

**AI-17112**

**4.**

**HC/DD1 Agreements  
DRAINAGE DISTRICT**

Date: 08/25/2009

Submitted By: Angela Garcia, BUDGET & MANAGEMENT

Department: BUDGET & MANAGEMENT

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Information

**CAPTION**

A. Status update regarding Interlocal Agreement and Subsidiary Agreement between County of Hidalgo and Hidalgo County Drainage District No. 1 and matters related hereto.

B. Discussion, consideration, and approval of Interlocal Agreement between County of Hidalgo and Hidalgo County Drainage District No. 1.

C. Discussion, consideration, and approval of Subsidiary Agreement between County of Hidalgo and Hidalgo County Drainage District No. 1 (including sale or lease of personal and real property).

**BACKGROUND**

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Fiscal Impact

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Attachments

*No file(s) attached.*

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Form Routing/Status

Form Started By: Angela  
Garcia

Started On: 08/21/2009 04:54  
PM

Final Approval Date: 08/21/2009

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**AI-17090**  
**DHS 0-9 PH II PR#11**  
**DRAINAGE DISTRICT**

**5.**

Date: 08/25/2009  
Submitted By: Minerva Luna, DRAINAGE DISTRICT  
Department: DRAINAGE DISTRICT

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Information

CAPTION

A. Request approval of Payment Request No. 11 to McAllen Construction, Inc. for the Construction of DHS Segment 0-9 PH II (1.75 miles).

B. Request approval to process manual checks to McAllen Construction, Inc. for the above mentioned project pending the approval of the County Auditor and pending the electronic transfer of funds from the Department of Homeland Security (DHS).

BACKGROUND

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Fiscal Impact

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Attachments

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*No file(s) attached.*

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Form Routing/Status

Route Seq	Inbox	Approved By	Date	Status
1	Budget & Management	Erika Zamora	08/21/2009 12:49 PM	APRV
2	Perla Lopez	Perla Lopez	08/21/2009 01:17 PM	APRV
3	Final Approval	Angela Garcia	08/21/2009 05:12 PM	APRV

Form Started By: Minerva Luna

Started On: 08/21/2009 08:23 AM

Final Approval Date: 08/21/2009

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**AI-17081**

**6.**

**2009 Tax Rate**

**DRAINAGE DISTRICT**

Date: 08/25/2009

Submitted By: Angela Garcia, BUDGET & MANAGEMENT

Department: BUDGET & MANAGEMENT

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Information

CAPTION

- A. Submission of 2009 effective and rollback tax rates.
- B. Discussion of 2009 planning calendar.
- C. Discussion of 2009 tax rate.
- D. Record vote on proposed 2009 tax rate and schedule two (2) public hearings if proposed tax rate exceeds the lower of the effective or rollback tax rates.

BACKGROUND

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Fiscal Impact

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Attachments

*No file(s) attached.*

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Form Routing/Status

<b>Route Seq</b>	<b>Inbox</b>	<b>Approved By</b>	<b>Date</b>	<b>Status</b>
1	Budget & Management	Erika Zamora	08/20/2009 01:25 PM	APRV
2	Perla Lopez	Perla Lopez	08/20/2009 02:31 PM	APRV
3	Final Approval		08/21/2009 05:12 PM	NEW

Form Started By: Angela Garcia  
Started On: 08/20/2009 01:07 PM

Final Approval Date: 08/21/2009

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**DHS Change Orders  
DRAINAGE DISTRICT**

Date: 08/25/2009  
Submitted By: Minerva Luna, DRAINAGE DISTRICT  
Department: DRAINAGE DISTRICT

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Information

**CAPTION**

- A. Request approval of Change Order No. 15 on the Contract with Ballenger Construction Company for the Construction of Levee DHS 0-5. Subject to Department of Homeland Security (DHS) concurrence.
- B. Request approval of Change Order No. 8A and No. 15 on the Contract with Ballenger Construction Company for the Construction of Levee DHS 0-6A. Subject to Department of Homeland Security (DHS) concurrence.
- C. Request approval of Change Order No. 27, No. 30, No. 33A and No. 34 on the Contract with SER Construction Partners, LTD. for the Construction of Levee DHS 0-6BC. Subject to Department of Homeland Security (DHS) concurrence.
- D. Request approval of Change Order No. 10 on the Contract with Williams Brothers Construction Co., Inc. for the Construction of Levee DHS 0-9 PH I. Subject to Department of Homeland Security (DHS) concurrence.
- E. Request approval of Change Order No. 27 and No. 28 on the Contract with McAllen Construction, Inc. for the Construction of Levee DHS 0-9 PH II. Subject to Department of Homeland Security (DHS) concurrence.
- F. Request approval of Change Order No. 10 on the Contract with Williams Brothers Construction Co., Inc. for the Construction of Levee DHS 0-10. Subject to Department of Homeland Security (DHS) concurrence.
- G. Request approval of Change Order No. 6 on the Contract with Ballenger Construction Company for the Construction of Common Levee/Anzalduas Dike Improvements, Hidalgo Loop Levee to Anzalduas Dam Project.
- H. Request approval of Work Authorization No. 42 for professional geotechnical engineering services on DHS Segment 0-4B.

**BACKGROUND**

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Fiscal Impact

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Attachments

Link: [DHS 0-5 CO#15](#)

Link: [DHS 0-6A CO#8A](#)

Link: [DHS 0-6A CO#15](#)

Link: [DHS 0-6BC CO#27](#)

Link: [DHS 0-6BC CO#30](#)

Link: [DHS 0-6BC CO#33A](#)

Link: [DHS 0-6BC CO#34](#)

Link: [DHS 0-9 PH I CO#10](#)

Link: [DHS 0-9 PH II CO#27](#)

Link: [DHS 0-9 PH II CO#28](#)

Link: [DHS 0-10 CO#10](#)

Link: [Common Levee CO#6](#)

Link: [L&G WA#42 DHS 0-4B](#)

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### Form Routing/Status

<b>Route Seq</b>	<b>Inbox</b>	<b>Approved By</b>	<b>Date</b>	<b>Status</b>
1	Budget & Management	Erika Zamora	08/19/2009 04:36 PM	APRV
2	Perla Lopez	Perla Lopez	08/20/2009 08:48 AM	APRV
3	Final Approval		08/21/2009 05:12 PM	NEW

Form Started By: Minerva Luna  
Started On: 08/18/2009 10:06 AM

Final Approval Date: 08/21/2009

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HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-5 (1.76 MILES)

CHANGE ORDER NO. 15

Date: June 8, 2009

Contractor: Ballenger Construction Co.  
24200 North FM 509  
Harlingen, Texas 78550

Owner: Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

Reference: LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-5 (1.76 MILES)

Contract No. 08-008-07-01  
Dannenbaum No. 4410-01

Description:

Increase to concrete riprap and caliche base quantity for perimeter road.

**Contract Amount:**

Original Contract Price:	\$	21,383,679.67
Previous Change Order(s):	\$	(2,166,172.87)
Contract price prior to this change order:	\$	19,217,506.80
Net increase (decrease) from this change order:	\$	45,779.18
Contract price with all change orders to date (including this change order):	\$	<u>19,263,285.98</u>

**Contract Time:**

Authorized contract time change:  
This Change Order \_\_\_\_\_ days  
Previous Total \_\_\_\_\_ days  
Total to Date \_\_\_\_\_ days

**APPROVALS:**

**ENGINEER:**

Dannenbaum Engineering Company - McAllen, LLC

  
Richard D. Seitz, P.E. Date 6/10/09  
Resident Project Representative

**OWNER:**


Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

**ACCEPTED:**

**CONTRACTOR:**

Ballenger Construction Co.

  
Joe C. Ballenger, Jr. Date 6/12/09  
President

HIDALGO COUNTY

JUN 17 2009

DRAINAGE DISTRICT #1



HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 15**

ATTACHMENT B

**Date:** June 16, 2009

**Contractor:** BALLENGER CONSTRUCTION  
CO.  
24200 North FM 509  
Harlingen, Texas 78550

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS  
PROJECT  
DHS SEGMENT 0-5 (1.76 MI)

**Contract No.** 08-008-07-01  
**Dannenbaum No.** 4410-01

**ENGINEER'S EXPLANATION**

DESCRIPTION OF CHANGE

Increase to concrete riprap and caliche base quantity for perimeter road.

JUSTIFICATION FOR CHANGE

Issued for Construction plans called for concrete riprap and caliche base to be placed under Anzaldua's bridge by Williams Brothers and was not part of this contract. This was based upon the assumption that this Contract would be completed prior to the completion of the Anzaldua's project. However, due to delays in the construction of the retaining wall and completion of the Anzaldua's Bridge project, it mandated that this work be added as part of this Contract.

ENGINEER'S JUSTIFICATION OF COST

Contractor was in agreement with Engineer's original "Opinion of Cost" and therefore we recommend execution of this change order for \$45,779.18.

HIDALGO COUNTY  
JUN 17 2009  
DRAINAGE DISTRICT #1

**HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-5 (1.76 MILES)**

**CHANGE ORDER NO. 15**

**ATTACHMENT B**

**ENGINEER'S PRELIMINARY OPINION OF COST**

**Date:** June 8, 2009      **Contract No.:** 08-008-07-01  
**Contractor:** Ballenger Construction Co.      **Dannenbaum No.:** 4410-01  
24200 North FM 509  
Harlingen, Texas 78550

**Description:** Increase to concrete riprap and caliche base quantity for perimeter road.

**COST SUMMARY**

BID ITEM NO.	UNITS	PREVIOUS QNTYS			REVISED QNTYS			VARIANCE AMOUNT
		QNTYS	UNIT PRICE	COST	QNTYS	UNIT PRICE	COST	
14	CY	3,307.84	\$ 310.00	\$ 1,025,430.40	3,447.84	\$ 310.00	\$ 1,068,830.40	\$ 43,400.00
17	CY	7,792.00	\$ 20.87	\$ 162,619.04	7,906.00	\$ 20.87	\$ 164,998.22	\$ 2,379.18
<b>GRAND TOTAL</b>								<b>\$ 45,779.18</b>

**HIDALGO COUNTY  
JUN 17 2009  
DRAINAGE DISTRICT #1**

LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-5 (1.76 MILES)  
BACK UP CALCULATIONS

**FLEXBASE (NEW) (CALICHE) (TY D GR 6 CL 4) (6 IN.)**

BEGIN	END	TOTAL DIST
3232.88	3519.52	286.64

25 FOOT WIDE SECTION		
LENGTH	# OF 20 FT	LENGTH
FT	#	FT
20	3	60
32	2	64
TOTAL DISTANCE (25 FT) =		124
TOTAL DISTANCE(20 FT) =		162.64
		<b>286.64</b>

WIDE	DEPTH	VOLUME	VOLUME
FT	FT	CFT	CY
24.25	0.5	1503.5	55.69
19.25	0.5	1565.41	57.98
			<b>113.66</b>

HIDALGO COUNTY

JUN 17 2009

DRAINAGE DISTRICT #1

LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-5 (1.76 MILES)  
BACK UP CALCULATIONS

**CONC. RIP RAP CL-B (SCOUR PROTECTION)**

BEGIN	END	TOTAL DIST
3232.88	3519.52	286.64

**25 FOOT WIDE SECTION**

LENGTH FT	# OF 20 FT #	LENGTH FT
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20	3	60
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32	2	64
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TOTAL DISTANCE (25 FT) =		124
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TOTAL DISTANCE(20 FT) =		162.64
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**286.64**

WIDE FT	DEPTH FT	VOLUME CFT	VOLUME CY
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25	0.5	1550	57.41
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20	0.5	1626.4	60.24
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**117.64**

TOTAL LENGTH FT	DEPTH FT	WIDE FT	VOLUME CFT	VOLUME CY
286.64	3	0.75	644.94	<b>23.8866667</b>

**TOTAL VOLUME CY 141.531111**

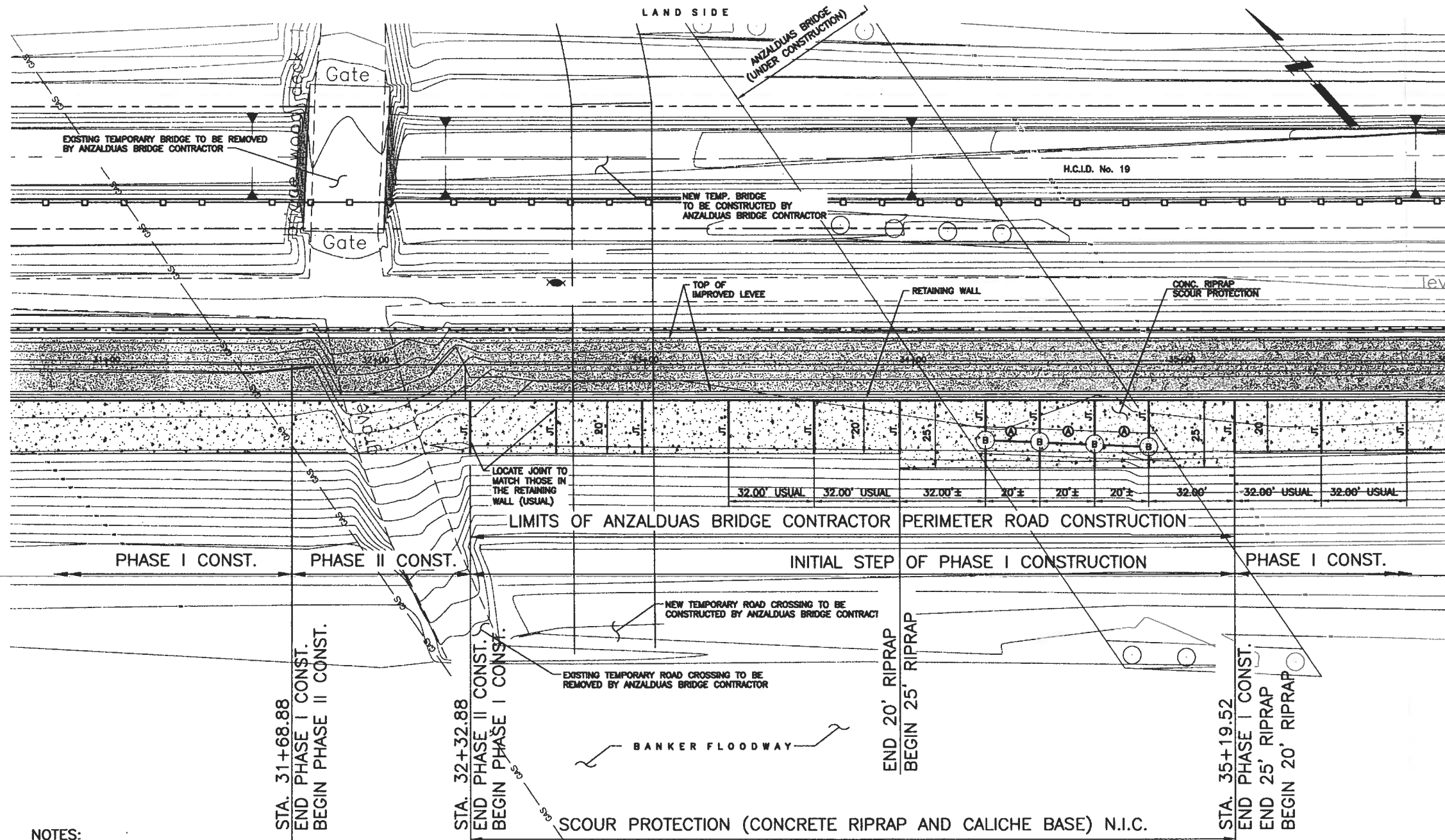
**COLUMNS TO DEDUCT**

IN	FACTOR	FT
72	12	6

RADIUS FT	AREA SQFT	NUMBER COLUM	AREA SQFT	DEPTH FT	VOLUME CFT	VOLUME CY
3	28.2744	4	113.0976	0.5	56.5488	2.09

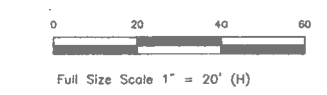
**FINAL VOLUME CY 139.44**

HIDALGO COUNTY  
JUN 17 2009  
DRAINAGE DISTRICT #1



- NOTES:**
- SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "C05" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "C01" SERIES SHEETS FOR PROPOSED TYPICAL SECTIONS.
  - SEE "C04" SERIES SHEETS FOR 20' CONC. RIPRAP SCOUR PROTECTION.
  - JOINTS LABELED (A) SHALL BE FORMED CONSTRUCTION JOINTS.

- LEGEND**
- PROPOSED SEDIMENT CONTROL FENCE
  - ⊕ SOIL BORE LOCATION
  - 100--- EXISTING CONTOURS
  - - - - - EXISTING MAINTENANCE ROAD
  - ▨ MAINTENANCE ROAD
  - N.I.C. NOT IN THIS CONTRACT
  - (A) CONSTRUCTION JOINTS
  - (B) COLUMN TO RECEIVE ADDITIONAL CONCRETE COVER (BENT 167)



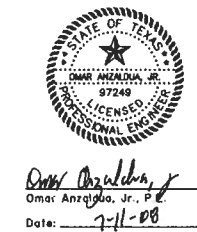
Rev. No.	Description	Chk. By:	Date
B	ISSUED FOR CONSTRUCTION	R.S.	07-11-08

**DANNENBAUM**  
ENGINEERING COMPANY-MCALLEN, LLC  
1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3677

NORTH BANKER FLOODWAY LEVEE  
IMPROVEMENT PROJECT  
DHS PF 225: O-5

**ENLARGEMENT DETAIL  
AND NOTES TO CONTRACTORS  
AT ANZALDUAS BRIDGE CROSSING**

SHEET (1 OF 1)



*Omar Anzaldo, Jr.*  
Omar Anzaldo, Jr., P.E.  
Date: 7-11-08

Project No.:	4410-01
Designed By:	O.A.
Drawn By:	H.R., J.R., D.C.
Checked By:	R.S.
Sheet No.:	C04-04

**NOTES:**

- LEVEE IMPROVEMENT CONTRACTOR (THIS CONTRACT) TO COORDINATE CONSTRUCTION OF PROPOSED RETAINING WALL WITH ANZALDUAS BRIDGE CONTRACTOR AT ALL TIMES DURING THE PERIOD OF THIS CONTRACT.
- LEVEE IMPROVEMENT CONTRACTOR SHALL CONSTRUCT RETAINING WALL FROM STATION 32+34.88 TO STATION 35+19.52 AS THE INITIAL PHASE OF HIS CONSTRUCTION.
- ONCE NEW LEVEE AND RETAINING WALL CONSTRUCTION HAS BEEN COMPLETED BETWEEN THE AFOREMENTIONED STATIONS, THE ANZALDUAS BRIDGE CONTRACTOR SHALL REMOVE AND RELOCATE THE EXISTING TEMPORARY ROAD AND BRIDGE CROSSING OF THE CANAL AND LEVEE TO A LOCATION CROSSING THE NEWLY CONSTRUCTED LEVEE AND RETAINING WALL.
- ONCE TEMPORARY CANAL AND LEVEE ROAD CROSSING HAS BEEN REMOVED BY THE ANZALDUAS BRIDGE CONTRACTOR, THE LEVEE IMPROVEMENT CONTRACTOR MAY CONTINUE RETAINING WALL AND LEVEE CONSTRUCTION OUTSIDE OF THAT SEGMENT OF THE LEVEE BETWEEN STATION 32+32.88 AND STATION 35+19.52.
- FINISH GRADING AND PLACEMENT OF THE CONCRETE RIPRAP AND CALICHE FOR THE SCOUR PROTECTION BETWEEN STATIONS 32+32.88 AND STATION 35+19.52 IS NOT A PART OF THE WORK OF THE LEVEE IMPROVEMENT CONTRACT (N.I.C.) BUT SHALL BE PERFORMED BY THE ANZALDUAS BRIDGE CONTRACTOR.
- OTHER PORTIONS OF THE WALL MAY BE CONSTRUCTED SIMULTANEOUSLY WITH THE INITIAL STEP OF PHASE I CONSTRUCTION EXCEPT FOR THE REACH CURRENTLY OCCUPIED BY THE ANZALDUAS BRIDGE CONTRACTOR'S TEMPORARY LEVEE CROSSING (APPROXIMATELY STA. 32+00). THIS SHALL BE PHASE II OF THE CONSTRUCTION AND CANNOT BE PERFORMED UNTIL THE ANZALDUAS BRIDGE CONTRACTOR HAS OPENED HIS NEW CROSSING TO TRAFFIC AND HAS REMOVED THE OLD CROSSING.

C:\15401\2297-25\Levee 0-3\Detail\ANZALDUAS BRIDGE CROSSING\recorder.dwg  
 Date: 07-11-08 10:20:00 AM 2008 14 2388 14 2388 14 2388  
 Plotted By: TURNER

HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6A (2.59 MILES)

CHANGE ORDER NO. 8A

Date: June 8, 2009

Contractor: Ballenger Construction Co.  
24200 North FM 509  
Harlingen, Texas 78550

Owner: Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

Reference: LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6A (2.59 MILES)

Contract No. 08-016-09-02  
Dannenbaum No. 4410-07

Description:

Revised quantities associated with Structure 325 & 327.

Contract Amount:

Original Contract Price:	\$	28,553,870.93
Previous Change Order(s):	\$	(1,398,937.73)
Contract price prior to this change order:	\$	27,154,933.20
Net increase (decrease) from this change order:	\$	109,492.12
Contract price with all change orders to date (including this change order):	\$	<u>27,264,425.32</u>

APPROVALS:

ENGINEER:

Dannenbaum Engineering Company - McAllen, LLC

  
Richard D. Seitz, P.E. Date 6/8/09  
Resident Project Representative

OWNER:


Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

ACCEPTED:

CONTRACTOR:

Ballenger Construction Co.

  
Joe C. Ballenger, Jr. Date 6/12/09  
President

HIDALGO COUNTY  
JUN 17 2009  
DRAINAGE DISTRICT #1

HIDALGO County Drainage District No. 1  
 LEVEE IMPROVEMENTS PROJECT  
 DHS SEGMENT 0-6A (2.59 MILES)

CHANGE ORDER NO. 8A

ATTACHMENT A

TABULATION OF QUANTITY AND COST

Date: June 8, 2009

Contractor: Ballenger Construction Co.

24200 North FM 509  
Harlingen, Texas 78550

Contract No. 08-016-09-02  
 Dannenbaum No. 4410-07

Description:

Revised quantities associated with Structure 325 & 327.

COST SUMMARY

BID ITEM NO.	UNITS	PREVIOUS QNTYS			REVISED QNTYS			VARIANCE AMOUNT	
		QNTYS	UNIT PRICE	COST	QNTYS	UNIT PRICE	COST		
18	EA	2.00	\$ 1,634.21	\$ 3,268.42	0.00	\$ 1,634.21	\$ -	\$ (3,268.42)	
19	EA	2.00	\$ 1,971.17	\$ 3,942.34	0.00	\$ 1,971.17	\$ -	\$ (3,942.34)	
38	EA	1.00	\$ 448.18	\$ 448.18	0.00	\$ 448.18	\$ -	\$ (448.18)	
68	EA	-	-	-	2.00	\$ 846.91	\$ 1,693.82	\$ 1,693.82	\$ -
69	LF	-	-	-	136.00	\$ 8.75	\$ 1,190.00	\$ 1,190.00	\$ -
70	LF	-	-	-	216.00	\$ 57.18	\$ 12,350.88	\$ 12,350.88	\$ -
71	EA	-	-	-	2.00	\$ 3,900.93	\$ 7,801.86	\$ 7,801.86	\$ -
72	EA	-	-	-	2.00	\$ 44,557.25	\$ 89,114.50	\$ 89,114.50	\$ -
73	EA	-	-	-	5.00	\$ 1,000.00	\$ 5,000.00	\$ 5,000.00	\$ -
<b>GRAND TOTAL</b>							\$	\$ 109,492.12	\$

HIDALGO COUNTY

JUN 17 2009

DRAINAGE DISTRICT #1

HIDALGO County Drainage District No. 1  
 LEVEE IMPROVEMENTS PROJECT  
 DHS SEGMENT 0-6A (2.59 MILES)

CHANGE ORDER NO. 8A

ATTACHMENT B

ENGINEER'S PRELIMINARY OPINION OF COST

Date: June 8, 2009

Contract No. 08-016-09-02  
 Dannenbaum No. 4410-07

Contractor: Ballenger Construction Co.  
24200 North FM 509  
Hartlingen, Texas 78550

Description: Revised quantities associated with Structure 325 & 326

**COST SUMMARY**

BID ITEM NO.	UNITS	PREVIOUS QNTYS			REVISED QNTYS			VARIANCE AMOUNT	
		QNTYS	UNIT PRICE	COST	QNTYS	UNIT PRICE	COST		
18	EA	2.00	\$ 1,634.21	\$ 3,268.42	0.00	\$ 1,634.21	\$ -	\$ (3,268.42)	
19	EA	2.00	\$ 1,971.17	\$ 3,942.34	0.00	\$ 1,971.17	\$ -	\$ (3,942.34)	
38	EA	1.00	\$ 448.18	\$ 448.18	0.00	\$ 448.18	\$ -	\$ (448.18)	
68	EA	-	-	-	2.00	\$ 846.91	\$ 1,693.82	\$ 1,693.82	\$ -
69	LF	-	-	-	136.00	\$ 8.75	\$ 1,190.00	\$ 1,190.00	\$ -
70	LF	-	-	-	216.00	\$ 57.18	\$ 12,350.88	\$ 12,350.88	\$ -
71	EA	-	-	-	2.00	\$ 3,900.93	\$ 7,801.86	\$ 7,801.86	\$ -
72	EA	-	-	-	2.00	\$ 44,557.25	\$ 89,114.50	\$ 89,114.50	\$ -
73	EA	-	-	-	5.00	\$ 1,000.00	\$ 5,000.00	\$ 5,000.00	\$ -
<b>GRAND TOTAL</b>							\$	\$ 109,492.12	\$

HIDALGO COUNTY

JUN 17 2009

DRAINAGE DISTRICT #1

**GATE WELL FOR SRTUCTURE # 325 & 327**

**Labor Cost**

Name	Hours	Rate	Hrs. X Rate X 1.16 Cost w/Burden	Cost X 0.25 Profit	Cost X 0.55 Burden	Cost + Profit + Burden Total
Concrete Finishers	70	\$ 9.59	\$ 778.71	\$ 194.68	\$ 428.29	\$ 1,401.67
Form Setter	70	\$ 9.16	\$ 743.79	\$ 185.95	\$ 409.09	\$ 1,338.83
Form Setter	70	\$ 9.16	\$ 743.79	\$ 185.95	\$ 409.09	\$ 1,338.83
Labor Common	70	\$ 7.69	\$ 624.43	\$ 156.11	\$ 343.44	\$ 1,123.97
Laborer Utility	70	\$ 9.05	\$ 734.86	\$ 183.72	\$ 404.17	\$ 1,322.75
Laborer Utility	70	\$ 9.05	\$ 734.86	\$ 183.72	\$ 404.17	\$ 1,322.75
Excavator Op	40	\$ 10.83	\$ 502.51	\$ 125.63	\$ 276.38	\$ 904.52
Roller op	40	\$ 7.16	\$ 332.22	\$ 83.06	\$ 182.72	\$ 598.00
Foreman	70	\$21.45	\$ 1,741.74	\$ 435.44	\$ 957.96	\$ 3,135.13
	0		\$ -	\$ -	\$ -	\$ -
			\$ -	\$ -	\$ -	\$ -
<b>TOTAL</b>						<b>\$ 12,486.45</b>

**Equipment**

Description	Hours	Rate	Rate X Hours Cost	Cost X 0.15 Profit		Cost + Profit Total Cost
JD 330 Exc.	40	\$ 121.57	\$ 4,862.80	\$ 729.42		\$ 5,592.22
Generator	70	\$ 2.00	\$ 140.00	\$ 21.00	\$ 0.00	\$ 161.00
Misc Small tools	1	\$ 375.00	\$ 375.00	\$ 56.25	\$ 0.00	\$ 431.25
Pick up truck	70	\$ 20.00	\$ 1,400.00	\$ 210.00	\$ 0.00	\$ 1,610.00
Roller	40	\$ 28.06	\$ 1,122.40	\$ 168.36	\$ 0.00	\$ 1,290.76
			\$ -	\$ 0.00	\$ 0.00	\$ 0.00
	0		\$ -	\$ 0.00	\$ 0.00	\$ 0.00
<b>TOTAL</b>						<b>\$ 9,085.23</b>

**Materials**

Description	Unit	Qty.	Unit Cost	Unit Cost X Qty. Cost	Cost X 0.25 Profit	Cost + Profit Total Cost
Type II curing com pound	Gal	12.25	\$ 6.36	\$ 77.95	\$ 1.95	\$ 79.90
Class C Concrete	CY	16.00	\$ 92.00	\$ 1,472.00	\$ 36.80	\$ 1,508.80
Reinforce Rebar	LB	6,500.00	\$ 0.75	\$ 4,875.00	\$ 121.88	\$ 4,996.88
Gate well	EA	1.00	\$ 4,000.00	\$ 4,000.00	\$ 100.00	\$ 4,100.00
Hatch co	EA	1.00	\$ 1,000.00	\$ 1,000.00	\$ 25.00	\$ 1,025.00
48" sluic	EA	1.00	\$ 8,000.00	\$ 8,000.00	\$ 200.00	\$ 8,200.00
wood forms	EA	1.00	\$ 3,000.00	\$ 3,000.00	\$ 75.00	\$ 3,075.00
			\$ -	\$ -	\$ -	\$ -
			\$ -	\$ -	\$ -	\$ -
<b>TOTAL</b>						<b>\$ 22,985.57</b>

Labor	\$ 12,486.45
Equipment	\$ 9,085.23
Materials	\$ 22,985.57
<b>Grand Total</b>	<b>\$ 44,557.25</b>

HIDALGO COUNTY

JUN 17 2009

DRAINAGE DISTRICT #1

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 8A**

ATTACHMENT B

**Date:** June 16, 2009

**Contractor:** BALLENGER CONSTRUCTION  
CO.  
24200 North FM 509  
Harlingen, Texas 78550

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS  
PROJECT  
DHS SEGMENT 0-6A (2.59 MI)

**Contract No.** 08-016-09-02  
**Dannenbaum No.** 4410-07

**ENGINEER'S EXPLANATION**

DESCRIPTION OF CHANGE

Revised quantities associated with Structure 325 & 327.

JUSTIFICATION FOR CHANGE

Per the request from USIBW, Structure 325 & 327 were relocated to the landside slope of the levee. The modification of these two structures is required to facilitate proper drainage so that water can drain to the DHS service road.

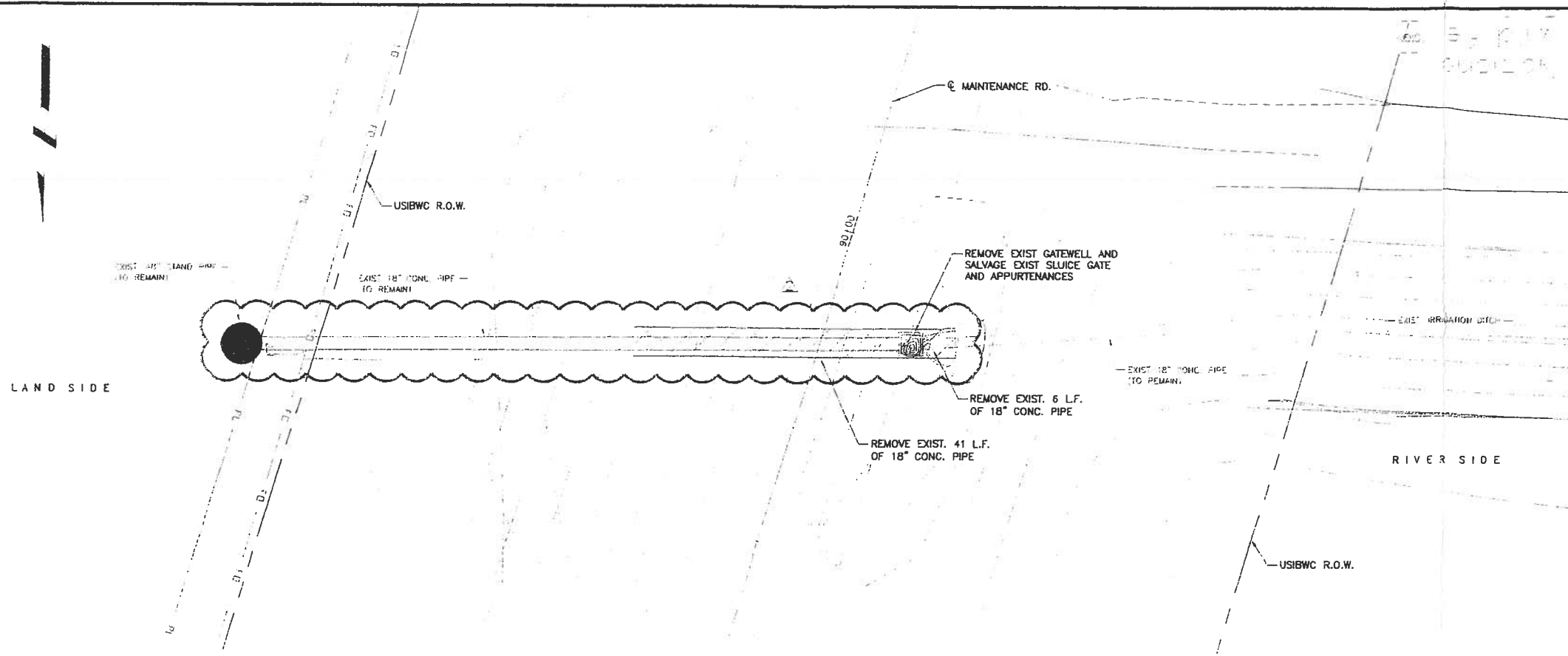
ENGINEER'S JUSTIFICATION OF COST

After re-evaluating these two structures, our Engineer's Original "Opinion of Cost" was revised from \$140,000 to \$109,492.12. Contractor agreed with our Engineer's Revised "Opinion of Cost" and the Engineer recommends execution of this change order for the revised amount of \$109,492.12.

HIDALGO COUNTY

JUN 17 2009

DRAINAGE DISTRICT #1



- NOTES:
- SEE "002" SERIES SHEETS FOR TYPICAL SECTIONS.
  - SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "C10" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "C08" SERIES SHEETS FOR ACCESS RAMP DETAILS.
  - SEE "S02" SERIES SHEETS FOR BOLLARD DETAILS.
  - WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.

- LEGEND
- PROPOSED SEDIMENT CONTROL FENCE
  - SOIL BORE LOCATION
  - EXISTING CONTOURS
  - EXISTING MAINTENANCE ROAD
  - MAINTENANCE ROAD
  - PERIMETER ROAD

Rev. No.	Description	Chk. By:	Date



**DANNENBAUM**  
ENGINEERING COMPANY-McALLEN, LLC  
1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3677  
Registration No. 8999

HIDALGO PROTECTIVE LEVEE  
IMPROVEMENT PROJECT  
DHS PF 225: O-6 A

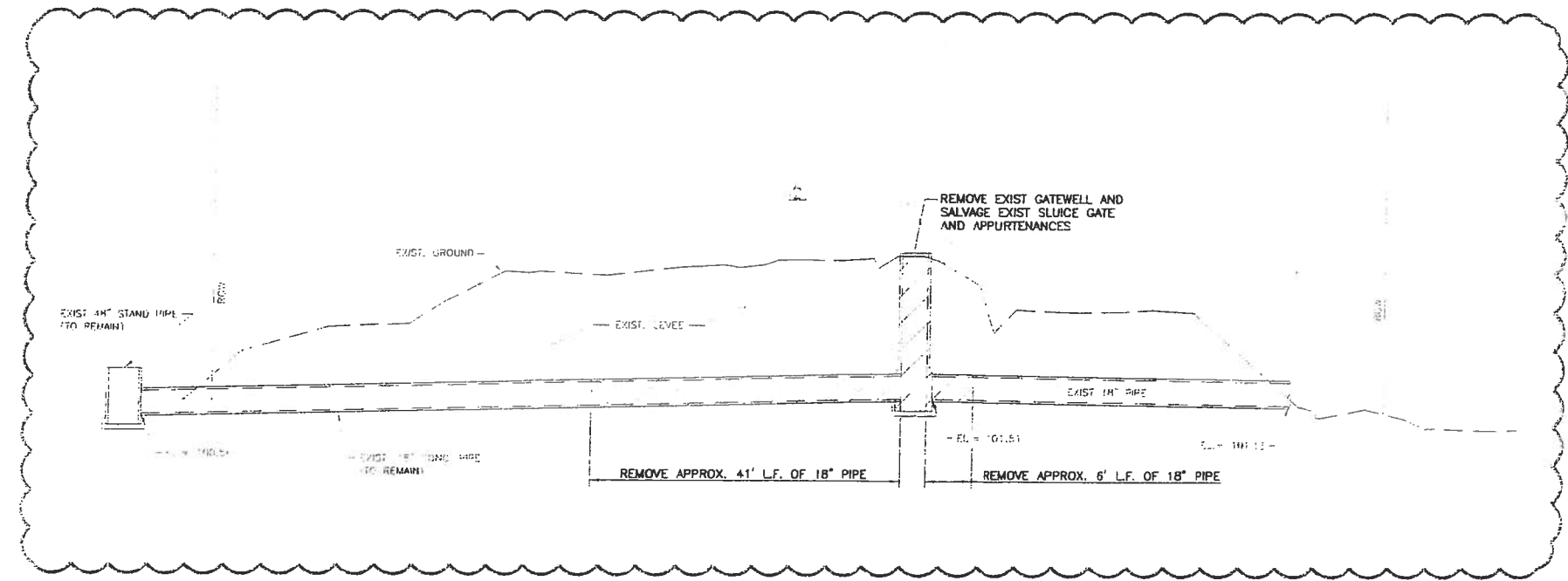
STA 89+81  
REMOVE AND REPLACE EXISTING  
STRUCTURE No. 325  
(1 OF 2)

SHEET 13 OF 101

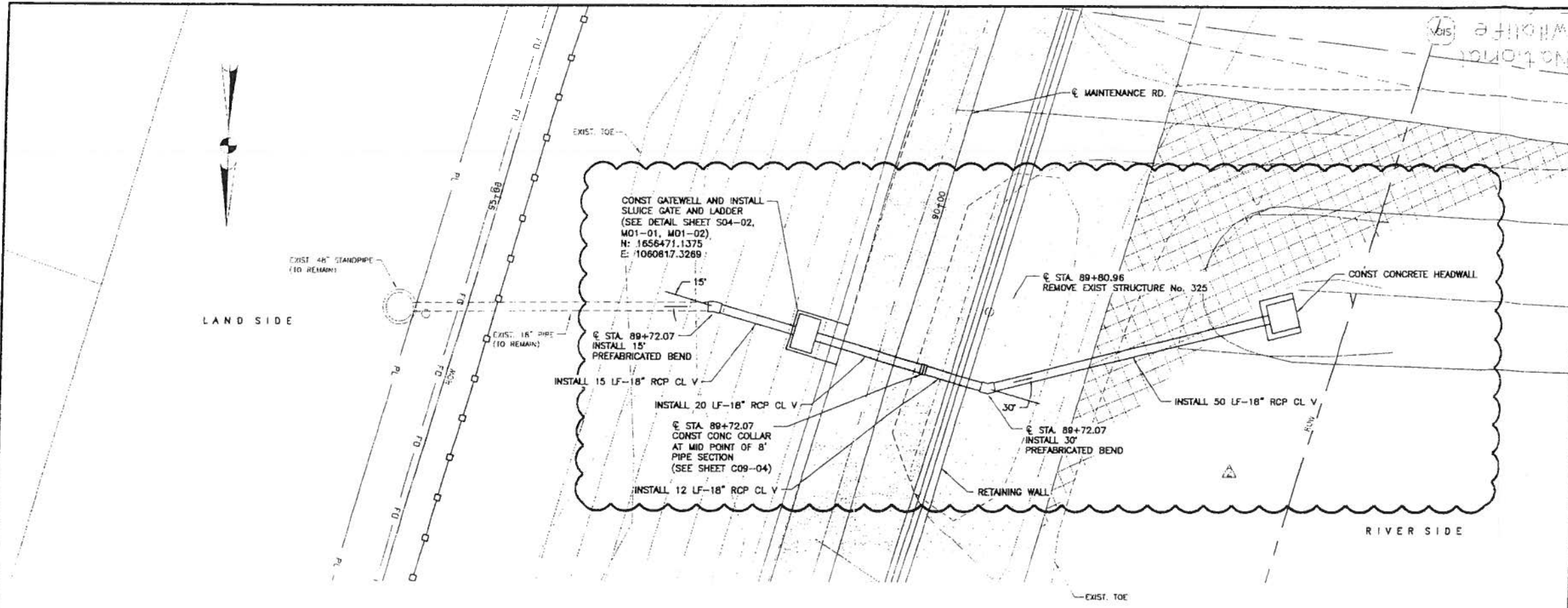


*Dann Dannenbaum*  
Professional Engineer  
5-12-09

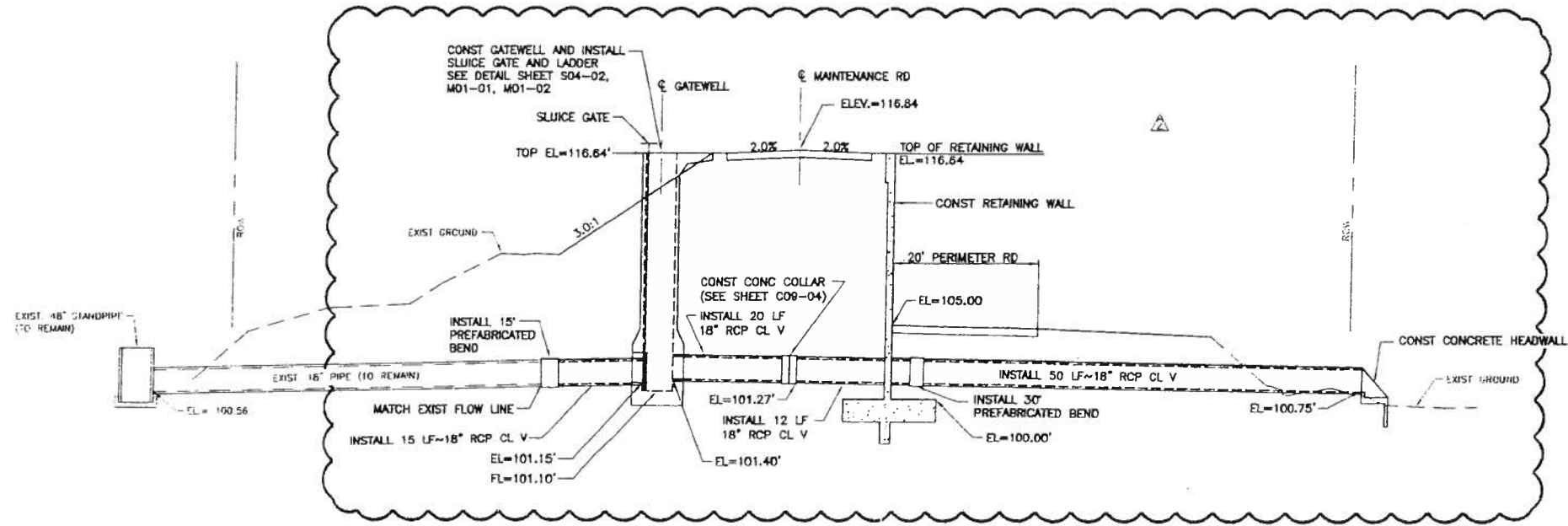
Project No.	410-07
Designer By	J.A.
Checker By	H.R.V.
Drawn By	R.S.
Sheet No.	006-03



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PLAN  
STRUCTURE NO 325 IMPROVEMENTS  
SCALE: 1"=10'



ELEVATION  
SCALE: 1"=10' (H)  
1"=5' (V)

NOTES:

1. SEE "C02" SERIES SHEETS FOR TYPICAL SECTIONS.
2. SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
3. SEE "C10" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
4. SEE "C08" SERIES SHEETS FOR ACCESS RAMP DETAILS.
5. SEE "S02" SERIES SHEETS FOR BOLLARD DETAILS.
6. WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.

LEGEND

- PROPOSED SEDIMENT CONTROL FENCE
- ⊕ SOIL BORE LOCATION
- - - - - EXISTING CONTOURS
- - - - - EXISTING MAINTENANCE ROAD
- [Pattern] MAINTENANCE ROAD
- [Pattern] PERIMETER ROAD

Rev. No.	Description	Chk. By:	Date
IFC	ISSUED FOR CONSTRUCTION	R.S.	11-03-08
△	REVISION No. 1	R.S.	11-18-08
△	REVISION No. 2	R.S.	05-07-09



**DANNENBAUM**  
ENGINEERING COMPANY-McALLEN, LLC  
1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3677  
Registration No. 8999

HIDALGO PROTECTIVE LEVEE  
IMPROVEMENT PROJECT  
DHS PF 225: O-6 A

**STA 89+72**  
REMOVE AND REPLACE EXISTING  
STRUCTURE No. 325  
(2 OF 2)

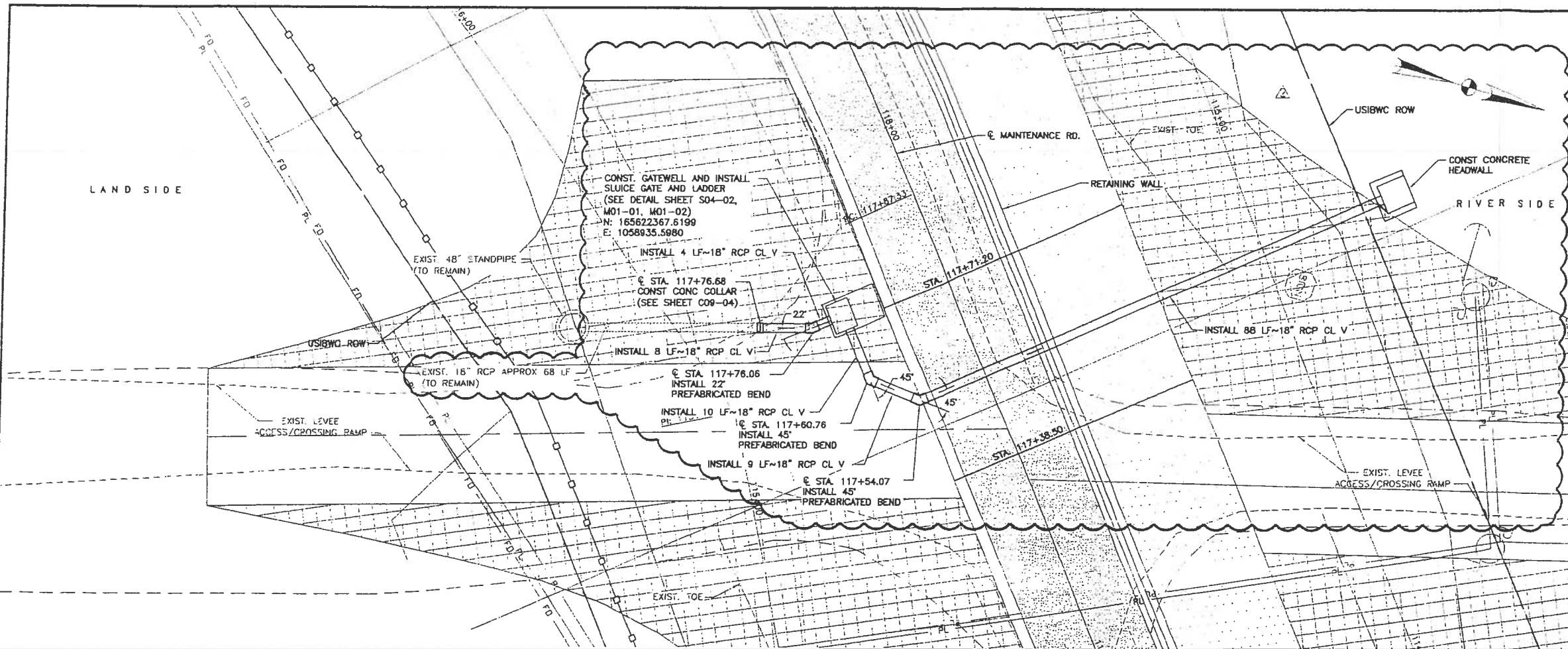


SHEET (4 OF 10)

Project No.	4410-07
Designed By:	O.A.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No.	C06-04

*Omar Arizola, Jr.*  
Omar Arizola, Jr., P.E.  
Date: 2-1-09

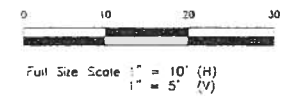




PLAN  
STRUCTURE NO. 327 IMPROVEMENTS  
SCALE: 1"=10'

- NOTES:
- SEE "C02" SERIES SHEETS FOR TYPICAL SECTIONS.
  - SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "C10" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "C08" SERIES SHEETS FOR ACCESS RAMP DETAILS.
  - SEE "S02" SERIES SHEETS FOR BOLLARD DETAILS.
  - WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.

- LEGEND
- PROPOSED SEDIMENT CONTROL FENCE
  - SOIL BORE LOCATION
  - EXISTING CONTOURS
  - EXISTING MAINTENANCE ROAD
  - MAINTENANCE ROAD
  - PERIMETER ROAD



Rev. No	Description	Chk. By	Date
IFC	ISSUED FOR CONSTRUCTION	R.S.	11-03-08
1	REVISION No. 1	R.S.	11-18-08
2	REVISED AS NOTED	R.S.	05-18-09



**DANNENBAUM**  
ENGINEERING COMPANY-McALLEN, LLC  
1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3677  
Registration No. 8999

HIDALGO PROTECTIVE LEVEE  
IMPROVEMENT PROJECT  
DHS PF 225: O-6 A

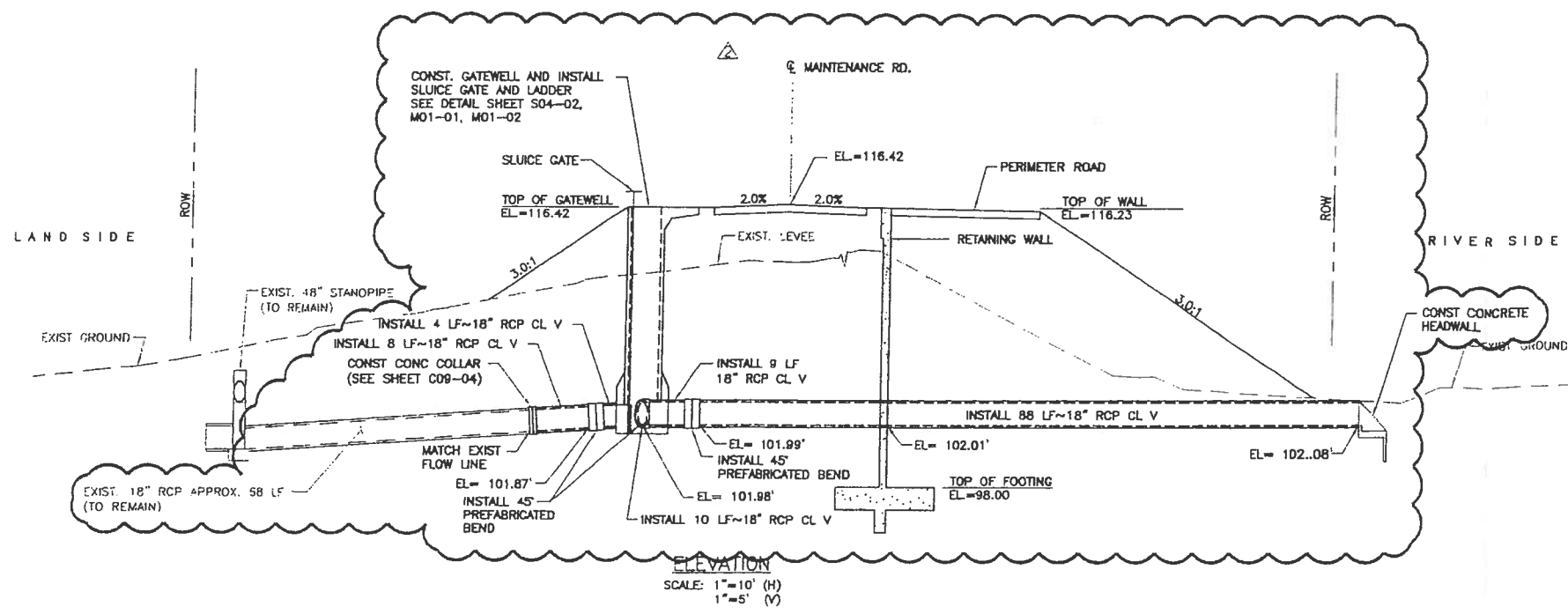
STA 117+54  
REMOVE AND REPLACE EXISTING  
STRUCTURE No. 327  
(2 OF 2)

SHEET (8 OF 10)



Project No.:	4410-07
Designed By:	O.A.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No.:	C06-08

*Omar A. Quidada, Jr.*  
Omar A. Quidada, Jr. P.E.  
Date: 11-18-09



ELEVATION  
SCALE: 1"=10' (H)  
1"=5' (V)

11/18/09, 11:58 AM, C:\Users\j... \Documents\1176-mca 2\Progress Structure 327 REV. 2.dwg, User: j... 317, 11/18/09, 11:58 AM, 1176-mca 2.dwg, Printed By: j...

HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6 A(2.59 MILES)

CHANGE ORDER NO. 15

Date: June 8, 2009

Contractor: Ballenger Construction Co.  
24200 North FM 509  
Harlingen, Texas 78550

Owner: Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

Reference: LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6 A(2.59 MILES)

Contract No. 08-016-09-02  
Dannenbaum No. 4410-07

Description:

Remove and reconstruct existing headwall and extend 54 in RCP for Structure No. 328.

**Contract Amount:**

Original Contract Price:	\$	28,553,870.93
Previous Change Order(s):	\$	(1,570,828.76)
Contract price prior to this change order:	\$	26,983,042.17
Net increase (decrease) from this change order:	\$	14,007.09
Contract price with all change orders to date (including this change order):	\$	<u>26,997,049.26</u>

**Contract Time:**

Authorized contract time change:

This Change Order	0	days
Previous Total	0	days
Total to Date	<u>0</u>	days

**APPROVALS:**

**ENGINEER:**

Dannenbaum Engineering Company - McAllen, LLC

  
Richard D. Seitz, P.E. Date 6/8/09  
Resident Project Representative

**OWNER:**


Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

**ACCEPTED:**

**CONTRACTOR:**

Ballenger Construction Co.

  
Joe C. Ballenger, Jr. Date 6/12/09  
President

HIDALGO COUNTY

JUN 17 2009

DRAINAGE DISTRICT #1

HIDALGO County Drainage District No. 1  
 LEVEE IMPROVEMENTS PROJECT  
 DHS SEGMENT 0-6 A(2.59 MILES)

CHANGE ORDER NO. 15

ATTACHMENT A

TABULATION OF QUANTITY AND COST

**Date:** June 8, 2009 **Contract No.:** 08-016-09-02  
**Contractor:** Ballenger Construction Co. **Dannenbaum No.:** 4410-07  
24200 North FM 509  
Harlingen, Texas 78550

**Description:** Remove and reconstruct existing headwall and extend 54 in RCP for Structure No. 328.

**COST SUMMARY**

BID ITEM NO.	UNITS	ORIGINAL QNTYS		REVISED QNTYS		VARIANCE AMOUNT
		QNTYS	UNIT PRICE	QNTYS	UNIT PRICE	
21	EA	1.00	\$ 3,360.79	1.12	\$ 3,360.79	\$ 3,764.08
43	LF	55.00	\$ 289.80	71.00	\$ 289.80	\$ 20,575.80
65	EA		\$ -	1.00	\$ 1,800.00	\$ 1,800.00
66	EA		\$ -	1.00	\$ 7,167.00	\$ 7,167.00
<b>GRAND TOTAL</b>						<b>\$ 14,007.09</b>

HIDALGO COUNTY  
 JUN 17 2009  
 DRAINAGE DISTRICT #1

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 15**

ATTACHMENT B

**Date:** June 16, 2009

**Contractor:** BALLENGER CONSTRUCTION  
CO.  
24200 North FM 509  
Harlingen, Texas 78550

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS  
PROJECT  
DHS SEGMENT 0-6A (2.59 MI)

**Contract No.** 08-016-09-02  
**Dannenbaum No.** 4410-07

**ENGINEER'S EXPLANATION**

DESCRIPTION OF CHANGE

Remove and reconstruct existing headwall and extend 54 in RCP for Structure No. 328.

JUSTIFICATION FOR CHANGE

Existing Headwall was buried and not visible from field observations. Headwall was placed on issued for bid plans from drawing by others. Once the headwall was exposed by contractor it was found to be closer to the wall than shown on plans. Its location conflicted with the perimeter road; therefore, requiring the removal of the headwall and construction of a new headwall farther from the wall this in turn required lengthening of the pipe.

ENGINEER'S JUSTIFICATION OF COST

Contractor was in agreement with Engineer's "Opinion of Cost" and therefore we recommend execution of this change order for \$14,007.09.

HIDALGO COUNTY  
JUN 17 2009  
DRAINAGE DISTRICT #1

HIDALGO County Drainage District No. 1  
 LEVEE IMPROVEMENTS PROJECT  
 DHS SEGMENT 0-6 A(2.59 MILES)

CHANGE ORDER NO. 15

ATTACHMENT B

ENGINEER'S OPINION OF COST

Date: June 8, 2009

Contractor: Ballenger Construction Co.  
 24200 North FM 509  
 Harlingen, Texas 78550

Contract No. 08-016-09-02  
 Dannenbaum No. 4410-07

Description:

Remove and reconstruct existing headwall and extend 54 in RCP for Structure No. 328.

COST SUMMARY

BID ITEM NO.	UNITS	ORIGINAL QNTYS		REVISED QNTYS		VARIANCE AMOUNT		
		QNTYS	UNIT PRICE	COST	QNTYS		UNIT PRICE	COST
21	EA	1.00	\$ 3,360.79	\$ 3,360.79	1.12	\$ 3,360.79	\$ 3,764.08	\$ 403.29
43	LF	55.00	\$ 289.80	\$ 15,939.00	71.00	\$ 289.80	\$ 20,575.80	\$ 4,636.80
65	EA			-	1.00	\$ 1,800.00	\$ 1,800.00	\$ 1,800.00
66	EA			-	1.00	\$ 7,167.00	\$ 7,167.00	\$ 7,167.00
GRAND TOTAL							\$	14,007.09

HIDALGO COUNTY

JUN 17 2009

DRAINAGE DISTRICT #1

**CONCRETE HEADWALL (54 IN.) (CAST-IN-PLACE)**

TXDOT LOW BID AS1458 ALL STATE

ITEM NO	DESCRIPTION	UNITS	QUANTITY	AVG BID	12 MO QTY	12 MO AVG BID	12 MO USAGE
466 2132	HEADWALL (CH-PW-0)(DIA= 54 IN)	EA	1.00	6,000.00	3.00	7,166.67	3.00

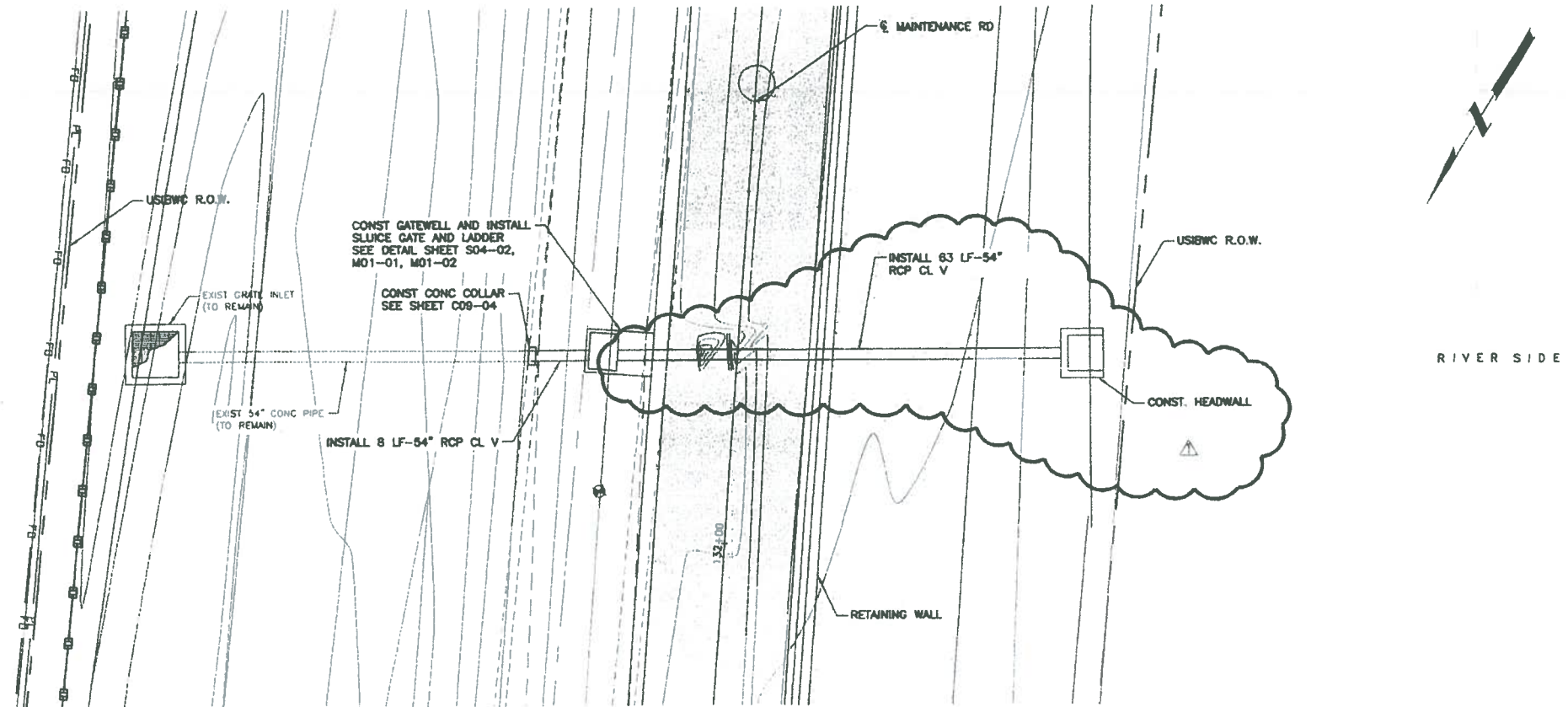
**REMOVE EXISTING HEADWALL**

BID ITEM	BID TABULATION FOR SIMILAR PROJECT	DESCRIPTION	UNIT	QTY	UNIT PRICE
26.00	DHS SEGMENT O-9 PH II	Remove Exist. Conc. Headwall (54 in)	Ea	1.00	1,800.00

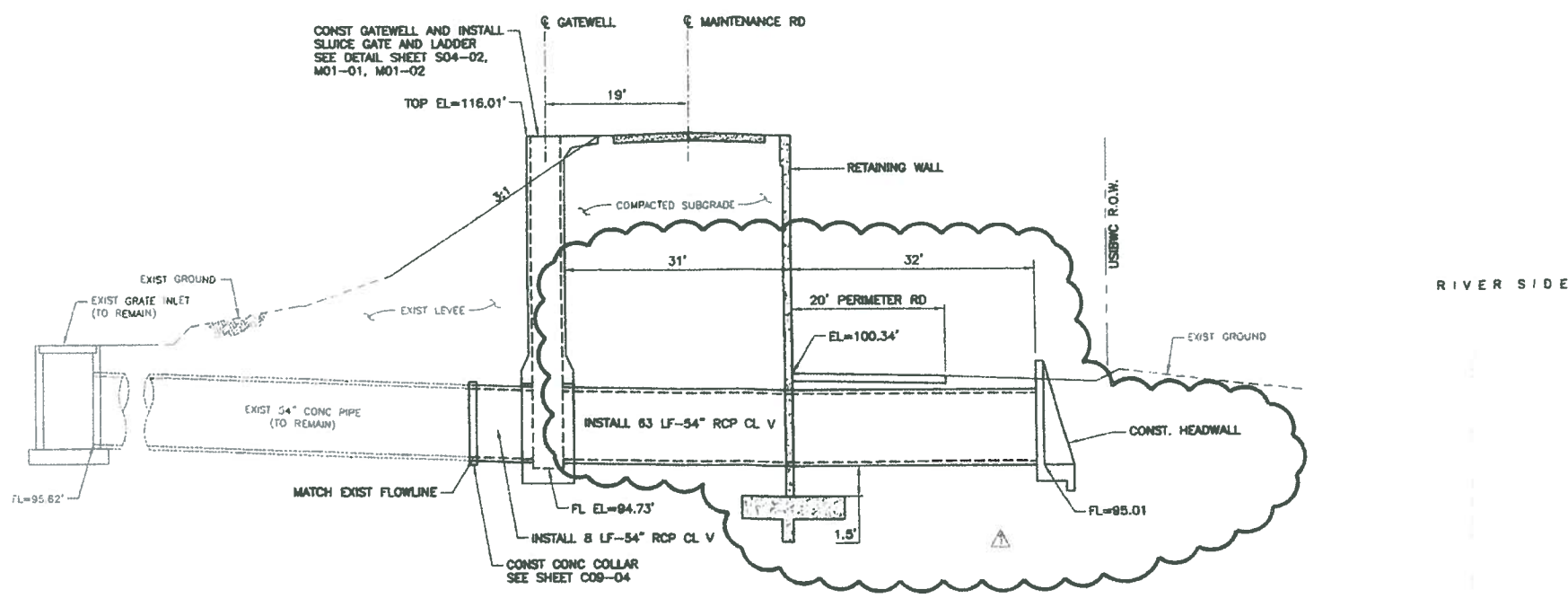
HIDALGO COUNTY

JUN 17 2009

DRAINAGE DISTRICT #1



PLAN  
PROPOSED STRUCTURE No. 328 IMPROVEMENTS  
SCALE: 1"=10' (H)



ELEVATION  
SCALE: 1"=10' (H)  
1"=5' (V)

LEGEND  
LIMITS OF STRUCTURE AND PIPE REMOVAL

Rev. No	Description	Chk. By	Date
B	ISSUED FOR CONSTRUCTION	R.S.	11-03-08
A	REPLACE IN ITS ENTIRETY	R.S.	01-30-09



**DANNENBAUM**  
ENGINEERING COMPANY-McALLEN, LLC  
1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3877  
Registration No. 8999

HIDALGO PROTECTIVE LEVEE  
IMPROVEMENT PROJECT  
DHS PF 225: O-6 A

STA 132+26  
REMOVE AND REPLACE EXISTING  
STRUCTURE No. 328  
(2 OF 2)

SHEET (10 OF 10)

<p>Omar Anis, Jr., P.E. Date: 2-13-09</p>	Project No.	4410-07
	Designed By:	O.A.
	Drawn By:	H.R.V.
	Checked By:	R.S.
	Sheet No.	C06-10

C:\1440\4231-21\Level 0-6\Issued For Construction 0-6\Revision 1\Proposed Structure 328 REV 1.dwg  
Drawn By: S. Garcia, 10/27/08, 10:53 AM, 10/27/08, 10:53 AM, 10/27/08, 10:53 AM



HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6B & 0-6C (1.38 MILES)

CHANGE ORDER NO. 27

Date: May 28, 2009

Contractor: SER Construction Partners, Ltd.  
3636 Pasadena Blvd.  
Pasadena, Texas 77503

Owner: Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

Reference: LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6B & 0-6C (1.38 MILES)

Contract No. 08-017-09-02  
Dannenbaum No. 4410-08 / 4410-09

Description: Increased Retaining Wall Footing unit price due to increase in reinforcing steel.

**Contract Amount:**

Original Contract Price:	\$	14,197,729.40
Previous Change Order(s):	\$	550,728.48
Contract price prior to this change order:	\$	14,748,457.88
Net increase (decrease) from this change order:	\$	254,299.64
Contract price with all change orders to date (including this change order):	\$	15,002,757.52

**Contract Time:**

Authorized contract time change:

Previous Total	0	days
This Change Order	0	days
Total to Date	0	days

**APPROVALS:**

**ENGINEER:**

Dannenbaum Engineering Company - McAllen, LLC

  
Richard D. Seitz, P.E. Date 6/10/09  
Resident Project Representative

**OWNER:**


Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

**ACCEPTED:**

**CONTRACTOR:**

SER Construction Partners, Ltd.

  
Rospel E. Ramos Date 6/11/09  
President

HIDALGO COUNTY  
JUN 03 2009  
DRAINAGE DISTRICT #1  
HIDALGO COUNTY  
MAY 29 2009  
DRAINAGE DISTRICT #1

HIDALGO COUNTY  
JUN 12 2009  
DRAINAGE DISTRICT #1





**REINFORCING STEEL QUANTITY BACKUP CALCULATIONS - C1 BARS**

	Station		Station	Length	Number of 32' - 4" Panels	Weight Per Panel (lbs)	Total Weight
1,000.00	10+00	1,750.00	17+50	750.00	23.2	1,035	24,014.54
1,750.00	17+50	2,400.00	24+00	650.00	20.1	1,527	30,702.28
2,400.00	24+00	2,950.00	29+50	550.00	17.0	1,887	32,091.15
2,950.00	29+50	3,700.00	37+00	750.00	23.2	2,071	48,029.08
3,700.00	37+00	5,000.00	50+00	1,300.00	40.2	1,035	41,625.21
5,000.00	50+00	5,800.00	58+00	800.00	24.7	1,194	29,537.61
5,800.00	58+00	6,600.00	66+00	800.00	24.7	1,035	25,615.51
6,600.00	66+00	7,400.00	74+00	800.00	24.7	1,415	35,012.82
7,400.00	74+00	7,800.00	78+00	400.00	12.4	1,035	12,807.76
7,800.00	78+00	8,300.00	83+00	500.00	15.5	1,050	16,231.41

Project Length: 7,300

Total Weight of C1 Bars: 295,667.37 lbs

Total Cost per Pound: \$ 0.86

**Total Cost: \$ 254,273.93**

~~HIDALGO COUNTY  
 JUN 03 2009  
 DRAINAGE DISTRICT #1~~

HIDALGO COUNTY  
 JUN 12 2009  
 DRAINAGE DISTRICT #1

~~HIDALGO COUNTY  
 MAY 29 2009  
 DRAINAGE DISTRICT #1~~

Station	Panel Length (inches)	Panel Length (inches)	Bar Spacing (inches)	Number of Bars	Use	Spacing	C1 Bar Length (feet)	Weight per foot	Weight per C1 Bar	Total Weight per 32'-4" Panel
10+00	32'-4"	388	12	32.33	33.00	11.76	11.75	2.67	31.37	1,035
17+50	32'-4"	388	9	43.11	44.00	8.82	13.00	2.67	34.71	1,527
24+00	32'-4"	388	8	48.50	49.00	7.92	14.42	2.67	38.50	1,887
29+50	32'-4"	388	9	43.11	47.00	8.26	16.50	2.67	44.06	2,071
37+00	32'-4"	388	12	32.33	33.00	11.76	11.75	2.67	31.37	1,035
50+00	32'-4"	388	11	35.27	36.00	10.78	12.42	2.67	33.16	1,194
58+00	32'-4"	388	12	32.33	33.00	11.76	11.75	2.67	31.37	1,035
66+00	32'-4"	388	10	38.80	40.00	9.70	13.25	2.67	35.38	1,415
74+00	32'-4"	388	12	32.33	33.00	11.76	11.75	2.67	31.37	1,035
78+00	32'-4"	388	11	35.27	36.00	10.78	10.92	2.67	29.16	1,050

~~HIDALGO COUNTY  
MAY 29 2009  
DRAINAGE DISTRICT #1~~

~~HIDALGO COUNTY  
JUN 03 2009  
DRAINAGE DISTRICT #1~~

HIDALGO COUNTY  
JUN 12 2009  
DRAINAGE DISTRICT #1

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 27**

**ENGINEER'S EXPLANATION**

**Date:** June 12, 2009

**Contractor:** SER CONSTRUCTION  
3636 Pasadena Blvd  
Pasadena, Texas 77503

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS  
PROJECT  
DHS SEGMENT 0-6B & 0-6C (1.38  
MI)

**Contract No.** 08-017-09-02  
**Dannenbaum No.** 4410-08 /  
4410-09

DESCRIPTION OF CHANGE

Increased Retaining Wall Footing unit price due to increase in reinforcing steel.

JUSTIFICATION FOR CHANGE

Contractor has requested payment for additional reinforcing steel he installed in the construction of the retaining wall footing. Contractor stated his bid price for Bid Item No. 6 (Retaining Wall Cast-In-Place Footing) was based upon the quantities of steel shown in the tabulation of reinforcement shown on the plans for a single 32'-4" wall panel. In the tabulation of reinforcing steel show on the plans, the quantity of steel shown for the C1 bar is incorrect as the quantity of steel shown is for a single layer of reinforcing steel while the wall section on the same plan sheets called for two layers of steel. The wall section was correct and the tabulation was not. Contractor submitted an RFI regarding the C1 bars and was directed to install the required two layers of reinforcing steel. The Engineer confirmed that the Contractor install the required two layers of C1 bars as directed by the Engineer. As this steel was required for the construction of the wall and it was installed by the Contractor, the Engineer recommends payment to the Contractor.

ENGINEER'S JUSTIFICATION OF COST

Engineer has reviewed the Contractor's back-up documentation relating to his additional cost incurred for this item of work and recommends an adjustment to the unit price for this bid item and an increase in the Bid Item in the amount of \$254,299.64 per this Change Order. Cost adjustment was calculated on the basis of pounds of additional reinforcing required plus labor costs for reinforcing bar.

HIDALGO COUNTY

JUN 12 2009

DRAINAGE DISTRICT #1

**SER CONSTRUCTION  
PARTNERS, LTD.**

**Eddie Ramos  
President**

Office (713) 473-7900  
Fax (713) 473-7919  
eddie@serconstruction.net

October 16<sup>th</sup> 2008

Mr. Richard Seitz P.E.  
Dannenbaum Engineering  
1109 Nolana Loop, Suite 208  
McAllen, TX 78504



Re: Hidalgo Levee Improvements Project DHS 06B&C  
Reinforcing Bar Schedule

Dear Sir:

Based on RFI no 7 on DHS 07 project the quantities on the reinforcing bar schedule are not complete. This is the same situation on the 06B&C project. The total number of C-1 bars is double than what is shown on the chart. This is approximately an additional 260,000 lbs of additional reinforcing steel not accounted for in the bar schedule. Please advise us if this situation does not apply on this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie Ramos". The signature is fluid and cursive, written over the word "Sincerely,".

Eddie Ramos  
President

STATION	WALL HEIGHT "H"	"HP"	PROPERTIES										REINFORCING STEEL FOR ONE 32'-4" PANEL																									
			WALL DIMENSIONS										MAX SOIL PRESS	A1~ 32 #5 12 1/2" C-C		A2~ 32 #6 12 1/2" C-C		A3~ 32 #7 12 1/2" C-C		A4~ 32 #8 12 1/2" C-C		A5~ 32 #9 12 1/2" C-C		A6~ 32 #11 12 1/2" C-C		A7~ 0 #11 12 1/2" C-C		B (#5)		C1		C2						
			FW	TW	SW	HW	FT	KW	KH	T/SF	LGTH	WT		LGTH	WT	LGTH	WT	LGTH	WT	LGTH	WT	LGTH	WT	LGTH	WT	SPA	NO	LGTH	WT	NO	SIZE	SPA	LGTH	WT	NO	SIZE	SPA	LGTH
10+00 TO 17+50	14'-6"	13'-0"	13'-6"	2'-3"	1'-4"	9'-11"	1'-6"	1'-0"	2'-0"	1.07	10'-3"	343	11'-0"	529	9'-3"	606	6'-9"	577							12"	33	16'-1"	554	33	8	12"	11'-9"	1036	33	8	12"	13'-0"	1146
17+50 TO 24+00	19'-9"	18'-0"	17'-9"	5'-3"	2'-0"	10'-6"	1'-9"	2'-0"	4'-0"	1.06	10'-3"	343	11'-2"	537	12'-2"	796	15'-8"	1339							12"	33	23'-4"	803	44	8	9"	13'-0"	1528	44	8	9"	17'-3"	2027
24+00 TO 29+50	21'-0"	19'-0"	19'-8"	5'-9"	2'-3"	11'-8"	2'-0"	2'-0"	4'-0"	1.07	10'-3"	343	11'-2"	537	12'-2"	796	17'-8"	1510							11"	36	24'-7"	923	49	8	8"	14'-5"	1887	49	8	8"	19'-2"	2508
29+50 TO 37+00	22'-0"	20'-0"	21'-0"	5'-0"	2'-3"	13'-9"	2'-0"	1'-9"	4'-0"	1.25	10'-3"	343	11'-2"	537	12'-2"	796	17'-11"	1531							11"	36	25'-7"	961	47	9	9"	16'-6"	2637	47	9	9"	20'-6"	3276
37+00 TO 50+00	14'-6"	13'-0"	13'-6"	2'-3"	1'-4"	9'-11"	1'-6"	1'-0"	2'-0"	1.07	10'-3"	343	11'-0"	529	9'-3"	606	6'-9"	577							12"	33	16'-1"	554	33	8	12"	11'-9"	1036	33	8	12"	13'-0"	1146
50+00 TO 58+00	15'-6"	14'-0"	14'-6"	2'-7"	1'-5"	10'-6"	1'-6"	1'-0"	2'-0"	1.08	10'-3"	343	12'-3"	589	10'-8"	698	8'-2"	698							12"	33	17'-1"	588	36	8	11"	12'-5"	1194	36	8	11"	14'-0"	1346
58+00 TO 66+00	14'-6"	13'-0"	13'-6"	2'-3"	1'-4"	9'-11"	1'-6"	1'-0"	2'-0"	1.07	10'-3"	343	11'-0"	529	9'-3"	606	6'-9"	577							12"	33	16'-1"	554	33	8	12"	11'-9"	1036	33	8	12"	13'-0"	1146
66+00 TO 74+00	16'-6"	15'-0"	15'-9"	3'-0"	1'-6"	11'-3"	1'-6"	1'-0"	2'-0"	1.07	10'-3"	343	13'-5"	645	12'-2"	796	9'-8"	826							12"	33	18'-1"	622	40	8	10"	13'-3"	1416	40	8	10"	15'-3"	1629
74+00 TO 78+00	14'-6"	13'-0"	13'-6"	2'-3"	1'-4"	9'-11"	1'-6"	1'-0"	2'-0"	1.07	10'-3"	343	11'-0"	529	9'-3"	606	6'-9"	577							12"	33	16'-1"	554	33	8	12"	11'-9"	1036	33	8	12"	13'-0"	1146
78+00 TO 83+00	12'-0"	11'-0"	11'-9"	1'-4"	1'-1"	9'-4"	1'-0"	1'-0"	1'-6"	0.98	11'-11"	398	8'-1"	389	5'-7"	366									12"	33	13'-1"	450	36	8	11"	10'-11"	1050	36	8	11"	11'-3"	1082

STATION	WALL HEIGHT "H"	"HP"	PROPERTIES										REINFORCING STEEL FOR ONE 32'-4" PANEL																		WALL HEIGHT "H"		
			WALL DIMENSIONS										MAX SOIL PRESS	D1 (#5)		D2 #5 AT 12" C-C		DOWEL F AT 12" C-C		H (#5)		S (#3)		T (#5)		U1~ 32 #5 AT 12 1/2" C-C		U2					
			FW	TW	SW	HW	FT	KW	KH	T/SF	SPA	NO		NO	WT	NO	WT	NO	WT	SPA	NO	NO	WT	SPA	NO	WT	LGTH	WT	SIZE	SPA		NO	LGTH
10+00 TO 17+50	14'-6"	13'-0"	13'-6"	2'-3"	1'-4"	9'-11"	1'-6"	1'-0"	2'-0"	1.07	12"	28	930	6	200	14	113	12"	14	465	60	185	12"	14	465	10'-4"	345	5	12"	33	7'-0"	240	14'-6"
17+50 TO 24+00	19'-9"	18'-0"	17'-9"	5'-3"	2'-0"	10'-6"	1'-9"	2'-0"	4'-0"	1.06	12"	38	1262	10	333	19	153	12"	19	631	60	185	12"	19	631	10'-4"	345	5	8"	49	12'-6"	430	19'-9"
24+00 TO 29+50	21'-0"	19'-0"	19'-8"	5'-9"	2'-3"	11'-8"	2'-0"	2'-0"	4'-0"	1.07	11"	44	1461	10	333	21	169	12"	20	665	60	185	12"	20	665	10'-4"	345	5	8"	49	12'-9"	652	21'-0"
29+50 TO 37+00	22'-0"	20'-0"	21'-0"	5'-0"	2'-3"	13'-9"	2'-0"	1'-9"	4'-0"	1.25	11"	46	1528	10	333	22	177	12"	22	731	60	185	12"	22	731	10'-4"	345	5	8"	49	12'-9"	652	22'-0"
37+00 TO 50+00	14'-6"	13'-0"	13'-6"	2'-3"	1'-4"	9'-11"	1'-6"	1'-0"	2'-0"	1.07	12"	28	930	6	200	14	113	12"	14	465	60	185	12"	14	465	10'-4"	345	5	12"	33	7'-0"	241	14'-6"
50+00 TO 58+00	15'-6"	14'-0"	14'-6"	2'-7"	1'-5"	10'-6"	1'-6"	1'-0"	2'-0"	1.08	12"	30	997	6	200	15	121	12"	15	499	60	185	12"	15	499	10'-4"	345	5	12"	33	7'-0"	241	15'-6"
58+00 TO 66+00	14'-6"	13'-0"	13'-6"	2'-3"	1'-4"	9'-11"	1'-6"	1'-0"	2'-0"	1.07	12"	28	930	6	200	14	113	12"	14	465	60	185	12"	14	465	10'-4"	345	5	12"	33	7'-0"	241	14'-6"
66+00 TO 74+00	16'-6"	15'-0"	15'-9"	3'-0"	1'-6"	11'-3"	1'-6"	1'-0"	2'-0"	1.07	12"	32	1063	6	200	17	137	12"	17	565	60	185	12"	17	565	10'-4"	345	5	12"	33	7'-0"	241	16'-6"
74+00 TO 78+00	14'-6"	13'-0"	13'-6"	2'-3"	1'-4"	9'-11"	1'-6"	1'-0"	2'-0"	1.07	12"	28	930	6	200	14	113	12"	14	465	60	185	12"	14	465	10'-4"	345	5	12"	33	7'-0"	241	14'-6"
78+00 TO 83+00	12'-0"	11'-0"	11'-9"	1'-4"	1'-1"	9'-4"	1'-0"	1'-0"	1'-6"	0.98	12"	24	797	4	133	13	105	12"	13	432	60	185	12"	13	432	10'-4"	345	5	12"	33	5'-2"	241	12'-0"

COEFFICIENTS OF HORIZONTAL EARTH PRESSURE		
STATION	Kp	Ka
10+00 TO 83+00	2.77	0.38

Rev. No.	Description	Chk. By:	DATE
B	ISSUED FOR CONSTRUCTION	R.S.	08-08-08



**DANNENBAUM**  
**ENGINEERING COMPANY-McALLEN, LLC**  
 1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3677

HIDALGO PROTECTIVE LEVEE  
 IMPROVEMENT PROJECT  
 DHS PF 225: O-6B & O-6C

**RETAINING WALL DETAILS**  
**(STA 10+00 TO STA 83+00)**

SHEET (2 OF 2)

Project No.:	4410-07
Designed By:	C.T.
Drawn By:	S.W.
Checked By:	W.P.C.
Sheet No.:	S01-01A

23: 1/25/08 2:04 PM ANALYSIS: 0. N/A Date: Rev: 2/25/08 10:55 AM Project: 4410-07, STA 10+00 TO STA 83+00  
 24: 2/25/08 2:04 PM ANALYSIS: 0. N/A Date: Rev: 2/25/08 10:55 AM Project: 4410-07, STA 10+00 TO STA 83+00

HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6B & 0-6C (1.38 MILES)

CHANGE ORDER NO. 30

Date: June 8, 2009

Contractor: SER Construction Partners, Ltd.  
3636 Pasadena Blvd.  
Pasadena, Texas 77503

Owner: Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

Reference: LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6B & 0-6C (1.38 MILES)

Contract No. 08-017-09-02  
Dannenbaum No. 4410-08 / 4410-09

Description: Borrow Site embankment modification.

**Contract Amount:**

Original Contract Price:	\$	14,197,729.40
Previous Change Order(s):	\$	912,797.68
Contract price prior to this change order:	\$	15,110,527.08
Net increase (decrease) from this change order:	\$	341,665.00
Contract price with all change orders to date (including this change order):	\$	15,452,192.08

**Contract Time:**

Authorized contract time change:	
Previous Total	0 days
This Change Order	0 days
Total to Date	0 days

**APPROVALS:**

**ENGINEER:**  
Dannenbaum Engineering Company - McAllen, LLC

*Richard D. Seitz, P.E. 6/10/09*  
Richard D. Seitz, P.E. Date  
Resident Project Representative

**OWNER:**  
Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

**ACCEPTED:**

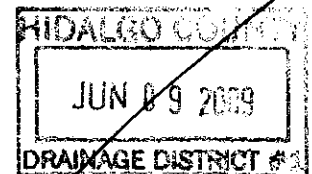
**CONTRACTOR:**  
SER Construction Partners, Ltd.

*Rosbel E. Ramos 6/10/09*  
Rosbel E. Ramos Date  
President

HIDALGO COUNTY

JUN 12 2009

DRAINAGE DISTRICT #1





HIDALGO County Drainage District No. 1  
 LEVEE IMPROVEMENTS PROJECT  
 DHS SEGMENT 0-6B & 0-6C (1.38 MILES)

CHANGE ORDER NO. 30

ATTACHMENT B

ENGINEER'S PRELIMINARY OPINION OF COST

Date: June 8, 2009 Contract No. 08-017-09-02  
3636 Pasadena Blvd. Dannenbaum No. 4410-08 / 4410-09  
Pasadena, Texas 77503

Description: Borrow Site embankment modification.

COST SUMMARY

BID ITEM NO.	UNITS	ORIGINAL QNTYS		REVISED QNTYS		VARIANCE AMOUNT		
		QNTYS	UNIT PRICE	COST	QNTYS		UNIT PRICE	COST
18	EMBANKMENT	88,946.50	\$ 20.00	\$ 1,778,930.00	157,279.50	\$ 20.00	\$ 3,145,590.00	\$ 1,366,660.00
19	EMBANKMENT (BORROW SITE)	75,000.00	\$ 15.00	\$ 1,125,000.00	6,667.00	\$ 15.00	\$ 100,005.00	\$ (1,024,995.00)
GRAND TOTAL								\$ 341,665.00

HIDALGO COUNTY

JUN 12 2009

DRAINAGE DISTRICT #1

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 30**

**ENGINEER'S EXPLANATION**

**Date:** June 12, 2009

**Contractor:** SER CONSTRUCTION  
3636 Pasadena Blvd  
Pasadena, Texas 77503

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS  
PROJECT  
DHS SEGMENT 0-6B & 0-6C (1.38  
MI)

**Contract No.** 08-017-09-02

**Dannenbaum No.** 4410-08 /  
4410-09

DESCRIPTION OF CHANGE

Modification to Embankment (Borrow Site) Quantity

JUSTIFICATION FOR CHANGE

Issued for Bid Item 19 for Embankment (Borrow Site) is for 75,000 cu. yds. This material was to come from widening of a Hidalgo County Drainage District No. 1 drainage ditch known as the Jackson Drain. However, once excavation of the ditch began it was discovered that the PI of the majority of the excavated material did not meet levee project requirements. For this reason the quantity for this bid item is being reduced to reflect the actual amount of excavated material that was usable, approximately 6,667 cu. yds.

ENGINEER'S JUSTIFICATION OF COST

After reviewing change order with Contractor he agreed with Engineer's estimate, no further negotiations were not necessary.

HIDALGO COUNTY

JUN 12 2009

DRAINAGE DISTRICT #1

HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6B & O-6C (1.38 MILES)

CHANGE ORDER NO. 33A

**Date:** July 24, 2009 (Revised 8/6/2009)

**Contractor:** SER Construction Partners, Ltd.  
3636 Pasadena Blvd.  
Pasadena, Texas 77503

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6B & O-6C (1.38 MILES)

**Contract No.** 08-017-09-02  
**Dannenbaum No.** 4410-08 / 4410-09

**Description:**

Install owner supplied anti-climb fence and extend 8 existing 8 foot bollards to 18 foot bollards by welding 10 foot bollards to the existing 8 foot bollards.

**Contract Amount:**

<b>Original Contract Price:</b>	\$	14,197,729.40
Previous Change Order(s):	\$	2,416,104.71
Contract price prior to this change order:	\$	16,613,834.11
Net increase (decrease) from this change order:	\$	9,396.05
<b>Contract price with all change orders to date (Including this change order):</b>	\$	<u>16,623,230.16</u>

**Contract Time:**

Authorized contract time change:

Previous Total	0	days
This Change Order	0	days
<b>Total to Date</b>	<u>0</u>	days

**APPROVALS:**

**ENGINEER:**

Dannenbaum Engineering Company - McAllen, LLC

  
Richard D. Seitz, P.E. Date 8/12/09  
Resident Project Representative

**OWNER:**


Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

**ACCEPTED:**

**CONTRACTOR:**

SER Construction Partners, Ltd.

  
Rosbel E. Ramos Date 8/11/09  
President

HIDALGO COUNTY

AUG 13 2009

DRAINAGE DISTRICT #1



HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6B & 0-6C (1.38 MILES)

CHANGE ORDER NO. 33A

ATTACHMENT B

ENGINEER'S PRELIMINARY OPINION OF COST

Date: July 24, 2009 (Revised 8/6/2009)

Contractor: SER Construction Partners, Ltd.  
3636 Pasadena Blvd.  
Pasadena, Texas 77503

Contract No.  
Dannenbaum No.

08-017-09-02  
4410-08 / 4410-09

Description:

Install owner supplied anti-climb fence and extend 8 existing 8 foot bollards to 18 foot bollards by welding 10 foot bollards to the existing 8 foot bollards.

COST SUMMARY

BID ITEM NO.	UNITS	ORIGINAL QNTYS			REVISED QNTYS			VARIANCE AMOUNT
		QNTYS	UNIT PRICE	COST	QNTYS	UNIT PRICE	COST	
60	EA	32.00	\$ 776.38	\$ 24,844.16	40.00	\$ 776.38	\$ 31,055.20	\$ 6,211.04
83	LS	0.00	\$ -	\$ -	1.00	\$ 3,185.01	\$ 3,185.01	\$ 3,185.01
GRAND TOTAL								\$ 9,396.05

HIDALGO COUNTY  
AUG 13 2009  
DRAINAGE DISTRICT #1

Engineer's Estimate

**Contract No.:** 08-017-09-02  
**Dannenbaum:** 4410-08 / 4410-09  
**Change Order No. 33A:** Change Order No. 33A  
**Description:** ANTI-CLIMBING FENCE PANEL (INSTALL SALVAGED)

**Labor**

Description	Qty	Days	Regular Hrs/Day	Overtime Hrs/Day	Total Regular Hours	Total Overtime Hours	Regular Rate/Hr	Overtime Rate/Hr	Total Regular	Total Overtime	Total Cost
Skilled Labor	1	1	8.00	2.00	8.00	2.00	\$ 10.00	\$ 15.00	\$ 80.00	\$ 30.00	\$ 110.00
Operator	1	1	8.00	2.00	8.00	2.00	\$ 14.00	\$ 21.00	\$ 112.00	\$ 42.00	\$ 154.00
Foreman	2	1	8.00	2.00	16.00	4.00	\$ 27.50	\$ 41.25	\$ 440.00	\$ 165.00	\$ 605.00
Welder	1	1	8.00	2.00	8.00	2.00	\$ 18.00	\$ 27.00	\$ 144.00	\$ 54.00	\$ 198.00
Labor Subtotal											\$ 1,067.00
Labor PTI	43.4%										\$ 463.08
Total Labor											\$ 1,530.08

**Equipment**

Description	Quantity	Days	Hrs/Day	Total Hrs	Rate/Hr	Total Cost
Cat 330 Excavator	1	1	10	10.00	52.00	\$ 520.00
Welding Machine	1	1	10	10.00	25.00	\$ 250.00
Equipment Subtotal						\$ 770.00
FOG	35%					\$ 269.50
Total Equipment						\$ 1,039.50

**Subcontractor**

Description	Quantity	Unit	Cost/Unit	Total Cost
Transport Mat	1	EA	200.00	\$ 200.00
Subcontractor Subtotal				\$ 200.00
Total Subcontractor				\$ 200.00

Labor	\$ 1,530.08
Equipment	\$ 1,039.50
Subcontractor	\$ 200.00
Subtotal	\$ 2,769.58
15% OH&P	\$ 415.44
Total Cost	\$ 3,185.01

**HIDALGO COUNTY**  
**AUG 13 2009**  
**DRAINAGE DISTRICT #1**

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 33A**

ATTACHMENT B

**Date:** August 12, 2009

**Contractor:** SER CONSTRUCTION  
3636 Pasadena Blvd  
Pasadena, Texas 77503

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS  
PROJECT  
DHS SEGMENT 0-6B & 0-6C (1.38  
MI)

**Contract No.** 08-017-09-02  
**Dannenbaum No.** 4410-08 /  
4410-09

**ENGINEER'S EXPLANATION**

DESCRIPTION OF CHANGE

Install owner supplied anti-climb fence and extend 8 existing 8 foot bollards to 18 foot bollards by welding 10 foot bollards to the existing 8 foot bollards.

JUSTIFICATION FOR CHANGE

Change Order No. 33 is being revised and reissued as Change Order No. 33A after discussions with DHS & CBP at this week's DHS Weekly Conference meeting (8-5-09) regarding the location for installation of the anti-climb fence. In addition, it was decided to delete the installation of the Contractor fabricated anti-climb and replace it with an Owner supplied anti-climb fence and extend the height of eight (8) of the existing bollards to provide better horizontal separation between the anti-climb fence and the toe of the concrete rip rap.

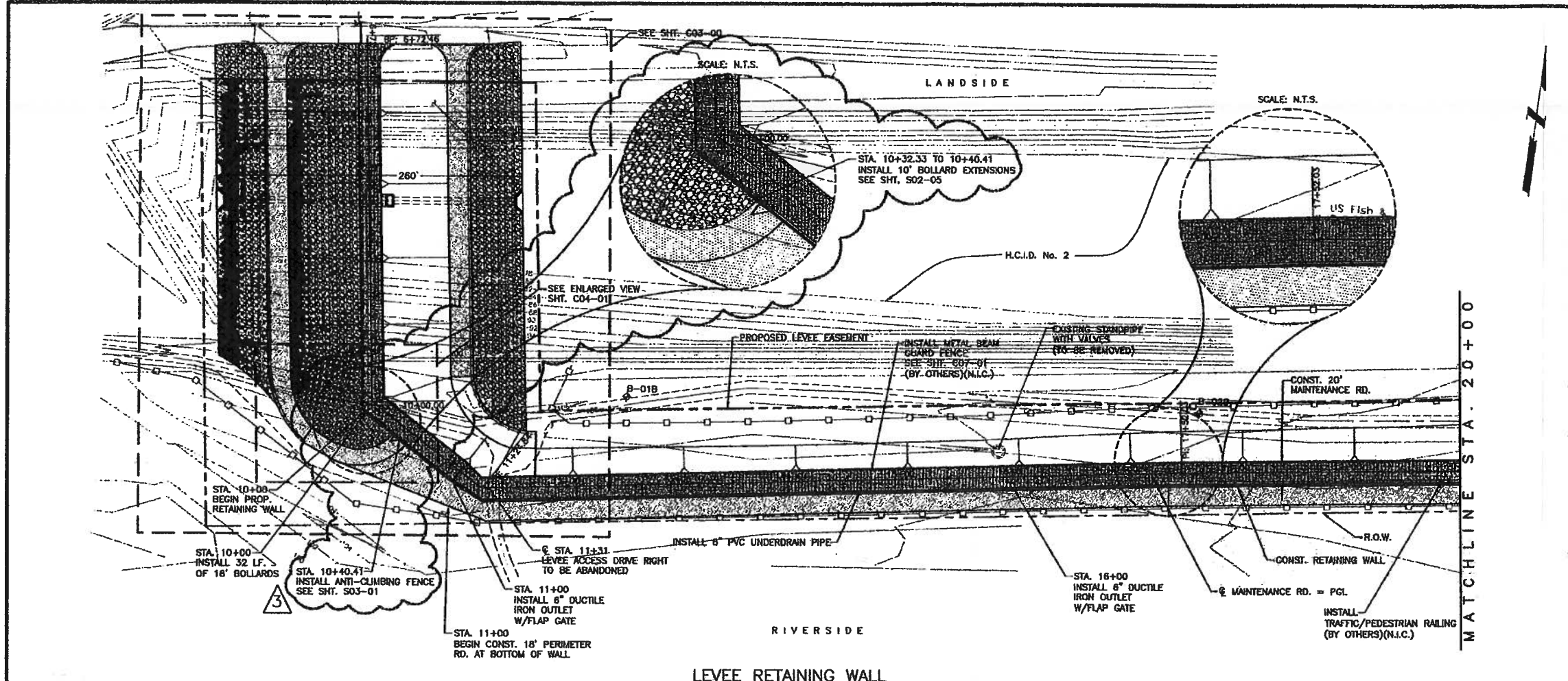
ENGINEER'S JUSTIFICATION OF COST

Change Order No. 33 had an original cost of \$10,000.00 for fabrication and installation of a new anti-climb fence. However, since it was decided to install a salvaged anti-climb fence taken from the Segment 0-9 Phase II project and weld 8 – 10 foot bollards on existing 8 foot bollards, "Engineer's Opinion of Cost" was revised. Price for the installation of a salvaged anti-climb fence was based on similar work performed by the Contractor on adjacent projects, and welding additional height onto existing bollards was a straight unit cost increase. Therefore, Engineer and Contractor are in agreement on this price, and Engineer recommends processing of this change order for \$9,396.05.

HIDALGO COUNTY

AUG 13 2009

DRAINAGE DISTRICT #1



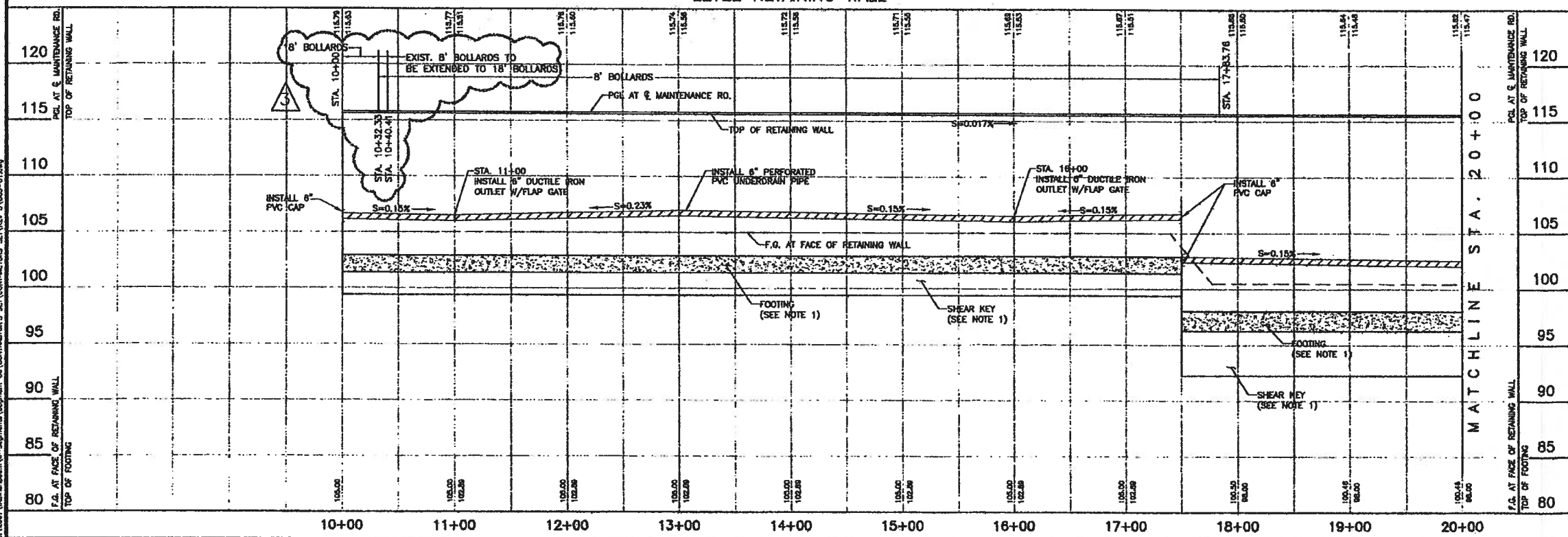
**NOTES:**

- FOR RETAINING WALL DETAILS, SEE "S01" SERIES.
- FOR MAINTENANCE RD. DETAILS, SEE SHEET ENTITLED: RETAINING WALL TYPICAL SECTIONS.
- PROPOSED MAINTENANCE RD. PGL ELEVATIONS ARE FOR TOP OF CALICHE MATERIAL.
- FOR UNDERDRAIN DETAILS, SEE SHEETS ENTITLED: UNDERDRAIN SYSTEM DETAILS.

**LEGEND**

- PROPOSED RETAINING WALL
- PROPOSED MAINTENANCE ROAD
- PROPOSED PERIMETER ROAD AT BOTTOM OF WALL
- PROPOSED LEVEE ACCESS DRIVE ENHANCEMENT
- PROPOSED HIKE/BIKE ASPHALT TRAIL
- PROPOSED SEDIMENT CONTROL FENCE
- EXISTING GEOTECHNICAL BORE
- EXISTING MAINTENANCE ROAD
- EXISTING CONTOURS
- EXISTING OVERHEAD POWERLINE
- PROPOSED GATE
- PROPOSED METAL BEAM GUARDRAIL W/POST

Scale 1" = 50' (H)  
1" = 3' (V)



Rev. No.	Description	Chk. By:	Date
B	ISSUED FOR CONSTRUCTION	J.R.	08-06-08
A	REVISION No.1	H.C.	11-10-08
A	REVISION No.2	J.R.	01-08-09
	REVISED AS NOTED		
A	ANTI-CLIMBING FENCE	H.G.	07-31-09

**DANNENBAUM**  
ENGINEERING COMPANY - McALLEN, LLC  
T.B.P.E. FIRM REGISTRATION #8999  
1109 NOLANA LOOP, STE 208 McALLEN, TX 78504 (956) 982-3677

**DL INC.**  
DOS LOGISTICS, INC.  
T.B.P.E. FIRM REGISTRATION #8-9225  
212 W. 3rd. Street Phone: (956) 988-8800  
Westaco, Tx. 78598 Fax: (956) 447-8184

HIDALGO PROTECTIVE LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT O-8B / Q-6C

**PLAN & PROFILE**  
STA. 10+00 TO STA. 20+00

SHEET (1 OF 7)

Project No: 4287-06  
Designed By: H.G.  
Drawn By: E.B., J.M., R.M., J.N.  
Checked By: H.G.  
Sheet No: C03-01

Hugo P. Gonzalez, Jr.  
Licensed Professional Engineer # 95680

21.0007.Dannenbaum-C-Segments Equipment, 08/10/CONTRACTOR'S SET, CONTRACTOR'S SET, REV. 3/03-01.dwg

HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6B & O-6C (1.38 MILES)

CHANGE ORDER NO. 34

Date: August 11, 2009

Contractor: SER Construction Partners, Ltd.  
3636 Pasadena Blvd.  
Pasadena, Texas 77503

Owner: Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

Reference: LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6B & O-6C (1.38 MILES)

Contract No. 08-017-09-02  
Dannenbaum No. 4410-08 / 4410-09

Description:

Extend existing Segment 0-6A Wall from Sta. 135+98.32 to Sta. 137+29.10 as directed by DHS.

**Contract Amount:**

Original Contract Price:	\$	14,197,729.40
Previous Change Order(s):	\$	2,425,500.76
Contract price prior to this change order:	\$	16,623,230.16
Net increase (decrease) from this change order:	\$	212,776.56
Contract price with all change orders to date (including this change order):	\$	<u>16,836,006.72</u>

**Contract Time:**


Authorized contract time change:

Previous Total	0	days
This Change Order	<u>0</u>	days
Total to Date	0	days

**APPROVALS:**

**ENGINEER:**

Dannenbaum Engineering Company - McAllen, LLC

  
Richard D. Seitz, P.E. Date 8/12/09  
Resident Project Representative

**OWNER:**


Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

**ACCEPTED:**

**CONTRACTOR:**

SER Construction Partners, Ltd.

  
Rosbel E. Ramos Date 8/11/09  
President

HIDALGO COUNTY

AUG 13 2009

DRAINAGE DISTRICT #1

HIDALGO County Drainage District No. 1  
 LEVEE IMPROVEMENTS PROJECT  
 DHS SEGMENT 0-6B & 0-6C (1.38 MILES)

CHANGE ORDER NO. 34

ATTACHMENT A

TABULATION OF QUANTITY AND COST

Date: August 11, 2009  
 Contract No. 08-017-08-02  
 Dammenbaum No. 4410-08 / 4410-09

Contract No. 08-017-08-02  
 Dammenbaum No. 4410-08 / 4410-09

Date: August 11, 2009  
 Contractor: SER Construction Partners, Ltd.  
 3636 Pasadena Blvd.  
 Pasadena, Texas 77503

Description: Extend existing Segment 0-6A Wall from Sta. 135+98.32 to Sta. 137+29.10 as directed by DHS.

COST SUMMARY

BID ITEM NO.	UNITS	ORIGINAL QNTYS			REVISED QNTYS			VARIANCE AMOUNT	
		QNTYS	UNIT PRICE	COST	QNTYS	UNIT PRICE	COST		
5	RETAINING WALL (CAST IN PLACE) (STEM)	CY	5,415.36	\$ 602.43	\$ 3,262,375.32	5,525.36	\$ 601.98	\$ 3,326,156.21	\$ 63,780.89
6	RETAINING WALL (CAST IN PLACE) (FOOTING)	CY	7,107.96	\$ 577.16	\$ 4,102,430.19	7,273.96	\$ 576.02	\$ 4,189,946.44	\$ 87,516.25
7	RETAINING WALL (CAST IN PLACE) (KEY)	CY	973.55	\$ 499.98	\$ 486,755.53	992.55	\$ 497.83	\$ 494,121.17	\$ 7,365.64
11	PERFORATED UNDERDRAIN PIPE (6 IN) (PVC)	LF	7,718.00	\$ 16.91	\$ 130,511.38	7,815.00	\$ 16.91	\$ 132,151.65	\$ 1,640.27
12	AGGREGATE DRAIN MATERIAL	CY	1,116.11	\$ 60.00	\$ 66,966.60	1,130.11	\$ 60.00	\$ 67,806.60	\$ 840.00
18	EMBANKMENT	CY	162,163.50	\$ 20.00	\$ 3,243,270.00	162,955.50	\$ 20.00	\$ 3,259,110.00	\$ 15,840.00
40	BOLLARD (TRANSPORT FROM STAGING AREA & INSTALL PER PLANS) (20 FT)	EA	1,135.00	\$ 276.00	\$ 313,260.00	1,231.00	\$ 276.00	\$ 339,756.00	\$ 26,496.00
41	BOLLARD (SUPPLY, CUT & WELD ANGLE IRON SUPPORTS)(4 IN X 4 IN X 1/4 IN - 8 FT)	LF	7,749.00	\$ 24.00	\$ 181,320.00	7,749.00	\$ 24.00	\$ 185,976.00	\$ 4,656.00
48	SHEET WALL DRAIN	SF	67,820.00	\$ 3.23	\$ 219,058.60	69,257.00	\$ 3.23	\$ 223,700.11	\$ 4,641.51
							GRAND TOTAL	\$	212,776.56

HIDALGO COUNTY  
 AUG 13 2009  
 DRAINAGE DISTRICT #1

HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-6B & 0-6C (1.38 MILES)

CHANGE ORDER NO. 34

ATTACHMENT B

ENGINEER'S PRELIMINARY OPINION OF COST

08-017-09-02  
4410-08 / 4410-09

Contract No.  
Dannenbaum No.

Date: August 11, 2009  
Contractor: SER Construction Partners, Ltd.  
3636 Pasadena Blvd.  
Pasadena, Texas 77503

Description: Extend existing Segment 0-6A Wall from Sta. 135+98.32 to Sta. 137+29.10 as directed by DHS.

COST SUMMARY

BID ITEM NO.	UNITS	ORIGINAL QNTYS			REVISED QNTYS			VARIANCE AMOUNT
		QNTYS	UNIT PRICE	COST	QNTYS	UNIT PRICE	COST	
5	CY	5,415.96	\$ 602.43	\$ 3,262,375.32	5,525.36	\$ 602.43	\$ 3,328,642.62	
	LB				3,611.19	\$ 0.69	\$ (2,491.72)	
					Subtotal		\$ 3,326,150.90	
					5,525.36	\$ 601.97903865	\$ 3,326,150.90	
					5,525.36	\$ 601.98000000	\$ 3,326,156.21	\$ 63,780.89
6	CY	7,107.96	\$ 577.16	\$ 4,102,430.19	7,273.96	\$ 577.16	\$ 4,198,238.75	
	LB				12,015.94	\$ 0.69	\$ (8,291.00)	
					Subtotal		\$ 4,189,947.75	
					7,273.96	\$ 576.02018040	\$ 4,189,947.75	
					7,273.96	\$ 576.02000000	\$ 4,189,946.44	\$ 87,516.25
7	CY	973.55	\$ 499.98	\$ 486,755.53	992.55	\$ 499.98	\$ 496,255.15	
	LB				3,092.70	\$ 0.69	\$ (2,133.97)	
					Subtotal		\$ 494,121.18	
					992.55	\$ 497.8300196	\$ 494,121.18	
					992.55	\$ 497.8300000	\$ 494,121.17	\$ 7,365.64
11	LF	7,718.00	\$ 16.91	\$ 130,511.38	7,815.00	\$ 16.91	\$ 132,151.65	
12	CY	1,116.11	\$ 60.00	\$ 66,966.60	1,130.11	\$ 60.00	\$ 67,806.60	\$ 1,640.27
16	CY	162,163.50	\$ 20.00	\$ 3,243,270.00	162,955.50	\$ 20.00	\$ 3,259,110.00	\$ 15,840.00
40	EA	1,135.00	\$ 276.00	\$ 313,260.00	1,231.00	\$ 276.00	\$ 339,756.00	\$ 26,496.00
41	LF	7,555.00	\$ 24.00	\$ 181,320.00	7,749.00	\$ 24.00	\$ 185,976.00	\$ 4,656.00
48	SF	67,820.00	\$ 3.23	\$ 219,058.60	69,257.00	\$ 3.23	\$ 223,700.11	\$ 4,641.51
GRAND TOTAL							\$	\$ 212,776.56

HIDALGO COUNTY

AUG 13 2009

DRAINAGE DISTRICT #1

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 34**

ATTACHMENT B

**Date:** August 12, 2009

**Contractor:** SER CONSTRUCTION  
3636 Pasadena Blvd  
Pasadena, Texas 77503

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS  
PROJECT  
DHS SEGMENT 0-6B & 0-6C (1.38  
MI)

**Contract No.** 08-017-09-02  
**Dannenbaum No.** 4410-08 /  
4410-09

**ENGINEER'S EXPLANATION**

DESCRIPTION OF CHANGE

Retaining Wall Extension for Segment 0-6A from Sta. 135+98.32 to Sta. 136+95.32.

JUSTIFICATION FOR CHANGE

Directed by DHS and CBP to connect South End of Segment 0-6A to existing POE fencing. Wall is designed to match future construction of floodwall by USIBWC and avoid future conflict with proposed USIBWC floodwall construction.

ENGINEER'S JUSTIFICATION OF COST

Cost for this change order was based on quantity times straight unit cost item or unit costs adjusted for owner supplied materials obtained from deleted work on DHS Segment 0-6A. Contractor and Engineer negotiated the cost for owner supplied material utilizing costs from previously negotiated change orders. Engineer believes the number to be fair and reasonable and recommends processing of this change order for \$212,776.56.

**HIDALGO COUNTY**

**AUG 13 2009**

**DRAINAGE DISTRICT #1**

## SEGMENT 0-6 B

(CO #34 - 0-6A SECOND EXTENSION TO HIDALGO PORT OF ENTRY)

PERFORATED UNDERDRAIN PIPE		
BEGIN STATION	END STATION	LENGTH (LF)
13598.32	13695.32	97
<b>TOTAL</b>		<b>97</b>

BOLLARD CALCULATIONS										
BEGIN STATION	END STATION	LENGTH (LF)	# OF BOLLARDS (20 FT)	ANGLE IRON SUPPORTS	# OF ANGLE IRON SUPPORTS USED IN SECTION	FLAT BAR SUPPORS	# OF FLAT BAR SUPPORTS USED IN SECTION	TOTAL # OF BOLLARDS NEEDED (20 FT)	TOTAL LENGTH OF ANGLE IRON SUPPORTS (LF)	TOTAL LENGTH OF FLAT BAR SUPPORTS (LF)
13598.32	13695.32	97	96	97.00	2.00	97.00	2.00	96.00	194.00	194.00
<b>TOTAL</b>								<b>96.00</b>	<b>194.00</b>	<b>194.00</b>

RETAINING WALL QUANTITIES (TYPE 2)																
BEGIN STATION	END STATION	LENGTH	WALL THICKNESS (FT)	HP (FT)	HP-10 (FT)	SW (FT)	FT (FT)	FW (FT)	KH (FT)	KW (FT)	AREA OF STEM (SF)	AREA OF FOOTING (SF)	AREA OF KEY (SF)	VOLUME OF STEM (CY)	VOLUME OF FOOTING (CY)	VOLUME OF KEY (CY)
13598.32	13695.32	97	1.00	17.97	7.97	2.25	2.00	18.167	2.50	1.50	22.95	36.33	3.75	82.45	130.53	13.47
<b>TOTAL</b>														<b>82.45</b>	<b>130.53</b>	<b>13.47</b>

STEM - RETAINING WALL QUANTITIES (WALL WRAP)															
TOP OF STEM 1&2 ELEVATION	TOP OF STEM 3 ELEVATION	TOP OF FOOTING ELEVATION	HEIGHT OF STEM 1 (FT)	HEIGHT OF STEM 2 (FT)	HEIGHT OF STEM 3 (FT)	WIDTH OF STEM 1 (FT)	WIDTH OF STEM 2 (FT)	WIDTH OF STEM 3 (FT)	WALL THICKNESS (FT)	AREA OF STEM 1 (SF)	AREA OF STEM 2 (SF)	AREA OF STEM 3 (SF)	VOLUME OF STEM 1 (CY)	VOLUME OF STEM 2 (CY)	VOLUME OF STEM 3 (CY)
115.95	107.56	103.53	12.42	8.39	4.03	19.50	42.50	42.50	1.25	242.19	178.29	171.28	11.21	8.25	7.93
<b>TOTAL</b>															<b>27.40</b>

HIDALGO COUNTY

AUG 13 2009

DRAINAGE DISTRICT #1

## SEGMENT 0-6 B

(CO #34 - 0-6A SECOND EXTENSION TO HIDALGO PORT OF ENTRY)

FOOTING - RETAINING WALL QUANTITIES (WALL WRAP)																				
WIDTH OF FOOTING 1 (FT)	WIDTH OF FOOTING 2 (FT)	WIDTH OF FOOTING 3 (FT)	WIDTH OF FOOTING 4 (FT)	WIDTH OF FOOTING 5 (FT)	LENGTH OF FOOTING 1 (FT)	LENGTH OF FOOTING 2 (FT)	LENGTH OF FOOTING 3 (FT)	LENGTH OF FOOTING 4 (FT)	LENGTH OF FOOTING 5 (FT)	WALL THICKNESS (FT)	AREA OF FOOTING 1 (SF)	AREA OF FOOTING 2 (SF)	AREA OF FOOTING 3 (SF)	AREA OF FOOTING 4 (SF)	AREA OF FOOTING 5 (SF)	VOLUME OF FOOTING 1 (CY)	VOLUME OF FOOTING 2 (CY)	VOLUME OF FOOTING 3 (CY)	VOLUME OF FOOTING 4 (CY)	VOLUME OF FOOTING 5 (CY)
16	16	16	16	7	17.406	2.094	2.094	19.16	21.25	1.25	278.50	16.75	16.75	306.50	148.75	12.89	0.78	0.78	14.19	6.89
																			<b>TOTAL</b>	<b>35.52</b>

KEY - RETAINING WALL QUANTITIES (WALL WRAP)							
HEIGHT OF KEY 1 (FT)	WIDTH OF KEY 1 (FT)	LENGTH OF KEY 1 (FT)	HEIGHT OF KEY 2 (FT)	WIDTH OF KEY 2 (FT)	LENGTH OF KEY 2 (FT)	AREA OF KEY (SF)	VOLUME OF KEY (CY)
2	1.25	40.75	1.5	1.25	21.5	4.38	5.27
<b>TOTAL</b>							<b>5.27</b>

AGGREGATE DRAIN MATERIAL								
BEGIN STATION	END STATION	LENGTH (LF)	RADIUS OF PIPE (FT)	AREA OF PIPE (SF)	HEIGHT (FT)	WIDTH (FT)	AREA OF AGGREGATE MATERIAL (SF)	VOLUME OF AGGREGATE MATERIAL (CY)
13598.32	13695.32	97	0.25	0.20	2	2	3.80	13.66
<b>TOTAL</b>								<b>13.66</b>

SHEET WALL DRAIN									
BEGIN STATION	END STATION	LENGTH (LF)	TOP ELEVATION OF BEGIN STA RETAINING WALL	TOP ELEVATION OF END STA RETAINING WALL	AVERAGE TOP ELEVATION OF RETAINING WALL	BOTTOM ELEVATION OF PIPE	TOP OF PIPE ELEVATION	HEIGHT OF SHEET WALL DRAIN	AREA OF DRAINAGE MAT (SF)
13598.32	13695.32	97	115.96	115.95	115.96	100.89	101.14	14.82	1437.06
<b>TOTAL</b>									<b>1437.06</b>

EMBANKMENT									
BEGIN STATION	END STATION	LENGTH (LF)	PGL @ CL MAINTENANCE RD	EXISTING GROUND ELEVATION	ACTUAL HEIGHT (FT)	WIDTH OF RAMP (FT)	WIDTH OF PERIMETER RD (FT)	AREA OF EMBANKMENT (SF)	VOLUME OF EMBANKMENT (CY)
13598.32	13695.32	97	115.96	106.96	9	22	27	220.5	792.17
<b>TOTAL</b>									<b>792.17</b>

**INDEX**  
NO. DESCRIPTION

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G01-01 COVER SHEET  
G01-02 INDEX OF SHEETS  
G01-03 SYMBOLS, LEGENDS, & ABBREVIATIONS  
G01-04 GENERAL NOTES

**LOCATION MAPS**

G02-01 PROJECT AND STAGING AREA LOCATION MAP  
G02-02 BENCHMARK LOCATION MAP  
G02-03 GEOTECHNICAL BOREHOLE LOCATION MAP

**HORIZONTAL CONTROL DATA**

G03-01 HORIZONTAL CONTROL LAYOUT AND DATA  
G03-02 HORIZONTAL CONTROL LAYOUT AND DATA

**EXISTING LEVEE TYPICAL SECTIONS**

C01-01 EXISTING TYPICAL SECTIONS (1 OF 2)  
C01-02 EXISTING TYPICAL SECTIONS (2 OF 2)

**PROPOSED RETAINING WALL LEVEE TYPICAL SECTIONS**

C02-01 PROPOSED TYPICAL SECTIONS (1 OF 3)  
C02-02 PROPOSED TYPICAL SECTIONS (2 OF 3)  
C02-03 PROPOSED TYPICAL SECTIONS (3 OF 3)

**RETAINING WALL LEVEE PLAN AND PROFILE SHEETS**

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C03-02 PLAN AND PROFILE (STA. 12+00.00 TO STA. 24+00.00)  
C03-03 PLAN AND PROFILE (STA. 24+00.00 TO STA. 36+00.00)  
C03-04 PLAN AND PROFILE (STA. 36+00.00 TO STA. 48+00.00)  
C03-04A ENLARGEMENT VIEW - STA. 42+50 TO STA. 48+00  
C03-05 PLAN AND PROFILE (STA. 48+00.00 TO STA. 60+00.00)  
C03-06 PLAN AND PROFILE (STA. 60+00.00 TO STA. 72+00.00)  
C03-07 PLAN AND PROFILE (STA. 72+00.00 TO STA. 84+00.00)  
C03-08 PLAN AND PROFILE (STA. 84+00.00 TO STA. 96+00.00)  
C03-09 PLAN AND PROFILE (STA. 96+00.00 TO STA. 108+00.00)  
C03-10 PLAN AND PROFILE (STA. 108+00.00 TO STA. 120+00.00)  
C03-11 PLAN AND PROFILE (STA. 120+00.00 TO STA. 132+00.00)  
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**ENLARGED VIEWS RETAINING WALL TRANSITIONS**

C04-01 ENLARGED VIEW OF NORTH END OF RETAINING WALL  
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C05-01 CROSS SECTIONS (STA. 00+00.00 TO STA. 07+00.00)  
C05-02 CROSS SECTIONS (STA. 08+00.00 TO STA. 15+00.00)  
C05-03 CROSS SECTIONS (STA. 16+00.00 TO STA. 23+00.00)  
C05-04 CROSS SECTIONS (STA. 24+00.00 TO STA. 31+00.00)  
C05-05 CROSS SECTIONS (STA. 32+00.00 TO STA. 39+00.00)  
C05-06 CROSS SECTIONS (STA. 40+00.00 TO STA. 47+00.00)  
C05-07 CROSS SECTIONS (STA. 48+00.00 TO STA. 55+00.00)  
C05-08 CROSS SECTIONS (STA. 56+00.00 TO STA. 63+00.00)  
C05-09 CROSS SECTIONS (STA. 64+00.00 TO STA. 71+00.00)  
C05-10 CROSS SECTIONS (STA. 72+00.00 TO STA. 79+00.00)  
C05-11 CROSS SECTIONS (STA. 80+00.00 TO STA. 87+00.00)  
C05-12 CROSS SECTIONS (STA. 88+00.00 TO STA. 95+00.00)  
C05-13 CROSS SECTIONS (STA. 96+00.00 TO STA. 103+00.00)  
C05-14 CROSS SECTIONS (STA. 104+00.00 TO STA. 111+00.00)  
C05-15 CROSS SECTIONS (STA. 112+00.00 TO STA. 119+00.00)  
C05-16 CROSS SECTIONS (STA. 120+00.00 TO STA. 127+00.00)  
C05-17 CROSS SECTIONS (STA. 128+00.00 TO STA. 135+00.00)  
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**REMOVE AND REPLACE EXISTING STRUCTURES**

C06-01 STA. 02+70.70 REMOVE AND REPLACE STRUCTURE NO. 253AL (1 OF 2)  
C06-02 STA. 02+70.70 REMOVE AND REPLACE STRUCTURE NO. 253AL (2 OF 2)  
C06-03 STA. 89+80.96 REMOVE AND REPLACE STRUCTURE NO. 325 (1 OF 2)  
C06-04 STA. 89+80.96 REMOVE AND REPLACE STRUCTURE NO. 325 (2 OF 2)  
C06-05 STA. 96+84.83 REMOVE AND REPLACE STRUCTURE NO. 326L (1 OF 2)  
C06-06 STA. 96+84.83 REMOVE AND REPLACE STRUCTURE NO. 326L (2 OF 2)  
C06-07 STA. 117+63.51 REMOVE AND REPLACE STRUCTURE NO. 327 (1 OF 2)  
C06-08 STA. 117+63.51 REMOVE AND REPLACE STRUCTURE NO. 327 (2 OF 2)  
C06-09 STA. 132+26.13 REMOVE AND REPLACE STRUCTURE NO. 328 (1 OF 2)  
C06-10 STA. 132+26.13 REMOVE AND REPLACE STRUCTURE NO. 328 (2 OF 2)  
C06-11 STA. 132+26.13 REMOVE AND REPLACE STRUCTURE NO. 252 (1 OF 2)  
C06-12 ENLARGEMENT VIEW OF STRUCTURE 252 AND GRADING LAYOUT

**NO. DESCRIPTION**

**UTILITY CROSSING DETAILS**

C07-01 EXISTING 4" GASLINE CROSSING DETAIL (STA. 10+78.21)  
C07-02 EXISTING 36" RCP (IRRIGATION LINE CROSSING) (STA. 35+51.81)  
C07-03 EXISTING 4" GASLINE CROSSING DETAIL (STA. 45+36.03)  
C07-04 EXISTING 24" RCP (IRRIGATION LINE CROSSING) (STA. 46+51.65)

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C08-01 LEVEE RAMP DETAILS (1 OF 3)  
C08-02 LEVEE RAMP DETAILS (2 OF 3)  
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C09-02 CONCRETE RIPRAP DETAILS  
C09-03 MISCELLANEOUS CONCRETE SHOULDER DETAILS  
C09-04 CONCRETE COLLAR AND BACKFILL STRUCTURE DETAILS

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C10-01 RETAINING WALL UNDERDRAIN SYSTEM DETAILS (1 OF 2)  
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C11-01 RETAINING WALL WATER STOP DETAILS (1 OF 3)  
C11-02 RETAINING WALL WATER STOP DETAILS (2 OF 3)  
C11-03 RETAINING WALL WATER STOP DETAILS (3 OF 3)  
C11-04 RETAINING WALL WATER STOP REPAIR DETAILS

**HIDALGO COUNTY IRRIGATION DISTRICT NO. 3 CHANNEL AND STRUCTURE RELOCATION**

C12-01 STRUCTURE No. 252 STA. 46+43.92 AND STA. 46+59.92 PLAN AND SECTIONS (1 OF 3)  
C12-02 STRUCTURE No. 252 STA. 46+43.92 AND STA. 46+59.92 PLAN AND SECTIONS (2 OF 3)  
C12-03 STRUCTURE No. 252 STA. 46+43.92 AND STA. 46+59.92 PLAN AND SECTIONS (3 OF 3)  
C12-04 STRUCTURE No. 252 CANAL INLET CONCRETE RIPRAP LAYOUT STA. 46+50.44

**RETAINING WALL STRUCTURAL DETAILS**

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S01-01A RETAINING WALL DETAILS (2 OF 2)  
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S01-03 REINFORCED CONCRETE PIPE THROUGH WALL DETAILS  
S01-04 ALTERNATE RETAINING WALL KEY DETAIL

**BOLLARD DETAILS**

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S02-02 10'-0" TO 18'-0" BOLLARD DETAILS  
S02-03 MISCELLANEOUS BOLLARD DETAILS (1 OF 2)  
S02-04 MISCELLANEOUS BOLLARD DETAILS (2 OF 2)  
S02-05 BOLLARD EXTENSION DETAIL

**ANTI-CLIMBING FENCE DETAILS**

S03-01 ANTI-CLIMBING FENCE

**GATEWELL STRUCTURAL DETAILS**

S04-01 GATEWELL 326L DETAILS  
S04-02 GATEWELL 328 DETAILS

**GATEWELL STRUCTURAL DETAILS (STRUCTURE 252)**

S05-01 STRUCTURE 252 GATEWELL DETAILS (1 OF 2)  
S05-02 STRUCTURE 252 GATEWELL DETAILS (2 OF 2)

**RETAINING WALL STRUCTURAL DETAILS (STRUCTURE 252)**

S06-01 STRUCTURE 252 RETAINING WALL DETAILS  
S06-02 STRUCTURE 252 RETAINING WALL DETAILS STA. 46+27.94 TO STA. 46+60.27 (1 OF 2)  
S06-03 STRUCTURE 252 RETAINING WALL DETAILS STA. 46+27.94 TO STA. 46+60.27 (2 OF 2)  
S06-04 STRUCTURE 252 RETAINING WALL DETAILS (1 OF 2)  
S06-05 STRUCTURE 252 RETAINING WALL DETAILS (2 OF 2)  
S06-06 3 ~ 5'X5' BOX CULVERTS HEADWALL DETAIL STA. 46+50.44 (1 OF 2)  
S06-07 3 ~ 5'X5' BOX CULVERTS HEADWALL DETAIL STA. 46+50.44 (2 OF 2)

**TEXAS DEPARTMENT OF TRANSPORTATION CULVERT AND HEADWALL DETAILS**

\*S07-01 MULTIPLE BOX CULVERTS CAST-IN-PLACE 5'-0" SPAN 0' TO 20' FILL  
S07-01A SINGLE BOX CULVERTS CAST-IN-PLACE 0' TO 30' FILL  
\*S07-02 MULTIPLE BOX CULVERTS CAST-IN-PLACE MISCELLANEOUS DETAILS  
\*S07-03 SINGLE BOX CULVERTS PRECAST 5'-0" SPAN  
\*S07-04 BOX CULVERTS PRECAST MISCELLANEOUS DETAILS  
\*S07-05 CONCRETE WINGWALLS WITH PARALLEL WINGS FOR SKEWED AND NON SKEWED BOX CULVERTS  
\*S07-06 CONCRETE HEADWALLS WITH FLARED WINGS FOR 0 DEGREE SKEW PIPE CULVERTS  
\*S07-07 CONCRETE WINGWALL WITH STRAIGHT WINGS FOR 0 DEGREE SKEW BOX CULVERTS

**NO. DESCRIPTION**

**WRAPWALL DETAILS**

S08-01 WRAPWALL DETAILS (1 OF 4)  
S08-02 WRAPWALL DETAILS (2 OF 4)  
S08-03 WRAPWALL DETAILS (3 OF 4)  
S08-04 WRAPWALL DETAILS (4 OF 4)

**MECHANICAL DETAILS**

MOI-01 SLUICE GATE  
MOI-02 GATEWELL LADDER AND ACCESS HATCH DETAILS

**TRAFFIC CONTROL PLANS**

TOI-01 TRAFFIC CONTROL PLAN (1 OF 2)  
TOI-02 TRAFFIC CONTROL PLAN (2 OF 2)

**STORMWATER POLLUTION PROTECTION PLANS**

ECOI-01 STORMWATER POLLUTION PREVENTION DETAILS  
ECOI-02 STORMWATER POLLUTION PREVENTION DETAILS  
ECOI-03 STORMWATER POLLUTION PREVENTION DETAILS



THE STANDARD SHEETS IDENTIFIED BY THE SYMBOL '\*' HAVE BEEN ISSUED BY ME AND ARE APPLICABLE TO THIS PROJECT

Rev. No.	Description	Chk. By:	Date
IFC	ISSUED FOR CONSTRUCTION	R.S.	08-05-08
△	DELETED AND ADDED SHEETS	R.S.	10-02-08
△	ADDED SHEETS	R.S.	06-12-09
△	ADDED SHEETS	R.S.	07-30-09



**DANNENBAUM**

ENGINEERING COMPANY-McALLEN, LLC  
1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3877

HIDALGO PROTECTIVE LEVEE  
IMPROVEMENT PROJECT  
DHS PF 225: O-6 A

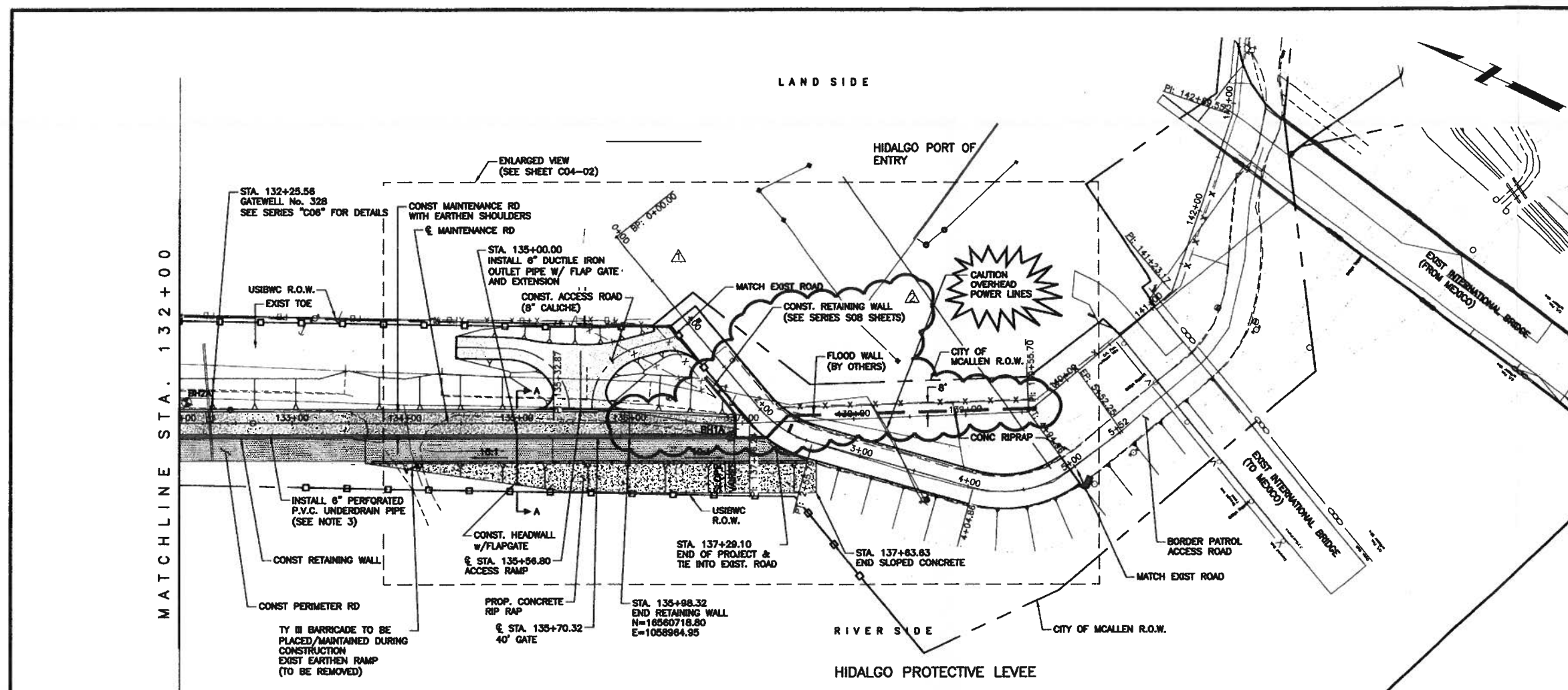
**INDEX OF SHEETS**

SHEET (1 OF 1)

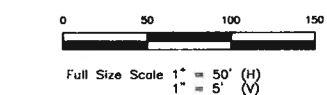
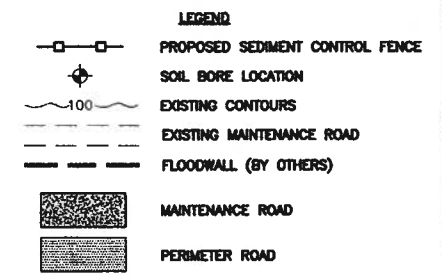


Omar Anzures, Jr., P.E.  
Date: 7-31-07

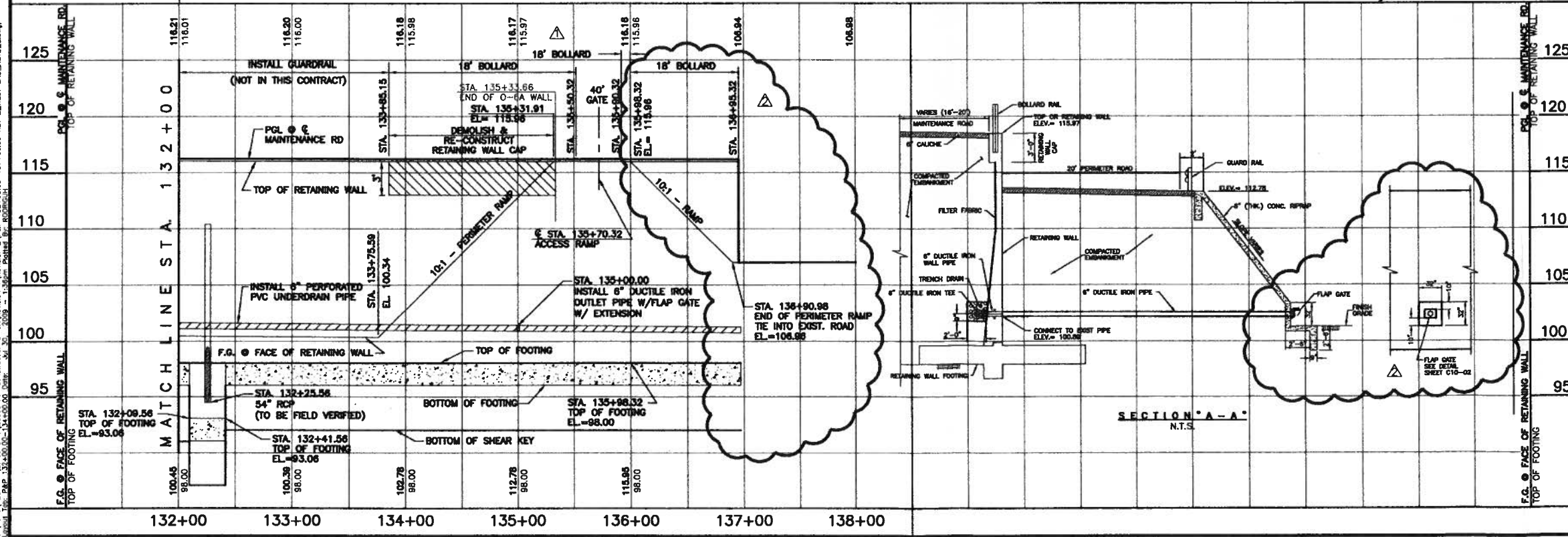
Project No.:	4410-07
Designed By:	O.A.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No.:	G01-02



- NOTES:**
- SEE "C02" SERIES SHEETS FOR TYPICAL SECTIONS.
  - SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "C10" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "C08" SERIES SHEETS FOR ACCESS RAMP DETAILS.
  - SEE "S02" SERIES SHEETS FOR BOLLARD DETAILS.
  - WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.
  - NO SEPARATE PAY ITEM WILL BE MADE FOR REMOVAL AND REPLACEMENT OF CALICHE AND EMBANKMENT OCCASIONED BY THE REMOVAL AND RECONSTRUCTION OF THE RETAINING WALL CAP, INCLUDE COST IN BID ITEM #72.



Rev. No.	Description	Chk. By:	Date
IFC	ISSUED FOR CONSTRUCTION	R.S.	08-05-08
△	REPLACE IN ITS ENTIRETY	R.S.	06-02-09
△	REVISED RETAINING WALL	R.S.	07-30-09



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ENGINEERING COMPANY - McALLEN, LLC  
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1109 NOLANA LOOP, STE 208 McALLEN, TX 78504 (956) 682-3677

HIDALGO PROTECTIVE LEVEE  
IMPROVEMENT PROJECT  
DHS PF 225: O-8 A

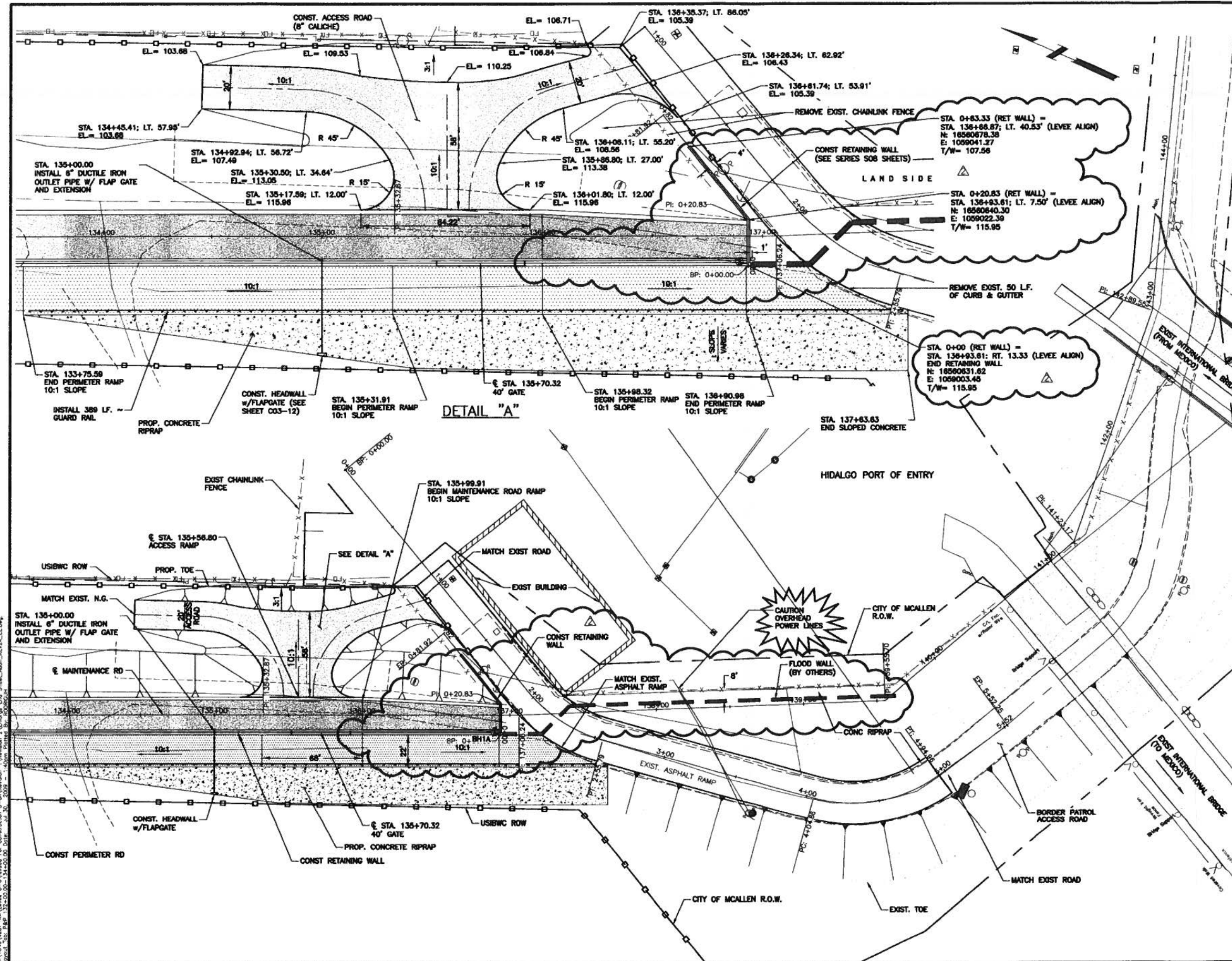
**RETAINING WALL - LEVEE**  
**PLAN & PROFILE**  
**STA. 132+00.00 TO STA. 135+32.81**

SHEET (12 OF 12)

Project No.:	4410-07
Designed By:	O.A.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No.:	C03-12

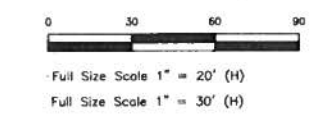
Date: 7-31-09

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Plot Date: 08/05/08 10:50:00 AM  
Plot Path: G:\1540\4287-XX\Drawings\Construction\0-04\Revision\1\Revision 2\Plan 132+00.00-137+00.00 REV 2\_WEST END\_REV2.dwg  
Plot Scale: 1/8" = 1'-0"



- NOTES:**
- SEE "C02" SERIES SHEETS FOR TYPICAL SECTIONS.
  - SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "C10" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "C08" SERIES SHEETS FOR ACCESS RAMP DETAILS.
  - SEE "S02" SERIES SHEETS FOR BOLLARD DETAILS.
  - WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.
  - NO SEPARATE PAY ITEM WILL BE MADE FOR REMOVAL AND REPLACEMENT OF CALICHE AND EMBANKMENT OCCASIONED BY THE REMOVAL AND RECONSTRUCTION OF THE RETAINING WALL CAP, INCLUDE COST IN BID ITEM #72.

- LEGEND**
- PROPOSED SEDIMENT CONTROL FENCE
  - SOIL BORE LOCATION
  - EXISTING CONTOURS
  - EXISTING MAINTENANCE ROAD
  - FLOODWALL (BY OTHERS)
  - MAINTENANCE ROAD
  - PERIMETER ROAD



Rev. No.	Description	Chk. By:	Date
IFC	ISSUED FOR CONSTRUCTION	R.S.	08-05-08
△	REPLACE IN ITS ENTIRETY	R.S.	06-02-09
△	REVISED RETAINING WALL	R.S.	07-30-09

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HIDALGO PROTECTIVE LEVEE  
IMPROVEMENT PROJECT  
DHS PF 225.0-A

**ENLARGED VIEW OF SOUTH END  
OF RETAINING WALL**



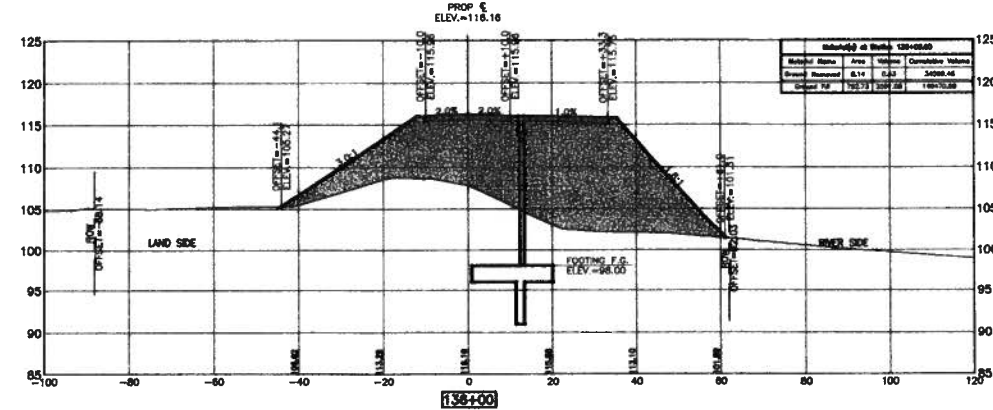
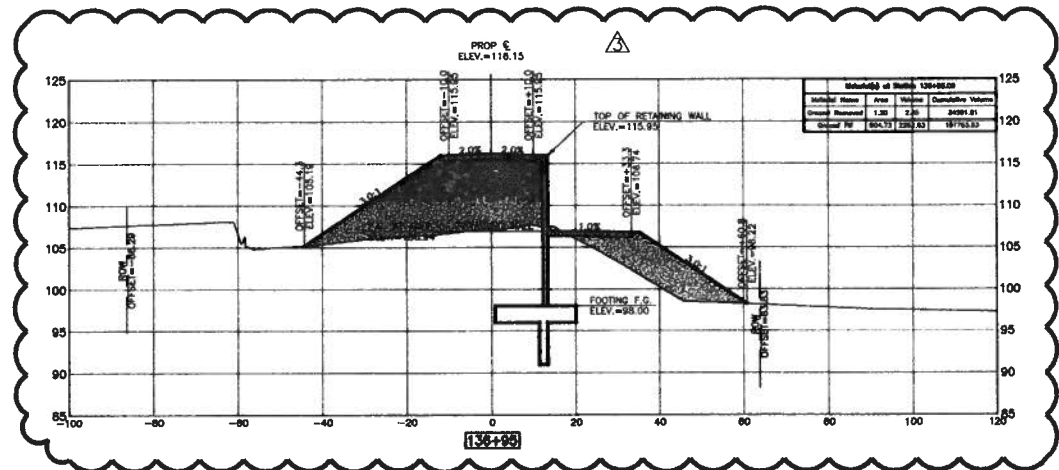
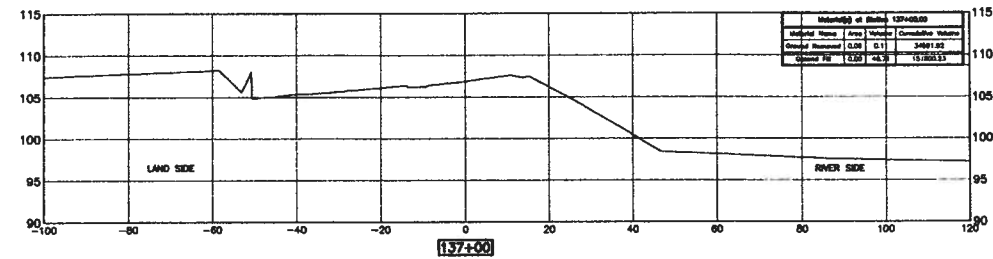
SHEET (1 OF 1)

Project No.:	4410-07
Designed By:	O.A.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No.:	C04-02

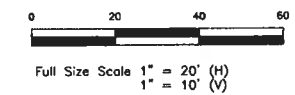
Date: 7-31-09

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User: Omar Anzaldo, Jr. P.E. Date: 7/31/09 10:00 AM

CROSS SECTIONS ARE FOR CONTRACTOR'S REFERENCE ONLY. THESE QUANTITIES DO NOT INCLUDE BENCHING OR PAVING. CONTRACTOR TO VERIFY ALL QUANTITIES.



--- FLOODWALL (BY OTHERS)



Rev. No.	Description	Chk. By:	Date
IFC	ISSUED FOR CONSTRUCTION	R.S.	02-25-09
△	REVISED KEY	R.S.	08-07-08
△	REVISED RETAINING WALL	R.S.	05-22-09
△	ADDED CROSS SECTION	R.S.	07-30-09



**DANNENBAUM**  
ENGINEERING COMPANY - McALLEN, LLC  
T.B.P.E. FIRM REGISTRATION #8999  
1109 NOLANA LOOP, STE 208 McALLEN, TX 78504 (956) 882-3877

HIDALGO PROTECTIVE LEVEE  
IMPROVEMENT PROJECT  
DHS PF 225: O-8 A

**CROSS SECTION**  
STA. 136+00.00 TO STA. 137+00.00

SHEET (18 OF 18)



Omar Anzures, Jr., P.E.  
Date: 7-21-09

Project No.:	4410-07
Designed By:	O.A.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No.:	C05-18

C:\154\4287-KA\Levee\_0-A\CrossSections\rev\_2\0-A\_CROSSSECTIONS\_4\_Par2\_B.dwg  
 Layout: 136+00-137+00 Date: Jul 30, 2009 - 2:18pm Author: B. Robinson

TYPE 1 WALL SECTION WITH BOLLARDS

STATION	WALL HEIGHT		PROPERTIES										REINFORCING STEEL FOR ONE 32'-4" PANEL																		7'6"																					
	(FT)	(FT)	WALL DIMENSIONS										MAX SOIL PRESS	A1 ~ 32 #5						A2 ~ 32 #6						A3 ~ 32 #7						A4 ~ 32 #8						A5 ~ 32 #9						B (#5)		C1		C2		O1 (#5)		
			FW	TW	SW	HW	FT	KW	KH	T/SF	LGTH	WT		LGTH	WT	LGTH	WT	LGTH	WT	LGTH	WT	LGTH	WT	LGTH	WT	LGTH	WT	LGTH	WT	LGTH		WT	LGTH	WT	LGTH	WT	LGTH	WT	LGTH	WT	LGTH	WT	LGTH	WT								
1+79.48 TO 4+58.04	21'-0"	19'-0"	18'-2"	3'-2"	2'-3"	12'-9"	2'-0"	1'-6"	2'-6"	1.55	10'-3"	343	11'-2"	537	17'-7"	1156	15'-1"	1289	10'-3"	1111	11"	36	23'-1"	867	88	9	9"	15'-8"	4638	43	9	9"	17'-8"	2584	11"	44	1461	19'-0"														
17+00 TO 19+00	21'-0"	19'-0"	18'-2"	3'-2"	2'-3"	12'-9"	2'-0"	1'-6"	2'-6"	1.55	10'-3"	343	11'-2"	537	17'-7"	1156	15'-1"	1289	10'-3"	1111	11"	36	23'-1"	867	88	9	9"	15'-8"	4638	43	9	9"	17'-8"	2584	11"	44	1461	19'-0"														
19+00 TO 35+35.81	15'-6"	14'-0"	14'-6"	2'-7"	1'-5"	10'-6"	1'-6"	1'-0"	2'-0"	1.08	10'-3"	343	12'-3"	589	10'-8"	698	8'-2"	698			12"	33	17'-1"	588	72	8	11"	12'-5"	2387	36	8	11"	14'-0"	1346	12"	30	997	14'-0"														
35+35.81 TO 35+68.14	21'-0"	19'-0"	19'-8"	5'-9"	2'-3"	11'-8"	2'-0"	1'-6"	2'-6"	1.05	10'-3"	343	11'-2"	537	20'-3"	1325	17'-9"	1517	12'-3"	1340	11"	36	23'-1"	867	98	8	8"	14'-5"	3774	48	8	8"	19'-2"	2457	11"	44	1461	19'-0"														
35+68.14 TO 45+20.03	15'-6"	14'-0"	14'-6"	2'-7"	1'-5"	10'-6"	1'-6"	1'-0"	2'-0"	1.08	10'-3"	343	12'-3"	589	10'-8"	698	8'-2"	698			12"	33	17'-1"	588	72	8	11"	12'-5"	2387	36	8	11"	14'-0"	1346	12"	30	997	14'-0"														
45+20.03 TO 45+52.36	17'-9"	16'-0"	17'-0"	3'-10"	1'-8"	11'-6"	1'-9"	1'-0"	2'-6"	1.04	10'-3"	343	11'-2"	537	14'-5"	943	11'-11"	1019	6'-11"	748	12"	33	19'-10"	683	80	8	10"	13'-8"	2920	40	8	10"	16'-6"	1763	12"	34	1129	16'-0"														
45+52.36 TO 46+27.94	15'-6"	14'-0"	14'-6"	2'-7"	1'-5"	10'-6"	1'-6"	1'-0"	2'-0"	1.08	10'-3"	343	12'-3"	589	10'-8"	698	8'-2"	698			12"	33	17'-1"	588	72	8	11"	12'-5"	2387	36	8	11"	14'-0"	1346	12"	30	997	14'-0"														
46+92.60 TO 53+00	15'-6"	14'-0"	14'-6"	2'-7"	1'-5"	10'-6"	1'-6"	1'-0"	2'-0"	1.08	10'-3"	343	12'-3"	589	10'-8"	698	8'-2"	698			12"	33	17'-1"	588	72	8	11"	12'-5"	2387	36	8	11"	14'-0"	1346	12"	30	997	14'-0"														
53+00 TO 69+00	17'-9"	16'-0"	17'-0"	3'-10"	1'-8"	11'-6"	1'-9"	1'-0"	2'-6"	1.04	10'-3"	343	11'-2"	537	14'-5"	943	11'-11"	1019	6'-11"	748	12"	33	19'-10"	683	80	8	10"	13'-8"	2920	40	8	10"	16'-6"	1763	12"	34	1129	16'-0"														
69+00 TO 91+50	18'-9"	17'-0"	15'-3"	2'-4"	1'-10"	11'-1"	1'-9"	1'-0"	2'-6"	1.57	10'-3"	343	11'-2"	537	14'-1"	922	11'-7"	990	6'-11"	748	12"	33	20'-4"	700	88	8	9"	13'-5"	3153	44	8	9"	14'-9"	1733	12"	38	1196	17'-0"														
91+50 TO 91+57.44	21'-0"	19'-0"	18'-2"	3'-2"	2'-3"	12'-9"	2'-0"	1'-6"	2'-6"	1.55	10'-3"	343	11'-2"	537	17'-7"	1156	15'-1"	1289	10'-3"	1111	11"	36	23'-1"	867	88	9	9"	15'-8"	4638	43	9	9"	17'-8"	2584	11"	44	1461	19'-0"														
116+09.25 TO 118+71.65	21'-0"	19'-0"	18'-2"	3'-2"	2'-3"	12'-9"	2'-0"	1'-6"	2'-6"	1.55	10'-3"	343	11'-2"	537	17'-7"	1156	15'-1"	1289	10'-3"	1111	11"	36	23'-1"	867	88	9	9"	15'-8"	4638	43	9	9"	17'-8"	2584	11"	44	1461	19'-0"														
133+85.15 TO 136+95.32	21'-0"	19'-0"	18'-2"	3'-2"	2'-3"	12'-9"	2'-0"	1'-6"	2'-6"	1.55	10'-3"	343	11'-2"	537	17'-7"	1156	15'-1"	1289	10'-3"	1111	11"	36	23'-1"	867	88	9	9"	15'-8"	4638	43	9	9"	17'-8"	2584	11"	44	1461	19'-0"														

TYPE 1 WALL SECTION WITH BOLLARDS

STATION	WALL HEIGHT		PROPERTIES										REINFORCING STEEL FOR ONE 32'-4" PANEL												7'6"					
	(FT)	(FT)	WALL DIMENSIONS										MAX SOIL PRESS	D2 #5 AT 12" C-C		DOWEL F AT 12" C-C		H (#5)		S (#3)		T (#5)		U1 ~ 32 #5 AT 12" C-C		U2				
			FW	TW	SW	HW	FT	KW	KH	T/SF	NO	WT		NO	WT	NO	WT	NO	WT	NO	WT	NO	WT	NO		WT	NO	WT	NO	WT
1+79.48 TO 4+58.04	21'-0"	19'-0"	18'-2"	3'-2"	2'-3"	12'-9"	2'-0"	1'-6"	2'-6"	1.55	6	200	19	153	12	19	631	64	197	12	19	631	10'-4"	345	5	8"	49	9'-6"	484	19'-0"
17+00 TO 19+00	21'-0"	19'-0"	18'-2"	3'-2"	2'-3"	12'-9"	2'-0"	1'-6"	2'-6"	1.55	6	200	19	153	12	19	631	64	197	12	19	631	10'-4"	345	5	8"	49	9'-6"	484	19'-0"
19+00 TO 35+35.81	15'-6"	14'-0"	14'-6"	2'-7"	1'-5"	10'-6"	1'-6"	1'-0"	2'-0"	1.08	6	200	15	121	12	15	499	64	197	12	15	499	10'-4"	345	5	12"	33	7'-0"	240	14'-0"
35+35.81 TO 35+68.14	21'-0"	19'-0"	19'-8"	5'-9"	2'-3"	11'-8"	2'-0"	1'-6"	2'-6"	1.05	6	200	21	153	12	21	898	64	197	12	21	898	10'-4"	345	5	8"	49	9'-6"	484	19'-0"
35+68.14 TO 45+20.03	15'-6"	14'-0"	14'-6"	2'-7"	1'-5"	10'-6"	1'-6"	1'-0"	2'-0"	1.08	6	200	15	121	12	15	499	64	197	12	15	499	10'-4"	345	5	12"	33	7'-0"	240	14'-0"
45+20.03 TO 45+52.36	17'-9"	16'-0"	17'-0"	3'-10"	1'-8"	11'-6"	1'-9"	1'-0"	2'-6"	1.04	6	200	18	145	12	18	598	64	197	12	18	598	10'-4"	345	5	12"	33	8'-6"	292	16'-0"
45+52.36 TO 46+27.94	15'-6"	14'-0"	14'-6"	2'-7"	1'-5"	10'-6"	1'-6"	1'-0"	2'-0"	1.08	6	200	15	121	12	15	499	64	197	12	15	499	10'-4"	345	5	12"	33	7'-0"	240	14'-0"
46+92.60 TO 53+00	15'-6"	14'-0"	14'-6"	2'-7"	1'-5"	10'-6"	1'-6"	1'-0"	2'-0"	1.08	6	200	15	121	12	15	499	64	197	12	15	499	10'-4"	345	5	12"	33	7'-0"	240	14'-0"
53+00 TO 69+00	17'-9"	16'-0"	17'-0"	3'-10"	1'-8"	11'-6"	1'-9"	1'-0"	2'-6"	1.04	6	200	18	145	12	18	598	64	197	12	18	598	10'-4"	345	5	12"	33	8'-6"	292	16'-0"
69+00 TO 91+50	18'-9"	17'-0"	15'-3"	2'-4"	1'-10"	11'-1"	1'-9"	1'-0"	2'-6"	1.57	6	200	16	129	12	16	532	64	197	12	16	532	10'-4"	345	5	12"	33	8'-6"	292	17'-0"
91+50 TO 91+57.44	21'-0"	19'-0"	18'-2"	3'-2"	2'-3"	12'-9"	2'-0"	1'-6"	2'-6"	1.55	6	200	19	153	12	19	631	64	197	12	19	631	10'-4"	345	5	8"	49	9'-6"	484	19'-0"
116+09.25 TO 118+71.65	21'-0"	19'-0"	18'-2"	3'-2"	2'-3"	12'-9"	2'-0"	1'-6"	2'-6"	1.55	6	200	19	153	12	19	631	64	197	12	19	631	10'-4"	345	5	8"	49	9'-6"	484	19'-0"
133+85.15 TO 136+95.32	21'-0"	19'-0"	18'-2"	3'-2"	2'-3"	12'-9"	2'-0"	1'-6"	2'-6"	1.55	6	200	19	153	12	19	631	64	197	12	19	631	10'-4"	345	5	8"	49	9'-6"	484	19'-0"

TYPE 1 WALL SECTION WITH BOLLARDS  
COEFFICIENTS OF HORIZONTAL EARTH PRESSURE

STATION	Kp	Ka
1+79.48 TO 4+58.04	2.88	0.38
17+00 TO 19+00	2.88	0.38
19+00 TO 35+35.81	2.77	0.38
35+35.81 TO 35+68.14	2.77	0.38
35+68.14 TO 45+20.03	2.77	0.38
45+20.03 TO 45+52.36	2.77	0.38
45+52.36 TO 46+27.94	2.77	0.38
46+92.60 TO 53+00	2.77	0.38
53+00 TO 69+00	2.77	0.38
69+00 TO 91+50	2.88	0.38
91+50 TO 91+57.44	2.88	0.38
116+09.25 TO 118+71.65	2.88	0.38
133+85.15 TO 136+95.32	2.88	0.38

Rev. No.	Description	Chk. By:	Date
IFC	ISSUED FOR CONSTRUCTION	R.S.	08-08-08
▲	REPLACE IN ITS ENTIRETY	M.S.M.	10-02-08
▲	REPLACE IN ITS ENTIRETY	M.S.M.	10-08-08
▲	REVISED AS NOTED	M.S.M.	06-12-09
▲	REVISED STATIONS	O.A.	07-15-09



**DANNENBAUM**  
ENGINEERING COMPANY-McALLEN, LLC  
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HIDALGO PROTECTIVE LEVEE  
IMPROVEMENT PROJECT  
DHS FF 225: O-8 A

RETAINING WALL DETAILS  
TYPE 1  
WITH BOLLARDS

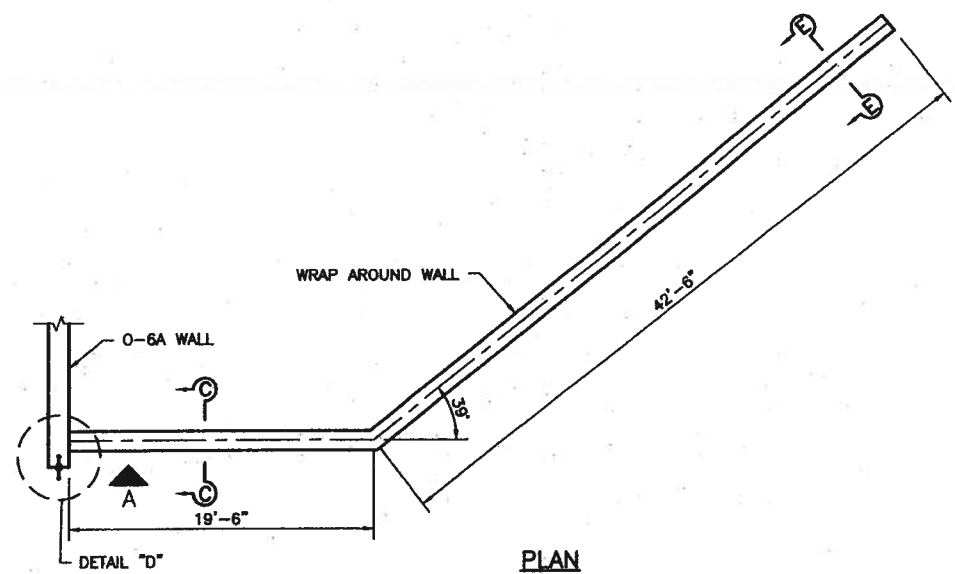
SHEET (2 OF 2)

Project No.: 4410-07  
Designed By: C.T.  
Drawn By: S.W.  
Checked By: W.P.C.  
Sheet No.: S01-01A

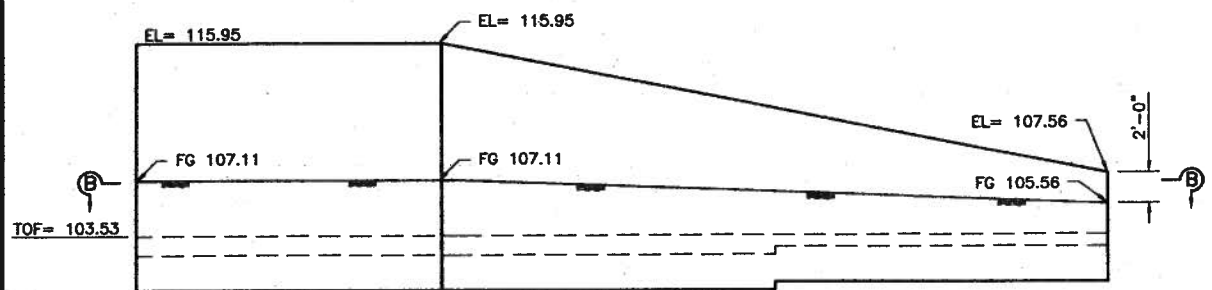
*Michel S. Mahrouf, P.E.*  
Date: 7-16-09

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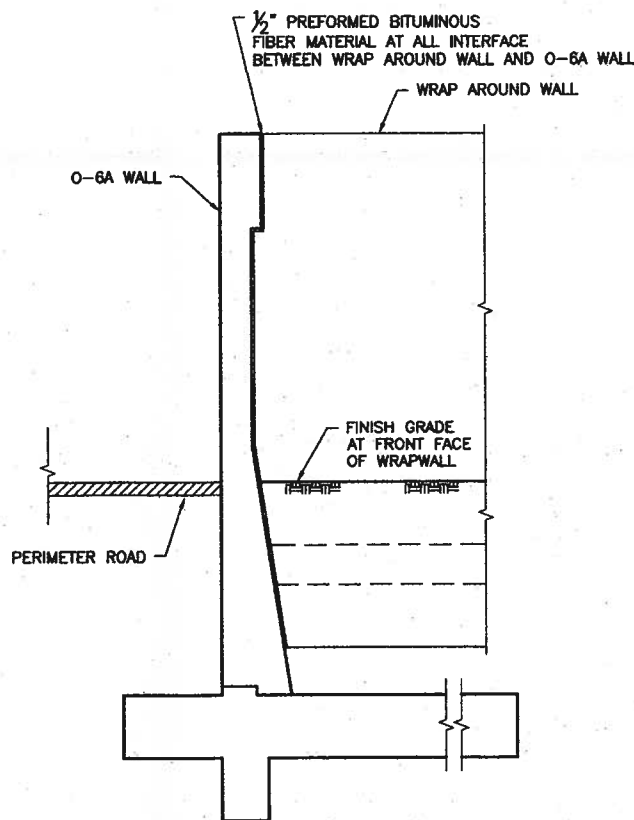




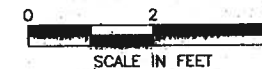
**PLAN**  
NTS  
(WALL FOOTING NOT SHOWN)



**ELEVATION**  
NTS



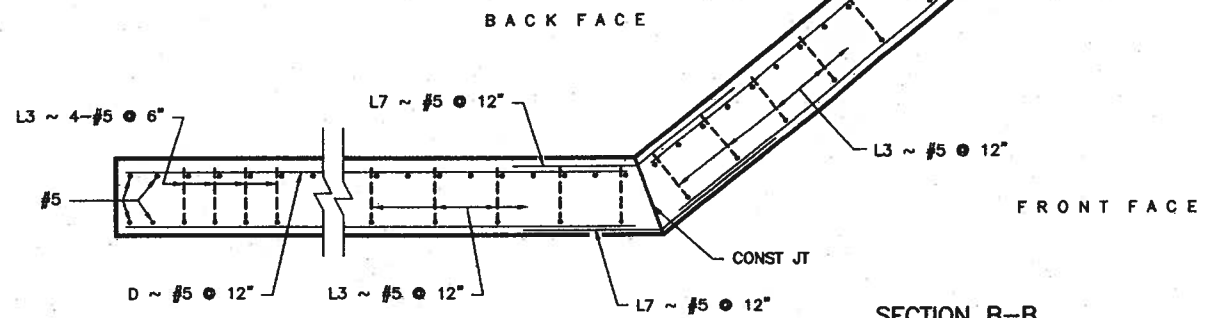
**VIEW A**  
NTS



**GENERAL NOTES:**

1. ALL CONCRETE TO BE CLASS "C", F'c = 3600 PSI.
2. ALL REINFORCING STEEL TO BE GRADE 60.
3. WALL IS DESIGNED FOR ALLOWABLE BEARING CAPACITY OF 3,000 PSF. WEIGHT OF FILL 120 PCF. CONTRACTOR SHALL ENSURE THAT BEARING CAPACITY IS ACHIEVED BY UTILIZING ANY MEANS OF COMPACTION AND/OR CEMENT STABILIZATION.
4. COMPACT BACKFILL BEHIND WALLS WITHIN 3 FT WITH PORTABLE HAND TAMPER.
5. SEE OTHER SHEETS IN THIS PLAN SET FOR DETAILS NOT SHOWN.

A2 ~ #6 @ 8"  
A1 ~ #8 @ 6"  
D ~ #5 @ 12"



**SECTION B-B**

Rev. No.	Description	Chk. By:	Date
1	ISSUED FOR CONSTRUCTION	R.S.	07-31-09



**DANNENBAUM**  
ENGINEERING COMPANY-McALLEN, LLC  
1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3677  
Registration No. 8999

HIDALGO PROTECTIVE LEVEE  
IMPROVEMENT PROJECT  
DHS PF 225: O-6 A

**WALL WRAP / RETAINING WALL  
DETAILS**

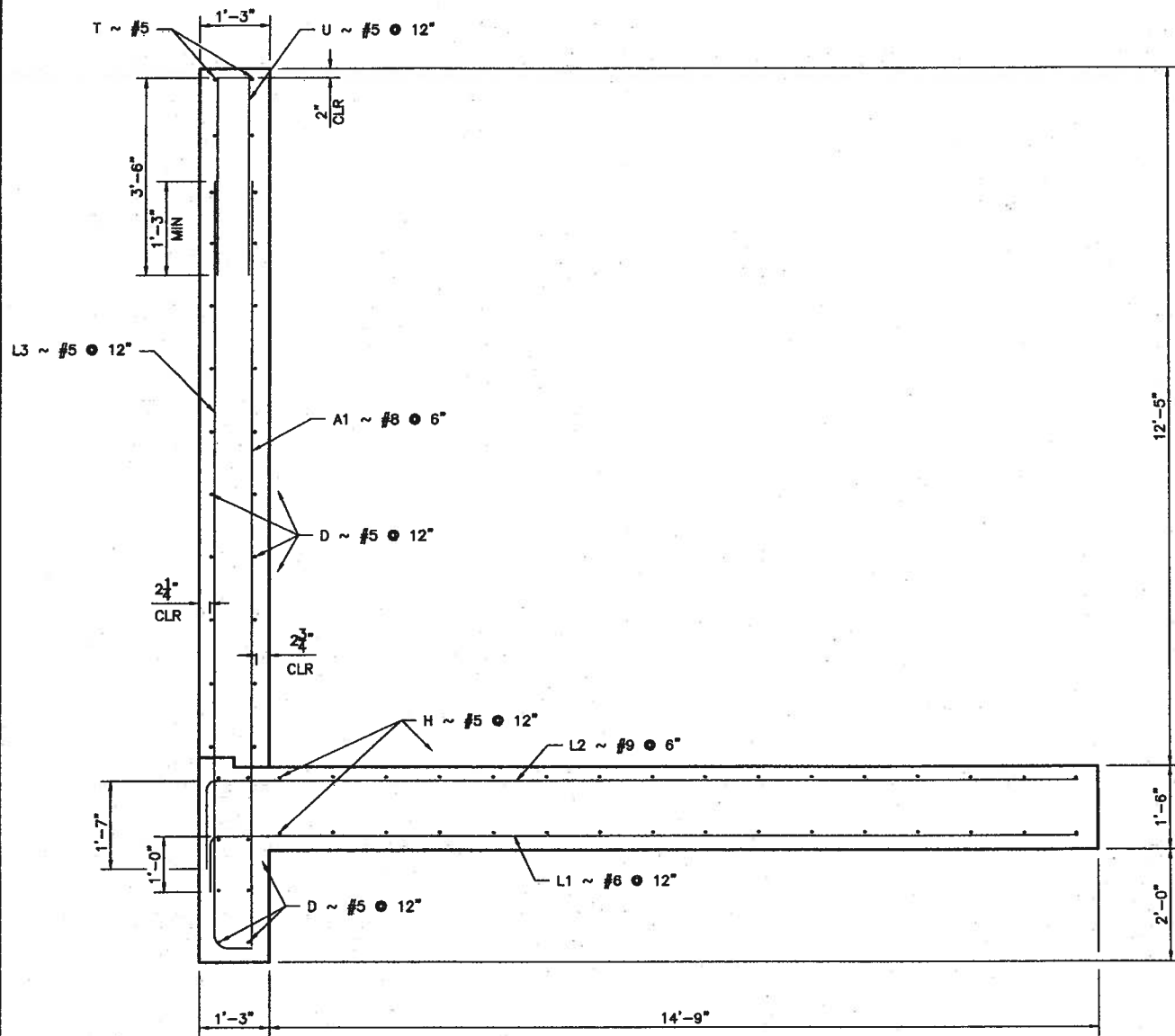
SHEET (1 OF 4)



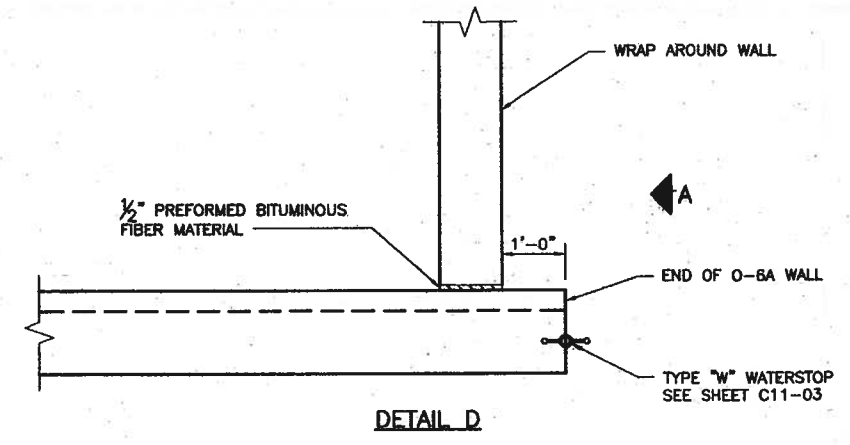
Project No.:	4410-07
Designed By:	W.P.C.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No.:	S08-01

*John Charles Kime*  
JOHN CHARLES KIME,  
J.R. P.E.  
Date: 3/10/2009

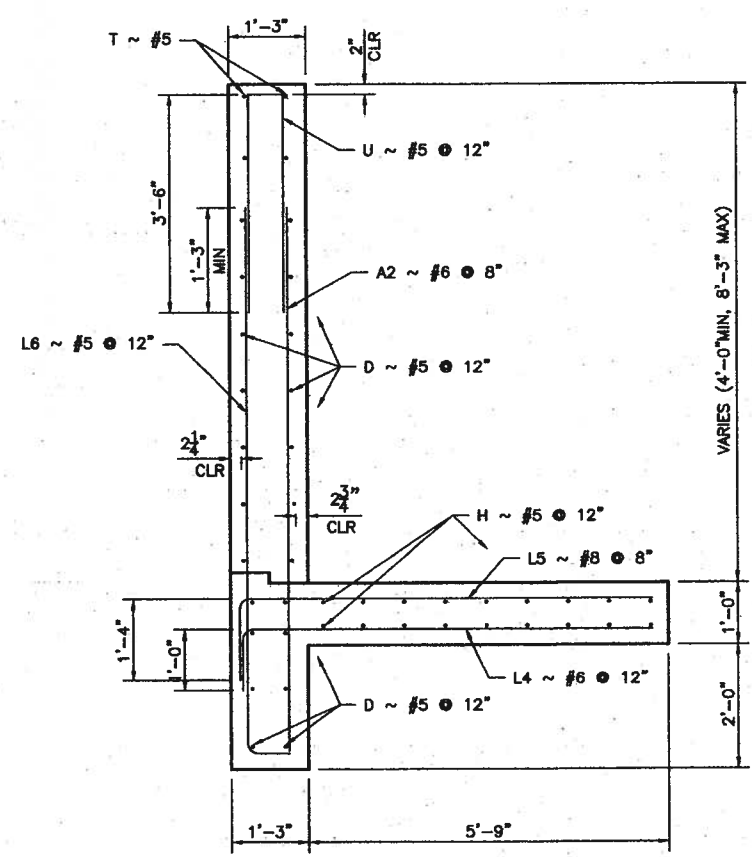
C:\1540\4287-001\levee O-6A\levee O-6A\Revision 1\Revision 2\FG & REV 2\WrapWall-Detail 1 of 4\_S08-01.dwg  
 Author: John Charles Kime, P.E. Date: 07/31/2009 - 11:28am Project: DHS PF 225



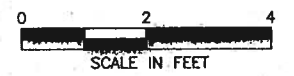
SECTION C-C



DETAIL D



SECTION E-E



Rev. No.	Description	Chk. By:	Date
1	ISSUED FOR CONSTRUCTION	R.S.	07-31-09

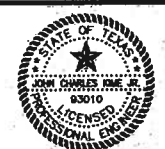


**DANNENBAUM**  
**ENGINEERING COMPANY-McALLEN, LLC**  
 1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3677  
 Registration No. 8999

HIDALGO PROTECTIVE LEVEE  
 IMPROVEMENT PROJECT  
 DHS PF 225: O-6 A

**WALLWRAP / RETAINING WALL  
 DETAILS**

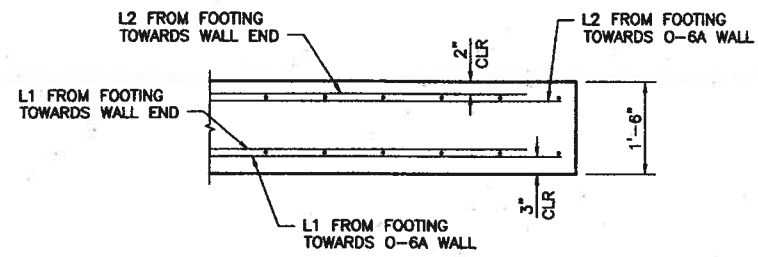
SHEET (2 OF 4)



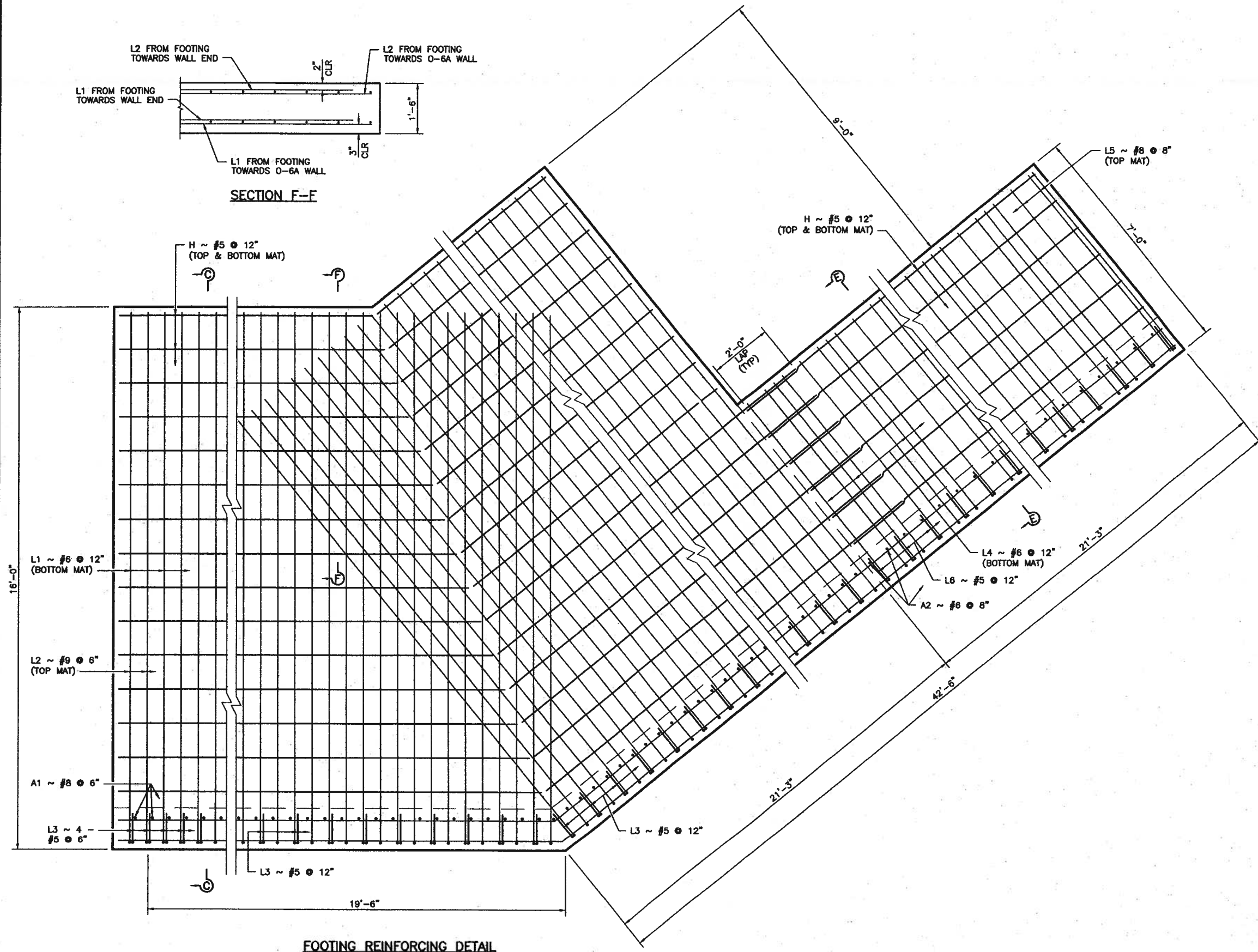
*John Charles Kime*  
 JOHN CHARLES KIME,  
 JR. P.E.  
 Date: 21 July 2009

Project No.:	4410-07
Designed By:	W.P.C.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No.:	S08-02

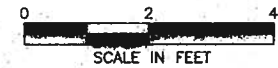
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 User: jkime Date: Jul 31, 2009 10:58 AM Plotter: HP DesignJet 5000



SECTION F-F



FOOTING REINFORCING DETAIL



Rev. No.	Description	Chk. By:	Date
IFC	ISSUED FOR CONSTRUCTION	R.S.	07-31-09



**DANNENBAUM**  
 ENGINEERING COMPANY-McALLEN, LLC  
 1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3677  
 Registration No. 8889

HIDALGO PROTECTIVE LEVEE  
 IMPROVEMENT PROJECT  
 DHS PF 225: O-6 A

WALLWRAP / RETAINING WALL  
 DETAILS

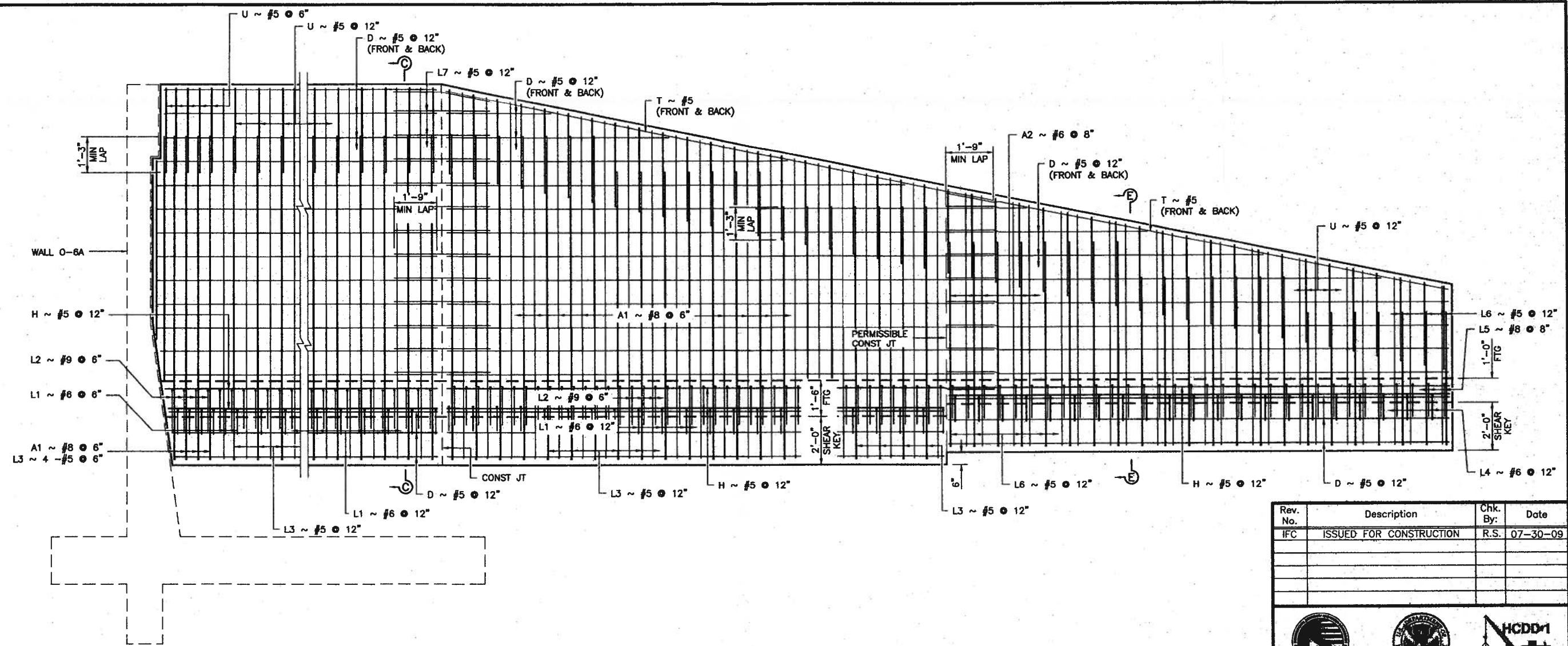
SHEET (3 OF 4)



*John Charles Kime, Jr.*  
 JOHN CHARLES KIME, JR.  
 P.E.  
 Date: 7/31/09

Project No:	4410-07
Designed By:	W.P.C.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No.:	S08-03

G:\1540\4287-00\Draws 0-6\Issued For Construction 0-6A\Revision 2\IFC & REV 2\Wpplsh-Detail 3 of 4\_S08-03.dwg  
 Date: 07/31/09 2:57pm  
 Plotted By: R0090204



WALL REINFORCING ELEVATION VIEW

Rev. No.	Description	Chk. By:	Date
IFC	ISSUED FOR CONSTRUCTION	R.S.	07-30-09



**DANNENBAUM**  
 ENGINEERING COMPANY-McALLEN, LLC  
 1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3677  
 Registration No. 8989

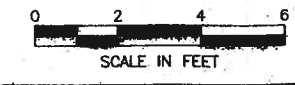
HIDALGO PROTECTIVE LEVEE  
 IMPROVEMENT PROJECT  
 DHS PF 225: O-6 A

WALLWRAP / RETAINING WALL  
 DETAILS

SHEET (4 OF 4)

Project No.:	4410-07
Designed By:	W.P.C.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No.:	S08-04

*John Charles Kime*  
 JOHN CHARLES KIME  
 J.C. P.E. 31072  
 Date: 3/20/09



© 154914287-2009 Levee O-6A (Issued For Construction O-6A) Revision 1: Revisions 2: VFC & REV 2: VFC/Revised-Details 4 of 4, 2008-04-09  
 AutoCAD 2009, Plot Date: 07/30/09, Plot Time: 11:07am, Plotter: HP DesignJet 2500

HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-9 PHASE I (2.12 MILES)

CHANGE ORDER NO. 10

Date: June 15, 2009

Contractor: Williams Brothers Construction Co., Inc.  
3800 Milam  
Houston, Texas 77006

Owner: Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

Reference: LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-9 PHASE I (2.12 MILES)

Contract No. 08-013-07-08  
Dannenbaum No. 4410-04

Description:  
Revised bollard and angle iron quantities.

**Contract Amount:**

Original Contract Price:	\$	20,253,897.40
Previous Change Order(s):	\$	(2,670,233.06)
Contract price prior to this change order:	\$	17,583,664.34
Net increase (decrease) from this change order:	\$	(15,165.00)
Contract price with all change orders to date (including this change order):	\$	<u>17,568,499.34</u>

**Contract Time:**

Authorized contract time change:		
This Change Order	0	days
Previous Total	0	days
Total to Date	<u>0</u>	days

**APPROVALS:**

**ENGINEER:**  
Dannenbaum Engineering Company - McAllen, LLC

  
Richard D. Seitz, P.E. Date 6/17/09  
Resident Project Representative

**OWNER:**  
Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

**ACCEPTED:**

**CONTRACTOR:**  
Williams Brothers Construction Co., Inc.

  
Randy T. Rogers Date 6-24-09  
Vice-President

HIDALGO COUNTY

JUL 02 2009

DRAINAGE DISTRICT #1





HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 10**

ATTACHMENT B

**Date:** July 2, 2009

**Contractor:** Williams Brothers Construction Co.,  
Inc.  
3800 Milam  
Houston, Texas 77006

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS  
PROJECT  
DHS SEGMENT 0-9 PH I (2.12 MI)

**Contract No.** 08-013-07-08  
**Dannenbaum No.** 4410-04

**ENGINEER'S EXPLANATION**

DESCRIPTION OF CHANGE

Revised bollard and angle iron quantities.

JUSTIFICATION FOR CHANGE

Bollard quantities were adjusted so that bollard sections could be counted and manufactured in even 8'-1" sections. This revised the limits of the bollards and required a quantity adjustment. We also adjusted the number of 20 foot bollards on each side of the ramp to accommodate the perimeter road ramp to the gate opening which was not included in the original bid quantity.

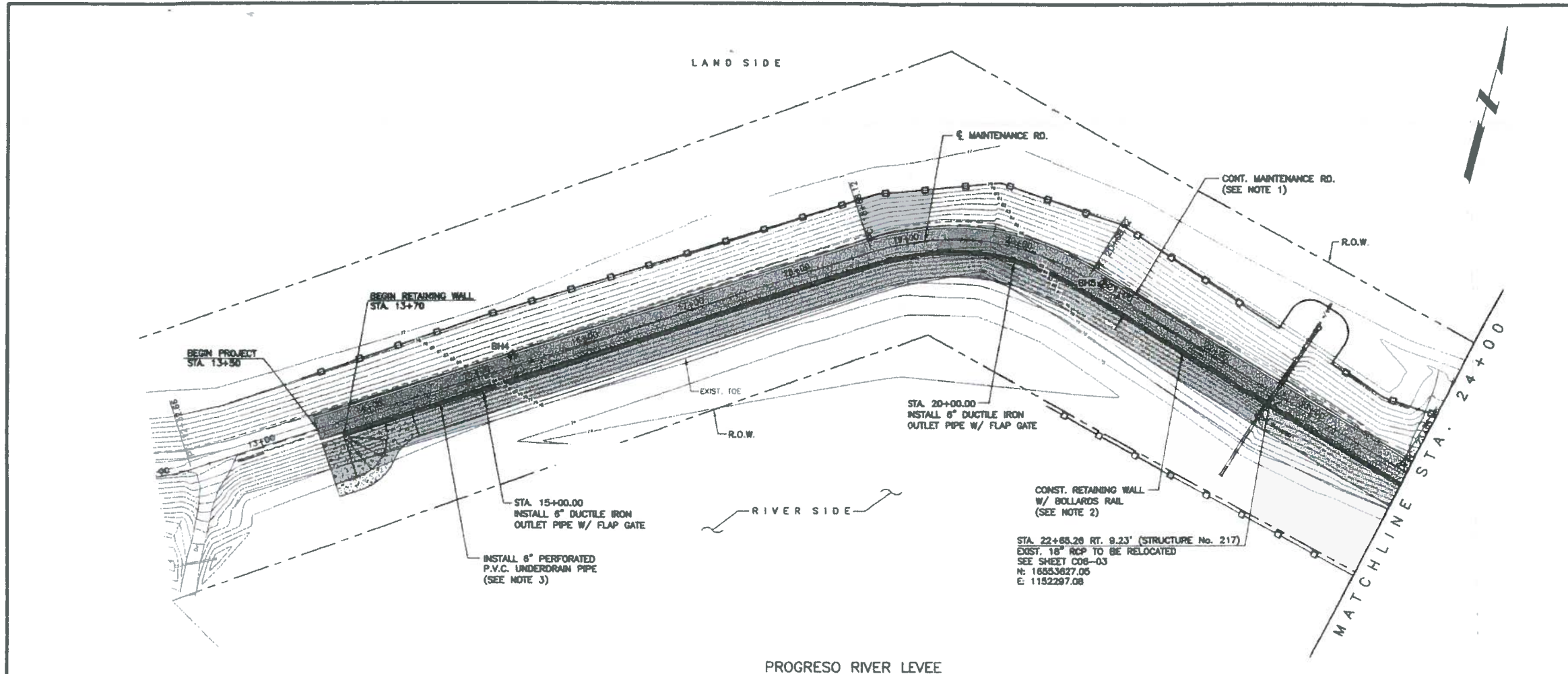
ENGINEER'S JUSTIFICATION OF COST

This was a straight unit cost change order.

**HIDALGO COUNTY**

**JUL 02 2009**

**DRAINAGE DISTRICT #1**






- NOTES:**
- SEE "002" SERIES SHEETS FOR PROPOSED TYPICAL SECTIONS.
  - SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "009" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "007" SERIES SHEETS FOR ACCESS RAMP DETAILS.
  - SEE "S01" SERIES SHEETS FOR BOLLARD DETAILS.
  - WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.
  - SHEAR KEY HEIGHT SHOWN ON PLAN AND PROFILE SHEETS IS NOT SHOWN TO ACTUAL DIMENSIONS. REFER TO RETAINING WALL DETAIL SHEETS FOR ACTUAL HEIGHT OF SHEAR KEY.

- LEGEND**
- PROPOSED SEDIMENT CONTROL FENCE
  - SOIL BORE LOCATION
  - EXISTING CONTOURS
  - EXISTING MAINTENANCE ROAD
  - MAINTENANCE ROAD
  - PERIMETER ROAD



Rev. No.	Description	Chk. By.	Date
B	ISSUED FOR CONSTRUCTION	R.S.	07-11-08
A	REVISION 1	R.S.	07-30-08
A	REVISED AS NOTED	R.S.	09-25-08






**DANNENBAUM**  
ENGINEERING COMPANY-MALLEN, LLC  
1109 Nolana Loop, Suite 208 McAllen, TX 78504 (958) 882-3677

PROGRESO RIVER LEVEL  
IMPROVEMENT PROJECT  
DHS SECTION O-9 (PHASE I)

**PLAN & PROFILE**  
STA. 13+50 TO 24+00

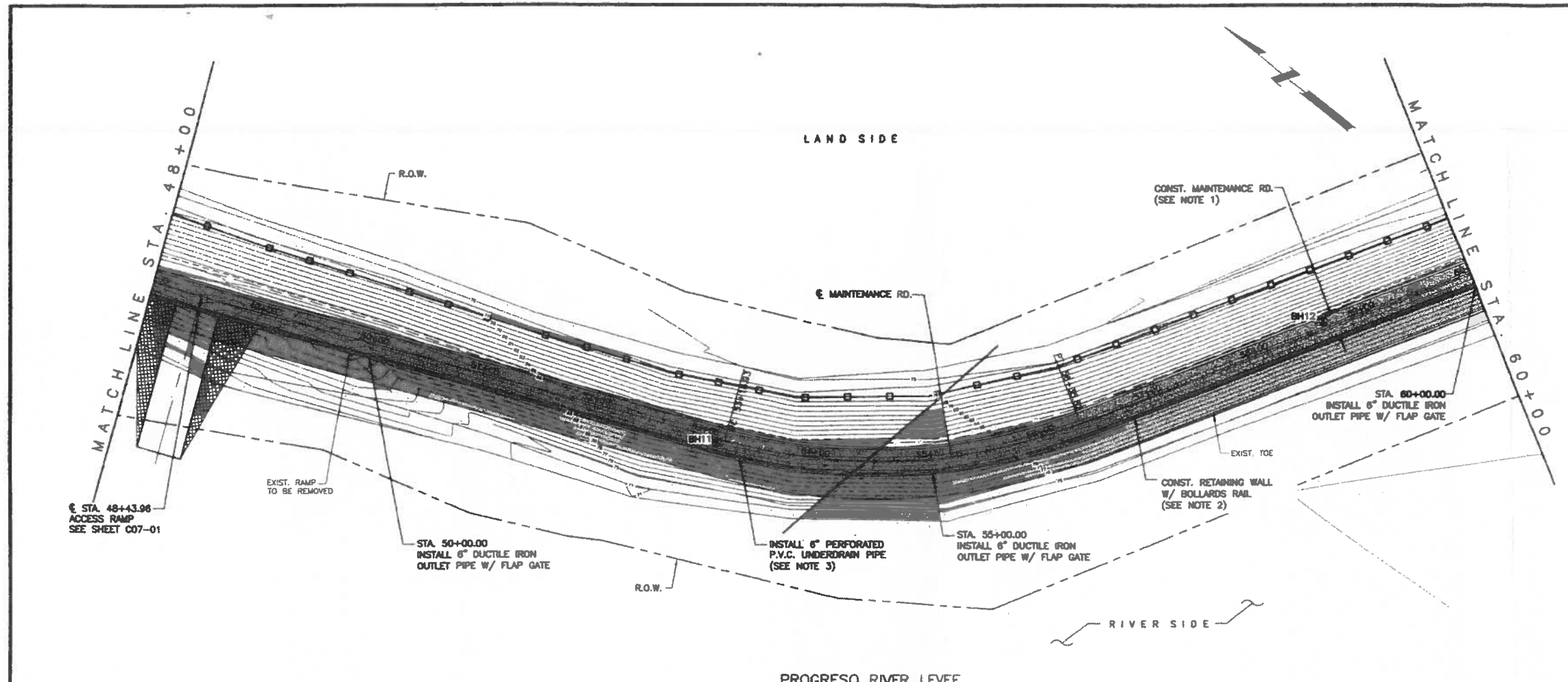
SHEET (3 OF 11)

 Umar Alkhalifa, Jr., P.E. Date: 6-25-09	Project No.	4410-04
	Designed By	O.A.
	Drawn By	H.R.V.
	Checked By	R.S.
	Sheet No.	C03-03

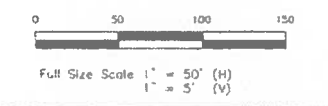
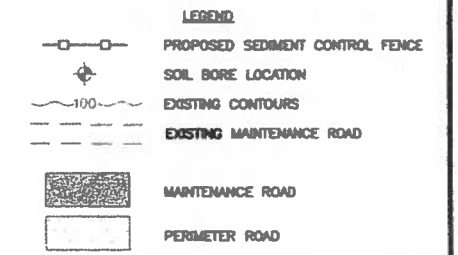
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 PLOT DATE: 06/25/09 10:55:00 AM







- NOTES:**
- SEE "C02" SERIES SHEETS FOR PROPOSED TYPICAL SECTIONS.
  - SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "C06" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "C07" SERIES SHEETS FOR ACCESS RAMP DETAILS.
  - SEE "S01" SERIES SHEETS FOR BOLLARD DETAILS.
  - WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.
  - SHEAR KEY HEIGHT SHOWN ON PLAN AND PROFILE SHEETS IS NOT SHOWN TO ACTUAL DIMENSIONS. REFER TO RETAINING WALL DETAIL SHEETS FOR ACTUAL HEIGHT OF SHEAR KEY.



Rev No.	Description	Chk. By:	Date
B	ISSUED FOR CONSTRUCTION	R.S.	07-11-08
A	REVISION 1	R.S.	07-30-08
A	REVISED AS NOTED	R.S.	09-25-08

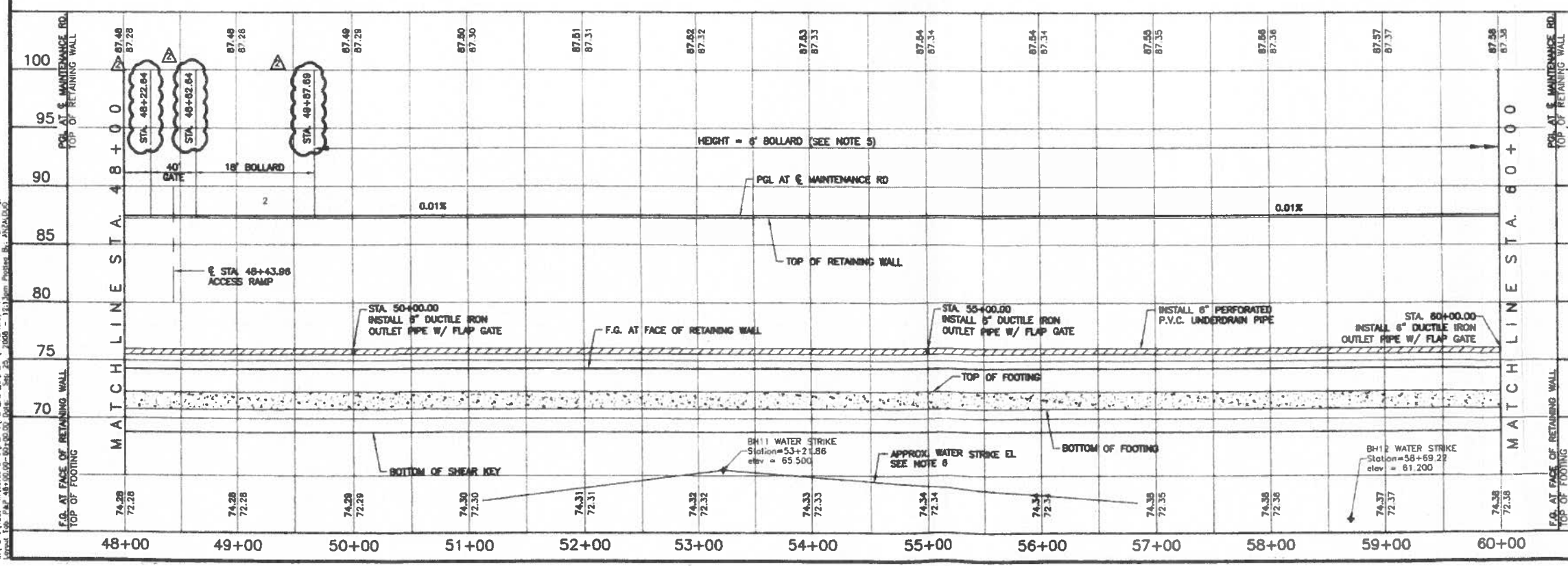


**DANNENBAUM**  
**ENGINEERING COMPANY-MCALLEN, LLC**  
 1109 Notlana Loop, Suite 208 McAllen, TX 78504 (956) 682-3877

PROGRESO RIVER LEVEE  
 IMPROVEMENT PROJECT  
 DHS SECTION O-9 (PHASE I)

**PLAN & PROFILE**  
**STA. 48+00 TO 60+00**

SHEET (6 OF 11)

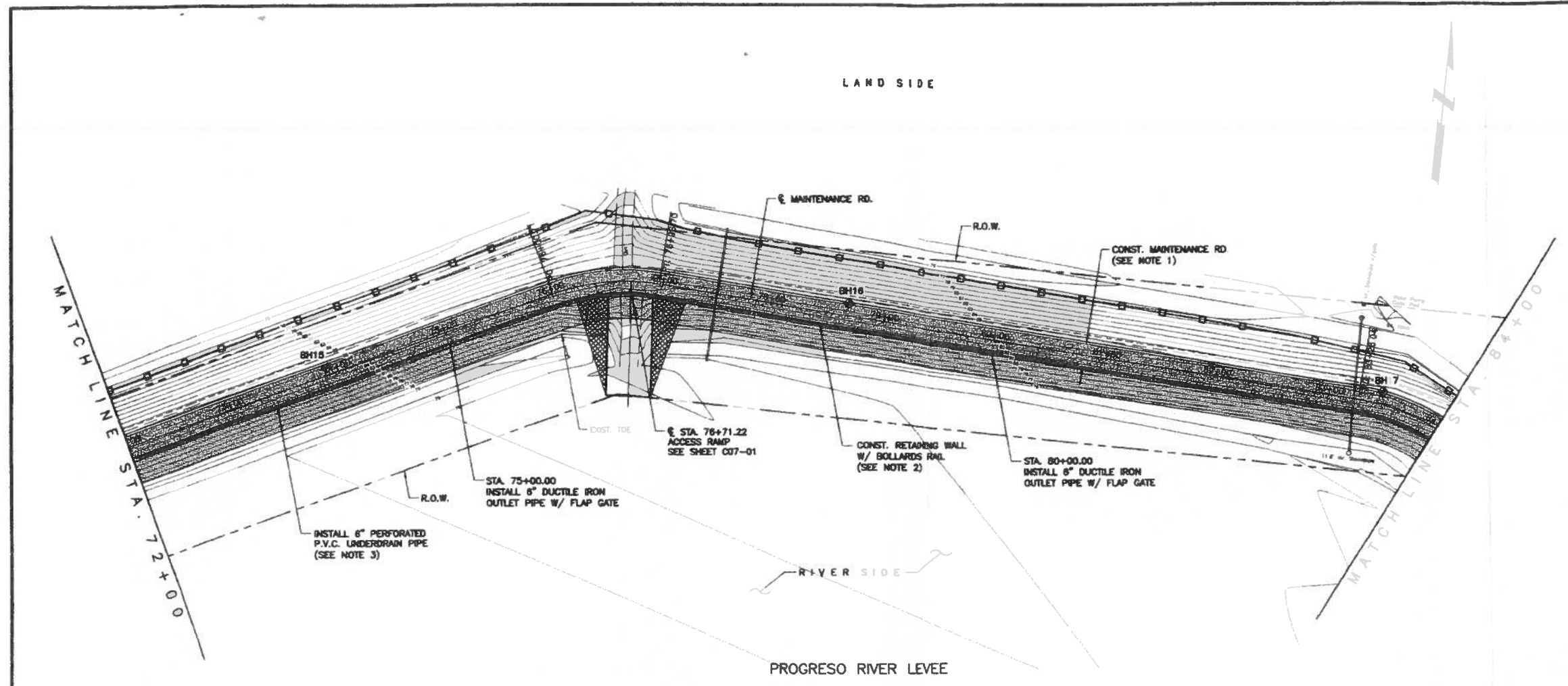


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 USER: JHARRIS

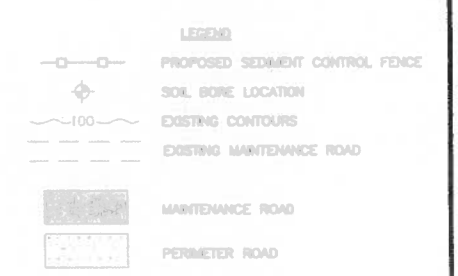


Project No:	4410-04
Designed By:	O.A.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No:	C03-06

*Omar Anzaldo*  
 Omar Anzaldo, P.E.  
 Date: 8-25-08



- NOTES:**
- SEE "002" SERIES SHEETS FOR PROPOSED TYPICAL SECTIONS.
  - SEE "301" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "008" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "007" SERIES SHEETS FOR ACCESS RAMP DETAILS.
  - SEE "301" SERIES SHEETS FOR BOLLARD DETAILS.
  - WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.
  - SHEAR KEY HEIGHT SHOWN ON PLAN AND PROFILE SHEETS IS NOT SHOWN TO ACTUAL DIMENSIONS. REFER TO RETAINING WALL DETAIL SHEETS FOR ACTUAL HEIGHT OF SHEAR KEY.



Rev No.	Description	Chk By:	Date
B	ISSUE FOR CONSTRUCTION	R.S.	07-11-08
A	REVISION 1	R.S.	07-30-08
A	REVISED AS NOTED	R.S.	09-25-08



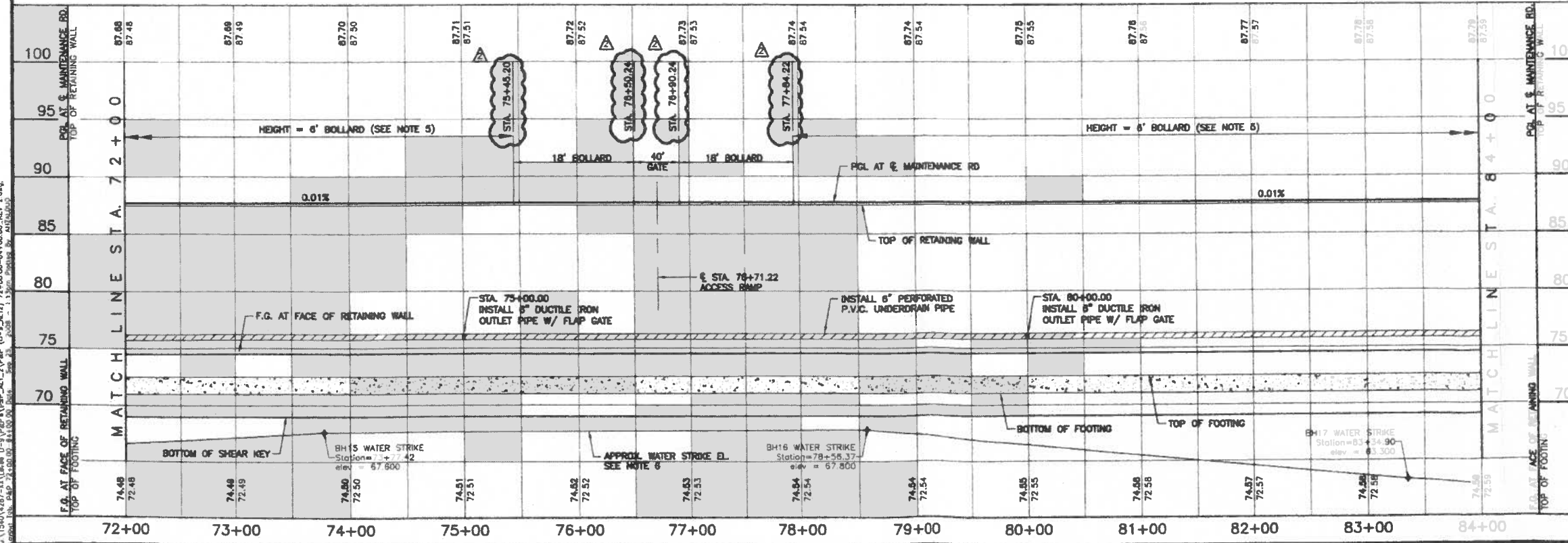
**DANNENBAUM**  
ENGINEERING COMPANY-McALLEN, LLC  
1100 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 882-3677

PROGRESO RIVER LEVEE IMPROVEMENT PROJECT  
DHS SECTION O-9 (PHASE I)

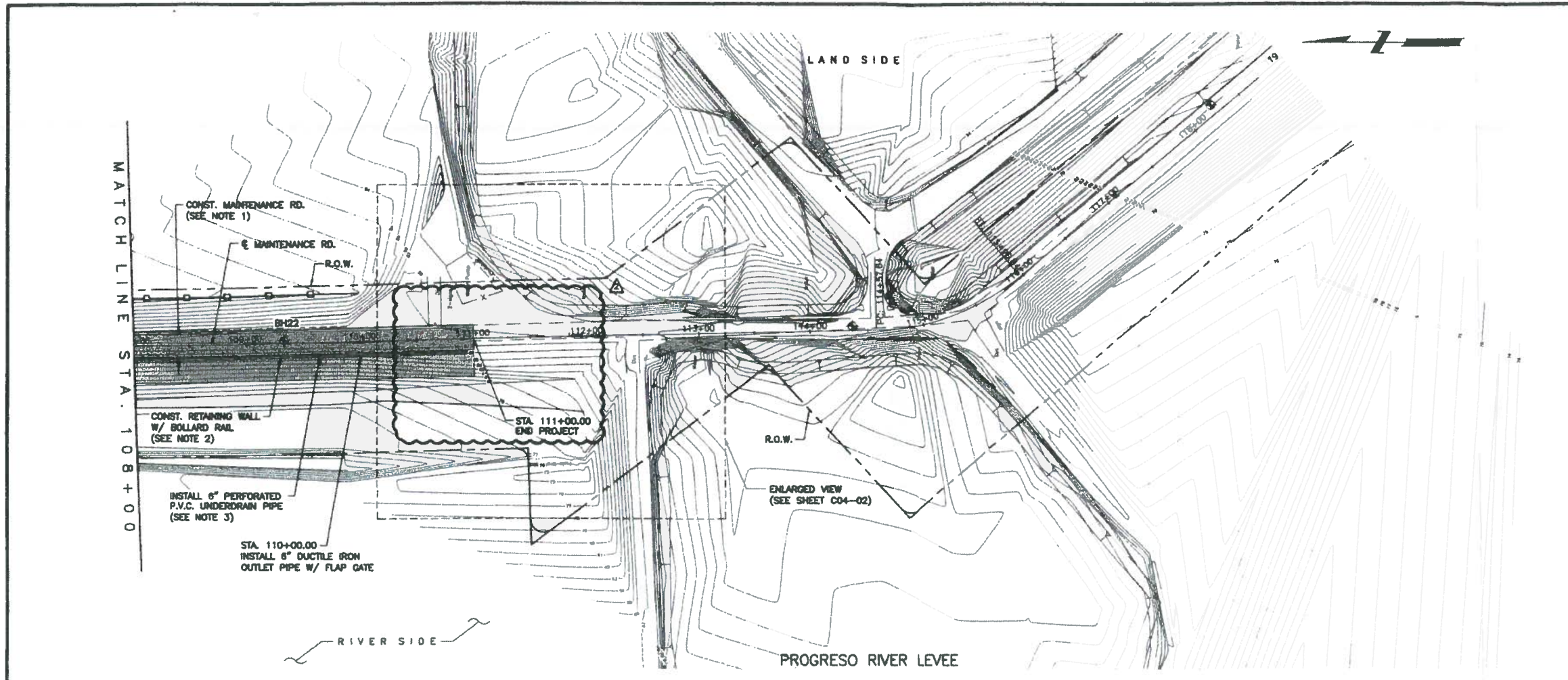
PLAN & PROFILE  
STA. 72+00 TO 84+00  
SHEET (8 OF 11)

Project No.:	4410-04
Designed By:	O.A.
Drawn By:	K.R.V.
Checked By:	R.S.
Sheet No.:	C03-08

Date: 4-25-08

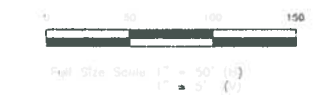


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 Author: J.R. CAP 7/20/08 11:41:00 AM Date: 7/23/08 1:13 PM Drawn By: J.R. CAP



- NOTES:**
- SEE "C02" SERIES SHEETS FOR PROPOSED TYPICAL SECTIONS.
  - SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "C08" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "C07" SERIES SHEETS FOR ACCESS RAMP DETAILS.
  - SEE "S01" SERIES SHEETS FOR BOLLARD DETAILS.
  - WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.
  - SHEAR KEY HEIGHT SHOWN ON PLAN AND PROFILE SHEETS IS NOT SHOWN TO ACTUAL DIMENSIONS. REFER TO RETAINING WALL DETAIL SHEETS FOR ACTUAL HEIGHT OF SHEAR KEY.

- LEGEND**
- PROPOSED SEDIMENT CONTROL FENCE
  - ⊕ SOIL BORE LOCATION
  - EXISTING CONTOURS
  - - - EXISTING MAINTENANCE ROAD
  - ▨ MAINTENANCE ROAD
  - PERIMETER ROAD



Rev. No.	Description	Chk. By:	Date
B	ISSUED FOR CONSTRUCTION	R.S.	07-11-08
A	REVISION 1	R.S.	07-30-08
A	REVISED AS NOTED	R.S.	09-25-08



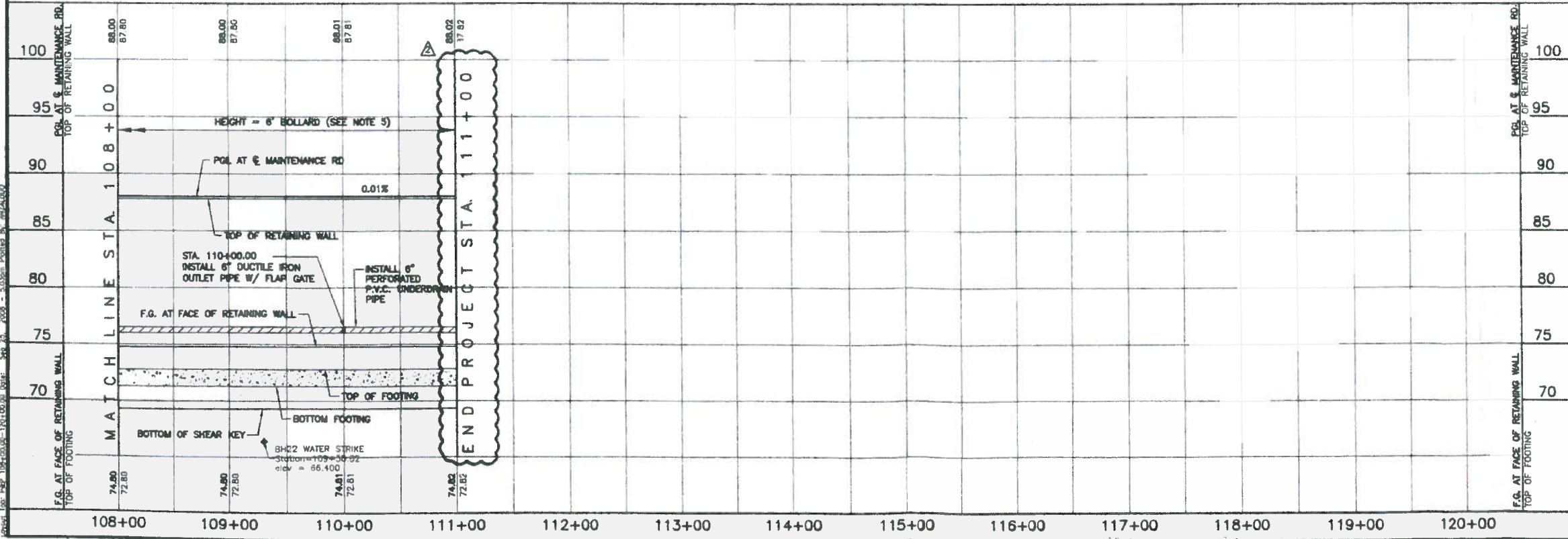
**DANNENBAUM**  
**ENGINEERING COMPANY-McALLEN, LLC**  
 1109 Nolana Loop Suite 208 McAllen, TX 78504 (956) 682-3677

PROGRESO RIVER LEVEL  
 IMPROVEMENT PROJECT  
 DHS SECTION 0-9 (PHASE I)

**PLAN & PROFILE**  
**STA. 108+00 TO 112+00**

SHEET (11 OF 11)

	Project No. 4410-04
<i>Omar Al-Sayid, Jr., P.E.</i> Date: 9-25-08	Designed By: O.A.
	Drawn By: H.R.V.
	Checked By: R.S.
	Sheet No. C03-11



C:\15401322-00\Draws\0-9\Plan\Profile.dwg (10-9-08) 108-00.00-112+00.00, Rev. 2.dwg  
 Plotted: 10/21/08 10:00:00 AM by: R.S. Plot Size: 36" x 48"

**HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-9 PHASE II (1.67 MILES)**

**CHANGE ORDER NO. 27**

**Date:** June 23, 2009

**Contractor:** McAllen Construction  
4700 N Ware Rd  
McAllen, Texas 78504

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-9 PHASE II (1.67 MILES)

**Contract No.** 08-018-09-02  
**Dannenbaum No.** 4410-04

**Description:**

Revised Final Completion date from July 2, 2009 to September 23, 2009.

**Contract Amount:**

<b>Original Contract Price:</b>	\$	13,425,119.85
Previous Change Order(s):	\$	567,844.80
Contract price prior to this change order:	\$	13,992,964.65
Net increase (decrease) from this change order:	\$	-
<b>Contract price with all change orders to date (including this change order):</b>	\$	<u>13,992,964.65</u>

**Contract Time:**

Authorized contract time change:

Previous Total	94	days
This Change Order	<u>83</u>	days
Total to Date	177	days

Original Contract Date  
Revised Contract Date - Previous Change Order  
Revised Contract Date - This Change Order

<b>Substantial Completion</b>	<b>Final Completion</b>
12/1/2008	3/30/2009
3/5/2009	7/2/2009
N/A	9/23/2009

**APPROVALS:**

**ENGINEER:**

Dannenbaum Engineering Company - McAllen, LLC

*Richard D. Seitz, P.E.* 7/7/09  
Richard D. Seitz, P.E. Date  
Resident Project Representative

**OWNER:**

Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

**ACCEPTED:**

**CONTRACTOR:**

McAllen Construction

*James Eckroat*  
James Eckroat  
Vice President

Date



**DANNENBAUM ENGINEERING COMPANY - McALLEN LLC**

1109 NOLANA LOOP, SUITE 208 McALLEN, TEXAS 78504 (956) 682-3677

June 23, 2009

Hidalgo County Drainage District No. 1  
902 North Doolittle Rd.  
Edinburg, Texas 78541

**ATTN:** *Mr. Godfrey Garza, Jr., CFM*  
*District Manager, Flood Plain Administrator*

**REF:** *Hidalgo County Levee Rehabilitation Project*  
*Contract No. 08-018-09-02*  
*DHS Segment O-9 Phase II*

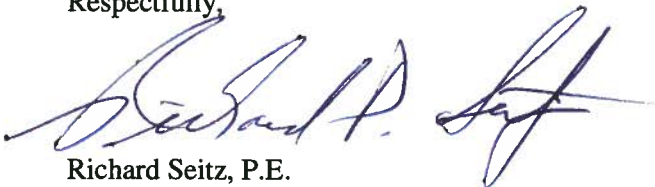
**SUBJ:** *Time Extension*  
*Change Order No. 27*

Dear Mr. Garza,

Attached please find the letter from McAllen Construction, Inc. dated June 19, 2009 where they request a time extension in the amount of 83 days to the final completion date of the contract.

Engineer has reviewed Contractor's request for additional time and find it to be valid. Therefore, Engineer recommends adjusting the contract period by the addition of 83 days. In accordance with Article 12, Change of Contract Price; Change of Contract Times, the extension of the final completion date by 83 calendar days from July 2, 2009 to September 23, 2009 is fair and reasonable.

Respectfully,



Richard Seitz, P.E.  
Resident Project Representative  
Dannenbaum Engineering Co. – McAllen LLC

cc: Louis Jones, P.E. – Dannenbaum Engineering  
Steve McGarraugh, Project Representative– Dannenbaum Engineering  
Jaime Xavier Farias, E.I.T. – Dannenbaum Engineering

Attachment: Bollard Foundation Redesign Delay

HIDALGO COUNTY  
JUL 13 2009  
DRAINAGE DISTRICT #1

HIDALGO COUNTY  
CANCELLED JUL 13 2009  
JUL 24 2009  
DRAINAGE DISTRICT #1

# McALLEN CONSTRUCTION, INC.

FILE COPY

P.O. Box 3244 • McAllen, Texas 78502 • Phone: (956) 686-7819 • Fax: (956) 686-7824

June 19, 2009

Mr. Richard Seitz, P.E.  
Resident Project Representative  
Dannenbaum Engineering  
1109 Nolana Loop, Suite 208  
McAllen, TX 78504

Project: HCDD #1 / DHS Segment 0-9 Ph II - Progreso River Levee Improvement  
Subject: **Bollard Foundation Redesign Delay**

Mr. Richard Seitz, P.E.:

On February 26, 2009 McAllen Construction, Inc. (McCI) received from the Engineer preliminary drawings to use in evaluating the Engineer's proposed design change to the bollard foundation. On May 20, 2009 the Engineer issued Change Orders #23 & #24 which finalized the design changes and increased the scope of work to be performed. On May 26, 2009 McCI signed the aforementioned change orders and returned them to the Engineer.

The Bollard Foundation was originally scheduled to be completed as part of Substantial Completion, as defined in Article 4 of the construction contract. Due to the delay by the government in supplying some of the necessary bollard material, an exception from the aforementioned article was made for the bollard foundation. Substantial Completion was awarded on February 27, 2009 with the aforementioned exception.

On March 26, 2009 McCI notified the Engineer in writing that any delay to the issuance of a change order for the revised bollard foundation would result in a delay to the final completion of the project.

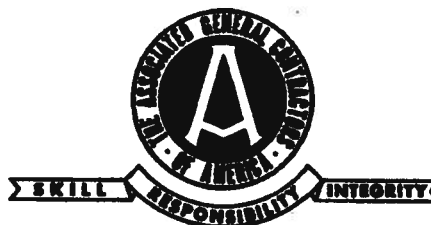
On June 17, 2009 Change Orders #23 & #24 were returned to McCI as "Approved" by all parties, allowing the procurement for and construction of the bollard foundation to proceed.

McCI hereby requests that 83 days be added to the date of final completion for the above referenced contract. This represents the time between the McCI's date of written

HIDALGO COUNTY

JUL 13 2009

DRAINAGE DISTRICT #1



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CANCELLED JUL 13 2009  
DRAINAGE DISTRICT #1

Raising Quality Through Continuous Improvement

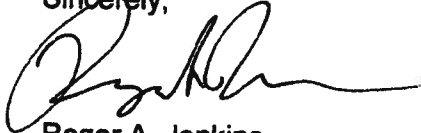
# McALLEN CONSTRUCTION, INC.

P.O. Box 3244 • McAllen, Texas 78502 • Phone: (956) 686-7819 • Fax: (956) 686-7824

notification to the Engineer, March 26, 2009, and the date on which Change Orders #23 & #24 were approved, June 17, 2009.

Should you have any questions or concerns, please contact me at 956-683-5710.

Sincerely,



Roger A. Jenkins  
Project Manager

HIDALGO COUNTY

JUL 13 2009

DRAINAGE DISTRICT #1



HIDALGO COUNTY  
CANCELLED JUL 13 2009  
DRAINAGE DISTRICT #1

Raising Quality Through Continuous Improvement

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 27**

ATTACHMENT B

**Date:** July 10, 2009

**Contractor:** McALLEN CONSTRUCTION  
4700 N WARE ROAD  
McALLEN, Texas 78504

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS  
PROJECT  
DHS SEGMENT 0-9 PH II (1.67 MI)

**Contract No.** 08-018-09-02

**Dannenbaum No.** 4410-04

**ENGINEER'S EXPLANATION**

DESCRIPTION OF CHANGE

Revised Final Completion date from July 2, 2009 to September 23, 2009.

JUSTIFICATION FOR CHANGE

Revised final completion date on contract due to pending change order's 23 & 24 on Segment 0-9 Phase II. Contractor submitted Engineer written notification on March 26<sup>th</sup> stating that any delay to the issuance of a change order for revised bollard foundation would result in a delay to the final completion of the project. Contractor received executed Change Order's on June 17<sup>th</sup>, resulting in an 83 day delay reflected in this change order.

ENGINEER'S JUSTIFICATION OF COST

N/A.

HIDALGO COUNTY

JUL 13 2009

DRAINAGE DISTRICT #1

**HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-9 PHASE II (1.67 MILES)**

**CHANGE ORDER NO. 28**

**Date:** July 7, 2009

**Contractor:** McAllen Construction  
4700 N Ware Rd  
McAllen, Texas 78504

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-9 PHASE II (1.67 MILES)

**Contract No.** 08-018-09-02  
**Dannenbaum No.** 4410-04

**Description:**

Plug and remove existing 4' x 5' culvert at Station 158+70 and extend Final Completion Date from September 23, 2009 to October 2, 2009.

**Contract Amount:**

<b>Original Contract Price:</b>	\$	<b>13,425,119.85</b>
Previous Change Order(s):	\$	567,844.80
Contract price prior to this change order:	\$	<b>13,992,964.65</b>
Net increase (decrease) from this change order:	\$	6,636.00
<b>Contract price with all change orders to date (including this change order):</b>	\$	<b><u>13,999,600.65</u></b>

**Contract Time:**

Authorized contract time change:  
Previous Total  
This Change Order  
Total to Date

177	days
<u>10</u>	days
187	days

Original Contract Date  
Revised Contract Date - Previous Change Order  
Revised Contract Date - This Change Order

<b>Substantial Completion</b>	<b>Final Completion</b>
12/1/2008	3/30/2009
3/5/2009	9/23/2009
N/A	10/2/2009

**APPROVALS:**

**ENGINEER:**

Dannenbaum Engineering Company - McAllen, LLC

*Richard D. Seitz, P.E.* 7/7/09  
Richard D. Seitz, P.E. Date  
Resident Project Representative

**OWNER:**

Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

**ACCEPTED:**

**CONTRACTOR:**

McAllen Construction

*James Eckroat* 7-9-09  
James Eckroat Date  
Vice President



HIDALGO COUNTY

JUL 13 2009

DRAINAGE DISTRICT #1





**Bid Summary Totals Report**

Standard Markup Instructions

	Cost Basis	Markup %	Markup
Labor:	1,139	0.00	0
Burden:	299	0.00	0
Perm Matl:	369	0.00	0
Const Matl:	0	0.00	0
Sub:	0	0.00	0
Eq. Op. Exp:	721	0.00	0
Co. Equip:	1,072	0.00	0
Rented Eq.:	0	0.00	0
G & A:	0	0.00	0
Misc2:	0	0.00	0
Misc3:	0	0.00	0
Overrides:	0		0
Total:	3,600	0.00	0

Selected Bond Table: B

Previous Run

Summary: 06/26/2009 2:47 PM  
 Spread: 06/26/2009 2:47 PM  
 Summary run on Takeoff Quan and Adjusted to Bid Quan.

Standard Spreads

Indirect Spread: Total  
 Markup Spread: Total  
 Addon/Bond Spread: Total

Totals as of Last Spread

	Cost:	Markup:	Total:
Direct:	3,601	0	3,601
Indirect:	0	0	0
Addons:	2,158	711	2,869
Bond:	166		166
SubTotal:	5,925	711	6,636
Pass Through:	0		0
Total:	5,925	711	6,636

HIDALGO COUNTY

JUL 13 2009

DRAINAGE DISTRICT #1

HIDALGO COUNTY  
 JUL 13 2009  
 DRAINAGE DISTRICT #1

DIRECT COST REPORT

HIDALGO COUNTY  
 JUL 13 2009  
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 Page 1  
 06/26/09  
 JUL 13 2009  
 DRAINAGE DISTRICT #1  
 DRAINAGE DISTRICT #1

Activity Resource	Desc	Quantity Pcs	Unit	Unit Cost	Labor	Material	Per Equip Matl/Exp	Constr	Equip Ment	Sub-Contract	Total
-------------------	------	--------------	------	-----------	-------	----------	--------------------	--------	------------	--------------	-------

**BID ITEM = 100**  
 Description = LOCATE BOX CULVERT  
 Land Item Unit = SCHEDULE: 1 100  
 LS Takeoff Quan: 1.000 Engr Quan: 1.000

Summary Codes:

110	LOCATE BOX CULVERT	Quan: 1.00 LS	Hrs/Shft: 11.00	Cal: 55	WC: TX5203
<u>E20M2</u>	20 TON EXC, 2 MEN	6.00 CH	Prod: 6.0000 HU	Lab Pcs: 3.00	Eqp Pcs: 1.00
	Excavator 20 ton	1.00 6.00 HR	64.194	385	385
	Common Labor	1.00 6.00 MH	9.680		83
	Equipment Operator	1.00 6.00 MH	12.950		111
	Skilled Labor	1.00 6.00 MH	11.110		96
\$675.49	18.0000 MH/LS	18.00 MH	[ 230.05 ]	290	385 675

120	LOCATE BOX CULVERT	Quan: 1.00 LS	Hrs/Shft: 11.00	Cal: 55	WC: TX5203
<u>E20M2</u>	20 TON EXC, 2 MEN	1.50 CH	Prod: 1.5000 HU	Lab Pcs: 3.00	Eqp Pcs: 0.00
	Excavator 20 ton	0.00 HR	64.194		
	Common Labor	1.00 1.50 MH	9.680		21
	Equipment Operator	1.00 1.50 MH	12.950		28
	Skilled Labor	1.00 1.50 MH	11.110		24
\$72.57	4.5000 MH/LS	4.50 MH	[ 57.51 ]	73	73

Item Totals:	100	- LOCATE BOX CULVERT			
\$748.06	22.5000 MH/LS	22.50 MH	[ 287.56 ]	363	385 748
748.060	1 LS			362.90	385.16 748.06

**BID ITEM = 110**  
 Description = EXCAVATE TO EXPOSE BOX CULVERT  
 Land Item Unit = SCHEDULE: 1 100  
 CY Takeoff Quan: 274.250 Engr Quan: 274.250

Summary Codes:

110	EXCAVATE TO EXPOSE BOX CULVERT	Quan: 383.95 CY	Hrs/Shft: 11.00	Cal: 55	WC: TX5203
	assumes 40% fluff				
	Images/Docs Attached				
<u>E20M2</u>	20 TON EXC, 2 MEN	2.55 CH	Prod: 150.0039 UH	Lab Pcs: 3.00	Eqp Pcs: 2.00
	Excavator 20 ton	1.00 2.56 HR	64.194	164	164
	Loader 3 cy	1.00 2.56 HR	43.886	112	112
	Common Labor	0.00 MH	9.680		
	Equipment Operator	2.00 5.12 MH	12.950	95	95
	Skilled Labor	1.00 2.56 MH	11.110	41	41
\$412.54	0.0200 MH/CY	7.68 MH	[ 0.28 ]	136	277 413

Item Totals:	110	- EXCAVATE TO EXPOSE BOX CULVERT			
\$412.54	0.0280 MH/CY	7.68 MH	[ 0.393 ]	136	277 413
1.504	274.25 CY			0.50	1.01 1.50

**BID ITEM = 120**  
 Description = CUT & PLUG 4' X 5' BOX CULVERT  
 Land Item Unit = SCHEDULE: 1 100  
 EA Takeoff Quan: 1.000 Engr Quan: 1.000

Summary Codes:

110	Cut Concrete Box	Quan: 36.00 LF	Hrs/Shft: 11.00	Cal: 55	WC: TX5203
<u>LAB12</u>	LABOR CREW 1 SKILL, 2 COMMON	6.60 CH	Prod: 60.0000 US	Lab Pcs: 3.00	Eqp Pcs: 3.00
	Air Compressor 100 - 2	1.00 6.60 HR	16.136	106	106
	Air Tool	2.00 13.20 HR	4.890	65	65
	Common Labor	2.00 13.20 MH	9.680		183
	Skilled Labor	1.00 6.60 MH	11.110		105
\$459.44	0.5500 MH/LF	19.80 MH	[ 6.348 ]	288	171 459

**DIRECT COST REPORT**

Activity Resource	Desc	Quantity Pcs	Unit	Unit Cost	Labor	Perm Material	Constr Mat/Exp	Equip Ment	Sub-Contract	Total
<b>BID ITEM = 120</b>			Land Item	SCHEDULE: 1	100					
Description =	CUT & PLUG 4' X 5' BOX CULVERT		Unit =	EA	Takeoff Quan:		1.000	Engr Quan:		1.000
<b>120</b>	<b>Construct Brick Plugs 2 ea</b>		<b>Quan:</b>	<b>40.00 SF</b>	<b>Hrs/Shft:</b>	<b>11.00</b>	<b>Cal: 55</b>	<b>WC: TX5203</b>		
<u>LAB12</u>	LABOR CREW 1 SKILL, 2 COMMON	7.33	CH	<b>Prod:</b>	<b>60.0000 US</b>		Lab Pcs: 3.00	Eqp Pcs:	0.00	
	Common Labor	2.00	14.67 MH		9.680	204				204
	Skilled Labor	1.00	7.33 MH		11.110	117				117
\$320.45	0.5500 MH/SF		22.00 MH	[ 6.348 ]		320				320
<b>205</b>	<b>Segment Blocks</b>		<b>Quan:</b>	<b>80.00 EA</b>	<b>Hrs/Shft:</b>	<b>11.00</b>	<b>Cal: 66</b>	<b>WC: TX5203</b>		
	Segment Blocks	80.00	ea		4.250	340				340
<b>210</b>	<b>Mortar Sand</b>		<b>Quan:</b>	<b>0.25 CY</b>	<b>Hrs/Shft:</b>	<b>11.00</b>	<b>Cal: 55</b>	<b>WC: TX5203</b>		
	Concrete Sand	0.25	TON		12.000	3				3
<b>220</b>	<b>Sack Cement</b>		<b>Quan:</b>	<b>4.00 SAC</b>	<b>Hrs/Shft:</b>	<b>11.00</b>	<b>Cal: 55</b>	<b>WC: TX5203</b>		
	Sack Cement	4.00	SACK		6.500	26				26
<hr/>										
====>	<b>Item Totals:</b>	<b>120</b>	<b>- CUT &amp; PLUG 4' X 5' BOX CULVERT</b>							
\$1,148.89	41.8000 MH/EA		41.80 MH	[ 482.45 ]	609	369		171		1,149
1,148.890	1 EA				608.86	369.00		171.03		1,148.89

<b>BID ITEM = 130</b>			Land Item	SCHEDULE: 1	100					
Description =	INSTALL AND COMPACT BACKFILL		Unit =	CY	Takeoff Quan:		286.000	Engr Quan:		286.000
Summary Codes:										
<b>110</b>	<b>Backfill Excavation</b>		<b>Quan:</b>	<b>400.00 CY</b>	<b>Hrs/Shft:</b>	<b>11.00</b>	<b>Cal: 55</b>	<b>WC: TX5203</b>		
Images/Docs	Attached									
<u>E20M2</u>	20 TON EXC, 2 MEN	8.88	CH	<b>Prod:</b>	<b>45.0000 UH</b>		Lab Pcs: 2.00	Eqp Pcs:	2.00	
	Excavator 20 ton	1.00	8.89 HR		64.194			571		571
	Loader 3 cy	1.00	8.89 HR		43.886			390		390
	Common Labor		0.00 MH		9.680					
	Equipment Operator	2.00	17.78 MH		12.950	330				330
	Skilled Labor		0.00 MH		11.110					
\$1,291.04	0.0444 MH/CY		17.78 MH	[ 0.654 ]		330		961		1,291
<hr/>										
====>	<b>Item Totals:</b>	<b>130</b>	<b>- INSTALL AND COMPACT BACKFILL</b>							
\$1,291.04	0.0621 MH/CY		17.78 MH	[ 0.915 ]	330			961		1,291
4.514	286 CY				1.15			3.36		4.51

**\$3,600.53      \*\*\* Report Totals \*\*\*      89.76 MH      1,438      369      1,794      3,601**

>>> indicates Non Additive Activity  
 ---Report Notes:---  
 The estimate was prepared with TAKEOFF Quantities.  
 This report shows TAKEOFF Quantities with the resources.  
 Bid Date: Owner: Engineering Firm:  
 Estimator-In-Charge:

HIDALGO COUNTY  
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 HIDALGO COUNTY  
 JUL 13 2009  
 CANCELLED JUL 13 2009  
 DRAINAGE DISTRICT #1  
 DRAINAGE DISTRICT #1

\* on units of MH indicate average labor unit cost was used rather than base rate.  
 [ ] in the Unit Cost Column = Labor Unit Cost Without Labor Burdens  
 In equipment resources, rent % and EOE % not = 100% are represented as XXX%YYY where XXX=Rent% and YYY=EOE%  
 ---Calendar Codes---  
 Calendars are found in crew and labor codes and have the format XXXdY where

**DIRECT COST REPORT**

Activity	Desc	Quantity	Unit	Unit	Perm	Constr	Equip	Sub-	Total
Resource		Pcs	Unit	Cost	Labor	Material	Matl/Exp	Ment Contract	

**BID ITEM = 130** Land Item SCHEDULE: 1 100  
 Description = INSTALL AND COMPACT BACKFILL Unit = CY Takeoff Quan: 286.000 Engr Quan: 286.000

XXX = The Calendar and Y = The Starting Day of the Week with Day 1 = Monday, etc.

- 40 40 Hour Work Week
- 50 50 Hour Work Week
- 55 55 Hour Work Week
- 60 60 Hour Work Week
- 66 66 Hr Work Week
- D40 Double 40 Hour Shifts

HIDALGO COUNTY

JUL 13 2009

DRAINAGE DISTRICT #1

HIDALGO COUNTY  
 JUL 13 2009  
 CANCELLED  
 DRAINAGE DISTRICT #1

**Bond Calculations**

**Table: B**

**Description: Class B General Contracting**

	<b>Contract Amount</b>	<b>Rate per 1000</b>	<b>Bond Amount</b>
<b>First:</b>	\$ 100,000	25.00	\$ 165.89
<b>Next:</b>	\$ 400,000	15.00	\$ 0.00
<b>Next:</b>	\$ 2,000,000	10.00	\$ 0.00
<b>Next:</b>	\$ 2,500,000	7.50	\$ 0.00
<b>Next:</b>	\$ 2,500,000	7.00	\$ 0.00
<b>Remainder:</b>		6.50	\$ 0.00
<b>Subtotal:</b>			\$ 165.89
<b>Time Threshold 1:</b>	12	<b>Extended Time Rate 1:</b> 1.0000 %	\$ 0.00
<b>Time Threshold 2:</b>	0	<b>Extended Time Rate 2:</b> 0.0000 %	\$ 0.00
<b>Length of Job:</b>	6	<b>Total Bond Amount:</b>	\$ 165.89

HIDALGO COUNTY  
 JUL 13 2009  
 DRAINAGE DISTRICT #1

HIDALGO COUNTY  
 JUL 13 2009  
 CANCELLED  
 DRAINAGE DISTRICT #1

**List of Addons**

<b>Addon</b>	<b>Description</b>	<b>Basis</b>	<b>%</b>	<b>Cost</b>	<b>Total Amt</b>
1	agc dues	JB	0.1900	Y	12.61
2	GL	JB	2.0000	Y	132.72
12	MU on Labor & Direct Burden	TL	140.0000	Y	2,012.98
21	Profit	++	12.0000	N	710.97
					2,869.28

**Addon Basis Codes and Descriptions Used in this Estimate:**

- TL - Total Labor
- JB - Job Value
- ++ - Cost, Markup, and Previous Addons

HIDALGO COUNTY

JUL 13 2009

DRAINAGE DISTRICT #1

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 28**

ATTACHMENT B

**Date:** July 10, 2009

**Contractor:** McALLEN CONSTRUCTION  
4700 N WARE ROAD  
McALLEN, Texas 78504

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS  
PROJECT  
DHS SEGMENT 0-9 PH II (1.67 MI)

**Contract No.** 08-018-09-02  
**Dannenbaum No.** 4410-04

**ENGINEER'S EXPLANATION**

DESCRIPTION OF CHANGE

Plug and remove existing 4' x 5' culvert at Station 158+70 and extend final completion date from September 23, 2009 to October 2, 2009.

JUSTIFICATION FOR CHANGE

Existing culvert was buried and not visible during field observations or found on any readily available information. Culvert is in conflict with the bollard foundation wall; elimination of the conflict, requires the removal of the portion of the culvert and plugging the ends of the remaining portions of the culvert.

The Contractor is entitled to additional contract days beginning with the discovery of the culvert and ending with the issuance of this change order.

ENGINEER'S JUSTIFICATION OF COST

We have reviewed Contractor supplied backup for cost incurred relating to this work and find it to be reasonable, therefore we recommended payment in the amount of \$6,636.00.

HIDALGO COUNTY

JUL 13 2009

DRAINAGE DISTRICT #1

HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-10 (2.34 MILES)

CHANGE ORDER NO. 10

Date: June 15, 2009

Contractor: Williams Brothers Construction Co., Inc.  
3800 Milam  
Houston, Texas 77006

Owner: Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

Reference: LEVEE IMPROVEMENTS PROJECT  
DHS SEGMENT 0-10 (2.34 MILES)

Contract No. 08-014-07-08  
Dannenbaum No. 4410-05

Description: Revised bollard and angle iron quantities.

**Contract Amount:**


Original Contract Price:	\$	18,763,215.00
Previous Change Order(s):	\$	343,677.70
Contract price prior to this change order:	\$	19,106,892.70
Net increase (decrease) from this change order:	\$	(21,948.00)
Contract price with all change orders to date (including this change order):	\$	<u>19,084,944.70</u>

**Contract Time:**

Authorized contract time change:	
This Change Order	0 days
Previous Total	<u>0</u> days
Total to Date	0 days

**APPROVALS:**

**ENGINEER:**  
Dannenbaum Engineering Company - McAllen, LLC

  
Richard D. Seitz, P.E. Date 4/17/09  
Resident Project Representative

**OWNER:**  
Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

**ACCEPTED:**

**CONTRACTOR:**  
Williams Brothers Construction Co., Inc.

  
Randy T. Rogers Date 6-29-09  
Vice-President

HIDALGO COUNTY  
JUL 02 2009  
DRAINAGE DISTRICT #1



HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 10**

ATTACHMENT B

**Date:** July 2, 2009

**Contractor:** Williams Brothers Construction Co.,  
Inc.  
3800 Milam  
Houston, Texas 77006

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** LEVEE IMPROVEMENTS  
PROJECT  
DHS SEGMENT 0-10 (2.12 MI)

**Contract No.** 08-014-07-08  
**Dannenbaum No.** 4410-05

**ENGINEER'S EXPLANATION**

DESCRIPTION OF CHANGE

Revised bollard and angle iron quantities.

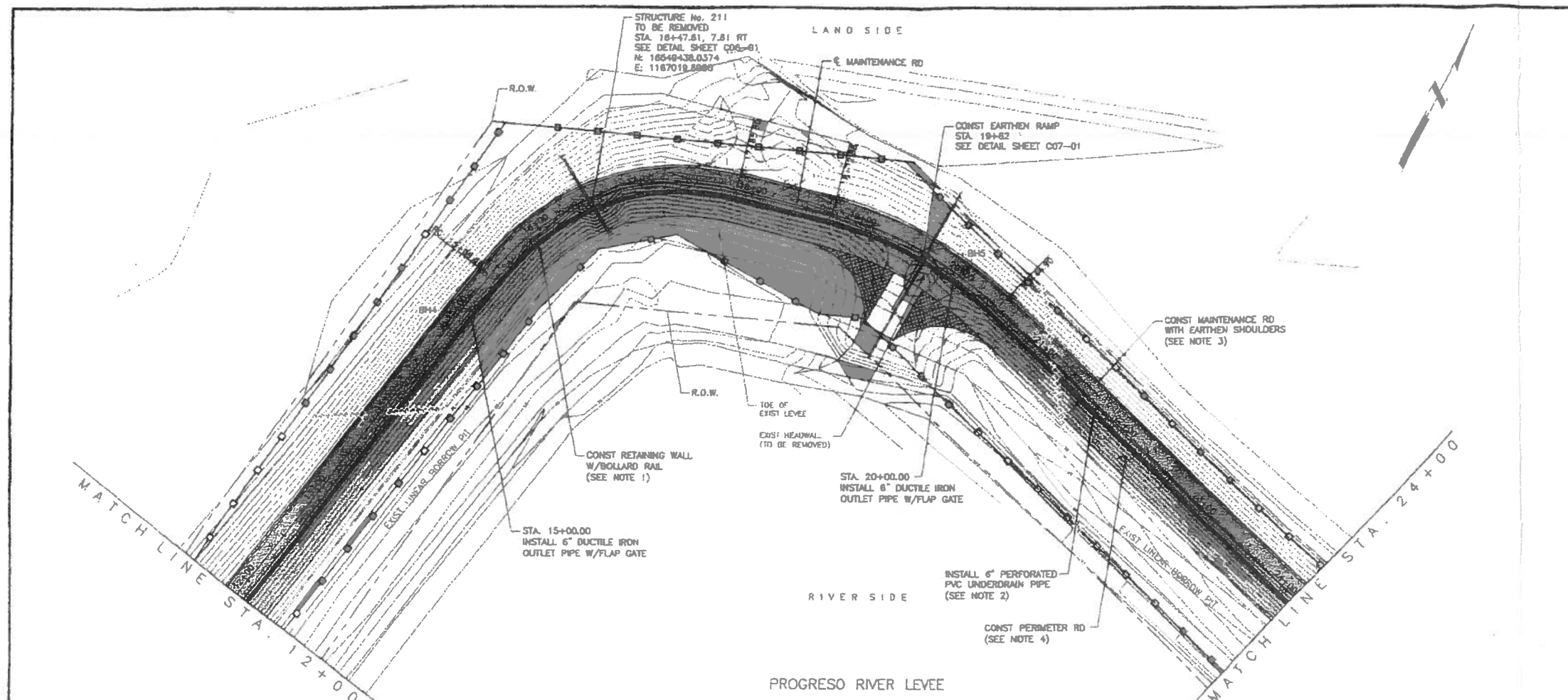
JUSTIFICATION FOR CHANGE

Bollard quantities were adjusted so that bollard sections could be counted and manufactured in even 8'-1" sections. This revised the limits of the bollards and required a quantity adjustment. We also adjusted the number of 20 foot bollards on each side of the ramp to accommodate the perimeter road ramp to the gate opening which was not included in the original bid quantity.

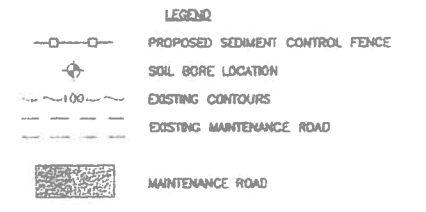
ENGINEER'S JUSTIFICATION OF COST

This was a straight unit cost change order.

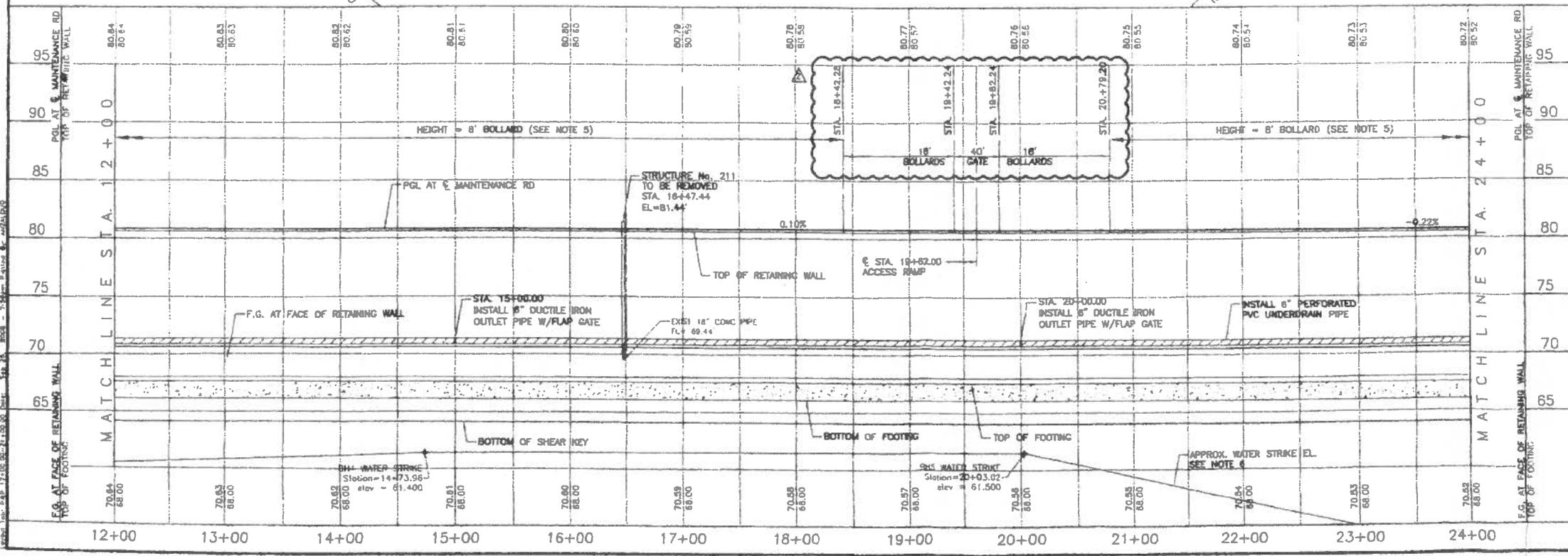
**HIDALGO COUNTY**  
**JUL 02 2009**  
**DRAINAGE DISTRICT #1**



- NOTES:**
- SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "C00" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "C02" SERIES SHEETS FOR PROPOSED TYPICAL SECTIONS.
  - SEE "C08" SERIES SHEETS FOR 20' CONC RIPRAP SCOUR PROTECTION.
  - SEE "S01" SERIES SHEETS FOR BOLLARD DETAILS.
  - WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.
  - SHEAR KEY HEIGHT SHOWN ON PLAN AND PROFILE SHEETS IS NOT SHOWN TO ACTUAL DIMENSIONS. REFER TO RETAINING WALL DETAIL SHEETS FOR ACTUAL HEIGHT OF SHEAR KEY.



Rev No	Description	Chg	Date
B	ISSUED FOR CONSTRUCTION	R.S	07-11-08
A	REVISION 1	R.S	07-30-08
A	REVISED AS NOTED	R.S	09-26-08



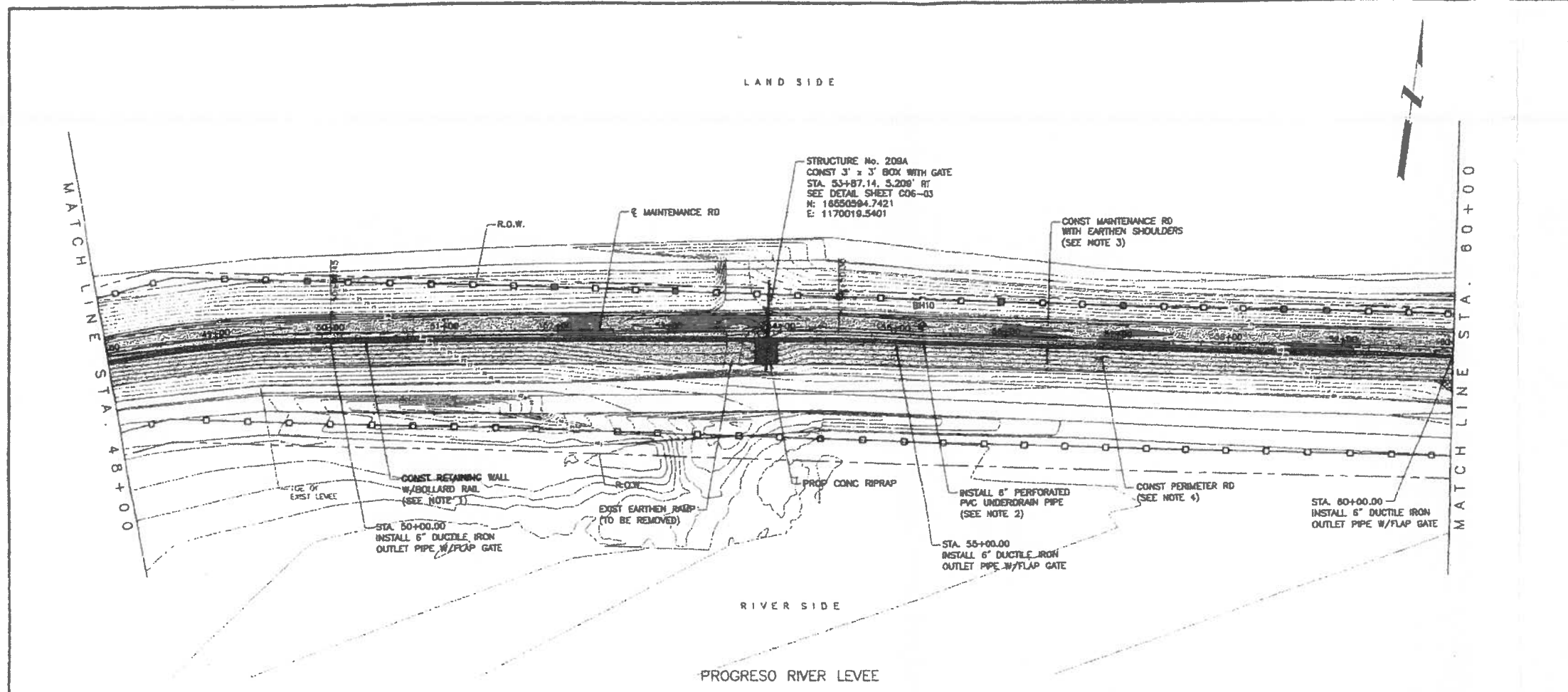
**DANNENBAUM**  
 ENGINEERING COMPANY-McALLEN, LLC  
 1109 Nolana Loop, Suite 208 McAllen, TX 78504 (958) 682-3577

PROGRESO RIVER LEVEE  
 IMPROVEMENT PROJECT  
 DHS SECTION O-10

RETAINING WALL - LEVEE  
 PLAN & PROFILE  
 STA. 12+00 TO STA. 24+00

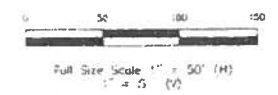
SHEET (2 OF 11)

Project No. 4410-05  
 Designed By: O.A.  
 Drawn By: H.R.V.  
 Checked By: R.S.  
 Sheet No. C03-02  
 Date: 8-25-08

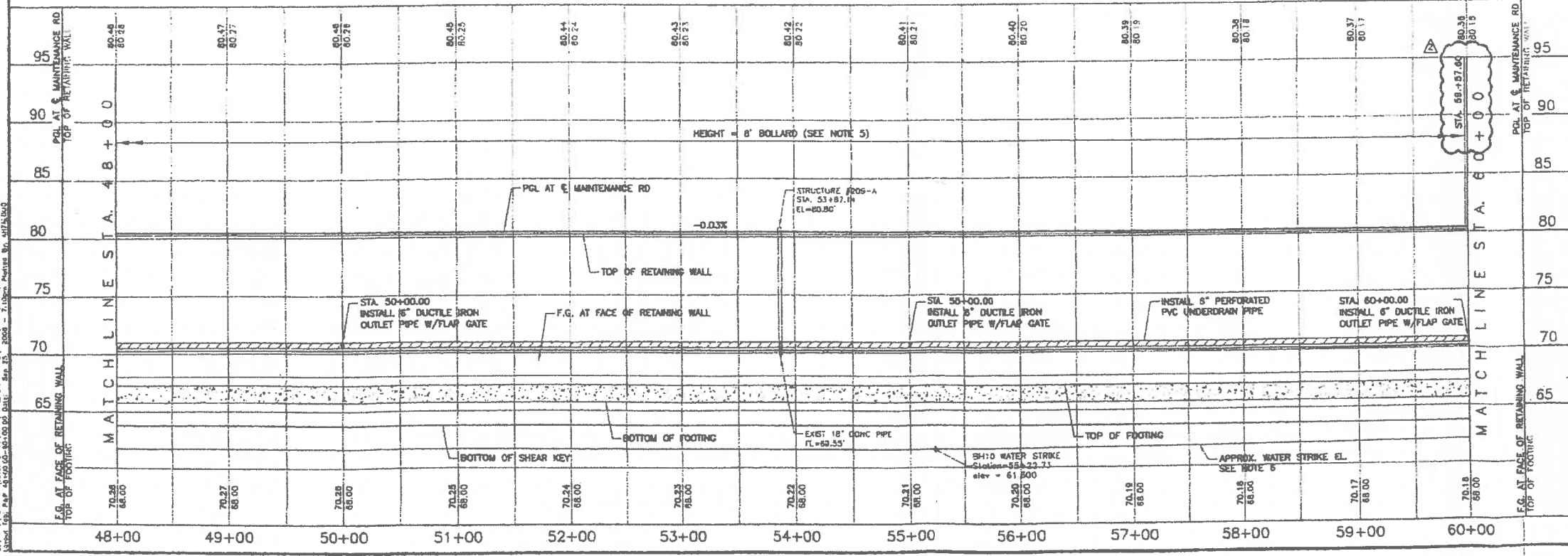


- NOTES:**
- SEE "501" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "008" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "002" SERIES SHEETS FOR PROPOSED TYPICAL SECTIONS.
  - SEE "008" SERIES SHEETS FOR 20' CONC RIPRAP SCOUR PROTECTION.
  - SEE "501" SERIES SHEETS FOR BOLLARD DETAILS.
  - WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.
  - SHEAR KEY HEIGHT SHOWN ON PLAN AND PROFILE SHEETS IS NOT SHOWN TO ACTUAL DIMENSIONS. REFER TO RETAINING WALL DETAIL SHEETS FOR ACTUAL HEIGHT OF SHEAR KEY.

- LEGEND**
- PROPOSED SEDIMENT CONTROL FENCE
  - ⊕ SOIL BORE LOCATION
  - - - - - EXISTING CONTOURS
  - - - - - EXISTING MAINTENANCE ROAD
  - ▨ MAINTENANCE ROAD



Rev No	Description	Chk By	Date
B	ISSUED FOR CONSTRUCTION	R.S.	07-11-08
A	REVISION 1	R.S.	07-30-08
A	REVISED AS NOTED	R.S.	08-25-08



**DANNENBAUM**  
 ENGINEERING COMPANY-McALLEN, LLC  
 1109 Nolana Loop, Suite 208 McAllen, TX 78504 (958) 682-3677

PROGRESO RIVER LEVEE  
 IMPROVEMENT PROJECT  
 DHS SECTION O-10

RETAINING WALL - LEVEE  
 PLAN & PROFILE  
 STA. 48+00 TO STA. 60+00

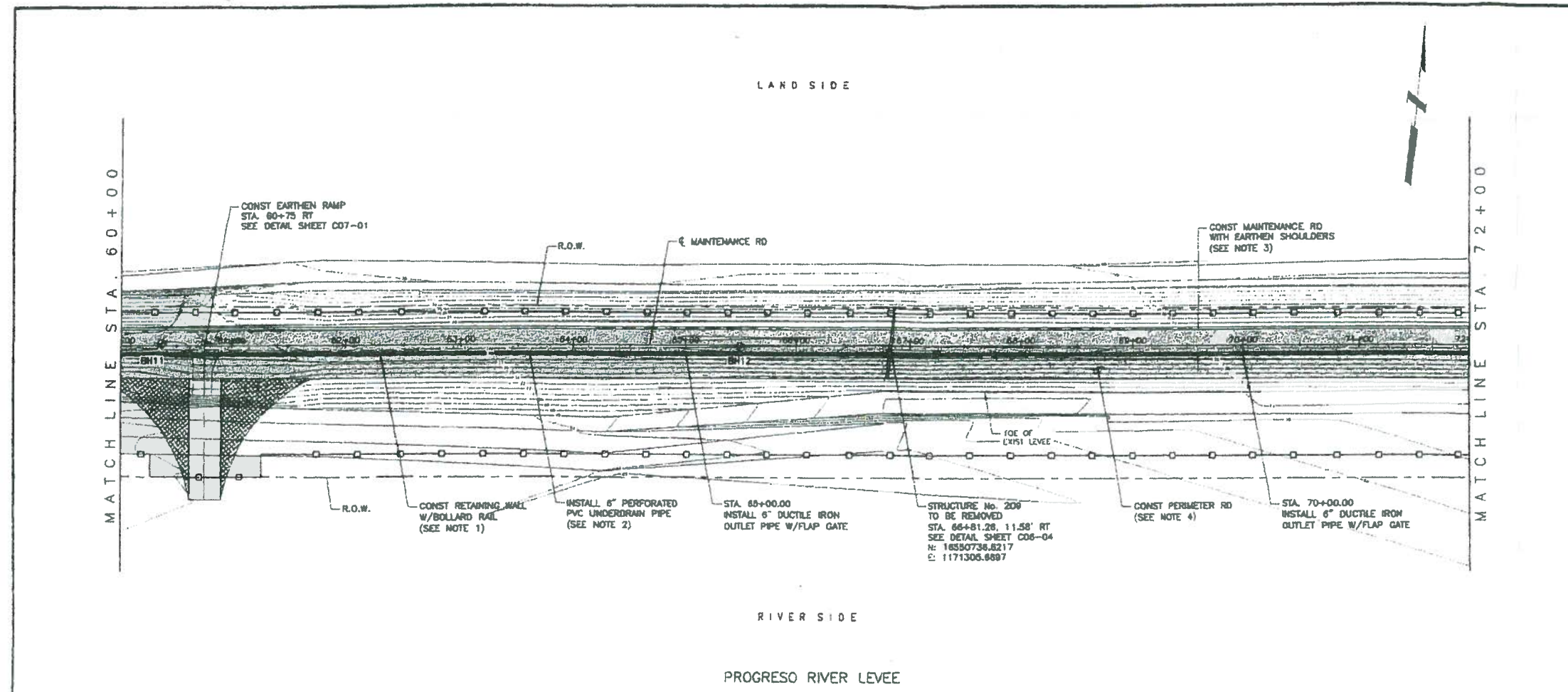
SHEET (5 OF 11)

Professional Engineer Seal for Omar Amador, State of Texas, License No. 9724, Exp. 09/2008.

Project No.	4410-05
Designed By	O.A.
Drawn By	H.R.V.
Checked By	R.S.
Sheet No.	C03-05

Date: 8-21-08

ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2005 EDITION, SECTION 201, PART 1, SUBSECTION 1.01, AND SECTION 201, PART 1, SUBSECTION 1.02.



- NOTES:**
1. SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  2. SEE "C00" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  3. SEE "C02" SERIES SHEETS FOR PROPOSED TYPICAL SECTIONS.
  4. SEE "C06" SERIES SHEETS FOR 20' CONC RIPRAP SCOUR PROTECTION.
  5. SEE "S01" SERIES SHEETS FOR BOLLARD DETAILS.
  6. WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.
  7. SHEAR KEY HEIGHT ON PLAN AND PROFILE SHEETS IS NOT SHOWN TO ACTUAL DIMENSIONS. REFER TO RETAINING WALL DETAIL SHEETS FOR ACTUAL HEIGHT OF SHEAR KEY.

**LEGEND**

- PROPOSED SEDIMENT CONTROL FENCE
- ◆ SOIL BORE LOCATION
- - - - EXISTING CONTOURS
- - - - EXISTING MAINTENANCE ROAD
- ▨ MAINTENANCE ROAD

Scale: 1" = 20'

Rev No	Descript
B	ISSUED FOR CON
A	REV SIGN
A	REVISED AS



**DANNENBAUM**  
 ENGINEERING COMPANY-McALLEN, LLC  
 1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3877

PROGRESO RIVER LEVEE  
 IMPROVEMENT PROJECT  
 DHS SECTION 0-10

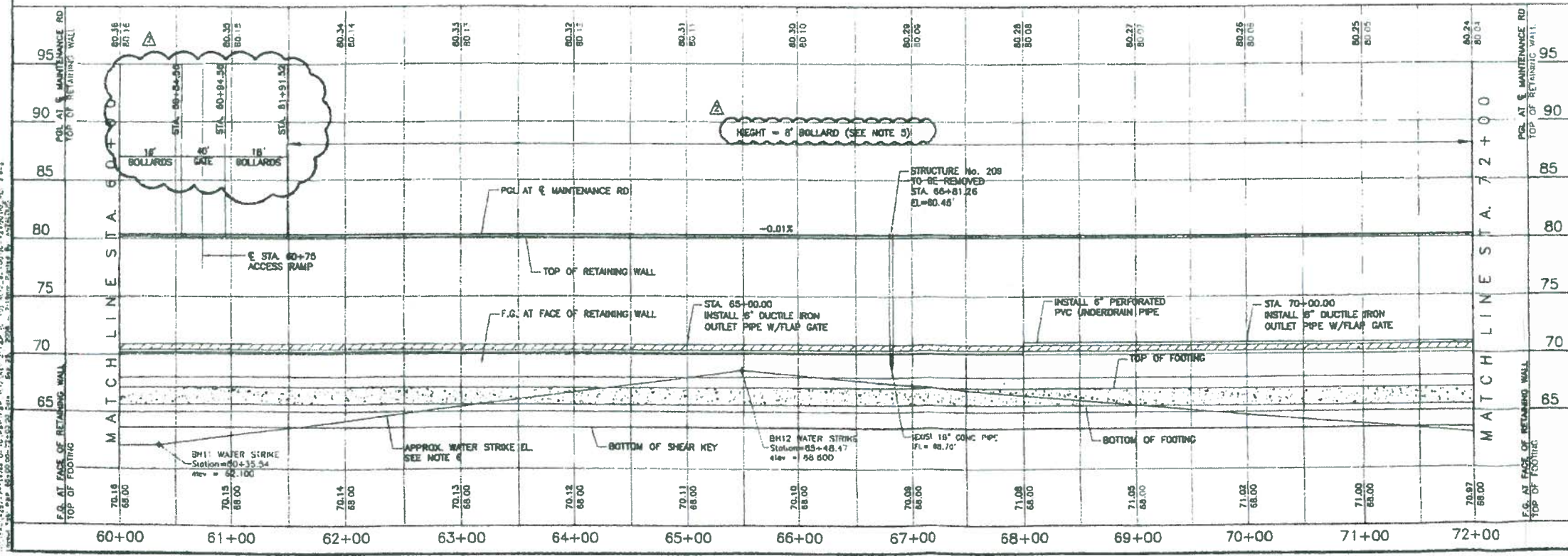
RETAINING - WALL  
 PLAN & PROFILE  
 STA. 60+00 TO STA. 72+00

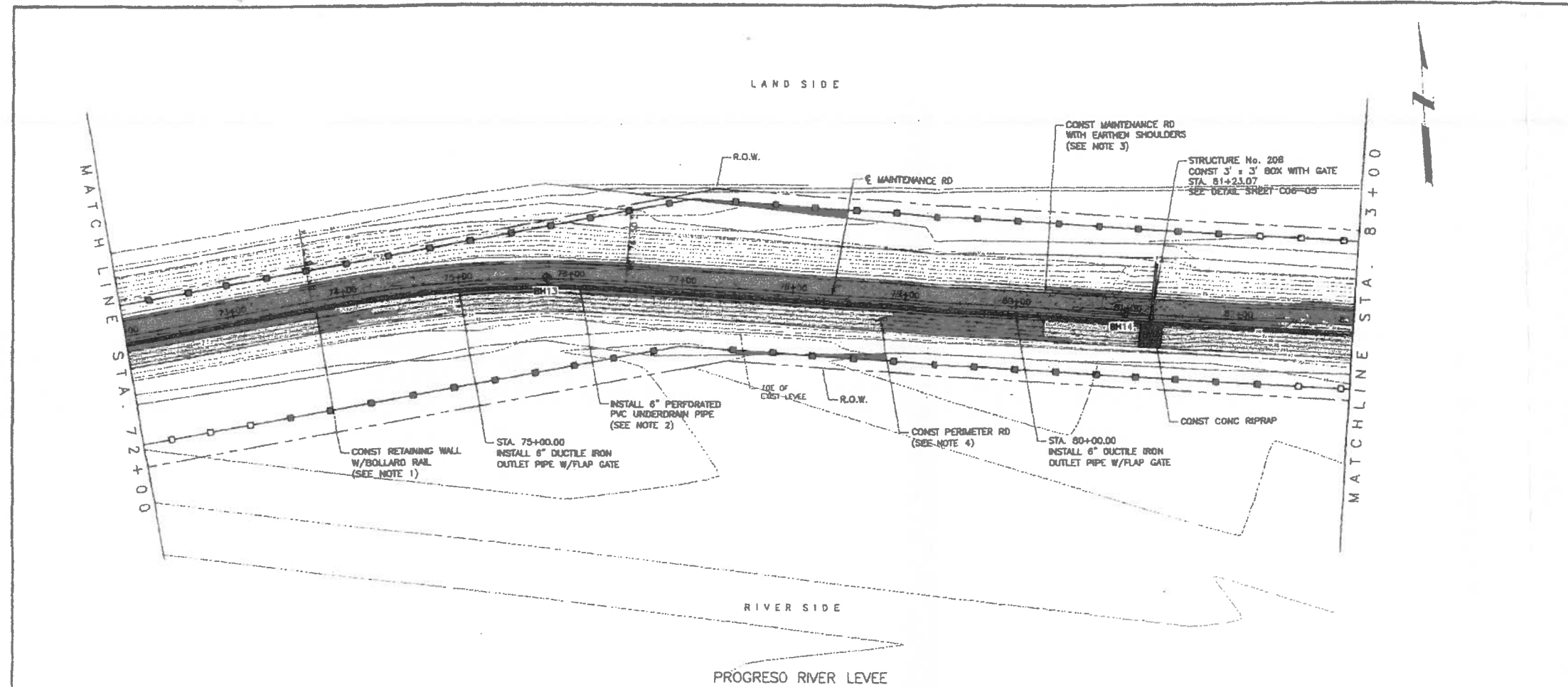
SHEET (6 OF 11)

Professional Engineer Seal for Omer Antonic, Jr., P.E., State of Texas, No. 87240.

Project No.	4410-05
Designed By	O.A.
Drawn By	H.R.V.
Checked By	R.S.
Sheet No.	C03-06

Date: 9-25-08





- NOTES:**
- SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  - SEE "C08" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  - SEE "C02" SERIES SHEETS FOR PROPOSED TYPICAL SECTIONS.
  - SEE "C06" SERIES SHEETS FOR 20' CONC RIPRAP SCOUR PROTECTION.
  - SEE "S01" SERIES SHEETS FOR BOLLARD DETAILS.
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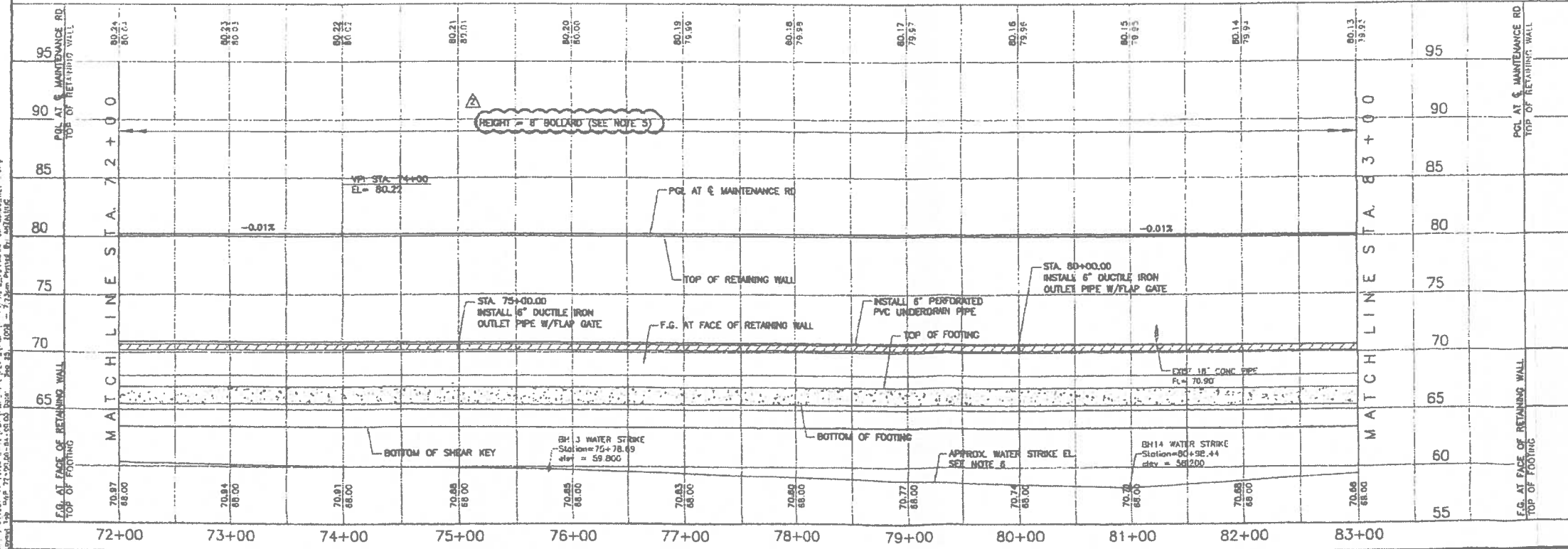
**LEGEND**

- PROPOSED SEDIMENT CONTROL FENCE
- ⊕ SOL. BORE LOCATION
- EXISTING CONTOURS
- - - EXISTING MAINTENANCE ROAD
- ▨ MAINTENANCE ROAD

A = TRANSITION TO 18' HEIGHT BOLLARD

Full Size Scale: 1" = 50' (H)  
1" = 5' (V)

Rev No	Description	Qty	Date
B	ISSUED FOR CONSTRUCTION	R.S.	07-11-08
A	REVISION 1	R.S.	07-30-08
A	REVISED AS NOTED	R.S.	08-25-08



**DANNENBAUM**  
ENGINEERING COMPANY-McALLEN, LLC  
1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 882-3677

PROGRESO RIVER LEVEE  
IMPROVEMENT PROJECT  
DHS SECTION O-10

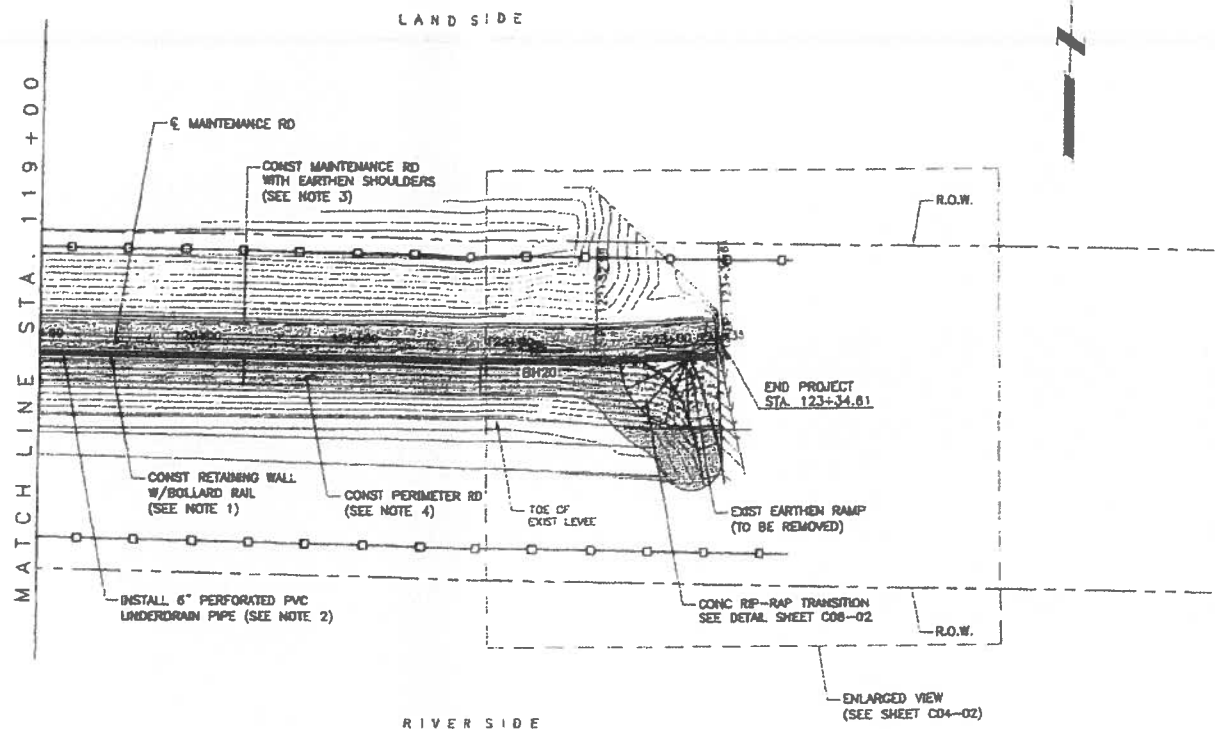
RETAINING - WALL  
PLAN & PROFILE  
STA. 72+00 TO STA. 83+00

SHEET (7 OF 11)

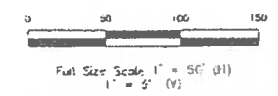
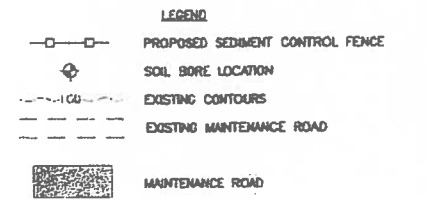
Project No: 4410-05  
Designed By: O.A.  
Drawn By: H.R.V.  
Checked By: R.S.  
Sheet No: C03-07  
Date: 07-25-08







- NOTES:**
1. SEE "S01" SERIES SHEETS FOR RETAINING WALL DETAILS.
  2. SEE "C09" SERIES SHEETS FOR RETAINING WALL UNDERDRAIN SYSTEM DETAILS.
  3. SEE "C02" SERIES SHEETS FOR PROPOSED TYPICAL SECTIONS.
  4. SEE "C08" SERIES SHEETS FOR 20' CONC RIPRAP SCOUR PROTECTION.
  5. SEE "S01" SERIES SHEETS FOR BOLLARD DETAILS.
  6. WATER STRIKE SHOWN ON PROFILE WAS DEVELOPED BY CONNECTING WATER STRIKE ELEVATIONS SHOWN IN GEOTECHNICAL REPORT FOR THIS PROJECT AND IS PROVIDED FOR CONTRACTOR INFORMATION ONLY.
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Rev No.	Description	Chk. Engr.	Date
B	ISSUED FOR CONSTRUCTION	F.S.	07-11-08
A	REVISION 1	F.S.	07-30-08
A	REVISED AS NOTED	R.S.	09-25-08



**DANNENBAUM**  
 ENGINEERING COMPANY-MCALLEN, LLC  
 1109 Nolana Loop, Suite 208 McAllen, TX 78504 (958) 682-3877

PROGRESO RIVER LEVEE  
 IMPROVEMENT PROJECT  
 DHS SECTION O-10

RETAINING WALL - LEVEE  
 PLAN & PROFILE  
 STA. 119+00 TO 123+34.61

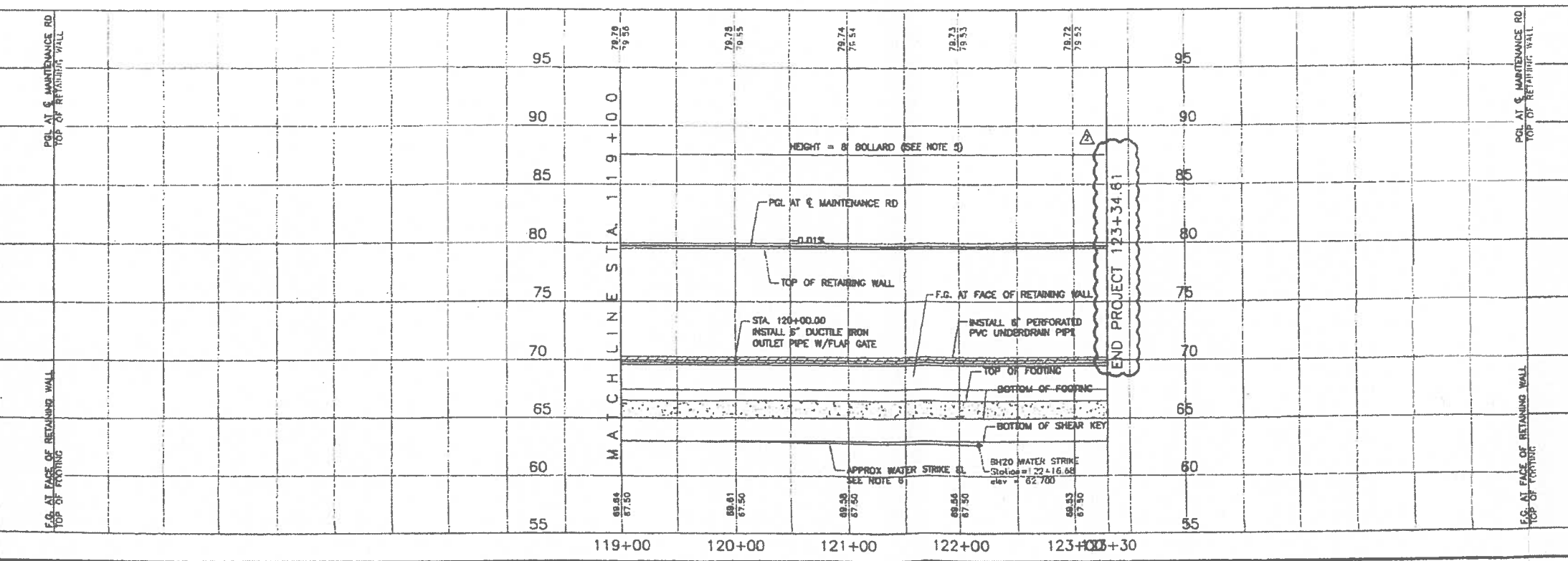
SHEET (11 OF 11)



Project No.:	4410-05
Designed By:	O.A.
Drawn By:	H.R.V.
Checked By:	R.S.
Sheet No.:	C03-11

Date: 9-25-08

PLAN AND PROFILE OF RETAINING WALL AND LEVEE IMPROVEMENT PROJECT FROM STA. 119+00 TO STA. 123+34.61. TOTAL LENGTH OF WALL IS 4,334.61 FEET.



HIDALGO County Drainage District No. 1  
LEVEE IMPROVEMENTS PROJECT  
COMMON LEVEE (5.35 MILES)

CHANGE ORDER NO. 6

Date: August 19, 2009

Contractor: Ballenger Construction Company  
24200 North FM 509  
Harlingen, Texas 78550

Owner: Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

Reference: LEVEE IMPROVEMENTS PROJECT  
COMMON LEVEE (5.35 MILES)

Contract No. 08-007-05-27  
Dannenbaum No. 4287-04

Description: Added new bid item for installation of 15" Gate Valve.

Contract Amount:

Original Contract Price:	\$	7,593,164.28
Previous Change Order(s):	\$	(57,767.34)
Contract price prior to this change order:	\$	7,535,396.94
Net increase (decrease) from this change order:	\$	3,620.94
Contract price with all change orders to date (including this change order):	\$	7,539,017.88

Contract Time:


Authorized contract time change:

Previous Total	0	days
This Change Order	0	days
Total to Date	0	days

APPROVALS:

ENGINEER:

Dannenbaum Engineering Company - McAllen, LLC

  
Richard D. Seitz, P.E. Date 8/19/09  
Resident Project Representative

OWNER:

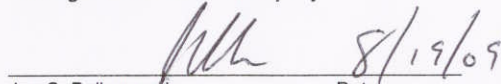
Hidalgo Co. Drainage Dist. No. 1

\_\_\_\_\_  
JD Salinas Date  
Chairman of the Board

ACCEPTED:

CONTRACTOR:

Ballenger Construction Company

  
Joe C. Ballenger Jr. Date 8/19/09  
President





HIDALGO COUNTY DRAINAGE DISTRICT NO. 1  
LEVEE IMPROVEMENTS PROJECT

**CHANGE ORDER NO. 6**

ATTACHMENT B

**Date:** August 14, 2009

**Contractor:** BALLENGER CONSTRUCTION  
CO.  
24200 North FM 509  
Harlingen, Texas 78550

**Owner:** Hidalgo County Drainage District No. 1  
902 N. Doolittle Road  
Edinburg, Texas 78541

**Reference:** MISSION LEVEE IMPROVEMENTS  
PROJECT  
COMMON LEVEE / ANZALDUAS  
DIKE IMPROVEMENT PROJECT  
(5.35 MILES)

**Contract No.** 08-007-05-21

**Dannenbaum No.** 4287-04

**ENGINEER'S EXPLANATION**

DESCRIPTION OF CHANGE

Added new bid item for installation of 15" Gate Valve.

JUSTIFICATION FOR CHANGE

The farmer that owns land on both sides of Gatewell Structure #308 installed a 15" PVC pipe through the RCP connected to Gatewell #308 as well as the Gatewell. The PVC pipe prevents the use of the Gatewell's sluice gate. Therefore, in order to prevent flow from one side of the levee to the other through the 15" PVC it is necessary to install a 15" gate valve in the PVC line. This work is being done at the request of the farmer and concurrence of USIBWC, it will be installed by the Contractor. The farmer has verbally agreed to reimburse HCDD #1 for the cost of this work.

ENGINEER'S JUSTIFICATION OF COST

Contractor submitted an "Opinion of Cost" which came out to be \$3,964.75, and was 8.67% higher than our original "Engineer's Opinion of Cost." Equipment and labor costs were based on similar work performed by the Contractor on adjacent projects. After Contractor reviewed our "Engineer's Opinion of Cost," it was agreed that our estimate was fair and reasonable. Therefore, Engineer recommends processing of this change order in the amount of \$3,620.94.

**HIDALGO COUNTY**

**AUG 14 2009**

**DRAINAGE DISTRICT #1**

**Contract No.:** 08-007-05-27  
**Dannenbaum:** 4287-04  
**Change Order No. 6:** Change Order No. 6  
**Description:** 15" Fresno Valve

**Labor**

Description	Labor	Days	Hours Per Day	Total Hours	Rate Per Hour	Total Cost
Foreman	1.00	1.00	8.00	8.00	\$ 21.45	\$ 171.60
Laborer	2.00	1.00	8.00	16.00	\$ 9.05	\$ 144.80
Backhoe Operator	1.00	1.00	8.00	8.00	\$ 8.61	\$ 68.88
Subtotal						\$ 385.28
Labor burden	55%					\$ 211.90
Labor Comp.	25%					\$ 96.32
						\$ 693.50

**Equipment**

Description	Quantity	Days	Hours Per Day	Total Hours	Rate Per Hour	Total Cost
Backhoe	1.00	1.00	8.00	8.00	\$ 25.00	\$ 200.00
Crew Truck	1.00	1.00	8.00	8.00	\$ 30.00	\$ 240.00
Subtotal						\$ 440.00
Equip comp	15%					\$ 66.00
						\$ 506.00

**Materials**

Description	Qty	Unit	Unit Cost	Total
15" Fresno Valve w/ all parts	1.00	EA	\$ 1,937.15	\$ 1,937.15
Subtotal				\$ 1,937.15
Material comp	25%			\$ 484.29
				\$ 2,421.44

**Total**

Total Labor and Material Cost \$ 3,620.94  
 Item total \$ 3,620.94

HIDALGO COUNTY

AUG 14 2009

DRAINAGE DISTRICT #1

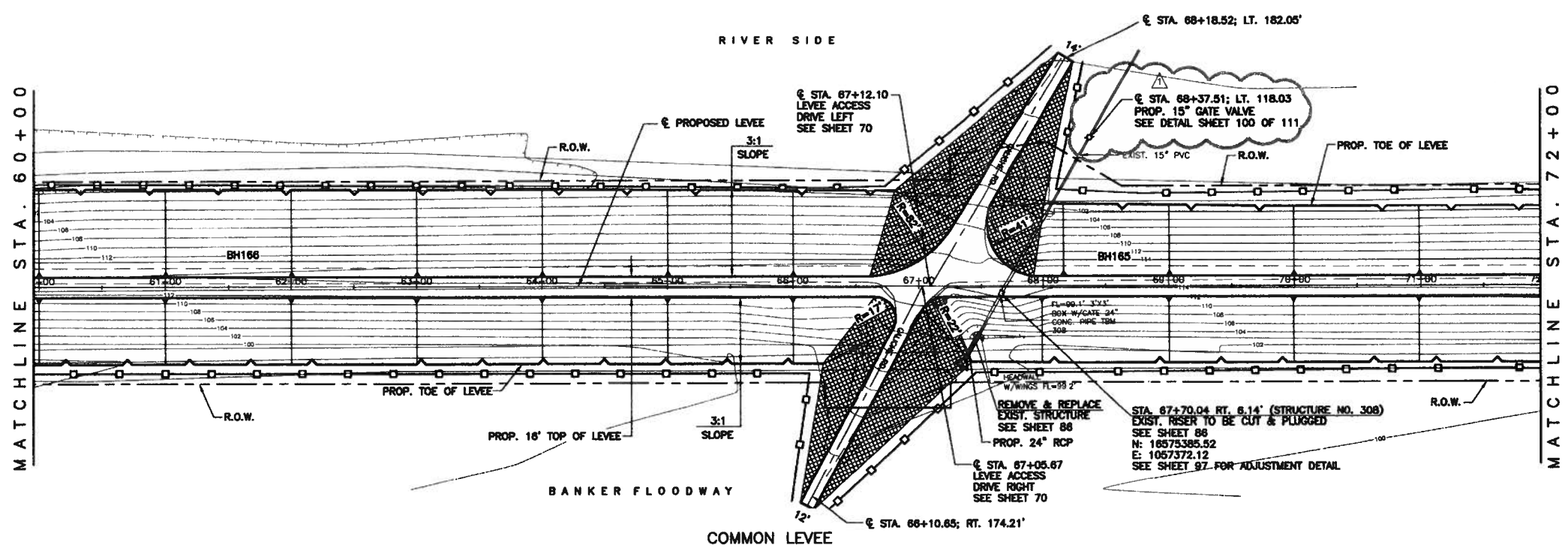
HIDALGO COUNTY

AUG 11 2009

DRAINAGE DISTRICT #1

G:\1540\1547-04\Eng Common Levee\1547-04\1547-04-00-72+00\_001.dwg  
 User: jrb  
 Date: 7/16/09

Rev. No.	Description	Chk. By.	Date
IFC	ISSUED FOR CONSTRUCTION	R.S.	04-20-08
△	ADDED 15" GATE VALVE	R.S.	07-16-09



**LEGEND**

- PROPOSED METALBEAM GUARDRAIL w/POST
- PROPOSED SEDIMENT CONTROL FENCE
- ⊕ EXISTING GEOTECHNICAL BORE
- PL — EXISTING OVERHEAD POWERLINE
- ✓ PROPOSED GATE
- EXISTING GUARDRAIL w/POST
- [Pattern] PROPOSED LEVEE ACCESS DRIVE EMBANKMENT
- [Pattern] PROPOSED PAVING LIMITS
- [Pattern] PROPOSED STONE RIP-RAP
- [Pattern] EXIST. STONE RIP-RAP

**NOTE:**

- WHERE R.O.W. IS LESS THAN 15 FEET FROM TOE OF PROPOSED LEVEE, SEDIMENT CONTROL FENCE SHALL BE PLACED AT R.O.W. LIMITS.
- R.O.W. LEVEE SHOWN WHERE IT LIES WITHIN PLAN VIEW.
- WSE= WATER SURFACE ELEVATION
- F.G. = FINISHED GRADE

STATION	EXIST. NAT. GROUND PROP. F.G.	DESIGN FLOOD WSE PROP. EMBANKMENT TOP
60+00	113.13 120.13	113.13 120.13
61+00	113.29 120.15	113.29 120.15
62+00	113.51 120.16	113.51 120.16
63+00	113.77 120.18	113.77 120.18
64+00	113.83 120.20	113.83 120.20
65+00	113.89 120.21	113.89 120.21
66+00	113.98 120.23	113.98 120.23
67+00	114.61 120.25	114.61 120.25
68+00	114.23 120.26	114.23 120.26
69+00	114.29 120.26	114.29 120.26
70+00	114.39 120.30	114.39 120.30
71+00	114.49 120.31	114.49 120.31
72+00	114.63 120.33	114.63 120.33

Professional Engineer Seal for **Omar Anzaldúa, Jr.**, License No. 97249, State of Texas. Date: 7-16-09.

Scale: 1" = 50' (H), 1" = 5' (V)

**COMMON LEVEE/ ANZALDUAS DIKE IMPROVEMENTS PROJECT**

HCDD-1

Sheet Title: **COMMON LEVEE IMPROVEMENTS PLAN & PROFILE SHEET STA. 60+00 - 72+00**

**DANNENBAUM ENGINEERING COMPANY-McALLEN, LLC**  
 1109 Nolana Loop, Suite 208 McAllen, TX 78504 (956) 682-3677

Date: Jul 16, 2009  
 Drawn By: H.R.V.  
 Designed By: G.A.  
 Checked By: A.C.F.  
 Project No.: 4287-04  
 Sheet 14 of 111



## WORK AUTHORIZATION NO. 42

**THIS WORK AUTHORIZATION** is made pursuant to the terms and conditions of Article 7 of the **Agreement** made by and between **HIDALGO COUNTY DRAINAGE DISTRICT NO. 1**, acting herein by and through the **BOARD OF DIRECTORS**, hereinafter called the “**Owner**”, and **L&G Engineering Laboratory, LLC**, professional engineers of Mercedes, Texas, hereinafter called the “**Laboratory**”.

**PART 1. Scope of Work.** The purpose of this work authorization is *to provide a Geotechnical Report for a Concrete Flood Protection Structure and Earthen Levee, Segment O-4 B, within Hidalgo County* known as the **Project**. This report will include the tasks listed in detail in **Attachment “B”**.

The scope of services to be provided by the **Owner** is identified in **ATTACHMENT “A” –Scope of Services to be Provided by the Owner** attached hereto.

The scope of services to be provided by the **Laboratory** is identified in **ATTACHMENT “B” –Scope of Services to be Provided by the Laboratory for a Geotechnical Report for a Concrete Flood Protection & Earthen Levee, Segment O-4 B, within Hidalgo County** attached hereto.

**PART 2. Estimated Cost.** The estimated Lump Sum professional engineering fee for services under this Work Authorization is **\$81,592.67**. This amount is based upon the fees outlined in the *Estimated Cost Proposal* attached hereto as **ATTACHMENT “D”**.

**PART 3. Payment.** Compensation and payment to the **Laboratory** for the services established under this Work Authorization shall be made in accordance with Articles 5, 6, and 7 of the **Agreement**.

**PART 4. Period of Service.** This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and all work associated with this Work Authorization shall be performed within the time period identified in the *Work Schedule* attached hereto as **ATTACHMENT “C”**.

**PART 5. Responsibilities and Obligations.** This Work Authorization does not waive the parties’ responsibilities and obligations provided under the **Agreement**.

**HIDALGO COUNTY**

**AUG 17 2009**

**DRAINAGE DISTRICT #1**

L&G Engineering Laboratory, LLC  
Hidalgo County Drainage District No. 1

**Work Authorization No. 15**

Page 1 of 2

**PART 6. Acceptance and Acknowledgement.** This Work Authorization is hereby accepted and acknowledged as indicated below and is effective as of the \_\_\_\_ day of \_\_\_\_\_, 2008.

**THE LABORATORY:  
L&G ENGINEERING LABORATORY, LLC.**

**BY:**   
Jacinto Garza, P.E., President/CEO

**THE OWNER:  
HIDALGO COUNTY DRAINAGE DISTRICT NO. 1**

**BY:** \_\_\_\_\_  
J.D. Salinas, Hidalgo County Judge

**LIST OF ATTACHMENTS**

- ATTACHMENT "A" - Services to be Provided by the Owner
- ATTACHMENT "B" - Services to be Provided by the Engineer
- ATTACHMENT "C" - Work Schedule
- ATTACHMENT "D" - Estimated Cost Proposal

**ATTACHMENT "A"**  
**Services to be Provided by the Owner**

The following provides an outline of the services to be provided by the **Owner** in the development of a Geotechnical Engineering Report for the *Concrete Flood Protection Structure and Earthen Levee, Segment O-4 B, within Hidalgo County.*

**GENERAL**

The **Owner** will provide to the **Laboratory** the following:

- (1) Authorization to the **Laboratory** to begin work in accordance with Article 7 of the Agreement.
- (2) Payment for work performed by the **Laboratory** and accepted by the **Owner** in accordance with Article 5 and Article 6, both of the Agreement.
- (3) Assistance to the **Laboratory**, as necessary, to obtain the required data and information from other local, regional, **State** and Federal agencies that the **Laboratory** cannot easily obtain.
- (4) Provide any available relevant data the **Owner** may have on file concerning the project.
- (5) Provide timely review and decisions in response to the **Laboratory's** request for information and/or required submittals and deliverables, in order for the **Laboratory** to maintain the agreed-upon work schedule prepared in accordance with ATTACHMENT "C" attached hereto.
- (6) Attend and participate in progress meetings as required and as coordinated and conducted by the **Laboratory**.

**HIDALGO COUNTY**

**AUG 17 2009**

**DRAINAGE DISTRICT #1**

L&G Engineering Laboratory, LLC  
Hidalgo County Drainage District No. 1

## **ATTACHMENT "B"**

### **Services to be Provided by the Laboratory**

The work to be furnished by the **Laboratory** under this work authorization is *to provide; a Geotechnical Report for a Concrete Flood Protection & Earthen Levee, Segment O-4 B, within Hidalgo County* known as the **Project**. This report will include the tasks listed in detail below.

The **Laboratory** shall furnish all equipment, materials, supplies, and incidentals as needed to perform the services required by this Work Authorization, except as otherwise specified to be provided by the **Owner**.

The **Laboratory** will develop/submit a work schedule (as required in ARTICLE 2.3 of the Agreement) that identifies milestone activities and/or deliverables, and that is conformable to the schedule outlined in ATTACHMENT "C".

The **Laboratory** shall provide the following services required for the analysis of overall stability for the proposed concrete flood protection structure and earthen levee dam designated as Segment O-4 B in Hidalgo County, Texas. The **Laboratory** shall maintain a direct line of communication and coordinate very closely with Hidalgo County Drainage District #1 and the design engineers responsible for the PS&E on this project.

Specific activities to be performed by the **Laboratory** include the following:

#### **I. Drilling Services**

Following IBWC and USACE guidelines the project will consist of drilling and sampling subsurface materials for a total of 4 ~ four (100') borings along the segment designated by the **Owner** as Segment O-4 B.

The **Laboratory** will stake the boring locations and provide utility clearances prior to performing the field exploration portion of the project. The **Owner** will be responsible to provide any necessary permits or authorization to egress areas (right of entry) where the borings are to be drilled. All borings will be located in the field by a representative of the **Laboratory**. All boring locations will be documented with 3-point referenced sketches.

The borings will be advanced to the depth noted above and the in-situ soil testing will be performed in general accordance with the TxDOT Geotechnical Manual and in accordance with ASTM Standards. The soils will be sampled as needed to verify subsurface materials and strata changes. Final drilling depths and elevations will be based on topographic conditions at the time of drilling operations.

All samples will be removed from the sample apparatus during drilling operations. The **Laboratory** will conduct various field tests on the recovered samples, visually classify the samples, and record the appropriate data on a field boring log. The samples will be appropriately packaged to minimize loss of their natural moisture content and to reduce the possibility of damage during transportation to the **Laboratory's** soils laboratory.

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Drilling services will include a 24-hour water level reading at each boring location. Following completion of drilling, sampling, all boreholes will be backfilled with soil cuttings from the completed borings. If there is not enough soil cuttings available, clean sand will be used to backfill the completed boreholes.

This proposal does not include activities and corresponding costs that may be associated with the following:

- Providing an ATV mounted drill rig, dozer or special equipment to clear areas of vegetation and debris or to regrade the site to gain access to the boring locations;
- Re-grading the site or portions of the site after drilling activities are completed;
- Site safety meetings that may be required;
- Encountering hazardous or contaminated soils or substances during our field activities.

The **Laboratory** will notify the Owner should these services become necessary to complete field exploration activities, and if approved by the Owner, additional negotiated fee and scope will be incorporated through Supplemental Work Authorization.

## **II. Laboratory Testing Services**

Geotechnical engineering laboratory tests will be performed on the samples recovered during the field study to evaluate their physical and engineering properties. Testing shall include several of the following test procedures:

- (1) Atterberg Limits (ASTM D4318). This procedure will be used to aid in the classifying of the soil and to provide information on the potential vertical rise and contraction of the soil. Test data furnished will include Liquid Limit, Plasticity Index, and Linear Shrinkage test results.
- (2) Gradation (ASTM D422) This procedure will be used to aid in the classifying of the soil. Testing will be dependent of the type of soil and can vary from a single sieve to a nest of sieves. A No. 200 sieve will be used for fine grained material as well as for cohesive soils.
- (3) Hydrometer Analysis. This procedure will be utilized to determine the grain size distribution for particles smaller than 0.075mm (No. 200) by the use of a Hydrometer (ASTM D422) L&G will provide D50 material sizes for Scour Analysis.
- (4) Unconfined Compression (ASTM D2166). This procedure covers the determination of the unconfined compressive strength of cohesive soil in the undisturbed, remolded, or compacted condition, using strain controlled application of the axial load and will provide an indication of the soil strength and compressibility. This procedure also determines the natural density of the soil which will be used in soils classification and evaluation of the soil consistency and strength.

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- (5) Laboratory Determination of Water (moisture) in Soil and Rock by Mass (ASTM D2216). This procedure will aid in determining the in-situ moisture of the soil to be able to evaluate the potential vertical rise and contraction of the soil.
- (6) One Dimensional Consolidation Properties of Soil (ASTM D 2435) (Method A). This procedure will identify the magnitude and rate of consolidation of soil when it is restrained laterally and drained axially while subjected to controlled stress loading.

### **III. Geotechnical Engineering Services**

- Develop schematic of plan and profile view for the proposed improvements. This schematic will include subsurface strata configurations of the soils in the area.
- Structural Evaluation of all borings: A detailed structural evaluation of the borings will be done so that soil strength parameters can be quantified for all geotechnical engineering calculations.
- Construct Slope & Wall Geometry Profile for Analysis: A geometric model will be constructed for each of the critical cross-sections provided to us by the design engineers to ensure accurate modeling of the proposed configuration.
- GSTABL Analysis of Vertical Wall Side, Varying Back Slopes and Earthen Levee Dam: A limit equilibrium slope stability analysis will be conducted for each of the locations where increased slopes are being proposed.
- Settlement & Bearing Capacity Check: From the consolidation test reports and the soil strength parameters done in the Structural Evaluation portion of this contract, both Settlement and Bearing Capacity checks will be performed for the earthen levee and retaining wall sections of the project.
- A Seepage Analysis along this portion of the concrete flood protection structure and earthen levee dam will be completed as per IBWC and USACE guidelines and manuals.
- Analysis of drag down forces on gate well structures.
- Geotechnical Report for Segment O-4 B: A Final Geotechnical Report will be created that summarizes all of the findings for this particular stretch of levee.

#### **Deliverables:**

- 1) Segment O-4 B Geotechnical Report**

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## **ATTACHMENT "C"**

### **Work Schedule**

The **Laboratory** will provide the deliverables for this work authorization as follows:

- Drilling operations can begin within two (2) to three (3) days following notice to proceed, staking of the borings, clearing the boring locations of utilities and site and weather conditions permitting.
- Drilling operations will take approximately five (5) days to complete.
- Report and engineering analyses will be substantially complete within thirty (30) days after completion of the drilling operations. The final report will be completed soon thereafter.

The **Laboratory** will inform the **Owner** (in reasonable advance of the delay) should the **Laboratory** encounter delays that would prevent the performance of all work in accordance with the above work schedule.

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**ATTACHMENT "D" - FEE SCHEDULE**  
**Geotechnical Analysis of Concrete Flood Protection Structure & Earthen Levee at Edinburg Intake Channel (Penitas Pumphouse)**  
**L&G ENGINEERING LABORATORY**

TASK	MANHOURS						Total
	Senior Project Manager	Senior Geotechnical Engineer	Engineer	E.I.T.	Admin/Clerical		
1							
2		2	4	4			10
3		2	6	8			16
4		2	4	4			10
5		4	8	4			16
6		2	4	8			14
7		2	4	8			14
8		4	12	16			32
9		4	12	16			32
10		4	16	24			44
11		4	8	12			24
12		8	16	24			48
13		2	8	8			18
14		2	8	8			18
15		4	12	16			32
16		4	12	16			32
17		8	16	24			48
18		4	16	24	16		68
		8	4	4	8		32
		12	170	228	24		508
		12	170	228	24		508
<b>Labor Hours</b>		<b>74</b>	<b>170</b>	<b>228</b>	<b>24</b>		<b>508</b>
Contract Rates		\$ 46.45	\$ 37.00	\$ 24.04	\$ 17.50		\$ 16,228.42
Direct Salary Cost		\$ 3,437.30	\$ 6,290.00	\$ 5,481.12	\$ 420.00		\$ 28,399.74
Overhead Multiplier	175.00%	\$ 1,050.00	\$ 11,007.50	\$ 9,591.96	\$ 735.00		\$ 5,578.52
Fixed Fee	12.50%	\$ 206.25	\$ 2,162.19	\$ 1,884.14	\$ 144.38		\$ 50,206.67
<b>Total Labor Costs</b>		<b>\$ 1,856.25</b>	<b>\$ 19,459.69</b>	<b>\$ 16,957.22</b>	<b>\$ 1,299.38</b>		<b>\$ 81,592.67</b>

**LINE ITEM EXPENSES**  
 Printing Reproduction  
 Laboratory Testing

**Total Expenses**

\$ 250.00  
 \$ 31,136.00

\$ 31,386.00

**L&G Laboratory Total Cost**

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\$ 81,592.67

**ATTACHMENT "D"**  
**Cost Proposal for Field Exploration and Laboratory Testing (Segment O-4 B)**

	SERVICES	UNITS	UNITS	UNIT COST	TOTAL COST
<b>I.</b>	<b>Project Management / Review</b>				
	A. Senior Project Engineering Specialist	Hours	4	\$ 85.00	\$ 340.00
	B. Typing and Clerical	Hours			
	C. Lodging	Day			
	D. Mileage	Mile			
	E. Air Travel	Trip			
<b>II.</b>	<b>Utility Clear. / Boring Locates</b>				
	A. Technician (Locate Borings)(Util Clr)	Hours	4	\$ 42.00	\$ 168.00
	B. Surveyor / Tie Boring Locations	LS	1	\$ 1,000.00	\$ 1,000.00
	C. Rebar (stakes with impalement covers)	Cost +12.5%			
	D. Vehicle Charge	Mile			
	E. Mileage	Mile	20	\$ 0.500	\$ 10.00
<b>III.</b>	<b>Field Exploration</b>				
A	Mobilization/Demob. / 2 rigs / 2 days	LS	1	\$ 2,000.00	\$ 2,000.00
B	Field Exploration				
	1. ASTM Drilling and SPT or Shelby	Feet	400	\$ 28.00	\$ 11,200.00
	2. TxDOT Drilling	Feet			
	3. Overburden Drilling	Feet			
	4. Texas Cone Penetration Tests	Each			\$ -
	5. Field Logger / Engineering Tech	Hour	32	\$ 42.00	\$ 1,344.00
	6. Logger's Assistant (Sample Id)	Hour	32	\$ 42.00	\$ 1,344.00
	7. Piezometers (temporary)	Each		\$ 500.00	\$ -
	8. Drilling Supplies (IBWC Spec.)	LS	1	\$ 250.00	\$ 250.00
	9. Vehicle Charge (Support Veh)	Mile	40	\$ 1.50	\$ 60.00
<b>IV</b>	<b>Engineering Data Analysis / Report</b>				
	2. Engineering Spec. (Soil Classification)	Hours	8	\$ 85.00	\$ 680.00
	3. Engineering Spec. (Boring Logs)	Hours	8	\$ 85.00	\$ 680.00
	4. Moisture Content	Ea.	80	\$ 9.00	\$ 720.00
	5. Atterberg Limits	Ea.	80	\$ 60.00	\$ 4,800.00
	6. -200 Determination	Ea.	80	\$ 55.00	\$ 4,400.00
	7. Consolidation Tests	Ea.	8	\$ 150.00	\$ 1,200.00
	8. Unconsolidated, Undrained Triax	Ea.	0	\$ 225.00	\$ -
	9. Unit Dry Weight/void rat/ UC	Ea.	4	\$ 150.00	\$ 600.00
	10. Hydrometer Analysis	Ea.	4	\$ 85.00	\$ 340.00
	10. Hydraulic Conductivity	Ea.		\$ -	\$ -
		Ea.		\$ -	\$ -
<b>Project Total</b>					<b>\$ 31,136.00</b>

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