

**FALCON HIGHLANDS SOUTH FILING 1
NATURAL RESOURCE REPORT
FINAL PLAT
FILE NUMBER: SF2418**

August 14, 2024, Rev. January 24, 2025



PREPARED FOR:

Challenger Communities
8605 Explorer Dr., Suite 250
Colorado Springs, CO 80920

PREPARED BY:

Matrix Design Group
2435 Research Parkway, Suite 300
Colorado Springs, CO 80920

Owner/ Applicant: Challenger Communities and Next Top Holdings
8605 Explorer Dr., Suite 250
Colorado Springs, CO 80920
Office: (719) 598-5192

Planner: Matrix Design Group
2435 Research Parkway, Suite 300
Colorado Springs, CO 80920
Office: (719) 575-0100

Civil Engineer: Daniel Madruga
ATWELL, LLC
6200 S. Syracuse Way, Suite 470
Greenwood Village, CO 80111
Office: (303) 462-1100

Tax Schedule No: 5300000588; 5300000587, 5300000817 (Part)

Site Location, Size, Zoning:

The project being submitted to El Paso County is a development application for the proposed Falcon Highlands South Filing 1 Final Plat. Falcon Highlands South is located south of Woodmen Rd, west of State Highway 24 and west of New Meridian Rd., in the greater Falcon area of El Paso County. The site is +/-23.592AC acres and proposes 24 single family detached residential lots with a gross density of 1.02 DU/ Acre.

The site layout encompasses 24 larger lots north of Antelope Meadows Circle. Minimum lot size within the development is 19,000 SF to promote compatibility with the existing Falcon Highlands lots to the north and west. The development will be accessed by Bridel Veil Way which will connect to Sahalee Trail, an urban local public road.

Topography

The topography of the project site is relatively flat draining to the south. There are grade changes of approximately 20' in a southwesterly direction as the site slopes down towards the south and west. The existing slopes are slight to moderate with no portions of the proposed site possessing slopes that would prevent development. The site is suitable for development and is not impacted by the existing grades. Current acceptable state and local best grading practices will be employed. The site slopes to the south and west where drainage will be routed to the right of way and then piped to a permanent water quality and detention pond just south of property.

Hydrologic Features/ Flood Hazard/ Floodplain

There is no major hydrologic feature within the project site. The entire development is within "Zone X" as designated FEMA floodplain as determined by the flood insurance rate map, community map number '08041C0561G', effective date 'December 7, 2018'.



The overarching premise of the drainage design is to route overland flow from residential lots to adjacent right-of-ways where public storm infrastructure will be installed and ultimately convey the stormwater to the downstream permanent water quality and detention facility to provide water quality treatment as well as flow attenuation and detention. Previous drainage reports designed ponds 1 and 2 (shown on the Final Plat) in order to provide detention for existing Filings 2 and 3. The analysis in the Final Drainage Report provides a detailed and defined design of these ponds to account for drainage requirement changes as well as a design to account for full spectrum detention. This development will redesign these existing ponds to meet current standards and provide full-spectrum detention.

There is a proposed grass-lined swale to capture flows in the open space behind the northern lots, The design of this swale is included in the report in Appendix E of the Final Drainage Report included with this submittal, to accurately access the width and depth of the drainage way for the minor and major storm events.

Wetlands

There are designated wetlands within the greater Falcon Highlands South development; however, these areas are located within existing drainage ways and are not included within the Filing 1 boundary. The existing ponds will be contained by individual tracts limiting development and will not be disturbed by this development. Drainage from the development will be conveyed to the existing detention ponds which will be improved to meet El Paso County standards. Please reference the Grading and Erosion Control plan, included with this submittal to see mitigation and preventative measures required to be taken for construction.

The entire development is within “Zone X” as designated FEMA floodplain as determined by the flood insurance rate map, community map number '08041C0561G', effective date 'December 7, 2018'.

Soils

The soils are suitable for construction with any necessary soil hazards to be mitigated using common and accepted engineering design techniques. More detailed soil investigations may be provided with future submittals. A Preliminary Soils and Geologic Hazards Study was completed for the Falcon Highlands South development. This study indicated the site contains potential geologic hazards typically found within this area of El Paso County to include one significant hazard potential to be erosion, potential for flooding and shallow groundwater. The potential hazards identified are relatively common to the region and are mitigated by accepted engineering design techniques and construction practices. More detailed soil investigations may be provided with future submittals.

A “Geology and Soils Evaluation Report” completed by RMG in November of 2024, found that proposed development is feasible. The general geology of the area is typically a combination of alluvial and pluvial deposits overlying the Black Squirrel Formation. Units mapped as occurring on the site are:

- Alluvium two (lower Holocene), which consists of dark gray to brown, poorly to well sorted moderately consolidated, silt, sand, gravel, and minor clay and occasional boulders in the stream terrace deposits approximately 6 to 12 feet above the modern flood plain or as non-terrace forming alluvium in valley headwaters. Clasts are subrounded to well-rounded and the dominant sediment is sandy gravel with silty sand matrix. Clays seams are poorly to moderately stratified.
- Black Squirrel Formation (Paleocene), which is Gray-green to tan to brownish gray, moderately-well sorted cross-bedded sandy arkoses interbedded with the micaceous sand claystone that contain abundant plan fragments and occasional, fine-to medium-grained massive arkosic beds. The exposed upper part of the Black Squirrel Formation is gradational with the overlying Dawson Arkose making the contact problematic. Thickness within the Falcon quadrangle is approximately 130 feet. The claystone within this unit may be prone to swelling when wet.
- Artificial Fill, which is man-placed fill in the form of stockpiles that were placed between prior to 2005 to 2015, as indicated by historical aerial photos. The stockpiles generally consisted of unsorted silt, sand, clay and rock fragments. The unsorted soil was mixed with uncontrolled dumping of household debris. The average thickness of the unit is less than 15 feet, above and below the ground surface.

The following present a list of geologic hazards encountered on this site:

- Groundwater
 - Mitigation: Proposed stiffed slab foundations will be suitable for the included lots. Underslab drains may be recommended at the time of either the lot-specific subsurface soil investigations and/or open excavation observations. Overlot grading may encounter elevated groundwater conditions necessitating localized stabilization, especially in areas

where groundwater measurements were at depths of 7 feet or less from the proposed finished ground surface

- **Compressible and/or Potentially Expansive Soils**
 - **Mitigation:** Shallow foundations are anticipated for the lots included in this study. Based on the boring logs and laboratory test data from the previous study, stiffened slab foundations atop either undisturbed native soil or atop structural fill after limited over-excavation and replacement will be suitable for the proposed lots.
- **Undocumented Fill**
 - **Mitigation:** If undocumented or otherwise unsuitable fill soils are encountered during the overlot grading process, they will require removal (over-excavation) and replacement with compacted structural fill. The zone of over-excavation shall extend to the bottom of the unsuitable fill zone and shall extend at least that same distance beyond the building perimeter (or lateral extend of the fill, if encountered first).

Mitigation recommendations for faults, seismicity, radon, flooding, surface drainage, erosion, corrosion, surface grading and drainage are discussed in the original Soils and Geology Study for Falcon Highlands South Development. It is RMG's opinion that recommendations regarding these conditions are still valid for the lots within the currently proposed Filing No. 1, Phase 1.

No geologic hazards were found that would preclude the proposed development as planned. The potential for expansive/compressible soils and shallow groundwater are not considered unusual for the Front Range region of Colorado. Mitigation of geologic hazards is most effectively accomplished by avoidance. However, where avoidance is not a practical or acceptable alternative, geologic hazards should be mitigated by implementing appropriate planning, engineering, and local construction practices. Stiffed slab foundations are currently proposed within Filing No. 1, Phase. The foundation and floor slabs of the structure should be designed using the recommendations provided in the site specific soil investigation performed for each lot. In addition, appropriate surface drainage should be established during construction and maintained by the homeowner.

To develop recommendations for construction of the proposed roadways, a pavement design investigation should be performed. This investigation should consist of additional test borings, soil laboratory testing and specific recommendations for the design and construction of roadway pavement sections. A copy of the report has been included in the submittal package.

Scenic Resources & Unique Natural Areas

There are no unique natural features or scenic resources on the project site. No significant natural features, such as distinctive topographic features including buttes and rock outcroppings; existing vegetation, drainage, riparian and wetland areas; significant wildlife habitats; identified aquifer recharge areas; and aesthetic features have been identified within the project boundary.

Utilities

Falcon Highlands South water service will be provided by Falcon Highlands Metropolitan District. This district currently cannot serve the entire proposed development; however, there is sufficient water for the 24 lots within Filing 1 and there are plans in place to make the necessary upgrades, including redrilling an additional well for future units.

Woodmen Hills Metropolitan District will service sanitary sewer for this development and there is sufficient sewer capacity available for the 24 lots within Filing 1. At full build out, Falcon Highlands South will ultimately trigger upgrades to the existing lift station as well as the force main per the Wastewater Report.

Wildlife/Endangered Species

The Colorado Division of Wildlife note the following as present in the area.

- Prairie Dog
- Mule Deer
- Pronghorn Antelope
- Fox species
- Coyote
- Rabbits
- Raptors
- Songbirds
- Numerous Small Mammals

The U.S. Fish and Wildlife Service's IPaC mapper and website database (<https://ecos.fws.gov/ipac/>) was used to determine the potential of endangered species and migratory birds within the area. The IPaC mapper listed the Eastern Black Rail and Piping Plover as threatened species in this area. The Pallid Sturgeon is listed and shown as endangered. The Monarch Butterfly is shown as a candidate endangered species and Ute Ladies'-stresses as threatened.

The Eastern Black Rail (*Laterallus jamaicensis*) is most commonly found in the southeastern United States near salt and brackish marches with dense cover, however, can be found in Colorado within shallow wetlands dominated by cattail, bulrush, and willow (USFWS, 2023c). There are no identified wetlands within the project area. The project area does not support the habitat required by this species; therefore, no anticipated impacts are expected for the eastern black rail throughout the project.

Piping plover (*Charadrius melodus*) is a riparian species often found along ocean shores, rivers, and wetlands, nesting in sandy areas with sparse vegetation (USFWS, 2003). The project area does not impact the N. Platte, S. Platte, or Laramie River Basin; therefore, no anticipated impacts are expected for the piping plover throughout the project.

Pallid sturgeon (*Scaphirhynchus albus*) has a historic range stretching from Montana down to Louisiana throughout the Missouri and Mississippi River systems (USFWS, 2023c). The project area does not impact the N. Platte, S. Platte, or Laramie River Basin; therefore, no anticipated impacts are expected for the pallid sturgeon throughout the project.

Monarch butterfly has the potential to reproduce within eastern Colorado between the months of June and September, producing one to three broods (Chu, 2011). However, Monarchs rely heavily on several species of milkweed as their host plant for egg laying. The Monarch Butterfly may be present on the site during migration season (May-October); presence of this species on site is not likely.

Ute's Ladies'-stresses (*Spiranthes diluvialis*) is a perennial herb with ivory-colored flowers typically associated with perennial streams, moist meadows, and sometimes irrigation ditches or canals (USFWS, 2023c). The project area does not support the habitat required by this species; therefore, no anticipated impacts are expected for Ute's Ladies'-stresses throughout the project.

Many species indicated in this report are known from the broader area and do not necessarily occur at the project site. Revegetation and landscape design in the project area should focus on reducing human-wildlife conflicts by keeping dense vegetation away from the surrounding properties. CPW provides guidance for developers to reduce conflicts with wildlife: Colorado Parks & Wildlife - Developing with Wildlife in Mind (state.co.us).

CPW also recommends designing fences with wildlife in mind, and the current fencing on site is not wildlife-friendly and does not appear to be regularly maintained. We suggest using fencing materials and techniques that reduce human-wildlife conflicts within and surrounding the development. While it is not possible to eliminate human-wildlife conflicts, careful and thoughtful design solutions can reduce conflict, especially within new developments. In this case, we recognize the density of homes in the development may not be conducive to wildlife movement, including mule deer and pronghorn.

Wildlife should be considered in the design of this development, and planned corridors are preferred to reduce vehicle-wildlife collisions and nuisance issues. Such corridors should consider areas for wildlife to safely pass through but not reside and areas more prohibitive to wildlife, especially potentially problematic species. Further and given the potential presence of prairie dog colonies/small mammals and the likely presence of prairie rattlesnakes, tailored fencing is recommended to prevent prairie dog burrowing near the development reducing zoonotic disease exposure (e.g., plague), and will deter rattlesnakes from entering those areas reducing chances of bites to people and their pets. Since prairie dogs generally avoid digging at or near barriers, a combined visual and exclusion barrier consisting of a solid, permanent structure buried at least 18 inches deep that is continuous above ground to at least 24 inches to deter digging along the perimeter of the development is recommended. Further information on prairie dog barriers can be found here: [Wild Earth Guardians – Prairie Dog Barriers](#). To be clear, this recommendation does not focus wildlife conflicts on the neighbors at the ends of the barriers but rather reduces conflicts throughout the entire property. Any changes to culverts, storm outfalls, or other structures potentially used for wildlife movement should be evaluated and the design will be adjusted to maintain or improve the safe passage of wildlife through the greater corridor while remaining mindful of human and wildlife safety. Any potential for human-wildlife conflicts should be fully evaluated during the design phase to implement proper wildlife-friendly fencing and best management practices for species of concern

The proposed project would result in the creation of 24 single family lots and residential roads. Based on review of the USFWS IPaC species list, the proposed project would result in “no potential for take” of threatened and endangered species.

Due to the construction activity and adjoining residential developments, it is not anticipated that this application will have significant impacts on wildlife in the area. CPW recommends surveying for the presence of prairie dog colonies and burrowing owls prior to construction. Should any owls be present on site, no human encroachment is allowed within 660 ft of any nesting burrows between March 15th and October 31st and any large disturbances, including residential construction, should include a larger buffer of up to a quarter mile from burrowing owl nests. The removal of this habitat will also reduce rattlesnake populations on site and reduce viable habitat for pronghorn and mule deer that may be using the site.

Raptor Nesting

This area has been identified as being within the buffer area of seasonal raptor nesting. The exact species and number of raptors that may occupy this area remains confidential due to safety concerns. The types of raptors that may be present include Bald Eagle, Golden Eagle, Ferruginous Hawk, Northern Harrier and Long-eared Owl. Each of these species has different recommended buffering zones and seasonal restrictions for surface occupancy and human encroachment. Consultation with the Colorado Division of Wildlife and/or bird specialist prior to construction is recommended to ensure compliance with all federal, state and local laws pertaining to the raptor nesting protection requirements.

Colorado Parks and wildlife reviewed the application and believes impact to the wildlife resources to be negligible. The site location is not located in or on any wildness area, wildlife preserve or designated critical habitat. The site location does not sustain any species of plant or animal life that is designated or proposed as threatened or endangered. The site location is not located within a principle flyway for migratory birds.

Migratory Birds

The U.S. Fish and Wildlife Service's IPaC mapper and website database (<https://ecos.fws.gov/ipac/>) was used to determine the potential of migratory birds within the area. The IPaC mapper listed 8 migratory birds, none of which are listed as endangered. Migratory birds identified include:

- Bald Eagle (Non-BCC Vulnerable)
- Broad Tailed Humming Bird (BCC Rangewide (CON))
- Ferruginous Hawk (BCC-BCR)
- Golden Eagle (Non-BCC Vulnerable)
- Grasshopper Sparrow (BCC-BCR)
- Lesser Yellowlegs (BCC Rangewide)
- Long-eared Owl (BCC Rangewide)
- Northern Harrier (BCC-BCR)

The Migratory Bird Treaty Act (MBTA) protects all migratory birds, raptors, and their active nests. The MBTA prohibits the removal or disturbance of active nests that would result in the loss of eggs or young.

Migratory birds and raptors could be potentially impacted from the Project, both directly through habitat loss and indirectly due to avoiding areas around newly constructed housing. Construction-related disturbances that occur during the migratory bird and raptor nesting season (January 15 through September 30) could result in direct mortality to raptors and migratory birds and cause others to become displaced. Project activities could directly impact active nests, resulting in direct mortality to eggs or nestlings. Occupied nests and a specified buffer should be avoided until a qualified biologist can confirm that fledglings have left the nest. CPW provides additional recommendations on nest buffers for raptors and eagles. Additionally, construction lighting, noise, and vibration in the immediate vicinity of active nests, could also result in nest failure or abandonment. To avoid impacts to migratory birds and raptors, the following mitigation measures should be implemented:

- Vegetation should be removed prior to the migratory bird and raptor nesting season (January 15 through September 30).
- If it is not possible to remove habitat (clearing/grubbing) prior to the nesting season, the contractor must have a qualified biologist survey the site for nesting migratory birds within seven days prior to clearing/grubbing or other construction activities. Active nests should be identified, protected, and avoided.
- USFWS will need to be contacted should an active nest become abandoned as a result of construction activities.

If active raptor nests are observed within the construction area during clearing/grubbing or construction, USFWS must be contacted for guidance on avoidance/setback or biological monitoring requirements.

Preble's Meadow Jumping Mouse

This development is within the Preble's Meadow Jumping Mouse block clearance area per the US Fish and Wildlife Map dated February 23, 2012. Protecting mouse habitat is not applicable for this project.

