

REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT

On this 23rd day of February, 2016, Commissioners Court came on to be heard and reviewed the accompanying notice of Jaho, Inc.

Job Location 18340 University Blvd, Sugar Land, TX 77479

Date 2/11/2016 Bond No. LPM9204965, Permit No. 2016-5519 to make use of certain Fort Bend County property subject to, "A Revised Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas the 3rd day of August, 1987, recorded in Volume _____ of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Article 1436a, Vernon's Texas Civil Statutes. Upon Motion of Commissioner _____, seconded by Commissioner _____, duly put and carried, it is ORDERED, ADJUDGED AND

DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Notes:

1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
 - a. 48 hours in advance of construction start up, and
 - b. when construction is completed and ready for final inspection
 Mail notices to: Permit Administrator
 Fort Bend County Engineering
 301 Jackson Street
 Richmond, Texas 77469
 281-633-7500
3. This permit expires one (1) year from date of permit if construction has not commenced.

By: *C. Charles O. Ay*
County Engineer

Presented to Commissioners Court and approved.
Recorded in Volume _____

By: N/A
Drainage District Engineer/Manager

Minutes of Commissioners Court

Clerk of Commissioners Court

By: _____
Deputy

County of Fort Bend
Engineering Department

301 Jackson Street
Richmond, Texas 77469

Johnny Ortega
Permit Administrator

Phone: (281) 633-7500

**Permit Application Review Form For
Cable, Conduit, and Pole Line Activity
In Fort Bend County**

Permit No. 2016-5519

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.

- X (1) Complete Application Form:
- X a. Name of road, street, and/or drainage ditch affected.
- X b. Vicinity map showing course of directions
- X c. Plans and specifications
- X (2) Bond:
- District Attorney, approval when applicable.
- Perpetual bond currently posted.
- No: _____
- Amount: _____
- X Performance bond submitted.
- No: LPM9204965
- Amount: \$5,000.00
- Cashier's Check
- No: _____
- Amount: _____
- (3) Verbal permission given for emergencies, to start construction before approved in Commissioner's Court.

Precinct Engineer Acknowledgment _____
Date

Precinct Commissioner Acknowledgment _____
Date

(4)

Drainage District Approval when applicable

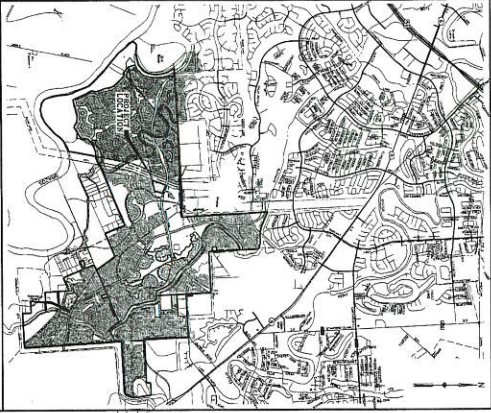
We have reviewed this project and agree it meets minimum requirements.



Johnny Ortega CFM/Permit Administrator



Date



VICINITY MAP

CONSTRUCTION PLANS

FOR

WATER, SEWER, DRAINAGE & PAVING IMPROVEMENTS

FOR

THE VILLAS AT RIVERSTONE

FORT BEND COUNTY MUD No. 128

FORT BEND COUNTY, TEXAS



APPROVAL BY THE CITY OF SUGAR LAND WILL BE FORFEIT IF CONSTRUCTION WAS NOT BEGUN WITHIN ONE YEAR OF APPROVAL DATE.
CONSTRUCTION SHALL NOT BE THE CITY OF SUGAR LAND AT NO CONSTRUCTION SHALL BEGIN UNTIL ENGINEER SHEET IS SIGNED.

CITY OF SUGAR LAND APPROVED: *[Signature]*
DATE: 10/20/15

FORT BEND COUNTY ENGINEER
INDEXED: *[Signature]*
DATE: 10/20/15
THESE DRAWINGS ARE THE PROPERTY OF COSTELLO ENGINEERING AND SURVEYING, INC. AND ARE NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF COSTELLO ENGINEERING AND SURVEYING, INC.



JOB NO. 0005062-02-03

DATE: AUGUST 2015

Engineering and Surveying
9980 Richmond Avenue, Suite 450 N
Houston, Texas 77042
(713) 783-7788 (713) 783-3980 Fax
TYPE FIRM REG. NO. 280
TBLSTFIRM REG. NO. 100486

CITY OF SUGAR LAND - ENGINEERING DEPT.
F.S.C. MUD No. 128 - DEPARTMENT - COSTELLO INC.
FORT BEND COUNTY DRAINAGE DISTRICT

CONTACT NUMBERS:
281-729-2788
832-448-1988
713-783-7788
281-342-2853



INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	CONSTRUCTION NOTES
LAYOUT SHEETS	
3.	PAVING AND FINISHING LAYOUT
4.	WATER AND SANITARY SEWER LAYOUT
5.	SEWER AND SANITARY SEWER LAYOUT AND STREET LIGHTING PLAN
6.	DRAINAGE CALCULATIONS
PLAN AND PROFILE	
7.	TRIGGER CHECK LAKE - STA. 0+00.00 TO STA. 0+06.50
8.	TRIGGER CHECK LAKE - STA. 0+06.50 TO STA. 0+08.50
9.	DISBURGO SALT LAKE - STA. 0+08.50 TO STA. 2+00.00 AND WATER LINE
MISCELLANEOUS SHEETS	
10.	GENERAL NOTES
11.	DOT CHANGING PLAN
12.	CLEARING PLAN
13.	PAVING PLAN
14.	FINAL PLAN FOR THE VILLAS AT RIVERSTONE
SUGAR LAND DETAILS	
SI-01	GENERAL CONSTRUCTION NOTES I
SI-02	GENERAL CONSTRUCTION NOTES II
SI-03	GENERAL CONSTRUCTION NOTES III
SI-04	GENERAL CONSTRUCTION NOTES IV
SI-05	GENERAL CONSTRUCTION NOTES V
SI-06	GENERAL CONSTRUCTION NOTES VI
SI-07	GENERAL CONSTRUCTION NOTES VII
SI-08	GENERAL CONSTRUCTION NOTES VIII
SI-09	GENERAL CONSTRUCTION NOTES IX
SI-10	GENERAL CONSTRUCTION NOTES X
SI-11	GENERAL CONSTRUCTION NOTES XI
SI-12	GENERAL CONSTRUCTION NOTES XII
SI-13	GENERAL CONSTRUCTION NOTES XIII
SI-14	GENERAL CONSTRUCTION NOTES XIV
SI-15	GENERAL CONSTRUCTION NOTES XV
SI-16	GENERAL CONSTRUCTION NOTES XVI
SI-17	GENERAL CONSTRUCTION NOTES XVII
SI-18	GENERAL CONSTRUCTION NOTES XVIII
SI-19	GENERAL CONSTRUCTION NOTES XIX
SI-20	GENERAL CONSTRUCTION NOTES XX
SI-21	GENERAL CONSTRUCTION NOTES XXI
SI-22	GENERAL CONSTRUCTION NOTES XXII
SI-23	GENERAL CONSTRUCTION NOTES XXIII
SI-24	GENERAL CONSTRUCTION NOTES XXIV
SI-25	GENERAL CONSTRUCTION NOTES XXV
SI-26	GENERAL CONSTRUCTION NOTES XXVI
SI-27	GENERAL CONSTRUCTION NOTES XXVII
SI-28	GENERAL CONSTRUCTION NOTES XXVIII
SI-29	GENERAL CONSTRUCTION NOTES XXIX
SI-30	GENERAL CONSTRUCTION NOTES XXX
SI-31	GENERAL CONSTRUCTION NOTES XXXI
SI-32	GENERAL CONSTRUCTION NOTES XXXII
SI-33	GENERAL CONSTRUCTION NOTES XXXIII
SI-34	GENERAL CONSTRUCTION NOTES XXXIV
SI-35	GENERAL CONSTRUCTION NOTES XXXV
SI-36	GENERAL CONSTRUCTION NOTES XXXVI
SI-37	GENERAL CONSTRUCTION NOTES XXXVII
SI-38	GENERAL CONSTRUCTION NOTES XXXVIII
SI-39	GENERAL CONSTRUCTION NOTES XXXIX
SI-40	GENERAL CONSTRUCTION NOTES XL
SI-41	GENERAL CONSTRUCTION NOTES XLI
SI-42	GENERAL CONSTRUCTION NOTES XLII
SI-43	GENERAL CONSTRUCTION NOTES XLIII
SI-44	GENERAL CONSTRUCTION NOTES XLIV
SI-45	GENERAL CONSTRUCTION NOTES XLV
SI-46	GENERAL CONSTRUCTION NOTES XLVI
SI-47	GENERAL CONSTRUCTION NOTES XLVII
SI-48	GENERAL CONSTRUCTION NOTES XLVIII
SI-49	GENERAL CONSTRUCTION NOTES XLIX
SI-50	GENERAL CONSTRUCTION NOTES L

6" SLOPE LEAD AND 6" POINT STATION OFFSET ELEVATION

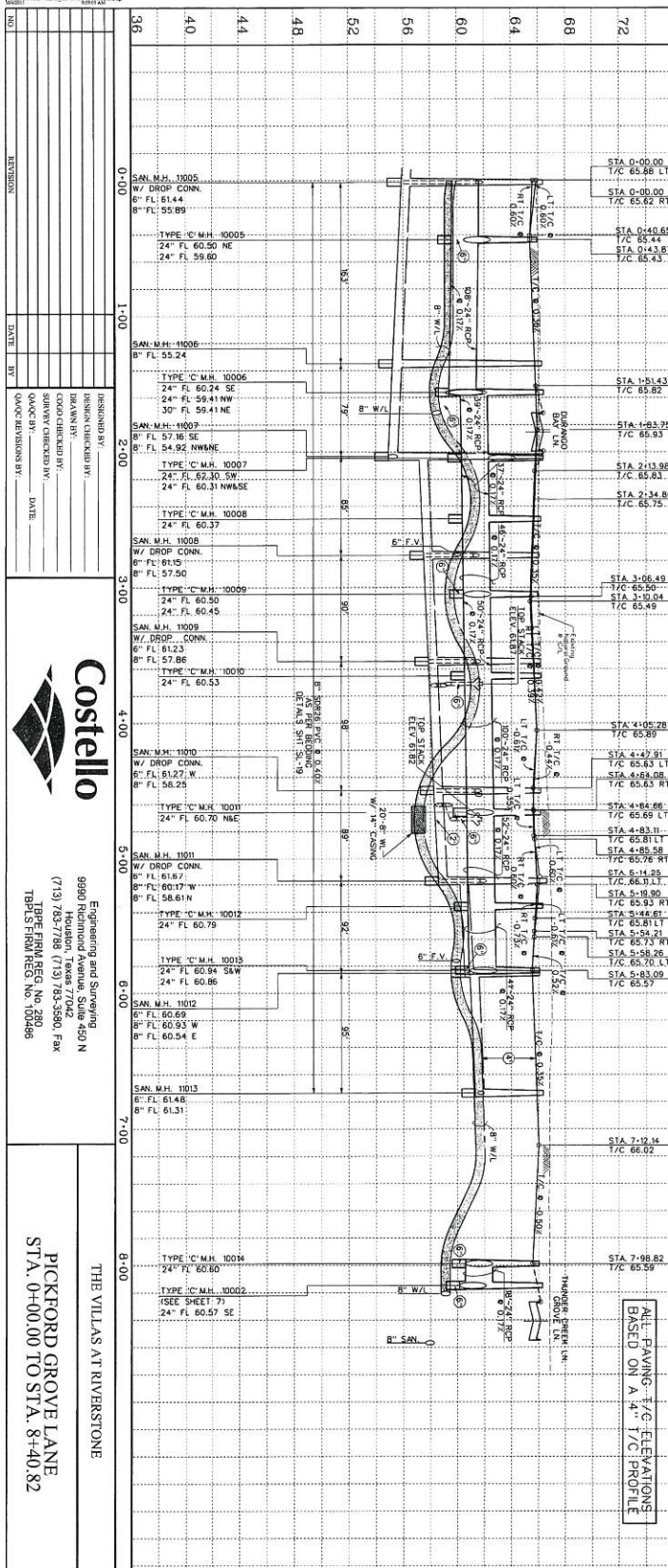
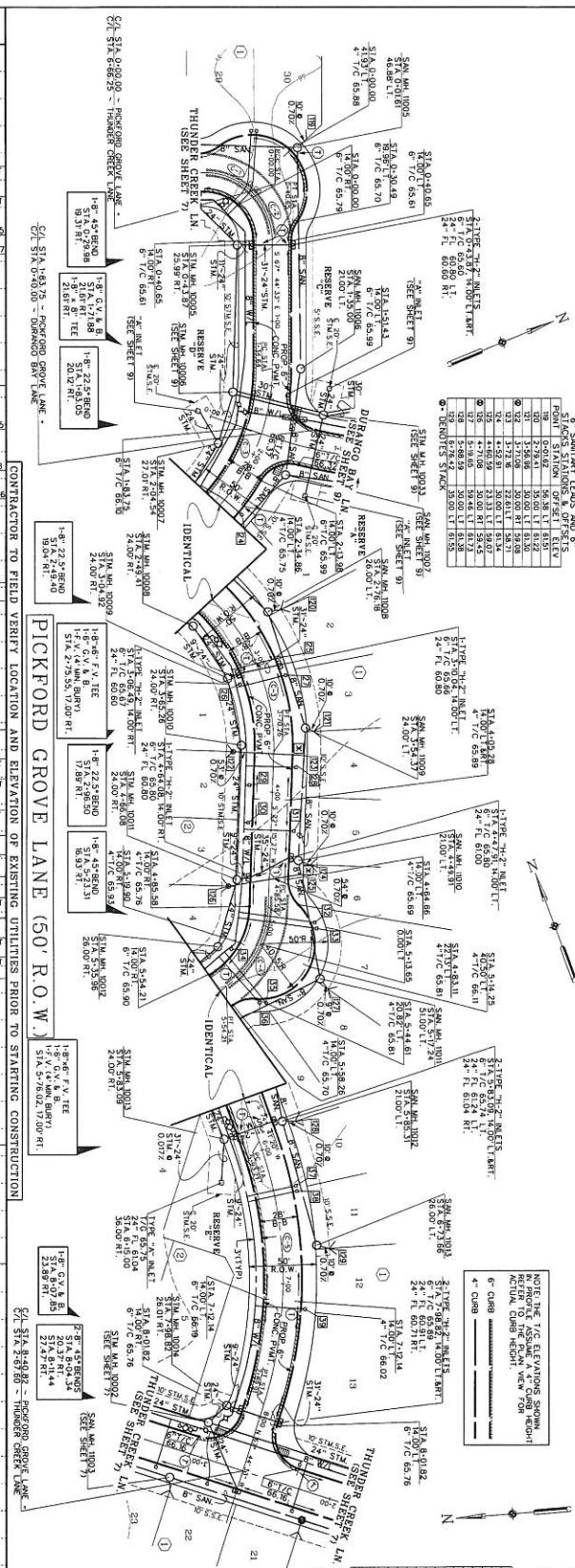
POINT	STATION	OFFSET	ELEVATION
1	21.00	0.00	55.88
2	21.50	0.00	55.88
3	22.00	0.00	55.88
4	22.50	0.00	55.88
5	23.00	0.00	55.88
6	23.50	0.00	55.88
7	24.00	0.00	55.88
8	24.50	0.00	55.88
9	25.00	0.00	55.88
10	25.50	0.00	55.88
11	26.00	0.00	55.88
12	26.50	0.00	55.88
13	27.00	0.00	55.88
14	27.50	0.00	55.88
15	28.00	0.00	55.88
16	28.50	0.00	55.88
17	29.00	0.00	55.88
18	29.50	0.00	55.88
19	30.00	0.00	55.88
20	30.50	0.00	55.88
21	31.00	0.00	55.88
22	31.50	0.00	55.88
23	32.00	0.00	55.88
24	32.50	0.00	55.88
25	33.00	0.00	55.88
26	33.50	0.00	55.88
27	34.00	0.00	55.88
28	34.50	0.00	55.88
29	35.00	0.00	55.88
30	35.50	0.00	55.88
31	36.00	0.00	55.88
32	36.50	0.00	55.88
33	37.00	0.00	55.88
34	37.50	0.00	55.88
35	38.00	0.00	55.88
36	38.50	0.00	55.88
37	39.00	0.00	55.88
38	39.50	0.00	55.88
39	40.00	0.00	55.88
40	40.50	0.00	55.88

NOTE THE T/C ELEVATIONS SHOWN ARE FROM THE ASSUMED VERTICAL CURVE ACTUAL CURB HEIGHT

NO.	STATION	OFFSET	ELEVATION
1	21.00	0.00	55.88
2	21.50	0.00	55.88
3	22.00	0.00	55.88
4	22.50	0.00	55.88
5	23.00	0.00	55.88
6	23.50	0.00	55.88
7	24.00	0.00	55.88
8	24.50	0.00	55.88
9	25.00	0.00	55.88
10	25.50	0.00	55.88
11	26.00	0.00	55.88
12	26.50	0.00	55.88
13	27.00	0.00	55.88
14	27.50	0.00	55.88
15	28.00	0.00	55.88
16	28.50	0.00	55.88
17	29.00	0.00	55.88
18	29.50	0.00	55.88
19	30.00	0.00	55.88
20	30.50	0.00	55.88
21	31.00	0.00	55.88
22	31.50	0.00	55.88
23	32.00	0.00	55.88
24	32.50	0.00	55.88
25	33.00	0.00	55.88
26	33.50	0.00	55.88
27	34.00	0.00	55.88
28	34.50	0.00	55.88
29	35.00	0.00	55.88
30	35.50	0.00	55.88
31	36.00	0.00	55.88
32	36.50	0.00	55.88
33	37.00	0.00	55.88
34	37.50	0.00	55.88
35	38.00	0.00	55.88
36	38.50	0.00	55.88
37	39.00	0.00	55.88
38	39.50	0.00	55.88
39	40.00	0.00	55.88
40	40.50	0.00	55.88

REMARKS/CONTROL

NO.	STATION	OFFSET	ELEVATION
1	21.00	0.00	55.88
2	21.50	0.00	55.88
3	22.00	0.00	55.88
4	22.50	0.00	55.88
5	23.00	0.00	55.88
6	23.50	0.00	55.88
7	24.00	0.00	55.88
8	24.50	0.00	55.88
9	25.00	0.00	55.88
10	25.50	0.00	55.88
11	26.00	0.00	55.88
12	26.50	0.00	55.88
13	27.00	0.00	55.88
14	27.50	0.00	55.88
15	28.00	0.00	55.88
16	28.50	0.00	55.88
17	29.00	0.00	55.88
18	29.50	0.00	55.88
19	30.00	0.00	55.88
20	30.50	0.00	55.88
21	31.00	0.00	55.88
22	31.50	0.00	55.88
23	32.00	0.00	55.88
24	32.50	0.00	55.88
25	33.00	0.00	55.88
26	33.50	0.00	55.88
27	34.00	0.00	55.88
28	34.50	0.00	55.88
29	35.00	0.00	55.88
30	35.50	0.00	55.88
31	36.00	0.00	55.88
32	36.50	0.00	55.88
33	37.00	0.00	55.88
34	37.50	0.00	55.88
35	38.00	0.00	55.88
36	38.50	0.00	55.88
37	39.00	0.00	55.88
38	39.50	0.00	55.88
39	40.00	0.00	55.88
40	40.50	0.00	55.88

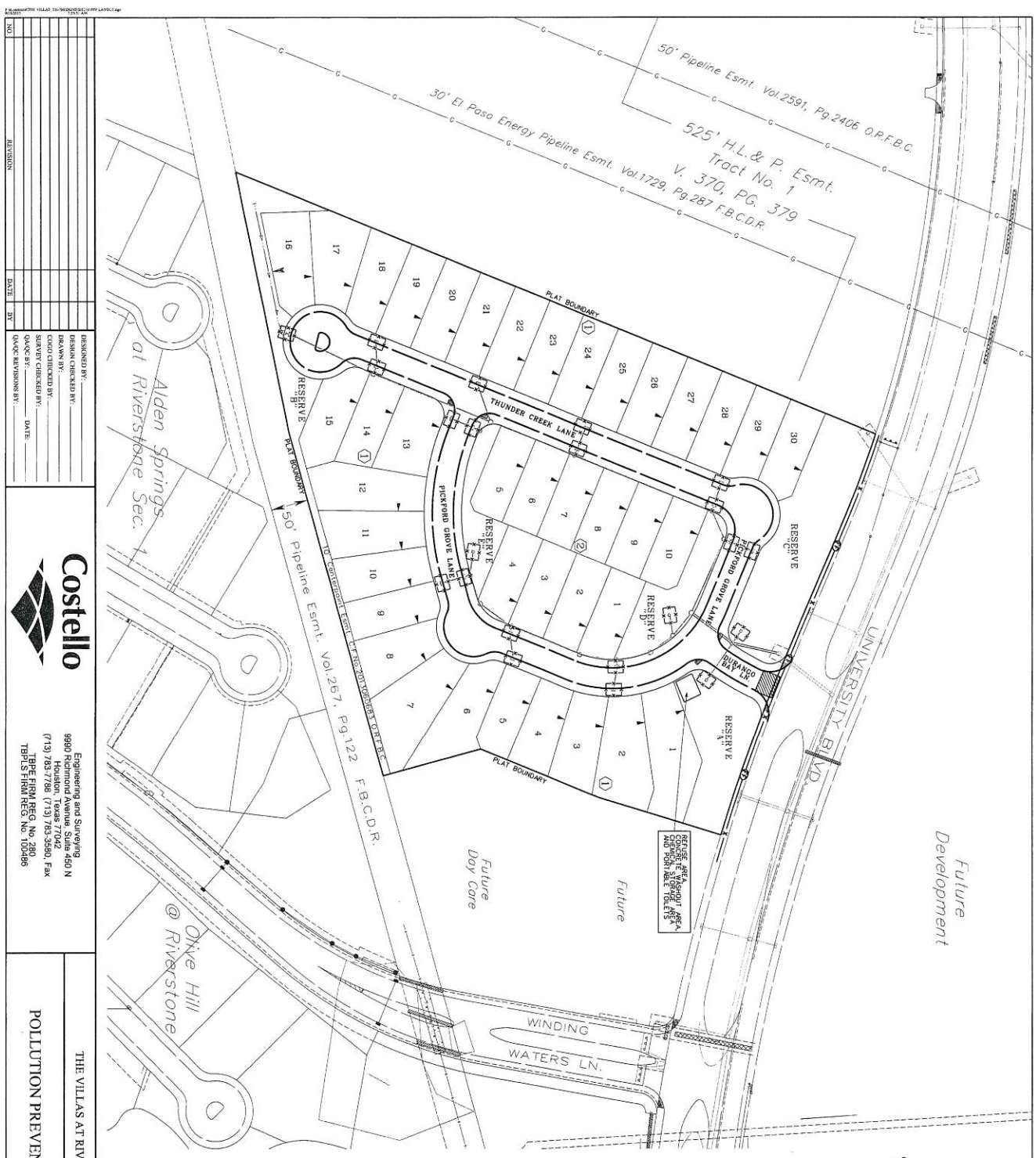


CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION

ALL PAVING T/C ELEVATIONS BASED ON A 4" T/C PROFILE

SCALE: 1" = 40' HORIZ. 1" = 4' VERT. CL. CURVE DATA

NO.	STATION	OFFSET	ELEVATION
1	21.00	0.00	55.88
2	21.50	0.00	55.88
3	22.00	0.00	55.88
4	22.50	0.00	55.88
5	23.00	0.00	55.88
6	23.50	0.00	55.88
7	24.00	0.00	55.88
8	24.50	0.00	55.88
9	25.00	0.00	55.88
10	25.50	0.00	55.88
11	26.00	0.00	55.88
12	26.50	0.00	55.88
13	27.00	0.00	55.88
14	27.50	0.00	55.88
15	28.00	0.00	55.88
16	28.50	0.00	55.88
17	29.00	0.00	55.88
18	29.50	0.00	55.88
19	30.00	0.00	55.88
20	30.50	0.00	55.88
21	31.00	0.00	55.88
22	31.50	0.00	55.88
23	32.00	0.00	55.88
24	32.50	0.00	55.88
25	33.00	0.00	55.88
26	33.50	0.00	55.88
27	34.00	0.00	55.88
28	34.50	0.00	55.88
29	35.00	0.00	55.88
30	35.50	0.00	55.88
31	36.00	0.00	55.88
32	36.50	0.00	55.88
33	37.00	0.00	55.88
34	37.50	0.00	55.88
35	38.00	0.00	55.88
36	38.50	0.00	55.88
37	39.00	0.00	55.88
38	39.50	0.00	55.88
39	40.00	0.00	55.88
40	40.50	0.00	55.88



POLLUTION PREVENTION PLAN

THE VILLAS AT RIVERSTONE

APPROVED BY: *[Signature]*
 DATE: 10-16-15

LEGEND

- NET PROTECTION REQUIRED
- BLOCK NUMBER
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE/EXIT
- SANDBAGS (10'x14')
- BOYS OR CURBS
- N.T.S.

POLLUTION PREVENTION NOTES:

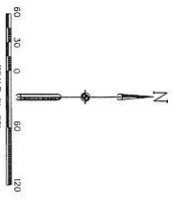
1. PLACE FILTER FABRIC SILT FENCE +/- 5 FEET AROUND ALL INLETS.
2. ALL SOIL STOCKPILES OR SPOWNOYD SOIL SHALL BE PROTECTED.
3. ALL PROPOSED STAKES TO BE CONSTRUCTED BY THE CONTRACTOR ACROSS THE ENTIRE SWATH LAST "STRIKED" OF THE DRAINAGE LOCATION.
4. A VEHICLE WASHROOM AREA MAY BE LOCATED BY THE CONTRACTOR TO BE CONSTRUCTED AND OPERATED IN THE WASHROOM AREA AT THE LOCATION OF SPOWNOYD SOIL. THE LOCATION OF THE WASHROOM SHALL BE DETERMINED BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL FACILITIES INCURRED ON THIS PLAN.
6. THE CONTRACTOR SHALL CONSTRUCT SILT BARRIERS APPLICABLE ON THIS PLAN.
7. UPON PROJECT COMPLETION, THE ENTIRE SPOWNOYD AREA NOT PROPOSED FOR IMMEDIATE RECONSTRUCTION SHALL BE RESTORED AS PER THE "RESTORATION PLAN" ATTACHED TO THIS PLAN.
8. THE CONTRACTOR SHALL REMOVE ALL SILT FENCE APPROX. ALL OPEN.
9. FURNISHED BY THE OWNER, PAVING CONSTRUCTION IS RESPONSIBLE FOR THE PROTECTION OF THE PROJECT.
10. TAKE AS REQUIRED TO BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A GREEN ALWAYS RECORDS OF THE NUMBER OF TIMES THE FENCE IS REMOVED AND REINSTALLED.

SCALE: 1"=50'

N

BENCHMARK CONTROL:
 ELEVATION: 72.0
 UNIVERSITY BLVD WEST ROW OF WINDING WATERS

DESIGNED BY:	DATE:
DRAWN CHECKED BY:	DATE:
CONTOUR CHECKED BY:	DATE:
SURVEY CHECKED BY:	DATE:
QA/QC CHECKED BY:	DATE:
QA/QC REVISIONS BY:	DATE:



LEGEND
 * SET 5/8" HIGH IRON ROD WITH PLASTIC CAP STAMPED
 "COSTELLO INC" UNLESS OTHERWISE NOTED
 ** FOUND 5/8" HIGH IRON ROD UNLESS OTHERWISE NOTED

RESERVE TABLE	
RESERVE 1"	0.2428 ACRES
RESERVE 2"	0.3524 ACRES
RESERVE 3"	0.2428 ACRES
RESERVE 4"	0.1523 ACRES
TOTAL:	1.4403 ACRES

CURVE DATA TABLE

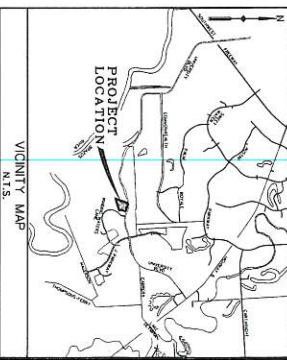
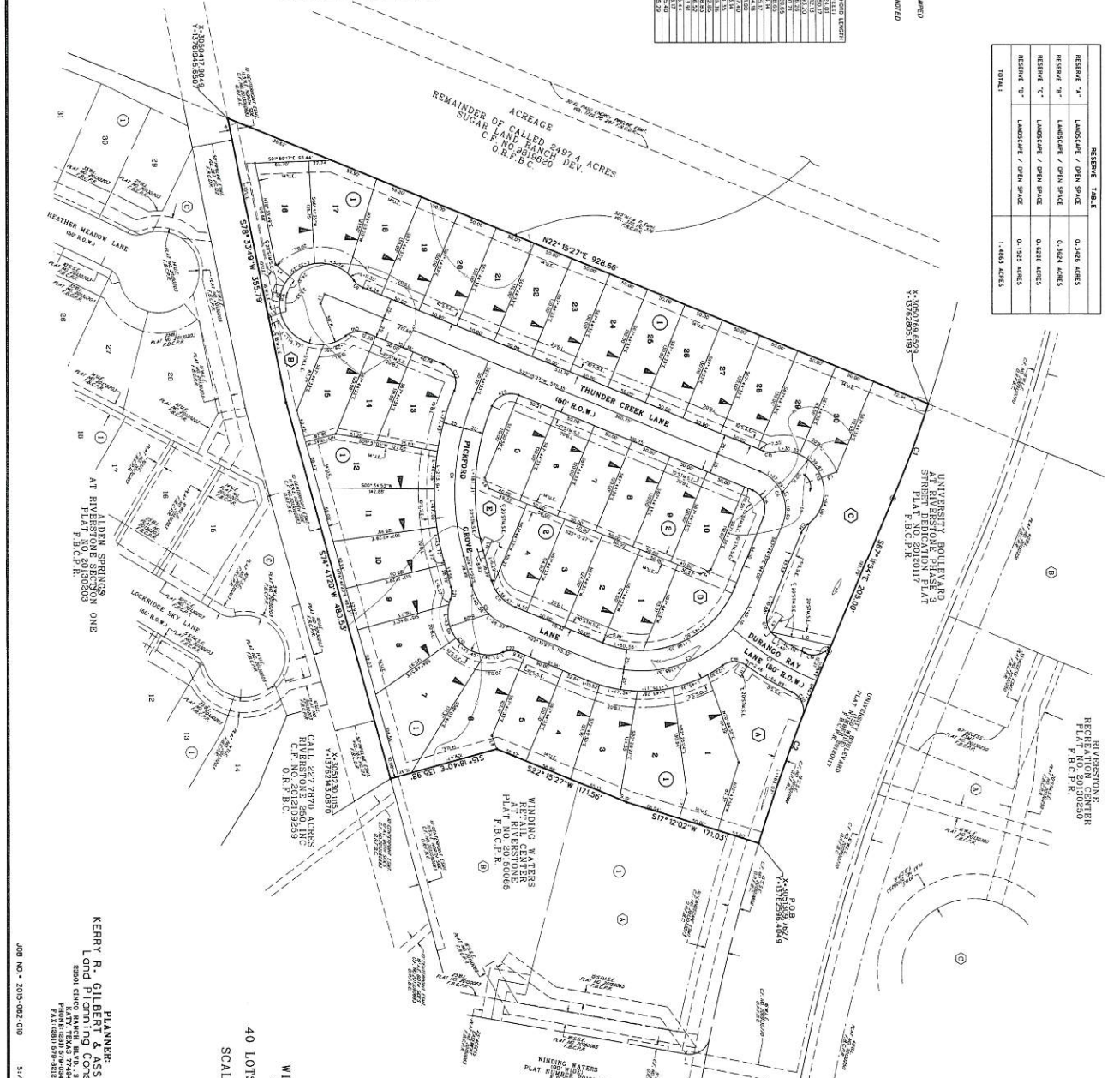
CURVE NO.	CHORD BEARING	CHORD DIST.	CHORD BEARING	CHORD DIST.	CHORD BEARING	CHORD DIST.
1	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
2	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
3	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
4	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
5	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
6	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
7	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
8	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
9	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
10	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
11	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
12	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
13	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
14	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
15	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
16	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
17	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
18	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
19	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
20	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
21	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
22	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
23	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
24	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
25	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
26	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
27	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
28	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
29	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66
30	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03
31	N 22° 15' 27" E	928.66	S 57° 12' 02" W	171.03	N 22° 15' 27" E	928.66

LINE DATA TABLE

LINE NO.	START POINT	END POINT	BEARING	DIST.
1	1	2	N 22° 15' 27" E	928.66
2	2	3	S 57° 12' 02" W	171.03
3	3	4	N 22° 15' 27" E	928.66
4	4	5	S 57° 12' 02" W	171.03
5	5	6	N 22° 15' 27" E	928.66
6	6	7	S 57° 12' 02" W	171.03
7	7	8	N 22° 15' 27" E	928.66
8	8	9	S 57° 12' 02" W	171.03
9	9	10	N 22° 15' 27" E	928.66
10	10	11	S 57° 12' 02" W	171.03
11	11	12	N 22° 15' 27" E	928.66
12	12	13	S 57° 12' 02" W	171.03
13	13	14	N 22° 15' 27" E	928.66
14	14	15	S 57° 12' 02" W	171.03
15	15	16	N 22° 15' 27" E	928.66
16	16	17	S 57° 12' 02" W	171.03
17	17	18	N 22° 15' 27" E	928.66
18	18	19	S 57° 12' 02" W	171.03
19	19	20	N 22° 15' 27" E	928.66
20	20	21	S 57° 12' 02" W	171.03
21	21	22	N 22° 15' 27" E	928.66
22	22	23	S 57° 12' 02" W	171.03
23	23	24	N 22° 15' 27" E	928.66
24	24	25	S 57° 12' 02" W	171.03
25	25	26	N 22° 15' 27" E	928.66
26	26	27	S 57° 12' 02" W	171.03
27	27	28	N 22° 15' 27" E	928.66
28	28	29	S 57° 12' 02" W	171.03
29	29	30	N 22° 15' 27" E	928.66
30	30	31	S 57° 12' 02" W	171.03

ABBREVIATION LEGEND

B.L.	BENCH MARK
C.F. NO.	CLIENTS FILE NO.
C.N.F. S.C.	OFFICIAL RECORDS FOR BEND COUNTY
S.S.E.	SANITARY SEWER EXISTENT
S.W.E.	STORM SEWER EXISTENT
M.L.E.	MATERIAL EXISTENT
F.O.C.P.R.	FOR BEND COUNTY S.A.T RECORDS
F.O.B.	FOR BEND COUNTY S.A.T RECORDS
E.M.T.	ELEMENT OF RECORDING
U.E.	UTILITY EXISTENT
M.E.	MATERIAL EXISTENT
F.O.C.P.R.	FOR BEND COUNTY S.A.T RECORDS
F.O.B.	FOR BEND COUNTY S.A.T RECORDS



THE VILLAS AT RIVERSTONE
 BEING 10.0412 ACRES
 WILLIAM LITTLE SURVEY A-54,
 FORT BEND COUNTY, TEXAS

40 LOTS 2 BLOCKS 5 RESERVES

SCALE: 1" = 60' DATE: SEPTEMBER, 2015

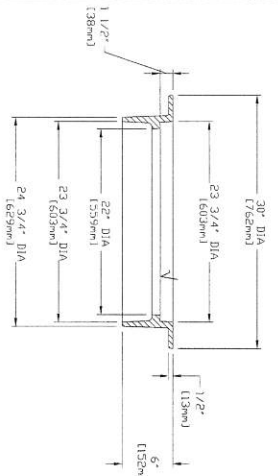
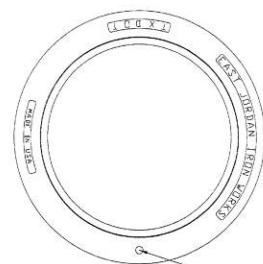
OWNER:
 RIVERSTONE 250, INC.,
 A TEXAS CORPORATION
 11000 W. WINDING WATERS BLVD., SUITE 100
 FORT BEND COUNTY, TEXAS 78122
 PHONE: (281) 359-0250
 FAX: (281) 359-0250

PREPARED BY:
Costello
 11000 W. WINDING WATERS BLVD., SUITE 100
 FORT BEND COUNTY, TEXAS 78122
 PHONE: (281) 359-0250
 FAX: (281) 359-0250

PLANNER:
 KERRY R. GILBERT & ASSOCIATES, INC.
 Land Planning Consultants
 22001 CIRCLE WINTER BLVD., SUITE A-280
 FORT BEND COUNTY, TEXAS 78122
 PHONE: (281) 359-0250
 FAX: (281) 359-0250

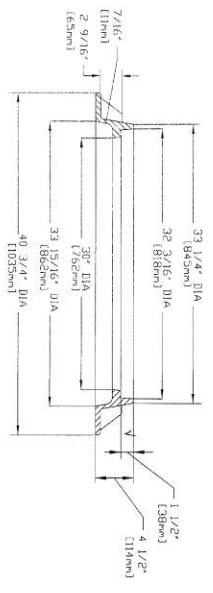
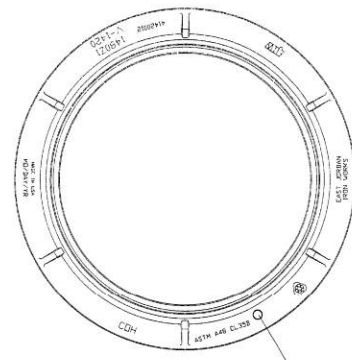
JOB NO. * 2015-02-200 S1/NE/RIVERSTONE/20150220/PLAT1018.DWG
 DWG. NO.:

SHEET 2 OF 2



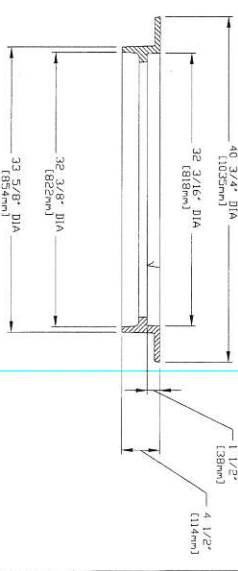
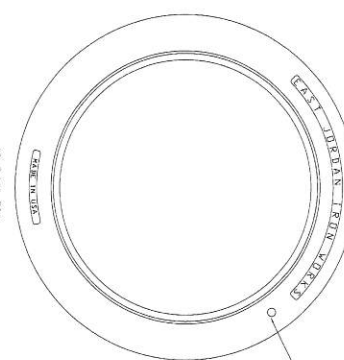
24" MANHOLE FRAME
N.T.S.

SL-DR-09



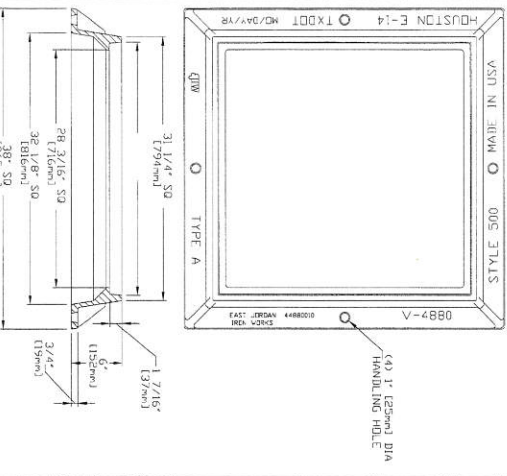
32" MANHOLE FRAME W/O MUD RING
N.T.S.

SL-DR-10



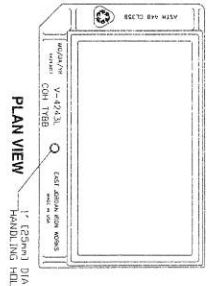
32" MANHOLE FRAME
N.T.S.

SL-DR-11



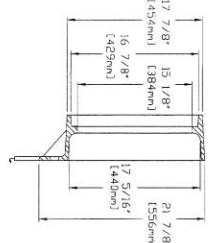
FRAME SECTION TYPE A INLET FRAME
N.T.S.

SL-DR-12

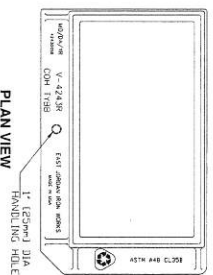


LEFT FRAME
N.T.S.

SL-DR-13

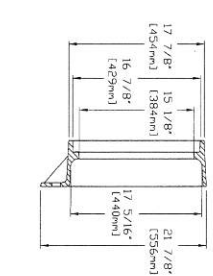


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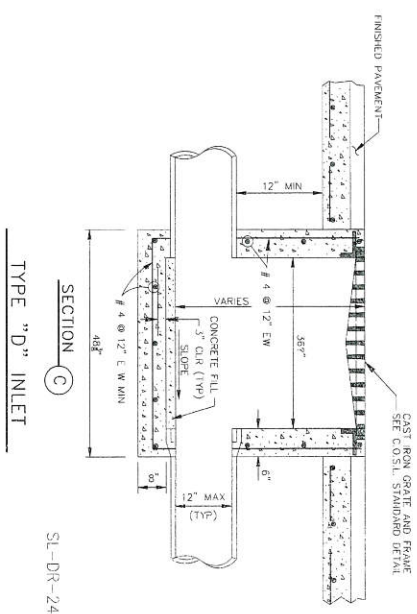
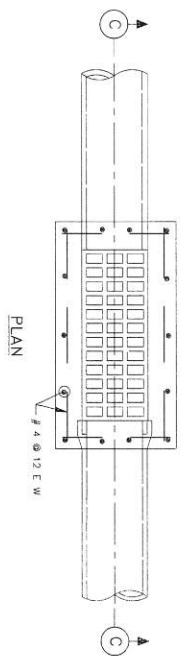


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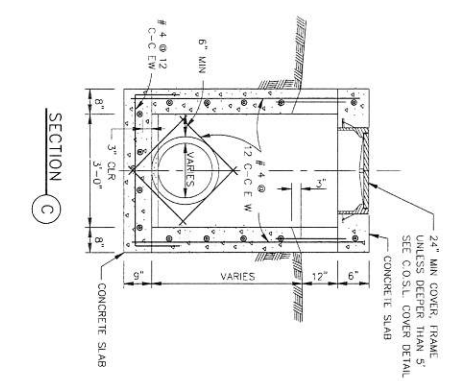
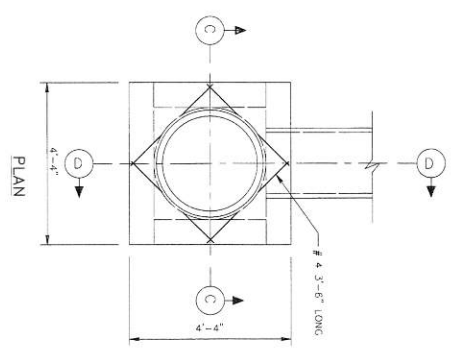
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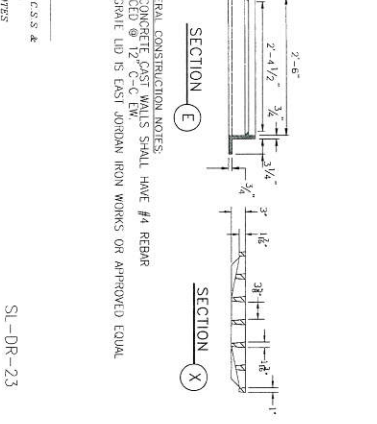
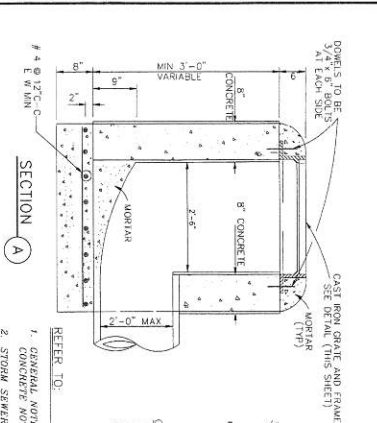
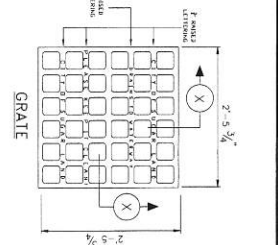
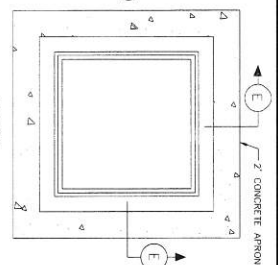
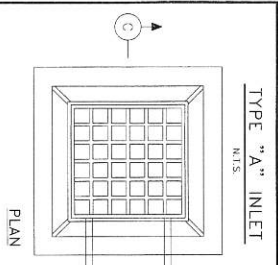
DATE: 08/11/11	BY: J. L. HANCOCK	CITY OF SUGAR LAND, TEXAS
DATE: 08/11/11	BY: J. L. HANCOCK	CONSTRUCTION PLANS FOR
DATE: 08/11/11	BY: J. L. HANCOCK	THE VILLAS AT RIVERSTONE
DATE: 08/11/11	BY: J. L. HANCOCK	STORM SEWER
DATE: 08/11/11	BY: J. L. HANCOCK	CONSTRUCTION DETAILS
DATE: 08/11/11	BY: J. L. HANCOCK	SL-05
DATE: 08/11/11	BY: J. L. HANCOCK	SHEET



SL-DR-24



SL-DR-22

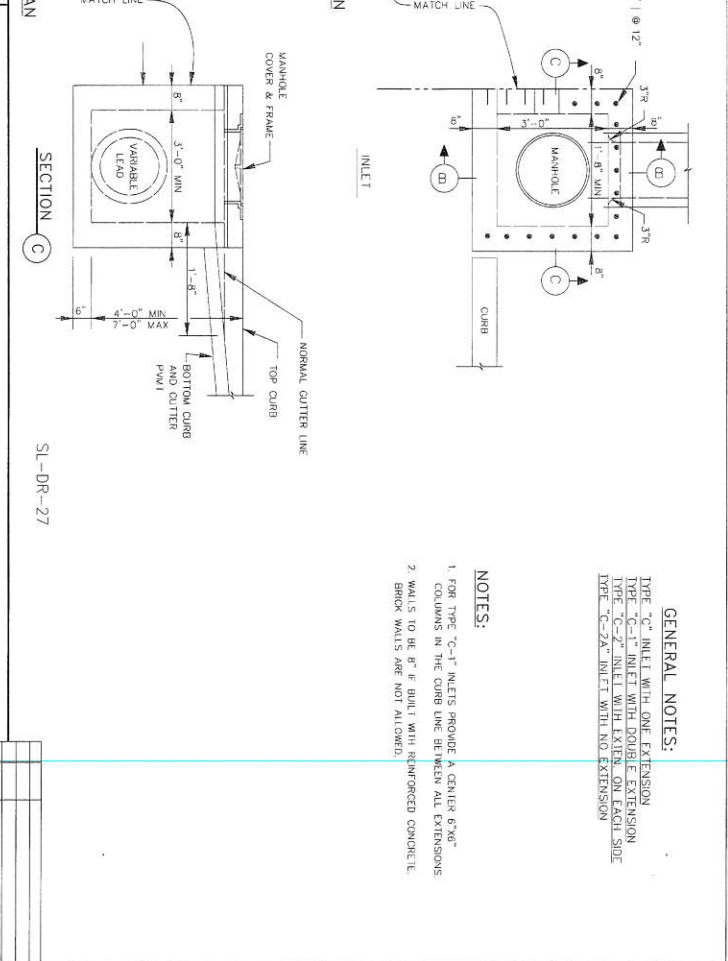
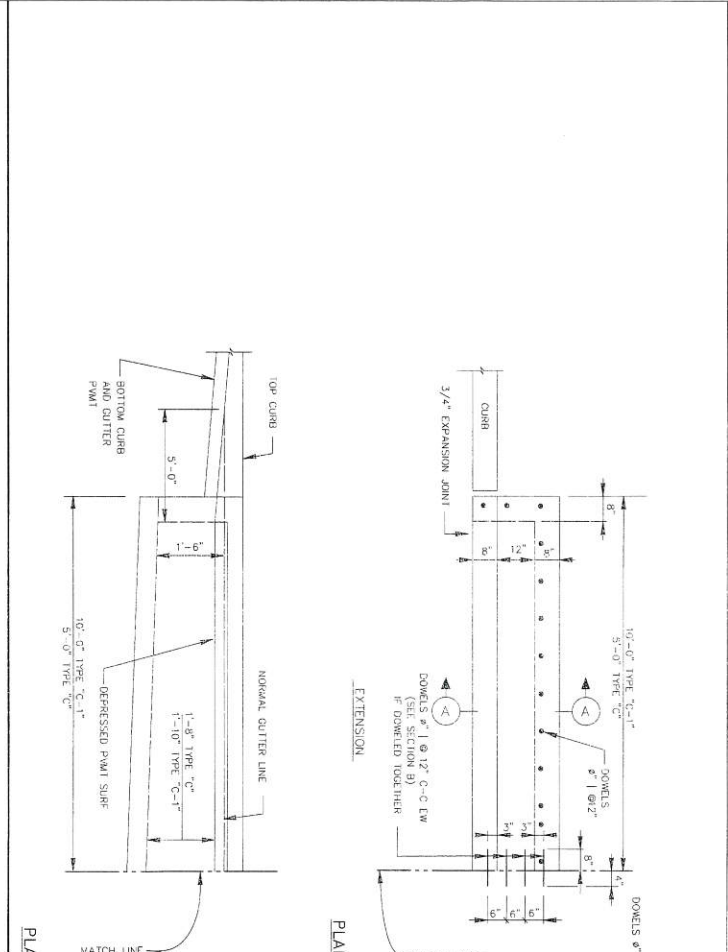
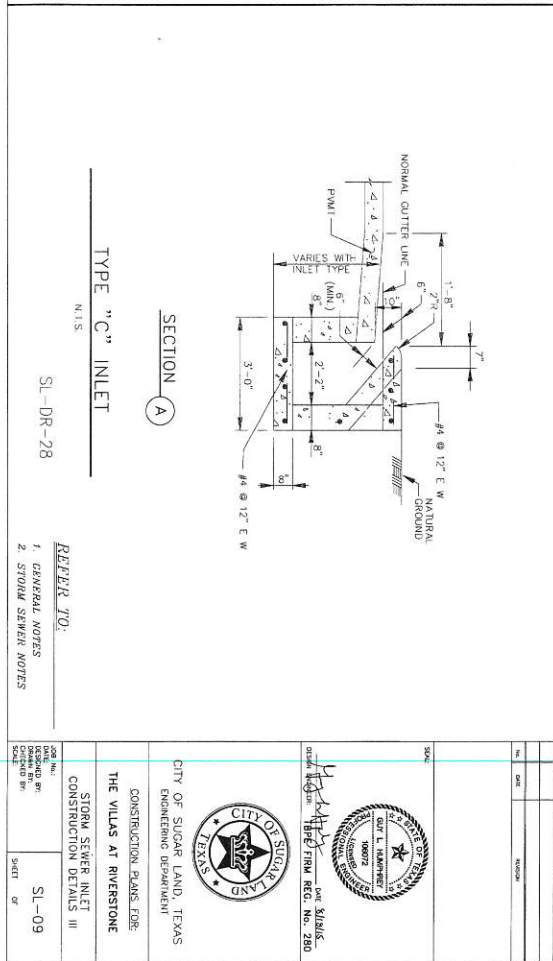
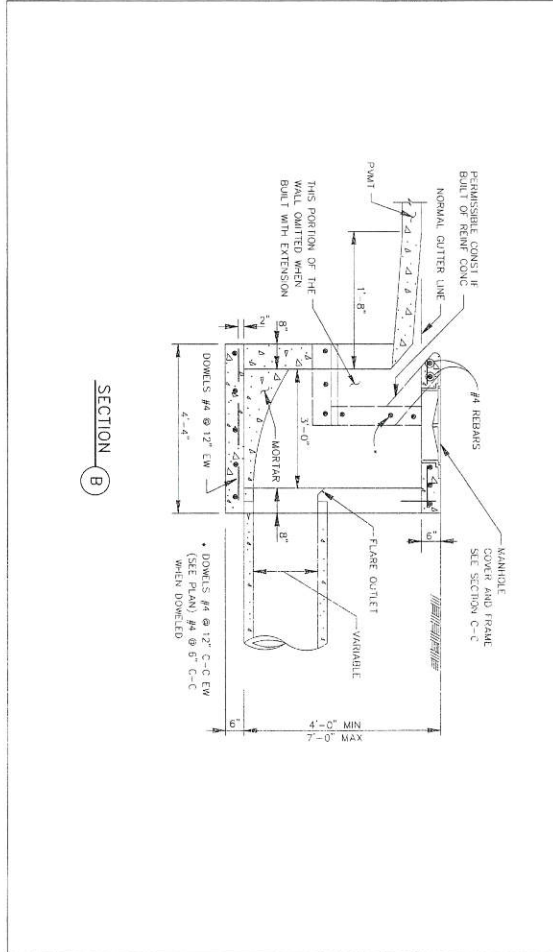


GENERAL CONSTRUCTION NOTES:
1. CONCRETE CAST WALLS SHALL HAVE #4 REBAR
2. GRATE LID IS CAST JORDAN IRON WORKS OR APPROVED EQUAL

REFER TO:
1. GENERAL NOTES, C.S.S. &
2. STORM SEWER NOTES

SL-DR-23

CITY OF SUGAR LAND, TEXAS ENGINEERING DEPARTMENT	DATE: 5/8/16 PROJECT: FIRE FIRM REG. NO. 280
CONSTRUCTION PLANS FOR: THE VILLAGES AT RIVERSTONE	CONSTRUCTION PLAN: STORM SEWER INLET CONSTRUCTION DETAILS: I
SHEET NO. SL-07 OF	SHEET OF



GENERAL NOTES:

TYPE "C" INLET WITH ONE EXTENSION
TYPE "C-1" INLET WITH DOUBLE EXTENSION
TYPE "C-2" INLET WITH EXT. ON EACH SIDE
TYPE "C-2A" INLET WITH NO EXTENSION

NOTES:

1. FOR TYPE "C-1" INLETS PROVIDE A CURB 6" WIDE
COLUMNS IN THE CURB LINE BETWEEN ALL EXTENSIONS.
2. WALLS TO BE 8" IF BUILT WITH REINFORCED CONCRETE.
BRICK WALLS ARE NOT ALLOWED.

DATE	NO.	DESCRIPTION

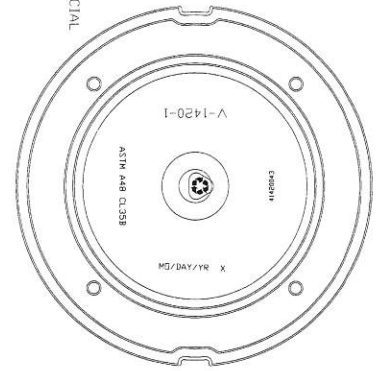
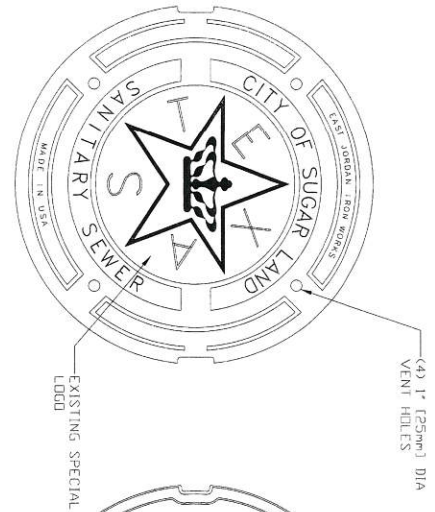
DATE: 11/15/2011
SHEET NO.: 280

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

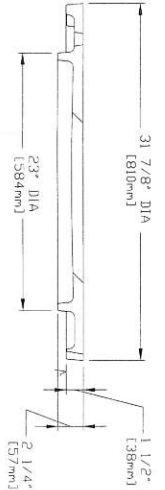
CONSTRUCTION ENGINEER
THE VILLAGES AT RIVERSTONE

STORM SEWER INLET
CONSTRUCTION DETAILS III

DATE: 11/15/2011
SHEET NO.: 09



**BOTTOM VIEW
OF COVER**



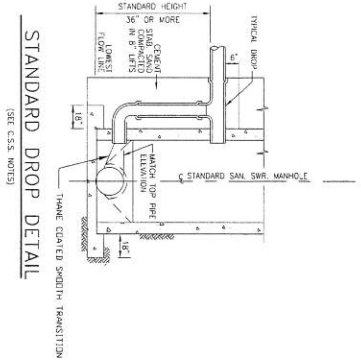
COVER SECTION

32" MANHOLE COVER

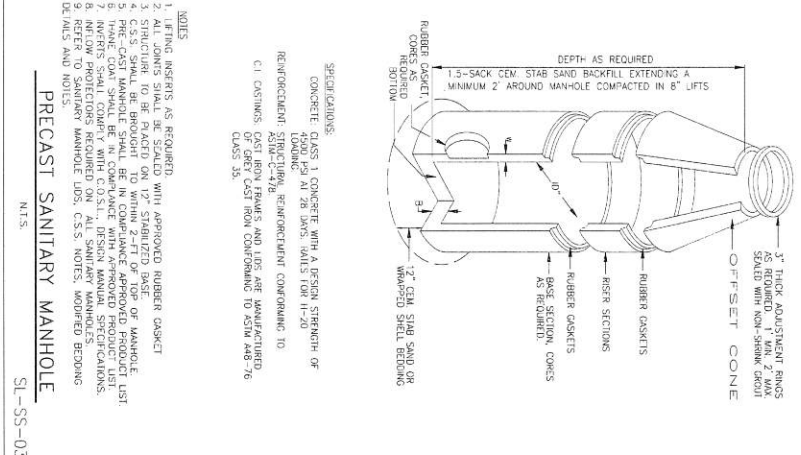
- DUCTILE IRON
MACHINED SURFACE
SL-SS-02

EAST AFRICAN IRON WORKS (P) APPROVED EQUIP.

DATE: _____	SCALE: _____	
DESIGNED BY: _____	CHECKED BY: _____	
CITY OF SUGAR LAND, TEXAS ENGINEERING DEPARTMENT CONSTRUCTION CLASS EDGE THE VILLAS AT RIVERSTONE SANITARY SEWER MANHOLE CONSTRUCTION DETAILS		
DATE: _____	DATE: _____	
DESIGNED BY: _____	CHECKED BY: _____	
SL-13	SHEET	OF

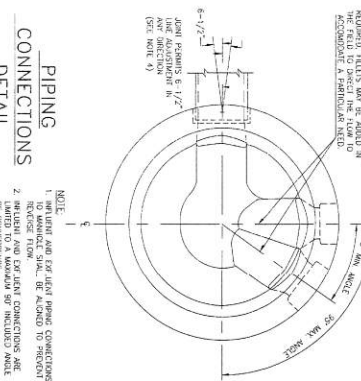


SL-SS-05

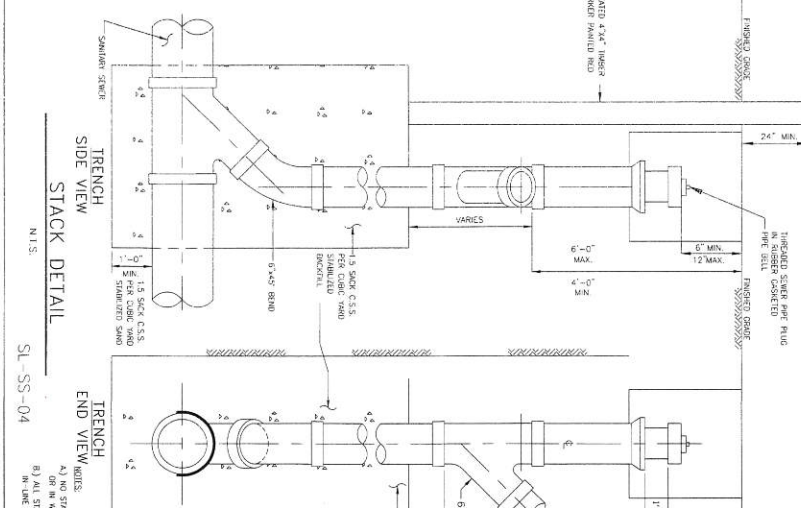


NOTES:
1. LIFTING INSERTS AS REQUIRED.
2. ALL JOINTS SHALL BE SEALED WITH APPROVED RUBBER GASKET.
3. STRUCTURE TO BE PLACED ON 12" STANDARD BASE.
4. PRE-CAST MANHOLE SHALL BE IN COMPLIANCE WITH APPROVED PRODUCT LIST.
5. FRAME COAT SHALL BE IN COMPLIANCE WITH APPROVED PRODUCT LIST.
6. INTERIOR PROTECTORS REQUIRED FOR ALL PRECAST MANHOLES.
7. REFER TO SANITARY MANHOLE LOS. C.S.S. NOTES, MODIFIED BEDDING DETAILS AND NOTES.
8. REFER TO SANITARY MANHOLE LOS. C.S.S. NOTES, MODIFIED BEDDING DETAILS AND NOTES.

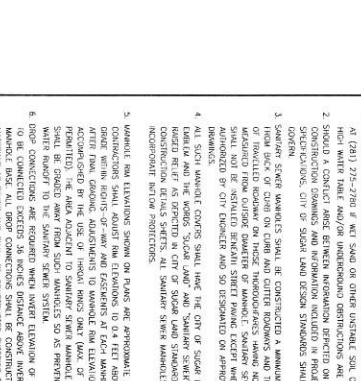
PRECAST SANITARY MANHOLE
N.T.S.
SL-SS-03



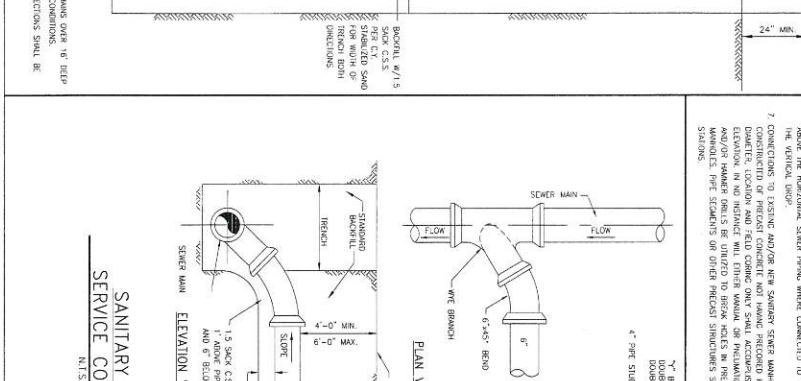
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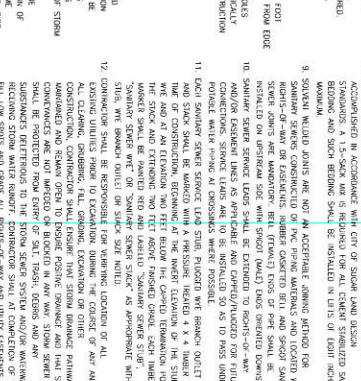
TRENCH SIDE VIEW
STACK DETAIL
N.T.S.
SL-SS-04



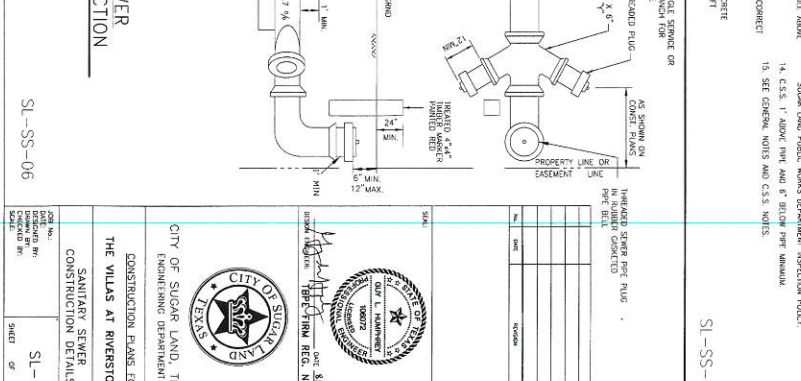
SL-SS-06



SANITARY SEWER
SERVICE CONNECTION
N.T.S.
SL-SS-06



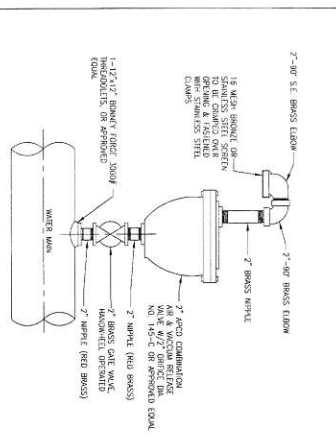
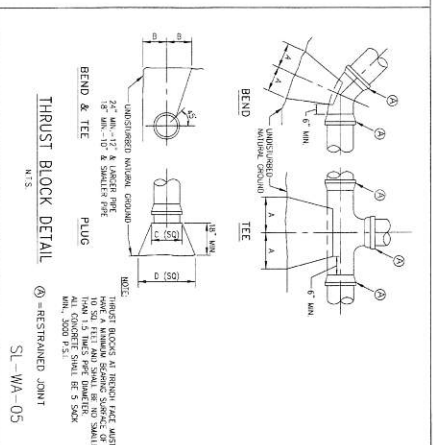
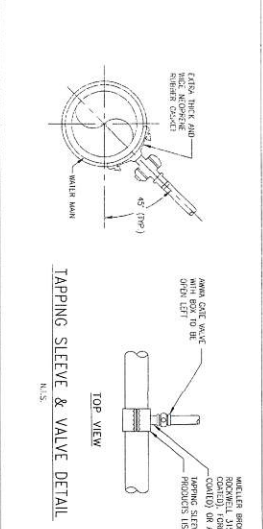
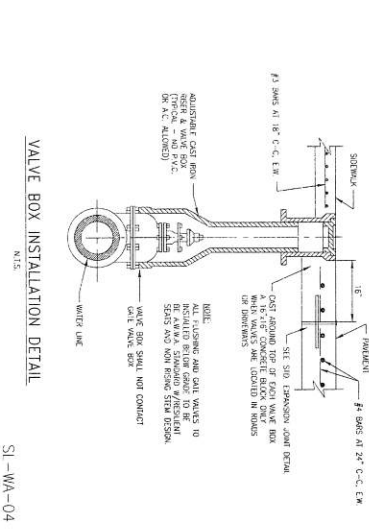
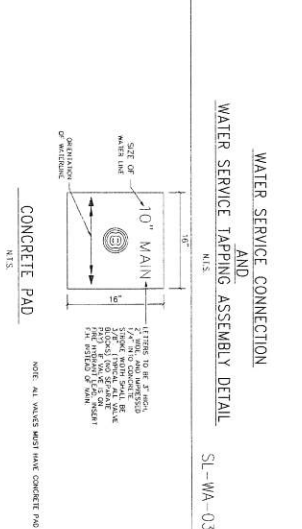
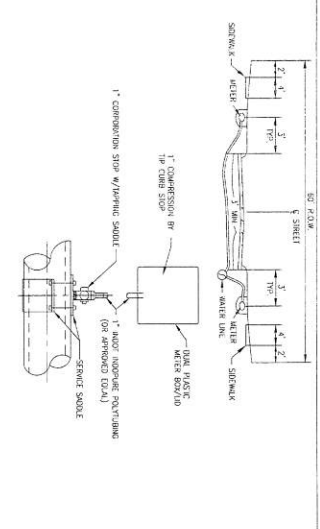
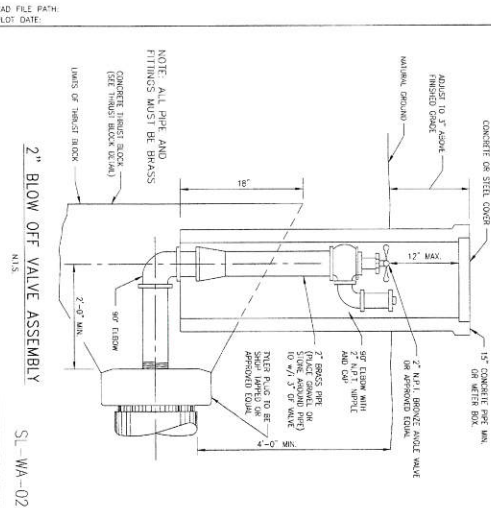
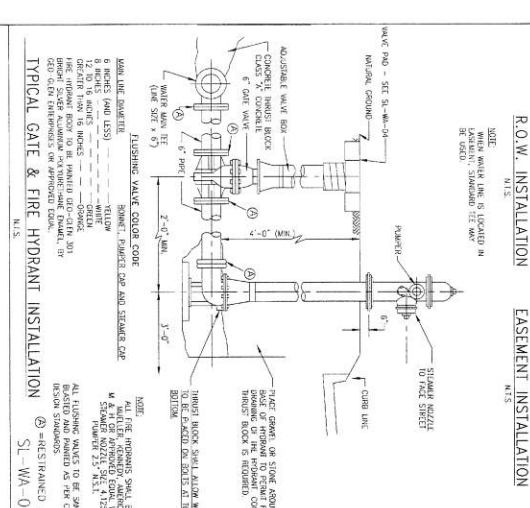
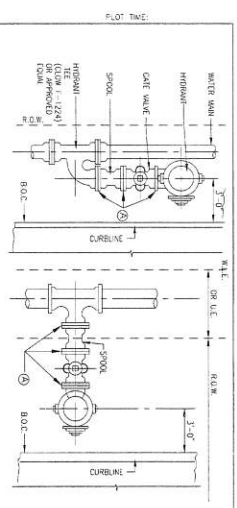
SL-SS-07



SANITARY SEWER
SERVICE CONNECTION
N.T.S.
SL-SS-07

NOTES:
1. CONTRACTOR SHALL CONTACT CITY OF SUGAR LAND ENGINEERING DEPARTMENT AT (281) 275-2700 FOR ALL SUGAR LAND SPECIFICATIONS, CITY OF SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
2. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
3. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
4. ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
5. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
6. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
7. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
8. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
9. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
10. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
11. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
12. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
13. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
14. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.
15. SUGAR LAND ENGINEERING DEPARTMENT SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUGAR LAND CONSTRUCTION DRAWINGS AND INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL APPLY.

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT
THE WILKS AT RIVERSIDE
CONSTRUCTION ENGINEER
SANITARY SEWER
CONSTRUCTION DETAILS
N.T.S.
SL-14



CONSTRUCTION NOTES:

1. WATER LINES 12" (N) AND LESS SHALL BE AMVIC C-500 UNITS.
2. ALL TAPPED MAINS AND LATERALS TO BE APPROVED WATER SERVICE ASSOC. (AMVIC).
3. ALL DUCTILE IRON PIPE SHALL BE CLASS 50 UNLESS NOTED. 40 A.C. PIPE WILL BE ALLOWED AND ALL DUCTILE IRON FITTINGS SHALL BE WORKMAN LIKED PATTERN OR EQUIVALENT.
4. ALL DUCTILE IRON FITTINGS SHALL BE CONNECTED TO THE STANDARD PRACTICE (PRACTICE).
5. UNUSUAL SPACING BETWEEN LINES SHALL BE 7' AT ALTERNATING TAP POINTS.

POLYETHYLENE WRAP FOR IRON PIPE NOTES:

1. POLYETHYLENE WRAP SHALL BE USED AS A MEANS TO PROTECT CAST IRON AND OTHER METALS IN A CORROSION SLOW ENVIRONMENT.
2. ALL 6" AND POLYETHYLENE WRAP SHALL BE SECURED AROUND ALL 1/4" DIA. PIPE.
3. POLYETHYLENE WRAP SHALL BE UNBUNDLED AND INSTALLED FIRMER IN TRENCH FROM FRONT TO BACK.
4. POLYETHYLENE WRAP SHALL BE UNBUNDLED AND INSTALLED FIRMER IN TRENCH FROM FRONT TO BACK.
5. POLYETHYLENE WRAP SHALL BE UNBUNDLED AND INSTALLED FIRMER IN TRENCH FROM FRONT TO BACK.

BENDS, TEES & PLUGS FOR PIPE OF VARIOUS SIZES

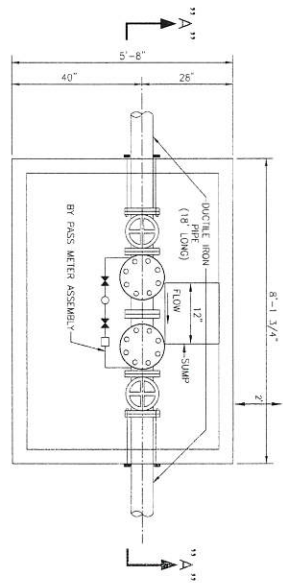
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3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"
4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"
6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"
6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"
7"	7"	7"	7"	7"	7"	7"	7"	7"	7"	7"	7"	7"	7"	7"	7"	7"	7"	7"
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10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"

CITY OF SUGAR LAND, TEXAS

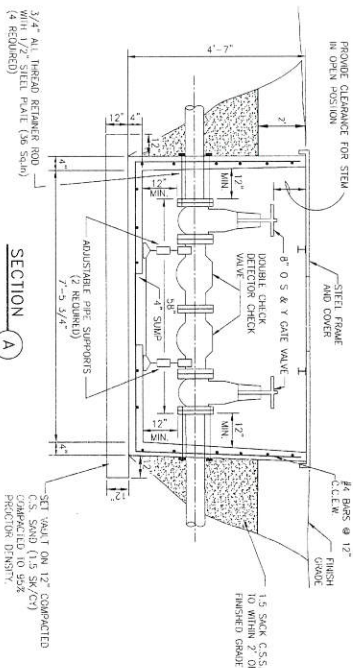
CONSTRUCTION PLANS FOR THE WILKINS AT RIVERSTONE

WATER LINE CONSTRUCTION DETAILS

DATE: 11/15/2011
SCALE: AS SHOWN
SHEET: 08 OF 11



PLAN VIEW



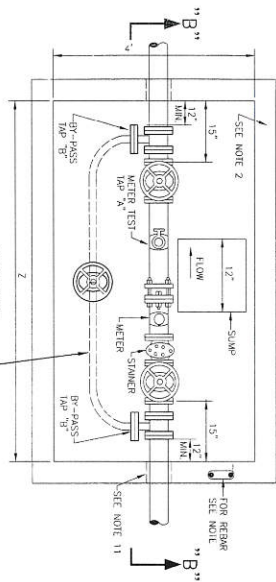
SECTION A

- NOTES:
1. SWAGE CONNECTION MAY BE ALLOWED WITHIN THE WALL WHEN APPROVED BY THE ENGINEERING DEPARTMENT.
2. THE VALVE MAY BE SUBSTITUTED FOR GATE VALVE ON THE CUSTOMER SIDE SUPPLIED BY PARK EQUIPMENT COMPANY, OR APPROVED EQUAL.

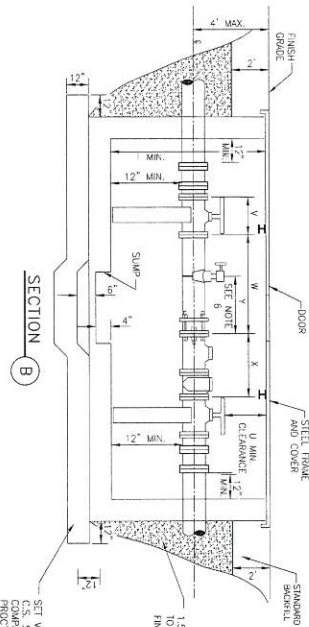
DETECTOR CHECK VALVE

N.T.S.

SI-WA-20



PLAN VIEW
DUCTILE IRON BYPASS
FOR 3" AND ABOVE



SECTION B

DOMESTIC												METER WALL											
METER SIZE	T	U	V	W	X	Y	Z	METER SIZE	T	U	V	W	X	Y	Z								
3"	4'-6"	25'	8"	11-1/2"	24'	9"	6-10"	3"	4'-6"	25'	8"	11-1/2"	24'	9"	6-10"								
4"	4'-6"	22'	8"	13-1/2"	29'	10"	7'-7"	4"	4'-6"	22'	8"	13-1/2"	29'	10"	7'-7"								
5"	5'-2"	26'	10'-1/2"	13-1/2"	33'	13'	8'-2"	6"	5'-2"	26'	10'-1/2"	13-1/2"	33'	13'	8'-2"								
6"	7'-0"	37'	13'	20-1/2"	41'	17'	10'-7"	10"	7'-0"	37'	13'	20-1/2"	41'	17'	10'-7"								

3" TO 10"
METER

N.T.S.

SI-WA-19

- NOTES:
1. NOTIFY THE ENGINEERING DEPARTMENT AT (817) 273-2780 PRIOR TO CONSTRUCTION OF WALL OR BY-PASS ASSEMBLY.
 2. THE METER WALL CAN BE EITHER POURED IN PLACE OR PREPARED. CONCRETE SHALL BE SIX INCHES (6") THICK AND BE 3,000 PSI WITH #4 REINFORCEMENT STEEL ON 12" CENTER. MINIMUM CURING TIME SHALL BE 7 DAYS. MINIMUM STRENGTH SHALL BE 4,000 PSI CONCRETE WITH #4 REINFORCEMENT STEEL ON 12" CENTER (6") CENTER EACH WAY. THESE ARE MINIMUM SPECIFICATIONS.
 3. THE WALL WILL NOT BE LOCATED IN ANY DOWN OR HANGING PITS AND MUST BE LOCATED IN A WATER METER CASIMAN.
 4. THE WALL UD SHALL BE A BRICK UD, TYPE O-4 SINGLE LEAF DESIGN AND 8" HIGH. S 1 1/4" INCH STEEL WITH SHAP ANCHORS BORED TO THE EXTERIOR THE LEGS BE 1/4" INCH MINIMUM. THE LOAD CAPACITY IS 150 POUNDS PER SQUARE FOOT. THE SIZE OF THE DOOR IS THREE FEET (3') BY THREE FEET (3').
 5. THE UD SHALL BE PAINTED WITH 43-28 THINCO DEFENSE ALUMINUM PAINT OR APPROVED EQUAL, AND CHIMNEY OVER METRYNO.
 6. THE BY-PASS AND METER TEST TAP SHALL BE INSTALLED INSIDE THE WALL. AP "X" MUST BE AT LEAST TWO (2) PIPE DIAMETERS DOWNSTREAM OF THE METER TAPS "B" AND "C" MUST BE MADE AT APPROXIMATE 90-DEGREE ANGLE ON EACH END OF THE INCHES (2") AND SHALL BE WELD FROM THE WALL. ALL TAPS SHALL BE TWO INCHES (2") AND SHALL BE WELD FROM THE WALL.
 7. THE STRAINER, METER AND FLEXIBLE COUPLING WILL NOT BE SET UNTIL THE METER WALL AND TAPS ARE ACCEPTED BY THE DISTRICT OPERATOR. ALL UTILITIES MUST ALSO HAVE BEEN ACCEPTED AND RELEASED BY THE CITY OF SUGAR LAND PUBLIC WORKS DEPARTMENT PRIOR TO METER.
 8. THE VALVES SHALL BE AN RESISTANT WOOD DESIGN BUT HAVE METAL HAS RECEIVED FEDERAL APPROVAL FROM THE CITY OF SUGAR LAND ENGINEERING DEPARTMENT. ALL VALVES SHALL BE FLANGED BOTH ENDS AND HAVE HAND WHEELS.
 9. THE METER WALL SHALL BE SET ON 12" C.S.S. BEDDING AS SHOWN ON DETAIL DRAWINGS. A SLUMP FOUR-INCHES (4") DEEP IN THE CENTER OF THE BOTTOM SLAB IF BROCKST WALL IS BEEN. HAND WHEEL SHALL BE USED TO LOCK AND UNLOCK VALVES.
 10. ALL THE WALL PENETRATIONS SHALL BE MADE WITH A CAST IN PLACE WALL SLAB AS APPROVED BY THE CITY OF SUGAR LAND ENGINEERING DEPARTMENT. ALL PENETRATIONS SHALL BE MADE USING A JOIST OR USING KNOCKOUT PANELS WILL NOT BE ALLOWED.
 11. A CONCRETE SUPPORT WILL BE INSTALLED UNDER EACH WALK.
 12. DEPTH OF WALL SHALL BE A MINIMUM OF 4'-1/2" AND A MAXIMUM OF 6'.
 13. ALL PIPING INSIDE THE WALL SHALL BE DUCTILE IRON WITH FLANGE FITTINGS. ALL PIPING SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF SUGAR LAND ENGINEERING DEPARTMENT.
 14. THE TYPE OF METER, TURBINE OR COMPOUND, WILL BE DETERMINED BASIS ON THE APPLICATION AND APPROVED BY THE ENGINEERING DEPARTMENT.

SI-WA-22

SI-WA-21

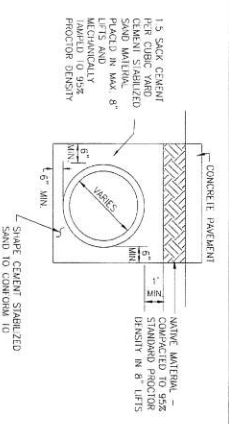
WATER LINE
METER WALL DETAILS

SI-17

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT
CONSTRUCTION PLANS FOR
THE VILLAGES AT RIVERSTONE

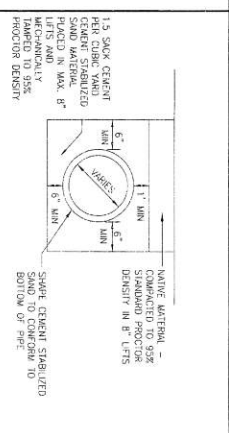
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SHEET NO. 17 OF 17

APPROVED BY: [Signature]
PER: [Signature]
DATE: 11/11/2011
SCALE: AS SHOWN
SHEET NO. 17 OF 17

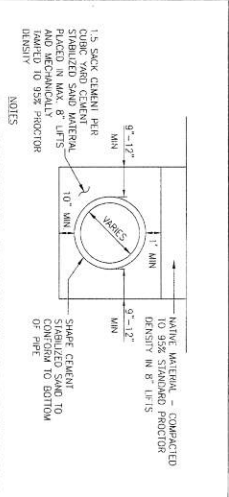


CLASS "A-A"
N.T.S.

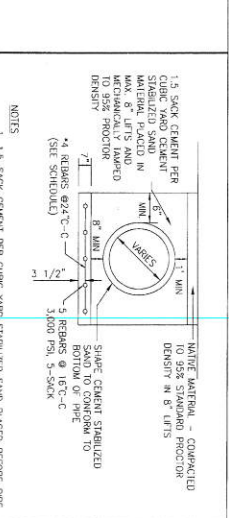
REINFORCED CONCRETE PIPE UNDER ROADWAY PAVEMENT



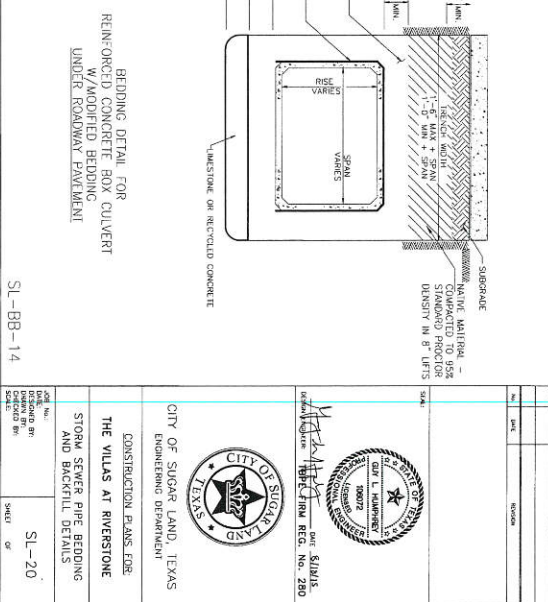
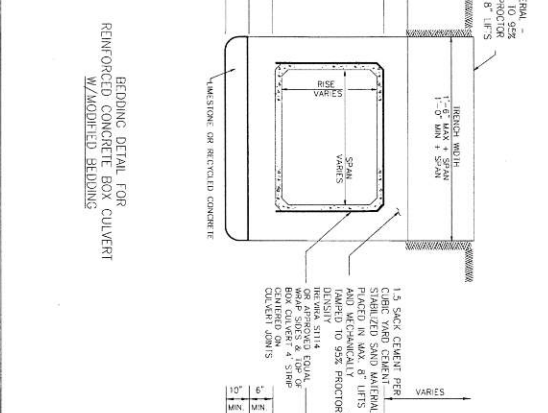
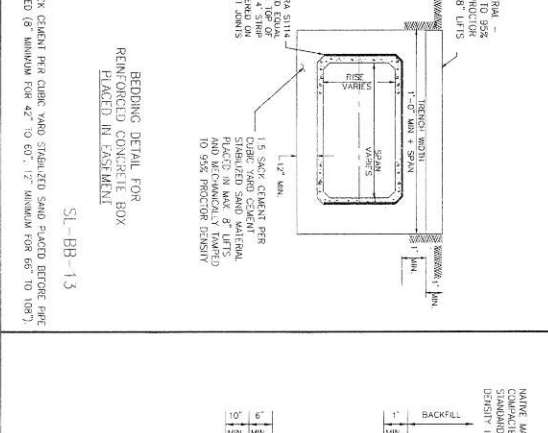
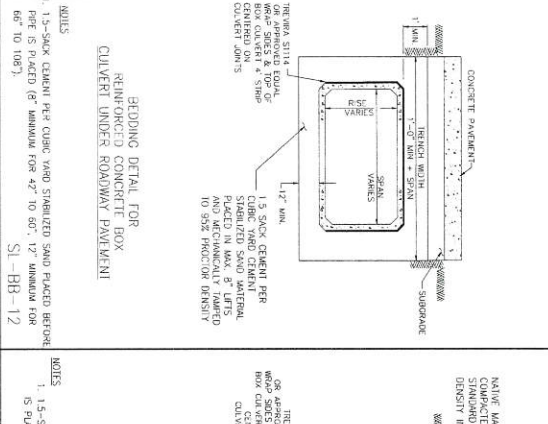
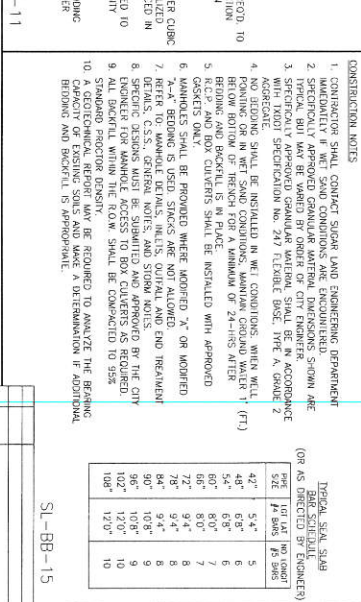
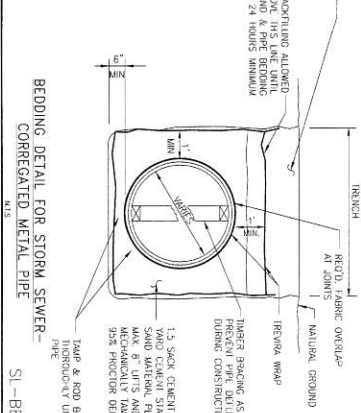
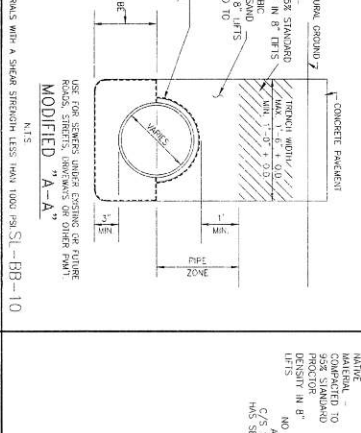
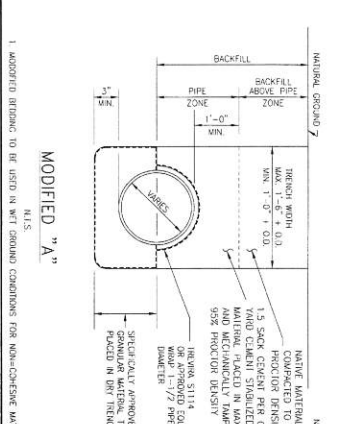
REINFORCED CONCRETE PIPE UNDER ROADWAY PAVEMENT



REINFORCED CONCRETE PIPE UNDER ROADWAY PAVEMENT



REINFORCED CONCRETE PIPE UNDER ROADWAY PAVEMENT



CONSTRUCTION NOTES:

- CONTRACTOR SHALL CONTACT SOIL AND ENGINEERING DEPARTMENT IMMEDIATELY IF WET SAND CONDITIONS ARE ENCOUNTERED.
- SPECIFICALLY APPROVED GRANULAR MATERIAL DIMENSIONS SHOWN ARE TO BE USED UNLESS OTHERWISE NOTED.
- SPECIFICALLY APPROVED GRANULAR MATERIAL SHALL BE IN ACCORDANCE WITH MOST SPECIFICATION NO. 217 FLEXIBLE BASE, TYPE A GRADE 2.
- NO BEDDING SHALL BE INSTALLED IN WET CONDITIONS, WITH WELL PAVING OR IN WET SAND CONDITIONS, UNLESS CIRCUMSTANCES PERMIT.
- R.C.P. AND BOX CULVERTS SHALL BE INSTALLED WITH APPROVED GASKETS ONLY.
- MANHOLES SHALL BE PROVIDED WHERE ADORDED "X" OR MODIFIED "A-A" DETAILS ARE SHOWN.
- REFER TO MANHOLE DETAILS, DETAILS, OUTCALL AND END TREATMENT DETAILS, C.S.S., GENERAL NOTES, AND SYMBOL NOTES.
- SPECIFIC DIMENSIONS MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER, C.S.S., GENERAL NOTES, AND SYMBOL NOTES.
- ALL BEDDING WITHIN THE ROW SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- A GEOLOGICAL REPORT MAY BE REQUIRED TO ANALYZE THE BEARING CAPACITY OF THE SOILS AND TO DETERMINE THE APPROPRIATE BEDDING AND BACKFILL IS APPROPRIATE.

TERMINAL SEAL SLAB (OR AS SHOWN IN DETAILS)

DEPTH	THICKNESS	CONCRETE STRENGTH
4"	5.4"	4000 PSI
6"	6.8"	4000 PSI
8"	8.2"	4000 PSI
10"	9.6"	4000 PSI
12"	11.0"	4000 PSI
14"	12.4"	4000 PSI
16"	13.8"	4000 PSI
18"	15.2"	4000 PSI
20"	16.6"	4000 PSI
22"	18.0"	4000 PSI
24"	19.4"	4000 PSI
26"	20.8"	4000 PSI
28"	22.2"	4000 PSI
30"	23.6"	4000 PSI
32"	25.0"	4000 PSI
34"	26.4"	4000 PSI
36"	27.8"	4000 PSI
38"	29.2"	4000 PSI
40"	30.6"	4000 PSI
42"	32.0"	4000 PSI

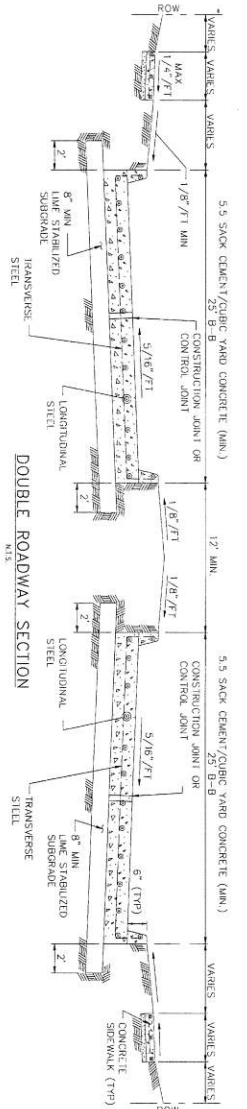
REINFORCED CONCRETE PIPE UNDER ROADWAY PAVEMENT

CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

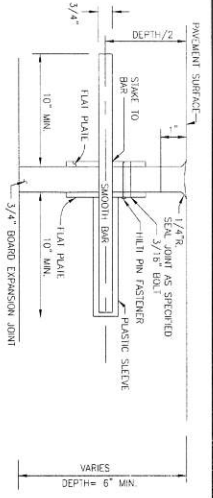
CONSTRUCTION PLANS FOR
THE WILKINS AT RIVERSIDE
STORM SEWER PIPE BEDDING
AND BACKFILL DETAILS

SL-20

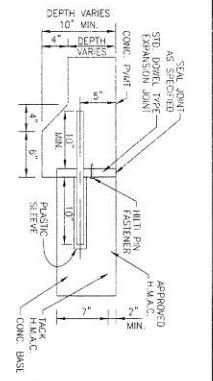
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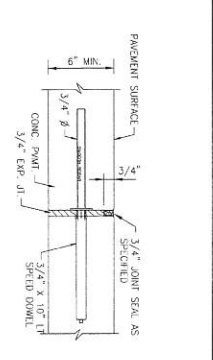
DOUBLE ROADWAY SECTION
N.T.S.



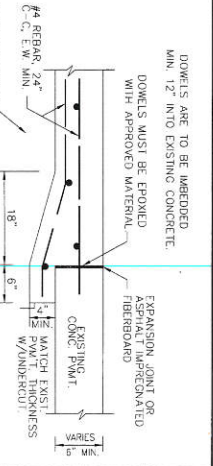
DOWEL TYPE EXPANSION JOINT
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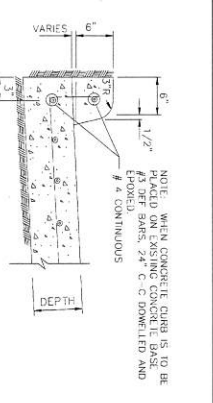
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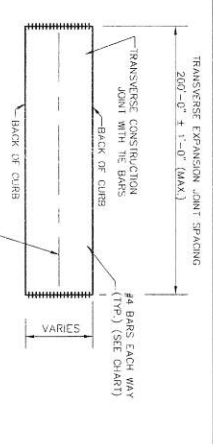
SPEED DOWEL EXPANSION JOINT
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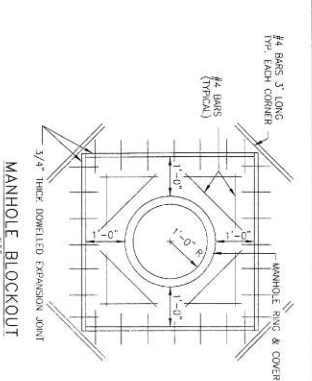
UNDERCUT DETAIL WITH HEADER
N.T.S.



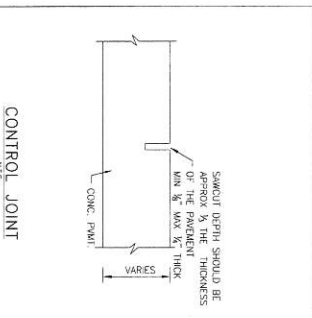
CONCRETE CURB
N.T.S.



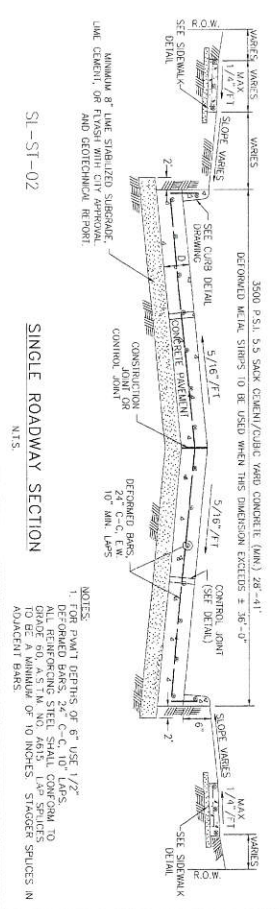
TRANSVERSE EXPANSION JOINT SPACING
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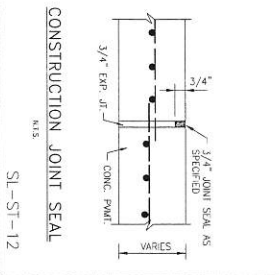
MANHOLE BLOCKOUT
N.T.S.



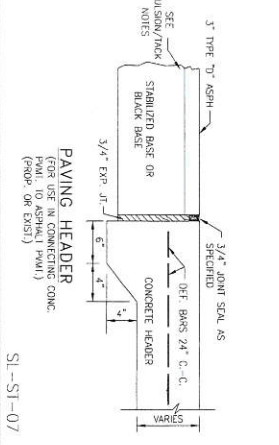
CONTROL JOINT
N.T.S.



SINGLE ROADWAY SECTION
N.T.S.



CONSTRUCTION JOINT SEAL
N.T.S.



PAVING HEADER
N.T.S.

CONSTRUCTION NOTES:

1. ALL CONCRETE SHALL BE 3000 PSI STRENGTH CONCRETE, TYPE #4 BARS 24 INCHES C-C. E-W IS THE MINIMUM ACCEPTABLE SPACING FOR CONCRETE. SEE SHEET 2.
2. 7' MAX. 5.5 SACK CEMENT/1000 YD CONCRETE, 3000 PSI STRENGTH CONCRETE, WITH #4 BARS 18 INCHES C-C. IS THE MINIMUM ACCEPTABLE SPACING FOR CONCRETE. SEE SHEET 2.
3. EPOCH (8) NOT 5.5 SACK 3000 PSI @ 28 DAYS. REINFORCED WITH #4 18" C-C. EACH WAY IS THE MINIMUM ACCEPTABLE SPACING FOR CONCRETE.
4. MINIMUM ACCEPTABLE SPACING FOR CONCRETE SHALL BE 18" C-C. EACH WAY IS THE MINIMUM ACCEPTABLE SPACING FOR CONCRETE.
5. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CHANGE IN WIDTH AND ALL POINTS OF CHANGE IN LENGTH. SEE SHEET 2.
6. TRANSVERSE CONTROL JOINTS ARE REQUIRED AT MAXIMUM SPACING OF 30' C-C. AND PERPENDICULAR TO THE DIRECTION OF TRAFFIC. SEE SHEET 2.
7. PAVEMENT FINISH SHALL BE SMOOTH BROOK FINISH. CURING COMPOUND REQUIRED ON ALL CONCRETE.
8. STOP WATER PENETRATION PROTECTION SHALL BE DESIGNED, CONSTRUCTED, MAINTAINED AND SHALL BE IN TOTAL COMPLIANCE WITH THE STOP WATER MANUAL OF THE CITY OF SUGAR LAND CITY ENGINEERS' MANUAL.
9. REFER TO GENERAL, C.E.S.S. AND PAVEMENT NOTES.

CONCRETE PAVEMENT CONSTRUCTION DETAILS

THE VILAS AT RIVERSTONE

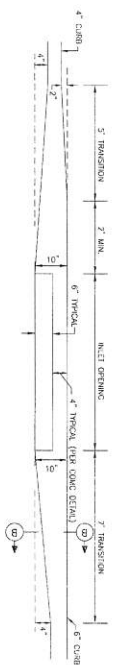
CITY OF SUGAR LAND, TEXAS
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR

CONCRETE PAVEMENT CONSTRUCTION DETAILS

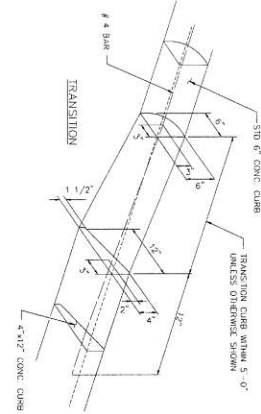
SL-21

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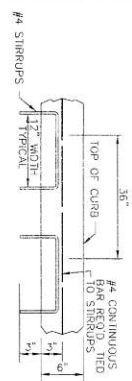
TYPICAL CURB TRANSITION FOR INLET INSTALLATION

SL-ST-13



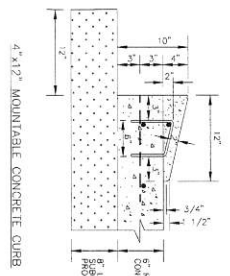
TYPICAL CURB TRANSITION

SL-ST-15



TYPICAL CONCRETE CURB REINFORCING

SL-ST-16



4\"/>

- NOTES:
- 1) 110 LBS. OF APPROVED NON-METALLIC FIBER MESH PER CY IN 4\"/>
 - 2) #4 RE-BAR STRIPS TO BE PLACED AT INTERVALS OF 7\"/>
 - 3) #4 RE-BAR LONGITUDINAL SHALL BE TIED TO EACH STRIP
 - 4) MOUNTABLE CURB ONE ALLOWED ON S.S.I. (O.I.) UNLESS OTHERWISE INDICATED BY OTHER NOTES

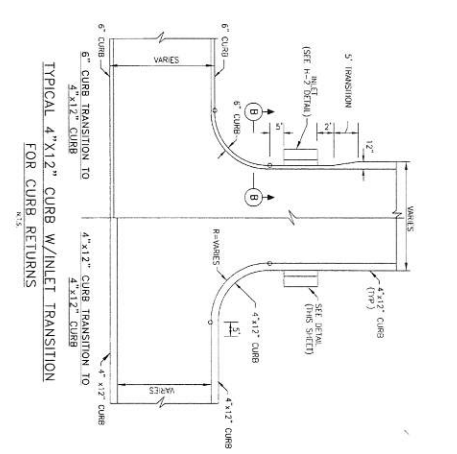
SL-ST-17



4-INCH x 12-INCH TRANSITION CURB

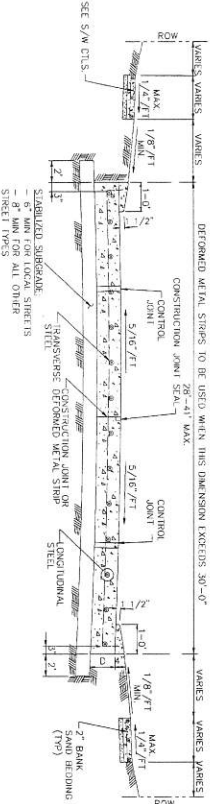
- 4\"/>
1. 6-INCH CONCRETE CURB TO BE CONSTRUCTED ON ALL SPANNEGS, ISLANDS WITH EITHER 6-INCH CONCRETE CURB OR 4-INCH x 12-INCH CONCRETE CURB
 2. REINFORCED CONCRETE CURB TO BE FORMED SEPARATE FROM TRANSVERSE JOINTS
 3. TRANSVERSE JOINTS TO BE 4-INCH x 12-INCH CONCRETE REINFORCED STEEL AS SHOWN IN 4\"/>
 - 5 TO BE INSTALLED

SL-ST-18



TYPICAL 4\"/>

SL-ST-14






TYPICAL SINGLE ROADWAY SECTION FOR CONCRETE PAVEMENT WITH 4\"/>

SL-ST-19

- CONSTRUCTION NOTES:
1. 6 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 24 INCHES C-C, E.M. IS THE MINIMUM ACCEPTABLE PAVEDBY CONSTRUCTION FOR RESIDENTIAL STREETS.
 2. 7 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI MINIMUM ACCEPTABLE PAVEDBY CONSTRUCTION FOR COLLECTION STREETS
 3. 50# (8) INCH, 5.5 SACK, 3500 PSI, @ 24\"/>
 - 4. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURB CURVE, POINTS OF JUNCTURE AND ALL INTERSECTION CURB RETURN POINTS (SEE ITEM 3.60 (K) ITEM 4.39) AND TPOOT DMS-5310, CLASS-2
 - 5. TRANSVERSE CONTROL JOINTS ARE REQUIRED AT MAXIMUM SPACING OF 20'-0\"/>
 - 6. PAVEMENT FINISH SHALL BE BAKER BROOK FINISH - CURING COMPOUND ON ALL CONCRETE.
 - 7. SLOTTED WATER POLLUTION PROTECTION SHALL BE RESPECTED CONSTRUCTION QUALITY MANUAL OF THE CITY OF SUGAR LAND.
 - 8. UNDESIRABLE SURFSOAF SHALL BE EXCAVATED AND REPLACED WITH CEMENT STABILIZED SAND.
 - 9. USE 1\"/>
 - 10. EDGE ALL CURBS WITH EDGING TOOL.
 - 11. DOWEL SHALL BE 3/4\"/>
 - 12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF SUGAR LAND OF ANY EROSION PROBLEMS FROM TO CONSTRUCTION OF DRAINAGE.
 - 13. REFER TO GENERAL, C.S.S., AND PAVEMENT NOTES.
 - 14. 10 LBS. OF APPROVED POLYPROPYLENE FIBER MESH PER C/Y IN 4\"/>

SL-ST-20

DATE	NO.	DESCRIPTION

CITY OF SUGAR LAND, TEXAS
 CONSTRUCTION DMS-5310
 ENGINEERING DEPARTMENT
 THE WILKS AT RIVERSTONE
 CONSTRUCTION DETAILS
 SL-23
 SHEET OF

HYPER-OXIDIZED WATER NOTES

1. HYPER-OXIDIZED WATER SHALL NOT BE DISCHARGED TO THE STORM SEWER OR DRAINAGE SYSTEM UNLESS THE OXIDIZER CONCENTRATION IS 0.1% OR GREATER. HYPER-OXIDIZED WATER SHALL BE STORED IN A CONTAINER OR BY OTHER MEANS UNTIL NEEDED FOR USE.
2. HYPER-OXIDIZED WATER SHALL BE STORED IN A CONTAINER OR BY OTHER MEANS UNTIL NEEDED FOR USE.
3. HYPER-OXIDIZED WATER SHALL BE STORED IN A CONTAINER OR BY OTHER MEANS UNTIL NEEDED FOR USE.
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5. HYPER-OXIDIZED WATER SHALL BE STORED IN A CONTAINER OR BY OTHER MEANS UNTIL NEEDED FOR USE.
6. HYPER-OXIDIZED WATER SHALL BE STORED IN A CONTAINER OR BY OTHER MEANS UNTIL NEEDED FOR USE.

SPILL AND LEAK RESPONSE NOTES

1. PERSONS OR SERVICES THAT EXCEED THE REPORTABLE QUANTITY (RQ) FOR OIL AND HAZARDOUS SUBSTANCES SHOULD BE TRAINED IN ACCORDANCE WITH THE FEDERAL AND STATE REGULATIONS.
2. SPILL AND LEAK RESPONSE PROCEDURES SHALL BE POSTED IN A READILY AVAILABLE AREA FOR ACCESS BY ALL PERSONS AND SERVICES.
3. SPILL AND LEAK RESPONSE PROCEDURES SHALL BE POSTED IN A READILY AVAILABLE AREA FOR ACCESS BY ALL PERSONS AND SERVICES.
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6. SPILL AND LEAK RESPONSE PROCEDURES SHALL BE POSTED IN A READILY AVAILABLE AREA FOR ACCESS BY ALL PERSONS AND SERVICES.
7. SPILL AND LEAK RESPONSE PROCEDURES SHALL BE POSTED IN A READILY AVAILABLE AREA FOR ACCESS BY ALL PERSONS AND SERVICES.

SANITARY WASTE NOTES


1. THE CONTRACTOR SHALL PROVIDE AN APPROPRIATE NUMBER OF PORTABLE TOILETS FOR THE WORKERS ON THE SITE AT ALL TIMES.
2. PORTABLE TOILETS SHALL BE MAINTAINED AND REPLENISHED AS NEEDED.
3. PORTABLE TOILETS SHALL BE MAINTAINED AND REPLENISHED AS NEEDED.
4. PORTABLE TOILETS SHALL BE MAINTAINED AND REPLENISHED AS NEEDED.
5. PORTABLE TOILETS SHALL BE MAINTAINED AND REPLENISHED AS NEEDED.
6. PORTABLE TOILETS SHALL BE MAINTAINED AND REPLENISHED AS NEEDED.
7. PORTABLE TOILETS SHALL BE MAINTAINED AND REPLENISHED AS NEEDED.
8. PORTABLE TOILETS SHALL BE MAINTAINED AND REPLENISHED AS NEEDED.

SURGRADE STABILIZATION NOTES

1. MAINTAIN THE INTEGRITY OF THE SURGRADE STABILIZATION BY THE CONTRACTOR UNTIL THE WORK IS COMPLETED.
2. MAINTAIN THE INTEGRITY OF THE SURGRADE STABILIZATION BY THE CONTRACTOR UNTIL THE WORK IS COMPLETED.
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8. MAINTAIN THE INTEGRITY OF THE SURGRADE STABILIZATION BY THE CONTRACTOR UNTIL THE WORK IS COMPLETED.

DEBRIS AND TRASH NOTES

1. ALL WASTE SOURCES AND STORAGE AREAS SHALL BE LOCATED AT A MINIMUM 50 FEET FROM ANY WATERWAY OR DRAINAGE SYSTEM.
2. WASTE SHALL BE STORED IN A MANNER THAT PREVENTS SPILLAGE AND LEAKAGE.
3. WASTE SHALL BE STORED IN A MANNER THAT PREVENTS SPILLAGE AND LEAKAGE.
4. WASTE SHALL BE STORED IN A MANNER THAT PREVENTS SPILLAGE AND LEAKAGE.
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13. WASTE SHALL BE STORED IN A MANNER THAT PREVENTS SPILLAGE AND LEAKAGE.
14. WASTE SHALL BE STORED IN A MANNER THAT PREVENTS SPILLAGE AND LEAKAGE.
15. WASTE SHALL BE STORED IN A MANNER THAT PREVENTS SPILLAGE AND LEAKAGE.

DATE: _____	SCALE: _____
BY: _____	REVISION: _____
CHECKED BY: _____	DATE: _____
APPROVED BY: _____	DATE: _____
	
CITY OF SUGAR LAND, TEXAS ENGINEERING DEPARTMENT CONSTRUCTION PLANS FOR THE WILKS AT RIVERSTONE	
GENERAL EROSION CONTROL NOTES	SHEET 33 OF 33

Davis, DeWayne

From: Shawn Byron <sbyron@kgadeforest.com>
Sent: Tuesday, February 02, 2016 10:22 AM
To: Davis, DeWayne
Cc: landscape@kgadeforest.com
Subject: StoneCreek Estates Lighting
Attachments: County Comments.pdf; StoneCreek Estates Electrical.pdf; StonecreekEstatesRecCenter Lighting Cutsheets.pdf

DeWayne,

Attached is the revised drawings for the lighting and electrical for the StoneCreek Estates Recreation Center. I have provided the revised drawings, lighting cutsheets, and the original county comments. I believe that we have addressed the maximum of 3.0fc, have added a more defined limit of work, and added the 20ft buffer line on the photometric drawings. Please let me know if you have any questions and/or comments. I believe this is the last item that is needed prior to receiving final approval through Fort Bend County.

Shawn Byron
KGA DeForest Design, LLC
LANDSCAPE ARCHITECTURE
23501 Cinco Ranch Blvd., Suite A-250
Katy, TX 77494
Phone: 281.646.1602 Fax: 281.646.1641
Email: sbyron@kgadeforest.com

If you have any problems reading this email or any attachments, please contact us immediately.

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**PERPETUAL BOND COVERING CABLE, CONDUIT AND/OR POLE LINE
ACTIVITY IN, UNDER, ACROSS OR ALONG FORT BEND COUNTY ROADS**

(AUTHORIZED)

BOND NO LPM9204965

THE STATE OF TEXAS

§

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF FORT BEND

§

THAT WE, Jaho, Inc., 2003 Wilson Road, Humble, Texas 77396 Whose address is the Principal, and Fidelity and Deposit Company of Maryland, a Corporation existing under and by virtue of the laws of the stated of Maryland and authorized to do an indemnifying business in the State of Texas, and whose principal office is located at 1400 American Lane, Tower I, 18th Floor, Schaumburg, IL 60196, whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought within said State is Tracy Haley and whose address is Zurich North America, 12222 Merit Dr., 8th Floor, Dallas TX 75251, hereinafter called the Surety, are held and firmly bound onto, **Robert E. Herbert, County Judge of Fort Bend County, Texas**, or his successors in office, in the full sum of Five Thousand and No/100----- Dollars (\$ 5,000.00) current, lawful money of the United States of America, to be paid to said **Robert E. Herbert, County Judge of Fort Bend County, Texas**, or his successors in office, to which payment well and truly to be made and done, we, the undersigned, bind ourselves and each of us, our heirs, executors, administrator, successors, assigns, and legal representatives, jointly and severally, by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT, WHEREAS, the above bounden principal contemplates laying, constructing, maintaining and/or repairing one or more cables, conduits, and/or pole lines in, under, across and/or along roads, streets and highways in the County of Fort Bend, and the State of Texas, under the jurisdiction of the Commissioners' Court of Fort Bend County, Texas, pursuant to the Commissioners' Court order adopted on the 1st day of December, A.D. 1980, recorded in Volume 13, of the Commissioners' Court Minutes of Fort Bend County, Texas, regulating same, which Commissioners' Court order is hereby referred to and made a part hereof for all purposes as though fully set out herein.

AND WHEREAS, the principal desires to provide Fort Bend County with a perpetual bond covering all such cable, conduit and/or pole line activity;

NOW, THEREFORE, if the above bounden principal shall faithfully perform all its cable, conduit and/or pole line activity (including, but not limited to the laying, constructing, maintaining and/or repair of cables, conduits and/or pole lines) in, under, across and/or along roads, streets and highways in the County of Fort Bend and State of Texas, under the jurisdiction of the Commissioners Court of Fort Bend County, Texas, pursuant to and in accordance with minimum requirements and conditions of the above mentioned Commissioners' Court order set forth and specified to be by said principal done and performed, at the time and in the manner therein specified, and shall pay over and make good and reimburse Fort Bend County, all loss and damages which Fort Bend County may sustain by reason of any failure or default on the part of said principal, then this obligation shall be null and void otherwise to remain in full force and effect.

This bond is payable at the County Courthouse in the County of Fort Bend and State of Texas.

It is understood that at any time Fort Bend County deems itself insecure under this bond, it may require further and/or additional bonds of the principal.

EXECUTED this 4th day of February, 2016.

Jaho, Inc
PRINCIPAL

BY

Fidelity and Deposit Company of Maryland
SURETY

BY Jessica Richmond, Attorney-in-Fact

Greg J. Pollard
Vice President

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **THOMAS O. MCCLELLAN, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Philip N. BAIR, Eric S. FEIGHL and Jessica RICHMOND, all of Houston, Texas, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings, EXCEPT bonds on behalf of Independent Executors, Community Survivors and Community Guardians.** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 25th day of November, A.D. 2015.

ATTEST:

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**



Eric D. Barnes

By: _____

*Secretary
Eric D. Barnes*

Thomas O. McClellan

*Vice President
Thomas O. McClellan*

State of Maryland
County of Baltimore

On this 25th day of November, A.D. 2015, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Maria D. Adamski

Maria D. Adamski, Notary Public
My Commission Expires: July 8, 2019



EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 4th day of February, 2014.



Gerald F. Haley

Gerald F. Haley, Vice President