

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 EISG Inc

Job Location Harlem Rd and Lakehead Lane, Richmond, TX 77407

Date 1/8/2016 Bond No. 4402430, Permit No. 2016-4905 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 Meyus, 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: Charles O. [Signature]
County Engineer

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

By: Mark Vogel
Drainage District Engineer/Manager

Clerk of Commissioners Court

By: Linda Willet
Deputy

RECEIVED

JAN 20 2016

FBC DRAINAGE DIST.

PERFORMANCE BOND

Bond #4402430

STATE OF TEXAS

Contract Date December 14, 2015

COUNTY OF FORT BEND

Date Bond Executed December 14, 2015

KNOW ALL PERSONS BY THESE PRESENTS: That EISG, Inc (Contractor), of the City of Houston, County of Harris, and State of Texas, as Principal, and SureTec Insurance Company, authorized under the Laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto **Fort Bend County Levee Improvement District No. 12** (Owner), in the penal sum of Seven Hundred Seventy-One Thousand Seven Hundred Eighty Four Dollars and Fifty Cents (\$771,784.50) for the payment whereof, the said Principal and Surety bind themselves, and their respective officers, directors, shareholders, partners, heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Owner, dated the _____ day of _____, 20__, for construction of:

Long Point Slough Maintenance, Phase Two

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform said Contract and shall in all respects duly and faithfully observe and perform all and singular the covenants, conditions and agreements in and by said contract agreed and covenanted by the Principal to be observed and performed, and according to the true intent and meaning of said Contract and the Documents and the Plans and Specifications related thereto, then this obligation shall be void; otherwise to remain in full force and effect;

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Statute to the same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to work performed thereunder, or the plans, specifications, or drawings, accompanying the same, shall in anyway affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, or the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument
14th day of December, 2015

EISG, Inc

Principal
BY: [Signature]

TITLE: Exec. V.P.

ADDRESS:

5353 W. Alabama St., Suite 340

Houston, TX 77056



SureTec Insurance Company

Surety
BY: [Signature]

TITLE: Michelle Ulery, Attorney in Fact

PHYSICAL ADDRESS:

1330 Post Oak Blvd., Ste. 1100

Houston, TX 77056



MAILING ADDRESS:

Same as above

TELEPHONE: 713-683-1475

LOCAL RECORDING AGENT
PERSONAL IDENTIFICATION NUMBER:

746941

The name and address of the Resident Agent of Surety is:

Southern American Insurance Agency, Inc., 13823 Schmidt Road, Cypress, TX 77429

SureTec Insurance Company

LIMITED POWER OF ATTORNEY

Know All Men by These Presents, That SURETEC INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

C. A. McClure, Kelly J. Brooks, Kenneth L. Meyer, Michelle Ulery

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for:

Five Million and 00/100 Dollars (\$5,000,000.00)

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment shall continue in force until 12/31/2016 and is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and of behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its President, and its corporate seal to be hereto affixed this 21st day of March, A.D. 2013.

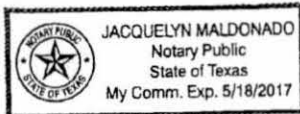


SURETEC INSURANCE COMPANY

By: [Signature]
John Knox Jr., President

State of Texas ss:
County of Harris

On this 21st day of March, A.D. 2013 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is President of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.



[Signature]
Jacquelyn Maldonado, Notary Public
My commission expires May 18, 2017

I, M. Brent Beaty, Assistant Secretary of SURETEC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; and furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

Given under my hand and the seal of said Company at Houston, Texas this 14 day of December 2015, A.D.

[Signature]
M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity.
For verification of the authority of this power you may call (713) 812-0800 any business day between 8:00 am and 5:00 pm CST.

SureTec Insurance Company
THIS BOND RIDER CONTAINS IMPORTANT COVERAGE INFORMATION
Statutory Complaint Notice/Filing of Claims

To obtain information or make a complaint: You may call the Surety's toll free telephone number for information or to make a complaint or file a claim at: 1-866-732-0099. You may also write to the Surety at:

SureTec Insurance Company
9737 Great Hills Trail, Suite 320
Austin, Tx 78759

You may contact the Texas Department of Insurance to obtain information on companies, coverage, rights or complaints at 1-800-252-3439. You may write the Texas Department of Insurance at

PO Box 149104
Austin, TX 78714-9104
Fax#: 512-475-1771
Web: <http://www.tdi.state.tx.us>
Email: ConsumerProtection@tdi.state.tx.us

PREMIUM OR CLAIM DISPUTES: Should you have a dispute concerning your premium or about a claim, you should contact the Surety first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

Terrorism Risks Exclusion

The Bond to which this Rider is attached does not provide coverage for, and the surety shall not be liable for, losses caused by acts of terrorism, riot, civil insurrection, or acts of war.

**Exclusion of Liability for
Mold, Mycotoxins, Fungi & Environmental Hazards**

The Bond to which this Rider is attached does not provide coverage for, and the surety thereon shall not be liable for, molds, living or dead fungi, bacteria, allergens, histamines, spores, hyphae, or mycotoxins, or their related products or parts, nor for any environmental hazards, bio-hazards, hazardous materials, environmental spills, contamination, or cleanup, nor the remediation thereof, nor the consequences to persons, property, or the performance of the bonded obligations, of the occurrence, existence, or appearance thereof.

PAYMENT BOND

Bond #4402430

STATE OF TEXAS

Contract Date December 14, 2015

COUNTY OF FORT BEND

Date Bond Executed December 14, 2015

KNOW ALL PERSONS BY THESE PRESENTS: That EISG, Inc (Contractor), of the City of Houston, County of Harris, and State of Texas, as Principal, and SureTec Insurance Company

authorized under the Laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto **Fort Bend County Levee Improvement District No. 12** (Owner), in the penal sum of Seven Hundred Seventy-One Thousand Seven Hundred Eighty Four Dollars and Fifty Cents (\$771,784.50) for the payment whereof, the said Principal and Surety bind themselves, and their respective officers, directors, shareholders, partners, heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Owner, dated the _____ day of _____, 20__, for construction of:

Long Point Slough Maintenance, Phase Two

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION IS SUCH, that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said contract, then, this obligation shall be void; otherwise to remain in full force and effect;

PROVIDED, HOWEVER, That this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Statute to the same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to work performed thereunder, or the plans, specifications, or drawings, accompanying the same, shall in anyway affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, or the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument
14 day of December, 2015

EISG, Inc

Principal

BY: [Signature]

TITLE: Exec. V.P.

ADDRESS:

5353 W. Alabama St., Suite 340

Houston, TX 77056

SureTec Insurance Company

Surety

BY: [Signature]

TITLE: Michelle Ulery, Attorney in Fact

PHYSICAL ADDRESS:

1330 Post Oak Blvd., Ste. 1100

Houston, TX 77056



MAILING ADDRESS:

Same as above

TELEPHONE: 713-683-1475

LOCAL RECORDING AGENT
PERSONAL IDENTIFICATION NUMBER:

746941

The name and address of the Resident Agent of Surety is:

Southern American Insurance Agency, Inc., 13823 Schmidt Road, Cypress, TX 77429

SureTec Insurance Company

LIMITED POWER OF ATTORNEY

Know All Men by These Presents, That SURETEC INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

C. A. McClure, Kelly J. Brooks, Kenneth L. Meyer, Michelle Ulery

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for:

Five Million and 00/100 Dollars (\$5,000,000.00)

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment shall continue in force until 12/31/2016 and is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:


Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and of behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its President, and its corporate seal to be hereto affixed this 21st day of March, A.D. 2013.

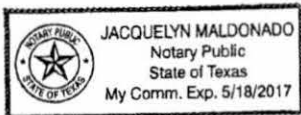
SURETEC INSURANCE COMPANY

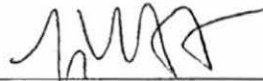
By: 
John Knox Jr., President



State of Texas SS:
County of Harris

On this 21st day of March, A.D. 2013 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is President of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.




Jacquelyn Maldonado, Notary Public
My commission expires May 18, 2017

I, M. Brent Beaty, Assistant Secretary of SURETEC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; and furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

Given under my hand and the seal of said Company at Houston, Texas this 14 day of December, 2015, A.D.


M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity.
For verification of the authority of this power you may call (713) 812-0800 any business day between 8:00 am and 5:00 pm CST.



SureTec Insurance Company
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Terrorism Risks Exclusion

The Bond to which this Rider is attached does not provide coverage for, and the surety shall not be liable for, losses caused by acts of terrorism, riot, civil insurrection, or acts of war.

**Exclusion of Liability for
Mold, Mycotoxins, Fungi & Environmental Hazards**

The Bond to which this Rider is attached does not provide coverage for, and the surety thereon shall not be liable for, molds, living or dead fungi, bacteria, allergens, histamines, spores, hyphae, or mycotoxins, or their related products or parts, nor for any environmental hazards, bio-hazards, hazardous materials, environmental spills, contamination, or cleanup, nor the remediation thereof, nor the consequences to persons, property, or the performance of the bonded obligations, of the occurrence, existence, or appearance thereof.

bond #4402430

MAINTENANCE BOND

STATE OF TEXAS

Contract Date: December 14, 2015

COUNTY OF FORT BEND

Date Bond Executed December 14, 2015

KNOW ALL MEN BY THESE PRESENTS: That EISG, Inc (Contractor), of the City of Houston, County of Harris, and State of Texas, as Principal, and SureTec Insurance Company authorized under the Laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto **Fort Bend County Levee Improvement District No. 12** (Owner), in the amount equal to **100%** of the total contract price, in the penal sum of Seven Hundred Seventy-One Thousand Seven Hundred Eighty Four Dollars and Fifty Cents (\$771,784.50) for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Owner, dated the _____ day of _____, 2015, for construction of:

Long Point Slough Maintenance, Phase Two

which contract is hereby referred to and make a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION IS SUCH, that if the said Principal shall repair any and all defects in said work occasioned by or resulting from defects in materials furnished by, or workmanship of, the Principal in performing the work covered by the Contract, occurring within a period of two years beginning on the date of termination of the Performance Bond as required under this Contract, in accordance with the provisions of the Contract, then, this obligation shall be void; otherwise to remain in full force and effect;

PROVIDED, HOWEVER, That this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Statute to the same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract, or to work performed thereunder, or the plans, specifications, or drawings, accompanying the same, shall in anyway affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, or the work to be performed thereunder.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on this date, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.



(seal)

(CONTRACTOR) EISG, INC

WITNESS:

[Handwritten signature]

BY:

[Handwritten signature: Barry Esene]

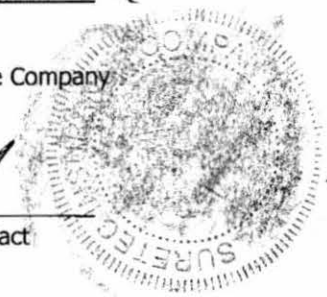
(SURETY) SureTec Insurance Company

WITNESS:

[Handwritten signature: Sheila Fink]
Sheila Fink, Secretary

BY:

[Handwritten signature: Michelle Ulery]
Michelle Ulery, Attorney in Fact



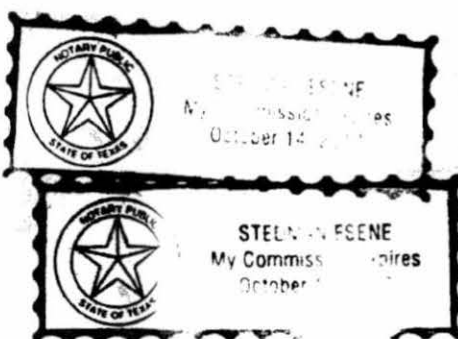
CERTIFICATE AS TO CORPORATE PRINCIPAL

I, Barry Esene, certify that I am the Secretary of the Corporation named as Principal in the within bond; that Barry Esene is the executive vice president who signed the said bond on behalf of the Principal, was then Executive vice president of said corporation, that I know his signature and his signature thereto is genuine and that said bond was duly designed, and attested for in behalf of said corporation by authority of its governing body.



(Corporate Seal)

Subscribed and sworn to before me, the undersigned authority, on this 12th day of November, 2015.



[Handwritten signature: Steven Esene]
Notary Public in and for Harris County

SureTec Insurance Company

LIMITED POWER OF ATTORNEY

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C. A. McClure, Kelly J. Brooks, Kenneth L. Meyer, Michelle Ulery

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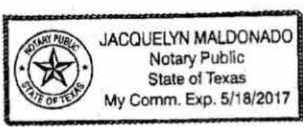
SURETEC INSURANCE COMPANY

By: [Signature]
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State of Texas ss:
County of Harris

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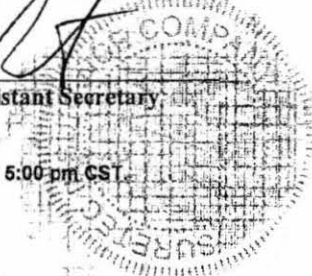
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Jacquelyn Maldonado, Notary Public
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[Signature]
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For verification of the authority of this power you may call (713) 812-0800 any business day between 8:00 am and 5:00 pm CST.



SureTec Insurance Company
THIS BOND RIDER CONTAINS IMPORTANT COVERAGE INFORMATION
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FORT BEND COUNTY, TEXAS FORT BEND COUNTY LEVEE IMPROVEMENT DISTRICT NO. 12 CONSTRUCTION PLANS FOR **LONG POINT SLOUGH MAINTENANCE**

MARCH 2013



VICINITY MAP
N.T.S.
FORT BEND COUNTY KEY MAPS
525 L & M
526 J, K, & L

SHEET INDEX

NO.	DESCRIPTION
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3	PROJECT LAYOUT (SHEET 1 OF 2)
4	PROJECT LAYOUT (SHEET 2 OF 2)
5	PLAN AND PROFILE - LONG POINT SLOUGH STA. 50+00 TO STA. 81+00
6	PLAN AND PROFILE - LONG POINT SLOUGH STA. 81+00 TO STA. 73+00
7	PLAN AND PROFILE - LONG POINT SLOUGH STA. 73+00 TO STA. 83+00
8	PLAN AND PROFILE - LONG POINT SLOUGH STA. 82+00 TO STA. 93+00
9	PLAN AND PROFILE - LONG POINT SLOUGH STA. 93+00 TO STA. 105+10
10	PLAN AND PROFILE - LONG POINT SLOUGH STA. 105+10 TO STA. 117+20
11	PLAN AND PROFILE - LONG POINT SLOUGH STA. 117+20 TO STA. 129+00
12	PLAN AND PROFILE - LONG POINT SLOUGH STA. 128+00 TO STA. 141+00
13	PLAN AND PROFILE - LONG POINT SLOUGH STA. 141+00 TO STA. 153+00
14	PLAN AND PROFILE - LONG POINT SLOUGH STA. 153+00 TO STA. 165+00
15	PLAN AND PROFILE - LONG POINT SLOUGH STA. 165+00 TO STA. 177+00
16	PLAN AND PROFILE - LONG POINT SLOUGH STA. 177+00 TO STA. 189+00
17	PLAN AND PROFILE - LONG POINT SLOUGH STA. 189+00 TO STA. 201+00
18	PLAN AND PROFILE - LONG POINT SLOUGH STA. 201+00 TO STA. 212+00
19	PLAN AND PROFILE - LONG POINT SLOUGH STA. 212+00 TO STA. 224+00
20	PLAN AND PROFILE - LONG POINT SLOUGH STA. 224+00 TO STA. 238+00
21	PLAN AND PROFILE - LONG POINT SLOUGH STA. 238+00 TO END
22	CROSS SECTION (SHEET 1 OF 9)
23	CROSS SECTION (SHEET 2 OF 9)
24	CROSS SECTION (SHEET 3 OF 9)
25	CROSS SECTION (SHEET 4 OF 9)
26	CROSS SECTION (SHEET 5 OF 9)
27	CROSS SECTION (SHEET 6 OF 9)
28	CROSS SECTION (SHEET 7 OF 9)
29	CROSS SECTION (SHEET 8 OF 9)
30	CROSS SECTION (SHEET 9 OF 9)
31	STORM WATER POLLUTION PREVENTION PLAN (SHEET 1 OF 2)
32	STORM WATER POLLUTION PREVENTION PLAN (SHEET 2 OF 2)
33	STORM WATER POLLUTION PREVENTION PLAN DETAILS
34	MISCELLANEOUS DETAILS
35	GRAVITY RETAINING WALL DETAILS

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**BROWN
& GAY**
ENGINEERS, INC.

Brown & Gay Engineers, Inc.
10777 Westheimer, Suite 400, Houston, TX 77042
Tel: 281-558-8700 Fax: 281-558-9701
— Civil engineers and surveyors —

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FORT BEND COUNTY

APPROVED: *Richard W. Stolleis*
RICHARD W. STOLLEIS, P.E.
COUNTY ENGINEER

DATE: 4/2/13



SHEET
NO: 1 OF 35

GENERAL CONSTRUCTION NOTES

GENERAL CONSTRUCTION NOTES

- EXISTING UTILITY INFORMATION SHOWN IS NOT GUARANTEED TO BE ACCURATE AND ALL INCLUDING, INCLUDING UTILITY LOCATIONS ARE APPROXIMATE AND SHOULD BE VERIFIED BY THE CONTRACTOR IN ADVANCE OF CONSTRUCTION. ANY CONTACT OR DISOCCUPANCY DISCOVERED MUST BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION. ANY DAMAGE TO EXISTING PUBLIC OR PRIVATE UTILITY LINES DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FORT BEND COUNTY ENGINEERING DEPARTMENT, AT (281)-433-7500, F.B.C. LD No 12 DISTRICT ENGINEER, LEE EDWARDS AT (281) 558-8705, AND THE ONE-CALL UTILITY COORDINATING COMMITTEE AT (713)-223-4267 OR 1-(800)-849-4344 A MINIMUM OF 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR, ON BEHALF OF THE OWNER, IS TO OBTAIN ALL PERMITS REQUIRED BY THE CITY OF HOUSTON AND/OR FORT BEND COUNTY, PRIOR TO STARTING CONSTRUCTION OF UTILITIES AND/OR SOILS WITHIN ALL RIGHT-OF-WAY.
- THE WORK AREA SHALL BE BARRICADED AND ILLUMINATED DURING DARKNESS AND PERIODS OF INACTIVITY, WHEN IN AN AREA OF DIRECT PUBLIC ACCESS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIAL AND EQUIPMENT STORED ON THE JOB SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STORAGE OF MATERIALS IN A SAFE AND ORGANIZED MANNER TO PREVENT INJURIES, DURING AND AFTER WORKING HOURS. LIMIT PROJECT COMPLETION AND OWNER ACCEPTANCE.
- THE LOADING AND UNLOADING OF ALL PIPE AND OTHER ACCESSORIES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PRACTICES AND SHALL, AT ALL TIMES BE PERFORMED WITH CARE TO AVOID ANY DAMAGE TO THE MATERIAL. THE CONTRACTOR SHALL LOCATE AND PROVIDE THE NECESSARY STORAGE AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SHIPPING AND STORING OF ALL MATERIALS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE SUCH MATERIAL AT THE POINT OF DELIVERY AND TO REJECT ALL DEFECTIVE MATERIAL. ANY DEFECTIVE MATERIAL INCORPORATED INTO THE WORK SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. THERE SHALL BE NO PAYMENT MADE FOR STORED MATERIAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE AND POSITIVE DRAINAGE AT ALL TIMES THROUGHOUT THE PROJECT.
- ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
- CONTRACTOR IS TO MAINTAIN A CLEAN PROJECT AREA, FREE FROM WORKMAN TRASH AND REFUSE, AT ALL TIMES.
- THE CONTRACTOR IS REQUIRED TO FOLLOW ALL APPLICABLE OSHA RULES AND REGULATIONS. TRIP/TWIST SAFETY SHALL BE COMPLIED WITH IN ACCORDANCE WITH OSHA 29 CFR PART 1926, AS PUBLISHED IN THE FEDERAL REGISTER OCTOBER 31, 1986 AND EFFECTIVE JANUARY 2, 1989.
- ALL GEOTECHNICAL REPORTS OF ANY KIND ARE AVAILABLE FOR REFERENCE AT THE OFFICE OF THE ENGINEER.
- AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL RESTORE THE EXISTING FACILITIES TO EQUAL OR BETTER THAN EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. ALL FINISHED GRADES SHALL VARY UPWARD FROM THE FINISHED ELEVATIONS SHOWN.
- FINAL ACCEPTANCE OF THE PROJECT WILL NOT BE GIVEN TO THE CONTRACTOR UNTIL IT IS INSPECTED AND APPROVED BY FORT BEND COUNTY ENGINEER, BY THE FORT BEND COUNTY DRAINAGE DISTRICT AND FORT BEND COUNTY.
- CONTRACTOR SHALL PROVIDE "SECOND DRAWINGS" WITH AS-BUILT MARK-UP ANNOTATIONS UPON COMPLETION OF THE PROJECT.
- THERE WILL BE NO SEPARATE PAYMENT FOR WORK SHOWN ON THESE PLANS, UNLESS SPECIFICALLY ESTABLISHED IN THE BID SECTION OF THE CONTRACT DOCUMENTS. INCLUDE COST OF THIS WORK IN THE CONTRACT LINE PRICE FOR ITEMS WHERE THIS WORK IS A COMPONENT OR INCIDENT.
- ALIGNMENT, CENTERLINE CURVE DATA, AND STATIONING SHALL BE VERIFIED.
- CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND ALL REGULATIONS OF UTILITY COMPANIES CONCERNING SAFETY AND HEALTH PRACTICES.
- INCLUDE PRICE OF ALL PIPE INCLUDING BEDDING AND BACKFILL, AS REQUIRED BY CITY OF HOUSTON STANDARD SPECIFICATIONS AND DRAWINGS IN PRICE BID PER INLET STRUCTURE.
- WHEN TRENCH CONDITIONS REQUIRE THE USE OF WELL POINTS AND WET SAND PROTECTION, THIS IS TO BE REQUESTED BY THE CONTRACTOR TO THE ENGINEER AND THEN APPROVED BY THE OWNER PRIOR TO IMPLEMENTATION.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EXISTING ROADWAYS. DAMAGE TO EXISTING ROADWAYS DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED TO THE SATISFACTION OF THE FACILITY OWNER AND ALL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTORS SHALL NOTIFY THE FOLLOWING ENTITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - FORT BEND COUNTY ENGINEERING (713)-433-7500
 - CENTERPOINT ENERGY/ENRTEC (713)-207-7777
 - TRANS ONE CALL SYSTEM 1-(800)-223-4267
 - UTILITY COORDINATING COMMITTEE (713)-223-4267
- CONTRACTOR SHALL MAINTAIN ALL TRAFFIC LANES AT ALL TIMES ON EXISTING ROADWAYS.
- CONTRACTOR SHALL NOT TRANSPORT MATERIALS ON PUBLIC ROADWAYS DURING PEAK TRAFFIC PERIODS, 8:30 AM TO 4:00 PM AND 4:00 PM TO 7:00 PM.
- OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE CONTRACTOR HAS MADE NO ATTEMPT TO MARK THESE LINES SINCE THEY ARE CLEARLY VISIBLE. BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. IF IT IS NECESSARY FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT (713) 207-7777.

FILL CONSTRUCTION NOTES

- ALL AREAS PROPOSED FOR FILL SHALL BE STRIPPED A MINIMUM OF 3 INCHES AND PROOF ROLLED TO 40# PROCTOR DENSITY PRIOR TO THE PLACEMENT AND COMPACTION OF SATURABLE FILL MATERIAL.
- ALL EXISTING DITCHES FOR FILL MUST BE DE-WICKED PRIOR TO FILLING. ALL UNSATURABLE MATERIAL MUST BE REMOVED FROM THE BOTTOM AND SIDES OF THE DITCH.
- CONTRACTOR SHALL NOT FILL ANY EXISTING DITCHES UNTIL THE PROPOSED DRAINAGE PIPE HAS BEEN INSTALLED.
- ALL FILL AREAS SHALL BE HYDRO-MULCH BEDDED IN ACCORDANCE WITH SPEC 02927 FOLLOWING FILL PLACEMENT AND THE REPLACEMENT OF STRIPPING.

FORT BEND COUNTY DRAINAGE DISTRICT NOTES

- FORT BEND COUNTY DRAINAGE DISTRICT CONSTRUCTION DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION AT 1024 BLUMLE ROAD, ROSENBERG, TEXAS 77471, (281)-242-2863. A COPY OF THE APPROVED CONSTRUCTION DRAWINGS IS REQUIRED AT THIS TIME.
- ENGINEER SHALL SUBMIT LETTER AND RECORD DRAWINGS TO THE FORT BEND COUNTY DRAINAGE DISTRICT, CONSTRUCTION DEPARTMENT, REQUESTING INSPECTION AND ACCEPTANCE OF ITEMS CONSTRUCTED IN FORT BEND COUNTY DRAINAGE DISTRICT RIGHT-OF-WAY PRIOR TO REQUESTING INSPECTION. THE DRAINAGE RIGHT-OF-WAY AND/OR EASEMENTS SHALL BE STAKED AND FLAGGED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING MAINTAINING, AND RESTORING MICROPILE DRAINAGE SYSTEM.
- ALL DISTURBED AREAS WITHIN THE FORT BEND COUNTY DRAINAGE DISTRICT RIGHT-OF-WAY, EXCEPT THE CHANNEL BOTTOM SHALL BE RESTORED AS PER HARRIS COUNTY FLOOD CONTROL DISTRICT SPECIFICATION 02921, "SOIL STABILIZATION" (PER APPLICATION) OR APPROVED EQUIVALENT.
- BACKFILL TO BE COMPACTED TO NO GREATER THAN 8-INCH LIFTS TO THE DENSITY OF THE IMPROVED ADJACENT SOIL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOW IN CHANNEL DURING CONSTRUCTION AND RESTORING CHANNEL TO ORIGINAL CONDITION.
- ALL EXCAVATED MATERIAL IS TO BE REMOVED FROM FORT BEND COUNTY DRAINAGE DISTRICT RIGHT-OF-WAY. NO FILL TO BE PLACED WITHIN DESIGNATED FLOOD PLAIN AREA WITHOUT FIRST OBTAINING A FILL PERMIT.
- CONTRACTOR, WITH THE ASSISTANCE OF THE ENGINEER IF NECESSARY, SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL PERMITS.

POLLUTION PREVENTION PLAN NOTES

- CONTRACTOR TO SEQUENCE CONSTRUCTION ACTIVITIES AND STORM WATER CONTROL MEASURES NECESSARY TO ACOMPLISH HIS WORK.
- PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL INSTALL AS A MINIMUM, EROSION AND SEDIMENT CONTROLS AT LOCATIONS SHOWN ON PLANS.
- CONTRACTOR SHALL RESPECT ALL EXISTING OR PROPOSED EROSION AND SEDIMENTATION CONTROL SYSTEMS.
- CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE DAMAGED EXISTING OR PROPOSED EROSION AND SEDIMENTATION CONTROL SYSTEMS THROUGHOUT THE DURATION OF THE CONTRACT.
- CONTRACTOR SHALL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
- CONTRACTOR SHALL LOCATE FUEL/MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONTAINMENT SYSTEMS. CONTRACTOR SHALL USE A LINDER UNDER ABOVE GROUND STORAGE TANKS. CONTRACTOR SHALL USE SILT FENCING, STRAIN BAILS, OR BERMING AROUND FUEL STORAGE AREAS.
- CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY FUEL OR TOXIC MATERIAL SPILLS ONTO THE PROJECT/CONSTRUCTION AREA AND THE ACTIONS TAKEN TO REMEDY THE PROBLEM.
- CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF FUELS, MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER.
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE ENVIRONMENTAL LAWS.
- CONTRACTOR SHALL DISCLOSE AND DEMONSTRATE COMPLIANCE WITH APPLICABLE STATE AND/OR LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.
- CONTRACTOR IS PROHIBITED FROM DISCHARGING SOLID MATERIALS, INCLUDING BUILDING MATERIALS INTO WATERS OF THE UNITED STATES, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
- CONTRACTOR SHALL MINIMIZE THE OFF-SITE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST.
- CONTRACTOR SHALL BE RESPONSIBLE FOR STREET CLEANING, ON A DAILY BASIS, ALL ROAD AND DIRT DEPOSITED ON THE EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY.
- DOWNSTREAM WATERCOURSES OR STROVES MUST BE PROTECTED FROM SEDIMENT RUNOFF DEVELOPED DURING THE CONSTRUCTION PROCESS. PREVENTIONS SUCH AS SILT FENCING, GEOTEXTILE FABRIC PROTECTION OVER STORM DRAIN SYSTEMS, MAT BAILS, OR ROCK BERMS MAY BE USED.
- ALL DISTURBED AREAS MUST BE SEEDS ON LANDSCAPED WITHIN 14 DAYS OF THE LAST ACTIVITY FOR THAT AREA.
- CHANNEL BOTTOM, SIDES AND MAINTENANCE BERM SHALL BE HYDRO-MULCH SEEDS.

CAUTION UNDERGROUND GAS FACILITIES

- LOCATIONS OF CENTERPOINT ENERGY MAIN LINES (TO INCLUDE CENTERPOINT ENERGY, INTRASTATE PIPELINE, LLC, WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. OUR SIGNATURE ON THESE PLANS ONLY IMPLY THAT A CONFLICT ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT (713) 223-4267 OR 1-800-849-4344 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.
- WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713) 867-8037 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
 - MINES EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPANIED USING NON-MECHANIZED EXCAVATION PROCEDURES.
 - IF ANY CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.
- THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

WARNING OVERHEAD ELECTRICAL LINES

- OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE. BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 732. HEALTH & SAFETY CODE FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES, SPECIFICALLY:
- ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES, AND
 - OPERATING A CRANE, SERVICER, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN 10 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES.
- PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. A VIOLATION FOR LINES TO BE TURNED OFF OR MOVED/CALL CENTERPOINT ENERGY AT (713) 207-7777.

ADDITIONAL CONSTRUCTION NOTES

- FENCES AND/OR OTHER ENCLOSUREMENTS IN THE PROPOSED R.O.W. ARE NOT TO BE REMOVED UNLESS OTHERWISE STATED ON THE PLANS. ACCESS IS LIMITED TO THE AVAILABLE R.O.W. UNLESS OTHERWISE STATED. ANY ADDITIONAL OR ALTERNATIVE ACCESS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- DO NOT ENTER PRIVATE PROPERTY WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER AND THE ENGINEER.
- IMP-RAP REMOVED DURING EXCAVATION FOR CHANNEL REPAIRS. MEETING SPECIFICATION SECTION NUMBER 02378. IMP-RAP SHOULD BE STOCKPILED FOR REUSE. PAYMENT SHALL BE AS EXCAVATION AND FILL (ON-SITE MATERIAL) DISPOSAL OF NONCONFORMING MATERIAL. PAYMENT FOR DISPOSAL OF NONCONFORMING MATERIAL WILL BE MADE BY SPECIFICATION SECTION NUMBER 02126. REMOVE AND DISPOSE OF CONCRETE'S REMAINS.
- IN AREAS OF BRUSH/WEED AND ASH/SLUDGE REPAIR, EXCAVATION IS REQUIRED TO EXPOSE UNDERGROUND VOIDS. BRUSH/WEED OCCURRING UNDER OUTFALL PIPES WILL REQUIRE EXPOSING THE PIPE AND POSSIBLY REPLACING THE SAND COUNTERS OR COLLAR AS DIRECTED BY THE ENGINEER.
- DEEP PLOWING IF NEEDED:
 - IN AREAS OF DEEP PLOWING, THE SLOPE OF BERM OF A CHANNEL IS TO BREAK UP THE DISSECTED SOILS AND EXPOSE ANY VOIDS OR HOLLOW CLOSE TO THE SURFACE OF THE SLOPE OR BERM. THE CONTRACTOR WILL DEEP PLOW THE SLOPE OR BERM TO A MINIMUM DEPTH OF 2' IN AREAS CONTAINING VOIDS AND/OR BELONG IN AREAS OF VOIDS ONLY. THE SURFACE FROM WHICH THE 2' DEPTH IS MEASURED WILL BE THE LEVEL OF THE SURROUNDING SOIL.
 - IN AREAS OF ROLLING THE BELLS WILL FIRST BE KNOCKED DOWN AND LEVELLED OFF. THE 2' DEPTH WILL THEN BE MEASURED FROM THIS NEW SURFACE. THE CONTRACTOR WILL DETERMINE THE MEANS AND METHOD FOR DEEP PLOWING.
- NEEDS TO BE REMOVED WILL BE IDENTIFIED BY THE ENGINEER. ALL OTHER NEEDS TO REMAIN.

NOTE: FORT BEND WATER AUTHORITY

- CONTRACTOR WILL CONTACT NORTH FORT BEND WATER AUTHORITY (FAUTHORITY) OPERATOR (NEWMAN TRANT 281-846-2330) TO LOCATE AND MARK AUTHORITY'S WATER LINE PRIOR TO ANY CONSTRUCTION. AUTHORITY HAS NO RESPONSIBILITY REGARDING THE LOCATION OF ANY OTHER FACILITIES WITHIN THE AUTHORITY'S EASEMENT.
- CONTRACTOR WILL COORDINATE WITH AUTHORITY REGARDING USE OF HEAVY EQUIPMENT ON OR ABOVE WATERLINE WITHIN THE EASEMENT TO PREVENT POTENTIAL DAMAGE TO AUTHORITY FACILITIES. THIS MAY INCLUDE USE OF MATS, PLATES, OR SPECIAL EQUIPMENT.
- ANY OPEN CUT CONSTRUCTION FOR A UTILITY CROSSING ABOVE AN AUTHORITY WATERLINE WILL NOT DISTURB SOILS WITHIN 18 INCHES OF AUTHORITY'S LINE. UTILITY'S EXCAVATION SHALL HAVE A PLATE WELDED OVER THE TOP OF THE EXCAVATION BUCKET, AND THE SIDE CUTTERS MUST BE REMOVED PRIOR TO EXCAVATION TO HELP PREVENT PIPELINE DAMAGE. ANY EXCAVATION TAKING PLACE WITHIN 18 INCHES OF THE OUTER EDGE OF THE WATERLINE SHALL BE DONE BY HAND EXCAVATION ONLY. AIR CUTTING AND VACUUM EXCAVATION ARE PERMITTED WITH THE APPROVAL OF THE AUTHORITY ON-SITE REPRESENTATIVE.
- CONSTRUCTION ACTIVITIES THAT GENERATE EXCESSIVE VIBRATION, INCLUDING PILE DRIVING, SPLIT DRIVING, SOIL COMPACTION WORK, AND OTHER VIBRATING EQUIPMENT, SHALL BE COORDINATED WITH AND APPROVED BY THE AUTHORITY'S ON-SITE REPRESENTATIVE.
- THE ENGINEER SHALL OBTAIN A LETTER OF NO OBJECTION MUST BE OBTAINED PRIOR TO ANY WORK ACTIVITY WITHIN AUTHORITY'S EASEMENT. AUTHORITY MUST REVIEW AND APPROVE PROPOSED EASEMENT AND CONSTRUCTION DRAWINGS BEFORE ISSUING A LETTER OF NO OBJECTION. A COPY OF THIS LETTER MUST BE IN THE POSSESSION OF UTILITIES AND ITS CONTRACTORS' MAIN OFFICES. WHILE CONDUCTING CONSTRUCTION ACTIVITY WITHIN THE AUTHORITY'S EASEMENT, THE OWNER WILL REMAIN RESPONSIBLE FOR NOTIFYING AUTHORITY'S REPRESENTATIVE TO BE PRESENT DURING ACTIVE CONSTRUCTION WITHIN AUTHORITY'S EASEMENT.
- CONTRACTOR MUST NOTIFY AUTHORITY 48 HRS IN ADVANCE OF CONSTRUCTION CONDUCTING ACTIVE CONSTRUCTION WITHIN THE AUTHORITY'S EASEMENT. AUTHORITY'S REPRESENTATIVE MAY BE PRESENT DURING ACTIVE CONSTRUCTION WITHIN AUTHORITY'S EASEMENT. THE OWNER WILL REMAIN RESPONSIBLE FOR NOTIFYING AUTHORITY'S REPRESENTATIVE TO BE PRESENT DURING ACTIVE CONSTRUCTION WITHIN AUTHORITY'S EASEMENT.

CONTRACTOR MAY NOT STORE CONSTRUCTION MATERIALS INCLUDING SOIL, SPILLS, AND EQUIPMENT ON AUTHORITY EASEMENT.

ALL PROPOSED CROSSINGS SHALL BE REASONABLY PROPORTIONATE TO AUTHORITY'S EASEMENT.

REQUESTS FOR VARIANCE FROM THESE CROSSING REGULATIONS MAY BE SUBMITTED TO THE AUTHORITY'S BOARD OF DIRECTORS FOR CONSIDERATION ON A CASE-BY-CASE BASIS AND MUST (1) PROVIDE AN EXPLANATION OF THE NEED FOR THE VARIANCE (2) BE IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN THE HOUSTON REGION, (3) NOT CREATE AN UNREASONABLE RISK OF HARM TO THE GENERAL PUBLIC OR (4) UNREASONABLY RESTRICT OR INTERFERE WITH THE AUTHORITY'S EASEMENT OR FACILITIES, OR THE OPERATION AND MAINTENANCE OF THE AUTHORITY'S FACILITIES.

A MINIMUM OF 24-INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE OUTSIDE OF ANY PROPOSED STORM SEWER AND THE EXISTING AUTHORITY WATERLINE. USE TRENCHLESS CONSTRUCTION WHEN CROSSING UNDER EXISTING AUTHORITY WATER LINE.

STORM SEWER PIPE MUST UTILIZE GASKETED JOINTS WITHIN AUTHORITY'S EASEMENT.

REV.	NO.	DATE	DESCRIPTION	P.E. APP.
1				
2				
3				

BROWN & GAY ENGINEERS, INC.

Brown & Gay Engineers, Inc.
 10000 Katy Road, Suite 400
 Houston, TX 77055
 Phone: (281) 558-4333
 Fax: (281) 558-4333
 1998 Registration No. 7-1048



LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

GENERAL CONSTRUCTION NOTES

JOB NUMBER: 1223-00

SUBMITTED BY: BROWN & GAY ENGINEERS, INC. DRAWN BY: A.T.S. SCALE: AS SHOWN DATE: MARCH 2012 SHEET NO. 2 OF 35 SHEETS

DESIGNED BY: J.C.P. CHECKED BY: J.C.P. APPROVED BY: BROWN & GAY ENGINEERS, INC. P.E. NO.

VERIFICATION OF PRIVATE UTILITY LINES

DATE: 4-9-13

DATE: 4-9-13

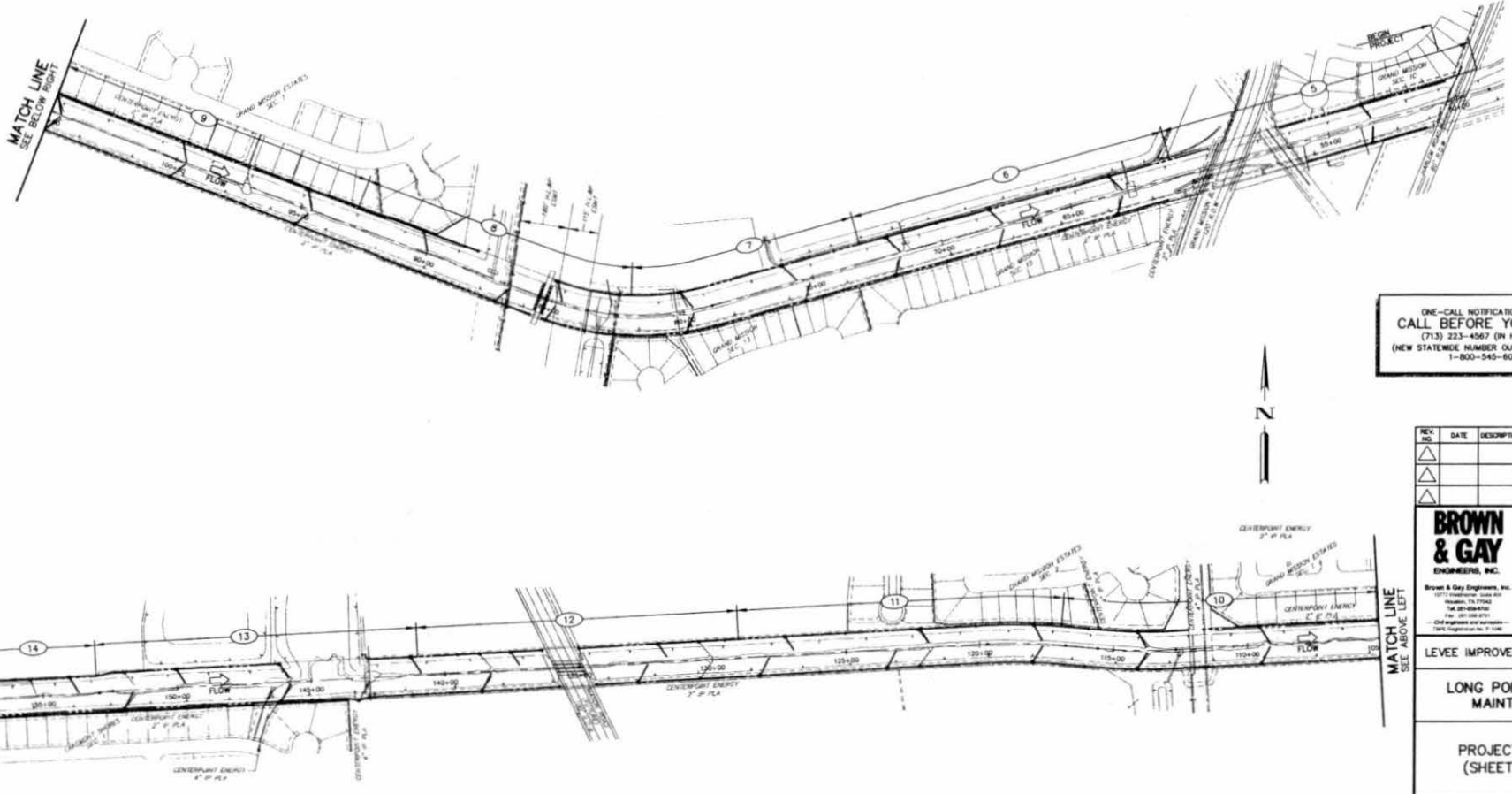
APPROVED BY: [Signature]

LEGEND

SHEET REFERENCE NUMBER --- (1)

PERMIT NOTES:
 1. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY FORT BEND COUNTY, TEXAS PRIOR TO STARTING CONSTRUCTION OF UTILITIES AND/OR DIAVERTS WITHIN COUNTY ROAD RIGHT-OF-WAY. THE PERMIT IS TO BE ISSUED IN THE OWNER'S NAME.
 2. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY REGULATION OF FORT BEND COUNTY, TEXAS FOR FLOOD PLAIN MANAGEMENT PRIOR TO STARTING CONSTRUCTION.

BENCHMARKS:
 Floodplain Reference Mark Number 210450 is a Brass Disk Stamped 210450 on bridge at former flood and longwall Slough/Channel Ditch located on upstream headwall, at stream center, on west side of road, Key Map Page 526.
 ELEV. 86.41 Feet NAD 1983, 2000 Adjustment.



**ONE-CALL NOTIFICATION SYSTEM:
 CALL BEFORE YOU DIG!!!
 (713) 223-4567 (IN HOUSTON)
 (NEW STATEWIDE NUMBER OUTSIDE HOUSTON)
 1-800-545-6005**

REV. NO.	DATE	DESCRIPTION	P.E. APPROV.
△			
△			

BROWN & GAY ENGINEERS, INC.

Brown & Gay Engineers, Inc.
 10777 Woodloch Forest, Suite 400
 Houston, TX 77055
 Tel: 281-488-6400
 Fax: 281-488-6401
 - Civil Engineers and Surveyors -
 1984 Registration No. F-1068

Wesley French
 3/8/12
 Civil Engineer

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

PROJECT LAYOUT
 (SHEET 1 OF 2)

JOB NUMBER: 1223-00
 SUBMITTED BY: BROWN & GAY ENGINEERS, INC.
 SCALE: 1"=200'
 DATE: MARCH 2013
 SURVEY BY: BROWN & GAY ENGINEERS, INC.
 DESIGNED BY: DMF
 DRAWN BY: JAVL/P
 SHEET NO. 3 OF 35 SHEETS

BROWN & GAY ENGINEERS, INC.
 10777 WOODLOCH FOREST, SUITE 400 HOUSTON, TEXAS 77055
 TEL: 281-488-6400 FAX: 281-488-6401
 REG. NO. F-1068

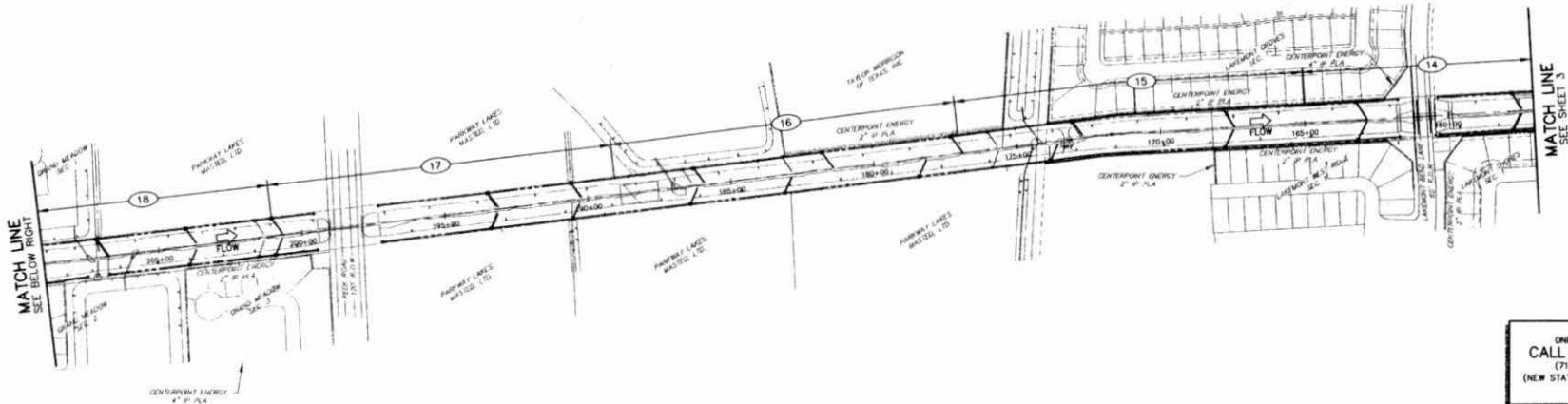
440

LEGEND

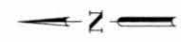
SHEET REFERENCE NUMBER ----- (1)

PERMIT NOTES:
 1. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY FORT BEND COUNTY, TEXAS PRIOR TO STARTING CONSTRUCTION OF UTILITIES AND/OR CONCRETE WITHIN COUNTY ROAD RIGHT-OF-WAY. THE PERMIT IS TO BE ISSUED IN THE OWNER'S NAME.
 2. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY REGULATION OF FORT BEND COUNTY, TEXAS FOR FLOOD PLAIN MANAGEMENT PRIOR TO STARTING CONSTRUCTION.

BENCHMARKS:
 Floodplain Reference Mark Number 210400 is a Brass Disk Mounted 210400 on bridge on Harmon Road and Longport Slough/Channel (Ditch) located on upstream side of Harmon Road, on west side of road, Key Map Page 528.
 ELEV. 86.41 Feet NAVD 1988, 2001 Adjustment.



ONE-CALL NOTIFICATION SYSTEM:
CALL BEFORE YOU DIG!!!
 (713) 223-4567 (IN HOUSTON)
 (NEW STATEWIDE NUMBER OUTSIDE HOUSTON)
 1-800-545-6005



REV. NO.	DATE	DESCRIPTION	P.E. APPRO.

BROWN & GAY ENGINEERS, INC.

Brown & Gay Engineers, Inc.
 12777 Westheimer, Suite 400
 Houston, TX 77040
 Tel: 281-488-8100
 Fax: 281-488-8101
 — Civil Engineers and Surveyors
 License Registration No. F-1048

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

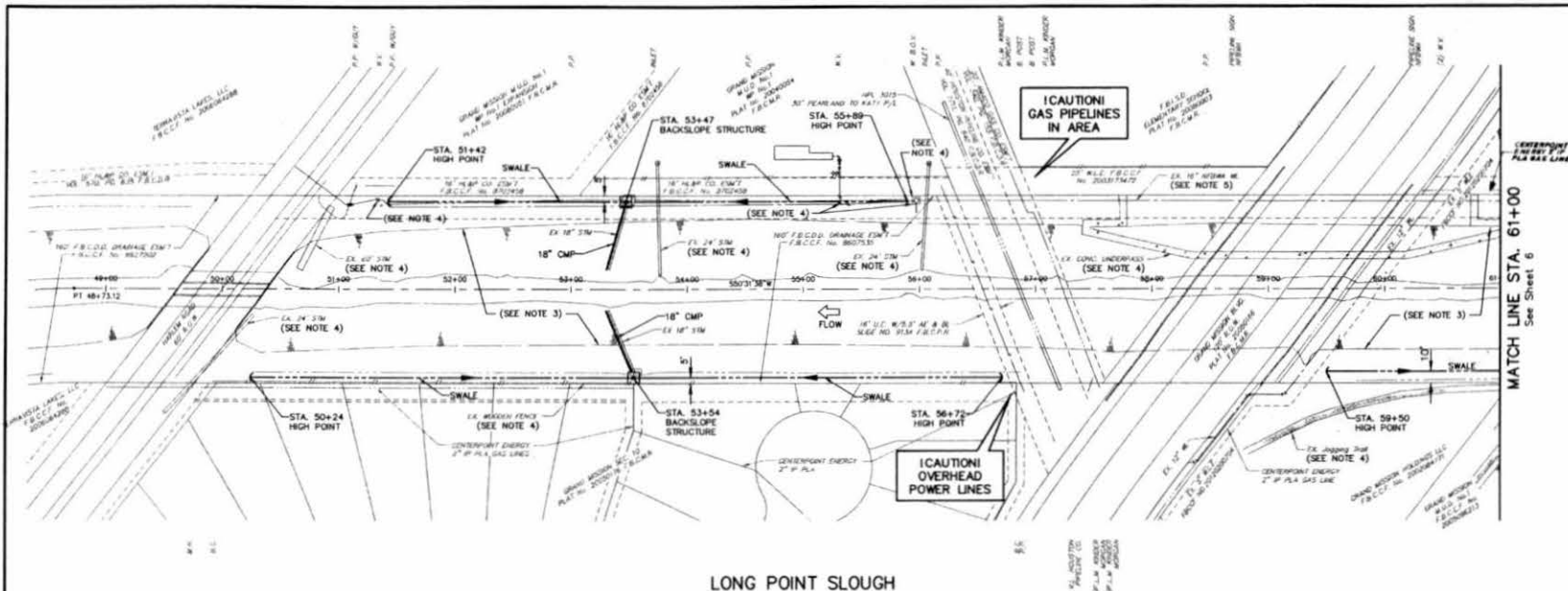
PROJECT LAYOUT
 (SHEET 2 OF 2)

JOB NUMBER: 1223-00

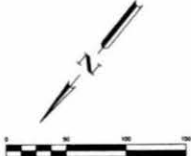
SUBMITTED BY: BROWN & GAY ENGINEERS, INC.	DESIGNED BY: CWP
SCALE: 1" = 200'	DRAWN BY: JAV/APP
DATE: MARCH 2003	SHEET NO. 4 OF 35 SHEETS
SURVEY BY: BROWN & GAY ENGINEERS, INC.	C.E. NO.

4/2/17

BROWN & GAY ENGINEERS, INC.
 12777 Westheimer, Suite 400, Houston, TX 77040
 License Registration No. F-1048
 Mar. 11, 2013, 10:08am, 10:00pm

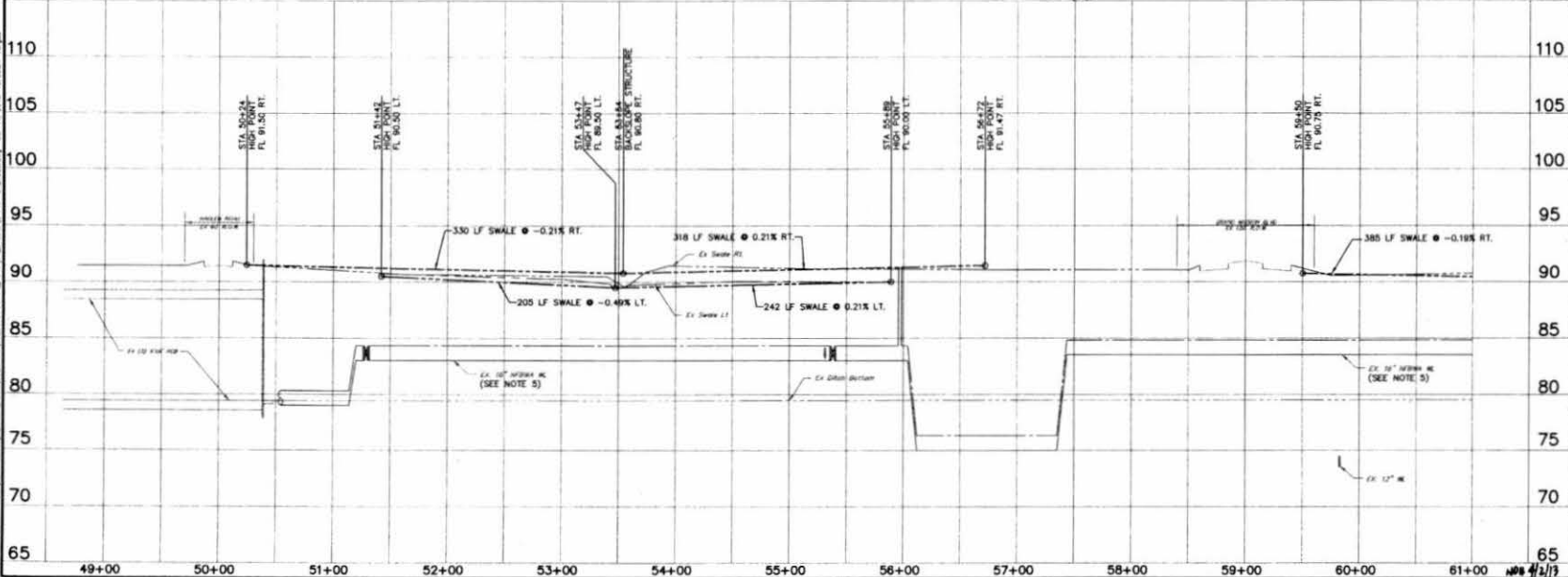


BENCHMARKS:
 Flooded Reference Mark Number 210000 is a Brass Disk Mounted
 20000 on a bridge at Warren Road and Longpoint Slough/Channel
 Disk located on upstream bank, at stream center, on west side
 of road. See Page 508.
 ELEV. 88.41 Feet NAD 1983, 2011 Adjustment.



- NOTES:**
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE. SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
 5. CONTRACTOR TO ADHERE TO NFWA CROSSING NOTES SHOWN ON SHEET 2.

LONG POINT SLOUGH



REV. NO.	DATE	DESCRIPTION	P.L. APP.
1			
2			

BROWN & GAY ENGINEERS, INC.
 1077 International Drive, Suite 400
 Houston, TX 77060
 Tel: 281-688-8700
 Fax: 281-688-8701
 E-mail: info@brownandgay.com
 www.brownandgay.com

C. WESLEY FRENCH
 68197
 PROFESSIONAL ENGINEER
 State of Texas
 F-1048

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

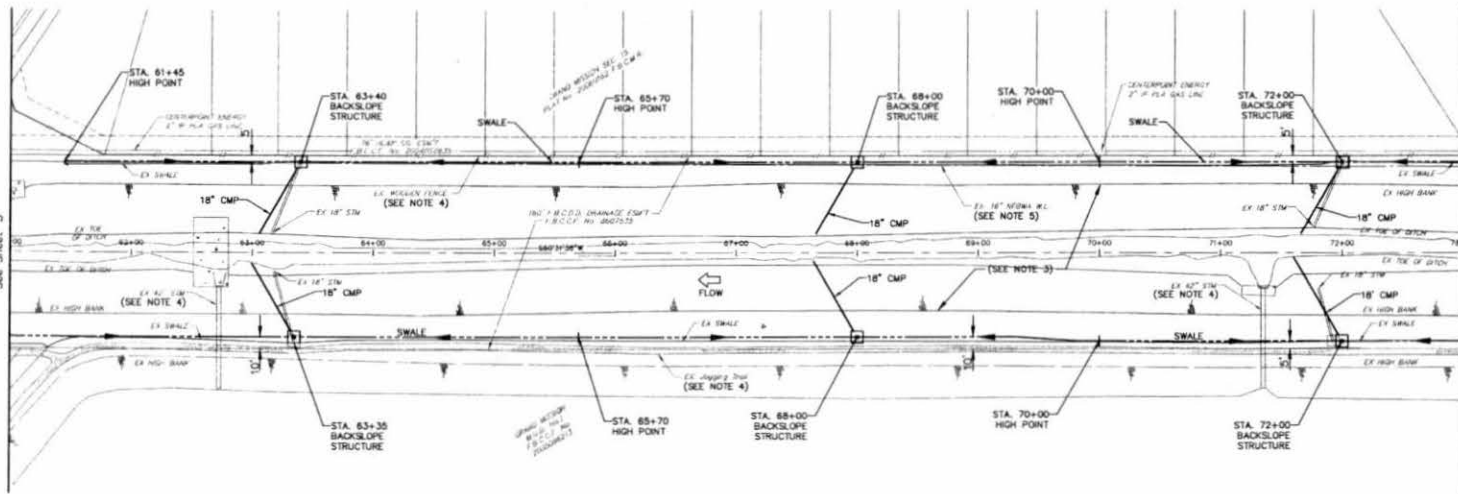
PLAN AND PROFILE LONG POINT SLOUGH STA. 50+00 TO STA. 61+00

JOB NUMBER: 1223-00

SUBMITTED BY: BROWN & GAY ENGINEERS, INC.
 DESIGNED BY: CWF
 SCALE: 1" = 20' (PLAN)
 DATE: MARCH 2013
 SHEET NO. 5 OF 35 SHEETS
 SURVEY BY: BROWN & GAY ENGINEERS, INC.
 P.L. APP.

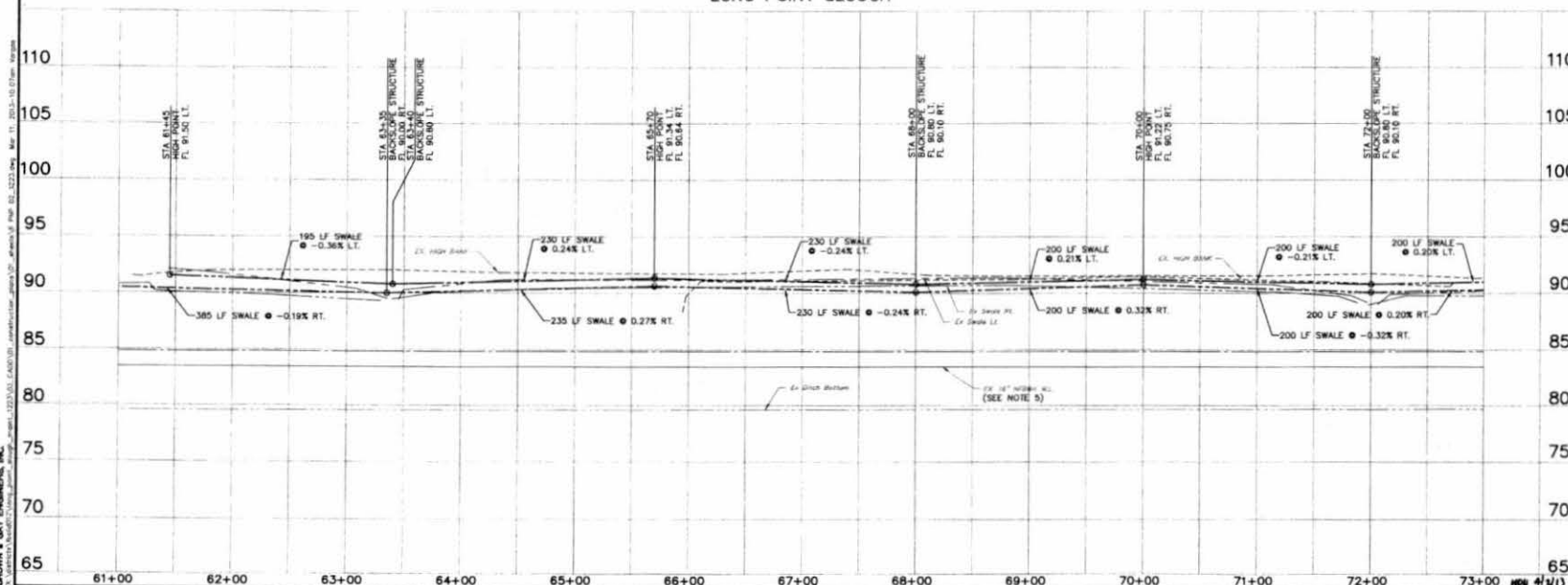
BROWN & GAY ENGINEERS, INC. 1223-00-05 LONG POINT SLOUGH MAINTENANCE STA. 50+00 TO STA. 61+00 SHEET NO. 5 OF 35 SHEETS

MATCH LINE STA. 61+00
See Sheet 5



MATCH LINE STA. 73+00
See Sheet 7

LONG POINT SLOUGH



NOTATIONS
 Elevation Reference with number 20000 is a Mean Sea Level
 20000 on bridge at Channel Road and Longpoint Slough/Channel
 20000 on all other horizontal, at stream center, or west side
 of road. See Page 200.
 ELEV. 88.41 Feet NAVD 1988, 2000 Adjustment



- NOTES:
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE. SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
 5. CONTRACTOR TO ADHERE TO NFPA CROSSING NOTES SHOWN ON SHEET 2.

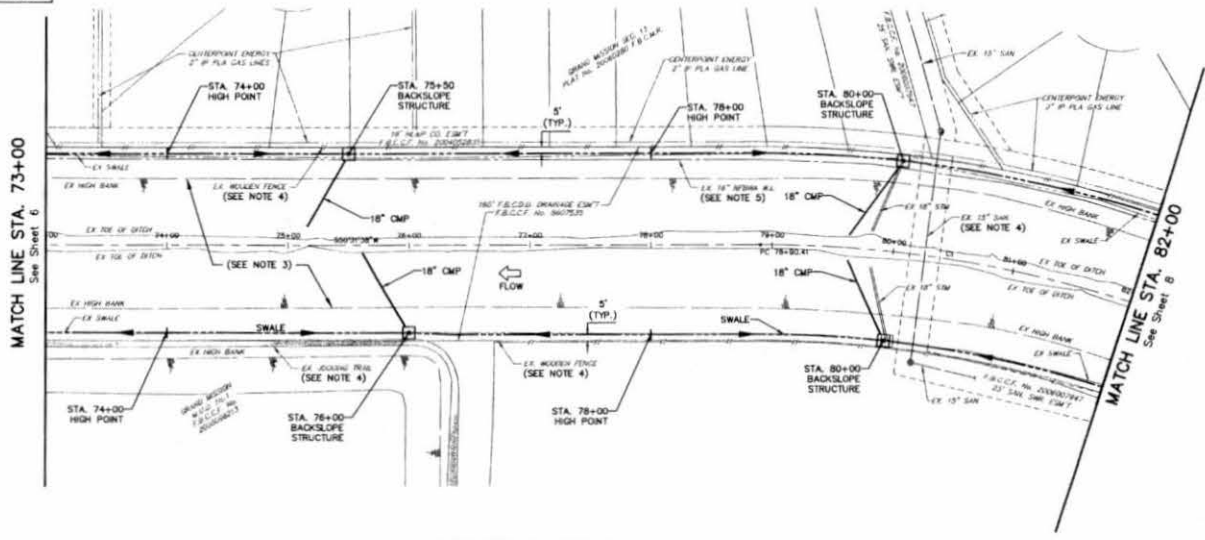
REV. NO.	DATE	DESCRIPTION	P.L. APPR.
1			
2			

BROWN & GAY ENGINEERS, INC.
 10777 Woodlawn, Suite 400
 Houston, TX 77055
 Tel. 281-688-8740
 Fax: 281-688-8742
 E-mail: bge@brownandgay.com
 "Your Engineers and Surveyors"
 "Since 1928, We've Been Here"

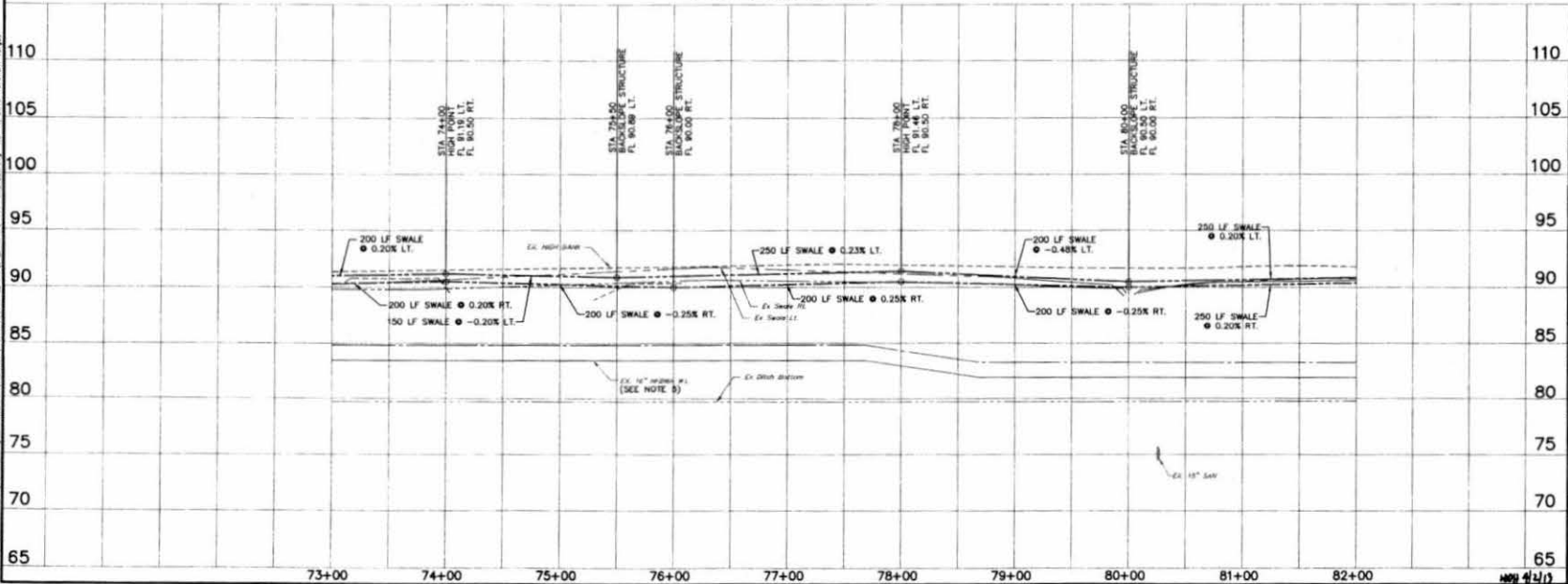
LEVEE IMPROVEMENT DISTRICT 12
LONG POINT SLOUGH MAINTENANCE
PLAN AND PROFILE LONG POINT SLOUGH STA. 61+00 TO STA. 73+00
JOB NUMBER: 1223-00
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: MARCH 2013
SHEET NO. 6 OF 35 SHEETS

BROWN & GAY ENGINEERS, INC.
 10777 Woodlawn, Suite 400
 Houston, TX 77055
 Tel. 281-688-8740
 Fax: 281-688-8742
 E-mail: bge@brownandgay.com
 "Your Engineers and Surveyors"
 "Since 1928, We've Been Here"

CURVE DATA TABLE				
NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD INCREASION
C1	36°16'52"	1000.00'	633.33'	586' 40" 04"



LONG POINT SLOUGH



BOUNDARY:
 Flooded Reference Mark Number 210450 is a Brass Disk Stamped 210450 on Bridge of Harris Road and Longpoint Slough/Douglas Slough located on right-of-way, located at station center, at work area of road, Key Map Page 33A.
 ELEV: 86.41 Feet NAVD 1988, 2011 Adjustment



- NOTES:
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02021 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE, SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
 5. CONTRACTOR TO ADHERE TO NFWMA CROSSING NOTES SHOWN ON SHEET 2.

REV. NO.	DATE	DESCRIPTION	P.L. APPR.
1			
2			
3			

BROWN & GAY ENGINEERS, INC.
 10777 Woodloch Lane, Suite 400
 Houston, TX 77060
 Tel: 281-988-6700
 Fax: 281-988-6701
 E-mail: bge@brownandgay.com
 1985 Registration No. 7-1048

Brown & Gay Engineers, Inc.
 F-1048

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

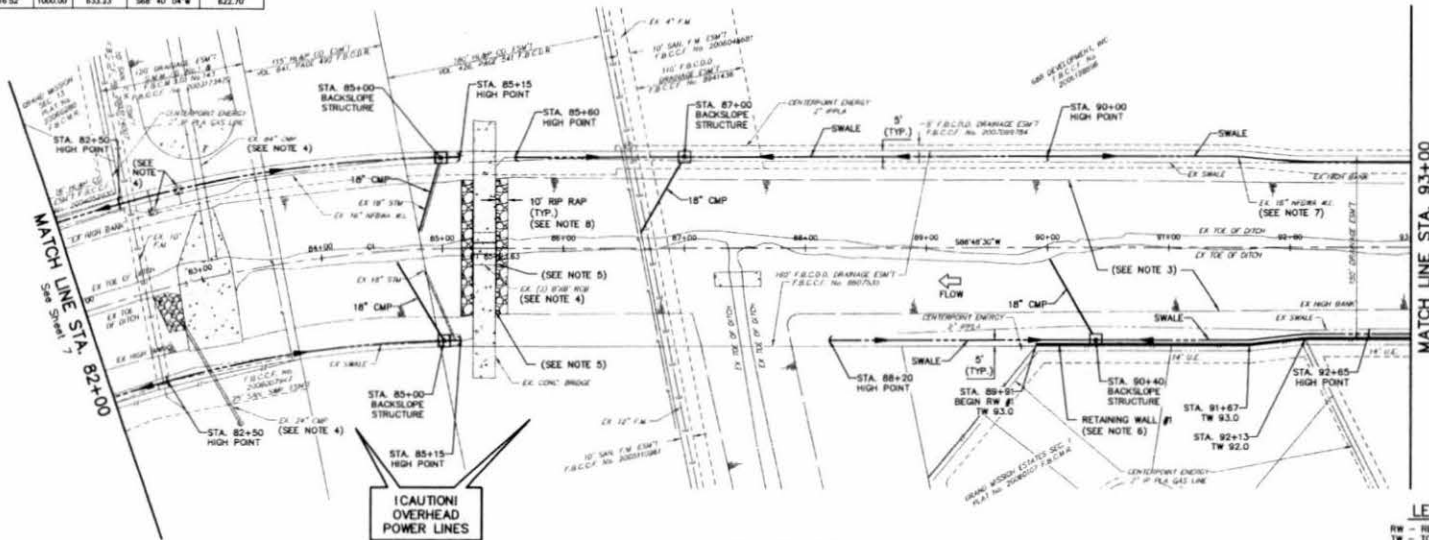
PLAN AND PROFILE LONG POINT SLOUGH STA. 73+00 TO STA. 82+00

JOB NUMBER: 1223-00

DESIGNED BY: LWF
 CHECKED BY: JCP
 DATE: 08/01/2012
 SHEET NO. 7 OF 35 SHEETS

BROWN & GAY ENGINEERS, INC.
 10777 WOODLOCH LANE, SUITE 400 HOUSTON, TEXAS 77060
 TEL: 281-988-6700 FAX: 281-988-6701
 E-MAIL: bge@brownandgay.com
 1985 REGISTRATION NO. 7-1048

CURVE DATA TABLE				
NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD LENGTH
C1	34°16'32"	1000.00'	833.83'	588' 40" 04"
				822.70'



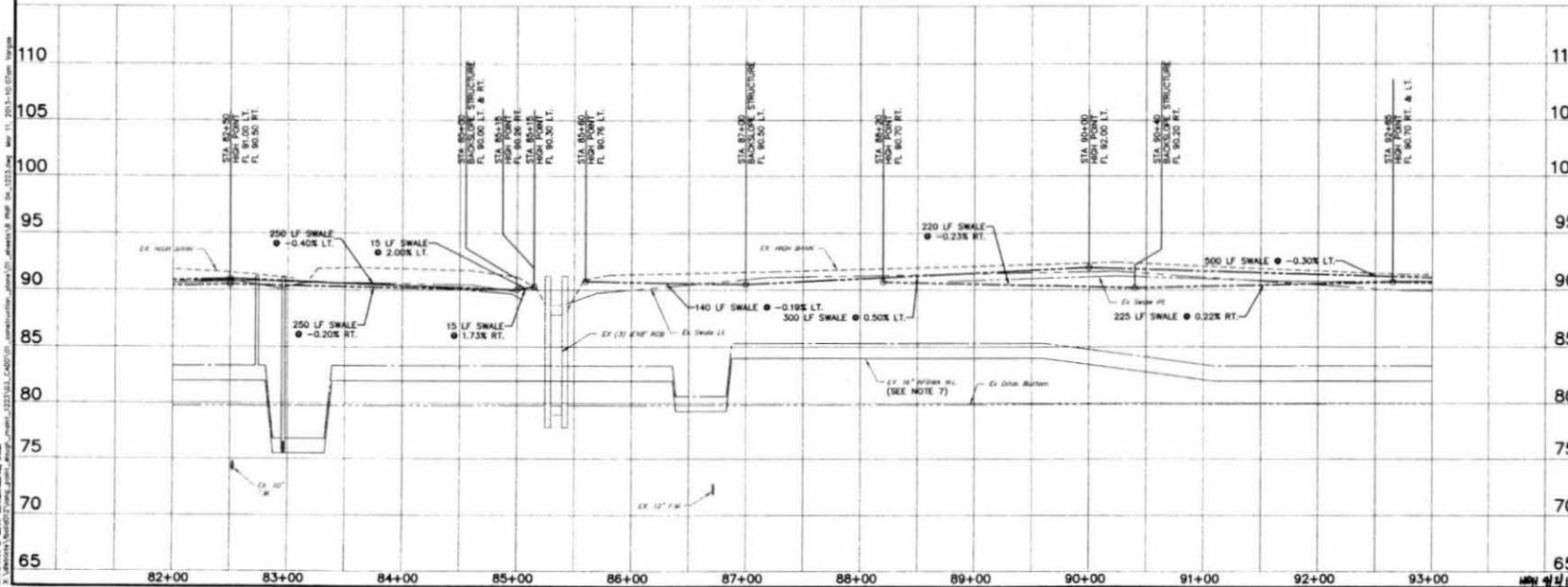
LONG POINT SLOUGH

LEGEND
RW - RETAINING WALL
TW - TOP OF RETAINING WALL

BOUNDARY
Floodgate Reference Mark Number 21040 is a Brass Disk Stamped 210402 on Bridge at Hatten Road and Longpoint Slough/Channel. Disk located on upstream bank, 65' stream center, on east side of road, Key Map Page 504.
ELEV. 86.41 Feet
NAVD 1986, 2000 Adjustment



- NOTES
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 82+00 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE, SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
 5. ERODED AREAS UNDER EXISTING CONCRETE CROSSINGS TO BE DEMOLISHED AND FLOWABLE FILL TO BE PLACED TO FILL ALL VOIDS, REGRADE ABUTMENT SLOPES TO 3:1 OR FLATTER AND ESTABLISH TURF PER NOTE 2.
 6. SEE SHEET 35 FOR RETAINING WALL DETAILS.
 7. CONTRACTOR TO ADHERE TO NFPA CROSSING NOTES SHOWN ON SHEET 2.
 8. 18" THICK RRP-RAP TO BE 80-150 LB. BROKEN CONCRETE (6" MINIMUM THICK PER STONE, NO EXPOSED REBAR.)



REV.	DATE	DESCRIPTION	P.L. APPR.
1			
2			
3			
4			

BROWN & GAY
ENGINEERS, INC.

Brown & Gay Engineers, Inc.
10177 Highway 200, Suite 100
Houston, TX 77054
Tel: 281-888-7878
Fax: 281-888-7879
— Civil Engineers and Surveyors —
1994 Registration No. P-1008

Brown & Gay Engineers, Inc.
P-1008

LEVEL 12
LONG POINT SLOUGH MAINTENANCE

PLAN AND PROFILE
LONG POINT SLOUGH
STA. 82+00 TO STA. 93+00

JOB NUMBER: 1223-00

DESIGNED BY: CMF
DRAWN BY: JAVL/P
DATE: MARCH 2013
SHEET NO. 8 OF 35 SHEETS

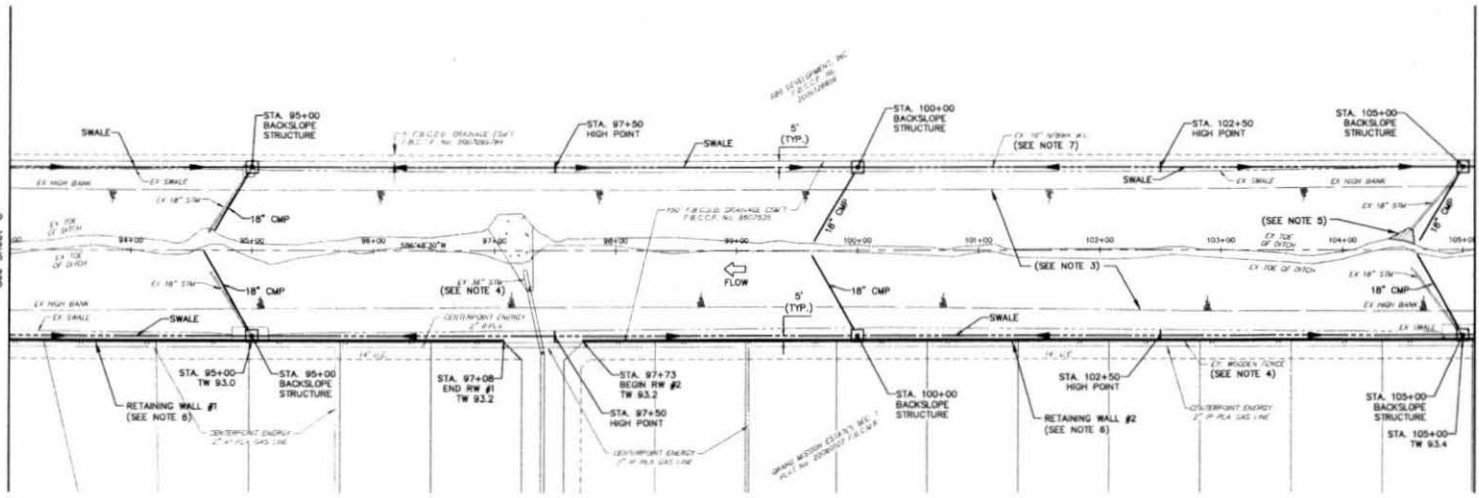
APPROVED BY: CMF
DATE: MARCH 2013
SHEET NO. 8 OF 35 SHEETS

BROWN & GAY ENGINEERS, INC.
10177 Highway 200, Suite 100, Houston, TX 77054
Tel: 281-888-7878, Fax: 281-888-7879
Civil Engineers and Surveyors
1994 Registration No. P-1008

MAR 13 2013

MATCH LINE STA. 93+00
See Sheet B

MATCH LINE STA. 105+10
See Sheet 10



BENCHMARKS:
 Nearest Reference Mark Number: 210450 is a Brass Disk Stamped 210450 on bridge at Indian Road and Longpoint Slough/Channel. Disk located on upstream abutment, at stream center, on west side of road. See Page 508.
 ELEV. 86.41 Feet HANG 1886, 200' Adjustment.

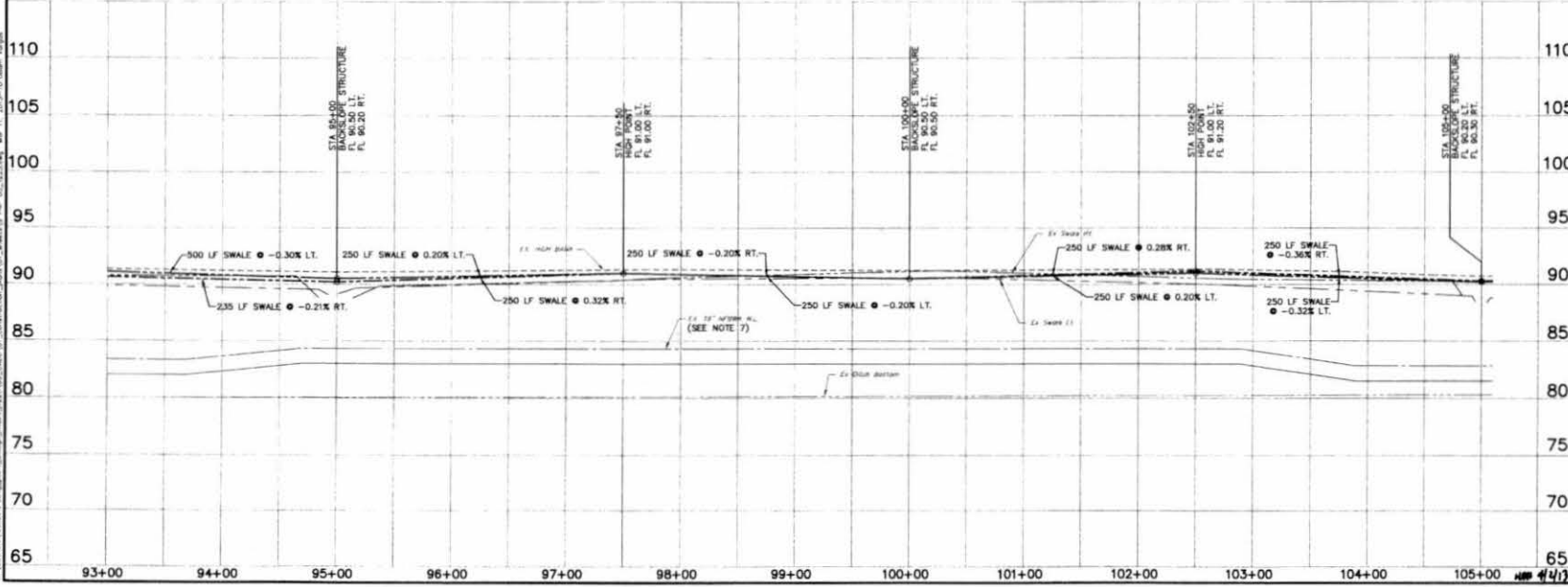


NOTES:

1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 93+00 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE. SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
5. CHANNEL BOTTOM TO BE RECONSTRUCTED. MAINTAIN 20' BOTTOM WIDTH. FILL TO SURROUNDING GRADE AND COMPACT TO 95% PROCTOR DENSITY.
6. SEE SHEET 35 FOR RETAINING WALL DETAILS.
7. CONTRACTOR TO ADHERE TO NFPA CROSSING NOTES SHOWN ON SHEET 2.

LEGEND
 RW - RETAINING WALL
 TW - TOP OF RETAINING WALL

LONG POINT SLOUGH



REV NO	DATE	DESCRIPTION	P.E. APPRO
1			
2			

BROWN & GAY ENGINEERS, INC.
 1277 Westchester, Suite 400
 Houston, TX 77060
 Tel: 281-684-8100
 Fax: 281-684-8101
 E-mail: bge@brownandgay.com
 100% Registered Professional Engineers

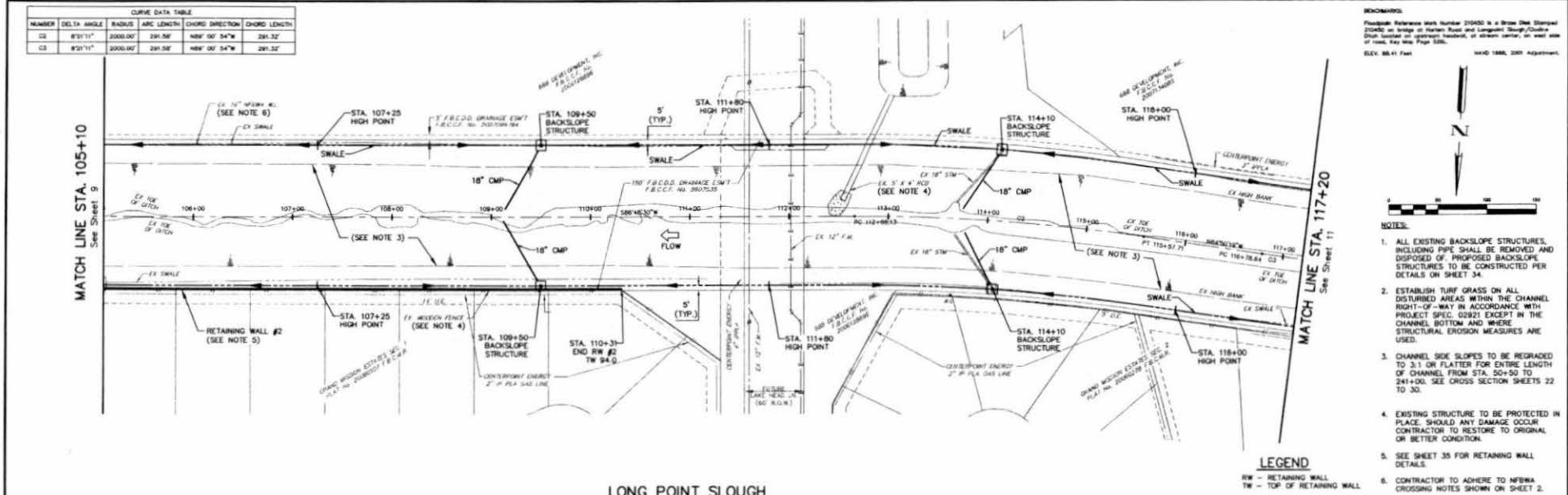
LEVEE IMPROVEMENT DISTRICT 12
 LONG POINT SLOUGH MAINTENANCE
 PLAN AND PROFILE
 LONG POINT SLOUGH
 STA. 93+00 TO
 STA. 105+10

JOB NUMBER: 1223-00	DESIGNED BY: CWF
DATE: MARCH 2011	DRAWN BY: JAV/PLP
SHEET NO: 9	OF 35 SHEETS

BROWN & GAY ENGINEERS, INC.
 1277 Westchester, Suite 400
 Houston, TX 77060
 Tel: 281-684-8100
 Fax: 281-684-8101
 E-mail: bge@brownandgay.com
 100% Registered Professional Engineers

CURVE DATA TABLE					
NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD LENGTH
02	8°21'11"	2000.00'	291.96'	N89°06'54"W	291.32'
03	8°21'11"	2000.00'	291.96'	N89°06'54"W	291.32'

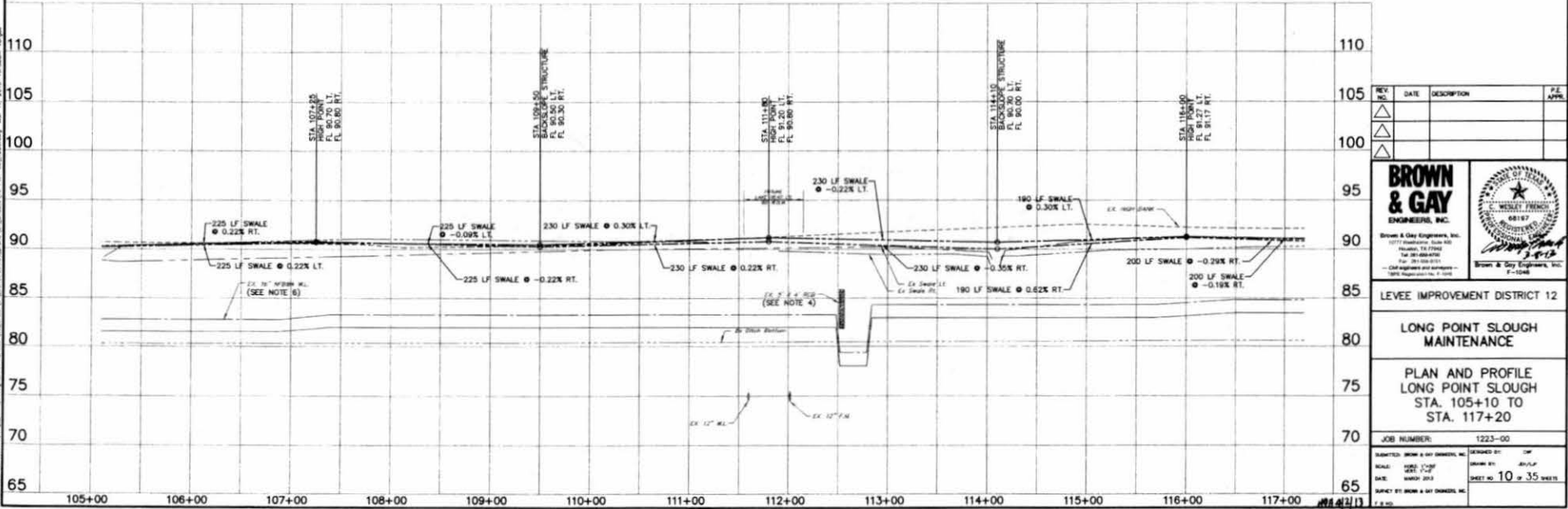
BOOKINGS:
 Flooded Reference Mark Number 21005 is a Brown Shee Stamped
 21040 is a marker on Western Road and Conquest Slough/Channel
 21041 is a marker on Western Road, at stream center, on west side
 of road, see Note Page 538.
 ELEV. 88.41 Feet
 1/10/2008, 2007 Adjustment.



- NOTES:**
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSAL OF PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SLOPE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE. SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
 5. SEE SHEET 35 FOR RETAINING WALL DETAILS.
 6. CONTRACTOR TO ADHERE TO NFBA CROSSING NOTES SHOWN ON SHEET 2.

LEGEND
 RW - RETAINING WALL
 TW - TOP OF RETAINING WALL

LONG POINT SLOUGH



REV	NO.	DATE	DESCRIPTION	P.E. APPL.

BROWN & GAY ENGINEERS, INC.
 10717 Woodlawn, Suite 300
 Houston, TX 77036
 Tel: 281-688-8700
 Fax: 281-688-8702
 • Old fashioned and computerized
 • 100% responsibility to clients

PROFESSIONAL ENGINEER
 STATE OF TEXAS
 NO. 68117
 EXPIRES 12/31/2012

Brown & Gay Engineers, Inc.
 P.E. [Signature]

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

PLAN AND PROFILE
 LONG POINT SLOUGH
 STA. 105+10 TO
 STA. 117+20

JOB NUMBER: 1223-00

DESIGNED BY: JWG
 CHECKED BY: JWG
 DATE: MARCH 2013
 SHEET NO. 10 OF 35 SHEETS

SAFETY BY BROWN & GAY ENGINEERS, INC.
 P.E. [Signature]

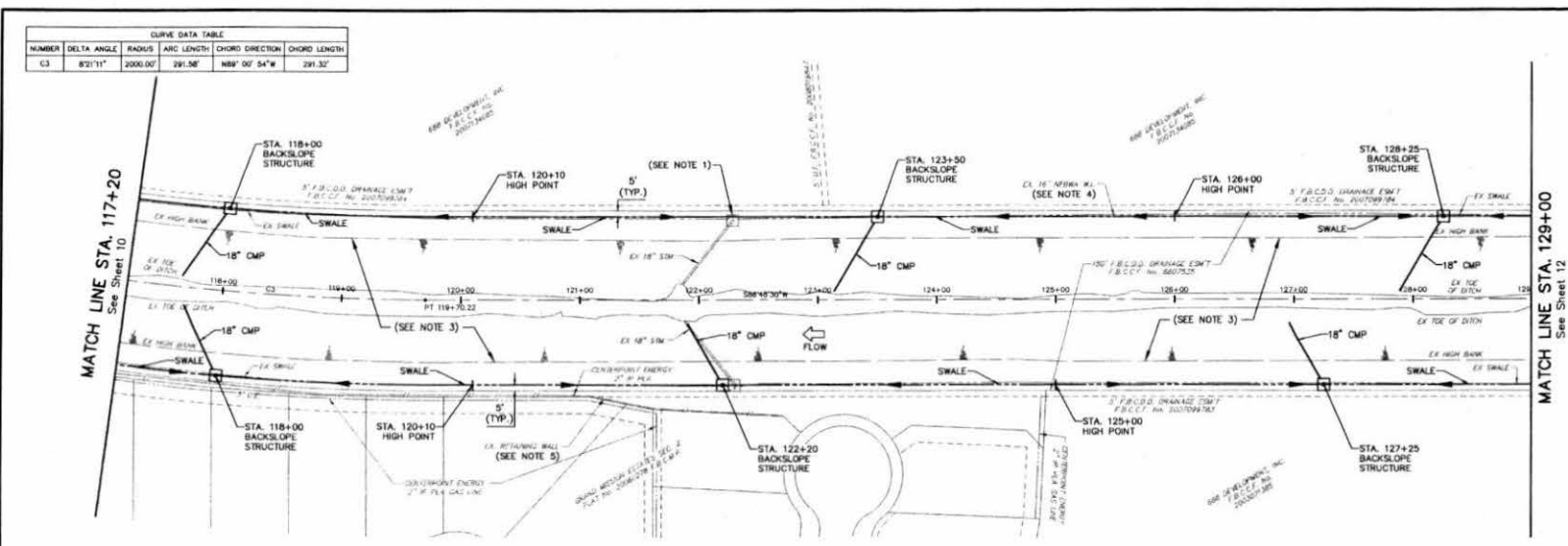
BROWN & GAY ENGINEERS, INC.
 10717 WOODLAWN, SUITE 300, HOUSTON, TEXAS 77036
 MAP 11, 2013-10-08am, Version

CURVE DATA TABLE					
NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD LENGTH
C.3	82°11'	2000.00'	291.58'	N89°04'54"W	291.32'

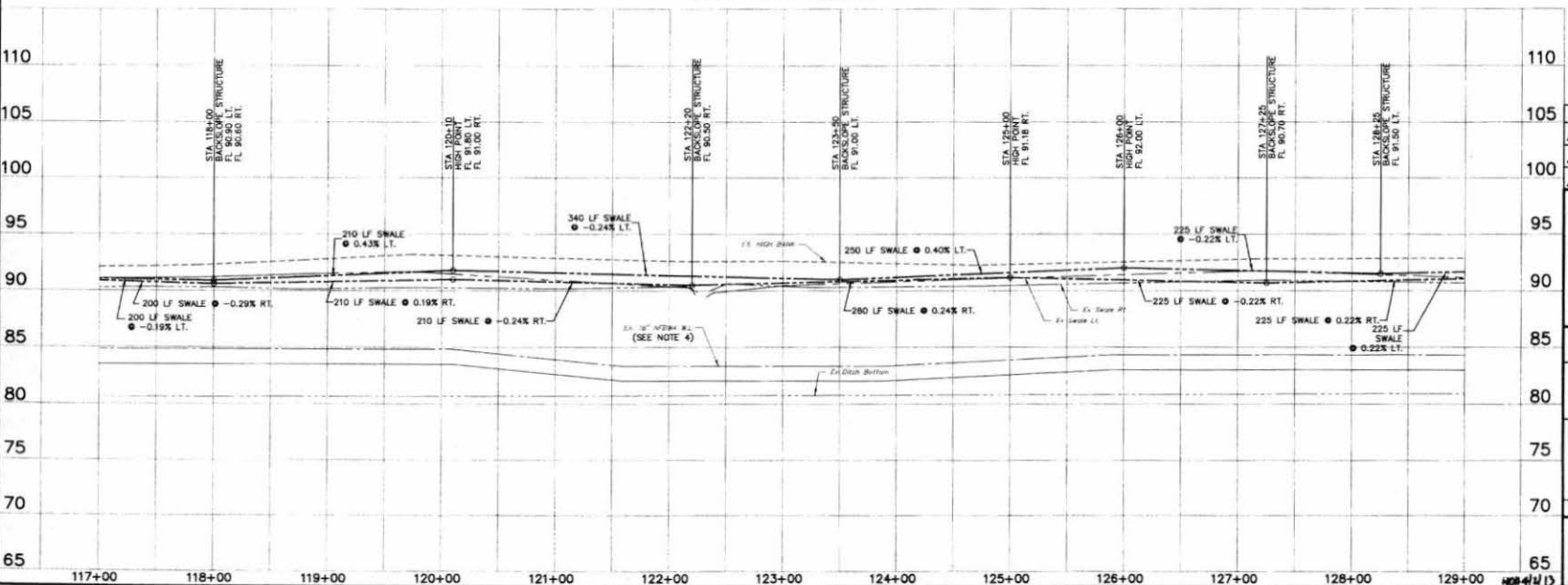
BENCHMARKS:
 Flagpole Reference Mark Number 210450 is a Brass Disk Stamped 210450 on bridge at Warren Road and Longport Slough/Channel. Disk located on upper bank, at stream center, on west side of road. See Map Page 538.
 ELEV. 88.41 Feet NAVD 1988, 2008 Adjustment



- NOTES:
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+00 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. CONTRACTOR TO ADHERE TO NFEMA CROSSING NOTES SHOWN ON SHEET 2.
 5. SEE SHEET 35 FOR RETAINING WALL DETAILS.



LONG POINT SLOUGH



REV. NO.	DATE	DESCRIPTION	P.E. APPR.
1			
2			

BROWN & GAY ENGINEERS, INC.
 12777 Woodbridge, Suite 401
 Houston, TX 77045
 Tel. 281-688-8700
 Fax. 281-688-8700
 E-mail: brown@gay.com
 www.browngay.com

Professional Engineer
 C. WESLEY FRENCH
 68197
 State of Texas
 License No. 11596

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

PLAN AND PROFILE
 LONG POINT SLOUGH
 STA. 117+20 TO
 STA. 129+00

JOB NUMBER: 1223-00

DESIGNED BY: CW
 CHECKED BY: JAC/LAP
 DATE: MARCH 2013
 SHEET NO. 11 OF 35 SHEETS

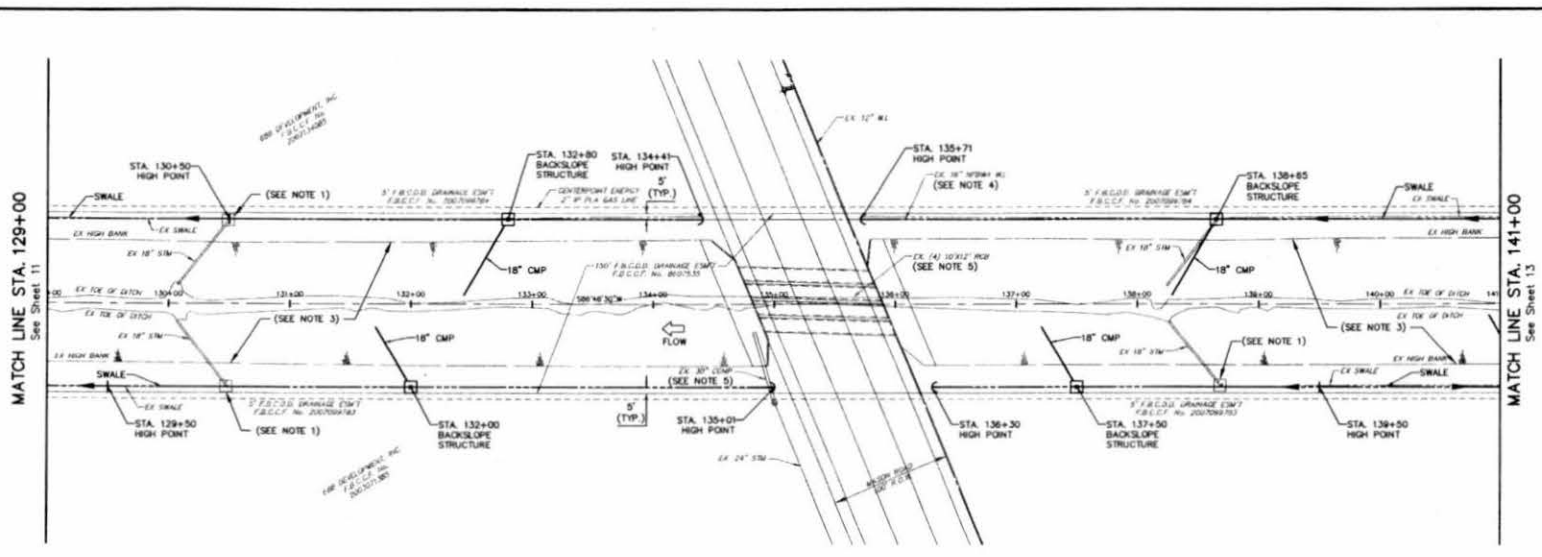
PREPARED BY: BROWN & GAY ENGINEERS, INC.
 DATE: MARCH 2013

BROWN & GAY ENGINEERS, INC. 12777 Woodbridge, Suite 401, Houston, TX 77045

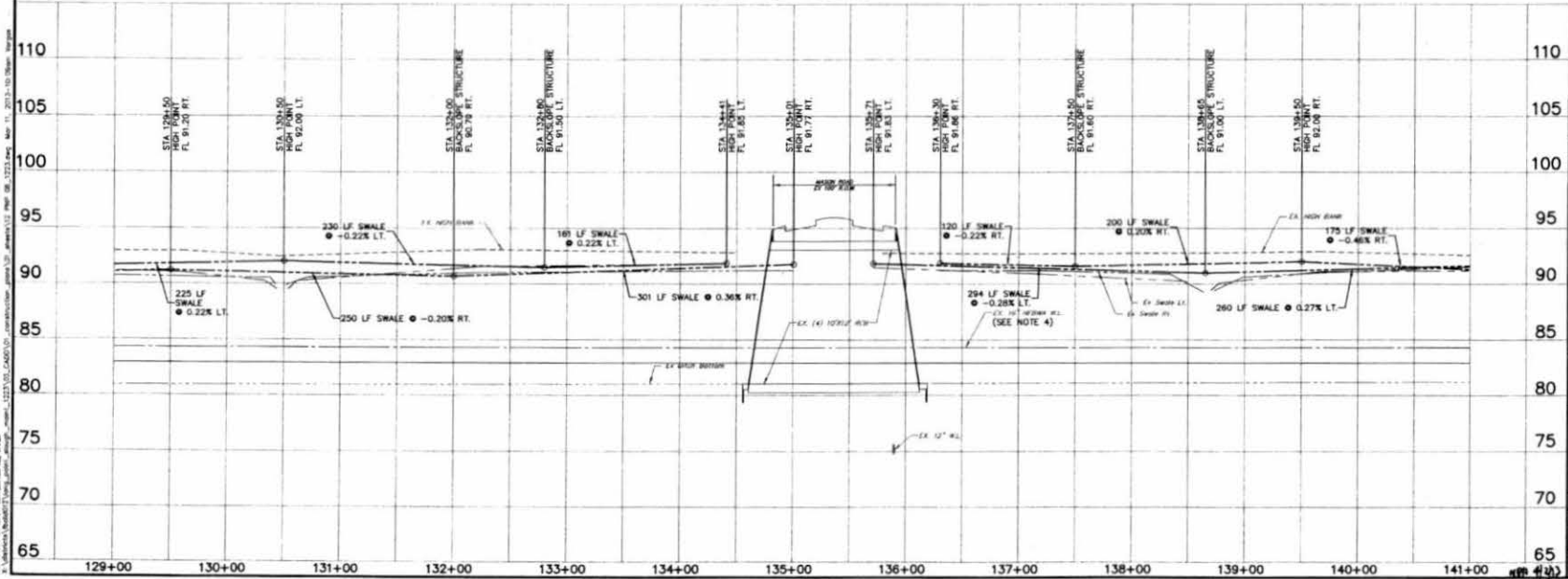
REMARKS:
 Floodplain Reference Mark Number 210405 is a Brass Disk Stamped 210405 on bridge on Highway Road and Longpoint Slough. This Disk located on upstream bank, at stream center, on west side of road, see sheet Page 22.
 ELEV. 88.41 Feet
 NAVD 1985, 2003 Adjustment.



- NOTES:**
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE, SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 50202 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. CONTRACTOR TO ADHERE TO NBSWA CROSSING NOTES SHOWN ON SHEET 2.
 5. EXISTING STRUCTURE TO BE PROTECTED IN PLACE, SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.



LONG POINT SLOUGH



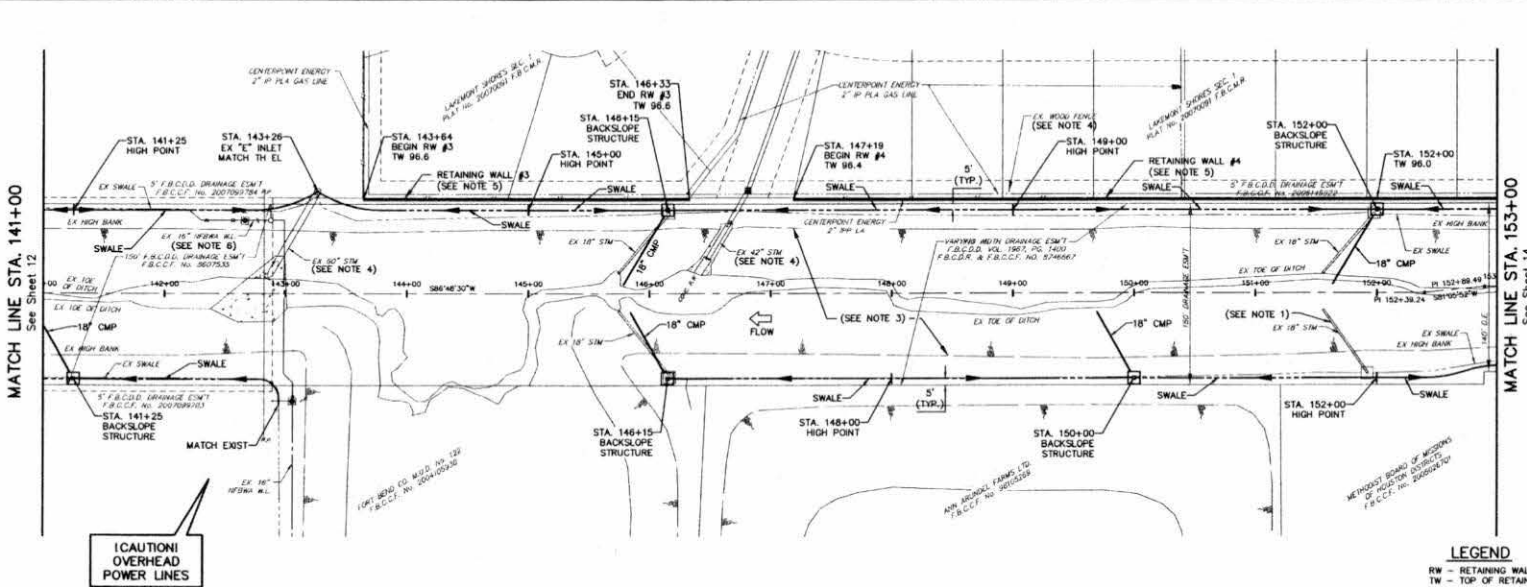
REV.	DATE	DESCRIPTION	P.E. APPRO.
1			
2			
3			
4			

BROWN & GAY ENGINEERS, INC.
 Brown & Gay Engineers, Inc.
 10177 Providence Drive
 Houston, TX 77036
 Tel: 281-888-6700
 Fax: 281-888-6701
 Old Angleton and Angleton
 1998, Registered No. 11-1006

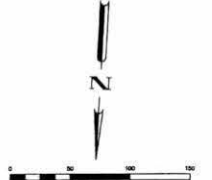
Wesley Francis
 P.E.

LEVEE IMPROVEMENT DISTRICT 12	
LONG POINT SLOUGH MAINTENANCE	
PLAN AND PROFILE LONG POINT SLOUGH STA. 129+00 TO STA. 141+00	
JOB NUMBER: 1223-00	DRAWN BY: JWP
SCALE: AS SHOWN	CHECKED BY: JWP
DATE: MARCH 2013	SHEET NO. 12 OF 35 SHEETS

BROWN & GAY ENGINEERS, INC.
 10177 Providence Drive, Houston, TX 77036
 Tel: 281-888-6700, Fax: 281-888-6701
 Old Angleton and Angleton, 1998, Registered No. 11-1006



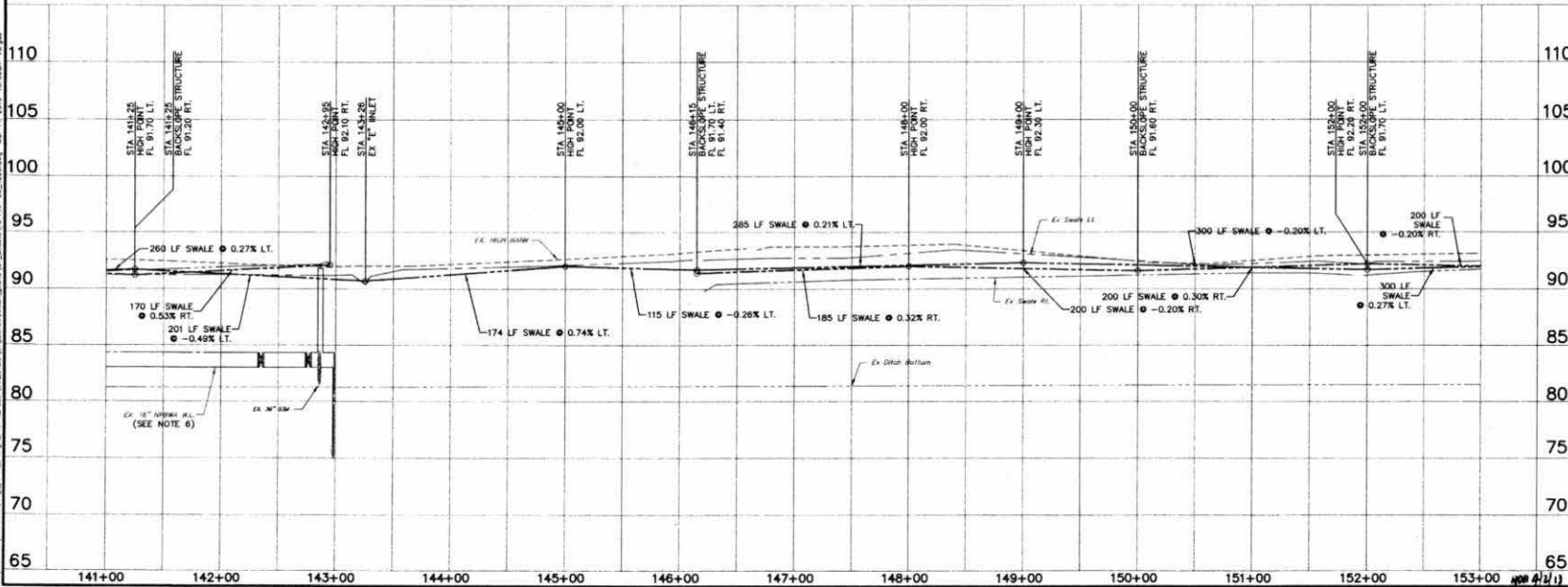
BENCHMARKS
 Floodplain Reference Mark Number 210450 is a Brass Disk Stamped 210450 on bridge at Parker Road and Longpoint Slough. Center Disk located on upstream face, at stream center, on west side of road. See Note Page 506.
 ELEV. 86.41 Feet
 NAVD 1985, 2007 Adjustment



- NOTES**
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02521 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 24+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE SHOULD ANY DAMAGE OCCUR. CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
 5. SEE SHEET 35 FOR RETAINING WALL DETAILS.
 6. CONTRACTOR TO ADHERE TO NFMA CROSSING NOTES SHOWN ON SHEET 2.

LEGEND
 RW - RETAINING WALL
 TW - TOP OF RETAINING WALL

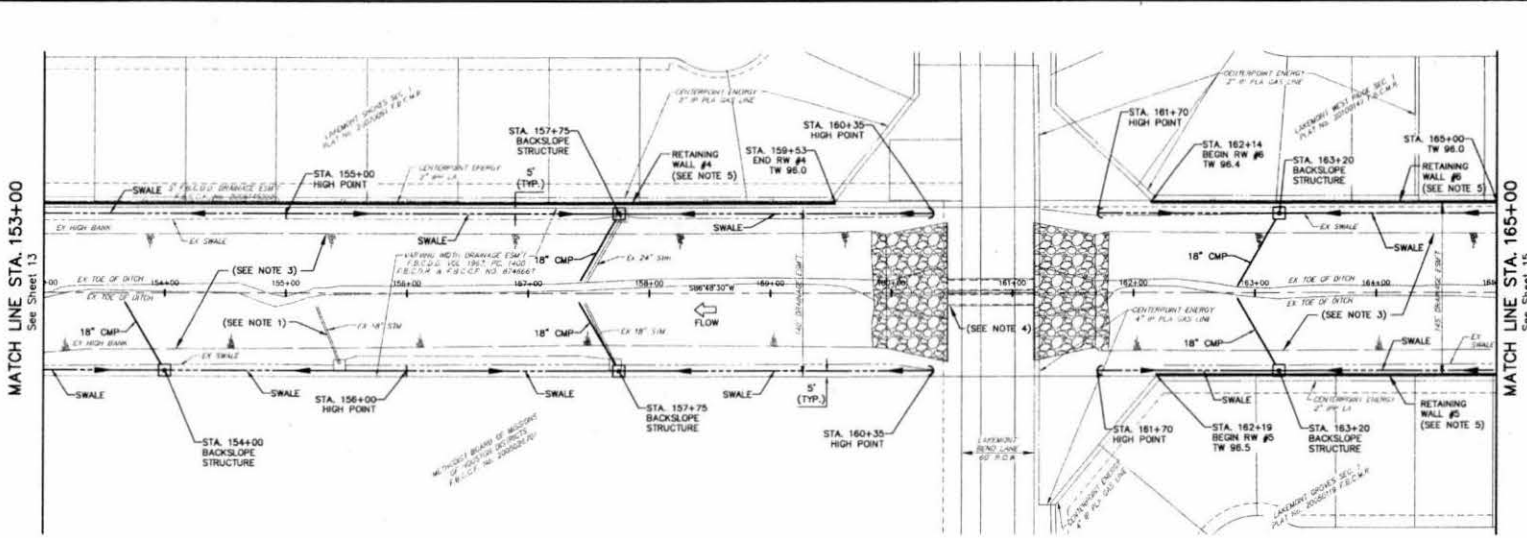
LONG POINT SLOUGH



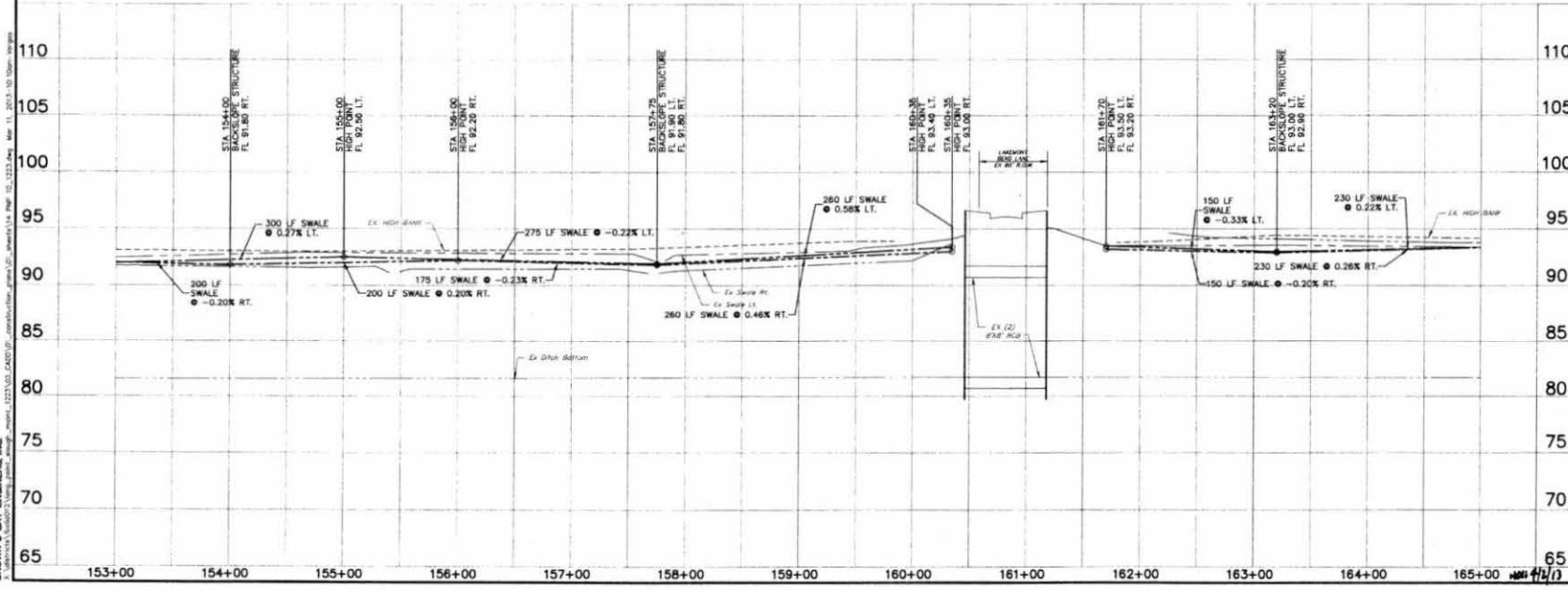
REV	DATE	DESCRIPTION	P.E. APPR.
1			
2			
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4			

BROWN & GAY ENGINEERS, INC. 2777 Professional Lane #10 Houston, TX 77056 Tel: 281-688-4700 Fax: 281-688-4700 www.browngay.com 1994 Registration No. F-1048	
LEVEE IMPROVEMENT DISTRICT 12 LONG POINT SLOUGH MAINTENANCE PLAN AND PROFILE LONG POINT SLOUGH STA. 141+00 TO STA. 153+00	
JOB NUMBER:	1223-00
DESIGNED BY:	CMF
DRAWN BY:	JAV/LP
SCALE:	HORIZ: 1"=20'
DATE:	MARCH 2013
SHEET NO:	13 OF 35 SHEETS
CHECKED BY: JAV DATE: MARCH 2013 SCALE: HORIZ: 1"=20' DATE: MARCH 2013 SHEET NO: 13 OF 35 SHEETS SUPPLY BY: BROWN & GAY ENGINEERS, INC. P.E. NO.	

BROWN & GAY ENGINEERS, INC.
 2777 Professional Lane #10
 Houston, TX 77056
 Tel: 281-688-4700
 Fax: 281-688-4700
 www.browngay.com
 1994 Registration No. F-1048



LONG POINT SLOUGH



BENCHMARKS
 Floodplain Reference Mark Number 210450 is a Brass Disk Stamped 210450 on a corner of the River Road and Longpoint Slough Channel. Disk located on upstream shoulder, at stream center, on west side of road. See Page 526.
 ELEV. 88.61 Feet
 NAD 83, 2000 Adjustment



- NOTES:**
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02021 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SLOPE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 154+50 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE. SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
 5. SEE SHEET 35 FOR RETAINING WALL DETAILS.

REV. NO.	DATE	DESCRIPTION	P.E. APPR.
1			
2			

BROWN & GAY
 ENGINEERS, INC.
 Brown & Gay Engineers, Inc.
 1017 Westwood, Suite 200
 Houston, TX 77036
 Tel: 281-288-8700
 Fax: 281-288-8701
 E-mail: bge@brownandgay.com
 100% Registered Professional Engineers

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

PLAN AND PROFILE LONG POINT SLOUGH STA. 153+00 TO STA. 165+00

JOB NUMBER: 1223-00

DESIGNED BY: CW
 DRAWN BY: JAL/P
 DATE: MARCH 2013
 SHEET NO. 14 OF 35 SHEETS

PREPARED BY: BROWN & GAY ENGINEERS, INC.
 DATE: 11/12/13

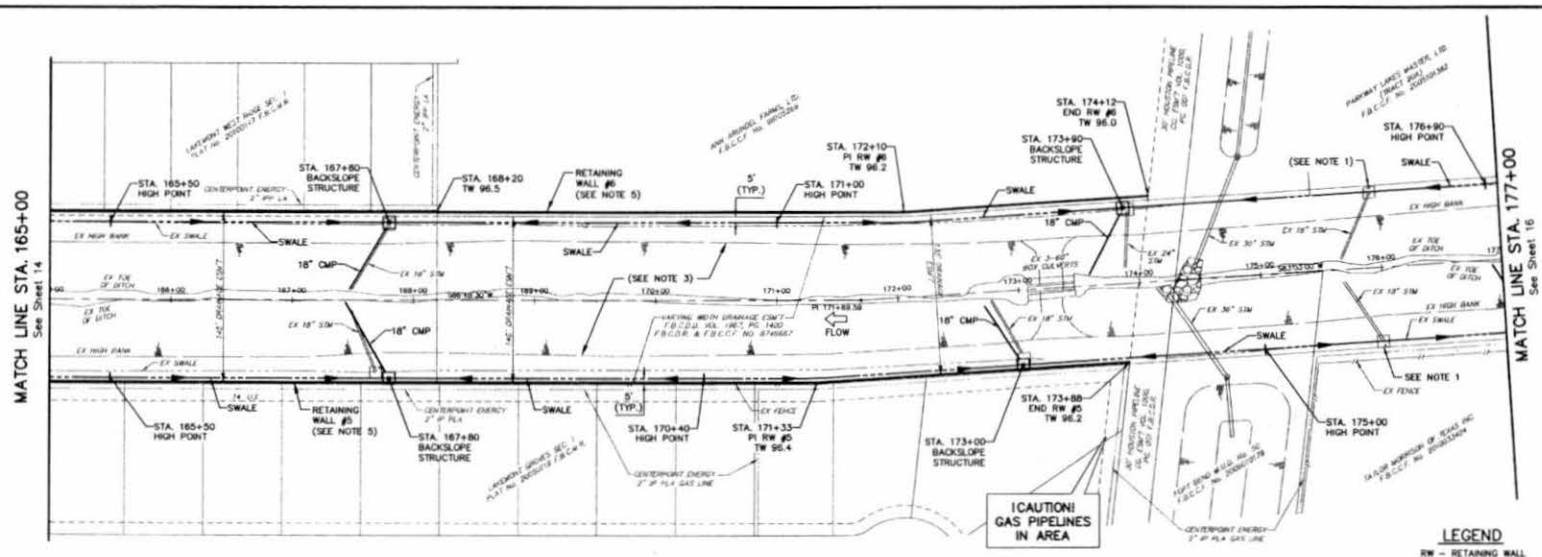
BROWN & GAY ENGINEERS, INC.
 1017 Westwood, Suite 200, Houston, TX 77036
 281-288-8700
 11/12/13

REVISIONS:
 Floodplain Reference Mark Number 210490 is a Brown One Stamped 20000 sq bridge at Newham Road and Longpoint Slough/Channel. Mark located on upstream bank, at stream center, on west side of road. Key map Page 02B.
 EXIST. 88.41 FAD 1940 1986, 2000 Adjustment.

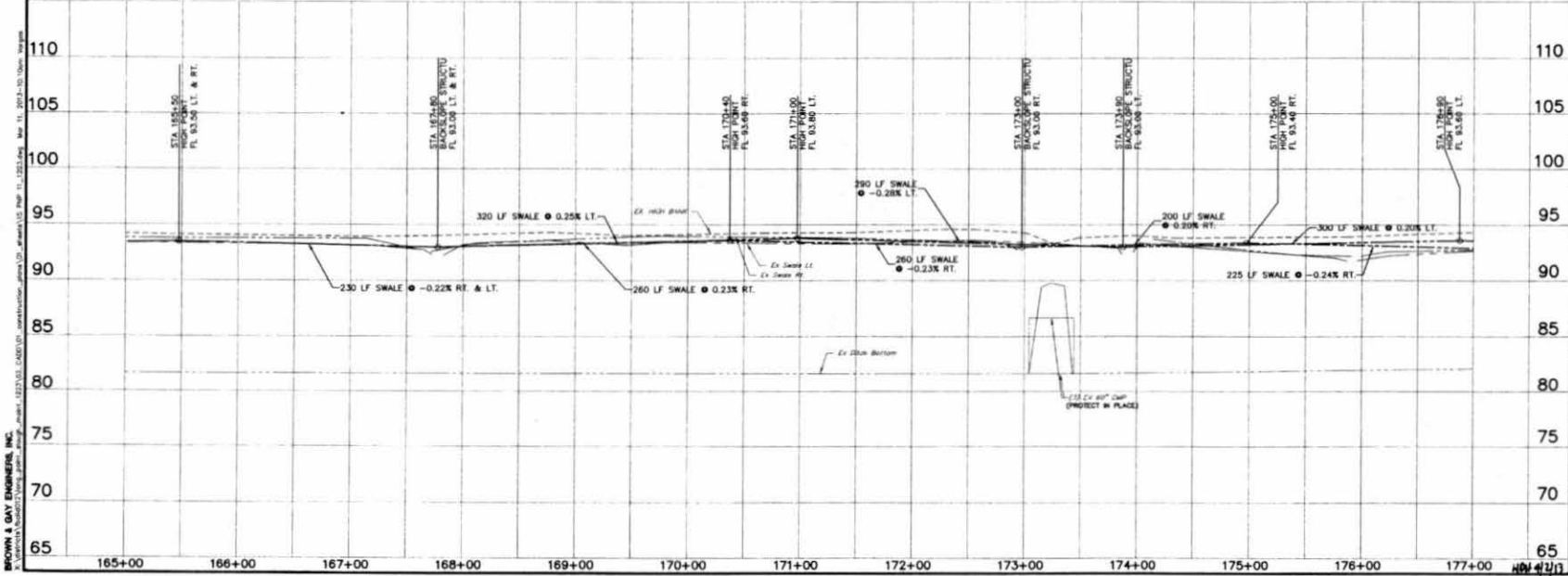


- NOTES:
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SLOPE TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE SHOULD ANY DAMAGE OCCUR. CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
 5. SEE SHEET 35 FOR RETAINING WALL DETAILS.

LEGEND
 RW - RETAINING WALL
 TW - TOP OF RETAINING WALL



LONG POINT SLOUGH



REV. NO.	DATE	DESCRIPTION	P.E. APPRO.

BROWN & GAY
ENGINEERS, INC.

10117 Westheimer Road, Suite 200
Houston, TX 77042
Tel: 281-488-8740
Fax: 281-488-8741
— Civil engineers and surveyors —
100% Registered Professional Engineers

Wesley French
Professional Engineer
No. 68187
State of Texas

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

PLAN AND PROFILE
 LONG POINT SLOUGH
 STA. 165+00 TO
 STA. 177+00

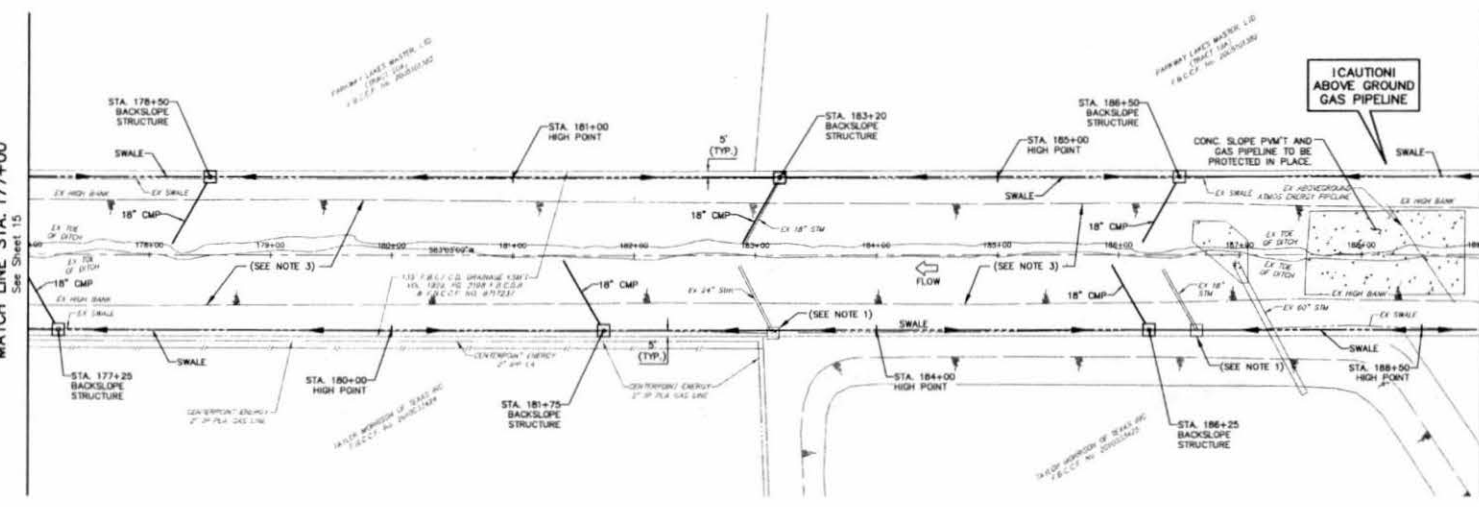
JOB NUMBER:	1223-00
DESIGNED BY:	OW
DRAWN BY:	ADJ/P
SCALE:	VERT. 1"=20' HORIZ. 1"=40'
DATE:	MARCH 2013
CHECKED BY:	OW
DATE:	MARCH 2013
DESIGNED BY:	OW
DATE:	MARCH 2013
CHECKED BY:	OW
DATE:	MARCH 2013

1 of 35 SHEETS

BROWN & GAY ENGINEERS, INC.
 10117 Westheimer Road, Suite 200, Houston, TX 77042
 Tel: 281-488-8740, Fax: 281-488-8741
 www.browngay.com

MATCH LINE STA. 177+00
See Sheet 15

MATCH LINE STA. 189+00
See Sheet 17

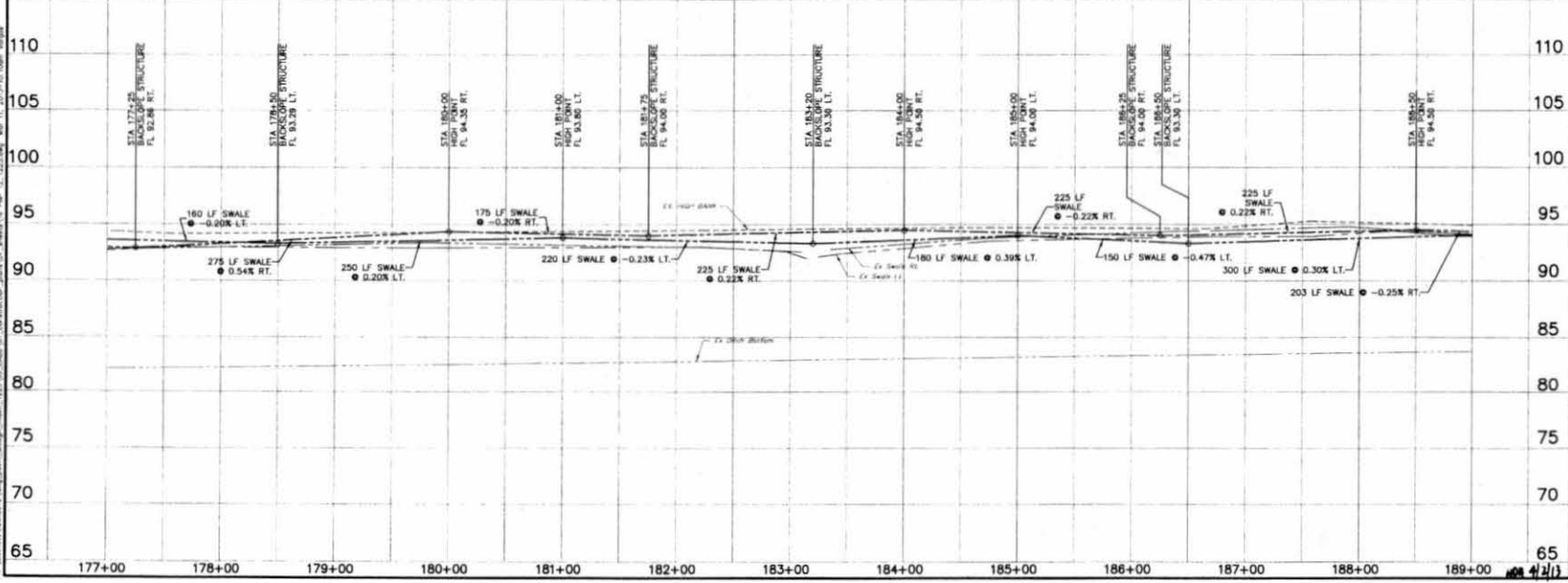


REMARKS:
Flooded Reference mark Number 210450 is a Brass One Stamped 210450 on bridge at Humber Road and Longport Slough/Channel. It is located at upstream end of Humber Road, at west side of road. Key Map Page 535.
ELEV 98.41 Feet HMD 1986, 2007 Adjustment.



- NOTES:
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE, SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 14.
 2. ESTABLISH BURY GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02321 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE DEGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE. SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.

LONG POINT SLOUGH



REV. NO.	DATE	DESCRIPTION	P.E. APPL.
1			
2			
3			
4			

BROWN & GAY ENGINEERS, INC.

Brown & Gay Engineers, Inc.
1817 Washington Street, Suite 102
Houston, TX 77002
Tel: 281-688-0700
Fax: 281-688-0717
— Civil Engineers and Surveyors —
1974 Registered No. 11048

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

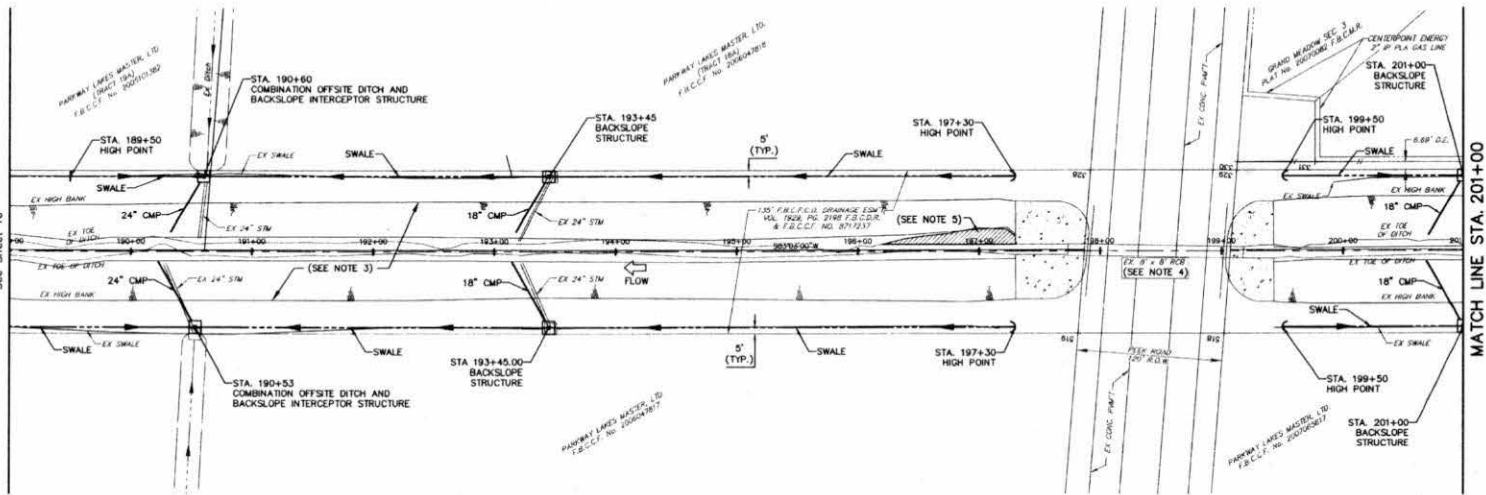
PLAN AND PROFILE
LONG POINT SLOUGH
STA. 177+00 TO
STA. 189+00

JOB NUMBER: 1223-00

DESIGNED BY: JWP
DRAWN BY: JWP
DATE: MARCH 2003
SHEET NO. 16 OF 35 SHEETS

BROWN & GAY ENGINEERS, INC. 1817 WASHINGTON STREET, SUITE 102 HOUSTON, TEXAS 77002

MATCH LINE STA. 189+00
See Sheet 16

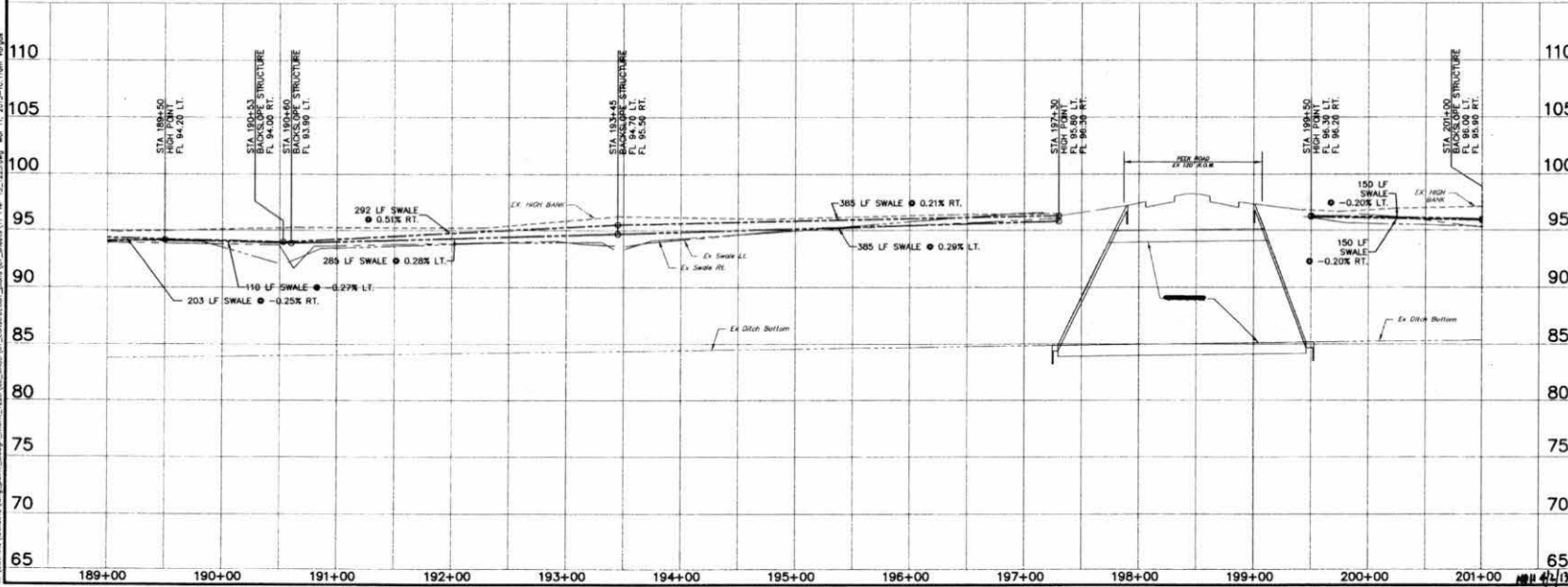


BENCHMARKS:
 Floodplain Reference Mark Number 210450 is a Brown Oak Stamped 210450 on bridge at Parker Road and Longpoint Slough/Chinle Ditch located on upstream headwall, of stream center, on west side of road. See Page 52B.
 ELEV. 88.41 Feet
 NAVD 1988, 2000 Adjustment.



- NOTES:**
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE. SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
 5. CHANNEL BOTTOM TO BE RECONSTRUCTED. MAINTAIN 20' BOTTOM WIDTH. FILL TO ADJACENT GRADES AND COMPACT TO 95% PROCTOR DENSITY.

LONG POINT SLOUGH



REV. NO.	DATE	DESCRIPTION	P.E. APPRO.
1			
2			

BROWN & GAY ENGINEERS, INC.
 10717 Woodmonte, Suite 402
 Houston, TX 77036
 Tel: 281-488-8750
 Fax: 281-488-8750
 Civil Engineers and Surveyors
 1976 Registration No. 7-1046

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

PLAN AND PROFILE
 LONG POINT SLOUGH
 STA. 189+00 TO
 STA. 201+00

JOB NUMBER: 1223-00

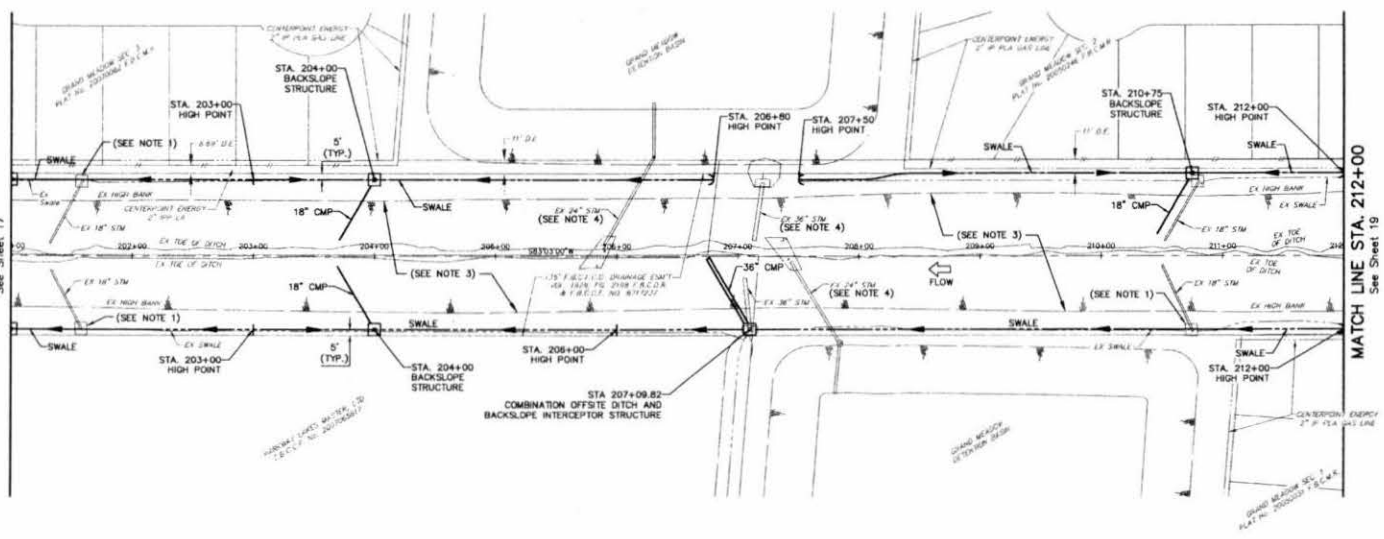
DATE: MARCH 2013

SHEET NO. 17 OF 35 SHEETS

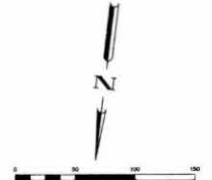
BROWN & GAY ENGINEERS, INC.
 10717 Woodmonte, Suite 402
 Houston, TX 77036
 Tel: 281-488-8750
 Fax: 281-488-8750
 Civil Engineers and Surveyors
 1976 Registration No. 7-1046

MATCH LINE STA. 201+00
See Sheet 17

MATCH LINE STA. 212+00
See Sheet 19

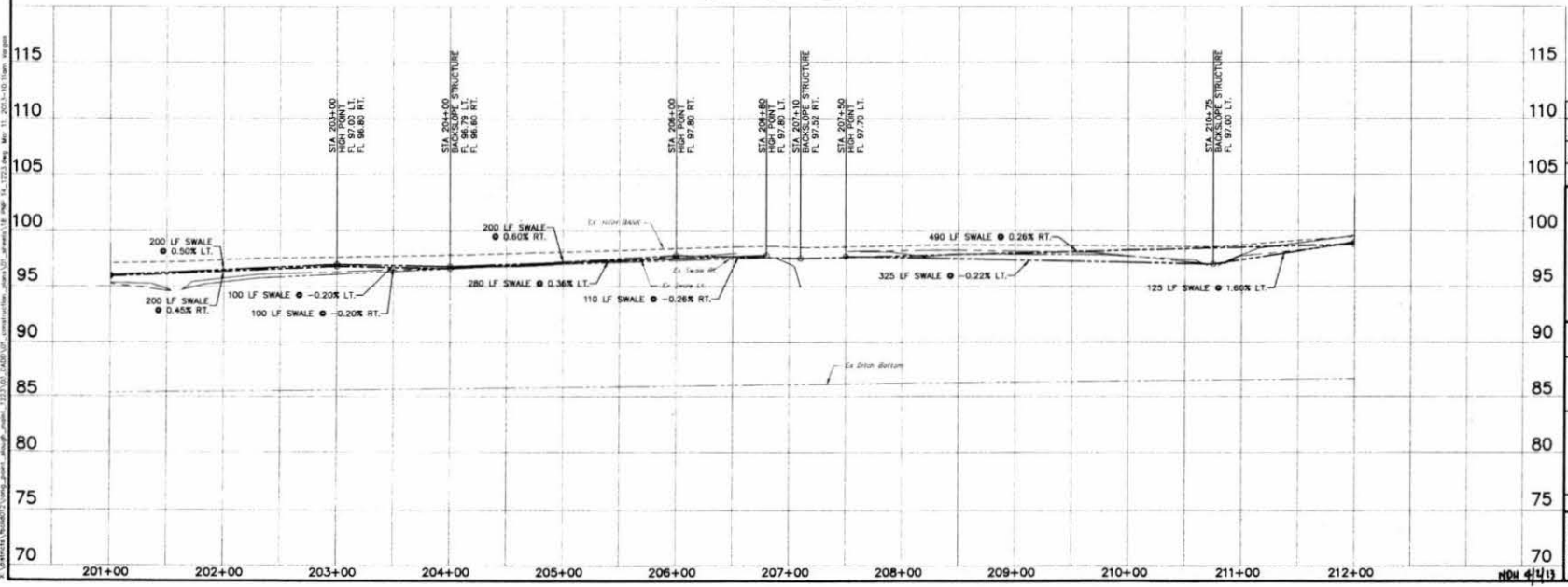


MARKERS
 Flooded Reference Mark Number 21040 is a Brass Disk Stamped
 21040 on bridge at station 201+00 and Long Point Slough
 21040 on bridge at station 207+00. All other markers in sheet are
 of steel. See Map Page 220.
 ELEV. 88.41 Feet NAVD 1986, 2001 Adjustment



- NOTES:
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 244+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE SHOULD ANY DAMAGE OCCUR. CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.

LONG POINT SLOUGH



REV. NO.	DATE	DESCRIPTION	P.L. APPL.
1			
2			
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BROWN & GAY ENGINEERS, INC.
 Brown & Gay Engineers, Inc.
 101 Westwood Plaza
 Houston, TX 77060
 Tel: 281-486-4700
 Fax: 281-486-4701
 E-mail: info@bng.com
 *All drawings and proposals
 shall be prepared in accordance with
 the Professional Seal of the State of Texas
 License No. 10484

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH
 MAINTENANCE

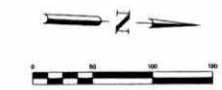
PLAN AND PROFILE
 LONG POINT SLOUGH
 STA. 201+00 TO
 STA. 212+00

JOB NUMBER: 1223-00
 SUBMITTED BY: BROWN & GAY ENGINEERS, INC. DESIGNED BY: CWF
 SCALE: AS SHOWN DRAWN BY: JAV/AP
 DATE: MARCH 2013 SHEET NO. 18 OF 35 SHEETS
 SURVEY BY: BROWN & GAY ENGINEERS, INC.
 4/13

BROWN & GAY ENGINEERS, INC.
 101 WESTWOOD PLAZA
 HOUSTON, TEXAS 77060
 TEL: 281-486-4700
 FAX: 281-486-4701
 E-MAIL: INFO@BNG.COM
 LICENSE NO. 10484

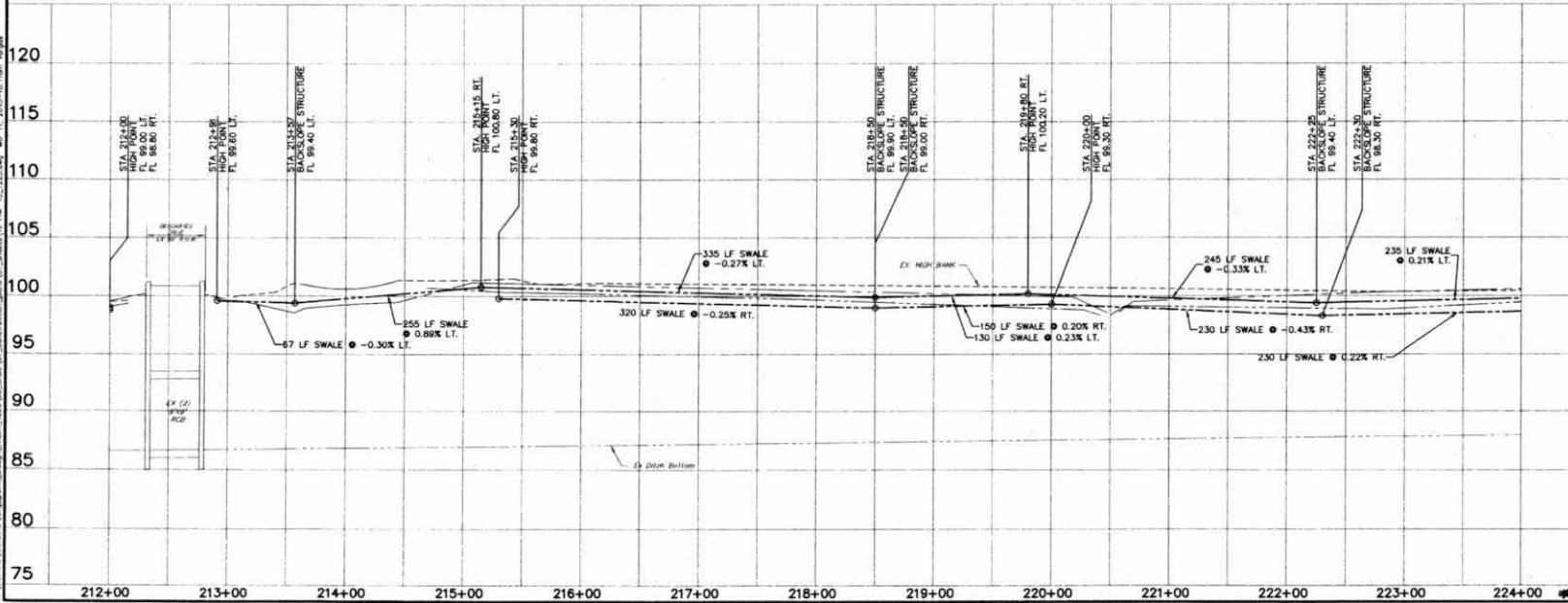
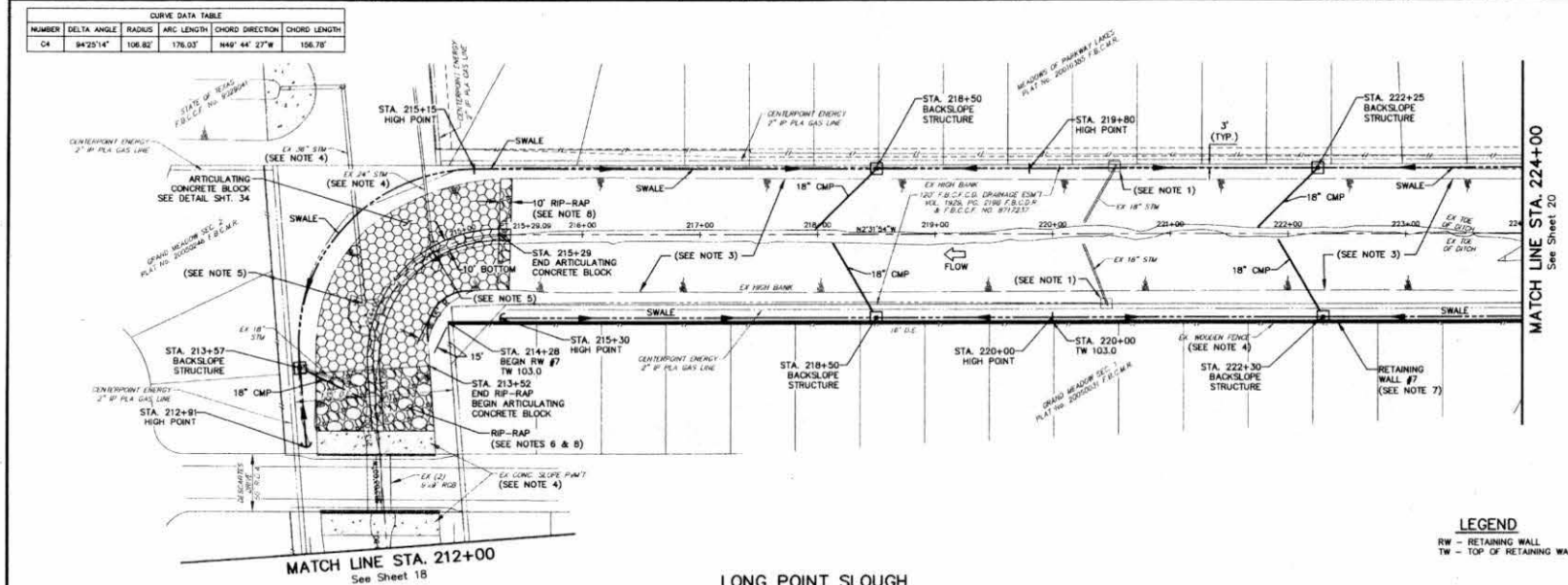
CURVE DATA TABLE					
NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD LENGTH
C4	94°23'14"	106.82'	176.03'	N49°44'27"W	156.78'

BENCHMARKS:
 Floodplain Reference Mark Number 210450 is a Brass Disk Stamped 210450 on bridge at eastern Road and Longpoint Slough/Channel. Mark located at upstream headcut, at stream center, on west side of road. See Map Page 52B.
 ELEV. 88.41 Feet NAVD 1988, 2001 Adjustment



- NOTES:**
- ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 - ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02021 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 - CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 - EXISTING STRUCTURE TO BE PROTECTED IN PLACE. SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
 - EXISTING PIPES TO BE CUT FLUSH WITH PROP. SLOPE PROTECTION. SEE DETAILS SHEET 34.
 - RIP-RAP TO BE INSTALLED FROM END OF EXISTING CONCRETE SLOPE PAVEMENT TO PROPOSED ARTICULATED BLOCK DETAILS.
 - SEE SHEET 35 FOR RETAINING WALL DETAILS.
 - 18" THICK RIP-RAP TO BE 80-150 LB. BROKEN CONCRETE (6" MINIMUM THICK PER STONE. NO EXPOSED REBAR.)

LEGEND
 RW - RETAINING WALL
 TW - TOP OF RETAINING WALL



REV NO.	DATE	DESCRIPTION	P.E. APPRO.

BROWN & GAY ENGINEERS, INC.
 10771 Redmond Road, Suite 400
 Redmond, OR 97756
 Tel: 503-868-8700
 Fax: 503-868-8700
 Civil Engineers and Surveyors
 Oregon Registration No. 1-1098

LEVEE IMPROVEMENT DISTRICT 12
 LONG POINT SLOUGH MAINTENANCE
 PLAN AND PROFILE
 LONG POINT SLOUGH
 STA. 212+00 TO
 STA. 224+00

JOB NUMBER: 1223-00

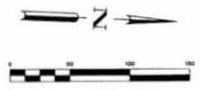
DATE: MARCH 2013

SCALE: 1"=20'

DESIGNED BY: CMF
 DRAWN BY: JAV/J.P.
 SHEET NO: 19 OF 35 SHEETS

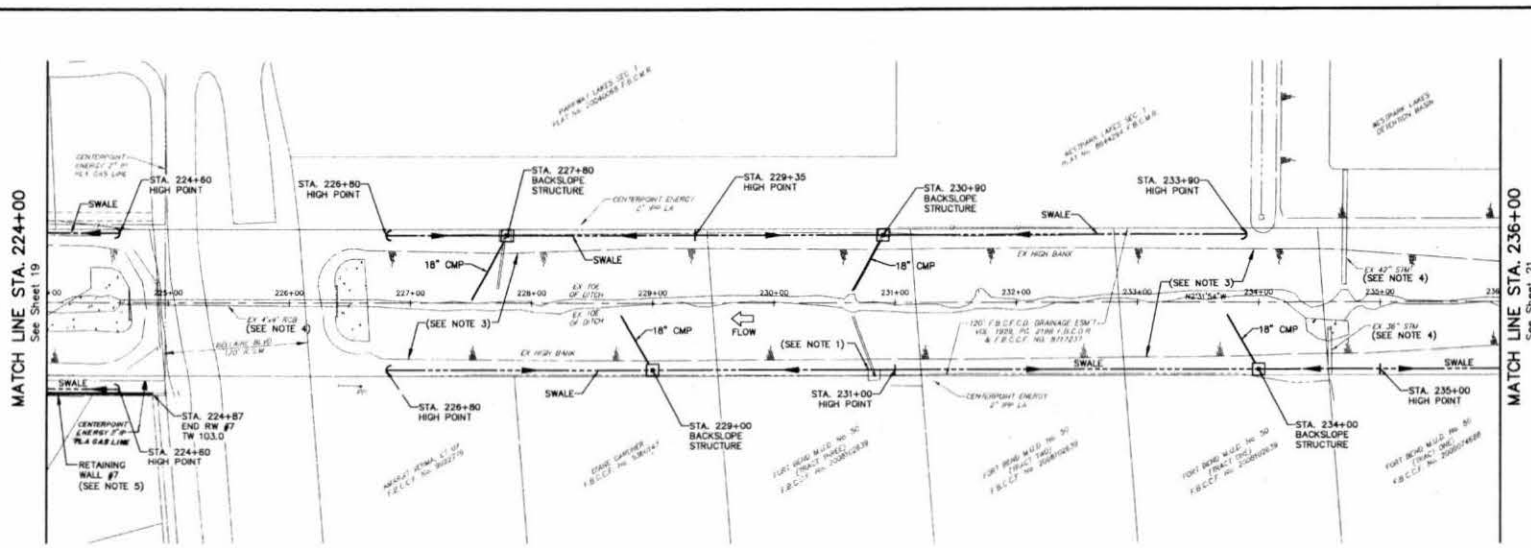
BROWN & GAY ENGINEERS, INC.
 10771 Redmond Road, Suite 400
 Redmond, OR 97756
 Tel: 503-868-8700
 Fax: 503-868-8700
 Civil Engineers and Surveyors
 Oregon Registration No. 1-1098

REMARKS:
 Floodway Reference Mark Number 210425 is a Brass Disk Stamped 210425 on bridge on Hatten Road and Longpoint Slough/Channel. Disk located on upstream face of, at stream center, on west side of road, see page 52B.
 ELEV. 88.41 Feet
 HAWK 1886, 2007 Adjustment

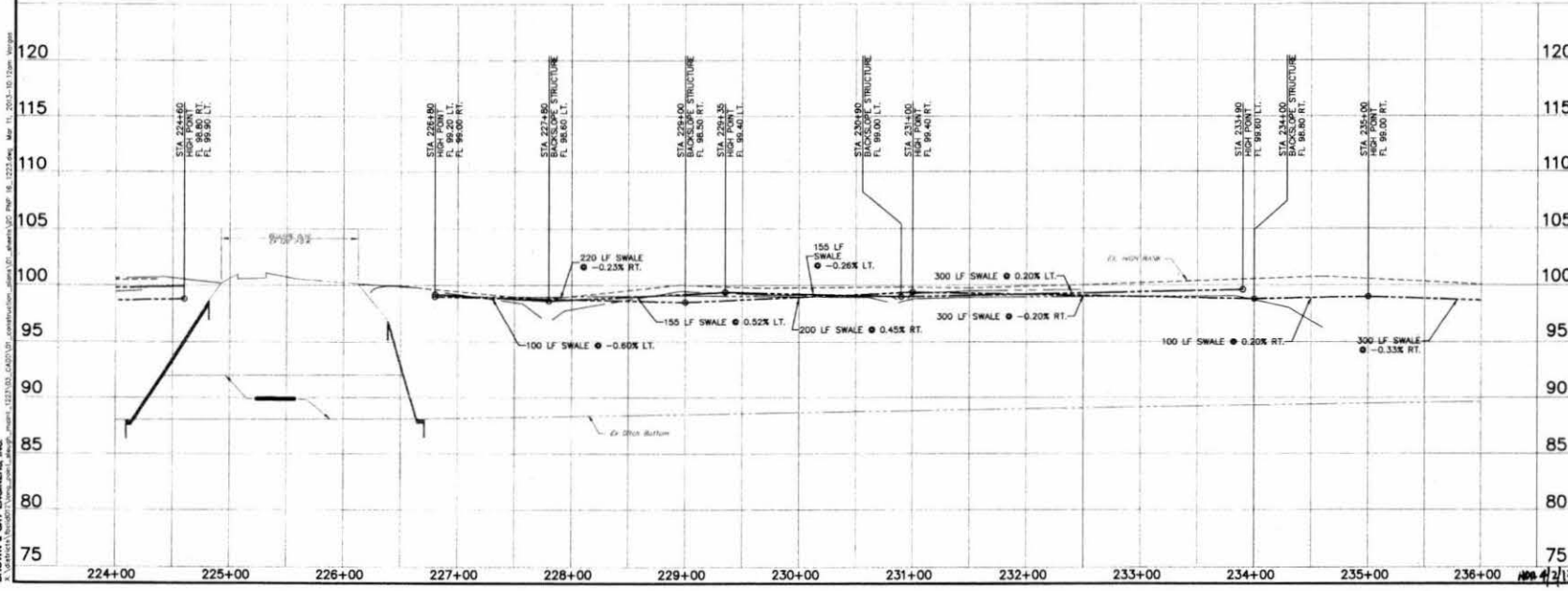


- NOTES:
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02021 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 224+00 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE, SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.
 5. SEE SHEET 35 FOR RETAINING WALL DETAILS.

LEGEND
 RW - RETAINING WALL
 TW - TOP OF RETAINING WALL



LONG POINT SLOUGH



REV. NO.	DATE	DESCRIPTION	P.E. APPRO.
1			
2			
3			

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

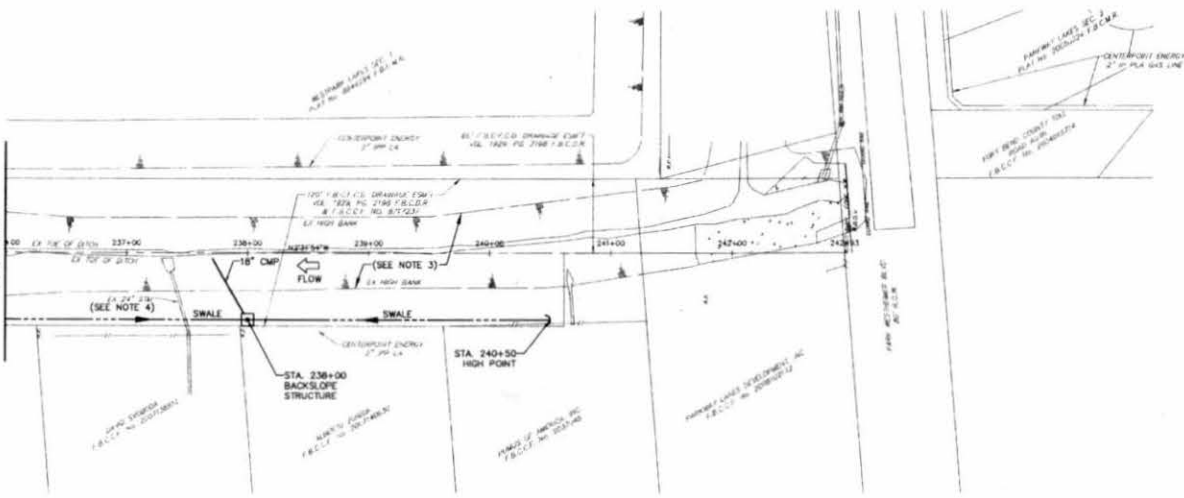
PLAN AND PROFILE LONG POINT SLOUGH STA. 224+00 TO STA. 236+00

JOB NUMBER: 1223-00

DESIGNED BY: CWF
 DRAWN BY: JWA/P
 DATE: MARCH 2013
 SHEET NO. 20 OF 35 SHEETS

BROWN & GAY ENGINEERS, INC.
 1223-00 - Construction - LEVEE IMPROVEMENT DISTRICT 12 - STA. 224+00 TO STA. 236+00 - MARCH 2013

MATCH LINE STA. 236+00
See Sheet 20

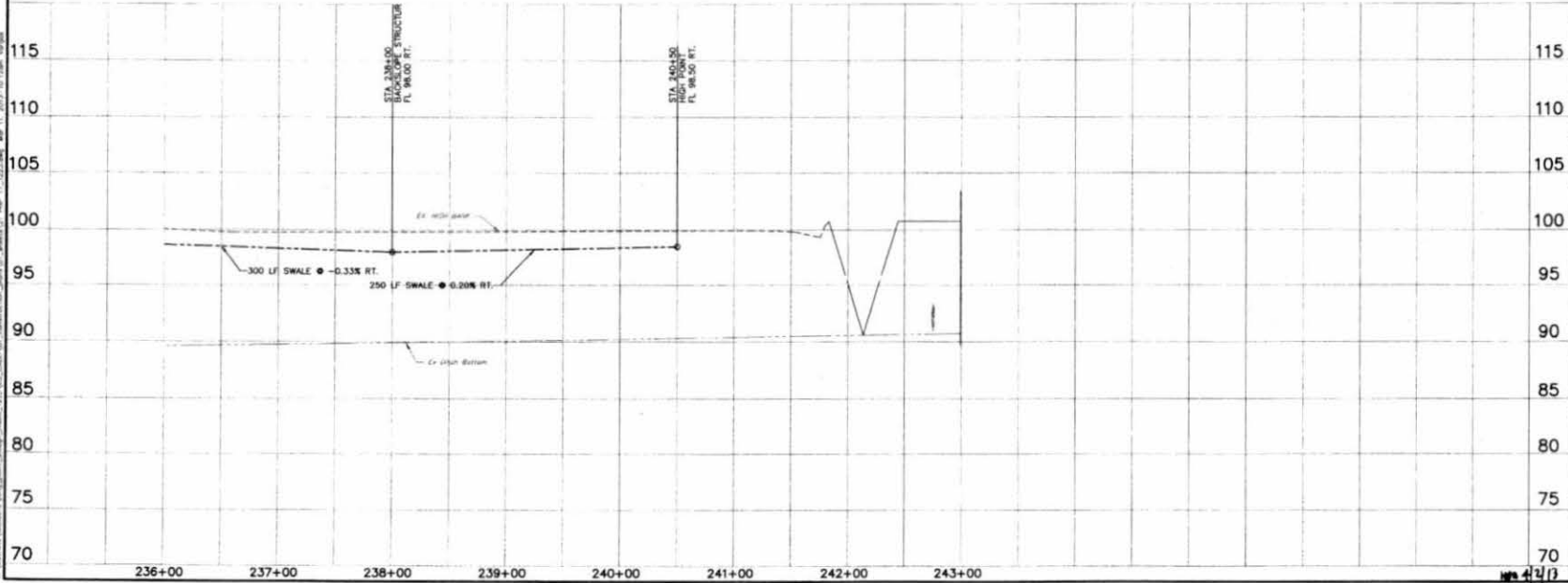


REVISIONS
 Foundation Reference Mark Number 210450 is a Brass Disk Stamped
 200400 on bridge at former Road and Company Slough/Channel
 This located on upstream headcut of stream center, on west side
 of road, see page 52b.
 ELEV. 88.41 Feet. AND 1986, 2000 Adjustment



- NOTES:
1. ALL EXISTING BACKSLOPE STRUCTURES, INCLUDING PIPE SHALL BE REMOVED AND DISPOSED OF. PROPOSED BACKSLOPE STRUCTURES TO BE CONSTRUCTED PER DETAILS ON SHEET 34.
 2. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02021 EXCEPT IN THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED.
 3. CHANNEL SIDE SLOPES TO BE REGRADED TO 3:1 OR FLATTER FOR ENTIRE LENGTH OF CHANNEL FROM STA. 50+50 TO 241+00. SEE CROSS SECTION SHEETS 22 TO 30.
 4. EXISTING STRUCTURE TO BE PROTECTED IN PLACE. SHOULD ANY DAMAGE OCCUR CONTRACTOR TO RESTORE TO ORIGINAL OR BETTER CONDITION.

LONG POINT SLOUGH



REV. NO.	DATE	DESCRIPTION	P.E. APPR.
1			
2			

BROWN & GAY
 ENGINEERS, INC.

1617 Westheimer Road, Suite 200
 Houston, TX 77056
 Tel: 281-486-8700
 Fax: 281-486-8701
 Chief Engineer and Surveyor
 CPE# 129696 (Exp. 6/1/04)

5-9-13

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH
 MAINTENANCE

PLAN AND PROFILE
 LONG POINT SLOUGH
 STA. 236+00 TO END

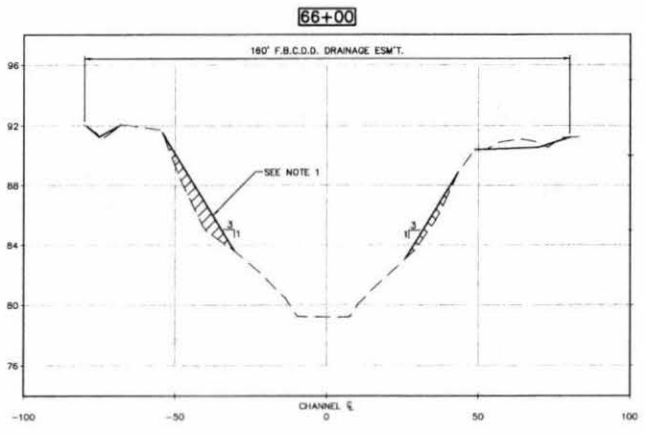
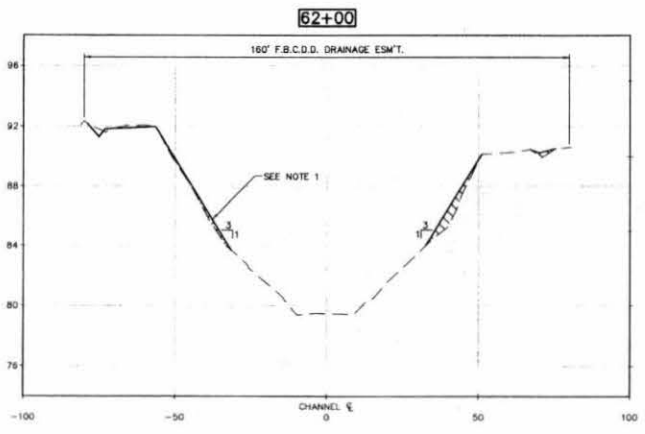
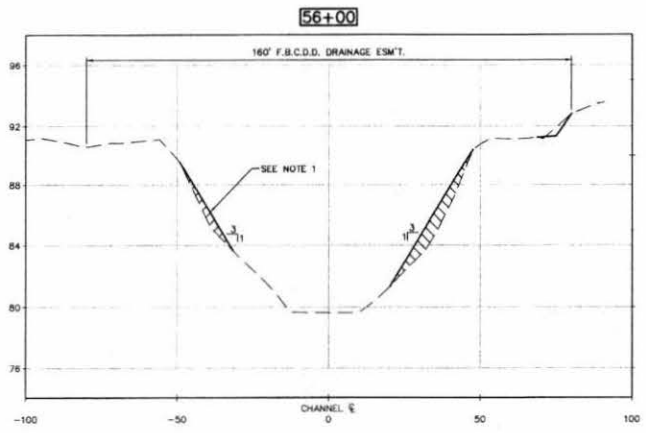
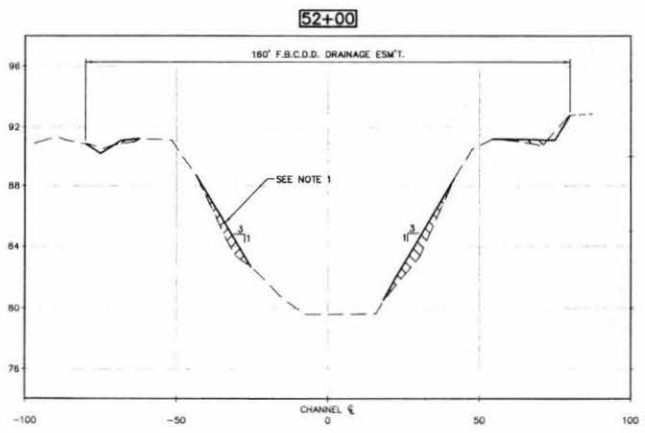
JOB NUMBER: 1223-00

SUBMITTED BY: BROWN & GAY ENGINEERS, INC. DESIGNED BY: JWF
 SCALE: 1"=40' DATE: JULY 14, 2013
 DATE: APRIL 2013 SHEET NO. 21 OF 35 SHEETS
 SURVEY BY: BROWN & GAY ENGINEERS, INC.

BROWN & GAY ENGINEERS, INC.
 1617 Westheimer Road, Suite 200
 Houston, TX 77056
 Tel: 281-486-8700
 Fax: 281-486-8701
 Chief Engineer and Surveyor
 CPE# 129696 (Exp. 6/1/04)

4/13

BROWN & GAY ENGINEERS, INC. 1223 L.O. LANDIS, HOUSTON, TEXAS 77002-1223 TEL: 281-568-8700 FAX: 281-568-8701



- NOTES**
1. REGRADE CHANNEL SIDE SLOPES TO 3:1 OR FLATTER. LEAVE NO EROSION OR RILLS DEEPER THAN 4". ESTABLISH TURF PER NOTE 3.
 2. CONTRACTOR TO REMOVE AND HAUL ALL EXISTING TOP SOIL OFFSITE. AFTER GRADES ARE ESTABLISHED CONTRACTOR SHALL IMPORT AND PLACE 4" OF TOPSOIL ALONG ENTIRE PROJECT LENGTH.
 3. ESTABLISH TURF GRASS ON ALL AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 00921 EXCEPT IN THE CHANNEL BOTTOM.

REV. NO.	DATE	DESCRIPTION	P.E. APPROV.
1			
2			
3			

BROWN & GAY
ENGINEERS, INC.

Brown & Gay Engineers, Inc.
10717 Eastwood Lane, Suite 400
Houston, TX 77036
Tel: 281-568-8700
Fax: 281-568-8701
— Civil Engineers and Surveyors —
CPEA Registration No. 1-1066

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH
MAINTENANCE

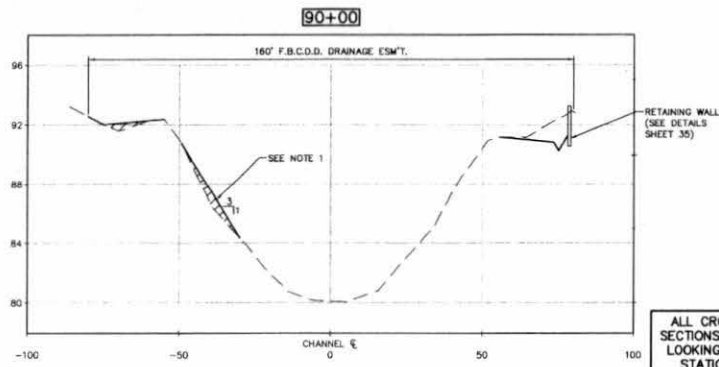
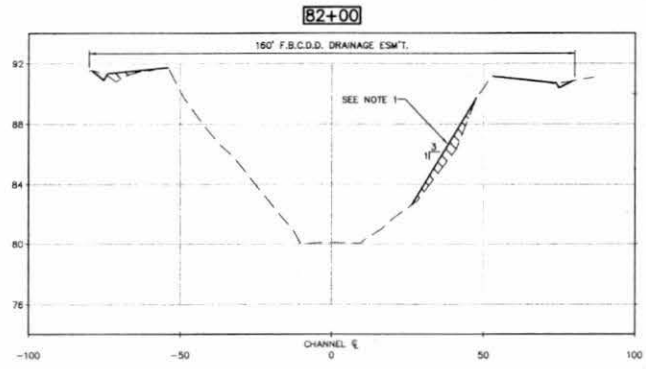
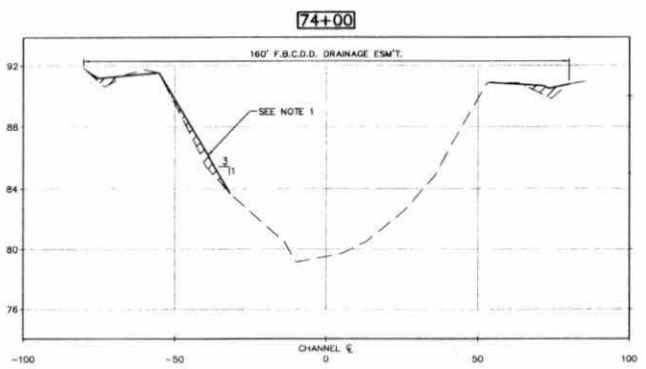
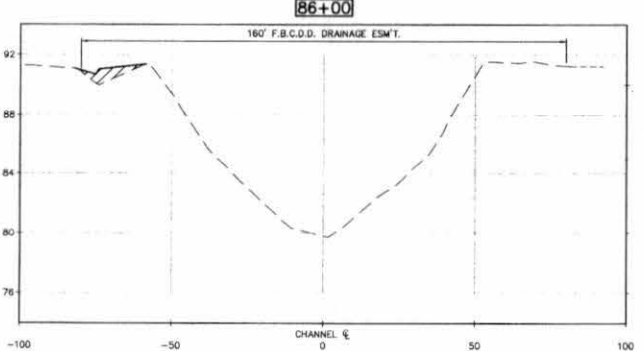
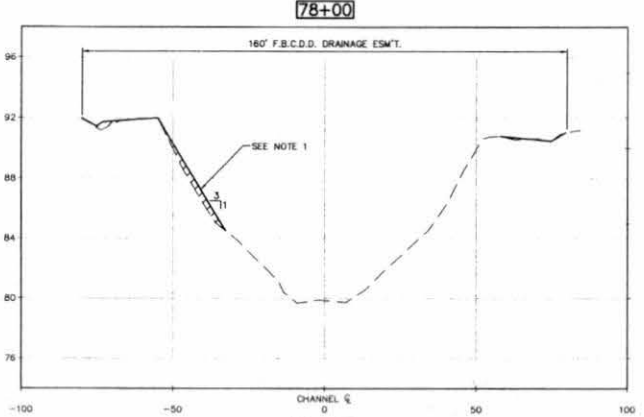
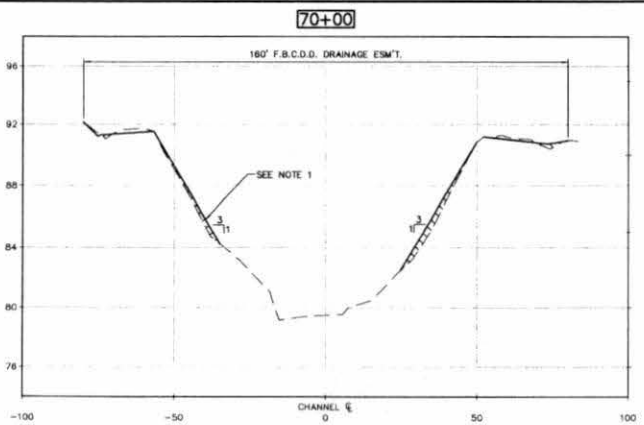
CROSS SECTION
(SHEET 1 OF 9)

ALL CROSS SECTIONS ARE LOOKING UP STATION

JOB NUMBER:	1223-00
SUBMITTED BY:	BROWN & GAY ENGINEERS, INC.
DESIGNED BY:	TOP
SCALE:	1" = 20'
DRAWN BY:	ADW/LAP
DATE:	MARCH 2003
SHEET NO.:	22 OF 35 SHEETS
SURVEY BY:	BROWN & GAY ENGINEERS, INC.
DRAWN BY:	

Not 4/13

BROWN & GAY ENGINEERS, INC.
 10777 FORTWORTH, SUITE 600
 FORTWORTH, TEXAS 76154
 TEL: 817-456-8740
 FAX: 817-456-8741
 WWW: WWW.BG-ENG.COM
 1223-00-LEVEE IMPROVEMENT DISTRICT 12, SECTION 2 OF 9, SHEET NO. 23 OF 35 SHEETS



- NOTES**
1. REGRADE CHANNEL SIDE SLOPES TO 3:1 OR FLATTER. LEAVE NO EROSION OR RILLS DEEPER THAN 4". ESTABLISH TURF PER NOTE 3.
 2. CONTRACTOR TO REMOVE AND HAUL ALL EXISTING TOP SOIL OFFSITE. AFTER GRADES ARE ESTABLISHED CONTRACTOR SHALL IMPORT AND PLACE 4" OF TOPSOIL ALONG ENTIRE PROJECT LENGTH.
 3. ESTABLISH TURF GRASS ON ALL AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02051 EXCEPT IN THE CHANNEL BOTTOM.

REV. NO.	DATE	DESCRIPTION	P.E. APPR.
△			
△			
△			

BROWN & GAY
ENGINEERS, INC.

Brown & Gay Engineers, Inc.
10777 Fortworth, Suite 600
Fortworth, TX 76154
Tel: 817-456-8740
Fax: 817-456-8741
WWW: WWW.BG-ENG.COM
Civil Engineers and Surveyors
1984 Registration No. 7-1044

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH
MAINTENANCE

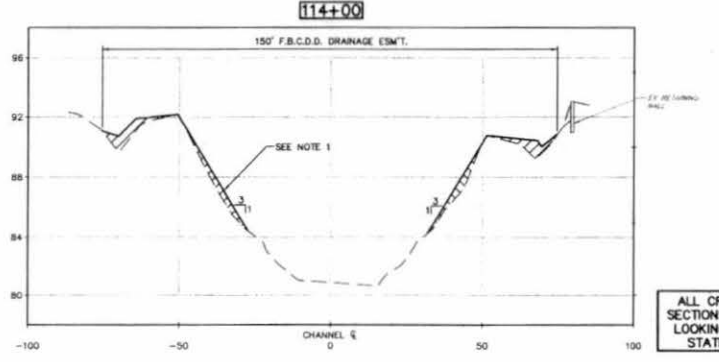
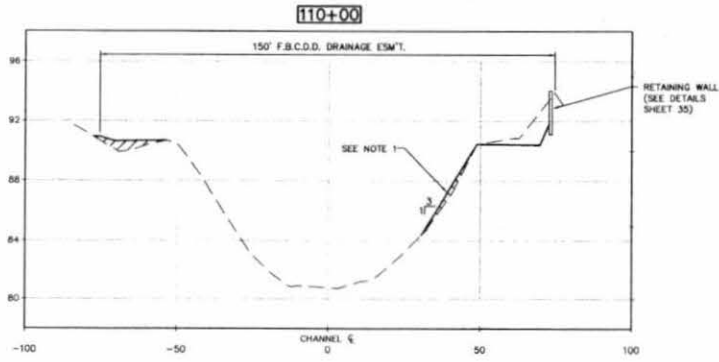
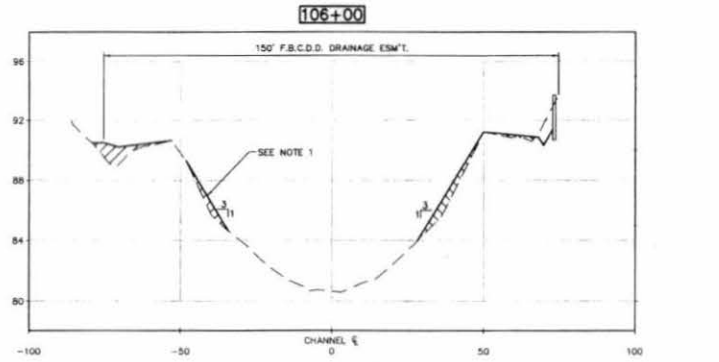
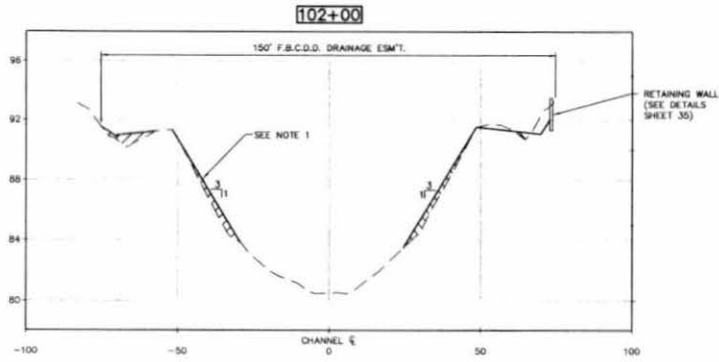
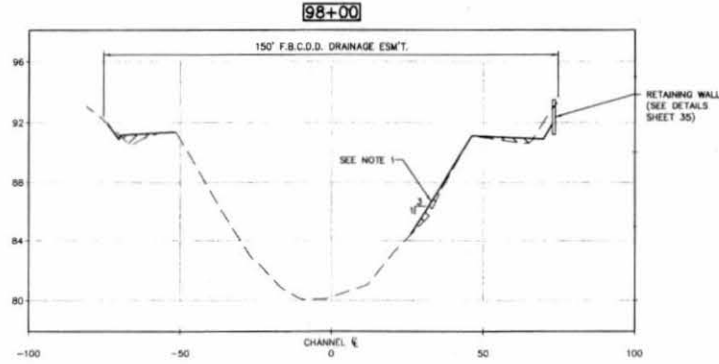
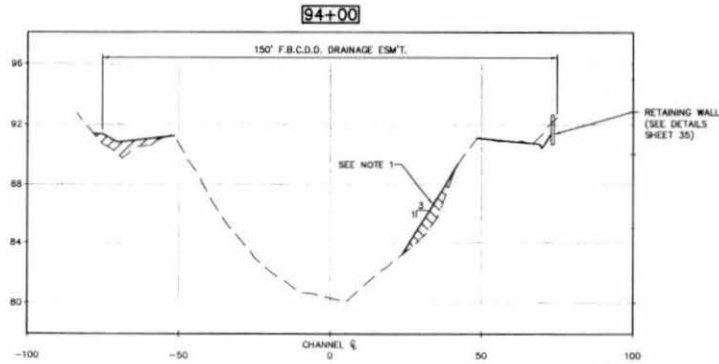
CROSS SECTION
(SHEET 2 OF 9)

JOB NUMBER	1223-00
SUBMITTED BY	BROWN & GAY ENGINEERS, INC.
DESIGNED BY	CM
SCALE	1" = 20'
DRAWN BY	ADJ/AP
DATE	MARCH 2013
SHEET NO.	23 OF 35 SHEETS
SURVEY BY	BROWN & GAY ENGINEERS, INC.
P.E. NO.	

ALL CROSS SECTIONS ARE LOOKING UP STATION

107-4213

BROWN & GAY ENGINEERS, INC.
11.14.2013 10:10:13 AM
SECTION 3 OF 9 SHEET 3 OF 35



- NOTES**
1. REGRADE CHANNEL SIDE SLOPES TO 3:1 OR FLATTER. LEAVE NO EROSION OR RILLS DEEPER THAN 4". ESTABLISH TURF FOR NOTE 3.
 2. CONTRACTOR TO REMOVE AND HAUL ALL EXISTING TOP SOIL OFFSITE. AFTER GRADES ARE ESTABLISHED CONTRACTOR SHALL IMPORT AND PLACE 4" OF TOPSOIL ALONG ENTIRE PROJECT LENGTH.
 3. ESTABLISH TURF GRASS ON ALL AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM.

REV. NO.	DATE	DESCRIPTION	P.E. APPROV.

BROWN & GAY
ENGINEERS, INC.

Brown & Gay Engineers, Inc.
10777 Woodloch, Suite 200
Houston, TX 77042
Tel: 281-588-8700
Fax: 281-588-8701
12000 Regalwood Lane, Houston, TX 77042
100% Registered Civil Engineers

Brown & Gay Engineers, Inc.
P. 10448

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

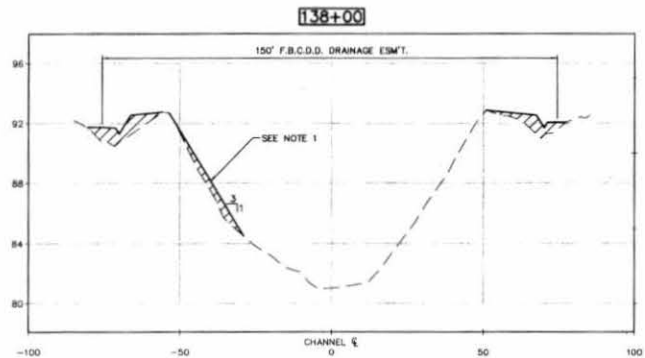
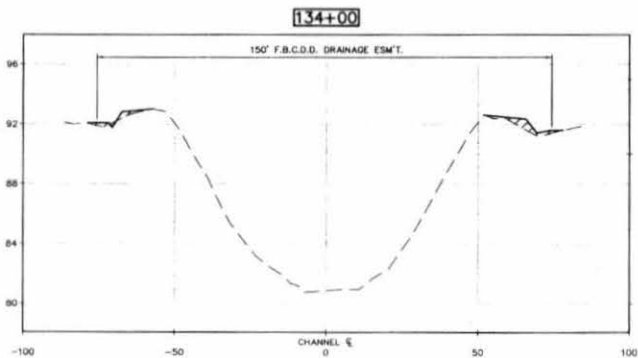
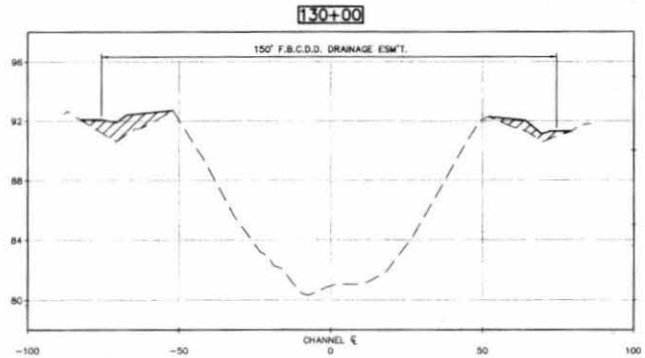
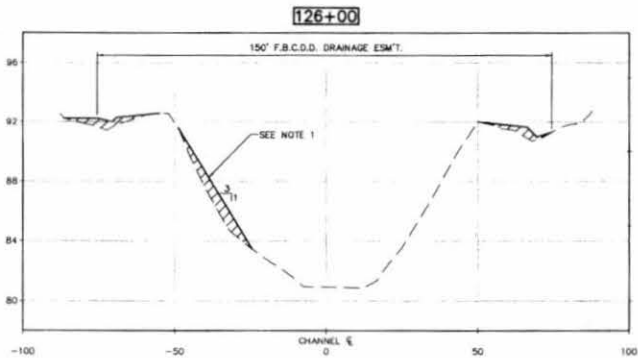
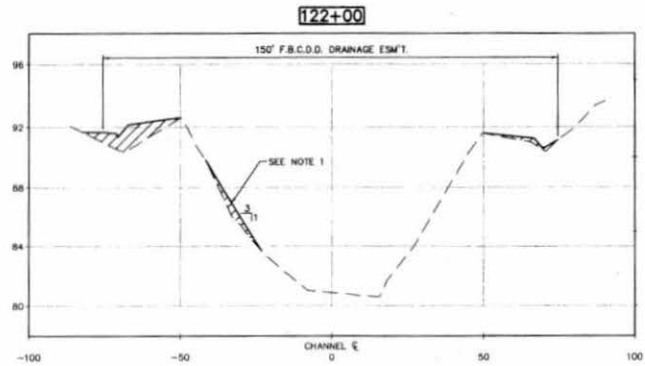
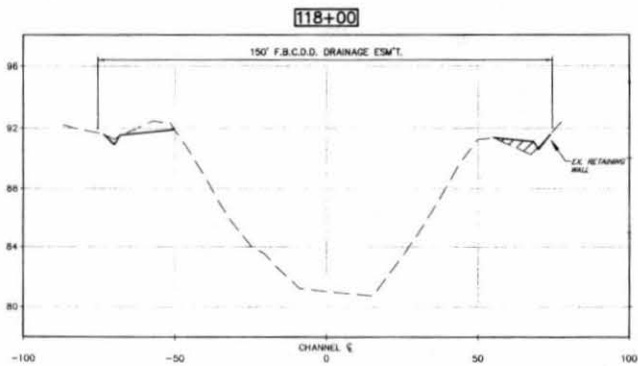
CROSS SECTION
(SHEET 3 OF 9)

JOB NUMBER: 1223-00	
DESIGNED BY: BGF	DRAWN BY: JGL/P
CHECKED BY: JGL/P	DATE: 08/08/2013
DATE: 08/08/2013	SHEET NO. 24 OF 35 SHEETS

ALL CROSS SECTIONS ARE LOOKING UP STATION

NON 4/2/13

BROWN & GAY ENGINEERS, INC. PROJECT NO. 1223-00, DRAWING NO. 25 OF 35 SHEETS, SECTION 4 OF 9, DATE: MAR 15, 2013, 10:12 AM



NOTES:

1. REGRADE CHANNEL SIDE SLOPES TO 3:1 OR FLATTER. LEAVE NO EROSION OR RILLS DEEPER THAN 4". ESTABLISH TURF PER NOTE 3.
2. CONTRACTOR TO REMOVE AND HAUL ALL EXISTING TOP SOIL OFFSITE. AFTER GRADES ARE ESTABLISHED CONTRACTOR SHALL IMPORT AND PLACE 4" OF TOPSOIL, ALONG ENTIRE PROJECT LENGTH.
3. ESTABLISH TURF GRASS ON ALL AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM.

REV.	DATE	DESCRIPTION	P.E. APPROV.
△			
△			
△			

BROWN & GAY ENGINEERS, INC.



Brown & Gay Engineers, Inc.
1007 Pennsylvania, Suite 402
Martinsburg, WV 26150
Tel: 201-694-9100
Fax: 201-694-9101
— Civil Engineers and Surveyors —
1989 Registration No. 7-1008

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

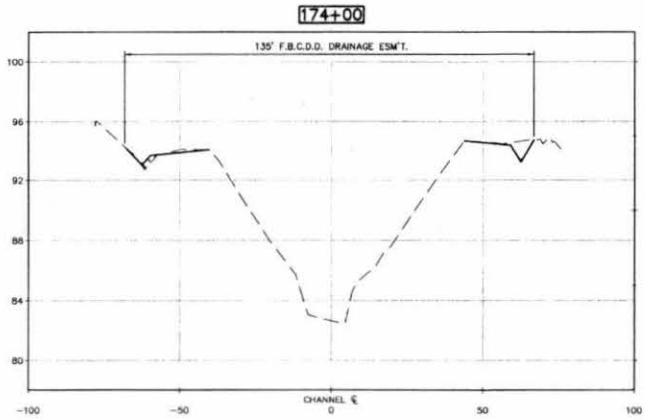
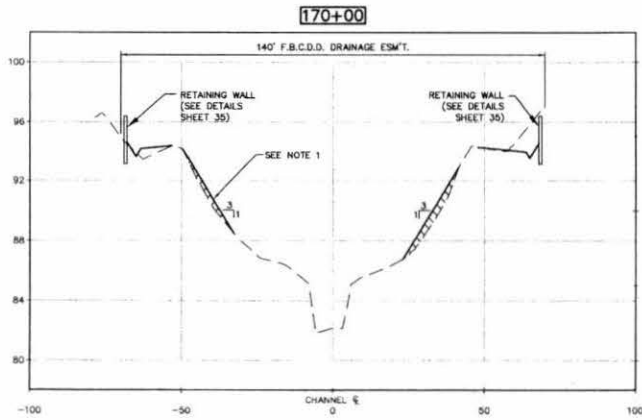
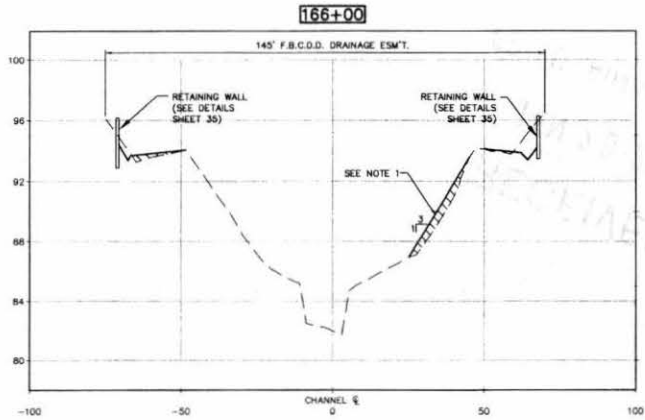
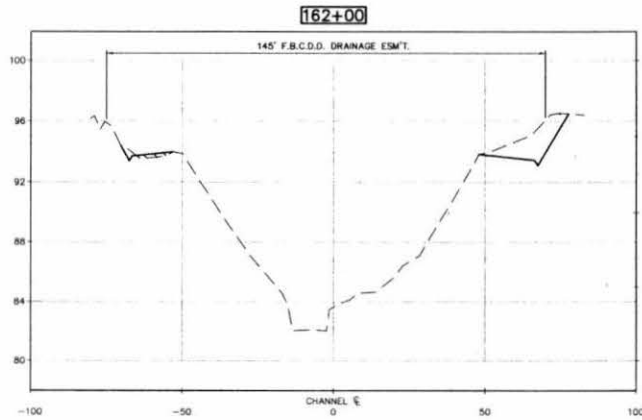
CROSS SECTION (SHEET 4 OF 9)

JOB NUMBER:	1223-00
DESIGNED BY:	DMF
DRAWN BY:	AVL/JP
DATE:	MARCH 2013
SHEET NO.:	25 OF 35 SHEETS

ALL CROSS SECTIONS ARE LOOKING UP STATION

MDS 42113

BROWN & GAY ENGINEERS, INC.
12211 VILLAGE LANE, SUITE 100, HOUSTON, TEXAS 77057
P.O. BOX 100, HOUSTON, TEXAS 77057
PHONE: 281-411-1111 FAX: 281-411-1112
WWW.BROWNANDGAY.COM



NOTES:

1. REGRADE CHANNEL SIDE SLOPES TO 3:1 OR FLATTER. LEAVE NO EROSION OR RILLS DEEPER THAN 4". ESTABLISH TURF PER NOTE 3.
2. CONTRACTOR TO REMOVE AND HAUL ALL EXISTING TOP SOIL OFFSITE. AFTER GRADES ARE ESTABLISHED CONTRACTOR SHALL IMPORT AND PLACE 4" OF TOPSOIL ALONG ENTIRE PROJECT LENGTH.
3. ESTABLISH TURF GRASS ON ALL AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM.

REV. NO.	DATE	DESCRIPTION	P.E. APPROV.
1			
2			
3			

BROWN & GAY
ENGINEERS, INC.

Brown & Gay Engineers, Inc.
12211 Village Lane, Suite 100
Houston, TX 77057
Tel: 281-411-1111
Fax: 281-411-1112
City engineers and architects
Since 1948

Brown & Gay Engineers, Inc.
P.O. Box 100
Houston, TX 77057
Tel: 281-411-1111
Fax: 281-411-1112

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH
MAINTENANCE

CROSS SECTION
(SHEET 6 OF 9)

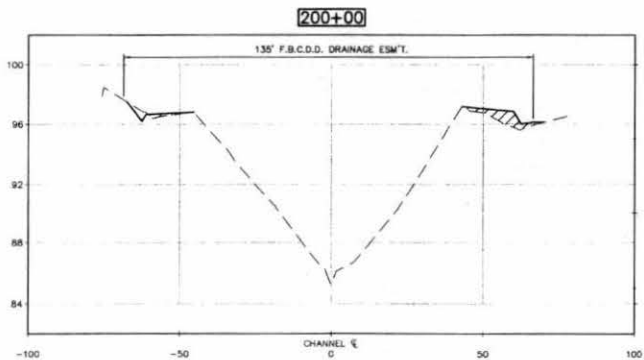
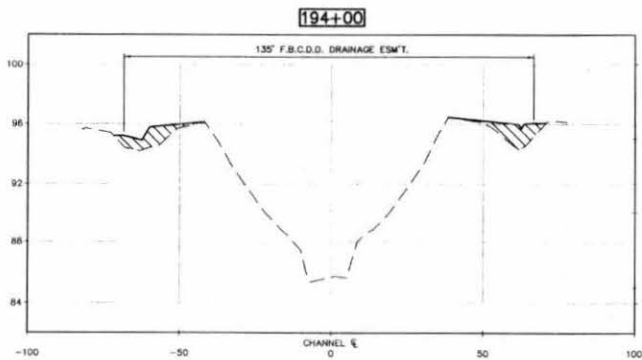
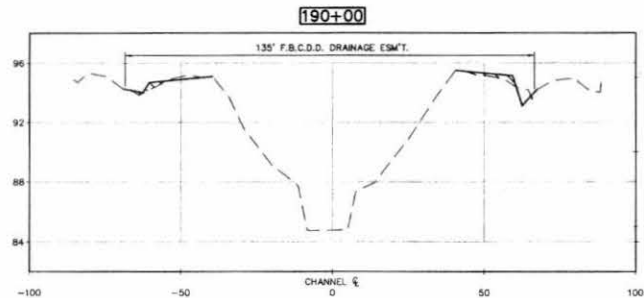
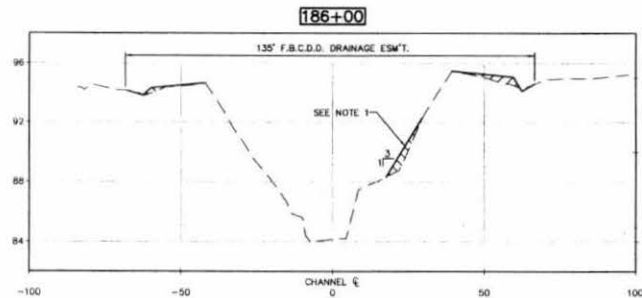
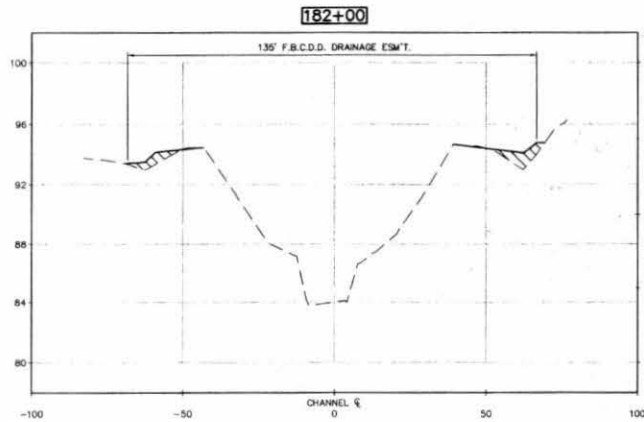
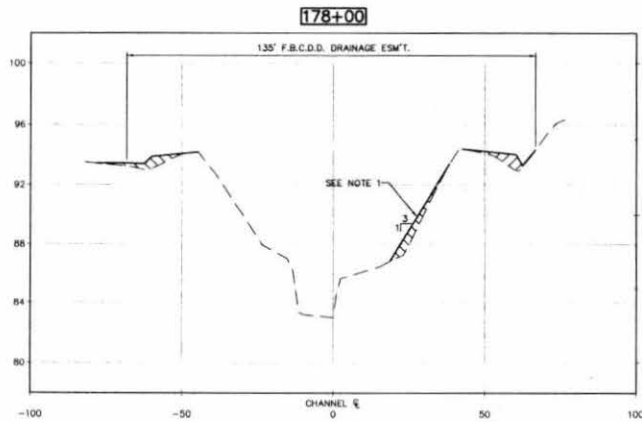
JOB NUMBER: 1223-00	
<small>DESIGNED BY: B.G. CHECKED BY: B.G. DATE: MARCH 2003 DRAWN BY: B.G. SCALE: 1"=40' SHEET NO. 27 OF 35 SHEETS</small>	<small>APPROVED BY: B.G. DATE: MARCH 2003 SCALE: 1"=40' SHEET NO. 27 OF 35 SHEETS</small>

ALL CROSS
SECTIONS ARE
LOOKING UP
STATION

4/13

RECEIVED
JAN 20 2016
FBC DRAINAGE DIST.

BROWN & GAY ENGINEERS, INC. 1223-03, CADSW/01, construction_plan/01, sheet/128, CROSS SECTION 7 OF 9, Job No. 1223-03, 10/24/01, 10/24/01, 10/24/01



- NOTES:**
1. REGRADE CHANNEL SIDE SLOPES TO 3:1 OR FLATTER. LEAVE NO EROSION OR HILLS DEEPER THAN 4". ESTABLISH TURF PER NOTE 3.
 2. CONTRACTOR TO REMOVE AND HAUL ALL EXISTING TOP SOIL OFFSITE. AFTER GRADES ARE ESTABLISHED CONTRACTOR SHALL IMPORT AND PLACE 4" OF TOPSOIL ALONG ENTIRE PROJECT LENGTH.
 3. ESTABLISH TURF GRASS ON ALL AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM.

REV. NO.	DATE	DESCRIPTION	P.E. APPROV.
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△			

BROWN & GAY ENGINEERS, INC.

1223-03, CADSW/01, construction_plan/01, sheet/128, CROSS SECTION 7 OF 9, Job No. 1223-03, 10/24/01, 10/24/01, 10/24/01

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

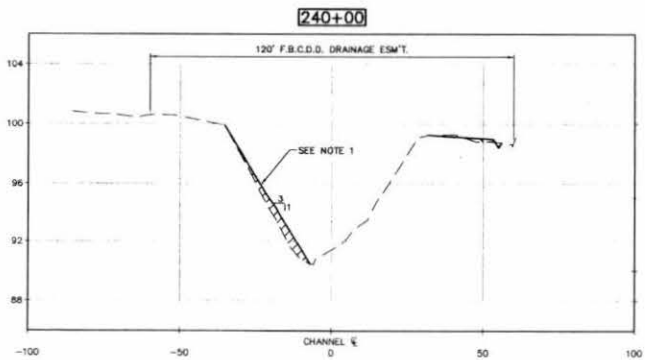
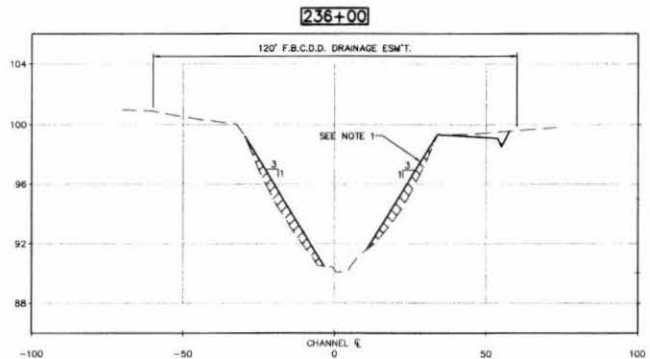
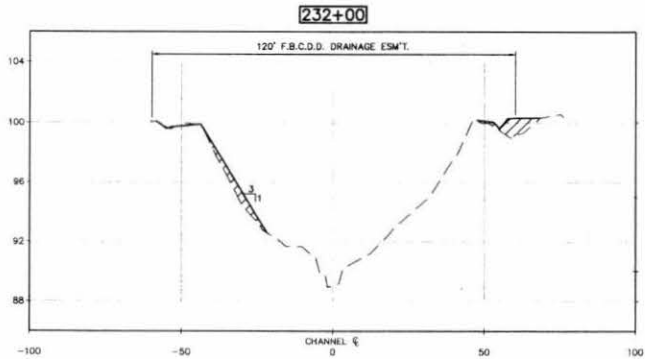
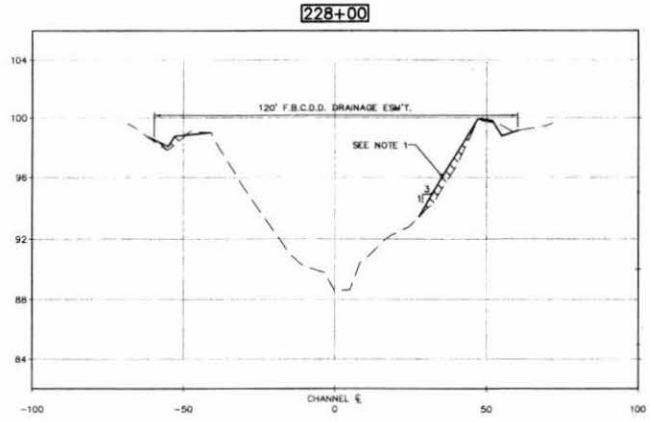
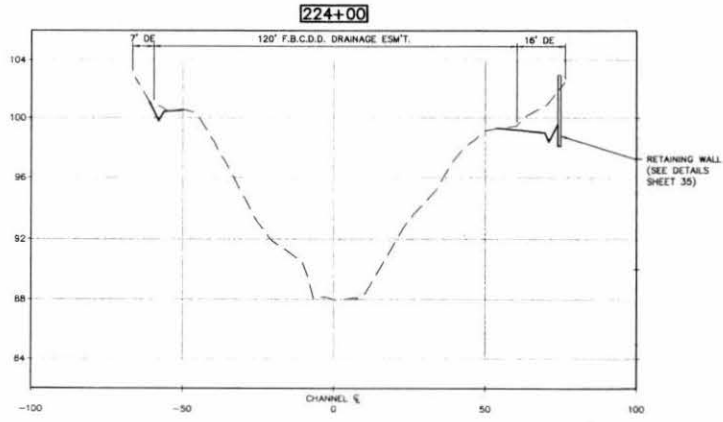
CROSS SECTION (SHEET 7 OF 9)

ALL CROSS SECTIONS ARE LOOKING UP STATION

JOB NUMBER: 1223-00	
DESIGNED BY: B&G	CHECKED BY: JWG
DRAWN BY: JWG	DATE: 10/24/01
DATE: 10/24/01	SHEET NO. 28 OF 35 SHEETS

not 440

BROWN & GAY ENGINEERS, INC. PROJECT NO. 1223-00, DRAWING NO. 30 OF 35, DATE: 04/21/13



- NOTES**
1. REGRADE CHANNEL SIDE SLOPES TO 3:1 OR FLATTER. LEAVE NO EROSION OR RILLS DEEPER THAN 4". ESTABLISH TURF PER NOTE 3.
 2. CONTRACTOR TO REMOVE AND HAUL ALL EXISTING TOP SOIL OFFSITE. AFTER GRADES ARE ESTABLISHED CONTRACTOR SHALL IMPORT AND PLACE 4" OF TOPSOIL ALONG ENTIRE PROJECT LENGTH.
 3. ESTABLISH TURF GRASS ON ALL AREAS WITHIN THE CHANNEL RIGHT-OF-WAY IN ACCORDANCE WITH PROJECT SPEC. 02921 EXCEPT IN THE CHANNEL BOTTOM.

REV. NO.	DATE	DESCRIPTION	P.E. APPR.
1			
2			

BROWN & GAY ENGINEERS, INC.

Brown & Gay Engineers, Inc.
10277 Woodbridge, Suite 200
Houston, TX 77055
Tel: 281-558-8800
Fax: 281-558-8811
12045 Woodbridge, Suite 200
Houston, TX 77055

WEST TEXAS ENGINEERS
68197
3-8-13

Brown & Gay Engineers, Inc.
P-12048

LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

CROSS SECTION (SHEET 9 OF 9)

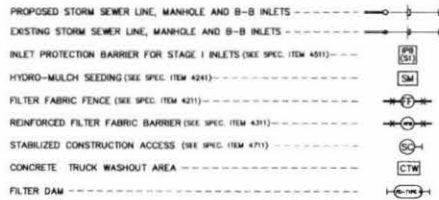
JOB NUMBER: 1223-00

DESIGNED BY: JWG
CHECKED BY: JWG
DATE: 04/21/13
DRAWN BY: JWG
DATE: 04/21/13
SHEET NO. 30 OF 35 SHEETS

ALL CROSS SECTIONS ARE LOOKING UP STATION

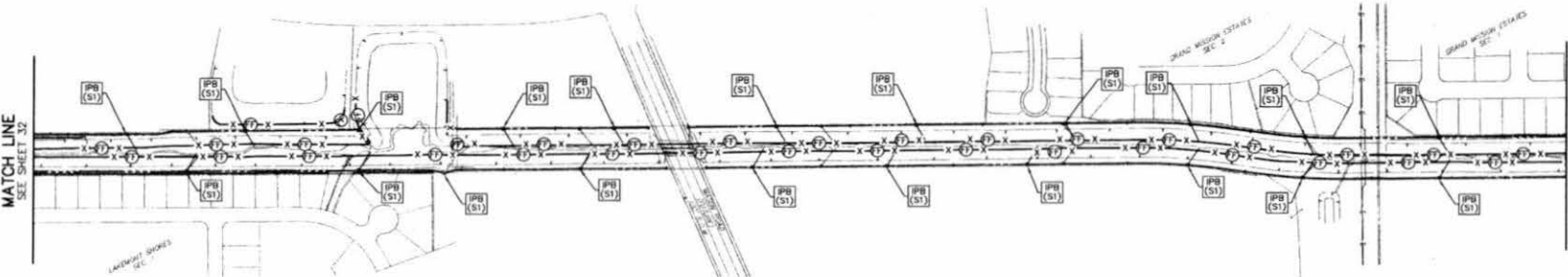
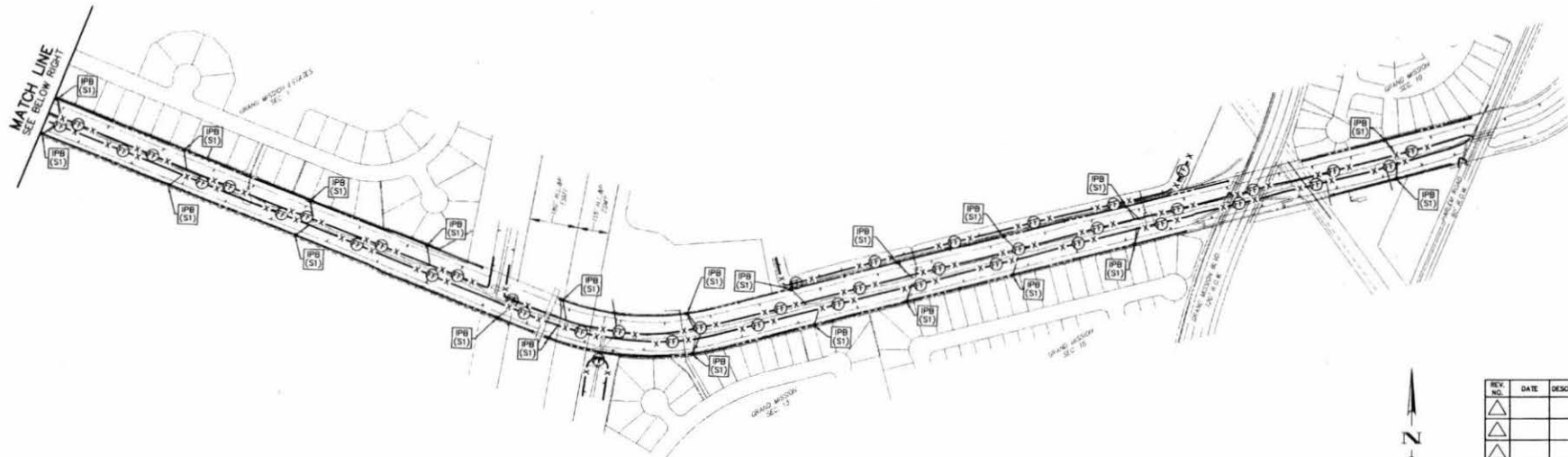
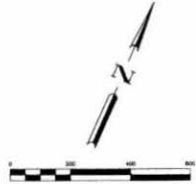
DATE 4/21/13

LEGEND



POLLUTION PREVENTION NOTES:

1. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE DRIVING AUTHORITY. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE TEXAS POLLUTION DISCHARGE ELIMINATION SYSTEM (TPDES) REQUIREMENTS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ENFORCEMENT OF TPDES REQUIREMENTS PER "GENERAL REQUIREMENTS FOR PERMIT T00100000".
3. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING GENERAL SOURCE CONTROLS PER SPECIAL SPEC. ITEM #811.
4. THE LOCATION OF THE STABILIZED CONSTRUCTION ACCESS IS TO BE DETERMINED BY THE CONTRACTOR.
5. ALL RESERVES AND AREAS BETWEEN BACK-OF-CURB AND RIGHT-OF-WAY SHALL BE HYDRO-MULCHED SEEDING, PER SPEC. ITEM 4241. ALL LOTS AND OTHER AREAS DISTURBED DURING CONSTRUCTION SHALL BE BROADCAST SEEDING, PER SPEC. ITEM 4240.



REV. NO.	DATE	DESCRIPTION	P.E. APPR.
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BROWN & GAY
ENGINEERS, INC.

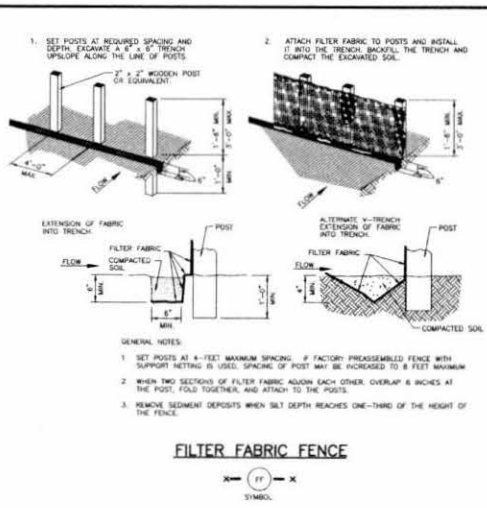
Brown & Gay Engineers, Inc.
12777 FORTWORTH ROAD #400
FORTWORTH, TX 76156
TEL: 817-636-8100
FAX: 817-636-8102
Professional Seal: 68197
F-1048

LEVEE IMPROVEMENT DISTRICT 12	
LONG POINT SLOUGH MAINTENANCE	
STORM WATER POLLUTION PREVENTION PLAN (SHEET 1 OF 2)	
JOB NUMBER:	1223-00
DESIGNED BY:	W.P. SHAW
DRAWN BY:	W.P. SHAW
CHECKED BY:	W.P. SHAW
DATE:	MARCH 2013
PROJECT NO.:	31 OF 35 SHEETS

BROWN & GAY ENGINEERS, INC. PROJECT NO. 1223-00, LEVEE IMPROVEMENT DISTRICT 12, STORM WATER POLLUTION PREVENTION PLAN, SHEET 1 OF 2, DATE: MARCH 2013, DRAWN BY: W.P. SHAW, CHECKED BY: W.P. SHAW, DESIGNED BY: W.P. SHAW

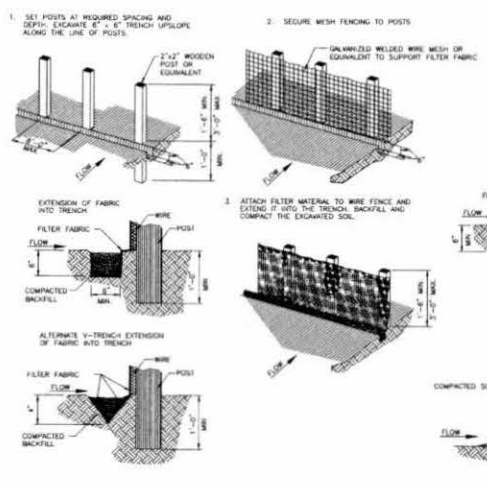
NOV 4/2/13

BROWN & GAY ENGINEERS, INC. 12225 WILLOW CANYON, CONROCK, TEXAS 75845, TEL: 281-353-1010 FAX: 281-353-1011



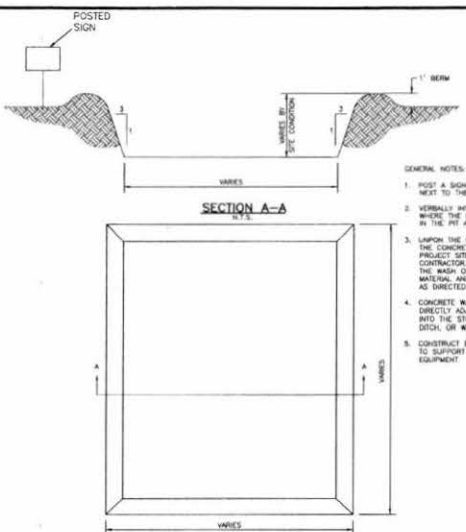
- GENERAL NOTES:**
1. SET POSTS AT 4-FOOT MAXIMUM SPACING. IF FACTORY PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POSTS MAY BE INCREASED TO 8 FEET MAXIMUM.
 2. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT THE POSTS, FOLD TOGETHER, AND ATTACH TO THE POSTS.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

FILTER FABRIC FENCE

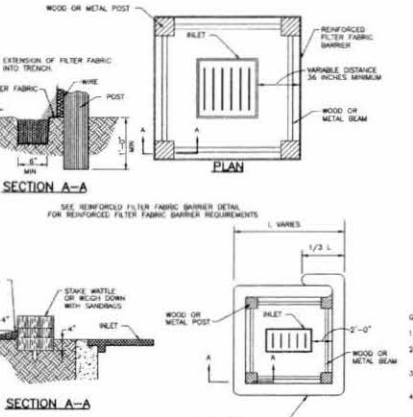


- GENERAL NOTES:**
1. SECURELY FASTEN MESH FENCING TO POSTS WITH STAPLES OR THE WIRES.
 2. SECURELY FASTEN FILTER FABRIC TO MESH FENCING.
 3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT A POST, FOLD TOGETHER, AND ATTACH TO A POST.
 4. REMOVE SEDIMENT DEPOSITS WHEN SILT REACHES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

REINFORCED FILTER FABRIC BARRIER



CONCRETE TRUCK WASHOUT AREA

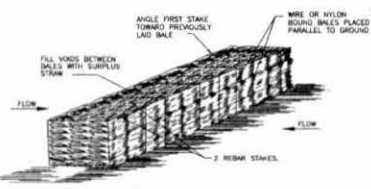


NOTE: TYPICALLY STRAW BALES ARE NOT RECOMMENDED FOR INLET PROTECTION BARRIERS.

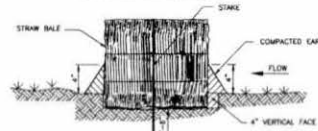
INLET PROTECTION BARRIERS FOR STAGE I INLETS



- GENERAL NOTES:**
1. POST A SIGN READING "CONCRETE WASH OUT PIT" NEXT TO THE PIT.
 2. VERTICALLY INTERLOCK THE CONCRETE TRUCK DRIVERS WHERE THE PIT IS AND TO WASH OUT THEIR TRUCKS IN THE PIT AND NO WASH ELSE.
 3. UNLESS THE CONCRETE SETTING UP (CURING, DRYING OUT), THE CONCRETE WASTE SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR. AFTER REMOVAL OF THE CONCRETE WASTE, THE WASH OUT PIT SHALL BE FILLED WITH CLEAN FILL MATERIAL AND COMPACTED TO IN-SITU CONDITIONS, OR AS DIRECTED BY THE PROJECT SPECIFICATIONS.
 4. CONCRETE WASH OUT PITS SHALL NOT BE LOCATED DIRECTLY ADJACENT TO, NOR AT ANY TIME DRAIN INTO THE STORM SEWER SYSTEM OR ANY OTHER SINK, DITCH, OR WATERWAY.
 5. CONSTRUCT ENTRY ROAD AND BOTTOM OF WASHOUT AREA TO SUPPORT EXPECTED LOADINGS FROM TRUCKS EQUIPMENT.



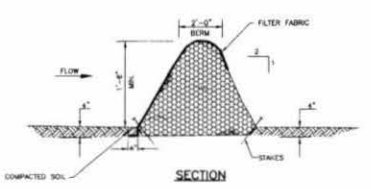
STRAW BALE FENCE



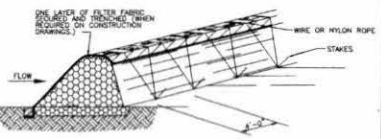
SECTION

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

STRAW BALE FENCE

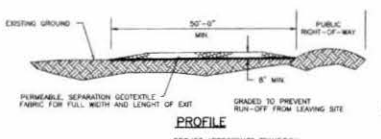


SECTION

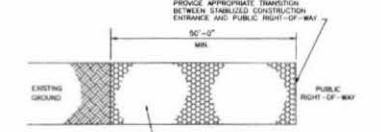


- GENERAL NOTES:**
1. LIMIT USE TO ONSITE SWALES FOR PURPOSES OF LOW FLOW VELOCITY DISSIPATION FOR EROSION CONTROL. USE BRUSH BERMS TO TREAT OVERLAND FLOW ONLY. DO NOT USE BRUSH BERMS TO TREAT FLOW IN CHANNELS.
 2. PLACE WOODY BRUSH AND BRANCHES HAVING A DIAMETER OF LESS THAN 2 INCHES WITH A 6-INCH OVERLAP.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

BRUSH BERM



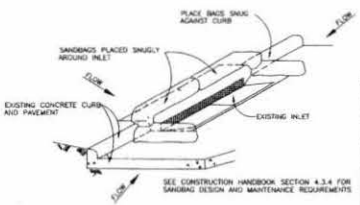
PROFILE



PLAN VIEW

- GENERAL NOTES:**
1. MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
 2. CONSTRUCT AND MAINTAIN CONSTRUCTION EXIT WITH CONSTANT WIDTH ACROSS ITS LENGTH, INCLUDING ALL POINTS OF INGRESS OR EGRESS.
 3. UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, STABILIZATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT.
 4. WHEN SHOWN ON THE CONSTRUCTION DRAWINGS, WOOD OR LENGTHEN STABILIZED AREA TO ACCOMMODATE A TRUCK WASHING AREA. PROVIDE OUTLET SEDIMENT TRAP FOR THE TRUCK WASHING AREA.
 5. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES PACKED WITH MUD.
 6. PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRIVING SURFACE.
 7. ALTERNATE METHODS OF CONSTRUCTION INCLUDE:
 - PLACEMENT STABILIZED SOIL, COMPACTED CEMENT STABILIZED SOIL, LIMESTONE AGGREGATE, OR OTHER FILL MATERIAL IN 4\"/>

STABILIZED CONSTRUCTION ACCESS



GENERAL NOTES:

1. BAGS OR MATLES CAN BE USED FOR THIS APPLICATION.
2. PROVIDE WOODEN OR UNWORN GEOTEXTILE FILTER FABRIC FOR BAGS.
3. PROVIDE COARSE SAND AND AGGREGATE MIX FOR FILL MATERIAL FOR BAGS. USE ONLY PARTICLES CONSISTING OF CLEAN, HARD, DURABLE MATERIALS FREE FROM ADHERING CONTAMINANTS, ANIMAL QUAY, LOAM, SHALE, SOFT OR PLANT MATERIALS OR ORGANIC AND INORGANIC MATTER.
4. REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE BARRIER.

INLET PROTECTION BARRIERS FOR STAGE II INLETS



REV. NO.	DATE	DESCRIPTION	P.E. APPRO.

BROWN & GAY ENGINEERS, INC.



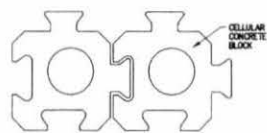
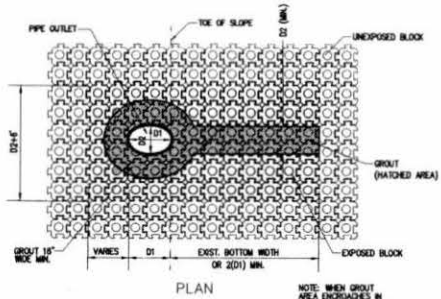
LEVEE IMPROVEMENT DISTRICT 12

LONG POINT SLOUGH MAINTENANCE

STORM WATER POLLUTION PREVENTION PLAN DETAILS

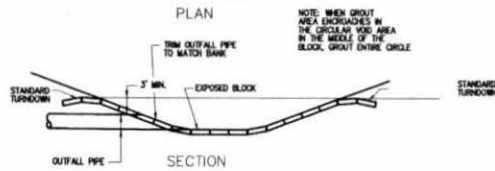
JOB NUMBER: 1223-00

DATE: 4/21/13
 SHEET NO. 33 OF 35 SHEETS

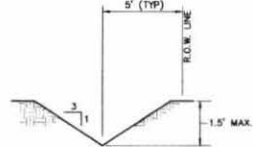


CELLULAR CONCRETE BLOCKS WITHOUT CABLES
BLOCK DETAILS

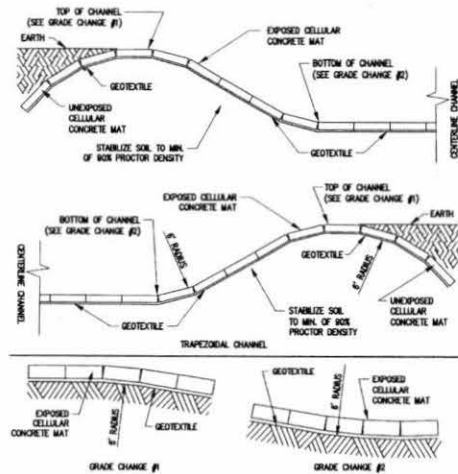
NOTES:
1. SEE SPECIFICATIONS FOR GEOTEXTILE TYPE.
2. BLOCKS TO BE BACKFILLED WITH TOP SOIL AND SEEDING FOR VEGETATION.



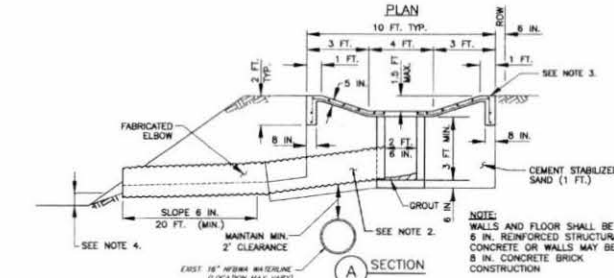
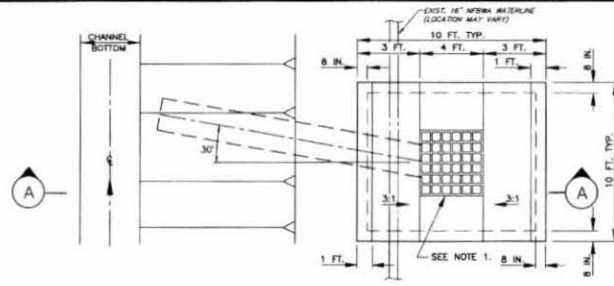
DETAIL-PIPE OUTLET



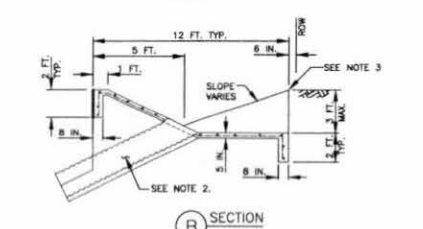
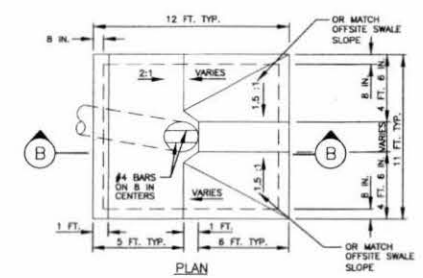
TYPICAL BACKSLOPE DETAIL
N.T.S.



TRAPEZOIDAL CHANNEL
DETAIL
ARTICULATED BLOCK DETAILS
(STATION 213+52 TO STA. 215+04)



BACK SLOPE STRUCTURE DETAIL
N.T.S.



COMBINATION BACKSLOPE &
OFFSITE DITCH INTERCEPTOR STRUCTURE
N.T.S.

- INTERCEPTOR STRUCTURE DETAIL NOTES:**
- CONCRETE PAD AROUND INLET: PAD FOR AS CONCRETE INTERCEPTOR STRUCTURE PER UNIT PRICE SCHEDULE. INLET TO HAVE GRATE TOP, VULCAN FOUNDRY COMPANY, V-4880-3 OR APPROVED EQUAL, APPROX. 489 SQ. IN. OPENING.
 - PROVIDE AND PLACE CEMENT STABILIZED SAND IN ACCORDANCE WITH SPECIFICATION SECTION 02321-CEMENT STABILIZED SAND AND SECTION 02316 - STRUCTURAL EXCAVATING.
 - INTERCEPTOR STRUCTURES:
A. ADJUST LENGTH AND WIDTH IN FIELD AS NECESSARY.
B. 2'-FEET DEEP X 6-INCH WIDE TOE ALL AROUND THE STRUCTURE.
C. STEEL REINFORCING-#4 BARS (GRADE 40) AT 12 INCHES ON CENTER EACH WAY.
D. ANY INTERCEPTOR OUTFALL PIPE LARGER THAN MAXIMUM SIZE INDICATED REQUIRES A SEPARATE DETAIL.
E. MATCH TOP OF CONCRETE WITH NATURAL GROUND.
 - SET FLOWLINE OF OUTFALL 1 FOOT ABOVE THE TOE OR 1 FOOT ABOVE THE NORMAL WATER LEVEL, WHICHEVER IS HIGHER.

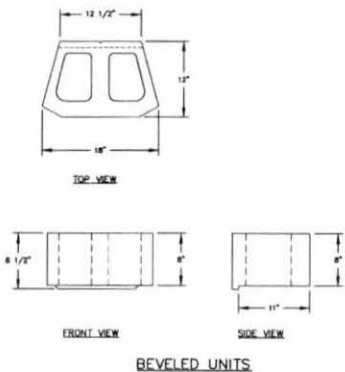
REV. NO.	DATE	DESCRIPTION	P.E. APPROV.

BROWN & GAY ENGINEERS, INC.
Brown & Gay Engineers, Inc.
10777 Westchester, Suite 200
Houston, TX 77060
Tel: 281-268-8300
Fax: 281-268-8333
E-Mail: info@brownandgay.com
12475 Westheimer Road, Suite 200
Houston, TX 77042

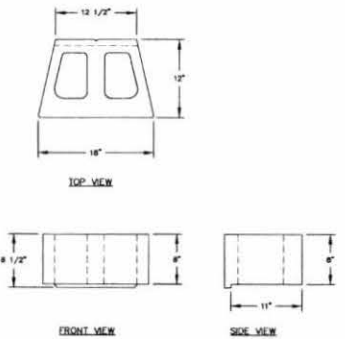
LEVEE IMPROVEMENT DISTRICT 12	
LONG POINT SLOUGH MAINTENANCE	
MISCELLANEOUS DETAILS	
JOB NUMBER: 1223-00	
DESIGNED BY: JCF	CHECKED BY: JCF
SCALE: N.T.S.	DATE: MARCH 2012
DRAWN BY: JCF	SHEET NO: 34 OF 35 SHEETS

BROWN & GAY ENGINEERS, INC. 10777 WESTCHESTER, SUITE 200 HOUSTON, TX 77060 TEL: 281-268-8300 FAX: 281-268-8333

MDH 4/2/12

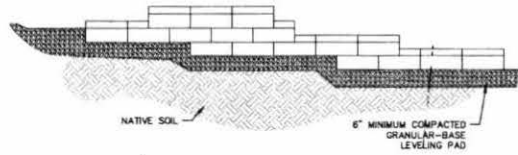


BEVELED UNITS

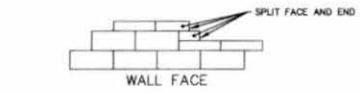
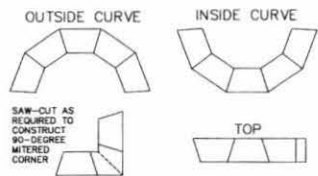


STRAIGHT UNITS

3 INDIVIDUAL BLOCK VIEWS
35 N.T.S.

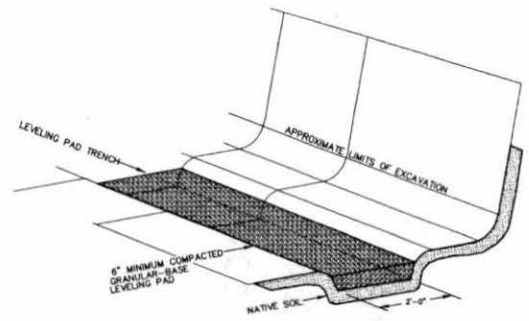


1 TYPICAL STEP-UP/WALL END DETAIL
35 N.T.S.



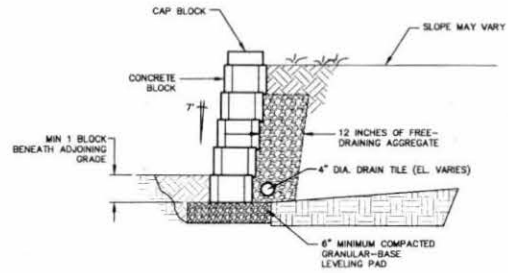
1. ALWAYS START CAPPING WALL FROM THE LOWEST ELEVATION.
2. LAY OUT CAPS PRIOR TO USING ADHESIVE.
3. CUT CAPS TO FIT. VARIOUS COMBINATIONS OF LONG AND SHORT CAP FACES WILL BE NECESSARY FOR RADI GREATER THAN THE MINIMUM.
4. ALTERNATE SHORT AND LONG CAP FACES EVERY OTHER CAP TO ACHIEVE A STRAIGHT ROW OF CAPS.
5. USE EXTERIOR-GRADE CONSTRUCTION ADHESIVE TO SECURE CAPS.

4 CAP BLOCK DETAILS
35 N.T.S.



2 TYPICAL BASE PREPARATION
35 N.T.S.

NOTE:
RETAINING WALLS TO BE CONSTRUCTED WITH PAVESTONE ANCHOR DIAMOND PRO SERIES BLOCKS OR APPROVED EQUIV.



5 TYPICAL GRAVITY WALL
35 N.T.S.

REV.	DATE	DESCRIPTION	P.E. APPROV.
△			
△			
△			

BROWN & GAY ENGINEERS, INC.
 1917 Woodlands, Suite 402
 Houston, TX 77060
 Tel: 281-888-8810
 Fax: 281-888-8710
 — Our engineers and architects are licensed in the State of Texas —
 EITP Registration No. 7-1294

WEST TRENCH DISTRICT
 2-8-13
 Brown & Gay Engineers, Inc.
 7-1294

LEVEE IMPROVEMENT DISTRICT 12
 LONG POINT SLOUGH MAINTENANCE

GRAVITY RETAINING WALL DETAILS

JOB NUMBER:	1223-00
DESIGNED BY:	JMW
SCALE:	N.T.S.
DATE:	MARCH 2013
SUBJECT:	BROWN & GAY ENGINEERS, INC.
DRAWN BY:	AVL/P
SHEET NO.:	35 OF 35 SHEETS

BROWN & GAY ENGINEERS, INC. 12223-00-LEVEE IMPROVEMENT DISTRICT 12 - LONG POINT SLOUGH MAINTENANCE - GRAVITY RETAINING WALL DETAILS - SHEET 35 OF 35 - 4/2/13

4/2/13

RECEIVED

JAN 20 2016

FBC DRAINAGE DIST.