



MEMORANDUM

To: David Soto
Planning Manager
Town of Prosper, Texas

From: Brandon Forsythe, P.E.
Kimley-Horn and Associates, Inc.
TPBE Registered Firm Number F-928

Date: February 22, 2023

Re: Home2Suites Parking Analysis
Gates of Prosper
Prosper, Texas

PURPOSE

Kimley-Horn and Associates, Inc. conducted a parking analysis for the proposed Home2Suites located on Block A, Lot 11 of Gates of Prosper Phase 2, at the southeast quadrant of Lovers Lane and Coleman Street in the Town of Prosper, Texas. This memorandum summarizes the results of the parking study.

According to the conceptual site plan (see **Appendix**), the site is planned to include a four story 119-key hotel.

This study is intended to determine the number of parking spaces needed on site in order to adequately serve the development and meet requirements outlined by the Town of Prosper and the Institute of Transportation Engineers (ITE).

METHODOLOGY

Two (2) analyses were performed for this study:

- **Town of Prosper Zoning Ordinance**
Utilized Parking Requirements Based on Use outlined in Chapter 4 Section 4.5.
- **ITE Parking Generation**
Utilized the average peak period parking demand rates.

PROPOSED SUPPLY

Based on the conceptual site plan for the development, 93 spaces are planned to be provided on site as shown in **Table 1**.

Table 1 – Planned Parking On-Site		
Land Use	Intensity	Provided Parking
Hotel	119 Guest Rooms	93

PARKING ANALYSIS

Town of Prosper Zoning Ordinance

As stated in Chapter 4, Section 4.5 of the Town's Zoning Ordinance, the required number of parking spaces for a proposed hotel development is one (1) space per hotel guest room. This section of the Town's Zoning Ordinance is provided in the **Appendix**.

Table 2 summarizes the proposed developments parking required based on the Town's Zoning Ordinance. Using requirements outlined, 119 spaces are required for the site.

Table 2 – City Parking Requirements			
Land Use	Intensity	Parking Requirement	City Required Parking
Hotel	119 Guest Rooms	1 space per Guest Room	119

ITE Parking Generation

The *ITE Parking Generation Manual* summarizes collected parking demand data which is compiled into statistics. Average peak period demand rates were used for the proposed hotel land use to obtain an anticipated parking demand for the site. Excerpts from the manual are provided in the **Appendix**.

During typical weekdays, the hotel land use peak period of usage occurs overnight and extends into the morning, from 11:00 PM to 8:00 AM. The manual utilizes data from 22 parking demand studies of this land use type, resulting in an average parking demand rate of 0.74 spaces per room.

Table 3 summarizes the analysis carried out using the *Parking Generation Manual*. Based on the peak period demand anticipated on site, the anticipated parking demand is 89 spaces.

Table 3 – ITE Parking Generation			
Land Use	Intensity	Parking Requirement	ITE Parking Demand
Hotel	119 Guest Rooms	0.74 spaces per guest room	89

PARKING ANALYSIS SUMMARY

According to this analysis, the current site plan meets recommendations outlined by ITE, but not those provided by the Town. **Table 4** summarizes the anticipated parking supply for the development and the parking recommendations based on City requirements and ITE.

Table 4 – Parking Analysis Summary			
Land Use	City Required	ITE Recommended	Current Provided Parking
Warehouse	119	89	93



While the current site plan's parking supply does not meet the Town's current requirements, it does meet the demand anticipated by ITE. The number recommended by the *ITE Parking Generation Manual* is based on numerous studies of developments that are similar to the proposed site's land use. It is our opinion that since the current planned parking meets ITE's recommended minimum spaces, the site will be adequately parked in its proposed state.

CONCLUSIONS

The current conceptual site plan provides 93 parking spaces. While this proposed number may not meet requirements outlined by the Town, it does meet the anticipated parking demand based on *ITE's Parking Generation Manual*. This manual utilizes research of similar land use types to determine when the peak demand of the site will occur and provides a recommended average parking demand rate of 0.74 spaces per guest room based on 22 studies performed on hotel developments. Since the proposed parking meets the demand of an average hotel development set forth in *ITE's Parking Generation Manual*, it is requested that a parking supply of 93 be deemed appropriate based on the findings of this study.

If you have any questions, please contact me at brandon.forsythe@kimley-horn.com or by phone at 817-339-2289.

A handwritten signature in blue ink that reads "Brandon Forsythe".

Brandon Forsythe, P.E.
Transportation Engineer



Appendix

Proposed Site Plan

Town of Prosper Zoning Ordinance

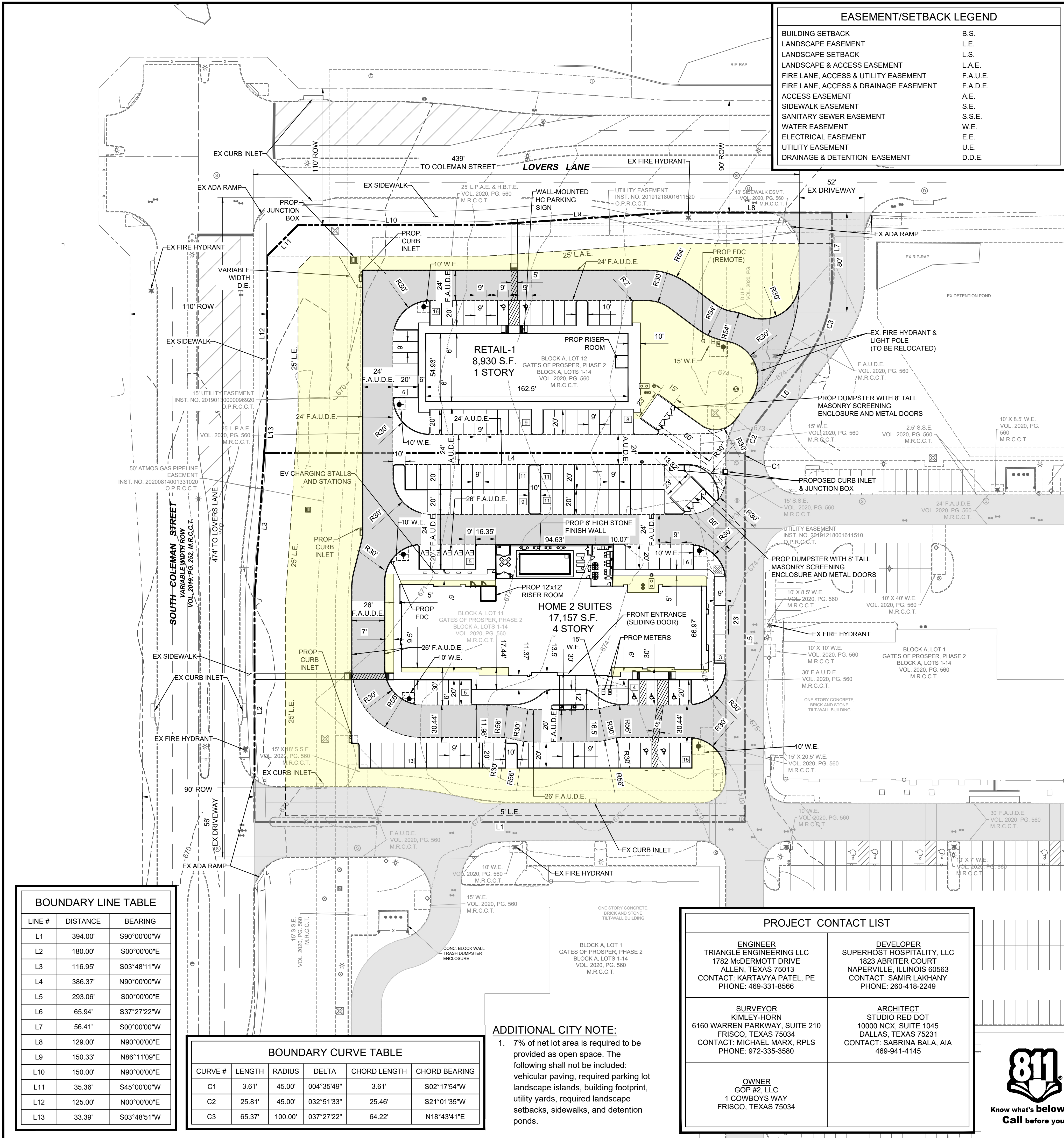
Chapter 4, Section 4.5

ITE Parking Generation Manual 5th Edition

Hotel (310) Average Rate



Proposed Site Plan



EASEMENT/SETBACK LEGEND

BUILDING SETBACK	B.S.
LANDSCAPE EASEMENT	L.E.
LANDSCAPE SETBACK	L.S.
LANDSCAPE & ACCESS EASEMENT	L.A.E.
FIRE LANE, ACCESS & UTILITY EASEMENT	F.A.U.E.
FIRE LANE, ACCESS & DRAINAGE EASEMENT	F.A.D.E.
ACCESS EASEMENT	A.E.
SIDEWALK EASEMENT	S.E.
SANITARY SEWER EASEMENT	S.S.E.
WATER EASEMENT	W.E.
ELECTRICAL EASEMENT	E.E.
UTILITY EASEMENT	U.E.
DRAINAGE & DETENTION EASEMENT	D.D.E.

EXISTING LEGEND

1/2" IR FOUND	IRRIGATION VALVE	NO PARKING
1/2" IR SET	WATER VALVE	CONCRETE
5/8" IR FOUND	FIRE HYDRANT	GRAVEL
3/8" IR FOUND	SIGN	BRICK
60-D NAIL FOUND	UTILITY POLE	STONE
PK NAIL SET	WATER METER	WOOD DECK
1/2" IP FOUND	GAS METER	BUILDING WALL
X-FOUND	A.C. PAD	TILE
X-SET	TRANS. BOX	BUILDING LINE
1" IR FOUND	GAS MARKER	EASEMENT
1" IP FOUND	OVERHEAD UTILITY LINE	BOUNDARY
POINT FOR CORNER	GUY WIRE ANCHOR	HIGHBANK LINE
CON. MONUMENT	BARBED WIRE FENCE	PARKING STRIPE
3/4" IP FOUND	IRON FENCE	HANDICAP SPACE
TELE. BOX	CHAINLINK FENCE	
CABLE BOX	WOOD FENCE	
ELECTRIC BOX	PIPE RAIL FENCE	
BRICK COLUMN	COVERED AREA	
STONE COLUMN	ASPHALT	
STORM DRAIN MH.	FIRE LANE STRIPE	
SAN. SEW. CO.	BRICK RET. WALL	
BOLLARD POST	STONE RET. WALL	
LIGHT POLE	CON. RET. WALL	
SAN. SEW. MH.	TELE. MH.	
WATER MH.		

SITE LEGEND

CONCRETE CURB	
SAW-CUT LINE	
FENCE	
FIRE LANE	
EXISTING FIRE LANE	
STRIPING	
OPEN SPACE	
PARKING SPACES	
MONUMENT/PYLON SIGN	
WHEEL STOPS	
HANDICAP LOGO	
HANDICAP SIGN	
RAMP	
BOLLARD	
TRAFFIC ARROW	
FIRE HYDRANT	
DUMPSTER	
SANITARY SEWER MANHOLE	
SANITARY SEWER CLEANOUT	
SANITARY SEWER DOUBLE CLEANOUT	
SANITARY SEWER SAMPLE PORT	
GREASE TRAP	
DOMESTIC WATER METER	
IRRIGATION METER	
GAS METER	
TRANSFORMER	
LIGHT POLE	
POWER POLE	

NO EXISTING TREES ON SITE

LOT 11 SITE DATA SUMMARY TABLE	
ZONING:	PD-67 (MIXED USE)
PROPOSED USE:	HOTEL
LOT AREA (EXCLUDING ROW):	2.67 ACRES (116,454 S.F.)
BUILDING AREA:	17,157 S.F.
BUILDING HEIGHT:	45'-0"
LOT COVERAGE:	14.7%
FLOOR AREA RATIO:	0.15
NUMBER OF GUEST ROOMS:	119
REGULAR PARKING REQUIRED:	119 SPACES
1 SP PER BEDROOM	
REGULAR PARKING PROVIDED:	88 SPACES
HANDICAP PARKING REQUIRED:	5 SPACES (1 VAN ACCESSIBLE)
HANDICAP PARKING PROVIDED:	5 SPACES (1 VAN ACCESSIBLE)
TOTAL PARKING PROVIDED:	93 SPACES
OPEN SPACE REQUIRED:	8,151.78 S.F. (7%)
OPEN SPACE PROVIDED:	2,455.66 S.F. (21.09%)
INTERIOR LANDSCAPING REQUIRED:	11,645 S.F. (10%)
INTERIOR LANDSCAPING PROVIDED:	34,519 S.F. (29.60%)
IMPERVIOUS AREA:	81,935 S.F. (70.4%)

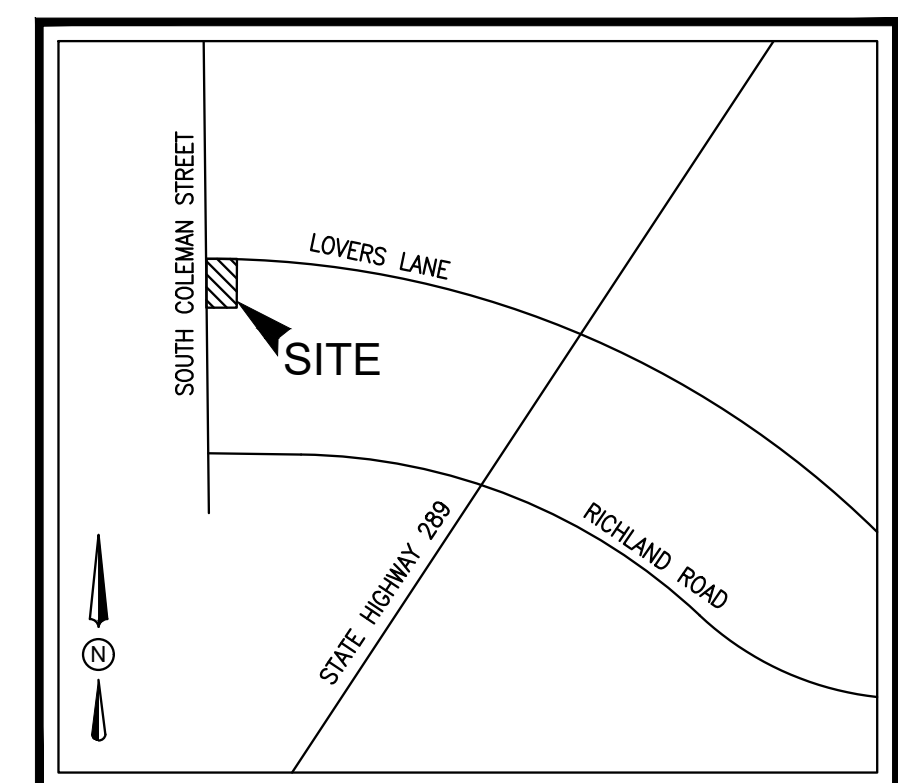
FLOOD PLAIN NOTE

ACCORDING TO MAP NO. 48085C0235J DATED JUNE 2, 2009, OF THE NATIONAL INSURANCE PROGRAM MAP, FLOOD INSURANCE RATE MAP OF COLLIN COUNTY, TEXAS, FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION, THIS PROPERTY IS LOCATED IN ZONE X (UNSHADED) AND IS NOT WITHIN A SPECIAL FLOOD HAZARD AREA.

NO.	DATE	DESCRIPTION	BY
1	12-05-22	1st PRELIMINARY SITE PLAN	EB
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9	-	-	-
10	-	-	-



Scale: 1" = 40' Feet



VICINITY MAP N.T.S.

SITE GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE CITY OR LOCAL JURISDICTION STANDARDS.
- THE LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS IS TAKEN FROM AS-BUILTS, UTILITY PLANS OR SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE OWNERS OF SUCH UNDERGROUND UTILITIES PRIOR TO WORKING IN THE AREA TO CONFIRM THEIR EXACT LOCATION AND TO DETERMINE WHETHER ANY ADDITIONAL UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND UTILITIES. IF EXISTING UNDERGROUND UTILITIES ARE DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPAIRING THE UTILITY.
- WHERE EXISTING UTILITIES OR SERVICE LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR THE UTILITIES OR SERVICE LINES WITH THE SAME TYPE OF ORIGINAL MATERIAL AND CONSTRUCTION, OR BETTER, UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS, AT HIS OWN COST AND EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS WITH UTILITIES.
- ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U. S. DEPARTMENT OF LABOR, OSHA, CONSTRUCTION SAFETY AND HEALTH REGULATIONS AND ANY AMENDMENTS THERETO.
- THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE, BUT ARE NOT LIMITED TO TRENCH BACKFILL, SIDE SLOPES, FENCES, DRAINAGE DITCHES, DRIVEWAYS, PRIVATE YARDS AND ROADWAYS.
- ANY CHANGES NEEDED AFTER CONSTRUCTION PLANS HAVE BEEN RELEASED, SHALL BE APPROVED BY THE CITY ENGINEER. THESE CHANGES MUST BE RECEIVED IN WRITING.
- THE CONTRACTOR SHALL PROVIDE "RED LINED" MARKED PRINTS TO THE ENGINEER PRIOR TO FINAL INSPECTION INDICATING ALL CONSTRUCTION WHICH DEVIATED FROM THE PLANS OR WAS CONSTRUCTED IN ADDITION TO THAT INDICATED ON THE PLANS.
- ALL CURB RADIUS TO BE 10' OR 2' UNLESS OTHERWISE NOTED ON THE SITE PLAN.
- ANY REVISION TO THIS PLAN WILL REQUIRE TOWN APPROVAL AND WILL REQUIRE REVISIONS TO ANY CORRESPONDING PLANS TO AVOID CONFLICTS BETWEEN PLANS.

LOT 12 SITE DATA SUMMARY TABLE

ZONING:	PD-67 (MIXED USE)
PROPOSED USE:	RETAIL
LOT AREA (EXCLUDING ROW):	1.86 ACRES (80,888 S.F.)
BUILDING AREA:	8,930 S.F.
BUILDING HEIGHT:	30'
LOT COVERAGE:	11.04%
FLOOR AREA RATIO:	0.11
REGULAR PARKING REQUIRED:	36 SPACES
1 SP PER 250 S.F.	
REGULAR PARKING PROVIDED:	37 SPACES
HANDICAP PARKING REQUIRED:	2 SPACES (1 VAN ACCESSIBLE)
HANDICAP PARKING PROVIDED:	2 SPACES (1 VAN ACCESSIBLE)
TOTAL PARKING PROVIDED:	39 SPACES
OPEN SPACE REQUIRED:	5,662.16 S.F. (7%)
OPEN SPACE PROVIDED:	23,198.74 S.F. (28.68%)
INTERIOR LANDSCAPING REQUIRED:	8,089 S.F. (10%)
INTERIOR LANDSCAPING PROVIDED:	39,039 S.F. (48.30%)
IMPERVIOUS AREA:	41,849 S.F. (51.7%)

CASE NUMBER: D22-0103

PRELIMINARY SITE PLAN-1

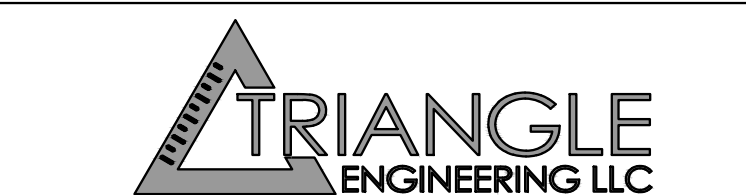
HOME 2 SUITE INN

SEC LOVERS LANE AND SOUTH COLEMAN STREET

CITY OF PROSPER

COLLIN COUNTY, TEXAS 75078

GATES OF PROSPER, BLOCK A, LOT 11 & LOT 12



T: 469.331.8566 | F: 469.213.7145 | E: info@triangle-engr.com
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Planning | Civil Engineering | Construction Management

P.E.	DES.	DATE	SCALE	PROJECT NO.	SHEET NO.
KP	EB	12-05-22	SCALE BAR	103-22	C-3.0
TX. P.E. FIRM #11525					



Town of Prosper Zoning Ordinance – Parking Standards

- **Community Center, Library, Museum, or Art Gallery:** Ten (10) parking spaces plus one (1) additional space for each three hundred (300) square feet of floor area in excess of two thousand (2,000) square feet. If an auditorium is included as a part of the building, its floor area shall be deducted from the total and additional parking provided on the basis of one (1) space for each four (4) seats that it contains.
- **Commercial Amusement:** One (1) space per three (3) guests at maximum designed capacity.
- **Country Club or Golf Club:** One (1) parking space for each one hundred fifty (150) square feet of floor area or for every five (5) members, whichever is greater.
- **Dance Hall, Assembly or Exhibition Hall without Fixed Seats:** One (1) parking space for each two hundred (200) square feet of floor area thereof.
- **Dwellings, Single Family and Duplex:** Two (2) covered spaces, located behind the front building line, and two (2) maneuvering spaces for each unit.
- **Dwellings, Multifamily:** Two (2) spaces for one (1) and two (2) bedroom units, plus one half (0.5) additional space for each additional bedroom.
- **Flea Market:** One (1) space for each five hundred (500) square feet of site area.
- **Fraternity, Sorority, or Dormitory:** One (1) parking space for each two (2) beds on campus, and one and one-half (1½) spaces for each two beds in off campus projects.
- **Furniture or Appliance Store, Hardware Store, Wholesale Establishments, Machinery or Equipment Sales and Service, Clothing or Shoe Repair or Service:** Two (2) parking spaces plus one (1) additional parking space for each three hundred (300) square feet of floor area over one thousand (1,000).
- **Gasoline Station:** Minimum of three (3) spaces for employees. Adequate space shall be provided for waiting, stacking, and maneuvering automobiles for refueling.
- **Golf Course:** Five (5) parking spaces per hole.
- **Health Studio or Club:** One (1) parking space per two hundred (200) square feet of exercise area.
- **Hospital:** One (1) space per employee on the largest shift, plus one and one-half (1½) spaces per each bed or examination room whichever is applicable.
- **Hotel:** One (1) parking space for each sleeping room or suite plus one (1) space for each two hundred (200) square feet of commercial floor area contained therein.
- **Kindergartens, day schools, and similar child training and care establishments** shall provide one (1) paved off-street loading and unloading space for an automobile on a through "circular" drive for each ten (10) students, or one (1) space per ten (10) students, **plus** one (1) space per teacher.
- **Library or Museum:** Ten (10) spaces plus one (1) space for every three hundred (300) square feet, over one thousand (1,000) square feet.
- **Lodge or Fraternal Organization:** One (1) space per two hundred (200) square feet.
- **Manufacturing or Industrial Establishment, Research or Testing Laboratory, Creamery, Bottling Plant, Warehouse, Printing or Plumbing Shop, or Similar Establishment:** One (1) parking space for each employee on the maximum working shift plus space to accommodate all trucks and other vehicles used in connection therewith, but not less than one (1) parking space for each one thousand (1,000) square feet of floor area.
- **Medical or Dental Office:** One (1) space per two hundred and fifty (250) square feet of floor area. Facilities over twenty thousand (20,000) square feet shall use the parking standards set forth for hospitals.
- **Mini-Warehouse:** Four (4) spaces per complex plus one (1) one additional space per three hundred (300)



ITE Parking Generation Manual 5th Edition – Hotel (310)

Hotel (310)

Peak Period Parking Demand vs: Rooms

On a: Weekday (Monday - Friday)

Setting/Location: General Urban/Suburban

Peak Period of Parking Demand: 11:00 p.m. - 8:00 a.m.

Number of Studies: 22

Avg. Num. of Rooms: 321

Peak Period Parking Demand per Room

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.74	0.43 - 1.47	0.64 / 0.99	0.65 - 0.83	0.22 (30%)

Data Plot and Equation

