

REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT

On this 26th day of January, 2016, Commissioners Court came on to be heard and reviewed the accompanying notice of Millis Equipment Rental, LLC
Job Location Harvest Corner Dr & Harvest Garden Blvd, Richmond, TX 77406
Date 1/12/2016 Bond No. 106404933, Permit No. 2016-5000 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 Meyer, seconded by Commissioner Patterson, 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: [Signature]
County Engineer

By: N/A
Drainage District Engineer/Manager

Presented to Commissioners Court and approved.
Recorded in Volume 1-26-16
Minutes of Commissioners Court

Clerk of Commissioners Court
By: [Signature]
Deputy

**PERFORMANCE BOND COVERING ALL CABLE, CONDUIT AND/OR POLE LINE
ACTIVITY IN, UNDER, ACROSS OR ALONG FORT BEND COUNTY ROAD**

AUTHORIZED

BOND NO. 106404933

THE STATE OF TEXAS

§

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF FORT BEND

§

THAT WE, Millis Equipment Rental, LLC whose address is 931 Pheasant Valley Dr., Suite 200, Missouri City, Texas 77489 Texas, hereinafter called the Principal, And Travelers Casualty and Surety Company of America, a Corporation existing under and by virtue of the laws of the state of Connecticut and authorized to do an indemnifying business in the state of Texas, and whose principal office is located at One Tower Square, Hartford, Connecticut 06183, whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought whining said state is Texas and Whose address is 1301 E. Collins Blvd., Suite 111C, Richardson, Tx 75081, hereinafter called the Surety, and held and firmly bound unto, Robert e. Hebert, County Judge of Fort Bend County, Texas, or his successors in office, in the full sum of Five Thousand Dollars & No/100's Dollars (\$ 5,000.00) current, lawful money of the United States of America, to be paid to said Robert E. Hebert, 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, administrators, 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, commercial driveway and median openings or modifications 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 performance bond covering all such cable, conduit and/or pole line activity, commercial driveway and median openings or modifications;

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, construction, maintenance and/or repair of cables, conduits and/or pole lines) in, under, across and/or along roads, streets and highways, commercial driveway and median openings or modifications 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 8th day of January, 2016.

Millis Equipment Rental, LLC

PRINCIPAL

BY

Travelers Casualty and Surety Company of America

SURETY

BY Roxanne G. Hebert, Attorney-in-Fac



POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In Fact No. 230155

Certificate No. 006596779

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Kurt A. Risk, Sue Kohler, Sharon Cavanaugh, Misty D. Amaya, Francine Hay, David R. Groppe, Sharen R. Groppe, Roxanne G. Hebert, and Beverly A. Ireland

of the City of Houston, State of Texas, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 12th day of November 2015

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut
City of Hartford ss.

By: [Signature]
Robert L. Raney, Senior Vice President

On this the 12th day of November 2015, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal. My Commission expires the 30th day of June, 2016.



[Signature]
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 8th day of January, 2016.

WARNING: THIS POWER OF ATTORNEY IS INVALID WITHOUT THE RED BORDER

Kevin E. Hughes
Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at www.travelersbond.com. Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.



IMPORTANT NOTICE

TO OBTAIN INFORMATION OR MAKE A COMPLAINT:

You may contact Travelers Casualty & Surety Company of America, Travelers Casualty & Surety Company, Travelers Indemnity Company, Standard Fire Insurance Company and/or Farmington Casualty Company for information or to make a complaint at:

Travelers Bond
Attn: Claims
1500 Market Street
West Tower, Suite 2900
Philadelphia, PA 19102

(267) 675-3130
(267) 675-3102 Fax

You may contact the Texas Department of Insurance to obtain the information on companies, coverages, rights or complaints at:

Texas Department of Insurance
P.O. Box 149104
Austin, TX 78714-9104

(800) 252-3439

ATTACH THIS NOTICE TO YOUR BOND. This notice is for information only and does not become a part or a condition of the attached document and is given to comply with Section 2253-021, Government Code, and Section 53.202, Property Code, effective September 1, 2001.

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. 2016-5000

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: 106404933
- 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

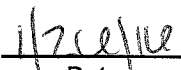
Precinct Commissioner Acknowledgment _____
Date

(4)
Drainage District Approval when applicable

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

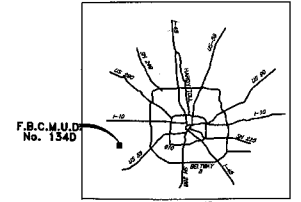


Johnny Ortega CFM/Permit Administrator



Date

CONSTRUCTION OF SITE WORK IN HARVEST GREEN RECREATION CENTER FOR FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT No. 134D



LOCATION MAP
FORT BEND COUNTY ENGINEER

ENGINEER: *Richard W. Stollers, P.E.*
P.E. RICHARD W. STOLLERS, P.E.

DATE: 11/7/16

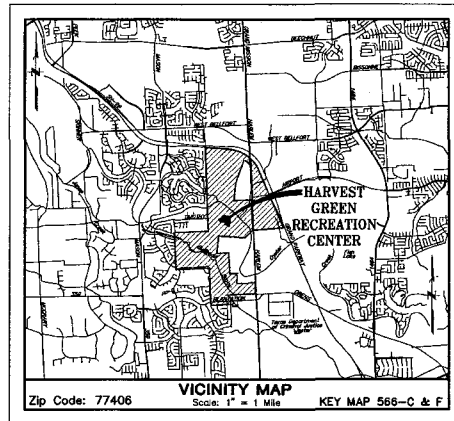
THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT COMMENCED IN ONE (1) YEAR FROM DATE OF APPROVAL.

APPROVED: *[Signature]*
DEVELOPMENT COORDINATOR

DATE: 11/7/16

INDEX OF DRAWINGS

<u>SHEET No.</u>	<u>TITLE</u>
1	COVER SHEET & INDEX
2	UTILITY PLAN
3	DRAINAGE PLAN
4	DRAINAGE CALCULATION TABLES
5	DIMENSION AND PAVING PLAN
6	FIRE ACCESS ROAD
7	GRADING PLAN
8	GENERAL CONSTRUCTION NOTES
<u>DETAILS</u>	
9	MISCELLANEOUS DETAILS I
10	MISCELLANEOUS DETAILS II
11	MISCELLANEOUS DETAILS III
12	PAVEMENT MARKING DETAILS
13	STORM WATER POLLUTION PREVENTION PLAN
14	STORM WATER POLLUTION PREVENTION PLAN DETAILS
15	TxDOT PED-12 CURB RAMPS



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

Approval by Fort Bend County 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 engineer professional JONES & CARTER, INC.

Contractor shall notify the Fort Bend County Engineering Department at least 48 hours prior to commencement at E-MAIL: CONSTRUCTION@FORTBENDCOUNTYTX.GOV

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

Contractor shall notify the City of Houston, Department of Public Works and Engineering, Office of the City Engineer, 48 hours before starting work on this project. Telephone No. 832-394-9088



I, Christopher C. Jousan, 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.

[Signature] 12/12/2015
Date
Christopher C. Jousan, P.E.

DECEMBER 2015
JONES | CARTER
Texas Board of Professional Engineers Registration No. F-439
22350 Merchants Way, Suite 170, Katy, TX 77449 • 832.913.4000

HARVEST GREEN RECREATION CENTER

JONES | CARTER
MKT, TEXAS

GENERAL NOTES:

1. CONTRACTOR IS TO FIELD VERIFY EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. ALL TYPE "A" INLETS TO BE BLOCKED OUT FROM PROPOSED REINFORCED CONCRETE PAVEMENT. (SEE TYPICAL PAVEMENT BLOCK OUT DETAIL SHEET 8)
3. ALL BACKFLOW PREVENTION DEVICES MUST BE TESTED AND CERTIFIED UPON INSTALLATION BY A RECOGNIZED BACKFLOW PREVENTION ASSEMBLY TESTER.
4. ACCORDING TO THE DISTRICTS RATE ORDER POOL OVERFLOW AND BACKWASH ARE REQUIRED TO CONNECT TO THE DISTRICT'S SANITARY SYSTEM.
5. ALL WATERLINES MUST HAVE A MINIMUM DEPTH OF FOUR FEET (4') BELOW TOP OF CURB.

WATER LINE-SANITARY SEWER CROSSING
 PLACE ONE FULL SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY SEWER PIPE COVERED AT CROSSING. EMBED SANITARY SEWER PIPE WITH GEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEAMY PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PROVIDE RESTRAINED JOINT PRESSURE RATED (MIN 100 PSI) SANITARY (SEE SANITARY SEWER CONSTRUCTION NOTES - SHEET 3 - PROTECTION REQUIREMENTS AT WATERLINE - SANITARY SEWER CROSSING), 24" MIN. CLEARANCE. NO SEPARATE PAY.

**HARVEST GREEN
 SEC 6
 Plat No. 20150123
 FBCPR**

100-Year Flood Plain
 According to Map No. 4815700140L of The Federal Emergency Management Agency's Flood Insurance Rate Maps dated April 2, 2014, the subject tract is within the Unshaded Zone "X". Unshaded Zone "X" is defined as areas determined to be outside the 500-Year Flood Plain.

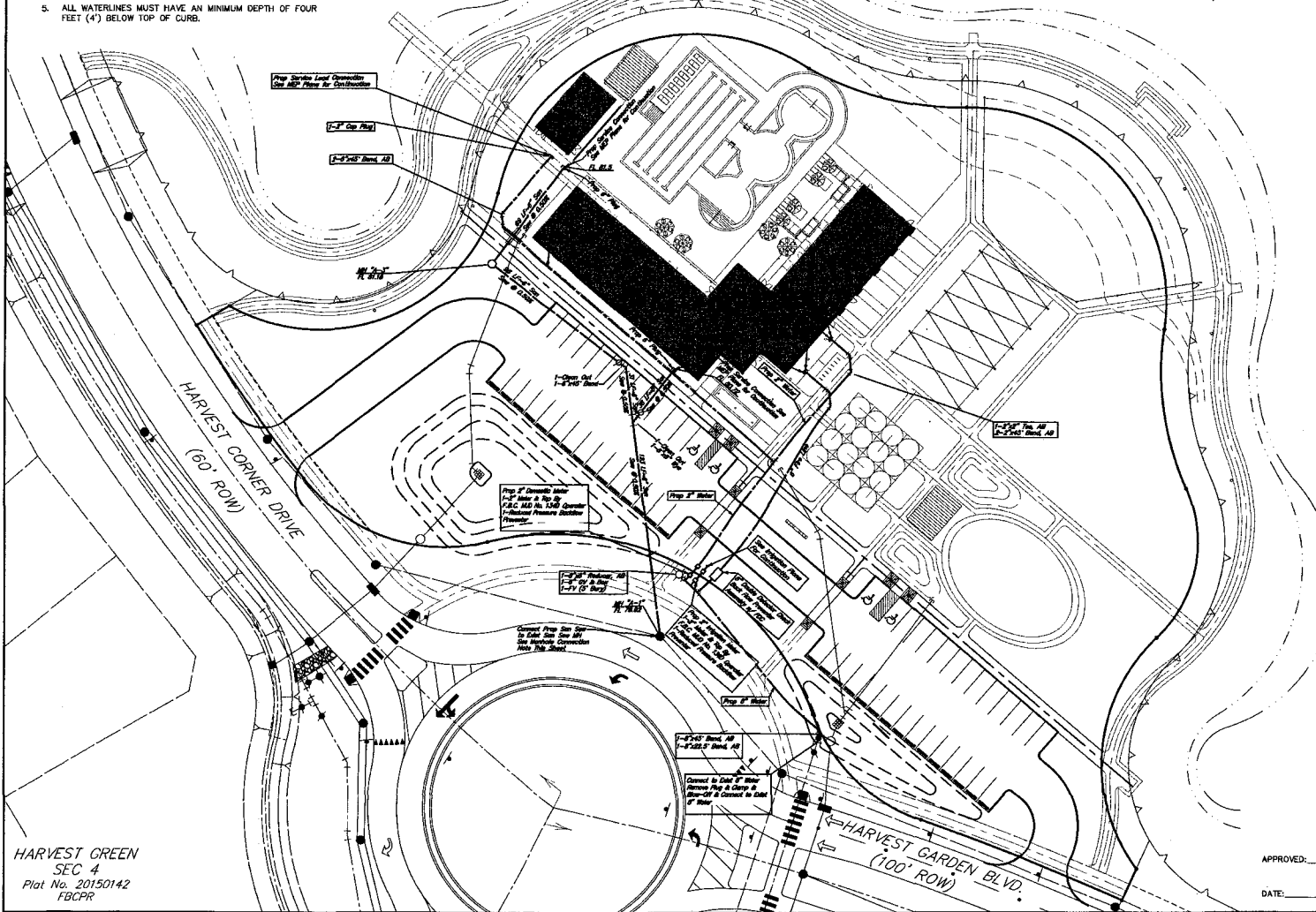
Note: The 100-Year base flood elevation is approximately 83.0 feet as per the FEMA Insurance Rate Map for Fort Bend County, Texas Community Panel No. 4815700140L, Dated April 2, 2014. The 100-Year Flood Plain elevation 83.0, is contained in the channel north of the retention ponds.

BENCHMARK
 2ND FORT BEND COUNTY LIBAR BENCHMARK NO. 25 "IN" HAS AN ASPHALT LOCATED 2.5' WEST OF THE FIRST MEGAN ROSE WEST OF FAL. 358 ON HARVEST BLVD. ELEVATION=44.08 HAVCRS (2001 ADJUSTMENT)

STANDARD MANHOLE CONNECTION NOTE
 Contractor shall use care to make opening in wall of existing manhole. Opening shall not be more than 3", not less than 1" greater in diameter than the outside diameter of the proposed pipe. Proposed pipe shall not protrude more than 3" past the inside face of manhole wall. Fill entire void around pipe with non-shrink waterproof grout or use lead and breakout/surge invert. Backfill excavation around existing manhole with cement sand.
 Contractor is responsible for field verification of all existing utility locations. All existing utilities are shown in approx. Locations only.

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



**HARVEST GREEN
 SEC 4
 Plat No. 20150142
 FBCPR**

APPROVED:
 DEVELOPMENT COORDINATOR
 DATE: 11/7/16

NO.	DATE	REVISIONS	APP.
FORT BEND COUNTY MUD No. 1340 FORT BEND COUNTY, TEXAS HARVEST GREEN RECREATION CENTER UTILITY PLAN			
JONES CARTER Texas Board of Professional Engineers Registration No. F-439 2330 Mendota Way, Suite 170, Katy, TX 77449-8319 (800)			
SCALE:	1"=30'	DGN. BY:	OMM
DATE:	DECEMBER 2015	DWN. BY:	JCG
JOB NO.:	5545-0031-90	DWG. NO.:	
SUBMITTED:		SURV. BY:	
		F.B. NO.:	
SHEET NO. 2 OF 15			

P:\PROJECTS\5545-Jordan Development\1-CAD\2015-20 Harvest Green Rec Center\DWG\General\HARVEST GREEN SEC 6\UTL.DWG, Date: 22/2015 - 2:32pm

100-Year Flood Plain
 According to Map No. 49157C0140L of the Federal Emergency Management Agency's Flood Insurance Rate Maps dated April 2, 2014, the subject tract is within the Unshaded Zone "X"; Unshaded Zone "X" is defined as areas determined to be outside the 500-Year Flood Plain.

Note: The 100-Year base flood elevation is approximately 83.0 feet as per the FEMA Insurance Rate Map for Fort Bend County, Texas Community Panel No. 49157C0140L, Dated April 2, 2014. The 100-Year Flood Plain elevation 83.0, is contained in the channel north of the detention pond.

KEY NOTES

CP-20 24" DIA. 30' SEE A/TM. SHEET #

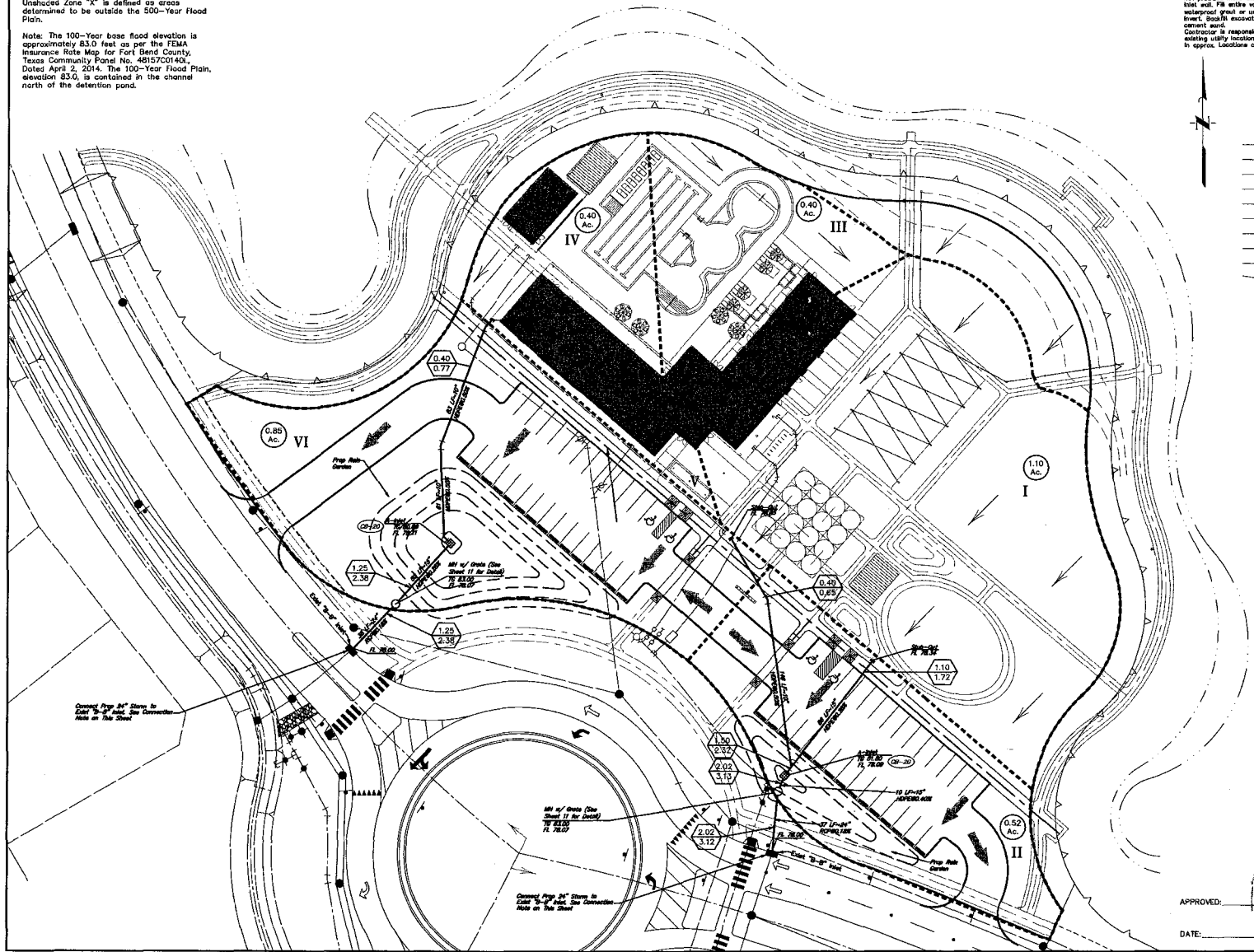
STANDARD INLET CONNECTION NOTE
 Contractor shall use care to make opening in wall of existing inlet. Opening shall not be more than 3", nor less than 1" greater in diameter than the existing diameter of the proposed pipe. Proposed pipe shall not protrude more than 3" past the battle face of inlet wall. Fill void around pipe with non-shrink wet-packed grout or use boot and grommet/straps insert. Backfill excavation around existing inlet with compact earth.
 Contractor is responsible for field verification of all existing utility locations. All existing utilities are shown in as-placed locations only.

BENCH MARK
 2000 FORT BEND COUNTY LEARN BENCHMARK NO. 25, "M" MARK IN ASPHALT LOCATED 2.5' WEST OF THE FIRST METAL POST WEST OF F.M. 358 ON HIGHWAY 90-A. ELEVATION=84.09 NAVARS (2001 ADJUSTMENT)
 NOTE: ALL ELEVATIONS SHOWN WERE DERIVED FROM GPS/RTK OBSERVATIONS AND UTILIZED GEOLINK.



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 |
| | | UE |
| | | WLE |
| | | SSE |
| | | STM SE |
| | | DE |
| | | AE |
| | | INLET |
| | | DRAINAGE AREA IN ACRES |
| | | RUNOFF IN C.F.S. |
| | | DRAINAGE AREA LINE |
| | | DRAINAGE AREA NUMBER |
| | | EXTREME EVENT SHEET FLOW |
| | | EXTREME EVENT SHEET FLOW (PER LANDSCAPE GRADING) |



NO.	DATE	REVISIONS	APP.
FORT BEND COUNTY MUD No. 134D FORT BEND COUNTY, TEXAS HARVEST GREEN RECREATION CENTER DRAINAGE PLAN			
JONES CARTER Texas Board of Professional Engineers Registration No. F-439 2230 Merchants Way, Suite 374, Katy, TX 77449 • 832.913.4000			
SCALE:	1"=30'	DON. BY:	CJM
DATE:	DECEMBER 2015	DWN. BY:	JLG
JOB NO.:	5540-0031-00	DWG. NO.:	
SUBMITTED:		SURV. BY:	
		P.R. NO.:	
APPROVED: CHRISTOPHER C. JOHNSON REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS 12/22/2015		SHEET NO. 3 OF 10	

2-Year

SYSTEM A		Check Basin	0.40	0.40	0.55	0.2	3.51	7.18	0.77	1.56	22.51	144	10	0.50	0.02	1.08	3.08	0.72	78.95	78.21	1.42	0.11	80.28	80.19	86.90	85.50	
Subsoil																											
Check Basin	MIS w/ gate		0.85	1.22	0.25	0.7	1.45	2.90	2.28	4.87	14.29	70	11	0.20	0.02	3.70	3.02	0.84	78.21	78.07	1.54	0.12	80.12	80.07	81.00	81.00	
MIS w/ Gate	Inlet Inlet		0.80	1.23	0.25	0.7	1.44	2.86	2.26	4.85	14.17	70	24	0.18	0.03	3.62	3.00	0.87	78.07	78.05	0.73	0.01	80.00	80.00	81.00	81.00	
Existing Storm System		Inlet	28	0.60	1.85	0.10	1.0	1.33	6.89	1.79	7.00	28.14	46	24	1.02	0.62	25.62	7.07	0.36	78.00	77.50	1.00	0.02	80.00	80.00	79.50	80.00
28			1.28	27.97	0.15	1.54	1.75	5.91	42.38	90.38	34.99	149	54	0.08	0.64	55.62	3.90	0.12	74.19	74.07	3.60	0.05	78.89	78.57	82.89	81.50	
29			0.60	27.97	0.15	1.54	2.72	5.82	43.92	90.03	37.78	156	54	0.08	0.63	55.62	3.90	0.12	74.07	73.95	2.60	0.05	78.87	78.45	81.60	81.00	
30			0.18	0.38	0.80	0.2	3.31	7.19	0.16	1.85	15.20	36	30	0.18	0.03	8.08	3.05	0.05	75.02	75.01	0.12	0.00	78.45	78.45	81.00	81.50	
31			0.33	0.33	0.35	0.2	3.53	7.20	0.56	1.31	10.14	47	24	1.00	0.07	23.28	7.41	0.36	78.00	77.50	0.28	0.04	80.00	80.00	79.50	81.00	
32			0.80	26.04	0.18	1.38	2.69	5.80	42.60	91.88	34.18	149	54	0.08	0.63	55.62	3.90	0.12	74.07	73.99	2.61	0.05	78.45	78.39	81.00	81.50	
33			2.50	2.50	0.15	1.1	1.20	4.82	4.52	9.37	10.34	63	24	0.18	0.03	8.08	3.05	0.05	75.00	75.77	1.44	0.04	80.00	77.99	77.77	81.74	
34			1.00	2.50	0.15	1.1	1.27	4.78	4.69	9.22	10.34	63	24	0.18	0.03	8.08	3.05	0.05	75.77	75.65	1.43	0.04	80.00	77.77	77.65	81.51	
35			32.24	32.24	0.15	1.03	2.07	4.27	34.29	115.64	33.65	149	54	0.12	0.02	68.12	4.28	0.08	72.00	72.04	3.42	0.00	80.00	78.11	81.11	82.04	
Inlet			0.46	0.46	0.15	1.0	1.50	7.10	0.88	1.81	12.72	27	24	1.00	0.07	23.28	7.41	0.36	78.14	77.64	0.20	0.00	80.00	80.15	79.64	81.14	
Inlet			0.22	0.22	0.15	1.1	1.74	7.28	0.61	0.80	22.68	47	24	2.50	0.10	20.77	11.30	0.15	77.60	77.51	0.18	0.00	80.00	79.60	79.51	81.18	
32			0.60	34.02	0.15	1.87	3.96	4.27	35.47	117.11	32.46	149	54	0.12	0.03	68.12	4.28	0.08	72.00	72.01	3.00	0.00	80.00	78.11	78.09	81.14	
33			0.80	69.20	0.15	2.59	2.64	5.77	36.19	207.88	38.78	170	72	0.10	0.03	127.00	4.49	0.15	71.62	71.50	3.40	0.05	80.00	78.89	78.89	81.14	

Storm System B		Wye	0.40	0.40	0.40	0.2	3.51	7.18	0.77	1.56	22.51	144	10	0.50	0.02	1.08	3.08	0.72	78.95	78.11	1.10	0.07	80.30	80.09	86.90	85.50
Subsoil																										
Subsoil	Wye		1.10	1.10	0.40	0.5	3.49	6.97	1.72	3.51	13.17	81	15	0.15	0.02	3.70	3.02	0.23	78.30	78.11	1.60	0.00	80.00	80.14	80.09	80.15
Wye	Check Basin		0.60	1.50	0.40	0.7	3.50	6.91	2.12	4.78	25.14	71	15	0.20	0.03	3.70	3.02	0.82	78.11	78.09	1.80	0.11	80.00	80.09	80.10	81.34
Check Basin	MIS w/ Gate		0.70	2.07	0.40	0.9	3.50	6.94	3.11	6.41	25.42	74	15	0.20	0.02	3.70	3.02	0.67	78.00	78.07	2.10	0.20	80.00	80.07	81.00	81.30
MIS w/ Gate	Inlet (Inlet start)		0.60	2.02	0.40	0.9	3.26	6.71	3.12	6.44	24.62	73	24	0.18	0.03	3.60	3.04	0.67	78.07	78.00	0.95	0.00	80.00	80.00	80.00	81.30
Existing Storm System		Wye (Inlet)	7	0.12	2.64	0.40	1.2	3.28	0.81	3.09	8.27	36	24	1.00	0.03	25.90	8.17	0.36	78.00	77.50	1.37	0.05	80.00	79.50	80.00	81.30
Inlet			7	0.15	0.65	0.40	0.3	3.40	7.09	1.94	14.27	39	24	1.00	0.03	35.90	8.15	0.36	78.00	77.50	0.00	0.00	80.00	79.50	81.00	81.30
7			6	0.10	1.20	0.40	1.5	3.45	7.08	1.81	10.45	140	24	0.18	0.03	8.00	3.04	0.43	77.50	77.00	1.00	0.05	81.00	79.10	81.00	81.30
6			0.60	61.50	0.15	2.18	2.80	6.00	78.12	167.58	21.46	150	60	0.07	0.03	108.70	4.24	0.15	73.80	73.40	3.20	0.00	80.00	73.30	78.80	81.20

100-Year

SYSTEM A		Check Basin	0.40	0.40	0.55	0.2	3.51	7.18	0.77	1.56	22.51	144	10	0.50	0.02	1.08	3.08	0.72	78.95	78.21	1.42	0.11	80.28	80.19	86.90	85.50	
Subsoil																											
Check Basin	MIS w/ gate		0.85	1.22	0.25	0.7	1.45	2.90	2.28	4.87	14.29	70	11	0.20	0.02	3.70	3.02	0.84	78.21	78.07	1.54	0.12	80.12	80.07	81.00	81.00	
MIS w/ Gate	Inlet Inlet		0.80	1.23	0.25	0.7	1.44	2.86	2.26	4.85	14.17	70	24	0.18	0.03	3.62	3.00	0.87	78.07	78.05	0.73	0.01	80.00	80.00	81.00	81.00	
Existing Storm System		Inlet	28	0.60	1.85	0.10	1.0	1.33	6.89	1.79	7.00	28.14	46	24	1.02	0.62	25.62	7.07	0.36	78.00	77.50	1.00	0.02	80.00	80.00	79.50	81.00
28			1.28	27.97	0.15	1.54	1.75	5.91	42.38	90.38	34.99	149	54	0.08	0.64	55.62	3.90	0.12	74.19	74.07	3.60	0.05	78.89	78.57	82.89	81.50	
29			0.60	27.97	0.15	1.54	2.72	5.82	43.92	90.03	37.78	156	54	0.08	0.63	55.62	3.90	0.12	74.07	73.95	2.60	0.05	78.87	78.45	81.60	81.00	
30			0.18	0.38	0.80	0.2	3.31	7.19	0.16	1.85	15.20	36	30	0.18	0.03	8.08	3.05	0.05	75.02	75.01	0.12	0.00	78.45	78.45	81.00	81.50	
31			0.33	0.33	0.35	0.2	3.53	7.20	0.56	1.31	10.14	47	24	1.00	0.07	23.28	7.41	0.36	78.00	77.50	0.28	0.04	80.00	80.00	79.50	81.00	
32			0.80	26.04	0.18	1.38	2.69	5.80	42.60	91.88	34.18	149	54	0.08	0.63	55.62	3.90	0.12	74.07	73.99	2.61	0.05	78.45	78.39	81.00	81.50	
33			2.50	2.50	0.15	1.1	1.20	4.82	4.52	9.37	10.34	63	24	0.18	0.03	8.08	3.05	0.05	75.00	75.77	1.44	0.04	80.00	77.99	77.77	81.74	
34			1.00	2.50	0.15	1.1	1.27	4.78	4.69	9.22	10.34	63	24	0.18	0.03	8.08	3.05	0.05	75.77	75.65	1.43	0.04	80.00	77.77	77.65	81.51	
35			32.24	32.24	0.15	1.03	2.07	4.27	34.29	115.64	33.65	149	54	0.12	0.02	68.12	4.28	0.08	72.00	72.04	3.42	0.00	80.00	78.11	81.11	82.04	
Inlet			0.46	0.46	0.15	1.0	1.50	7.10	0.88	1.81	12.72	27	24	1.00	0.07	23.28	7.41	0.36	78.14	77.64	0.20	0.00	80.00	80.15	79.64	81.14	
Inlet			0.22	0.22	0.15	1.1	1.74	7.28	0.61	0.80	22.68	47	24	2.50	0.10	20.77	11.30	0.15	77.60	77.51	0.18	0.00	80.00	79.60	79.51	81.18	
32			0.60	34.02	0.15	1.87	3.96	4.27	35.47	117.11	32.46	149	54	0.12	0.03	68.12	4.28	0.08	72.00	72.01	3.00	0.00	80.00	78.11	78.09	81.14	
33			0.80	69.20	0.15	2.59	2.64	5.77	36.19	207.88	38.78	170	72	0.10	0.03	127.00	4.49	0.15	71.62	71.50	3.40	0.05	80.00	78.89	78.89	81.14	

Storm System B		Wye	0.40	0.40	0.40	0.2	3.51	7.18	0.77	1.56	22.51	144	10	0.50	0.02	1.08	3.08	0.72	78.95	78.11	1.10	0.07	80.30	80.09	86.90	85.50
Subsoil																										
Subsoil	Wye		1.10	1.10	0.40	0.5	3.49	6.97	1.72	3.51	13.17	81	15	0.15	0.02	3.70	3.02	0.23	78.30	78.11	1.60	0.00	80.00	80.14	80.09	80.15
Wye	Check Basin		0.60	1.50	0.40	0.7	3.50	6.91	2.12	4.78	25.14	71	15	0.20	0.03	3.70	3.02	0.82	78.11	78.09	1.80	0.11	80.00	80.09	80.10	81.34
Check Basin	MIS w/ Gate		0.70	2.07	0.40	0.9	3.50	6.94	3.11	6.41	25.42	74	15	0.20	0.02	3.70	3.02	0.67	78.00	78.07	2.10	0.20	80.00	80.07	81.00	81.30
MIS w/ Gate	Inlet (Inlet start)		0.60	2.02	0.40	0.9	3.26	6.71	3.12	6.44	24.62	73	24	0.18	0.03	3.60	3.04	0.67	78.07	78.00	0.95	0.00	80.00	80.00	80.00	81.30
Existing Storm System		Wye (Inlet)	7	0.12	2.64	0.40	1.2	3.28	0.81	3.09	8.27															

GENERAL NOTES:

1. ALL RADII ARE SHOWN FROM BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE SHOWN FROM FACE OF CURB UNLESS OTHERWISE NOTED.
3. SIDEWALKS SHALL NOT EXCEED A 5% MAX. SLOPE AND 2% MAX. CROSS SLOPE IN ACCORDANCE WITH T&S AND ADA REQUIREMENTS.
4. ALL ACCESSIBLE ROUTES SHALL BE CONSTRUCTED IN ACCORDANCE WITH T&S AND ADA REQUIREMENTS.
5. ALL PROPOSED CURB TO BE 6" UNLESS OTHERWISE NOTED.

**HARVEST GREEN
SEC 6
Plot No. 20150123
FBCPR**

SLEEVES:

1. Sleeves shall be Schedule 40 PVC Extending a Min. 2' Beyond Back of Curb With Both Ends Capped.
2. Install Sleeves a Min. 24" Below Top of Pavement to Top of Pipe.
3. Contractor to Mark Sleeve Loc. on Top of Curb or Turn up PVC Sleeve and Cap Above Ground.

BENCHMARK

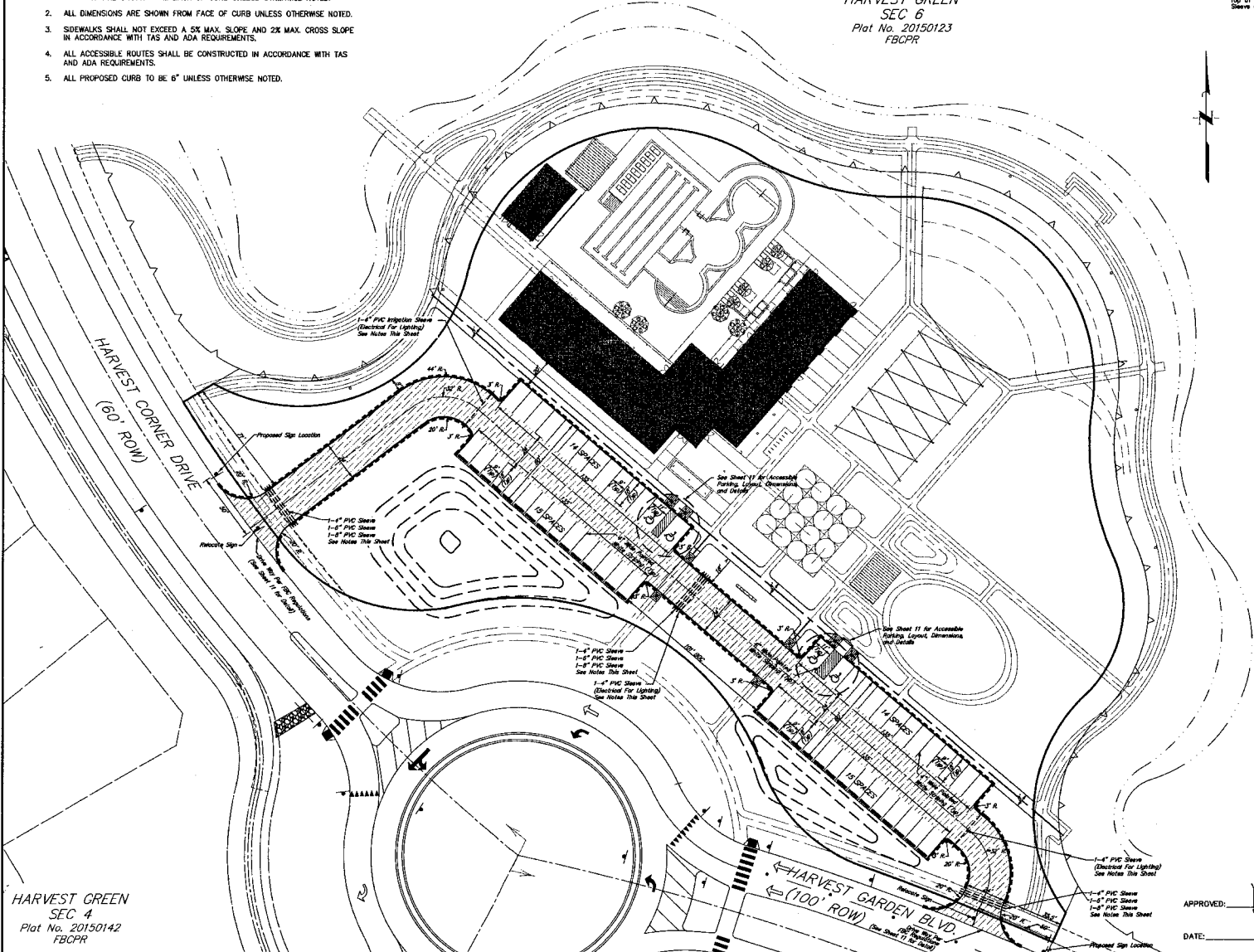
2003 FORT BEND COUNTY UDAR BENCHMARK NO. 25 "M" NAIL IN ASPHALT LOCATED 2.5' WEST OF THE FIRST MEDIAN ROSE WEST OF F&M 360 ON HIGHWAY 90-A. ELEVATION=84.09 NAVD83 (2001 ADJUSTMENT)

100-Year Flood Plain
According to Map No. 48157C0140L of The Federal Emergency Management Agency's Flood Insurance Rate Maps dated April 2, 2014, the subject tract is within the Unshaded Zone "X"; Unshaded Zone "X" is defined as an area determined to be outside the 500-Year Flood Plain.

Note: The 100-Year base flood elevation is approximately 83.0 feet as per the FEMA Insurance Rate Map for Fort Bend County, Texas Community Panel No. 48157C0140L, Dated April 2, 2014. The 100-Year Flood Plain, elevation 83.0, is contained in the channel north of the detention pond.

LEGEND

- PROPOSED SIDEWALK (BY OTHERS)
- PROP 5" CONCRETE PAVEMENT (SEE JOINT SPACING DETAIL SHEET 10)
- ▨ PROP 6" CONCRETE PAVEMENT (SEE JOINT SPACING DETAIL SHEET 10)
- ▩ PROPOSED ACCESSIBLE RAMP (SEE DETAIL SHEET 10)
- ♿ ACCESSIBLE SPACE
- ⊕ PROPOSED SIGN
- PROPOSED WHEEL STOP
- - - - - 6" CURB



HARVEST GREEN
SEC 4
Plot No. 20150142
FBCPR

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 1340
FORT BEND COUNTY, TEXAS

HARVEST GREEN RECREATION CENTER

DIMENSION AND PAVING PLAN

JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
2220 Merchants Way, Suite 170, Katy, TX 77449-8323 (832) 4000

SCALE: 1"=30' DGN. BY: CMA
DATE: DECEMBER 2015 DWN. BY: J.G.
JOB NO. 5540-0031-00 DWG. NO.
SUBMITTED: SURV. BY:
F.B. NO.

APPROVED: *[Signature]*
DEVELOPMENT COORDINATOR

DATE: 11/11/15

[Signature]
CHRISTOPHER C. JOURNAL
111507
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS

SHEET NO. 5 OF 15

P:\V\02\0123\05340\Journals\Development\Corp\0031-00\Harvest Green Rec Center\04\Draw\General\04\SEC 6\DIMENSION AND PAVING PLAN.dwg, Date: 12/23/15, Time: 2:53pm

HARVEST GREEN
SEC 6
Plot No. 20150123
FBCPR

FIRE ACCESS REVIEW

This Plan review is intended for parking lot and driveway aisle only. Fire protection sprinkler/hose lay will be submitted with the building package.

BENCH MARKS

2000 FORT BEND COUNTY LIDAR BENCHMARK NO. 25 "TM" MARK IN ASPHALT LOCATED 2.1' WEST OF THE FIRST MEAN HIGH WEST OF F.M. 350 ON HIGHWAY 90-A. ELEVATION=84.0 NAVD83 (2001 ADJUSTMENT)






NOTE: ALL ELEVATIONS SHOWN WERE DERIVED FROM GPS/RTN OBSERVATIONS AND UTILIZED GEODESIC.

100-Year Flood Plain

According to Map No. 48157C0140L of The Federal Emergency Management Agency's Flood Insurance Rate Maps dated April 2, 2014, the subject tract is within the Unshaded Zone "X"; Unshaded Zone "X" is defined as areas determined to be outside the 500-Year Flood Plain.

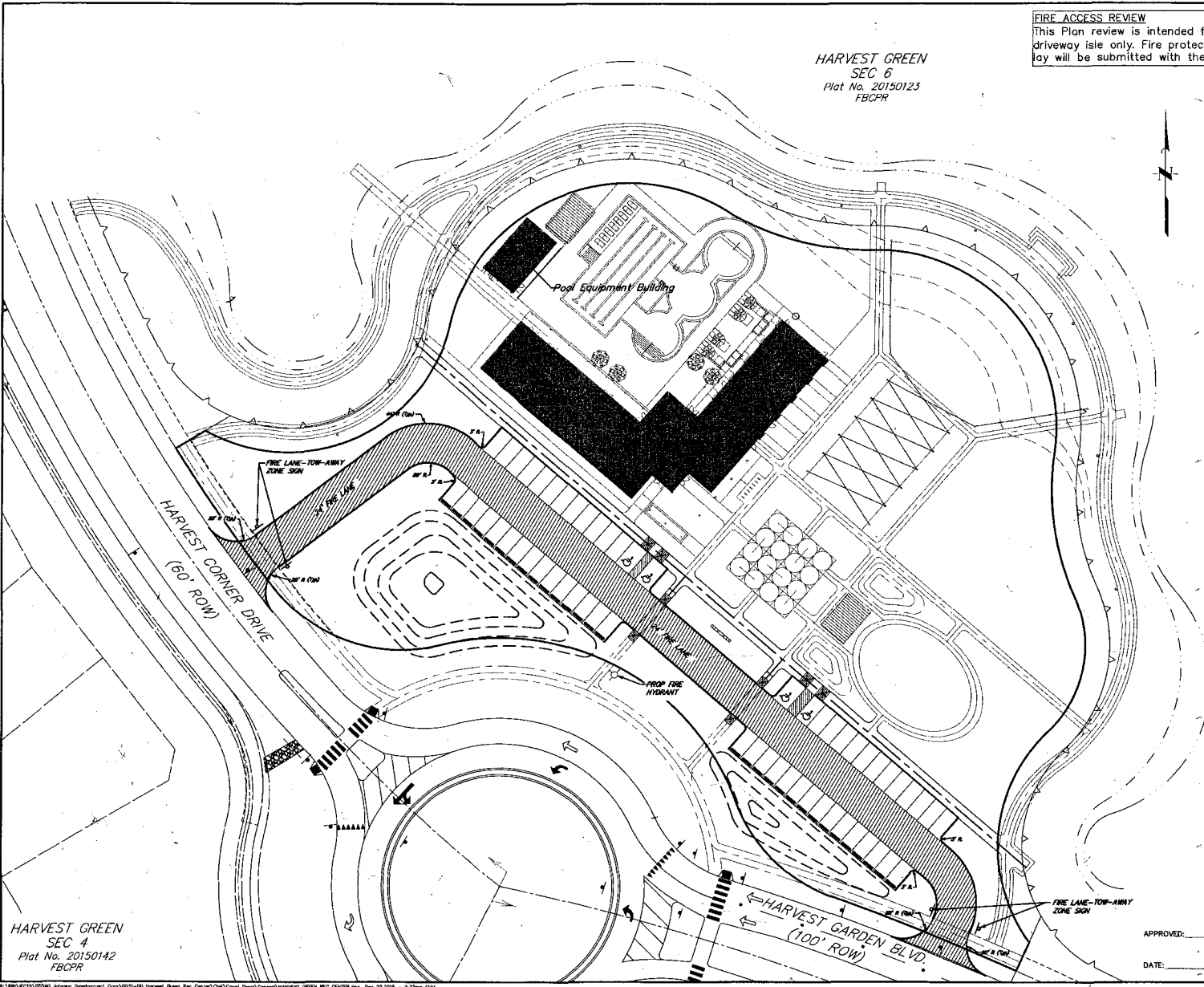
Note: The 100-Year base flood elevation is approximately 83.0 feet as per the FEMA Insurance Rate Map for Fort Bend County, Texas Community Panel No. 48157C0140L, Dated April 2, 2014. The 100-Year Flood Plain, elevation 83.0, is contained in the channel north of the detention pond.

LEGEND

-  FIRE LANE
-  "HOSELAY DISTANCE" FDC HOSELAY LINE
-  PROPOSED WATERLINE
-  FIRE TRUCK
-  FIRE LANE-TOW-AWAY ZONE SIGN

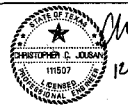
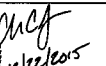
LANE MARKING SPECIFICATION

CURBS LOCATED BETWEEN APPROVED FIRE LANE-TOW-AWAY ZONE SIGN SHALL BE PAINTED RED OR A RED STRIPE SHALL BE PLACED ALONG THE PAVEMENT WHERE THERE IS NO CURB. THESE CURBS SHALL BE CONSPICUOUSLY AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE-TOW-AWAY ZONE" IN WHITE LETTERS AT LEAST (3) INCHES IN HEIGHT, AT INTERVALS NOT TO EXCEED (50) FEET.

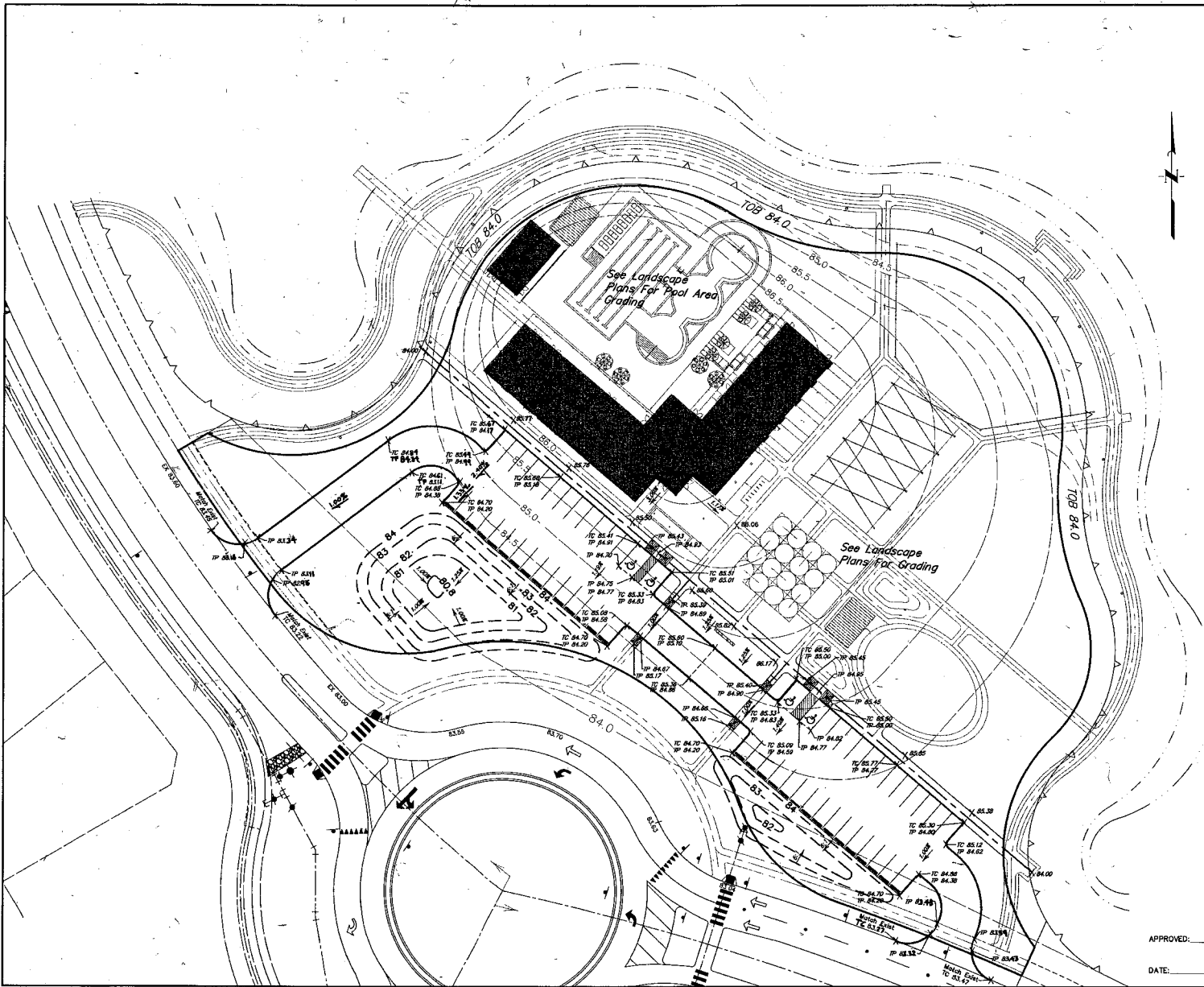


HARVEST GREEN
SEC 4
Plot No. 20150142
FBCPR

APPROVED: *[Signature]*
DEVELOPMENT COORDINATOR
DATE: 11/16

NO.	DATE	REVISIONS	APP.
FORT BEND COUNTY MUD No. 1340 FORT BEND COUNTY, TEXAS			
HARVEST GREEN RECREATION CENTER			
FIRE ACCESS ROAD			
JC JONES CARTER			
Texas Board of Professional Engineers Registration No. F-439 2230 Merchants Way, Suite 173, Katy, TX 77449 • 832-913-8000			
SCALE:	1"=50'	DEN. BY:	CMH
DATE:	DECEMBER 2015	DWN. BY:	J.G.
JOB NO.	3540-0531-00	DWG. NO.	
SUBMITTED:		SURV. BY:	
		F.B. NO.	
			 SHEET NO. 6 OF 15

P:\PROJECTS\2015\20150142\20150142.dwg Plot No. 20150142 FBCPR



BENCH MARK
 2005 FORT BEND COUNTY LEARN BENCHMARK NO. 25. "TK"
 NAIL IN ASPHALT LOCATED 2.5' WEST OF THE FIRST
 MEDIAN ROSE WEST OF F.M. 359 ON LEFTWAY M-A.
 ELEVATION=84.08 NAVD83 (2004 ADJUSTMENT)
 NOTE: ALL ELEVATIONS SHOWN WERE OBTAINED FROM
 OFF-PEAK OBSERVATIONS AND DILATED GEODESIC

100-Year Flood Plain
 According to Map No. 48157C0140L of The
 Federal Emergency Management Agency's Flood
 Insurance Rate Maps dated April 2, 2014, the
 subject tract is within the Unshaded Zone "X".
 Unshaded Zone "X" is defined as areas
 determined to be outside the 500-Year Flood
 Plain.

Note: The 100-Year base flood elevation is
 approximately 83.0 feet as per the FEMA
 Insurance Rate Map for Fort Bend County,
 Texas Community Panel No. 48157C0140L,
 Dated April 2, 2014. The 100-Year Flood Plain,
 elevation 83.0, is contained in the channel
 north of the detention pond.

LEGEND

— 85.0 —	PROPOSED TOP OF CURB ELEVATION
TC 142.00	PROPOSED TOP OF CURB ELEVATION
TC 139.00	EXISTING TOP OF CURB ELEVATION
TP 138.50	PROPOSED TOP OF PAVEMENT ELEVATION
TP 139.00	EXISTING TOP OF PAVEMENT ELEVATION
TC 138.50	PROPOSED TOP OF GRATE ELEVATION
---	BREAK LINE
FF 114.0	FINISHED FLOOR ELEVATION
[74.2]	PROPOSED GRADE ELEVATION
142.50	PROPOSED SPOT ELEVATION
136	EXISTING GRADE
84.00	PROPOSED GRADE
~~~~~	PROPOSED GRADE DIRECTION

- NOTE:**
1. ACCESSIBLE SPACES AND ACCESS AISLES SHALL NOT EXCEED 2%  
 SLOPE IN ANY DIRECTION AND ARE TO BE CONSTRUCTED IN  
 ACCORDANCE WITH T&S AND ADA STANDARDS.
  2. ACCESSIBLE ROUTES SHALL NOT EXCEED 2% IN CROSS SLOPE  
 AND 5% IN RUNNING SLOPE AND ARE TO BE CONSTRUCTED IN  
 ACCORDANCE WITH T&S AND ADA STANDARDS.

NO.	DATE	REVISIONS	APP
FORT BEND COUNTY MUD No. 134D FORT BEND COUNTY, TEXAS			
HARVEST GREEN RECREATION CENTER <b>GRADING PLAN</b>			
<b>JONES CARTER</b> <small>Texas Board of Professional Engineers Registration No. F-438          2330 Merchants Way, Suite 170, Katy, TX 77449 • 832.918.0200</small>			
SCALE:	1"=30'	DNW. BY:	CMM
DATE:	DECEMBER 2015	DWN. BY:	JLG
JOB NO.:	5540-0031-00	DWG. NO.:	
SUBMITTED:		SURV. BY:	
		F.B. NO.:	
APPROVED: DEVELOPMENT COORDINATOR			
DATE: 1/1/16		SHEET NO. 7 OF 15	









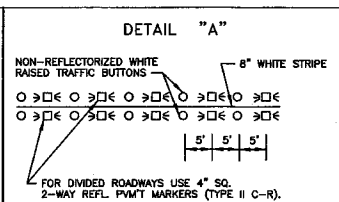
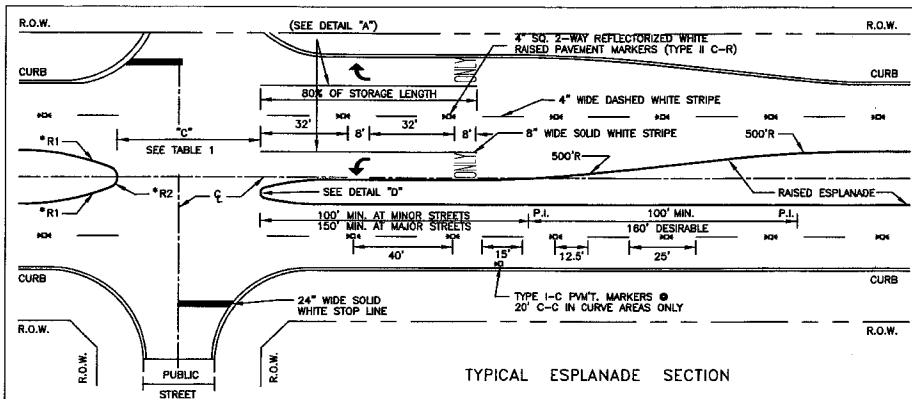


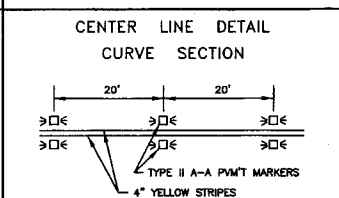
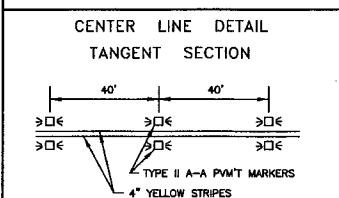
TABLE 1  
TYPICAL LENGTH OF ESPLANADE OPENING "C" FOR PUBLIC STREET

ESPLANADE INTERRUPTION	NO LTB		
	(1)	(1)	(1)
UNDIVIDED STREET < 40'	45'	51(2)	60'
44'	50'	56(2)	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

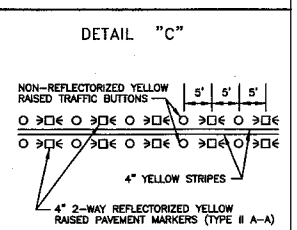
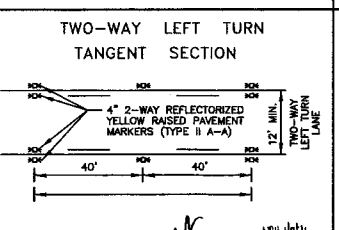
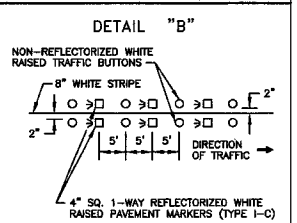
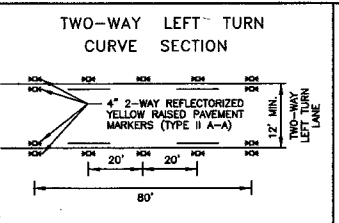
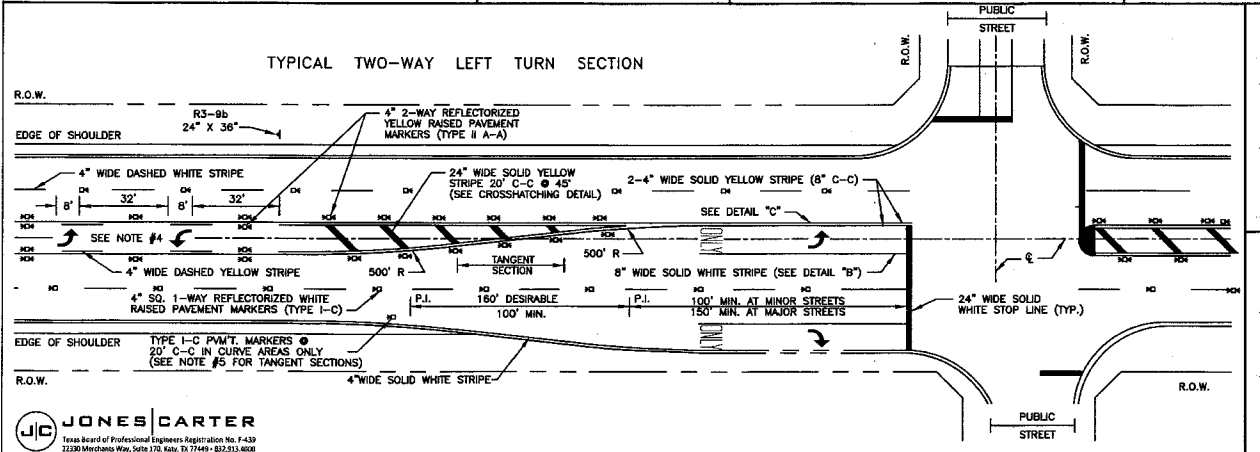
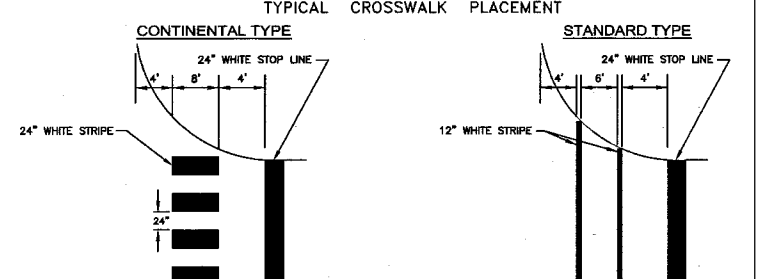
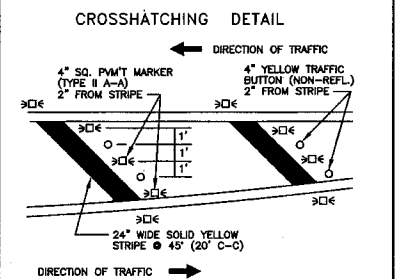
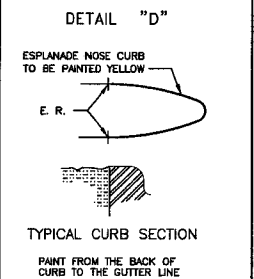
ESPLANADE	*R1	*R2
< 8'	N/A	W/2
8'-38'	90'	W/5
> 38'	N/A	15'



PAVEMENT MARKER LEGEND

SYMBOL	DESCRIPTION
◻◻◻	TWO SIDED REFLECTORIZED RAISED PAVEMENT MARKER
◻◻	ONE SIDED REFLECTORIZED PAVEMENT MARKER
○	NON-REFLECTIVE 4" DIA. RAISED TRAFFIC BUTTON

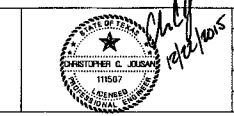
- NOTES:
1. ALL STRIPING & MARKERS SHALL CONFORM WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
  2. ALL TRAFFIC BUTTONS AND MARKERS SHALL BE INSTALLED ADJACENT TO STRIPES (APPROX. 2').
  3. LEFT TURN STORAGE BAYS SHALL BE A MIN. OF 100' AT MINOR STREETS AND A MIN.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



JONES CARTER  
Texas Board of Professional Engineers Registration No. F-430  
21230 Merchants Way, Suite 170, Katy, TX 77449 • 832-913-6600

NO.	REVISION	DATE	NAME
1	ISSUED THIS DESIGN	1/2/20	SLS
2	ADDED ON-THE-FLY CROSSWALK	4/20/20	ME
3	ADDED RIGHT TURN LANE	4/29/21	ALL
4	MODIFIED BITUM LANDING	1/29/23	ME

FORT BEND COUNTY  
ENGINEERING DEPARTMENT



HARVEST GREEN RECREATION CENTER  
PAVEMENT MARKING DETAILS

PROJECT NO.	5540-0031-00
DATE	1/2/20
SCALE	AS SHOWN
APP'D BY	[Signature]
CHECKED BY	[Signature]
DATE	12/15

HARVEST GREEN  
SEC 6  
Plot No. 20150123  
FBCPR

**BENCH MARK**  
2005 FORT BEND COUNTY LIDAR BENCHMARK NO. 25. "PK"  
NAIL IN ASPHALT LOCATED 2.5' WEST OF THE FIRST  
MEAN HIGH, WEST OF F.A. 208 ON HIGHWAY 60-A.  
ELEVATION=84.09 DAVENSS (2001 ADJUSTMENT)  
NOTE: ALL ELEVATIONS SHOWN WERE DERIVED FROM  
GPS/RTK OBSERVATIONS AND UTILIZED GEOTRIG.

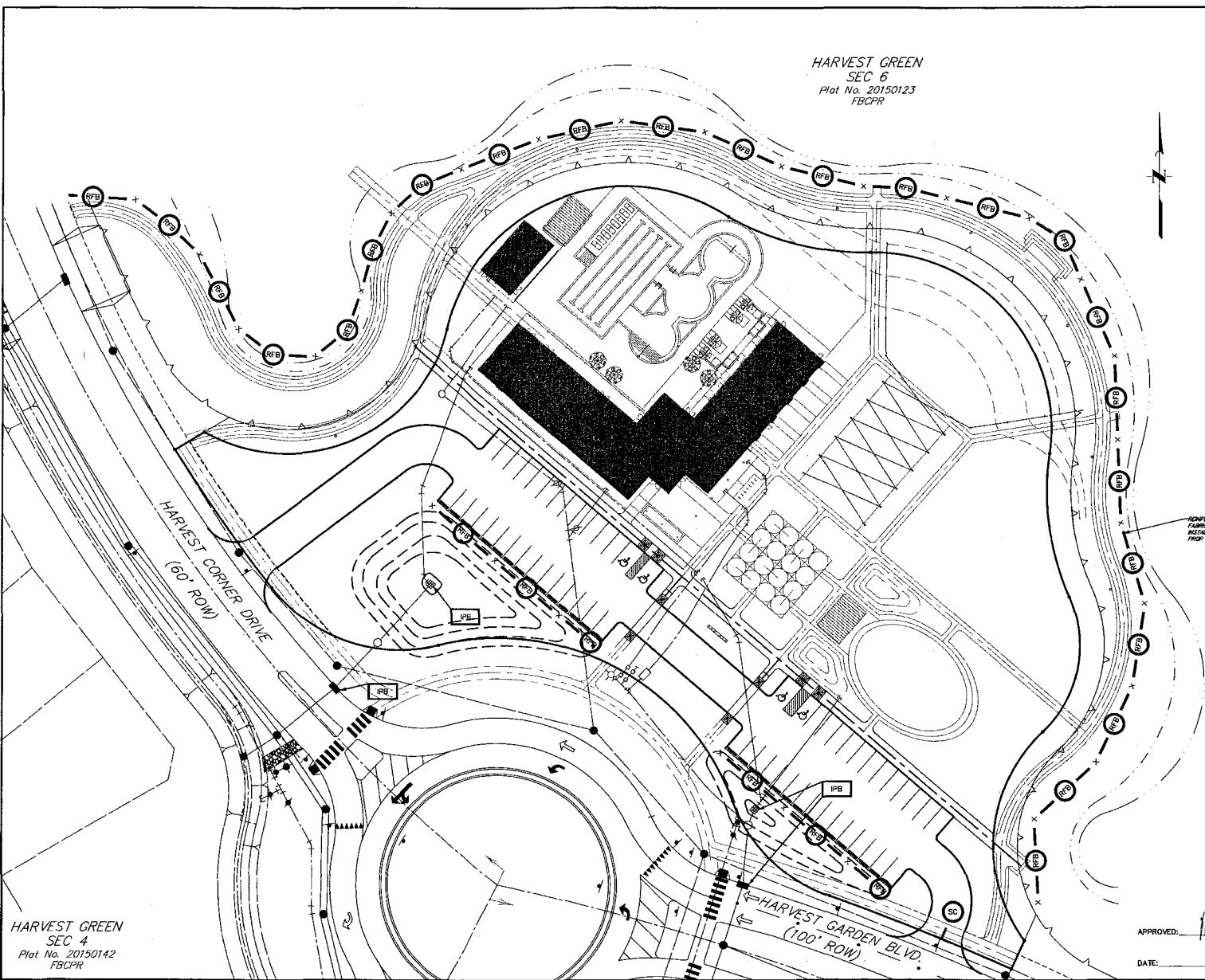
**100-Year Flood Plain**  
According to Map No. 48157CD140L of The  
Federal Emergency Management Agency's Flood  
Insurance Rate Maps dated April 2, 2014, the  
subject tract is within the Unshaded Zone "X";  
Unshaded Zone "X" is defined as area  
determined to be outside the 500-Year Flood  
Plain.

Note: The 100-Year base flood elevation is  
approximately 83.0 feet as per the FEMA  
Insurance Rate Map for Fort Bend County,  
Texas Community Panel No. 48157CD140L,  
Dated April 2, 2014. The 100-Year Flood Plain,  
elevation 83.0, is contained in the channel  
north of the detention pond.

**LEGEND**

- IPB INLET PROTECTION BARRIERS FOR STAGE II INLETS
- X RFB REINFORCED FILTER FABRIC BARRIER
- SC STABILIZED CONSTRUCTION ACCESS

REINFORCED FILTER FABRIC BARRIER TO BE INSTALLED BEHIND ALL PROP. BACK OF CURB.



HARVEST GREEN  
SEC 4  
Plot No. 20150142  
FBCPR

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 1340  
FORT BEND COUNTY, TEXAS

HARVEST GREEN RECREATION CENTER

STORM WATER POLLUTION PREVENTION PLAN

**JONES CARTER**  
Texas Board of Professional Engineers Registration No. F-039  
2330 Merchants Way, Suite 110, Katy, TX 77449-832, 933.6000

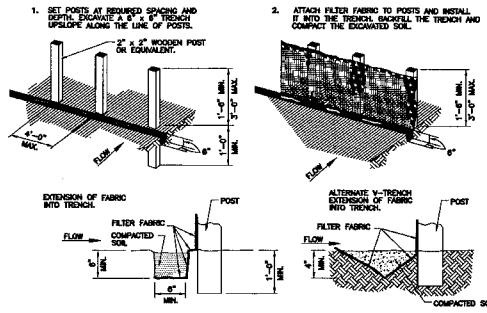
SCALE: 1"=30' DGN. BY: CMW  
DATE: DECEMBER 2016 DWN. BY: JLG  
JOB NO. 5545-0031-00 DWG. NO. _____  
SUBMITTED: _____ SURV. BY: _____  
F.B. NO. _____

APPROVED: *[Signature]*  
DEVELOPMENT COORDINATOR

DATE: 11/16

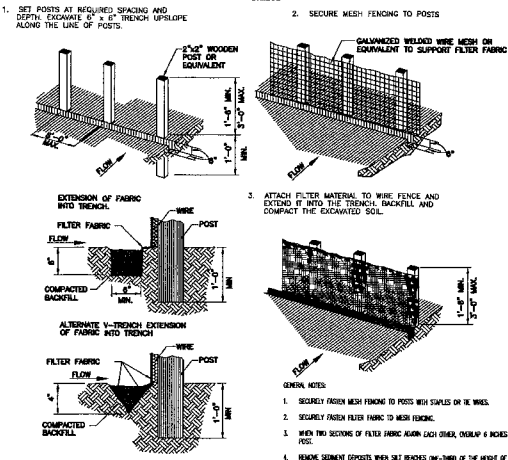
*[Signature]*  
13  
OF 15

P:\PROJECTS\25540 Johnson Development Corp\2021-09 Harvest Green Site Center\DWG\Storm Drain\Storm Drain\2021 GREEN SEC 0410A.dwg Dwg: 22/2018 - 2:20pm Day



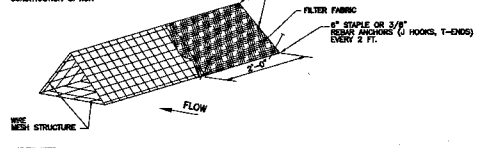
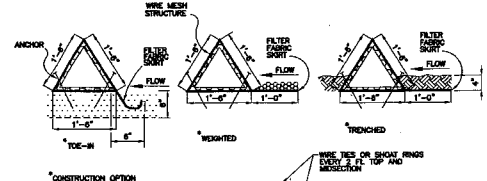
- GENERAL NOTES:
- SET POSTS AT 4-FOOT MAXIMUM SPACING. IF FACTORY PREASSEMBLED TRENCH WITH SUPPORTING TRENCH IS USED, SPACING OF POST MAY BE INCREASED TO 6 FEET MAXIMUM.
  - WHEN TWO SECTIONS OF FILTER FABRIC ALONG EACH OTHER, OVERLAP 6 INCHES AT THE POST, TREAD EXTERIOR, AND ATTACH TO THE POSTS.
  - REMOVE SEMENT DEPOSIT WHEN SALT CRUST REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE.

**FILTER FABRIC FENCE**



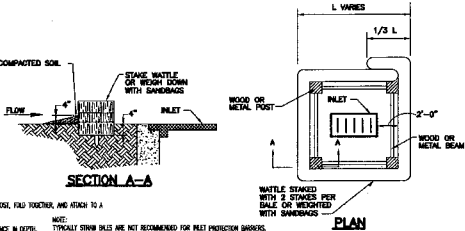
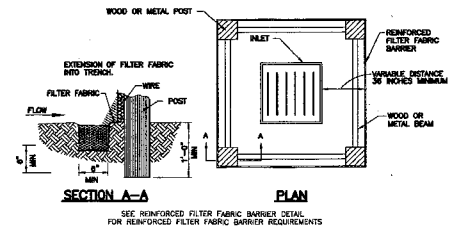
- GENERAL NOTES:
- SECURELY FASTEN MESH FENCING TO POSTS WITH STAPLES OR NAILS.
  - SECURELY FASTEN FILTER FABRIC TO MESH FENCING.
  - WHEN TWO SECTIONS OF FILTER FABRIC ALONG EACH OTHER, OVERLAP 6 INCHES AT A POST, TREAD EXTERIOR, AND ATTACH TO A POST.
  - REMOVE SEMENT DEPOSIT WHEN SALT CRUST REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE IN DEPTH.

**REINFORCED FILTER FABRIC BARRIER**



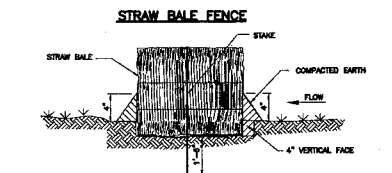
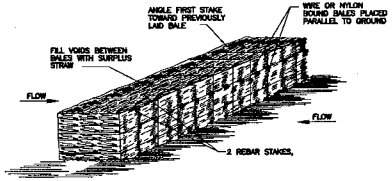
- GENERAL NOTES:
- PLACE UNDERLAY IN A ROW WITH THREE SPACES ALIGNING THE ADJACENT BARRIERS.
  - MAKE ONE COMPLETE SECTION OF FILTER FABRIC, WIRE FABRIC, AND WIRE MESH AND EXTEND FABRIC TO FORM SHIRT ON THE UPSTREAM SIDE.
  - WASH SHIRT WITH A CONTINUOUS LAYER OF 2-INCH TO 3-INCH OPEN GRADED SOIL OR IN SHIRT WITH SIX INCHES WITH MECHANICALLY COMPACTED UNDERLAY.
  - SECURELY FASTEN BARRIERS AND SHIRT BY PLACING 3-INCH WIRE STAPLES ON 2-FOOT CENTERS ON BOTH SIDES, ON SHIRT UNDER 16-INCH BY 1/2-INCH BARS (2-INCH, 4-INCH).
  - FILTER FABRIC SHALL BE LAPPED OVER ONE'S 6 INCHES TO OTHER SECTIONS. FASTEN JOINTS WITH GALVANIZED SHIRT RINGS OR EQUIVALENT.
  - THE BARRIER STRUCTURE SHALL BE WELDED WIRE MESH, 16 INCHES ON EACH SIDE.

**TRIANGULAR FILTER FABRIC FENCE**



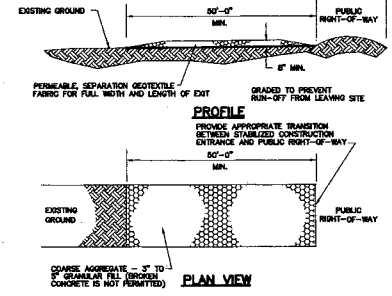
- GENERAL NOTES:
- MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
  - CONSTRUCT AND MAINTAIN CONSTRUCTION ERT WITH CONTINUOUS BERT ACROSS ITS LENGTH, INCLUDING ALL POINTS OF ACCESS OR CROSS.
  - UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, CONSIDERATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION AREA.
  - WORK SHOWN ON THE CONSTRUCTION DRAWINGS, WHICH OR LENGTH ON STABILIZED AREA TO ACCOMMODATE A TRUCK WORKING AREA. PROVIDE DUTTY STABILIZED TYP FOR THE TRUCK WORKING AREA.
  - REMOVE PAVING TOP EXISTING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES FRENCH WITH PAVING.
  - PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRIVING SURFACE.
  - ALTERNATE METHODS OF CONSTRUCTION INCLUDE: COARSE STABILIZED SOIL, COMPACTED CEMENT STABILIZED SOIL, LIME/CEMENT AGGREGATE, OR OTHER FILL MATERIAL IN AN APPLICATION OF THICKNESS OF 8 INCHES.
  - WOOD NAILS OR OTHER HOLDING DEVICES PLACED TO EDGE AND ACROSS SUPPORT WOODEN BEAMS WHICH ARE PLACED ON TOP OF EXISTING SOIL IN AN APPLICATION THICKNESS OF 4 INCHES.
  - STEEL NAILS: PERFORATED NAILS PLACED ACROSS PERPENDICULAR SUPPORT MEMBERS.

**INLET PROTECTION BARRIERS FOR STAGE I INLETS**



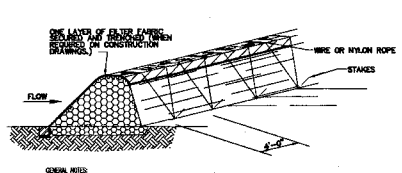
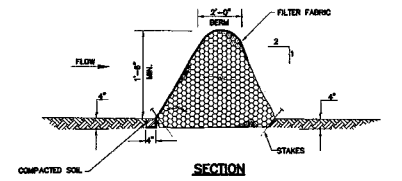
- GENERAL NOTES:
- LIMIT USE TO GRADE STAPLES FOR PURPOSES OF LOW FLOW VELOCITY DISPERSION FOR EROSION CONTROL. USE BRUSH BEAMS TO TREAT CHANNEL FLOW ONLY. DO NOT USE BRUSH BEAMS TO TREAT FLOW IN CHANNELS.
  - PLACE BRUSH BEAMS AND BRANCHES USING A DIAMETER OF LESS THAN 2 INCHES WITH A 6-INCH OVERLAP. AVOID INTERSECTION OF BRUSH BEAMS AND SOIL INTO BRUSH BEAM.
  - MINIMUM HEIGHT OF THE BRUSH BEAM IS 18 INCHES, MEASURED FROM THE TOP OF THE EXISTING GROUND AT THE UPSLOPE SIDE TO THE TOP OF THE BEAM.
  - THIRD PLACE BRUSH BEAMS ALONG CONTOUR LINES. MAXIMUM PLACEMENT OF BRUSH BEAMS IS NOT PERMITTED.
  - BRUSH BEAMS SHALL BE AT LEAST 4 INCHES INTO THE SOIL.
  - ANCHOR BRUSH BEAMS USING WIRE OR NYLON ROPE ACROSS THE BEAM WITH A MINIMUM TENSION OF 50 POUNDS.
  - SECURELY TIE ROPE TO 1/2-INCH NYLON STAPLES DRIVEN INTO THE GROUND ON 4-FOOT CENTERS ON BOTH SIDES OF THE BEAM.
  - PERFORM MAINTENANCE AS NEEDED.

**STRAW BALE FENCE**



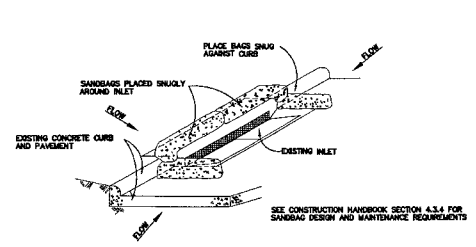
- GENERAL NOTES:
- MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
  - CONSTRUCT AND MAINTAIN CONSTRUCTION ERT WITH CONTINUOUS BERT ACROSS ITS LENGTH, INCLUDING ALL POINTS OF ACCESS OR CROSS.
  - UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, CONSIDERATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION AREA.
  - WORK SHOWN ON THE CONSTRUCTION DRAWINGS, WHICH OR LENGTH ON STABILIZED AREA TO ACCOMMODATE A TRUCK WORKING AREA. PROVIDE DUTTY STABILIZED TYP FOR THE TRUCK WORKING AREA.
  - REMOVE PAVING TOP EXISTING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES FRENCH WITH PAVING.
  - PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRIVING SURFACE.
  - ALTERNATE METHODS OF CONSTRUCTION INCLUDE: COARSE STABILIZED SOIL, COMPACTED CEMENT STABILIZED SOIL, LIME/CEMENT AGGREGATE, OR OTHER FILL MATERIAL IN AN APPLICATION OF THICKNESS OF 8 INCHES.
  - WOOD NAILS OR OTHER HOLDING DEVICES PLACED TO EDGE AND ACROSS SUPPORT WOODEN BEAMS WHICH ARE PLACED ON TOP OF EXISTING SOIL IN AN APPLICATION THICKNESS OF 4 INCHES.
  - STEEL NAILS: PERFORATED NAILS PLACED ACROSS PERPENDICULAR SUPPORT MEMBERS.

**STABILIZED CONSTRUCTION ACCESS**



- GENERAL NOTES:
- LIMIT USE TO GRADE STAPLES FOR PURPOSES OF LOW FLOW VELOCITY DISPERSION FOR EROSION CONTROL. USE BRUSH BEAMS TO TREAT CHANNEL FLOW ONLY. DO NOT USE BRUSH BEAMS TO TREAT FLOW IN CHANNELS.
  - PLACE BRUSH BEAMS AND BRANCHES USING A DIAMETER OF LESS THAN 2 INCHES WITH A 6-INCH OVERLAP. AVOID INTERSECTION OF BRUSH BEAMS AND SOIL INTO BRUSH BEAM.
  - MINIMUM HEIGHT OF THE BRUSH BEAM IS 18 INCHES, MEASURED FROM THE TOP OF THE EXISTING GROUND AT THE UPSLOPE SIDE TO THE TOP OF THE BEAM.
  - THIRD PLACE BRUSH BEAMS ALONG CONTOUR LINES. MAXIMUM PLACEMENT OF BRUSH BEAMS IS NOT PERMITTED.
  - BRUSH BEAMS SHALL BE AT LEAST 4 INCHES INTO THE SOIL.
  - ANCHOR BRUSH BEAMS USING WIRE OR NYLON ROPE ACROSS THE BEAM WITH A MINIMUM TENSION OF 50 POUNDS.
  - SECURELY TIE ROPE TO 1/2-INCH NYLON STAPLES DRIVEN INTO THE GROUND ON 4-FOOT CENTERS ON BOTH SIDES OF THE BEAM.
  - PERFORM MAINTENANCE AS NEEDED.

**BRUSH BERM**



- GENERAL NOTES:
- INLET OR BARRIERS CAN BE USED FOR THE APPLICATION.
  - REMOVE BARRIERS ON DAMAGED ACCESSIBLE FLOW PATHS FOR SIGNS.
  - REMOVE DAMAGED BARRIERS AND REPAIR WITH FILL MATERIAL FOR SIGN. USE ONLY MATERIALS CONSISTING OF CLEAN, WASH, DRAINAGE MATERIALS FREE FROM ADHESIVE CONTAMINANTS, SALT, FUEL, OIL, GREASE, LUBRICANTS, OILS OR FLAMMABLE LIQUIDS OR SOLIDS AND WASTES.
  - REMOVE SEMENT DEPOSIT WHEN THE SEMENT HAS ACCUMULATED TO ONE-THIRD OF THE HEIGHT OF THE BARRIER.

**INLET PROTECTION BARRIERS FOR STAGE II INLETS**



**JONES CARTER**  
Texas Board of Professional Engineers Registration No. 1-439  
22330 Marshalls Way, Suite 170, Katy, TX 77449 • 832.513.0000

NO.	REVISIONS	DATE	BY
1	CHANGED TITLE BLOCK	7/27/20	R.L.S.
2	ADDED DIMENSIONAL MISSING	8/27/20	R.L.S.

**FORT BEND COUNTY ENGINEERING DEPARTMENT**



*Handwritten signature and date: [Signature] 10/22/20*

PROJECT NO.	NDR 11716
CLIENT	HARVEST GREEN RECREATION CENTER
DATE	8/27/20
SCALE	N.T.S.
DATE	8/27/20

CONSTRUCTION HANDBOOK: STORM WATER MANAGEMENT HANDBOOK FOR CONSTRUCTION ACCESS. PROVIDED BY CITY OF HOUSTON, HARRIS COUNTY, AND WARRIOR COUNTY FLOOD CONTROL DISTRICT, 2021 EDITION.

