



**PERMIT APPLICATION REVIEW FORM FOR  
CABLE, CONDUIT, AND POLE LINE ACTIVITY  
IN FORT BEND COUNTY**

**Fort Bend County  
Engineering Department**  
301 Jackson Suite 401  
Richmond, Texas 77469  
281.633.7500  
[Permits@fortbendcountytx.gov](mailto:Permits@fortbendcountytx.gov)

- ☒ **Right of Way Permit**  
☐ **Commercial Driveway Permit**

Permit No: 2017-15756

The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

**(1) COMPLETE APPLICATION FORM:**

- ☒ a. Name of road, street, and/or drainage ditch affected.  
☒ b. Vicinity map showing course of directions  
☒ c. Plans and specifications

**(2) BOND:**

- ☐ County Attorney, approval when applicable.
- ☒ Perpetual bond currently posted.      Bond No: [REDACTED]      Amount: \$50,000.00
- ☐ Performance bond submitted.      Bond No: \_\_\_\_\_      Amount: \_\_\_\_\_
- ☐ Cashier's Check      Check No: \_\_\_\_\_      Amount: \_\_\_\_\_

**(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):**

\_\_\_\_\_  
Drainage District Approval

\_\_\_\_\_  
Date

**We have reviewed this project and agree it meets minimum requirements.**

*Charles O. Ay*

\_\_\_\_\_  
Permit Administrator

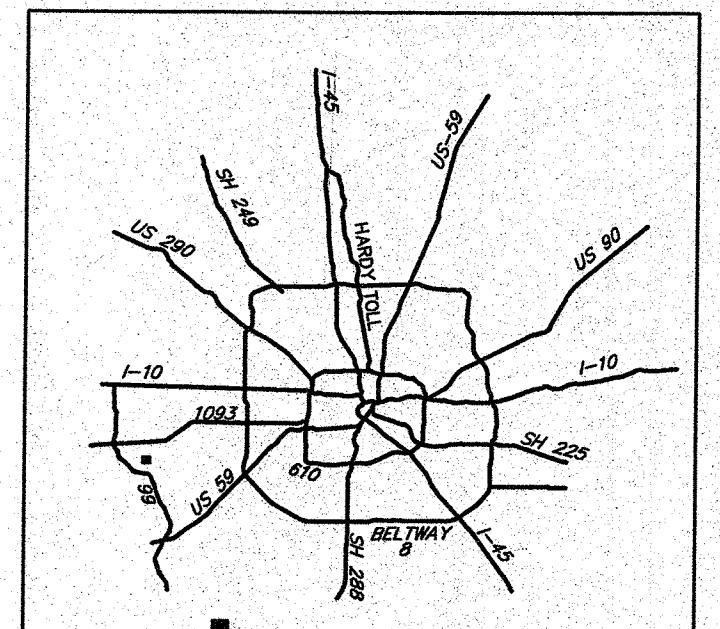
\_\_\_\_\_  
Date





# CONSTRUCTION OF SANITARY, DRAINAGE & PAVING FACILITIES FOR STONECREEK ESTATES DRIVE FOR FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT No. 184

CEIV  
JUN 29 2017  
UN 29 2017



F.B.C.M.U.D.  
No. 184

## INDEX OF DRAWINGS

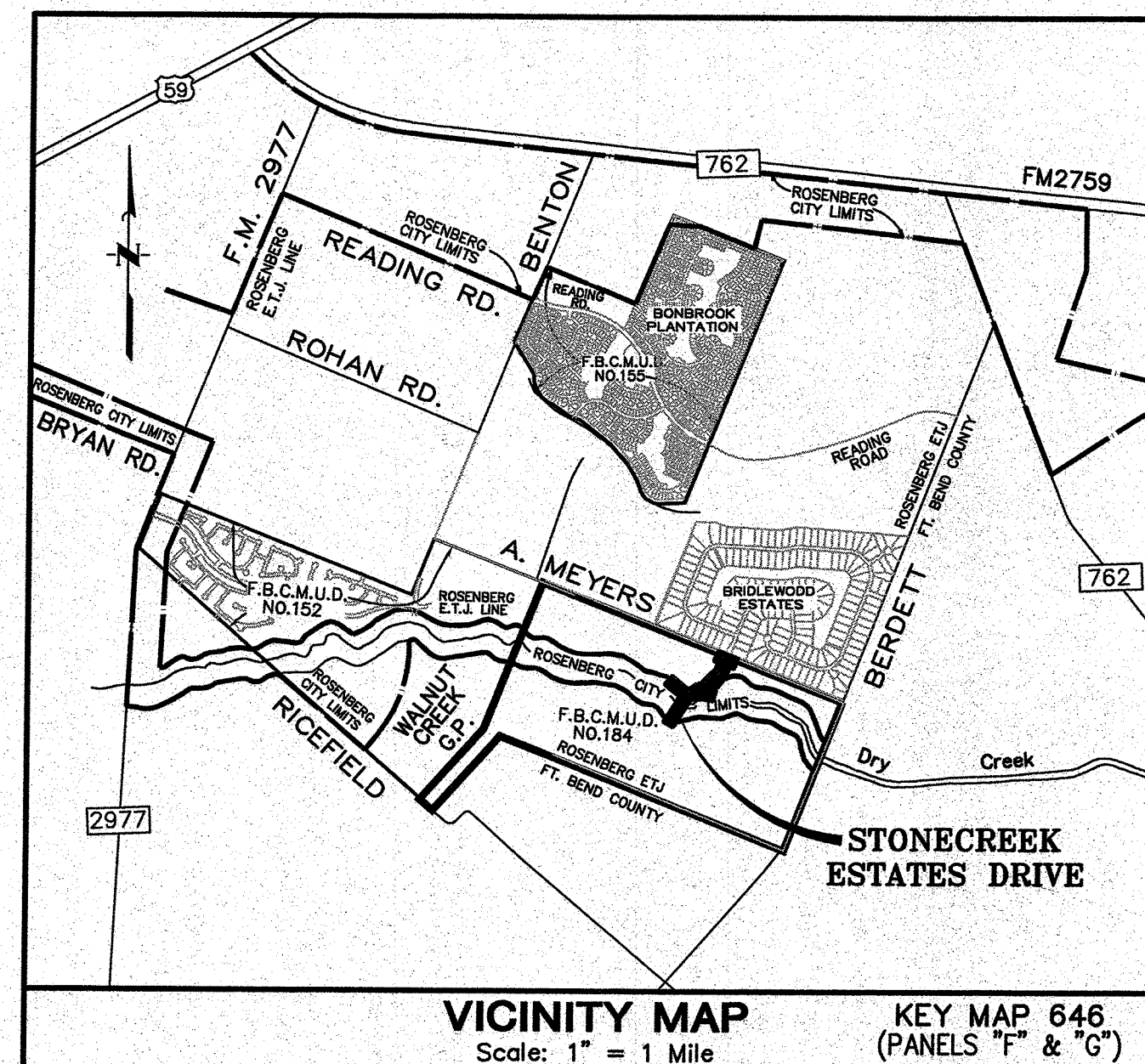
SHEET No.	TITLE
1	COVER SHEET & INDEX
2	GENERAL CONSTRUCTION LAYOUT - SANITARY SEWER
3	GENERAL CONSTRUCTION LAYOUT - PAVING & DRAINAGE
4	GENERAL CONSTRUCTION LAYOUT - SIGNING & PAVEMENT MARKING PLAN
5	STORM DRAINAGE TABLES
6	CONSTRUCTION NOTES

## PLAN & PROFILE

STREET NAME	STATION
7 OFFSITE SANITARY	0+00 TO 5+00
8 OFFSITE SANITARY	0+00 TO 9+00
9 STONECREEK ESTATES DRIVE	3+50 TO 14+48.57
9A A. MYERS ROAD	0+00 TO 2+00
10 A. MYERS ROAD	2+00 TO 6+50
11 A. MYERS ROAD	6+50 TO 11+00
12 A. MYERS ROAD	11+00 TO 15+50
13 A. MYERS ROAD	15+50 TO 19+34

## DETAILS

14	TRAFFIC CONTROL PLAN
15	SANITARY SEWER DETAILS
16	STORM SEWER DETAILS
17	OUTFALL DETAILS
18	PAVING DETAILS
19	PAVEMENT MARKING DETAILS
20	GRADING PLAN
21	STORM WATER POLLUTION PREVENTION PLAN
22	STORM WATER POLLUTION PREVENTION PLAN DETAILS
23	TxDOT PED-12 DETAILS



VICINITY MAP  
Scale: 1" = 1 Mile

KEY MAP 646  
(PANELS "F" & "G")

## NOTES:

These plans were prepared to meet or exceed the specifications and requirements of City of Rosenberg and Fort Bend County as currently amended.

Approval by Fort Bend County and City of Rosenberg will be deemed void if construction has not begun within one year of approval date.

Construction shall not begin before the plat of this section is filed in the Fort Bend County Map Records.

Construction will be monitored under the supervision of a licensed professional engineer of JONES & CARTER, INC.

Contractor shall notify the Fort Bend County Engineering Department at least 48 hours prior to commencement at 281-633-7500 and construction@fortbendcountytx.gov.

I, John D. Barcellona, a Professional Engineer licensed in the State of Texas do hereby certify that these plans were prepared under my supervision to meet or exceed the specifications and requirements of Fort Bend County, Texas.

*John D. Barcellona*  
John D. Barcellona, P.E.  
6-19-17  
Date

TEXAS811 NOTIFICATION SYSTEM  
CALL BEFORE YOU DIG!!!  
www.texas811.org/  
1-800-344-8377

## FORT BEND COUNTY ENGINEER

ENGINEER: *Rick J. Stangor* P.E., P.O.E.  
for RICHARD W. STOLLIS, P.E.

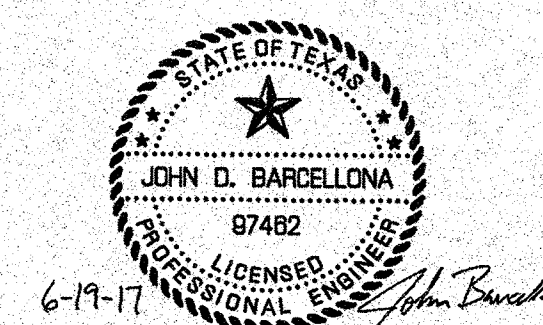
DATE: 7/14/17  
THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT COMMENCED IN ONE (1) YEAR FROM DATE OF APPROVAL.

APPROVED: *Massi D. J.*  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

JUNE 2017

**J/C JONES & CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000



*John Maresh*  
John Maresh, City Manager  
7-10-2017  
Date

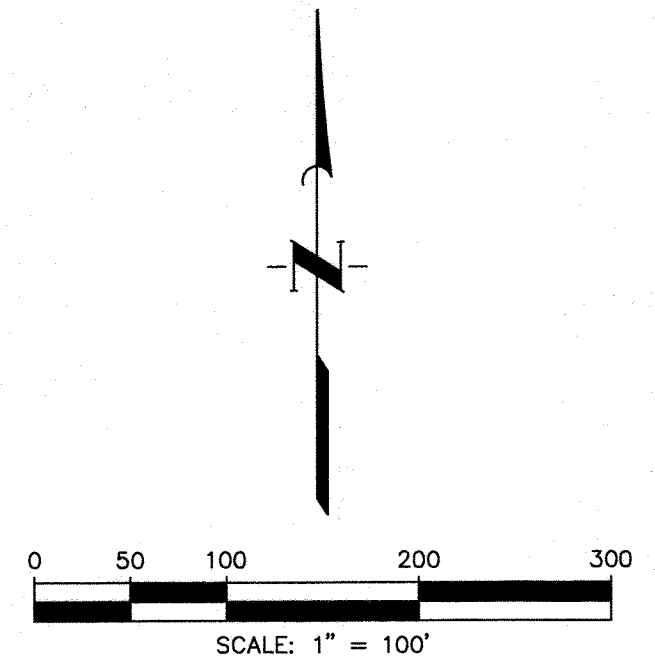
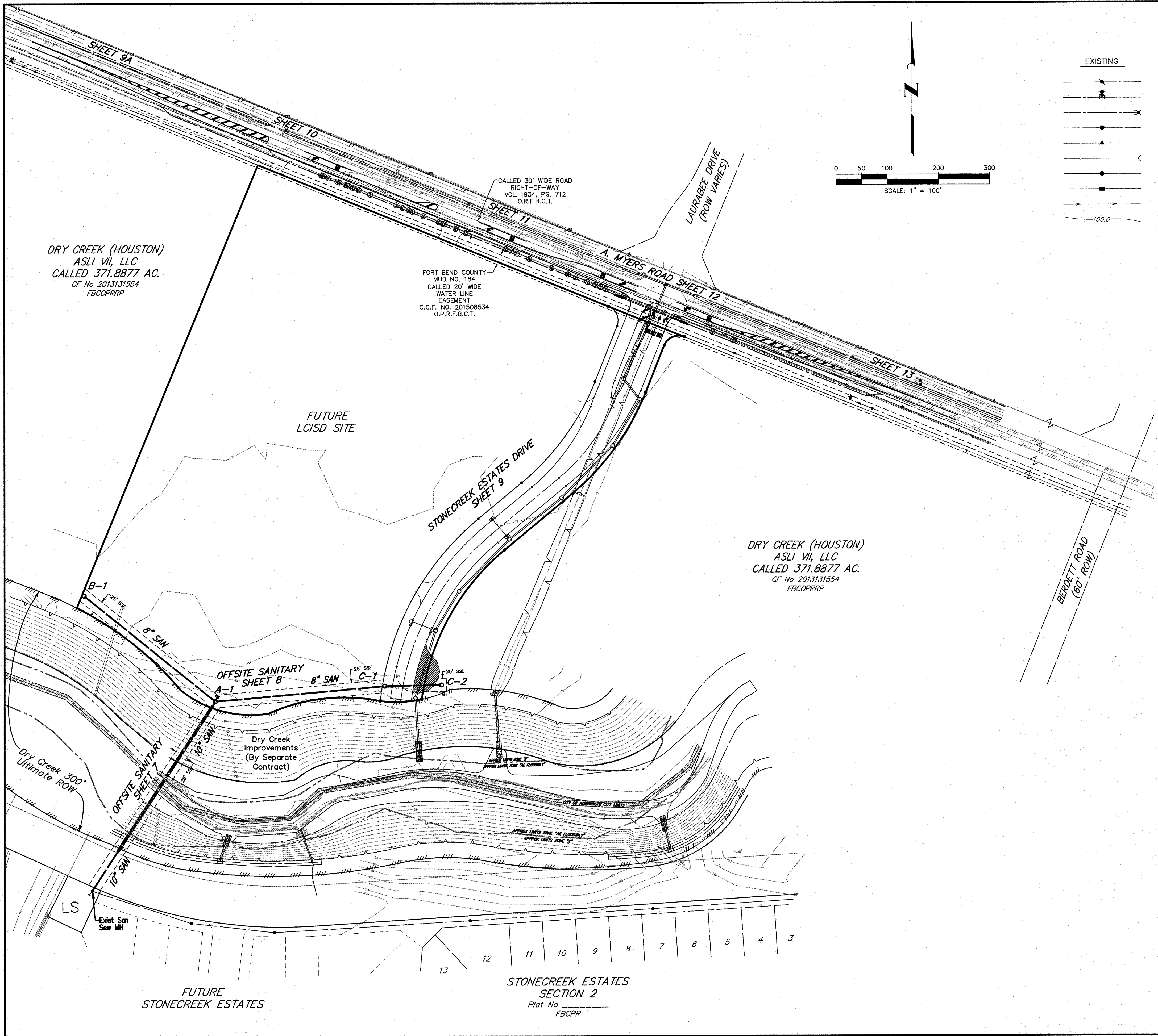
*Charles M. Eastland*  
Charles M. Eastland, P.E., City Engineer  
7/6/17  
Date

STONECREEK ESTATES DRIVE - SANITARY, DRAINAGE & PAVING FACILITIES

J/C JONES & CARTER  
KATY, TEXAS

SHEET No.  
1  
OF 23





**LEGEND**

EXISTING	PROPOSED	
		WATERLINE w/ GATE VALVE
		FLUSH VALVE w/ GATE VALVE
		PLUG & CLAMP w/ BLOW OFF
		SANITARY SEWER w/ MANHOLE
		SANITARY STACK
		SANITARY LEAD
		STORM SEWER w/ MANHOLE
		STORM SEWER w/ INLET
		SWALE CENTERLINE
		NATURAL GROUND CONTOUR
		UTILITY EASEMENT
		WATERLINE EASEMENT
		SANITARY SEWER EASEMENT
		STORM SEWER EASEMENT
		DRAINAGE EASEMENT
		AERIAL EASEMENT

**BENCH MARK**  
Elevations shown hereon are based upon GPS observations calibrated to the published values of HGCS 71, and HGCS 72 (NAVD 88).

**T.B.M.**  
Being a set mag nail. Located in an asphalt driveway off of Berdett Road. Elevation = 77.55' (NAVD88).

**100 YR. FLOOD PLAIN**  
This tract lies within Zone "X" of the Flood Insurance Rate Map, Community No. 480228, Map Number 48157C0265L, Panel 0265, Suffix "L" dated April 2, 2014, for Fort Bend County, Texas and incorporated areas. Zone "X" is defined as areas determined to be outside the 0.2% annual chance floodplain.

APPROVED: DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

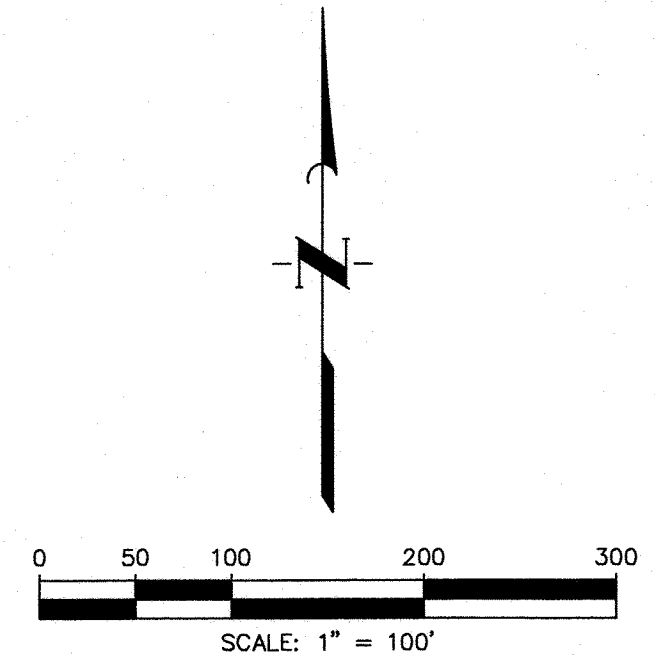
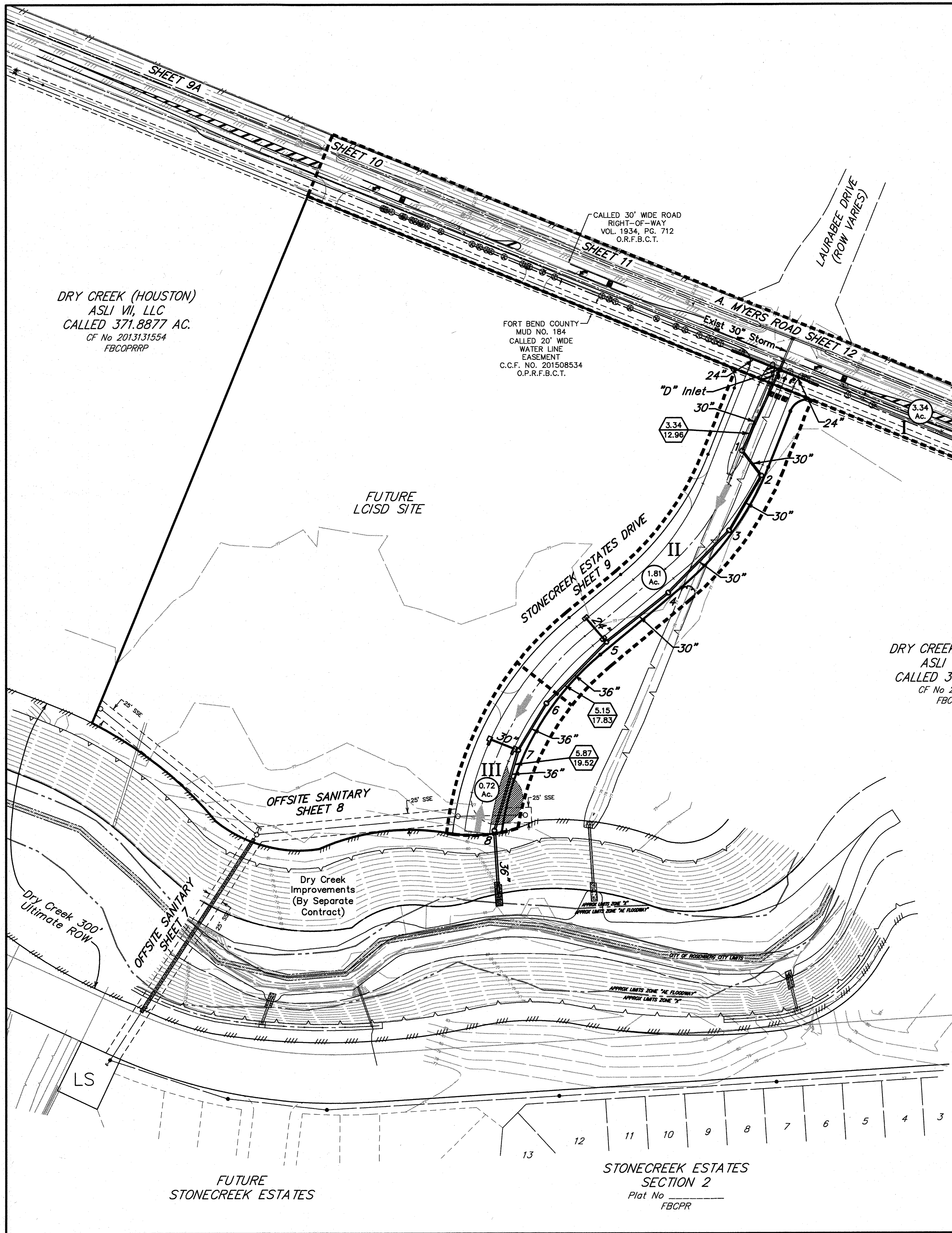
STONECREEK ESTATES DRIVE  
GENERAL CONSTRUCTION LAYOUT  
SANITARY SEWER

**JC JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=100' DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO.   
SUBMITTED: SURV. BY:   
F.B. NO.

SHEET NO. 2 OF 23





LEGEND

- | EXISTING | PROPOSED |                           |
|----------|----------|---------------------------|
|          |          | WATERLINE w/ GATE VALVE   |
|          |          | FLUSH VALVE w/ GATE VALVE |
|          |          | PLUG & CLAMP w/ BLOW OFF  |
|          |          | SANITARY SEWER w/ MANHOLE |
|          |          | SANITARY STACK            |
|          |          | SANITARY LEAD             |
|          |          | STORM SEWER w/ MANHOLE    |
|          |          | STORM SEWER w/ INLET      |
|          |          | SWALE CENTERLINE          |
|          |          | NATURAL GROUND CONTOUR    |
|          |          | UTILITY EASEMENT          |
|          |          | WATERLINE EASEMENT        |
|          |          | SANITARY SEWER EASEMENT   |
|          |          | STORM SEWER EASEMENT      |
|          |          | DRAINAGE EASEMENT         |
|          |          | AERIAL EASEMENT           |
- 
- |   |  |                        |
|---|--|------------------------|
| INLET                                       |  | DRAINAGE AREA IN ACRES |
| STORM SEWER                                 |  | RUNOFF IN C.F.S.       |
| <hr style="border-top: 1px dashed black;"/> |  |                        |
| VII   |  | DRAINAGE AREA LINE     |
| <hr style="border-top: 1px solid black;"/>  |  |                        |
| DRAINAGE AREA NUMBER                        |  |                        |
| EXTREME EVENT SHEET FLOW                    |  |                        |

**BENCH MARK**  
Elevations shown hereon are based upon GPS observations collated to the published values of HGCS 71, and HGCS 72 (NAVD 88).

**T.B.M.**  
Being a set mag nail. Located in an asphalt driveway off of Berdett Road. Elevation = 77.55' (NAVD88).

**100 YR. FLOOD PLAIN**  
This tract lies within Zone "X" of the Flood Insurance Rate Map, Community No. 480228, Map Number 48157C0265L, Panel 0265, Suffix "L" dated April 2, 2014, for Fort Bend County, Texas and incorporated areas. Zone "X" is defined as areas determined to be outside the 0.2% annual chance floodplain.

AREA DESCRIPTION	AREA (acre)	DETENTION REQUIRED (acre-feet)	DETENTION PROVIDED (acre-feet)
Phase I			
Stonecreek Estates Sec 1	76.47	14.53	
Section 1 Dry Creek Improvement	10.76	2.04	
Phase I Subtotal	87.23	16.57	19.56
Phase II			
Stonecreek Estates Sec 2	12.12	2.30	
Stonecreek Estates Sec 3	52.66	10.01	
LCISD Site & Collector Road	18.14	3.45	
Section 2 Dry Creek Improvement	8.35	1.59	
Phase II Subtotal	91.27	17.34	21.51
Total	178.5	33.92	41.07

DETENTION SOURCE	VOLUME PROVIDED (acre-feet)	SERVICEABLE AREA (acre)
Section 1 Dry Creek Improvement	19.56	102.95
Section 2 Dry Creek Improvement	21.51	113.19
Total	41.07	216.14
Excess (Phase I & Phase II)	7.15	37.64

Note  
1- Per approved Drainage Analysis for 502.6-Acre Stonecreek Development on Dry Creek dated June 2, 2014. Approved by Fort Bend County Drainage District on June 18, 2014

\*NOTE: DETENTION RATE IS ACHIEVED DUE TO THE TIMING OF THE DEVELOPED FLOWS FROM STONECREEK RELATIVE TO UPSTREAM PEAK FLOWS IN DRY CREEK. PEAK FLOWS FROM STONECREEK RELEASE AND REACH SMITH'S LAKE BEFORE FLOWS FROM UPPER PORTIONS OF DRY CREEK REACH THE STONECREEK DEVELOPMENT.

APPROVED: DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE  
GENERAL CONSTRUCTION LAYOUT  
PAVING & DRAINAGE

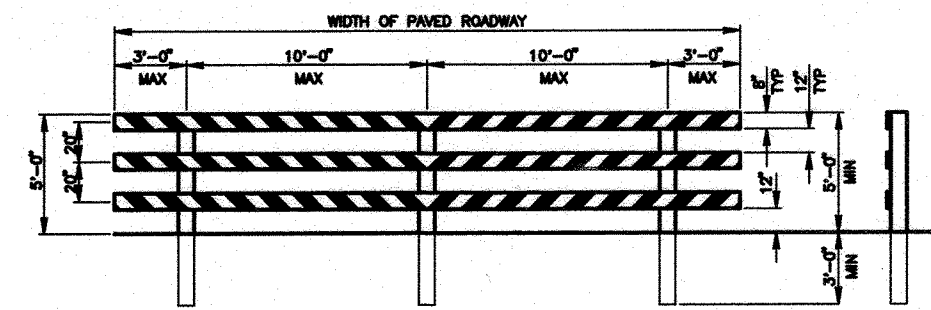
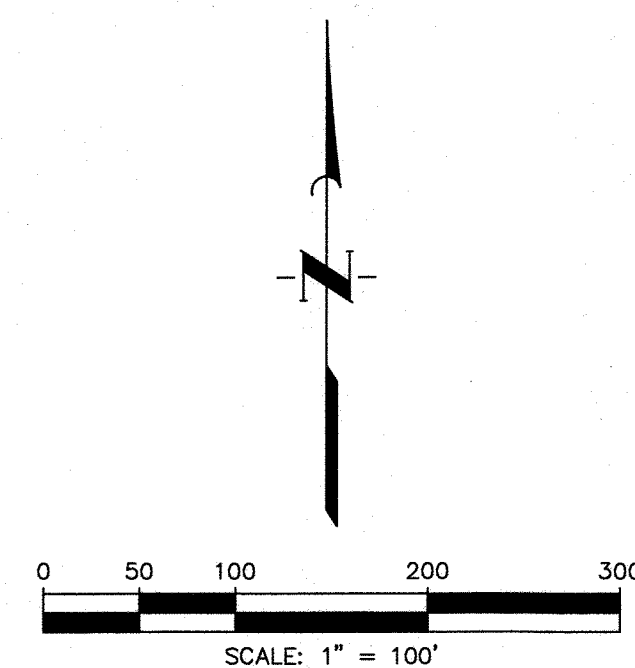
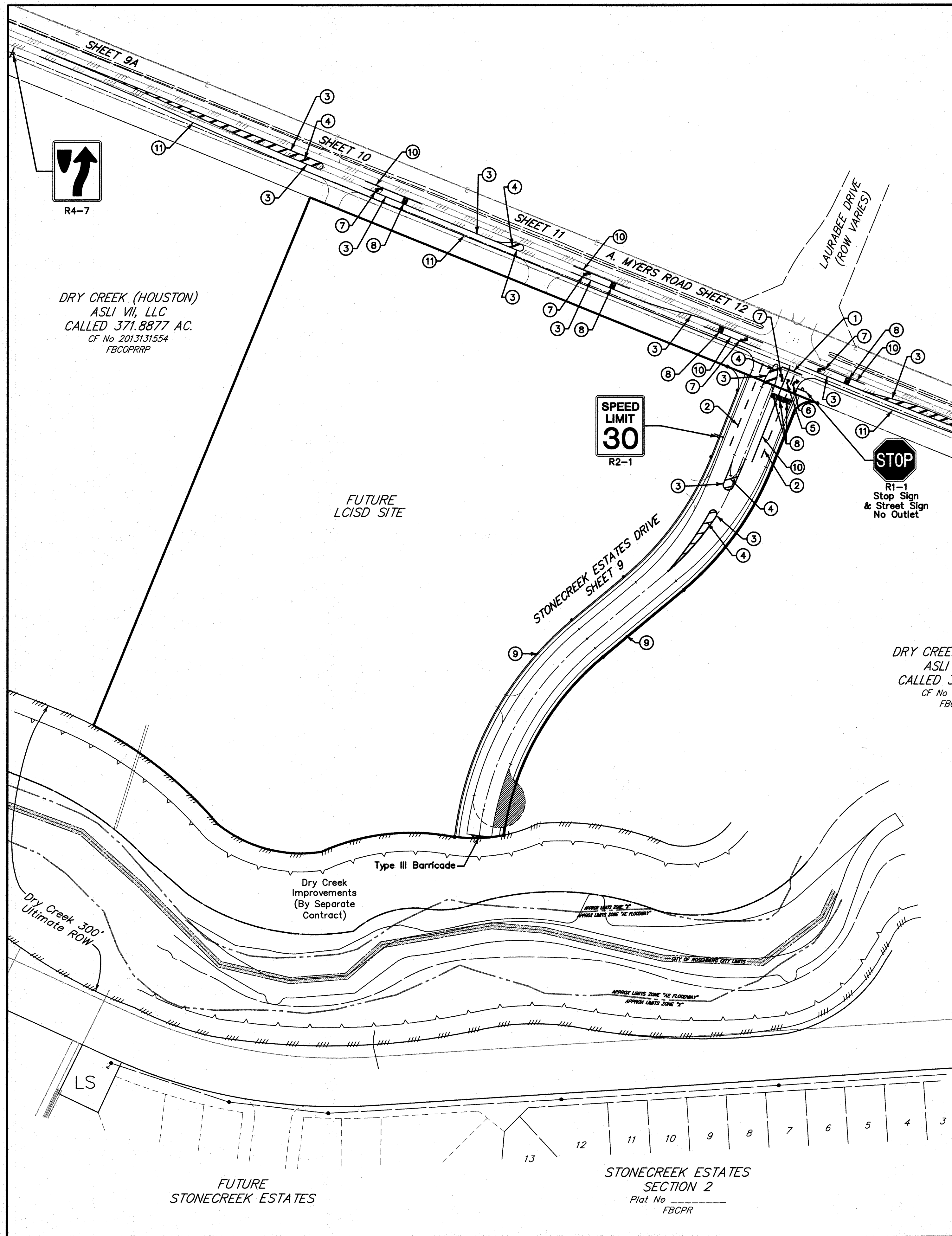
**JC JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=100' DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
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SUBMITTED: SURV. BY:   
F.B. NO.

6/19/17

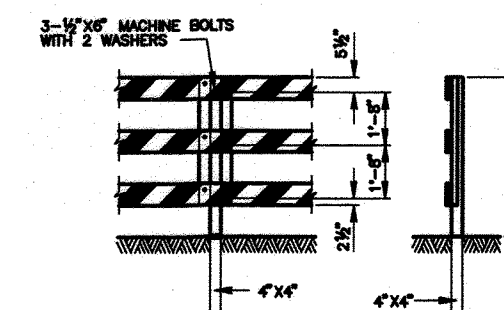
SHEET NO.  
3  
OF 23





TYPE III BARRICADE  
FOR END OF ROAD

FOR TYPE III BARRICADE FOR END OF ROAD, THE THREE (3) PAIRS SHALL BE REFLECTIVE RED AND REFLECTIVE WHITE STRIPES WITH DIAMOND GRADE SHEETING ON SIDE FACING TRAFFIC.



POST FOR  
TYPE III BARRICADE

# LEGEND

- 1 STOP SIGN WITH STREET NAME SIGN
- 2 TYPE III BARRICADE
- 3 6" CURB
- 4 7" CONC PAVEMENT
- 5 ASPHALT PAVEMENT
- 6 24" SOLID WHITE LINE (Thermoplastic)
- 7 4" DASHED LINE
- 8 4" SOLID DOUBLE YELLOW LINE
- 9 24" WIDE SOLID YELLOW LINE @ 20' C-C @ 45°
- 10 STRAIGHT ONLY ARROW
- 11 RIGHT TURN ARROW
- 12 LEFT TURN ARROW
- 13 WORD "ONLY"
- 14 5' CONCRETE SIDEWALK
- 15 8" SOLID WHITE
- 16 4" SOLID WHITE

## BENCH MARK

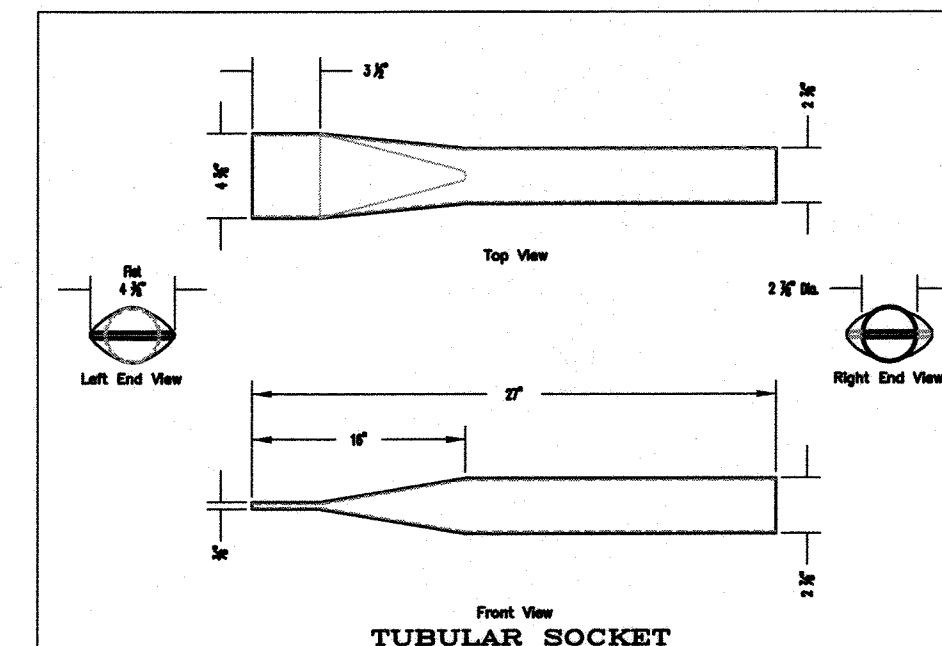
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## T.B.M.

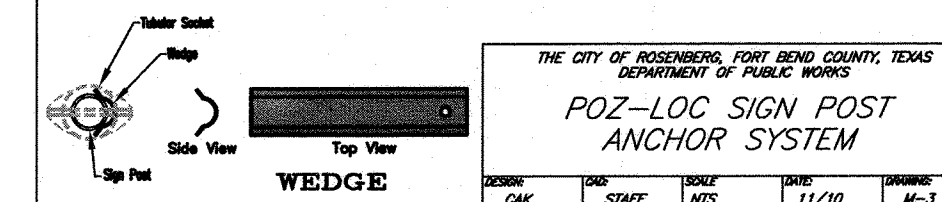
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## 100 YR. FLOOD PLAIN

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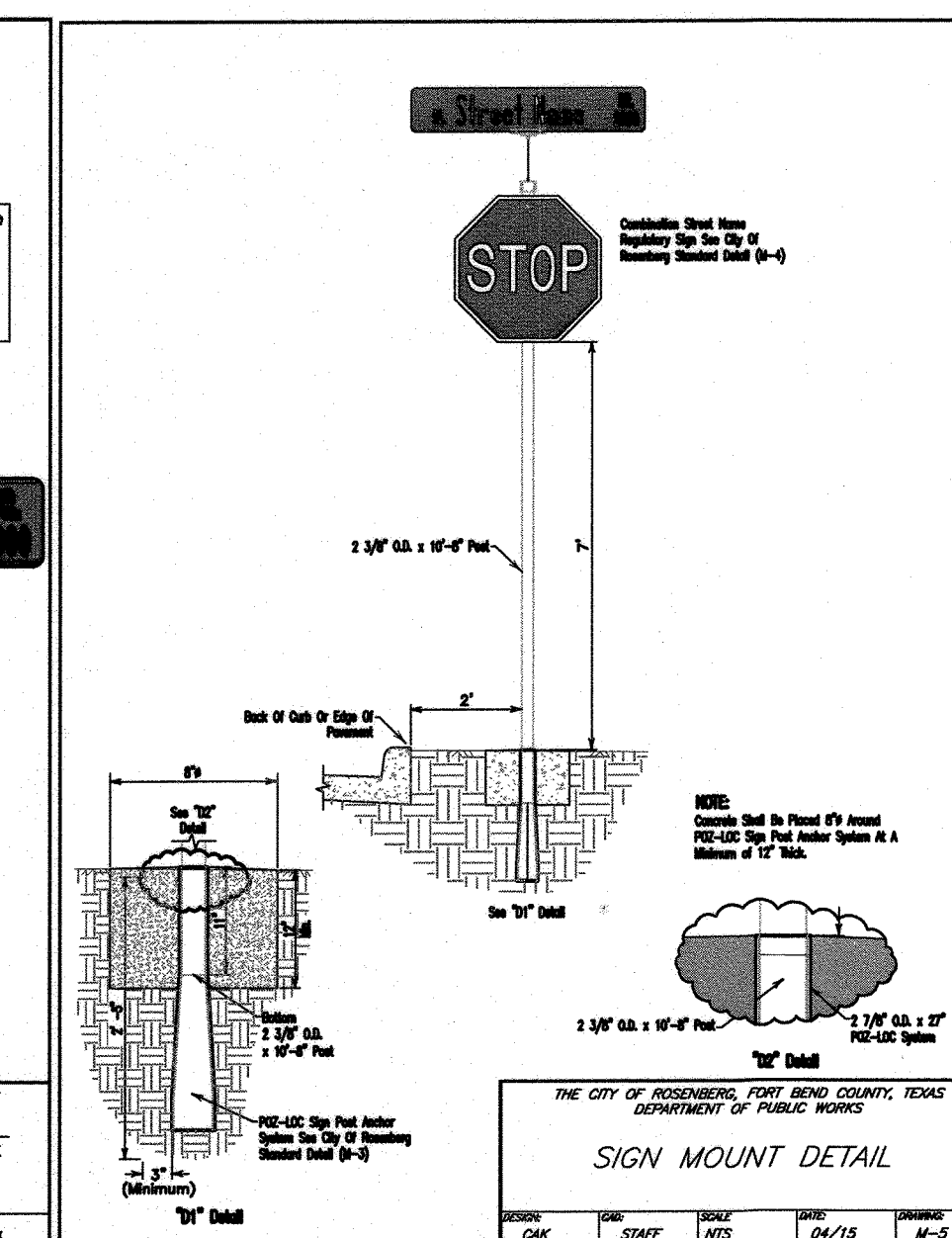
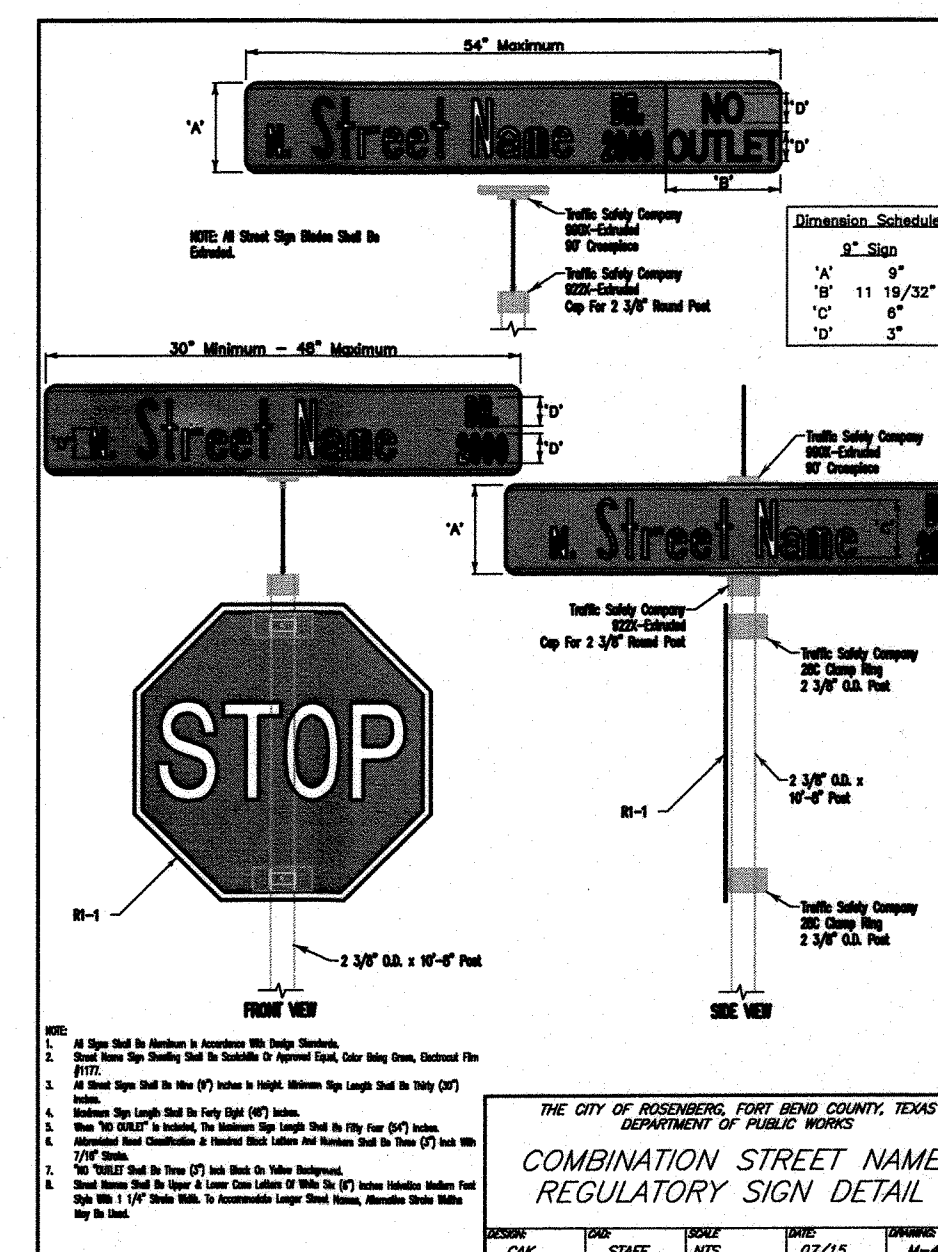


- NOTE:
- POZ-LOC Sign Post Anchor System consists of a Galvanized Traffic Post (2 3/4" O.D.) that may be ordered with Sign Bracket or with Pre-Punched 15 Hole Pattern, Tubular Socket (2 3/4" O.D. x 27" Long 12 Ga. Wall Thickness), Wedge (Locks Traffic Post into Tubular Socket).
  - POZ-LOC Anchor System Tools needed to install or remove are Socket Driver, Drive Cap, and Wedge Puller.
  - To install POZ-LOC Anchor System, with Drive Cap in place on end of Drive Socket, drive the Tubular Socket into ground (orient flat end of socket parallel to sign face) using the Socket Driver (or mechanical hammer). Insert Sign Post into Tubular Socket and orient sign to roadway. Insert POZ-LOC Wedge with hole up, between Traffic Post and the Tubular Socket interior and drive the Wedge until the bottom of the hole is within 4" (four inches) of the Tubular Socket Rim. The Wedge Puller can be used to pull the Wedge needs to be removed by inserting it between Sign Post and Tubular Socket and driving it out.



APPROVED: *Massi D.* DEVELOPMENT COORDINATOR

DATE: 7/14/17



NO.	DATE	REVISIONS	APP.
1	7/14/17		

FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE  
GENERAL CONSTRUCTION LAYOUT  
SIGNING & PAVEMENT  
MARKING PLAN

**J/C JONES CARTER**  
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SUBMITTED: SURV. BY:  
F.B. NO.

STATE OF TEXAS  
JOHN D. BARRELLONA  
97462  
LICENSED PROFESSIONAL ENGINEER

6/19/17

SHEET NO. 4 OF 23



3 YEAR																															
Manhole From	Manhole To	Contributing Area (Acres)	Total Area (Acres)	Runoff Coefficient C	Sum of C*A	Intensity (in/hr)			Flow (ft <sup>3</sup> /s)		Time of Concentration (mins)	Pipe Length (feet)	Pipe Diameter or Rise (in)	Box Span (in)	Slope (%)	Mannings "n"	Design Capacity (cfs)	Design Velocity (ft/sec)	Fall (feet)	Flowline Elevation Upstream (feet)	Flowline Elevation Downstream (feet)	Actual Velocity (ft/sec)	Hydraulic Gradient (%)	Change in Head (feet)	Elevation of Hyd. Grad. Upstream (feet)	Elevation of Hyd. Grad. Downstream (feet)	Top of Curb Upstream (feet)	Gutter Elevation Upstream (feet)	HGL ABOVE / BELOW GUTTER		
						3 yr	100 yr	3 yr	100 yr	3 yr																				100 yr	
STONECREEK ESTATES DRIVE																															
Stub	D inlet	3.34	3.34	0.65	2.2	5.98	11.63	12.97	25.26	10.00	0.02	17	30		3.00	0.013	71.04	14.47	0.51	74.66	7415	2.64	0.10	0.02	77.16	76.35	79.58	79.08	GOOD	-1.92	
D inlet	1	3.34	3.34	0.65	2.2	5.97	11.63	12.96	25.24	10.02	0.81	147	30		0.13	0.013	14.79	3.01	0.19	69.37	6918	2.64	0.10	0.15	76.35	76.20	79.60	79.10	GOOD	-2.75	
1	2	0.00	3.34	0.65	2.2	5.79	11.34	12.96	25.24	10.83	0.29	52	30		0.13	0.013	14.79	3.01	0.07	69.18	6911	2.64	0.10	0.05	76.20	76.15	79.72	79.22	GOOD	-3.02	
2	3	0.00	3.34	0.65	2.2	5.73	11.24	12.96	25.24	11.12	0.58	105	30		0.13	0.013	14.79	3.01	0.14	69.11	68.98	2.64	0.10	0.10	76.15	76.05	79.56	79.06	GOOD	-2.91	
3	4	0.00	3.34	0.65	2.2	5.61	11.05	12.96	25.24	11.70	0.80	144	30		0.13	0.013	14.79	3.01	0.19	68.98	68.79	2.64	0.10	0.14	76.05	75.90	78.87	78.37	GOOD	-2.32	
4	5	0.00	3.34	0.65	2.2	5.46	10.80	12.96	25.24	12.50	0.72	130	30		0.13	0.013	14.79	3.01	0.17	68.79	68.62	2.64	0.10	0.13	75.90	75.77	77.96	77.46	GOOD	-1.56	
5	6	1.81	5.15	0.65	3.3	5.33	10.58	17.83	35.43	13.22	0.76	142	36		0.11	0.013	22.12	3.13	0.16	68.12	67.96	2.52	0.07	0.10	75.77	75.67	77.10	76.60	GOOD	-.83	
6	7		5.15	0.65	3.3	5.19	10.37	17.83	35.43	13.97	0.48	90	36		0.11	0.013	22.12	3.13	0.10	67.96	67.86	2.52	0.07	0.06	75.67	75.61	77.40	76.90	GOOD	-1.23	
CI	CI	0.36	0.36	0.65	0.2	5.98	11.63	1.40	2.72	10.00	0.07	40	30		1.25	0.013	45.86	9.34	0.50	71.60	71.10	0.28	0.00	0.00	75.60	75.60	77.10	76.60	GOOD	-1.00	
CI	7	0.36	0.72	0.65	0.5	5.96	11.61	2.79	5.43	10.07	0.01	8	30		1.89	0.013	56.39	11.49	0.15	71.10	70.95	0.57	0.00	0.00	75.60	75.60	77.10	76.60	GOOD	-1.00	
7	8	0.72	5.87	0.65	3.8	5.12	10.24	19.52	39.05	14.45	0.73	138	36		0.11	0.013	22.12	3.13	0.15	67.86	67.71	2.76	0.09	0.12	75.61	75.49	77.10	76.60	GOOD	-.99	
8	Outfall	0.00	5.87	0.65	3.8	5.00	10.04	19.52	39.05	15.19	0.55	104	36		0.11	0.013	22.12	3.13	0.11	65.20	65.09	2.76	0.09	0.09	75.49	75.40	79.00				

100 YEAR																														
Manhole From	Manhole To	Contributing Area (Acres)	Total Area (Acres)	Runoff Coefficient C	Intensity (in/hr)			Flow (ft <sup>3</sup> /s)		Time of Concentration (mins)	Pipe Length (feet)	Pipe Diameter or Rise (in)	Box Span (in)	Slope (%)	Mannings "n"	Design Capacity (cfs)	Design Velocity (ft/sec)	Fall (feet)	Flowline Elevation Upstream (feet)	Flowline Elevation Downstream (feet)	Actual Velocity (ft/sec)	Hydraulic Gradient (%)	Change in Head (feet)	Elevation of Hyd. Grad. Upstream (feet)	Elevation of Hyd. Grad. Downstream (feet)	Top of Curb Upstream (feet)	Outer Elevation Upstream (feet)		HGL ABOVE / BELOW GUTTER	
					3 yr	100 yr	3 yr	100 yr	3 yr																					100 yr
STONECREEK ESTATES DRIVE																														
Stub	D Inlet	3.34	3.34	0.65	2.2	5.98	11.63	12.97	25.26	10.00	17	30		3.00	0.013	71.04	14.47	0.51	74.66	74.15	5.15	0.38	0.06	79.14	79.07	79.58	79.08	GOOD	+06	
D Inlet	1	0.00	3.34	0.65	2.2	5.97	11.63	12.96	25.24	10.02	147	30		0.13	0.013	14.79	3.01	0.19	69.37	69.18	5.14	0.38	0.56	79.07	78.52	79.60	79.10	GOOD	-03	
1	2	0.00	3.34	0.65	2.2	5.79	11.34	12.96	25.24	10.83	52	30		0.13	0.013	14.79	3.01	0.07	69.18	69.11	5.14	0.38	0.20	78.52	78.32	79.72	79.22	GOOD	-70	
2	3	0.00	3.34	0.65	2.2	5.73	11.24	12.96	25.24	11.12	105	30		0.13	0.013	14.79	3.01	0.14	69.11	68.98	5.14	0.38	0.40	78.32	77.92	79.56	79.06	GOOD	-74	
3	4	0.00	3.34	0.65	2.2	5.61	11.05	12.96	25.24	11.70	144	30		0.13	0.013	14.79	3.01	0.19	68.98	68.79	5.14	0.38	0.55	77.92	77.38	78.87	78.37	GOOD	-45	
4	5	0.00	3.34	0.65	2.2	5.46	10.80	12.96	25.24	12.50	130	30		0.13	0.013	14.79	3.01	0.17	68.79	68.62	5.14	0.38	0.49	77.38	76.88	77.96	77.46	GOOD	-08	
5	6	1.81	5.15	0.65	3.3	5.33	10.58	17.83	35.43	13.22	142	36		0.11	0.013	22.12	3.13	0.16	68.12	67.96	5.01	0.28	0.40	76.88	76.48	77.10	76.60	GOOD	+28	
6	7		5.15	0.65	3.3	5.19	10.37	17.83	35.43	13.97	90	36		0.11	0.013	22.12	3.13	0.10	67.96	67.86	5.01	0.28	0.25	76.48	76.23	77.40	76.90	GOOD	-42	
CI	CI	0.36	0.36	0.65	0.2	5.98	11.63	1.40	2.72	10.00	40	30		1.25	0.013	45.86	9.34	0.50	71.60	71.10	0.55	0.00	0.00	76.22	76.22	77.10	76.60	GOOD	-38	
CI	7	0.36	0.72	0.65	0.5	5.96	11.61	2.79	5.43	10.07	8	30		1.89	0.013	56.39	11.49	0.15	71.10	70.95	1.11	0.02	0.00	76.22	76.22	77.10	76.60	GOOD	-38	
7	8	0.72	5.87	0.65	3.8	5.12	10.24	19.52	39.05	14.45	138	36		0.11	0.013	22.12	3.13	0.15	67.86	67.71	5.52	0.34	0.47	76.23	75.76	77.10	76.60	GOOD	-37	
8	Outfall	0.00	5.87	0.65	3.8	5.00	10.04	19.52	39.05	15.19	104	36		0.11	0.013	22.12	3.13	0.11	65.20	65.09	5.52	0.34	0.36	75.76	75.40	79.00				
Extreme Event Analysis (Sta. 6+47)																														
CI	CI	0.36	0.36	0.65	0.2	5.98	11.63	1.40	11.17	10.00	40	30		1.25	0.013	45.86	9.34	0.50	71.60	71.10	2.28	0.07	0.03	76.27	76.24	77.10			0.83	
CI	7	0.36	0.72	0.65	0.5	5.96	11.61	2.79	22.33	10.07	8	30		1.89	0.013	56.39	11.49	0.15	71.10	70.95	4.55	0.30	0.02	76.24	76.22	77.10			0.86	
3-year flow of drainage area III plus 9.77																														

APPROVED: Maxi D  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

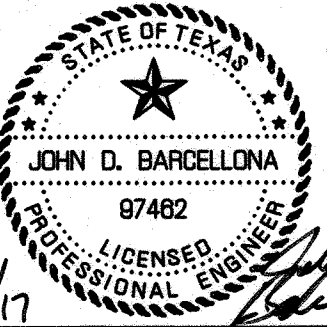
FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

STORM DRAINAGE TABLES

**JC JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=100' DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO.   
SUBMITTED: SURV. BY:   
F.B. NO.

  
6/14/17

SHEET NO.  
**5**  
OF 23



## GENERAL CONSTRUCTION NOTES

- WASTEWATER COLLECTION SYSTEMS, WATER, PAVING, TRAFFIC SIGNALS AND DRAINAGE SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING CITY DOCUMENTS. THESE DOCUMENTS ARE "DESIGN STANDARDS", "APPENDIX G - APPROVED PRODUCTS LIST", & STANDARD CONSTRUCTION DETAILS. THESE DOCUMENTS MAY BE OBTAINED FROM THE CITY OF ROSENBERG.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING PUBLIC OR PRIVATE UTILITY LINES, INCLUDING BUT NOT LIMITED TO PAVING, WATER LINES, WASTEWATER COLLECTION SYSTEMS, STORM SEWER AND TRAFFIC SIGNALS DURING CONSTRUCTION. ALL DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH CURRENT EDITIONS OF CITY OF ROSENBERG STANDARD CONSTRUCTION SPECIFICATIONS, DESIGN DETAILS AND DESIGN MANUALS. REPAIRS SHALL BE AT NO COST TO THE CITY OF ROSENBERG.
- ALIGNMENT, CENTERLINE CURVE DATA, AND STATIONING TO BE DETERMINED FROM APPROVED, RECORDED SUBDIVISION PLAT OR ROAD RIGHT-OF-WAY.
- THE APPROXIMATE LOCATION OF EXISTING UTILITIES ARE GIVEN FOR REFERENCE ONLY. BEFORE COMMENCING THE WORK ON THIS CONTRACT, THE CONTRACTOR SHALL VERIFY BY FIELD INVESTIGATION THE ACTUAL LOCATIONS OF ALL UTILITY FACILITIES WITHIN AND ADJACENT TO THE LIMITS OF THE WORK THAT MAY BE AFFECTED BY THE WORK. CONFLICTS WHICH RESULT DUE TO NEGLIGENCE BY THE CONTRACTOR TO LOCATE, HORIZONTALLY AND VERTICALLY, EXISTING UTILITIES WHICH ARE SHOWN ON THE CONSTRUCTION DRAWINGS, OR WHICH THE CONTRACTOR HAS BEEN GIVEN NOTICE OR HAS KNOWLEDGE, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF REMEDIAL WORK, REMOVAL OF PORTIONS OF THE WORK OR EXTENSIVE DESIGN CHANGES OCCASIONED BY THE FAILURE OF THE CONTRACTOR TO VERIFY THE LOCATION OF EXISTING UTILITIES AS DESCRIBED ABOVE SHALL BE BORNE BY THE CONTRACTOR.
- CONTRACTOR IS TO CONTACT DIG TESS AT TEXAS 811 OR 1(800)344-8377 FOR LOCATION OF EXISTING FACILITIES THAT MAY NOT BE SHOWN ON THE PLANS AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
- CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY THE "REGULATIONS OF FORT BEND COUNTY, TEXAS, FOR FLOOD PLAIN MANAGEMENT" PRIOR TO STARTING CONSTRUCTION.
- CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY FORT BEND COUNTY, TEXAS PRIOR TO STARTING CONSTRUCTION OF UTILITIES AND/OR CULVERTS WITHIN FORT BEND COUNTY ROAD RIGHTS-OF-WAY. CONTACT FORT BEND COUNTY PERMIT OFFICE (281-633-7502), CONSTRUCTION@FORTBENDCOUNTYTX.GOV. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY THE CITY OF ROSENBERG PRIOR TO STARTING CONSTRUCTION.
- CONTRACTOR SHALL COMPLY WITH O.S.H.A. REGULATIONS AND TEXAS STATE LAW CONCERNING TRENCH SAFETY SYSTEMS.
- THE CONTRACTOR SHALL RETURN ALL EXISTING FACILITIES TO EXISTING OR BETTER CONDITION UNLESS OTHERWISE NOTED AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING RED LINE RECORD DRAWINGS (INCLUDING MEASUREMENTS FROM TWO FIXED OBJECTS TO ENDS OF SANITARY SEWER SERVICES) AT THE COMPLETION OF THIS JOB. PRIOR TO FINAL PAYMENT.

## SANITARY SEWER CONSTRUCTION NOTES

- ALL PROPOSED 8-INCH TO 12-INCH GRAVITY SANITARY SEWER LINES WILL BE DUCTILE IRON OR SDR 26 PVC PIPE ASTM D-3034, UNLESS OTHERWISE NOTED ON PLANS. 15 INCH GRAVITY LINES WILL BE SDR-35 PVC, ASTM D-3034, AND 18-INCH TO 27 INCH GRAVITY LINES WILL BE SDR-35 PVC, ASTM F-679, UNLESS OTHERWISE NOTED ON PLANS. NON-PRESSURE PVC MAY NOT BE SUBSTITUTED FOR DIP OR C-900 PVC, (OR 18 ONLY).
- ALL TYPES OF SANITARY SEWER PIPE SHALL BE CEMENT SAND BEDDED AND BACKFILLED IN ACCORDANCE WITH THE LATEST CITY OF ROSENBERG STANDARD DETAILS. (NO SEPARATE PAY).
- MAINTAIN 12-INCH MINIMUM CLEARANCE BETWEEN ALL SANITARY SEWERS, STORM SEWERS AND CULVERTS UNLESS OTHERWISE NOTED.
- SEWER TRENCHES UNDER OR WITHIN ONE (1) FOOT OF PROPOSED OR FUTURE PAVEMENT TO BE BACKFILLED WITH CEMENT-SAND BACKFILL AS SPECIFIED, TO WITHIN ONE (1) FOOT OF SUBGRADE. INCLUDE COST OF BACKFILL IN UNIT PRICE BID PER LINEAR FOOT OF PIPE.
- ALL SEWER LINES SHALL BE AIR-TESTED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS AND THE LATEST CITY OF ROSENBERG STANDARDS.
- FOR ALL PVC PIPE, USE MANHOLE WATERSTOP GASKET AND CLAMP ASSEMBLY AT MANHOLE CONNECTIONS IN ACCORDANCE WITH THE LATEST CITY OF ROSENBERG DETAILS (NO SEPARATE PAY).
- SANITARY SEWER MANHOLES SHALL BE COATED IN ACCORDANCE WITH THE LATEST CITY OF ROSENBERG DETAILS. (NO SEPARATE PAY). COATING SHALL BE APPROVED BY THE CITY AS FOUND IN THE CITY OF ROSENBERG APPROVED SANITARY SEWER PRODUCTS LIST.
- SANITARY SEWER MANHOLES SHALL BE STANDARD PRECAST CITY OF ROSENBERG, UNLESS OTHERWISE NOTED. ALL SANITARY MANHOLES WITHIN THE 100-YEAR FLOOD HAVE THE TOP SET AT LEAST TWELVE (12) INCHES ABOVE THE BASE FLOOD ELEVATION OR SEALED AND VENTED.
- ALL MANHOLES SHALL BE SET SO THAT THE TOP OF THE CONE IS NO HIGHER THAN THE ADJACENT TOP OF CURB ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER. THE FINISH RIM ELEVATION SHALL BE MET WITH PRE-CAST RINGS.
- ALL FAR SIDE LEADS SHALL BE SIX (6) INCHES OR EIGHT (8) INCHES AT 1.0% MINIMUM SLOPE AND SHALL BE PVC, DR 26, 160 PSI PRESSURE PIPE CONFORMING TO ASTM D-2241. STUBS AND FAR-SIDE LEADS WILL BE AWWA C-900, DR 18, WHERE THERE IS LESS THAN THREE (3) FOOT COVER TO TOP OF CURBS.
- LEADS SERVING TWO LOTS SHALL HAVE A SERVICE "WYE" WITH PLUGS (NO SEPARATE PAY). THE "WYE" SHALL BE LOCATED WITHIN THE STREET RIGHT-OF-WAY OR ADJOINING UTILITY EASEMENT.
- ALL DUCTILE IRON PIPE SHALL BE 150 PSI WITH EIGHT (8) MIL, BLACK VIRGIN POLYETHYLENE WRAP AS SPECIFIED IN ANSI/AWWA C105/A21.5.
- ALL D.I.P. SHALL BE LINED WITH VIRGIN POLYETHYLENE CONFORMING TO ASTM D-1248; 40 MIL THICKNESS (NOMINAL), 35 MILS (MINIMUM). LINER TO BE POLYICZE, POLYBOND, OR EQUAL. AT ANY POINT WHERE I.P. CAN NOT BE WRAPPED IN POLYETHYLENE TUBING, COAT THE EXTERIOR WITH POLYBOND OR APPROVED EQUAL.
- MANHOLE RIMS ARE TO BE SET AT THE ELEVATIONS SHOWN ON THE PLANS INITIALLY. AFTER PAVING AND GRADING IS COMPLETED, RIMS ARE TO BE ADJUSTED TO THREE (3) TO SIX (6) INCHES ABOVE FINAL GRADE AND BACK-DRESSED WITH DIRT TO PROVIDE DRAINAGE AWAY FROM THE MANHOLE.
- ALL PVC PIPE (ALL TYPES AND SDR/DR WALL THICKNESS TO BE USED) SHALL HAVE RUBBER GASKET EQUIPPED BELL AND SPIGOT JOINTS CONFORMING TO ASTM D-3212. THE GASKET MATERIAL SHALL CONFORM TO ASTM F-477. SOLVENT WELDED JOINTS WILL NOT BE APPROVED FOR THIS PROJECT.
- IF WET SAND IS ENCOUNTERED IN THE FIELD, USE SPECIAL BEDDING PER CITY OF ROSENBERG DESIGN STANDARDS AND AS DIRECTED BY THE ENGINEER.
- WATER AND SANITARY SEWER SEPARATION DISTANCES SHALL BE IN ACCORDANCE WITH THE PROTECTION REQUIREMENTS TABLE SHOWN ON THIS SHEET, AND THE REQUIREMENTS LISTED IN 30 TAC § 290.44, WHICHEVER IS MORE STRINGENT.
- ALL SANITARY SEWER FACILITIES AND POTABLE WATERLINES MUST BE INSTALLED SO AS TO PROVIDE A MINIMUM OF NINE FEET OF HORIZONTAL CLEARANCE BETWEEN THEM. WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, FOLLOW THE SPECIAL PROCEDURES IN THE PROTECTION REQUIREMENTS TABLE SHOWN ON THIS SHEET AND THE PROCEDURES LISTED IN 30 TAC § 290.44. MARK SERVICES WITH 4"x4" POST AND CUT IN CURB PAINTED GREEN.

## SPECIAL NOTES: LOCATION OF SANITARY SEWER FACILITIES

- IF STAKES ARE LEFT IN THE GROUND AT THE STACKS AND LEADS AFTER CONSTRUCTION OF UTILITIES, THEN AN EFFORT WILL BE MADE TO PRESERVE THEM DURING PAVING CONSTRUCTION. HOWEVER, IF THESE STAKES ARE KNOCKED OUT FOR ANY REASON, THE UTILITY CONTRACTOR REMAINS RESPONSIBLE FOR LOCATING AND MARKING THE FACILITIES AS DESCRIBED IN SPECIAL NOTE 3.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING RED LINE RECORD DRAWINGS (INCLUDING MEASUREMENTS FROM TWO FIXED OBJECTS TO ENDS OF SANITARY SEWER SERVICES) AT THE COMPLETION OF THIS JOB.
- THE UTILITY CONTRACTOR IS RESPONSIBLE FOR LOCATING AND MARKING ALL STACKS AND FAR SIDE LEADS. AFTER THE PAVING IN THIS SECTION IS COMPLETED, A 1/4-INCH DEEP NOTCH SHALL BE CUT IN THE CURB AND PAINTED WITH A RED LINE ADJACENT TO THE STACK OR LEAD.

PROTECTION REQUIREMENTS AT  
WATER LINE - SANITARY SEWER CROSSINGS

	PROPOSED WATER LINE				PROPOSED SANITARY SEWER			
	OVER		UNDER		OVER		UNDER	
	EXISTING SS	PROP SS	EXISTING SS	PROP SS	EXISTING WL	PROP WL	EXISTING WL	PROP WL
Minimum 2 feet vertical clearance	✓ <sup>1</sup>	✓ <sup>1</sup>	✓ <sup>2</sup>	✓	✓ <sup>6</sup>	✓	✓	✓ <sup>1</sup>
Place 1 full section (min 18ft) of WL centered at SS crossing. Provide restrained joints on WL, spaced at least 9 ft. horizontally from centerline of SS	✓	✓	✓	✓	✓ <sup>6</sup>	✓		✓
Place 1 full section (min 18ft) of SS centered at WL crossing. Provide restrained joints on SS, spaced at least 9 ft. horizontally from centerline of WL		✓		✓ <sup>7</sup>	✓ <sup>6</sup>	✓ <sup>7</sup>	✓	✓
Replace 1 full section of existing SS with pressure-rated DIP or pressure rated PVC pipe with adapters and restrained joints centered at WL crossing	✓ <sup>3,4</sup>		✓ <sup>4,7</sup>		✓ <sup>6</sup>			
Provide DIP for small diameter WL (less than 24 inches). PVC pipe is only allowed if encased per TAC § 290.44, and use restrained joints for both DIP and PVC pipe			✓	✓	✓ <sup>6</sup>	✓		
Embed SS with CSS for the total length of 1 pipe segment plus 1 foot beyond the joints on each end	✓ <sup>3,4</sup>	✓ <sup>5</sup>	✓ <sup>4</sup>	✓ <sup>5</sup>	✓ <sup>5,6</sup>	✓ <sup>5</sup>	✓ <sup>5</sup>	✓ <sup>5</sup>

- Minimum clearance is 2 feet for non-pressure rated SS and 6 inches for pressure rated SS (with at least 150 psi pressure rating)
- Minimum clearance is 2 feet for non-pressure rated SS and 1 foot for pressure rated SS
- Required if existing SS is disturbed and/or there is evidence of leakage
- Not required for augered WL unless there is evidence of leakage; completely fill augered hole with bentonite/clay mixture
- Not required for augered SS; completely fill augered hole with bentonite/clay mixture
- Not allowed. Requires approval of City Engineer.
- Both Waterline and Wastewater main lateral must pass a pressure and leakage test as specified in AWWA C600 standards.

## STORM SEWER CONSTRUCTION NOTES

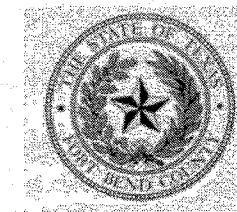
- ALL STORM SEWER CONSTRUCTION SHALL CONFIRM TO ALL CITY OF ROSENBERG AND FORT BEND COUNTY REQUIREMENTS.
- THE CONTRACTOR(S) SHALL NOTIFY FORT BEND COUNTY ENGINEERING FORTY-EIGHT (48) HOURS IN ADVANCE OF COMMENCING UTILITY AND/OR PAVING CONSTRUCTION AT: CONSTRUCTION@FORTBENDCOUNTYTX.GOV. THE CONTRACTOR(S) SHALL NOTIFY THE CITY OF ROSENBERG AT 832-595-3500 AND THE CITY ENGINEER AT 281-342-2033 FOR START OF CONSTRUCTION.
- STORM SEWER PIPE 24 INCHES AND LARGER SHALL BE REINFORCED CONCRETE PIPE ASTM, C-76, CLASS III WITH JOINTS CONFORMING TO ASTM C-361 WITH RUBBER GASKETS CONFORMING TO ASTM, C-443. PIPE SHALL BE INSTALLED, BEDDED, AND BACKFILLED IN CONFORMITY WITH CITY OF HOUSTON DRAWINGS 02317-02, 02317-03, 02317-05, 02317-06, AND 02317-07, AS APPROPRIATE.
- ALL SEWERS CONSTRUCTED IN SIDE LOT EASEMENTS SHALL HAVE PIPE BEDDING AND BACKFILL AS SPECIFIED IN NOTE 2. A MINIMUM EASEMENT WIDTH OF TWENTY (20) FEET SHALL BE PROVIDED.
- ALL STORM SEWER MANHOLES SHALL BE STANDARD CITY OF ROSENBERG TYPE "C" UNLESS OTHERWISE NOTED.
- ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES OR INLETS ARE TO BE PLUGGED WITH EIGHT (8) INCH BRICK WALLS UNLESS OTHERWISE NOTED (NO SEPARATE PAY).
- ALL MANHOLES SHALL BE SET SO THAT THE TOP OF THE CONE IS NO HIGHER THAN THE ADJACENT TOP OF CURB ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER. THE FINISH RIM ELEVATION SHALL BE MET WITH PRE-CAST RINGS.
- ALL MANHOLES SHALL BE ADJUSTED TO FINISHED GRADE AFTER PAVING IS COMPLETE.
- ALL SEWERS UNDER OR WITHIN ONE (1) FOOT OF FUTURE OR PROPOSED PAVEMENT SHALL BE BACKFILLED WITH 1-1/2 SACK/CY CEMENT-SAND TO A POINT IMMEDIATELY BELOW THE SUBGRADE. BACKFILL REMAINING DEPTH WITH SUITABLE MATERIAL IN 6-INCH LAYERS. COMPACTED TO 95% STD. PROCTOR DENSITY PER AASHTO TEST METHOD T-99. MOISTURE CONTENT SHALL BE AS SPECIFIED. (NO SEPARATE PAY)
- ALTERNATIVE TO CEMENT STABILIZED SAND BACKFILL FOR PIPES FIFTY-FOUR (54) INCH AND LARGER, FROM 1-FOOT ABOVE THE TOP OF THE PIPE TO THE BOTTOM OF THE SUBGRADE. CONTRACTOR MAY BACKFILL WITH SUITABLE MATERIAL, PROVIDED THE BACKFILL MATERIAL IS PLACED IN EIGHT (8) INCH LIFTS AND MECHANICALLY COMPACTED TO NINETY-FIVE (95)% STANDARD PROCTOR DENSITY AT -3% TO +5% MOISTURE CONTENT AS DETERMINED BY AASHTO TEST METHOD T-99. TESTS SHALL BE TAKEN AT ONE HUNDRED (100) FOOT INTERVALS ON EACH LIFT. BEDDING AND BACKFILL TO ONE (1) FOOT ABOVE THE TOP OF THE PIPE SHALL BE CEMENT-STABILIZED SAND.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION, AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE LATEST CITY OF ROSENBERG REQUIREMENTS; ALL IN COMPLIANCE WITH THE "NATIONAL POLLUTANTS DISCHARGE ELIMINATION SYSTEM" (NPDES) REQUIREMENTS.

## PAVING CONSTRUCTION NOTES

- PAVEMENT SHALL BE IN ACCORDANCE WITH THE "REGULATIONS OF FORT BEND COUNTY, TEXAS FOR THE APPROVAL AND ACCEPTANCE OF INFRASTRUCTURE" AND/OR AMENDMENTS OF SAME AND THE CITY OF ROSENBERG.
- THE CONTRACTOR(S) SHALL NOTIFY FORT BEND COUNTY PUBLIC INFRASTRUCTURE DEPARTMENT-ENGINEERING DIVISION-PERMIT OFFICE, TWENTY-FOUR (24) HOURS IN ADVANCE OF COMMENCING UTILITY AND/OR PAVING CONSTRUCTION AT CONSTRUCTION@FORTBENDCOUNTYTX.GOV. AND WRITTEN NOTIFICATION FORTY- EIGHT (48) HOURS IN ADVANCE OF COMMENCING CONSTRUCTION. THE CONTRACTOR(S) SHALL NOTIFY THE CITY OF ROSENBERG AT 832-595-3500 AND THE CITY ENGINEER AT 281-342-2033 FOR START OF CONSTRUCTION.
- ALL RETURNS SHALL HAVE A 25-FOOT RADIUS AT FACE OF CURB UNLESS OTHERWISE NOTED.
- GUIDELINES SET FORTH IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" SHALL BE OBSERVED.
- ALL INTERSECTIONS SHALL BE CONSTRUCTED WITH WHEELCHAIR RAMPS IN ACCORDANCE WITH THE GOVERNOR'S OFFICE OF TRAFFIC SAFETY MEMORANDUM DATED MAY 6, 1976. (HIGHWAY SAFETY ACT - 1973 SECTION 288). SEE TxDOT PED-05 SHEET. ALL WHEELCHAIR RAMPS SHALL COMPLY WITH CURRENT "THE AMERICANS WITH DISABILITIES ACT" (A.D.A.) SPECIFICATIONS. RAMPS TO BE COLORED WITH A COLOR TO BE DETERMINED BY THE ENGINEER CONFORMING TO ASTM-C979.
- ALL FILL IN EXISTING OR PROPOSED FORT BEND COUNTY RIGHT-OF-WAY, INCLUDING BACKDRESSING BEHIND THE CURB, SHALL BE PLACED IN MAXIMUM LOOSE LIFTS OF EIGHT INCHES (8") OR LESS AND COMPACTED TO 95% OF MAXIMUM DENSITY AT -3% TO +5% MOISTURE CONTENT AS DETERMINED BY AASHTO TEST METHOD T-99.
- ALL CONCRETE PAVEMENT TO BE 28-FOOT B-B SIX (6) INCH REINFORCED CONCRETE WITH SIX (6) INCH REINFORCED CONCRETE CURBS, UNLESS OTHERWISE NOTED. CONCRETE MIX SHALL BE AS SPECIFIED.
- PAVEMENT REINFORCEMENT FOR 28-FOOT B-B SIX (6) INCH REINF. CONCRETE SHALL BE #4, GRADE 60 STEEL RE-BARS ON 24-INCH CENTERS FOR LONGITUDINAL STEEL AND ON 24-INCH CENTERS FOR TRANSVERSE STEEL. REINFORCEMENT SHALL BE PLACED ON CHAIRS SPACED 36" CENTER TO CENTER. BENT BARS SHALL BE GRADE 40.
- REFER TO THE LATEST FORT BEND COUNTY PAVEMENT MARKING DETAILS AND FORT BEND COUNTY SUBDIVISION STANDARD PAVING DETAILS.
- SIDEWALKS CONSTRUCTED IN ESPLANADES SHALL BE SIX INCHES (6") THICK WITH SURFACE COLORED BLACK WHEN CURBS ARE TEN FEET (10') AND LESS IN WIDTH FROM FACE-TO-FACE OF CURBS.
- 4"x12" CONCRETE SHALL ONLY BE USED IN FRONT OF SINGLE RESIDENTIAL LOTS. ALL OTHER LOCATIONS SHALL BE 6" CURBS.

## TCEQ GENERAL CONSTRUCTION NOTES

- All newly installed pipes and related products must conform to American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard 61-G and must be certified by an organization accredited by ANSI as required in 30 TAC §290.44(a)(1).
- All plastic pipe for use in public water systems must bear the National Sanitation Foundation Seal of Approval (NSF-pw-G) as required in 30 TAC §290.44(a)(2).
- As required in 30 TAC §290.44(a)(3), "No pipe which has been used for any purpose other than the conveyance of drinking water shall be accepted or relocated for use in any public drinking water supply".
- As required in 30 TAC §290.44(a)(4), "Water transmission and distribution lines must be installed in accordance with the manufacturer's instructions. However, the top of the waterline must be located below the frost line and in no case shall the top of the waterline be less than 24 inches below ground surface".
- "Projects constructed on or after January 1, 2014 must comply with changes to the Safe Drinking Water Act that reduce the maximum allowable lead content of pipes, pipe fittings, plumbing fittings, and fixtures to 0.25 percent".
- The system must be designed to maintain a minimum pressure of 35 psi at all points within the distribution network at flow rates of at least 1.5 gallons per minute per connection. When the system is intended to provide firefighting capability, it must also be designed to maintain a minimum pressure of 20 psi under combined fire and drinking water flow conditions as required by 30 TAC §290.44(d).
- Air release devices shall be installed in the distribution system at all points where topography or pipeline design may create air locks in the lines. The air release devices shall be installed in such a manner as to preclude the possibility of submergence or possible entrance of contaminants. In this respect, all openings to the atmosphere shall be covered with a 16-mesh or finer, corrosion-resistant screening material or an acceptable equivalent as required by 30 TAC §290.44(d)(1).
- The system shall be provided with sufficient valves and blowoffs so that necessary repairs can be made without undue interruption of service over any considerable area and for flushing the system when required in accordance with 30 TAC §290.44(d)(5).

Fort Bend County Engineering  
FORT BEND COUNTY, TEXASRichard W. Stolleis, P.E.  
County EngineerFort Bend County  
Construction - General Notes

- Fort Bend County must be invited to the Pre-Construction Meeting.
- Contractor shall notify Fort Bend County Engineering Department 48 hours prior to commencing construction and 48 hour notice to any construction activity within the limits of the paving at [Construction@fortbendcountytx.gov](mailto:Construction@fortbendcountytx.gov).
- Contractor is responsible for obtaining all permits required from Fort Bend County prior to commencing construction of any improvements within County road right of ways.
- All Paving Improvements shall be constructed in accordance with Fort Bend County "Rules, Regulations and Requirements relating to the Approval and Acceptance of Improvements in Subdivisions as currently amended.
- All road widths, curb radii and curb alignment shown indicates back of curb
- A continuous longitudinal reinforcing bar shall be used in the curbs.
- All concrete pavement shall be 5 ½ sack cement with a minimum compressive strength of 3500 psi at 28 days. Transverse expansion joints shall be installed at each curb return and at a maximum spacing of 60 feet.
- All weather access to all existing streets and driveways shall be maintained at all times.
- 4"x 12" reinforced concrete curb shall be placed in front of single family lots only. **All other areas shall be 6" reinforced concrete curb.**
- At all intersection locations, **Type 7 ramps** shall be placed in accordance with **TxDOT Ped-12a** standard detail sheet. A.D.A. - Handicap Ramps shall be installed with street paving at all intersections and comply with current A.D.A. regulations.
- Curb headers are required at curb connections to Handicap Ramps, with no construction joint within 5' of ramps.
- All intersections utilizing Traffic Control measures shall have A.D.A. wheel chair ramps installed.
- Guidelines are set forth in the Texas "Manual on Uniform Traffic Control Devices", as currently amended, shall be observed. The Contractor shall be responsible for providing adequate flagmen, signing, striping and warning devices, etc., during construction - both day and night.
- All R1-2 stop signs shall be 30"x30" with diamond grade sheeting per Texas manual on uniform traffic control devices.
- Street name signage shall be on a 9" high sign flat blade w/reflective green background. Street names shall be upper and lowercase lettering with uppercase letters of 6" minimum and lowercase letters of 4.5" minimum. The letters shall be reflective white. Street name signs shall be mounted on stop sign post.
- A Blue Double Reflectorized button shall be placed at all Fire Hydrant locations. The Button shall be placed 12 inches off of the centerline of the street on the same side as the hydrant.

NOTE: Fort Bend County notes supersede any conflicting notes.

Inspection. The Project and all parts thereof shall be subject to inspection from time to time by inspectors designated by Fort Bend County. No such inspections shall relieve the Contractor of any of its obligations hereunder. Neither failure to inspect nor failure to discover or reject any of the work as not in accordance with the drawings and specifications, requirements and specifications of Fort Bend County or any provision of this Project shall be construed to imply an acceptance of such work or to relieve the Contractor of any of its obligations hereunder.

301 Jackson St., Suite 401, Richmond, TX 77469  
Phone 281-633-7500

I:\Construction\Forms\FBC\_Construction\_General\_Notes\_REVISED 2015-11-18.docx

APPROVED: *Maxi D. ...*  
DEVELOPMENT COORDINATOR

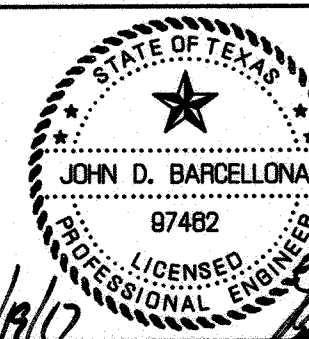
DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

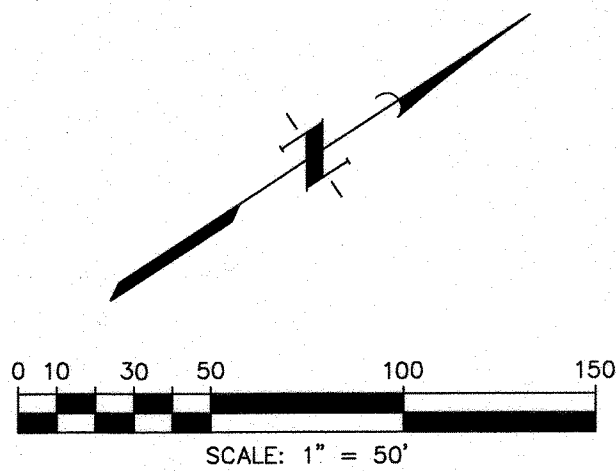
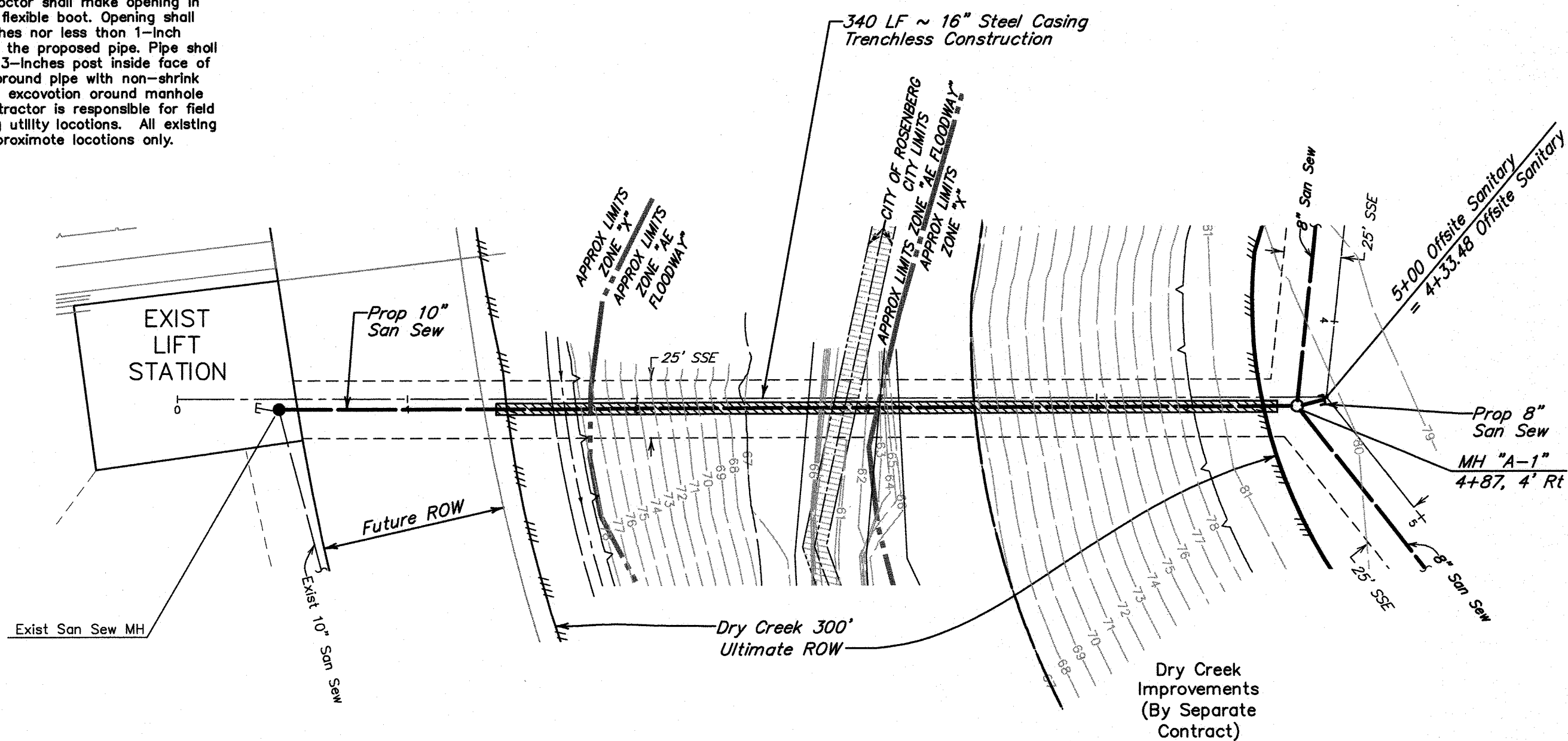
## CONSTRUCTION NOTES

**JC JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000SCALE: N.T.S. DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO.   
SUBMITTED: SURV. BY:   
F.B. NO.   
6/1/17SHEET NO.  
6  
OF 23



**SANITARY MANHOLE CONNECTION NOTE:**

Contractor shall use core to make opening in wall of existing manhole. Contractor shall make opening in manhole wall and install flexible boot. Opening shall not be more than 3-inches nor less than 1-inch greater in diameter than the proposed pipe. Pipe shall not protrude more than 3-inches past inside face of manhole wall. Fill void around pipe with non-shrink waterproof grout. Backfill excavation around manhole with cement-sand. Contractor is responsible for field verification of all existing utility locations. All existing utilities are shown in approximate locations only.



**BENCH MARK**

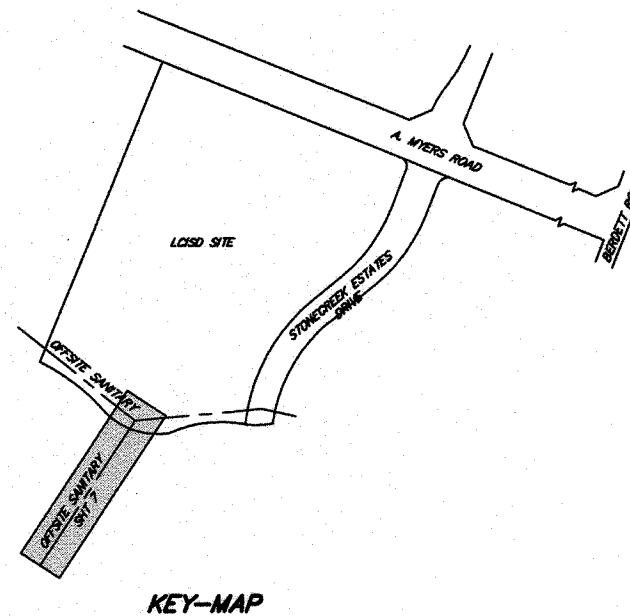
Elevations shown hereon are based upon GPS observations calibrated to the published values of HGCSO 71, and HGCSO 72 (NAVD 88).

**T.B.M.**

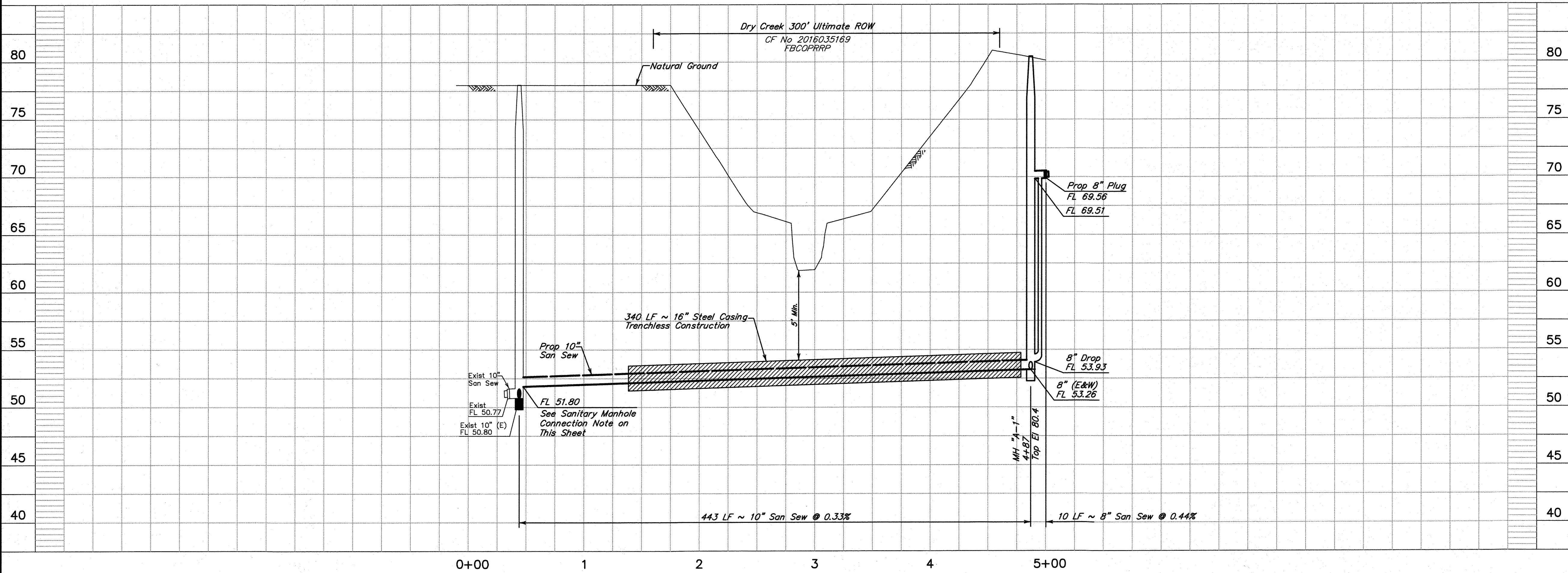
Being a set mag nail. Located in an asphalt driveway off of Berdett Road. Elevation = 77.55' (NAVD88).

**100 YR. FLOOD PLAIN**

This tract lies within Zone "X" of the Flood Insurance Rate Map, Community No. 480228, Map Number 48157C0285L, Panel 0285, Suffix "L" dated April 2, 2014, for Fort Bend County, Texas and incorporated areas. Zone "X" is defined as areas determined to be outside the 0.2% annual chance floodplain.



**OFFSITE SANITARY**



APPROVED: *Max D. Jones*  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

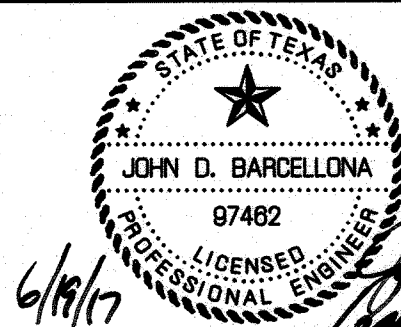
FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

**OFFSITE SANITARY**  
**0+00 TO 5+00**

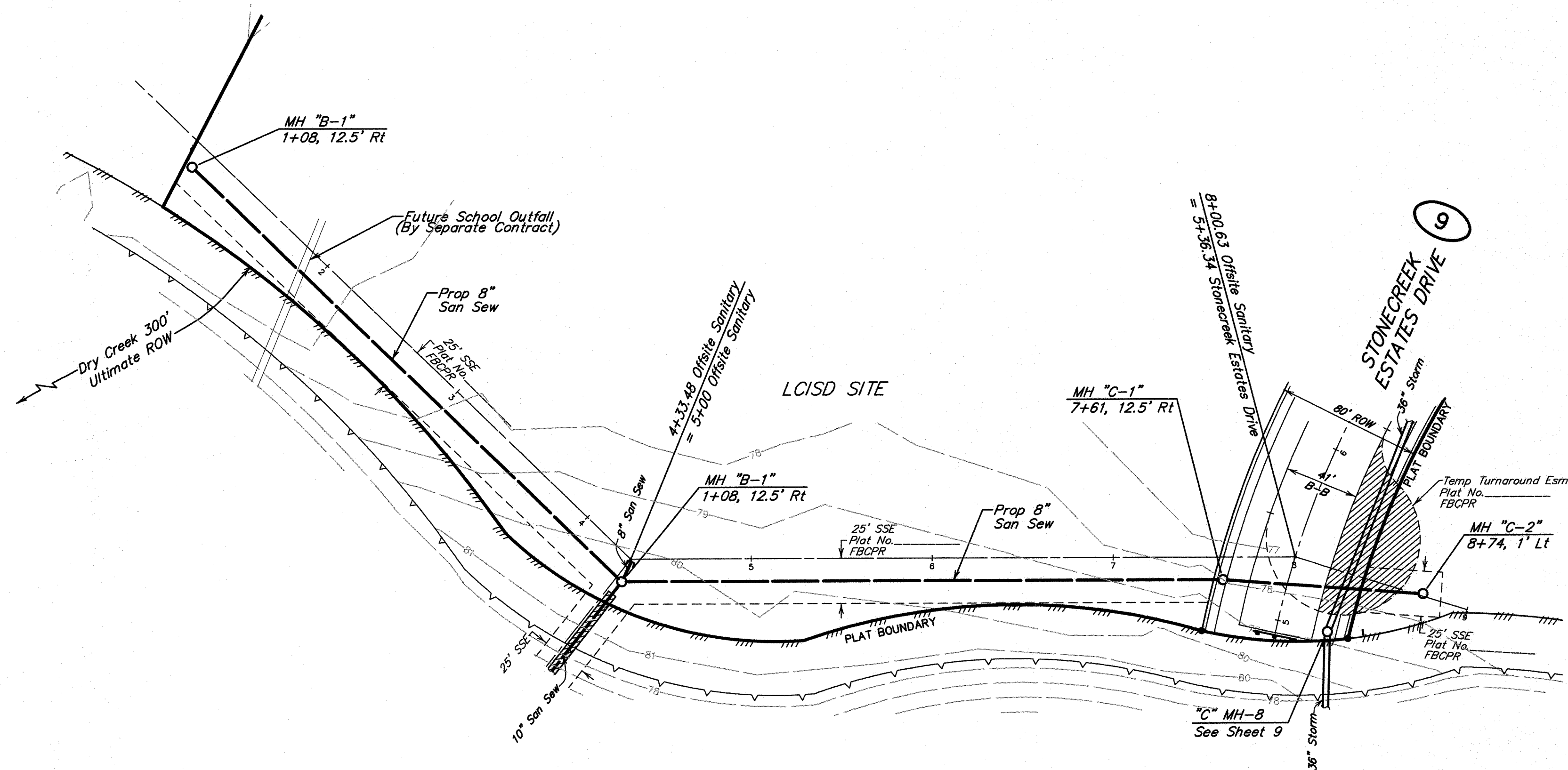
**JC JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=50' H., 1"=5' V. DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO. \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
F.B. NO. \_\_\_\_\_



SHEET NO.  
**7**  
OF 23





# **FILL NOTES**

- 1.) DRAINAGE SWALES: All Existing Drainage Swales Shall Be Filled as Shown with Material From Existing Adjacent Spoil Banks in Maximum 8" Loose Lifts and Compacted to 95% Proctor Density as Per AASHTO Test Method T-99.
- 2.) DRAINAGE SWALES: All Existing Drainage Swales Under Proposed Concrete Pavement Shall Be Cleaned, Mucked Out and Scarified to a Minimum Depth of 6" and Filled as Specified Above in Fill Note No. 1. No Separate Pay.
- 3.) ROADWAY EMBANKMENT: Strip 3" of Vegetation From Area to Be Filled and Re-Compact Soil to 95% Proctor Density. Place Fill Material as Specified in Fill Note No. 1.

## **BENCH MARK**

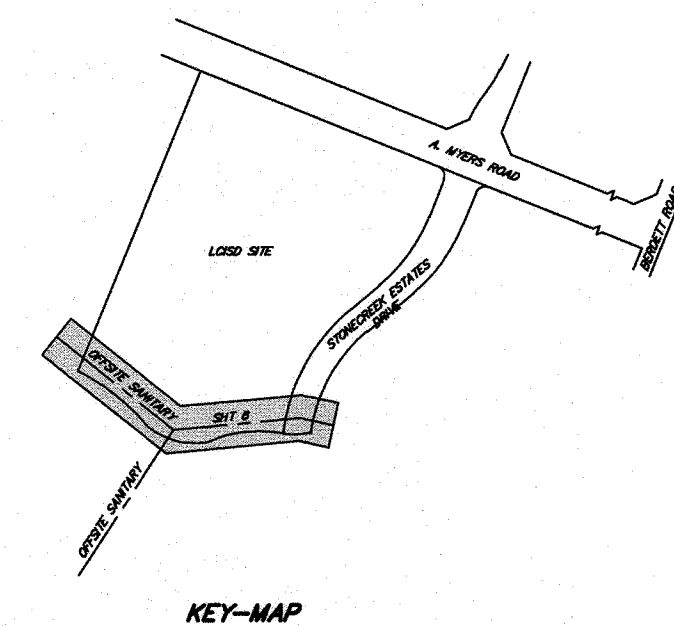
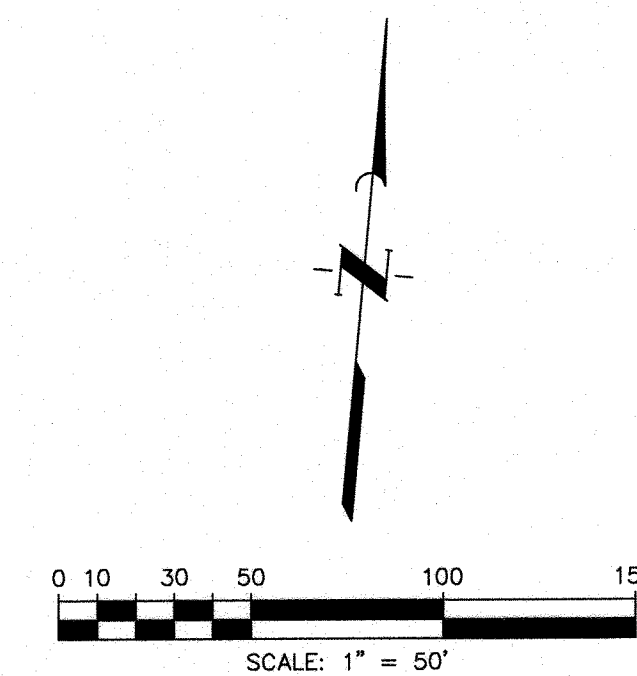
Elevations shown hereon are based upon GPS observations calibrated to the published values of HGCS 71, and HGCS 72 (NAVD 88).

## **T.B.M.**

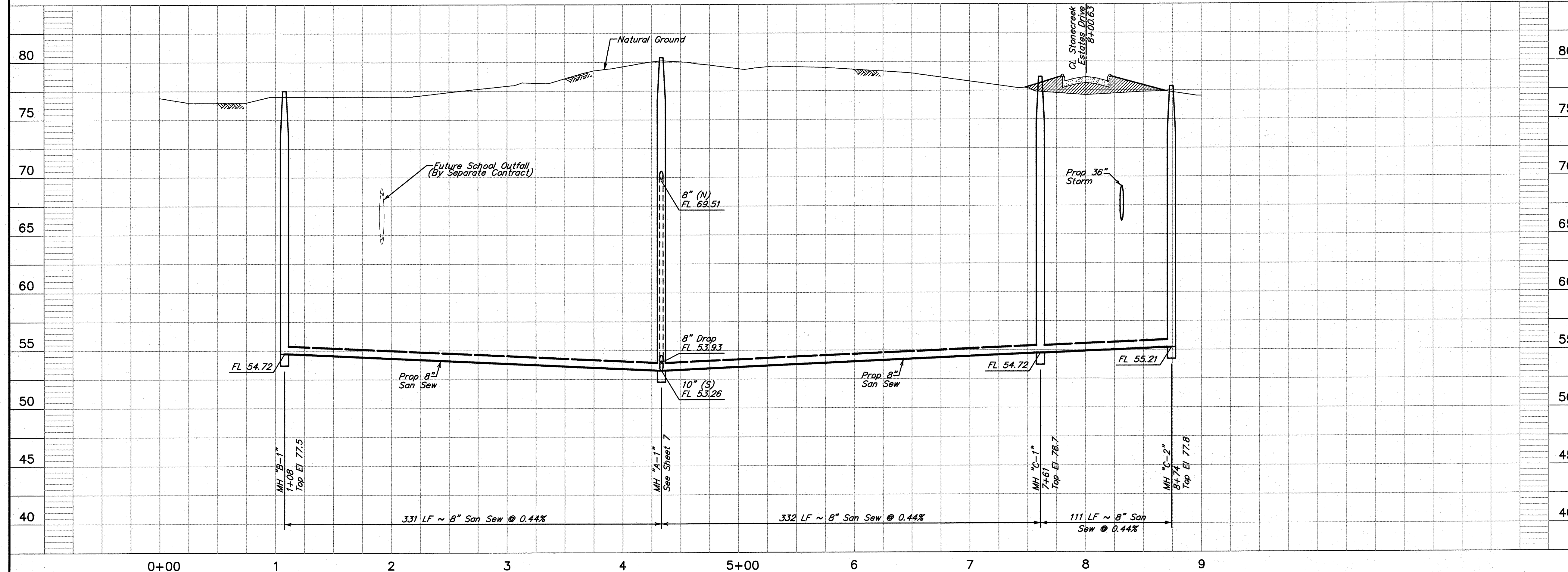
Being a set mag nail. Located in an asphalt driveway off of Berdett Road. Elevation = 77.55' (NAVD88).

## **100 YR. FLOOD PLAIN**

This tract lies within Zone "X" of the Flood Insurance Rate Map, Community No. 480228, Map Number 48157C0265L, Panel 0265, Suffix "L" dated April 2, 2014, for Fort Bend County, Texas and incorporated areas. Zone "X" is defined as areas determined to be outside the 0.2% annual chance floodplain.



## **OFFSITE SANITARY**



APPROVED: *Maya D. [Signature]* DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

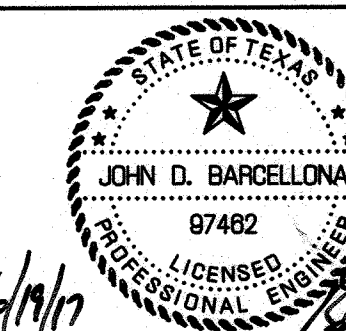
FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

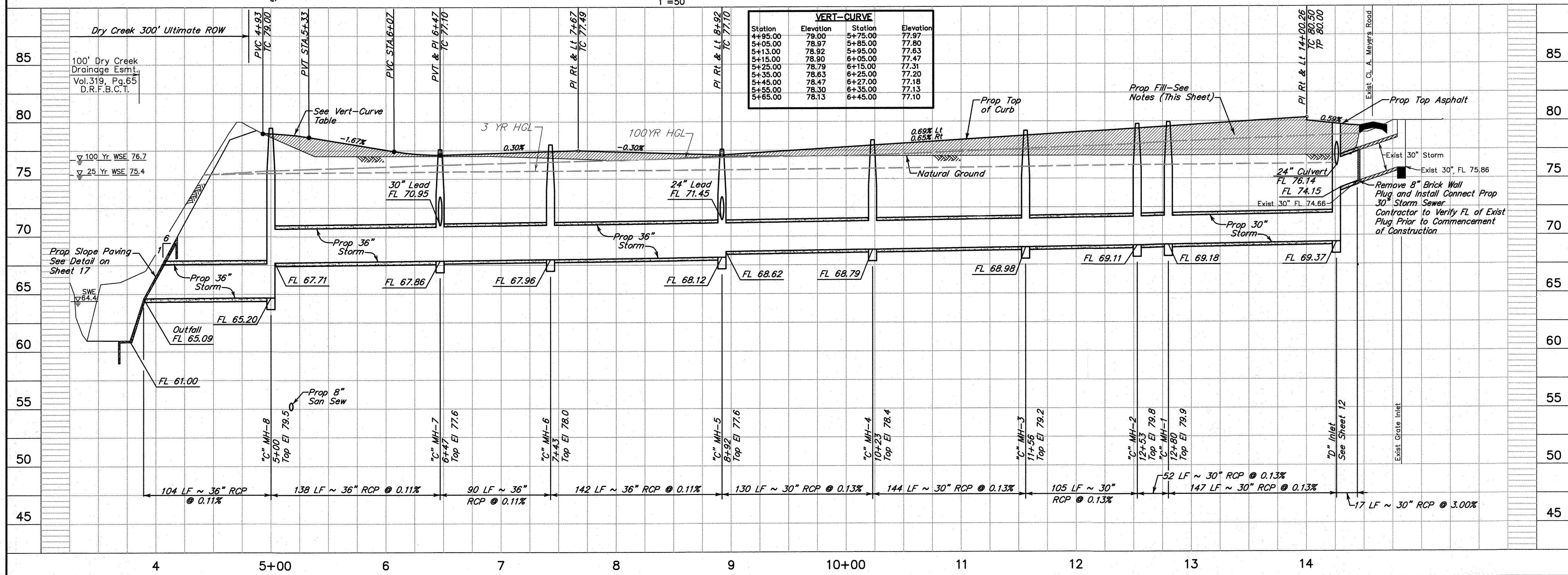
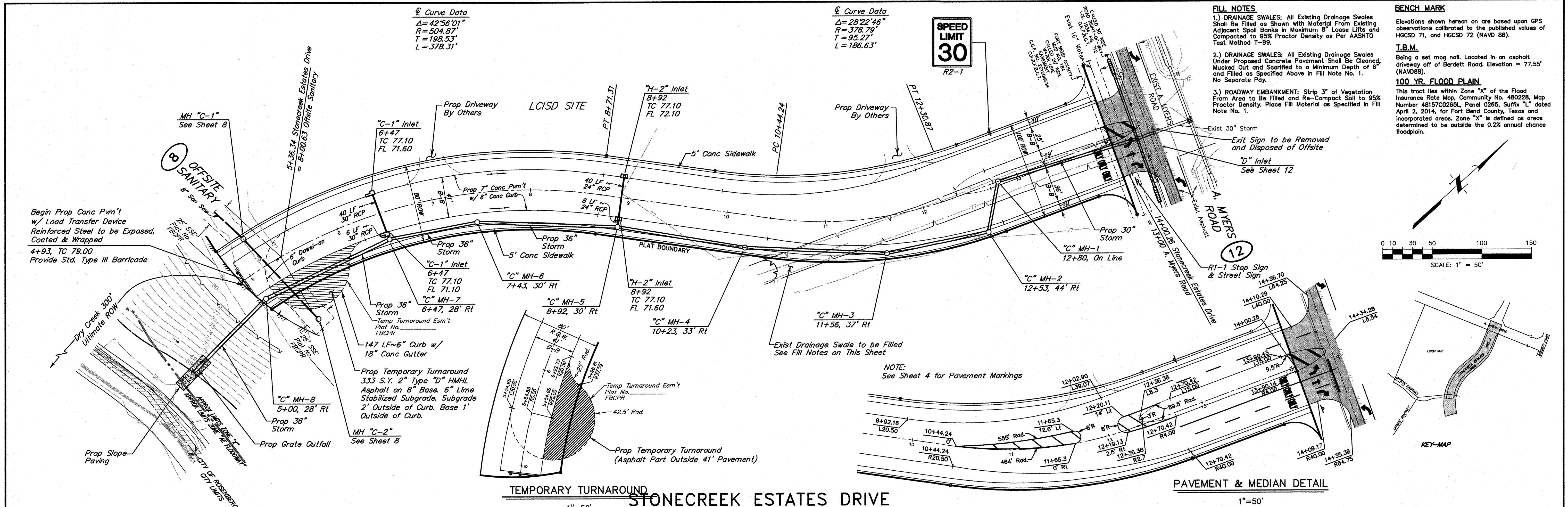
**OFFSITE SANITARY**  
0+00 TO 9+00

**JC JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=50' H., 1"=5' V. DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO.   
SUBMITTED: SURV. BY:   
F.B. NO.   
SHEET NO. 8 OF 23







APPROVED: *Maggie D.*  
 DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 184  
 FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

STONECREEK ESTATES DRIVE  
 3+50 TO 14+48.57

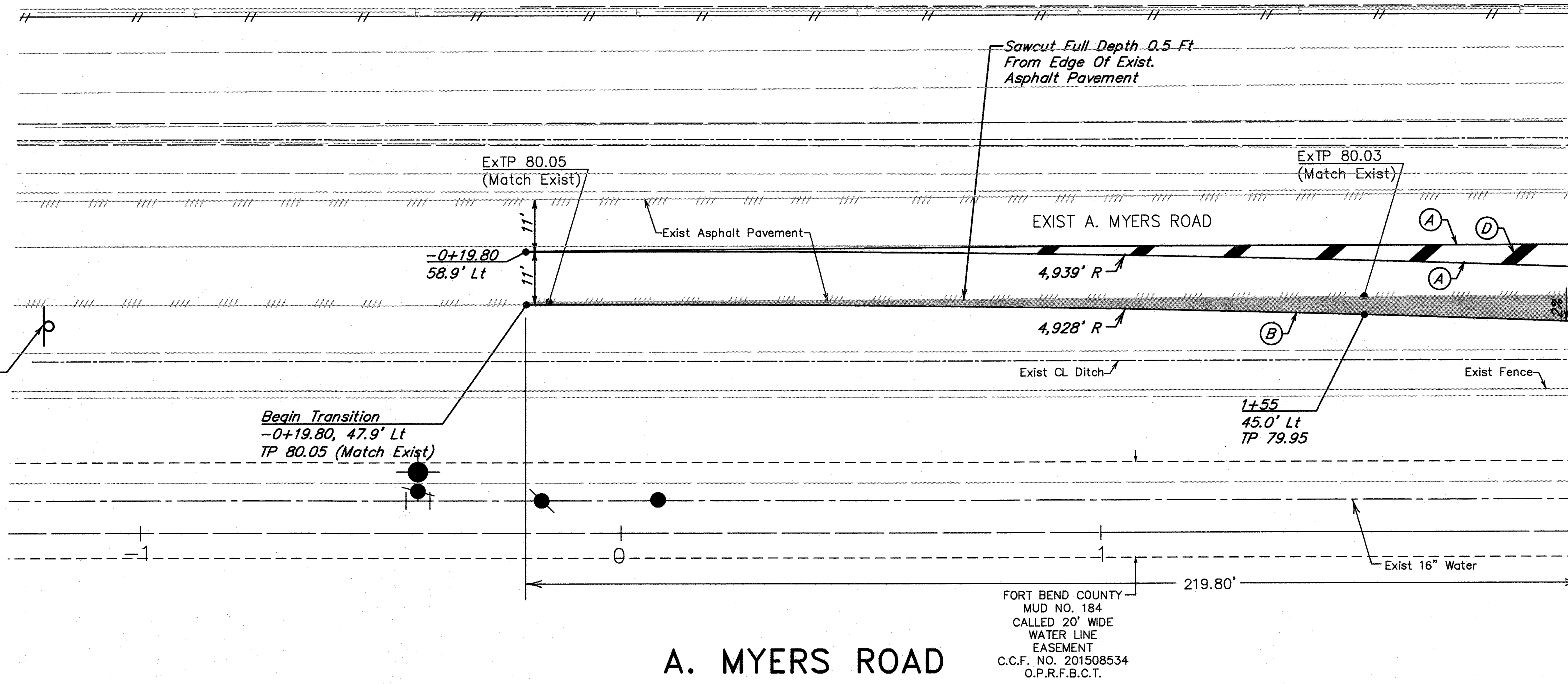
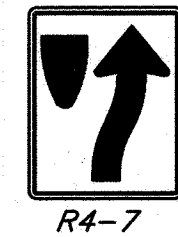
**J.C. JONES CARTER**  
 Texas Board of Professional Engineers Registration No. F-439  
 22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=50' H., 1"=5' V. DGN. BY: FMJ  
 DATE: June 2017 DWN. BY: JLG  
 JOB NO. 12268-0012-00 DWG. NO. \_\_\_\_\_  
 SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
 F.B. NO. \_\_\_\_\_

STATE OF TEXAS  
 JOHN D. BARCELLONA  
 67482  
 LICENSED PROFESSIONAL ENGINEER  
 6/14/17

SHEET NO.  
 9  
 OF 23





- CONSTRUCTION NOTES**
- SEE SHEET 19 FOR ADDITIONAL RAISED PAVEMENT MARKERS. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
  - CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE A. MYERS RD RIGHT-OF-WAY WITH THE FORT BEND COUNTY ROAD & BRIDGE DEPT (281-342-4513).
- PROP 2" TYPE "D" HML ASPHALT ON 8" BASE. MATCH EXISTING EDGE OF ASPHALT ELEVATION.

- LEGEND**
- (A) 4" DOUBLE SOLID YELLOW
  - (B) 4" SOLID WHITE (6" FROM EDGE)
  - (C) 8" SOLID WHITE
  - (D) 24" SOLID YELLOW
  - (E) TURN ARROW
  - (F) WORD 'ONLY'
  - (G) 24" SOLID WHITE

- FILL NOTES**
- DRAINAGE SWALES: All Existing Drainage Swales Shall Be Filled as Shown with Material From Existing Adjacent Spoil Banks in Maximum 8" Loose Lifts and Compacted to 95% Proctor Density as Per AASHTO Test Method T-99.
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  - ROADWAY EMBANKMENT: Strip 3" of Vegetation From Area to Be Filled and Re-Compact Soil to 95% Proctor Density. Place Fill Material as Specified in Fill Note No. 1.

**BENCH MARK**

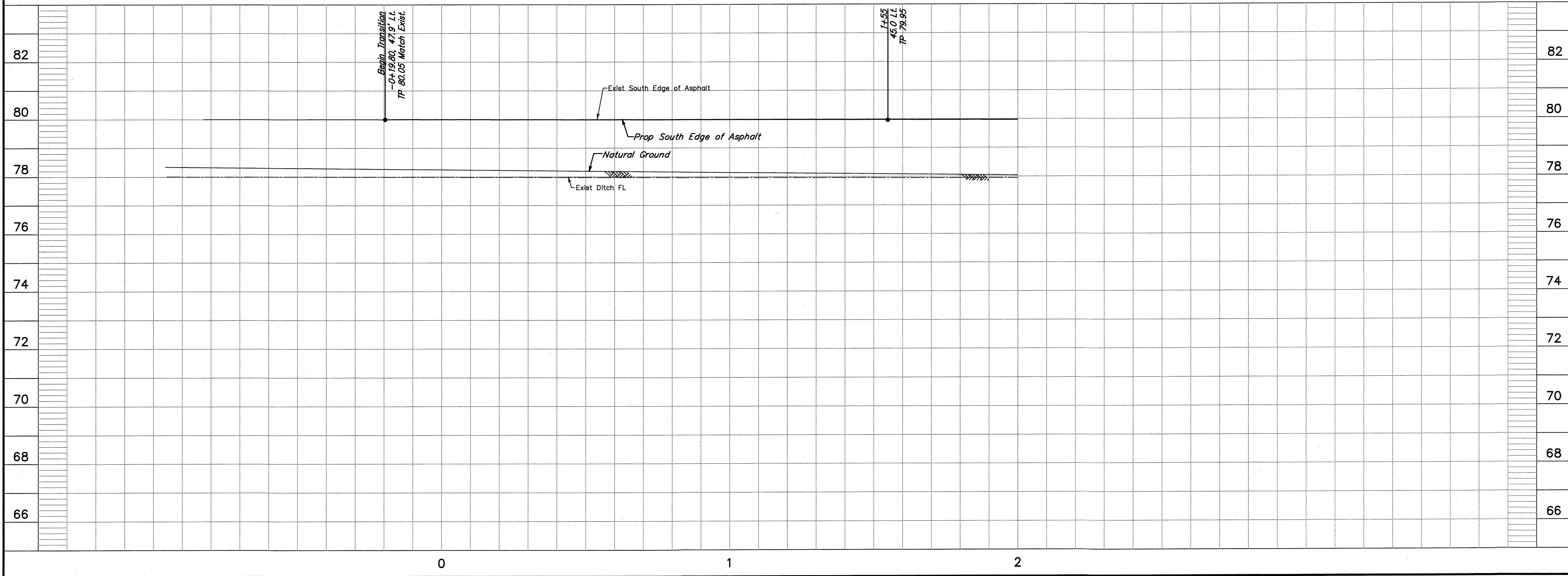
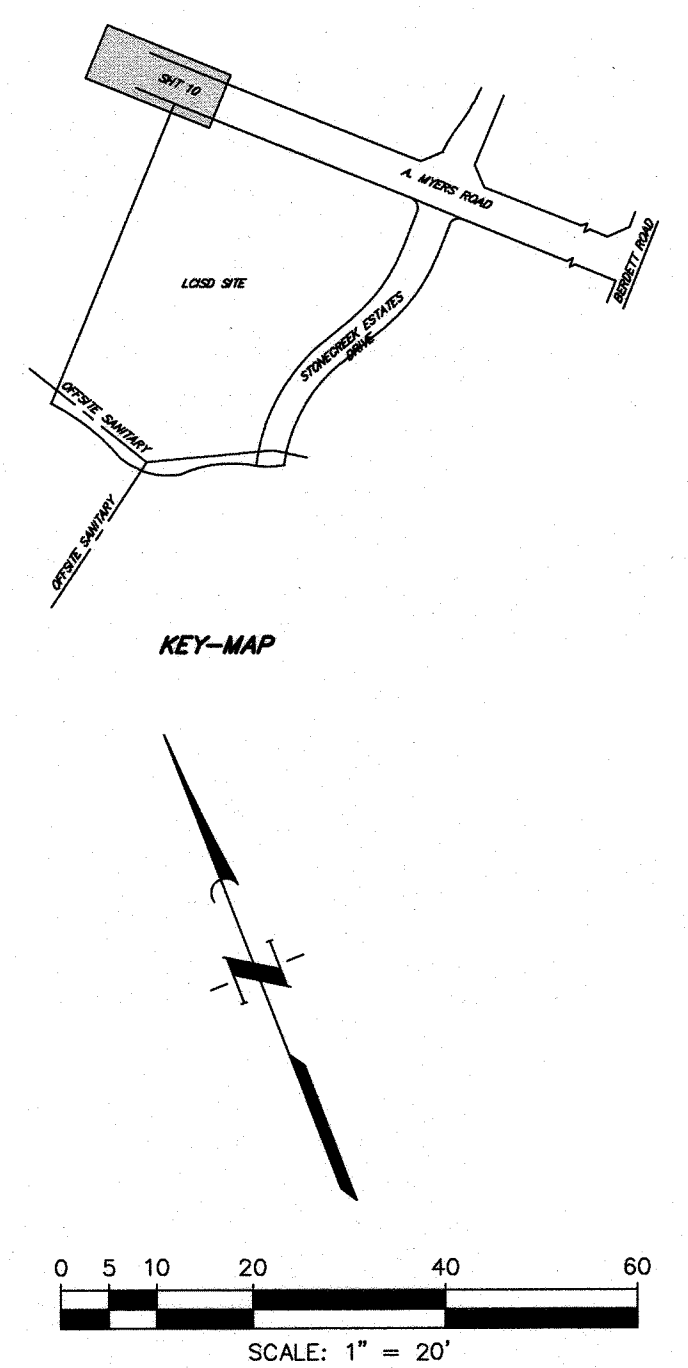
Elevations shown hereon are based upon GPS observations calibrated to the published values of HGCSO 71, and HGCSO 72 (NAVD 88).

**T.B.M.**

Being a set mag nail. Located in an asphalt driveway off of Berdett Road. Elevation = 77.55' (NAVD88).

**100 YR. FLOOD PLAIN**

This tract lies within Zone "X" of the Flood Insurance Rate Map, Community No. 480228, Map Number 48157C0265L, Panel 0265, Suffix "L" dated April 2, 2014, for Fort Bend County, Texas and incorporated areas. Zone "X" is defined as areas determined to be outside the 0.2% annual chance floodplain.



APPROVED: *Max*  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

A. MYERS ROAD  
0+00 TO 2+00

**JC JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=20' H., 1"=2' V. DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO.   
SUBMITTED: SURV. BY:   
F.B. NO.

STATE OF TEXAS  
JOHN D. BARDELLONA  
77482  
LICENSED PROFESSIONAL ENGINEER

SHEET NO.  
9A  
OF 23



# CONSTRUCTION NOTES

- SEE SHEET 19 FOR ADDITIONAL RAISED PAVEMENT MARKERS. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
- CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE A. MYERS RD RIGHT-OF-WAY WITH THE FORT BEND COUNTY ROAD & BRIDGE DEPT (281-342-4513).

PROP 2" TYPE "D" HMLH ASPHALT ON 8" BASE. MATCH EXISTING EDGE OF ASPHALT ELEVATION.

# LEGEND

- (A) 4" DOUBLE SOLID YELLOW
- (B) 4" SOLID WHITE (6" FROM EDGE)
- (C) 8" SOLID WHITE
- (D) 24" SOLID YELLOW
- (E) TURN ARROW
- (F) WORD "ONLY"
- (G) 24" SOLID WHITE

# FILL NOTES

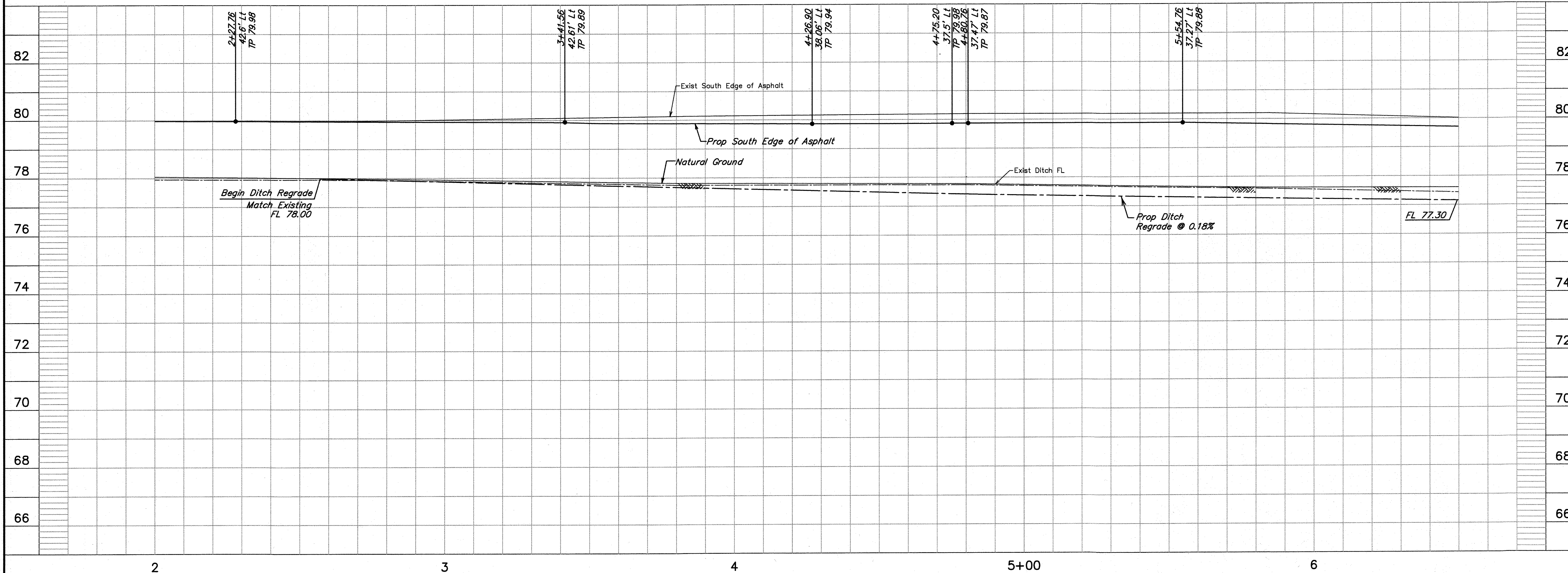
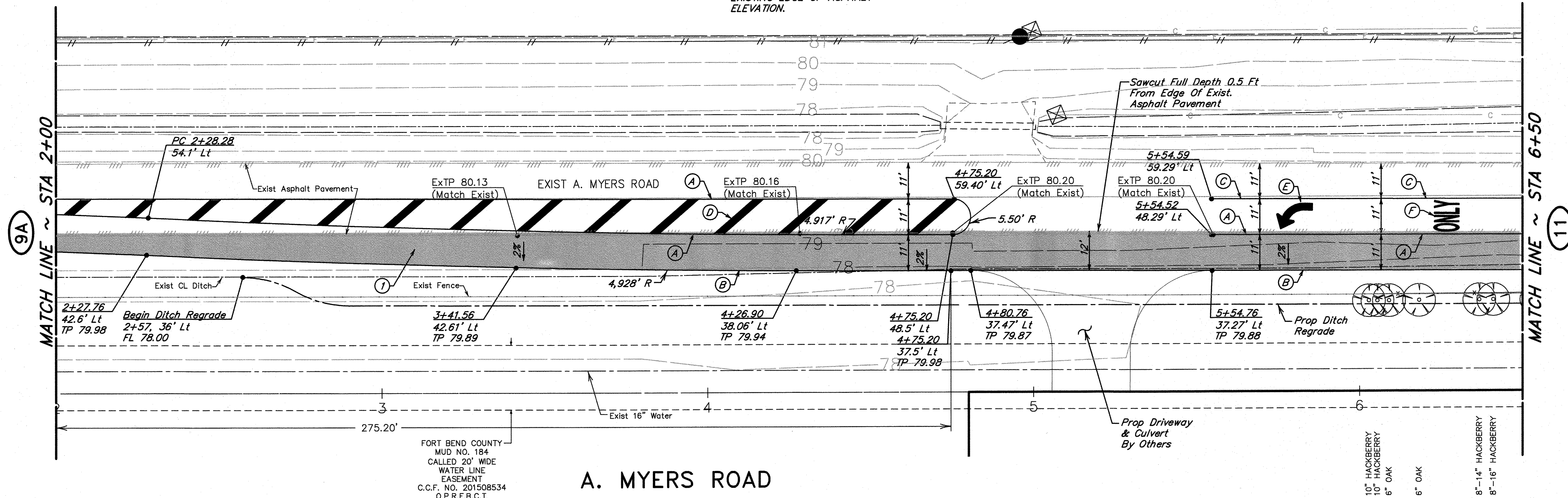
- DRAINAGE SWALES: All Existing Drainage Swales Shall Be Filled as Shown with Material From Existing Adjacent Spoil Banks in Maximum 8" Loose Lifts and Compacted to 95% Proctor Density as Per AASHTO Test Method T-99.
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# BENCH MARK

Elevations shown hereon are based upon GPS observations calibrated to the published values of HGSD 71, and HGSD 72 (NAVD 88).

**T.B.M.**  
Being a set mag nail. Located in an asphalt driveway off of Berdett Road. Elevation = 77.55' (NAVD88).

**100 YR. FLOOD PLAIN**  
This tract lies within Zone "X" of the Flood Insurance Rate Map, Community No. 480228, Map Number 48157C0265L, Panel 0265, Suffix "L" dated April 2, 2014, for Fort Bend County, Texas and incorporated areas. Zone "X" is defined as areas determined to be outside the 0.2% annual chance floodplain.



APPROVED: *Maxi D. Jones*  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

**A. MYERS ROAD  
2+00 TO 6+50**

**J.C. JONES | CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=20' H., 1"=2' V. DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO.   
SUBMITTED: SURV. BY:   
F.B. NO.   
F.B. NO.   
F.B. NO.

STATE OF TEXAS  
JOHN D. BARCELLONA  
97482  
LICENSED PROFESSIONAL ENGINEER

6/19/17

SHEET NO.  
**10**  
OF 23



① SEE SHEET 19 FOR ADDITIONAL RAISED  
PAVEMENT MARKERS. ALL PAVEMENT  
MARKINGS SHALL BE THERMOPLASTIC.

② CONTRACTOR SHALL COORDINATE  
ALL WORK WITHIN THE A. MYERS RD  
RIGHT-OF-WAY WITH THE FORT BEND  
COUNTY ROAD & BRIDGE DEPT  
(291-342-4513).

PROP 2" TYPE "D" HMMH  
ASPHALT ON 8" BASE. MATCH  
EXISTING EDGE OF ASPHALT  
ELEVATION.

- (A) 4" DOUBLE SOLID YELLOW
- (B) 4" SOLID WHITE (6" FROM EDGE)
- (C) 8" SOLID WHITE
- (D) 24" SOLID YELLOW
- (E) TURN ARROW
- (F) WORD "ONLY"
- (G) 24" SOLID WHITE

1) DRAINAGE SWALES: All Existing Drainage Swales Shall Be Filled as Shown with Material From Existing Adjacent Slope Banks in Maximum 8" Loose Lifts and Compacted to 95% Proctor Density as Per AASHTO Test Method T-99.

2) DRAINAGE SWALES: All Existing Drainage Swales Under Proposed Concrete Pavement Shall Be Cleaned, Mucked Out and Scarified to a Minimum Depth of 6" and Filled as Specified Above in Fill Note No. 1.  
No Separate Pay.

3) ROADWAY EMBANKMENT: Strip 3" of Vegetation From Area to Be Filled and Re-Compact Soil to 95% Proctor Density. Place Fill Material as Specified in Fill Note No. 1.

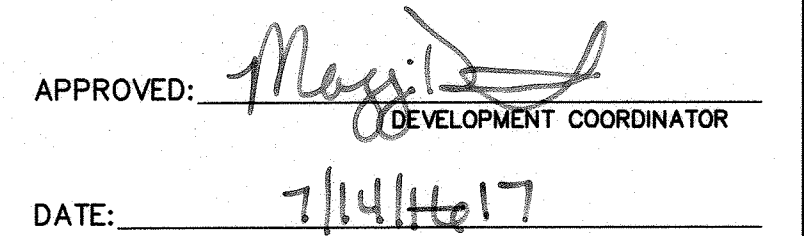
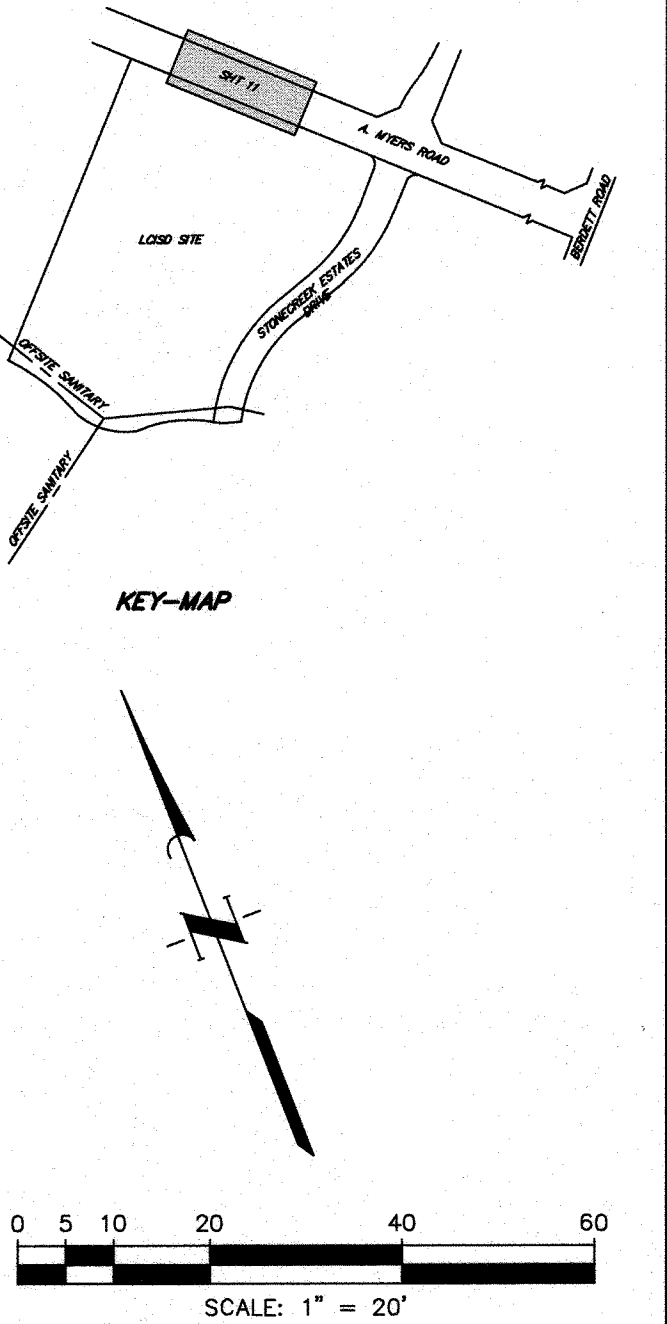
Elevations shown hereon are based upon GPS observations calibrated to the published values of HGCSD 71, and HGCSD 72 (NAVD 88).

**T.B.M.**

Being a set mag nail. Located in an asphalt driveway off of Berdett Road. Elevation = 77.55' (NAVD88).

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NO.	DATE	REVISIONS	APP.

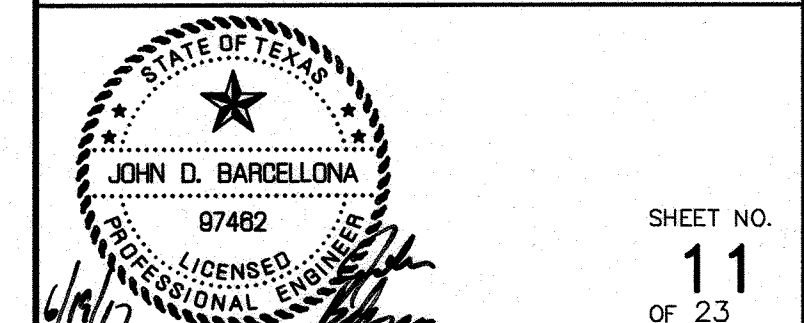
FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

A. MYERS ROAD  
6+50 TO 11+00



SCALE: 1"=20' H., 1"=2' V. DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO. \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
F.B. NO. \_\_\_\_\_





① SEE SHEET 19 FOR ADDITIONAL RAISED  
PAVEMENT MARKERS. ALL PAVEMENT  
MARKINGS SHALL BE THERMOPLASTIC.

② CONTRACTOR SHALL COORDINATE  
ALL WORK WITHIN THE A. MYERS RD  
RIGHT-OF-WAY WITH THE FORT BEND  
COUNTY ROAD & BRIDGE DEPT  
(281-342-4513).

PROP 2" TYPE "D" MHHL  
ASPHALT ON 8" BASE. MATCH  
EXISTING EDGE OF ASPHALT  
ELEVATION.

- (A) 4" DOUBLE SOLID YELLOW
- (B) 4" SOLID WHITE (6" FROM EDGE)
- (C) 8" SOLID WHITE
- (D) 24" SOLID YELLOW
- (E) TURN ARROW
- (F) WORD 'ONLY'
- (G) 24" SOLID WHITE

TEST WELL

## SIGE

GRATE INLET

SIGN

POWER POLE

- 1.) **DRAINAGE SWALES:** All Existing Drainage Swales Shall Be Filled as Shown with Material From Existing Adjacent Spill Banks in Maximum 8" Loose Lifts and Compacted to 95% Proctor Density as Per AASHTO Test Method T-99.
- 2.) **DRAINAGE SWALES:** All Existing Drainage Swales Under Proposed Concrete Pavement Shall Be Cleaned, Mucked Out and Scarified to a Minimum Depth of 6" and Filled as Specified Above in Fill Note No. 1.  
No Separate Pay.
- 3.) **ROADWAY EMBANKMENT:** Strip "3" of Vegetation From Area to Be Filled and Re-Compact Soil to 95% Proctor Density. Place Fill Material as Specified in Fill Note No. 1.

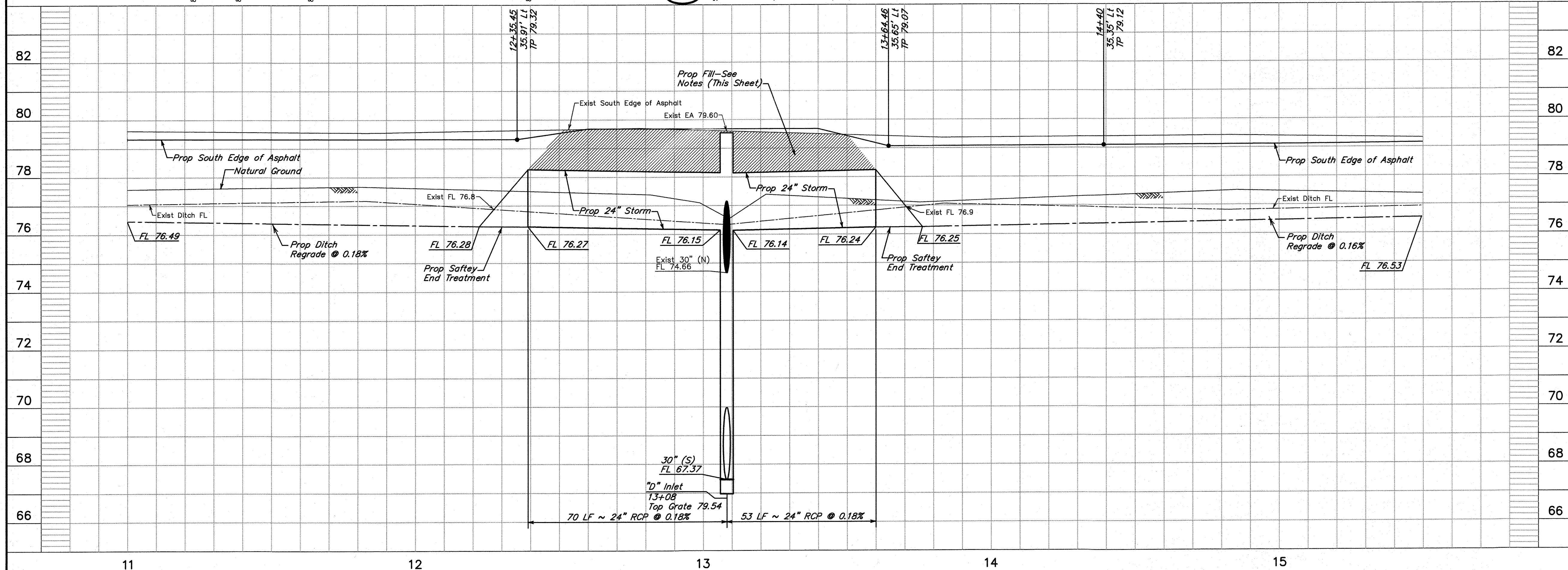
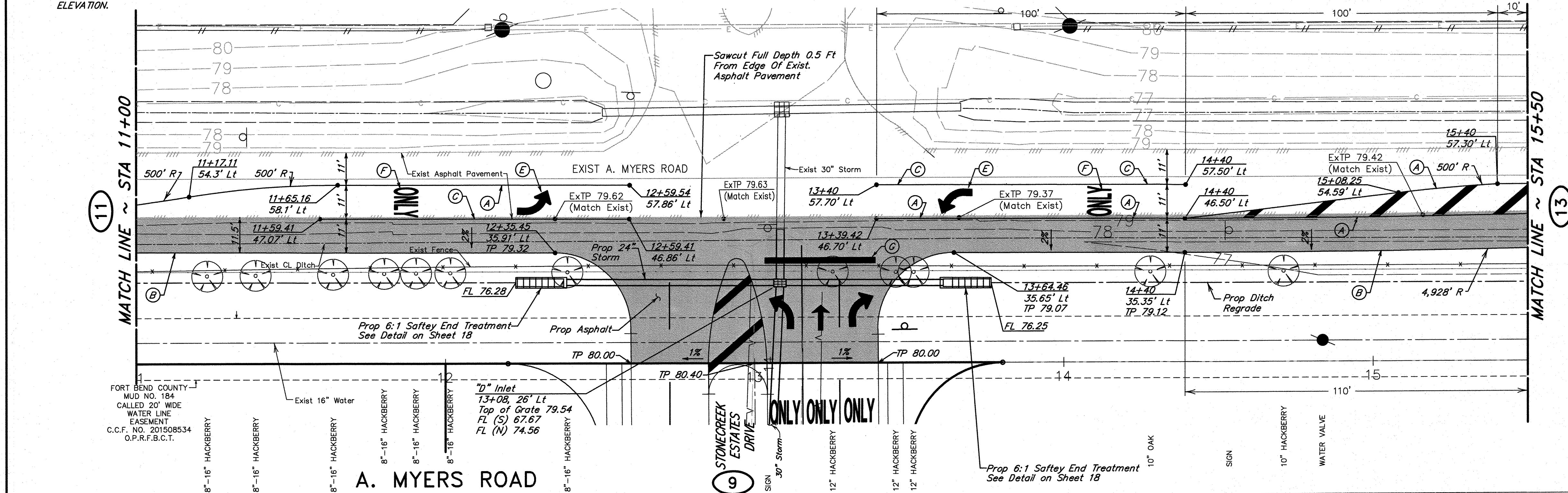
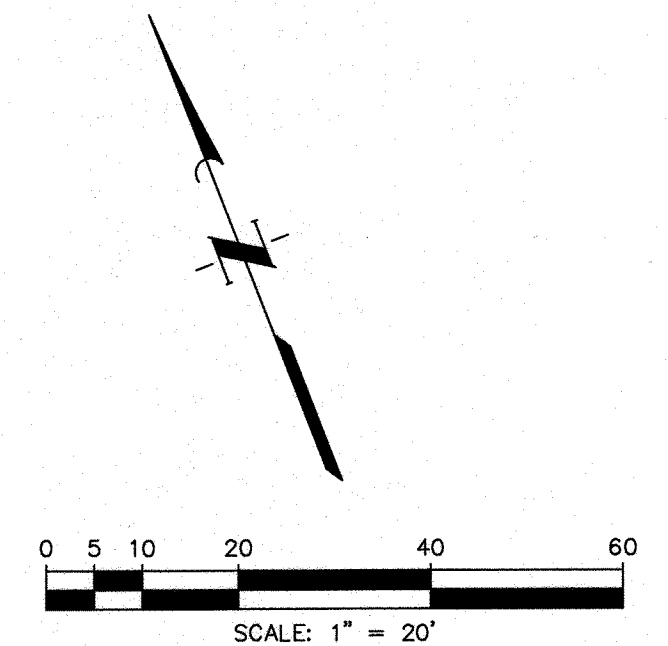
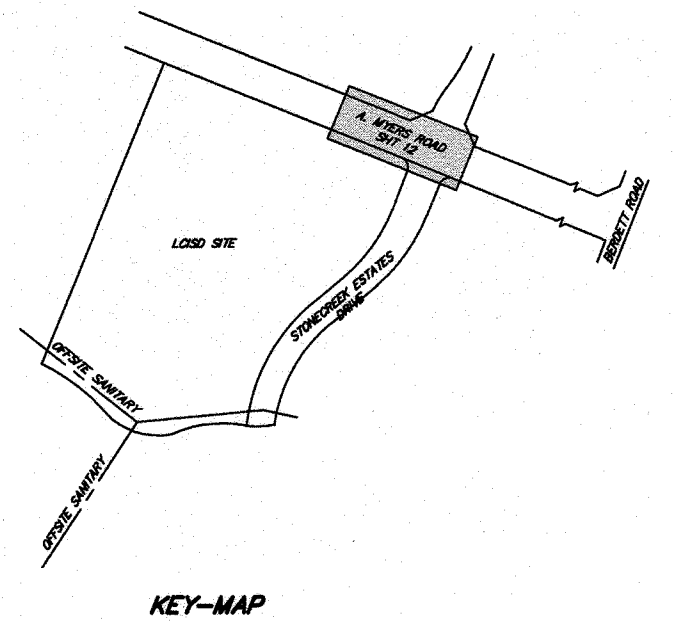
Elevations shown hereon are based upon GPS observations calibrated to the published values of HCGSD 71, and HCGSD 72 (NAVD 88).

**1.B.M.**

Being a set mag. nail. Located in an asphalt driveway off of Berrett Road. Elevation = 77.55' (NAVD88).

**100 YR. FLOOD PLAIN.**

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APPROVED: Maggi D.  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP

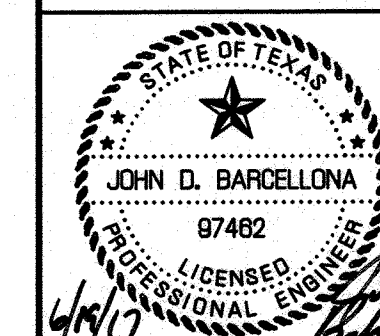
FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

A. MYERS ROAD  
11+00 TO 15+50



SCALE: 1"=20' H., 1"=2' V. DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO. \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
F.B. NO. \_\_\_\_\_



SHEET NO.  
**12**  
OF 23



# CONSTRUCTION NOTES

- SEE SHEET 19 FOR ADDITIONAL RAISED PAVEMENT MARKERS. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
- CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE A. MYERS RD RIGHT-OF-WAY WITH THE FORT BEND COUNTY ROAD & BRIDGE DEPT (281-342-4513).

PROP 2" TYPE "D" HMMH ASPHALT ON 8" BASE. MATCH EXISTING EDGE OF ASPHALT ELEVATION.

# LEGEND

- (A) 4" DOUBLE SOLID YELLOW
- (B) 4" SOLID WHITE (6" FROM EDGE)
- (C) 8" SOLID WHITE
- (D) 24" SOLID YELLOW
- (E) TURN ARROW
- (F) WORD ONLY
- (G) 24" SOLID WHITE

TELEPHONE POLE

# FILL NOTES

- DRAINAGE SWALES: All Existing Drainage Swales Shall Be Filled as Shown with Material From Existing Adjacent Spoil Banks in Maximum 8" Loose Lifts and Compacted to 95% Proctor Density as Per AASHTO Test Method T-99.
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- ROADWAY EMBANKMENT: Strip 3" of Vegetation From Area to Be Filled and Re-Compact Soil to 95% Proctor Density. Place Fill Material as Specified in Fill Note No. 1.

# BENCH MARK

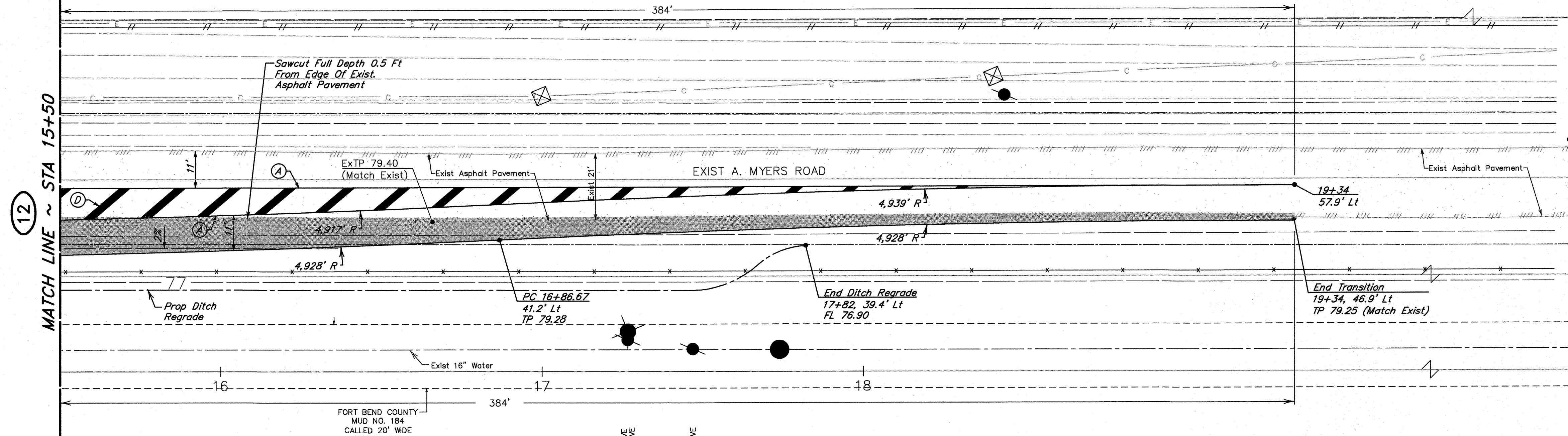
Elevations shown hereon are based upon GPS observations calibrated to the published values of HGCSO 71, and HGCSO 72 (NAVD 88).

# T.B.M.

Being a set mag nail. Located in an asphalt driveway off of Berdett Road. Elevation = 77.55' (NAVD88).

# 100 YR. FLOOD PLAIN

This tract lies within Zone "X" of the Flood Insurance Rate Map, Community No. 480228, Map Number 48157C0265L, Panel 0265, Suffix "L" dated April 2, 2014, for Fort Bend County, Texas and incorporated areas. Zone "X" is defined as areas determined to be outside the 0.2% annual chance floodplain.

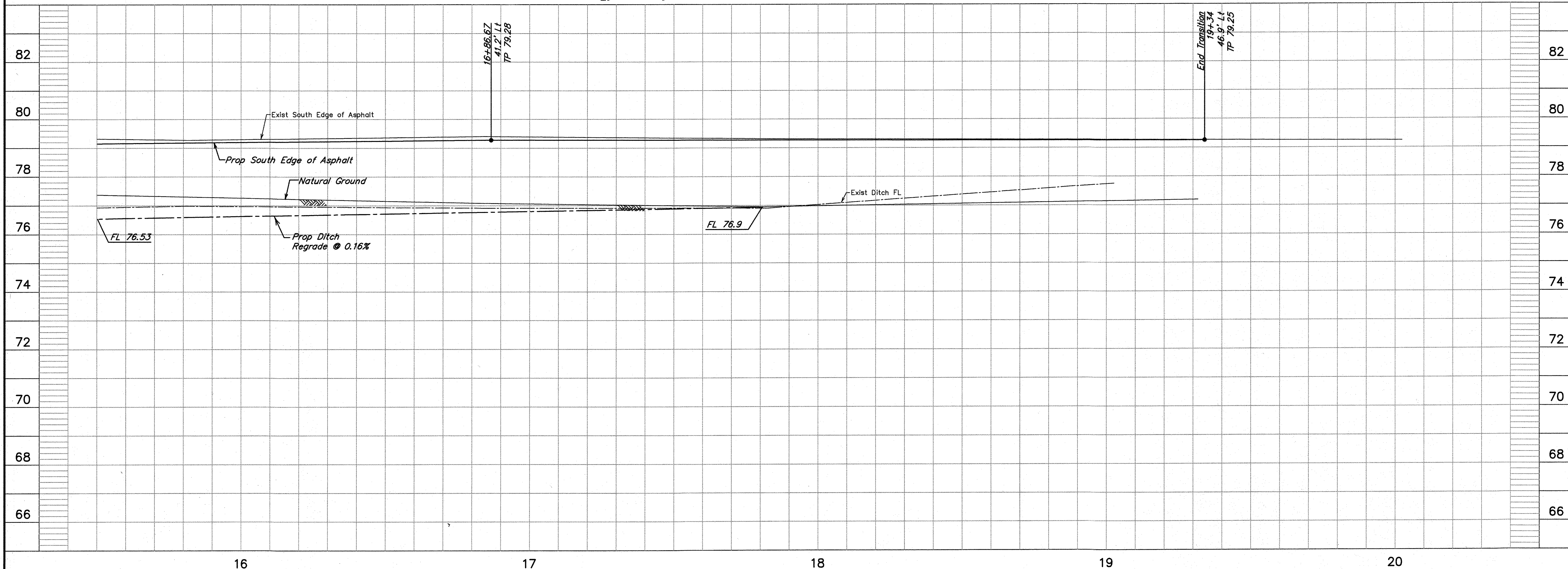
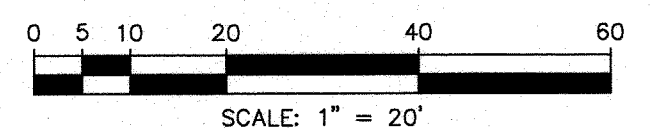
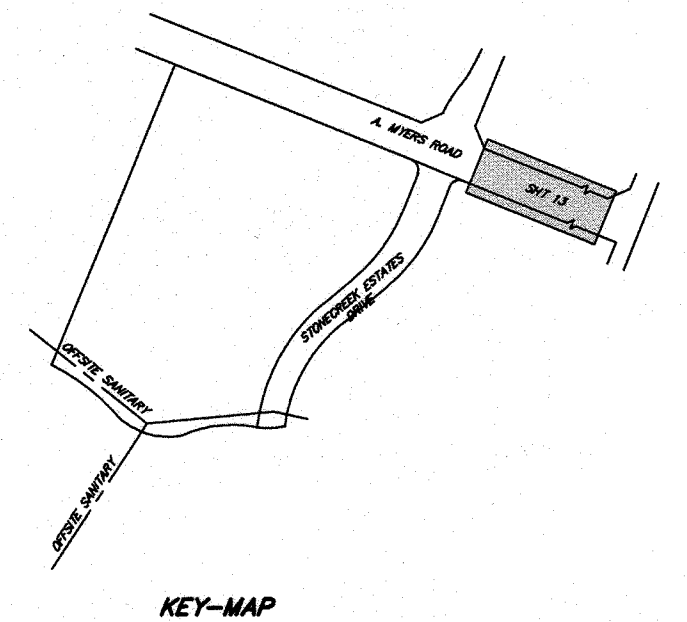
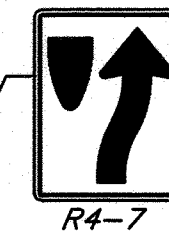


A. MYERS ROAD

FORT BEND COUNTY  
MUD NO. 184  
CALLED 20' WIDE  
WATER LINE  
EASEMENT  
C.C.F. NO. 201508534  
O.P.R.F.B.C.T.

FLUSH VALVE  
WATER VALVE

WATER VALVE



APPROVED: *Max*  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

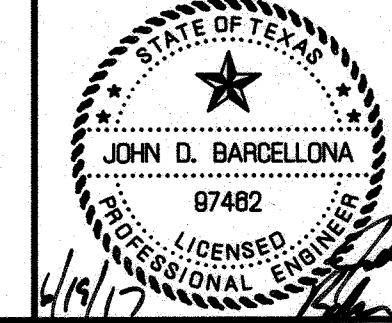
FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

A. MYERS ROAD  
15+50 TO 19+34

**JC JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=20' H., 1"=2' V. DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO.   
SUBMITTED: SURV. BY:   
F.B. NO.   
9/1/17

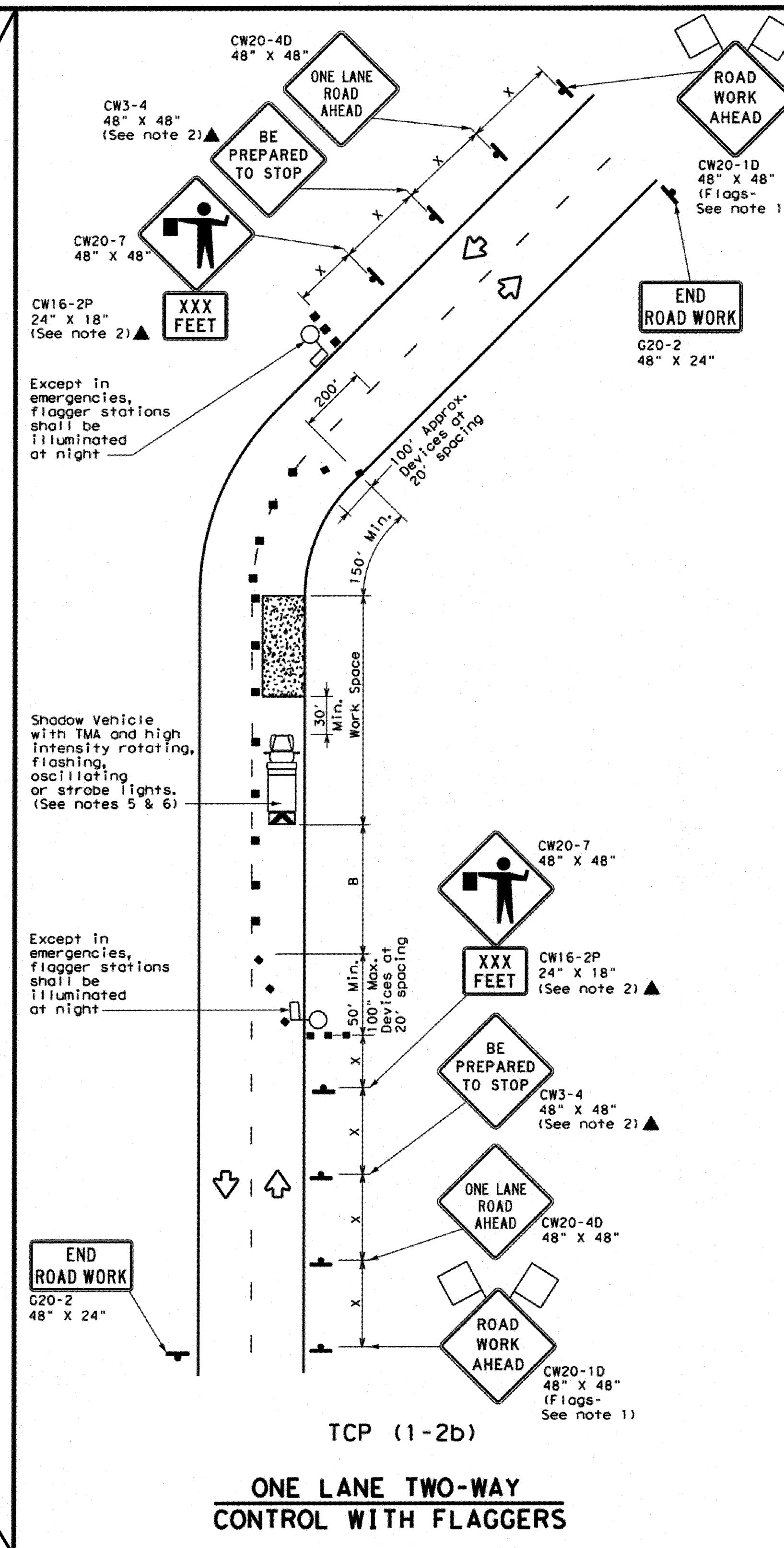
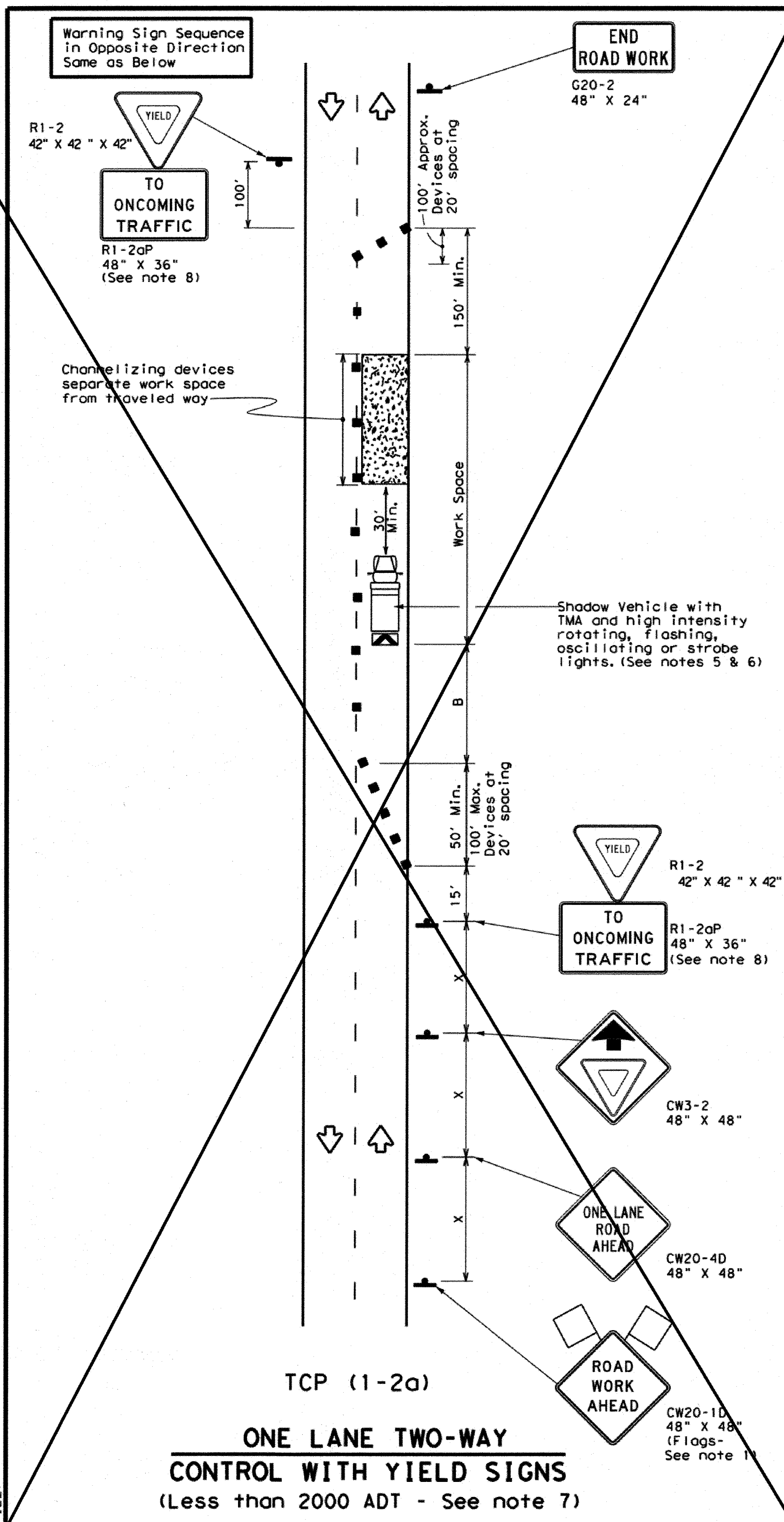


SHEET NO.  
13  
OF 23



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DATE: FILE:



**LEGEND**

Type 3 Barricade	Channelizing Devices
Heavy Work Vehicle	Truck Mounted Attenuator (TMA)
Trailer Mounted Flashing Arrow Board	Portable Changeable Message Sign (PCMS)
Sign	Traffic Flow
Flag	Flagger

Posted Speed * Formula	Minimum Desirable Taper Lengths **	Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "x" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance			
		On a Taper	On a Tangent						
30	L = WS <sup>2</sup> / 60	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45		450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

\* Conventional Roads Only  
\*\* Taper lengths have been rounded off.  
L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

**TYPICAL USAGE**

MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

**GENERAL NOTES**

- Flags attached to signs where shown are REQUIRED.
- All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
- The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
- Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or R1-2 "YIELD" sign is less than 1500 feet.
- A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

**TCP (1-2a)**

- R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
- R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.

**TCP (1-2b)**

- Flaggers should use two-way radios or other methods of communication to control traffic.
- Length of work space should be based on the ability of flaggers to communicate.
- If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
- Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
- Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

**Texas Department of Transportation**  
Traffic Operations Division

**TRAFFIC CONTROL PLAN**  
ONE-LANE TWO-WAY TRAFFIC CONTROL

TCP (1-2)-12

© TxDOT December 1985	REV. TXDOT	REV. TXDOT	REV. TXDOT	REV. TXDOT
4-90 2-12	CONT	SECT	JOB	HIGHWAY
2-94				
1-97				
4-98				
	DIST	COUNTY		SHEET NO.

152

APPROVED: *Maxi D.*  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

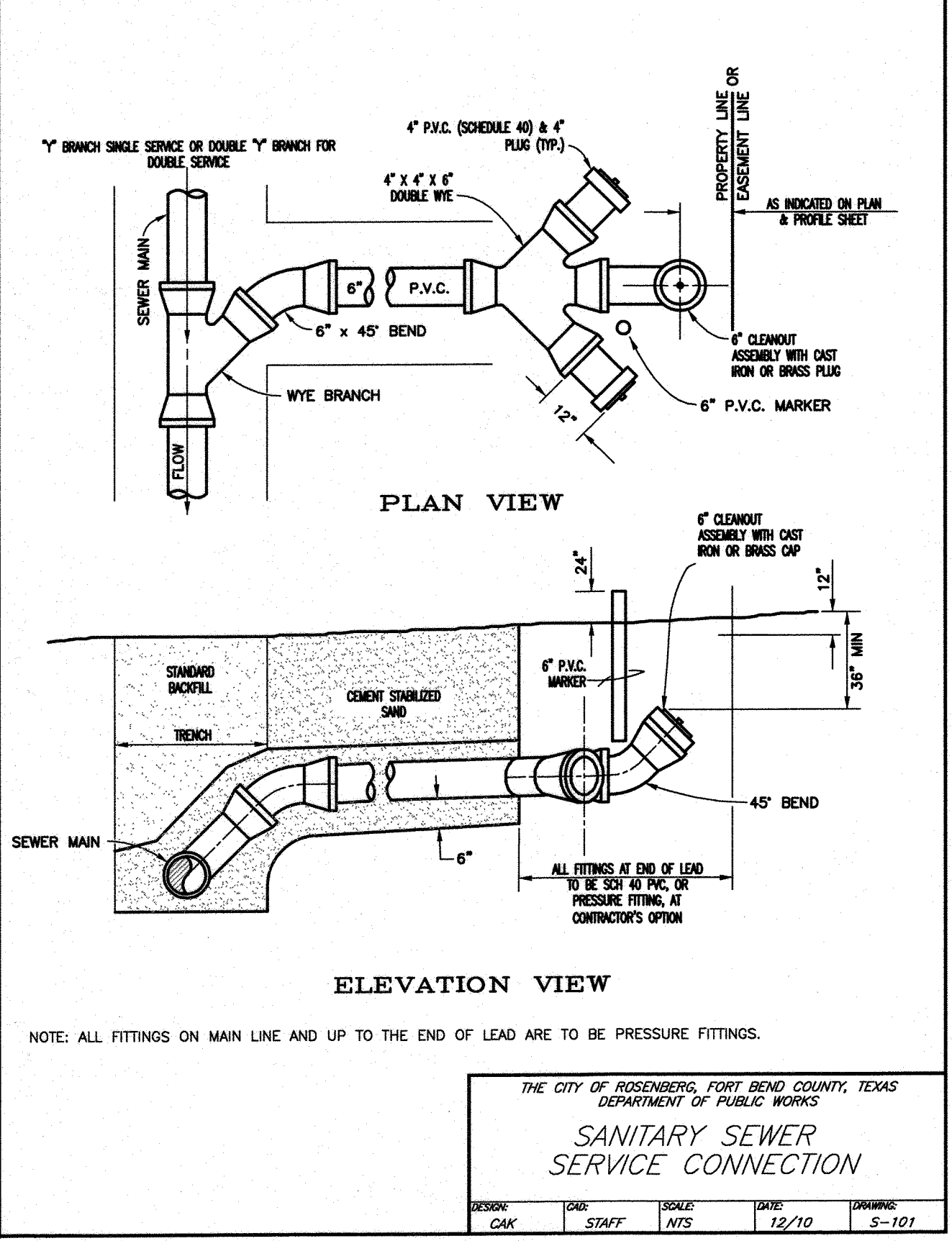
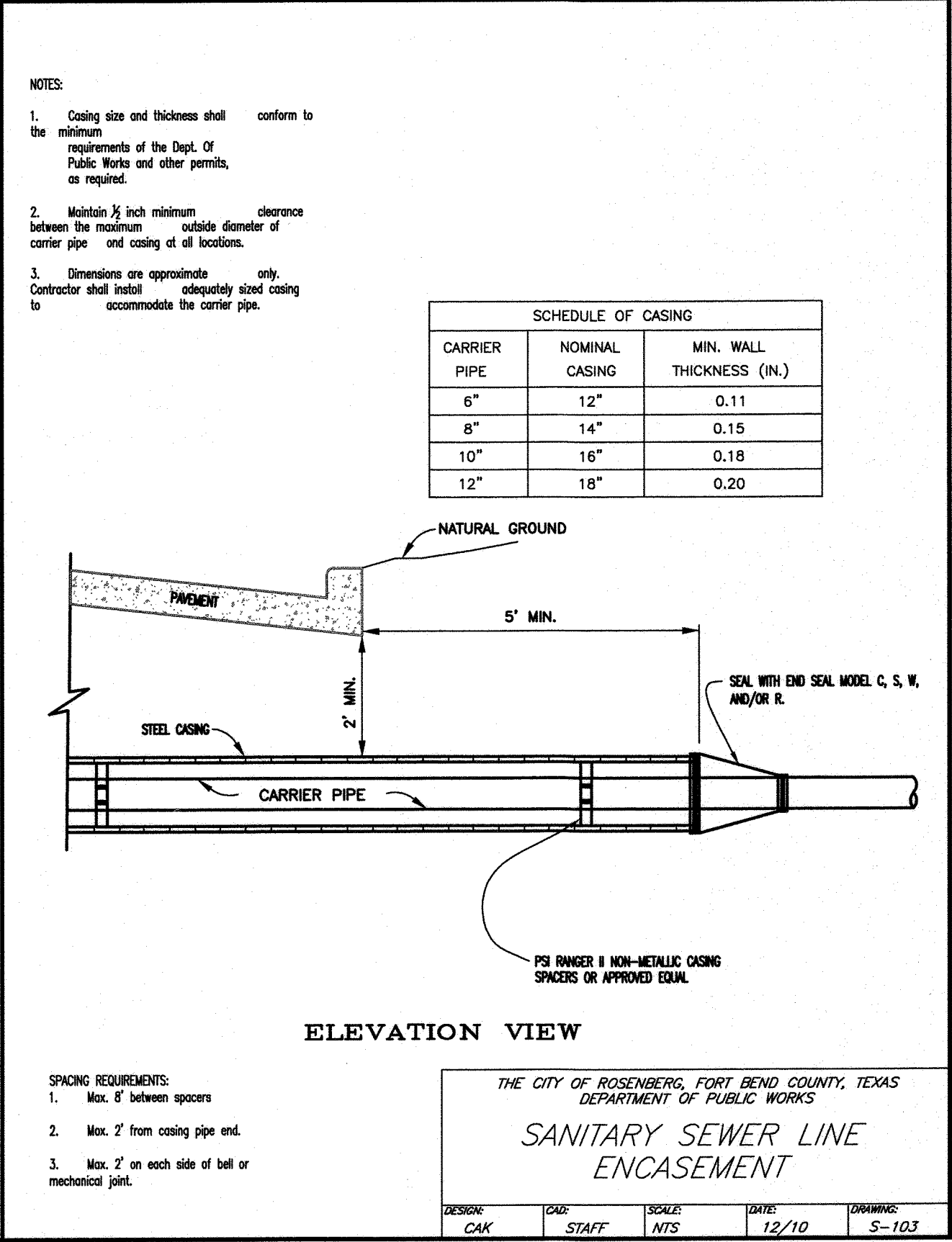
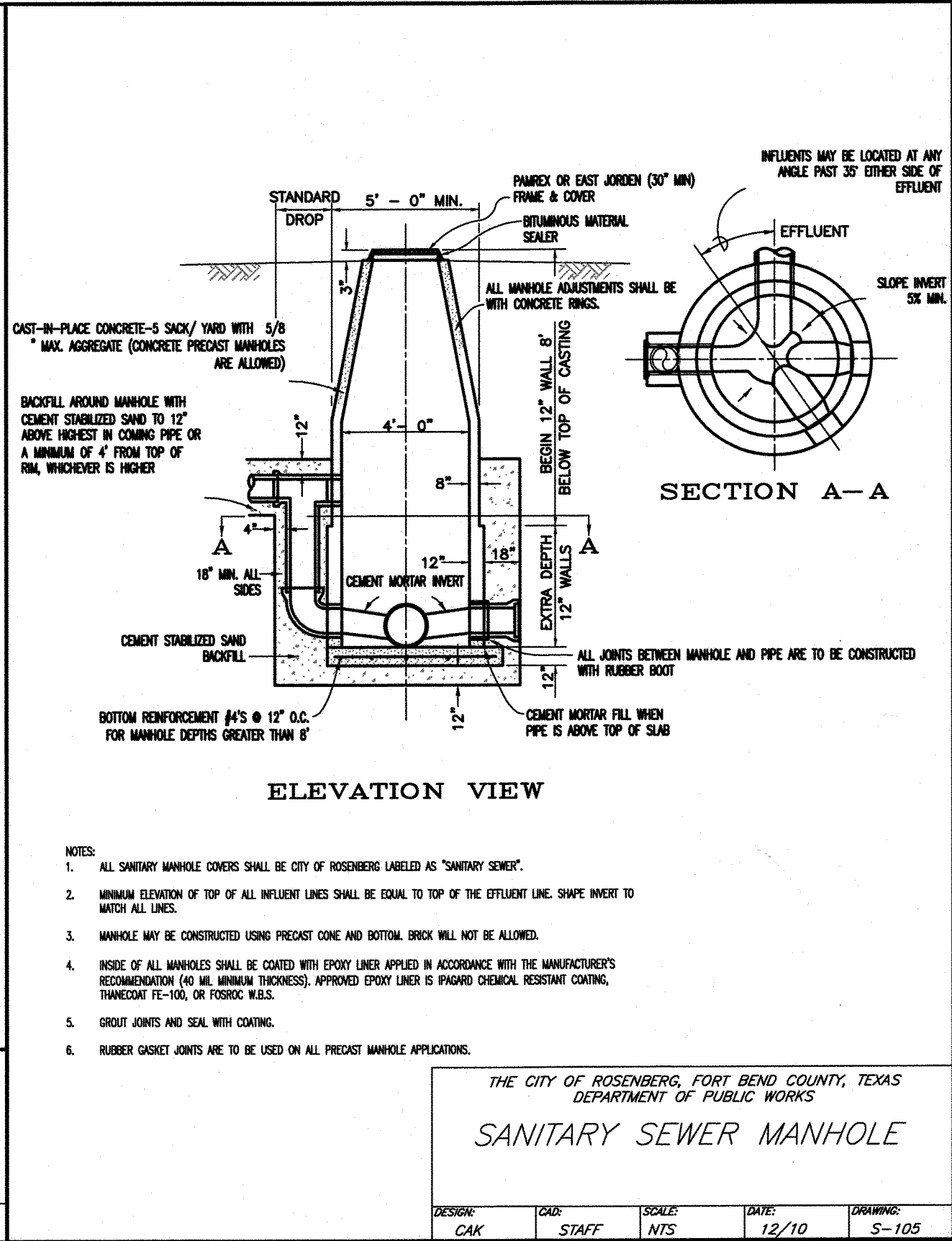
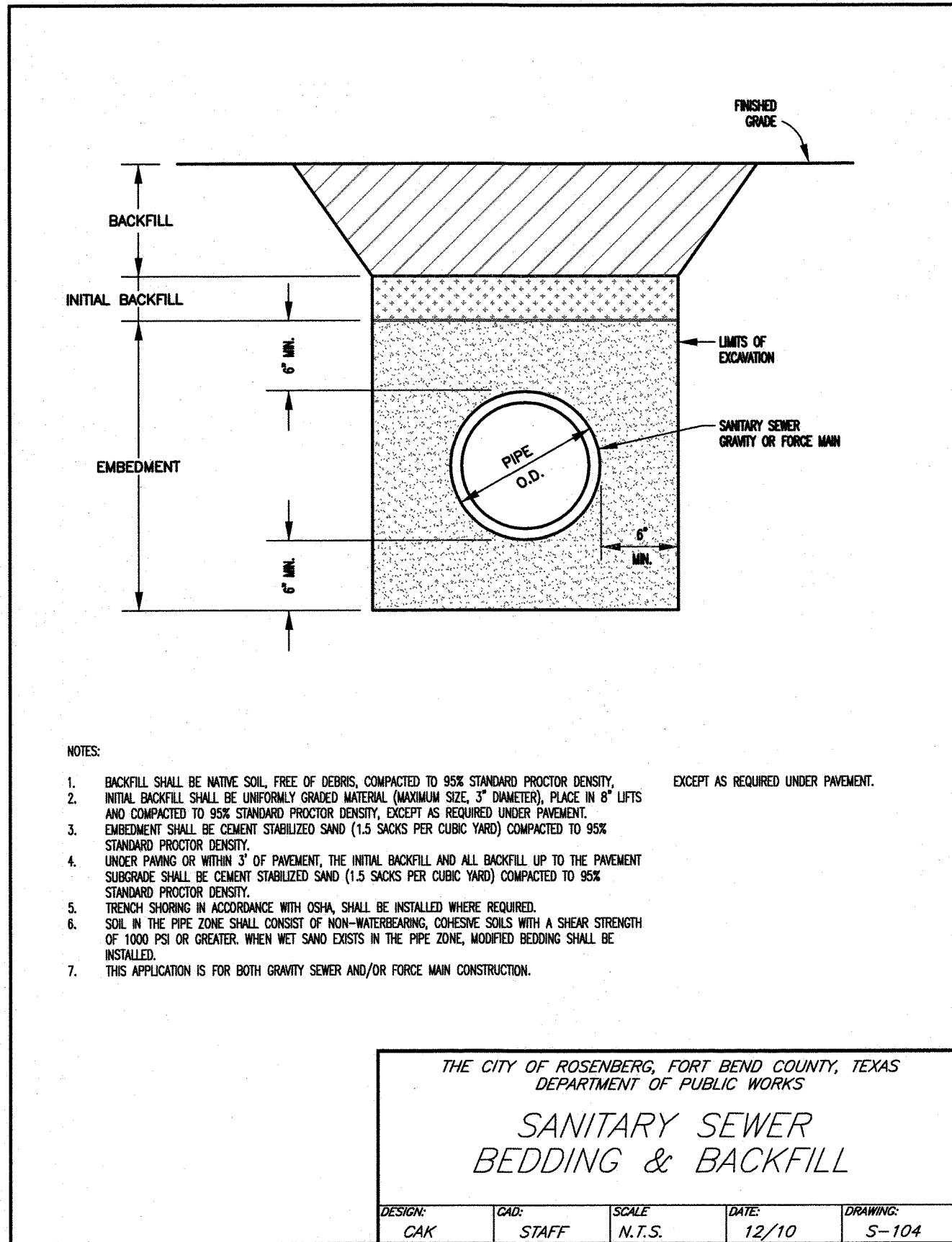
TRAFFIC CONTROL PLAN

**JC JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: N.T.S. DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO.  
SUBMITTED: SURV. BY:  
F.B. NO.

STATE OF TEXAS  
JOHN D. BARCELONA  
97402  
LICENSED PROFESSIONAL ENGINEER  
4/17/17





APPROVED: *Maxwell*  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

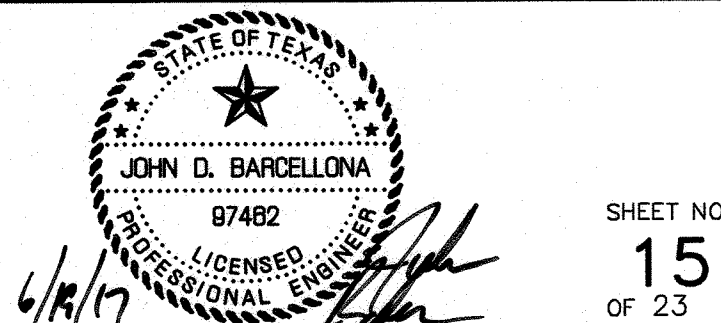
FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

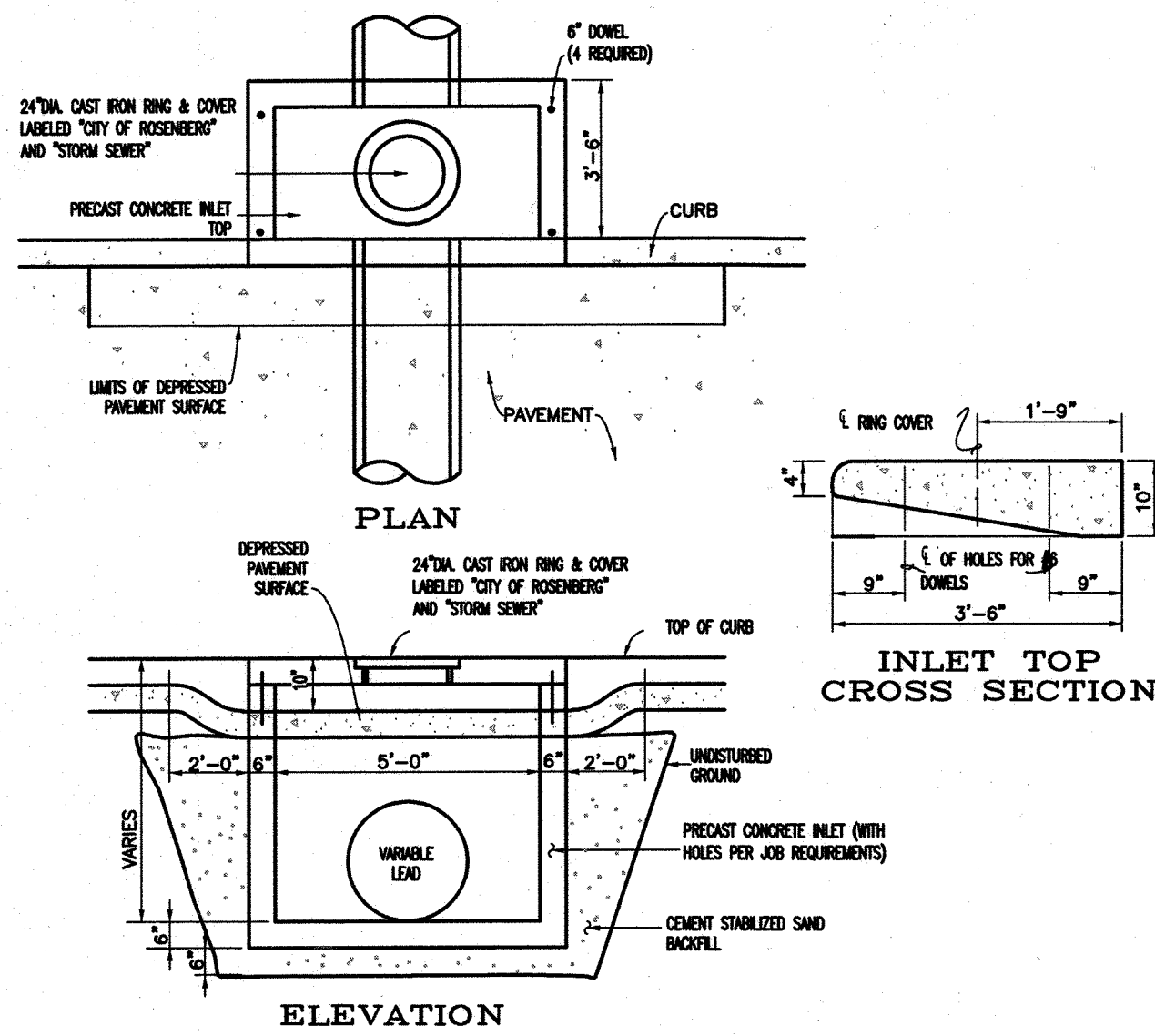
**SANITARY SEWER DETAILS**

**JC JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: N.T.S. DGN. BY: FMJ  
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SUBMITTED: SURV. BY:   
F.B. NO.





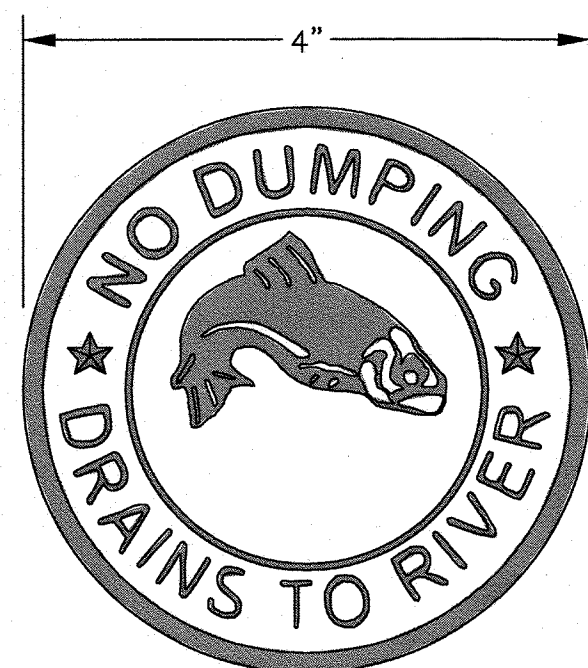


- NOTES:
1. INLET WALLS MAY BE EXTENDED USING PRECAST RISER SECTION.
  2. INLET TOPS MUST BE SECURED TO THE INLET WALL USING #8 DOWELS DRILLED AND GROoved A MINIMUM DEPTH OF 5" INTO THE INLET WALL.
  3. INLET BACKFILL SHALL BE CEMENT STABILIZED SAND TO THE TOP OF FIRST SAGE.
  4. ALL STORM SEWER INLETS MUST HAVE A NO DUMPING STORM DRAIN MARKER (SEE DETAIL D-100) PLACED ON IT WHEN INSTALLED.



THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS  
DEPARTMENT OF PUBLIC WORKS  
**TYPE H-2 INLET**

DESIGN: CAK STAFF: NTS DATE: 11/10 DRAWING: D-108



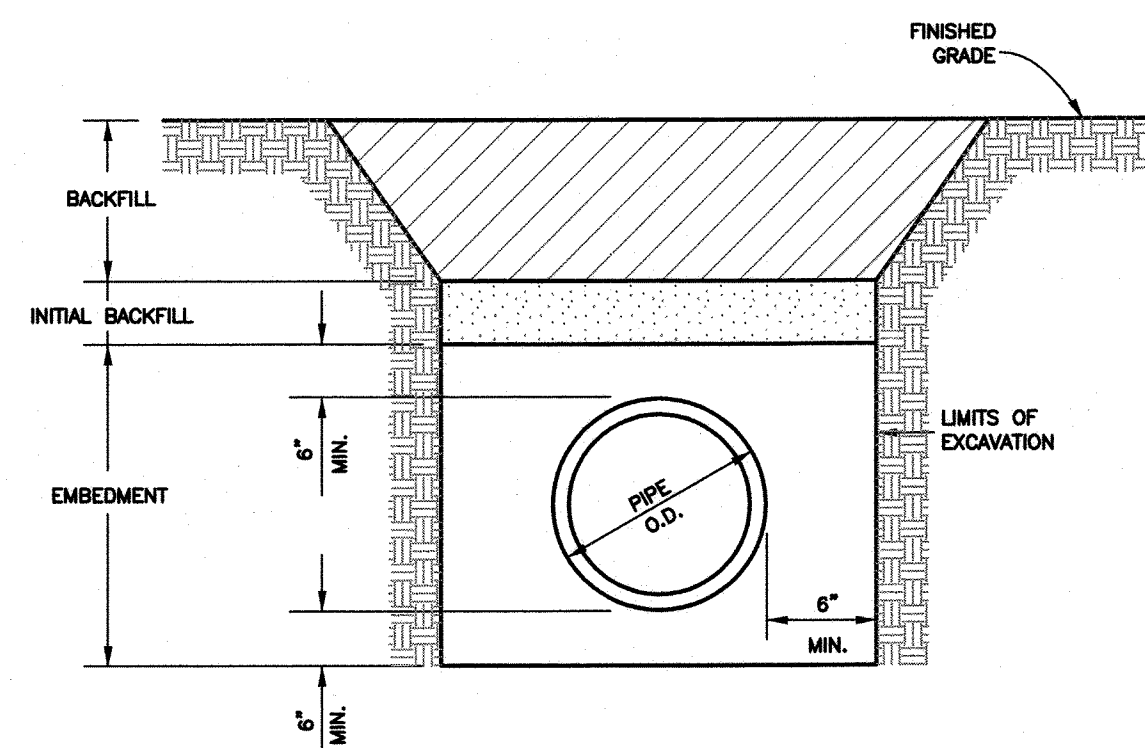
### STORM DRAIN MARKER

ITEM NO. SD-4  
1. COLOR: BLUE, 4" DISC  
MATERIAL: STAINLESS STEEL  
SYMBOL: FISH  
MANUFACTURED BY:  
ALMETEX INDUSTRIES, INC.  
1601 DRIVE  
HACKETTSTOWN, NJ 07840  
1 (609) 256-0380  
www.almetex.com

- NOTES:
1. Surface installation requires the surface be brushed with a wire brush and all dust blown off that surface.
  2. Install marker with [SIKS-ADH] Sikabond Adhesive using a dipless caulking tube gun. Place the adhesive on the back side of the marker in a circular motion from the outside of the marker into the middle of the marker. Place marker in place and apply pressure to the face of the marker.
  3. Markers may be applied to concrete, asphalt or steel. The City of Rosenberg requires the marker to be placed on the middle of every catch basin on all storm drains.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS  
DEPARTMENT OF PUBLIC WORKS  
**NO DUMPING  
METAL STORM DRAIN MARKER**

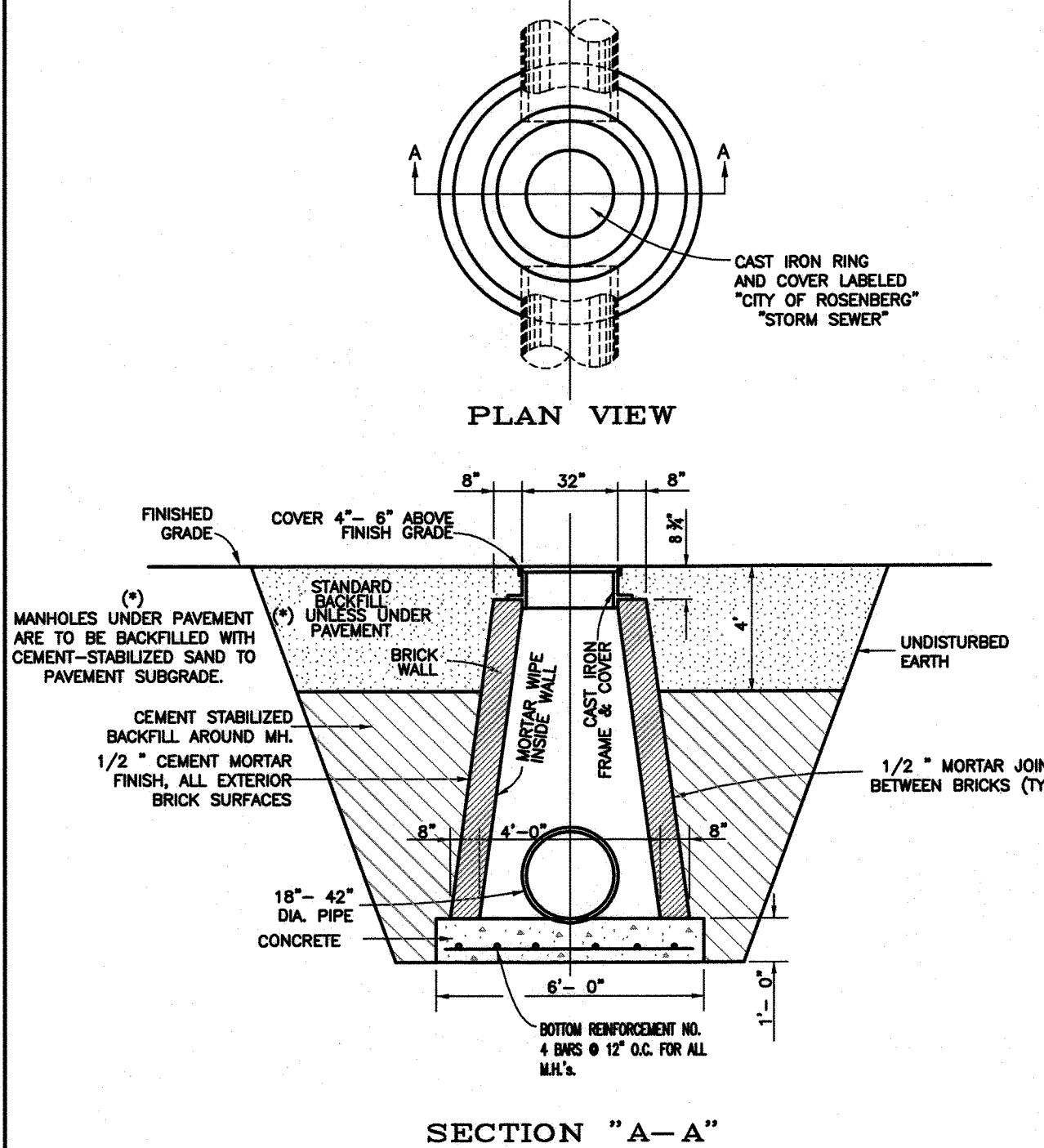
DESIGN: CAK STAFF: NTS DATE: 11/10 DRAWING: D-109



- NOTES:
1. BACKFILL SHALL BE NATIVE SOIL, FREE OF DEBRIS, COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.
  2. INITIAL BACKFILL SHALL BE UNIFORMLY GRADED MATERIAL (MAXIMUM SIZE, 3" DIAMETER), PLACED IN 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED UNDER PAVEMENT.
  3. EMBEDMENT SHALL BE CEMENT STABILIZED SAND (1.5 SACKS PER CUBIC YARD) COMPACTED TO 95% STANDARD PROCTOR DENSITY.
  4. UNDER PAVING OR WITHIN 3' OF PAVEMENT, THE INITIAL BACKFILL AND ALL BACKFILL UP TO THE PAVEMENT SUBGRADE SHALL BE CEMENT STABILIZED SAND (1.5 SACKS PER CUBIC YARD) COMPACTED TO 95% STANDARD PROCTOR DENSITY.
  5. TRENCH SHORING IN ACCORDANCE WITH OSHA, SHALL BE INSTALLED WHERE REQUIRED.
  6. SOIL IN THE PIPE ZONE SHALL CONSIST OF NON-WATERBEARING, COHESIVE SOILS WITH A SHEAR STRENGTH OF 1000 PSF OR GREATER. WHEN WET SAND EXISTS IN THE PIPE ZONE, MODIFIED BEDDING SHALL BE INSTALLED.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS  
DEPARTMENT OF PUBLIC WORKS  
**STORM SEWER  
BEDDING & BACKFILL**

DESIGN: CAK STAFF: NTS DATE: 11/10 DRAWING: D-100a

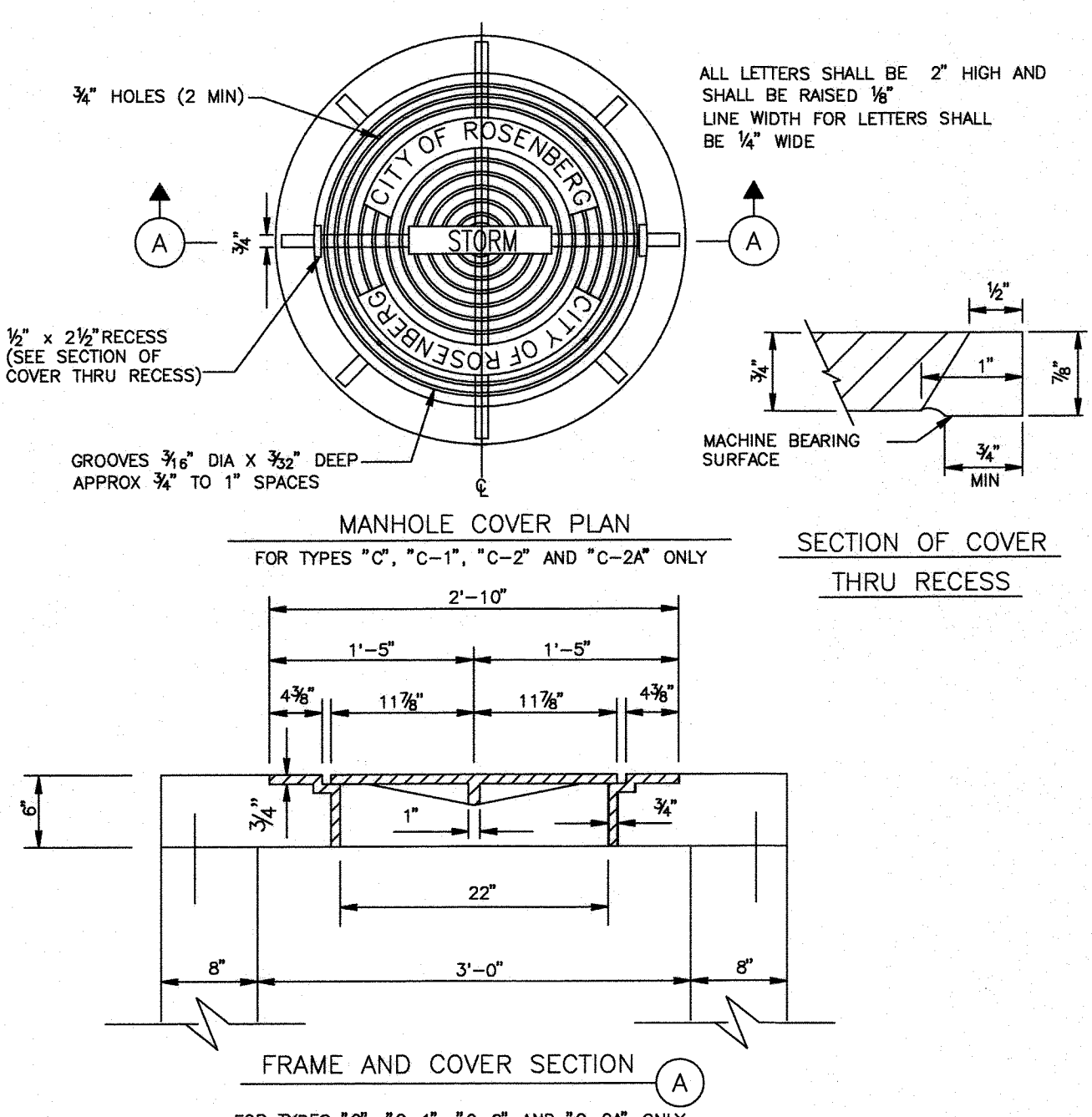


- NOTES:
1. BRICK WALLS 8'-0" BELOW CASTING TO BE 12" THICK.
  2. ALL BRICK MATERIAL SHALL CONFORM WITH ASTM C32, GRADE NA, EXCEPT NOT MORE THAN 10% GRADE ASSORTION WILL BE PERMIT.
  3. ALL MANHOLE CHIMNEYS SHALL BE BRICK OR THROAT RING.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS  
DEPARTMENT OF PUBLIC WORKS  
**BRICK  
TYPE "C" MANHOLE 18'-42"**

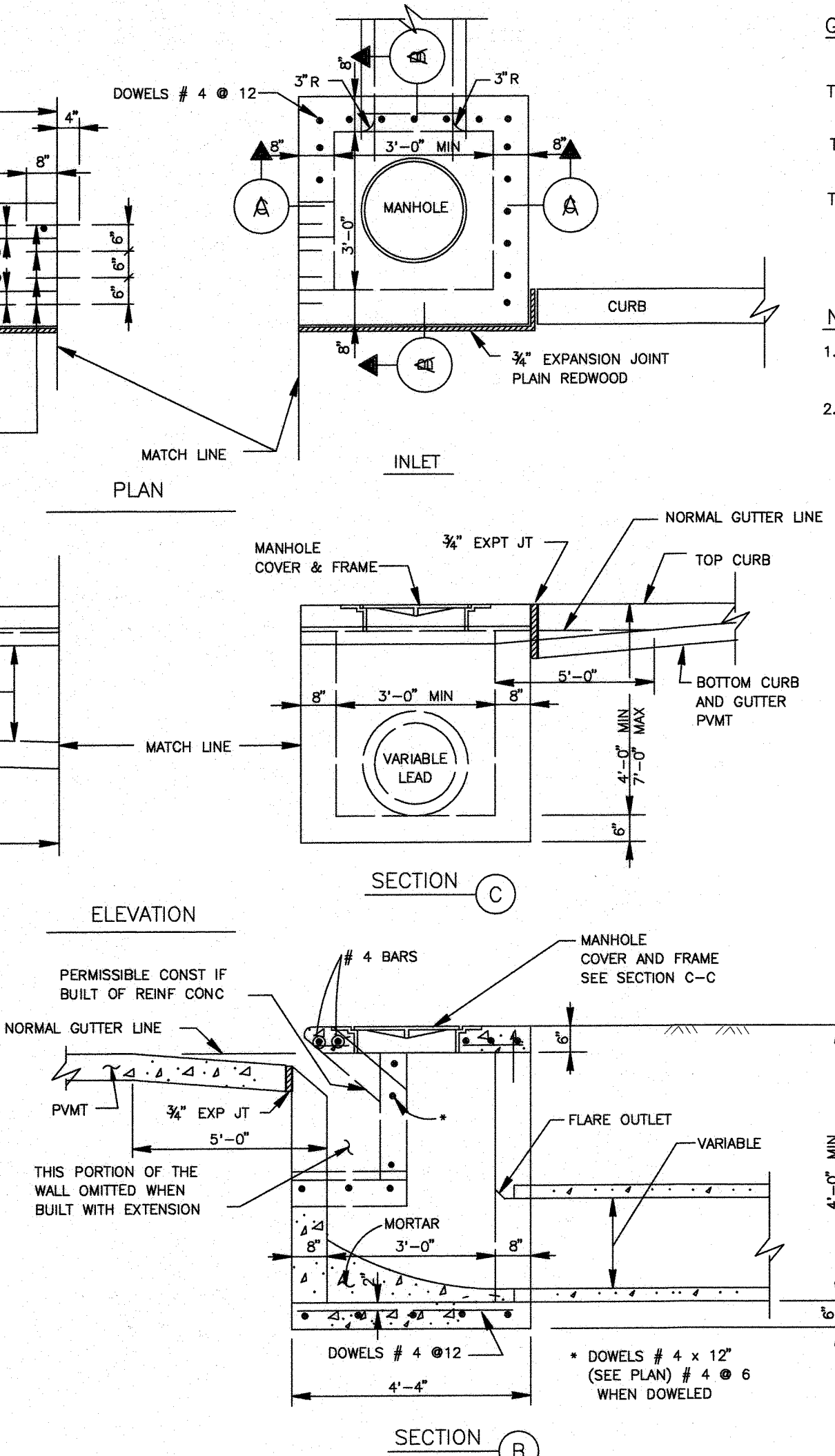
DESIGN: CAK STAFF: NTS DATE: 11/10 DRAWING: D-101

### STORM SEWER TYPE "C-1", "C-2" AND "C-2A" INLETS



### STORM SEWER TYPE "C", "C-1", "C-2", "C-2A" AND "H-2" INLET FRAME AND COVER

N.T.S.



### STORM SEWER TYPE "D" INLET

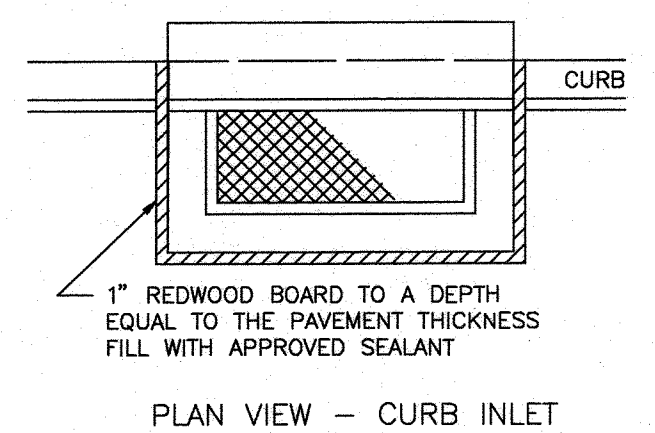
N.T.S.

### GENERAL NOTES:

- TYPE "C-1" INLET WITH ONE EXTENSION (5'-0" LONG)  
TYPE "C-2" INLET WITH ONE EXTENSION ON EACH SIDE  
TYPE "C-2A" INLET WITH DOUBLE EXTENSION (10'-0" LONG)

### NOTES:

1. FOR TYPE "C-2A" INLETS PROVIDE A CENTER 6"x6" COLUMNS IN THE CURB LINE BETWEEN ALL EXTENSIONS.
2. WALLS TO BE 6" IF BUILT WITH REINFORCED CONCRETE. WHEN BUILT WITH BRICK WALL, USE STRAIGHT WALL IN BACK WITH 6" REINFORCED CONCRETE TOP SLABS DOWELLED INTO BRICK WALLS WITH #4 X 8" @ 12".



APPROVED: *Maxi D.*  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

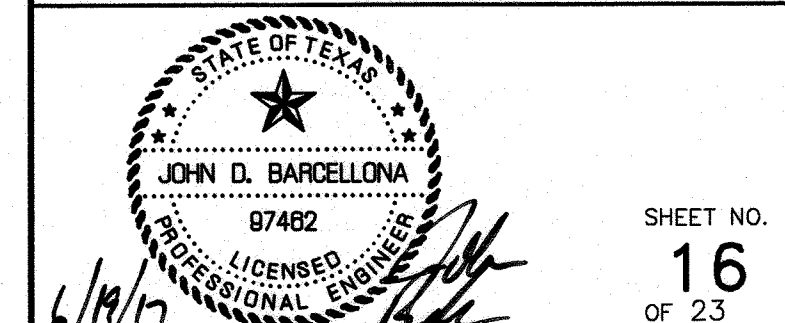
FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

### STORM SEWER DETAILS

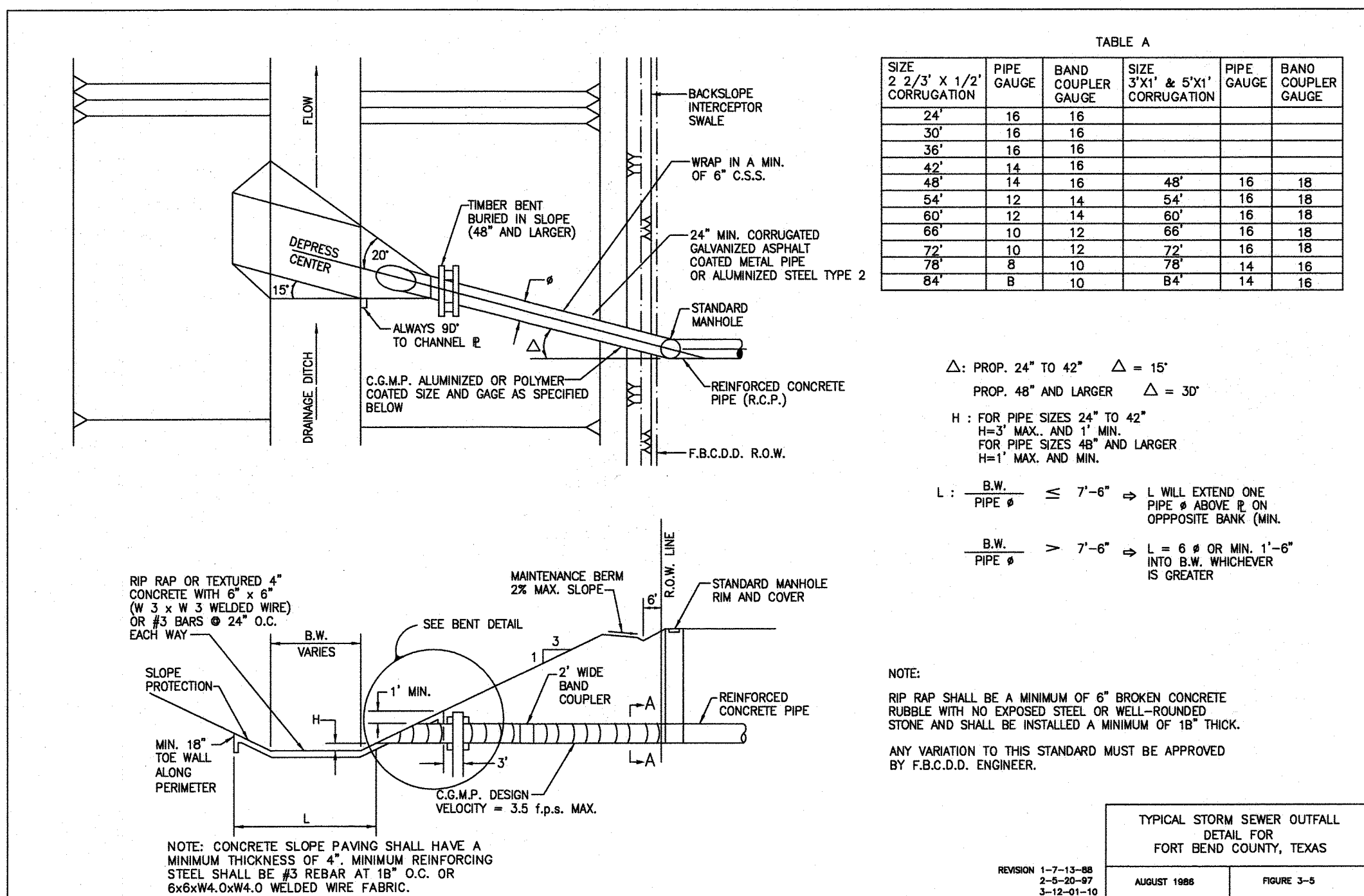
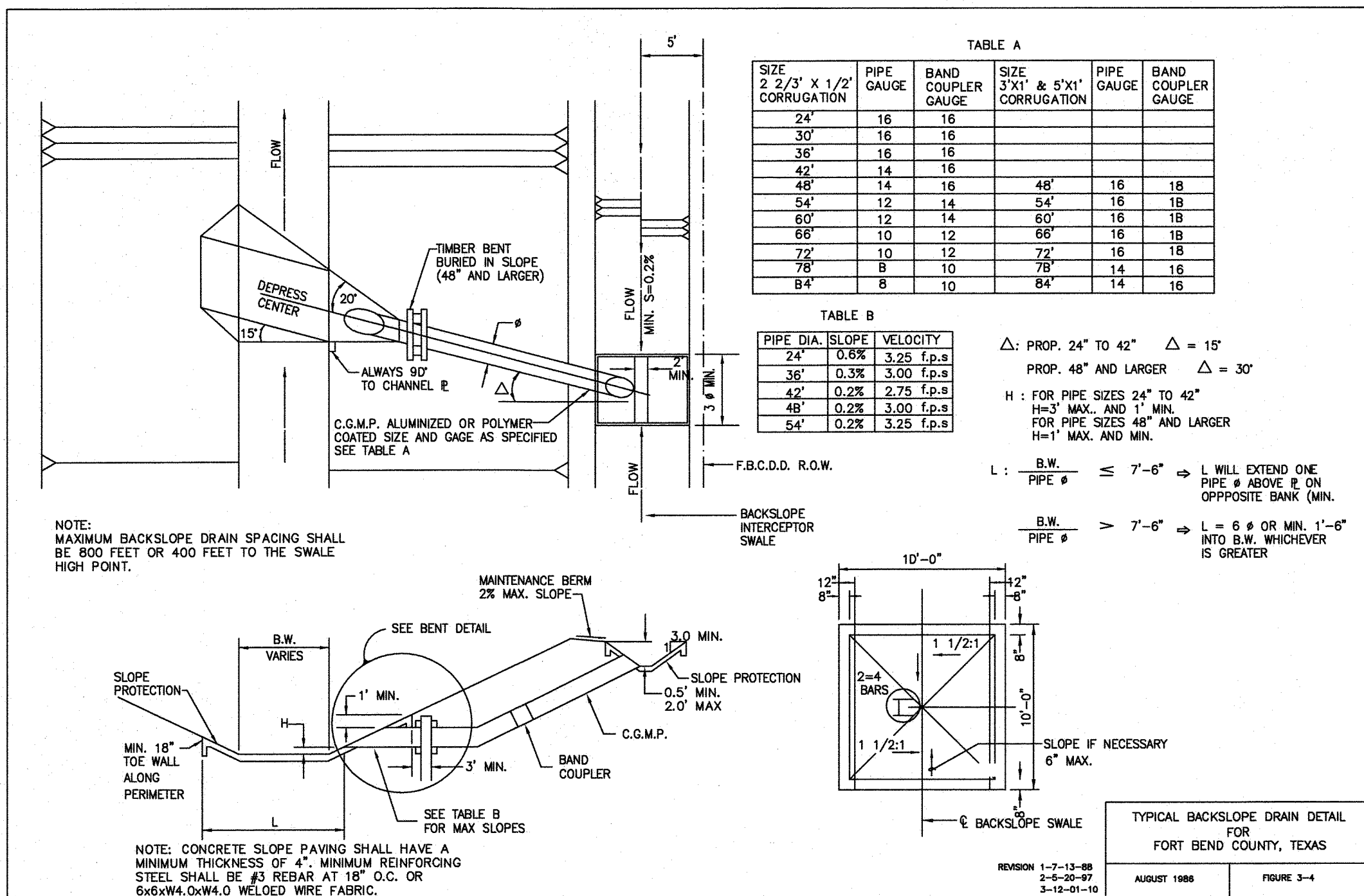
**JC JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: N.T.S. DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO.   
SUBMITTED: SURV. BY:   
F.B. NO.   
6/14/17



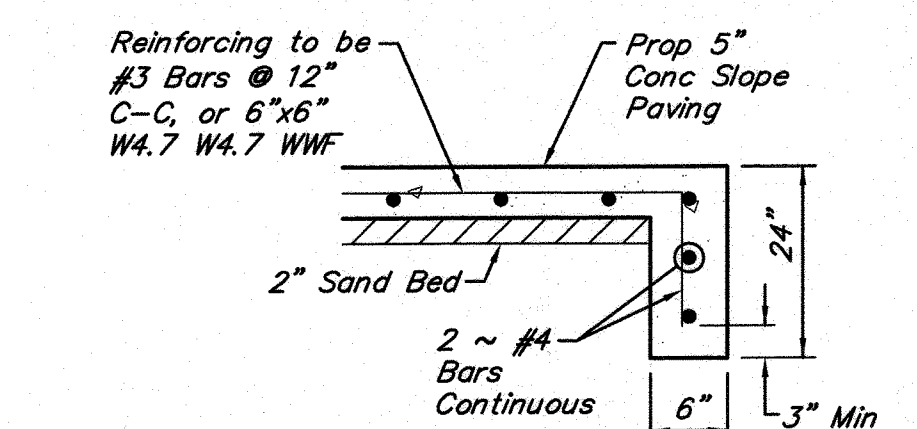
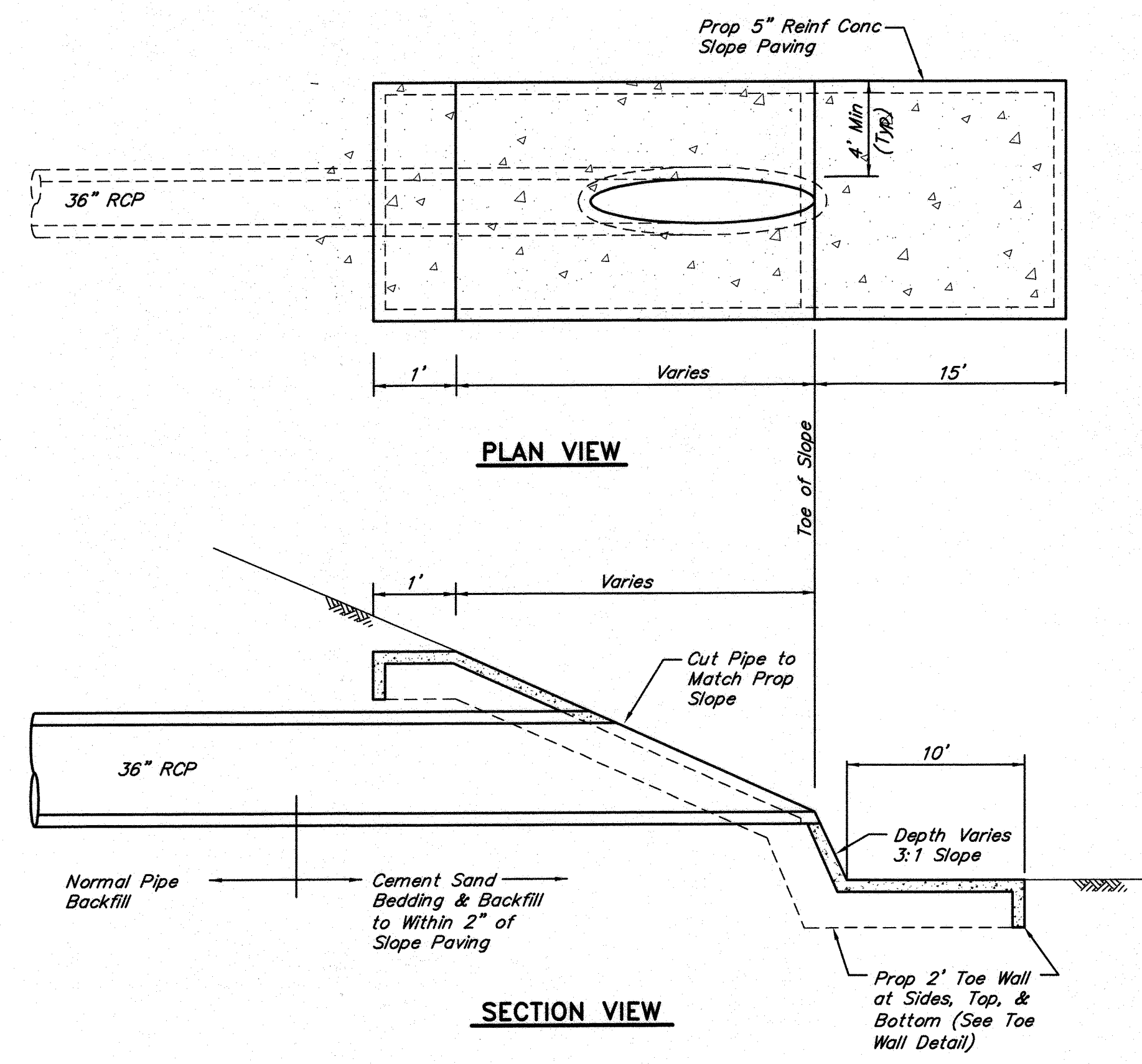
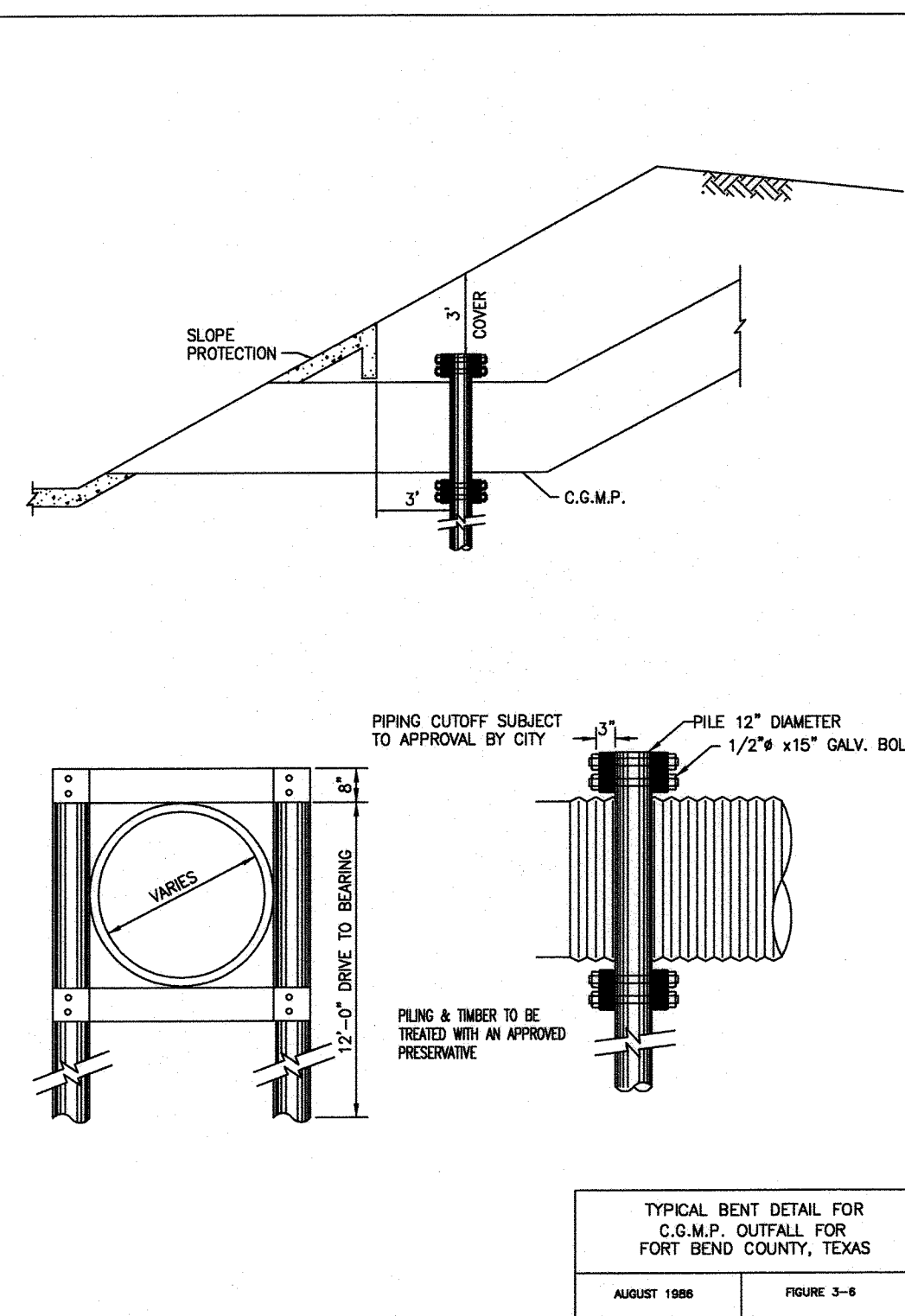
SHEET NO.  
16  
OF 23





- GENERAL NOTES:**
- INSTALL OUTFALLS 48 INCHES OR LARGER DIAMETER AND TREATMENT PLANT OUTFALLS OF ANY DIAMETER WITH RIPRAP EROSION PROTECTION, DIMENSIONED AS SHOWN IN TYPICAL STORM SEWER OUTFALL STRUCTURE LAYOUT.
  - STORM SEWER AND INTERCEPTOR OUTFALL PIPES WITH THE FLOOD RIGHT-OF-WAY SHALL BE CORRUGATED METAL PIPE (CMP) IN ACCORDANCE WITH SPECIFICATION SECTION NO. 02942-CORRUGATED METAL PIPE.
  - PROVIDE AND PLACE CEMENT STABILIZED SAND IN ACCORDANCE WITH SPECIFICATION SECTION NO. 02221-CEMENT STABILIZED SAND.
  - TIMBER BENTS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION NO. 02464-TIMBER BENTS.
  - EXCAVATION, FILL AND BACKFILL FOR INTERCEPTOR STRUCTURES SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION NO. 02316-STRUCTURAL EXCAVATING AND BACKFILLING.
  - RIPRAP SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION NO. 02378-RIPRAP AND GRANULAR FILL.
  - CONCRETE SHALL BE STRUCTURAL CONCRETE IN ACCORDANCE WITH SPECIFICATION SECTION NO. 03310-CONCRETE.
  - INTERCEPTOR STRUCTURES:
    - ADJUST LENGTH AND WIDTH IN FIELD AS NECESSARY.
    - 2-FOOT DEEP X 8-INCH WIDE TOE ALL AROUND THE STRUCTURE.
    - STEEL REINFORCING-#4 BARS (GRADE 40) AT 12 INCHES ON CENTER EACH WAY.
    - ANY INTERCEPTOR OUTFALL PIPE LARGER THAN MAXIMUM SIZE INDICATED REQUIRES A SEPARATE DETAIL.
  - SET FLOWLINE OF OUTFALL PIPES 1 FOOT ABOVE CHANNEL FLOWLINE OR 1 FOOT ABOVE NORMAL WATER SURFACE ELEVATION.
  - SEE CONCRETE CHANNEL LINING DETAIL SHEET FOR CMP OUTFALL DETAILS THROUGH CONCRETE CHANNEL LINING.
  - CONCRETE PAD AROUND TYPE "B" INLET: PAD FOR AS CONCRETE INTERCEPTOR STRUCTURE PER UNIT PRICE SCHEDULE.

THIS DETAIL SHEET HAS BEEN PREPARED FOR USE ON FLOOD PROJECTS OR PROJECTS TO BE MAINTAINED BY THE FLOOD WHEN COMPLETED BY OTHERS. THE ENGINEER SHOULD CAREFULLY REVIEW THESE DETAILS TO DETERMINE THEIR APPLICABILITY TO A PARTICULAR PROJECT. IF REVISIONS ARE NECESSARY, THEY SHALL BE CLEARLY DELINEATED AND NOTED IN THE REVISION BLOCK IN ACCORDANCE WITH RULE 131.152(a) OF THE TEXAS STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS. AN ENGINEER WHO INCORPORATES THE DETAILS ON THIS SHEET INTO HIS WORK MUST SEAL THIS SHEET AND BECOME RESPONSIBLE FOR ITS USE IN THE END PRODUCT IN ACCORDANCE WITH RULE 131.168(m).



**TOE WALL DETAIL**

**TYPICAL STORM SEWER OUTFALL DETAIL**

N.T.S.

APPROVED: *Maxim*

DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 184

FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

OUTFALL DETAILS

**JC JONES CARTER**

Texas Board of Professional Engineers Registration No. F-439

22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: N.T.S. DGN. BY: FMJ

DATE: June 2017 DWN. BY: JLG

JOB NO. 12268-0012-00 DWG. NO. \_\_\_\_\_

SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_

F.B. NO. \_\_\_\_\_

STATE OF TEXAS

JOHN D. BARCELLONA

77482

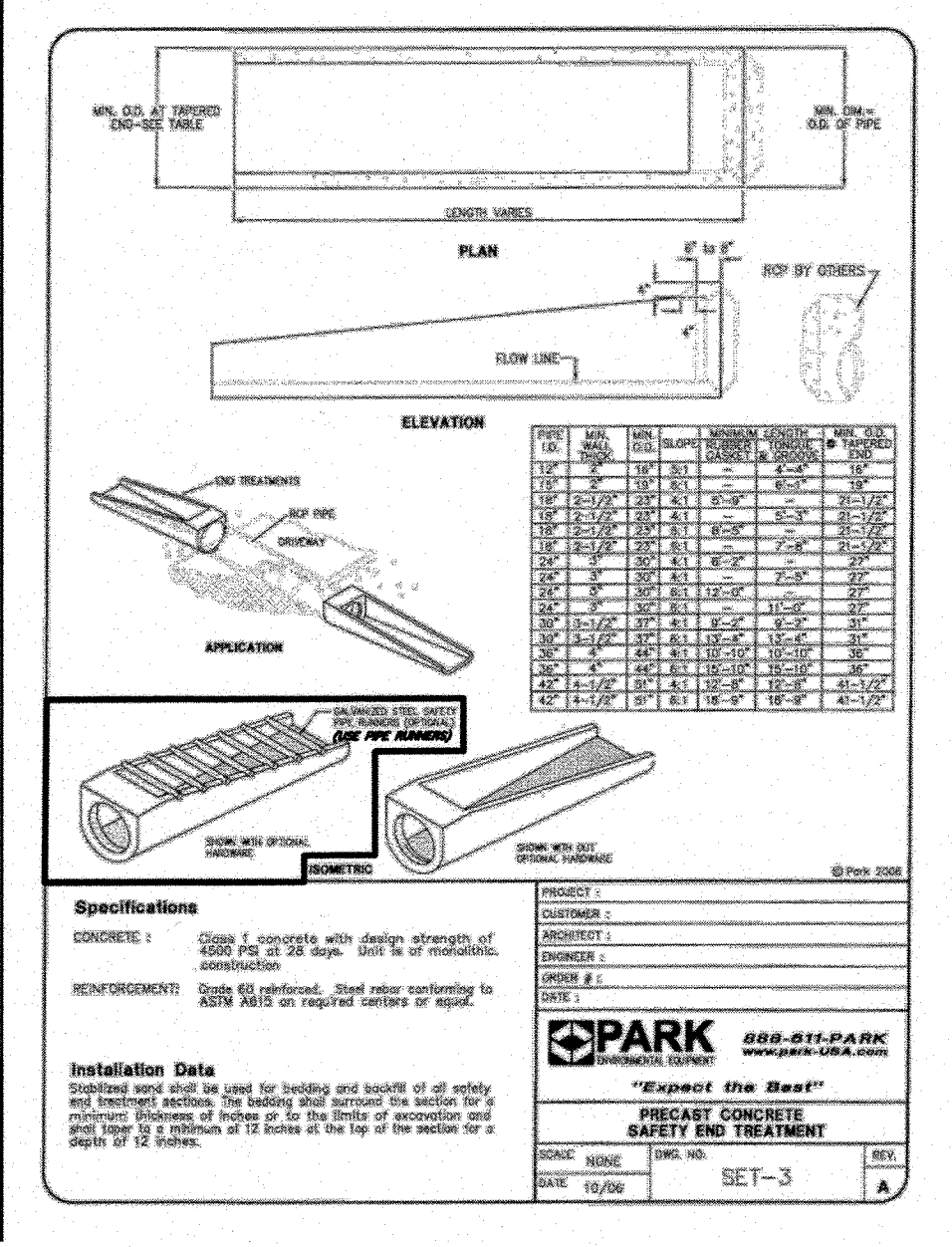
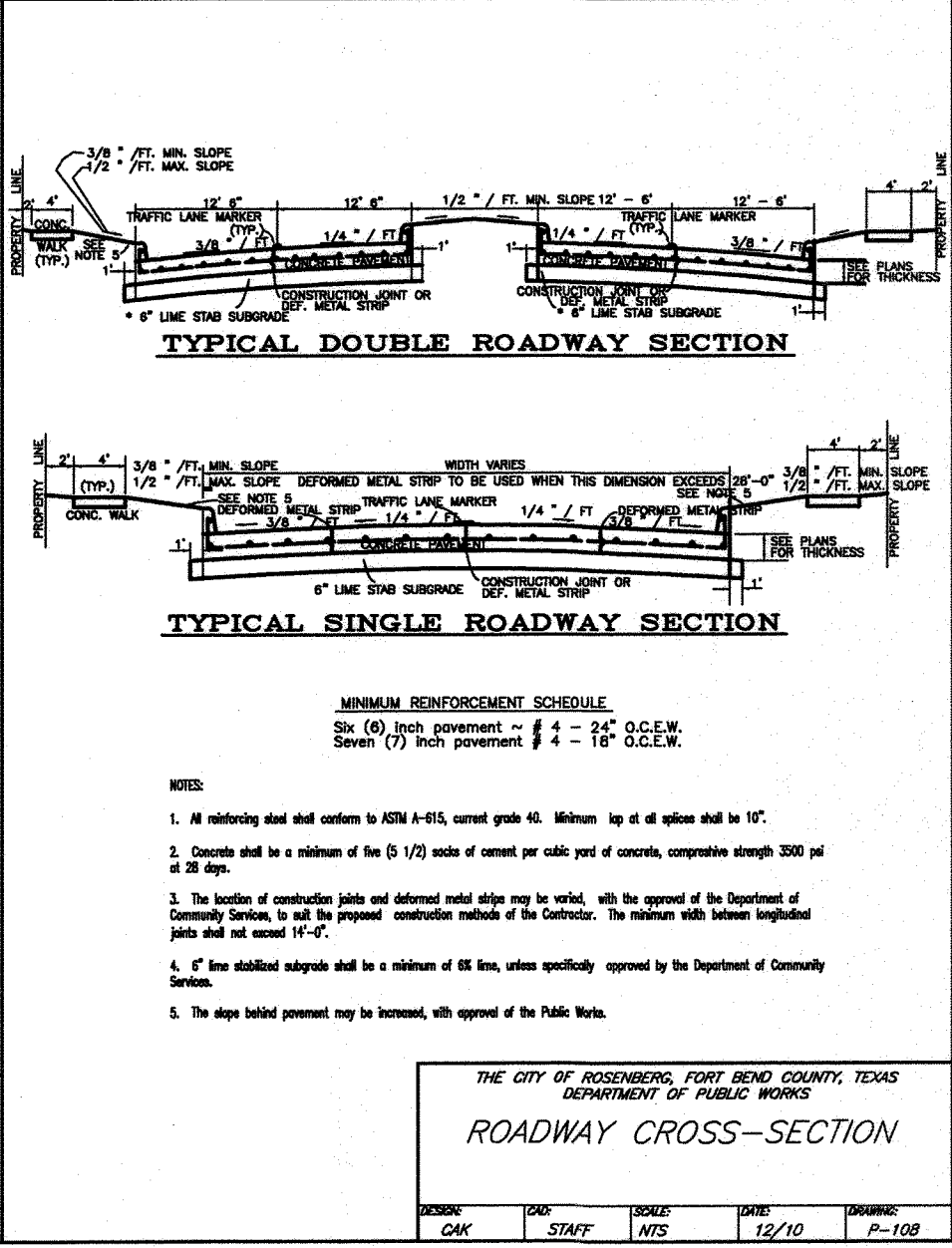
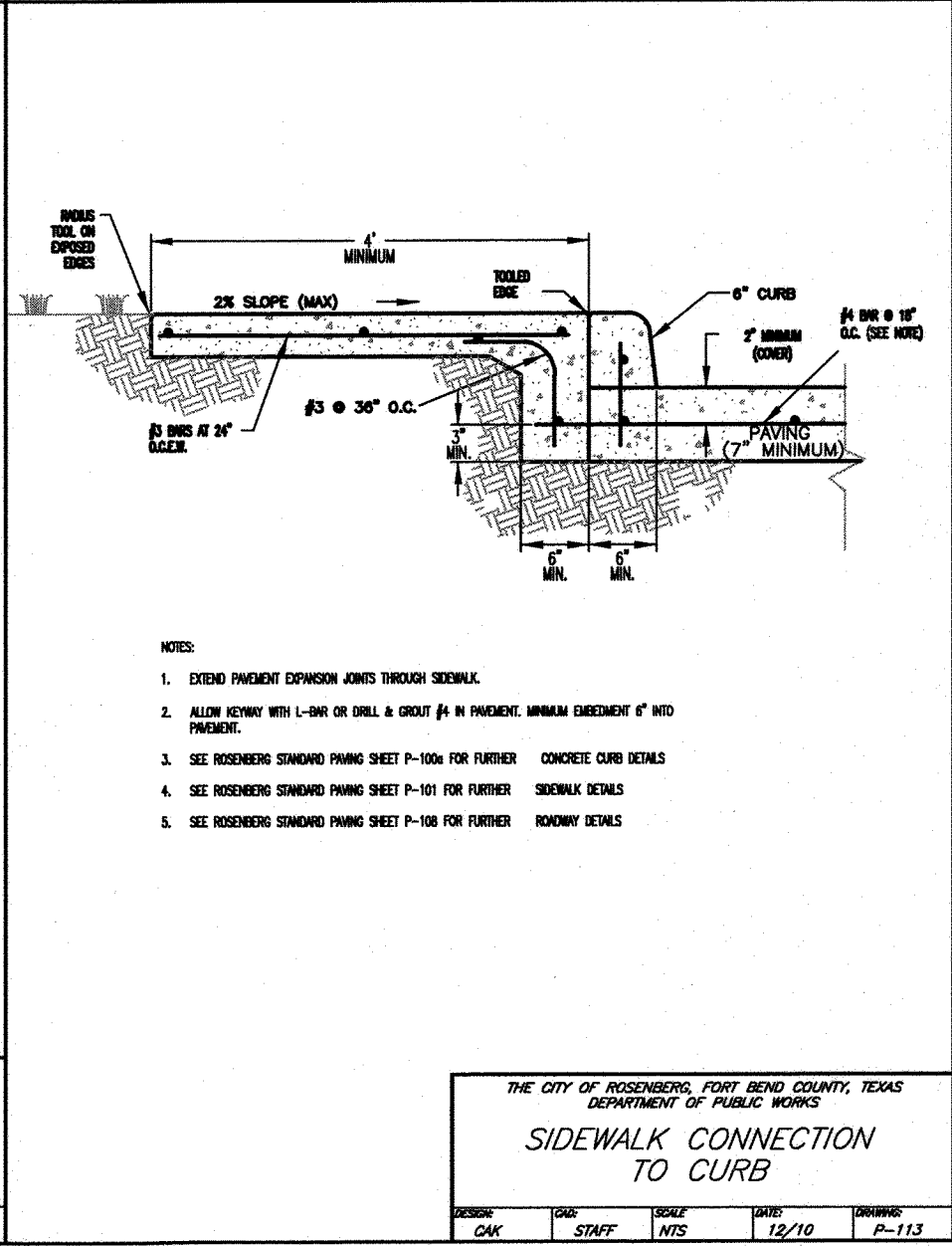
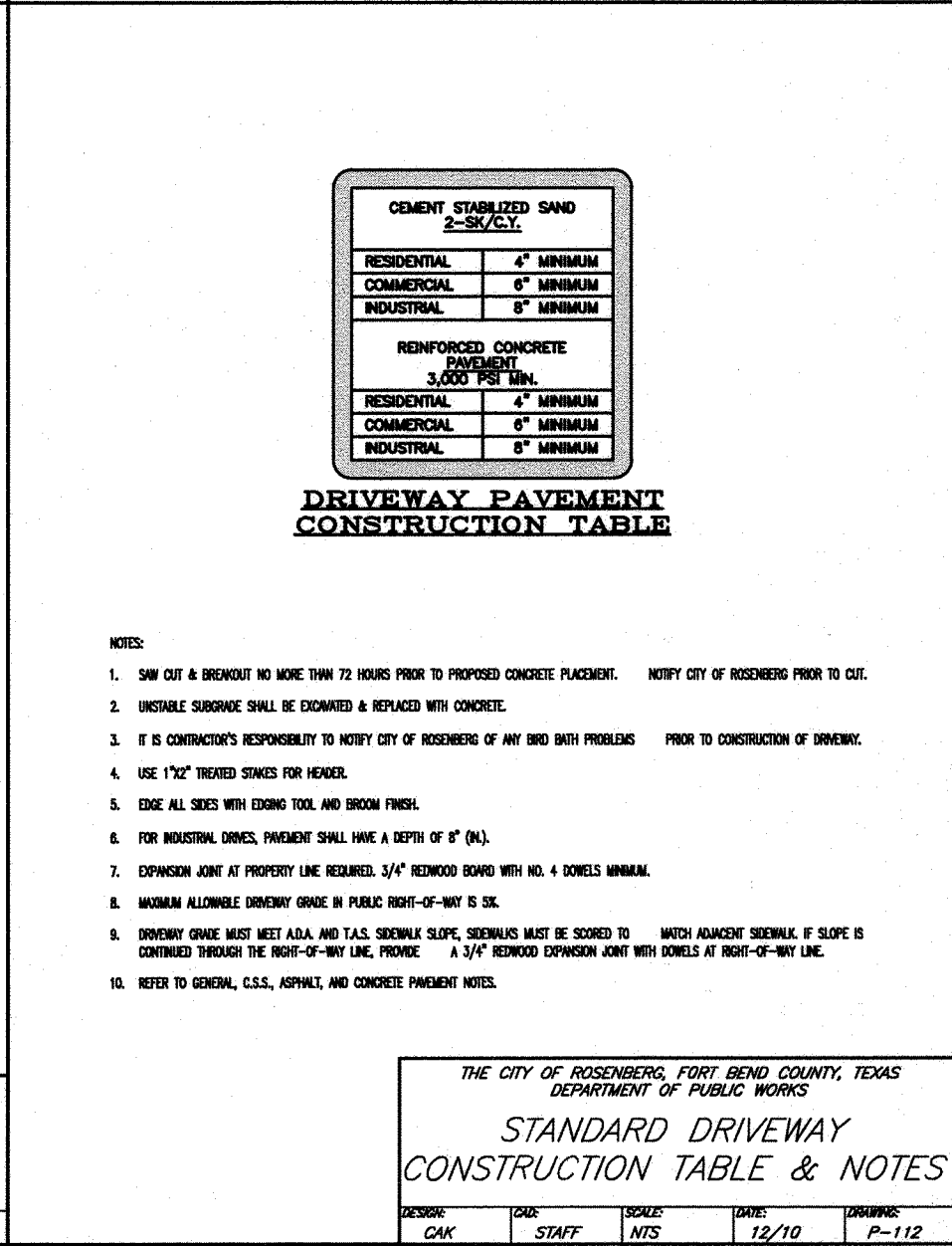
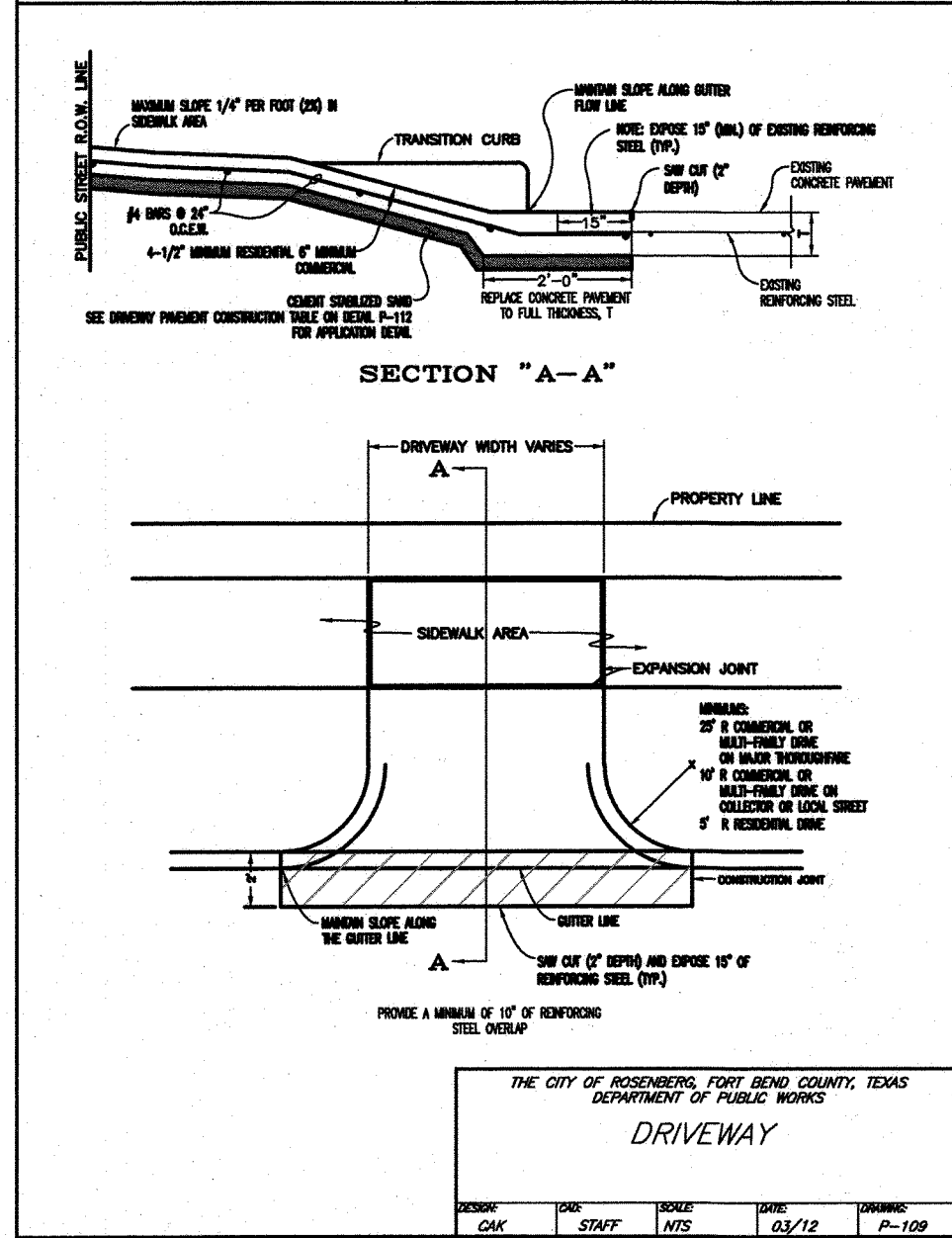
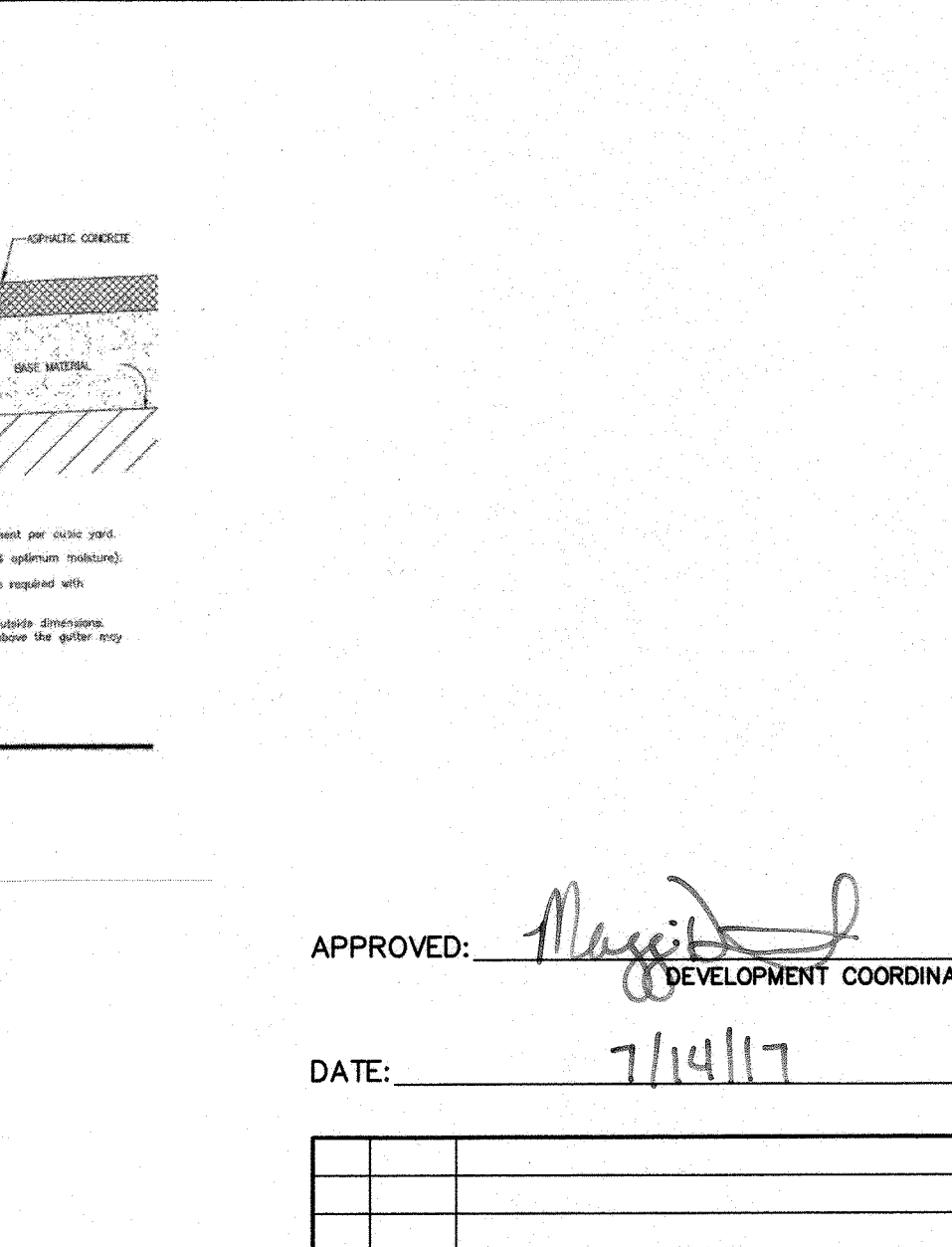
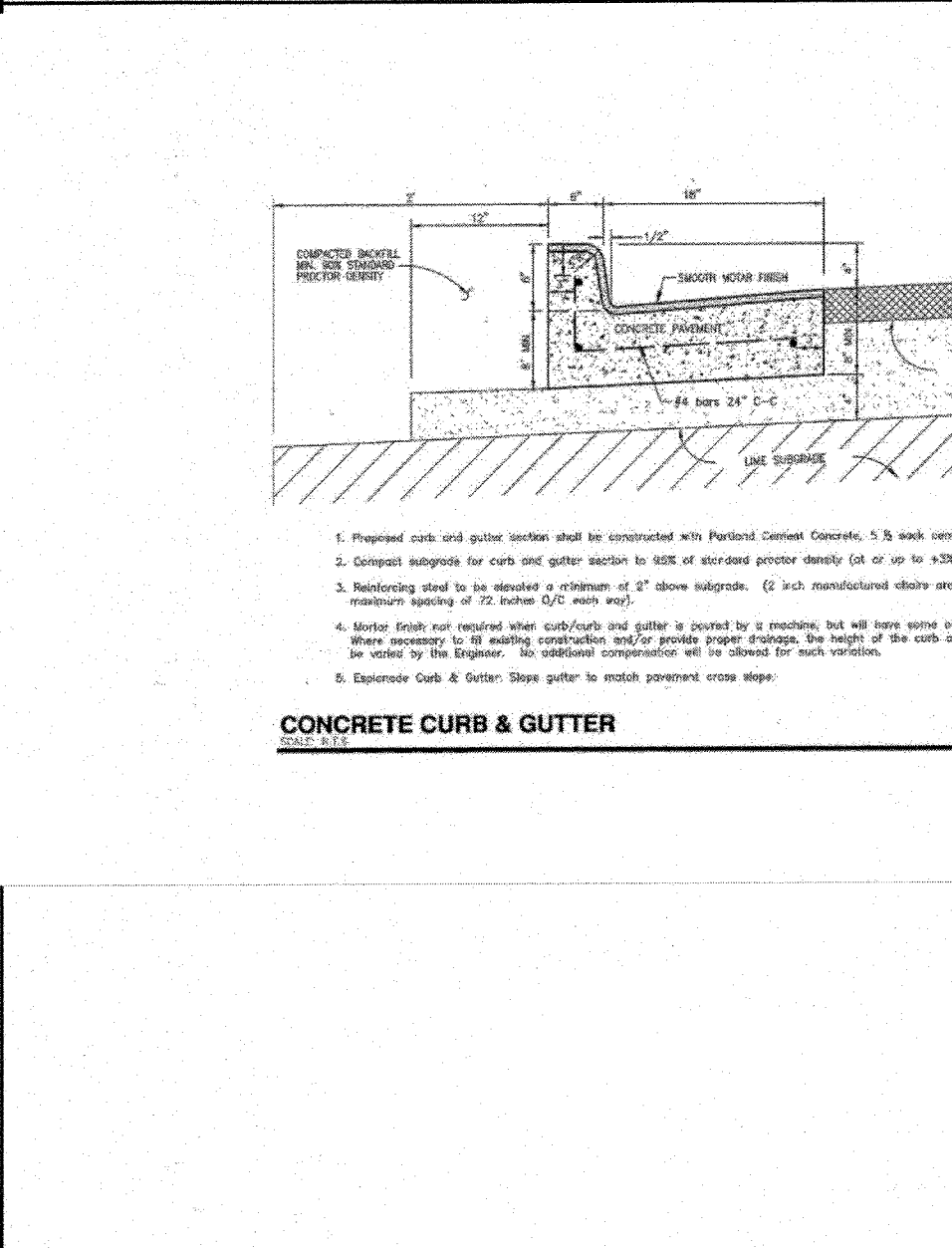
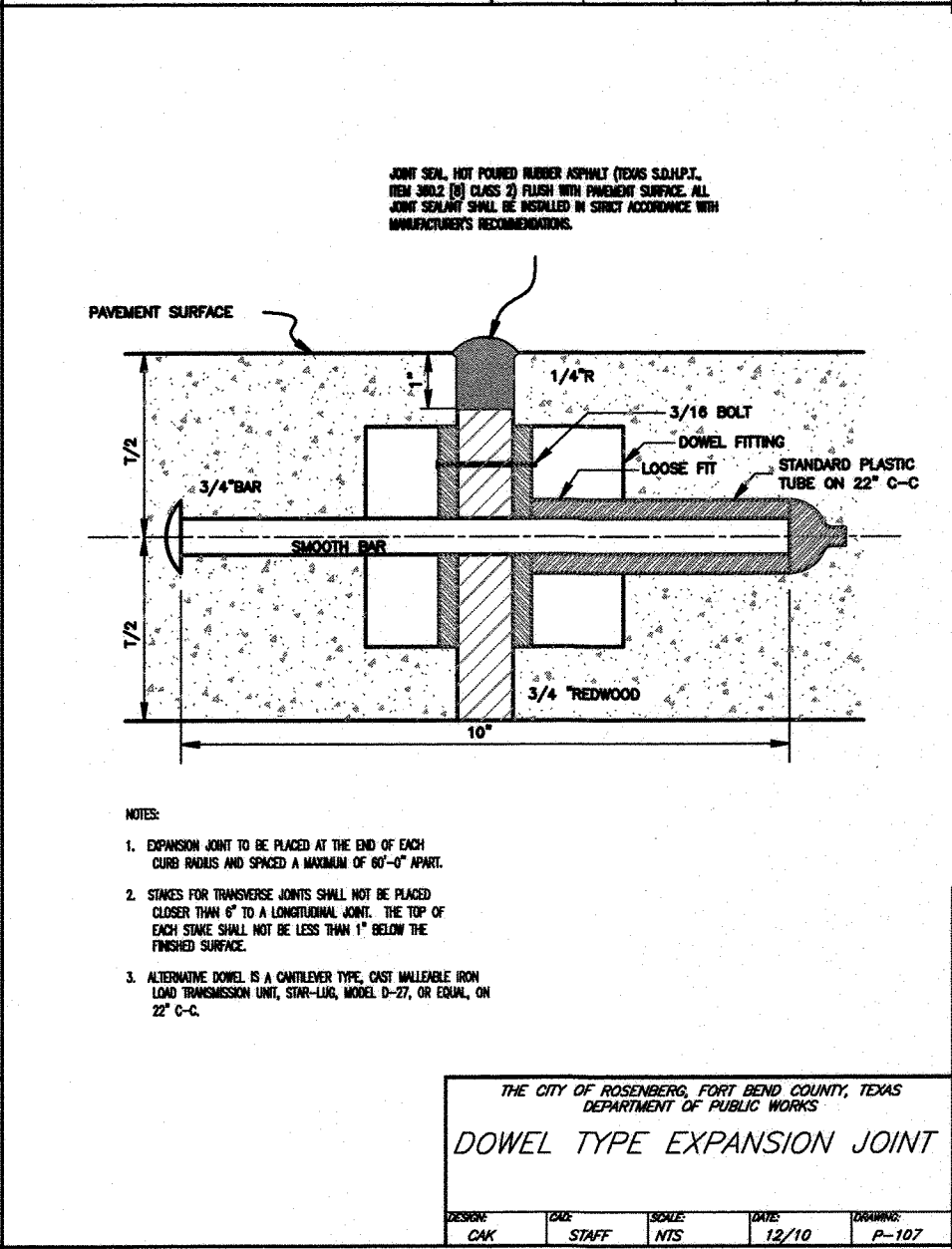
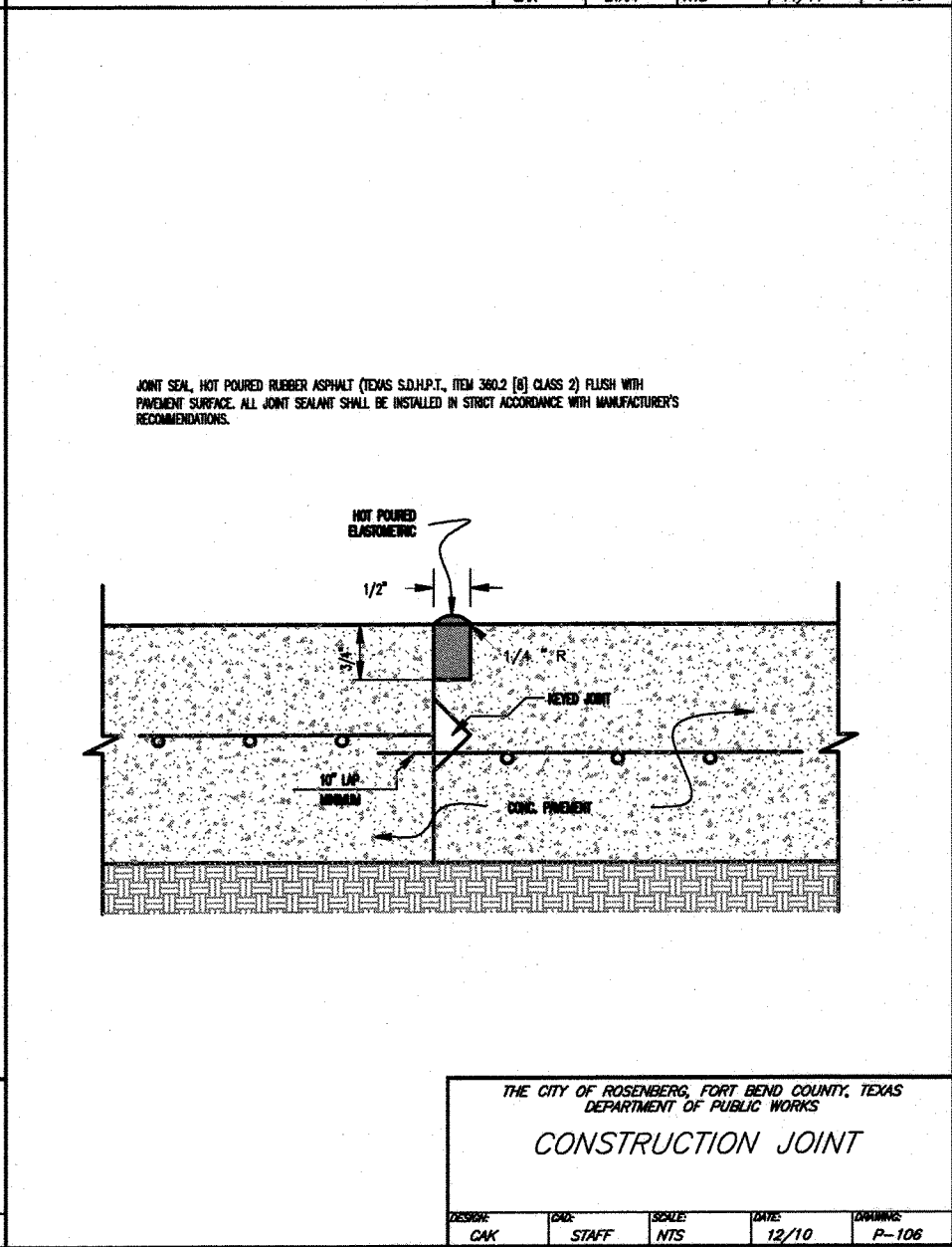
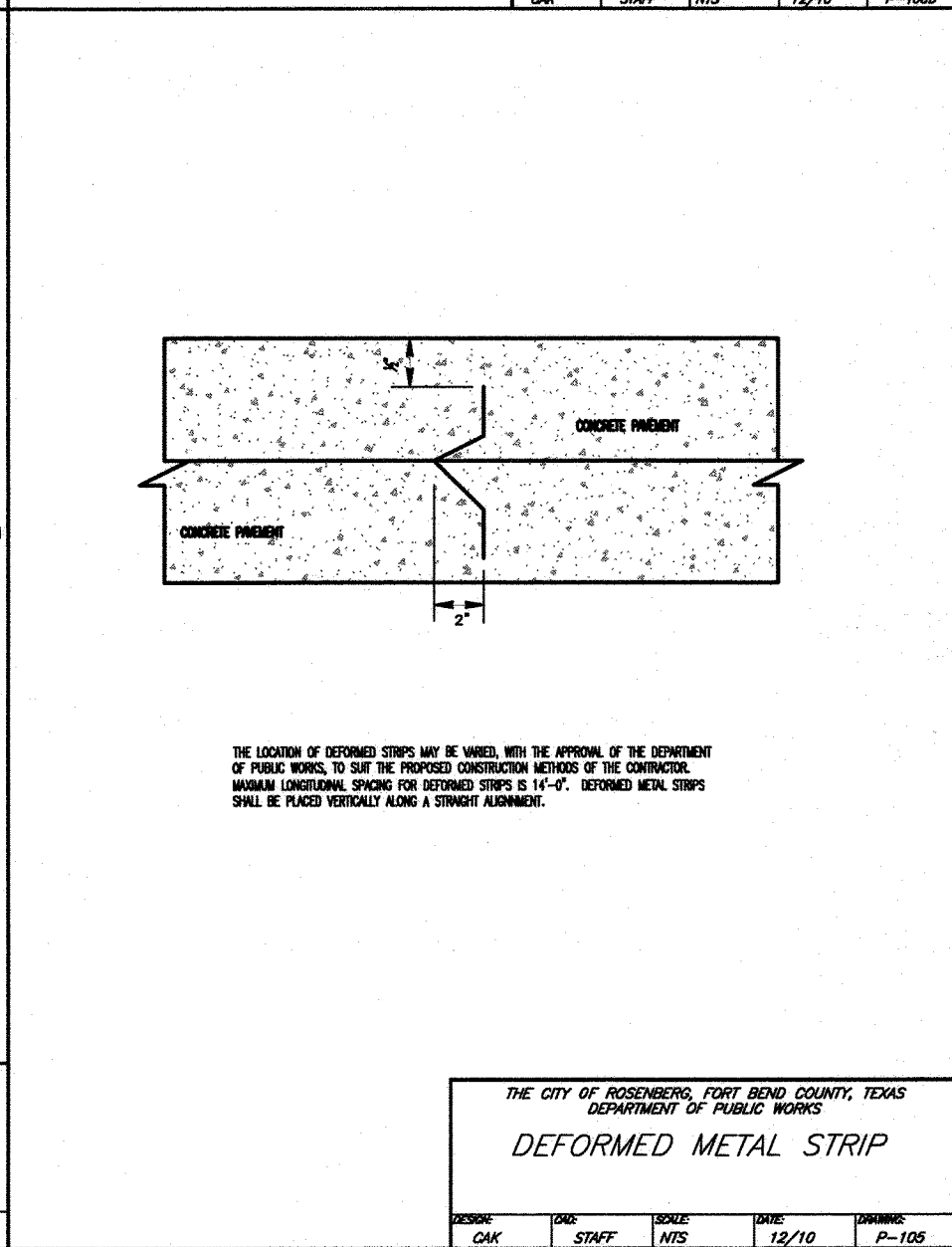
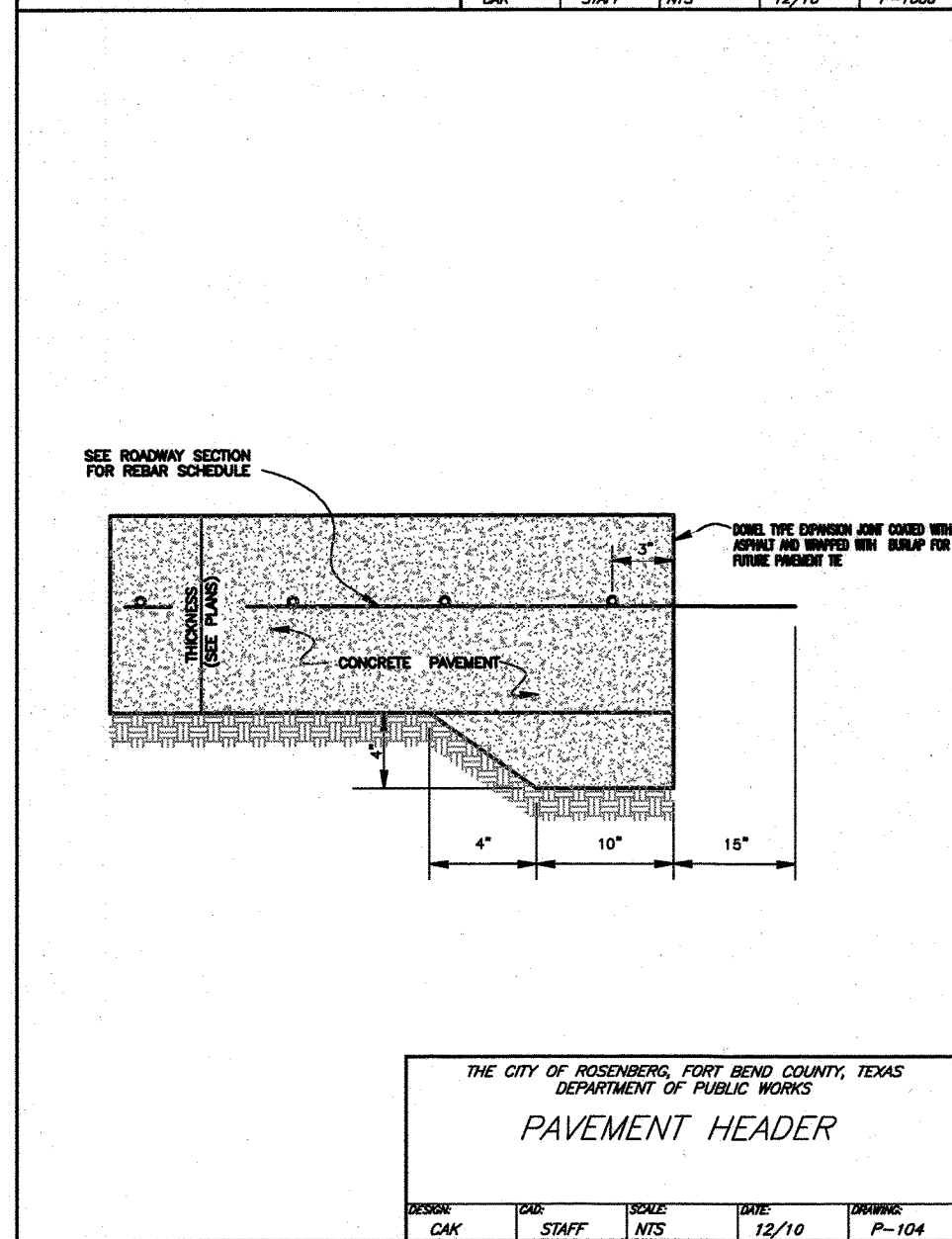
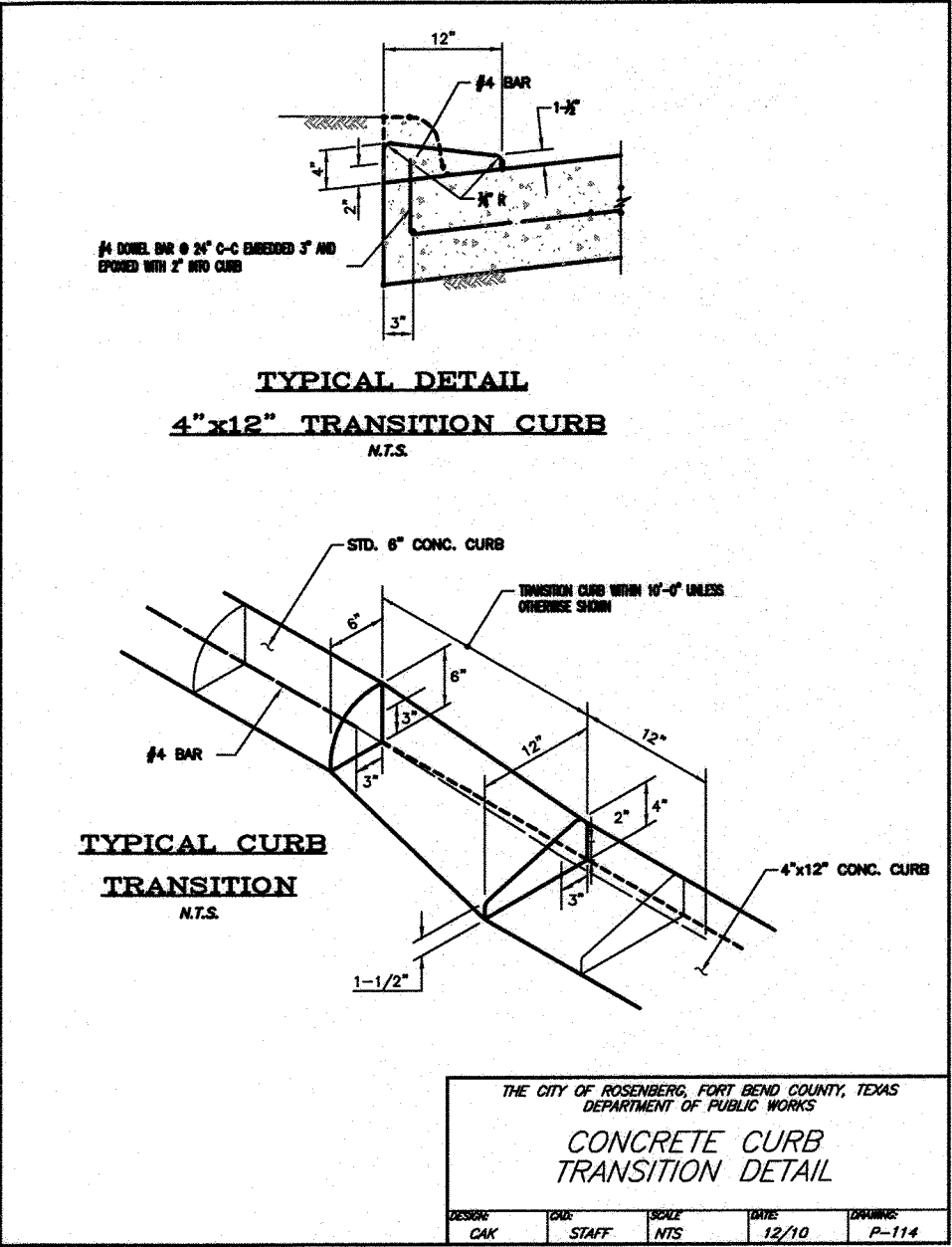
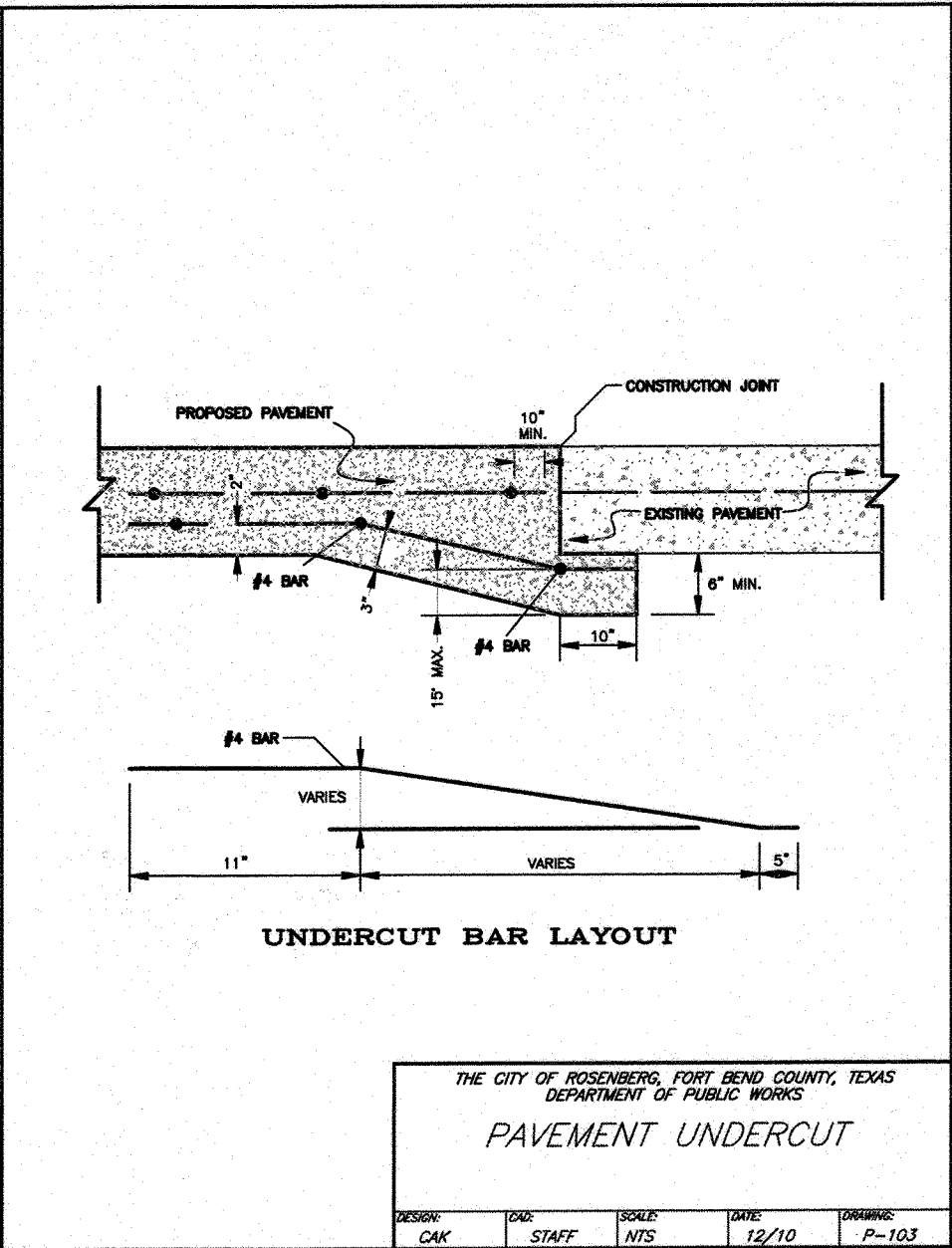
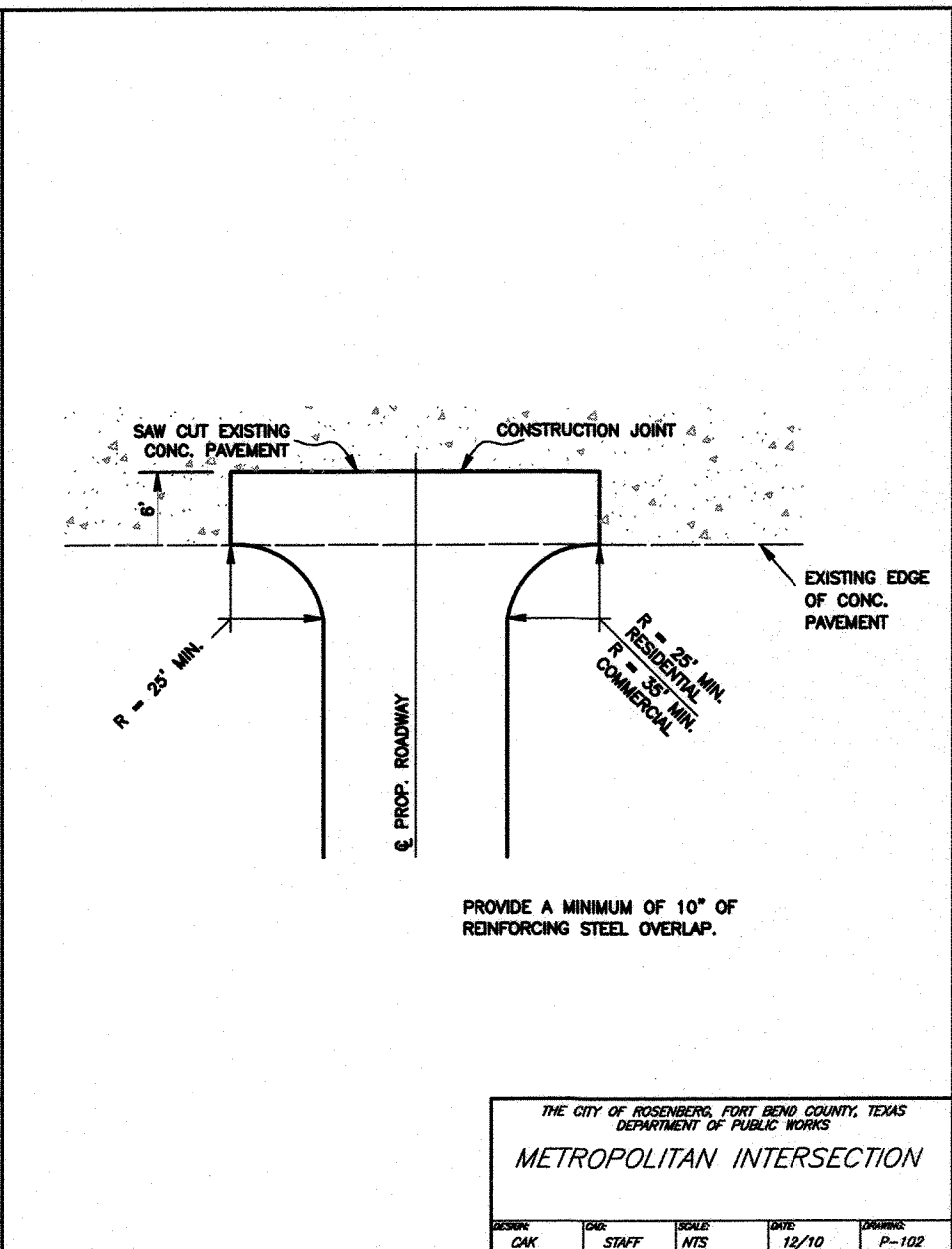
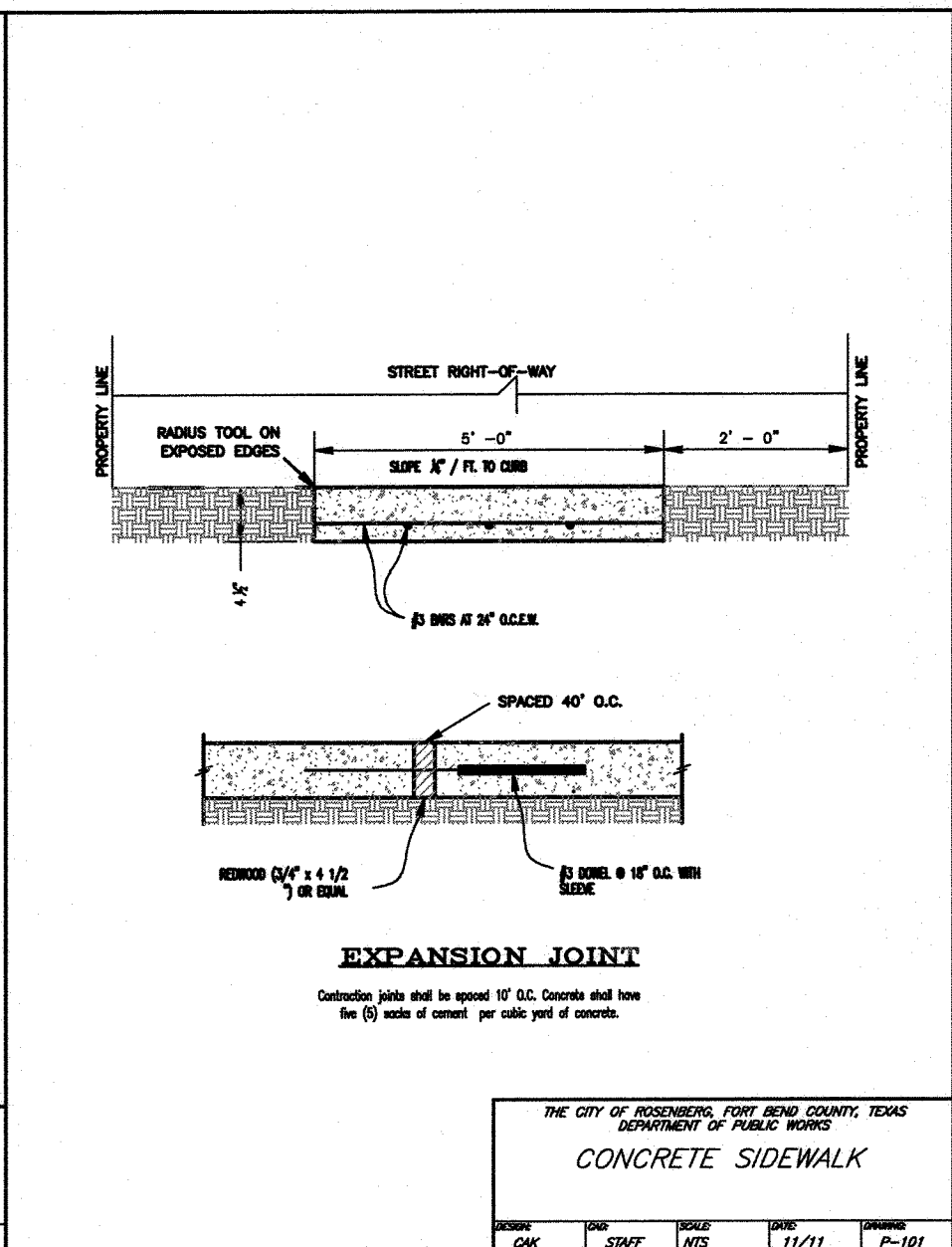
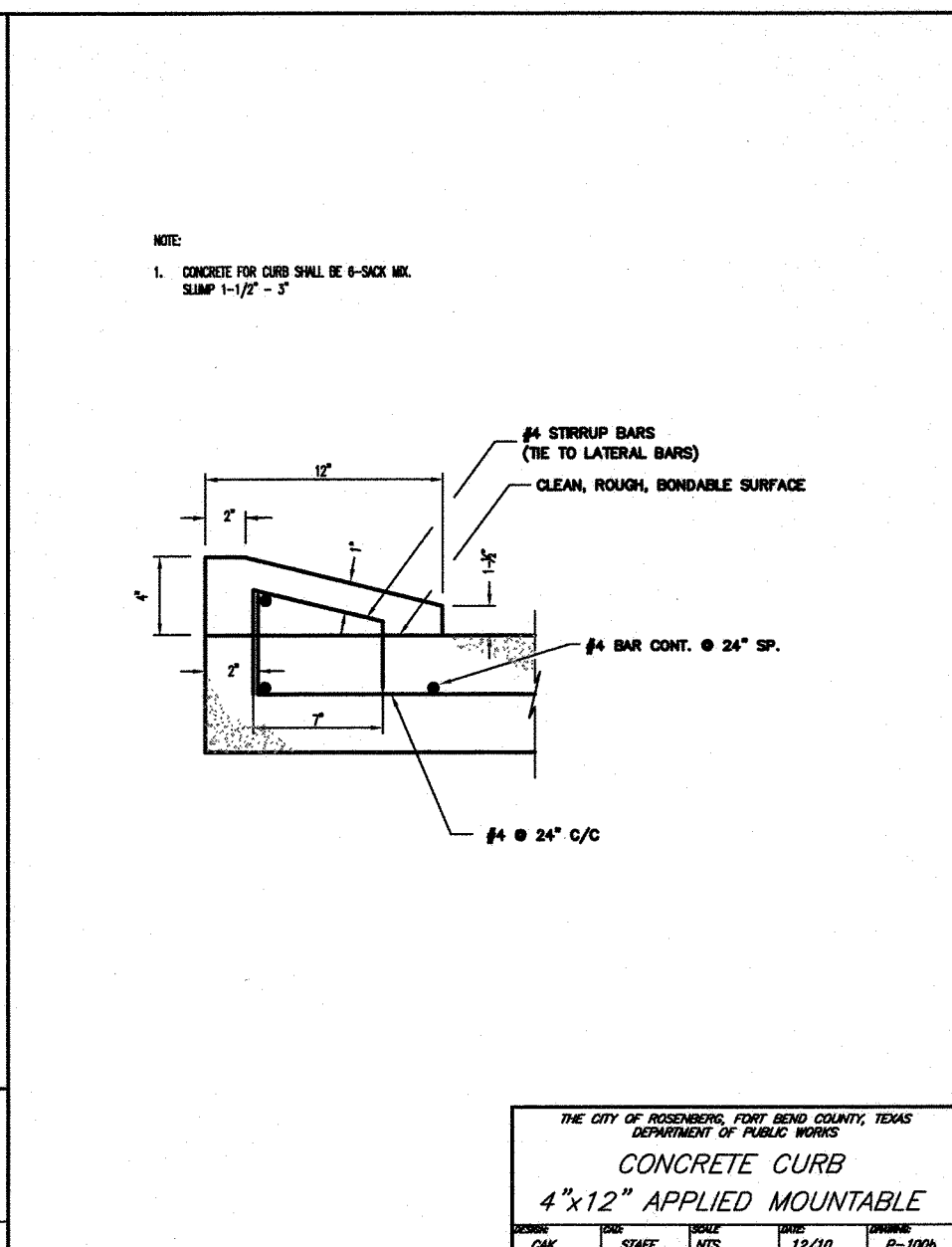
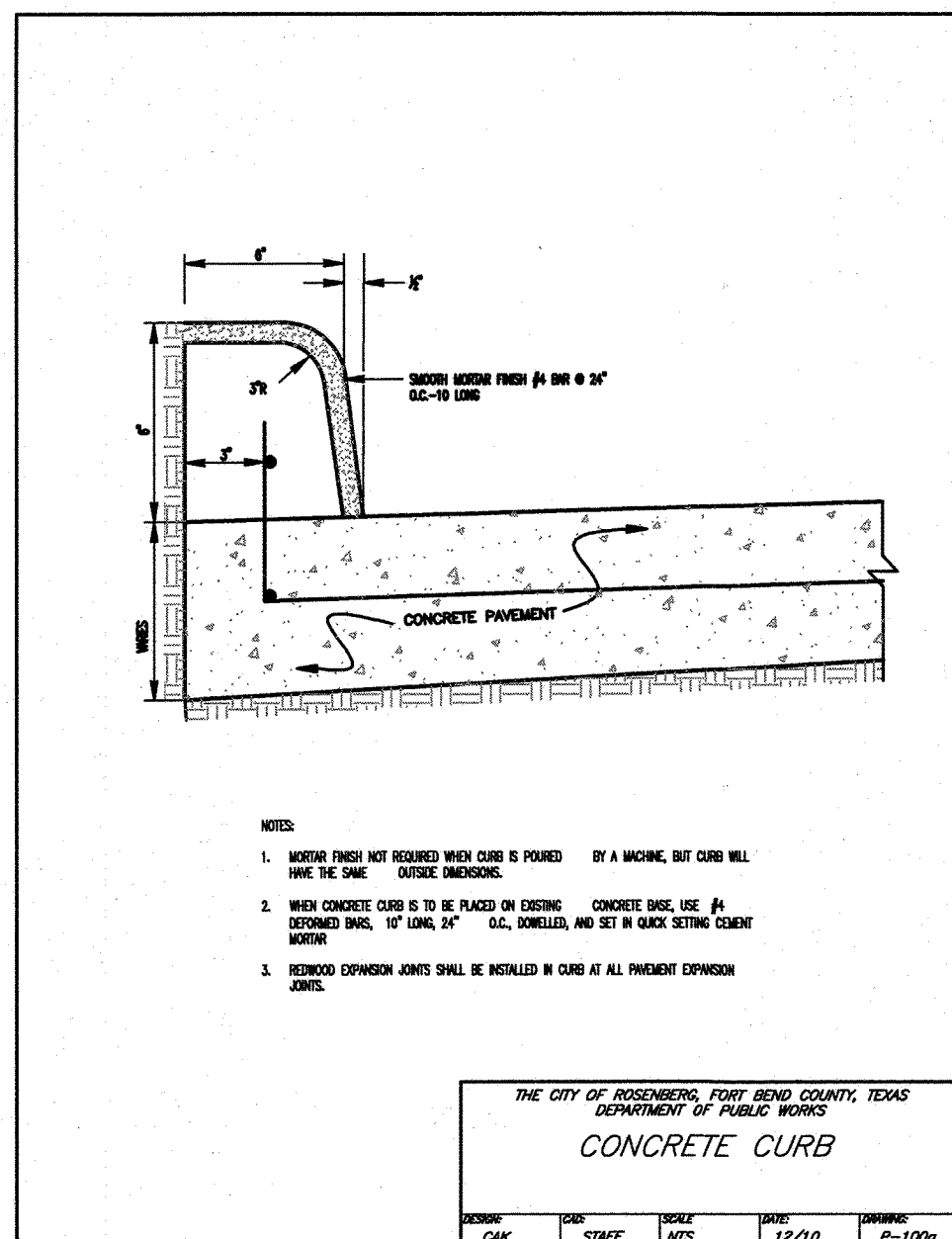
6/19/17

97482

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OF 23





APPROVED: *Maggie*  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

PAVING DETAILS

JC JONES CARTER  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: N.T.S. DGN. BY: FMJ  
DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO.   
SUBMITTED: SURV. BY:   
F.B. NO.   
6/19/17

STATE OF TEXAS  
JOHN D. BARCELONA  
7482  
LICENSED PROFESSIONAL ENGINEER  
SHEET NO. 18  
OF 23



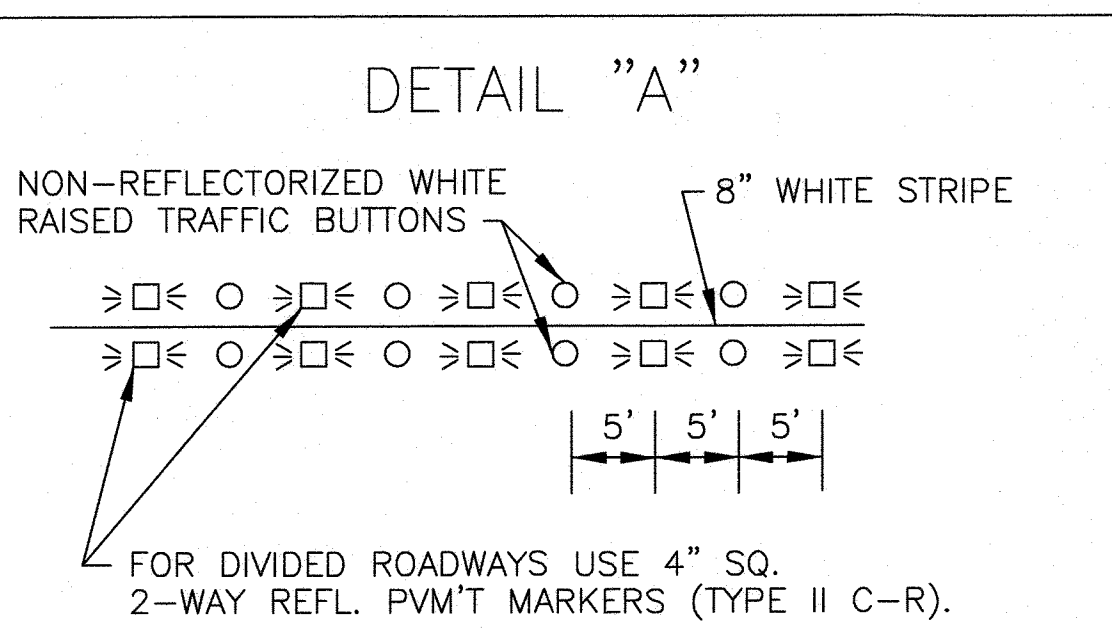
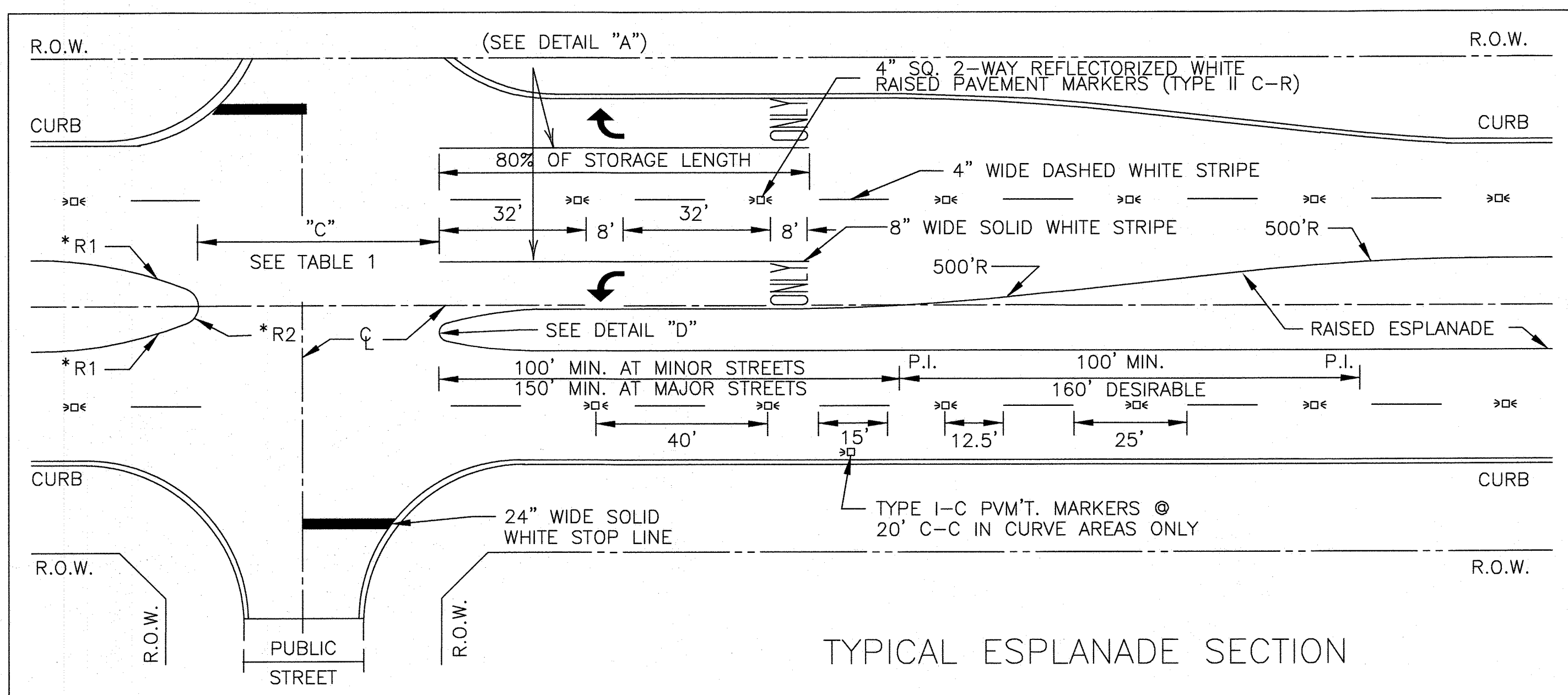


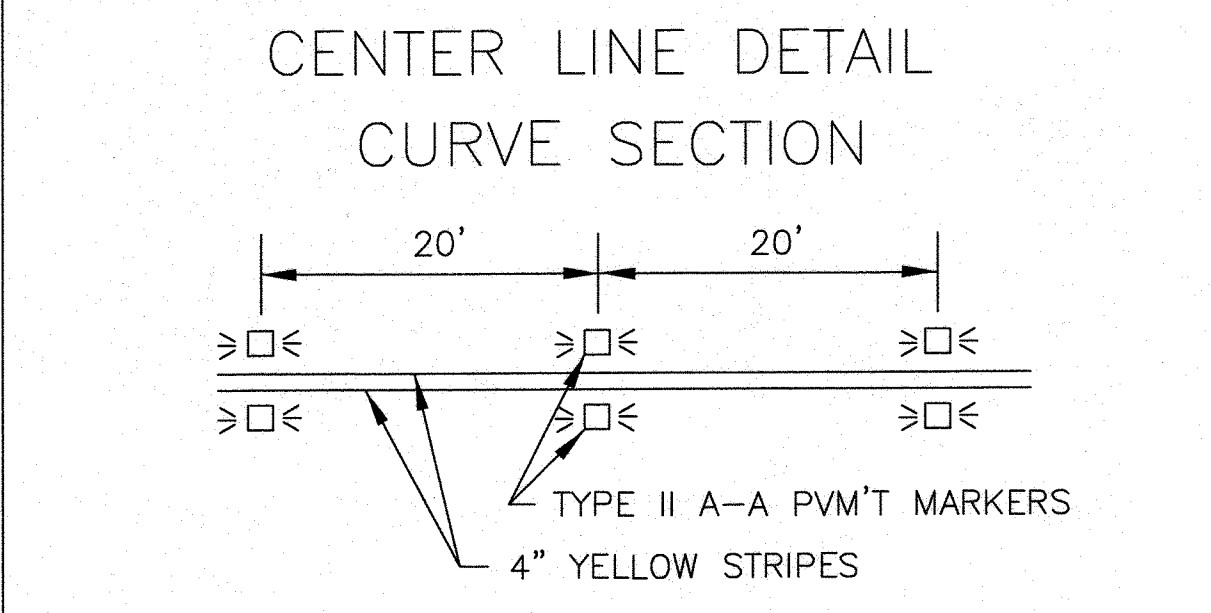
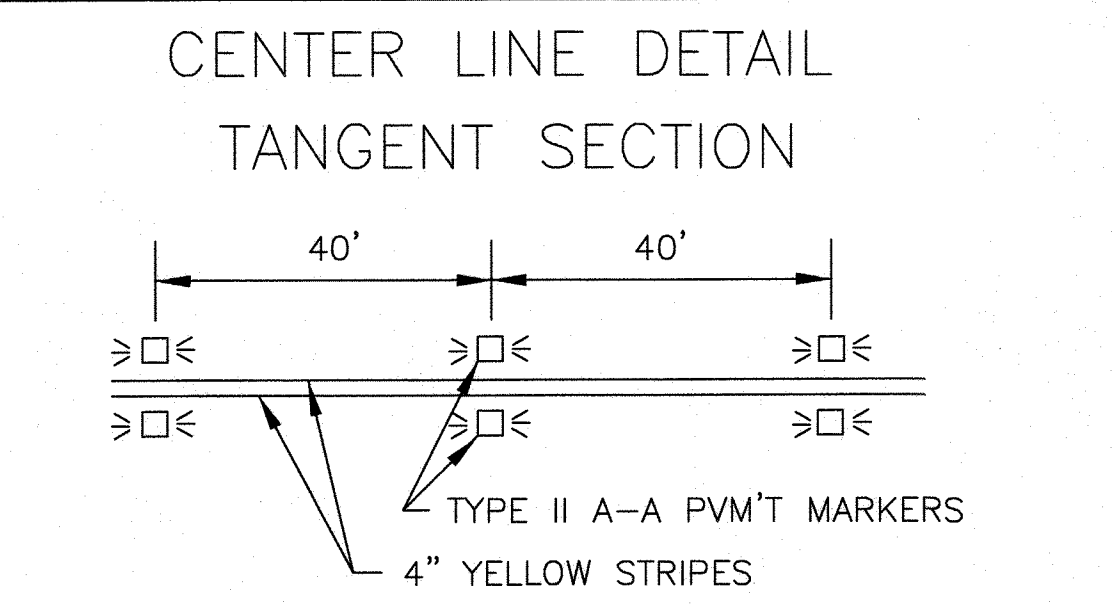
TABLE 1  
TYPICAL LENGTH OF ESPLANADE  
OPENING "C" FOR PUBLIC STREET

ESPLANADE INTERRUPTION	NO LTB (1)	1 LTB (1)	2LTB (1)
UNDIVIDED STREET < 40' 44'	45' 50'	52.5' (2) 55' (2)	60' 60'
DIVIDED STREET	D+10'	D+10'	D+10'

NOTES:  
(1) LEFT TURN BAY  
(2) DISTANCE FROM CENTERLINE OF OPENING TO ESPLANADE NOSE WITH LEFT TURN LANE MUST BE 30'

RADIUS DIMENSIONS

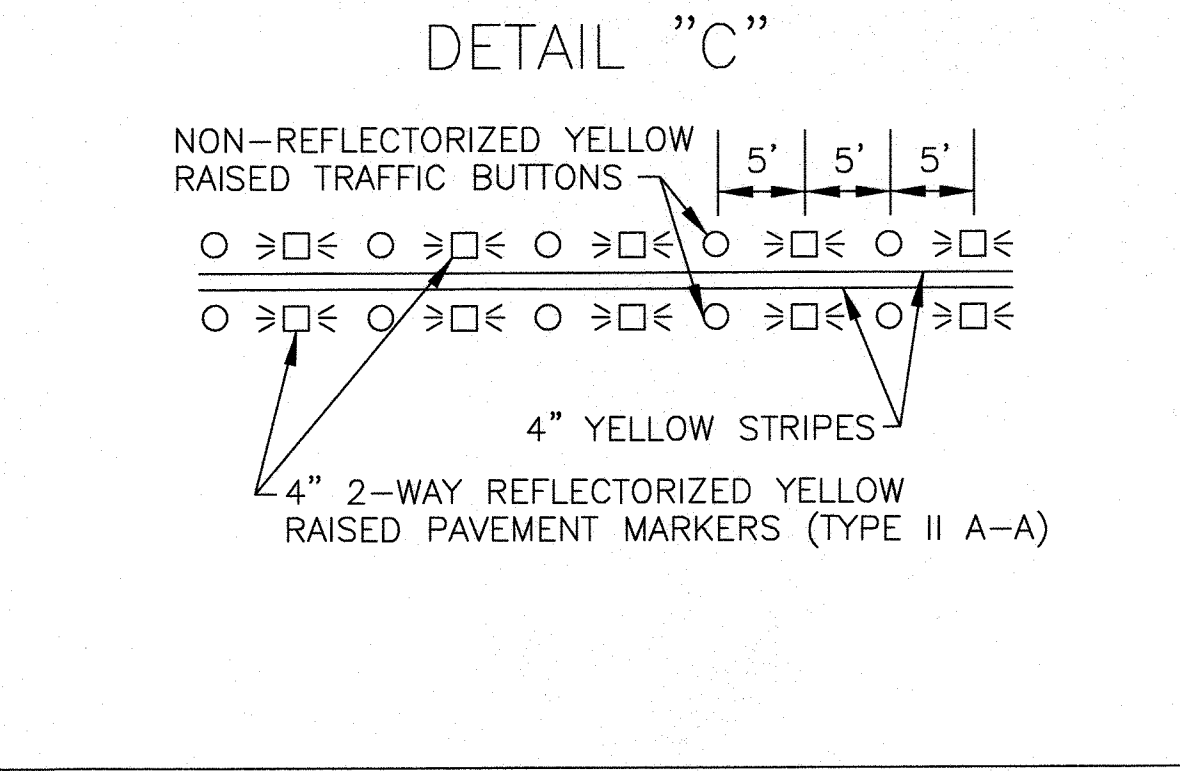
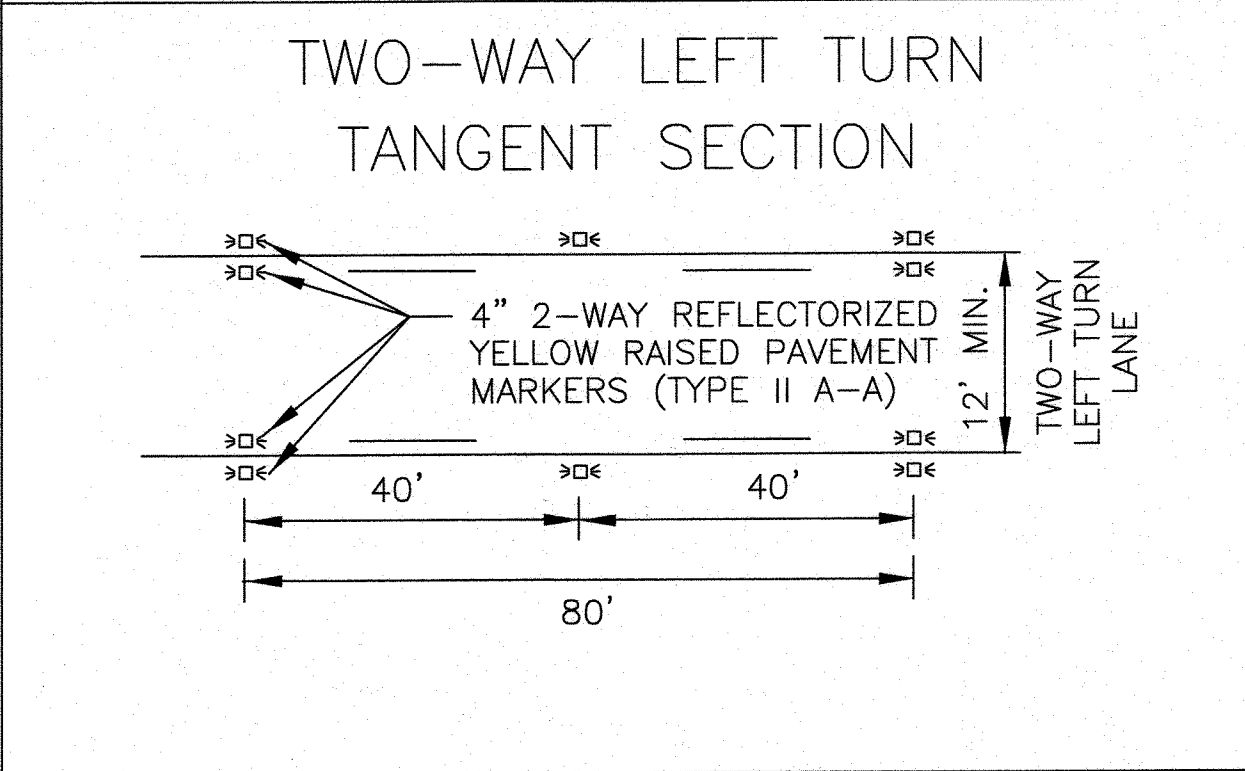
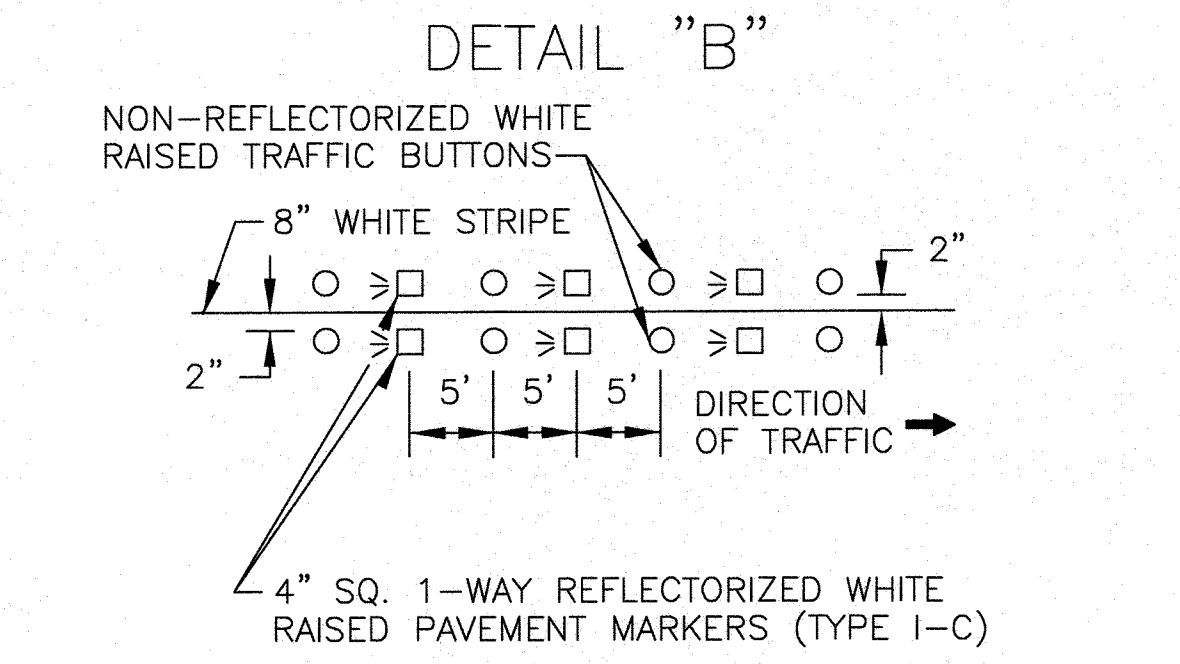
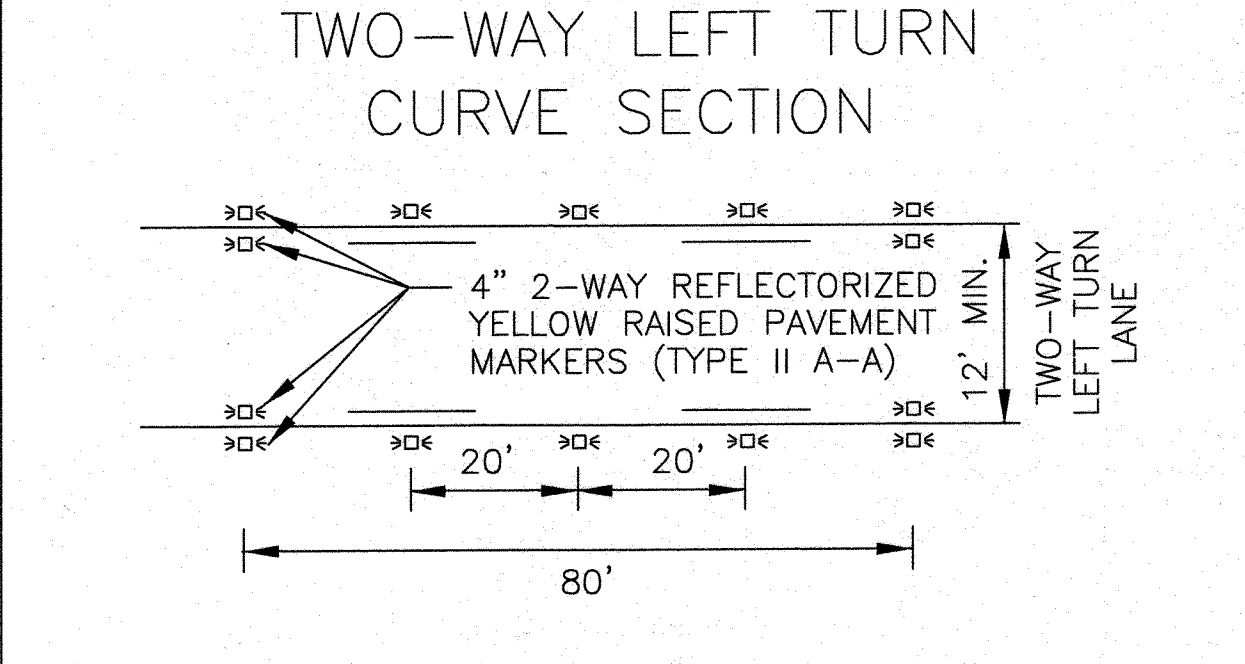
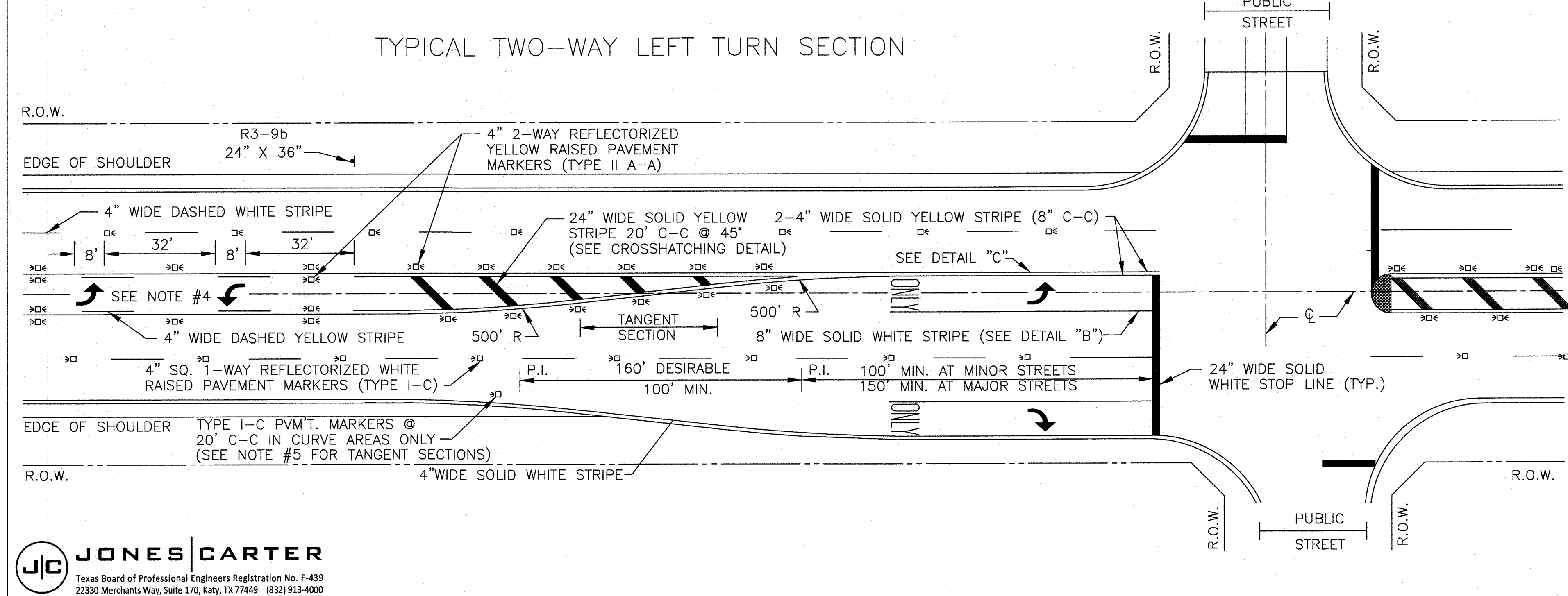
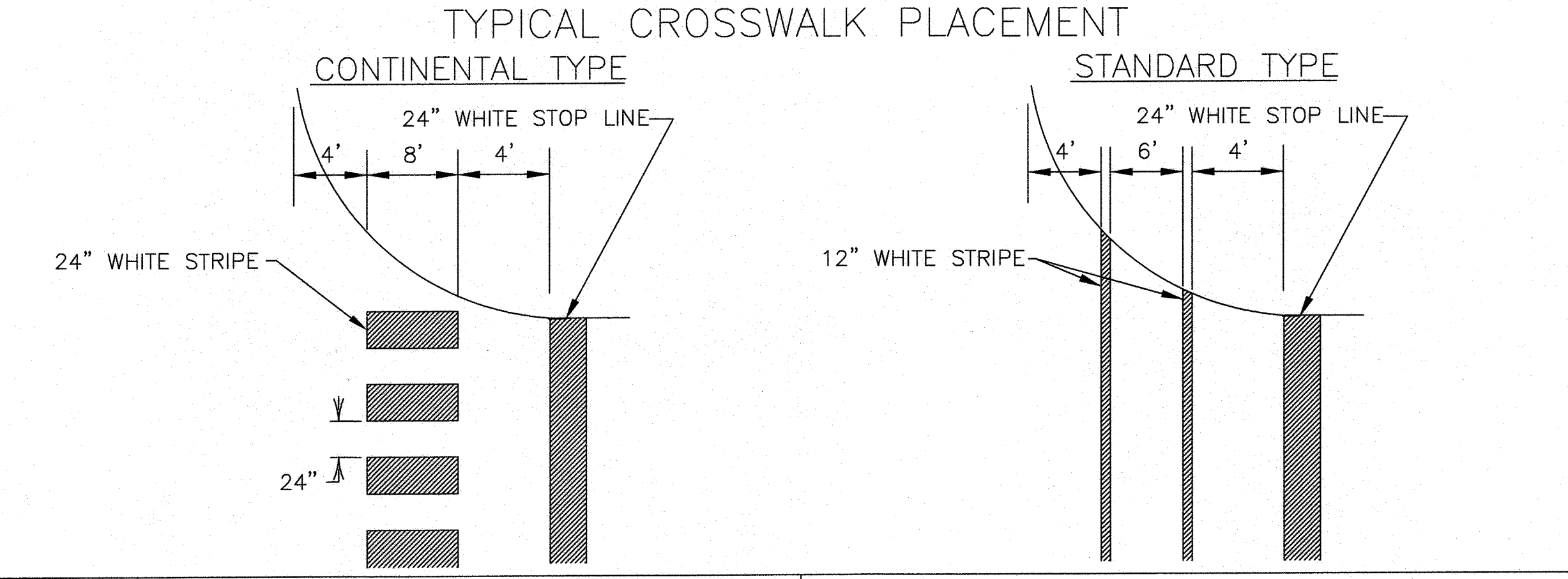
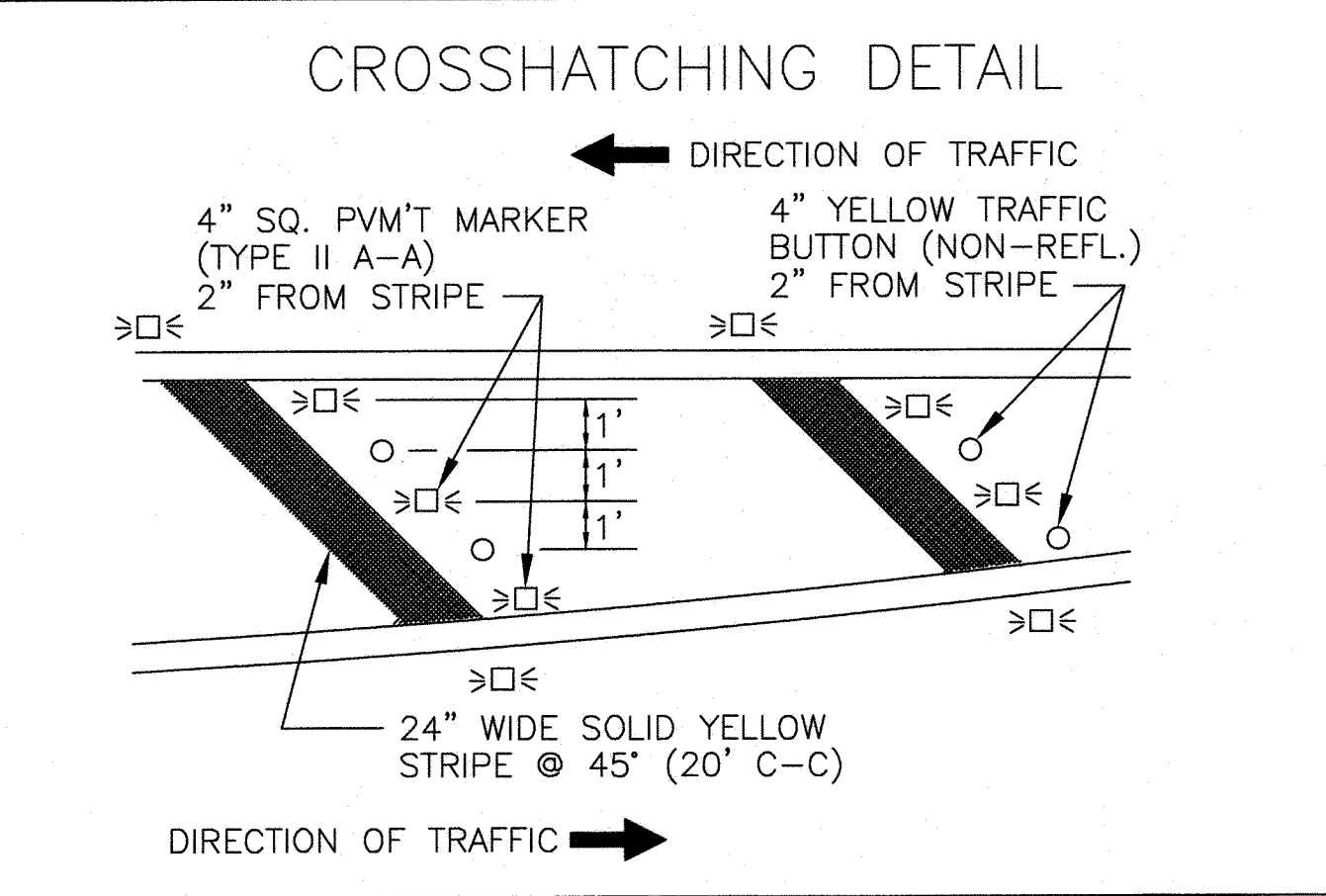
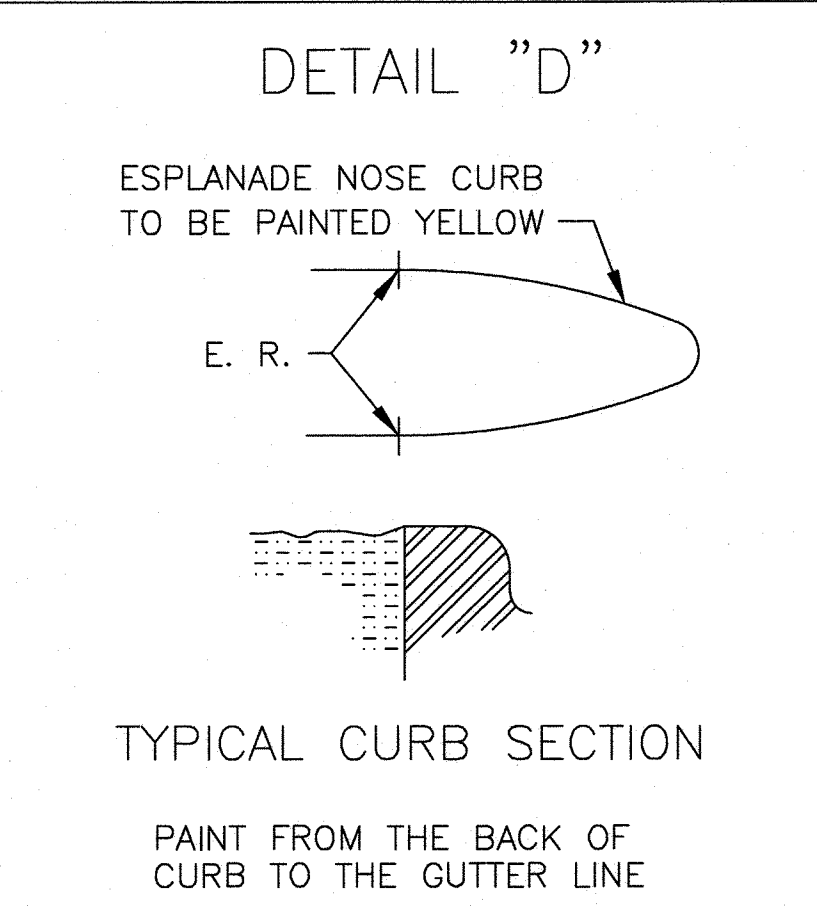
ESPLANADE	*R1	*R2
<8'	N/A	W/2
8'-38'	90'	W/5
>38'	N/A	15'



PAVEMENT MARKER LEGEND

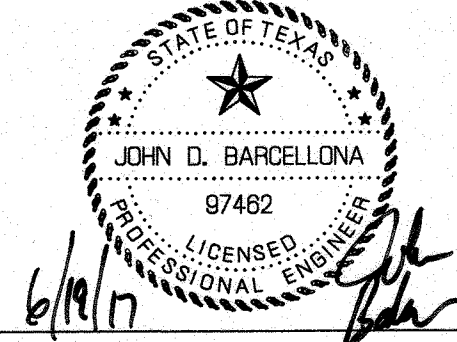
SYMBOL	DESCRIPTION
□	4" X 4" REFLECTORIZED RAISED PAVEMENT MARKER
□←	INDICATES DIRECTION OF TRAFFIC FLOW
○	NON-REFLECTIVE 4" DIA. RAISED TRAFFIC BUTTON

- NOTES:
- ALL STRIPING & MARKERS SHALL CONFORM WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
  - ALL TRAFFIC BUTTONS AND MARKERS SHALL BE INSTALLED ADJACENT TO STRIPES (APPROX. 2").
  - LEFT TURN STORAGE BAYS SHALL BE A MIN. OF 100' AT MINOR STREETS AND A MIN. OF 150' AT MAJOR STREETS.
  - REPEAT ARROWS AT APPROX. 1000' INTERVALS WITHIN TWO-WAY LEFT TURN SECTION.
  - WITHIN A TANGENT SECTION THE TYPE I-C PAVEMENT MARKERS CAN BE PLACED AT 40' C-C ON ROADWAYS WITHOUT CURB AND GUTTERS.



NO.	REVISIONS	DATE	NAME
1	CHANGED TITLE BLOCK	7/21/98	R.L.S.
2	ADDED CONTINENTAL CROSSWALK	8/3/98	ALP

FORT BEND COUNTY  
ENGINEERING DEPARTMENT



PROJECT TITLE: STONECREEK ESTATES DRIVE			
DRAWN BY: R.L.S.	SHEET DESCRIPTION: PAVEMENT MARKING DETAILS	JOB NO: 12268-0012-00	FILE NAME: PMDET
SCALE: N.T.S.	DATE: 6/27/01	APPROVED BY:	SHT NO: 19 / 23

Massi 7/14/17



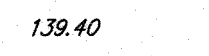
Elevations shown hereon on are based upon GPS observations calibrated to the published values of HGCS D 71, and HGCS D 72 (NAVD 88).

Being a set mag nail. Located in an asphalt driveway off of Berdett Road. Elevation = 77.55' (NAVD88).

This tract lies within Zone "X" of the Flood Insurance Rate Map, Community No. 480228, Map Number 48157C0265L, Panel 0265, Suffix "L" dated April 2, 2014, for Fort Bend County, Texas and incorporated areas. Zone "X" is defined as areas determined to be outside the 0.2% annual chance floodplain.

141.0


139.40



EXISTING NATURAL GROUND CONTOUR

PROPOSED TOP OF CURB

APPROXIMATE LIMITS OF FILL  
(SEE LOT GRADING NOTES FOR  
PLACEMENT AND COMPACTION)




APPROXIMATE LIMITS OF CUT

PROPOSED BACKLOT ELEVATIONS


SLOPE OF FINISHED GRADE

MAX PONDING ABOVE TOP OF  
CURB AT INLETS BEFORE  
SHEET FLOW

79.0



0.00'



1. LOT AREAS THAT ARE TO RECEIVE FILL SHALL BE PREPARED AS FOLLOWS (NO SEPARATE PAY).
  - A. AREAS THAT ARE TO RECEIVE FILL WILL BE STRIPPED TO A DEPTH OF 3" STRIPPINGS SHALL BE STOCK PILED AND THEN SPREAD EVENLY ON SURFACE OF FILL AREAS.
  - B. PRIOR TO PLACEMENT OF FILL ON STRIPPED AREAS, THE CONTRACTOR SHALL PROOF ROLL USING A PNEUMATIC ROLLER (12 TON OR APPROVED EQUIVALENT SEPARATE PAY). SHOULD SOFT UNSTABLE AREAS APPEAR IN THE LOTS, THE CONTRACTOR SHALL REMOVE UNSTABLE MATERIAL AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL REPLACE THIS WITH A SUITABLE MATERIAL COMPACTED AS REQUIRED (NO SEPARATE PAY FOR A DEPTH UP TO 1.5 FOOT).
  - C. AREAS WITH A P.I. OF 25 OR LESS WILL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DENSITY WITH A MOISTURE CONTENT OF  $4\frac{1}{2}$ -2% OF OPTIMUM AS DETERMINED BY AASHTO TEST METHOD T-99.
  - D. AREAS WITH A P.I. OF MORE THAN 25 WILL BE COMPACTED TO AT LEAST 90% OF THE MAXIMUM DENSITY WITH A MOISTURE CONTENT OF  $4\frac{1}{2}$ -2% OF OPTIMUM AS DETERMINED BY AASHTO TEST METHOD T-99.
2. LOT FILL SHALL BE PLACED IN MAXIMUM LOOSE LIFTS OF EIGHT INCHES (8") OR LESS AND COMPACTED TO 95% OF MAXIMUM DENSITY OF OPTIMUM TO  $4\frac{1}{2}$ -2% MOISTURE CONTENT AS DETERMINED BY AASHTO TEST METHOD T-99.
3. ALL EXISTING DRAINAGE SWALES IN FILL AREAS SHALL BE STRIPPED OF ANY VEGETATION, CLEANED, AND MUCKED OUT TO SUITABLE SUBGRADE MATERIAL AND THEN FILLED AS SHOWN WITH EXCAVATION MATERIAL IN MAXIMUM EIGHT INCH (8") LOOSE LIFTS, WITH EACH LIFT COMPACTED TO AT LEAST 95% PROCTOR DENSITY AS DETERMINED BY AASHTO TEST METHOD T-99.
4. CLEARING AND SCATTERED TREES IN AREAS DESIGNATED TO RECEIVE FILL IS INCIDENTAL TO THE CONTRACT. INCLUDE COSTS IN PRICE BID FOR LOT GRADING.
5. BACK LOT UTILITY EASEMENTS THAT HAVE BEEN CLEARED SHALL BE FILLED WITH UP TO 12-INCHES OF EXCAVATED MATERIAL AND GRADED TO DRAIN. FINISH SURFACE SHALL BE LEFT SMOOTH AND FINE GRADED.
6. ENGINEER WILL PROVIDE APPROXIMATE BACK LOT LINE FINISH ELEVATIONS. CONTRACTOR SHALL VERIFY FINAL LOT GRADES AND ELEVATIONS TIED TO PROJECT BENCH MARK. CONTRACTOR SHALL INCLUDE COST IN ITEM BID FOR LOT GRADING.
7. FINAL PAYMENT SHALL BE CONTINGENT ON THE ENGINEERS VERIFICATION THAT LOT GRADING IS IN ACCORDANCE WITH THE DRAINAGE PLAN AND THAT SOIL COMPACTION TESTS WERE PERFORMED AS REQUIRED.
8. ALL LOTS SHALL BE GRADED SO THAT NO PORTION OF ANY LOT STRICH DRAIN OUT OR ACROSS ANY OTHER LOT, BUT SHALL DRAIN DIRECTLY TO STREET UNLESS DESIGNATED AS OTHER THAN TYPE "A" GRADING.

DATE: 7/14/17

[illegible]

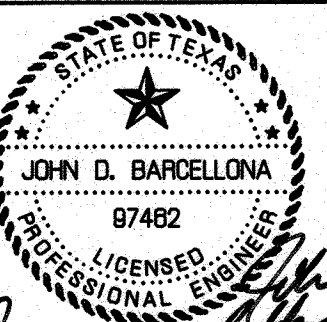
FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

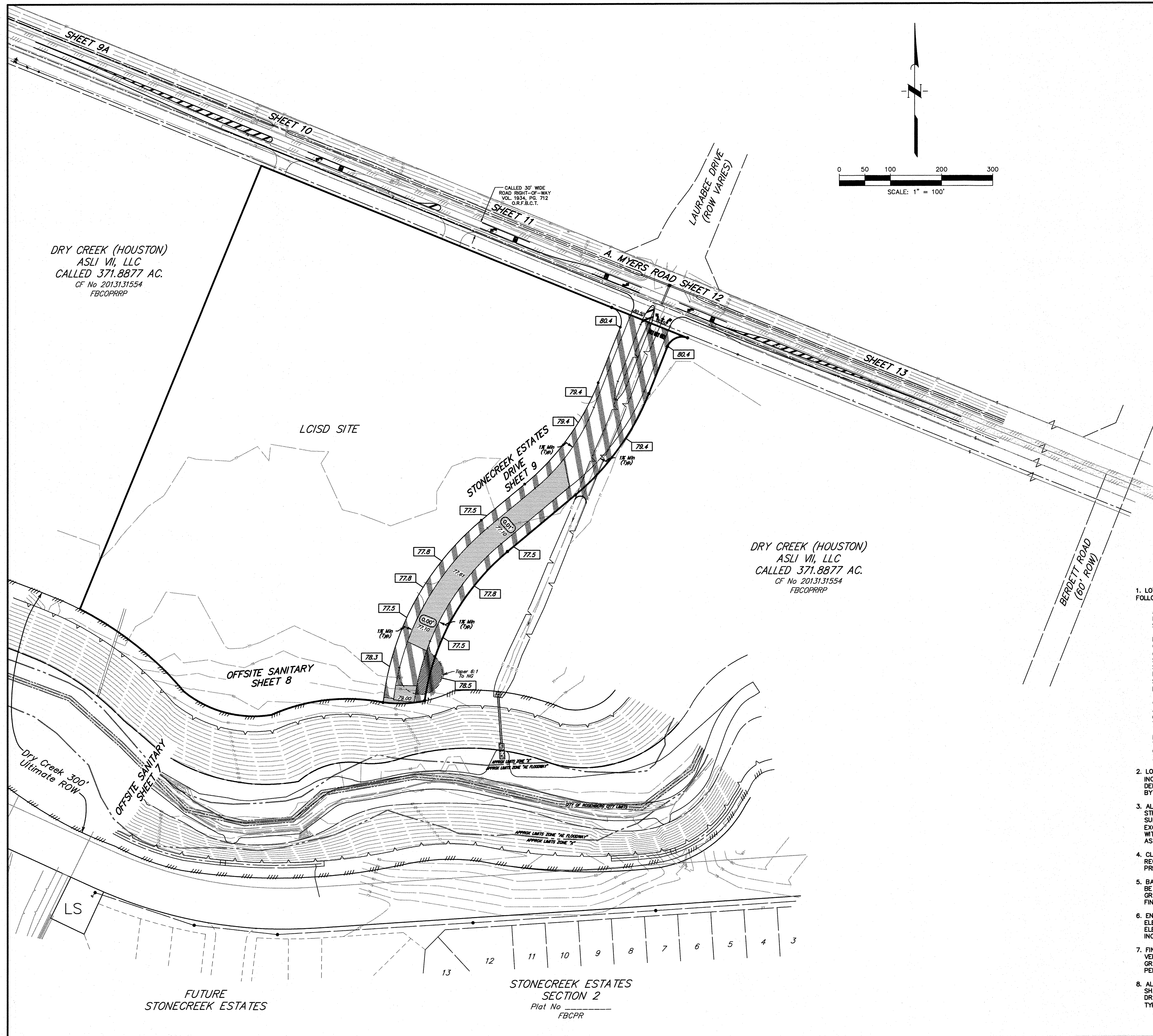
## GRADING PLAN



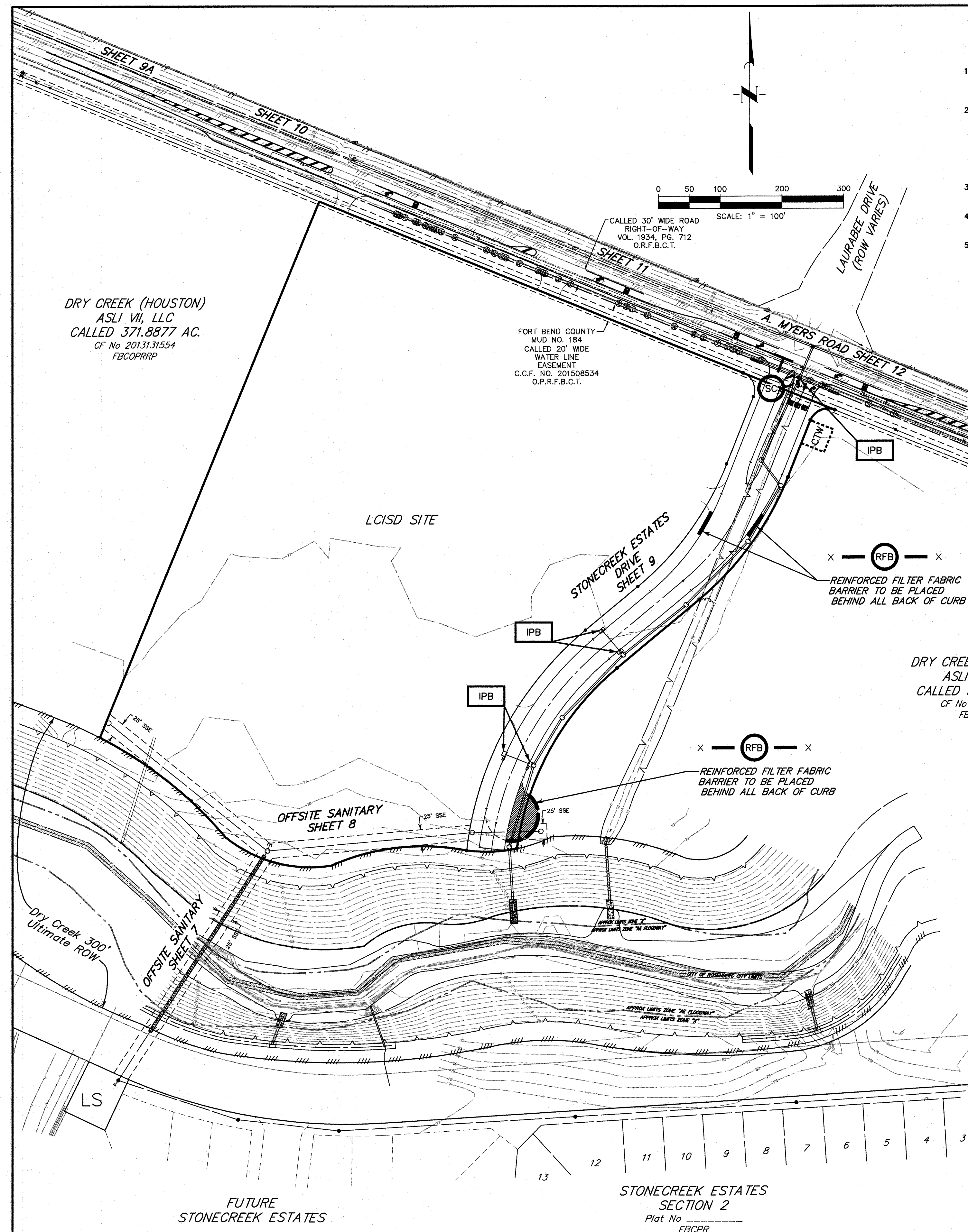
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DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO. \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
F.B. NO. \_\_\_\_\_



EET NO.  
**20**  
23











## MANHOLE/INLET PROTECTION NOTES

1. INLETS AND MANHOLES THAT ARE NOT COMPLETE AND/OR ARE SUBJECT TO CONVEYING STORM WATER FLOWS ARE TO BE PROTECTED TO PREVENT SEDIMENT FROM ENTERING THE PROPOSED OR EXISTING STORM SEWER SYSTEM.
2. PROTECTION SHALL CONSIST OF ONE LAYER OF 3x12-INCH OAK TIMBERS, ONE (1) INCH APART, COVERED WITH ONE LAYER OF WOVEN POLYPROPYLENE OR POLYESTER FILTER FABRIC (EXXON G17 100#, PHILLIPS SUPAC 4#SUG10 OR APPROVED EQUAL) HELD IN PLACE WITH 1/2" STAPLES. THE FABRIC SHALL BE HELD IN PLACE WITH TWO (2) 2x4'S NAILED SECURELY TO EACH TIMBER OVER THE FILTER FABRIC. THE FILTER FABRIC SHALL EXTEND BEYOND THE PERIMETER OF THE OAK TIMBERS AS TO ENSURE ONE (1) FOOT OF BURY BETWEEN THE MANHOLE OR INLET AND THE SURROUNDING SOIL AS SHOWN.
3. FILTER FABRIC TO BE CLEANED OR REPLACED WHEN IT CEASES TO FUNCTION PROPERLY OR AS DIRECTED BY THE ENGINEER.
4. CONTRACTOR MAY SUBMIT PLANS FOR ALTERNATE METHODS OF PROTECTION. THESE ALTERNATE METHODS MUST BE APPROVED PRIOR TO USE IN THE FIELD.
5. NO SEPARATE PAYMENT SHALL BE MADE FOR INLET AND MANHOLE PROTECTION. INCLUDE THE COST IN THE UNIT PRICE FOR THE INLETS AND MANHOLES.

EROSION AND SEDIMENTATION CONTROL NOTES

1. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROLS AT LOCATION SHOWN ON PLANS.
2. CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENTATION CONTROL SYSTEMS SPECIFIED HEREIN, AT A MINIMUM OF ONCE EVERY CALENDAR DAY.
3. CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE DAMAGED EROSION AND SEDIMENTATION CONTROL SYSTEM THROUGHOUT THE DURATION OF THE CONTRACT. (NO SEPARATE PAY).
4. CONTRACTOR SHALL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
5. CONTRACTOR SHALL LOCATE FUEL/MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONVEYANCE SYSTEMS. CONTRACTOR SHALL USE SILT FENCING, HAY BALES, OR BERMS AROUND FUEL STORAGE AREAS. (NO SEPARATE PAY).
6. CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY AND IN WRITING, OF ANY FUEL OR TOXIC MATERIAL SPILLS ONTO THE PROJECT/CONSTRUCTION AREA AND THE ACTION TAKEN TO REMEDY THE PROBLEM.
7. CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF HIS FUELS, MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER. (NO SEPARATE PAY).
8. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE ENVIRONMENTAL LAWS.
9. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATELY MAINTAINED SANITARY FACILITIES.
10. AT COMPLETION OF THE CONTRACT, OWNER AND/OR OWNER'S REPRESENTATIVE WITH THE CONTRACTOR SHALL EXAMINE EROSION AND SEDIMENTATION CONTROL SYSTEM BEFORE RELIEVING CONTRACTOR OF HIS MAINTENANCE RESPONSIBILITIES.
11. IF EROSION AND SEDIMENTATION CONTROL SYSTEM IS EXISTING FROM PRIOR CONTRACTS, OWNER AND/OR OWNER'S REPRESENTATIVES WITH THE CONTRACTOR SHALL EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEM FOR DAMAGE PRIOR TO CONTRACTOR STARTING CONSTRUCTION OF THE CONTRACT. ANY DAMAGE NOTED AT THIS TIME SHALL BE REPAIRED AT OWNER'S EXPENSE.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR STREET CLEANING, ON A DAILY BASIS, ALL MUD AND DIRT DEPOSITED ON THE EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY.
13. IF PAVING CONTRACTOR REMOVES OR PUNCTURES TIMBER GRATE TO ESTABLISH DRAINAGE, INLET OR OUTLET SHALL BE SURROUNDED BY FILTER FABRIC FENCE AS SHOWN IN DETAIL ON THIS SHEET.

### LEGEND

- |  |  |
|--|--|
|   | INLET PROTECTION BARRIERS<br>FOR STAGE II INLETS |
|   | STABILIZED<br>CONSTRUCTION ACCESS                |
|   | CONCRETE TRUCK WASHOUT AREA                      |
|  | REINFORCED FILTER BARRIER                        |

APPROVED: Maggi D  
DEVELOPMENT COORDINATOR

DATE: 7/14/17

NO.	DATE	REVISIONS	APPROVED

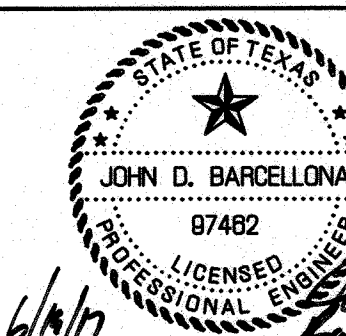
FORT BEND COUNTY MUD No. 184  
FORT BEND COUNTY, TEXAS

STONECREEK ESTATES DRIVE

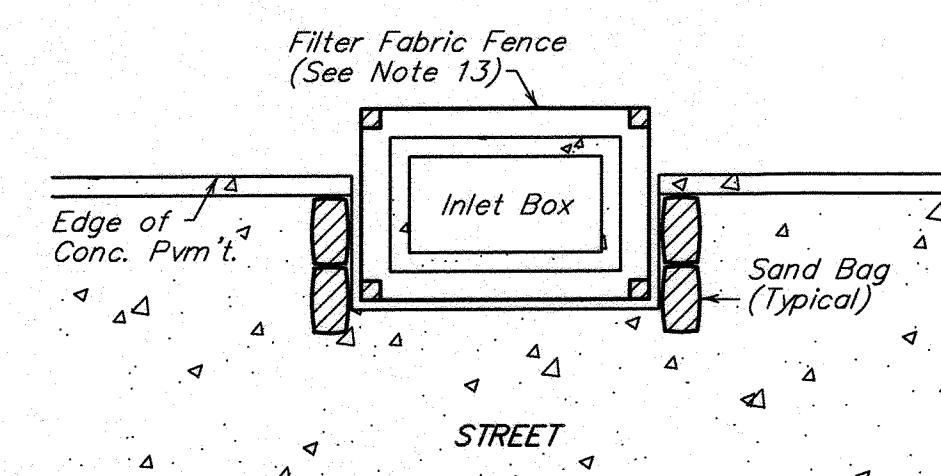
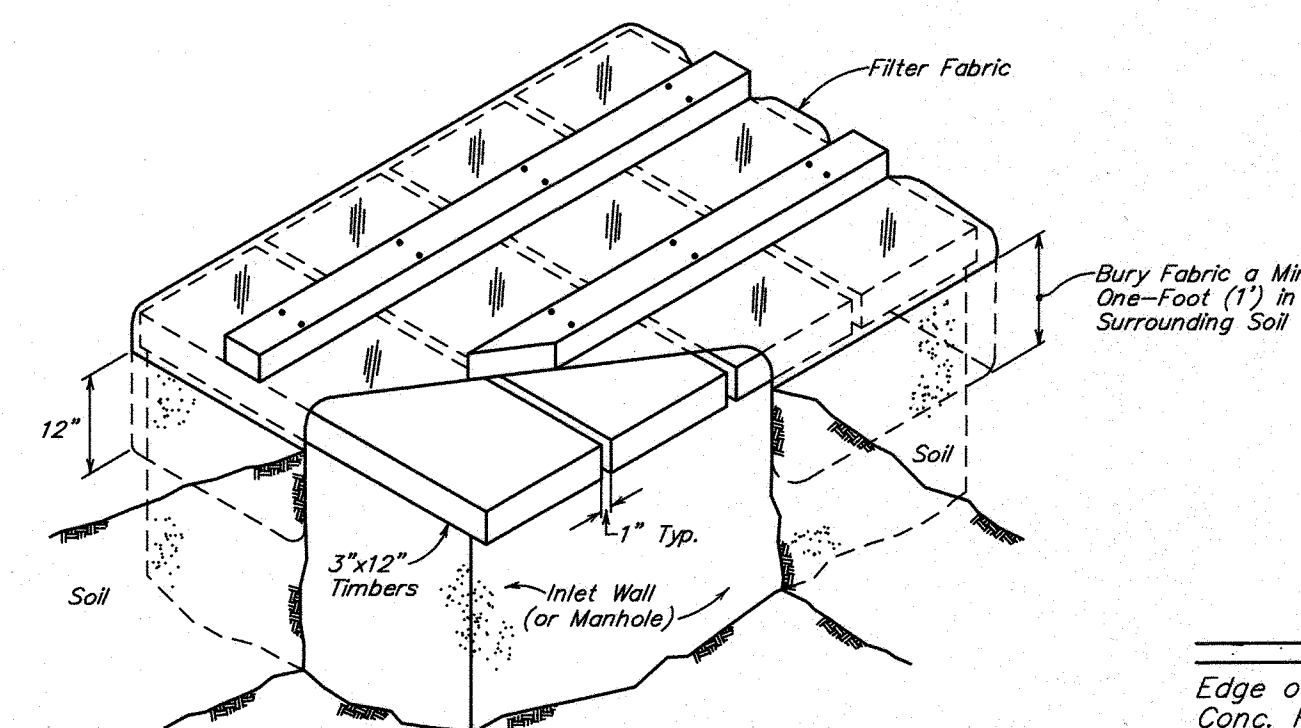
# STORM WATER POLLUTION PREVENTION PLAN



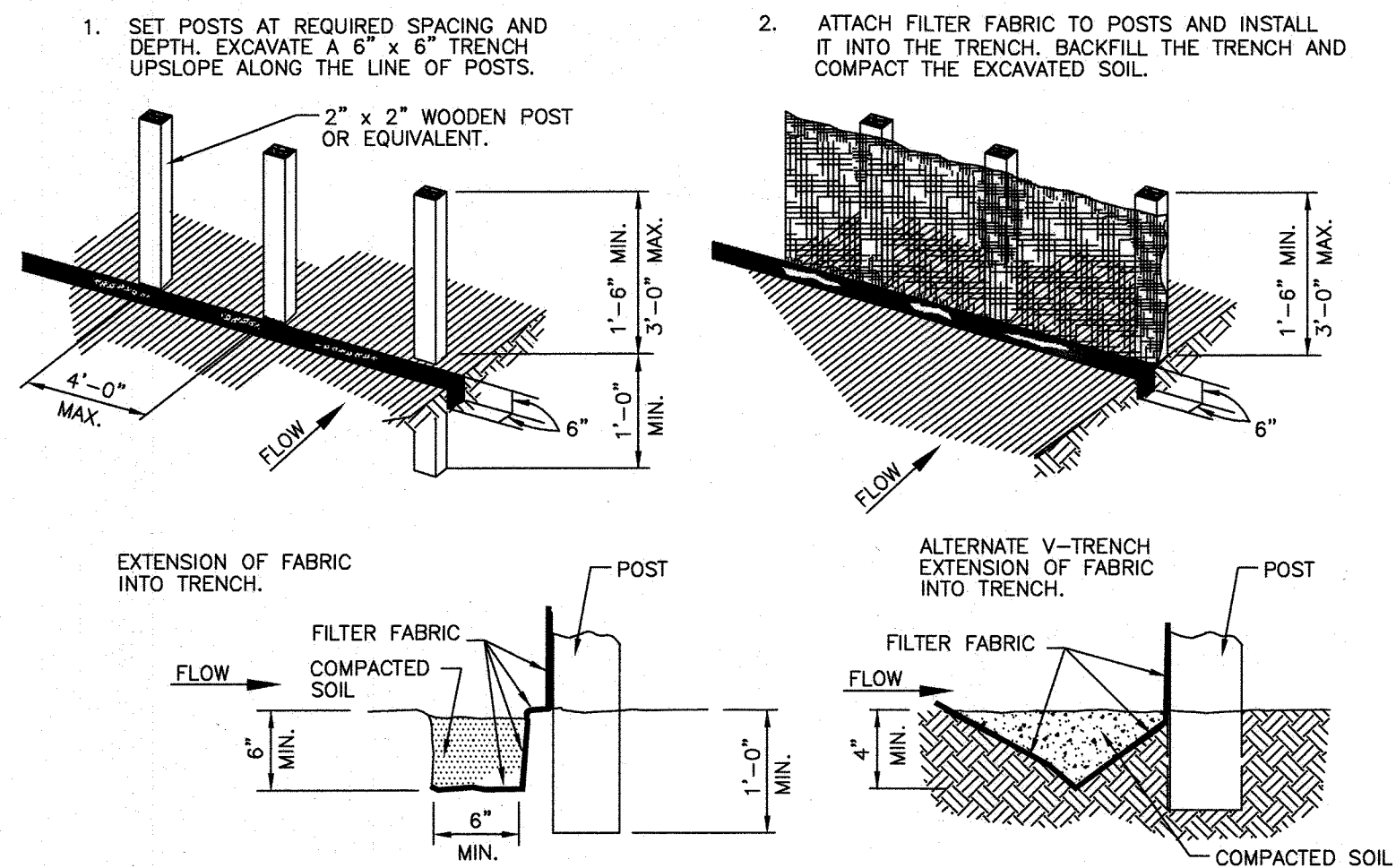
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DATE: June 2017 DWN. BY: JLG  
JOB NO. 12268-0012-00 DWG. NO. \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
F.B. NO. \_\_\_\_\_



SHEET NO  
**21**  
OF 23

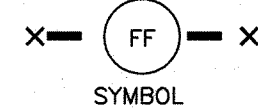




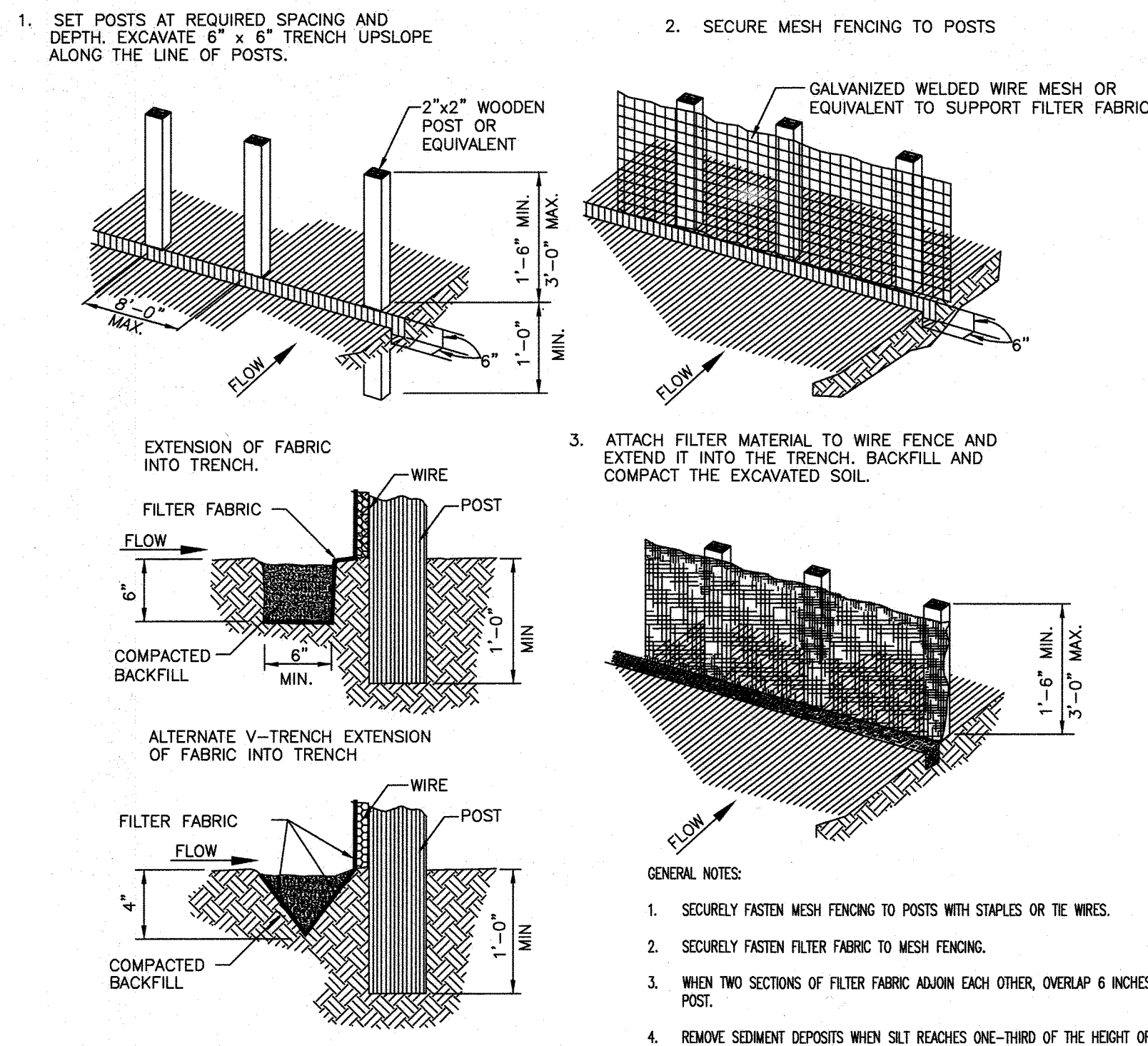


- GENERAL NOTES:
1. SET POSTS AT 4-FOOT MAXIMUM SPACING. IF FACTORY PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAXIMUM.
  2. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT THE POST, FOLD TOGETHER, AND ATTACH TO THE POSTS.
  3. REMOVE SEDIMENT DEPOSITS WHEN SILT DEPTH REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE.

#### FILTER FABRIC FENCE

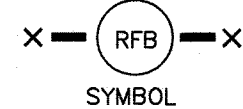


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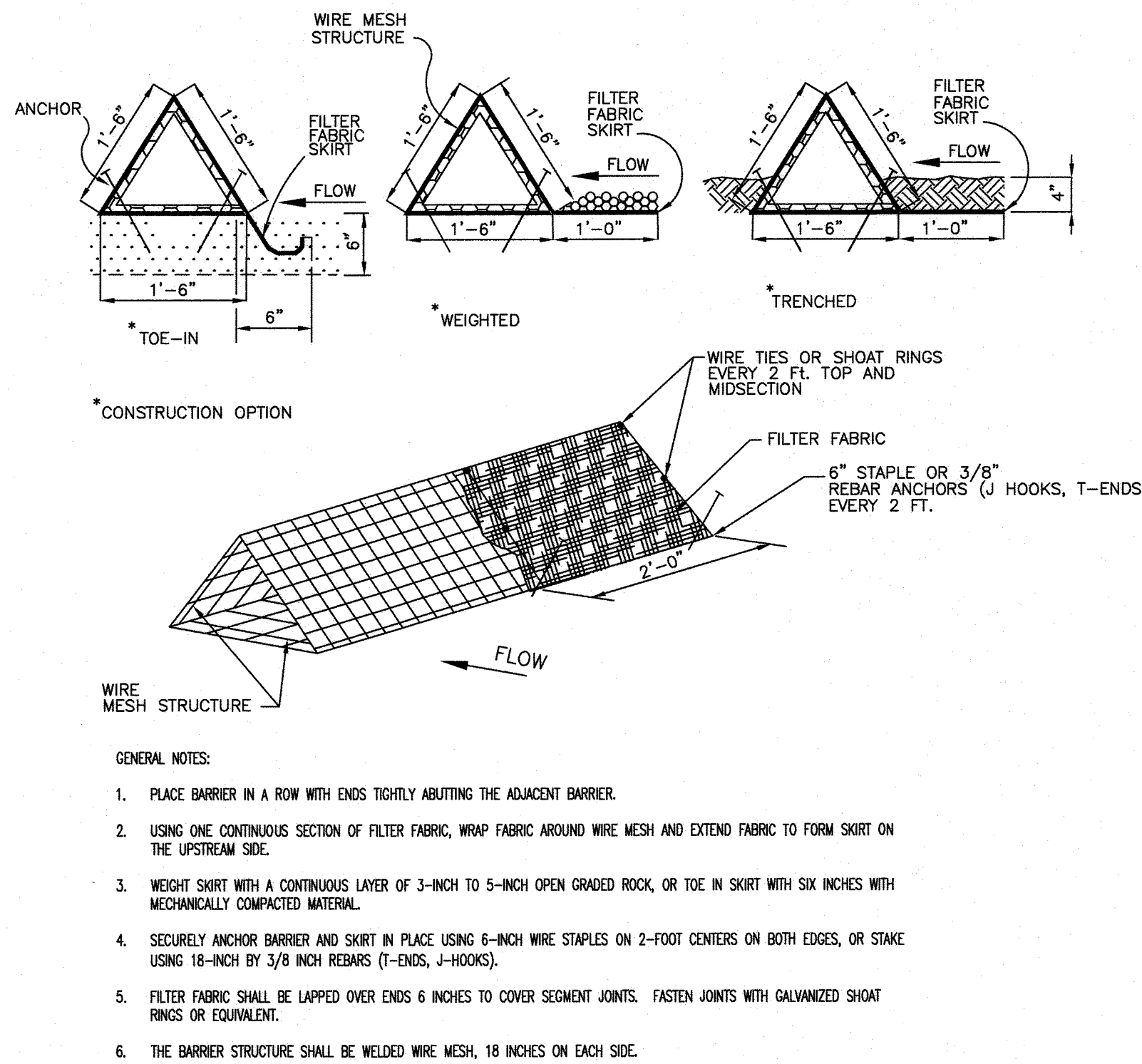


- GENERAL NOTES:
1. SECURELY FASTEN MESH FENCING TO POSTS WITH STAPLES OR TIE WIRES.
  2. SECURELY FASTEN FILTER FABRIC TO MESH FENCING.
  3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT A POST, FOLD TOGETHER, AND ATTACH TO A POST.
  4. REMOVE SEDIMENT DEPOSITS WHEN SILT REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE IN DEPTH.

#### REINFORCED FILTER FABRIC BARRIER

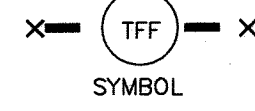


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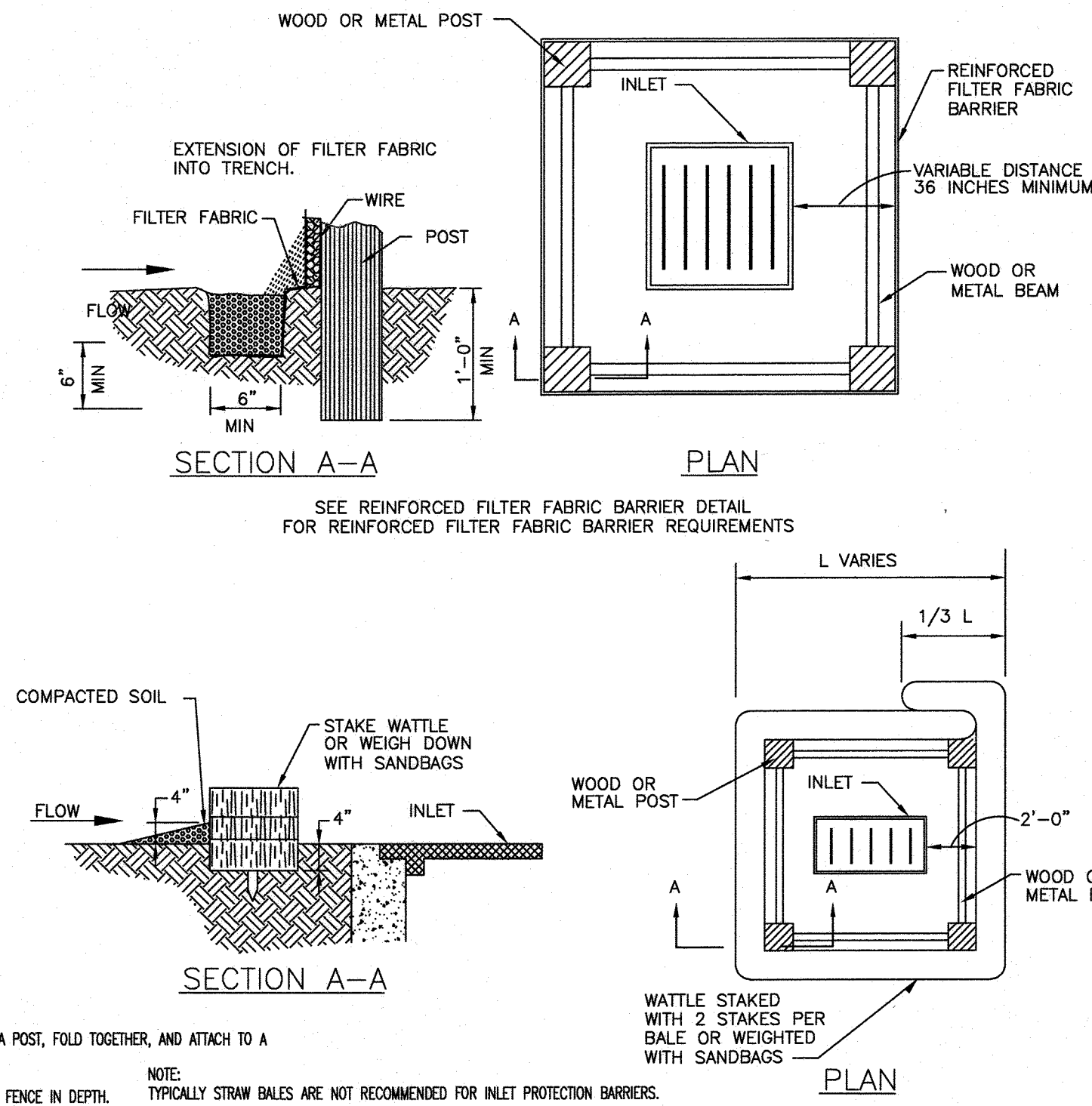


- GENERAL NOTES:
1. PLACE BARRIER IN A ROW WITH ENDS TIGHTLY ADJUTING THE ADJACENT BARRIER.
  2. USING ONE CONTINUOUS SECTION OF FILTER FABRIC, WRAP FABRIC AROUND WIRE MESH AND EXTEND FABRIC TO FORM SKIRT ON THE UPSTREAM SIDE.
  3. WEIGHT SKIRT WITH A CONTINUOUS LAYER OF 3-INCH TO 5-INCH OPEN GRADED ROCK, OR TOE IN SKIRT WITH SIX INCHES WITH MECHANICALLY COMPACTED MATERIAL.
  4. SECURELY ANCHOR BARRIER AND SKIRT IN PLACE USING 6-INCH WIRE STAPLES ON 2-FOOT CENTERS ON BOTH EDGES, OR STAKE USING 18-INCH BY 3/8 INCH REBAR (T-ENDS, J-HOOKS).
  5. FILTER FABRIC SHALL BE LAPPED OVER ENDS 6 INCHES TO COVER SEGMENT JOINTS. FASTEN JOINTS WITH GALVANIZED SHOAT RINGS OR EQUIVALENT.
  6. THE BARRIER STRUCTURE SHALL BE WELDED WIRE MESH, 18 INCHES ON EACH SIDE.

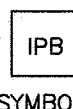
#### TRIANGULAR FILTER FABRIC FENCE



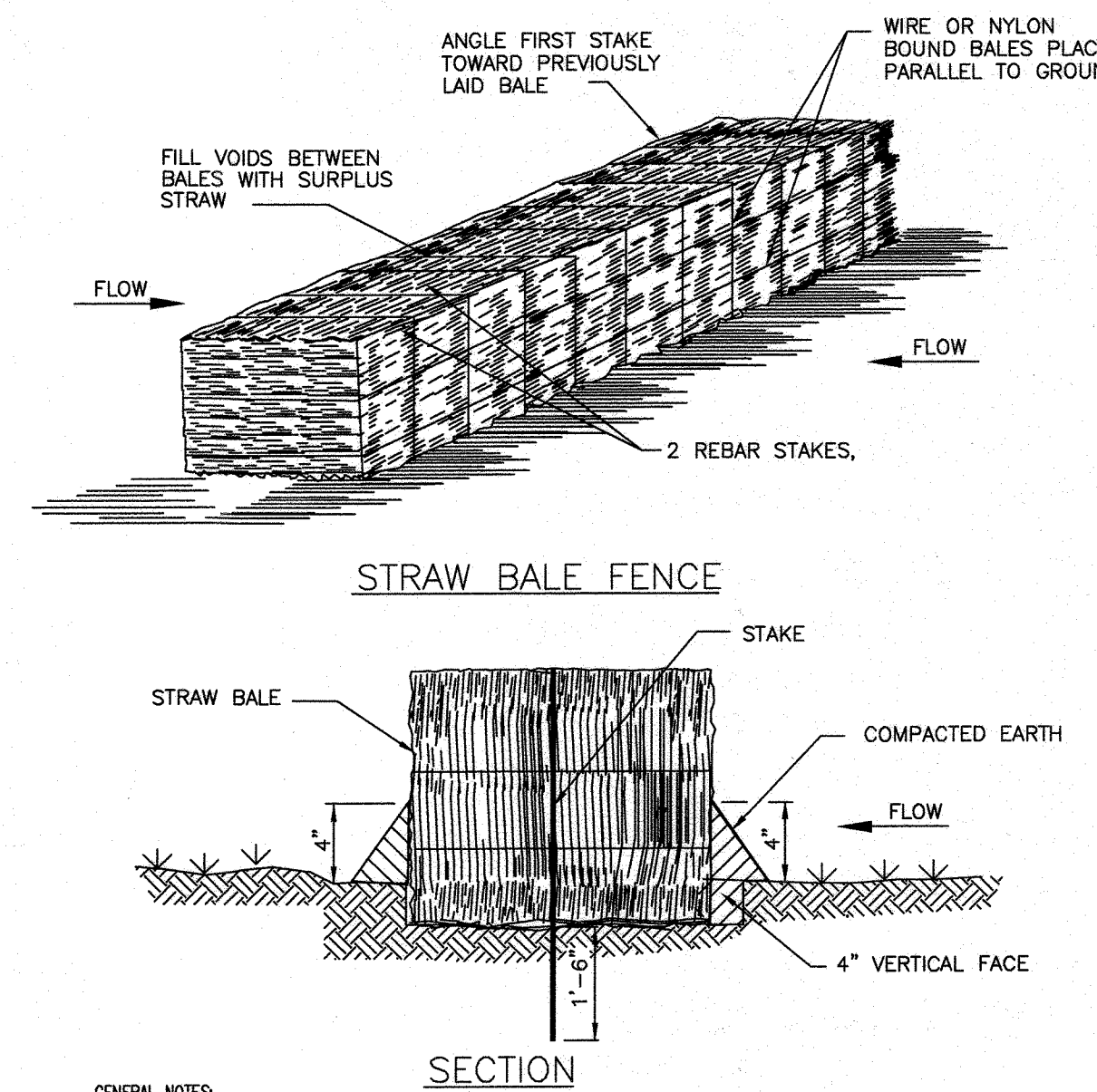
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#### INLET PROTECTION BARRIERS FOR STAGE I INLETS

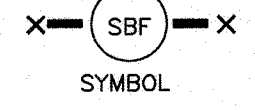


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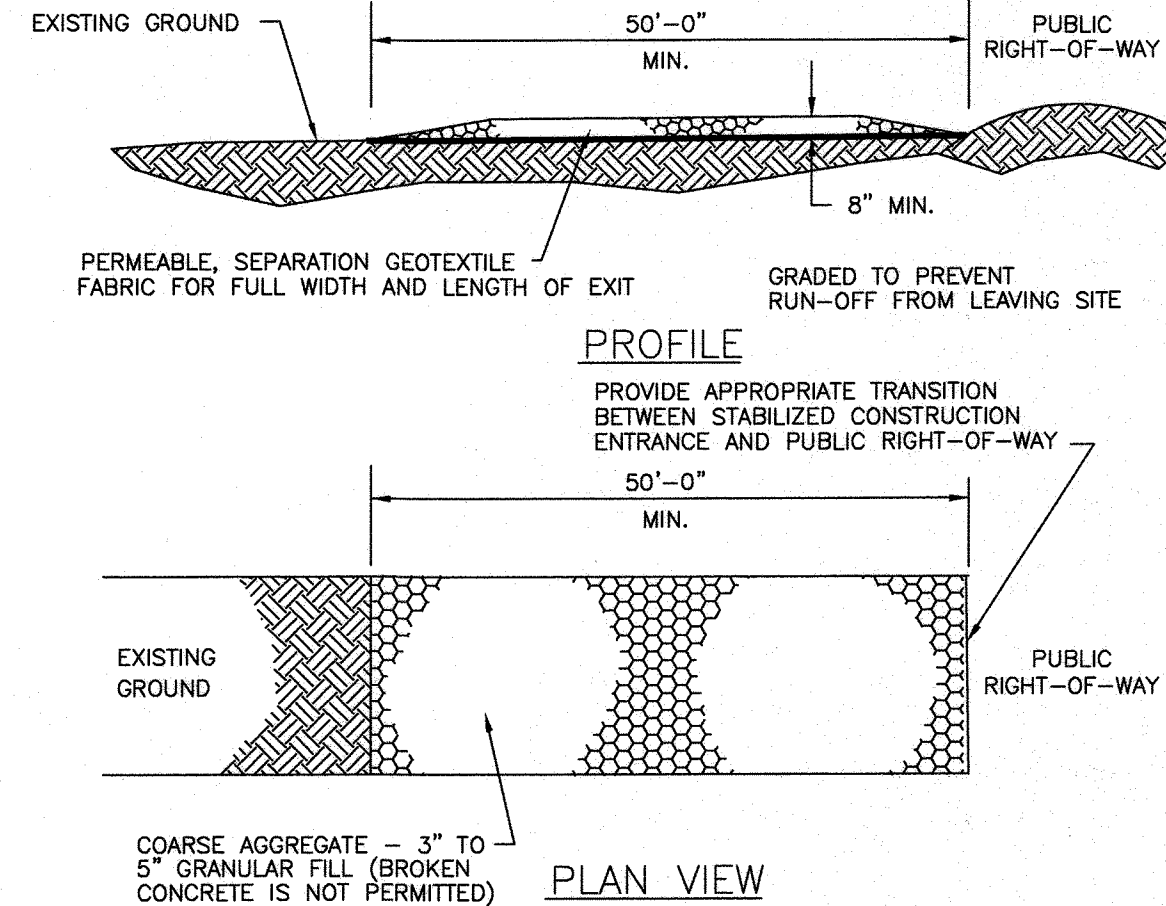


- GENERAL NOTES:
1. LIMIT USE TO ONSITE SWALES FOR PURPOSES OF LOW FLOW VELOCITY DISSIPATION FOR EROSION CONTROL. USE STRAW BALE FENCES TO TREAT OVERLAND FLOW ONLY. DO NOT USE STRAW BALE FENCES TO TREAT FLOW IN CHANNELS.
  2. PLACE BALES IN A ROW WITH ENDS TIGHTLY ADJUTING ADJACENT BALES. FILL THE VOIDS BETWEEN BALES WITH SURPLUS STRAW. PLACE BALES WITH BINDING PARALLEL TO GROUND SURFACE.
  3. IMBED EACH BALE AT LEAST 4 INCHES IN THE SOIL.
  4. SECURELY ANCHOR BALES IN PLACE BY REBAR STAKES. DRIVE STAKES THROUGH THE BALES AND AT LEAST 18 INCHES INTO THE GROUND. ANGLE THE STAKE IN EACH BALE TOWARD THE PREVIOUS BALE TO FORCE THE BALES TOGETHER.
  5. BIND BALES WITH WIRE OR NYLON ROPE TIED ACROSS THE STRAW BALES.
  6. REPLACE WITH NEW STRAW BALE FENCE EVERY TWO MONTHS.
  7. WATTLES STAKED INTO THE GROUND ARE A PREFERRED SUBSTITUTE FOR STRAW BALE FENCES.

#### STRAW BALE FENCE

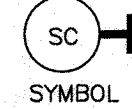


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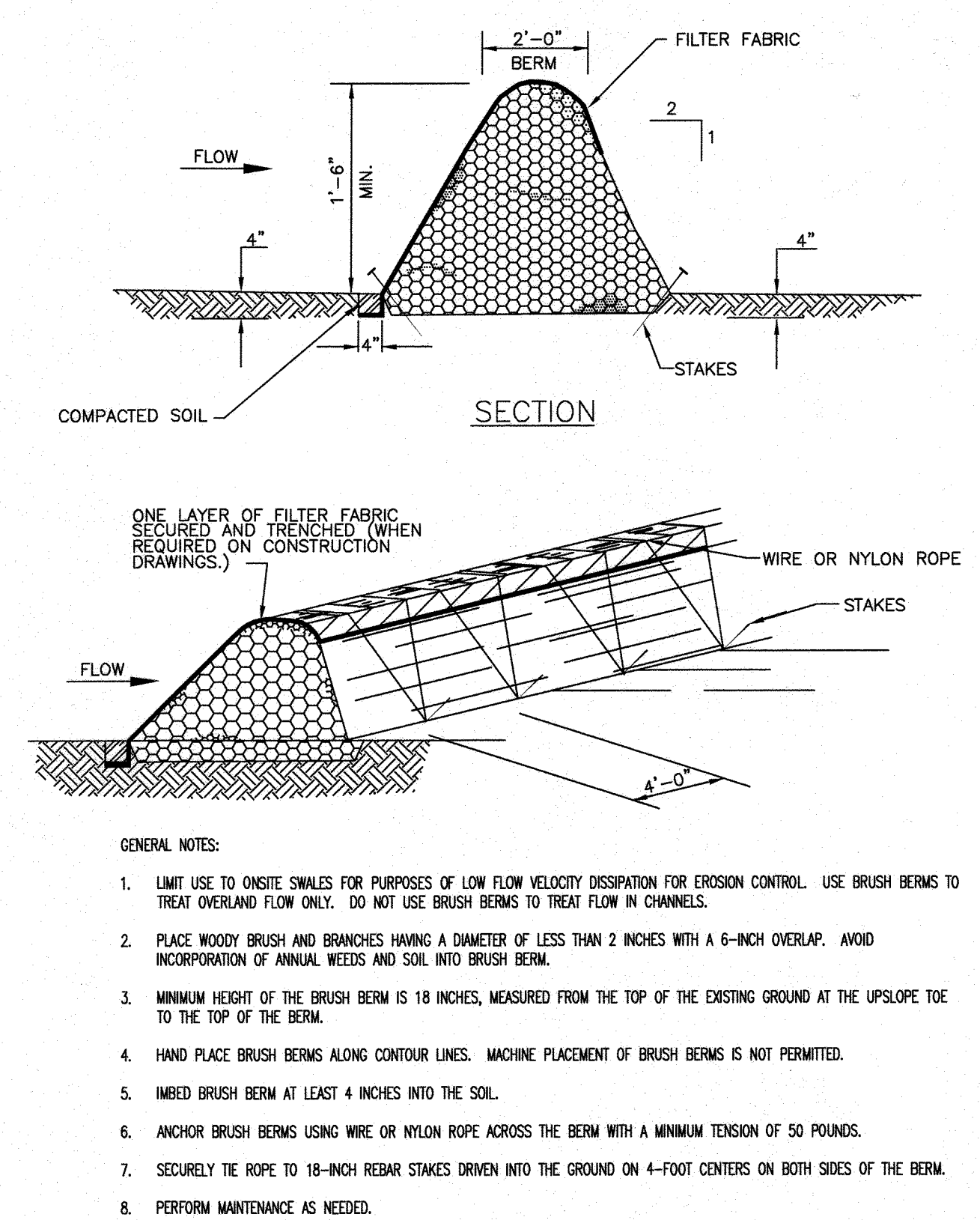


- GENERAL NOTES:
1. MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
  2. CONSTRUCT AND MAINTAIN CONSTRUCTION EXIT WITH CONSTANT WIDTH ACROSS ITS LENGTH, INCLUDING ALL POINTS OF INGRESS OR EGRESS.
  3. UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, STABILIZATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT.
  4. WHEN SHOWN ON THE CONSTRUCTION DRAWINGS, WIDEN OR LENGTHEN STABILIZED AREA TO ACCOMMODATE A TRUCK WASHING AREA. PROVIDE OUTLET SEDIMENT TRAP FOR THE TRUCK WASHING AREA.
  5. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES PACKED WITH MUD.
  6. PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRAINING SURFACE.
  7. ALTERNATIVE METHODS OF CONSTRUCTION INCLUDE:
    - CEMENT STABILIZED SOIL: COMPACTED CEMENT STABILIZED SOIL, LIMESTONE AGGREGATE, OR OTHER FILL MATERIAL IN AN APPLICATION OF THICKNESS OF 8 INCHES.
    - WOOD MATS: OAK OR OTHER HARDWOOD TIMBERS PLACED EDGE TO EDGE AND ACROSS SUPPORT WOODEN BEAMS WHICH ARE PLACED ON TOP OF EXISTING SOIL IN AN APPLICATION THICKNESS OF 6 INCHES.
    - STEEL MATS: PERFORATED MATS PLACED ACROSS PERPENDICULAR SUPPORT MEMBERS.

#### STABILIZED CONSTRUCTION ACCESS

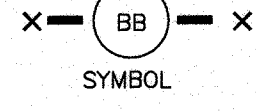


SYMBOL

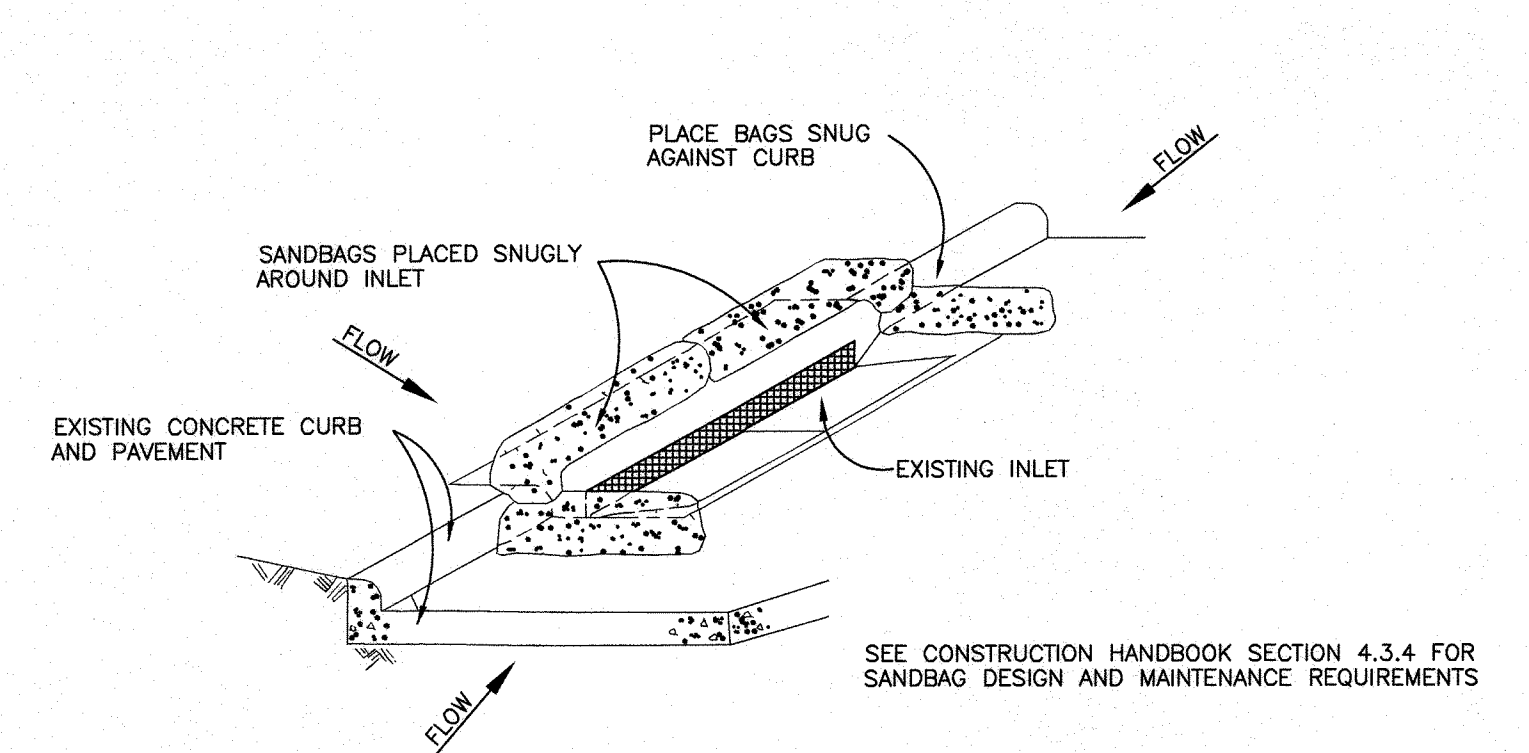


- GENERAL NOTES:
1. LIMIT USE TO ONSITE SWALES FOR PURPOSES OF LOW FLOW VELOCITY DISSIPATION FOR EROSION CONTROL. USE BRUSH BERMS TO TREAT OVERLAND FLOW ONLY. DO NOT USE BRUSH BERMS TO TREAT FLOW IN CHANNELS.
  2. PLACE WOODY BRUSH AND BRANCHES HAVING A DIAMETER OF LESS THAN 2 INCHES WITH A 6-INCH OVERLAP. AVOID INCORPORATION OF ANNUAL WEEDS AND SOIL INTO BRUSH BERM.
  3. MINIMUM HEIGHT OF THE BRUSH BERM IS 18 INCHES, MEASURED FROM THE TOP OF THE EXISTING GROUND AT THE UPSLOPE TOE TO THE TOP OF THE BERM.
  4. HAND PLACE BRUSH BERMS ALONG CONTOUR LINES. MACHINE PLACEMENT OF BRUSH BERMS IS NOT PERMITTED.
  5. IMBED BRUSH BERM AT LEAST 4 INCHES INTO THE SOIL.
  6. ANCHOR BRUSH BERMS USING WIRE OR NYLON ROPE ACROSS THE BERM WITH A MINIMUM TENSION OF 50 POUNDS.
  7. SECURELY TIE ROPE TO 18-INCH REBAR STAKES DRIVEN INTO THE GROUND ON 4-FOOT CENTERS ON BOTH SIDES OF THE BERM.
  8. PERFORM MAINTENANCE AS NEEDED.

#### BRUSH BERM



SYMBOL



- GENERAL NOTES:
1. BAGS OR WATTLES CAN BE USED FOR THIS APPLICATION.
  2. PROVIDE WOVEN OR UNWOVEN GEOTEXTILE FILTER FABRIC FOR BAGS.
  3. PROVIDE COARSE SAND AND AGGREGATE MIX FOR FILL MATERIAL FOR BAGS. USE ONLY PARTICLES CONSISTING OF CLEAN, HARD, DURABLE MATERIALS FREE FROM ADHERENT COATINGS, SALT, ALKALI, DIRT, CLAY, LOAM, SHALE, SOFT OR FLAKY MATERIALS, OR ORGANIC AND INJURIOUS MATTER.
  4. REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE BARRIER.

#### INLET PROTECTION BARRIERS FOR STAGE II INLETS

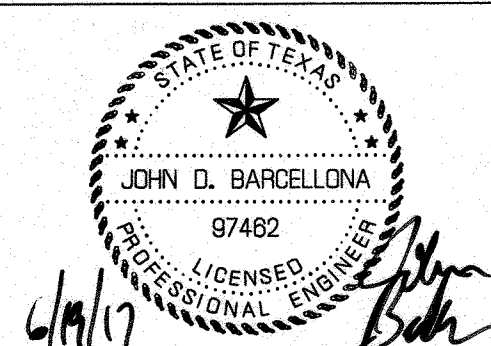
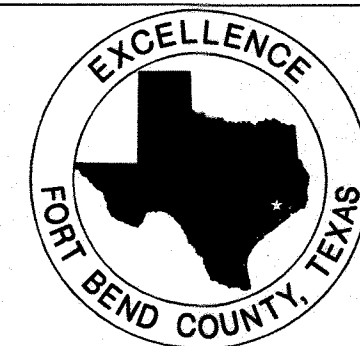


SYMBOL

**J/C JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-439  
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

NO.	REVISIONS	DATE	NAME
1	CHANGED TITLE BLOCK	7/21/98	R.L.S.
2	ADDED CONTINENTAL CROSSWALK	8/3/98	ALP

FORT BEND COUNTY  
ENGINEERING DEPARTMENT



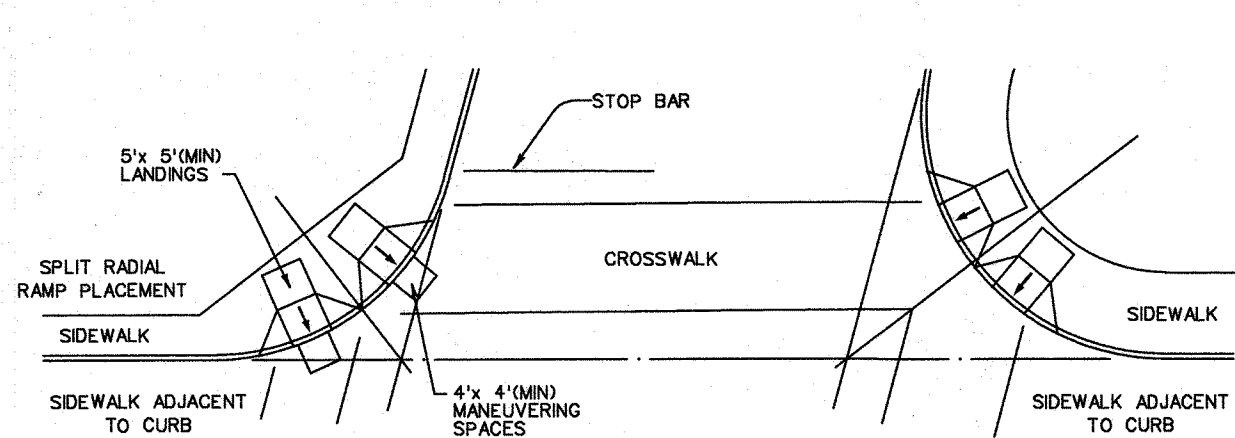
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DRAWN BY:	R.L.S.	SHEET DESCRIPTION:	STORM WATER POLLUTION PREVENTION PLAN DETAILS
CHKD BY:		FILE NAME:	PMDET
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DATE:	6/27/01	APPROVED BY:	
		SHT NO.	22 / 23

Maggie 7/14/17

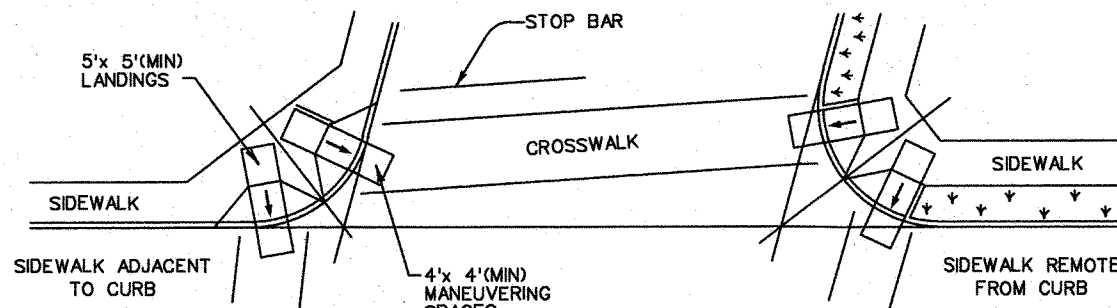


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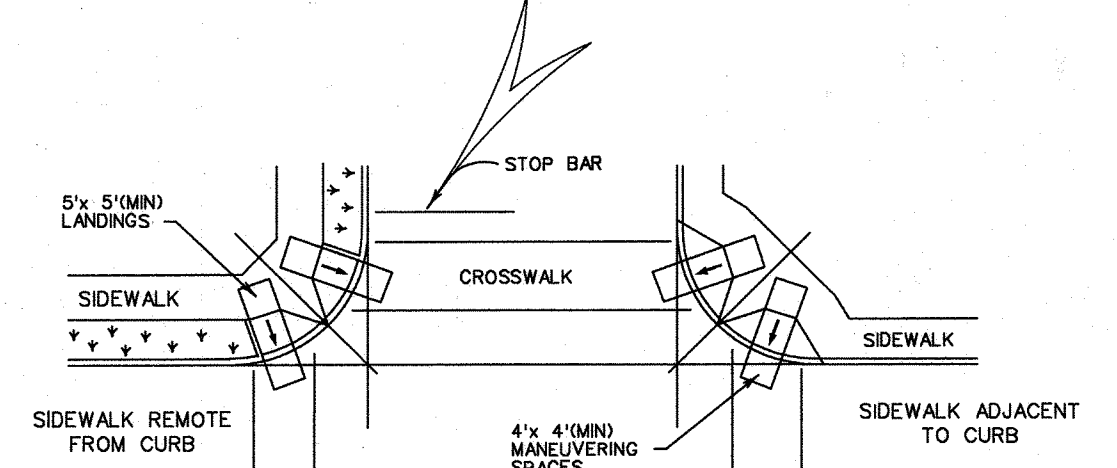
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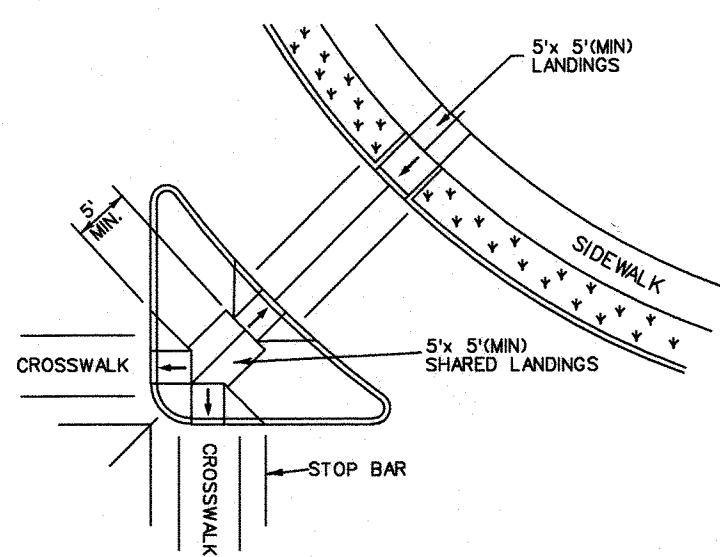
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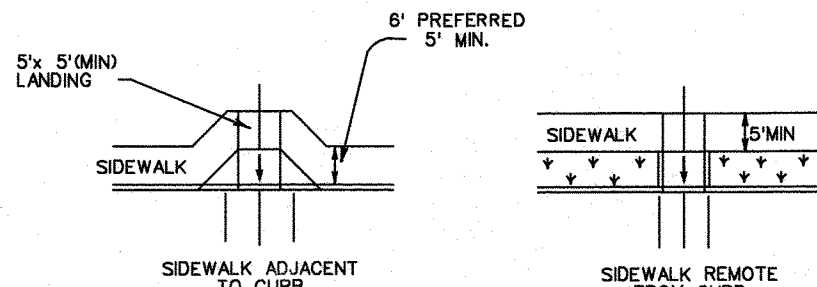
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NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION  
W/FREE RIGHT TURN & ISLAND



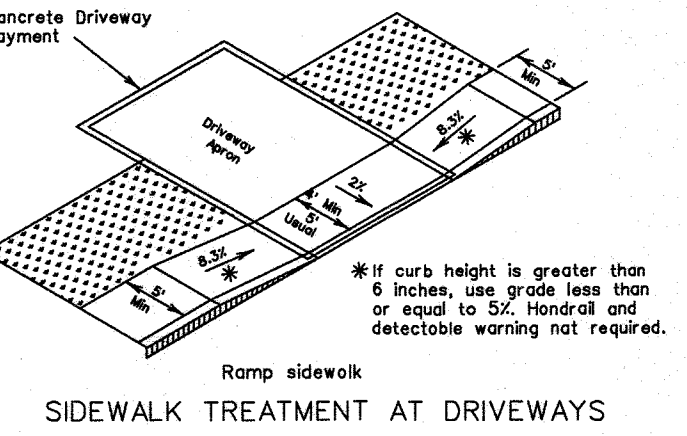
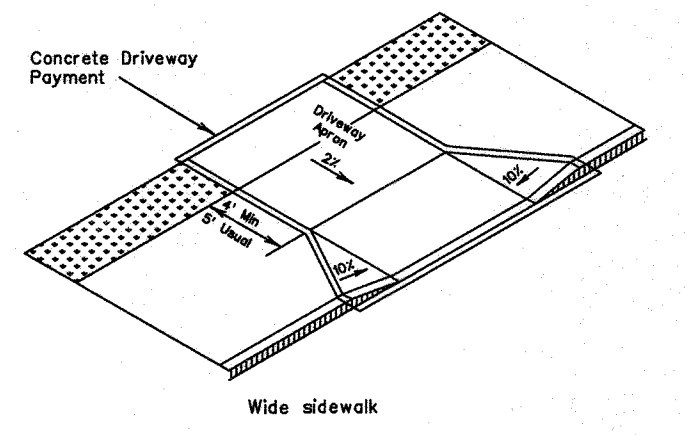
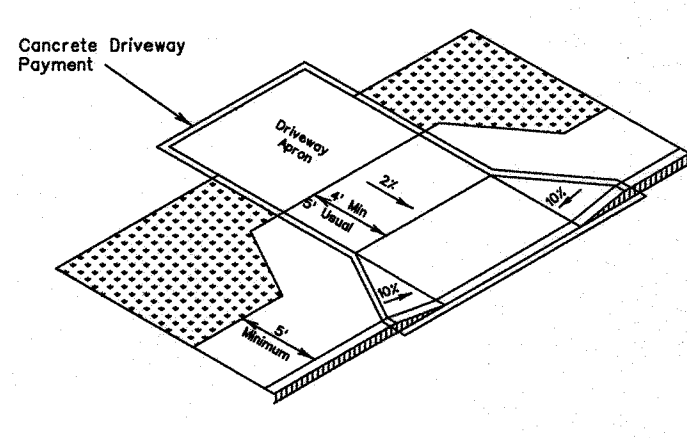
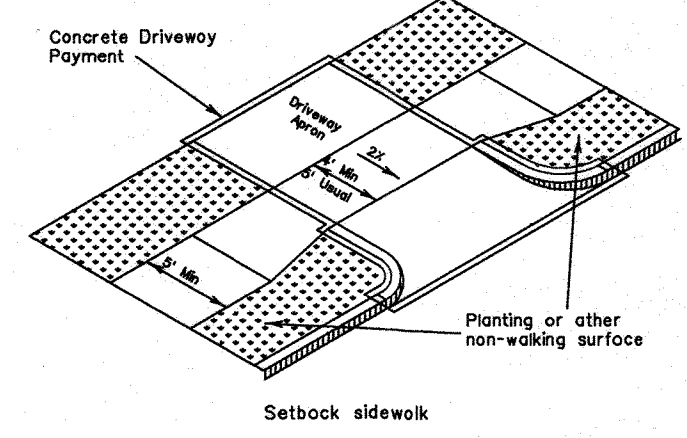
MID-BLOCK PLACEMENT  
PERPENDICULAR RAMPs

 Texas Department of Transportation		Design Division Standard	
PEDESTRIAN FACILITIES CURB RAMPS			
PED-12A			
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TxDOT March 2002	CONV	SHEET	JOB
REV			DESCRIPTION
VP June 13, 2012	DIST	COUNTY	SHEET NO.

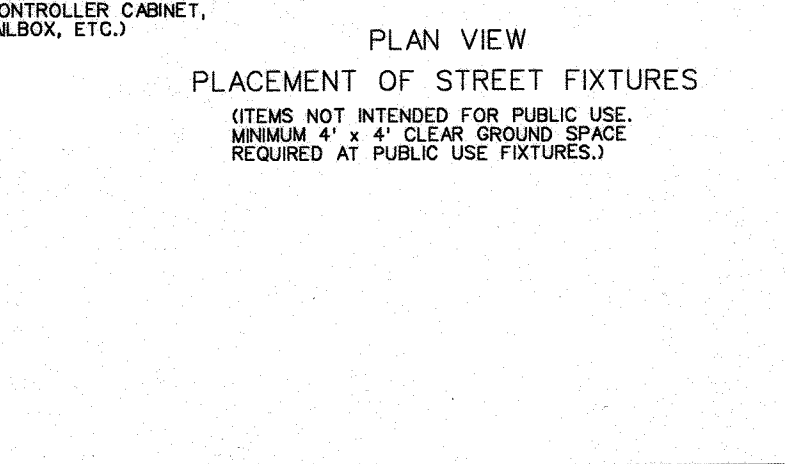
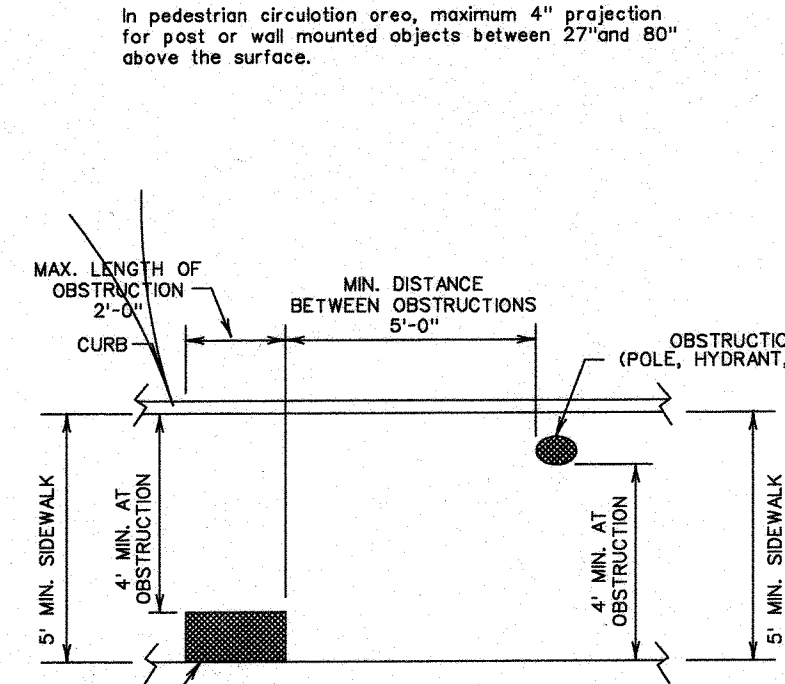
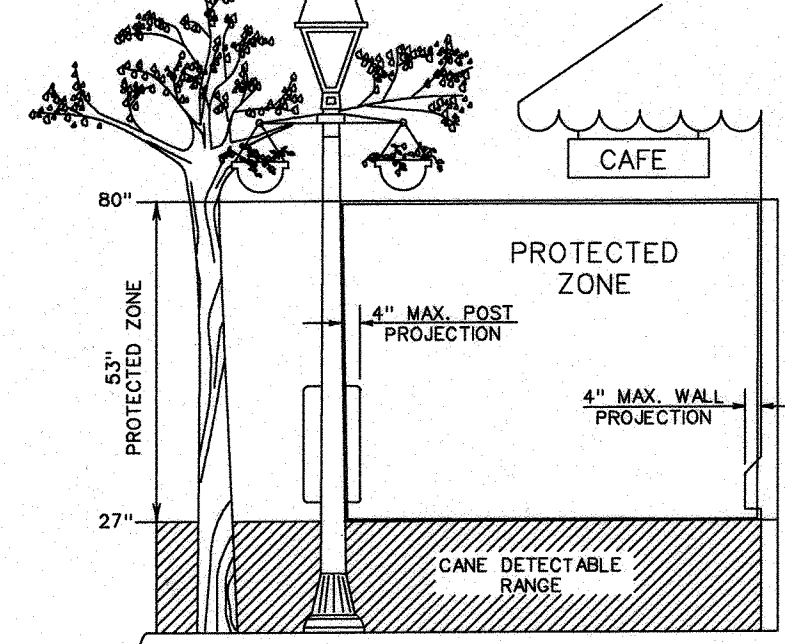
TYPICAL CROSSING LAYOUTS

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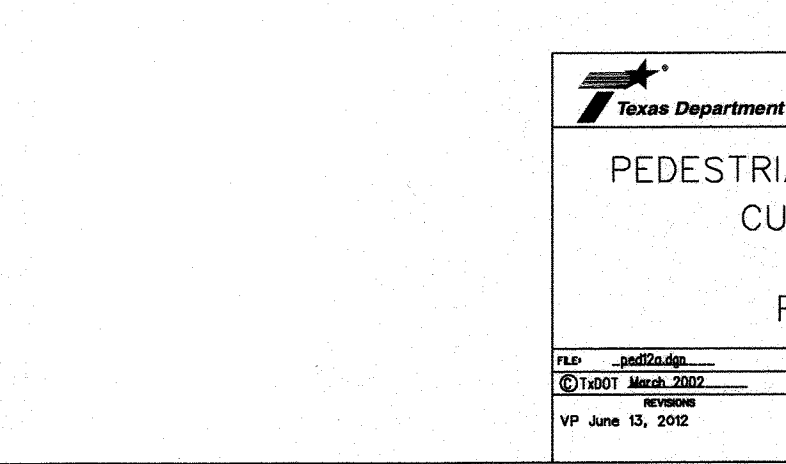
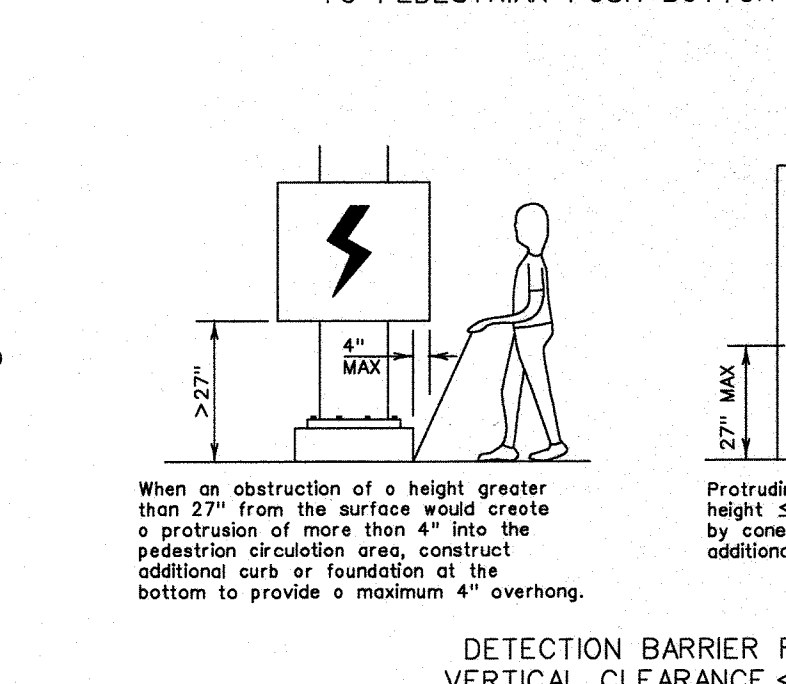
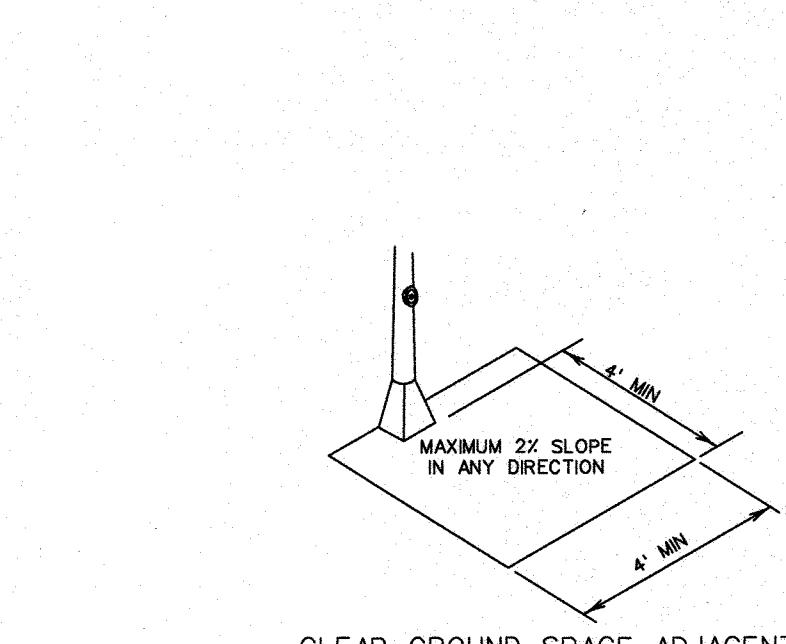
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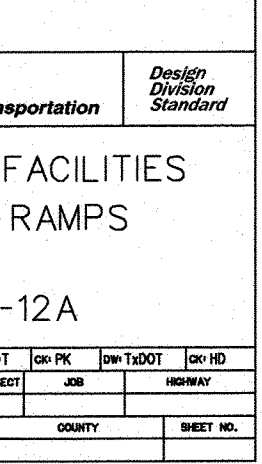
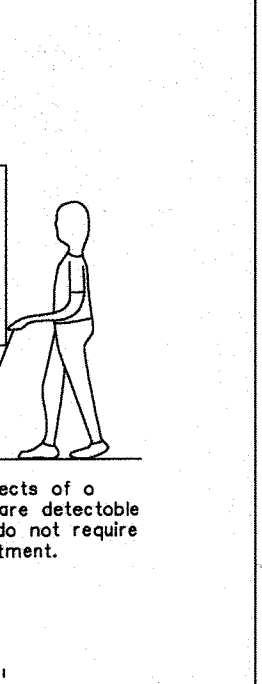
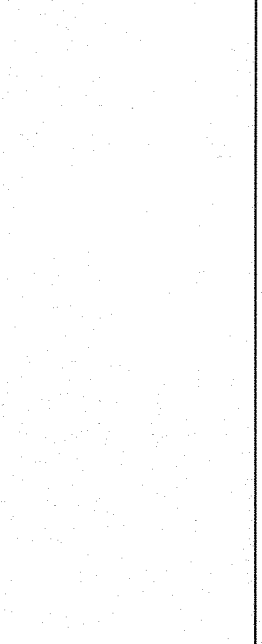
PEDESTRIAN FACILITIES CURB RAMPS



PEDESTRIAN FACILITIES CURB RAMPS

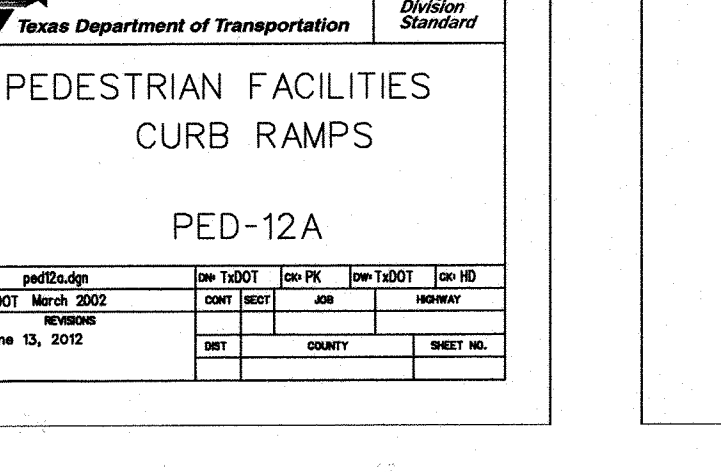
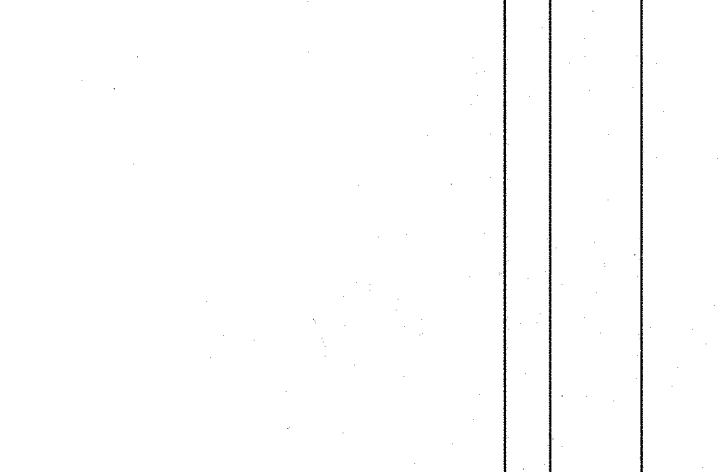
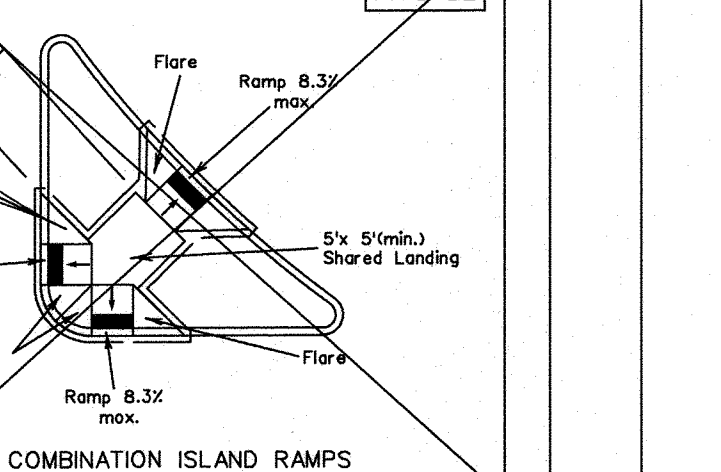
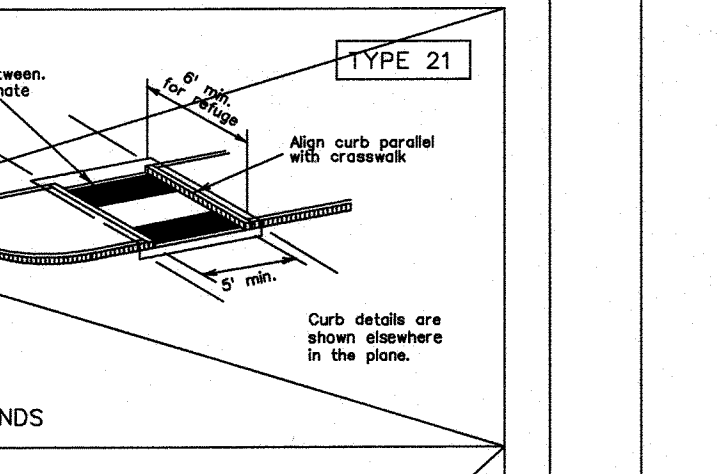
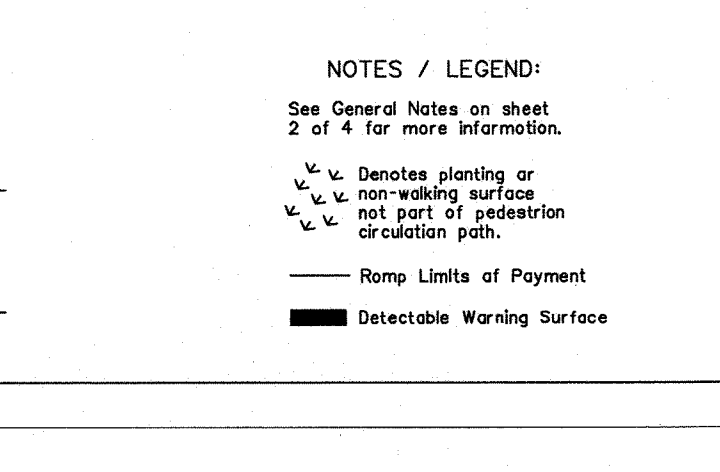
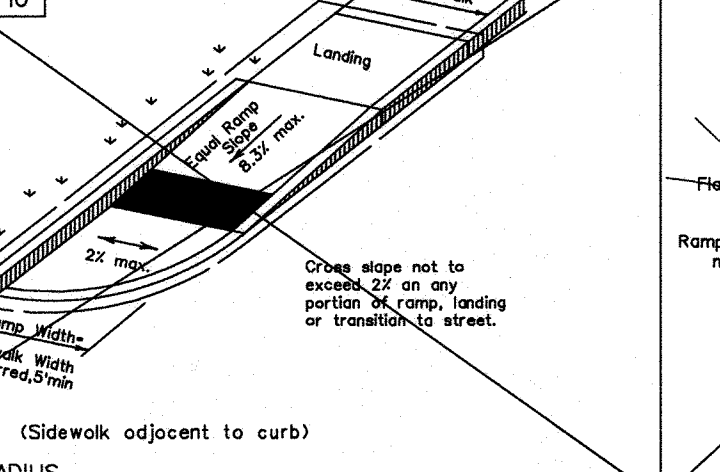
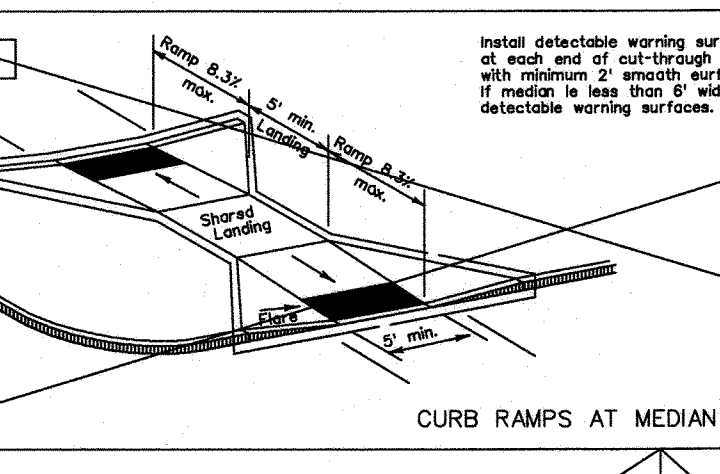
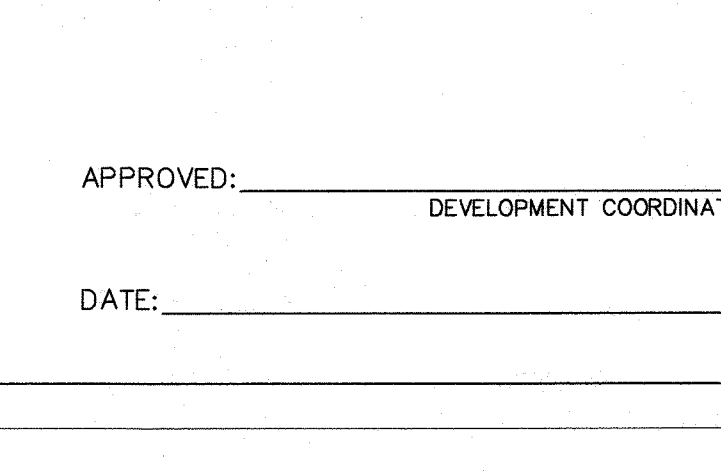
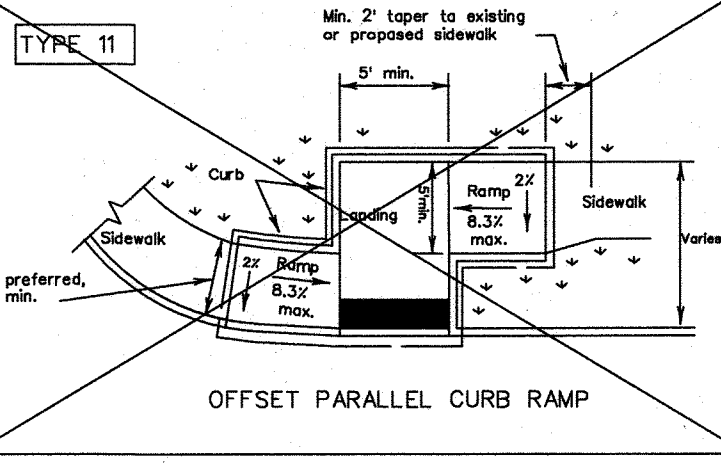
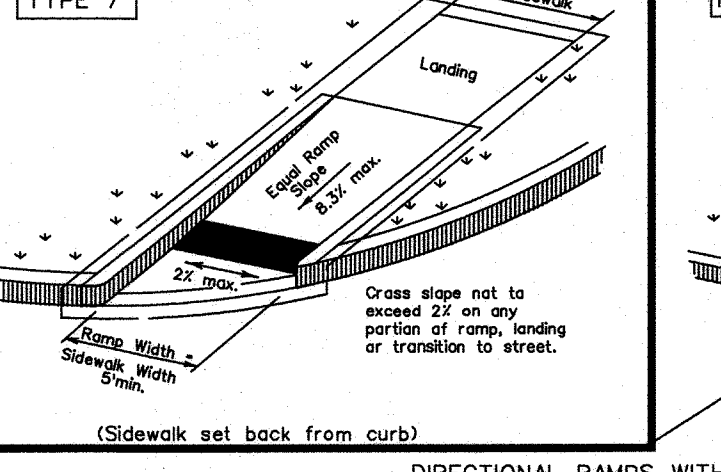
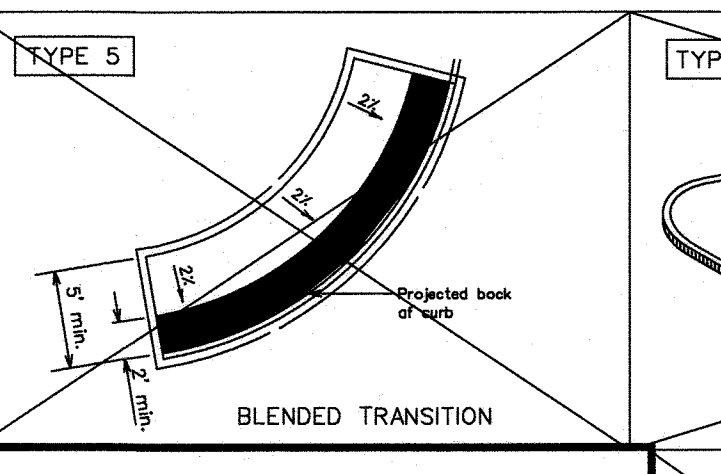
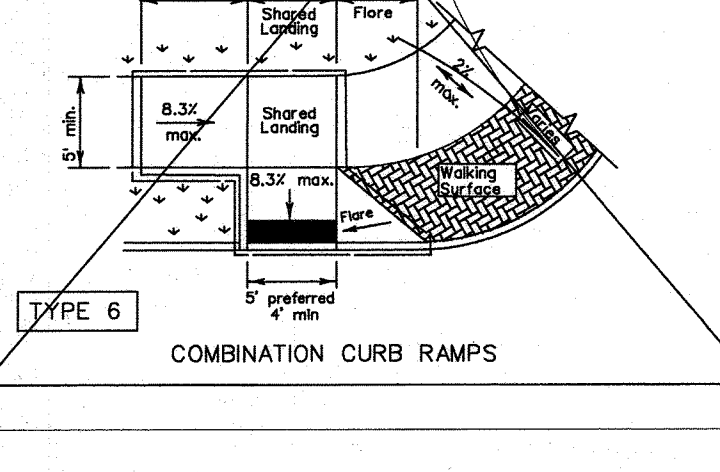
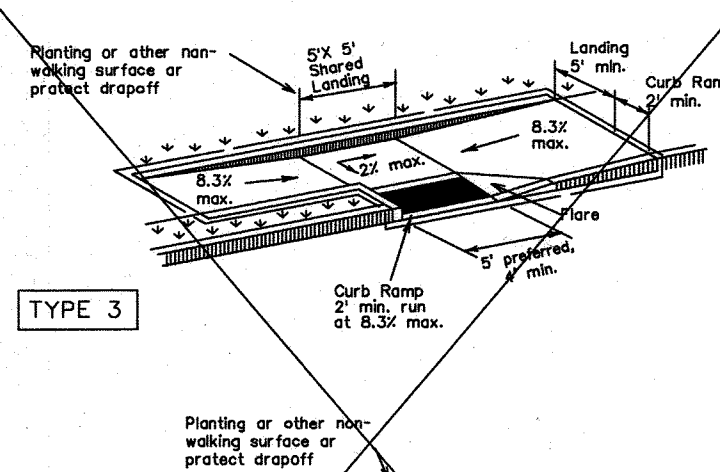
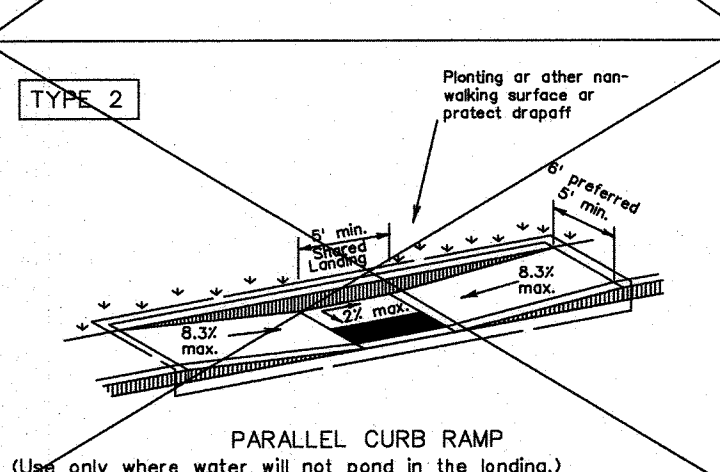
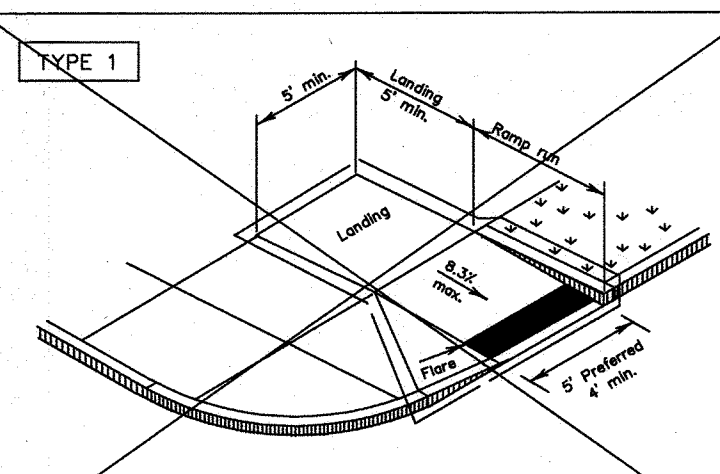


PEDESTRIAN FACILITIES CURB RAMPS



PEDESTRIAN FACILITIES CURB RAMPS

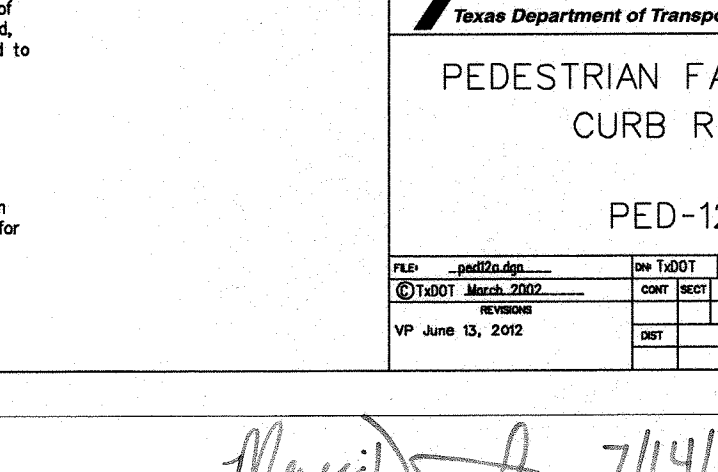
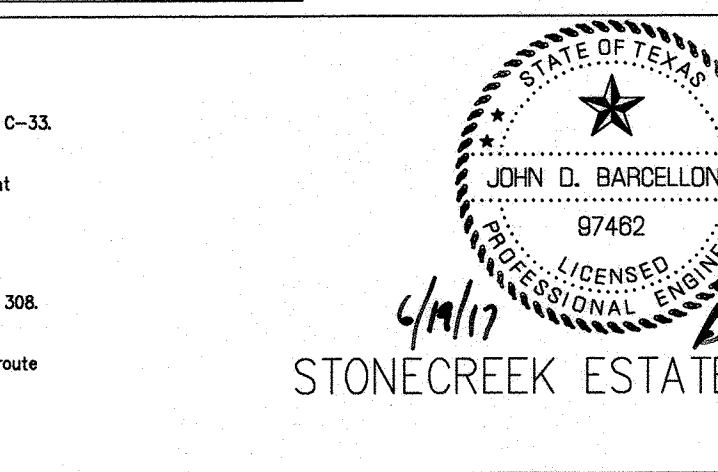
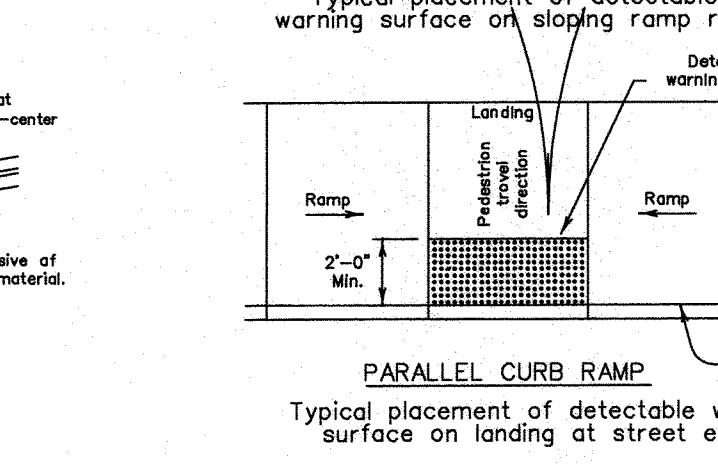
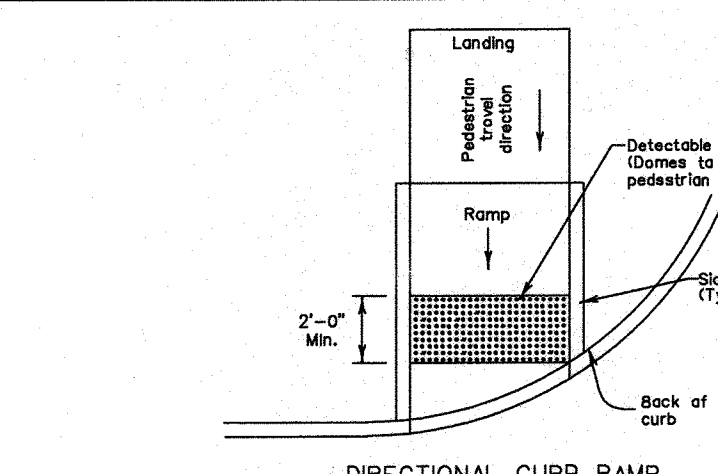
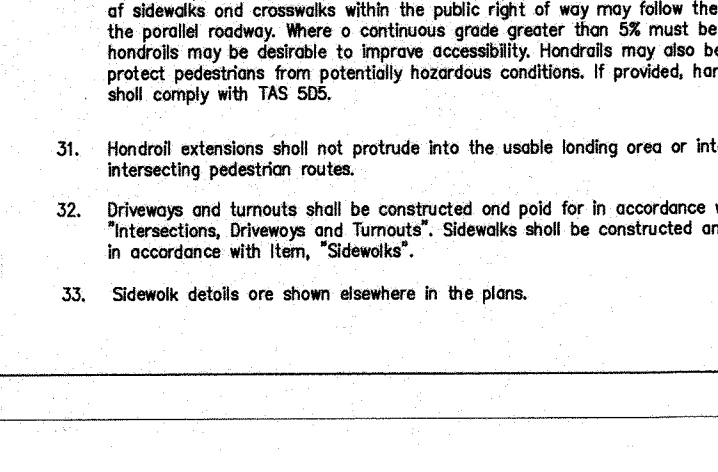
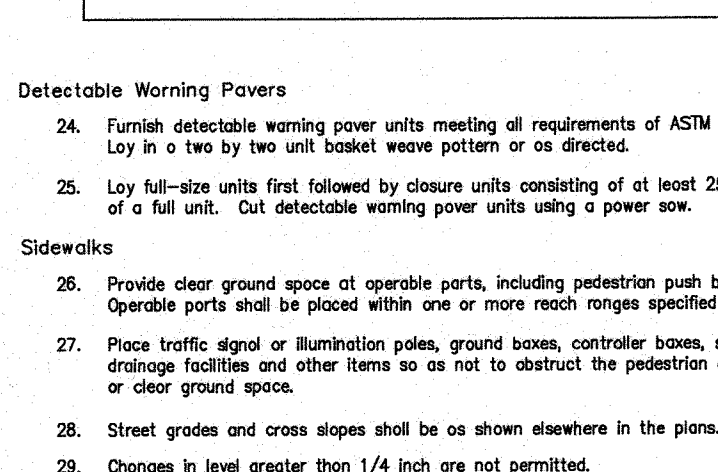
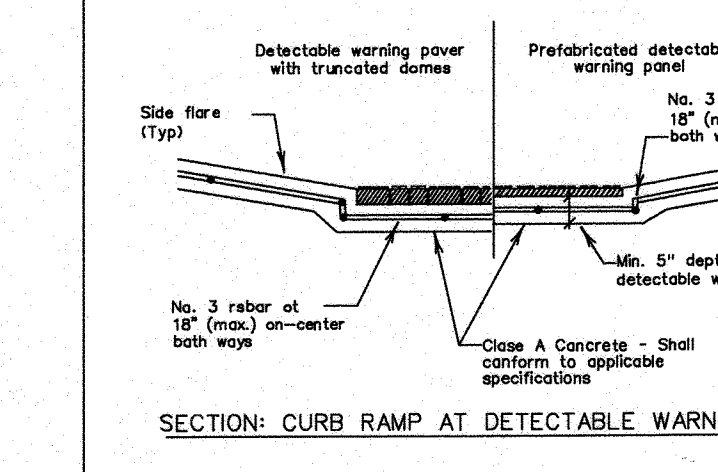
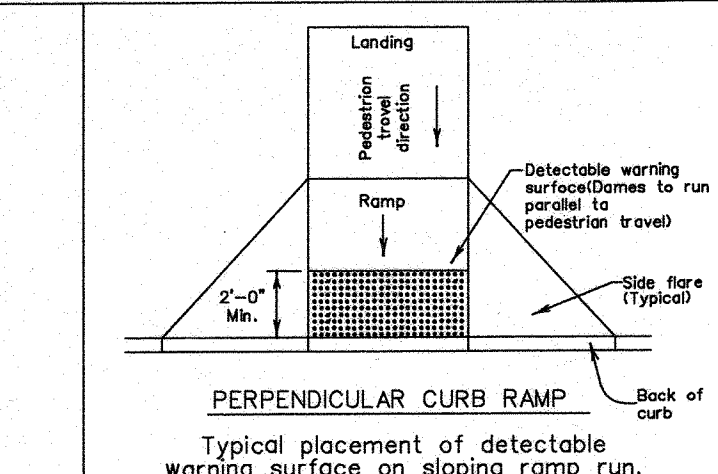
JONES CARTER  
Texas Board of Professional Engineers Registration No. 4-030  
2230 Meridian Way, Suite 170, Kays, TX 77445 (832) 914-4000



PEDESTRIAN FACILITIES CURB RAMPS

General Notes

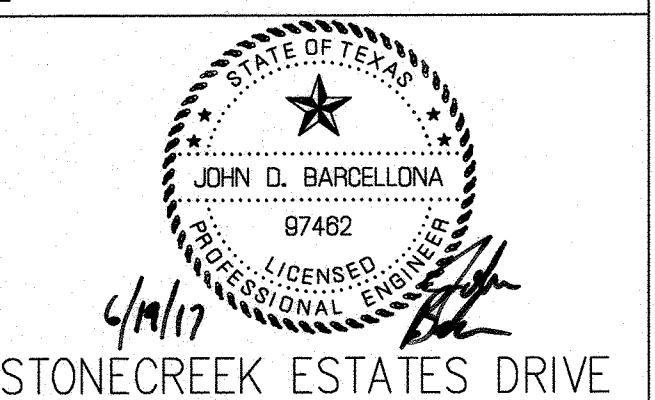
1. Install a curb ramp or blended transition at each pedestrian street crossing.
  2. All slopes shown are maximum allowable. Lesser slopes that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
  3. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5' x 5' posting areas at intervals not to exceed 200' are required.
  4. Landings shall be 5' x 5' minimum with a maximum 2% slope in any direction.
  5. 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.
  6. Maximum allowable cross slopes on sidewalk and curb ramp surfaces is 2%.
  7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
  8. 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.
  9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
  10. 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.
  11. 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 align with theoretical crosswalks unless otherwise directed.
  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. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
  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. Existing features that comply with TAS may remain in place unless otherwise shown on the plans.
- Detectable Warning Material
18. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 705 of the TAS. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install on approved coat-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
  19. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
  20. Detectable warning surfaces must be slip resistant and not allow water to accumulate.
  21. 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.
  22. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb. Align the rows of domes to be perpendicular to the grade break between the ramp run and the street. Detectable warning surfaces may be curved along the corner radius.
  23. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.




PEDESTRIAN FACILITIES CURB RAMPS

Detectable Warnings

24. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-933. Lay in a two by two unit basket weave pattern or as directed.
  25. 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.
- Sidewalks
26. Provide clear ground space of operable parts, including pedestrian push buttons. Operable parts shall be placed within one or more reach ranges specified in TAS 308.
  27. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
  28. Street grades and cross slopes shall be as shown elsewhere in the plans.
  29. Changes in level greater than 1/4 inch are not permitted.
  30. 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 to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with TAS 525.
  31. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
  32. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
  33. Sidewalk details are shown elsewhere in the plans.



 Texas Department of Transportation		Design Division Standard	
PEDESTRIAN FACILITIES CURB RAMPS			
PED-12A			
FILE	ped12a.dwg		
DATE	10/01	March 2002	
REVISION			
VP	June 13, 2012		
DATE	10/01	CHK PKG	10/01
CONT	SECT	JOB	HIGHWAY
DIST		COUNTY	SHEET NO.



CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA
C1	30.00'	47.37'	42.60'	S 66°56'11" W	90°28'13"
C2	500.00'	247.66'	245.13'	S 35°53'27" W	28°22'46"
C3	464.87'	342.94'	335.21'	S 28°56'49" W	42°16'03"
C4	238.96'	81.40'	81.01'	S 88°01'01" W	19°31'01"
C5	362.76'	223.96'	220.42'	S 83°34'16" W	35°22'23"
C6	215.44'	180.34'	175.12'	N 75°05'12" W	47°57'41"
C7	658.67'	263.59'	261.84'	N 51°22'39" W	22°55'45"
C8	30.00'	25.23'	24.49'	S 43°44'01" E	48°11'23"
C9	30.00'	21.65'	21.18'	S 01°01'53" W	41°20'24"
C10	500.00'	247.66'	245.13'	S 35°53'27" W	28°22'46"
C11	544.87'	415.74'	405.72'	S 28°13'20" W	43°43'01"
C12	464.87'	13.76'	13.76'	N 08°10'50" E	01°41'46"
C13	464.87'	75.67'	75.49'	N 14°09'59" E	09°18'52"
C14	42.50'	92.92'	75.49'	N 14°09'59" E	12°16'18"
C15	464.87'	15.30'	15.30'	N 08°45'21" E	01°53'09"
C16	464.87'	25.59'	25.59'	N 11°50'16" E	03°09'15"

LINE	BEARING	DISTANCE
L1	S 22°10'18" W	60.00'
L2	S 21°42'04" W	99.18'
L3	S 50°04'50" W	172.93'
L4	S 21°42'04" W	117.29'
L5	S 50°04'50" W	110.62'
L6	N 88°57'47" E	41.41'
L7	S 01°02'13" E	25.00'
L8	S 88°57'47" W	46.87'

DRY CREEK (HOUSTON) ASL VII, LLC  
RESIDUE CALLED 371.8877 AC.  
C.C.F. NO. 2013131554  
O.P.R.F.B.C.T.

## RESTRICTED RESERVE "A" 14.92 ACRES (RESTRICTED TO SCHOOL PURPOSES)

LAMAR CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
CALLED 15.09 AC.  
C.C.F. NO. 2017007820  
O.P.R.F.B.C.T.

CALLLED 30' WIDE  
ROAD RIGHT-OF-WAY  
VOL. 1934, PG. 712  
O.R.F.B.C.T.

3.05 ACRES HEREBY  
DEDICATED FOR  
RIGHT-OF-WAY  
PURPOSES

DRY CREEK (HOUSTON) ASL VII, LLC  
RESIDUE CALLED 371.8877 AC.  
C.C.F. NO. 2013131554  
O.P.R.F.B.C.T.

GENERAL NOTES:

- This tract lies within Zone "X" (unshaded) of the Flood Insurance Rate Map, Community No. 480228, Map Number 48157C0285L, Panel 285, Suffix "L", dated April 2, 2014, for Fort Bend County, Texas and incorporated areas. Zone "X" (unshaded) is defined as areas determined to be outside the 0.2% annual chance floodplain. This flood statement does not imply that the property or structures thereon will be free from flooding or flood damage. On rare occasions floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create liability on the part of the surveyor.
- The location of the flood zone lines shown hereon were determined by scaling from said FIRM map. The actual location as determined by elevation contours may differ. Charlie Kalkomey Surveying, Inc. assumes no liability as to the accuracy of the location of the flood zone limits.
- Bearings and coordinates are based upon the Texas Coordinate System, South Central Zone, NAD83, based upon GPS observations.
- Elevations shown hereon are based upon GPS observations calibrated to the published values of HGSOD 71, and HGSOD 72 (NAVD 88).
- The coordinates shown hereon are Texas State Plane Coordinates, South Central Zone (Grid NAD83) and may be brought to surface by applying the following combined scale factor of 0.999986817.
- Project Benchmark: TBM "A" - being a set cotton picker spindle, located on Laurabee Drive as shown hereon. Elevation = 80.76' (NAVD88).
- Project Benchmark: TBM "B" - being a set cotton picker spindle, located in a power pole at the intersection of the northeast right-of-way line of A. Myers Road with the northeast right-of-way line of Laurabee Drive, being 549 feet Northeast of the edge of asphalt of Laurabee Drive, and being 4.3 feet Southeast of a brick column as shown hereon. Elevation = 80.75' (NAVD88).
- Elevations used for delineating contour lines are based upon U.S.C.&G.S. datum, NAVD88.
- This plot was prepared to meet City of Rosenberg and Fort Bend County requirements.
- The drainage system for this subdivision is designed in accordance with the Fort Bend County Drainage Criteria Manual which allows street ponding with intense rainfall events.
- BL indicates building line; U.E. indicates utility easement; STM. S.E. indicates storm sewer easement; W.L.E. indicates water line easement; S.S.E. indicates sanitary sewer easement; H.L. & P.E. indicates Hydrologic Lighting and Power easement; D.E. indicates drainage easement; P.L. indicates property line; O.P.R.F.B.C.T. indicates Official Public Records, Fort Bend County, Texas.
- All drainage easements are to be kept clear of fences, buildings, vegetation, and other obstructions to the operation and maintenance of the drainage facility. All property is required to drain into the drainage easements through an approved drainage structure.
- Site plans shall be submitted to Fort Bend County for staff review and approval prior to construction. Driveway requirements for the locations, widths and offset from an intersection and any existing driveways or proposed driveways, shall conform to the design standards of Fort Bend County.
- There are no pipelines or pipeline easements within the limits of the subdivision.
- This tract is located in the jurisdictions of Fort Bend County, Fort Bend County Drainage District, Lamar Consolidated Independent School District, Fort Bend County M.U.D. 184, the City of Rosenberg E.T.A., and Fort Bend County Subordinate District.
- Approval of this plot will expire one year from City Council approval if not recorded in the Real Property Records of the County of Fort Bend.
- This tract is located in Lighting Zone L22.
- Five-eighths (5/8") iron rods three feet (3') in length are set on all perimeter boundary corners, all angle points, all points of curvature and tangency, and all block corners, unless otherwise noted.
- No owner of the land subject to an easement may place, build or construct any permanent building, structure or obstruction of any kind over, under or upon the easement, provided that such owner may cross or cover the easement with a paved driveway/parking lot under the following conditions: the driveway shall be paved to the boundary line of the easement to limit the amount of paving that must be removed to provide access, and there shall be no obligation of the city to replace/repair any paving removed in the exercise of this easement.
- The top of all floor slabs shall be a minimum of 78.90 feet above mean sea level. The top of the slab elevation at any point on the perimeter of the slab shall not be less than (24") twenty-four inches above natural ground. Any future development should verify that the minimum slab elevation is at least 12" above the maximum anticipated ponding or street flow elevation within the site.
- Temporary Access Easement recorded under County Clerk's File Number 2017007821, Official Public Records, Fort Bend County, Texas is to be abandoned with the recording of this plot and construction of Stonecreek Estates Drive, and is shown hereon for reference only.
- This plot was prepared from information furnished by Old Republic National Title Insurance Company, File No. HT076091, Effective date March 31, 2017. The surveyor has not abstracted the above property.
- One-foot reserve dedicated to the public in fee as a buffer separation between the side and end of streets where streets abut adjacent property. The condition of such dedication being that when the adjacent property is subdivided or re-subdivided in a recorded plat, the one-foot reserve shall thereupon become vested in the public for street right-of-way purposes and the fee title thereto shall be conveyed to the city in fee. The city, in its discretion, may later dedicate, alter, repair, resurface, or otherwise use the reserve.
- Sidewalks shall be built or caused to be built not less than 5 feet in width on both sides of all dedicated rights-of-way within said plot and on the contiguous right-of-way of all adjacent roads surrounding said plot in accordance with the A.D.A.

I, Chris D. Kalkomey, am authorized under the laws of the State of Texas to practice the profession of surveying and hereby certify that the above subdivision is true and correct; was prepared from an actual survey of the property made under my supervision on the ground; that all boundary corners, angle points, points of curvature and other points of reference have been marked with iron pipes having a minimum outside diameter of five-eighths (5/8) inch and length of not less than three (3) feet.

Chris D. Kalkomey, Registered Professional Land Surveyor  
Texas Registration No. 5869

I, Duane H. Whitehead, a Professional Engineer Registered in the State of Texas, do hereby certify that this plot meets all requirements of Fort Bend County, Texas.

Duane H. Whitehead, Registered Professional Engineer  
Texas Registration No. 105210  
Firm Registration No. F-1339

## LEGEND

These standard symbols will be found in the drawing.

IRF - FOUND 5/8" IR W/CAP  
"JONES | CARTER"

State of Texas  
County of Fort Bend

We, James Steenberg, President, and Kay Danziger, Secretary, being officers of Lamar Consolidated School District, owner of a 15.09 acre tract of land described in the foregoing map of LAMAR CISD CARTER ELEMENTARY SCHOOL, do hereby make and establish said subdivision and development plot of said property according to all lines, dedications, restrictions and notations on said maps or plat.

FURTHER, Owners do hereby dedicate for public utility purposes an unobstructed aerial easement five (5) feet in width from a place twenty (20) feet above the ground level upward, located adjacent to all public utility easements shown on the attached plot.

FURTHER, Owners do hereby covenant and agree that all of the property within the boundaries of this plot and adjacent to any drainage easement ditch, gully, creek or natural drainage way shall hereby be restricted to keep such drainage ways and easements clear of fences, buildings, excessive vegetation and other obstructions to the operations and maintenance of the drainage facility, and that such abutting property shall not be permitted to drain directly into this easement except by means of an approved drainage structure.

FURTHER, We do hereby acknowledge the receipt of the "Orders for Regulation of Outdoor Lighting in the Unincorporated Areas of Fort Bend County, Texas," and do hereby covenant and agree to shall comply with this order as adopted by Fort Bend County Commissioners Court on March 23, 2004, and any subsequent amendments.

IN TESTIMONY WHEREOF, Lamar Consolidated Independent School District, has caused these presents to be signed by James Steenberg, its President hereunto authorized, attested by Kay Danziger, its Secretary, this 16th day of May, 2017.

Lamar Consolidated Independent School District

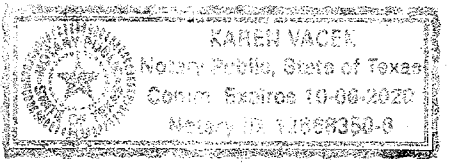
By: James Steenberg  
James Steenberg, President

Attest: Kay Danziger  
Kay Danziger, Secretary

BEFORE ME, the undersigned authority, on this day personally appeared James Steenberg, as President, Lamar Consolidated Independent School District Board of Trustees, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that she executed the same for the purposes and considerations therein set forth.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this 16th day of May, 2017.

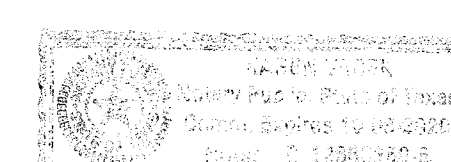
By: Karen Vacker  
Karen Vacker, Notary Public in and for the State of Texas



BEFORE ME, the undersigned authority, on this day personally appeared Kay Danziger, as Secretary, Lamar Consolidated Independent School District Board of Trustees, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that she executed the same for the purposes and considerations therein set forth.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this 16th day of May, 2017.

By: Karen Vacker  
Karen Vacker, Notary Public in and for the State of Texas



State of Texas  
County of Fort Bend

We, Dry Creek (Houston) ASL VII, LLC, a Delaware limited liability company, by Avanti Strategic Land Investors VII, LLP, a Delaware limited liability limited partnership, its sole Member, by Avanti Properties Group II, LLP, a Delaware limited liability limited partnership, its Managing General Partner, by Avanti Management Corporation, a Florida corporation, its sole general partner, acting by and through Andrew Dubill, its Vice President, owners of a portion of the land described in the foregoing map of LAMAR CISD CARTER ELEMENTARY SCHOOL, do hereby make and establish said subdivision and development plot of said property according to all lines, dedications, restrictions and notations on said maps or plat.

FURTHER, Owners do hereby dedicate for public utility purposes an unobstructed aerial easement five (5) feet in width from a place twenty (20) feet above the ground level upward, located adjacent to all public utility easements shown on the attached plot.

FURTHER, Owners do hereby covenant and agree that all of the property within the boundaries of this plot and adjacent to any drainage easement ditch, gully, creek or natural drainage way shall hereby be restricted to keep such drainage ways and easements clear of fences, buildings, excessive vegetation and other obstructions to the operations and maintenance of the drainage facility, and that such abutting property shall not be permitted to drain directly into this easement except by means of an approved drainage structure.

FURTHER, Owners certify that they are the owners of the land outside the plotted boundary and hereby dedicate any and all easements shown which are outside the plotted boundary.

FURTHER, We do hereby acknowledge the receipt of the "Orders for Regulation of Outdoor Lighting in the Unincorporated Areas of Fort Bend County, Texas," and do hereby covenant and agree to shall comply with this order as adopted by Fort Bend County Commissioners Court on March 23, 2004, and any subsequent amendments.

IN TESTIMONY WHEREOF, Dry Creek (Houston) ASL VII, LLC, a Delaware limited liability company, by Avanti Strategic Land Investors VII, LLP, a Delaware limited liability limited partnership, its sole Member, by Avanti Properties Group II, LLP, a Delaware limited liability limited partnership, its Managing General Partner, by Avanti Management Corporation, a Florida corporation, its sole general partner, acting by and through Andrew Dubill, its Vice President, owners of a portion of the land described in the foregoing map of LAMAR CISD CARTER ELEMENTARY SCHOOL, do hereby make and establish said subdivision and development plot of said property according to all lines, dedications, restrictions and notations on said maps or plat.

Dry Creek (Houston) ASL VII, LLC, a Delaware limited liability company

By: Avanti Strategic Land Investors VII, LLP  
a Delaware limited liability limited partnership, its sole member

By: Avanti Properties Group II, LLP  
a Delaware limited liability limited partnership, its Managing General Partner

By: Avanti Management Corporation  
a Florida corporation, its sole general partner

By: Andrew Dubill  
Andrew Dubill, Vice President

BEFORE ME, the undersigned authority, on this day personally appeared Andrew Dubill, Vice President of Avanti Management Corporation, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein set forth.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this 31 day of May, 2017.

By: Janet R. Morales  
Janet R. Morales, Notary Public in and for the State of Florida



This is to certify that the City Council of the City of Rosenberg, Texas has approved this plot and subdivision of LAMAR CISD CARTER ELEMENTARY SCHOOL in conformance with the laws of the State of Texas and the ordinances of the City of Rosenberg as shown hereon and authorized the recording of this plot this 16th day of May, 2017.

By: William Benton  
William Benton, Mayor

By: Linda Cernosek  
Linda Cernosek, Secretary

This is to certify that the Planning Commission of the City of Rosenberg, Texas has approved this plot and subdivision of LAMAR CISD CARTER ELEMENTARY SCHOOL in conformance with the laws of the State of Texas and the ordinances of the City of Rosenberg as shown hereon and authorizes the recording of this plot this 16th day of May, 2017.

By: James Urbish  
James Urbish, Chairman

By: Wayne Pollock  
Wayne Pollock, Secretary

OWNER:  
DRY CREEK (HOUSTON) ASL VII, LLC  
9801 WESTHEIMER, SUITE 250  
HOUSTON, TEXAS 77042  
(713) 627-1015

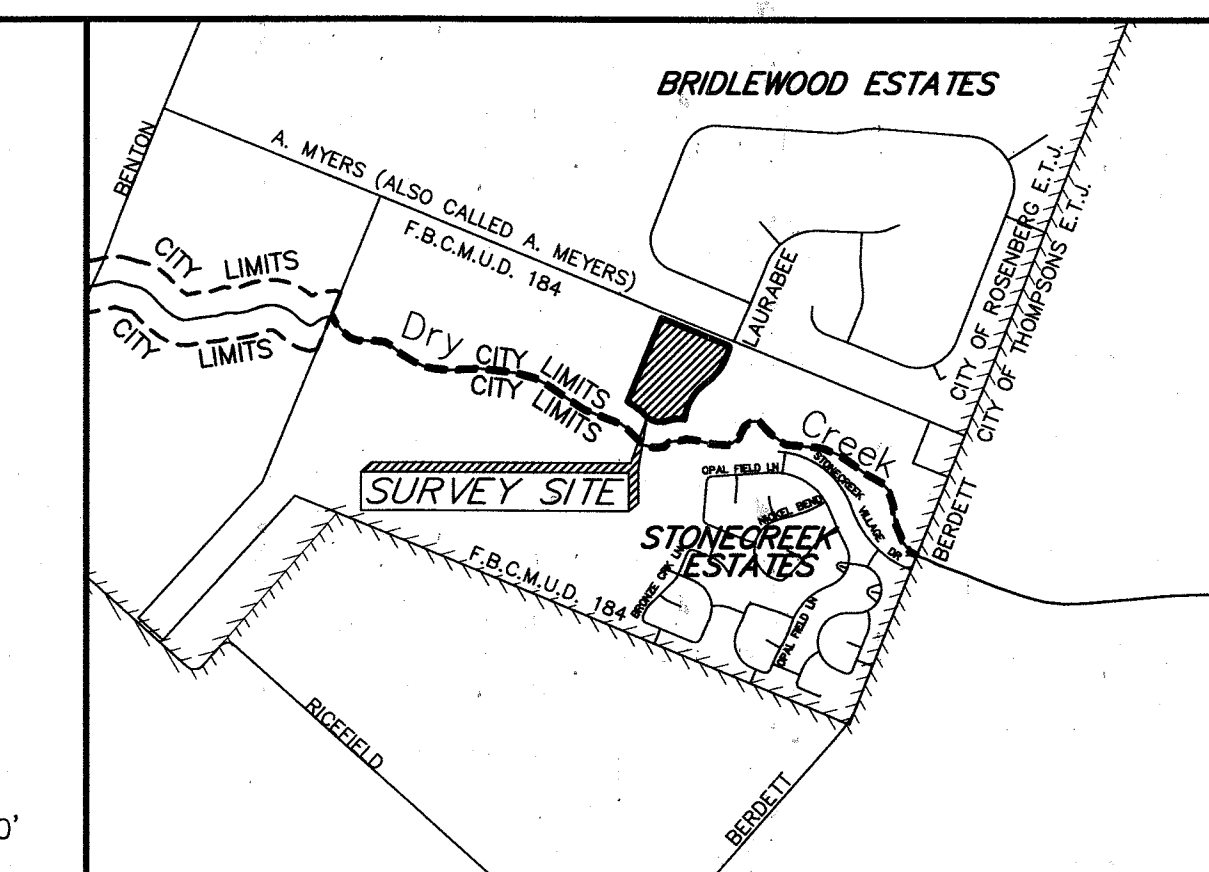
OWNER:  
LAMAR CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
3911 AVENUE I  
ROSENBERG, TEXAS 77042  
(281) 341-3100

ENGINEER:  
KELLY R. KALUZA & ASSOCIATES, INC.  
3014 AVENUE I  
ROSENBERG, TEXAS 77471  
(281) 341-0808  
TX. FIRM REG. NO. F-1339

LAMAR CISD  
CARTER ELEMENTARY SCHOOL  
0 LOTS, 1 BLOCK, 2 RESERVES  
BEING 18.14 ACRES IN THE  
WILEY MARTIN LEAGUE, ABSTRACT 56  
FORT BEND COUNTY, TEXAS  
MARCH 24, 2017

JC JONES | CARTER

CHARLIE KALKOMEY SURVEYING DIVISION  
Texas Board of Professional Land Surveying Registration No. 10064304  
6415 Reading Road • Rosenberg, Texas 77471 • 281.342.2033



VICINITY MAP  
(SCALE: 1" = 2,000')

I, Richard W. Stolleis, P.E., Fort Bend County Engineer, do hereby certify that the plat of this subdivision complies with all of the existing rules and regulations of this office as adopted by the Fort Bend County Commissioners' Court. However, no certification is hereby given as to the effect of drainage from this subdivision on the intersecting drainage artery or parent stream or any other area or subdivision within the watershed.

By: Richard W. Stolleis  
Richard W. Stolleis, P.E.  
Fort Bend County Engineer

APPROVED BY THE COMMISSIONERS' COURT OF FORT BEND COUNTY, TEXAS, THIS 27th day of June, 2017.

By: Robert E. Haber  
Robert E. Haber, County Judge

By: Andy Meyers  
Andy Meyers, Commissioner, Precinct 6

By: James Patterson  
James Patterson, Commissioner, Precinct 4

I, Laura Richard, County Clerk in and for Fort Bend County, hereby certify that the foregoing instrument with its certificate of authentication was filed for recordation in my office on June 28, 2017 at 9:29 a.m. in Plot No. 20170136 of the Plat Records of Fort Bend County for said county.

Witness my hand and seal of office, at Richmond, Texas, the day and date last above written.

By: Laura Richard  
Laura Richard, County Clerk  
Fort Bend County, Texas

By: Betty Kacal  
Betty Kacal, Deputy  
Fort Bend County, Texas



20 PGS  
PLAT ATTACH  
201701199

FILED AND RECORDED  
OFFICIAL PUBLIC RECORDS

By: Laura Richard  
Laura Richard, County Clerk  
Fort Bend County, Texas  
June 28, 2017 09:29:24 AM  
FEE: \$250.00 BAK  
PLAT  
20170136