

Soil Description	Unit Weight (lb/ft ³)	Friction Angle (degree)	Active Earth Pressure, Ka	Passive Earth Pressure, Kp	At Rest Earth Pressure, Ko
Lean Clay and Claystone with Sand (CL)	105	20	0.490	2.040	0.658
High Plasticity Clay and Claystone (CH)	105	17	0.548	1.826	0.708

14.2 Detention Pond Considerations

Based on a review of the Early Overlot Grading / Erosion Control Plans provided by Core Engineering, the proposed detention ponds which are anticipated to be raised up to 15 feet above the surrounding ground surface. Impounded stormwater runoff is not anticipated to be stored above the natural ground surface. As such, aboveground embankment construction is anticipated, and impounded stormwater runoff may be stored above the natural ground surface. Detention pond side slopes are to be constructed with a maximum 3:1 slope. Side slopes should be constructed in accordance with applicable sections of the El Paso County Engineering Criteria Manual, the El Paso County Drainage Criteria Manual, and the El Paso County Land Development Code.

15.0 ADDITIONAL STUDIES

The findings, conclusions and recommendations presented in this report were provided to evaluate the suitability of the site for future development. Unless indicated otherwise, the test borings, laboratory test results, conclusions and recommendations presented in this report are not intended for use for design and construction. We recommend that a *lot-specific* subsurface soil investigation be performed for the proposed structures. The extent of any fill soils encountered during the lot-specific investigation(s) should be evaluated for suitability to support the proposed structures prior to construction. Additionally, the groundwater conditions encountered in the lot-specific investigation should be evaluated to determine the feasibility of basement construction on that lot.

The lot-specific subsurface soil investigations should consider the proposed structure type, anticipated foundation loading conditions, location within the property, and local construction methods. Recommendations resulting from the investigations should be used for design and confirmed by on-site observation and testing during development and construction.

16.0 CONCLUSIONS

Based upon our evaluation of the geologic conditions, it is our opinion that the proposed development is feasible. The geologic conditions identified (expansive soils and bedrock, faults, seismicity, and radon) are not considered unusual for the Front Range region of Colorado. Mitigation of geologic conditions is most effectively accomplished by avoidance. However, where



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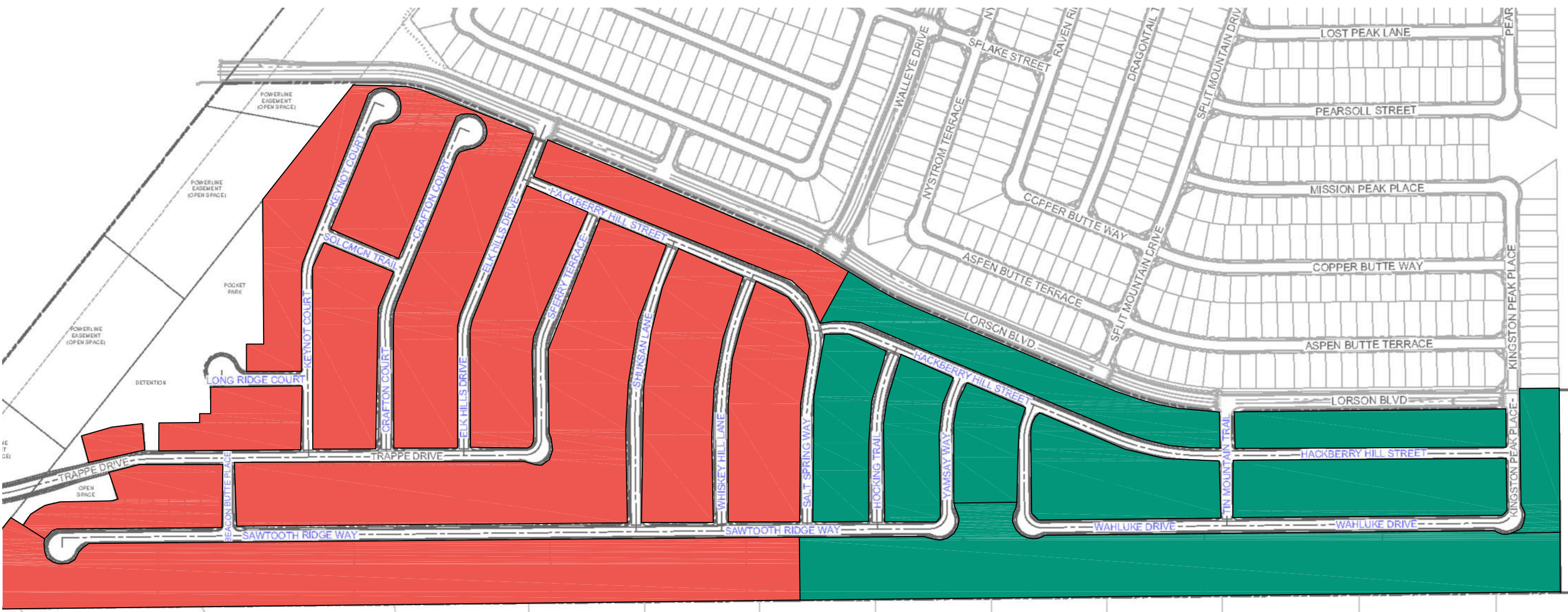
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**SUBEXCAVATION TO:
 8 FEET BELOW AND 8 FEET
 (LATERALLY) BEYOND SPREAD
 FOOTING FOUNDATION COMPONENTS.**

ROADWAYS IN THIS AREA SHOULD BE
 SUBEXCAVATED TO A DEPTH OF 6
 FEET BELOW BOTTOM OF SUBGRADE

**SUBEXCAVATION TO:
 10 FEET BELOW AND 10 FEET
 (LATERALLY) BEYOND SPREAD
 FOOTING FOUNDATION COMPONENTS.**

ROADWAYS IN THIS AREA SHOULD BE
 SUBEXCAVATED TO A DEPTH OF 5
 FEET BELOW BOTTOM OF SUBGRADE

are these
backwards?



HILLSIDE AT LORSON
 RANCH
 EL PASO COUNTY, CO
 LORSON RANCH METRO
 DIST. NO. 1

ENGINEER:	JM
DRAWN BY:	KZ
CHECKED BY:	JM
ISSUED:	1-3-2022
REVISION	
ROADWAY SUBEX	5-20-2022

**SUBEXCAVATION
 RECOMMENDATIONS**

SHEET No.
FIG-88