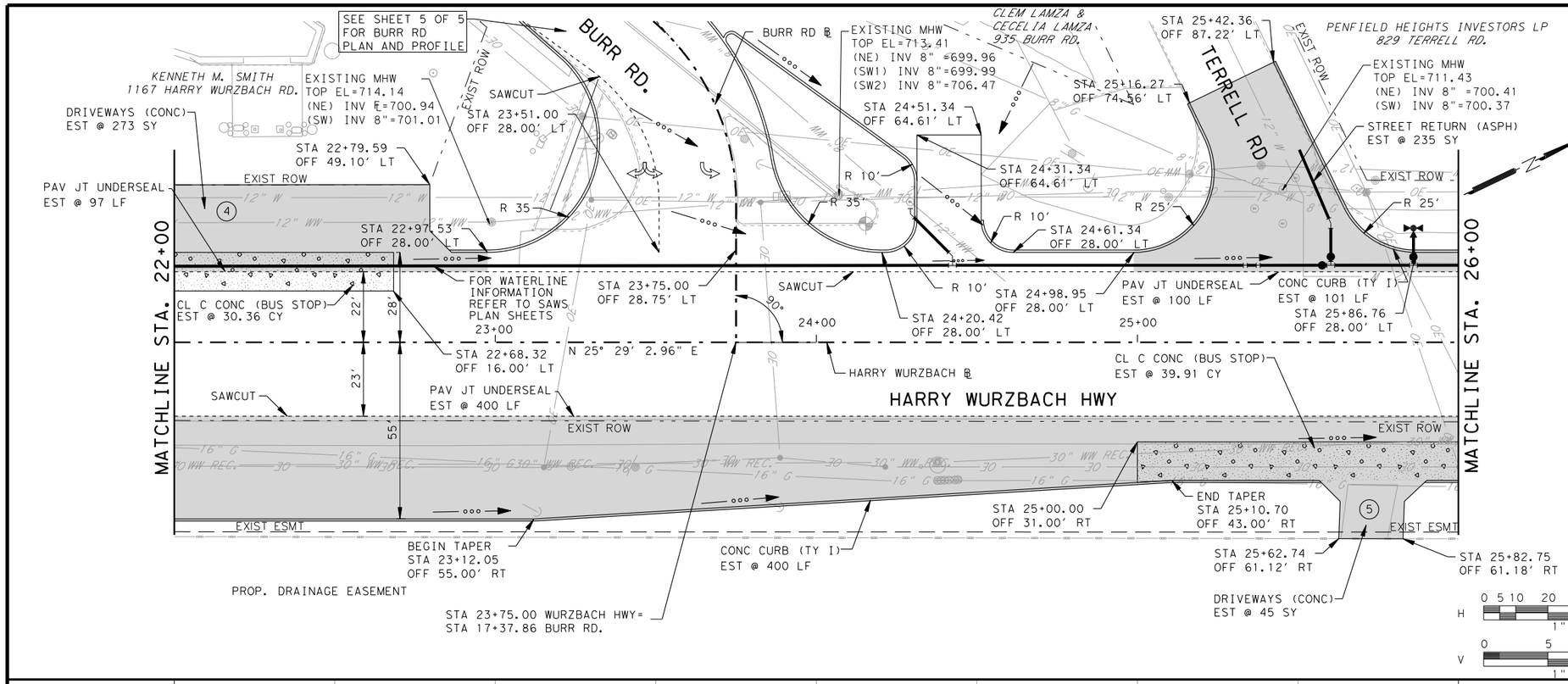

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER FL LEFT
- GUTTER FL RIGHT

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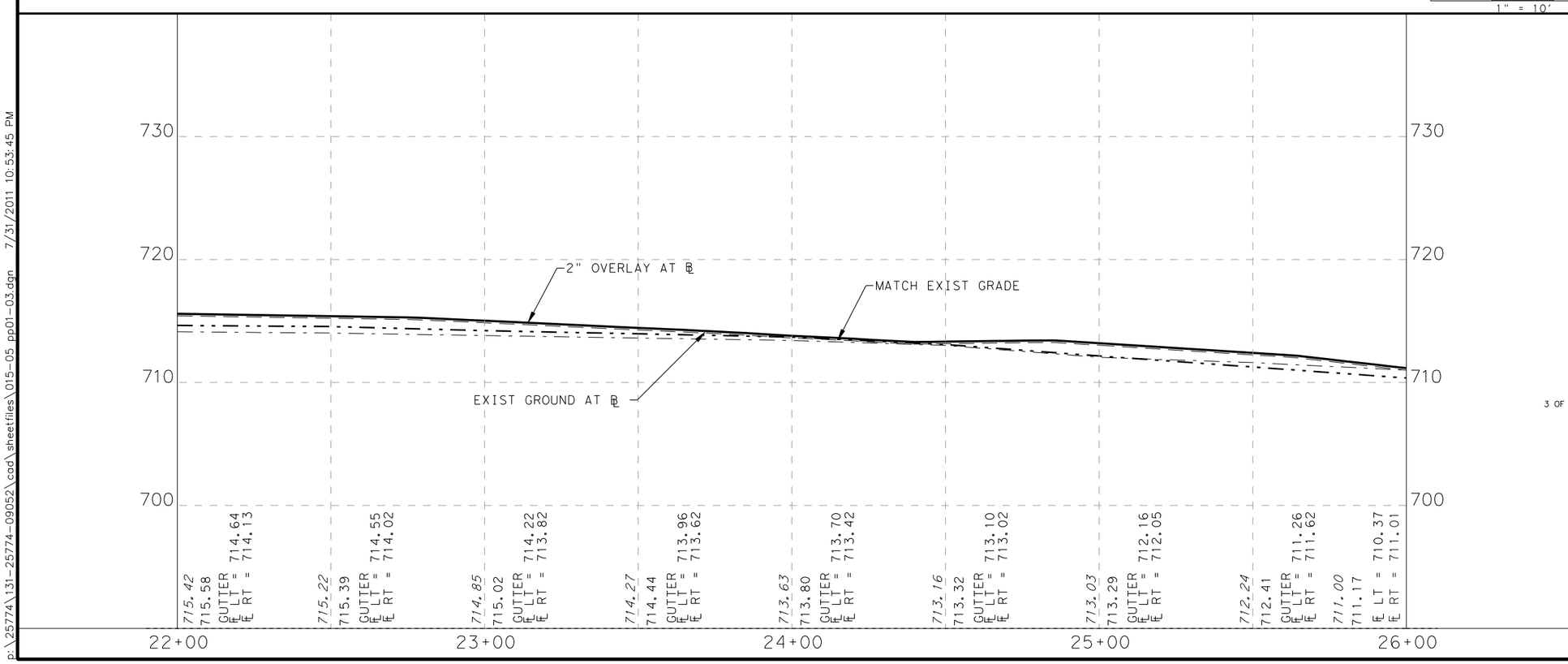

CSJ 915-12-471

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	4.00
EXCAVATION (ROADWAY)	CY	519.00
SUBGRADE WIDENING (ORD COMP)	STA	4.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	1,732.78
LIME (HYDRATED LIME (DRY))	TON	65.15
LIME TRT (EXST MATL) (6")	SY	1,732.78
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	1,058.47
AGGR (TY-PB GR-4)	CY	35.28
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	110.00
D-GR HMA(QCQA) TY-B PG64-22	TON	1,095.45
D-GR HMA(QCQA) TY-C PG64-22	TON	388.10
PLANE ASPH CONC PAV(0" TO 2")	SY	2,000.00
PAV JT UNDERSEAL (48")	LF	597.00
CL C CONC (BUS STOP)	CY	39.91
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	501.00
DRIVEWAYS (CONC)	SY	318.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	0.00
CONC DIRECTIONAL ISLAND	SY	0.00

3 OF 4

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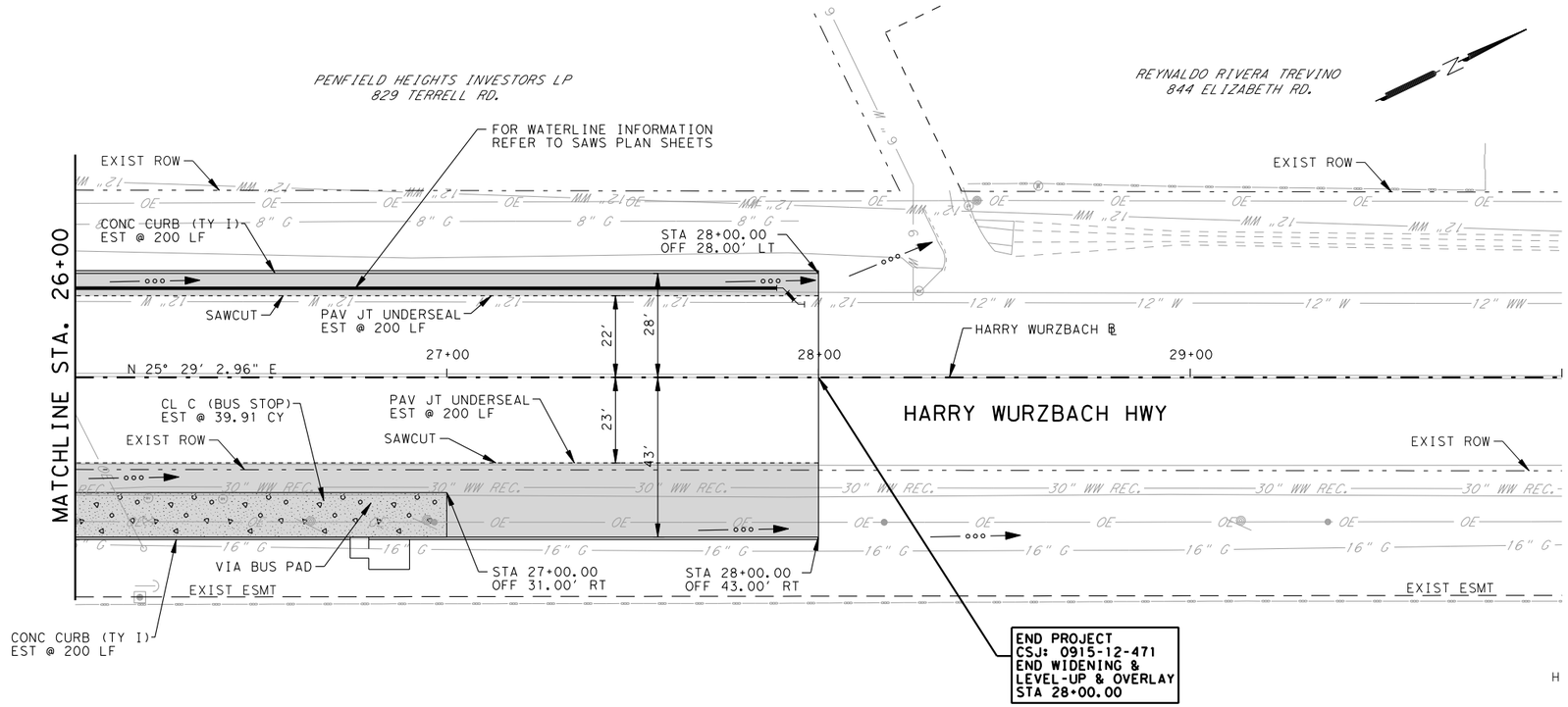

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

H: 0 5 10 20 40 60 — 1" = 40'

V: 0 5 10 15 — 1" = 10'

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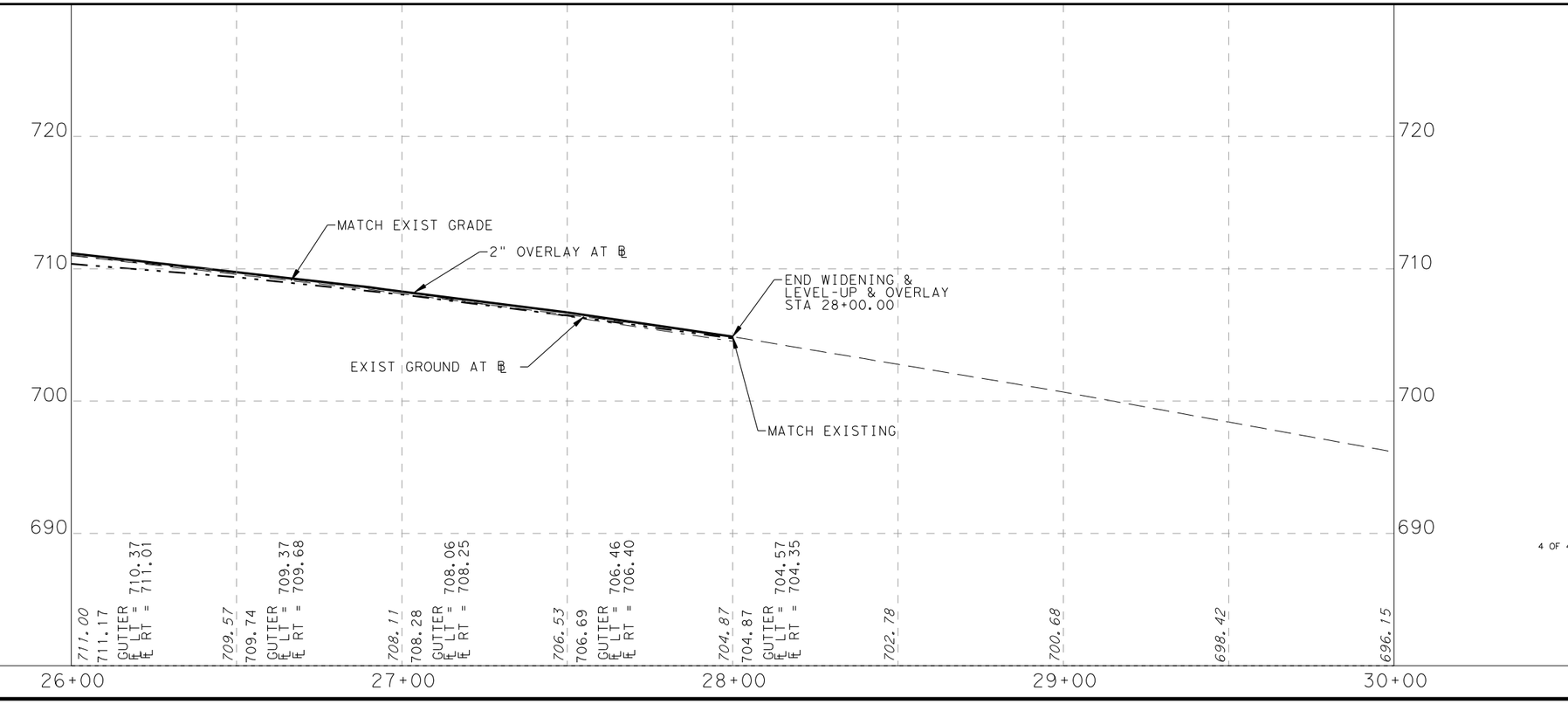

CSJ 915-12-471

SHEET TOTALS

DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	2.00
EXCAVATION (ROADWAY)	CY	1,177.00
SUBGRADE WIDENING (ORD COMP)	STA	2.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	679.56
LIME (HYDRATED LIME (DRY))	TON	25.55
LIME TRT (EXST MATL) (6")	SY	679.56
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	473.33
AGGR (TY-PB GR-4)	CY	15.78
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	55.00
D-GR HMA(QCQA) TY-B PG64-22	TON	426.21
D-GR HMA(QCQA) TY-C PG64-22	TON	173.56
PLANE ASPH CONC PAV(0" TO 2")	SY	1,000.00
PAV JT UNDERSEAL (48")	LF	400.00
CL C CONC (BUS STOP)	CY	39.91
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	400.00
DRIVEWAYS (CONC)	SY	0.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	0.00
CONC DIRECTIONAL ISLAND	SY	0.00

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BURR RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 143

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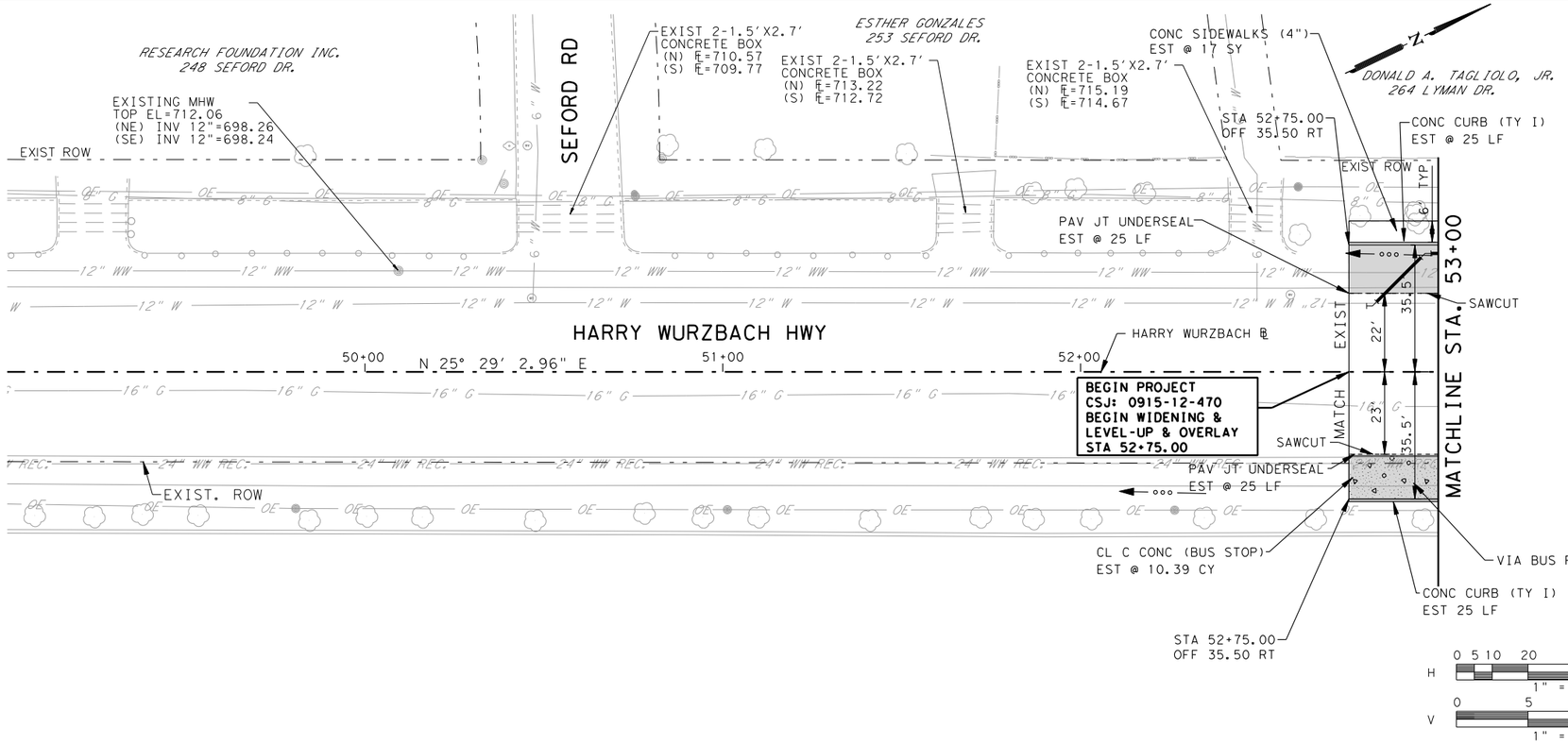

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

STATE OF TEXAS
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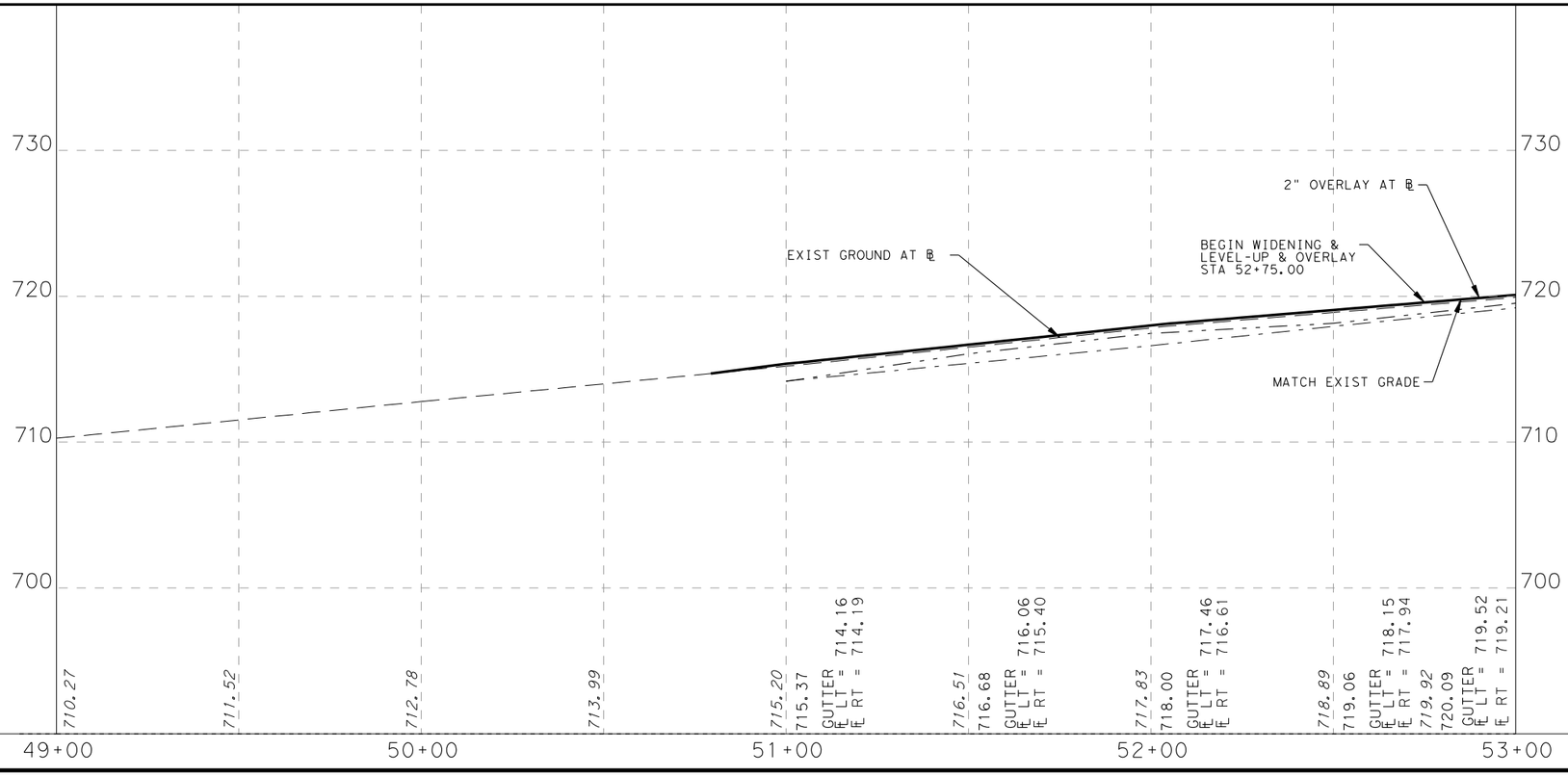
7/31/2011



CSJ 915-12-470

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	0.25
EXCAVATION (ROADWAY)	CY	171.00
SUBGRADE WIDENING (ORD COMP)	STA	0.25
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	85.44
LIME (HYDRATED LIME (DRY))	TON	3.21
LIME TRT (EXST MATL) (6")	SY	85.44
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	62.57
AGGR (TY-PB GR-4)	CY	2.09
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	7.00
D-GR HMA(QCQA) TY-B PG64-22	TON	53.20
D-GR HMA(QCQA) TY-C PG64-22	TON	22.94
PLANE ASPH CONC PAV(0" TO 2")	SY	125.00
PAV JT UNDERSEAL (48")	LF	50.00
CL C CONC (BUS STOP)	CY	10.39
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	50.00
DRIVEWAYS (CONC)	SY	0.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	17.00
CONC DIRECTIONAL ISLAND	SY	0.00

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FORT SAM HOUSTON TRANSPORTATION PROJECTS

PLAN AND PROFILE

WINANS RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 144

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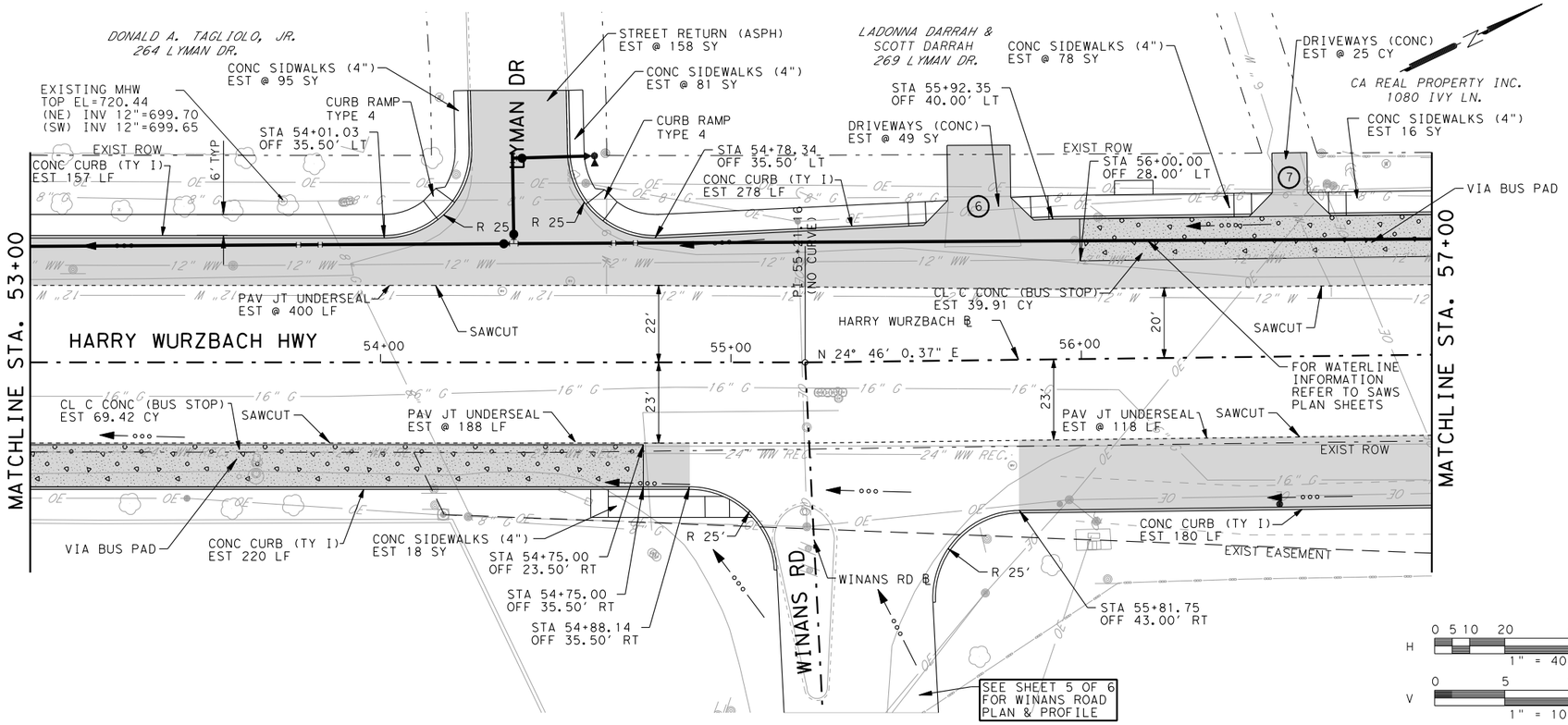

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

H 0 5 10 20 40 60 — 1" = 40'

V 0 5 10 15 — 1" = 10'

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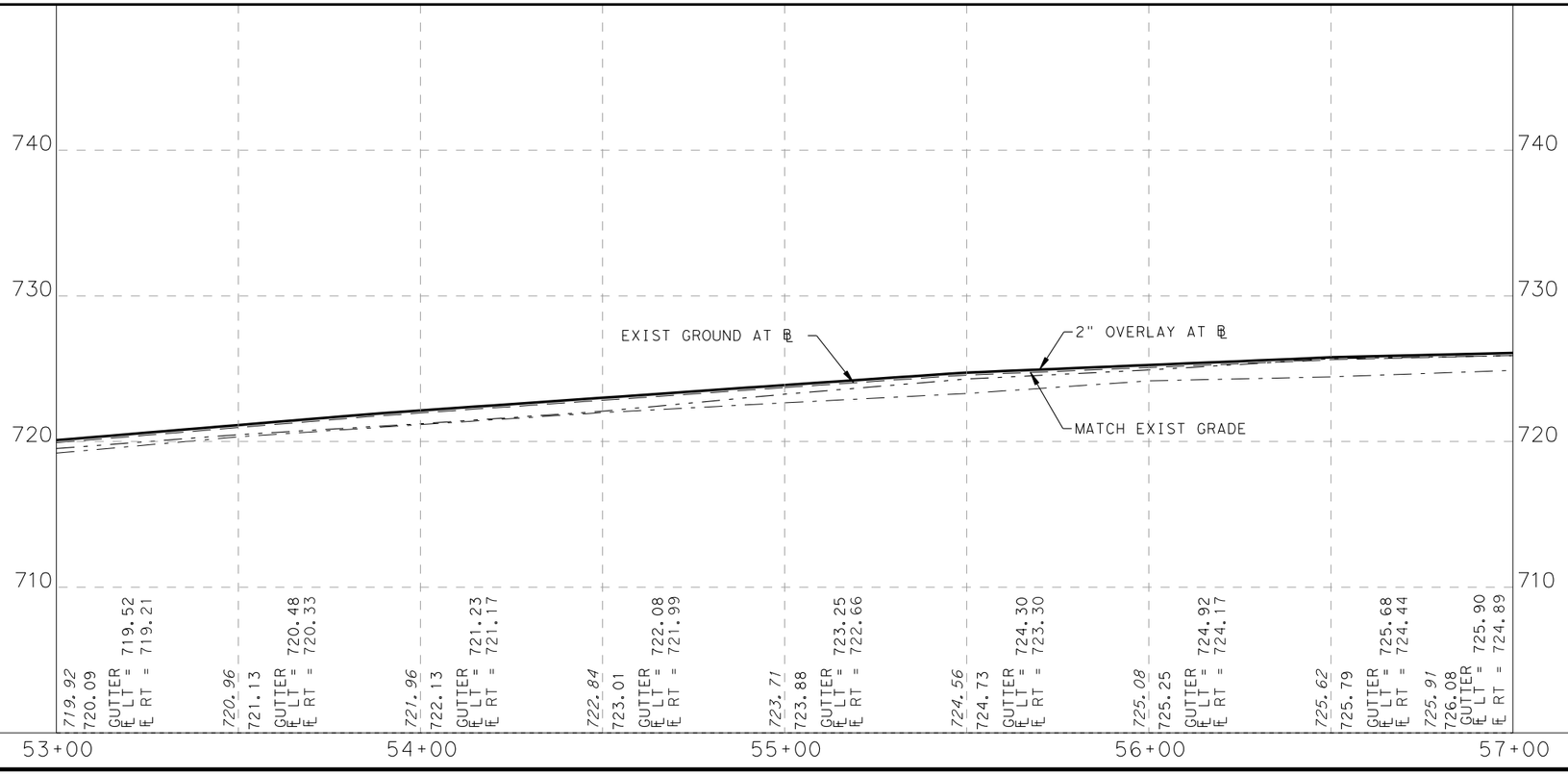

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	4.00
EXCAVATION (ROADWAY)	CY	235.00
SUBGRADE WIDENING (ORD COMP)	STA	4.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	1,609.22
LIME (HYDRATED LIME (DRY))	TON	60.51
LIME TRT (EXST MATL) (6")	SY	1,609.22
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	999.70
AGGR (TY-PB GR-4)	CY	33.32
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	108.00
D-GR HMA(QCQA) TY-B PG64-22	TON	1,004.01
D-GR HMA(QCQA) TY-C PG64-22	TON	366.56
PLANE ASPH CONC PAV(0" TO 2")	SY	1,966.00
PAV JT UNDERSEAL (48")	LF	706.00
CL C CONC (BUS STOP)	CY	108.77
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	835.00
DRIVEWAYS (CONC)	SY	74.00
CURB RAMPS (TY 4)	EA	2.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	288.00
CONC DIRECTIONAL ISLAND	SY	0.00

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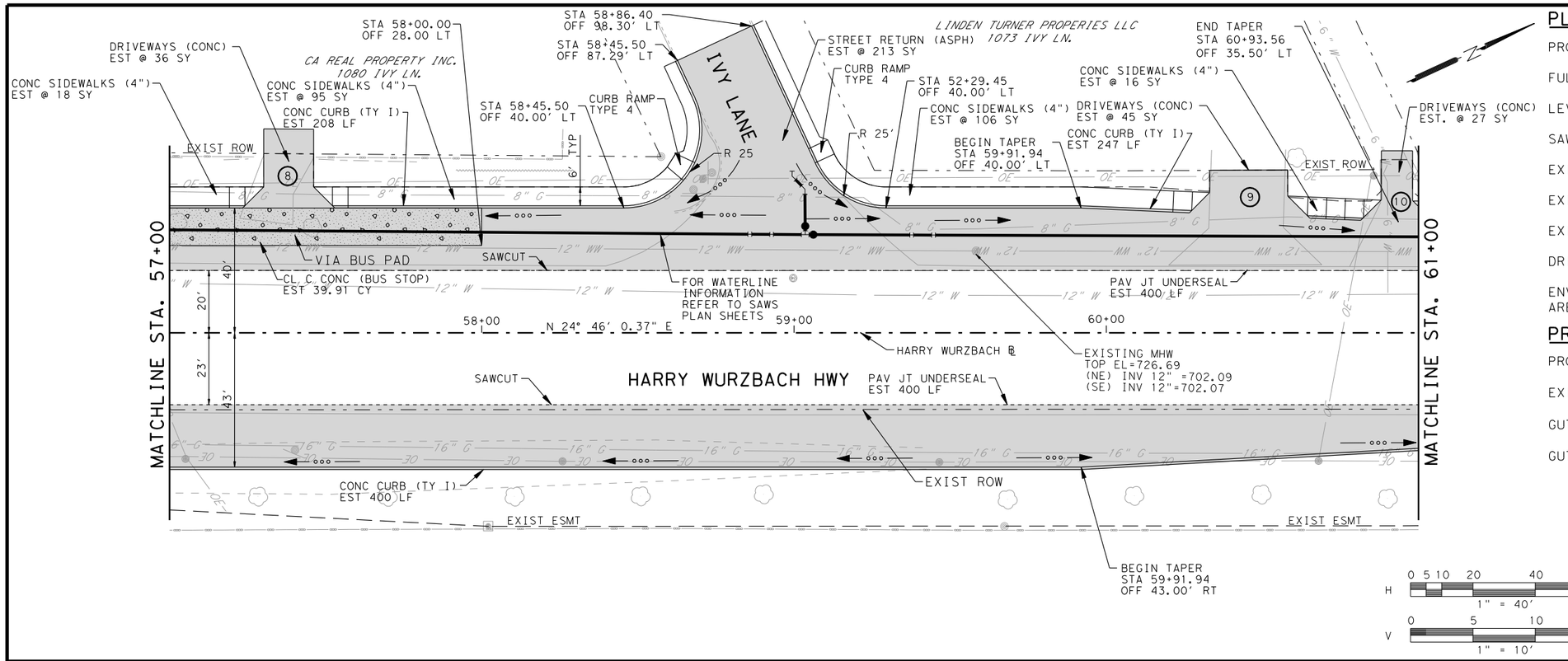

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

H: 0 5 10 20 40 60 — 1" = 40'

V: 0 5 10 15 — 1" = 10'

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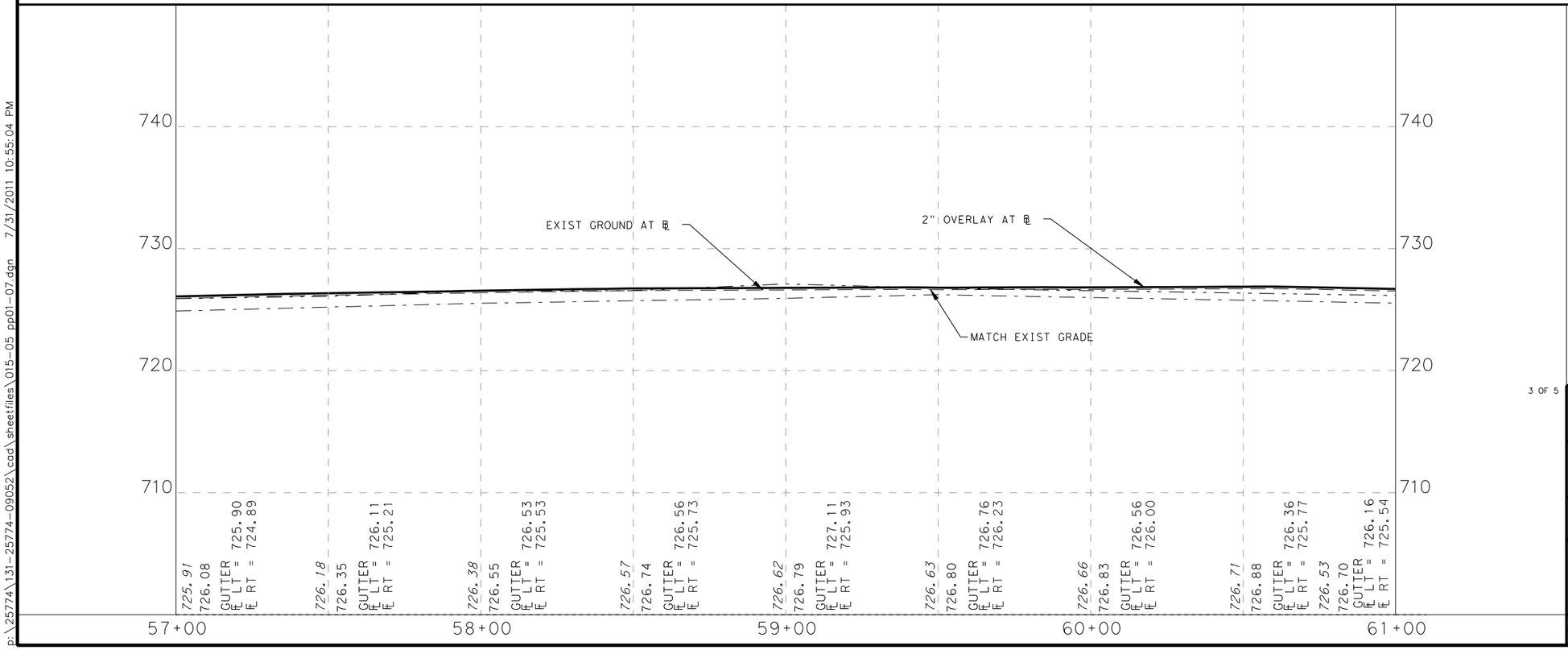

CSJ 915-12-470

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	4.00
EXCAVATION (ROADWAY)	CY	278.00
SUBGRADE WIDENING (ORD COMP)	STA	4.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	2,154.56
LIME (HYDRATED LIME (DRY))	TON	81.01
LIME TRT (EXST MATL) (6")	SY	2,154.56
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	1,151.07
AGGR (TY-PB GR-4)	CY	38.37
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	105.00
D-GR HMA(QCQA) TY-B PG64-22	TON	1,368.69
D-GR HMA(QCQA) TY-C PG64-22	TON	422.06
PLANE ASPH CONC PAV(0" TO 2")	SY	1,911.00
PAV JT UNDERSEAL (48")	LF	800.00
CL C CONC (BUS STOP)	CY	39.91
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	855.00
DRIVEWAYS (CONC)	SY	125.00
CURB RAMPS (TY 4)	EA	2.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	235.00
CONC DIRECTIONAL ISLAND	SY	0.00

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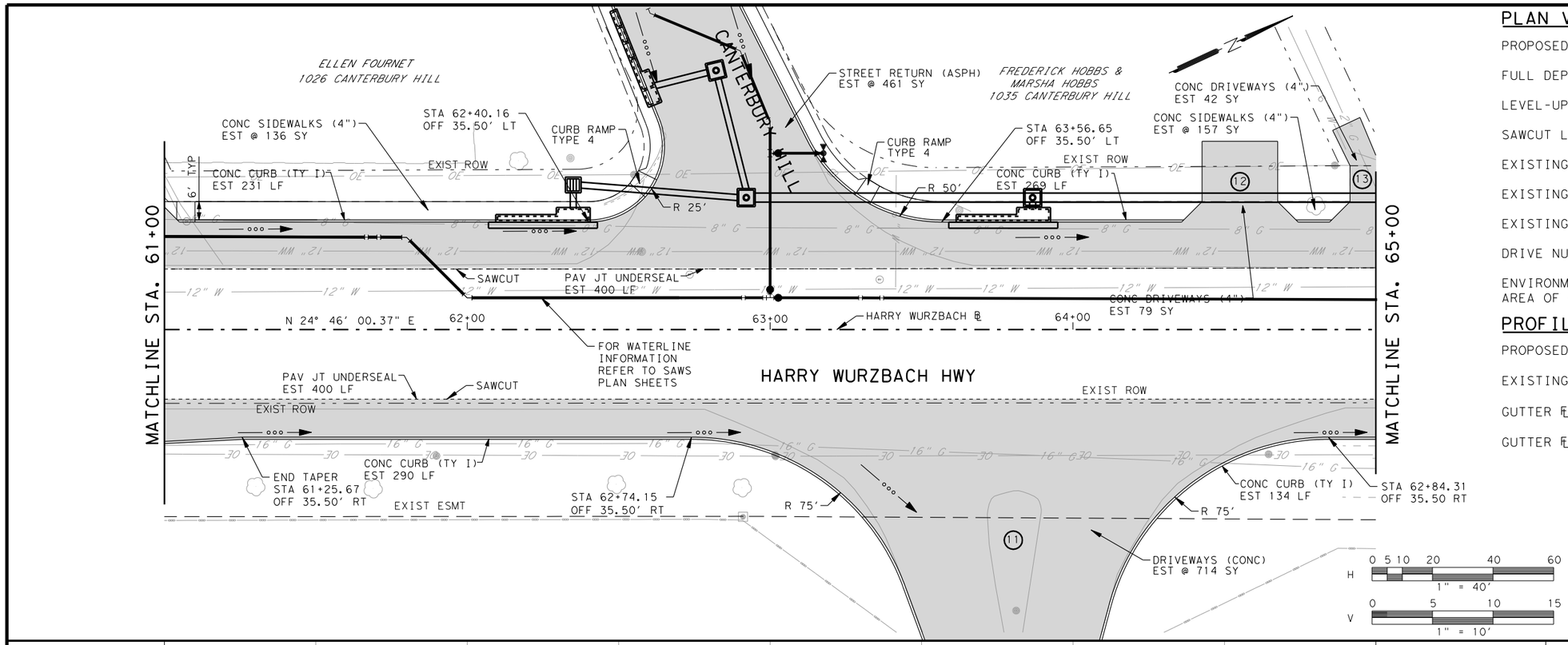

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

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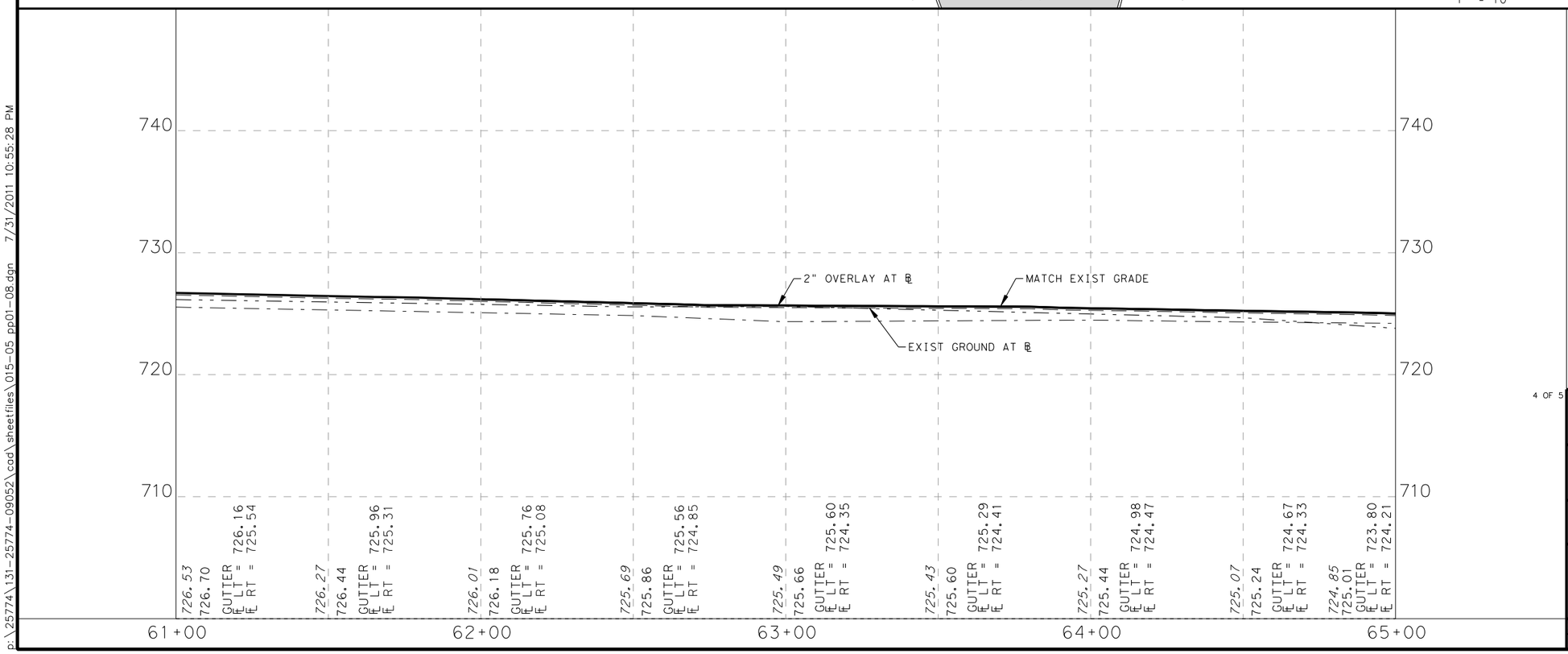

CSJ 915-12-470

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	4.00
EXCAVATION (ROADWAY)	CY	171.00
SUBGRADE WIDENING (ORD COMP)	STA	4.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	1,942.44
LIME (HYDRATED LIME (DRY))	TON	73.04
LIME TRT (EXST MATL) (6")	SY	1,942.44
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	1,085.53
AGGR (TY-PB GR-4)	CY	36.18
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	105.00
D-GR HMA(QCQA) TY-B PG64-22	TON	1,227.45
D-GR HMA(QCQA) TY-C PG64-22	TON	398.03
PLANE ASPH CONC PAV(0" TO 2")	SY	1,917.00
PAV JT UNDERSEAL (48")	LF	800.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	924.00
DRIVEWAYS (CONC)	SY	934.00
CURB RAMPS (TY 4)	EA	2.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	293.00
CONC DIRECTIONAL ISLAND	SY	0.00

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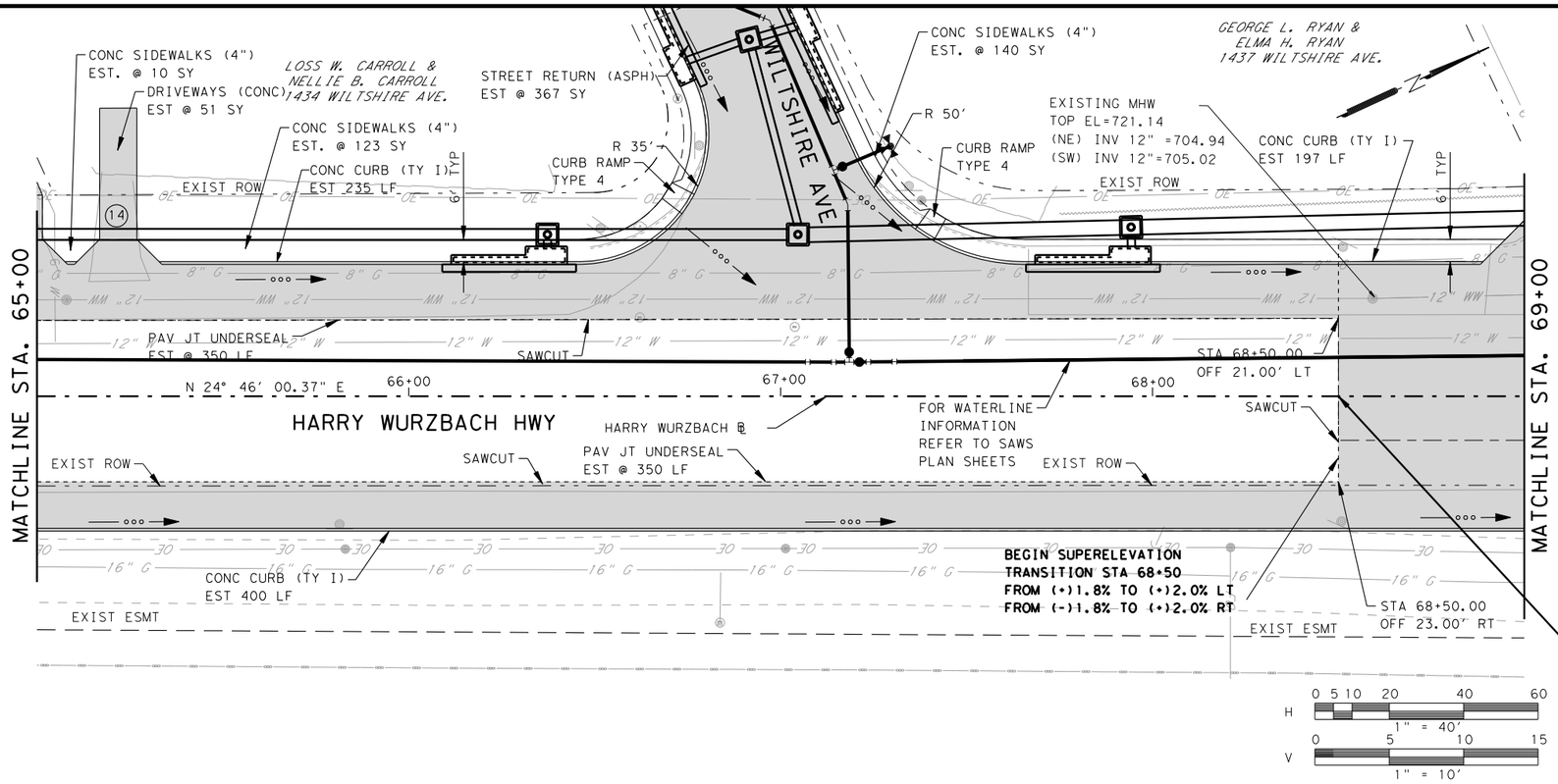

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

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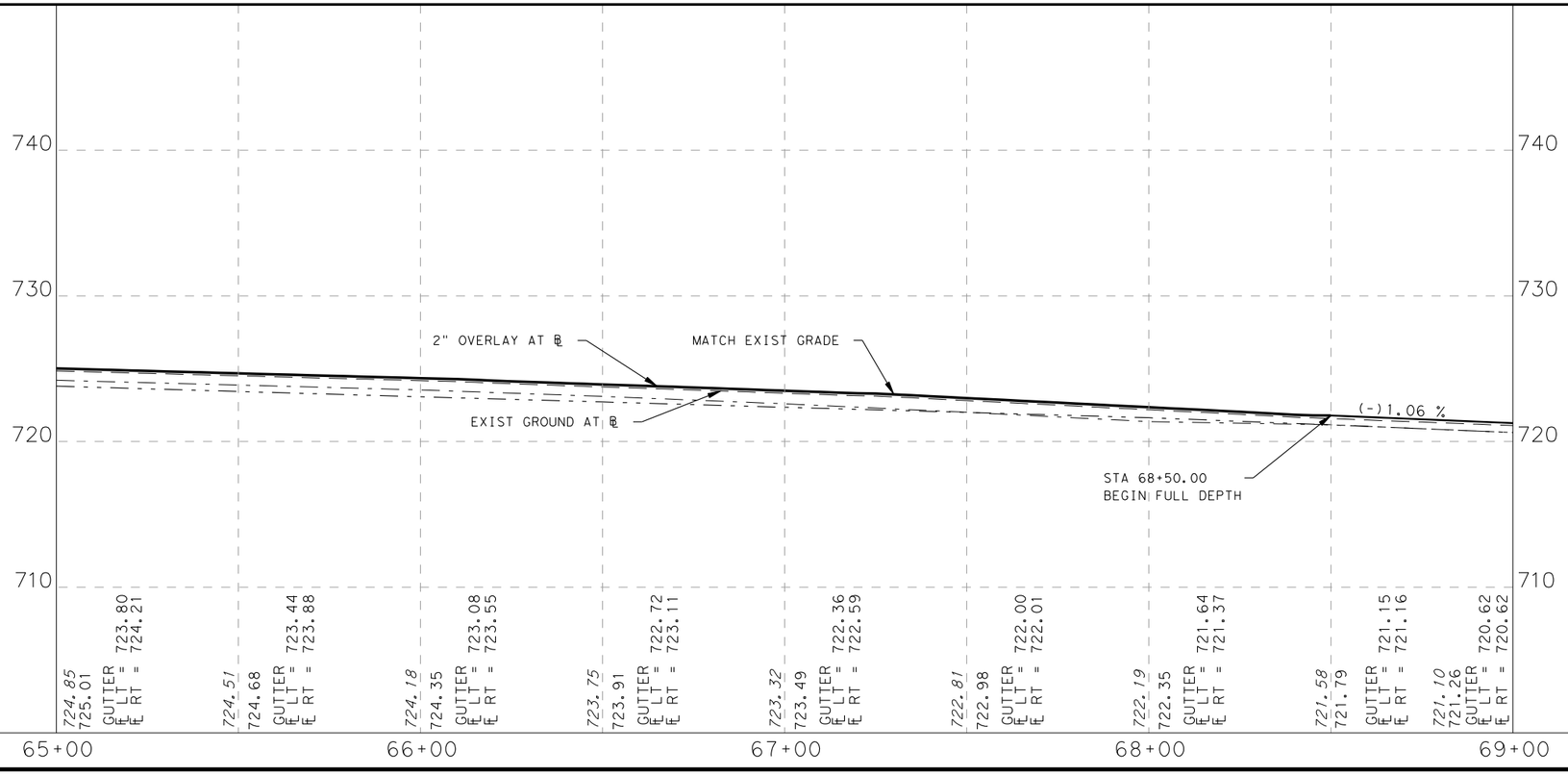

CSJ 915-12-470

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	4.00
EXCAVATION (ROADWAY)	CY	199.00
SUBGRADE WIDENING (ORD COMP)	STA	3.50
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	2,052.56
LIME (HYDRATED LIME (DRY))	TON	77.18
LIME TRT (EXST MATL) (6")	SY	2,052.56
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	1,056.70
AGGR (TY-PB GR-4)	CY	35.22
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	94.00
D-GR HMA(QCQA) TY-B PG64-22	TON	1,304.53
D-GR HMA(QCQA) TY-C PG64-22	TON	387.46
PLANE ASPH CONC PAV(0" TO 2")	SY	1,700.00
PAV JT UNDERSEAL (48")	LF	700.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	832.00
DRIVEWAYS (CONC)	SY	52.00
CURB RAMPS (TY 4)	EA	2.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	273.00
CONC DIRECTIONAL ISLAND	SY	0.00
		0.00

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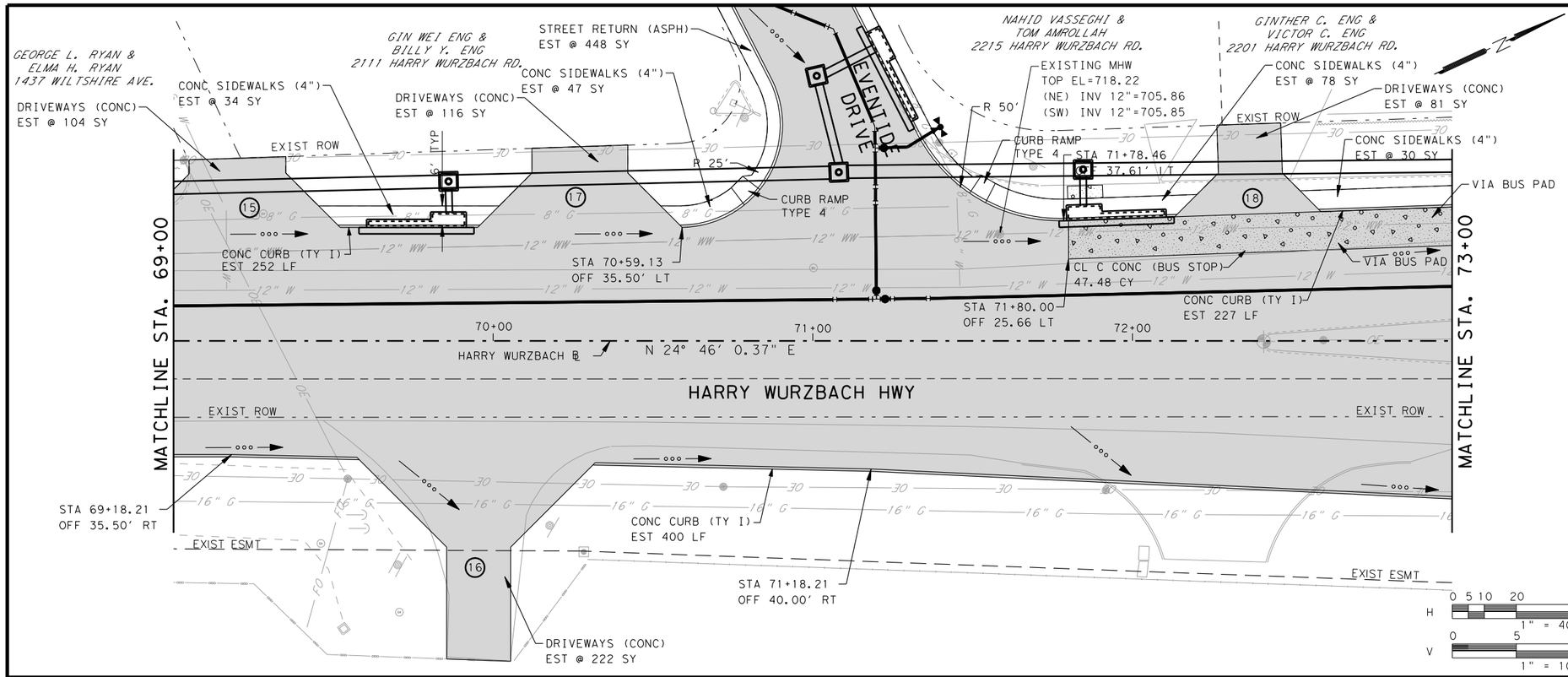

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

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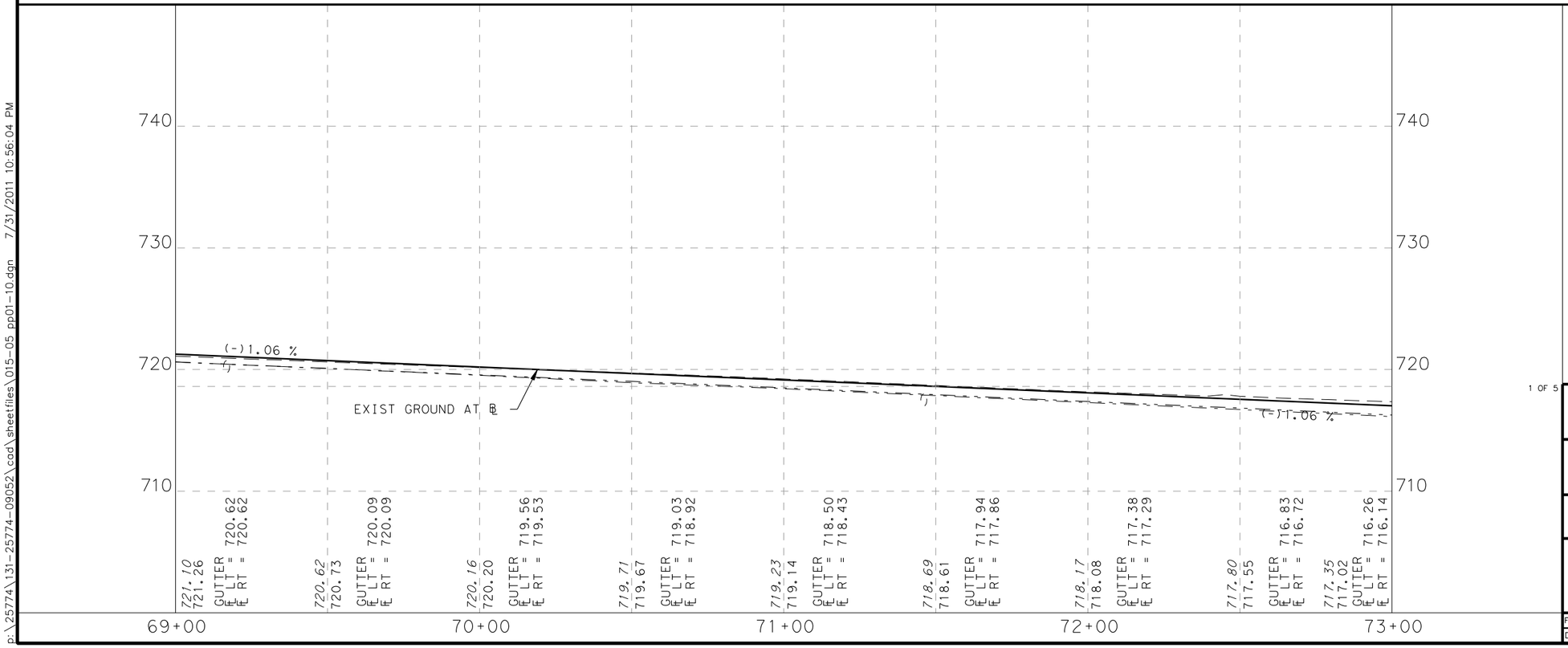

CSJ 915-12-480

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	4.00
EXCAVATION (ROADWAY)	CY	160.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	4,054.89
LIME (HYDRATED LIME (DRY))	TON	152.46
LIME TRT (EXST MATL) (6")	SY	4,054.89
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	1,149.27
AGGR (TY-PB GR-4)	CY	38.31
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	2,630.32
D-GR HMA(QCQA) TY-C PG64-22	TON	421.40
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	0.00
CL C CONC (BUS STOP)	CY	47.78
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	879.00
DRIVEWAYS (CONC)	SY	524.00
CURB RAMPS (TY 4)	EA	2.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	189.00
CONC DIRECTIONAL ISLAND	SY	0.00

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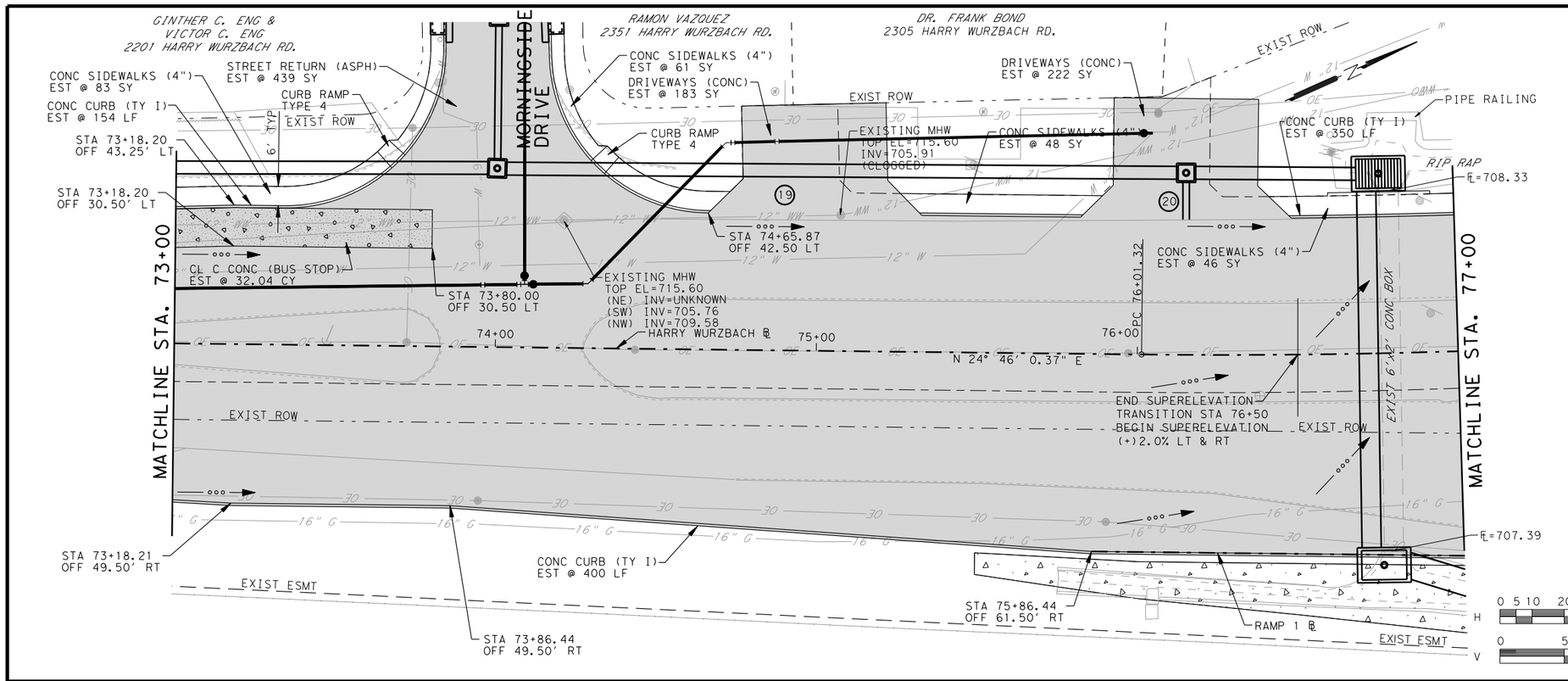

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER FL LEFT
- GUTTER FL RIGHT

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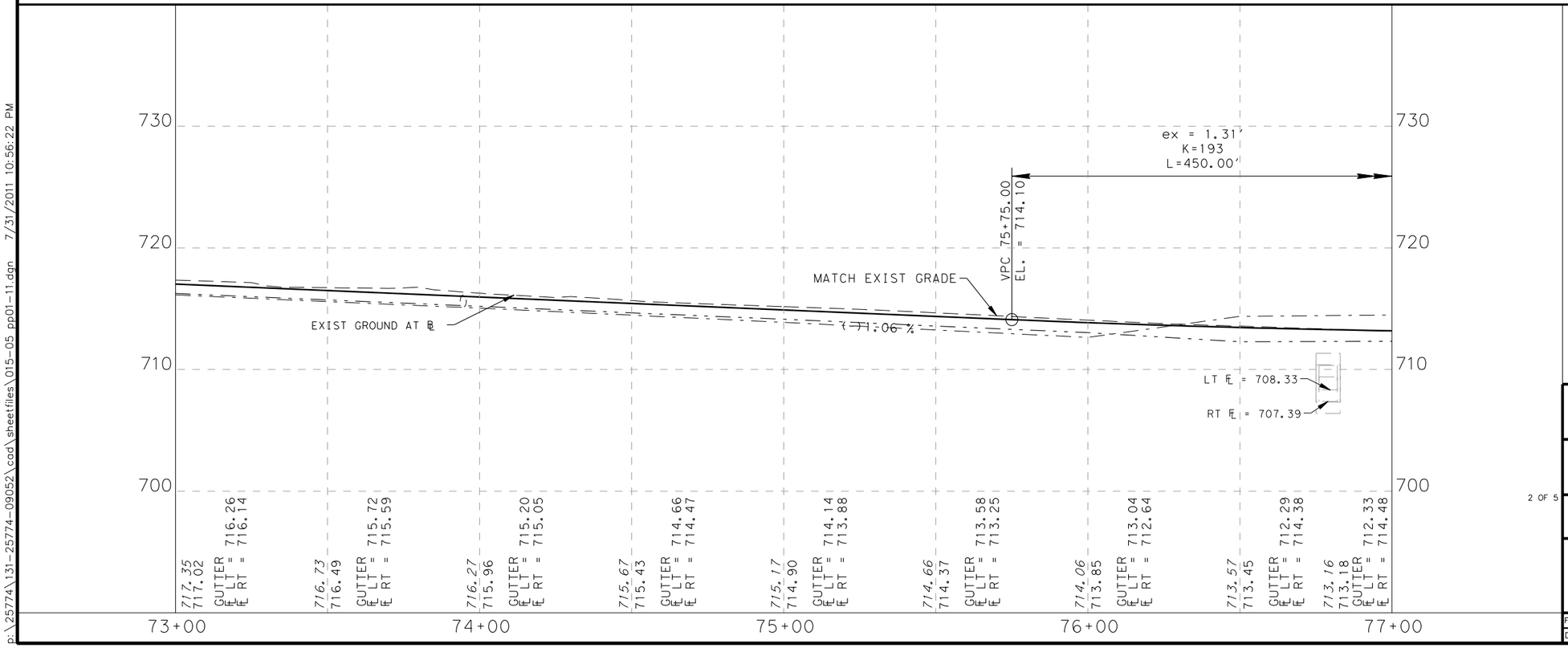

CSJ 915-12-480

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	4.00
EXCAVATION (ROADWAY)	CY	517.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	5,052.89
LIME (HYDRATED LIME (DRY))	TON	189.99
LIME TRT (EXST MATL) (6")	SY	5,052.89
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	1,389.70
AGGR (TY-PB GR-4)	CY	46.32
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	3,288.49
D-GR HMA(QCQA) TY-C PG64-22	TON	509.56
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	0.00
CL C CONC (BUS STOP)	CY	32.04
RIPRAP (CONC)(4 IN)	CY	2.47
CONC CURB (TY I)	LF	904.00
DRIVEWAYS (CONC)	SY	379.00
CURB RAMPS (TY 4)	EA	2.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	241.53
CONC DIRECTIONAL ISLAND	SY	0.00

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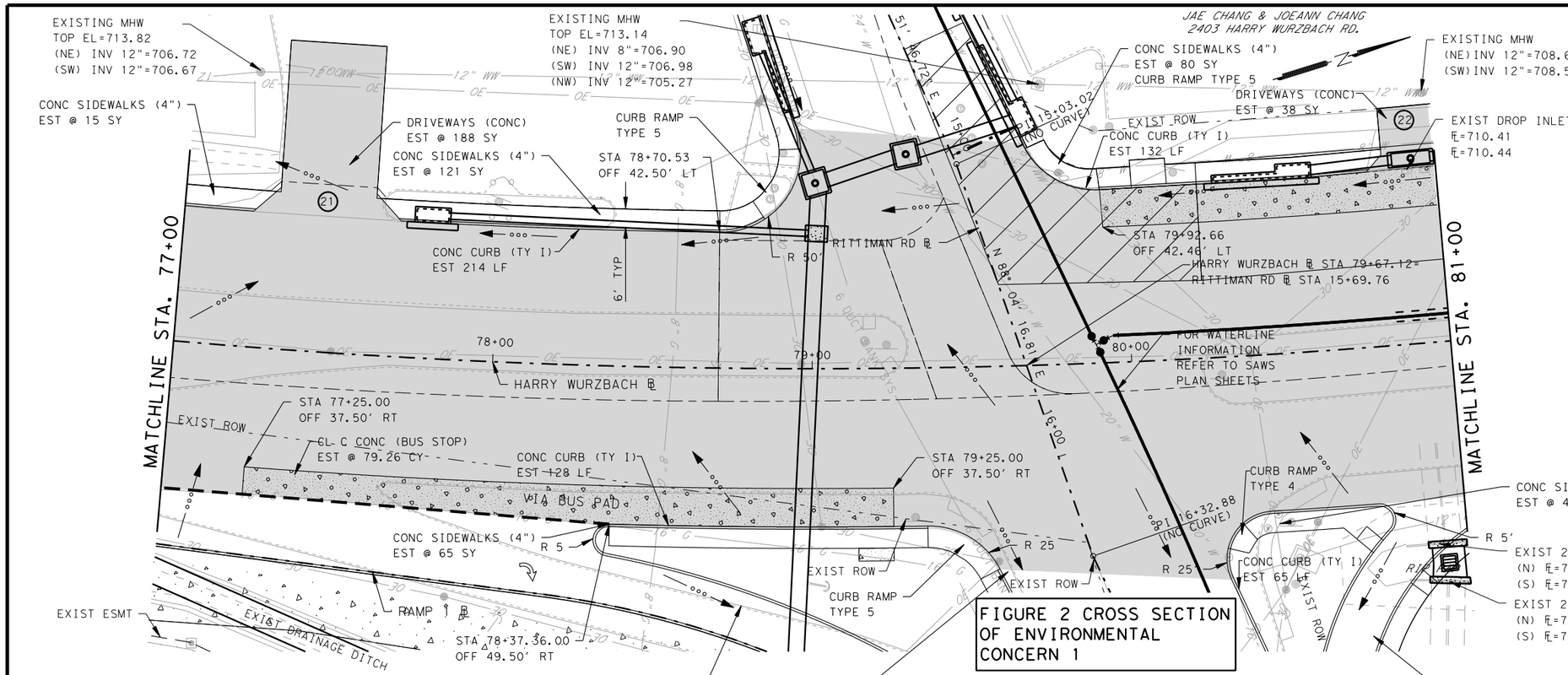

FIGURE 2 CROSS SECTION OF ENVIRONMENTAL CONCERN 1

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
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PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER FL LEFT
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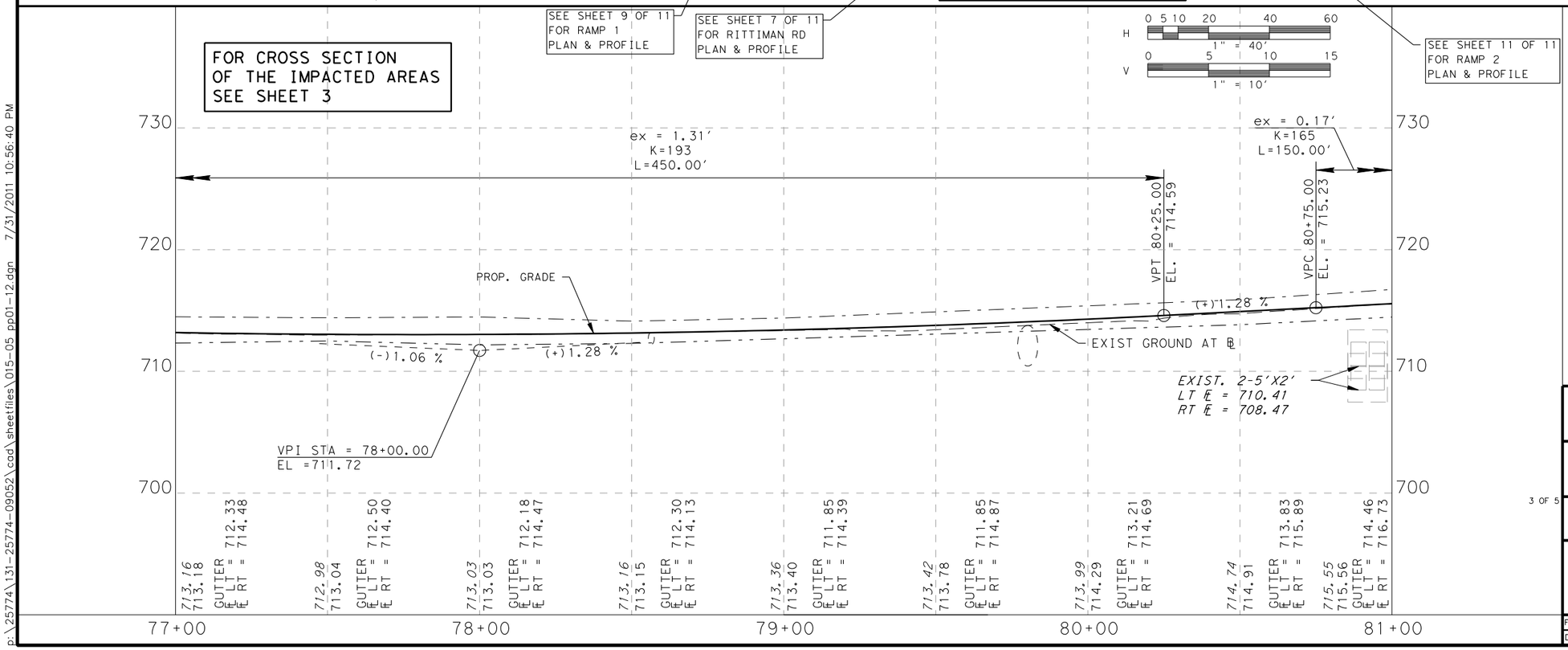
7/31/2011



CSJ 915-12-480

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	4.00
EXCAVATION (ROADWAY)	CY	594.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	4,854.89
LIME (HYDRATED LIME (DRY))	TON	182.54
LIME TRT (EXST MATL) (6")	SY	4,854.89
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	1,405.77
AGGR (TY-PB GR-4)	CY	46.86
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	3,142.85
D-GR HMA(QCQA) TY-C PG64-22	TON	515.45
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	0.00
CL C CONC (BUS STOP)	CY	79.26
RIPRAP (CONC)(4 IN)	CY	2.07
CONC CURB (TY I)	LF	539.00
DRIVEWAYS (CONC)	SY	256.00
CURB RAMPS (TY 4)	EA	1.00
CURB RAMPS (TY 5)	EA	3.00
CONC SIDEWALK (4")	SY	287.00
CONC DIRECTIONAL ISLAND	SY	0.00

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3 OF 5

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

FORT SAM HOUSTON TRANSPORTATION PROJECTS

PLAN AND PROFILE

RITTIMAN RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 151

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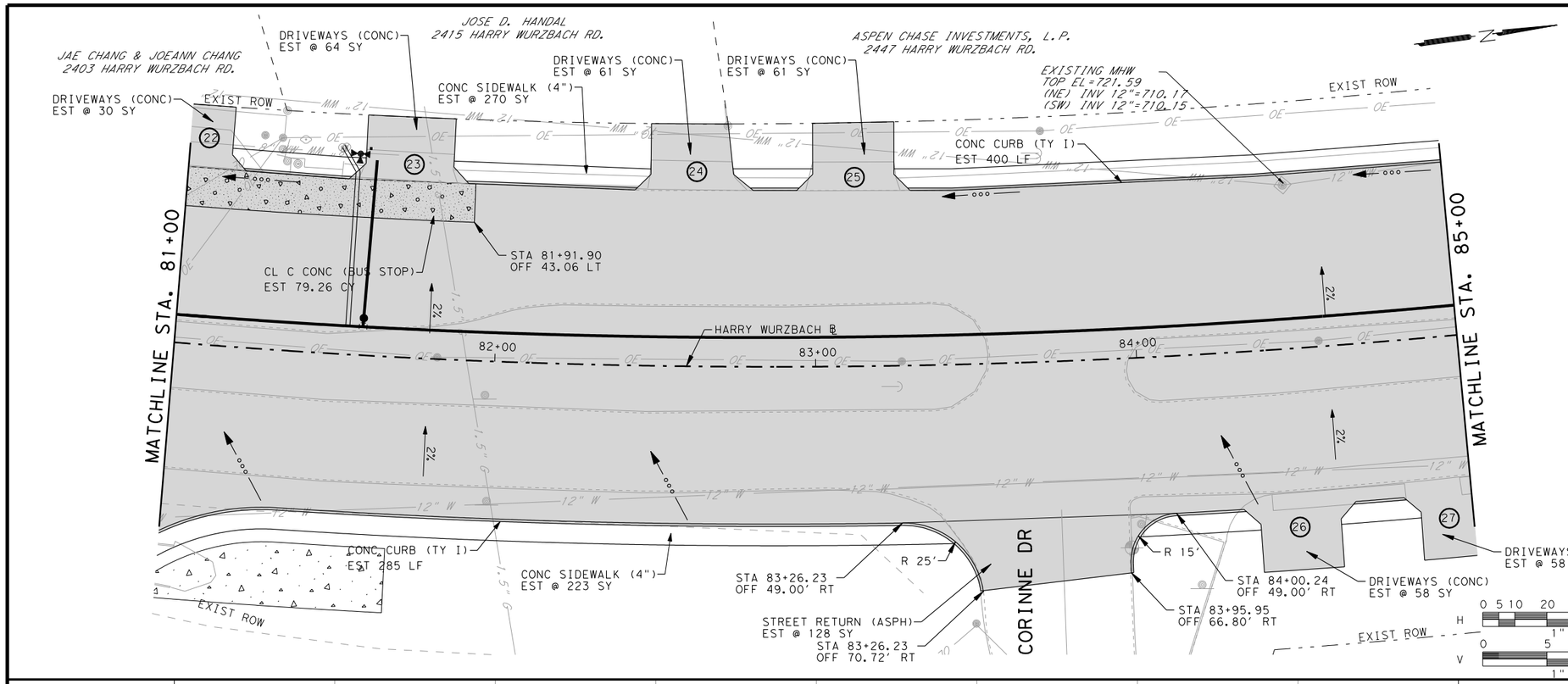

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

STATE OF TEXAS
ROLANDO ESCAMILLA
90128
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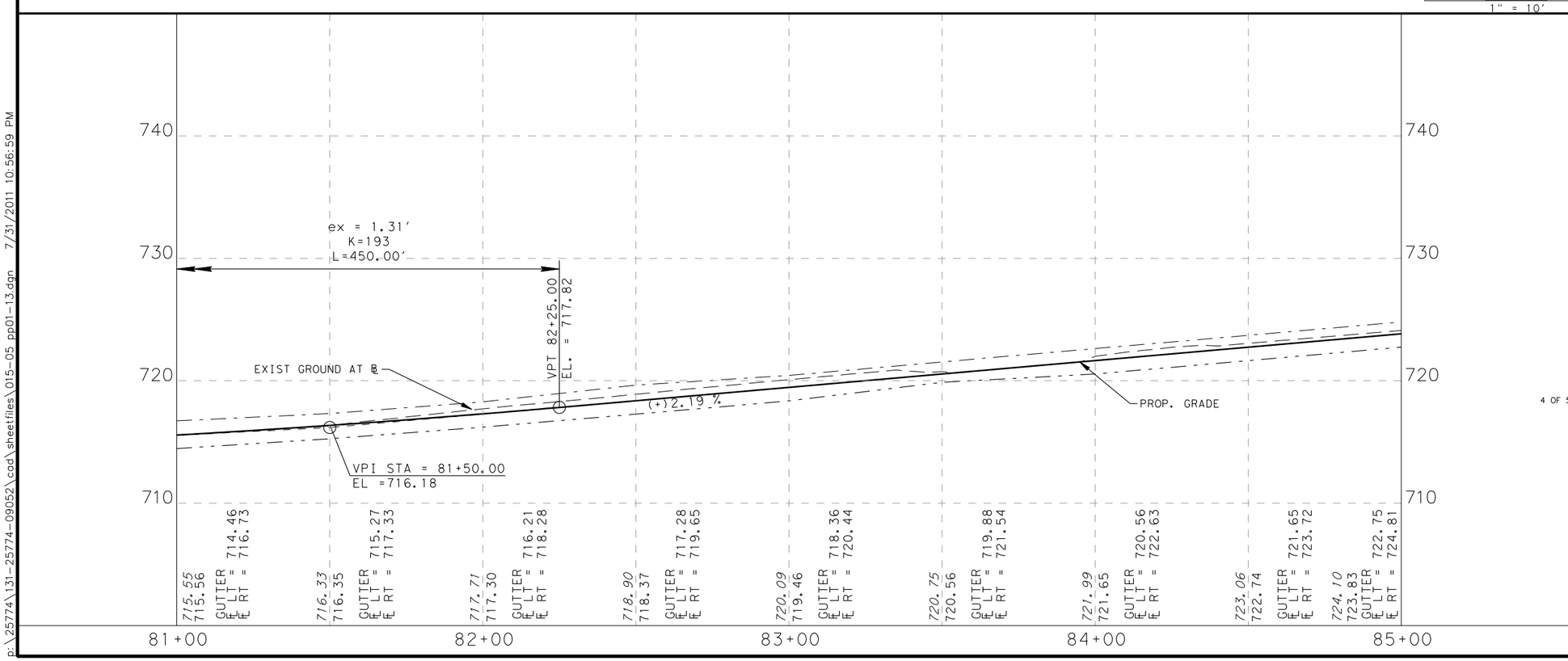
7/31/2011



CSJ 915-12-480

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	4.00
EXCAVATION (ROADWAY)	CY	170.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	4,939.67
LIME (HYDRATED LIME (DRY))	TON	185.73
LIME TRT (EXST MATL) (6")	SY	4,939.67
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	1,420.80
AGGR (TY-PB GR-4)	CY	47.36
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	3,215.67
D-GR HMA(QCQA) TY-C PG64-22	TON	520.96
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	0.00
CL C CONC (BUS STOP)	CY	79.26
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	685.00
DRIVEWAYS (CONC)	SY	305.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	493.00
CONC DIRECTIONAL ISLAND	SY	0.00

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RITTIMAN RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 152

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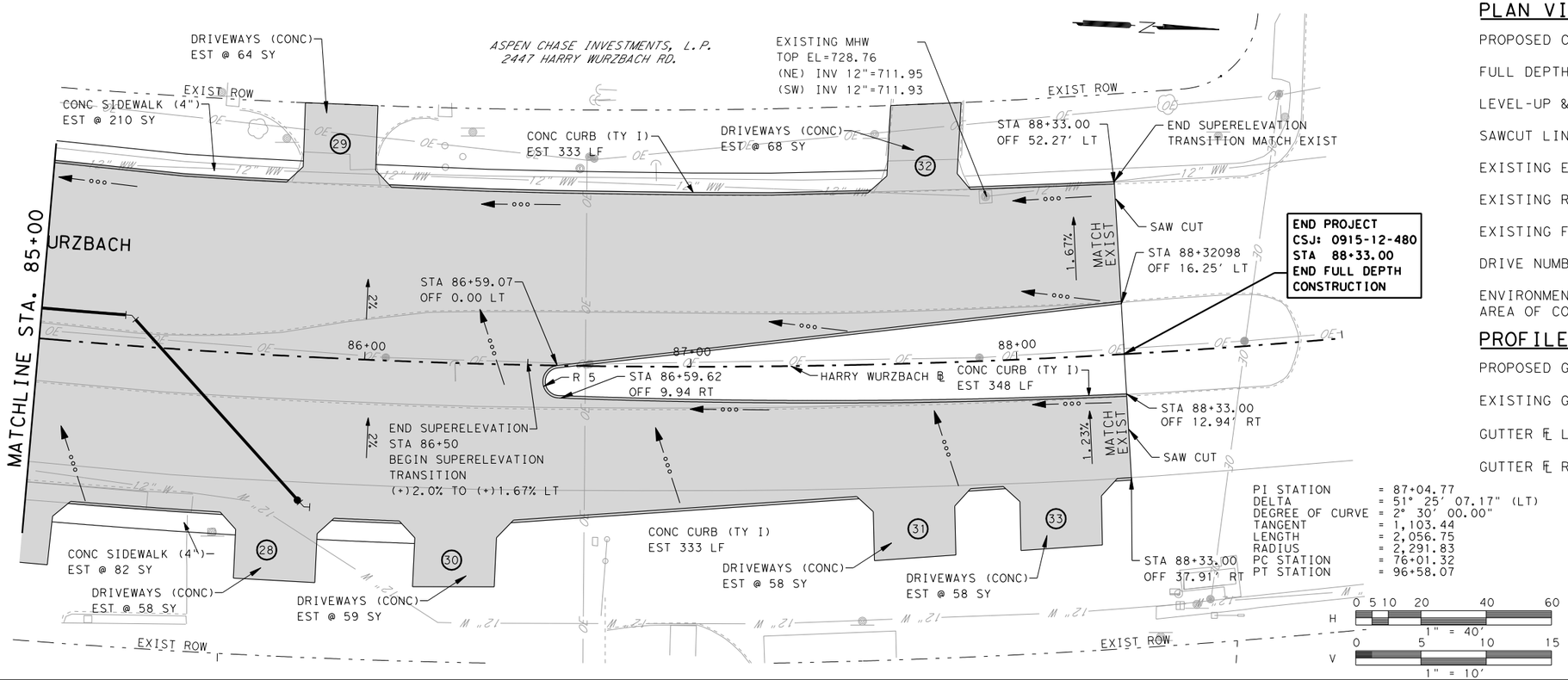

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER (#)
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

STATE OF TEXAS
ROLANDO ESCAMILLA
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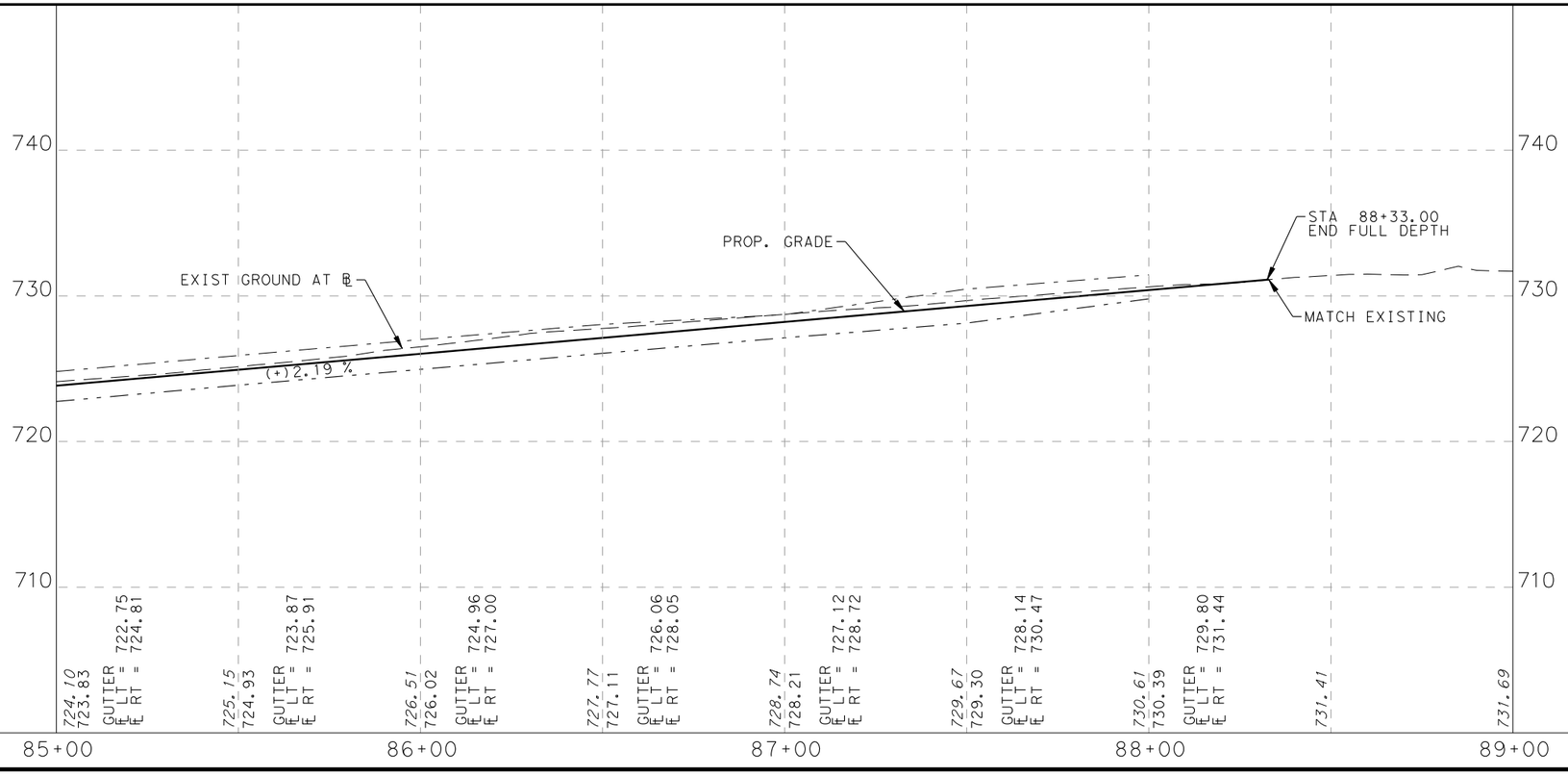
7/31/2011



CSJ 915-12-480

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	3.32
EXCAVATION (ROADWAY)	CY	61.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	3,464.44
LIME (HYDRATED LIME (DRY))	TON	130.26
LIME TRT (EXST MATL) (6")	SY	3,464.44
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	961.10
AGGR (TY-PB GR-4)	CY	32.04
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	2,245.49
D-GR HMA(QCQA) TY-C PG64-22	TON	352.40
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	0.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	1,014.00
DRIVEWAYS (CONC)	SY	366.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	292.00
CONC DIRECTIONAL ISLAND	SY	0.00

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FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 153

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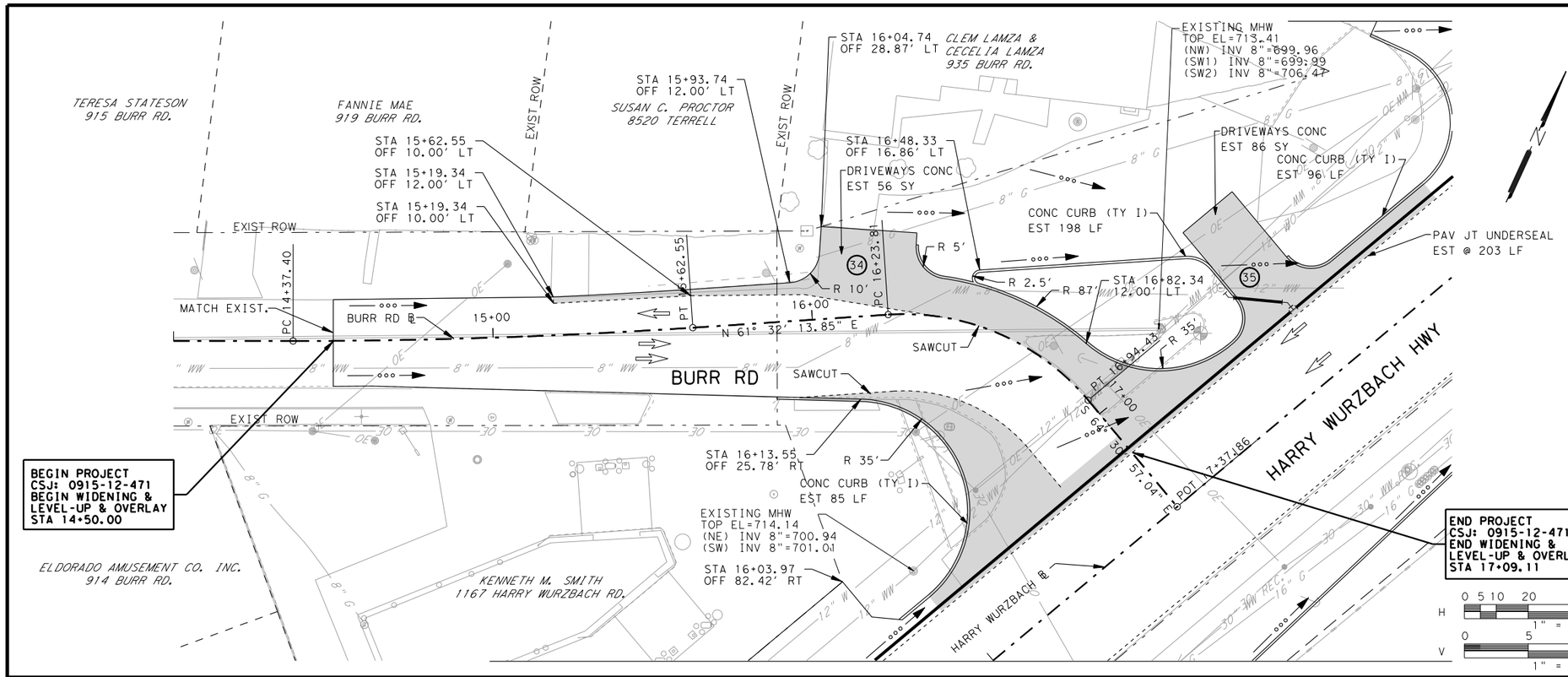

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

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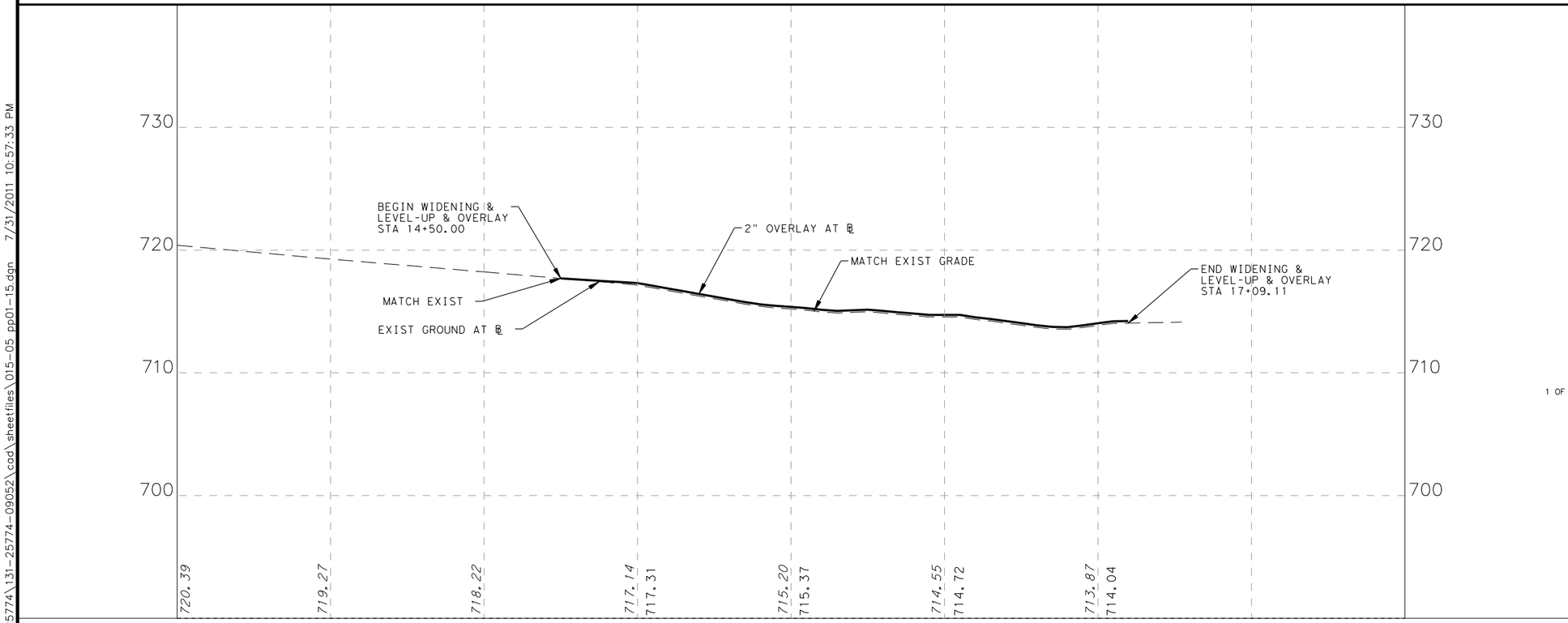

CSJ 915-12-471

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	2.60
EXCAVATION (ROADWAY)	CY	89.00
SUBGRADE WIDENING (ORD COMP)	STA	2.60
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	145.00
LIME (HYDRATED LIME (DRY))	TON	39.16
LIME TRT (EXST MATL) (6")	SY	1,041.44
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	517.53
AGGR (TY-PB GR-4)	CY	17.25
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	656.77
D-GR HMA(QCQA) TY-C PG64-22	TON	189.76
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	203.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	379.00
DRIVEWAYS (CONC)	SY	145.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	0.00
CONC DIRECTIONAL ISLAND	SY	0.00

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FORT SAM HOUSTON TRANSPORTATION PROJECTS

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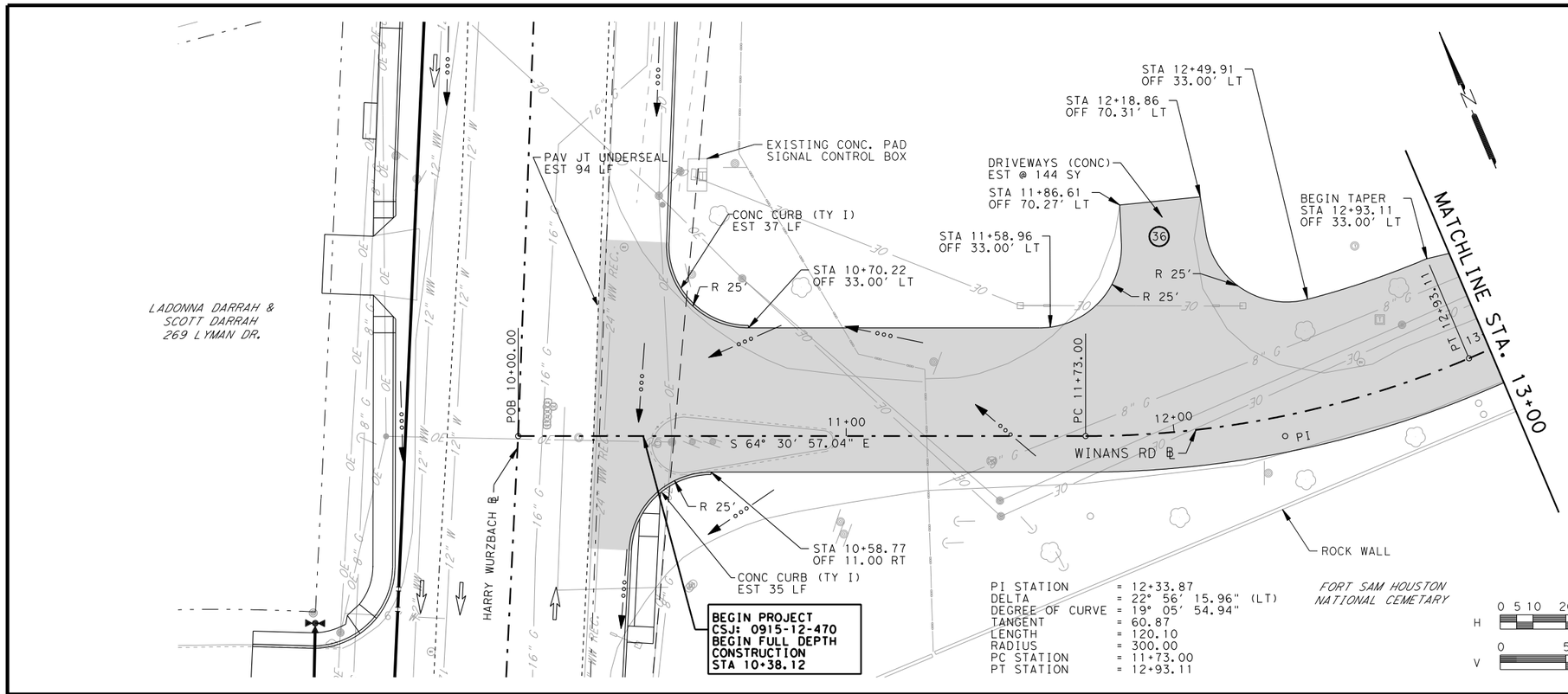

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DELTA = 22° 56' 15.96" (LT)
DEGREE OF CURVE = 19° 05' 54.94"
TANGENT = 60.87
LENGTH = 120.10
RADIUS = 300.00
PC STATION = 11+73.00
PT STATION = 12+93.11

H 0 5 10 20 40 60 1" = 40'
V 0 5 10 15 1" = 10'

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℞
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

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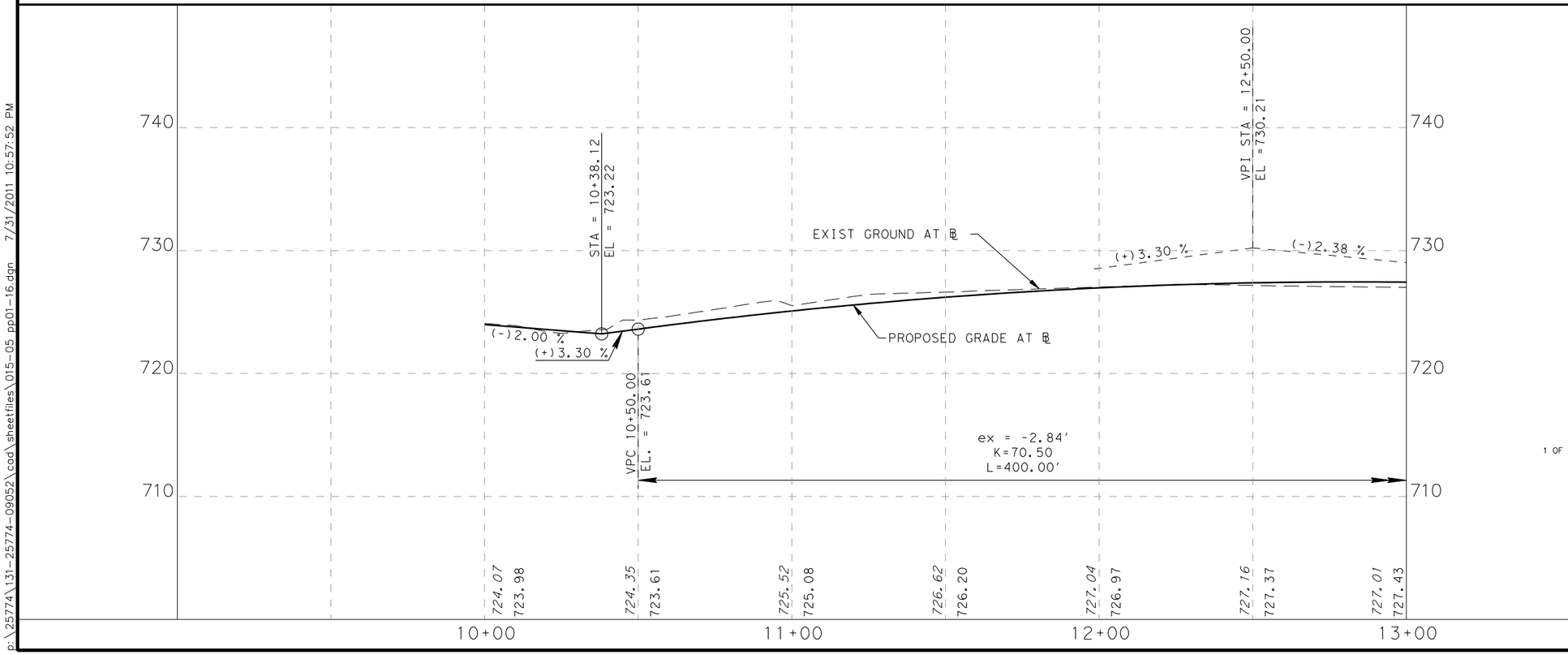

CSJ 915-12-470

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	2.80
EXCAVATION (ROADWAY)	CY	46.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	699.00
LIME (HYDRATED LIME (DRY))	TON	58.78
LIME TRT (EXST MATL) (6")	SY	1,563.22
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	465.80
AGGR (TY-PB GR-4)	CY	15.53
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	1,009.32
D-GR HMA(QCQA) TY-C PG64-22	TON	170.79
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	94.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	72.00
DRIVEWAYS (CONC)	SY	145.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	0.00
CONC DIRECTIONAL ISLAND	SY	0.00

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FORT SAM HOUSTON TRANSPORTATION PROJECTS

PLAN AND PROFILE

WINANS RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 155

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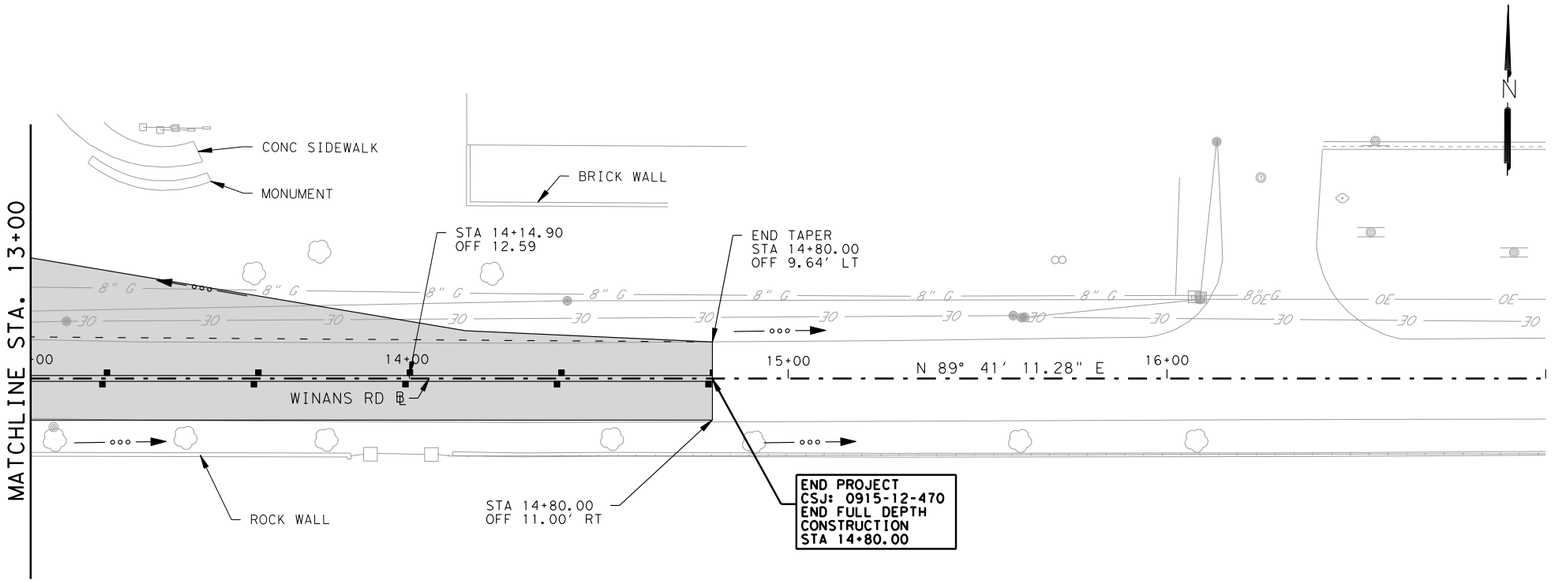

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

H: 0 5 10 20 40 60 — 1" = 40'

V: 0 5 10 15 — 1" = 10'

STATE OF TEXAS
ROLANDO ESCAMILLA
90128
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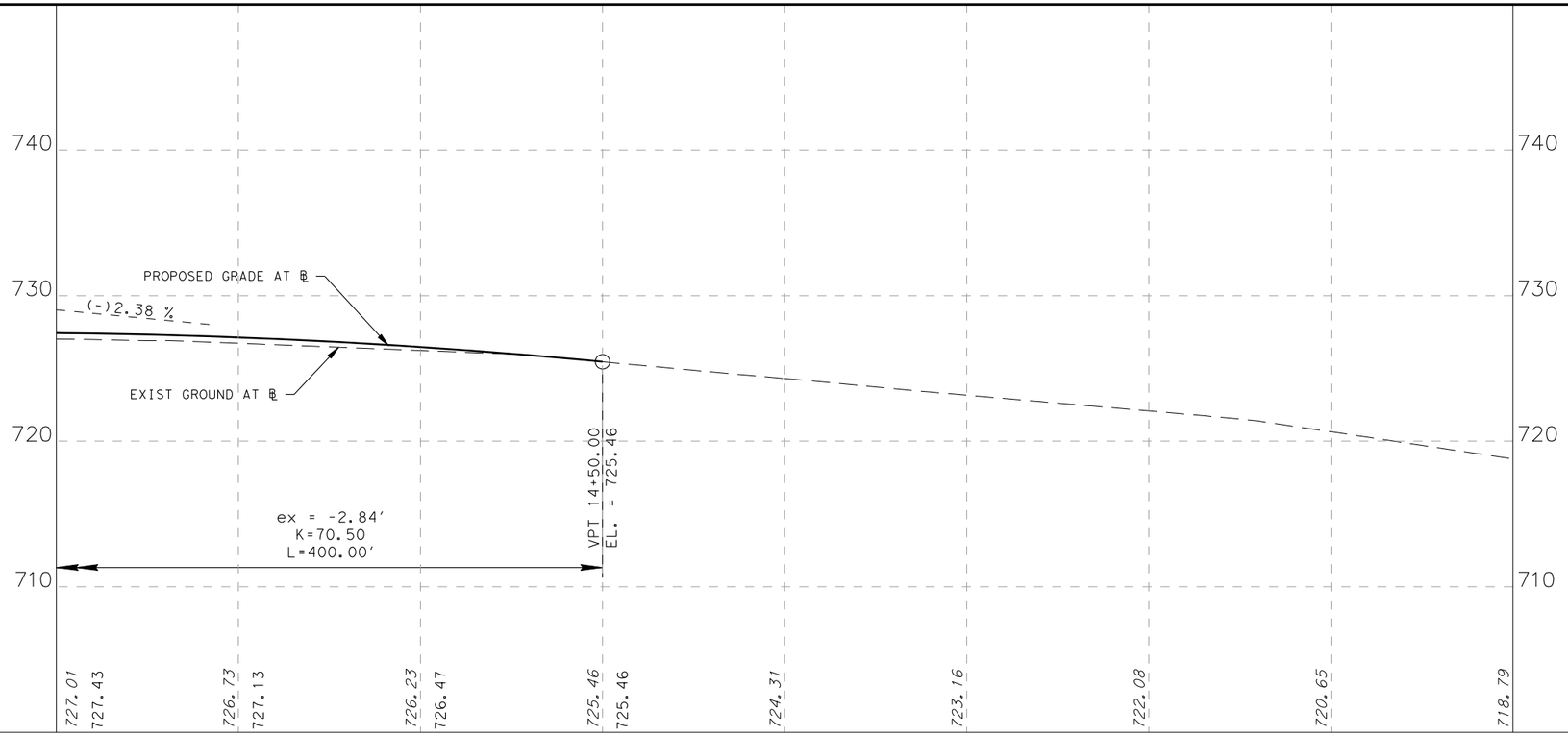
PROFESSIONAL ENGINEER
7/31/2011



CSJ 915-12-470

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	1.80
EXCAVATION (ROADWAY)	CY	7.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	202.00
LIME (HYDRATED LIME (DRY))	TON	26.12
LIME TRT (EXST MATL) (6")	SY	694.78
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	191.30
AGGR (TY-PB GR-4)	CY	6.38
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	438.42
D-GR HMA(QCQA) TY-C PG64-22	TON	70.14
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	0.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	0.00
DRIVEWAYS (CONC)	SY	0.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	0.00
CONC DIRECTIONAL ISLAND	SY	0.00

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FORT SAM HOUSTON TRANSPORTATION PROJECTS

PLAN AND PROFILE

WINANS RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
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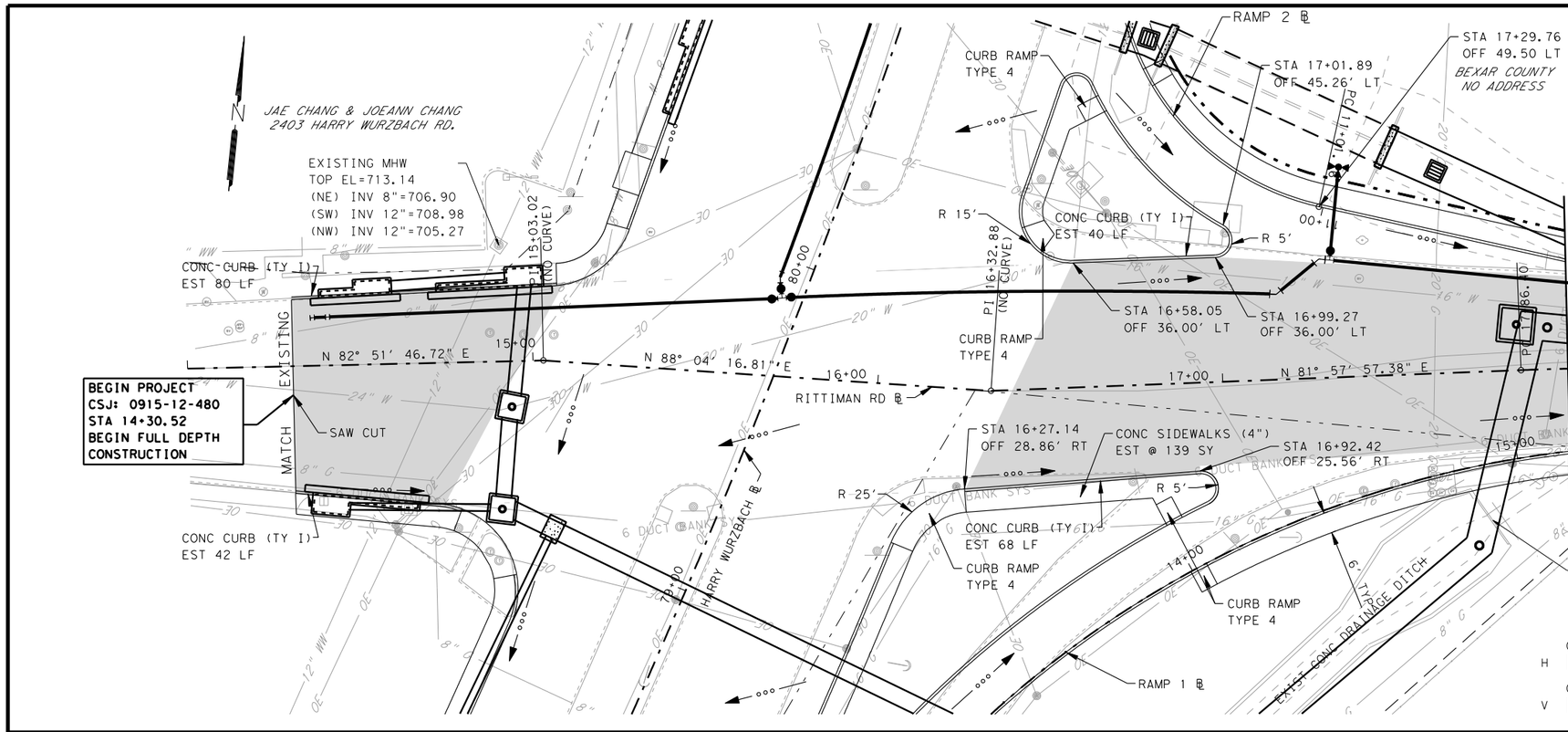

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
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- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER FL LEFT
- GUTTER FL RIGHT

STATE OF TEXAS
ROLANDO ESCAMILLA
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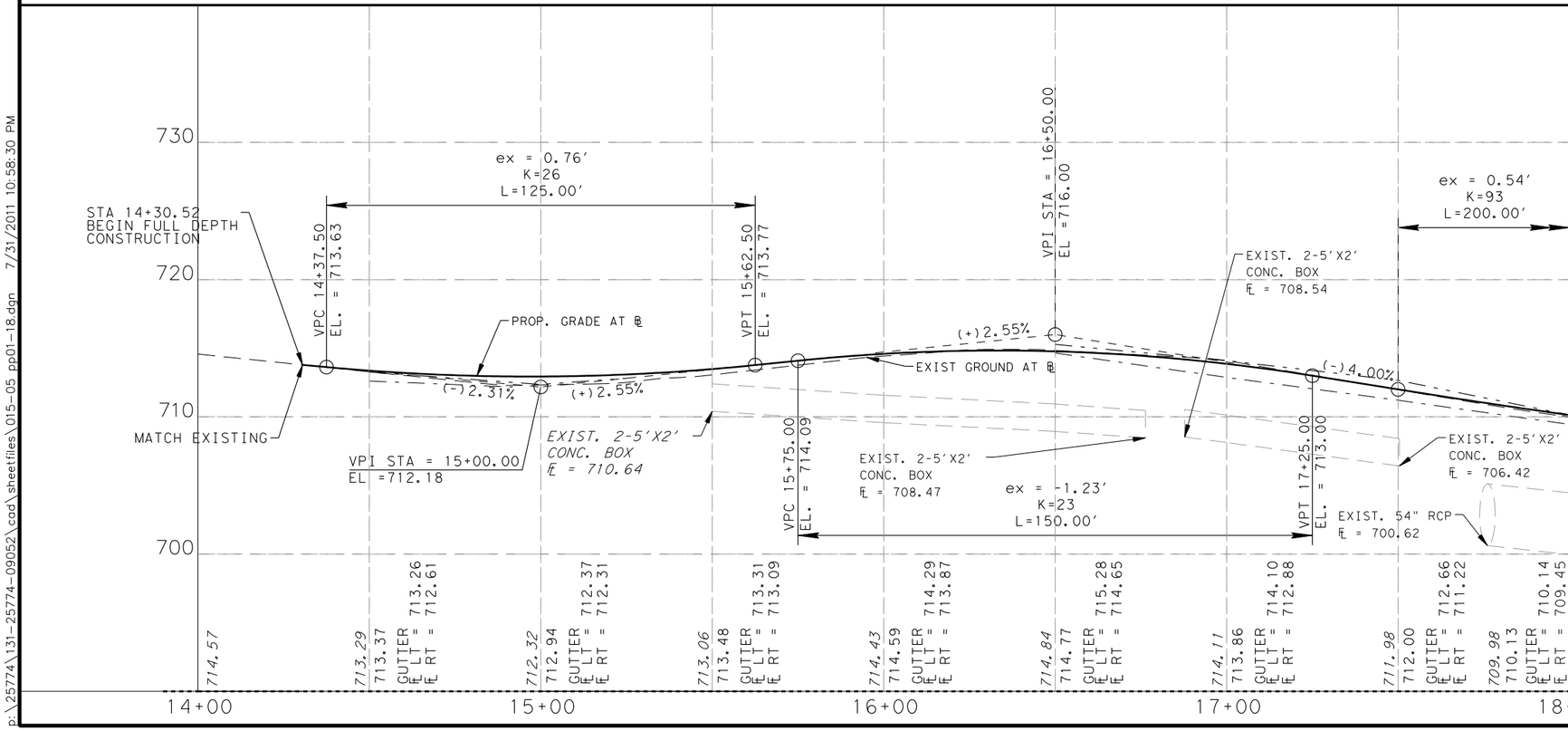
7/31/2011



CSJ 915-12-480

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	2.26
EXCAVATION (ROADWAY)	CY	572.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	1,061.00
LIME (HYDRATED LIME (DRY))	TON	54.81
LIME TRT (EXST MATL) (6")	SY	1,458.78
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	422.23
AGGR (TY-PB GR-4)	CY	14.07
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	0.00
D-GR HMA(QCQA) TY-C PG64-22	TON	154.82
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	0.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	276.00
DRIVEWAYS (CONC)	SY	0.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	139.00
CONC DIRECTIONAL ISLAND	SY	0.00

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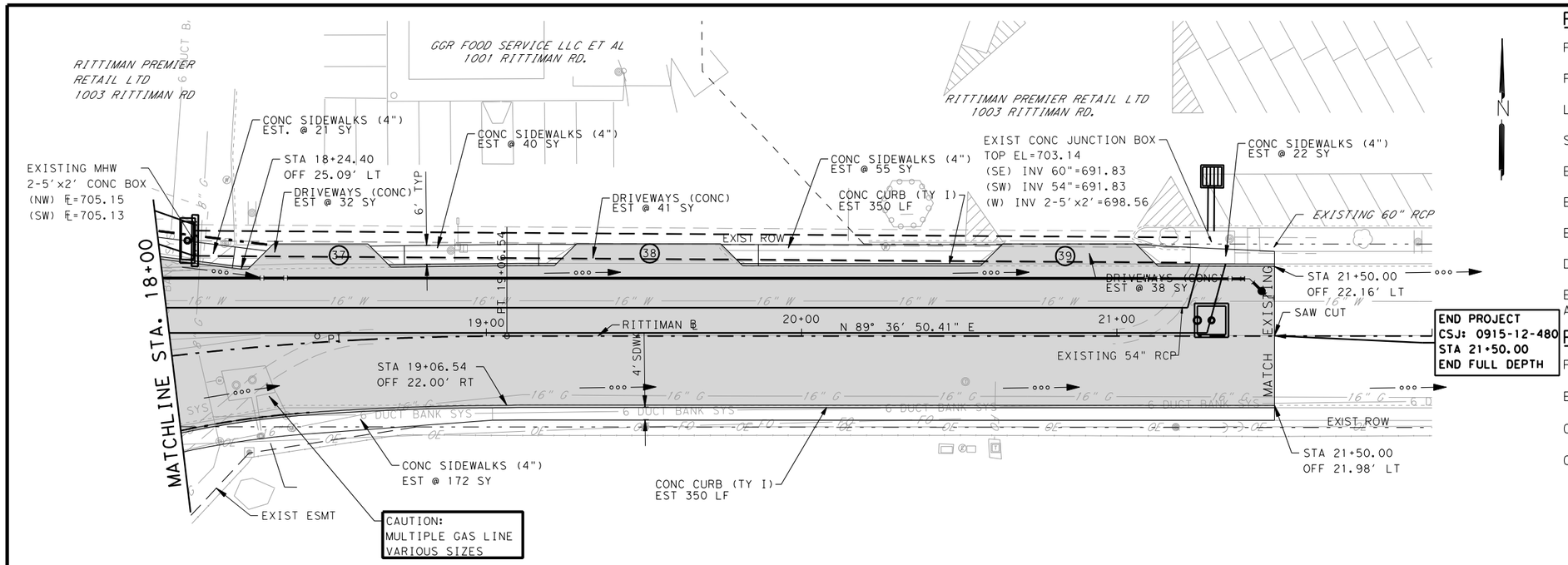

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
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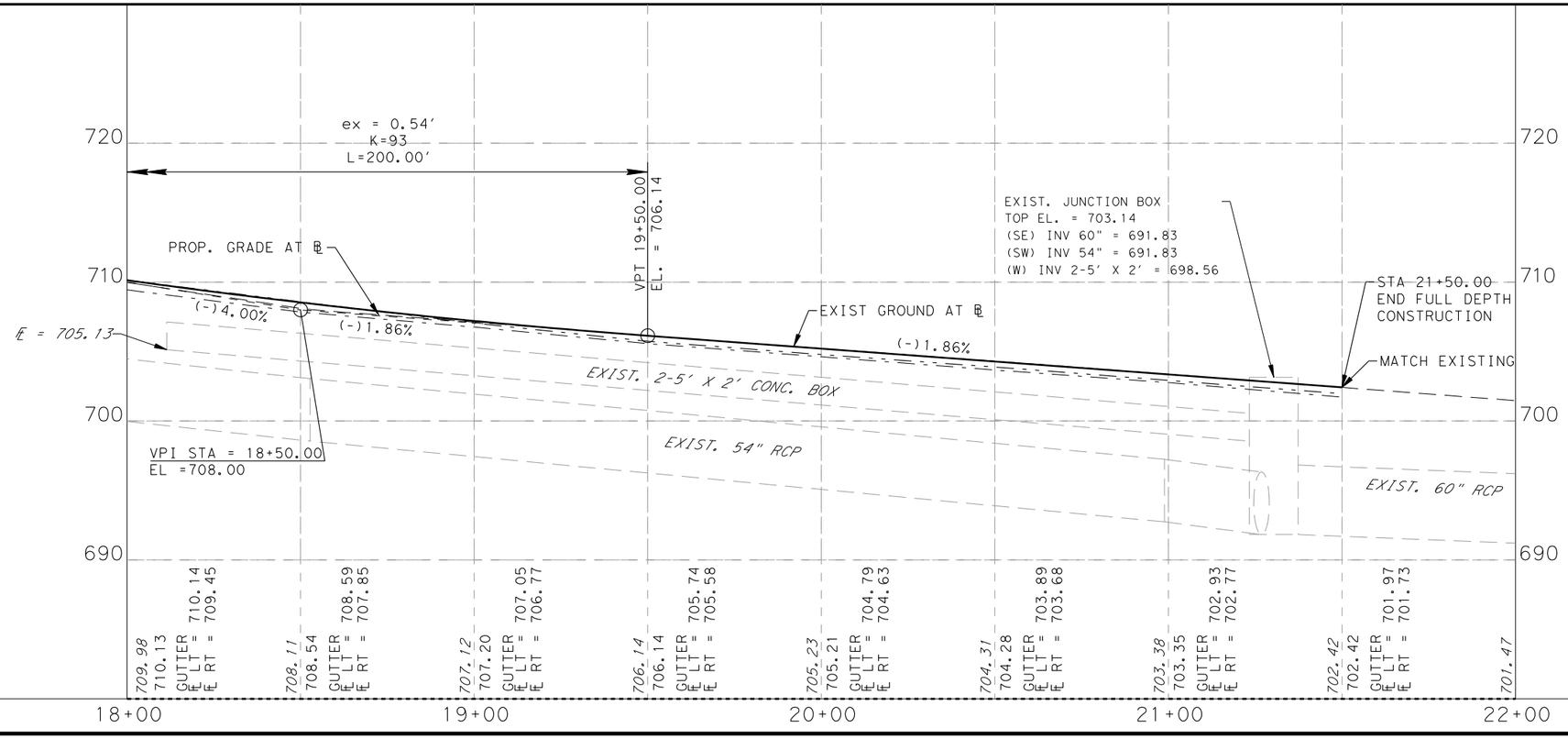
PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER FL LEFT
- GUTTER FL RIGHT

H: 0 5 10 20 40 60 — 1" = 40'

V: 0 5 10 15 — 1" = 10'

STATE OF TEXAS — ROLANDO ESCAMILLA — 90128 — LICENSED PROFESSIONAL ENGINEER — 7/31/2011



CSJ 915-12-480

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	3.50
EXCAVATION (ROADWAY)	CY	221.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	678.00
LIME (HYDRATED LIME (DRY))	TON	72.41
LIME TRT (EXST MATL) (6")	SY	1,925.67
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	523.63
AGGR (TY-PB GR-4)	CY	17.45
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	1,230.68
D-GR HMA(QCQA) TY-C PG64-22	TON	192.00
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	0.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	700.00
DRIVEWAYS (CONC)	SY	113.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	310.00
CONC DIRECTIONAL ISLAND	SY	0.00

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CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

FORT SAM HOUSTON TRANSPORTATION PROJECTS

PLAN AND PROFILE

RITTIMAN RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 158

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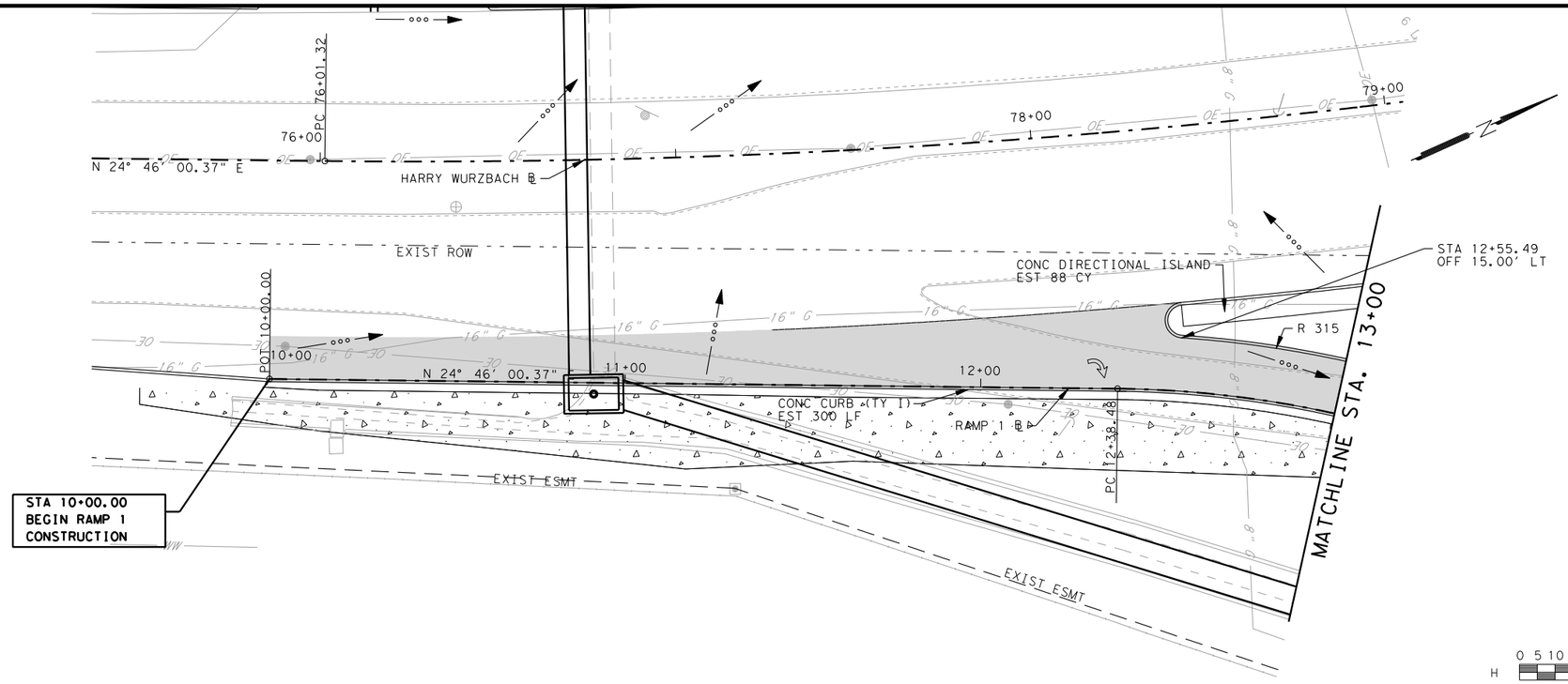


PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

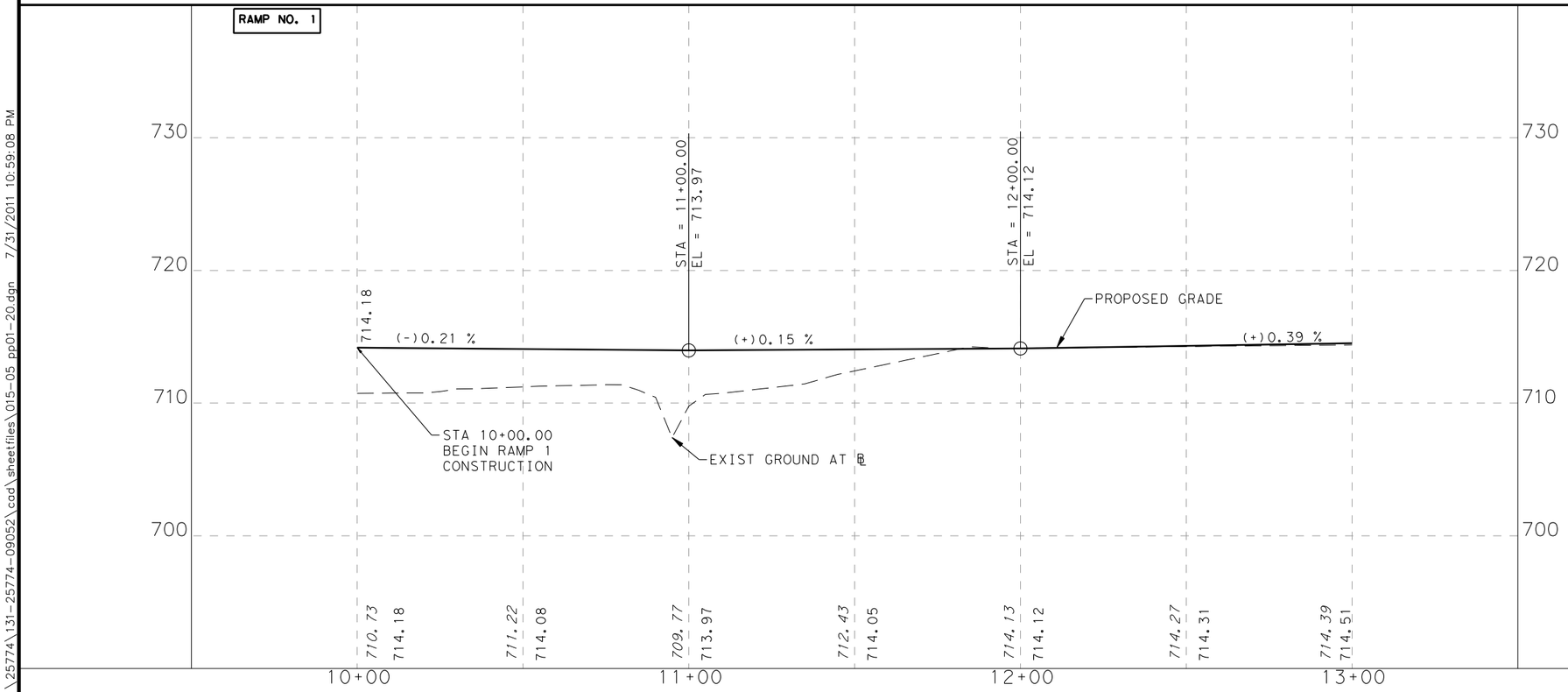
PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

H: 0 5 10 20 40 60 — 1" = 40'

V: 0 5 10 15 — 1" = 10'

STATE OF TEXAS
ROLANDO ESCAMILLA
90128
LICENSED
PROFESSIONAL ENGINEER
7/31/2011



CSJ 915-12-480

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	3.00
EXCAVATION (ROADWAY)	CY	0.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	0.00
LIME (HYDRATED LIME (DRY))	TON	17.50
LIME TRT (EXST MATL) (6")	SY	465.44
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	120.13
AGGR (TY-PB GR-4)	CY	4.00
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	292.82
D-GR HMA(QCQA) TY-C PG64-22	TON	44.05
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	0.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	2.07
CONC CURB (TY I)	LF	355.00
DRIVEWAYS (CONC)	SY	0.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	0.00
CONC DIRECTIONAL ISLAND	SY	88.00

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FORT SAM HOUSTON TRANSPORTATION PROJECTS

PLAN AND PROFILE

RITTIMAN RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 159

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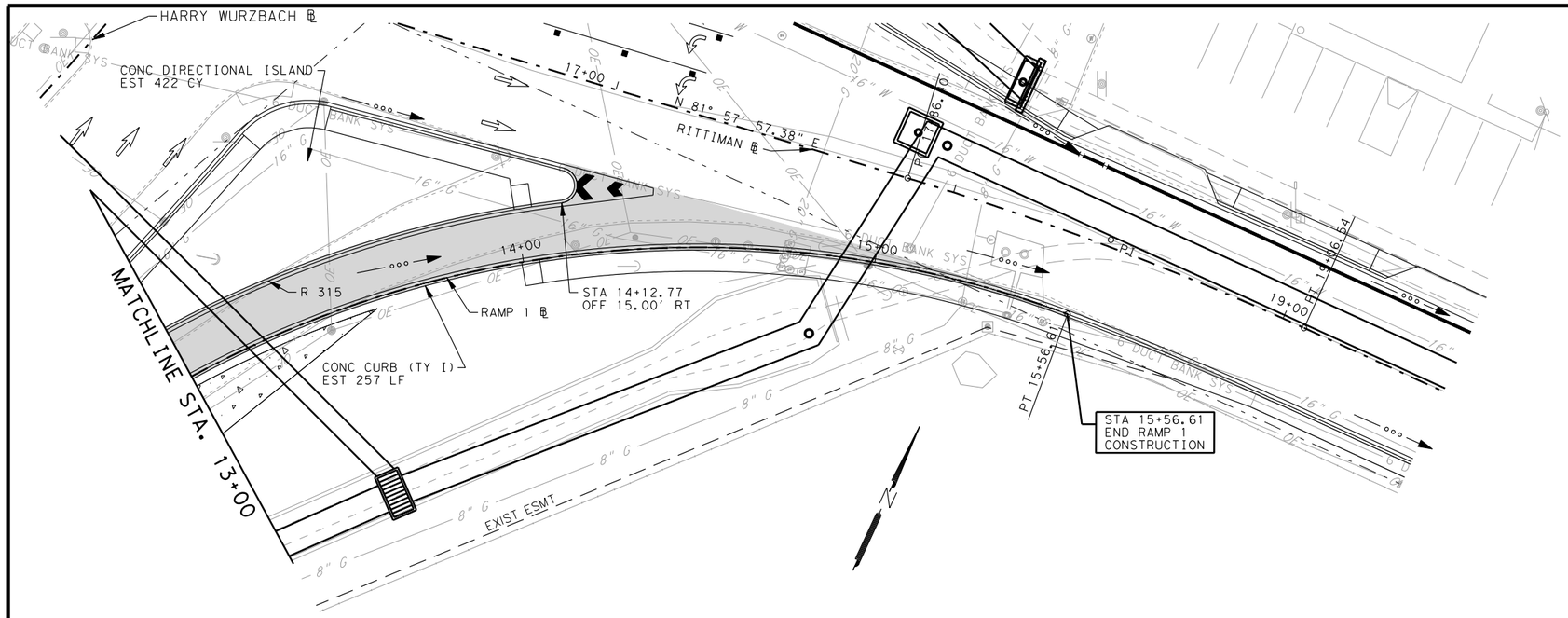


PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

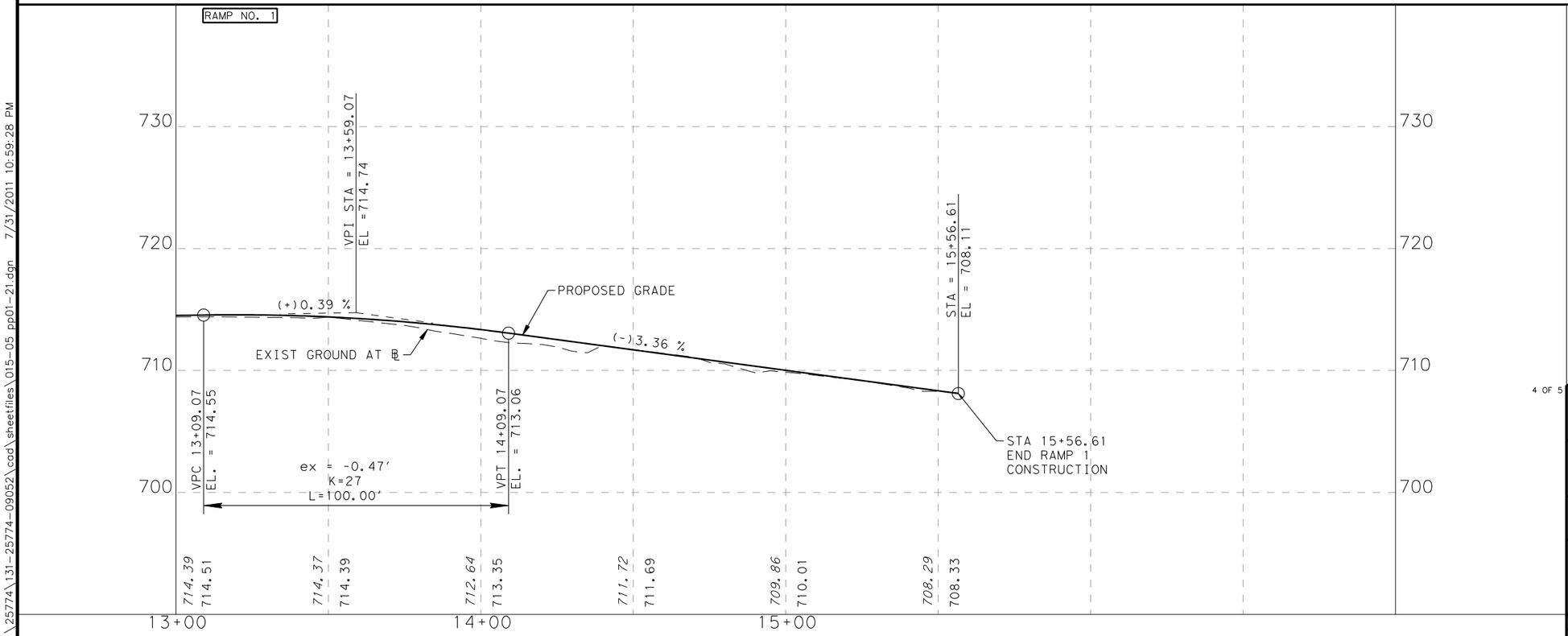
PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

H 0 5 10 20 40 60 — 1" = 40'

V 0 5 10 15 — 1" = 10'

STATE OF TEXAS
ROLANDO ESCAMILLA
90128
LICENSED
PROFESSIONAL ENGINEER
7/31/2011



CSJ 915-12-480

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	2.57
EXCAVATION (ROADWAY)	CY	0.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	0.00
LIME (HYDRATED LIME (DRY))	TON	15.47
LIME TRT (EXST MATL) (6")	SY	411.33
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	95.90
AGGR (TY-PB GR-4)	CY	3.20
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	252.57
D-GR HMA(QCQA) TY-C PG64-22	TON	35.16
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	0.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	3.76
CONC CURB (TY I)	LF	387.00
DRIVEWAYS (CONC)	SY	0.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	0.00
CONC DIRECTIONAL ISLAND	SY	422.00

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PLAN AND PROFILE

RITTIMAN RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 160

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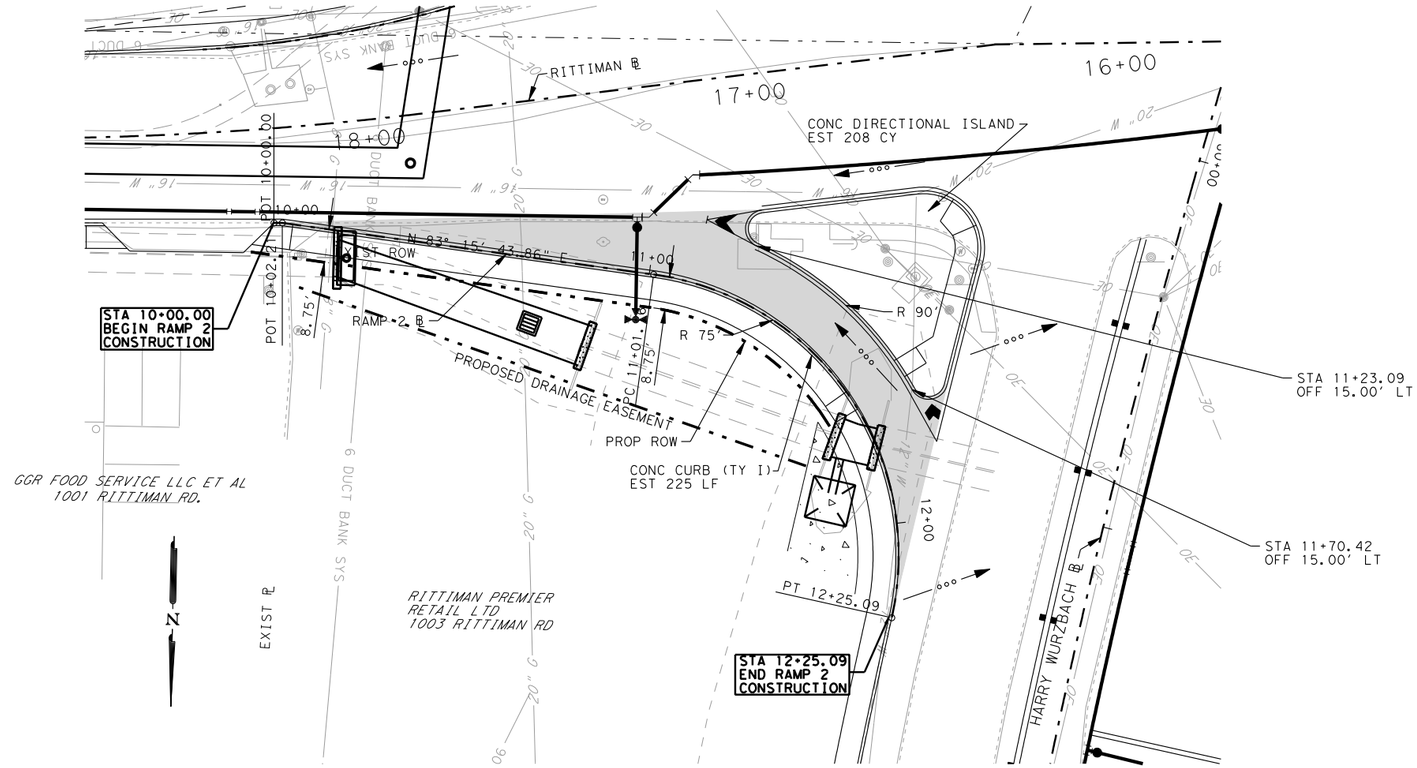

PLAN VIEW LEGEND

- PROPOSED CURB
- FULL DEPTH RECONSTRUCTION
- LEVEL-UP & OVERLAY
- SAWCUT LINE
- EXISTING EDGE ROADWAY
- EXISTING RIGHT OF WAY
- EXISTING FENCE
- DRIVE NUMBER
- ENVIRONMENTAL AREA OF CONCERN

PROFILE VIEW LEGEND

- PROPOSED GRADE
- EXISTING GROUND @ ℄
- GUTTER ℄ LEFT
- GUTTER ℄ RIGHT

H 0 5 10 20 40 60 — 1" = 40'

V 0 5 10 15 — 1" = 10'

STATE OF TEXAS
ROLANDO ESCAMILLA
90128
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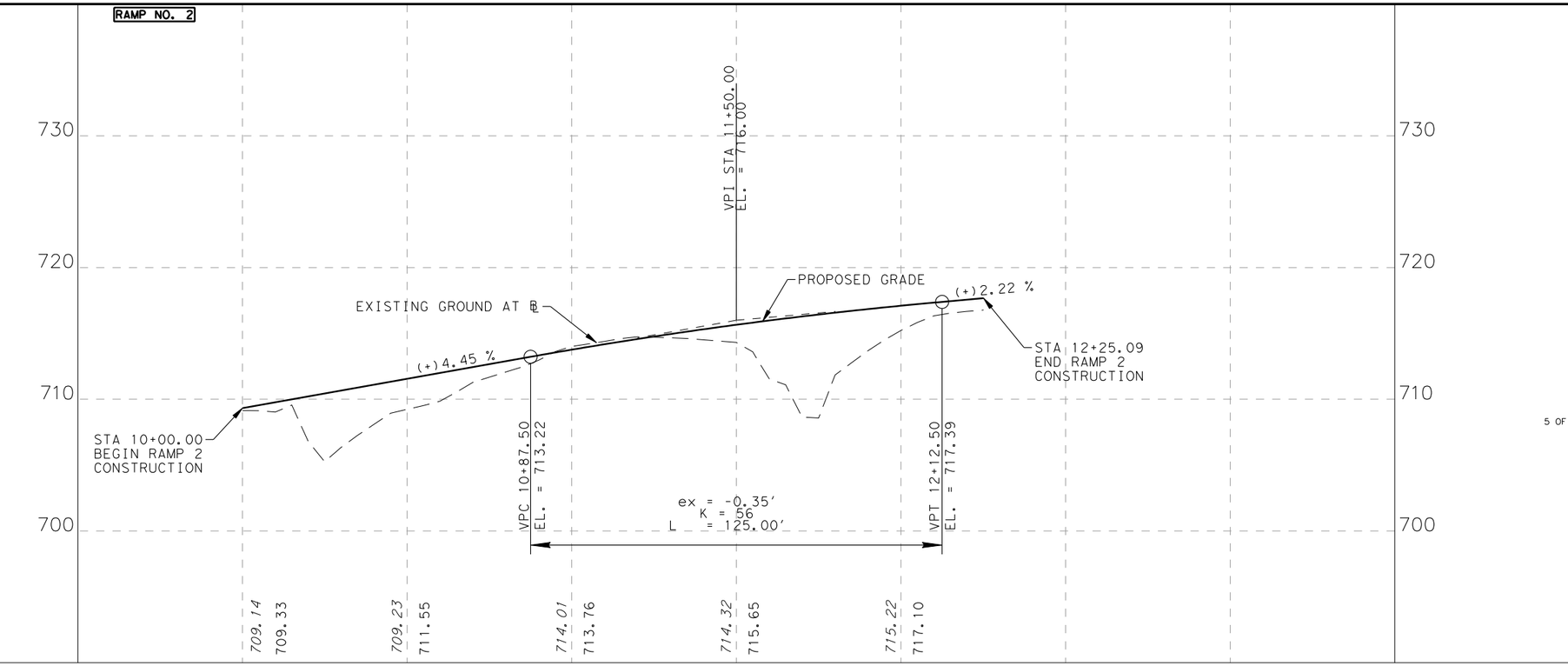
PROFESSIONAL ENGINEER
7/31/2011



CSJ 915-12-480

SHEET TOTALS		
DESCRIPTION	UNIT	TOTAL
PREPARING ROW	STA	2.25
EXCAVATION (ROADWAY)	CY	0.00
SUBGRADE WIDENING (ORD COMP)	STA	0.00
EMBANKMENT (FINAL)(ORD COMP)(TY A)	CY	0.00
LIME (HYDRATED LIME (DRY))	TON	13.51
LIME TRT (EXST MATL) (6")	SY	359.22
ASPH(AC-5 OR 10,CRS/HFRS-2,RS/CRS-1P)	GAL	83.80
AGGR (TY-PB GR-4)	CY	2.79
D-GR HMA(METH) TY-B PG64-22 (LEVEL UP)	TON	0.00
D-GR HMA(QCQA) TY-B PG64-22	TON	220.67
D-GR HMA(QCQA) TY-C PG64-22	TON	30.73
PLANE ASPH CONC PAV(0" TO 2")	SY	0.00
PAV JT UNDERSEAL (48")	LF	0.00
CL C CONC (BUS STOP)	CY	0.00
RIPRAP (CONC)(4 IN)	CY	0.00
CONC CURB (TY I)	LF	295.00
DRIVEWAYS (CONC)	SY	0.00
CURB RAMPS (TY 5)	EA	0.00
CONC SIDEWALK (4")	SY	0.00
CONC DIRECTIONAL ISLAND	SY	208.00

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FORT SAM HOUSTON TRANSPORTATION PROJECTS

PLAN AND PROFILE

RITTIMAN RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 161

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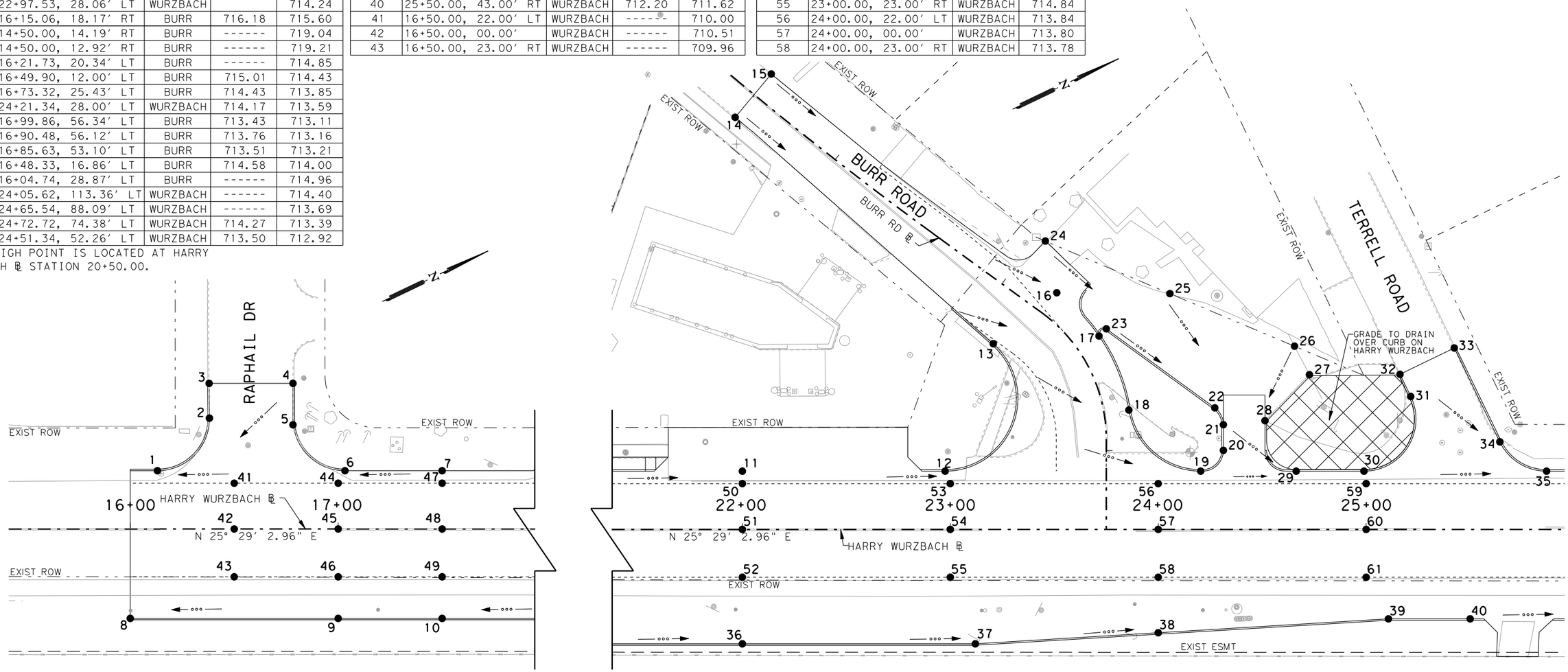
POINT	STATION & OFFSET	STREET	TC ELEV	GUTTER
1	16+13.08, 28.00' LT	WURZBACH	709.47	708.89
2	16+38.08, 53.21' LT	RAPHAIL	709.97	709.39
3	16+37.94, 69.99' LT	RAPHAIL	710.18	709.60
4	16+78.25, 69.99' LT	RAPHAIL	711.59	711.01
5	16+78.25, 52.98' LT	RAPHAIL	711.39	710.81
6	17+03.25, 28.00' LT	WURZBACH	710.94	710.36
7	17+50.00, 28.00' LT	WURZBACH	------	711.51
8	16+00.00, 43.00' RT	WURZBACH	709.11	708.53
9	17+00.00, 43.00' RT	WURZBACH	711.29	710.71
10	17+50.00, 43.00' RT	WURZBACH	712.55	711.97
11	22+00.00, 28.00' LT	WURZBACH	------	714.64
12	22+97.53, 28.06' LT	WURZBACH		714.24
13	16+15.06, 18.17' RT	BURR	716.18	715.60
14	14+50.00, 14.19' RT	BURR	------	719.04
15	14+50.00, 12.92' RT	BURR	------	719.21
16	16+21.73, 20.34' LT	BURR	------	714.85
17	16+49.90, 12.00' LT	BURR	715.01	714.43
18	16+73.32, 25.43' LT	BURR	714.43	713.85
19	24+21.34, 28.00' LT	WURZBACH	714.17	713.59
20	16+99.86, 56.34' LT	BURR	713.43	713.11
21	16+90.48, 56.12' LT	BURR	713.76	713.16
22	16+85.63, 53.10' LT	BURR	713.51	713.21
23	16+48.33, 16.86' LT	BURR	714.58	714.00
24	16+04.74, 28.87' LT	BURR	------	714.96
25	24+05.62, 113.36' LT	WURZBACH	------	714.40
26	24+65.54, 88.09' LT	WURZBACH	------	713.69
27	24+72.72, 74.38' LT	WURZBACH	714.27	713.39
28	24+51.34, 52.26' LT	WURZBACH	713.50	712.92

NOTE: HIGH POINT IS LOCATED AT HARRY WURZBACH ℄ STATION 20+50.00.

POINT	STATION & OFFSET	STREET	TC ELEV	GUTTER
29	24+66.34, 28.00' LT	WURZBACH	713.37	712.79
30	24+98.95, 28.00' LT	WURZBACH	712.75	712.17
31	25+21.44, 63.92' LT	TERRELL	712.34	711.76
32	25+16.27, 74.56' LT	TERRELL	712.24	711.66
33	25+42+36, 87.22' LT	TERRELL	711.52	710.94
34	25+63.00, 44.00' LT	TERRELL	711.34	710.73
35	25+86.76, 28.00' LT	WURZBACH	711.24	710.61
36	22+00.00, 55.00' RT	WURZBACH	714.71	714.13
37	23+12.05, 55.00' RT	WURZBACH	714.35	713.77
38	24+00.00, 49.69' RT	WURZBACH	714.00	713.42
39	25+10.70, 43.00' RT	WURZBACH	712.41	711.83
40	25+50.00, 43.00' RT	WURZBACH	712.20	711.62
41	16+50.00, 22.00' LT	WURZBACH	------	710.00
42	16+50.00, 00.00'	WURZBACH	------	710.51
43	16+50.00, 23.00' RT	WURZBACH	------	709.96

POINT	STATION & OFFSET	STREET	ELEV
44	17+00.00, 22.00' LT	WURZBACH	710.58
45	17+00.00, 00.00'	WURZBACH	711.67
46	17+00.00, 23.00' RT	WURZBACH	711.16
47	17+50.00, 22.00' LT	WURZBACH	711.81
48	17+50.00, 00.00'	WURZBACH	712.88
49	17+50.00, 23.00' RT	WURZBACH	712.39
50	22+00.00, 22.00' LT	WURZBACH	715.21
51	22+00.00, 00.00'	WURZBACH	715.58
52	22+00.00, 23.00' RT	WURZBACH	714.98
53	23+00.00, 22.00' LT	WURZBACH	714.78
54	23+00.00, 00.00'	WURZBACH	715.02
55	23+00.00, 23.00' RT	WURZBACH	714.84
56	24+00.00, 22.00' LT	WURZBACH	713.84
57	24+00.00, 00.00'	WURZBACH	713.80
58	24+00.00, 23.00' RT	WURZBACH	713.78

POINT	STATION & OFFSET	STREET	ELEV
59	25+00.00, 22.00' LT	WURZBACH	712.38
60	25+00.00, 00.00'	WURZBACH	713.19
61	25+00.00, 23.00' RT	WURZBACH	712.59



LAYOUT PLAN LEGEND

PROPOSED CURB

PROPOSED EDGE OF PAVEMENT

FLOW ARROW

TRAFFIC FLOW

PROPOSED SPOT ELEVATION #

0 25 50 75

1" = 50'

STATE OF TEXAS
ROLANDO ESCAMILLA
90128
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7/31/2011

1 OF 1

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FORT SAM HOUSTON TRANSPORTATION PROJECTS

INTERSECTION GRADING PLAN

BURR RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470.etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 162

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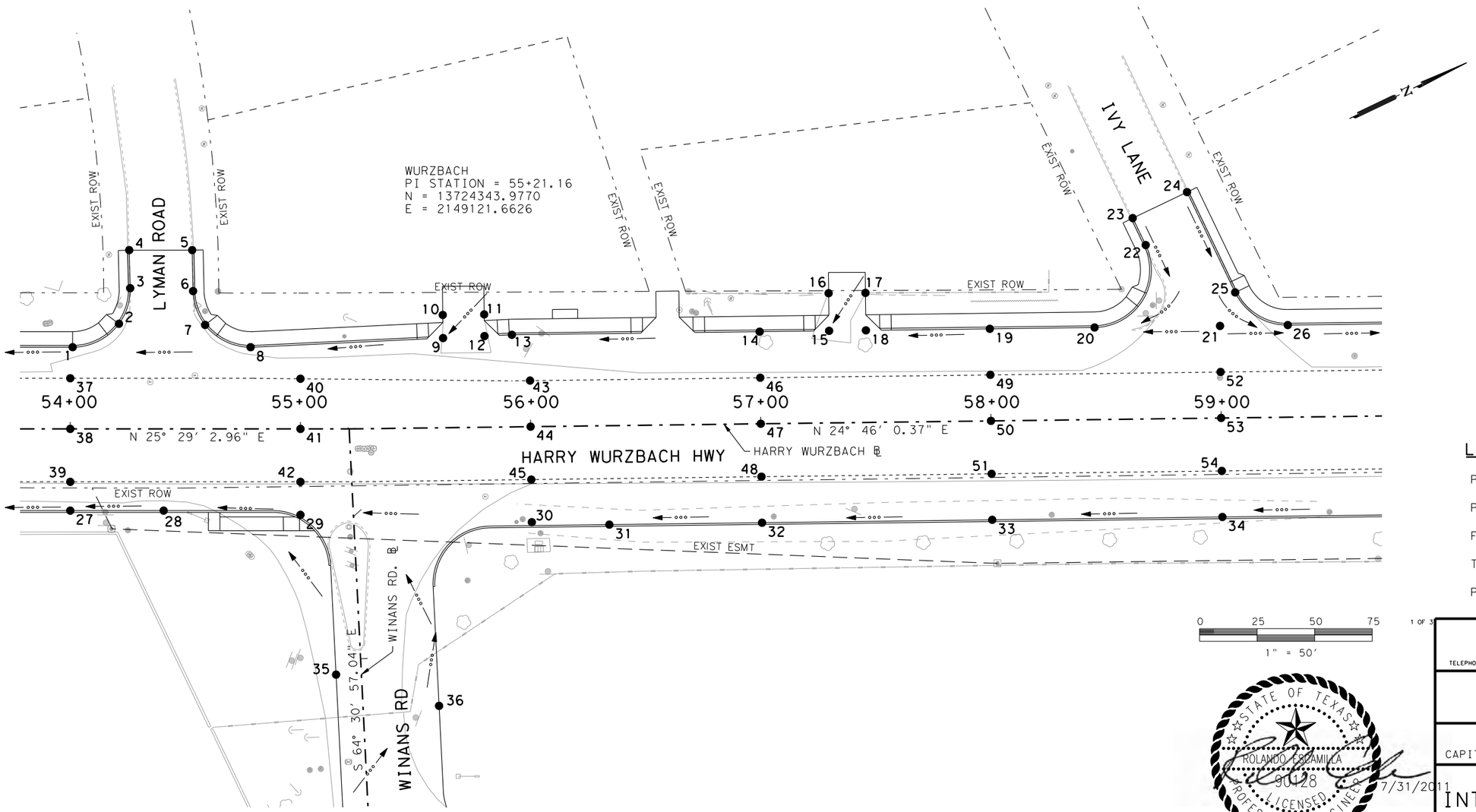
POINT	STATION & OFFSET	STREET	TC ELEV	GUTTER
1	54+01.03, 35.50′ LT	WURZBACH	721.83	721.25
2	54+21.16, 44.67′ LT	LYMAN	722.29	721.71
3	54+26.02, 61.14′ LT	LYMAN	721.96	721.38
4	54+25.60, 77.66′ LT	LYMAN	721.62	721.04
5	54+52.97, 77.66′ LT	LYMAN	721.92	721.34
6	54+53.35, 59.89′ LT	LYMAN	722.49	721.91
7	54+58.59, 45.17′ LT	LYMAN	723.00	722.42
8	54+79.37, 35.50′ LT	WURZBACH	723.36	722.78
9	55+62.44, 38.94′ LT	WURZBACH	725.05	724.47
10	55+62.44, 48.99′ LT	DRIVEWAY	726.86	726.28
11	55+80.44, 48.99′ LT	DRIVEWAY	727.34	726.76
12	55+80.44, 39.58′ LT	WURZBACH	725.28	724.70
13	55+92.35, 40.00′ LT	WURZBACH	725.41	724.83
14	57+00.00, 40.00′ LT	WURZBACH	726.48	725.90
15	57+30.17, 40.00′ LT	WURZBACH	726.60	726.02
16	57+30.17, 56.33′ LT	DRIVEWAY	728.88	728.30
17	57+46.17, 56.29′ LT	DRIVEWAY	729.66	729.08
18	57+46.17, 40.00′ LT	WURZBACH	726.67	726.09

POINT	STATION & OFFSET	STREET	TC ELEV	GUTTER
19	58+00.00, 40.00′ LT	WURZBACH	726.89	726.31
20	58+45.50, 40.00′ LT	WURZBACH	727.08	726.50
21	59+00.00, 40.00′ LT	IVY	------	727.11
22	58+68.18, 75.54′ LT	IVY	727.75	727.17
23	58+62.66, 87.31′ LT	IVY	727.92	727.34
24	58+86.40, 98.30′ LT	IVY	727.96	727.38
25	59+06.78, 54.46′ LT	IVY	727.56	726.98
26	59+29.45, 40.00′ LT	WURZBACH	727.33	726.75
27	54+00.00, 35.50′ RT	WURZBACH	721.75	721.17
28	54+40.58, 35.50′ LT	WURZBACH	722.42	721.84
29	55+00.00, 37.34′ RT	WURZBACH	------	722.66
30	56+00.00, 40.52′ RT	WURZBACH	------	724.19
31	56+33.91, 43.00′ RT	WURZBACH	724.92	724.34
32	57+00.00, 43.00′ RT	WURZBACH	725.47	724.89
33	58+00.00, 43.00′ RT	WURZBACH	726.11	725.53
34	59+00.00, 43.00′ RT	WURZBACH	726.51	725.93
35	11+06.34, 11.00′ RT	WINANS	725.91	725.33
36	11+22.12, 33.00′ LT	WINANS	725.74	725.16

POINT	STATION & OFFSET	STREET	ELEV
37	54+00.00, 22.00′ LT	WURZBACH	721.59
38	54+00.00, 00.00′	WURZBACH	722.13
39	54+00.00, 23.00′ RT	WURZBACH	721.52
40	55+00.00, 21.80′ LT	WURZBACH	723.52
41	55+00.00, 00.00′	WURZBACH	723.88
42	55+00.00, 23.00′ RT	WURZBACH	723.14
43	56+00.00, 19.83′ LT	WURZBACH	725.11
44	56+00.00, 00.00′	WURZBACH	725.25
45	56+00.00, 23.00′ RT	WURZBACH	724.67
46	57+00.00, 20.00′ LT	WURZBACH	726.19
47	57+00.00, 00.00′	WURZBACH	726.08
48	57+00.00, 23.00′ RT	WURZBACH	725.46
49	58+00.00, 20.00′ LT	WURZBACH	726.53
50	58+00.00, 00.00′	WURZBACH	726.55
51	58+00.00, 23.00′ RT	WURZBACH	726.02
52	59+00.00, 20.00′ LT	WURZBACH	726.97
53	59+00.00, 00.00′	WURZBACH	726.79
54	59+00.00, 23.00′ RT	WURZBACH	726.34



LAYOUT PLAN LEGEND

PROPOSED CURB

PROPOSED EDGE OF PAVEMENT

FLOW ARROW

TRAFFIC FLOW

PROPOSED SPOT ELEVATION

0 25 50 75

1" = 50′

1 OF 3

STATE OF TEXAS
ROLANDO ESCAMILLA
90128
LICENSED
PROFESSIONAL ENGINEER
7/31/2011

TETRA TECH
TBPE F-3924
700 N. ST. MARY'S STREET SAN ANTONIO, TX 78205
TELEPHONE #: (210) 226-2922 FAX #: (210) 226-8497 WEBSITE: WWW.TETRATECH.COM

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CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

FORT SAM HOUSTON TRANSPORTATION PROJECTS

INTERSECTION GRADING PLAN

WINANS RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 163

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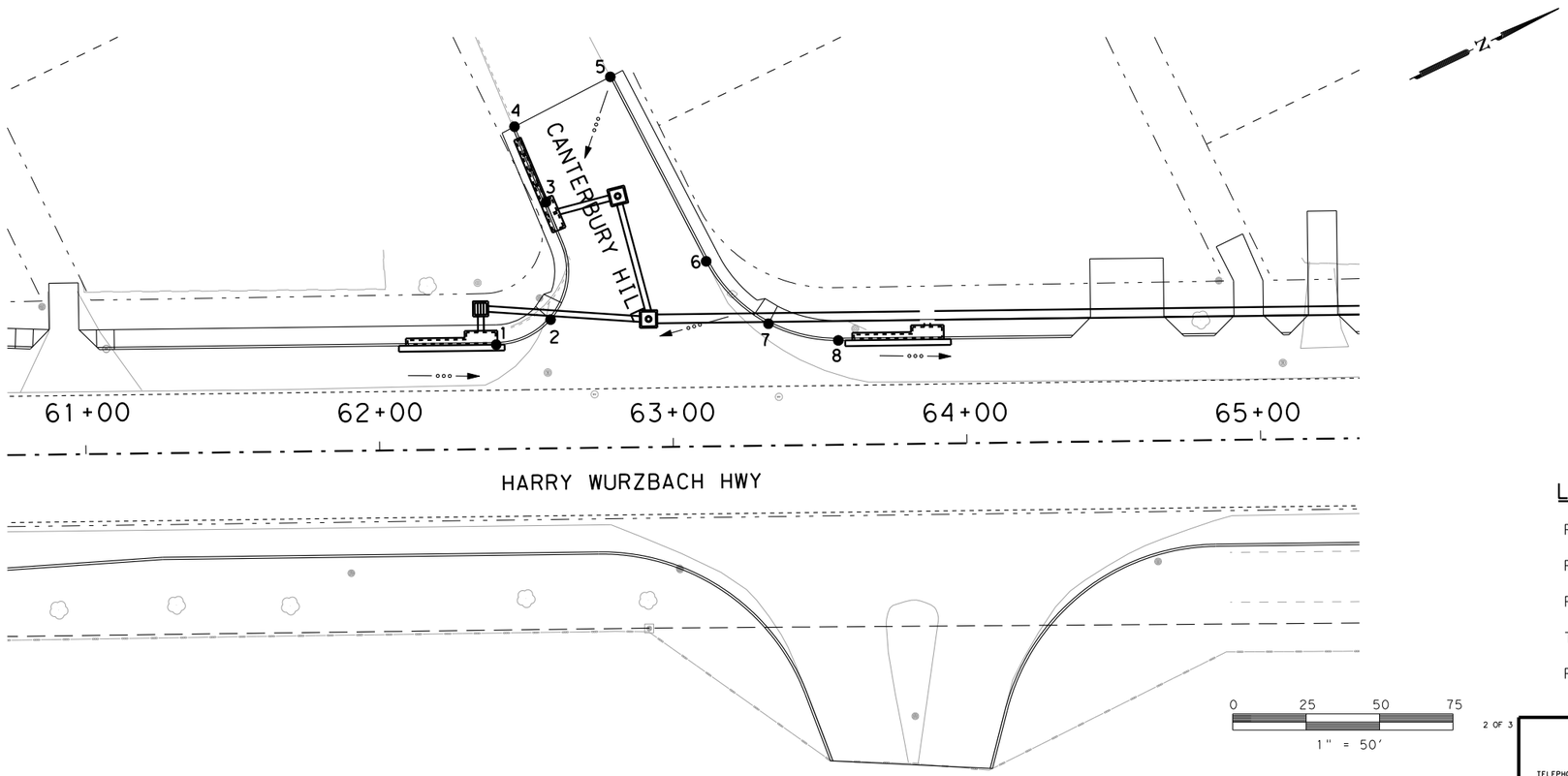
POINT	HW STATION & OFFSET	STREET	TC ELEV	GUTTER
1	62+40.16, 35.50′ LT	CANTERBURY	725.66	725.08
2	62+62.60, 49.47′LT	CANTERBURY	725.71	725.13
3	62+57.72, 83.80′ LT	CANTERBURY	726.95	726.37
4	62+47.30, 109.69′ LT	CANTERBURY	727.07	726.49
5	62+80.12, 126.24′ LT	CANTERBURY	728.60	728.02
6	63+12.00, 62.99′ LT	CANTERBURY	726.43	725.85
7	63+28.02, 44.51′ LT	CANTERBURY	726.11	725.53
8	63+56.65, 35.50′ LT	CANTERBURY	725.83	725.25



LAYOUT PLAN LEGEND

PROPOSED CURB

PROPOSED EDGE OF PAVEMENT

FLOW ARROW

TRAFFIC FLOW

PROPOSED SPOT ELEVATION

0 25 50 75

1" = 50′

2 OF 3

STATE OF TEXAS
ROLANDO ESCAMILLA
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7/31/2011

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FORT SAM HOUSTON TRANSPORTATION PROJECTS

INTERSECTION GRADING PLAN

WINANS RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 164

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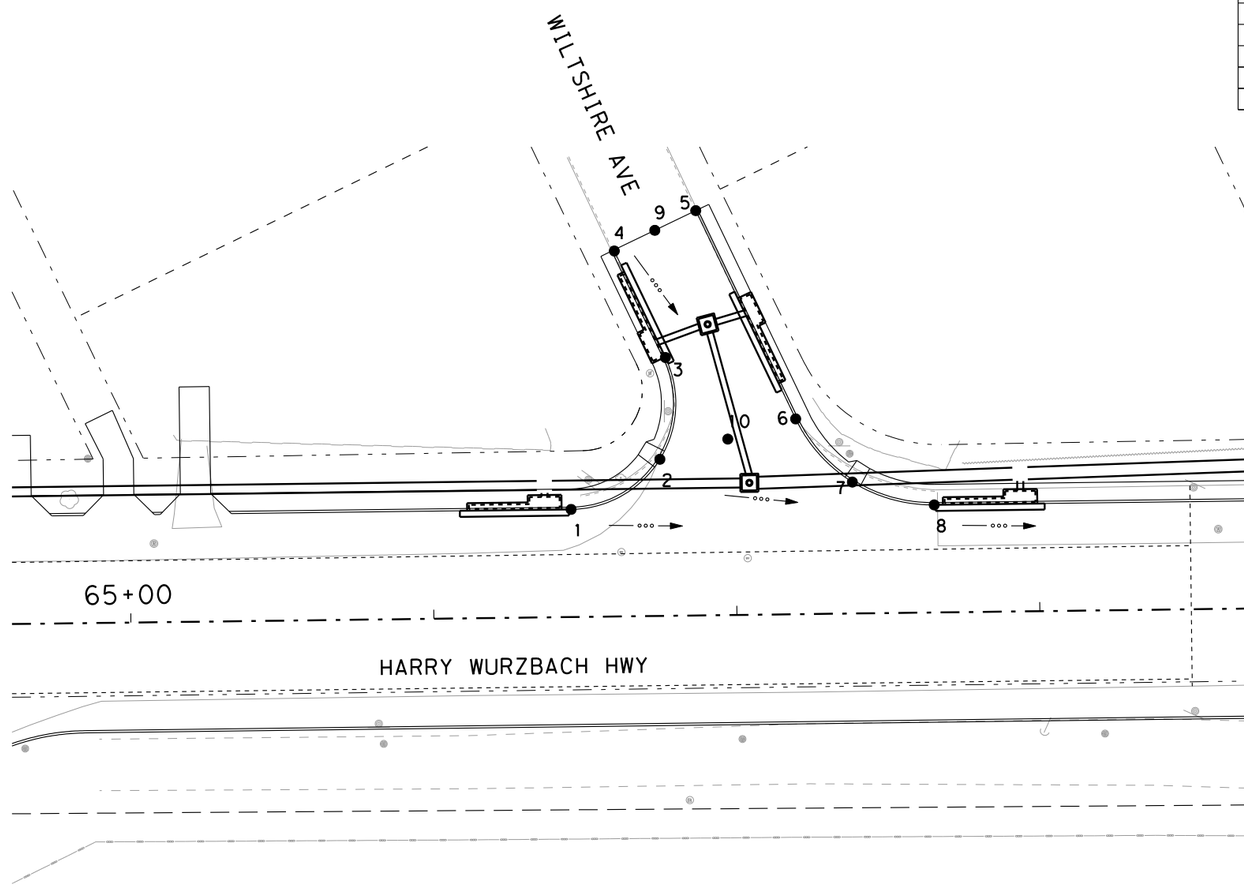
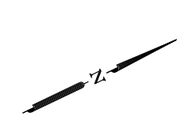
POINT	HW STATION & OFFSET	STREET	TC ELEV	GUTTER
1	66+45.72, 35.50′ LT	WILTSHIRE	723.47	723.85
2	66+75.22, 51.67′LT	WILTSHIRE	724.54	723.96
3	66+77.46, 85.24′ LT	WILTSHIRE	725.99	725.41
4	66+60.90, 120.91′ LT	WILTSHIRE	728.89	728.31
5	66+88.09, 133.57′ LT	WILTSHIRE	729.24	728.66
6	67+20.20, 64.44′ LT	WILTSHIRE	724.28	723.70
7	67+38.65, 43.35′ LT	WILTSHIRE	723.63	723.05
8	67+65.55, 35.50′ LT	WILTSHIRE	723.25	722.67
9	66+74.50, 127.24′ LT	WILTSHIRE	N/A	728.99
10	66+97.71, 58.05′ LT	WILTSHIRE	N/A	723.80





LAYOUT PLAN LEGEND

PROPOSED CURB

PROPOSED EDGE OF PAVEMENT

FLOW ARROW

TRAFFIC FLOW

PROPOSED SPOT ELEVATION

0 25 50 75

1" = 50′

3 OF 3

STATE OF TEXAS
ROLANDO ESCAMILLA
90128
LICENSED
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7/31/2011

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CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

FORT SAM HOUSTON TRANSPORTATION PROJECTS

INTERSECTION GRADING PLAN

WINANS RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 165

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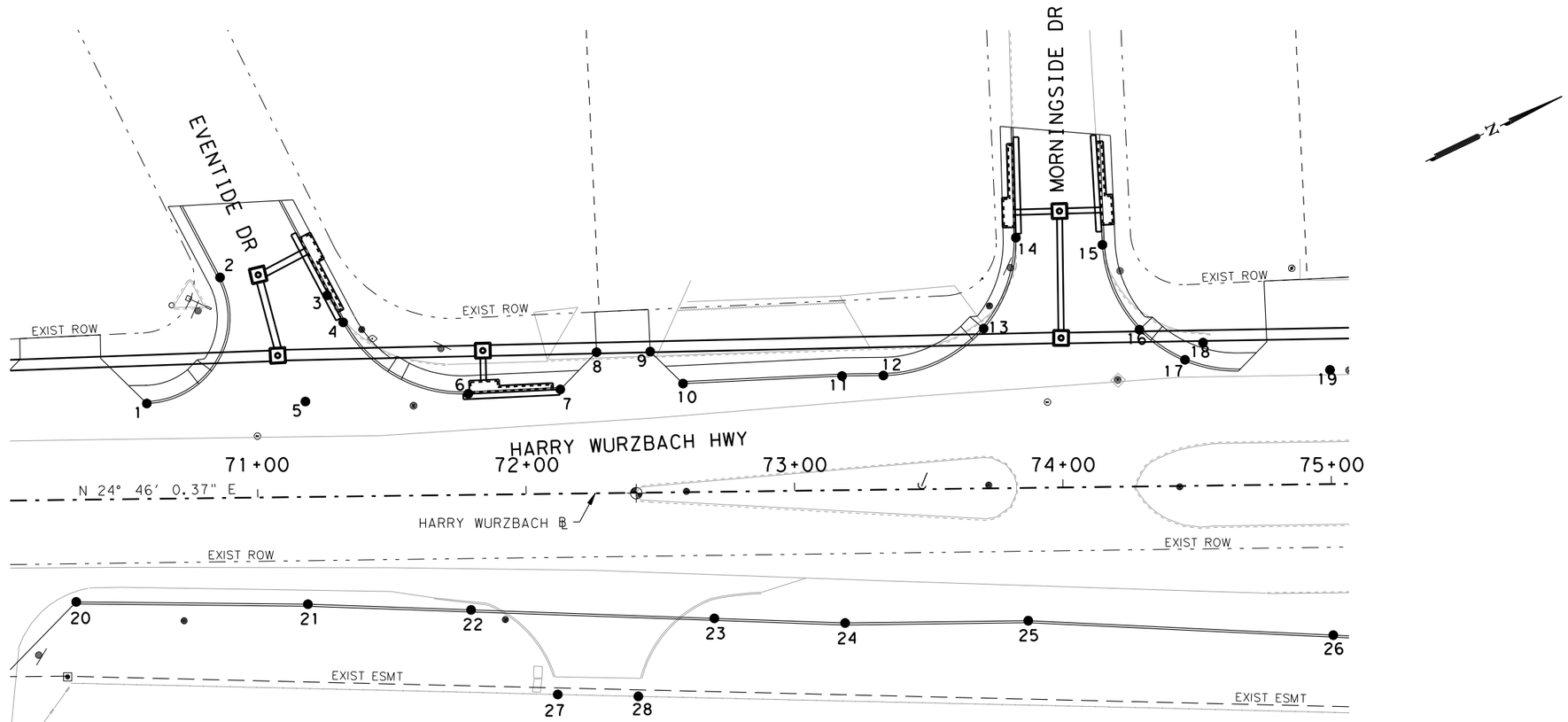

POINT	HW STATION & OFFSET	STREET	TC ELEV	GUTTER
1	70+59.12, 35.51' LT	WURZBACH	719.91	719.33
2	70+87.01, 82.11' LT	EVENTIDE	720.58	720.00
3	71+26.79, 74.92' LT	EVENTIDE	719.77	719.19
4	71+32.65, 64.80'LT	EVENTIDE	719.43	718.85
5	71+18.21, 35.50'LT	WURZBACH	-----	718.84
6	71+78.90, 37.62' LT	WURZBACH	718.76	718.18
7	72+13.21, 38.83' LT	WURZBACH	718.38	717.80
8	72+26.89, 52.50' LT	DRIVEWAY	718.24	717.66
9	72+46.89, 52.50' LT	DRIVEWAY	717.99	717.41
10	72+58.96, 40.43' LT	WURZBACH	717.87	717.29
11	73+18.21, 42.50' LT	WURZBACH	717.22	716.64
12	73+33.63, 42.50' LT	WURZBACH	717.5	716.47
13	73+71.20, 59.51' LT	WURZBACH	-----	716.58
14	78+83.62, 93.20' LT	MORNINGSIDE	717.01	716.43
15	74+15.82, 90.15' LT	MORNINGSIDE	716.93	716.35
16	74+29.22, 58.38' LT	WURZBACH		715.93
17	74+44.85, 47.09' LT	WURZBACH	715.83	715.25
18	74+52.86, 53.25' LT	WURZBACH	-----	715.45
19	75+00.00, 42.50' LT	WURZBACH	-----	714.64
20	70+31.91, 38.07' RT	WURZBACH	719.61	719.03
21	71+18.21, 40.01' RT	WURZBACH	719.05	718.47
22	71+78.94, 42.89' RT	WURZBACH	718.54	717.96
23	72+69.53, 47.19' RT	WURZBACH	717.66	717.08
24	73+18.21, 49.50' RT	WURZBACH	717.27	716.69
25	73+86.44, 49.50' RT	WURZBACH	716.32	715.74
26	75+00.00, 56.31' RT	WURZBACH	715.09	714.90
27	72+10.84, 74.79' RT	DRIVEWAY	712.37	711.79
28	72+40.84, 75.88' RT	DRIVEWAY	712.09	711.51

LAYOUT PLAN LEGEND

PROPOSED CURB

PROPOSED EDGE OF PAVEMENT

FLOW ARROW

TRAFFIC FLOW

PROPOSED SPOT ELEVATION #

0 25 50 75

1" = 50'

STATE OF TEXAS
ROLANDO ESCAMILLA
90128
LICENSED
PROFESSIONAL ENGINEER
7/31/2011

1 OF 2

TETRA TECH
TBPE F-3924
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CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

FORT SAM HOUSTON TRANSPORTATION PROJECTS

INTERSECTION GRADING PLAN

RITTIMAN RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 166

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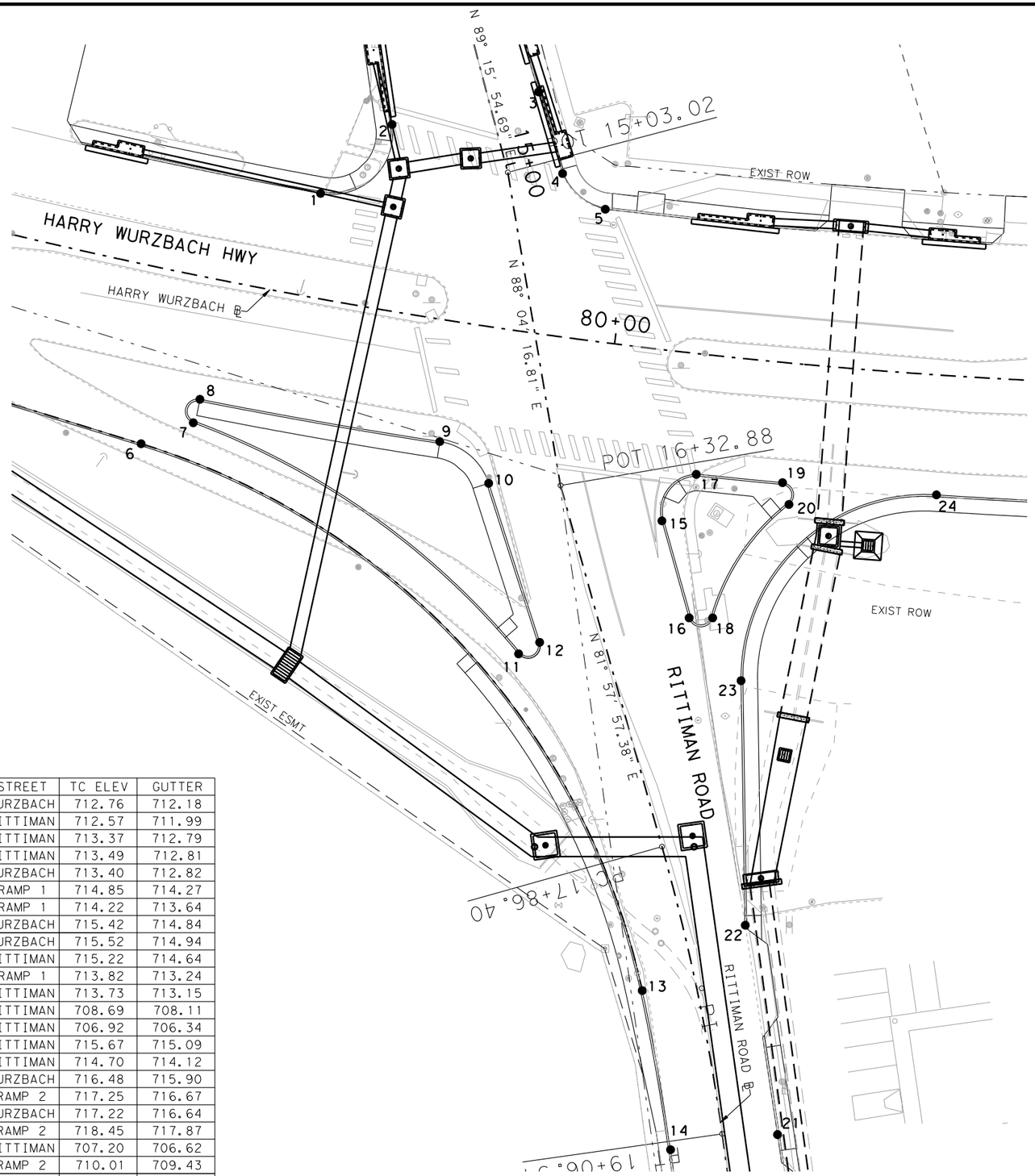

POINT	HW STATION & OFFSET	STREET	TC ELEV	GUTTER
1	78+70.53, 42.50′ LT	WURZBACH	712.76	712.18
2	14+71.98, 40.76′ RT	RITTIMAN	712.57	711.99
3	14+74.39, 20.55′ LT	RITTIMAN	713.37	712.79
4	15+05.71, 21.85′ LT	RITTIMAN	713.49	712.81
5	79+90.54, 54.06′ LT	WURZBACH	713.40	712.82
6	12+38.48, 00.00′ LT	RAMP 1	714.85	714.27
7	12+55.49, 15.00′ LT	RAMP 1	714.22	713.64
8	78+37.86, 49.50′ RT	WURZBACH	715.42	714.84
9	79+35.42, 49.50′ RT	WURZBACH	715.52	714.94
10	16+27.14, 28.86′ RT	RITTIMAN	715.22	714.64
11	14+12.77, 15.00′ LT	RAMP 1	713.82	713.24
12	16+92.38, 25.58′ RT	RITTIMAN	713.73	713.15
13	18+42.30, 22.00′ RT	RITTIMAN	708.69	708.11
14	19+10.00, 21.86′ RT	RITTIMAN	706.92	706.34
15	16+58.05, 36.00′ LT	RITTIMAN	715.67	715.09
16	16+99.27, 36.00′ LT	RITTIMAN	714.70	714.12
17	80+40.88, 49.00′ RT	WURZBACH	716.48	715.90
18	11+23.04, 15.00′ LT	RAMP 2	717.25	716.67
19	80+73.67, 49.00′ RT	WURZBACH	717.22	716.64
20	11+70.42, 15.00′ LT	RAMP 2	718.45	717.87
21	19+10.00, 22.35′ RT	RITTIMAN	707.20	706.62
22	10+02.21, 00.00′ LT	RAMP 2	710.01	709.43
23	11+01.16, 00.00′ LT	RAMP 2	714.39	713.81
24	81+35.51, 49.00′ RT	WURZBACH	718.25	717.67

0 25 50 75

1" = 50′

STATE OF TEXAS
ROLANDO ESCAMILLA
90128
LICENSED
PROFESSIONAL ENGINEER
7/31/2011

LAYOUT PLAN LEGEND

PROPOSED CURB

PROPOSED EDGE OF PAVEMENT

FLOW ARROW

TRAFFIC FLOW

PROPOSED SPOT ELEVATION #

2 OF 2

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CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

FORT SAM HOUSTON TRANSPORTATION PROJECTS

INTERSECTION GRADING PLAN

RITTIMAN RD. & HARRY WURZBACH INTERSECTION

FINAL SUBMITTAL	PROJECT NO.: 915-12-470,etc		DATE: 7/31/2011
DRWN. BY: RPR	DSGN. BY: JDH	CHKD. BY: RE	SHEET NO.: 167

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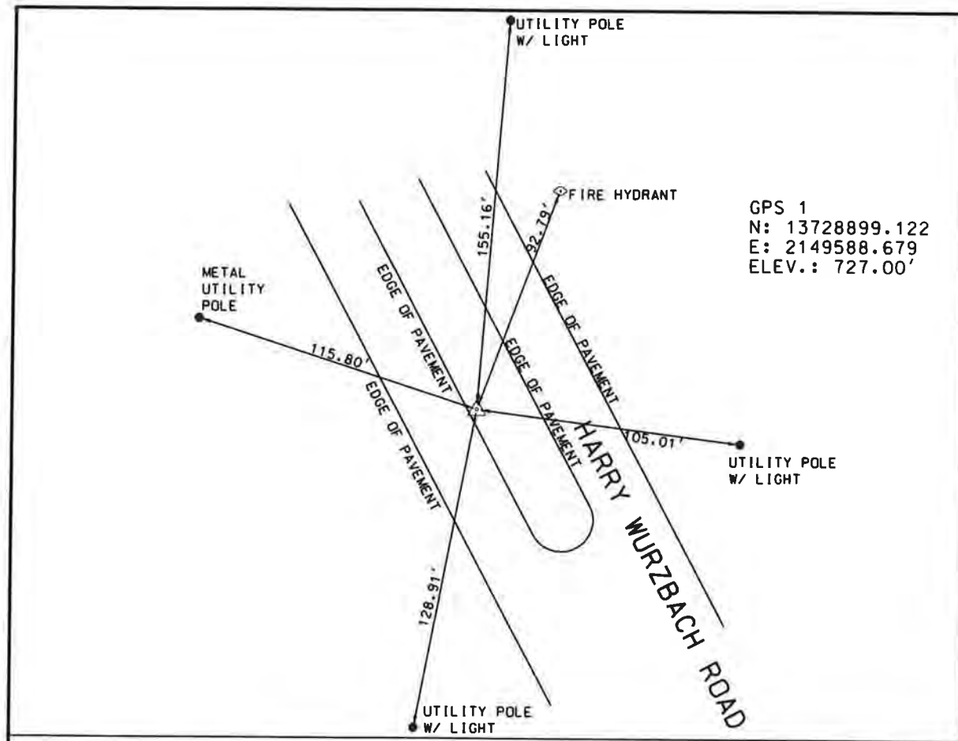
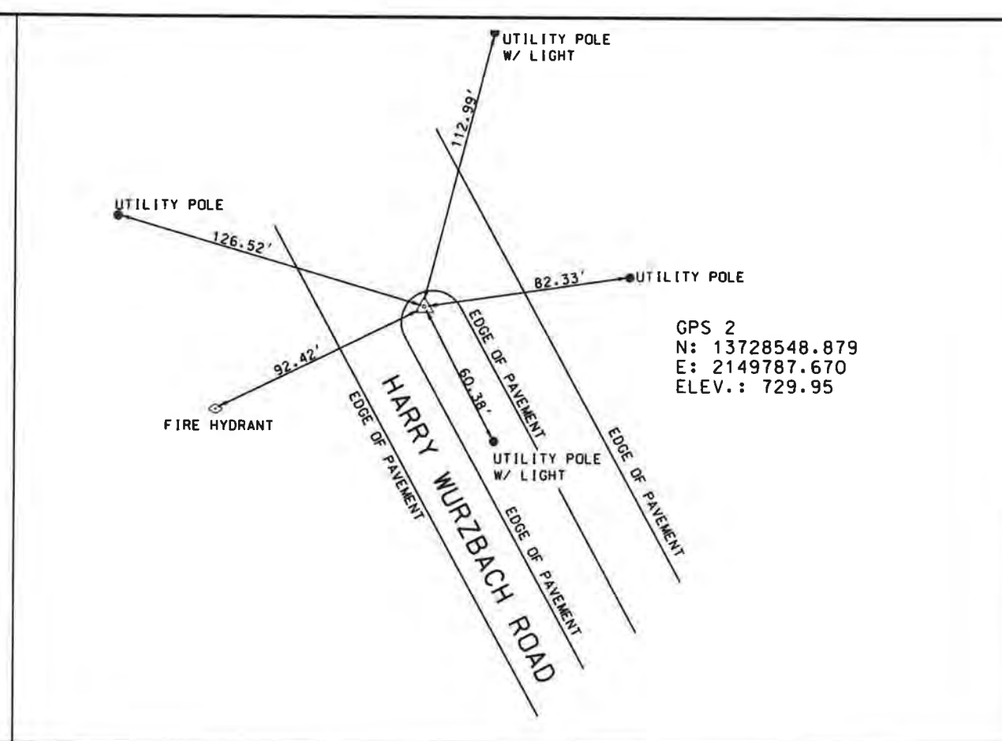
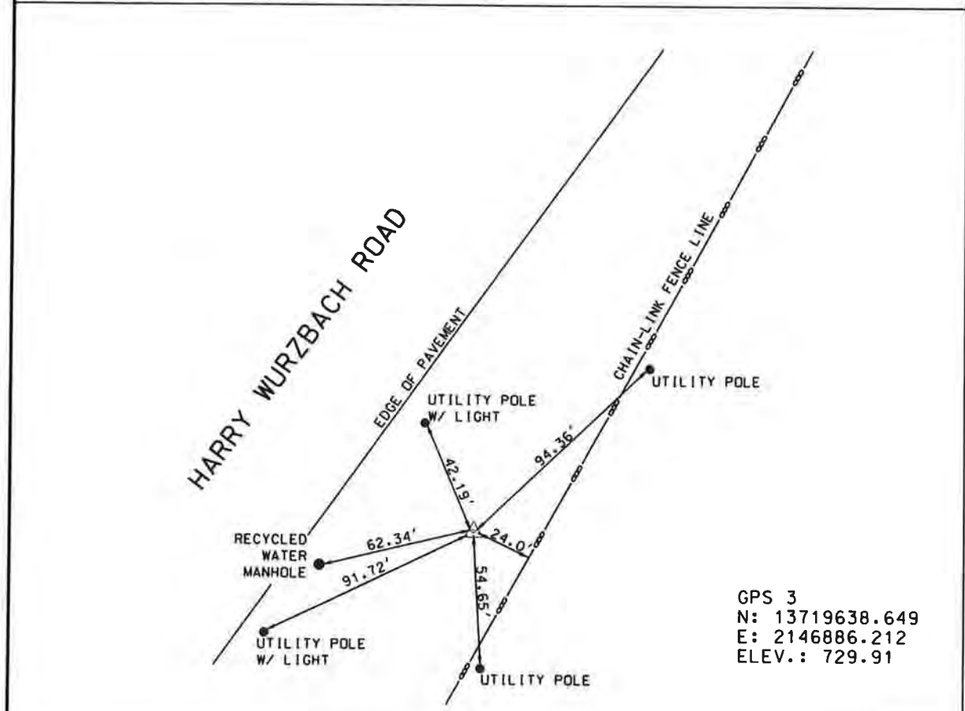


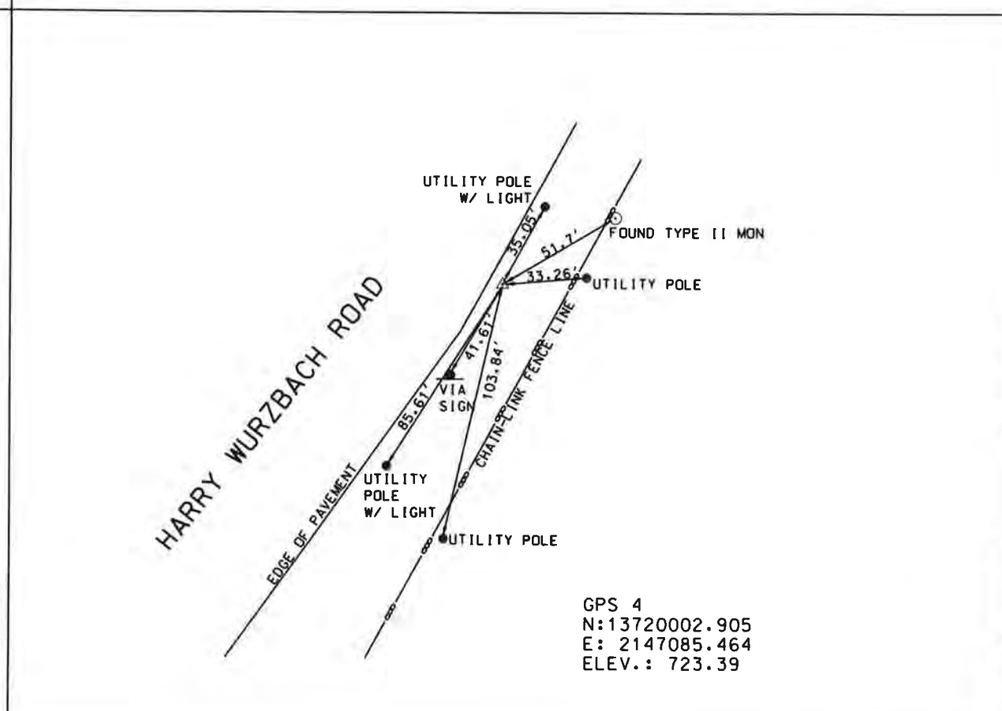
SET 1/2" IRON ROD WITH ALUMINUM CAP STAMPED "COSA CTL 1"



SET 1/2" IRON ROD WITH ALUMINUM CAP STAMPED "COSA CTL 2"



SET 1/2" IRON ROD WITH ALUMINUM CAP STAMPED "COSA CTL 3"



SET 1/2" IRON ROD WITH ALUMINUM CAP STAMPED "COSA CTL 4"

1. HORIZONTAL DATUM

* BEARINGS ARE BASED ON NAD83(93), TEXAS STATE PLANE COORDINATES SYSTEM, SOUTH CENTRAL ZONE (4204). COORDINATES AND DISTANCES ARE IN U.S. SURVEY FEET. DISPLAYED COORDINATE VALUES ARE SURFACE VALUES DERIVED BY MULTIPLYING GRID COORDINATES BY 1.00017 (SAF: 1.00017).

* THE HORIZONTAL CONTROL COORDINATE VALUES WERE OBTAINED BY GPS OBSERVATIONS TO THE FOLLOWING STATIONS:

TXDOT STATION: Z0150884
COUNTY: BEXAR

CORS STATION: TXAN
COUNTY: BEXAR

2. VERTICAL DATUM

BASED ON NAVD88. DERIVED FROM DIFFERENTIAL LEVELING METHODS TO:

NGS ID: D 963
PID: AY0252
COUNTY: BEXAR

3. ARROWHEADS EXAGGERATED FOR CLARITY PURPOSES. DIMENSIONS ARE TO CENTER OF IMPROVEMENTS.

STATE OF TEXAS
REGISTERED
ERIC N. MILLER
5910
PROFESSIONAL
LAND SURVEYOR

Eric N. Miller
6/22/09

N

SCALE: 1" = 30'

No.	Revision	Drawn	Approved	Date

REVISIONS

CITY OF SAN ANTONIO
DEPARTMENT OF
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES

VICKREY & ASSOCIATES, INC.
CONSULTING ENGINEERS
CIVIL / ENVIROMENTAL / SURVEY
12940 Country Parkway San Antonio, Texas 78216
Voice(210) 349-3271 Fax(210) 349-2561 www.vickreynet.com

HARRY WURZBACH ROAD
FORT SAM HOUSTON
TRANSPORTATION
PROJECT CONTROL

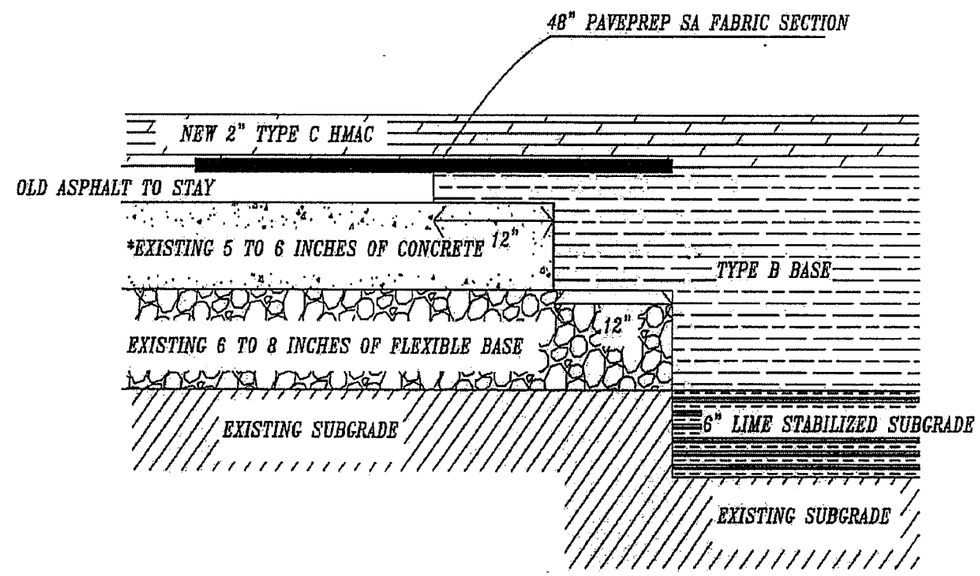
DGN: RV	CHK DGN: RMA	DWG:	CHK DWG:	SHEET NO. 1 OF 1

PAVEPREP SA SCHEMATIC PLAN

NOTE: LOCATIONS ARE APPROXIMATE
DRAWING IS NOT TO SCALE

TOP 2 INCHES OF EXISTING ASPHALT WILL BE MILLED
AND NEW TYPE C HMAC WILL BE PLACED BACK

IF IT IS DESIRED NOT TO ADD FILL TO SUBGRADE
AN ADDITIONAL 2" OF TYPE B BASE COULD BE USED

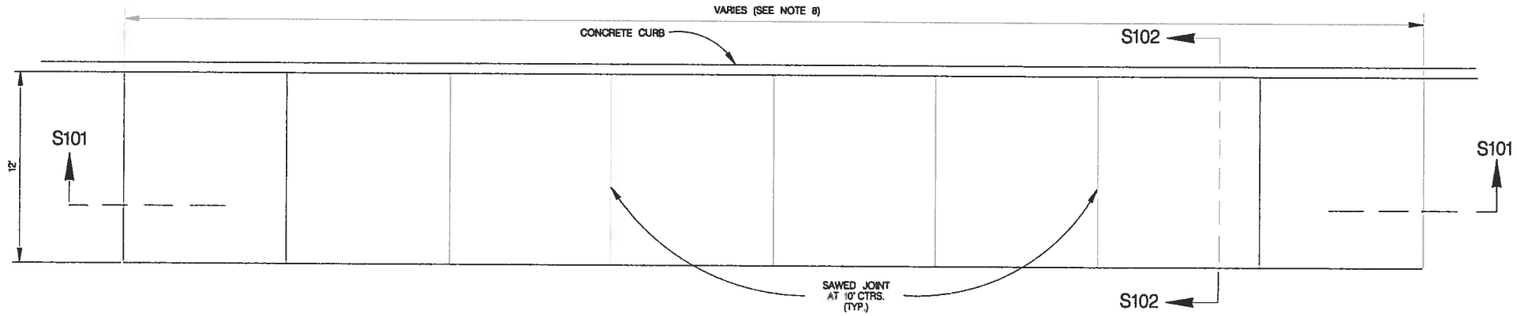


**Paveprep SA should be used in all pavements whether concrete pavement exists or not.*

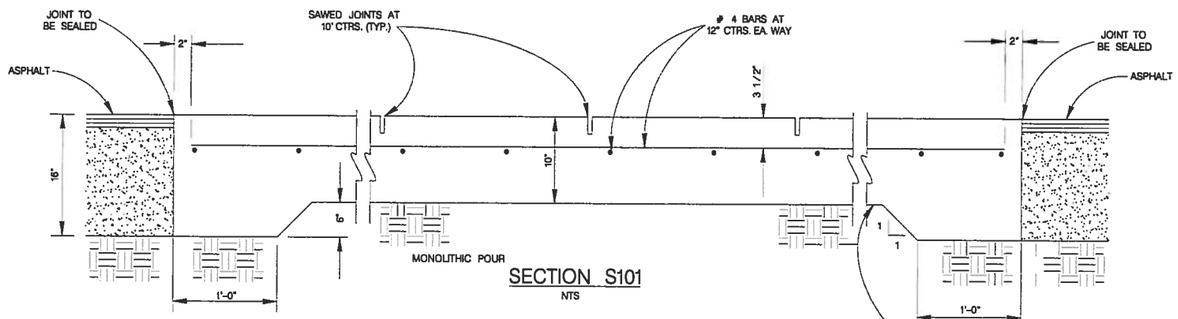
Arias Job No. 2009-461	Proposed CIMS-Fort Sam Houston Transportation Projects San Antonio, Texas	ARIAS & ASSOCIATES, INC.

GENERAL NOTES

1. ALL CONCRETE SHALL TEST 4,000 P.S.I. AT 28 DAYS.
2. BUS STOP CONCRETE PAD CONSTRUCTION SHALL BE PAID UNDER ITEM 209 AT THE UNIT PRICE BID, WHICH PRICE SHALL BE FULL COMPENSATION FOR ALL DEMOLITION, REMOVAL OF EXISTING CURB, EXCAVATION, HAULING, CRUSHED LIMESTONE, REINFORCING STEEL, CONCRETE, CONCRETE CURB, JOINTS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
3. BUS PAD AND CURB SHALL BE MONOLITHICALLY POURED. ALL EXISTING CURBING SHALL BE REMOVED AND REPLACED AS PER STANDARD DETAILS.
4. THE CONTRACTOR SHALL CONSTRUCT AN EXPANSION JOINT MIDWAY IF THE "CONCRETE BUS STOP PAD" IS LONGER THAN 150 FEET. NO DIRECT PAYMENT SHALL BE MADE FOR CONSTRUCTION OF AN EXPANSION JOINT.
5. ACTUAL BUS PAD LENGTH AND WIDTH TO BE FIELD DETERMINED BY CITY ENGINEER OR HIS DESIGNATED REPRESENTATIVE.
6. DO NOT DRIVE ON PAD UNTIL CONCRETE HAS REACHED A STRENGTH OF 2,800 P.S.I.
7. BREAK TEST CYLINDERS AS FOLLOWS:
   - 2 AT 3 DAYS
   - 2 AT 7 DAYS
   - 2 AT 28 DAYS
8. CONCRETE BUS PAD LENGTH (OR AS SHOWN ON THE PLANS):
   - 30 M.P.H. – 100'
   - 35 M.P.H. – 160'
   - 40 M.P.H. – 150'
   - 45 M.P.H. – 200'

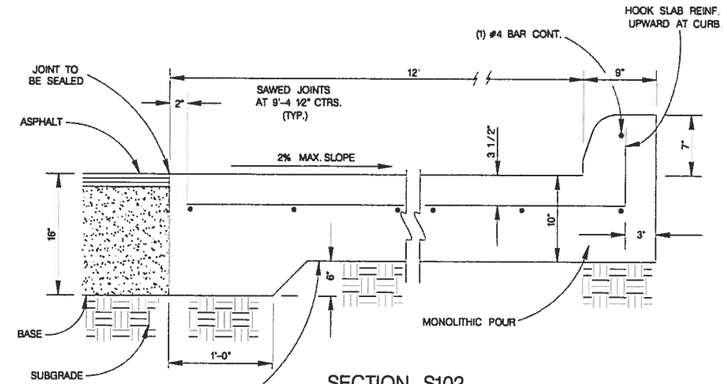


PLAN VIEW
NTS

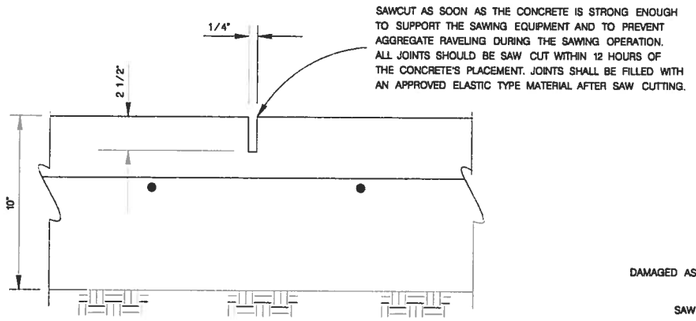


SECTION S101
NTS

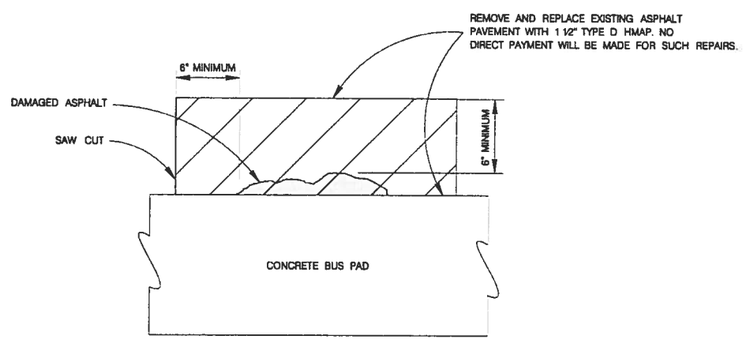
PROOFROLL EXISTING SUBGRADE WITH BACKHOE OR SIMILAR EQUIPMENT TO LOCATE POTENTIAL SOFT REGIONS OF SUBGRADE . REPLACE SOFT AREAS WITH 12" OF SUITABLE MATERIAL.



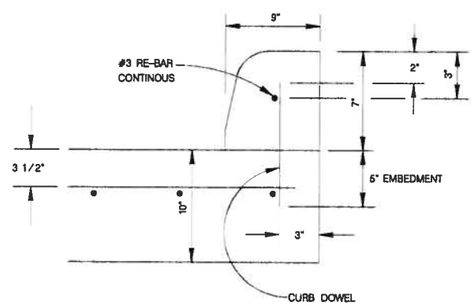
SECTION S102
NTS



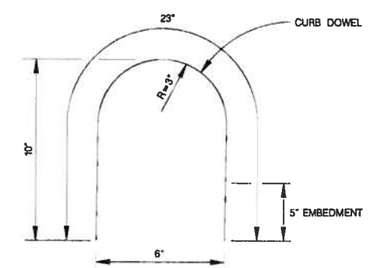
SAWED JOINT DETAIL
NTS



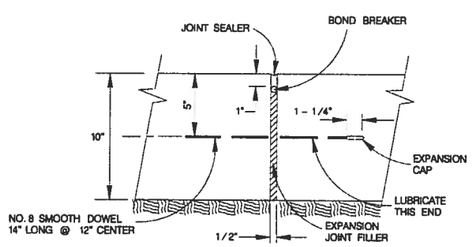
REPAIR OF DAMAGED ASPHALT
NTS



CONCRETE CURB OPTION
NEED CITY ENGINEER'S APPROVAL
NTS



CURB DOWEL
NO. 3 RE-BAR @ 30" C-C
NTS



NOTE:
THE CONTRACTOR SHALL CONSTRUCT AN EXPANSION JOINT MIDWAY IF THE "CONCRETE BUS STOP PAD" IS LONGER THAN 150 FEET. NO DIRECT PAYMENT SHALL BE MADE FOR CONSTRUCTION OF AN EXPANSION JOINT.

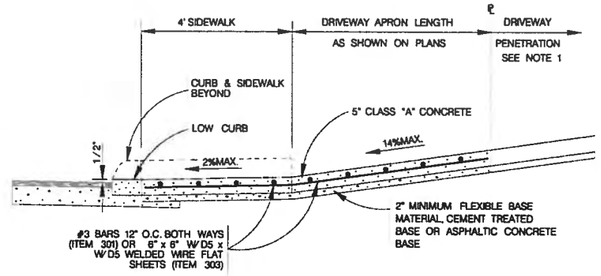
EXPANSION JOINT DETAIL
SCALE : 1" = 1'

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

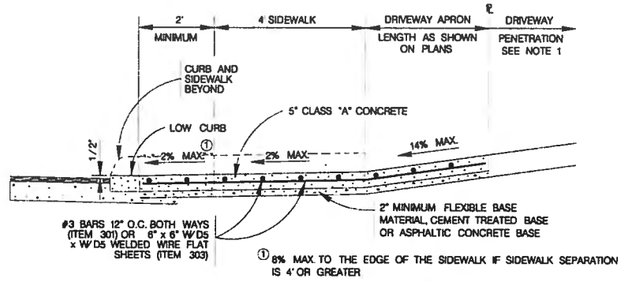
CONCRETE
BUS STOP PAD

100 % SUBMITTAL	PROJECT NO.: 0915-12-470, etc.		DATE: 7/31/2011
DRWN. BY: V. VASQUEZ	DSGN. BY: L. MALTOS	CHKD. BY: R.S. HOSSEINI, P.E.	SHEET NO.: 170 OF ___



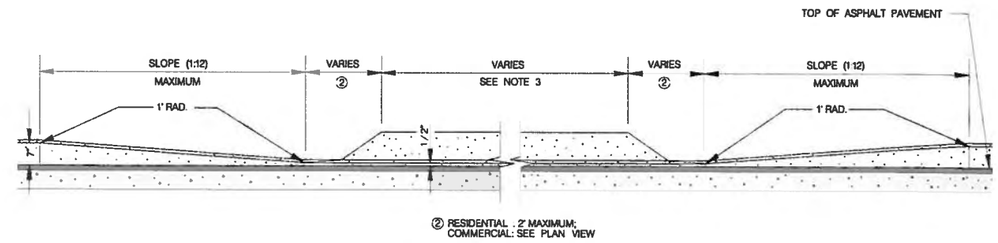
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB
ITEM 503.1



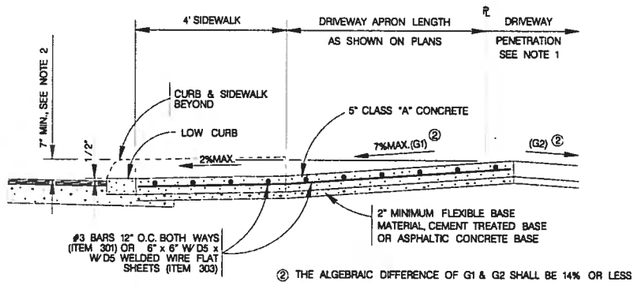
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.1



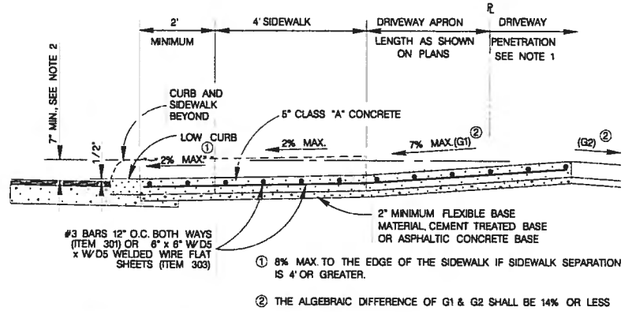
CURB PROFILE AT DRIVEWAY

WITH SIDEWALK ABUTTING CURB



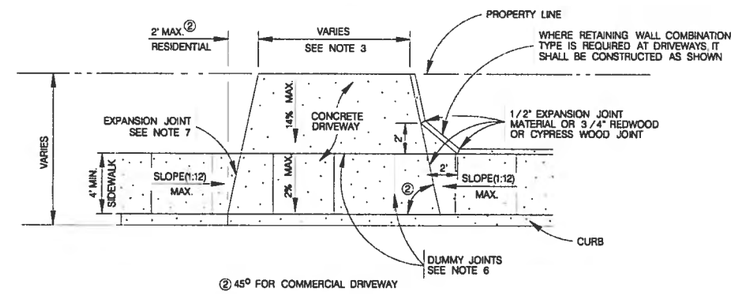
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB
ITEM 503.1



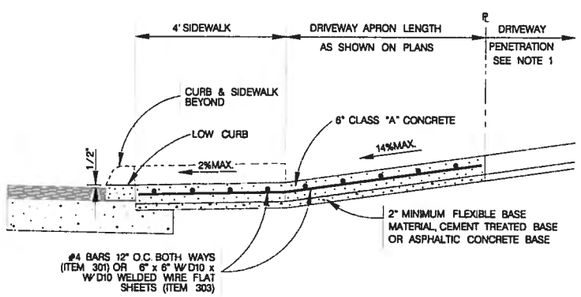
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS SEPARATED FROM CURB
ITEM 503.1



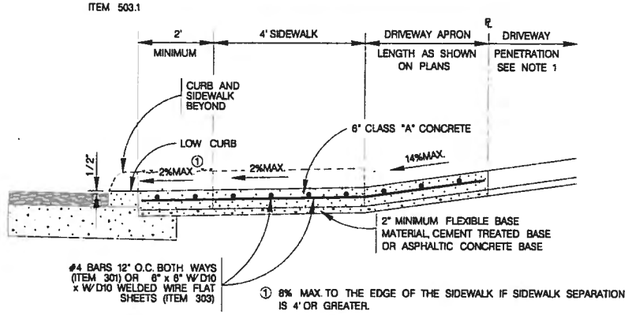
TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK ABUTTING CURB



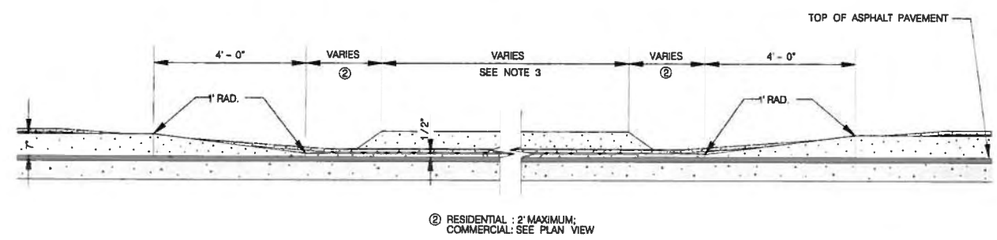
TYPICAL COMMERCIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB
ITEM 503.2



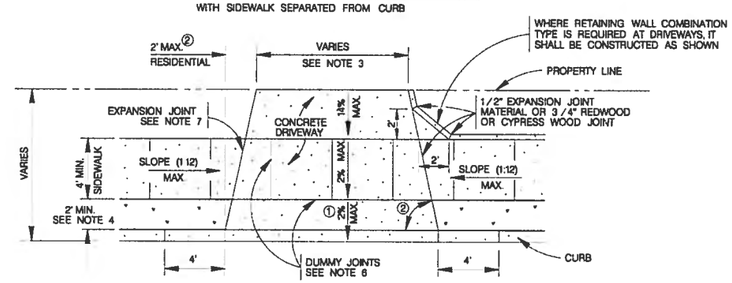
TYPICAL COMMERCIAL DRIVEWAY SECTION

WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.2



CURB PROFILE AT DRIVEWAY

WITH SIDEWALK SEPARATED FROM CURB



TYPICAL DRIVEWAY PLAN VIEW

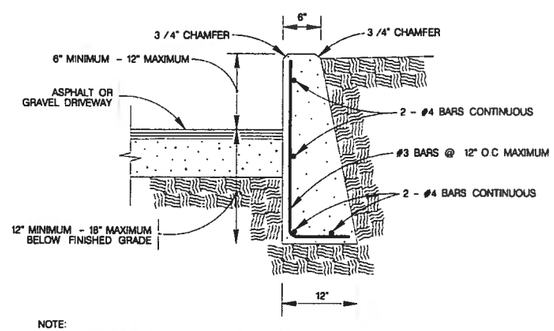
WITH SIDEWALK SEPARATED FROM CURB

CONCRETE DRIVEWAY NOTES

1. DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION OF THE DRIVEWAY SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:
   A.) CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO 503.1 OR 503.2.
   B.) ASPHALTIC CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.4 AND SHALL INCLUDE A MINIMUM OF 1" ASPHALT TYPE 'D' & 6" FLEXIBLE BASE
   C.) GRAVEL DRIVEWAY PAID FOR UNDER ITEM NO. 503.5 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE
2. 7" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE. IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.
3. THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	20'
COMMERCIAL – ONE WAY	12'	20'
COMMERCIAL – TWO WAY	24'	30'

4. FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
5. FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
6. DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
7. A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3 /8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
8. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
9. SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.



NOTE:
1. COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.
2. CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

DRIVEWAY – CONCRETE RETAINING WALL

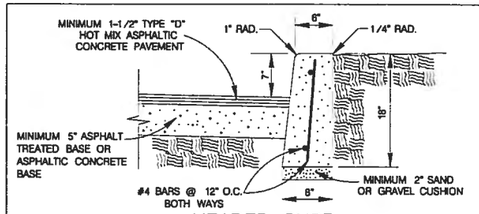
ON COMPACTED SUBGRADE
ITEM 307.1

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

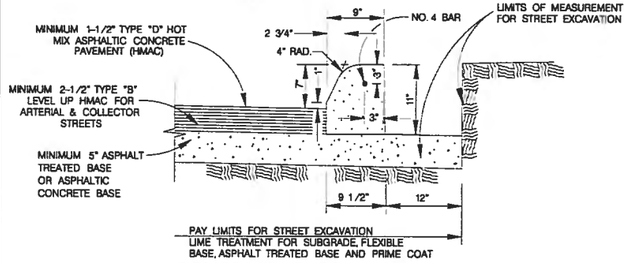
CONCRETE DRIVEWAY STANDARDS

100 % SUBMITTAL	PROJECT NO.: 0915-12-470, etc.	DATE: 7/31/2011
DRWN. BY: V. VASQUEZ	DSGN. BY:	CHKD BY: R.S. HOSSENI, P.E.	SHEET NO.: 17 OF



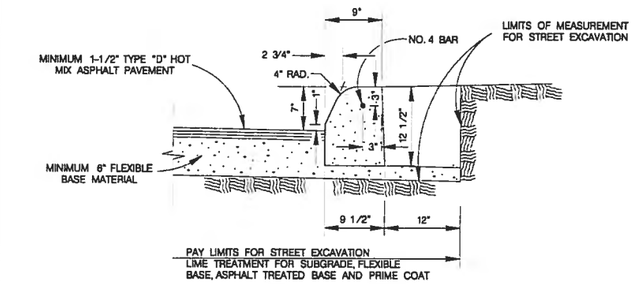
HEADER CURB

ITEM 500 ON SAND OR GRAVEL
SCALE : 1"=2'



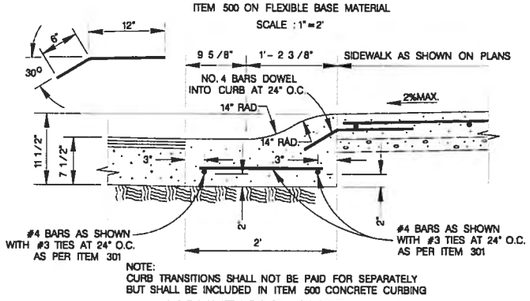
CONCRETE CURB

ITEM 500 ON ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
SCALE : 1"=2'



CONCRETE CURB

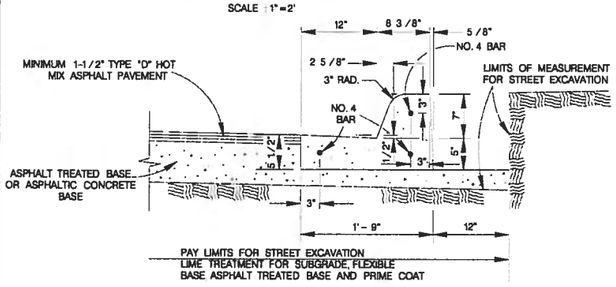
ITEM 500 ON FLEXIBLE BASE MATERIAL
SCALE : 1"=2'



NOTE:
CURB TRANSITIONS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN ITEM 500 CONCRETE CURBING

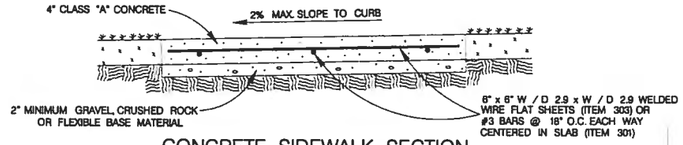
MOUNTABLE CURB

ITEM 500 ON COMPACTED SUBGRADE
SCALE : 1"=2'



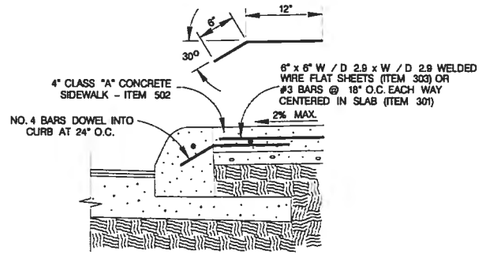
TYPICAL CURB & GUTTER DETAIL

ITEM 500 ON ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
SCALE : 1"=2'



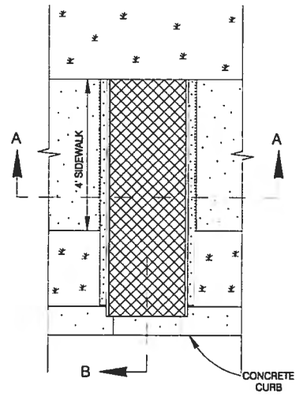
CONCRETE SIDEWALK SECTION

ITEM 502
SCALE : 1"=2'



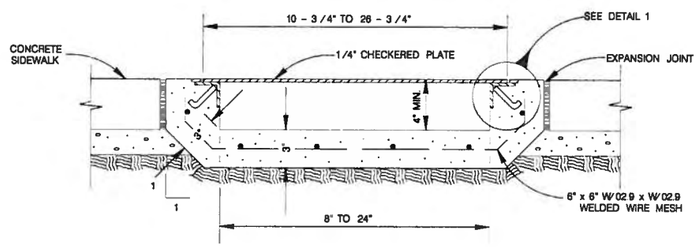
CONCRETE SIDEWALK ABUTTING CURB SECTION

ITEM 502
SCALE : 1"=2'



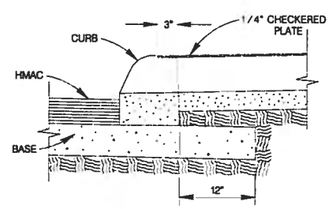
CONCRETE SIDEWALK DRAIN DETAIL

SCALE : 1"=4'



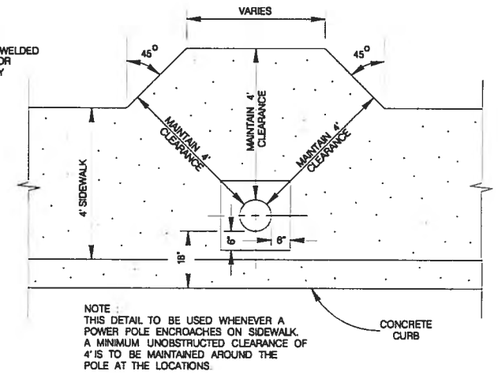
SECTION A-A

SCALE=1 12



SECTION B

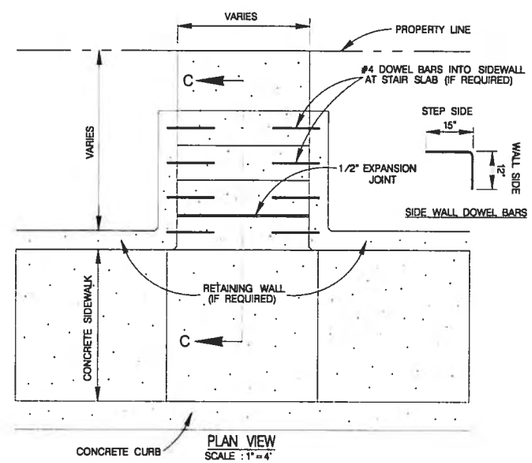
SCALE : 1"=2'



NOTE :
THIS DETAIL TO BE USED WHENEVER A POWER POLE ENCROACHES ON SIDEWALK. A MINIMUM UNOBSTRUCTED CLEARANCE OF 4' IS TO BE MAINTAINED AROUND THE POLE AT THE LOCATIONS.

CONCRETE SIDEWALK @ UTILITY POWER POLE DETAIL

SCALE : 1"=4'

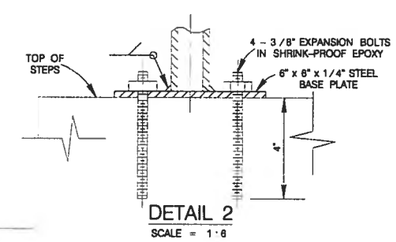


PLAN VIEW

SCALE : 1"=4'

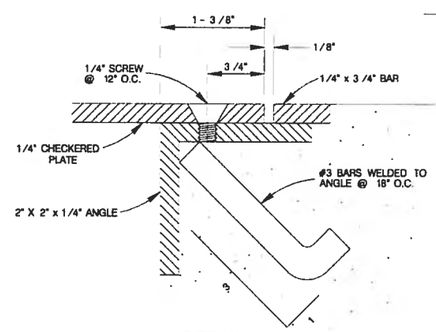
CONCRETE STEPS

ITEM 524



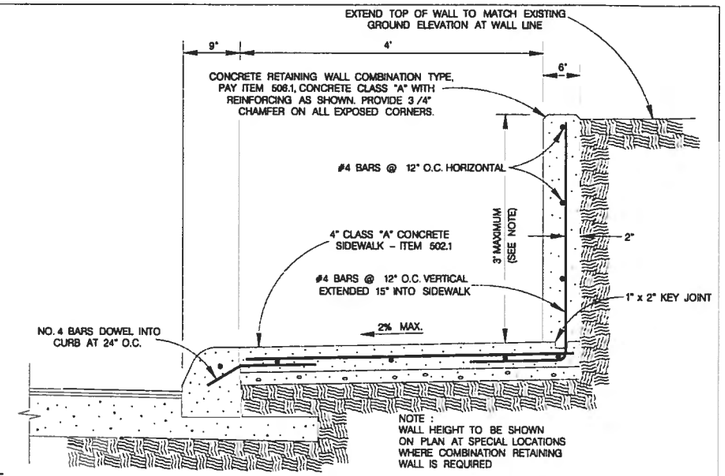
DETAIL 2

SCALE = 1·6



DETAIL 1

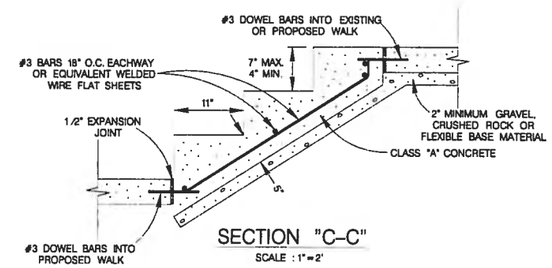
SCALE=1 : 1



NOTE :
WALL HEIGHT TO BE SHOWN ON PLAN AT SPECIAL LOCATIONS WHERE COMBINATION RETAINING WALL IS REQUIRED

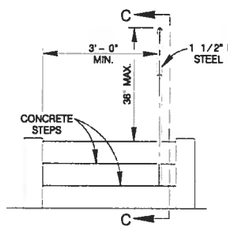
CONCRETE RETAINING WALL - COMBINATION TYPE

ITEM 506
SCALE : 1"=2'



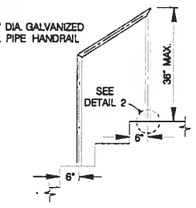
SECTION "C-C"

SCALE : 1"=2'



PIPE HANDRAIL DETAIL

PROFILE VIEW
SCALE : 1"=4'



SECTION "D-D"

FRONT VIEW
SCALE : 1"=4'

NOTES :
1. PLACE STEPS TO CONFORM WITH PROPOSED PARKWAY GRADING
2. 1-1/2" DIA. GALVANIZED STEEL PIPE HANDRAIL REQUIRED ON ONE SIDE OF THE STEPS WHEN 3 OR MORE RISERS ARE USED, OR AS DESIGNED BY ENGINEER. TO BE PAID UNDER ITEM 522

HANDRAIL FOR CONCRETE STEPS

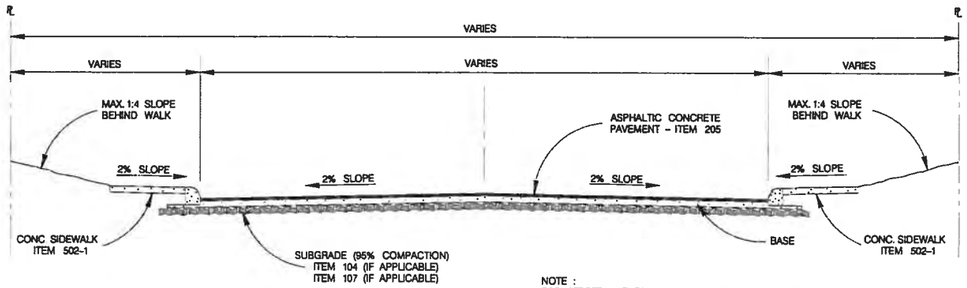
ITEM 522

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

MISCELLANEOUS CONSTRUCTION STANDARDS I

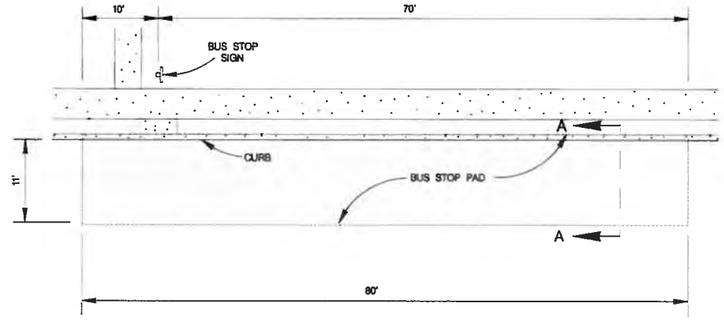
100 % SUBMITTAL	PROJECT NO.: 0915-12-470, etc.		DATE: 7/31/2011
DRWN. BY: V. VASQUEZ	DSGN BY:	CHKD BY: R.S. HOSSEINI, P.E	SHEET NO.: 112 OF



NOTE :
FOR STREETS OTHER THAN LOCAL TYPE "A" STREETS, THE EDGE OF THE SIDEWALK MUST BE LOCATED A MINIMUM OF TWO FEET AWAY FROM THE BACK OF THE CURB.

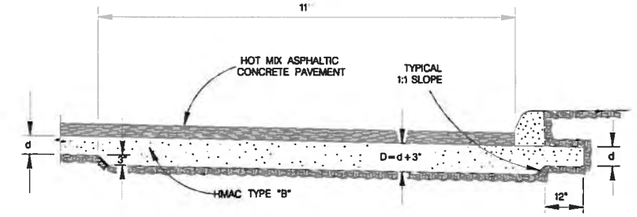
TYPICAL STREET SECTION

SCALE : 1"=8'



PLAN VIEW

SCALE : 1"=20'



SECTION "A-A"

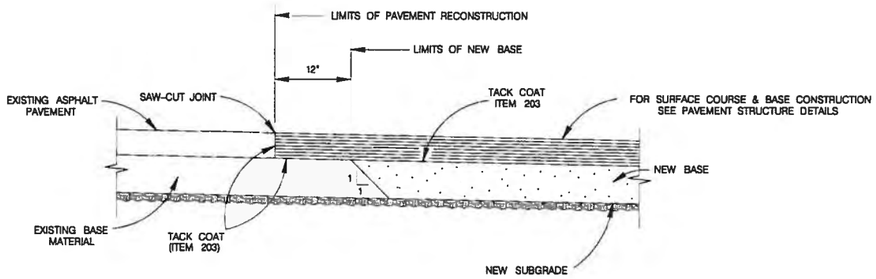
SCALE : 1"=4'

NOTES :
1. EXCAVATION FOR THICKENED PAVEMENT SECTION WILL BE PAID UNDER ITEM NO. 104 "STREET EXCAVATION".

2. BASE MATERIALS :
A.) IF THE MEASUREMENT FOR THE HMAC MATERIAL IS PER TON, THICKENED PAVEMENT SECTION WILL BE PAID FOR UNDER ITEM NO. 205, TYPE "B" - PER TON.
B.) IF THE MEASUREMENT FOR THE HMAC MATERIAL IS PER SQUARE YARD, NO EXTRA PAYMENT WILL BE MADE FOR THE THICKENED PAVEMENT.

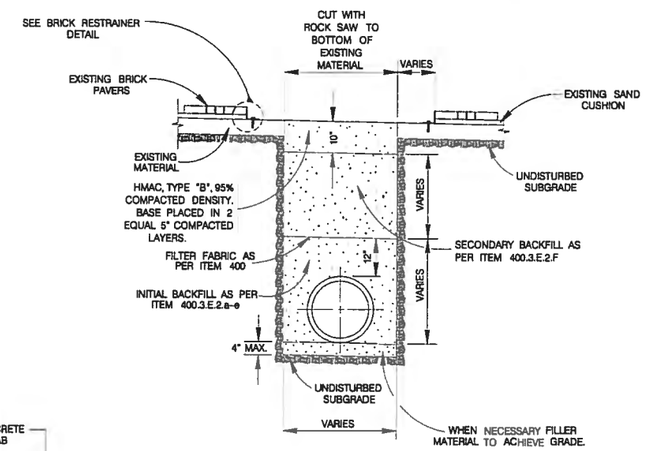
HMAC BUS STOP PAD

NEED CITY ENGINEER'S APPROVAL TO USE HMAC BUS PAD



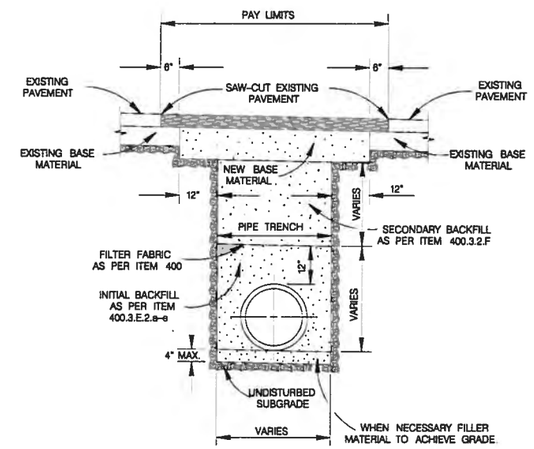
PAVEMENT JUNCTION DETAILS

SCALE : 1"=2'



TYPICAL BASE REPLACEMENT FOR BRICK SURFACED STREET SECTION

ITEM 511.3
SCALE : 1"=4'

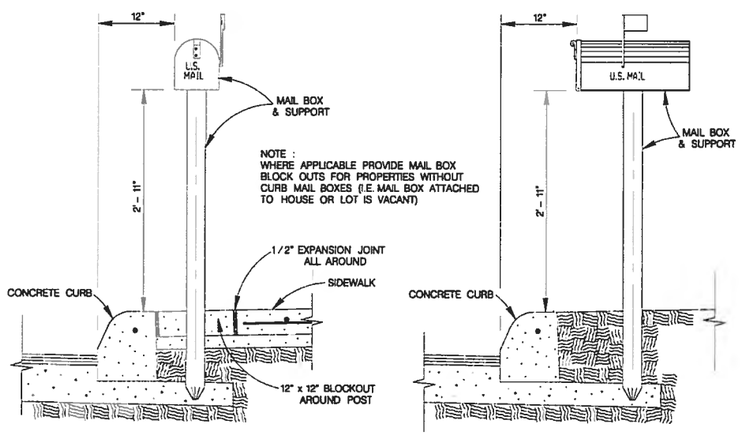


NOTES :
1. FOR LOCAL TYPE "A" & "B" STREETS (RESIDENTIAL) USE 6" ASPHALT CONCRETE BASE TYPE "B" WITH 1-1/2" TYPE "D" HOT MIX ASPHALTIC CONCRETE PAVEMENT

2. FOR ARTERIAL & SECONDARY STREETS (COMMERCIAL) USE 12.5" TYPE "B" HOT MIX ASPHALTIC CONCRETE PAVEMENT LEVELING-UP COURSE & 1-1/2" TYPE "D" HOT MIX ASPHALTIC CONCRETE PAVEMENT SURFACE COURSE

TYPICAL PAVEMENT REPLACEMENT

ITEM 511
SCALE : 1"=4'



MAIL BOX PARALLEL TO CURB

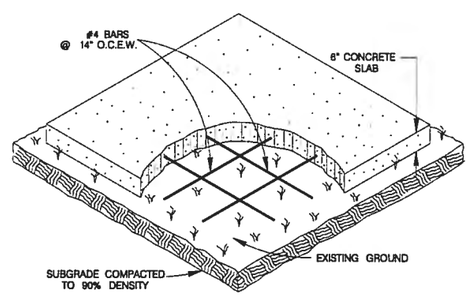
WHEN SIDEWALK ABUTS CURB
SCALE : 1"=2'

MAIL BOX PERPENDICULAR TO CURB

WHEN SIDEWALK IS SEPARATED FROM CURB
SCALE : 1"=2'

MAIL BOX LOCATION

ITEM 513.1



MAIL BOX PAD NOTES :
1 THE CONTRACTOR WILL CONSTRUCT SLABS FOR "TEMPORARY MAIL BOX COLLECTION PAD" FOR THE UNITED STATES POSTAL SERVICE WITH LOCATIONS AND SIZES SPECIFIED BY THE CITY ENGINEER DURING CONSTRUCTION

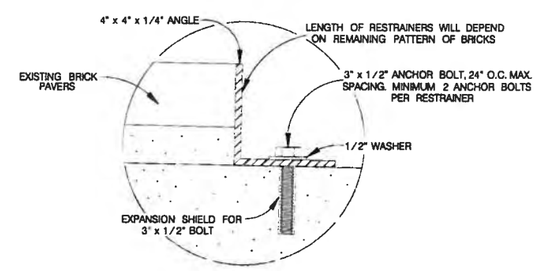
2. THE CONSTRUCTION OF SLABS SHALL CONFORM TO ITEM 513 "REMOVING AND RELOCATING MAILBOXES".

3. PAYMENT WILL BE MADE UNDER ITEM 513.2 "COMMUNITY MAILBOX SLAB - PER SQUARE YARD".

4 UNIT PRICE WILL INCLUDE REMOVAL OF "TEMPORARY MAIL BOX COLLECTION PAD" SLABS AT THE END OF THE PROJECT. NO SEPARATE PAY ITEM

COMMUNITY MAIL BOX SLAB

ITEM 513.2
SCALE : 1"=4'



BRICK RESTRAINER DETAIL

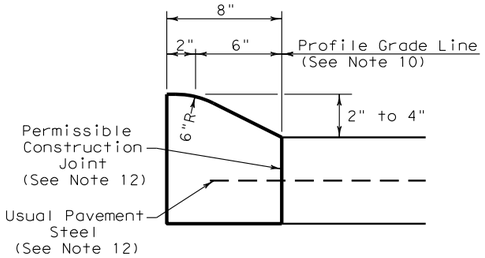
SCALE = 1 : 6

MAY 2009

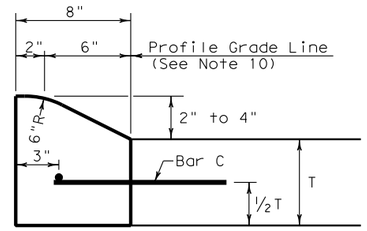
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

MISCELLANEOUS CONSTRUCTION STANDARDS II

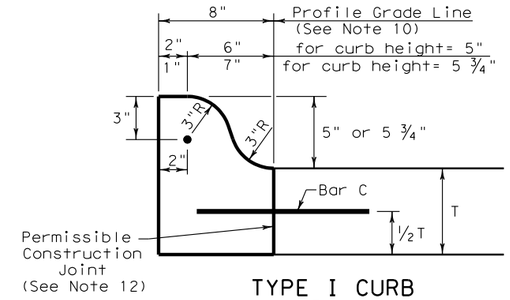
100 % SUBMITTAL	PROJECT NO.: 0915-12-470, etc.		DATE: 7/11/2011
DRWN. BY: V. VASQUEZ	DSGN. BY:	CHKD. BY: R.S. HOSSEINI, P.E	SHEET NO. 173 OF



TYPE I CURB (MONOLITHIC)
2" - 4" HEIGHT



TYPE I CURB
2" - 4" HEIGHT



TYPE I CURB
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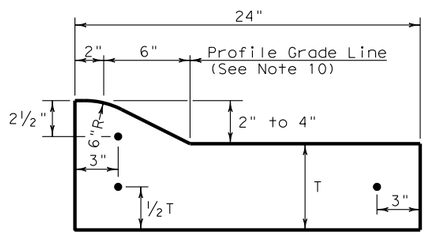
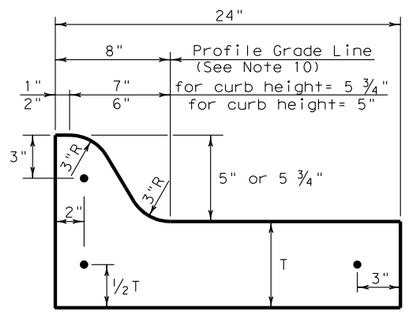
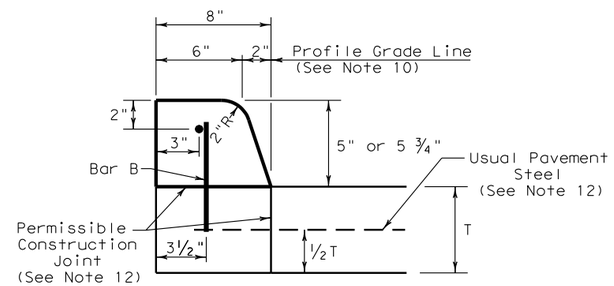


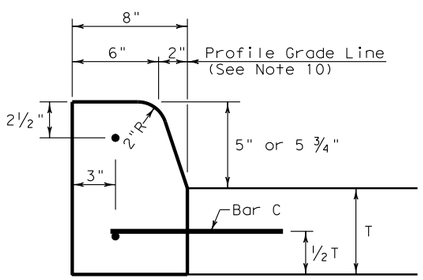
TYPE I CURB AND GUTTER
2" - 4" HEIGHT



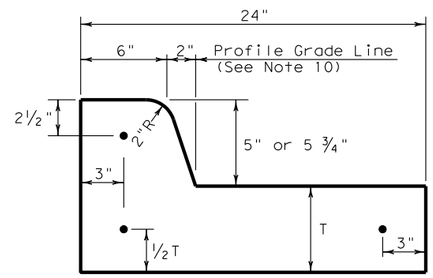
TYPE I CURB AND GUTTER
5" - 5 ¾" HEIGHT



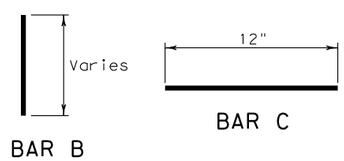
TYPE II CURB (MONOLITHIC)
5" - 5 ¾" HEIGHT

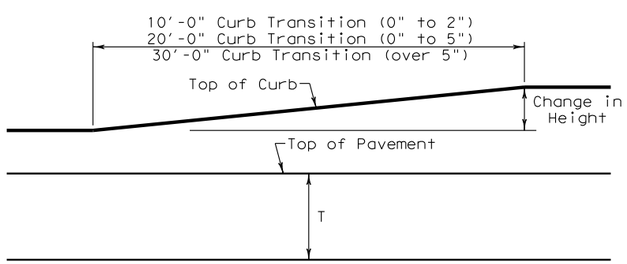


TYPE II CURB
5" - 5 ¾" HEIGHT

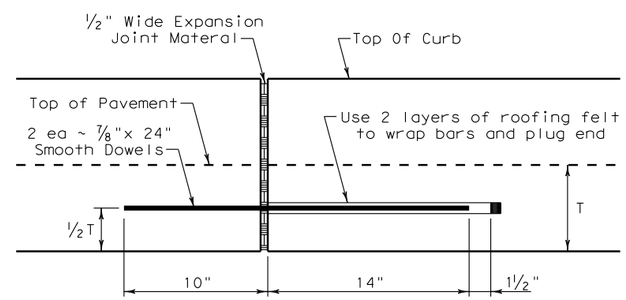


TYPE II CURB AND GUTTER
5" - 5 ¾" HEIGHT





CURB TRANSITION
Note: To be paid for as Highest Curb



EXPANSION JOINT DETAIL

General Notes

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No.4 unless otherwise shown. The use of synthetic fiber in lieu of steel reinforcing is acceptable, provided the fiber producer is on the Department Producer List (MPL), maintained by TxDOT, Construction Division.
4. Round exposed sharp edges with a rounding tool, to a minimum radius of ¼ inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is placed on existing concrete pavement, the pavement shall be drilled and the reinforcing bars grouted in place.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C~C.
9. Dimension 'T' shown is the thickness of concrete pavement or flexible base and surface (8" maximum).
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. When vertical permissible construction joints are used, resulting in a longitudinal construction joint in the pavement, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans for longitudinal construction joints. Reinforcing steel for curb section shall then conform to that required for concrete curb.

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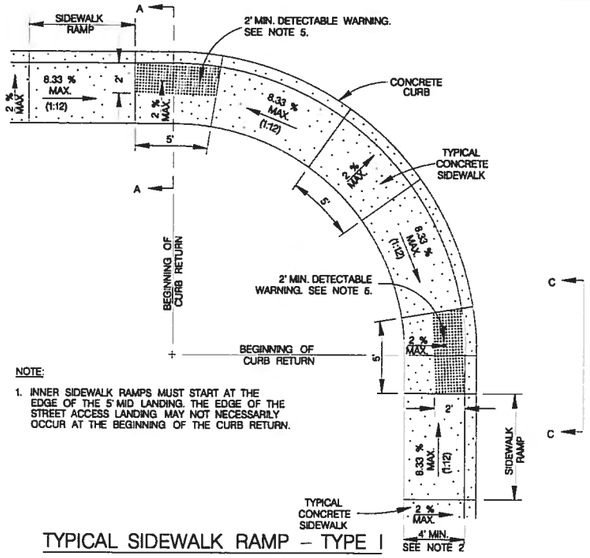
LEVELS DISPLAYED
1 2

Texas Department of Transportation
Design Division (Roadway)

CONCRETE CURB AND CURB AND GUTTER

CCCG-10

FILE: cccg10.dgn	DN: TxDOT	CK: AM	DW: BD	CK:		
© TxDOT 1995	DIST	FEDERAL AID PROJECT				SHEET
REVISIONS						174
	COUNTY		CONTROL	SECT	JOB	HIGHWAY
	BEXAR		915	12	470,etc.	WURZB



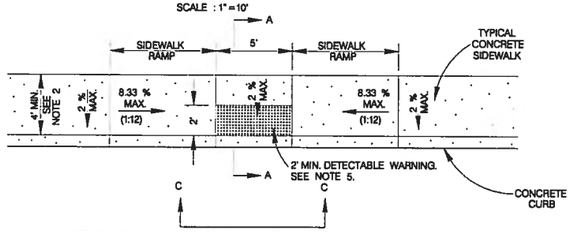
NOTE:

1. INNER SIDEWALK RAMPS MUST START AT THE EDGE OF THE 5' MID LANDING. THE EDGE OF THE STREET ACCESS LANDING MAY NOT NECESSARILY OCCUR AT THE BEGINNING OF THE CURB RETURN.

TYPICAL SIDEWALK RAMP – TYPE I

SIDEWALK ABUTS THE CURB

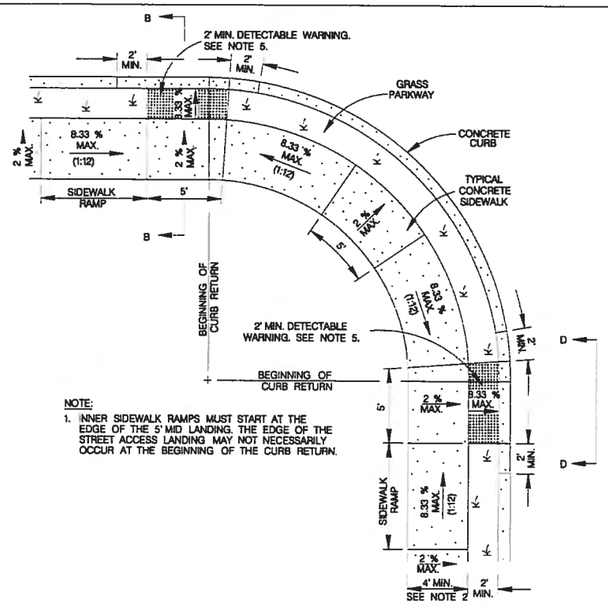
SCALE : 1" = 10'



TYPICAL SIDEWALK RAMP – TYPE II

USED AT TEE INTERSECTIONS WHERE SIDEWALK ABUTS CURB

SCALE : 1" = 10'



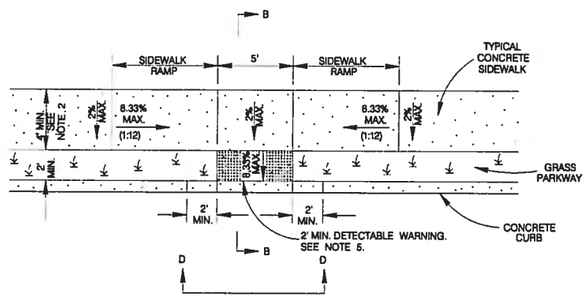
NOTE:

1. INNER SIDEWALK RAMPS MUST START AT THE EDGE OF THE 5' MID LANDING. THE EDGE OF THE STREET ACCESS LANDING MAY NOT NECESSARILY OCCUR AT THE BEGINNING OF THE CURB RETURN.

TYPICAL SIDEWALK RAMP – TYPE III

SIDEWALK SEPARATED FROM CURB

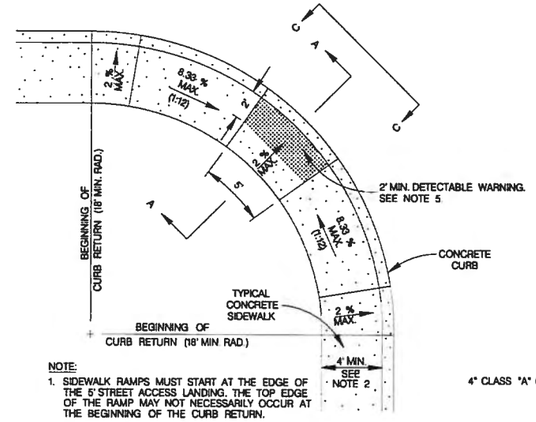
SCALE : 1" = 10'



TYPICAL SIDEWALK RAMP – TYPE IV

USED AT TEE INTERSECTIONS WHERE SIDEWALK IS SEPARATED FROM CURB

SCALE : 1" = 10'



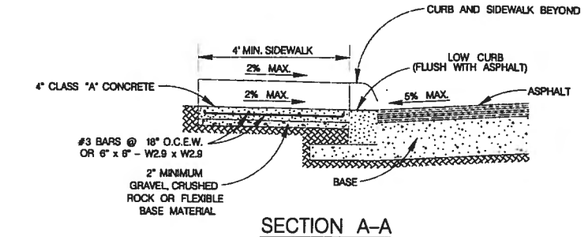
NOTE:

1. SIDEWALK RAMPS MUST START AT THE EDGE OF THE 5' STREET ACCESS LANDING. THE TOP EDGE OF THE RAMP MAY NOT NECESSARILY OCCUR AT THE BEGINNING OF THE CURB RETURN.
2. TYPE V RAMPS MUST HAVE 18' MIN. RADIUS.

TYPICAL SIDEWALK RAMP – TYPE V

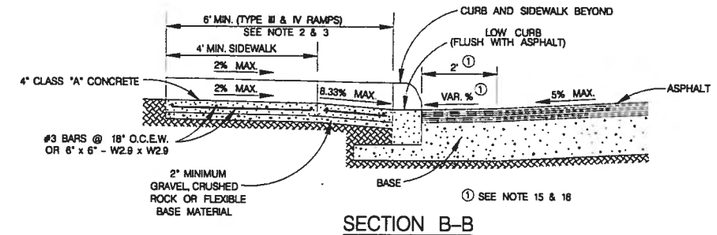
SIDEWALK ABUTS CURB

SCALE : 1" = 10'



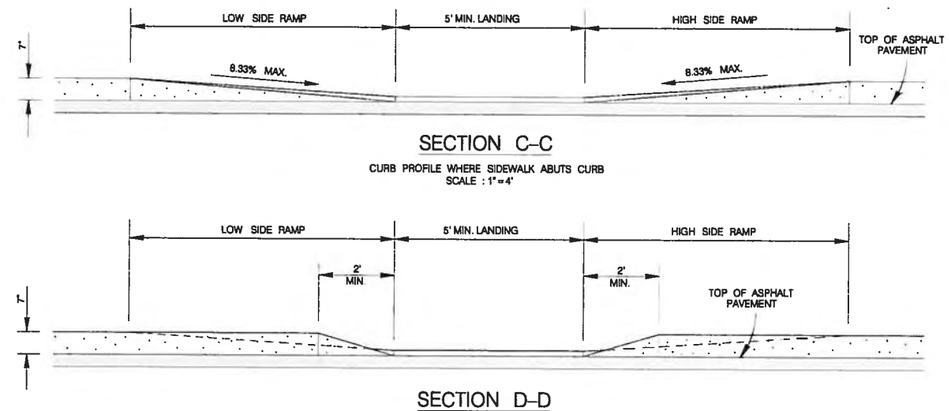
SECTION A–A

SCALE : 1" = 4'



SECTION B–B

SCALE : 1" = 4'



SECTION C–C

CURB PROFILE WHERE SIDEWALK ABUTS CURB

SCALE : 1" = 4'

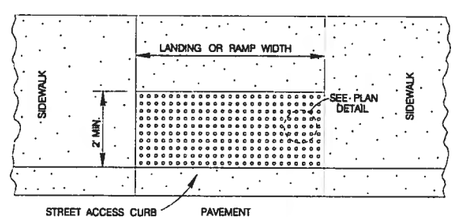
SECTION D–D

CURB PROFILE WHERE SIDEWALK IS SEPARATED FROM CURB

SCALE : 1" = 4'

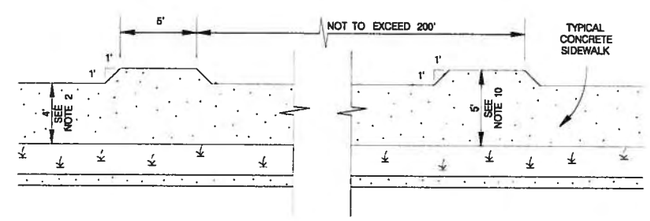
GENERAL NOTES

1. WHEN POSSIBLE SIDEWALKS SHOULD BE PLACED NEXT TO THE PROPERTY LINE, ALLOWING A MININMUM OF 1 FOOT BUFFER. DEVIATION OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.
2. FOR LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
3. FOR OTHER THAN LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB OR AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
4. SIDEWALK RAMP LENGTHS PRESENTED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE.
5. ALL CURB-RAMPS OR LANDINGS ABUTTING THE CROSSWALK SHALL HAVE A DETECTABLE WARNING 24 INCHES DEEP (IN THE DIRECTION OF PEDESTRIAN TRAVEL) AND EXTENDING THE FULL WIDTH OF THE CURB RAMP OR LANDING. THE DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES, ALIGNED IN A GRID PATTERN WITH A DIAMETER OF A NOMINAL 0.9 INCHES (23 MM), A HEIGHT OF NOMINAL 0.2 INCHES (5 MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES (60 MM). THE DETECTABLE WARNING SURFACE SHALL BE A CAST-IN-PLACE TILE CONFORMING TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS OR PAVERS CONFORMING TO TXDOT STANDARD PED-05, PEDESTRIAN FACILITIES.
6. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
7. SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO CONSTRUCT TYPE I OR TYPE III RAMPS.
8. CONSTRUCTION OF ALL WHEELCHAIR RAMPS TO BE INCLUDED UNDER ITEMS "500 – CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER" AND / OR "502 – CONCRETE SIDEWALKS". RAMP SURFACE SHALL BE BRUSH FINISHED.
9. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF WHEELCHAIR RAMPS TO BE SHOWN ON CONSTRUCTION PLANS. CITY CONSTRUCTION INSPECTOR CAN ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
10. SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET.
11. WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.
12. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" – W2.9 x W2.9 WIRE MESH.
13. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY. ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND TAS STANDARDS.
14. SIDEWALK CROSS GRADE SHALL HAVE A MAXIMUM SLOPE OF 2%. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
15. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (I.E. 8.33-(-2.67) = 11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
16. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
17. ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT.



DETECTABLE WARNING SURFACE

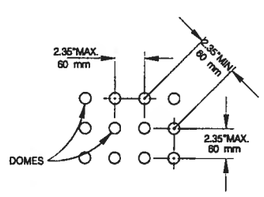
SCALE : 1" = 4'



SIDEWALK PASSING SPACE

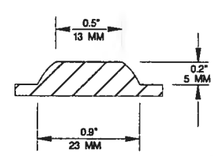
SCALE : 1" = 10'

TABLE 1 (SEE NOTE 4)		
GUTTER SLOPE	SIDEWALK RAMP LENGTH (1:12)	
	LOW SIDE	HIGH SIDE
1%	5'-6"	7'-2"
2%	5'-0"	8'-4"
3%	4'-6"	10'-0"
4%	4'-2"	12'-6"
5%	3'-10"	16'-6"



PLAN DETAIL

NO SCALE



DOME SECTION

NO SCALE

NOTE:

STAMPED CONCRETE TRUNCATED DOMES WILL NOT BE ALLOWED TO BE USED FOR DETECTABLE WARNING ON WHEELCHAIR RAMPS. CONTRACTOR MUST SUBMIT TRUNCATED DOME INFORMATION THAT IS TO BE USED ON WHEELCHAIR RAMPS TO THE PROJECT MANAGER FOR APPROVAL AT LEAST 30 DAYS PRIOR TO INSTALLATION.

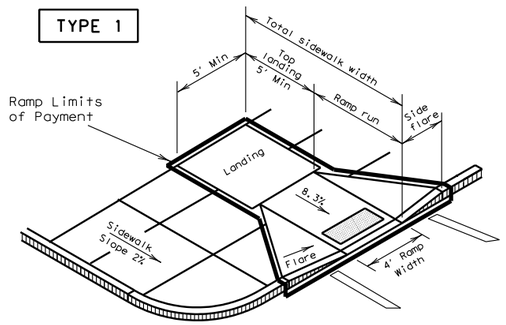
MAY 2009

CITY OF SAN ANTONIO

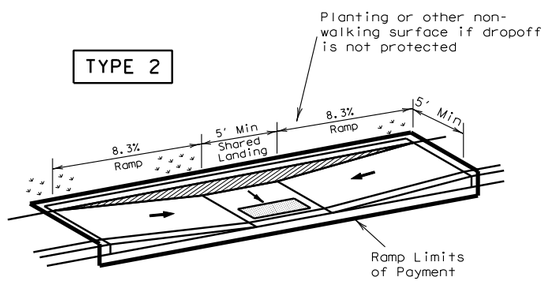
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

WHEELCHAIR RAMP STANDARDS

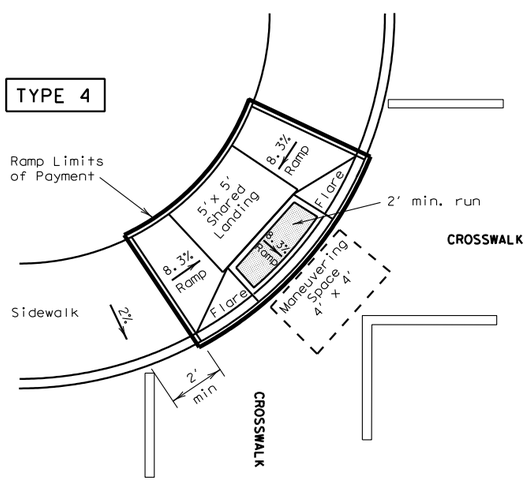
100 % SUBMITTAL	PROJECT NO.: 0915-12-470, etc.		DATE: 7/31/2011
DRWN BY: V. VASQUEZ	DSGN. BY:	CHKD. BY: R.S. HOSSEINI, P.E.	SHEET NO.: 15 OF



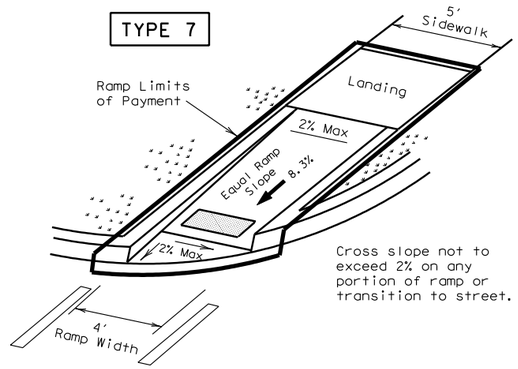
PERPENDICULAR CURB RAMP



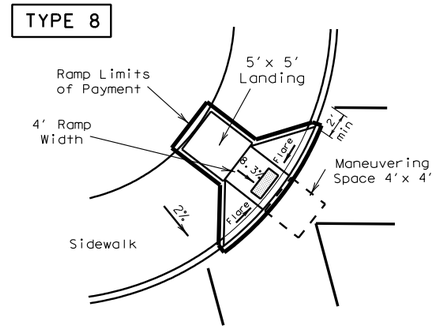
PARALLEL CURB RAMP
(Use only where water will not pond in the landing.)



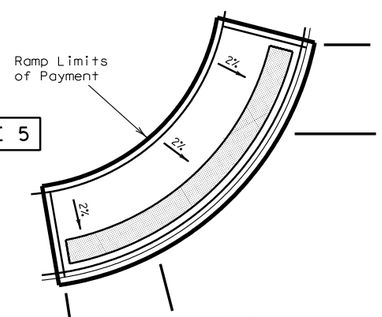
DIAGONAL COMBINATION CURB RAMP
Perpendicular to the Tangent of the Curb Radius and Contained in Crosswalk



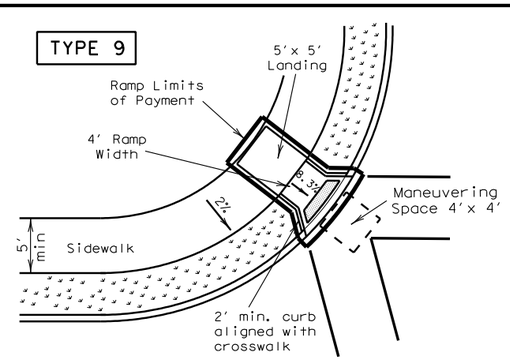
DIRECTIONAL RAMP WITHIN RADIUS
(Sidewalk set back from curb)



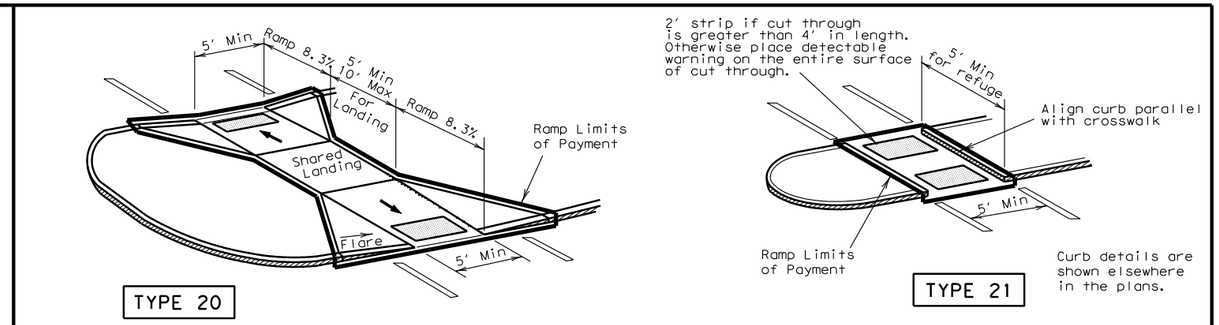
DIAGONAL CURB RAMP (FLARED SIDES)



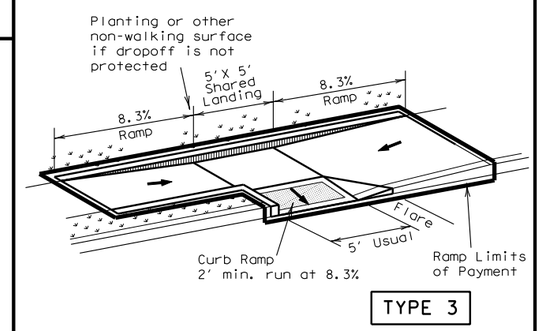
FLUSH LANDING

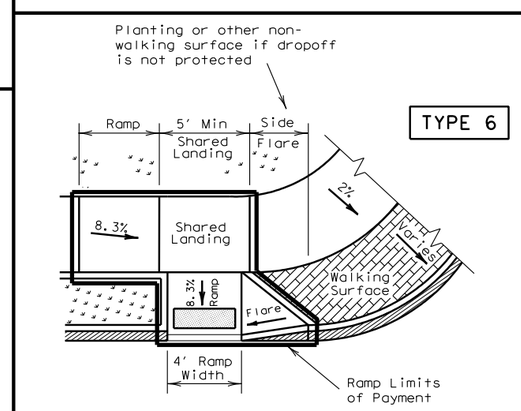


DIAGONAL CURB RAMP (RETURNED CURB)

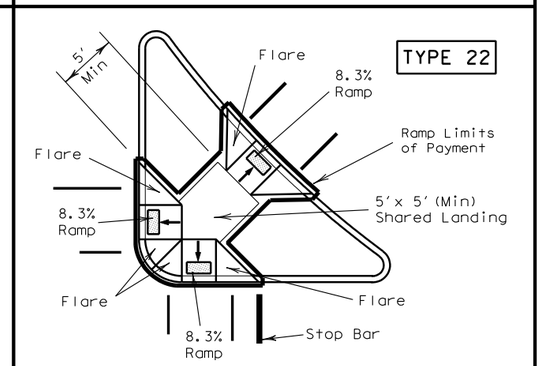


CURB RAMPS AT MEDIAN ISLANDS

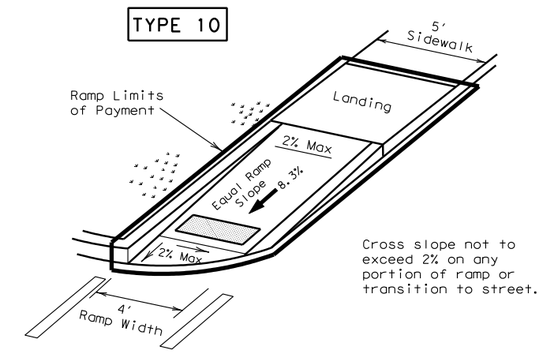




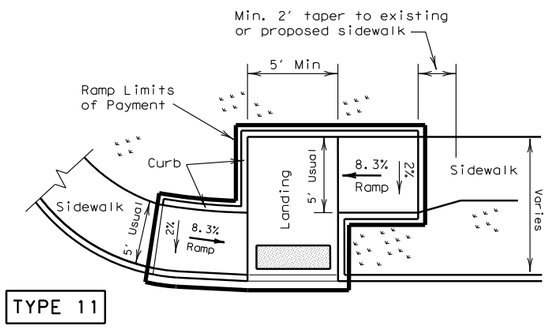
COMBINATION CURB RAMPS



COMBINATION ISLAND RAMPS



DIRECTIONAL RAMP WITHIN RADIUS
(Sidewalk adjacent to curb)



OFFSET PARALLEL CURB RAMP

NOTES:
See General Notes on sheet 2 of 4 for more information.

" " Denotes planting or non-walking surface.

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LEVELS DISPLAYED

Texas Department of Transportation
Design Division (Roadway)

PEDESTRIAN FACILITIES
CURB RAMPS

PED-05

SHEET 1 OF 4

FILE: ped05.dgn	DN: EH	CK:	DW: BGD		CK:
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REVISIONS	SAT				176
	COUNTY	CONTROL	SECT	JOB	HIGHWAY
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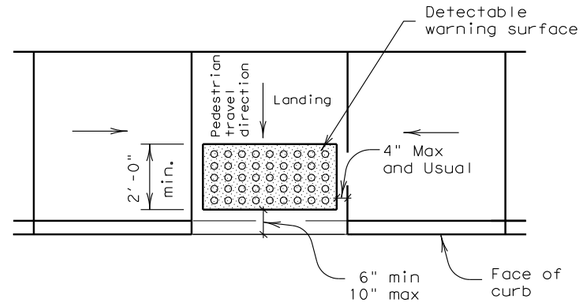
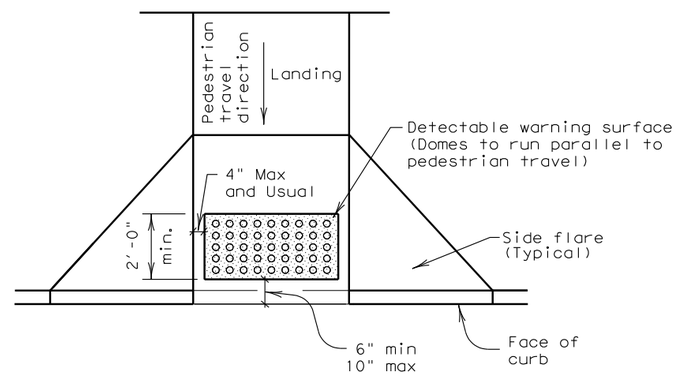
DETECTABLE WARNINGS

General Notes for Detectable Warnings

1. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 4.29 of the Texas Accessibility Standards (TAS). The surface must contrast visually with adjoining surfaces, including side flares. Furnish dark brown or dark red detectable warning surface adjacent to uncolored concrete, unless specified elsewhere in the plans.
2. Detectable warning surfaces must be slip resistant and not allow water to accumulate.
3. Align truncated domes in the direction of pedestrian travel when entering the street.
4. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.
5. Detectable warning surfaces shall be a minimum of 24" in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
6. Detectable warning surfaces shall be located so that the edge nearest the curb line is a minimum of 6" and a maximum of 10" from the extension of the face of curb. Detectable warning surfaces may be curved along the corner radius.
7. TxDOT maintains a list of Qualified Detectable Warning Materials. Details are provided herein for the placement of landscape pavers. For other materials, refer to the manufacturer's product manual for proper installation.



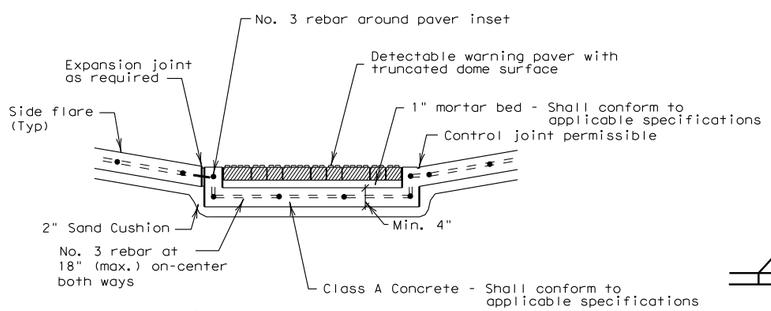
Typical placement of detectable warning surface on landing at street edge.



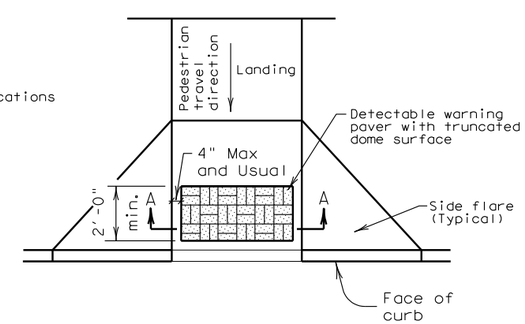
Typical placement of detectable warning surface on sloping ramp run.

Pedestrian Facilities General Notes

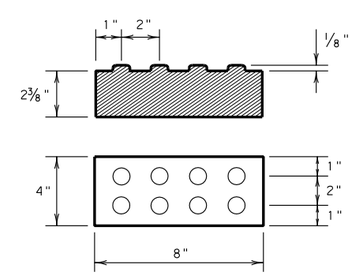
1. All slopes are maximum allowable. The least possible slope that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
2. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is encouraged. Where a 5' sidewalk can not be provided due to site constraints, a minimum 3' sidewalk with 5'x 5' passing areas at intervals not to exceed 200' is required.
3. Landings shall be 5'x 5' minimum with a maximum 2% slope in any direction.
4. Maneuvering space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
5. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
6. Curb ramps with returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planting or other non-walking surface or because the side approach is substantially obstructed. Otherwise, provide flared sides.
7. Additional information on curb ramp location, design, light reflective value and texture may be found in the current edition of the Texas Accessibility Standards (TAS) and 16 TAC §68.102.
8. To serve as a pedestrian refuge area, the median should be a minimum of 5' wide. Medians should be designed to provide accessible passage over or through them.
9. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
10. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall be aligned with theoretical crosswalks, or as directed by the Engineer.
11. Existing features that comply with TAS may remain in place unless otherwise shown on the plans.
12. Handrails are not required on curb ramps. Provide curb ramps wherever on accessible route crosses (penetrates) a curb.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Separate curb ramp and landings from adjacent sidewalk and any other elements with premold or board joint of ¾" unless otherwise directed by the Engineer.
15. Provide a smooth transition where the curb ramps connect to the street.
16. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
17. Flare slope shall not exceed 10% measured along curb line.



Section A-A



Truncated Dome Pattern Curb Ramp



Detectable Warning Paver

General Notes (Pavers)

Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.

Lay full-size units first followed by closure units consisting of at least 25 percent of a full unit. Cut detectable warning paver units using a power saw.

DETECTABLE WARNING PAVER (OPTION)

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LEVELS DISPLAYED

Texas Department of Transportation
Design Division (Roadway)

PEDESTRIAN FACILITIES

GENERAL NOTES AND DETECTABLE WARNINGS

PED-05

SHEET 2 OF 4

FILE: ped05.dgn	DN: EH	CK:	DW: BGD	CK:
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REVISIONS	SAT			177
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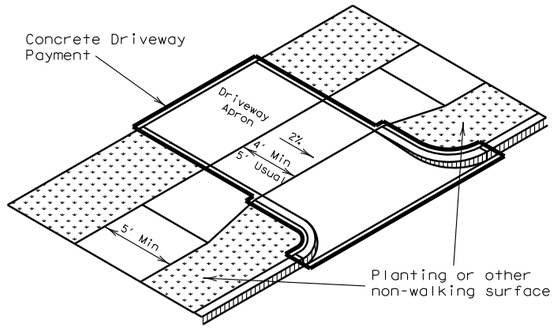
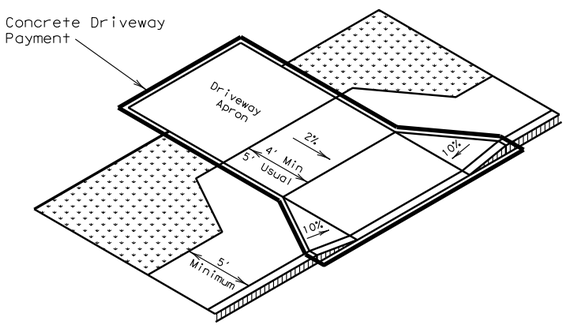
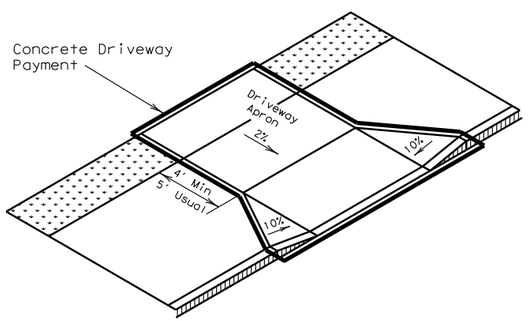


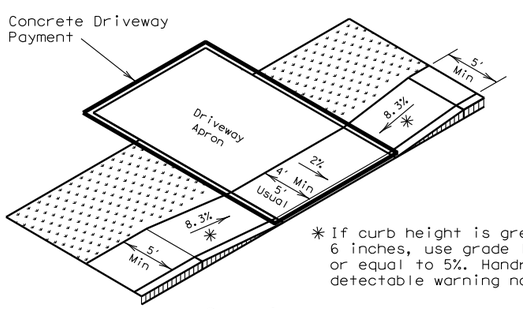
Setback sidewalk



Apron offset sidewalk



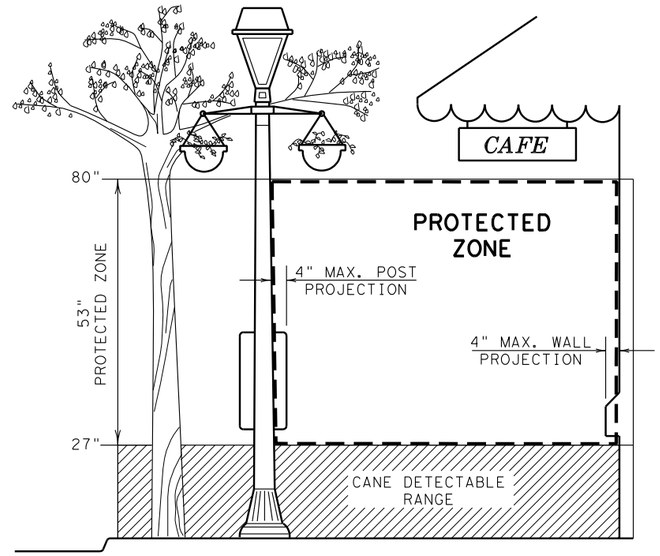
Wide sidewalk



✳ If curb height is greater than 6 inches, use grade less than or equal to 5%. Handrail and detectable warning not required.

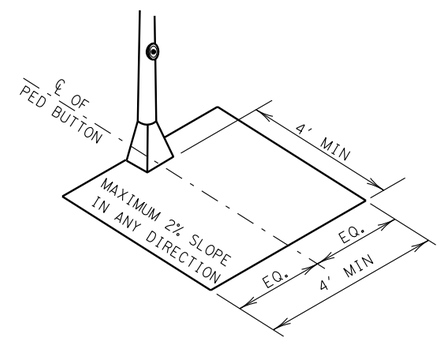
Ramp sidewalk

SIDEWALK TREATMENT AT DRIVEWAYS

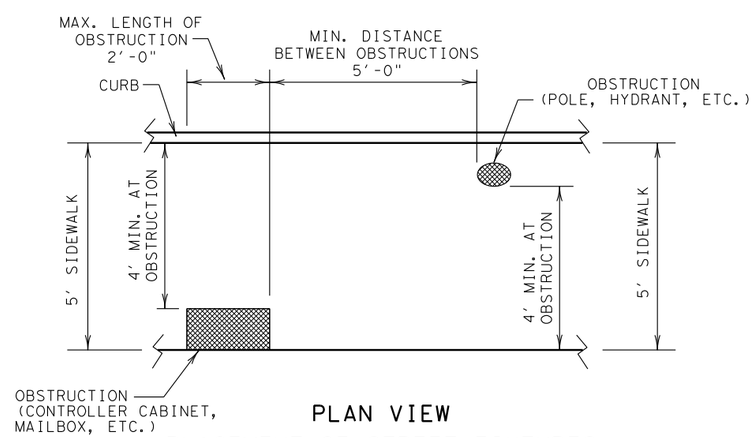


PROTECTED ZONE

In pedestrian circulation area, maximum 4" projection for post or wall mounted objects between 27"and 80" above the surface.



CLEAR GROUND SPACE CENTERED AT PEDESTRIAN PUSH BUTTON



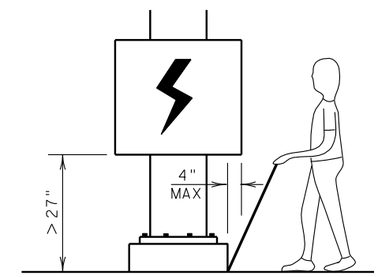
PLAN VIEW

PLACEMENT OF STREET FIXTURES

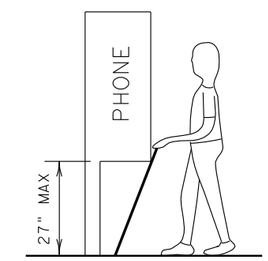
(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' × 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)

General Notes

1. All slopes are maximum allowable. The least possible slope that will still drain properly should be used.
2. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the accessible route or clear ground space.
3. Usual sidewalk cross slope equals 1.5%. The maximum allowable sidewalk cross slope equals 2%.
4. Street grades and cross slopes shall be as shown elsewhere in the plans.
5. Existing features that comply with TAS may remain in place unless otherwise shown on the plans.
6. Changes in level greater than ¼ inch are not permitted.
7. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks, within the public right of way, may follow the grade of the parallel roadway. Where a continuous grade greater than 5% must be provided, handrails may be desirable on one or both sides of the sidewalk to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails must comply with TAS 4.8.5.
8. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
9. Driveways and turnouts shall be constructed and paid for in accordance with Item, "Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
10. Sidewalk details are shown elsewhere in the plans.



When an obstruction of a height greater than 27" from the surface would create a protrusion of more than 4" into the pedestrian circulation area, construct additional curb or foundation at the bottom to provide a maximum 4" overhang.



Protruding objects of a height ≤ 27" are detectable by cane and do not require additional treatment.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

Texas Department of Transportation
Design Division (Roadway)

PEDESTRIAN FACILITIES
SIDEWALKS

PED-05

SHEET 3 OF 4

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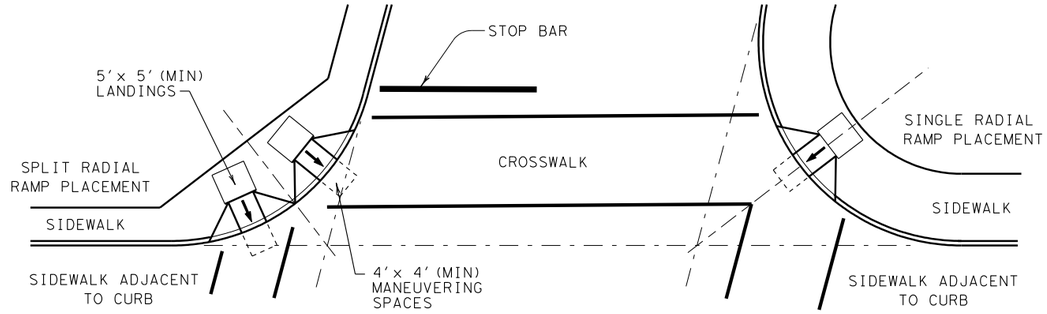
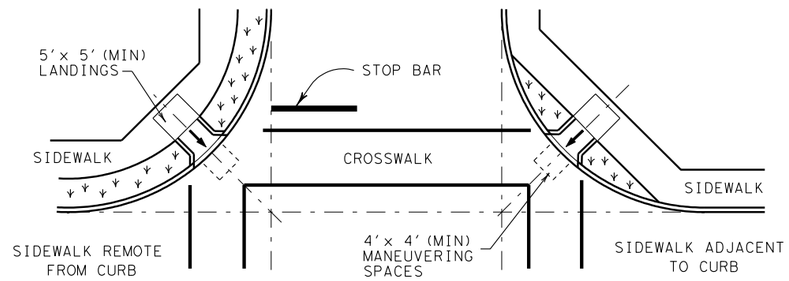
1



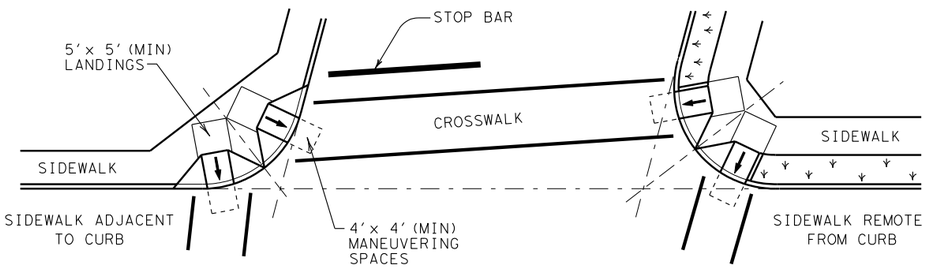
SKEWED INTERSECTION WITH "LARGE" RADIUS



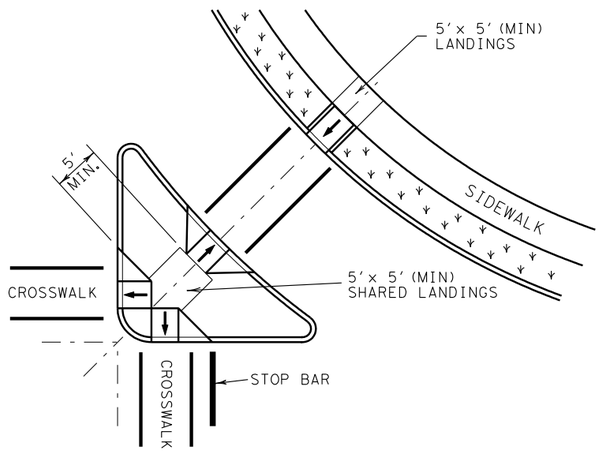
NORMAL INTERSECTION WITH "LARGE" RADIUS

General Notes

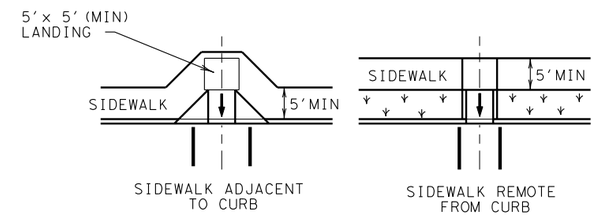
1. Street grades and cross slopes shall be as shown elsewhere in the plans.
2. Ramps are shown here without detectable warnings for simplicity. Detectable warnings are required at the locations shown on the PED Standard (Sheets 1 and 2 of 4) and in accordance with the details shown below.
3. Small channelization islands, which can not provide a minimum 5′ x 5′ landing at the top of ramps, shall be cut through level with the surface of the street.



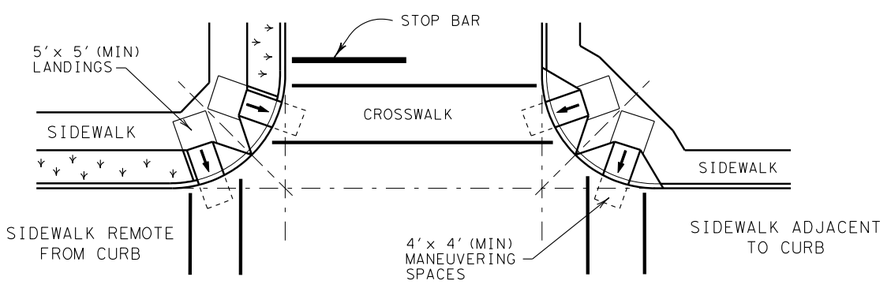
SKEWED INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
W/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS



NORMAL INTERSECTION WITH "SMALL" RADIUS

TYPICAL CROSSING LAYOUTS

SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS

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PEDESTRIAN FACILITIES

INTERSECTION LAYOUTS

PED-05

SHEET 4 OF 4

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