

Appendix A
Agency Correspondence



DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON TX 77553-1229

September 24, 2013

REPLY TO
ATTENTION OF:

Policy Analysis Section

SUBJECT: Permit Application – SWG-2013-00172

Ingrid Fairchild
Harris County Flood Control District
9900 Northwest Freeway
Houston, Texas 77092-8601

Dear Ms. Fairchild:

The above numbered permit has been approved and a signed copy is enclosed for your retention.

Also enclosed are ENG Form 4336, and a copy of "Notice to Permittee" which provides important information for permit administration. You should notify the District Engineer, in writing, upon completion of the authorized work. To assist us in improving our service to you, please complete the survey found at <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,

A handwritten signature in black ink, appearing to read "Casey Cutler".

Casey Cutler
Chief, Policy Analysis Section

Enclosures

Copy Furnished:

U.S. Environmental Protection Agency, 1445 Ross Avenue, Suite 1200, Dallas, Texas
75202-2750

NOTICE TO PERMITTEES

Department of the Army Permits for Work in Navigable Waters require attention to administration and policies which are often misunderstood or disregarded. To avoid possible misinterpretations and to expedite procedures, permit post-authorization requirements and pertinent information are outlined as follows:

1. Permits remain in effect until revoked, relinquished, or the structures are removed. An extension of time for completion of structures or work may be granted provided that a public notice is issued and that evidence is furnished of the bona fide intention of the permittee to complete the work within a reasonable time. If work or structures are not completed within the time provided in the permit, it is the permittee's responsibility to request an extension of time at least 4 months before the expiration date.

2. Maintenance of authorized completed structures may be done at any time without extending the completion period. It is, however, required that the District Commander be notified prior to commencement of maintenance.

3. SPECIAL REGULATIONS GOVERN MAINTENANCE WORK INVOLVING DREDGING OR FILL. This maintenance is not authorized by the original permit and specific prior approval is required before such work is commenced in navigable waters. Your request for authorization should be submitted in time for public notice requirements and coordination with other agencies.

4. If ownership of structures or work covered by a permit is transferred, the District Commander must be notified immediately. The notification will provide information so that permit responsibilities can be changed to the new owner or assignee.

5. Permittees are reminded that the Area Engineer must be notified as soon as possible of the time for commencement of construction or work, and immediately upon completion. If pipelines across Federal project channels are covered by the permit, the Area Engineer should be informed of the date the pipelines are to be placed in time for him to arrange for an inspector to be present.

6. All material changes in location or plans must be submitted promptly to the District Commander for approval before construction is begun.

7. Permits should not be considered as an approval of design features of any structure authorized or an implication that such structure is adequate for the purpose intended.

DISTRICT COMMANDER
GALVESTON DISTRICT
CORPS OF ENGINEERS

DEPARTMENT OF THE ARMY PERMIT

Permittee Harris County Flood Control District (HCFCFD)

Permit No. SWG-2013-00172

Issuing Office Galveston District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To construct the Kuykendahl Detention Basin (P545-01-00) to lower flood water surface elevations and reduce structure flooding in the Greens Bayou watershed. Construction of the project will result in approximately 2.55 acres of unavoidable impacts to jurisdictional wetlands and 1.45 acres of impacts to jurisdictional streams. The detention basin complex will consist of four interconnected detention cells, excavated to various depths and connected by culverts or pipes. Maintenance activities and improvements within P145-00-00, P245-00-00, and P145-00-03 channels are also part of the project. The project will be conducted in accordance with the attached plans in 20 sheets.

Project Location: The project is located in waters and wetlands located in the Greens Bayou watershed, south of Kuykendahl Road and west of Ella Boulevard, in Houston, Harris County, Texas. LATITUDE & LONGITUDE (NAD 83): Latitude: 29.3978 North; Longitude: -95.4489 West

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on 31 December 2018. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. The permittee will purchase credits at the Greens Bayou Wetlands Mitigation Bank (GBWMB) to mitigate for unavoidable impacts to 2.55 acres of palustrine forested wetlands prior to the start of work in the jurisdictional area.
2. The permittee will submit documentation to the Corps of Engineers, Chief, Compliance Section, Regulatory Branch, Galveston District, verifying that 2.55 acres of credits were purchased from GBWMB, prior to the start of work in the jurisdictional area.
3. The permittee understands and agrees that if future operations by the United States require the removal, relocation or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate or alter the structural work or obstructions caused thereby without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - () Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
 - (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
 - () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
 - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
 - b. This permit does not grant any property rights or exclusive privileges.
 - c. This permit does not authorize any injury to the property or rights of others.
 - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
 - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
 - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
 - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - d. Design or construction deficiencies associated with the permitted work.

- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
 - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
 - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

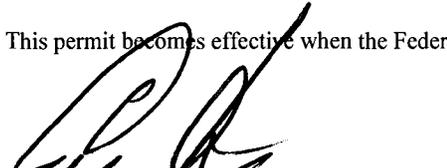


 (PERMITTEE)
HARRIS COUNTY FLOOD CONTROL DISTRICT

9/16/13

 (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



 (DISTRICT ENGINEER)
CASEY CUTLER
CHIEF POLICY ANALYSIS SECTION
FOR COLONEL RICHARD P. PANNELL

9/20/13

 (DATE)

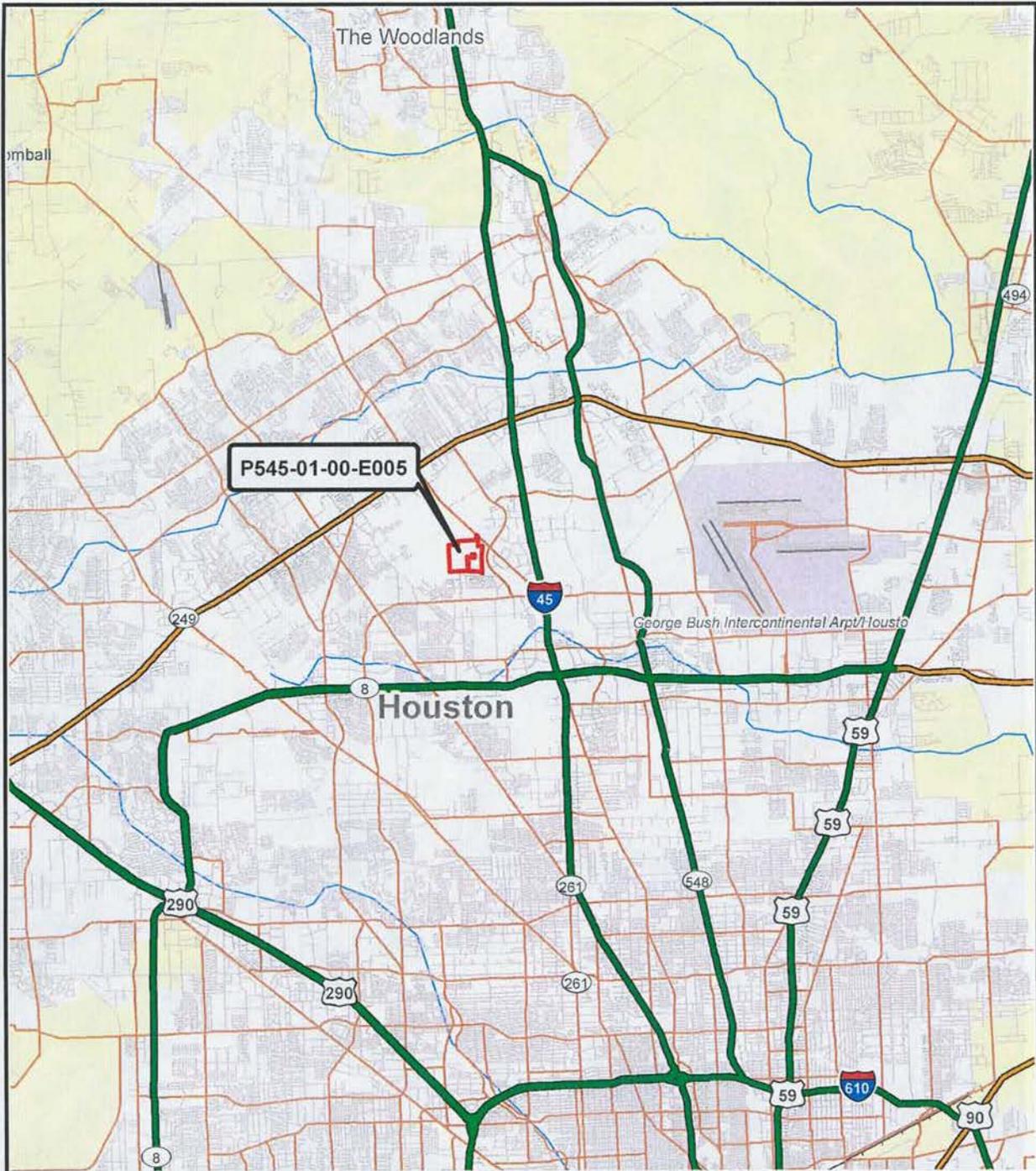
When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

 (TRANSFEREE - Typed/Printed Name)

 (DATE)

 (TRANSFEREE - Signature)

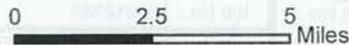
 (Mailing Address)



PERMITTED PLANS
Legend



Projection: State Plane
 Datum: NAD 83
 Zone: Texas South Central
 Units: Feet



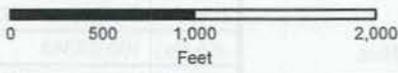
ATKINS

Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-01-00-E005)
 March 4, 2013
 Sheet 1 of 20

| | |
|------------------------------------|---------------------|
| Prepared By: Atkins/14923 | 1 inch = 3.31 miles |
| Job No.: 100012345 | Date: Jan 21, 2013 |
| File: ENV\100012345\Prj\A_vicinity | |



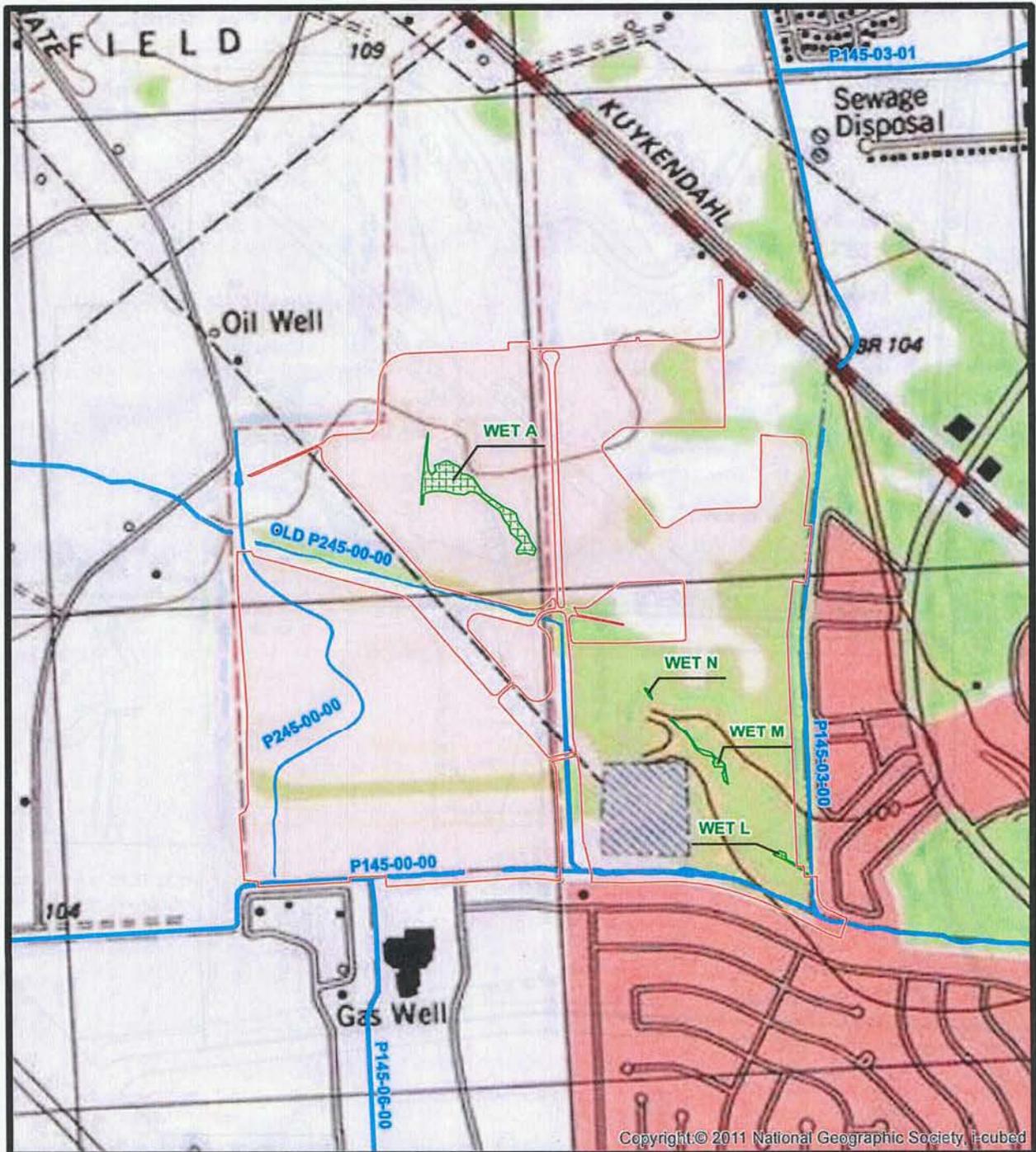
Projection: State Plane
 Datum: NAD 83
 Zone: Texas South Central
 Units: Feet
 Aerial: H-GAC, 2010
 Wetland: Crouch 2001, 2010
 NHD: USGS National Map, 2011
 Floodplain: FEMA DFIRM, 2010



- Project Area
- Jurisdictional Wetlands
- Waters of the U.S.

ATKINS
 Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-0 1-00-E005)
 March 4, 2013
Sheet 2 of 20

| | |
|---|--------------------|
| Prepared By: Atkins/14923 | Scale: 1" = 1,000' |
| Job No.: 100012345 | Date: Feb 13, 2013 |
| File: N:\Clients\G_H\HCFCD\100028648\projects\mxd | |

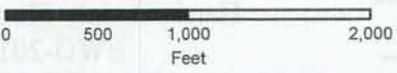


Copyright © 2011 National Geographic Society, Inc.



Projection: State Plane
 Datum: NAD 83
 Zone: Texas South Central
 Units: Feet
 Aerial: H-GAC, 2010
 Wetland: Crouch 2001, 2010
 NHD: USGS National Map, 2011
 Floodplain: FEMA DFIRM, 2010

- Project Area
- Jurisdictional Wetlands
- Waters of the U.S.



ATKINS

Harris County Flood Control District
 SWG-2013-00172

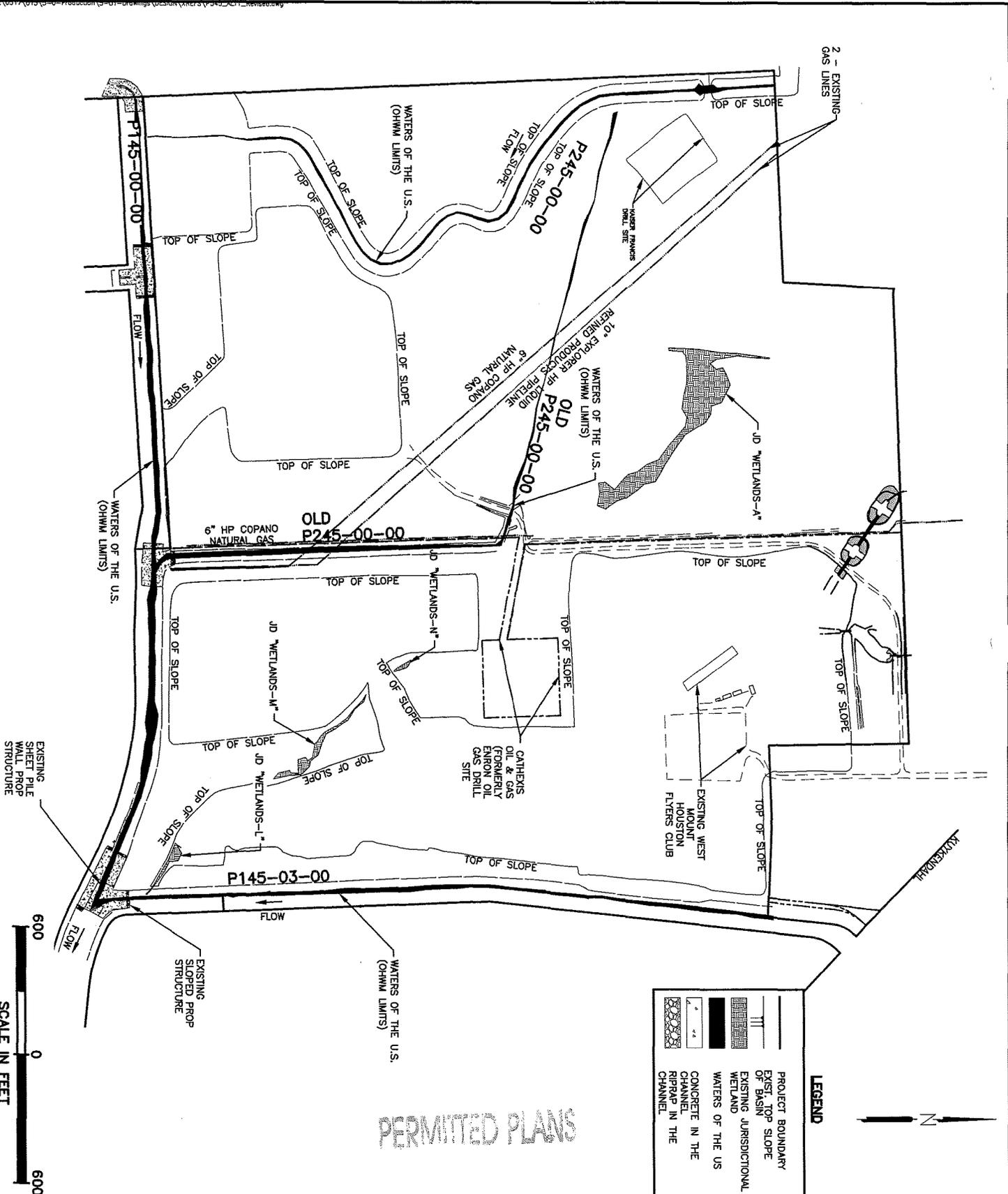
Kuykendahl Detention Basin (P545-0 1-00-E005)

March 4, 2013

Sheet 3 of 20

PERMITTED PLANS

| | |
|--|--------------------|
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| Job No.: 100012345 | Date: Feb 13, 2013 |
| File: N:\Clients\G_HVCFCD\100028648\projects\mxd | |



PERMITTED PLANS

LEGEND

| | |
|--|---------------------------------------|
| | PROJECT BOUNDARY |
| | EXIST. TOP SLOPE OF BASIN |
| | EXISTING JURISDICTIONAL WETLAND |
| | WATERS OF THE US |
| | CONCRETE IN THE RIPRAP IN THE CHANNEL |



HARRIS COUNTY FLOOD CONTROL DISTRICT

9900 Northwest Freeway
Houston, Texas 77092

Lockwood, Andrews & Newnam, Inc.
 A LPA A P&W COMPANY
 LOCKWOOD, ANDREWS & NEWMAN, INC.
 TEXAS REGISTERED ENGINEERING FIRM
 F-2814

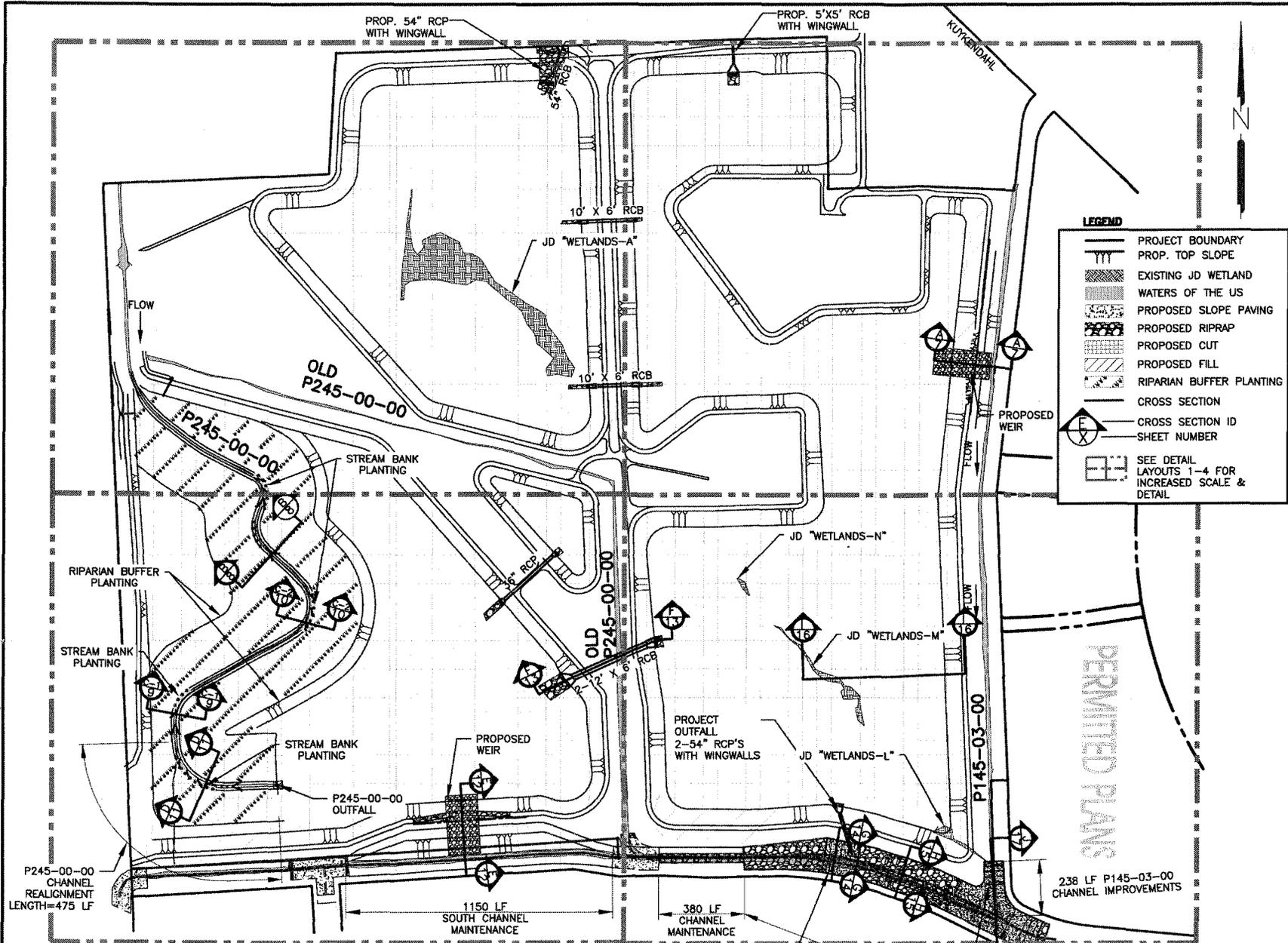
DATE: 11-30-12
 SCALE: 1" = 600'

EXHIBIT NUMBER

| |
|-----------|
| PREPARED: |
| CHECKED: |
| APPROVED: |

Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-0 1-00-E005)
 March 4, 2013
 Sheet 4 of 20

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 LV10071010-0-Production 0-01-Drawing DESIGN METS/ENR.dwg
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LEGEND

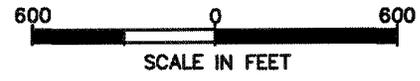
- PROJECT BOUNDARY
- PROP. TOP SLOPE
- EXISTING JD WETLAND
- WATERS OF THE US
- PROPOSED SLOPE PAVING
- PROPOSED RIPRAP
- PROPOSED CUT
- PROPOSED FILL
- RIPARIAN BUFFER PLANTING
- CROSS SECTION
- CROSS SECTION ID SHEET NUMBER
- SEE DETAIL LAYOUTS 1-4 FOR INCREASED SCALE & DETAIL

OVERALL DISTURBED SURFACE AREA OF WATERS OF THE US

| JURISDICTIONAL AREA | DISTURBED AREA OF WATERS OF US (ACRE) | EXCAVATION (CUBIC YARD) | TEMPORARY EXCAVATION (CUBIC YARD) | STRUCTURAL FILL (CUBIC YARD) | DIRT FILL (CUBIC YARD) |
|---------------------|---------------------------------------|-------------------------|-----------------------------------|------------------------------|------------------------|
| P245-00-00 | 0.52 | 300.1 | 0.0 | 69.3 | 308.9 |
| OLD P245-00-00 | 0.01 | 0.0 | 400.0 | 0.0 | 0 |
| P145-03-00 | 0.07 | 377.0 | 0.0 | 148.9 | 0.5 |
| P145-00-00 | 0.85 | 199.3 | 0.0 | 298.3 | 610.3 |
| WETLAND A | 2.19 | 74416.0 | 0.0 | 0.0 | 0.0 |
| WETLAND L | 0.1 | 517.2 | 0.0 | 0.0 | 12.3 |
| WETLAND M | 0.23 | 5026.0 | 0.0 | 0.0 | 0.0 |
| WETLAND N | 0.03 | 679.8 | 0.0 | 0.0 | 0.0 |

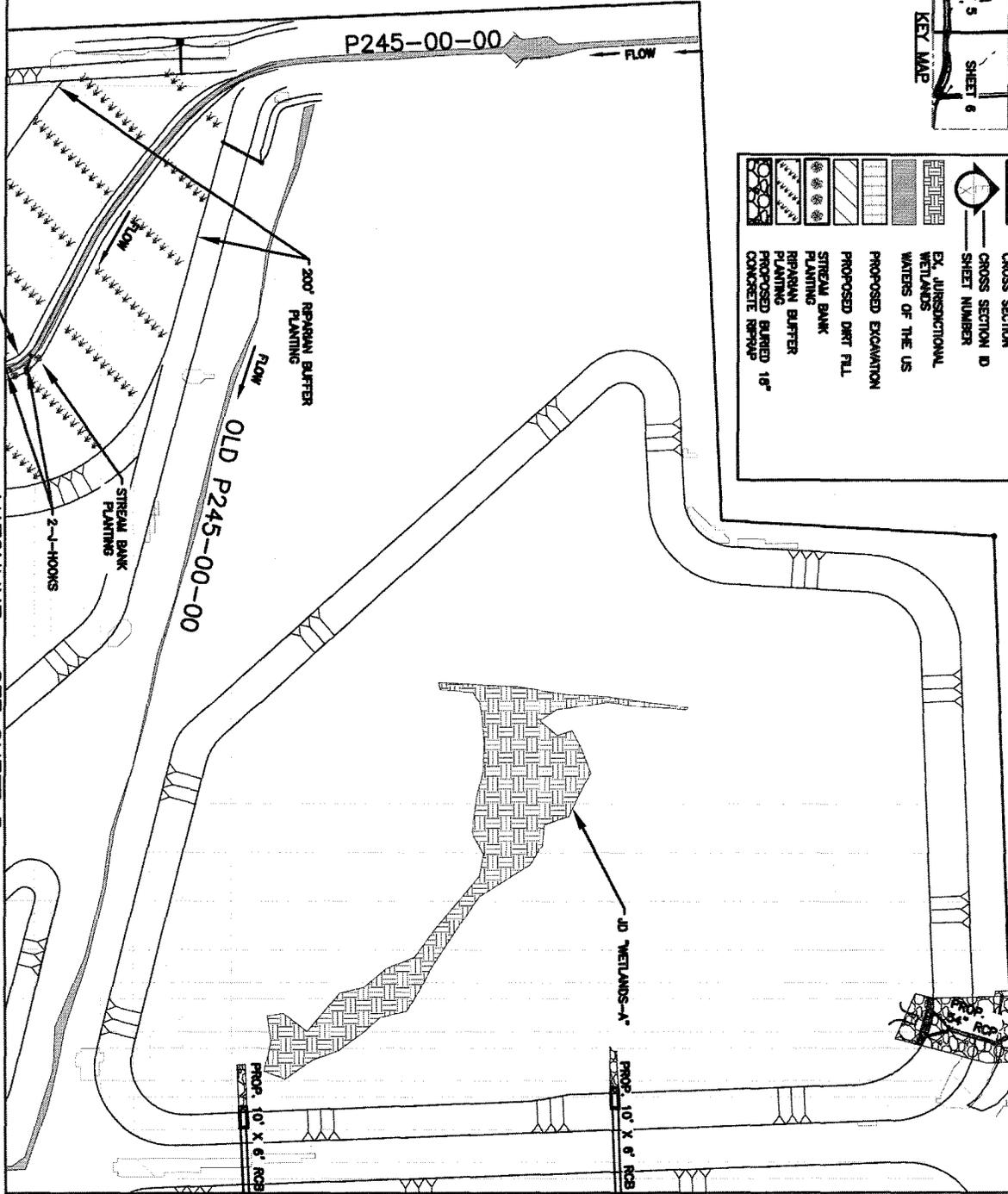
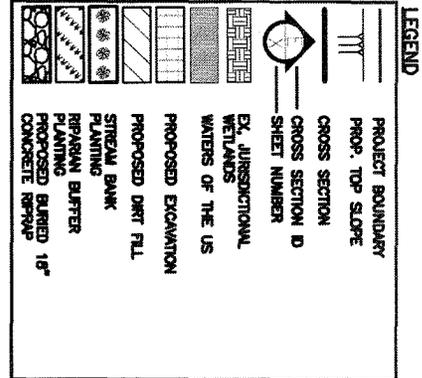
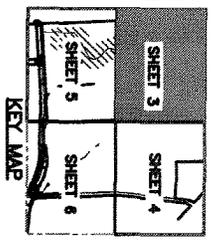
PROP. SHEET PILE WALL WITH 2.8' DROP SEE SHEET 14.

SEE SHEET 17 FOR SLOPED DROP STRUCTURE ON P145-03-00 PLAN & PROFILE



Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin
 March 4, 2013
 Sheet 5 of 20

| | | |
|--|----------|-----------|
| PREPARED: | CHECKED: | APPROVED: |
| | | |
| 9900 Northwest Freeway Houston, Texas 77092 | | |
| DATE: 11-30-12 | | |
| SCALE: 1" = 600' | | |
| EXHIBIT NUMBER | | |
| 2 OF 17 | | |



PERMITTED PLANS



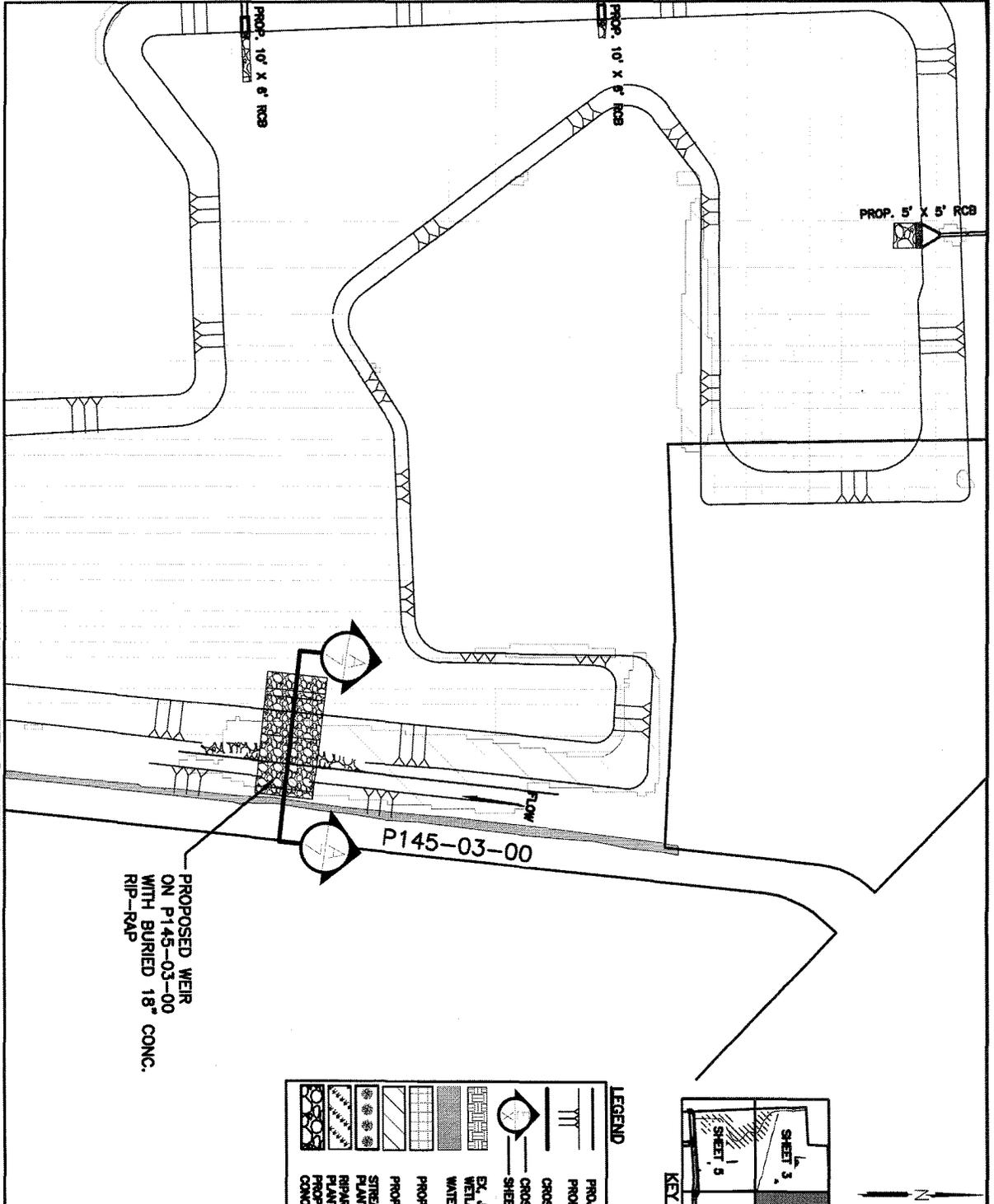
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| | 9900 Northwest Freeway Houston, Texas 77092 | Lockwood, Andrews & Newnam, Inc. A LEAD & BAILY COMPANY LOCKWOOD, ANDREWS & NEWMAN, INC. TEXAS REGISTERED ENGINEERING FIRM E-2614 | EXHIBIT NUMBER 3 OF 17 |
| | HARRIS COUNTY FLOOD CONTROL DISTRICT | | |

Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin
 March 4, 2013
 Sheet 6 of 20

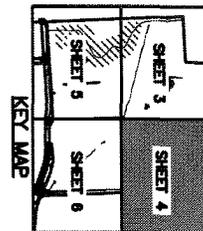
MATCHLINE ~ SEE SHEET 3

MATCHLINE ~ SEE SHEET 6

DERIVED PLANS



| LEGEND | |
|--------|-----------------------------------|
| | PROJECT BOUNDARY |
| | PROP. TOP SLOPE |
| | CROSS SECTION |
| | CROSS SECTION ID |
| | SHEET NUMBER |
| | EX. JURISDICTIONAL WETLANDS |
| | WATERS OF THE US |
| | PROPOSED EXCAVATION |
| | PROPOSED DIRT FILL |
| | STREAM BANK |
| | RIPIARIAN BUFFER |
| | PLANTING |
| | PROPOSED BURIED 18" CONC. RIP-RAP |



9900 Northwest Freeway
 Houston, Texas 77092

HARRIS COUNTY FLOOD CONTROL DISTRICT

DATE: 11-30-12
 SCALE: 1" = 300'

4 OF 17 SHEET NUMBER

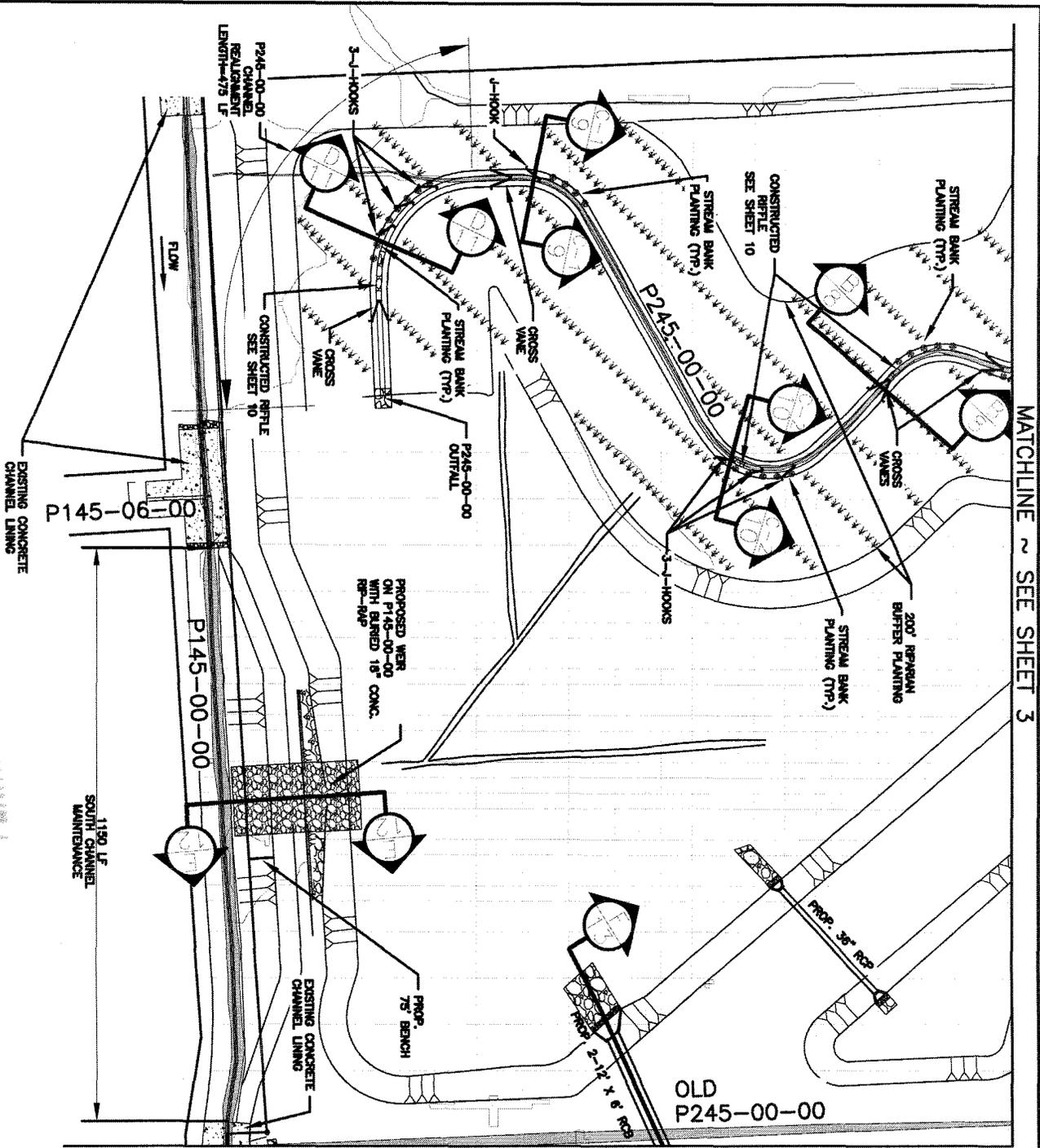
LAN Lockwood, Andrew & Newman, Inc.
 A LEO A DALY COMPANY

LOCKWOOD, ANDREWS & NEWMAN, INC.
 TEXAS REGISTERED ENGINEERING FIRM
 7-2014

PREPARED:
 CHECKED:
 APPROVED:

Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin
 March 4, 2013
 Sheet 7 of 20

SWG DELAYED

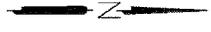
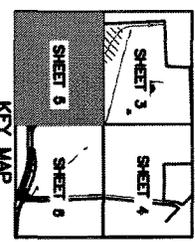


MATCHLINE ~ SEE SHEET 3

MATCHLINE ~ SEE SHEET 6



| LEGEND | |
|--------|---|
| | PROJECT BOUNDARY |
| | PROP. TOP SLOPE |
| | CROSS SECTION |
| | CROSS SECTION ID |
| | SHEET NUMBER |
| | EX. JURISDICTIONAL WETLANDS OF THE US |
| | PROPOSED EXCAVATION |
| | PROPOSED DIRT FILL |
| | STREAM BANK PLANTING |
| | RIPIARIAN BUFFER PLANTING |
| | PROPOSED RIPRAP CONCRETE CHANNEL LINING |



HARRIS COUNTY FLOOD CONTROL DISTRICT

9900 Northwest Freeway
Houston, Texas 77092

DATE: 11-30-12
SCALE: 1" = 300'

EXHIBIT NUMBER 5 OF 17

Lockwood, Andrews & Newman, Inc.
 A LEAD & DAILY COMPANY
 LOCKWOOD, ANDREWS & NEWMAN, INC.
 TEXAS REGISTERED ENGINEERING FIRM
 1-2914

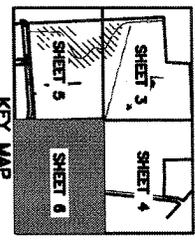
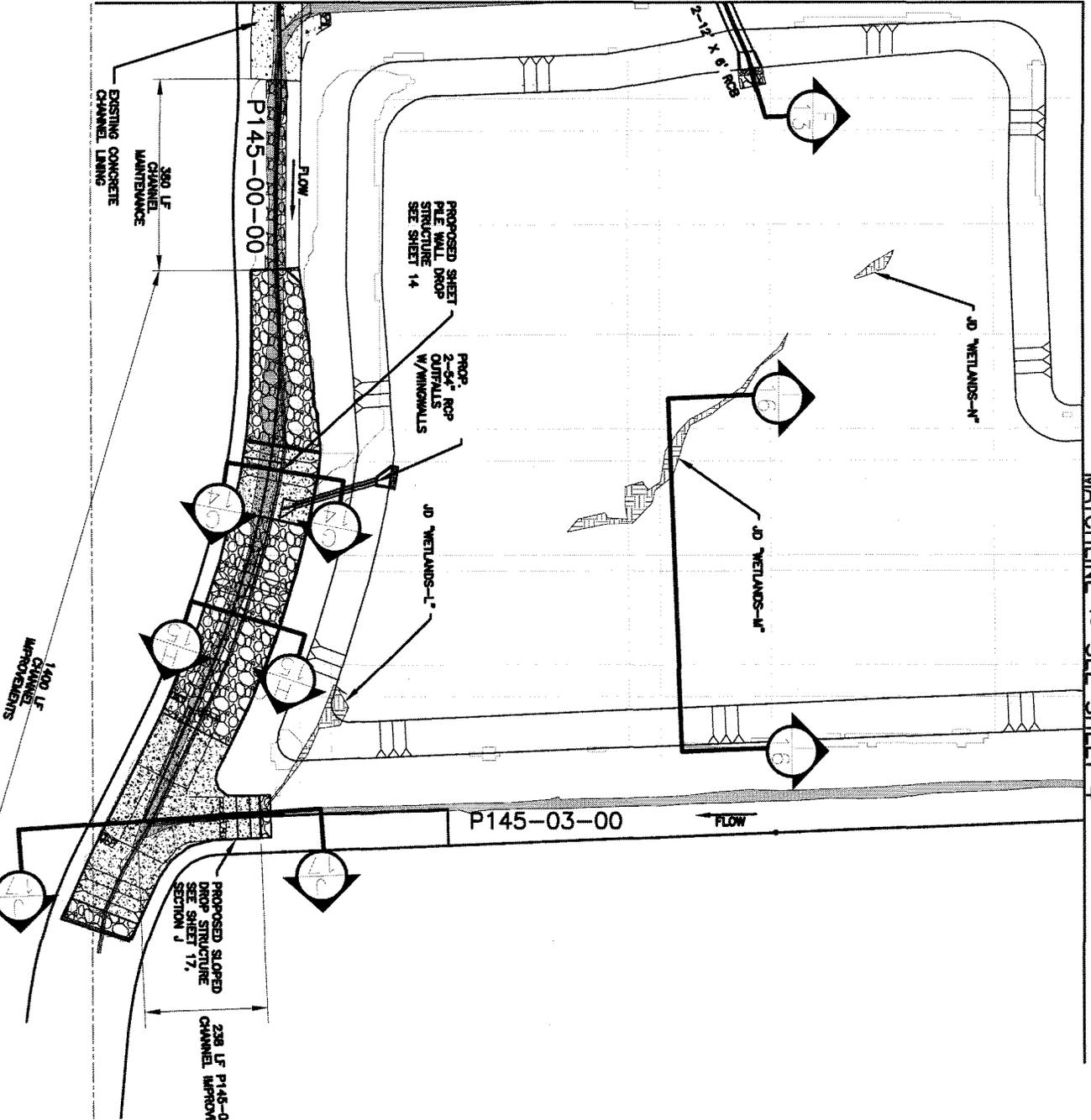
PREPARED: _____
 CHECKED: _____
 APPROVED: _____

Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin
 March 4, 2013
 Sheet 8 of 20

MATCHLINE ~ SEE SHEET 5

MATCHLINE ~ SEE SHEET 4

PERMITTED BASIN



LEGEND

| | |
|--|--|
| | PROJECT BOUNDARY |
| | PROP. TOP SLOPE |
| | CROSS SECTION |
| | CROSS SECTION ID |
| | EX. JURISDICTIONAL WETLANDS OF THE US |
| | PROPOSED EXCAVATION |
| | PROPOSED DIRT FILL |
| | STREAM BANK |
| | RIPIARIAN BUFFER |
| | PROPOSED SLOPED BANK STRUCTURE |
| | PROPOSED BURIED 18" CONCRETE BURIED CHANNEL LINING |



HARRIS COUNTY FLOOD CONTROL DISTRICT

9900 Northwest Freeway
Houston, Texas 77092

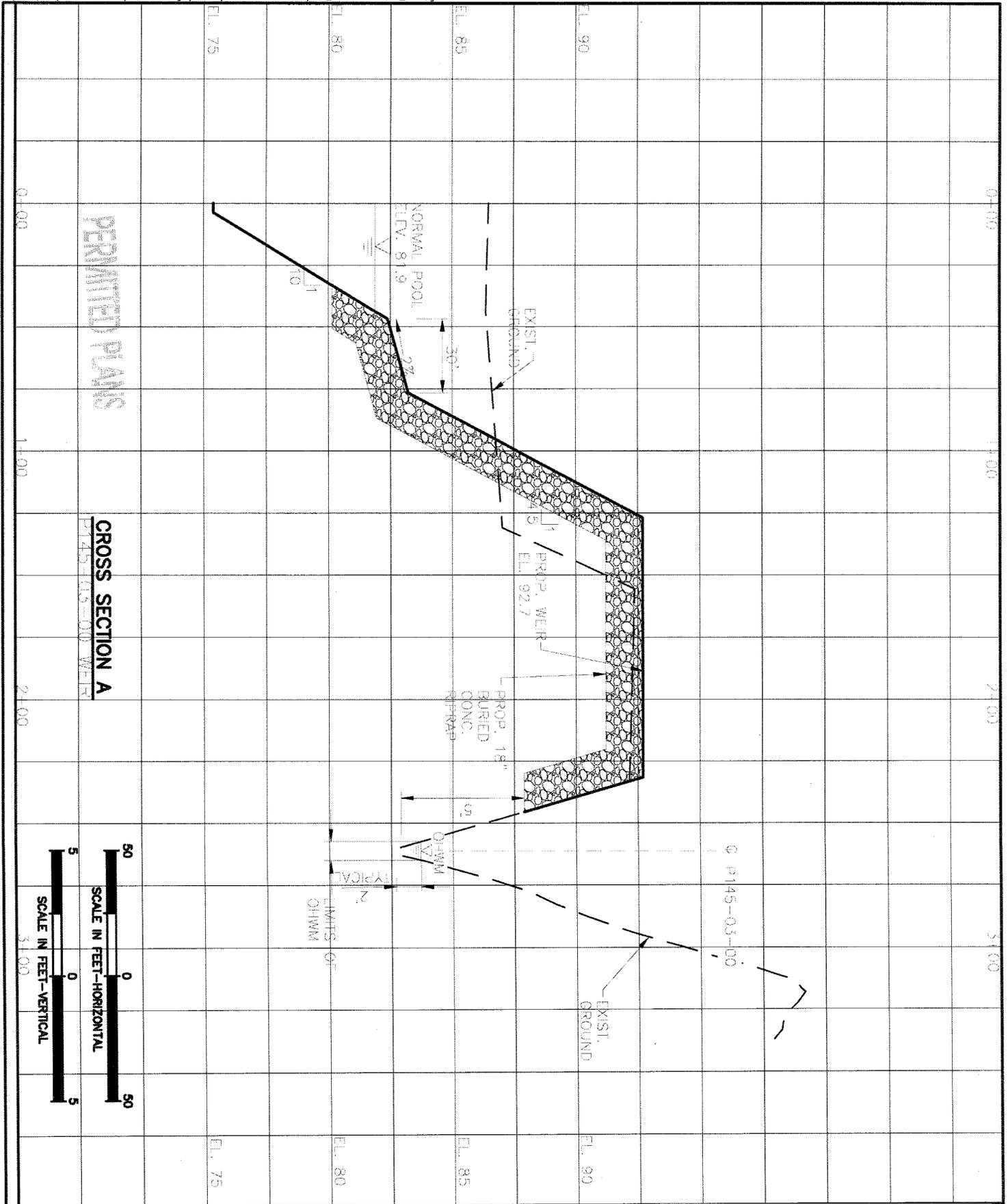
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SCALE: 1" = 300'

EXHIBIT NUMBER 6 OF 17

Lockwood, Andrews & Newnam, Inc.
 L & A ELLY ROBERTY
 LOCKWOOD, ANDREWS & NEWMAN, INC.
 TEXAS REGISTERED ENGINEERING FIRM
 5-2014

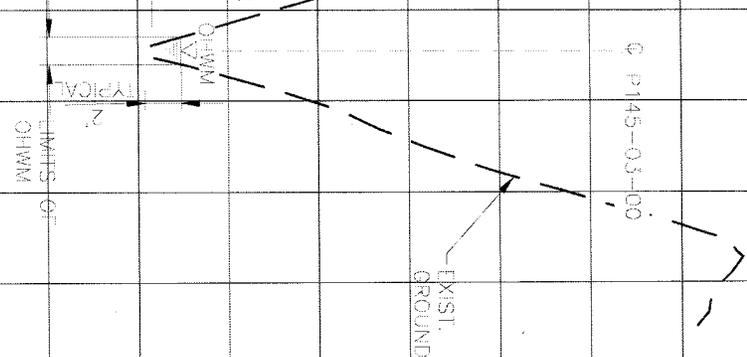
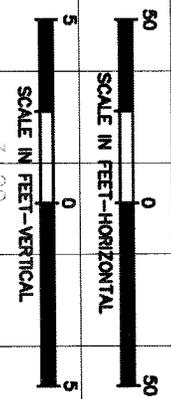
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| PREPARED: | |
| CHECKED: | |
| APPROVED: | |

Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin
 March 4, 2013
 Sheet 9 of 20



REPORTED PANS

CROSS SECTION A
 P145-03-00 WEIR



HARRIS COUNTY FLOOD CONTROL DISTRICT

9900 Northwest Freeway
 Houston, Texas 77092

DATE: 11-30-12
 SCALE: H 1" = 50'
 V 1" = 5'

SHEET NUMBER
 7 OF 17

Lockwood, Andrews & Newnam, Inc.
 A LEO A DALY COMPANY

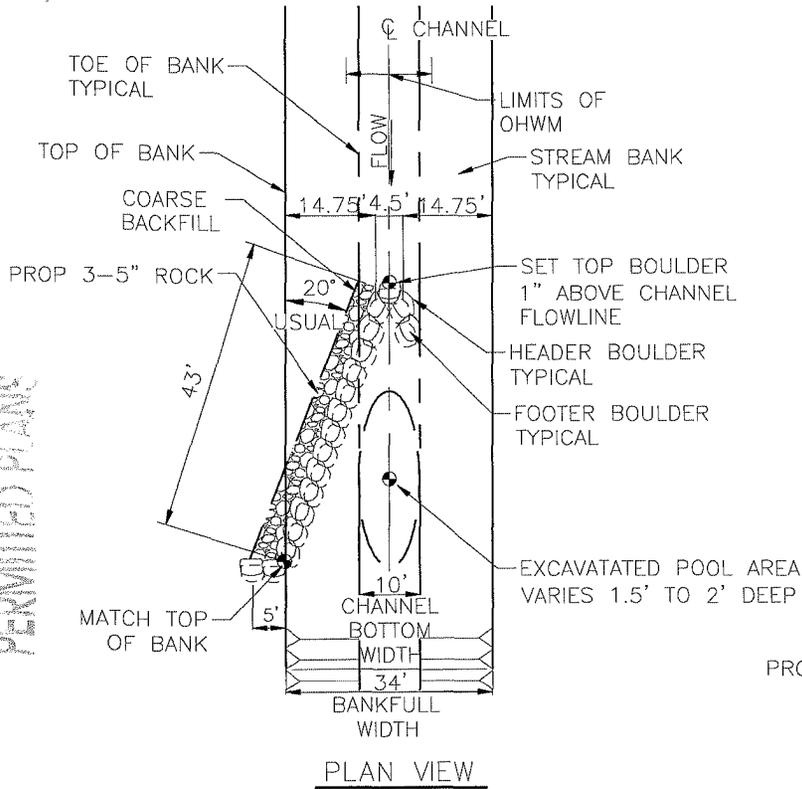
LOCKWOOD, ANDREWS & NEWMAN, INC.
 TEXAS REGISTERED ENGINEERING FIRM
 1-2614

PREPARED: _____
 CHECKED: _____
 APPROVED: _____

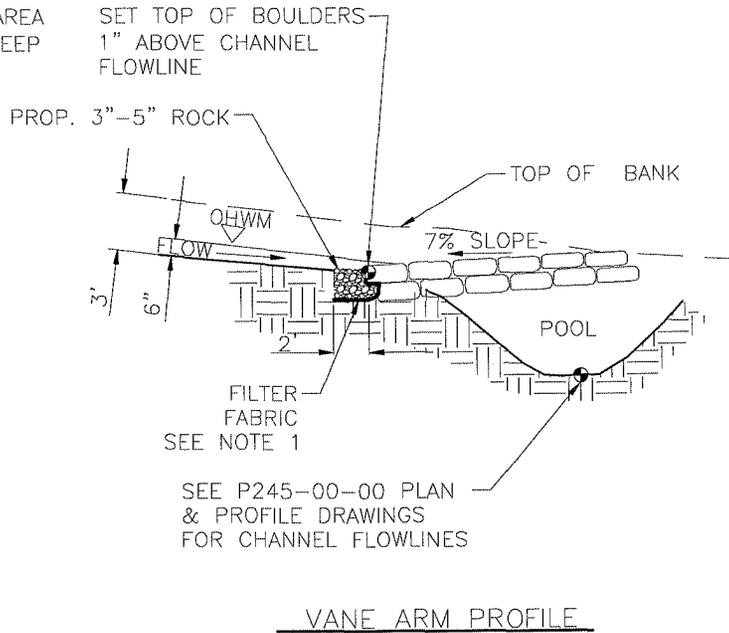
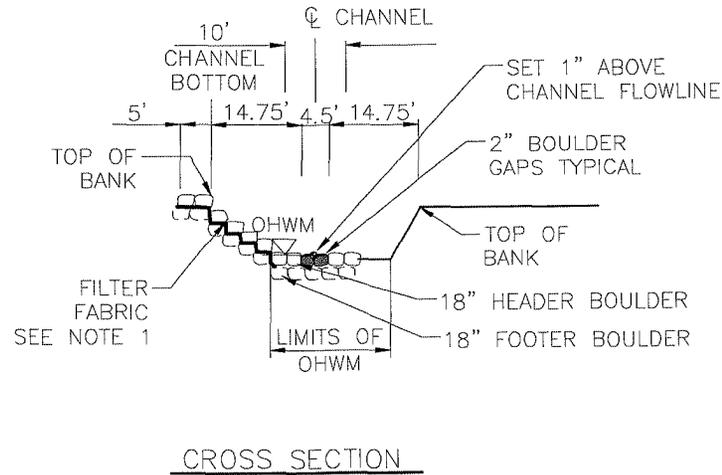
Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin
 March 4, 2013
 Sheet 10 of 20

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REVIEW PLANS



- NOTES:
1. USE MIRAFI FW-404 GEOTEXTILE OR EQUIVALENT.
 2. BOULDERS TO BE EITHER STONE OR EQUIVALENT.
 3. BOULDERS SHALL BE 18" TALL X 30" WIDE X 18"-24" DEEP.



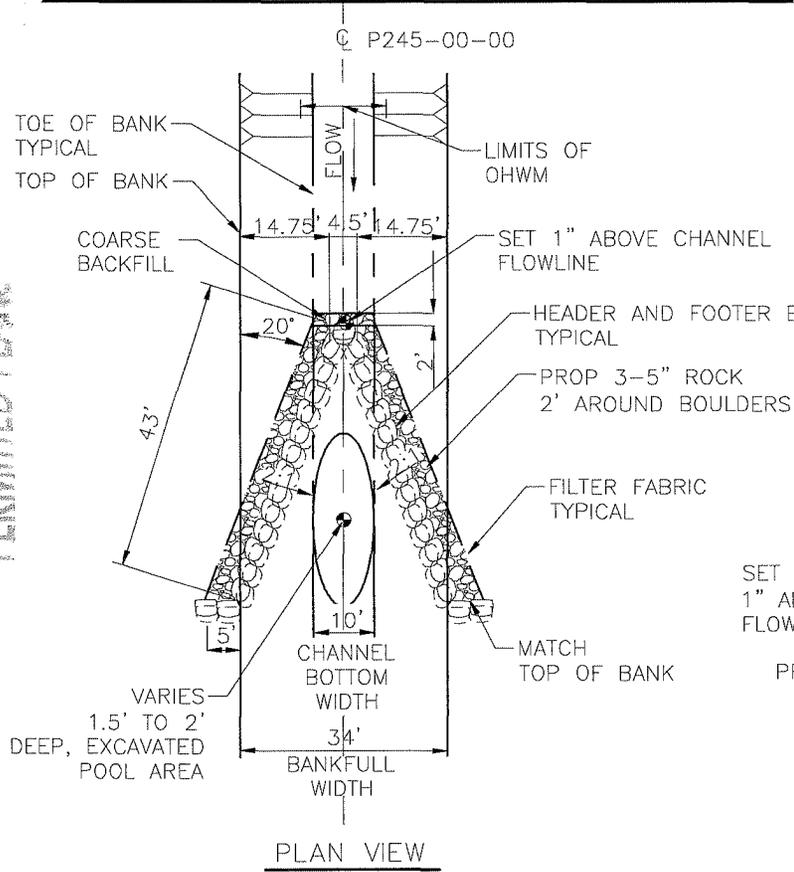
SECTION C-1
 TYPICAL J-HOOK VANE DETAIL

Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-0 1-00-E005)
 March 4, 2013
 Sheet 12 of 20

| | | | |
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| PREPARED: | CHECKED: | APPROVED: | |
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| | | | |
| 9900 Northwest Freeway Houston, Texas 77092 | | | |
| DATE: 11-30-12 | | SCALE: NTS | |
| SHEET NUMBER | | | |

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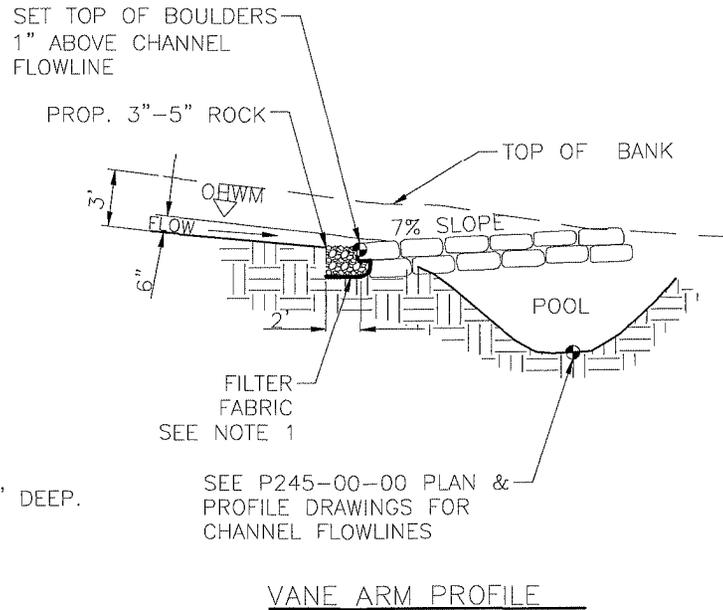
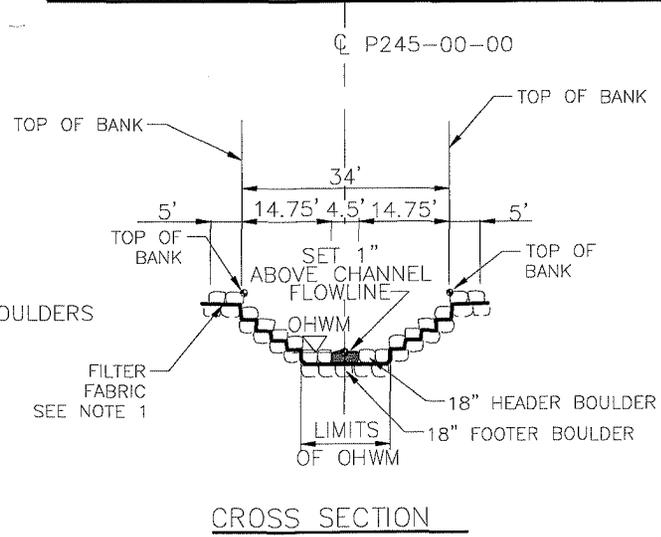
PERMITTED PLANS



NOTES:

1. USE MIRAFI FW-404 GEOTEXTILE OR EQUIVALENT.
2. BOULDERS TO BE EITHER STONE OR EQUIVALENT.
3. BOULDERS SHALL BE 18" TALL X 30" WIDE X 18"-24" DEEP.

SECTION B
 TYPICAL BOULDER CROSS VANE DETAIL



VANE ARM PROFILE

PERMITTED PLANS

Harris County Flood Control District

SWG-2013-00172

Kuykendahl Detention Basin (P545-0 1-00-E005)

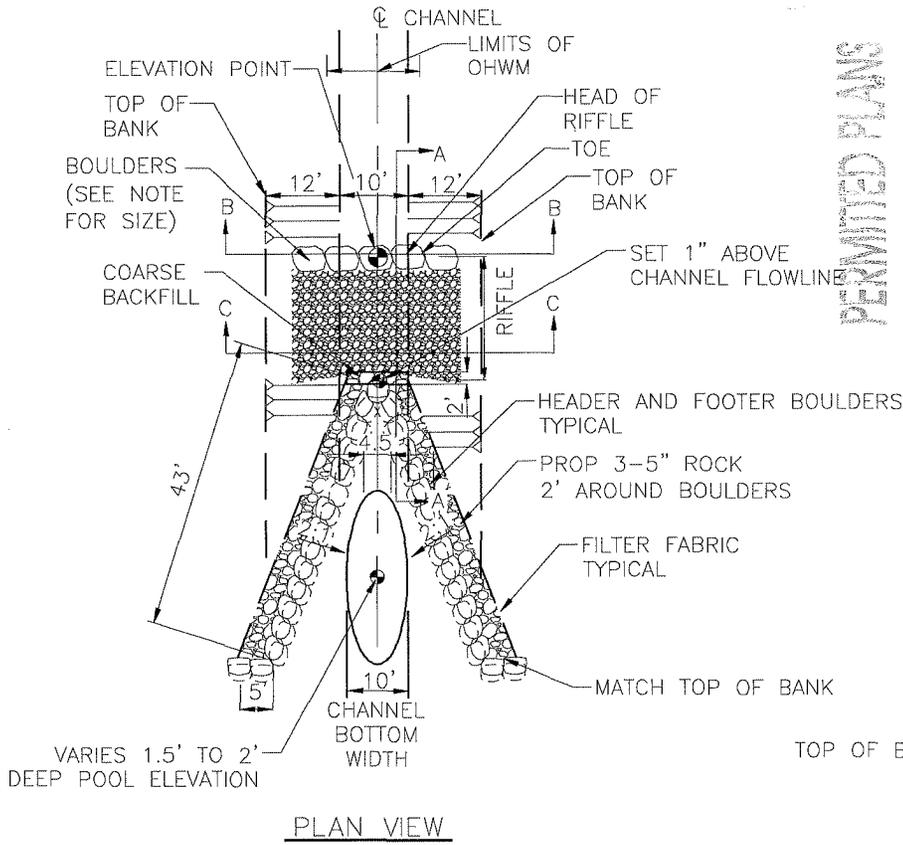
March 4, 2013

Sheet 11 of 20

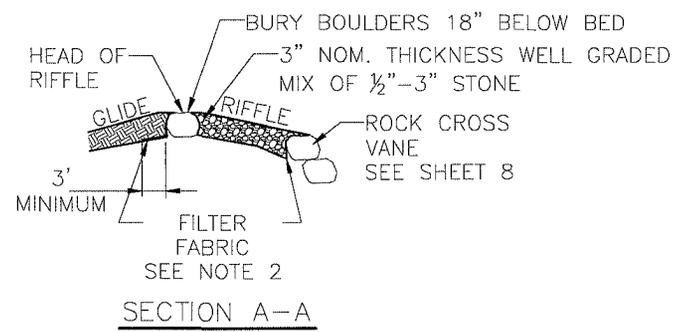
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| APPROVED: | |
|  Lockwood, Andrews & Newnam, Inc. A TIO A S&P COMPANY LOCKWOOD, ANDREWS & NEWMAN, INC. TEXAS REGISTERED ENGINEERING FIRM 7-2574 | |
|  HARRIS COUNTY FLOOD CONTROL DISTRICT | |
| 9900 Northwest Freeway Houston, Texas 77092 | |
| DATE: | 11-30-12 |
| SCALE: | NTS |
| SHEET NUMBER | |

PROPOSED HCFCD
 CROSS SECTION B

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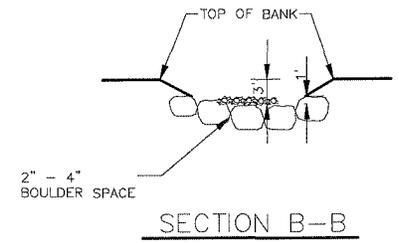


PLAN VIEW

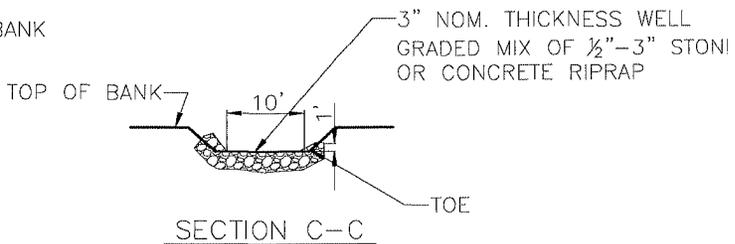


SECTION A-A

PERMITTED PLANS



SECTION B-B



SECTION C-C

- NOTES:**
- BOULDERS SHOULD BE NATIVE STONES OR CONCRETE. DIMENSIONS APPROXIMATELY 18" L X 18" W X 18" D
 - USE MIRAFI FW-404 GEOTEXTILE FILTER FABRIC OR EQUIVALENT.

SECTION C-2
CONSTRUCTED RIFFLE DETAIL

Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-0 1-00-E005)
 March 4, 2013
Sheet 13 of 20

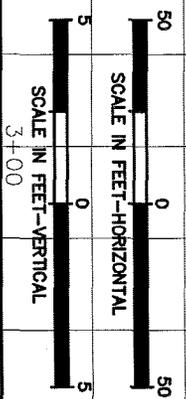
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| PREPARED: | CHECKED: | APPROVED: |
| LOCKWOOD, ANDREWS & NEWNAM, INC. <small>INCORPORATED AND REGISTERED ENGINEERING FIRM F-2614</small> | | |
| HARRIS COUNTY FLOOD CONTROL DISTRICT <small>9900 Northwest Freeway Houston, Texas 77092</small> | | |
| DATE: | 11-30-12 | |
| SCALE: | NTS | |
| SHEET NUMBER | | |

PROPOSED HCFCD
 CROSS SECTION C-2



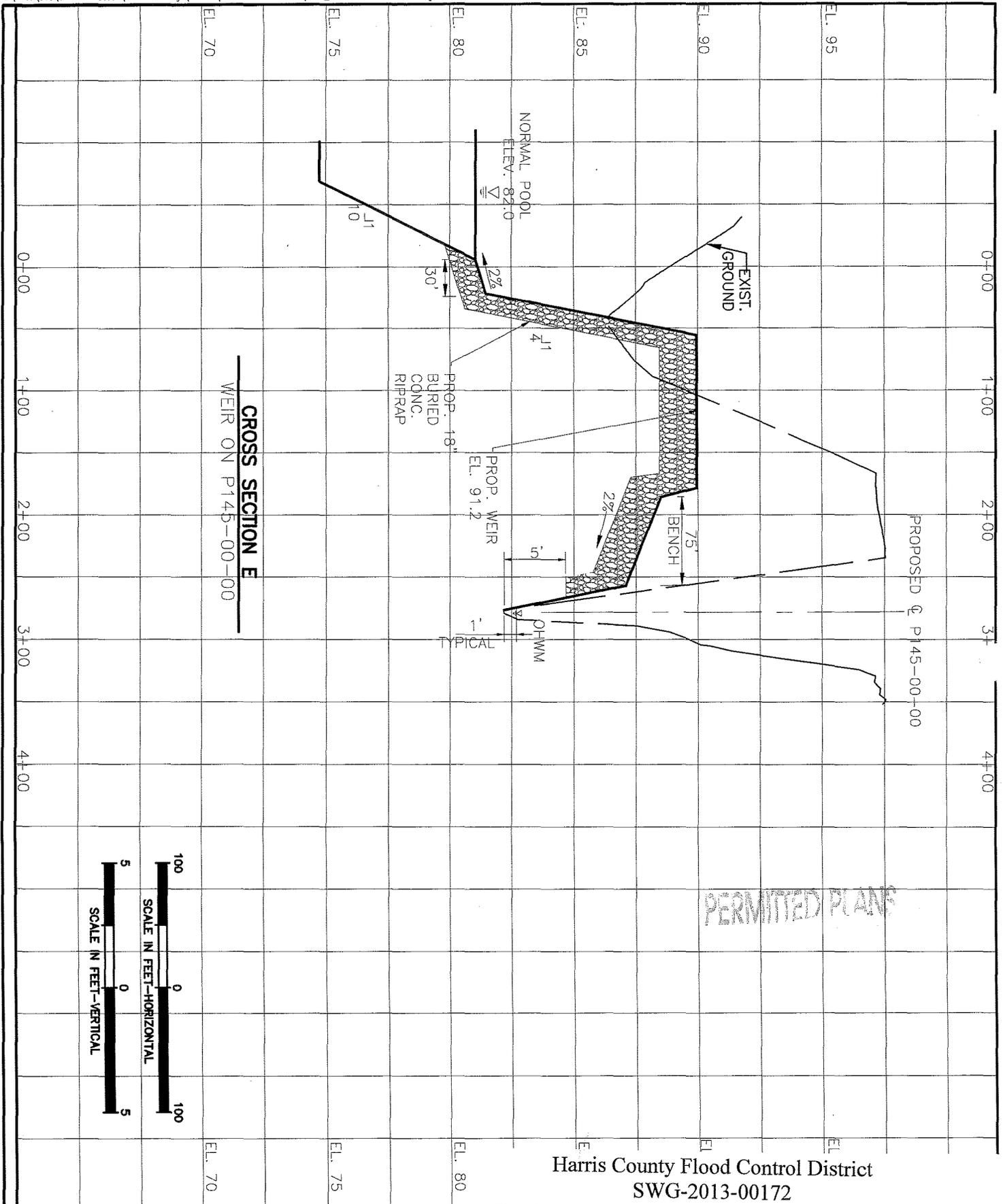
CROSS SECTION D
 P245-00-00 CHANNEL
 PROPOSED NEW STREAM ALIGNMENT

PERMITTED PLANS



Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-0 1-00-E005)
 March 4, 2013
 Sheet 14 of 20

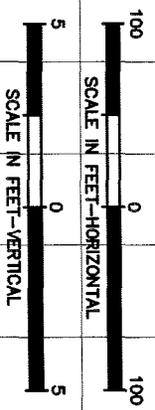
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| <p>HARRIS COUNTY FLOOD CONTROL DISTRICT</p> <p>9901 Northside Freeway Houston, Texas 77025</p> | <p>PREPARED:</p> | <p>Lockwood, Andrews & Newnam, Inc. 5115 A DART ROAD LOCKWOOD, ANDREWS & NEWMAN, INC. TEXAS REGISTERED ENGINEERING FIRM P-2614</p> |
| | <p>CHECKED:</p> | |
| | <p>APPROVED:</p> | |
| <p>DATE: 11-30-12 SCALE: H 1" = 50' V 1" = 5'</p> | <p>SHEET NUMBER</p> | <p>P</p> |



CROSS SECTION E
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PROPOSED @ P145-00-00

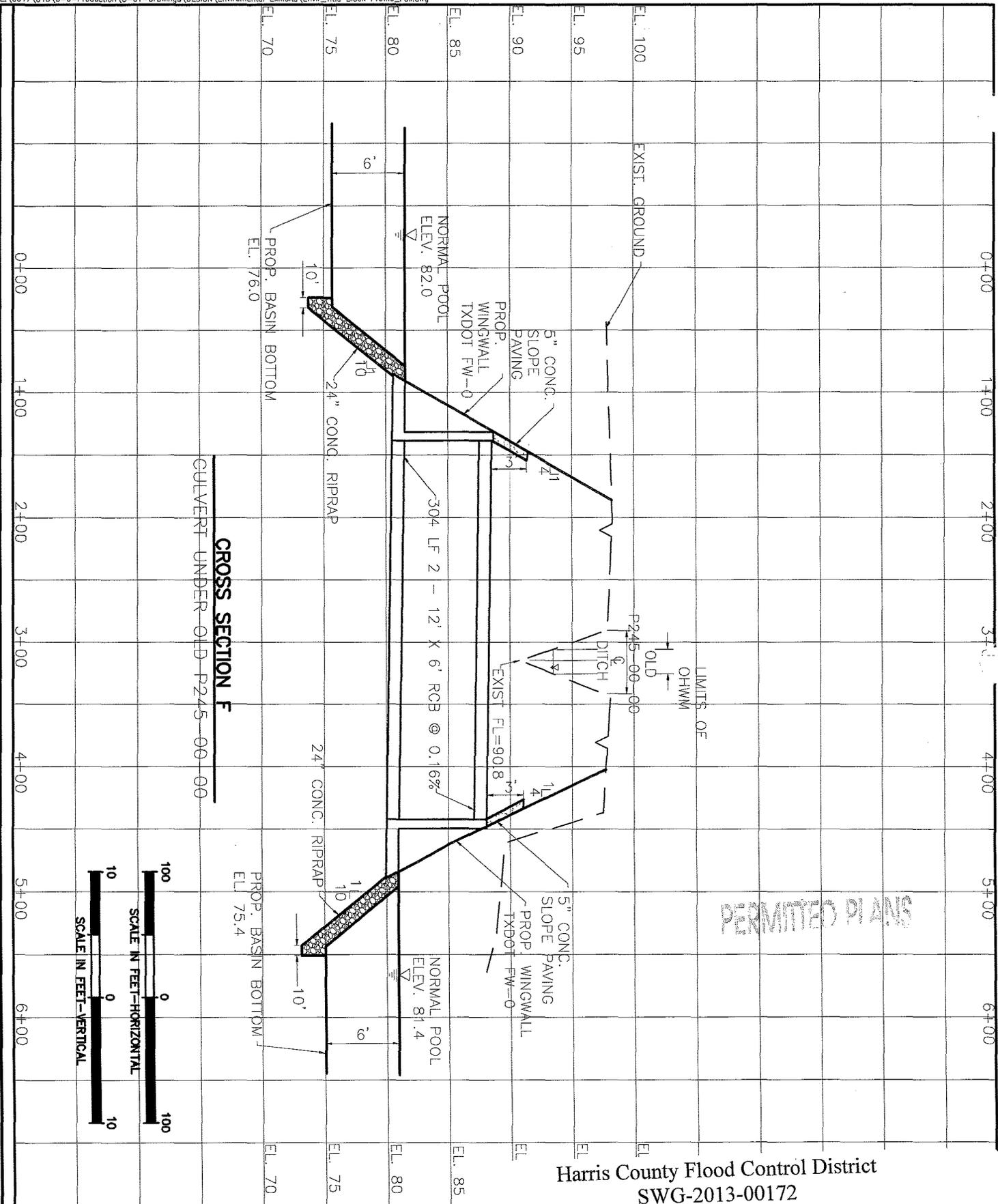
PERMITTED PLAN



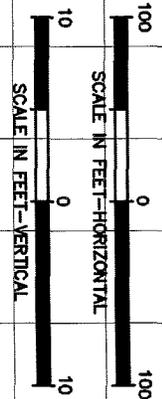
Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-0 1-00-E005)
 March 4, 2013
 Sheet 15 of 20

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|  HARRIS COUNTY FLOOD CONTROL DISTRICT 9900 Northwest Freeway Houston, Texas 77092 | PREPARED: _____ |
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| PROPOSED HCFCD CROSS SECTION E | | | |
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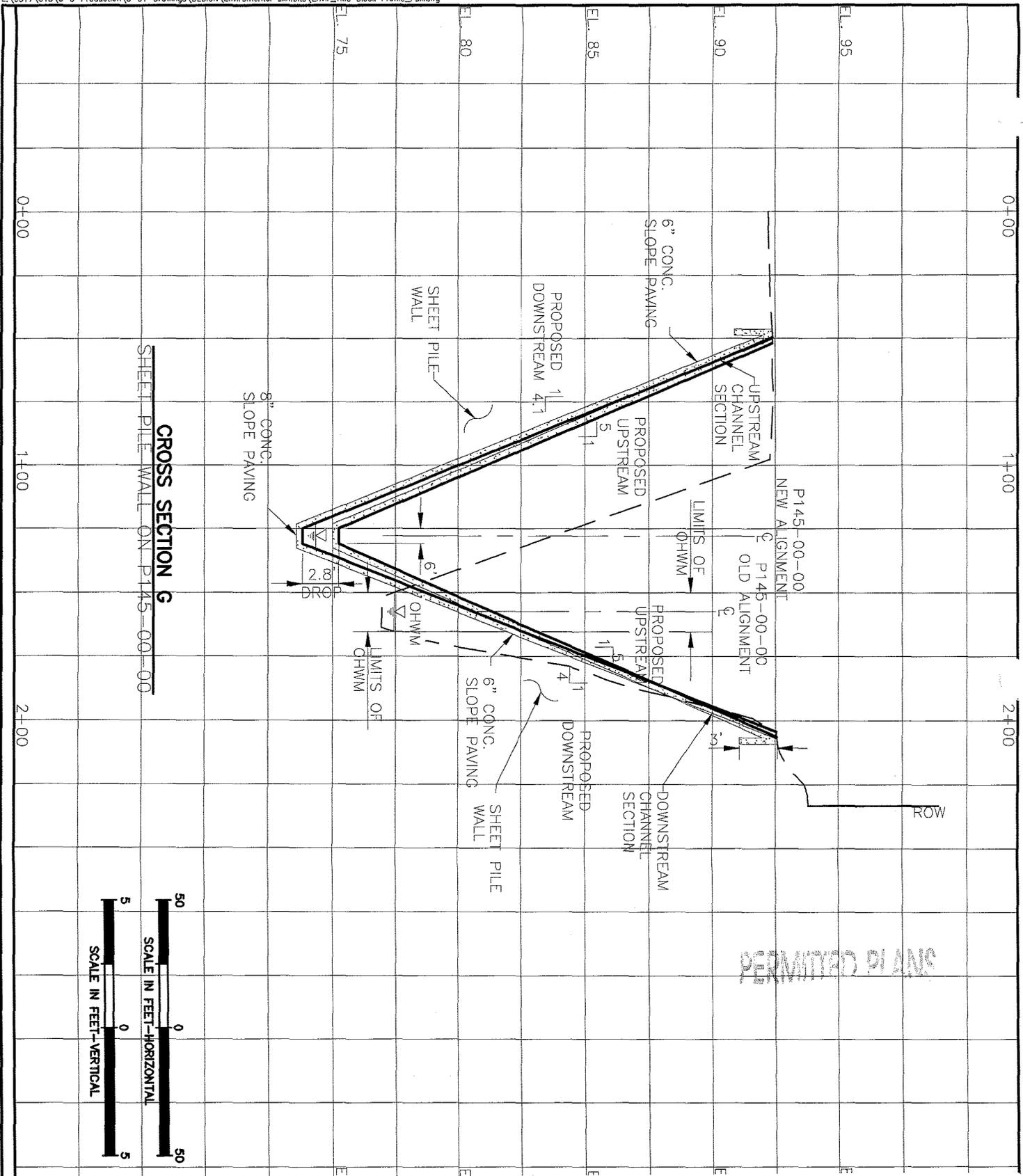
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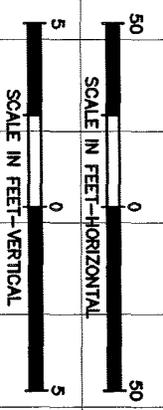
Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-0 1-00-E005)
 March 4, 2013
 Sheet 16 of 20

PROPOSED HCFCD
 CROSS SECTION F

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|  <p>HARRIS COUNTY FLOOD CONTROL DISTRICT</p> | PREPARED: _____ |
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| | APPROVED: _____ |
| DATE: 11-30-12 SCALE: H 1" = 100' V 1" = 10' SHEET NUMBER: _____ |  <p>Lockwood, Andrews & Newman, Inc. A TIO A DALY COMPANY LOCKWOOD, ANDREWS & NEWMAN, INC. TEXAS REGISTERED ENGINEERING FIRM F-2614</p> |



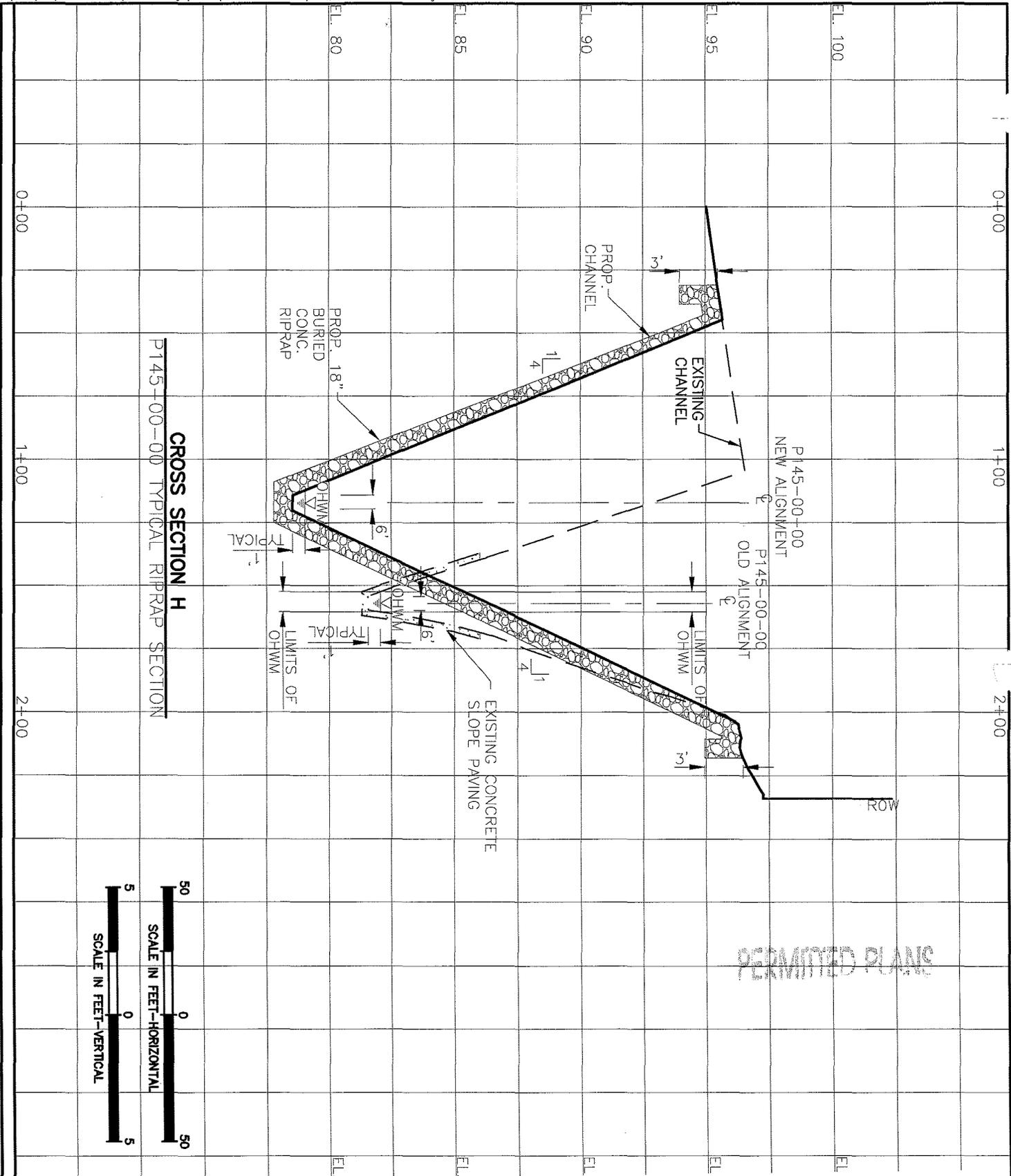
PERMITTED PLANS



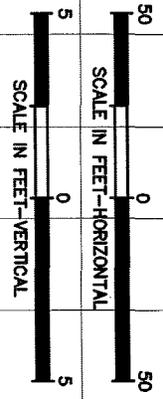
Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-0 1-00-E005)
 March 4, 2013
 Sheet 17 of 20

PROPOSED HCFC
 CROSS SECTION G

| | |
|--|----------------------|
| <p>DATE: 11-30-12 SCALE: H 1" = 50' V 1" = 5'</p> <p>9100 Northwood Freeway Houston, Texas 77062</p> <p>HARRIS COUNTY FLOOD CONTROL DISTRICT</p> | <p>PREPARED:</p> |
| | <p>CHECKED:</p> |
| | <p>APPROVED:</p> |
| <p>LOCKWOOD, ANDREWS & NEWMAN, INC. A LEO A DALY COMPANY TEXAS REGISTERED ENGINEERING FIRM F-2614</p> | <p>SHEET NUMBER:</p> |



CROSS SECTION H
 P145-00-00 TYPICAL RIPRAP SECTION

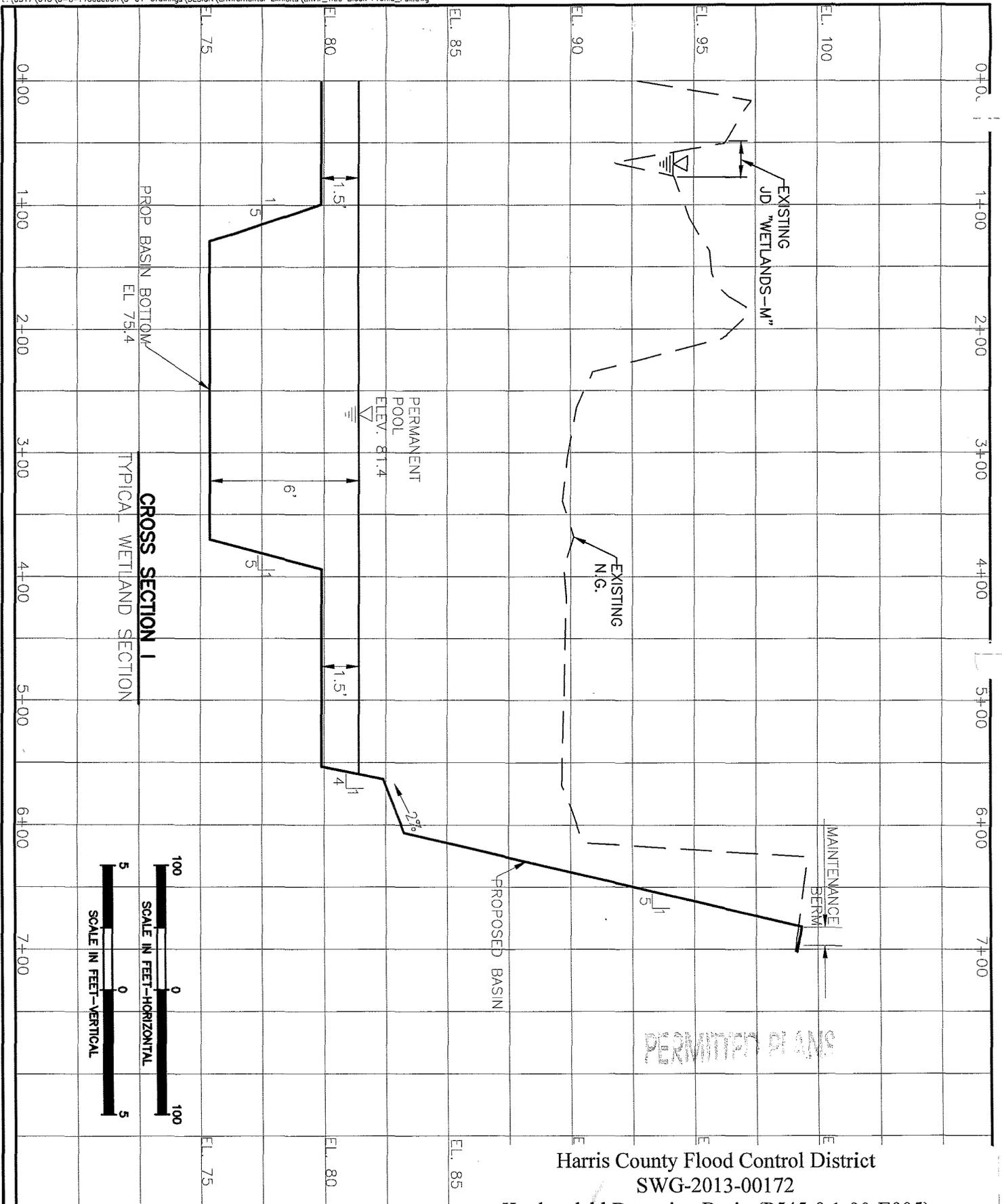


PERMITTED PLANS

Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-0 1-00-E005)
 March 4, 2013
 Sheet 18 of 20

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| <p>HARRIS COUNTY FLOOD CONTROL DISTRICT</p> | PREPARED: _____ |
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| | APPROVED: _____ |
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PROPOSED HCFC
 CROSS SECTION H



PERMITTED PLANS

Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-0 1-00-E005)
 March 4, 2013
 Sheet 19 of 20

PREPARED:
 CHECKED:
 APPROVED:

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 TEXAS REGISTERED ENGINEERING FIRM
 F-2614

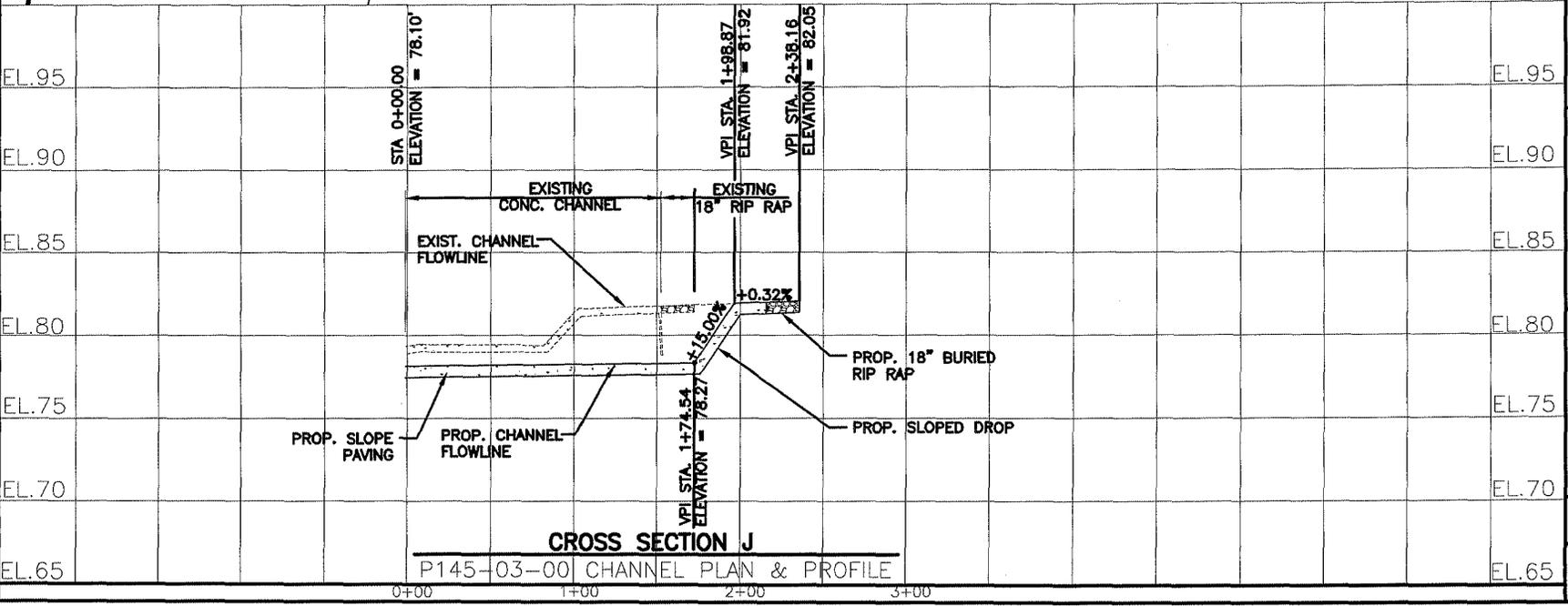
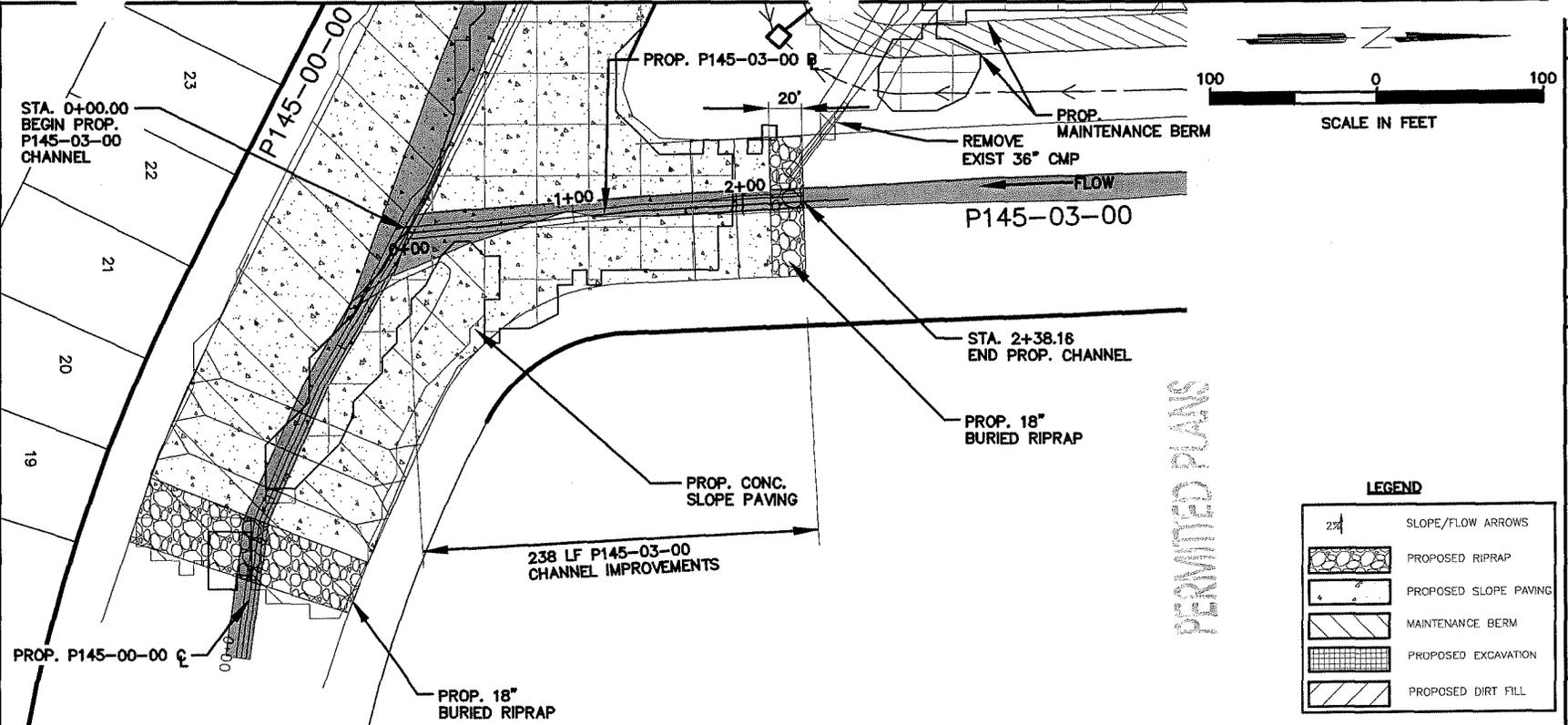
HARRIS COUNTY FLOOD CONTROL DISTRICT

DATE: 11-30-12
 SCALE: H 1" = 80'
 V 1" = 5'

SHEET NUMBER
 16 OF 17

PROPOSED HCPCD
 CROSS SECTION I

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| NO. | DATE | DESCRIPTION |
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PROJECT ID# P545-01-00-E005
 KUYKENDAH STORMWATER
 DETENTION BASIN
 CROSS SECTION J -
 P145-03-00 CHANNEL PLAN & PROFILE

Harris County Flood Control District
 SWG-2013-00172
 Kuykendahl Detention Basin (P545-01-00-E005)
 March 4, 2013
 Sheet 20 of 20

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 16, 2013

Mr. Dwayne Johnson
Galveston District CESWG-PE-RE
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

Re: USACE Permit Application Number SWG-2013-00172

Dear Mr. Johnson:

This letter is in response to the Statement of Findings (SOF) dated August 1, 2013, for the Joint Public Notice dated March 11, 2013, on the Harris County Flood Control District's proposed construction of the Kuykendahl Detention Basin (P545-01-00) to lower flood water surface elevations and reduce structure flooding in the Greens Bayou watershed. The project is located in the Greens Bayou watershed, south of Kuykendahl and west of Ella Boulevard, in Harris County, Texas.

The Texas Commission on Environmental Quality (TCEQ) has reviewed the public notice and related application information along with the SOF. On behalf of the Executive Director and based on the evaluation of the information contained in these documents, the TCEQ certifies that there is reasonable assurance that the project will be conducted in a way that will not violate water quality standards. General information regarding this water quality certification, including standard provisions of the certification, is included as an attachment to this letter.

Construction of the proposed project will result in approximately 2.55 acres of unavoidable impacts to jurisdictional wetlands and 1.45 acres of jurisdictional streams. The applicant proposes to compensate for 2.55 acres of wetland impact by purchasing credits at the Greens Bayou Wetlands Mitigation Bank. The applicant also proposes to perform stream enhancement activities to improve channel conditions.

No review of property rights, location of property lines, nor the distinction between public and private ownership has been made, and this certification may not be used in any way with regard to questions of ownership.

Mr. Dwayne Johnson
U.S. Army Corps of Engineers
USACE Permit Application Number SWG-2013-00172

Page 2

August 16, 2013

If you require additional information or further assistance, please contact Mr. John Trevino, Water Quality Assessment Section, Water Quality Division (MC-150), at (512) 239-4600 or by email at John.Trevino@tceq.texas.gov.

Sincerely,



David W. Galindo
Water Quality Division Director
Texas Commission on Environmental Quality

DWG/JT/gg

Attachment

cc: Mr. Glenn Laird, Harris County Flood Control District, 9900 Northwest Freeway,
Houston, Texas 77092-8601

WORK DESCRIPTION: As described in the public notice dated March 11, 2013, and the August 1, 2013, Environmental Assessment and Statement of Findings.

SPECIAL CONDITIONS: None

GENERAL: This certification, issued pursuant to the requirements of Title 30, Texas Administrative Code, Chapter 279, is restricted to the work described in the August 1, 2013, Environmental Assessment and Statement of Findings and shall be concurrent with the Corps of Engineers (COE) permit. This certification may be extended to any minor revision of the COE permit when such change(s) would not result in an impact on water quality. The Texas Commission on Environmental Quality (TCEQ) reserves the right to require full joint public notice on a request for minor revision. The applicant is hereby placed on notice that any activity conducted pursuant to the COE permit which results in a violation of the state's surface water quality standards may result in an enforcement proceeding being initiated by the TCEQ or a successor agency.

STANDARD PROVISIONS: These following provisions attach to any permit issued by the COE and shall be followed by the permittee or any employee, agent, contractor, or subcontractor of the permittee during any phase of work authorized by a COE permit.

1. The water quality of wetlands shall be maintained in accordance with all applicable provisions of the Texas Surface Water Quality Standards including the General, Narrative, and Numerical Criteria.
2. The applicant shall not engage in any activity which will cause surface waters to be toxic to man, aquatic life, or terrestrial life.
3. Permittee shall employ measures to control spills of fuels, lubricants, or any other materials to prevent them from entering a watercourse. All spills shall be promptly reported to the TCEQ by calling the State of Texas Environmental Hotline at 1-800-832-8224.
4. Sanitary wastes shall be retained for disposal in some legal manner. Marinas and similar operations which harbor boats equipped with marine sanitation devices shall provide state/federal permitted treatment facilities or pump out facilities for ultimate transfer to a permitted treatment facility. Additionally, marinas shall display signs in appropriate locations advising boat owners that the discharge of sewage from a marine sanitation device to waters in the state is a violation of state and federal law.
5. Materials resulting from the destruction of existing structures shall be removed from the water or areas adjacent to the water and disposed of in some legal manner.

6. A discharge shall not cause substantial and persistent changes from ambient conditions of turbidity or color. The use of silt screens or other appropriate methods is encouraged to confine suspended particulates.
7. The placement of any material in a watercourse or wetlands shall be avoided and placed there only with the approval of the Corps when no other reasonable alternative is available. If work within a wetland is unavoidable, gouging or rutting of the substrate is prohibited. Heavy equipment shall be placed on mats to protect the substrate from gouging and rutting if necessary.
8. Dredged Material Placement: Dredged sediments shall be placed in such a manner as to prevent any sediment runoff onto any adjacent property not owned by the applicant. Liquid runoff from the disposal area shall be retained on-site or shall be filtered and returned to the watercourse from which the dredged materials were removed. Except for material placement authorized by this permit, sediments from the project shall be placed in such a manner as to prevent any sediment runoff into waters in the state, including wetlands.
9. If contaminated spoil that was not anticipated or provided for in the permit application is encountered during dredging, dredging operations shall be immediately terminated and the TCEQ shall be contacted by calling the State of Texas Environmental Hotline at 1-800-832-8224. Dredging activities shall not be resumed until authorized by the Commission.
10. Contaminated water, soil, or any other material shall not be allowed to enter a watercourse. Noncontaminated storm water from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
11. Storm water runoff from construction activities that result in a disturbance of one or more acres, or are a part of a common plan of development that will result in the disturbance of one or more acres, must be controlled and authorized under Texas Pollutant Discharge Elimination System (TPDES) general permit TXR150000. A copy of the general permit, application (notice of intent), and additional information is available at:
http://www.tceq.texas.gov/permitting/stormwater/wq_construction.html or by contacting the TCEQ Storm Water & Pretreatment Team at (512) 239-4671.
12. Upon completion of earthwork operations, all temporary fills shall be removed from the watercourse/wetland, and areas disturbed during construction shall be seeded, ripped, or given some other type of protection to minimize subsequent soil erosion.

Any fill material shall be clean and of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters.

13. Disturbance to vegetation will be limited to only what is absolutely necessary. After construction, all disturbed areas will be revegetated to approximate the pre-disturbance native plant assemblage.
14. Where the control of weeds, insects, and other undesirable species is deemed necessary by the permittee, control methods which are nontoxic to aquatic life or human health shall be employed when the activity is located in or in close proximity to water, including wetlands.
15. Concentrations of taste and odor producing substances shall not interfere with the production of potable water by reasonable water treatment methods, impart unpalatable flavor to food fish including shellfish, result in offensive odors arising from the water, or otherwise interfere with reasonable use of the water in the state.
16. Surface water shall be essentially free of floating debris and suspended solids that are conducive to producing adverse responses in aquatic organisms, putrescible sludge deposits, or sediment layers which adversely affect benthic biota or any lawful uses.
17. Surface waters shall be essentially free of settleable solids conducive to changes in flow characteristics of stream channels or the untimely filling of reservoirs, lakes, and bays.
18. The work of the applicant shall be conducted such that surface waters are maintained in an aesthetically attractive condition and foaming or frothing of a persistent nature is avoided. Surface waters shall be maintained so that oil, grease, or related residue will not produce a visible film of oil or globules of grease on the surface or coat the banks or bottoms of the watercourse.
19. This certification shall not be deemed as fulfilling the applicant's/permittee's responsibility to obtain additional authorization/approval from other local, state, or federal regulatory agencies having special/specific authority to preserve and/or protect resources within the area where the work will occur.



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON TX 77553-1229

DEC 22 2010

Policy Analysis Section

SUBJECT: **SWG-2001-01323**; HCFCD, 300-Acres, P545-01-00-E005, Jurisdictional Verification, Harris County, Texas

Harris County Flood Control District
ATTN: Ingrid Fairchild
9900 Northwest Freeway
Houston, Texas 77092

Dear Ms. Fairchild:

This correspondence concerns our July 12, 2010 delineation verification request letter for an approximate 300 acre tract located southwest of the intersection of Kuykendahl Road and Ella Boulevard in Harris County, Texas. Due to your reporting error, this verification supersedes the verification dated December 15, 2010.

Based on our August 17, 2010 site visit, coordination with EPA, and the December 21, 2010 revised delineation table (enclosed), we have determined that tract contains 2.55-acres of jurisdictional adjacent wetlands (A, L, M, N) and 5.07-acres of waters of the United States (C, E, F, J, K). These areas are subject to our jurisdiction under Section 404 of the Clean Water Act (CWA). Any discharge of dredged and/or fill material into waters of the U.S. requires a Department of the Army (DA) permit under Section 404 of the CWA.

This determination has been conducted to identify the limits of the United States Army Corps of Engineers Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

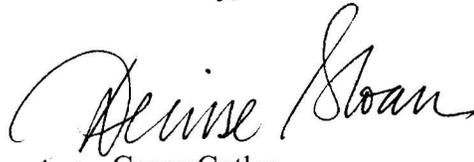
The wetlands on the site were identified using the 1987 Corp Wetland Delineation Manual, which requires under normal conditions, a predominance of hydrophytic vegetation, hydric soils, and sufficient hydrology to support this aquatic ecosystem. This letter contains an approved jurisdictional determination for your subject site, which is valid for 5 years from the date of this letter unless new information warrants a revision prior to the expiration date. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeals Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination, you must submit a completed RFA form to the Southwest Division Office at the following address:

Mr. Elliot Carman
Appeal Review Officer, CESWD-PD-O
U.S. Army Corps of Engineer Division, Southwestern
1100 Commerce Street, Suite 831
Dallas, Texas 75242-1317
Telephone: 469-487-7061; FAX: 469-487-7199

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete; that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within **60 days** of the date of the NAP. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

If you have any questions concerning this determination, please reference file number **SWG-2001-01323** and contact Mr. Dwayne Johnson at the letterhead address or by telephone at 409-766-6353.

Sincerely,

A handwritten signature in cursive script that reads "Denise Sloan".

for Casey Cutler
Chief, Policy Analysis Section

Enclosures

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

| | | |
|--|--|--------------------------|
| Applicant: Harris County Flood Control District | File Number: SWG-2001-01323 | Date: DEC 22 2010 |
| Attached is: | | See Section below |
| <input type="checkbox"/> | INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission) | A |
| <input type="checkbox"/> | PROFFERED PERMIT (Standard Permit or Letter of Permission) | B |
| <input type="checkbox"/> | PERMIT DENIAL | C |
| <input checked="" type="checkbox"/> | APPROVED JURISDICTIONAL DETERMINATION | D |
| <input type="checkbox"/> | PRELIMINARY JURISDICTIONAL DETERMINATION | E |

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/cecwo/reg/> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved jurisdictional determination (JD) or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Dwayne A. Johnson
Project Manager, Policy Analysis Section
CESWG-PE-RB
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229
409-766-6353; FAX: 409-766-3931

If you only have questions regarding the appeal process you may also contact:

Mr. Elliot Carman
Appeal Review Officer, CESWD-PD-O
U.S. Army Corps of Engineer Division, Southwestern
1100 Commerce Street, Room 831
Dallas, Texas 75242-1317
Telephone: 469-487-7061; FAX: 469-487-7199
Email: Elliot.N.Carman@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

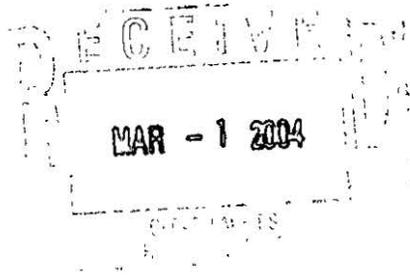
Signature of appellant or authorized agent.

Date: _____

Telephone number: _____

P545-01-00-E005
 SWG-2001-01323
 Waters of the U.S. And WetlandsTable

| Feature | Latitude | Longitude | UTM | | Acreage |
|-------------------------|-----------|------------|----------------------|---------------------|-------------|
| | | | Northing (meters) | Easting (meters) | |
| WETLANDS | | | | | |
| A | 29.980573 | -95.447058 | 3319156.23 | 263904.81 | 2.19 |
| L | 29.973983 | -95.441145 | 3318394.20 | 264461.28 | 0.10 |
| M | 29.975416 | -95.442709 | 3318567.06 | 264312.21 | 0.23 |
| N | 29.977381 | -95.443863 | 3318794.46 | 264201.99 | 0.03 |
| Subtotal | | | | | 2.55 |
| WATERS OF THE US | | | | | |
| C | 29.978736 | -95.447010 | 3318949.37 | 263900.47 | 0.87 |
| E | 29.978400 | -95.449100 | 3318916.35 | 263702.55 | 0.80 |
| F | 29.97957 | 95.450220 | 3319049.98 | 263596.87 | 0.17 |
| J | 29.973830 | -95.443200 | 3318395.01 | 264254.74 | 2.05 |
| K | 29.977286 | -95.440645 | 3318786.15 | 264514.35 | 1.18 |
| Subtotal | | | | | 5.07 |



Harris County
Flood Control District

9900 Northwest Freeway
Houston, Texas 77092
713-684-4000

February 25, 2004

Ms. Edith Erling
U. S. Fish and Wildlife Service
17629 El Camino Real, Suite 211
Houston, Texas 77058

RE: Potential Federal Threatened and Endangered Species
300 Acres North of Genoa-Red Bluff Road.
HCFCD Project ID P545-01-00-Y008

Dear Ms. Erling:

The Harris County Flood Control District (HCFCD) proposes to implement a flood damage reduction improvement southwest of Kuykendahl Road and west of HCFCD Unit P145-03-00 in northern Harris County. The project area encompasses approximately 300 acres.

The purpose of this letter is to request any information or concerns your agency may have regarding federal threatened and endangered species and/or critical habitats potentially occurring within the project site. The project site is not in an area of concern according to the U.S. Fish and Wildlife Service maps. I have enclosed a vicinity map and a survey map to illustrate the location and type of project we are attempting to complete.

Should you require any additional information, please contact Mr. Vincent Pershing of my staff at (713) 684-4223. Thank you for your assistance.

Sincerely,

Glenn W. Laird, AICP
Environmental Services Dept. Manager

A review of U.S. Fish and Wildlife Service files and your project information indicate that no federally listed or proposed threatened or endangered species are likely to occur at the project site. The project site is not located within officially designated critical habitat.

GWL:VJP:rso

This review does not constitute our approval for wetlands, sensitive habitats, migratory birds or any other environmental requirements.

Enclosures: Vicinity Map
Site Map

Approved: Edith Erling
Date: May 25, 2004

cc: Vincent Pershing, HCFCD
Bob DeVillier, HCFCD

Clear Lake Ecological Services Field Office
U.S. Fish and Wildlife Service
17629 El Camino Real, Suite 211
Houston, Texas 77058-3051

Burkes, Kevin M

To: Texas Natural Diversity Database
Subject: RE: NDD File Review

From: Texas Natural Diversity Database [mailto:TexasNatural.DiversityDatabase@tpwd.texas.gov]
Sent: Wednesday, August 21, 2013 9:31 AM
To: Burkes, Kevin M
Subject: RE: NDD File Review

Mr. Burkes,

Save the attached file to your computer and change the file extension from txt to zip to extract the data.

Please be aware that the email address for information requests is now: txnnd@tpwd.texas.gov

Your information request area contains known ecologically significant stream segments. Use the link below to obtain that data.

The Texas Natural Diversity Database ([TXNDD](#)) includes federal, and state listed and tracked Threatened, Endangered, and Rare species. The attached .zip file contains documents that will guide you in appropriate use, restrictions, and shapefile interpretation of Texas NDD data as well as a request for adding data to the TXNDD. Also included is a shapefile of the T&E and Rare species element occurrences, information the TXNDD has available presently, within and touching the requested quads along with a companion **EO report**; areas where EO data are absent **do not mean** absence of occurrence for Threatened, Endangered, and Rare species. Included is an **EO List** of the T&E and Rare species element occurrences that are on the quads adjacent to your request area. The **EO List** is to inform you of other potential federal, and state listed and tracked Threatened, Endangered, and Rare species within the area. To round out your review, please use the Rare, Threatened, and Endangered Species of Texas by County application found [here](#). For questions regarding the application please contact Amy Turner at Amy.Turner@tpwd.texas.gov or by calling her directly at (361) 576-0022 x223.

- If your project area is in Travis, Williamson, or Bexar county it is highly recommended that you download the GIS shapefiles for the Karst Zones from the USFWS website <http://www.fws.gov/southwest/es/austintexas/> and/or contact Jenny Wilson – USFWS at (512)490-0057 x 231 for a review of the project location. All three counties are known to have multiple important karst features.
- If your information request includes one or more records for **Bald Eagle** or **colonial waterbirds**, contact Brent Ortego at brent.ortego@tpwd.state.tx.us or (361) 576-0022 for more up-to-date information on the **Bald Eagle** or **colonial waterbirds**.
- **For communication towers**, in addition to the USFWS guidelines in the attachment and the links at towerkill.com, there is research identifying a simple way to reduce bird strike and high bird mortality at towers. Gehring J., P. Kerlinger, A.M. Manville II. (2009) Communication towers, lights, and birds: successful methods of reducing the frequency of avian collisions. Ecological Applications: Vol. 19, No. 2, pp. 505-514.doi: 10.1890/07-1708.1
- For **wind energy or transmission related projects**, to obtain the Department's guidelines it is also recommended to contact Julie Wicker at julie.wicker@tpwd.state.tx.us or (512)389-4579. In addition, the U.S. Fish and Wildlife Service's Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines, along with other helpful links and information, can be accessed at: <http://www.fws.gov/habitatconservation/wind.html>.
- If your information request contains records for **Texas trailing phlox** you should contact Jason Singhurst at jason.singhurst@tpwd.state.tx.us or (512) 389-8726.

Absence of information in an area does not mean absence of occurrence. *Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Data from the TXNDD do not provide a definitive statement as to the presence, absence, or condition of special species, natural*

communities, or other significant features within your project area. These data cannot substitute for an on-site evaluation by qualified biologists.

Additional sources of data:

TPWD Annotated County Lists: http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered_species/

USFWS species lists: http://ecos.fws.gov/tess_public/servlet/gov.doi.tess_public.servlets.EntryPage

USFWS CRITICAL HABITAT: <http://criticalhabitat.fws.gov/>

Ecologically Significant Stream Segments: http://www.tpwd.state.tx.us/landwater/land/maps/gis/data_downloads/

Ecologically Significant Stream Segment Information:

http://www.tpwd.state.tx.us/landwater/water/environconcerns/water_quality/sigsegs/

Bob Gottfried

Texas Natural Diversity Database Administrator

Texas Parks and Wildlife - Wildlife Division

4200 Smith School Rd

Austin, TX 78744

512-389-8744

[TXNDD Information](#)

Please make a note of my new email address: Bob.Gottfried@tpwd.texas.gov

Bob Gottfried

Texas Natural Diversity Database Administrator

Texas Parks and Wildlife - Wildlife Division

4200 Smith School Rd

Austin, TX 78744

512-389-8744

[TXNDD Information](#)

Please make a note of my new email address: Bob.Gottfried@tpwd.texas.gov

From: Burkes, Kevin M [<mailto:Kevin.Burkes@atkinsglobal.com>]

Sent: Monday, August 12, 2013 11:17 AM

To: Bob Gottfried

Subject: NDD File Review

Mr. Gottfried,

Please conduct a NDD review for the following counties:

What type of data do you want?: **1) ArcGIS shapefile 2) EOR report**

Where is the location of your project? **Harris County**

Please provide the scope/type of project. **Feasibility study for Stormwater Detention Basin Project**

Thanks,

Kevin M. Burkes

Project Manager, Environmental Sciences & Planning

ATKINS

1250 Wood Branch Park Drive, Suite 300 Houston, TX 77079 | Tel: +1 (281) 529-4158 Cell: +1 (225) 454.3355

Email: kevin.burkes@atkinsglobal.com | Web: www.atkinsglobal.com/northamerica www.atkinsglobal.com

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Consider the environment. Please don't print this email unless you really need to.

The IS team in Atkins has scanned this email and any attachments for viruses and other threats; however no technology can be guaranteed to detect all threats. Always exercise caution before acting on the content of an email and before opening attachments or following links contained within the email.



From the Office of
 Larry E. Brown
 Plant Taxonomist
 726 Horncastle Drive
 Channelview, Texas 77530 - 3410
 Phone Number: 281 - 452 - 1105
 E-mail Address: Plantman@flash.net

**A Endangered Plant Species Survey at HCFD Unit P545-01-00-R001
 West of Interstate 45, South of Kuykendahl Road, and
 North of the Cranbrook Subdivision
 Key Map 372 A
 Between 29°58'28"N and 95°26'45"W west to about 29°58'27"N and 95°27'10"W
 Harris County, Texas
 April 30, 2001**

To whom it may concern:

I was employed by Harris County Flood Control District to conduct a survey for the federally endangered plant species *Hymenoxys texana* (Prairie dawn) in an undeveloped segment of land off of Kuykendahl Road near the intersection with Ella Blvd. The subject property is west of an already completed detention basin and is bordered on the south by a drainage ditch and on the east side by the detention basin and a woodland to the north of the detention basin. The western boundary along the drainage ditch appears to be a S shaped curve of the ditch. This is adjacent to a north south fence at the edge of the woodland. To the north and west of the S shaped curve, it appears that a detention basin is under now under construction. I was able to walk the entire site from east to west along the southern drainage ditch. The boundaries of the subject property appear to be between 95°58'45" and 95°27'57" east to west and between 29°58'25" and 29°58'57" south to north. The survey was conducted on April 21, 2001.

Prairie dawn only grows and flowers from March through April and it occurs as small colonies on sparsely vegetated areas of fine-sandy compacted soil. These sites are often at the base of mima (pimple) mounds. At the time of the survey in late April, Prairie Dawn plants have completed their life cycle for the year. However, old dead stems of the plants are still visible on these sites. Prairie Dawn plants are absent from areas of soil disturbance as I have never observed it growing on sites where the soil horizon has been overturned. Also Prairie Dawn is a heliophyte, i.e., it grows in open sunny sites and is absent from areas of deep shade such as woodlands.

The nearest known Prairie Dawn sites are a few miles to the west along Gessner Road just north of the intersection with Beltway 8.

Most of the subject property is a dense woodland. There are indications that some of this woodland was originally a prairie. The woodland was so dense that I was able to cross the entire site only by walking along the southern drainage ditch which is on the north edge of the Cranbrook Subdivision. As indicated above a dense woodland with shade is not suitable for Prairie Dawn. Some of the

dominant woodland plants were *Sapium sebiferum*, *Baccharis halimifolia*, *Ilex vomitoria*, *Myrica cerifera*, *Quercus falcata*, and *Diospyros virginiana*.

While walking along the southern drainage ditch, I noted a small Prairie Dawn habitat between the woodland and the drainage ditch. The coordinates were 29°58'31" N and 95°26'50" W. This site is marginal for Prairie Dawn and I noted no plants there. Some of the Prairie Dawn associated plants here were *Houstonia rosea*, *Plantago heterophylla*, *Plantago elongata*, and *Spartina spartinae*.

During the survey I was unsure of the exact western boundary and I crossed into some fields on the west edge of the subject property. These fields were associated with past and present drilling activity with salt impacted soil. I also noted some mima mounds with a Prairie Dawn habitat around the base. These sites were dominated by the salt tolerant grass *Parapholis incurva* and the salt tolerant forb *Spergularia echinosperma*. I noted no Prairie Dawn plants on these sites but from a distance I expected to find them.

In summary, one marginal Prairie Dawn site was discovered on the subject property but no Prairie Dawn plants were found on the site. However, the Prairie Dawn habitat is in fields on the west edge of the subject property. It is my professional opinion that Prairie Dawn plants are not on the subject property.

Dr. Larry E. Brown,

A handwritten signature in cursive script that reads "Larry E Brown".

Plant Taxonomist
and Environmental Consultant



An employee-owned company

March 16, 2010

Mr. James Greenwade
Natural Resources Conservation Service
101 S. Main
Temple, Texas 76501

PN 100012345

Dear Mr. Greenwade:

Re: P500-08-00 and P545-01-00 Detention Basins Project
Greens Bayou, Harris County, Texas

PBS&J has been retained by Harris County Flood Control District ("HCFCD") to prepare an Environmental Assessment (EA) for the proposed P500-08-00 and P545-01-00 Detention Basins, Greens Bayou, Harris County, Texas (Exhibit A).

The proposed project is along an approximately two-mile section of Greens Bayou along W. Green Road form Ella Boulevard to Chisholm Trial. The purpose of the proposed project is to lower flood water surface elevations and reduce structure flooding. HCFCD has obtained two large tracts of land that are in the upstream limits of the project reach. The proposed P545-01-00 detention basin is located north of W. Rankin Road and west of Kuykendahl Road, adjacent to the North Fork of Greens Bayou (P145-00-00). The proposed P500-08-00 detention basin is located east of Interstate Highway (IH) 45, between Rankin Road and Greens Road, adjacent to Greens Bayou. Due to the size and optimal location of these tracts, the proposed stormwater detention basins are able to efficiently reduce the sever and frequent flooding events in the project reach.

The proposed project is located within the following soil types: Addicks loam (Ad); Clodine loam (Cd); Clodine – Urban land complex (CE); and Gessner loam(GE). Please see Exhibit A for the location of these soil types. Review of the Harris County soil data concluded that prime farmland soils Clodine loam and Gessner loam are present within the proposed project area.

PSB&J has completed a Farmland Conversion Impact Rating for your review. Enclosed is a completed Conversion Impact Rating Form (AD-1006) along with project location maps (Exhibit A) of the proposed project.

We appreciate your timely review of this project. If you have any questions or need additional information, please contact Casey Hall or me.

Very truly yours,

Rodolfo (Rudy) Salazar
Environmental Scientist II

RS:SC

United States Department of Agriculture



Natural Resources Conservation Service

101 S. Main Street
Temple, TX 76501-6624
Phone: 254-742-9826
FAX: 254-742-9859

March 23, 2010

Subject: LNU—Farmland Protection
P500-08-00 and P545-01-00 Detention Basins Project
Greens Bayou, Harris County, Texas

Attention: Rodolfo Salazar, Environmental Scientist II

We have reviewed the information provided concerning the proposed P500-08-00 and P545-01-00 Detention Basins Project, Greens Bayou in Harris County, Texas as outlined in your letter of March 16, 2010. This review is part of the National Environmental Policy Act (NEPA) evaluation. We have evaluated the proposed site as required by the Farmland Protection Policy Act (FPPA).

The soils at the proposed site are considered exempt from the FPPA because the land is considered "already in" urban development. The FPPA excludes from the definition of "Farmland" areas that are already converted to urban uses. We have completed a Farmland Conversion Impact Rating (form AD-1006) indicating the exemption. We encourage the use of accepted erosion control methods during the construction of this project.

We are enclosing the completed AD-1006 for the project indicating the approval status. Thank you for the resource materials you submitted to evaluate this project. If you have any questions please call Micki Yoder at (254)-742-9826, Fax (254)-742-9859.

Sincerely,

A handwritten signature in blue ink that reads "Micki Yoder".

Micki Yoder/NRCS
State Resources Inventory Coordinator



CURTIS TUNNELL
EXECUTIVE DIRECTOR

MAC 93-9

TEXAS HISTORICAL COMMISSION
P.O. BOX 12276 AUSTIN, TEXAS 78711-2276 (TELEPHONE) 512-463-6096 (FAX) 512-463-6095 (RELAY TX) 1-800-735-2989 (TDD)
DEPARTMENT OF ANTIQUITIES PROTECTION

January 21, 1994

Mr. Roger G. Moore
Moore Archeological Consulting
1526 1/2 Heights Blvd.
Houston, TX 77008

Re: Antiquities Permit #1233, Final Report (HCFCD T2, T9)

Dear Mr. Moore:

The Department of Antiquities Protection is in receipt of the twelve copies of the Final Report for Antiquities Permit #1233, and the report is in order. Therefore, the requirements under that permit are complete. If you have not yet sent us a completed THC Abstract Form (copy enclosed) please do so as soon as possible. We must have this information to complete our records for Permit 1233.

Thank you for your assistance in the protection of our State's cultural resources, and if you have any questions please contact Mark Denton, project reviewer, of our staff at (512) 463-5711.

Sincerely,

Tim Perttula

James E. Bruseth, Ph.D.
Deputy State Historic Preservation Officer

Tim Perttula

Timothy K. Perttula, Ph.D.
Assistant Director for Antiquities Review

Enclosure: THC Abstract Form

MHD/JEB/TKP

cc: Bill Moore

The State Agency for Historic Preservation



19700 Hickory Twig Way, Suite M76
Spring, Texas 77388, USA (CWA)
P: (281) 350-6133
E: rdaigle@culturalresource.com

www.culturalresource.com

RECEIVED

NOV 19 2001

TEXAS HISTORICAL COMMISSION

November 10, 2001

Mr. Mark Denton,
Chief Archaeology Reviewer
The Texas Historical Commission
PO Box 12276
Austin, Texas 78711-2276

Ref: Proposed Kuykendahl Road Detention Site Expansion, The Harris County Flood Control District. HCFCDD Project ID P545-01-00-R001, Houston, Harris County, Texas. TAC Permit No. 2612
CRC Project No. 010409

Dear Mr. Denton:

Enclosed please find our Draft Report for the Intensive Survey conducted under the above referenced TAC Permit. We will appreciate your review and subsequent approval of this Draft Report for CRC Project No. 010409.

With regards,

Robert P. d'Aigle, RPA
Principle Investigator

NO HISTORIC
PROPERTIES AFFECTED
PROJECT MAY PROCEED

By [Signature]
for F. Lawrence Oaks
State Historic Preservation Officer
Date 12-10-01

DRAFT REPORT
ACCEPTABLE
Please submit 20 final report copies
by [Signature]
for F. Lawrence Oaks
State Historic Preservation Office
Date 12-10-01



TEXAS
HISTORICAL
COMMISSION

The State Agency for Historic Preservation

RICK PERRY, GOVERNOR

JOHN L. NAU, III, CHAIRMAN

F. LAWRENCE OAKS, EXECUTIVE DIRECTOR

January 15, 2002

Robert P. d'Aigle
Cultural Resource Consultants
19700 Hickory Twig Way, Suite 76
Spring, TX 77388

Re: Project Review under the Antiquities Code of Texas
Final Reports: *Cultural Resource Management Intensive Survey, Proposed
Detention Site Harris County Flood Control District, Harris County, Texas*
Antiquities Permit #2612
PERMIT COMPLETE

Dear Colleague:

Thank you for your correspondence describing the above referenced project. This letter presents the comments of the Executive Director of the Texas Historical Commission, the state agency responsible for administering the Antiquities Code of Texas.

The Archeology Division is in receipt of twenty copies of the final report and a completed *Abstracts in Texas Contract Archeology* form for the above referenced permit. The submission of twenty copies of the final report and abstract form demonstrates completion of your permit requirements under Permit #2612.

Thank you for your cooperation in this state review process, and for your efforts to preserve the irreplaceable heritage of Texas. **If you have any questions concerning our review or if we can be of further assistance, please contact Lillie Thompson at 512/463-1858.**

Sincerely,

A handwritten signature in cursive script, appearing to read "F. Lawrence Oaks".

for

F. Lawrence Oaks, State Historic Preservation Officer

FLO/lft

RECEIVED

JAN 22 2002

HCPCD
ENVIRONMENTAL SERVICES



DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON TX 77553-1229

December 3, 2013

REPLY TO
ATTENTION OF:

Policy Analysis Section

SUBJECT: Permit Application – SWG-2009-00691
HCFCD Project ID P500-08-00-E001

Ingrid Fairchild
Harris County Flood Control District
9900 Northwest Freeway
Houston, Texas 77092-8601

Dear Ms. Fairchild:

The above numbered permit has been approved and a signed copy is enclosed for your retention.

Also enclosed are ENG Form 4336, and a copy of "Notice to Permittee" which provides important information for permit administration. You should notify the District Engineer, in writing, upon completion of the authorized work. To assist us in improving our service to you, please complete the survey found at <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,

A handwritten signature in black ink, appearing to read "Casey Cutler".

Casey Cutler
Chief, Policy Analysis Section

Enclosures

Copy Furnished:

U.S. Environmental Protection Agency, 1445 Ross Avenue, Suite 1200, Dallas, Texas
75202-2750

ES LOG 08-235G

DEPARTMENT OF THE ARMY PERMIT

Permittee Harris County Flood Control District (HCFCDD)

Permit No. SWG-2009-00691

Issuing Office Galveston District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To construct the Glenn Forest Detention Basin (P500-08-00-E001) to lower flood water surface elevations and reduce structure flooding in the Greens Bayou watershed. Construction of the project will result in unavoidable impacts of 9.01 acres of waters of the United States (U.S.), including wetlands. Permanent impacts include 8.96 acres to wetlands and 0.02 acre to waters of the U.S. Temporary construction impacts of 0.02 acre to wetlands and 0.01 acre to streams are also proposed. Approximately 4.34 acres of waters of the U.S., including wetlands, would be avoided. The project will be conducted in accordance with the attached plans in 18 sheets.

Project Location: The project is located in waters and wetlands located in the Greens Bayou watershed, east of Interstate Highway 45, between Rankin Road and Greens Road, in Harris County, Texas. The project can be located on the U.S.G.S. quadrangle map entitled: Aldine, Texas. LATITUDE & LONGITUDE (NAD 83): Latitude: 29.956 North; Longitude: -95.407 West

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on 31 December 2018. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. The permittee must notify the Corps of Engineers (CE), Galveston District, Chief, Compliance Section, Regulatory Branch, in writing, at the start of construction within jurisdictional areas.
2. To compensate for the unavoidable impacts to waters of the U.S., the permittee will purchase the required credits from the Greens Bayou Wetlands Mitigation Bank, Subdivision B, within 30 days of commencing work within waters of the U.S.
3. The permittee will submit documentation to the CE, Galveston District, Chief, Compliance Section, Regulatory Branch, verifying that credits were purchased from the Greens Bayou Wetland Mitigation Bank, Subdivision B.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - () Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
 - (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
 - () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
 - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
 - b. This permit does not grant any property rights or exclusive privileges.
 - c. This permit does not authorize any injury to the property or rights of others.
 - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
 - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
 - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
 - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - d. Design or construction deficiencies associated with the permitted work.

- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
 - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
 - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

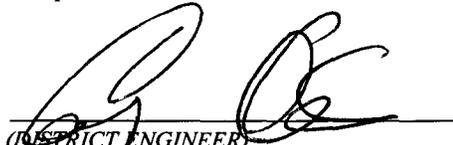


(PERMITTEE)

HARRIS COUNTY FLOOD CONTROL DISTRICT

11/12/13
 (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



(DISTRICT ENGINEER)

**CASEY CUTLER
 CHIEF POLICY ANALYSIS SECTION
 FOR COLONEL RICHARD P. PANNELL**

12/3/13
 (DATE)

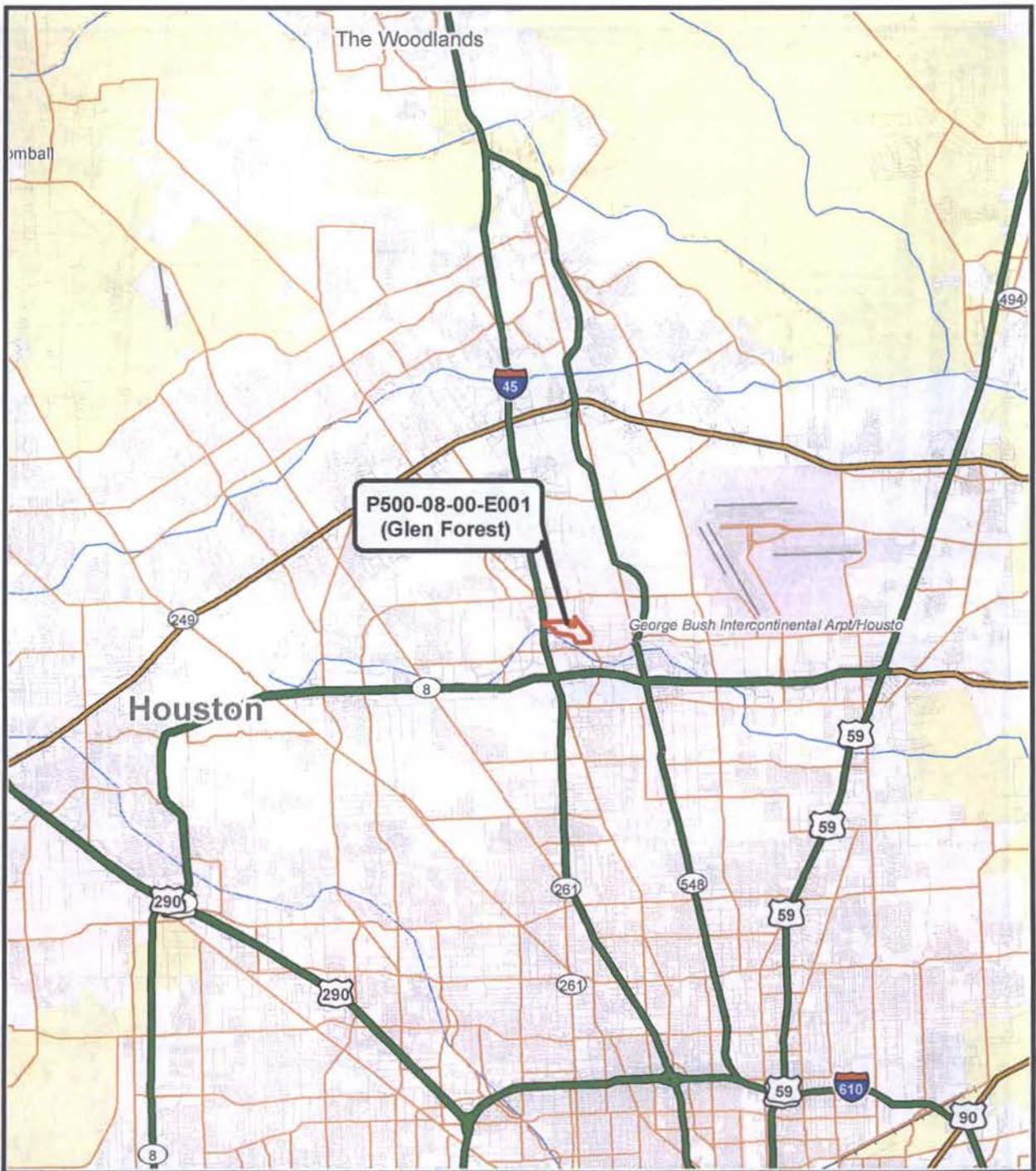
When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

 (TRANSFEEE - Typed/Printed Name)

 (DATE)

 (TRANSFEEE - Signature)

 (Mailing Address)



PERMITTED PLANS



Projection: State Plane
 Datum: NAD 83
 Zone: Texas South Central
 Units: Feet

ATKINS

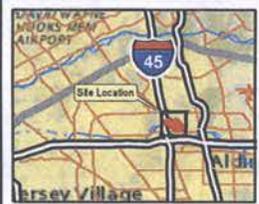
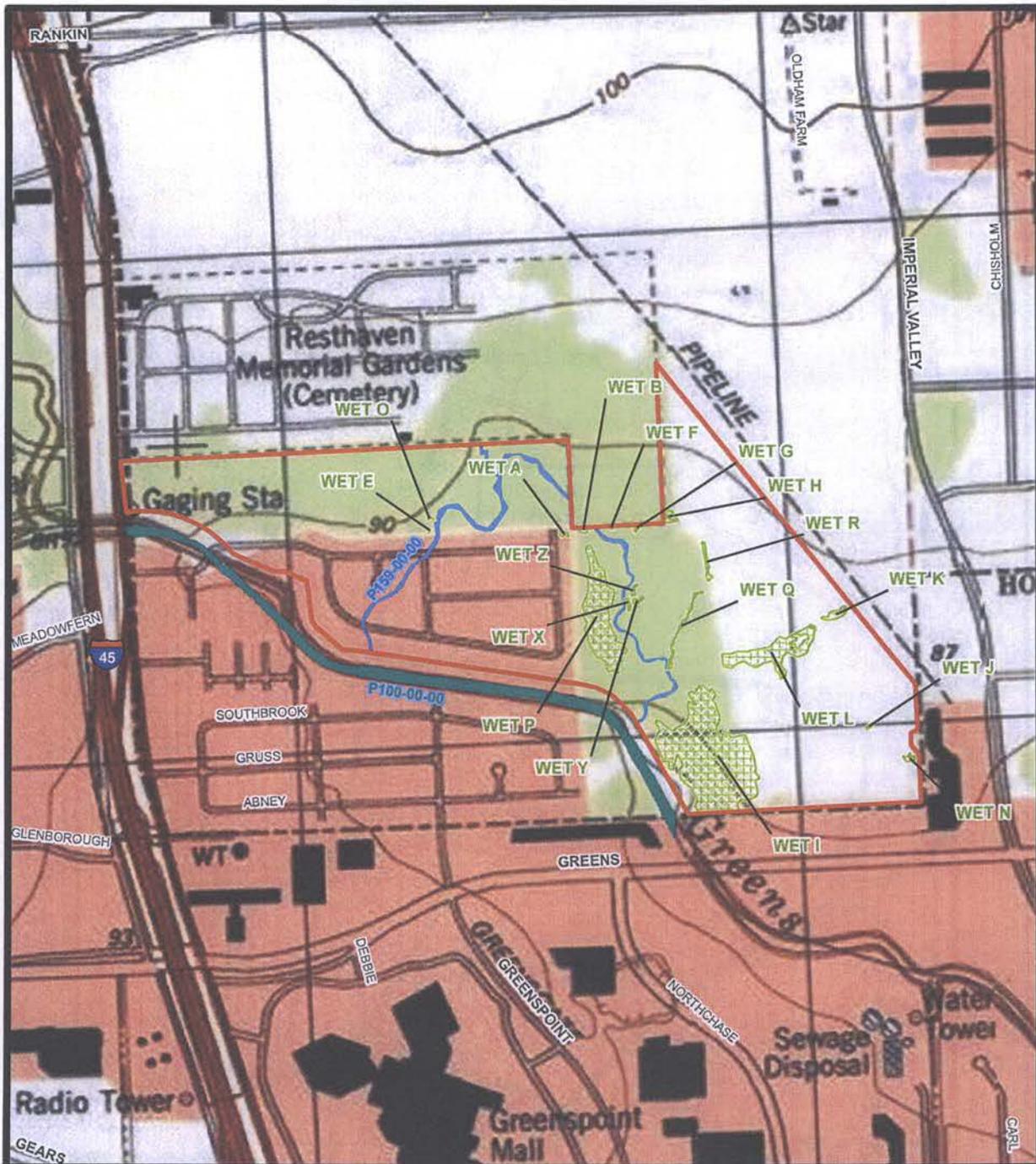
Figure 1
 Vicinity Map
 Harris County Flood Control District
 P500-08-00-E001 (Glen Forest)
 Stormwater Detention Basin Project
 Harris County, Texas

SWG-2009-00691

P500-08-00-E001 Glenn Forest Detention Basin Project

April 10, 2013

Sheet 1 of 18



- Project Area
- Wetlands
- P100-00-00: (Greens Bayou)
(Field Delineated; Atkins, December 2012)
- P159-00-00: Waters of the U.S.
(SWG 200-00691)



Projection: State Plane
 Datum: NAD 83
 Zone: Texas South Central
 Units: Feet
 Aerial: H-GAC, 2010
 Wetland: Crouch 2001, 2010

ATKINS

Waters of the U.S., Including
 Wetlands Delineation Map
P500-08-00-E001 (Glenn Forest)
 Detention Basin Project
 Harris County, Texas

PERMITTED PLANS

Prepared By: ATKINS/24002

Scale: 1" = 1,000'

Job No.: 100012345

Date: Mar 26, 2013

SWG-2009-00691

P500-08-00-E001 Glenn Forest Detention Basin Project

April 10, 2013

Sheet 2 of 18



Projection: State Plane
 Datum: NAD 83
 Zone: Texas South Central
 Units: Feet
 Aerial: H-GAC, 2010
 Wetland: Crouch 2001, 2010

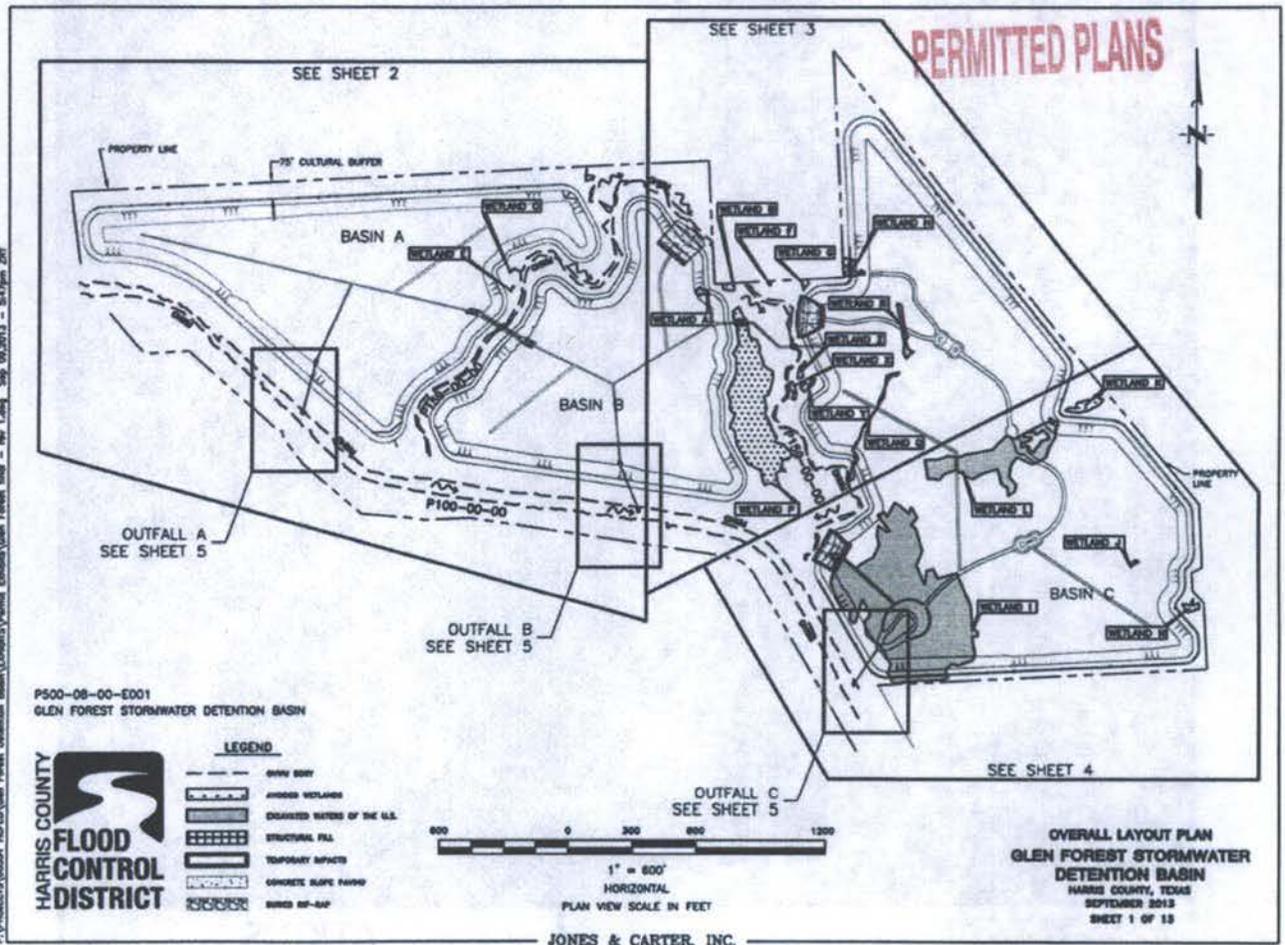
-  Project Area
-  Wetlands
-  Waters of the U.S.



ATKINS

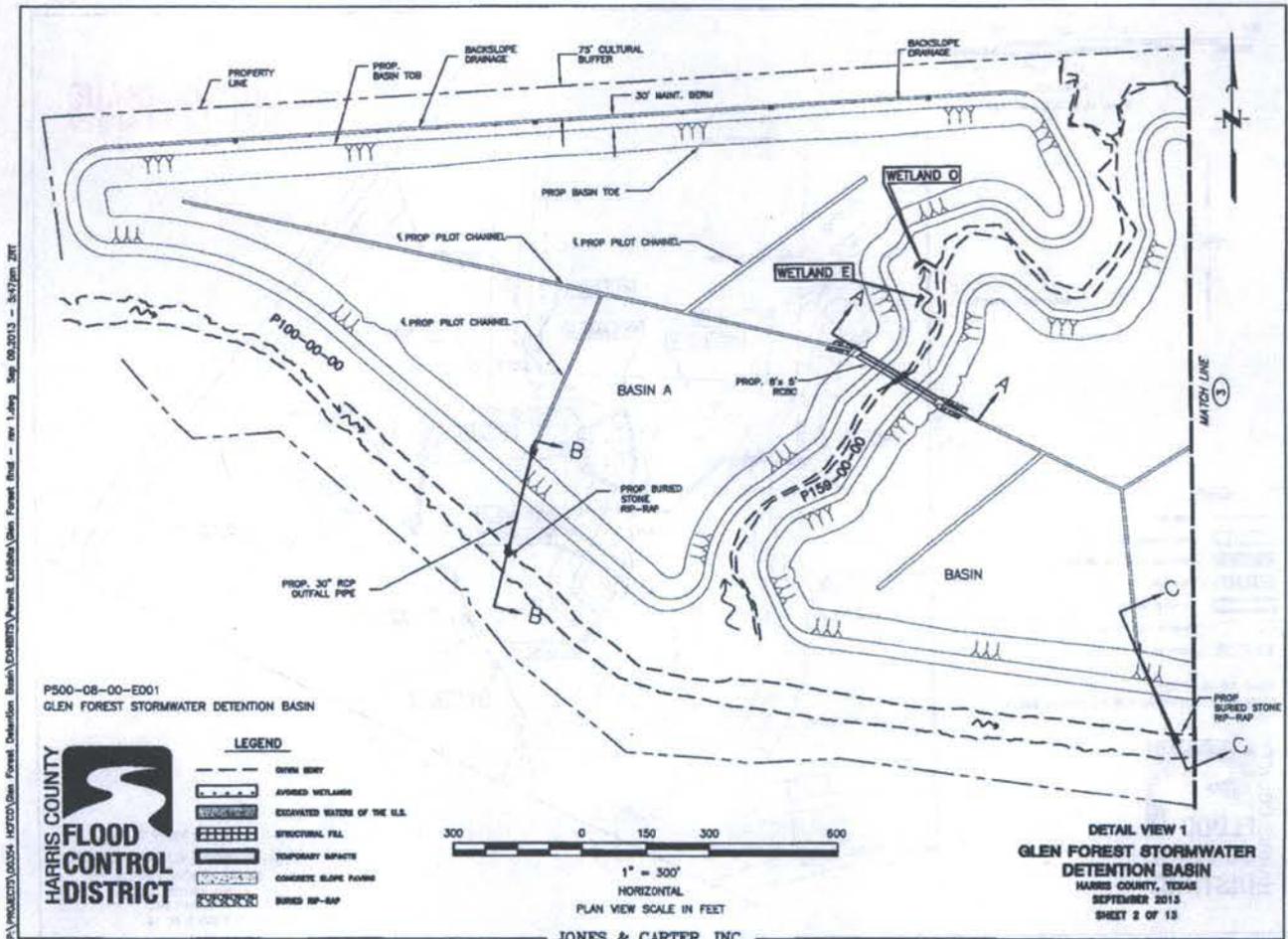
Figure 2
Aerial Location Map
Harris County Flood Control District
P500-08-00-E001 (Glen Forest)
Detention Basin Project
Harris County, Texas

SWG-2009-00691
P500-08-00-E001 Glenn Forest Detention Basin Project
April 10, 2013
Sheet 3 of 18



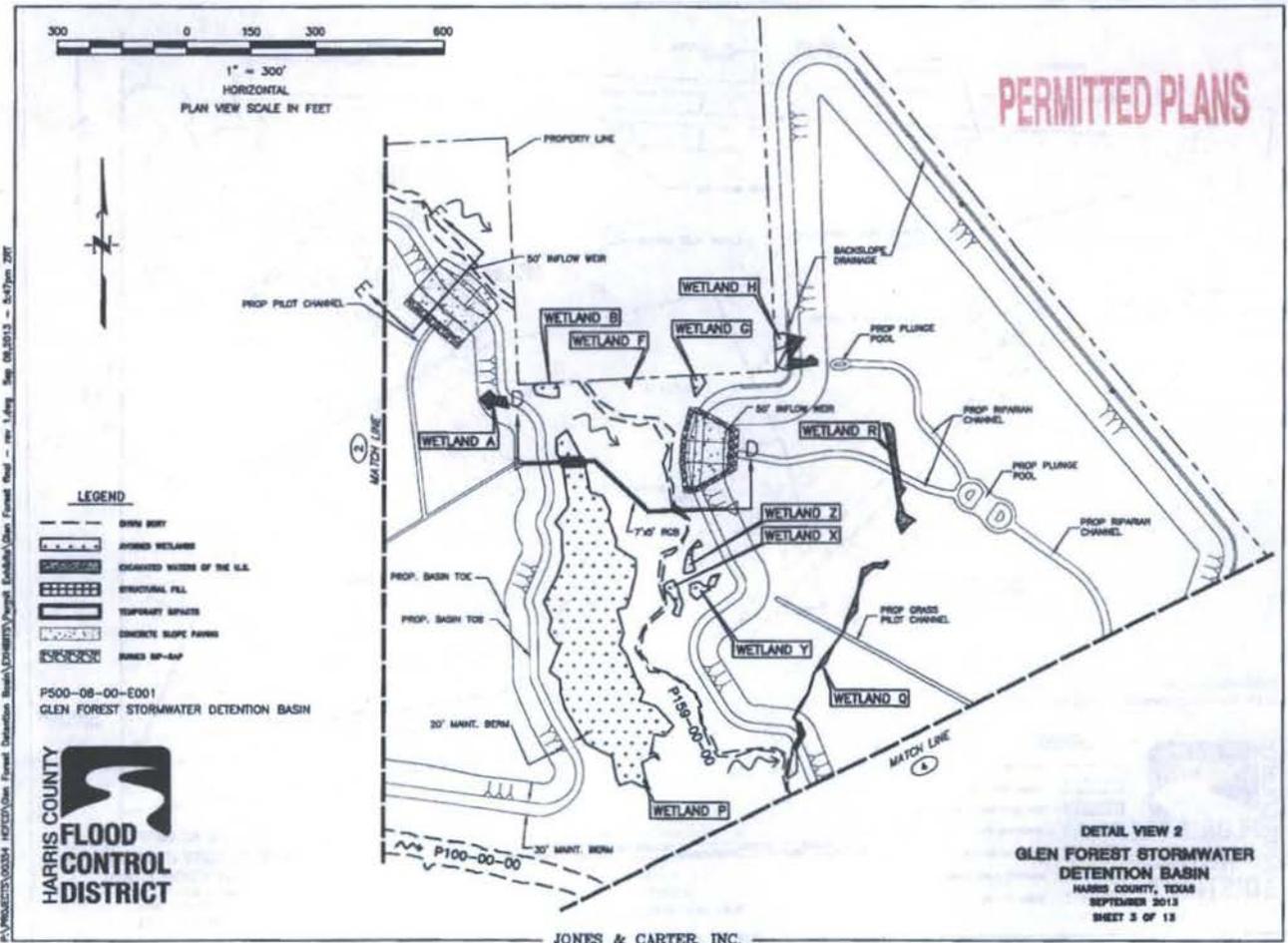
SWG-2009-00691
 P500-08-00-E001 Glenn Forest Detention Basin Project
 April 10, 2013
 Sheet 4 of 18
 Harris County Flood Control District

PERMITTED PLANS



SWG-2009-00691
P500-08-00-E001 Glenn Forest Detention Basin Project
April 10, 2013
Sheet 5 of 18

Harris County Flood Control District



SWG-2009-00691
P500-08-00-E001 Glenn Forest Detention Basin Project
April 10, 2013
Sheet 6 of 18

Harris County Flood Control District

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P500-08-00-E001
 GLEN FOREST STORMWATER DETENTION BASIN



| LEGEND | |
|--------|------------------------------|
| | DHWM BORY |
| | AVOIDED WETLANDS |
| | EXCAVATED WATERS OF THE U.S. |
| | STRUCTURAL FILL |
| | TEMPORARY IMPACTS |
| | CONCRETE SLOPE PAVING |
| | BURIED RIP-RAP |

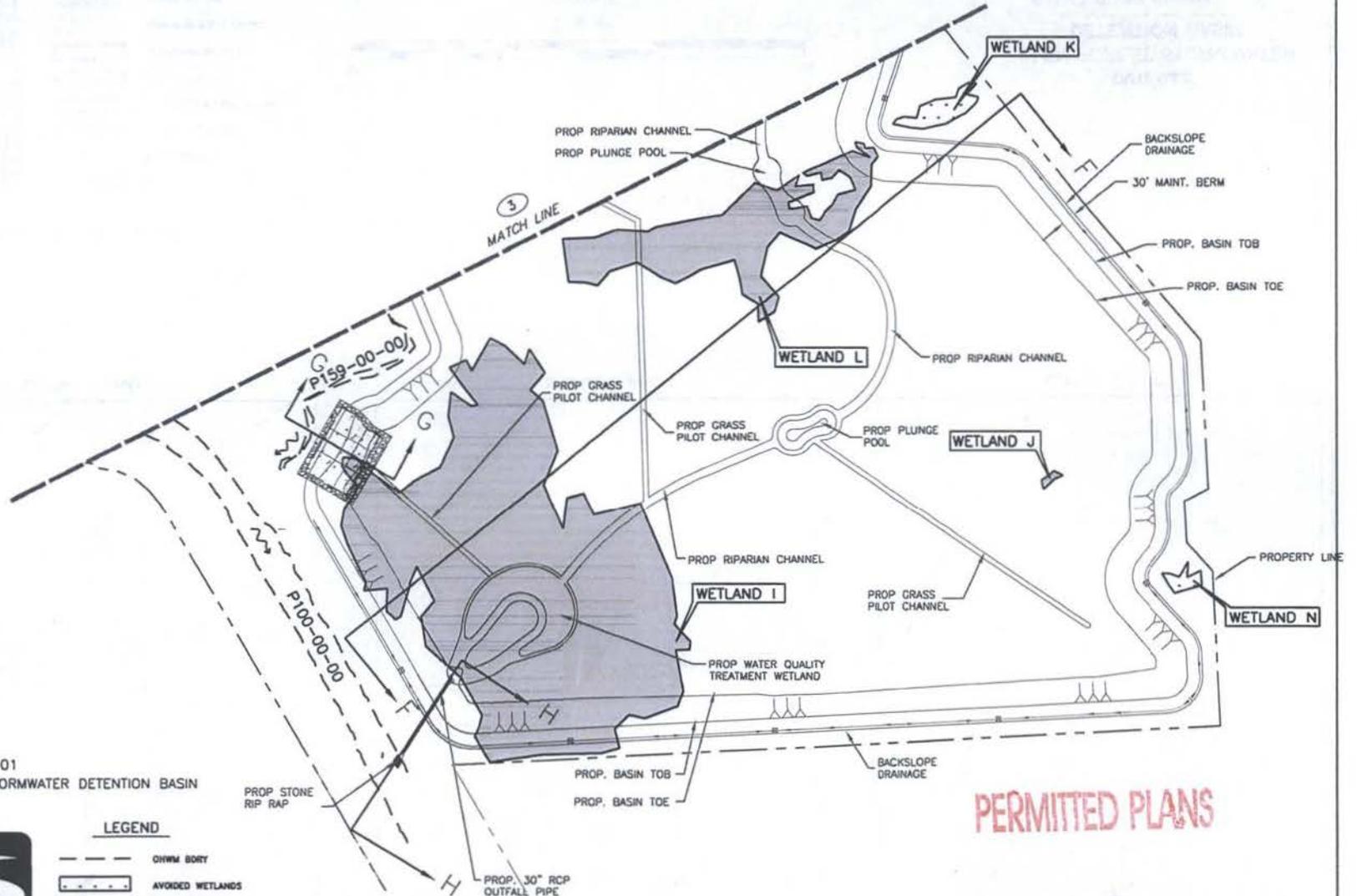


1" = 300'

HORIZONTAL

PLAN VIEW SCALE IN FEET

JONES & CARTER, INC.

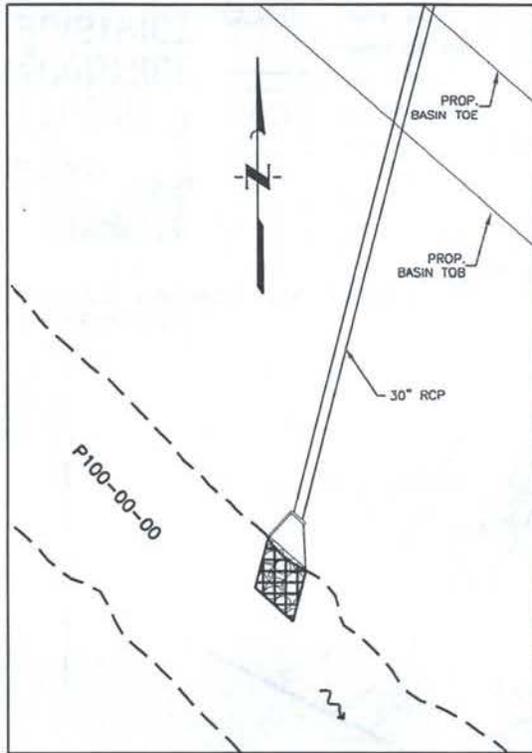


PERMITTED PLANS

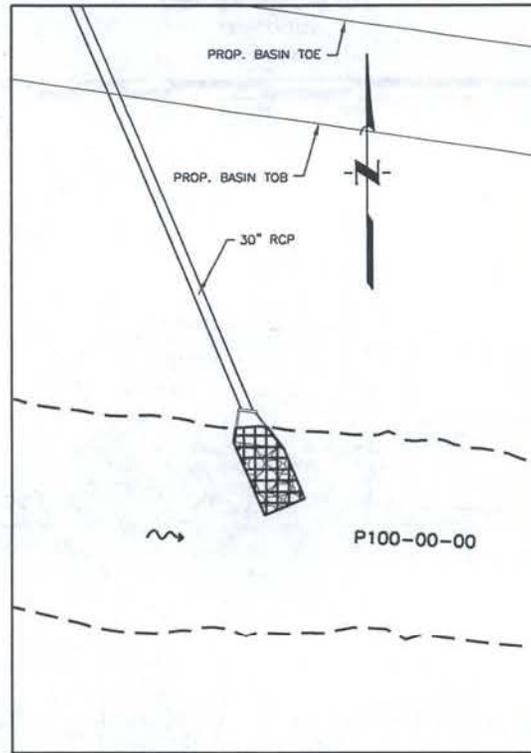
**DETAIL VIEW 3
 GLEN FOREST STORMWATER
 DETENTION BASIN
 SWG-2009-00691**

**P500-08-00-E001 Glenn Forest Detention Basin Project
 April 10, 2013
 Sheet 7 of 18**

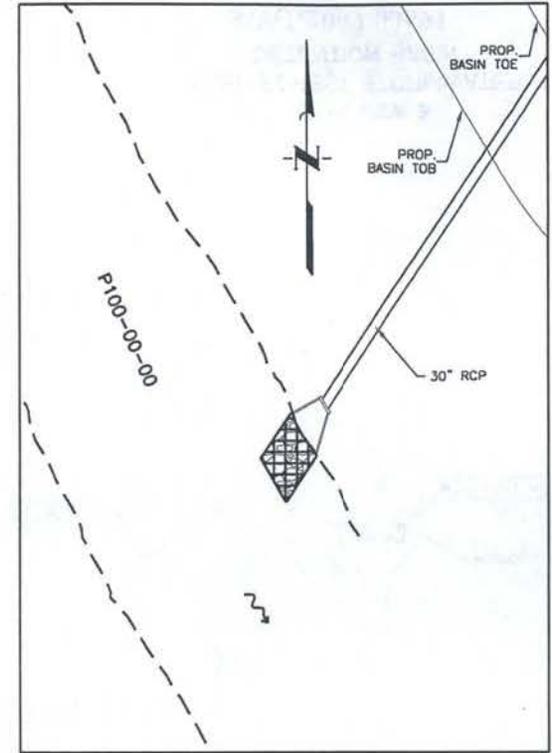
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OUTFALL A INSET



OUTFALL B INSET



OUTFALL C INSET

P500-08-00-E001
 GLEN FOREST STORMWATER DETENTION BASIN



LEGEND

| | |
|--|------------------------------|
| | OHWM BDRY |
| | AVOIDED WETLANDS |
| | EXCAVATED WATERS OF THE U.S. |
| | STRUCTURAL FILL |
| | TEMPORARY IMPACTS |
| | CONCRETE SLOPE PAVING |
| | BURIED RIP-RAP |



1" = 50'
 HORIZONTAL
 PLAN VIEW SCALE IN FEET

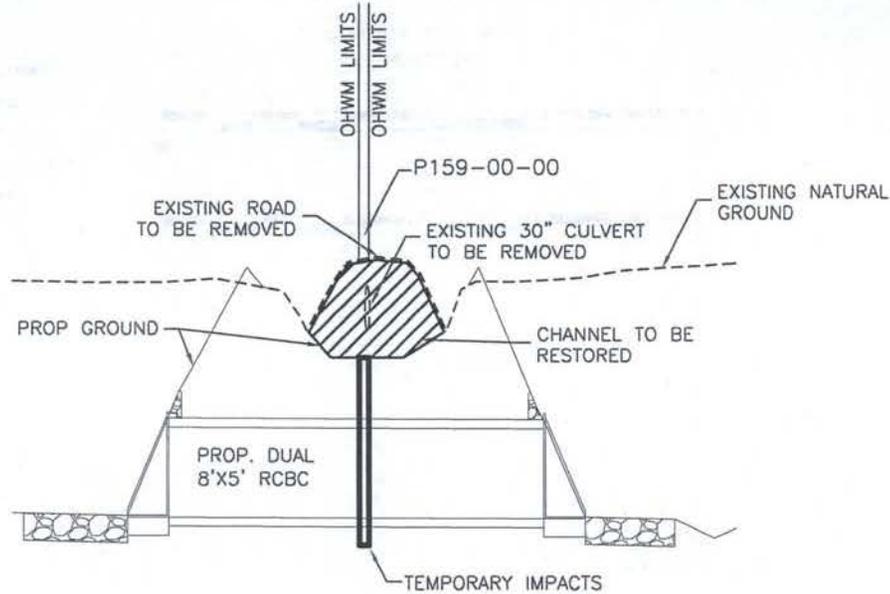
PERMITTED PLANS

JONES & CARTER, INC.

OUTFALLS
 GLEN FOREST STORMWATER
 DETENTION BASIN

SWG-2009-00691

P500-08-00-E001 Glenn Forest Detention Basin Project
 April 10, 2013
 Sheet 8 of 18



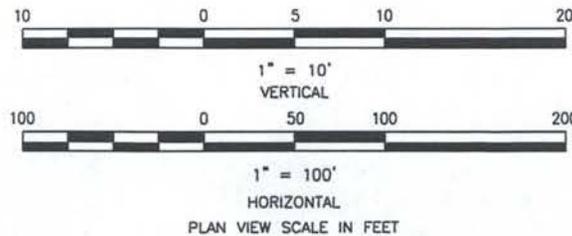
CROSS SECTION A-A

PERMITTED PLANS

P500-08-00-E001
 GLEN FOREST STORMWATER DETENTION BASIN



| LEGEND | |
|--------|------------------------------|
| | OHWM BDRY |
| | AVOIDED WETLANDS |
| | EXCAVATED WATERS OF THE U.S. |
| | STRUCTURAL FILL |
| | TEMPORARY IMPACTS |
| | CONCRETE SLOPE PAVING |
| | BURIED RIP-RAP |



JONES & CARTER, INC.

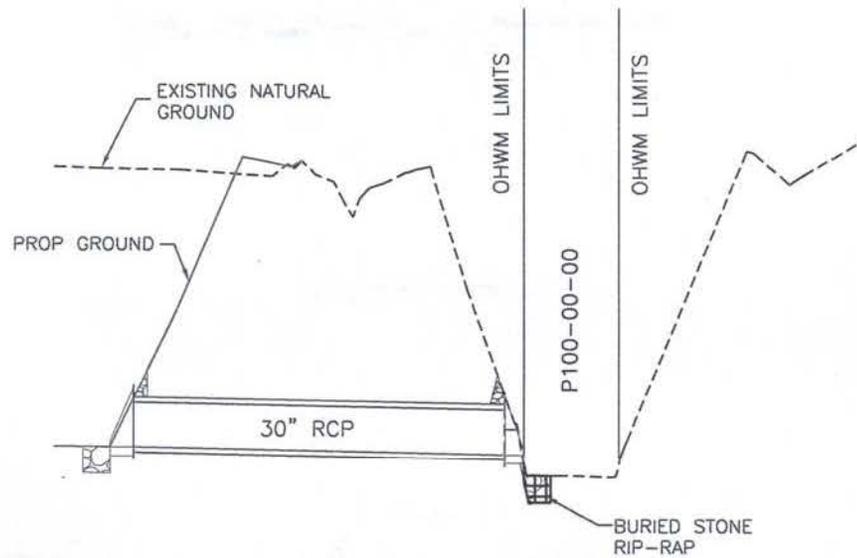
CROSS SECTION A-A
 GLEN FOREST STORMWATER
 DETENTION BASIN
 HARRIS COUNTY, TEXAS

SWG-2009-00691

P500-08-00-E001 Glenn Forest Detention Basin Project

April 10, 2013

Sheet 9 of 18

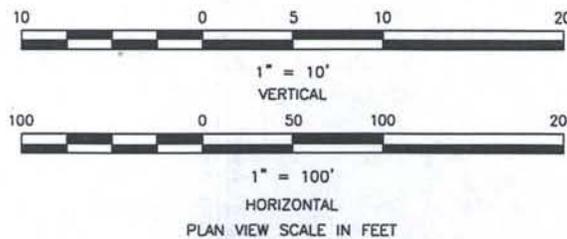


CROSS SECTION B-B

P500-08-00-E001
GLEN FOREST STORMWATER DETENTION BASIN



| LEGEND | |
|--------|------------------------------|
| | OHWM BORY |
| | AVOIDED WETLANDS |
| | EXCAVATED WATERS OF THE U.S. |
| | STRUCTURAL FILL |
| | TEMPORARY IMPACTS |
| | CONCRETE SLOPE PAVING |
| | BURIED RIP-RAP |



PERMITTED PLANS

CROSS SECTION B-B
GLEN FOREST STORMWATER
DETENTION BASIN
HARRIS COUNTY, TEXAS

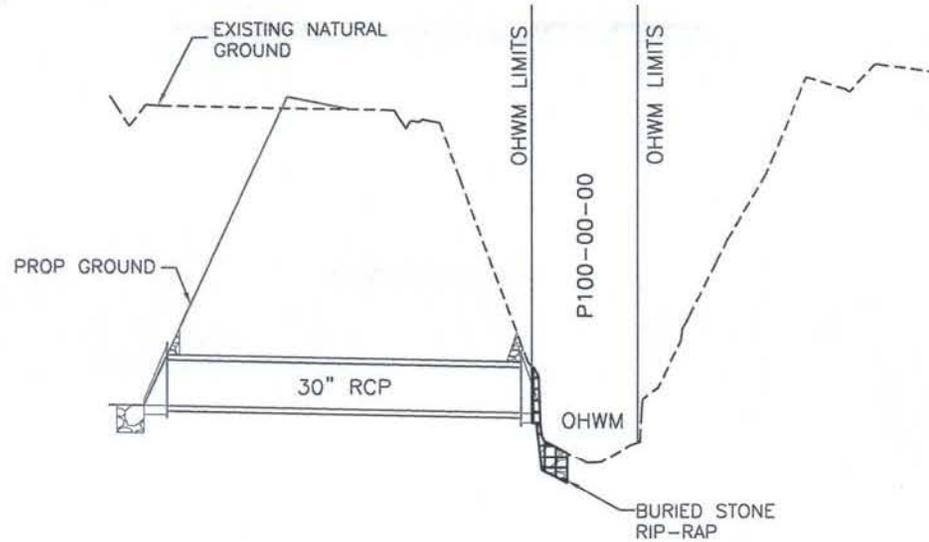
SWG-2009-00691

JONES & CARTER, INC.

P500-08-00-E001 Glenn Forest Detention Basin Project

April 10, 2013

Sheet 10 of 18

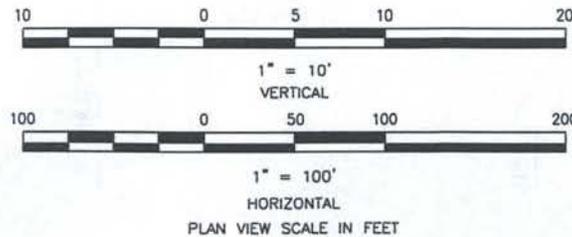


CROSS SECTION C-C

P500-08-00-E001
 GLEN FOREST STORMWATER DETENTION BASIN



| LEGEND | |
|--------|------------------------------|
| | OHWM BDRY |
| | AVOIDED WETLANDS |
| | EXCAVATED WATERS OF THE U.S. |
| | STRUCTURAL FILL |
| | TEMPORARY IMPACTS |
| | CONCRETE SLOPE PAVING |
| | BURIED RIP-RAP |



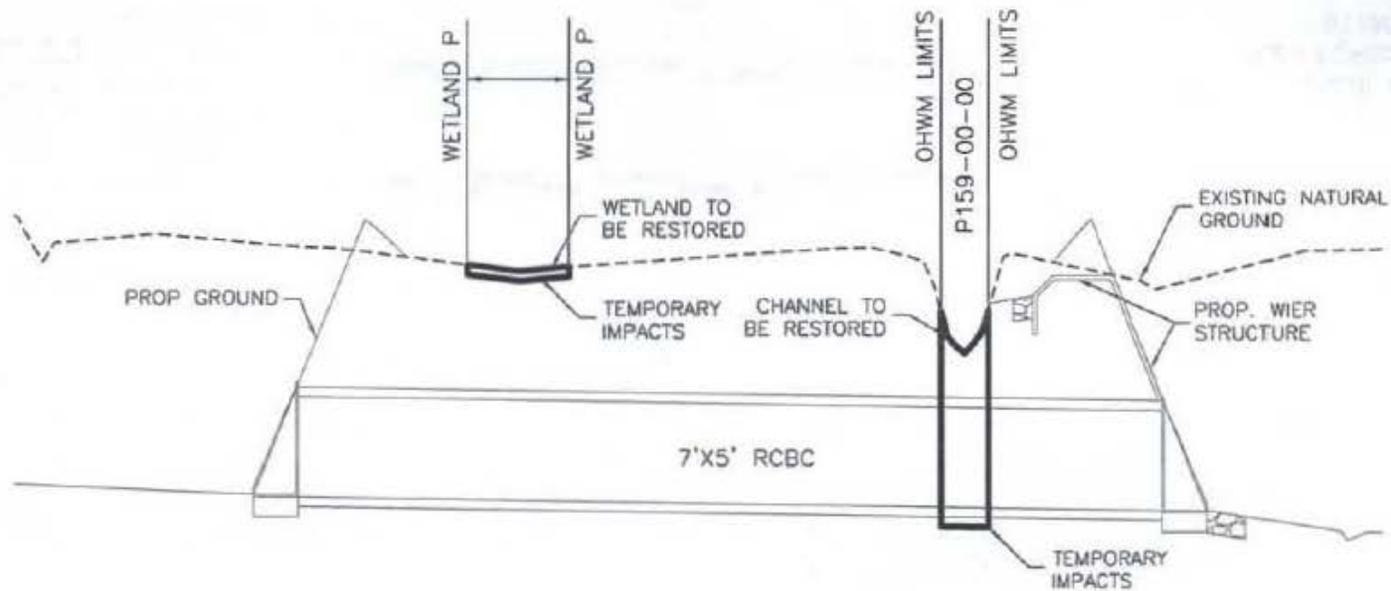
PERMITTED PLANS

CROSS SECTION C-C
 GLEN FOREST STORMWATER
 DETENTION BASIN

SWG-2009-00691

P500-08-00-E001 Glenn Forest Detention Basin Project
 April 10, 2013
 Sheet 11 of 18

JONES & CARTER, INC.



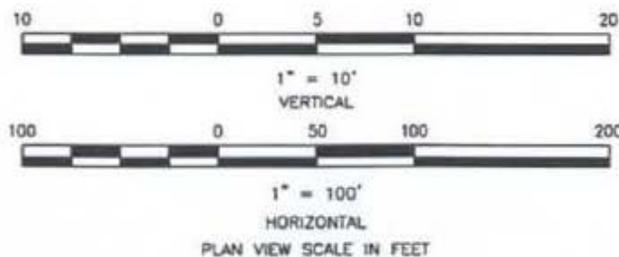
PERMITTED PLANS

CROSS SECTION D-D

P500-08-00-E001
GLEN FOREST STORMWATER DETENTION BASIN



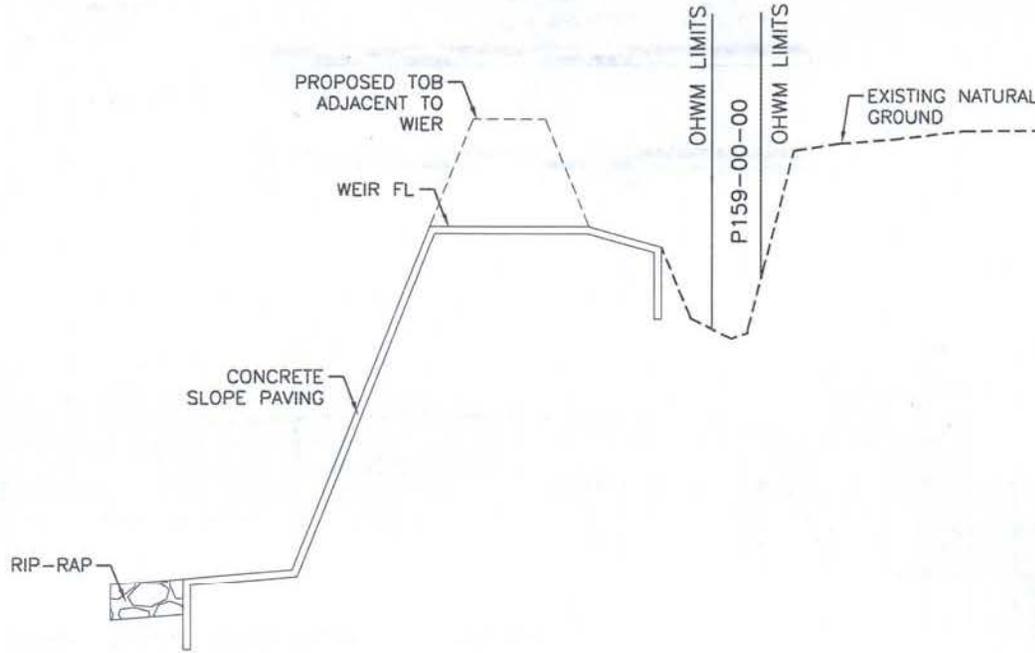
| LEGEND | |
|--------|------------------------------|
| | OHWM BORDY |
| | AVOIDED WETLANDS |
| | EXCAVATED WATERS OF THE U.S. |
| | STRUCTURAL FILL |
| | TEMPORARY IMPACTS |
| | CONCRETE SLOPE PAVING |
| | BURIED HP-RAP |



CROSS SECTION D-D
GLEN FOREST STORMWATER
DETENTION BASIN
SWG-2009-00691

P500-08-00-E001 Glenn Forest Detention Bas

April 10, 2013
Sheet 12 of 18

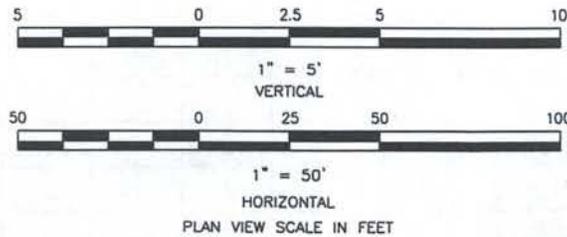


CROSS SECTION E-E

P500-08-00-E001
 GLEN FOREST STORMWATER DETENTION BASIN



| LEGEND | |
|--------|------------------------------|
| | OHWM BDRY |
| | AVOIDED WETLANDS |
| | EXCAVATED WATERS OF THE U.S. |
| | STRUCTURAL FILL |
| | TEMPORARY IMPACTS |
| | CONCRETE SLOPE PAVING |
| | BURIED RIP-RAP |



PERMITTED PLANS

CROSS SECTION E-E
 GLEN FOREST STORMWATER
 DETENTION BASIN

SWG-2009-00691

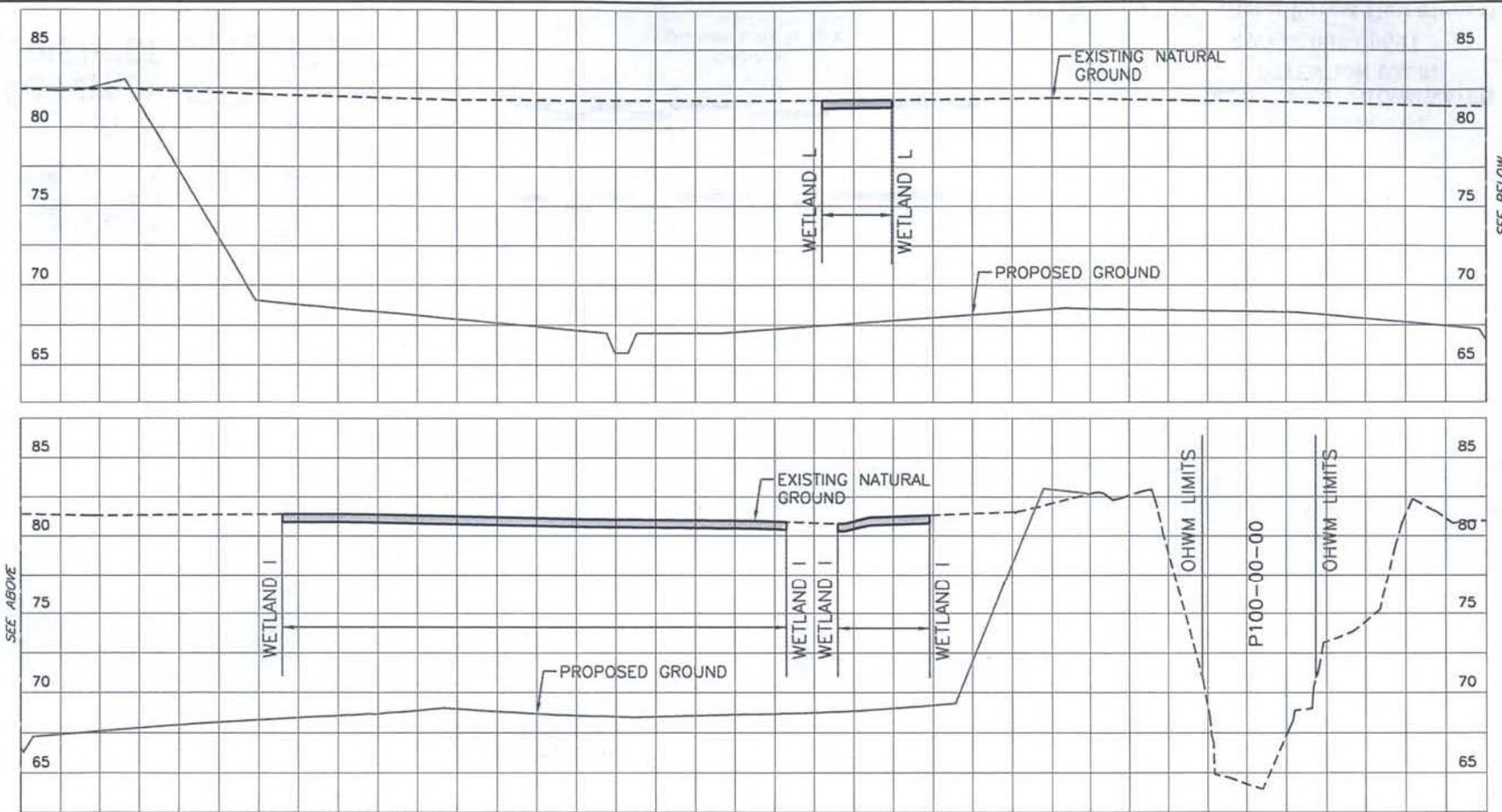
P500-08-00-E001 Glenn Forest Detention Basin Project

April 10, 2013

Sheet 13 of 18

JONES & CARTER, INC.

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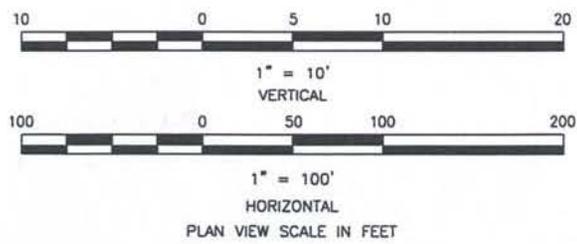


CROSS SECTION F-F

P500-08-00-E001
GLEN FOREST STORMWATER DETENTION BASIN



- LEGEND**
- OHWM BORY
 - AVOIDED WETLANDS
 - EXCAVATED WATERS OF THE U.S.
 - STRUCTURAL FILL
 - TEMPORARY IMPACTS
 - CONCRETE SLOPE PAVING
 - BURIED RIP-RAP



JONES & CARTER, INC.

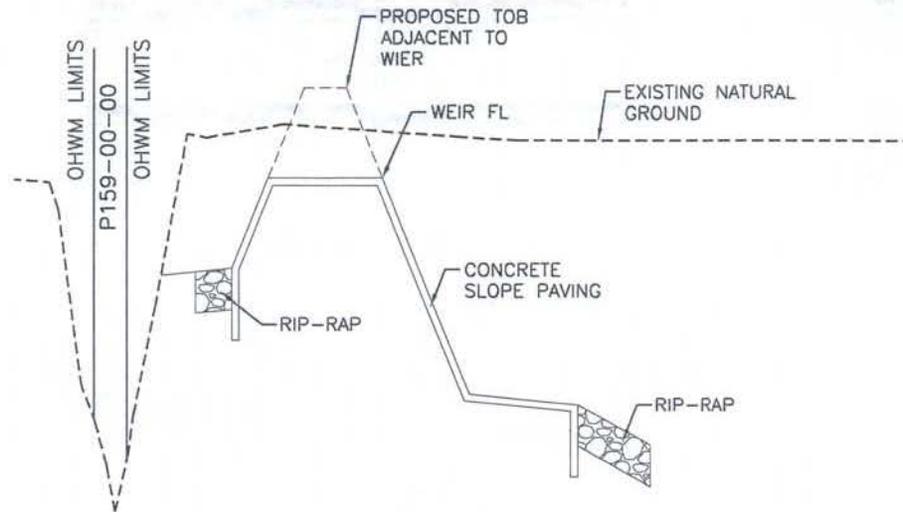
PERMITTED PLANS

**CROSS-SECTION F-F
GLEN FOREST STORMWATER
DETENTION BASIN**

SWG-2009-00691

P500-08-00-E001 Glenn Forest Detention Basin Project
April 10, 2013
Sheet 14 of 18

Harris County Public Infrastructure Department

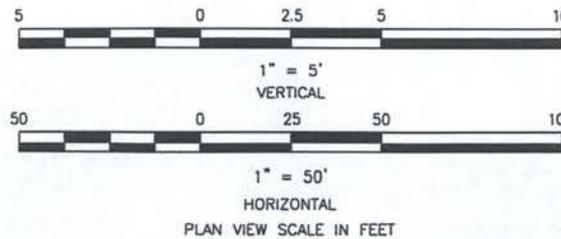


CROSS SECTION G-G

P500-08-00-E001
 GLEN FOREST STORMWATER DETENTION BASIN



| LEGEND | |
|--------|------------------------------|
| | OHWM BORD |
| | AVOIDED WETLANDS |
| | EXCAVATED WATERS OF THE U.S. |
| | STRUCTURAL FILL |
| | TEMPORARY IMPACTS |
| | CONCRETE SLOPE PAVING |
| | BURIED RIP-RAP |



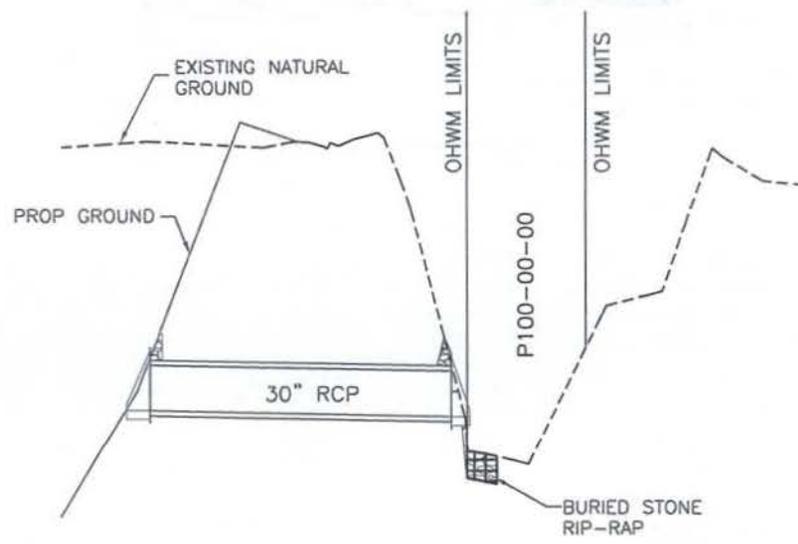
PERMITTED PLANS

CROSS SECTION G-G
 GLEN FOREST STORMWATER
 DETENTION BASIN

SWG-2009-00691

P500-08-00-E001 Glenn Forest Detention Basin Project
 April 10, 2013
 Sheet 15 of 18

JONES & CARTER, INC.



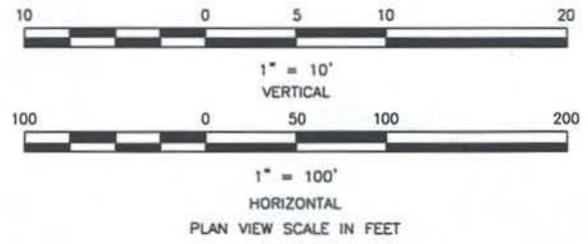
CROSS SECTION H-H

P500-08-00-E001
 GLEN FOREST STORMWATER DETENTION BASIN



LEGEND

| | |
|--|------------------------------|
| | OHWM BARY |
| | AVOIDED WETLANDS |
| | EXCAVATED WATERS OF THE U.S. |
| | STRUCTURAL FILL |
| | TEMPORARY IMPACTS |
| | CONCRETE SLOPE PAVING |
| | BURIED RIP-RAP |



PERMITTED PLANS

CROSS SECTION H-H
 GLEN FOREST STORMWATER
 DETENTION BASIN

SWG-2009-00691

P500-08-00-E001 Glenn Forest Detention Basin Project
 April 10, 2013
 Sheet 16 of 18

JONES & CARTER, INC.

**HCFC D P500-08-00-E001 (Glen Forest) Detention Basin Project
Impacts to Waters of the U.S., Including Wetlands**

| Map ID (Exhibit B) | Classification | Total Area (acres) | Impacted Area (acres) | Temporary Impacted Area (acres) | Avoided Area (acres) | Excavation (cubic yards) | Temporary Excavation (cubic yards) | Structural Fill (cubic yards) |
|---|----------------|-----------------------|-----------------------------|--|----------------------------|--------------------------------|---|--|
| Wetlands | | | | | | | | |
| A | PEM | 0.03 | 0.03 | 0.00 | 0.00 | 27 | 0 | 0 |
| B | PFO | 0.04 | 0.00 | 0.00 | 0.04 | 0 | 0 | 0 |
| E | PFO | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| F | PFO | 0.01 | 0.00 | 0.00 | 0.01 | 0 | 0 | 0 |
| G | PFO | 0.02 | 0.00 | 0.00 | 0.02 | 0 | 0 | 0 |
| H | PFO | 0.10 | 0.06 | 0.00 | 0.04 | 46 | 0 | 0 |
| I | PFO | 7.14 | 7.14 | 0.00 | 0.00 | 5,759 | 0 | 0 |
| J | PEM | 0.01 | 0.01 | 0.00 | 0.00 | 11 | 0 | 0 |
| K | PEM | 0.15 | 0.00 | 0.00 | 0.15 | 0 | 0 | 0 |
| L | PEM | 1.54 | 1.54 | 0.00 | 0.00 | 1,243 | 0 | 0 |
| N | PFO | 0.05 | 0.00 | 0.00 | 0.05 | 0 | 0 | 0 |
| O | PEM | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| P | PFO | 2.58 | 0.00 | 0.02 | 2.56 | 0 | 17 | 0 |
| Q | PEM | 0.10 | 0.08 | 0.00 | 0.02 | 62 | 0 | 0 |
| R | PFO | 0.10 | 0.10 | 0.00 | 0.00 | 100 | 0 | 0 |
| X | PFO | 0.04 | 0.00 | 0.00 | 0.04 | 0 | 0 | 0 |
| Y | PFO | 0.04 | 0.00 | 0.00 | 0.04 | 0 | 0 | 0 |
| Z | PFO | 0.03 | 0.00 | 0.00 | 0.03 | 0 | 0 | 0 |
| Subtotal | -- | 11.98 | 8.96 | 0.02 | 3.00 | 7,248 | 17 | 0 |
| Waters of the U.S. | | | | | | | | |
| Greens Bayou ^{1,2} (P100-00-00) | Perennial | N/A | 0.02 | 0.00 | N/A | 11 | 0 | 48 |
| D (P159-00-00) | Intermittent | 1.35 | 0.00 | 0.01 | 1.34 | 0 | 224 | 0 |
| Subtotal | -- | 1.35 | 0.02 | 0.01 | 1.34 | 11 | 224 | 48 |
| Total | | 13.33 | 8.98 | 0.03 | 4.34³ | 7,259 | 241 | 48 |

1 P100-00-00 (Greens Bayou) was not identified in the Final USACE Verified Wetlands and Waters of the U.S. Delineation Report (Crouch, 2010) or SWG-2009-00691 Determination.

2 Atkins field-delineated the OHWM of P100-00-00 (Greens Bayou) in December 2012. Atkins did not observe a wetland fringe area or Special Aquatic site below the OHWM.

3 4.34 = 13.33 - 8.96 - 0.03. Reflects impacts to wetlands and P159-00-00; only the outfalls of P100-00-00 (Greens Bayou) are considered as part of the project.

PERMITTED PLANS

SWG-2009-00691

P500-08-00-E001 Glenn Forest Detention Basin Project

April 10, 2013

Sheet 17 of 18

Harris County Public Infrastructure Department

P500-08-00-E001 (SWG-2009-00691)
Wetland and Waters of the U.S. Table

| ID | Longitude(DD) | Latitude (DD) | Easting | Northing | Acreage |
|--------------------------------|---------------|---------------|---------------|----------------|--------------|
| Jurisdictional Wetlands | | | | | |
| A | -95.408591 | 29.956593 | 267561.369372 | 3316416.028135 | 0.03 |
| B | -95.408197 | 29.956652 | 267599.540603 | 3316421.769894 | 0.04 |
| E | -95.411410 | 29.956725 | 267289.551289 | 3316436.380289 | 0.00 |
| F | -95.407601 | 29.956679 | 267657.136879 | 3316423.554949 | 0.01 |
| G | -95.407072 | 29.956665 | 267708.170027 | 3316420.930934 | 0.02 |
| H | -95.406403 | 29.956844 | 267773.166715 | 3316439.418896 | 0.10 |
| I | -95.405701 | 29.952490 | 267830.807271 | 3315955.327095 | 7.14 |
| J | -95.402349 | 29.952946 | 268155.456500 | 3315999.094763 | 0.01 |
| K | -95.402956 | 29.954995 | 268101.618509 | 3316227.467430 | 0.15 |
| L | -95.404452 | 29.954324 | 267955.643963 | 3316156.109599 | 1.54 |
| N | -95.401531 | 29.952359 | 268233.060331 | 3315932.368181 | 0.05 |
| O | -95.411376 | 29.956949 | 267293.355574 | 3316461.143225 | 0.00 |
| P | -95.407956 | 29.955213 | 267619.455319 | 3316261.758447 | 2.58 |
| Q | -95.406206 | 29.954868 | 267787.587301 | 3316219.966987 | 0.10 |
| R | -95.405652 | 29.956002 | 267843.704391 | 3316344.556480 | 0.10 |
| X | -95.407310 | 29.955282 | 267681.976847 | 3316268.098318 | 0.04 |
| Y | -95.407072 | 29.955348 | 267705.105490 | 3316274.932598 | 0.04 |
| Z | -95.407175 | 29.955550 | 267695.632552 | 3316297.534366 | 0.03 |
| SUBTOTAL | | | | | 11.98 |
| Waters of the U.S. | | | | | |
| D | -95.409900 | 29.957700 | 267437.587000 | 3316541.401000 | 1.35 |
| TOTAL JD Acreage | | | | | 13.33 |

PERMITTED PLANS

OCT 10 2013

Bryan W. Shaw, Ph.D., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 7, 2013

Mr. Dwayne Johnson
U.S. Army Corps of Engineers
Galveston District CESWG-PE-RE
P.O. Box 1229
Galveston, Texas 77553-1229

Re: USACE Permit Application No. SWG-2009-00691

Dear Mr. Johnson:

This letter is in response to the Statement of Findings (SOF) dated September 23, 2013, for the Joint Public Notice dated April 16, 2013, on the Harris County Flood Control District (HCFCD) proposed construction of the Glenn Forest Detention Basin (P500-08-00-E001). The project is located in the Greens Bayou watershed, east of Interstate Highway 45 between Rankin Road and Greens Road, Harris County, Texas.

The Texas Commission on Environmental Quality (TCEQ) has reviewed the public notice and related application information along with the SOF. On behalf of the Executive Director and based on our evaluation of the information contained in these documents, the TCEQ certifies that there is reasonable assurance that the project will be conducted in a way that will not violate water quality standards. General information regarding this water quality certification, including standard provisions of the certification, is included as an attachment to this letter.

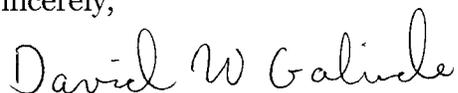
The applicant proposes to construct the Glenn Forest Detention Basin to lower flood surface elevations and reduce structure flooding in the Greens Bayou watershed. The detention basin as proposed will consist of three interconnected detention cells, connected by culverts and excavated to various depths. The total project area is 160 acres with permanent impacts to 8.96 acres of wetlands and 0.02 acre of stream, as well as temporary impacts to 0.02 acre of wetlands and 0.01 acre of stream due to project construction. The applicant proposes to mitigate for project construction impacts by purchasing credits from the Greens Bayou Mitigation Bank.

Mr. Dwayne Johnson
U.S. Army Corps of Engineers
USACE Permit Application No. SWG-2009-00691
Page 2
October 7, 2013

No review of property rights, location of property lines, nor the distinction between public and private ownership has been made, and this certification may not be used in any way with regard to questions of ownership.

If you require additional information or further assistance, please contact Ms. Brittany Lee, Water Quality Assessment Section, Water Quality Division (MC-150), by phone at (512) 239-5210 or if by email at Brittany.Lee@tceq.texas.gov.

Sincerely,



David W. Galindo, Director
Water Quality Division
Texas Commission on Environmental Quality

DWG/BL/gbg

Attachment

ccs: Mr. Glenn Laird, Harris County Flood Control District, 9900 Northwest Freeway,
Houston, Texas 77092
Ms. Katie Wanka, Harris County Flood Control District, 9900 Northwest Freeway,
Houston, Texas 77092

WORK DESCRIPTION: As described in the public notice dated April 16, 2013, and the September 23, 2013, Environmental Assessment and Statement of Findings.

SPECIAL CONDITIONS: None

GENERAL: This certification, issued pursuant to the requirements of Title 30, Texas Administrative Code, Chapter 279, is restricted to the work described in the September 23, 2013, Environmental Assessment and Statement of Findings and shall be concurrent with the Corps of Engineers (COE) permit. This certification may be extended to any minor revision of the COE permit when such change(s) would not result in an impact on water quality. The Texas Commission on Environmental Quality (TCEQ) reserves the right to require full joint public notice on a request for minor revision. The applicant is hereby placed on notice that any activity conducted pursuant to the COE permit which results in a violation of the state's surface water quality standards may result in an enforcement proceeding being initiated by the TCEQ or a successor agency.

STANDARD PROVISIONS: These following provisions attach to any permit issued by the COE and shall be followed by the permittee or any employee, agent, contractor, or subcontractor of the permittee during any phase of work authorized by a COE permit.

1. The water quality of wetlands shall be maintained in accordance with all applicable provisions of the Texas Surface Water Quality Standards including the General, Narrative, and Numerical Criteria.
2. The applicant shall not engage in any activity which will cause surface waters to be toxic to man, aquatic life, or terrestrial life.
3. Permittee shall employ measures to control spills of fuels, lubricants, or any other materials to prevent them from entering a watercourse. All spills shall be promptly reported to the TCEQ by calling the State of Texas Environmental Hotline at 1-800-832-8224.
4. Sanitary wastes shall be retained for disposal in some legal manner. Marinas and similar operations which harbor boats equipped with marine sanitation devices shall provide state/federal permitted treatment facilities or pump out facilities for ultimate transfer to a permitted treatment facility. Additionally, marinas shall display signs in appropriate locations advising boat owners that the discharge of sewage from a marine sanitation device to waters in the state is a violation of state and federal law.
5. Materials resulting from the destruction of existing structures shall be removed from the water or areas adjacent to the water and disposed of in some legal manner.

6. A discharge shall not cause substantial and persistent changes from ambient conditions of turbidity or color. The use of silt screens or other appropriate methods is encouraged to confine suspended particulates.
7. The placement of any material in a watercourse or wetlands shall be avoided and placed there only with the approval of the Corps when no other reasonable alternative is available. If work within a wetland is unavoidable, gouging or rutting of the substrate is prohibited. Heavy equipment shall be placed on mats to protect the substrate from gouging and rutting if necessary.
8. Dredged Material Placement: Dredged sediments shall be placed in such a manner as to prevent any sediment runoff onto any adjacent property not owned by the applicant. Liquid runoff from the disposal area shall be retained on-site or shall be filtered and returned to the watercourse from which the dredged materials were removed. Except for material placement authorized by this permit, sediments from the project shall be placed in such a manner as to prevent any sediment runoff into waters in the state, including wetlands.
9. If contaminated spoil that was not anticipated or provided for in the permit application is encountered during dredging, dredging operations shall be immediately terminated and the TCEQ shall be contacted by calling the State of Texas Environmental Hotline at 1-800-832-8224. Dredging activities shall not be resumed until authorized by the Commission.
10. Contaminated water, soil, or any other material shall not be allowed to enter a watercourse. Noncontaminated stormwater from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
11. Storm water runoff from construction activities that result in a disturbance of one or more acres, or are a part of a common plan of development that will result in the disturbance of one or more acres, must be controlled and authorized under Texas Pollutant Discharge Elimination System (TPDES) general permit TXR150000. A copy of the general permit, application (notice of intent), and additional information is available at: http://www.tceq.state.tx.us/nav/permits/wq_construction.html or by contacting the TCEQ Storm Water & Pretreatment Team at (512) 239-4671.
12. Upon completion of earthwork operations, all temporary fills shall be removed from the watercourse/wetland, and areas disturbed during construction shall be seeded, ripped, or given some other type of protection to minimize subsequent soil erosion. Any fill material shall be clean and of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters.

13. Disturbance to vegetation will be limited to only what is absolutely necessary. After construction, all disturbed areas will be revegetated to approximate the pre-disturbance native plant assemblage.
14. Where the control of weeds, insects, and other undesirable species is deemed necessary by the permittee, control methods which are nontoxic to aquatic life or human health shall be employed when the activity is located in or in close proximity to water, including wetlands.
15. Concentrations of taste and odor producing substances shall not interfere with the production of potable water by reasonable water treatment methods, impart unpalatable flavor to food fish including shellfish, result in offensive odors arising from the water, or otherwise interfere with reasonable use of the water in the state.
16. Surface water shall be essentially free of floating debris and suspended solids that are conducive to producing adverse responses in aquatic organisms, putrescible sludge deposits, or sediment layers which adversely affect benthic biota or any lawful uses.
17. Surface waters shall be essentially free of settleable solids conducive to changes in flow characteristics of stream channels or the untimely filling of reservoirs, lakes, and bays.
18. The work of the applicant shall be conducted such that surface waters are maintained in an aesthetically attractive condition and foaming or frothing of a persistent nature is avoided. Surface waters shall be maintained so that oil, grease, or related residue will not produce a visible film of oil or globules of grease on the surface or coat the banks or bottoms of the watercourse.
19. This certification shall not be deemed as fulfilling the applicant's/permittee's responsibility to obtain additional authorization/approval from other local, state, or federal regulatory agencies having special/specific authority to preserve and/or protect resources within the area where the work will occur.



DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON TX 77553-1229

FEB 01 2010

REPLY TO
ATTENTION OF:

Policy Analysis Section

SUBJECT: SWG-2009-691; Preliminary Jurisdictional Determination, P500-08-00-E001,
Harris County, Texas

Harris County Flood Control District
ATTN: Ingrid Fairchild
9900 Northwest Freeway
Houston, Texas 77092

Dear Ms. Fairchild:

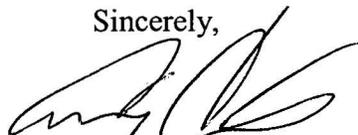
Enclosed is a preliminary jurisdictional determination (JD) for P500-08-00-E001. The subject 171 acre tract is located east of Interstate Highway 45 and north of Greens Bayou in Harris County, Texas.

Approximately 11.98 acres of wetlands and 1.35 acres of water were identified under normal circumstances on this tract. Based on the review of the information associated with this request, we have determined that the preliminary delineation map submitted is a reasonable depiction of the approximate locations of the aquatic resources on the site. Computation of impacts made on the basis of this preliminary JD will treat all waters and wetlands that would be affected in any way by any activity on the site as if they are jurisdictional waters of the United States (U.S.). As such, these aquatic resources are subject to Section 404 of the Clean Water Act. If you wish, you may request an approved JD at any time. Please note that if you request an approved JD and then decide to appeal it, the appeal will not be accepted if any work has started in waters of the United States or that would alter the hydrology of waters of the U.S.

This determination has been conducted to identify the limits of the Corps' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

This preliminary JD is valid for 5 years from the date of this letter unless new information warrants a revision prior to the expiration date. This letter supersedes the previous preliminary JD issued November 10, 2009. If you have any questions concerning this matter, please reference file number SWG-2009-691 and contact Mr. Dwayne Johnson at 409-766-6353.

Sincerely,

A handwritten signature in black ink, appearing to read 'Casey Cutler', written in a cursive style.

Casey Cutler
Chief, Policy Analysis Section

Enclosures

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

| | | | |
|--|--|----------------------------------|-------------------|
| Applicant: Harris County Flood Control District | | File Number: SWG-2009-691 | Date: |
| Attached is: | | | See Section below |
| | INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission) | | A |
| | PROFFERED PERMIT (Standard Permit or Letter of Permission) | | B |
| | PERMIT DENIAL | | C |
| | APPROVED JURISDICTIONAL DETERMINATION | | D |
| X | PRELIMINARY JURISDICTIONAL DETERMINATION | | E |

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/ccwo/reg/> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved jurisdictional determination (JD) or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Dwayne A. Johnson
Project Manager, Policy Analysis Section
CESWG-PE-RB
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229
409-766-6353; FAX: 409-766-3931

If you only have questions regarding the appeal process you may also contact:

Mr. James Gilmore
Appeal Review Officer, CESWD-ETO-R
U.S. Army Corps of Engineers
1100 Commerce Street, Room 831
Dallas, Texas 75242-0216
Telephone: 469-487-7061; FAX: 469-487-7190
Email: James.E.Gilmore@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or authorized agent.

Date:

Telephone number:

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

- A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD):** October 20, 2009
- B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:**
Harris County Flood Control District, 9900 Northwest Fwy, Houston, TX. 77092
- C. DISTRICT OFFICE, FILE NAME, AND NUMBER:** Galveston, SWG-2009-00691
- D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:** The project site is located east of IH 45 and north of Greens Bayou in northern Harris County, Texas.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State:TX **County/parish/borough:** Harris **City:** Houston
Center coordinates of site (lat/long in degree decimal format):
Lat. 29.96° N, Long. -95.41° E.

Universal Transverse Mercator:

Name of nearest waterbody: Greens Bayou

Identify (estimate) amount of waters in the review area:

Non-wetland waters: 5,045 linear feet: 15 avg width (ft) and/or 1.35 acres.
Cowardin Class: Riverine
Stream Flow: Ephemeral
Wetlands: 11.98 acres
Cowardin Class: Emergent

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal:

Non-Tidal:

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination.
 Field Determination. Date(s): Field visit on 9/25/09

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party

who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

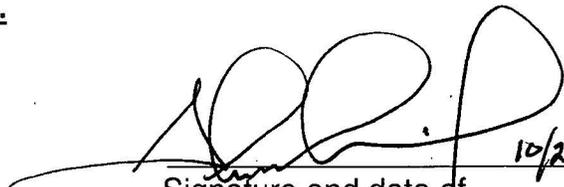
SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply

- checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas: Buffalo-San Jacinto, Texas
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps. HUC 12040104
- U.S. Geological Survey map(s). Cite scale & quad name: Aldine, TX Quad 1919, 1945, 1947, 1954, 1967, and 1982.
- USDA Natural Resources Conservation Service Soil Survey. Citation. 2008 Aerial with NRCS Soil Survey Data
- National wetlands inventory map(s). Cite name: 2008 Aerial with NWI Wetlands.
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: 2008 Aerial with FEMA Floodplain Overlays and Wetlands and Waters of the US. FEMA Panel Number 48201C0460L, dated 6/18/2007.
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): 1930,1956,1984,1999, 2004, and 2008.
or Other (Name & Date):
- Previous determination(s). File no. and date of response letter:
- Other information (please specify):Site photographs.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

 11-5-09
Signature and date of
Regulatory Project Manager
(REQUIRED)

 10/20/09
Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining
the signature is impracticable)

P500-08-00-E001 (SWG-2009-00691)
Wetland and Waters of the U.S. Table

| ID | Longitude(DD) | Latitude (DD) | Easting | Northing | Acreage |
|--------------------------------|---------------|---------------|---------------|----------------|--------------|
| Jurisdictional Wetlands | | | | | |
| A | -95.408591 | 29.956593 | 267561.369372 | 3316416.028135 | 0.03 |
| B | -95.408197 | 29.956652 | 267599.540603 | 3316421.769894 | 0.04 |
| E | -95.411410 | 29.956725 | 267289.551289 | 3316436.380289 | 0.00 |
| F | -95.407601 | 29.956679 | 267657.136879 | 3316423.554949 | 0.01 |
| G | -95.407072 | 29.956665 | 267708.170027 | 3316420.930934 | 0.02 |
| H | -95.406403 | 29.956844 | 267773.166715 | 3316439.418896 | 0.10 |
| I | -95.405701 | 29.952490 | 267830.807271 | 3315955.327095 | 7.14 |
| J | -95.402349 | 29.952946 | 268155.456500 | 3315999.094763 | 0.01 |
| K | -95.402956 | 29.954995 | 268101.618509 | 3316227.467430 | 0.15 |
| L | -95.404452 | 29.954324 | 267955.643963 | 3316156.109599 | 1.54 |
| N | -95.401531 | 29.952359 | 268233.060331 | 3315932.368181 | 0.05 |
| O | -95.411376 | 29.956949 | 267293.355574 | 3316461.143225 | 0.00 |
| P | -95.407956 | 29.955213 | 267619.455319 | 3316261.758447 | 2.58 |
| Q | -95.406206 | 29.954868 | 267787.587301 | 3316219.966987 | 0.10 |
| R | -95.405652 | 29.956002 | 267843.704391 | 3316344.556480 | 0.10 |
| X | -95.407310 | 29.955282 | 267681.976847 | 3316268.098318 | 0.04 |
| Y | -95.407072 | 29.955348 | 267705.105490 | 3316274.932598 | 0.04 |
| Z | -95.407175 | 29.955550 | 267695.632552 | 3316297.534366 | 0.03 |
| SUBTOTAL | | | | | 11.98 |
| Waters of the U.S. | | | | | |
| D | -95.409900 | 29.957700 | 267437.587000 | 3316541.401000 | 1.35 |
| TOTAL JD Acreage | | | | | 13.33 |



In Reply Refer To:
FWS/R2/CLES/

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Division of Ecological Services
17629 El Camino Real, Suite 211
Houston, Texas 77058
281/286-8282 / (FAX) 281/488-5882



March 2013

Thank you for your request for threatened and endangered species, fish and wildlife, environmental, and/or aquatic resources information, comments, and/or recommendations within the United States Fish and Wildlife Service (Service) Clear Lake Ecological Service's area of responsibility. Our comments are provided in accordance with the provisions of the Endangered Species Act (ESA) (16 U.S.C. 1531 et seq.), the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.), the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668 et seq.), the Fish and Wildlife Coordination Act (16 U.S.C. 661-667(e)), and the National Environmental Policy Act (42 U.S.C. §4321-4347 et seq.).

Endangered Species Act

The ESA and Federal regulations prohibit "take" of threatened or endangered species of fish and wildlife within the U.S. or its territorial waters. Please note that "take" is defined to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." A county-by-county listing of federally listed threatened and endangered species that occur within this office's work area can be found at http://www.fws.gov/southwest/es/ES_Lists_Main.cfm.

Section 7 of the ESA

According to Section 7(a)(2) of the ESA, it is the responsibility of each Federal agency to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any federally listed species. As such, Federal agencies are required to consult with the Service if it appears that any action they are proposing "may affect" a listed species.

To evaluate a project for its potential effect(s) to listed species project proponents should use the county-by-county listing and other current species information to determine whether habitat for a listed species is present at the project site. If potential habitat is present, a qualified individual should conduct surveys to determine whether a listed species is present. After completing a habitat evaluation and/or any necessary surveys, project proponents should evaluate the project for potential effects to listed species and make one of the following determinations:

No effect – the proposed action will not affect federally listed species or critical habitat (i.e., suitable habitat for the species occurring in the project county is not present in or adjacent to the action area). No coordination or contact with the Service is necessary. However, if the project changes or

¹ For information regarding habitat requirements of federally listed species please visit <http://ecos.fws.gov/>.

² The effects of any action under Section 7 should be analyzed together with the effects of other activities that are interrelated to, or interdependent with, that action. Therefore, if your proposed action(s) is part of and depends on a separate action for its justification, or has no independent utility apart from the separate action, then it should be considered interrelated or interdependent and should be analyzed under Section 7 of the ESA.

additional information on the distribution of listed or proposed species becomes available, the project should be reanalyzed for effects not previously considered.

Is not likely to adversely affect – the project may affect listed species and/or critical habitat; however, the effects are expected to be discountable (extremely unlikely to occur), insignificant (can't be measured or detected), or completely beneficial. Certain avoidance and minimization measures may need to be implemented in order to reach this level of effect. You should seek written concurrence from the Service that adverse effects have been eliminated. Be sure to include all of the information and documentation used to reach your decision with your request for concurrence. The Service must have this documentation before issuing a concurrence.

Is likely to adversely affect – adverse effects to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial. If the overall effect of the proposed action is beneficial to the listed species but also is likely to cause some adverse effects to individuals of that species, then the proposed action “is likely to adversely affect” the listed species. An “is likely to adversely affect” determination requires the Federal action agency to initiate formal Section 7 consultation with the Service.

Regardless of the determination, the Service recommends developing a complete record of the evaluation, including steps leading to the determination of effect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related articles.

Please be advised that while a Federal agency may designate a non-Federal representative to conduct informal consultations with the Service, assess project effects, or prepare a biological assessment, the Federal agency must notify the Service in writing of such a designation. The Federal agency shall also independently review and evaluate the scope and contents of a biological assessment prepared by their designated non-Federal representative before that document is submitted to the Service.

The Service's Consultation Handbook is available online to assist you with further information on definitions, process, and fulfilling ESA requirements for your projects at http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf.

Section 10 of the ESA

Projects that do not involve a federal nexus can be evaluated under Section 10 of the ESA. If “incidental take” of a listed species is likely to occur during a proposed non-federal activity, then the project sponsor or landowner may apply for an incidental take permit under Section 10 of the ESA. Please see the following links for further guidance on Section 10 <http://www.fws.gov/endangered/permits/index.html> and http://www.fws.gov/southwest/es/AustinTexas/ESA_HCP_FAQs.html.

Candidate Species

Freshwater Mussels

The following species of mussels occur in Texas and are candidates for listing under the ESA: Texas fatmucket *Lampsilis bracteata*, golden orb *Quadrula aurea*, smooth pimpleback *Quadrula houstonensis*, Texas pimpleback *Quadrula petrina*, and Texas fawnsfoot *Truncilla macrodon*. We are also reviewing the status of six other species for potential listing under the ESA. One of the main contributors to mussel die offs is sedimentation, which smothers and suffocates mussels. To reduce sedimentation within rivers, streams, and tributaries crossed by a project, the Service recommends

that that you implement the best management practices within the enclosed document entitled *Best Management Practices for Projects Affecting, Rivers, Streams and Tributaries*.

Candidate Conservation Agreements

Candidate Conservation Agreements (CCAs) or Candidate Conservation Agreements with Assurances (CCAAs) are voluntary agreements between the Service and public or private entities to implement conservation measures to address threats to candidate species. Implementing conservation efforts before species are listed increases the likelihood that simpler, flexible, and more cost-effective conservation options are available. A CCAA can provide participants with assurances that if they engage in conservation actions, they will not be required to implement additional conservation measures beyond those in the agreement. For additional information on CCAs/CCAAs please visit the Service's website at <http://www.fws.gov/endangered/what-we-do/cca.html>.

Migratory Birds

The MBTA protects all native migratory birds and prohibits the taking, killing, possession, and transportation (among other actions) of migratory birds, their eggs, and parts, except when specifically permitted by regulations for specific intentional uses. A list of birds protected under the MBTA can be found in 50 CFR 10 of the MBTA and at <http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/mbtandx.html>. Activities that have the potential to take migratory birds as well as recommendations for reducing such take include:

Utility Lines

The construction of overhead power lines creates threats of avian collision and electrocution. The Service recommends the installation of underground rather than overhead power lines whenever possible. For new lines and/or the modification, maintenance, and update of old lines, we recommend that you implement the Avian Protection Plan guidelines for power lines found at <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/BirdHazards.html>.

Communication Towers

Telecommunication towers are estimated to kill millions of birds per year. We recommend that you implement the guidance in *Service Guidance on Siting, Construction, Operation, and Decommissioning of Communication Towers*. This guidance can be found at <http://www.fws.gov/habitatconservation/communicationtowers.html>.

We request that you provide us with the final location and specifications of your proposed towers, as well as the recommendations implemented. A Tower Site Evaluation Form is also available via the above website; we recommend you complete this form and keep it in your files.

Land Clearing

Land clearing work can destroy active nests (eggs or young present) and kill birds. The Service recommends you review and implement the conservation actions for migratory birds outlined in the enclosed document entitled *Suggested Priority for Migratory Bird Conservation Actions for Projects*.

Colonial Water Bird Rookeries

Disturbance from construction activities and project operations can adversely affect breeding bird use of nesting sites and can result in nest abandonment and loss of reproduction. We recommend that

project activities do not occur within 1,000 feet of colonial waterbird rookeries during the nesting season from February 15 to September 1.

Bald Eagles

The bald eagle *Haliaeetus leucocephalus* is protected by the BGEPA and the MBTA. Accordingly, the Service recommends that project proponents use the *National Bald Eagle Management Guidelines* to avoid and minimize harm and disturbance of bald eagles. These guidelines can be found at <http://www.fws.gov/migratorybirds/BaldAndGoldenEagleManagement.htm>. Eagles are particularly vulnerable to disturbance throughout the nesting season, which in Texas is generally from October 1 to May 30.

Wetlands, Streams, and Other Aquatic Resources

Numerous projects along the Texas coast often impact wetlands, streams, or other aquatic resources or require work in a navigable waterway. Section 404 of the Clean Water Act regulates the discharge of fill material into waters of the U.S. (e.g., wetlands and streams) and Section 10 of the Rivers and Harbors Act of 1899 regulates work and/or structures within navigable waterways. The U.S. Army Corps of Engineers (Corps) is tasked with administering these regulations and we recommend that you coordinate your activities with the Corps for proper permitting and compliance with these regulations.

Thank you for the opportunity to provide comments on your project. If you need any additional information, you can contact one of our biologists (Donna Anderson, Moni Belton, Kelsey Gocke, Jeff Hill, Charrish Stevens, or Arturo Vale) at 281/286-8282.

Sincerely,



Edith Erfling
Field Supervisor

Enclosures

**Suggested Priority of Migratory Bird Conservation Actions for Projects
U.S. Fish and Wildlife Service (USFWS), Migratory Bird Management**

March 9, 2010

1. Avoid any take of migratory birds and/or minimize the loss, destruction, or degradation of migratory bird habitat while completing the proposed project or action.
2. Determine if the proposed project or action will involve below- and/or above-ground construction activities since recommended practices and timing of surveys and clearances could differ accordingly.
3. If the proposed project or action includes a reasonable likelihood that take of migratory birds will occur, then complete actions that could take migratory birds outside of their nesting season. This includes clearing or cutting of vegetation, grubbing, etc. The primary nesting season for migratory birds varies greatly between species and geographic location, but generally extends from early April to mid-July. However, the maximum time period for the migratory bird nesting season can extend from early February through late August. Also, eagles may initiate nesting as early as late December or January depending on the geographic area. Due to this variability, project proponents should consult with the appropriate Regional Migratory Bird Program (USFWS) for specific nesting seasons. Strive to complete all disruptive activities outside the peak of migratory bird nesting season to the greatest extent possible. Always avoid any habitat alteration, removal, or destruction during the primary nesting season for migratory birds. Additionally, clearing of vegetation in the year prior to construction (but not within the nesting season) may discourage birds from attempting to nest in the proposed construction area, thereby decreasing chance of take during construction activities.
4. If a proposed project or action includes the potential for take of migratory birds and/or the loss or degradation of migratory bird habitat and work cannot occur outside the migratory bird nesting season (either the primary or maximum nesting season), project proponents will need to provide the USFWS with an explanation for why work has to occur during the migratory bird nesting season. Further, in these cases, project proponents also need to demonstrate that all efforts to complete work outside the migratory bird nesting season were attempted, and that the reasons work needs to be completed during the nesting season were beyond the proponent's control.

Also, where project work cannot occur outside the migratory bird nesting season, project proponents must survey those portions of the project area during the nesting season prior to construction occurring to determine if migratory birds are present and nesting in those areas. In addition to conducting surveys during the

nesting season/construction phase, companies may also benefit from conducting surveys during the prior nesting season. Such surveys will assist the company in any decisions about the likely presence of nesting migratory birds or sensitive species in the proposed project or work area. While individual migratory birds will not necessarily return to nest at the exact site as in previous years, a survey in the nesting season in the year before construction allows the company to become familiar with species and numbers present in the project area well before the nesting season in the year of construction. Bird surveys should be completed during the nesting season in the best biological timeframe for detecting the presence of nesting migratory birds, using accepted bird survey protocols. USFWS Offices can be contacted for recommendations on appropriate survey guidance. Project proponents should also be aware that results of migratory bird surveys are subject to spatial and temporal variability. Finally, project proponents will need to conduct migratory bird surveys during the actual year of construction, if they cannot avoid work during the primary nesting season (see above) and if construction will impact habitats suitable for supporting nesting birds.

5. If no migratory birds are found nesting in proposed project or action areas immediately prior to the time when construction and associated activities are to occur, then the project activity may proceed as planned.
6. If migratory birds are present and nesting in the proposed project or action area, contact your nearest USFWS Ecological Services Field Office and USFWS Region Migratory Birds Program for guidance as to appropriate next steps to take to minimize impacts to migratory birds associated with the proposed project or action.

* Note: these proposed conservation measures assume that there are no Endangered or Threatened migratory bird species present in the project/action area, or any other Endangered or Threatened animal or plant species present in this area. If Endangered or Threatened species are present, or they could potentially be present, and the project/action may affect these species, then consult with your nearest USFWS Ecological Services Office before proceeding with any project/action.

** The Migratory Bird Treaty Act prohibits the taking, killing, possession, and transportation, (among other actions) of migratory birds, their eggs, parts, and nests, except when specifically permitted by regulations. While the Act has no provision for allowing unauthorized take, the USFWS realizes that some birds may be killed during construction and operation of energy infrastructure, even if all known reasonable and effective measures to protect birds are used. The USFWS Office of Law Enforcement carries out its mission to protect migratory birds through investigations and enforcement, as well as by fostering relationships with individuals, companies, and industries that have taken effective steps to avoid take of migratory birds, and by encouraging others to implement measures to avoid take of migratory birds. It is not possible to absolve

individuals, companies, or agencies from liability even if they implement bird mortality avoidance or other similar protective measures. However, the Office of Law Enforcement focuses its resources on investigating and prosecuting individuals and companies that take migratory birds without identifying and implementing all reasonable, prudent and effective measures to avoid that take. Companies are encouraged to work closely with Service biologists to identify available protective measures when developing project plans and/or avian protection plans, and to implement those measures prior to/during construction or similar activities.

*** Also note that Bald and Golden Eagles receive additional protection under the Bald and Golden Eagle Protection Act (BGEPA). BGEPA prohibits the take, possession, sale, purchase, barter, offer to sell, purchase, or barter, transport, export or import, of any Bald or Golden Eagle, alive or dead, including any part, nest, or egg, unless allowed by permit. Further, activities that would disturb Bald or Golden Eagles are prohibited under BGEPA. "Disturb" means to agitate or bother a Bald or Golden Eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an Eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. If a proposed project or action would occur in areas where nesting, feeding, or roosting eagles occur, then project proponents may need to take additional conservation measures to achieve compliance with BGEPA. New regulations (50 CFR § 22.26 and § 22.27) allow the take of bald and golden eagles and their nests, respectively, to protect interests in a particular locality. However, consultation with the Migratory Bird, Ecological Services, and Law Enforcement programs of the Service will be required before a permit may be issued.

BEST MANAGEMENT PRACTICES FOR PROJECTS AFFECTING RIVERS, STREAMS AND TRIBUTARIES

The project crosses or potentially affects river, stream or tributary aquatic habitat. Therefore the Service recommends implementing the following applicable Best Management Practices:

1. Construct stream crossings during a period of low streamflow (e.g., July - September);
2. Cross streams, stream banks and riparian zones at right angles and at gentle slopes;
3. When feasible, directionally bore under stream channels;
4. Disturb riparian and floodplain vegetation only when necessary;
5. Construction equipment should cross the stream at one confined location over an existing bridge, equipment pads, clean temporary native rock fill, or over a temporary portable bridge;
6. Limit in-stream equipment use to that needed to construct crossings;
7. Place trench spoil at least 25 feet away landward from streambanks;
8. Use sediment filter devices to prevent movement of spoil off right-of-way when standing or flowing water is present;
9. Trench de-watering, as necessary, should be conducted to prevent discharge of silt laden water into the stream channel;
10. Maintain the current contours of the bank and channel bottom;
11. Do not store hazardous materials, chemicals, fuels, lubricating oils, and other such substances within 100 feet of streambanks;
12. Refuel construction equipment at least 100 feet from streambanks;
13. Revegetate all disturbed areas as soon as possible after construction to prevent unnecessary soil erosion. Use only native riparian plants to help prevent the spread of exotics;
14. Maintain sediment filters at the base of all slopes located adjacent to the streams until right-of-way vegetation becomes established;
15. Maintain a vegetative filtration strip adjacent to streams and wetlands. The width of a filter strip is based on the slope of the banks and the width of the stream. Guidance to determine the appropriate filter strip (stream management zone, SMZ) width is provided below; and
16. Direct water runoff into vegetated areas.

SMZ widths should consider watershed characteristics, risk of erosion, soil type, and stream width. SMZ widths are measured from the top of each bank and established on each side of the stream. Erosion risk is increased with sandy soil, steep slopes, large watersheds and increasing stream widths. Recommended primary and secondary SMZ widths are provided in the table below.

| Stream Width (Feet) | Slope (Percent) | Primary SMZ (Feet) | Secondary SMZ (Feet) |
|---------------------|-----------------|-----------------------------|----------------------|
| <20 | <7 | 35 | 0 |
| <20 | 7-20 | 35 | 50 |
| <20 | >20 | Top of slope or 150 | 75 |
| 20-50 | <7 | 50 | 0 |
| 20-50 | 7-20 | 50 | 50 |
| 20-50 | >20 | Top of slope or 150 | 75 |
| >50 | <7 | Width of stream or 100 max. | 0 |
| >50 | 7-20 | Width of stream or 100 max. | 50 |
| >50 | >20 | Top of slope or 150 | 75 |

Reference

Arkansas Forestry Commission. 2001. Draft Arkansas Forestry Best Management Practices for Water Quality Protection.

bcc: MDT
GWL
CBL



CERTIFIED MAIL 7010 1060 0002 3798 7612
RETURN RECEIPT REQUESTED

9900 Northwest Freeway
Houston, Texas 77092
713-684-4000
www.hcfc.org

April 8, 2013

Mr. Edith Erling
U.S. Fish and Wildlife Service
17629 El Camino Real, Suite 211
Houston, Texas 77058

RE: Potential Federal Threatened and Endangered Species
Proposed Glen Forest Stormwater Detention Basin
HCFCD Project ID No P500-08-00-E001

Dear Ms. Erling:

The Harris County Flood Control District (HCFCD) proposes to implement a flood damage reduction improvement project northeast of the intersection of Interstate Highway 45 and Greens Bayou in northern Harris County, Texas. The project area begins north of Greens Bayou (HCFCD Unit No P100-00-00) and encompasses approximately 160 acres.

The purpose of this letter is to request any information or concerns your agency may have regarding federal threatened and endangered species and/or critical habitats potentially occurring within the project site. The project site is not in an area of concern according to the U.S. Fish and Wildlife Service maps. I have enclosed a vicinity map and a project map to illustrate the location and type of project we are attempting to complete.

Should you require any additional information, please contact Ms. Katie Wanka of my staff at (713) 684-4137. Thank you for your assistance.

Sincerely,

A handwritten signature in black ink that reads "Ingrid Fairchild".

Ingrid M. Fairchild
Regulatory Compliance Department Manager

IMF:KMW:rso

Enclosures: Vicinity Map
Aerial Map with USACE Verified Wetlands

cc: Kevin Burkes, Atkins
Katie Wanka, HCFCD
Brandie Johnson, HCFCD
Project File

S:\Environmental\Regulatory\USACE Permitting\13-L4-8usfws P500-08-E001 USFWS Glen Forest.Doc

ES LOG 08-235E

P125121

Burkes, Kevin M

To: Texas Natural Diversity Database
Subject: RE: NDD File Review

From: Texas Natural Diversity Database [mailto:TexasNatural.DiversityDatabase@tpwd.texas.gov]
Sent: Wednesday, August 21, 2013 9:31 AM
To: Burkes, Kevin M
Subject: RE: NDD File Review

Mr. Burkes,

Save the attached file to your computer and change the file extension from txt to zip to extract the data.

Please be aware that the email address for information requests is now: txnnd@tpwd.texas.gov

Your information request area contains known ecologically significant stream segments. Use the link below to obtain that data.

The Texas Natural Diversity Database ([TXNDD](#)) includes federal, and state listed and tracked Threatened, Endangered, and Rare species. The attached .zip file contains documents that will guide you in appropriate use, restrictions, and shapefile interpretation of Texas NDD data as well as a request for adding data to the TXNDD. Also included is a shapefile of the T&E and Rare species element occurrences, information the TXNDD has available presently, within and touching the requested quads along with a companion **EO report**; areas where EO data are absent **do not mean** absence of occurrence for Threatened, Endangered, and Rare species. Included is an **EO List** of the T&E and Rare species element occurrences that are on the quads adjacent to your request area. The **EO List** is to inform you of other potential federal, and state listed and tracked Threatened, Endangered, and Rare species within the area. To round out your review, please use the Rare, Threatened, and Endangered Species of Texas by County application found [here](#). For questions regarding the application please contact Amy Turner at Amy.Turner@tpwd.texas.gov or by calling her directly at (361) 576-0022 x223.

- If your project area is in Travis, Williamson, or Bexar county it is highly recommended that you download the GIS shapefiles for the Karst Zones from the USFWS website <http://www.fws.gov/southwest/es/austintexas/> and/or contact Jenny Wilson – USFWS at (512)490-0057 x 231 for a review of the project location. All three counties are known to have multiple important karst features.
- If your information request includes one or more records for **Bald Eagle** or **colonial waterbirds**, contact Brent Ortego at brent.ortego@tpwd.state.tx.us or (361) 576-0022 for more up-to-date information on the **Bald Eagle** or **colonial waterbirds**.
- **For communication towers**, in addition to the USFWS guidelines in the attachment and the links at towerkill.com, there is research identifying a simple way to reduce bird strike and high bird mortality at towers. Gehring J., P. Kerlinger, A.M. Manville II. (2009) Communication towers, lights, and birds: successful methods of reducing the frequency of avian collisions. Ecological Applications: Vol. 19, No. 2, pp. 505-514.doi: 10.1890/07-1708.1
- For **wind energy or transmission related projects**, to obtain the Department's guidelines it is also recommended to contact Julie Wicker at julie.wicker@tpwd.state.tx.us or (512)389-4579. In addition, the U.S. Fish and Wildlife Service's Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines, along with other helpful links and information, can be accessed at: <http://www.fws.gov/habitatconservation/wind.html>.
- If your information request contains records for **Texas trailing phlox** you should contact Jason Singhurst at jason.singhurst@tpwd.state.tx.us or (512) 389-8726.

Absence of information in an area does not mean absence of occurrence. Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Data from the TXNDD do not provide a definitive statement as to the presence, absence, or condition of special species, natural

communities, or other significant features within your project area. These data cannot substitute for an on-site evaluation by qualified biologists.

Additional sources of data:

TPWD Annotated County Lists: http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered_species/

USFWS species lists: http://ecos.fws.gov/tess_public/servlet/gov.doi.tess_public.servlets.EntryPage

USFWS CRITICAL HABITAT: <http://criticalhabitat.fws.gov/>

Ecologically Significant Stream Segments: http://www.tpwd.state.tx.us/landwater/land/maps/gis/data_downloads/

Ecologically Significant Stream Segment Information:

http://www.tpwd.state.tx.us/landwater/water/enviroconcerns/water_quality/sigsegs/

Bob Gottfried

Texas Natural Diversity Database Administrator

Texas Parks and Wildlife - Wildlife Division

4200 Smith School Rd

Austin, TX 78744

512-389-8744

[TXNDD Information](#)

Please make a note of my new email address: Bob.Gottfried@tpwd.texas.gov

Bob Gottfried

Texas Natural Diversity Database Administrator

Texas Parks and Wildlife - Wildlife Division

4200 Smith School Rd

Austin, TX 78744

512-389-8744

[TXNDD Information](#)

Please make a note of my new email address: Bob.Gottfried@tpwd.texas.gov

From: Burkes, Kevin M [<mailto:Kevin.Burkes@atkinsglobal.com>]

Sent: Monday, August 12, 2013 11:17 AM

To: Bob Gottfried

Subject: NDD File Review

Mr. Gottfried,

Please conduct a NDD review for the following counties:

What type of data do you want?: **1) ArcGIS shapefile 2) EOR report**

Where is the location of your project? **Harris County**

Please provide the scope/type of project. **Feasibility study for Stormwater Detention Basin Project**

Thanks,

Kevin M. Burkes

Project Manager, Environmental Sciences & Planning

ATKINS

1250 Wood Branch Park Drive, Suite 300 Houston, TX 77079 | Tel: +1 (281) 529-4158 Cell: +1 (225) 454.3355

Email: kevin.burkes@atkinsglobal.com | Web: www.atkinsglobal.com/northamerica www.atkinsglobal.com

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TEXAS HISTORICAL COMMISSION

real places telling real stories

November 6, 2009

Dale Norton
PBS&J
1250 Wood Branch Park Dr., Ste. 300
Houston, TX 77079

Re: Project review under the Antiquities Code of Texas, Backhoe Trench Testing Needed, for Proposed Glen Forest Stormwater Detention Basin Excavation, in Harris County (USACE/HCFCD), TAC Permit #5293

Dear Mr. Norton:

Thank you for your correspondence concerning the above referenced project. This letter serves as comment on the proposed undertaking from the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission. As the state agency responsible for administering the Antiquities Code of Texas, these comments also provide recommendations on compliance with state antiquities laws and regulations.

The map enclosed with your draft survey report indicates that the proposed project will extend to within 75 feet (ft) of the historic Resthaven Memorial Cemetery. Historic cemeteries are known for containing unmarked burials outside of the known or existing boundaries. As such, the portion of the project that runs within 75 ft of the cemetery will require additional archaeological investigation. The draft survey report indicated that 100 ft of the northern section of the proposed project area that are adjacent to the cemetery have been designated as a 50 ft buffer zone, where no work will be conducted, and a 50 ft monitoring zone, where monitoring of any ground disturbing activities will occur. It is our policy that all historic cemeteries should have a 75 ft buffer around them. Any breach of that 75 ft buffer zone will require testing to determine if any unmarked burials are located outside of the known cemetery boundaries. To that end, the northern half of the monitoring zone will require testing, if a 75 foot buffer cannot be maintained.

If the 75 foot buffer cannot be maintained, we recommend backhoe trenching within the portions of the proposed project area that extend within 75 ft of the cemetery. This additional testing should be conducted by a professional archeologist and should follow all requirements of the Texas Health and Safety Code (Title 8, Subchapter C, Chapters 711). The report for this additional work can be submitted as an appendix to the original draft report submitted to our office for review.

Alternatively, if the proposed project can be adjusted to allow for a 75 ft buffer zone, where no work would be conducted, then no additional testing would be required.

Thank you for your cooperation in this federal review process, and for your efforts to preserve the irreplaceable heritage of Texas. **If you have any questions please contact Marie Archambeault of our staff, at (512) 463-6043.**

Sincerely,



for
Mark Wolfe
State Historic Preservation Officer

MW/ma



RICK PERRY, GOVERNOR • JON T. HANSEN, CHAIRMAN • MARK WOLFE, EXECUTIVE DIRECTOR

P.O. BOX 12276 • AUSTIN, TEXAS • 78711-2276 • P 512.463.6100 • F 512.475.4872 • TDD 1.800.735.2989 • www.thc.state.tx.us

TEXAS HISTORICAL COMMISSION

real places telling real stories

February 3, 2010

Mr. Darren Schubert
PBS&J
1250 Wood Branch Park Drive,
Suite 300
Houston, TX 77079

Re: Project Review under the Antiquities Code of Texas
Tagged CD Rec'd: Glen Forest Stormwater Detention Basin HCFCD Project, Harris County
Texas Antiquities Permit #5293
COMPLETED PERMIT

Dear Colleague:

Thank you for your correspondence describing the above referenced project. This letter presents the comments of the Executive Director of the Texas Historical Commission, the state agency responsible for administering the Antiquities Code of Texas.

The Archeology Division recently received a tagged PDF CD for the above referenced permit. The earlier submission of the final report and completed *Abstracts in Texas Contract Archeology* form demonstrates completion of your permit requirements under Permit #5293.

Thank you for your cooperation in this state review process, and for your efforts to preserve the irreplaceable heritage of Texas. **If you have any questions concerning our review or if we can be of further assistance, please contact Lillie Thompson at 512/463-1858.**

Sincerely,



for
Mark Wolfe
Executive Director

MW/lft



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U.S. Department of Homeland Security
Federal Emergency Management Agency
800 North Loop 288
Denton, Texas, 76209



FEMA

June 16, 2014

RECEIVED

JUN 23 2014

Texas Historical Commission

Mark Wolfe
State Historic Preservation Officer
Texas Historical Commission
P.O. Box 12276
Austin, TX 78711-2276

RE: Section 106 Review Consultation, FEMA HMGP-DR-1791-TX Project #67, Harris County Flood Control District Greens Bayou Project, Houston, Texas

Dear Mr. Wolfe:

The Harris County Flood Control District (HCFCD) is requesting Hazard Mitigation Grant Program (HMGP) funding from the Federal Emergency Management Agency (FEMA) for the construction of two storm water detention basins in the Greens Bayou watershed in Houston, Harris County, Texas. FEMA is initiating Section 106 review for the proposed undertaking described below.

HCFCD proposes to construct two stormwater detention basins, P545-01-00-E005 (Kuykendahl Basin) and P500-08-00-E001 (Glen Forest Basin) in order to significantly lower surface flood water elevations and reduce structural flooding in the project area.

HCFCD proposes to create approximately 2,325 acre-feet of storage at the Kuykendahl Basin within 300 acres of property. Four detention basin cells would be constructed within the complex and they would be connected by pipe and/or culvert. In addition, four existing channels (P145-00-00, P245-00-00, P145-03-00, and Old P245-00-00) at the complex would be improved. Improvements include replacement of drop structures, installation of benches and weirs adjacent to channels, stabilization of stream banks with rip rap and concrete pavement, channel realignment, planting of vegetation for erosion control, and installation of temporary culverts.

At the Glen Forest Basin, HCFCD proposes to create approximately 894 acre-feet of storage within 160 acres of property. Three detention basin cells would be constructed within the complex, one of which will contain a stormwater quality treatment wetland complex to treat stormwater run-off from an adjacent property. Two 8-foot by 5-foot concrete culverts would be installed under channel P159-00-00 in two locations to connect the three detention basin cells. HCFCD would install three 30-inch corrugated metal pipes to carry bank overflow events from the detention basin cells into P100-00-00. Stone riprap would be placed below the plane of the ordinary high water mark of the P100-00-00 channel at its intersection with the outfall pipes to provide bank stabilization and prevent erosion below the pipes.

HCFCFCD and its agents have been corresponding with the Texas Historical Commission (THC) over the past two decades regarding surveys of the detention basin sites under the Antiquities Code of Texas.

Kuykendahl Basin

The area of potential effect (APE) for the Kuykendahl Basin is indicated on the enclosed aerial and topographic maps.

Between March 2 and 11, 1993, Moore Archeological Consulting conducted a cultural resources survey on the eastern portion of the proposed Kuykendahl Basin project area, consisting of a 126.68-acre site and a 5-acre addition near Greens Bayou, under the Texas Antiquities Committee Permit (TAC) No. 1233. Between May 18 and July 13, 2001, CRC International Archaeology & Ecology, LLC (CRC) conducted an intensive cultural resources survey (D'Aigle, 2001), under TAC No. 2612 for the remaining portion (western half) of the proposed basin.

The research conducted by Moore and CRC in local archives, at the THC, and at the Texas Archeological Research Laboratory (TARL) indicates that there are no known historic structures or improvements on the APE (Moore, 1993 and D'Aigle, 2001). Further, the research indicated the absence of pre-recorded sites, National Register of Historic Places (NRHP)-listed properties, or State Archeological Landmarks (SALs) within the APE. The nearest recorded historic sites are approximately 3.5 kilometers from the southwest corner of the APE (D'Aigle, 2001).

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Based on the negative results of the cultural resources survey of the proposed basin, CRC recommended that no further archaeological investigations be required for the proposed APE. THC determined no historic properties would be affected by the proposed project on December 10, 2001.

Glen Forest Basin

The APE for the Glen Forest Basin is indicated on the enclosed aerial and topographic maps.

Between June 8 and 11, 2009, personnel from Atkins conducted an intensive cultural resource survey for the proposed Glen Forest Basin project site (Schubert, 2010), under TAC No. 5293. The cultural resources investigations consisted of a background archival, literature, and record review, an intensive pedestrian survey of the APE, including the excavation of auger tests and/or backhoe tests, and the production of a report for review by the THC. The purpose of the surveys was to determine if any cultural resources were located within the APE, and if so, to determine their eligibility for formal designation as SALs and for inclusion in the NRHP.

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1 mile of the project area, only one of which resulted in the recordation of an archeological site (Schubert, 2010).

The investigations conducted within the project area did not result in the location of cultural materials. Although it has been shown that Greens Bayou attracted prehistoric peoples in the region, the combined effects of development and razing of the neighborhood within the project area, rechannelization of the bayou, and the generally low-lying, flood-prone location of the project area may have destroyed any landforms on which prehistoric habitation was most likely (Schubert, 2010). Portions of the northern boundary of the project area abut the Resthaven Memorial Gardens Cemetery. This commercial cemetery first appears on the 1945 USGS quadrangle and was opened in 1928. Eighty-five gravesites were platted for sale along the shared property boundary in 1928, each able to contain two graves. The cemetery is located outside of the proposed project area (Schubert, 2010).

Per a recommendation made by the THC dated November 6, 2009, HCFCD has proposed a minimum 75-foot buffer between the cemetery and any vegetation clearing or excavation. This 75-foot buffer would be a requirement of the FEMA HMGP grant. If human remains or an unmarked burial are encountered during construction, the site manager or archeologist, if present, will notify the HCFCD project manager, the law enforcement agency, and the THC within 24 hours of discovery. The project archeologist and a qualified physical anthropologist also will be contacted to assist with identifying the remains. THC concurred with the recommendation for the 75-foot buffer and other conditions on February 3, 2010.

FEMA has made a determination of **No Historic Properties Affected** as a result of the proposed undertaking. FEMA requests concurrence with this determination. Your prompt review of this project is greatly appreciated. Should you need additional information please contact Dorothy Weir, FEMA Environmental Specialist, at (940) 383-7250.

| | |
|-------------------------------------|--|
| CONCUR | |
| by <u>William D. Monk</u> | |
| for Mark Wolfe | |
| State Historic Preservation Officer | |
| Date <u>7/11/14</u> | |
| Track# _____ | |

Sincerely,



Kevin Jaynes
Regional Environmental Officer
Region 6

References

D'Aigle, Robert P. 2001. Cultural Resource Investigation Intensive Survey Proposed Detention Site at Kuykendahl Road, Harris County, Texas. CRC, International Archaeology & Ecology, LLC, Project Report No. 010409.

Moore Archeological Consulting, Inc. 1993. A Cultural Resource Survey of a 126.68 Acre Floodwater Detention Basin Site (HCFCD Unit P5454-01-00 and 5 Acre Betz Tract Addition, Near Greens Bayou in, Harris County, Texas, Texas.



FEMA

June 19, 2014

Mr. Jimmy Arterberry, Tribal Historic Preservation Officer
Comanche Nation
P.O. Box 908
Lawton, OK 73502

RE: Section 106 Review Consultation, FEMA HMGP-DR-1791-TX Project #67

Applicant: Harris County Flood Control District
Undertaking: Greens Bayou Detention Project
Location: Kuykendahl Basin
Latitude: 29.98014; Longitude: -95.44536
Glen Forest Basin
Latitude: 29.95739; Longitude: -95.40974
Houston, Harris County, Texas
Determination: No Historic Properties Affected

Dear Mr. Arterberry:

The Harris County Flood Control District (HCFCD) is requesting Hazard Mitigation Grant Program (HMGP) funding from the Federal Emergency Management Agency (FEMA) for the construction of two storm water detention basins in the Greens Bayou watershed in Houston, Harris County, Texas. FEMA is initiating Section 106 review for the proposed undertaking described below.

HCFCD proposes to construct two stormwater detention basins, P545-01-00-E005 (Kuykendahl Basin) and P500-08-00-E001 (Glen Forest Basin) in order to significantly lower surface flood water elevations and reduce structural flooding in the project area.

HCFCD proposes to create approximately 2,325 acre-feet of storage at the Kuykendahl Basin within 300 acres of property. Four detention basin cells would be constructed within the complex and they would be connected by pipe and/or culvert. In addition, four existing channels (P145-00-00, P245-00-00, P145-03-00, and Old P245-00-00) at the complex would be improved. Improvements include replacement of drop structures, installation of benches and weirs adjacent to channels, stabilization of stream banks with rip rap and concrete pavement, channel realignment, planting of vegetation for erosion control, and installation of temporary culverts.

At the Glen Forest Basin, HCFCD proposes to create approximately 894 acre-feet of storage within 160 acres of property. Three detention basin cells would be constructed within the complex, one of which will contain a stormwater quality treatment wetland complex to treat stormwater run-off from an adjacent property. Two 8-foot by 5-foot concrete culverts would be installed under channel

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All ground disturbing projects will be conditioned with the following requirement:

If ground disturbing activities occur during construction, applicant will monitor ground disturbance and if any potential archeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA.

FEMA recognizes that whether you provide comments now or decline to consult at this time; this does not preclude future opportunities to comment. If you have any interests in any of the declared counties, or in only certain classes of projects, please let us know. This information will assist FEMA in determining potential project impacts.

Based on information gathered through this review process, FEMA has made a determination of **No Historic Properties Affected** as a result of the proposed undertaking. FEMA requests concurrence with this determination. Maps and photographs of the project area are enclosed. Your prompt review of this project is greatly appreciated. Should you have any questions or need additional information regarding these undertakings, please contact Dorothy Weir, FEMA Environmental Specialist, at 940-

Mr. Arterberry
June 19, 2014
Page 4

383-7250 or Dorothy.Weir@fema.dhs.gov or Hector Abreu, Tribal Liaison, at Hector.Abreu@fema.dhs.gov, or by phone at (940) 383-7221.

Sincerely,


Kevin Jaynes
Regional Environmental Officer
Region 6

Enclosures

Maps of APE
Photos of Project Area

From: Jimmy Arterberry
To: Abreu, Hector
Subject: RE: FEMA-HMGP-DR-1791-TX, PW067
Date: Friday, June 20, 2014 3:44:30 PM

In response to your request, the above referenced project has been reviewed by staff of this office. Based on the information provided and a search within the Comanche Nation Site Files, we have determined that there are **no properties** affected by the proposed undertaking.

If you require additional information or are in need of further assistance, please contact this office at (580) 595-9960 or 9618.

This review is performed in order to identify and preserve the Comanche Nation and State's cultural heritage, in conjunction with the State Historic Preservation Office.

Jimmy W. Arterberry, THPO Comanche Nation #6 SW 'D' Avenue, Suite C Lawton, Oklahoma 73502
(580) 595-9960 or 9618
(580) 595-9733 FAX

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FEMA

June 19, 2014

Ms. Amie Tah-Bone, NAGPRA Representative
Kiowa Tribe of Oklahoma
SH 9 West
Carnegie, OK 73015

RE: Section 106 Review Consultation, FEMA HMGP-DR-1791-TX Project #67

Applicant: Harris County Flood Control District
Undertaking: Greens Bayou Detention Project
Location: Kuykendahl Basin
Latitude: 29.98014; Longitude: -95.44536
Glen Forest Basin
Latitude: 29.95739; Longitude: -95.40974
Houston, Harris County, Texas
Determination: No Historic Properties Affected

Dear Ms. Tah-Bone:

The Harris County Flood Control District (HCFCD) is requesting Hazard Mitigation Grant Program (HMGP) funding from the Federal Emergency Management Agency (FEMA) for the construction of two storm water detention basins in the Greens Bayou watershed in Houston, Harris County, Texas. FEMA is initiating Section 106 review for the proposed undertaking described below.

HCFCD proposes to construct two stormwater detention basins, P545-01-00-E005 (Kuykendahl Basin) and P500-08-00-E001 (Glen Forest Basin) in order to significantly lower surface flood water elevations and reduce structural flooding in the project area.

HCFCD proposes to create approximately 2,325 acre-feet of storage at the Kuykendahl Basin within 300 acres of property. Four detention basin cells would be constructed within the complex and they would be connected by pipe and/or culvert. In addition, four existing channels (P145-00-00, P245-00-00, P145-03-00, and Old P245-00-00) at the complex would be improved. Improvements include replacement of drop structures, installation of benches and weirs adjacent to channels, stabilization of stream banks with rip rap and concrete pavement, channel realignment, planting of vegetation for erosion control, and installation of temporary culverts.

At the Glen Forest Basin, HCFCD proposes to create approximately 894 acre-feet of storage within 160 acres of property. Three detention basin cells would be constructed within the complex, one of which will contain a stormwater quality treatment wetland complex to treat stormwater run-off from an adjacent property. Two 8-foot by 5-foot concrete culverts would be installed under channel

P159-00-00 in two locations to connect the three detention basin cells. HCFCD would install three 30-inch corrugated metal pipes to carry bank overflow events from the detention basin cells into P100-00-00. Stone riprap would be placed below the plane of the ordinary high water mark of the P100-00-00 channel at its intersection with the outfall pipes to provide bank stabilization and prevent erosion below the pipes.

HCFCD and its agents have been corresponding with the Texas Historical Commission (THC) over the past two decades regarding surveys of the detention basin sites under the Antiquities Code of Texas.

Kuykendahl Basin

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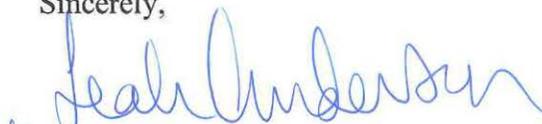
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Ms. Tah-Bone
June 19, 2014
Page 4

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Sincerely,



Kevin Jaynes
Regional Environmental Officer
Region 6

Enclosures

Maps of APE
Photos of Project Area



FEMA

June 19, 2014

Mr. Donald Patterson, Tribal Historian
Tonkawa Tribe of Oklahoma
1 Rush Buffalo Road
Tonwaka, OK 74653

RE: Section 106 Review Consultation, FEMA HMGP-DR-1791-TX Project #67

Applicant: Harris County Flood Control District
Undertaking: Greens Bayou Detention Project
Location: Kuykendahl Basin
Latitude: 29.98014; Longitude: -95.44536
Glen Forest Basin
Latitude: 29.95739; Longitude: -95.40974
Houston, Harris County, Texas
Determination: No Historic Properties Affected

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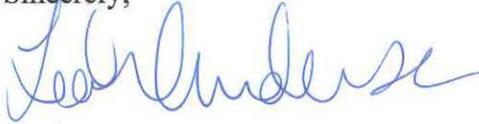
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Mr. Patterson
June 19, 2014
Page 4

383-7250 or Dorothy.Weir@fema.dhs.gov or Hector Abreu, Tribal Liaison, at Hector.Abreu@fema.dhs.gov, or by phone at (940) 383-7221.

Sincerely,


for Kevin Jaynes
Regional Environmental Officer
Region 6

Enclosures

Maps of APE
Photos of Project Area

Appendix B

Public Coordination and Draft Public Notice

FEDERAL EMERGENCY MANAGEMENT AGENCY

PUBLIC NOTICE

Notice of Availability of the Draft Environmental Assessment for the Construction of
P545-01-00-E005 (Kuykendahl) and P500-08-00-E001 (Glen Forest) Stormwater Detention Basins
Greens Bayou, Harris County, Texas
FEMA-1791-DR-TX-067

Interested persons are hereby notified that the Harris County Flood Control District (HCFCD) has applied to the Federal Emergency Management Agency (FEMA), through the Texas Division of Emergency Management (TDEM), for Hazard Mitigation Grant Program (HMGP) funding under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. FEMA proposes to provide funding to HCFCD for the construction of improvements to an existing stormwater detention basin and funding the construction of a new stormwater detention basin. The project area consists of the tracts of land of the two proposed detention basin locations, both located on the north side of Houston, Harris County, Texas, within the Greens Bayou watershed. The proposed P545-01-00-E005 (Kuykendahl) stormwater detention basin is located north of W. Rankin Road and west of Kuykendahl Road, adjacent to the North Fork of Greens Bayou (P145-00-00). The proposed P500-08-00-E001 (Glen Forest) stormwater detention basin is located east of Interstate Highway (IH) 45 between Rankin Road and Greens Road, adjacent to Greens Bayou. The proposed action would add approximately 3,219 acre-feet of storage volume. The area of focus for the proposed project is a reach of Greens Bayou approximately 2 miles along W. Greens Road from Ella Boulevard to Imperial Valley Drive that experiences significant flood damages. The purpose of the proposed project is to lower flood water surface elevations and reduce structure flooding in this area. The proposed project would provide flood water detention that would serve to detain stormwater volumes during excessive rainfall events. This project would benefit the residents and businesses of Harris County near and along Greens Bayou by reducing peak volumes during excessive rainfall events. The proposed action would also include stream improvement and maintenance activities to accommodate flow into and out of the proposed stormwater detention basins.

In accordance with the National Environmental Policy Act (NEPA) of 1969 and the implementing regulations of FEMA, an Environmental Assessment (EA) was prepared to assess the potential impacts of the proposed action on the human and natural environment. The Draft EA summarizes the purpose and need, alternatives, affected environment, and potential environmental consequences for the proposed action. The Draft EA is available for comment and can be requested from Dorothy Weir, FEMA Region 6, at Dorothy.weir@fema.dhs.gov or viewed and downloaded from FEMA's website at <http://www.fema.gov/media-library/assets/documents/> or viewed at the following location between (date) and (date).

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11331 Airline Drive
Houston, Texas 77037

The comment period will end 30 days from the initial notice publication date of (date). Written comments on the Draft EA can be mailed, emailed, or faxed to the contact listed below. If no substantive comments are received by 5:00 p.m. (date), the Draft EA will become final and a Finding of No Significant Impact (FONSI) will be issued for the project. Substantive comments will be addressed as appropriate in the final documents.

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