



September 23, 2016

Bayer Becker
Attn: Mr. Wardell Wilcox, PTP
6900 Tylersville Road, Suite A
Mason, Ohio 45040

Re: Fields at Liberty Way TIS – Approval

Wardell,

The TIS report dated September 19, 2016 is approved as submitted on September 21, 2016. The development is required to construct the recommended improvements as listed on pages 6 and 7 of the report. As previously agreed upon by BCEO and developer, proposed Site Drive #1 required for Phase 1 will convert to a right in/right out access when the full build-out of the development occurs. All improvements associated with proposed Site Access #2 shall be constructed prior to the granting of any certificate of occupancy in future phase(s) beyond Phase 1. Per the TIS, Phase 1 consists of two hotels.

Respectfully,

A handwritten signature in blue ink, reading "Matthew J. Loeffler".

Matthew J. Loeffler, P.E.
BCEO Traffic Engineer

Attachment: Copy of pages 1, 6 & 7

Cc: Tim Dawson – West Chester Township (email)
Eric Pottenger & Teresa Barnes – BCEO (email)
File



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September 19, 2016

Mr. Matthew Loeffler, PE
Butler County Engineers Office
1921 Fairgrove Avenue (SR 4)
Hamilton, Ohio 45011-1965

Re: The Fields at Liberty Way Development – Final Revised Traffic Impact Analysis

Dear Mr. Loeffler,

Bayer Becker has updated the traffic analysis for the proposed The Fields at Liberty Way Development, based on the comments received from the Butler County Engineers Office dated September 16, 2016.

The proposed The Fields at Liberty Way Development will happen in 2 phases and is proposed to consist of 2 hotels (Phase 1) and 2 hotels, medical office, commercial retail (Full Build Out) on the west side of Cox Road just south of Liberty Way in West Chester Township, Butler County, Ohio. The access to the development is proposed to provide a right turn in/right turn out driveway (Site Drive #1) approximately 570 feet south of Cox Road (centerline to centerline) and a full movement driveway (Site Drive #2) approximately 915 feet south of Cox Road (centerline to centerline). It should be noted that Site Drive #1 will initially operate as a full movement driveway (Phase 1) but will be converted to right turn in/right turn out only when the full build out of the development occurs. The preliminary The Fields at Liberty Way Development site plan is attached as Appendix A.

Existing traffic counts were acquired on Cox Road at the intersections with Service Center Drive during the 7:00-9:00 AM and 4:00-6:00 PM peak hour periods and Cabling Specialist Drive for a period of 24 hours on Wednesday – May 18, 2016. The actual traffic count data is shown graphically in the attached Figure 1 and contained in Appendix B.

The trip generation calculations for the proposed development were determined for the weekday AM and PM peak hours. The procedures outlined in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual, 9th Edition* were used to estimate trip generation rates. The trips generated by the proposed The Fields at Liberty Way Development are provided in the following Table 1 on the following page.

6900 Tylersville Road, Suite A
Mason, OH 45040
513-336-6600

110 South College Avenue, Suite 101
Oxford, OH 45056
513-523-4270

1404 Race Street, Suite 204
Cincinnati, OH 45202
513-336-6600

209 Grandview Drive
Fort Mitchell, KY 41017
859-261-1113

<http://www.bayerbecker.com>

with the existing traffic signal at the Cox Road and Liberty Way intersection, then a 3-phase 90 second cycle will be installed. As a result of the uncertainty of the signal coordination, BCEO requested that the proposed storage turn lane lengths be based on a 90 second signal cycle. Table 4 provides the summary of the design speed, cycle length, existing storage, required back of queue storage and proposed storage lengths.

**Table 4
Turn Lane Length Summary**

2034 Build Turn Lane	Design Speed (MPH)	Cycle Length (Sec)	No. of Turn Lane(s)	Existing Storage (ft.)	95 th Percentile Back of Queue Storage (ft.)	ODOT L&D Storage (ft.)	Proposed Storage (ft.)
Cox Road and Site Drive #1 – Phase 1- 2019 Build - Unsignalized							
SB Right Turn Lane	45	60	1	-	Not Reported	175'	175'
Cox Road and Site Drive #1 – Option A and Option B - Unsignalized							
SB Right Turn Lane	45	60	1	-	Not Reported	275'	175'
Cox Road and Site Drive #2 – Option A - Signalized							
NB Left Turn Lane	45	60	1	-	70'	225'	275'
SB Right Turn Lane	45	60	1	-	50'	175'	225'
EB Left Turn Lane	25	60	1	-	95'	175'	300'
EB Right Turn Lane	25	60	1	-	50'	50'	150'
Cox Road and Site Drive #2 – Option B - Unsignalized							
NB Left Turn Lane	45	60	1	-	50'	225'	105'
SB Right Turn Lane	45	60	1	-	Not Reported	175'	50'
EB Left Turn Lane	55	60	1	-	709'	150'	175'
EB Right Turn Lane	55	60	1	-	50'	50'	150'

As shown in Table 4, the BCEO determined the preferred storage lane lengths that will be provided for all movements. The complete back of queue results is included with the LOS capacity summary. The ODOT L&D turn lane warrant and turn storage length calculations are provided in in Appendix F.

Roadway Improvements

Based on the analysis contained in this report, no roadway improvements are recommended to accommodate the **2034 No-Build Traffic Condition** (excluding site traffic) and the roadway improvements that are recommended to accommodate the **2034 Build Traffic Condition** (including site traffic) are as follows:

Cox Road/Site Drive #1 Intersection

1. Reconstruct Site Drive #1, approximately 570 feet south of Cox Road (centerline to centerline), to provide the following:
 - One (1) southbound right turn storage lane approximately 175 feet in length (including 50-foot diverging taper).
 - One (1) lane for ingressing traffic.
 - One (1) lane for egressing traffic.
 - Install a stop sign traffic control device on the eastbound approach to the intersection.

Phase 1

Cox Road/Site Drive #2 Intersection – Option A - Signalized

- Phase 2*
1. Construct Site Drive #2, approximately 915 feet south of Cox Road (centerline to centerline), and provide the following:
 - One (1) northbound left turn storage lane approximately 275 feet in length plus appropriate taper.
 - One (1) southbound right turn storage lane approximately 225 feet in length plus appropriate taper.
 - One (1) eastbound left turn storage lane approximately 300 feet in length plus appropriate taper.
 - One (1) eastbound right turn storage lane approximately 150 feet in length plus appropriate taper.
 - One (1) lane for ingress traffic.
 2. Remove the existing Cabling Specialty Driveway and provide a cross property easement for access to Site Drive #2.
 3. Install a new traffic signal to operate at the Cox Road/Site Drive #2 intersection; when the traffic volumes are warranted.

Cox Road/Site Drive #2 Intersection – Option B - Unsignalized

- Phase 2*
1. Construct Site Drive #2, approximately 915 feet south of Cox Road (centerline to centerline), and provide the following:
 - One (1) northbound left turn storage lane approximately 225 feet in length plus appropriate taper.
 - One (1) southbound right turn storage lane approximately 175 feet in length plus appropriate taper.
 - One (1) eastbound left turn storage lane approximately 225 feet in length plus appropriate taper.
 - One (1) eastbound right turn storage lane approximately 150 feet in length plus appropriate taper.
 - One (1) lane for ingress traffic.
 - Install a stop sign traffic control device on the eastbound approach to the intersection.

All improvements shall be constructed in accordance with the standards and requirements outlined by the Butler County Engineer's Office.

Please review the enclosures and contact us with any questions.

Sincerely,



Wardell L. Wilcox, P.T.P.

Attachments

15M040 High 5 Traffic Study.Docx