

**NEW BOSTON LANDFILL
APPENDIX IIC
TRANSPORTATION STUDY**

**NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT NO. MSW 576C**

PERMIT AMENDMENT APPLICATION

TRANSPORTATION ANALYSIS

Prepared for

WASTE MANAGEMENT OF TEXAS, INC.

June 2013



Prepared by

MTG ENGINEERS & SURVEYORS
5930 Summerhill ♦ Texarkana, Texas 75503 ♦ 903-838-8533

TBPE No. 354

NARRATIVE

30 TAC §330.61(i)

In accordance with 30 TAC §330.61(i), this transportation analysis was performed for the proposed New Boston Landfill permit amendment to demonstrate the access, availability, and adequacy of the access roads as discussed below.

Site Access

Access to the New Boston Landfill is directly from US 82 approximately 1.08 miles east of the intersection of Interstate 30 and US 82. This roadway is operated and maintained by the Texas Department of Transportation (TxDOT) and is functionally classified as a principal arterial.

The adjacent intersection with Interstate 30 is a full access interchange allowing for traffic movements in all directions from either Interstate 30 or US 82. At the location of the site access to the landfill, US 82 is a two lane roadway with paved shoulders. There are no load restrictions on this segment of highway thus it is open to all vehicles as allowed by law. In information provided by TxDOT, currently no construction projects are planned for the segment of US 82 east of Interstate 30 towards the City of New Boston. On the segment of US 82 west of Interstate 30, a maintenance project is being planned to convert the segment from Interstate 30 to east of SH 98 to a undivided four lane highway. Otherwise, routine maintenance and potential future construction projects will be performed by TxDOT to keep US 82 in an adequate condition for the life of the facility.

Interstate 30 is a controlled access roadway and is functionally classified as a rural interstate highway. In information provided by TxDOT, a pavement repair and resurfacing of the existing interstate facility project is scheduled for 2014. This project will not alter the utilization of Interstate 30 as an access roadway for the landfill.

Site access roads within one mile of the facility are shown in Attachment 1. See Appendix 1 for TxDOT correspondence regarding the adequacy of US 82 and the existing site entrance road connection to US 82.

Existing and Projected Traffic Volumes on Access Roads

Average annual daily traffic count data was obtained from TxDOT for US 82 and Interstate 30. TxDOT utilizes a count location immediately east of the entrance to the facility for US 82 and one east of the facility adjacent to FM 992 for Interstate 30. The most current traffic data published by TxDOT is 2010. Based on a review of traffic data from 2007 to 2010 as shown in Table 1 below, traffic volumes on this segment of US 82 have been relatively consistent for the past four years. The volumes represent traffic on US 82 in both directions.

Table 1 – Historical and Existing Traffic Data

Year	2007	2008	2009	2010
US 82 Volume	3,600	3,800	3,100	3,400
IH 30 Volume	20,000	26,000	24,000	23,470

Future traffic volumes are projected through 2053 for the basis of this study. The actual site operating life may be affected by various future factors and does not necessarily mirror traffic volume growth. TxDOT's recommended annual average growth rate of 2% is utilized for this analysis which is significantly greater than the projected population annual growth rate of 0.4% as developed by the Texas Water Development Board. Based on TxDOT's annual average growth rate of 2%, the 2053 projected traffic volume on US 82 is 7,811 vehicles per day and the 2053 projected volume for Interstate 30 is 53,916 vehicles per day.

Facility Generated Traffic

Based on facility records, the average number of vehicles utilizing the landfill is approximately 92 vehicles per day. Since growth in the facility generated traffic should more closely follow population growth, the projected population annual growth rate of 0.4% is utilized for predicting facility generated traffic growth. Table 2 summarizes the existing and predicted traffic volumes through the predicted life of the facility.

The facility generated traffic accounts for less than three (3) percent of the current traffic volume and less than two (2) percent of the 2053 projected volumes. Therefore, the facility generated traffic does not result in a deterioration of the level of service for any of the access roadways serving the facility.

Table 2 – Facility Generated Traffic

	Current(VPD)	2053 (VPD)
Waste Shipment Vehicles	77	91
Support Vehicles	15	18
Total	92	109

Level of Service

Level of service analysis for the site access roadways were analyzed for both the existing and facility life traffic volumes utilizing the methodologies in the "Highway Capacity Manual" as published by the Transportation Research Board. This methodology provides a means of estimating roadway operating levels of service (LOS) in terms of comparing expected speed-flow and density flow relationships. Roadway LOS is characterized by four performance measures:

1. Density of traffic (passenger cars per mile per lane)
2. Speed of traffic (miles per hour)
3. Volume to capacity ratio of the travel lane
4. Percent of time spent following

Each of these measures affects the overall roadway operating LOS and results in the assignment of a letter grade that ranges from A to F. LOS A to D is generally considered acceptable while a LOS of E to F is considered unacceptable. Due to the different classification of the two facilities, US 82 being a two-lane rural arterial and Interstate 30 being a four-lane controlled access interstate facility, the components of analysis are as defined for that type of facility in the Highway Capacity Manual. The peak direction hourly volume for US 82 is based on a directional factor of 60% and a peak hour factor of 1.0. Level of service analysis for both US 82 and Interstate 30 are summarized in the following tables:

US 82

LEVEL OF SERVICE

	FROM	TO	AVERAGE ANNUAL DAILY TRAFFIC	PEAK DIRECTION HOURLY VOLUME	LEVEL OF SERVICE
EXISTING	IH 30	TEXAS AVE	3,400	187	A
2053	IH 30	TEXAS AVE	7,811	445	B

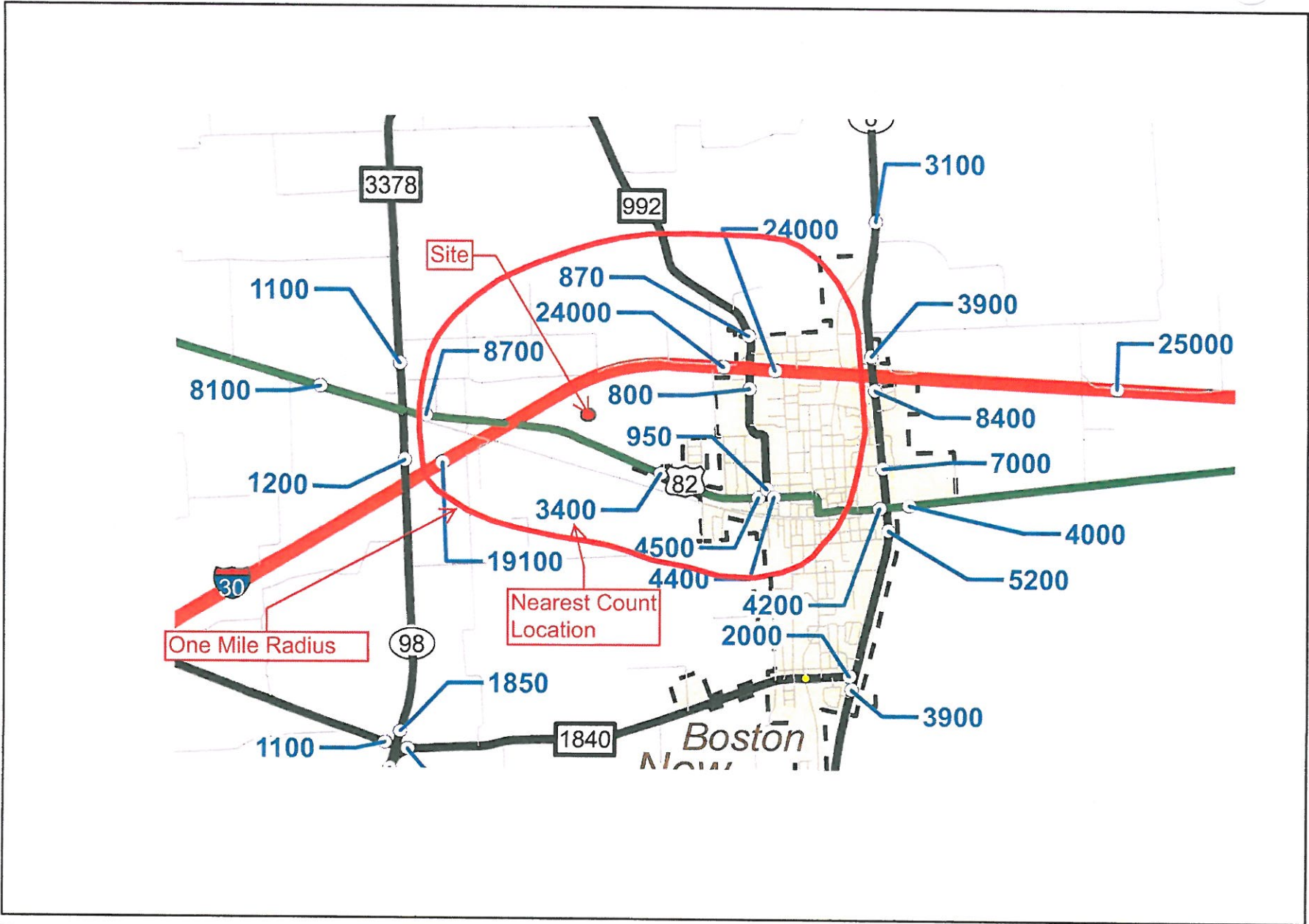
INTERSTATE 30
LEVEL OF SERVICE

	From	To	Average Annual Daily Traffic	Capacity (passenger cars/hour)	Volume/Capacity Ratio	Density (passenger cars/hour per lane)	LOS
EXISTING	US 82	FM 992	1242	4800	0.26	8.3	B
2053	US 82	FM 992	2855	4800	0.59	19.6	C

Summary

Based on the above information, the following conclusions are made concerning the impact of the proposed expansion of the New Boston Landfill on the transportation system serving the site.

1. All of the access roadways serving the site have no weight restrictions other than the maximum allowable legal weight limits allowed by law.
2. The volume of traffic generated by the facility accounts for approximately 2.7% of the existing roadway volume and is predicted to be approximately 1.4% of the future roadway volume. This demonstrates that the traffic generated by the facility is not a significant generator and does not solely result in a decrease in the level of service for this roadway.
3. The existing entrance road facility for the site has been in place since 2004 and is adequate for existing and future site generated traffic volumes.
4. TxDOT's response states the facility entrance is sufficient and no additional turn lanes are required.



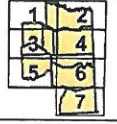
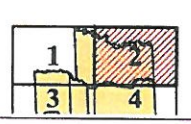
AAOT	FM	FS	Water Bodies
Uninc'd Towns	FS	FM	District
Streets & Roads	IH	SL	City
BF	PR	SS	County
BI	RE	UA	
BS	RM	UP	
BU	RR	US	

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2010 ATLANTA DISTRICT TRAFFIC MAP

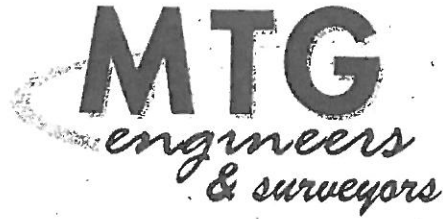
PREPARED BY THE
 Texas Department of Transportation
 Transportation Planning and Programming Division
 IN COOPERATION WITH THE
 U.S. Department of Transportation



APPENDIX 1

**TEXAS DEPARTMENT OF TRANSPORTATION
COORDINATION CORRESPONDENCE**

107004



December 4, 2012

Kenneth Icenhower, P.E.
Texas Department of Transportation
3405 Sowell Lane
Texarkana, TX 75501-2902

Re: New Boston Landfill
Waste Management of Texas, Inc.
Bowie County

Dear Mr. Icenhower:

Waste Management of Texas is preparing a permit application for a proposed expansion of the New Boston Landfill located west of New Boston. The purpose of this letter is to document coordination with the Texas Department of Transportation (TxDOT) consistent with the requirements of municipal solid waste regulations, 30 Texas Administrative Code Chapter 330 (30 TAC §330.61(i)(4)). Additionally, we are requesting information regarding any traffic or location restrictions or proposed roadway improvements in the vicinity of the site.

The current site entrance located on US 82 approximately one mile east of IH 30 will continue to function as the site entrance for the facility as shown on the attached location map (Figure 1). The proposed expansion area and property boundary is also depicted on the location map. This area will be screened from IH 30 and US 82 by maintenance of existing natural vegetation screening.

Listed below are specific issues that we would ask TxDOT to confirm or address in a written form:

- Traffic Volume Projections: Please provide an annual traffic volume growth rate for the following roadways in the vicinity of the site. This information will be utilized to compare the traffic anticipated to be generated by the New Boston Landfill with TxDOT projections:
 - US 82
 - IH 30
- Please provide any information regarding any planned maintenance or construction improvements in the vicinity of the site, specifically on the roadways listed above.
- Please provide any information on any load-zoned roadways in the vicinity of the site that have gross vehicle weight limits less than 80,000 pounds.
- Please provide any information on any other traffic or location restrictions that are known to exist on the roadways in the vicinity of the site.

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5930 Summerhill Rd. Texarkana Texas 75503
P 903.838.8533 F 903.832.4700
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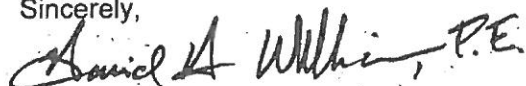
CIVIL ENVIRONMENTAL SURVEYING

The following table provides information on current and projected facility generated traffic. The projected facility generated traffic is based on Texas Water Development Board's predicted population growth of 0.4% since facility traffic growth should follow population growth.

	Current (Vehicles per day)	Future (2053) (Vehicles per day)
[REDACTED]	77	91
[REDACTED]	15	18
[REDACTED]	92	109

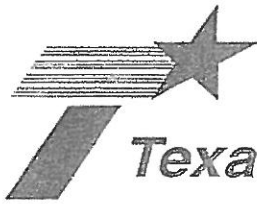
We appreciate your review of this information and written response. Please feel free to contact me at 903-838-8533 or e-mail at dwilliams@mtgengineers.com if there are any questions or if additional information is desired.

Sincerely,



David A. Williams, P.E.
Project Manager

Attachments



Texas Department of Transportation

701 E MAIN • ATLANTA TEXAS 75551-2418 • (903) 796-2851

January 10, 2013

David A. Williams, P.E.
MTG Engineering & Surveyors
P.O. Box 3786
Texarkana, TX 75503

Dear David,

In response to your letter dated December 4, 2012 requesting information in area of the Waste Management of Texas site for the New Boston Landfill, please see the below.

Traffic Volume Projections:

- o IH 30 from SH 98 to US 82 – 2010 current ADT 19,050/2030 design ADT 26,670
- o IH 30 from US 82 to FM 992 – 2010 current ADT 23,470/2030 design ADT 37,550
- o US 82 from SH 98 to IH 30 – 2010 current ADT 8,700/2030 design ADT 12,180
- o US 82 from IH 30 to Frost Street – 2010 current ADT 3,400/2030 design ADT 4,760

Planned Maintenance/Construction improvements in the area:

- o US 82 from FM 1840 to SH 98 – 2013 letting
Reconstruct 2 lane rural roadway to provide passing lanes (Pass Thru Toll)
- o IH 30 from West end of Sulphur River Bridge to SH 98 – 2014 letting
Repair pavement and resurface existing interstate facility
- o IH 30 from SH 98 to SP 86 – 2014 letting
Repair pavement and resurface existing interstate facility
- o US 82 from SH 98 to IH 30 – 2013 letting
Reconstruct 2 lane rural roadway to a minimum width of 48 feet
(This is a maintenance contract to be done in conjunction with the Pass Thru Toll)

Load-zoned roads:

- o There are no load-zoned roads in the vicinity that have gross vehicle weight limits less than 80,000 pounds

If you need any additional information, please call me at 903-799-1280.

Sincerely,

Brad A. Haugh
District Maintenance Administrator – Atlanta

Cc: Icenhower

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From: David Williams
Sent: Wednesday, January 16, 2013 5:13 PM
To: 'Brad Haugh'
Subject: RE: Waste Management

Brad,

All is well up here! I hope all is going well with you.

After review of the letter may I ask for an amendment or additional information? I assumed on some of the items without thinking about the needs of TCEQ which will make us address back with you in the future. Also, so you know, at the time of administrative completeness with TCEQ they will send out an interagency coordination letter so you will have a second chance to comment at a later date.

Anyway, the two items are as follows:

- 330.61(i)(1) – data on availability and adequacy of roads. Would you be willing to state that US 82 is available and adequate for the landfill use? Can you also state that the existing entrance road as located is sufficient and no additional turn lanes, etc are required?
- I know you provided the 2010 current ADT – can you state that those are the most current available traffic counts?

I am attaching the TCEQ rules related to transportation in case you want to read further. Thanks for your help on this.

David

David Williams, P.E.
Project Manager
MTG Engineers & Surveyors
5930 Summerhill Road
Texarkana, TX 75503
Ph 903-838-8533
Cell 903-293-2919

From: Brad Haugh [<mailto:Brad.Haugh@txdot.gov>]
Sent: Monday, January 14, 2013 10:58 AM
To: David Williams
Subject: Waste Management

David,

Hope you're doing well!

See attached. Will this serve your purpose? Do you want a hard copy mailed to you?



Texas Department of Transportation

701 E MAIN • ATLANTA TEXAS 75551-2418 • (903) 796-2851

January 23, 2013

David A. Williams, P.E.
MTG Engineering & Surveyors
P.O. Box 3786
Texarkana, TX 75503

Dear David,

This letter is in response to your email dated January 16, 2013 requesting additional information or clarification in the area of the Waste Management of Texas site for the New Boston Landfill.

The traffic count given is in fact 2010 data and this is the latest and most current available traffic counts. Furthermore, US 82 is available and adequate for the landfill use and at this time the existing road as located is sufficient and no additional turn lanes are required.

If you need any additional information, please call me at 903-799-1280.

Sincerely,

Brad A. Haugh
District Maintenance Administrator – Atlanta

Cc: Icenhower