



Town of Parker Community Development Department
 Development Review Division
 Attention: **Krista Flynt**

Application Type: **Site Plan**
 Status: **First Referral**
 Application Name: **Parker and Pine F1 L6 – Everbrook Daycare**
 Case/AP#: **SP20-058**
 Referral Received: January 29, 2021
 Comments Due: February 23, 2021

Application Location: Generally located at the southeast corner of Twenty Mile and Pine Lane

Review date: **February 16, 2021**
 Plan reviewer: **Randall L. Capra, rcapra@parkeronline.org**
 Phone: 303.805.3169

Narrative: The applicant, Allison Morgan, is requesting a Site Plan for a 12,723 sq. ft. day care building. The site is located on the southeast corner of Twenty Mile Road and Pine Lane.

Code Reference: 2018 International Fire Code, 2018 International Building Code, 2017 NEC (until Dec 31, 2021)

TOWN OF PARKER FIRE/LIFE SAFETY:	R REVIEWED FOR CODE COMPLIANCE; REVISIONS REQUIRED
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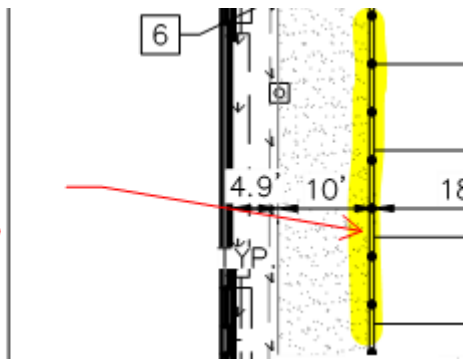
- 1st Submittal – Reviewed February 16, 2021
- 2nd Submittal – Reviewed May 21, 2021 (*comments in red, italicized font*)

UNRESOLVED ISSUES/COMMENTS

- A. *Please provide information as to what these symbols are on the site plan; should these be bollards and a fence, the improvements should be inset to allow vehicles to fully use the parking spots. Should there be a fence in this location, the question arises as to how parents and children will access the walkway without having to walk through a parking lot. Additionally, emergency access will be compromised should a fence be installed in this area. See below and address this issue when resubmitting:*

Callout (19) has been added to clarify. These are proposed bollards. No fence will be added. Bollards have been shifted to be in sidewalk.

What are these symbols? Provide information on this.



1. The contact information provided on the site plan, utility drawings, and the construction documents indicate that South Metro Fire as the contact for fire response on this project; please note: SMFRA is the response agency while the Town of Parker Building – Fire Life Safety Division is the agency that will address all site and building review. This information should be corrected to reveal the correct agencies responsible for this review. *Satisfied; applicant has addressed/acknowledged with current submittal.*
2. The applicant shall be aware that the Town of Parker will officially have adopted the 2021 ICC codes and the 2020 NEC standard on January 1, 2022; any submittal documents made after December 31, 2021 shall comply with

the 2021 ICC codes and the 2020 NEC standard. *Satisfied; applicant has addressed/acknowledged with current submittal.*

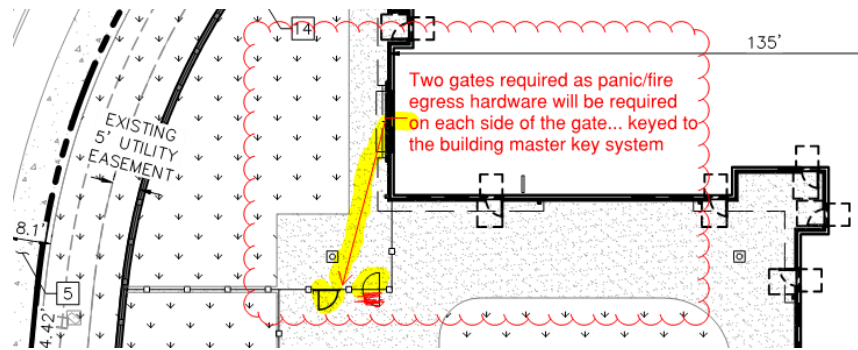
3. The applicant shall be aware that no vertical construction on this site will be allowed until such time that curb gutter and first lift of asphalt are installed; a site inspection will be required to ensure that this requirement is made prior to allowing vertical construction to commence. *Satisfied; applicant has addressed/acknowledged with current submittal.*
4. The applicant shall be aware that the access road hydrant distribution was not planned to address the suppression needs for all commercial properties within this subdivision; this site requires the addition of one hydrant (to be located at the s/w corner island of the building... as required per NFPA 24 Section 7.2.3... see the snap shot of the red-lined fire hydrant location shown under item 4 below: *Satisfied; applicant has addressed/acknowledged with current submittal. Note – Per discussion, the hydrant that is to be installed on the south side of the access road must be in service prior to any stock and train, TCO, or CO being issued for this building.*
5. Per the requirements of [18 IFC Section 503.1.1 Buildings and Facilities] approved fire apparatus access roads shall be provided for every facility, building, portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility (the building is a 155+ feet long and 50.56 feet wide and cannot meet the requirement as measured from the center line of the fire apparatus as measured by an approved route from any point that a fire engine might park when responding to a call at this building). This submittal does not provide for this requirement of the code. Per the requirements of the code, the fire code official is allowed to increase the dimension of the 150 feet provided that the applicant meets Exception 1.1 of this section... “The building is equipped throughout with an approved automatic sprinkler suppression system installed in accordance with section 903.1.1, 903.1.2, or 903.3.1.3. **Note – This submittal does address the requirements to sprinkle the building; with respect to this project, access is provided though the occupancy type and occupant loading dictates that the building is to be sprinklered.** *Satisfied; applicant has addressed/acknowledged with current submittal.*
6. The applicant shall, in addition to notating that the UFL is a 6:” line, notate the length of the UFL as measured from the “T” on the street to the flange in the building. Address this issue when resubmitting. *Satisfied; applicant has addressed/acknowledged with current submittal.*
7. With regard to the fire sprinkler control valve room, ensure that the following is addressed: *Partially satisfied; applicant has acknowledged with current submittal though the issue was not addressed. When resubmitting, provide a plan of the room showing that all items noted below can be accommodated in this room (along with the domestic, etc. that might also be included within the design of the building.*
 - Exterior access is required into the riser room with access into the building provided either adjacent to the riser room or through the riser room.
 - The FACP will be required to be located in the fire sprinkler control valve room; ensure that the riser room is sized to accommodate the FACP and the riser. A three-foot clearance is required in front of the FACP as well

As discussed via phone, acknowledged. Riser room size has been confirmed to accommodate all items listed below. Riser room plans will be included with Architectural Construction documents for review.

than 24 inches from foundation wall; three

8. The riser room shall not be located behind a fence; ensure that this provision is addressed when resubmitting. *Satisfied; applicant has addressed/acknowledged with current submittal.*
9. The playground areas shall be separated that each of the areas has two points of egress, separate by one half of the diagonal. Gates will be required to have panic/fire egress hardware and in each play yard, gates shall open in the direction of travel; this will require that two gates will be required when separating play yards to ensure that this provision is met. *Not satisfied; applicant has acknowledged with current submittal though intent does not meet code... see below:*

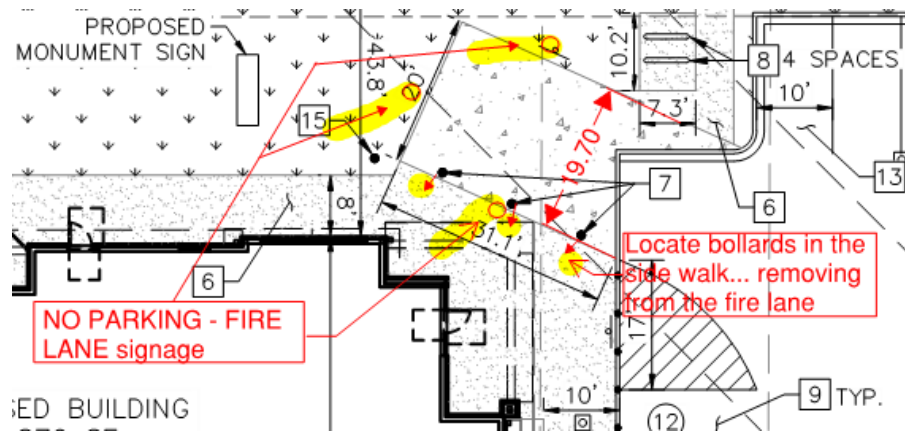
Additional gate added as shown in the photo below. Refer to Site Plan.



10. The applicant shall provide an auto turn analysis indicating that apparatus can navigate all portions of this site (showing that the proposed hammer head can work); NO PARKING – FIRE LANE signage is required for any portion of the access where the 20-foot clear width requirement cannot be met. *Partially satisfied; applicant has addressed/acknowledged with current submittal though three NO PARKING – FIRE LANE signs are required to be added in the hammer head* Additional signs have been added.

11. The construction drawings indicate that there are three proposed removable bollards to be placed at the hammer head required for site access; the applicant shall remove the bollards from the site plan as they are not allowed. Signage maybe placed that states EMERGENCY ACCESS ONLY on each side of the entry. No Parking – Fire Lane signage (with directional arrows pointing either direction) shall be placed on all three sides of the hammerhead. See below for fire lane signage areas. *Partially satisfied; applicant has relocated the “removable” bollards though and placed adjacent to the access (Bldg side). The bollards, however, are shown in the 20-foot clear width of the required fire lane and shall be placed in the sidewalk outside of the 20-foot clear width requirement. See below for more direction and address this issue when resubmitting.*

Bollards have been updated to show outside of the 20' clear area.



12. The Town of Parker requires that fire apparatus access roads meet the clear-width and weight-bearing standards of the jurisdiction in which the project is located. Roadways shall be designed to support the imposed weight of fire apparatus, 30 two axle and 40 ton three axle vehicles. An unimpeded clear width of 24-feet shall be maintained at all times. As such, any location where parked vehicles would obstruct this clear width requirement will require “NO PARKING – FIRE LANE” signage. *This signage shall be red on white. Update design criteria has been provided at the end of this document; ensure compliance when resubmitting. Partially satisfied; applicant has provided most of the fire lane signage; see above for further clarification of* Additional signs have been added.

GENERAL COMMENTS (as applicable)

All engineering documents submitted to the Town of Parker shall bear the wet signature and seal of the engineer or architect in responsible charge of the design.

Water distribution and site access components shall be installed and in service prior to the construction of any portion of the structure, except by special permit issued by the Fire District.

Underground fire lines

When thrust blocks are used as part of the pipe restraint system, submitted plans for permit shall provide detailed documentation that the thrust blocks satisfy all requirements of 13 NFPA 24: 10.8.2, including specific thrust block dimensions and mathematical calculations for block dimensions per guidelines provided in Annex A.10.8.2.

Underground Fire Line - Submittal Requirements

Reference: 2016 NFPA 24 [Installation of Private Fire Service Mains and Their Appurtenances](#)

A separate permit is required and will be issued pending review of a detailed submittal which must include the following: [18 IFC 901.2]

4.1.1 Working plans shall be submitted for approval to the authority having jurisdiction before any equipment is installed or replaced.

4.1.2 Deviation from approved plans shall require permission of the authority having jurisdiction.

4.1.3 Working plans shall be drawn to an indicated scale on sheets of uniform size, with a plan of each floor as applicable, and shall include the following items that pertain to the design of the system:

- (1) Name of owner
- (2) Location, including street address
- (3) Point of compass
- (4) A graphic representation of the scale used on all plans
- (5) Name and address of contractor
- (6) Size and location of all water supplies
- (7) The following items that pertain to private fire service mains:
 - (a) Size
 - (b) Length
 - (c) Location
 - (d) Material (ductile iron, PVC, etc.)
 - (e) Point of connection to city main
 - (f) Sizes, types, and locations of valves, depth at which the top of the pipe is laid below grade
 - (g) Method of restraint (Meg-a-Lug or similar)
 - (h) Stamped and signed thrust block calculations specific to the soils conditions for the site
 - (i) Copy of the installer's state license

4.1.4 The working plan submittal shall include the manufacturer's installation instructions for any specially listed equipment, including descriptions, applications, and limitations for any devices, piping, or fittings. Submittals must include installation specifications for thrust blocks, corrosion protection, restraint system, bedding, detail of pipe under the building up to, and including, the flange. When it is intended that a different contractor will extend the fire line from a stopping point outside the building, to the inside flange, a second submittal and permit is required.

All plans shall be combined into a single pdf prior to uploading to the Town of Parker website.

All tees, plugs, reducers, valves, and hydrant branches shall be restrained against movement by thrust blocks [10.8.2] or restrained joint systems [10.8.3]. When thrust blocks are used as part of the pipe restraint system, submitted plans shall provide detailed documentation that the thrust blocks satisfy all requirements of Section 10.8.2, including specific thrust block dimensions and mathematical calculations for block dimensions per guidelines provided in Annex A.10.8.2.

Any individual or company who physically works on or installs any part of a fire suppression system, including underground supply lines, from public water lines to system risers and backflow preventers, **must** be registered with the Colorado Division of Fire Safety. [Dept. of Public Safety, Division of Fire Safety, Fire Suppression Program 8 CCR 1507-11:3.1.2] Documentation of valid annual registration is required with plan submittal.

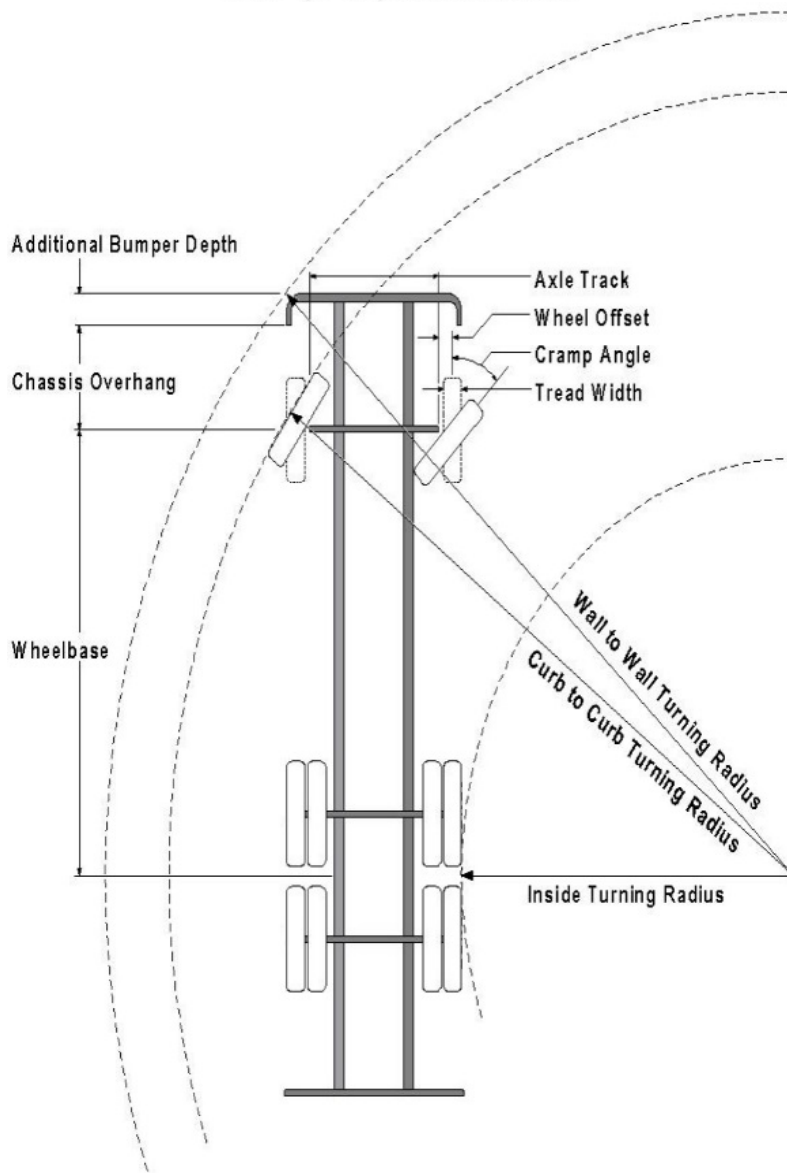
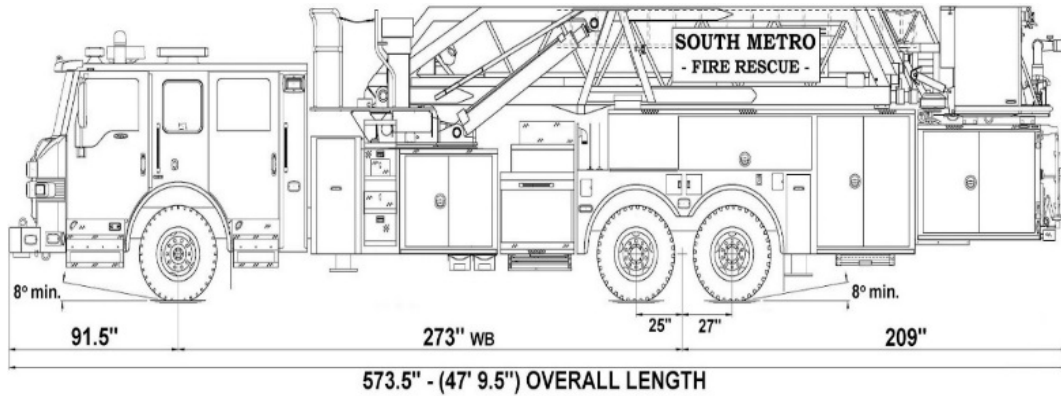
The following website for the Colorado Division of Fire Safety will provide registration instructions.

<http://dfs.state.co.us/SuppAppsProInsp.htm>

All submittals must display a wet stamp and original signature by a Colorado licensed professional engineer or NICET III, or higher, in fire suppression systems. [Dept. of Public Safety, Division of Fire Safety, Fire Suppression Program 8 CCR 1507

FIRE ACCESS ROAD DESIGN CRITERIA

VEHICLE SPECIFICATIONS are provided for the largest apparatus in use by South Metro Fire Rescue. Fire Apparatus Access Roads shall be capable of accommodating this apparatus.



Vehicle Specifications

Length: 47' 9.5"

Width: 8' 5" - (10' 1" mirror to mirror)

Height: 10' 9"

Wheelbase: 273 in.

Design load: 80,000 pounds

Inside Cramp Angle: 40°

Axle Track: 83"

Wheel Offset: 5.3"

Tread Width: 13.5"

Turning Radii:

Inside Turn: 26 ft. 1 in.

Curb to curb: 41 ft. 11 in.

Wall to wall: 46 ft. 8 in.

Where objects are present adjacent to the fire apparatus access road, particularly on turns and turn arounds which require backing, a reasonable safety margin shall be provided to prevent potential damage to the property and to the fire apparatus.

PRIVATE ROADS that provide access to more than two dwellings or one or more commercial buildings shall be constructed to meet the roadway standards approved by the South Metro Fire Rescue Authority for fire apparatus access. Private roads that do not meet the roadway standard may be accepted provided that alternative methods and materials are incorporated into the subdivision that addresses the fire and life safety of the citizens.

FIRE CODE REVIEW BLOCK

All fire hydrants shall be installed according to water utility standards. The number and locations of the fire hydrants as shown on the Overall Utility Plan are correct as specified by the Town of Parker, Community Development Department.

Fire Code Official or Designated Representative

Date

(NOTE - Underground Fire Line (UFL) submittal documents must meet the requirements of NFPA 24 when submitting for review.)