

## **Traffic Management and Parking Plan**

**DERBY STREET SHOPS  
HINGHAM, MASSACHUSETTS**

SEPTEMBER 13, 2018  
REVISED NOVEMBER 29, 2018

## **PROJECT DESCRIPTION**

W/S/M Hingham Properties LLC (the “Client”) is proposing to expand and develop a portion of an approximately 44.7 ± acre parcel of land located at 92-98 Derby Street and 124 Old Derby Street in Hingham, MA (the “Site”). The Building 5 project includes the demolition of the existing 13,000 sf RiteAid building and the construction of a new, state of the art 25,000 sf building for a net increase in Gross Leasable Area (GLA) at Derby Street Shops of 12,000 sf.

W/S/M Hingham Properties has completed the following analysis to address car and pedestrian circulation and parking at Derby Street Shops. Peak Season as referenced in this plan is identified as the holiday shopping period from Thanksgiving through New Year’s Day each year.

The traffic management and parking plan provides additional detail and recommendations on the following:

- Standard Traffic Management Plan
  - Intersection Analysis
  - Signage/Wayfinding
  - Truck Traffic Management
- Peak Season Traffic Management Plan
- Standard Parking Management
  - Employee Parking Requirements
  - Compatible Uses
  - Signage/Wayfinding
- Peak Season Parking Management Plan
- Pedestrian Traffic Plan

## **STANDARD TRAFFIC MANAGEMENT PLAN**

### **INTERSECTION ANALYSIS**

W/S/M Hingham Properties engaged Traffic Engineer, Ron Muller & Associates, to perform traffic counts on August 18, 2018 and complete a subsequent analysis of the Old Derby Street intersections (the Kohl’s Driveway and the main site driveway). These intersections were identified by the Planning Board as most likely to be impacted by the Building 5 and new MassDOT intersection improvements and in need of further study. In summary, both the Kohl’s driveway and the Old Derby Street approach to the main site driveway will continue to operate at desirable levels of service during the critical Saturday mid-day peak hour.

The Ron Muller & Associates scope of work also included an evaluation of the internal signage and traffic markings at the site’s eastern service driveway. The evaluation completed by Ron Muller & Associates indicates that the internal signage and markings are appropriate at the site’s eastern service driveway to discourage left hand turns on to Derby Street westbound. However, included within the Ron Muller & Associates report are recommendations of ways to further enhance wayfinding and improve the visibility of the current signage to further discourage patrons from trying to use this exit to reach Route 3. More detail regarding the recommended signage improvements is found in the following section of this plan. W/S/M Hingham Properties will monitor these intersections and if increased signage does not alleviate the issue, has identified the potential addition of a right turn only island as another way of deterring left hand turns in these locations. The design and permitting of a right turn only island is subject to approval by MassDOT.

A copy of the Ron Muller & Associates Supplemental Traffic Analysis, dated August 24, 2018 is attached in the Appendix.

**SIGNAGE/WAYFINDING**

BSC Group and Ron Muller & Associates have completed an analysis of the current wayfinding signage on-site and have identified several locations where signage is smaller than recommended and may be obscured by mature landscaping. The following recommended improvements will help direct customers who are exiting the site to their desired destination and will more clearly identify prohibited travel movements. In general, BSC used this opportunity to recommend signage locations which are in more prominent locations and stand alone to distinguish it from other signage nearby.

BSC suggests the installation of appropriately sized directional signage which provide customers with clear guidance towards the signalized intersections which provide egress to Route 3. The recommended signage is described below and depicted on the attached Directional Signage and Location Plan.

1. Two signs at the eastern service driveway across from the northeasterly corner of Whole Foods. The first sign should read “To Derby Street West and Route 3 (No Trucks)” and should have an arrow pointing left. The second sign should read “To Derby Street East (No Access to Route 3)” and have an arrow pointing straight. Additionally, an MUTCD compliant “No Left Turn” at the eastern service drive across Derby Street should be installed. Finally, at the easter service driveway, a “Right Turn only” sign will be placed under the Stop sign.
2. At the northwesterly corner of Whole Foods a sign reading “To Derby Street West and Route 3” and should have an arrow pointing left.
3. At the northeasterly corner of the Pavilion Building another sign reading “To Derby Street and Route 3” also should have an arrow point right. A sign mounted on the same sign post, facing the opposite direction, should also read “To Derby Street and Route 3” and have an arrow pointing left. This will direct customers, who may try to use the Whole Foods driveway for Route 3 access, from the interior parking lots, to the main site driveway with Derby Street.
4. At the northwesterly corner of the Pavilion Building a sign reading “To Derby Street and Route 3” with an arrow pointing right.
5. A STOP sign is recommended to be re-installed at the Old Derby Street and Main driveway intersection, along with a STOP AHEAD sign along Old Derby Street, warning vehicles of the upcoming stop sign.
6. At the Kohl’s driveway, a sign pointing left and reading “to Derby Street West and Route 3” will be installed.
7. At the intersection of Old Derby Street and the Main site driveway, pavement markings will be installed indicating “Do Not block intersection.”
8. Additionally, it is recommended that current signage instructing visitors exiting Derby Street Shops through the main entrance that both exit lanes can be used to access Route 3 should be moved to the southwesterly corner of the Pavilion Building.

Please refer to the attached Directional Signage and Location Plan for details and locations of signage.

### **TRUCK TRAFFIC MANAGEMENT**

Truck and delivery vehicles are expected to continue to operate at the rear of the buildings away from high pedestrian areas. Trucks entering Derby Street Shops from Derby Street will be required to take a right into the site at the eastern service driveway behind Bertuccis and follow the service driveway along the perimeter of the site to their destination.

The alignment revisions to the Kohl's driveway which will be implemented with the Building 5 project and the MassDOT Old Derby Street construction are expected to improve truck operations on the service driveways at the rear of the buildings at Derby Street Shops. Truck traffic returning to Route 3 is expected to utilize the new Old Derby Street/Derby Street signalized intersection to make a left turn onto Derby Street towards Route 3.

Exiting truck maneuvers at the eastern service driveway will continue to be discouraged and limited to right turns only onto Derby Street eastbound. Refer to the attached Traffic Routes plan.

### **PEAK SEASON TRAFFIC MANAGEMENT PLAN**

Derby Street Shops is committed to managing peak seasonal traffic periods, most notably the holiday season. Currently, W/S/M Hingham Properties partners with the Hingham Police to hire police details during peak hours to help manage and ensure the safety of vehicles entering and exiting the site.

In addition to the police details, Derby Street Shops will engage monitors, who can help direct the flow of traffic circulation within the site. Traffic monitors will be able to respond to specific issues and pressure points at different intersections at different times of the day. At a minimum, it is recommended that a monitor be located at the Old Derby Street/Main driveway entrance, at the Whole Foods driveway/Whole Foods intersection, and at the Building 5/Main Driveway intersection.

### **STANDARD PARKING MANAGEMENT**

#### **EMPLOYEE PARKING REQUIREMENTS**

The Derby Street Shops employee handbook requires employees to park in designated areas, specifically the parking lot to the east of Whole Foods. Parking for customers and visitors is reserved for the centrally located spaces within the site shopping areas.

Attached is a Parking Management Plan of designated employee parking areas which are provided to all employees at Derby Street Shops and includes future employee parking at the conclusion of the Building 5 project. Management of Derby Street sends reminders to tenants about the policies in the employee handbook and will regularly remind tenants to have employees park in the designated areas only.



# DERBY STREET SHOPPES

100 DERBY STREET

HINGHAM  
MASSACHUSETTS  
(PLYMOUTH COUNTY)

DIRECTIONAL SIGNS  
AND LOCATIONS

SEPTEMBER 13, 2018

PREPARED FOR:

W/S/M HINGHAM PROPERTIES  
33 BOYLSTON STREET, SUITE 3000  
CHESTNUT HILL, MA 02467

**BSC GROUP**

803 Summer Street  
Boston, Massachusetts  
02127

617 896 4300

Job No.: 45817.09 Date: \_\_\_\_\_  
Scale: \_\_\_\_\_ Revised: \_\_\_\_\_  
Dwg No: \_\_\_\_\_  
File: \_\_\_\_\_



# DERBY STREET SHOPPES

100 DERBY STREET

HINGHAM  
MASSACHUSETTS  
(PLYMOUTH COUNTY)

TRAFFIC ROUTES

SEPTEMBER 13, 2018

PREPARED FOR:

W/S/M HINGHAM PROPERTIES  
33 BOYLSTON STREET, SUITE 3000  
CHESTNUT HILL, MA 02467

**BSC GROUP**

803 Summer Street  
Boston, Massachusetts  
02127

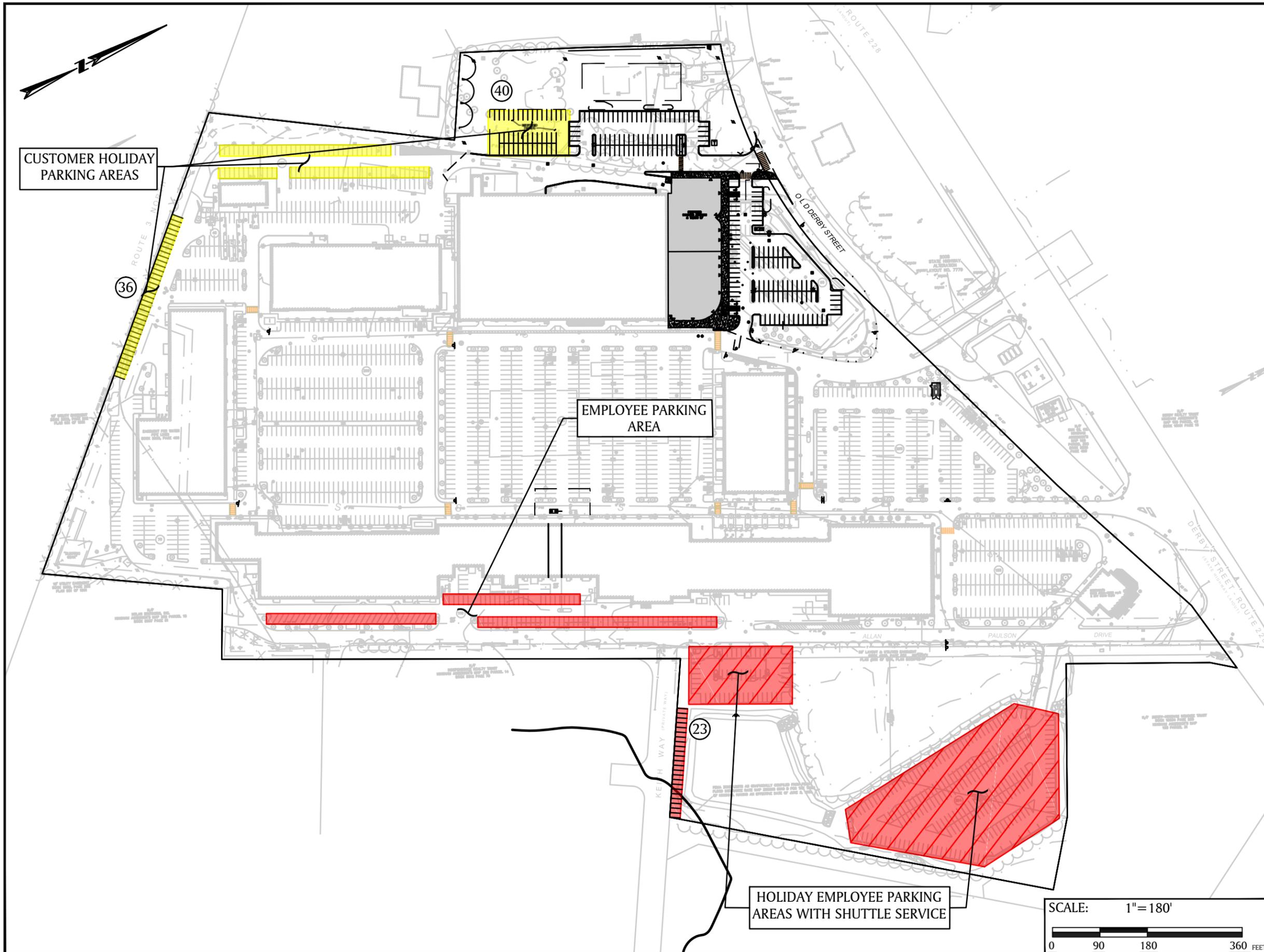
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# DERBY STREET SHOPPES

100 DERBY STREET

HINGHAM  
MASSACHUSETTS  
(PLYMOUTH COUNTY)

PEAK/HOLIDAY SEASON  
PARKING MANAGEMENT  
PLAN

SEPTEMBER 13, 2018

PREPARED FOR:

W/S/M HINGHAM PROPERTIES  
33 BOYLSTON STREET, SUITE 3000  
CHESTNUT HILL, MA 02467



803 Summer Street  
Boston, Massachusetts  
02127

617 896 4300

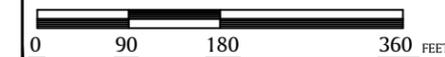
Job No.: 45817.09 Date: SEPT 13, 2018

Scale: 1"=180" Revised:

Dwg No:

File:

SCALE: 1" = 180'



### **COMPATIBLE USES**

W/S/M Hingham Properties and the management staff at Derby Street Shops expects and maintains a strong working relationship with all tenants on site. As part of this relationship, Derby Street Shops is mindful when leasing space to new tenants with respect to parking needs and peak hour timing differentials for each tenant. WS Development owns and operates over 100 properties, many of which have varying uses which must be coordinated to ensure an appropriate balance of parking availability is maintained. WS Development will continue to pay close attention to the placement of tenants to reduce parking conflicts and will continue to be in constant contact with tenants to be aware of and address issues if they arise.

W/S/M Hingham Properties has requested approval to locate fitness uses on the site. Through discussions with the Planning Board, the applicant has agreed to restrict fitness in certain areas to diminish the possibility of fitness use parking and retail use parking conflicting. Please see attached fitness use location plan for further information about the locations where fitness uses have been restricted.

### **SIGNAGE/WAYFINDING**

BSC recommends additional parking signage identifying for customers where alternative parking areas are located such as the outermost lots, and behind the REI. The intent of these signs is to make customers aware of alternative parking options to the centrally located parking areas in the middle of the site. These areas often have a surplus of parking even during peak hours. See the Directional Signs and Locations site plan for suggested locations for additional parking signage.

Additional signage directing customers how to exit the site, as described in the traffic management section above, will help customers more efficiently plan their exit maneuvers.

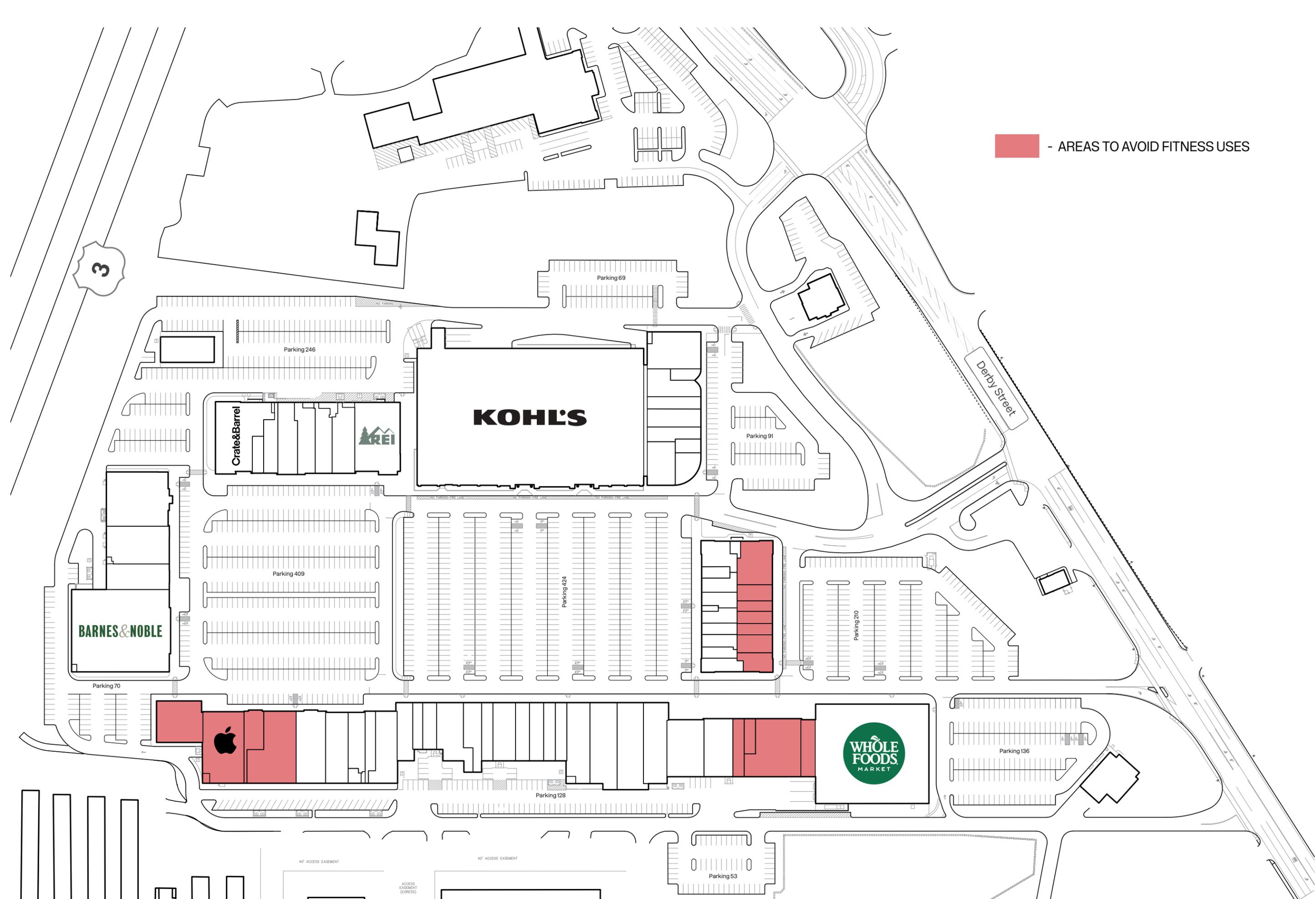
### **PEAK SEASON PARKING MANAGEMENT PLAN**

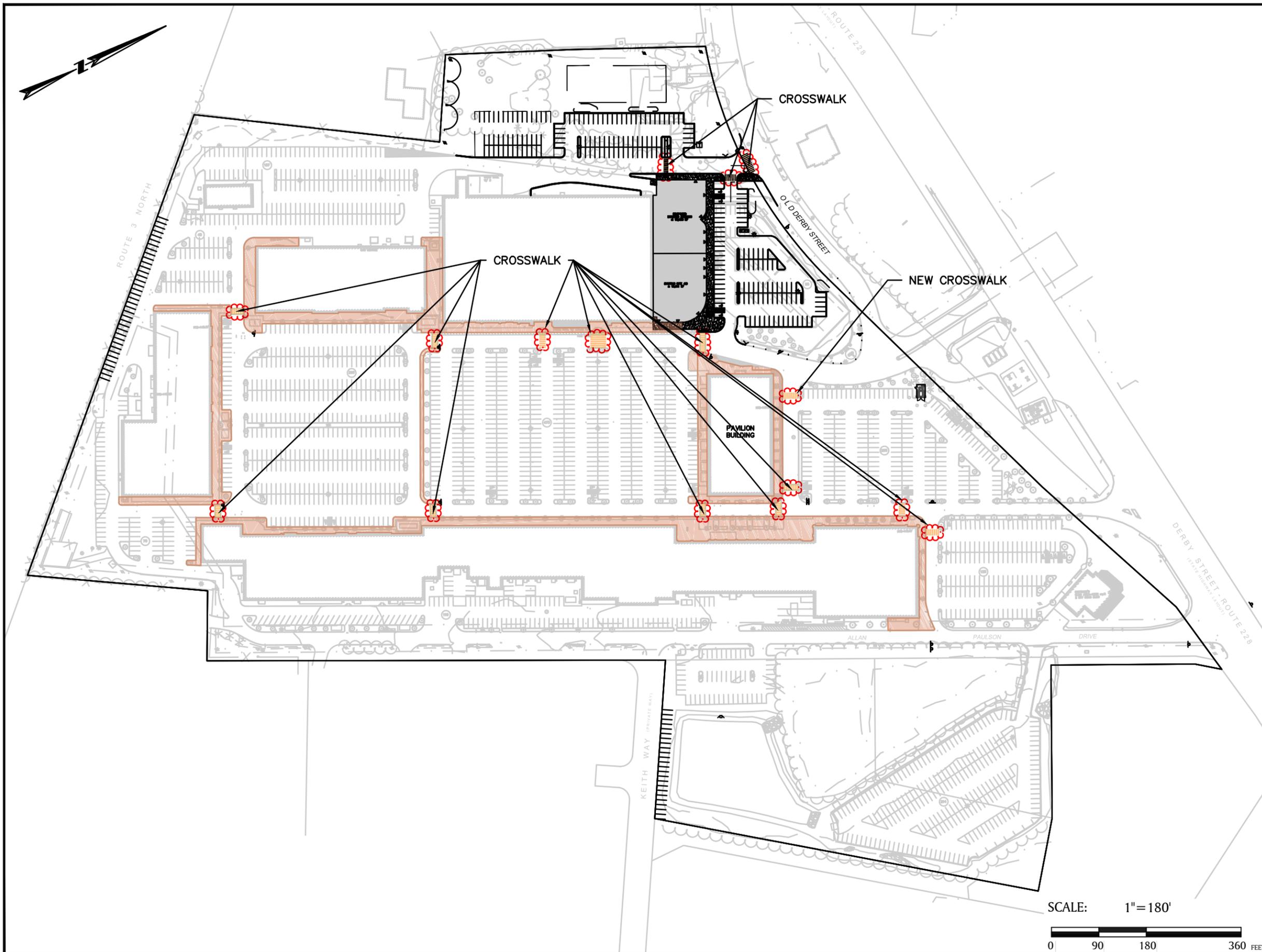
During peak periods, the ability for customers to find parking is vital to the visitor experience. To ensure availability of primary parking spaces, Derby Street Shops management will provide a van shuttle service for employees from the outer employee parking lots (depicted in the Parking Management Plan below with hatched marks) to the shops to ensure all customer parking is left available for shoppers.

W/S/M Hingham Properties acknowledges that, during previous peak seasons, overflow parking was set up without Town approval. W/S/M Hingham Properties striped this overflow parking because customers were parallel parking along the main service road around the site, which in turn caused backups. To formalize the use of additional areas on site for peak period parking, W/S/M Hingham Properties respectfully requests permission from the Town of Hingham to use the grass perimeter of the property for overflow parking during peak season periods only. The location of these areas is depicted in yellow on the Parking Management Plan graphic presented in the previous page. Once constructed, W/S/M Hingham Properties would like to use the reinforced overflow parking lot to the west of the Building 5 as overflow parking during the peak season.

As mentioned previously, Derby Street Shops will also be engaging traffic monitors to help manage the on-site circulation of visitors and assist with the identification of available parking.

### **PARKING MONITORING PLAN**





# DERBY STREET SHOPPES

100 DERBY STREET

HINGHAM  
MASSACHUSETTS  
(PLYMOUTH COUNTY)

PEDESTRIAN ROUTES

SEPTEMBER 13, 2018

PREPARED FOR:

W/S/M HINGHAM PROPERTIES  
33 BOYLSTON STREET, SUITE 3000  
CHESTNUT HILL, MA 02467



803 Summer Street  
Boston, Massachusetts  
02127

617 896 4300

Job No.: 45817.09 Date: SEPT 13, 2018

Scale: 1"=180' Revised:

Dwg No:

File:

SCALE: 1" = 180'



Applicant has agreed to conduct a parking monitoring plan per the recommendations provided by Jeff Dirk in his letter dated 11/16/2018:

*The Applicant shall conduct a parking monitoring program for the entire site that would consist of: i) parking demand observations conducted over a continuous 12-hour period (7 AM to 7 PM) on a weekday and a Saturday; and ii) parking occupancy within the site. The observations shall be conducted once during the peak holiday shopping season (between November 27<sup>th</sup> and December 24<sup>th</sup>) and once during spring (April, May or June) or fall (September or October). The results of the parking monitoring program shall be summarized in a written report (the "Parking Monitoring Report") provided to the Director of Community Planning within one (1) month of the parking observations and should include the following information:*

- *Land uses and size (no. of seats, space occupied (sf) and/or occupancy (persons), as appropriate) for the uses located within the overall site at the time that the parking demand observations were performed;*
- *Parking supply (total number of parking spaces provided)*
- *Number of occupied parking spaces reported in 30 minute intervals during the observation period*
- *Number of available parking spaces reported in 30 minute intervals during the observation period (i.e., parking supply – no. of occupied spaces)*
- *Peak parking demand period*
- *Average duration of stay; and*
- *Graphical presentation of parking occupancy within the site during the peak parking demand period*

*To the extent that the observed parking demand exceeds the parking supply within the overall site, the Applicant shall identify and undertake corrective measures to address the parking shortfall. These measures should be documented in the Parking Monitoring Report along with the responsible party and time frame for implementation. The initial parking monitoring program should be performed prior to the issuance of a Certificate of Occupancy for the Project in order to establish a baseline condition and then thereafter within one year of occupancy of the Project (defined the tenancy/leasing of 80 percent or more of the gross leasable area created by the Project). The Director of Community Planning may recommend that additional parking observations be performed if it is found that the parking demand exceeds the parking supply within the overall site.*

## **PEDESTRIAN TRAFFIC PLAN**

Pedestrian travel routes are vital in a retail center. W/S/M Hingham Properties conducted a pedestrian crosswalk analysis at the site and worked with an artist to develop cross walk designs. These designs are intended not only to beautify the property but also to make pedestrians and drivers acutely aware of the locations of pedestrian crosswalks on the property through the use of bright colors and bold design patterns. If approved by the Town, the crosswalks are ready to be installed immediately.

Please find attached a Pedestrian Routes plan analysis of the site and the locations and design set for the proposed crosswalk improvements.

### **SUMMARY**

The completion of the on-site traffic counts and analysis by Ron Muller & Associates demonstrates the ability of the Old Derby Street intersections to operate effectively after the completion of the Derby Street/Old Derby Street signalization project. Through this report, BSC has incorporated the recommendations made by Ron Muller & Associates and identified additional signage, circulation management and peak period recommendations that will improve the safety and movement of pedestrians and cars through the Derby Street Shops. BSC believes these improvements can be made in a relatively short timeframe and can be in place before the completion of the Building 5 project.

**Appendix**

**DERBY STREET SHOPS SUPPLEMENTAL TRAFFIC ANALYSIS**

**CONSTRUCTION MANAGEMENT PLAN**



Ref.: 16045

August 24, 2018

Ms. Victoria Maguire  
W/S/M Hingham Properties LLC  
33 Boylston Street, Suite 3000  
Chestnut Hill, MA 02467

Reg.: Supplemental Traffic Analysis  
Derby Street Shoppes, Hingham, MA

Dear Victoria:

***Ron Müller & Associates*** (RMA) has prepared this letter in response to a request by the Hingham Planning Board for additional information regarding the traffic impacts of the proposed expansion of the Derby Street Shoppes located on Derby Street in Hingham, Massachusetts. The Hingham Planning Board requested the following additional information:

- analysis of the Derby Street Shoppes main driveway intersection with Old Derby Street;
- analysis of the Old Derby Street intersection with the rear Kohl's driveway; and
- evaluation of potential improvements to minimize illegal left turns exiting the Derby Street Shoppes easternmost service driveway.

RMA prepared a Traffic Impact and Access Study<sup>1</sup> for the Derby Street Shoppes expansion project that evaluated the impacts of the expansion on the intersections along Derby Street. The study assumed completion of roadway improvements planned by the Town of Hingham and the Massachusetts Department of Transportation (MassDOT) that will include relocation and signalization of Old Derby Street. Due to the additional site traffic that will then be drawn to Old Derby Street, the Hingham Planning Board requested that the internal site intersections along Old Derby Street also be evaluated.

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<sup>1</sup> *Traffic Impact and Access Study, Derby Street Shoppes Expansion, Hingham, MA*; prepared for W/S/M Hingham Properties LLC; prepared by Ron Müller & Associates; May 23, 2017.

As documented in the traffic study, the Derby Street Shoppes project generates the greatest volume of traffic during the Saturday peak hour. Accordingly, this supplemental traffic evaluation focuses on conditions during this time period. Additional traffic counts were collected at the Old Derby Street intersections with the main site driveway and with the rear Kohl's driveway on Saturday August 18, 2018 between 12:00 and 2:00 PM. In addition, a vehicle delay study was performed at the Old Derby Street and main site driveway intersection to measure actual delays experienced by left and right turns onto the main driveway. These delay values were then used to adjust the capacity analysis model to reflect actual delays experienced at the intersection as the model does not take into consideration the effects of vehicle platooning and gaps created by the adjacent traffic signal at the Derby Street intersection. The traffic counts and the existing conditions volume network are attached to this letter and the results of the vehicle delay study are summarized in Table 1 and are discussed below.

**Table 1**  
**Vehicle Delay Study**  
**Old Derby Street at Main Driveway**

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<u>Metrics</u>	<u>Saturday Peak Hour Left and Right Turns</u>
Average Delay <sup>a</sup>	6.8
Maximum Delay <sup>a</sup>	79.0
Average Queue <sup>b</sup>	<25
Maximum Queue <sup>b</sup>	125

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<sup>a</sup> In seconds per vehicle.

<sup>b</sup> In feet (assumes 25 feet per vehicle).

As shown in Table 1, left and right turns from Old Derby Street onto the main site driveway currently operate at level-of-service (LOS) A during the Saturday peak hour with average delays of 6.8 seconds per vehicle. The average queue on Old Derby Street was found to be less than one vehicle with a maximum queue of 5 vehicles experienced during this time period. Based on field observations, vehicle queues along the main site driveway sometimes block Old Derby Street. These queues can occur in both directions, either in the northbound direction from the traffic signal at Derby Street, or in the southbound direction when entering vehicles are delayed by turning vehicles and pedestrian crossings further into the site. During these times, delays for vehicles exiting Old Derby Street increase, but are generally short-lived due to courtesy gaps provided by motorists.

The future traffic conditions at these two intersections were projected consistent with the methodology described in the traffic study and using the new traffic counts. The design-year volume conditions at the two internal site intersections are attached to this letter. Intersection capacity analyses were performed consistent with the methodology described in the *Highway Capacity Manual*<sup>2</sup> (HCM) using the Synchro analysis program. As described above, and consistent with the *MassDOT Transportation Impact Assessment Guidelines*,<sup>3</sup> the vehicle gap times in the Synchro program were adjusted so that the results approximate the delays and queues measured under existing conditions. These same adjustments were then carried forward under design-year volume conditions. The level-of-service and queue results are presented in Table 2 and are discussed below. All analysis worksheets are attached for reference.

**Table 2**  
**Level-of-Service Analysis Summary**

Peak Hour/ Movement	Existing Conditions				Design-Year Conditions			
	v/c <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Queue <sup>d</sup>	v/c	Delay	LOS	Queue
<b>Old Derby Street at Main Site Driveway</b>								
<i>Saturday Peak Hour</i>								
NB Left	0.01	8.2	A	0	0.17	9.6	A	146
EB Left/Right	0.14	7.7	A	120	0.19	8.3	A	158
<b>Old Derby Street at Kohl's Driveway</b>								
<i>Saturday Peak Hour</i>								
WB Left	0.00	7.7	A	0	0.00	7.9	A	0
NB Left/Right	0.04	9.8	A	44	0.09	11.6	A	50

<sup>a</sup> Volume-to-capacity ratio

<sup>b</sup> Average control delay in seconds per vehicle

<sup>c</sup> Level of service

<sup>d</sup> 95<sup>th</sup> percentile vehicle queue length in feet (assuming 25 feet per vehicle) using SimTraffic results

The results of these analyses reveal that both the relocated Kohl's driveway and the Old Derby Street approach to the main site driveway will continue to operate at desirable levels (LOS A to B) during the critical Saturday peak hour.

In addition to the traffic analyses along Old Derby Street, RMA evaluated traffic circulation and safety along Old Derby Street and along the easternmost service driveway in an effort to

<sup>2</sup>*Highway Capacity Manual 2010*; Transportation Research Board; Washington, DC; 2010.

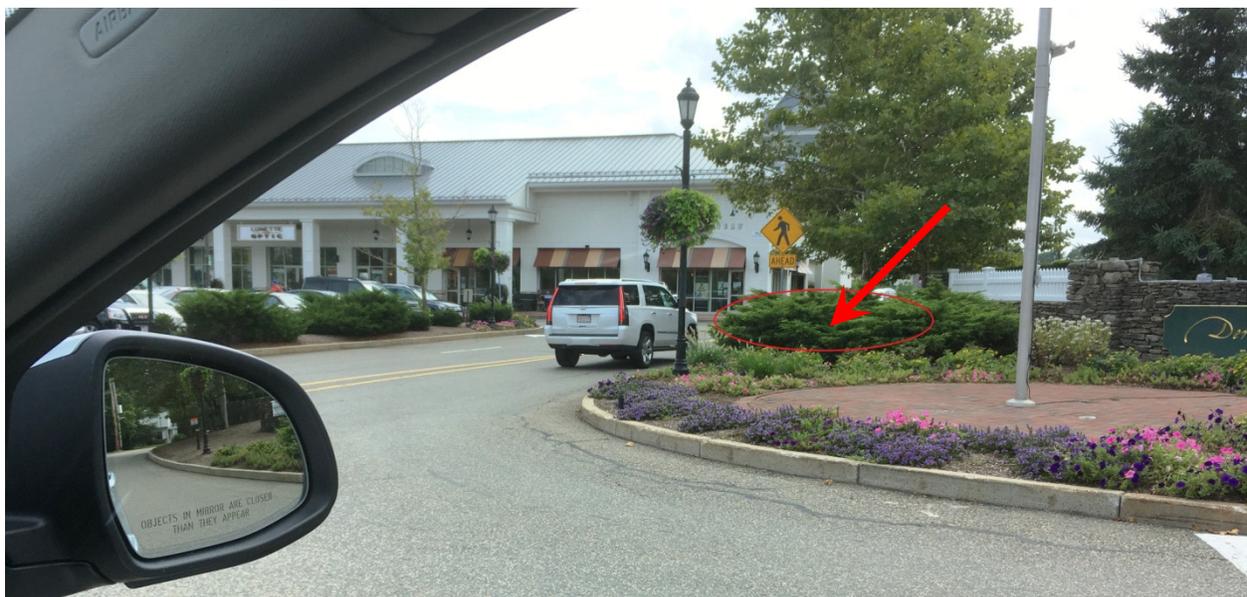
<sup>3</sup> *Transportation Impact Assessment (TIA) Guidelines*; Massachusetts Department of Transportation; March 2014.

minimize illegal left turns exiting this driveway. RMA conducted a sight distance analysis at the relocated Kohl's driveway to assure that adequate sight lines are available to allow vehicles to safely exit. With the proposed signalization of the Derby Street and Old Derby Street intersection, the existing right-turn-only restriction on the Kohl's driveway will no longer be necessary and should be eliminated once the Derby Street roadway improvements are completed. At the relocated Kohl's driveway intersection, sufficient intersection sight distance is provided to allow approaching motorists to safely stop from speeds of nearly 50 miles per hour. Although the speed limit is not posted on Old Derby Street, field observations revealed speeds of generally 25 to 30 miles per hour. Accordingly, more than adequate sight distance will be provided at the relocated Kohl's driveway. It is recommended that any proposed landscaping in the vicinity of the relocated Kohl's driveway be set back sufficiently so as not to impede the available sight distances.

A STOP sign is currently missing on the Old Derby Street approach to the main site driveway and should be re-installed. In addition, due to the horizontal curvature of Old Derby Street approaching the main site driveway, a STOP AHEAD sign should be installed just before the curve to warn motorists of the upcoming stop condition. At the Old Derby Street intersection with the main site driveway, sight distance to the south (into the site) is severely limited by overgrown landscaping as shown on Figure 1. This landscaping should be trimmed or removed to increase the available sight line.

**Figure 1**  
**Sight Distance from Old Derby Street - Looking South along the Main Site Drive**

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Based on information relayed at the Hingham Planning Board meeting regarding the Derby Street Shoppes expansion plans, vehicles sometimes turn left from the Derby Street Shoppes easternmost service driveway either directly onto Derby Street, or by making a U-turn at the Cushing Street traffic signal or along Cushing Street. Based on field observations, there are appropriate signs and pavement markings at the service driveway intersection with Derby Street to prohibit left turns. In addition, there is an existing sign along the service driveway notifying motorists to turn left into the site to access Derby Street and Route 3. However, this sign is very small and easily overlooked. See Figure 2.

**Figure 2**  
**Existing Sign on the Service Road**

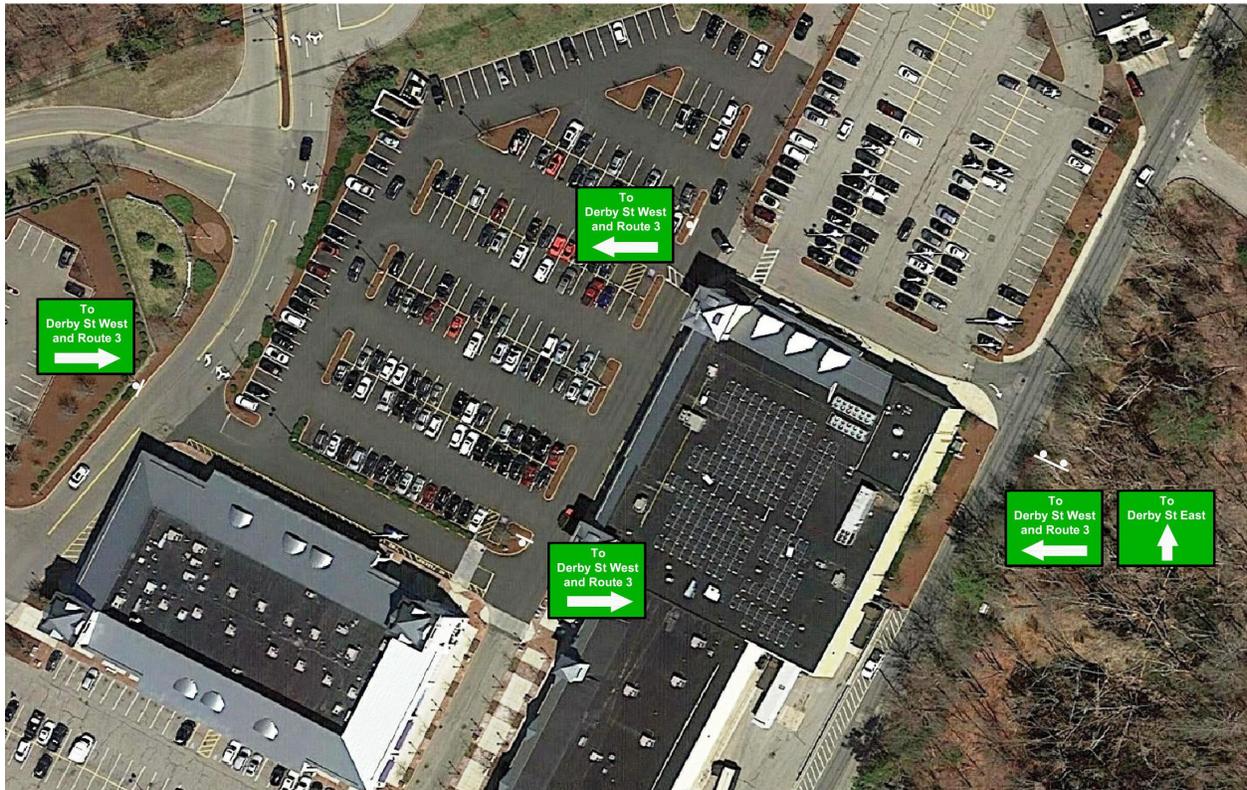
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It is recommended that this sign be replaced with much larger directional signs consistent with the Manual on Uniform Traffic Control Devices (MUTCD). One sign should read “To Derby Street East” with an upward-pointing arrow and the adjacent sign should read “To Derby Street West & Route 3” with a left-pointing arrow. In addition, the latter sign (with appropriate-pointing arrow) should also be installed at the three internal site intersections through which traffic destined to Derby Street west and Route 3 will have to make turns. The recommended sign locations are shown on Figure 3.

**Figure 3**  
**Recommended Directional Signs and Locations**

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In summary, this evaluation found the following:

- Both the relocated Kohl's driveway and the Old Derby Street approach to the main site driveway will continue to operate at desirable levels during the critical Saturday peak hour.
- The existing right-turn-only restriction on the Kohl's driveway should be eliminated once the Derby Street roadway improvements are completed.
- More than adequate sight distance will be provided at the relocated Kohl's driveway intersection with Old Derby Street.
- Any proposed landscaping in the vicinity of the relocated Kohl's driveway should be set back sufficiently so as not to impede the available sight distances.

- A STOP sign is currently missing on the Old Derby Street approach to the main site driveway and should be re-installed.
- A STOP AHEAD sign should be installed on Old Derby Street just before the curve approaching the main site driveway to warn motorists of the upcoming stop condition.
- Existing landscaping in the southwest corner of Old Derby Street and the main site driveway should be trimmed or removed to increase available sight lines.
- MUTCD-compliant directional signs should be installed on the easternmost service road and throughout the site to minimize the potential for illegal left turns onto Derby Street.

Please feel free to contact me should you have any questions regarding these findings and recommendations.

Sincerely,

***Ron Müller & Associates***



Ronald Müller, P.E.  
Principal

Attachments

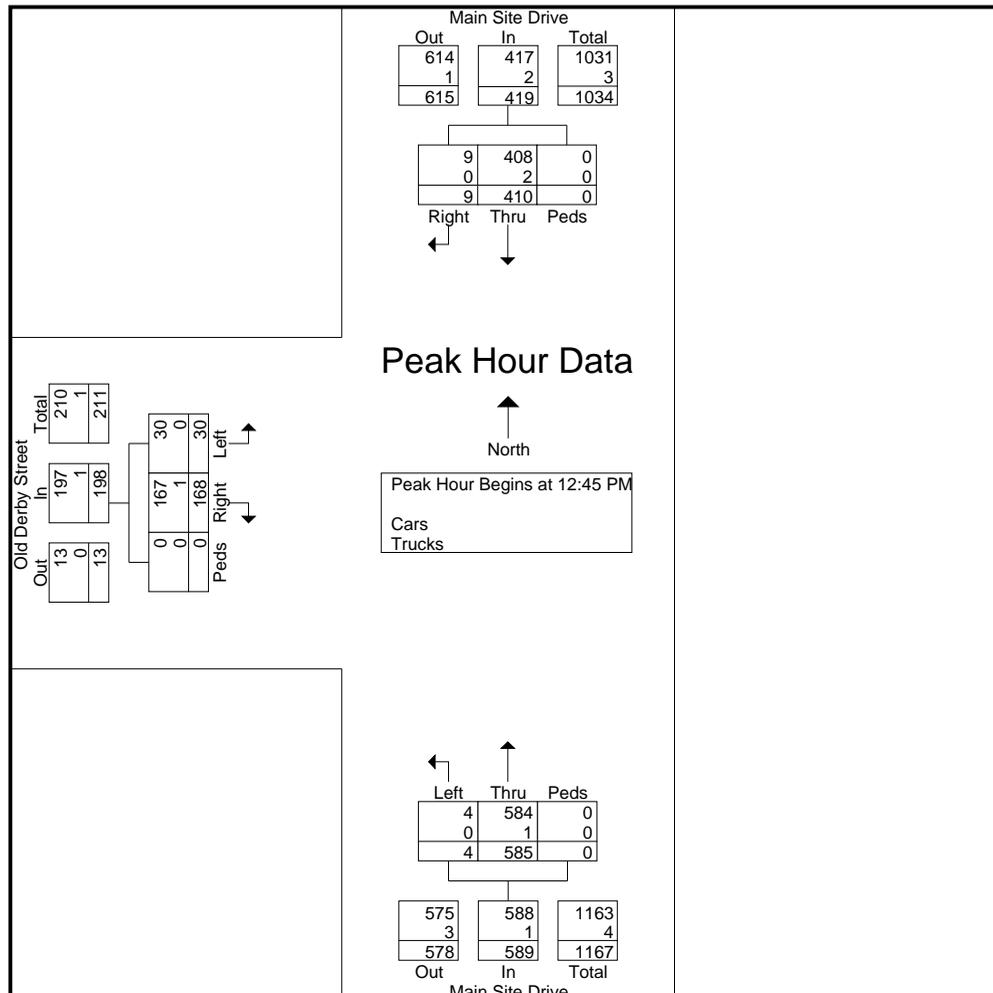
E-W Street: Old Derby Street  
 N-S Street: Main Site Drive

**Groups Printed- Cars - Trucks**

Start Time	Main Site Drive From North				Main Site Drive From South				Old Derby Street From West				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
12:00 PM	114	2	0	116	3	123	0	126	6	44	0	50	292
12:15 PM	76	2	0	78	0	128	0	128	6	32	0	38	244
12:30 PM	95	2	0	97	2	135	0	137	12	28	0	40	274
12:45 PM	114	3	0	117	2	136	0	138	6	37	0	43	298
Total	399	9	0	408	7	522	0	529	30	141	0	171	1108
01:00 PM	110	1	0	111	1	127	0	128	10	40	0	50	289
01:15 PM	88	1	0	89	0	150	0	150	7	45	0	52	291
01:30 PM	98	4	0	102	1	172	0	173	7	46	0	53	328
01:45 PM	95	5	0	100	0	135	0	135	9	32	0	41	276
Total	391	11	0	402	2	584	0	586	33	163	0	196	1184
Grand Total	790	20	0	810	9	1106	0	1115	63	304	0	367	2292
Apprch %	97.5	2.5	0		0.8	99.2	0		17.2	82.8	0		
Total %	34.5	0.9	0	35.3	0.4	48.3	0	48.6	2.7	13.3	0	16	
Cars	788	20	0	808	9	1105	0	1114	63	303	0	366	2288
% Cars	99.7	100	0	99.8	100	99.9	0	99.9	100	99.7	0	99.7	99.8
Trucks	2	0	0	2	0	1	0	1	0	1	0	1	4
% Trucks	0.3	0	0	0.2	0	0.1	0	0.1	0	0.3	0	0.3	0.2

E-W Street: Old Derby Street  
 N-S Street: Main Site Drive

Start Time	Main Site Drive From North				Main Site Drive From South				Old Derby Street From West				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:45 PM													
12:45 PM	114	3	0	117	2	136	0	138	6	37	0	43	298
01:00 PM	110	1	0	111	1	127	0	128	10	40	0	50	289
01:15 PM	88	1	0	89	0	150	0	150	7	45	0	52	291
01:30 PM	98	4	0	102	1	172	0	173	7	46	0	53	328
Total Volume	410	9	0	419	4	585	0	589	30	168	0	198	1206
% App. Total	97.9	2.1	0		0.7	99.3	0		15.2	84.8	0		
PHF	.899	.563	.000	.895	.500	.850	.000	.851	.750	.913	.000	.934	.919
Cars	408	9	0	417	4	584	0	588	30	167	0	197	1202
% Cars	99.5	100	0	99.5	100	99.8	0	99.8	100	99.4	0	99.5	99.7
Trucks	2	0	0	2	0	1	0	1	0	1	0	1	4
% Trucks	0.5	0	0	0.5	0	0.2	0	0.2	0	0.6	0	0.5	0.3



# Ron Müller & Associates

Traffic Engineering and Consulting Services

File Name : 16045 Old Derby-Kohls Sat

Site Code : 16045

Start Date : 8/18/2018

Page No : 1

E-W Street: Old Derby Street

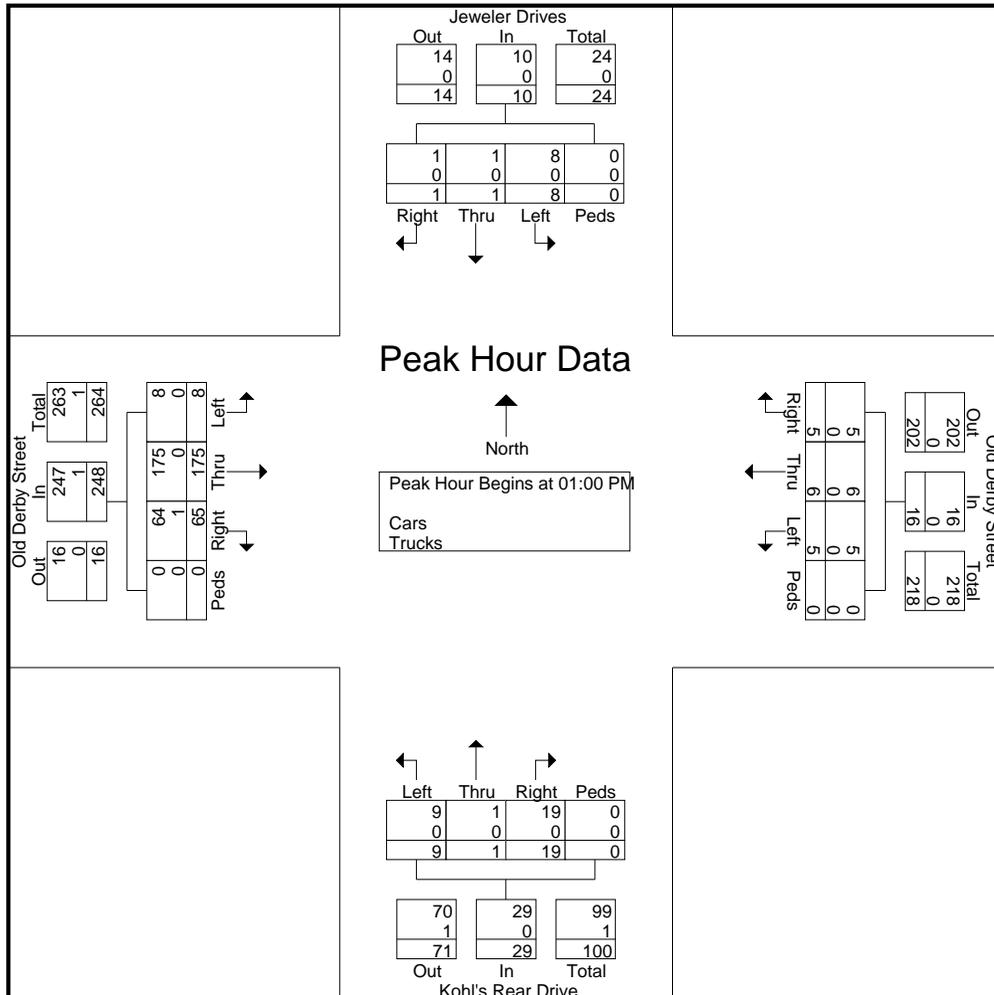
N-S Street: Kohl's Rear Drive

## Groups Printed- Cars - Trucks

Start Time	Jeweler Drives From North					Old Derby Street From East					Kohl's Rear Drive From South					Old Derby Street From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
12:00 PM	3	0	0	0	3	2	3	3	0	8	0	0	1	0	1	2	41	17	0	60	72
12:15 PM	2	2	0	0	4	0	0	1	0	1	1	0	1	0	2	0	36	17	0	53	60
12:30 PM	3	0	0	0	3	1	3	1	0	5	3	0	4	0	7	1	36	22	0	59	74
12:45 PM	2	0	0	0	2	4	1	1	0	6	1	0	1	0	2	0	31	22	0	53	63
Total	10	2	0	0	12	7	7	6	0	20	5	0	7	0	12	3	144	78	0	225	269
01:00 PM	1	0	0	0	1	1	2	2	0	5	3	0	6	0	9	1	46	12	0	59	74
01:15 PM	2	0	1	0	3	0	0	1	0	1	2	0	4	0	6	3	46	22	0	71	81
01:30 PM	3	0	0	0	3	1	4	1	0	6	1	0	4	0	5	2	48	14	0	64	78
01:45 PM	2	1	0	0	3	3	0	1	0	4	3	1	5	0	9	2	35	17	0	54	70
Total	8	1	1	0	10	5	6	5	0	16	9	1	19	0	29	8	175	65	0	248	303
Grand Total	18	3	1	0	22	12	13	11	0	36	14	1	26	0	41	11	319	143	0	473	572
Apprch %	81.8	13.6	4.5	0		33.3	36.1	30.6	0		34.1	2.4	63.4	0		2.3	67.4	30.2	0		
Total %	3.1	0.5	0.2	0	3.8	2.1	2.3	1.9	0	6.3	2.4	0.2	4.5	0	7.2	1.9	55.8	25	0	82.7	
Cars	18	3	1	0	22	12	13	11	0	36	14	1	26	0	41	11	319	142	0	472	571
% Cars	100	100	100	0	100	100	100	100	0	100	100	100	100	0	100	100	100	99.3	0	99.8	99.8
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	0	0.2	0.2

E-W Street: Old Derby Street  
N-S Street: Kohl's Rear Drive

Start Time	Jeweler Drives From North					Old Derby Street From East					Kohl's Rear Drive From South					Old Derby Street From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	1	0	0	0	1	1	2	2	0	5	3	0	6	0	9	1	46	12	0	59	74
01:15 PM	2	0	1	0	3	0	0	1	0	1	2	0	4	0	6	3	46	22	0	71	81
01:30 PM	3	0	0	0	3	1	4	1	0	6	1	0	4	0	5	2	48	14	0	64	78
01:45 PM	2	1	0	0	3	3	0	1	0	4	3	1	5	0	9	2	35	17	0	54	70
Total Volume	8	1	1	0	10	5	6	5	0	16	9	1	19	0	29	8	175	65	0	248	303
% App. Total	80	10	10	0		31.2	37.5	31.2	0		31	3.4	65.5	0		3.2	70.6	26.2	0		
PHF	.667	.250	.250	.000	.833	.417	.375	.625	.000	.667	.750	.250	.792	.000	.806	.667	.911	.739	.000	.873	.935
Cars	8	1	1	0	10	5	6	5	0	16	9	1	19	0	29	8	175	64	0	247	302
% Cars	100	100	100	0	100	100	100	100	0	100	100	100	100	0	100	100	100	98.5	0	99.6	99.7
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	0	0.4	0.3



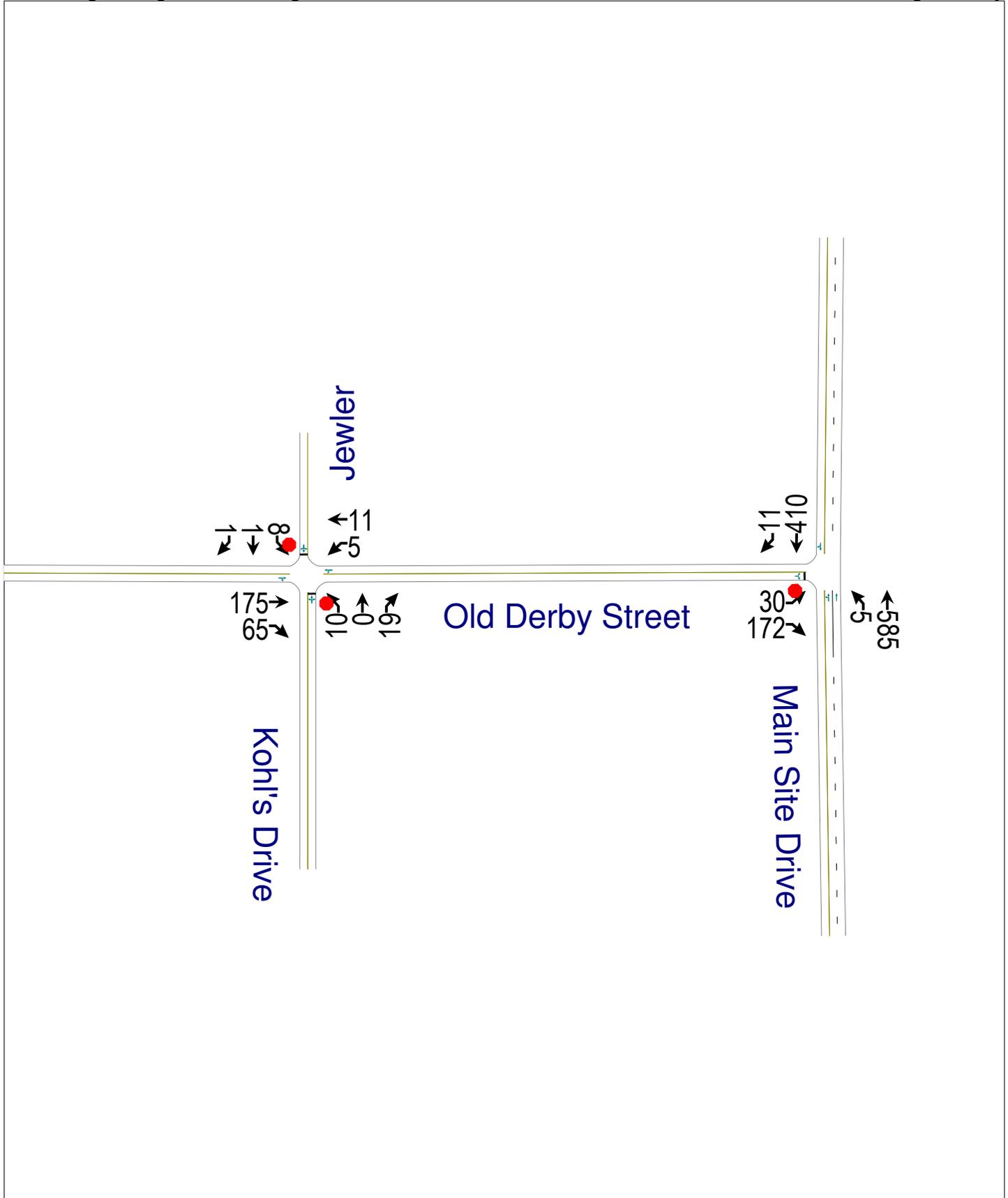
**Ron Müller & Associates**  
*Traffic Engineering and Consulting Services*

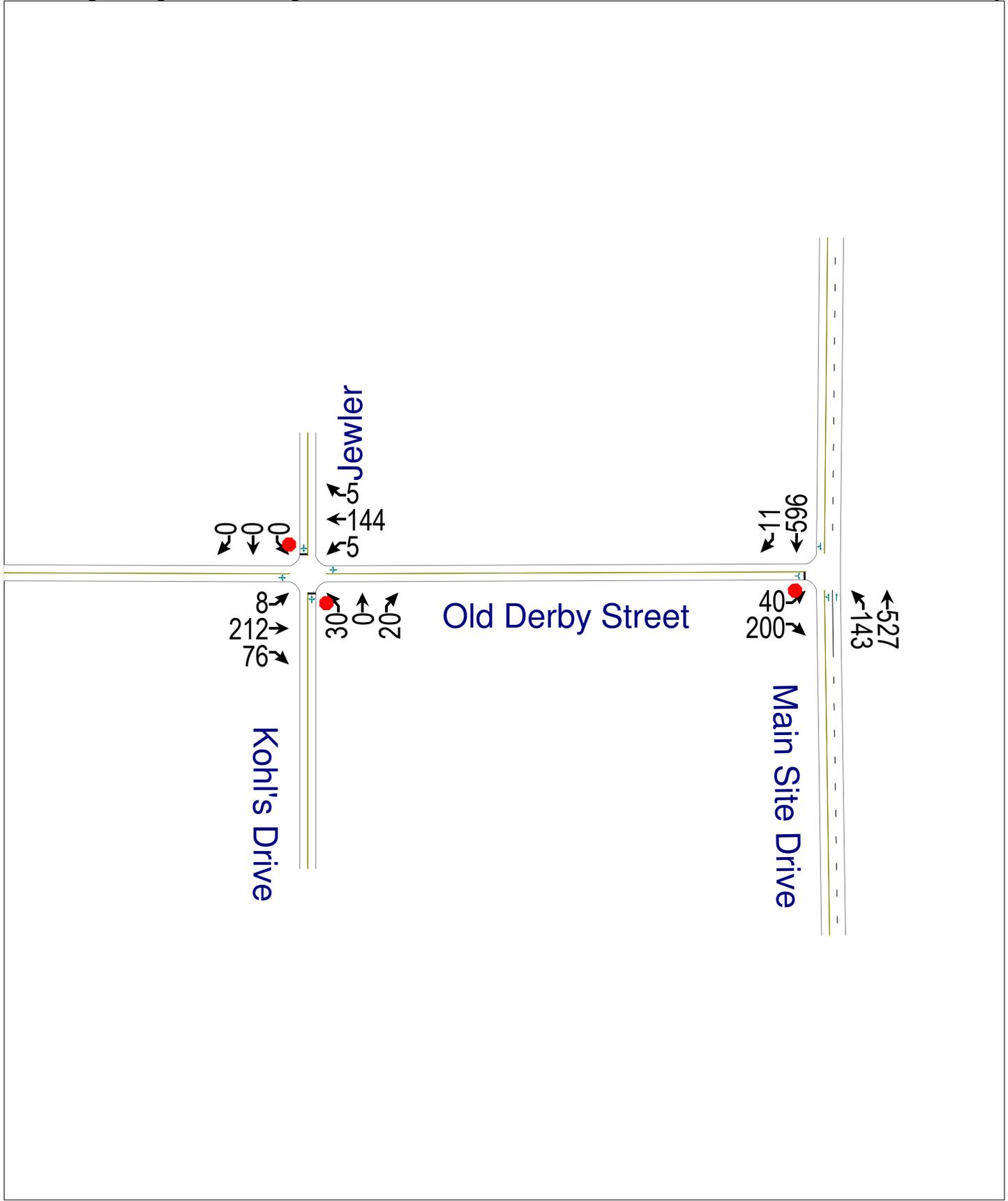
Vehicle Delay/Queue Study  
Old Derby Street at Main Site Driveway

File Name : 16045 Old Derby Delay Sat  
Site Code : 16045  
Start Date : 8/18/2018  
Page No : 1

**Summary Information:**

1:01:00 PM - 1:59:00 PM	Left/Right
Total Vehicle Count:	186
Delayed Vehicle Count:	186
Through Vehicle Count:	0
Average Stopped Time:	6.83
Maximum Stopped Time:	79
Min. Secs. for Delay:	0
Average Queue:	0.37
Queue Density:	1.40
Maximum Queue:	5
Delay in Vehicle Hour:	0.37
Total Delay:	1271





Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	30	172	5	585	410	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	33	187	5	636	446	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	781	452	458	0	-	0
Stage 1	452	-	-	-	-	-
Stage 2	329	-	-	-	-	-
Critical Hdwy	2	2	4.1	-	-	-
Critical Hdwy Stg 1	2	-	-	-	-	-
Critical Hdwy Stg 2	2	-	-	-	-	-
Follow-up Hdwy	2	2	2.2	-	-	-
Pot Cap-1 Maneuver	1438	1583	1114	-	-	-
Stage 1	1583	-	-	-	-	-
Stage 2	1641	-	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	1428	1583	1114	-	-	-
Mov Cap-2 Maneuver	1428	-	-	-	-	-
Stage 1	1583	-	-	-	-	-
Stage 2	1630	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	7.7	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1114	-	1558	-	-
HCM Lane V/C Ratio	0.005	-	0.141	-	-
HCM Control Delay (s)	8.2	0	7.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection

Int Delay, s/veh 1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	175	65	5	11	0	10	0	19	8	1	1
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	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	186	69	5	12	0	11	0	20	9	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	12	0	0	255	0	0	244	243	221	253	277	12
Stage 1	-	-	-	-	-	-	221	221	-	22	22	-
Stage 2	-	-	-	-	-	-	23	22	-	231	255	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1620	-	-	1322	-	-	714	662	824	704	634	1074
Stage 1	-	-	-	-	-	-	786	724	-	1002	881	-
Stage 2	-	-	-	-	-	-	1000	881	-	776	700	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1620	-	-	1322	-	-	710	659	824	685	631	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	710	659	-	685	631	-
Stage 1	-	-	-	-	-	-	786	724	-	1002	877	-
Stage 2	-	-	-	-	-	-	994	877	-	757	700	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.4	9.8	10.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	781	1620	-	-	1322	-	-	704
HCM Lane V/C Ratio	0.04	-	-	-	0.004	-	-	0.015
HCM Control Delay (s)	9.8	0	-	-	7.7	0	-	10.2
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

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Intersection: 2: Main Site Drive & Old Derby Street

---

Movement	EB
Directions Served	LR
Maximum Queue (ft)	110
Average Queue (ft)	80
95th Queue (ft)	120
Link Distance (ft)	717
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

---

Intersection: 5: Kohl's Drive/Jewler & Old Derby Street

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Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	28
Average Queue (ft)	24	6
95th Queue (ft)	44	24
Link Distance (ft)	415	184
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

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Network Summary

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Network wide Queuing Penalty: 0

Intersection

Int Delay, s/veh 2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	40	200	143	527	596	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	43	217	155	573	648	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1251	654	660	0	-	0
Stage 1	654	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Critical Hdwy	2	2	4.1	-	-	-
Critical Hdwy Stg 1	2	-	-	-	-	-
Critical Hdwy Stg 2	2	-	-	-	-	-
Follow-up Hdwy	2	2	2.2	-	-	-
Pot Cap-1 Maneuver	1246	1493	938	-	-	-
Stage 1	1493	-	-	-	-	-
Stage 2	1518	-	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	944	1493	938	-	-	-
Mov Cap-2 Maneuver	944	-	-	-	-	-
Stage 1	1493	-	-	-	-	-
Stage 2	1151	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.3	2.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	938	-	1361	-	-
HCM Lane V/C Ratio	0.166	-	0.192	-	-
HCM Control Delay (s)	9.6	0.8	8.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.7	-	-

Intersection

Int Delay, s/veh 1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	8	212	76	5	144	5	30	0	20	0	0	0
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	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	226	81	5	153	5	32	0	21	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	159	0	0	306	0	0	449	452	266	460	489	156
Stage 1	-	-	-	-	-	-	283	283	-	166	166	-
Stage 2	-	-	-	-	-	-	166	169	-	294	323	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1433	-	-	1266	-	-	524	506	778	515	482	895
Stage 1	-	-	-	-	-	-	728	681	-	841	765	-
Stage 2	-	-	-	-	-	-	841	763	-	719	654	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1433	-	-	1266	-	-	519	500	778	496	476	895
Mov Cap-2 Maneuver	-	-	-	-	-	-	519	500	-	496	476	-
Stage 1	-	-	-	-	-	-	722	676	-	834	762	-
Stage 2	-	-	-	-	-	-	838	760	-	694	649	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	11.6	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	599	1433	-	-	1266	-	-	-
HCM Lane V/C Ratio	0.089	0.006	-	-	0.004	-	-	-
HCM Control Delay (s)	11.6	7.5	0	-	7.9	0	-	0
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	-

---

Intersection: 2: Main Site Drive & Old Derby Street

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Movement	EB	NB	NB
Directions Served	LR	LT	T
Maximum Queue (ft)	180	217	128
Average Queue (ft)	94	63	5
95th Queue (ft)	158	146	44
Link Distance (ft)	719	518	518
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

---

Intersection: 5: Kohl's Drive/Jewler & Old Derby Street

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Movement	EB	NB
Directions Served	LTR	LTR
Maximum Queue (ft)	56	55
Average Queue (ft)	3	27
95th Queue (ft)	22	50
Link Distance (ft)	554	415
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

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Network Summary

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Network wide Queuing Penalty: 0

## **Construction Management Plan**

**DERBY STREET SHOPS  
HINGHAM, MASSACHUSETTS**

SEPTEMBER 14, 2018

WS Development on behalf of W/S/M Hingham Properties has created the following Construction Management Plan (CMP) to address all construction related activities involved with the installation of the new leach field and the construction of Building 5 at Derby Street Shops. This plan is subject to the permitting of both projects and any requirements set forth for those projects by the permit granting authorities within the Town of Hingham.

Project Description

The leach field project includes the construction a new soil absorption system (SAS) in the northwest portion of the Derby Street Shops behind Kohls and the current RiteAid building. The new SAS will be sized for 54,000 gallons per day and once complete will allow the current SAS located beneath the RiteAid parking lot to be discontinued and removed.

The Building 5 project includes the demolition of the existing 13,000 sf RiteAid building and the construction of a new, state of the art 25,000 sf building for a net increase in Gross Leasable Area (GLA) at Derby Street Shops of 12,000 sf. The newly constructed retail building is intended to include new restaurant, retail or fitness uses. The Building 5 project will also include the removal of the existing leach field under the parking lot, the construction of a renovated parking lot and landscaping in front of the building, as well as additional overflow parking capacity behind Kohls.

Project Schedule

Leach Field Anticipated Construction Schedule	
General Contractor Mobilization	2 Weeks
Removal of Existing Structures	1 Week
Installation of leach field	9 Weeks
Completion of leach field / Activation	1 Week

Building 5 Anticipated Construction Schedule	
General Contractor Mobilization	2 Weeks
Demolition of Existing Structures	1 Month
Building 5 Construction	7 Months
Tenant Fit Out	3 Months
Project Completion / Grand Opening	1 Week

Perimeter Protection / Public Safety

WS Development will work closely with the selected General Contractors to ensure proper fencing and barricades will be used to isolate construction areas from pedestrian traffic around the site. In addition, sidewalk areas and walkways near construction activities will be well marked to protect pedestrians and ensure their safety. Proper signage will be installed and regularly updated as site conditions change during the construction process. Construction procedures will be designed to meet all Occupational Safety and Health Administration (OSHA) safety standards for specific site construction activities.

Safety On Site

All subcontractors working on site shall provide and maintain all safety measures, procedures, and documentation as required by governing agencies. The jobsite will be enclosed by temporary fencing. Prior to the start of work by any subcontractor a Hazardous Risk Assessment Plan is reviewed. During this review all potential hazardous work requirements and the safety plans required to mitigate these risks are confirmed. Construction procedures will be designed to meet all Occupational Safety and Health Administration (OSHA) safety standards for specific site construction activities.

Access to the site for emergency vehicles will be maintained at all times with a dedicated and marked point of access. All other site points of access will be maintained for a secondary access as needed. The proposed site logistic and traffic plans are designed to isolate the construction while providing safe access for pedestrians and automobiles during normal day to day activities and emergencies.

### Signage and Distribution of Information

Signage will direct pedestrians around the site as well as direct truck traffic and deliveries. Proper signage will be placed as needed to alleviate confusion for pedestrians and automobile traffic.

The construction site shall have a sign installed that shall list the name of construction company/general contractor, and their contact information including the phone number. This sign shall be clearly visible to enable the public to call with any questions or concerns.

### Abutter Notification and Coordination

WS Development recognizes the challenges of building construction in an active retail center and the importance of responding to the needs of adjacent businesses, property owners and residents. The abutting tenants and neighboring properties shall be informed of the scheduled start of construction and will be updated on the development during its construction as needed.

WS Development is acutely aware of the traffic and parking concerns that arise during the busy holiday shopping season and will work to minimize any impact to traffic flow or parking during the months of November and December. As shown on the current schedule, Building 5 construction, which will have the most significant impact on traffic and parking of the two projects, will not begin until after the holiday season.

### Material Handling/Construction Waste

WS Development's selected General Contractor(s) will take an active role in regard to the processing and recycling of construction waste and will have in-place a Construction Waste Management Plan (CWMP) for the project. Construction debris shall be wetted and covered to minimize air born dust particles.

### Dumpster Location and Loading

Dumpsters will be located within the construction staging area. Dumpsters will be secured with odor and dust control measures. Dumpster pick-ups to be done during normal construction hours and will avoid peak traffic periods. Loading and unloading of the dumpsters will take place with-in the proposed fence areas.

### Truck Movements During Construction

Trucks are needed for material removal and delivery from and to the site as the project proceeds. Truck traffic related to this construction site shall vary throughout the construction period.

All construction material delivery trucks will be loaded and unloaded inside the construction fence throughout the course of the project. Trucks and equipment will follow the designated truck route and be staged at the designated areas on the CMP.

Trucks coming to and from the site are required to use major arterial roadways or highways and not local streets. The General Contractor will be required to communicate the designated truck routes to all subcontractors. All trucks will be restricted from using residential neighborhood roadways.

### Construction Employee Parking

All construction workers visiting the site for either project will be required to park in the designated employee parking area behind REI as depicted in Appendix B of the Employee Handbook.

### Dust Control

Construction activities that generate dust will be mitigated through the use of wetting agents to suppress dust that may come from construction activities.

### Noise and Odor Control

A significant effort will be made to minimize the noise impact of the Project's construction activities.

Mitigation measures to be undertaken will include:

Using mufflers on equipment and ongoing maintenance of intake and exhaust mufflers.

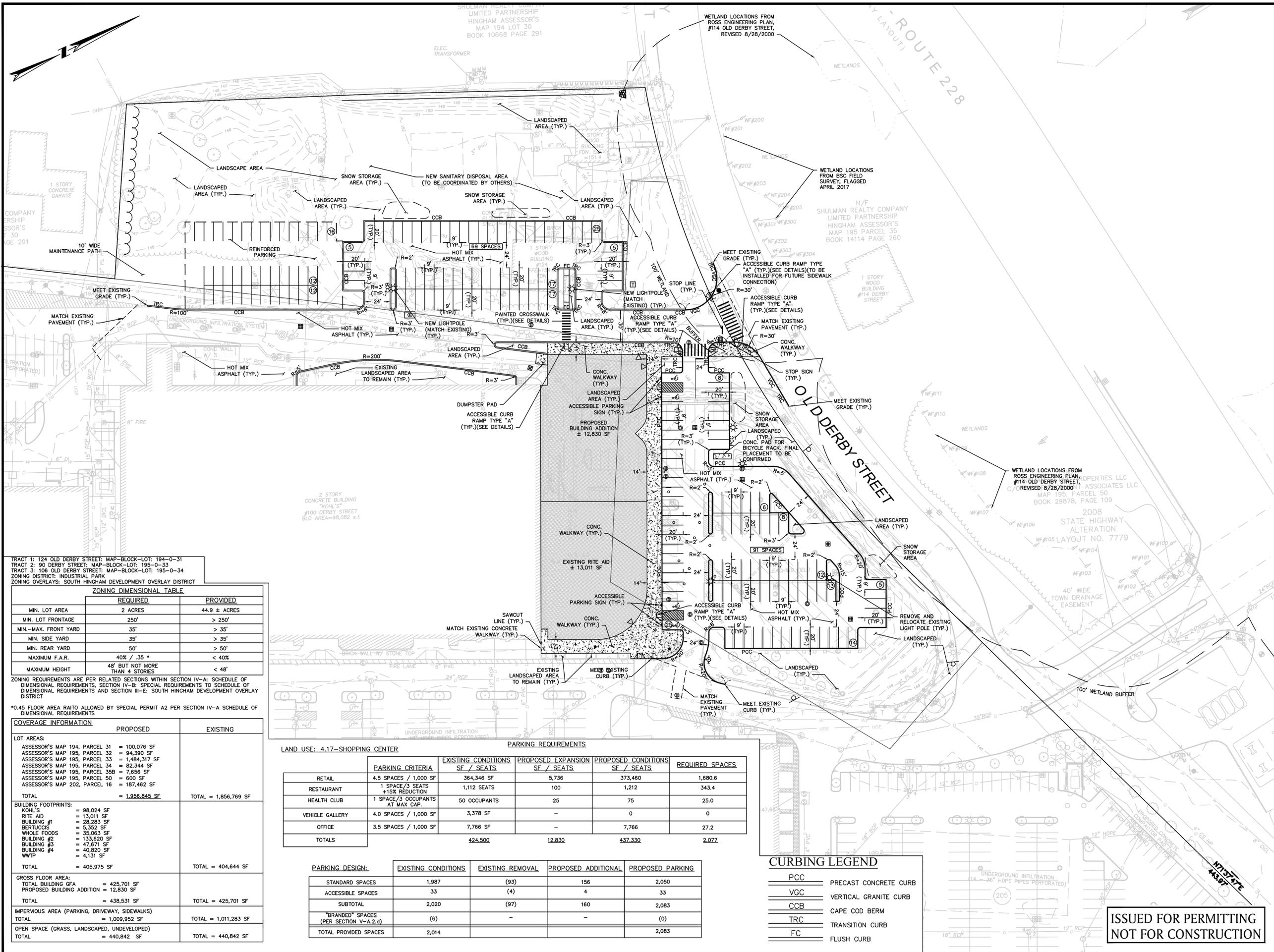
Turning off idling equipment.

### Emergency Contacts

A 24-hour emergency contact list will be provided to all parties involved in the project prior to start of construction and maintained throughout construction. This contact list will include the primary point of contact from the selected General Contractor. Any concerns related to the project may also be addressed to:

#### *WS Development*

Contact: Paul Kennedy, [paul.kennedy@wsdevelopment.com](mailto:paul.kennedy@wsdevelopment.com), (617) 646-3163



TRACT 1: 124 OLD DERBY STREET; MAP-BLOCK-LOT: 194-0-31  
 TRACT 2: 90 DERBY STREET; MAP-BLOCK-LOT: 195-0-33  
 TRACT 3: 106 OLD DERBY STREET; MAP-BLOCK-LOT: 195-0-34  
 ZONING DISTRICT: INDUSTRIAL PARK  
 ZONING OVERLAYS: SOUTH HINGHAM DEVELOPMENT OVERLAY DISTRICT

ZONING DIMENSIONAL TABLE		
	REQUIRED	PROVIDED
MIN. LOT AREA	2 ACRES	44.9 ± ACRES
MIN. LOT FRONTAGE	250'	> 250'
MIN.-MAX. FRONT YARD	35'	> 35'
MIN. SIDE YARD	35'	> 35'
MIN. REAR YARD	50'	> 50'
MAXIMUM F.A.R.	40% / .35 *	< 40%
MAXIMUM HEIGHT	48' BUT NOT MORE THAN 4 STORIES	< 48'

ZONING REQUIREMENTS ARE PER RELATED SECTIONS WITHIN SECTION IV-A: SCHEDULE OF DIMENSIONAL REQUIREMENTS, SECTION IV-B: SPECIAL REQUIREMENTS TO SCHEDULE OF DIMENSIONAL REQUIREMENTS AND SECTION III-E: SOUTH HINGHAM DEVELOPMENT OVERLAY DISTRICT

\*0.45 FLOOR AREA RATIO ALLOWED BY SPECIAL PERMIT A2 PER SECTION IV-A SCHEDULE OF DIMENSIONAL REQUIREMENTS

COVERAGE INFORMATION		
	PROPOSED	EXISTING
<b>LOT AREAS:</b>		
ASSESSOR'S MAP 194, PARCEL 31	= 100,076 SF	
ASSESSOR'S MAP 195, PARCEL 32	= 94,390 SF	
ASSESSOR'S MAP 195, PARCEL 33	= 1,484,317 SF	
ASSESSOR'S MAP 195, PARCEL 34	= 82,344 SF	
ASSESSOR'S MAP 195, PARCEL 35B	= 7,656 SF	
ASSESSOR'S MAP 195, PARCEL 50	= 600 SF	
ASSESSOR'S MAP 202, PARCEL 16	= 187,462 SF	
<b>TOTAL</b>	<b>= 1,958,845 SF</b>	<b>TOTAL = 1,856,769 SF</b>
<b>BUILDING FOOTPRINTS:</b>		
KOHL'S	= 98,024 SF	
RITE AID	= 13,011 SF	
BUILDING #1	= 28,283 SF	
BERTUCCIS	= 5,352 SF	
WHOLE FOODS	= 33,063 SF	
BUILDING #2	= 133,620 SF	
BUILDING #3	= 47,671 SF	
BUILDING #4	= 40,820 SF	
WWP	= 4,131 SF	
<b>TOTAL</b>	<b>= 405,975 SF</b>	<b>TOTAL = 404,644 SF</b>
<b>GROSS FLOOR AREA:</b>		
TOTAL BUILDING GFA	= 425,701 SF	
PROPOSED BUILDING ADDITION	= 12,830 SF	
<b>TOTAL</b>	<b>= 438,531 SF</b>	<b>TOTAL = 425,701 SF</b>
<b>IMPERVIOUS AREA (PARKING, DRIVEWAY, SIDEWALKS)</b>		
<b>TOTAL</b>	<b>= 1,009,952 SF</b>	<b>TOTAL = 1,011,283 SF</b>
<b>OPEN SPACE (GRASS, LANDSCAPED, UNDEVELOPED)</b>		
<b>TOTAL</b>	<b>= 440,842 SF</b>	<b>TOTAL = 440,842 SF</b>

**LAND USE: 4.17--SHOPPING CENTER**

	PARKING CRITERIA	EXISTING CONDITIONS SF / SEATS	PROPOSED EXPANSION SF / SEATS	PROPOSED CONDITIONS SF / SEATS	REQUIRED SPACES
RETAIL	4.5 SPACES / 1,000 SF	364,346 SF	5,736	373,460	1,680.6
RESTAURANT	1 SPACE/3 SEATS +15% REDUCTION	1,112 SEATS	100	1,212	343.4
HEALTH CLUB	1 SPACE/3 OCCUPANTS AT MAX CAP.	50 OCCUPANTS	25	75	25.0
VEHICLE GALLERY	4.0 SPACES / 1,000 SF	3,378 SF	-	0	0
OFFICE	3.5 SPACES / 1,000 SF	7,766 SF	-	7,766	27.2
<b>TOTALS</b>		<b>424,500</b>	<b>12,830</b>	<b>437,330</b>	<b>2,077</b>

PARKING DESIGN:				
	EXISTING CONDITIONS	EXISTING REMOVAL	PROPOSED ADDITIONAL	PROPOSED PARKING
STANDARD SPACES	1,987	(93)	156	2,050
ACCESSIBLE SPACES	33	(4)	4	33
SUBTOTAL	2,020	(97)	160	2,083
"BRANDED" SPACES (PER SECTION V-A.2.d)	(6)	-	-	(0)
<b>TOTAL PROVIDED SPACES</b>	<b>2,014</b>			<b>2,083</b>

**CURBING LEGEND**

	PCC	PRECAST CONCRETE CURB
	VGC	VERTICAL GRANITE CURB
	CCB	CAPE COD BERM
	TRC	TRANSITION CURB
	FC	FLUSH CURB

PROFESSIONAL ENGINEER DATE

**DERBY STREET SHOPS**  
 100 DERBY STREET  
 IN  
 HINGHAM MASSACHUSETTS (PLYMOUTH COUNTY)  
 LAYOUT & MATERIALS PLAN

MARCH 9, 2018

REVISIONS:

NO.	DATE	DESC.
1	5/8/2018	RESPONSE TO COMMENTS
2	6/20/2018	RESPONSE TO COMMENTS
3	7/13/2018	SITE LAYOUT REVISIONS
4	9/10/2018	SITE LAYOUT REVISIONS

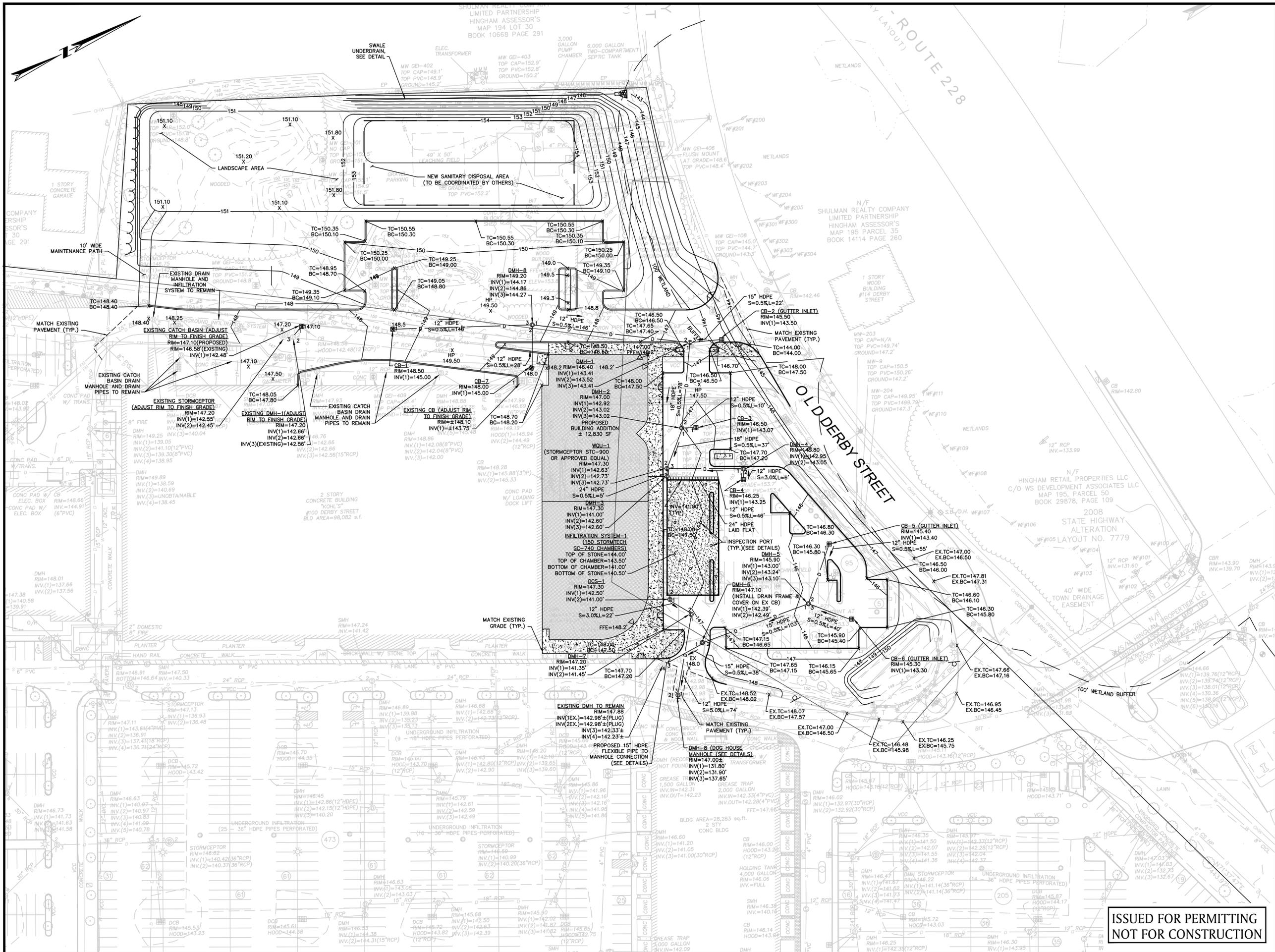
PREPARED FOR:  
 W/S/M HINGHAM PROPERTIES  
 33 BOYLSTON STREET, SUITE 3000  
 CHESTNUT HILL, MA 02467

**BSC GROUP**  
 803 Summer Street  
 Boston, Massachusetts  
 02127  
 617 896 4300

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 SCALE: 1" = 40'

FILE: P:\4581709\C\4581709-  
 DWG: SHEET C-103  
 JOB. NO: 4-5817.09

**ISSUED FOR PERMITTING  
 NOT FOR CONSTRUCTION**



PROFESSIONAL ENGINEER DATE

**DERBY STREET SHOPS**  
 100 DERBY STREET  
 IN  
 HINGHAM MASSACHUSETTS  
 (PLYMOUTH COUNTY)

**GRADING & DRAINAGE PLAN**

MARCH 9, 2018

REVISIONS:

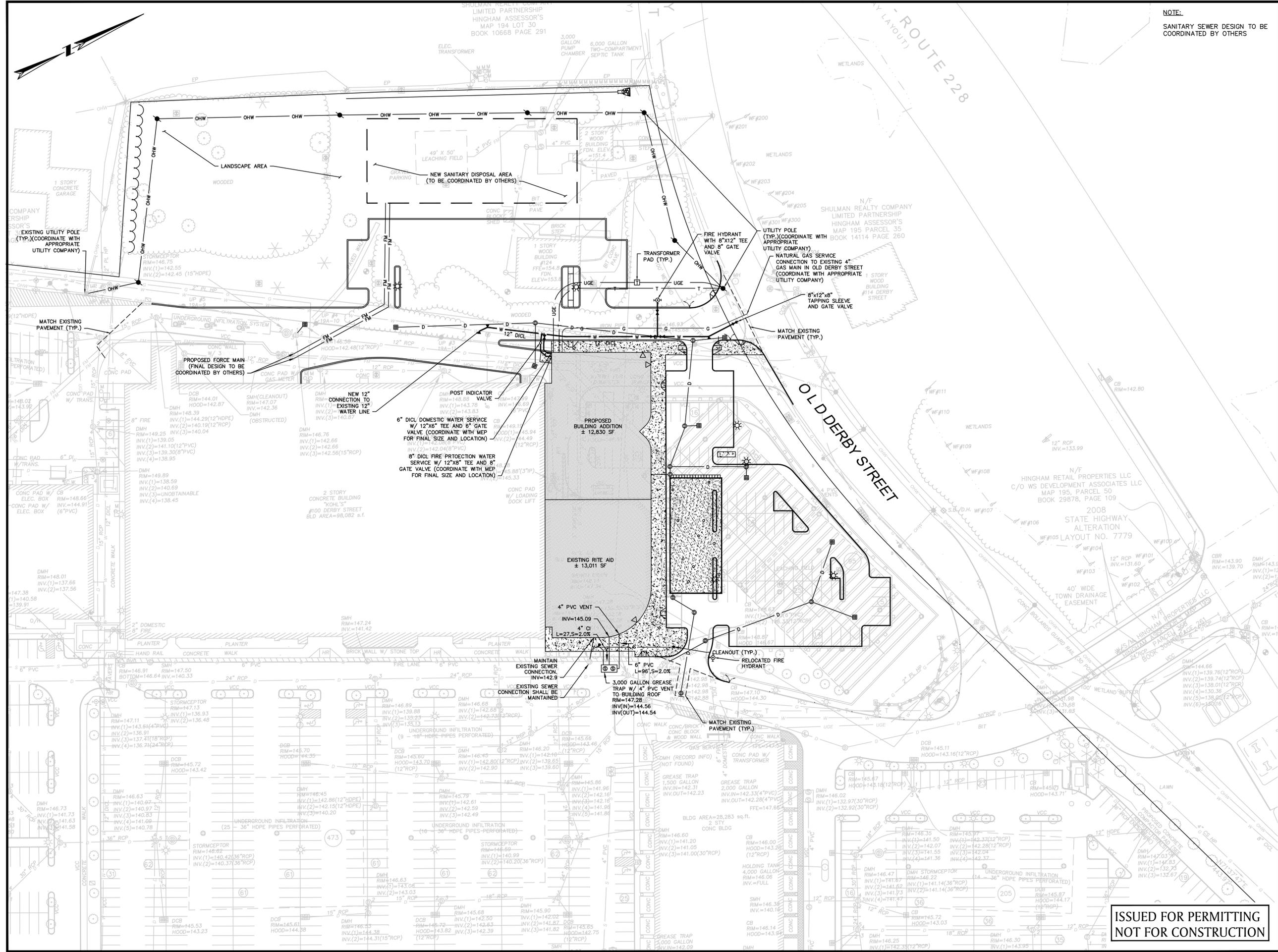
NO.	DATE	DESC.
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PREPARED FOR:  
 W/S/M HINGHAM PROPERTIES  
 33 BOYLSTON STREET, SUITE 3000  
 CHESTNUT HILL, MA 02467

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 803 Summer Street  
 Boston, Massachusetts  
 02127  
 617 896 4300

SCALE: 1" = 40'  
 0 20 40 80 FEET

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 NOT FOR CONSTRUCTION**



**NOTE:**  
SANITARY SEWER DESIGN TO BE COORDINATED BY OTHERS

PROFESSIONAL ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

**DERBY STREET SHOPS**  
100 DERBY STREET  
IN  
HINGHAM MASSACHUSETTS  
(PLYMOUTH COUNTY)

**UTILITY PLAN**

MARCH 9, 2018

**REVISIONS:**

NO.	DATE	DESC.
1	5/8/2018	RESPONSE TO COMMENTS
2	6/20/2018	RESPONSE TO COMMENTS
3	7/13/2018	SITE LAYOUT REVISIONS
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PREPARED FOR:  
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CHESTNUT HILL, MA 02467

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