

MEMORANDUM

DATE: June 14, 2019

TO: Nina Ruiz, PCD-Project Manager

FROM: Jeff Rice / Steve Kuehster, PCD-Engineering
719-520-7877 / 719-520-6813

SUBJECT: SP-19-006 – Saddlehorn Ranch/824
First Submittal

Engineering Division

Planning and Community Development (PCD)-Engineering reviews plans and reports to ensure general conformance with El Paso County standards and criteria. The project engineer is responsible for compliance with all applicable criteria, including other governmental regulations. Notwithstanding anything depicted in the plans in words or graphic representation, all design and construction related to roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent version of the relevant adopted El Paso County standards, including the Land Development Code (LDC), the Engineering Criteria Manual (ECM), the Drainage Criteria Manual (DCM), and the Drainage Criteria Manual Volume 2 (DCM2). Any deviations from regulations and standards must be requested, and approved by the ECM Administrator, in writing. Any modifications necessary to meet overlooked criteria after-the-fact will be entirely the developer's responsibility to rectify.

A written response to all comments and redlines is required for review of the re-submittal. Please arrange a meeting between the developer's team and County staff to review and discuss these comments and prepared revisions/responses prior to the next submittal.

Due to the volume and complexity of these comments and the additional information and details required in the plans and reports, Staff will provide more detailed comments on the next submittal. Additional comments may be generated based on the revised submittal documents. A 21-day review period will be necessary with the next review to complete the review of revised documents and any deviation requests.

Highlights in Red for JR Engineering
Highlights in Green for Guman
Highlights in Cyan for LSC

General / Letter of Intent

1. Provide copies or electronic links to the easements identified in title insurance Schedule B exceptions 11, 17, and 24. If these easements cannot be delineated, provide a note on the preliminary plan stating that.
 - a. JR Response: Need more clarity on which specific easements documents are being requested.
2. See Letter of Intent redlines.
3. Mention all waivers and deviations in the Letter of Intent.

Final Plat

1. Include the drainage tract along the northeast edge of the plat, at a minimum, within the plat. Planning may require the remainder of the overall property to be platted as a separate tract.
 - a. JR Response: The drainage tract is planned to be addressed in future plats, JR requests a meeting with the county to discuss.

2. Revise or add any additional drainage and maintenance access easements required in other comments/redlines.
 - a. JR Response: Addressed
3. Provide closure calculation sheets for the Filing 1 boundary, lots, tracts, and ROW.
 - a. JR Response: Addressed

Preliminary Plan

1. Label the Judge Orr Road and Curtis Road MTCP classifications, proposed rights-of-way and ROW preservation. Provide cross-sections (see TIS comment #1 below).
2. Show and label existing and proposed drainage facilities and all necessary drainage and maintenance access easements.
 - a. JR Response: Addressed.
3. Ensure that all checklist items are provided.
 - a) Guman response: checklist items provided.
4. Provide a note stating that approved Base Flood Elevations (BFEs) are required to be obtained for any plats in or within 300 feet of the northeast corner.
 - a) Guman response: This is called out on General note 18 on the cover sheet.
5. See preliminary plan redlines for additional comments.
 - a) Guman response: Redlined changes have been incorporated.

Transportation / Traffic Impact Study (TIS) / Noise Study

1. Provide deviation requests for the proposed Curtis Road and Judge Orr Road cross-sections to set the required widths going forward on this project (see e-mail dated April 3, 2019) The deviation requests need to address where there is not a defined cross-section in the ECM. This is needed to document acceptance of the cross-sections and track potential ECM revisions.
2. A deviation request for rural knuckle design or reduced curve radius is required for the curves on several roads in at least 6 locations. Please discuss with Staff and submit the deviation request as soon as possible before making design revisions.
3. As noted in the TIS dated January 2019, Curtis Road is "unimproved" between Judge Orr Road and Falcon Highway (except where the County constructed it south of Judge Orr Road as part of the Stapleton Drive project). Address what improvements are needed adjacent to the project south to Falcon Highway to bring the road up to 2-lane arterial standards for use of the proposed subdivision.

MDDP / Preliminary Drainage Report / Drainage Plans

1. Revise the drainage plan in accordance with any Preliminary Plan road and lot revisions.
 - a. JR Response: Addressed.
2. As noted in the DCM Update, Table 6-1, SWMM is most commonly used with urbanized watersheds; ensure that the model has been properly calibrated for use in this rural development.
 - a. JR Response: SWMM model has been recalculated with rural DCIA value.
3. Show approximate locations of conceptual channel improvements on the developed drainage plan.
 - a. JR Response: Channel improvements will be determined within the Final Drainage reports for each filing of Saddlehorn Ranch. Specific location of channel improvements exceeds the scope of this MDDP/PDR. Channel improvements are based upon culvert and pond improvements. Final culvert and pond design will occur with the FDR and therefore channel improvement design will as well.
4. The report needs to address access to the natural and improved channel sections for long-term maintenance. Provide discussion of the maintenance entity, access, and other maintenance

- aspects/considerations of the preliminary design. Show conceptual access roads for ponds and channels on the developed drainage plan.
- a. JR Response: Addressed. Channel access will be provided at drainageway culvert locations. Existing grades within the channels allow for maintenance vehicles and equipment to operate within the channel as is. It is our intent to leave the channels in their natural configuration as much as possible.
5. Provide proposed roadway cross-sections on the developed condition plans.
 - a. JR Response: Addressed.
 6. The floodplain locations appear to not conform to the contours in many locations. Verify and revise as appropriate.
 - a. If the modeled floodplain differs from the FEMA floodplain show both on the plans. (Since the lots are 2.5 acres and larger in size it is acceptable to have floodplain easements within the lots where appropriate.)
 - i. JR Response: JR engineering is requesting a meeting with the County to review the floodplain boundary.
 - b. Evaluate how the undersized culverts under Judge Orr Road and Curtis Road affect the proposed development during overtopping. Show overtopping/diversion areas on the plans.
 - i. JR Response: Overtopping will occur at the culvert locations per existing grades along the roadways. Exact limits of overtopping will not be analyzed within the context of this report.
 7. Consider moving temporary stormwater quality/detention facilities from future rights-of-way. Ensure that the GEC plans match the drainage plans.
 - a. JR Response: Temp Sediment Pond A will be located outside the ROW of Barrosito Trail. Sediment Basin F1 and F2 will remain in current location. These facilities will be demolished with construction of future filing's and full spectrum water quality ponds will receive their flow in the future. Therefore, Sed basin F1 and F2 will remain as shown.
 8. Consider adjusting pond overflow spillways to a potentially less damaging location if the ponds do overtop. Please discuss with staff.
 - a. JR Response: Pond spillway locations have not been specified within the context of the PDR. Final spillway locations will be determined within the FDR. All spillway overflow paths will be directed toward the nearest drainageway and away from development.
 9. Provide correspondence with the State Engineer on notice to construct impoundments, when available (final checklist item).
 - a. JR Response: The project does not include any jurisdictional dams requiring State Engineer review or approval.
 10. See MDDP/PDR redlines for further revisions and clarification of these comments.
 - a. JR Response: Addressed.

Grading and Erosion Control Plan / Predevelopment Site Grading / SWMP

1. The owner needs to sign the ESQCP, Pre-development Site Grading form, PDR, and GEC Plan.
 - a. JR Response: Addressed.
2. The no-rise certification needs to be signed by the engineer.
 - a. JR Response: Addressed.
3. The areas proposed to be graded under the early grading approval need to be clarified. If it is only the Filing 1 area and borrow/stockpile areas being graded, state so in the Letter of Intent.
 - a. JR Response: Addressed. Letter of intent text has been updated to clarify the areas needing early grading approval.

4. Ensure that all GEC Plan and SWMP checklist items (attached) are provided. GEC and SWMP checklists will be reviewed with the next submittal.
 - a. JR Response: Addressed.

5. Note: Engineering Staff has no comments on the Soil, Geology, Geologic Hazard and Wastewater Study, except that additional study will be required for road and drainage construction in accordance with ECM Appendix C, for the final plat.
 - a. JR Response: Noted.

6. Note: If you have not already, please familiarize yourself with the new CDPHE Stormwater Discharge Requirements at <https://www.colorado.gov/pacific/cdphe/cor400000-stormwater-discharge>. All Stormwater Management Plans (SWMPs) for projects under review, already approved, and under construction need to be updated to meet the State requirements. If a project is already approved we do not need the SWMP resubmitted to EPC PCD but all SWMPs in the field need to be updated as part of the regular revision process. Please reference the CDPHE checklist and requirements – County checklists and criteria are in the process of being updated, which should be complete around the end of July.
 - a. JR Response: Addressed. State checklists used and submitted.

Attachments/Electronic Redlines

1. LOI redlines
2. MDDP/Preliminary Drainage Report redlines
3. Preliminary Plan redlines
4. TIS redlines
5. Grading and Erosion Control Plan Checklist
6. SWMP Checklist
7. Engineering Final Submittal Checklist (for Early Grading)

El Paso County Grading and Erosion Control Plan Submittal Checklist

- 1) Vicinity map.....
- 2) North arrow and acceptable scale (1"=20' to 1"=100').....
- 3) Existing and proposed Contours 2 feet or less (except for hillside).
- 4) Standard EPC Grading and Erosion Control Notes included.
- 5) Delineate mapped FEMA 100-yr floodplain.
- 6) Construction site boundaries clearly delineated.
- 7) Areas of soil disturbance shown.
- 8) All proposed construction BMPs and Construction BMP details shown.
- 9) Show existing vegetation.
- 10) Existing and proposed water courses including springs, streams, wetlands, Detention ponds, roadside ditches, irrigation ditches and other water surfaces.
- 11) Show all existing structures.
- 12) Show all existing utilities.
- 13) Submit geotechnical investigation from soils engineer.
- 14) Conclusions from soils report and geologic hazards report incorporated in grading design.
- 15) Show existing and proposed property lines and site boundary.
- 16) All existing and proposed easements (permanent and construction).including required off site easements.
- 17) Any offsite grading clearly shown and called out.
- 18) Existing and proposed storm drainage facilities as necessary to show all BMPs.
- 19) Temporary sediment ponds provided for disturbed drainage areas greater than one acre.
- 20) Proposed slopes steeper than 3:1 with top and toe of slope delineated.
- 21) Erosion control blanketing shown on slopes steeper than 3:1.
- 22) Retaining walls greater than or equal to 4ft in height require design by P.E. and building permit from Regional Building Department. Locations to be shown on the plan (not located in County ROW).
- 23) Vehicle tracking shown at all construction entrances.
- 24) The erosion control plan is to be certified by a Colorado Registered P.E. with appropriate signature blocks for EPC and the Engineer and the statement "The Owner will comply with the requirements of the Erosion Control Plan" signed by the owner.
- 25) Required Signature blocks:

= Not checked at this time

= Provided, needs minor clarification/correction

N/A = Assumed not applicable – verify revisions

N/A = Verified – clearly not applicable

= Verified – provided

= Not found/missing information

Stormwater Management Plan Checklist

1	Applicant (owner/designated operator), Prepared By, SWMP Administrator, and Contractor information	<input type="checkbox"/>
2	Table of Contents	<input type="checkbox"/>
3	Site description and location to include vicinity map (not just Section, Township, Range)	<input type="checkbox"/>
4	Narrative description of construction activities proposed (e.g., may include clearing and grubbing, temporary stabilization, road grading, utility / storm installation, final grading, final stabilization, and removal of temporary control measures)	<input type="checkbox"/>
5	Phasing plan – may require separate drawings indicating initial, interim, and final site phases for larger projects. Provide “living maps” that can be revised in the field as conditions dictate.	<input type="checkbox"/>
6	Proposed sequence for major activities: Provide a construction schedule of anticipated starting and completion dates for each stage of land-disturbing activity depicting conservation measures anticipated, including the expected date by which the final stabilization will be completed.	<input type="checkbox"/>
7	Estimates of the total site area and area to undergo disturbance	<input type="checkbox"/>
8	Soil erosion potential and potential impacts upon discharge	<input type="checkbox"/>
9	A description of existing vegetation at the site and percent ground cover	<input type="checkbox"/>
10	The location and description of any other potential pollution sources such as fueling (mobile or stationary), chemical storage, etc.	<input type="checkbox"/>
11	Material handling to include spill prevention and response procedures	<input type="checkbox"/>
12	Spill prevention and pollution controls for dedicated batch plants	<input type="checkbox"/>
13	Other stormwater pollutant control measures to include waste disposal and cleanup of off-site soil tracking	<input type="checkbox"/>
14	The location and description of any anticipated non-stormwater components of discharge (springs, irrigation, etc.)	<input type="checkbox"/>
15	The name of ultimate receiving waters; size, type and location of stormwater outfall or storm sewer system discharge	<input type="checkbox"/>
16	SWMP Map to include: a) construction boundaries	<input type="checkbox"/>
	b) all areas of disturbance	<input type="checkbox"/>
	c) areas of cut and fill	<input type="checkbox"/>
	d) areas used for storage of building materials, soils or wastes (stockpiles)	<input type="checkbox"/>
	e) location of any dedicated asphalt / concrete batch plants	<input type="checkbox"/>
	f) location of all structural BMPs	<input type="checkbox"/>
	g) location of all non-structural BMPs	<input type="checkbox"/>
	h) springs, streams, wetlands and other surface waters	<input type="checkbox"/>
17	Narrative description of all structural BMPs to be used, including: silt fence, straw bales, check dams, sediment basins, diversion swales, etc. Ensure that methods are ECM/DCM-approved.	<input type="checkbox"/>
18	Description of non-structural BMPs to be used including seeding, mulching, protection of existing vegetation, site watering, sod placement, etc.	<input type="checkbox"/>
19	Technical drawing details for BMP installation and maintenance	<input type="checkbox"/>
20	Procedure for how the SWMP will be revised	<input type="checkbox"/>
21	Description of final stabilization and long-term stormwater quality measures to control stormwater pollutants after construction operations have been completed	<input type="checkbox"/>
22	Specification that vegetative cover density is to be a minimum of 70% of pre-disturbed levels to be considered stabilized	<input type="checkbox"/>
23	Outline of permit holder inspection procedures to install, maintain, and effectively operate BMPs to manage erosion and sedimentation	<input type="checkbox"/>
24	Record keeping procedures identified to include signature on inspection logs and location of SWMP records onsite	<input type="checkbox"/>

Please note: all items need to be addressed. If not applicable, explain; simply identifying “not applicable” will not satisfy CDPHE requirement of explanation.

= Not checked at this time

= Provided, needs minor clarification/correction

= Assumed not applicable – verify revisions

= Verified – clearly not applicable

= Verified – provided

= Not found/missing information

Engineering Final Submittal Checklist for Electronic Submittals	
Check Box	Item: Report/Form
<input checked="" type="checkbox"/>	Drainage Report (signed)
<input type="checkbox"/>	Traffic Impact Study (signed)
<input checked="" type="checkbox"/>	Grading & Erosion Control Plan (signed)
<input type="checkbox"/>	Street Construction Plans (signed)
<input type="checkbox"/>	Deviation Request (signed)
<input checked="" type="checkbox"/>	MS4 Post Construction Form and SDI worksheet DPW POC: John Chavez
<input checked="" type="checkbox"/>	Proof of embankment/pond submittal to State Engineer
<input checked="" type="checkbox"/>	ESQCP (signed) DPW POC: John Chavez
<input checked="" type="checkbox"/>	* Financial Assurance Estimate, SIA (signed)
<input type="checkbox"/>	* Pond/BMP Maint. Agreement and Easement (signed)
<input type="checkbox"/>	* Operation & Maintenance Manual
<input checked="" type="checkbox"/>	Pre-Development Site Grading Acknowledgement and Right of Access Form (signed)
<input checked="" type="checkbox"/>	Other: Offsite Easements, Other Permits (FEMA LOMR, USACE, Floodplain...), Conditions of Approval, etc. _
Pre-Construction Checklist:	
<input type="checkbox"/>	Driveway/Access Permit (Temporary access permits to be obtained from EPC DPW)
<input type="checkbox"/>	Work Within the ROW Permit (DPW or CDOT)
<input checked="" type="checkbox"/>	* Stormwater Management Plan (SWMP) Submit to PCD-Inspections 2 weeks prior to precon.
<input type="checkbox"/>	* Colorado Discharge Permit (COR: _____)
<input type="checkbox"/>	* County Construction Activity Permit
<input type="checkbox"/>	* CDPHE APEN – (if over 25 ac. or 6 mos.)
<input type="checkbox"/>	* Financial Surety (Letter of Credit/Bond/Collateral/Check)
<input type="checkbox"/>	Construction Permit Fee: <i>Early Grading or Standalone Grading</i> \$ 1,637.00 (Verify fees with Inspections Supervisor at time of scheduling)
<input type="checkbox"/>	Other: _____

* - required items to obtain an ESQCP

** - after recordation

Permit Fee and Collateral must be separate checks

Post Construction Submittal Checklist: (ECM 5.10.6)	
<input type="checkbox"/>	As-Built Drawings
<input type="checkbox"/>	Pond Certification Letter
<input type="checkbox"/>	Acceptance Letter for wet utilities

- = Need final / signed version

- = complete, in file

- = PCD Staff to provide

- = Undetermined at this time

- = Need later