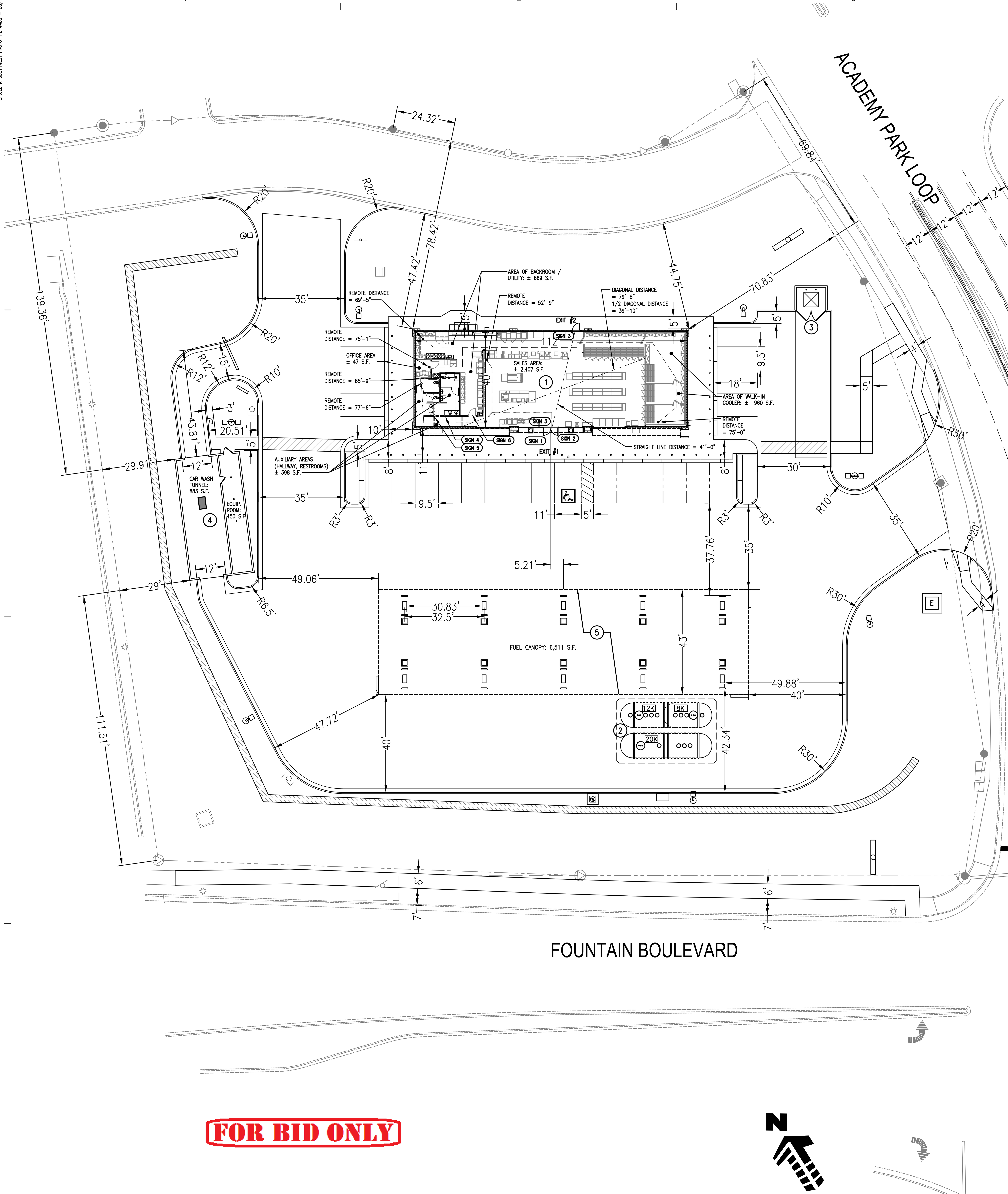
CIRCLE K SOUTHWEST PROTOTYPE 4480 – 08/13/2013



1 SCALE N.T.S. LIFE SAFETY PLAN

PROJECT DATA AND BUILDING CODE ANALYSIS

APPLICABLE BUILDING CODES:

BASED ON THE FOLLOWING:
2011 PIKES PEAK REGIONAL BUILDING CODE (PPRBC) (IBC 2009)

2009 INTERNATIONAL BUILDING CODE

2009 INTERNATIONAL FIRE CODE AND LOCAL AMENDMENTS

2009 INTERNATIONAL MECHANICAL CODE

2009 INTERNATIONAL PLUMBING CODE

2009 INTERNATIONAL ENERGY CONSERVATION CODE

2011 NATIONAL ELECTRICAL CODE

2003 ICC/ANSI 117.1 ACCESSIBILITY
ALL FEDERAL, STATE, AND LOCAL CODES & AMENDMENTS

1. OCCUPANCY GROUP:

A. C-STORE TOTAL BUILDING SQ. FT. = 4,480 SQ. FT. — GROUP M (MERCANTILE)
B. FUEL CANOPY TOTAL SQ. FT. = 6,511 SQ. FT. — GROUP M (MERCANTILE)
C. CAR WASH SQ. FT. = 1,334 SQ. FT. — GROUP B (BUSINESS)

2. INTERNAL CONVENIENCE STORE BUILDING SQUARE FOOTAGE BREAKDOWN OF AREAS:

BUILDING AREA:

1. ACCESORY STORAGE AREA, MECHANICAL EQUIPMENT ROOM:	
A. AREA OF BACKROOM / UTILITY:	= 671 S.F.
B. AREA OF WALK-IN COOLER	= 963 S.F.
	= 1,634 S.F.
2. SALES AREA/ CASHIER AREA:	= 2,358 S.F.
3. AUXILIARY AREAS (HALLWAY, RESTROOMS):	= 433 S.F.
4. OFFICE AREA:	= 55 S.F.
TOTAL BUILDING AREA	= 4,480 S.F.

3. CONSTRUCTION TYPE:

A. C-STORE BUILDING: V – B, NON-SPRINKLERED
B. FUEL CANOPY: II – B, NON-SPRINKLERED
C. CAR WASH: V – B, NON-SPRINKLERED

4. LOCATION ON PROPERTY:

A. C-STORE BUILDING: (SEPARATION FROM OTHER STRUCTURE OR PROP. LINE)
1) EAST SIDE – 70.8' (TO PROPERTY LINE)
2) NORTH SIDE – 78.4' (TO PROPERTY LINE)
3) WEST SIDE – 71.6' (TO CAR WASH)* ; 128.1' (TO PROPERTY LINE)
4) SOUTH SIDE – 66.2' (TO FUEL CANOPY)

NOTE: PROJECT MEETS THE INTENT OF THE CODE FOR ALLOWABLE BUILDING AREA PER IBC SECTION 503.
* CONVENIENCE STORE AND CAR WASH ARE DESIGNED AS ONE BUILDING PER THE EXCEPTION TO IBC SECTION 705.3.

B. FUEL CANOPY: (SEPARATION FROM OTHER STRUCTURE OR PROP. LINE)
1) EAST SIDE – 92.1' (TO PROPERTY LINE)
2) NORTH SIDE – 66.2' (TO CONVENIENCE STORE)
3) WEST SIDE – 102.2' (TO PROPERTY LINE)
4) SOUTH SIDE – 72.8' (TO PROPERTY LINE)

NOTE: PROJECT MEETS THE INTENT OF THE CODE FOR ALLOWABLE BUILDING AREA PER IBC SECTION 503.

C. CAR WASH: (SEPARATION FROM OTHER STRUCTURE OR PROP. LINE)
1) EAST SIDE – 71.6' (TO CAR WASH)* ; 270.5' (TO PROPERTY LINE)
2) NORTH SIDE – 139.4' (TO PROPERTY LINE)
3) WEST SIDE – 29' (TO PROPERTY LINE)
4) SOUTH SIDE – 111.5' (TO PROPERTY LINE)

NOTE: PROJECT MEETS THE INTENT OF THE CODE FOR ALLOWABLE BUILDING AREA PER IBC SECTION 503.
* CONVENIENCE STORE AND CAR WASH ARE DESIGNED AS ONE BUILDING PER THE EXCEPTION TO IBC SECTION 705.3.

5. BUILDING HEIGHT: (PER TABLE 503)

A. C-STORE BUILDING:
– PROPOSED STRUCTURE IS (1) STORY @ 23'-6" HIGH
– ALLOWABLE HEIGHT FOR TYPE V-B CONSTRUCTION IS (1) STORY AND 40 FEET.
– 23'-6" IS LESS THAN 40'-0" (MEETS CODE)

B. FUEL CANOPY:
– PROPOSED STRUCTURE IS (1) STORY @ 19'-0" HIGH
– ALLOWABLE HEIGHT FOR TYPE II-B CONSTRUCTION IS (4) STORIES AND 55 FEET.
– 19'-0" IS LESS THAN 55'-0" (MEETS CODE)

C. CAR WASH:
– PROPOSED STRUCTURE IS (1) STORY @ 16'-8" HIGH
– ALLOWABLE HEIGHT FOR TYPE V-B CONSTRUCTION IS (1) STORY AND 40 FEET.
– 16'-8" IS LESS THAN 40'-0" (MEETS CODE)

6. ALLOWABLE FLOOR AREA: (PER TABLE 503)

A. *C-STORE BUILDING:
– TYPE V-B CONSTRUCTION WITHOUT SPRINKLERS= 4,480 S.F.
– ALLOWABLE FLOOR AREA FOR M OCCUPANCY, V-B CONSTRUCTION = 9,000 S.F.
4,480 S.F. IS LESS THAN 9,000 S.F. (MEETS CODE)

B. FUEL CANOPY:
– TYPE II-B CONSTRUCTION WITHOUT SPRINKLERS= 6,511 S.F.
– ALLOWABLE FLOOR AREA FOR M OCCUPANCY, II-B CONSTRUCTION = 12,500 S.F.
6,511 S.F. IS LESS THAN 12,500 S.F. (MEETS CODE)

C. *CAR WASH:
– TYPE V-B CONSTRUCTION WITHOUT SPRINKLERS= 1,334 S.F.
– ALLOWABLE FLOOR AREA FOR B OCCUPANCY, V-B CONSTRUCTION = 9,000 S.F.
1,334 S.F. IS LESS THAN 9,000 S.F. (MEETS CODE)

* NOTE: CONVENIENCE STORE AND CAR WASH ARE DESIGNED AS ONE BUILDING PER THE EXCEPTION TO IBC SECTION 705.3.
4,480 S.F. + 1,334 S.F. = 5,814 S.F. IS LESS THAN 9,000 S.F. (MEETS CODE)

7. SEPARATED OCCUPANCIES:

A. NONE IN THIS PROJECT.
B. THE S-1 STORAGE AREA AND B OFFICE AREA ARE NOT REQUIRED TO BE SEPARATED FROM THE GROUP M SALES AREA PER TABLE 508.4.

8. BUILDING ELEMENT FIRE RESISTANCE BASED ON CONSTRUCTION TYPE:

A. C-STORE BUILDING: (TABLE 601): V – B CONSTRUCTION

1) EXTERIOR, BEARING WALLS	NOT REQUIRED
2) EXTERIOR, NON-BEARING WALLS	NOT REQUIRED
3) INTERIOR, BEARING WALLS	NOT REQUIRED
4) INTERIOR, NON-BEARING WALLS	NOT REQUIRED
5) STRUCTURAL FRAME	NOT REQUIRED
6) FLOOR / CEILINGS	NOT REQUIRED
7) ROOF / CEILINGS	NOT REQUIRED

B. FUEL CANOPY: (TABLE 601): II – B CONSTRUCTION

1) EXTERIOR, BEARING WALLS	NOT REQUIRED
2) EXTERIOR, NON-BEARING WALLS	NOT REQUIRED
3) INTERIOR, BEARING WALLS	NOT REQUIRED
4) INTERIOR, NON-BEARING WALLS	NOT REQUIRED
5) STRUCTURAL FRAME	NOT REQUIRED
6) FLOOR / CEILINGS	NOT REQUIRED
7) ROOF / CEILINGS	NOT REQUIRED

C. CAR WASH: (TABLE 601): V – B CONSTRUCTION

1) EXTERIOR, BEARING WALLS	NOT REQUIRED
2) EXTERIOR, NON-BEARING WALLS	NOT REQUIRED
3) INTERIOR, BEARING WALLS	NOT REQUIRED
4) INTERIOR, NON-BEARING WALLS	NOT REQUIRED
5) STRUCTURAL FRAME	NOT REQUIRED
6) FLOOR / CEILINGS	NOT REQUIRED
7) ROOF / CEILINGS	NOT REQUIRED

9. EXTERIOR WALL RESISTANCE ON FIRE SEPARATION DISTANCE: (TABLE 602)

A. C-STORE BUILDING: M OCCUPANCY AND V – B CONSTRUCTION

1) WALLS LESS THAN 5 FEET	2 HOUR
2) WALLS BETWEEN 5 AND 10 FEET	1 HOUR
3) WALLS BETWEEN 10 AND 30 FEET	0 HOUR
4) WALLS GREATER THAN 30 FEET	0 HOUR

NOTE: NO EXTERIOR WALL SEPARATION IS REQUIRED. CONVENIENCE STORE AND CAR WASH ARE DESIGNED AS ONE BUILDING PER THE EXCEPTION TO IBC SECTION 705.3. (MEETS CODE)

B. FUEL CANOPY: M OCCUPANCY AND II – B CONSTRUCTION

1) WALLS LESS THAN 5 FEET	2 HOUR
2) WALLS BETWEEN 5 AND 10 FEET	1 HOUR
3) WALLS BETWEEN 10 AND 30 FEET	0 HOUR
4) WALLS GREATER THAN 30 FEET	0 HOUR

NOTE: DUE TO THE FRONTAGE AROUND THE BUILDING IN EXCESS OF 10 FEET, NO EXTERIOR WALL SEPARATION IS REQUIRED. (MEETS CODE)

C. CAR WASH: B OCCUPANCY AND V – B CONSTRUCTION

1) WALLS LESS THAN 5 FEET	2 HOUR
2) WALLS BETWEEN 5 AND 10 FEET	1 HOUR
3) WALLS BETWEEN 10 AND 30 FEET	0 HOUR
4) WALLS GREATER THAN 30 FEET	0 HOUR

NOTE: NO EXTERIOR WALL SEPARATION IS REQUIRED. CONVENIENCE STORE AND CAR WASH ARE DESIGNED AS ONE BUILDING PER THE EXCEPTION TO IBC SECTION 705.3. (MEETS CODE)

10. EXTERIOR WALL OPENINGS: (TABLE 705.8)

A. PER THE EXCEPTION TO IBC SECTION 705.8, TWO OR MORE BUILDINGS ON THE SAME LOT SHALL EITHER BE REGULATED AS SEPARATE BUILDINGS OR SHALL BE CONSIDERED AS PORTIONS OF ONE BUILDING IF THE AGGREGATE AREA OF SUCH BUILDINGS IS WITHIN THE LIMITS SPECIFIED IN CHAPTER 5 FOR A SINGLE BUILDING. WHERE THE BUILDINGS CONTAIN DIFFERENT OCCUPANCY GROUPS OR ARE OF DIFFERENT TYPES OF CONSTRUCTION, THE AREA SHALL BE THAT ALLOWED FOR THE MOST RESTRICTIVE OCCUPANCY OR CONSTRUCTION.

11. PARAPETS: (SECTION 705.11, EXCEPTION #1)

A. A PARAPET WALL IS NOT REQUIRED TO BE FIRE-RESISTANCE RATED IN ACCORDANCE WITH TABLE 602 BECAUSE OF FIRE SEPARATION DISTANCE.
(MEETS CODE)

C-STORE
12. OCCUPANT LOADS: (TABLE 1004.1.1)

A. MERCANTILE AREA:	30 S.F. GROSS PER OCCUPANT
B. BUSINESS AREA:	100 S.F. GROSS PER OCCUPANT
C. KITCHEN AREA:	200 S.F. GROSS PER OCCUPANT
D. STORAGE / STOCK / SHIPPING AREAS:	300 S.F. GROSS PER OCCUPANT
E. ACCESSORY AREAS:	300 S.F. GROSS PER OCCUPANT

13. OCCUPANT LOAD CALCULATIONS:

C-STORE		
1. ACCESSORY STORAGE AREA, MECHANICAL EQUIPMENT ROOM:	1,629 S.F./300	= 5 OCC.
2. SALES AREA/ CASHIER AREA	2,407 S.F./30	= 80 OCC.
3. AUXILIARY AREAS (HALLWAY, RESTROOMS)	398 S.F.	= 0 OCC.
4. OFFICE AREA:	47 S.F./100	= 1 OCC.
TOTAL OCCUPANT LOAD		= 86 OCCUPANTS
FUEL CANOPY OCCUPANT LOAD:	6,511 S.F./200	= 33 OCCUPANTS
CAR WASH OCCUPANCY LOAD:		
1. EQUIPMENT ROOM:	450 S.F./300	= 2 OCC.
2. WASH BAY:	884 S.F./300	= 5 OCC.
TOTAL OCCUPANT LOAD		= 7 OCCUPANTS

C-STORE
14. TRAVEL DISTANCE TO EXITS: (TABLE 1016.1)

A. REQUIRED DISTANCE = 200 FEET WITHOUT AUTOMATIC SPRINKLER SYSTEM
B. PROVIDED MAXIMUM TRAVEL DISTANCE = 77'-6" (MEETS CODE)

C-STORE
15. NUMBER OF EXITS REQUIRED: (TABLE 1021.1)

A. REQUIRED: 2 EXITS
B. PROVIDED: 2 EXITS (MEETS CODE)

C-STORE
16. EGRESS WIDTH REQUIREMENTS (NON-SPRINKLERED): (SECTION 1005.1)

A. REQUIRED: 0.20 INCHES / OCCUPANT (86 OCCUPANTS) = 17.2 INCHES
B. PROVIDED: 34"x1 + 68"x1 = 102 INCHES (2 EXIT DOORS) (MEETS CODE)

EXIT REQUIREMENTS

TRAVEL DISTANCE	COMMON PATH OF TRAVEL	
ALLOWABLE TRAVEL DISTANCE WITHOUT SPRINKLER 200 FT PER IBC TABLE 1016.1	COMMON PATH OF TRAVEL DISTANCE WITHOUT SPRINKLER 75 FT 30 FT IN SALES AREA	ACTUAL COMMON PATH OF TRAVEL DISTANCE 30 FT.
MINIMUM NO. OF EXITS	ARRANGEMENT MEANS OF EGRESS:	
REQUIRED 2 PROVIDED 2	REQUIRED DISTANCE BETWEEN EXIT DOORS DISTANCE BETWEEN EXITS SHALL BE EQUAL OR NOT LESS THAN 1/2 OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE BUILDING OR AREA TO BE SERVED – MEASURED IN A STRAIGHT LINE BETWEEN EXIT DOORS OR EXIT ACCESS DOORWAYS.	ACTUAL STRAIGHT LINE DISTANCE BETWEEN EXITS EXIT #1 TO #2 = 41'-0" ACTUAL STRAIGHT LINE ACROSS PUBLIC AREA: DIAGONAL AT PUBLIC AREA = 79'-8" 1/2 DIAGONAL = 39'-10" CONCLUSION = = 41'-0" IS GREATER THAN 39'-10" (MEETS CODE)

ACCESSIBILITY SIGNS

- SIGN 1 — INTERNATIONAL SYMBOL OF ACCESSIBILITY
- SIGN 2 — "THIS DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS" LETTER MIN. 1" HIGH. SIGN MOUNTED ABOVE DOOR.
- SIGN 3 — TACTILE EXIT SIGN SHALL COMPLY SECTION 703.3, ICC / ANSI A117.1 2009
- SIGN 4 — MEN'S RESTROOM
- SIGN 5 — WOMEN'S RESTROOM
- SIGN 6 — EMPLOYEES ONLY

SITE PLAN KEY NOTES

1. PROPOSED CONVENIENCE STORE ± 4,480 S.F.
2. PROPOSED UNDERGROUND STORAGE TANKS, SEE FUEL PLANS.
3. PROPOSED TRASH ENCLOSURE PER COLORADO SPRINGS STANDARD DETAILS, AND CIRCLE K APPROVAL. SEE SHEET SD1.3, SITE DETAILS.
4. PROPOSED CAR WASH ± 1,333.5 S.F. (UNDER SEPARATE PERMIT)
5. PROPOSED FUEL CANOPY ± 6,511 S.F.

GreenbergFarrow
1430 W. Peachtree St., Suite 200
Atlanta, GA 30309
t: 404 601 4000 f: 404 601 3980

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ISSUE/REVISION RECORD

DATE	DESCRIPTION
01/19/15	PERMIT SET

PROFESSIONAL SEAL

PROFESSIONAL IN CHARGE
HUGHES THOMPSON
PROJECT MANAGER
OSCAR FLORES
QUALITY CONTROL
WARREN DRURY
DRAWN BY
ARMANDO MATA

PROJECT NAME
CIRCLE K STORES, INC. CAR WASH
COLORADO SPRINGS COLORADO
E. FOUNTAIN BLVD & ACADEMY PARK LOOP

CIRCLE K STORES INC.

PROJECT NUMBER
20130780

SHEET TITLE
LIFE SAFETY PLAN

SHEET NUMBER
LS1.0-CW

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