Notice of Application

The Spokane County Department of Building and Planning (Review Authority) has published this Notice of Application to provide the opportunity to comment on the described proposal. The comment period ends 14 calendar days from the date issued. During this period written comments may be submitted to the Review Authority. The file may be examined between the hours of 7:30 a.m. and 4:00 p.m. Monday through Thursday and 7:30 a.m. and 12:00 p.m. Friday (except holidays) at the Department of Building and Planning in the Public Works Building, 1026 W. Broadway, Spokane, Washington. Questions may be directed to the Project Coordinator listed below.

PROJECT #: B1500073; B1500075
OWNER: MILLSON, LLC
PHONE: 509-466-8900
CONTACT: ARCHITECTURAL VENTURES/RON
PHONE: 509-290-1491
APPLICATION DATE: 01/14/2015
DETERMINATION OF COMPLETENESS: 01/29/2015
SITE ADDRESS: 4330 S GROVE RD
LOCATION: SPOKANE, WA 99224
PARCEL: 25334.9052
DESCRIPTION: (2) SPECULATIVE WAREHOUSES (SHELL ONLY)
ZONING: Light Industrial
OTHER PERMITS: POSSIBLE NPDES THRU DOE; WATER & SEWER PERMITS THRU CITY OF SPOKANE
FURTHER STUDIES: N/A

ENVIRONMENTAL REVIEW: The Department of Building and Planning has reviewed the proposed project for probable adverse environmental impacts and expects to issue a mitigated determination of nonsignificance (MDNS) for this project. The optional DNS process in WAC 197-11-355 is being used. This may be the only opportunity to comment on the environmental impacts of the proposed project. The proposal may include mitigation measures under applicable codes, and the project review process may incorporate or require mitigation measures regardless of whether an EIS is prepared. A copy of subsequent threshold determination for the specific proposal may be obtained upon request. The Spokane Environmental Ordinance governs any SEPA appeal and such appeal shall be filed within fourteen (14) days after the notice that the determination has been made.

EXISTING ENVIRONMENTAL DOCUMENTS: DNS for rough site grading/topsoil export issued on 5/2/2013

WRITTEN COMMENTS: Agencies, tribes and the public are encouraged to review and provide written comments on the proposed project and its probable environmental impacts. All comments received within 14 calendar days of the date issued below will be considered prior to making a decision on this application.

DEVELOPMENT REGULATIONS: Spokane County Zoning Code, Spokane County Subdivision Ordinance, Spokane County Standards for Roads and Sewer Construction, Spokane County Guidelines for Stormwater Management, Spokane County Critical Area Ordinance and the regulations of the Spokane Regional Health District are the primary regulations applicable to the site.

CONSISTENCY: In consideration of the above referenced development regulations and typical conditions and/or mitigating measures, the proposal is found to be consistent with the "type of land use", "level of development", "infrastructure", and "character of development".

PUBLIC HEARING: This action is not subject to a future public hearing.

REVIEW AUTHORITY: Julie Shatto, SEPA Coordinator; jshatto@spokanecounty.org
Randy Vissia, Building Director
Spokane County Building and Planning
1026 W Broadway Avenue
Spokane, WA 99260
(509) 477-3675

Date Issued: 2-6-15
Signature: Julie Shatto

The comment period closes at 4:00 p.m. on February 19, 2015.
ENVIROMENTAL CHECKLIST

SPOKANE ENVIRONMENTAL ORDINANCE
SECTION 11.10.230[1]

Updated March 15, 2006
ENVIRONMENTAL CHECKLIST

Purpose of checklist:
The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:
This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:
Complete this checklist for nonproject proposals, even though questions may be answered "does not apply."

IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (Part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND
1. Name of proposed project, if applicable: Grove Office Warehouse
2. Name of applicant: Architectural Ventures
3. Address and phone number of applicant and contact person: Ron Mackie – 9802 E. Mission Avenue – Spokane Valley, WA 99206 509-290-1491
5. Agency requesting checklist: Spokane County Engineering
SPokane ENVIRONMENTAL ORDINANCE

(WAC 197-11-985) Section 11.10.230(1)  
6. Proposed timing or schedule (including phasing, if applicable):

Start grading operations Spring 2015 mid-late April  Proposed Building Construction start May 2015 mid-July or August end

Building completion in Fall 2015 Spring 2014.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Yes, Tenant improvements to the proposed two 40,000 s.f. 67,500-sf tilt-up concrete spec. office warehouse buildings and site construction per plan submitted. Plan to divide lot into 2 separate parcels.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

None. Except SEPA submitted on adjacent property to west. Related land use action CE-345-95 “B”.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None are known

Preliminary SP-1583 JS 1-27-15

10. List any government approvals or permits that will be needed for your proposal, if known.

At time of building permitting requirements for Building permit, Avigation Easement, Washington State Dept. of Transportation for Road design. For rough grading a grading permit through Spokane County. Possible NPDES permit through WA State Dept. of Ecology. Possible NREC review for shell building envelope only.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The proposed project is for rough grading and construction on this site for a future two proposed Office/Warehouses of approx. 40,000 s.f. 67,500-sf on this 5.02 acre site. Future utilities work consisting of 2 separate Sanitary sewer and domestic water and fire service waters to be tied into existing service lines in Thorpe and Grove Roads. Site is accessed by Thorpe Road and Grove Road.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The Site is located at 4330 S. Grove Road in Spokane County. Site is Southwest corner of intersection of Thorpe and Grove Roads. Section 33, Township 25 North, Range 42 East, W.M. in the County of Spokane. Parcel no. 25334.9052
13. Does the proposed action lie within the Critical Aquifer Recharge Area (CARA)?

Moderate sensitivity area.

14. The following questions supplement Part A.

   a. Critical Aquifer Recharge Area (CARA)

   (1) Describe any systems, other than those designed for the disposal of sanitary waste, installed for the purpose of discharging fluids below the ground surface (includes systems such as those for the disposal of stormwater or drainage from floor drains). Describe the type of system, the amount of material to be disposed of through the system and the types of material likely to be disposed of (including materials which may enter the system inadvertently through spills or as a result of firefighting activities).

   Future recessed truck wells will have proposed trench drains fed into sand trap/oil water separator and piped to drywells. No floor drains are proposed within buildings except future restrooms which will be piped to sanitary sewer. Future roof drainage will be collected into gutter system roof drains and rainwater leader piping will be direct into drywells. CARA compliance required at time of building permit.

   (2) Will any chemicals (especially organic solvents or petroleum fuels) be stored in aboveground or underground storage tanks? If so, what types and quantities of material will be stored?

   No plans for underground tanks and unknown user for building at this time. Do not know what may be stored at this time. No chemicals required for grading or building construction shell.

   (3) What protective measures will be taken to insure that leaks or spills of any chemicals stored or used on site will not be allowed to percolate to groundwater. This includes measures to keep chemicals out of disposal systems.

   None designed at this time.
c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The soil most prevalent at the project site is silty sand topsoil to a depth of 6-8". Silty course sand with gravel from depths of 6"-3 feet and sand gravelly loam with boulders depth of 3 feet-6 feet. Basalt rock at depths of 8-12 feet.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

None are visible or known

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

4,000 cu. yards of topsoil will be removed and trucked off this site for this proposal. Future grading will occur to construct paving areas and building area associated with future proposal, however, the design will strive to balance the site so that filling will not be needed. Future fill will be a gravel base course under building areas and paving. Topsoil to be exported to an approved project site within the area.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Due to mild slopes and permeable soils existent on the site, no erosion problems are anticipated.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Approximately 36.5% 30.8% of the site will be covered with future proposed building and approximately 44% 41.6% of site will be asphalt paving upon completion of the construction associated with this proposal.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Construction entrances graveled will be implemented and silt fencing and/or straw bales will be used as needed to prevent sediments from leaving the site. Compliance with Spokane County Erosion/Sediment Control Standards must be demonstrated during all phases of grading activity.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Dust and equipment exhaust would occur during grading operations and future construction. Upon completion of the project, increased traffic will cause increased automobile and truck emissions.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None are known
c. Proposed measures to reduce or control emissions or other impacts to air, if any:

   **Dust control measures during grading operations, water spray site as needed. Compliance with Spokane Regional Clean Air Agency Regulations shall be met.**

3. Water

a. SURFACE:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

   **No.**

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

   **No.**

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

   **None**

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

   **No**

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

   **No**

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

   **No**

b. GROUND:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

   **Future development will include Subsurface discharge via drywells to be proposed. Swales will be designed to treat the first half inch of runoff from asphalt surfaces. No groundwater is present near existing ground surface. CARA compliance required at building permit stage.**
2) Describe waste material that will be discharged into the ground from septic tanks or other sanitary waste treatment facility. Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of persons the system(s) are expected to serve.

None

c. WATER RUNOFF (INCLUDING STORMWATER):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

All future surface runoff from building roofs will be piped directly to drywells for immediate subsurface discharge (assumuing roofs are a non-asphalt product). Runoff from future proposed asphalt areas will be routed to swales for treatment prior to being discharged into the ground via drywells. Runoff from recessed truck wells to be diverted into sand trap/oil water separator and discharged to drywell, proposed.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No

d. PROPOSED MEASURES to reduce or control surface, ground, and runoff water impacts, if any:

Future Swale and landscaped areas surrounding the site with Asphalt areas sloped to drain towards these areas. Future-recessed truck loading areas designed with trench-drains. Compliance with Spokane County Stormwater Regulations required at building permit stage.

4. Plants

a. Check or circle types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- X grass
- pasture
- crop or grain
- wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Wild grasses and scrub will be removed.

c. List threatened or endangered species known to be on or near the site.

None are known
SPOKANE ENVIRONMENTAL ORDINANCE

(WAC 197-11-985) Section 11.10.230(1)  File No. ________________

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance
vegetation on the site, if any:

**Future proposed Site will be professionally landscaped to enhance the site after construction including
trees, plantings and grass areas. Compliance w/ Spokane County Landscaping Regulations to be
reviewed at time of building permit.**

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the
site:
birds: hawk, heron, eagle, **songbirds, other: sparrows**
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other:

b. List any threatened or endangered species known to be on or near the site.

None are known

c. Is the site part of a migration route? If so, explain.

No All of Spokane County considered migratory area for fowl.

d. Proposed measures to preserve or enhance wildlife, if any:

**Future proposed Landscaping will be an important part of the project.**

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet
the completed project's energy needs? Describe whether it will be used for heating,
manufacturing, etc.

Electric and natural gas services are proposed for the future development of this site.

b. Would your project affect the potential use of solar energy by adjacent properties?
If so, generally describe.

No

c. What kinds of energy conservation features are included in the plans of this proposal?
List other proposed measures to reduce or control energy impacts, if any:

**Future Gas heating equipment with economizers may be included, tinted windows and insulated
concrete wall panels for thermal mass are planned. High window for natural-lighting and daylighting of
warehouse areas is proposed. Insulated roof system to complete thermal envelope.**

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk
of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal?
If so, describe.

No
1. Describe special emergency services that might be required.

   General fire, police and emergency services as any typical Office/Warehouse.

2. Proposed measures to reduce or control environmental health hazards, if any:

   Future proposed Buildings to be fully fire sprinklered and will have concrete faced wall panels on both interior and exterior faces. Roof will be steel joists, girders and steel decking, non-combustable. No hazardous materials in any big quantities are planned to be stored in building. Site developer and management planning contract with security service for patrols.

b. NOISE

   1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

      None. that will effect use.

   2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

      Short-term: construction equipment from 7:00 AM to 4:00 PM
      Long-term: increased traffic mainly during 7:00 AM to 6:00 PM

   3) Proposed measures to reduce or control noise impacts, if any:

      Future proposal will have solid mass walls designed to reduce any outside noise.

8. Land and shoreline use

   a. What is the current use of the site and adjacent properties?

      The current site is vacant. The property to the south is a non-vacated road with residential to South of road. The property to the West is Industrial development. The property to the North and East across roads is Industrial Buildings and development.

   b. Has the site been used for agriculture? If so, describe.

      Not to my knowledge

   c. Describe any structures on the site.

      None

   d. Will any structures be demolished? If so, what?

      No

   e. What is the current zoning classification of the site?

      The site is zoned Light Industrial L-L.
f. What is the current comprehensive plan designation of the site?

   Light Industrial

   Does not apply

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

   No, CARA regulations apply

i. Approximately how many people would reside or work in the completed project?

   Unknown at this time. Proposed tenants (Storage warehouse) interest indicates 4-8 people per building.

j. Approximately how many people would the completed project displace?

   None

k. Proposed measures to avoid or reduce displacement impacts, if any:

   None

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

   Professional landscaping will be completed to create business park look.

9. Housing

   a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

      None

   b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

      None

   c. Proposed measures to reduce or control housing impacts, if any:

      None

10. Aesthetics

   a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

      Future proposed Building height will be approximately 39'-0" 34'-0". Decorative and painted concrete are the principal exterior building materials along with tinted glass.
b. What views in the immediate vicinity would be altered or obstructed?

None

c. Proposed measures to reduce or control aesthetic impacts, if any:

Perimeter landscaping. Compliance w/ Spokane County Landscaping Regulations to be reviewed.

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Future General site lighting directed on-site from dusk to dawn. Future Car and Truck traffic.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

None

d. Proposed measures to reduce or control light and glare impacts, if any:

Proposed Shielded light fixtures and perimeter landscaping.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

None.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None

13. Historic and cultural preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

None

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None
SPOKANE ENVIRONMENTAL ORDINANCE

(WAC 197-11-985) Section 11.10.230(1)

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Site is bordered by Thorpe Road to the North and Grove Road to the East. The proposed site areas will have (3) access points off Grove Road and (1) access points from Thorpe.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No. Do not know where Transit stop is for this area.

c. How many parking spaces would the completed project have? How many would the project eliminate?

The proposed future development site plan indicates 86 car parks.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Future Street work will be required for the widening and channeling of both Thorpe Road and Grove. This will also include new curb & gutter with separated sidewalk.

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15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

The future completed proposal could increase need for increased fire protection.
SPOKANE ENVIRONMENTAL ORDINANCE

(WAC 197-11-985) Section 11.10.230(1)

b. Proposed measures to reduce or control direct impacts on public services, if any.

Future Development will be fire-sprinklered and designed w/ concrete and steel construction. New fire hydrants to be installed on-site. Building could be serviced by a contracted security service.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Avista Utilities: power and natural gas
City of Spokane: Sewer and Water

C. SIGNATURE

I, the undersigned, swear under penalty of perjury that the above responses are made truthfully and to the best of my knowledge. I also understand that, should there be any willful misrepresentation or willful lack of full disclosure on my part, the agency must withdraw any determination of Nonsignificance that it might issue in reliance upon this checklist.

Date: _3-28-2013 amended 1-8-2015_ Signature: Ron R. Mackie

Please Print or Type:

Proponent: Ron Mackie Address: 9802 E. Mission Avenue
Spokane Valley, WA 99206

Phone: 509-290-1491

Person completing form (if different from proponent): Address:

Phone: 

TO BE COMPLETED BY APPLICANT

EVALUATION FOR AGENCY USE ONLY
FOR STAFF USE ONLY

Staff member(s) reviewing checklist: Julie Shatto

Based on this staff review of the environmental checklist and other pertinent information, the staff concludes that:

- A. there are no probable significant adverse impacts and recommends a Determination of Nonsignificance.
- X B. probable significant adverse environmental impacts do exist for the current proposal and recommends a Mitigated Determination of Nonsignificance with conditions.
- C. there are probable significant adverse environmental impacts and recommends a Determination of Significance.
January 25, 2015

Julie Shatto  
Building & Planning  
Spokane County  
1116 W. Broadway Ave  
Spokane, WA 99260

Re: Trip Distribution Letter for Proposed Thorpe and Grove Warehouses.

Dear Julie:

At the request of Spokane County, 4 Ty Civil is preparing a Trip Distribution Letter for the proposed Thorpe and Grove Warehouses @ 4330 S Grove Rd in Spokane County, WA, Parcel #25334.9052 (currently platted to 2 lots). The site is located on the Southwest corner of the intersection of Thorpe and Grove in Spokane, WA, as shown on the Vicinity Map (Attachment #1). It is undeveloped and vacant currently.

**Brief Project Description**

Divcon’s building site is made up of a 2-40,000 sf warehouse with some office space. The site will have associated parking and landscaping on a 5.02 acre site. The proposed site plan shows the location of the building, parking, and the four access locations for the site, see Attachment #2. These access points are located on Thorpe and Grove road. The buildings are single story.

**Trip Generation Discussion**

Trip Generation rates and volumes for the Thorpe and Grove site is based on data from the client and compared to information published by the Institute of Transportation Engineers (ITE) in the manual, *Trip Generation* (8th Edition). For this project, Warehouse (ITE Code 150) represents the trip making characteristics of Divcon’s new warehouses. By following Figure 3.1 (Recommended Procedure for Selecting between Trip Generation Average Rates and Equations), it was determined to use the Regression equation. The results of this calculation for trip generation rates and volumes for the a.m. peak hour, p.m. peak hour on a daily basis are summarized in the table below. Flow chart and curve equations are added as Attachment #3 and #4.

<table>
<thead>
<tr>
<th>KSF</th>
<th>A.M. Peak Hour</th>
<th>P.M. Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ln(T) = 0.55Ln(80) + 1.88</td>
<td>Ln(T) = 0.64Ln(80) + 1.14</td>
</tr>
<tr>
<td></td>
<td>Directional Distribution</td>
<td>Directional Distribution</td>
</tr>
<tr>
<td></td>
<td>79% In</td>
<td>21% Out</td>
</tr>
<tr>
<td>80</td>
<td>58</td>
<td>15</td>
</tr>
</tbody>
</table>

*KSF = thousand square feet

Distribution of traffic from Thorpe and Grove site was based on likely routes to and from the buildings. Overall distribution for Thorpe and Grove site is expected to be 95% will head northwest towards the I-90 interchange while 5% will head west, and less than 1% will head south or east. This Information is shown on Attachment #1, Trip Distribution/Vicinity Map.
Existing Conditions and possible Impacts
Using the Trip Generation methods, the possible number of trips generated has been documented in this report. It is not expected that this will reduce the level of service at the I-90 interchange. Depending on the master plan for the lots in this area, this site use should have a low traffic impact. Let me know if you have any questions pertaining to your review of this information.

Sincerely,
4 Ty Civil, LLC

[Signature]

Danny Patterson, P.E.
Owner
effects of changes in site characteristics is purely hypothetical and not provable at this date.

**Step 2:** Is the size of the development under analysis (in terms of the unit of measurement of the independent variable) within the range of the data shown in the data plot?

If yes, proceed to Step 3.
If no, collect local data and establish a local rate. Refer to Chapter 4 for guidelines.

**Step 3:** How many data points comprise the sample reported in *Trip Generation*?

If the number of data points is one or two, collect local data and establish a local rate. Refer to Chapter 4 for guidelines.
If the number of data points is three, four, or five, the analyst is encouraged to collect local data and establish a local rate (see Chapter 4), but can otherwise proceed to Step 4.
If the number of data points is six or more, proceed to Step 4.

**Step 4:** Is a regression equation provided?

If yes, proceed to Step 7.
If no, proceed to Step 5.

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**Figure 3.1 Recommended Procedure for Selecting Between Trip Generation Average Rates and Equations**

1. **Compatible with ITE Land Use Code?**
   - No
   - Yes

2. **Size within Data Extremes?**
   - No
   - Yes

3. **Number of Data Points?**
   - 1 or 2
   - 3-5
   - 5+

4. **Regression Equation?**
   - No
   - Yes

5. **Standard Deviation ≤ 110 percent?**
   - No
   - Yes

6. **Data Clustered Okay?**
   - No
   - Yes
    - Use Weighted Average Rate

7. **20 or More Data Points?**
   - No
   - Yes

8A. **$R^2 \geq 0.75$? And Within Cluster?**
   - Yes
   - No

8B. **Std Dev ≤ 110%? And Within Cluster?**
   - Yes
   - No

- Choose Line at Cluster
- Use Regression Equation
- Use Weighted Average Rate
- Collect Local Data
Step 5: Is the standard deviation for the weighted average rate less than or equal to 110 percent of the weighted average rate (calculation: the standard deviation divided by weighted average rate is less than or equal to 1.1)?

If yes, proceed to Step 6.
If no, collect local data and establish a local rate. Refer to Chapter 4 for guidelines.

Step 6: Is the line that corresponds to the weighted average rate within the cluster of data points near the size of the development site?

(Note: If there are no data points near the site size, but there are good matches at somewhat smaller and larger sizes, assume the answer is yes.)

If yes, USE THE WEIGHTED AVERAGE RATE.
If no, collect local data and establish a local rate. Refer to Chapter 4 for guidelines.

Step 7: Are at least 20 data points distributed over the range of values typically found for the independent variable? Are there few erratic data points (i.e., outliers)? Is the line corresponding to the regression equation within the cluster of data points at the size of the development in question?

If all answers are yes, USE THE REGRESSION EQUATION.
If at least one answer is no, proceed to Step 8.

Caution: The regression equation typically yields a line with a y-intercept. For an independent variable with a low value (i.e., near zero), the regression equation might produce a trip ends estimate that is illogical. In such a case, the analyst should use the weighted average trip rate to estimate trip ends.

Step 8: Answer Questions 8A and 8B:

Question 8A:
Is the R^2 for the regression equation greater than or equal to 0.75? And, is the line corresponding to the regression equation within the cluster of data points at the size of the development in question?

Question 8B:
Is the standard deviation for the weighted average rate less than or equal to 110 percent of the weighted average rate? And, is the line corresponding to the weighted average rate within the cluster of data points at the size of the development in question?

(Note: If there are no data points near the site size, but there are good matches at somewhat smaller and larger sizes, assume the answer is yes.)

If Questions 8A and 8B are both answered yes, choose whichever line (representing either the equation or the weighted average rate) best fits the data points at the size of the independent variable in question. The decision could be different for different points in the chart.

If the answer to Question 8A is yes and to Question 8B is no, USE THE REGRESSION EQUATION.

If the answer to Question 8A is no and to Question 8B is yes, USE THE WEIGHTED AVERAGE RATE.

If the answers to Questions 8A and 8B are both no, COLLECT LOCAL DATA. Refer to Chapter 4 for guidance. Also, if the answers to 8A and 8B are no, an acceptable EXCEPTION to the “collect local data” recommendation is if the rate or equation line passes through the cluster of data at the size of the development in question. If such is the case, use either the weighted average rate or the regression equation (whichever line is appropriate).
Warehousing
(150)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 31
Average 1000 Sq. Feet GFA: 572
Directional Distribution: 25% entering, 75% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

<table>
<thead>
<tr>
<th>Average Rate</th>
<th>Range of Rates</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.32</td>
<td>0.09 - 1.68</td>
<td>0.67</td>
</tr>
</tbody>
</table>

Data Plot and Equation

Fitted Curve Equation: \( \ln(T) = 0.64 \ln(X) + 1.14 \)
\( R^2 = 0.64 \)
Warehousing
(150)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 23
Average 1000 Sq. Feet GFA: 745
Directional Distribution: 79% entering, 21% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

<table>
<thead>
<tr>
<th>Average Rate</th>
<th>Range of Rates</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.30</td>
<td>0.08 - 1.93</td>
<td>0.63</td>
</tr>
</tbody>
</table>

Data Plot and Equation

\[
\text{Ln}(T) = 0.55 \times \text{Ln}(X) + 1.88 \\
R^2 = 0.67
\]

\[
\text{Ln}(T) = 0.55 \times \text{Ln}(80) + 1.83
\]

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73
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