

July 25, 2008

Bill Balaz  
Balaz & Associates, Inc.  
2527 Foresight Circle  
Grand Junction CO 81505

*Re: TED-2008-215 – Hyatt Hotel*

The TED's Exception Committee has approved your resubmitted exception with the following modification:

- ✓ Obtain a Cross Access Easement with the northern vacant property owned by the Walker Field Public Airport Authority. The access will need to be built as part of the Hyatt project.

If you have any questions, please feel free to contact the Development Engineer in charge of your project or Tim Moore, Public Works and Planning Director at 970.244.1557.

Sincerely,



Sue Mueller  
Sr. Administrative Assistant

Cc: Rick Dorris, Development Engineer  
Ronnie Edwards, Associate Planner  
File



PUBLIC WORKS & PLANNING DEPARTMENT  
PLANNING DIVISION

# Transportation Engineering Design Standards (TEDS) Exception Approval / Denial Form

## REVISED SUBMITTAL

Project Number: **TED-2008-215**

Project: Hyatt Hotel

Site Address: Horizon and H

Applicant: Oxford Development Company

Representative: Balaz and Associates

Development Engr.: Rick Dorris

Planner: Ronnie Edwards

### TEDS Exception Request #1:

Approved as requested.

Approved with the following modification(s):

Denied.

The following additional information is required before a decision can be made:

- Obtain a Cross Access Easement with the northern vacant property owned by the Walker Field Public Airport Authority. The access will need to be built as part of the Hyatt project.

### TEDS Review Committee:

Public Works: Tom M...

Date: 8/19/08

Planning Division: Lisa E Cox

Date: 8/19/08

Fire Department: Hank Masterson

Date: 8/19/08

*Rick*

## Transportation Engineering Design Standards (TEDS) Exception Recommendation Form

### REVISED SUBMITTAL

Date: August 15, 2008

To: TEDS Review Committee

From: Rick Dorris & Ken Fischer, Development Engineer



Project Number: **TED-2008-215**

Primary Project: Hyatt Hotel

Planner: Ronnie Edwards

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#### TEDS Exception Request #1:

Comment: A reasonable speed for the slip lane around the roundabout is 25 MPH. The transformer provides some impairment in sight but as shown on the drawing the shaded window is small.

#### Recommendation:

Approve as requested.

Approve with the following modification(s):

Deny.

Hold until the following additional information is submitted and reviewed:

- Obtain a Cross Access Easement with the northern vacant property owned by the Walker Field Public Airport Authority. The access will need to be built as part of the Hyatt project.

*26  
+3  
7/8*

LETTER OF TRANSMITTAL

BALAZ & ASSOCIATES, INC.

2527 Foresight Circle  
Grand Junction, CO 81505  
Phone 970-263-9733  
Fax 970-263-9736

Date 8-14-08

To RICK DORRIS

Re: HYATT PLACE

We are sending you Attached Under separate cover via \_\_\_\_\_ the following items:

For Approval For Your Use As Requested For Review and Comment

Other \_\_\_\_\_

Copies	Sheet Numbers	Date	Description
6	TE's Response w/ sheet TE-1		

Remarks RICK HERE IS THE RESPONSE LETTER  
and revised drawing we discussed yesterday  
let me know if you need anything else

Thank

Copy To Rob Cicco - OXFORD  
FILE

Signed Bill

Received By \_\_\_\_\_

RECEIVED

AUG 14 2008

COMMUNITY DEVELOPMENT  
DEPT.

# **BALAZ & ASSOCIATES, INC.**

2527 Foresight Circle      Grand Junction, CO 81505      Phone: (970) 263-9733

August 14, 2008

Mr. Rick Dorris  
Community Development Engineer  
City of Grand Junction  
250 N. 5th Street  
Grand Junction, Colorado 81501

Re: Hyatt Place  
    TED-2008-215

Dear Rick:

This letter is a response to Sue Mueller's July 25, 2008 letter and the items discussed in our meeting on August 6, 2008 regarding the initial TEDS exception request for two driveways onto Horizon Drive.

The site plan and Sheet TE-1 have been revised to include the following items:

1. The northern driveway has been moved south to provide a minimum stopping distance of 200 ft. to the point where the right turn bypass lane and the left roundabout lane come together on Horizon Drive. This is the minimum stopping distance for 30 mph while 155 feet is the minimum stopping distance for 25 mph.
2. The resulting distance between the relocated northern driveway and the proposed shared driveway to the south is 309 feet which exceeds the minimum distance of 300 feet between driveways.
3. The area on the parking lot around the north driveway has been reconfigured to provide a 50 ft. throat depth.
4. The south driveway has a distance of 64 feet from the Horizon Drive flow line to the first parking space to the right. This was viewed as a reasonable method to determine the throat depth as all the Hyatt traffic is right in only. The Cross Pointe Business Park requires a throat depth of 25 feet which is available for inbound traffic turning left into that facility.

The following items were discussed in the August 6th meeting.

1. The changes to TE-1 described above were reviewed with City personnel. It was the opinion of the Applicant's Engineer that the above changes brought the site plan into compliance with TEDS when asked by Staff.
2. The speed limit on the roundabout right bypass lane for design purposes is an assumed 25 mph. The roundabout speed limit is 15 mph.

3. The existing electric transformer box appears to cause issues with the sight triangle for the right bypass lane. The transformer may be very costly to move as two primary power loops tie into that transformer per discussions with Xcel after our meeting. This box was just moved as part of the roundabout construction.
4. Cross access easements to the airport parcel and the BLM are desired. A meeting was held with Rex Tibbets, Grand Junction Regional Airport Manager, prior to this meeting. One of the items discussed was potential sale of the parcel to Oxford.
5. The Fire Department requirement for two accesses is met by the two proposed driveways onto Horizon Drive.
6. A letter should be sent to Rick Dorris addressing the concerns discussed and the TEDS application will be continued using the same number as the initial submittal.

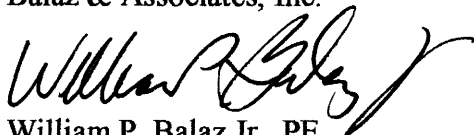
With regard to the electric transformer, Balaz & Associates, Inc. (BAI) personnel measured the height of the transformer at 44-1/2 inches above the concrete base which is approximately the same height as the back of curb on Horizon Drive. To assess the potential issues with the transformer box, 8' by 20' rectangles representing cars have been placed at key points for clear sight zones and stopping distance and a shaded blind spot added behind the transformer when looking northeast from the driveway. In all cases the cars are outside of the transformer blind spot at the key points implying that the transformer is not an issue at the key design points. While vehicles temporarily enter the blind spot they emerge again to see the driveway with the 200 ft. stopping distance for vehicles entering or leaving the driveway.

Oxford Development will begin discussions with the Grand Junction Regional Airport on a cross access easement for their parcel. It is our understanding that the BLM easement is not needed based on our phone conversation today. Oxford Development also realizes that the access needs could change relative to the BLM building in the future. If a new owner or tenant desired cross access from BLM through the airport parcel, Oxford would be willing to discuss the BLM cross access easement assuming the Grand Junction Regional Airport had provided a cross access easement for BLM.

The revised Sheet TE-1 is attached. Five (5) additional copies of this letter with the attachment are also attached.

Thank you for meeting with us on August 6th and your input in developing this response. Please feel free to contact the undersigned at the above address if you have any questions regarding this submittal.

Sincerely,  
Balaz & Associates, Inc.



William P. Balaz Jr., PE  
President

Cc: Rob Cicco, Oxford Development, w/ Attachment

## Transportation Engineering Design Standards (TEDS) Exception Recommendation Form

Date: 7-11-2008

To: TEDS Review Committee

From: Rick Dorris & Ken Fischer, Development Engineer

Project Number: **TED-2008-215**

Primary Project: Hyatt Hotel

Planner: Ronnie Edwards

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### TEDS Exception Request #1:

Comment: The sight distance is not from the center of the roundabout as shown on the drawing. The critical sight path is along the by-pass lane. Section 6.1.3.3 states 200' is required for 30 mph and this is a reasonable speed for the by-pass lane. The development plans must demonstrate 200' of stopping sight distance when the project is submitted for site plan review.

### Recommendation:

Approve as requested.

Approve with the following modification(s):

Deny.

Hold until the following additional information is submitted and reviewed:

The Hyatt Hotel TEDS Exception has been rejected due to:

- the proximity to the Round About,
- the view obstruction due to the electrical box to the north of the proposed driveway,
- the lack of throat length (50' is required without obstructing the site circulation),

If a second driveway on Horizon Drive is still desired another TEDS Exception is still required, the following items will need to be incorporated:

- Move the proposed driveway further to the south within 300 feet of the shared driveway at the southern corner of the property. This will require the TEDS Exception,
- Obtain a Cross Access Easement with BLM and the northern vacant property owned by the Walker Field Public Airport Authority. The access will need to be built as part of the Hyatt project. This access will address the Fire Department's requirement for two accesses properly spaced,
- Provide a Cross Access Easement through the proposed Hyatt project to the northern vacant property owned by the Walker Field Public Airport Authority,
- Provide a driveway throat depth of at least 50' without impacting the site circulation,
- Move the electrical box from the view corridor along Horizon Drive.

July 25, 2008

Bill Balaz  
Balaz & Associates, Inc.  
2527 Foresight Circle  
Grand Junction CO 81505

*Re: TED-2008-215 – Hyatt Hotel*

The TED's Exception Committee has denied your requests due to the following:

- ✓ The proximity to the round-a-bout;
- ✓ The view obstruction due to the electrical box to the north of the proposed driveway;
- ✓ The lack of throat length (50' is required without obstructing the site circulation)

If a second driveway on Horizon Drive is still desired, another TEDS Exception will be required with the following items incorporated:

- ✓ Move the proposed driveway further to the south within 300 feet of the shared driveway at the southern corner of the property.
- ✓ Obtain a Cross Access Easement with BLM and the northern vacant property owned by the Walker Field Public Airport Authority. The access will need to be built as part of the Hyatt project. This access will address the Fire Department's requirement for two accesses properly spaced;
- ✓ Provide a Cross Access Easement through the proposed Hyatt project to the northern vacant property owned by the Walker Field Public Airport Authority;
- ✓ Provide a driveway throat depth of at least 50' without impacting the site circulation
- ✓ Move the electrical box from the view corridor along Horizon Drive.

If you have any questions, please feel free to contact the Development Engineer in charge of your project or Tim Moore, Public Works and Planning Director at 970.244.1557.

Sincerely,



Sue Mueller  
Sr. Administrative Assistant

Cc: Ken Fischer (in Rick Dorris' absence), Development Engineer  
Ronnie Edwards, Associate Planner  
File



## Transportation Engineering Design Standards (TEDS) Exception Approval / Denial Form

Project Number: **TED-2008-215**

Project: Hyatt Hotel

Site Address: Horizon and H

Applicant: Oxford Development Company

Representative: Balaz and Associates

Development Engr.: Rick Dorris & Ken Fischer

Planner: Ronnie Edwards

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### TEDS Exception Request #1:

Approved as requested.

Approved with the following modification(s):

Denied.

The following additional information is required before a decision can be made:

The sight distance is not from the center of the roundabout as shown on the drawing. The critical sight path is along the by-pass lane. Section 6.1.3.3 states 200' is required for 30 mph and this is a reasonable speed for the by-pass lane. The development plans must demonstrate 200' of stopping sight distance when the project is submitted for site plan review.

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### TEDS Review Committee:

Public Works:

*Loni Mow*

Date: 7-23-08

Planning Division:

*Risa E Cox*

Date: 7/22/08

Fire Department:

*Charles Martin*

Date: 7/22/08

## APPLICATION

### Transportation Engineering Design Standards (TEDS)

### Exception Request

Submit five (5) copies of the application and associated drawings. Use the instructions provided to fill out this form. Additional sheets are recommended; it is important to provide complete information.

Project: Hyatt Hotel w/ separate Restaurant & Bar  
Site Address: SW Corner Horizon Drive & H Road  
City File Number  
(If Applicable): (To be filled in by City Staff)  
Applicant: Oxford Development Company Rob Cicco 412 395 3452  
Representative: Balaz & Associates, Inc. Bill Balaz 263-9733  
Date: July 9, 2008

#### 1. Referenced section in TEDS and a brief description of the request(s)

Request #1 - TEDS 3.2.4 Number of Access Points and Joint Access – Request is for two driveways

Request #2 - N/A

Request #3 - N/A

Request #4 - N/a

#### 2. Site Description

The site is located on the SW corner of Horizon Drive and H Road just west of the new roundabout. The site has a single frontage on Horizon Drive, a minor arterial. Presently, there are no curb cuts on the Horizon Drive frontage. The site is vacant land zoned I/O. The lot to the southwest is vacant and the site of the proposed Cross Point Business Center. The lot to the north contains the BLM office while the vacant parcel to the northeast is owned by the Grand Junction Regional Airport Authority. Across Horizon Drive to the east is the Motel 6 and IntelliTec College. The BLM driveway adjacent to the NE corner of the Hyatt site is right out as required by the roundabout construction.

The project proposes to construct a Hyatt Place with 134 rooms and a separate restaurant, approximately 5000 sq. ft. The parking lot includes 182 parking spaces.

The proposed access is via two driveways onto Horizon Drive. The southern driveway is located on the common property line with the undeveloped lot to the southwest. This driveway will be shared with the proposed Cross Point Business Center project per the attached TEDS exception approval. See Attachment 1. The second driveway is located 300 ft. north of the shared driveway and is across from the Motel 6 driveway. The shared driveway is located across from the IntelliTec College driveway. Attachment 2 contains sheet TE-1 which shows the proposed site plan overlain on an aerial photo.

**For each TEDS exception request, please complete A and B below**

**REQUEST #1 TEDS 3.2.4 Number of Access Points and Joint Access – Request is for two driveways.**

**A. Description**

The second driveway is required to comply with the International Fire Code D104.1 which requires two driveways for multi story buildings. The Hyatt Place is a five story building. The two proposed driveways are shown on Sheet TE-1. The southern driveway is located on the common property line with the undeveloped lot to the southwest. This access point will be a shared driveway with the proposed Cross Point Business Center project per the attached TEDS exception approval. This driveway is across from the IntelliTec College driveway. The second driveway is located 314 ft. north of the south driveway and is across from the Motel 6 driveway.



**Photo 1: Looking S. down Horizon Drive (Hyatt site on right past transformer)**



Photo 2: Looking NE site on left beyond light pole.

The distance to a point on the roundabout where the H Road right bypass and the through lane merge is 193 ft. from the edge of the northern driveway which exceeds the required 150 ft. spacing to an unsignalized intersection. These driveway locations are in compliance with TEDS Section 4.1 Access Locations. The shared driveway is encouraged per TEDS Sections 3.2.5 and 4.3.5.



Photo 3: Looking at roundabout from north driveway location

The benefit to the project is compliance with the Fire Code and greater potential safety for guests. The requirement for two driveways cannot be met by a single driveway.

If the TEDS exception is not approved, the project would not be in compliance with the International Fire Code and safety issues could be created for guests without two accesses to allow the timely ingress/egress of fire and emergency vehicles.

## B. Exception Considerations

1. How will the exception affect safety? The exception will increase the safety of the Hyatt Place guests by providing the two driveways required by the Fire Code for large multi story buildings. The proposed driveways have been placed across from existing driveways for the Motel 6 and IntelliTec College. The spacing between the driveways is the 314 ft which exceeds the minimum spacing of 300 ft. The distance from the northern driveway edge to the point where the H Road Bypass Lane and the through lane merge is 193 ft which is greater than the required 150 ft. to an unsignalized intersection. The point where the two lanes merge is considered the equivalent of the flow line of a standard 90 degree intersection. This driveway configuration meets the TEDS Section 4.1 Access Location.

The posted speed limit on Horizon Drive is 35 mph and the posted roundabout speed limit is 15 mph. TEDS Manual requires a Minimum Sight Distance of 400 ft for 35 mph. No minimum sight distance requirements are listed for 15 mph, therefore the 200 ft. for 20 mph is used. The roundabout speed limit determines the sight distance requirement when looking left from the northern driveway as there is not sufficient distance from the end of the roundabout to the driveway to reach 35 mph. The distance from the point on the thru lane where a driver's line of sight is down Horizon Drive to the edge of the proposed northern driveway is 429 ft which exceeds the minimum sight distance requirements. The 400 ft. sight distance is provided on each side of the shared driveway and the southern side of the northern driveway.

There is a two way center turn lane on Horizon Drive which provides a means for guests to turn left into the proposed Hyatt Place driveways if they are travelling north from I-70 and minimizes speed differentials between through and turning traffic.

The ITE Trip Generation Manual, 7<sup>th</sup> Edition was used to obtain trip generations for a hotel with a restaurant. The peak hour trips for a hotel with 134 rooms and an average occupancy rate of 70% is 45 trip ends. The data

assumes that 49% (22) are entering and 51% (23) are exiting. Traffic count data from November 2005 and March 2008 for a point on Horizon Drive south of H Road shows maximum hourly trips of 470. Assuming the traffic is equally split between the two lanes; vehicles per hour, vph, are 235. The TEDS Manual Warrants for Right Turn Lanes – Four Lane Roadways, 35 mph or less does not go this low for vph. The minimum vph on the table is 300. Therefore no right turn lanes are required. The ITE table and traffic count data is included in Attachment 3.

Driveway throat depth or storage length exceeds that required by TEDS Section 4.2.5.1. A retail requirement is assumed for the hotel and restaurant.

Based on the above information, the proposed driveway configuration should not have a negative impact on safety for the following reasons: 1) the driveway configuration and sight distances provided comply w/ TEDS Section 4.1.; 2) Horizon Drive has a continuous two way left turn lane that minimizes the speed differentials between turning and through traffic.; 3) Adequate driveway throat distances are provided, 4) There is a shared driveway with an adjacent parcel that minimizes curb cuts on Horizon Drive, and 5) Two driveways are provided per the Fire Code. The two driveways are viewed as an enhancement of public safety.

2. Have other alternatives been considered that would meet the standard? The Developer looked at a shared driveway with the BLM which would be on the northwest corner of the site. This driveway is restricted to right turn out by the new roundabout construction and is of no value for getting traffic into the Hyatt site and providing a second entrance as required by the Fire Code.

The Developer is proposing to have a shared driveway with the proposed Cross Point Business Park onto Horizon Drive. This shared driveway limits the number of access points onto Horizon Drive while providing access for both properties which is encouraged by TEDS sections 3.2.5 and 4.3.5. A second internal connection with the Cross Point Business Park has been evaluated but is considered undesirable due to the potential for high volumes of traffic entering/exiting the office building that would conflict with the Hotel guests checking in or out and restaurant patrons going to lunch or dinner. This traffic congestion in the interior driveway increases the potential for vehicle accidents or pedestrians being hit by cars which increases liability for the Hyatt operations that is not deemed acceptable.

3. Has the proposed design been used in other areas? Several existing hotels/motels in the area have two driveways as required by the Fire Code. Examples include the Marriott Courtyard and Residence Inn on Hilaria Ave., the Holiday Inn, Best Western Sandman Motel and Denny's, Affordable Inns, Quality Inn and Good Pastures restaurant, Super 8 Motel and Taco Bell, Country Inns, Ramada Inn and Las Palmas restaurant and Americas Best

Value Inn on Horizon Drive, and the proposed Holiday Inn on Crossroads Blvd. See pictures in Attachment 4.

4. Will the exception require CDOT or FHWA coordination? No
5. Is this a one-time exception or a request to change the TEDS manual? One-time exception.

REQUEST #2 – N/A

REQUEST #3 – N/A

REQUEST #4 – N/A

**ATTACHMENT 1 – CROSS POINT BUSINESS PARK TEDS APPROVAL LETTER**



May 5, 2008

Jim Brzostowicz  
Project Designer  
Drexel, Barrell & Company  
123 N. 7<sup>th</sup> Street  
Grand Junction CO 81501

*Re: TED-2008-085 – Cross Point Business Park*

The TED's Exception Committee has approved your request as submitted.

If you have any questions, please feel free to contact the Development Engineer in charge of your project or Tim Moore, Public Works and Planning Director at 970.244.1557.

Sincerely,



Sue Mueller  
Sr. Administrative Assistant

Cc: Kent Harbert, Development Engineer  
Ronnie Edwards, Associate Planner  
File



PUBLIC WORKS & PLANNING DEPARTMENT  
PLANNING DIVISION

### Transportation Engineering Design Standards (TEDS) Exception Approval / Denial Form

Project Number: TED- 2008-085  
 Project: Cross Point Business Park  
 Site Address: NW Corner of Hilaria Ave + Horizon Drive  
 Applicant: Leadership Circle LLC  
 Representative: Jim Brzostowicz, Drexel, Barrell & Co  
 Development Engr.: Kent Haubert  
 Planner: Ronnie Edwards

TEDS Exception Request #1: TEDS 3.2.2 - Allow driveway onto Horizon Drive

- Approved as requested.
- Approved with the following modification(s):
- Denied.
- The following additional information is required before a decision can be made:

~~TEDS Exception Request #2:~~

- ~~Approved as requested.~~
- ~~Approved with the following modification(s):~~
- ~~Denied.~~
- ~~The following additional information is required before a decision can be made:~~

TEDS Review Committee:

Public Works:	<u>Jim Moran</u>	Date: <u>4-1-08</u>
Planning Division:	<u>Risa E Cox</u>	Date: <u>4/1/08</u>
Fire Department:	<u>Charles Magnus</u>	Date: <u>4/1/08</u>

**ATTACHMENT 2 – SITE LAYOUT, SHEET TE-1**

**ATTACHMENT 3 – ITE TRIP GENERATION DATA AND TRAFFIC COUNTS**

Site ID: South of H Rd  
 Station: Horizon Dr  
 Description: Horizon Dr south of H Rd  
 City: Grand Junction  
 County: Mesa  
 Start Date/Time: 11-07-2005 17:00  
 End Date/Time: 11-08-2005 23:59

Site ID: South of H Rd  
 Station: Horizon Dr  
 Description: Horizon Dr south of H Rd  
 City: Grand Junction  
 County: Mesa  
 Start Date/Time: 03-06-2008 00:00  
 End Date/Time: 03-06-2008 23:59

11/7/2005

	All Lanes
17:00	179
18:00	143
19:00	105
20:00	57
21:00	60
22:00	24
23:00	10

11/8/2005

0:00	25
1:00	27
2:00	13
3:00	17
4:00	76
5:00	147
6:00	268
7:00	426
8:00	371
9:00	324
10:00	281
11:00	470
12:00	473
13:00	391
14:00	327
15:00	390
16:00	405

Total	5009
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3/6/2008

	All Lanes
0:00	19
1:00	20
2:00	22
3:00	57
4:00	123
5:00	269
6:00	320
7:00	296
8:00	329
9:00	294
10:00	313
11:00	387
12:00	355
13:00	320
14:00	246
15:00	353
16:00	362
17:00	368
18:00	240
19:00	225
20:00	151
21:00	78
22:00	87
23:00	25

Total	5259
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Source: City of Grand Junction Traffic Department

# Land Use: 310 Hotel

## Description

Hotels are places of lodging that provide sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room) and/or other retail and service shops. Some of the sites included in this land use category are actually large motels providing the facilities of a hotel noted above. All suites hotel (Land Use 311), business hotel (Land Use 312), motel (Land Use 320) and resort hotel (Land Use 330) are related uses.

## Additional Data

Studies of hotel employment density indicate that, on the average, a hotel will employ 0.9 employees per room.<sup>1</sup>

Thirty studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 83 percent.

The hotels surveyed were primarily located outside central business districts in suburban areas.

The sites were surveyed from the late 1960s to the 2000s throughout the United States.

***For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.***

## Source Numbers

4, 5, 12, 13, 18, 55, 72, 170, 187, 254, 260, 262, 277, 280, 301, 306, 357, 422, 436, 507, 577

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<sup>1</sup> Buttke, Carl H., Unpublished studies of building employment densities, Portland, Oregon.

# Hotel (310)

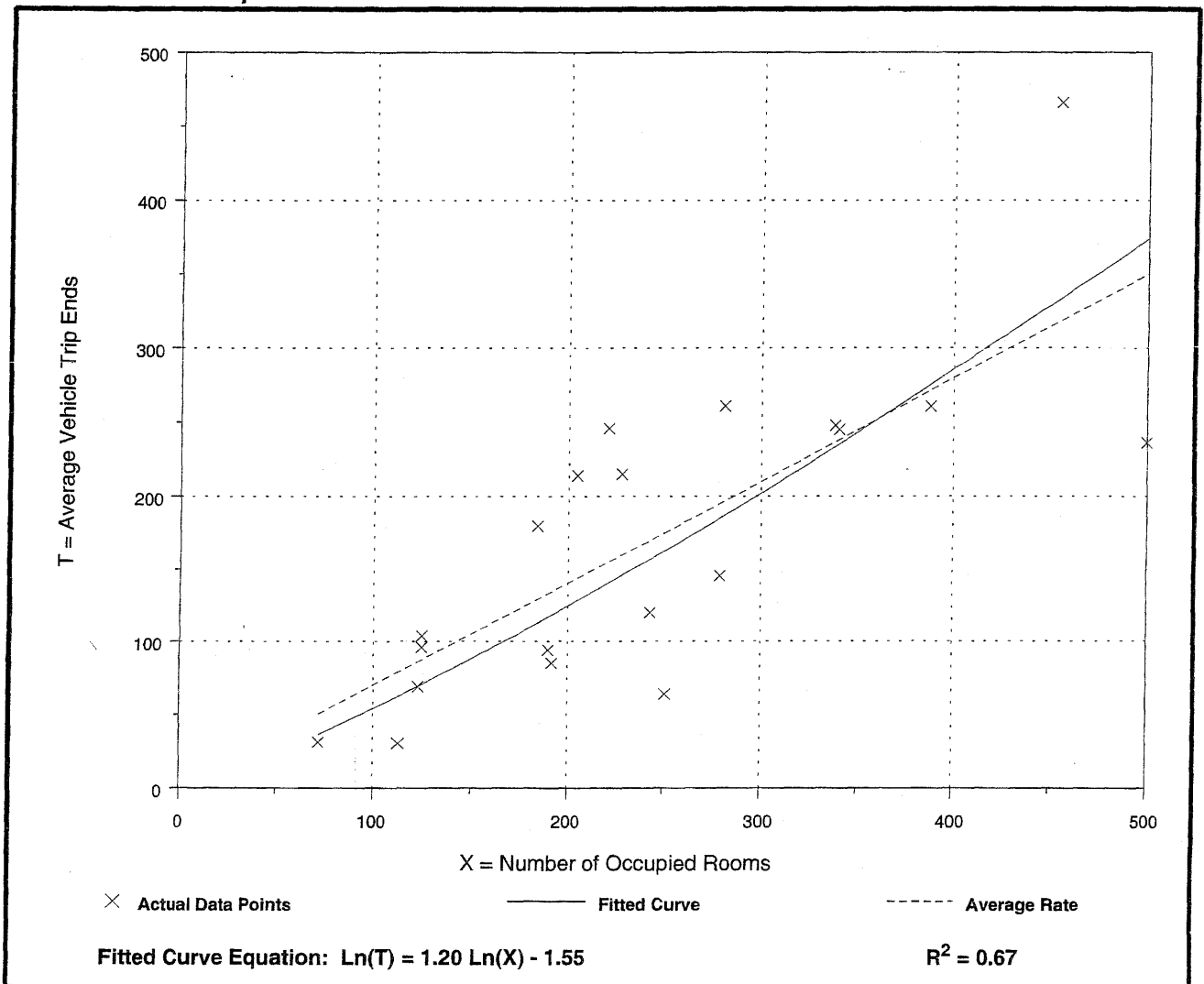
**Average Vehicle Trip Ends vs: Occupied Rooms**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 4 and 6 p.m.**

Number of Studies: 20  
 Average Number of Occupied Rooms: 243  
 Directional Distribution: 49% entering, 51% exiting

### Trip Generation per Occupied Room

Average Rate	Range of Rates	Standard Deviation
0.70	0.25 - 1.11	0.87

### Data Plot and Equation



## Warrants for Right Turn Lanes

### Two Lane Roadways

#### Number of Peak Hour Turning Vehicles

DDHV (vph)	35 MPH or less	40 MPH	45 MPH	50 MPH	55 MPH
200				73	35
300			120	41	24
400	200	200	50	30	19
500	150	125	35	25	16
600	75	50	25	20	14
800	50	30	15	15	11
1000	25	25	15	11	9
1200	20	20	15	9	8

DDHV – Directional Design Hourly Volume; volume of vehicles in the design hour using the through lane adjacent to which the right lanes is to be constructed.

## Warrants for Right Turn Lanes

### Four Lane Roadways

#### Number of Peak Hour Turning Vehicles

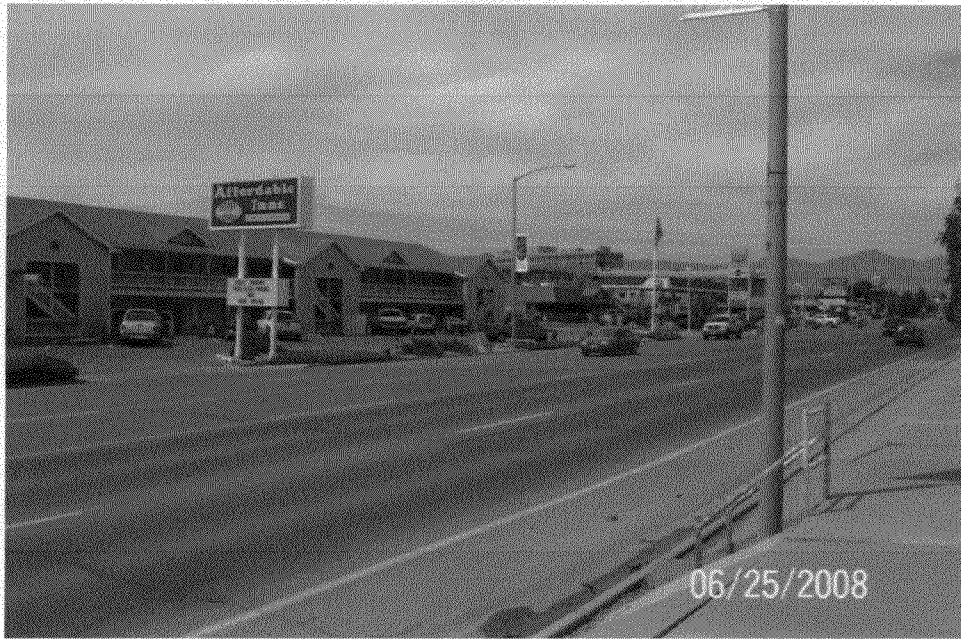
DDHV (vph)	35 MPH or less	40 MPH	45 MPH	50 MPH	55 MPH
300					75
400			145	75	40
500			95	57	32
600	170	160	65	42	26
800	80	70	37	28	19
1200	50	25	20	18	14
1600	20	15	14	13	10
2000	15	10	9	9	8

DDHV – Directional Design Hourly Volume; volume of vehicles in the design hour using the through lane adjacent to which the right lanes is to be constructed.

Charts developed based on studies conducted by Kansas Department of Transportation and University of Nebraska



**ATTACHMENT 4 – PICTURES SHOWING HOTEL SITES W/ TWO DRIVEWAYS**



**AFFORDABLE INNS – SOUTH DRIVEWAY**



**AFFORDABLE INNS – NORTH DRIVEWAY**



**QUALITY INN & GOOD PASTURES RESTAURANT – 2 DRIVEWAYS**



**SUPER 8 NORTH DRIVEWAY (SHARED w/ TACO BELL)**



**SUPER 8 MOTEL SOUTH DRIVEWAY**



**COUNTRY INNS NORTH DRIVEWAY**



**COUNTRY INNS SOUTH DRIVEWAY**



**BEST WESTERN SANDMAN MOTEL SOUTH & NORTH DRIVEWAYS  
(NORTH SHARED W/ DENNY'S)**



**AMERICAS BEST VALUE INN DRIVEWAY ONTO HORIZON COURT**



**AMERICAS BEST VALUE INN DRIVEWAY ONTO HORIZON DRIVE**



**RAMADA INN NORTH DRIVEWAY (SHARED W/ LAS PALMAS RESTAURANT)**



**RAMADA INN SOUTH DRIVEWAY**



**HOLIDAY INN SOUTH DRIVEWAY**



**HOLIDAY INN NORTH DRIVEWAY**





**MARRIOTT RESIDENCE INN/COURTYARD WEST DRIVEWAY ONTO  
HILARIA AVE.**



**MARRIOTT RESIDENCE INN/COURTYARD EAST DRIVEWAY ONTO  
HILARIA AVE.**

ROAD

EXISTING BLM  
DRIVEWAY  
(RIGHT OUT ONLY)

Elec. Box

193.04'

429.62'

68.56'  
45°

NEW DRIVEWAY

EXISTING

