WASTE MANAGEMENT

AUSTIN COMMUNITY LANDFILL
9900 Giles Rd.
Austin, Texas 78754
(512) 272-6228
(512) 272-9370 Fax

December 23, 2002

Mr. Richard Carmichael, Ph.D., Manager
MC-124
MSW Permits Section
Waste Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Subject: Municipal Solid Waste – Travis County
Austin Community Landfill – Permit No. MSW 249C
Permit Modification Request – Drainage Improvements

Dear Dr. Carmichael:

On behalf of Waste Management of Texas, Inc. (WMTX) and in association with RJR Engineering, Ltd., L.L.P. (RJR), the enclosed revisions to the surface water drainage facilities in Attachment 8 of the Site Development Plan (SDP) for the subject facility are being submitted to the Texas Commission on Environmental Quality (TCEQ) for consideration as a Class I permit modification.

By this request, WMTX is seeking approval to modify some of the site drainage facilities included in Attachment 8 of the SDP to include the construction of two sedimentation ponds, the addition of a culvert, the inclusion of an alternate channel configuration for the central channel, and minor revisions to two other culverts.

This request for a permit modification includes the submittal of revisions and additions to the SWMP for the facility. The following information is being submitted in support of this request for a permit modification.

Description of Proposed Changes

This permit modification proposes improvements to the site's surface water drainage system. These improvements include the following:

1) The addition of culvert 6 on the west hill. This culvert will intercept stormwater flows from the West Landfill Perimeter Ditch 6, Drainage Area WWF1. Currently, these surface water flows continue in Ditch 6 to Culvert 5-6. Culvert 6 will have a 12 inch thick rock riprap discharge pad.

2) An alternate to the discharge Reno Mattress of 24-inch thick rock riprap pad has been included for Culvert 5-6. Additionally, revised culvert calculations for Culvert 5-6 representing the actual culvert slopes, lengths and elevations based on current construction survey and design plans have been included.

3) Culvert 3-4 has been revised to reflect construction conditions. The culvert slope was increased from 2.00 % to 10.1 %. The Entrance Flow-Line was changed from 588 feet m.s.l. to 594 feet m.s.l. And an alternate to the discharge Reno Mattress of 6-inch thick concrete riprap protection has been included. Revised culvert calculations have been included for Culver 3-4.

4) An alternate to Channel CH2 has been included. Currently, Channel CH2 is permitted as a 50-foot wide vegetated earthen trapezoidal channel with 3:1 side slopes and a channel slope of 1.30 %. An alternate channel configuration of 40 foot wide vegetated earthen trapezoidal channel with 3:1 side slopes and a channel slope of 0.70 % has been included. Channel calculations have been included.

5) Two sedimentation ponds have been added to the Central Channel between the East and West Landfills. A wall type weir is proposed for the South Pond Structure. The spillway has been designed to pass the 100-year storm at a depth of 1.78 feet. A concrete lined embankment structure acting at the secondary spillway with three 36-inch corrugated metal pipe culverts and a wall type weir acting as the primary spillway have been proposed for the North Pond Structure. The secondary spillway has been designed to pass the 100-year storm at a depth of 2.41 feet. Both structures will allow for storage behind the wall with dewatering provided from two six-inch pipes located at the base of the walls. A combination of concrete stilling blocks, concrete riprap, and 24 inch thick stone riprap have been included to protect the downstream receiving channel from erosion at both pond structures.

Explanation Supporting Modification

Modifications to the site drainage facilities are in accordance with provisions of the TCEQ rules. There are several operational benefits to the design modification including the following:

- Consistent with long-term development of the landfill

  The proposed modifications will improve the permanent drainage facilities at the site.

- Improves the landfill's capability to protect the environment and human health

  The current Attachment 8 has no provisions for sedimentation ponds. The addition of the sedimentation ponds and the other improvements to the drainage facilities will reduce erosion around the central drainage channel and around culverts 3-4 and 5-6

and provide two additional means to control sediment. This will improve the landfill's capability to protect the environment and human health.

- Consistent with Site Operations

  Changes to the drainage facilities and Attachment 8 are being made in conjunction with the preparation of drainage facility construction plans.

Sections of Attachment 8 Being Revised

Section	Title	Description
Appendix 2.3	Post-Development Drainage Calculations	Addition of calculations for southern pond structure, northern pond structure, CH2 alternate channel configuration, culvert 6, stone riprap. Revision of the calculations for culverts 3-4 and 5-6.
Attachment 8, Sheet 9 of 10 (figure)	Developed Surface Water Plan	Addition of a CH2 alternate channel configuration included only as a supplement to the above referenced Appendix 2.3. No change was made to this Attachment 8, Sheet 9 of 10.
Attachment 8-1A (figure)	West Landfill Drainage Plan	Addition of southern pond structure, northern pond structure, and culvert 6.
Attachment 8-3 (figure)	Surface Water Management Details	Addition of culvert 6, stone and concrete riprap outlet protection and revision of culverts 3-4 and 5-6.
Addition of Attachment 8-3A (figure)	Central Channel South Pond Structure Plan	Addition of a Central Channel South Pond Structure Plan.
Addition of Attachment 8-3B (figure)	Central Channel South Pond Structure Profile	Addition of a Central Channel South Pond Structure Profile.
Addition of Attachment 8-3C (figure)	Central Channel North Pond Structure Plan	Addition of a Central Channel North Pond Structure Plan.

(rjr\00wm\GMPModSep02)

Section	Title	Description
Addition of Attachment 8-3D (figure)	Central Channel North Pond Structure Profile	Addition of a Central Channel North Pond Structure Profile.
Addition of Attachment 8-3E (figure)	Surface Water Management Details	Addition of 12 inch and 24 inch Stone Rip-rap Details.
Addition of Attachment 8-3F (figure)	Surface Water Management Details	Addition of 6 inch and 12 inch Concrete Paving Details.

Specific Provision Under Which Modification Requested

The proposed changes to Attachment 8 are minor in nature and do not substantially alter the permit conditions or reduce the capability of the facility to protect human health and the environment. Additionally, these changes will improve offsite drainage by reducing the peak flows and improving the quality of the storm water run-off without increasing landfill disposal capacity. Therefore, approval of this modification is requested under the provisions of Title 30 Texas Administrative Code Section 305.70(j)(11) (30 TAC §305.70(j)(11)), changes in the drainage control plan that significantly alter internal stormwater run-on/run-off control without impacting offsite drainage or increasing landfill disposal capacity, or of 30 TAC §305.70(l).

Certification

The certification statement required by 30 TAC §305.44 is enclosed as a part of this request.

As required by 30 TAC §330.113(c) of TCEQ rules, please be advised that this letter with enclosures is being placed in the operating record for the subject facility in accordance with requirements of 30 TAC §330.113(a) and /or (b). Also as required, an original and one copy of this letter with enclosures are being submitted to the TCEQ central office while another copy is being submitted directly to the appropriate TCEQ regional office.

(rjr\00wm\GMPModSep02)

I trust that this submittal is complete and will lead to approval of this permit modification request. If you have any questions or comments concerning this submittal, please contact me at telephone number (512) 272-6221 or Mr. J.Roy Murray, P.E., of RJR at telephone number (281) 397-6747 in Houston.

Very truly yours,
Waste Management of Texas, Inc.

Rusty Fusilier

Rusty Fusilier, P.E.
Compliance Manager

RF:rf/jm
Enclosures

cc w/enclosures: Barry Kalda, TCEQ Region 11 Austin

cc w/o enclosures: Steve Jacobs, WMTX
James Smith, WMTX
J. Roy Murray, RJR

(rjr\00wm\GMPModSep02)

Certification Statement to
Texas Commission on Environmental Quality
Pertaining to Permit Modification

Facility Permittee:	Waste Management of Texas, Inc.
Facility Name:	Austin Community Landfill
Facility Permit No.:	MSW Permit No. 249C
Subject:	Class I Modification – Drainage Improvements
Modification Date:	December 23, 2002
Description:	WMTX is seeking approval to modify the some of the site drainage facilities included in Attachment 8 of the Site Development Plan to include the construction of two sedimentation ponds, the addition of a culvert, the inclusion of an alternate channel configuration for the central channel, and minor revisions to two other culverts.

Certification: In accordance with Title 30 Texas Administrative Code Section 305.70(b) and on behalf of the facility permittee, I make the following certification pertaining to the above described permit modification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: James O. Smith Date: 12-24-02

Printed Name: JAMES O. SMITH Title: DIST. MANAGER

ED 0010357

TJFA 505
PAGE 006

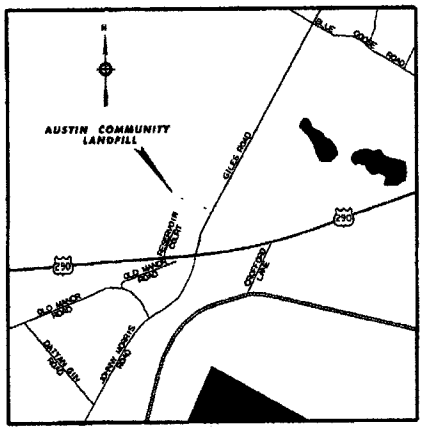
PERMIT PLANS FOR CENTRAL CHANNEL DRAINAGE IMPROVEMENTS

WASTE MANAGEMENT OF TEXAS, INC.

AUSTIN COMMUNITY LANDFILL

AUSTIN, TEXAS

NOVEMBER 2002



LOCATION MAP
N.T.S.

SHEET	TITLE
8-1A	WEST LANDFILL DRAINAGE PLAN
8-3	SURFACE WATER MANAGEMENT DETAILS
8-3A	CENTRAL CHANNEL SOUTH POND STRUCTURE PLAN
8-3B	CENTRAL CHANNEL SOUTH POND STRUCTURE PROFILE
8-3C	CENTRAL CHANNEL NORTH POND STRUCTURE PLAN
8-3D	CENTRAL CHANNEL NORTH POND STRUCTURE PROFILE
8-3E	SURFACE WATER MANAGEMENT DETAILS
8-3F	SURFACE WATER MANAGEMENT DETAILS

PREPARED FOR:

WASTE MANAGEMENT

AUSTIN COMMUNITY LANDFILL
9900 GILES ROAD
AUSTIN, TEXAS 78754

(512) 272-6221

General Note:

Topography provided herein from Landair Surveying, Inc. dated May 21, 2002 and Martin Survey Associates dated September 2002.

STATE OF TEXAS
JAMES R. MURRAY III
73860
REGISTERED
PROFESSIONAL ENGINEER
12/23/02

PREPARED BY:

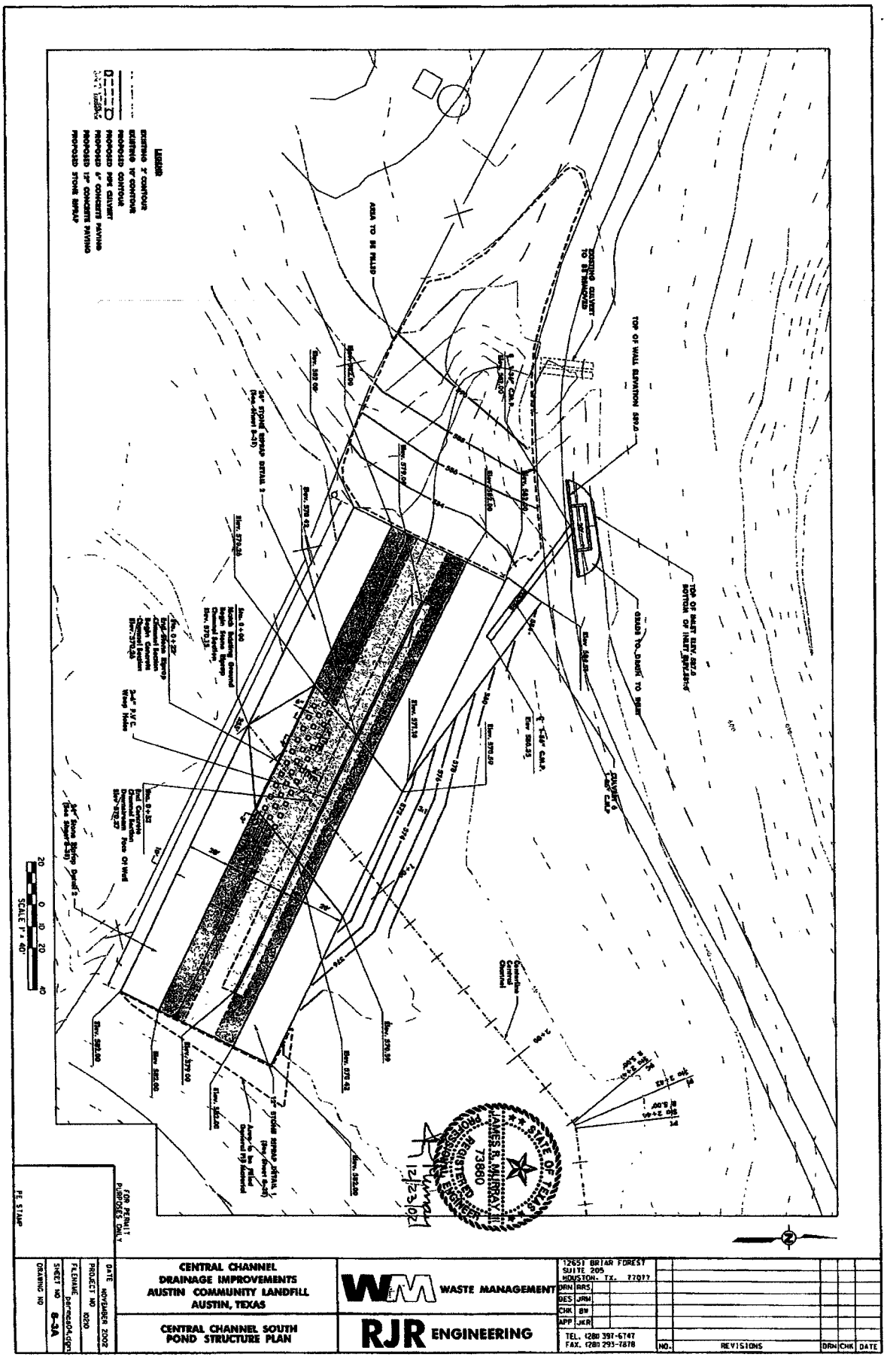
RJR ENGINEERING

12651 BRIAR FOREST
SUITE 205
HOUSTON, TEXAS 77077

(281) 397-6747

WM-CAST-0000499

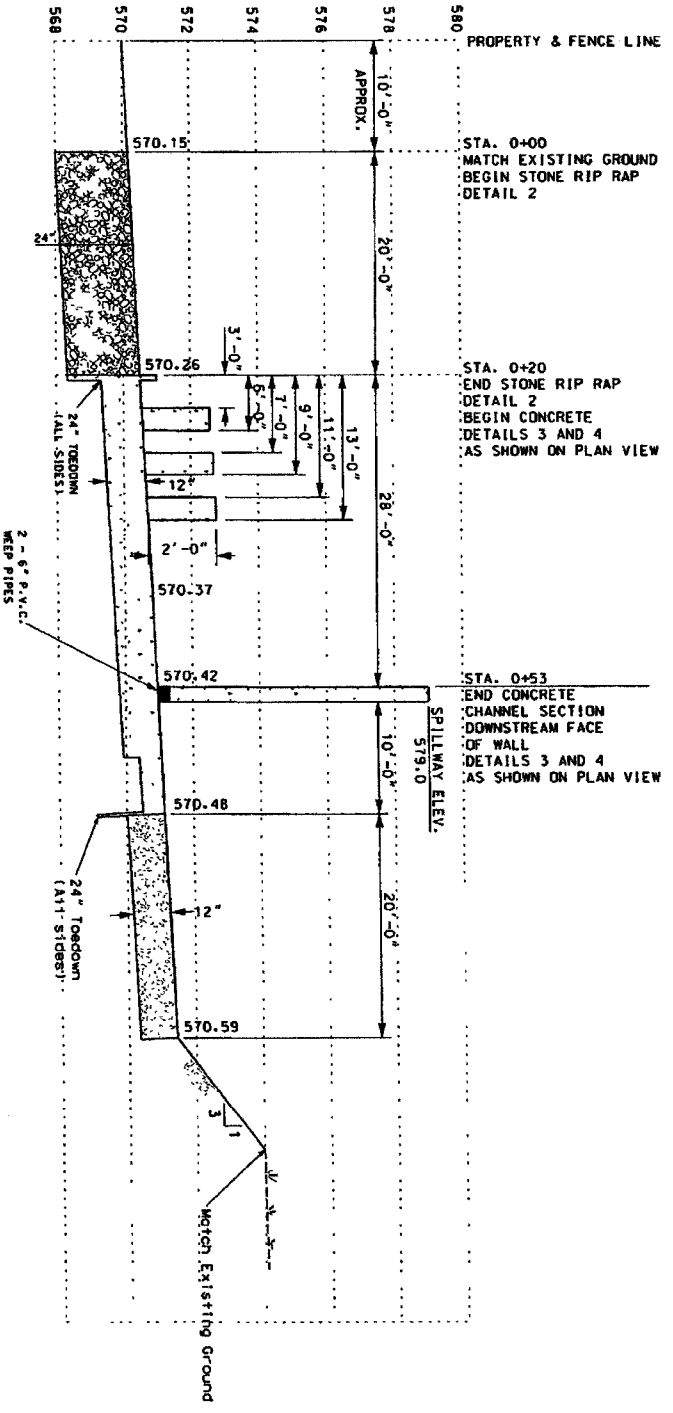
WM-CAST-0000500

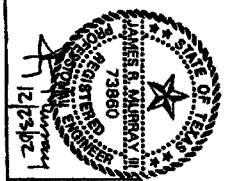


WM-CAST-0000501

CENTRAL CHANNEL SOUTH POND STRUCTURE PROFILE

(NOT TO SCALE)





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FOR PERMIT PURPOSES ONLY

DRAWING NO	8-3B
SHEET NO	
FILENAME	pstructs505.dgn
PROJECT NO	4310
DATE	NOVEMBER 2002

CENTRAL CHANNEL DRAINAGE IMPROVEMENTS AUSTIN COMMUNITY LANDFILL AUSTIN, TEXAS

CENTRAL CHANNEL SOUTH POND STRUCTURE PROFILE

WASTE MANAGEMENT

RJR ENGINEERING

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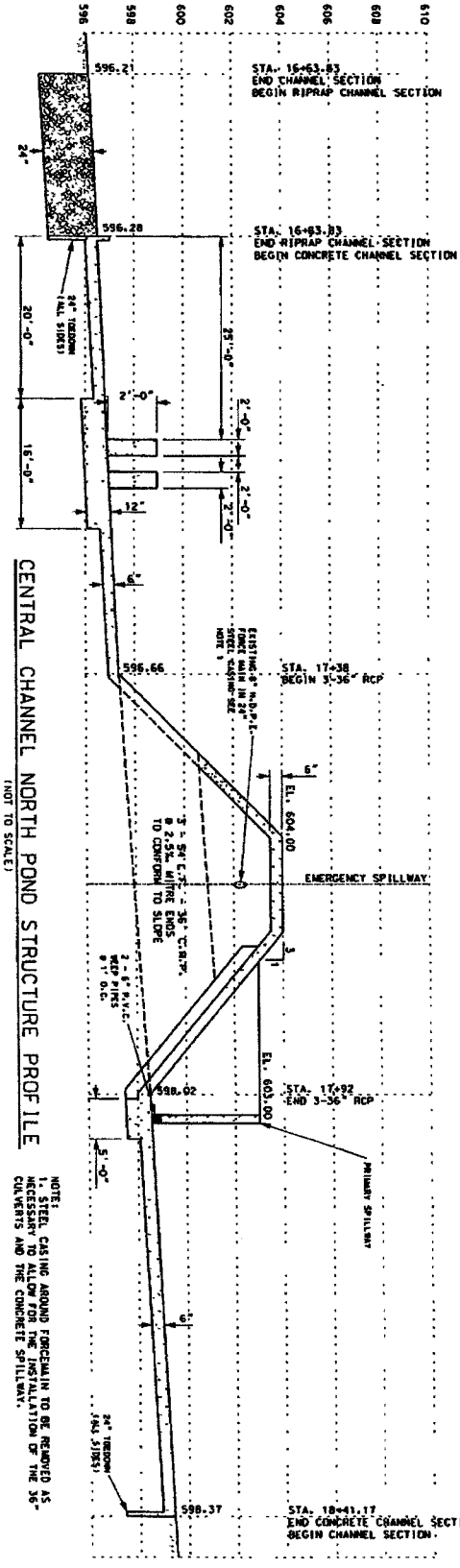
DRN	JNG
DES	JRM
CHK	
APP	

NO.	REVISIONS	DRN	CHK	DATE

WM-CAST-0000502

WM-CAST-0000503



CENTRAL CHANNEL NORTH POND STRUCTURE PROFILE

(NOT TO SCALE)

NOTE:
1. STEEL CASING AROUND FORCEMAIN TO BE REMOVED AS NECESSARY TO ALLOW FOR THE INSTALLATION OF THE 36" CULVERTS AND THE CONCRETE SPILLWAY.

STATE OF TEXAS
REGISTERED
PROFESSIONAL
ENGINEER
JAMES A. MURRAY, III
73880

12/12/02

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DATE	NOVEMBER 2002
PROJECT NO	1080
FILENAME	permas07.dgn
SHEET NO	8-3D
DRAWING NO	

CENTRAL CHANNEL
DRAINAGE IMPROVEMENTS
AUSTIN COMMUNITY LANDFILL
AUSTIN, TEXAS

CENTRAL CHANNEL SOUTH
POND STRUCTURE PROFILE

WM WASTE MANAGEMENT

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DRN	JWC
DES	JRM
CHK	
APP	

TEL: (281) 397-6747
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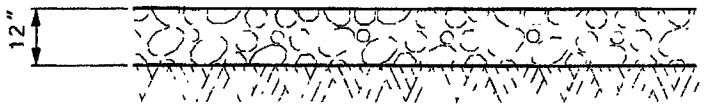
NO.	REVISIONS	DRN	CHK	DATE

WM-CAST-0000504

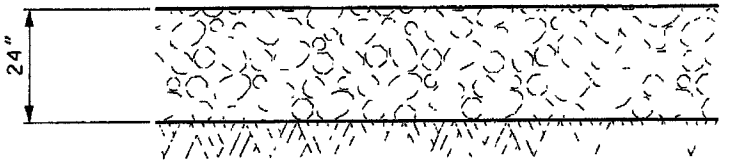
WM-CAST-0000505

d Min = 3"
d 50 = 6"
d Max = 9"



STONE RIP-RAP DETAIL 1
(NOT TO SCALE)

d Min = 6"
d 50 = 12"
d Max = 18"



STONE RIP-RAP DETAIL 2
(NOT TO SCALE)

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12/23/02

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FAX: (281) 293-7878

NO.	REVISIONS	DRN	CHK	DATE

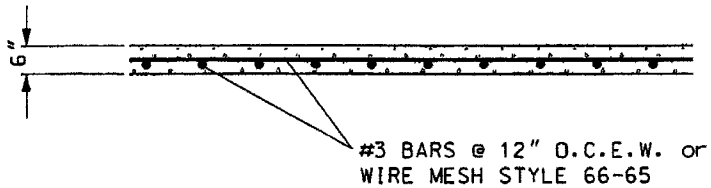
DRN JJG
DES JRM
CHK JM
APP JKR

WASTE MANAGEMENT
RJR ENGINEERING

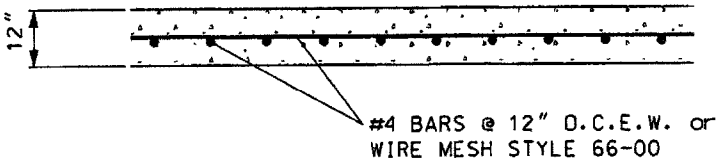
CENTRAL CHANNEL
DRAINAGE IMPROVEMENTS
AUSTIN COMMUNITY LANDFILL
AUSTIN, TEXAS

SURFACE WATER MANAGEMENT DETAILS

DATE NOVEMBER 2002
PROJECT NO 1020
FILENAME permcs08.dgn
SHEET NO 8-3E
DRAWING NO



CONCRETE PAVING DETAIL 3
(NOT TO SCALE)



CONCRETE PAVING DETAIL 4
(NOT TO SCALE)

STATE OF TEXAS
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12/23/02

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PE STAMP

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HOUSTON, TX 77077
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FAX: (281) 293-7878

NO.	REVISIONS	DRN	CHK	DATE
		DRG	JMC	
		DES	JMC	
		QWK	BW	
		APP	JMR	

WASTE MANAGEMENT

RJR ENGINEERING

CENTRAL CHANNEL
DRAINAGE IMPROVEMENTS
AUSTIN COMMUNITY LANDFILL
AUSTIN, TEXAS

SURFACE WATER MANAGEMENT DETAILS

DATE NOVEMBER 2002
PROJECT NO 10210
FILENAME perwcs09.dgn
SHEET NO S-3F
DRAWING NO

RJR

JOB NAME Austin Comm. L/F
JOB NO. 10710.003
CALCULATED BY JRoy DATE 11/26/02
CHECKED BY _____ DATE _____
SHEET 1 OF 1

Purpose: Calculate depth of flow over weir on the central channel southern pond structure.

Given: Q_{100} = 977.48 cfs (Developed Surface Water Plan Attachment 8, Sheet 9 of 10, MSW-249A) CH 1

L = 205 feet

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STATE OF TEXAS
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73860
REGISTERED PROFESSIONAL ENGINEER
12/20/02

For sheets 1 through 8 of 8

Equation:

$$Q = \frac{2}{3}(C_1)\, b\sqrt{2g}\,(H)^{3/2}$$

$$H^{3/2} = \frac{Q}{\frac{2}{3}(C_1)\, b\sqrt{2g}}$$

$$H = \left(\frac{Q}{\frac{2}{3}(C_1)\, b\sqrt{2g}}\right)^{2/3}$$

where: C_1 = 0.5 for a broad crested weir (range 0.50 to 0.57)

g = 32.2 fps^2

Solve:

$$H = \frac{977.48 \text{ cfs}}{\frac{2}{3}(0.5)\,205 \text{ ft}\,\sqrt{2\,(32.2 \text{ fps}^2)}} = 1.78 \text{ ft.}$$

∴ The 100 year storm of 977.48 cfs will overflow the weir @ a depth of 1.78 ft. The weir will be designed to provide erosion protection to a minimum depth of 2.0 ft.

The elevation of the spillway = 579.00
Depth of 100-Year flow over spillway = 1.78
Elevation of 100-Year Event = 580.78

Sheet 1 of 8

WM-CAST-0000507

RJR

JOB NAME Austin Comm. L/F
JOB NO. 10210.003
CALCULATED BY JRoy DATE 11/26/02
CHECKED BY _____ DATE _____
SHEET 1 OF 1

Purpose: Calculate depth of flow over weir on the central channel northern pond structure.

Given: $Q_{100} = 585.38$ cfs (Developed Surface Water Plan Attachment 8, Sheet 9 of 10, MSW-249A) CH2

$L = 84$ feet

Equation:

$$H = \left(\frac{Q}{\frac{2}{3}(C_1) b \sqrt{2g}} \right)^{2/3}$$

where: $C_1 = 0.54$ for a broad crested weir (range 0.50 to 0.57)

$g = 32.2 \text{ fps}^2$

Solve:

$$H = \frac{585.38 \text{ cfs}}{\frac{2}{3}(0.54)\ 84 \text{ ft} \sqrt{2(32.2 \text{ fps}^2)}} = 2.41'$$

∴ The 100 year storm of 585.38 cfs will overflow the weir @ a depth of 2.41 ft. The weir will be designed to provide erosion protection to a minimum depth of 3.0 ft.

The elevation of the spillway	=	604.00
Depth of 100-Year Flow over spillway	=	2.41
Elevation of 100-Year Event	=	606.41

CH 2 - Alternate Channel Configuration

TRAPEZOIDAL CHANNEL ANALYSIS
NORMAL DEPTH COMPUTATION

November 20, 2002

PROGRAM INPUT DATA

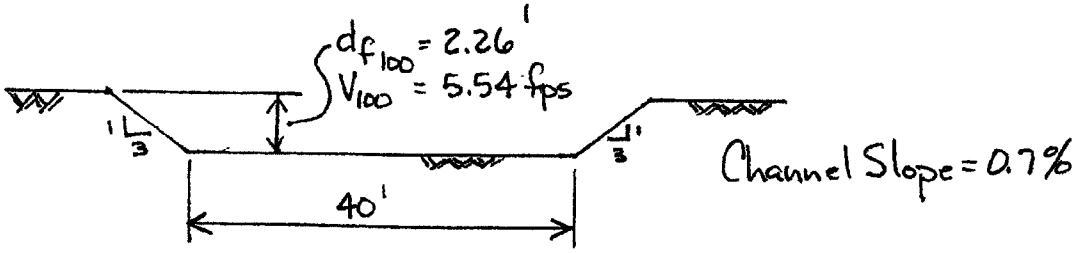
DESCRIPTION	VALUE
Flow Rate (cfs)	585.43 - See Note 1
Channel Bottom Slope (ft/ft)	0.007
Manning's Roughness Coefficient (n-value)	0.035 - See Note 2
Channel Left Side Slope (horizontal/vertical)	3.0
Channel Right Side Side Slope (horizontal/vertical)	3.0
Channel Bottom Width (ft)	40.0

COMPUTATION RESULTS

DESCRIPTION	VALUE
Normal Depth (ft)	2.26
Flow Velocity (fps)	5.54 < 6.0 fps ✓
Froude Number	0.695
Velocity Head (ft)	0.48
Energy Head (ft)	2.74
Cross-Sectional Area of Flow (sq ft)	105.73
Top Width of Flow (ft)	53.56

Notes:

1. $Q_{100\ Year}$ from Developed Surface Water Plan Attachment 8, Sheet 9 of 10, MSW-249A, for CH2.
2. Mannings "N" Value for a grass lined channel.



CH2 Alternate Channel Section

Culvert 3-4

PIPE CULVERT ANALYSIS
COMPUTATION OF CULVERT PERFORMANCE CURVE

December 5, 2002

PROGRAM INPUT DATA

DESCRIPTION	VALUE
Culvert Diameter (ft)	3.0
FHWA Chart Number	2
FHWA Scale Number (Type of Culvert Entrance)	1
Manning's Roughness Coefficient (n-value)	0.024
Entrance Loss Coefficient of Culvert Opening	0.5
Culvert Length (ft)	67.0
Invert Elevation at Downstream end of Culvert (ft)	587.22
Invert Elevation at Upstream end of Culvert (ft)	594.0
Culvert Slope (ft/ft)	0.1012
Starting Flow Rate (cfs)	33.2
Incremental Flow Rate (cfs)	1.0
Ending Flow Rate (cfs)	33.2
Starting Tailwater Depth (ft)	0.0
Incremental Tailwater Depth (ft)	1.0
Ending Tailwater Depth (ft)	0.0

COMPUTATION RESULTS

Flow Rate (cfs)	Tailwater Depth (ft)	Headwater (ft) Inlet Control	Headwater (ft) Outlet Control	Normal Depth (ft)	Critical Depth (ft)	Depth at Outlet (ft)	Outlet Velocity (fps)
33.2	0.0	2.69	0.0	1.1	1.87	1.1	14.07

For tailwater depth see next sheet.

Headwater Elev. = 594.0 + 2.69 = 596.69

Inlet Elev. = = 600.00

∴ A single 36" C.M.P. is adequate to convey the 25 year flowrate with a headwater that is 3.31' below the inlet elevation.

Tailwater Calculation
Culvert 3-4

TRAPEZOIDAL CHANNEL ANALYSIS
NORMAL DEPTH COMPUTATION

December 5, 2002

PROGRAM INPUT DATA

DESCRIPTION	VALUE	
Flow Rate (cfs)	585.43	← See Note 1
Channel Bottom Slope (ft/ft)	0.003	
Manning's Roughness Coefficient (n-value)	0.013	← Concrete
Channel Left Side Slope (horizontal/vertical)	3.0	
Channel Right Side Slope (horizontal/vertical)	3.0	
Channel Bottom Width (ft)	19.0	

COMPUTATION RESULTS

DESCRIPTION	VALUE	
Normal Depth (ft)	2.39	←
Flow Velocity (fps)	9.37	
Froude Number	1.207	
Velocity Head (ft)	1.36	
Energy Head (ft)	3.75	
Cross-Sectional Area of Flow (sq ft)	62.47	
Top Width of Flow (ft)	33.33	

The receiving channel elevation @ Culvert 3-4 = 582.97
Normal Depth in receiving channel @ Culvert 3-4: 2.39 (see above)
Water surface elevation in channel @ Culvert 3-4: 585.36

Elevation of outlet of Culvert 3-4 = 587.22

The tailwater elevation (585.36) is below the outlet elevation (587.22).

Note:
1. $Q_{100\,Year}$ from Developed Surface Water Plan, Attachment 8, Sheet 9 of 10, MSW-249A, for CH2.

Culvert 5-6

PIPE CULVERT ANALYSIS
COMPUTATION OF CULVERT PERFORMANCE CURVE

December 5, 2002

PROGRAM INPUT DATA

DESCRIPTION	VALUE
Culvert Diameter (ft)	3.0
FHWA Chart Number	2
FHWA Scale Number (Type of Culvert Entrance)	1
Manning's Roughness Coefficient (n-value)	0.024
Entrance Loss Coefficient of Culvert Opening	0.5
Culvert Length (ft)	50.0
Invert Elevation at Downstream end of Culvert (ft)	589.0
Invert Elevation at Upstream end of Culvert (ft)	590.0
Culvert Slope (ft/ft)	0.02
Starting Flow Rate (cfs)	47.75
Incremental Flow Rate (cfs)	1.0
Ending Flow Rate (cfs)	47.75
Starting Tailwater Depth (ft)	0.0
Incremental Tailwater Depth (ft)	1.0
Ending Tailwater Depth (ft)	0.0

COMPUTATION RESULTS

Flow Rate (cfs)	Tailwater Depth (ft)	Headwater (ft) Inlet Control	Headwater (ft) Outlet Control	Normal Depth (ft)	Critical Depth (ft)	Depth at Outlet (ft)	Outlet Velocity (fps)
47.75	0.0	3.81	3.87	2.3	2.25	2.25	8.39

Q_{25} = 95.5 cfs (See Surface Water Management System Details Attachment 8.3)

with 2 - 36" C.M.P.

$Q_{25/pipe}$ = 47.75 cfs. ← 100-Yr from CH1, Attachment 8

Water Surface @ Outfall = 581.0 + 2.71 = 583.78 Pipe Outfall = 589.0 ∴ Tailwater = 0'

Head water Elev = 590.00 + 3.87' = 593.87

Inlet Elev. = = 597.00

∴ Two 36" C.M.P. are adequate to convey the 25 year flowrate with a headwater that is 3.13' below the inlet elevation.

Culvert 6

PIPE CULVERT ANALYSIS
COMPUTATION OF CULVERT PERFORMANCE CURVE

December 5, 2002

PROGRAM INPUT DATA

DESCRIPTION	VALUE
Culvert Diameter (ft)	3.0
FHWA Chart Number	2
FHWA Scale Number (Type of Culvert Entrance)	1
Manning's Roughness Coefficient (n-value)	0.024
Entrance Loss Coefficient of Culvert Opening	0.5
Culvert Length (ft)	65.0
Invert Elevation at Downstream end of Culvert (ft)	580.35
Invert Elevation at Upstream end of Culvert (ft)	581.0
Culvert Slope (ft/ft)	0.01
Starting Flow Rate (cfs)	10.83 ← Design Q25 from Perimeter Ditch Sik.
Incremental Flow Rate (cfs)	1.0
Ending Flow Rate (cfs)	10.83
Starting Tailwater Depth (ft)	0.43
Incremental Tailwater Depth (ft)	1.0
Ending Tailwater Depth (ft)	0.43

COMPUTATION RESULTS

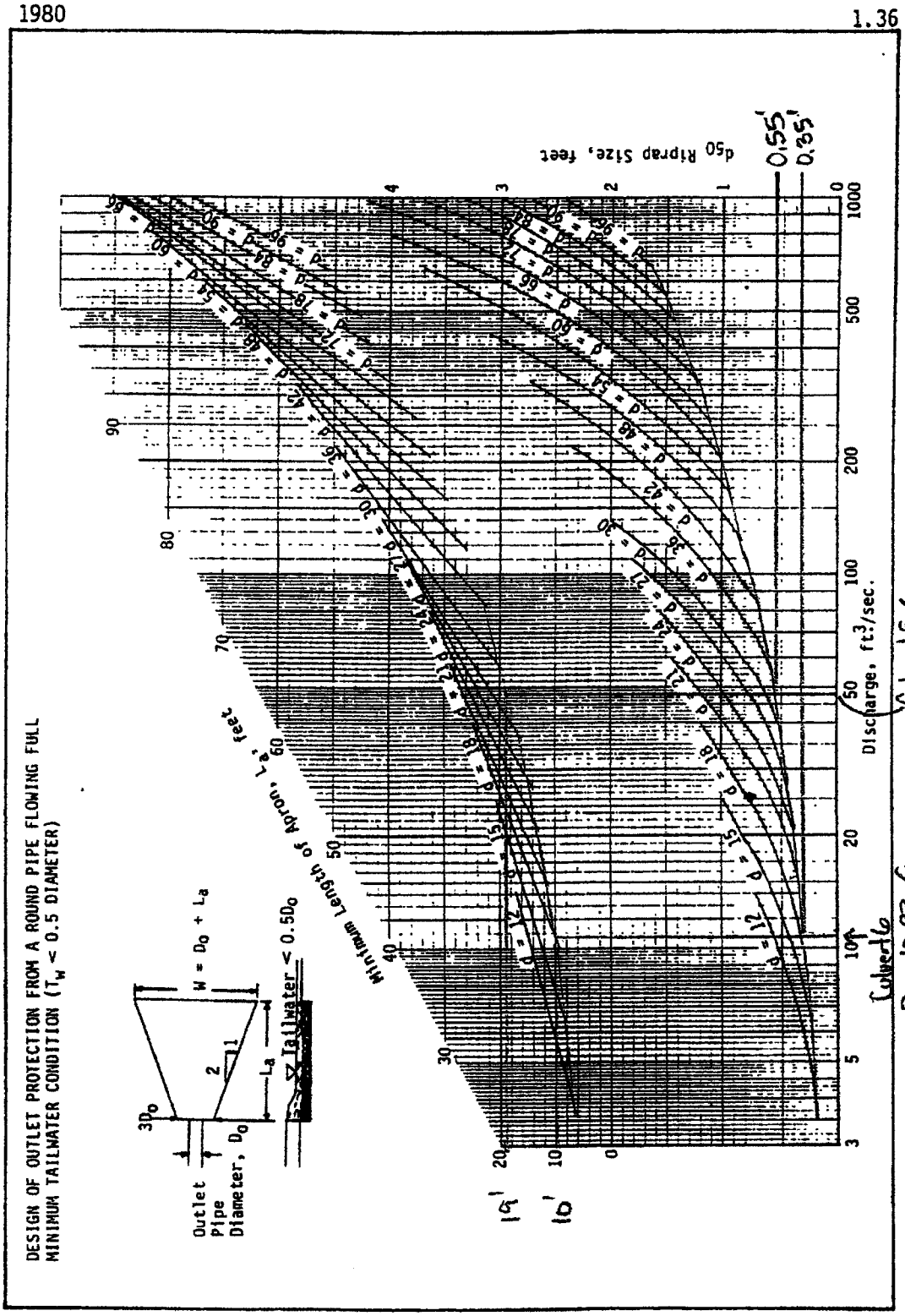
Flow Rate (cfs)	Tailwater Depth (ft)	Headwater (ft) Inlet Control	Headwater (ft) Outlet Control	Normal Depth (ft)	Critical Depth (ft)	Depth at Outlet (ft)	Outlet Velocity (fps)
10.83	0.43	1.43	1.59	1.13	1.04	1.04	4.96

Tailwater depth = 580.78 − 580.35 = 0.43'
↑ From South Pond Structure 100-Year

Headwater Elev. = 581.0 + 1.59 = 582.59

Inlet Elev. = 587.00

∴ A single 36" C.M.P. is adequate to convey the 25 year flowrate with a headwater that is 4.61' below the inlet elevation.



Source: USDA-SCS

Plate 1.36c

Sheet 8 of 8

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 21, 2003

Mr. James O. Smith, District Landfill Manager
Waste Management of Texas, Inc.
9900 Giles Lane
Austin, Texas 78754

Re: Municipal Solid Waste - Travis County
Waste Management of Texas, Inc.
Austin Community Landfill - Permit No. MSW 249C
Permit Modification Request
Mail Log No. 03-997

Dear Mr. Smith

Enclosed is a copy of the above referenced permit modification for a municipal solid waste facility issued pursuant to Chapter 361, Texas Health & Safety Code prepared for your permit modification request dated December 23, 2002. This modification includes changes to the Site Development Plan to improve site drainage by construction of two sedimentation ponds, the addition of a culvert, the inclusion of an alternate central channel configuration, and minor revisions to two other culverts. The documentation, including the application, prepared and submitted to support the modification shall be considered a part of and operational requirements of this permit.

Prior to September 1, 2002, the name of the Texas Commission on Environmental Quality (TCEQ) was the Texas Natural Resource Conservation Commission (TNRCC). However, until January 1, 2004 and to allow for phasing in the name change, the agency may perform any act authorized for the TNRCC as either the TNRCC or as the TCEQ.

If you have any questions concerning this letter or if we may be of any assistance to you regarding municipal solid waste, you may contact Mr. Wayne R. Harry, P.E. of my staff at MC-124, P.O. Box 13087, Austin, Texas 78711-3087; telephone number (512) 239-6619.

Sincerely,

Richard C. Carmichael, Ph.D., P.E., CIH, Manager
Municipal Solid Waste Permits Section
Waste Permits Division

RCC/ALD/wrh

Enclosure

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

MODIFICATION TO

MUNICIPAL SOLID WASTE PERMIT Nº MSW-249C

Waste Management of Texas, Inc.
Austin Community Landfill

Municipal Solid Waste Permit No. MSW-249C is hereby modified as follows:

Description of Change:

The permittee has changed the Site Development Plan to improve site drainage by construction of two sedimentation ponds, the addition of a culvert, the inclusion of an alternate central channel configuration, and minor revisions to two other culverts.

List of Items Revised in Attachment A:

Attachment 8	Appendix 2.3	Post Development Drainage Calculations
	Figure 8-1A	West Landfill Drainage Plan
	Figure 8-3	Surface Water Management Details
(new)	Figure 8-3A	Central Channel South Pond Structure Plan
(new)	Figure 8-3B	Central Channel South Pond Structure Profile
(new)	Figure 8-3C	Central Channel North Pond Structure Plan
(new)	Figure 8-3D	Central Channel North Pond Structure Profile
(new)	Figure 8-3E	Surface Water Management Details
(new)	Figure 8-3F	Surface Water Management Details

This modification is a part of Permit No. MSW-249C and should be attached thereto.

APPROVED, ISSUED, AND EFFECTIVE in accordance with 30 Texas Administrative Code Section 305.70(j)(11) and 305.70(l). No public notice is required for this modification. This modification is a minor change and does not reduce the capability of the facility to protect human health and the environment.

ISSUED DATE:

FEB 2 0 2003

Margaret Hoffman
For the Commission

ED 0010348