



COLORADO

Department of Transportation

Region 2 Permits
5615 Wills Blvd.
Pueblo, CO 81008-2349

December 14, 2021

SH 24G/94A
El Paso County

Ryan Howser
E.P.C. Planning & Community Development
2880 International Circle
Colorado Springs, CO 80910

RE: Crossroads at Meadowbrook Filing No1 - SF2129

Dear Ryan,

I am in receipt of a referral request for comments for Crossroads at Meadowbrook Filing No. 1. The Crossroad at Meadowbrook Preliminary Plan has been labeled various underdevelopment names within the filing to include the development of the 11 parcels. Currently under review is Mixed Use Preliminary Plan (SP2011) for 1 multifamily lot, 10 commercial lots and 4 tracts for private roads, utilities, drainage, open spaces and signage. For this referral review we looked at **Crossroads at Meadowbrook Mixed Use, Crossroads at meadowbrook filing No. 1 and Aura at Crossroads** all three of these developmental areas are anticipated to include approximately 306 multifamily housing units, a 10,000-square feet of retail, 14,000 square foot pharmacy, 8,000 square feet of sit down restraunts 11, 000 square feet of fast food restraunt and a 2,500 square foot coffee shop. Crossroads at Meadowbrook Mix Use, is located on the southwest quadrant of the intersection of US-24 and Newt Drive and SH-94 and encompasses approximately 29.04-acres, the property tax schedule is 5408007006 and 5408007007 in El Paso County.

Traffic Operations:

The current Traffic Impact Study Dated August 13, 2021 has been reviewed and previous comments from Traffic Impact Studies listed have not been addressed (in Italics). Traffic Operations staff comments are as follows:

Oct 12, 2021 comments;

- **As has been previously stated the plan shall reserve public right-of way for the future interchange at US24 & 94. The plat, as submitted shows no reservation or ROW dedication.**
- CDOT is requesting ROW dedication along US24 south of the intersection of SH24 east and west side of the roadway and north of the intersection east and west side of the roadway for the footprint of the El Paso Counties PEL Study and for the expansion of US24 to include three thru lanes EB and one acceleration lane off of Newt.



Previous comments dated August 11, 2021 listed below;

- Right-of-way shall be preserved for future interchange footprint at US 24 & Hwy 94 as shown in the PEL study.
- Future interchange improvements will impact most of lot 4, a significant portion of lot 5, and the landscape buffer of lot 6 and will need to be modified.

Previous comments dated March 23, 2021 listed below;

- *The 2020 AM adjusted existing traffic volumes on Figure 5 at SH-94 & Marksheffel Rd does not seem to balance with adjacent intersections.*
- *The traffic impact study included an analysis of westbound Hwy 94-to-24 left turn flyover option for 2026, in addition to the widening of Hwy 24; however, it is anticipated a grade separation would be built in lieu of additional through lanes and carry the largest volume movements (Hwy 24 through traffic) in the 2040 time horizon. The US 24 PEL study estimated the cost of grade separation to be 1/3 of additional through-lane widening of Hwy 24. The traffic impact study shall analyze potential grade separation without additional through lanes in 2026. The study may utilize interchange planning selection tool such as CAP-X to determine most appropriate grade separation in 2040 for the analysis.*
- *Table 9 appears to have a typo for in the bottom left cell*
- *Page 51 indicates that the southbound left turn lane is not warranted; however, the SHAC warrant is only 10 vehicles per day and therefore is warranted.*

Previous comments dated January 21, 2021 listed below;

- *According to CDOT MS2 site, the existing peak hour traffic volumes are considerably less than pre-pandemic volumes shown in Figure 5 of the Traffic Impact Study. For example:*
 - ❖ *AM Peak hour count in January 2020 shows 975 southbound and 428 northbound through volumes at US24 and Marksheffel Road intersection.*
 - ❖ *Eastbound was recorded at 340 vehicles, and westbound thru was recorded at 1225 vehicles.*
 - ❖ *Westbound left was recorded at 305 vehicles and southbound right was 657 vehicles.*
 - ❖ *Based on additional counts found on the CDOT MS2 site <https://cdot.ms2soft.com/tcds/tsearch.asp?loc=Cdot&mod=>, it appears that in most cases the June 2 peak-hour counts should be factored 35% to reach pre-COVID volumes, with the exception of the Highway 94 PM peak hour needing the 44% factor as stated in the study.*
- *Trip distribution as shown in Figures 8 and 9 seem to overweight distribution to/from the west and underweight distribution to/from the north by 10%.*
- *Section 5.2 recommends converting eastbound & westbound turn lanes along Hwy 24 at Hwy 94 & at Marksheffel Rd to shared thru/right turn lanes. Conversion to shared lanes is not acceptable under the E-X category of the State Highway Access Code. Furthermore, safety performance of six-lane highways is worse than four-lane highways below an approximate ADT of 36,000.*
- *The US 24 PEL study prioritizes the interchange of Hwy 24 & 94 over widening Hwy 24 from Powers to Hwy 94. The study also estimated the cost to be 1/3 of widening. The*



traffic impact study shall include analysis of grade separation of the intersection and potential interchange alternatives such as a DDI.

Hydraulics:

The Drainage Report dated February 2021 and the Grading & Erosion Control Plan dated February 16, 2021 for Crossroads at Meadowbrook Mixed Use has been reviewed by a CDOT Hydraulics Engineer. Their comments follow:

- **Oct 6, 2021 comments: All previous comments still apply and have not been addressed. Please revise and resubmit.**
- **Sept 13, 2021 comments:** The full spectrum detention pond does not provide adequate full spectrum detention for the 5-year, 10-year and 25-year storms. The Ratio Peak Outflow to Predevelopment Q (in the Routed Hydrograph Results table on the Detention Basin Outlet Structure Design spreadsheet) for each of these storm events should be at or below 1.0.
- Please provide outlet protection calculations for the pond outlet pipe and riprap rundown. Riprap should be sized properly in these locations within CDOT's roadside swale.
- Please provide explanation of and formulas used for the existing and proposed swale calculations. The provided charts do not provide background on how the hydraulic calculations were completed.
- N values in the "Open Channel Flow Calculator" for "A-A" don't match what is shown in the basin map section. Please clarify.
- No storm sewer hydraulic calculations were provided in the report. CDOT needs to confirm that the storm network adjacent to CDOT right-of-way has proper capacity.
- **January 11, 2021 comments:** This project doesn't seem to directly affect CDOT facilities with the current design. My only concern is the outfall of the detention pond. The report states that the outfall discharges into an existing swale. This swale is not well defined. The existing condition is natural sheet flow across the basin and will be concentrated flow in the proposed condition at the outfall. In the final design, I would suggest the engineer ensure the swale can handle the concentrated flows without erosion of the channel bottom.
- **March 24, 2021 comments:** Existing conditions topo map shows that existing flow at the SW corner sheet flows to the west and that flow does not enter the existing roadside swale. The proposed detention pond outlet concentrates and directs this flow to the roadside swale, which will cause erosion. Please coordinate with CDOT Hydraulics Engineer to design suitable outlet protection.
- Drainage report does not specify who will maintain the pond. CDOT needs to know that the pond will be properly maintained because if it is not maintained and the pond does not function as intended erosion on CDOT property will ensue. This will be a condition of the CDOT Access Permit.
- **The highway drainage system is for the protection of the state highway right-of-way, structures, and appurtenances. It is not designed nor intended to serve the drainage requirement of abutting or other properties beyond undeveloped historical flow. Drainage to the state highway right-of-way shall not exceed the undeveloped historical rate of flow.**
- **CDOT would like to emphasize this development devise and implement a permanent plan for periodic removal and disposal of sediment from detention facilities for maintenance of development detention facilities shall not be in CDOT Rights of Way. This will be a condition of the CDOT Access Permit.**

Materials:

The Soils and Geology Study dated March 3, 2021 for Crossroads Commercial has been reviewed by a CDOT Materials Engineer. Their comments follow:



- Aug 9, 2021 comments: Planned roadway improvements on CDOT Right of Way shall be designed in accordance with the current CDOT Pavement Design Manual, the State Highway Access Code and current design standards.

Environmental:

The Impact Identification Statement for Crossroads at Meadowbrook has been reviewed by a CDOT Environmental Engineer. Their comments follow:

- How was it determined that....” there are no known historical or archeological sites identified in the site”? No further comments needed.

Access:

The Preliminary Plan has been reviewed and the development changes will impact CDOT infrastructure. My comments are as follows:

- **The current Filing No. 1 Plat does not show dedication of ROW and will need to be revised and rereviewed.**
- The developer is required to apply for a new Colorado Department of Transportation Access Permit for the connection of Newt Dr. to SH24G. An Access Permit is required at the intersection location of (SH24 and Newt Drive). The change in land and access use rules apply as detailed in the State Highway Access Code 2002, Section 2.6. **This has not been done to date.**
- Notice: a condition of the access permit will be the donation of the required Public ROW needed for future roadway improvements and additional roadway improvements will be required at the intersection of SH24G and Newt Dr.
- Additional phases are expected for this development. Additional phase will be required to be reviewed as they come in and further traffic operation requirements may be needed if warrants are met.
- No additional access will be allowed to the development from any of the surrounding State Highways and only allowed from the minor surrounding internal roadways.
- This development is being reviewed concurrently with the developments listed below since they all impact the same intersections.
 - ❖ Crossroads North
 - ❖ Meadowbrook Park
 - ❖ Crossroads at Meadowbrook Mixed Use
 - ❖ Reagan Ranch
- CDOT is collaborating with the City of Colorado Springs and El Paso County in development review as all three agency’s infrastructure will be impacted by the traffic within these developments.
- A pre-application meeting to discuss expectations and processes with the three agencies is required prior to application for access permit being made to CDOT by the development or El Paso County.

Additionally,

- On-premise and off-premise signing shall comply with the current Colorado Outdoor Advertising Act, sections 43-1-401 to 421, C.R.S., and all rules and regulations pertaining to outdoor advertising. Please contact Mr. Todd Ausbun at (719) 696-1403 for any questions regarding advertising devices.



- Any utility work within the state highway right of way will require a utility permit from the CDOT. Information for obtaining a utility permit can also be obtained by contacting Mr. Ausbun.

Please contact Arthur Gonzales in Pueblo at (719) 546-5732 or Arthur.gonzales@state.co.us with any questions.

Sincerely,


Arthur Gonzales
CDOT R2 Access Manager

Xc: Jennifer Irvine/Victoria Chavez/Jeff Rice - El Paso County
Ferguson
Bauer
Stecklein
Whittlef/Biren
Ausbun
Vigil/Regalado/file

