

CHARTER TOWNSHIP OF MERIDIAN
PLANNING COMMISSION
AGENDA

REGULAR MEETING
and
WORK SESSION MEETING

April 13, 2015

Town Hall Room, Meridian Municipal Building
5151 Marsh Road, Okemos, MI 48864

Regular Meeting

1. Call meeting to order at approximately 7:00 p.m.
2. Approval of agenda
3. Approval of minutes
 - A. March 9, 2015 Work Session Meeting
 - B. March 16, 2015 Work Session Meeting
 - C. March 23, 2015 Regular Meeting
 - D. March 23, 2015 Work Session Meeting
4. Public remarks
5. Communications
 - A. Ken & Brenda Miller RE: REZ #15010 (Forsberg Family LLC)
 - B. Eric Brauher RE: REZ #15010 (Forsberg Family LLC)
 - C. Michael Gillengerten RE: REZ #15010 (Forsberg Family LLC)
 - D. Shaun Dickey RE: REZ #15010 (Forsberg Family LLC)
 - E. Oral Surgery Associates of Lansing RE: REZ #15010 (Forsberg Family LLC)
 - F. Dennis Vandecar RE: REZ #15010 (Forsberg Family LLC)
 - G. Allene & Wesley Hood RE: REZ #15010 (Forsberg Family LLC)
 - H. Jay & Cathleen Heath RE: REZ #15010 (Forsberg Family LLC)
 - I. Valerie Nilson RE: REZ #15010 (Forsberg Family LLC)
 - J. Nancy McKeague RE: REZ #15010 (Forsberg Family LLC)
 - K. James Sherman RE: REZ #15010 (Forsberg Family LLC)
 - L. Rona Moore RE: REZ #15010 (Forsberg Family LLC)
 - M. Tim Lilleboe RE: REZ #15010 (Forsberg Family LLC)
 - N. Chengfeng Yang RE: REZ #15010 (Forsberg Family LLC)
 - O. Petition RE: REZ #15010 (Forsberg Family LLC)
 - P. Marty & Leigh Holmes RE: REZ #15010 (Forsberg Family LLC)
 - Q. Tim Daman RE: REZ #15010 (Forsberg Family LLC)
6. Public Hearings
 - A. Special Use Permit #15-83251 (Kroger) request to construct gas station with a 254 square foot transaction kiosk and 8 fueling stations at 4884 Marsh Rd.

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7. Unfinished Business
 - A. Rezoning #15010 (Forsberg Family, LLC), request to rezone approximately 39.46 acres from I (Industrial), PO (Professional and Office), RR (Rural Residential), and C-2 (Commercial) to C-2 (Commercial) with an offer of conditions to develop as a mixed use planned unit development and restrict density to no more than 18 dwelling units per acre. The site has frontage on Kansas Street and Jolly Oak Road
8. Other Business
9. Township Board, Planning Commission officer, committee chair, and staff comment or reports
10. New Applications
 - A. Special Use Permit #15031 (BBI Holdings LLC), request to establish a child care center at 2172 and 2190 Association Drive with a request for a decision the same night as the public hearing
 - B. Wetland Use Permit #15-01 (BBI Holdings), request to impact regulated wetlands for the construction of a child care center at 2172 and 2190 Association Drive with a request for a decision the same night as the public hearing
 - C. Special Use Permit #15041 (Triestram and Dorner) request to construct a 128 square foot deck in the 100-year floodplain at 4303 Tacoma Boulevard with a request for a decision the same night as the public hearing
11. Site Plans received
 - A. Site Plan Review #15-03 (BBI Holdings), request to develop a 13,000 square foot child care center at 2172 and 2190 Association Drive
12. Site Plans approved
 - A. Site Plan Review #15-01 (Fedewa), request to develop a 5-unit townhouse project to be located at 2043 Hamilton Road
13. Public Remarks
14. Adjournment

Post Script: John Scott-Craig

The Planning Commission's Bylaws state agenda items shall not be introduced for discussion or public hearing that is opened after 10:00 p.m. The chair may approve exceptions when this rule

Planning Commission Agenda

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would cause substantial backlog in Commission business (Rule 5.14 Limit on Introduction of Agenda Items).

Persons wishing to appeal a decision of the Planning Commission to the Township Board in the granting of a Special Use Permit must do so within ten (10) days of the decision of the Planning Commission (Sub-section 86-189 of the Zoning Ordinance)

Work Session Meeting

1. Call meeting to order
2. Approval of agenda
3. Discussion
 - A. 2005 Master Plan Update
5. Public remarks
6. Adjournment

**TENTATIVE
PLANNING COMMISSION AGENDA**

**Regular Meeting
April 27, 2015**

**Town Hall Room, Meridian Municipal Building
5151 Marsh Road, Okemos, MI 48864**

Regular Meeting

1. Public Hearings
 - A. Special Use Permit #15031 (BBI Holdings LLC), request to establish a child care center at 2172 and 2190 Association Drive with a request for a decision the same night as the public hearing.
 - B. Wetland Use Permit #15-01 (BBI Holdings), request to impact regulated wetlands for the construction of a child care center at 2172 and 2190 Association Drive with a request for a decision the same night as the public hearing.
 - C. Special Use Permit #15041 (Triestram and Dorner) request to construct a 128 square foot deck in the 100-year floodplain at 4303 Tacoma Boulevard with a request for a decision the same night as the public hearing
2. Unfinished Business
 - A. Special Use Permit #15-83251 (Kroger), request to construct a gas station with a 254 square foot transaction kiosk and 8 fueling stations at 4884 Marsh Rd.
3. Other Business

Work Session Meeting

- A. 2005 Master Plan Update

**CHARTER TOWNSHIP OF MERIDIAN
PLANNING COMMISSION
WORK SESSION MINUTES**

DRAFT

March 9, 2015

**5151 Marsh Road, Okemos, MI 48864-1198
Town Hall Rom, 517-853-4560**

PRESENT: Chair Scott-Craig, Vice-Chair Jackson, Commissioners Honicky, Cordill, Ianni, Van
Coevering, Tenaglia and De Groff
ABSENT: Commissioner Deits
STAFF: Principal Planner Gail Oranchak

1. Call meeting to order

Chair Scott-Craig called the work session meeting to order at approximately 9:45 P.M.

2. Approval of agenda

The agenda was accepted as written.

3. 2005 Master Plan Update

- Chair Scott-Craig reported he and Vice Chair Jackson met with Township Manager Walsh and Director of Community Planning and Development to discuss the Master Plan update:
 - Establish working groups composed of Planning Commissioners, Township Board members, members of other boards and commissions and public members
 - Each group responsible for a different chapter
 - Mixed group of 6-10 people per group
 - Identify topics to include in each chapter
 - Data collection in house
 - Use the \$50,000 to hire a consultant to prepare the final document
 - Each group would have a planning commissioner/facilitator
 - Commissioners suggest public members of each group
 - Not necessary to have specific planning knowledge
- John and Pat to meet this week
- Impact of Open Meetings Act on group meeting—noticing
- Specific nights for group meetings
- Importance of Township Board participation
- Manager Walsh to facilitate Township Board participation
- At least one planning commissioner and one board member per group
- March 16 – establish Master Plan timeline

4. Public Remarks

None

5. Adjournment

Chair Scott-Craig adjourned the meeting at approximately 10:05 p.m.

Respectfully Submitted,

Gail Oranchak, AICP
Principal Planner

**CHARTER TOWNSHIP OF MERIDIAN
PLANNING COMMISSION
WORK SESSION MINUTES**

DRAFT

March 16, 2015

**5151 Marsh Road, Okemos, MI 48864-1198
Town Hall Rom, 517-853-4560**

PRESENT: Chair Scott-Craig, Vice-Chair Jackson, Commissioners Honicky, Cordill, Ianni, Van
Coevering, Tenaglia and De Groff
ABSENT: Commissioner Deits
STAFF: Principal Planner Gail Oranchak

1. Call meeting to order

Chair Scott-Craig called the work session meeting to order at approximately 6:10 P.M.

2. Approval of agenda

Commissioner Ianni moved approval of the agenda. Seconded by Commissioner Cordill.

VOICE VOTE: Motion carried 7-0

3. Discussion

2005 Master Plan Update

- Difficulty reorganizing the Master Plan into goal oriented chapters
- Not everything in each chapter relates to a goal
- New structure proposed by Chair Scott-Craig
- Three parts to each chapter: Introduction; description of existing conditions; goals, objectives and strategies
- Data chapters followed by Future Land Use chapter and map
- Goals reflected in Future Land Use Chapter
- Implementation Chapter includes strategies to achieve change, land use policy changes, timelines and metrics
- Public input required
- Seven working groups provide input
- Use goals as basis for discussion in working groups
- Complete data collection before set-up committees
- Anticipate challenges with transportation
- Information needed about the Bus Rapid Transit project since the cost reduction of \$50 million
- Relationship of the Township Board goals to the Master Plan goals
- Housing and Demographic data: who is here and what do they live in
- Data dependency to be based on each topic
- Programmed set of discussion topics for each group facilitator
- Group meetings to define a community vision based on goals
- Social engineering and walkable communities

- Does the vision foresee a walkable community 20 years from now
- Balancing the interests of those who are here and those who will be here
- Baby Boomers interest in downsizing
- Future college funding not home purchase is #1 priority for young families
- Millennials and mobility
- Planning Commissioner preference for facilitating the seven goal-based focus groups : Goal 1 - Honicky; Goal 2 - Jackson; Goal 3 – Tenaglia; Goal 4 - DeGroff; Goal 5 - Van Coevering; Goal 6 - Scott-Craig; Goal 7 - Ianni
- Request for Planning Commissioners to recommend 8-10 participants per committee
- Planning Commission facilitator will lead the group meeting
- Ground rules: consensus building, commonalities, encourage individuals to share ideas
- Identifying implementation strategies follows goal crafting
- First meeting to collect information, opinions and ideas
- Second meeting to put it all together
- Distribute goals to facilitate preparation before the group meeting. Write ideas and thoughts on paper
- Prepare a list of Planning Commission ideas before the meeting and provide them to committee members
- Agenda and packet of information to send before the first meeting
- What is the expected outcome? Consensus, many different ideas?
- First meeting open, friendly, collect ideas
- As the facilitator, don't use "but." It discounts ideas
- Don't "hit people cold." Introduction to explain the process, what it is for and what to expect
- "Not here to criticize but collect ideas"
- No evaluation at the first meeting
- Not the only opportunity to have input

4. Public Remarks

None

5. Adjournment

Chair Scott-Craig adjourned the meeting at approximately 9:00 p.m.

Respectfully Submitted,

Gail Oranchak, AICP
Principal Planner

**CHARTER TOWNSHIP OF MERIDIAN
PLANNING COMMISSION
REGULAR MEETING MINUTES
March 23, 2015**

DRAFT

5151 Marsh Road, Okemos, MI 48864-1198
853-4000, Town Hall Room, 7:00 P.M.

PRESENT: Commissioners Cordill, DeGroff, Honicky, Ianni, Jackson, Scott-Craig, Tenaglia, Van Coevering
ABSENT: Commissioner Deits
STAFF: Principal Planner Oranchak

1. Call meeting to order

Chair Scott-Craig called the regular meeting to order at 7:00 P.M.

2. Approval of agenda

Commissioner Cordill moved to approve the agenda amended as follows:

- **Change the order in which Agenda Items #7A and #7B come before the Planning Commission**

Seconded by Commissioner Tenaglia.

VOICE VOTE: Motion carried 8-0.

3. Approval of Minutes

**Commissioner Ianni moved to approve the Regular Meeting Minutes of March 9, 2015.
Seconded by Commissioner Jackson.**

VOICE VOTE: Motion carried 8-0.

4. Public Remarks

Chair Scott-Craig opened the floor for public remarks.

Neil Bowlby, 6020 Beechwood Drive, Haslett, pointed out the difficulty in separating what is before the Planning Commission tonight regarding Okemos Pointe is a rezoning request, not the MUPUD project. He believed the project previously shown in the concept plan is a close rendering of what the applicant intends to build. He suggested that since the proposed agenda for the next Planning Commission meeting appears to be light, it would be a good time to complete amendments to the Planning Commission bylaws.

Jim Sherman, 2610 Robins Way, Okemos, spoke in opposition to rezoning the rural residential parcel which is part of Rezoning #15010.

Jay Heath, 2607 Robins Way, Okemos, spoke in opposition to rezoning the rural residential parcel which is part of Rezoning #15010.

Chris Buck, 2642 Loon Lane, Okemos, spoke in support of Rezoning #15010, noting the continued attempts by the developer to address the concern of adjacent and nearby neighbors.

Brent Forsberg, 2422 Jolly Road, Okemos, offered a quick update on the rural residential portion near Kansas Road relative to Rezoning #15010.

Will Randle, Vice President, WestPac, 4409 Dobie Road, Okemos, offered a brief synopsis of

WestPac's operations and accomplishments.

Ed Love, 306 E. Henry, Charlotte, outlined Energy Options' mission and its energy and sustainability options for Rezoning #15010.

Debbie Elliott, 3720 Taos Circle, Okemos, voiced concern with the impact Rezoning #15010 would have on her property, rural living in the area and the wetlands.

Mark Clouse, 300 S. Washington, Lansing, availed himself for Planning Commission questions on Rezoning #15020.

Val Nilson, 2565 Robins Way, expressed concern with the density of the project in Rezoning #15010.

Jay Murthy, 2483 Robins Way, Okemos, spoke in continued opposition to Rezoning #15010.

Steve Freemire, 3622 Kansas Road, Okemos, expressed his continued opposition to Rezoning #15010.

Ann Zimmerman, 2344 Coyote Creek Drive, Okemos, voiced her continued opposition to Rezoning #15010.

Chair Scott-Craig closed public remarks.

5. Communications

- A. Anne Hughes, 2734 Lupine Drive, Okemos; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- B. John Faett, Victory Martial Arts, 3544 Meridian Crossing, Suite 130, Okemos; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- C. Jim Rypkema, Presidentm Briarwood Home Owners Association, PO Box 226, Okemos, RE: Opposition to Rezoning #15010 (Forsberg Family LLC)
- D. Patrick Crilley, 2568 Heather Circle, East Lansing; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- E. James M. Miller, 1982 Cimarron Drive, Okemos; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- F. Patsy King, 1130 Bonanza Drive, Okemos; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- G. Robert D. Earl, 5561 Okemos Road, East Lansing; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- H. Santos Vega, 2332 Sower Boulevard, Okemos; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- I. Morris Huntley, 3554 Okemos Road, Okemos; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- J. Persis Indian Grill, 3536 Meridian Crossing, Okemos; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- K. William Adrian, 1114 Bonanza Drive, Okemos; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- L. James White, 2400 Science Parkway, Okemos; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- M. CORT Furniture, 3544 Meridian Crossing, Suite 140, Okemos; RE: Support for Rezoning #15010 (Forsberg Family LLC)
- N. Ahmad Elbast, 3536 Meridian Crossing; RE: Support for Rezoning #15010 (Forsberg Family LLC)

Communications distributed at the March 9, 2015 Planning Commission meeting and filed

- Carol Ogan, 2335 Coyote Creek Dr., Okemos; RE: Rezoning #15010 (Forsberg Family LLC)
- Joyce Larkin, 2317 Taos Trail, Okemos; RE: Rezoning #15010 (Forsberg Family LLC)
- Jay Murthy, 2483 Robins Way, Okemos; RE: Rezoning #15010 (Forsberg Family LLC)
- Jamal Shamsie, 2342 Coyote Creek, Okemos; RE: Rezoning #15010 (Forsberg Family LLC)
- Dr. Brent Felton & Swapna Hingwe, 2469 Robins Way, Okemos; RE: Rezoning #15010 (Forsberg Family LLC)
- Christine Beacco, 3683 Sonoma Vista, Okemos; RE: Rezoning #15010 (Forsberg Family LLC)
- Tracie Yurkinas, 2331 Coyote Creek, Okemos; RE: Rezoning #15010 (Forsberg Family LLC)

6. Public hearings (None)

7. Unfinished Business

- A. Rezoning #15010 (Forsberg Family, LLC), request to rezone approximately 39.46 acres from I (Industrial), PO (Professional and Office), RR (Rural Residential), and C-2 (Commercial) to C-2 (Commercial) with an offer of conditions to develop as a mixed use planned unit development and restrict density to no more than 18 dwelling units per acre. The site has frontage on Kansas Street and Jolly Oak Road.

Planning Commission discussion:

- Added condition by the applicant for the RR frontage on Kansas Street states the building height will be restricted to a maximum of 35 feet, the building setbacks from adjacent property will be 1.5 times the height of the building with a minimum of no less than 50 feet and a limit of 10 dwelling units per acre
- Appreciation for the applicant's consideration of a grocery store on nearby property which would be a service to area residents
- Reminder that with a conditional rezoning, if the MUPUD is not approved, the land reverts back to its previous zoning designation
- Mix of housing types will be addressed during the MUPUD process
- New condition placed on the RR parcel attempts to maintain the character of the nearby rural neighborhood
- Concern with the major change in intensity from RR to C-2 use without any transition
- Commissioner preference to rezone the six (6) ± RR zoned acres to low density multiple family (RDD-five (5) to RD-eight (8) dwelling units per acre)
- Setback between commercial and any residential designation is 100 feet (or 60 feet with a double row of conifer trees)
- Maximum density of the RR district is one unit per 40,000 square feet (approximately one (1) acre)
- Clarification needed by staff on whether the Planning Commission can recommend only a portion of the conditional rezoning request
- Clarification needed by staff on whether the Planning Commission can modify one of the zoning designations from the applicant's proposed rezoning request
- Concern with increasing the number of allowed residential units from the current six (6) to even 30 as allowed for under RDD rezoning
- Planning Commissioner preference to exclude the RR parcel in the proposed project
- Inquiry if the Planning Commission can negotiate the number of units allowed on the current RR portion during the MUPUD process if the approximately 39.46 acres was rezoned commercial now
- Definition of a unit
- 12 unit difference on the six (6) ± acre parcel from the applicant's offered condition to RD zoning

- Appreciation for the applicant's willingness to show what will be developed prior to the conditional rezoning request to C-2
- Commissioner belief the conditional rezoning will not be detrimental to the neighbors
- Commissioner preference for the applicant to offer workforce housing as a condition
- Commissioner belief uses are not harmonious if buffers/barriers are needed between them
- Single family dwellings could be built on the RR zoned parcel as there are homes "all around it"
- Applicant is currently working on the traffic study updates
- Effect of the setback on Kansas Road as delineated in the proposed new condition

B. Rezoning #15020 (George F. Eyde Family, LLC) request to rezone approximately 8.7 acres from PO (Professional Office) and RA (Single Family, Medium Density) to C-2 (Commercial) at 1614 and 1622 Grand River Avenue and an undeveloped parcel on Central Park Drive

Commissioner Ianni moved [and read into the record] NOW THEREFORE, BE IT RESOLVED THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN hereby recommends approval of Rezoning #15020 to rezone approximately 8.66 acres located on the north side of Grand River Avenue east of Central Park Drive and identified as 1614 and 1622 Grand River Avenue and an undeveloped parcel on Central Park Drive to C-2 (Commercial). Seconded by Commissioner Van Coevering.

Planning Commission discussion:

- Area north of Grand River and on the east side of Central Park Drive is predominantly commercial
- Unlikely there will be a need for the land's use as PO or RA in the future
- Planning Commissioner concern with the Planning Commission "setting the stage" for all residential properties along Central Park Drive to the north by rezoning the RA parcel
- RA parcel on Central Park Drive is adjacent to RD zoned land
- RD zoning is a multiple family low density district with a maximum of eight (8) dwelling units per acre
- When a C-2 district abuts residential, it requires a 100 foot setback with the option of a reduction to 60 feet with a double row of conifer trees
- Nearby Trilogy project is adjacent to single family subdivision to the north (Central Park Estates)
- Owners of Trilogy have not expressed a concern with the proposed rezoning
- Appreciation for actual statistics on the excess of PO zoned land in Meridian Township
- Area could become very walkable, dependent on the nature of the commercial development

Commissioner Honicky offered the following amendment:

- **Rezone parcel 1614 and 1622 Grand River to C-2 and keep the present RA zoning on the undeveloped parcel on Central Park Drive.**

The motion died for lack of a second.

ROLL CALL VOTE: YEAS: Commissioners Cordill, DeGroff, Ianni, Jackson, Tenaglia, Van Covering, Chair Scott-Craig

NAYS: Commissioner Honicky

Motion carried 7-1.

8. **Other Business (None)**

9. **Township Board, Planning Commission officer, committee chair, and staff comment or reports**

(None)

10. New applications (None)

11. Site plans received

- A. Site Plan Review #15-02 (Aaron Hanson), request to establish a brewery at 4903 Dawn Avenue

12. Site plans approved

- A. Site Plan Review #15-14-04-2 (Wolverine Building Group), request to amend an approved site plan to add a 3,275 square foot mezzanine to the Whole Food's building under construction at 2750 Grand River

13. Public remarks

Chair Scott-Craig opened public remarks.

Jay Murthy, 2483 Robins Way, Okemos, requested clarification on how the rezoning process works, as he was unclear why the applicant was required to provide a traffic study, but earlier comment indicated traffic should not be considered as a reason to deny the rezoning request.

Steve Freemire, 3622 Kansas Road, Okemos, noted Kansas Road is a dirt road with 12 homes located on it. He voiced his continued objection to rezoning the RR portion as presented in Rezoning #15010.

Ann Zimmerman, 2344 Coyote Creek Drive, Okemos, expressed concern that a finalized site plan does not need to be in place for the Forsberg property to be rezoned.

Principal Planner Oranchak explained it is very unusual to have any type of site plan in place prior to a rezoning request, adding a specific site plan will be submitted during the MUPUD phase.

Planning Commission and staff discussion:

- Dwelling units are living units, which is not the same as the number of buildings
- A maximum of approximately four single family (4) dwelling units per acre are possible in RA zoning
- RA zoning on the current RR parcel would require other design elements (i.e., a street)

Chair Scott-Craig closed public remarks.

14. Adjournment

Chair Scott-Craig adjourned the regular meeting at 8:24 P.M.

Respectfully Submitted,

Sandra K. Otto
Recording Secretary

**CHARTER TOWNSHIP OF MERIDIAN
PLANNING COMMISSION
WORK SESSION MINUTES**

DRAFT

March 23, 2015

**5151 Marsh Road, Okemos, MI 48864-1198
Town Hall Rom, 517-853-4560**

PRESENT: Chair Scott-Craig, Vice-Chair Jackson, Commissioners Honicky, Cordill, Ianni, Van Coevering, Tenaglia and De Groff
ABSENT: Commissioner Deits
STAFF: Principal Planner Gail Oranchak

1. Call meeting to order

Chair Scott-Craig called the work session meeting to order at approximately 8:45 P.M.

2. Approval of agenda

Commissioner Ianni moved to approve the agenda. Seconded by Commissioner Jackson.

VOICE VOTE: Motion carried 8-0.

3. 2005 Master Plan Update

- Proposed working committees: Subject matter may be different depending on the group
- Possibly two meetings of approximately 1.5 hours
- Residents and business owners
- Goal 1 – Commissioner Honicky; Goal 2 – Vice-Chair Jackson; Goal 3 – Commissioner Tenaglia; Goal 4- Commissioner DeGroff; Goal 5 – Commissioner Van Coevering; Goal 6 – Commissioner Deits; Goal 7 – Commissioner Ianni. Chair Scott-Craig to assist with Goal 5 and/or Goal 6
- Possible consultant to update Economic Analysis chapter
- Caution using economic development consultant dependent on proprietary data
- Economic projections reflect demographics
- Projected demographics—call for more work force housing, alternative transportation?
- What percent of the Township’s market share is service-oriented
- More specific methodology, research, data sources, economic projections
- More detailed RFP – expanded statement of work
- Go forward with RFP for economic analysis
- Identify Master Plan issues that make up an economic analysis
- Next steps for establishing working committees—participants, dates
- Regular citizens, not necessarily experts
- Each Planning Commissioner provide list of 6-8 interested people
- Two meetings, 1.5 hours each
- Suggestion to have interested people complete forms. May participate in meetings or provide written comments
- Commissioner DeGroff to review issues delaying Bylaws

4. Public Remarks
None

5. Adjournment

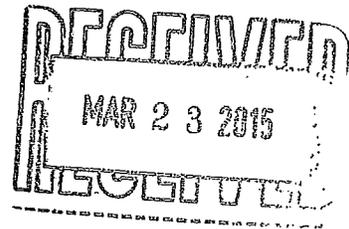
Chair Scott-Craig adjourned the meeting at approximately 9:35 p.m.

Respectfully Submitted,

Gail Oranchak, AICP
Principal Planner

March 23, 2015

Ken & Brenda Miller
3681 Kansas Rd.
Okemos, MI. 48864



To: Meridian Township

RE: Oppose - Rezoning #15010 (T.A. Forsberg, Inc.)

Let's get to the point; we **STRONGLY "OPPOSE"** the rezoning request on Kansas Rd. The Forsberg camp has already come before the board in the past with this same request, at that time they were given the boards blessing to build three houses on the Rural Residential properties on Kansas Rd.

We feel what Forsberg is proposing will have an adverse effect on every family who lives on Kansas Rd. We all chose this older neighborhood because of its rustic Rural Residential appeal. This neighborhood has what is left in Meridian Township as a good wholesome country feel, we are a **NEIGHBORHOOD**, and we want it to stay this way.

Rezoning this parcel definitely purposes many concerns, the biggest, our **Property Values Decreasing**, noise and light pollution, invasion of privacy, excessive infrastructure that we would all have to endure due to the apartment building bordering Kansas, not to mention the buffer that Forsberg has proposed would take years to mature. It would be difficult to put in enough dense vegetation for screening purposes surrounding the edges that border Kansas Rd.

The impact issues on Kansas Rd. that we find very misleading is the fire access path which opens up a whole new concern for the residents on this road. Before you know it you have people thinking this is the perfect short cut, the next thing is that it becomes a paved road connecting to Kansas Rd. We have seen similar type of proposals in the past right here in Meridian Twp. over the past couple decades.

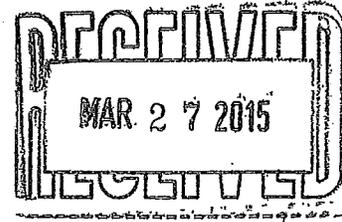
We the Kansas Road neighborhood, encourage the Township Planning Commission NOT to grant this rezoning request. Our family, like 99% of all the families on Kansas Road **OPPOSE** this endeavor.

Thank you for your time,
Sincerely,

Mr. & Mrs. Kenneth A. Miller

To:

Ms. Gail Oranchak
Principal Planner
Charter Township of Meridian
5151 Marsh Road
Okemos, MI 48864



RE: Support for Rezoning #15010

Dear Meridian Township Board and Planning Commission,

I am writing this letter in support of the proposed development at Okemos Pointe, **Rezoning #15010 (Forsberg Family LLC)**. This community lifestyle apartment development provides many important benefits to Meridian Township. First, there is currently a need for this type of quality housing in the Township and from the surrounding area. Secondly, an extension of the trails to complete the cross-country pathway in this area is a desired community resource that a majority of the Township agrees with, as was demonstrated by the recent millage approval for the trails by the Township voters in the last election.

The economic benefits to the township also should not be overlooked. The potential tax dollar benefits alone will be around \$1.5 million, with an additional \$11 million in consumer spending to help our local businesses. Additional tax revenue also will provide new important financial support for our local schools and help sustain the high quality of living that Meridian Township is known for.

As a resident of this Township, I ask that you support smart developments like Okemos Pointe that help maintain and advance the quality of life and continued economic growth.

Thank you for your time and support.

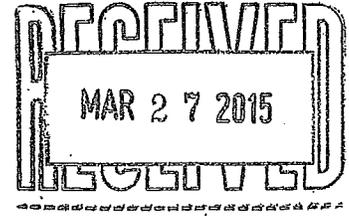
Sincerely,

Signature

Print Name & Address: ERIC Braucher 1830 W. Grand River Ave, Okemos MI

To:

Ms. Gail Oranchak
Principal Planner
Charter Township of Meridian
5151 Marsh Road
Okemos, MI 48864



RE: Support for Rezoning #15010

Dear Meridian Township Board and Planning Commission,

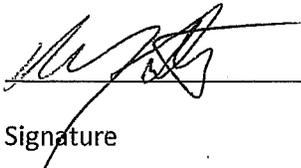
I am writing this letter in support of the proposed development at Okemos Pointe, **Rezoning #15010 (Forsberg Family LLC)**. This community lifestyle apartment development provides many important benefits to Meridian Township. First, there is currently a need for this type of quality housing in the Township and from the surrounding area. Secondly, an extension of the trails to complete the cross-country pathway in this area is a desired community resource that a majority of the Township agrees with, as was demonstrated by the recent millage approval for the trails by the Township voters in the last election.

The economic benefits to the township also should not be overlooked. The potential tax dollar benefits alone will be around \$1.5 million, with an additional \$11 million in consumer spending to help our local businesses. Additional tax revenue also will provide new important financial support for our local schools and help sustain the high quality of living that Meridian Township is known for.

As a resident of this Township, I ask that you support smart developments like Okemos Pointe that help maintain and advance the quality of life and continued economic growth.

Thank you for your time and support.

Sincerely,

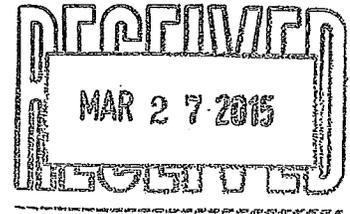


Signature

Print Name & Address: Michael Gillengerten 6286 Sunballow Lane Haslett

To:

Ms. Gail Oranchak
Principal Planner
Charter Township of Meridian
5151 Marsh Road
Okemos, MI 48864



RE: Support for Rezoning #15010

Dear Meridian Township Board and Planning Commission,

I am writing this letter in support of the proposed development at Okemos Pointe, **Rezoning #15010 (Forsberg Family LLC)**. This community lifestyle apartment development provides many important benefits to Meridian Township. First, there is currently a need for this type of quality housing in the Township and from the surrounding area. Secondly, an extension of the trails to complete the cross-country pathway in this area is a desired community resource that a majority of the Township agrees with, as was demonstrated by the recent millage approval for the trails by the Township voters in the last election.

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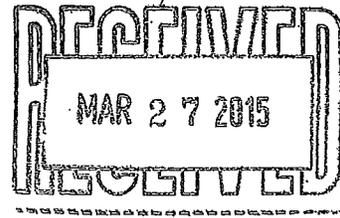
A handwritten signature in cursive script, appearing to read "Shawn Dickey". The signature is written in black ink and is positioned above a horizontal line.

Signature

Print Name & Address: Shawn Dickey 1830 W Comal Ave Okemos

To:

Ms. Gail Oranchak
Principal Planner
Charter Township of Meridian
5151 Marsh Road
Okemos, MI 48864



RE: Support for Rezoning #15010

Dear Meridian Township Board and Planning Commission,

I am writing this letter in support of the proposed development at Okemos Pointe, **Rezoning #15010 (Forsberg Family LLC)**. This community lifestyle apartment development provides many important benefits to Meridian Township. First, there is currently a need for this type of quality housing in the Township and from the surrounding area. Secondly, an extension of the trails to complete the cross-country pathway in this area is a desired community resource that a majority of the Township agrees with, as was demonstrated by the recent millage approval for the trails by the Township voters in the last election.

The economic benefits to the township also should not be overlooked. The potential tax dollar benefits alone will be around \$1.5 million, with an additional \$11 million in consumer spending to help our local businesses. Additional tax revenue also will provide new important financial support for our local schools and help sustain the high quality of living that Meridian Township is known for.

As a resident of this Township, I ask that you support smart developments like Okemos Pointe that help maintain and advance the quality of life and continued economic growth.

Thank you for your time and support.

Sincerely,

A handwritten signature in black ink, appearing to be "Jeff Persico", written over a horizontal line. The signature is stylized and somewhat scribbled.

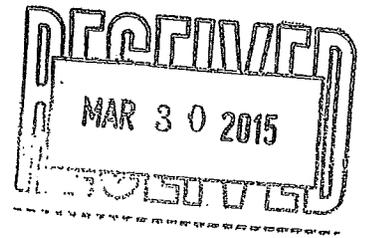
Signature

Print Name & Address:

Oral Surgery Associates of Lansing
Jeff Persico
4201 OKEMOS Rd

To:

Ms. Gail Oranchak
Principal Planner
Charter Township of Meridian
5151 Marsh Road
Okemos, MI 48864



RE: Support for Rezoning #15010

Dear Meridian Township Board and Planning Commission,

I am writing this letter in support of the proposed development at Okemos Pointe, **Rezoning #15010 (Forsberg Family LLC)**. This community lifestyle apartment development provides many important benefits to Meridian Township. First, there is currently a need for this type of quality housing in the Township and from the surrounding area. Secondly, an extension of the trails to complete the cross-country pathway in this area is a desired community resource that a majority of the Township agrees with, as was demonstrated by the recent millage approval for the trails by the Township voters in the last election.

The economic benefits to the township also should not be overlooked. The potential tax dollar benefits alone will be around \$1.5 million, with an additional \$11 million in consumer spending to help our local businesses. Additional tax revenue also will provide new important financial support for our local schools and help sustain the high quality of living that Meridian Township is known for.

As a resident of this Township, I ask that you support smart developments like Okemos Pointe that help maintain and advance the quality of life and continued economic growth.

Thank you for your time and support.

Sincerely,

Signature

Print Name & Address: DENNIS VANDECOR, 1078 BONANZA DR, OKEMOS MI 48864

Gail Oranchak

From: allene hood <alleneze1@yahoo.com>
Sent: Monday, March 30, 2015 3:20 PM
To: Gail Oranchak
Subject: Rezoning #15010 (Forsberg Family LLC)

Dear Meridian Township Board and Commissioners,

I am writing this letter in support of the proposed Lifestyle Community at Okemos Pointe, **Rezoning #15010(Forsberg Family LLC)**. This community would provide many benefits to Meridian Township. First is a need for this type of quality housing in the township for current residents who may sell their home and want to stay in the area, and future residents coming into Okemos. Having an extension of the trails to complete the cross country pathway through this area is a benefit that the majority of the township agrees with. This was proven with the millage increase for the trails passed by the voters in the last election. The economic benefits to the township should not be overlooked as well. It is my understanding that the taxes alone will be around \$1.5Million. This additional tax revenue could be used for keeping the high standard of living that Meridian Township is known for. Also, it could help bring more school aged children providing more school funding. As a resident of this township, I would respectfully ask you to support community developments like Okemos Pointe that are helping to maintain and grow our quality of life. Thank you for your time.

Sincerely,

Allene and Wesley Hood

1150 Scenic Lake Dr.
Okemos, Mi
48864

March 30, 2015

Meridian Charter Township Planning Commission

5151 Marsh Rd.

Okemos, MI 48864

Dear Commissioners:

I am opposed to the proposed rezoning #15010 for the Forsberg project which connects to many single family neighborhoods including the Sanctuary where I live.

Many families have bought or built homes in the area based on its quiet, relatively private character. I realize we can't expect vacant land to remain undeveloped. But there is an expectation that the use approved by the township of property adjacent to single family, higher end neighborhoods will remain buffered from a C-2 commercially zoned property.

The proposed density of the Forsberg project is overwhelming to our neighborhoods. Families with young children and senior families are concerned about the potential safety risks, both from potential crime that usually accompanies higher density housing as well as the heavier traffic it will generate.

The project is presented as a "high end" housing development but evidence points to less than high end: I base this assertion on the following: 1. A high end market would expect garages or covered carports; 2. This market would also expect elevators rather than walk-ups; and 3. Most importantly; the density would not support the suggested rents. If the ponds, wetland areas, and roads are removed from the total parcel, the number of units is even denser than at first look. All this leads me to believe it would be marketed to a lower rent market and/or students.

I strongly urge you to find a better solution to the rezoning proposal, one that would mesh better with the many single family neighborhoods around this property. I envision this to require the Forsberg team to scale the density back to 200 units or less and to require garages and elevators. It makes more sense given the surrounding communities.

Sincerely,

Valerie Nilson

2565 Robins Way

Okemos, MI 48864

Gail Oranchak

From: Jay Heath <jaycheath@aol.com>
Sent: Monday, March 30, 2015 7:43 PM
To: Gail Oranchak
Subject: My letter to oppose the Forsberg rezoning #15010

Gail,

This is my letter to oppose the Forsberg rezoning #15010.

Charter Township Of Meridian
Planning Commission
Meridian Municipal Building
5151 Marsh Rd.
Okemos, MI 48864

To the Charter Township of Meridian Planning Commission:

My wife and I are writing to strongly oppose the rezoning #15010 (Forsberg family LLC.). We built our dream home and are raising our two young children in the Sanctuary neighborhood as many of our neighbors have. We chose to build here because of the residential nature of the area, low crime, quietness, and country feel. We now greatly fear that by changing the Rural Residential zoning to Commercial-2 you will be greatly upsetting the family neighborhood that we deeply enjoy. We would have never chosen to build our dream home and raise our children in the Sanctuary if it was attached to a 500-unit complex. We would have chosen to build elsewhere. So we currently find ourselves baffled that the planning board would even be considering such a rezoning of this magnitude. This rezoning would take 6 acres off Kansas road currently zoned Rural Residential allowing 6 homes and turn it into Commercial-2 which would allow 60 units and that's just the beginning. The whole rezoning would allow 500 units. These 500 units would be attached via path to the back of our neighborhood, which will greatly change the character of the Sanctuary neighborhood.

Reasons why we oppose this rezoning #15010

1. Violation of Charter Township Master Plan.

- The project violates the number 1 stated goal of Charter Township of Meridian's master plan. Which states: Maintain a community of desirable, attractive residential neighborhoods with an emphasis on single-family, owner-occupied homes. As well as, to ensure that future land results in a housing supply that emphasizes single-family owner-occupied homes.

2. Property Value.

- Taking a quiet cul-de-sac family neighborhood full of single family homes and attaching it to a 500 unit rental complex can only have a negative effect on property values. Furthermore, if the units turn out to be less than upscale, or these apartments are built shoddily and fall into disrepair over the next ten years, the surrounding single-family homes will lose even more value.

3. Density.

- 500 units is just too many~ that's 700-800 tenants attached to the Sanctuary neighborhood. The nature of the Sanctuary is a family friendly neighborhood. Adding this many units will severely alter the dynamics of the neighborhoods.

4. Safety.

- The safety of our children who play on our streets and in our yard, are potentially at risk. This proposal is basically giving 700+ renters direct access to our family owned and occupied residential neighborhoods. We do not need the added dangerous exposure to these 700+ people walking into our neighborhoods and able to leave without anyone seeing them.

5. Traffic.

-Adding 700-800 cars to the Jolly and Okemos intersection that is already very congested and dangerous. Also there is no turn lanes for either the high school or the Meadows off of Jolly Rd. with this additional traffic the situation would become even more dangerous.

6. Crime.

- 700-800 renters living in a high-density housing development will lead to a higher crime rate.

7. Already exists.

- If the idea is that there is a need for single bedroom and two bedroom apartments, they DO exist within a mile of this projects location. I have called both Club Meridian and Knob Hill, and they both have vacancies and no waiting lists. If the township still believes that more housing is needed, **why not opt for condo type style housing where there is far less density, yet still promotes home ownership.**

The job of the planning committee is to protect the residents that have already built their homes in this area~ specifically the residents of The Meadows, The Sanctuary, The Preserves, and Coyote Creek as well as the residents of Kansas Road. We all bought our land, built our homes, and are raising our families in this area based on the zoning and culture of the existing laws. The Master Plan of the Meridian Township clearly states that the no. 1 goal of the Meridian Township Board is to preserve and strengthen existing and future residential neighborhoods. What is being proposed is NOT a neighborhood, or residential homes. It is a massive apartment complex that will drastically change the make-up of our already existing neighborhoods.

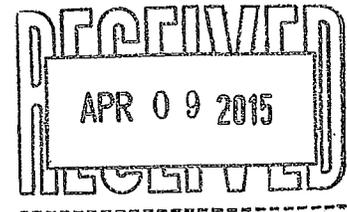
We greatly urge you to vote against rezoning #15010.

Thank you,

Jay C Heath
2607 Robins Way
Okemos, MI

Cathleen Heath
2607 Robins Way
Okemos, MI

Charter Township Of Meridian
Planning Commission
Meridian Municipal Building
5151 Marsh Rd.
Okemos, MI 48864



To the Charter Township of Meridian Planning Commission:

My wife and I are writing to strongly oppose the rezoning #15010 (Forsberg family LLC.). We built our dream home and are raising our two young children in the Sanctuary neighborhood as many of our neighbors have. We chose to build here because of the residential nature of the area, low crime, quietness, and country feel. We now greatly fear that by changing the Rural Residential zoning to Commercial-2 you will be greatly upsetting the family neighborhood that we deeply enjoy. We would have never chosen to build our dream home and raise our children in the Sanctuary if it was attached to a 450+ unit complex. We would have chosen to build elsewhere. So we currently find ourselves baffled that the planning board would even be considering such a rezoning of this magnitude. This rezoning would take 6 acres off Kansas road currently zoned Rural Residential allowing 6 homes and turn it into Commercial-2 which would allow 60 units and that's just the beginning. The whole rezoning would allow 450+ units. These 450+ units would be attached via path to the back of our neighborhood, which will greatly change the character of the Sanctuary neighborhood.

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2. Property Value.

- Taking a quiet cul-de-sac family neighborhood full of single family homes and attaching it to a high density of rental complexes can only have a negative effect on property values. Furthermore, if the units turn out to be less than upscale, or these apartments are built shoddily and fall into disrepair over the next ten years, the surrounding single-family homes will lose even more value.

3. Density.

- 450+ units is just too many~ that's 700-800 tenants attached to the Sanctuary neighborhood. The nature of the Sanctuary is a family friendly neighborhood. Adding this many units will severely alter the dynamics of the neighborhoods.

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The job of the planning committee is to protect the residents that have already built their homes in this area~ specifically the residents of The Meadows, The Sanctuary, The Preserves, and Coyote Creek as well as the residents of Kansas Road. We all bought our land, built our homes, and are raising our families in this area based on the zoning and culture of the existing laws. The Master Plan of the Meridian Township clearly states that the no. 1 goal of the Meridian Township Board is to preserve and strengthen existing and future residential neighborhoods. What is being proposed is NOT a neighborhood, or residential homes. It is a massive apartment complex that will drastically change the make-up of our already existing neighborhoods.

We greatly urge you to vote against rezoning #15010.

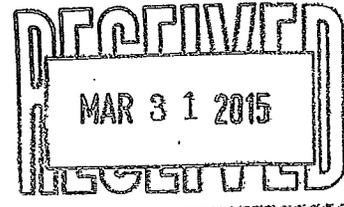
Thank you,


Cathleen Heath
Jay C Heath
2607 Robins Way
Okemos, MI



MHA
Michigan Health &
Hospital Association

2112 University Park Drive
Okemos, MI 48864
(517) 323-3443
www.mha.org



March 31, 2015

Dear Meridian Township Board and Planning Commission:

The proposed apartment development at Okemos Pointe (Rezoning #15010) is a vital component for the continued improvement of our community. It will bring about economic advancement, better connect the community and provide the housing that is needed for an important group of young families and professionals.

The Michigan Health & Hospital Association employs 106 people between our Headquarters office in Okemos and our Capitol Advocacy Center in downtown Lansing. We host several meetings each week at Headquarters, including quarterly meetings of our Board of Trustees, supporting local hotels and restaurants in the area. We work collaboratively with other businesses and associations that have chosen to invest in Meridian Township, including Delta Dental, the Michigan Osteopathic Association, the Michigan Home Healthcare Association, and Jackson.

First and foremost, the Meridian area will gain a substantial amount of income from property taxes. It is estimated that \$1.6 million will be gained from this development annually. Consumer spending will also increase each year by up to \$11.5 million in retail sales. The additional revenue will significantly benefit the services in our community.

The location and outdoor trails included in the plan will give many people the option of walking to work and local stores. Increased foot traffic will help businesses as well as create a more visible, connected community. With an area that is close to shopping, recreation and work, local employers will be able to attract highly sought-after candidates and at the same time grow their businesses. We employ several Michigan State University students and many young professionals who are seeking this type of apartment development – in fact, walkable communities are key to talent attraction.

We urge you to support this project, which we believe will help our community to prosper and gain important connections.

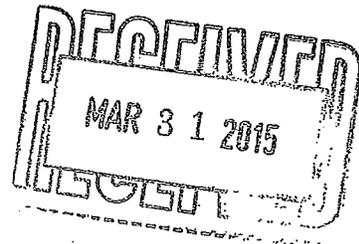
Sincerely,

Nancy McKeague SHRM-SCP, SPHR
Senior Vice President
Chief Human Resources Officer

JAMES SHERMAN

2610 Robins Way
48864

517-599-9164



March 31, 2015
Department of Community Planning and
Development
Charter Township of Meridian
5151 Marsh Road
Okemos, MI 48864

To Whom it may concern,

I am writing in opposition to the Forsberg rezoning #15010. My wife and I bought and built in the Sanctuary neighborhood in 2007. We were the third house to finish construction on Robins Way. We chose this area because of its minimal congestion, low ambient light, low amount of noise, and because of the safety of this area. All are now at risk if the rezoning of nearly 40 acres is approved. This neighborhood is called the Sanctuary because it is quiet, peaceful, and relaxing; if a 466 unit apartment complex is approved with rezoning, that vision and now a reality of this neighborhood will be severely impacted.

Reality. Should we be led to believe that a 466 unit housing project could be kept upscale? Even with the job growth that Jackson National Life will sustain, they plan to add up to 100 extra jobs in this area per year for the next 10 years. There are already 2 large apartment complexes in the near vicinity: Club Meridian and Knob Hill, all with immediate occupancy and no waiting lists. Also, for young executives, there are already many properties for sale in Meridian Township that are available to purchase.

One of the founding principles, in summary, of the Meridian Township Charter is to promote single-family home ownership. How is this project furthering that? Home owners who live in close proximity to this project have invested their resources and lives into their community, into our community. This isn't just a Sanctuary issue: this is an issue for The Meadows, The Preserve, Coyote Creek, and most importantly, the home owners on Kansas Road. For all of us to build and buy homes in such close proximity, with the current zoning in place, to change it now, would be a travesty. Not just a travesty for us, but for everyone that the Planning Commission is supposed to protect in our beautiful and unique township.

Concerned Resident,

James Sherman

Gail Oranchak

From: Moore, Rona A. <Rona.Moore@arbor.edu>
Sent: Wednesday, April 01, 2015 10:39 AM
To: Gail Oranchak

To: The Forsberg Family LLC- Rezoning Committee REZ #15010

I oppose the rezoning because it will cause too much traffic in an already busy intersection. The community atmosphere would be affected, and our children safety is at risk. The priority of the city leaders should be about what would be in the best interest of those citizens who resides in the area. We are the ones who will have to deal with the cities decision and I hope for the sake of our communities it will be in favor of those citizens who resides in the community, someone like myself.

Please do not allow this rezoning to happen.

Sincerely,

A concerned resident,

Rona Moore

Gail Oranchak

From: Lilleboe, Timothy M <Timothy.M.Lilleboe@morganstanley.com>
Sent: Thursday, April 09, 2015 11:43 AM
To: Gail Oranchak
Subject: Okemos Point development

Dear Ms. Oranchak,

I am an Okemos resident and in favor of the Okemos Pointe project for a couple of reasons. 1. Tax revenues. 2. Creation of new jobs which there is never a bad time for that. It sounds like they will be high quality living facilities for young professionals. I believe it is a win win for everyone involved including Meridian township. Hopefully this plan will get approved and I thank you for time you have put into this process. Sincerely,

Tim Lilleboe

Tim Lilleboe

Senior Vice President
Financial Planning Specialist
Financial Advisor

Morgan Stanley Wealth Management

2900 West Rd. Suite 300
East Lansing MI.
Phone: 517-351-1112
Direct Line: 517-203-2868
Fax: 517-351-1306
Toll Free: 800-248-0487
Asst: 517-203-2888
Timothy.m.lilleboe@morganstanley.com

Important Notice to Recipients:

Please do not use e-mail to request, authorize or effect the purchase or sale of any security or commodity. Unfortunately, we cannot execute such instructions provided in e-mail. Thank you.

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Gail Oranchak

From: Chengfeng Yang <chengfeng_yang@hotmail.com>
Sent: Tuesday, April 07, 2015 2:51 PM
To: Gail Oranchak
Subject: Re: A letter Opposing the Forsberg rezoning #15010

Charter Township Of Meridian
Planning Commission
Meridian Municipal Building
5151 Marsh Rd.
Okemos, MI 48864

To the Charter Township of Meridian Planning Commission:

My wife and I are writing to strongly oppose the rezoning #15010 (Forsberg family LLC.). We built our dream home in the Sanctuary neighborhood as many of our neighbors have. We chose to build here because of the residential nature of the area, low crime, quietness, and country feel. We now greatly fear that by changing the Rural Residential zoning to Commercial-2 you will be greatly upsetting the family neighborhood that we deeply enjoy. We would have never chosen to build our dream home and raise our children in the Sanctuary if it was attached to a 500-unit complex. We would have chosen to build elsewhere. So we currently find ourselves baffled that the planning board would even be considering such a rezoning of this magnitude. This rezoning would take 6 acres off Kansas road currently zoned Rural Residential allowing 6 homes and turn it into Commercial-2 which would allow 60 units and that's just the beginning. The whole rezoning would allow 500 units. These 500 units would be attached via path to the back of our neighborhood, which will greatly change the character of the Sanctuary neighborhood.

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6. Crime.

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7. Already exists.

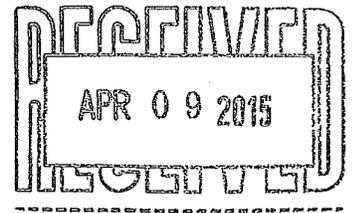
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The job of the planning committee is to protect the residents that have already built their homes in this area~ specifically the residents of The Meadows, The Sanctuary, The Preserves, and Coyote Creek as well as the residents of Kansas Road. We all bought our land, built our homes, and are raising our families in this area based on the zoning and culture of the existing laws. The Master Plan of the Meridian Township clearly states that the no. 1 goal of the Meridian Township Board is to preserve and strengthen existing and future residential neighborhoods. What is being proposed is NOT a neighborhood, or residential homes. It is a massive apartment complex that will drastically change the make-up of our already existing neighborhoods.

We greatly urge you to vote against rezoning #15010.

Thank you,

Chengfeng Yang and Zhishan Wang
2556 Robins Way
Okemos, MI 48864



Community Against the Forsberg Rezoning #15010

About this petition

The purpose of this petition is to oppose the Forsberg #15010 rezoning of 39.46 acres from Industrial, Professional and Office, Rural Residential, to Commercial, and Commercial 2. Our community is strongly opposed to the Forsberg plan because it would negatively impact and drastically change the neighborhoods and single-family homes in the area.

The job of the planning committee is to protect the residents that have already built their homes in this area- specifically the residents of The Meadows, The Sanctuary, and The Preserves, as well as the residents of Kansas Road and Coyote Creek. We all bought our land, built our homes, and are raising our families in this area based on the zoning and culture of the existing laws. The Master Plan of the Meridian Township clearly states that the no. 1 goal of the Meridian Township Board is to preserve and strengthen existing and future residential neighborhoods. What is being proposed is **NOT** a neighborhood, or residential homes. What is being proposed is a massive apartment complex that will dramatically change the make-up of our already existing neighborhoods.

The following are several reasons why we oppose this rezoning plan #15010:

1. Violation of Charter Township Master Plan.

- The project violates the number 1 stated goal of Charter Township of Meridian's master plan. Which states: **Maintain a community of desirable, attractive residential neighborhoods with an emphasis on single-family, owner-occupied homes. As well as, to ensure that future land results in a housing supply that emphasizes single-family owner-occupied homes.**

2. Changing the zoning rules after the neighborhoods of single family homes are already built.

We all bought our land, built our homes, and are raising our families in this area based on the existing zoning laws. Changing the zoning to allow high-density housing, after the fact, is **wrong** and goes against the Charter Township Master Plan.

2. Property Value.

- Taking quiet cul-de-sac family neighborhoods full of single family homes and attaching it to a 500 unit rental complex **can only have a negative effect on property values**. Furthermore, if the units turn out to be less than upscale, or these apartments are built shoddily and fall into disrepair over the next ten years, the surrounding single-family homes will lose even more value.

3. Density.

- 500 units is just too many~ that's 700-800 tenants attached to the Sanctuary neighborhood. The nature of the Sanctuary and surrounding neighborhoods is family friendly. Adding this many units will negatively alter the dynamics of the neighborhoods.

4. Safety.

- The safety of our children who play on our streets and in our yards, are potentially at risk. This proposal is basically giving 700+ renters direct access to our family owned and occupied residential neighborhoods. We do not need the added dangerous exposure to these 700+ people walking into our neighborhoods and able to leave without anyone seeing them.

5. Traffic.

- Adding 700-800 cars to the Jolly and Okemos intersection that is already very congested and dangerous. Also there is no turn lanes for either the high school or the Meadows off of Jolly Rd. with this additional traffic the situation would become even more dangerous.

6. Crime.

- 700-800 renters living in a high-density housing development will lead to a higher crime rate.

7. Already exists.

- If the idea is that there is a need for single bedroom and two bedroom apartments, they DO exist within a mile of this project's location. Both Club Meridian and Knob Hill have vacancies and no

waiting lists which means opportunity for immediate occupancy. If the township still believes that more housing is needed, why not opt for condo-style housing?

Signatures

1. Name: James Sherman on 2015-03-29 02:23:15
Comments:

2. Name: Jay Heath on 2015-03-29 02:24:28
Comments: please help stop the rezoning!

3. Name: Cathleen Heath on 2015-03-29 02:28:13
Comments: I urge you all to read this petition, and if you agree, please sign

4. Name: Christine Sermak on 2015-03-29 02:31:13
Comments:

5. Name: Stephanie Sherman on 2015-03-29 02:54:18
Comments:

6. Name: William J. Hallan on 2015-03-29 08:48:14
Comments:

7. Name: Jerome Tandoc on 2015-03-29 11:31:14
Comments: Okemos resident in The Meadows subdivision.

8. Name: Christen Yoo on 2015-03-29 12:04:01
Comments:

9. Name: Nancy Bennett on 2015-03-29 12:11:01
Comments: Resident in The Meadows

10. Name: Jay Murthy on 2015-03-29 12:22:36
Comments: I strongly oppose the rezoning for all the reasons stated in the petition

11. Name: Jihad siryani on 2015-03-29 12:36:31
Comments: strongly oppose the rezoning

12. Name: Wei Lai on 2015-03-29 13:20:29
Comments: strongly oppose the re-zoning

13. Name: James Sherman on 2015-03-29 14:23:15
Comments: Meridian Township resident opposed to the rezoning

14. Name: Jong B Park on 2015-03-29 14:31:57

Comments: I strongly oppose the Forsberg Rezoning. Is it required by the law that those who works in Okemos should live in Okemos. It doesn't make any sense that building a massive apartment complex in the inappropriate area just because of high demanding. They need to find vacant land for their building project if they are so desperate.

-
15. Name: Dev & Kokila on 2015-03-29 14:49:56
Comments: We strongly oppose the rezoning.
-
16. Name: David Atkins on 2015-03-29 15:35:29
Comments: Do the right thing.
-
17. Name: Ruby Chahal on 2015-03-29 15:47:09
Comments: Oppose rezoning
-
18. Name: Sumana Babu Shankar on 2015-03-29 15:57:20
Comments: The reason Okemos is Okemos today is because of some well thought out plans from some very thoughtful people in yester yerars. Let's preserve the integrity/truth/culture for commercialization. Resident of Sanctuary.
-
19. Name: Vaishali Nukala on 2015-03-29 16:06:06
Comments: My husband and I are not in favor of the rezoning for the reasons stated in this petition.
-
20. Name: Jay Heath on 2015-03-29 17:08:13
Comments: Resident of the Sanctuary.
-
21. Name: Cathleen Heath on 2015-03-29 17:25:31
Comments: Okemos Resident of the Sanctuary
-
22. Name: Satish Chandolu on 2015-03-29 18:53:39
Comments:
-
23. Name: Viraj Patil on 2015-03-29 19:56:00
Comments: Okemos Resident - The Meadows - Strongly oppose the Forsberg rezoning #15010
-
24. Name: VENKATARAMANA PASULA on 2015-03-29 20:46:27
Comments:
-
25. Name: Chengfeng Yang on 2015-03-29 21:21:46
Comments: I strongly support this petition against the Forsberg Rezoning #15010
-
26. Name: Venkat on 2015-03-29 21:46:18

Comments: Okemos Resident - The Meadows - I agree and oppose the Forsberg rezoning #15010

27. Name: Valerie Nilson on 2015-03-29 22:47:27
Comments: The high density of Forsberg's proposal fails to give evidence that this will be a "high end" housing project. A significantly lower number of units would be more compatible with the proximity of single family homes whose owners have invested heavily into their long term interest in their properties.

28. Name: Dee Kalfa on 2015-03-29 23:05:24
Comments:

29. Name: Mike Cieszkowski on 2015-03-30 01:06:15
Comments:

30. Name: Dean Woolcock on 2015-03-30 01:15:10
Comments:

31. Name: Brent Felton on 2015-03-30 03:14:22
Comments: I thank everyone for their support in opposing this re-zoning measure.

32. Name: Sally Demshur on 2015-03-30 12:28:06
Comments:

33. Name: Mary Longcore on 2015-03-30 13:13:31
Comments:

34. Name: Amanda Campbell on 2015-03-30 13:36:38
Comments: Having a housing unit like this in this location would cause so much more traffic, it is hard to imagine living in Okemos if this was built. Also, I am very dissapointed in the process for determining what businesses/buildings do get put up. Why another bank? Why not a market on the corner of Okemos/Jolly. Hard to believe, we have the chance to build businesses that make our city a community and instead we are choosing congestion and businesses that do not add to the culture of our neighborhoods.

35. Name: Dan Sermak on 2015-03-30 13:41:34
Comments:

36. Name: Emilie Amundson on 2015-03-30 15:02:12
Comments:

37. Name: Joseph Amundson on 2015-03-30 15:03:34
Comments:

-
38. Name: Bonnie Binioris on 2015-03-30 15:41:09
Comments:
-
39. Name: Dave & Leigh Ann Warner on 2015-03-30 18:54:53
Comments:
-
40. Name: Matt Raven on 2015-03-30 19:33:22
Comments:
-
41. Name: Lauren Kulbago on 2015-03-30 19:41:50
Comments:
-
42. Name: Matt Kulbago on 2015-03-30 19:45:08
Comments:
-
43. Name: Ann Rashmir on 2015-03-30 21:44:49
Comments:
-
44. Name: Paul Demshur on 2015-03-30 22:17:25
Comments: okemos meadows
-
45. Name: Margaret Wade on 2015-03-30 23:28:13
Comments:
-
46. Name: Rajesh Nair on 2015-03-30 23:32:11
Comments:
-
47. Name: Rachel Boersma on 2015-03-30 23:58:51
Comments:
-
48. Name: Kenneth Miller on 2015-03-31 00:20:50
Comments: We say no!
-
49. Name: Shilpa Rodrigues on 2015-03-31 00:34:30
Comments:
-
50. Name: Ann Zimmerman on 2015-03-31 04:38:22
Comments: 100% Oppose this project
-
51. Name: Greg Alexe on 2015-03-31 04:50:04
Comments: I strongly oppose this project.

-
52. Name: Michael Corr on 2015-03-31 12:42:56
Comments:
-
53. Name: Dawn Schafer on 2015-03-31 12:53:45
Comments:
-
54. Name: Patrick Corr on 2015-03-31 13:09:37
Comments: This impacts the area too much and will hurt the existing developments and residents.
-
55. Name: alexander Corr on 2015-03-31 13:14:57
Comments:
-
56. Name: ashley corr on 2015-03-31 13:16:21
Comments: please vote against this new development
-
57. Name: Ken on 2015-03-31 13:22:44
Comments:
-
58. Name: Stacy Bogard on 2015-03-31 13:40:44
Comments:
-
59. Name: Steven Freemire on 2015-03-31 13:49:35
Comments:
-
60. Name: Cindy Freemire on 2015-03-31 14:31:07
Comments: Do not want the rezoning, nor do we want an apartment complex
-
61. Name: Daryl Montie on 2015-03-31 15:15:40
Comments:
-
62. Name: Nicholas Mercurio on 2015-03-31 15:34:14
Comments:
-
63. Name: Jennifer Corr on 2015-03-31 16:19:12
Comments:
-
64. Name: Julie VanDyke on 2015-03-31 16:31:03
Comments:
-
65. Name: Karen Haley on 2015-03-31 16:34:10

Comments: Coyote Creek property owner

66. Name: Swapna Hingwe on 2015-03-31 17:21:22
Comments:

67. Name: Maureen Stockwell on 2015-03-31 18:05:03
Comments:

68. Name: Carol Ogan on 2015-03-31 18:39:24
Comments: In addition to the issues noted in this petition, construction to the south of Coyote Creek Drive has already resulted in pushing the wetlands further onto Coyote Creek property. We now have standing water in the lawn area behind my condo (2335 Coyote Creek Drive) year round.

69. Name: Adam Carrasco on 2015-03-31 19:25:08
Comments:

70. Name: Nancy Knight on 2015-03-31 20:43:28
Comments: The building of this apartment complex directly behind Coyote Creek infringes on the wetlands that are supposed to be protected. We moved to this location in 1994 because of the natural aspects of the terrain and not to view high density apartment buildings. Coyote Creek property owner.

71. Name: joan jonckheere on 2015-03-31 22:07:35
Comments: I am against the rezoning

72. Name: Dan Geers on 2015-03-31 22:22:30
Comments: I oppose this rezoning request

73. Name: Marisol on 2015-03-31 23:01:26
Comments: This is outrageous. My son and I will personally be going around the neighborhoods getting signatures.

74. Name: John Hrcka on 2015-03-31 23:48:27
Comments: Oppose the rezoning.

75. Name: Candice Carrasco on 2015-04-01 00:48:11
Comments: Meridian township homeowner/Homeowner in the Meadows

76. Name: Tom Hursey on 2015-04-01 01:19:04
Comments:

77. Name: Tina Hursey on 2015-04-01 01:21:37

Comments:

78. Name: Su Min Oh on 2015-04-01 02:35:58
Comments:

79. Name: Sara Bekemeier on 2015-04-01 18:52:11
Comments:

80. Name: Phani Mantravadi on 2015-04-02 01:06:21
Comments: Am against the rezoning.

81. Name: Carrie Zwyghuizen on 2015-04-02 01:35:18
Comments:

82. Name: Vamsi Batchu on 2015-04-03 03:03:52
Comments: 2542 Lupine

83. Name: Adam Kaleward on 2015-04-03 10:00:39
Comments:

CHARTER TOWNSHIP OF MERIDIAN

MEMORANDUM

TO: Planning Commission

FROM: Peter Menser
Peter Menser
Associate Planner

DATE: April 9, 2015

RE: Special Use Permit #15-83251 (Kroger), request to construct a gasoline station at 4884 Marsh Road

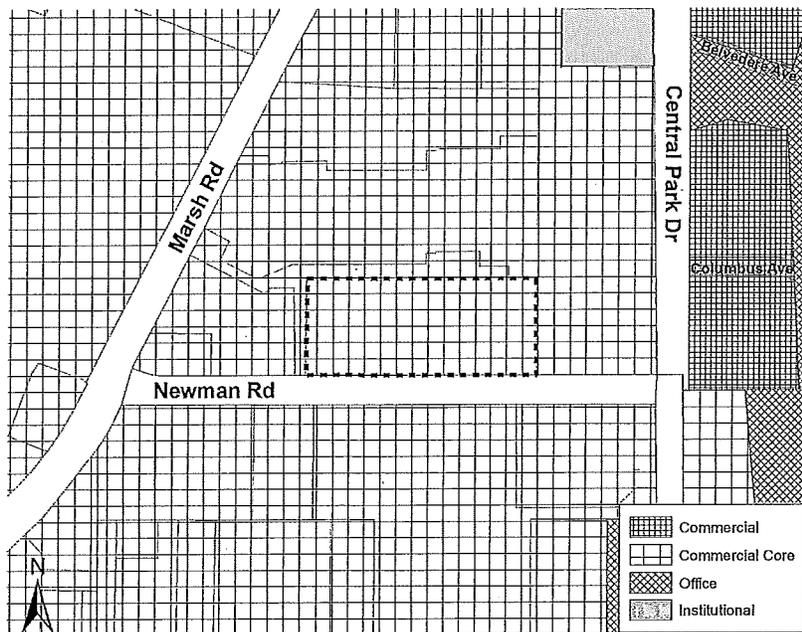
Kroger is requesting a special use permit to construct a gasoline station at 4884 Marsh Road. The gasoline station will have seven fueling dispensers (14 fuel nozzles), a 265 square foot transaction kiosk, and a 5,418 square foot canopy structure. Gasoline stations are permitted by special use permit in the C-3 (Commercial) zoning district as a "drive-in or drive-through use" per Section 86-405(e)(13) of the Code of Ordinances.

The special use permit request is an amendment to an existing special use permit to construct the Meridian Towne Center shopping center (SUP #83251). A Kroger grocery store is located on the property at 4884 Marsh Road; the gasoline station would be constructed west of the grocery store in an existing parking area. The Kroger property is approximately six acres in size and is located on Newman Road, east of Marsh Road. The site is zoned C-3 (Commercial).

Master Plan

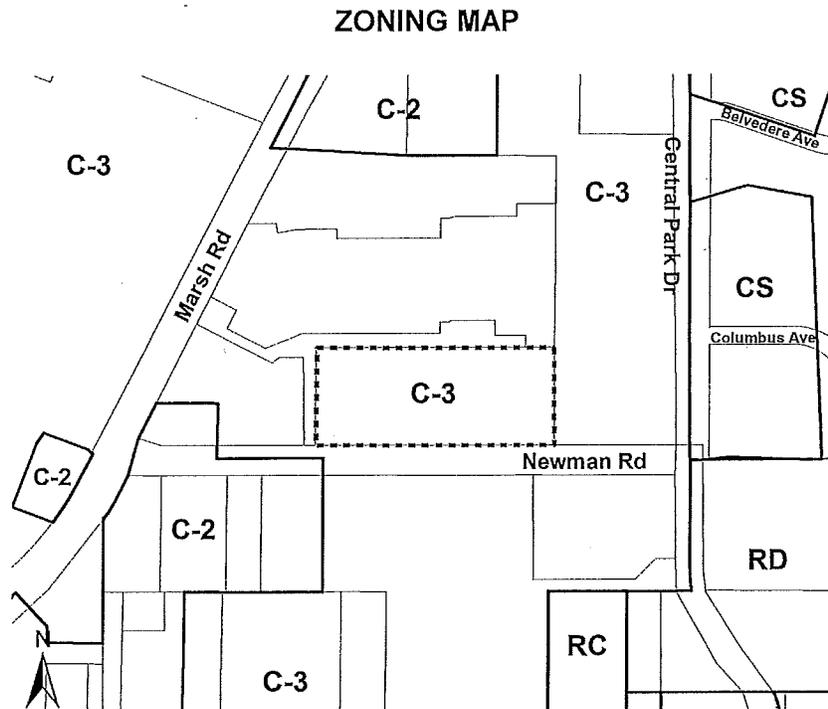
The 2005 Master Plan designates the subject site as commercial core.

FUTURE LAND USE MAP



Zoning

4884 Marsh Road is zoned C-3 (Commercial) residential. The minimum lot width in the C-3 zoning district is 100 feet and the minimum lot area is 10,000 square feet. The subject site approximately 806 feet of frontage along Newman Road and the lot area is approximately six acres (261,360 square feet).



Physical Features

The subject property is located on Newman Road, east of Marsh Road. The site is developed with a 49,615 square foot Kroger grocery store and associated parking lot. Landscaping consisting of grass and street trees is located along the Newman Road frontage.

The Township wetland map shows the proposed gasoline station is not located in or near a wetland and the Township's Flood Insurance Rate Map (FIRM) indicates the site is not located in or near a floodplain.

Streets and Traffic

Access to the proposed gasoline station site will be primarily from a driveway off Newman Rd. west of the existing grocery store. There are six driveways on Newman Rd. (two near Kroger, one mid-block, one at Kolh's, and two near the KFC restaurant) and two on Marsh Rd. (one at the Outback restaurant and one near the FedEx store) that could all provide access to the proposed gasoline station. Newman Road is a four lane road classified as a Collector street in the 2005 Master Plan and is under the jurisdiction of the Ingham County Road Department (ICRD). A 2006 traffic count by the ICRD on Newman Road between Marsh Road and Central Park Drive showed 4,480 automobiles in a 24 hour period.

The applicant has provided a Traffic Impact Assessment prepared by Fleis & Vandenbrink, dated March 6, 2015. The assessment addressed a gasoline station with nine fueling dispensers (18 fuel nozzles), which is two more than the seven fueling dispensers proposed.

Fleis & Vandenbrink calculated future motor vehicle traffic resulting from the proposed project will generate approximately 219 trips during the a.m. peak hour (112 entering the site and 107 leaving) and 250 trips during the p.m. peak hour (125 entering the site and 125 leaving) each day. A portion of those are described by Fleis & Vandenbrink as "pass-by" trips, meaning those vehicles are already on the roadway and are not new trips. When the pass-by trips are removed from the total trip generation, the proposed project will generate approximately 92 trips during the a.m. peak hour (47 entering the site and 45 leaving) and 145 trips during the p.m. peak hour (72 entering the site and 73 leaving).

The Fleis & Vandenbrink study also reviewed existing and future level of service (L.O.S.) at intersections around the proposed gas station site. The study concludes that all intersections will continue to operate acceptably at a L.O.S. grade "D" or better except the intersection that serves as the primary entrance to Meridian Towne Centre at Marsh Road near the FedEx store, which will continue to operate at a L.O.S. grade of "F." The signalized intersection at Marsh Rd. and Newman Rd. will experience an increase in delay of approximately three seconds per vehicle during both a.m. and p.m. peak hours if the gas station is constructed, which Fleis & Vandenbrink classify as insignificant.

The Township's traffic consultant William F. Savage, P.E. reviewed the site plan and traffic study and noted concern with left turns out of the aligned driveways mid-block on Marsh Rd. between the Meridian Mall and Meridian Towne Centre northwest of the project site.

A 7-foot wide pedestrian/bicycle pathway is located along the Newman Road frontage. The pathway through the driveway at Newman Rd. adjacent to the proposed gasoline station will be upgraded as part of the project.

Public Utilities

The Department of Public Works and Engineering has indicated that municipal water and sanitary sewer is available to serve the site.

Staff Analysis

The applicant has requested to construct a gasoline station at 4884 Marsh Rd. with seven fueling dispensers (14 fuel nozzles), a 265 square foot transaction kiosk, and a 5,418 square foot canopy structure. Gasoline stations are permitted by special use permit in the C-3 (Commercial) zoning district as a "drive-in or drive-through use" per Section 86-405(e)(13) of the Code of Ordinances. Gas station uses are also subject to the standards listed in Section 86-405(13)(b).

The special use permit review criteria, found in Section 86-126 of the Code of Ordinances, should be used when evaluating the special use permit amendment. This special use permit request is considered a minor amendment to the original special use permit (SUP #83251) to construct the Meridian Towne Centre shopping center. A minor amendment to SUP #83251 will also be required to expand the size of the shopping center, which will be held concurrently with site plan review.

Parking calculations for the proposed project will be based on the required parking for the overall Meridian Towne Centre shopping center as that is how it was originally approved. The minimum parking requirement for shopping centers between 25,000 and 400,000 square feet is four spaces per 1,000 square feet. Meridian Towne Centre is approximately 241,222 total square feet in size therefore the minimum required number of parking spaces for the site is 965 spaces. There are 1,194 parking spaces on the site. The proposed gasoline station will eliminate 92 parking spaces, leaving 1,102 parking spaces, above the minimum 965 spaces required.

Planning Commission Options

The Planning Commission may approve, approve with conditions, or deny the special use permit. A resolution will be provided for a decision at a future meeting.

Attachments

1. Special Use Permit application and attachments
2. Letter from William Savage, P.E., dated March 23, 2015
3. Site Plans and Building Elevations

**Special Use Permit #15-83251
(Kroger)
April 9, 2015**

APPLICANT: Kroger
40393 Grand River Ave.
Novi, MI, 48375

REQUESTED ACTION: Construct gasoline station

**ZONING OF
SUBJECT PARCEL:** C-3 (Commercial)

GENERAL LOCATION: 4884 Marsh Rd.

**EXISTING LAND USE
ON THE PARCEL:** Grocery store and parking lot

**ADJACENT AREA
LAND USE(S):** N: Commercial
S: Commercial
E: Commercial
W: Commercial

**ZONING ON
ADJOINING PARCELS:** N: C-3 (Commercial)
S: C-3 (Commercial)
E: C-3 (Commercial)
W: C-3 (Commercial)

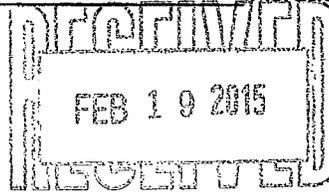
CHARTER TOWNSHIP OF MERIDIAN
DEPARTMENT OF COMMUNITY PLANNING AND DEVELOPMENT
5151 MARSH ROAD, OKEMOS, MI 48864
PLANNING DIVISION PHONE: (517) 853-4560, FAX: (517) 853-4095

SPECIAL USE PERMIT APPLICATION

Before submitting this application for review, an applicant may meet with the Director of Community Planning and Development to discuss the requirements for a special use permit and/or submit a conceptual plan for review to have preliminary technical deficiencies addressed prior to submittal of the application. If the property or land use is located in the following zoning districts RD, RC, RCC, RN then the applicant must meet with the Planning Director to discuss technical difficulties before filing a formal application.

Part I

- A. Applicant The Kroger Co of Michigan
Address of Applicant 40393 Grand River Ave
Novi, MI 48375 chaz.mccullah@kroger.com
Telephone - Work 248.957.2236 Home _____ Fax 248.957.2277 Email _____
Interest in property (circle one): Owner Tenant Option Other _____
(Please attach a list of all persons with an ownership interest in the property.)
- B. Site address / location / parcel number 33-02-02-22-126-021
Legal description (please attach if necessary)
see attached Topographic Survey by LSG
Current zoning C-3
Use for which permit is requested / project name Kroger D793 Retail Fuel Center
Corresponding ordinance number 86.405 - C-3 Commercial District
- C. Developer (if different than applicant) _____
Address _____
Telephone - Work _____ Home _____ Fax _____
- D. Architect, Engineer Planner or Surveyor responsible for design of project if different from applicant:
Name LSG Engineers and Surveyors
Address 3135 Pine Tree Rd, Suite D, Lansing, MI 48911
Telephone - Work 517.393.2902 Home 313.671.7882 Fax 517.393.2608
- E. Acreage of all parcels in the project: Gross 6.08 Net 6.08 boyer@lsg-es.com
- F. Explain the project and development phases: Install a retail fuel station in an existing parking lot.
- G. Total number of: See site plan
Existing: structures _____ bedrooms _____ offices _____ parking spaces _____ carports _____
garages _____ Proposed: structures _____ bedrooms _____ offices _____ parking spaces _____ carports _____
garages _____
- H. Square footage: existing buildings 0 proposed buildings 265 sq. ft.
Usable Floor area: existing buildings 0 proposed buildings 265 sq. ft.
- I. If employees will work on the site, state the number of full time and part time employees working per shift and hours of operation: one employee from the existing grocery store.
- J. Existing Recreation: Type _____ Acreage _____
Proposed Recreation: Type _____ Acreage _____



Existing Open Space: Type _____ Acreage _____
 Proposed Open Space: Type _____ Acreage _____

K.

If Multiple Housing:

Total acres of property _____

Acres in floodplain _____ Percent of total _____

Acres in wetland (not in floodplain) _____ Percent of total _____

Total dwelling units _____

Dwelling unit mix: Number of single family detached: for Rent _____ Condo _____
 Number of duplexes: for Rent _____ Condo _____
 Number of townhouses: for Rent _____ Condo _____
 Number of garden style apartments: for Rent _____ Condo _____
 Number of other dwellings: for Rent _____ Condo _____

L.

The following support materials must be submitted with the application:

1. Nonrefundable Fee.
2. Legal Description of the property. See attached topographic survey
3. Evidence of fee or other ownership of the property.
4. Site Plan containing the information listed in the attachment to this application. See plan set.
5. Architectural sketches showing all sides and elevations of the proposed buildings or structures, including the project entrance, as they will appear upon completion. The sketches should be accompanied by material samples or a display board of the proposed exterior materials and colors. See plan set.
6. A Traffic Study, prepared by a qualified traffic engineer, based on the most current edition of *Evaluating Traffic Impact Studies: A Recommended Practice for Michigan Communities*, published by the State Department of Transportation. Forthcoming.
 - a. A traffic assessment will be required for the following:
 - 1) New special uses which could, or expansion or change of an existing special use where increase in intensity would, generate between 50 to 99 directional trips during a peak hour of traffic.
 - 2) All other special uses requiring a traffic assessment as specified in the Township Code of Ordinances, Chapter 86, Article IV, Division 2.
 - b. A traffic impact study will be required for the following:
 - 1) New special uses which would, or expansion or change of an existing special use where increase in intensity would, generate over 100 directional trips or more during a peak hour of traffic, or over 750 trips on an average day.
 - 2) All other special uses requiring a traffic assessment as specified in the Township Code of Ordinances, Chapter 86, Article IV, Division 2.
7. Natural features assessment which includes a written description of the anticipated impacts on the natural features at each phase and at project completion that contains the following:
 - a. An inventory of natural features proposed to be retained, removed, or modified. Natural features shall include, but are not limited to, wetlands, significant stands of trees or individual trees greater than 12 inches dbh, floodways, floodplains, waterbodies, identified groundwater vulnerable areas, slopes greater than 20 percent, ravines, and vegetative cover types with potential to sustain significant or endangered wildlife. N/A
 - b. Description of the impacts on natural features. N/A
 - c. Description of any proposed efforts to mitigate any negative impacts. N/A

The natural features assessment may be waived by the Director of Community Planning and Development in certain circumstances.

- M. Any other information specified by the Director of Community Planning and Development which is deemed necessary to evaluate the application.
- N. In addition to the above requirements, for zoning districts, **RD, RC, RCC, RN, and CV** and **Group Housing Residential Developments** the following is required: N/A
1. Existing and proposed contours of the property at two foot intervals based on United States Geological Survey (USGS) data.
 2. Preliminary engineering reports in accordance with the adopted Township water and sewer standards, together with a letter of review from the Township Engineer.
 3. Ten copies of a report on the intent and scope of the project including, but not limited to: Number, size, volume, and dimensions of buildings; number and size of living units; basis of calculations of floor area and density and required parking; number, size, and type of parking spaces; architectural sketches of proposed buildings.
 4. Seven copies of the project plans which the Township shall submit to local agencies for review and comments.
- O. In addition to the above requirements, a special use application in zoning district **RP** requires the following material as part of the site plan: N/A
1. A description of the operations proposed in sufficient detail to indicate the effects of those operations in producing traffic congestion, noise, glare, air pollution, water pollution, fire hazards or safety hazards or the emission of any potentially harmful or obnoxious matter or radiation.
 2. Engineering and architectural plans for the treatment and disposal of sewerage and industrial waste tailings, or unusable by-products.
 3. Engineering and architectural plans for the handling of any excessive traffic congestion, noise, glare, air pollution, or the emission of any potentially harmful or obnoxious matter or radiation.
- P. In addition to the above requirements, a special use application for a use in the Floodway Fringe of zoning district **CV** requires the following: N/A
1. A letter of approval from the State Department of Environmental Quality.
 2. A location map including existing topographic data at two-foot interval contours at a scale of one inch representing 100 feet.
 3. A map showing proposed grading and drainage plans including the location of all public drainage easements, the limits, extent, and elevations of the proposed fill, excavation, and occupation.
 4. A statement from the County Drain Commissioner, County Health Department, and Director of Public Works and Engineering indicating that they have reviewed and approved the proposal.
- Q. In addition to the above requirements, a special use application for a use in the Groundwater Recharge area or zoning district **CV** requires the following: N/A
1. A location map including existing topographic data at two-foot interval contours.
 2. A map showing proposed grading and drainage plans including the location of all public drainage easements, the limits and extent of the proposed fill, excavation, and occupation.
 3. A statement from the County Drain Commissioner, County Health Department, and Director of Public Works and Engineering indicating that they have reviewed and approved the proposal.
- R. In addition to the above requirements, the Township Code of Ordinances, Article VI, should be reviewed for the following special uses: group housing residential developments, mobile home parks, nonresidential structures and uses in residential districts, planned community and regional shopping center developments, sand or gravel pits and quarries, sod farms, junk yards, sewage treatment and disposal installations, camps and clubs for outdoor sports and buildings greater than 25,000 square feet in gross floor area. N/A
- S.

Part II

SUP REQUEST STANDARDS
Township Code of Ordinances, Section 86-126

Applications for Special Land Uses will be reviewed with the standards stated below. An application that complies with the standards stated in the Township Ordinance, conditions imposed pursuant to the Ordinance, other applicable Ordinances, and State and Federal statutes will be approved. Your responses to the questions below will assist the Planning Commission in its review of your application.

- (1) The project is consistent with the intent and purposes of this chapter.
- (2) The project is consistent with applicable land use policies contained in the Township's comprehensive development plan of current adoption.
- (3) The project is designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and that such a use will not change the essential character of the same area.
- (4) The project will not adversely affect or be hazardous to existing neighboring uses.
- (5) The project will not be detrimental to the economic welfare of surrounding properties or the community.
- (6) The project is adequately served by public facilities, such as existing roads, schools, stormwater drainage, public safety, public transportation, and public recreation, or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide any such service.
- (7) The project is adequately served by public sanitation facilities if so designed. If on-site sanitation facilities for sewage disposal, potable water supply, and storm water are proposed, they shall be properly designed and capable of handling the longterm needs of the proposed project.
- (8) The project will not involve uses, activities, processes, materials, and equipment and conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare, or odors.
- (9) The project will not directly or indirectly have a substantial adverse impact on the natural resources of the Township, including, but not limited to, prime agricultural soils, water recharge areas, lakes, rivers, streams, major forests, wetlands, and wildlife areas.

Part III

I (we) hereby grant permission for members of the Charter Township of Meridian's Boards and/or Commissions, Township staff member(s) and the Township's representatives or experts the right to enter onto the above described property (or as described in the attached information) in my (our) absence for the purpose of gathering information including but not limited to the taking and the use of photographs.

Yes No (Please check one)

By the signature(s) attached hereto, I (we) certify that the information provided within this application and accompanying documentation is, to the best of my (our) knowledge, true and accurate

Chaz McCullah
Signature of Applicant

2-18-15
Date

Chaz McCullah
Type/Print Name

Fee: \$250.00 Gas station

Received by/Date: Martha Wyatt

250.00 minor amendment
for size

2/19/15

**Special Use Permit Application Attachment
Site Plan Requirements Per Section 86-124(c)(4)**

A site plan, drawn to a legible scale, containing the following information where applicable:

- a. Boundaries of the subject property.
- b. Total area of the subject property.
- c. Location of all existing and proposed structures.
- d. Approximate location and distance of all structures within 100 feet of the subject property.
- e. Uses of existing and proposed buildings, on the subject site.
- f. Proposed means of vehicular and pedestrian ingress and egress to the subject property.
- g. Public and private roads and streets, rights-of-way, and easements, indicating names and widths, which abut or cross the site.
- h. Existing and proposed parking spaces, and vehicular and pedestrian circulation patterns.
- i. The buildable area of the subject property indicating all required setbacks, yards and open space.
- j. Zoning classification of the subject and adjacent properties.
- k. Existing and proposed fencing, screening, landscaping, and buffers.
- l. Location and sizes of existing utilities including power lines and towers, both above and below the ground.
- m. Amount and location of all impervious surfaces.
- n. The verified boundaries of all natural water features and required setback lines.



2005-000908

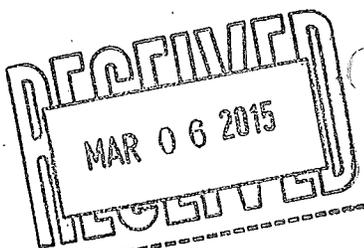
Page: 2 of 2

01/05/2005 08:12f

EXHIBIT "A"

Part of the Northeast 1/4 and the Northwest 1/4, Section 22, T4N, R1W, Meridian Township, Ingham County, Michigan as more particularly described as beginning at a point on the North and South 1/4 line of said Section 22, located distant S00Degrees07'05"W, 941.42 feet, along said 1/4 line from North 1/4 corner of said Section 22; thence N89Degrees59'51"E, 200.0 feet; thence S00Degrees07'05"W, 330.0 feet; thence South89Degrees59'51"W, 802.03 feet; thence N00Degrees07'05"E, 330.0 feet; thence N89Degrees59'51"E, 602.03 feet; to the point of beginning; Including all easements set forth in that certain Reciprocal Easement Agreement dated December 20, 1985, by and between Meridian Towne Partnership and The Kroger Co., and recorded in Liber 1549, Page 1059, amended and restated reciprocal easement agreement dated September 30, 1987, recorded October 1, 1987 in Liber 1655, Page 811, Register of Deeds Office, Ingham County, Michigan, and that certain Construction and Access Easement dated December 20, 1985, by and between Meridian Centre Investments and Meridian Towne Partnership, as Grantor, and The Kroger Co., as Grantee, and recorded in Liber 1549, Page 1034, Register of Deeds Office, Ingham County, Michigan.

Together with Easements shown in Reciprocal Easement Agreement dated December 20, 1985, recorded February 25, 1986 in Liber 1549, Page 1059 as amended and restated in Liber 1655, Page 811.



MEMO

VIA EMAIL

To: Mr. Chaz McCullah, Project Manager
Kroger Company of Michigan

From: Michael J. Labadie, PE
Steven J. Russo, E.I.T.
Fleis & VandenBrink

Date: March 6, 2015

Re: Proposed Kroger Fueling Station
Meridian Township, Michigan
Traffic Impact Assessment

Introduction

This memorandum presents the results of a Traffic Impact Assessment (TIA) for a proposed Kroger fuel station in Meridian Township, Michigan. The project site is located in an area near the northeast quadrant of the Marsh Road & Newman Road intersection and is being proposed for a new 18 pump Kroger fueling station. Existing site access to Newman Road and Marsh Road are not proposed to change as part of the development plans and is currently provided via two driveways to Newman Road and one driveway to Marsh Road.

The Township has required a TIA for the proposed project in accordance with Township Ordinance. This TIA has been completed to identify the impacts (if any) of this project on the intersection of Marsh Road & Newman Road and the existing site access points. The scope of the study was developed based on Fleis & VandenBrink's (F&V) knowledge of the study area, understanding of the development program, accepted traffic engineering practice, and methodologies published by the Institute of Transportation Engineers (ITE). Additionally, F&V solicited input regarding scope of work from the Ingham County Road Department (ICRD) who has jurisdiction over the study roadways, and the Township. The study analyses were completed using Synchro and SimTraffic, Version 8 traffic analysis software.

Data Collection

Existing weekday traffic volume data were collected by F&V subconsultant Traffic Data Collection, Inc. (TDC) on February 24th, 2015. Vehicular turning movement counts were collected during the AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak periods at all study intersections. These data were used as a baseline to establish existing traffic conditions without the proposed development. F&V also collected an inventory of existing lane use and traffic controls and obtained existing traffic signal timing information from ICRD.

The peak hour volumes for each intersection were utilized for this study and the volumes were balanced upward through the study network. In general, the peak hours of existing network traffic were identified to occur between 7:30 AM to 8:30 AM and 4:30 PM to 5:30 PM.

27725 Stansbury Boulevard, Suite 150
Farmington Hills, MI 48334
P: 248.536.0080
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www.fveng.com

Existing Conditions

The existing AM and PM peak hour traffic volumes were identified based on the data collected. Existing peak hour vehicle delays and Levels of Service (LOS) at the study intersections were calculated based on the existing lane use and traffic control shown on the attached Figure 1, the existing peak hour traffic volumes shown on the attached Figure 2, and the methodologies presented in the *Highway Capacity Manual, 2010* (HCM). Typically, LOS D is considered acceptable, with LOS A representing minimal delay, and LOS F indicating failing conditions. Additionally, SimTraffic network simulations were reviewed to evaluate network operations and vehicle queues. The results of the existing conditions analysis are attached and summarized in Table 1.

Table 1
Existing Intersection Operations

Intersection	Control	Approach	AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS
1. Marsh Road & Newman Road / Meridian Mall Drive	Signalized	EB	38.3	D	42.3	D
		WB	34.5	C	43.1	D
		NB	12.1	B	22.8	C
		SB	13.0	B	19.5	B
		Overall	15.3	B	26.7	C
2. Marsh Road & Kroger Site Drive / DSG Drive	STOP (Minor)	EB	10.7	B	22.4	C
		WB	10.0	B	57.0	F
		NB LT	8.5	A	8.7	A
		SB LT	7.7	A	10.0	B
3. Newman Road & W. Kroger Site Drive / LTCU Drive	STOP (Minor)	EB LT	7.4	A	7.8	A
		WB LT	7.4	A	7.9	A
		NB	9.5	A	14.3	B
		SB	8.7	A	9.9	A
4. Newman Road & E. Kroger Site Drive / Home Depot Drive	STOP (Minor)	EB LT	7.4	A	7.8	A
		WB LT	7.3	A	7.6	A
		NB	9.3	A	13.0	B
		SB	8.9	A	14.2	B

The results of the existing conditions analysis indicate that all study intersection approaches and movements currently operate acceptably at a LOS D or better during the AM peak period. During the PM peak period both the eastbound and westbound left turn movements at the intersection of Marsh Road & Kroger Drive / Dick's Sporting Good's (DSG) Drive currently operate at a LOS F. Therefore, vehicle queues were calculated for these approaches / movements. The queue length calculations based on the HCM 2010 and SimTraffic simulations are shown in Table 2.

The results of the queue evaluation indicate that the 95th percentile queues on the minor street approaches are calculated to be 5 vehicles or less during the PM peak period which is not significant. Additionally, review of network simulations indicates acceptable traffic operations during both peak periods and significant vehicle queues are not observed.

Table 2
Existing 95th Percentile Queues (vehicles)**

Intersection	Approach	Lane	PM Peak	
			HCM 2010	SimTraffic* (simulation)
2. Marsh Road & Kroger Site Drive / DSG Drive	EB	Left / Thru	2	3
		Left	4	3
	WB	Thru / Right	2	5

* - SimTraffic queue lengths are based on average of 5 separate runs in SimTraffic.

** - Vehicle queues in SimTraffic calculated in feet. Converted to vehicles using ratio of 1 vehicle = 20 feet.

As this development is proposed within the next year, and based on stagnant traffic growth patterns in southeast Michigan, future background conditions **without the proposed development** are assumed equal to existing conditions.

Site Trip Generation and Assignment

The number of AM and PM peak hour vehicle trips that would be generated by the proposed fuel station was forecast based on data published by the Institute of Transportation Engineers (ITE) in *Trip Generation, 9th Edition* and the *Trip Generation Handbook, 2nd Edition*.

As is typical of fuel stations, a portion of the site-generated trips are already present on the adjacent road network and are interrupted to visit the site. These trips are known as "pass-by" trips and account for a percentage of the total site-generated traffic. Pass-by trips result in turning movements at the site driveways, but do not increase traffic volumes on the adjacent road network. The site trip generation forecast is shown in Table 3.

Table 3
Site Trip Generation

Land Use	ITE Code	Amount	Units	Average Daily Traffic	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Gas Station	944	18	Pumps	3,034	112	107	219	125	125	250
<i>Pass-By</i>	<i>58% AM, 42% PM</i>			<i>1,517</i>	<i>65</i>	<i>62</i>	<i>127</i>	<i>53</i>	<i>52</i>	<i>105</i>
New Trips				1,517	47	45	92	72	73	145

The vehicle trips that would be generated by the proposed development were assigned to the study road network based on existing peak hour traffic patterns, the proposed site access plan, and the methodologies published by ITE. This methodology indicates that pass-by trips enter and exit the development in their original direction of travel, while new trips will return to their direction of origin. The assumed distribution of site traffic is summarized in Table 4.

Table 4
Site Trip Distribution

New Trips		AM	PM	Pass-By	
From	To			From	To
East	East	5%	16%	East	West
West	West	2%	8%	West	East
North	North	63%	31%	North	North
South	South	30%	45%	South	South
		100%	100%		



For assignment of pass-by trips along Marsh Road, pass-by trips from the north were assigned to enter the site via the existing Kroger Drive aligned with DSG Drive and exit as a right turn onto Newman Road. At the signalized intersection of Marsh Road & Newman Road they were assigned to turn left to continue in their original southbound direction of travel. The same route was used in reverse to assign pass-by trips from the south.

Future Conditions

Future peak hour vehicle delays and LOS were calculated at the study intersections based on the existing lane use and traffic control shown on the attached Figure 1, the future peak hour traffic volumes shown on the attached Figure 4, and the methodologies presented in the HCM. The results of the future conditions analysis are attached and summarized in Table 5.

**Table 5
 Future Intersection Operations**

Intersection	Control	Approach	AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS
1. Marsh Road & Newman Road / Meridian Mall Drive	Signalized	EB	39.4	D	45.1	D
		WB	38.9	D	45.6	D
		NB	13.6	B	25.9	C
		SB	<u>14.0</u>	<u>B</u>	<u>21.5</u>	<u>C</u>
		Overall	18.6	B	29.8	C
2. Marsh Road & Kroger Site Drive / DSG Drive	STOP (Minor)	EB	10.8	B	25.0	D
		WB	9.6	A	60.3	F
		NB LT	8.4	A	8.7	A
		SB LT	7.8	A	10.2	B
3. Newman Road & W. Kroger Site Drive / LTCU Drive	STOP (Minor)	EB LT	7.5	A	8.0	A
		WB LT	7.4	A	7.9	A
		NB	11.1	B	19.8	C
		SB	9.3	A	11.7	B
4. Newman Road & E. Kroger Site Drive / Home Depot Drive	STOP (Minor)	EB LT	7.5	A	7.8	A
		WB LT	7.3	A	7.6	A
		NB	9.3	A	13.2	B
		SB	9.0	A	14.6	B

The results of the future conditions analysis indicate that all study intersection approaches and movement will continue to operate acceptably at a LOS D or better except the driveway egress left turn movements at the intersection of Marsh Road & Kroger Drive / DSG Drive which will continue to operate at a LOS F. However, evaluation of 95th percentile vehicle queues under future conditions indicate that vehicle queues will be similar to existing conditions during the PM peak period, as shown in Table 6.

At the signalized intersection of Marsh Road & Newman Road, overall vehicle delay at the signalized study intersection will increase by approximately 3 seconds per vehicle during both peak periods, which is not significant. At the existing site access points to Newman Road, all approaches and movements will operate

at a LOS C or better during both peak periods. Lastly, review of network simulations indicates acceptable traffic operations during both peak periods and significant vehicle queues are not observed.

Table 6

Future 95th Percentile Queues (vehicles)**

Intersection	Approach	Lane	Existing		Future	
			PM Peak		PM Peak	
			HCM 2010	SimTraffic* (simulation)	HCM 2010	SimTraffic* (simulation)
2. Marsh Road & Kroger Site Drive / DSG Drive	EB	Left / Thru	2	3	2	3
	WB	Left	4	3	4	4
		Thru / Right	2	5	3	6

* - SimTraffic queue lengths are based on average of 5 separate runs in SimTraffic.

** - Vehicle queues in SimTraffic calculated in feet. Converted to vehicles using ratio of 1 vehicle = 20 feet.

Conclusions

The conclusions of this Traffic Impact Assessment are as follows:

1. Currently, all study intersection approaches and movements operate acceptably at a LOS D or better except the driveway egress left turn movements at the intersection of Marsh Road & Kroger Drive / DSG Drive which operate at a LOS F during the PM peak period; however, 95th percentile vehicle queues are calculated to be 5 vehicles or less.
2. Future traffic operations with the proposed fueling station will be similar to existing conditions and minor increases in vehicle delay and queues will not be discernable.

Overall, traffic operations will be acceptable with the proposed fuel station. Any questions related to this memorandum, study, analyses, and results should be addressed to Fleis & VandenBrink.

Attached: Traffic Volume Data
 Synchro / SimTraffic Results
 Figures 1 – 4

SJR:mjl

Traffic Data Collection, TL
 7504 Sawgrass Drive, Washington, MI 48094 Ph. (586) 786-5407



**Traffic Study Performed For:
 Fleis Vandenbrink**

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_2Z4

File Name : TMC_1 Marsh&KrogerDw
Site Code : TMC_1
Start Date : 2/24/2015
Page No : 1

Groups Printed- Pass Cars - Single Units - Heavy Trucks - Ped

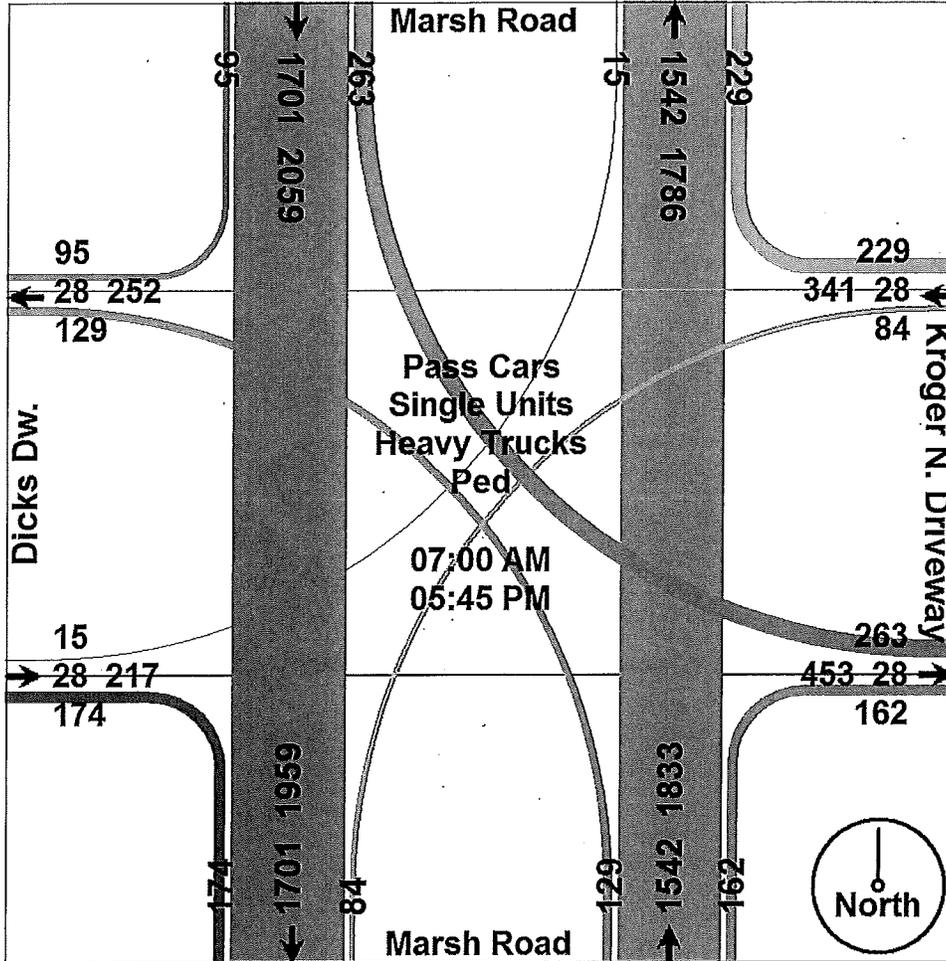
Start Time	Marsh Road Southbound					Kroger N. Driveway Westbound					Marsh Road Northbound					Dicks Dw. Eastbound					Int. Total
	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	
07:00 AM	0	83	3	0	86	0	0	1	0	1	0	33	0	0	33	2	0	0	0	2	122
07:15 AM	0	89	2	0	91	2	0	0	0	2	3	39	1	0	43	1	0	0	0	1	137
07:30 AM	0	122	3	0	125	1	0	0	0	1	2	55	2	0	59	1	1	0	0	2	187
07:45 AM	5	121	6	0	132	3	0	0	0	3	3	52	7	0	62	2	0	0	0	2	199
Total	5	415	14	0	434	6	0	1	0	7	8	179	10	0	197	6	1	0	0	7	645
08:00 AM	2	112	2	0	116	7	0	1	0	8	3	45	1	0	49	4	0	0	0	4	177
08:15 AM	2	111	11	0	124	2	0	2	0	4	3	31	4	0	38	1	0	0	0	1	167
08:30 AM	6	101	9	0	116	5	0	0	0	5	5	42	4	1	52	0	0	0	0	0	173
08:45 AM	7	100	11	0	118	10	0	1	0	11	4	52	10	0	66	1	2	0	0	3	198
Total	17	424	33	0	474	24	0	4	0	28	15	170	19	1	205	6	2	0	0	8	715
**** BREAK ****																					
04:00 PM	8	102	21	1	132	25	4	8	0	37	21	116	12	0	149	20	3	0	1	24	342
04:15 PM	12	101	31	2	146	21	4	13	0	38	22	119	15	0	156	17	1	3	0	21	361
04:30 PM	7	109	24	1	141	17	3	8	0	28	13	157	12	0	182	23	3	3	0	29	380
04:45 PM	10	113	24	0	147	17	5	11	0	33	21	144	14	0	179	16	5	3	0	24	383
Total	37	425	100	4	566	80	16	40	0	136	77	536	53	0	666	76	12	9	1	98	1466
05:00 PM	9	129	31	0	169	33	5	14	0	52	17	174	9	1	201	17	2	2	0	21	443
05:15 PM	6	116	25	2	149	18	1	7	0	26	17	191	12	0	220	27	3	1	0	31	426
05:30 PM	11	100	37	1	149	34	5	11	0	50	9	131	10	0	150	22	4	1	0	27	376
05:45 PM	10	92	23	0	125	34	1	7	0	42	19	161	16	0	196	20	4	2	0	26	389
Total	36	437	116	3	592	119	12	39	0	170	62	657	47	1	767	86	13	6	0	105	1634
Grand Total	95	1701	263	7	2066	229	28	84	0	341	162	1542	129	2	1835	174	28	15	1	218	4460
Apprch %	4.6	82.3	12.7	0.3		67.2	8.2	24.6	0		8.8	84	7	0.1		79.8	12.8	6.9	0.5		
Total %	2.1	38.1	5.9	0.2	46.3	5.1	0.6	1.9	0	7.6	3.6	34.6	2.9	0	41.1	3.9	0.6	0.3	0	4.9	
Pass Cars	95	1679	263	0	2037	229	28	83	0	340	162	1522	129	0	1813	174	28	15	0	217	4407
% Pass Cars	100	98.7	100	0	98.6	100	100	98.8	0	99.7	100	98.7	100	0	98.8	100	100	100	0	99.5	98.8
Single Units	0	15	0	0	15	0	0	1	0	1	0	16	0	0	16	0	0	0	0	0	32
% Single Units	0	0.9	0	0	0.7	0	0	1.2	0	0.3	0	1	0	0	0.9	0	0	0	0	0	0.7
Heavy Trucks	0	7	0	0	7	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	11
% Heavy Trucks	0	0.4	0	0	0.3	0	0	0	0	0	0	0.3	0	0	0.2	0	0	0	0	0	0.2
Ped	0	0	0	7	7	0	0	0	0	0	0	0	0	2	2	0	0	0	1	1	10
% Ped	0	0	0	100	0.3	0	0	0	0	0	0	0	0	100	0.1	0	0	0	100	0.5	0.2

Comments: Traffic study conducted during typical weekday (Tuesday-Thursday) from 7:00-9:00 AM morning & 4:00-6:00 PM afternoon peak hours & while school was in session. Non-signalized intersection.

Traffic Study Performed For:
Fleis Vandenbrink

Project: Meridian Kroger Traffic Study
 Location: Marsh Road & Newman Road
 Weather: Cloudy, Temp. 20's
 Count By: Miovision Video SCU_224

File Name : TMC_1 Marsh&KrogerDw
 Site Code : TMC_1
 Start Date : 2/24/2015
 Page No : 2

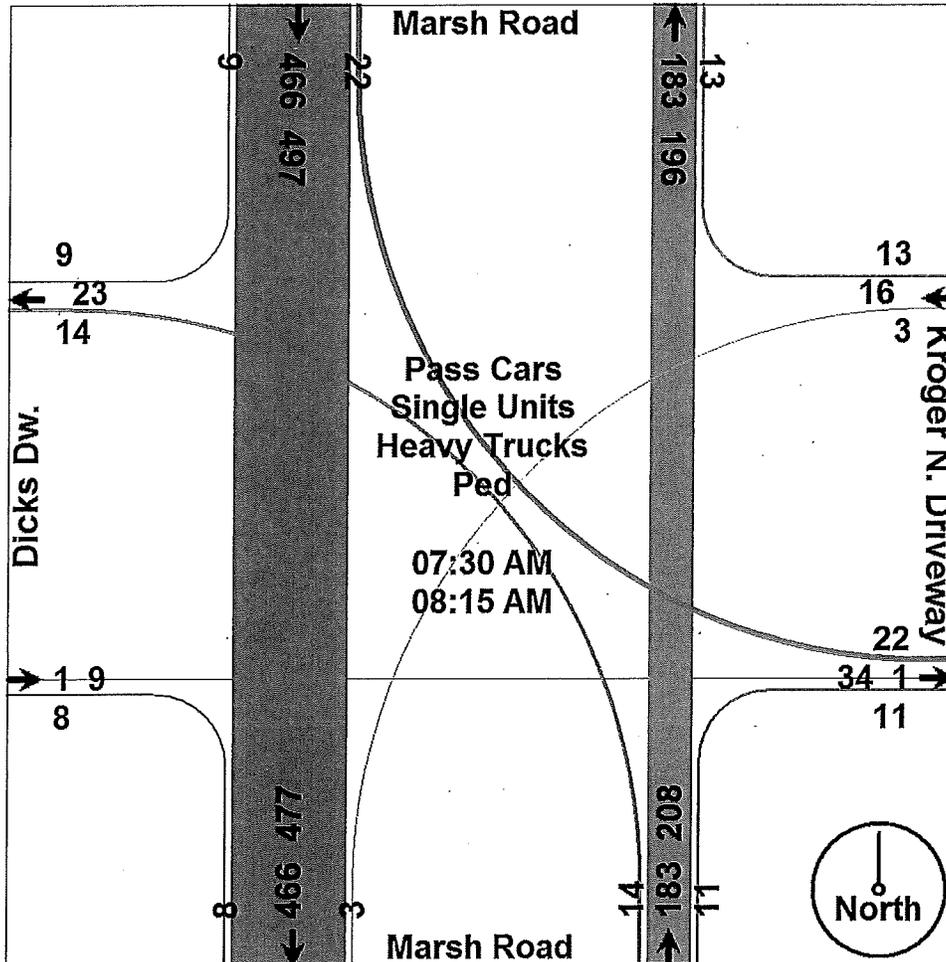


Traffic Study Performed For:
Fleis Vandenbrink

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_2Z4

File Name : TMC_1 Marsh&KrogerDw
Site Code : TMC_1
Start Date : 2/24/2015
Page No : 3

Start Time	Marsh Road Southbound				Kroger N. Driveway Westbound				Marsh Road Northbound				Dicks Dw. Eastbound				Int. Total
	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	122	3	125	1	0	0	1	2	55	2	59	1	1	0	2	187
07:45 AM	5	121	6	132	3	0	0	3	3	52	7	62	2	0	0	2	199
08:00 AM	2	112	2	116	7	0	1	8	3	45	1	49	4	0	0	4	177
08:15 AM	2	111	11	124	2	0	2	4	3	31	4	38	1	0	0	1	167
Total Volume	9	466	22	497	13	0	3	16	11	183	14	208	8	1	0	9	730
% App. Total	1.8	93.8	4.4		81.2	0	18.8		5.3	88	6.7		88.9	11.1	0		
PHF	.450	.955	.500	.941	.464	.000	.375	.500	.917	.832	.500	.839	.500	.250	.000	.563	.917
Pass Cars	9	457	22	488	13	0	3	16	11	178	14	203	8	1	0	9	716
% Pass Cars	100	98.1	100	98.2	100	0	100	100	100	97.3	100	97.6	100	100	0	100	98.1
Single Units	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
% Single Units	0	1.1	0	1.0	0	0	0	0	0	2.2	0	1.9	0	0	0	0	1.2
Heavy Trucks	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
% Heavy Trucks	0	0.9	0	0.8	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0.7
Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



**Traffic Study Performed For:
 Fleis Vandenbrink**

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_2Z4

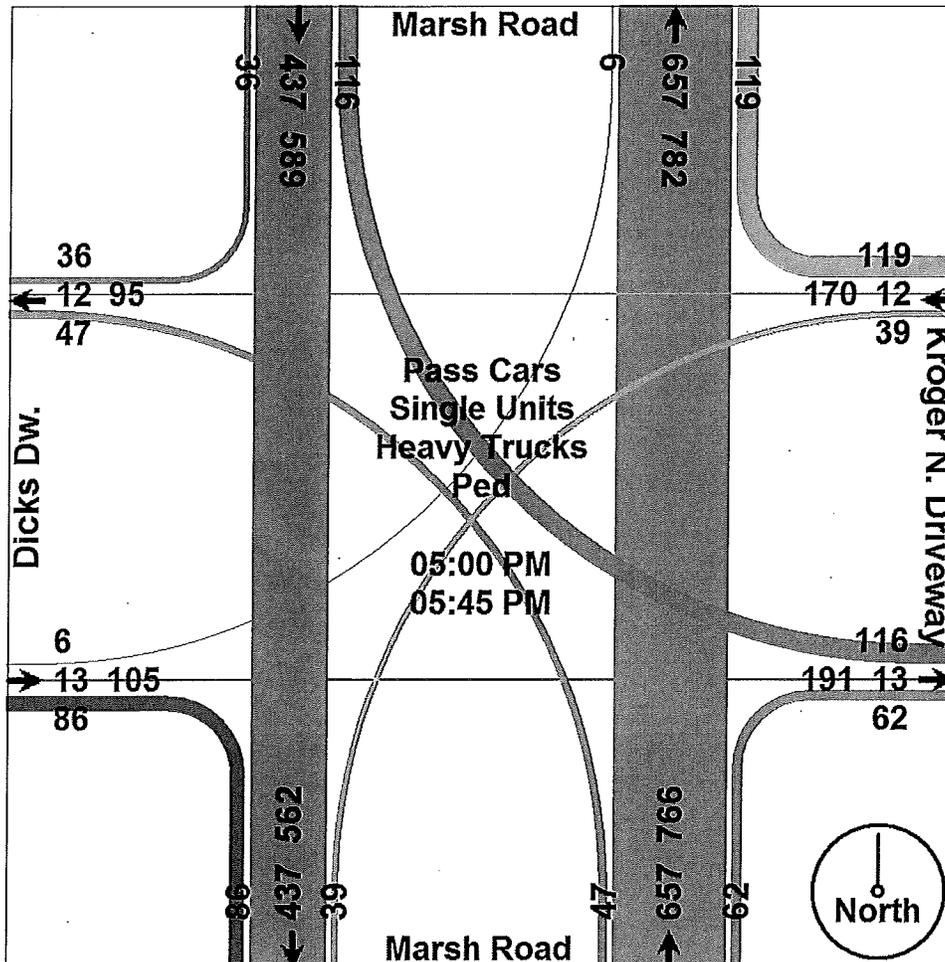
File Name : TMC_1 Marsh&KrogerDw
Site Code : TMC_1
Start Date : 2/24/2015
Page No : 4

Start Time	Marsh Road Southbound				Kroger N. Driveway Westbound				Marsh Road Northbound				Dicks Dw. Eastbound				Int. Total
	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	

Peak Hour Analysis From 12:45 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	9	129	31	169	33	5	14	52	17	174	9	200	17	2	2	21	442
05:15 PM	6	116	25	147	18	1	7	26	17	191	12	220	27	3	1	31	424
05:30 PM	11	100	37	148	34	5	11	50	9	131	10	150	22	4	1	27	375
05:45 PM	10	92	23	125	34	1	7	42	19	161	16	196	20	4	2	26	389
Total Volume	36	437	116	589	119	12	39	170	62	657	47	766	86	13	6	105	1630
% App. Total	6.1	74.2	19.7		7.0	7.1	22.9		8.1	85.8	6.1		81.9	12.4	5.7		
PHF	.818	.847	.784	.871	.875	.600	.696	.817	.816	.860	.734	.870	.796	.813	.750	.847	.922
Pass Cars	36	434	116	586	119	12	39	170	62	655	47	764	86	13	6	105	1625
% Pass Cars	100	99.3	100	99.5	100	100	100	100	100	99.7	100	99.7	100	100	100	100	99.7
Single Units	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
% Single Units	0	0.7	0	0.5	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0.2
Heavy Trucks	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% Heavy Trucks	0	0	0	0	0	0	0	0	0	0.2	0	0.1	0	0	0	0	0.1
Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



**Traffic Study Performed For:
 Fleis Vandenbrink**

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_3HT

File Name : TMC_2 Marsh&Newman
Site Code : TMC_2
Start Date : 2/24/2015
Page No : 1

Groups Printed- Pass Cars - Single Units - Heavy Trucks - Ped

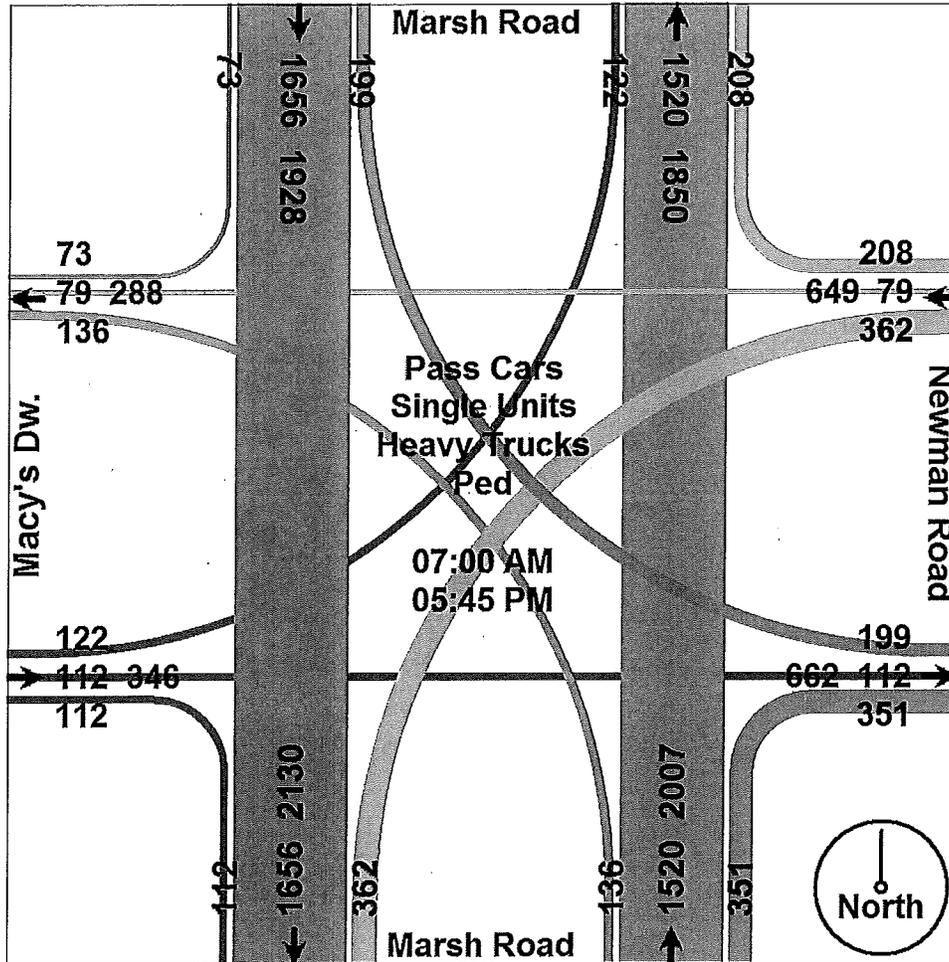
Start Time	Marsh Road Southbound					Newman Road Westbound					Marsh Road Northbound					Macy's Dw. Eastbound					Int. Total
	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	
07:00 AM	2	77	6	1	86	1	1	2	0	4	5	33	2	1	41	0	0	0	0	0	131
07:15 AM	0	85	6	0	91	3	2	5	0	10	4	41	3	1	49	0	0	0	0	0	150
07:30 AM	2	130	4	0	136	4	0	10	0	14	3	54	0	0	57	0	0	0	0	0	207
07:45 AM	1	108	7	0	116	1	0	3	0	4	12	61	4	0	77	0	2	2	0	4	201
Total	5	400	23	1	429	9	3	20	0	32	24	189	9	2	224	0	2	2	0	4	689
08:00 AM	1	111	11	0	123	4	2	3	0	9	3	43	0	0	46	1	1	3	0	5	183
08:15 AM	1	96	11	0	108	2	1	10	0	13	12	31	4	0	47	0	1	1	0	2	170
08:30 AM	3	91	7	0	101	3	3	7	0	13	6	50	6	0	62	3	2	0	0	5	181
08:45 AM	7	85	7	1	100	8	8	14	0	30	18	61	5	0	84	2	4	2	0	8	222
Total	12	383	36	1	432	17	14	34	0	65	39	185	15	0	239	6	8	6	0	20	756
**** BREAK ****																					
04:00 PM	8	106	15	0	129	21	8	40	0	69	35	122	18	0	175	15	12	7	0	34	407
04:15 PM	5	90	31	0	126	16	3	34	0	53	32	130	15	0	177	12	7	18	0	37	393
04:30 PM	7	107	15	0	129	29	8	37	0	74	36	133	6	0	175	13	15	9	0	37	415
04:45 PM	8	113	19	1	141	23	7	36	1	67	43	151	18	0	212	8	13	16	0	37	457
Total	28	416	80	1	525	89	26	147	1	263	146	536	57	0	739	48	47	50	0	145	1672
05:00 PM	12	125	16	0	153	24	6	46	0	76	37	168	11	0	216	23	12	11	0	46	491
05:15 PM	5	128	19	0	152	27	10	41	0	78	45	171	17	0	233	9	10	16	0	35	498
05:30 PM	9	108	10	0	127	18	9	38	0	65	36	119	13	0	168	9	15	18	0	42	402
05:45 PM	2	96	15	0	113	24	11	36	0	71	24	152	14	0	190	17	18	19	0	54	428
Total	28	457	60	0	545	93	36	161	0	290	142	610	55	0	807	58	55	64	0	177	1819
Grand Total	73	1656	199	3	1931	208	79	362	1	650	351	1520	136	2	2009	112	112	122	0	346	4936
Apprch %	3.8	85.8	10.3	0.2		32	12.2	55.7	0.2		17.5	75.7	6.8	0.1		32.4	32.4	35.3	0		
Total %	1.5	33.5	4	0.1	39.1	4.2	1.6	7.3	0	13.2	7.1	30.8	2.8	0	40.7	2.3	2.3	2.5	0	7	
Pass Cars	73	1633	196	0	1902	203	79	357	0	639	346	1507	136	0	1989	112	111	122	0	345	4875
% Pass Cars	100	98.6	98.5	0	98.5	97.6	100	98.6	0	98.3	98.6	99.1	100	0	99	100	99.1	100	0	99.7	98.8
Single Units	0	17	2	0	19	4	0	3	0	7	3	9	0	0	12	0	1	0	0	1	39
% Single Units	0	1	1	0	1	1.9	0	0.8	0	1.1	0.9	0.6	0	0	0.6	0	0.9	0	0	0.3	0.8
Heavy Trucks	0	6	1	0	7	1	0	2	0	3	2	4	0	0	6	0	0	0	0	0	16
% Heavy Trucks	0	0.4	0.5	0	0.4	0.5	0	0.6	0	0.5	0.6	0.3	0	0	0.3	0	0	0	0	0	0.3
Ped	0	0	0	3	3	0	0	0	1	1	0	0	0	2	2	0	0	0	0	0	6
% Ped	0	0	0	100	0.2	0	0	0	100	0.2	0	0	0	100	0.1	0	0	0	0	0	0.1

Comments: Traffic study conducted during typical weekday (Tuesday-Thursday) from 7:00-9:00 AM morning & 4:00-6:00 PM afternoon peak hours & while school was in session. Signalized intersection with push button ped. signals all quadrants.

Traffic Study Performed For:
Fleis Vandenbrink

Project: Meridian Kroger Traffic Study
 Location: Marsh Road & Newman Road
 Weather: Cloudy, Temp. 20's
 Count By: Miovision Video SCU_3HT

File Name : TMC_2 Marsh&Newman
 Site Code : TMC_2
 Start Date : 2/24/2015
 Page No : 2

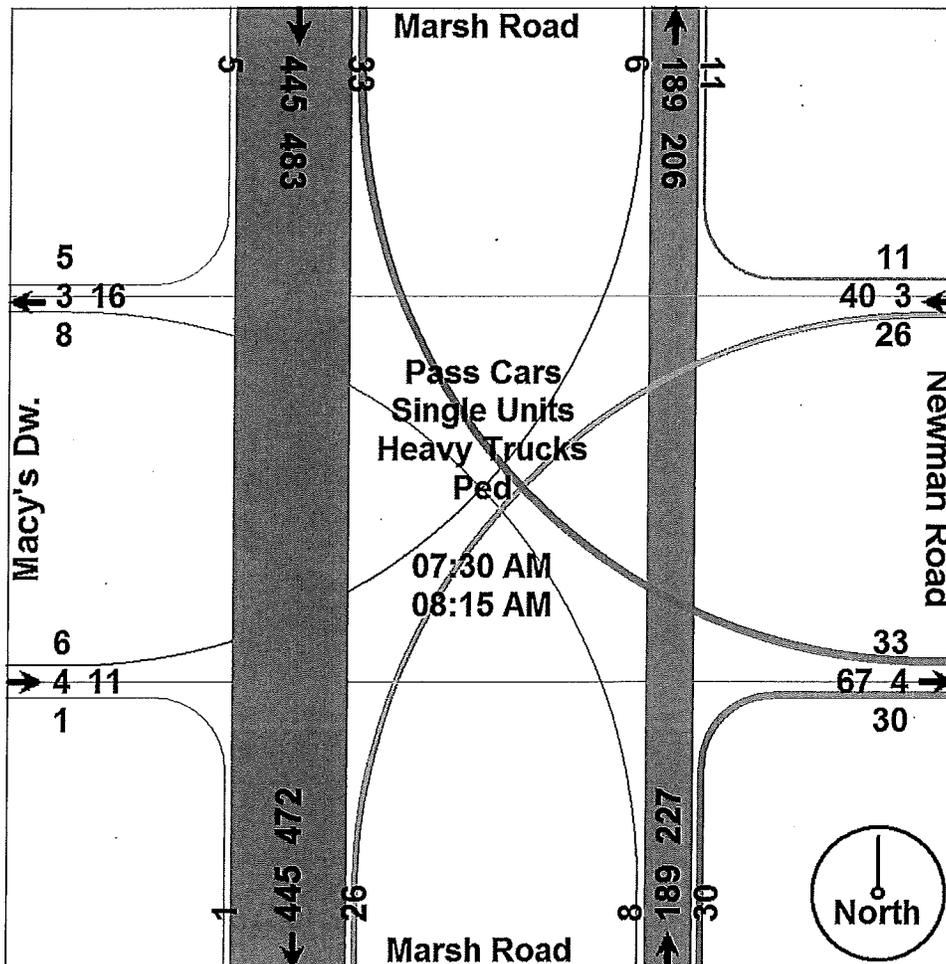


**Traffic Study Performed For:
 Fleis Vandenbrink**

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_3HT

File Name : TMC_2 Marsh&Newman
Site Code : TMC_2
Start Date : 2/24/2015
Page No : 3

Start Time	Marsh Road Southbound				Newman Road Westbound				Marsh Road Northbound				Macy's Dw. Eastbound				Int. Total
	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	130	4	136	4	0	10	14	3	54	0	57	0	0	0	0	207
07:45 AM	1	108	7	116	1	0	3	4	12	61	4	77	0	2	2	4	201
08:00 AM	1	111	11	123	4	2	3	9	3	43	0	46	1	1	3	5	183
08:15 AM	1	96	11	108	2	1	10	13	12	31	4	47	0	1	1	2	170
Total Volume	5	445	33	483	11	3	26	40	30	189	8	227	1	4	6	11	761
% App. Total	1	92.1	6.8		27.5	7.5	65		13.2	83.3	3.5		9.1	36.4	54.5		
PHF	.625	.856	.750	.888	.688	.375	.650	.714	.625	.775	.500	.737	.250	.500	.500	.550	.919
Pass Cars	5	435	33	473	9	3	25	37	29	185	8	222	1	4	6	11	743
% Pass Cars	100	97.8	100	97.9	81.8	100	96.2	92.5	96.7	97.9	100	97.8	100	100	100	100	97.6
Single Units	0	6	0	6	1	0	1	2	0	2	0	2	0	0	0	0	10
% Single Units	0	1.3	0	1.2	9.1	0	3.8	5.0	0	1.1	0	0.9	0	0	0	0	1.3
Heavy Trucks	0	4	0	4	1	0	0	1	1	2	0	3	0	0	0	0	8
% Heavy Trucks	0	0.9	0	0.8	9.1	0	0	2.5	3.3	1.1	0	1.3	0	0	0	0	1.1
Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



**Traffic Study Performed For:
 Fleis Vandenbrink**

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_1TM

File Name : TMC_3 Newman&WKrogerDw
Site Code : TMC_3
Start Date : 2/24/2015
Page No : 1

Groups Printed- Pass Cars - Single Units - Heavy Trucks - Ped

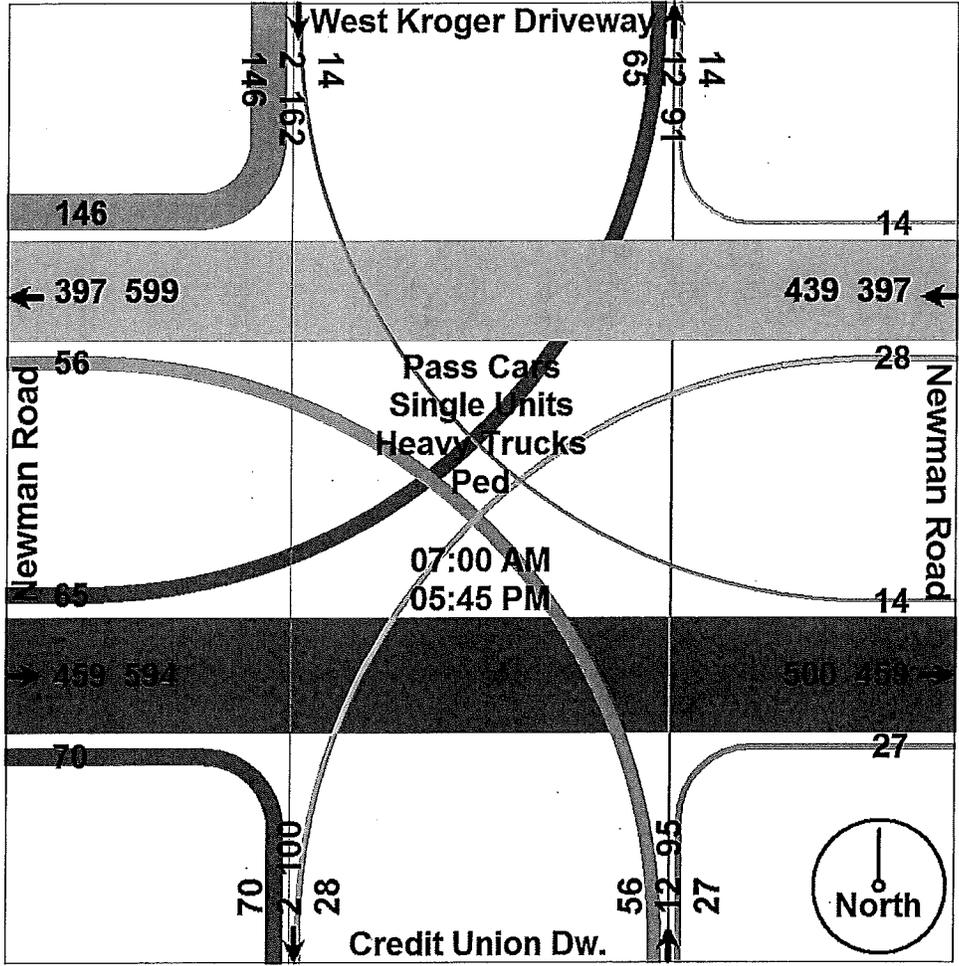
Start Time	West Kroger Driveway Southbound					Newman Road Westbound					Credit Union Dw. Northbound					Newman Road Eastbound					Int. Total
	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	
07:00 AM	1	0	0	1	2	0	2	0	0	2	0	0	0	1	1	3	7	1	0	11	16
07:15 AM	0	0	0	0	0	1	11	1	0	13	0	0	0	1	1	5	5	0	0	10	24
07:30 AM	2	0	0	0	2	0	10	1	0	11	1	0	2	0	3	0	4	2	0	6	22
07:45 AM	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	5	13	3	0	21	26
Total	3	1	0	1	5	1	27	2	0	30	1	0	2	2	5	13	29	6	0	48	88
08:00 AM	1	0	0	0	1	0	7	0	0	7	1	1	1	0	3	3	8	1	0	12	23
08:15 AM	1	0	0	0	1	0	13	1	0	14	0	0	1	0	1	3	20	3	0	26	42
08:30 AM	2	0	0	0	2	1	8	1	0	10	0	0	2	0	2	2	11	0	0	13	27
08:45 AM	7	0	0	1	8	0	18	0	0	18	1	0	1	0	2	4	19	4	0	27	55
Total	11	0	0	1	12	1	46	2	0	49	2	1	5	0	8	12	58	8	0	78	147
**** BREAK ****																					
04:00 PM	22	0	0	0	22	3	39	3	0	45	2	1	2	0	5	6	40	9	0	55	127
04:15 PM	11	1	2	0	14	2	31	7	0	40	8	1	6	0	15	11	41	6	0	58	127
04:30 PM	15	0	1	0	16	1	39	1	0	41	4	2	8	0	14	8	36	7	0	51	122
04:45 PM	16	0	2	0	18	1	35	5	0	41	4	2	9	0	15	6	62	8	0	76	150
Total	64	1	5	0	70	7	144	16	0	167	18	6	25	0	49	31	179	30	0	240	526
05:00 PM	19	0	2	0	21	0	46	2	0	48	4	2	6	0	12	3	50	8	0	61	142
05:15 PM	15	0	2	0	17	1	54	5	0	60	1	3	6	0	10	5	57	5	0	67	154
05:30 PM	17	0	2	0	19	1	37	0	0	38	1	0	5	0	6	3	38	6	0	47	110
05:45 PM	17	0	3	0	20	3	43	1	0	47	0	0	7	0	7	3	48	2	0	53	127
Total	68	0	9	0	77	5	180	8	0	193	6	5	24	0	35	14	193	21	0	228	533
Grand Total	146	2	14	2	164	14	397	28	0	439	27	12	56	2	97	70	459	65	0	594	1294
Apprch %	89	1.2	8.5	1.2		3.2	90.4	6.4	0		27.8	12.4	57.7	2.1		11.8	77.3	10.9	0		
Total %	11.3	0.2	1.1	0.2	12.7	1.1	30.7	2.2	0	33.9	2.1	0.9	4.3	0.2	7.5	5.4	35.5	5	0	45.9	
Pass Cars	145	2	14	0	161	14	390	28	0	432	27	12	56	0	95	70	454	65	0	589	1277
% Pass Cars	99.3	100	100	0	98.2	100	98.2	100	0	98.4	100	100	100	0	97.9	100	98.9	100	0	99.2	98.7
Single Units	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	9
% Single Units	0.7	0	0	0	0.6	0	1.3	0	0	1.1	0	0	0	0	0	0	0.7	0	0	0.5	0.7
Heavy Trucks	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
% Heavy Trucks	0	0	0	0	0	0	0.5	0	0	0.5	0	0	0	0	0	0	0.4	0	0	0.3	0.3
Ped	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	4
% Ped	0	0	0	100	1.2	0	0	0	0	0	0	0	0	100	2.1	0	0	0	0	0	0.3

Comments: Traffic study conducted during typical weekday (Tuesday-Thursday) from 7:00-9:00 AM morning & 4:00-6:00 PM afternoon peak hours & while school was in session. Non-signalized intersection.

**Traffic Study Performed For:
 Fleis Vandenbrink**

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_1TM

File Name : TMC_3 Newman&WKrogerDw
Site Code : TMC_3
Start Date : 2/24/2015
Page No : 2

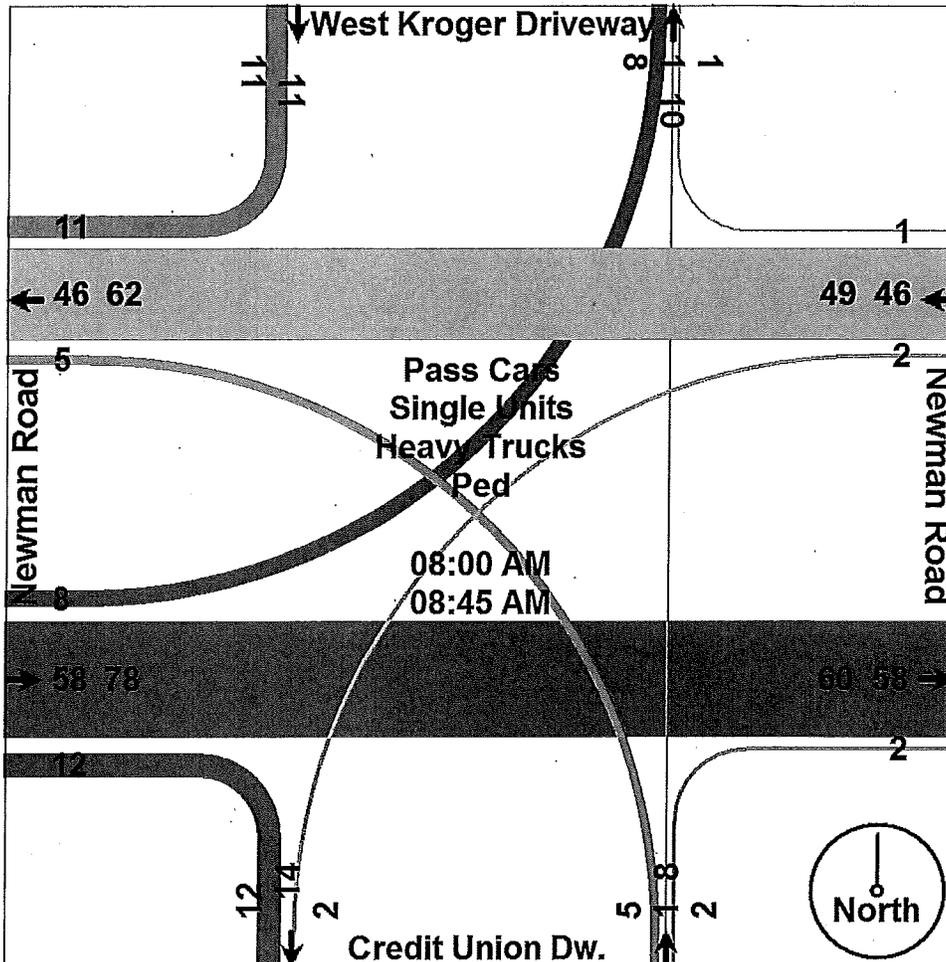


Traffic Study Performed For:
Fleis Vandenberg

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_1TM

File Name : TMC_3 Newman&WKrogerDw
Site Code : TMC_3
Start Date : 2/24/2015
Page No : 3

Start Time	West Kroger Driveway Southbound				Newman Road Westbound				Credit Union Dw. Northbound				Newman Road Eastbound				Int. Total
	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	1	0	0	1	0	7	0	7	1	1	1	3	3	8	1	12	23
08:15 AM	1	0	0	1	0	13	1	14	0	0	1	1	3	20	3	26	42
08:30 AM	2	0	0	2	1	8	1	10	0	0	2	2	2	11	0	13	27
08:45 AM	7	0	0	7	0	18	0	18	1	0	1	2	4	19	4	27	54
Total Volume	11	0	0	11	1	46	2	49	2	1	5	8	12	58	8	78	146
% App. Total	100	0	0		2	93.9	4.1		25	12.5	62.5		15.4	74.4	10.3		
PHF	.393	.000	.000	.393	.250	.639	.500	.681	.500	.250	.625	.667	.750	.725	.500	.722	.676
Pass Cars	10	0	0	10	1	46	2	49	2	1	5	8	12	55	8	75	142
% Pass Cars	90.9	0	0	90.9	100	100	100	100	100	100	100	100	100	94.8	100	96.2	97.3
Single Units	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
% Single Units	9.1	0	0	9.1	0	0	0	0	0	0	0	0	0	3.4	0	2.6	2.1
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1.7	0	1.3	0.7
Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

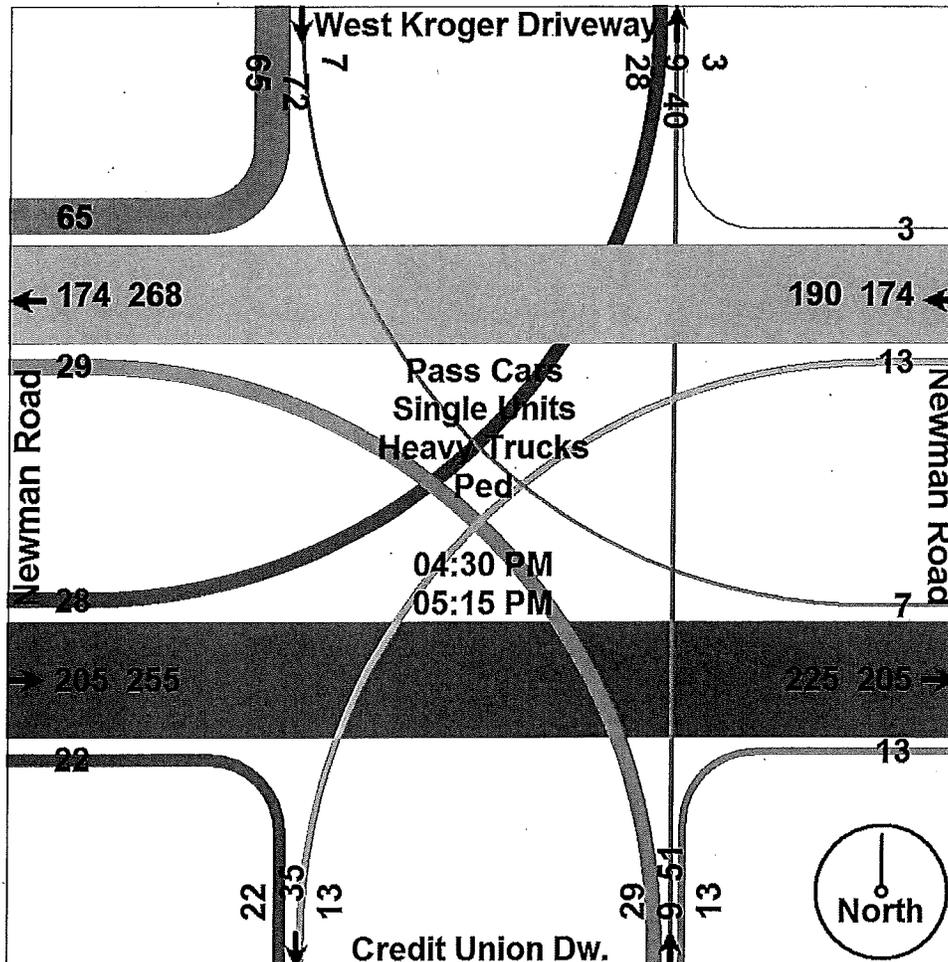


**Traffic Study Performed For:
 Fleis Vandenberg**

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_1TM

File Name : TMC_3 Newman&WKrogerDw
Site Code : TMC_3
Start Date : 2/24/2015
Page No : 4

Start Time	West Kroger Driveway Southbound				Newman Road Westbound				Credit Union Dw. Northbound				Newman Road Eastbound				Int. Total
	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	
Peak Hour Analysis From 12:45 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	0	1	16	1	39	1	41	4	2	8	14	8	36	7	51	122
04:45 PM	16	0	2	18	1	35	5	41	4	2	9	15	6	62	8	76	150
05:00 PM	19	0	2	21	0	46	2	48	4	2	6	12	3	50	8	61	142
05:15 PM	15	0	2	17	1	54	5	60	1	3	6	10	5	57	5	67	154
Total Volume	65	0	7	72	3	174	13	190	13	9	29	51	22	205	28	255	568
% App. Total	90.3	0	9.7		1.6	91.6	6.8		25.5	17.6	56.9		8.6	80.4	11		
PHF	.855	.000	.875	.857	.750	.806	.650	.792	.813	.750	.806	.850	.688	.827	.875	.839	.922
Pass Cars	65	0	7	72	3	173	13	189	13	9	29	51	22	205	28	255	567
% Pass Cars	100	0	100	100	100	99.4	100	99.5	100	100	100	100	100	100	100	100	99.8
Single Units	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% Single Units	0	0	0	0	0	0.6	0	0.5	0	0	0	0	0	0	0	0	0.2
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Traffic Data Collection, TDC
 7504 Sawgrass Drive, Washington, MI 48094 Ph. (586) 786-5407



**Traffic Study Performed For:
 Fleis Vandenberg**

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_1US

File Name : TMC_4 Newman&EKrogerDw
Site Code : TMC_4
Start Date : 2/24/2015
Page No : 1

Groups Printed- Pass Cars - Single Units - Heavy Trucks - Ped

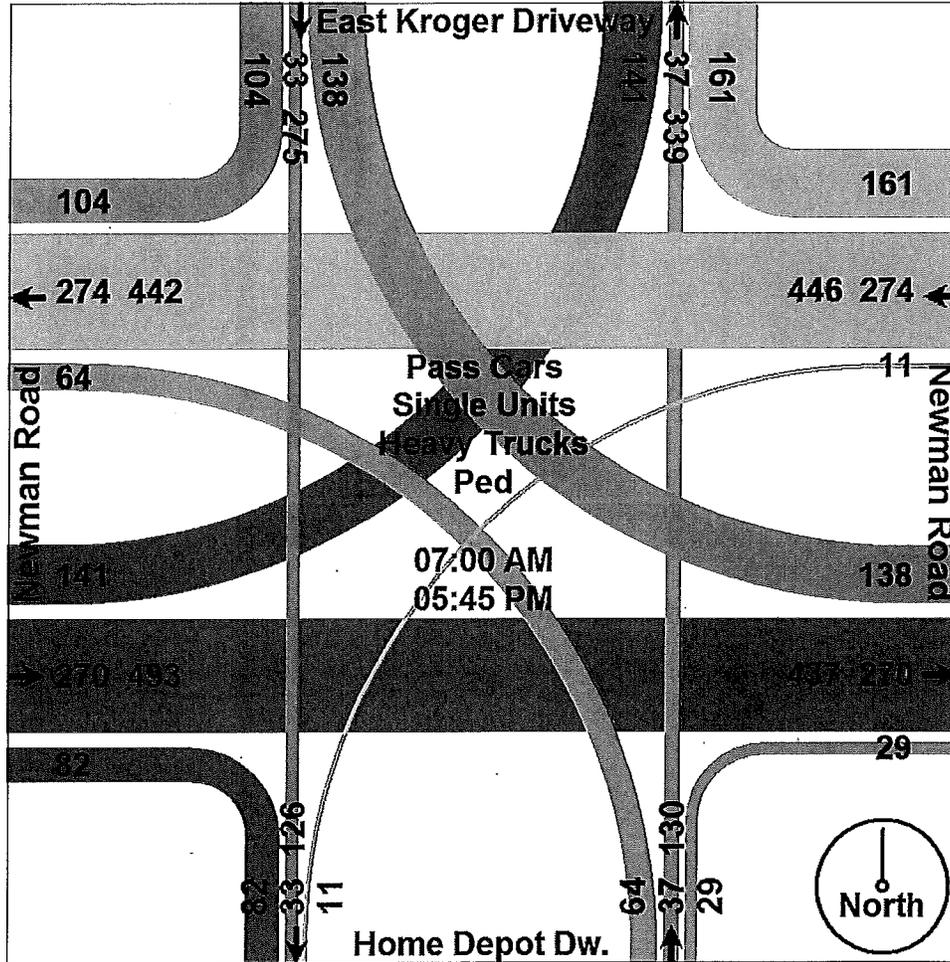
Start Time	East Kroger Driveway Southbound					Newman Road Westbound					Home Depot Dw. Northbound					Newman Road Eastbound					Int. Total
	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	Rgt	Thru	Left	Peds	App. Total	
07:00 AM	1	1	0	2	4	1	3	1	1	6	0	0	1	0	1	1	6	1	2	10	21
07:15 AM	0	0	1	0	1	0	13	0	0	13	0	0	1	0	1	1	2	2	0	5	20
07:30 AM	4	0	2	0	6	0	5	0	0	5	0	1	2	0	3	2	2	1	0	5	19
07:45 AM	0	0	3	0	3	4	3	0	0	7	1	0	1	0	2	5	7	1	0	13	25
Total	5	1	6	2	14	5	24	1	1	31	1	1	5	0	7	9	17	5	2	33	85
08:00 AM	0	0	0	0	0	5	6	0	0	11	1	0	0	0	1	5	2	1	0	8	20
08:15 AM	2	1	0	0	3	6	9	1	0	16	1	0	3	0	4	9	9	2	0	20	43
08:30 AM	1	2	0	0	3	9	7	0	0	16	0	1	2	0	3	4	3	5	0	12	34
08:45 AM	3	0	0	0	3	9	12	0	0	21	1	1	4	0	6	3	9	7	0	19	49
Total	6	3	0	0	9	29	34	1	0	64	3	2	9	0	14	21	23	15	0	59	146
**** BREAK ****																					
04:00 PM	7	3	17	0	27	14	31	1	0	46	3	4	8	0	15	7	16	15	1	39	127
04:15 PM	8	2	17	0	27	15	24	4	1	44	3	2	7	0	12	9	28	14	0	51	134
04:30 PM	11	3	20	0	34	15	22	1	1	39	3	6	8	0	17	5	27	12	0	44	134
04:45 PM	11	1	24	0	36	16	28	0	0	44	4	6	2	0	12	8	42	13	0	63	155
Total	37	9	78	0	124	60	105	6	2	173	13	18	25	0	56	29	113	54	1	197	550
05:00 PM	16	4	14	0	34	20	23	1	0	44	3	4	9	0	16	5	29	23	0	57	151
05:15 PM	18	5	8	0	31	16	36	0	0	52	4	4	6	0	14	6	35	18	0	59	156
05:30 PM	10	6	25	0	41	14	21	1	0	36	4	7	5	0	16	6	25	10	0	41	134
05:45 PM	12	5	7	0	24	17	31	1	0	49	1	1	5	0	7	6	28	16	0	50	130
Total	56	20	54	0	130	67	111	3	0	181	12	16	25	0	53	23	117	67	0	207	571
Grand Total	104	33	138	2	277	161	274	11	3	449	29	37	64	0	130	82	270	141	3	496	1352
Apprch %	37.5	11.9	49.8	0.7		35.9	61	2.4	0.7		22.3	28.5	49.2	0		16.5	54.4	28.4	0.6		
Total %	7.7	2.4	10.2	0.1	20.5	11.9	20.3	0.8	0.2	33.2	2.1	2.7	4.7	0	9.6	6.1	20	10.4	0.2	36.7	
Pass Cars	104	33	138	0	275	160	267	11	0	438	29	37	63	0	129	82	263	141	0	486	1328
% Pass Cars	100	100	100	0	99.3	99.4	97.4	100	0	97.6	100	100	98.4	0	99.2	100	97.4	100	0	98	98.2
Single Units	0	0	0	0	0	1	5	0	0	6	0	0	1	0	1	0	5	0	0	5	12
% Single Units	0	0	0	0	0	0.6	1.8	0	0	1.3	0	0	1.6	0	0.8	0	1.9	0	0	1	0.9
Heavy Trucks	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
% Heavy Trucks	0	0	0	0	0	0	0.7	0	0	0.4	0	0	0	0	0	0	0.7	0	0	0.4	0.3
Ped	0	0	0	2	2	0	0	0	3	3	0	0	0	0	0	0	0	0	3	3	8
% Ped	0	0	0	100	0.7	0	0	0	100	0.7	0	0	0	0	0	0	0	0	100	0.6	0.6

Comments: Traffic study conducted during typical weekday (Tuesday-Thursday) from 7:00-9:00 AM morning & 4:00-6:00 PM afternoon peak hours & while school was in session. Non-signalized intersection.

**Traffic Study Performed For:
 Fleis Vandenbrink**

Project: Meridian Kroger Traffic Study
 Location: Marsh Road & Newman Road
 Weather: Cloudy, Temp. 20's
 Count By: Miovision Video SCU_1US

File Name : TMC_4 Newman&EKrogerDw
 Site Code : TMC_4
 Start Date : 2/24/2015
 Page No : 2

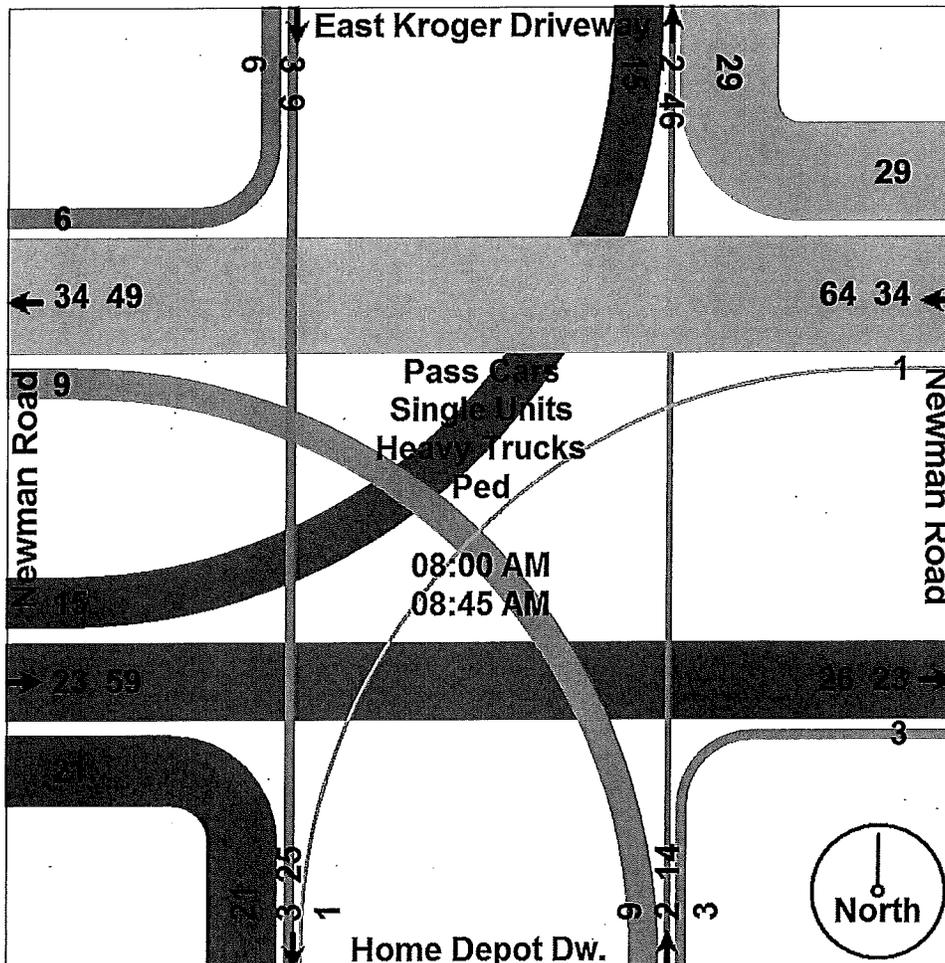


**Traffic Study Performed For:
 Fleis Vandenbrink**

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_1US

File Name : TMC_4 Newman&EKrogerDw
Site Code : TMC_4
Start Date : 2/24/2015
Page No : 3

Start Time	East Kroger Driveway Southbound				Newman Road Westbound				Home Depot Dw. Northbound				Newman Road Eastbound				Int. Total
	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	5	6	0	11	1	0	0	1	5	2	1	8	20
08:15 AM	2	1	0	3	6	9	1	16	1	0	3	4	9	9	2	20	43
08:30 AM	1	2	0	3	9	7	0	16	0	1	2	3	4	3	5	12	34
08:45 AM	3	0	0	3	9	12	0	21	1	1	4	6	3	9	7	19	49
Total Volume	6	3	0	9	29	34	1	64	3	2	9	14	21	23	15	59	146
% App. Total	66.7	33.3	0		45.3	53.1	1.6		21.4	14.3	64.3		35.6	39	25.4		
PHF	.500	.375	.000	.750	.806	.708	.250	.762	.750	.500	.563	.583	.583	.639	.536	.738	.745
Pass Cars	6	3	0	9	29	34	1	64	3	2	9	14	21	20	15	56	143
% Pass Cars	100	100	0	100	100	100	100	100	100	100	100	100	100	87.0	100	94.9	97.9
Single Units	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
% Single Units	0	0	0	0	0	0	0	0	0	0	0	0	0	8.7	0	3.4	1.4
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	4.3	0	1.7	0.7
Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Traffic Study Performed For:
Fleis Vandenberg

Project: Meridian Kroger Traffic Study
Location: Marsh Road & Newman Road
Weather: Cloudy, Temp. 20's
Count By: Miovision Video SCU_1US

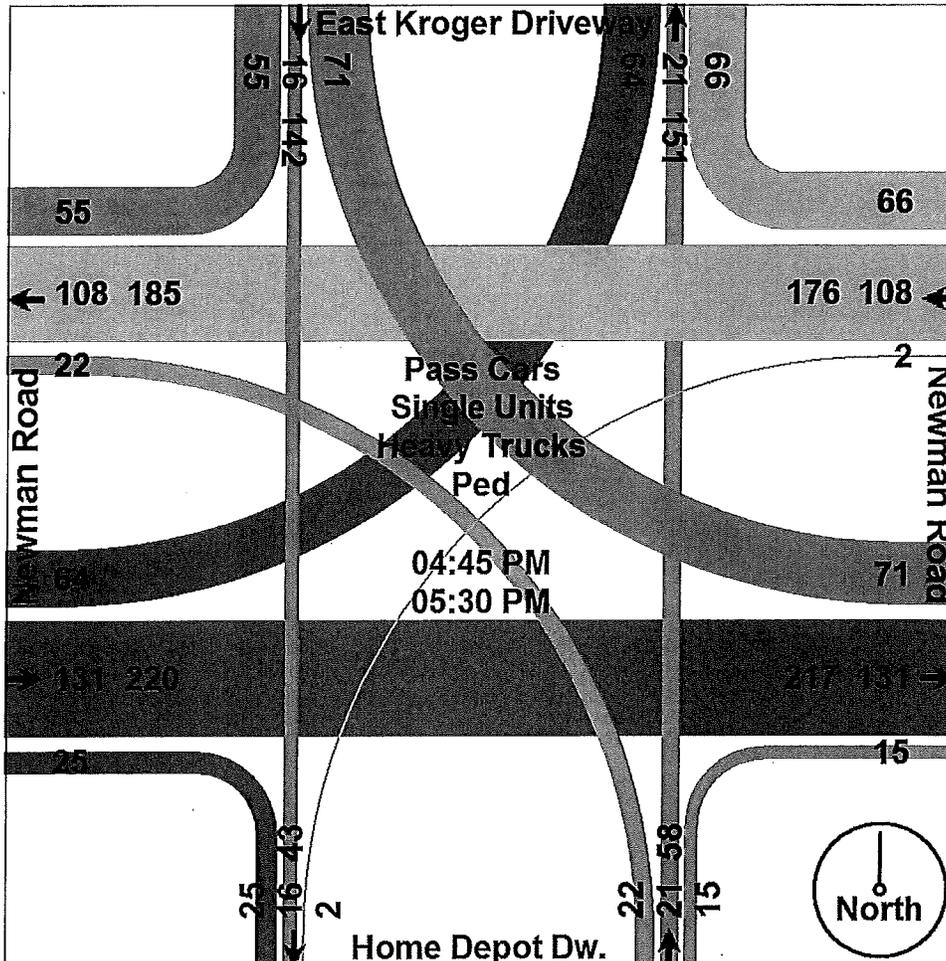
File Name : TMC_4 Newman&EKrogerDw
Site Code : TMC_4
Start Date : 2/24/2015
Page No : 4

Start Time	East Kroger Driveway Southbound				Newman Road Westbound				Home Depot Dw. Northbound				Newman Road Eastbound				Int. Total
	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	Rgt	Thru	Left	App. Total	

Peak Hour Analysis From 12:45 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

04:45 PM	11	1	24	36	16	28	0	44	4	6	2	12	8	42	13	63	155
05:00 PM	16	4	14	34	20	23	1	44	3	4	9	16	5	29	23	57	151
05:15 PM	18	5	8	31	16	36	0	52	4	4	6	14	6	35	18	59	156
05:30 PM	10	6	25	41	14	21	1	36	4	7	5	16	6	25	10	41	134
Total Volume	55	16	71	142	66	108	2	176	15	21	22	58	25	131	64	220	596
% App. Total	38.7	11.3	50		37.5	61.4	1.1		25.9	36.2	37.9		11.4	59.5	29.1		
PHF	.764	.667	.710	.866	.825	.750	.500	.846	.938	.750	.611	.906	.781	.780	.696	.873	.955
Pass Cars	55	16	71	142	65	108	2	175	15	21	22	58	25	130	64	219	594
% Pass Cars	100	100	100	100	98.5	100	100	99.4	100	100	100	100	100	99.2	100	99.5	99.7
Single Units	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
% Single Units	0	0	0	0	1.5	0	0	0.6	0	0	0	0	0	0.8	0	0.5	0.3
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Ped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



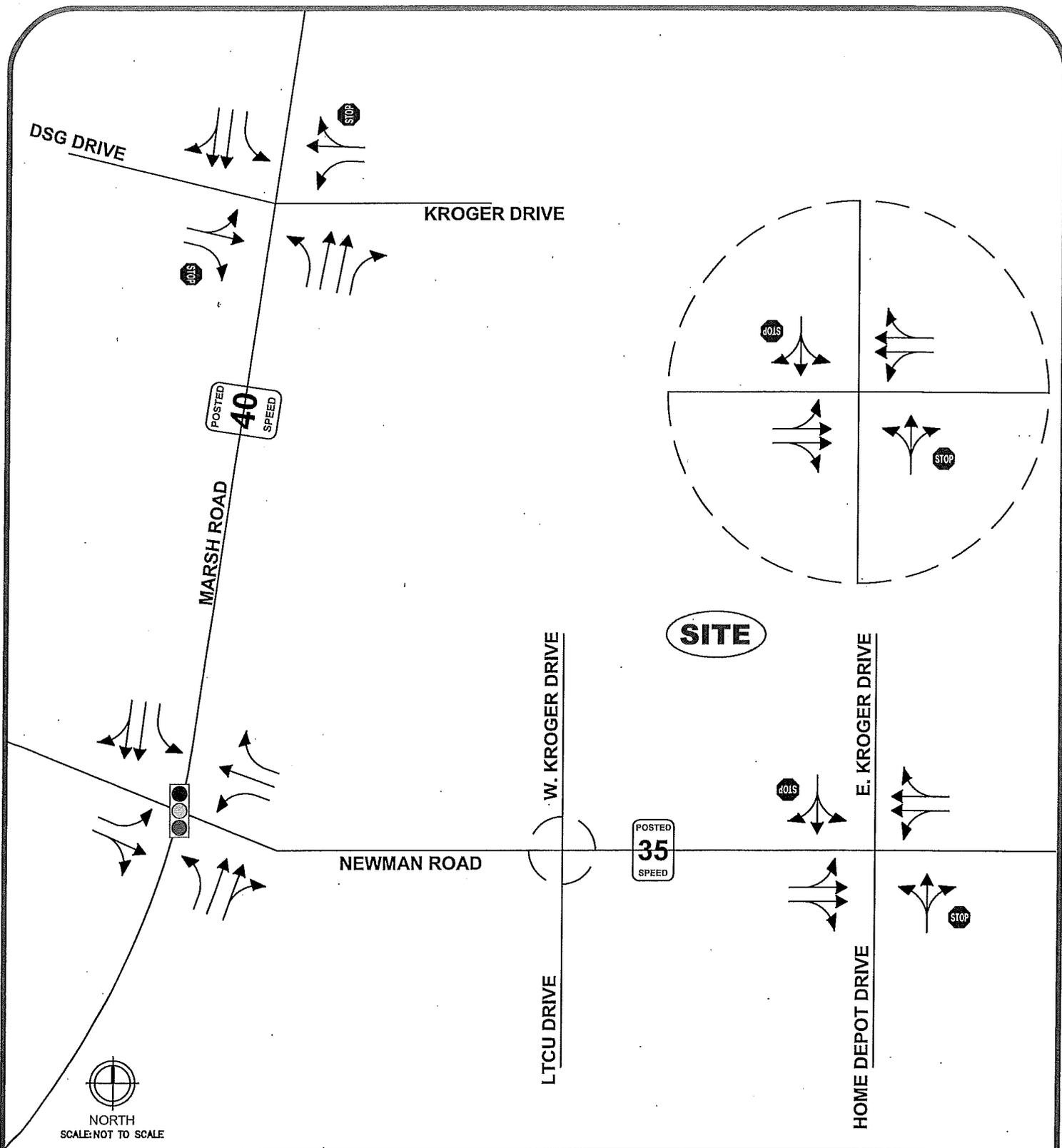
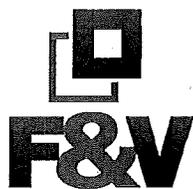


FIGURE 1
LANE USE AND TRAFFIC CONTROL
 KROGER GAS STATION - MERIDIAN TOWNSHIP, MI

LEGEND

- ROADS
- LANE USE
- SIGNALIZED INTERSECTION
- UNSIGNALIZED INTERSECTION



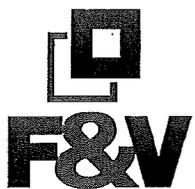
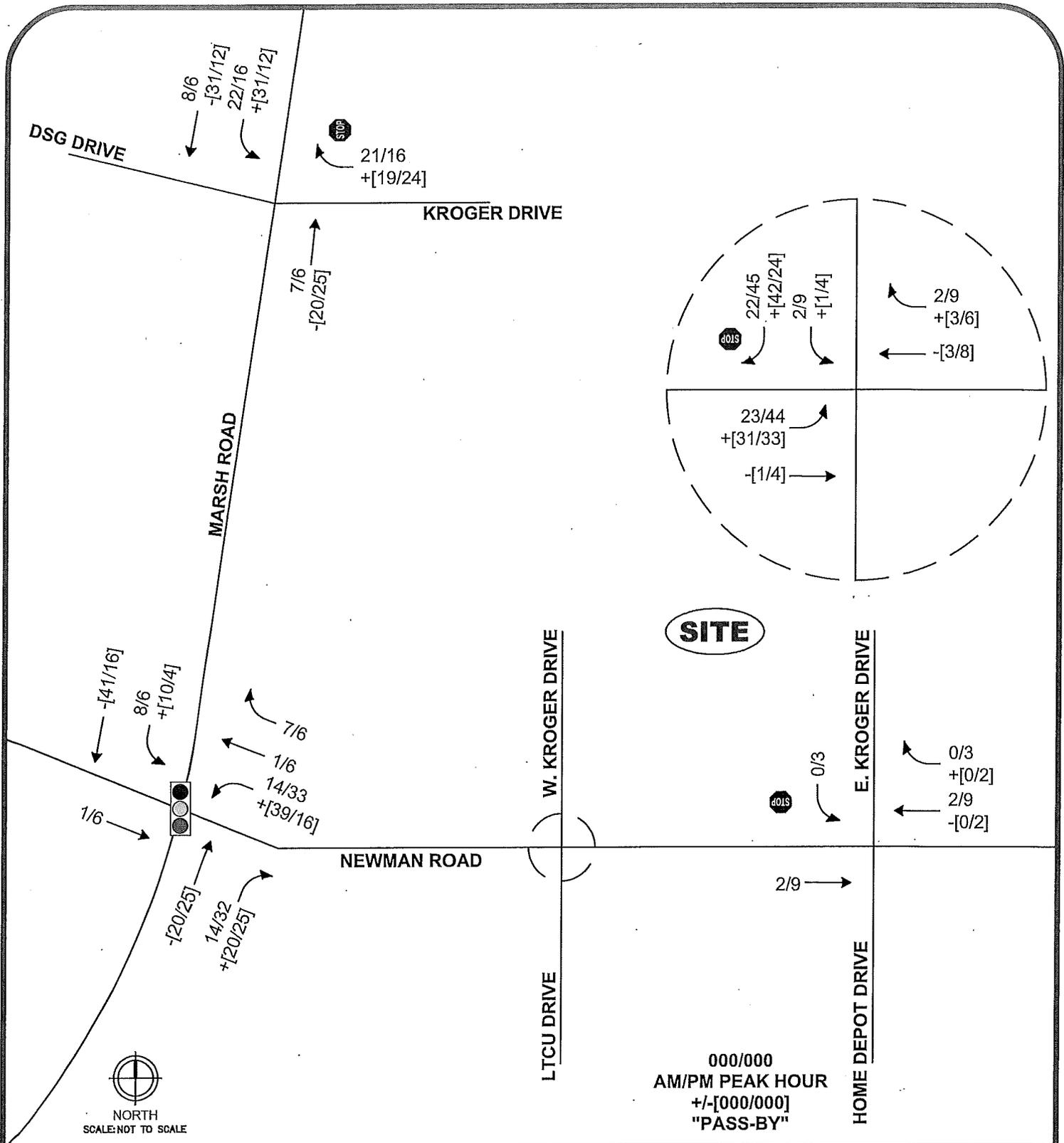
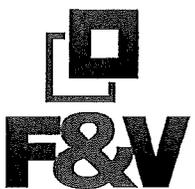
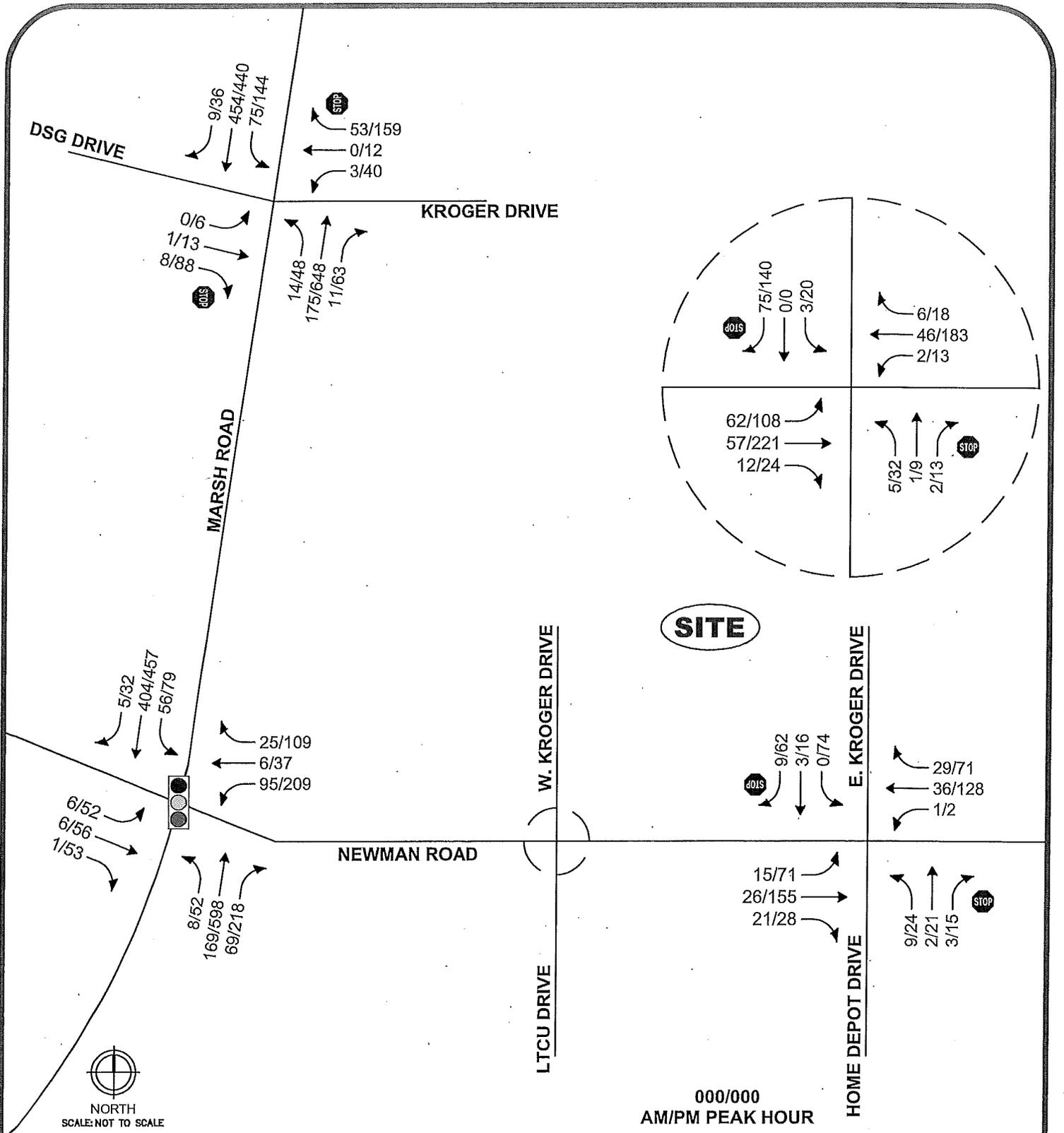


FIGURE 3
SITE-GENERATED
TRAFFIC VOLUMES
KROGER GAS STATION - MERIDIAN TOWNSHIP, MI

LEGEND

- ROADS
- TRAFFIC VOLUMES (AM/PM)
- SIGNALIZED INTERSECTION
- UNSIGNALIZED INTERSECTION



**FIGURE 4
FUTURE TRAFFIC
VOLUMES**

KROGER GAS STATION - MERIDIAN TOWNSHIP, MI

HCM 2010 Signalized Intersection Summary

Existing Conditions

1: Marsh Road & Meridian Mall Drive (Push Buttons)/Newman Road

AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	5	1	42	5	18	8	189	35	38	445	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1759	1759	1759	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	10	8	2	59	7	25	11	255	47	43	500	6
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.60	0.60	0.60	0.71	0.71	0.71	0.74	0.74	0.74	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	8	8	8	2	2	2	2	2	2
Cap, veh/h	81	66	16	179	188	159	583	1461	265	695	1749	21
Arrive On Green	0.04	0.04	0.04	0.11	0.11	0.11	0.08	0.49	0.49	0.08	0.49	0.49
Sat Flow, veh/h	1810	1468	367	1675	1759	1495	1774	2993	544	1774	3582	43
Grp Volume(v), veh/h	10	0	10	59	7	25	11	149	153	43	247	259
Grp Sat Flow(s),veh/h/ln	1810	0	1835	1675	1759	1495	1774	1770	1767	1774	1770	1855
Q Serve(g_s), s	0.4	0.0	0.4	2.7	0.3	1.2	0.0	3.9	4.0	0.0	6.8	6.8
Cycle Q Clear(g_c), s	0.4	0.0	0.4	2.7	0.3	1.2	0.0	3.9	4.0	0.0	6.8	6.8
Prop In Lane	1.00		0.20	1.00		1.00	1.00		0.31	1.00		0.02
Lane Grp Cap(c), veh/h	81	0	82	179	188	159	583	864	863	695	864	906
V/C Ratio(X)	0.12	0.00	0.12	0.33	0.04	0.16	0.02	0.17	0.18	0.06	0.29	0.29
Avail Cap(c_a), veh/h	442	0	448	409	429	365	665	864	863	776	864	906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	0.0	37.6	33.9	32.8	33.3	11.2	11.7	11.7	10.0	12.5	12.5
Incr Delay (d2), s/veh	0.7	0.0	0.7	1.1	0.1	0.5	0.0	0.4	0.4	0.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	1.3	0.1	0.5	0.1	2.0	2.0	0.5	3.5	3.7
LnGrp Delay(d),s/veh	38.3	0.0	38.3	35.0	32.9	33.7	11.2	12.2	12.2	10.0	13.3	13.3
LnGrp LOS	D		D	C	C	C	B	B	B	B	B	B
Approach Vol, veh/h		20			91			313			549	
Approach Delay, s/veh		38.3			34.5			12.1			13.0	
Approach LOS		D			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	45.8		9.6	12.0	45.8		14.5				
Change Period (Y+Rc), s	5.8	5.8		* 5.9	5.8	5.8		5.8				
Max Green Setting (Gmax), s	10.0	40.0		* 20	10.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	2.0	6.0		2.4	2.0	8.8		4.7				
Green Ext Time (p_c), s	0.0	1.7		0.0	0.0	2.9		0.2				

Intersection Summary

HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 TWSC
2: Marsh Road & DSG Drive/Site Drive

Existing Conditions
AM Peak Hour

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	1	8	3	0	13	14	188	11	22	477	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	75	0	-	-	225	-	50	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	60	60	60	60	60	60	84	84	84	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	2	2	2
Mvmt Flow	0	2	13	5	0	22	17	224	13	23	507	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	704	816	259	558	821	112	517	0	0	224	0	0
Stage 1	559	559	-	257	257	-	-	-	-	-	-	-
Stage 2	145	257	-	301	564	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	328	314	746	417	312	926	1045	-	-	1342	-	-
Stage 1	486	514	-	731	699	-	-	-	-	-	-	-
Stage 2	849	699	-	689	512	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	312	304	746	398	302	926	1045	-	-	1342	-	-
Mov Cap-2 Maneuver	312	304	-	398	302	-	-	-	-	-	-	-
Stage 1	478	505	-	719	688	-	-	-	-	-	-	-
Stage 2	816	688	-	663	503	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	10	0.6	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1045	-	-	304	746	398	926	1342	-	-
HCM Lane V/C Ratio	0.016	-	-	0.005	0.018	0.013	0.023	0.017	-	-
HCM Control Delay (s)	8.5	-	-	16.9	9.9	14.2	9	7.7	-	-
HCM Lane LOS	A	-	-	C	A	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	0.1	0.1	-	-

HCM 2010 TWSC
 3: LTCU Drive/W. Site Drive & Newman Road

Existing Conditions
 AM Peak Hour

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	58	12	2	49	1	5	1	2	0	0	11
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	68	68	68	67	67	67	60	60	60
Heavy Vehicles, %	4	4	4	0	0	0	0	0	0	9	9	9
Mvmt Flow	11	81	17	3	72	1	7	1	3	0	0	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	74	0	0	97	0	0	153	190	50	142	198	38
Stage 1	-	-	-	-	-	-	111	111	-	79	79	-
Stage 2	-	-	-	-	-	-	42	79	-	63	119	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.5	6.5	6.9	7.68	6.68	7.08
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.68	5.68	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.68	5.68	-
Follow-up Hdwy	2.24	-	-	2.2	-	-	3.5	4	3.3	3.59	4.09	3.39
Pot Cap-1 Maneuver	1509	-	-	1509	-	-	805	708	1014	794	681	1003
Stage 1	-	-	-	-	-	-	888	807	-	901	812	-
Stage 2	-	-	-	-	-	-	973	833	-	920	780	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1508	-	-	1508	-	-	784	701	1013	784	674	1002
Mov Cap-2 Maneuver	-	-	-	-	-	-	784	701	-	784	674	-
Stage 1	-	-	-	-	-	-	881	801	-	894	810	-
Stage 2	-	-	-	-	-	-	952	831	-	907	774	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.3	9.5	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	818	1508	-	-	1508	-	-	1002
HCM Lane V/C Ratio	0.015	0.007	-	-	0.002	-	-	0.018
HCM Control Delay (s)	9.5	7.4	0	-	7.4	0	-	8.7
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection

Int Delay, s/veh 2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	15	24	21	1	34	29	9	2	3	0	3	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	76	76	76	60	60	60	75	75	75
Heavy Vehicles, %	5	5	5	0	0	0	0	0	0	0	0	0
Mvmt Flow	20	32	28	1	45	38	15	3	5	0	4	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	83	0	0	61	0	0	114	173	30	124	167	41
Stage 1	-	-	-	-	-	-	87	87	-	66	66	-
Stage 2	-	-	-	-	-	-	27	86	-	58	101	-
Critical Hdwy	4.2	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.25	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1490	-	-	1555	-	-	857	724	1044	843	729	1028
Stage 1	-	-	-	-	-	-	917	827	-	943	844	-
Stage 2	-	-	-	-	-	-	993	827	-	953	815	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1490	-	-	1555	-	-	834	713	1044	826	718	1028
Mov Cap-2 Maneuver	-	-	-	-	-	-	834	713	-	826	718	-
Stage 1	-	-	-	-	-	-	904	815	-	930	843	-
Stage 2	-	-	-	-	-	-	976	826	-	931	804	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0.1	9.3	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	834	880	1490	-	-	1555	-	-	928
HCM Lane V/C Ratio	0.018	0.009	0.014	-	-	0.001	-	-	0.017
HCM Control Delay (s)	9.4	9.1	7.4	0	-	7.3	0	-	8.9
HCM Lane LOS	A	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0.1

HCM 2010 Signalized Intersection Summary
 1: Marsh Road & Meridian Mall Drive (Push Buttons)/Newman Road

Existing Conditions
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	50	53	160	31	103	52	623	161	69	473	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1881	1881	1900	1881	1881	1900
Adj Flow Rate, veh/h	62	60	63	170	33	110	58	692	179	73	503	34
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.90	0.90	0.90	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	195	91	96	219	230	195	529	1209	313	397	1461	99
Arrive On Green	0.11	0.11	0.11	0.12	0.12	0.12	0.09	0.43	0.43	0.09	0.43	0.43
Sat Flow, veh/h	1810	849	891	1810	1900	1611	1792	2812	727	1792	3398	229
Grp Volume(v), veh/h	62	0	123	170	33	110	58	440	431	73	264	273
Grp Sat Flow(s),veh/h/ln	1810	0	1740	1810	1900	1611	1792	1787	1752	1792	1787	1841
Q Serve(g_s), s	2.9	0.0	6.3	8.5	1.4	6.0	0.0	17.3	17.3	0.0	9.2	9.2
Cycle Q Clear(g_c), s	2.9	0.0	6.3	8.5	1.4	6.0	0.0	17.3	17.3	0.0	9.2	9.2
Prop In Lane	1.00		0.51	1.00		1.00	1.00		0.41	1.00		0.12
Lane Grp Cap(c), veh/h	195	0	187	219	230	195	529	768	753	397	768	791
V/C Ratio(X)	0.32	0.00	0.66	0.78	0.14	0.56	0.11	0.57	0.57	0.18	0.34	0.35
Avail Cap(c_a), veh/h	389	0	374	389	408	346	558	768	753	426	768	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	0.0	39.9	39.7	36.6	38.6	16.7	20.1	20.1	23.2	17.7	17.8
Incr Delay (d2), s/veh	0.9	0.0	3.9	5.8	0.3	2.6	0.1	3.1	3.2	0.2	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	3.2	4.6	0.8	2.8	0.9	9.2	9.0	1.4	4.8	5.0
LnGrp Delay(d),s/veh	39.3	0.0	43.8	45.5	36.9	41.1	16.8	23.1	23.2	23.5	19.0	18.9
LnGrp LOS	D		D	D	D	D	B	C	C	C	B	B
Approach Vol, veh/h		185			313			929			610	
Approach Delay, s/veh		42.3			43.1			22.8			19.5	
Approach LOS		D			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.3	45.8		15.9	14.3	45.8		17.1				
Change Period (Y+Rc), s	5.8	5.8		* 5.9	5.8	5.8		5.8				
Max Green Setting (Gmax), s	10.0	40.0		* 20	10.0	40.0		20.0				
Max Q Clear Time (g_c+1), s	2.0	19.3		8.3	2.0	11.2		10.5				
Green Ext Time (p_c), s	0.2	5.3		0.6	0.2	3.1		0.7				

Intersection Summary

HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 TWSC
2: Marsh Road & DSG Drive/Site Drive

Existing Conditions
PM Peak Hour

Intersection

Int Delay, s/veh 8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	13	88	40	12	119	48	667	63	116	446	36
Conflicting Peds, #/hr	3	0	1	1	0	3	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	75	0	-	-	225	-	50	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	82	82	82	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	1	1	1
Mvmt Flow	7	15	104	49	15	145	55	767	72	133	513	41

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1307	1683	280	1414	1704	386	557	0	0	770	0	0
Stage 1	803	803	-	880	880	-	-	-	-	-	-	-
Stage 2	504	880	-	534	824	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.21	-	-
Pot Cap-1 Maneuver	119	95	723	99	93	618	1024	-	-	847	-	-
Stage 1	348	399	-	312	368	-	-	-	-	-	-	-
Stage 2	524	368	-	503	390	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	65	75	721	61	74	616	1024	-	-	847	-	-
Mov Cap-2 Maneuver	65	75	-	61	74	-	-	-	-	-	-	-
Stage 1	328	336	-	295	347	-	-	-	-	-	-	-
Stage 2	363	347	-	347	328	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.4	57	0.5	1.9
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1024	-	-	72	721	61	369	847	-	-
HCM Lane V/C Ratio	0.054	-	-	0.31	0.144	0.8	0.433	0.157	-	-
HCM Control Delay (s)	8.7	-	-	76.1	10.8	171.5	22	10	-	-
HCM Lane LOS	A	-	-	F	B	F	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.1	0.5	3.6	2.1	0.6	-	-

HCM 2010 TWSC
3: LTCU Drive/W. Site Drive & Newman Road

Existing Conditions
PM Peak Hour

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	31	225	24	13	191	3	32	9	13	7	0	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	79	79	79	85	85	85	86	86	86
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	0	0	0
Mvmt Flow	37	268	29	16	242	4	38	11	15	8	0	83

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	246	0	0	296	0	0	510	634	148	490	647	123
Stage 1	-	-	-	-	-	-	356	356	-	277	277	-
Stage 2	-	-	-	-	-	-	154	278	-	213	370	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1332	-	-	1270	-	-	451	399	878	466	392	911
Stage 1	-	-	-	-	-	-	640	633	-	712	685	-
Stage 2	-	-	-	-	-	-	839	684	-	775	624	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1332	-	-	1270	-	-	395	380	878	432	373	911
Mov Cap-2 Maneuver	-	-	-	-	-	-	395	380	-	432	373	-
Stage 1	-	-	-	-	-	-	619	612	-	689	675	-
Stage 2	-	-	-	-	-	-	752	674	-	724	603	-

Approach	EB			WB			NB			SB
HCM Control Delay, s	0.9			0.6			14.3			9.9
HCM LOS							B			A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	452	1332	-	-	1270	-	-	829
HCM Lane V/C Ratio	0.141	0.028	-	-	0.013	-	-	0.109
HCM Control Delay (s)	14.3	7.8	0.1	-	7.9	0.1	-	9.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.4

Intersection

Int Delay, s/veh 5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	71	146	28	2	121	66	24	21	15	71	16	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	85	85	85	91	91	91	87	87	87
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	0	0	0
Mvmt Flow	82	168	32	2	142	78	26	23	16	82	18	71

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	220	0	0	200	0	0	432	572	100	445	549	110
Stage 1	-	-	-	-	-	-	347	347	-	186	186	-
Stage 2	-	-	-	-	-	-	85	225	-	259	363	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1361	-	-	1377	-	-	512	433	943	501	446	929
Stage 1	-	-	-	-	-	-	648	638	-	804	750	-
Stage 2	-	-	-	-	-	-	919	721	-	729	628	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1361	-	-	1377	-	-	433	403	943	446	415	929
Mov Cap-2 Maneuver	-	-	-	-	-	-	433	403	-	446	415	-
Stage 1	-	-	-	-	-	-	604	595	-	749	749	-
Stage 2	-	-	-	-	-	-	826	720	-	642	585	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.3	0.1	13	14.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	433	529	1361	-	-	1377	-	-	563
HCM Lane V/C Ratio	0.061	0.075	0.06	-	-	0.002	-	-	0.304
HCM Control Delay (s)	13.9	12.4	7.8	0.1	-	7.6	0	-	14.2
HCM Lane LOS	B	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.2	0.2	-	-	0	-	-	1.3

Queuing and Blocking Report

Existing Conditions
PM Peak Hour

Intersection: 1: Marsh Road & Meridian Mall Drive (Push Buttons)/Newman Road

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	94	119	154	110	57	76	226	258	90	149	137
Average Queue (ft)	36	54	81	20	28	27	120	109	39	68	65
95th Queue (ft)	75	99	136	63	49	59	204	205	77	122	119
Link Distance (ft)	354	354		591	591		728	728		756	756
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)			125			500			350		
Storage Blk Time (%)			2	0							
Queuing Penalty (veh)			1	0							

Intersection: 2: Marsh Road & DSG Drive/Site Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	51	50	84	119	51	9	24	15	75	2	10
Average Queue (ft)	15	29	25	44	14	0	1	1	30	0	0
95th Queue (ft)	43	47	60	82	41	7	11	6	57	2	5
Link Distance (ft)	245			225		756	756			472	472
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		75	75		225			50	150		
Storage Blk Time (%)	0		1	2			0				
Queuing Penalty (veh)	0		1	1			0				

Intersection: 3: LTCU Drive/W. Site Drive & Newman Road

Movement	EB	WB	NB	SB
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	34	25	61	54
Average Queue (ft)	4	3	27	31
95th Queue (ft)	20	19	51	50
Link Distance (ft)	591	386	199	192
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Home Depot Drive/E. Site Drive & Newman Road

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LT	LT	TR	L	TR	LTR
Maximum Queue (ft)	42	5	10	34	45	86
Average Queue (ft)	12	0	0	14	21	43
95th Queue (ft)	38	4	4	39	47	69
Link Distance (ft)	386	375	375		217	203
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				60		
Storage Blk Time (%)				0	0	
Queuing Penalty (veh)				0	0	

Zone Summary

Zone wide Queuing Penalty: 3

HCM 2010 Signalized Intersection Summary
 1: Marsh Road & Meridian Mall Drive (Push Buttons)/Newman Road

Future Conditions
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	6	1	95	6	25	8	169	69	56	404	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1759	1759	1759	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	10	10	2	134	8	35	11	228	93	63	454	6
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.60	0.60	0.60	0.71	0.71	0.71	0.74	0.74	0.74	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	8	8	8	2	2	2	2	2	2
Cap, veh/h	86	73	15	194	204	173	612	1167	462	685	1685	22
Arrive On Green	0.05	0.05	0.05	0.12	0.12	0.12	0.09	0.47	0.47	0.09	0.47	0.47
Sat Flow, veh/h	1810	1538	308	1675	1759	1495	1774	2478	981	1774	3577	47
Grp Volume(v), veh/h	10	0	12	134	8	35	11	161	160	63	224	236
Grp Sat Flow(s),veh/h/ln	1810	0	1846	1675	1759	1495	1774	1770	1690	1774	1770	1854
Q Serve(g_s), s	0.4	0.0	0.5	6.5	0.3	1.8	0.0	4.5	4.7	0.0	6.5	6.5
Cycle Q Clear(g_c), s	0.4	0.0	0.5	6.5	0.3	1.8	0.0	4.5	4.7	0.0	6.5	6.5
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.58	1.00		0.03
Lane Grp Cap(c), veh/h	86	0	88	194	204	173	612	833	796	685	833	873
V/C Ratio(X)	0.12	0.00	0.14	0.69	0.04	0.20	0.02	0.19	0.20	0.09	0.27	0.27
Avail Cap(c_a), veh/h	426	0	435	395	414	352	659	833	796	732	833	873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	0.0	38.8	36.1	33.3	34.0	11.4	13.1	13.1	11.0	13.6	13.6
Incr Delay (d2), s/veh	0.6	0.0	0.7	4.3	0.1	0.6	0.0	0.5	0.6	0.1	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	3.2	0.2	0.8	0.1	2.3	2.3	0.8	3.4	3.5
LnGrp Delay(d),s/veh	39.3	0.0	39.5	40.4	33.4	34.6	11.4	13.6	13.7	11.1	14.4	14.4
LnGrp LOS	D		D	D	C	C	B	B	B	B	B	B
Approach Vol, veh/h		22			177			332			523	
Approach Delay, s/veh		39.4			38.9			13.6			14.0	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.5	45.8		9.9	13.5	45.8		15.6				
Change Period (Y+Rc), s	5.8	5.8		* 5.9	5.8	5.8		5.8				
Max Green Setting (Gmax), s	10.0	40.0		* 20	10.0	40.0		20.0				
Max Q Clear Time (g_c+1), s	2.0	6.7		2.5	2.0	8.5		8.5				
Green Ext Time (p_c), s	0.1	1.8		0.0	0.1	2.6		0.4				

Intersection Summary

HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 TWSC
2: Marsh Road & DSG Drive/Site Drive

Future Conditions
AM Peak Hour

Intersection

Int Delay, s/veh 2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	1	8	3	0	53	14	175	11	75	454	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	75	0	-	-	225	-	50	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	60	60	60	60	60	60	84	84	84	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	2	2	2
Mvmt Flow	0	2	13	5	0	88	17	208	13	80	483	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	785	889	246	644	894	104	493	0	0	208	0	0
Stage 1	647	647	-	242	242	-	-	-	-	-	-	-
Stage 2	138	242	-	402	652	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	287	285	760	362	283	937	1067	-	-	1360	-	-
Stage 1	431	470	-	746	709	-	-	-	-	-	-	-
Stage 2	857	709	-	601	467	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	245	264	760	334	262	937	1067	-	-	1360	-	-
Mov Cap-2 Maneuver	245	264	-	334	262	-	-	-	-	-	-	-
Stage 1	424	442	-	734	698	-	-	-	-	-	-	-
Stage 2	764	698	-	554	440	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	9.6	0.6	1.1
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1067	-	-	264	760	334	937	1360	-	-
HCM Lane V/C Ratio	0.016	-	-	0.006	0.018	0.015	0.094	0.059	-	-
HCM Control Delay (s)	8.4	-	-	18.7	9.8	15.9	9.2	7.8	-	-
HCM Lane LOS	A	-	-	C	A	C	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	0.3	0.2	-	-

HCM 2010 TWSC
3: LTCU Drive/W. Site Drive & Newman Road

Future Conditions
AM Peak Hour

Intersection

Int Delay, s/veh 5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	62	57	12	2	46	6	5	1	2	3	0	75
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	68	68	68	67	67	67	60	60	60
Heavy Vehicles, %	4	4	4	0	0	0	0	0	0	9	9	9
Mvmt Flow	86	79	17	3	68	9	7	1	3	5	0	125

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	76	0	0	96	0	0	300	342	49	291	346	39
Stage 1	-	-	-	-	-	-	260	260	-	78	78	-
Stage 2	-	-	-	-	-	-	40	82	-	213	268	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.5	6.5	6.9	7.68	6.68	7.08
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.68	5.68	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.68	5.68	-
Follow-up Hdwy	2.24	-	-	2.2	-	-	3.5	4	3.3	3.59	4.09	3.39
Pot Cap-1 Maneuver	1506	-	-	1510	-	-	635	583	1016	621	560	1002
Stage 1	-	-	-	-	-	-	728	697	-	902	813	-
Stage 2	-	-	-	-	-	-	976	831	-	750	669	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1505	-	-	1509	-	-	529	547	1015	588	525	1001
Mov Cap-2 Maneuver	-	-	-	-	-	-	529	547	-	588	525	-
Stage 1	-	-	-	-	-	-	684	655	-	848	811	-
Stage 2	-	-	-	-	-	-	852	829	-	701	629	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.6	0.3	11.1	9.3
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	604	1505	-	-	1509	-	-	975
HCM Lane V/C Ratio	0.02	0.057	-	-	0.002	-	-	0.133
HCM Control Delay (s)	11.1	7.5	0.1	-	7.4	0	-	9.3
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	0.5

Intersection

Int Delay, s/veh 2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	15	26	21	1	36	29	9	2	3	0	3	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	76	76	76	60	60	60	75	75	75
Heavy Vehicles, %	5	5	5	0	0	0	0	0	0	0	0	0
Mvmt Flow	20	35	28	1	47	38	15	3	5	0	4	12

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	86	0	0	64	0	0	118	178	32	129	173	43
Stage 1	-	-	-	-	-	-	90	90	-	69	69	-
Stage 2	-	-	-	-	-	-	28	88	-	60	104	-
Critical Hdwy	4.2	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.25	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1487	-	-	1551	-	-	851	719	1041	837	724	1025
Stage 1	-	-	-	-	-	-	913	824	-	939	841	-
Stage 2	-	-	-	-	-	-	991	826	-	950	813	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1487	-	-	1551	-	-	828	708	1041	821	713	1025
Mov Cap-2 Maneuver	-	-	-	-	-	-	828	708	-	821	713	-
Stage 1	-	-	-	-	-	-	900	812	-	926	840	-
Stage 2	-	-	-	-	-	-	974	825	-	928	802	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0.1	9.3	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	828	876	1487	-	-	1551	-	-	924
HCM Lane V/C Ratio	0.018	0.01	0.014	-	-	0.001	-	-	0.017
HCM Control Delay (s)	9.4	9.1	7.5	0	-	7.3	0	-	.9
HCM Lane LOS	A	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0.1

HCM 2010 Signalized Intersection Summary

Future Conditions

1: Marsh Road & Meridian Mall Drive (Push Buttons)/Newman Road

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	56	53	209	37	109	52	598	218	79	457	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1881	1881	1900	1881	1881	1900
Adj Flow Rate, veh/h	62	67	63	222	39	116	58	664	242	84	486	34
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.90	0.90	0.90	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	1	1	1
Cap, veh/h	188	94	88	267	280	238	521	1064	388	371	1405	98
Arrive On Green	0.10	0.10	0.10	0.15	0.15	0.15	0.09	0.41	0.41	0.09	0.41	0.41
Sat Flow, veh/h	1810	901	847	1810	1900	1612	1792	2567	935	1792	3390	237
Grp Volume(v), veh/h	62	0	130	222	39	116	58	462	444	84	256	264
Grp Sat Flow(s),veh/h/ln	1810	0	1748	1810	1900	1612	1792	1787	1715	1792	1787	1839
Q Serve(g_s), s	3.1	0.0	7.0	11.5	1.7	6.4	0.0	19.7	19.7	0.0	9.4	9.5
Cycle Q Clear(g_c), s	3.1	0.0	7.0	11.5	1.7	6.4	0.0	19.7	19.7	0.0	9.4	9.5
Prop In Lane	1.00		0.48	1.00		1.00	1.00		0.55	1.00		0.13
Lane Grp Cap(c), veh/h	188	0	182	267	280	238	521	741	711	371	741	762
V/C Ratio(X)	0.33	0.00	0.72	0.83	0.14	0.49	0.11	0.62	0.62	0.23	0.35	0.35
Avail Cap(c_a), veh/h	375	0	362	375	394	334	540	741	711	390	741	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	0.0	41.9	40.0	35.8	37.8	18.1	22.3	22.3	27.2	19.3	19.3
Incr Delay (d2), s/veh	1.0	0.0	5.2	10.5	0.2	1.5	0.1	3.9	4.1	0.3	1.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	3.6	6.5	0.9	2.9	1.0	10.4	10.2	1.8	4.9	5.0
LnGrp Delay(d),s/veh	41.1	0.0	47.0	50.5	36.0	39.3	18.1	26.3	26.4	27.5	20.6	20.6
LnGrp LOS	D		D	D	D	D	B	C	C	C	C	C
Approach Vol, veh/h		192			377			964			604	
Approach Delay, s/veh		45.1			45.6			25.9			21.5	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	45.8		15.9	14.7	45.8		20.0				
Change Period (Y+Rc), s	5.8	5.8		* 5.9	5.8	5.8		5.8				
Max Green Setting (Gmax), s	10.0	40.0		* 20	10.0	40.0		20.0				
Max Q Clear Time (g_c+1), s	2.0	21.7		9.0	2.0	11.5		13.5				
Green Ext Time (p_c), s	0.2	5.4		0.6	0.2	3.0		0.7				

Intersection Summary

HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection

Int Delay, s/veh 10.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	13	88	40	12	159	48	648	63	144	440	36
Conflicting Peds, #/hr	3	0	1	1	0	3	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	75	75	-	-	225	-	50	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	82	82	82	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	1	1	1
Mvmt Flow	7	15	104	49	15	194	55	745	72	166	506	41

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1353	1718	277	1453	1739	375	550	0	0	748	0	0
Stage 1	860	860	-	858	858	-	-	-	-	-	-	-
Stage 2	493	858	-	595	881	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.21	-	-
Pot Cap-1 Maneuver	110	91	726	93	88	628	1030	-	-	863	-	-
Stage 1	321	376	-	322	376	-	-	-	-	-	-	-
Stage 2	532	376	-	463	367	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	52	69	724	54	67	626	1030	-	-	863	-	-
Mov Cap-2 Maneuver	52	69	-	54	67	-	-	-	-	-	-	-
Stage 1	303	303	-	304	355	-	-	-	-	-	-	-
Stage 2	333	355	-	304	296	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25	60.3	0.5	2.4
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1030	-	-	63	724	54	395	863	-	-
HCM Lane V/C Ratio	0.054	-	-	0.355	0.143	0.903	0.528	0.192	-	-
HCM Control Delay (s)	8.7	-	-	90.7	10.8	216	23.9	10.2	-	-
HCM Lane LOS	A	-	-	F	B	F	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.3	0.5	4	3	0.7	-	-

HCM 2010 TWSC
 3: LTCU Drive/W. Site Drive & Newman Road

Future Conditions
 PM Peak Hour

Intersection

Int Delay, s/veh 5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	108	221	24	13	183	18	32	9	13	20	0	140
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	79	79	79	85	85	85	86	86	86
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	0	0	0
Mvmt Flow	129	263	29	16	232	23	38	11	15	23	0	163

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	254	0	0	292	0	0	684	822	146	670	825	127
Stage 1	-	-	-	-	-	-	535	535	-	276	276	-
Stage 2	-	-	-	-	-	-	149	287	-	394	549	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1323	-	-	1274	-	-	339	311	881	347	310	906
Stage 1	-	-	-	-	-	-	502	527	-	712	685	-
Stage 2	-	-	-	-	-	-	844	678	-	608	520	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1323	-	-	1274	-	-	250	270	881	298	270	906
Mov Cap-2 Maneuver	-	-	-	-	-	-	250	270	-	298	270	-
Stage 1	-	-	-	-	-	-	443	465	-	629	675	-
Stage 2	-	-	-	-	-	-	682	668	-	516	459	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.6	0.6	19.8	11.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	307	1323	-	-	1274	-	-	722
HCM Lane V/C Ratio	0.207	0.097	-	-	0.013	-	-	0.258
HCM Control Delay (s)	19.8	8	0.2	-	7.9	0.1	-	11.7
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0.3	-	-	0	-	-	1

Intersection

Int Delay, s/veh 5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	71	155	28	2	128	71	24	21	15	74	16	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	85	85	85	91	91	91	87	87	87
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	0	0	0
Mvmt Flow	82	178	32	2	151	84	26	23	16	85	18	71

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	234	0	0	210	0	0	446	596	105	461	571	117
Stage 1	-	-	-	-	-	-	357	357	-	197	197	-
Stage 2	-	-	-	-	-	-	89	239	-	264	374	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1345	-	-	1365	-	-	501	420	936	488	434	919
Stage 1	-	-	-	-	-	-	639	632	-	792	742	-
Stage 2	-	-	-	-	-	-	914	711	-	724	621	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1345	-	-	1365	-	-	422	390	936	433	403	919
Mov Cap-2 Maneuver	-	-	-	-	-	-	422	390	-	433	403	-
Stage 1	-	-	-	-	-	-	595	588	-	737	741	-
Stage 2	-	-	-	-	-	-	821	710	-	636	578	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.3	0.1	13.2	14.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	422	515	1345	-	-	1365	-	-	547
HCM Lane V/C Ratio	0.062	0.077	0.061	-	-	0.002	-	-	0.319
HCM Control Delay (s)	14.1	12.6	7.8	0.1	-	7.6	0	-	14.6
HCM Lane LOS	B	B	A	A	-	A	A	-	B
HCM 95th %file Q(veh)	0.2	0.2	0.2	-	-	0	-	-	1.4

Queuing and Blocking Report

Future Conditions
PM Peak Hour

Intersection: 1: Marsh Road & Meridian Mall Drive (Push Buttons)/Newman Road

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	99	124	181	161	65	84	248	262	97	137	129
Average Queue (ft)	39	61	111	30	30	31	130	125	44	70	61
95th Queue (ft)	78	113	170	109	52	69	210	217	79	119	110
Link Distance (ft)	354	354		591	591		728	728		756	756
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)			125			500			350		
Storage Blk Time (%)			8	0							
Queuing Penalty (veh)			3	0							

Intersection: 2: Marsh Road & DSG Drive/Site Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	TR	L	T	T	R	L	T	TR
Maximum Queue (ft)	51	62	91	162	43	6	6	30	85	4	2
Average Queue (ft)	17	31	29	57	15	0	0	2	36	0	0
95th Queue (ft)	42	49	69	113	41	4	4	16	69	3	1
Link Distance (ft)	245			225		756	756			472	472
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		75	75		225			50	150		
Storage Blk Time (%)		0	2	5				0			
Queuing Penalty (veh)		0	5	2				0			

Intersection: 3: LTCU Drive/W. Site Drive & Newman Road

Movement	EB	WB	WB	NB	SB
Directions Served	LT	LT	TR	LTR	LTR
Maximum Queue (ft)	66	35	10	57	89
Average Queue (ft)	15	4	0	27	45
95th Queue (ft)	46	21	6	51	70
Link Distance (ft)	591	386	386	199	192
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report

Future Conditions
PM Peak Hour

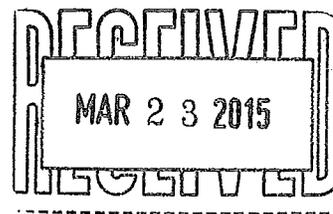
Intersection: 4: Home Depot Drive/E. Site Drive & Newman Road

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	TR	LT	TR	L	TR	LTR
Maximum Queue (ft)	44	13	10	12	43	44	103
Average Queue (ft)	11	1	0	1	17	22	48
95th Queue (ft)	36	6	5	8	43	47	81
Link Distance (ft)	386	386	375	375		217	203
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					60		
Storage Blk Time (%)					0	0	
Queuing Penalty (veh)					0	0	

Zone Summary

Zone wide Queuing Penalty: 10

**William F. Savage, P.E.
Savage Traffic Engineering, Inc.**



Summer Address

6401 Timber Ridge Trail
East Lansing, MI 48823
Phone & Fax: 517-339-3933

e-mail: MSUSavage@aol.com

Winter Address

6611 Stone River Road, #206
Bradenton, FL 34203
Phone & Fax: 941-755-4681

March 22, 2015

Peter Menser, Associate Planner
Charter Township of Meridian
5151 Marsh Road
Okemos, MI 48826

RE: Kroger Fuel Stations

Hi Peter:

Once again this consultant prepared a very hard to read impact study. The 25 (+ or -) page study had no page numbers, didn't have a site plan in the report, and the important current traffic, generated traffic, and future traffic seem to be hard to find in the study.

I am concerned with the future east and west left turns at the Kroger – DSG intersection at Marsh Road. Fortunately, these turns are fairly light and some of these vehicles will choose to find other routes. But to be on the safe side, I think that the accidents for the past two to three years should be reviewed. Also, I would like to see a "bake up, and delay" study (maybe it won't show a problem).

Sincerely,

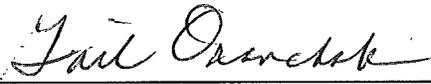
WFSavage

William F. Savage, P.E.

CHARTER TOWNSHIP OF MERIDIAN

MEMORANDUM

TO: Planning Commission

FROM: 
Gail Oranchak, AICP
Principal Planner

DATE: April 9, 2015

RE: Rezoning #15010 (Forsberg Family, LLC), request to conditionally rezone approximately 39.46 acres from I (Industrial), PO (Professional and Office), RR (Rural Residential) and C-2 (Commercial) to C-2* (Commercial)

A public hearing was held during the Planning Commission's March 9, 2015 regular meeting regarding Forsberg Family LLC's request to conditionally rezone approximately 39.46 acres from I (Industrial), PO (Professional and Office), RR (Rural Residential) and C-2 (Commercial) to C-2* (Commercial) with the voluntary offer to develop the site as a mixed use planned unit development with a restriction of no more than 18 dwelling units per acre as allowed under the density bonus provisions in the ordinance.

Since the meeting the applicant has again amended the application by removing three parcels totaling approximately six acres zoned RR (Rural Residential) and located west of the Smith Drain and east of Kansas Street. The removal of the six acres effectively reduces the amount of acreage being rezoned to approximately 33.42 acres. By removing the six acres from the request, the new condition offered at the last meeting to limit density on the six acres has been retracted.

Planning Commission Options

The Planning Commission may recommend approval or denial of the applicant's conditional rezoning request or it may recommend a different zoning designation to the Township Board. A resolution to recommend approval of the amended request to the Township Board is attached.

Attachments

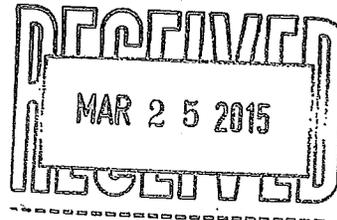
1. Letter from Brent Forsberg dated March 18, 2015
2. Resolution to approve

T.A. Forsberg, Inc.

Land Development Sales Project Management

March 26, 2015

Meridian Charter Township
ATTN: Gail Oranchak
5151 Marsh Road
Okemos, MI 48864



**RE: Rezoning Application #15010 (Forsberg Family L.L.C.)
Supplemental Attachment**

Dear Gail:

This letter is to state our request to remove the \pm 6 acres on Kansas Street from our rezoning request. This is parcel numbers 33-02-02-33-302-003, 33-02-02-33-302-004, and 33-02-02-33-302-005. Additionally, this will remove the condition submitted by the applicant March 18th which applied to these Kansas Street parcels only.

Thank you for your prompt attention on this.

Sincerely,

A handwritten signature in cursive script, appearing to read "Brent Forsberg".

Brent Forsberg
President

For Forsberg Family L.L.C.

A handwritten signature in cursive script, appearing to read "Brent Forsberg".

Brent Forsberg, Its Manager



RESOLUTION TO APPROVE

**Rezoning #15010
Forsberg Family LLC
Jolly Oak Road and Farrins Parkway**

RESOLUTION

At a regular meeting of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 13th day of April 2015, at 7:00 p.m., Local Time.

PRESENT: _____

ABSENT: _____

The following resolution was offered by _____ and supported by _____.

WHEREAS, Forsberg Family LLC requested the rezoning (Rezoning #15010) of approximately 39.46 acres developed and undeveloped acres located north of Jolly Road, north and west of Jolly Oak Road and north of Farrins Parkway and addressed as 2311 and 3668 Kansas Street, 2398 Jolly Road, and 2360 and 2362 Jolly Oak Road from PO (Professional and Office), C-2 (Commercial) and I (Industrial) and RR (Rural Residential) to C-2 (Commercial) with the voluntary offer of a condition limiting development to a mixed use planned unit development with a restriction of no more than 18 units per acre as allowed under the density bonus provisions in the ordinance; and

WHEREAS, the Planning Commission held a public hearing and discussed the request at its March 9, 2015 meeting; and

WHEREAS, the applicant amended the application by removing from the request three parcels totaling approximately six acres zoned RR (Rural Residential) and located west of the Smith Drain and east of Kansas Street; and

WHEREAS, the Planning continued discussion of the request at its March 23, 2105 and April 13, 2015 meetings; and

WHEREAS, the Planning Commission reviewed the staff material forwarded under cover memorandums dated March 5, 2015, March 19, 2015 and April 9, 2105; and

WHEREAS, rezoning the subject site to C-2 (Commercial) conditioned on the site's development as a mixed use planned unit development is consistent with the developing character of the area as evidenced by the recent conditional rezoning of a nearby site on the corner of Joly Oak Road, Water Lily Way and Farrins Parkway from PO (Professional and Office) to C-2 (Commercial) to establish a hotel; and

WHEREAS, a future C-2 (Commercial) zoned mixed use planned unit development is compatible with existing office and retail development located south and east of the subject site; and

**Resolution to Approve
Rezoning #15010 (Forsberg Family LLC)
Page 2**

WHEREAS, a mixed use planned unit development complements surrounding office and commercial service uses by providing future multiple family housing; and

WHEREAS, the Township's traffic consultant reviewed the applicant's Traffic Study commenting, there are no concerns "except for the Okemos Road/Jolly Road intersection;" and

WHEREAS, the Ingham County Road Department has proposed improvements to the Jolly Road/Okemos Road intersection to alleviate existing and anticipated delays at the traffic signal; and

WHEREAS, public utilities and services are available to serve the site; and

WHEREAS, the rezoning will result in a logical and orderly development pattern for the surrounding area.

NOW THEREFORE, BE IT RESOLVED THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN hereby recommends approval of Rezoning #15010 to rezone approximately 33.42 developed and undeveloped acres located north of Jolly Road, west and north of Jolly Oak Road and north of Farrins Parkway and addressed as 2398 Jolly Road, and 2360 and 2362 Jolly Oak Road to C-2 (Commercial) with the voluntary offer of a condition limiting development to a mixed use planned unit development with a restriction of no more than 18 units per acre as allowed under the density bonus provisions in the ordinance.

ADOPTED: YEAS: _____

NAYS: _____

STATE OF MICHIGAN)
) ss
COUNTY OF INGHAM)

I, the undersigned, the duly qualified and acting Chair of the Planning Commission of the Township of Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and a complete copy of a resolution adopted at a regular meeting of the Planning Commission on the 13th day of April 2015.

John Scott-Craig
Planning Commission Chair