

96-37
Target

Page 1 of 4

City of Rockwall (3/87)

APPLICATION AND FINAL PLAT CHECKLIST

Date 5-22-96

Name of Proposed Development STEGER TOWNE CROSSING PHASE I.

Name of Developer STEGER TOWNE CROSSING, L.P.

Address 5025 ARAPAHO ROAD, 407 Phone 214/789-2977
DALLAS, TEXAS 75248

Owner of Record 740/3097, LIMITED PARTNERSHIP, A TEXAS LIMITED PARTNERSHIP
O.L. STEGER, III, GENERAL PARTNER

Address 504 W. RUSK, ROCKWALL, TEXAS 75087 Phone 214/722-3334

Name of Land Planner/Surveyor/Engineer LAWRENCE A. CATES & ASSOCIATES, INC.

Address 14200 MIDWAY ROAD, 122 Phone 214/385-2272
DALLAS, TEXAS 75244

Total Acreage 32.4557 AC. Current Zoning A & C

Number of Lots/Units NINE (9)

Signed *Lawrence A. Cates*

The Final Plat shall generally conform to the Preliminary Plat, as approved by the City Council and shall be drawn to legibly show all data on a satisfactory scale, usually not smaller than one inch equals 100 feet. The Final Plat shall be submitted on a drawing which is 18" x 24".

The following Final Plat Checklist is a summary of the requirements listed under Section VIII of the Rockwall Subdivision Ordinance. Section VIII should be reviewed and followed when preparing a Final Plat. The following checklist is intended only as a reminder and a guide for those requirements.

Information

Provided of	Not
<u>Shown on Plat</u>	<u>Applicable</u>

<u>XX</u>	<u> </u>
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1. Title or name of development, written and graphic scale, north point, date of plat and key map

XX _____

2. Location of the development by City, County and State.

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_____ XX _____

3. Location of development tied to a USGS monument, Texas highway monument or other approved benchmark

XX _____

4. Accurate boundary survey and property description with tract boundary lined indicated by heavy lines

_____ XX _____

5. If no engineering is provided show contours of 5 ft. intervals

XX _____

6. Accurate plat dimensions with all engineering information necessary to reproduce plat on the ground

XX _____

7. Approved name and right-of-way width of each street, both within an adjacent to the development

XX _____

8. Locations, dimensions and purposes of any easements or other rights-of-way

XX _____

9. Identification of each lot or site and block by letter and number and building lines

_____ _____

10. Record owners of contiguous parcels of unsubdivided land, names and lot patterns of contiguous subdivisions, approved Concept Plans, reference recorded subdivision plats or adjoining platted land by record name and by deed record volume and page

XX _____

11. Boundary lines, dimensions and descriptions of open spaces to be dedicated for public use of the inhabitants of the development

_____ _____

12. Certificate of dedication of all streets, alleys, parks and other public uses signed by the owner or owners (see wording)

Page 3 of 4

x _____

13. Designation of the entity responsible for the operation and maintenance of any commonly held property and a waiver releasing the City of such responsibility, a waiver releasing the City for damages in establishment or alteration of graded (see wording)

x _____

14. Statement of developer responsibility for storm drainage improvements (see wording)

x _____

15. Instrument of dedication or adoption signed by the owner or owners (see wording)

x _____

16. Space for signatures attesting approval of the plat (see wording)

y _____

17. Seal and signature of the surveyor and/or engineer responsible for surveying the development and/or the preparation of the plat (see wording)

x _____

18. Compliance with all special requirements developed in preliminary plat review

xx _____

19. Statements indicating that no building permits will be issued until all public improvements are accepted by the City (see wording)

20. Submit along with plat a calculation sheet indicating the area of each lot

_____ x

21. Attach copy of any proposed deed restrictions for proposed subdivision

**City of Rockwall
Planning And Zoning Commission**

- Agenda Date:** June 11, 1996
- Applicant:** Weber & Company
- Agenda Item:** **96-37-FP/SP/LP** Consider approval of a request from Weber and Company for a final plat, site plan and landscape plan for Steger Towne Crossing Phase I.
- Action Needed:** Discuss and consider approval of the request
- Background Information:**
- PLAT**
This property is part of the Steger Towne Crossing development. This plat contains 9 lots as part of the first phase of the development. Cross access and fire lanes are provided to serve this site. The proposed anchor tenants on the property include Target and Albertson's. We are finalizing the 15' R.O.W dedication for FM-740.
- LANDSCAPE PLAN**
At the work session there was some discussion regarding clustering the trees. Staff reviewed this and was unable to find an acceptable alternative that would brake up this massive parking lot.
- Additional screening has been added to the rear of the Albertson's store and along the chain link fence behind the Target on the north side of Steger Towne Drive.
- SITE PLAN**
The site plan meets the parking and site requirements for the commercial zoning district.
- Recommendation:** Staff recommends approval of this request with the following conditions;
1. 15' R.O.W. dedication for FM-740 prior to the plat being filed.
 2. Approval of the engineering plans.

3. The existing temporary fire lane and access drives on the Food Lion site be abandon or reconfigured prior to the construction of that portion of Steger Towne Drive.
4. The developer of the Steger Towne Crossing allow the property behind Albertson's to petition for cross access to the center.

**City of Rockwall
City Council**

Agenda Date: June 17, 1996

Applicant: Weber & Company

Agenda Item: **96-37-FP/SP/LP** Consider approval of a request from Weber and Company for a final plat, site plan and landscape plan for Steger Towne Crossing Phase I.

Action Needed: Discuss and consider approval of the request

Background Information:

PLAT

This property is part of the Steger Towne Crossing development. This plat contains 9 lots as part of the first phase of the development. Cross access and fire lanes are provided to serve this site. The proposed anchor tenants on the property include Target and Albertson's. We are finalizing the 15' R.O.W dedication for FM-740. The right of way for FM-740 will need to be dedicated by separate instrument.

LANDSCAPE PLAN

At the Commission work session there was some discussion regarding clustering the trees instead of the proposed diamond tree islands. Staff reviewed this and was unable to find an acceptable alternative that would brake up this massive parking lot.

Additional screening has been added to the rear of the Albertson's store and along the chain link fence behind the Target on the north side of Steger Towne Drive.

This landscaping plan was revised to match the Boston Market landscaping to achieve a uniform planting along Steger Towne Drive.

SITE PLAN

The site plan meets the parking and site requirements for the commercial zoning district. The anchor stores are still finalizing the plans for exterior materials and colors. Staff has met with

the architects for the anchor stores, and the building plans are still being designed and reviewed by their corporate offices.

Staff Recommendation:

Staff recommends approval of this request with the following conditions;

1. 15' R.O.W. dedication by separate instrument for FM-740 prior to the plat being filed.
2. Approval of the engineering plans.
3. The existing temporary fire lane and access drives on the Food Lion site be abandon or reconfigured prior to the construction of that portion of Steger Towne Drive.
4. The developer of the Steger Towne Crossing allow the property behind Albertson's to petition for cross access to the center.

P & Z Recommendation:

Approval with staff conditions.

**CITY OF ROCKWALL
City Council Agenda**

Agenda Date: June 17, 1996

Agenda No. V.F.

Agenda Item: **PZ-37-FP/SP/LP** Hold Public Hearing Regarding Request for Sign Variance Consider Approval of a Request from Weber and Company for a Final Plat, Site Plan, Landscape Plan and Sign Plan for Stegar Towne Crossing Phase I Generally located on the east side of FM-740 South of I-30 and Take Any Necessary Action.

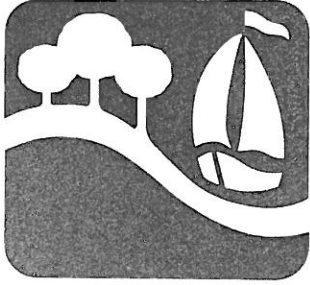
Item Generated By:

Action Needed:

Background Information:

Attachments:

1. Copy of Planning & Zoning Recommendations



CITY OF ROCKWALL
"THE NEW HORIZON"

Memorandum

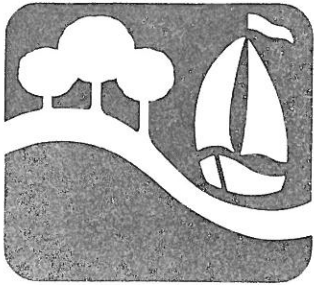
TO: Julie Couch, City Manager

FROM: Bill Crolley, City Planner

RE: Steger Towne Crossing Request for a Sign Plan and Sign Height Variance

DATE: June 12, 1996

The Developer of the Steger Towne Crossing Addition is requesting approval of a sign plan in conjunction with the proposed development. A detailed sign plan map with sign sizes will be sent in the Friday packet.



CITY OF ROCKWALL

"THE NEW HORIZON"

Memorandum

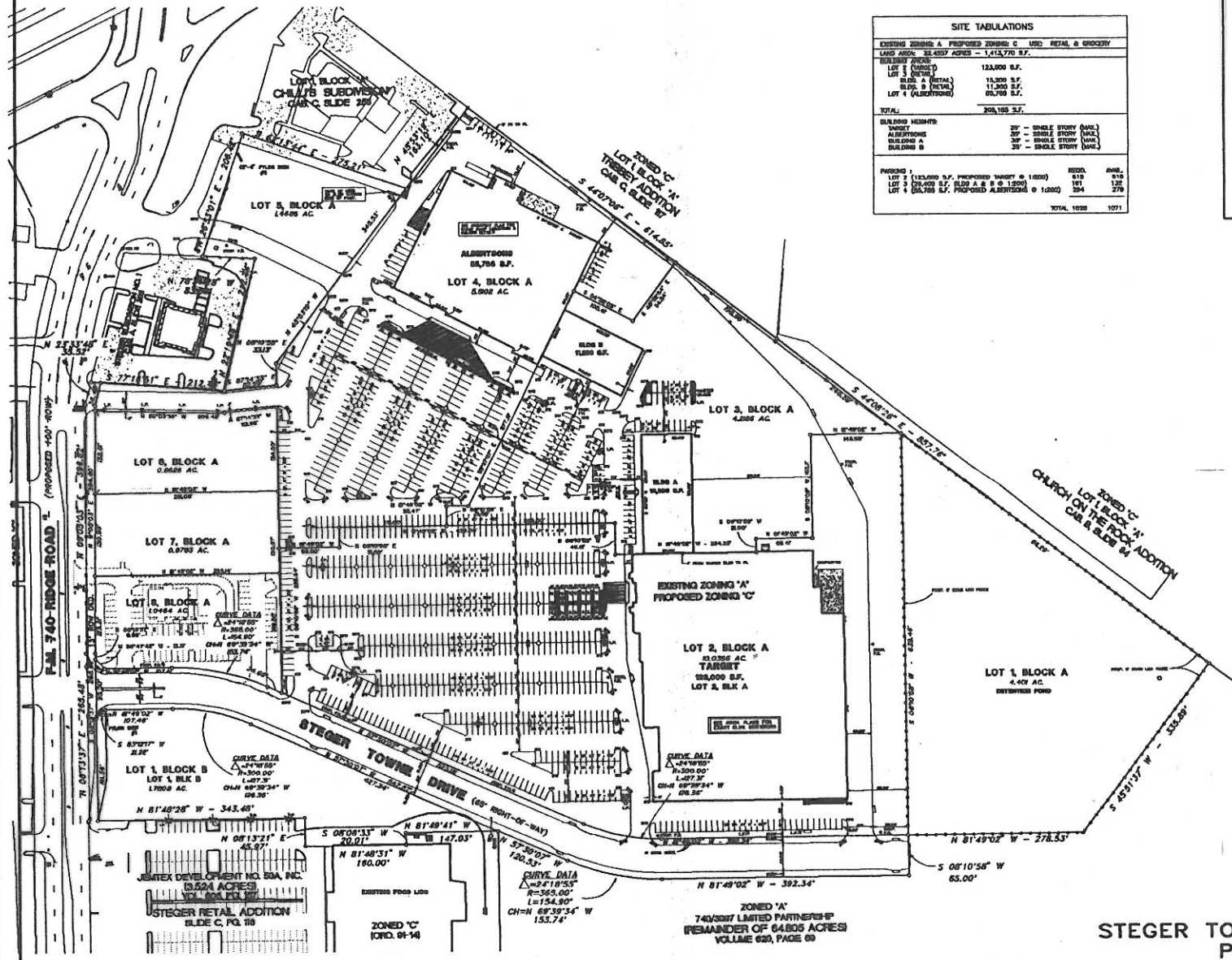
TO: Julie Couch, City Manager

FROM: Bill Crolley, City Planner

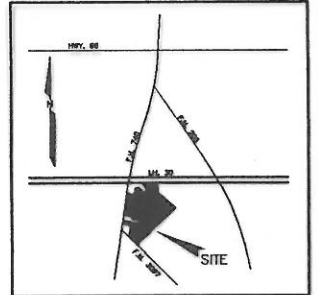
RE: Steger Towne Crossing Request for a Sign Plan and Sign Height Variance

DATE: June 14, 1996

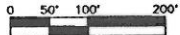
The Developer of the Steger Towne Crossing Addition is requesting approval of a sign plan in conjunction with the proposed development. The sign ordinance allows approval of a sign plan for shopping centres. Included for review is the sign plan requested by the applicant. As proposed all individual businesses will have monument signs. There are three pylon signs requested with this plan. These three signs as defined by the sign ordinance are combination identification signs and directory signs. The I-30 pylon sign as proposed is 42' 9" tall. The sign ordinance limits the height of this sign to 30'. The Council may allow height variance as the applicant has requested. The remaining two pylon signs are located at the intersection of Steger Towne Crossing Drive and F.M. 740 and F.M.3097. These two Pylon signs are 25' tall with 260 sq. ft. of sign area. Both of these signs meet the sign ordinance requirements.



SITE TABULATIONS			
EXISTING ZONING A PROPOSED ZONING C USED RETAIL & GROCERY			
LAND AREA: 32.457 ACRES - 1,413,770 S.F.			
BUILDING ZONING:			
LOT 1 (RETAIL)	122,000 S.F.		
LOT 2 (RETAIL)	122,000 S.F.		
LOT 3 (RETAIL)	11,200 S.F.		
LOT 4 (ALTERNATIVE)	66,700 S.F.		
TOTAL:	301,900 S.F.		
BUILDING HEIGHTS:			
STEGER	2 nd - SINGLE STORY (MAX)		
ALTERNATIVE	2 nd - DOUBLE STORY (MAX)		
BUILDING A	2 nd - SINGLE STORY (MAX)		
BUILDING B	2 nd - SINGLE STORY (MAX)		
PARKING:			
LOT 1 (122,000 S.F., PROPOSED TARGET @ 1,000)	RESID.	210	910
LOT 2 (122,000 S.F., PROPOSED TARGET @ 1,000)	RESID. A & B @ 1,000	181	130
LOT 3 (11,200 S.F., PROPOSED ALTERNATIVE @ 1,000)	RESID.	104	270
TOTAL	1035	1071	



LOCATION MAP
(NOT TO SCALE)



SITE PLAN
OF
**STEGER TOWNE CROSSING
PHASE 1**
LOCATED IN THE CITY OF ROCKWALL, TEXAS
BEING OUT OF THE
JAMES SMITH SURVEY, ABSTRACT NO. 200
ROCKWALL COUNTY, TEXAS

OWNER:
740/3097 LIMITED PARTNERSHIP, L.P.
O.L. STEGER, III, GENERAL PARTNER
504 WEST RUSK
ROCKWALL, TEXAS 75087

DEVELOPER:
STEGER TOWNE CROSSING, L.P.
5025 ARAPAHO ROAD, #400
DALLAS, TEXAS 75248

ENGINEER:
LAWRENCE A. CATES & ASSOC.
14200 MIDWAY ROAD, SUITE 122
DALLAS, TEXAS 75244

DESCRIPTION OF PROPOSED ZONE CHANGE

BEING A 24.47 ACRE TRACT OUT OF THE JAMES SMITH SURVEY, ABSTRACT NO. 200, ROCKWALL COUNTY, TEXAS; SAID TRACT BEING PART OF THE 64.805 ACRE TRACT DESCRIBED IN DEED TO 740/3097 LIMITED PARTNERSHIP, RECORDED IN VOLUME 620, PAGES 69, 73, 77, 81 AND 85 OF THE DEED RECORDS OF ROCKWALL COUNTY, TEXAS; SAID 24.47 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING, AT A POINT IN THE EAST RIGHT-OF-WAY OF F.M. 740 (RIDGE ROAD) (A 90 FOOT WIDE RIGHT-OF-WAY), SAID POINT BEING THE NORTHWEST CORNER OF THE STEGER RETAIL ADDITION, AN ADDITION TO THE CITY OF ROCKWALL ACCORDING TO THE PLAT RECORDED IN CABINET B, SLIDE OF THE PLAT RECORDS OF ROCKWALL COUNTY, TEXAS;

THENCE: N 09°13'37" E, ALONG THE SAID EAST RIGHT-OF-WAY LINE OF F.M. 740, A DISTANCE OF 265.48 FEET TO A POINT;

THENCE: N 09°02'59" E, CONTINUING WITH SAID EAST LINE, A DISTANCE OF 24.80 FEET TO THE POINT OF BEGINNING; SAID POINT ALSO BEING THE NORTHWEST CORNER OF AN EXISTING "ZONE C" AREA, PREVIOUSLY ZONED BY ORDINANCE 91-14;

THENCE: N 09°02'59" E, CONTINUING WITH SAID EAST LINE OF F.M. 720, A DISTANCE OF 252.08 FEET TO A POINT; SAID POINT BEING THE INTERSECTION OF SAID EAST LINE OF F.M. 720, AND THE SOUTHEAST LINE OF AN EXISTING "ZONE C" AREA ACCORDING TO THE OFFICIAL ZONING MAP FOR ROCKWALL, TEXAS, DATED 8/25/95;

THENCE: N 70°00'19" E, DEPARTING SAID EAST LINE OF F.M. 720 AND ALONG THE SAID SOUTHEAST LINE OF THE EXISTING "ZONE C" AREA, A DISTANCE OF 916.77 FEET TO A POINT IN THE NORTHEAST LINE OF SAID 740/3097 LIMITED PARTNERSHIP TRACT; SAID POINT ALSO BEING IN THE SOUTHEAST LINE OF LOT 1, BLOCK A, CHURCH OF THE ROCK ADDITION, AN ADDITION TO THE CITY OF ROCKWALL ACCORDING TO THE PLAT RECORDED IN CABINET B, SLIDE 84 OF THE PLAT RECORDS OF ROCKWALL COUNTY, TEXAS;

THENCE: S 44°07'06" E, ALONG SAID NORTHEAST LINE OF THE 740/3097 LIMITED PARTNERSHIP TRACT AND THE SAID SOUTHEAST LINE OF SAID LOT 1, A DISTANCE OF 373.05 FEET TO A POINT;

THENCE: S 44°08'26" E, CONTINUING ALONG SAID NORTHEAST LINE OF THE 740/3097 LIMITED PARTNERSHIP TRACT AND THE SAID SOUTHEAST LINE OF SAID LOT 1, A DISTANCE OF 857.76 FEET TO A POINT;

THENCE: DEPARTING SAID NORTHWEST LINE OF SAID 720/3097 LIMITED PARTNERSHIP TRACT AND SAID SOUTHEAST LINE OF LOT 1, AND ACROSS SAID 720/3097 LIMITED PARTNERSHIP TRACT THE FOLLOWING SIX COURSES AND DISTANCES:

S 45°51'37" W, DEPARTING SAID NORTHEAST LINE OF THE 740/3097 LIMITED PARTNERSHIP TRACT, A DISTANCE OF 335.89 FEET TO A POINT;

N 81°49'02" W, A DISTANCE OF 278.53 FEET TO A POINT;

S 08°10'58" W, A DISTANCE OF 65.00 FEET TO A POINT;

N 81°49'02" W, A DISTANCE OF 392.34 FEET TO A POINT; SAID POINT BEING THE BEGINNING OF A CURVE TO THE RIGHT WHOSE CENTER BEARS N 08°10'58" E, A DISTANCE OF 365.00 FEET FROM SAID POINT;

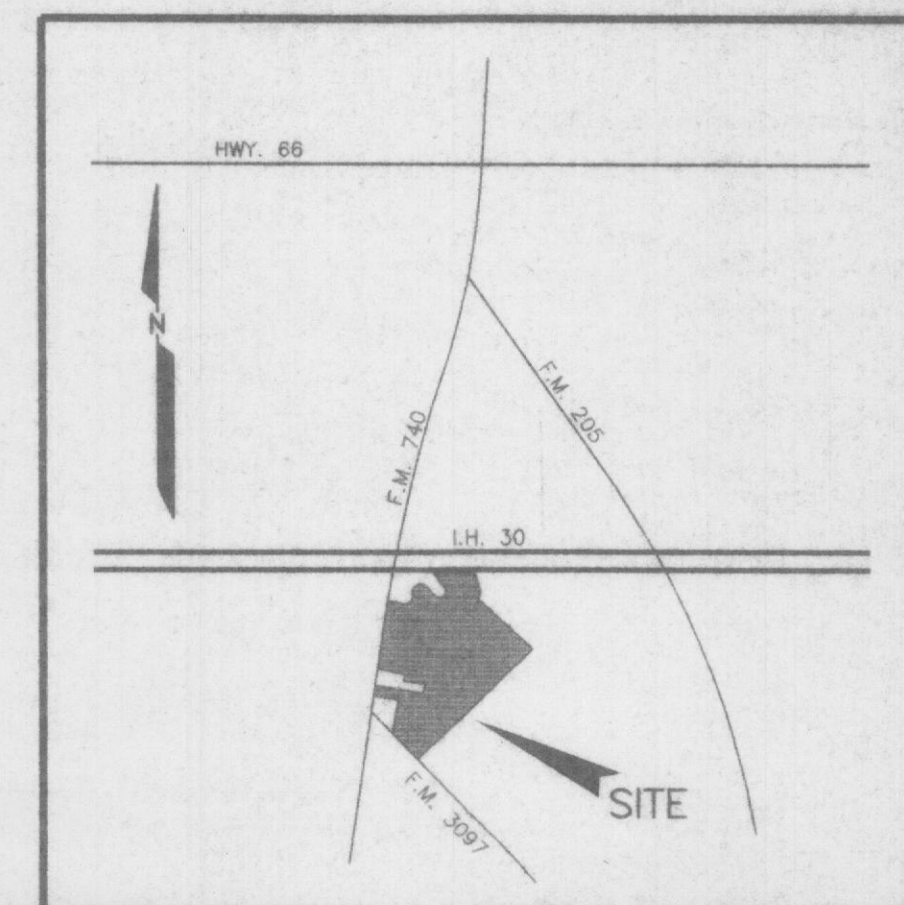
WESTERLY, ALONG SAID CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 24°18'55", AN ARC DISTANCE OF 154.90 FEET TO A POINT;

N 57°30'07" W, A DISTANCE OF 120.53 FEET TO A POINT; SAID POINT BEING IN THE EAST LINE OF SAID EXISTING "ZONE C" AREA;

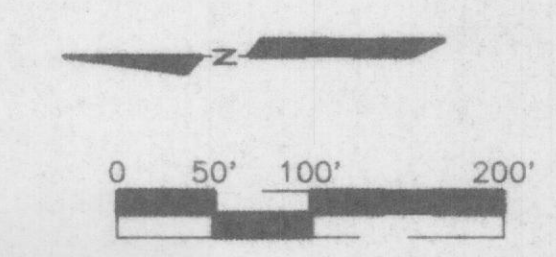
THENCE: ALONG THE EXISTING "ZONE C" AREA THE FOLLOWING TWO COURSES AND DISTANCES:

N 08°13'07" E, A DISTANCE OF 316.16 FEET TO A POINT;

N 81°46'53" W, A DISTANCE OF 650.01 FEET TO THE POINT OF BEGINNING AND CONTAINING 24.47 ACRES (1,065,954 S.F.) OF LAND, MORE OR LESS.



LOCATION MAP (NOT TO SCALE)



EXISTING ZONING 'A'

EXISTING ZONING 'A'
PROPOSED ZONING 'C'

EXISTING ZONING 'C'

EXISTING ZONING 'C'

EXISTING ZONING 'PD-9'

ZONING CHANGE EXHIBIT
 PHASE I
 STEGER TOWNE CROSSING
 A 24.47 ACRE TRACT
 LOCATED IN THE CITY OF ROCKWALL, TEXAS
 ROCKWALL COUNTY, TEXAS

LOT 1, BLOCK 'A',
CHURCH ON THE ROCK ADDITION
CAB. B, SLIDE 84

LOT 1, BLOCK 'A',
TRIBBY ADDITION
CAB. C, SLIDE 117

LOT 1, BLOCK 'A',
CHILLIS SUBDIVISION
CAB. C, SLIDE 283

STEGER SUBDIVISION NO. 1
CAB. A, SLIDE 203

JEMTEX DEVELOPMENT NO. 50A, INC.
(3,524 ACRES)
VOL. 60A, PAGES 13-15
STEGER RETAIL ADDITION
CAB. B, SLIDE 1

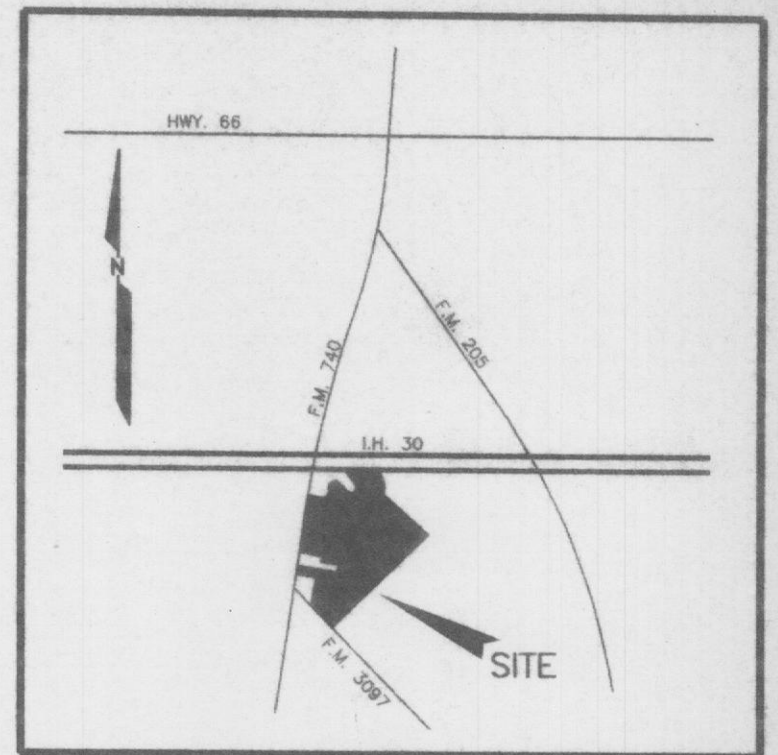
THE AMERICAN NATIONAL
BANK OF TERRELL
VOLUME 859, PAGE 94

740/3097 LIMITED PARTNERSHIP
64.805 ACRES
VOLUME 620, PAGE 69
VOLUME 620, PAGE 73
VOLUME 620, PAGE 77
VOLUME 620, PAGE 81
VOLUME 620, PAGE 85

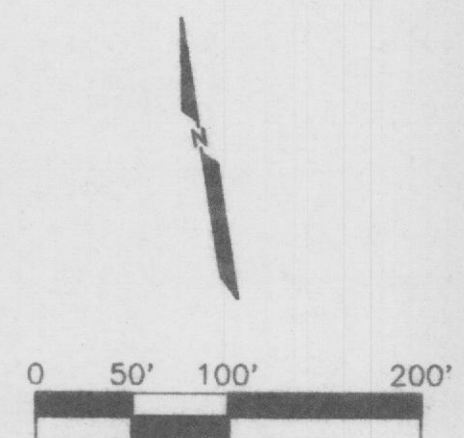
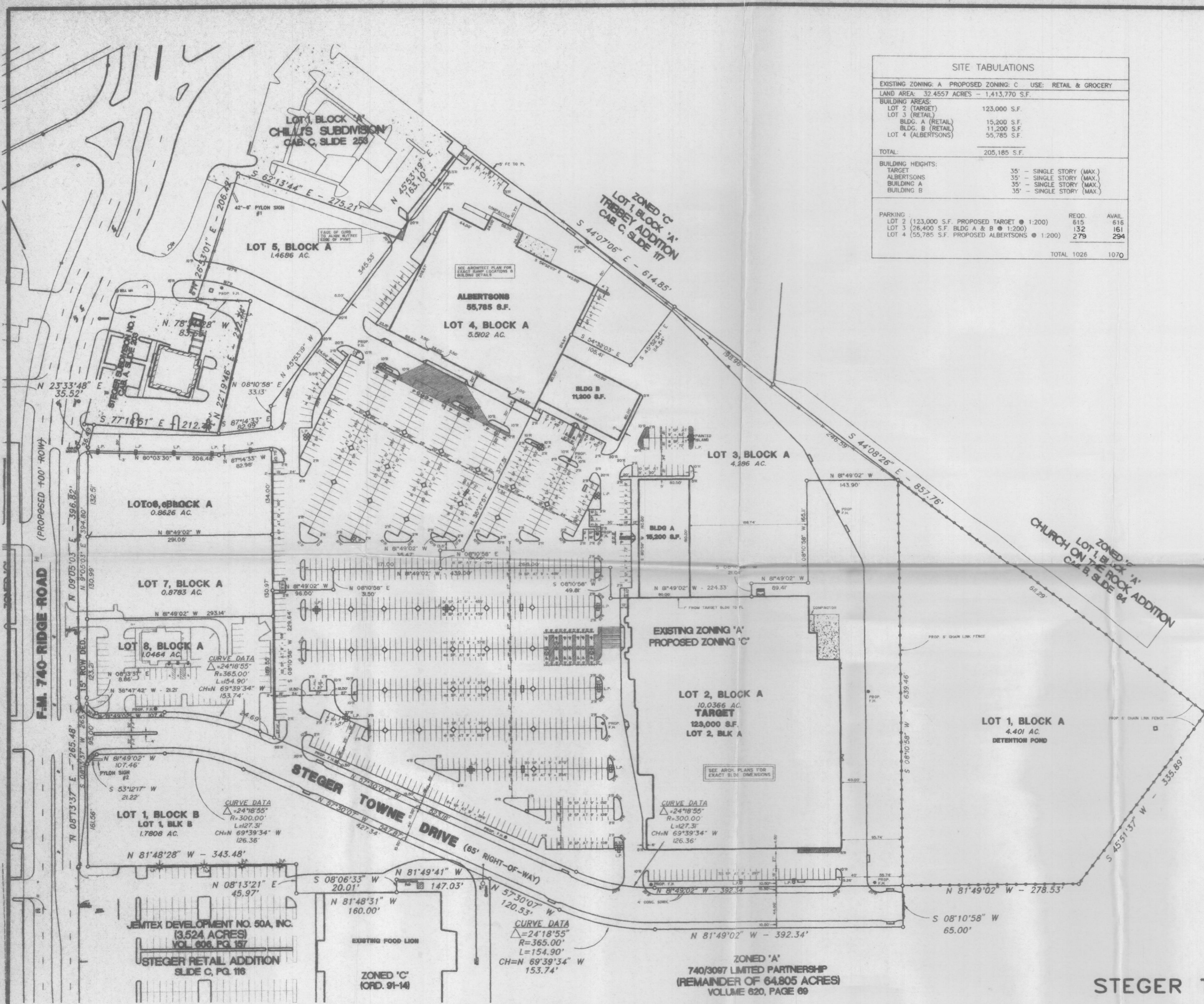
CURVE DATA
 Δ=24°18'55"
 R=365.00'
 L=154.90'
 CH=N 69°39'34" W
 153.74'

EXISTING ZONING 'C'

SITE TABULATIONS		
EXISTING ZONING:	A	PROPOSED ZONING: C
USE:	RETAIL & GROCERY	
LAND AREA:	32.4557 ACRES - 1,413,770 S.F.	
BUILDING AREAS:		
LOT 2 (TARGET)	123,000 S.F.	
LOT 3 (RETAIL)	15,200 S.F.	
BLDG. A (RETAIL)	11,200 S.F.	
LOT 4 (ALBERTSONS)	55,785 S.F.	
TOTAL:	205,185 S.F.	
BUILDING HEIGHTS:		
TARGET	35' - SINGLE STORY (MAX.)	
ALBERTSONS	35' - SINGLE STORY (MAX.)	
BUILDING A	35' - SINGLE STORY (MAX.)	
BUILDING B	35' - SINGLE STORY (MAX.)	
PARKING:		
LOT 2 (123,000 S.F. PROPOSED TARGET @ 1:200)	REQD.	AVAIL.
LOT 3 (26,400 S.F. BLDG. A & B @ 1:200)	615	616
LOT 4 (55,785 S.F. PROPOSED ALBERTSONS @ 1:200)	132	161
	279	294
	TOTAL 1026	1070



LOCATION MAP
(NOT TO SCALE)



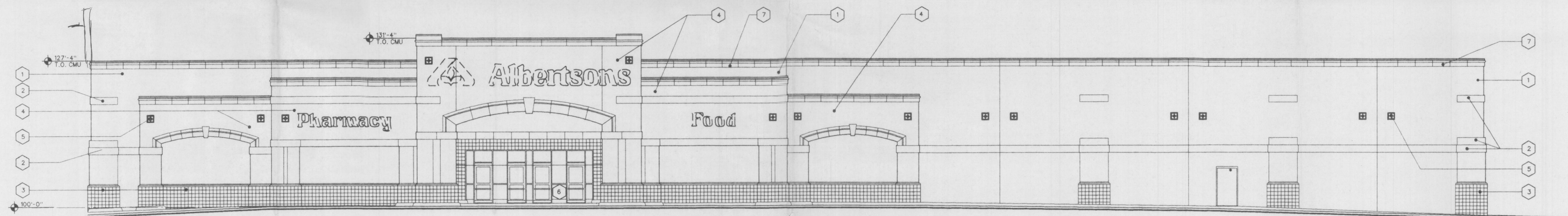
OWNER:
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O.L. STEGER, III, GENERAL PARTNER
504 WEST RUSK
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DEVELOPER:
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ENGINEER:
LAWRENCE A. CATES & ASSOC.
14200 MIDWAY ROAD, SUITE 122
DALLAS, TEXAS 75244

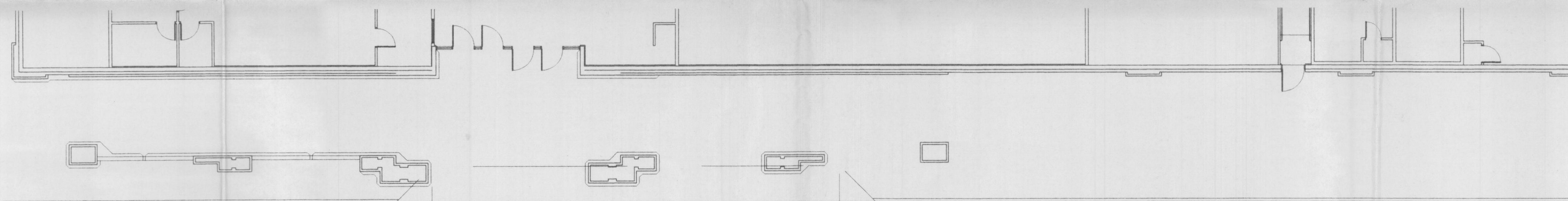
SITE PLAN OF
**STEGER TOWNE CROSSING
PHASE 1**
LOCATED IN THE CITY OF ROCKWALL, TEXAS
BEING OUT OF THE
JAMES SMITH SURVEY, ABSTRACT NO. 200
ROCKWALL COUNTY, TEXAS

96-37



FRONT ELEVATION

SCALE: 3/32" = 1'-0"



PARTIAL PLAN

SCALE: 3/32" = 1'-0"

EXTERIOR COLOR SCHEDULE

GENERAL NOTES:
 1. COLORS TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.
 2. FINISHES ARE ALSO REQUIRED AT INSIDE FACE OF ALL EXPOSED PARAPET WALLS.
 3. REFER TO SPECIFICATIONS FOR PAINT MANUFACTURERS & SPECIAL COATING SYSTEMS.
 4. COLORS TO MATCH PROPOSED ADJACENT RETAIL.

CONCRETE MASONRY UNITS (TYPES)

- | | | |
|-------|---|--|
| CMU | 1 | SMOOTH FACE CMU
INTEGRAL COLOR: A |
| CMU | 2 | SPLIT FACE CMU
INTEGRAL COLOR: A |
| CMU | 3 | SPLIT FACE CMU
CENTER SCORED
INTEGRAL COLOR: B |
| BRICK | 4 | BRICK
COLOR: |

ACCENT TILE

STOREFRONT/ENTRY DOORS/
SILL FLASHING/TRIM AT STOREFRONT

EXTERIOR FINISH SYSTEM E.I.F.S.

EXTERIOR HOLLOW METAL DOORS & FRAMES,
RAILINGS, ROLL-UP DOORS & FRAMES, METAL
CAPS

ROOF TOP MECHANICAL EQUIPMENT
EXTENDING ABOVE PARAPET

- | | |
|---|--|
| 5 | QUARRY TILE
COLOR: "PACIFIC BLUE" |
| 6 | VISTAWALL
COLOR: "MEDIUM BRONZE" |
| 7 | THORO SYSTEM PRODUCTS
THOROWALL COLOR: "MOBE PEARL"
FINISH: FINE TEXTURE |
| 8 | PAIN TO MATCH THOROWALL
COLOR: |
| 9 | PAIN TO MATCH THOROWALL
COLOR: "MOBE PEARL" |

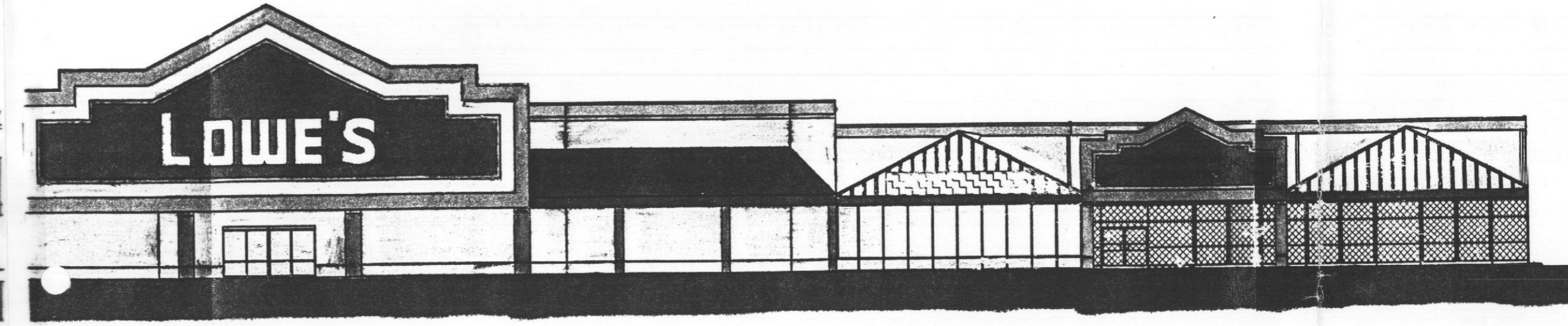
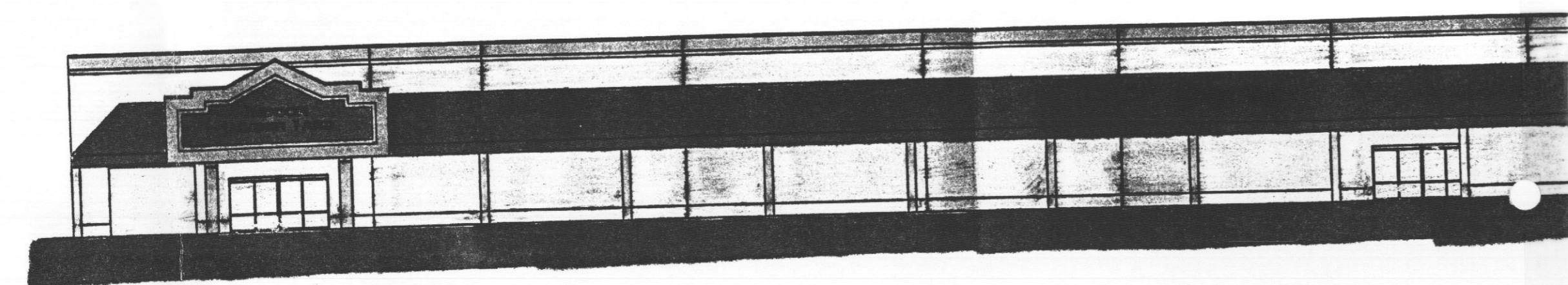
ALBERTSONS

S.E.C. 1-30 & RIDGE ROAD

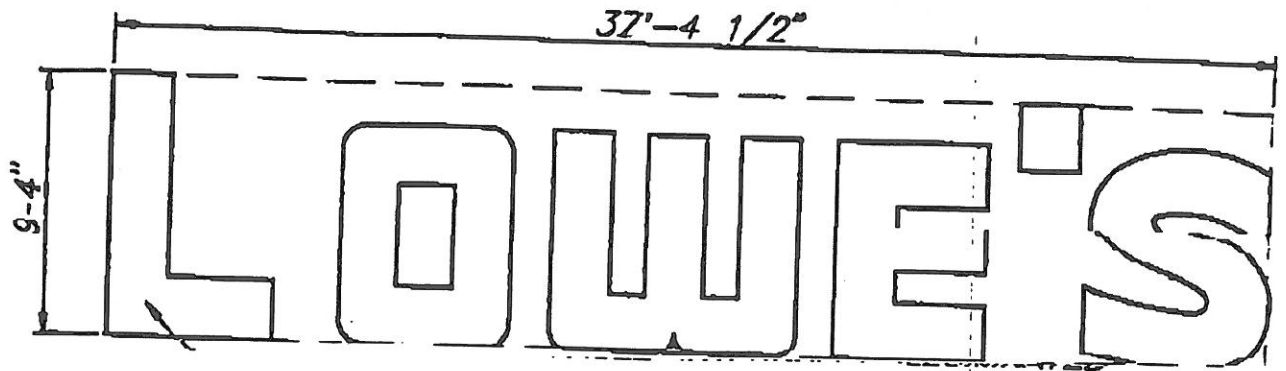
ROCKWALL, TEXAS

CALLAWAY ARCHITECTS
 17738 PRESTON ROAD / SUITE 125
 DALLAS, TEXAS 75255-9736
 (214) 752-6885 FAX (214) 752-8058

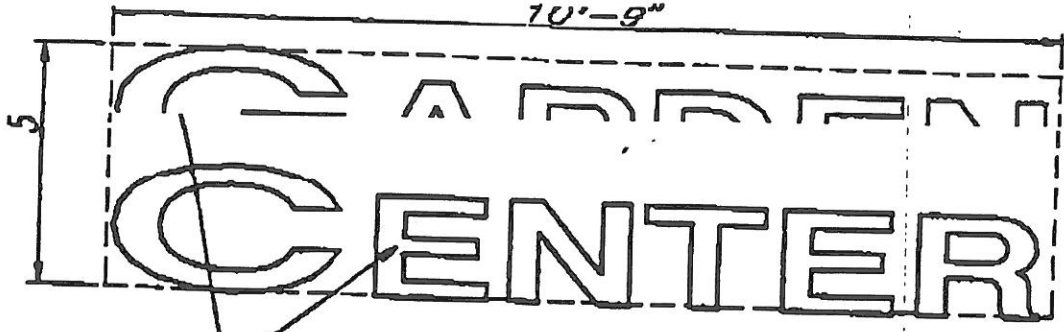
DATE: 5/28/96
 PROJECT: 6633
 Drawn by: LAH



FRONT ELEVATION
SCALE: 1" = 20'-0"

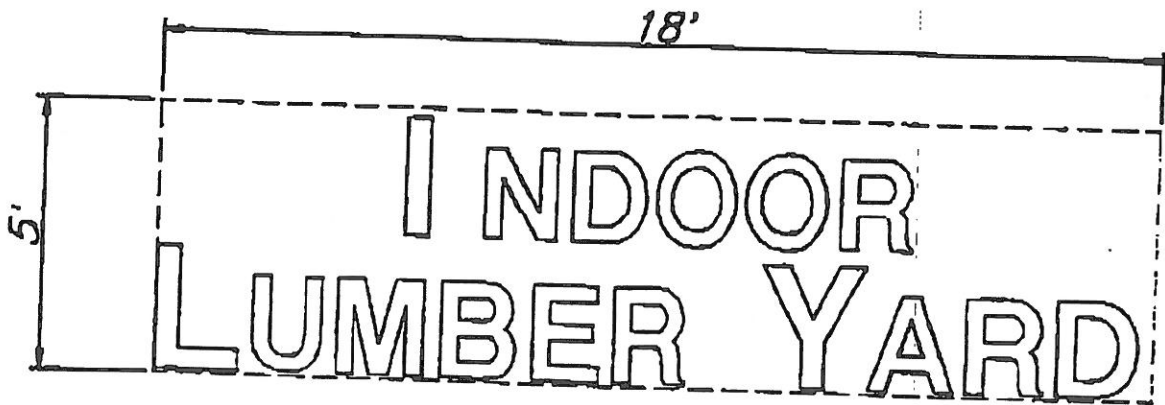


INDIVIDUAL SIGN LETTERS = 259 SQ. FT.
 RECTANGULAR SIGN TOTAL = 328 SQ. FT.
 70'-9"



WHITE ACRYLIC FACED INTERNALLY ILLUMINATED

SIGN LETTERS = 35 SQ. FT.
 RECTANGULAR SIGN TOTAL = 50 SQ. FT.



SIGN LETTERS = 46 SQ. FT.
 RECTANGULAR SIGN TOTAL = 84 SQ. FT.

LOWE'S STANDARD BUILDING SIGNS

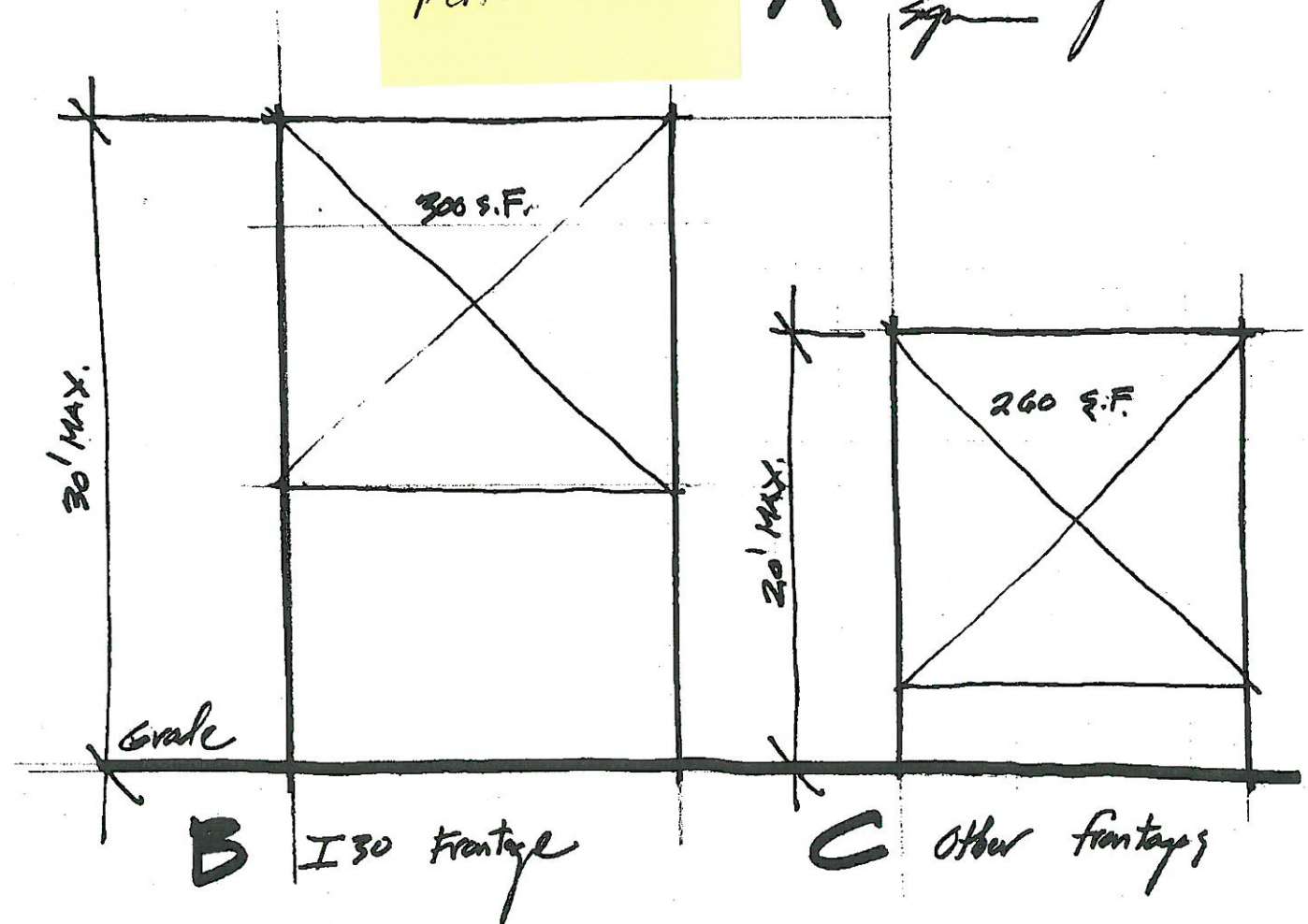
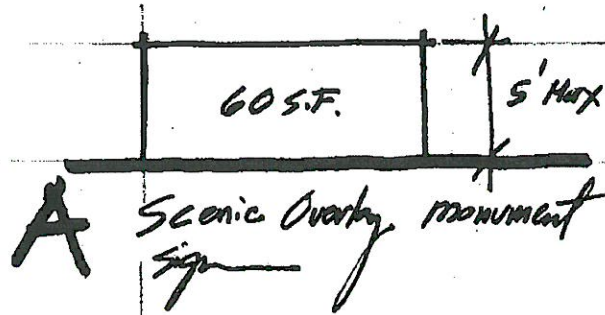
GOOD FULTON & FARRELL ARCHITECTS

3102 Oak Lawn Avenue
Suite 250
Dallas, Texas 75219
214 / 528-5599
Fax 214 / 521-8672

Sheet No. _____
Sheet Title _____
Project No. _____
Date 9/19/95
Revisions _____

Sign Adherence Requirements.
City of Rockwall

STEGER
TOWH SITE
PLAT FILE



SECTION III

Sign StandardsA. Structural Standards

1. General Sign Provisions: All signs located or to be located within the City of Rockwall shall conform to the general provisions set forth in Table II entitled "Functional Standards". In addition, the following specific standards shall apply.
2. Marquee Signs: Marquee signs erected on the face of a marquee shall be built as an integral part of the marquee. Such sign faces shall not have a vertical height of more than four (4) feet nor exceed seventy-five percent (75%) of the width of such building or store frontage, nor the sign standards of Table II. Vertical clearance shall be subject to the requirements of Paragraph 5 of this Section. No sign shall be allowed to overhang public property unless such sign has been approved by the Sign Board of Review.
3. Wall Signs: Wall signs may be painted directly on a window or door, but no other building surface. All other wall signs shall be attached to, and not painted onto, any building. The sign brackets or supports for wall signs may not project more than two (2) inches from said wall. Such sign faces shall not have a vertical height of more than six (6) feet nor exceed ten percent (10%) of the front face area of the building or store front as established in approved plans submitted to the City or sixty (60) square feet, whichever is greater, nor the sign standards of Table II. Vertical clearance shall be subject to the requirements of Paragraph 5 of this Section. (Ord. 85-65A)

Height looks
OK (ie: typical)
but area limitation
is a problem

City of Rockwall

**FINAL DRAFT
TRAFFIC IMPACT STUDY FOR THE
PROPOSED STEGER TOWNE CROSSING
IN ROCKWALL, TEXAS**

Prepared by:

**DeShazo, Tang & Associates, Inc.
400 S. Houston St., Suite 330
Dallas, Texas 75202**



January 24, 1996

City of Rockwall

**FINAL DRAFT
TRAFFIC IMPACT STUDY FOR THE
PROPOSED STEGER TOWNE CROSSING
IN ROCKWALL, TEXAS**

Prepared by:

DeShazo, Tang & Associates, Inc.
400 S. Houston St., Suite 330
Dallas, Texas 75202



January 24, 1996

Final Draft

**Traffic Impact Study
for the Proposed Steger Towne Crossing
in Rockwall, Texas**

Prepared for:

Mr. Bill Crolley
City of Rockwall

Prepared by:

DeShazo, Tang & Associates, Inc.
400 South Houston Street, Suite 330
Dallas, Texas 75202
(214) 748-6740
J95118

January 24, 1996

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DeShazo, Tang & Associates, Inc.
Engineers ♦ Planners
400 S. Houston St, Suite 330
Dallas, Texas 75202-4802
214/748-6740 ♦ FAX 214/748-7037

TECHNICAL MEMORANDUM

To: Mr. Bill Crolley
City of Rockwall

From: DeShazo, Tang & Associates, Inc.

Date: January 24, 1996

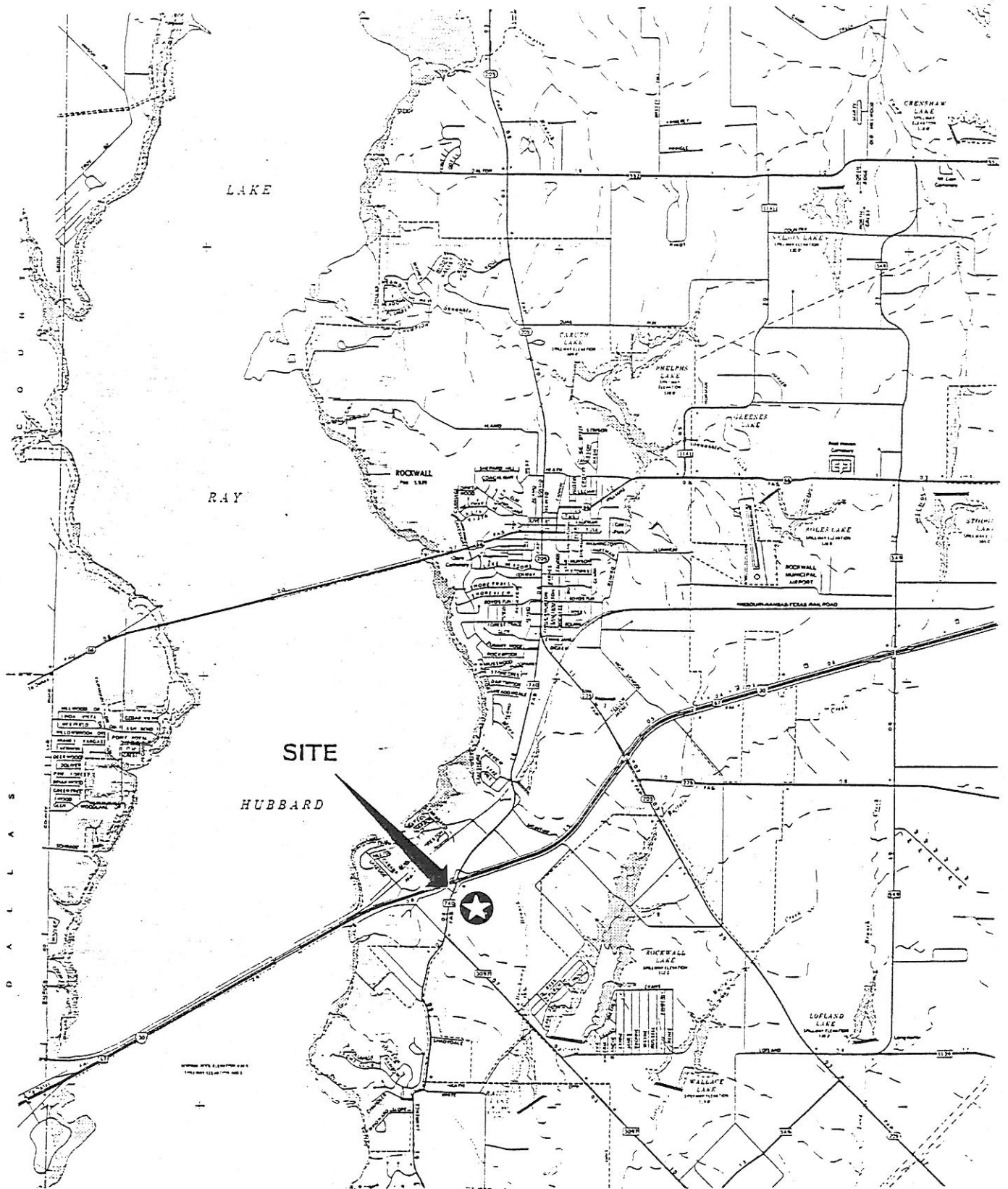
Subject: **Traffic Impact Study for the Proposed Steger Towne Crossing in Rockwall, Texas; J95118**

INTRODUCTION

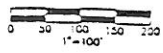
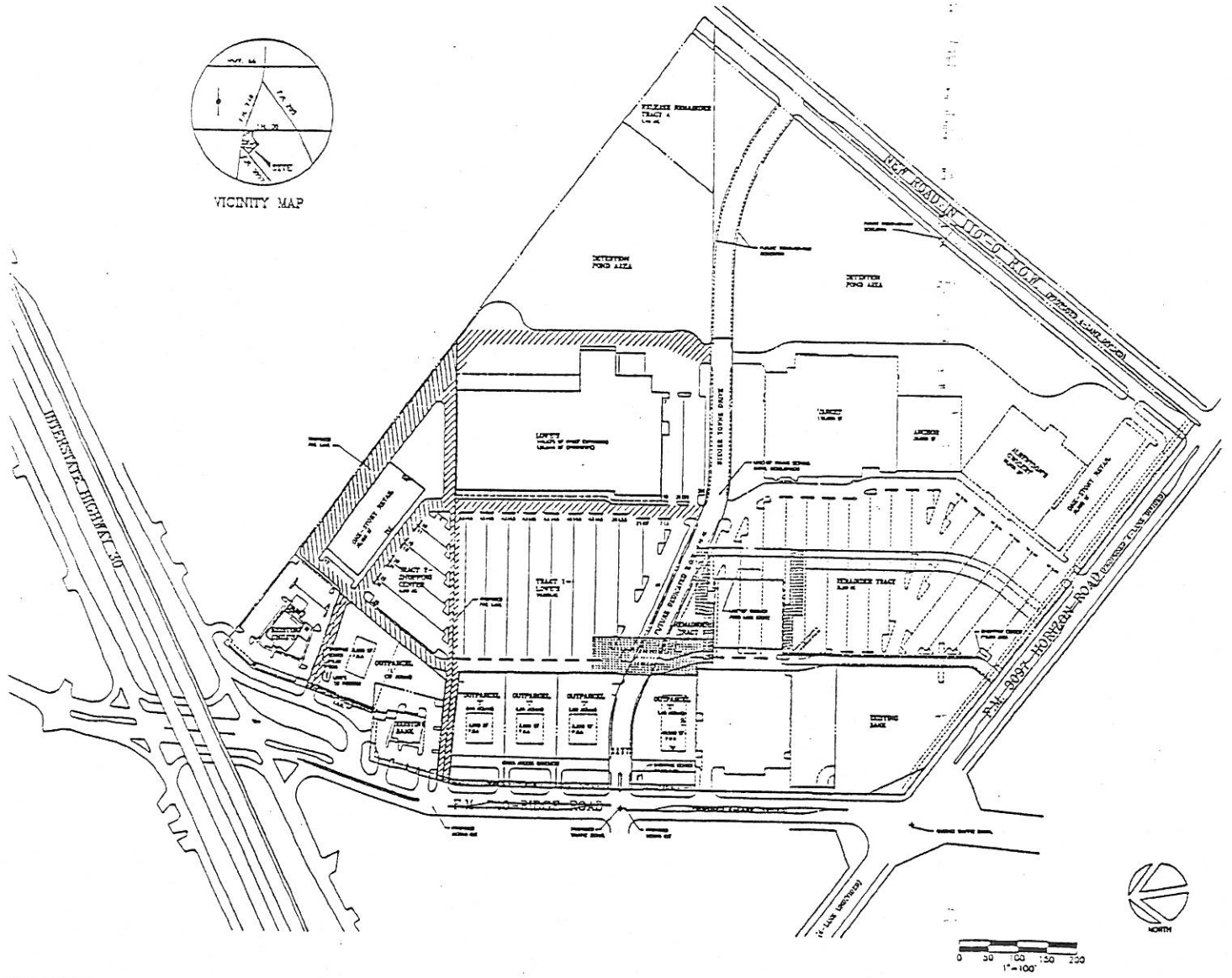
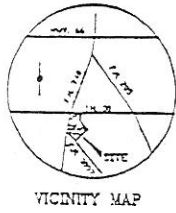
The purpose of this memorandum is to address the City of Rockwall's need to evaluate the traffic-related issues of the proposed Steger Towne Crossing located on the east side of Ridge Road (FM-740 between IH-30 and Horizon Road (FM-3097). Exhibit 1 illustrates the site location. The proposed 64.82 acre site includes 415,000 square feet of retail uses which may include a hardware store, a discount center, a grocery store and supporting retail. Additional commercial sites are planned on five outparcels, ranging in size from 0.94 acres to 1.37 acres. As shown in Exhibit 2, the site plan depicts the dedication of right-of-way for the proposed Steger Towne Drive from Ridge Road to a "New Road" adjacent to the property.

The impact of the site-generated trips on the adjacent roadway network was determined by analyzing the intersection and interchange capacity during the PM peak traffic hour for the following conditions:

- existing background traffic for 1995;
- projected background traffic for 1997;
- projected background 1997 traffic with site-related traffic.



**EXHIBIT 1
SITE LOCATION**



Weber & Company
REAL ESTATE DEVELOPMENT/INVESTMENT

GOOD FULTON & FARRELL ARCHITECTS



**EXHIBIT 2
SITE PLAN**

STUDY AREA ROADWAYS

The study area considered in this analysis contains a freeway, arterials and collectors in the vicinity of the site. Exhibit 3 depicts the City of Rockwall Thoroughfare Plan in the study area. Descriptions of these roadways are as follows:

IH-30 - is a grade-separated, east/west freeway providing access from Rockwall to Dallas to the west. Access ramps are provided to and from Ridge Road from the freeway main lanes from the east and west of Ridge Road. Continuous, one-way frontage roads are provided for both eastbound and westbound traffic.

Ridge Road (FM-740) - is a north/south, two-lane, undivided roadway connecting IH-30 and the southern portions of the city to SH-205 in the north, forming a key route in the local street network. The recently reconstructed interchange with IH-30 is signalized. The City's Thoroughfare Plan identifies this facility as a M4D (minor, four-lane, divided roadway) along the existing right-of-way from south of Horizon Road to north of IH-30. Ridge Road is planned for reconstruction by the Texas Department of Transportation (TxDOT) as a four-lane divided roadway from IH-30 to Horizon Road.

Horizon Road (FM-3097) - is currently a two-lane, two-way roadway east of Ridge Road. West of Ridge Road, Horizon Road is one-way northwest-bound, providing access to IH-30 and north of IH-30. Between IH-30 and Ridge Road, Horizon Road is currently being reconstructed and widened to accommodate two traffic flow as a four lane undivided roadway.

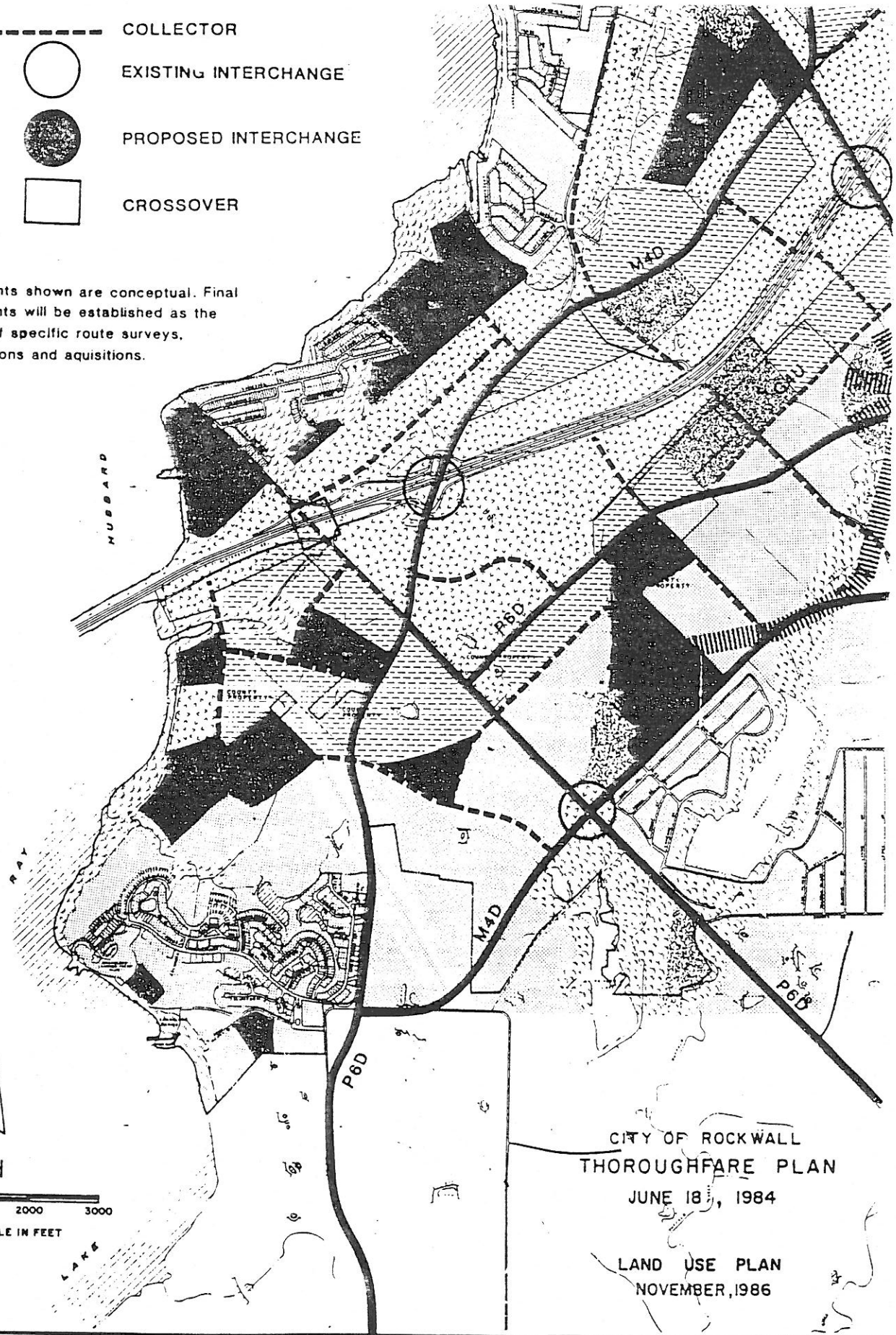
TRAFFIC ANALYSIS

Existing Traffic Volumes

From August 18 through November 2, 1995, DeShazo, Tang & Associates conducted 24-hour traffic volume counts on the study area roadways. Exhibit 4 illustrates the existing daily traffic volumes. Guidelines established by the North Central Texas Council of Governments (NCTCOG) state that two-lane arterials can acceptably accommodate approximately 14,500 vehicles per day in suburban areas while four-lane, divided arterials can accommodate up to 32,000 vehicles per day. Exhibit 5A depicts the roadway Levels-of-Service (LOS) for the streets adjacent to the site. LOS refers to the operational conditions within a traffic stream and their perception by motorists. There are six LOS conditions that are designated from "A" to "F", with "A" representing the best operational conditions and "F" the worst conditions. Typically, LOS above "E" are desired.

- COLLECTOR
- EXISTING INTERCHANGE
- PROPOSED INTERCHANGE
- CROSSOVER

NOTE: Alignments shown are conceptual. Final alignments will be established as the result of specific route surveys, dedications and acquisitions.



CITY OF ROCKWALL
 THOROUGHFARE PLAN
 JUNE 18, 1984
 LAND USE PLAN
 NOVEMBER, 1986



EXHIBIT 3
CITY OF ROCKWALL THOROUGHFARE PLAN

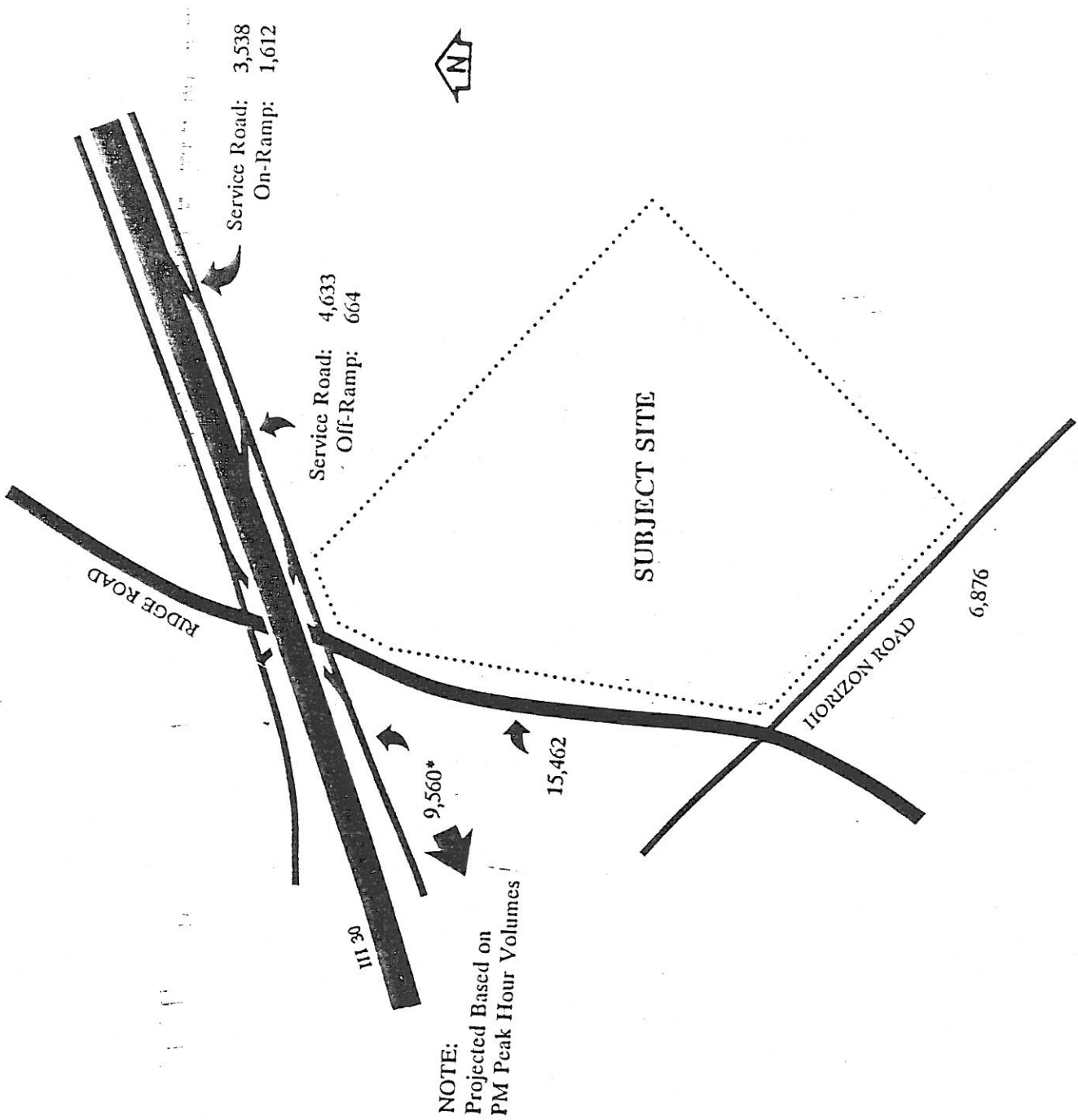


EXHIBIT 4

EXISTING DAILY TRAFFIC VOLUMES

**EXHIBIT 5A
EXISTING 24-HOUR ROADWAY LEVEL-OF-SERVICE**

Location	Existing Capacity	Existing Daily Traffic Volume	Percent of Existing Capacity Used/ LOS
Ridge Road between IH-30 and Horizon Road	14,000	15,462	110% / F
Horizon Road southeast of Ridge Road	12,500	6,876	55% / A
IH-30 eastbound frontage road between Ridge Road and off-ramp	7,000	4,633	66% / B
IH-30 eastbound frontage road east of Ridge Road after on-ramp	14,000	3,538	25% / A
IH-30 off-ramp east of Ridge Road	14,000	1,612	12% / A
IH-30 on-ramp east of Ridge Road	14,000	664	5% / A

As shown, only Ridge Road experiences a traffic demand which exceeds the existing capacity and operates at an undesirable LOS.

Existing PM peak traffic hour intersection turning movement volumes were also examined to determine the existing traffic operations. The intersection LOS is measured in terms of average delay per vehicle as defined in the following table.

INTERSECTION LEVEL-OF-SERVICE CRITERIA

LOS	SIGNALIZED Average Stopped Delay (seconds per vehicle)	UNSIGNALIZED Average Total Delay (seconds per vehicle)
A	≤ 5.0	≤ 5.0
B	5.1 to 15.0	5.0 to 10.0
C	15.1 to 25.0	10.1 to 20.0
D	25.1 to 40.0	20.1 to 30.0
E	40.1 to 60.0	30.1 to 45.0
F	> 60.0	≥ 45.0

LOS results were determined using the 1994 Highway Capacity Software (HCS) for signalized and unsignalized intersections and PASSER-III for the freeway interchanges. Intersections examined included the Ridge Road/IH-30 interchange and Ridge Road at Horizon Road. The current LOS for these intersections during the evening peak hour are shown in Exhibit 5B.

**EXHIBIT 5B
EXISTING PM PEAK HOUR
INTERSECTION LEVEL-OF-SERVICE**

Intersection	LOS/Delay (sec/veh)
Ridge Road at IH-30 Westbound Frontage Road	B/8.2
Ridge Road at IH-30 Eastbound Frontage Road	B/11.8
Ridge Road at Carlisle Plaza/Steger Towne Drive	F/(unsignalized)
Ridge Road at Horizon Road	B/14.4

As shown, only the unsignalized intersection of Ridge Road at Carlisle Plaza/Steger Towne Drive operates at an unacceptable LOS.

A summary of the intersection analyses are provided in the Appendix.

Trip Generation

The Institute of Transportation Engineers (ITE) 5th Edition *Trip Generation Manual* was used to project the number of trip ends generated by the proposed development. The manual summarizes field research in trip generation rates for various land uses in the form of graphs and equations. The category for Shopping Center was used to estimate the trip-ends generated by the proposed development. Exhibit 6 presents a summary of the trip-ends generated by the proposed development for typical 24-hour and PM peak hour (of the adjacent street) periods. The evening peak hour represents the highest overall traffic volumes on the adjacent roadways. As shown in Exhibit 6, pass-by trips were applied to the outparcels planned for the development. It was assumed these outparcels would be developed as fast-food restaurants with drive-through lanes. According to the *Trip Generation Manual*, approximately 43 percent of the trips generated by these fast-food restaurants could be composed of existing traffic on the adjacent street system. Therefore, these pass-by trips are not considered newly-generated trips. As shown, the proposed development is expected to generate approximately 29,640 trips on a typical weekday, with about 2,344 of these trips occurring during the evening peak hour. Supplemental information from the *Trip Generation Manual* is provided in the Appendix.

**EXHIBIT 6
TRIP GENERATION SUMMARY**

Use	Amount (square feet)	Total Daily Trip Ends	PM Peak Hour of Adjacent Street Traffic		
			In	Out	Total
Shopping Center	415,380	17,210	813	813	1,626
Fast-Food w/Drive-through	6,000	3,793	114	105	219
Fast-Food w/Drive-through	6,000	3,793	114	105	219
Fast-Food w/Drive-through	6,000	3,793	114	105	219
Fast-Food w/Drive-through	6,000	3,793	114	105	219
Fast-Food w/Drive-through	10,500	6,637	199	184	384
TOTAL	449,880	39,018	1,468	1,418	2,886
Fast-Food Pass-by	43%	9,378	282	260	542
TOTAL ADDITIONAL TRIPS	449,880	29,641	1,186	1,158	2,344

Trip Distribution

Trip distributions for the site-related traffic were determined using demographic information provided by the NCTCOG. Trips related to the proposed Steger Towne Center were distributed throughout the study area based on the relative location of residential land uses. Based on this analysis, the projected additional traffic was assigned to the local roadway network using assumed shortest travel paths. Trip distribution results are summarized in Exhibit 7.

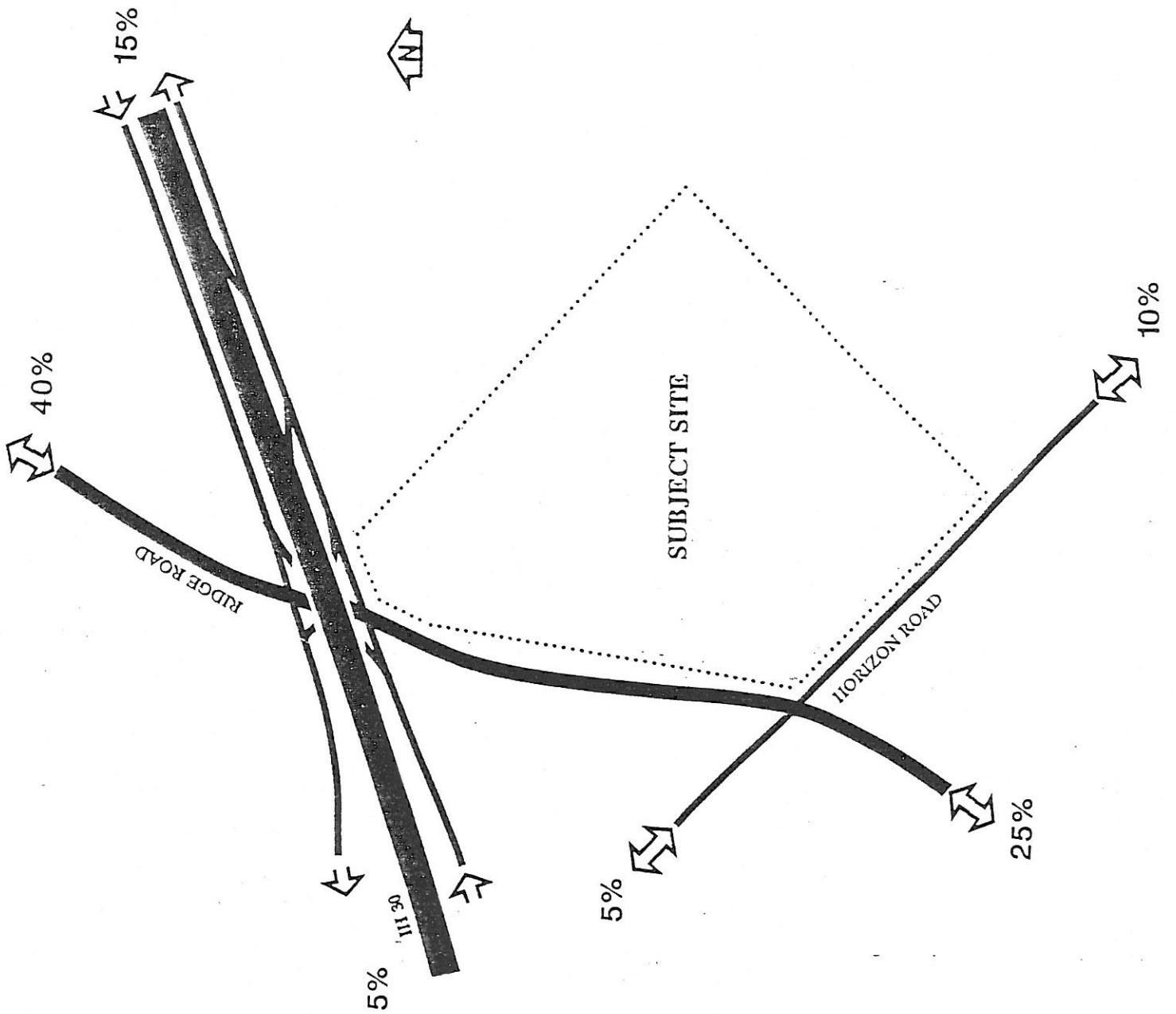


EXHIBIT 7
TRIP DISTRIBUTION

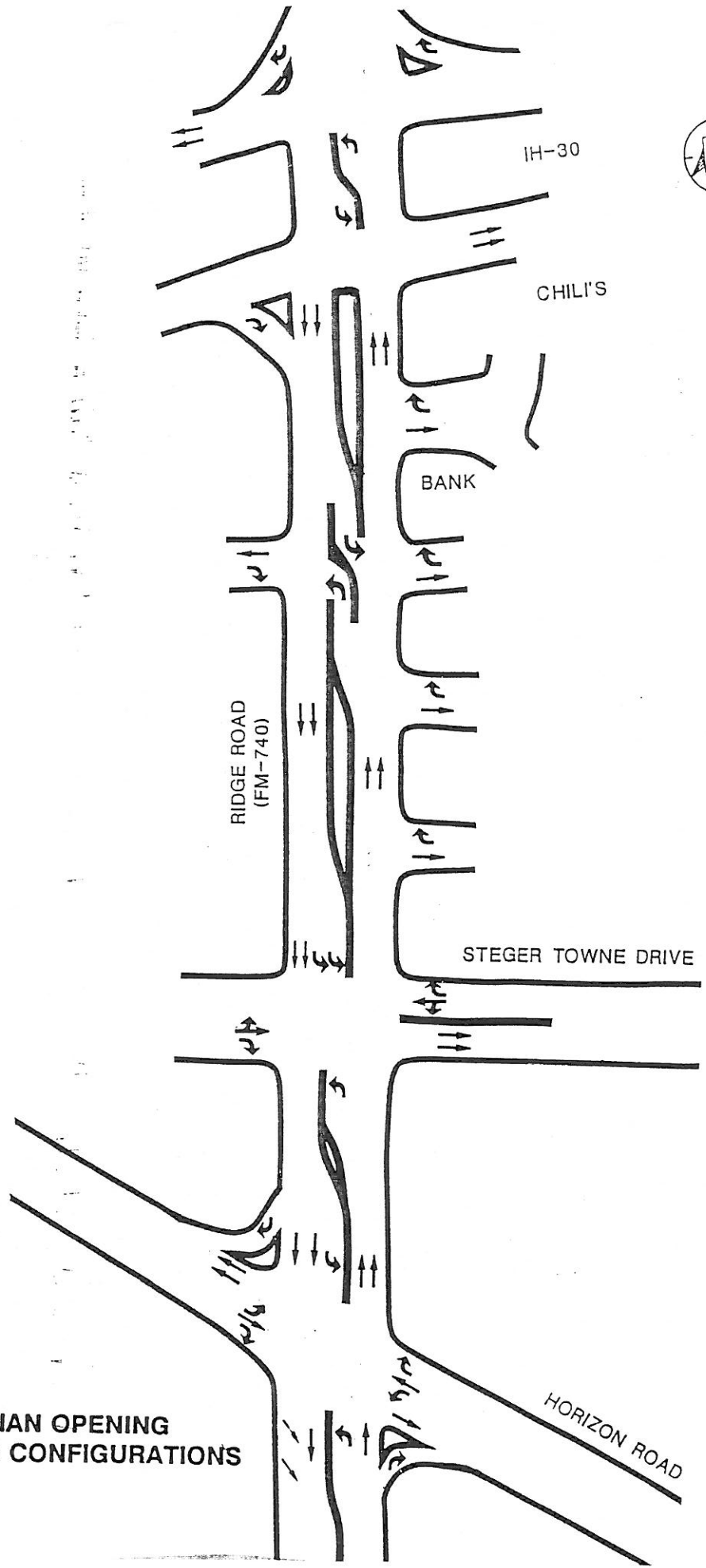
Projected Traffic Volumes

The projected background traffic volumes for the design year 1997 were obtained from the *Traffic Impact Study for the Proposed Wal-Mart Supercenter on IH-30 in Rockwall, Texas*. The projected background with Wal-Mart traffic was used as the base traffic volumes in this study. Ridge Road was assumed to be a four-lane, divided roadway adjacent to the site. Horizon Road was assumed to be a two-lane, undivided roadway adjacent to the site. West of Ridge Road, Horizon Road was assumed to be a two-way roadway. Median openings were assumed to be located on Ridge Road at the proposed Steger Towne Drive and at a driveway between the IH-30 interchange and the proposed Steger Towne Drive. At the north driveway location, left turns exiting Steger Towne Shopping Center and Carlisle Plaza were assumed to be prohibited. Exhibit 8 illustrates the proposed median opening locations and configurations.

Site-related trips were then assigned to the committed/programmed roadway network based on the trip distribution results. Exhibit 9 depicts the evening peak hour site-related traffic movements in the vicinity of the site. Exhibit 10 summarizes the projected background traffic with the site-related traffic volumes included.

Site Impact Determination

Intersection capacity analyses were conducted for the projected background, and projected background with site-related traffic conditions to determine the intersection levels of service with and without the development. The results are presented in Exhibit 11. A summary of the intersection analyses are provided in the Appendix.



**EXHIBIT 8
PROPOSED MEDIAN OPENING
LOCATIONS AND CONFIGURATIONS**

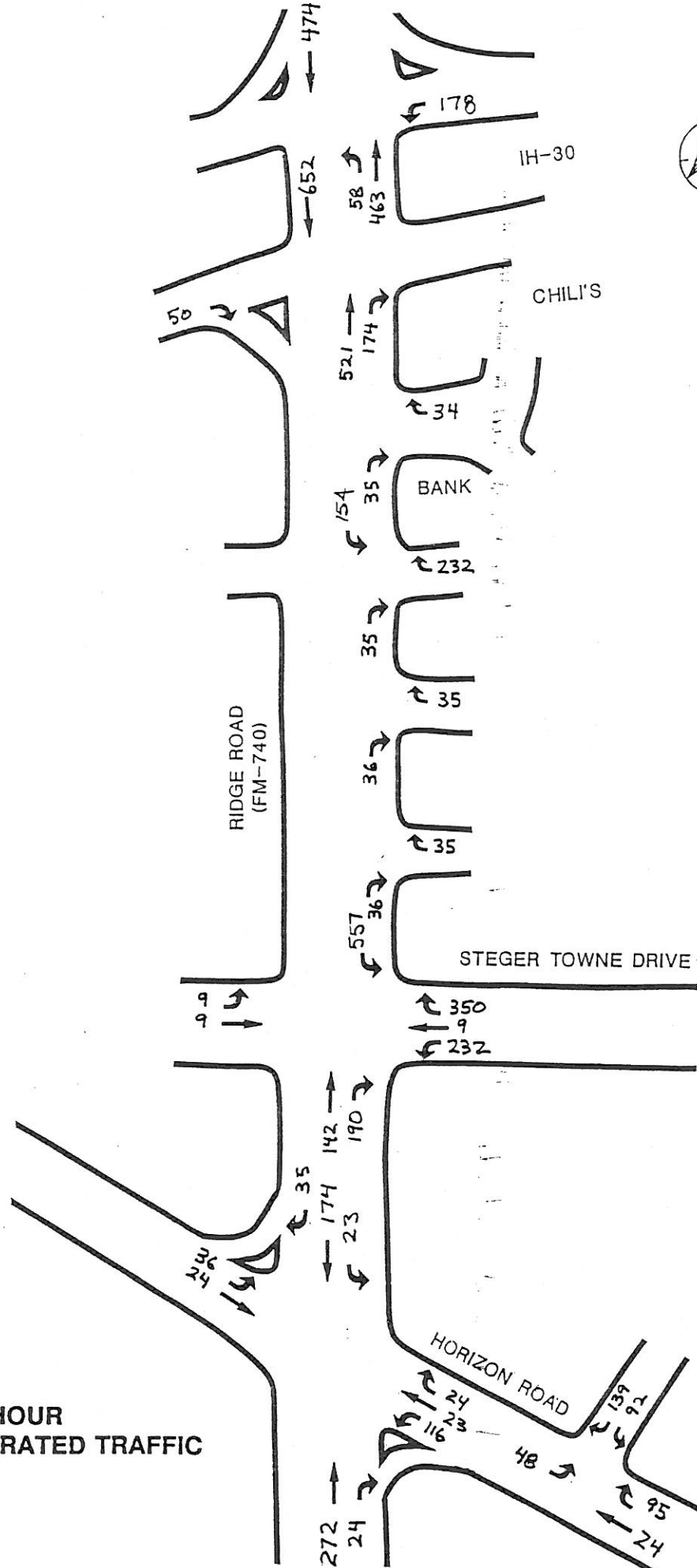


EXHIBIT 9
PM PEAK HOUR
SITE-GENERATED TRAFFIC



**EXHIBIT 10
PM PEAK HOUR BASE PLUS
SITE-GENERATED TRAFFIC**

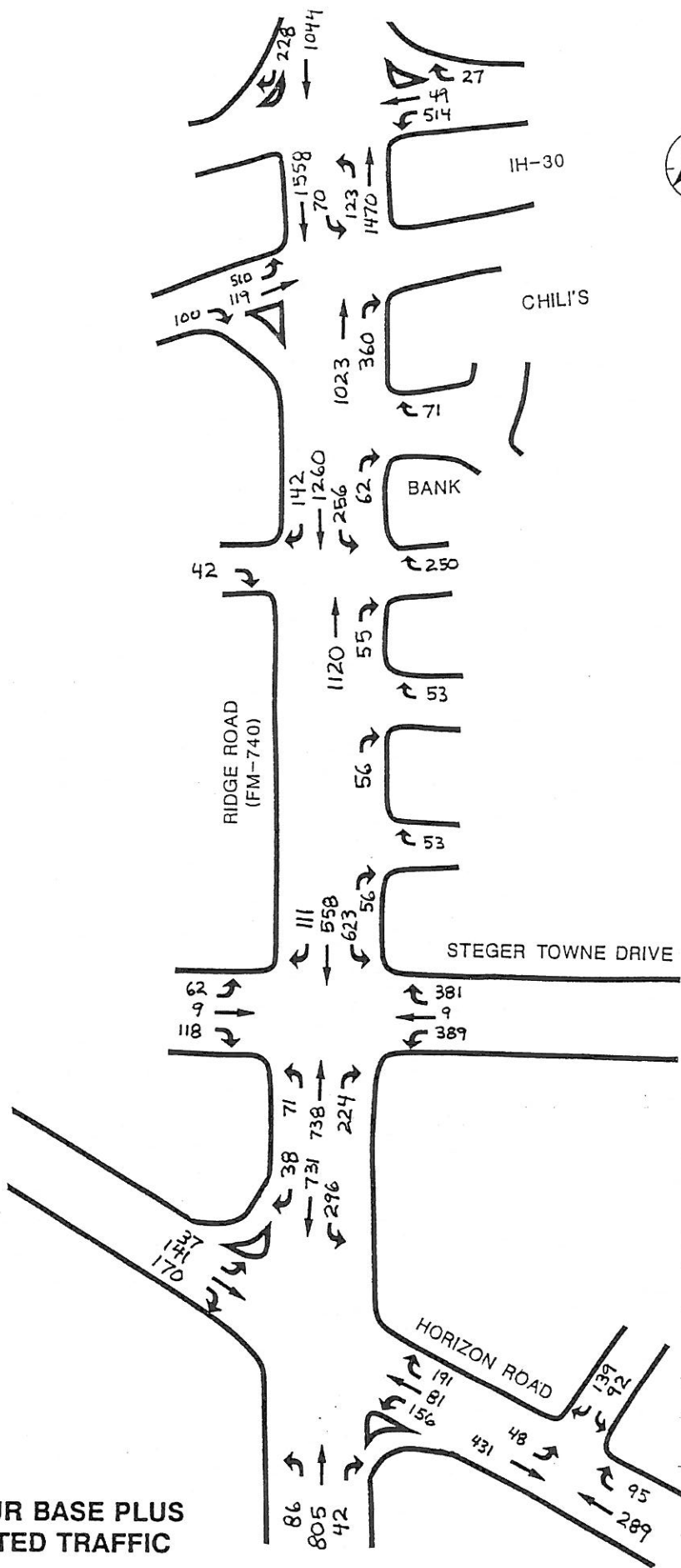


EXHIBIT 11
LEVEL-OF-SERVICE SUMMARY
PM PEAK HOUR OF THE ADJACENT STREET

Intersection	Projected Background Traffic LOS/Delay(sec/veh)	Projected Background Traffic with Site Traffic LOS/Delay(sec/veh)
Ridge Road @ IH-30 WBFR	B/8.2	B/9.7
Ridge Road @ IH-30 EBFR	B/11.8	B/12.8
Ridge Road @ North Driveway (unsignalized)	D/1.2	D/3.0
Ridge Road @ Steger Towne Drive/ Carlisle Plaza	F/66.0 (unsignalized)	D/34.7 (signalized) C/21.4 (Dual SB left)
Ridge Road @ Horizon Road	B/14.4	C/21.8
Horizon Road @ South Driveway (unsignalized)	Not Applicable	C/2.9

RECOMMENDATIONS AND CONCLUSIONS

The programmed widening of Ridge Road between IH-30 and Horizon Road with recommended modifications to the intersection of Steger Town Boulevard is projected to accommodate all phases of the proposed Steger Towne Crossing Development. The projected LOS at IH-30 and Ridge Road is expected to remain the same with or without development of the subject site. The intersection of Ridge Road and Horizon Road will be reconstructed as part of the TxDOT Ridge Road widening. With these planned/programmed improvements, the intersection is projected to operate at a LOS C with an average vehicle delay of only 21.8 seconds.

The prevalent direction of site related trips occurs north of IH-30. Traffic traveling southbound on Ridge Road has two primary opportunities to execute left turn maneuvers into the subject site. The site's primary access will be at Steger Towne Drive, which is proposed to be signalized when warranted according to the Texas Manual of Uniform Traffic Control Devices (TxMUTCD). As part of this analysis, a need has been identified to provide for southbound dual left turn lanes on Ridge Road at Steger Towne Drive. This modification may be accommodated as part of the planned/programmed improvements to Ridge Road by TxDOT.

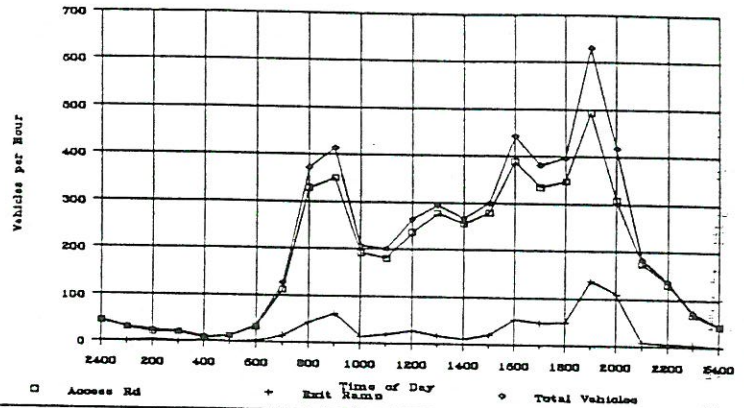
A channelized median providing a left turn for the northern driveway of Steger Town Crossing is also proposed. This type of median would allow all movements into the site. However, departing left turning vehicles (i.e. those desiring to travel southbound on Ridge Road), would do so via the intersection of Ridge Road at Steger Towne Drive/Carlisle Plaza. This recommended median treatment maximizes traffic operations of the public roadway system and enhances safety of the planned facilities.

It is, however, recognized that existing traffic movements in to and out of existing developments will be affected. Other median design options may be explored, however, such efforts are beyond the scope of this study. Generally, a full median opening at the northern driveway would present conflicts of turning movements with existing developments on both sides of Ridge Road. The projections of LOS for a full median opening at the northern driveway is "F". This value is primarily attributed to the projected delay of the left-turn departing vehicles. The delay to other movements, i.e. right-turn entering and departing vehicles and the south bound left-turning vehicles, would not be significantly affected with a full median opening design.

The remaining intersection analyses shown in Exhibit 11 reflect adequate LOS. It is also concluded that the existing and the programmed improvements to Ridge Road can accommodate the proposed development of Steger Towne Crossing. The construction of the "New Road" adjacent to the east boundary of the site and/or the extension of Steger Towne Drive to this road is not necessary from a transportation engineering analysis perspective as part of approval for this development.

Appendix

Street: *IH-30 Access Rd Eastbound*
 Location: *600 feet east of Ridge Road/FM-740*
 City/State: *Rockwall, Texas*
 Project-ID#: *95118 - 162*
 Date: *November 1, 1995*
 Day of Week: *Wednesday*
 Data Source: *DT&A*



24-Hour Volume: 5,297

Time	Peak	EB Access Rd	IH-30 Exit Ramp	Time	Peak	EB Access Rd	IH-30 Exit Ramp
2400				1200			
15		9	1	1215		60	7
30		7	0	1230		62	2
45		3	0	1245		78	6
100		11	0	1300		78	2
		30	1			278	17
115		5	4	1315		74	4
130		9	1	1330		52	2
145		4	0	1345		62	3
200		2	0	1400		68	3
		20	5			256	12
215		7	0	1415		66	3
230		9	0	1430		75	4
245		2	0	1445		72	5
300		2	1	1500		67	9
		20	1			280	21
315		4	1	1515		89	8
330		1	0	1530		100	14
345		0	2	1545		114	16
400		3	0	1600	443	86	16
		8	3			389	54
415		1	0	1615		81	12
430		1	0	1630		89	8
445		3	0	1645		79	14
500		8	0	1700		86	13
		13	0			335	47
515		4	0	1715		94	10
530		9	0	1730		97	17
545		5	0	1745		85	12
600		15	3	1800		72	10
		33	3			348	49
615		17	0	1815		123	11
630		27	4	1830		101	18
645		28	2	1845		130	46
700		40	9	1900		140	62
		112	15			494	137
715		66	5	1915	686	126	63
730		66	5	1930		78	28
745		84	14	1945		49	11
800		113	19	2000		56	7
		329	43			309	109
815		98	29	2015		52	3
830	490	111	22	2030		42	2
845		83	6	2045		37	3
900		59	6	2100		44	1
		351	63			175	9
915		50	3	2115		37	2
930		46	3	2130		40	2
945		48	7	2145		27	0
1000		48	2	2200		27	2
		192	15			131	6
1015		48	3	2215		16	0
1030		42	4	2230		17	1
1045		49	6	2245		19	3
1100		42	7	2300		16	1
		181	20			68	5
1115		51	6	2315		20	0
1130		70	12	2330		9	1
1145		48	7	2345		9	0
1200		68	3	2400		6	0
		237	28			44	1

Directional Volumes 4,633 664

Equipment ID#: 3595

24-Hour Volume 5,297

Street Observations

DeShaz Tang & Associates, Inc.

Street: IH-30 Access Rd Eastbound

Location: 600 feet east of
Ridge Road/FM-740

City/State: Rockwall, Texas

Project-ID#: 95118 - 162

I. Street Width:

II. Street Material:
Concrete

III. Curbing/Gutters?:
Concrete

IV. Number of Lanes: *1 (one) each*

V. Divided?: *Yes*

VI. Traffic Control Devices: *None*

VII. Pedestrian Crosswalks?: *Not Applicable*

VIII. Pedestrian Pushbutton?: *Not Applicable*

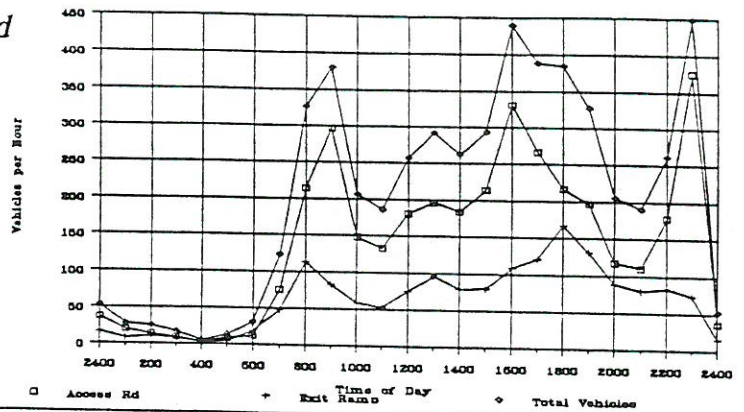
IX. On-street Parking: *Unmarked*

X. Posted Speed Limit: *Unmarked*

XI. Adjacent Land Uses: *Commercial, Agricultural*

XII. Additional Observations/Comments:

Street: *IH-30 Access Road Eastbound*
 Location: *3,100 feet east of Ridge Road/FM-740*
 City/State: *Rockwall*
 Project-ID#: *95118 - 163*
 Date: *November 1, 1995*
 Day of Week: *Wednesday*
 Data Source: *DT&A*



24-Hour Volume: **5,150**

Time	Peak	EB Access Rd	IH-30 On-Ramp	Time	Peak	EB Access Rd	IH-30 On-Ramp
2400				1200			
15		7	0	1215		42	21
30		6	1	1230		43	21
45		3	1	1245		64	19
100		4	6	1300		47	35
		20	8			196	96
115		2	6	1315		57	23
130		8	3	1330		41	13
145		2	2	1345		43	17
200		2	0	1400		43	26
		14	11			184	79
215		2	1	1415		48	15
230		4	6	1430		56	24
245		1	1	1445		49	26
300		2	0	1500		61	15
		9	8			214	80
315		1	1	1515		61	26
330		1	0	1530		73	21
345		0	1	1545		110	41
400		1	1	1600		87	21
		3	3			331	109
415		1	1	1615	449	66	30
430		0	1	1630	449	66	28
445		2	1	1645		64	30
500		6	2	1700		71	33
		9	5			267	121
515		3	1	1715		59	40
530		2	2	1730		69	48
545		1	7	1745	416	52	44
600		6	9	1800		37	35
		12	19			217	167
615		8	8	1815		73	46
630		16	11	1830		37	33
645		17	15	1845		46	32
700		34	14	1900		41	20
		75	48			197	131
715		28	30	1915		28	29
730		40	36	1930		34	22
745		54	25	1945		23	15
800		92	22	2000		32	23
		214	113			117	89
815		86	25	2015		32	26
830		95	29	2030		27	14
845	436	71	16	2045		21	19
900		45	13	2100		30	21
		297	83			110	80
915		30	22	2115		26	27
930		29	19	2130		36	23
945		43	8	2145		53	19
1000		46	10	2200		63	15
		148	59			178	84
1015		33	12	2215		217	38
1030		29	12	2230	526	101	20
1045		41	14	2245		40	6
1100		30	15	2300		17	10
		133	53			375	74
1115		31	23	2315		12	9
1130		49	24	2330		10	3
1145		44	9	2345		11	0
1200		57	20	2400		4	4
		181	76			37	16

Directional Volumes 3,538 1,612

Equipment ID#: **3592**

24-Hour Volume 5,150

Street Observations

DeShaz Tang & Associates, Inc.

Street: IH-30 Access Road Eastbound

Location: 3,100 feet east of
Ridge Road/FM-740

City/State: Rockwall

Project-ID#: 95118 - 163

I. Street Width:

II. Street Material:

On-Ramp: Concrete; Access Rd: Asphalt

III. Curbing/Gutters?:

On-Ramp: Concrete; Access Rd: Concrete Curb on Left, Open Drainage on Right

IV. Number of Lanes: *On-Ramp: 1 (one); Access Rd: 2 (two)*

V. Divided?: *Yes*

VI. Traffic Control Devices: *None*

VII. Pedestrian Crosswalks?: *Not Applicable*

VIII. Pedestrian Pushbutton?: *Not Applicable*

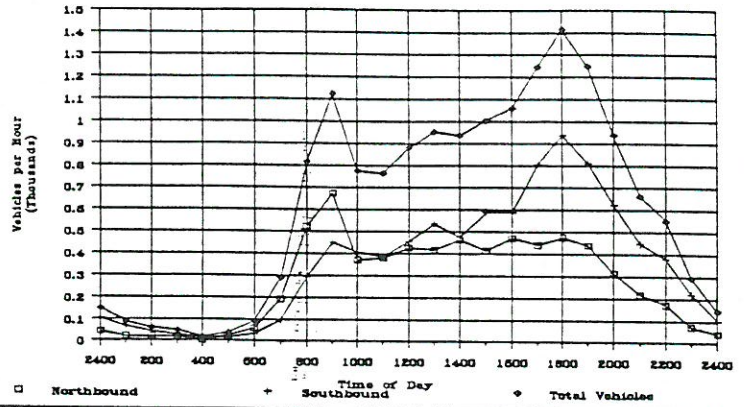
IX. On-street Parking: *No*

X. Posted Speed Limit: *Unmarked*

XI. Adjacent Land Uses: *Agricultural*

XII. Additional Observations/Comments:

Street: *FM-740/Ridge Road*
 Location: *1,000 feet south of IH-30*
 City/State: *Rockwall, Texas*
 Project-ID#: *95118 - 164*
 Date: *November 1, 1995*
 Day of Week: *Wednesday*
 Data Source: *DT&A*



24-Hour Volume: **15,462**

Time	Peak	Northbound	Southbound	Time	Peak	Northbound	Southbound
2400				1200			
15		11	18	1215		95	145
30		4	13	1230		108	152
45		3	24	1245		121	125
100		2	20	1260		93	417
			12	1275			115
			67	1290			537
115		7	15	1315		114	123
130		8	8	1330		117	122
145		3	10	1345		104	112
200		2	8	1360		127	462
			41	1375			117
215		4	5	1390			474
230		4	9	1415		116	129
245		4	10	1430		110	156
300		8	4	1445		113	148
			28	1460		75	414
315		1	2	1475			158
330		0	5	1490			591
345		0	4	1515		95	136
400		2	4	1530		126	125
			15	1545		117	150
415		3	4	1560		133	180
430		6	5	1575			591
445		6	2	1615		101	477
500		9	4	1630		121	257
			15	1645		100	169
515		5	12	1660		119	168
530		15	6	1675			211
545		15	6	1690			805
600		24	10	1715		113	208
			34	1730		129	233
615		27	19	1745		116	477
630		47	22	1760			244
645		46	21	1775		117	475
700		72	36	1790			255
			98	1800			940
715		79	50	1815	1,417	105	467
730		108	75	1830		105	218
745		141	76	1845		107	202
800		195	93	1860		107	207
			294	1875		121	438
815		188	110	1890			184
830		210	102	1915		99	811
845	1,175	162	115	1930		89	191
900		115	123	1945		60	170
			450	1960		66	130
915		100	98	1975			624
930		67	90	2000			133
945		86	108	2015		65	118
1000		119	109	2030		69	128
			405	2045		36	86
1015		119	92	2100		46	115
1030		76	99	2115		52	447
1045		97	95	2130		53	113
1100		87	100	2145		34	85
			386	2160		33	69
1115		99	114	2175			380
1130		103	103	2215		23	54
1145		109	117	2230		15	62
1200		115	122	2245		17	64
			456	2300		18	41
				2315			221
				2330		10	33
				2345		15	25
				2400		7	19
						43	103

Directional Volumes: Northbound 6,649; Southbound 8,813

Equipment ID#: 3593

24-Hour Volume: 15,462

Street Observations

DeShaz Tang & Associates, Inc.

Street: FM-740/Ridge Road

Location: 1,000 feet south of

IH-30

City/State: Rockwall, Texas

Project-ID#: 95118 - 164

I. Street Width: 36.3 feet

II. Street Material:
Asphalt

III. Curbing/Gutters?:
Drainage Ditch

IV. Number of Lanes: 2 (two) plus one shared left turn lane.

V. Divided?: No

VI. Traffic Control Devices: Intersection traffic signals at Horizon & IH-30 Access Rd

VII. Pedestrian Crosswalks?: No

VIII. Pedestrian Pushbutton?: No

IX. On-street Parking: No

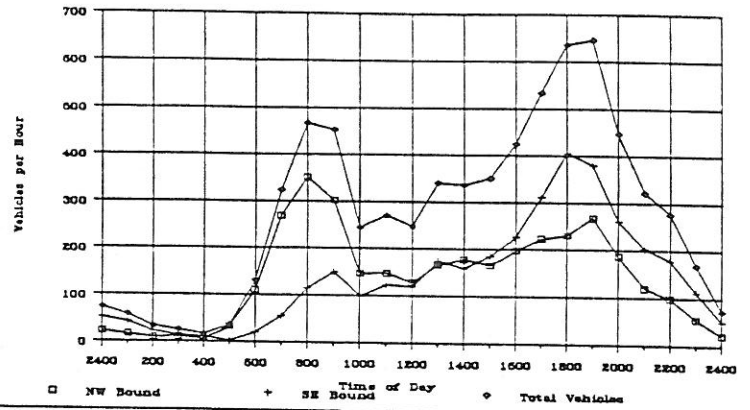
X. Posted Speed Limit: 40 mph

XI. Adjacent Land Uses: Commercial

XII. Additional Observations/Comments:

Street: *Horizon Road*
 Location: *310 feet east of FM-740/Ridge Road*
 City/State: *Rockwall, Texas*
 Project-ID#: *95118 - 165*
 Date: *November 1, 1995*
 Day of Week: *Wednesday*
 Data Source: *DT&A*

24-Hour Volume: **6,876**



Time	Peak	NW Bound	SE Bound	Time	Peak	NW Bound	SE Bound
2400				1200			
15		4	10	1215		39	40
30		5	8	1230		44	46
45		4	16	1245		43	40
100		3	8	1300		40	175
		16	42			166	
115		2	8	1315		44	39
130		5	7	1330		39	34
145		1	6	1345		42	42
200		2	2	1400		53	178
		10	23			178	
215		3	3	1415		43	41
230		4	7	1430		46	45
245		0	5	1445		39	43
300		4	0	1500		38	186
		11	15			166	
315		1	1	1515		45	53
330		1	4	1530		54	47
345		0	4	1545		56	63
400		4	2	1600		43	198
		6	11			198	
415		6	0	1615		48	95
430		6	2	1630		68	72
445		12	1	1645		48	74
500		10	0	1700		59	312
		34	3			223	
515		8	7	1715		56	85
530		23	6	1730		49	100
545		32	3	1745		53	119
600		47	5	1800		73	231
		110	21			231	
615		49	8	1815		75	97
630		68	14	1830		49	108
645		76	18	1845	679	76	273
700		76	16	1900		68	380
		269	56			273	
715		70	17	1915		55	69
730		81	19	1930		53	76
745		110	34	1945		39	64
800		91	45	2000		40	187
		352	115			187	
815		89	41	2015		41	50
830	535	84	41	2030		36	58
845		83	30	2045		24	52
900		47	38	2100		19	203
		303	150			120	
915		44	26	2115		27	48
930		34	24	2130		32	48
945		28	25	2145		23	45
1000		41	23	2200		17	178
		147	98			99	
1015		41	34	2215		23	28
1030		27	29	2230		14	33
1045		42	30	2245		13	31
1100		38	30	2300		6	113
		148	123			56	
1115		28	40	2315		8	22
1130		31	28	2330		9	13
1145		35	26	2345		5	4
1200		34	25	2400		1	51
		128	119			23	

Directional Volumes **3,449** **3,427**

Equipment ID#: **3594**

24-Hour Volume **6,876**

Street Observations

DeShaz Tang & Associates, Inc.

Street: Horizon Road

Location: 310 feet east of

FM-740/Ridge Road

City/State: Rockwall, Texas

Project-ID#: 95118 - 165

I. Street Width: 25.7 feet

II. Street Material:
Asphalt

III. Curbing/Gutters?:
Drainage Ditch

IV. Number of Lanes: 2 (Two)

V. Divided?: No

VI. Traffic Control Devices: Intersection Traffic Control Signals at FM-740

VII. Pedestrian Crosswalks?: None

VIII. Pedestrian Pushbutton?: None

IX. On-street Parking: No

X. Posted Speed Limit: 45 mph

XI. Adjacent Land Uses: Commercial, Agricultural

XII. Additional Observations/Comments:

Intersection Traffic Movements

DeShazo, Tang & Associates, Inc

Location: Ridge Road / FM-740 & IH-30 WB Service Road
 City/State: Rockwall, Texas County: Rockwall
 Signalization: Signalized
 Project-ID#: 95089 - E

Date/Day: August 18, 1995 / Thursday
 Data Source: DT&A
 Data Collector(s): Dewey Bishop
 Comments: Sunny & Hot

Time of Count	Northbound on Ridge Road / FM-740		Southbound on Ridge Road / FM-740		Westbound on IH-30 Service Road			Fifteen Minute Subtotals	Peak Hour Totals	Peak Hour Factor	
	Begin	End	Left	Thru	Thru	Right	Uturn				Left
16:00											
16:15											
16:30											
16:45											
17:00											
17:15											
17:30											
17:45											
18:00											
18:15											
18:30											
PM Peak Hour Total/Direction	57		867		479			228			2,050
% Turn	6.2%		93.8%		67.8%			32.2%			13.1%
Peak Hr Factor	0.71		0.90		0.88			0.81			0.95

Intersection Traffic Movements

DeShazo, Tang & Associates, Inc

Location: Ridge Road / FM-740 & IH-30 EB Service Road
 City/State: Rockwall, Texas County: Rockwall
 Signalization: Signalized
 Project-ID#: 95089 - F

Date/Day: August 18, 1995 / Thursday
 Data Source: DT&A
 Data Collector(s): Buck Woolverton
 Comments: Sunny & Hot

Time of Count	Northbound on Ridge Road / FM-740			Southbound on Ridge Road / FM-740			Eastbound on IH-30 EB Service Road			Fifteen Minute Subtotals	Peak Hour Totals	Peak Hour Factor
	Begin	End	Count	1	2	Thru	Left	Thru	Right			
16:00												
16:15												
16:30												
16:45												
17:00												
17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
PM Peak Hour Total/Direction												
% Turn												
Peak Hr Factor												

Intersection Traffic Movements

DeShazo, Tang & Associates, Inc

Location: FM-740/Ridge Road & Driveway to Bank/Chili's
City/State: Rockwall, Texas
Signalization: None
Project-ID#: 95118 - B
Date/Day: October 30, 1995 / Monday
Data Source: DT&A
Data Collector(s): Charles L. DeShazo
Conditions: Cloudy & Dry

Time of Count	Northbound on FM-740 2U		Southbound on FM-740 2U		Eastbound out of Driveway 2U		Fifteen Minute Subtotals	Peak Hour Totals	Peak Hour Factor
	Begin	End	Left	Thru	Left	Right			
17:00									
17:15									
17:30									
17:45									
	17:00	17:15	114	2	2	254	1	5	378
	17:15	17:30	102	2	4	341	2	9	460
	17:30	17:45	124	0	3	257	1	3	388
	17:45	18:00	112	3	1	280	5	2	403
									1,629 *
									88.53%
PM Peak Hour			452	7	9	1,132	9	19	
Total/Direction			459	---	---	1,142	---	28	
% Turn			98.5%	1.5%	---	99.1%	32.1%	67.9%	
Peak Hour Factor			91.1%	58.3%	---	83.0%	45.0%	52.8%	

File: A2X2HRS.WK1

Observations:

Intersection Traffic Movements

DeShazo, Tang & Associates, Inc

Location: *Access from State Ave* FM-740/Ridge Road & Carlisle Plaza Main Drvwy
 Date/Day: November 2, 1995 / Thursday
 City/State: Rockwall, Texas County: Rockwall
 Signalization: None Data Source: DT&A
 Project-ID#: 95118 - C Data Collector(s): C. Blaine Rodgers
 Conditions: Cloudy & Dry

Time of Count	Northbound on		Southbound on		Westbound out of			Fifteen Minute Subtotals	Peak Hour Totals	Peak Hour Factor
	FM-740 2U	1 > 1 Left Thru	FM-740 2U	1 < 0 Thru Right	Carlisle Plaza Drvwy 2U	1 > 1 Left	< 1 Right			
17:00	15	121	182	25	11	34	388			
17:15	14	102	233	41	8	27	425			
17:30	14	112	227	25	9	32	419			
17:45	11	120	226	20	10	25	412	1,644 *	98.09%	
PM Peak Hour	54	455	868	111	38	118	1,644			
Total/Direction	---	509	979	---	---	156	---			
% Turn	10.6%	89.4%	88.7%	11.3%	24.4%	75.6%				
Peak Hour Factor	90.0%	94.0%	93.1%	67.7%	86.4%	86.8%				

File: A2X2HRS.WK1

Observations:

Intersection Traffic Movements

DeShazo, Tang & Associates, Inc

Location: *FM-740/Ridge Road & Carlisle Plaza Driveway*
 City/State: *Rockwall, Texas*
 Signalization: *None*
 Project-ID#: *95118 - A*

Date/Day: *October 30, 1995 / Monday*
 Data Source: *DT&A*
 Data Collector(s): *C. Blaine Rodgers*
 Conditions: *Cloudy & Dry*

Time of Count	Northbound on		Southbound on		Westbound out of <i>Carlisle Plaza Drvwy</i>		Fifteen Minute Subtotals	Peak Hour Totals	Peak Hour Factor
	FM-740 2U	FM-740 2U	FM-740 2U	FM-740 2U	1>	2U			
Begin	Left	Thru	Left	Thru	Left	Right			
End									
17:00	5	111	225	39	9	9	398		
17:15	2	101	268	31	6	10	418		
17:30	4	98	258	35	8	13	416		
17:45	6	121	258	37	6	10	438	1,670 *	95.32%
PM Peak Hour Total/Direction	17	431	1,009	142	29	42	1,670		
% Turn	3.8%	96.2%	87.7%	12.3%	40.8%	59.2%			
Peak Hour Factor	70.8%	89.0%	94.1%	95.9%	80.6%	105.0%			

File: A2X2HRS.WK1

Observations:

Intersection Traffic Movements

DeShazo, Tang & Associates, Inc

Location: FM-740/Ridge Rd & FM-3097/Horizon Rd **Date/Day:** October 5, 1995 / Thursday
City/State: Rockwall, Texas **County:** Rockwall **Data Source:** DT&A
Signalization: Traffic Signals **Data Collector(s):** C. Blaine Rodgers
Project ID#: 95056 - A **Comments:** Fair & Dry

Time of Count	Northbound on FM-740/Ridge Rd (2U)			Southbound on FM-740/Ridge Rd (3U)			Northwest Bound FM-3097/Horizon Rd (2U)			Fifteen Minute Subtotals	Peak Hour Totals	Peak Hour Factor
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
16:00	0	1	<0	1	1	<0	1	1	<0			
16:15	20	82	4	88	142	3	2	9	43	393		
16:30	28	64	4	90	123	0	6	13	32	360		
16:45	29	77	5	73	119	5	11	26	74	419		
17:00	23	94	5	56	106	3	6	7	47	347	1,519	
17:15	20	105	2	106	150	0	11	12	35	441	1,567	
17:30	21	100	4	84	140	1	9	19	41	419	1,626	
17:45	22	83	6	100	138	0	5	13	43	410	1,617	
18:00	23	85	6	100	139	3	15	14	48	433	1,703 *	98.33%
18:15	20	73	5	81	142	1	4	19	40	385	1,647	
18:30	26	78	7	95	177	3	3	15	29	433	1,661	
PM Peak Hour	86	373	18	390	567	4	40	58	167	1,703		
Total/Direction	18.0%	477	3.8%	961	40.6%	59.0%	15.1%	21.9%	63.0%			
% Turn	76.8%	88.8%	64.3%	92.0%	80.1%	20.0%	66.7%	55.8%	56.4%			
Peak Hour Factor												

Note:

- * The "west" leg of this intersection is a one-way, one-lane street Northwest Bound.
- * At 16:24 a rear-end collision took place in the southbound lanes approximately 150 feet south of the intersection due to someone stopping to make a left turn into a convenience store located on the southeast corner. This affected both southbound and northbound traffic, but police were on the scene within four minutes directing traffic around the disabled vehicles. The accident was cleaned up by 16:48.
- * There is no left turn lane for the Northbound traffic, yet there is a left turn signal for that movement.

Intersection Traffic Movements

DeShazo, Tang & Associates, Inc

Location: FM-740/Ridge Rd & FM-3097/Horizon Rd **Date/Day:** October 11, 1995 / Wednesday
City/State: Rockwall, Texas **County:** Rockwall **Data Source:** DT&A
Signalization: Traffic Signals **Data Collector(s):** C. Blaine Rodgers
Project-ID#: 95056 - B **Comments:** Fair & Dry

Time of Count	Northbound on FM-740/Ridge Rd			Southbound on FM-740/Ridge Rd			Northwest Bound FM-3097/Horizon Rd			Fifteen Minute Subtotals	Peak Hour Totals	Peak Hour Factor
	Begin	End	Count	Left	Thru	Right	Left	Thru	Right			
06:30	06:45		44	29	0	10	18	2	2	37	32	174
06:45	07:00		43	29	1	7	37	1	1	26	30	175
07:00	07:15		78	38	1	11	34	1	0	54	19	236
07:15	07:30		59	50	4	9	54	2	5	40	38	261
07:30	07:45		61	53	4	16	62	1	4	27	33	261
07:45	08:00		68	70	7	16	70	0	8	33	45	317
08:00	08:15		52	85	8	26	65	1	6	33	38	314
08:15	08:30		51	83	3	27	54	2	4	29	57	310
08:30	08:45		49	87	5	42	62	0	5	25	27	302
08:45	09:00		47	65	3	15	65	1	5	21	26	248
AM Peak Hour			224	146	6	37	143	6	8	157	119	846
Total/Direction			---	376	---	---	186	---	---	284	---	
% Turn			59.6%	38.8%	1.6%	19.9%	76.9%	3.2%	2.8%	55.3%	41.9%	
Peak Hour Factor			71.8%	42.0%	18.8%	22.0%	51.1%	75.0%	25.0%	72.7%	52.2%	

Note:

- * The "west" leg of this intersection is a one-way, one-lane street Northwest Bound.
- * There is no left turn lane for the Northbound traffic, yet there is a left turn signal for that movement.
- * One Vehicle was observed going the wrong way on the oneway section of Horizon Road at 08:10. This was not added to the data, but the vehicle did make a southeast bound through movement.

Streets: (E-W) IH 30 WBFR (N-S) Ridge Road
 Analyst: GCL File Name: WBRB2.HC9
 Area Type: Other 11-1-95 PM Peak
 Comment: Base Traffic Volumes (Includes Walmart Study)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes				1	> 1	1	1	2			3	1
Volumes				336	49	27	65	947			570	228
Lane Width				12.0	12.0	12.0	12.0	12.0			12.0	12.0
RTOR Vols						0						0
Lost Time				3.00	3.00	3.00	3.00	3.00			3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					*	*		
Thru					*	*		
Right								
Peds								
WB Left		*						
Thru		*						
Right		*						
Peds								
NB Right								
SB Right								
Green	26.0A				49.0A	15.0A		
Yellow/AR	0.0				0.0	0.0		
Cycle Length:	90 secs							

Phase combination order: #1 #5 #6

Intersection Performance Summary

Lane	Group:	Mvmts	Cap	Adj Sat	Flow	v/c	Ratio	g/C	Ratio	Delay	LOS	Approach:	
												Delay	LOS
WB	L	452		1770		0.453		0.256		18.7	C	18.5	C
	LT	459		1796		0.438		0.256		18.6	C		
	R	405		1583		0.069		0.256		16.4	C		
NB	L	535		1770		0.127		0.333		4.3	A	4.3	A
	T	2525		3725		0.415		0.678		4.3	A		
SB	T	2856		5588		0.231		0.511		7.9	B	8.0	B
	R	809		1583		0.297		0.511		8.3	B		

Intersection Delay = 8.2 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.425

Streets: (E-W) IH 30 WBFR (N-S) Ridge Road
 Analyst: GCL File Name: WBRBD.HC9
 Area Type: Other 11-1-95 PM Peak
 Comment: Base Plus Development Traffic Volumes

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes				1	> 1	1	1	2			3	1
Volumes				514	49	27	123	1410			1044	228
Lane Width				12.0	12.0	12.0	12.0	12.0			12.0	12.0
RTOR Vols						0						0
Lost Time				3.00	3.00	3.00	3.00	3.00		0	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru								
Right								
Peds								
WB Left		*						
Thru		*						
Right		*						
Peds								
NB Right								
SB Right								
Green	26.0A				49.0A	15.0A		
Yellow/AR	0.0				0.0	0.0		
Cycle Length:	90 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach:	
								Delay	LOS
WB	L	452	1770	0.694	0.256	22.7	C	21.6	C
	LT	457	1790	0.610	0.256	20.8	C		
	R	405	1583	0.069	0.256	16.4	C		
NB	L	386	1770	0.334	0.333	12.1	B	6.0	B
	T	2525	3725	0.617	0.678	5.5	B		
SB	T	2856	5588	0.423	0.511	8.9	B	8.8	B
	R	809	1583	0.297	0.511	8.3	B		

Intersection Delay = 9.7 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.758

Streets: (E-W) IH 30 EBFR (N-S) Ridge Road
 Analyst: GCL File Name: EBRB2.HC9
 Area Type: Other 11-1-95 PM Peak
 Comment: Base Traffic Volumes (Includes Walmart Study)

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	> 1	1						3	1	1	2
Volumes	510	119	50						502	186	70	906
Lane Width	12.0	12.0	12.0						12.0	12.0	12.0	12.0
RTOR Vols			0							0		0
Lost Time	3.00	3.00	3.00						3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru	*							
Right	*							
Peds								
WB Left								
Thru								
Right								
Peds								
NB Right								
SB Right								
Green	31.0A				46.0A	13.0P		
Yellow/AR	0.0				0.0	0.0		
Cycle Length:	90 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Mvmts	Adj Sat	v/c	g/c	Delay	LOS	Approach:	
								Cap	Flow
EB	L	551	1770	0.596	0.311	21.2	C	20.9	C
	LT	562	1806	0.594	0.311	21.2	C		
	R	492	1583	0.108	0.311	16.8	C		
NB	T	2670	5588	0.218	0.478	10.4	B	10.5	B
	R	756	1583	0.259	0.478	10.7	B		
SB	L	516	1770	0.143	0.289	6.5	B	6.7	B
	T	2318	3725	0.432	0.622	6.8	B		

Intersection Delay = 11.8 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.487

Streets: (E-W) IH 30 EBFR (N-S) Ridge Road
 Analyst: GCL File Name: EBRBD.HC9
 Area Type: Other 11-1-95 PM Peak
 Comment: Base + Development Traffic Volumes

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	> 1	1					3	1		1	2
Volumes	510	119	100					1023	360		70	1558
Lane Width	12.0	12.0	12.0					12.0	12.0		12.0	12.0
RTOR Vols												0
Lost Time	3.00	3.00	3.00					3.00	3.00		3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru	*							
Right	*							
Peds								
WB Left								
Thru								
Right								
Peds								
NB Right								
SB Right								
Green	31.0A				46.0A	13.0P		
Yellow/AR	0.0				0.0	0.0		
Cycle Length:	90 secs	Phase combination order: #1 #5 #6						

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	551	1770	0.596	0.311	21.2	C	20.7	C
	LT	562	1806	0.594	0.311	21.2	C		
	R	492	1583	0.213	0.311	17.4	C		
NB	T	2670	5588	0.444	0.478	11.9	B	12.1	B
	R	756	1583	0.501	0.478	12.7	B		
SB	L	339	1770	0.218	0.289	12.2	B	10.1	B
	T	2318	3725	0.743	0.622	10.0	B		

Intersection Delay = 12.8 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.694

<GID01>

"Base"

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0
OCT 90

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIIIIIIIII
P P	A A	S S	S S	E	R R	I I I
P P	A A	S	S	E	R R	I I I
PPPP	AAAAA	SSS	SSS	EEEE	RRRR	I I I
P	A A	S	S	E	R R	I I I
P	A A	S S	S S	E	R R	I I I
P	A A	SSS	SSS	EEEE	R R	IIIIIIIIIIIIIIIIII

* * * * * GENERAL IDENTIFICATION DATA * * * * *

FREEWAY NAME - - - IH 30

CITY NAME - - - - - ROCKWALL

DISTRICT NUMBER - - - - - 02

DATE - - - - - 11/01/95

RUN NUMBER - - - - - 01

<GID02>

* * * * * ISOLATED INTERCHANGE OPERATION * * * * *

*** PARAMETERS ***

NUMBER OF INTERCHANGES - - - - 1

LOWER CYCLE LIMIT (SEC) - - - - 90

UPPER CYCLE LIMIT (SEC) - - - - 100

CYCLE INCREMENT (SEC) - - - - 10

*** OPTIONS ***

OPTIMIZE INTERNAL OFFSETS ? - - YES

EVALUATE INTERNAL OFFSETS ? - - NO

*** LEFT-SIDE MOVEMENT DATA ***

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
ARTERIAL			
RIGHT-TURN	129	1900	-
STRAIGHT-THROUGH	327	3800	10
STRAIGHT-THEN-LEFT	55	1900	-
FRONTAGE ROAD			
RIGHT-TURN	14	1900	-
STRAIGHT-THROUGH	119	719	10
LEFT-THEN-STRAIGHT	510	3081	-
LEFT-THEN-LEFT	0	0	-
INTERIOR			
LEFT-TURN	70	1900	5
STRAIGHT-THROUGH	737	3800	-

*** RIGHT-SIDE MOVEMENT DATA ***

```

* * * * *
      TRAFFIC          VOLUME          SATURATION          MINIMUM
      MOVEMENT        (VPH)           FLOW (VPHG)        PHASE (SEC)
* * * * *

```

ARTERIAL

RIGHT-TURN	228	1900	-
STRAIGHT-THROUGH	439	3800	10
STRAIGHT-THEN-LEFT	70	1900	-

FRONTAGE ROAD

RIGHT-TURN	27	1900	-
STRAIGHT-THROUGH	49	537	10
LEFT-THEN-STRAIGHT	298	3263	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	55	1900	5
STRAIGHT-THROUGH	837	3800	-

<GSI01>

*** INTERCHANGE 1 RIDGE ROAD

RUN 01 PAGE 4A

*** GENERAL SIGNALIZATION INFORMATION ***

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C		A	B	C	A+C
PHASE TIME (SEC)	33.6	40.1	16.3	49.9	*	48.8	26.9	14.3	63.1
V/C RATIO	.26	.41	.27	.38	*	.24	.36	.25	.34
LEVEL OF SERVICE	A	A	A	A	*	A	A	A	A
DELAY (SEC/VEH)	22.21	20.08	11.27	6.60	*	12.93	28.45	5.48	2.98
LEVEL OF SERVICE	C	C	B	B	*	B	C	A	A
STORAGE RATIO			.08	.26	*			.14	.17
LEVEL OF SERVICE			B	C	*			C	C
PHASE ORDER	LEAD-LAG			TOTAL INTERCHANGE DELAY		14.44			VEH-HRS/HR
INTERNAL OFFSET	4 SEC			CYCLE LENGTH		90 SEC			

HCS → LOS B = 13.3 sec/veh
EBFR
WSPR

<SPI01>

*** INTERCHANGE 1 RIDGE ROAD

w/out development w devel. timing
EBFR = LOS B / 12.0
WBFR = LOS B / 8.0

RUN 01 PAGE 4B

*** SIGNAL PHASING INFORMATION ***

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE			*	RIGHT-SIDE SEQUENCE			PHASE INTERVAL LENGTH (SEC)
	A	B	C		A	C	B	
1	<----		<----	*	<----	^	^	4.00
2				*				29.60
3		V	V	*				19.20
4	---->			*	---->	----	----	14.30
5				*				6.60
6				*				16.30
INTERNAL OFFSET	4 SEC				CYCLE LENGTH			90 SEC
					PHASE ORDER			LEAD-LAG

<GSI01>

*** INTERCHANGE 1 RIDGE ROAD

RUN 01 PAGE 5A

*** GENERAL SIGNALIZATION INFORMATION ***

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C		A	B	C	A+C
PHASE TIME (SEC)	37.4	44.8	17.8	55.2	*	54.5	29.9	15.6	70.1
V/C RATIO	.26	.41	.27	.38	*	.24	.35	.25	.33
LEVEL OF SERVICE	A	A	A	A	*	A	A	A	A
DELAY (SEC/VEH)	24.30	21.68	14.14	8.03	*	13.95	31.06	5.03	1.80
LEVEL OF SERVICE	C	C	B	B	*	B	C	A	A
STORAGE RATIO			.18	.55	*			.08	.10
LEVEL OF SERVICE			C	E	*			B	B
PHASE ORDER	LAG -LEAD			TOTAL INTERCHANGE DELAY			15.57 VEH-HRS/HR		
INTERNAL OFFSET	65 SEC			CYCLE LENGTH			100 SEC		

<SPI01>

*** INTERCHANGE 1 RIDGE ROAD

RUN 01 PAGE 5B

*** SIGNAL PHASING INFORMATION ***

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE			*	RIGHT-SIDE SEQUENCE			PHASE INTERVAL LENGTH (SEC)
	A	C	B		A	B	C	
1		A			A		35.10	
2		A			B		2.30	
3		C			B		17.80	
4		B			B		9.80	
5		B			C		15.60	
6		B			A		19.40	
INTERNAL OFFSET	65 SEC				CYCLE LENGTH 100 SEC			
					PHASE ORDER LAG -LEAD			

<GID01> " Base Plus Development"

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0
OCT 1990

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIIIIIII
P P	A A	S S	S S	E	R R	I I I
P P	A A	S	S	E	R R	I I I
PPPP	AAAAA	SSS	SSS	EEEE	RRRR	I I I
P	A A	S	S	E	R R	I I I
P	A A	S S	S S	E	R R	I I I
P	A A	SSS	SSS	EEEE	R R	IIIIIIIIIIIIIIII

* * * * * GENERAL IDENTIFICATION DATA * * * * *

FREEWAY NAME - - - IH 30

CITY NAME - - - - - ROCKWALL

DISTRICT NUMBER - - - - - 00

DATE - - - - - 11/01/95

RUN NUMBER - - - - - 02

<GID02>

* * * * * ISOLATED INTERCHANGE OPERATION * * * * *

*** PARAMETERS ***

NUMBER OF INTERCHANGES - - - - 1

LOWER CYCLE LIMIT (SEC) - - - - 90

UPPER CYCLE LIMIT (SEC) - - - - 100

CYCLE INCREMENT (SEC) - - - - 10

*** OPTIONS ***

OPTIMIZE INTERNAL OFFSETS ? - - YES

EVALUATE INTERNAL OFFSETS ? - - NO

<IMD01A>

* * * INTERCHANGE 1 RIDGE ROAD

RUN 02 PAGE 2A

*** LEFT-SIDE MOVEMENT DATA ***

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
ARTERIAL			
RIGHT-TURN	251	1900	-
STRAIGHT-THROUGH	649	3800	10
STRAIGHT-THEN-LEFT	95	1900	-
FRONTAGE ROAD			
RIGHT-TURN	56	1900	-
STRAIGHT-THROUGH	119	719	10
LEFT-THEN-STRAIGHT	510	3081	-
LEFT-THEN-LEFT	0	0	-
INTERIOR			
LEFT-TURN	70	1900	5
STRAIGHT-THROUGH	1196	3800	-

<IMD01B>

* * * INTERCHANGE 1 RIDGE ROAD

RUN 02 PAGE 2B

*** RIGHT-SIDE MOVEMENT DATA ***

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
ARTERIAL			
RIGHT-TURN	228	1900	-
STRAIGHT-THROUGH	773	3800	10
STRAIGHT-THEN-LEFT	70	1900	-
FRONTAGE ROAD			
RIGHT-TURN	27	1900	-
STRAIGHT-THROUGH	49	394	10
LEFT-THEN-STRAIGHT	423	3406	-
LEFT-THEN-LEFT	0	0	-
INTERIOR			
LEFT-TURN	95	1900	5
STRAIGHT-THROUGH	1159	3800	-

*** INTERNAL DELAY-OFFSET INFORMATION ***

PHASING	OPTIMIZE?	FORCE?	INTERIOR QUEUE STORAGE	
LEAD-LEAD	Y	-	THROUGH MOVEMENT AT LEFT SIDE (VEH)	16
LAG -LEAD	Y	-	LEFT-TURN MOVEMENT AT LEFT SIDE (VEH)	8
LEAD-LAG	Y	-	THROUGH MOVEMENT AT RIGHT SIDE (VEH)	16
LAG -LAG	Y	-	LEFT-TURN MOVEMENT AT RIGHT SIDE (VEH)	8
TTI -LEAD	Y	-		

PERMITTED LEFT TURNS?	INTERIOR TRAVEL TIMES	
LEFT-SIDE INTERSECTION	YES	LEFT TO RIGHT (SEC) - - - - - 10
RIGHT-SIDE INTERSECTION	YES	RIGHT TO LEFT (SEC) - - - - - 10

<GSI01>

*** INTERCHANGE 1 RIDGE ROAD

RUN 02 PAGE 4A

*** GENERAL SIGNALIZATION INFORMATION ***

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C		A	B	C	A+C
PHASE TIME (SEC)	46.3	30.9	12.8	59.1	*	48.7	26.5	14.8	63.5
V/C RATIO	.36	.55	.38	.51	*	.41	.50	.42	.46
LEVEL OF SERVICE	A	A	A	A	*	A	A	A	A
DELAY (SEC/VEH)	15.32	29.54	13.77	4.23	*	14.42	33.07	7.94	3.28
LEVEL OF SERVICE	B	C	B	A	*	B	D	B	A
STORAGE RATIO			.17	.33	*			.14	.27
LEVEL OF SERVICE			C	D	*			C	C
PHASE ORDER	LAG -LEAD			TOTAL INTERCHANGE DELAY		20.51		VEH-HRS/HR	
INTERNAL OFFSET	64 SEC			CYCLE LENGTH		90 SEC			

EBFR ⇒ LOS B - 11.9 sec/veh
 WBFR ⇒ LOS B / 8.8

<SPI01>

*** INTERCHANGE 1 RIDGE ROAD

RUN 02 PAGE 4B

*** SIGNAL PHASING INFORMATION ***

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE			*	RIGHT-SIDE SEQUENCE			PHASE INTERVAL LENGTH (SEC)
	A	C	B		A	B	C	
1	<-----	<-----		<-----	^	^	37.50	
2							8.80	
3		----->	V			----->	12.80	
4			V				4.90	
5							14.80	
6							11.20	

Handwritten calculations:
 A > 46.3 = 46
 C - 12.8 = 13
 B > 30.9 = 31
 A - 48.7 = 49
 B > 26.5 = 26
 C - 14.8 = 15

INTERNAL OFFSET 64 SEC

CYCLE LENGTH 90 SEC
PHASE ORDER LAG -LEAD

<GSI01>

* * * INTERCHANGE 1 RIDGE ROAD

RUN 02 PAGE 5A

*** GENERAL SIGNALIZATION INFORMATION ***

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C		A	B	C	A+C
PHASE TIME (SEC)	51.7	34.4	13.9	65.6	*	54.4	29.4	16.2	70.6
V/C RATIO	.36	.54	.37	.51	*	.40	.49	.41	.46
LEVEL OF SERVICE	A	A	A	A	*	A	A	A	A
DELAY (SEC/VEH)	16.56	31.81	13.97	4.42	*	15.55	35.64	7.77	3.15
LEVEL OF SERVICE	B	C	B	A	*	B	D	B	A
STORAGE RATIO			.17	.34	*			.14	.26
LEVEL OF SERVICE			C	D	*			C	C
PHASE ORDER	LAG -LEAD			TOTAL INTERCHANGE DELAY			22.03 VEH-HRS/HR		
INTERNAL OFFSET	73 SEC			CYCLE LENGTH			100 SEC		

<SPI01>

* * * INTERCHANGE 1 RIDGE ROAD

RUN 02 PAGE 5B

*** SIGNAL PHASING INFORMATION ***

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE			*	RIGHT-SIDE SEQUENCE			PHASE INTERVAL LENGTH (SEC)
	A	C	B		A	B	C	
1		A		*	A		43.60	
2		A		*	B		8.10	
3		C		*	B		13.90	
4		B		*	B		7.40	
5		B		*	C		16.20	
6		B		*	A		10.80	
INTERNAL OFFSET	73 SEC				CYCLE LENGTH 100 SEC			
					PHASE ORDER LAG -LEAD			

Center For Microcomputers In Transportation

HCS: Unsignalized Intersection Release 2.1

File Name RCB.HC0
 Streets: (N-S) Ridge Road (E-W) Chili's Driveway
 Major Street Direction.... NS
 Length of Time Analyzed... 60 (min)
 Analyst..... GCL
 Date of Analysis..... 11/1/95
 Other Information..... Base Traffic Volumes

Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	3<	0	1	2	0	0	0	0	0>	1<	0
Stop/Yield			N			N						
Volumes		482	7	10	741					9	0	19
PHF		.95	.95	.95	.95					.95	.95	.95
Grade		0			0			0			0	
MC's (%)		0	0	0	0					0	0	0
SU/RV's (%)		0	0	0	0					0	0	0
CV's (%)		0	0	0	0					0	0	0
PCE's		1.1	1.1	1.1	1.1					1.1	1.1	1.1

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	164	
Potential Capacity: (pcph)	1143	
Movement Capacity: (pcph)	1143	
Prob. of Queue-free State:	0.98	
Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	489	
Potential Capacity: (pcph)	937	
Movement Capacity: (pcph)	937	
Prob. of Queue-free State:	0.99	
Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)	1236	
Potential Capacity: (pcph)	206	
Capacity Adjustment Factor due to Impeding Movements	0.99	
Movement Capacity: (pcph)	203	
Prob. of Queue-free State:	1.00	
Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	1236	
Potential Capacity: (pcph)	172	
Major LT, Minor TH Impedance Factor:	0.99	
Adjusted Impedance Factor:	0.99	
Capacity Adjustment Factor due to Impeding Movements	0.99	
Movement Capacity: (pcph)	170	

Intersection Performance Summary

Movement	FlowRate v (pcph)	MoveCap Cm (pcph)	SharedCap Csh (pcph)	Avg.Total Delay	LOS	Delay By App
WB L	10	170 >	410	> 9.5	> B	9.5
WB R	22	1143 >		>	>	
SB L	12	937		3.9	A	0.1

Intersection Delay = 0.2

Center For Microcomputers In Transportation

File Name RCBD.HCO
 Streets: (N-S) Ridge Road (E-W) Chili's Driveway
 Major Street Direction.... NS
 Length of Time Analyzed... 60 (min)
 Analyst..... GCL
 Date of Analysis..... 11/1/95
 Other Information..... Base Plus Development Traffic Volumes

Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	3<	0	0	2	0	0	0	0	0	0	1
Stop/Yield			N			N						
Volumes		462	67		1410							77
PHF		.95	.95		.95							.95
Grade		0			0			0			0	
MC's (%)		0	0		0							0
SU/RV's (%)		0	0		0							0
CV's (%)		0	0		0							0
PCE's		1.1	1.1		1.1							1.1

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	188	
Potential Capacity: (pcph)	1112	
Movement Capacity: (pcph)	1112	
Prob. of Queue-free State:	0.92	

Intersection Performance Summary

Movement	FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
WB R	89	1112		3.5	A	

Intersection Delay = 0.1

Center For Microcomputers In Transportation

HCS: Unsignalized Intersection Release 2.1

Page 1

File Name RNDBD.HCO
 Streets: (N-S) Ridge Road (E-W) North Driveway
 Major Street Direction.... NS
 Length of Time Analyzed... 60 (min)
 Analyst..... GCL
 Date of Analysis..... 11/6/95
 Other Information..... Base + Development Traffic Volumes

Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2<	0	1	2<	0	0	0	1	0	0	1
Stop/Yield			N			N						
Volumes	17	1120	55	256	1260	142			42			250
PHF	.95	.95	.95	.95	.95	.95			.95			.95
Grade		0			0			0			0	
MC's (%)	0	0	0	0	0	0			0			0
SU/RV's (%)	0	0	0	0	0	0			0			0
CV's (%)	0	0	0	0	0	0			0			0
PCE's	1.1	1.1	1	1	1.1	1			1			1

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	588	701
Potential Capacity: (pcph)	697	611
Movement Capacity: (pcph)	697	611
Prob. of Queue-free State:	0.62	0.93
Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	1175	1402
Potential Capacity: (pcph)	401	303
Movement Capacity: (pcph)	401	303
Prob. of Queue-free State:	0.33	0.93

Intersection Performance Summary

Movement	FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
EB R	44	611		6.3	B	
WB R	263	697		8.3	B	
NB L	20	303		12.7	C	0.2
SB L	269	401		26.7	D	4.1

Intersection Delay = 3.0

Center For Microcomputers In Transportation

HCS: Unsignalized Intersection Release 2.1

Page 1

File Name RNDE.HCO
 Streets: (N-S) Ridge Road (E-W) Carlisle Plaza North
 Major Street Direction.... NS
 Length of Time Analyzed... 60 (min)
 Analyst..... GCL
 Date of Analysis..... 11/7/95
 Other Information..... Existing Traffic Volumes - PM Peak Hour

Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1<	0	0>	1<	0	0	0	0
Stop/Yield			N			N						
Volumes	17	431		1009	142		29	0	42			
PHF	.95	.95		.95	.95		.95	.95	.95			
Grade		0		0			0				0	
MC's (%)	0	0		0	0		0	0	0			
SU/RV's (%)	0	0		0	0		0	0	0			
CV's (%)	0	0		0	0		0	0	0			
PCE's	1.1	1.1		1.1	1.1		1.1	1.1	1.1			

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)		1080
Potential Capacity: (pcph)		393
Movement Capacity: (pcph)		393
Prob. of Queue-free State:		0.88
Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)		1151
Potential Capacity: (pcph)		485
Movement Capacity: (pcph)		485
Prob. of Queue-free State:		0.96
Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)		1528
Potential Capacity: (pcph)		172
Capacity Adjustment Factor due to Impeding Movements		0.96
Movement Capacity: (pcph)		165
Prob. of Queue-free State:		1.00
Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)		1528
Potential Capacity: (pcph)		138
Major LT, Minor TH Impedance Factor:		0.96
Adjusted Impedance Factor:		0.96
Capacity Adjustment Factor due to Impeding Movements		0.96
Movement Capacity: (pcph)		132

Intersection Performance Summary

Movement	FlowRate v (pcph)	MoveCap Cm (pcph)	SharedCap Csh (pcph)	Avg.Total Delay	LOS	Delay By App
EB L	34	132	>	>	>	
EB R	48	393	>	>	>	
			216	26.8	D	26.8
NB L	20	485		7.7	B	0.3

Intersection Delay = 1.2

Center For Microcomputers In Transportation

HCS: Unsignalized Intersection Release 2.1

File Name RSTB.HC0
 Streets: (N-S) Ridge Road (E-W) Carlisle Plaza Drive
 Major Street Direction.... NS
 Length of Time Analyzed... 60 (min)
 Analyst..... GCL
 Date of Analysis..... 11/6/95
 Other Information..... Existing Traffic w/ Walmart & Widened Ridge Road

Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2<	0	0>	1<	0	0	0	0
Stop/Yield			N			N						
Volumes	71	630		763	111		53	0	118			
PHF	.95	.95		.95	.95		.95	.95	.95			
Grade		0		0			0				0	
MC's (%)	0	0		0	0		0	0	0			
SU/RV's (%)	0	0		0	0		0	0	0			
CV's (%)	0	0		0	0		0	0	0			
PCE's	1.1	1.1		1.1	1.1		1.1	1.1	1.1			

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)		437
Potential Capacity: (pcph)		832
Movement Capacity: (pcph)		832
Prob. of Queue-free State:		0.84
Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)		874
Potential Capacity: (pcph)		582
Movement Capacity: (pcph)		582
Prob. of Queue-free State:		0.86
Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)		1520
Potential Capacity: (pcph)		141
Capacity Adjustment Factor due to Impeding Movements		0.86
Movement Capacity: (pcph)		121
Prob. of Queue-free State:		1.00
Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)		1520
Potential Capacity: (pcph)		113
Major LT, Minor TH Impedance Factor:		0.86
Adjusted Impedance Factor:		0.86
Capacity Adjustment Factor due to Impeding Movements		0.86
Movement Capacity: (pcph)		97

Intersection Performance Summary

Movement	FlowRate v (pcph)	MoveCap Cm (pcph)	SharedCap Csh (pcph)	Avg.Total Delay	LOS	Delay By App
EB L	62	97 >	247	> 66.0	> F	66.0
EB R	136	832 >		>	>	
NB L	83	582		7.2	B	0.7
Intersection Delay =				6.8		

Streets: (E-W) Steger Towne Drive (N-S) Ridge Road
 Analyst: GCL File Name: RSTBD.HC9
 Area Type: Other 11-1-95 PM Peak
 Comment: Base + Development Traffic Volumes

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	> 1		1	> 1		1	1	2	1	1	2	<
Volumes	62	9	118	381	9	389	71	738	224	633	820	111
Lane Width		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			22			78			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
EB Thru	*							
EB Right	*							
EB Peds								
WB Left		*						
WB Thru		*						
WB Right		*						
WB Peds								
NB Right								
SB Right								
Green	9.0A	21.0A			5.0A	29.0P	20.0A	
Yellow/AR	0.0	3.0			0.0	0.0	3.0	
Cycle Length:	90 secs							

Phase combination order: #1 #2 #5 #6 #7

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	LT	119	1784	0.622	0.067	37.6	D	65.4	F
	R	106	1583	0.957	0.067	85.8	F		
WB	LT	414	1776	0.989	0.233	57.5	E	50.0	E
	R	369	1583	0.885	0.233	40.6	E		
NB	L	135	1770	0.556	0.044	24.5	C	41.8	E
	T	828	3725	0.986	0.222	47.4	E		
	R	352	1583	0.671	0.222	27.7	D		
SB	L	692	1770	0.962	0.722	35.6	D	20.1	C
	TR	1992	3659	0.517	0.544	10.1	B		

Intersection Delay = 34.7 sec/veh Intersection LOS = D
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.990

Streets: (E-W) Steger Towne Drive (N-S) Ridge Road
 Analyst: GCL File Name: RSTBDI.HC9
 Area Type: Other 11-1-95 PM Peak
 Comment: Base + Development Traffic Volumes

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	> 1		1	> 1		1	1	2	1	2	2	<
Volumes	62	9	118	381	9	389	71	738	224	633	820	111
Lane Width		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		*
Thru	*				Thru			*
Right	*				Right			*
Peds					Peds			
WB Left		*			SB Left	*	*	
Thru		*			Thru		*	*
Right		*			Right		*	*
Peds					Peds			
NB Right		*			EB Right	*		
SB Right					WB Right	*	*	
Green	9.0A	23.0A			Green	6.0A	22.0P	24.0A
Yellow/AR	0.0	3.0			Yellow/AR	0.0	0.0	3.0
Cycle Length:	90 secs Phase combination order: #1 #2 #5 #6 #7							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	LT	119	1784	0.622	0.067	37.6	D	42.1	E
	R	158	1583	0.783	0.100	44.8	E		
WB	LT	454	1776	0.903	0.256	39.6	D	24.3	C
	R	897	1583	0.456	0.567	8.9	B		
NB	L	152	1770	0.493	0.067	19.6	C	23.1	C
	T	993	3725	0.821	0.267	27.5	D		
	R	827	1583	0.285	0.522	9.2	B		
SB	L	983	3539	0.698	0.278	23.7	C	16.5	C
	TR	1870	3659	0.550	0.511	11.6	B		

Intersection Delay = 21.4 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.791

Streets: (E-W) Horizon Road
 Analyst: GCL
 Area Type: Other
 Comment: Base Traffic Volumes

(N-S) Ridge Road
 File Name: RHB.HC9
 11-1-95 PM Peak

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	2	<	1	1	1	1	2	<
Volumes	1	117	170	40	58	167	86	533	18	273	557	3
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations											
Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*		*	
	Thru	*					Thru			*	
	Right	*					Right			*	
	Peds						Peds				
WB	Left	*				SB	Left	*	*	*	
	Thru	*					Thru		*	*	
	Right	*					Right		*	*	
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		25.0A				Green		5.0A	16.0P	44.0A	
Yellow/AR		0.0				Yellow/AR		0.0	0.0	0.0	
Cycle Length:		90 secs	Phase combination order: #1 #5 #6 #7								

Intersection Performance Summary									
Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	220	902	0.005	0.244	19.5	C	22.0	C
	T	455	1863	0.270	0.244	21.0	C		
	R	387	1583	0.463	0.244	22.7	C		
WB	L	274	1121	0.153	0.244	20.3	C	21.1	C
	TR	809	3310	0.308	0.244	21.2	C		
NB	L	278	1770	0.327	0.044	10.2	B	14.9	B
	T	849	1863	0.661	0.456	15.9	C		
	R	721	1583	0.026	0.456	10.3	B		
SB	L	437	1770	0.657	0.433	17.6	C	9.4	B
	TR	2358	3723	0.262	0.633	5.5	B		
Intersection Delay =					14.4 sec/veh	Intersection LOS =		B	
Lost Time/Cycle, L =					9.0 sec	Critical v/c(x)		= 0.640	

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4
 Center For Microcomputers In Transportation

01-23-1996

Streets: (E-W) Horizon Road

(N-S) Ridge Road

Analyst: GCL

File Name: RHBD.HC9

Area Type: Other

11-1-95 PM Peak

Comment: Base +Development Traffic Volumes

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	2	<	1	1	1	1	2	<
Volumes	37	141	170	156	81	191	86	805	42	296	731	38
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
EB Thru	*							
EB Right	*							
EB Peds								
WB Left	*							
WB Thru	*							
WB Right	*							
WB Peds								
NB Right								
SB Right								
Green	22.0A							
Yellow/AR	0.0				5.0A	18.0P	45.0A	
Cycle Length:	90 secs				0.0	0.0	0.0	

Phase combination order: #1 #5 #6 #7

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	
								Mvmts	Cap
EB	L		157	743	0.249	0.211	22.6	C	
	T		393	1863	0.376	0.211	23.4	C	
	R		334	1583	0.536	0.211	25.3	D	
WB	L		202	955	0.813	0.211	40.4	E	
	TR		704	3333	0.426	0.211	23.7	C	29.6
NB	L		183	1770	0.497	0.044	11.3	B	
	T		869	1863	0.974	0.467	36.0	D	
	R		739	1583	0.060	0.467	10.0	B	
SB	L		476	1770	0.655	0.478	19.4	C	
	TR		2465	3698	0.344	0.667	5.0	A	8.9

Intersection Delay = 21.8 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.892

File Name HSDBD.HCO
 Streets: (N-S) South Driveway (E-W) Horizon Road
 Major Street Direction.... EW
 Length of Time Analyzed... 60 (min)
 Analyst..... GCL
 Date of Analysis..... 11/7/95
 Other Information..... Base + Development PM Peak Hour

Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0>	1	0	0	1<	0	0	0	0	0>	1<	0
Stop/Yield			N			N						
Volumes	48	431			289	95				92	0	139
PHF	.95	.95			.95	.95				.95	.95	.95
Grade		0			0			0			0	
MC's (%)	0	0			0	0				0	0	0
SU/RV's (%)	0	0			0	0				0	0	0
CV's (%)	0	0			0	0				0	0	0
PCE's	1.1	1.1			1.1	1.1				1.1	1.1	1.1

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB

Conflicting Flows: (vph)		336
Potential Capacity: (pcph)		936
Movement Capacity: (pcph)		936
Prob. of Queue-free State:		0.83

Step 2: LT from Major Street	WB	EB

Conflicting Flows: (vph)		384
Potential Capacity: (pcph)		1125
Movement Capacity: (pcph)		1125
Prob. of Queue-free State:		0.95
TH Saturation Flow Rate: (pcphpl)		1700
RT Saturation Flow Rate: (pcphpl)		
Major LT Shared Lane Prob. of Queue-free State:		0.93

Step 3: TH from Minor Street	NB	SB

Conflicting Flows: (vph)		816
Potential Capacity: (pcph)		407
Capacity Adjustment Factor due to Impeding Movements		0.93
Movement Capacity: (pcph)		378
Prob. of Queue-free State:		1.00

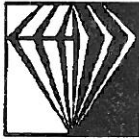
Step 4: LT from Minor Street	NB	SB

Conflicting Flows: (vph)		816
Potential Capacity: (pcph)		357
Major LT, Minor TH Impedance Factor:		0.93
Adjusted Impedance Factor:		0.93
Capacity Adjustment Factor due to Impeding Movements		0.93
Movement Capacity: (pcph)		332

Intersection Performance Summary

Movement	FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
SB L	107	332 >		>	>	
SB R	161	936 >	542	>	C	13.1
EB L	56	1125		3.4	A	0.3

Intersection Delay = 2.9



PARAGON PROJECT RESOURCES, INC.
ENGINEERING AND MANAGEMENT CONSULTANTS

May 14, 1996

Mr. Tony R. Tramel, P.E.
DeShazo Tang & Associates
Dallas, TX 75202

Via Fax: 741-1937

Dear Tony:

There is no issue with the proposed zoning or platting for Steger Towne crossing, nor do I have any problems with your projected traffic volumes, etc. My personal problem is with the number of drives on the primary arterial through that area.

Your understanding of City guidance on driveway spacing is not complete. An extract of the Commercial District section of the Rockwall Zoning Ordinance is attached for your future use. The standard is 1 drive per 200 feet of street frontage *per site* for arterial streets, or as approved by the City Council. If a "site" is an outparcel, the concept plan is in compliance. If a "site" is the shopping center, the plan requires City Council approval.

As you know, neither PARAGON nor I are traffic engineers, and our reference library is not as extensive as yours. My opinions expressed at the work session were based on my understanding of the Zoning Ordinance and the brief guidance provided in the AASHTO green book (an extract attached). As you know, most of the AASHTO discussion is very general, and Figure II-29 is the only numerical data I found (and I gather from the information you provided, even its conclusions are in dispute). If we believe Figure II-29, then additional drives cause additional accidents. The density of proposed and existing drives onto FM 740 from Steger Towne Crossing and the bank would amount to 28 intersections per kilometer (if it were extended for a kilometer), which I think we would all agree is excessive. For these reasons I asked you to relook your previous recommendations.

Bill Crolley tells me that the concept plan has been previously approved by the Planning and Zoning Commission and the City Council. In that case, the appropriate thing for me to do is abstain on both the Steger Towne and the Boston Market agenda items.

Sincerely,

G. William Quinby, P.E.
Planning and Zoning Commissioner

cc: Bill Crolley, via Fax 771-7727