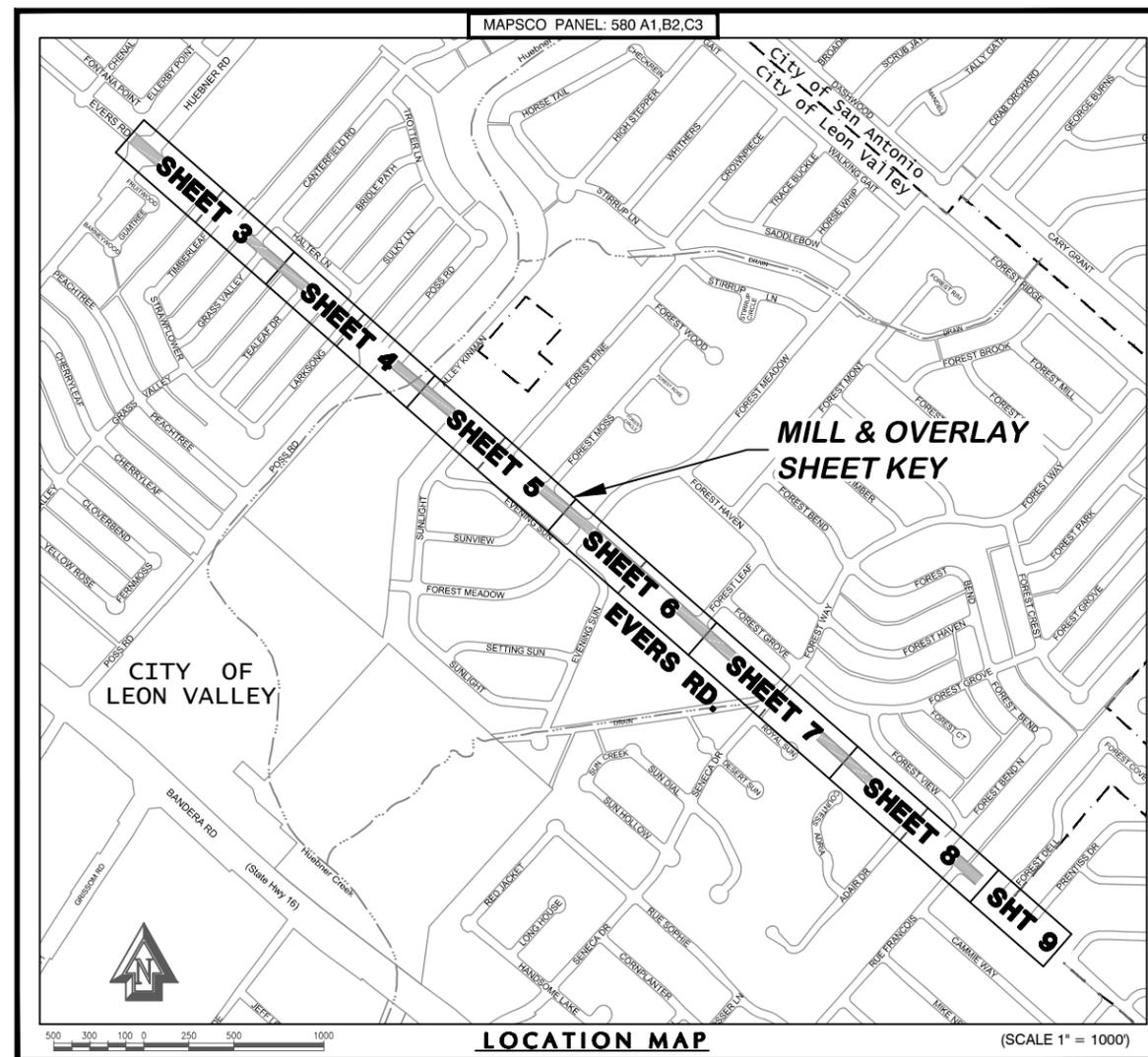


# CITY OF LEON VALLEY



**BID No. 2015 - 02**

## FY 2015 EVERS ROAD REHABILITATION



### INDEX TO DRAWINGS

1. COVER

#### Base Bid - Mill & Overlay

2. GENERAL NOTES & ESTIMATED QUANTITIES
3. STA. 10+00 TO 20+00
4. STA. 20+00 TO 30+50
5. STA. 30+50 TO 41+00
6. STA. 41+00 TO 51+50
7. STA. 51+50 TO 62+00
8. STA. 62+00 TO 72+00
9. STA. 72+00 TO 74+00

#### Alternate #1 - Bus Pads

- A1.1 STA. 10+00 TO STA. 22+00
- A1.2 STA. 31+00 TO STA. 41+00
- A1.3 STA. 47+00 TO STA. 56+50
- A1.4 STA. 67+00 TO STA. 72+00

#### Detail Standards

- D1 MISCELLANEOUS CONSTRUCTION STANDARDS I \*
- D2 MISCELLANEOUS CONSTRUCTION STANDARDS II \*
- D3 CONCRETE DRIVEWAY STANDARDS \*
- D4 WHEELCHAIR RAMP STANDARDS \*
- D5 CONCRETE BUS STOP PAD \*
- D6 TYPICAL CROSSWALK DETAILS \*
- D7 LEFT-TURN "ONLY" AND ARROW SPACING WORKSHEET \*
- D8 STANDARD PAVEMENT MARKINGS WITH REFLECTIVE RAISED PAVEMENT MARKERS FOR POSITION GUIDANCE 1 \*
- D9 STANDARD PAVEMENT MARKINGS (ARROWS) \*
- D10 STANDARD PAVEMENT MARKINGS (WORDS) \*
- D11 BARRICADE AND CONSTRUCTION STANDARDS SHEET 1 OF 4 \*
- D12 BARRICADE AND CONSTRUCTION STANDARDS SHEET 2 OF 4 \*
- D13 BARRICADE AND CONSTRUCTION STANDARDS SHEET 3 OF 4 \*
- D14 BARRICADE AND CONSTRUCTION STANDARDS SHEET 4 OF 4 \*

\* THE DETAILS IN THIS SET HAVE BEEN SELECTED BY THE ENGINEER AS BEING APPLICABLE TO THIS PROJECT.

**SIA ENGINEERING, INC.**



6977 SAN PEDRO AVE.  
 SAN ANTONIO, TEXAS 78216-6245  
 VOICE: (210) 341-5500 FAX: (210) 308-0662  
 TBPE FIRM No. F-1892 TBPLS FIRM No. F-100380-00  
 WWW.SIA-ENGINEERING.COM

*S. Sayyadioshi*



This drawing and all related documents (including electronic media) were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained herein shall be used only for the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation) any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained shall be used only by the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation), any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

**GENERAL NOTES**

1. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL THE EXISTING UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION. ANY DAMAGE TO UTILITIES WILL BE CONTRACTORS RESPONSIBILITY.
2. ALL CONSTRUCTION METHODS AND MATERIALS IF NOT SHOWN SHALL BE AS PER THE CITY OF SAN ANTONIO, "STANDARD SPECIFICATIONS FOR CONSTRUCTION", JUNE 2008.
3. CONTRACTOR IS TO OBTAIN ALL NECESSARY PERMITS.
4. CITY TO PROVIDE ALL MATERIALS TESTING. CONTRACTOR TO NOTIFY AND COORDINATE WITH CMT FIRM FOR OBTAINING ALL SAMPLES REQUIRED IN THE SPECIFICATIONS.
5. PROVIDE A MINIMUM OF 2" CONCRETE COVER OVER ALL REINFORCING.
6. PROVIDE EXPANSION JOINTS FOR CONCRETE CURBS, SIDEWALKS AND CONCRETE PAVEMENT. CUT TO SHAPE EVERY 40' AND AT ANGLE POINTS AND RETURNS.
7. ALL REINFORCING STEEL SHALL BE CONTINUOUS WITH SPLICES LAPPED 40 DIAMETERS. GRADE 60 KSI.
8. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 P.S.I. @ 28 DAYS, UNLESS OTHERWISE NOTED.
9. CONTRACTOR TO SECURE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) STORMWATER CONSTRUCTION PERMIT FROM TCEQ.
10. CONTRACTOR TO CONTACT UTILITY LOCATOR AT 811. AT THE CITY OF LEON VALLEY 210-681-1850.
11. SIDEWALK CROSS SLOPE NOT TO EXCEED 2%.
12. PAVING TO BE REMOVED WILL BE SAWCUT ON A CLEAN LINE. ANY SUBCONTRACTOR WHO DAMAGES PAVING NOT DESIGNATED FOR REMOVAL SHALL PATCH AND REPAIR DAMAGED AREAS.
13. CONTRACTOR SHALL PROTECT ALL EXISTING MAILBOXES, UTILITIES, SPRINKLER SYSTEMS, AND METER/BOXES. ANY ADJUSTMENTS WILL BE INCIDENTAL (AND N.S.P.I.).
14. TEMPORARY TRAFFIC CONTROL SHALL CONFORM TO PART 6, TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION. (NO SEPARATE PAY ITEM.)

**EVERS ROAD REHABILITATION**

**Base Bid**

ITEM	DESCRIPTION	UNIT	QUANTITY
100.1	MOBILIZATION	LS	1
100.2	INSURANCE AND BONDS	LS	1
101.1	PREPARING RIGHT-OF-WAY	LS	1
104.1	STREET EXCAVATION	CY	*
203.1	TACK COAT	GAL.	3,150
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP. DEPTH)	S.Y.	31,440
206.1	ASPHALT TREATED BASE (9" COMPACTED DEPTH)	S.Y.	*
208.1	SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT	S.Y.	31,440
407.4	CONCRETE COLLARS FOR VALVES, MANHOLES	C.Y.	5
535.1	4 INCH WIDE YELLOW LINE	L.F.	11,680
535.2	4 INCH WIDE WHITE LINE	L.F.	3,380
535.4	8 INCH WIDE WHITE LINE	L.F.	280
535.7	24 INCH WIDE WHITE LINE	L.F.	600
535.8	RIGHT ARROW	EA.	2
535.12	WORD 'ONLY'	EA.	2
535.19	WORD 'STOP'	EA.	8
535.19a	WORD 'AHEAD'	EA.	8
537.6	TRAFFIC BUTTON (TYPE I-C)	EA.	290
537.8	TRAFFIC BUTTON (TYPE II-AA)	EA.	290

**Additive Alternate #1 Concrete Bus Pads**

Add to the Contract			
101.1	PREPARING RIGHT-OF-WAY (Net Additional Cost Incurred)	LS	1
SP-4.8	CONCRETE BUS PADS	EA	13
Deduct from the contract			
203.1	TACK COAT	GAL.	180
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE B (2" COMP. DEPTH)	S.Y.	1,740
208.1	SALVAGING, HAULING & STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT	S.Y.	1,740

\* QUANTITY TO BE USED IN AREAS DESIGNATED BY THE ENGINEER FOR BASE REPLACEMENT. DELINEATION OF AREAS REQUIRING BASE REPEPLACEMENT WILL BE MADE IN THE FIELD FOR INDIVIDUAL SECMENTS AFTER THEY ARE MILLED.

*S. Sanyal*

**SIA ENGINEERING, INC.**  
 6977 SAN PEDRO AVE.  
 SAN ANTONIO, TEXAS 78216-6245  
 VOICE: (210) 341-5500 FAX: (210) 308-0662  
 TBPETIRM No. F-1892 TBPISFRM No. F-100380-00  
 WWW.SIA-ENGINEERING.COM



NO.	DATE	REVISION	BY



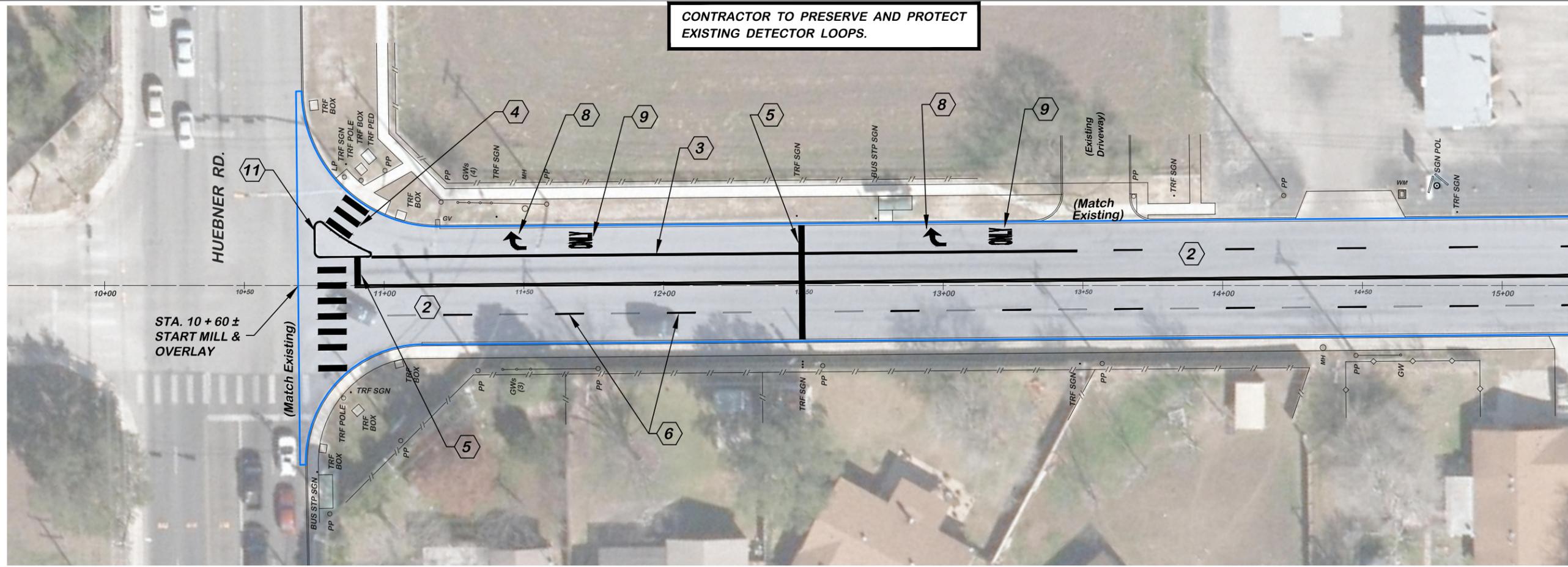
CITY OF LEON VALLEY  
 6400 EL VERDE ROAD  
 LEON VALLEY, TEXAS 79238 (210) 684-1991

DATE: 09/16/15	R.H.B.
DESIGNED:	D.A.G./M.F.K.
DRAWN:	S.S.
CHECKED:	SIA PROJECT No:

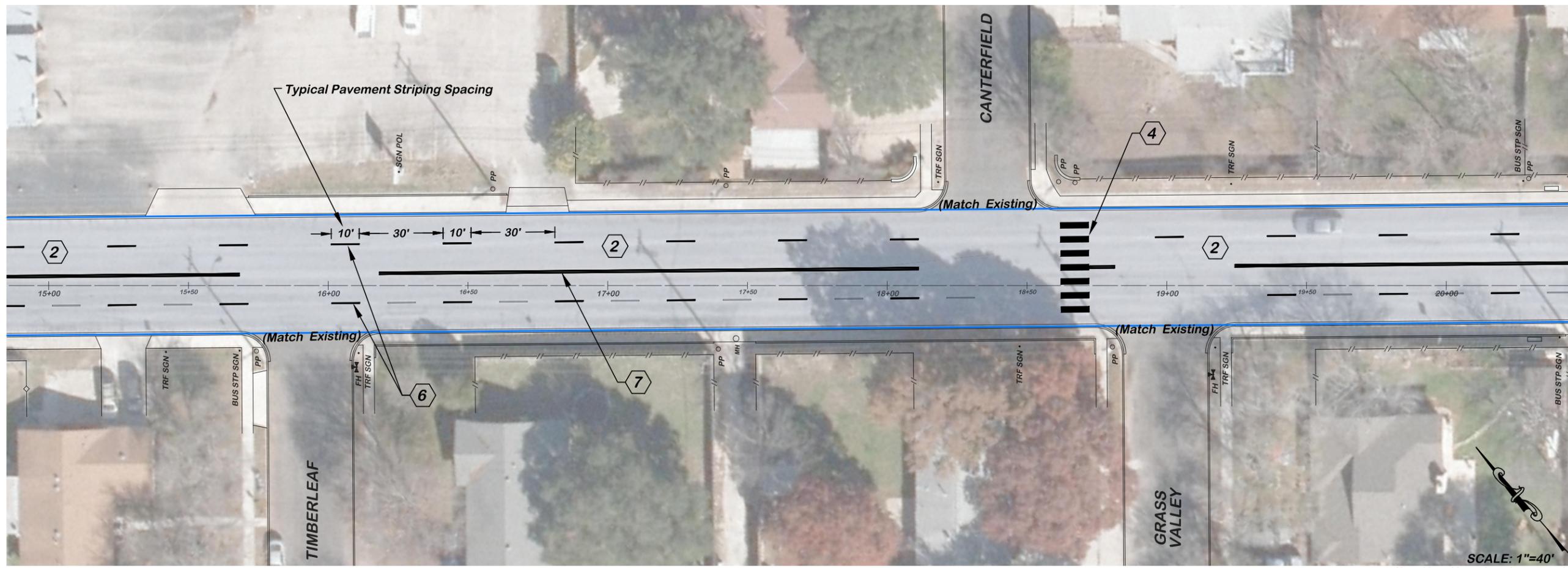
**GENERAL NOTES & ESTIMATED QUANTITIES**  
 BID No. 2015 - 02  
**FY 2015 Evers Road Rehabilitation**  
 Leon Valley, Bexar County, Texas

This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained shall be used only by the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation), any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

PDF Created: 3/17/2015 8:16 AM  
 File: P:\Leon Valley\COLV Evers Rd Overlay\Drawings\Sheets\Plans Sheet Set.dwg



**EVERS ROAD**



NOTE: STATIONING AND BASELINE IS ARBITRARY AND IS SHOWN AS A CONVENIENT FRAME OF REFERENCE.

**EVERS ROAD**

FOR KEYED NOTES SEE SHEET 9.

*S. Sanyal*

**SIA ENGINEERING, INC.**  
 6977 SAN PEDRO AVE.  
 SAN ANTONIO, TEXAS 78216-6245  
 VOICE: (210) 341-5500 FAX: (210) 308-0662  
 TBP#FIRM NO. F-182 TBP#SFRM NO. F-100380-00  
 WWW.SIA-ENGINEERING.COM

NO.	DATE	REVISION	BY



CITY OF LEON VALLEY  
 6400 EL VERDE ROAD  
 LEON VALLEY, TEXAS 79238 (210) 684-1991

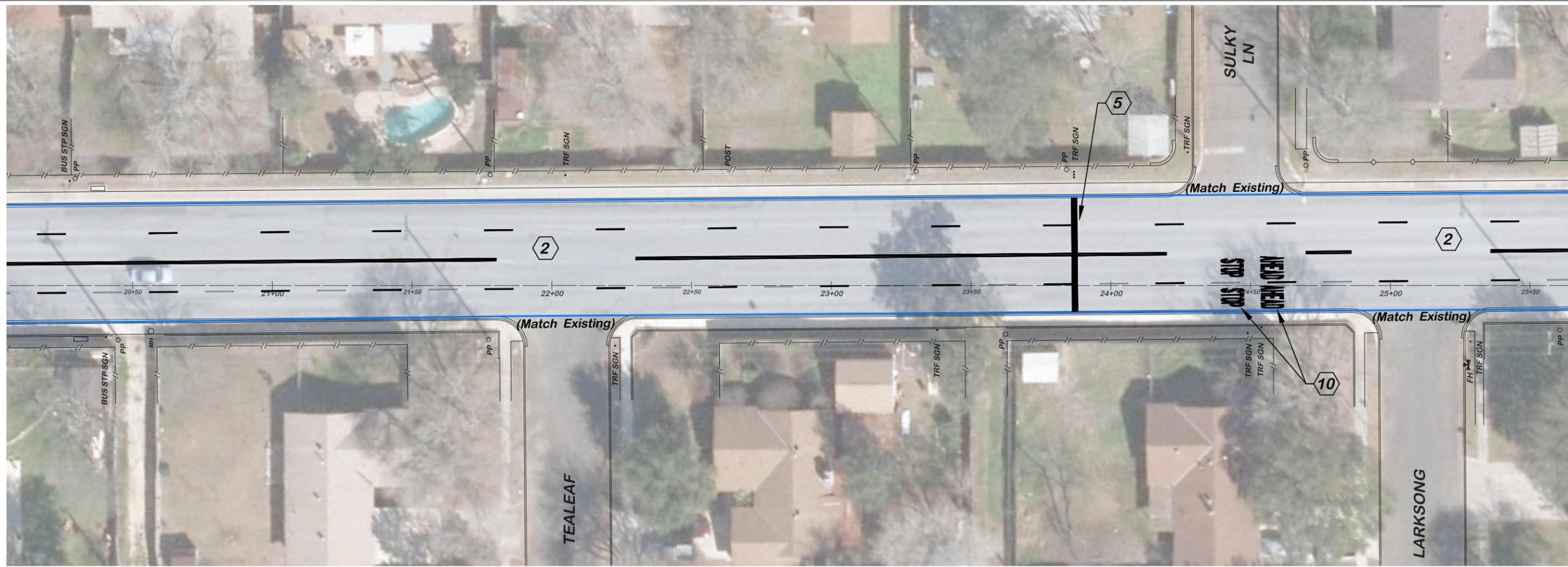
DATE:	03/16/15
DESIGNED:	R.H.B.
DRAWN:	D.A.G./M.F.K.
CHECKED:	S.S.
SIA Project No.:	

**Base Bid - Mill & Overlay**  
**STA. 10+60 TO STA. 20+00**  
**BID No. 2015 - 02**  
**FY 2015 Evers Road Rehabilitation**  
 Leon Valley, Bexar County, Texas

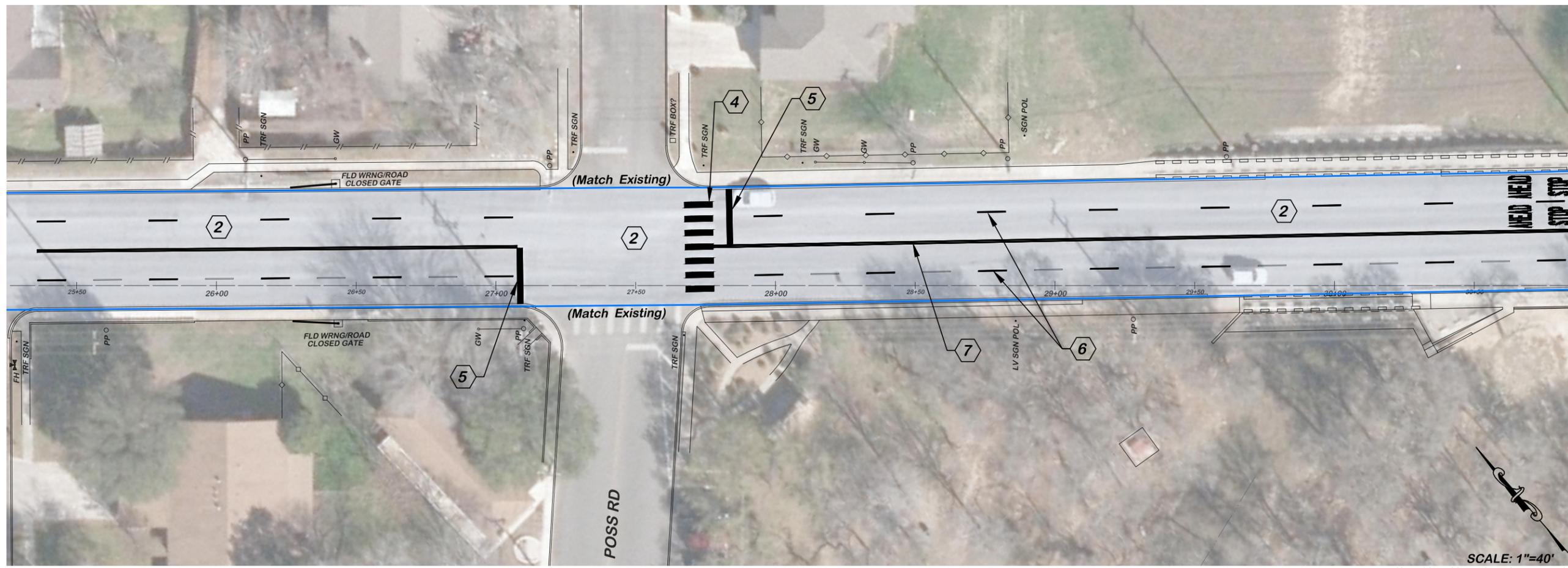
SHEET **3**  
 OF **27**

This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained shall be used only by the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation) any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

PDF Created: 3/16/2015 3:07 PM  
 File: P:\Leon Valley\COLV Evers Rd Overlay\Drawings\Sheets\Plans Sheet\_Set.dwg



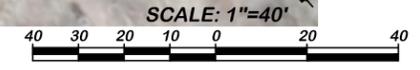
**EVERS ROAD**



NOTE: STATIONING AND BASELINE IS ARBITRARY AND IS SHOWN AS A CONVENIENT FRAME OF REFERENCE.

**EVERS ROAD**

FOR KEYED NOTES SEE SHEET 9.



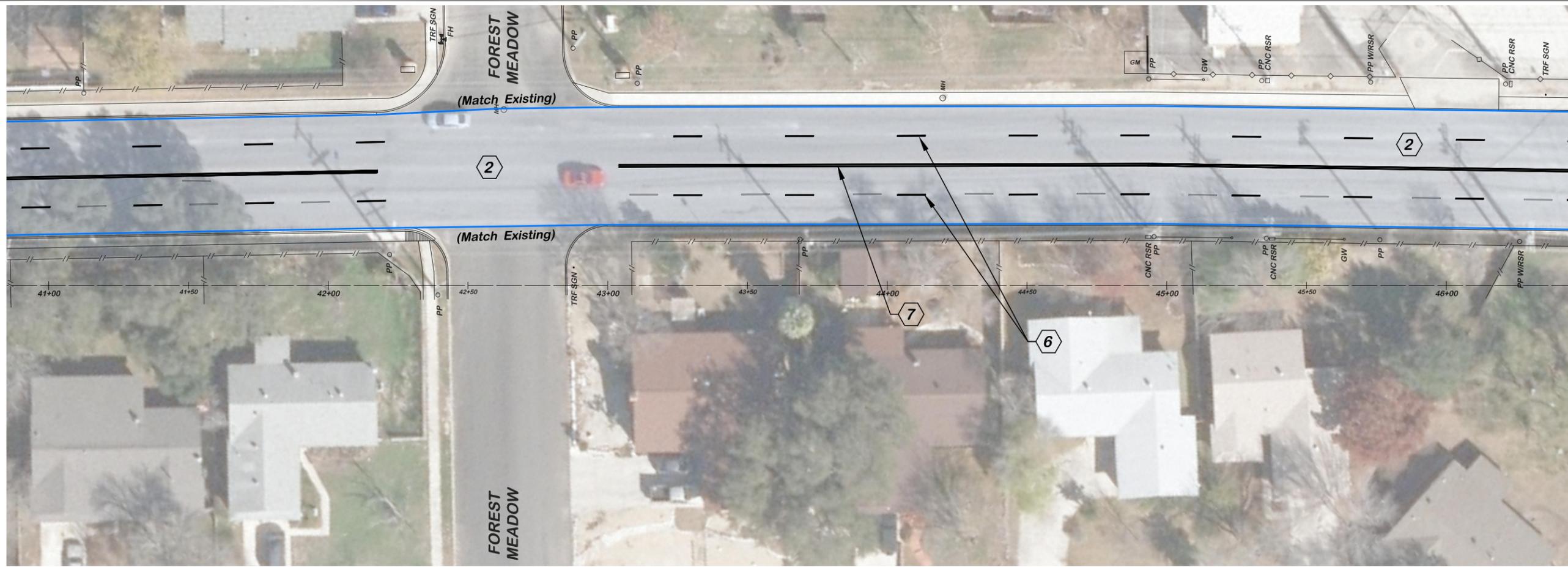
*S. Sanyal*

<b>Base Bid - Mill &amp; Overlay</b> STA. 20+00 TO STA. 30+50		DATE: 03/16/15	DESIGNED: R.H.B.	DRAWN: D.A.G./M.F.K.	CHECKED: S.S.	SIA PROJECT NO: 1501684-1391
<b>FY 2015 Evers Road Rehabilitation</b> Leon Valley, Bexar County, Texas						CITY OF LEON VALLEY 6400 EL VERDE ROAD LEON VALLEY, TEXAS 78238 (210) 684-1391
<b>BID No. 2015 - 02</b> <b>FY 2015 Evers Road Rehabilitation</b> Leon Valley, Bexar County, Texas		<b>SIA ENGINEERING, INC.</b> 6977 SAN PEDRO AVE. SAN ANTONIO, TEXAS 78216-6245 VOICE: (210) 341-5500 FAX: (210) 308-0662 TBPETIRM No. F-1892 TBPISFRM No. F-100380-00 WWW.SIA-ENGINEERING.COM		SHEET <b>4</b> OF <b>27</b>		No. DATE REVISION BY

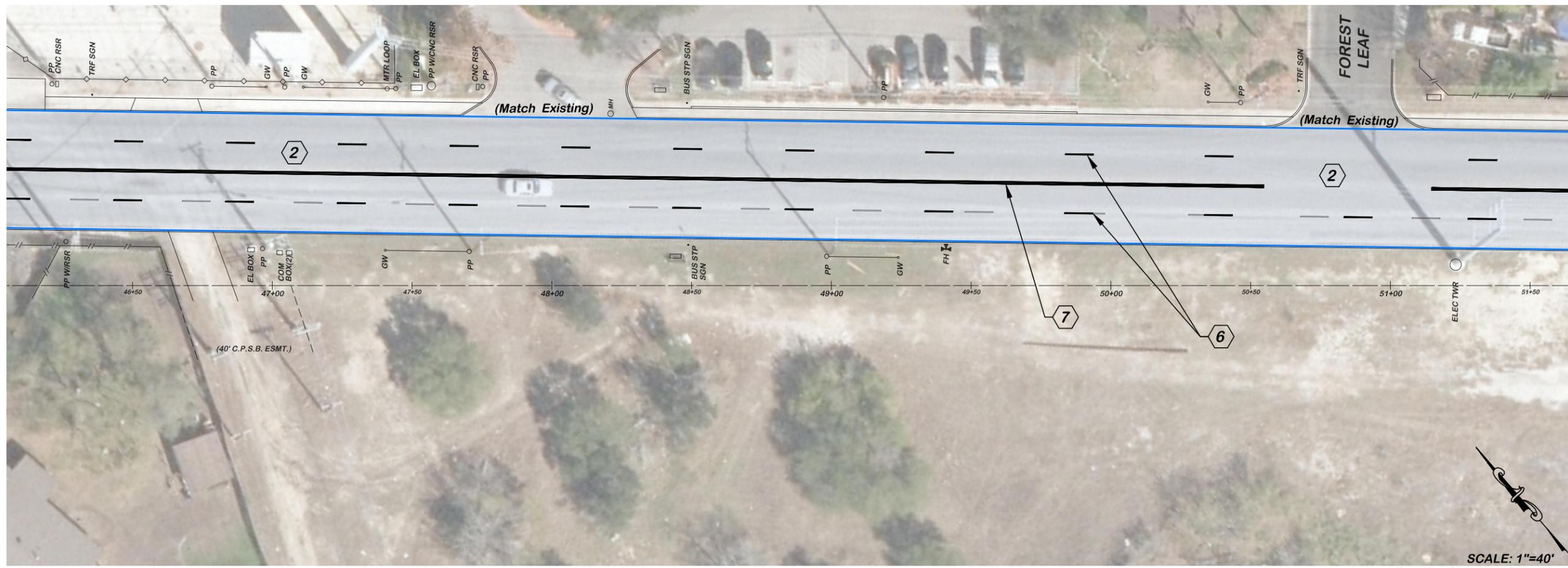


This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained shall be used only by the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation), any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

PDF Created: 3/16/2015 3:47 PM  
 File: P:\Leon Valley\COLV Evers Rd Overlay\Drawings\Sheets\Plans Sheet Set.dwg



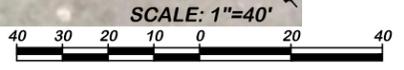
**EVERS ROAD**



**EVERS ROAD**

NOTE: STATIONING AND BASELINE IS ARBITRARY AND IS SHOWN AS A CONVENIENT FRAME OF REFERENCE.

FOR KEYED NOTES SEE SHEET 9.



*S. Sanyal*

**SIA ENGINEERING, INC.**  
 6977 SAN PEDRO AVE.  
 SAN ANTONIO, TEXAS 78216-6245  
 VOICE: (210) 341-5500 FAX: (210) 308-0662  
 TBPETRM No. F-182 TBPETRM No. F-100380-00  
 WWW.SIA-ENGINEERING.COM

NO.	DATE	REVISION	BY



CITY OF LEON VALLEY  
 6400 EL VERDE ROAD  
 LEON VALLEY, TEXAS 79238 (210) 684-1991

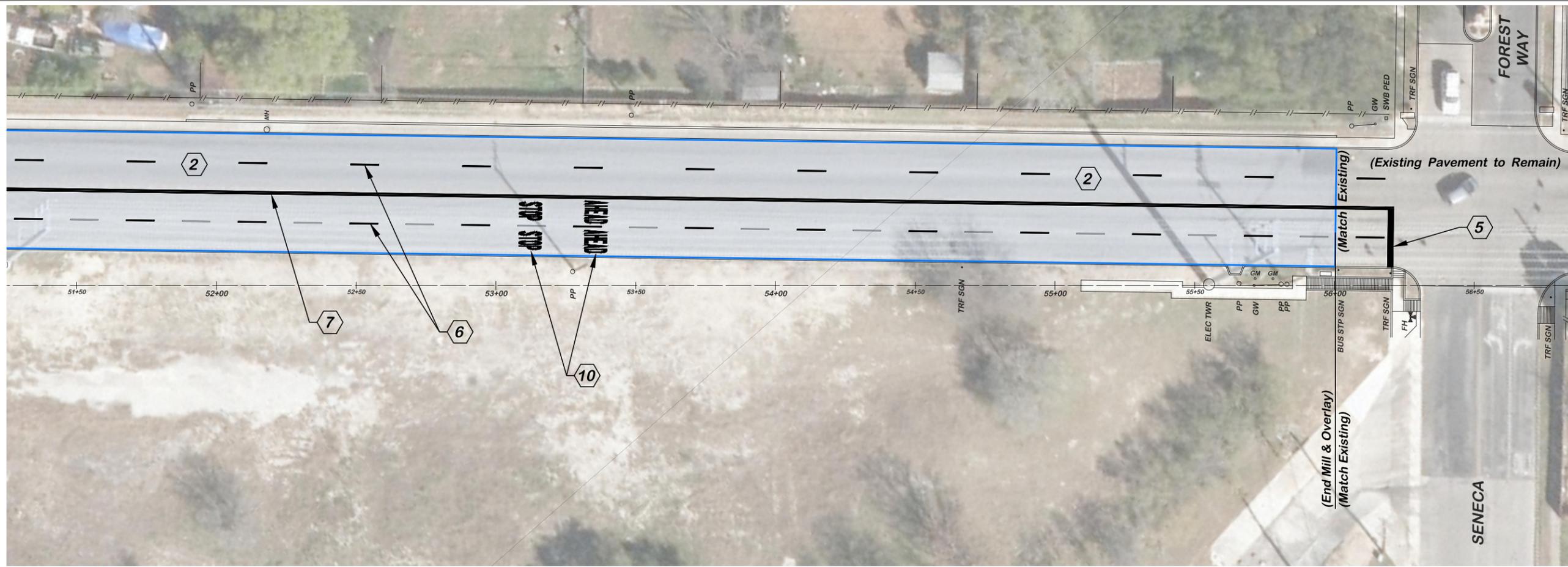
DATE:	03/16/15
DESIGNED:	R.H.B.
DRAWN:	D.A.G./K.F.K.
CHECKED:	S.S.
SIA PROJECT NO.:	

**Base Bid - Mill & Overlay**  
 STA. 41+00 TO STA. 51+50  
 BID No. 2015 - 02  
**FY 2015 Evers Road Rehabilitation**  
 Leon Valley, Bexar County, Texas

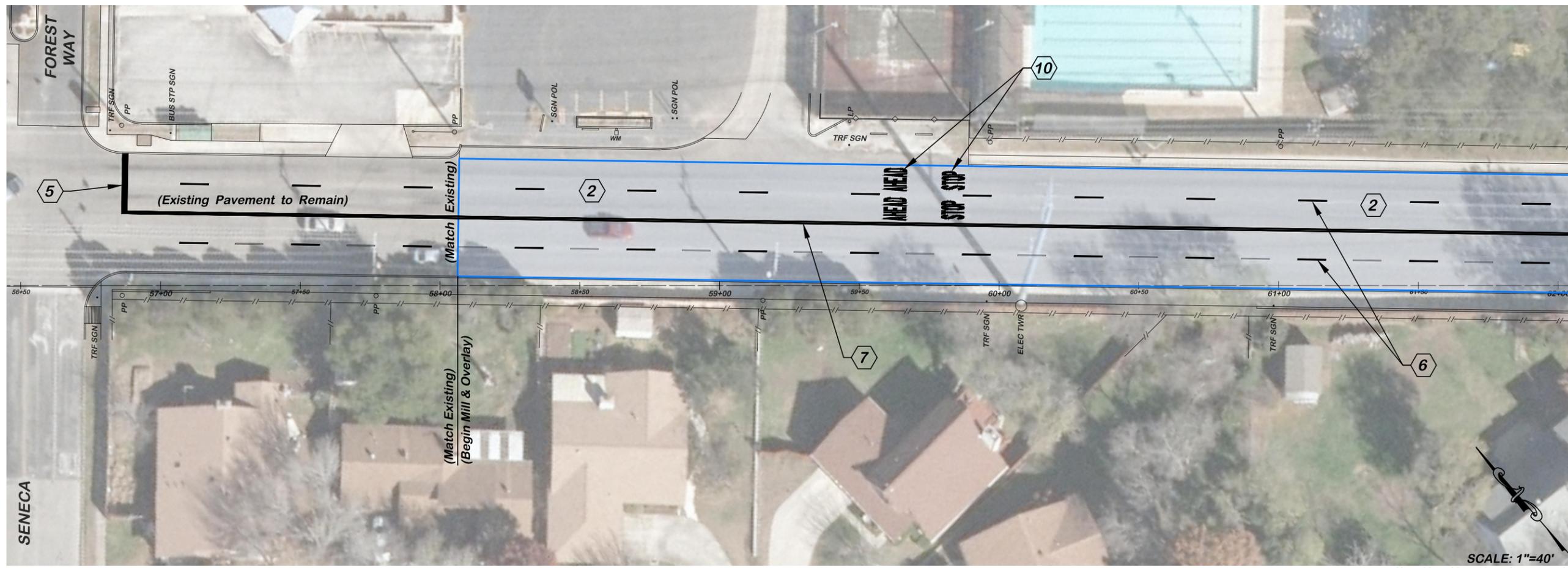
SHEET **6**  
 OF **27**

This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained shall be used only by the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation), any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

PDF Created: 3/16/2015 3:48 PM  
 File: P:\Leon Valley\COLV Evers Rd Overlay\Drawings\Sheets\Plans Sheet Set.dwg



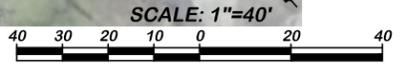
**EVERS ROAD**



**EVERS ROAD**

NOTE: STATIONING AND BASELINE IS ARBITRARY AND IS SHOWN AS A CONVENIENT FRAME OF REFERENCE.

FOR KEYED NOTES SEE SHEET 9.



*S. Sanyal*

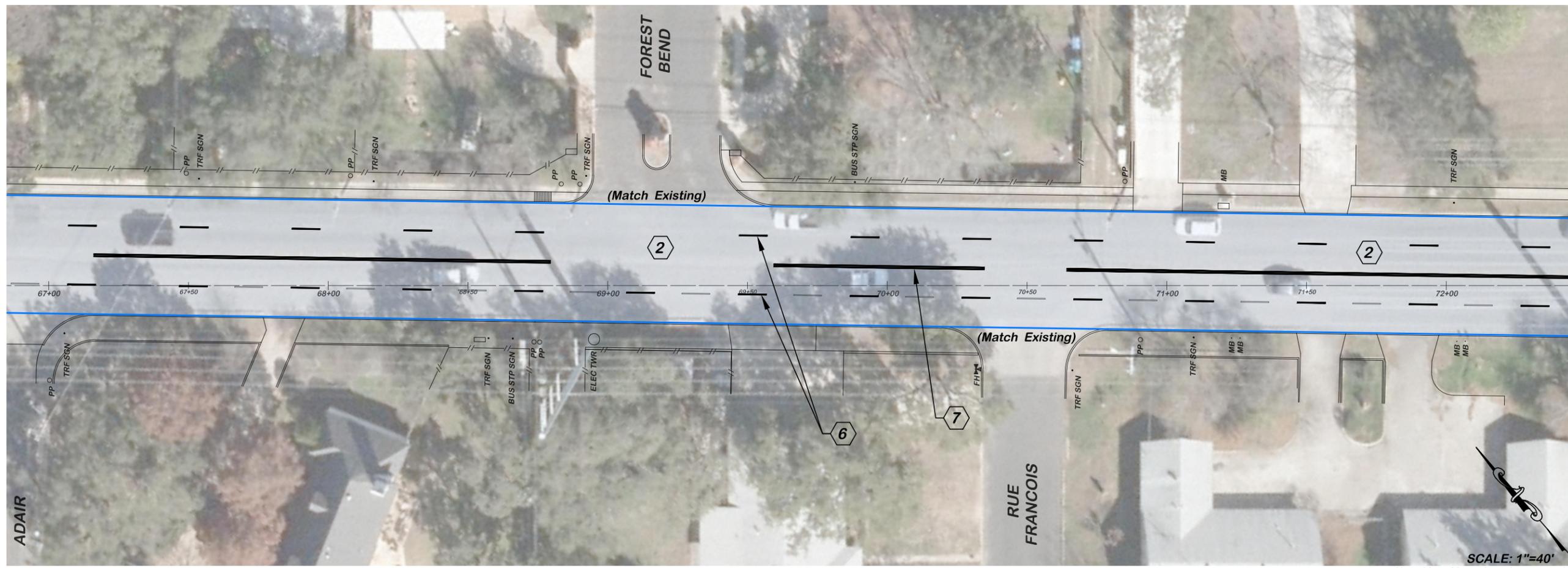
<b>SIA ENGINEERING, INC.</b> 6977 SAN PEDRO AVE. SAN ANTONIO, TEXAS 78216-6245 VOICE: (210) 341-5500 FAX: (210) 308-0662 TBPETIRM NO. F-182 TBPESFRM NO. F-100380-00 WWW.SIA-ENGINEERING.COM	
DATE: 03/16/15 DESIGNED: R.H.B. DRAWN: D.A.G./K.F.K. CHECKED: S.S.	CITY OF LEON VALLEY 6400 EL VERDE ROAD LEON VALLEY, TEXAS 79238 (210) 684-1391
<b>Base Bid - Mill &amp; Overlay</b> <b>STA. 51+50 TO STA. 62+00</b> <b>BID No. 2015 - 02</b> <b>FY 2015 Evers Road Rehabilitation</b> Leon Valley, Bexar County, Texas	
SHEET OF	<b>7</b> <b>27</b>

This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained shall be used only by the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation), any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

PDF Created: 3/16/2015 3:48 PM  
 File: P:\Leon Valley\COLV Evers Rd Overlay\Drawings\Sheets\Plans Sheet Set.dwg



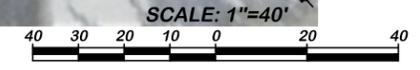
**EVERS ROAD**



**EVERS ROAD**

NOTE: STATIONING AND BASELINE IS ARBITRARY AND IS SHOWN AS A CONVENIENT FRAME OF REFERENCE.

FOR KEYED NOTES SEE SHEET 9.



*S. Sanyal*

**SIA ENGINEERING, INC.**  
 6977 SAN PEDRO AVE.  
 SAN ANTONIO, TEXAS 78216-6245  
 VOICE: (210) 341-5500 FAX: (210) 308-0662  
 TBP#FIRM NO. F-182 TBP#SFRM NO. F-100380-00  
 WWW.SIA-ENGINEERING.COM

NO.	DATE	REVISION	BY



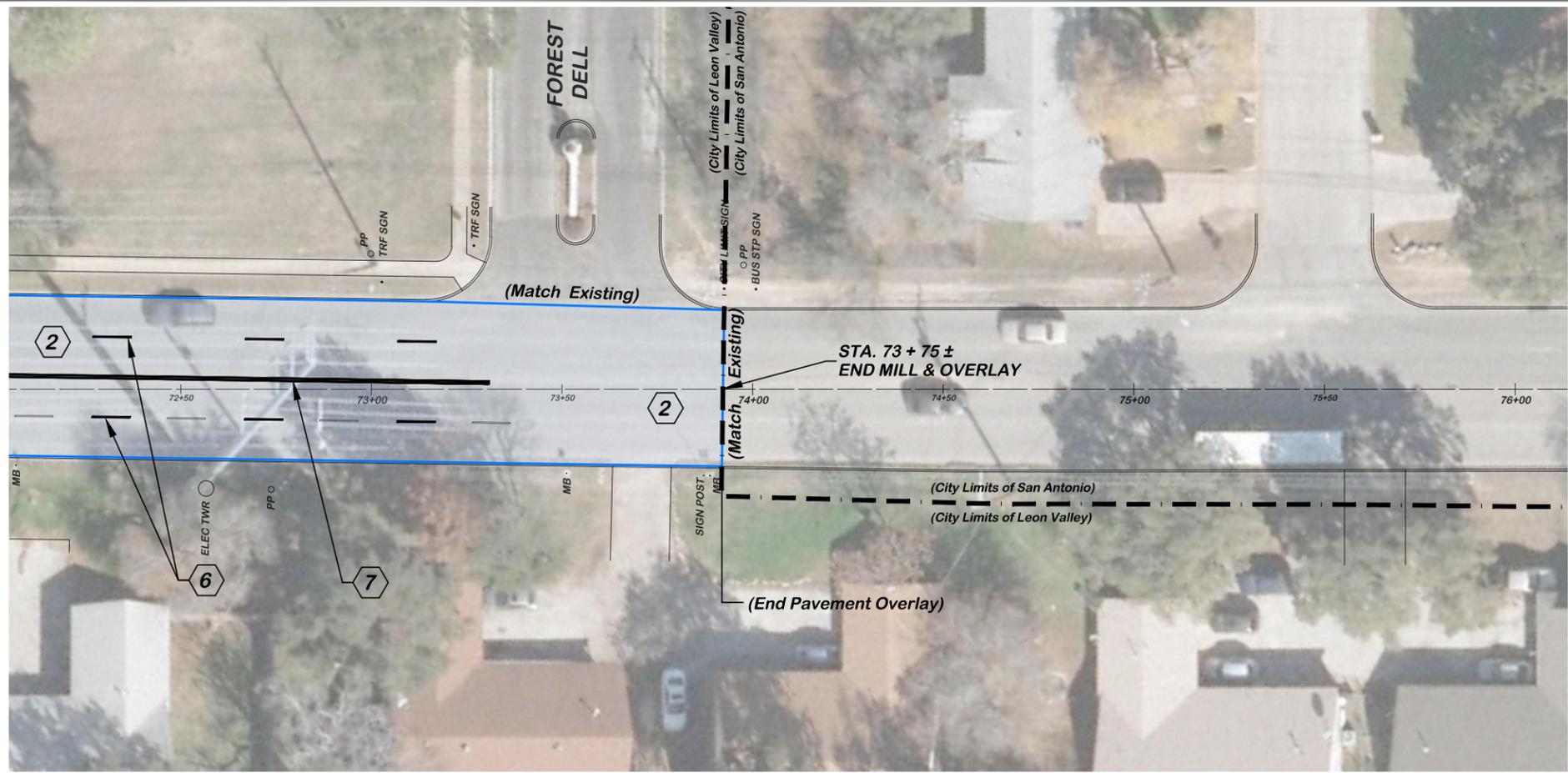
CITY OF LEON VALLEY  
 6400 EL VERDE ROAD  
 LEON VALLEY, TEXAS 79238 (210) 684-1391

DATE:	03/16/15
DESIGNED:	R.H.B.
DRAWN:	D.A.G./M.F.K.
CHECKED:	S.S.
SIA PROJECT NO.:	

**Base Bid - Mill & Overlay**  
 STA. 62+00 TO STA. 72+00  
 BID No. 2015 - 02  
**FY 2015 Evers Road Rehabilitation**  
 Leon Valley, Bexar County, Texas

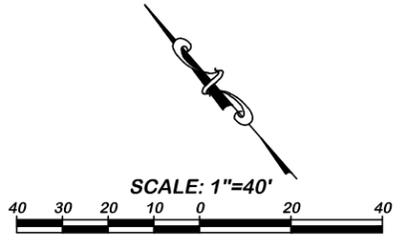
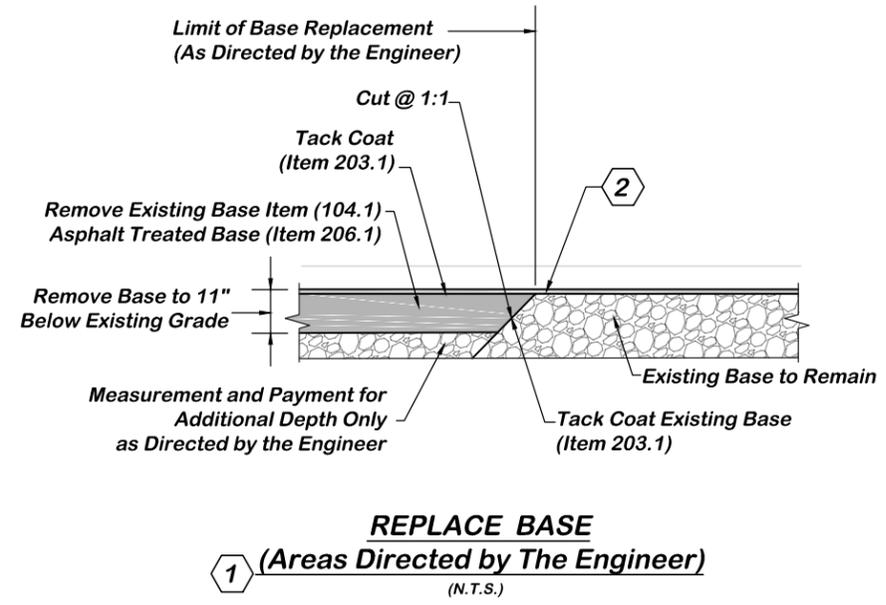
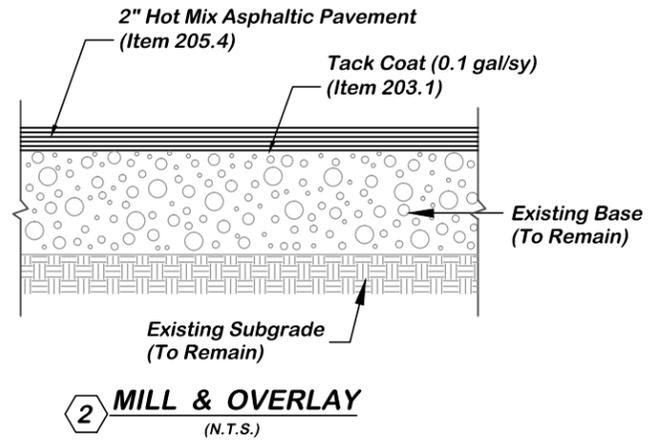
This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained shall be used only by the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation), any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

PDF Created: 3/17/2015 8:55 AM  
 File: P:\Leon Valley\COLV Evers Rd Overlay\Drawings\Sheets\Plans Sheet Set.dwg



**EVERS ROAD**

MILL & OVERLAY KEYED NOTES	
1	Replace Base (See Detail This Sheet)
2	Mill & Overlay (See Detail This Sheet)
3	8" Wide White Line Pavement Marking (Item 535.4)
4	Crosswalk Pavement Markings (Item 535.7)
5	24" Wide White Line Pavement Marking (Item 535.7)
6	4" Wide White Line Pavement Marking (Item 535.2)
7	4" Wide Yellow Line Pavement Marking (Item 535.1)
8	Right Turn Only Arrow Pavement Marking (Item 535.8)
9	Word "ONLY" Pavement Marking (Item 535.12)
10	Words "STOP" and "AHEAD" Pavement Marking (Item 535.19)
11	4" Wide Yellow Line Striped Island (Item 535.1)



NOTE: STATIONING AND BASELINE IS ARBITRARY AND IS SHOWN AS A CONVENIENT FRAME OF REFERENCE.

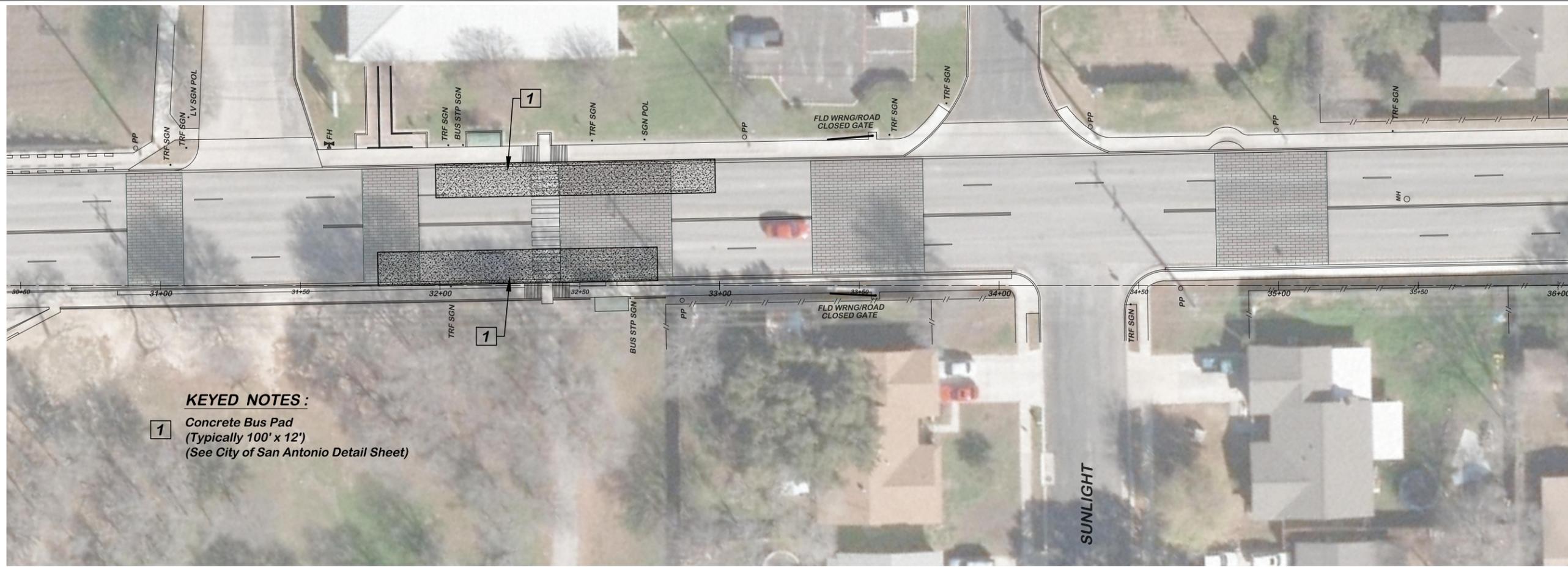
*S. Sanyal*

<b>SIA ENGINEERING, INC.</b> 6977 SAN PEDRO AVE. SAN ANTONIO, TEXAS 78216-6245 VOICE: (210) 341-5500 FAX: (210) 308-0662 TBP FIRM NO. F-182 TBP LSR FIRM NO. F-100380-00 WWW.SIA-ENGINEERING.COM	
DATE: 03/16/15 DESIGNED: R.H.B. DRAWN: D.A.G./M.F.K. CHECKED: S.S. SIA PROJECT NO:	BY: _____ REVISION: _____ NO. DATE
CITY OF LEON VALLEY 6400 EL VERDE ROAD LEON VALLEY, TEXAS 79238 (210) 684-1391	
<b>Base Bid - Mill &amp; Overlay</b> <b>STA. 72+00 TO STA. 74+00</b> <b>BID No. 2015 - 02</b> <b>FY 2015 Evers Road Rehabilitation</b> Leon Valley, Bexar County, Texas	
SHEET OF	<b>9</b> <b>27</b>



This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained herein shall be used only by the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation), any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

PDF Created: 3/16/2015 3:50 PM  
 File: P:\Leon Valley\COLV Evers Rd Overlay\Drawings\Sheets\Plans Sheet\_Set.dwg



**KEYED NOTES:**  
 1 Concrete Bus Pad  
 (Typically 100' x 12')  
 (See City of San Antonio Detail Sheet)

**EVERS ROAD**



NOTE: STATIONING AND BASELINE IS ARBITRARY AND IS SHOWN AS A CONVENIENT FRAME OF REFERENCE.

**EVERS ROAD**



*S. Sanyal*

**SIA ENGINEERING, INC.**  
 6977 SAN PEDRO AVE.  
 SAN ANTONIO, TEXAS 78216-6245  
 VOICE: (210) 341-5500 FAX: (210) 308-0662  
 TBPETIRM NO. F-182 TBPISFRM NO. F-100380-00  
 WWW.SIA-ENGINEERING.COM

NO.	DATE	REVISION	BY



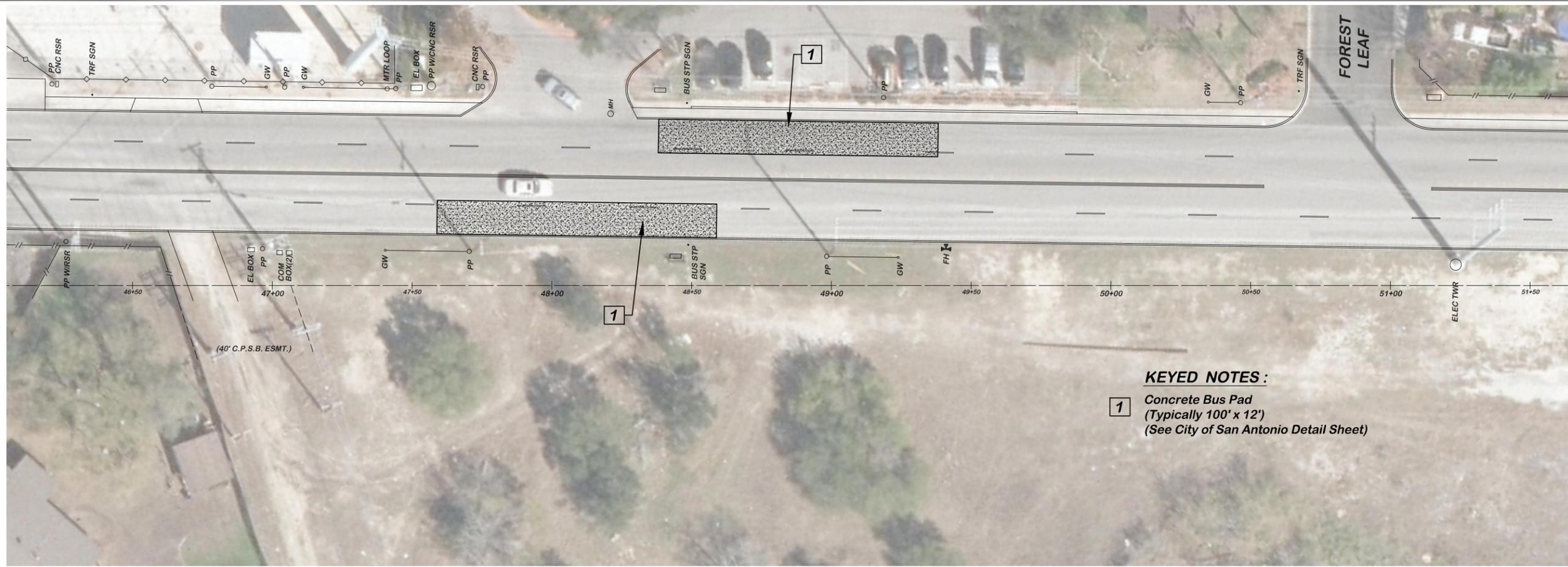
CITY OF LEON VALLEY  
 6400 EL VERDE ROAD  
 LEON VALLEY, TEXAS 79238 (210) 684-1391

DATE:	03/16/15
DESIGNED:	R.H.B.
DRAWN:	D.A.G./M.F.K.
CHECKED:	S.S.
SIA PROJECT NO.:	

**Alternate #1 - Bus Pads**  
 STA. 31+00 TO STA. 41+00  
 BID No. 2015 - 02  
 FY 2015 Evers Road Rehabilitation  
 Leon Valley, Bexar County, Texas

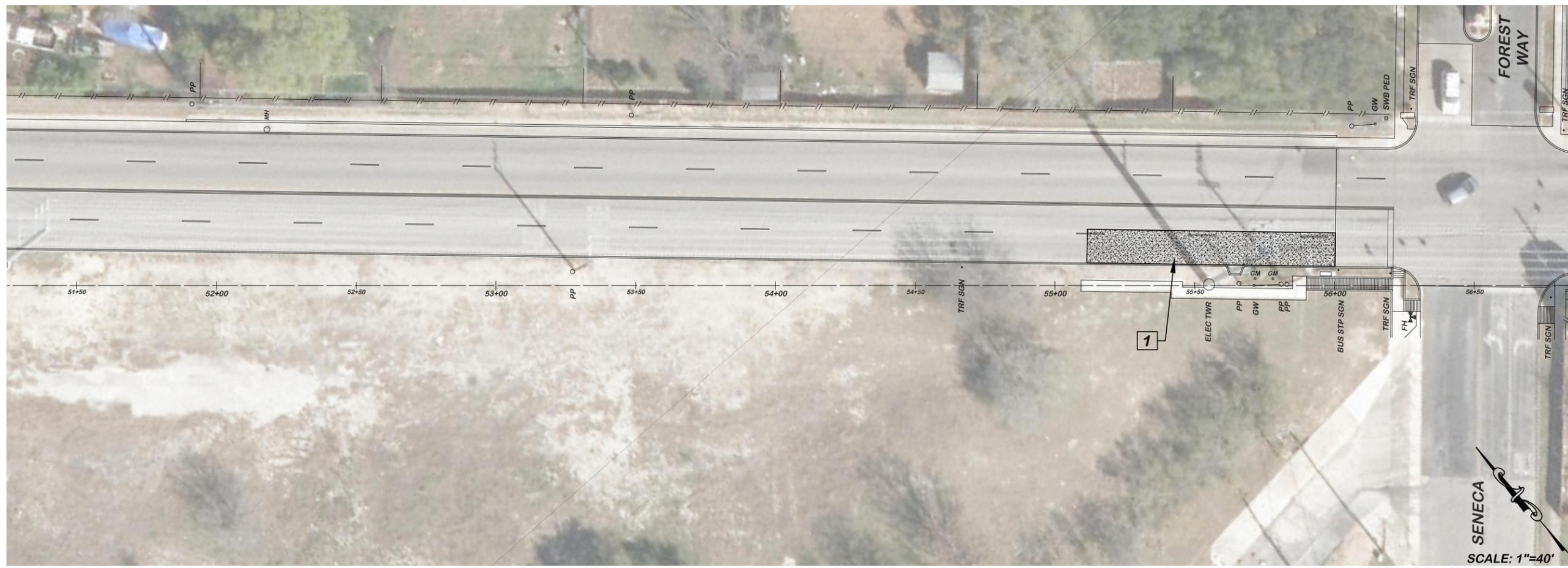
This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained shall be used only by the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation), any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

PDF Created: 3/16/2015 3:50 PM  
 File: P:\Leon Valley\COLV Evers Rd Overlay\Drawings\Sheets\Plans Sheet\_Set.dwg



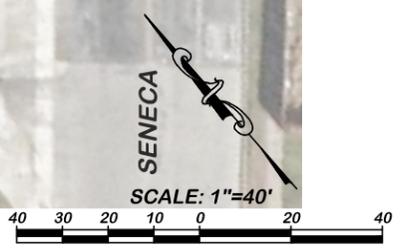
**KEYED NOTES :**  
**1** Concrete Bus Pad  
 (Typically 100' x 12')  
 (See City of San Antonio Detail Sheet)

**EVERS ROAD**



NOTE: STATIONING AND BASELINE IS ARBITRARY AND IS SHOWN AS A CONVENIENT FRAME OF REFERENCE.

**EVERS ROAD**



*S. Sanyal*

**SIA ENGINEERING, INC.**  
 6977 SAN PEDRO AVE.  
 SAN ANTONIO, TEXAS 78216-6245  
 VOICE: (210) 341-5500 FAX: (210) 308-0662  
 TBPETIRM No. F-182 TBPESFRM No. F-100380-00  
 WWW.SIA-ENGINEERING.COM

No.	DATE	REVISION	BY



CITY OF LEON VALLEY  
 6400 EL VERDE ROAD  
 LEON VALLEY, TEXAS 79238 (210) 684-1391

DATE: 03/16/15  
 DESIGNED: R.H.B.  
 DRAWN: D.A.G./K.F.K.  
 CHECKED: S.S.  
 SIA Project No:

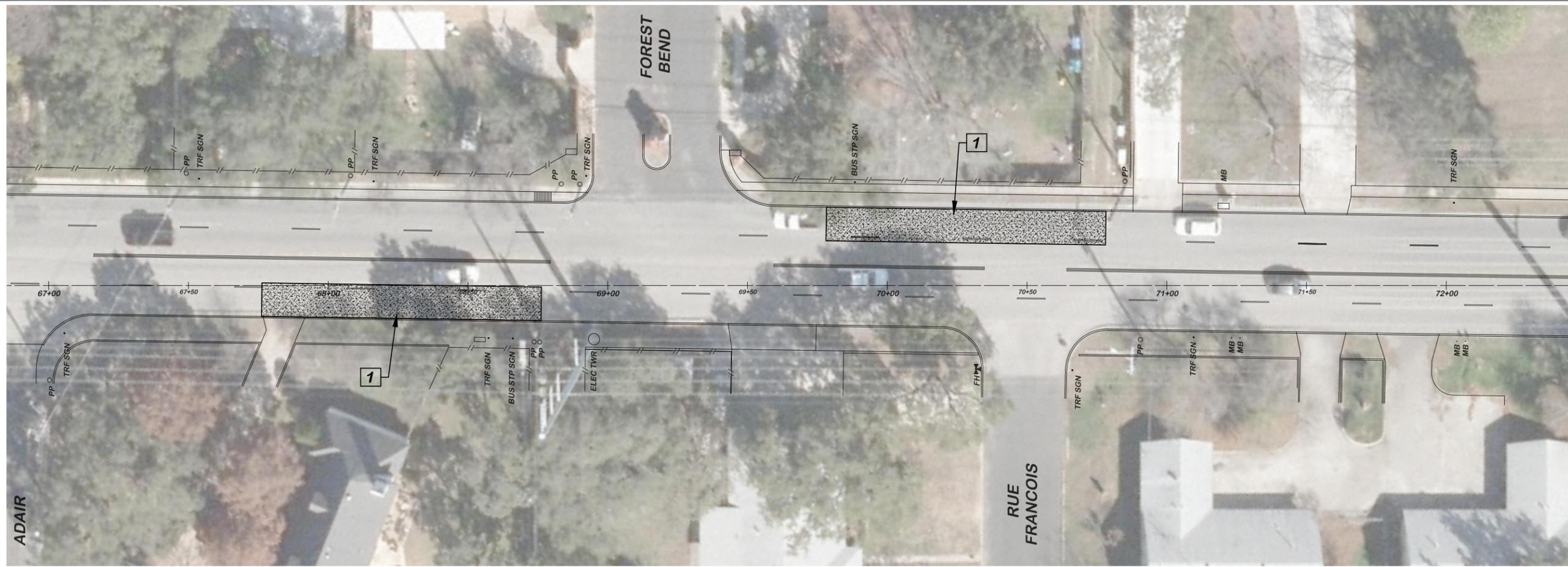
**Alternate #1 - Bus Pads**  
**STA. 47+00 TO STA. 56+50**

BID No. 2015 - 02  
**FY 2015 Evers Road Rehabilitation**  
 Leon Valley, Bexar County, Texas

SHEET **A1.3**  
 OF **27**

This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained shall be used only by the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation), any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

PDF Created: 3/16/2015 3:51 PM  
 File: P:\Leon Valley\COLV Evers Rd Overlay\Drawings\Sheets\Plans Sheet\_Set.dwg

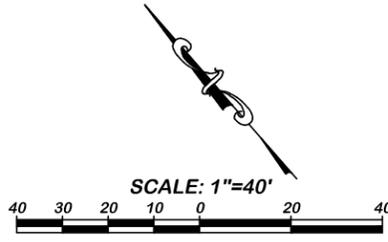


**EVERS ROAD**

**KEYED NOTES :**

- 1** Concrete Bus Pad  
 (Typically 100' x 12')  
 (See City of San Antonio Detail Sheet)

NOTE: STATIONING AND BASELINE IS ARBITRARY AND IS SHOWN AS A CONVENIENT FRAME OF REFERENCE.



*S. Sanyal*

**SIA ENGINEERING, INC.**  
 6977 SAN PEDRO AVE.  
 SAN ANTONIO, TEXAS 78216-6245  
 VOICE: (210) 341-5500 FAX: (210) 308-0662  
 TBP# FIRM NO. F-1892 TBP#S FIRM NO. F-100380-00  
 WWW.SIA-ENGINEERING.COM

NO.	DATE	REVISION	BY



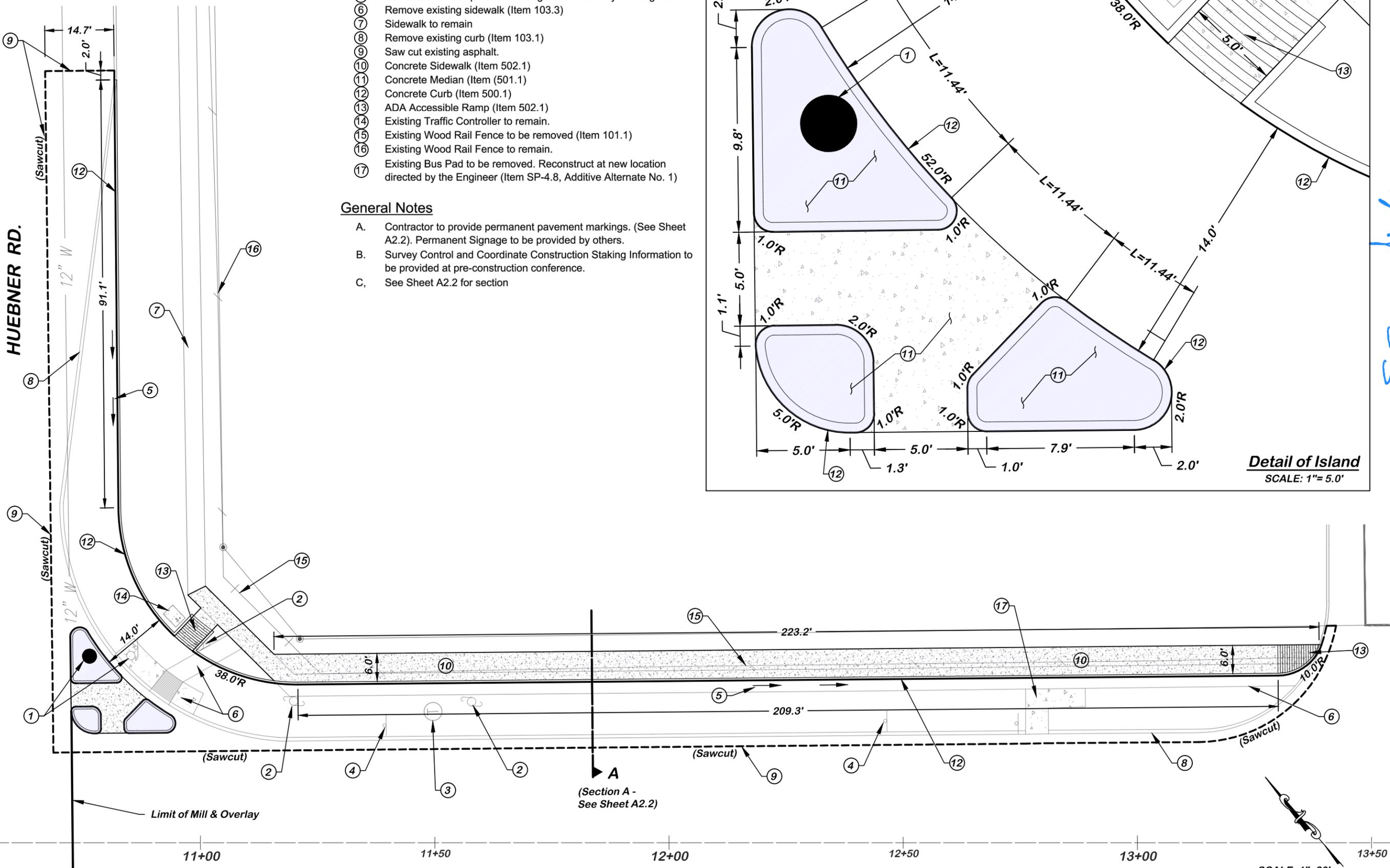
DATE: 03/16/15  
 DESIGNED: R.H.B.  
 DRAWN: D.A.G./M.F.K.  
 CHECKED: S.S.  
 SIA PROJECT NO:  
 CITY OF LEON VALLEY  
 6400 EL VERDE ROAD  
 LEON VALLEY, TEXAS 78238 (210) 684-1391

**Alternate #1 - Bus Pads**  
 STA. 67+00 TO STA. 72+00  
 BID No. 2015 - 02  
 FY 2015 Evers Road Rehabilitation  
 Leon Valley, Bexar County, Texas

SHEET **A1.4**  
 OF 27

This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained shall be used only by the client for which services were rendered and only for the purposes of construction or installing the work as shown at the designated location and site. Any other use of documents, including (without limitation), any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

PDF Created: 3/15/2015 11:46 AM  
 File: P:\Leon Valley\COLV Evers Rd Overlay\Drawings\Sheets\Plans Sheet RT Lane.dwg

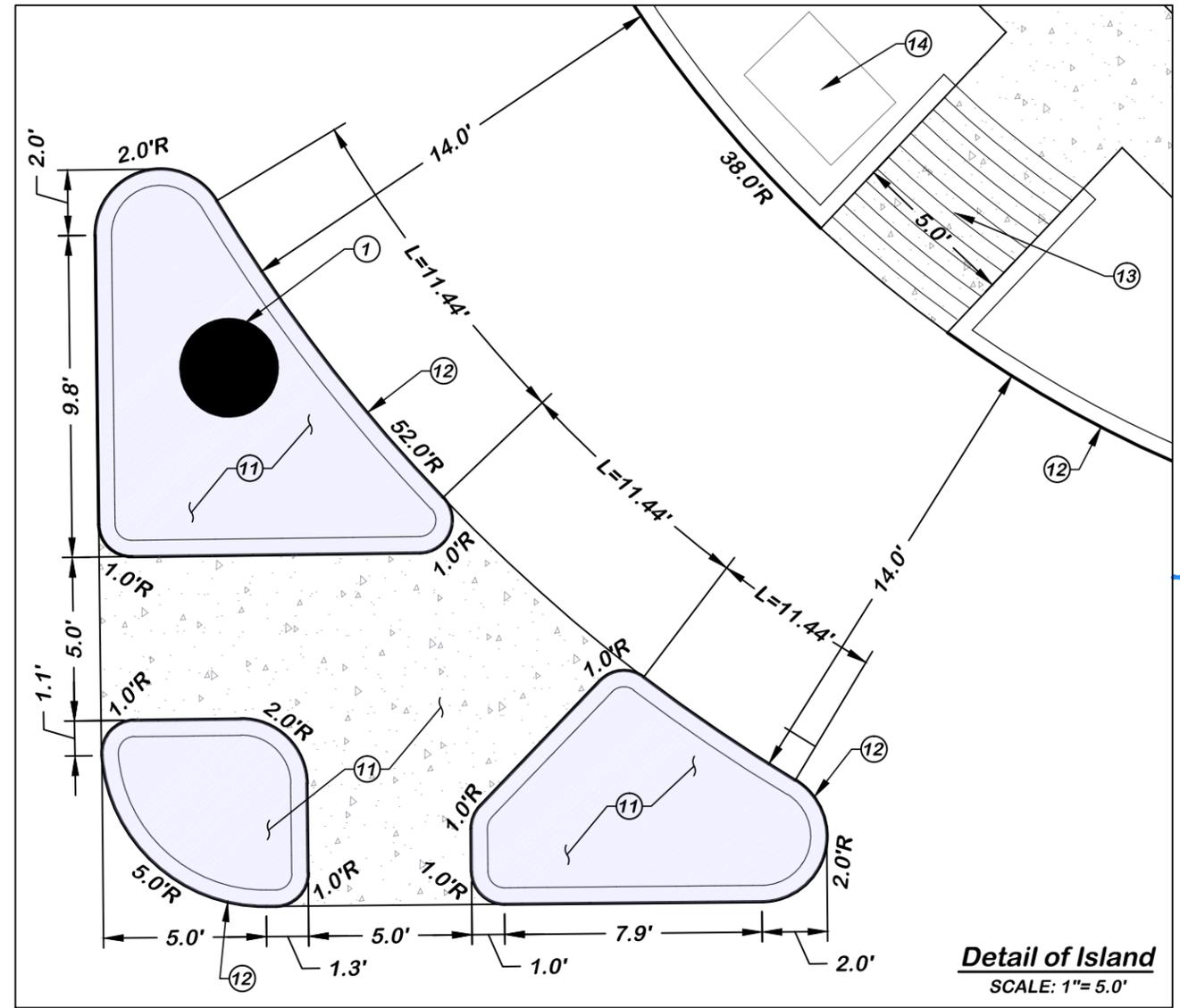


**Sheet A2.1 Key Notes**

- ① Existing Traffic Signal to be relocated by others
- ② Existing Utility Poles to be relocated by others.
- ③ Adjustment to existing manholes to be by others.
- ④ Remove and replace existing traffic signs to be by others
- ⑤ Grade to maintain positive drainage as directed by the Engineer.
- ⑥ Remove existing sidewalk (Item 103.3)
- ⑦ Sidewalk to remain
- ⑧ Remove existing curb (Item 103.1)
- ⑨ Saw cut existing asphalt.
- ⑩ Concrete Sidewalk (Item 502.1)
- ⑪ Concrete Median (Item (501.1)
- ⑫ Concrete Curb (Item 500.1)
- ⑬ ADA Accessible Ramp (Item 502.1)
- ⑭ Existing Traffic Controller to remain.
- ⑮ Existing Wood Rail Fence to be removed (Item 101.1)
- ⑯ Existing Wood Rail Fence to remain.
- ⑰ Existing Bus Pad to be removed. Reconstruct at new location directed by the Engineer (Item SP-4.8, Additive Alternate No. 1)

**General Notes**

- A. Contractor to provide permanent pavement markings. (See Sheet A2.2). Permanent Signage to be provided by others.
- B. Survey Control and Coordinate Construction Staking Information to be provided at pre-construction conference.
- C. See Sheet A2.2 for section



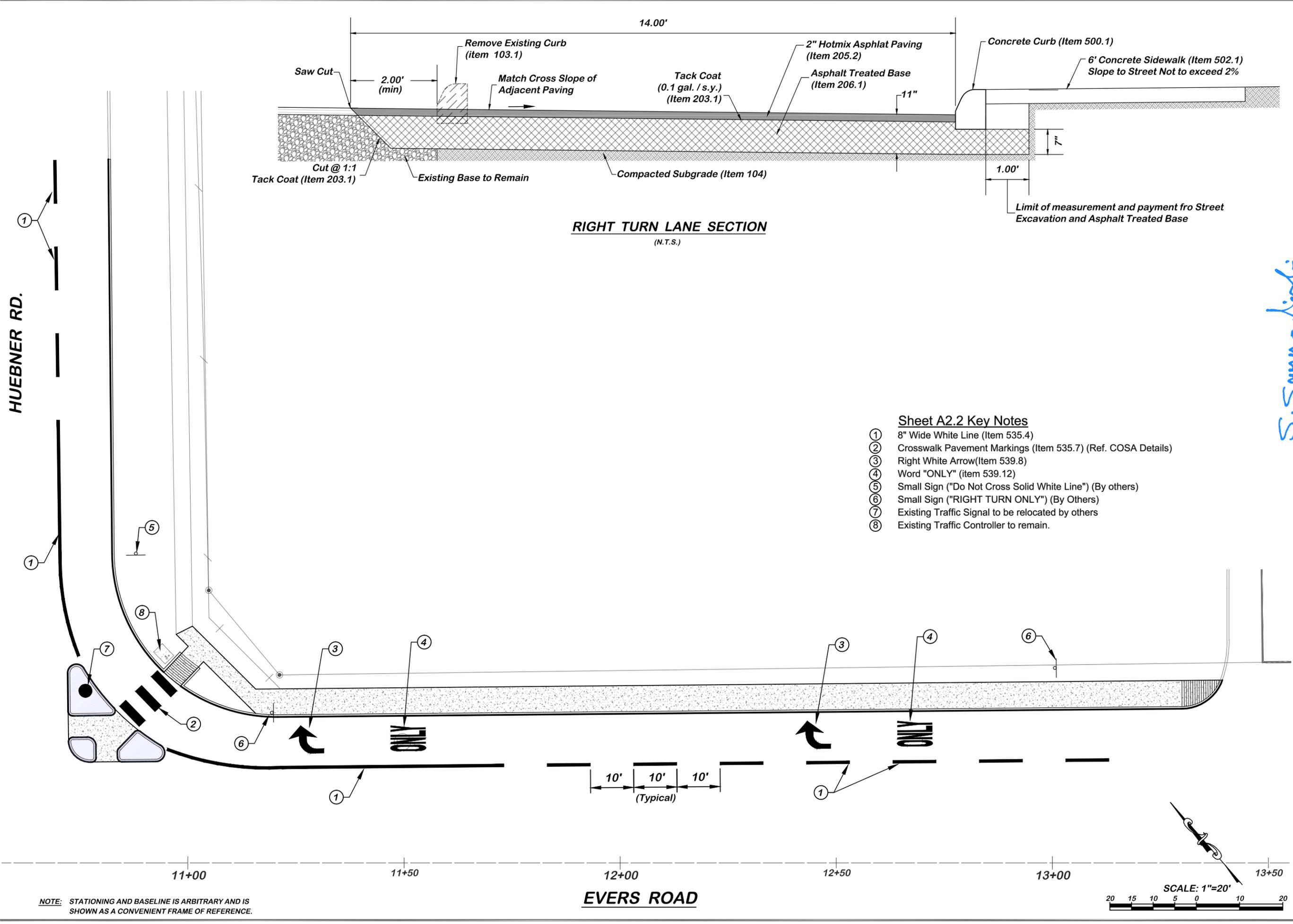
*S. Sanyal*

<b>SIA ENGINEERING, INC.</b>		6977 SAN PEDRO AVE. SAN ANTONIO, TEXAS 78216-6245 VOICE: (210) 341-5500 FAX: (210) 308-0662 TBP#FIRM No. F-1892 TBP#LSFIRM No. F-100380-00 WWW.SIA-ENGINEERING.COM	
		CITY OF LEON VALLEY 6400 EL VERDE ROAD LEON VALLEY, TEXAS 79238 (210) 684-1991	
DATE: 03/16/15	DESIGNED: R.H.B.	DRAWN: D.A.G./M.F.K.	CHECKED: S.S.
SIA PROJECT No:		SIA PROJECT No:	
<b>Alternate #2 - Right Turn Lane</b>		<b>FY2012 Evers Road Rehabilitation</b>	
<b>BID # FY 2015 - 02</b>		Leon Valley, Bexar County, Texas	
SHEET	<b>A2.1</b>		OF
			<b>29</b>

NOTE: STATIONING AND BASELINE IS ARBITRARY AND IS SHOWN AS A CONVENIENT FRAME OF REFERENCE.

This drawing and all related documents (including electronic media), were prepared by the SIA Engineering, Inc. as instruments of service and shall remain the property of the Engineer. Information contained herein shall be used only for the purposes of construction or installation of the work as shown at the designated location and site. Any other use of documents, including (without limitation), any reproduction or alteration, is strictly prohibited. The user shall hold harmless and indemnify the Engineer from all liabilities from any unauthorized use. Such use shall cause the waiver of any expressed or implied warranties and shall sever any liabilities which may arise from the construction, use or result of any such unauthorized use or changes.

PDF Created: 3/15/2015 11:53 AM  
 File: P:\Leon Valley\COLV Evers Rd Overlay\Drawings\Sheets\Plans Sheet RT Lane.dwg



HUEBNER RD.

**RIGHT TURN LANE SECTION**  
(N.T.S.)

**Sheet A2.2 Key Notes**

- ① 8" Wide White Line (Item 535.4)
- ② Crosswalk Pavement Markings (Item 535.7) (Ref. COSA Details)
- ③ Right White Arrow (Item 539.8)
- ④ Word "ONLY" (item 539.12)
- ⑤ Small Sign ("Do Not Cross Solid White Line") (By others)
- ⑥ Small Sign ("RIGHT TURN ONLY") (By Others)
- ⑦ Existing Traffic Signal to be relocated by others
- ⑧ Existing Traffic Controller to remain.

*S. Sanyal*

**SIA ENGINEERING, INC.**  
 6977 SAN PEDRO AVE.  
 SAN ANTONIO, TEXAS 78216-6245  
 VOICE: (210) 341-5500 FAX: (210) 308-0662  
 TBPETIRM No. F-182 TBPETIRM No. F-100380-00  
 WWW.SIA-ENGINEERING.COM

NO.	DATE	REVISION	BY



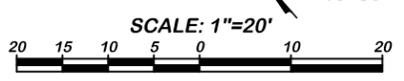
CITY OF LEON VALLEY  
 6400 EL VERDE ROAD  
 LEON VALLEY, TEXAS 79238 (210) 684-1991

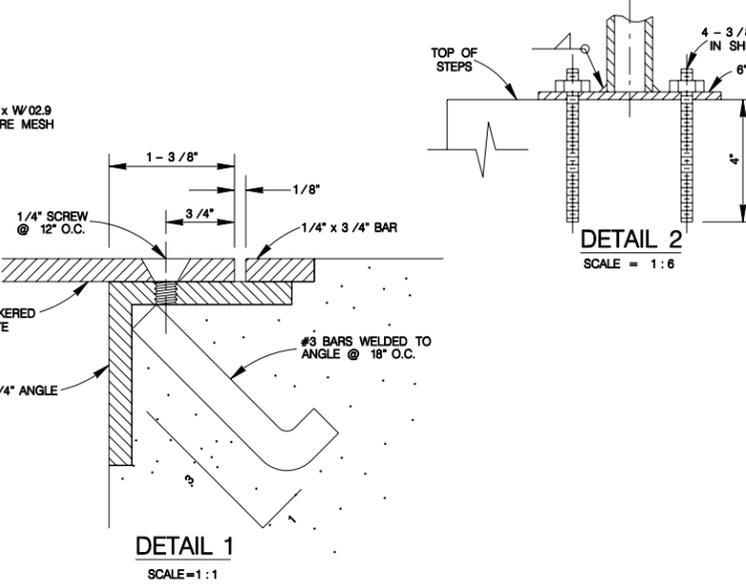
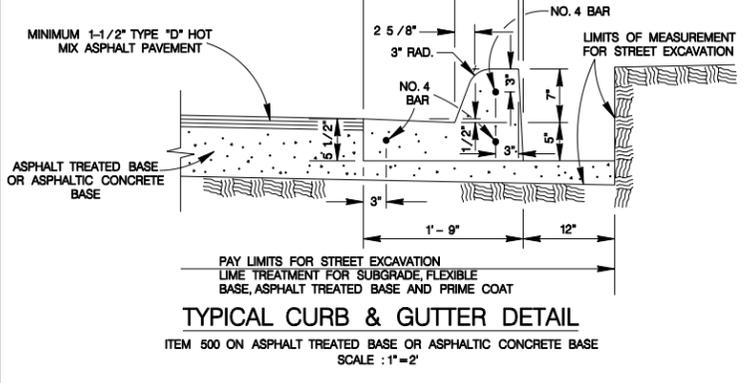
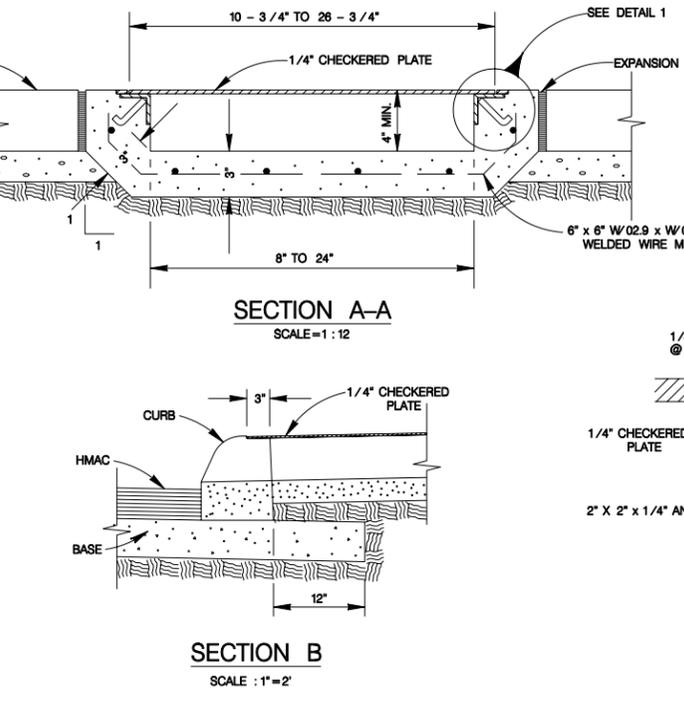
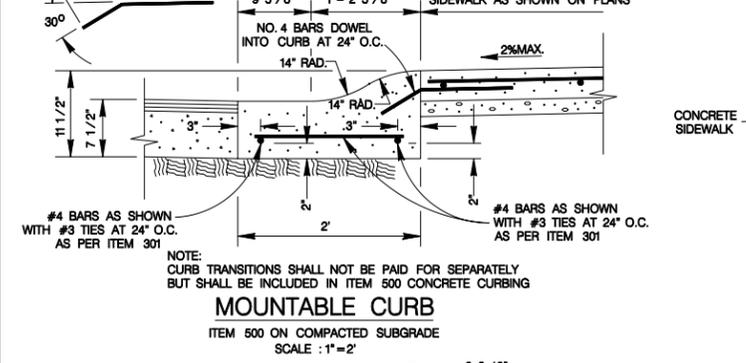
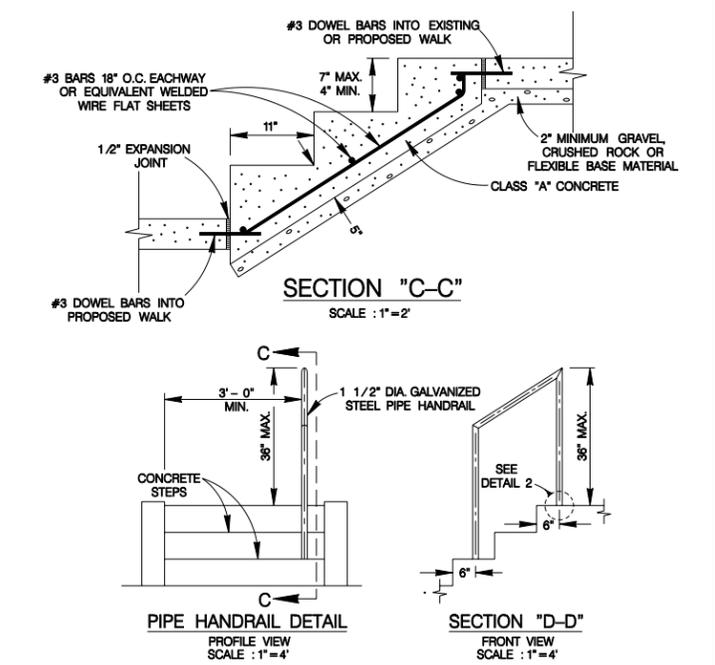
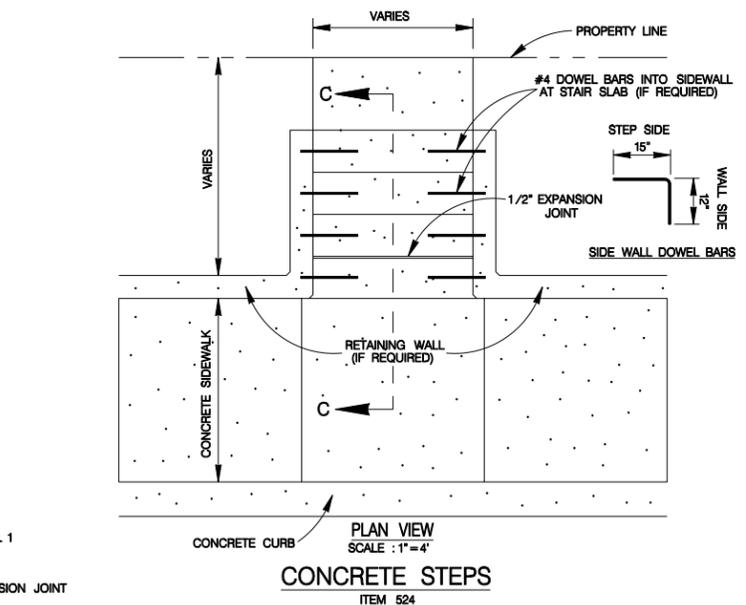
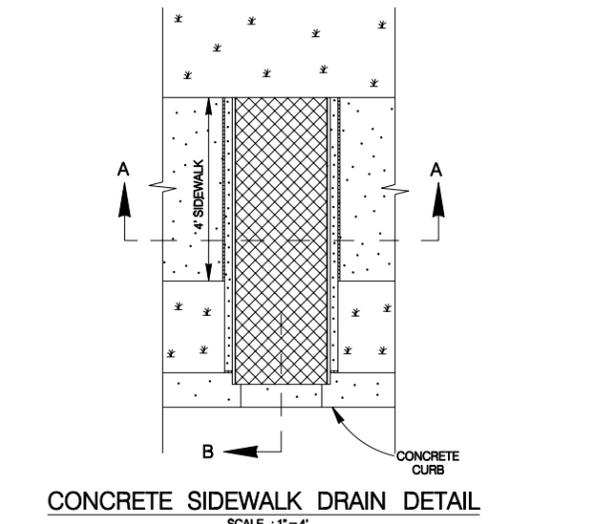
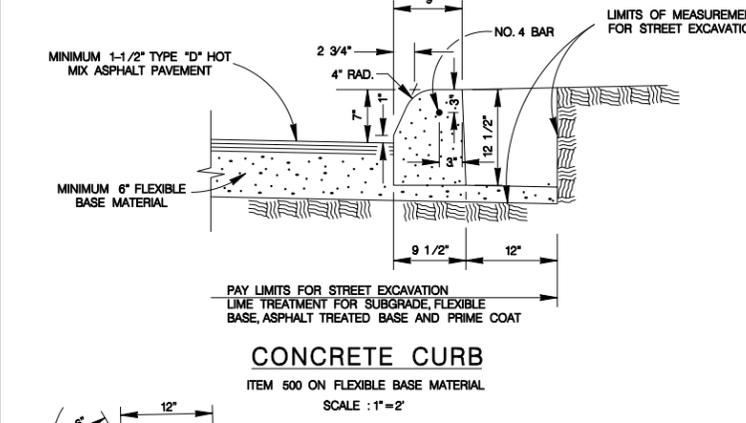
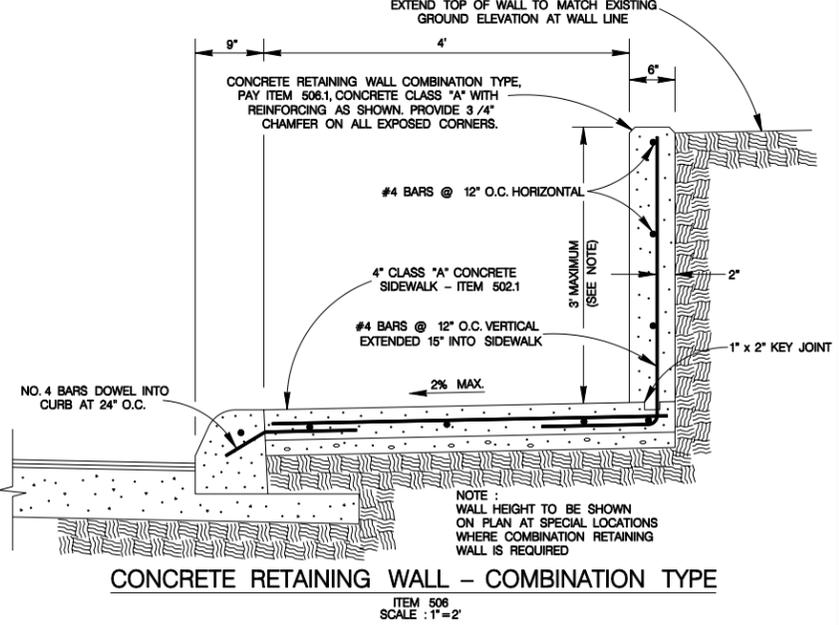
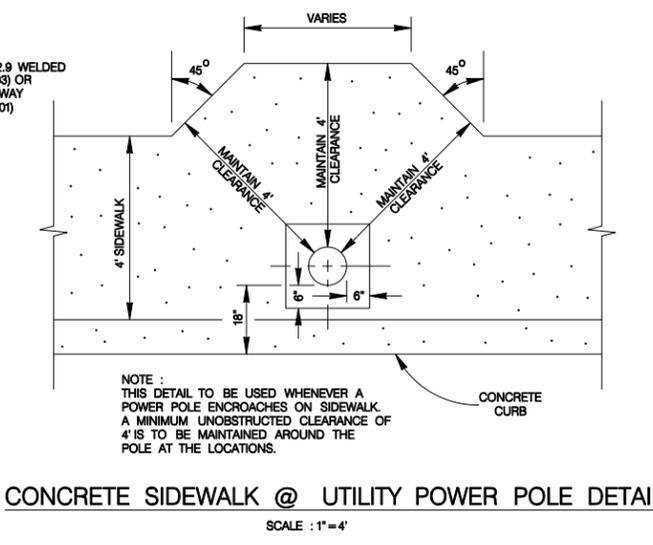
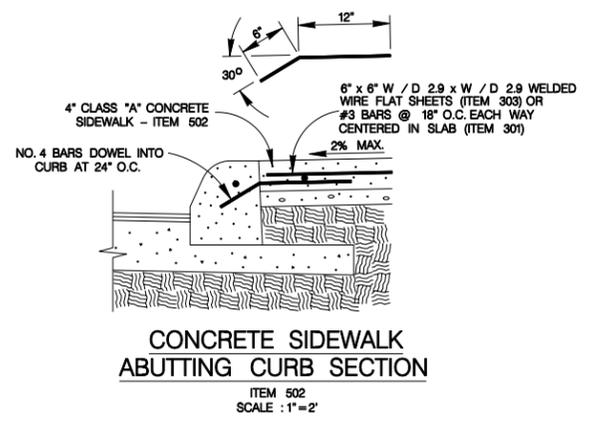
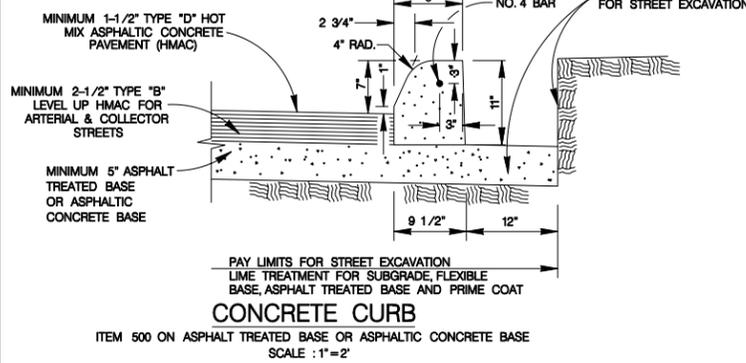
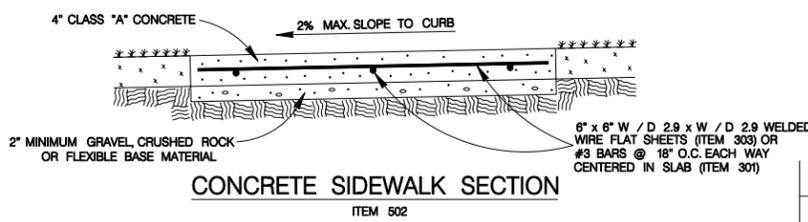
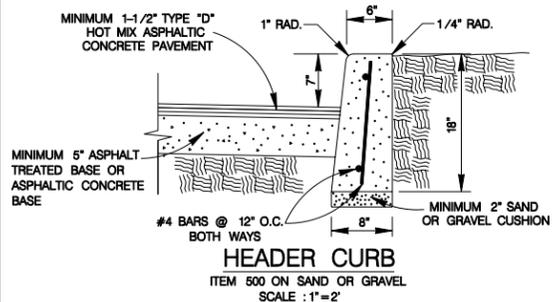
DATE: 03/16/15	R.H.B.
DESIGNED: D.A.G./M.F.K.	S.S.
DRAWN: S.S.	S.S.
CHECKED: S.S.	S.S.
SIA PROJECT No:	

**Alternate #2 - Right Turn Lane PAVEMENT MARKINGS & SECTION**  
**FY2012 Evers Road Rehabilitation**  
**BID # FY 2015 - 02**  
 Leon Valley, Bexar County, Texas

SHEET **A2.2**  
 OF **29**

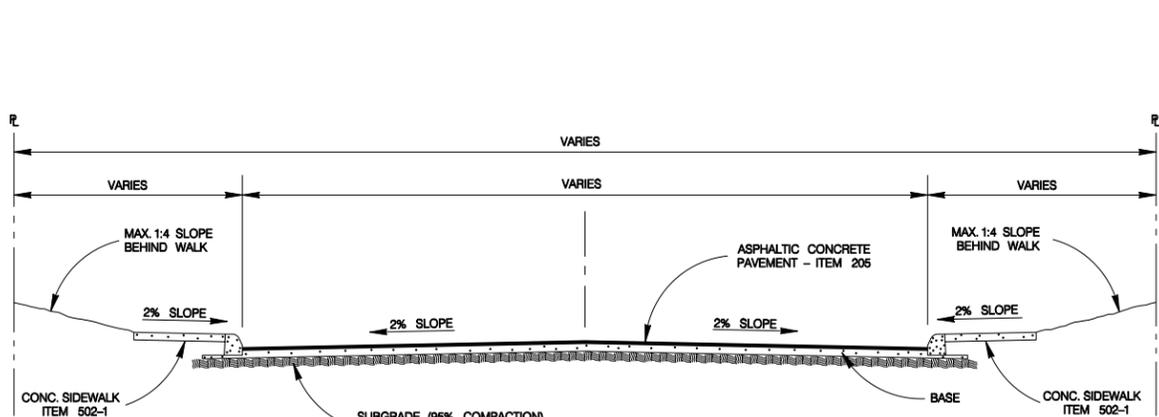
NOTE: STATIONING AND BASELINE IS ARBITRARY AND IS SHOWN AS A CONVENIENT FRAME OF REFERENCE.





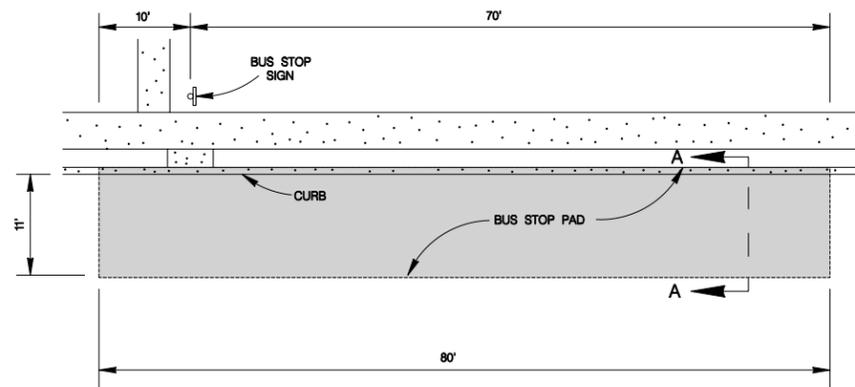
**HANDRAIL FOR CONCRETE STEPS**  
ITEM 522

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

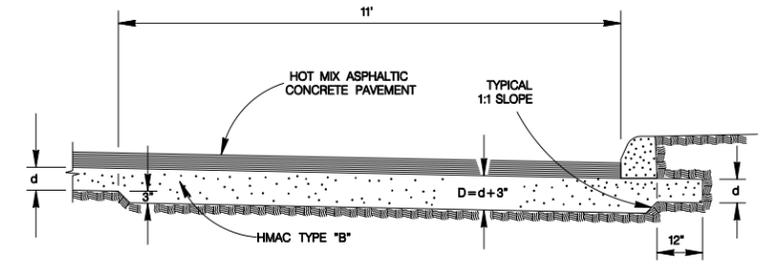


**TYPICAL STREET SECTION**  
SCALE : 1"=8'

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.

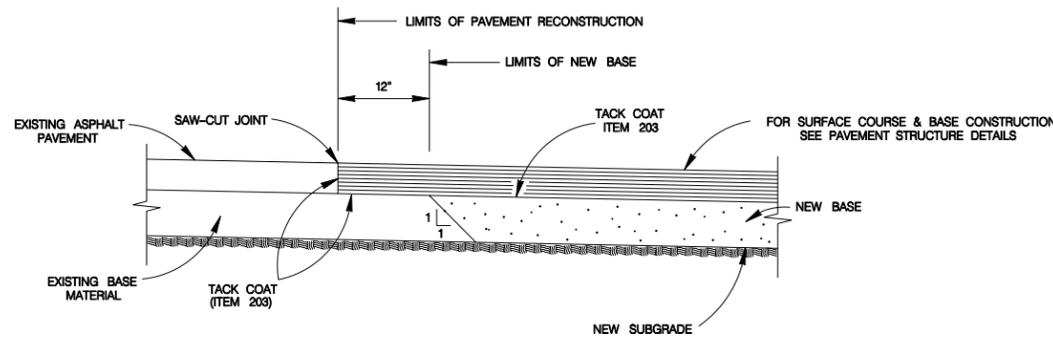


**PLAN VIEW**  
SCALE : 1"=20'

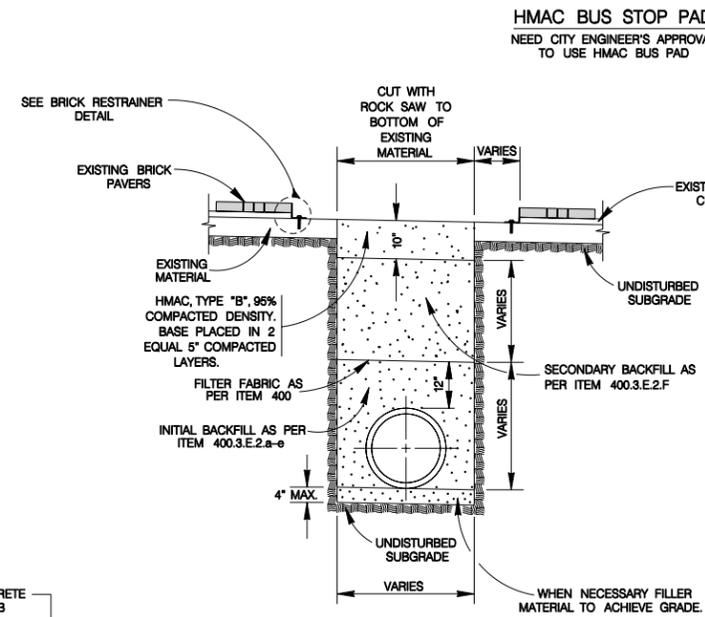


**SECTION "A-A"**  
SCALE : 1"=4'

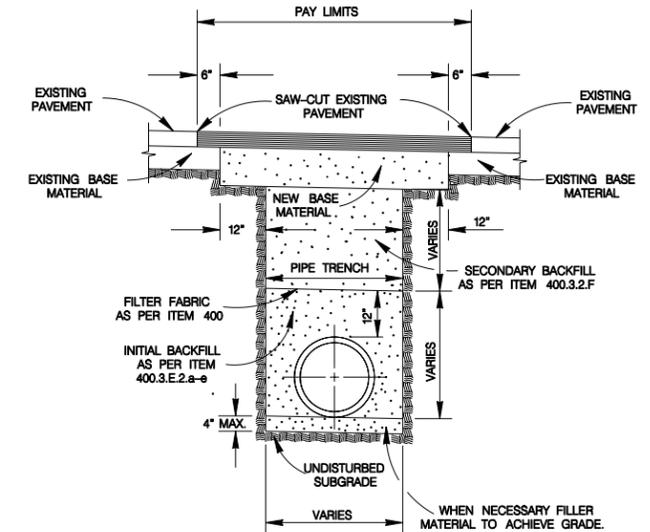
- NOTES :
- EXCAVATION FOR THICKENED PAVEMENT SECTION WILL BE PAID UNDER ITEM NO.104 "STREET EXCAVATION".
  - BASE MATERIALS :  
A.) IF THE MEASUREMENT FOR THE HMAC MATERIAL IS PER TON, THICKENED PAVEMENT SECTION WILL BE PAID FOR UNDER ITEM NO.205, TYPE "B" - PER TON.  
B.) IF THE MEASUREMENT FOR THE HMAC MATERIAL IS PER SQUARE YARD, NO EXTRA PAYMENT WILL BE MADE FOR THE THICKENED PAVEMENT.



**PAVEMENT JUNCTION DETAILS**  
SCALE : 1"=2'

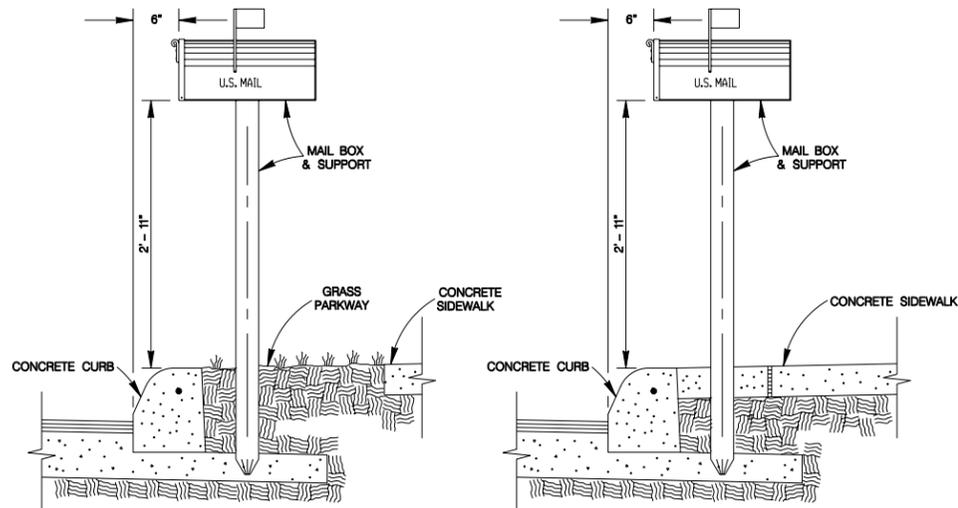


**TYPICAL BASE REPLACEMENT FOR BRICK SURFACED STREET SECTION**  
ITEM 511.3  
SCALE : 1"=4'



- NOTES :
- 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.
  - 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.

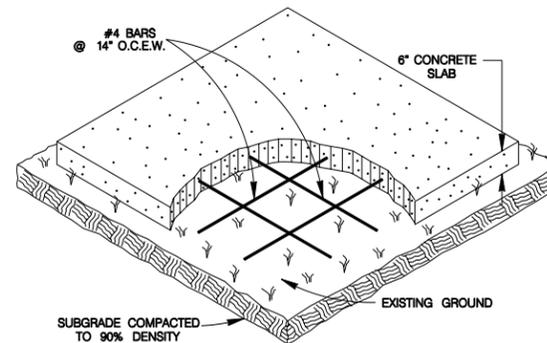
**TYPICAL PAVEMENT REPLACEMENT**  
ITEM 511  
SCALE : 1"=4'



**MAIL BOX PERPENDICULAR TO CURB**  
WHEN SIDEWALK IS DETACHED FROM CURB  
SCALE : 1"=2'

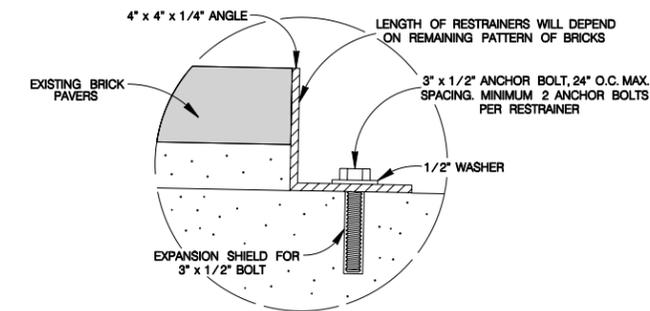
**MAIL BOX PERPENDICULAR TO CURB**  
WHEN SIDEWALK IS ATTACHED TO CURB  
SCALE : 1"=2'

**MAIL BOX LOCATION**  
ITEM 513.1



- MAIL BOX PAD NOTES :**
- 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.
  - THE CONSTRUCTION OF SLABS SHALL CONFORM TO ITEM 513 "REMOVING AND RELOCATING MAILBOXES".
  - PAYMENT WILL BE MADE UNDER ITEM 513.2 "COMMUNITY MAILBOX SLAB - PER SQUARE YARD".
  - UNIT PRICE WILL INCLUDE REMOVAL OF "TEMPORARY MAIL BOX COLLECTION PAD" SLABS AT THE END OF THE PROJECT. NO SEPARATE PAY ITEM.

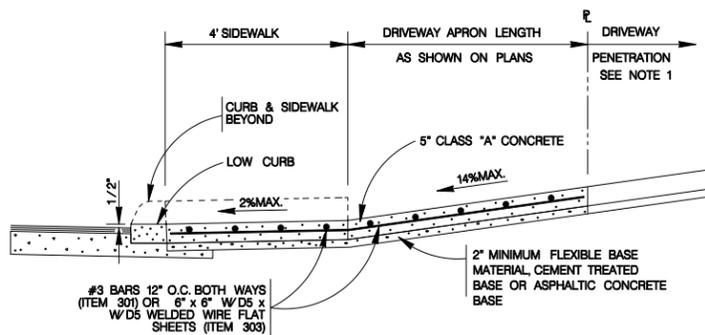
**COMMUNITY MAIL BOX SLAB**  
ITEM 513.2  
SCALE : 1"=4'



**BRICK RESTRAINER DETAIL**  
SCALE = 1:6

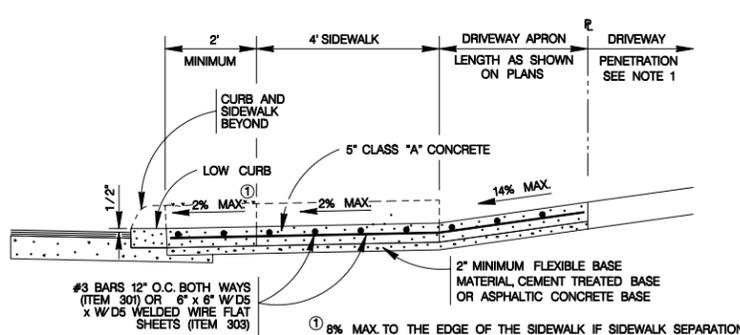
FEBRUARY 2010  
CITY OF SAN ANTONIO  
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

MISCELLANEOUS  
CONSTRUCTION STANDARDS II  
Sheet D2



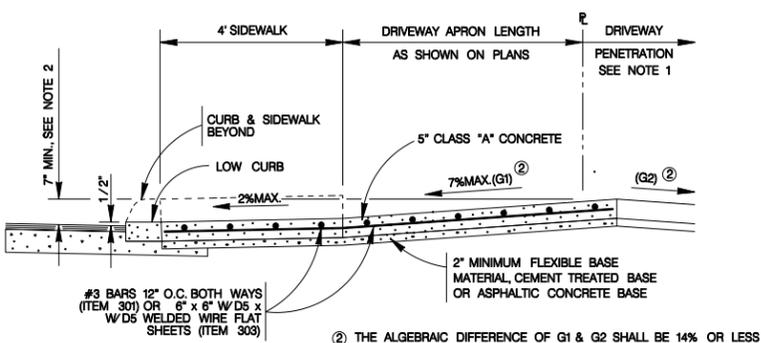
**TYPICAL RESIDENTIAL DRIVEWAY SECTION**

WITH SIDEWALK ABUTTING CURB  
ITEM 503.1



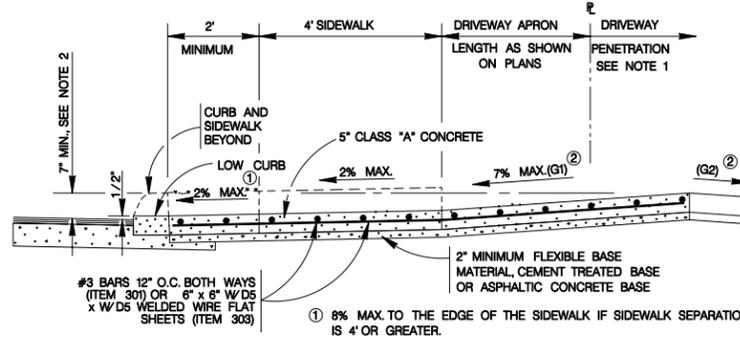
**TYPICAL RESIDENTIAL DRIVEWAY SECTION**

WITH SIDEWALK SEPARATED FROM CURB  
ITEM 503.1



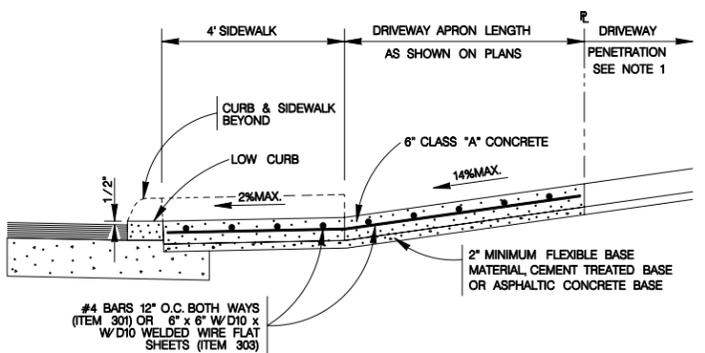
**TYPICAL RESIDENTIAL DRIVEWAY SECTION**

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



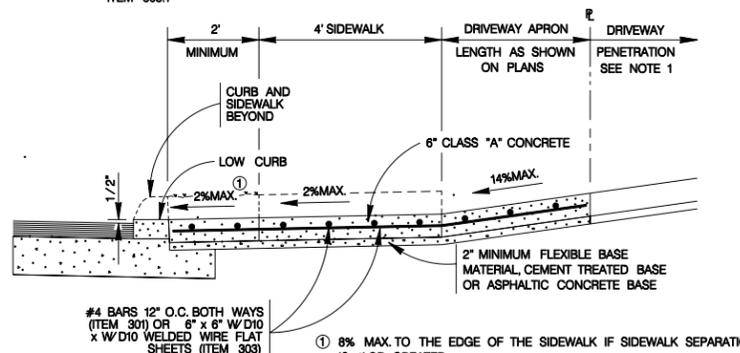
**TYPICAL RESIDENTIAL DRIVEWAY SECTION**

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



**TYPICAL COMMERCIAL DRIVEWAY SECTION**

WITH SIDEWALK ABUTTING CURB  
ITEM 503.2



**TYPICAL COMMERCIAL DRIVEWAY SECTION**

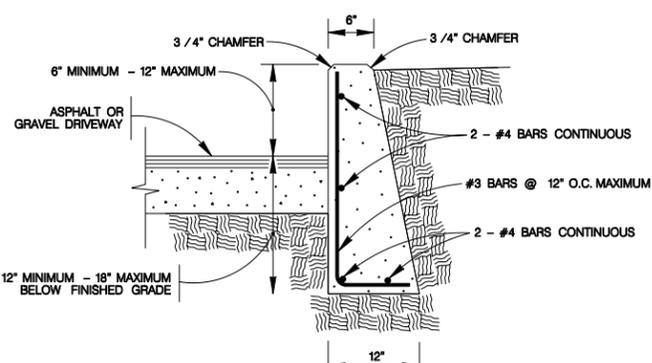
WITH SIDEWALK SEPARATED FROM CURB  
ITEM 503.2

**CONCRETE DRIVEWAY NOTES**

- 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.
- 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.
- 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:

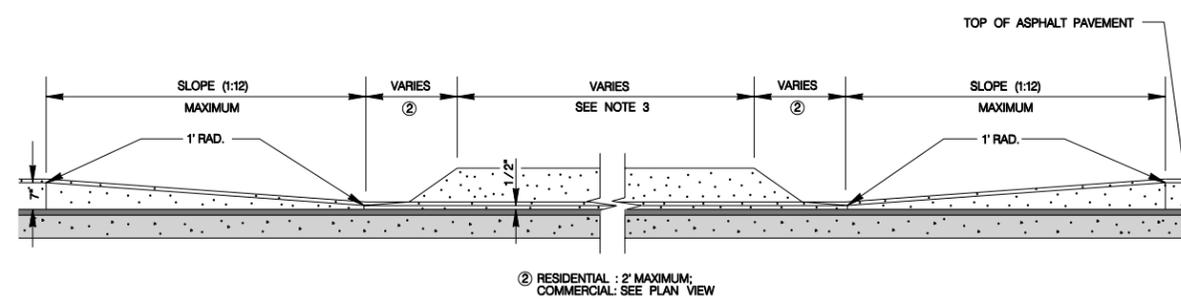
TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	20'
COMMERCIAL - ONE WAY	12'	20'
COMMERCIAL - TWO WAY	24'	30'

- 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.
- 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 8' WHEN LOCATED AT THE BACK OF CURB.
- 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.
- 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.
- 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%.
- SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.



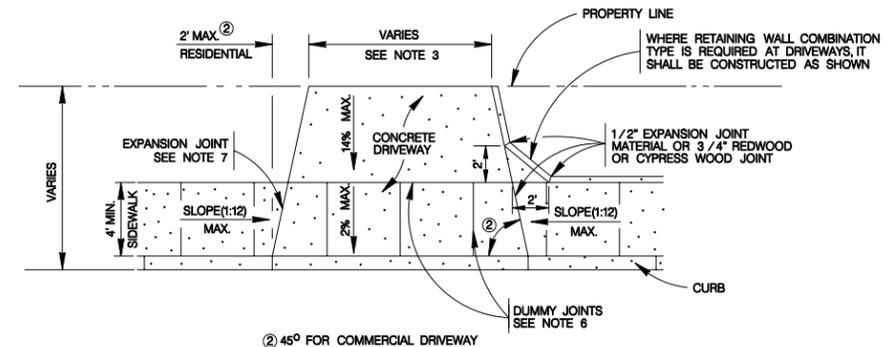
NOTE:  
1. COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.  
2. CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

**DRIVEWAY - CONCRETE RETAINING WALL**  
ON COMPACTED SUBGRADE  
ITEM 307.1



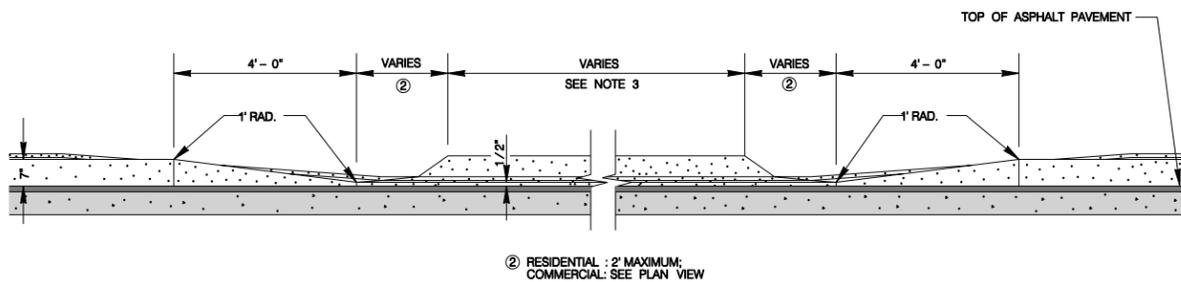
**CURB PROFILE AT DRIVEWAY**

WITH SIDEWALK ABUTTING CURB



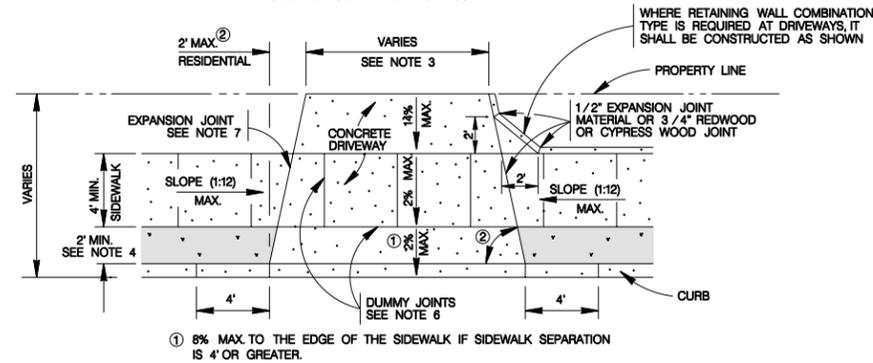
**TYPICAL DRIVEWAY PLAN VIEW**

WITH SIDEWALK ABUTTING CURB



**CURB PROFILE AT DRIVEWAY**

WITH SIDEWALK SEPARATED FROM CURB



**TYPICAL DRIVEWAY PLAN VIEW**

WITH SIDEWALK SEPARATED FROM CURB

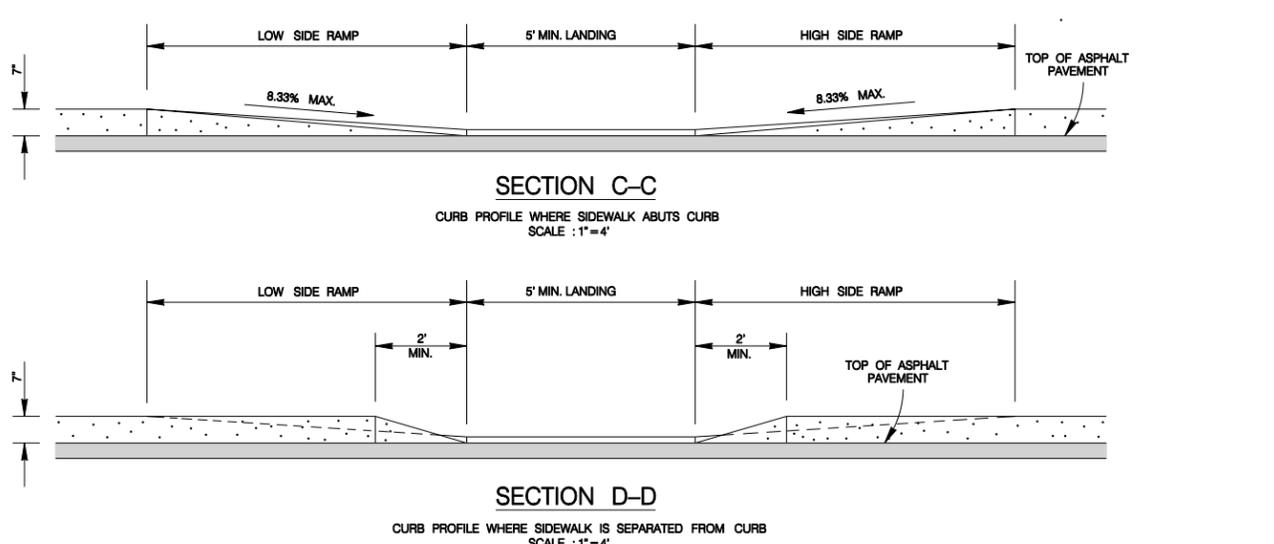
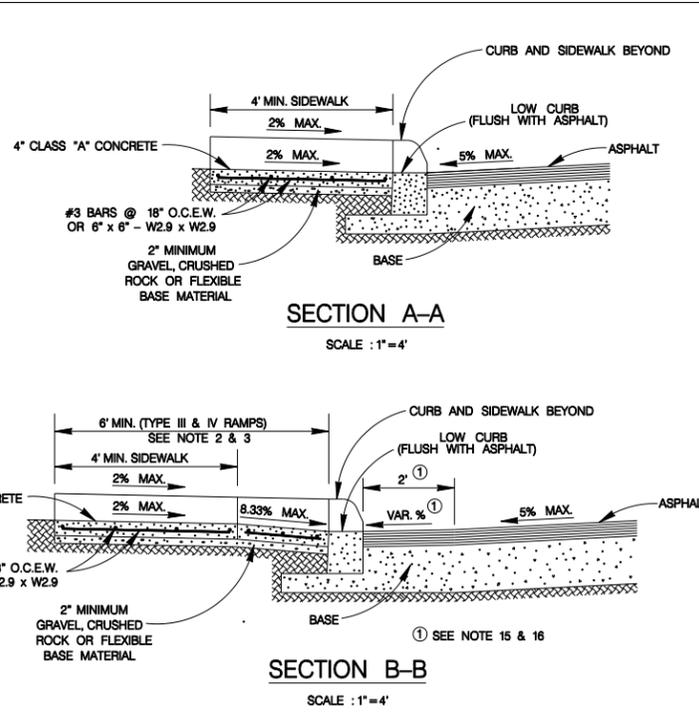
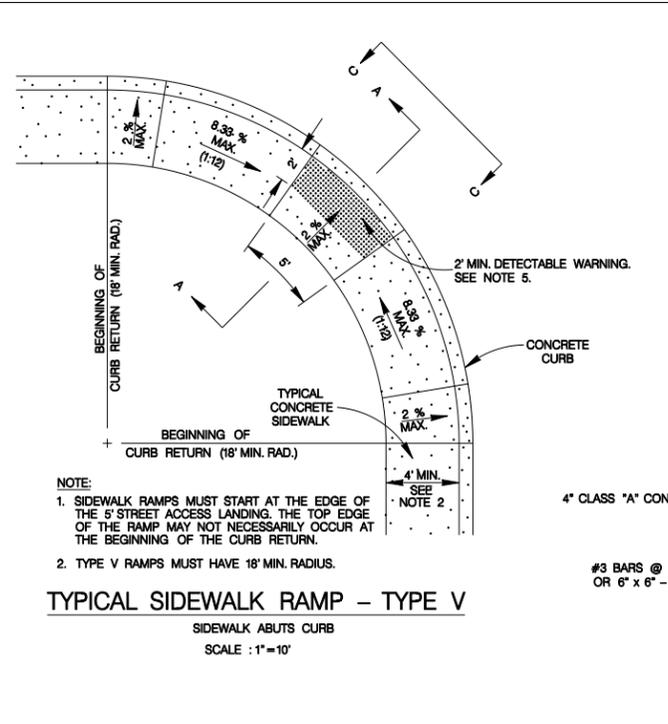
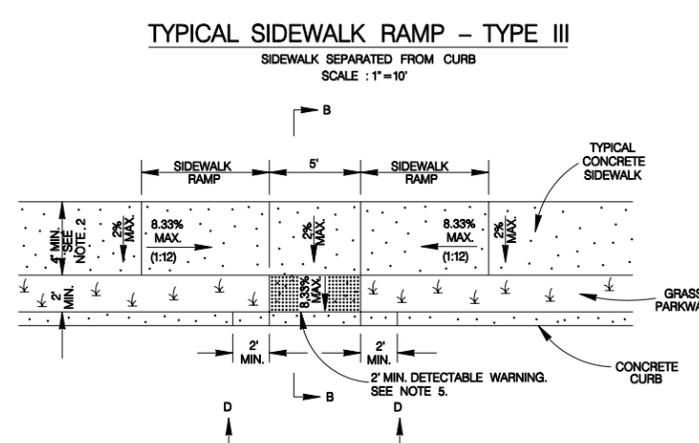
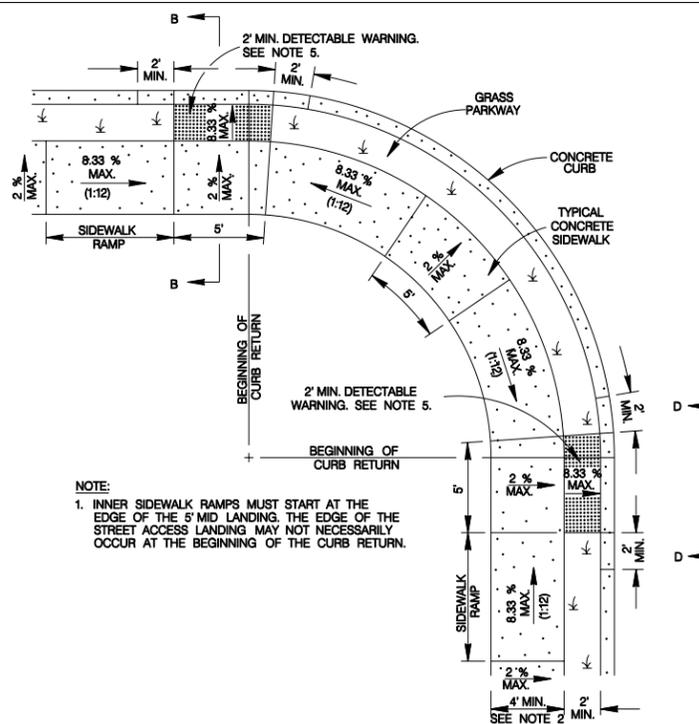
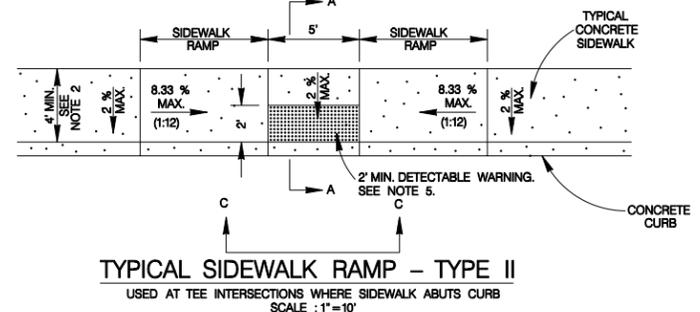
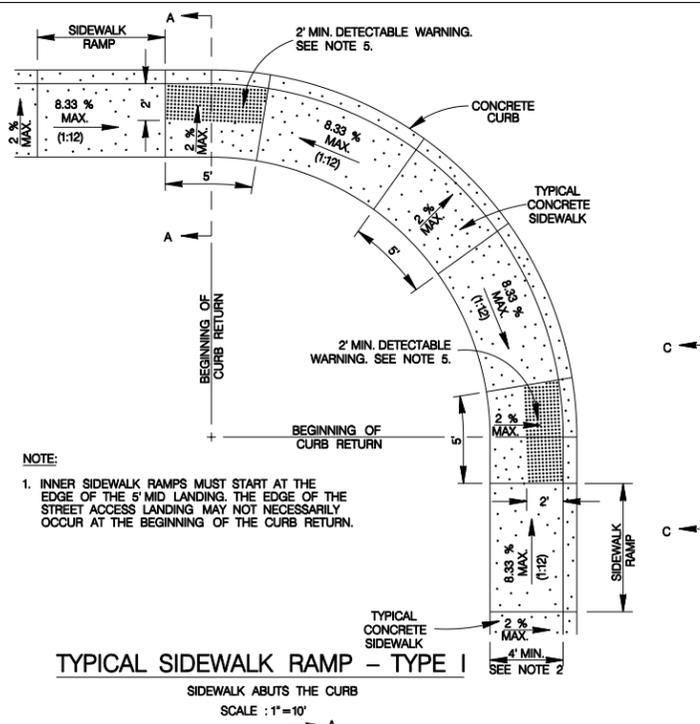
MAY 2009

CITY OF SAN ANTONIO  
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

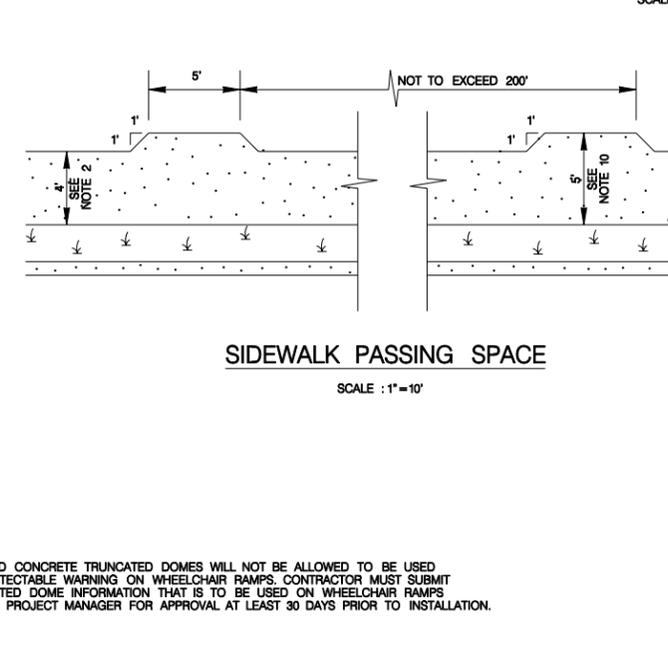
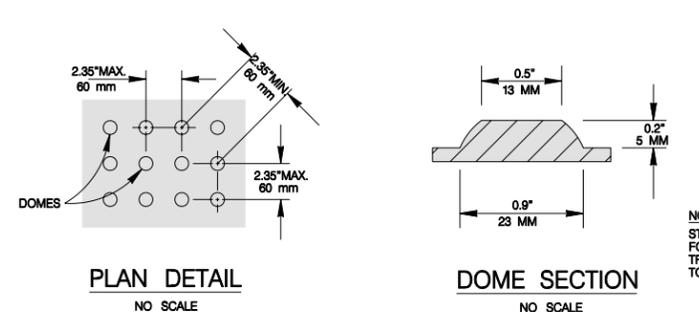
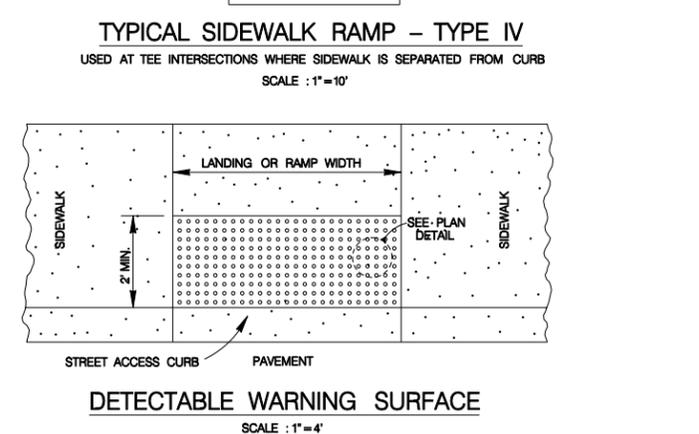
**CONCRETE DRIVEWAY STANDARDS**

Sheet D3

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: V. VASQUEZ	DGSN. BY:	CHKD. BY: R.S. HOSSEINI, P.E.
SHEET NO.:		OF



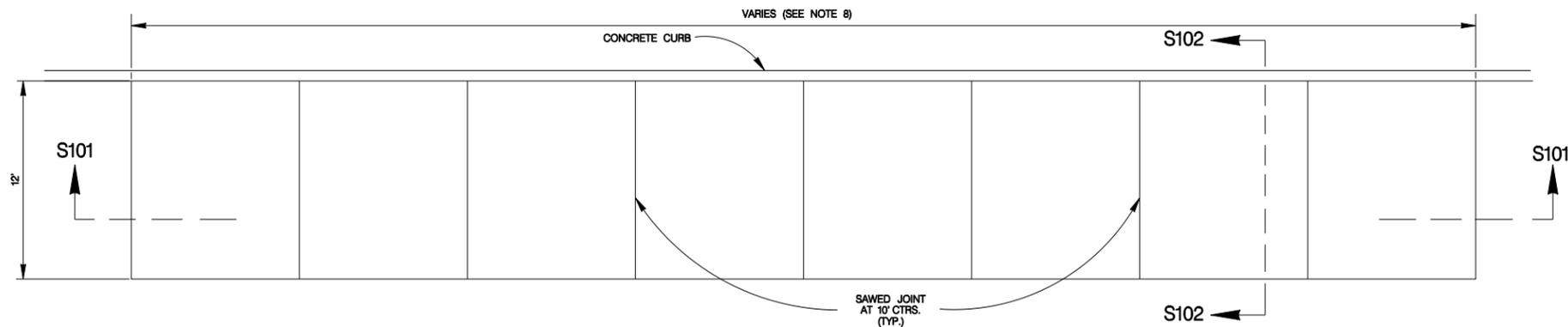
- GENERAL NOTES**
- WHEN POSSIBLE SIDEWALKS SHOULD BE PLACED NEXT TO THE PROPERTY LINE, ALLOWING A MINIMUM OF 1 FOOT BUFFER. DEVIATION OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.
  - FOR LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
  - 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.
  - 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.
  - 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 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.
  - 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.
  - SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO CONSTRUCT TYPE I OR TYPE III RAMP.
  - 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.
  - 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.
  - SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET.
  - WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.
  - REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" - W2.9 x W2.9 WIRE MESH.
  - 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.
  - SIDEWALK CROSS GRADE SHALL HAVE A MAXIMUM SLOPE OF 2%. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
  - 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) = 5.66). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
  - 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.
  - ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT.



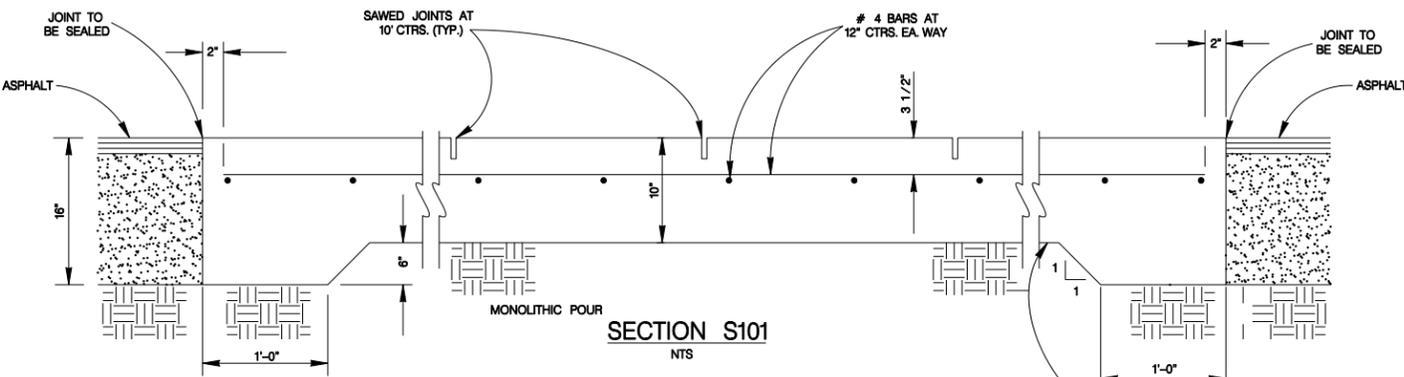
**TABLE 1**  
(SEE NOTE 4)

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'-8"

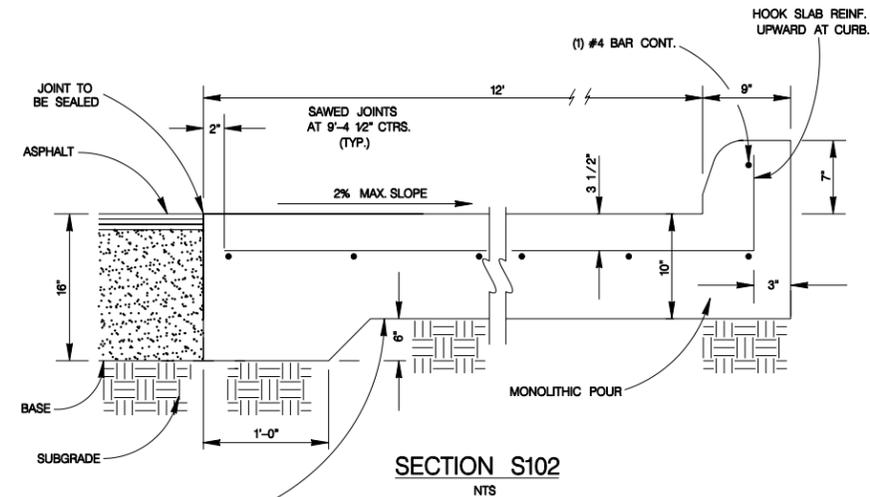
**NOTE:**  
STAMPED CONCRETE TRUNCATED DOMES WILL NOT BE ALLOWED TO BE USED FOR DETECTABLE WARNING ON WHEELCHAIR RAMPS. CONTRACTOR MUST SUBMIT TRUNCATED DOME INFORMATION THAT IS TO BE USED ON WHEELCHAIR RAMPS TO THE PROJECT MANAGER FOR APPROVAL AT LEAST 30 DAYS PRIOR TO INSTALLATION.



PLAN VIEW  
NTS

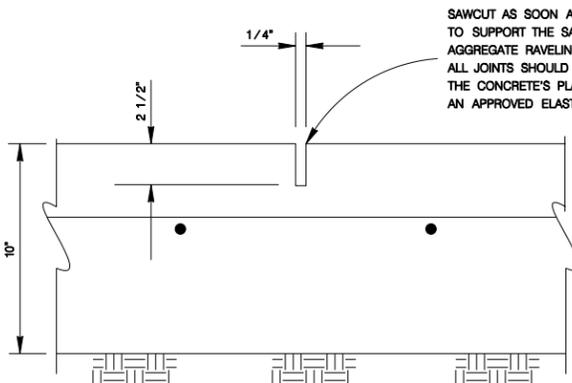


SECTION S101  
NTS



SECTION S102  
NTS

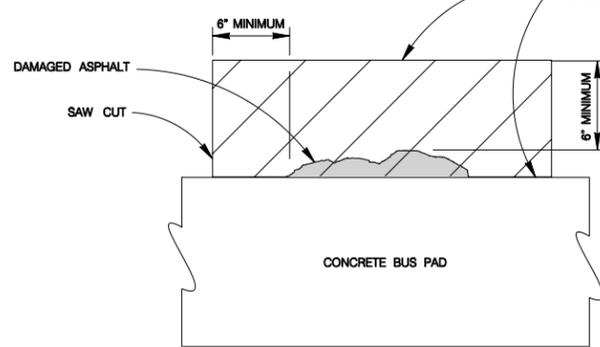
- GENERAL NOTES**
- ALL CONCRETE SHALL TEST 4,000 P.S.I. AT 28 DAYS.
  - BUS STOP CONCRETE PAD CONSTRUCTION SHALL BE PAID UNDER ITEM 209 AT THE UNIT PRICE BID, WHICH PRICE SHALL BE FULL COMPENSATION FOR ALL DEMOLITION, REMOVAL OF EXISTING CURB, EXCAVATION, HAULING, CRUSHED LIMESTONE, REINFORCING STEEL, CONCRETE, CONCRETE CURB, JOINTS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
  - BUS PAD AND CURB SHALL BE MONOLITHICALLY POURED. ALL EXISTING CURBING SHALL BE REMOVED AND REPLACED AS PER STANDARD DETAILS.
  - 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.
  - ACTUAL BUS PAD LENGTH AND WIDTH TO BE FIELD DETERMINED BY CITY ENGINEER OR HIS DESIGNATED REPRESENTATIVE.
  - DO NOT DRIVE ON PAD UNTIL CONCRETE HAS REACHED A STRENGTH OF 2,800 P.S.I.
  - BREAK TEST CYLINDERS AS FOLLOWS:  
2 AT 3 DAYS  
2 AT 7 DAYS  
2 AT 28 DAYS
  - CONCRETE BUS PAD LENGTH (OR AS SHOWN ON THE PLANS):  
30 M.P.H. - 100'  
35 M.P.H. - 160'  
40 M.P.H. - 160'  
45 M.P.H. - 200'



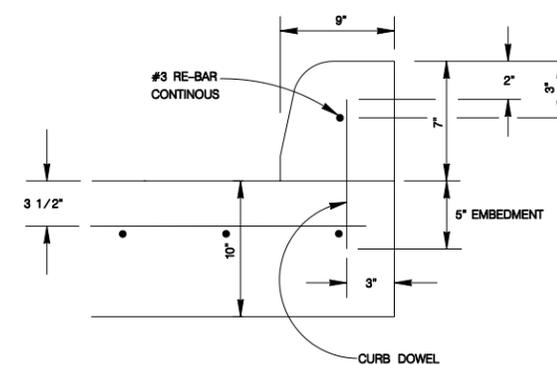
SAWED JOINT DETAIL  
NTS

SAWCUT AS SOON AS THE CONCRETE IS STRONG ENOUGH TO SUPPORT THE SAWING EQUIPMENT AND TO PREVENT AGGREGATE RAVELING DURING THE SAWING OPERATION. ALL JOINTS SHOULD BE SAW CUT WITHIN 12 HOURS OF THE CONCRETE'S PLACEMENT. JOINTS SHALL BE FILLED WITH AN APPROVED ELASTIC TYPE MATERIAL AFTER SAW CUTTING.

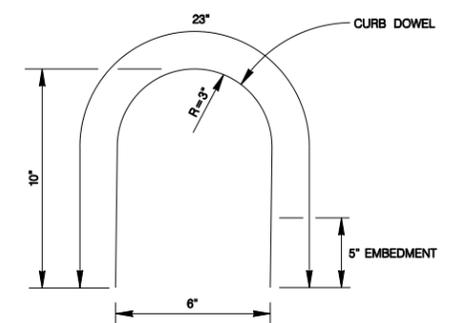
REMOVE AND REPLACE EXISTING ASPHALT PAVEMENT WITH 1 1/2" TYPE D HMAP. NO DIRECT PAYMENT WILL BE MADE FOR SUCH REPAIRS.



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

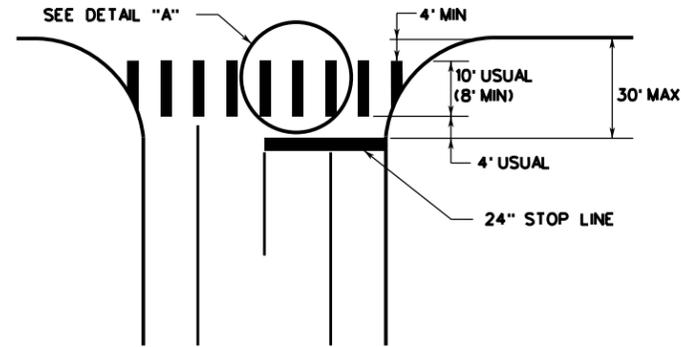
CITY OF SAN ANTONIO  
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CONCRETE  
BUS STOP PAD

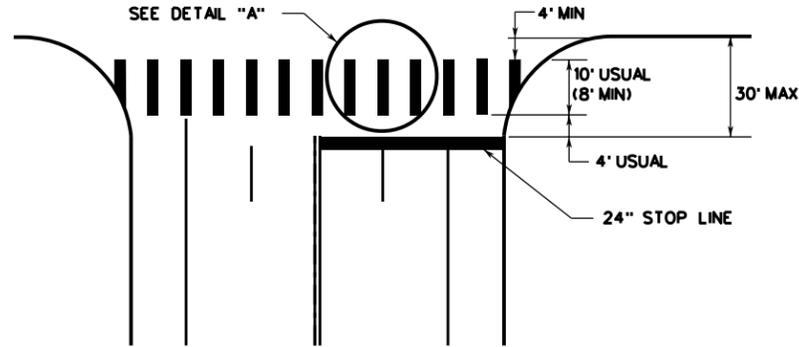
Sheet D5

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: V. VASQUEZ	DSGN. BY: L. MALTOS	CHKD. BY: R.S. HOSSEINI, P.E.
SHEET NO.:		OF

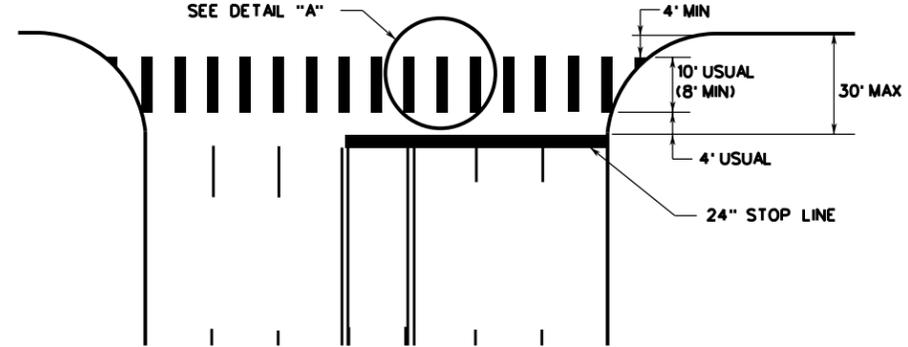
**TWO LANES WITH SHOULDERS**



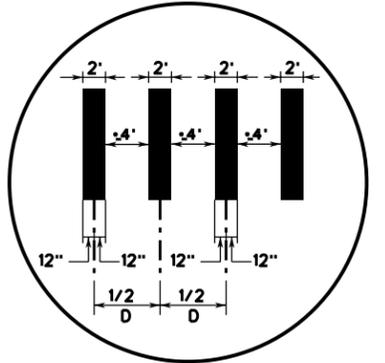
**FOUR LANES WITH SHOULDERS**



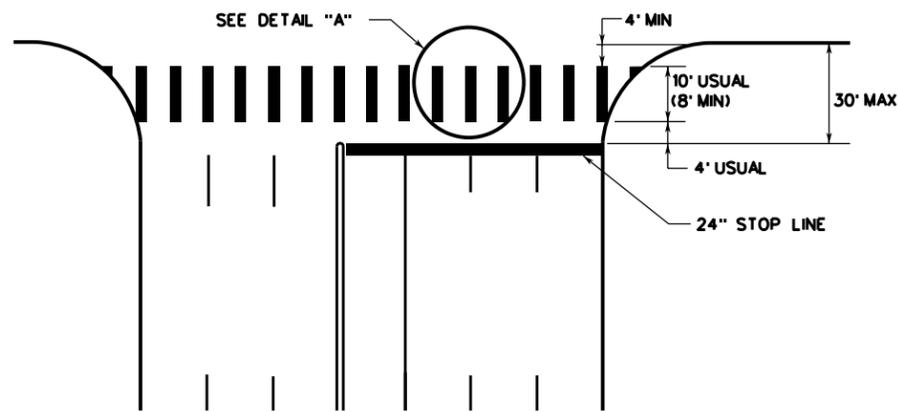
**MULTI-LANES**



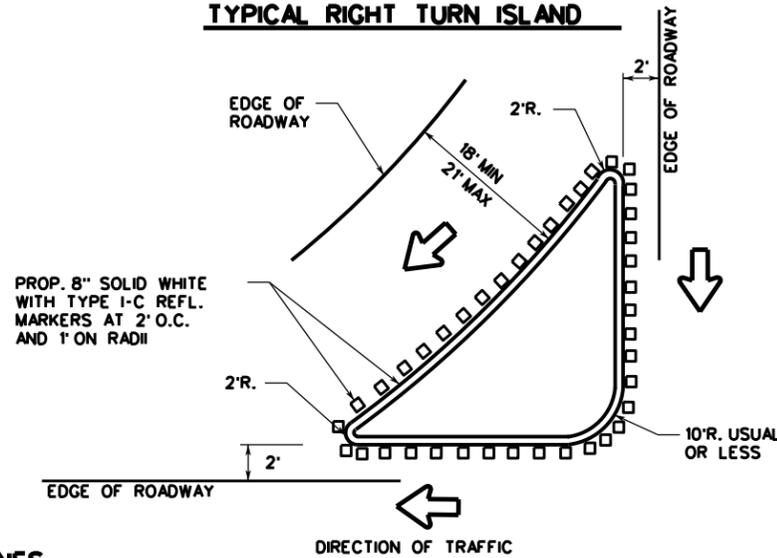
**DETAIL "A"**



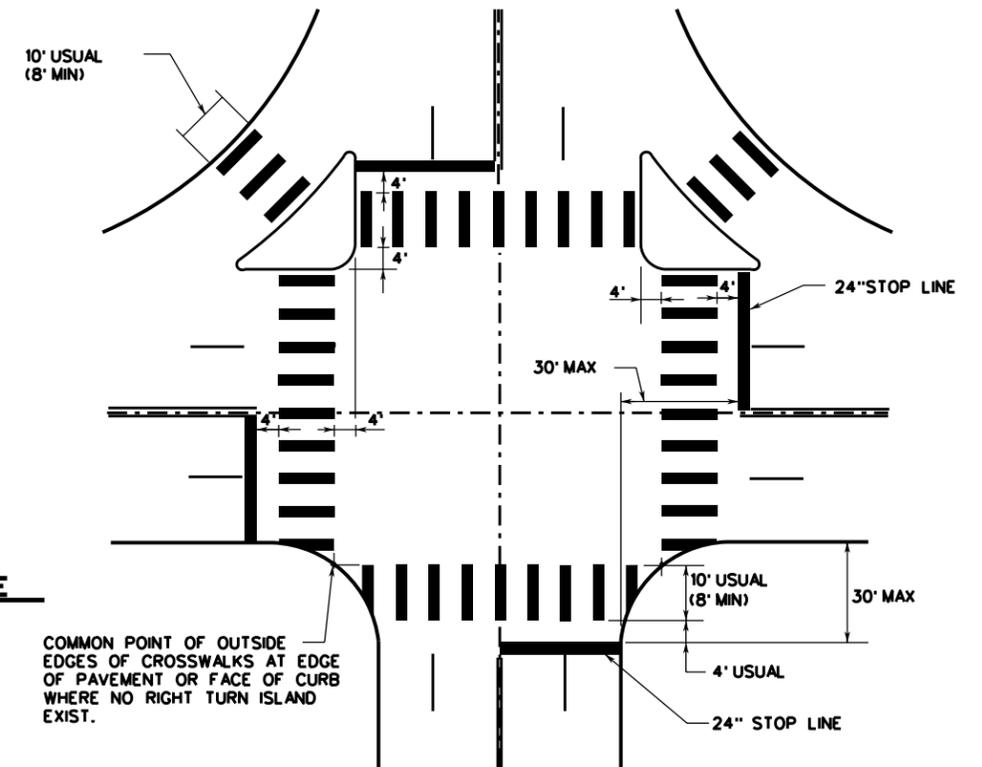
**MULTI-LANE WITH MEDIAN**



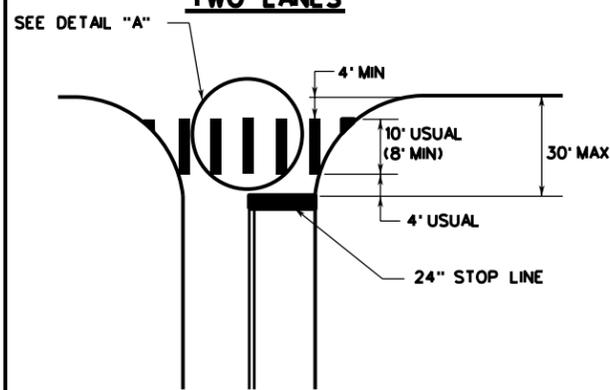
**TYPICAL RIGHT TURN ISLAND**



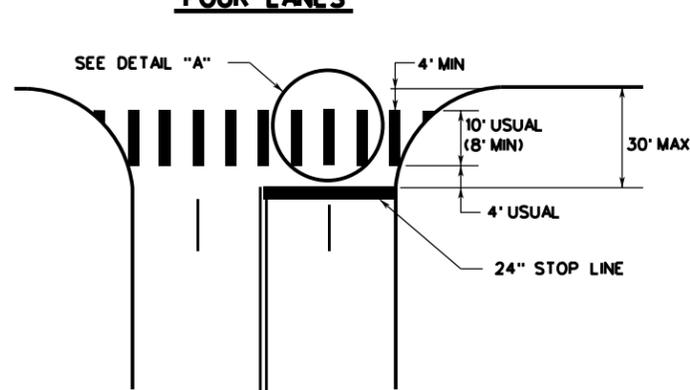
**INTERSECTION WITH RIGHT - TURN ISLANDS**



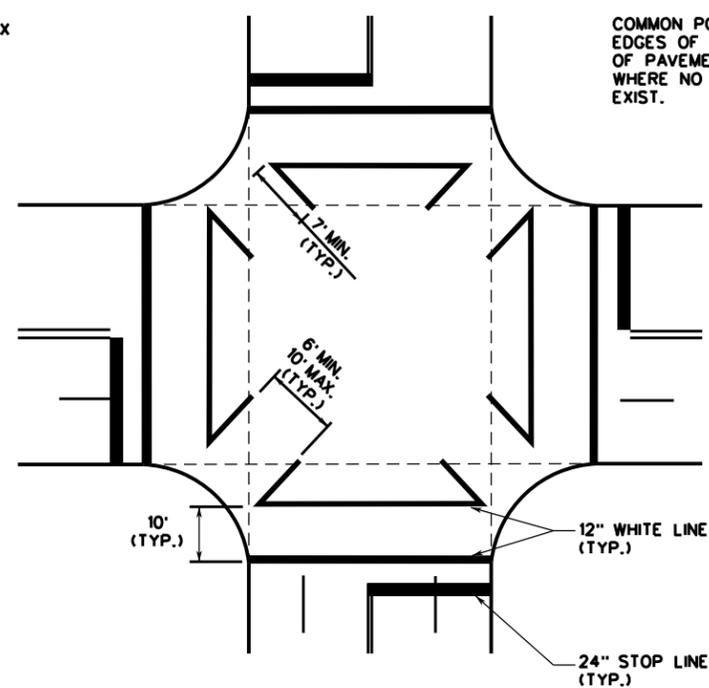
**TWO LANES**



**FOUR LANES**

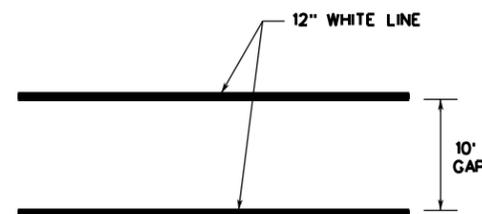


**EXCLUSIVE PEDESTRIAN PHASE**



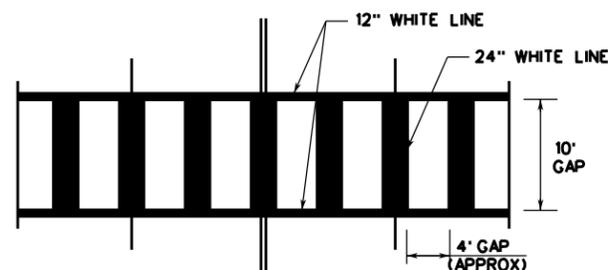
COMMON POINT OF OUTSIDE EDGES OF CROSSWALKS AT EDGE OF PAVEMENT OR FACE OF CURB WHERE NO RIGHT TURN ISLAND EXIST.

**CENTRAL BUSINESS DISTRICT CROSSWALK DETAIL**



**HIGH VISIBILITY CROSSWALK DETAIL**

TYPICALLY USED AT SIGNALIZED AND NON-SIGNALIZED MID-BLOCK CROSSINGS FOR COLLECTOR AND ARTERIAL ROADWAYS AND AT LOCATIONS REQUIRING EXTRA EMPHASIS.



- NOTES:
- CROSSWALKS AND STOP LINES SHALL BE WHITE.
  - "D" IS EQUAL TO ONE HALF THE WIDTH OF TRAVEL LANE.

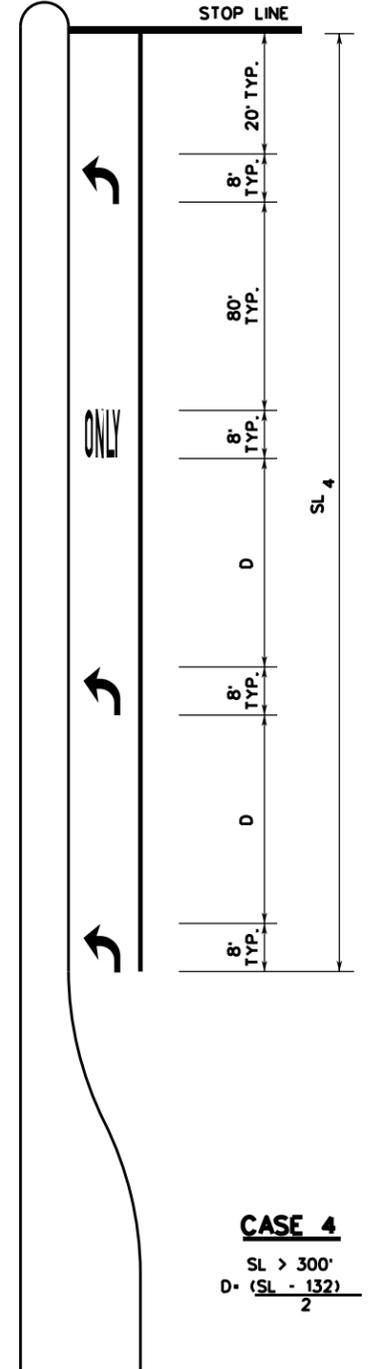
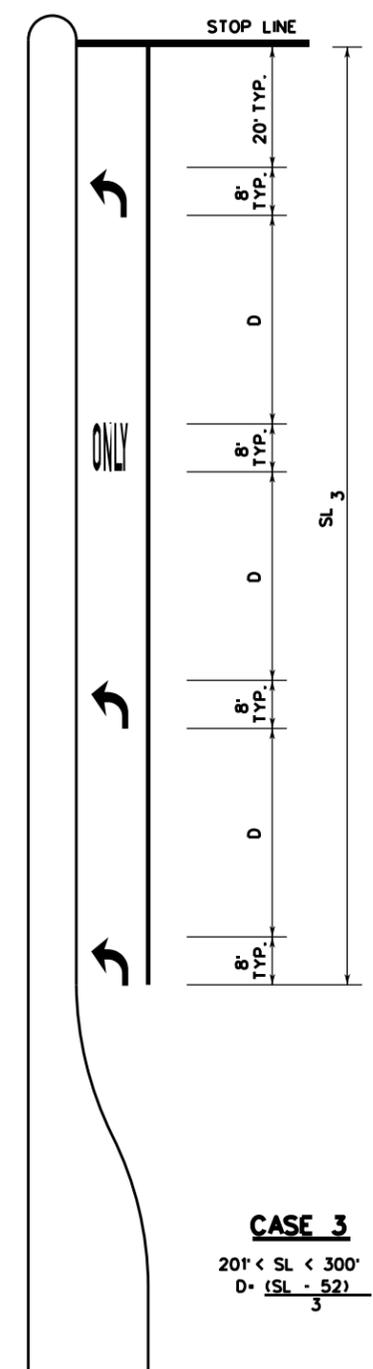
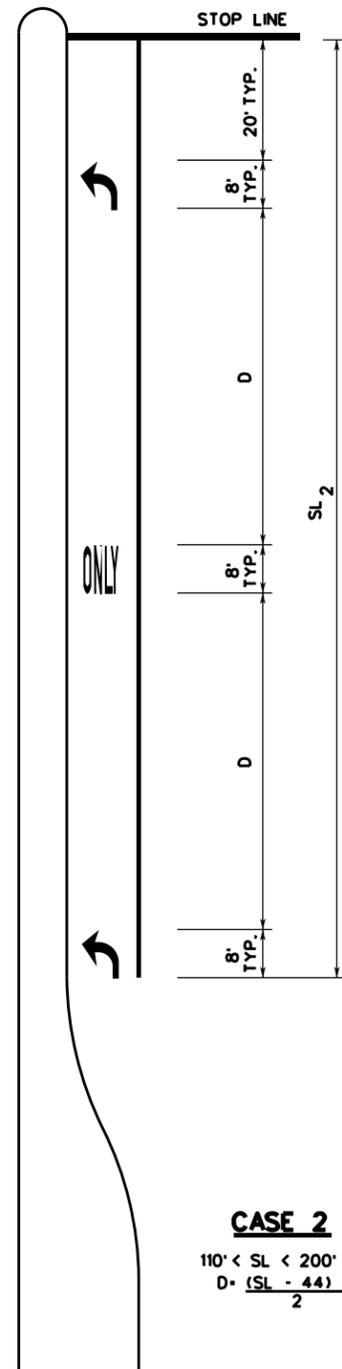
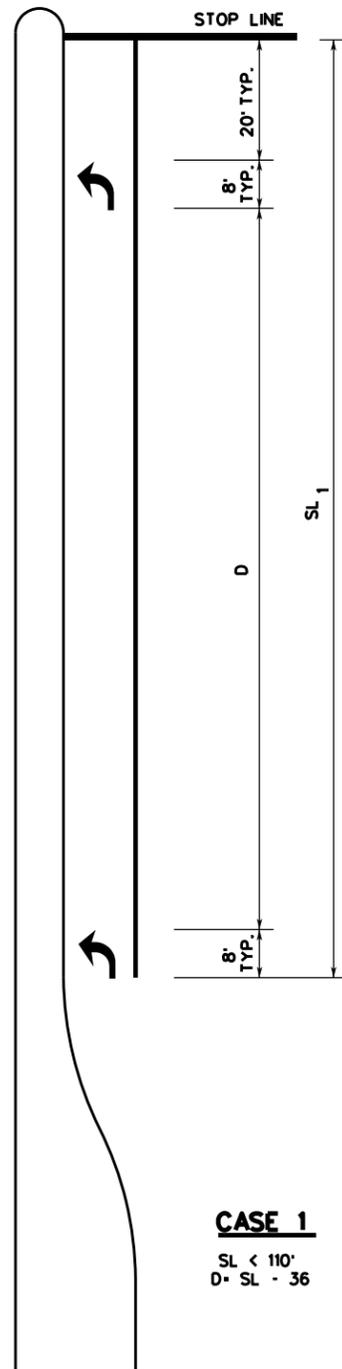
SEPTEMBER 2009

CITY OF SAN ANTONIO  
DEPARTMENT OF PUBLIC WORKS

TRAFFIC ENGINEERING STANDARDS  
TYPICAL CROSSWALK  
DETAILS  
SHEET 9 OF 16

Sheet D6

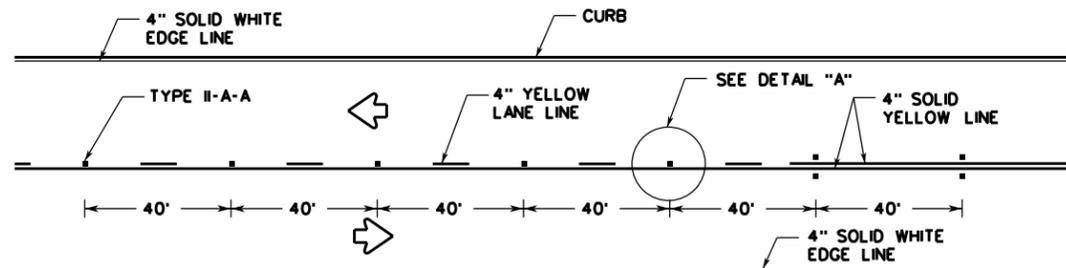
DATE: _____	PROJECT NO.: _____	SUBMITTAL: _____
CHKD. BY: M.E.	DSGN. BY: C.B.W.	DRWN. BY: J.A.N.
SHEET NO.: _____	OF _____	



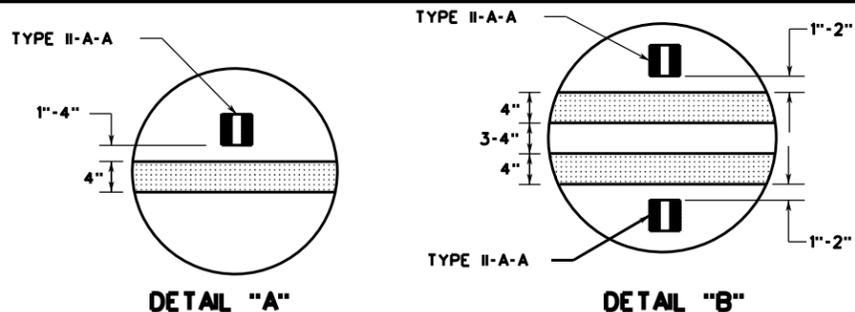
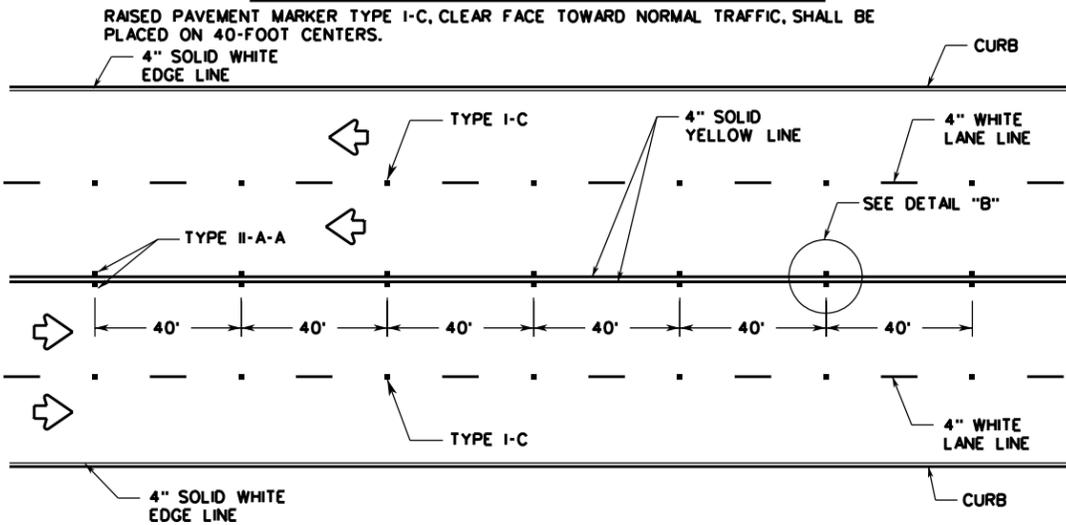
KEY:  
 SL - STORAGE LENGTH (FEET)  
 D - DISTANCE BETWEEN ARROWS AND LEGENDS (FEET)

- GENERAL NOTES:
1. THESE DETAILS ALSO APPLY TO RIGHT-TURN LANES.
  2. FOR DUAL-TURN LANES, DIMENSIONS SHALL BE THE SAME FOR EACH LANE.
  3. SL DIMENSION IS FROM STOP LINE TO END OF TURN LANE, WHICH DOES NOT INCLUDE TAPER LENGTH.
  4. PAVEMENT ARROWS AND "ONLY" LEGEND MARKINGS ARE TYPICALLY USED AT SIGNALIZED INTERSECTIONS AND AT UNSIGNALIZED INTERSECTIONS WHERE A DEMONSTRATED NEED EXISTS.
  5. MINIMUM SL = 110'. SL MAY BE LESS THAN 110 FEET AS DIRECTED BY THE CITY TRAFFIC ENGINEER.

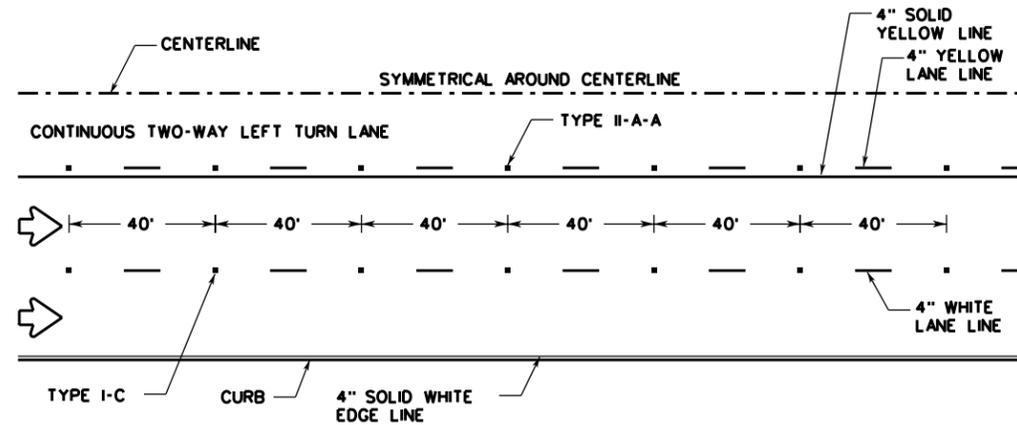
**CENTERLINE & EDGE FOR ALL TWO LANE STREETS WITH PASSING ZONE**



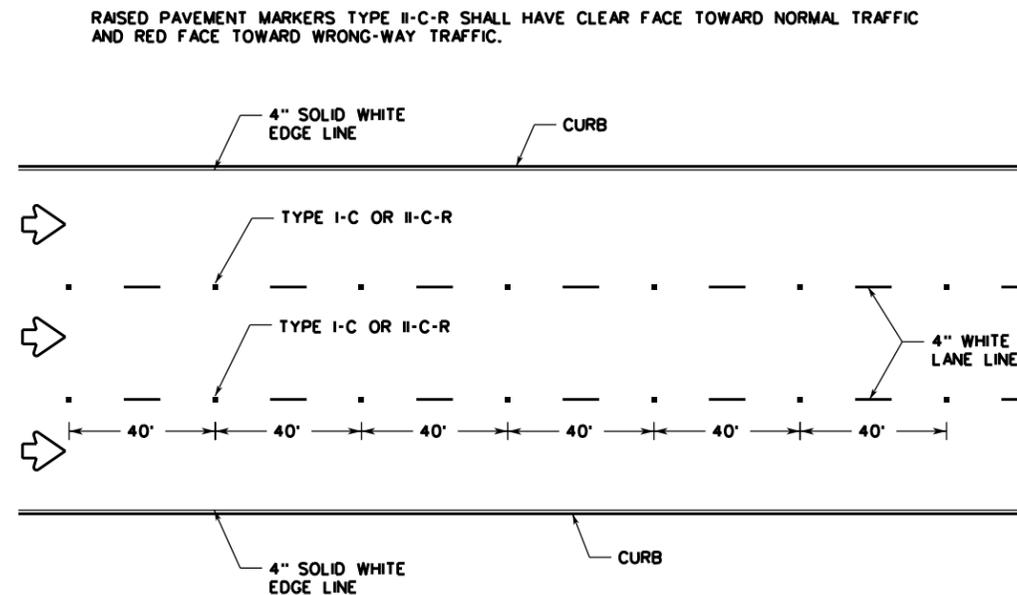
**CENTERLINE, LANE LINES & EDGE LINES FOR FOUR LANE TWO-WAY STREETS**



**CENTERLINE, LANE LINES, & EDGE LINES FOR TWO-WAY LEFT TURN LANE**



**LANE LINES & EDGE LINES FOR ONE-WAY MULTILANE STREET**



**TABLE 1 - TYPICAL LENGTH (L)**

POSTED SPEED	FORMULA
45 >	$L = \frac{WS^2}{60}$
≥ 45	$L = WS$

\* 85TH PERCENTILE SPEED MAY BE USED ON ROADS WHERE TRAFFIC SPEEDS NORMALLY EXCEED THE POSTED SPEED LIMIT. CROSSHATCHING LENGTH SHOULD BE ROUNDED UP TO NEAREST 5 FOOT INCREMENT.

L = LENGTH OF CROSSHATCHING (FT)  
W = WIDTH OF OFFSET (FT)  
S = POSTED SPEED (MPH)

EXAMPLES:  
AN 8 FOOT SHOULDER IN ADVANCE OF A BRIDGE REDUCES TO 4 FEET ON A 70 MPH ROADWAY. THE LENGTH OF THE CROSSHATCHING SHOULD BE:  
 $L = 8 \times 70 = 560$  FT  
A 4 FOOT SHOULDER IN ADVANCE OF A BRIDGE REDUCES TO 2 FEET ON A 40 MPH ROADWAY. THE LENGTH OF THE CROSSHATCHING SHOULD BE:  
 $L = 4(40)^2 / 60 = 106.67$  FT ROUNDED TO 110 FT

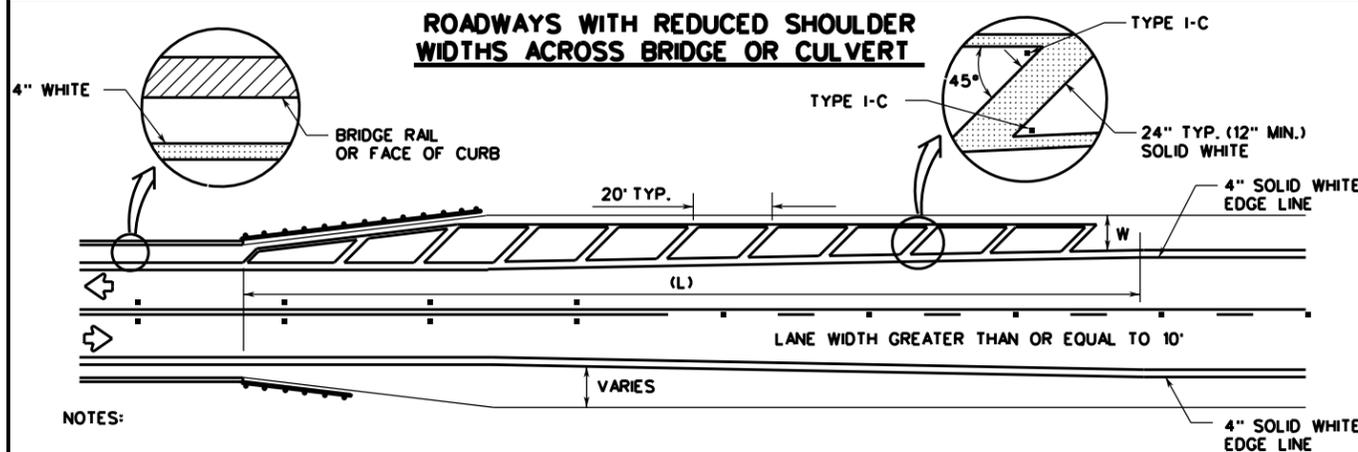
**YIELD LINES**



**GENERAL NOTES:**

1. EDGELINE ADJACENT TO CURB AND GUTTER IS NOT REQUIRED IN ALL CASES, HOWEVER SHALL BE PLACED AS DIRECTED BY CITY TRAFFIC ENGINEER.
2. THE TRAVELED WAY INCLUDES ONLY THAT PORTION OF THE ROADWAY USED FOR VEHICULAR TRAVEL AND NOT THE PARKING LANES, SIDEWALKS, BERMS AND SHOULDERS. THE TRAVELED WAYS SHALL BE MEASURED FROM THE INSIDE OF EDGELINE TO INSIDE OF EDGELINE OF A TWO LANE ROADWAY.
3. ALL RAISED PAVEMENT MARKERS PLACED IN BROKEN LINES SHALL BE PLACED IN LINE WITH AND MIDWAY BETWEEN THE STRIPES.
4. ON CONCRETE PAVEMENTS THE RAISED PAVEMENT MARKERS SHOULD BE PLACED TO ONE SIDE OF THE LONGITUDINAL JOINTS.
5. ALL PAVEMENT MARKING MATERIAL SHALL MEET THE REQUIRED MATERIAL SPECIFICATIONS AS SPECIFIED BY CITY OF SAN ANTONIO STANDARD SPECIFICATIONS.
6. 4" SOLID WHITE EDGE LINES ARE OPTIONAL AS DIRECTED BY THE CITY TRAFFIC ENGINEER.

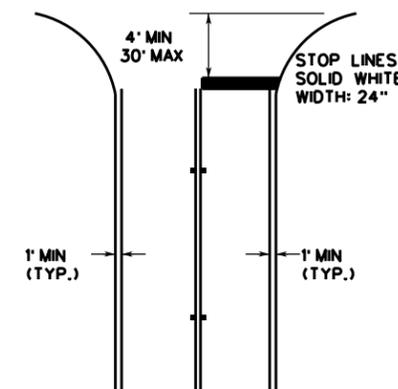
**ROADWAYS WITH REDUCED SHOULDER WIDTHS ACROSS BRIDGE OR CULVERT**



**NOTES:**

1. NO-PASSING ZONE ON BRIDGE APPROACH IS OPTIONAL BUT IF USED, IT SHALL BE A MINIMUM 500 FEET LONG.
2. FOR CROSSHATCHING LENGTH (L) SEE TABLE 1.
3. THE WIDTH OF THE OFFSET (W) AND THE REQUIRED CROSSHATCHING WIDTH IS THE FULL SHOULDER WIDTH IN ADVANCE OF THE BRIDGE.
4. THE CROSSHATCHING SHOULD BE REQUIRED IF THE SHOULDER WIDTH IN ADVANCE OF THE BRIDGE IS 4 FOOT OR WIDER AND ANY REDUCTION IN SHOULDER WIDTH ACROSS THE BRIDGE OCCURS.

**GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE**



SEPTEMBER 2009

CITY OF SAN ANTONIO

DEPARTMENT OF PUBLIC WORKS

TRAFFIC ENGINEERING STANDARDS  
STANDARD PAVEMENT MARKINGS WITH REFLECTIVE RAISED PAVEMENT MARKERS FOR POSITION GUIDANCE

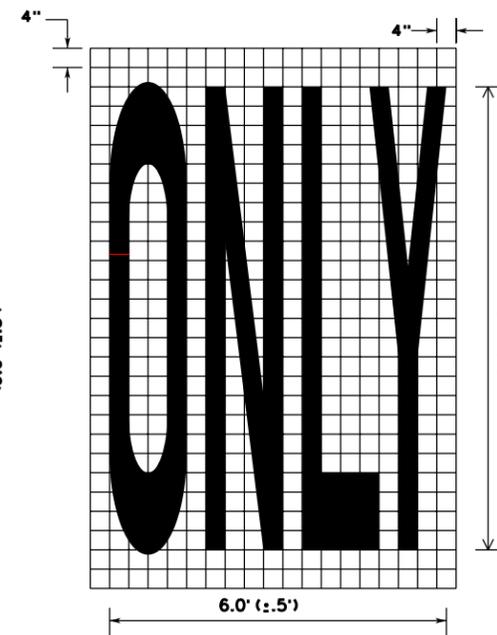
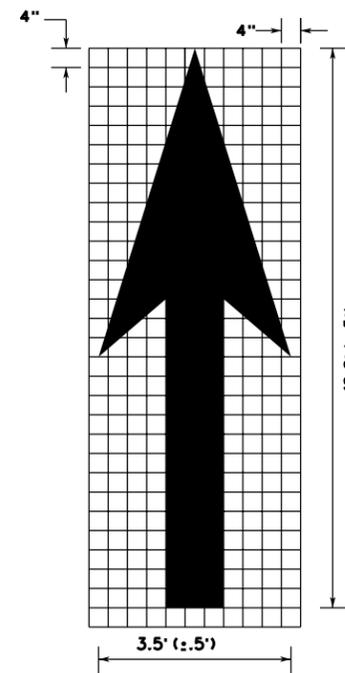
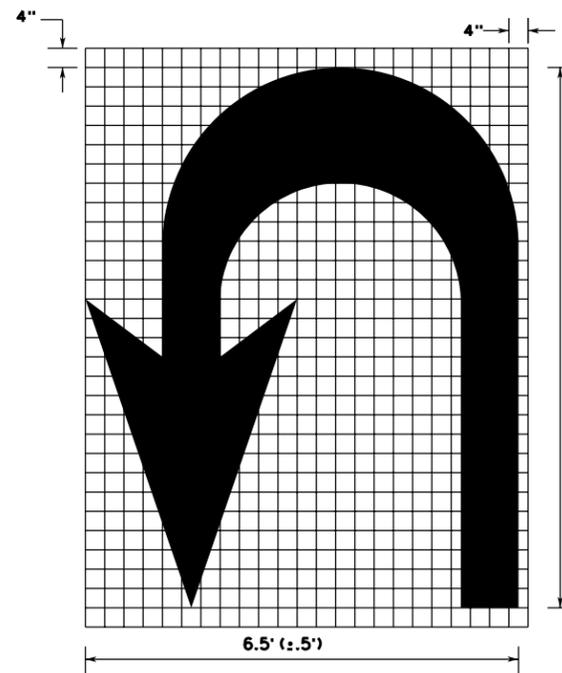
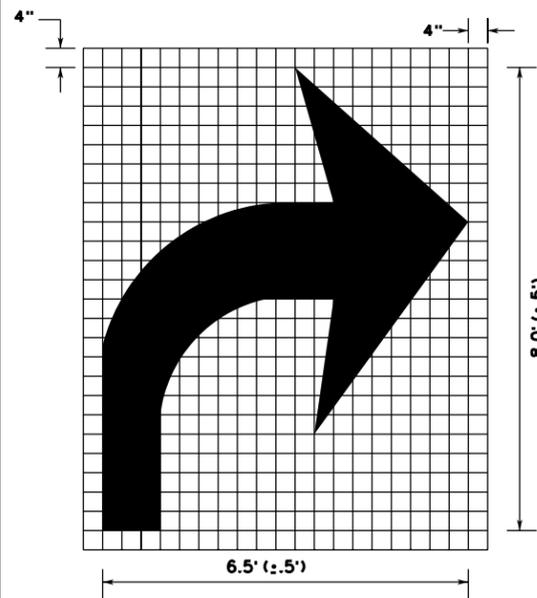
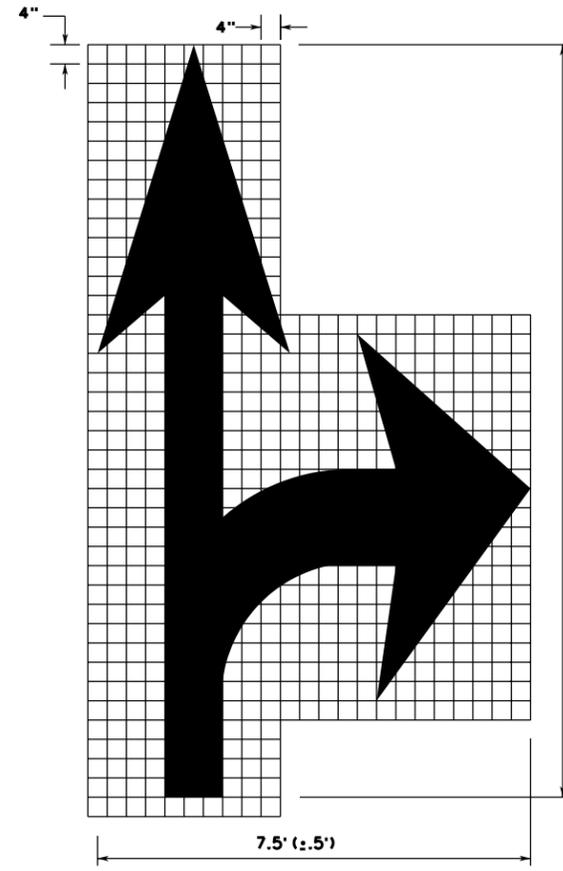
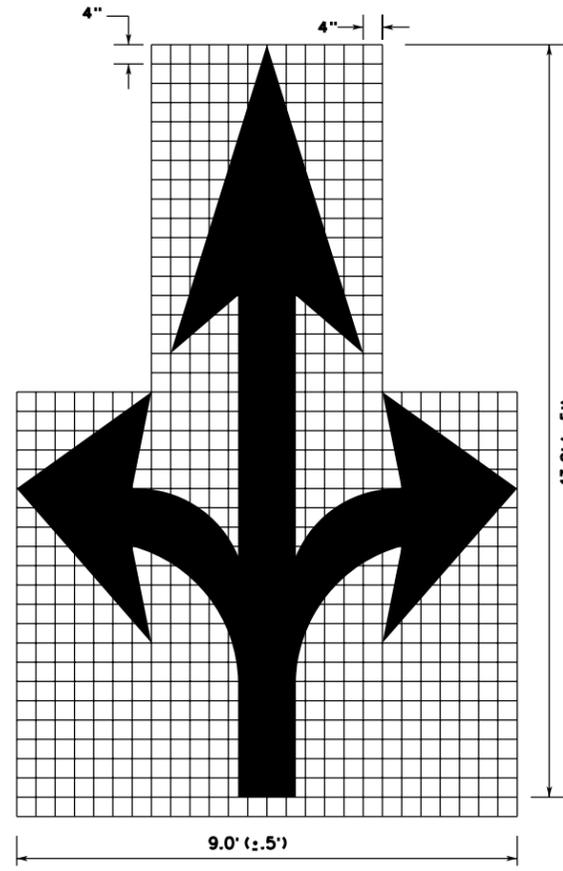
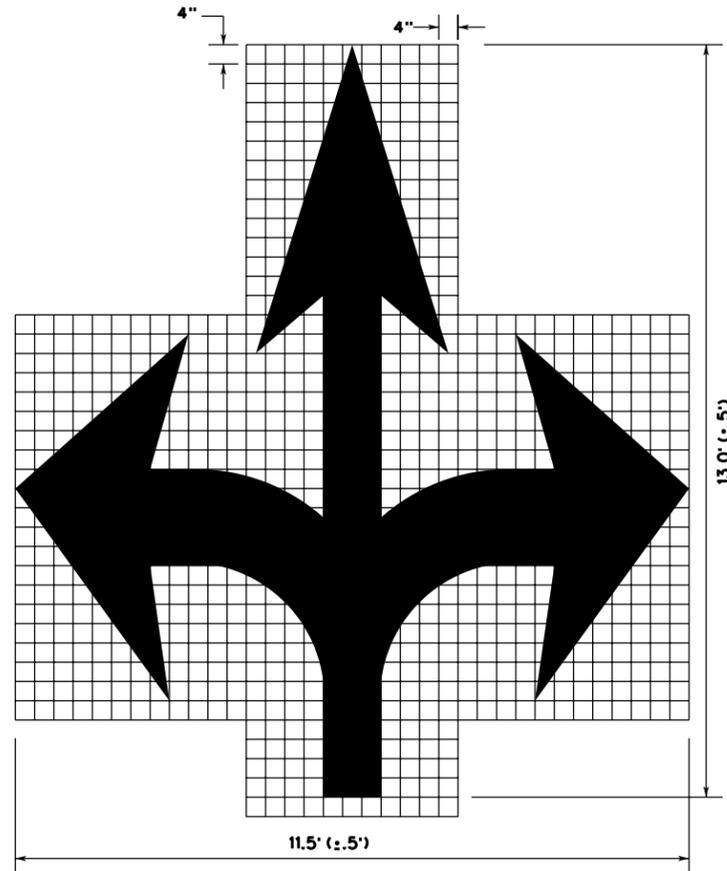
SHEET 4 OF 16

Sheet D8

DATE: _____	PROJECT NO.: _____	DESIGNER: _____
DRWN. BY: LAN	DSGN. BY: C.B.W.	CHKD. BY: M.E.

NOTES:

1. MINIMUM 8 FOOT WHITE MARKINGS SHALL BE USED, UNLESS OTHERWISE NOTED. IF MESSAGE CONSISTS OF MORE THAN ONE WORD, IT SHOULD BE PLACED WITH FIRST WORD NEAREST THE DRIVER.
2. THESE DETAILS ARE STANDARD SIZE FOR NORMAL INSTALLATION; SIZES MAY BE REDUCED APPROXIMATELY ONE-THIRD DEPENDING ON CONDITIONS.
3. THE LONGITUDINAL SPACE BETWEEN MARKINGS SHOULD BE 30 FEET.
4. MARKINGS CONSIDERED APPROPRIATE FOR USE WHEN WARRANTED INCLUDE THE FOLLOWING:
  - A. REGULATORY
    - STOP
    - RIGHT (LEFT) TURN ONLY
    - 25 MPH
    - SYMBOL ARROWS
  - B. WARNING
    - STOP AHEAD
    - SIGNAL AHEAD
    - SCHOOL
    - SCHOOL X-ING
    - PED X-ING
    - R X R (SEE RCPM DETAIL)
5. UNCONTROLLED USE OF PAVEMENT MARKINGS CAN RESULT IN DRIVER CONFUSION. WORD AND SYMBOL MARKINGS SHOULD BE NO MORE THAN THREE LINES.
6. THE WORD "STOP" SHALL NOT BE USED ON THE PAVEMENT UNLESS ACCOMPANIED BY A STOP LINE AND STOP SIGN. THE WORD "STOP" SHALL NOT BE PLACED ON THE PAVEMENT IN ADVANCE TO A STOP LINE, UNLESS EVERY VEHICLE IS REQUIRED TO STOP AT ALL TIMES.
7. PAVEMENT MARKINGS SHOULD GENERALLY BE NO MORE THAN ONE LANE IN WIDTH, WITH SCHOOL MESSAGES BEING THE EXCEPTION. FOR DETAILS OF SCHOOL AND SCHOOL CROSSING PAVEMENT MARKINGS, REFER TO PART VII OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
8. SPACING BETWEEN LETTERS SHOULD BE APPROXIMATELY 4 INCHES. THE WIDTH OF LETTERS MAY VARY DEPENDING ON THE WIDTH OF THE TRAVEL LANES.
9. LANE-USE ARROW MARKINGS MAY BE USED TO CONVEY EITHER GUIDANCE OR MANDATORY MESSAGES. ARROWS USED TO CONVEY A MANDATORY MOVEMENT MUST BE ACCOMPANIED BY STANDARD SIGNS AND THE PAVEMENT MARKING WORD "ONLY".
10. PAVEMENT MARKINGS ARE TO BE LOCATED AS SPECIFIED ELSEWHERE IN THE PLANS.



SEPTEMBER 2009

CITY OF SAN ANTONIO  
DEPARTMENT OF PUBLIC WORKS

TRAFFIC ENGINEERING STANDARDS  
STANDARD PAVEMENT MARKINGS  
(ARROWS)

SHEET 3 OF 16

Sheet D9

DATE: _____	PROJECT NO.: _____	DATE: _____
DRWN. BY: J.A.N.	DSGN. BY: C.B.W.	CHKD. BY: M.E.
SHEET NO.: _____	OF _____	

TRUCKS NEXT YIELD MERGE EXIT STOP ONLY

9.5' (±.5) 4" 7.5' (±.5) 4" 7.0' (±.5) 4" 8.0' (±.5) 4" 6.5' (±.5) 4" 6.5' (±.5) 4" 6.0' (±.5) 4"

SCHOOL SIGNAL TURN LANE ENDS PED

9.5' (±.5) 4" 8.5' (±.5) 4" 6.5' (±.5) 4" 6.5' (±.5) 4" 7.5' (±.5) 4" 5.5' (±.5) 4"

ZONE AHEAD RIGHT LEFT ROUTE X-ING

6.5' (±.5) 4" 8.0' (±.5) 4" 8.5' (±.5) 4" 6.5' (±.5) 4" 8.0' (±.5) 4" 8.0' (±.5) 4"

1234567890 MPH BUS

6.0' (±.5) 4" 6.0' (±.5) 4"

SEPTEMBER 2009  
 CITY OF SAN ANTONIO  
 DEPARTMENT OF PUBLIC WORKS  
 TRAFFIC ENGINEERING STANDARDS  
 STANDARD PAVEMENT MARKINGS  
 (WORDS)  
 SHEET 2 OF 16 **Sheet D10**

DATE: _____			
PROJECT NO.: _____			
DATE: _____			
DRWN. BY: LAN	DSGN. BY: C.B.W.	CHKD. BY: M.E.	SHEET NO.: ____ OF ____

# TRAFFIC NOTES

## TRENCHING / EXCAVATING

The following notes shall apply to excavations of trenches or pits that are located in the pavement or are within six (6) feet of the edge of roadway:

- 1.) Trench walls shall not be closer than three (3) feet from the edge of the traveled way at any stage of construction.
- 2.) Traffic control devices shall be in place before starting any excavation.
- 3.) Trenches or pits will not be permitted to be bridged by steel plates and open to traffic unless they are temporarily backfilled to finished street grade.
- 4.) For pits or trenches along or in a roadway that are going to be left open over night that are zero to fifty (0 - 50) feet in length, the following applies. GUARD RAIL OR CONCRETE BARRIER SHALL BE USED.
- 5.) For pits or trenches along or in roadway that are going to be left open over night and are longer than 50 feet in length. CONCRETE BARRIERS MUST BE USED.
- 6.) Plastic construction fencing shall be required for any trench or pit left open over night.
- 7.) When using any guardrail or concrete barrier, protected end must be used as per the TEXAS-M.U.T.C.D.
- 8.) For vertical drop-offs greater than two (2) feet along roadway, low profile concrete with appropriate end protection must be installed.
- 9.) All concrete barriers placed on City R.O.W shall be low profile. No high profile barriers will be allowed.

## REFLECTIVE SHEETING

The reflectorized white and reflectorized orange stripes for channelizing devices such as barricade drums and vertical panels shall be constructed of reflective sheeting meeting the color and retro-reflectivity requirements of high intensity, unless otherwise specified in the plans.

## MAINTENANCE

- 1.) All traffic signs shall be kept in proper position, clean and legible at all times. Damaged barricades, signs, and other traffic control devices shall be replaced without undue delay.
- 2.) To ensure adequate maintenance, a suitable schedule for inspection, cleaning, and replacement of barricades, lights, and signs shall be established.
- 3.) Special attention and necessary action shall be taken to see that weeds, trees, shrubbery and construction materials do not obscure the face of any sign or barricades.

## TRAINING

Each person whose actions affect maintenance and construction zone safety, from the upper-level management personnel through construction and maintenance field personnel, should receive training appropriate to the job decision each individual is required to make. Only those individuals who are qualified by means of adequate training in safe traffic control practices and have a basic understanding of the principles established by applicable standards and regulations, including those of the TEXAS M.U.T.C.D. should supervise the selection, placement, and maintenance of traffic control devices in maintenance and construction areas.

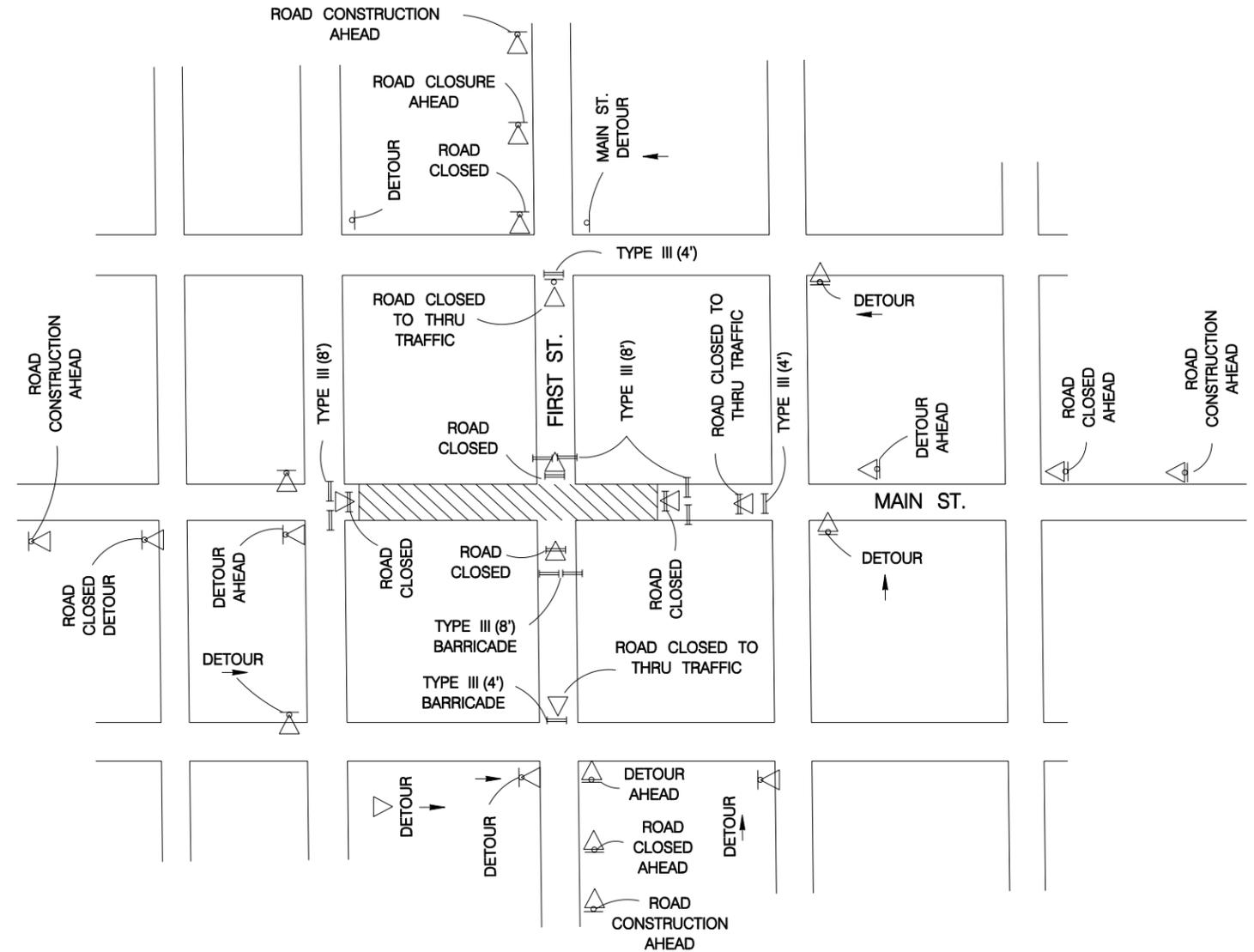
## SPECIAL EVENTS BARRICADING

All Type I, (8') barricades used for special events (Dome, Runs, Walks, Parades etc.) shall be a minimum of 42" high and 96" wide. Any necessary signs will require proper sign stands.

## USE OF CITY R.O.W.

The City of San Antonio reserves the right to allow contracting and barricading sub-contractors to use the City's R.O.W. The City also reserves the right to advise contractors and barricading sub-contractors to remove stored or unused traffic control devices from the City of San Antonio R.O.W. It is the barricading sub-contractor's responsibility to remove any traffic control device from City's R.O.W. when instructed to do so by a City representative.

# CLOSURE DIAGRAMS



TYPICAL INTERSECTING STREET CLOSURE FOR TWO LANE STREETS

NOTE:  
ALL SIGNS WILL BE MOUNTED ON SIGN SUPPORTS ONLY

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY JOHN D. FRIEBELE, #46394 ON 06-20-05 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

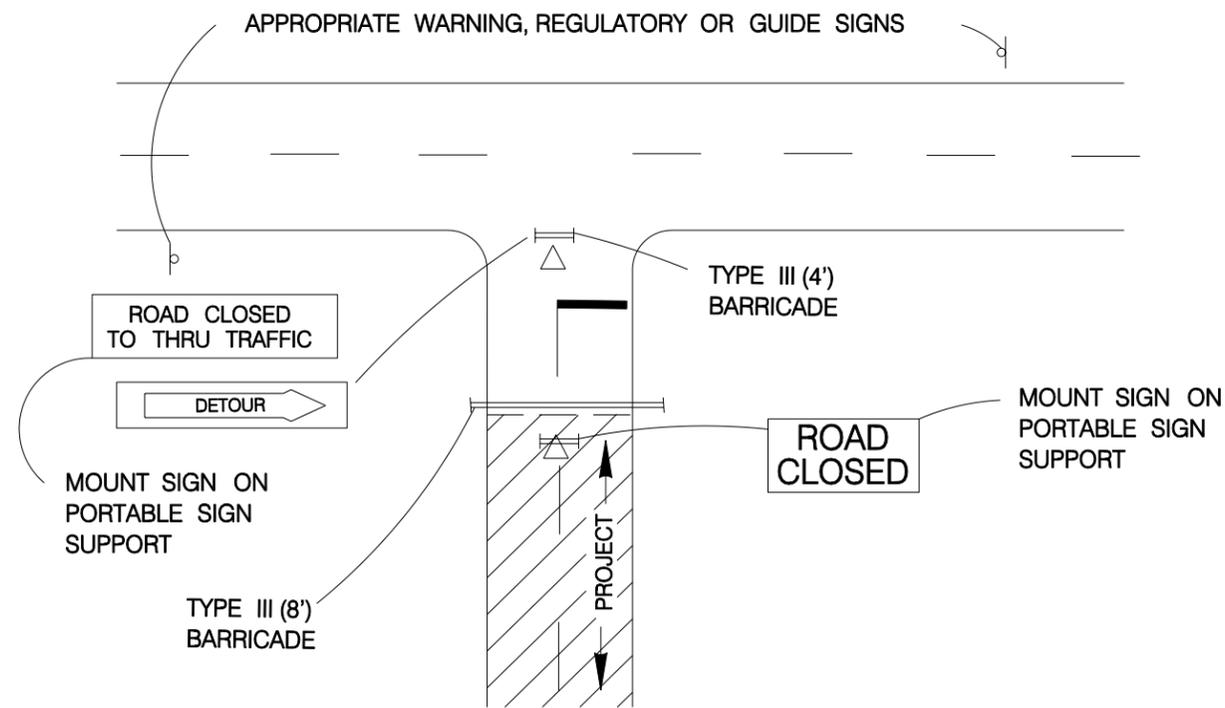
JUNE 2005

CITY OF SAN ANTONIO  
DEPARTMENT OF PUBLIC WORKS

TRAFFIC STANDARDS  
BARRICADE AND CONSTRUCTION STANDARDS  
SHEET 1 OF 4

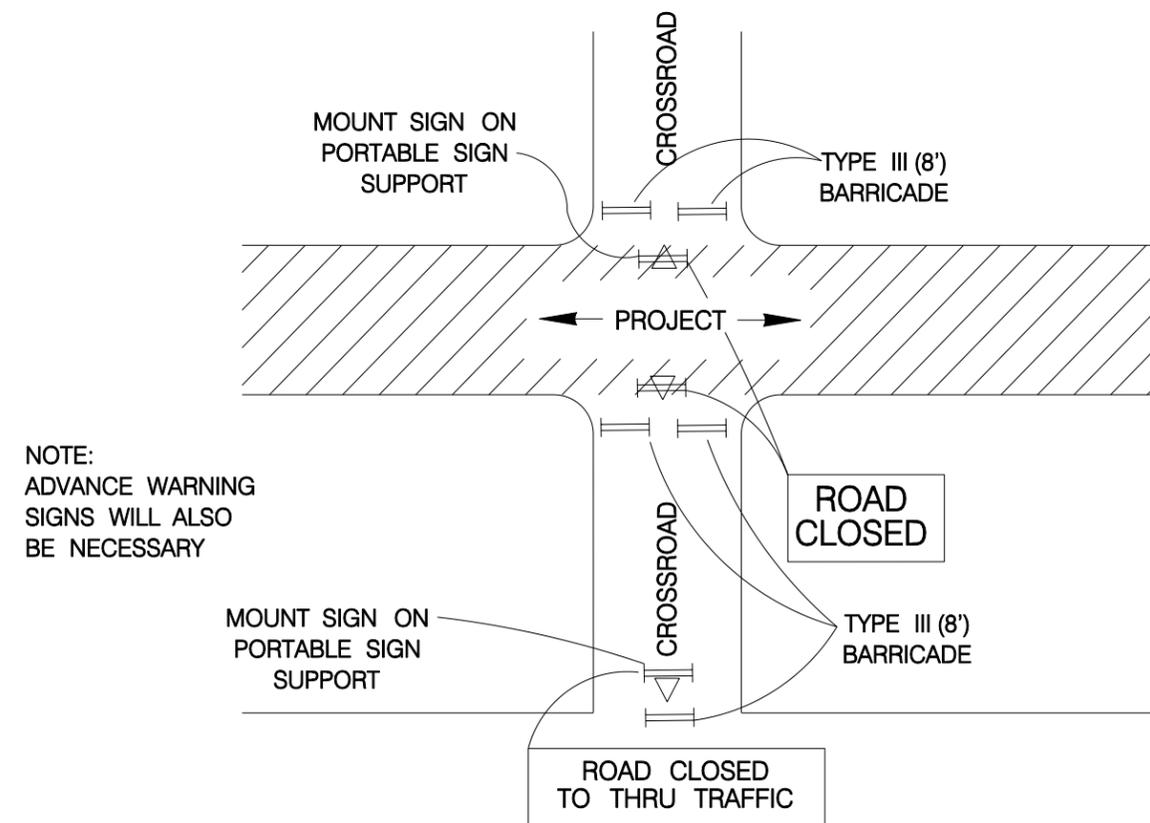
Sheet D11

DRWN. BY: A.F.G.	DSGN. BY: E.N.M.	CHKD. BY: J.D.F./E.N.M.	DATE:
% SUBMITTAL	PROJECT NO.:	SHEET NO. OF	

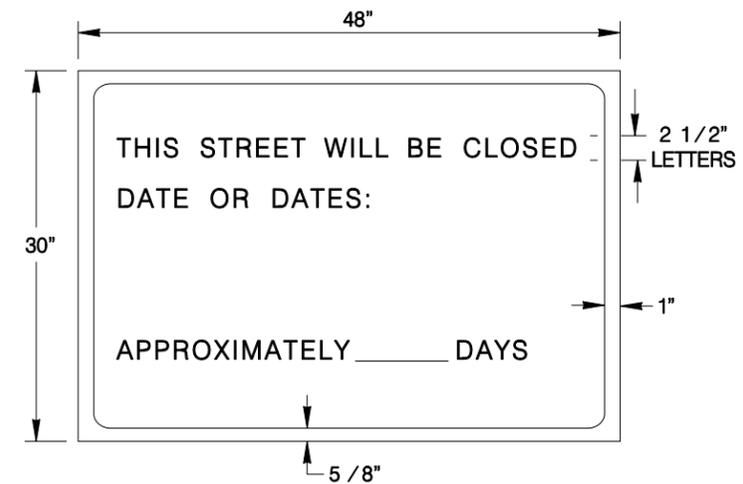


**PROJECT LIMITS FOR CLOSED ROADWAY**

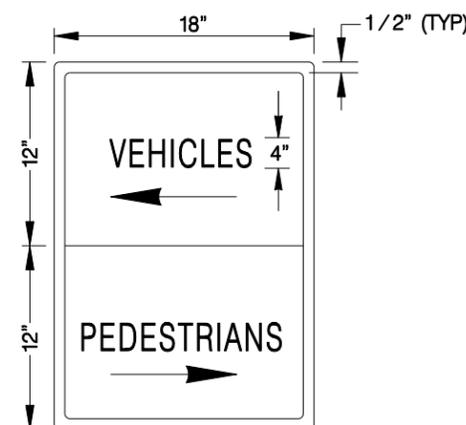
BARRICADES SHALL BE ERECTED COMPLETELY ACROSS ROADWAY. CHANNELIZING DEVICES MAY BE DRUMS, VERTICAL PANELS OR CONES AS SPECIFIED IN THE PLANS



**CROSS STREET SIGNING AND BARRICADING  
TOTALLY CLOSED**

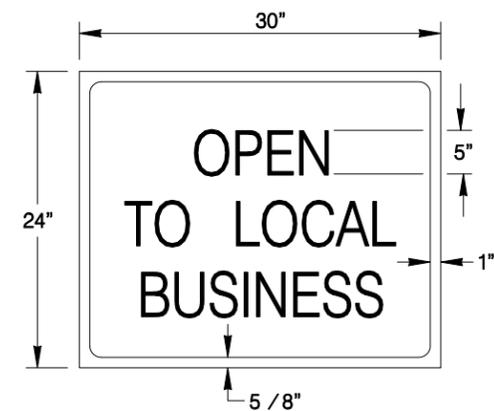


LETTERS- BLACK  
BORDER- BLACK  
BACKGROUND- ORANGE



LETTERS- BLACK  
BORDER- BLACK  
BACKGROUND- ORANGE  
SPACING-3 SIGNS PER BLOCK

DIRECTION OF ARROWS  
ARE REVERSIBLE

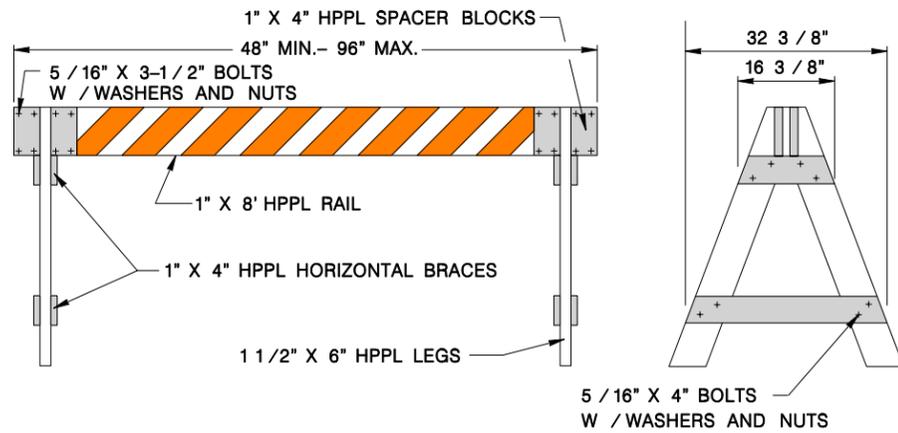


LETTERS- WHITE  
BORDER- WHITE  
BACKGROUND- BLUE REFLECTIVE

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY JOHN D. FRIEBELE, #46394 ON 06-20-05 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

JUNE 2005			
CITY OF SAN ANTONIO DEPARTMENT OF PUBLIC WORKS			
TRAFFIC STANDARDS BARRICADE AND CONSTRUCTION STANDARDS SHEET 2 OF 4			
<b>Sheet D12</b>			
% SUBMITTAL	PROJECT NO.:	DATE:	
DRWN. BY: A.F.G.	DSGN. BY: E.N.M.	CHKD. BY: J.D.F./E.N.M.	SHEET NO.: OF

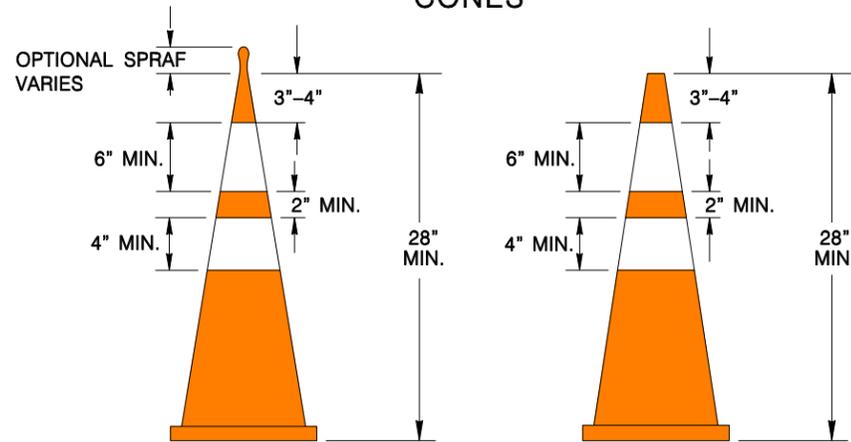
### TYPE I BARRICADE



- 1.) Only the following Type I barricade shall be used in the City of San Antonio Right-Of-Way:
  - A. 1" x 8" plastic rail with 2" x 6" wooden legs.
  - B. 1" x 8" wooden rail with plastic legs.
  - C. 1" x 8" wooden rail with 2" x 6" wood legs.
  - D. No screws allowed for assembly of A-legs or rail.
  - E. Warning lights will be used as directed by the Traffic Engineer.
  - F. All Type I (4') barricades will be a minimum of 36" high and 60" wide. (For Construction Use Only)
  - G. All Type I (8') barricades with wooden legs shall be 2" X 6" wood only.
  - H. All Type I (4') barricades with wooden legs shall be 1" X 8" wood only.
- 2.) Type I Barricades shall not be used for partial and total street closures in construction work zones. Only Type III barricades shall be used for this purpose.
- 3.) Warning lights shall not be mounted on Type I barricades.

(See TxDOT BC-03 Sheets for specific construction information)

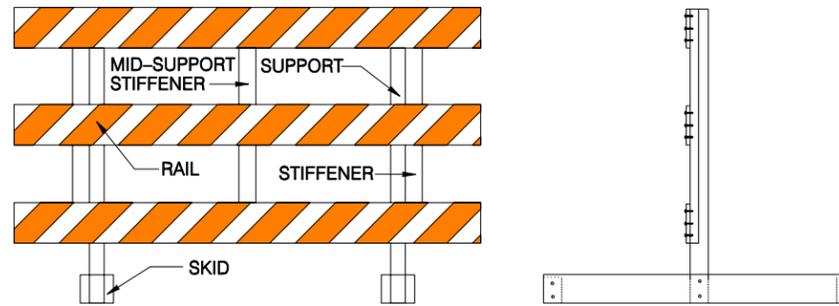
### CONES



- 1.) Base for 28" high cones must weigh at least 9.5 lbs.
- 2.) Night time cones must have reflective collars.

(See TxDOT BC-03 Sheets for specific construction information)

### Type III BARRICADE



- 1.) Only the following Type III barricade shall be used in the City of San Antonio Right-Of-Way.
  - A. Hollow polyvinyl or fiberglass tubing post with 1" X 8" wooden rails.
  - B. Hollow polyvinyl or fiberglass tubing post with plastic rails.
  - C. Skids must be wood or solid plastic only.
  - D. Warning lights shall not be mounted on Type III barricades.

(See TxDOT BC-03 Sheets for specific construction information)

### TEMPORARY MARKINGS

- 1.) Solid double yellow painted lines shall be installed for temporary division of traffic or construction duration longer than five (5) days, with repainting to occur once monthly or at the discretion of the Traffic Engineer. ( All cost of upkeep will be at the contractor's expense.)
- 2.) Solid double yellow tabs, or V/P panels shall be installed for temporary division of traffic for construction duration less than five (5) days, with re-tapping to occur at the discretion of the Traffic Engineer. NAILS SHALL NOT BE USED TO FIX TABS TO CEMENT OR BASE (All cost of upkeep will be at the contractor's expense.)

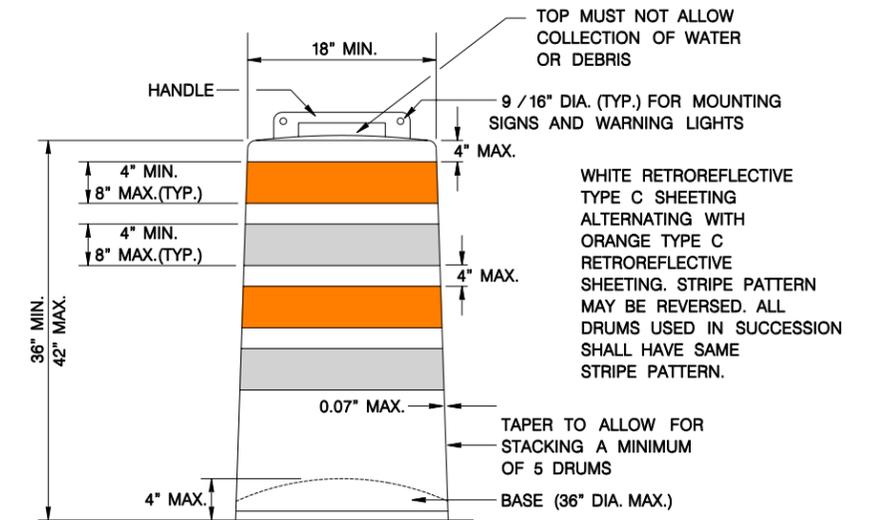
(See TxDOT BC-03 Sheets for specific construction information.)

### TEMPORARY CONCRETE BARRIER

- 1.) All concrete barriers placed on City R.O.W. shall be low profile.
- 2.) No high profile barriers will be allowed.
- 3.) Reflectors will be required on each concrete barrier.

(See TxDOT BC-03 Sheets for specific construction information)

### PLASTIC DRUMS



- 1.) Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
- 2.) Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
- 3.) The Engineer/Inspector shall provide written notice to the Contractor regarding the replacement of drums or other traffic control devices. The Contractor shall have a maximum of 24 hours to replace any plastic drums or other traffic control devices identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.
- 4.) Each drum must have a 40 lb. rubber or plastic snap on.
- 5.) No signs larger than 18" X 24" will be allowed to be mounted on plastic drums.
- 6.) No warning lights will be allowed to be mounted on plastic barrels.
- 7.) In lieu of a warning light, a yellow reflector will be acceptable.

(See TxDOT BC-03 Sheets for specific construction information)

JUNE 2005

CITY OF SAN ANTONIO  
DEPARTMENT OF PUBLIC WORKS

TRAFFIC STANDARDS  
BARRICADE AND CONSTRUCTION  
STANDARDS  
SHEET 3 OF 4

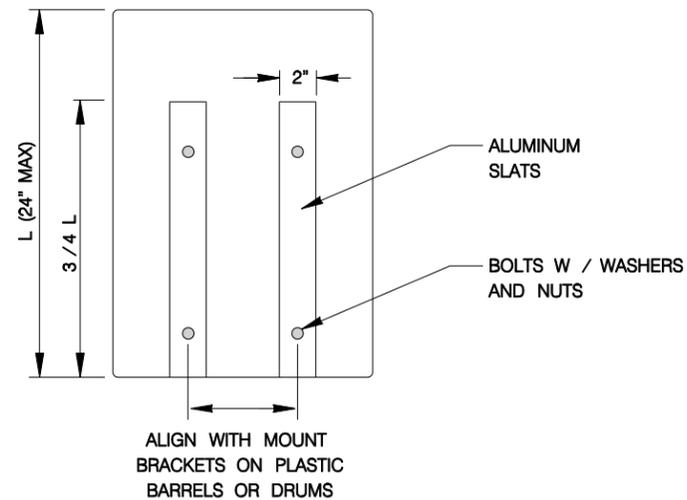
Sheet D13

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY JOHN D. FRIEBELE, #46394 ON 06-20-05 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

DRWN. BY: A.F.G.	DSGN. BY: E.N.M.	CHKD. BY: J.D.F./E.N.M.	SHEET NO.: OF
% SUBMITTAL	PROJECT NO.:	DATE:	

## SIGNS

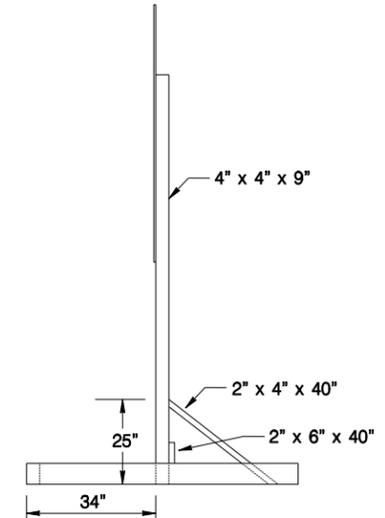
- 1.) A maximum of two signs can be mounted on any one Long / Intermediate Term Stationary Portable Sign Support.
- 2.) 48" X 48" signs shall be mounted separately on the Long / Intermediate Term Stationary Portable Sign Support.
- 3.) For Short Term Stationary Portable Sign Support the distance from the bottom of the vinyl sign to the existing ground must be one (1) foot.
- 4.) Long / Intermediate Term Stationary Portable Signs must be made of wood or plastic only.
- 5.) No signs shall be mounted to any Type I, Type III, or folding barricades.
- 6.) Signs shall be mounted only on TxDOT approved sign supports.
- 7.) Detour signs will be mounted on single "D" legs w / 7' clearance from the bottom of the sign.
- 8.) **WORK DURATION TERMINOLOGY**  
 Long Term Stationary = occupies a location 3 or more days.  
 Intermediate-Term Stationary = occupies a location for overnight to 3 days.  
 Short Term Stationary = daylight work that occupies a location from 1 to 12 hours.  
 Short Duration = occupies a location up to 1 hour.
- 9.) Signs shall adhere to the following requirements:
  - Signs placed on plastic barrels or drums shall be made of ABS plastic or plywood.
  - Signs placed on skids shall be made of plywood or aluminum.
  - Aluminum signs shall have a minimum thickness of 0.08".
  - Plywood signs shall have a minimum thickness of 1 / 2".
  - ABS Plastic signs shall have a minimum thickness of 0.13".  
 Plastic signs cannot exceed 18" by 24" in size and shall be reinforced with 2" wide, 0.08" thick aluminum slats, as depicted below:



- No other material shall be accepted without the express written approval of the Traffic Engineer.

(See TxDOT BC-03 Sheets for specific construction information.)

## LONG TERM / INTERMEDIATE TERM SIGN SUPPORT



- 1.) 48" X48" signs must be mounted independently.
- 2.) A maximum of two signs can be mounted on any one long term / intermediate sign support.
- 3.) Sand bag all sign supports.
- 4.) Distance from the bottom of the sign to the existing ground shall be 7'.
- 5.) Distance from the header barricade rail to the face of the sign panel shall be 2' min. and 10' max.
- 6.) Steel tripods shall not be allowed.

(See TxDOT BC-03 Sheets for specific construction information)

JUNE 2005

CITY OF SAN ANTONIO  
DEPARTMENT OF PUBLIC WORKS

TRAFFIC STANDARDS  
**BARRICADE AND CONSTRUCTION STANDARDS**  
SHEET 4 OF 4

**Sheet D12**

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY JOHN D. FRIEBELE, #46394 ON 06-20-06 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: A.F.G.	DSGN. BY: E.N.M.	CHKD. BY: J.D.F./E.N.M.
SHEET NO.:		OF