

SS WILSON ASSOCIATES

Consulting Engineers

REPORT NO. W95-025

**DETAILED NOISE CONTROL STUDY
PROPOSED RESIDENTIAL SUBDIVISION
TYANDAGA - WEST
HALTON FILE NO. 24T-95009B
PART OF LOTS 4 & 12, R.P. 99
CITY OF BURLINGTON**

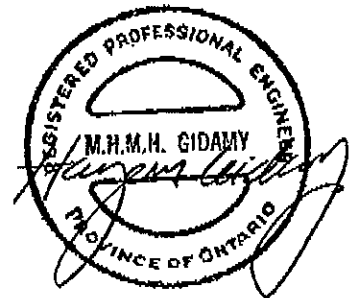
SUBMITTED TO :

**JANNOCK PROPERTIES
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1.0 INTRODUCTION

- 1.1** The services of SS Wilson Associates were retained by Jannock Properties to prepare a Detailed Noise Control Study for the proposed development referred to as Tyandaga - West located on Part of Lots 4 and 12, R.P. 99 in the City of Burlington, Ontario.

The objective of this report to update the previously prepared Noise Control Feasibility Study Report No. W95-025 dated April 23, 1996. It is also the objective of this report is to support an application for Final Approval and Registration of the proposed development.

- 1.2** The site is bounded by the following land uses:
- to the north by conservation lands
 - to the south by Ontario Hydro lands, the North Service Road and the QEW/Highway 403 interchange
 - to the east by an existing residential development - Tyandaga Woodlands and Ontario Hydro lands
 - to the west by a shale reserve quarry; Aldershot Quarries, which is owned by the proponent

The location of the site is shown in Figure 1.

- 1.3** Major features of the development are defined by the Lot Grading Plans 1 of 4, 2 of 4, 3 of 4 and 4 of 4, Sheets No. 15, 16, 17 and 18 dated June 1998, prepared by Metropolitan Planning and Engineering Inc., Contract No. DB-433.

Figure 2 is a photoreduced copy of the proposed Draft Plan of Subdivision.

Other applicable drawings used in this study include the Sediment and Siltation Control Plan, Sheet 19 dated June 1998, prepared by Metropolitan Planning and Engineering Inc., Contract No. DB-433, and the Site Environs, Existing Features, Operational Plan, Sections and Rehabilitation Plans prepared by Harrington and Hoyle Ltd. dated August 1992.

1.4 Major noise sources (current and future) impacting the development include:

1. The proposed Aldershot Quarries Area "C" shown on Figure 3.
2. Highway 403 and Highway QEW/403.
3. To a lesser extent, the North Service Road.

The proponent advises that Area "C" in the Aldershot Quarries may be active within the next 10 to 25 years.

1.5 This report reflects the following new features:

- The proposed Grading Plans for the Tyandaga-West Subdivision.
- The accurate survey of both the subject site and how it is related to the Aldershot Quarries site, which is located immediately to the west.
- The new lot/block arrangements and numbering.

All these new features are shown on the drawings prepared by Metropolitan Planning & Engineering Inc. referenced above.

1.6 More detailed sound level calculations have been performed in this study due to the proposed Aldershot Quarries operations at several additional locations within the subject site.

1.7 All the sound level calculations made throughout this report are based on the International Standardization Organization (ISO) ground attenuation model, to replace the Canada Mortgage and Housing Corporation (CMHC) model.

1.8 The scope of this report is to define the minimum noise attenuation requirements for the control of outdoor and indoor environmental sound levels.

1.9 The proposed development was the subject of a Noise Control Feasibility Study Report prepared earlier by this firm, Report No. W95-025 dated April 23, 1996.

2.0 SUMMARY AND RECOMMENDATIONS

2.1 SUMMARY

Based on the analysis conducted in this investigation, it is concluded that:

1. The unattenuated daytime sound levels at the residential units along the north-west side of the subdivision will exceed the recommended objective sound level due to the future quarry operations. For these units, outdoor noise control measures are required along with relevant warning clauses.

All other units on the development will have acceptable sound levels, and therefore, no outdoor noise control measures need be considered.

2. As a result of the change in the modeling procedures, the calculated sound levels due to the proposed quarry operations have increased by 1 to 2 dBA. Therefore, a higher sound barrier is recommended.
3. The predicted unattenuated sound levels due to Highway 403/QEW and the North Service Road do not exceed the Provincial objectives, therefore, there is no need to consider roadway noise mitigation for this development.
4. Although the projected sound levels are predicted to be above the sound level criteria outlined in Section 3, it is feasible to control sound levels for outdoor and indoor areas of the proposed development to meet the stated criteria. We therefore recommend that final approval and registration be given with appropriate implementation conditions.
5. The calculated sound levels show that there will be no need for mitigation if the equipment is located at least 150 metres from the developments west property limit; i.e. where the closest excavation point is 150 metres from the quarry's east property line with a gradual slope towards the bottom of the quarry.

2.2 RECOMMENDATIONS

1. Outdoor Noise Control Measures

Lots: 18 to 29 inclusive
Blocks: 8 to 11 inclusive

- a. An acoustical barrier shall be constructed to protect the Outdoor Living Areas (OLA) and the second storeys of the lots/blocks referenced above.

- (i) The barrier should be constructed along the alignment shown schematically in Figure 4.
 - (ii) The required barrier height as shown in Figure 4 is approximately 4m earth berm or 5m earth berm/acoustic fence combination.
 - (iii) The barrier may consist of an earth berm, a fence or a combination thereof. The fence component should be constructed of a durable material having approximately 20 kilograms per square meter (four pounds per square foot) of mass surface density and be in a continuous line without openings or gaps.
- c. The sound barrier heights are based on the proposed grade elevations shown on the grading plans prepared by Metropolitan Planning & Engineering Inc. and referenced in Section 1.3 of this Report. Any changes to the noted elevations will require revisions to the barrier heights.

2. Warning Clause¹

The following warning clause shall be registered on title and included in all Development Agreements and Offers of Sale and Purchase or Lease of all lots and blocks within the subject site:

"The purchaser/tenants acknowledge the presence of a future extractive industrial land use to the west and that extraction may take place during the daytime only."

3. Required Sections and Details

Typical cross sections will be prepared and submitted by the Consulting Engineers responsible for the site grading and drainage plans prior to Final Approval and Registration of the subdivision based on the final grade elevations. The sections would typically include existing and proposed future grades, source, receiver and barrier/berm ground elevations, berm slopes, ditches, etc.

4. Implementation Procedures

- Prior to final assumption of the subdivision by the Municipality, the Grading Certificate prepared by the project's Consulting Engineers is to be reviewed by the Acoustical Consultant for conformance with the proposed grade elevations which were used in this study. Any unfavourable deviations in the

¹ Reference should be made to the Ministry of the Environment's Guidelines for Registering Environmental Conditions.

final grades from the proposed grade elevations are to be used to make the necessary adjustments to the planned barrier top elevations to maintain the approved sound levels in this study.

- Prior to final assumption of the subdivision by the Municipality, the proposed sound barrier shall be certified by the Acoustical Consultant as being in conformance with this study.

3.0 SOUND LEVEL CRITERIA

3.1 SURFACE TRANSPORTATION CRITERIA

The surface transportation noise is based on the objective sound levels recommended by the Ontario Ministry of the Environment (Ref.: Publication LU-131), the Regional Municipality of Halton and the City of Burlington for different land uses and spaces.

The following is summary of the applicable sound level criteria for surface transportation sources:

Outdoor Living Areas (OLA)

Area & Time Period	$L_{eq}(16)$ Road and Rail (dBA)
Individual or Common Outdoor Living Areas (16 hr, 07:00 - 23:00)	55

Indoor Areas

Type of Space	$L_{eq}(\text{Time Period})$ (dBA)	
	Road	Rail
Living/dining areas of residences, hospitals, schools, nursing/retirement homes, day-care centres, etc. (Time period: 16 hr, 07:00 - 23:00)	45	40
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc. (Time period: 8 hr, 23:00 - 07:00)	40	35
General offices, reception areas, retail stores, etc. (Time period: 16 hr, 07:00 - 23:00)	50	45
Living/dining areas of residences, hospitals, nursing/retirement homes, schools, day-care centres, theatres, places of worship, libraries, individual or semi-private offices, conference rooms, reading rooms, etc. (Time period: 16 hr, 07:00 - 23:00 etc.)	45	40
Sleeping quarters of hotels/motels (Time period: 8 hr, 23:00 - 07:00)	45	40

The criteria for acceptable outdoor and indoor sound levels are based on “free-field” predicted and/or measured sound levels at the applicable receiver locations, thus the effects of sound reflections and reverberant sound fields are not considered.

If the sound level is less than or equal to the sound level criteria, no control measures will be required.

The outdoor sound levels *may* exceed the outdoor sound level criterion by up to 5 decibels, provided that it can be demonstrated that it is not technically feasible to achieve the criterion and that the occupants are informed of a potential disturbance due to the excess noise by means of a warning clause or cautionary note to be registered on title and included in all Development Agreement(s) and Offers of Sale and Purchase or Lease.

Central air conditioning is required when the nighttime sound level at the outside wall of the sleeping quarters or bedrooms is equal to or exceeds Leq_{8hrs} 60 dBA or when the daytime sound level at the outside wall of the Living/Dining/ Recreation space is equal to or exceeds Leq_{16hrs} 65 dBA.

If the nighttime sound level at the outside wall exceeds Leq_{8hrs} 50 dBA but is less than 60 dBA, or if the daytime sound level at the outside wall exceeds 55 dBA but is less than Leq_{16hrs} 65 dBA, then forced air heating with provision for future installation of central air conditioning is required.

3.2 CRITERIA FOR STATIONARY NOISE SOURCES

Since the proposed development may be subjected to high sound levels due to the future quarry operations in Area "C" (classified as Stationary Sources of Noise as defined by the MOE), the assessment procedures and criteria will have to be based on the MOE criteria.

The following criteria apply to the impact of Stationary Sources of noise as defined by the MOE to include industrial and commercial facilities. The criteria equally apply to, firstly the impact of Stationary Sources external to the development on the proposed development or, secondly to the impact of any proposed Stationary Sources internal to the development on the development itself or on to other existing noise-sensitive land uses external to the development.

The criteria used in this study are based on the guidelines prepared by the Ontario Ministry of the Environment for the assessment of planned "Stationary Sources" of sound, Publications NPC-233, NPC-205 and NPC-232 included in the Model Municipal Noise Control by-law, 1978.

The predicted and/or measured "predictable worst case" 1-hour equivalent sound levels (Leq_{1hr}) of the stationary source(s) are normally compared with the higher of the corresponding Leq_{1hr} of road traffic or the following criteria:

Outdoor Points of Reception

The criteria for outdoor points of reception in any area amenable for use are:

Area	Time Of Day	Sound Level, dBA
Major population centres or urban areas (MOE Class 1 Area)	Daytime and Evening 07:00 - 23:00	Leq1hr 50
Areas that combine urban and rural environments (MOE Class 2 Area)	Daytime 07:00 - 19:00	Leq1hr 50
	Evening 19:00 - 23:00	Leq1hr 45

In the Plane of a Window

The criteria for bedrooms, living/dining areas of residences, hospitals, schools, nursing/retirement homes, day-care centres, etc. during the day and evening time periods are:

Area	Time Of Day	Sound Level, dBA
Major population centres or urban areas (MOE Class 1 Area)	Daytime and Evening 07:00 - 23:00	Leq1hr 50
Areas that combine urban and rural environments (MOE Class 2 Area)	Daytime 07:00 - 19:00	Leq1hr 50
	Evening 19:00 - 23:00	Leq1hr 45

The criteria for bedrooms or sleeping quarters during the nighttime period are:

Area	Time Of Day	Sound Level, dBA
Major population centres or urban areas (MOE Class 1 Area)	Nighttime 23:00 - 07:00	Leq1hr 45
Areas that combine urban and rural environments (MOE Class 2 Area)	Nighttime 23:00 - 07:00	Leq1hr 45

4.0 ANALYSIS

4.1 TRAFFIC NOISE SOURCES

1. QEW AND HIGHWAY. 403

Posted Speed limit	:	100 km/hr.
Current AADT/SADT	:	133,500 (1991)
Future AADT/SADT*	:	203, 136 (2008)
% Medium Trucks	:	8 %
% Heavy Trucks	:	16 %
Source of Information	:	MTO Volumes Book

(* Note: Assumed Traffic Growth Rate 2-5%/Yr to 2008)

2. HIGHWAY 403

Posted Speed limit	:	100 km/hr.
Current AADT/SADT	:	84,600 (1991)
Future AADT/SADT*	:	128, 729 (2008)
% Medium Trucks	:	8 %
% Heavy Trucks	:	16 %
Source of Information	:	MTO Volumes Book

(* Note: Assumed Traffic Growth Rate 2.5%/Yr to 2008)

Roadway noise prediction methods used and the various adjustments implemented are summarized in Appendix A.

Appendix B includes sample calculations of the roadway noise impact on Lots 48 and 49 without taking into effect the attenuation due to the extensive mature vegetation in the area between the development and the roadways. The predicted unattenuated 24 hour level in the outdoor living area is Leq 57 dBA which is below the maximum allowable objective of 60 dBA. With the effect of the mature vegetation, the predicted 24 hour level will be a maximum Leq 52 dBA. For the lots located north of Lots 48 and 49, the sound levels are expected to be substantially below 52 dBA due to the reduced angle of exposure to the roadways, the increased distance setback and the presence of more intervening mature vegetation.

4.2 QUARRY NOISE PREDICTION

1. Points of Reception

Figure 3 illustrates the outline of the existing Aldershot Quarry and the proposed dwelling units.

For the purposes of investigating the potential noise due to the quarry, we have selected 4 receptor locations (Lot 20, Lot 30, Block 8 and Block 11) which are considered the worst case due to their proximity and exposure to the area and work faces to be extracted. For each receptor, the assessment was carried out at 2 locations; the closest part of the backyards (i.e. the Outdoor Living Area (OLA)) and the 2nd storey level.

The receptors are as follows:

- R1A: Backyard point of reception on Lot 20
- R1B: Second Storey² point of reception on Lot 20
- R2A: Backyard point of reception on Lot 30
- R2B: Second Storey point of reception on Lot 30
- R3A: Backyard point of reception on Block 8
- R3B: Second Storey point of reception on Block 8
- R4A: Backyard point of reception on Block 11
- R4B: Second Storey point of reception on Block 11

The selected receptors are marked on Figure 5.

² A typical receptor 4.5m above ground level.

2. Ambient Sound Levels

The immediate area surrounding the subject quarry is predominantly conservation land use with residences in the immediate area east of the subject site.

The primary source of ambient noise in the area is due to vehicular traffic on the QEW / Highway 403 and the North Service Road which are located approximately 650 m south of the closest lot. While the predicted sound level due to the Highway at Lots 48 and 49 show hourly sound levels in excess of Leq 50 dBA, the predicted levels at the northern lots, which are closest to the quarry, are anticipated to be below 50 dBA. Accordingly, the MOE minimum ambient data in Section 3.3 will be used. (primarily Leq 1(h) 50 dBA during the daytime).

In this study, we have used the worst case ambient (i.e. the MOE minimum ambient data) despite the fact that measurements taken by this firm under light wind conditions during the month of September 1997 at several locations throughout the subject site, show ambient levels higher than Leq (1h) 50 dBA.

3. Typical Site Operations

Prior to future extraction of the shale material from this site, the top soil or the overburden will be removed to expose the material to be extracted from the site. The overburden removed will be used for both the construction of the perimeter visual/sound berm and also during the site rehabilitation phase. The phasing and direction of extraction are outlined in the operational and rehabilitation plans which are reproduced in part in Figures 6 and 7.

Due to the topography of this site extraction may occur in 2 or 3 lifts depending on the grade elevations.

The proponent advises that material extracted from this site will be shipped off-site via trucks to another location for further processing.

The shale material will be stored in stock piles on-site generally in the vicinity of the toe of the work face.

With the removal of the top soil and overburden, the shale is now exposed and ready for the extraction operations approximately 2 metres below grade.

There are 2 possible alternatives for the extraction of the shale material from the proposed pit with the use of either a hydraulic excavation backhoe or a bulldozer as the primary equipment for the extraction process itself. The use of a hydraulic excavation backhoe for extraction will be very limited to certain

faces close to the extraction limit while the use of the bulldozer is the favoured approach by the proponent at this time.

The basic operations using the bulldozer method is to extract the shale material using a bulldozer, while a front end loader is used for management of the stock piles and loading the haulage trucks. The trucks then transport the shale off site for processing elsewhere.

Firstly, the bulldozer creates grooves in the ground using ripping teeth which rip the ground at 1.8 m to 2.1 m spacing while moving up and/or down on the sloped work face until the workface is ripped. After weathering of the turned ground takes place for a period of time, the bulldozer then pushes the ripped shale downward along the sloped face to create a linear stock pile along the base of the face as shown schematically in Figure 8. The front end loader takes care of creating additional stock-piles elsewhere on site where required, overall management of the stock piles and for loading the haulage trucks.

Occasionally, both pieces of equipment operate simultaneously for continuous periods in any one hour during peak operations of the brick plant which is located elsewhere off this site.

The following is summary of the technical information of the proposed operations:

- Face slope is 4:1
- Approximate deck (or lift) height is 20 m (1 or 2 decks will be used depending on the grade elevations)
- Bulldozer speed 3 km/hr
- Rip spacing 2.1 m apart
- Calculated length of the work face 82.5 m ±
- Calculated width of the work face 39 m ±
- Work face ground elevations: varies based on a 4:1 slope
- Front end loader works approx. 36 min/hr around the stock piles
- Bulldozer operates 60 minutes/hr on the work face
- Front end loader works approx. 24 min/hr loading the haulage trucks.

Two stockpile areas will be located within the site; close to the toe face and close to the front end loader. Trucks will enter the site from the entrance on the south-west section of the property and proceed to the stockpile areas.

The projected number of trucks entering and leaving the site in any one hour is 2 @ 3 loads each per hour. Not more than 4 minutes will be required to load trucks at the site. The maximum speed of the vehicles within the site will be up to 20 km/hr.

4. Potential Sources of Noise

The components of the stationary source defined by the MOE for this project include mobile sources and operations, some of which continually change their location every few seconds, minutes, days, every few weeks/months depending on the phasing of the site operations. Therefore, this operation is somewhat complex in nature and modelling of the noise events include a thorough knowledge of the operations and the ability to model these noise events at various locations and phases of the site operation process.

The site operations for the stationary sources assessment include the following activities:

- the ripping and excavation of the shale material.
- transporting of the shale internally within the site from the pit face or active face to the storage stock pile, or loading areas.
- haulage truck movements within the site which include movements and idling.

The following summarizes the operations that will be carried out as part of the "construction process" and will be subject to sound level criteria during construction:

- stripping of the natural earth covering or overburden using a front-end loader or a tracked bulldozer.
- construction of the visual/sound attenuating perimeter /berm.
- site rehabilitation work.

5. Prediction Model

A 3-dimensional computer program for multiple point and line sources and multiple receivers was used to calculate sound levels. The program takes into account:

- Reference noise levels and reference distances for the equipment working in each area of the proposed development site (i.e. sound emission levels).
- The Cartesian co-ordinates (x, y & z) of all sources and receivers.
- The number of events or occurrences of the noise in a given time period and the time period of each event.
- Spherical divergence factor.
- Additional attenuation due to sound barriers; natural or man-made types.
- Additional attenuation due to ground based on the ISO model for ground attenuation.
- Atmospheric attenuation due to air molecular absorption.
- Acoustical shielding due to the presence of intervening structures or

buildings between a specific source and the receptor.

6. Predicted Sound Levels

Figure 9 shows four typical work faces; WF1, WF2, WF3 and WF4, which were used for assessment purposes. The faces are considered the worst case scenarios due to distance, exposure and barrier attenuation.

Without incorporation of any noise control measures, the noise from the quarry will be the dominant source of noise. The predicted sound level will exceed the applicable criteria by significant margins.

With the introduction of the grade differences between the plateaus of the extracted shale (lifts) and the surrounding land uses, a significant reduction can be expected i.e., with increasing quarry depth, the sound levels will be further attenuated.

Appendix B contains sample calculations and results of all sources of noise when the extraction takes place nearest the closest receptors.

Table 1A shows summary of the predicted sound levels at all receptors based on the worst case scenario; i.e., with all equipment operating simultaneously (all trucks, bulldozer and front end loader) and without taking into consideration the effect of the trees.

The results show that the dominant source of noise is due to the operation of the bulldozer almost right-up to the closest property line or the limit of extraction.

Figure 10 shows the extent, coverage and density of the trees on the site of the proposed development. The depth of coverage ranges from 20 to over 130 metres. Accordingly, the sound levels for Lots 18 to 28 have been adjusted by -5 dBA and lots south of Lot 28 by -10 dBA. Table 1B shows the predicted sound levels with the effect of the trees.

7. Impact Assessment

The criteria for indoor Leq sound levels are based on projected Leq levels at the outside face of the dwellings with appropriate assumptions for the differences between the outdoor and indoor sound levels. If the outside Leq levels do not exceed the recommended objective sound levels, then the indoor Leq levels will not be exceeded, assuming standard building construction and openable windows.

Overall daytime sound levels at the dwelling facades are shown in Tables 1A and 1B.

In consideration of the estimated sound levels presented in Table 1A and by comparison to the acceptable indoor noise criteria (Section 3) it is concluded that with the incorporation of a sound barrier having an approximate height of 4 metres (berm only) or 5 metres (3m berm + 2m acoustic fence on top), the future shale quarry is not expected to be of concern for the subject development.

Figure 4 illustrates the proposed alignment of the recommended sound barrier.

TABLES

TABLE 1A
PREDICTED OVERALL HIGHEST HOUR Leq, dBA
WITHOUT THE EFFECT OF THE TREES

WORKFACE CODE	RECEPTOR	BARRIER HEIGHT 4m
WF1	R1A: LOT 20 BACKYARD P.L.	52 dBA
WF1	R1B: LOT 20 2ND STOREY	53 dBA
WF2	R2A: LOT 30 BACKYARD P.L.	57 dBA
WF2	R2B: LOT 30 2ND STOREY	57 dBA
WF3	R3A: BLOCK 8 BACKYARD P.L.	51 dBA
WF3	R3B: BLOCK 8 2ND STOREY	52 dBA
WF4	R4A: BLOCK 11 BACKYARDS P.L.	55 dBA
WF4	R4B: BLOCK 11 2ND STOREY	56 dBA

TABLE 1B

PREDICTED OVERALL HIGHEST HOUR Leq. dBA
WITH THE EFFECT OF THE TREES

WORKFACE CODE	RECEPTOR	BARRIER HEIGHT 4m
WF1	R1A: LOT 20 BACKYARD P.L.	47 dBA
WF1	R1B: LOT 20 2ND STOREY	48 dBA
WF2	R2A: LOT 30 BACKYARD P.L.	<50 dBA
WF2	R2B: LOT 30 2ND STOREY	<50 dBA
WF3	R3A: BLOCK 8 BACKYARD P.L.	<51 dBA
WF3	R3B: BLOCK 8 2ND STOREY	<52 dBA
WF4	R4A: BLOCK 11 BACKYARDS P.L.	50 dBA
WF4	R4B: BLOCK 11 2ND STOREY	51 dBA

NOTE: <Means less than the levels shown by up to 3dBA

FIGURES

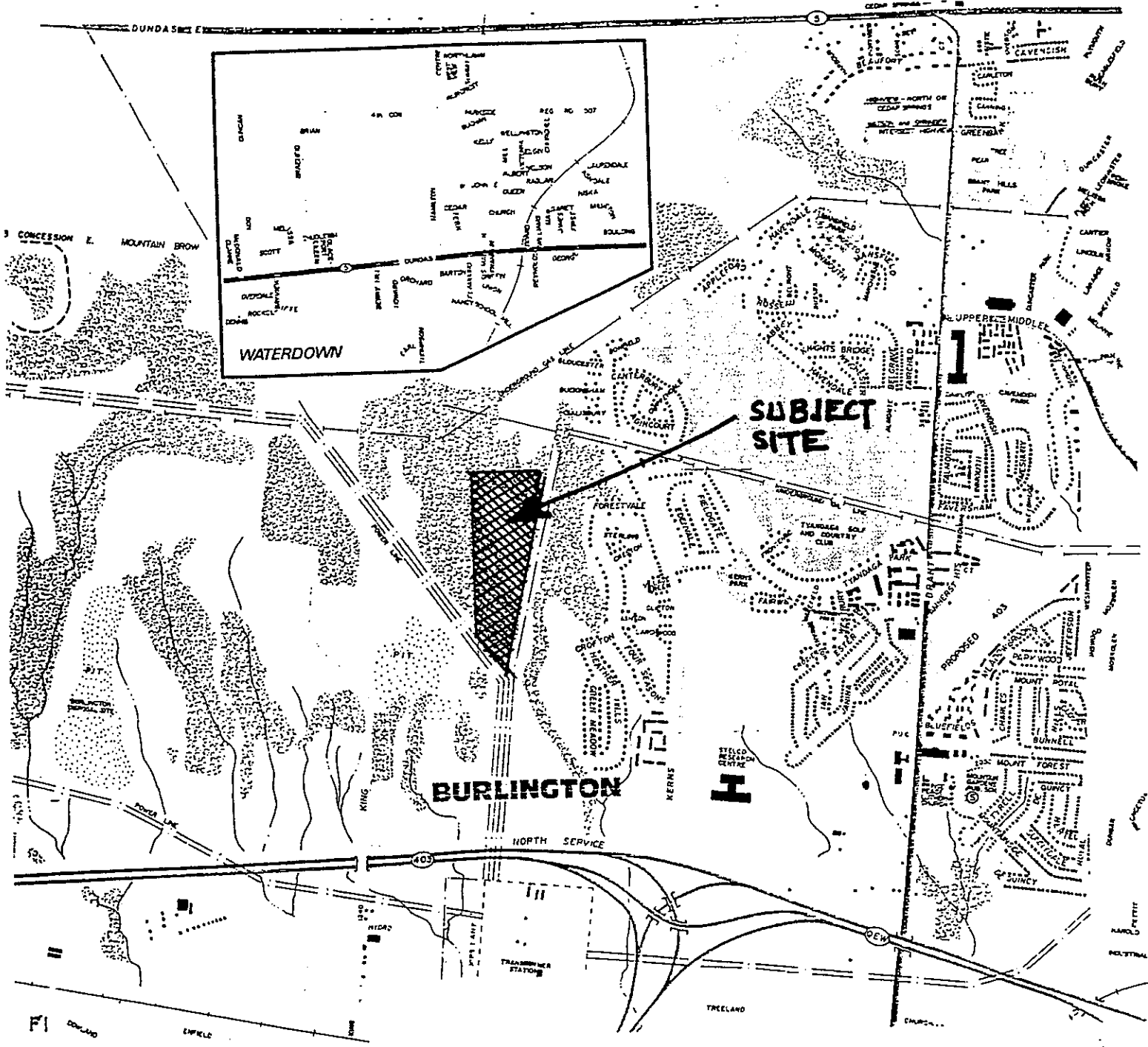
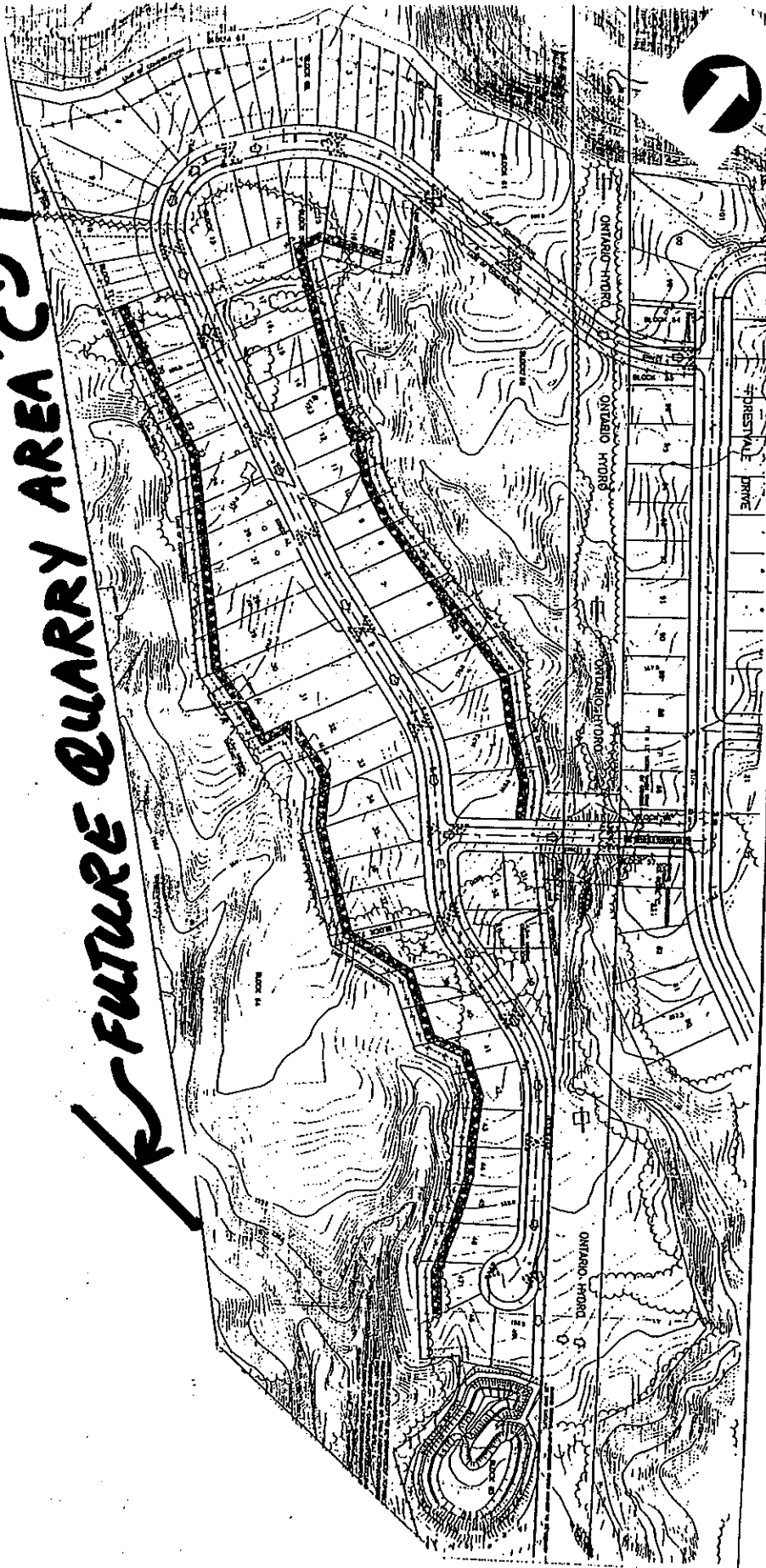


FIGURE 1
THE LOCATION OF THE SITE

FUTURE QUARRY AREA 'C'



**FIGURE 2
THE PROPOSED SUBDIVISION PLAN**

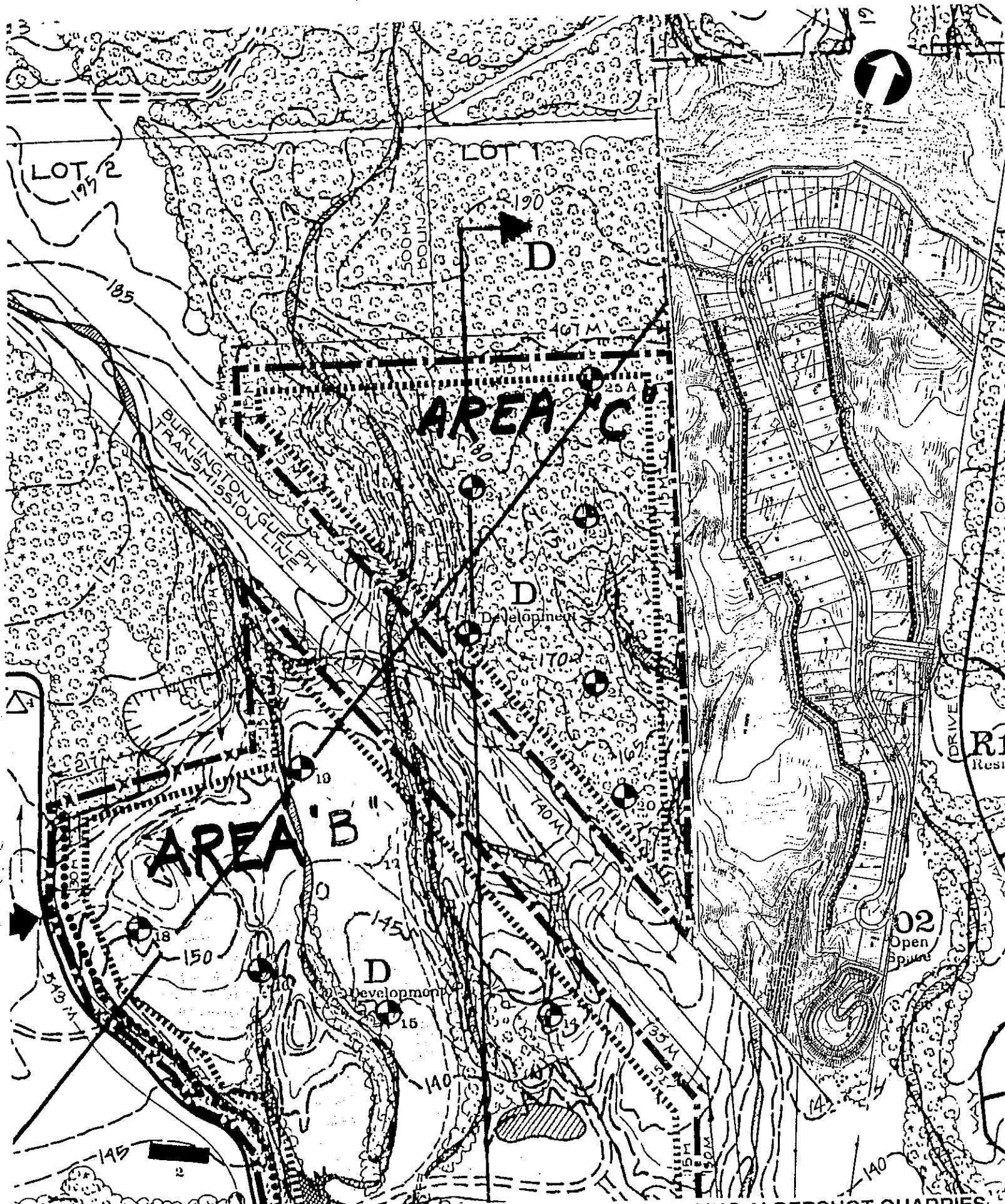


FIGURE 3 : THE PROPOSED SUBDIVISION PLAN AND THE EXISING ALDERSHOT QUARRIES
 CONIC 2

UNDERGROUND COLLECTOR
DRAINAGE COLLECT DEEPFACE AND FEED
IT DIRECTLY INTO ENHANCED STREAM

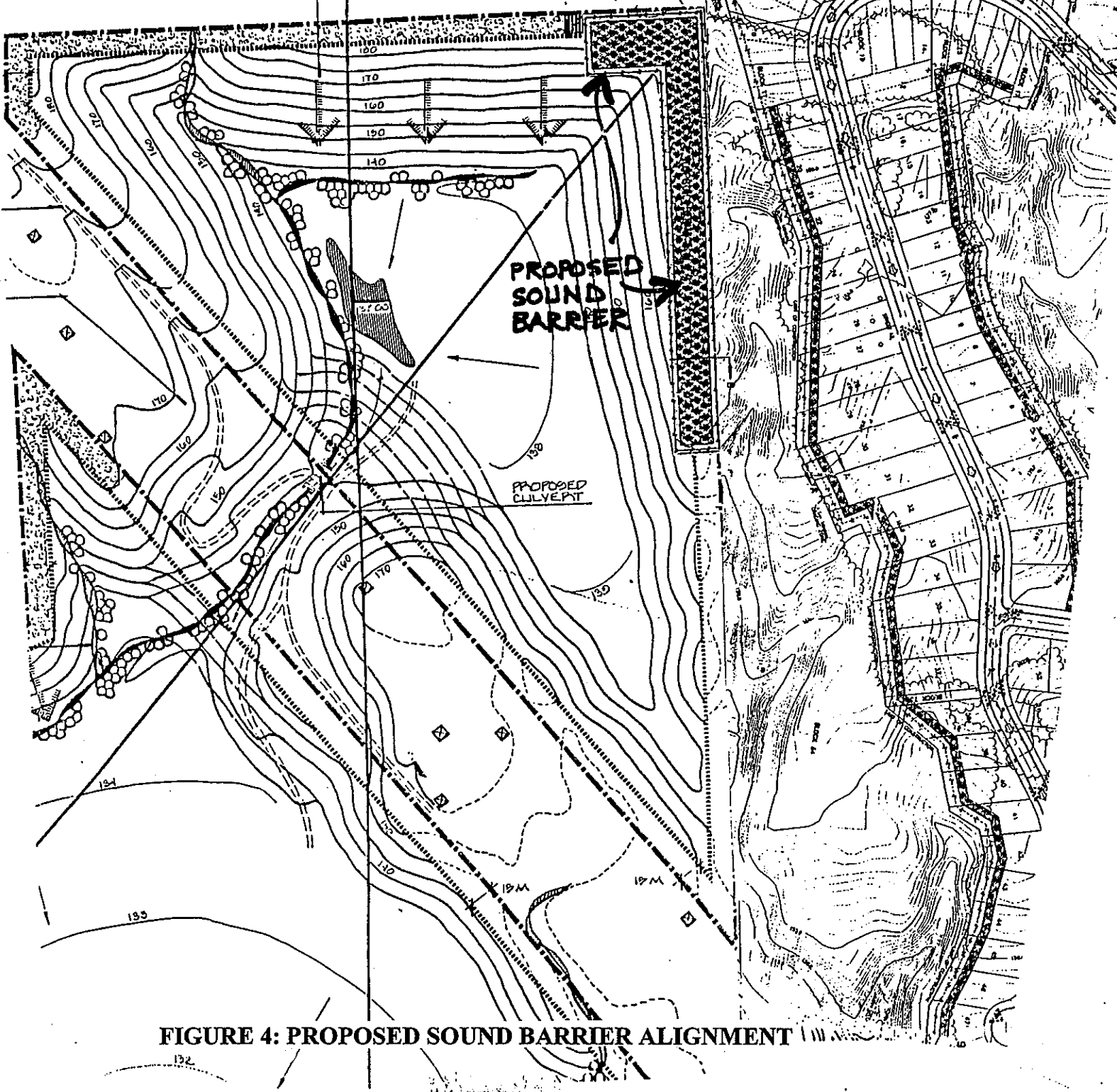


FIGURE 4: PROPOSED SOUND BARRIER ALIGNMENT

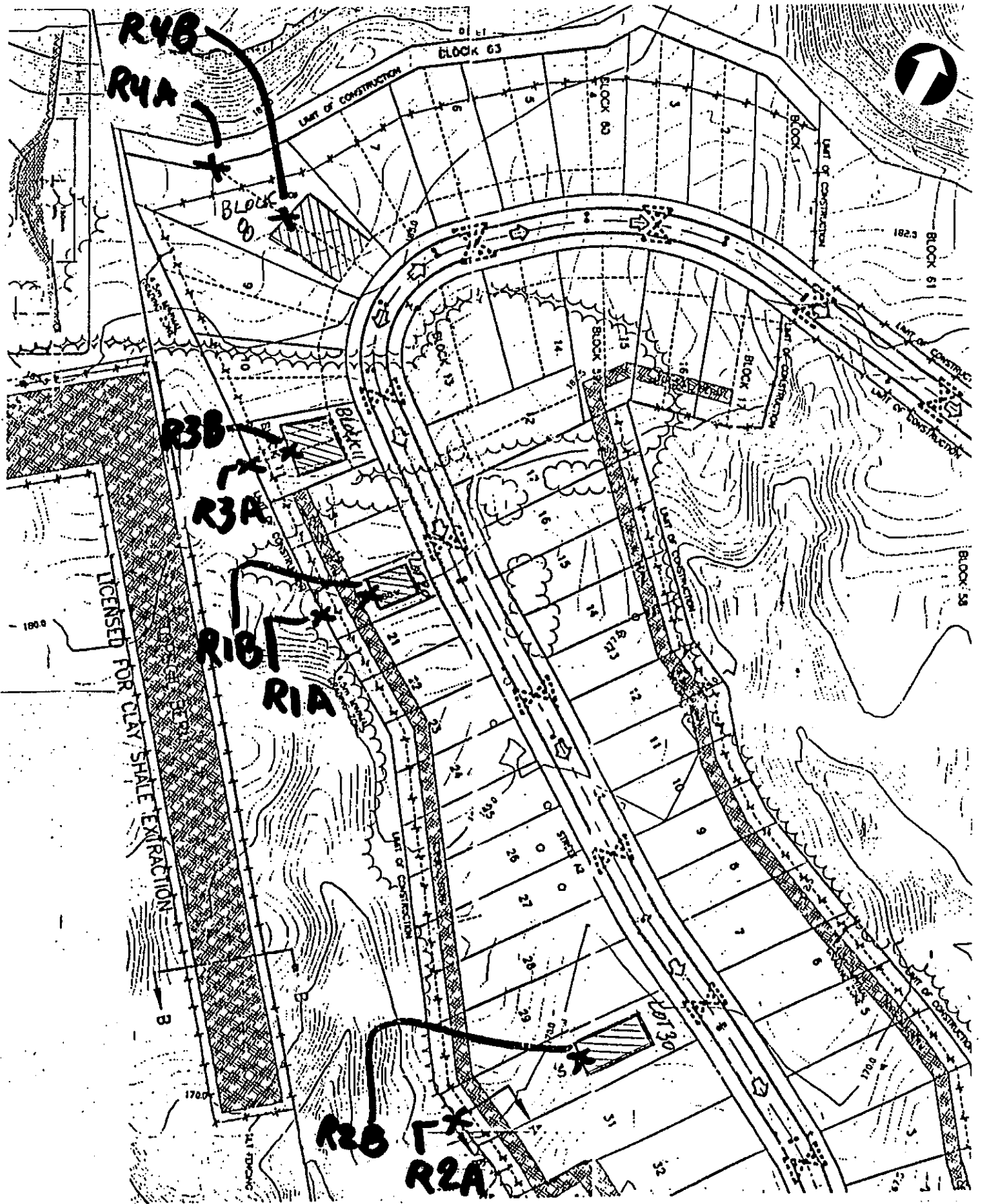


FIGURE 5: THE SELECTED POINTS OF RECEPTION

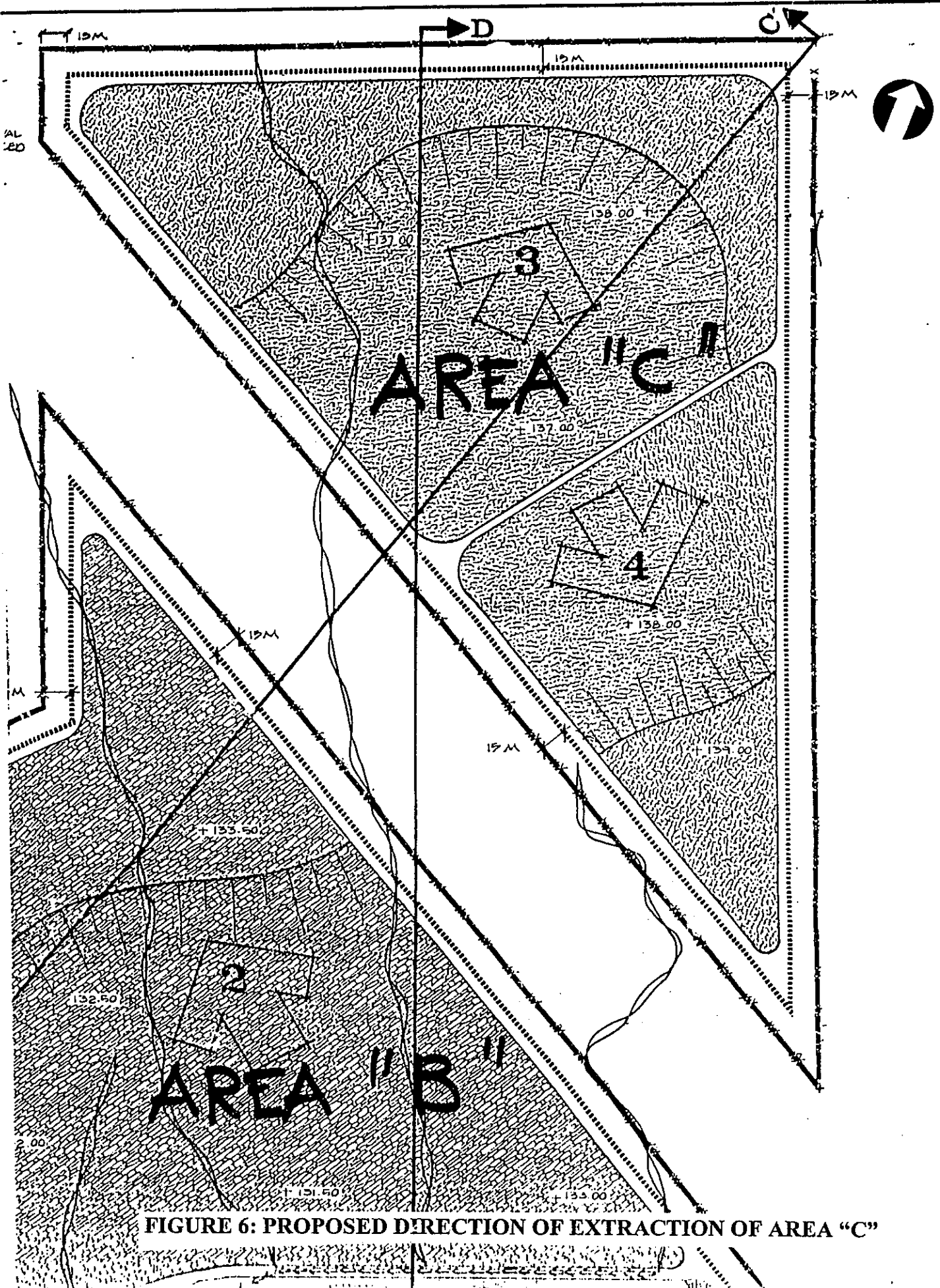




























FIGURE 6: PROPOSED DIRECTION OF EXTRACTION OF AREA "C"

Legend

-  SCRAP STORAGE
-  BOUNDARY OF LICENSED AREA
-  LIMIT OF EXTRACTION SETBACK
-  SETBACK DIMENSION LINES (METRES)
-  SECTION LINE
-  EXTRACTION LINE
-  DIRECTION OF EXTRACTION
-  PROPOSED RECLAMATION OF HYDRO LANDS
-  UNDISTURBED AREA
-  PRODUCT STOCKPILE AREA ± ROOMS
MAX. HEIGHT 10M
-  AREA UNDER REHABILITATION
-  REHABILITATED AREA
-  MAINTENANCE, STORAGE, AND
REFUELLING AREA
-  SILT POND
-  POLISHING POND
-  TEMPORARY DRAINAGE DITCH
-  EXISTING STREAM
-  REHABILITATED STREAM
-  EXISTING FENCING - SEEDLING
-  PROPOSED 1200 MM POSIE WIRE FENCE
-  3M HIGH OVERBURDEN BERM,
3M FROM FENCE
-  OVERBURDEN STOCKPILE
-  STRIPPED AREA
-  MOVEMENT OF STRIPPED SOIL
-  EXISTING 7M HIGH POPLAR TREE SCREEN,
2.5M OC., ON 3M HIGH BERM.
-  ENTRANCE/EXIT
- +133.00 FINAL QUARRY FLOOR ELEVATION

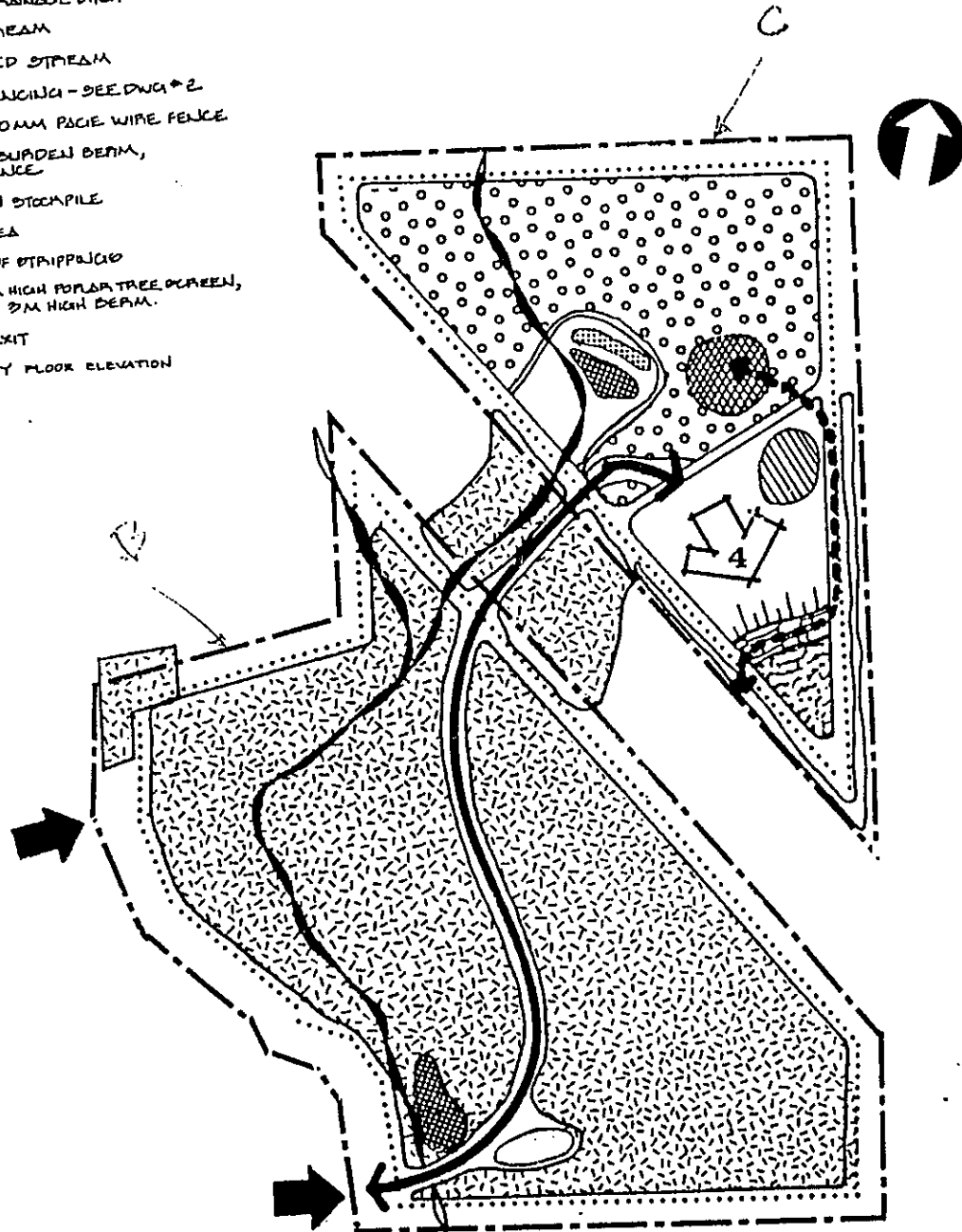


FIGURE 7: PROPOSED SITE ACCESS AND REHABILITATION

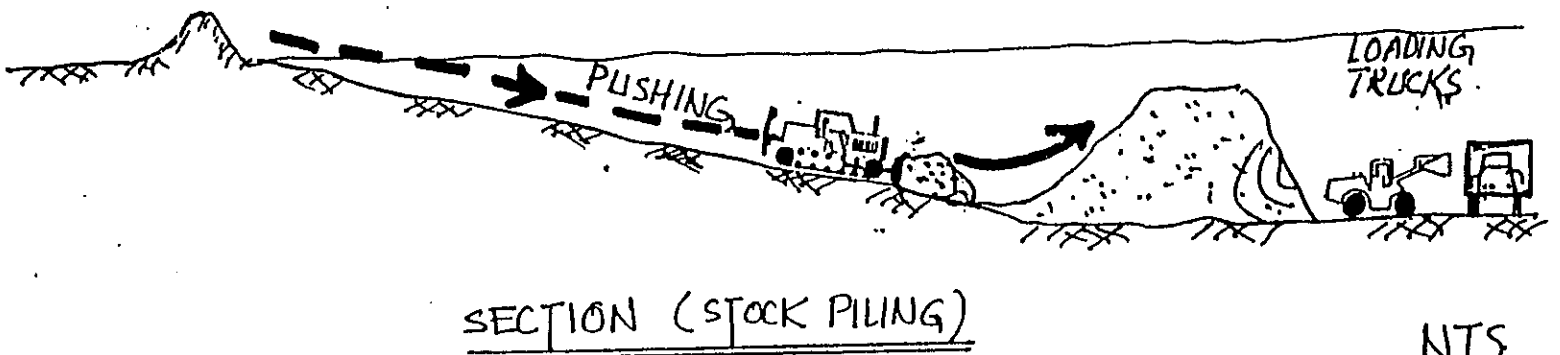
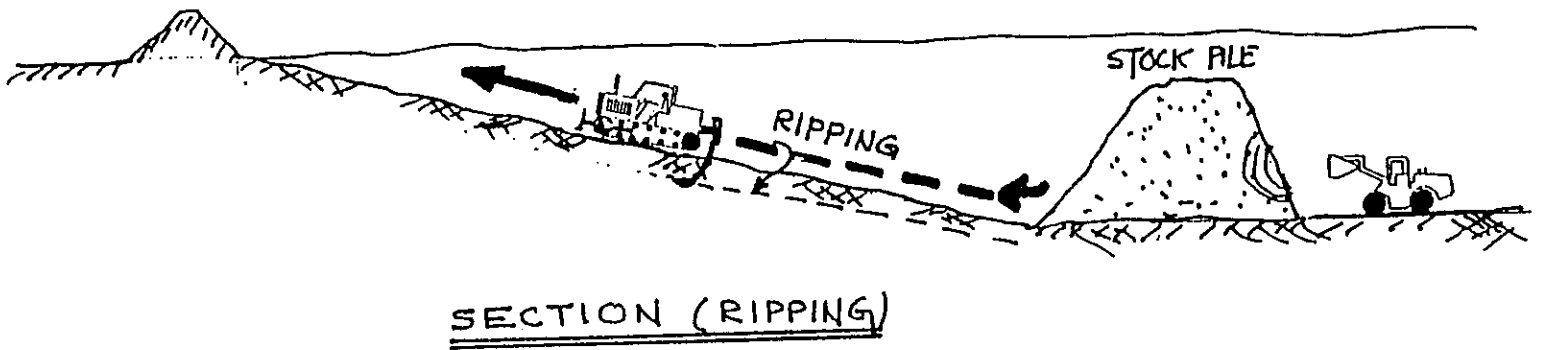
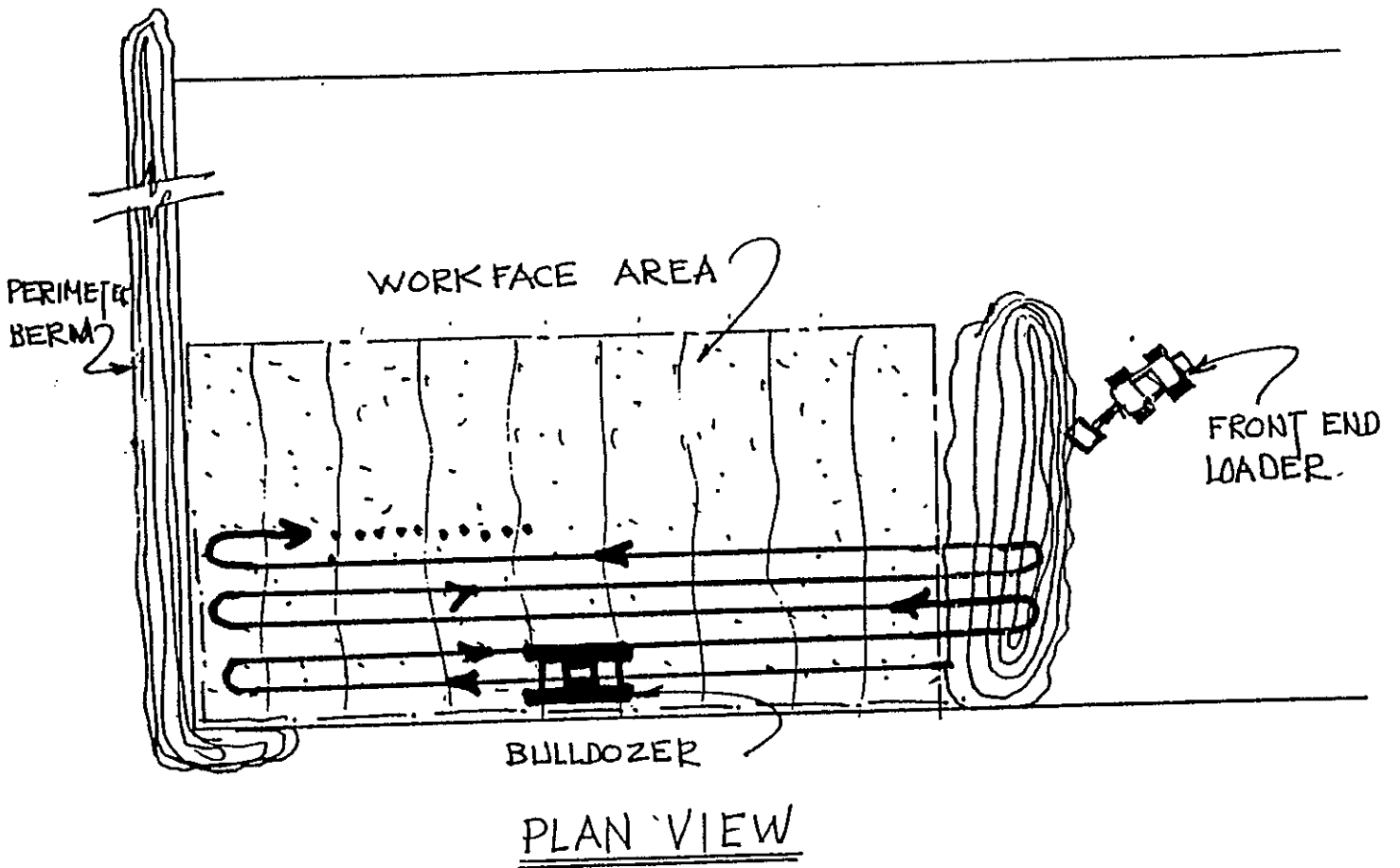


FIGURE 8: TYPICAL OPERATIONS AND WORK FACE LAYOUT

NTS

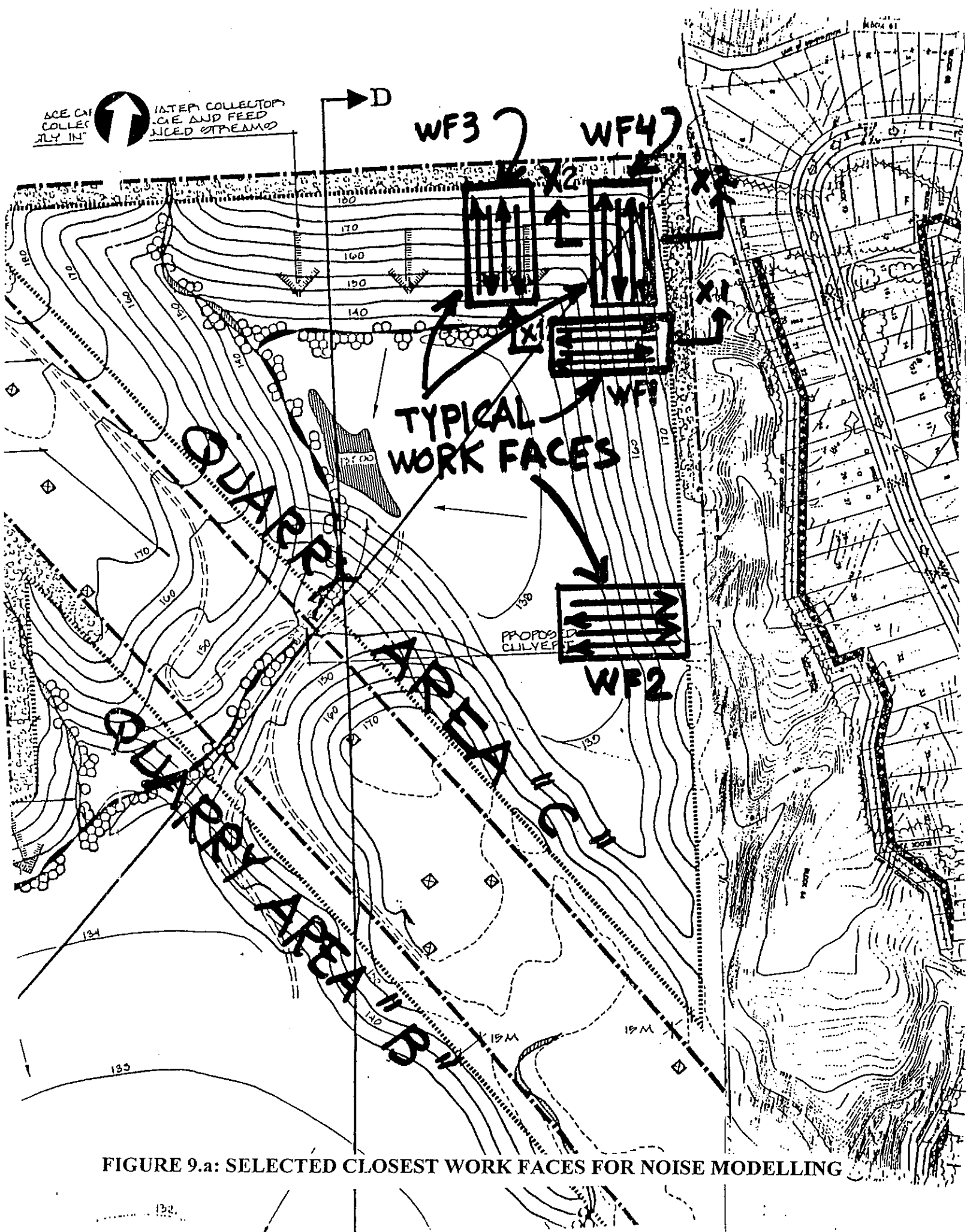
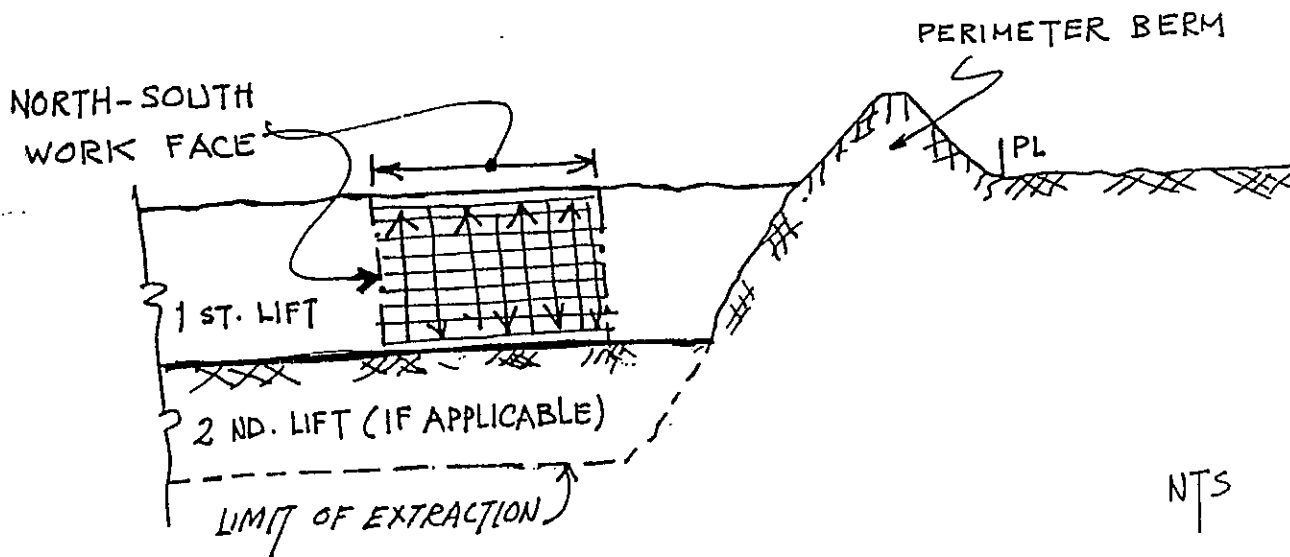
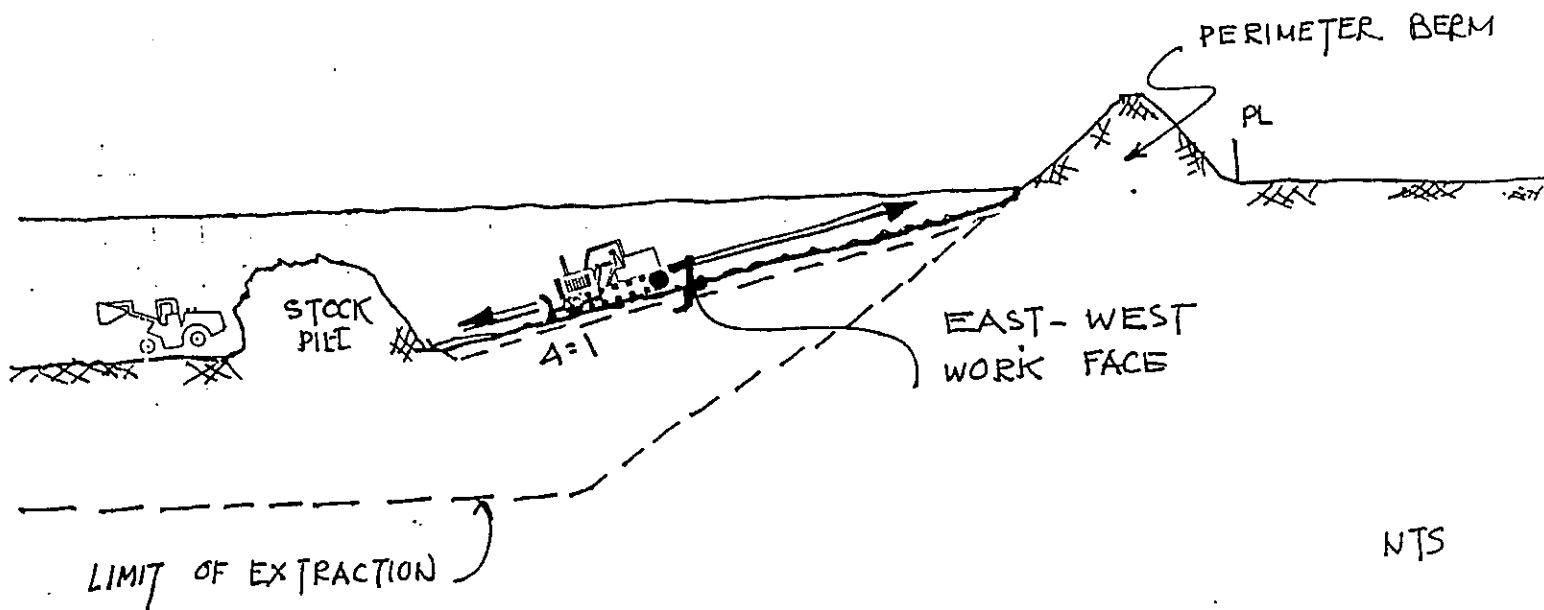


FIGURE 9.a: SELECTED CLOSEST WORK FACES FOR NOISE MODELLING



SECTION X2-X2
(N-S WORK FACE)



SECTION X1-X1
(E-W WORK FACE)

FIGURE 9.b: TYPICAL SECTIONS THROUGH WORK FACES

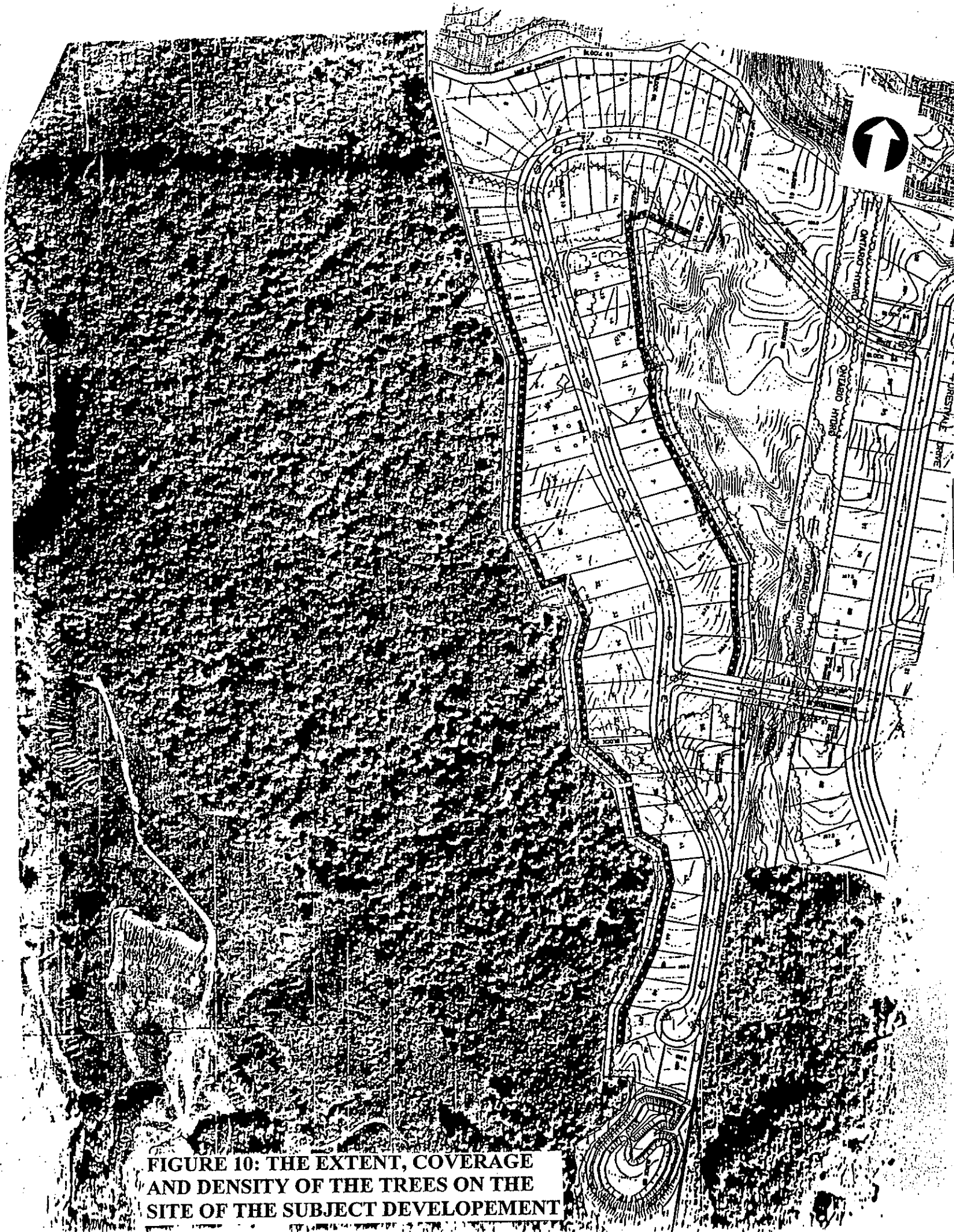


FIGURE 10: THE EXTENT, COVERAGE AND DENSITY OF THE TREES ON THE SITE OF THE SUBJECT DEVELOPEMENT

APPENDIX A
GENERAL PROCEDURES AND ADJUSTMENTS

APPENDIX A

GENERAL PROCEDURES AND ADJUSTMENTS

1.1 MOE ROAD TRAFFIC NOISE PREDICTION TECHNIQUE

The road traffic noise assessment method is based on a model originally developed by the U.S. Federal Highway Administration in 1978 as modified by the Ontario Ministry of the Environment (MOE) to suit the provincial requirements.

The analytical model predicts hourly Leq due to road traffic. It is modular in structure and thereby lends itself to applications requiring detailed analysis.

The variables required for the road traffic assessment include the following: road traffic volume per hour, percentages of automobiles, medium trucks and heavy trucks, average speed of traffic flow, roadway gradient, source to receiver distance(s), type of ground cover, road element size and shielding applicable.

The details of the model could be found in the publication "Ontario Road Noise Analysis Method for Environment and Transportation (ORNAMENT)¹", Ministry of the Environment, October 1989.

The applicable procedures are summarized in the following paragraphs. Sample calculations are included in this report for a typical receiver location.

1.1.1. Predicted sound level data are generally based on two daily periods or the full 24 hour period as requested by the MOE for specific sources:

07:00 to 23:00 hours
23:00 to 07:00 hours

1.1.2. Roadway traffic volumes (AADT) split:

Regional Roads

07:00 to 23:00 hours = 90%
23:00 to 07:00 hours = 10%

Provincial Highways

07:00 to 23:00 hours = 85%
23:00 to 07:00 hours = 15%

1.1.3. Reference Hour Sound Level:

$$Leq_{ref} = 10 \log \sum_{i=1}^3 \{ K_g P_i 10^{\frac{(L_{0i})}{10}} \} - 10 \log S + 2.76 \quad 1$$

$$(L_0)_{AUTOMOBILE} = 38.1 \log(S) - 2.42$$

$$(L_0)_{MEDIUM TRUCK} = 33.9 \log(S) + 16.43$$

$$(L_0)_{HEAVY TRUCK} = 24.6 \log(S) + 38.5$$

¹The computerized version of this model is 'STAMSON 5.03'.

- where Leq_{ref} the reference hourly sound level;
 K_g the road gradient adjustment factor for heavy trucks;
 P_i the percentage of i^{th} vehicle class, expressed as fraction of the total volume;
 $(L_0)_i$ the reference energy mean emission level of i^{th} vehicle class;
 S the posted speed limit in km/h.

1.1.4. Adjustments to Reference Level (dB)

- Traffic Volume:

$$\text{Adjustment} = 10 \log (V/V_{ref}) = 10 \log (V/40)$$

where V is the total traffic volume.

- Distance:

$$\text{Adjustment} = 10 \log (D_{ref}/D)^{1+\alpha}$$

where D_{ref} is reference distance of 15 m.
 α is ground absorption coefficient.

$$\alpha = 0 \text{ for reflective surfaces (hard ground)}$$

$$\alpha = 0.66 \text{ for absorptive surfaces (soft ground)}$$

where $h_{eff} \leq 3 \text{ m}$

$$\alpha = 0.75(1-(h_{eff}/25)) \text{ for absorptive surfaces}$$

where $3 < h_{eff} \leq 25 \text{ m}$

$$\alpha = 0 \text{ for absorptive surfaces}$$

where $h_{eff} > 25 \text{ m}$

$$h_{eff} = s + p + t + r$$

where h_{eff} is the total effective height.

- Road Segment

Non-Reflective Surface :

$$\text{Adjustment} = 10 \log \left\{ \frac{1}{\pi} \int_{\phi_1}^{\phi_2} \cos^{\alpha} \Phi \, d\Phi \right\} \quad 5$$

Reflective Surface :

$$\text{Adjustment} = 10 \log \left\{ \frac{\Phi_2 - \Phi_1}{\pi} \right\} \quad 6$$

where f_1 is the negative angle of view;
 f_2 is the positive angle of view.

1.1.5. Typical Receiver and Source Heights:

Outdoor Living Areas (OLA) = 1.5 m

Second Storey Bedroom = 4.5 m

Source Height = 0.5 m where $P_{HT} < 0.01$

Source Height = $\sqrt[3]{100 P_{HT}}$ where $0.01 \leq P_{HT} \leq 0.30$

Source Height = 2.4 m where $P_{HT} > 0.30$

where P_{HT} is the percentage of heavy trucks, unadjusted by the gradient factor, expressed as a fraction of the total volume.

1.2 BARRIER CALCULATION MODEL

1.2.1. Barrier attenuation is calculated using optical diffraction theory.

1.2.2. Attenuation for road traffic noise is calculated at 500 Hz for an incoherent infinite line source.

1.2.3. The barrier prediction model is based on the following:

$$\text{Barrier Attenuation} = 0 \text{ dB}, \quad \text{for } (N_0)_i \cos \phi \leq -0.1916$$

$$\text{Barrier Attenuation} = 10 \log \left\{ \frac{1}{\Phi_2 - \Phi_1} \int_{\Phi_1}^{\Phi_2} \frac{\tan^2 \sqrt{2\pi |N_0|_i \cos \phi}}{\sqrt{10} 2\pi |N_0|_i \cos \phi} d\Phi \right\},$$

for $-0.1916 \leq (N_0)_i \cos \phi \leq 0$

$$\text{Barrier Attenuation} = 10 \log \left\{ \frac{1}{\Phi_2 - \Phi_1} \int_{\Phi_1}^{\Phi_2} \frac{\tanh^2 \sqrt{2\pi (N_0)_i \cos \phi}}{\sqrt{10} 2\pi (N_0)_i \cos \phi} d\Phi \right\},$$

for $0 \leq (N_0)_i \cos \phi \leq 5.03$

$$\text{Barrier Attenuation} = 20 \text{ dBA} \quad \text{for } (N_0)_i \cos \phi \geq 5.03$$

where N_0 is Fresnel Number, $N_0 = 2.915 \times (\text{P.L.D.})$

APPENDIX B
SAMPLE SOUND LEVEL CALCULATIONS

S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
 STRIPPING ON THE EAST FACE NEAR THE TOP

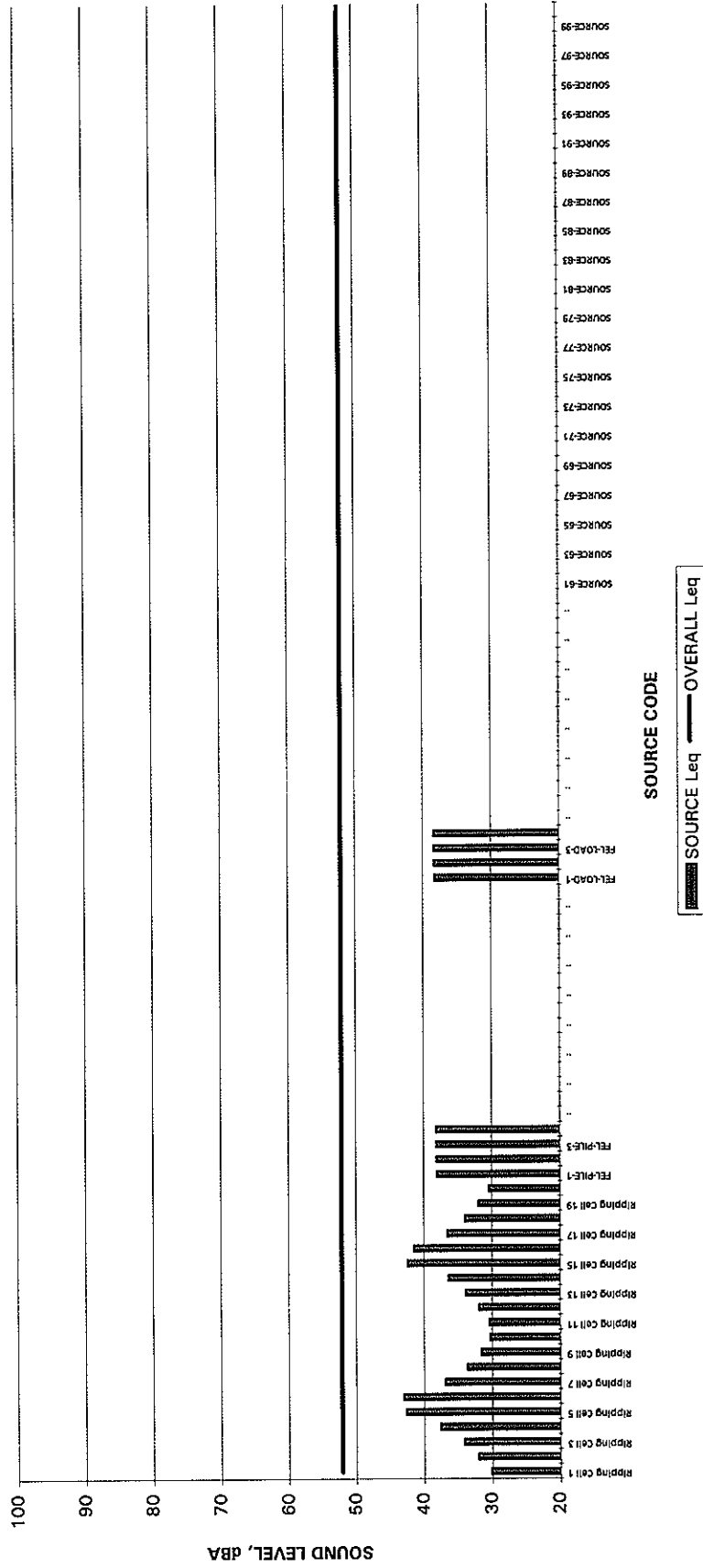
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 5/15/98 15:16

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 Receptor Name : LOT 20, OUTDDOR LIVING AREA (OLA)
 Other data WITH PROPERTY LINE BERM (4m HIGH)
 Other data STRIPPING CLOSE BY AT WORK FACE "WF1"

Disk File #: jana-r1 a.xls

SOURCE Leq SOUND LEVELS - ALL SOURCES



Master File Name MODEL100.XLS

Updated : May 24, 1995

5/15/98 15:16

File Number :

Project Name :

Receptor Name :

Other data

S.S. WILSON AND ASSOCIATES

**JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE EAST FACE NEAR THE TOP**

W95-25 Disk File #: janA-r1a.xls

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

LOT 20, OUTDOOR LIVING AREA (OLA)

WITH PROPERTY LINE BERM (4m HIGH)

STRIPPING CLOSE BY AT WORK FACE "WF1"

BULLDOZER MOVING AND RIPPING

Receptor Xr Co-Ordinates, m	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0			
Receptor Yr Co-Ordinates, m	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0			
Ground Elevation at Receptor, m	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0			
Receptor Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5			
Receptor Zr Co-Ordinates, m	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5			
Source Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Source Code Name	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 1	Ripping cell 2
Source Name/Details																				
Source Xs Co-Ordinates, m	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0
Source Ys Co-Ordinates, m	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0	-75.0
Ground Elevation at source, m	166.0	170.0	172.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Zs Co-Ordinates, m	169.0	173.0	177.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0
Point or Line Source (P or L) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Reference Dist. for Lp, m	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
Reference Sound Level, dBA	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	155	141	123	110	97	91	105	119	138	152	149	135	115	101	87	83	98	112	132	147
Selected Ds-r, m	155	141	123	110	97	91	105	119	138	152	149	135	115	101	87	83	98	112	132	147
Frequency	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Geometrical Spreading	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider Dist.atten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	155	141	123	110	97	91	105	119	138	152	149	135	115	101	87	83	98	112	132	147
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Distance Error Flag	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Geometrical Spreading, dB	-20.3	-19.5	-18.3	-17.3	-16.2	-15.7	-16.9	-18.0	-19.2	-20.1	-20.0	-19.1	-17.7	-16.5	-15.3	-14.9	-16.3	-17.5	-18.9	-19.8
ISO Ground Attenuation																				
Model (1=none, 2=CMHC, 3=ISO)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Distance used for calculation	155	141	123	110	97	91	105	119	138	152	149	135	115	101	87	83	98	112	132	147
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Receptor Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Barrier Height Factor(2xht) (CMHC)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
P+T Factors (CMHC only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Is there a sound Barrier ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ground Attenuation, dB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

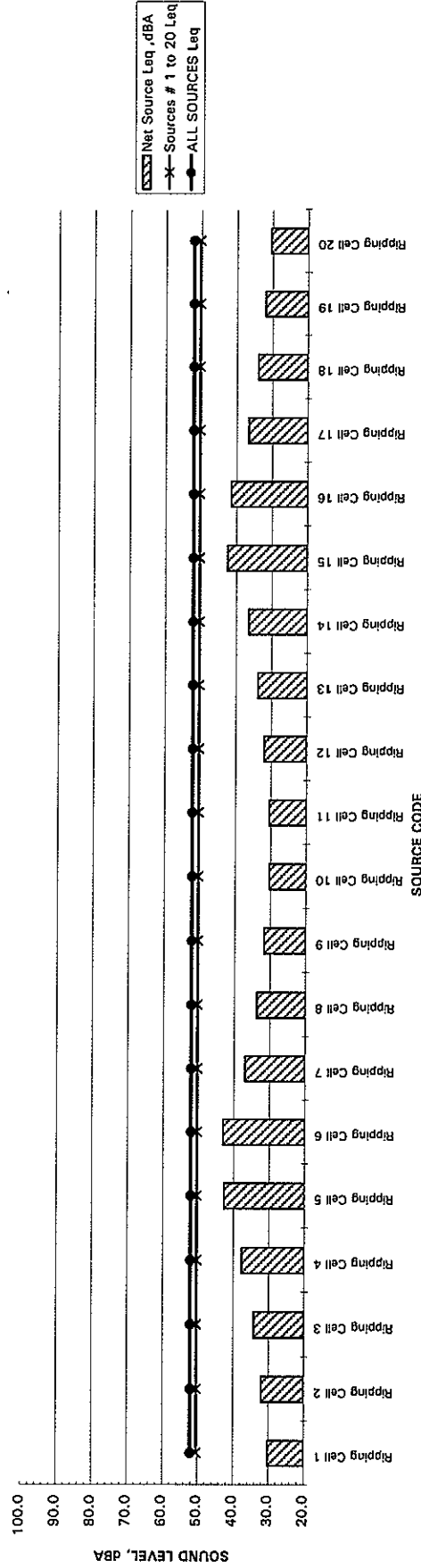
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Yes Atmospheric Attenuation Consider atm.atten.(Y or N) ?		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y						
Atmospheric Attenuation, dB		-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3					
Barrier Attenuation		178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0					
Ground Elevation at source, m		170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0					
SOURCE-BARRIER DISTANCE(m)		180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0					
Ground Elevation at Receptor,m		72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8					
RECEIVER-BARRIER DIST.(m)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
BARRIER HEIGHT (m)		179.0	178.5	178.0	178.0	178.5	178.5	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0					
BARRIER THICKNESS (m)		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0					
Barrier Attenuation, dB		-14.2	-13.2	-12.3	-9.9	-6.0	-6.1	-11.0	-13.2	-13.8	-14.2	-14.3	-13.7	-13.3	-11.9	-7.2	-8.5	-12.0	-13.3	-13.9	-14.5	
Barrier Acoustic Zone		shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	
Barrier Top Elevation		166.0	170.0	174.0	178.0	182.0	182.0	178.0	174.0	170.0	166.0	166.0	170.0	174.0	182.0	182.0	178.0	174.0	178.0	174.0	170.0	166.0
Sub-Total Attenuation, dBA		-34.8	-32.9	-30.8	-27.4	-22.4	-22.0	-28.1	-31.4	-33.3	-34.7	-34.6	-33.1	-31.2	-28.6	-22.6	-23.6	-28.5	-31.0	-33.0	-34.6	
Additional Adjustments																						
0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Lp @ Receptor, dBA		43.2	45.1	47.2	50.6	55.6	56.0	49.9	46.6	44.7	43.3	43.4	44.9	46.8	49.4	54.4	54.4	49.5	47.0	45.0	43.4	
Leq Time Base , Minutes		60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	
Line Source Data :		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
- Source Speed, Km/Hr																						
- No. of Movements in Time Base																						
-Segment integration time, min.																						
Point Source Data :		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
- No. of Events in Time Base		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
- Each Event Duration, min.		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
- Duration Of All Events, min.		3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
Leq @ Receptor, dBA		30.2	32.0	34.1	37.6	42.6	43.0	36.9	33.6	31.7	30.3	30.4	31.9	33.8	36.4	42.4	41.4	36.5	33.9	31.9	30.4	
Other Adjustments																						
0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Net Source Leq ,dBA		30.2	32.0	34.1	37.6	42.6	43.0	36.9	33.6	31.7	30.3	30.4	31.9	33.8	36.4	42.4	41.4	36.5	33.9	31.9	30.4	
Sources # 1 to 20 Leq		50																				
ALL SOURCES Leq		52																				
Overall Lp		63																				
Maximum Lp		56																				
dBA																						

Master File Name MODEL100.XLS
 Updated : May 24, 1995
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 File Number : W95-25 Disk File #: janA-r1a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : LOT 20, OUTDOOR LIVING AREA (OLA)
 Other data : WITH PROPERTY LINE BERM (4m HIGH)
 Other data : STRIPPING CLOSE BY AT WORK FACE "WF1"

S.S. WILSON AND ASSOCIATES

JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
 STRIPPING ON THE EAST FACE NEAR THE TOP

Leq SOUND LEVELS AT RECEPTOR



Source Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Source Code Name	Rippling Cell 1	Rippling Cell 2	Rippling Cell 3	Rippling Cell 4	Rippling Cell 5	Rippling Cell 6	Rippling Cell 7	Rippling Cell 8	Rippling Cell 9	Rippling Cell 10	Rippling Cell 11	Rippling Cell 12	Rippling Cell 13	Rippling Cell 14	Rippling Cell 15	Rippling Cell 16	Rippling Cell 17	Rippling Cell 18	Rippling Cell 19	Rippling Cell 20
Source Name/Details																				
Net Leq @ Receptor,dBA	30.2	32.0	34.1	37.6	42.6	43.0	36.9	33.6	31.7	30.3	30.4	31.9	33.8	36.4	42.4	41.4	36.5	33.9	31.9	30.4

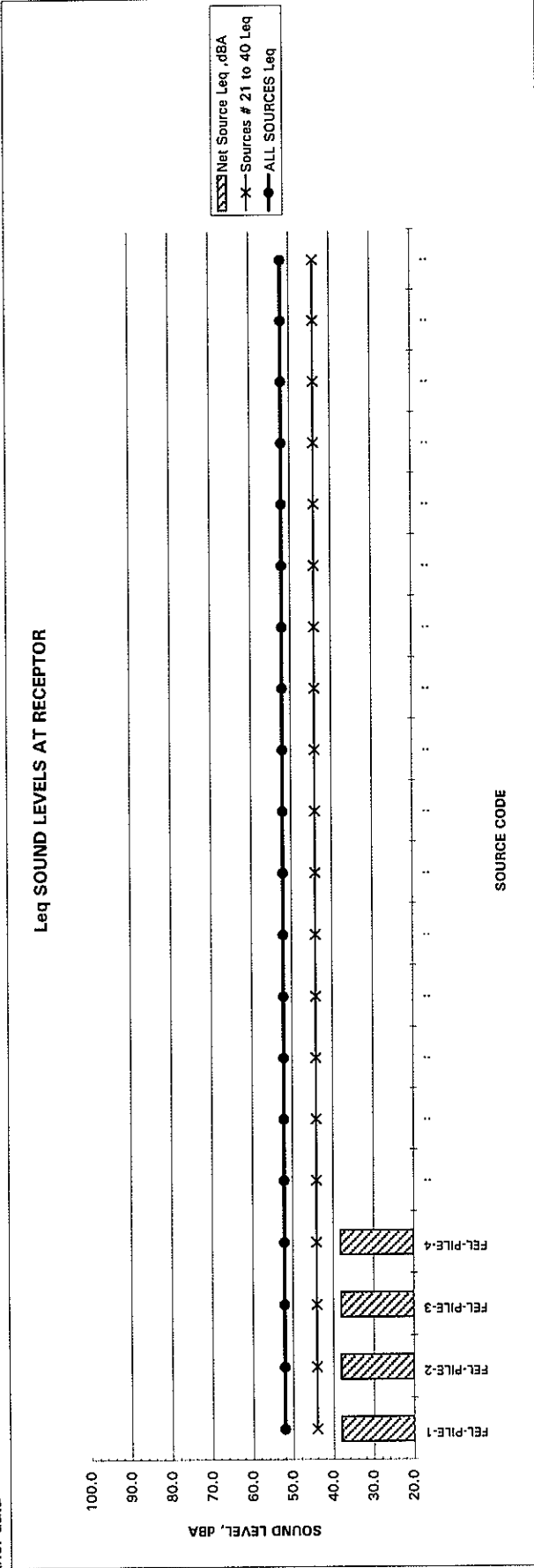
Yes Atmospheric Attenuation Consider atm. atten. (Y or N) ?	Disk File #:													
	JanA-r1a.xls													
Atmospheric Attenuation, dB	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Barrier Attenuation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ground Elevation at source, m	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0
SOURCE-BARRIER DISTANCE(ft)	103.0	99.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Ground Elevation at Receptor, m	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0
RECEIVER-BARRIER DIST. (ft)	99.0	99.0	628.5	628.5	628.5	628.5	628.5	628.5	628.5	628.5	628.5	628.5	628.5	628.5
BARRIER HEIGHT (ft)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
BARRIER GND. ELEV.(ft)	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0
BARRIER THICKNESS (ft)	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barrier Attenuation, dB	-13.1	-13.2	-13.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barrier Acoustic Zone	shadow	shadow	shadow	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright
Barrier Top Elevation	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0
Sub-Total Attenuation, dBA	-34.8	-34.7	-34.6	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8
Additional Adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-Total Adjustments, dB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Leq @ Receptor, dBA	46.2	46.3	46.3	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4
Leq Time Base, Minutes	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Line Source Data :	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
- Length of Line Segment, m														
- Source Speed, Km/Hr														
- No. of Movements in Time Base														
-Segment Integration time, min.														
Point Source Data :	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- No. of Events in Time Base	1	1	1	1	1	1	1	1	1	1	1	1	1	1
- Each Event Duration, min.	9	9	9	9	9	9	9	9	9	9	9	9	9	9
- Duration Of All Events, min.	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Leq @ Receptor, dBA	38.0	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1
Other Adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Source Leq, dBA	38.0	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1
Sources # 21 to 40 Leq	44	44	44	44	44	44	44	44	44	44	44	44	44	44
ALL SOURCES Leq	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Overall Lp	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Maximum Lp	46	46	46	46	46	46	46	46	46	46	46	46	46	46
dBA														

S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE EAST FACE NEAR THE TOP

W85-25 Disk File #: JanA-T1a.xls
 PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 LOT 20, OUTDDOR LIVING AREA (OLA)
 WITH PROPERTY LINE BERM (4m HIGH)
 STRIPPING CLOSE BY AT WORK FACE "WF1"

Master File Name MODEL100.XL5
 Updated : May 24, 1995
 5/15/98 15:16

File Number :
 Project Name :
 Receptor Name :
 Other data
 Other data



Source Number	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Source Code Name	FEL-PILE-1	FEL-PILE-2	FEL-PILE-3	FEL-PILE-4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Source Name/Details	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Net Leq @ Receptor, dBA	38.0	38.1	38.1	38.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Master File Name MODEL100.XLS
 Updated : May 24, 1995
 5/15/98 15:16
 File Number :
 Project Name :
 Receptor Name :
 Other data

OK
 S.S. WILSON AND ASSOCIATES
 JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
 STRIPPING ON THE EAST FACE NEAR THE TOP
 W95-25 Disk File #: jannA-11a.xls
 PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 LOT 20, OUTDOOR LIVING AREA (OLA)
 WITH PROPERTY LINE BERM (4m HIGH)
 STRIPPING CLOSE BY AT WORK FACE "WF1"

	FEL-LOAD-1	FEL-LOAD-2	FEL-LOAD-3	FEL-LOAD-4	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0	-541.0
Receptor Xr Co-Ordinates, m	-541.0	-541.0	-541.0	-541.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
Receptor Yr Co-Ordinates, m	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0
Ground Elevation at Receptor, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Receptor Height above ground, m	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5	181.5
Source Number	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
Source Code Name																	
Source Name/Details																	
Source Xs Co-Ordinates, m	-495.0	-495.0	-495.0	-495.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Source Ys Co-Ordinates, m	-165.0	-165.0	-165.0	-165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Elevation at source, m	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Zs Co-Ordinates, m	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0
Point or Line Source (P or L) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Reference Sound Level, dBA	83.0	83.0	83.0	83.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	179	176	174	172	643	643	643	643	643	643	643	643	643	643	643	643	643
Selected Ds-r, m	179	176	174	172	643	643	643	643	643	643	643	643	643	643	643	643	643
Frequency	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Geometrical Spreading																	
Consider Dist.atten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	179	176	174	172	643	643	643	643	643	643	643	643	643	643	643	643	643
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Distance Error Flag	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
Geometrical Spreading, dB	-21.5	-21.4	-21.3	-21.2	-32.6	-32.6	-32.6	-32.6	-32.6	-32.6	-32.6	-32.6	-32.6	-32.6	-32.6	-32.6	-32.6
ISO Ground Attenuation																	
Model (1=none, 2=CMHC, 3=ISO)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Distance used for calculation	179	176	174	172	643	643	643	643	643	643	643	643	643	643	643	643	643
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Receptor Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Barrier Height Factor(2xhb) (CMHC)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
P+T Factors (CMHC only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Is there a sound Barrier ?	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N
Ground Attenuation, dB	0.0	0.0	0.0	0.0	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7

File Number : W95-25 Disk File # : JanA-r1a.xls

Yes	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Yes Atmospheric Attenuation																		
Consider atm_atten.(Y or N) ?																		
Atmospheric Attenuation, dB	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
Barrier Attenuation																		
Ground Elevation at source, m	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0
SOURCE-BARRIER DISTANCE(ft)	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0
Ground Elevation at Receptor, m	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0
RECEIVER-BARRIER DIST. (ft)	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0
BARRIER HEIGHT (ft)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
BARRIER GND. ELEV.(ft)	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0	179.0
BARRIER THICKNESS (ft)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Barrier Attenuation, dB	-12.9	-13.0	-13.0	-13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barrier Acoustic Zone	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow
Barrier Top Elevation	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0	166.0
Sub-Total Attenuation, dBA	-34.8	-34.7	-34.7	-34.6	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8	-38.8
Additional Adjustments																		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48.2	48.3	48.3	48.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
- Length of Line Segment, m																		
- Source Speed, Km/Hr																		
- No. of Movements in Time Base																		
- Segment integration time, min.																		
Point Source Data :																		
- No. of Events in Time Base	1.5	1.5	1.5	1.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1
- Each Event Duration, min.	4	4	4	4	60	60	60	60	60	60	60	60	60	60	60	60	60	60
- Duration Of All Events, min.	6.00	6.00	6.00	6.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00
Leq @ Receptor, dBA	38.2	38.3	38.3	38.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Source Leq .dBA																		
Net Source Leq .dBA	38.2	38.3	38.3	38.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sources # 41 to 60 Leq	44																	
ALL SOURCES Leq	52																	
Overall Lp	54																	

Maximum Lp 48 dBA

**S.S. WILSON AND ASSOCIATES
 JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
 STRIPPING ON THE EAST FACE NEAR THE TOP**

Master File Name MODEL100.XL5

Updated : May 24, 1995

5/15/98 15:16

File Number :

Project Name :

Receptor Name :

Other data

Other data

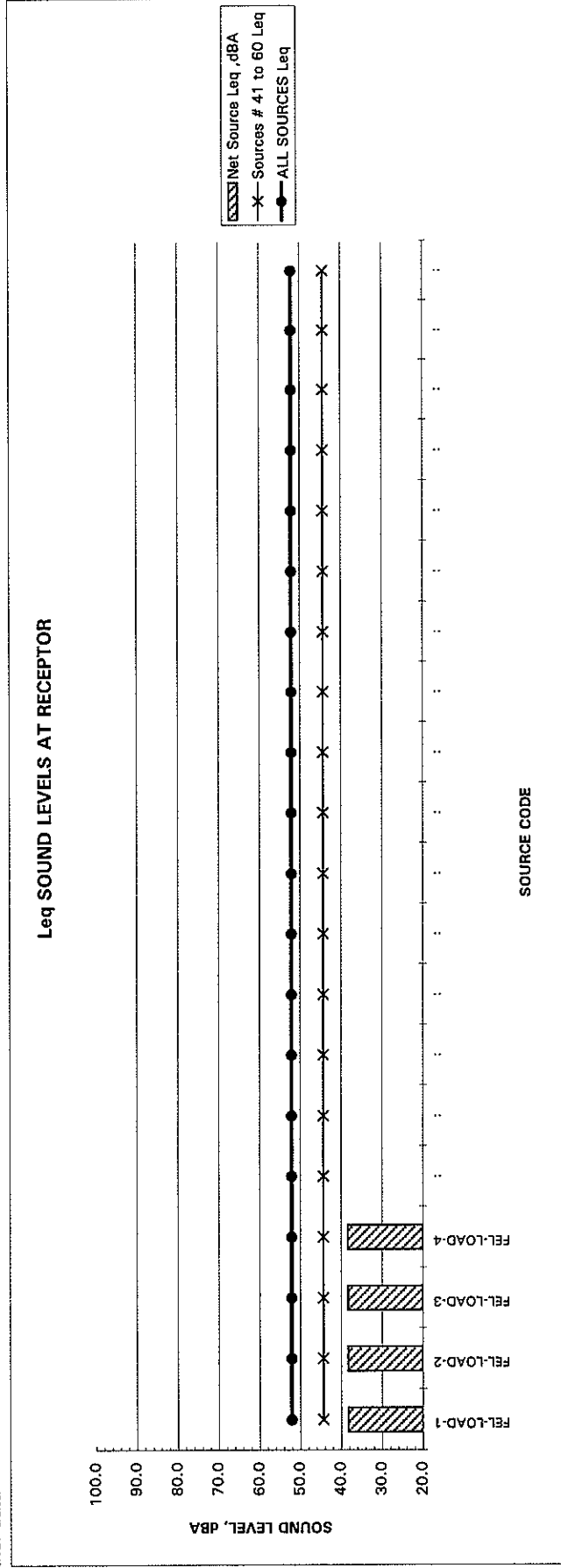
W95-25 Disk File #: janA-r1a.xls

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

LOT 20, OUTDDOR LIVING AREA (OLA)

WITH PROPERTY LINE BERM (4m HIGH)

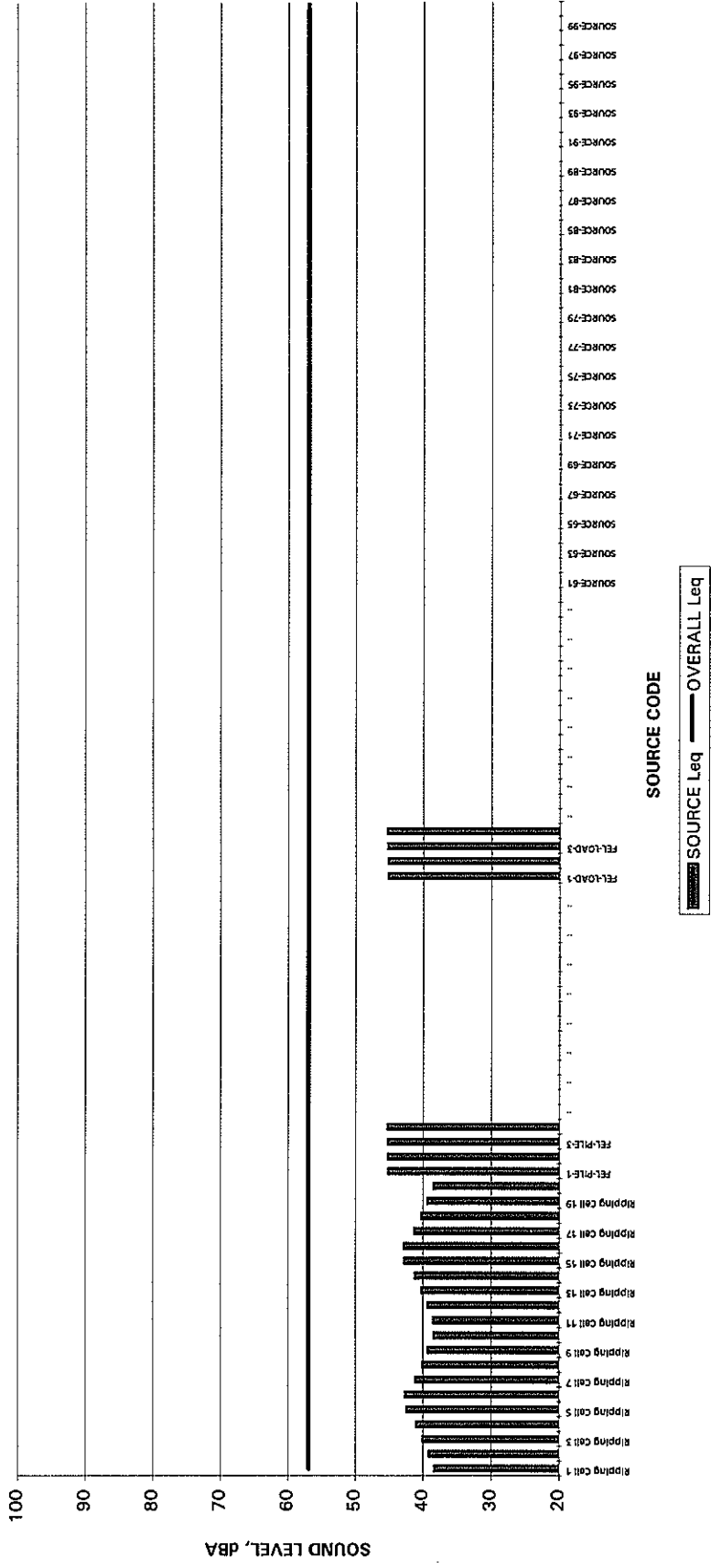
STRIPPING CLOSE BY AT WORK FACE "WF1"



Source Number	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Source Code Name	FEL-LOAD-1	FEL-LOAD-2	FEL-LOAD-3	FEL-LOAD-4																
Source Name/Details	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS																
Net Leq @ Receptor, dBA	38.2	38.3	38.3	38.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Master File Name MODEL100.XL5 OK
 Updated : May 24, 1995
 5/15/98 15:20
 File Number : W95-25 Disk File #: janA-r1 a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : LOT 29 & 30, BUILDING ENVELOPE (2nd STOREY LEVEL)
Other data WITHOUT PROPERTY LINE SOUND BERM
Other data STRIPPING CLOSE BY AT WORK FACE "WF2"

SOURCE Leq SOUND LEVELS - ALL SOURCES



Master File Name MODEL100.XLS

OK

S.S. WILSON AND ASSOCIATES

Updated : May 24, 1995

JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT STRIPPING ON THE EAST FACE NEAR THE TOP

W95-25 Disk File #: JanA-r1 a.xls

Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : LOT 29 & 30, BUILDING ENVELOPE (2nd STOREY LEVEL)
 Other data : WITHOUT PROPERTY LINE SOUND BERM

BULLDOZER MOVING AND RIPPING

STRIPPING CLOSE BY AT WORK FACE "WF2"

Receptor Xr Co-Ordinates, m	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	
Receptor Yr Co-Ordinates, m	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Ground Elevation at Receptor, m	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	
Receptor Height above ground, m	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Receptor Zr Co-Ordinates, m	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	
Source Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Source Code Name	Ripping Cell 1	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell 1	Ripping Cell 1	Ripping Cell 1	Ripping Cell 1	Ripping Cell 1	Ripping Cell 1	Ripping Cell 1	Ripping Cell 1	Ripping Cell 1	Ripping Cell 2
Source Name/Details																				
Source Xs Co-Ordinates, m	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0
Source Ys Co-Ordinates, m	350.0	75.0	60.0	60.0	25.0	25.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
Ground Elevation at source, m	162.0	166.0	170.0	170.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Zs Co-Ordinates, m	165.0	169.0	173.0	173.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0	181.0
Point or Line Source (P or L) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Reference Sound Level, dBA	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	194	179	164	164	149	128	147	162	177	192	191	176	161	146	126	125	145	160	175	190
Selected Ds-r, m	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Geometrical Spreading	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider Dist. atten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	194	179	164	164	149	128	147	162	177	192	191	176	161	146	126	125	145	160	175	190
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Distance Error Flag	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Geometrical Spreading, dB	-22.2	-21.5	-20.8	-20.0	-18.7	-18.6	-19.8	-20.7	-21.4	-22.1	-22.1	-21.4	-20.6	-19.8	-18.5	-18.4	-19.7	-20.6	-21.4	-22.1
ISO Ground Attenuation																				
Model (1=none,2=CMHC,3=ISO)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Distance used for calculation	194	179	164	149	130	128	147	162	177	192	191	176	161	146	126	125	145	160	175	190
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Receptor Height above ground, m	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Barrier Height Factor(2xhb) (CMHC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P-T Factors (CMHC only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Is there a sound Barrier ?	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ground Attenuation, dB	-4.0	-3.9	-3.8	-3.7	-3.5	-3.5	-3.7	-3.8	-3.9	-4.0	-4.0	-3.9	-3.8	-3.7	-3.5	-3.5	-3.7	-3.8	-3.9	-4.0

File Number : W95-25 Disk File #: janA-r1a.xls

Yes Atmospheric Attenuation	Y	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	
Consider atm.atten.(Y or N) ?	Y	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	
Atmospheric Attenuation, dB	Y	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	
Barrier Attenuation	Y	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	
Ground Elevation at source, m	Y	162.0	166.0	170.0	170.0	170.0	170.0	166.0	162.0	162.0	162.0	166.0	170.0	174.0	174.0	174.0	178.0	174.0	170.0	166.0	162.0
SOURCE-BARRIER DISTANCE(ft)	Y	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Elevation at Receptor,m	Y	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4
RECEIVER-BARRIER DIST.(ft)	Y	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8
BARRIER HEIGHT (ft)	Y	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARRIER GND. ELEV.(ft)	Y	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARRIER THICKNESS (ft)	Y	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barrier Attenuation, dB	Y	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barrier Acoustic Zone	Y	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright
Barrier Top Elevation	Y	162.0	166.0	170.0	174.0	178.0	174.0	170.0	166.0	162.0	162.0	166.0	170.0	174.0	174.0	178.0	174.0	170.0	166.0	162.0	162.0
Sub-Total Attenuation, dBA	Y	-26.6	-25.8	-25.0	-24.0	-22.5	-22.3	-23.8	-24.8	-25.7	-26.5	-25.7	-24.8	-23.7	-22.2	-22.1	-23.7	-24.7	-25.6	-26.5	-26.5
Additional Adjustments	Y	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Leq Time Base, Minutes	Y	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Line Source Data :	Y	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
- Length of Line Segment, m	Y																				
- Source Speed, Km/Hr	Y																				
- No. of Movements in Time Base	Y																				
- Segment integration time, min.	Y																				
Point Source Data :	Y	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- No. of Events in Time Base	Y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
- Each Event Duration, min.	Y	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
- Duration Of All Events, min.	Y	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Leq @ Receptor, dBA	Y	38.3	39.2	40.0	41.0	42.5	42.7	41.1	40.2	39.3	38.5	39.3	40.2	41.2	42.8	42.9	41.3	40.3	39.4	38.5	38.5
Other Adjustments	Y	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Source Leq, dBA	Y	38.3	39.2	40.0	41.0	42.5	42.7	41.1	40.2	39.3	38.5	39.3	40.2	41.2	42.8	42.9	41.3	40.3	39.4	38.5	38.5
Sources # 1 to 20 Leq	Y	54																			
ALL SOURCES Leq	Y	57																			
Overall Lp	Y	67																			
Maximum Lp	Y	56																			
dBa	Y																				

**S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE EAST FACE NEAR THE TOP**

Master File Name MODEL100.XL5

Updated : May 24, 1995

5/15/98 15:20

File Number :

W95-25 Disk File #: jana-r1a.xls

Project Name :

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

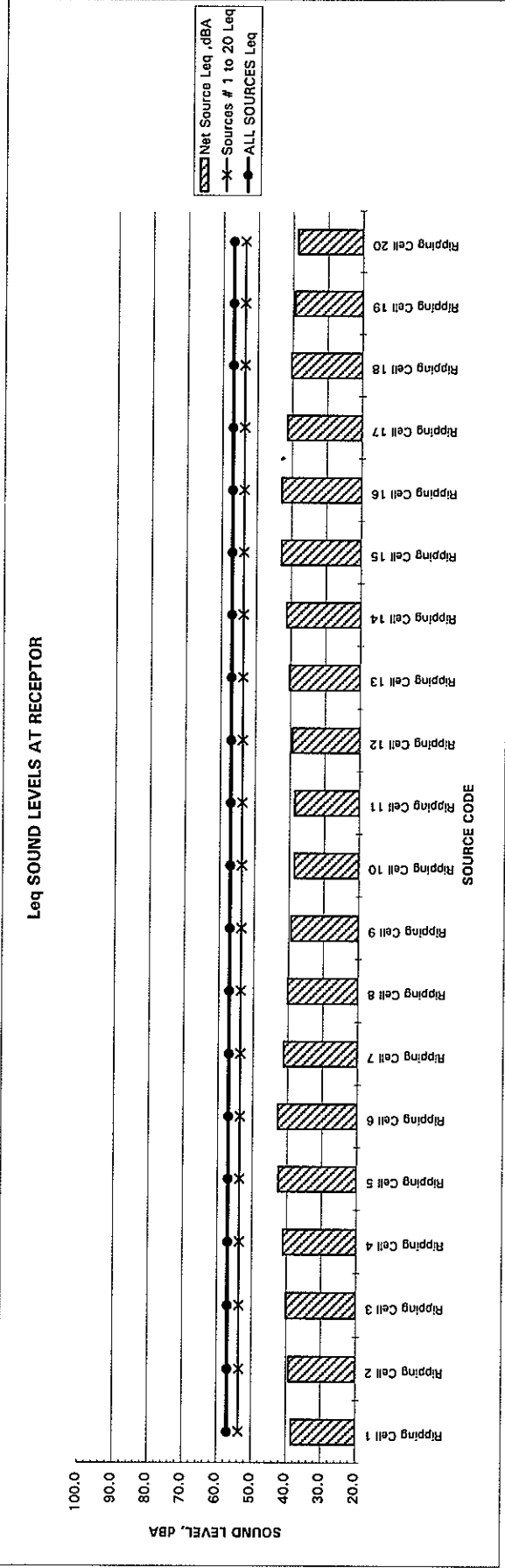
Receptor Name :

LOT 29 & 30, BUILDING ENVELOPE (2nd STOREY LEVEL)

Other data

WITHOUT PROPERTY LINE SOUND BERM

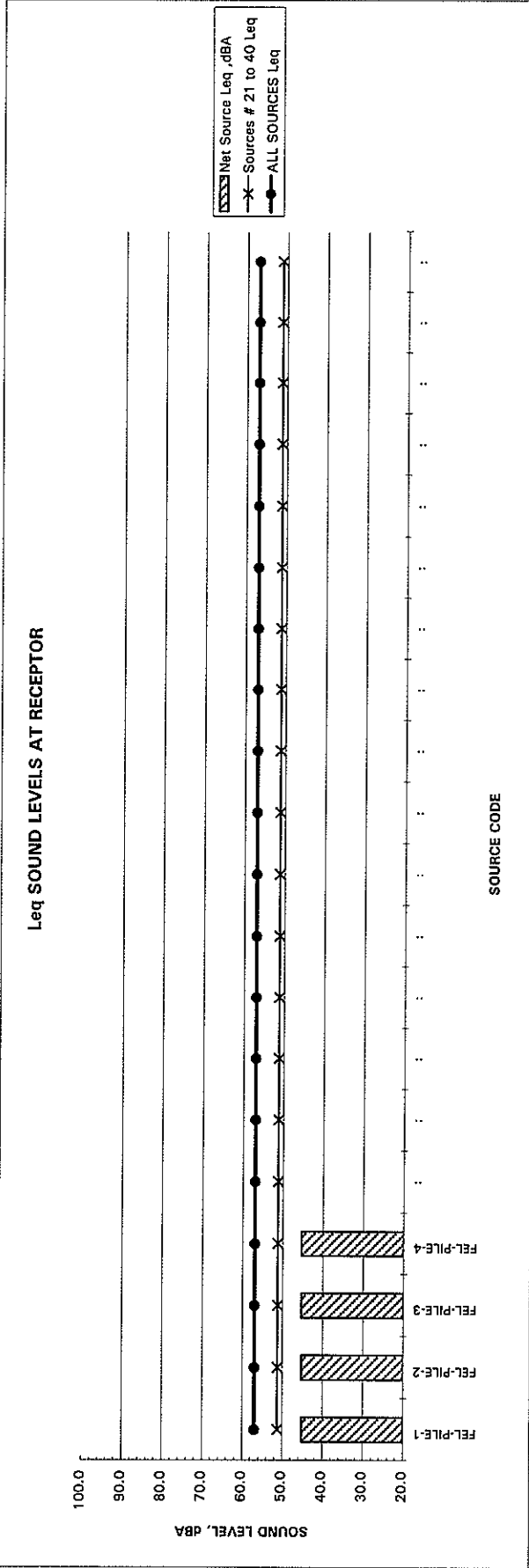
STRIPPING CLOSE BY AT WORK FACE "WF2"



Source Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Source Code Name	Rippling Cell 1	Rippling Cell 2	Rippling Cell 3	Rippling Cell 4	Rippling Cell 5	Rippling Cell 6	Rippling Cell 7	Rippling Cell 8	Rippling Cell 9	Rippling Cell 10	Rippling Cell 11	Rippling Cell 12	Rippling Cell 13	Rippling Cell 14	Rippling Cell 15	Rippling Cell 16	Rippling Cell 17	Rippling Cell 18	Rippling Cell 19	Rippling Cell 20
Source Name/Details	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Net Leq @ Receptor, dBA	38.3	39.2	40.0	41.0	42.5	42.7	41.1	40.2	39.3	38.4	38.5	39.3	40.2	41.2	42.8	42.9	41.3	40.3	39.4	38.5

File Number : W95-25		Disk File #:		janA-r1a.xls	
Yes	Y	Y	Y	Y	Y
Atmospheric Attenuation, dB	-0.5	-0.5	-0.4	-1.1	-1.1
Barrier Attenuation	162.0	162.0	162.0	162.0	162.0
Consider atm.atten.(Y or N) ?	Y	Y	Y	Y	Y
Ground Elevation at Source, m	162.0	162.0	162.0	162.0	162.0
SOURCE-BARRIER DISTANCE(m)	0.0	0.0	0.0	15.0	15.0
Ground Elevation at Receptor, m	172.4	172.4	172.4	172.4	172.4
RECEIVER-BARRIER DIST. (ft)	210.9	210.9	480.3	480.3	480.3
BARRIER HEIGHT (ft)	0.0	0.0	0.0	0.0	0.0
BARRIER GND. ELEV. (ft)	0.0	0.0	0.0	0.0	0.0
BARRIER THICKNESS (ft)	0.0	0.0	0.0	0.0	0.0
Barrier Attenuation, dB	0.0	0.0	0.0	0.0	0.0
Barrier Acoustic Zone	bright	bright	bright	bright	bright
Barrier Top Elevation	162.0	162.0	162.0	162.0	162.0
Sub-Total Attenuation, dBA	-27.6	-27.5	-27.5	-36.0	-36.0
Additional Adjustments					
	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0
Sub-Total Adjustments, dB	0.0	0.0	0.0	0.0	0.0
Lp @ Receptor, dBA	53.4	53.5	53.5	60.0	60.0
Leq Time Base, Minutes	60.0	60.0	60.0	60.0	60.0
Line Source Data :	N/A	N/A	N/A	N/A	N/A
- Length of Line Segment, m					
- Source Speed, Km/Hr					
- No. of Movements in Time Base					
- Segment integration time, min.					
Point Source Data :	Yes	Yes	Yes	Yes	Yes
- No. of Events in Time Base	1	1	1	1	1
- Each Event Duration, min.	9	9	60	60	60
- Duration Of All Events, min.	9.00	9.00	60.00	60.00	60.00
Leq @ Receptor, dBA	45.2	45.2	45.3	0.0	0.0
Other Adjustments					
	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0
Net Source Leq, dBA	45.2	45.2	45.3	0.0	0.0
Sources # 21 to 40 Leq	51				
ALL SOURCES Leq	57				
Overall Lp	59				
			Maximum Lp	54	dBA

Master File Name MODEL100.XL5
 Updated : May 24, 1995
 5/15/98 15:20
 File Number : W95-25 Disk File #: JanA-r1a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receiver Name : LOT 29 & 30, BUILDING ENVELOPE (2nd STOREY LEVEL)
 Other data : WITHOUT PROPERTY LINE SOUND BERM
 Other data : STRIPPING CLOSE BY AT WORK FACE "WF2"



Source Number	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Source Code Name	FEL-PILE-1	FEL-PILE-2	FEL-PILE-3	FEL-PILE-4	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
Source Name/Details	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
Net Leq @ Receptor, dBA	45.2	45.2	45.3	45.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Master File Name MODEL100.XL5

OK

S.S. WILSON AND ASSOCIATES

Updated : May 24, 1995

**JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE EAST FACE NEAR THE TOP**

5/15/98 15:20

Disk File #: janA-r1a.xls

File Number :

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

FRONT END LOADER LOADING TRUCKS

Receptor Name :

LOT 29 & 30, BUILDING ENVELOPE (2nd STOREY LEVEL)

Other data

WITHOUT PROPERTY LINE SOUND BERM

STRIPPING CLOSE BY AT WORK FACE "WF2"

Receptor Xr Co-Ordinates, m	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0	-385.0		
Receptor Yr Co-Ordinates, m	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
Ground Elevation at Receptor, m	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4		
Receptor Height above ground, m	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Receptor Zr Co-Ordinates, m	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9	176.9		
Source Number	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
Source Code Name	FEL-LOAD-1	FEL-LOAD-2	FEL-LOAD-3	FEL-LOAD-4																	
Source Name/Details	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS																	
Source Xs Co-Ordinates, m	350.0	380.0	300.0	380.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	
Source Ys Co-Ordinates, m	115.0	-115.0	-115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	
Ground Elevation at source, m	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Source Zs Co-Ordinates, m	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	165.0	
Point or Line Source (P or L) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
Reference Sound Level, dBA	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
Source-Receiver Distance, m	218	217	216	215	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495	
Selected Ds-r, m	218	217	216	215	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495	
Frequency	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	
Geometrical Spreading																					
Consider Dist.atten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
Source-Receiver Distance, m	218	217	216	215	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495	
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
Distance Error Flag	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	
Geometrical Spreading, dB	-23.3	-23.2	-23.2	-23.1	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	
ISO Ground Attenuation																					
Model (1=none, 2=CMHC, 3=ISO)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Distance used for calculation	218	217	216	215	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495	
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Receptor Height above ground, m	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Barrier Height Factor(2xhb) (CMHC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
P+T Factors (CMHC only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Is there a sound Barrier ?	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Ground Attenuation, dB	-4.1	-4.1	-4.1	-4.1	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	-4.5	

File Number : W95-25		Disk File #:		janA-r1a.xls														
Yes Atmospheric Attenuation		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Consider atm.atten.(Y or N) ?																		
Atmospheric Attenuation, dB		-0.5	-0.5	-0.5	-0.5	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1
Barrier Attenuation																		
Ground Elevation at source, m		162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0
SOURCE-BARRIER DISTANCE(ft)		0.0	0.0	0.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Ground Elevation at Receptor,m		172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4	172.4
RECEIVER-BARRIER DIST.(ft)		215.9	215.9	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3
BARRIER HEIGHT (ft)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARRIER GND. ELEV.(ft)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARRIER THICKNESS (ft)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barrier Attenuation, dB		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barrier Acoustic Zone		bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright
Barrier Top Elevation		162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0	162.0
Sub-Total Attenuation, dBA		-27.8	-27.8	-27.7	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0
Additional Adjustments																		
.....		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.....		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.....		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.....		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-Total Adjustments, dB		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lp @ Receptor, dBA		55.2	55.2	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
Leq Time Base , Minutes		60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Line Source Data :		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
- Length of Line Segment, m																		
- Source Speed, Km/Hr																		
- No. of Movements in Time Base																		
- Segment integration time, min.																		
Point Source Data :		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- No. of Events in Time Base		1.5	1.5	1.5	1.5	1	1	1	1	1	1	1	1	1	1	1	1	1
- Each Event Duration, min.		4	4	4	4	60	60	60	60	60	60	60	60	60	60	60	60	60
- Duration Of All Events, min.		6.00	6.00	6.00	6.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00
Leq @ Receptor, dBA		45.2	45.2	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3
.....		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.....		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.....		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Source Leq ,dBA		45.2	45.2	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3	45.3
Sources # 41 to 60 Leq		51																
ALL SOURCES Leq		57																
Overall Lp		61																
Maximum Lp																		
55																		
dBA																		

Master File Name MODEL100.XL5

Updated : May 24, 1995

5/15/98 15:20

File Number :

Project Name :

Receptor Name :

Other data

Other data

W95-25 Disk File f: janA-r1a.xls

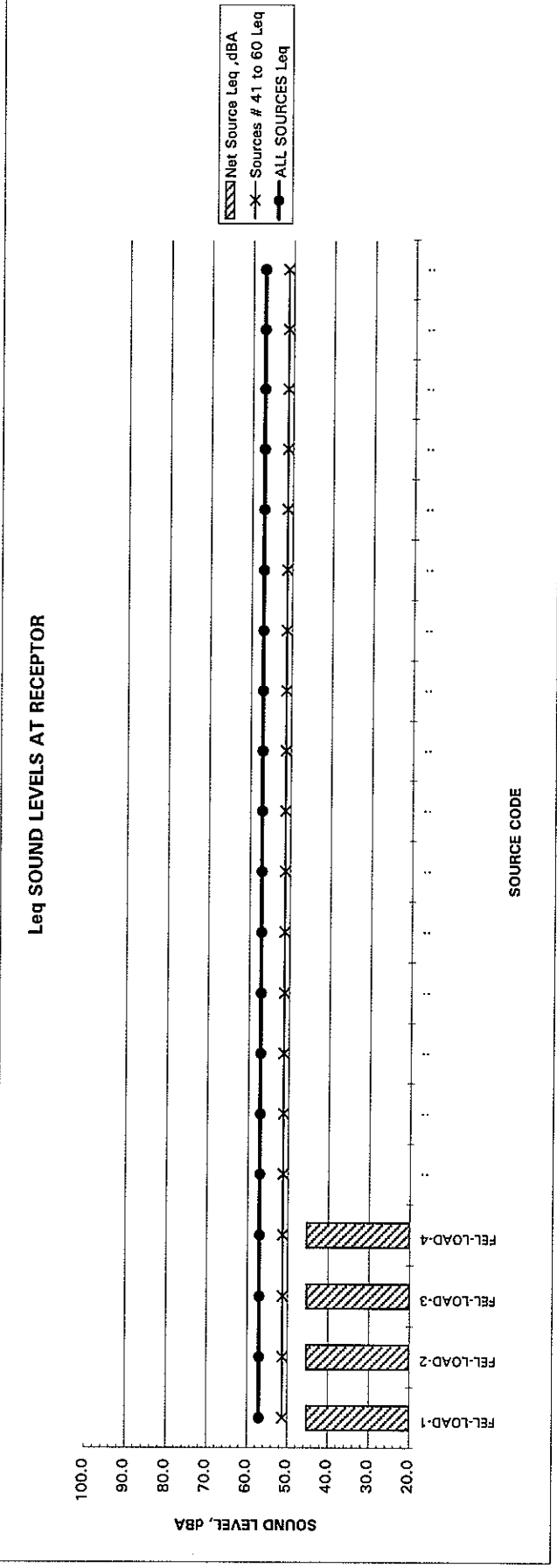
PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

LOT 29 & 30, BUILDING ENVELOPE (2nd STOREY LEVEL)

WITHOUT PROPERTY LINE SOUND BERM

STRIPPING CLOSE BY AT WORK FACE "WF2"

**S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE EAST FACE NEAR THE TOP**



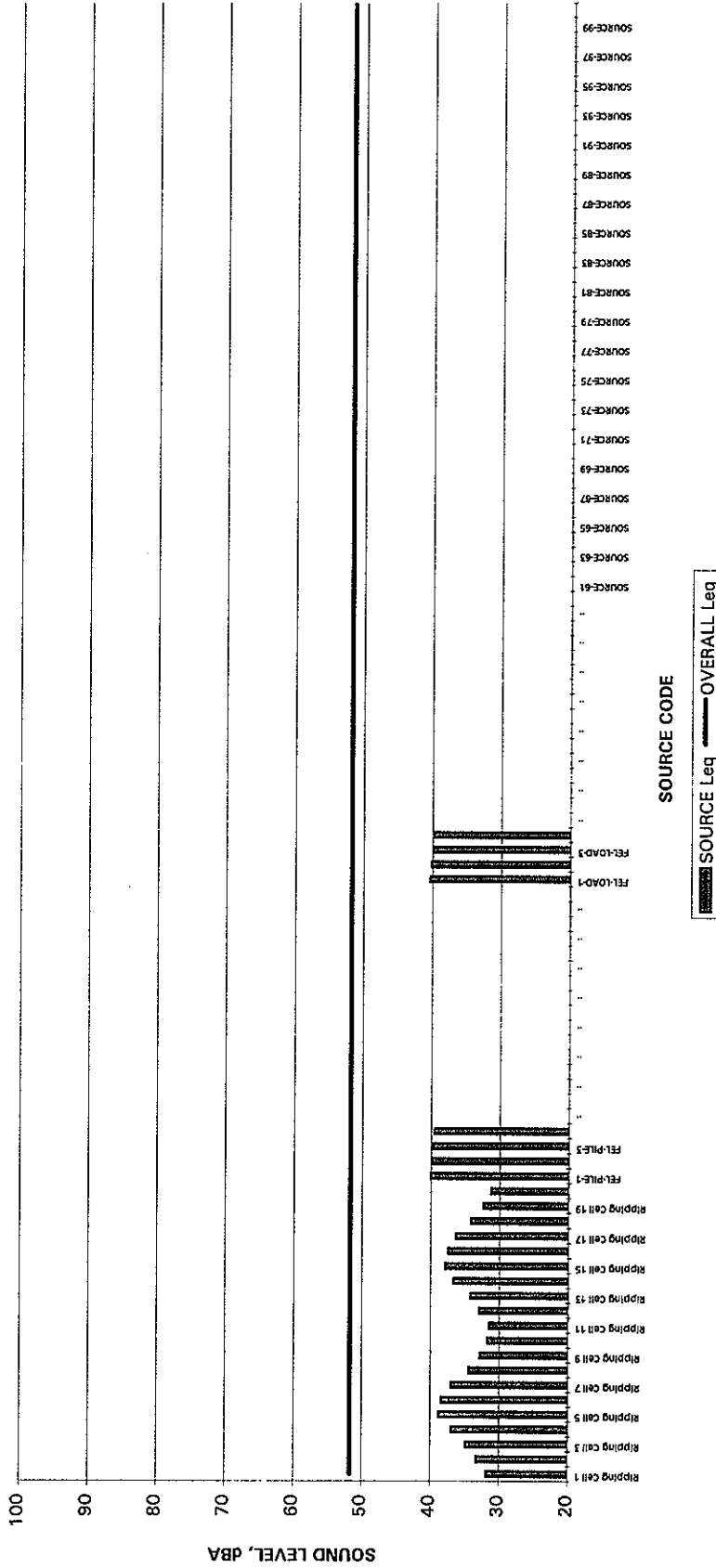
Source Number	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Source Code Name	FEL-LOAD-1	FEL-LOAD-2	FEL-LOAD-3	FEL-LOAD-4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Source Name/Details	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Net Leq @ Receptor,dBA	45.2	45.2	45.3	45.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Master File Name MODEL100.XL5 OK
 Updated : May 24, 1995
 5/15/98 14:59
 File Number : W95-25 Disk File #: janA-r1a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)
Other data WITH PROPERTY LINE BERM (3m HIGH)
Other data STRIPPING CLOSE BY AT WORK FACE "WF3"

S.S. WILSON AND ASSOCIATES

JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
 STRIPPING ON THE NORTH FACE NEAR THE TOP

SOURCE Leq SOUND LEVELS - ALL SOURCES



Master File Name MODEL100.XLS

Updated : May 24, 1995

5/15/98 14:59

File Number :

Project Name :

Receptor Name :

Other data

S.S. WILSON AND ASSOCIATES

JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE NORTH FACE NEAR THE TOP

BULLDOZER MOVING AND RIPPING

W95-25 Disk File #: JanA-r1 a.xls

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

BLOCK 8, OUTDOOR LIVING AREA (OLA)

WITH PROPERTY LINE BERM (3m HIGH)

STRIPPING CLOSE BY AT WORK FACE "WFS"

	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	
Receptor Xr Co-Ordinates, m																					
Receptor Yr Co-Ordinates, m	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
Ground Elevation at Receptor, m	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7
Receptor Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Receptor Zr Co-Ordinates, m	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2
Source Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Source Code Name	Ripping Cell 1	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell
Source Name/Details																					
Source Xs Co-Ordinates, m	54.0	56.5	57.0	59.0	59.0	59.0	59.0	59.0	59.0	54.0	54.0	54.0	54.0	54.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0
Source Ys Co-Ordinates, m	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0	177.0
Ground Elevation at source, m	171.0	171.0	175.0	179.0	183.0	183.0	183.0	183.0	183.0	171.0	171.0	171.0	171.0	171.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Zs Co-Ordinates, m	170.0	174.0	178.0	182.0	186.0	186.0	186.0	186.0	186.0	174.0	174.0	174.0	174.0	174.0	182.0	186.0	186.0	186.0	186.0	186.0	186.0
Point or Line Source (P or LI) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Reference Sound Level, dBA	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	214	204	194	186	179	187	194	202	212	221	230	221	212	204	197	207	213	220	229	238	238
Selected Dsr, m	214	204	194	186	179	187	194	202	212	221	230	221	212	204	197	207	213	220	229	238	238
Frequency	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Geometrical Spreading	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider Dist. atten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	214	204	194	186	179	187	194	202	212	221	230	221	212	204	197	207	213	220	229	238	238
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Distance Error Flag	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
Geometrical Spreading, dB	-23.1	-22.7	-22.3	-21.9	-21.5	-21.9	-22.2	-22.6	-23.0	-23.4	-23.7	-23.4	-23.0	-22.7	-22.4	-22.8	-23.0	-23.3	-23.7	-24.0	-24.0
ISO Ground Attenuation																					
Model (1=none 2=CMHC 3=ISO)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Distance used for calculation	214	204	194	186	179	187	194	202	212	221	230	221	212	204	197	207	213	220	229	238	238
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Receptor Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Barrier Height Factor(2xhb) (CMHC)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
P+T Factors (CMHC only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Is there a sound Barrier ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ground Attenuation, dB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Disk File #: japa-r1a.xls

File Number : W95-25	Disk File #:											
Yes Atmospheric Attenuation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider atm.atten.(Y or N) ?	-0.5	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5
Atmospheric Attenuation, dB	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0
Barrier Attenuation	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0
Ground Elevation at source, m	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0
SOURCE-BARRIER DISTANCE(sbd)	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7
Ground Elevation at Receptor,m	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7
RECEIVER-BARRIER DIST.(rbd)	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7
BARRIER HEIGHT (bh)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
BARRIER GND. ELEV.(bgf)	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5
BARRIER THICKNESS (bt)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Barrier Attenuation, dB	-9.6	-8.6	-7.4	-5.9	0.0	-5.4	-7.5	-8.8	-9.4	-9.3	-8.3	-7.4
Barrier Acoustic Zone	shadow	shadow	shadow	shadow	bright	shadow	shadow	shadow	shadow	shadow	shadow	shadow
Barrier Top Elevation	170.0	174.0	178.0	182.0	183.0	182.0	178.0	174.0	170.0	170.0	174.0	182.0
Sub-Total Attenuation, dBA	-33.1	-31.7	-30.1	-28.1	-26.2	-28.1	-30.6	-32.2	-33.3	-33.5	-32.1	-30.8
Additional Adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-Total Adjustments, dB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lp @ Receptor, dBA	44.9	46.3	47.9	49.9	51.8	51.4	49.9	47.4	45.8	44.7	44.5	47.2
Leq Time Base , Minutes	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Line Source Data :	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
- Length of Line Segment, m												
- Source Speed, Km/Hr												
- Segment integration time, min.												
- No. of Movements in Time Base												
Point Source Data :												
- No. of Events in Time Base	1	1	1	1	1	1	1	1	1	1	1	1
- Each Event Duration, min.	3	3	3	3	3	3	3	3	3	3	3	3
- Duration Of All Events, min.	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Leq @ Receptor, dBA	31.8	33.3	34.9	36.9	38.8	38.4	36.9	34.4	32.8	31.7	31.5	32.9
Other Adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Source Leq, dBA	31.8	33.3	34.9	36.9	38.8	38.4	36.9	34.4	32.8	31.7	31.5	32.9
Sources # 1 to 20 Leq	48											
ALL SOURCES Leq	52											
Overall Lp	61											
Maximum Lp	52											
dBa												
dBa												

**S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE NORTH FACE NEAR THE TOP**

Master File Name MODEL100.XL5

Updated : May 24, 1995

5/15/98 14:59

File Number :

Project Name :

Receptor Name :

Other data

Other data

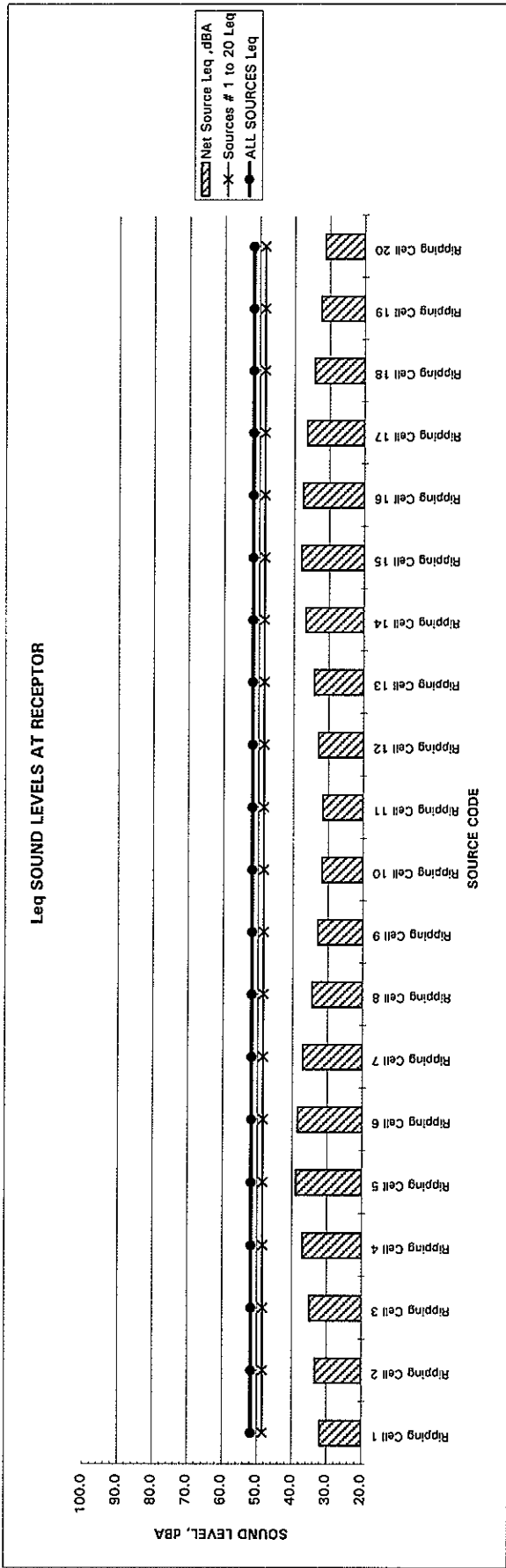
W95-25 Disk File #: janA-r1a.xls

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

BLOCK 8, OUTDOOR LIVING AREA (OLA)

WITH PROPERTY LINE BERM (3m HIGH)

STRIPPING CLOSE BY AT WORK FACE "WF3"



Source Number	Source Code Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Ripping Cell 1		Ripping Cell 2	Ripping Cell 3	Ripping Cell 4	Ripping Cell 5	Ripping Cell 6	Ripping Cell 7	Ripping Cell 8	Ripping Cell 9	Ripping Cell 10	Ripping Cell 11	Ripping Cell 12	Ripping Cell 13	Ripping Cell 14	Ripping Cell 15	Ripping Cell 16	Ripping Cell 17	Ripping Cell 18	Ripping Cell 19	Ripping Cell 20
	Source Name/Details																				
	Net Leq @ Receptor, dBA	31.8	33.3	34.9	36.9	38.8	38.4	36.9	34.4	32.8	31.7	31.5	32.9	34.1	36.6	37.9	37.4	36.3	34.2	32.3	31.2

S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE NORTH FACE NEAR THE TOP

OK

Master File Name MODEL100.XLS

Updated : May 24, 1995

File Number : 5/15/98 14:59

Disk File #: janA-r1a.xls

Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)

Other data : WITH PROPERTY LINE BERM (3m HIGH)

FRONT END LOADER STOCK PILING

STRIPPING CLOSE BY AT WORK FACE *WF3*

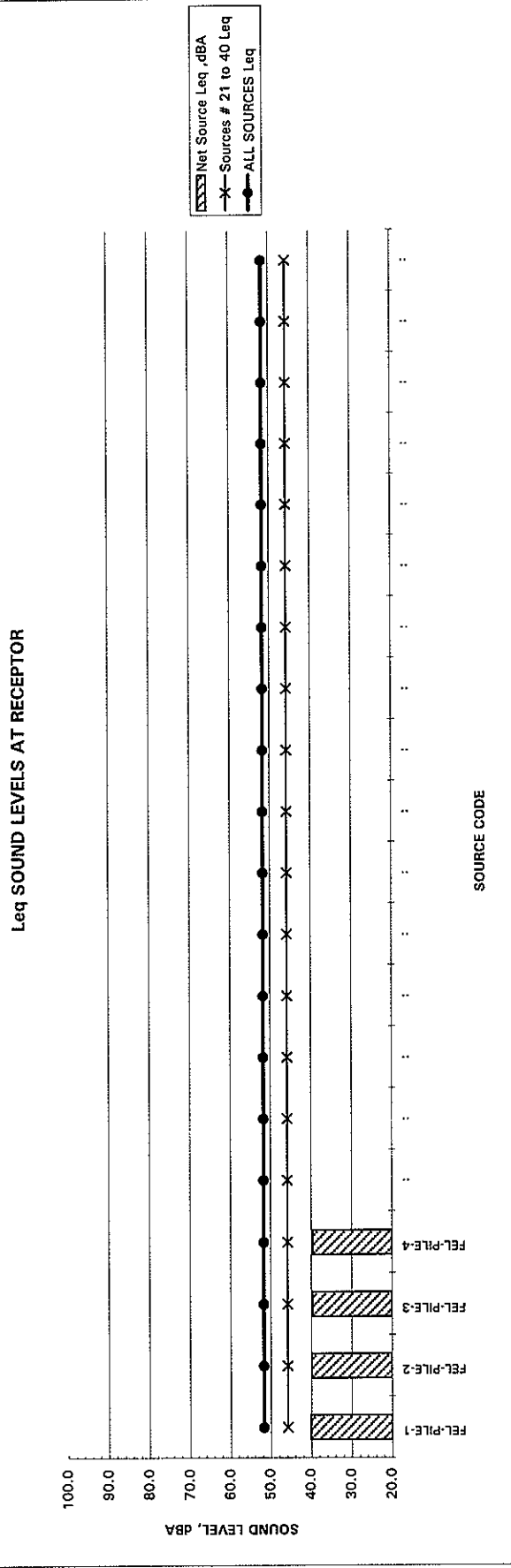
	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	
Receptor Xr Co-Ordinates, m	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	
Receptor Yr Co-Ordinates, m	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	
Ground Elevation at Receptor, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Receptor Height above ground, m	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	
Receptor Zr Co-Ordinates, m	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Source Code Name	FEL-PILE-1	FEL-PILE-2	FEL-PILE-3	FEL-PILE-4															
Source Name/Details	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING															
Source Xs Co-Ordinates, m	523.0	323.0	323.0	323.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Source Ys Co-Ordinates, m	117.0	127.0	137.0	147.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Elevation at source, m	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Zs Co-Ordinates, m	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
Point or Line Source (P or L) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Reference Sound Level, dBA	81.0	81.0	81.0	81.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	228	235	243	249	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243
Selected Ds-r, m	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Frequency	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Geometrical Spreading	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider Dist.atten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	228	235	243	249	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Distance Error Flag	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
Geometrical Spreading, dB	-23.6	-23.9	-24.2	-24.4	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3
ISO Ground Attenuation	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Model (1=none,2=CMHC,3=ISO)	228	235	243	249	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243
Distance used for calculation	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Height, above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Receptor Height above ground, m	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Barrier Height Factor(2xhh) (CMHC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P+T Factors (CMHC only)	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Is there a sound Barrier ?	0.0	0.0	0.0	0.0	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7
Ground Attenuation, dB																			

File Number : W95-25		Disk File #: janA-r1a.xls	
Yes Atmospheric Attenuation			
Consider atm.aten.(Y or N) ?	Y	Y	Y
Atmospheric Attenuation, dB	-0.5	-0.5	-1.8
Barrier Attenuation			
Ground Elevation at source, m	167.0	167.0	167.0
SOURCE-BARRIER DISTANCE(m)	145.0	150.0	15.0
Ground Elevation at Receiver,m	186.7	186.7	186.7
RECEIVER-BARRIER DIST. (m)	92.6	766.6	766.6
BARRIER HEIGHT (ft)	3.0	3.0	3.0
BARRIER GND. ELEV.(ft)	182.5	182.5	0.0
BARRIER THICKNESS (ft)	3.0	3.0	0.0
Barrier Attenuation, dB	-8.5	-8.3	0.0
Barrier Acoustic Zone	shadow	shadow	bright
Barrier Top Elevation	170.0	170.0	170.0
Sub-Total Attenuation, dBA	-32.7	-33.1	-40.8
Additional Adjustments			
.....			
Sub-Total Adjustments, dB	0.0	0.0	0.0
Leq @ Receptor, dBA	48.3	47.9	47.8
Leq Time Base, Minutes	60.0	60.0	60.0
Line Source Data :	N/A	N/A	N/A
- Length of Line Segment, m			
- Source Speed, Km/Hr			
- No. of Movements in Time Base			
-Segment Integration time, min.			
Point Source Data :			
- No. of Events in Time Base	1	1	1
- Each Event Duration, min.	9	9	60
- Duration Of All Events, min.	9.00	9.00	60.00
Leq @ Receptor, dBA	40.1	39.7	39.5
Other Adjustments			
.....			
Net Source Leq ,dBA	40.1	39.7	39.5
Sources # 21 to 40 Leq	46		
ALL SOURCES Leq	52		
Overall Lp	54	Maximum Lp	48
		dBa	dBa

Master File Name MODEL100.XL5
 Updated : May 24, 1995
 File Number : W95-25 Disk File #: janA-r1a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)
 Other data : WITH PROPERTY LINE BERM (3m HIGH)
 Other data : STRIPPING CLOSE BY AT WORK FACE "WF3"

S.S. WILSON AND ASSOCIATES

JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
 STRIPPING ON THE NORTH FACE NEAR THE TOP



Source Number	Source Code Name	Net Leq @ Receptor, dBA	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	FEL-PILE-1 FEL STOCK PILING	40.1																				
	FEL-PILE-2 FEL STOCK PILING	39.9																				
	FEL-PILE-3 FEL STOCK PILING	39.7																				
	FEL-PILE-4 FEL STOCK PILING	39.5																				
	Net Leq @ Receptor, dBA		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Master File Name MODEL100.XLS

Updated : May 24, 1995

File Number : W95-25

Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)

Other data : WITH PROPERTY LINE BERM (3m HIGH)

Other data : STRIPPING CLOSE BY AT WORK FACE "WF3"

OK S.S. WILSON AND ASSOCIATES

JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE NORTH FACE NEAR THE TOP

FRONT END LOADER LOADING TRUCKS

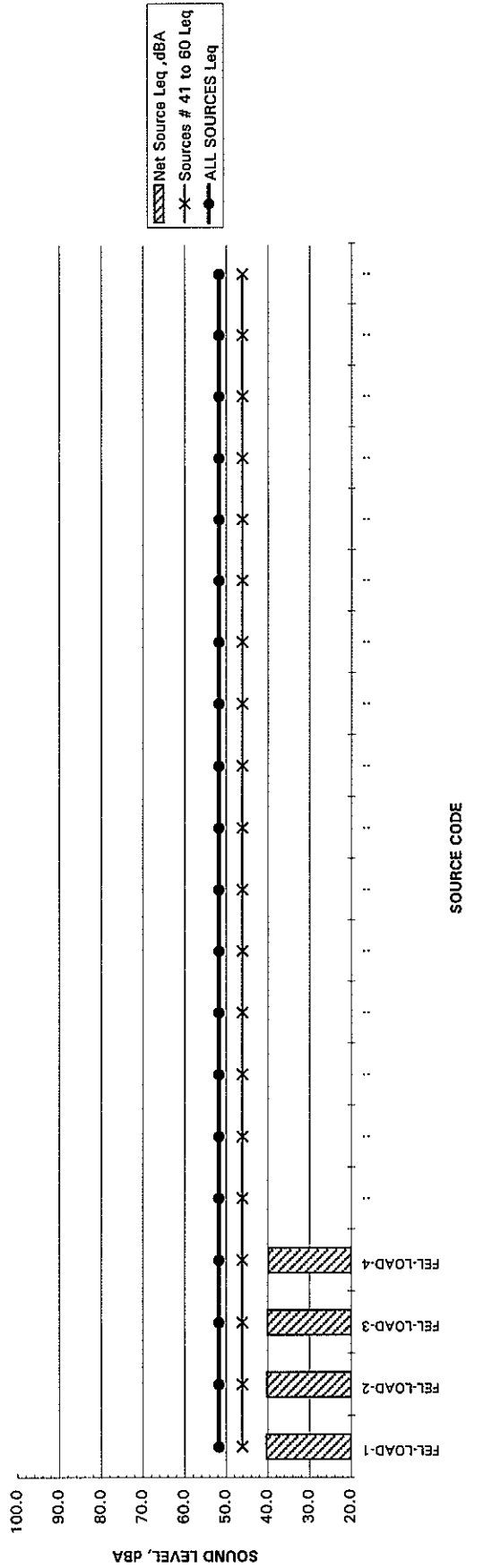
	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0			
Receptor Xr Co-Ordinates, m	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0			
Receptor Yr Co-Ordinates, m	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7			
Ground Elevation at Receptor, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5			
Receptor Height above ground, m	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2			
Receptor Zr Co-Ordinates, m	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Source Number																				
Source Code Name	FEL-LOAD-1	FEL-LOAD-2	FEL-LOAD-3	FEL-LOAD-4																
Source Name/Details	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS																
Source Xs Co-Ordinates, m	517.0	-127.0	-137.0	517.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Source Ys Co-Ordinates, m	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
Ground Elevation at source, m	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Zs Co-Ordinates, m	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
Point or Line Source (P or L) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Reference Sound Level, dBA	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0	83.0
Reference Dist for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	232	239	246	253	260	267	274	281	288	295	302	309	316	323	330	337	344	351	358	365
Selected Ds-r ,m	232	239	246	253	260	267	274	281	288	295	302	309	316	323	330	337	344	351	358	365
Frequency	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Geometrical Spreading	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider Dist.aten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reference Dist for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	232	239	246	253	260	267	274	281	288	295	302	309	316	323	330	337	344	351	358	365
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Distance Error Flag	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
Geometrical Spreading, dB	-23.8	-24.1	-24.3	-24.6	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3
ISO Ground Attenuation																				
Model (1=none,2=CMHC,3=ISO)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Distance used for calculation	232	239	246	253	260	267	274	281	288	295	302	309	316	323	330	337	344	351	358	365
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Receptor Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Barrier Height Factor(2xth) (CMHC)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
P+T Factors (CMHC only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Is there a sound Barrier ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ground Attenuation, dB	0.0	0.0	0.0	0.0	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7

File Number : W95-25		Disk File #: janA-r1a.xls													
Yes Atmospheric Attenuation		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider atm.atten.(Y or N) ?		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Atmospheric Attenuation, dB		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Barrier Attenuation		167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0
Ground Elevation at source, m		145.0	150.0	150.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
SOURCE-BARRIER DISTANCE(ft)		186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7
Ground Elevation at Receptor,m		91.5	93.3	55.6	766.6	766.6	766.6	766.6	766.6	766.6	766.6	766.6	766.6	766.6	766.6
RECEIVER-BARRIER DIST.(ft)		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
BARRIER HEIGHT (ft)		182.5	182.5	182.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
BARRIER GND. ELEV.(ft)		3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BARRIER THICKNESS (ft)		-8.4	-8.3	-8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barrier Attenuation, dB		shadow	shadow	shadow	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright	bright
Barrier Acoustic Zone		170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
Barrier Top Elevation		-32.6	-32.8	-33.0	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8
Sub-Total Attenuation, dB		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additional Adjustments		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-Total Adjustments, dB		50.4	50.2	50.0	49.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lp @ Receptor, dBA		60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Leq Time Base , Minutes		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Line Source Data :															
- Length of Line Segment, m															
- Source Speed, Km/Hr															
- No. of Movements in Time Base															
-Segment integration time, min.															
Point Source Data :		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- No. of Events in Time Base		1.5	1.5	1.5	1.5	1	1	1	1	1	1	1	1	1	1
- Each Event Duration, min.		4	4	4	4	60	60	60	60	60	60	60	60	60	60
- Duration Of All Events, min.		6.00	6.00	6.00	6.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00
Leq @ Receptor, dBA		40.4	40.2	40.0	39.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Source Leq ,dBA		40.4	40.2	40.0	39.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Sources # 41 to 60 Leq	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
ALL SOURCES Leq	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Overall Lp	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
			Maximum Lp												
			50												
			dB												

Master File Name MODEL100.XL5
 Updated : May 24, 1995
 5/15/98 14:59
 File Number : W95-25
 Disk File #: janA-r1a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)
 Other data : WITH PROPERTY LINE BERM (3m HIGH)
 STRIPPING CLOSE BY AT WORK FACE "WF3"

Leq SOUND LEVELS AT RECEPTOR



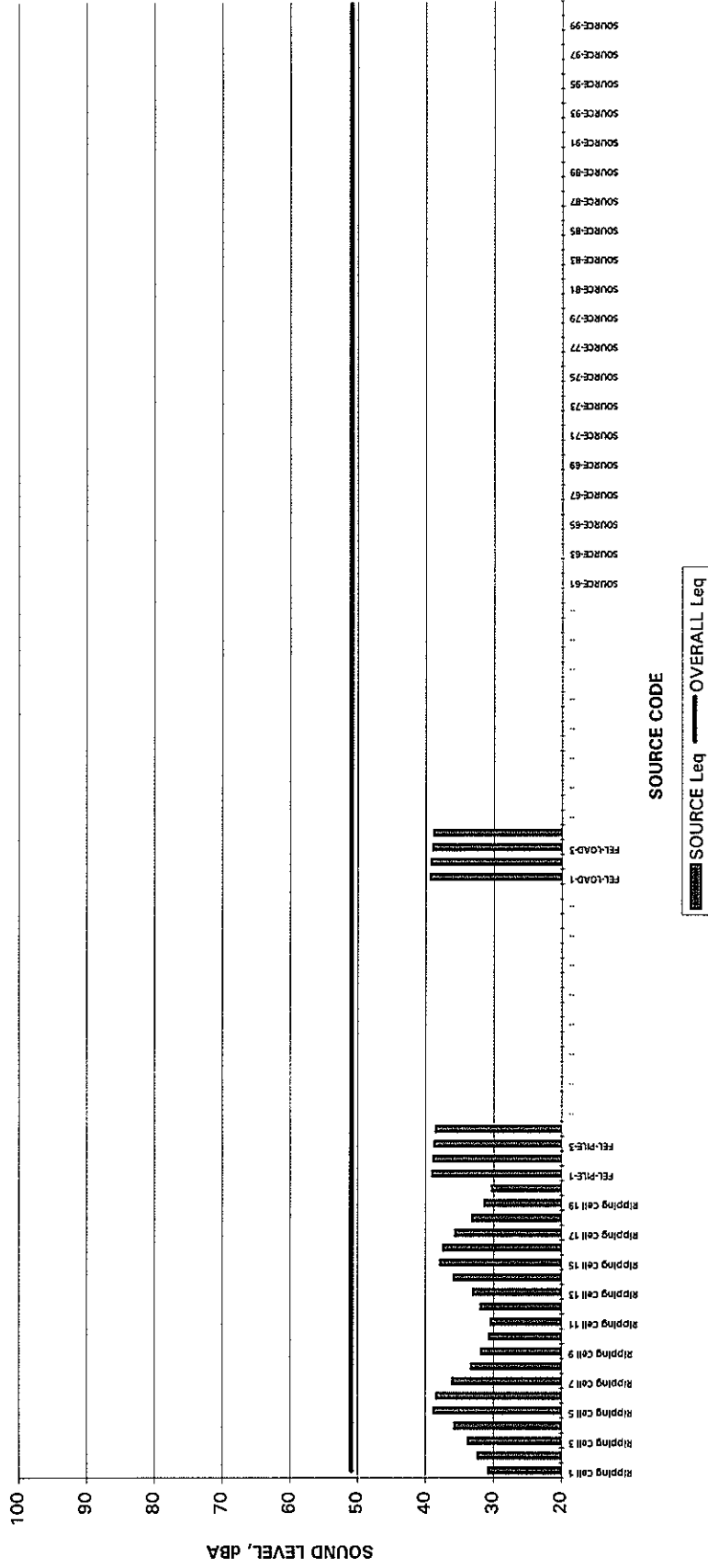
Source Number	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Source Code Name	FEL-LOAD-1	FEL-LOAD-2	FEL-LOAD-3	FEL-LOAD-4																
Source Name/Details	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS																
Net Leq @ Receptor, dBA	40.4	40.2	40.0	39.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Master File Name MODEL100.XL5 OK
 Updated : May 24, 1995
 5/15/98 15:02

S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
 STRIPPING ON THE NORTH FACE NEAR THE TOP

File Number : W95-25 disk File #: janA-r1a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)
 Other data WITH PROPERTY LINE BERM (4m HIGH)
 Other data STRIPPING CLOSE BY AT WORK FACE "WF3"

SOURCE Leq SOUND LEVELS - ALL SOURCES



Master File Name MODEL100.XLS

Updated : May 24, 1995

5/15/98 15:02

File Number :

Project Name :

Receptor Name :

Other data

OK

S.S. WILSON AND ASSOCIATES

JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT STRIPPING ON THE NORTH FACE NEAR THE TOP

W95-25 Disk File #: janA-r1a.xls

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

BLOCK 8, OUTDOOR LIVING AREA (OLA)

WITH PROPERTY LINE BERM (4m HIGH)

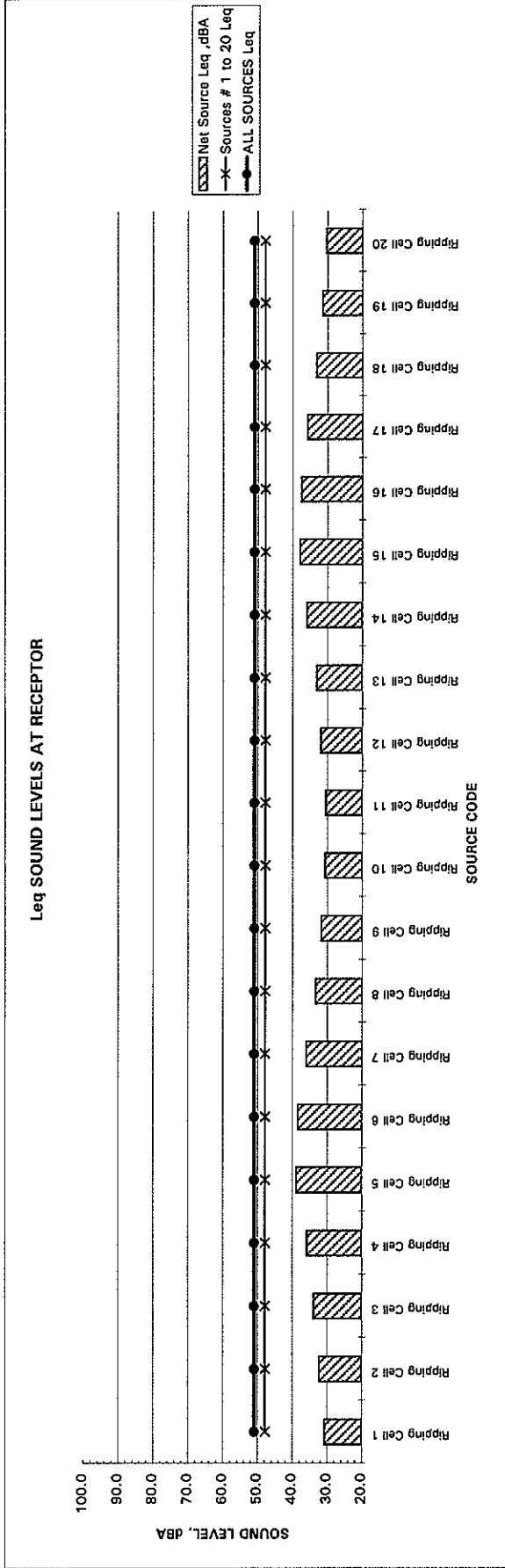
BULLDOZER MOVING AND RIPPING

STRIPPING CLOSE BY AT WORK FACE "WF3"

Receptor Xr Co-Ordinates, m	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0
Receptor Yr Co-Ordinates, m	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
Ground Elevation at Receptor, m	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7
Receptor Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Receptor Zr Co-Ordinates, m	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2
Source Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Source Code Name	ripping cell 1	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell	ripping cell
Source Name/Details																				
Source Xs Co-Ordinates, m	533.0	559.0	578.0	593.0	609.0	626.0	643.0	660.0	676.0	693.0	710.0	727.0	744.0	761.0	778.0	795.0	812.0	829.0	846.0	863.0
Source Ys Co-Ordinates, m	107.6	117.6	127.6	137.6	147.6	157.6	167.6	177.6	187.6	197.6	207.6	217.6	227.6	237.6	247.6	257.6	267.6	277.6	287.6	297.6
Ground Elevation at source, m	197.0	171.0	175.0	179.0	183.0	187.0	191.0	195.0	199.0	203.0	207.0	211.0	215.0	219.0	223.0	227.0	231.0	235.0	239.0	243.0
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Zs Co-Ordinates, m	170.0	174.0	178.0	182.0	186.0	190.0	194.0	198.0	202.0	206.0	210.0	214.0	218.0	222.0	226.0	230.0	234.0	238.0	242.0	246.0
Point or Line Source (P or L) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Reference Sound Level, dBA	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	214	204	194	186	179	187	194	202	212	222	232	242	252	262	272	282	292	302	312	322
Selected Dsr, m	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Frequency	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Geometrical Spreading	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider Dist.atten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	214	204	194	186	179	187	194	202	212	222	232	242	252	262	272	282	292	302	312	322
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Distance Error Flag	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
Geometrical Spreading, dB	-23.1	-22.7	-22.3	-21.9	-21.5	-21.2	-20.8	-20.4	-20.0	-19.6	-19.2	-18.8	-18.4	-18.0	-17.6	-17.2	-16.8	-16.4	-16.0	-15.6
ISO Ground Attenuation	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Model (1=none,2=CMHC,3=ISO)	214	204	194	186	179	187	194	202	212	222	232	242	252	262	272	282	292	302	312	322
Distance used for calculation	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Receptor Height above ground, m	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Barrier Height Factor(2xhb) (CMHC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P+T Factors (CMHC only)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Is there a sound Barrier ?	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Attenuation, dB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Master File Name MODEL100.XLS
 Updated : May 24, 1995
 5/15/95 15:02
 File Number : W05-25
 Disk File #: janA-11a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)
 Other data : WITH PROPERTY LINE BERM (4m HIGH)
 Other data : STRIPPING CLOSE BY AT WORK FACE "WFS"

S.S. WILSON AND ASSOCIATES
 JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
 STRIPPING ON THE NORTH FACE NEAR THE TOP



Source Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Source Code Name	Rippling Cell 1	Rippling Cell 2	Rippling Cell 3	Rippling Cell 4	Rippling Cell 5	Rippling Cell 6	Rippling Cell 7	Rippling Cell 8	Rippling Cell 9	Rippling Cell 10	Rippling Cell 11	Rippling Cell 12	Rippling Cell 13	Rippling Cell 14	Rippling Cell 15	Rippling Cell 16	Rippling Cell 17	Rippling Cell 18	Rippling Cell 19	Rippling Cell 20
Source Name/Details																				
Net Leq @ Receptor, dBA	30.8	32.3	33.8	35.7	38.8	38.4	36.0	33.3	31.8	30.7	30.4	31.8	33.0	35.8	37.9	37.4	35.6	33.1	31.3	30.3

Master File Name MODEL100.XLS

Updated : May 24, 1995

5/15/98 15:02

File Number :

Project Name :

Receptor Name :

Other data

OK

S.S. WILSON AND ASSOCIATES

JANNOCK DEVELOPMENTS-TYANDAGA WEST DEVELOPMENT STRIPPING ON THE NORTH FACE NEAR THE TOP

W95-25 Disk File #: jana-r1 a.xls

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

BLOCK 8, OUTDOOR LIVING AREA (OLA)

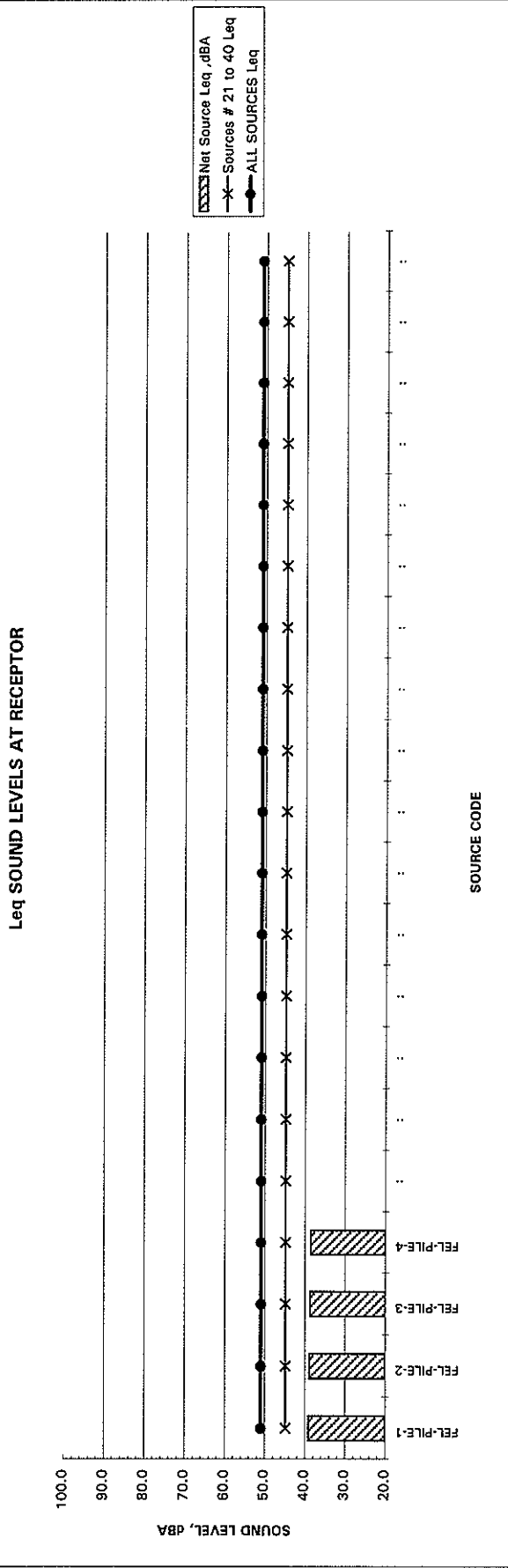
WITH PROPERTY LINE BERM (4m HIGH)

STRIPPING CLOSE BY AT WORK FACE "WF3"

FRONT END LOADER STOCK PILING

Table with columns for Source Name/Details, FEL Stock Piling, FEL Stock Piling, FEL Stock Piling, and various noise level/attenuation values across multiple rows and iterations.

Master File Name MODEL100.XL5
 Updated : May 24, 1995
 5/15/98 15:02
 File Number : W95-25
 Disk File #: jana-r1a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)
 Other data : WITH PROPERTY LINE BERM (4m HIGH)
 Other data : STRIPPING CLOSE BY AT WORK FACE "WF3"



Source Number	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Source Code Name	FEL-PILE-1	FEL-PILE-2	FEL-PILE-3	FEL-PILE-4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Source Name/Details	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Net Leq @ Receptor, dBA	39.1	38.9	38.7	38.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Master File Name MODEL100.XLS

Updated : May 24, 1995

5/15/98 15:02

File Number : Disk File #: janA-r1a.xls

Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)

Other data : WITH PROPERTY LINE BERM (4m HIGH)

Other data : STRIPPING CLOSE BY AT WORK FACE "WF3"

S.S. WILSON AND ASSOCIATES

JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE NORTH FACE NEAR THE TOP

FRONT END LOADER LOADING TRUCKS

	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0		
Receptor Xr Co-Ordinates, m	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0		
Receptor Yr Co-Ordinates, m	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7		
Ground Elevation at Receptor, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5		
Receptor Height above ground, m	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2		
Receptor Zr Co-Ordinates, m	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Source Code Name	FEL-LOAD-1	FEL-LOAD-2	FEL-LOAD-3	FEL-LOAD-4																
Source Name/Details	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS																
Source Xs Co-Ordinates, m	157.0	517.0	517.0	517.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Source Ys Co-Ordinates, m	117.0	-127.0	-137.0	-147.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Ground Elevation at source, m	157.0	157.0	157.0	157.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Source Zs Co-Ordinates, m	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	
Point or Line Source (P or L) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
Reference Sound Level, dBA	83.0	83.0	83.0	83.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
Source-Receptor Distance, m	232	239	246	253	782	782	782	782	782	782	782	782	782	782	782	782	782	782	782	
Selected Ds-r, m	232	239	246	253	782	782	782	782	782	782	782	782	782	782	782	782	782	782	782	
Frequency	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	
Geometrical Spreading																				
Consider Dist.atten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
Source-Receptor Distance, m	232	239	246	253	782	782	782	782	782	782	782	782	782	782	782	782	782	782	782	
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
Distance Error Flag	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	
Geometrical Spreading, dB	-23.8	-24.1	-24.3	-24.6	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	-34.3	
ISO Ground Attenuation																				
Model (1=none,2=CMHC,3=ISO)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Distance used for calculation	232	239	246	253	782	782	782	782	782	782	782	782	782	782	782	782	782	782	782	
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Receptor Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Barrier Height Factor(2xbh) (CMHC)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
P+T Factors (CMHC only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Is there a sound Barrier ?	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Ground Attenuation, dB	0.0	0.0	0.0	0.0	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	

File Number : W95-25 Disk File # : JanA-r1a.xls

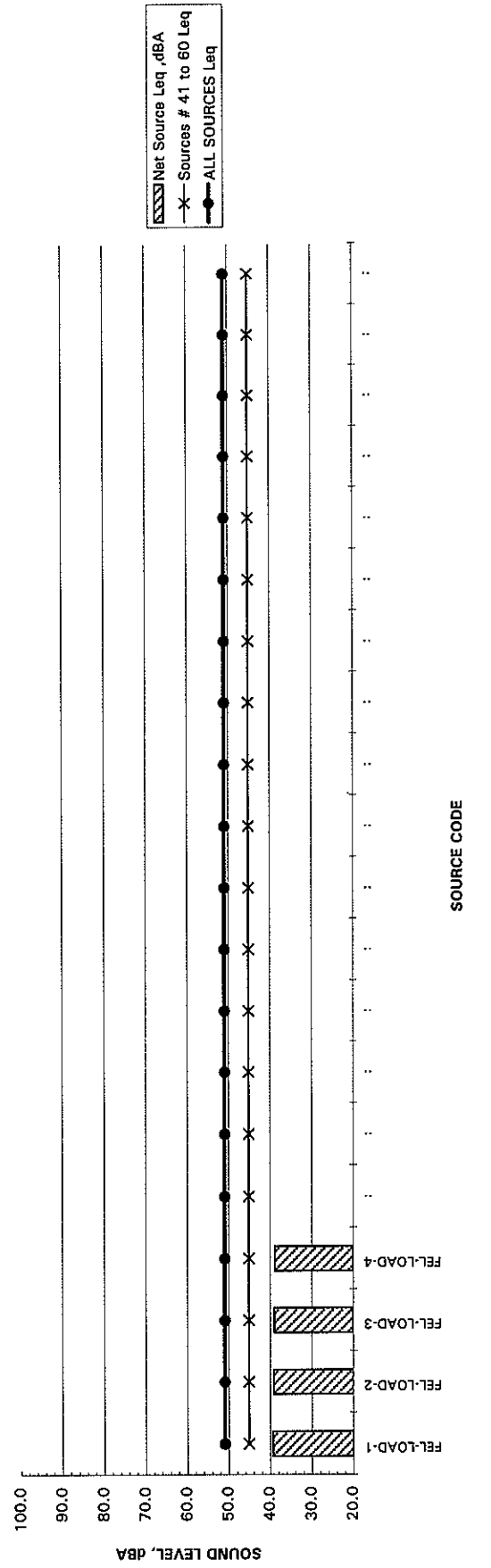
Yes Atmospheric Attenuation Consider atm.atten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Atmospheric Attenuation, dB	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Barrier Attenuation	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	
Ground Elevation at source, m	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	
SOURCE-BARRIER DISTANCE(ft)	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	
Ground Elevation at Receptor,m	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	
RECEIVER-BARRIER DIST.(ft)	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	
BARRIER HEIGHT (ft)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
BARRIER GND. ELEV.(ft)	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	
BARRIER THICKNESS (ft)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Barrier Attenuation, dB	-9.4	-9.3	-9.2	-9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Barrier Acoustic Zone	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow
Barrier Top Elevation	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	171.0	
Sub-Total Attenuation, dBA	-33.7	-33.8	-34.0	-34.2	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	
Additional Adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Leg Time Base , Minutes	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	
Line Source Data :	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
- Length of Line Segment, m																				
- Source Speed, Km/Hr																				
- No. of Movements in Time Base																				
-Segment integration time, min.																				
Point Source Data :	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
- No. of Events in Time Base	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
- Each Event Duration, min.	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
- Duration Of All Events, min.	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Leq @ Receptor, dBA	39.3	39.2	39.0	38.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Net Source Leq ,dBA	39.3	39.2	39.0	38.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Sources # 41 to 60 Leq	45
ALL SOURCES Leq	51

Overall Lp 55 dBA Maximum Lp 49 dBA

Master File Name MODEL100.XL5
 Updated : May 24, 1995
 5/15/98 15:02
 File Number : W95-25 Disk File #: janA-r1a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)
 Other data : WITH PROPERTY LINE BERM (4m HIGH)
 Other data : STRIPPING CLOSE BY AT WORK FACE "WF3"

Leq SOUND LEVELS AT RECEPTOR



Source Number	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Source Code Name	FEL-LOAD-1	FEL-LOAD-2	FEL-LOAD-3	FEL-LOAD-4																
Source Name/Details	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS																
Net Leq @ Receptor,dBA	39.3	39.2	39.0	38.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

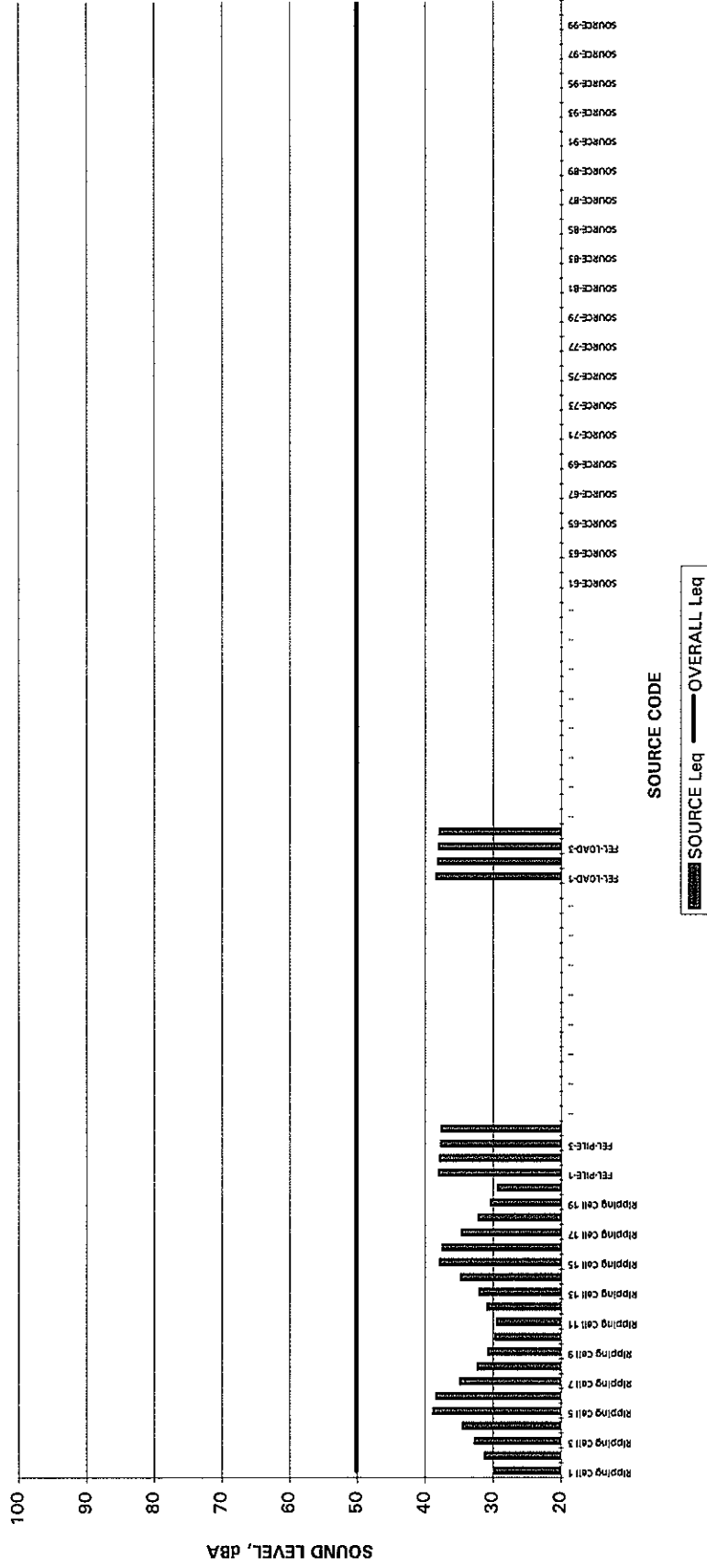
Master File Name MODEL100.XL5 OK
 Updated : May 24, 1995
 5/15/98 15:05
 File Number : W95-25
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)
Other data WITH PROPERTY LINE BARRIER (3m BERM + 2m WALL ON TOP)
Other data STRIPPING CLOSE BY AT WORK FACE "WF3"

S.S. WILSON AND ASSOCIATES

JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
 STRIPPING ON THE NORTH FACE NEAR THE TOP

Disk File #: janA-r1a.xls

SOURCE Leq SOUND LEVELS - ALL SOURCES



Master File Name MODEL100.XLS

Updated : May 24, 1995

5/15/98 15:05

File Number :

Project Name :

Receptor Name :

Other data

Other data

OK

S.S. WILSON AND ASSOCIATES

**JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE NORTH FACE NEAR THE TOP**

W95-25 Disk File #: jana-r1a.xls

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

BLOCK 8, OUTDOOR LIVING AREA (OLA)

WITH PROPERTY LINE BARRIER (3m BERM + 2m WALL ON TOP)

STRIPPING CLOSE BY AT WORK FACE "WF3"

BULLDOZER MOVING AND RIPPING

	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0	-680.0
Receptor Xr Co-Ordinates, m																		
Receptor Yr Co-Ordinates, m																		
Ground Elevation at Receptor, m																		
Receptor Height above ground, m																		
Receptor Zr Co-Ordinates, m																		
Source Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Source Code Name	Ripping cell 1	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell
Source Name/Details																		
Source Xs Co-Ordinates, m																		
Source Ys Co-Ordinates, m																		
Ground Elevation at source, m																		
Source Height above ground, m																		
Source Zs Co-Ordinates, m																		
Point or Line Source (P or L) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Reference Sound Level, dBA	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	214	204	204	194	186	179	187	194	202	212	221	230	221	204	197	207	213	220
Selected Ds-r, m	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Frequency	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Geometrical Spreading	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider Dist.atten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	214	204	194	186	179	187	194	202	212	221	230	221	204	197	207	213	220	229
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Distance Error Flag	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
Geometrical Spreading, dB	-23.1	-22.7	-22.3	-21.9	-21.5	-21.9	-22.2	-22.2	-22.6	-23.0	-23.4	-23.7	-23.4	-22.7	-22.4	-22.8	-23.0	-23.7
ISO Ground Attenuation	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Model (1=none,2=CMHC,3=ISO)	214	204	194	186	179	187	194	202	212	221	230	221	204	197	207	213	220	229
Distance used for calculation	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Receptor Height above ground, m	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Barrier Height Factor(2xH) (CMHC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P+T Factors (CMHC only)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Is there a sound Barrier ?	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Attenuation, dB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

File Number : W95-25		Disk File #:		janA-r1a.xls															
Yes	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Yes Atmospheric Attenuation																			
Consider atm.atten.(Y or N) ?																			
Atmospheric Attenuation, dB																			
	-0.5	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5
Barrier Attenuation																			
Ground Elevation at source, m																			
	171.6	171.6	175.0	175.0	175.0	171.0	171.0	167.0	167.0	167.0	171.0	175.0	175.0	179.0	183.0	179.0	179.0	179.0	171.0
SOURCE-BARRIER DISTANCE(ft)																			
	120.0	105.0	120.0	120.0	120.0	183.0	183.0	183.0	183.0	183.0	183.0	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7
Ground Elevation at Receptor,m																			
	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7
RECEIVER-BARRIER DIST.(ft)																			
	93.0	93.0	109.5	109.5	109.5	187.0	187.0	187.0	187.0	187.0	187.0	187.0	187.0	187.0	187.0	187.0	187.0	187.0	187.0
BARRIER HEIGHT (ft)																			
	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
BARRIER QND. ELEV.(ft)																			
	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5
BARRIER THICKNESS (ft)																			
	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Barrier Attenuation, dB																			
	-11.7	-10.7	-9.6	-8.3	-8.3	0.0	0.0	-7.5	-9.7	-10.9	-11.5	-11.4	-10.3	-9.5	-7.2	-7.2	-6.9	-6.9	-11.2
Barrier Acoustic Zone																			
Barrier Top Elevation																			
	172.0	176.0	180.0	184.0	183.0	183.0	184.0	180.0	176.0	172.0	172.0	176.0	180.0	184.0	183.0	183.0	184.0	180.0	176.0
Sub-Total Attenuation, dBA																			
	-35.2	-33.8	-32.3	-30.5	-26.2	-32.7	-34.3	-35.3	-34.2	-33.0	-30.3	-27.1	-27.6	-30.4	-32.9	-30.4	-32.9	-30.4	-34.7
Additional Adjustments																			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-Total Adjustments, dB																			
	42.8	44.2	45.7	47.5	51.8	51.4	47.8	45.3	43.7	42.7	42.4	43.8	45.0	47.7	50.9	50.4	47.6	45.1	43.3
Leq @ Receptor, dBA																			
	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Line Source Data :																			
- Length of Line Segment, m																			
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
- Source Speed, Km/Hr																			
- No. of Movements in Time Base																			
- Segment integration time, min.																			
Point Source Data :																			
- No. of Events in Time Base																			
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
- Each Event Duration, min.																			
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
- Duration Of All Events, min.																			
	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Leq @ Receptor, dBA																			
	29.8	31.2	32.7	34.5	38.8	38.4	34.8	32.3	30.7	29.7	29.4	30.8	32.0	34.7	37.9	37.4	34.6	32.1	30.3
Other Adjustments																			
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Source Leq, dBA																			
	29.8	31.2	32.7	34.5	38.8	38.4	34.8	32.3	30.7	29.7	29.4	30.8	32.0	34.7	37.9	37.4	34.6	32.1	30.3
Sources # 1 to 20 Leq																			
	47																		
ALL SOURCES Leq																			
	50																		
Overall Lp																			
	60																		
Maximum Lp																			
	52																		
dBA																			

**S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE NORTH FACE NEAR THE TOP**

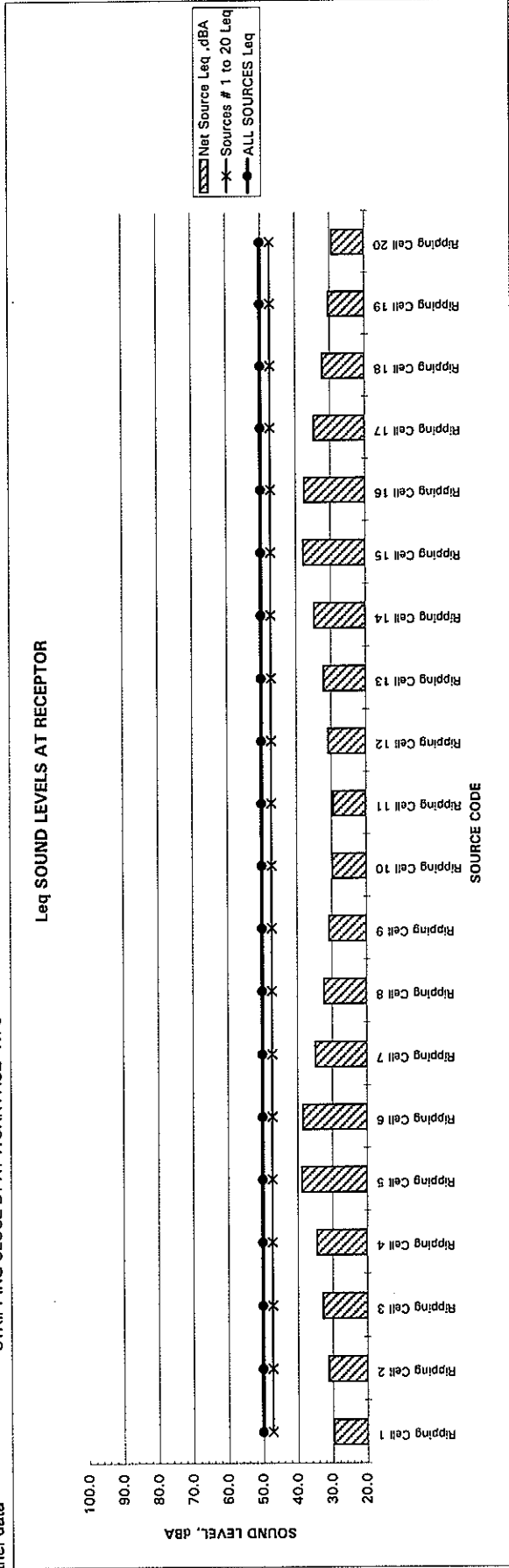
Master File Name MODEL100.XL5

Updated : May 24, 1995

File Number : W95-25

Disk File # : jannA-r1a.xls

Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)
 Other data : WITH PROPERTY LINE BARRIER (3m BERM + 2m WALL ON TOP)
 STRIPPING CLOSE BY AT WORK FACE "WF3"



Source Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Source Code Name	Rippling Cell 1	Rippling Cell 2	Rippling Cell 3	Rippling Cell 4	Rippling Cell 5	Rippling Cell 6	Rippling Cell 7	Rippling Cell 8	Rippling Cell 9	Rippling Cell 10	Rippling Cell 11	Rippling Cell 12	Rippling Cell 13	Rippling Cell 14	Rippling Cell 15	Rippling Cell 16	Rippling Cell 17	Rippling Cell 18	Rippling Cell 19	Rippling Cell 20
Source Name/Details																				
Net Leq @ Receptor, dBA	29.8	31.2	32.7	34.5	38.8	38.4	34.8	32.3	30.7	29.7	29.4	30.8	32.0	34.7	37.9	37.4	34.6	32.1	30.3	29.3

File Number : W95-25 Disk File #: JanA-r1a.xls

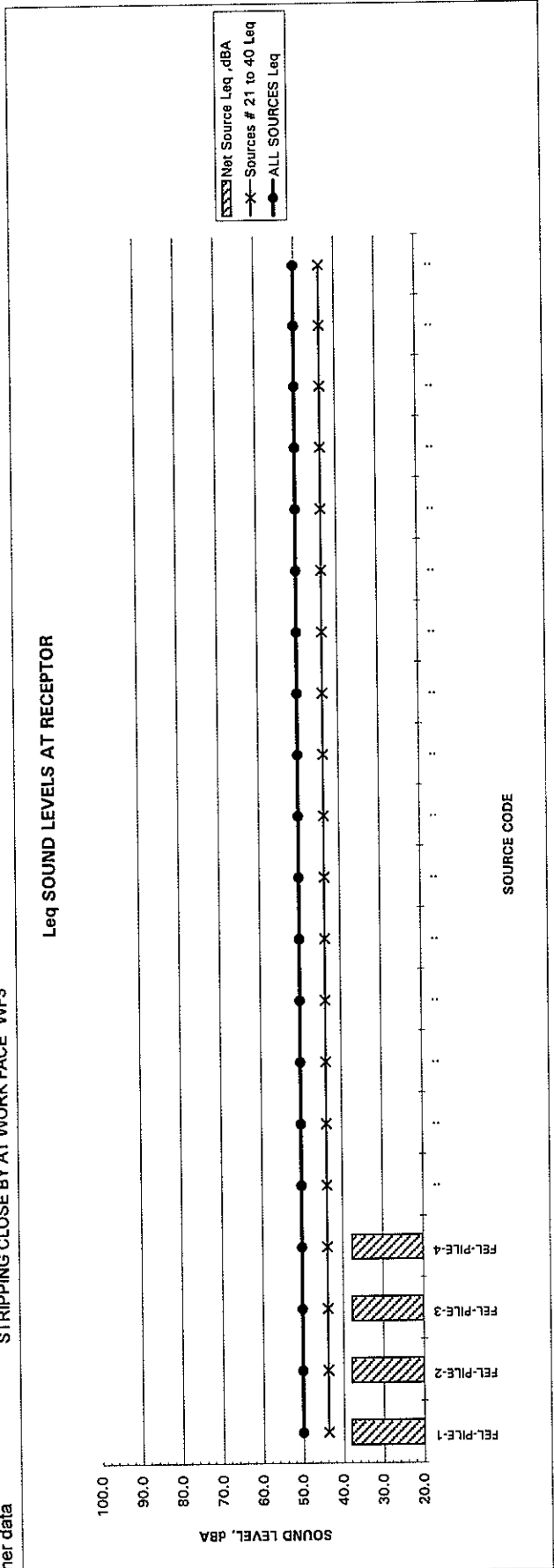
Yes Atmospheric Attenuation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider atm.atten.(Y or N) ?	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Atmospheric Attenuation, dB	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0
Barrier Attenuation	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0	157.0
Ground Elevation at source, m	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0
SOURCE-BARRIER DISTANCE(m)	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7	186.7
Ground Elevation at Receptor,m	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6	92.6
RECEIVER-BARRIER DIST.(m)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
BARRIER HEIGHT (ft)	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5
BARRIER GND. ELEV.(ft)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
BARRIER THICKNESS (ft)	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6	-10.6
Barrier Attenuation, dB	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow
Barrier Acoustic Zone	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0
Barrier Top Elevation	-34.8	-34.9	-35.1	-35.2	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8	-40.8
Sub-Total Attenuation, dBA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additional Adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Leq @ Receptor, dBA	46.2	46.1	45.9	45.8	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Leq Time Base , Minutes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Line Source Data :																			
- Length of Line Segment, m																			
- Source Speed, Km/Hr																			
- No. of Movements in Time Base																			
-Segment integration time, min.																			
Point Source Data :																			
- No. of Events in Time Base	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
- Each Event Duration, min.	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
- Duration Of All Events, min.	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Leq @ Receptor, dBA	38.0	37.8	37.7	37.6	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Other Adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Source Leq ,dBA	38.0	37.8	37.7	37.6	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Overall Lp 52 dBA Maximum Lp 46 dBA

Sources # 21 to 40 Leq
ALL SOURCES Leq
 Overall Lp 52 dBA

S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE NORTH FACE NEAR THE TOP

Master File Name MODEL100.XL5
 Updated : May 24, 1995
 5/16/98 15:05
 File Number : W95-25
 Disk File #: jannA-r1a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 8, OUTDOOR LIVING AREA (OLA)
 Other data : WITH PROPERTY LINE BARRIER (3m BERM + 2m WALL ON TOP)
 Other data : STRIPPING CLOSE BY AT WORK FACE "WF3"

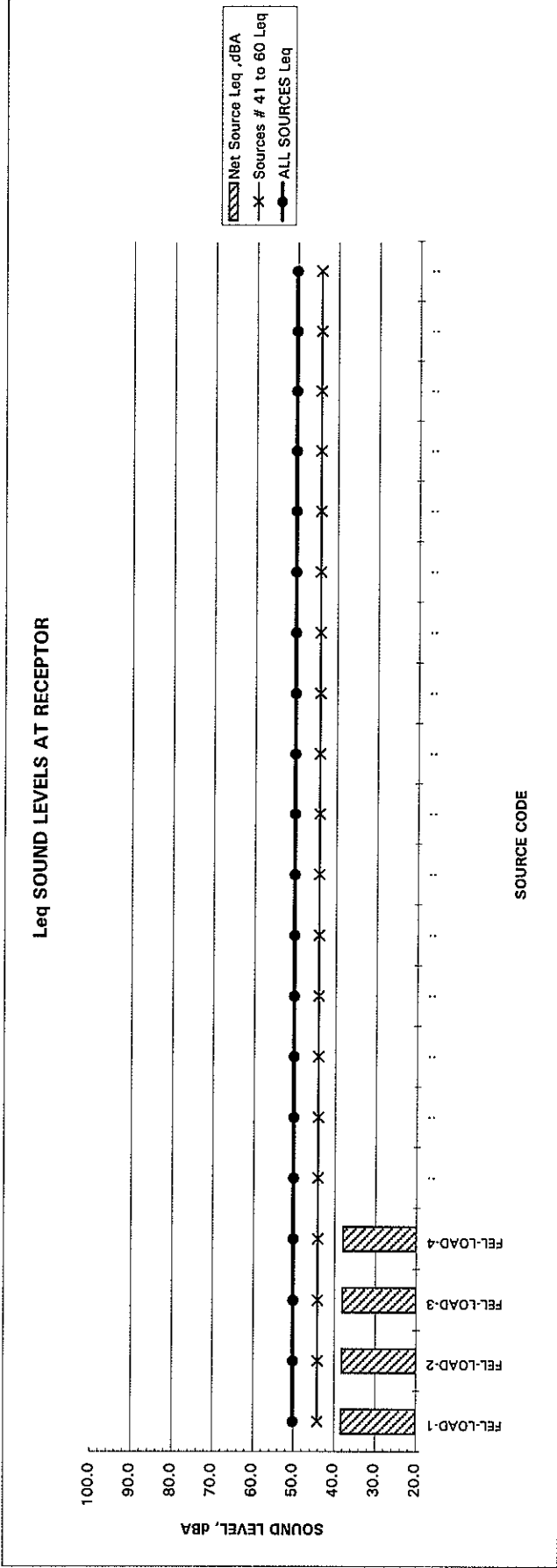


Source Number	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Source Code Name	FEL-PILE-1	FEL-PILE-2	FEL-PILE-3	FEL-PILE-4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Source Name/Details	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Net Leq @ Receptor, dBA	38.0	37.8	37.7	37.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Master File Name MODEL100.XL5
 Updated : May 24, 1995
 5/15/98 15:05
 File Number :
 Project Name :
 Receptor Name :
 Other data

S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE NORTH FACE NEAR THE TOP

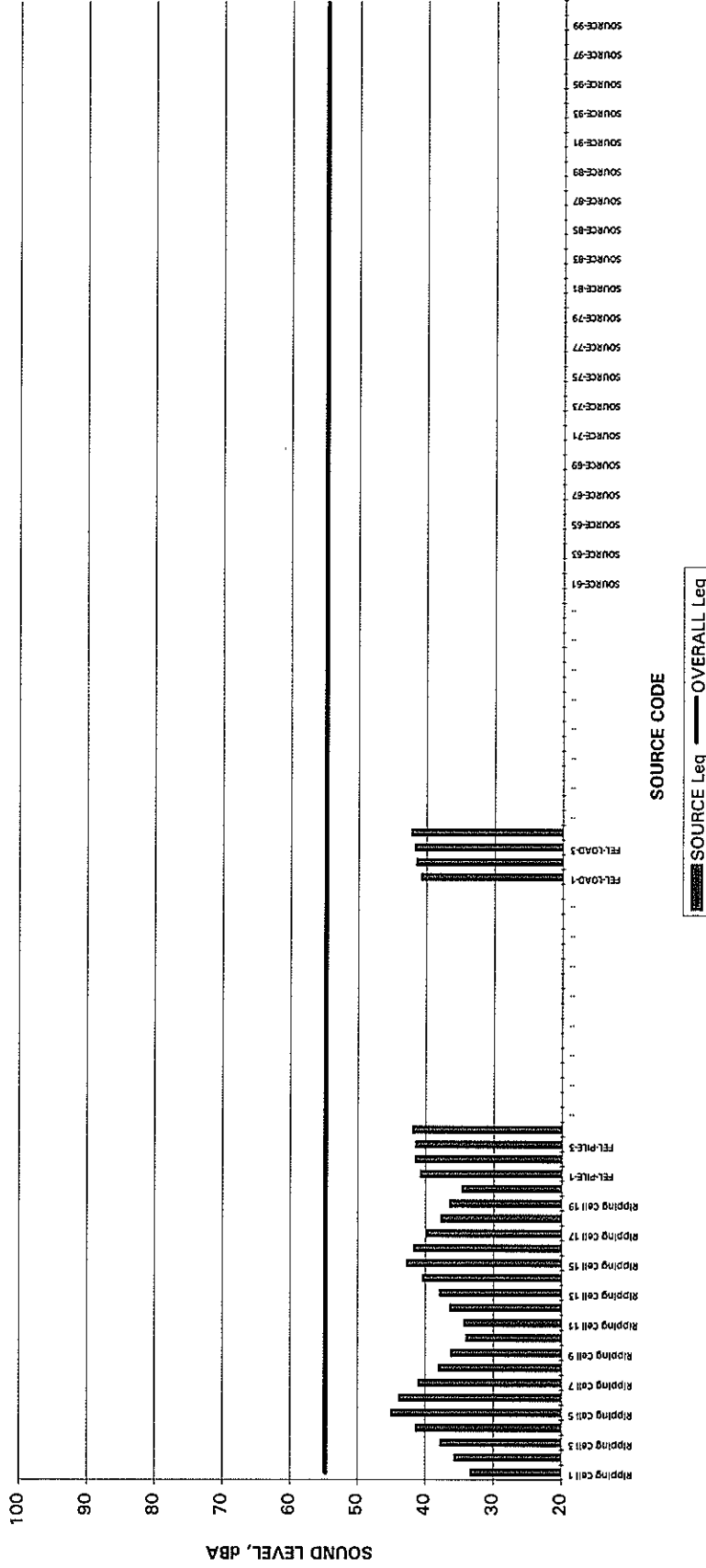
Disk File #: jannA-r1a.xls
 W95-25
 PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 BLOCK 8, OUTDOOR LIVING AREA (OLA)
 WITH PROPERTY LINE BARRIER (3m BERM + 2m WALL ON TOP)
 STRIPPING CLOSE BY AT WORK FACE "WF3"



Source Number	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Source Code Name	FEL-LOAD-1	FEL-LOAD-2	FEL-LOAD-3	FEL-LOAD-4																
Source Name/Details	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS																
Net Leq @ Receptor.dBA	38.3	38.2	38.0	37.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Master File Name MODEL100.XL5 OK
 Updated : May 24, 1995
 5/15/98 15:09
S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
 STRIPPING ON THE EAST FACE NEAR THE TOP
 Disk File #: janA-r1a.xls
 File Number : W95-25
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 11, OUTDOOR LIVING AREA (OLA)
Other data WITH PROPERTY LINE BERM (4m HIGH)
Other data STRIPPING CLOSE BY AT WORK FACE "WF4"

SOURCE Leq SOUND LEVELS - ALL SOURCES



Master File Name MODEL100.XLS
 Updated : May 24, 1995
 5/15/98 15:09
 File Number : W95-25
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 11, OUTDOOR LIVING AREA (OLA)
 Other data : WITH PROPERTY LINE BERM (4m HIGH)
 STRIPPING CLOSE BY AT WORK FACE "WF4"
 OK
 S.S. WILSON AND ASSOCIATES
 JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
 STRIPPING ON THE EAST FACE NEAR THE TOP
 BULLDOZER MOVING AND RIPPING

Receptor Xr Co-Ordinates, m	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	
Receptor Yr Co-Ordinates, m	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	
Ground Elevation at Receptor, m	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	
Receptor Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Receptor Zr Co-Ordinates, m	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	
Source Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Source Code Name	Ripping Cell 1	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell	Ripping Cell
Source Name/Details																				
Source Xs Co-Ordinates, m	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0
Source Ys Co-Ordinates, m	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Ground Elevation at source, m	171.0	175.0	175.0	175.0	183.0	183.0	175.0	171.0	171.0	167.0	167.0	171.0	171.0	175.0	179.0	183.0	183.0	175.0	175.0	175.0
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Zs Co-Ordinates, m	178.0	178.0	178.0	178.0	186.0	186.0	182.0	178.0	174.0	170.0	170.0	174.0	178.0	182.0	186.0	186.0	182.0	178.0	178.0	178.0
Point or Line Source (P or L) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Reference Sound Level, dBA	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receiver Distance, m	36.0	73.0	71.0	69.0	71.0	71.0	81.0	79.0	81.0	87.0	95.0	103.0	96.0	91.0	89.0	101.0	100.0	102.0	106.0	113.0
Selected Dsr, m	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Frequency	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Geometrical Spreading	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider Dist.atten.(Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receiver Distance, m	86	78	71	69	71	71	81	79	81	87	95	103	96	91	89	101	100	102	106	113
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Distance Error Flag	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
Geometrical Spreading, dB	-15.2	-14.3	-13.5	-13.3	-13.5	-14.6	-14.4	-14.7	-15.2	-16.0	-16.7	-16.1	-15.6	-15.5	-16.5	-16.6	-16.5	-16.6	-17.0	-17.5
ISO Ground Attenuation	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Model (1=none,2=CMHC,3=ISO)	86	78	71	69	71	71	81	79	81	87	95	103	96	91	89	101	100	102	106	113
Distance used for calculation	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Receptor Height above ground, m	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Barrier Height Factor(2xht) (CMHC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P+T Factors (CMHC only)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Is there a sound Barrier ?	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Attenuation, dB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

File Number : W95-25		Disk File #:		janA-r1a.xls																		
Yes Atmospheric Attenuation		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider atm.atten.(Y or N) ?		-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Atmospheric Attenuation, dB		183.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0
Barrier Attenuation		183.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0
Ground Elevation at source, m		179.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0
SOURCE BARRIER DISTANCE (S-B)		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ground Elevation at Receptor, m		182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5
RECEIVER-BARRIER DIST. (R-B)		55.4	50.6	46.3	43.0	44.9	44.9	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6
BARRIER HEIGHT (bh)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
BARRIER GND. ELEV.(lbg)		180.0	180.5	181.5	182.0	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5
BARRIER THICKNESS (bt)		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Barrier Attenuation, dB		-16.3	-16.0	-13.6	-10.3	-6.4	-6.5	-9.4	-12.2	-13.5	-14.9	-13.8	-12.4	-11.3	-9.0	-6.5	-6.5	-10.5	-11.4	-12.7	-11.4	-12.7
Barrier Acoustic Zone shadow		shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow	shadow
Barrier Top Elevation		171.0	175.0	183.0	187.0	183.0	187.0	187.0	183.0	179.0	175.0	171.0	171.0	175.0	183.0	187.0	183.0	187.0	179.0	175.0	171.0	171.0
Sub-Total Attenuation, dBA		-31.6	-29.4	-27.2	-23.6	-20.1	-21.2	-24.0	-27.0	-28.9	-31.0	-30.7	-28.7	-27.1	-24.6	-22.3	-23.3	-25.2	-27.3	-28.6	-30.4	-30.4
Additional Adjustments		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-Total Adjustments, dB		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ln @ Receptor, dBA		46.4	48.6	50.8	54.4	57.9	56.8	54.0	51.0	49.1	47.0	47.3	49.3	50.9	53.4	55.7	54.7	52.8	50.7	49.4	47.6	47.6
Leq Time Base , Minutes		60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Line Source Data :		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
- Source Speed, Km/Hr																						
- No. of Movements in Time Base																						
Segment integration time, min.																						
Point Source Data :																						
- No. of Events in Time Base		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
- Each Event Duration, min.		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
- Duration Of All Events, min.		3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Leq @ Receptor, dBA		33.3	35.6	37.8	41.3	44.9	43.8	41.0	38.0	36.1	34.0	34.3	36.3	37.9	40.4	42.7	41.7	39.8	37.7	36.4	34.6	34.6
Other Adjustments		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Source Leq ,dBA		33.3	35.6	37.8	41.3	44.9	43.8	41.0	38.0	36.1	34.0	34.3	36.3	37.9	40.4	42.7	41.7	39.8	37.7	36.4	34.6	34.6
Sources # 1 to 20 Leq		53																				
ALL SOURCES Leq		55																				
Overall Lp		66																				
Maximum Lp		58																				
Overall Lp		66																				
Maximum Lp		58																				
Overall Lp		66																				
Maximum Lp		58																				

S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE EAST FACE NEAR THE TOP

Master File Name MODEL100.XLS

Updated : May 24, 1995

File Number :

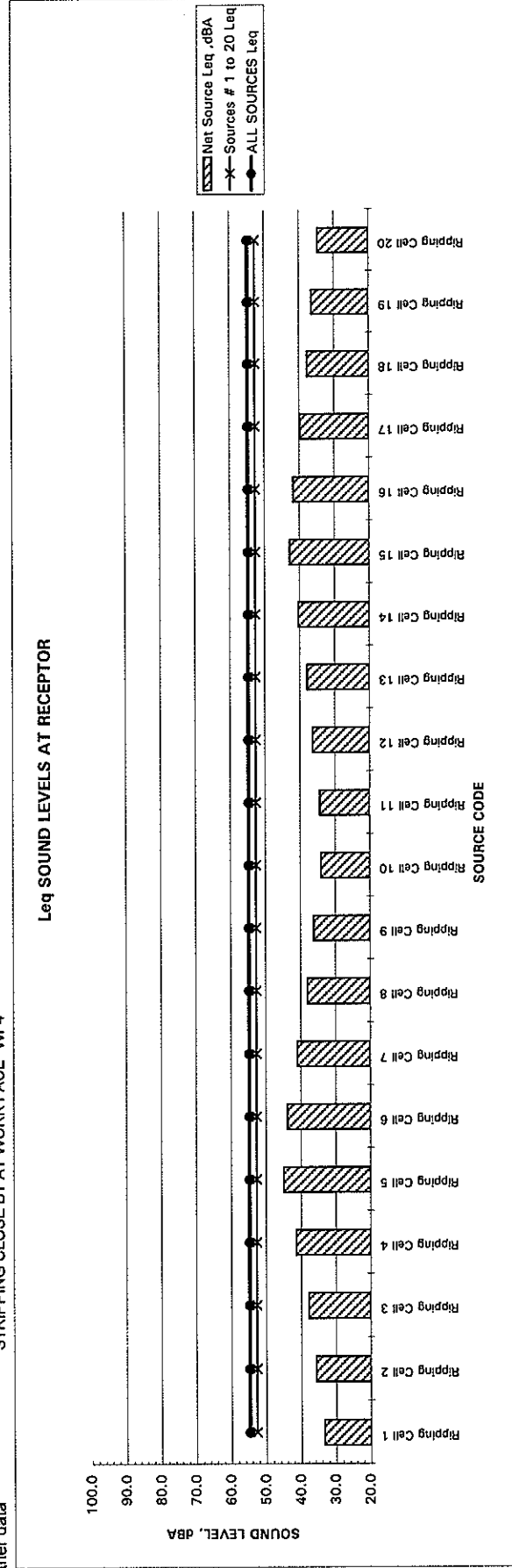
Disk File # : janA-r1a.xls

Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

Receptor Name : BLOCK 11, OUTDOOR LIVING AREA (OLA)

Other data : WITH PROPERTY LINE BERM (4m HIGH)

Other data : STRIPPING CLOSE BY AT WORK FACE "WF4"



Source Number	Source Code Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Source Name/Details	Rippling Cell 1	Rippling Cell 2	Rippling Cell 3	Rippling Cell 4	Rippling Cell 5	Rippling Cell 6	Rippling Cell 7	Rippling Cell 8	Rippling Cell 9	Rippling Cell 10	Rippling Cell 11	Rippling Cell 12	Rippling Cell 13	Rippling Cell 14	Rippling Cell 15	Rippling Cell 16	Rippling Cell 17	Rippling Cell 18	Rippling Cell 19	Rippling Cell 20	Rippling Cell 20
Net Leq @ Receptor, dB(A)	33.3	35.6	37.8	41.3	44.9	43.8	41.0	38.0	36.1	34.0	34.3	36.3	37.9	40.4	41.7	39.8	37.7	36.4	42.7	34.6	34.6

Master File Name MODEL100.XLS

Updated : May 24, 1995

5/15/98 15:09

File Number :

Project Name :

Receptor Name :

Other data

Other data

S.S. WILSON AND ASSOCIATES

JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT STRIPPING ON THE EAST FACE NEAR THE TOP

W95-25 Disk File #: janA-r1a.xls

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

BLOCK 11, OUTDOOR LIVING AREA (OLA)

WITH PROPERTY LINE BERM (4m HIGH)

STRIPPING CLOSE BY AT WORK FACE "WF4"

FRONT END LOADER STOCK PILING

Receptor Xr Co-Ordinates, m	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0	-591.0
Receptor Yr Co-Ordinates, m	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0
Ground Elevation at Receptor, m	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5
Receptor Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Receptor Zr Co-Ordinates, m	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0	184.0
Source Number	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Source Code Name	FEL-PILE-1	FEL-PILE-2	FEL-PILE-3	FEL-PILE-4																
Source Name/Details	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING																
Source Xs Co-Ordinates, m	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
Source Ys Co-Ordinates, m	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0
Ground Elevation at source, m	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0	167.0
Source Height above ground, m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Zs Co-Ordinates, m	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
Point or Line Source (P or L) ?	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Reference Sound Level, dBA	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	99	106	114	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123
Selected Ds-r, m	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Frequency	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Geometrical Spreading	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Consider Dist. atten. (Y or N) ?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reference Dist. for Lp, m	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Source-Receptor Distance, m	99	106	114	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123
Distance Reduction Factor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Distance Error Flag	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok	Ok
Geometrical Spreading, dB	-16.4	-17.0	-17.6	-18.3	-33.3	-33.3	-33.3	-33.3	-33.3	-33.3	-33.3	-33.3	-33.3	-33.3	-33.3	-33.3	-33.3	-33.3	-33.3	-33.3
ISO Ground Attenuation	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Model (1=none, 2=CMHC, 3=ISO)	99	106	114	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123
Distance used for calculation	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Source Height above ground, m	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Receptor Height above ground, m	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Barrier Height Factor(2xhb) (CMHC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P+T Factors (CMHC only)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Is there a sound Barrier ?	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ground Attenuation, dB	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7

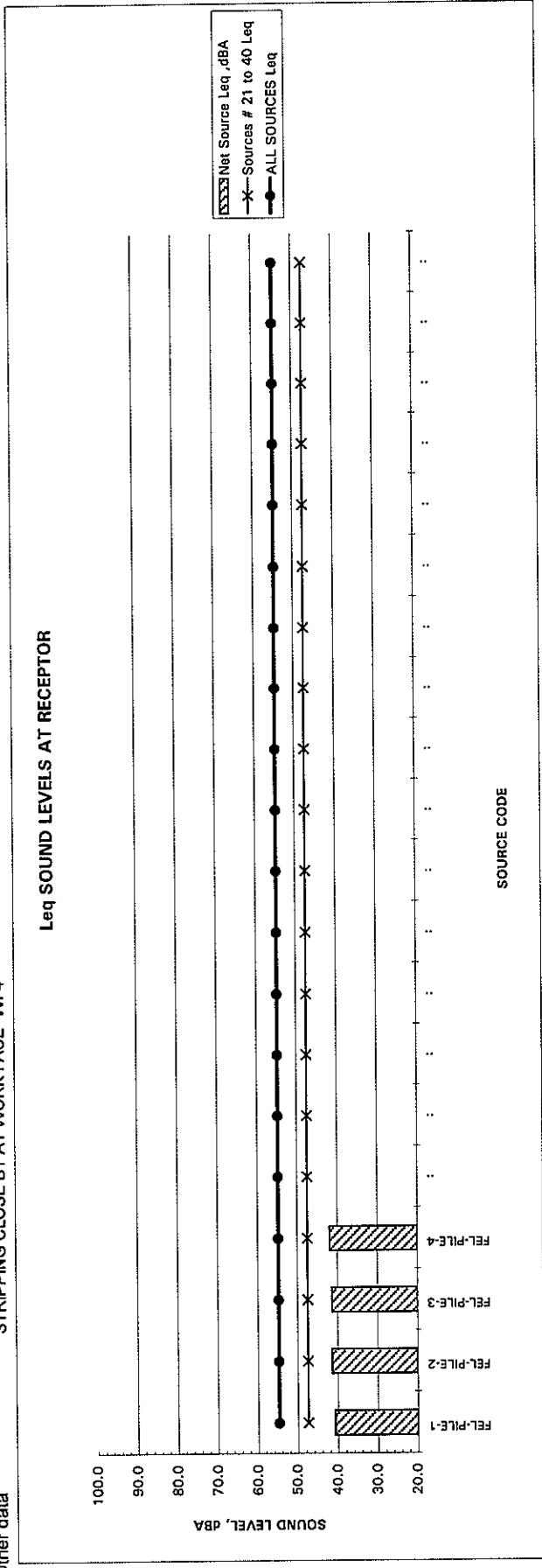
File Number : W95-25
Disk File #: janA-r1a.xls

Yes Atmospheric Attenuation				Consider atm.atten.(Y or N) ?				Y				Y				Y				Y			
Atmospheric Attenuation, dB				-0.2				-0.2				-0.2				-0.2				-1.6			
Barrier Attenuation				167.0				167.0				167.0				167.0				167.0			
Ground Elevation at source, m				167.0				167.0				167.0				167.0				167.0			
SOURCE BARRIER DISTANCE(ft)				45.0				45.0				45.0				45.0				45.0			
Ground Elevation at Receptor,m				182.5				182.5				182.5				182.5				182.5			
RECEIVER-BARRIER DIST.(ft)				58.1				58.1				58.1				58.1				58.1			
BARRIER HEIGHT (ft)				4.0				4.0				4.0				4.0				4.0			
BARRIER GND. ELEV.(ft)				179.5				180.0				180.0				180.0				180.0			
BARRIER THICKNESS (ft)				3.0				3.0				3.0				3.0				3.0			
Barrier Attenuation, dB				-15.4				-14.1				-12.4				0.0				0.0			
Barrier Acoustic Zone				shadow				shadow				shadow				bright				bright			
Barrier Top Elevation				171.0				171.0				171.0				171.0				171.0			
Sub-Total Attenuation, dB				-32.0				-31.3				-30.9				-39.5				-39.5			
Additional Adjustments																							
				0.0				0.0				0.0				0.0							
				0.0				0.0				0.0				0.0							
				0.0				0.0				0.0				0.0							
				0.0				0.0				0.0				0.0							
Sub-Total Adjustments, dB				0.0				0.0				0.0				0.0							
Lp @ Receptor, dBA				49.0				49.6				50.1				0.0							
Leq Time Base , Minutes				60.0				60.0				60.0				60.0							
Line Source Data :				N/A				N/A				N/A				N/A							
- Length of Line Segment, m																							
- Source Speed, Km/Hr																							
- No. of Movements in Time Base																							
- Segment Integration time, min.																							
Point Source Data :																							
- No. of Events in Time Base				1				1				1				1							
- Each Event Duration, min.				9				9				60				60							
- Duration Of All Events, min.				9.00				9.00				60.00				60.00							
Leq @ Receptor, dBA				40.7				41.4				41.9				0.0							
Other Adjustments																							
				0.0				0.0				0.0				0.0							
				0.0				0.0				0.0				0.0							
				0.0				0.0				0.0				0.0							
Net Source Leq ,dBA				40.7				41.4				41.9				0.0							
Sources # 21 to 40 Leq				47																			
ALL SOURCES Leq				55																			
Overall Lp				56				Maximum Lp				50				dBA							

56 dBA

55 dBA

S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE EAST FACE NEAR THE TOP
 Master File Name MODEL100.XL5
 Updated : May 24, 1995
 5/15/98 15:09
 File Number : W95-25 Disk File #: jannA-11a.xls
 Project Name : PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON
 Receptor Name : BLOCK 11, OUTDOOR LIVING AREA (OLA)
 Other data : WITH PROPERTY LINE BERM (4m HIGH)
 Other data : STRIPPING CLOSE BY AT WORK FACE "WF4"



Source Number	Source Code Name	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	FEL-PILE-1	FEL-PILE-1	FEL-PILE-2	FEL-PILE-3	FEL-PILE-4																
	Source Name/Details	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING	FEL STOCK PILING																
	Net Leq @ Receptor, dBA	40.7	41.4	41.4	41.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Master File Name MODEL100.XLS

Updated : May 24, 1995

5/15/98 15:09

File Number :

Project Name :

Receptor Name :

Other data

S.S. WILSON AND ASSOCIATES

JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT STRIPPING ON THE EAST FACE NEAR THE TOP

FRONT END LOADER LOADING TRUCKS

W95-25 Disk File #: jana-r1a.xls

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

BLOCK 11, OUTDOOR LIVING AREA (OLA)

WITH PROPERTY LINE BERM (4m HIGH)

STRIPPING CLOSE BY AT WORK FACE "WF4"

Table with columns for Receptor Xr Co-Ordinates, Receptor Yr Co-Ordinates, Ground Elevation at Receptor, Receptor Height above ground, Receptor Zr Co-Ordinates, Source Number, Source Code Name, Source Name/Details, Source Xs Co-Ordinates, Source Ys Co-Ordinates, Ground Elevation at source, Source Height above ground, Source Zs Co-Ordinates, Point or Line Source (P or L) ?, Reference Sound Level, dBA, Reference Dist for Lp, m, Source-Receiver Distance, m, Selected Ds-r, m, Frequency, Geometrical Spreading, Geometrical Spreading, dB, ISO Ground Attenuation, Model (1=none, 2=CMHC, 3=ISO), Distance used for calculation, Source Height above ground, m, Receptor Height above ground, m, Barrier Height Factor(2xhb) (CMHC), P+T Factors (CMHC only), Is there a sound Barrier?, Ground Attenuation, dB.

**S.S. WILSON AND ASSOCIATES
JANNOCK DEVELOPMENTS- TYANDAGA WEST DEVELOPMENT
STRIPPING ON THE EAST FACE NEAR THE TOP**

Master File Name MODEL100.XLS

Updated : May 24, 1995

5/15/98 15:09

File Number :

Project Name :

Receptor Name :

Other data

Other data

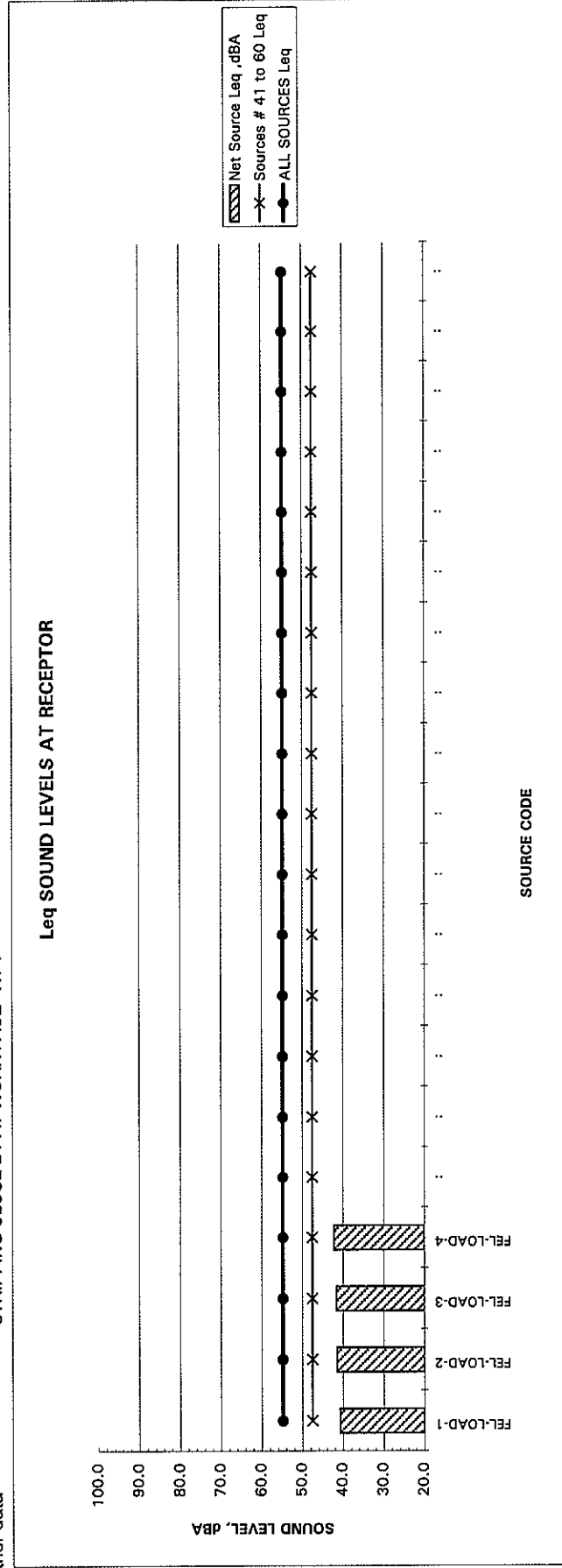
W95-25 Disk File f: janA-11a.xls

PROPOSED TYANDAGA WEST RESIDENTIAL DEVELOPMENT, BURLINGTON

BLOCK 11, OUTDOOR LIVING AREA (OLA)

WITH PROPERTY LINE BERM (4m HIGH)

STRIPPING CLOSE BY AT WORK FACE "WF-4"



Source Number	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Source Code Name	FEL-LOAD-1	FEL-LOAD-2	FEL-LOAD-3	FEL-LOAD-4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Source Name/Details	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS	FEL LOADING TRUCKS	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Net Leq @ Receptor,dBA	40.7	41.4	41.6	42.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Filename: 148NIGHT.te Time Period: 24 hours
Description: LOT 48 & 49 - BUILDING ENVELOPE (NIGHTTIME)

Road data, segment # 1: QEW+HWY 403

Car traffic volume : 154383 veh/TimePeriod *
Medium truck volume : 16251 veh/TimePeriod *
Heavy truck volume : 32502 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: QEW+HWY 403

Angle1 Angle2 : -90.00 deg -30.00 deg
Wood depth : 0 (No woods.)
No of house rows : 1
House density : 70 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 500.00 m
Receiver height : 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: HWY 403

Car traffic volume : 97834 veh/TimePeriod *
Medium truck volume : 10298 veh/TimePeriod *
Heavy truck volume : 20597 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: HWY 403

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 500.00 m
Receiver height : 4.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Result summary

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.QEW+HWY 403	! 2.00 !	53.04	! 53.04
2.HWY 403	! 2.00 !	57.34	! 57.34
	Total		58.71 dBA

TOTAL Leq FROM ALL SOURCES: 58.71 - 2 dBA (DISTANCE CORRECTION)
⇒ 57 dBA

Filename: l48day.te Time Period: 24 hours
Description: LOT 48 & 49 - OUTDOOR LIVING AREA (DAYTIME)

Road data, segment # 1: QEW+HWY 403

Car traffic volume : 154383 veh/TimePeriod *
Medium truck volume : 16251 veh/TimePeriod *
Heavy truck volume : 32502 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: QEW+HWY 403

Angle1 Angle2 : -90.00 deg -30.00 deg
Wood depth : 0 (No woods.)
No of house rows : 1
House density : 70 %
Surface : 1 (Absorptive ground surface)
Receiver source distance : 500.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Road data, segment # 2: HWY 403

Car traffic volume : 97834 veh/TimePeriod *
Medium truck volume : 10298 veh/TimePeriod *
Heavy truck volume : 20597 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 2: HWY 403

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 500.00 m
Receiver height : 1.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Result summary

	! source !	Road	! Total
	! height !	Leq	! Leq
	! (m) !	(dBA)	! (dBA)
1.QEW+HWY 403	! 2.00 !	51.40	! 51.40
2.HWY 403	! 2.00 !	55.82	! 55.82
	Total		57.16 dBA

TOTAL Leq FROM ALL SOURCES: 57.16 - 2 dBA (DISTANCE CORRECTION)
⇒ 55 dBA