2000 COMMODITY FLOW SURVEY REPORT

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International Results Group Ste. 1400, 505 – 3rd⁴ Street SW Calgary, Alberta T2P 3E6 Tel: (403) 237-7244 Fax: (403) 237-8186 e-mail: <u>results@nucleus.com</u>

Market Research Market Intelligence Pilot Studies Program Evaluation

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1.0 INTRODUCTION

The 2000 Commodity Flow Survey was conducted on behalf of Planning Policy/Data Management & Forecasting at the City of Calgary and Alberta Infrastructure as part of the 2001 model update project. In 2001 the City of Calgary will update the Calgary Regional Travel Model (CRTM). In order to increase the responsiveness of the Calgary Regional Travel Model, the flow of goods and services have been targeted as an important portion of travel in the City of Calgary and Region. The data from this survey, along with others that will be conducted, will be used to recalibrate the CRTM to include new networks, updated modeling techniques and expanded coverage.

The survey has two (2) fundamental goals;

- the collection of data on the movement of goods and services for a 24-hour period; and,
- the collection of data on the trips the delivery vehicles make throughout the day, including non-delivery or pickup stops.

The main objective of this survey is to provide data for the monitoring of the Transportation Plan and for developing new transportation forecasting models. Detailed commodity and truck movements will be added to the model based on the data that was collected. The survey involved contacting business establishments and shipping depots to collect information on the type, amount, value and method of transporting both goods and services. Businesses of all types were targeted to determine their use of transportation for shipping goods and services. This was an establishment based, shipper/receiver survey that used on-site and mailback data collection techniques to gather information on the transportation of both goods and services. Data was collected on all outbound shipments, and inbound and outbound for depots, over a 24-hour period on an assigned date. This data reported on the shipment details, and on the vehicles transporting the shipments. Shipment data is expected to add clarity to the distribution patterns of commodities, and how Calgary and Region interacts with other locations of business external to the study area. Vehicle data offers a similar understanding of how commodities move, and what travel patterns will be used to ship these quantities. For each shipment, the major commodity, weight, value (when available), method of transportation, origin, destination and other indicators are reported.

With the addition of commodity flows in the forecasting model, the theory is that the prioritizing of projects that are critical to business will become inherent in CRTM. Infrastructure can be tested for improvements to "commodity mobility" as well as "personal mobility". This information will alleviate the need for special studies to determine the right project to accommodate commodity flow. Truck volumes will be implicitly represented in the model allowing for greater flexibility in determining industrial and commercial land use impacts.

The study area includes the City of Calgary as well as the surrounding region. The region includes the municipal districts of Foothills and Rockyview in their entirety; Wheatland to Standard in the East; up to Vulcan to the South. The regional boundaries are roughly Crosssfield to the North, Bragg Creek to the west, Cayley to the south and Standard to the East. The process and its' outcome are reported in full detail in the following sections of this report.

Methodology and process are discussed in this summary report along with any issues that require consideration and modification for future studies of this nature. Statistics related to the study can be found in Appendix A; a copy of the introduction letters used are in Appendix B; a copy of all data

collection forms used in the study are in Appendix C, and other supportive instruments referred to in this report can be found in Appendix D).

Fieldwork began on August 14, 2000 and was completed on January 9, 2001. Although fieldwork was originally scheduled to be completed by December 6, 2000, difficulties with finding a workable sample database necessitated accessing three (3) different databases before one was found to be the most complete. This resulted in delays, and required that all project staff be assigned to the task of verifying sample before recruitment and data collection could begin as planned. The timetable was revised for fieldwork to be completed by January 12, 2001 to accommodate the time lost working with the sample. Two sample sources were used; Alberta Treasury and City Business Tax. The target of 3,000 completed surveys for the City of Calgary, and 300 for the Region was surpassed by December 20, 2000. However, companies that still held packages for completion were given the first week of January to finalize their data for pick up by January 9, 2001. The project halted for the Christmas season and all outstanding packages were collected between January 3 and 9, 2001. Final editing, data input, data cleaning and geocoding was completed by February 28, 2001. The required data for *3107* completed surveys for the City, and *304* for the Region were delivered on February 28, 2001. Updated employment data for all of the sample accessed with respect to the City of Calgary database was delivered March 15, 2001.

1.2 General Results

The drivers for success in this study is in establishing and maintaining a good one-on-one relationship with the participating company, and the level of ease which companies are able to comprehend and complete the forms. Also influencing the level of participation was company size, and the time required to complete the forms. Every effort was made to minimize the amount of work required by the company in order to engage them as a participant. This was accomplished by offering partial and full assists with their data collection, often in cases where it should not have been required.

General Results – City of Calgary

A sample database of 49,354 companies was cleaned and matched to categories and telephone numbers for the City of Calgary sample. Of that, some 18,398 were not contacted to participate once the required number of companies had been recruited. Out of the 49,354, some 1722 (3.4%) could not be reached because of wrong numbers, a fax number, or the company was no longer in operation. 12,384 (25.1%) did not qualify because they did not ship, or only use Canada Post or personal courier; or, their business type was disqualified. (See Appendix A). There were 3574 (7.2%) establishments duplicated in the sample. Of the remaining companies, 1167, or 2.4% refused to participate. Some 3791 (7.7%) in total were pre-qualified, and 3150 (6.4%) were recruited; 3107 provided data that was useable.

General Results - Region

A sample database of 11,102 companies was cleaned and matched to categories and telephone numbers for the Regional Sample. Once the required number of participants were recruited no further contracts were made. Due to the number of smaller businesses in the Region, fewer amalgamations, name changes and business closings the database provided by Alberta Treasury for this sample group was less complicated and recruitment was completed early. As there was no requirement to exhaust this sample frame no sample stats are available. (See Appendix A for a full summary). Overall some 345 companies were recruited and 304 provided data that was useable.

2.0 Process

2.1 Staffing and Training

Some 51 candidates were interviewed for the tasks of sample preparation, mailing and packaging, participant recruitment, editing, data input, team leaders and business contacts. Twenty-three project staff was initially hired under contract, and another ten (10) added at different stages throughout the project. In total, some 33 individuals collectively were employed to work on the project. Thirty (30) of the project team members had post-secondary education and higher, including the fields of Commerce, Education, Sociology, Political Science, Marketing and Law. The remaining three (3) had completed high school and brought up to twenty (20) years working experience to the project. During the core part of the project, which spanned 18 weeks, only three (3) team members found permanent employment and had to be replaced. After fielding was completed, 15 team members remained on project for a further 8 weeks to complete editing, data input, data cleaning, and to update employment data.

Prior to launching the project, all new staff, along with project managers, went on retreat for a halfday debriefing; from there, skills were matched with the most suitable tasks. Individual teams underwent a full day of instruction on their specific job. Training was ongoing, as next steps occurred throughout the project, or when changes needed to be made. Initial training included an overhead presentation of International Results Groups' research procedures for data collection, ethics, and general work requirements, along with discussions and descriptions of each step of the project, and practice sessions. Project Managers and senior staff facilitated three (3) training business meetings with each of the thirteen (13) Business Contacts to ensure they were following procedure, and were comfortable with communicating the study objectives. During the project, weekly staff meetings were held to discuss and resolve issues, to review suggestions for more efficient ways to accomplish specific tasks, and to keep morale high. Reward socials were held as milestones were met.

Although the criteria used for the methodology was the same for both metropolitan Calgary and the Region, the report will highlight any differences in the two components.

2.2 Sample Verification

The first step in sample verification was to determine if the company was still in active status, to confirm the current establishment name, a current address and a key contact at the management level, for all of the sample. This step was completed by telephone with a team of 10 to 20 verification staff.

The establishment was contacted, and the address and contact name verified. A series of questions were asked to determine if the company qualified to participate in the study. Qualification was determined by verifying if the company initiates shipments of a product or service to another location, by means other than personal courier. Shipments could be made to locations within the city or outside the city. Companies that qualified were automatically mailed an introduction letter addressed to the contact name. Companies that did not qualify were put into an inactive database, while qualified establishments were transferred into the active database. In instances where there was doubt with respect to the information received from the company regarding their qualification, or it was apparent to the consultant that the company should qualify, the company was coded as active. An appropriate amount of time was allowed to lapse for delivery of the letter before a recruitment call was made.

Sample verification and cleaning was a labour intensive function and considerably more time consuming than expected. Initially, eight (8) individuals were intended to work on this function; this was increased to 20 when sample problems were encountered. Due to the style of the Alberta Treasury sample all team members were required to work labourously through the data, identifying overlaps, duplications and for verification purposes in order to proceed with the project. It was found that the Alberta Treasury database is not updated when companies cease operation, experience amalgamations or have name changes. This resulted in a database that contained many redundant company names, but each required effort to determine that status. As well, because corporations are often put into numerous business categories they were sometimes listed as many as a dozen times within different categories. In addition, the first two (2) sets of sample did not include telephone numbers. This required that each missing number had to be researched through telephone directories, CD databases and online directories.

2.3 Mail-out Introductory Letters

The introductory letter, was written and signed, by a senior official from the Planning and Transportation Policy business unit for locations within the City of Calgary, and by the Director of Highway Policy and Planning for Alberta Infrastructure for distribution in the Region. This was an important component for the success of this study. (See Appendix B). Not only did the letter add credibility to the project, the expectation of being contacted to participate enhanced the likelihood of co-operation by the establishment. Included with the introductory letter was an easy-to-read, one-page insert flyer, informing the reader about the general objectives of the study. Hypothetical and potential questions were drafted that provided answers about why and how the data provided by the company could assist various stakeholders. (See Appendix B). This insert played an important role as introduction to the project, and increased the possibility of securing a first meeting. However, for the most part, in order to schedule a first meeting it was still necessary to discuss some details of the project. Although a media campaign was conducted just prior to beginning the project, few remembered seeing or hearing that campaign.

In total, 5,807 letters were mailed to companies in the City of Calgary and 540 in the Region; in some cases re-mailing or a subsequent fax was required. In such cases either the introductory letter was misdirected internally once it was opened; it got caught up in a backlog of mail; or, the contact had misplaced it and asked for another copy. Some 13% overall in the City requested a remail or a fax and 32 letters were returned undelivered. In the Region 8% of all contacts requested another letter of fax; 12 letters were returned undelivered. All companies that received a letter were contacted

It was found that two (2) or more individuals at the participating establishments eventually became involved in facilitating data collection. Additional copies of the letter were carried by the Business Contacts in their presentation portfolio to refresh the contact's memory, and to formally introduce any new participants to the study.

The introductory letter was addressed to a senior management executive (decision maker) at each company, who was considered to be the key contact. It was determined through pilot testing that in order to gain solid support for the study, senior management 'buy-in' is necessary. Although, in the end, most individuals at this level were not directly involved with the study process, they were instrumental in making a corporate decision to participate and in facilitating staff co-operation.

In the future, a recommended key factor for awareness is that an even stronger introductory letter should be used to position participation in the study as a privilege. If supported by an equally strong media campaign, the results could be even more effective.

2.4 Recruitment Call

Up to seven (7) attempts were made to recruit the average establishment, while more attempts were made if necessary to some of the larger priority companies. As the initial contact is made with upper management, not limiting the number of recruitment attempts was essential to accommodate their busy schedules. In a number of cases, the targeted contact was out of town, or unreachable, for the entire recruiting period. Overall, some 19,220 calls were made within the City of Calgary and 1875 in the Region during the recruitment phase.

As successful completion of this study was dependent on building relationships and trust, an average telephone recruitment call regardless of the location lasted between 10 and 15 minutes. The purpose of the recruitment call was to confirm the eligibility of the establishment with the key contact, and to schedule a face-to-face meeting with that person. The face-to-face meeting was essential for the successful recruitment of the company. However, a meeting did not necessarily result in a recruited company. Some requested a faxed descriptive page regarding the process prior to granting a meeting in addition to the information they had already received.

City of Calgary Recruitment

From the three (3) data bases provided for this study recruits represented 6.4 % overall. Some 24% were recruited on the 1st attempt; 20% on the 2nd attempt; 16% on the 3rd attempt, 31% after 4 attempts; and 9% after more than 4 attempts. Overall, there was a refusal rate of 2.4% on the telephone; another 8% were ineligible, and 12% were still not available after seven (7) attempts. Refusals were most likely to come from the very small, one and two man operation; from forceful 'gatekeepers', or from the very large company where the volume of commodity flow was considered somewhat problematic and inconvenient for the company to participate. Examples of this include a private trucking company with 270 trucks and excessive shipments over a 24-hour day, and a large energy supplier. Both felt participating in the project would be too much to expect of their drivers, and they were not willing to accept assistance.

Ineligible establishments included companies that do not initiate any commodity shipments, and service companies that are independent contractors working on site, but not transporting any service to another location.

Overall, only seven (7) establishments requested additional information regarding FOIP, and a written explanation of how the data would be handled. Other requests included confirmation from the Project Manager that the recruiter was representing the City of Calgary, and the occasional call was made to the City of Calgary. This put high demand on the recruiter to answer questions, to be knowledgeable about business operations, well informed about the process; and to be mature and capable of speaking with high-level executives. The study was qualitative in nature, as it required one-on-one, unstructured, conversation with one and more participants at each establishment.

Regional Recruitment

Some 16 % were recruited on the 1st attempt; 24% on the 2nd attempt; 14% on the 3rd attempt, 38% after 4 attempts; and 8% after more than 4 attempts. Overall, there was a refusal rate of 6% of the contacts made on the telephone; another 7% % were ineligible, and 14% were still not available after

seven (7) attempts. Refusals were most likely to come from the very small, one and two man operation; from forceful 'gatekeepers', or from the home business operations.

Unlike the City of Calgary participants, no establishments in the Region requested additional information on FOIP. Recruiters were expected to answer questions, to be knowledgeable about business operations, well informed about the process; and to be mature and capable of speaking with high-level executives. The study was qualitative in nature, and required one-on-one, unstructured, conversation with one and more participants at each establishment, and in many cases it was important that this be someone they could feel comfortable inviting into their home. Because of this factor, similar to the business consultants, regional recruiters were predominantly female.

2.5 Initial Meeting

Initial meetings were scheduled by the recruiters for the Business Consultants, and posted at the command centre. Each recruiter was assigned five (5) consultants, and was responsible for their scheduling and followup. Any re-scheduling of missed or cancelled meetings was handled by a designated coordinator, in collaboration with each recruitment leader. Overall, 4.2% of all meetings were missed by potential participants; a higher 7.2% were cancelled, but for the most part were re-scheduled. Cancellations and missed meeting were not necessarily known in advance. Of the missed meetings, some 35% were missed multiple times by the same party. After three (3) missed meetings the company was taken off the active listing. This was more likely to occur with small business owners, and independent operators with no formal office base, however, .82% were large companies. Business Consultants found it necessary to cancel and reschedule 1.25% of their scheduled meetings. This was generally due to winter road conditions, vehicle problems, or delays at a prior meeting. All contacts were notified by the command center and re-scheduled.

The purpose of the first meeting was to obtain management buy-in and personalize the project. Overall, only two (2) companies volunteered participation without a meeting. This willingness was due to prior awareness through a Business Association. Some trucking companies included their drivers in the initial meeting. Of those who agreed to participate, 100% gave a firm commitment during the meeting. Regardless of that commitment, 1.3% declined participation after they received their package. This could occur immediately following receipt of the package, the day prior to data collection, or the morning of data collection. Refusals at this point were often because of concern over the amount of paper received, and their unwillingness to proceed; an interruption in plans; or a corporate priority. Another 1.6% simply did not complete the study without giving a reason. Only .4% refused during the meeting. To avoid refusals, it was important that the Business Consultant have excellent people skills, and be able to communicate the importance of the project.

The incidence of refusal at the initial meeting was highest in visits where the key contact was not likely to be available for data collection, when he/she is located at a head office in another City, or the contract person was middle management or lower.

In this study, non-participants most often were;

- Small companies
- Independent service contractors
- Companies with a spokesperson of limited authority, and a Head Office elsewhere.
- Companies with more than 100 transactions a day
- Companies that lacked the motivation to participate
- Independent truck owner/operators.

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During the initial meeting, the Establishment Form was partially completed by the Business Consultant. Pertinent data was also gathered about the number of trips/shipments in a day, and the number and type of vehicles used. This information was passed to the Packagers through a formal request process. This gave them the information they required to assemble the applicable forms, the correct number of forms, and to personalize each package.

The data collection date which was determined by the individual Business Consultants, was scheduled at the meeting. The data collection date was based on project criteria, and the information learned from the company. Data Collection was scheduled within one (1) week of the initial meeting, and only adjusted for unusual circumstances. The contact was left with a reminder sheet and a number to call with questions. A second meeting time was scheduled for dropping off the survey package and for spending time to review details of the data collection procedure, and form completion.

2.6 Data Collection Scheduling

A sequence of data collection dates across a five (5) day workweek was pre-determined in order to meet study deadlines, to establish a balance of travel days, and to satisfy random collection. Although initially it was intended to conduct data collection across the seven (7) days of the week, only Monday to Friday was feasible. It was found that companies rarely ship during the weekends. The occasional vehicle will pick up a scheduled shipment from a loading yard without any need to make contact with the company. The companies were not willing to allow unauthorized personnel on-site in their absence.

Regardless, that each company was assigned a specific data collection day, there was a need to be flexible for re-scheduling, rather than lose participants by being inflexible. Immediately upon any cancellation, or a forgotten commitment to participate, a new date was rescheduled. For the most part the second date was kept.

2.7 Packaging

Data collection material was packaged for each company based on the information gathered during the initial meeting. These packages were prepared daily for next day drop-off meetings. The package contained documentation relevant to the type of business, the number of shipments, and the number and type of vehicles. For data identification purposes, each company was assigned a unique five (5) digit case number.

Each package contained the applicable survey documents based on the company category of Goods Producer, Goods Depot or Service Company; in some cases dual categories applied. A package could consist of;

- An Establishment Form and/or an Establishment Form for Depots
- Good Shipment Forms and Good Depot Forms
- Goods Vehicle Forms; Goods Vehicle For Hire Form; or, a Service Vehicle Form
- Colour coded instructions
- Colour coded code sheets
- Colour coded examples of completed forms

While all data forms were white; colour-coded enclosures included:

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- A detailed set of instructions, including an outline of the study purpose, a step-by-step explanation of how to complete the survey, and a listing of definitions. (pink)
- A completed example of each of the forms for their reference. (Yellow).
- A code sheet for recording Commodity type, and reasons for stops. (orange)
- An employment code if information not completed (blue)
- A second copy of the letter from the City of Calgary

Packages went through a proofing checkpoint to ensure that contents matched the company profile, including reference to the data collection day, and that the applicable number of stamped self-addressed return envelopes for the For Hire Vehicles drivers were included. (See Appendix C for data sheets and Appendix D for reference and instruction forms).

For Hire drivers received more forms than other driver. Their package included instructions to record the driver's name and telephone number for followup by recruiters, and a stamped return envelope.

In some cases, information received during the initial meeting was not as accurate as anticipated. Additional forms, or different forms, occasionally had to be dropped off prior to, or on, data collection day; this occurred with a small .6% of companies. The most common error occurred with the company's estimate on the number of For Hire' vehicles. In most cases, the quantity of shipments was overstated, and in some cases highly overstated. As a result substantial paper was returned. A much small number underestimated their volume, and submitted excess data on blank paper, or made extra copies.

2.8 Second Meeting

The second meeting was scheduled to meet with the company representative(s) who would be coordinating data collection, and/or completing the company portion of the survey. In most companies the work was done by more than one (I) person. At the second meeting the personalized data collection package was delivered and details for completing the survey reviewed. Included in the package was a wall poster, which is a larger and more colourful version of the insert in the introductory letter. It was intended that, prior to data collection day the poster would be posted in a noticeable location to serve as information and notice of the upcoming study. (See Appendix D)

The data collection package was typically delivered two (2) to three (3) days prior to the assigned date. Timing of this delivery was important to minimize the possibility of missing the data collection date, by not enough time being allowed for distribution at the company. Flexibility in scheduling was required to accommodate those companies that required the survey information a week or ten (10) days in advance. This occurred with companies where drivers pick up shipments in the middle of the night, or very early in the morning, and for companies that do not see or speak to their drivers on a regular basis. All scheduling, drop offs, data recording and data pickup was followed and tracked at the control center.

2.9 Distribution and Collection of Data Collection Sheets

To increase participation, several options were made available to companies for distribution of the survey material, and for recording pertinent data. Companies could control the data collection themselves by explaining and distributing materials to their individual drivers. They were also offered the option of a partial assist, or a full assist, by the International Results Group project staff. This could mean, less work, or no work, for their staff.

A '*partial assist'* meant the Business Consultant and/or other project team member(s) would be on-site for a partial, or full, day explaining and distributing survey materials to the drivers. In some instances, the company was responsible for collecting the completed data sheets from the drivers, and completing the Goods or Depot Shipment forms on their own. Another level of a partial assist only required completion of the Goods or Depot Shipment forms by the project team, while the company managed distribution and collection of survey forms with their drivers.

A '*full assist'* meant the Business Consultant and/or other project team member(s) were onsite for part of a day, or a full 24-hour time period, managing and distributing forms to the drivers. They would often return to the site the following day, or within a week depending on timing of paper flow, and record all of the shipment data for the company. In some cases, this required the assistance of only the Business Consultant, while in other situations it required more team members to be involved. For example, one (I) company required the assistance of 10 project staff over a 16-hour time period.

Overall in the City of Calgary, some 794 companies received partial assistance, and another 122 required full on-site assistance. In the Region, eight (8) received partial assistance and two (2) received full assistance.

This service was another example of a need for flexibility, and an early assessment of the various needs of each company in order to obtain the best data and the most cooperation. It became necessary to offer assistance as part of the study service when companies appeared hesitant and likely to withdraw from the project; or, when experience indicated that to get reliable information offering assistance was necessary. Business Consultants were trained to identify these situations. Although the need for assistance of any nature was most often left up to the individual company, if the Business Consultant did not feel confident that study requirements were fully understood, or if it was determined by the Project Manager that the work could be onerous for the company a partial or full assist was immediately offered. This offer was to minimize refusals. Other influencing factors for offering assistance was an indication that the company could not handle the process because of sheer volume. This level of flexibility required substantial management.

2.10 For Hire Drivers

For Hire drivers received a stamped self-addressed envelope in their package to facilitate the mail back of their forms. The driver's name and telephone number was collected on-site to allow the project team to do followup as a reminder to return these forms. When a telephone number was available, drivers received up to three (3) followup calls as a reminder to complete and mail back their forms. For the most part, drivers returned these calls. With some prompting, some agreed to complete their survey; others had forgotten to complete their forms and had thrown them out; while some simply did not cooperate. For the most part, all of the addresses on driver forms had to be modified or completed unless only one stop was made. Their general attitude was that they would provide delivery company names, and in some cases intersections, but were not prepared to complete the addresses. In the case where destination names were not legible, followup calls were necessary for verification and completion.

2.11 Data Followup

When the individual company packages were dropped off, the process was reviewed, and the company was encouraged to contact the Project Manager with questions and for clarification. Overall, only seventeen (17) calls were fielded regarding confusion on completing the forms.

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Pickup generally was scheduled for the day immediately following data collection, or no later than two (2) days after that date. This scheduling was flexible in consideration of companies with a large volume of reporting. Some companies called to reschedule their pickup for a variety of reasons. Often, they required more time to complete their shipment information, or to gather surveys from their drivers. In some cases, the second pickup time was again re-scheduled. Some 10.6% required several reschedules, or did not have their information available at the agreed upon date. To facilitate these changes and avoid delays, one (1) person in the City and one (I) in the Region was dedicated to pickup service. On average, within two (2) to four (4) days of data collection, a package was picked up by the consultant, or the project courier, and delivered to the Control Centre for processing. Some 3% of all packages were not available for pickup for several weeks in the City. In the Region it was found that that participants either agreed to participate and followed through, or did not agree to participate on the initial call.

2.12 Reminder Call

With the exception of companies that received their package a day in advance, reminder calls of their data collection date were made to remaining participants.

2.13 Quality Control

It was the responsibility of the Project Manager to audit procedures, and the completed data. Any problems were alerted to the Business Consultants to enhance the level of explanation to participating company in an attempt to minimize editing, callbacks, and incomplete and unobtainable data. In the initial few weeks, all procedures and completed forms were reviewed until such time as the various team members fully understood their job functions, and, controls and process were working as planned. Regular meetings were held with the various teams to collaborate on steps that would make the process more effective and time saving.

2.14 Coding, Editing, Data Entry and Verification

An inordinate amount of time was spent coding, editing, and completing the surveys. Some gaps in addresses were expected, but the extent of the careless and lax reporting was surprising and overwhelming. As a result, editing involved numerous validation calls, searching through telephone directories, databases, and Address Guide Books. The most frequent gap was in completing addresses, balancing and categorizing shipments. Some forms had to be completely rewritten due to impossible reporting, either to make it legible for data entry, or to place the information in order. A high number of reported destinations were primarily names of buildings, vague street, road locations, or intersections. Most shipment quantities had to be converted to kgs. or other weights and measures, and at least 60% of total shipments did not equal the number recorded on the shipment forms. As well, it was common that drivers reported different weights and measures than those recorded by the company.

Some 92% of all surveys required amendments of some nature. This could include;

- Balancing the accumulated total amount of goods reported on the Goods or Depot Shipment forms to the total dollar value noted on the Establishment form.
- Completing addresses on driver forms and on shipment forms
- Sequencing values reported on Shipment and driver forms
- Completing shipment forms from a stack of invoices provided by the shipment company

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In the City of Calgary forty-seven (47) companies included all the copies of their invoices, waybills and shipping documents for the day with their pickup package without completing any of the forms, only two (2) in the region included shipping documents. One company alone required 20 hours for one Business Consultant to interpret, verify, transcribe the data, and complete the addresses. One partial assist required three (3) consultants for three (3) days, or 63 hours, to sort and record shipment data on site, while a full assist with a 24-hour company required 16 project members to rotate over three (3) shifts.

2.15 Database Development

A total of six (6) database files were completed and delivered to The City of Calgary representative. This database included;

- Establishment File
- Employment File
- Total Shipment File
- Trip File
- Vehicle File
- Individual Shipment File

The database was created in SPSS, complete with variables and value labels. The data was then entered directly into SPSS. Missing, non-applicable and refused data was left blank.

All database information was verified through a visual verification process, and any data input or logic errors noted at this stage were corrected.

2.16 Geocoding

The resulting data from 3107 surveys was then geocoded to the City database using ArcView GIS software. Regional addresses were manually geocoded using ArcView GIS software and regional maps. This was time consuming work and required 62 hours to complete.

3.0 Reporting Issues

3.1 Forms

The first issue noted was that companies had a variety of operational differences that directly affected the study.

Establishment Form

- 1. A number of companies in the study were both a goods and service provider. This created difficulty in categorizing the company. To accommodate this a new code was established.
- Most companies were unable to record dollar value of their shipments for a variety of reasons;
 - Depots do not know the value of what they are shipping as product owners do not share that information with them, and the goods are insured by the producing company, or
 - Value information is kept at Head Office and not shared with field offices, or

• Shippers had no way to break out quantity, and units and value of shipment was often grouped as one value.

Little could be done to work participants through these issues as there are no solutions for unavailable information.

- 3. Establishment forms and Goods Depot/Goods Shipment forms only indicated an opportunity to report tonnes, litres, and items, and an 'other' option. A high number reported in lbs., cases, or items, while drivers tended to report in terms of pallets and items. This made it difficult to match driver information with Depot/Good forms, and extensive work to unify reporting. To solve this, all discrepancies were verified with the establishment.
- 4. Establishments were inclined to record different vehicle weights than the drivers. Again, verification was done through followup phone calls to both the establishment and the driver.
- 5. Few Total Quantity Shipped categories equaled the Quantity recorded on the Shipment or Depot forms. Followup was conducted with the establishment and errors when identified were corrected.
- 6. A large number of companies are home based businesses, and did not fall into any of the designated employment categories. New codes were assigned.

Recommendation: Standardized reporting units with fewer options should be established for future studies.

Employment Category Codes

 These codes had to be expanded to include all categories *in field*, as most companies did not only have employees in office space, or in industrial/commercial space, but employment in the field as well. There were a high number of home-based businesses that did not fit into any of the typical categories.

Vehicle Forms

- 1. For the most part, many of the targeted companies no longer operate their own vehicles, including service companies. A Service Vehicle form for Hire should be added to the study forms in the future.
- Few service vehicle drivers were able to record the value of service. They may know the basic service call cost, but are generally unaware of the cost of parts, labour and GST. Followup had to be conducted with the establishment, and where possible adjustments were made.
- 3. Overall, consistency for service vehicle reporting is difficult. The form requests that they begin recording all stops when they begin their assigned day. Some drivers did not record stops until they left the company shop for the day; some recorded from the time they left home, if they park the service vehicle at home; others recorded stops in their own personal vehicle until they picked up the service vehicle on the job, which meant two (2) vehicles were reported on. This was motivated by the instruction to *Begin Recording all Stops*

when you begin your Assigned Day. This should be more clearly defined in future studies so purpose is clear.

4. Some service vehicle drivers pick up parts along the way to work, or have them in their vehicle from previous days, and may drop them off along the way. Because there was no service involved at that point, the value recorded on the vehicle form did not match the value of service reported by the establishment. Again, all discrepancies were verified with the establishment.

3.2 Reporting Errors and Issues

1. The majority of Establishment Forms were completed incorrectly, or missing data. Most Goods Shipment forms/Goods Depot forms did not match the value or quantity noted on the establishment forms. Establishments were contacted to complete missing information.

2. Goods Depots/Goods Shipment forms were primarily missing complete addresses; many only recorded intersections, or names of companies. Addresses reported by drivers often differed from destinations and addresses supplied by the establishment. These addresses were verified with the establishment.

4.0 Reasons for Refusals

There were a variety of reasons given by companies for a refusal to participate in the study. Some were believable and others were simply excuses. The more common reasons included;

- Too much work for the company, the drivers, or both
- No time
- No one to do the work, and they were not willing to accept assistance
- Not interested
- They felt the City wants to know too much about their business
- The information required is confidential
- They forgot to collect on their designated date, and were not interested in rescheduling
- They were angry with the City Planning and did not want to help them out
- The company coordinator was away sick on the assigned data collection date
- They mailed it to their head office and it got lost in the system

APPENDIX A

General Results For City of Calgary

The overall sample of 49,354 was broken out as follows:

Sample Status	Sample 1	Sample 2	Sample 3	Total
	N=10,863	N=14,646	N=23,845	N=49,354
	(%)	(%)	(%)	(%)
Phone – NIS	2.2	1.2	2.3	1.9
Fax Number	.4%	.5%	.8%	.6%
Wrong Number	.7%	.8%	3.2%	1.9%
No Answer/machine	2.5%	9.3%	9.3%	7.8%
Callback (5 dials)	.5%	.7%	.4%	.5%
Head Office Decision	.1%	-	.1%	.1%
Out of Bus.	.7%	.9%	1.1%	1.0%
Contact unavailable for study	.1%	.0%	.2%	.1%
Refusal	2.8%	.6%	3.3%	2.4%
Ineligible - ship by post/courier	4.8%	1.4%	6.4%	4.6%
Ineligible - do not ship	12.9%	5.3%	30.4%	19.1%
Business Type Disqualified	.7%	.8%	2.1%	1.4%
Establishment not contacted for recruitment	52.4%	66.5%	12.5%	37.3%
Language Issues	-	.0%	.0%	.0%
Duplicates	3.5%	1.0%	12.8%	7.
Establishment Pre-Qualified	10.4%	6.2%	7.4%	7.7%
Establishment Recruited	5.5%	4.8%	7.7%	6.4

The following represents the breakout of Business Type and Industry Group included in the 3107 completed surveys

Business Type	Size
n=3107	(n=3107)
Agriculture	15
Industry	586
Wholesale	288
Retail	377
Private Services	1542
Government	9
Education	5
Transportation	104
Homebased Business	184
Refused	2

Industry Groups	N=3107
Depots	33
Goods Only	600
Service Only	1746
Good and Service	45
Unclassified*	682

• The unclassified category are companies that had no shipments on their data collection date. As this is a commodity driven database we were unable to properly classify their business.

Geocoding outcome;

Geo-Coding	Comments
1. Stops Form	40,915 records : 1545 were un-codable: 375 City addresses (3.8%) and 273 un-codable regional addresses (0.7%). The rest were coded, were outside the region, or were correct, but would not geo-code.
2. Individual Shipment Forms	10,606 Records : 339 were un-codable City addresses(3.2%) 82 were un-codable regional addresses (0.8%). The rest were coded, were outside the region, or were correct, but would not geo-code.
3. Vehicle Form	926 Records : 12 were un-codable City addresses (1.3%) of For Hire Vehicles. The rest were coded, were outside the region, or were correct, but would not code.
4. Establishment Form	3107 Records : 56 addresses were correct, but would not code with the City database

Refusals and Dollar Value

	Comments
1. Refusals	6816 Records: In the Vehicle file there were 2 Don't knows for vehicle configuration
2. Dollar Value	 49816 Records: (Stops Form) Of the 29,935 records that should have had a dollar value assigned, 22,006 were missing dollar value (73.5% refusal or unknown quantity on dollar value) 10,602 Records: (Individual Shipment Form) 6688 records were missing a dollar value (64.1% of eligible records) 3014 Records: (Total Shipment Form) 1578 were missing a dollar value (52.4% of eligible records)

General Results For The Region

As it was not a requirement to screen the entire sample of 11,102 regional establishments, no statistics are available as in the City of Calgary sample, in terms of sample statistics.

The following represents the breakout of Business Type and Industry Group included in the 304 completed surveys:

Business Type	Size
n=304	(n=304)
Agriculture	63
Industry	47
Wholesale	5
Retail	35
Private Services	100
Government	0
Homebased Business	25
Agriculture Homebased	1
Agriculture/Wholesale	1
Agriculture in the Field	1
Industry in the Field	1
Private Services in the Field	1
Retail in the Field	1
Retail/Private Services	2
Wholesale in the Field	1

Industry Groups	N=304
Depots	0
Goods Only	53
Service Only	114
Good and Service	5
Unclassified*	132

 The unclassified category are companies that had no shipments on their data collection date. As this is a commodity driven database without data we were unable to properly classify their business.

Geocoding Outcome;

Geo-Coding	Comments
1. Stops Form	1656 records : 28 were coded as OK TZ but no XY coordinates (1.7%); 49 unknown (3.0%). The rest were coded, or were outside the region.
2. Individual Shipment Forms	372 Records : 9 were coded as OK TZ but no XY coordinates (2.4%) and 3 unknown (0.8%). The rest were coded, or were outside the region.
3. Vehicle Form	28 Records : 10 were coded as OK TZ but no XY coordinates (35.7%); and 1 unknown (3.6%). The rest were coded, or were outside the region.
4. Establishment Form	304 Records : 5 were coded OK TZ but no XY coordinates (1.6%) and 1 unknown (0.3%). The rest were correct.

Dollar Value

	Comments
1. Dollar Value	 328 Records: (Total Shipment Form) 69 were missing dollar value (21.0%). This was either a refusal or unknown. 372 Records: (Individual Shipment Form) 172 were missing dollar value (46.2%). This was either a refusal or unknown. 735 Records: (Stops Form) 231 records were missing a dollar value (31.4%). This was either a refusal or unknown.

Database Layouts – Commodity Flow Study

Establishment File

Establishment Number Establishment Name Establishment Type Establishment Address (Suite, Building, Street Name, Street Type, Quadrant, City) Collection Date

Employment File

Establishment Number Employment Category Number of Employees

Total Shipment File

Establishment Number Shipment Number Type of Goods Shipped Direction of Shipment (going in, coming out) Quantity of Goods Being Shipped Units for Quantity Value of Goods

Trip File

Establishment Number Vehicle Number Stop Number Reason for Stop Location where Stopped (Name, Suite, Building, Street Name, Street Type, Quadrant, City, Province) Arrival Time Departure Time Type of Goods Shipped Quantity of Commodity Picked Up Units for Quantity **Ouantity** of Commodity Delivered Units for Quantity Value of Goods

Vehicle File

Establishment Number Vehicle Number For hire/ Not for hire Date of Collection Type of Vehicle Number of Axles GVW Configuration Code Owner of Vehicle Location of Vehicle at beginning of day (Suite, Building, Street Name, Street Type, Quadrant, City, Prov) Departure Time

Individual Shipment File

Establishment Number Shipment Number Type of Goods Shipped Direction of Shipment (qoing in, coming out) Address of Destination (Suite, Building, Street Name, Street Type, Quadrant, City, Prov) **Ouantity of Goods** Being Shipped Units for Ouantity Value of Goods Routing (depot/no depot) Vehicle Type Number of Axles GVW Ownership of Vehicle

APPENDIX B



THE CITY OF CALGARY

LAND USE & MOBILITY, PLANNING & TRANSPORTATION POLICY #8124 P.O. BOX 2100, POSTAL STATION M, CALGARY, AB T2P 2M5

2000 December 4

File: 450-30-04

Subject: 2000 Commodity Flow Study

We are asking for your help in an important study.

The movement of commodities, including both goods and services, is vital to our local economy. The effective planning and design of the transportation system to accommodate commodity flows requires an understanding of the relevant origin/destination patterns, volumes, values and types of vehicles involved.

The City of Calgary, Planning & Transportation Policy Business Unit is conducting a major study of business establishments involved in the movement of goods and services. The study will take place from the end of August to the end of 2001 January. Data on your business establishment's use of shipping will be collected for a single day during this period.

Your company has been selected at random from a listing of all business establishments in Calgary to participate in this study. Your participation is critical to the success of the study. The City of Calgary has retained the services of the International Results Group to administer the study. They will contact you in the next few weeks to discuss the study.

All information provided by your company would be held in confidence and protected under the Freedom of Information and Protection of Privacy Act.

The Alberta Trucking Association and the Calgary Economic Development Authority endorse this study, underlining the critical role it plays in answering the need for appropriate commodity flow data for the support of effective transportation planning and design.

Enclosed please find a handout briefly describing the study and how we will use the data to better plan the city. If you have any questions about the data collection procedures please call the International Results Group at 237-7244. For more general questions about the study please do not hesitate to call the Forecasting & Transportation Data Division of the Planning & Transportation Policy Business Unit at 268-1661. We thank you in advance for your help.

Yours truly,

RIBater

R. K. Parker General Manager Planning & Transportation Policy Business Unit

DM/sd Enclosure

ALGARY -The Best Place To Livel

PHONE: (403) 268-1574 FAX: (403) 268-1874 WEBSITE: www.gov.calgary.ab.ca/transp







File: 450-30-04

August 16, 2000

SUBJECT: 2000 COMMODITY FLOW SURVEY

We are asking for your help in an important survey.

The movement of commodities, including both goods and services, is vital to our local economy. The effective planning and design of the transportation system to accommodate commodity flows requires an understanding of the relevant origin/destination patterns, volumes, values and types of vehicles used in the movement of commodities.

The City of Calgary in conjunction with Alberta Infrastructure and regional local governments is conducting a major survey of business establishments involved in the movement of goods and services. The survey will take place from the end of August to the end of October 2000.

The survey itself will concentrate on business establishments involved in shipping goods or delivering services. However, transport companies will play a role in providing information on the logistics of shipping through data recorded by their drivers. During the course of the survey, truck drivers employed by transport companies will be given forms by the shippers at sampled business establishments to record their vehicle trips and vehicle type. Data the drivers will be asked to record will include all stop locations, delivery volumes, pickup volumes, truck weights, and truck configurations. All information provided by your company and drivers would be strictly confidential and protected under provincial law.

The Alberta Trucking Association and the Calgary Economic Development Authority endorse this study, underlining the critical role it plays in answering the need for appropriate commodity flow data for the support of effective transportation planning and design.

Attached is a summary sheet briefly describing the survey and how it will enhance the ability to plan for the movements of goods and services.

.../2

If you have any specific questions or concerns about the survey and its administration, you may call Edith Wenzel of International Results Group at (403) 237-7244. Other questions of a more general nature about how the data will be used to better plan for commodity flow can be directed to Alberta's Infrastructure's representative, JD Hunt of HBA Specto Incorporated, at 403-268-6402.

Thank you in advance for your co-operation and support

Yours truly,

The Philps

Jack Phelps, P. Eng. Director Highway Policy and Planning

/ce

Attachment



The 2000

Commodity Flow

Survey is an

important effort

to study the

movement of goods

and services and

the vehicles used

to deliver them.

WHAT WILL WE ASK?

Forms will be distributed to selected business establishments. Some of these forms will be filled in by the establishments, others will be filled in by the delivery and service vehicle drivers stopping at these establishments.

WHAT DO WE WANT TO KNOW?

- How many goods and services are being shipped and where they are going?
- How those goods and services reach their destinations?
- What types of vehicles are being used, including all sorts of semis, single units, light trucks, vans and cars.
- What trips are made by delivery and service vehicles including all the trips for pick-ups and deliveries and for fueling, servicing, etc.

HOW DOES THIS HELP BUSINESS?

This study will give planners the information they need to do a good job of planning for the movement of goods and services into, out of and within the Calgary Region, which is a vital part of keeping local business healthy.

HOW DOES THIS HELP TRUCKERS AND DELIVERY VEHICLE DRIVERS?

It will help the transportation planners and engineers designing the roadway system to take into account the special needs of truckers and delivery vehicle drivers.

WHY DO WE NEED TO KNOW THE DOLLAR VALUES OF SHIPMENTS?

Shipment values need to be known in order to assess the economic impacts of transportation improvements on businesses. The dollar values of the things going into and coming out of a business establishment provide a consistent indication of the role of shipments in the production process.

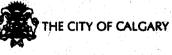
IS THIS IMPORTANT TO ALL TRUCKERS AND DELIVERY VEHICLE DRIVERS?

Yes: Those businesses who operate their own trucks and vans, the big shipping companies and the small independents all use the transportation system – and it is important for planners to be able to take into account the needs of all three.

QUESTIONS?

Questions regarding this survey can be directed to the Commodity Flow Study Team at 268-1661.

ALBERTA TRUCKING ASSOCIATION





APPENDIX C

Establishment Form

Se	ri	1	#:
00		11	17

Page

	Company of Location Isame		Serial #:				
Establishment Address	Exact Street Address	ſ	Collection Date		n		
	City / Town & Province / State	. [Day	Month	Yoar		

		t Information egory Code descriptions)	· · · · · · · · · · · · · · · · · · ·
Employment Category	Number of Employees	Employment Category	Number of Employees
		Please continue your list here i	lf needed
· · · · · · · · · · · · · · · · · · ·			
<u></u>			· · · · · · · · · · · · · · · · · · ·
		Total Number of Employees	

Shipment	or Service	Information	
		• • • • • • •	

Between 4am on the survey day and 4am the next day, record the total shipments by commodity or by service type, the quantity and type of units and the total dollar value.

Service or Commodity Type please use codes on ORANGE pages	Quantity	Units (check only one box)	Total Dollar Value (with GST)
	·	□ tonnes □ m³ □ Service □ litres □ ft ³ □ Visits □ items □	
		☐ tonnes ☐ m³	
		☐ tonnes ☐ m³	
		□ tonnes □ m³ □ Service □ litres □ ft ³ Visits	
		☐ tonnes ☐ m³ ☐ Service ☐ litres ☐ ft ³ ✔ Visits ☐ items ☐	

Freedom of Information Declaration

The Company information is collected for transportation purposes by the City of Calgary, Transportation Department under the authority of Section 32(c) of the Freedom of Information and Protection of Privacy (FOIP) Act and is protected by the FOIP Act. The International Results Group is acting on behalf of the City of Calgary to collect and process the data from this survey and must adhere to the provisions of the FOIP Act. If you have any questions about the collection, please contact the Senior Transportation Engineer, Transportation Department, 7th Floor 800 Macleod Trail SE at 268-1657.

Establishment Form : FOR DEPOTS

	Company or Location Name	
Establishment	Exact Street Address	 Collection Date
Address	City / Town & Province / Stats	Day Month Year

Page

of

	Employment (See Employment Categ		
Employment Category	Number of Employees	Employment Category	Number of Employees
	L	Please continue your list here in	f needed
		Total Number of Employees	

Between 4am c	on the survey o the qua	Shipment Ir day and 4am the nex ntity and type of uni	formation t day, record the total ship ts and the total dollar value	ments by commodity ,
Commodity Type please use codes on ORANGE page	Direction	Quantity	Units	Total Dollar Value (with GST)
	□ Going out □ Coming In		□ tonnes □ m ³ □ litres □ ft ³ □ items □	
	□ Going out □ Coming In		☐ tonnes ☐ m³ ☐ litres ☐ π³ ☐ litres ☐	
	 Going out Coming in 		_ tonnes _ m ³ _ litres _ π ³ _ items	
	□ Going out □ Coming in		□ tonnes □ m ³ □ litres □ π ³ □ items □	
	□ Going out □ Coming in		☐ tonnes ☐ m³ ☐ litres ☐ ft³ ☐ items ☐	

Freedom of Information Declaration

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Goods Shipment Form

Time period covered from 4 AM on your survey day until 4 AM the next day.

Clarification on the route

the goods take to final

destination. A depot is

a location where goods

are recombined.

repacked or transferred

to another vehicle.

Goes first to a depot

Goes directly

destination

Goes first to a depot

Goes directly to final destination

Goes first to a depot

Goes directly to final

destination

Goes first to a depot

Goes directly to final

destination

of

To be filled out by the shipper/receiver. Serial #: Fill out for each shipment that leaves the establishment Exact address for the final destination of the Size of **Dollar Value of** Goods goods Shipment Туре the shipment (include GST) ustries (abarv Im Please use Codes on check off only one unit type ORANGE page. **Company or Location Name** \$ ☐ tonnes □ litres □ m³ Exact Street Address 🗆 items 🗀 ft³ City / Town & Province / State **Company of Location Name** \$ ☐ tonnes ☐ litres ☐ m³ ☐ items ☐ ft³ Exact Street Address City / Town & Province / State **Company or Location Name** \$ 🗆 tonnes Exact Street Address 🗆 items 🗆 ft³ City / Town & Province / State **Company or Location Name** \$ □ tonnes □ litres □ m³ Exact Street Address 🗆 items 🗀 ft³ City / Town & Province / State

Goes first to a depot

Goes directly to final destination

Go to next page.

Company or Location Name

Exact Street Address

City / Town & Province / State

City / Town & Context Address

City / Town &

Goods Depot Form

Time period covered from 4 AM on your survey day until 4 AM the next day.

Page of

Go to next page.

To be filled out by the shipper/receiver.

Serial Number: _____

For shipme For shipme	nts coming in nts going out	Location Section: record the shipment- type, quantity, and origin . record the shipment- type, quantity, and destination	Record th	shicle Section: ne vehicle used to shipment.
Goods Type Please use Codes on ORANGE page.	Quantity & \$ Value including GST check off only one unit type	Exact address of the location each vehicle is coming from or going to. Calgary Industries 9218 42 Streat 5E Calgary, Alberta	Type of vehicle used to move the goods to and from the depot Fill in truck data	Ownership of the vehicle used to move the goods.
\$	□ tonnes □ litres □ m³ □ items □ ft³ □	Are these goods Coming in Going out (Record Origin) (Record Destination) Company or Location Name Exact Street Address City / Town & Province / State	 Car Van Other specify Truck # Axles GVW(kg) 	 Owned by company producing goods being shipped. Leased and operated by company producing goods being shipped. FOR HIRE: Owned by different transport company or driver.
	□ tonnes □ litres □ m³ □ items □ ft ³ □	Are these goods Coming in Going out (Record Origin) Going out (Record Destination) Company or Location Name Exact Street Address City / Town & Province / State	 Car Van Other specify Truck # Axles GVW(kg) 	 Owned by company producing goods being shipped. Leased and operated by company producing goods being shipped. FOR HIRE: Owned by different transport company or driver.
\$	□ tonnes □ litres □ m³ □ items □ ft³ □	Are these goods Coming in Going out (Record Origin) (Record Destination) Company or Location Name Exact Street Address City / Town & Province / State	 Car Van Other specify Truck # Axles GVW(kg) 	 Owned by company producing goods being shipped. Leased and operated by company producing goods being shipped. FOR HIRE: Owned by different transport company or driver.
\$	□ tonnes □ litres □ m ³ □ items □ ft ³	Are these goods Coming in Going out (Record Origin) (Record Destination) Company or Location Name Exact Street Address City / Town & Province / State	 Car Van Other specify Truck # Axles GVW(kg) 	 Owned by company producing goods being shipped. Leased and operated by company producing goods being shipped. FOR HIRE: Owned by different transport company or driver.

Service Vehicle Form

Time period covered from 4 AM on your survey day until 4 AM the next day.

Driver Name or Number: _

Contact Number: _____

· · · · · · · · · · · · · · · · · · ·	Please describe	your delivery	/ vehicle	······································		
Vehicle Type	□ Car	□Van		□ Bicycle	Other Specify	
		Number of	Axles =	Gross Vehic	e Weight (GVW) =	kg
-		Configura	ation code	(888 c	codes on BLUE page)	

Vehicle	Please describe the ownership of your vehicle	
Ownership (check only one box	Owned by company providing service	Leased and operated by company providing service

Begi	•	Section : Please fill out for each vehicle sto ding all stops when you begin your assig			formation Section: r each service stop
Stop #	Reason for Stop Please us Codes or BLUE page.		Fill in times and circle AM/PM.	Service Type: Please use Codes on ORANGE page.	Value of service delivered including parts and labour and GST
1		Company or Location Name Exact Street Address City / Town & Province / State	Arrival Time AM PM Departure Time AM PM		\$
2		Company or Location Name Exact Street Address City / Town & Province / State	Arrival Time AM PM Departure Time AM PM		\$ o to next page.)

Goods Vehicle Form - FOR HIRE ONLY

Go to next page.

_Contact Number: _____ Serial #:_____

	Please describe	your delivery	v vehicle	·····	·····	
Vehicle	□ Car	□Van			Other Specify	
Туре	C Truck	Number of	Axles =	Gross Vehicl	e Weight (GVW) =	kg
	C	onfiguration	(Eg.	short double, single	e unit etc.)	

	Please tell us where you came from	
	Company or Location Name	
Vehicle's Location at Beginning of the Day		Departure Time
	Exact Street Address	AM
	City / Town & Province / State	РМ

Reco	•	Section : Please fill out for each vehicle sto ps until the goods picked up at stop 1 are (Goods Information Section: Fill out for each stop			
Stop #	Reason for Stop: Please use Codes on Orange page.	Exact address of the location for each vehicle stop. Calgary Industries 9218 All Stheat 5E Calgary, Alberta	Fill in times and circle AM/PM.	Goods Type: Please use Codes on ORANGE page.	Quantity Picked Up Please check off only one unit type below.	Quantity Delivered Please check off only one unit type below.
1	l st Stop	Company or Location Name xact Street Address Ny / Town & Province / State	Arrival Time AM PM Departure Time AM PM		□ tonnes □ litres □ m³ □ items □ ft ³ □	☐ tonnes ☐ m³ ☐ litres ☐ m³ ☐ ltems ☐ ft ³ ☐
2		Company or Location Name xact Street Address Ity / Town & Province / State	Arrival Time AM PM Departure Time AM PM		□ tonnes □ litres □ m³ □ items □ ft ³ □	□ tonnes □ litres □ m³ □ items □ ft ³ □

Goods Vehicle Form : FOR HIRE ONLY (Continued)

Driver Name or Number:										
Stop Section : Please fill out for each vehicle stop. Record all stops until the goods picked up at stop 1 are delivered.							Goods Information Section: Fill out for each stop.			
Stop #	Rea for S Pleas Code BL pag	e use s on UE		address of the location vehicle stop. agary Industries 21842 Street St agary Aberta	on for eac	h	Fill in times and circle AM/PM.	Goods Type: Please use Codes on ORANGE page.	Quantity Delivered Please check off only one unit type below.	Quantity Picked up Please check off only one unit type below.
			Company or Lo Exact Street Ad City / Town & Pr	Śrees			Arrival Time AM PM Departure Time AM PM	r	litres m'	□ tonnes □ litres □ m³ □ ltems □ ft³ □
			Company or Lo Exact Street Ad City / Town & Pi	drees			Arrival Time AM PM Departure Time AM PM	l in		□ tonnes □ m³ □ litres □ m³ □ items □ ft ³ □
			Company or Lo Exact Street Ad City / Town & Pi	drees			Arrival Time AM PM Departure Time AM PM	r	〕tonnes 〕litres □m³ 〕items □ ft³ 〕	□ tonnes □ m³ □ litres □ m³ □ items □ ft ³ □
			Company or Lo Exact Street Ad City / Town & Pi	draea			Arrival Time AM PM Departure Time AM PM	l i		□ tonnes □ litres □ m³ □ items □ ft³ □
			Company or Lo Exact Street Ad City / Town & Pi	drees			Arrival Time AM PM Departure Time AM PM			bonnes m ³ litres ft ³ terns ft ³

Goods Vehicle Form

Driver Name or Number: ____

_____<u>C</u>ontact #_____

	Please describe your delivery vehicle						
Vehicle	🗆 Car	□Van		🗆 Bicycle	□ Other Specify		
Туре	Truck Number of Axies =		Gross Vehicl	kg			
	Configuration code			(see c			

Vehicle	Please describe the ownership of your vehicle)
Ownership (check only one)	Owned by company producing goods being shipped	Leased and operated by company producing goods being shipped
(box box	□ FOR HIRE: Owned by different transport company or driver	You should be using the form "Goods Vehicle Form: FOR HIRE ONLY"

Stop Section : Please fill out for each vehicle stop Begin recording all stops when you begin your assigned day					Goods Information Section: Fill out for each goods stop			
Stop #	Reasor for Stop Please us Codes or BLUE page.	Cangary Industries	Fill in times and circle AM/PM.	Goods Type: Please use Codes on ORANGE page.	Quantity Delivered Please check off only one unit type below.	Quantity Picked up Please check off only one unit type below.		
1		Company or Location Name Exact Street Address Cky / Town & Province / State	Arrival Time AM PM Departure Time AM PM			□ tonnes □ litres □ m³ □ items □ ft ³ □		
2		Company or Location Name Exact Street Address City / Town & Province / State	Arrival Time AM PM Departure Time AM PM		litres m°	□ tonnes □ litres □ m³ □ items □ ft³ □		
				l (Go to next	page.		

APPENDIX D

General Results For City of Calgary

You count in transportation planning!

The movement of commodities, including both goods and services, is vital to our local economy. The effective planning and design of the transportation system to accommodate the flow of goods and services requires an understanding of the relevant patterns, volumes, values and types of vehicles used.

Alberta Infrastructure, along with The City of Calgary, is conducting a major study of commodity flow in the City of Calgary and the Calgary Region to help make informed decisions.

You're organization is one of a number of companies selected to participate in this Commodity Flow study.

Your participation is critical to the success of the study !

All information provided by you and your company will be strictly confidential and protected under the Freedom of Information and Protection of Privacy Act.

The Alberta Trucking Association has endorsed this study, understanding the critical role it plays in answering the need for appropriate commodity flow data for the support of effective transportation planning and design. They have encouraged all of their members to cooperate in supplying this data.

The International Results Group is administering the study on behalf of Alberta Infrastructure. If you have any questions about the enclosed data collection forms please call the International Results Group at 237-7244.

Establishment Form Instructions

This package contains the information necessary to complete the Establishment form. Before you go any further, please make sure your package contains all of these forms:

- Instructions and Definitions (Pink)
- Sample Establishment Form (Yellow)
- Employment Category Code Sheet (Blue)
- Goods/Service Type Code Sheet (Orange)
- Establishment Form (White)

If any of these forms are missing, please obtain copies from The Project Manager at International Results Group.

<u>Step 1:</u>

Read through the following instructions and definitions. Refer to the Example Establishment Form (Yellow) as a guideline.

Step 2:

Complete the following information at the top of the Establishment Form (White):

- Company Name
- Exact Street Address
- Data Collection Date

Step 3:

Begin recording your employment information:

- <u>Employment Category</u> Refer to the Blue page, choose the applicable code and record the number of employees working in that particular category. (*If an employee's job entails work in more than one category, they should be recorded once only in the PRIMARY work category*)
- The total number of employees working at the company is recorded at the end of this section

Step 4:

Record your Shipment information for the total shipments by commodity/service type that your company shipped out on your assigned collection date:

- **<u>Commodity Type</u>** Refer to the Orange page and choose the applicable code.
- Quantity Record the amount of goods shipped
- Unit Type Choose the applicable type
- Total Dollar Value also include GST

Continue to fill out the form for the entire workday. Use as many sheets as required (Additional forms are available from The Project Manager at The International Results Group. At the end of the day, please review the forms to ensure they are complete and submit them to your on-site project coordinator.

If you have any questions, please call the Project Manager at International Results Group at 237-7244. THANK YOU FOR PARTICPATING

Establishment Form: FOR DEPOTS Instructions

This package contains the information necessary to complete the Establishment form. Before you go any further, please make sure your package contains all of these forms:

- Sample Establishment Form (Yellow)
- □ Employment Category Code Sheet (Blue)
- Goods/Service Type Code Sheet (Orange)
- Establishment Form (White)

If any of these forms are missing, please obtain copies from your project coordinator.

<u>Step 1:</u>

Read through the following instructions and definitions. Refer to the Example Establishment Form (Yellow) as a guideline.

<u>Step 2:</u>

Complete the information at the top of the Establishment Form (White) including:

- Company Name
- Exact Street Address
- Data Collection Date

Step 3:

Begin recording your employment information:

- <u>Employment Category</u> Refer to the Blue page, choose a code and record the number of employees working in that particular category. (If an employee's job involves work in more than one category, they should be recorded only once in the PRIMARY work category)
- The total number of employees is recorded at the end of this section

Step 4:

Record your Shipment information for the total shipments by commodity/service type for your company on collection day only.

- <u>Commodity Type</u> Refer to the Orange page and choose the applicable code.
- Direction if the goods are "going out" or "coming in"
- Quantity Record the amount of goods shipped
- Unit Type Choose the applicable type
- Total Dollar Value include GST

Continue to fill out the forms for the full workday. Use as many sheets as required (Additional forms are available from the Project Manager at International Results Group). At the end of the day, please review your forms to ensure they are complete and submit them to your on-site project coordinator.

If you have any questions, please call The Project Manager at International Results Group at 237-7244. THANK YOU FOR PARTICIPATING



Goods Shipment Form

This package contains the information needed to complete the Goods Shipment Forms, to be filled out by the shipper/receiver.

Before you go any further, please make sure your package contains all of these forms:

- Example Goods Shipment Form (Yellow)
- Goods Type Code Sheet (Orange)
- Goods Shipment Forms (White)

If any of the forms are missing, please obtain copies from your on-site project coordinator

<u>Step 1:</u>

Read through the following instructions and definitions. Refer to the Example Goods Shipment Form (Yellow) as a guideline.

Step 2:

Record all shipments sent out by your company on your assigned data collection date.

FOR EACH SHIPMENT

Please record the following information:

- <u>Goods Type</u> Refer to the Orange Page and choose the appropriate code
- The Exact Address of the location Please fill out the full name and address of the goods destination
- Shipment Size Record the shipment size
- Dollar Value the Value of the goods being shipped
- <u>Final Destination</u> check off one of the two choices to indicate the route each shipment will take (either to depot or final destination)

Step 4:

Continue to fill out the forms for all shipments made on your data collection date. Use as many sheets as required (Additional forms are available from your on-site project coordinator).

At the end of the delivery day, please review your forms to ensure they are complete and return them to your onsite coordinator.

If you have any questions, please call the Project Manager at International Results Group at 237-7244. THANK YOU for participating



Goods Depot Form

This package contains the information needed to complete the Goods Depot Forms, to be filled out by the shipper/receiver.

Before you go any further, please make sure your package contains all of these forms:

- □ Example Goods Shipment Form (Yellow)
- Goods Type Code Sheet (Orange)
- Goods Depot Forms (White)

If any of the forms are missing, please obtain copies from your on-site project coordinator

<u>Step 1:</u>

Read through the following instructions and definitions, Refer to the Example Goods Depot Form (Yellow) as required.

Step 2:

Record all shipments coming in or going out of your company on your assigned collection date.

- FOR EACH SHIPMENT COMING IN Please record the following information:
 - Goods Type Refer to the Orange Page and choose the applicable code
 - Quantity and Value of Shipment include GST
 - Goods Coming In Check off goods "coming in"
 - Good's origin Please fill out the full name and address of the origin of the goods
 - Vehicle ownership Choose the applicable vehicle ownership code
- FOR EACH SHIPMENT GOING OUT Please record the following information:
 - Goods Type Refer to the Orange Page and choose the applicable code
 - Quantity and Value of Shipment include GST
 - Goods Going Out Check off goods "Going out"
 - Good's destination Please fill out the full name and address of the destination of the goods
 - Vehicle ownership Choose the applicable vehicle ownership code

Step 4:

Continue to fill out the forms for shipments on the collection date. Use as many sheets as required (Additional forms are available from your on-site project coordinator).

At the end of the delivery day, please review your forms to ensure they are complete and return them to your onsite coordinator.

If you have any questions, please call the Project Manager at International Results Group at 237-7244. THANK YOU FOR PARTICIPATING

2000 Commodity Flow Study

 $M_{\rm ext}$

Goods Vehicle Form Recording Sheet Instructions

This package contains the information necessary to complete the Goods Vehicle Forms. Before you go any further, please make sure your package contains all of these forms:

- Instructions and Definitions (Pink)
- □ Sample Goods Vehicle Forms (Yellow)
- Goods Type Code Sheet/Reason for Stop Code Sheet (Orange)
- Goods Vehicle Form Page 1(White)
- □ Goods Vehicle Form Pages 2+ (White)

If any of the forms are missing, please ask your on-site project coordinator for copies.

Step 1:

Read through the following instructions and definitions. Refer to the Example Goods Vehicle Forms (Yellow) as a guideline.

Step 2:

Complete the information at the top of the Goods Vehicle Form Page 1(White) including:

- Driver Name or Number and Contact Number
- <u>The Vehicle Type</u>
- <u>The Vehicle Ownership</u> Choose only one of the two options. If you choose the "FOR HIRE" category, this is the wrong form. Please ask your Project Coordinator for the "FOR HIRE ONLY" form.

Step 3:

Begin with your first stop of the day record all stops. The first stop to complete on the form is where you pick up your business vehicle. You must record all stops made with this vehicle throughout your recording day; such as, lunch, repairs, refueling, etc.

- FOR EACH STOP Please record the following information;
 - Reason for Stop Refer to the Orange page and choose the applicable code
 - The Exact Address of the location Please fill out the name and full address of each stop
 - Arrival Time When you arrive at each stop
 - Goods Type Refer to the Orange Page and choose the applicable code
 - <u>Departure Time</u> The time you leave from each location
- IF YOU ARE DELIVERING OR PICKING UP GOODS Please fill in the following information:
 - Goods Type Refer to the Orange Page and choose the applicable code
 - Quantity Picked Up/Quantity delivered Enter the applicable amount

Step 4:

Continue to fill out the forms for your entire workday. Record your name and/or driver number and contact number on each of the subsequent recording sheets, using as many sheets as required (Additional forms are available from your on-site project coordinator).

Remember it is important that ALL STOPS are recorded, including stops for gas, meals, etc.

PLEASE NOTE: If you switch vehicles at some point during the day, you will need to start with a new set of forms.

At the end of the work day, please review your forms to ensure they are complete and submit them to your onsite project coordinator.

If you have any questions, please call our Project Manager at 237-7244. THANK YOU for perficipating.

Goods Vehicle Form - FOR HIRE ONLY Recording Sheet Instructions

This package contains the information needed to complete the Goods Vehicle Form – FOR HIRE ONLY. The organization that you are making a delivery for is participating in a Commodity Flow Pilot Study on behalf of the City of Calgary Transportation Dept. The data collected from this study will assist in the effective planning and design of the transportation system. Results will be used to accommodate the flow of goods, and allow the City to gain an understanding of the relevant patterns, volumes, values and types of vehicles used. We are asking for your cooperation in completing these forms for all stops made on behalf of this organization for today only.

Before you go any further, please make sure your package contains the following forms. If any are missing, please ask your on-site project coordinator:

- Example Goods Vehicle Form FOR HIRE ONLY (Yellow)
- Goods Type Code Sheet/Reason For Stop Code Sheet (Orange)
- Goods Vehicle Form FOR HIRE ONLY Page 1(White) and Page 2+(White)

<u>Step 1:</u>

Read through the following instructions and definitions. Refer to the Example Goods Vehicle Form – FOR HIRE ONLY (Yellow) as a guideline.

<u>Step 2:</u>

Complete the following information at the top of the Goods Vehicle Form - FOR HIRE ONLY Page 1 (White):

- Driver Name/Number and Contact Number
- The Vehicle Type
- <u>The Vehicle's Location at the beginning of the day.</u> Please provide information about the location of your vehicle at the beginning of the day.
- Departure Time Please record the time you depart from this location

<u>Step 3:</u>

Begin recording all stops when you begin delivery for this company. The first stop will be the location where you are picking up goods for delivery. You must record all stops made while delivering for this company, including, lunch, repairs, refueling, etc.

- FOR EACH STOP Please record the following information:
 - <u>Reason for Stop</u> Refer to the Orange page and choose the applicable code
 - The Exact Address of the location Please fill out the full name and address of each stop
 - Arrival Time When you arrive at each stop
 - Goods Type Refer to the Orange Page and choose the applicable code
 - **Departure Time** –The time you leave from each stop

IF YOU ARE DELIVERING OR PICKING UP GOODS - Please fill in the following information

- <u>Goods Type</u> Refer to the Orange Page and choose the applicable code
- Quantity Picked Up/Quantity delivered Enter the amount delivered to or picked up at this stop

Step 4:

Continue to fill out the forms for all stops made while transporting goods on behalf of this company. Please record your name and/or driver number and contact number on each of your subsequent recording sheets, using as many sheets as required (Additional forms are available from your on-site project coordinator).

Remember - It is important that <u>ALL STOPS</u> are recorded, including stops for gas, meals, etc.

<u>NOTE</u>: If you switch vehicles at some point during the day, you will need to start with a new set of forms, if you are continuing to transport goods on behalf of this company.

At the end of the day, please review your forms to ensure they are complete. Seal them in the stamped self- addressed envelope provided and mail them as soon as possible.

If you have any questions, please call our Project Manager at 237-7244. THANK YOU FOR PARTICIPATING

Service Vehicle Form Recording Sheet Instructions

This package contains the information necessary to complete the Service Vehicle Forms. Before you go any further, please make sure your package contains the following forms:

- □ Sample Service Vehicle Forms (Yellow)
- Service Type Code Sheet/Reason for Stop(Orange)
- □ Service Vehicle Form Page 1(White) and Service Vehicle Forms Pages 2+ (White)

If any of the forms are missing, please ask for copies from your on-site project coordinator

Step 1:

Read through the following instructions and definition. Refer to the Example Service Vehicle Forms (Yellow) as a guideline.

Step 2:

Complete the information on the top of the Service Vehicle Form Page 1(White) including:

- Driver Name/Number and Contact Number
- The Vehicle Type Information
- The Vehicle Ownership information please choose only one of the two options

Step 3:

Begin recording all stops when you begin your assigned day. The first stop to complete on the form is the location where you pick up your business vehicle, or where you begin your workday. You must record all stops throughout the day, including meals, repairs, refueling, etc.

• FOR EACH STOP - Please record the following information:

- Reason for Stop Refer to the Orange page and choose the applicable code
- The Exact Address of the location Please fill out the full name and address of the destination
- <u>Arrival Time</u> When you arrive at each stop
- Goods Type Refer to the Orange Page and choose the applicable code
- Departure Time When you leave each location
- IF YOU ARE DELIVERING OR PICKING UP GOODS Please fill in the following information:
 - Service Type Refer to the Orange Page and choose the applicable code
 - <u>Quantity Picked Up/Quantity delivered</u> Enter the value of the service that was delivered including parts, labour and GST.

<u>Step 4:</u>

Continue to fill out the forms for your entire workday. Record your name and/or Driver number and contact number on each of the subsequent recording sheets, using as many sheets as required (Additional forms are available from your onsite project coordinator).

REMEMBER It is important that <u>ALL STOPS</u> are recorded, including stops for gas, meals, etc.

PLEASE NOTE: If you switch vehicles at some point during the day, you will need to start with a new set of forms.

At the end of the work day, please review your forms to ensure that they are complete and submit them to your on-site project coordinator.

If you have any questions, please call our Travel Study Manager at 237-7244. THANK YOU FOR PARAICIPATING

Establishment Form

ablishment F	Form	Page / of 2
Establishment Address	Company or Location Name ABC STORES Exact Street Address 2121 Banister Road SE City / Town & Province / State Calgary	Serial #: <u>/27 86</u> Collection Date Day Month (01) 06 09 00

	· · ·	t Information ogory Code descriptions)	
Employment Category	Number of Employees	Employment Category	Number of Employees
		Please continue your list here i	fneeded
EP03	20		
EP03 EP09	10		
		Total Number of Employees	30

Shipment or Service Information Between 4am on the survey day and 4am the next day, record the total shipments by commodity or by service type, the quantity and type of units and the total dollar value.							
Service or Commodity Type please use codes on ORANGE pages	Quantity	Units (check only one box)	Total Dollar Value (with GST)				
27	4-	□ tonnes □ m³ □ Service □ litres □ ft³ □ Visits ☑ items □ <u>Boyr</u>	# 740				
17	1	□ tonnes □ m³ □ Service □ litres □ ft³ □ Visits □ ritems ፬ <u>Box</u>	# 250				
		□ tonnes □ m³ □ Service □ litres □ ft³ Visits □ items □					
		□ tonnes □ m³ □ Service □ litres □ tt³ Visits □ items □					
		□ tonnes □ m³ □ Service □ litres □ tt³ Visits					

Freedom of Information Declaration

The Company information is collected for transportation purposes by the City of Calgary, Transportation Department under the authority of Section 32(c) of the Freedom of Information and Protection of Privacy (FOIP) Act and is protected by the FOIP Act. The International Results Group is acting on behalf of the City of Calgary to collect and process the data from this survey and must adhere to the provisions of the FOIP Act. If you have any questions about the collection, please contact the Senior Transportation Engineer, Transportation Department, 7th Floor 800 Macleod Trail SE at 268-1657.

Goods Depot Form

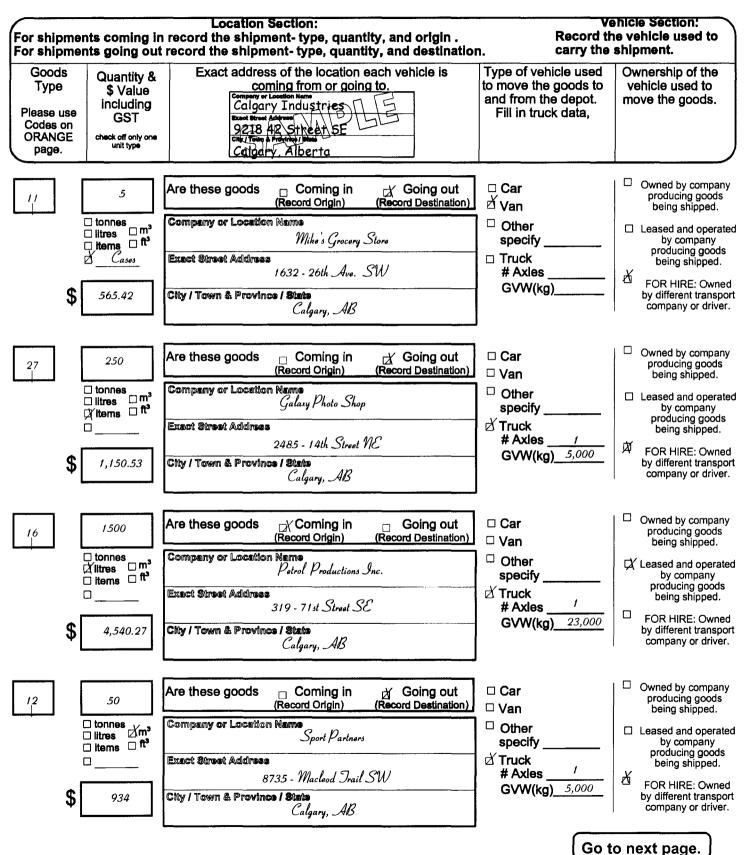
Time period covered from 4 AM on your survey day until 4 AM the next day.

Page

of

To be filled out by the Shipper/Receiver.

Serial # : 12654



Name or Nu	mber:	Darcy	Contact Number:	555-1212	Serial #:	14684
	Please describe	your delivery	v vehicle			
Vehicle	🗆 Car	□Van	□Motorcycle	🗆 Bicycle	Other Specify	/
Туре		Number of	Axles = <u>2</u>	Gross Vehicle	Weight (GVW) =	12,000

Vehicle	Please describe the ownership of your vehick	9
Ownership (check only one	Owned by company producing goods being shipped	Leased and operated by company producing goods being shipped
box)	FOR HIRE: Owned by different transport company or driver	You should be using the form "Goods Vehicle Form: FOR HIRE ONLY"

Beg	•	Section : Please fill out for each vehicle sto ling all stops when you begin your assig	Goods Information Section: Fill out for each goods stop			
top #	Reason for Stop: Please use Codes on ORANGE page.	Exact address of the location for each vehicle stop.	Fill in times and circle AM/PM.	Goods Type: Please use Codes on ORANGE page.	Quantity Picked Up Please check off only one unit type below.	Quantity Delivered Please check off only one unit type below.
1	2	ompany or Location Name B& J. Service xact Street Address 1945 - 33rd Ave. SW Ity / Town & Province / State Calgary, AB	Arrival Tipre 10:30 PM Departure Time 11:30 PM	16	5,000	□ tonnes □ m³ □ litres □ m³ □ items □ tt³ □
2		Sompany or Location Name Mol Sub Shop Exact Street Address 3610 - Crauchild Jrail SW Sity / Town & Province / State algany, AB	Arrival Time 11:50 PM Departure Time 1:05 PM		□ tonnes □ m³ □ litres □ m³ □ items □ 1t ³	□ tonnes □ litres □ m³ □ items □ ft³ □
					Go to nex	t page.

Service Vehicle Form

Time period covered from 4 AM on your survey day until 4 AM the next day.

-

river Name or N	umber: <u>/</u> 2	bab	_ Contact N	umber: <u>23</u>	<u>7-724/</u> Serial No:	12654
Vehiele	Please describe	your delivery	Vehicle	Bicycie	□ Other Specify	
Vehicle Type	Truck	Number o uration Typ	f Axles =		e Weight (GVW) =	kg

Vehicle	Please describe the ownership of your vehicle
Ownership check only one box	Service Owned by company providing Owned by company providing Owned by Driver

Begi	-	ection : Please fill out for each vehicle sto ing all stops when you begin your assig	-	Service Information Section: Fill out for each service stop		
Stop #	Reason for Stop: Please use Codes on ORANGE page.	Exact address of the location for each vehicle stop.	Fill in times and circle AM/PM.	Service Type: Please use Codes on ORANGE page.	Value of service delivered including parts and labour and GST	
1		Black Gold Endustries Stack Gold Endustries Stack Street Address 7810 - 50 KAULSE ty / Town & Province / State Calgary	Arrival Time	4,2	\$ 225	
2		ompany or Location Name xact Street Address Ity / Town & Province / State	Arrival Time AM PM Departure Time AM PM		\$	
				l G	o to next page.	

Goods Vehicle Form - FOR HIRE ONLY

Driver Name or Number: Paul Contact Number: 242-2244 Serial #: 16737

	Please describe	our delivery	vehicle		
Vehicle	🗆 Car	□Van		Bicycle	Other Specify
Туре	Truck N	lumber of <i>i</i>	Axles =(Gross Vehicl	le Weight (GVW) = <u><i>≤oo ∂</i></u> kg
	C o	nfiguration	Double (Eg.s	hort double, single	e unit etc.)

here you came from	
ation Name	Departure
dress	<u>Time</u>
Th Ave so	AM / GO (PM)
ovince / State	
	aition Name Location Iross MAUESG ovince / State

Rec	· · · ·	Section : Please fill out for each vehicle stop ps until the goods picked up at stop 1 are c	Goods Information Section: Fill out for each stop			
Stop #	Reason for Stop: Please use Codes on Orange page	Exact address of the location for each vehicle stop.	Fill in times and circle AM/PM.	Goods Type: Please use Codes on ORANGE page.	Quantity Picked Up Please check off only one unit type below.	
1		ompany or Location Name XYZ Depot Letters Ltd cact Street Address 7810-50 AVE 55 ty / Town & Province / State Calgary, AB	Arrival Time		150 tonnes m ³ titres ft ³	□ tonnes □ litres □ m³ □ items □ ft ³ □
2		propany or Location Marrie M Kes Packagas Ltd matter Address 1632 - 26 t Auc Su ty / Town & Province / State Calgay, AB	Arrival Time		itonnes iltres □ m³ items □ īt³ □	/00 tonnes m ³ itres ft ³ terns ft ³
				I ((Go to next	page.

Service Code	Service Description	Statistics Canada Codes 'M' Aggregation 1986
33	Construction services	70-72
34	Pipeline transportation services	73
35	Transportation & storage services	74
36	Radlo & television broadcasting services	75
37	Postal services	77
38	Utilities services	76, 78, 79
41	Other finance, insurance & real estate services	83
42	Business services	84
43	Education services	85
44	Health services	86
45	Amusement & recreation services	87
46	Accommodation & food services	88
47	Other personal & miscellaneous services	89
50	Operation, office, cafeteria and lab. Supplies	91
51	Travel & entertainment., advertising & promotion	92
52	Non-profit organizations excluding education services.	93
53	Non-profit educational services	94
56	Defense services	97
57	Other municipal government services	98
58	Other provincial government services	99
59	Other federal government services	100
62	Sales of other government services	103

Commodity Flow Pilot Study Service Codes

Reason for Stop Codes

Stop Code	Stop Description
1	Goods Pickup
2	Goods Drop Off
3	Stop for Delivery of Service
4	Stop for Meal
5	Vehicle stopped for fuelling
6	Vehicle Repair
7	Return to Starting Business
8	Stop at Home
9	Other – Please Specify on form

Code	Commodity (Goods Type) Description	Statistics Canada Codes 'M' Aggregation 1986
1	Farm products	01-03
2	Forestry Products	04
3	Fish & Seafood, fresh, chilled	05
4	Hunting and Trapping Products	06
5	Metallic ores	07-08
6	Coal	• 09
7	Crude petroleum, natural gas or gasoline	10-11
8	Nonmetallic minerals	12
9	Ordnance or accessories	13
10	Food or kindred products	14-24
11	Tobacco products, excluding insecticides	25-26
12	Textile mill products & Leather or leather products	30-33
13	Apparel or other finished textile products or knit apparel	34-35
14	Lumber or wood products, excluding furniture	36-38
15	Furniture or fixtures	39
16	Pulp, paper or allied products	40-42
17	Printed matter	43-44
18	Chemicals or allied products	64-67
19	Petroleum or coal products	62-63
20	Rubber or miscellaneous plastic products	27-29
21	Clay, concrete, glass or stone products	60-61
22	Primary metal products, including galvanized	45-49
23	Fabricated metal products	50-52
24	Machinery, excluding electrical	53-54
25	Electrical machinery, equipment or supplies	58-59
26	Transportation equipment	55-57
27	Instruments, photographic goods, optical goods, watches or clocks	68
28	Miscellaneous products of manufacturing	69
29	Waste or scrap materials not identified by producing industry	
30	Other (Miscellaneous) freight shipments	
31	Containers, carriers or devices, shipping, returned empty	
32	Waste hazardous materials or waste hazardous substances	

Turn Over Page For - REASON FOR STOP CODES

Employment Code	Description
EP01	Agriculture in office space
EP02	Agriculture in agricultural space
EP03	Industry in office space
EP04	Industry in industrial space
EP05	Wholesale in office space
EP06	Wholesale in warehouse space
EP07	Retail in office space
EP08	Retail in retail space
EP09	Private services in office space
EP10	Private services in industrial space
EP11	Private services in commercial space
EP12	Government in government space
EP13	Education in government space
EP14	Education in schools
EP15	Education in post-secondary institutions
EP16	Transportation handling in office space
EP17	Transportation handling in depot space
EP18	Home-based business
EP19	Agriculture in field
EP20	Industry in field
EP21	Wholesale in field
EP22	Retail in field
EP23	Private Services in field
EP24	Government in field
EP25	Education in field
EP26	Transportation in field

Employment Category Codes