ROAD EVALUATION REPORT

for

BROWN ROAD

EL PASO COUNTY, COLORADO

for the

PRAIRIE RIDGE SUBDIVISION

prepared for

Sonship Properties, LLC
997 Elizabeth Drive
Rocky Ford, Colorado 81067

prepared by

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Colorado 80917

August 14, 2020

PCD File No. SF2010

County DPW staff will be assessing the conditions of Brown Rd to confirm what has been provided in this report. We will forward any information provided once the assessment has been completed.

Project No:2019-112

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APPENDIX

BROWN ROAD CONDITIONS REPORT

I. Report Purpose

An evaluation of Brown Road is required by El Paso County as a condition of platting the Prairie Ridge Subdivision. Brown Road extends approximately 1 mile north of the Walker Road intersection (*Appendix, Exhibit 1*). The road ends at a cul-de-sac located along the northerly property line of the Prairie Ridge Subdivision.

This report will address the following:

a. Existing cross section characteristics with respect to travel lane width, foreslope and backslope slopes, and depth of borrow ditches. Deficiencies will be discussed.
b. The depth of the base course at various locations along the entire length of road.
c. Compaction densities of the roadway surface at various locations.
d. Horizontal alignment of the gravel travel way. This will be limited to within the right of way due to the limited field data.
e. Approximate locations, sizes, and pipe material for the cross culverts at roadway low points. The hydrologic and hydraulic analysis for each culvert is beyond the scope of this report.
f. Evaluation of the vertical alignment is beyond the scope of this evaluation.

The following two (2) typical sections were used in this evaluation (*Appendix, Exhibit 4).*

a. The **first** cross section was obtained from the El Paso County Engineering Criteria Manual. This section provides the basis for this evaluation.
b. The **second** cross section was provided by El Paso County in 2010 as the preferred cross section to be specifically used for this project. This typical section is only feasible for relatively flat cross sections. However, since this is not characteristic along the entire length of Brown Road, this alternate was eliminated from consideration.

Survey field survey data was obtained for only the area within the right of way. Plan and profiles and cross sections were developed (*Appendix, Exhibits 5 and 6)* from this data. Since the field data was limited to within the right of way, the plan and profiles and cross sections are not meant to be used for the preparation of construction plans and/ or the preparation of accurate construction cost estimates. Deficiencies are noted and discussed.

II. Location and Description

Brown Road is in northern El Paso County. It intersects with Walker Road approximately 3.7 miles east of State Highway 83 (*Appendix, Exhibit 1*). Brown Road extends to the north of Walker Road approximately 1 mile where it ends in a "cul-de-sac" located along the northerly property line of the Prairie Ridge Subdivision.

Brown Road provides the primary access to the Prairie Ridge Subdivision along with other privately owned tracts.. Brown Road is gravel road maintained by El Paso County. Prairie Ridge Subdivision consists of approximately 40.7 acres. The project is currently undeveloped agricultural ground and has been used for pasture and grazing land. The site is to be divided into 7 single-family lots with a minimum size of 5 acres. No internal roadway improvements are planned except for driveways to the individual residences. Access to each lot is to be directly off Brown Road.

A drainage study and report were previously prepared by Land Development Consultants (LDC). It was submitted and approved by El Paso County on May 28, 2008. Subsequent to the report approval the plat was never recorded, and the project has remained dormant until recently.

An Early Assistance Meeting was held on August 28, 2018 to review current requirements for reconsidering the plat (*Appendix, Exhibit 3*). According to the Meeting Minutes, the following roadway improvements are required:

a. Right of way dedication.
b. Provide a new gravel surface along Brown Road. At least 2-inch compacted gravel over the length of Brown Road.
c. Asphalt apron at Walker Road.
d. Construct cul-de-sac bulb and curve at the dog leg to provide a smooth transition w/o stop conditions.
e. Recalculate the cost of the Brown Road Pavement Improvements and readjust the required contribution.

III. Roadway Evaluation: Definitions

a. Horizontal Alignment

Only the horizontal alignment of the existing travel way, backslope and foreslope, were evaluated. It was assumed that the horizontal location of the Brown Road right of way will remain the same until such time that the issues have been addressed and participation of the adjacent land owners level of participation have been determined.

b. Right of Way

The right of way, along with adjacent easements, reflects the area in which all public improvements are installed. Only the horizontal location of the gravel travel way, backslope and foreslope were evaluated. Additional right of way requirements was based on assumptions regarding the existing ground adjacent to the right of way. This will need to be verified if the extent of the additional right of way and/or easements are to be accurately determined.

6 to 1 slope is indicated in the ECP standard detail for rural local gravel road. Please revise

c. **Sight Distance**
Sight distance is the length of roadway visible to a driver. The three types of sight distance common in roadway design are intersection sight distance, stopping sight distance, and passing sight distance. Since sight distance basically pertains to the vertical alignment, addressing deficiencies is beyond the scope of this report.

d. **Clear zone**
The clear zone is the total roadside border area, starting at the edge of the traveled way and in most cases, to the right of way or the additional access easement line. The existing Clear Zone is compromised due to the locations of the ends of the existing culverts as well as the steep backslope sections along the entire length.

e. **Lateral clearance**
Lateral clearance is the distance from the edge of the travel way to the nearest column, pole, abutment etc. The only poles that are present along Brown Road are telephone poles located along the easterly right of way line. The location of these poles is to remain the same. Also, as previously discussed, the ends of the existing culverts are not located a sufficient distance away from the edge of shoulder. This distance is 7 to 10 feet (*Appendix, Exhibit 4*). Therefore, it is assumed that all the culverts will need to be extended or replaced.

f. **Backslope**
The backslope extends from the top of the cut at the existing grade to the bottom of the ditch. According to the approved typical section, the required slope is 3 to 1. The slope of the backslope section, for a significant number of cross sections, are steeper than the 3 to 1 slope required by El Paso County.

g. **Foreslope**
The foreslope extends from the outside of the shoulder to the bottom of the borrow ditch. The slope of the foreslope section for most of cross sections are steeper than the 3 to 1 slope required by El Paso County.

IV. Roadway Evaluation: General

Brown Road was separated into two (2) segments (*Appendix, Exhibit 2*). The southerly segment is approximately 2,650 feet in length and extends from Walker Road (station 10+00), north to the southwesterly corner of the project site (approximately station 36+50). The northerly segment is approximately 2,600 feet in length and extends north from the southwesterly property corner of the Prairie Ridge Subdivision to the cu-de-sac at the northern end of the road (approximately station 62+50). Field data for 39 cross sections was obtained for

the entire length of the road from Walker Road to the cul-de-sac. Field data for 28 cross sections was obtained for northerly segment (station 10+00 to station 36+50). Field data for the remaining 11 cross sections was obtained for southerly segment (station 36+50 to station 62+50). Plan and profiles of the entire length of Brown Road were prepared from the field data. The plans include right of way, property corners, edges of gravel, ditch flow lines, utility poles, fence lines and culverts. The approved El Paso County typical section was then superimposed on each cross section. A comparison of the two is the subject of this evaluation.

Entech Engineering obtained nine (9) test holes and performed ten (10 compaction/density tests to determine depth of road base and compaction densities along the entire length. A report was prepared summarizing their findings (*Appendix, Exhibit 8*). Five (5) test holes were obtained in the southerly segment and four (4) were obtained in the northerly segment. Approximate locations of the test holes and density tests are indicated on the plan and profiles (*Appendix, Exhibit 5*).

A hydrologic and hydraulic evaluation of the existing culverts will ultimately be required for all the culverts. Improvements to these facilities can only be accomplished after a hydrologic and hydraulic evaluation of each have been performed. This evaluation is beyond the scope of this report. This was not included in the drainage report since runoff from the Prairie Ridge Subdivision has no impact on the existing facilities.

Does the existing gravel/base course material meet the specifications indicated in table D-7 of the ECM?

V. Roadway Evaluation: Southerly Segment

The southerly segment is approximately 2,650 feet in length. It extends from station 10+00 (approx. centerline of Walker Road) to station 36+50 (southwesterly corner of the project site).

a. Conditions meeting current criteria (southerly segment)

i. An asphalt apron was installed by El Paso County in the summer of 2019 at the intersection of Walker Road.
ii. The cross slope of the travel way varies between 2% and 4% with only a few exceptions.
iii. Cross culverts are located approximately at stations 15+75, 30+25, and 37+50 which are located at the low points of the road. All culvert locations are in various degrees of sedimentation.
iv. Test holes were obtained to check the depth of the base course The approximate locations of these test holes are indicated on the plan and profile drawings included in *Exhibit 8 of the Appendix*. Depths of the base course are summarized below:

1. Test Hole #7, approximate station = 27+50, depth of base course = 5.5" inches
2. Test Hole #8: approximate station = 18+50, depth of gravel = 6 inches

The minimum per criteria is 6 inches per ECM Appendix D.3.6. Please revise accordingly.

3. Test Hole #9: approximate station = 11+50, depth of gravel = 6 inches

Additional characteristics are included in *Exhibit 8 of the Appendix*.

b. **Conditions deficient from current criteria (southerly segment)**
It is understood that the owner of the Prairie Ridge Subdivision has no responsibility to correct the following deficiencies since the existing road does not currently meet El Paso criteria. The impact of the increase in traffic as a result of the Prairie Ridge Subdivision is only negligible.

The deficiencies in the southerly section are as follows:

i. The centerline of the existing travel lanes does not coincide with the right of way centerline at all locations. The existing centerline is located approximately 15 feet to the east of the right of way centerline at the southwesterly corner of the Prairie Ridge Subdivision. The existing roadway centerline then "relocates" gradually to approximately 10 feet to the west at the Walker Road intersection.
ii. The width of the travelled way is consistently an average of 20 to 22 feet wide as opposed to the minimum required width of 24 feet.
iii. There are no shoulders at any of the cross sections.
iv. The depths of the roadside ditches are typically less than two feet at the majority of the cross sections. The actual depth varies between one (1) and two and a half (2.5) feet in the heavily eroded areas.
v. The slope of the **foreslope** section is typically steeper than the 6 to1 at all the cross sections. It appears that the slope varies from 3 to 1 to nearly vertical along the steeper sections of the roadway where erosion has occurred.
vi. The slope of the **backslope** section varies considerably at most of the cross sections. In places the slope is nearly vertical and at other cross sections the slope is nearly flat.
vii. There is a significant amount of erosion along the steeper sections of the roadway. The resulting sediment has accumulated at the low points resulting in the sedimentation of the culverts. This condition reduces the culvert's hydraulic carrying capacity. A hydrologic and hydraulic evaluation is required in order to evaluate each of the culverts. This evaluation is beyond the scope of this report.
viii. The ends of all the culverts do not have headwalls and wingwalls or riprap aprons for erosion protection. It appears that the ends of the culverts are also located within the Clear Zone and, as a result, will need to be removed and replaced.

VI. Roadway Evaluation (northerly segment)

The northerly segment is approximately 2,600 feet in length and extends from stations 36+50 to 62+50. This segment extends north of the southwesterly corner of the Prairie Ridge Subdivision to approximately station 49+50 where the road takes a sharp 90-degree angle turn to the east. The road ends at a cul-de-sac at approximately station 62+50. The entirety of the northerly section is adjacent to the Prairie Ridge Subdivision.

a. Conditions meeting current criteria (northerly segment)

i. This segment meets current El Paso County criteria in basically for the same conditions as described above for the southerly segment.

ii. The centerline of the existing road located between station 49+50 and 62+50 is consistently located near the right of way centerline.

iii. There were six (6) test holes along the project's boundary. Five (5) of the six (6) meet the minimum criteria of six (6") and are summarized as follows:

1. Test Hole #1: approximate station = 38+00, depth of base course = 7 inches
2. Test Hole #2: approximate station = 45+00, depth of gravel = 7 inches
3. Test Hole #3: approximate station = 48+00, depth of gravel = 7 inches
4. Test Hole #4: approximate station = 38+00, depth of base course = 7 inches
5. Test Hole #5: approximate station = 62+50 (located in the cul-de-sac), depth of gravel = 7 inches

Additional characteristics are included in *Exhibit 8 of the Appendix*.

b. Conditions deficient from current criteria (northerly segment)

The following describes the deficiencies along the northerly section:

i. The deficiencies are basically the same as discussed for the southerly section.

ii. The centerline of the existing travel lanes does not coincide with the right of way centerline between station 36+50 and 49+50. The existing centerline is located approximately 15 feet to the east of the centerline for the length of the northerly section from station 49+00 to station 36+50. Station 49+00 is located where Brown Road takes a sharp right turn to the east.

iii. The horizontal and vertical alignments of the cul-de-sac do not meet the current criteria.

iv. The roadside borrow ditches around the cul-de-sac do not meet requirements. Considerable sedimentation is evident.

v. There is insufficient depth of base course (test hole #6) along the outer edge of the existing cul-de-sac.

1. Test Hole #6: approximate station = 62+50 (located along the outside edge of the cul-de-sac), depth of gravel = 4.5 inches

Additional characteristics are included in *Exhibit 8 of the Appendix*.

VII. Recommended Improvements (southerly segment)

The following improvements are recommended for the southerly segment.

a. Additional right-of-way is required along both sides of Brown Road. Because of the location of the utility poles along the easterly side, additional right of way along this side will do little to allow for the construction of the approved typical section unless the poles are relocated.
b. The utility pole line will need to be relocated in order to construct the approved typical section.
c. Replace the culverts at approximately stations 16+00 and 30+25. The owner of the Prairie Ridge subdivision is not required to install these improvements since the subdivision has no impact on the hydrologic/ hydraulic conditions of the existing culverts.
d. Install stone check dams *(Appendix, Exhibit 7)* along the steeper sections of the roadway in order to limit erosion along the borrow ditches.
e. Install erosion control fabric and seeding and mulch in the borrow ditch sections

VIII. Recommended Improvements (northerly segment)

It is understood that the owner of the Prairie Ridge Subdivision will only address the following described deficiencies that can be feasibly installed at this time. The owner is limited in the extent of improvements for the following reasons:

a. A significant amount of right-of-way is required along the opposite side of Brown Road. This is problematic since the property is under separate ownership that has no participating interest in the Prairie Ridge Subdivision.
b. The existing above ground utility line along the easterly and southerly property lines of the Prairie Ridge Subdivision will need to be relocated in order to install the approved cross section.

The following improvements are recommended for the northerly segment

a. Similar improvements for the length of the northerly segment, as were [illegible] for the southerly segment, are recommended.
[illegible] right-of-way is required along both sides of the right-of-way in the vicinity of the Prairie Ridge Subdivision. Because of the constraints posed by [illegible]s adjacent to the Prairie Ridge Subdivision, additional right of [illegible]e relocation of the utility poles, will do little to accommodate the

Please submit a GEC plan showing the location of the proposed grading/improvements to be done by the owner. The GEC checklist shall also be filled out and an FAE form will be required to be submitted for the proposed improvements by the owner.

Brown Rd is on the westerly and northerly property line. Please clarify where the existing utility lines are located and revise the text accordingly.

construction of the approved typical section. Obtaining additional right- of-way along the existing right-of-way is problematic due to separate property ownership that has no participating interest in the Prairie Ridge Subdivision.

c. Install stone check dams (Appendix, Exhibit 7) along the steeper sections of the roadway to limit erosion.
d. Install erosion control fabric and seeding and mulch in the borrow ditch sections.
e. Grade the existing cul-de-sac to meet current horizontal and vertical requirements.
f. Grade the borrow ditches along the cul-de-sac to provide positive runoff to the north.
g. Replace the existing culvert at station 38+50. It is understood this will not be required of the owner of the Prairie Ridge Subdivision since runoff from the project site has no impact on the culvert and since additional right-of-way and/ or easement along the westerly side will be required.
h. Install riprap erosion protection at the outfall of the borrow ditch around the cul-de-sac (between approximate stations 61+00 and16 63+00)

IX. Cost of Improvements - General

Providing an accurate cost estimate for the entire length of Brown Road is beyond the scope of this evaluation. In order to do so, the following additional data and issues will need to be obtained and addressed:

a. A significant amount of additional field data is required to prepare a CADD surface from which accurate earthwork quantities can be determined.
b. At least 15% preliminary design plans will need to be prepared.
c. Significant additional grading is required outside the right of way to meet the backslope, foreslope, and borrow ditch minimum criteria.
d. Significant additional right of way and/ or easements will be required on both sides of the right of way along the length of the majority of the road.
e. Relocation of the existing utility pole line will be required in order to install County's approved cross section.
f. Hydrologic/ hydraulic evaluations are required in order to properly size the existing cross culverts.
g. Participation of adjacent property owners will be required.

X. Cost of Improvements- Northerly segment

Installation of the improvements along the property line of the Prairie Ridge Subdivision in order to construct the approved typical section is not feasible at this time. As a result, the only improvements that can be installed are as follows:

a. Stone check dams: These are proposed along the borrow ditch adjacent to the Prairie Ridge Subdivision. These are recommended at locations where anticipated supercritical flows and excessive velocities are expected. This condition typically creates excessive velocities increasing the potential for erosion. An assumed number of check dams were included in the cost estimate. The majority of the borrow ditches only handle the runoff from the

Erosion control fabric and seeding/mulch is indicated above in the recommended improvements yet it is not mentioned here. Additionally it is shown in the table below. Please revise accordingly.

road and therefore the velocities are non-erosive. This will need to be verified once a hydrologic/ hydraulic study has been conducted.

b. Additional road base is only required along Brown at a few locations except for the cul-de-sac since the geotechnical testing has shown a thickness of six (6) inches or greater. The existing density of the existing sub-grade is also in excess of 95%.

c. Cul-de-sac improvements are to include:

- the reshaping of the existing cul-de-sac and the installation of a borrow ditch around the perimeter.
- Installation of additional road base to provide a consistent six (6) inch minimum thickness.
- Installation of riprap erosion at the outfall of the borrow ditch.

Item #	Description	Approx. Quantity	Units	Unit Cost	Total
1	Unclassified excavation	150	CY	$5.00	$750
2	Scarify and compact subgrade	29	SY	$2.50	$73
3	Type 5 Roadway Base Course	265	CY	$48.00	$12,720
4	Stone Check Dams	20	EA	$800.00	$16,000
5	Erosion Control Fabric	2850	SY	$5.00	$14,250
5	Topsoil (4", spread and prepared)	250	CY	$22.00	$5,500
6	Seeding and Fertilizer	2850	SY	$0.25	$713
7	Mulch, Straw (Broadcast)	2850	SY	$0.20	$570
8	12" D50 Riprap	14	CY	$55.00	$770
7	Granular Bedding	5	CY	$95.00	$475
9	Filter Fabric	21	SY	$4.50	$95
10	18" CMP Driveway Culvert	150	LF	$75.00	$11,250
11	18" CMP Flared End Section	6	EA	$750.00	$4,500
	Subtotal				$67,665
	Contingencies (10%)				$6,766
	Total				$74,431

XI. Future Brown Road Improvements: Cost Sharing

The current improvements along the entire length of Brown Road currently do not meet El Paso County standards for a rural gravel road. Due to the cost required to bring the road to current standards, equitable cost sharing for the individual parcels sharing access to this road, was discussed in a 2008. Attached is a letter from El Paso County, dated May 19, 2008 and corrected October 1, 2008 (Appendix, Exhibit 9). This letter outlines the "Conditions for Approval" for the

Prairie Ridge plat in 2008. An inflation rate of 21.1% was used in the calculation of the various numbers used in the Development Services letter. This rate was determined from a table produced by the **Department of Labor and Statistics** for the average inflation rate for the period between 2008 and2020 is included as *Exhibit 10 in the Appendix* of this report.

Please use a consumer price index specific for Colorado such as Denver Boulder Greeley/Denver Aurora Lakewood price index.

It is recommended that the May 19, 2008 (corrected October 1, 2008) letter from El Paso County Development Services be revised to include the following amended amounts for the Brown Road improvements:

Preliminary Plan Conditions of Approval (Appendix, Exhibit 9)

All conditions are to remain the same except for the changes described below.

Conditions of Approval, Item 9.1 (adjusted for 2020) revised as follows (changes are shown in bold type):

Applicant's total fair share, equitable, and reasonably proportional contribution to the Brown Road Improvements shall be **$13,325** per lot for a total of **$93,275** structured as follows:

Conditions of Approval, Item 9.1.A (adjusted for 2020) revised as follows (changes are shown in bold type):

Prior to recording the final plat, Applicant shall deposit the sum of **$60,550** with the El Paso County Treasurer, which funds the County shall maintain and deposit in a separate, interest bearing account not part of the County's operating budget.

Conditions of Approval, Item 9.1.B (adjusted for 2020) revised as follows (changes are shown in bold type):

At the time of closing each lot the remaining **$32,725** balance of the contribution, or **$4,675** per lot, ...

Conditions of Approval, Item 9.2

No changes

Conditions of Approval, Item 9.3

No changes

Conditions of Approval, Item 9.4

No changes but repeated as follows:

Should the County not use the funds on of before the expiration date the County shall return the funds to the Applicant, their heirs, successors and assigns (excluding individual lot owner successors), together with accrued interest.

Conditions of Approval, Item 10
No changes

Final Plat Conditions of Approval

All conditions are to remain the same except for the changes described below.

Conditions of Approval, Item 14.1 (adjusted for 2020) (changes are shown in bold type):

Applicant's total fair share, equitable, and reasonably proportional contribution to the Brown Road Improvements shall be **$13,325** per lot for a total of $93,275 structured as follows:

Conditions of Approval, Item 14.1.A (adjusted for 2020) (changes are shown in bold type):

Prior to recording the final plat, Applicant shall deposit the sum of **$60,550** with the El Paso County Treasurer, which funds the County shall maintain and deposit in a separate, interest bearing account not part of the County's operating budget.

Conditions of Approval, Item 14.1.B (adjusted for 2020) revised as follows (changes are shown in bold type):
At the time of closing each lot the remaining **$32,725** balance of the contribution, or **$4,675** per lot, ...

Conditions of Approval, Item 14.2
No changes

Conditions of Approval, Item 14.3
a. No changes

Conditions of Approval, Item 14.4
b. No changes and repeated as follows:

Should the County not use the funds on of before the expiration date the County shall return the funds to the Applicant, their heirs, successors and assigns (excluding individual lot owner successors), together with accrued interest.

Conditions of Approval, Item 15
No changes

XII. Summary

Brown Road is a gravel road that extends approximately 1 mile north of Walker Road. It serves as the main access for the Prairie Ridge Subdivision as well as for other existing residences. As a condition of platting, El Paso County has required that Brown Road be evaluated for conformance with the current approved roadway typical section and base course thickness.

The following is a summary of the observations and recommendations made in this evaluation:

1. The existing roadway, along its entire length, does not meet current criteria.

2. The increase in traffic as a result of the development will only have minimal impact on the existing road.

3. The depth and density of the existing base course has an average depth of 5" to 6" over the major portion of the road. An additional 1" is required to meet the minimum requirement for El Paso County. A significant deficiency is located at the outer edges of the existing cul-de-sac.

4. The width of the travel way is consistently between 20 feet and 22 feet.

5. Construction of the typical section is problematic due to the width of the existing right of way (60 feet) as well as the topography on either side of the existing roadway and right of way.

6. The foreslope and backslope of the existing roadway cross section consistently do not meet criteria.

7. The existing "hilly" topography requires extensive grading outside the right-of-way in order to meet the minimum criteria.

8. Significant additional right of way and/or easements are required along **both** sides of the Brown Road along the entire length.

9. The overhead utility line needs to be relocated to permit the construction of the typical section.

10. Improvements to the cu-de-sac are required in order to meet the minimum standards.

11. Substantial improvements to the entire length of Brown Road are required to bring the roadway to meet El Paso County standards. In order to fund these improvements a cost share was determined in 2008. This cost share was determined based on the area that would access Brown Road for future development of individual tracts. Copies of the

correspondence regarding this cost sharing is included in the Appendix. A current cost share of $13,325 per lot was determined using the agreement that was prepared in 2008. The values were adjusted with an inflation rate of 21.1% which was obtained from the Department of Labor and Statistics.

12. Construction costs for the immediate improvements to Brown Road that are required at this time are estimated to be $74,431. It remains to be discussed whether or not these funds can be applied toward the funds for the prorated share of the future Brown Road Improvements.

APPENDIX

Exhibit 1: Vicinity Map

Google Maps Brown Rd

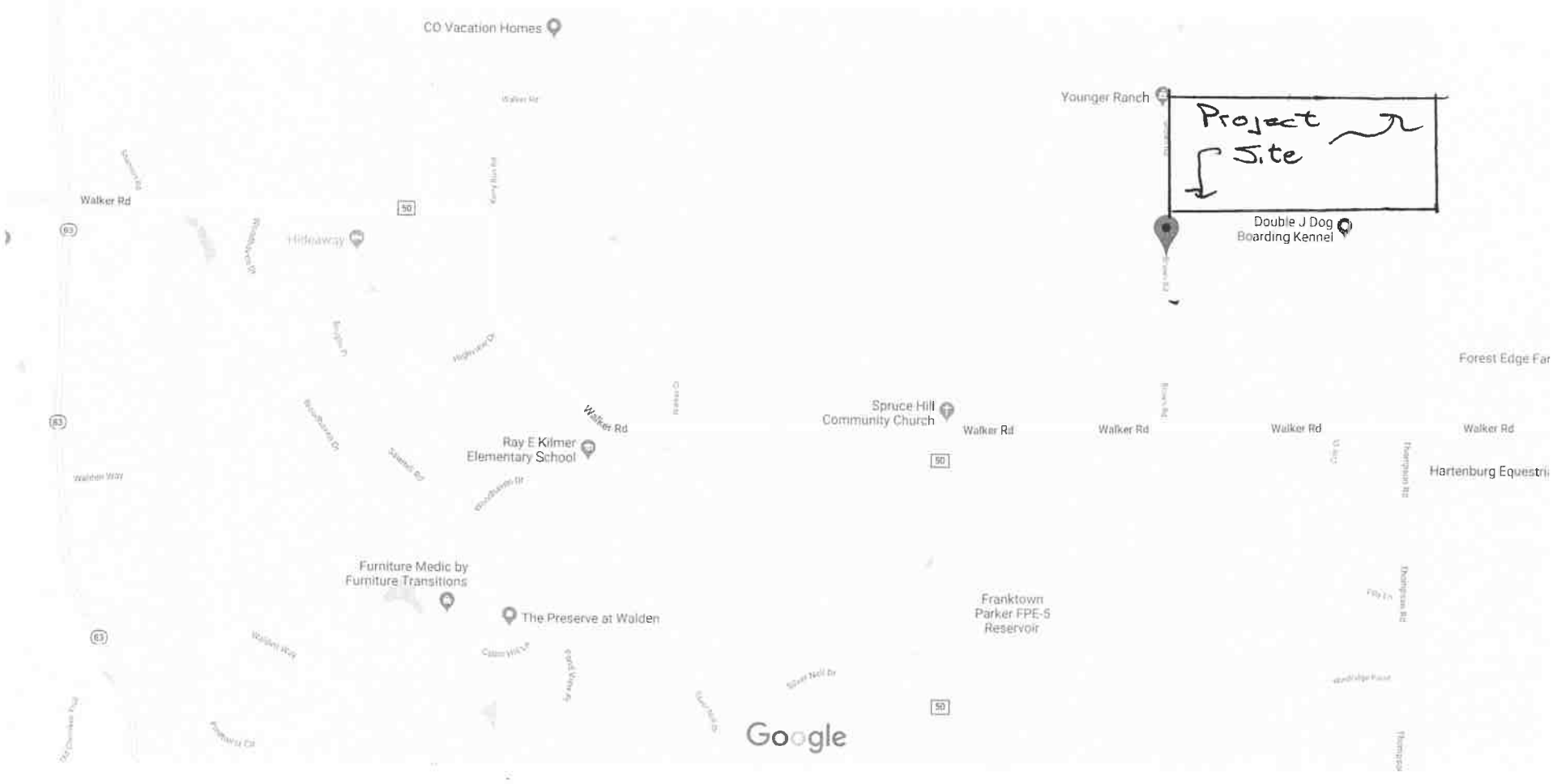
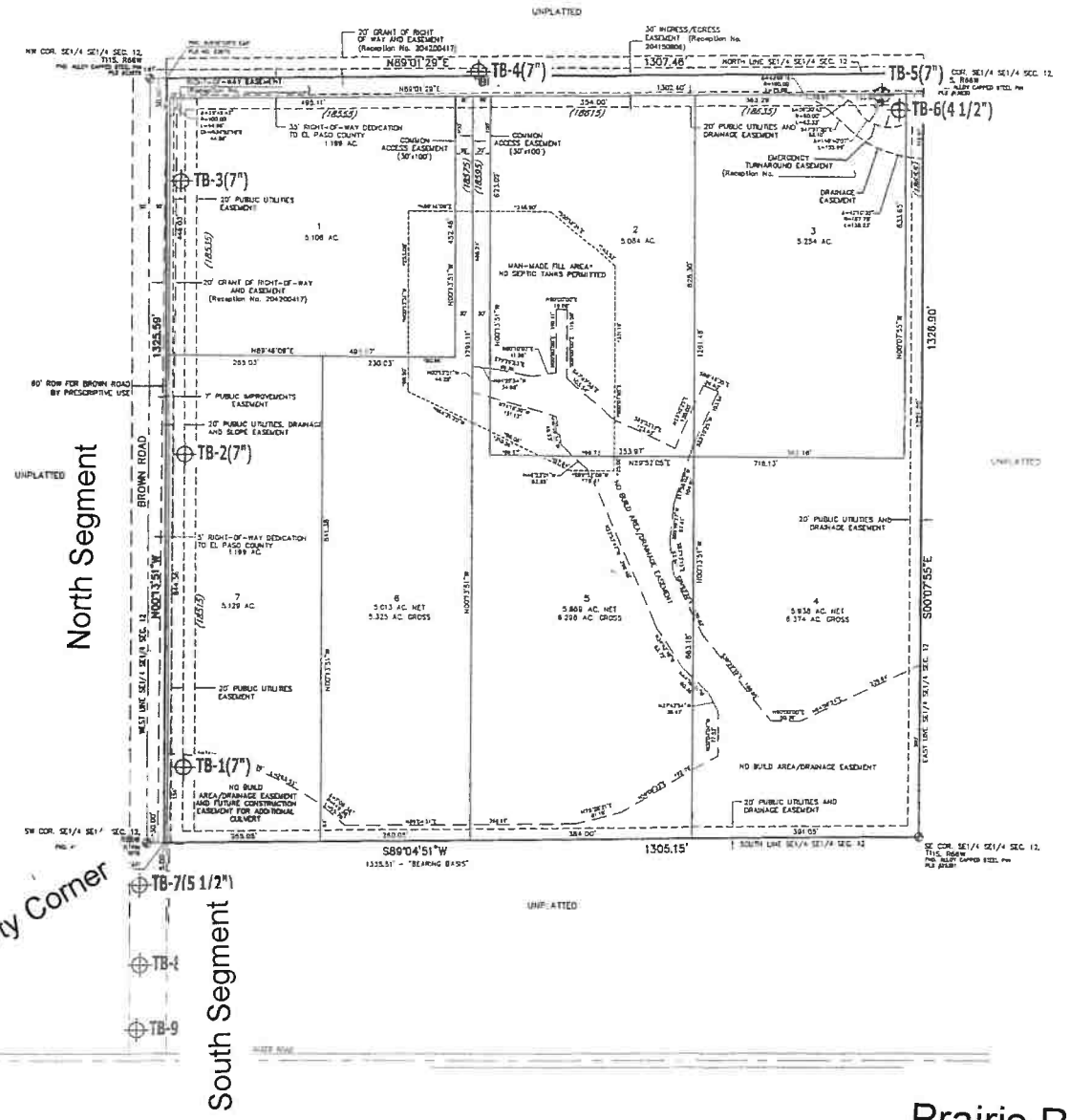


Exhibit 2: Prairie Ridge Project Site Map



LEGEND:

⊕TB-1(X") = Test Bore No.(Depth of Road Base)

Prairie Ridge Project Site Map

Exhibit 3: Early Assistance Meeting Minutes

EL PASO COUNTY

COMMISSIONERS:
DARRYL GLENN (PRESIDENT)
MARK WALLER (PRESIDENT PRO TEMPORE)

STAN VANDERWERF
LONGINOS GONZALEZ
PEGGY LITTLETON

PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT
CRAIG DOSSEY, EXECUTIVE DIRECTOR

Minutes for August 28, 2018

Early Assistance Meeting – EA-18-264

Members Attending
Planner- Gabe Sevigny
Engineer- Gilbert LaForce
Admin Specialist
Applicants etc

Applicant Summary
The applicant(s) are proposing a reconsideration of a final plat, parcel no. 6100000483

Planning Summary

- The property is zoned RR-5
- All setbacks are 25', 30' maximum building height.
- The plat was previously approved, but has since expired, a reconsideration of the final plat is required ($1,737)
- If a new review of construction drawings is required, then another project and a fee of $3,437 may be assessed.
- The address for the online submittal program is www.epcdevplanreview.com
    - This link can also be used to research the previously approved preliminary plan and final plat, and see if the reports that were used are still applicable with todays standards of the Land Development Code(2018) and the ECM.

Final Plat ($1,737) (Chapters 7&8)

- Additional fees at the time of recording for park, school, traffic, and recording.
- The online submittal portal will outline specific submittal requirements; however some to be aware of are:
    - Proof of adjacent property owner notification
    - Letter of intent
    - Final Plat
    - Title Commitment dated within 30 days of application submittal
    - Subdivision improvements agreement
    - Construction drawings
    - Commitment letters
    - Drainage report
    - SWMP
    - Soils and Geology Report

2880 INTERNATIONAL CIRCLE, SUITE 110
PHONE: (719) 520-6300
COLORADO SPRINGS, CO 80910-3127
FAX: (719) 520-6695
www.ELPASOCO.com

- Water Supply

Engineering:

Transportation:

- Based on the existing/proposed use, a Traffic Impact Study is required.
- County Transportation Impact Fee will be required for this .

Drainage:

- A Drainage Report is required, there is one on file, please review and make sure that it still meets the requirement standards of the ECM.
- On-site water quality and detention BMPs may be required. As proposed, the subdivision will provide one full-spectrum detention basin on this lot.
- Per Resolution 15-042, El Paso County has adopted Full Spectrum Detention for the design of permanent water quality/detention facilities (if detention is required).
- State Engineer's requirements apply if detention is required.
- The property is located in the East Cherry Creek drainage basin. There are no Drainage and bridge fees.

Grading, Erosion & Sediment Control:

- A Grading and Erosion Control Plan is required with application. The Grading and Erosion Control Plan must be prepared in accordance with Volume 2 of the Drainage Criteria Manual.
- An ESQCP permit is required. See section 1.1 of the application form for the additional required submissions. Financial surety for the installation and maintenance of Grading and Erosion Control BMPs will be required. A County Construction Activity permit will be required. Contact the El Paso County Department of Health and Environment for further information regarding the permit.
- All necessary requirements must be met if an Early Grading Permit (prior to Final Plat approvals) will be requested.
- Construction activities that disturb 1 or more acres are required by the Environmental Protection Agency to obtain a Construction Stormwater Permit. Contact the Colorado Department of Public Health & Environment, Water Quality Control Division for further information regarding the permit.
- The Colorado Department of Public Health and Environment Air Quality Control Division requires all land development activities greater than 25 acres or with a construction duration longer than 6 months to obtain an Air Pollution Emission Notice and Emission Permit

Public Improvements:

- Public Improvements are required. If required, the Applicant may be required to enter into a Subdivision Improvement Agreement (SIA) with the County. The Applicant will be responsible to refer to the Land Development Code (LDC) for information on SIA type(s); the Engineering Criteria Manual (ECM) for the required format of the associated Financial Assurance Estimate.
- Construction Plans for the required Public Improvements must be reviewed and approved by Planning and Community Development (PCD) - Engineering. All Construction Plan submittals must adhere to the criteria set forth in the ECM.
- New access permit(s) will be required from Planning and Community Development.
- Work within the ROW permit(s) may be be required.
- Mailbox kiosk locations may need to be determined.

Wrap Up

- The project manager briefly went over the application packets, fees, checklists and general timeframe.
- **LIST SPECIFIC FEES-$1,737, $3,4437* see above for condition of the construction drawings**
- **Recording fees, school, park, to be determined.**
- NOTE: fees are subject to change. The fees at the time of application apply.
- The fee for any additional waiver/deviation requests (more than two) - $550.00 each. **Please note that requests for waivers and/or deviations may result in additional processing/review delay.**
- **PLEASE NOTE:** Upon the actual submittal, the title commitment must be dated within 30 days of the submittal date. ALL copies of each item requested on the submittal matrix must accompany the submittal for it to be complete or the submittal will be denied.
- **PLEASE NOTE:** All prospective timelines for review are subject to departmental staffing and workload.
- **PLEASE NOTE**: Pursuant to the adopted El Paso County Road Impact Fee Program (Resolution No. 12-382), a transportation impact fee, calculated on a per trip basis, may be due at the time of building permit issuance.
- ***NOTE**: Early Assistance is valid for 12 months from submittal of the EA application. If a project submittal is not received within 12 months, a new EA meeting will be required. An audio copy of the meeting is available by contacting the Planning and Community Development Department at (719) 520-6300.*

EA File No. 18-264 Prairie Rige

PCD-Engineering Meeting Notes

EA Meeting Date/Time:	**Tuesday, 8/28/2018 3:00**
Parcel Number:	**6100000483**
Address./Plat No./Acre:	**0 / 39.77 ac**
Project Manager/Phone:	**Gabe Sevigny (719) 520-7943**
EA Engineer/Phone:	**Gilbert LaForce (719) 520-7945**
Application/Land Use Type:	

IMPORTANT NOTE:

These Engineering meeting notes are based on the information provided by the Applicant and reasonable preliminary research. The County requirements and policies in effect at the time of the meeting may change prior to the project submittal date, and the requirements and policies in effect at the date of submittal shall apply. Based on the applicant-provided information and preliminary research, these notes are the best estimate of the requirements expected to be met by the Applicant. The actual requirements may change based on project revisions, new information, or constraints that were unavailable or overlooked at the time of the Early Assistance meeting. It is solely the Applicant's responsibility to research and be familiar with state and federal laws and permitting requirements; the County's regulations, codes and criteria; the requirements of other applicable local, state or federal agencies; and any governing documents that apply to the project, including previous drainage and transportation studies and previous land use approvals and conditions. Reference links are provided at the end of this document.

REQUEST

TO REVIEW AND FINALIZE PREVIOUSLY APPROVED PLAT
SF07016 / SP07014

Drainage Impacts

Requirements

- ☐ Preliminary/Final Drainage Report/Letter
- ☐ Master Development Drainage Plan
- ☐ Drainage Basin Planning Study
- ☐ Grading & Erosion Control Plan/Stormwater Management Plan
- ☒ Erosion and Stormwater Quality Control Permit (ESQCP)
- ☐ Builder's Erosion and Stormwater Quality Control Permit (BESQCP)
- ☐ Pre-Development Site Grading Form
- ☒ Financial Assurance Estimate
- ☐ Full Spectrum Detention
- ☐ Permanent Water Quality
- ☐ Downstream Conveyance Analysis (to include
- ☐ Floodplain Impacts
- ☐ Special Districts/Water Quality Authority Area
- ☐ Deviation Request
- ☒ Public Improvements

Basin Name/Studied	Basin Fee*	Bridge Fee*
East Cherry Creek	0	0

* Per impervious acre, collected prior to recordation of Final Plat.

- A 25% fee reduction applies for Low Density Lots (2.5 acres and greater lot sizes).

Drainage Notes:

Approved drainage report on file.

Approved GEC on file. However, condition was to construct a paved apron at Walker Rd. Resubmit.

Require: ESQCP, FAE

Traffic Impacts

Requirements

- ☐ Traffic Impact Study/Memorandum
- ☐ Road Construction Plans
- ☐ Public Improvements
- ☐ Deviation Request
- ☐ Road Impact Fee
- ☐ Driveway Access Permit
- ☐ Signal Warrant Study
- ☐ Joint Access Easement

Adjacent Road Name	Ex. ROW (ft)	Surface	2040 MTCP			2060 MTCP		
			Classification	ROW	Dedication	Classification	ROW	Pr Pre
Brown Road	Prescriptive		R Local					
Other (i.e. multi-jurisdictional):								
Metro District	Choose an item.							

Traffic Notes:

Per staff report:

1. ROW dedication and provide a new gravel surface
2. At least 2-in compacted over the length of Brown Road
3. Asphalt apron at Walker Road
4. Construct Cul-de-sac bulb and curve at the dog leg to provide a smooth transition w/o stop condition.
5. Recalculate the Brown Road Pavement improvement and readjust the required contribution.

COUNTY CODES AND CRITERIA:

El Paso County Land Development Code (**LDC**) (2016):

https://planningdevelopment.elpasoco.com/land-development-code/

El Paso County Engineering and Drainage Criteria Manuals (**ECM**) (2017) & (**DCM**) Volumes 1 and 2 and Update:

https://planningdevelopment.elpasoco.com/planning-community-development/engineering/#1519834440345-f2ddfd20-0d90

El Paso County 2016 Major Transportation Corridors Plan Update (**MTCP**) (2016):
https://publicworks.elpasoco.com/road-bridge-planning/mtcp/

El Paso County Development Fees: https://planningdevelopment.elpasoco.com/#1515613078895-69552b09-44a4

El Paso County Projects (EDARP): https://epcdevplanreview.com/Public

Assessor's Information

Assessor's Data: http://land.elpasoco.com/default.aspx

Assessor's Map: http://gis2.asr.elpasoco.com

Drainage Links:

Urban Drainage and Flood Control District: http://udfcd.org

Detention Pond Compliance Website: https://maperture.digitaldataservices.com/gvh/?viewer=cswdif

State DWR: http://water.state.co.us/SURFACEWATER/DAMSAFETY/Pages/DamSafety.aspx

NOAA Rainfall: https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=co

Floodplain: https://www.pprbd.org/Download/Floodplain#floodplainHandouts

https://pprbd.maps.arcgis.com/apps/webappviewer/index.html?id=1d9243f3606542159a0a418070b08686

https://msc.fema.gov/portal/advanceSearch

Fountain Creek Watershed: http://www.fountain-crk.org/

State Transportation Links

Colorado Department of Transportation (**CDOT**) M&S Standards and Specifications, Access Code and Permit:

- https://www.codot.gov/business/designsupport/standard-plans
- https://www.codot.gov/business/permits/accesspermits
- https://www.codot.gov/business/permits/accesspermits/references

Local Governing Authorities

City of Colorado Springs: https://coloradosprings.gov/

City of Fountain: https://www.fountaincolorado.org/

Town of Calhan: http://calhan.co/

Green Mountain Falls: https://gmfco.elpasoco.com/

Town of Monument: http://www.townofmonument.org/

Town of Palmer Lake: http://www.townofpalmerlake.com/

Contact Information

CDOT Access Manager	**(719)562-5537**
Work in Right of Way Permit	**(719)520-6869**
Right of Way Vacation	**(719)520-6897**
Floodplain Administrator	**(719)327-2898**
EPC Public Health	**(719)578-3199**
CDPHE Air Quality Division	**(303)692-3100**
CDPHE Water Quality Division	**(303)692-3500**
Cherry Creek Basin Water Quality Authority	**(303)239-5400**

Traffic Information

Traffic Impact Study (ECM Appendix B)*	
Full TIS	ADT > 1,000 or Pk Hr > 100
Intermediate TIS	ADT < 1,000 or Pk Hr < 100
Traffic Memo	ADT ≤ 500 or Pk Hr ≤ 50
No TIS	ADT < 100 or Pk Hr < 10

*An approved TIS that has been prepared in the last three years may be revised or updated where a proposed access is changed or a change in the proposed action may result in a new trip generation that exceeds the original trip generation estimates. An amendment letter is required.

**If the original TIS is older than three years, an entirely new TIS shall be prepared.

The applicant is responsible for obtaining any necessary approvals for impacts within other jurisdictions. It is recommended that the applicant approach the jurisdiction early in the development process for any additional requirements. If the proposal is impacted by an El Paso County Department of Public Works project, coordination with DPW is required.

Drainage Report/Plan Information

Drainage Letter Report – With a Re-plat, Minor Sub or Plot Plan (DCM Section 4.5)

Drainage Basin Planning Study (DBPS) – May be required with a very large development

Master Development Drainage Plan (MDDP) – Required with phased development greater than 10 acres (may be

required with Sketch Plan) (DCM Section 4.2)

Preliminary Drainage Report (PDR) – Required with a Preliminary Plan (DCM Section 4.3)

Final Drainage Report (FDR) – Required with a Final Plat (DCM Section 4.4)

Detention/Water Quality BMP/Downstream Conveyance Information

If regional detention or water quality BMPs are not available then on-site facilities will be required. The County Criteria has been updated to require Full-Spectrum Detention/WGCV Facilities. If on-site facilities are required, the applicant will be required to provide access and drainage easements in accordance with Section 11.2.2 of the Drainage Criteria Manual. Private Detention Pond/BMP maintenance agreement(s) and Operations and Maintenance Manual(s) will be required.

For special water quality BMPs, see the Engineering Criteria Manual Appendix I.

State Engineer's requirements regarding dams and water rights apply. Post Construction MS4 Form, SDI Worksheet, and Jurisdictional/Non-Jurisdictional dam construction forms are typically required for detention facilities.

The project must provide for an acceptable method of storm drainage conveyance and may be required to construct (or contribute an equitable share to the construction of) a storm conveyance or collector system.

If the site conveys storm drainage flows through or across an adjacent private property, then the applicant is responsible for obtaining off-site drainage easements in accordance with the Engineering Criteria Manual Section 3.3.3.K. Any offsite easements necessary for the development shall be recorded prior to County Plan approvals.

Drainage Master Plan/Floodplain Information

If it is undetermined at this time if an adopted Drainage Basin Planning Study or Master Plan exists in this area, the applicant is responsible for researching the appropriate information.

If the subdivision application impacts the floodplain, a FEMA Letter of Map Revision may be required. If the site is in or near a floodplain, contact the Regional Floodplain Administrator for allowed floodplain uses and procedural requirements. It is the Applicant's responsibility to research the effects and implications of developing in or near a floodplain, including limited uses, floodplain development permits, geotechnical, wetland and wildlife studies, structural requirements, flood insurance and potential future floodplain mapping updates. FEMA's FIRM maps may be out of date or at a low level of accuracy.

If the site lies within the Cherry Creek Basin Water Quality Authority area, the applicant should discuss any concerns related to the development with the CCBWQA's consultant.

If the site lies within the Fountain Creek watershed, the District has authority over the floodplain impacts and is advisory to the County on uses outside of the floodplain. The applicant should discuss any concerns related to the development with District staff.

Grading, Erosion, and Sediment Control Information

The Grading and Erosion Control Plan must be prepared in accordance with Drainage Criteria Manual Vol. 2 and the County checklist.

An Erosion and Stormwater Quality Control Permit (ESQCP) is required for construction activities that result in land disturbance of greater than or equal to one acre. An ESQCP is also required for construction activities that result in less than one acre if the activity is part of a larger common plan of development or sale that would disturb one acre or more of ground surface (ECM 1.4.1). Refer to Table I-2 in the Engineering Criteria Manual to determine applicability of an ESQCP. An application for an ESQCP shall be accompanied by the following:

- Stormwater Management Plan
- Permit Fee
- Financial Surety
- Statement of Certification
- Operation and Maintenance Plan
- Maintenance Agreement
- Application Information

Please refer to the Engineering Criteria Manual Appendix I (1.4.1A) for further information and criteria on the above mentioned items.

A Builder's Erosion and Sediment Quality Control Permit (BESQCP) is required only for a single family residence or duplex site that has < 1 acre of disturbed areas and the site is currently covered by an ESCQP and site is not in sensitive area. Refer to Table I-2 in the Engineering Criteria Manual for further information on sensitive areas and Section I.4.2 for information on the BESQCP application.

Neither an ESQCP nor BESQCP are required for a single family residence or duplex building site which disturbs < 1 acre and is not part of a larger project or in a sensitive area.

If a County Construction Activity permit is required, contact the El Paso County Department of Health and Environmental for further information regarding the permit. Construction activities that disturb one or more acres are required by the Environmental Protection Agency to obtain a Construction Stormwater Permit. Contact the Colorado Department of Public Health & Environment Water Quality Control Division for further information regarding the permit. All land development activities greater than twenty-five (25) acres or with construction duration longer than six (6) months must obtain an Air Pollution Emission Notice and Emissions Permit. Contact the Colorado Department of Public Health & Environment Air Quality Control Division for more information regarding the permit.

Public Improvements Information

If public improvements are required, the applicant will be required to enter into a Subdivision Improvement Agreement (SIA) with the County. Refer to the El Paso County Land Development Code for information on the SIA and the ECM for the required format of the associated Financial Assurance Estimate. All forms are available online.

Construction drawings for the required public improvements must be reviewed and approved by PCD and the County Engineer. All Construction drawing submittals shall adhere to the criteria set forth in the ECM. A construction plan review fee will be assessed when the plans are submitted for review.

Geotechnical reports for earthwork and pavement designs must be reviewed and approved. All submittals must adhere to the criteria set forth in the ECM.

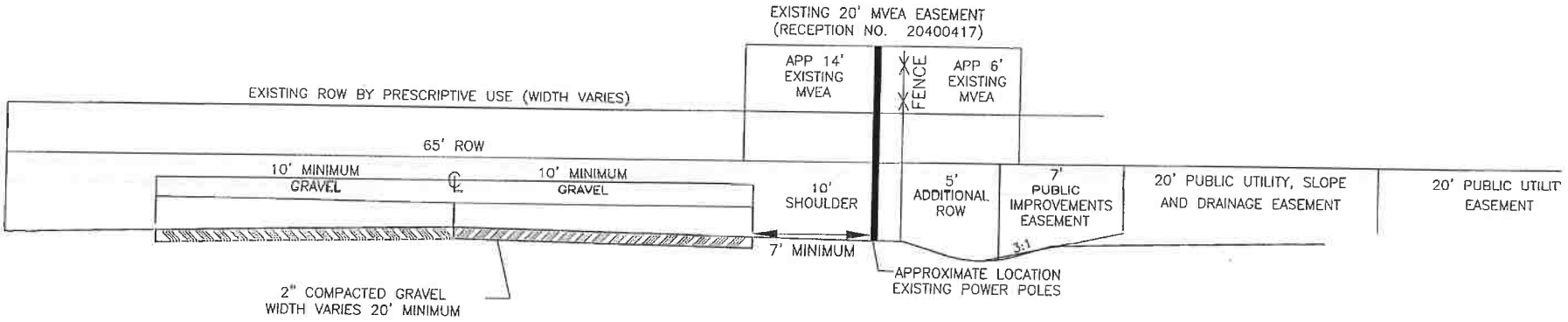
Any work within the Right of Way will require a permit.

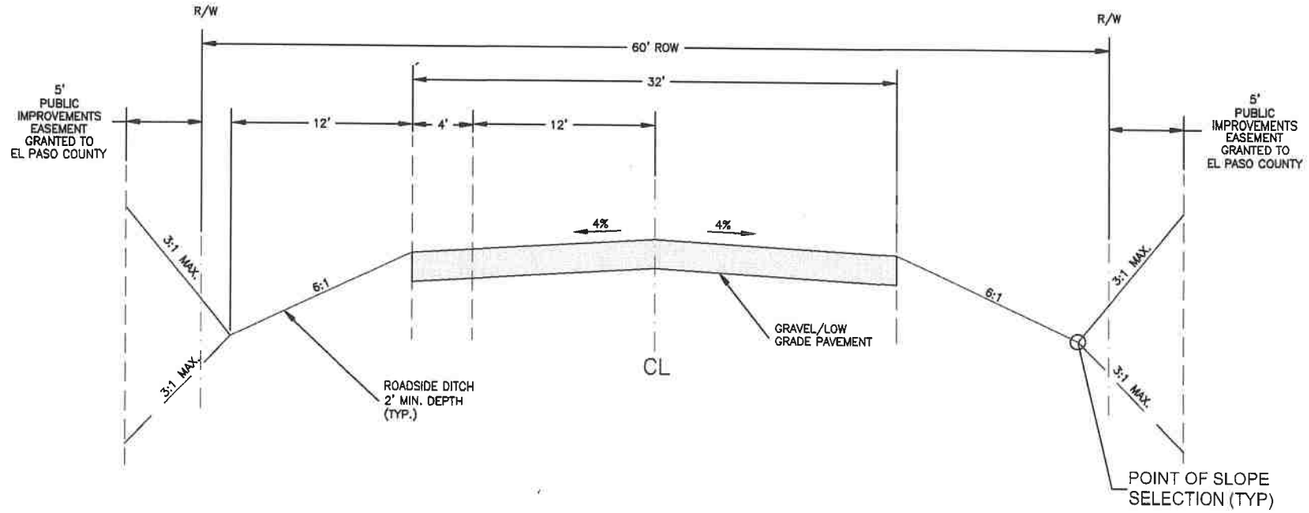
Any Fire cistern(s) and mailbox kiosks need to be shown on the construction drawings.

Deviations

All engineering designs and studies shall be performed in conformance with adopted codes, standards and criteria. Any deviations are to be formally identified and requested in writing, with justification provided per ECM Section 5.8. All deviation requests must be approved by the ECM Administrator prior to submitting the application for review, or delays in the review and additional fees may result. The Applicant must submit adequate justification for consideration of the request(s).

Exhibit 4: Typical Sections, Charts, Tables and Figures

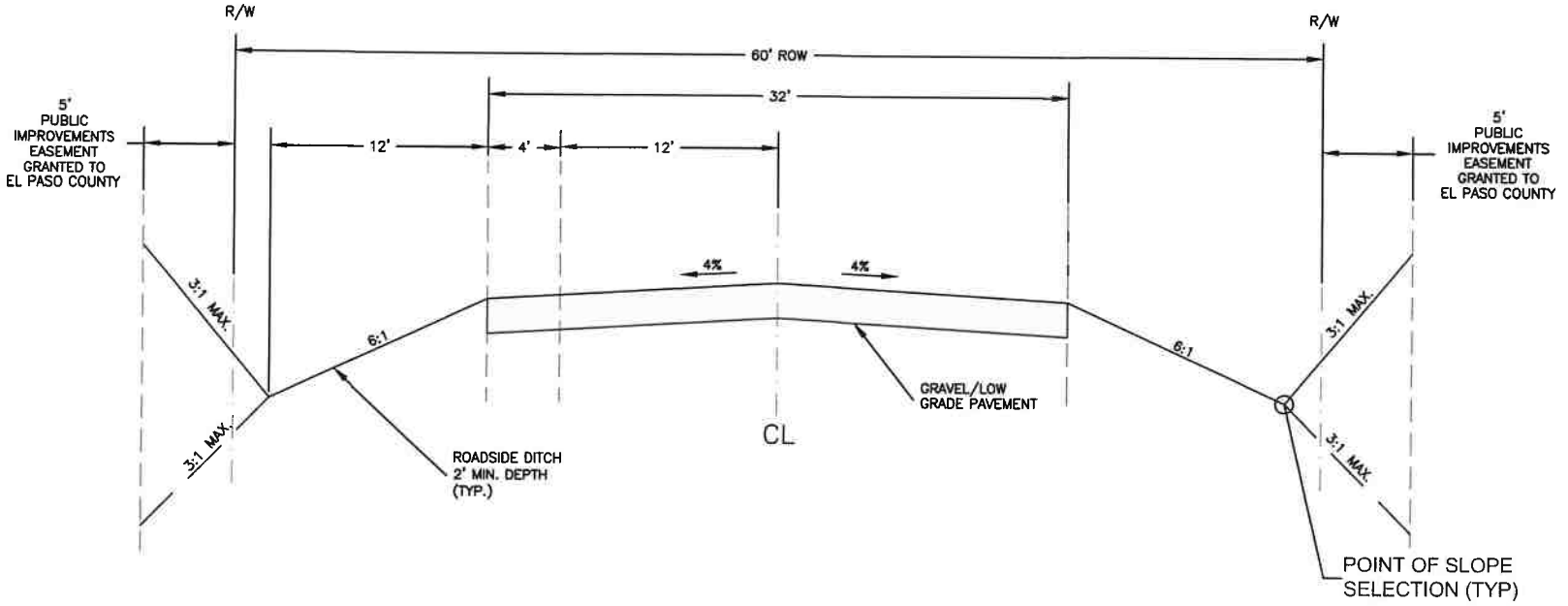

EXISTING 20' MVEA EASEMENT
(RECEPTION NO. 20400417)
APP 14' EXISTING MVEA
FENCE
APP 6' EXISTING MVEA
EXISTING ROW BY PRESCRIPTIVE USE (WIDTH VARIES)
65' ROW
10' MINIMUM GRAVEL
10' MINIMUM GRAVEL
10' SHOULDER
5' ADDITIONAL ROW
7' PUBLIC IMPROVEMENTS EASEMENT
20' PUBLIC UTILITY, SLOPE AND DRAINAGE EASEMENT
20' PUBLIC UTILIT EASEMENT
7' MINIMUM
3:1
2" COMPACTED GRAVEL
WIDTH VARIES 20' MINIMUM
APPROXIMATE LOCATION
EXISTING POWER POLES



Roadway Design Parameters
Design Speed: 50 mph
Posted Speed: 45 mph
Maximum ADT: 199
Design Vehicle: WB-50

SCALE: NOT TO SCALE

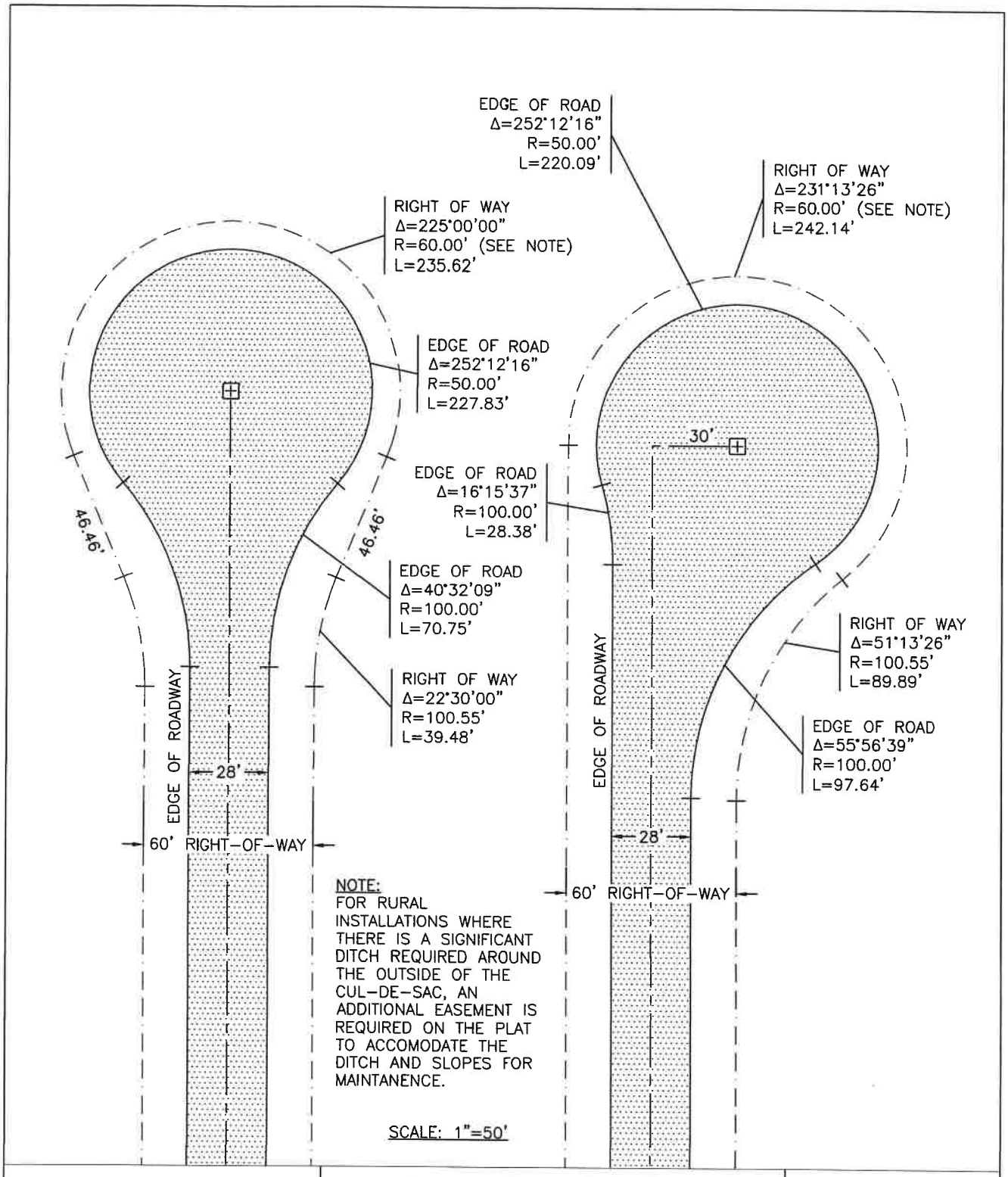
9/16/10 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Rural Gravel Local Roadway Standard Cross Section REVISION DATE: 12/8/15 FILE NAME: SD_2-10	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



Roadway Design Parameters
Design Speed: 50 mph
Posted Speed: 45 mph
Maximum ADT: 199
Design Vehicle: WB-50

SCALE: NOT TO SCALE

9/16/10 DATE APPROVED: André P. Brackin DEPARTMENT OF TRANSPORTATION	Rural Gravel Local Roadway Standard Cross Section REVISION DATE: 12/8/15 FILE NAME: SD_2-10	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION



1/1/08

DATE APPROVED:

John A. McCarty

DEPARTMENT OF TRANSPORTATION

Rural Cul-De-Sac Details

Standard Drawing

EL PASO COUNTY
DEPARTMENT OF TRANSPORTATION

REVISION DATE: 12/8/15

FILE NAME: SD_2-76

Centerline Grade (Min.-Max.)	1-5%	1-5%	1-5%	1-5%	1-6%
Intersection Grades (Min.-Max.)	1-2%	1-2%	1-3%	1-3%	1-4%

[1] Assumes 4% superelevation, 6% for 70 MPH design speeds
[2] Pavement width in each direction for divided roadways

Table 2-5. Roadway Design Standards for Rural Collectors and Locals

	Collectors		Local	
Criteria	**Major**	**Minor**	**Local**	**Gravel**
Design Speed / Posted Speed (MPH)	50 / 45	40 / 35	30 / 30	50/45
Clear Zone	20'	14'	7'	12'
Minimum Centerline Curve Radius	930'[2]	565'	300'	As Approved
Number of Through Lanes	2	2	2	2
Lane Width	12'	12'	12'	12'
Right of Way	90'	80'	70'[3]	70'[3]
Paved Width	32'	32'	28'	n/a
Median Width	n/a	n/a	n/a	n/a
Outside Shoulder Width (paved/gravel)	8'(4'/4')	6'(4'/2')	4'(2'/2')	4'(0'/4')
Inside Shoulder Width (paved/gravel)	n/a	n/a	n/a	n/a
Design ADT	3,000	1,500	750	200
Design Vehicle	WB-67	WB-67	WB-50	WB-50
Access Permitted	No	Yes	Yes	Yes
Access Spacing	n/a	Frontage	Frontage	Frontage
Intersection Spacing	¼ mile	660'	330'	330'
Parking Permitted	No	Yes	Yes	No
Minimum Flowline Grade	1%	1%	1%	1%
Centerline Grade (Min.-Max.)	1-8%[1]	1-8%[1]	1-8%[1]	1-8%
Intersection Grades (Min.-Max.)	1-4%	1-4%	1-4%	1-4%

[1] 10% maximum grade permitted at the discretion of the ECM Administrator
[2] Assumes 4% superelevation, 6% for 70 MPH design speeds
[3] 60-foot right-of-way plus two 5-foot Public Improvements Easements granted to El Paso County

Table 2-16. Clear Zone Distances[1]

Design Speed	Design ADT	Foreslopes 1V:6H or flatter	Foreslopes 1V:5H to 1V:4H	Foreslopes 1V:3H	Backslopes 1V:3H	Backslopes 1V:5H to 1V:4H	Backslopes 1V:6H or flatter
40 mph or less	Under 750	7–10	7-10	[2]	7–10	7–10	7–10
	750–1500	10–12	12-14	[2]	10–12	10–12	10–12
	1500–6000	12–14	14-16	[2]	12–14	12–14	12–14
	Over 6000	14–16	16-18	[2]	14–16	14–16	14–16
50 mph	Under 750	10–12	12–14	[2]	8–10	8–10	10-12
	750–1500	12–14	16–20	[2]	10–12	12–14	14-16
	1500–6000	16–18	20–26	[2]	12–14	14–16	16-18
	Over 6000	18–20	24–28	[2]	14–16	18–22	20-22
60 mph	Under 750	16–18	20–24	[2]	10–12	12–14	14–16
	750–1500	20–24	26–32*	[2]	12–14	16–18	20–22
	1500–6000	26–30	32–40*	[2]	14–18	18–22	24–26
	Over 6000	30–32*	36–44*	[2]	20–22	24–26	26–28
70 mph	Under 750	18–20	20–26	[2]	10–12	14–16	14–16
	750–1500	24–26	28–36*	[2]	12–16	18–20	20–22
	1500–6000	28–32*	34–42*	[2]	16–20	22–24	26–28
	Over 6000	30–34*	38–46*	[2]	22–24	26–30	28–30

[1] Distances are provided in feet from the edge of the through lane.
[2] Since recovery is less likely on the unshielded, traversable 1V:3H slopes, fixed objects should not be present in the vicinity of the toe of these slopes. Recovery of high-speed vehicles that encroach beyond the edge of the shoulder may be expected to occur beyond the toe of the slope. Determination of the width of the recovery area at the toe of slope should take into consideration right-of-way availability, environmental concerns, economic factors, safety needs, and crash histories. Also, the distance between the edge of the through-traveled lane and the beginning of the 1V:3H slope should influence the recovery area provided at the toe of slope.

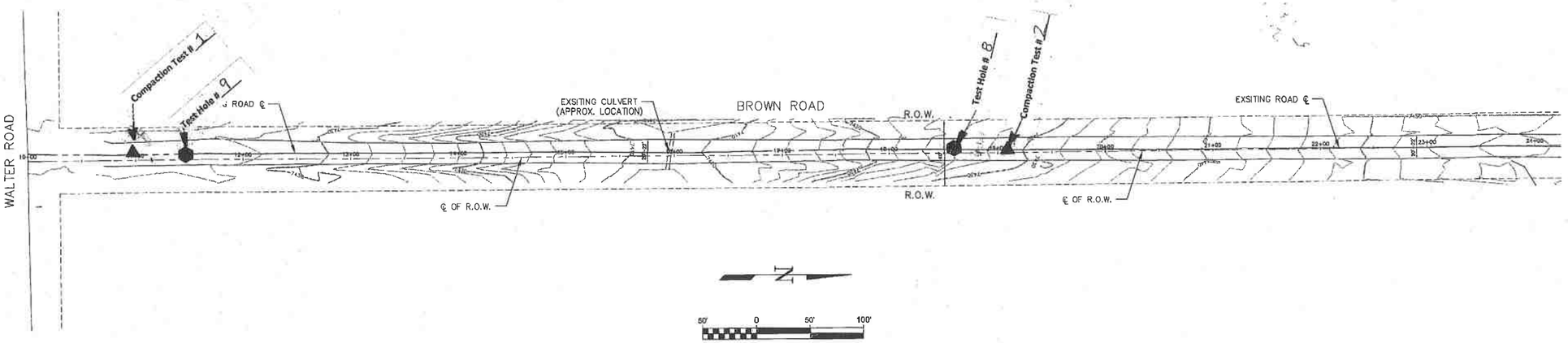
2.3.6 Sight Distance

Sight distance is the length of roadway that is clearly visible to the driver and is dependent upon the height of the driver's eye above the road surface, the specified object height above the road surface, and the height of sight obstructions within the line of sight. The minimum sight distance available on a roadway should be sufficient to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object. In evaluating the overall performance of a roadway, both the horizontal and vertical sight distances should be considered.

A. Sight Distance Calculations

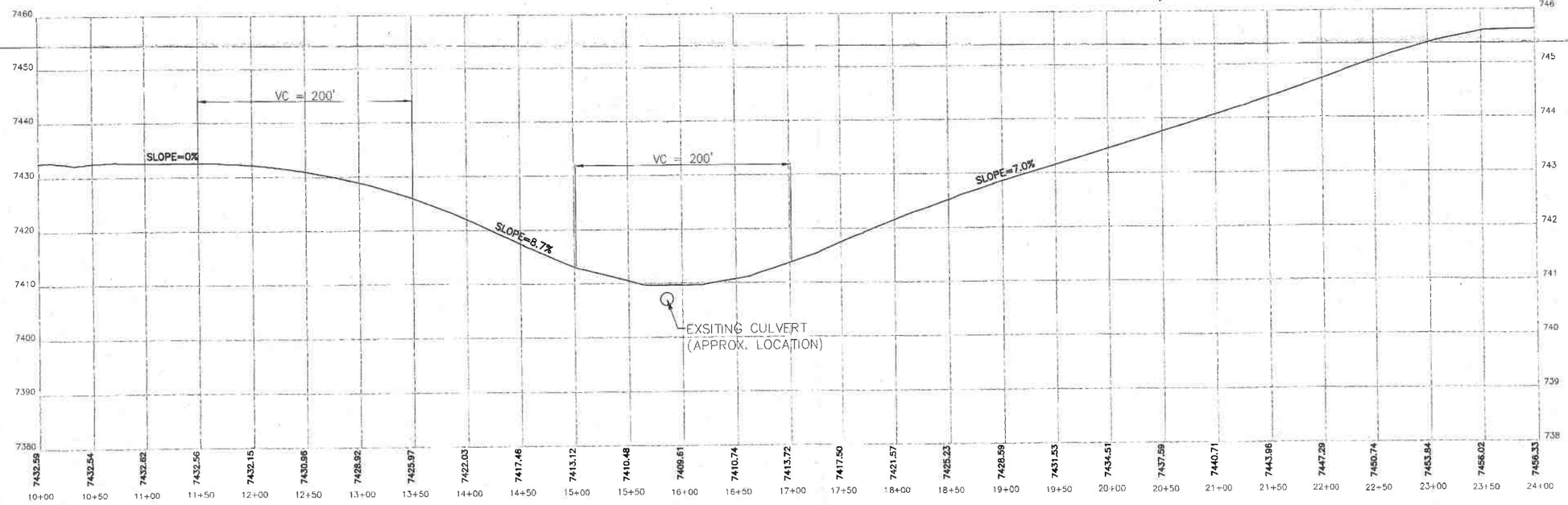
For general sight distance calculations, the height of the driver's eye is considered to be 3.5 feet above the road surface and the object is considered to be 0.5 feet above the road surface. However, for passing sight distance calculations, the height of the object is considered to be 4.25 feet above the road surface.

Exhibit 5: Brown Road Plan and Profiles



NOTE:

1. DEPTH OF COVER OVER CULVERTS ASSUMED TO BE 2 FEET.
2. SLOPE OF CULVERT IS NOT VERIFIED
3. HORIONTAL AND VERTICAL ALLIGNMENT OF CULVERTS ASSUMED
4. AND NOT VERIFIED.



HORZ. SCALE = 1"=50'
VERT. SCALE = 1"=10'

NOTE:

PLAN & PROFILE IS FOR ROADWAY ELEVATION PURPOSES ONLY AND IS NOT TO BE USED FOR THE DEVELOPMENT OF DESIGN DRAWINGS OR CONSTRUCTION.

NOT FOR CONSTRUCTION:

THESE PLANS ARE INTENDED FOR SUBMITTAL, REVIEW AND APPROVAL BY CITY/COUNTY PLANNING DEPARTMENTS AND SHOULD NOT BE USED ON SITE FOR CONSTRUCTION OR LAYOUT.

CALL BEFORE YOU DIG . . .
811
DIAL 811
48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS FOR LOCATIONS AND MARKING GAS, ELECTRIC, WATER AND SEWER SERVICES

No.	Description	By	Date

REVISIONS

H Scale: 1"= 50'
V Scale: 1"= 10'
Designed By: KH
Drawn By: TLC
Checked By: KH
Date: 11/14/19

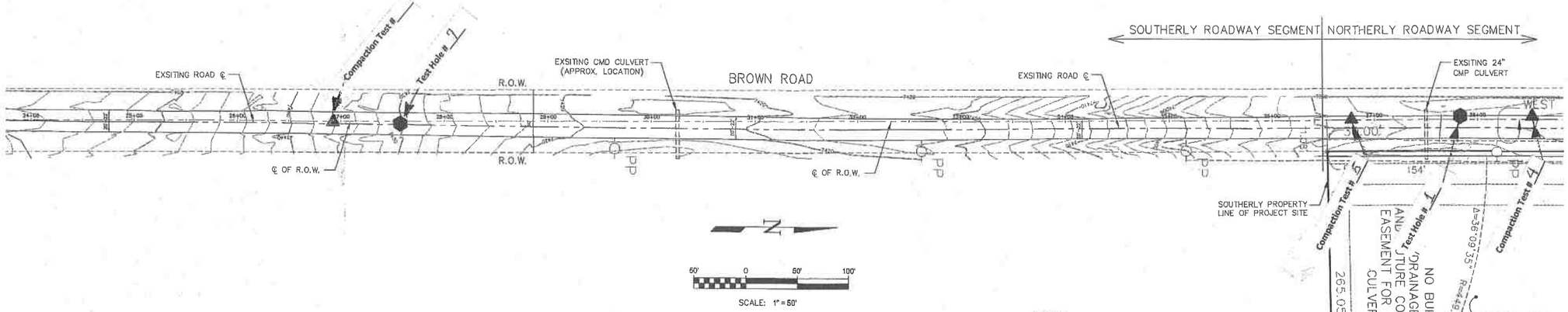
Land Development Consultants, Inc.
PLANNING · SURVEYING
www.ldc-inc.com · TEL: (719) 528-6133 FAX: (719) 528-6848
3898 MAIZELAND ROAD · COLORADO SPRINGS, CO 80909

BROWN ROAD ELEVATION
PLAN & PROFILE
STATION 10+00 TO 24+00

Project Number: 18065

Sheet: 1 of 4

P:\18065\18065 - Prairie Ridge\Surveying\Dwg\20705\18PH1\2019 Profile.dwg



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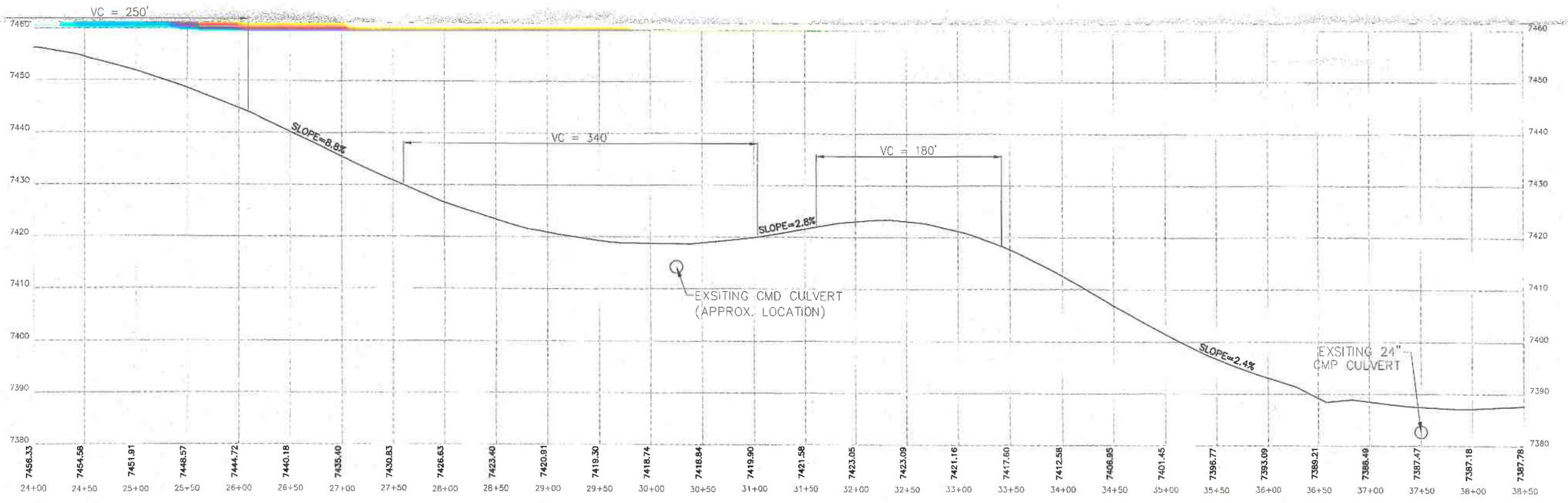

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CALL BEFORE YOU DIG ...
811
DIAL 811
48 HOURS NOTICE BEFORE YOU EXCAVATE
FOR LOCATING AND MARKING GAS, ELECTRIC, WATER AND WASTEWATER

No.	Description	By	Date
	REVISIONS		

H Scale: 1"= 50'
V Scale: 1"= 10'
Designed By: KH
Drawn By: TLC
Checked By: KH
Date: 11/14/18

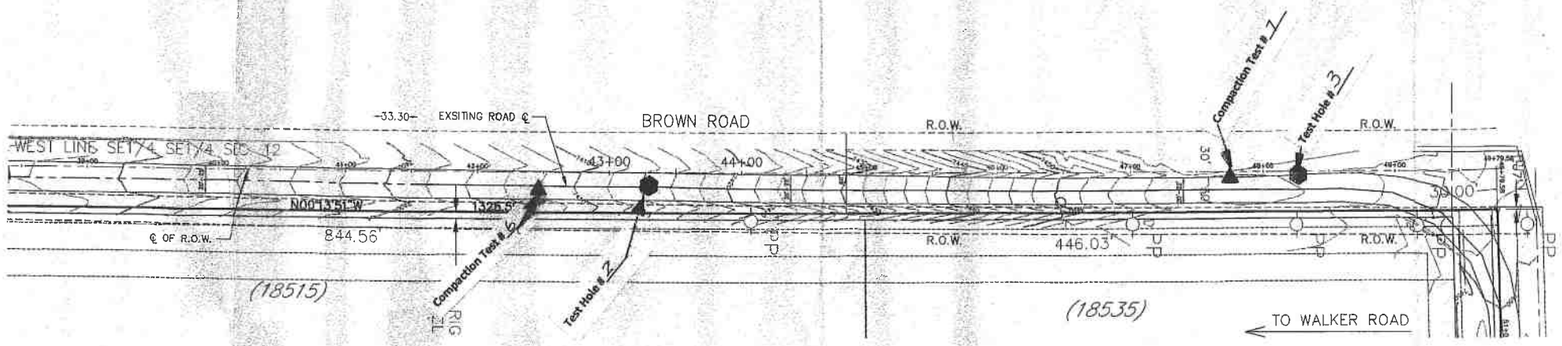
Land Development Consultants, Inc.
PLANNING - SURVEYING
www.ldc-inc.com - TEL: (719) 538-6133 - FAX: (719) 528-6848
3898 MAIZELAND ROAD - COLORADO SPRINGS, CO 80909

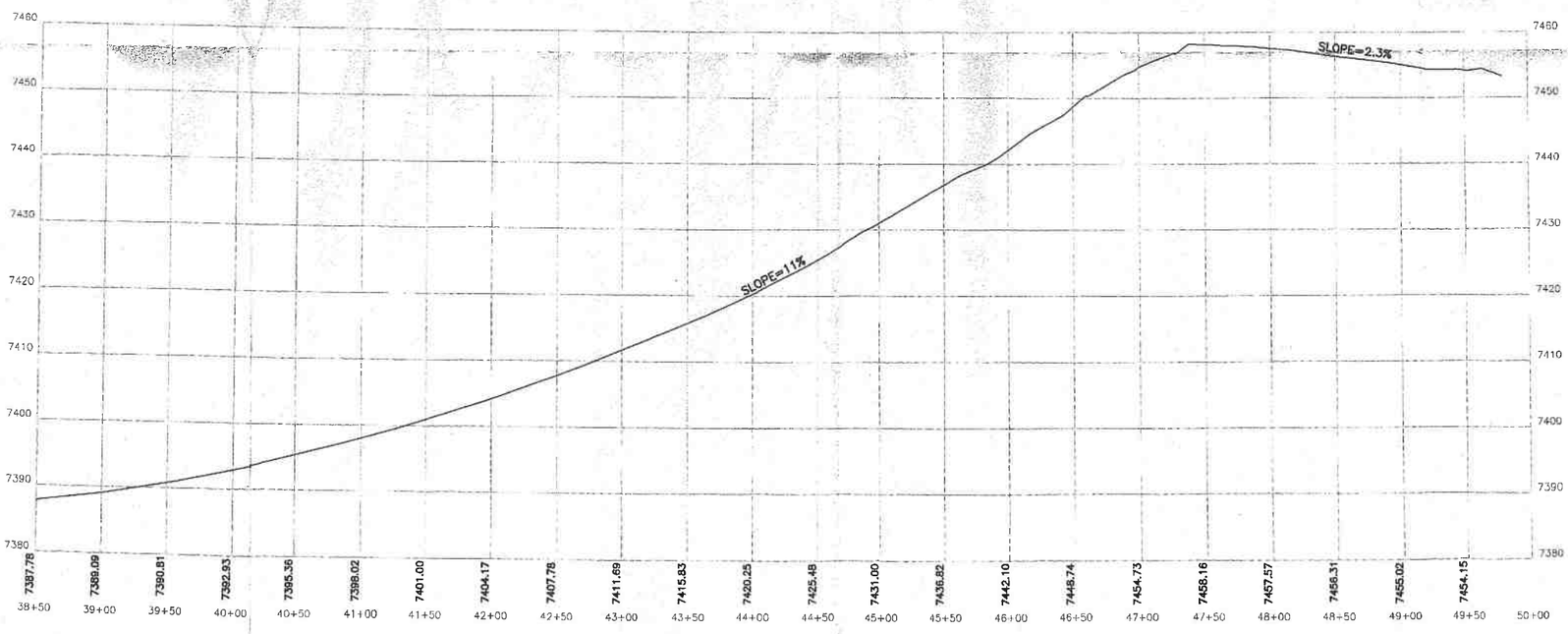
BROWN ROAD ELEVATION PLAN & PROFILE
STATION 24+00 TO 38+50

Project Number: 18065

Sheet: 2 of 4

F:\18065\18065 - Prairie Ridge\Surveying\Topo\07051RR\12019 Profile.dwg





HORZ. SCALE = 1"=50'
VERT. SCALE = 1"=10'

NOTE:

PLAN & PROFILE IS FOR ROADWAY ELEVATION PURPOSES ONLY AND IS NOT TO BE USED FOR THE DEVELOPMENT OF DESIGN DRAWINGS OR CONSTRUCTION.

NOTE:

1. DEPTH OF COVER OVER CULVERTS ASSUMED TO BE 2 FEET.
2. SLOPE OF CULVERT IS NOT VERIFIED
3. HORIONTAL AND VERTICAL ALLIGNMENT OF CULVERTS ASSUMED
4. AND NOT VERIFIED.

NOT FOR CONSTRUCTION:

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CALL BEFORE YOU DIG ...

811

DIAL 811

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS FOR LOCATING ANY UNDERGROUND ELECTRIC, WATER AND WASTEWATER

REVISIONS

No.	Description	By	Date

H Scale: 1"= 50'
V Scale: 1"= 10'
Designed By: KH
Drawn By: TLC
Checked By: KH
Date: 11/14/19

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BROWN ROAD ELEVATION PLAN & PROFILE
STATION 38+50 TO 50+00

Project Number: 18065

Sheet: 3 of 4

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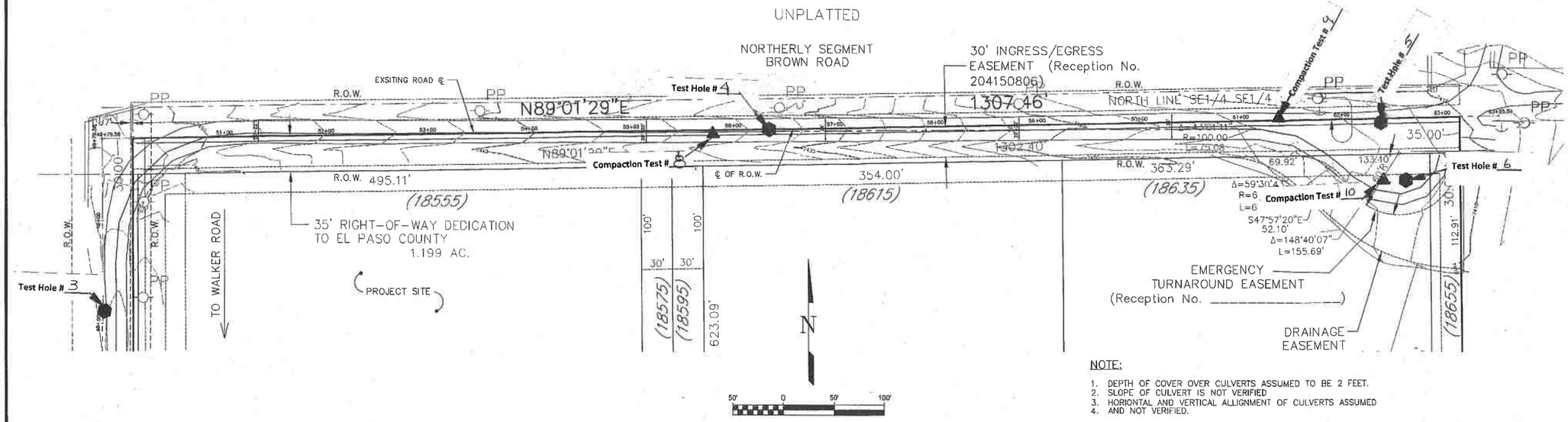

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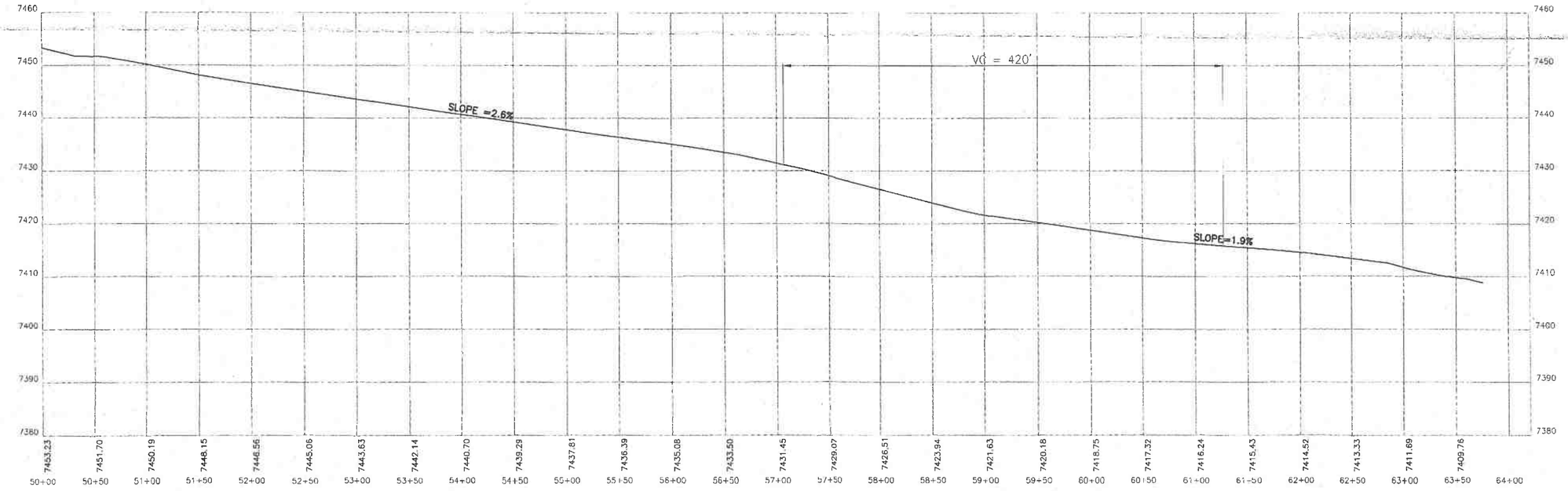
2. SLOPE OF CULVERT IS NOT VERIFIED
3. HORIONTAL AND VERTICAL ALLIGNMENT OF CULVERTS ASSUMED
4. AND NOT VERIFIED.



HORZ. SCALE = 1"=50'
VERT. SCALE = 1"=10'

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811
DIAL 811
48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS FOR LOCATING AND MARKING GAS, ELECTRIC, WATER AND WASTEWATER

REVISIONS

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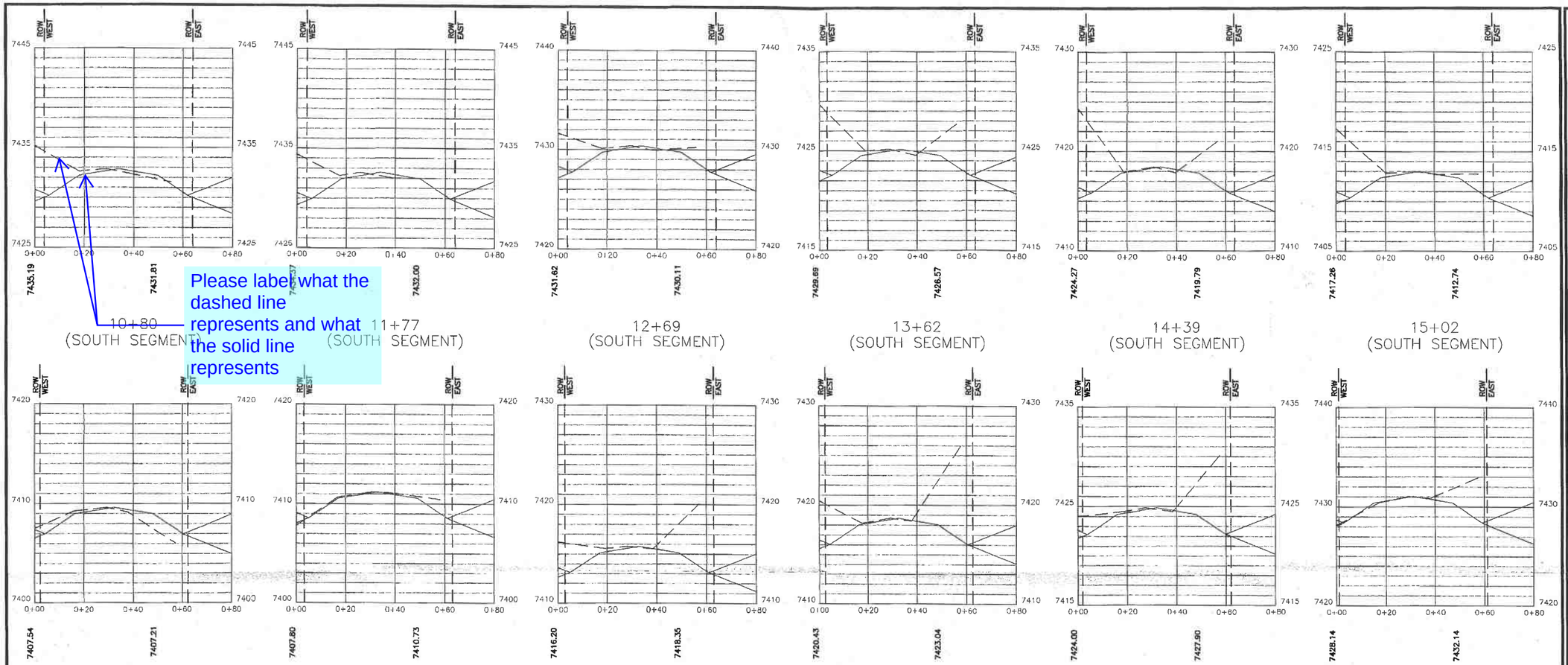
BROWN ROAD ELEVATION PLAN & PROFILE
STATION 50+00 TO 64+00

Project Number: 18065

Sheet: 4 of 4

F:\18000\18065 - Prairie Ridge\Surveying\Topo\07051PR12019 Profile.dwg

Exhibit 6: Brown Road Cross Sections



Please label what the dashed line represents and what the solid line represents

10+80 (SOUTH SEGMENT)

11+77 (SOUTH SEGMENT)

12+69 (SOUTH SEGMENT)

13+62 (SOUTH SEGMENT)

14+39 (SOUTH SEGMENT)

15+02 (SOUTH SEGMENT)

15+71 (SOUTH SEGMENT)

16+63 (SOUTH SEGMENT)

17+31 (SOUTH SEGMENT)

17+66 (SOUTH SEGMENT)

18+46 (SOUTH SEGMENT)

19+43 (SOUTH SEGMENT)

20+36 (SOUTH SEGMENT)

21+26 (SOUTH SEGMENT)

22+19 (SOUTH SEGMENT)

23+04 (SOUTH SEGMENT)

23+65 (SOUTH SEGMENT)

24+54 (SOUTH SEGMENT)

NOTE:

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811 DIAL 811

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REVISIONS

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H Scale: 1"= 20'
V Scale: 1"= 5'
Designed By: KH
Drawn By: TLC
Checked By: KH
Date: 11/14/19

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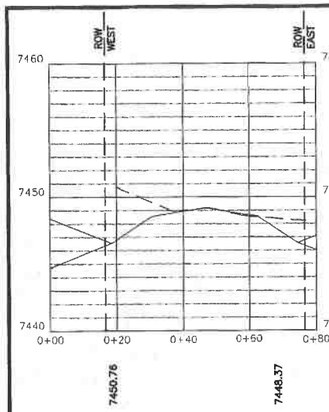
PLANNING · SURVEYING
www.ldc-inc.com · TEL: (719) 528-6133 · FAX: (719) 528-6544
3836 MAIZELAND ROAD · COLORADO SPRINGS, CO 80909

BROWN ROAD ELEVATION CROSS SECTION
STATION 25+39 TO 48+74

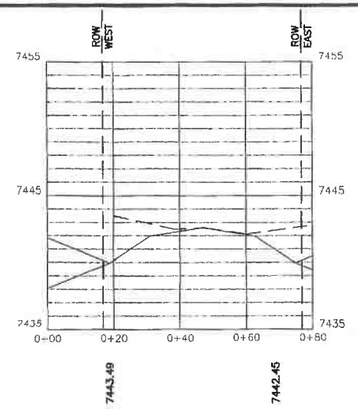
Project Number: 18065

Sheet: 1 of 3

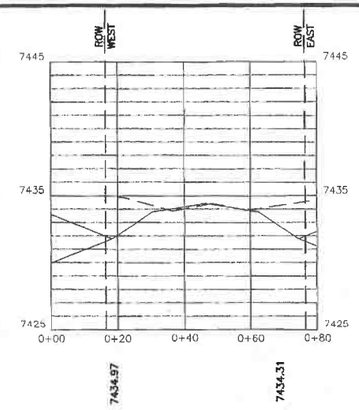
P:\18065\1805 - Pikes Ridge\Survey\dgn\Topo\070519\R1\2019 Profile.dwg



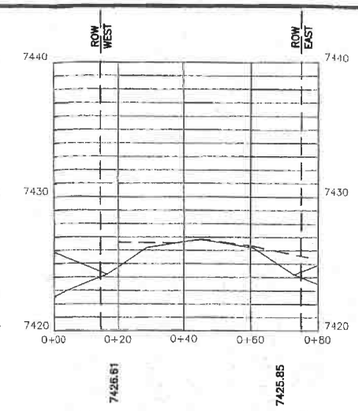
25+39
(SOUTH SEGMENT)



26+24
(SOUTH SEGMENT)



27+11
(SOUTH SEGMENT)



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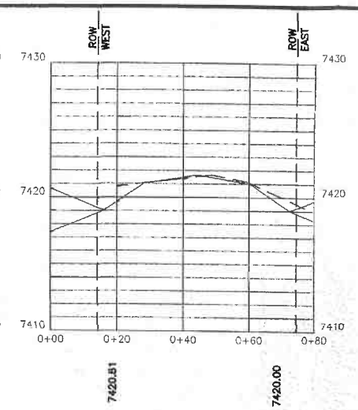
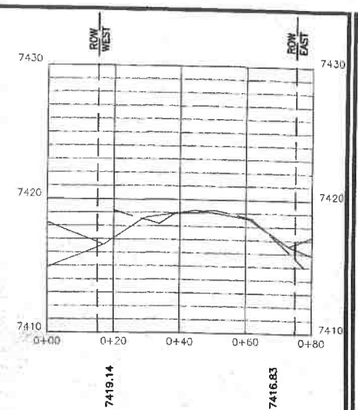
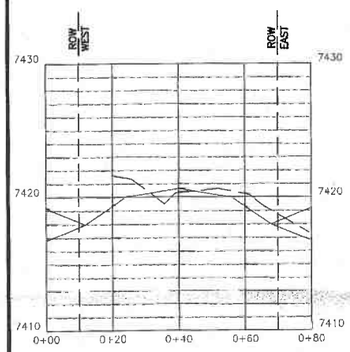


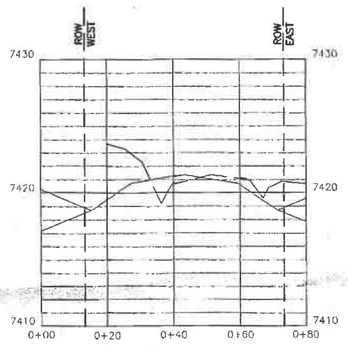
28+81
(SOUTH SEGMENT)



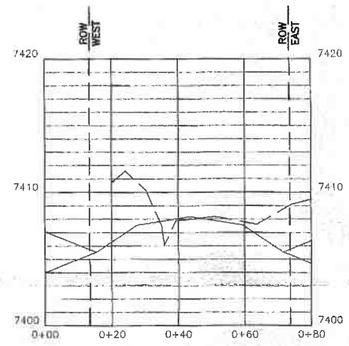
29+55
(SOUTH SEGMENT)



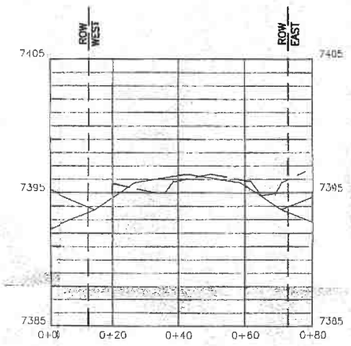
31+24
(SOUTH SEGMENT)



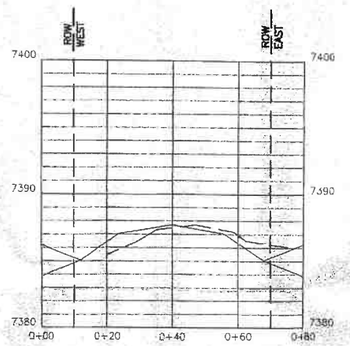
33+24
(SOUTH SEGMENT)



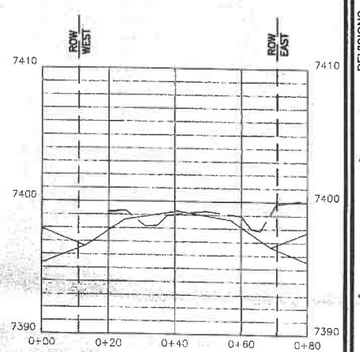
34+39
(SOUTH SEGMENT)



35+55
(SOUTH SEGMENT)



38+45
(NORTH SEGMENT)



41+21
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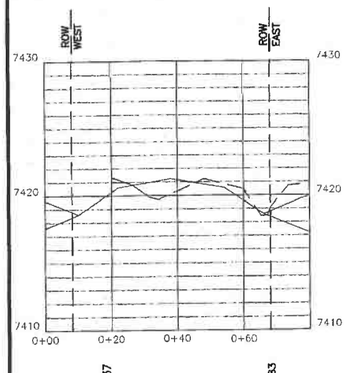
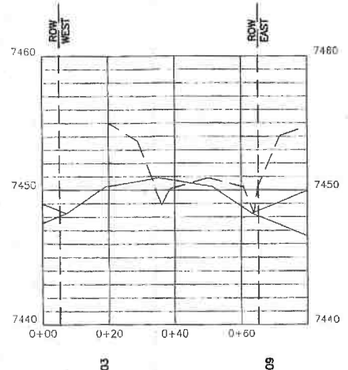
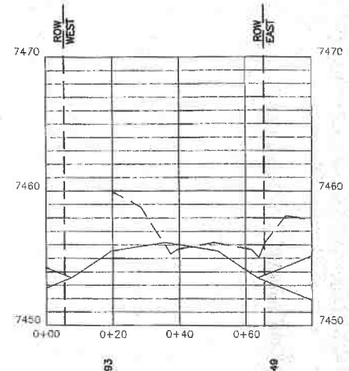


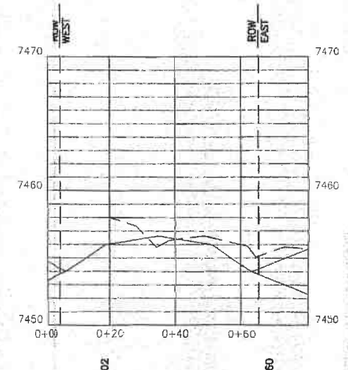
44+05
(NORTH SEGMENT)



46+53
(NORTH SEGMENT)



47+15
(NORTH SEGMENT)



48+74
(NORTH SEGMENT)

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811
DIAL 811
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REVISIONS			
No.	Description	By	Date

H Scale: 1"= 20'
V Scale: 1"= 5'
Designed By: KH
Drawn By: TLC
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Date: 11/14/18

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BROWN ROAD ELEVATION CROSS SECTIONS
STATION 25+39 TO 48+74

Project Number: 18065
Sheet: 2 of 3

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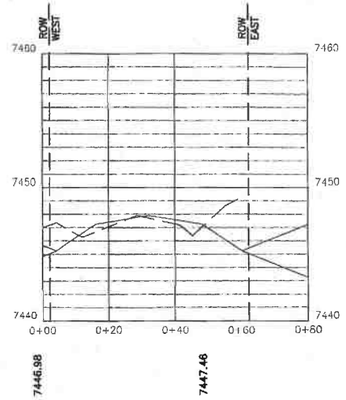
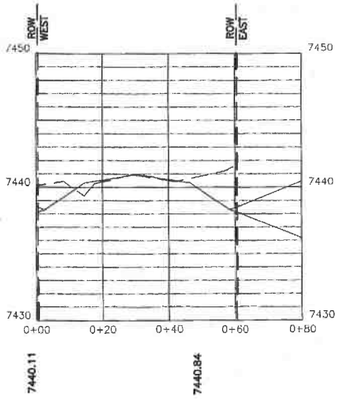
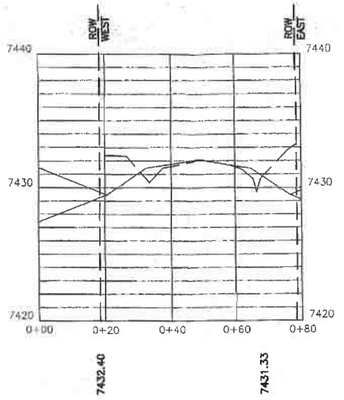


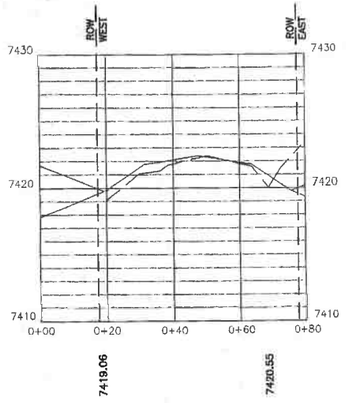
51+38
(NORTH SEGMENT)



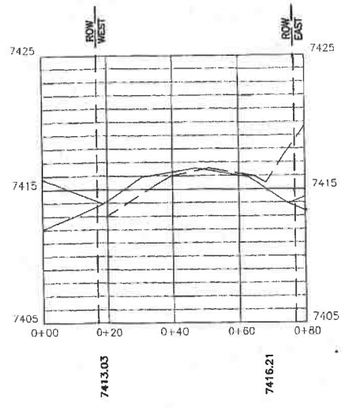
53+67
(NORTH SEGMENT)



56+65
(NORTH SEGMENT)



58+62
(NORTH SEGMENT)



60+72
(NORTH SEGMENT)

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DIAL 811
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REVISIONS

No.	Description	By	Date

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V Scale: 1"= 5'
Designed By: KH
Drawn By: TLC
Checked By: KH
Date: 11/14/19

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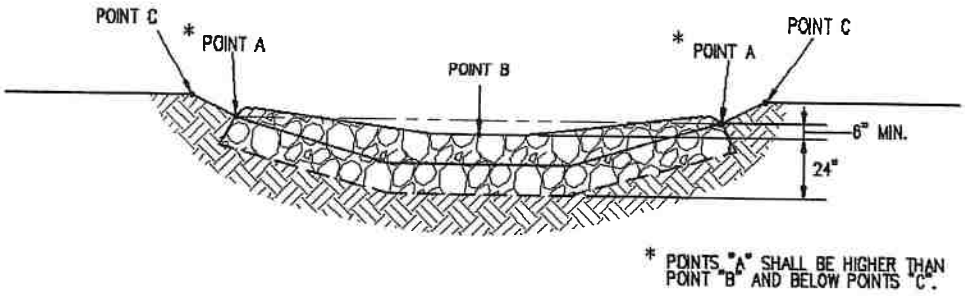
BROWN ROAD ELEVATION CROSS SECTIONS
STATION 51+38 TO 60+72

Project Number: 18065

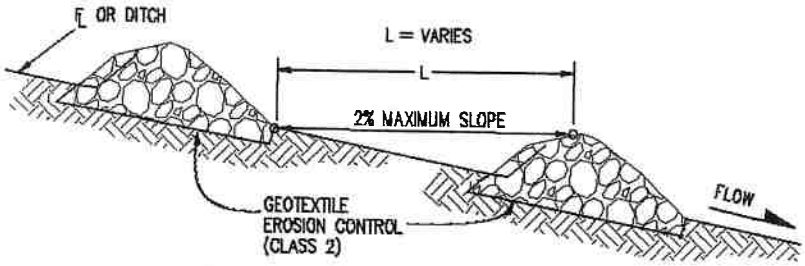
Sheet: 3 of 3

I:\18000\18065 - Prairie Ridge\Survey\ng\Road\07151PR11\2019 Profile.dwg

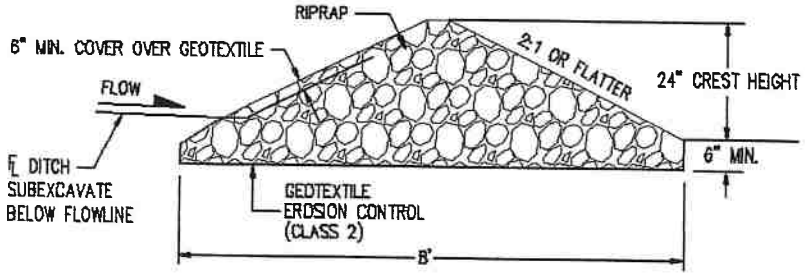
Exhibit 7: Stone Check Dams



TYPICAL SECTION VIEW



SECTION VIEW ALONG DITCH FLOWLINE



SECTION DETAIL

Exhibit 8: Entech Geotechnical Report

ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, CO 80907
PHONE (719) 531-5599
FAX (719) 531-5238

November 26, 2019

KCH Engineering Solutions
5228 Cracker Barrel Circle
Colorado Springs, Colorado 80917

Attn: Ken Harrison

Re: Base Course Thickness Measurement, Grain Size Analysis, Moisture Density Relation Curve Testing Results, and Density Testing Test Results
Prairie Ridge – Brown Road
El Paso County, Colorado

Dear Mr. Harrison:

As requested, personnel of Entech Engineering, Inc. have taken depth measurements of the road base and have performed laboratory testing on the soils obtained from the above referenced site. The observations and soils testing on the site were performed on November 6, 2019.

The project consisted of the evaluation of an existing gravel road to determine the thickness of the basecourse layer and to obtain samples for laboratory testing consisting of Grain size Analysis and moisture density relation testing. The following table shows the results of the laboratory testing and the thickness of the basecourse samples. Laboratory test results are enclosed with this letter.

In addition, density testing was performed on the roadway subgrade. Results of the density tests are attached to this report.

We trust that this has provided you with the information you require. Should you have any questions or need further information, please do not hesitate to contact us.

Respectfully Submitted,

ENTECH ENGINEERING, INC.

Daniel P. Stegman
Project Engineer

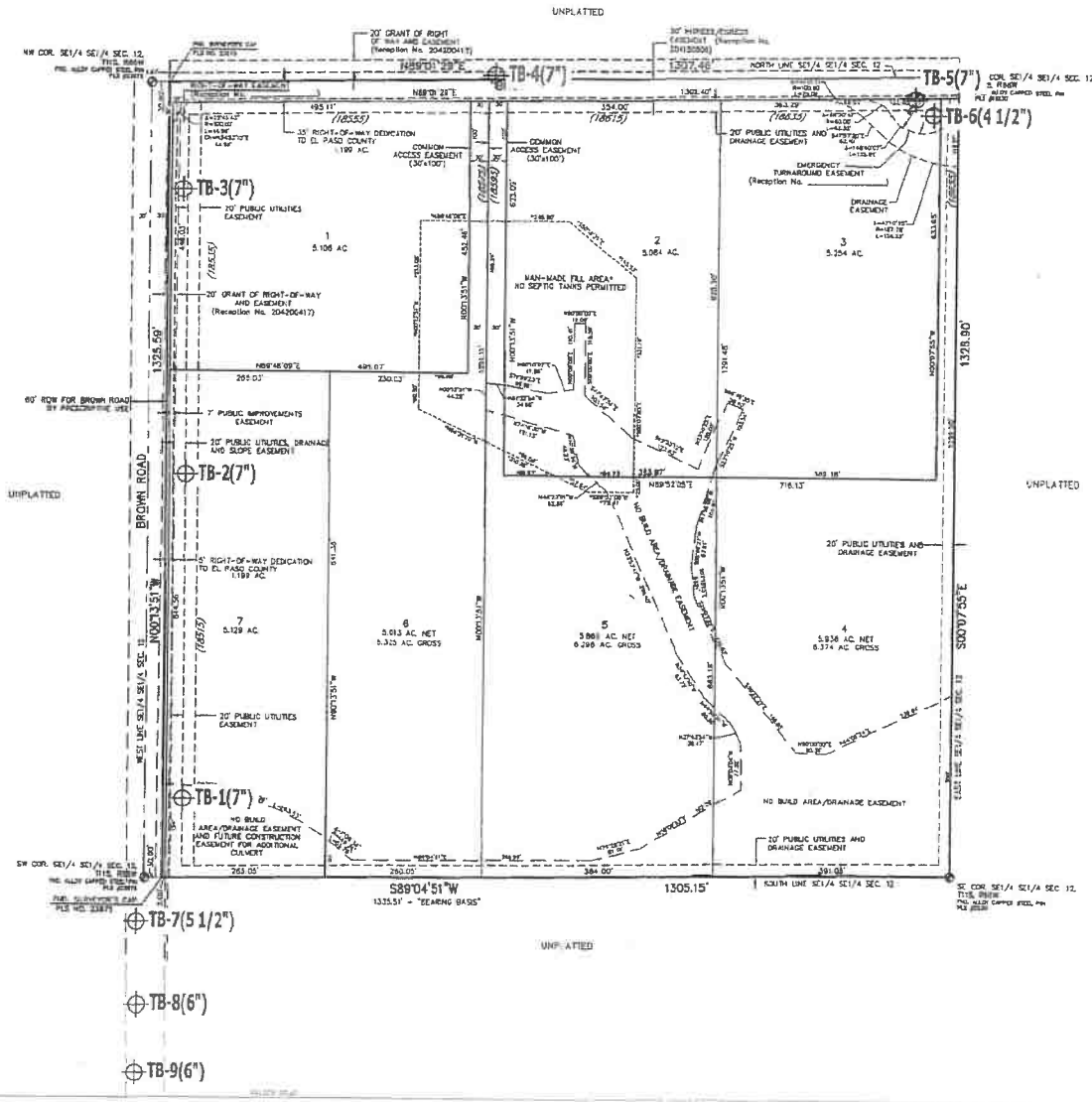
Mark H. Hauschild, P.E.
Senior Engineer

DPS/am

Enclosure

Entech Job No. 191877
F:\AA projects\2019\191877-LDC, Inc.-Prane Ridge-191877grain&mdrc.doc

CC: LDC Inc ~ Dan Kupferer



LEGEND:

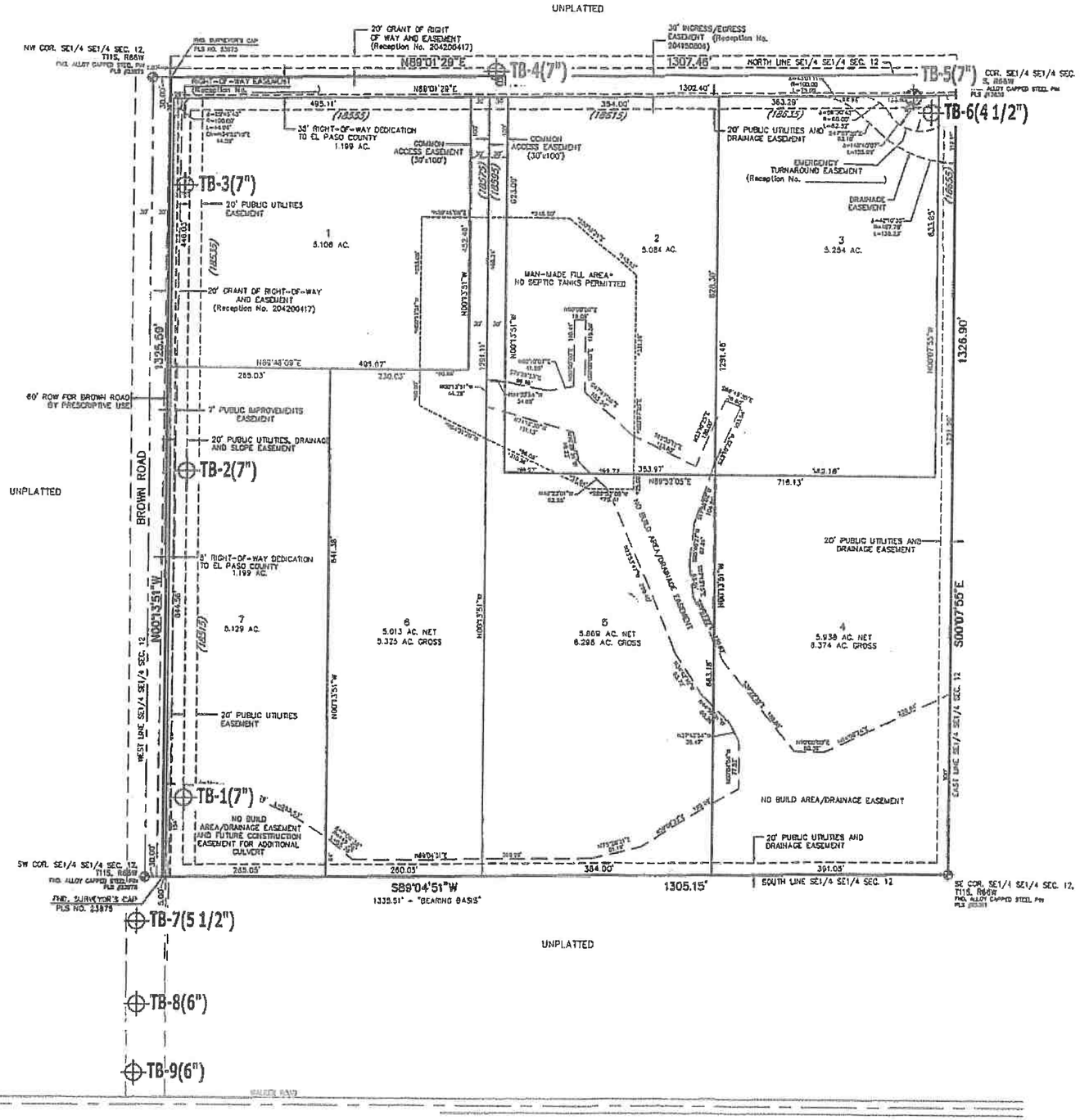
⊕TB-1(X") = Test Bore No.(Depth of Road Base)

REVISIONS	BY:

ENTECH ENGINEERING, INC.
45 BUCKEY DRIVE
COLORADO SPRINGS, CO. 80907 (719) 531-5599

SITE/SAMPLE LOCATION MAP
PRAIRIE RIDGE
EL PASO COUNTY, COLORADO
FOR: LDS, INC.

DRAWN BY: JAC
PROJECTED BY: KAH
CHECKED BY: KH
DATE: 11/22/10
SCALE: AS SHOWN
JOB NO.: 101277
SHEET NO.
1 OF 1



LEGEND:

⊕TB-1(X") = Test Bore No.(Depth of Road Base)

REVISIONS	BY:

ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, CO. 80907 (719) 531-5599

SITE/SAMPLE LOCATION MAP
PRAIRIE RIDGE
EL PASO COUNTY, COLORADO
FOR: LDS, INC.

DRAWN BY:	JAC
APPROVED BY:	KAR
CHECKED BY:	RG
DATE:	11/29/10
SCALE:	AS SHOWN
JOB NO.:	191677
SHEET NO.:	1 OF 1 SHEETS

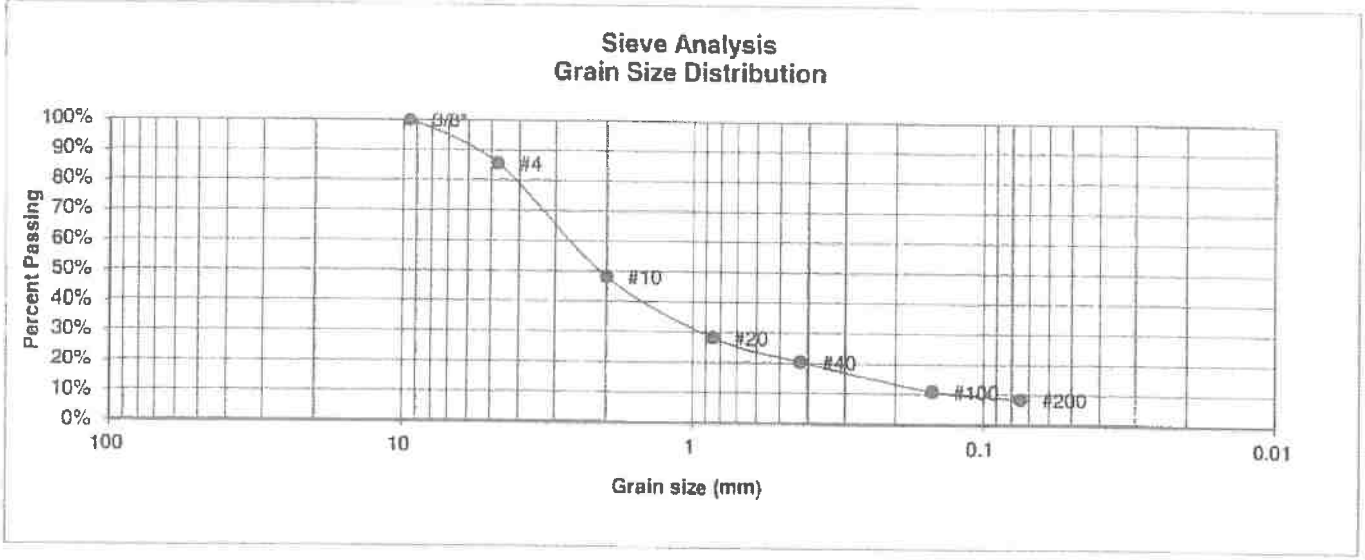
TABLE 1

SUMMARY OF LABORATORY TEST RESULTS

CLIENT LDC, INC.
PROJECT PRAIRIE RIDGE
JOB NO. 191877

SAMPLE NO.	BASE COURSE THICKNESS	PASSING NO. 200 SIEVE (%)	UNIFIED CLASSIFICATION	SOIL DESCRIPTION
1	7"	8.4	SM-SW	SAND, SLIGHTLY SILTY
2	7"	10.8	SM-SW	SAND, SLIGHTLY SILTY
3	7"	12.9	SM	SAND, SILTY
4	7"	9.4	SM-SW	SAND, SLIGHTLY SILTY
5	7"	9.4	SM	SAND, SLIGHTLY SILTY
6	4.5"			
7	5.5"			
8	6"			
9	6"			

UNIFIED CLASSIFICATION	SM-SW	CLIENT	LDC, INC.
SOIL TYPE #	1	PROJECT	PRAIRIE RIDGE
TEST BORING #	1	JOB NO.	191877
DEPTH (FT)	7"	TEST BY	BL



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	85.7%
10	48.2%
20	28.3%
40	20.3%
100	10.9%
200	8.4%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

LABORATORY TEST RESULTS

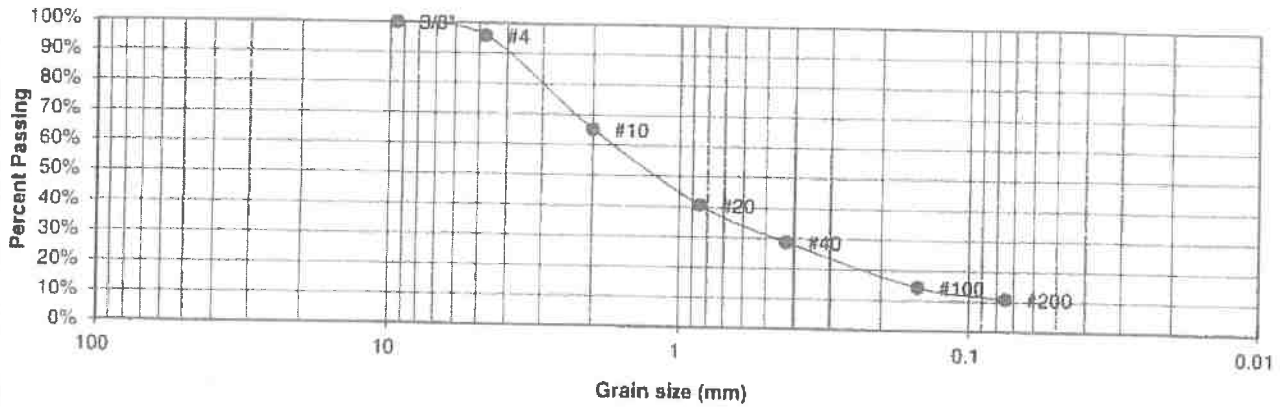
DRAWN:	DATE	CHECKED	DATE
		DS	11/22/19

JOB NO 191877

FIG NO 1

UNIFIED CLASSIFICATION	SM-SW	CLIENT	LDC, INC.
SOIL TYPE #	1	PROJECT	PRAIRIE RIDGE
TEST BORING #	2	JOB NO.	191877
DEPTH (FT)	7"	TEST BY	BL

Sieve Analysis
Grain Size Distribution



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	95.8%
10	65.2%
20	40.7%
40	28.8%
100	14.4%
200	10.8%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

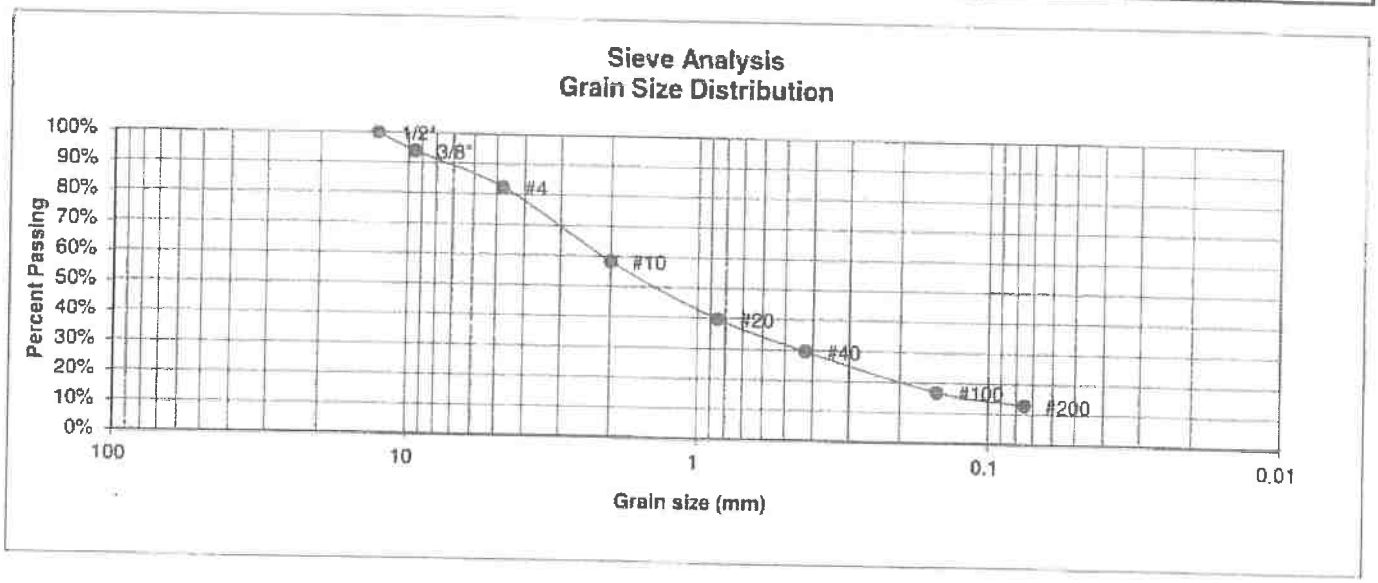
LABORATORY TEST RESULTS

DRAWN	DATE	CHECKED:	DATE:
		DS	11/22/19

JOB NO 191877

FIG NO 2

UNIFIED CLASSIFICATION	SM	CLIENT	LDC, INC.
SOIL TYPE #	1	PROJECT	PRAIRIE RIDGE
TEST BORING #	3	JOB NO.	191877
DEPTH (FT)	7"	TEST BY	BL



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	100.0%
3/8"	93.8%
4	82.3%
10	58.3%
20	39.8%
40	29.6%
100	16.9%
200	12.9%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

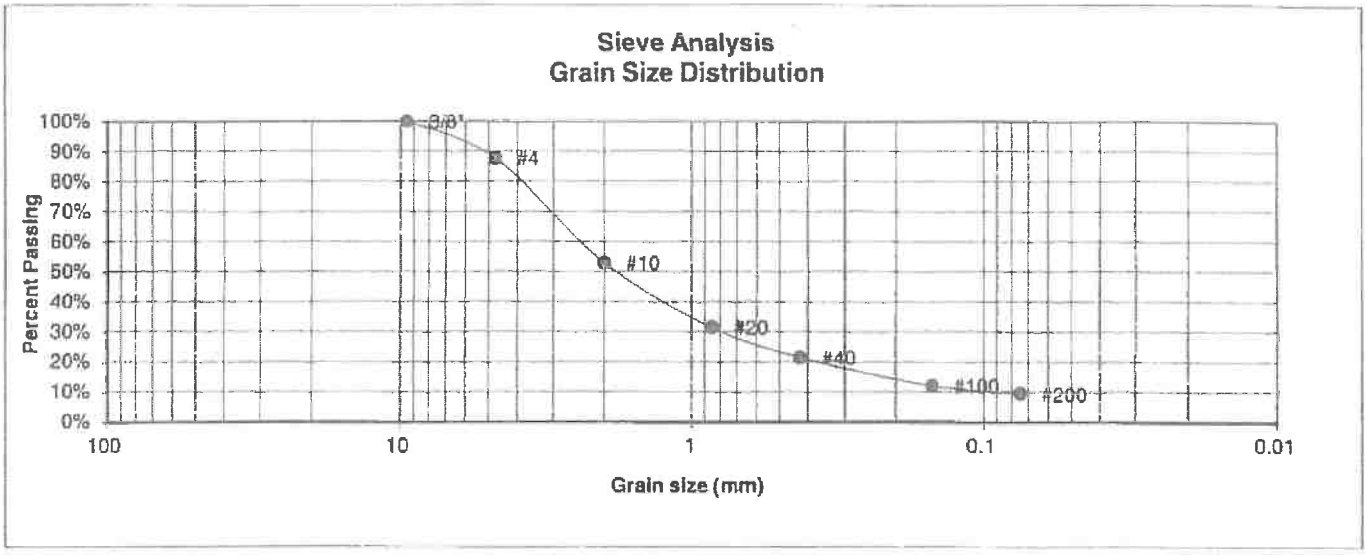
LABORATORY TEST RESULTS

DRAWN	DATE:	CHECKED	DATE
		DS	11/26/19

JOB NO 191877

FIG NO 3

UNIFIED CLASSIFICATION	SM-SW	CLIENT	LDC, INC.
SOIL TYPE #	1	PROJECT	PRAIRIE RIDGE
TEST BORING #	4	JOB NO.	191877
DEPTH (FT)	7"	TEST BY	BL



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	87.7%
10	53.0%
20	31.4%
40	21.4%
100	12.0%
200	9.4%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

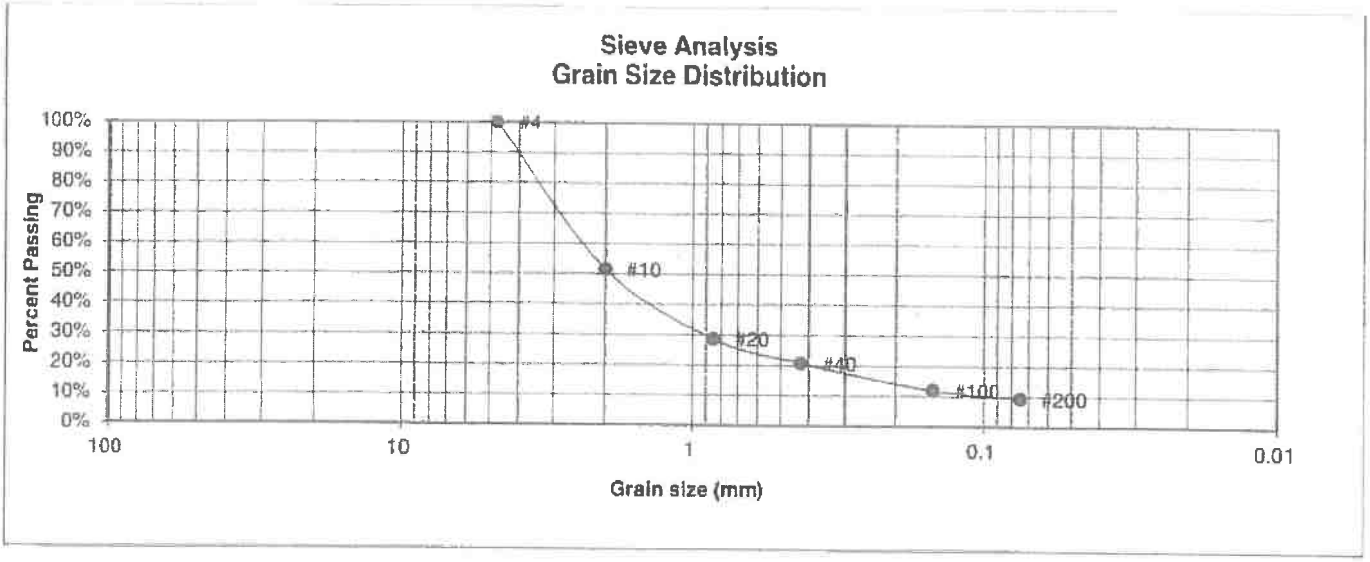
LABORATORY TEST RESULTS

DRAWN:	DATE	CHECKED	DATE
		DJ	11/22/19

JOB NO 191877

FIG NO 4

UNIFIED CLASSIFICATION	SM	CLIENT	LDC, INC.
SOIL TYPE #	1	PROJECT	PRAIRIE RIDGE
TEST BORING #	5	JOB NO.	191877
DEPTH (FT)	7"	TEST BY	BL



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	
4	100.0%
10	51.6%
20	28.7%
40	20.8%
100	12.0%
200	9.4%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

LABORATORY TEST RESULTS

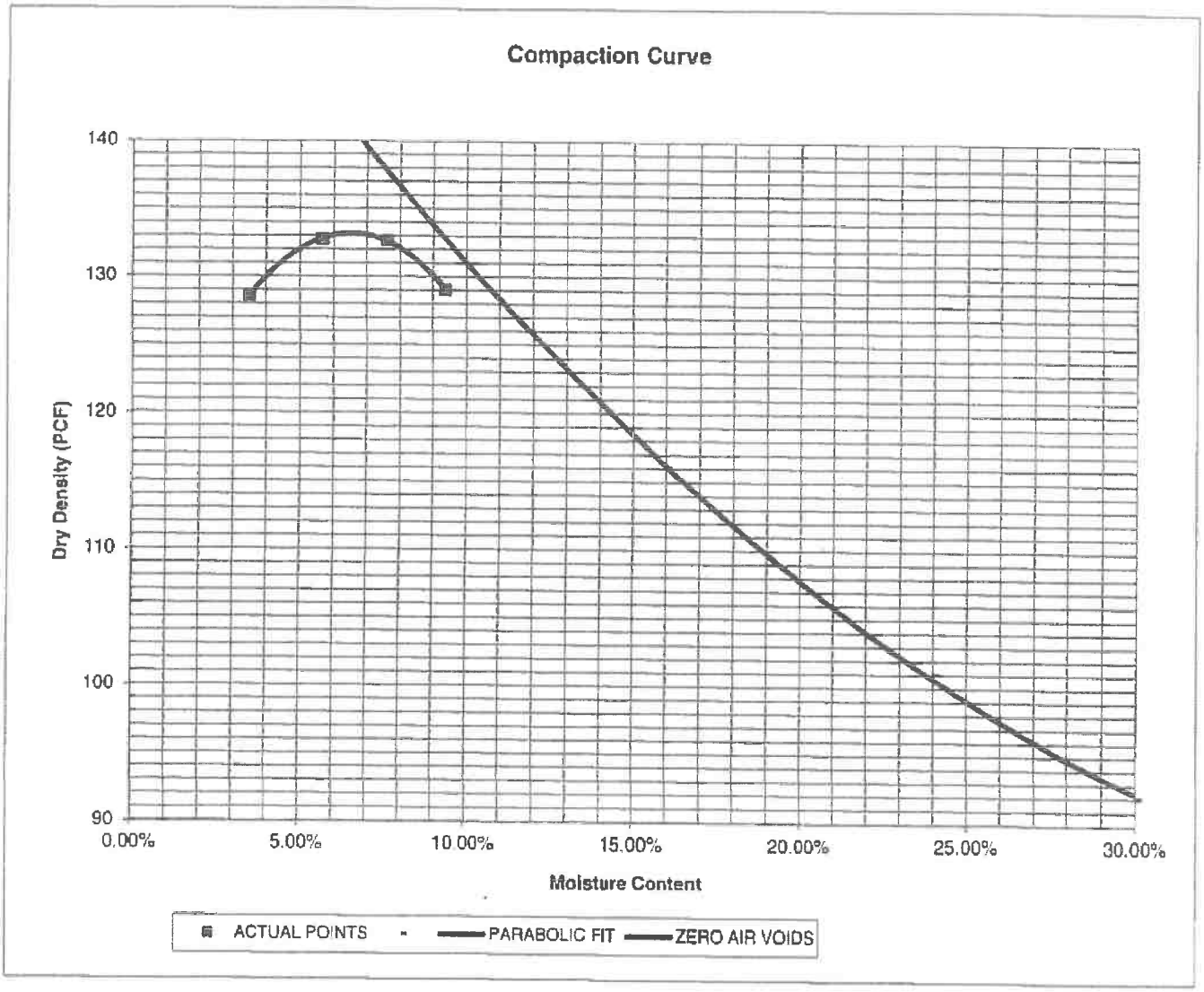
DRAWN:	DATE	CHECKED	DATE
		DS	11/26/19

JOB NO 191877

FIG NO 5

PROJECT	PRAIRIE RIDGE	CLIENT	LDC, INC.
SAMPLE LOCATION	BROWN ROAD	JOB NO.	191877
SOIL DESCRIPTION	SAND, SILTY, RED BROWN	DATE	11/20/19

IDENTIFICATION	SM	PROCTOR TEST #	1
TEST DESIGNATION / METHOD	ASTM D-1557-B	TEST BY	BL
MAXIMUM DRY DENSITY (PCF)	133.2	OPTIMUM MOISTURE	6.4%



ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

MOISTURE DENSITY RELATION

DRAWN	DATE	CHECKED	DATE
		DS	11/22/19

JOB NO 191877

FIG NO 6

Client:	LDC, Inc.	**Entech Job #:**	191877.6	**Proctor Value Key:**	**M = modified, ASTM D-1557**
Project:	Prairie Ridge - Brown Road	**Tested By:**	T. Kinner		**S = standard, ASTM D-698**
Subject:	Roadway Subgrade	**Report Date:**	12-02-2019		**T = AASHTO, T-180**

Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail ☑ = Fail
1	40' north and 4' west of northeast corner of intersection with Walker Road, Brown Road, northbound, roadway subgrade, at grade.	11/30/19	99	95	7.6	SM	M - 133.2 @ 6.4	☐
2	89' north and 6' east of northwest corner of intersection with Walker Road, Brown Road, southbound, roadway subgrade, at grade.	11/30/19	99	95	7.1	SM	M - 133.2 @ 6.4	☐
3	400' north and 8' west of northeast corner of intersection with Walker Road, Brown Road, northbound, roadway subgrade, at grade.	11/30/19	99	95	6.9	SM	M - 133.2 @ 6.4	☐
4	440' north and 4' east of northwest corner of intersection with Walker Road, Brown Road, southbound, roadway subgrade, at grade.	11/30/19	99	95	7.3	SM	M - 133.2 @ 6.4	☐
5	75' north and 6' west of northeast corner of driveway to 18275 Brown Road, northbound, roadway subgrade, at grade.	11/30/19	99	95	7.4	SM	M - 133.2 @ 6.4	☐
6	270' north and 13' west of northeast corner of driveway to 18275 Brown Road, southbound, roadway subgrade, at grade.	11/30/19	99	95	6.2	SM	M - 133.2 @ 6.4	☐
7	25' north and 16' east of northwest corner of driveway to 18845 Brown Road, northbound, roadway subgrade, at grade.	11/30/19	99	95	7.1	SM	M - 133.2 @ 6.4	☐
8	170' north and 7' east of northwest corner of driveway to 18845 Brown Road, southbound, roadway subgrade, at grade.	11/30/19	99	95	6.9	SM	M - 133.2 @ 6.4	☐
9	40' west and 4' south of northwest corner of driveway to 18885 Brown Road, westbound, roadway subgrade, at grade.	11/30/19	99	95	7.6	SM	M - 133.2 @ 6.4	☐
10	300' west and 11' south of northwest corner of driveway to 18885 Brown Road, eastbound, roadway subgrade, at grade.	11/30/19	99	95	7.1	SM	M - 133.2 @ 6.4	☐

Comments:

Scope of Observation: PERIODIC; CONTRACTOR'S OR CLIENT'S REPRESENTATIVE ADVISED

All dimensions are approximate. Cl. = Centerline

ENTECH
ENGINEERING, INC.
505 Elkton Drive
Colorado Springs, CO 80907
(719) 531-5599 • (719) 531-5238 (fax)

FIELD DENSITY RESULTS

Mark H. Hauschild, P.E.

Exhibit 9: Brown Road Construction Cost Sharing Exhibits

07051

RECEIVED
11/2/08

EL PASO COUNTY

DEVELOPMENT SERVICES
IMAD KARAKI, DIRECTOR

May 19, 2008 – **Corrected October 1, 2008**

Ken and Carol Rushing
K & C Rushing LLLP
18625 Brown Road
Colorado Springs, Colorado 80908

RE: Preliminary Plan – Prairie Ridge Subdivision (SP-07-014)
Final Plat – Prairie Ridge Subdivision (SF-07-016)

This is to inform you that the above-referenced requests were heard and approved by the Board of County Commissioners on April 24, 2008. Details are as follows:

Preliminary Plan – Request for approval of a seven-lot subdivision. The site consists of 40.67 acres in the RR-5 (Residential Rural) District. The property (Schedule No. 61000-00-483) is located on Brown Road, north of Walker Road approximately 1 1/2 miles west of its intersection with Black Forest Rd.

The approval is subject to the following:

CONDITIONS OF APPROVAL

1. Applicable park and school fees shall be paid with any final plats.

2. Developer shall comply with federal and state laws, regulations, ordinances, review and permit requirements, and other agency requirements, if any, of applicable agencies including, but not limited to, the Colorado Division of Wildlife, Colorado Department of Transportation, U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service regarding the Endangered Species Act, particularly as it relates to the Preble's Meadow Jumping Mouse as a listed threatened species.

3. A completed U.S. Army Corps of Engineers permit should be provided to the El Paso County Development Services Department prior to project commencement if ground-disturbing activities would occur in wetland areas. Alternatively, a letter from a qualified wetland scientist indicating why such a permit is not required for this project would be acceptable.

4. A driveway access permit will be required from the El Paso County Development Services Department for any access to a County maintained roadway.

2880 INTERNATIONAL CIRCLE, SUITE 110
PHONE: (719) 520-6300
COLORADO SPRINGS, CO 80910-3127
FAX: (719) 520-6695
WWW.ELPASOCO.COM

5. Compliance with all fire district requirements shall be met. Individual lot purchasers shall provide in-house sprinklers for each home built.

6. Adequate right-of-way and easements shall be provided and shown on the final plat, prior to Board of County Commissioners' hearing, for the future construction (grading and widening) of Brown Road to meet minimum rural local gravel road standards.

7. Add the following note:

"Individual lot purchasers are responsible for constructing driveways, including necessary drainage culverts from Brown Road per Land Development Code Section 6.3.3.C.2 and 6.3.3.C.3. Due to their length, driveways for Lots 5 and 6 will need to be specifically approved by the Tri-Lakes/Monument Fire Rescue Authority.

8. Easements necessary for the construction of the curve in Brown Road at the northwest corner of the subdivision shall be reviewed and approved by the Development Services Department prior to hearing by the Board of County Commissioners, and shall be recorded with the final plat.

9. Brown Road will retain its current alignment. Prior to recording the final plat, Applicant shall enter into a Public Improvements Contribution Agreement ("Agreement") with the County in which Applicants shall agree to participate in the completion of off-site public improvements to bring Brown Road into compliance with County local road standards ("Brown Road Improvements"). Said Agreement shall require separate approval by the Board. Said Agreement shall address the following:

   1) Applicants' total fair, equitable, and reasonably proportional contribution to the Brown Road Improvements shall be$11,000.00 per lot for a total of $77,000.00 structured as follows:

      A. Prior to recording the final plat, Applicants shall deposit the sum of $50,000.00 with the El Paso County Treasurer, which funds the County shall maintain and deposit in a separate, interest bearing account not part of the County's operating budget.

      B. Applicant shall require as a condition of sale and closing of each of the seven lots, at the time of closing each lot, payment by the buyer to Applicant of 1/7th of the remaining $27,000.00 balance of the contribution, or $3,857.00 per lot, which funds Applicants shall cause to be paid to Development Services Department who in turn

will transfer the funds to the El Paso County Treasurer for deposit into the above described account. Interest shall accrue on the amount of $3,857 per lot from the date of recording of the Final Plat at an interest rate of 5 percent per annum simple interest.

2) Said funds shall only be used for the purpose of constructing, or contributing to the construction of, the Brown Road Improvements.

3) On or before the expiration date, the County may use the funds, including any interest accrued thereon, only for the purpose of constructing, or contributing to the construction of, the Brown Road Improvements. The expiration date is 5 years from the closing date of the sale of the last lot in the Prairie Ridge subdivision or 10 years from the date of the Agreement, which ever is later.

4) **Should the County not use said funds on or before the expiration date, the County shall return the funds to the applicants, their heirs, successors and assigns (excluding individual lot owner successors), together with accrued interest.**

10. A note shall be added to the Plat to place buyers on notice of their obligation to pay to the Applicant at closing 1/7th of the remaining balance of the contribution for Brown Road Improvements consistent with the terms of the Public Improvements Contribution Agreement as outlined in Condition 9 above.

NOTATIONS

1. The proposed subdivision is located entirely within the East Cherry Creek Drainage Basin (CYCY0200). This basin has not been studied and no drainage or bridge fees apply.

2. According to Section 47.C.10.c of the El Paso County Land Development Code, approval of the Preliminary Plan will expire after twelve (12) months unless a final plat has been approved and recorded or a time extension has been granted.

Final Plat – Request for approval of a seven-lot subdivision. The site consists of 40.67 acres in the RR-5 (Residential Rural) District. The property (Schedule No. 61000-00-483) is located on Brown Road, north of Walker Road, approximately 1 ½ miles west of its intersection with Black Forest Road.

This approval is subject to the following:

CONDITIONS OF APPROVAL

1. Developer shall comply with federal and state laws, regulations, ordinances, review and permit requirements, and other agency requirements, if any, of applicable agencies including, but not limited to, the Colorado Division of Wildlife,

Colorado Department of Transportation, U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service regarding the Endangered Species Act, particularly as it relates to the Preble's Meadow Jumping Mouse as a listed threatened species.

2. A completed U.S. Army Corps of Engineers permit shall be provided to the El Paso County Planning Department prior to project commencement if ground-disturbing activities would occur in wetland areas. Alternatively, a letter from a qualified wetland scientist indicating why such a permit is not required for this project may be acceptable.

3. Fees in lieu of school land dedication in the amount of $2,156.00 shall be paid to El Paso County for the benefit of Lewis-Palmer School District No. 38.

4. Fees in lieu of regional parkland dedication in the amount of $2,471.00 shall be paid to El Paso County.

5. All Deed of Trust holders shall ratify the plat. The applicant shall provide a current Title Commitment at the time of submittal of the mylar for recording.

6. Colorado statute requires that at the time of the approval of platting, the subdivider provides the certification of the County Treasurer's Office that all ad valorem taxes applicable to such subdivided land, for years prior to that year in which approval is granted, have been paid. Therefore, this plat is approved by the Board of County Commissioners on the condition that the subdivider or developer must provide to the Development Services Department, at the time of recording the plat, a certification from the County Treasurer's Office that all prior years' taxes have been paid in full.

7. The subdivider or developer must pay, for each parcel of property, the fee for tax certification in effect at the time of recording the plat.

8. The subdivision improvements agreement, including the estimate of guaranteed funds as approved by the El Paso County Development Services Department shall be filed at the time of the recording of the final plat.

9. Collateral sufficient to ensure that the public improvements as listed in the approved estimate of guaranteed funds/surety estimate shall be provided when the final plat is recorded.

10. The County Attorney's Conditions of Compliance shall be adhered to at the appropriate time.

11. A driveway access permit will be required from the El Paso County Development Services Department for any access to a county maintained roadway.

12. Compliance with all Fire District requirements shall be met. Individual lot purchasers shall provide in-house sprinklers in the construction of new homes.

13. Replace note #20 with the following:

    Individual lot purchasers are responsible for constructing driveways, including necessary drainage culverts from Brown Road per Land Development Code Section 6.3.3.C.2 and 6.3.3.C.3. Due to their length, the driveways for Lots 5 and 6 will need to be specifically approved by the Tri-Lakes/Monument Fire Rescue Authority.

14. Brown Road will retain its current alignment. Prior to recording the final plat, Applicant shall enter into a Public Improvements Contribution Agreement ("Agreement") with the County in which Applicants shall agree to participate in the completion of off-site public improvements to bring Brown Road into compliance with County local road standards ("Brown Road Improvements"). Said Agreement shall require separate approval by the Board. Said Agreement shall address the following:

    1) Applicants' total fair, equitable, and reasonably proportional contribution to the Brown Road Improvements shall be $11,000.00 per lot for a total of $77,000.00 structured as follows:

        A. Prior to recording the final plat, Applicants shall deposit the sum of $50,000.00 with the El Paso County Treasurer, which funds the County shall maintain and deposit in a separate, interest bearing account not part of the County's operating budget.

        C. Applicant shall require as a condition of sale and closing of each of the seven lots, at the time of closing each lot, payment by the buyer to Applicant of 1/7th of the remaining $27,000.00 balance of the contribution, or $3,857.00 per lot, which funds Applicants shall cause to be paid to Development Services Department who in turn will transfer the funds to the El Paso County Treasurer for deposit into the above described account. Interest shall accrue on the amount of $3,857 per lot from the date of recording of the Final Plat at an interest rate of 5 percent per annum simple interest.

    2) Said funds shall only be used for the purpose of constructing, or contributing to the construction of, the Brown Road Improvements.

    3) On or before the expiration date, the County may use the funds, including any interest accrued thereon, only for the purpose of constructing, or contributing to the construction of, the Brown Road Improvements. The expiration date is 5 years from the closing date of the sale of the last lot in the Prairie Ridge subdivision or 10 years from the date of the Agreement, which ever is later.

4) **Should the County not use said funds on or before the expiration date, the County shall return the funds to the applicants, their heirs, successors and assigns (excluding individual lot owner successors), together with accrued interest.**

15. A note shall be added to the Plat to place buyers on notice of their obligation to pay to the Applicant at closing 1/7th of the remaining balance of the contribution for Brown Road Improvements consistent with the terms of the Public Improvements Contribution Agreement as outlined in Condition 14 above.

NOTATIONS

1. Failure to record the plat within one (1) year following Board of County Commissioner approval will require reconsideration by the Board. Said reconsideration may involve compliance with new criteria, regulations and updated fees.

2. The proposed subdivision is located entirely within the East Cherry Creek Drainage Basin (CYCY0200). This basin has not been studied and no drainage or bridge fees apply.

This action will not become a matter of public record, nor can building permits be issued or lots conveyed based upon this action, until the Plat has been filed with the El Paso County Clerk and Recorder. This is done through our office but, in order to accomplish such filing, it will be necessary for you to contact us regarding recording fees which must be paid and make an appointment to pay the fees and submit the plat for recordation.

Please note the El Paso County Clerk and Recorder will no longer accept documents for recording unless they have a minimum one-inch clear margin at the top of each page.

This represents the Development Services Department's understanding of the action taken by the Board of County Commissioners. A copy of their Resolution will be forwarded to you, once that document is available.

Should you have any questions, or if I can be of further assistance, please contact me at 719-520-6300.

Sincerely,

Craig Dossey, Project Manager II

ec: Pam Cherry, LDC, Inc.
Eileen Wheeler, Deputy Clerk to the Board
cc: Files: SP-07-014, Prompt/ SF-07-016

Pam Cherry

From: Pam Cherry
Sent: Monday, April 07, 2008 5:10 PM
To: 'Carol Rushing'
Subject: Brown Road Improvements
Attachments: 04-07-2008 Brown Road EGF.xls; 01-20-2008 Prarie Ridge EGF.xls

Raimere-
The Rushing's propose to complete the work to Brown Road as previously agreed to a minimum width of 20'. Currently Brown Road is not graveled and is only a dirt surface that is maintained by the County. Rushing's EGF dated January 10, 2008 is in the amount of $46,700.00.

This is a listing of the property owners and the acreage associated with each owner and all would access Brown Road:
Mariah Meadows - 157 acres
Tug Haugen - 40 acres
Rushing - 40 acres
Younger - 240 acres
McDermott - 80 acres
Havens - 35 acres
Lockburner - 54 acres

This is a total of 646 acres which could represent a maximum of 129 5-acre lots. Based on lot count, since Rushing's are platting 7 lots, they responsibility for improvements would be 5.4%. Last year Paul Danley provided Rushing's with a ball park number of $680,000.00 to construct the Brown Road to paved County standard. Today our engineer ran the numbers for improving the road to County standards and came up with $673,580.00 for all improvements. Thereby Rushing's responsibility would be 5.4% of $673,580.00 or $36,373.32 which is $10,326.68 less than the amount of the EGF dated 1-20-08. There is a small portion of throw-away for the 12.5% grade section adjacent to their property. But according to the EGF, the amount of throw away is only $1,440.00. Rushing's are already contributing more than their fair share for the construction of Brown based on our engineer's estimate which is extremely close to Paul Danley's ball park estimate. Rushing's are discussing whether they should offer to contribute to the escrow in view of these numbers.

Another item of concern is the fact that the Mariah Meadows applications have expired, both the PUD and the Preliminary Plan. Yet the Mariah owners appear to have significant influence regarding the approval of this subdivision. We have had many meetings with the County on this project in order to obtain a recommendation of approval. That the Mariah group does not voice any objection until the night before the BOCC hearing, even though they were present at Planning Commission is puzzling.

Pam Cherry
LDC-Inc
2850 Serendipity Circle West
Colorado Springs, CO 80917
719-528-6133

Pam Cherry

From: Pam Cherry
Sent: Thursday, April 17, 2008 4:35 PM
To: Paul Danley; 'Jeff Rice'; 'Raimere Fitzpatrick'; 'John McCarty'
Cc: Robert Martin; 'Jane Fredman'; 'Carol Rushing'
Subject: FW: Escrow

The Rushing's will propose the following for improvements to Brown Road. Please provide us with your feedback.

Thanks
Pam

-----Original Message-----
From: Carol Rushing [mailto:bzy24-7b@kellin.net]
Sent: Thursday, April 17, 2008 4:31 PM
To: Pam Cherry
Subject: Escrow

Dear Pam,

We would like to propose that Prairie Ridge contribute the following to improvements on Brown Road:

1. 20' wide, 2" deep Class 6 road base on surface of entire one-mile length of Brown Rd., even though Prairie Ridge is only bordered by Brown Rd. by 1/2 mile

2. New asphalt apron from Walker Rd. to Brown Rd., 20' wide, 40' long, 3" deep

3. Internal 100' radius on NW corner of Prairie Ridge property, "graveled" (Class 6 road base)

4. Turn-around for emergency vehicles on NE corner of Prairie Ridge property, "graveled" (Class 6 road base)

5. $2,000 per lot to be put in an escrow fund for future improvement to Brown Rd. by each lot owner at time of application for building permit, with an appropriate document to be recorded with final plat, along with a plat note for the builder. This amount would be the only fee that the lot owner would have to contribute for the improvement of Brown Rd.

Ken & Carol

Pam Cherry

To: Raimere Fitzpatrick; Paul Danley; Jeff Rice

Cc: Carol Rushing; jfredman@fwflegal.com; John McCarty

Subject: Prairie Ridge

This morning I have run some new numbers based on our conversation yesterday afternoon. The total impact area that I used for yesterday was 895 acres. I have deducted 115 acres for half of Mariah, and have deducted 240 acres for the Younger partnership. I have included 120 acres of Younger property that is owned individually by Delores. So, the 895 acres is decreased to an impact area of 535 acres instead. The cost from the EGF for Brown Road is $673,580.00. With the $50,000.00 deduction for County in-kind we have 623,580 remaining. We have a total of 13 40-acres parcels in the 535 acres. So the associated cost is still in the same range we were talking about yesterday of $47,967.69 per 40-acre parcel, or $6,852.52 per lot in the Rushing's Case. They agreed to setup an escrow in the amount of their EGF to get the improvements started. Their EGF amount was $46,700.00.

Pam Cherry
LDC-Inc
2850 Serendipity Circle West
Colorado Springs, CO 80917
719-528-6133

Localized Access

Total Brown Road Acreage 328 acres
Haugen Property out 40 acres
Mariah Meadows North out 115 acres
Younger Out Brown Frontage 240 acres

PRAIRIE RIDGE
BROWN ROAD IMPROVEMENTS

ACREAGE UTILIZING FUTURE ROADWAY	895 ACRES
ACREAGE NOT DEVLOPING OR UTILIZING OTHER ACCESS	
YOUNGER FAMILY WILL NOT DEVELOP FOR 50 YEARS	360 ACRES
NORTH HALF MARIAH MEADOWS ACCESS TO NORTH	115 ACRES
TOTAL ACREAGE	420 ACRES
40 ACRE PROPERTIES	10.5
EGF AMOUNT FOR COUNTY STANDARD RURAL LOCAL PAVED	$680,000.00
COUNTY IN-KIND CONTRIBUTION	$50,000.00
EXPECTED CONSTRUCTION COSTS	$630,000.00
PARCEL SHARE	$60,000.00
PER LOT CONTRIBUTION BASED ON 7 LOTS PRAIRIE RIDGE	$8,571.43
PRAIRIE RIDGE AGREEMENT WITH ADJACENT DEVELOPER	$11,000.00 PER LOT
AGREEMENT AND FAIR SHARE DIFFERENCE	$2,428.57
AMOUNT OVER FAIR SHARE	$17,000.00
ESTABLISHMENT OF ESCROW AT PLAT RECORDING	$50,000.00
DEPOSIT TO ESCROW AT LOT CLOSINGS	$27,000.00
PER LOT DEPOSIT TO ESCROW AT CLOSING	$3,857.14
ADDITIONAL IMPROVEMENTS NOW	$11,300.00

Construction Cost Estimate

Brown Road Drainage Improvements

Item #	Description	Approx Quantity	Units	Unit Cost	Total
1	Unclassified excavation	150	CY	$5.00	$750
2	Scarify and compact subgrade	29	SY	$2.50	$73
3	Type 5 Roadway Base Course	265	CY	$48.00	$12,720
4	Stone Check Dams	20	EA	$800.00	$16,000
5	Erosion Control Fabric	2850	SY	$5.00	$14,250
5	Topsoil (4", spread and prepared)	250	CY	$22.00	$5,500
6	Seeding and Fertilizer	2850	SY	$0.25	$713
7	Mulch, Straw (Broadcast)	2850	SY	$0.20	$570
8	12" D50 Riprap	14	CY	$55.00	$770
7	Granular Bedding	5	CY	$95.00	$475
9	Filter Fabric	21	SY	$4.50	$95
10	18" CMP Driveway Culvert	150	LF	$75.00	$11,250
11	18" CMP Flared End Section	6	EA	$750.00	$4,500
	Subtotal				$67,665
	Contingencies (10%)				$6,766
	Total				$74,431

Exhibit 10: Historical Inflation Rate Table (2006 to 2020)

Table of Historical Inflation Rates in Percent

The table of **historical inflation rates** displays annual rates from 1914 to 2020. Rates of inflation are calculated using the current Consumer Price Index published monthly by the Bureau of Labor Statistics (BLS). BLS data was last updated on August 12, 2020 and covers up to July 2020. The next inflation update is set to happen on September 11, 2020. It will provide historical inflation rates through to August 2020.

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE
2008	4.3	4	4	3.9	4.2	5	5.6	5.4	4.9	3.7	1.1	0.1	3.8
2009	0	0.2	-0.4	-0.7	-1.3	-1.4	-2.1	-1.5	-1.3	-0.2	1.8	2.7	-0.4
2010	2.6	2.1	2.3	2.2	2	1.1	1.2	1.1	1.1	1.2	1.1	1.5	1.6
2011	1.6	2.1	2.7	3.2	3.6	3.6	3.6	3.8	3.9	3.5	3.4	3	3.2
2012	2.9	2.9	2.7	2.3	1.7	1.7	1.4	1.7	2	2.2	1.8	1.7	2.1
2013	1.6	2	1.5	1.1	1.4	1.8	2	1.5	1.2	1	1.2	1.5	1.5
2014	1.6	1.1	1.5	2	2.1	2.1	2	1.7	1.7	1.7	1.3	0.8	1.6
2015	-0.1	0	-0.1	-0.2	0	0.1	0.2	0.2	0	0.2	0.5	0.7	0.1
2016	1.4	1	0.9	1.1	1	1	0.8	1.1	1.5	1.6	1.7	2.1	1.3
2017	2.5	2.7	2.4	2.2	1.9	1.6	1.7	1.9	2.2	2	2.2	2.1	2.1
2018	2.1	2.2	2.4	2.5	2.8	2.9	2.9	2.7	2.3	2.5	2.2	1.9	2.4
2019	1.6	1.5	1.9	2	1.8	1.6	1.8	1.7	1.7	1.8	2.1	2.3	1.8
2020	2.5	2.3	1.5	0.3	0.1	0.6	1						
											Total		21.1

Please use a consumer price index specific for Colorado such as Denver Boulder Greeley/Denver Aurora Lakewood price index.