LSC Responses Below

MEMORANDUM

DATE: November 1, 2023

TO: Ryan Howser, PCD-Project Manager

FROM: Charlene Durham, PCD-Engineering

719-520-7951

SUBJECT: SF-23-004 – Saddlehorn Ranch Filing No. 3

Third 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.

The comments include unresolved previous comments and new comments resulting from the re-submittal in **bold italic**. All previous comments that have been resolved have been noted or deleted. A written response to all comments and redlines is required for review of the resubmittal. 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. Additional comments may be generated on items added or revised after the original comments.

General / Letter of Intent/Final Plat

- 1. Resolved.
- 2. See Final Plat redlines. See updated/remaining redlines.
- 3. Legal Description and Closure sheets (from submittal 1, as it was not resubmitted) do not have the same project area. Please update so closure sheet and Legal Description match and update any other documents accordingly. *Unresolved*.

Transportation / Traffic Impact Study (TIS) / Noise Study

- See TIS redlines. See updated/remaining TIS redlines.
 LSC Response: Please refer to the PDF with LSC Responses to TIS Redlines
- Provide draft escrow agreement(s) and road fee credit agreement request(s). Unresolved.

LSC Response: Please see attached Escrow Calculation Table for this subdivision filing. This table is also attached to the draft escrow agreement(s) and road fee credit agreement (separate submittal item). Note: a prior table was submitted for Filing No. 2. This Filing No. 3 table refers back to that Filing No. 2 table.

Final Drainage Report (FDR)

- 1. See FDR redlines.
- Provide detailed discussion and analysis addressing channel stability as compared to DBPS recommendations or confirm DBPS recommendations. Provide complete hydraulic analysis including shear stresses. Add discussion comparing channel information to the Haegler DPBS (velocity, flow depth, shear stress, etc.) for the channel through the site to the south boundary of Saddlehorn Ranch. *Unresolved*.
- Resolved.

Construction Plans / Geotechnical Issues / Grading and Erosion Control Plan / SWMP

- 1. See CD/GEC Plan redlines. See updated/remaining redlines.
- 2. If channel stabilization is needed provide channel improvements CDs. Supercritical flows are of concern. *Unresolved*.
- 3. If there will be USPS mail kiosk/cluster in this subdivision provide locations on the CDs. **Resolved.**

Forms / SIA / FAE

- 1. Note: An O&M manual and PDB/BMP Maintenance Agreement and Easement for District maintenance of the channel will be required. The latest template for the agreement can be e-mailed upon request. Unresolved Maintenance agreement submitted is for Filing No. 4 which will only work if both subdivisions will be recorded at the same time or Filing No. 4 first. Note that Maintenance agreement for channel and ponds can be combined into a single document or may be separate. Using the same template as the one used for Filing 1 would be easiest. O&M Manual needs to include channel maintenance, as well as pond maintenance, which has been provided.
- 2. Provide separate easements for County acceptance and maintenance of the culverts, wingwalls and riprap on both sides of San Isidro trail. *Unresolved.*
- 3. See attached Engineering Final Submittal Checklist for reference.

Attachments/Electronic Redlines

- 1. Final Plat redlines
- 2. TIS redlines
- 3. FDR redlines
- 4. CD redlines
- 5. PDB/BMP Agreement redlines
- 6. O & M Manual Redlines
- 7. PDB/BMP Agreement and Easement redlines (coordinate with OCA redlines)
- 8. Engineering Final Submittal Checklist

Engine	ering Final Submittal Checklist										
Check											
Box	Item: Report/Form										
	Drainage Report (signed)										
	PBMP Applicability Form										
	Traffic Impact Study (signed)										
	Grading & Erosion Control Plan and checklist (signed)										
	Street and Channel Construction Plans (signed)										
	Deviation Request (signed)										
	MS4 Post Construction Form and SDI worksheet										
	Proof of embankment/pond submittal to State Engineer										
	ESQCP (signed)										
	* Financial Assurance Estimate, SIA (signed)										
	* Channel, Pond/BMP Maint. Agreement and Easement (signed)										
	* Operation & Maintenance Manual										
	AutoCAD base drawing (submitted to DPW)										
\Box	Pre-Development Site Grading Acknowledgement and Right of Access Form (signed)										
	Other: Offsite Easements, Other Permits (FEMA LOMR, USACE, Floodplain),										
Dra Ca	Conditions of Approval, Street light license agreement, etc.										
Pre-Co	Instruction Checklist:										
<u> </u>	Driveway/Access Permit (Temporary access permits to be obtained from EPC DPW)										
	Work Within the ROW Permit (DPW or CDOT)										
	* Stormwater Management Plan (SWMP) and checklist Submit to PCD-Inspections 2 weeks prior to precon.										
	* Colorado Discharge Permit (COR:)										
	* County Construction Activity Permit										
	* CDPHE APEN – (if over 25 ac. or 6 mos.)										
	* Financial Surety (Letter of Credit/Bond/Collateral/Check)										
	Construction Permit Fee:										
	Major Final Plat (CO and/or PBMPS and/or offsite										
_	impvts.) (Verify fees with Inspections Supervisor at time of scheduling)										
	Other: Dewatering Pemit,										
* - requi	red items to obtain an ESQCP										
Permit F	Fee and Collateral must be separate checks										
Post C	onstruction Submittal Checklist: (ECM 5.10.6)										
	As-Built Drawings										
	Pond Certification Letter										
	Acceptance Letter for wet utilities										
- 🔀 = co	eed final / signed version - □ = Undetermined at this time omplete, in file - □ = Need later CD Staff to provide										

Escrow Analysis for Off Site Improvements Saddlehorn Ranch Filing No. 3

		TIS Report			Report		TIS Report V									25% of	Filing No. 3 plus		i	Estimated	From Filing No. 2			
		Short Term Site Generated		LONG Term Site Generated		Projected Short-Term			2043 Projected			Average of	Percentages		Average of	Filing No. 1	25% of	Recommended	EPC Staff	Total	Dollar Amount From			
		Traffic Vo	umes	Traffic	Volumes	Total Traff	.c (TIS Fig 9)	Total	Traffic	of Short-Te		AM and PM	of 2043		AM and PM Percentages	(Avg of	Filing No. 1	Percentage	Override	Improvement	the Prior Table for			4
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provement	Trigger (vph)	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		AM	PM		AM and PM)	(Avg. or AM & PM)	for Escrow(1)	Value	Cost	Filing No. 2	Totals	Adjusted Totals	For Filings 4
																						5111 N - 2 - 250/ -f		1
udge Orr/Curtis		Filing 3 Only		3 Only	Only		Filing 3 Only		aly		Filing 3 Only		Filing 3 Only			Filing 3 + 25% of Filing No. 1					Filing No. 3 + 25% of Filing No. 1 Amts.	Adjusted		
astbound Right Turn Deceleration Lane	50	1	3	1	2	84	48	205	142	1.2%	6.3%	3.7%	0.5%	1.4%	0.9%	12.2%	13.1%	3.7%		\$112,623	3	\$4,189.84	\$3,016.84	4
orthbound Left Turn Lane - potential future lengthening (restriping)	260(2)	3	2	2	1	54	90	165	259	5.6%	2.2%	3.9%	1.2%	0.4%	0.8%	4.2%	5.0%	5.0%		\$18,125	5	\$ 912.77	\$370.77	7
Nestbound Right Turn Deceleration Lane	50	4	2	5	3	37	15	129	103	10.8%	13.3%	12.1%	3.9%	2.9%	3.4%			3.4%		\$119,873	3	\$4,068.84	\$3,387.61	1
																						\$9,171.45	\$6,775.23	3
																						Filing No. 3 + 25% of Filing No. 1 + Prior		Remaining A
			Filing	gs 1 - 3			Filings 1	- 3			Filings 1 - 3			Filings 1 - 3			Filing 3 + 25% of	Filing No. 1				Filing 2 Table Amt.		For Filings
astbound Right Turn Deceleration Lane	50	5	19	5	17	84	48	205	142	6.0%	39.6%	22.8%	2.4%	12.0%	7.2%			3.7%		\$112,623	\$22,62	\$25,642		
lorthbound Left Turn Lane - potential future lengthening (restriping)	260(2)	19	12	15	6	54	90	165	259	35.2%	13.3%	24.3%	9.1%	2.3%	5.7%			5.0%		\$18,125	\$76	\$1,139		
Vestbound Right Turn Deceleration Lane	50	4	2	5	3	37	15	129	103	10.8%	13.3%	12.1%	3.9%	2.9%	3.4%			3.4%		\$119,873		\$4,069		
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astbound Right Turn Deceleration Lane	50	5	19	gs 1-5 5	17	84	Filings 1	-5 205	142	6.0%	Filings 1-5 39.6%	22.8%	2.4%	Filings 1-5 12.0%	7.2%		Filings	22.8%		\$112,623	\$25,64	Filings 1-5 amts. 2 \$25,642		
Northbound Left Turn Lane - potential future lengthening (restriping)	260(2)	19	12	15	9	54	90	165	259	35.2%	13.3%	24.3%	9.1%	3.5%	6.3%			6.3%		\$18,125				
Westbound Right Turn Deceleration Lane	50	16	10	19	13	37	15	129	103	43.2%	66.7%	55.0%	14.7%	12.6%	13.7%			13.7%		\$119,873				
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outhbound Right Turn Deceleration Lane	25(3)	2		1 3	3	39	27	107	167	5.1%	3.7%	4.4%		1.8%	2.3%	6.6%	8.9%	8.9%		\$99,978	3	\$8,884.20		
Eastbound Left turn Deceleration Lane Lengthening	50(4)	1		3 1	3	16	39	45	105	6.3%	7.7%	7.0%	2.2%	2.9%	2.5%	11.7%	14.2%		43.3			\$28,596.49		
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outhbound Right Turn Deceleration Lane	25(3)	22		.3 22	15	39	27	107	167	56.4%	48.1%	52.3%	20.6%	9.0%	14.8%			8.9%		\$99,978				
astbound Left turn Deceleration Lane Lengthening	50(4)	8	2	.6 8	25	16	39	45	105	50.0%	66.7%	58.3%	17.8%	23.8%	20.8%			14.2%	82.7	% \$66,092				\$11
																					\$48,63	\$80,115		
			Filin	ngs 1-5			Filings 1	-5			Filings 1-5			Filings 1-5								Filings 1-5 amts.		
outhbound Right Turn Deceleration Lane	25(3)	25		.5 27	17	39	27	107	167	64.1%	55.6%	59.8%	25.2%	10.2%	17.7%			59.8%		\$99,978	\$61,43			
astbound Left turn Deceleration Lane Lengthening	50(4)	10		1 10	30	16	39	45	107	62.5%	79.5%	71.0%	22.2%	28.0%	25.1%			100.0%	100.0					

(1) LSC General Note Regarding Escrows: There are a number of developments – in progress and future/planned - in the area which will also add traffic to these intersection turn lanes. As El Paso County collects escrow for other developments, fair-share recalculation of pro-rata share escrow amounts and credit be provided to developments according to the updated fair-share calculations. Also, once the improvements are completed, applicable/allowable Countywide Fee Program credits for construction of intersection approach improvements (turn lanes) be applied based on a ratio of fee program unit cost divided by the improvement cost.

(2) 265' current length; 56/183 ex. vol.; 9/5 Fil 2 vol. 260' Stacking - future trigger.. once intersection is signalized Or if Stop signs are switched to EB and WB or while NB stop control remains, if queue reaches lengths that overspill the lane, at a frequency more than "infrequently."

(3) The default ECM trigger for this potential right turn lane is 25 vph. However, since the southbound approach is currently Stop-sign controlled, the turn lane is not currently needed due to speed differential between through traffic and right turning traffic. LSC recommends the following triggers:

Once the intersection is signalized (if as signal is the selected future traffic control instead of a modern roundabout) or

o If El Paso County switches the orientation of the stop signs such that Curtis is changed to the "major street" and Falcon Highway is changed to the "minor street" (the intersection remains two-way, stop-sign control).

The check for either trigger could occur with future subdivision filings and a determination could be made at that time if this project should install the turn lane (with fee-program credit per fee program provisions). If neither trigger is met, escrow for pro-rata share of this potential improvement with each Filing. Per EPC, Saddlehorn values alone would exceed 25 vph, which could trigger the improvement LSC would suggest escrow in leu of lane construction if the above two triggers are not met as the lane could potentially be "throw away" if a roundabout is selected as the future traffic control. The escrow for the southbound right turn lane could potentially be returned to the applicant, as it would not be necessary with a roundabout.

(4) 290' current full-width left turn lane length; For Existing plus Fil. 1-5, recommended "trigger:" once projected queue (95th percentile) exceeds 50'

(5) Long Term Filing 2 Percentage plus 25% of the Filing No. 1 long term percentage (Filings 1&2 minus Filing No. 2)

For Filing No. 3 Date:12/22/2023 - Modified from Filing 2 Table Rev. 4-11-2023 (minor correction 5-5-2023 - cell K37 - 2043 AM Total, Fil 1-5 row for SB RT decel. lane at Falcon Hwy/Curtis)