

P0595-015  
April 29, 2025

Michael R. Mates, PE  
Pease Development Authority  
55 International Drive  
Portsmouth, NH 03801

Re: **Trip Generation Memorandum  
Proposed Warehouse Facility  
100 New Hampshire Avenue, Portsmouth, NH**

Dear Mr. Mates:

Tighe & Bond has prepared this trip generation memorandum as an update to the previously approved *Traffic Impact Assessment*, revised February 17, 2023, for a 209,750+/- square foot (SF) Advanced Manufacturing Facility located at 100 New Hampshire Avenue within the Pease International Tradeport in Portsmouth, NH. The Applicant previously revised the proposed use and site layout to construct a reduced 101,936+/- SF warehouse distribution facility in place of the previously approved advanced manufacturing facility. The tenant for the proposed warehouse facility did not ultimately move forward with plans to lease the space. Two new tenants have since been identified to occupy the warehouse and distribution space following minor building and site modifications, which were approved by the PDA on April 14, 2025. Interior building modifications include a partition to provide dedicated space for both tenants and the conversion of a portion of the building to office space. A 3,500 SF truck shelter addition is proposed and is not included in the total proposed building square footage because it will be unconditioned space. The number of loading docks will be reduced from the previously proposed 30 bays to 15 bays under the currently proposed project. The previous loading docks will be replaced with truck and trailer storage areas under the current project.

Consistent with the previous approval, the site will provide truck access via two full access driveways on Rochester Avenue: one directly opposite Lee Street, and one east of Newfields Street. Passenger car access will be provided via the full access driveway on New Hampshire Avenue. Visitor/ employee parking will be separated from truck parking and loading dock operation by an emergency access gate. A proposed 11-space parking area for passenger cars will be constructed near the northwest corner of the building with access via Rochester Avenue, north of Lee Street. This memorandum describes the proposed trip generation for the new tenants and resultant impact on traffic operations.

## **Trip Generation**

Site generated traffic volumes were estimated using site-specific data provided by each of the perspective building tenants, Georgia Pacific and Hospital Corporation of America (HCA). Georgia Pacific is estimated to generate up to 40 truck trips daily (20 entering, 20 exiting); HCA is estimated to generate up to 20 truck trips per day (10 entering, 10 exiting). The building will be staffed by a total of 45 employees (10 employees at Georgia Pacific and 35 employees at HCA), estimated to generate approximately 130 total passenger car trips daily (65 entering, 65 exiting). Based on the trip generation analysis, the facility is expected to generate approximately 190 total daily trips (130 car trips and 60 truck trips) per day.

Based on ITE data utilizing LUC 140 – Manufacturing, the previous advanced manufacturing facility was estimated to generate 996 vehicles over the course of a typical weekday,

comprised of 902 passenger car trips and 94 truck trips. The previously approved trip generation summary for the advanced manufacturing use is shown in Table 1.

As compared to the previously approved advanced manufacturing facility, the site is estimated to generate 806 fewer daily trips comprised of 772 fewer passenger cars trips and 34 fewer truck trips. The proposed site-generated traffic summary and comparison to the previously approved use are shown in Table 2.

## **Trip Distribution**

Truck distribution was reviewed for the proposed project based on site-specific data provided by the future tenants. The proposed trip distribution patterns for HCA truck traffic and for passenger cars for both tenants are expected to remain the same as the previously proposed trip distribution. Based on the location of the nearby Georgia Pacific facility at 170 Shattuck Way in Newington, all inbound truck trips from Newington are anticipated to utilize Woodbury Avenue to Arboretum Drive to access the site. Outbound trips from the site are anticipated to be distributed to the surrounding roadway network as follows:

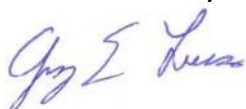
- 85% South to I-95 southbound (17 daily truck trips)
- 10% Northwest to US Route 4 westbound (2 daily truck trips)
- 5% North to I-95 northbound (1 daily truck trip)

In addition to the currently proposed development generating fewer trips than the previously proposed project, the modified trip distribution pattern for the Georgia Pacific truck trips are expected to reduce impact on the roadway network, particularly at intersections along Pease Boulevard in the vicinity of the US Route 4 ramps.

## **Conclusions**

Based on the proposed low throughput of the warehouse facility, the project is expected to generate fewer site-generated trips than the previously approved advanced manufacturing facility. It is anticipated that based on the estimated lower site trip generation, the study area intersections are expected to operate more favorably as compared to the previously approved higher intensity use.

### **TIGHE & BOND, INC.**



Greg Lucas, PE, PTOE, RSP1  
Senior Project Manager

Enclosures      Previously Approved Site-Generated Traffic Summary (Table 1)  
Proposed Site-Generated Traffic Summary (Table 2)

**TABLE 1**

Previously Approved Site-Generated Traffic Summary

| <b>Proposed - 209,750 SF Manufacturing Facility (Passenger Cars)</b> |              |             | <b>LUC 140</b> |
|--|--------------|-------------|----------------|
| <b>Peak Hour Period</b>  | <b>Enter</b> | <b>Exit</b> | <b>Total</b>   |
| Weekday Morning  | 105          | 32          | 137            |
| Weekday Afternoon  | 46           | 103         | 149            |
| Weekday  | 451          | 451         | 902            |
| <b>Proposed - 209,750 SF Manufacturing Facility (Trucks)</b>         |              |             | <b>LUC 140</b> |
| <b>Peak Hour Period</b>  | <b>Enter</b> | <b>Exit</b> | <b>Total</b>   |
| Weekday Morning  | 3            | 3           | 6              |
| Weekday Afternoon  | 2            | 4           | 6              |
| Weekday  | 47           | 47          | 94             |
| <b>Proposed - 209,750 SF Manufacturing Facility (Total Vehicles)</b> |              |             | <b>Total</b>   |
| <b>Peak Hour Period</b>  | <b>Enter</b> | <b>Exit</b> |                |
| Weekday Morning  | 108          | 35          | 143            |
| Weekday Afternoon  | 48           | 107         | 155            |
| Weekday  | 498          | 498         | 996            |

**Source:** Institute of Transportation Engineers, Trip Generation, 11th Edition, 2021  
Land Use - 140 Manufacturing

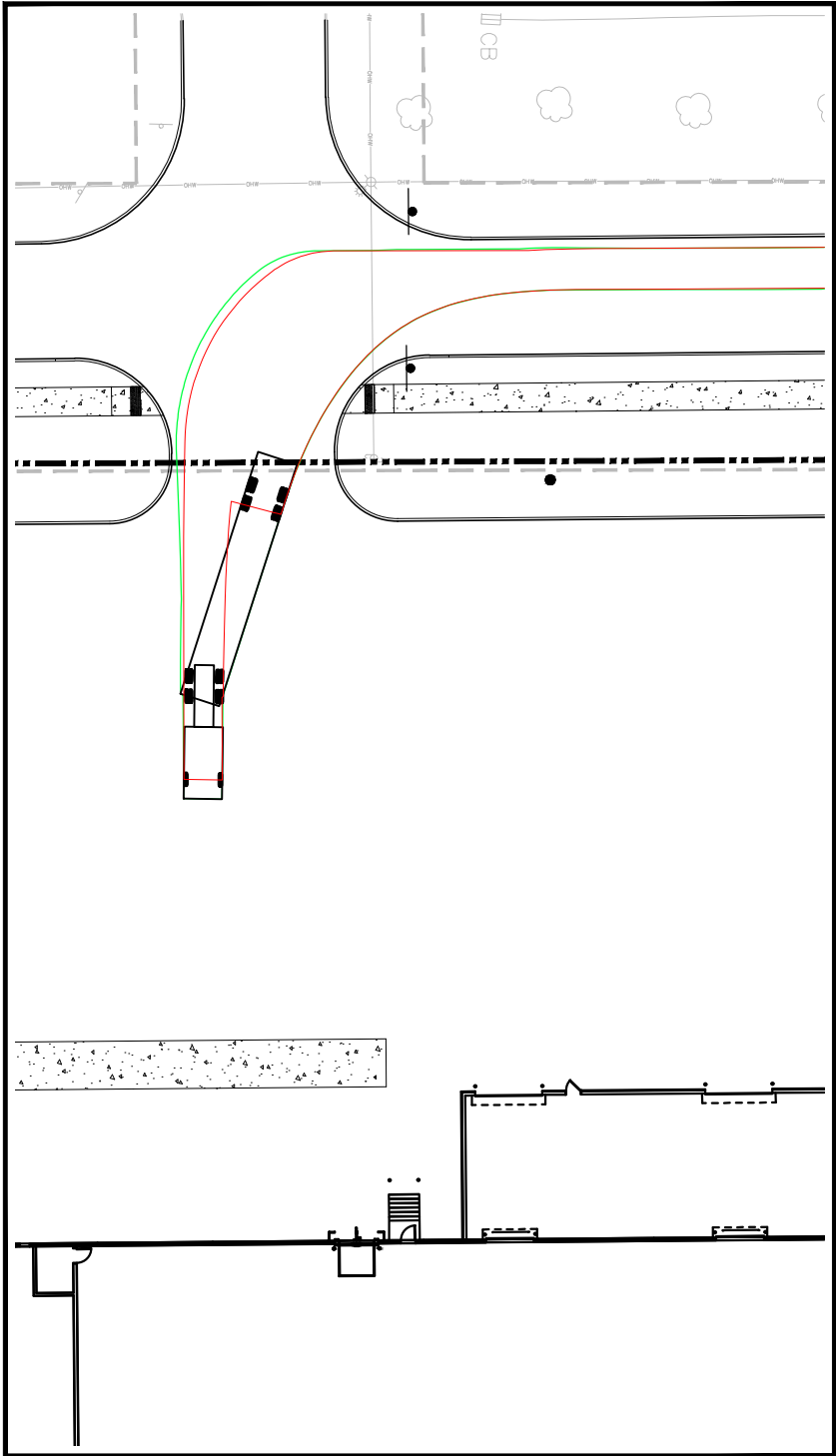
**TABLE 2**

Proposed Site-Generated Traffic Summary

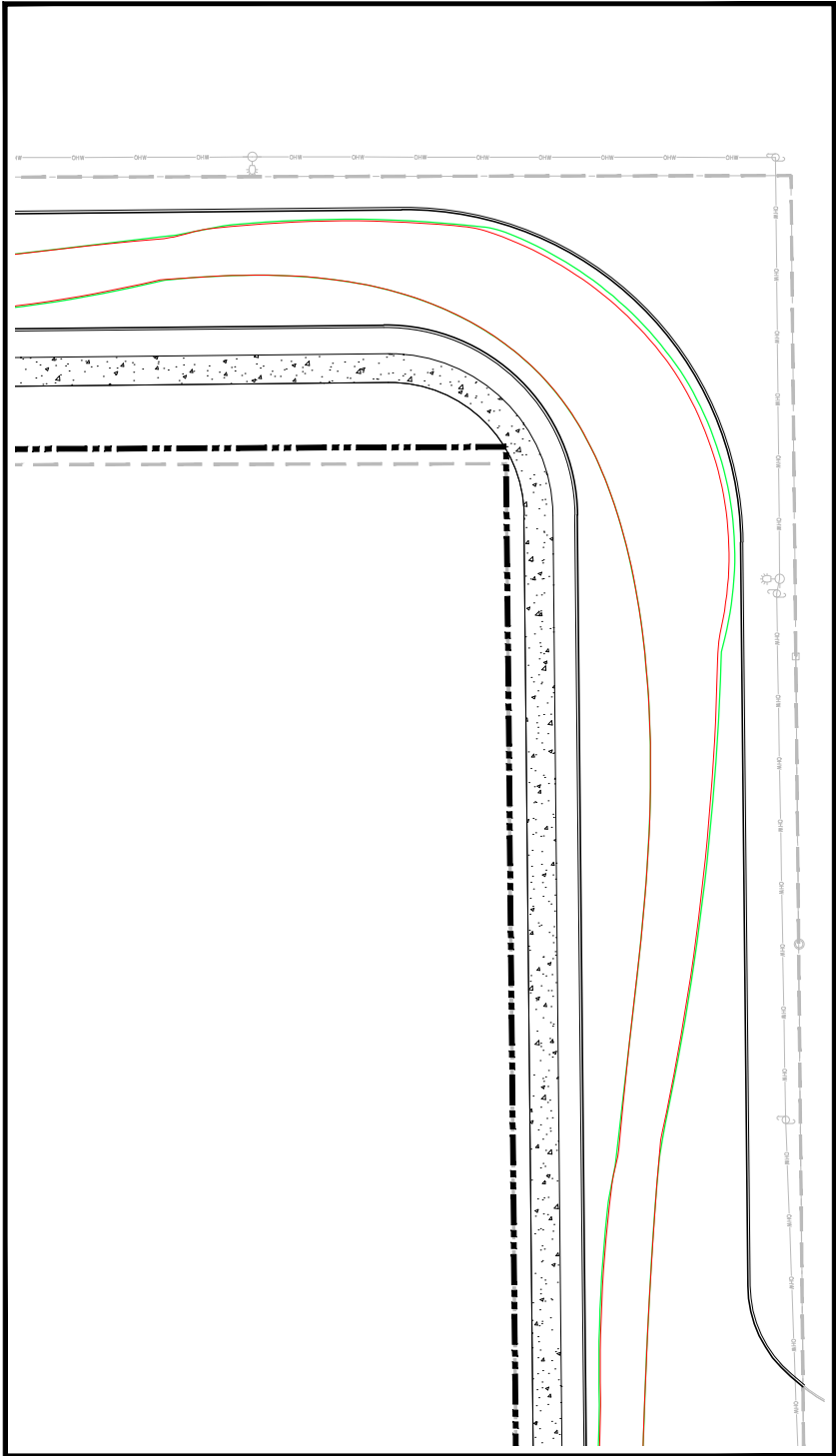
| <b>Proposed - 101,936 SF Warehouse (Passenger Cars)</b>                     |              |             |              |
|---|--------------|-------------|--------------|
|   | <b>Enter</b> | <b>Exit</b> | <b>Total</b> |
| Weekday   | 65           | 65          | 130          |
| <b>Proposed - 101,936 SF Warehouse (Trucks)</b>                             |              |             |              |
|   | <b>Enter</b> | <b>Exit</b> | <b>Total</b> |
| Weekday   | 30           | 30          | 60           |
| <b>Total Proposed - 101,936 SF Warehouse (All Vehicles)</b>                 |              |             |              |
|   | <b>Enter</b> | <b>Exit</b> | <b>Total</b> |
| Weekday   | 95           | 95          | 190          |
| <b>Net Passenger Car Trips (Total Proposed minus Previously Approved)</b>   |              |             |              |
|   | <b>Enter</b> | <b>Exit</b> | <b>Total</b> |
| Weekday   | -386         | -386        | -772         |
| <b>Net Truck Trips (Total Proposed minus Previously Approved)</b>           |              |             |              |
|   | <b>Enter</b> | <b>Exit</b> | <b>Total</b> |
| Weekday   | -17          | -17         | -34          |
| <b>Net Total Vehicular Trips (Total Proposed minus Previously Approved)</b> |              |             |              |
|   | <b>Enter</b> | <b>Exit</b> | <b>Total</b> |
| <b>Weekday</b>  | <b>-403</b>  | <b>-403</b> | <b>-806</b>  |

**Source:** Site-specific tenant data

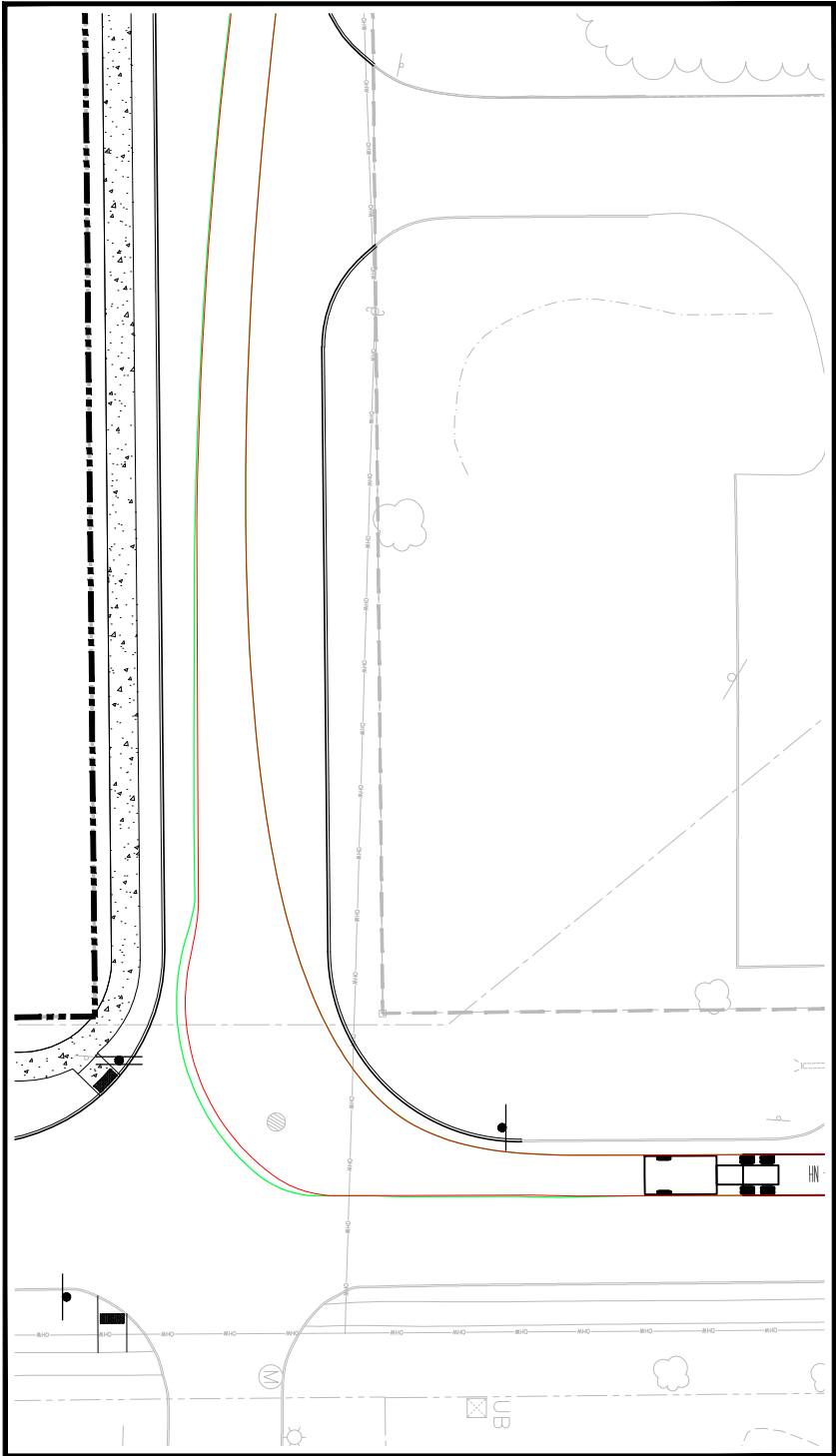
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Plot Date: Wednesday, April 02, 2025 Plotted By: Neil A. Hansen  
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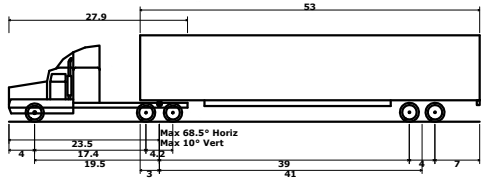
ROCHESTER AVENUE TO SITE



STRATHAM STREET TO ROCHESTER AVENUE



NEW HAMPSHIRE AVENUE TO STRATHAM STREET

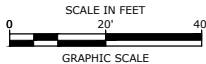


**WB-67 - Interstate Semi-Trailer - NH**  
Overall Length 73.501ft  
Overall Width 8.500ft  
Overall Body Height 13.500ft  
Min Body Ground Clearance 1.334ft  
Max Track Width 8.500ft  
Lock-to-lock time 6.00s  
Max Steering Angle (Virtual) 28.40°

**LEGEND**

— LIMIT OF VEHICLE TIRES  
— LIMIT OF VEHICLE BODY / OVERHANG

**Tighe&Bond**



**Proposed  
Georgia-Pacific  
Fit-Up**

Aviation Avenue  
Group, LLC

100 New Hampshire  
Avenue  
Portsmouth, NH

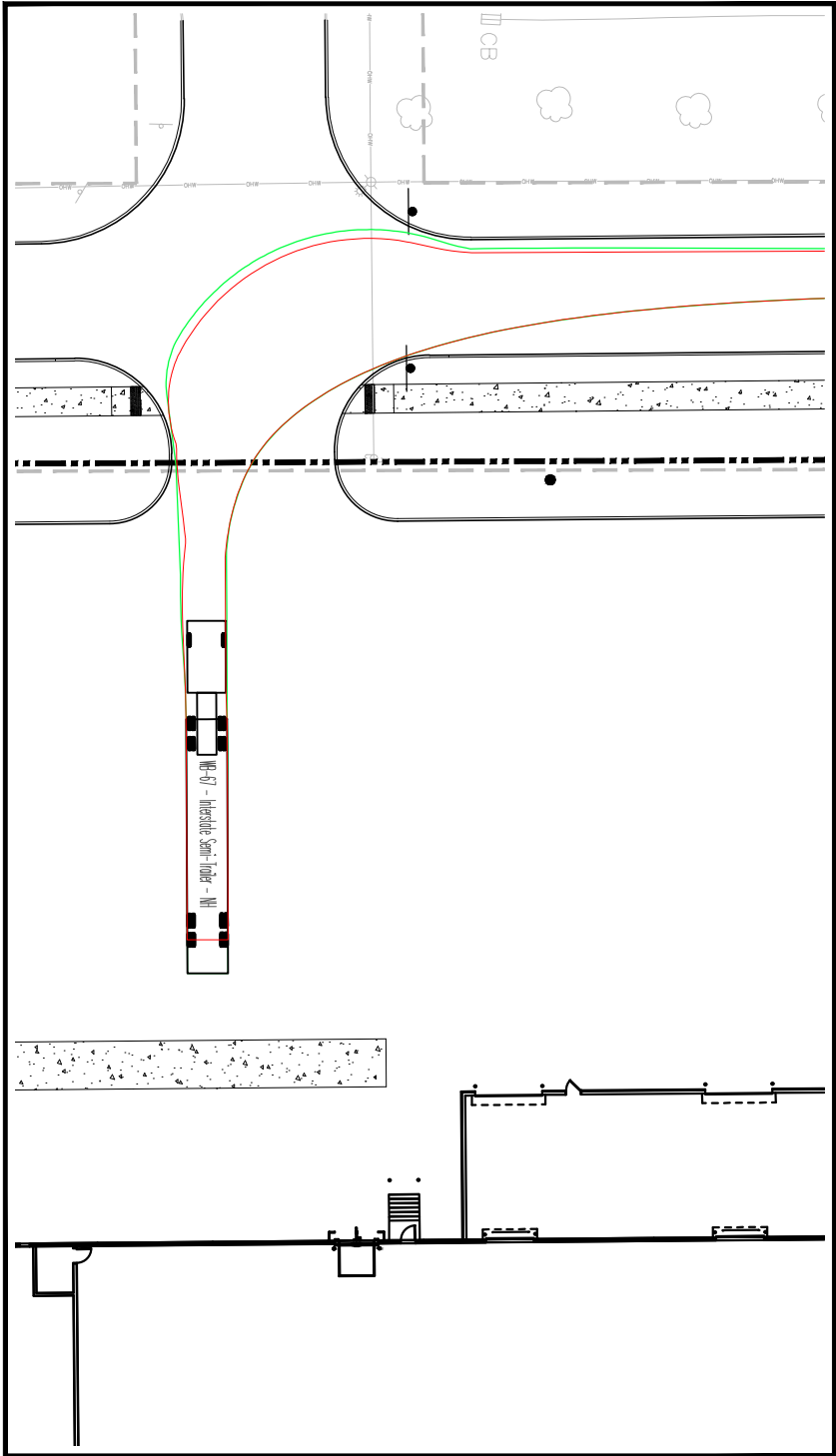
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| DATE:       | 4/2/2025             |             |
| FILE:       | P0595-015_DESIGN.DWG |             |
| DRAWN BY:   | CML                  |             |
| CHECKED:    | NAH                  |             |
| APPROVED:   | PMC                  |             |

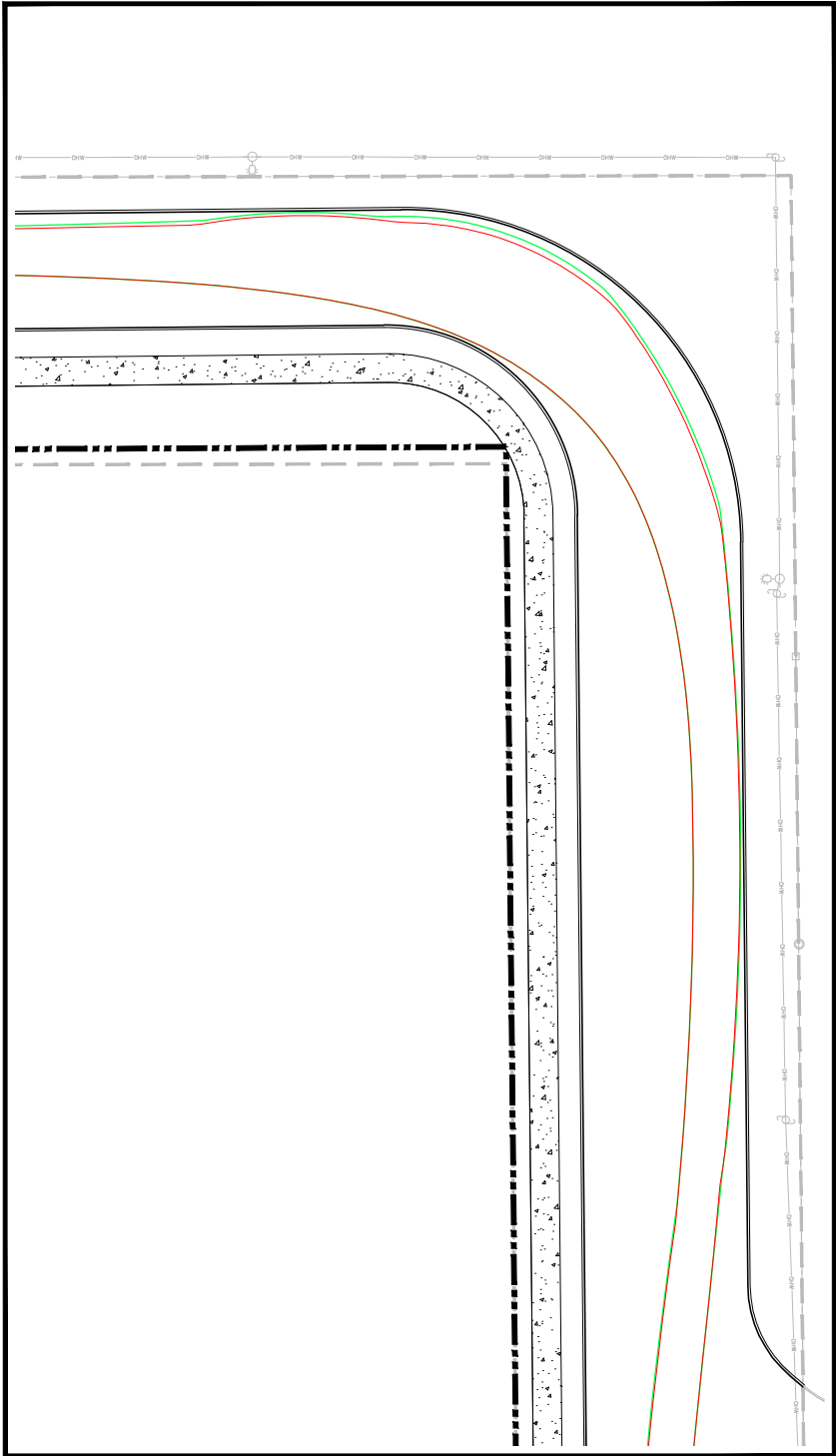
WB-67 TRUCK TURNING  
EXHIBIT

SCALE: AS SHOWN

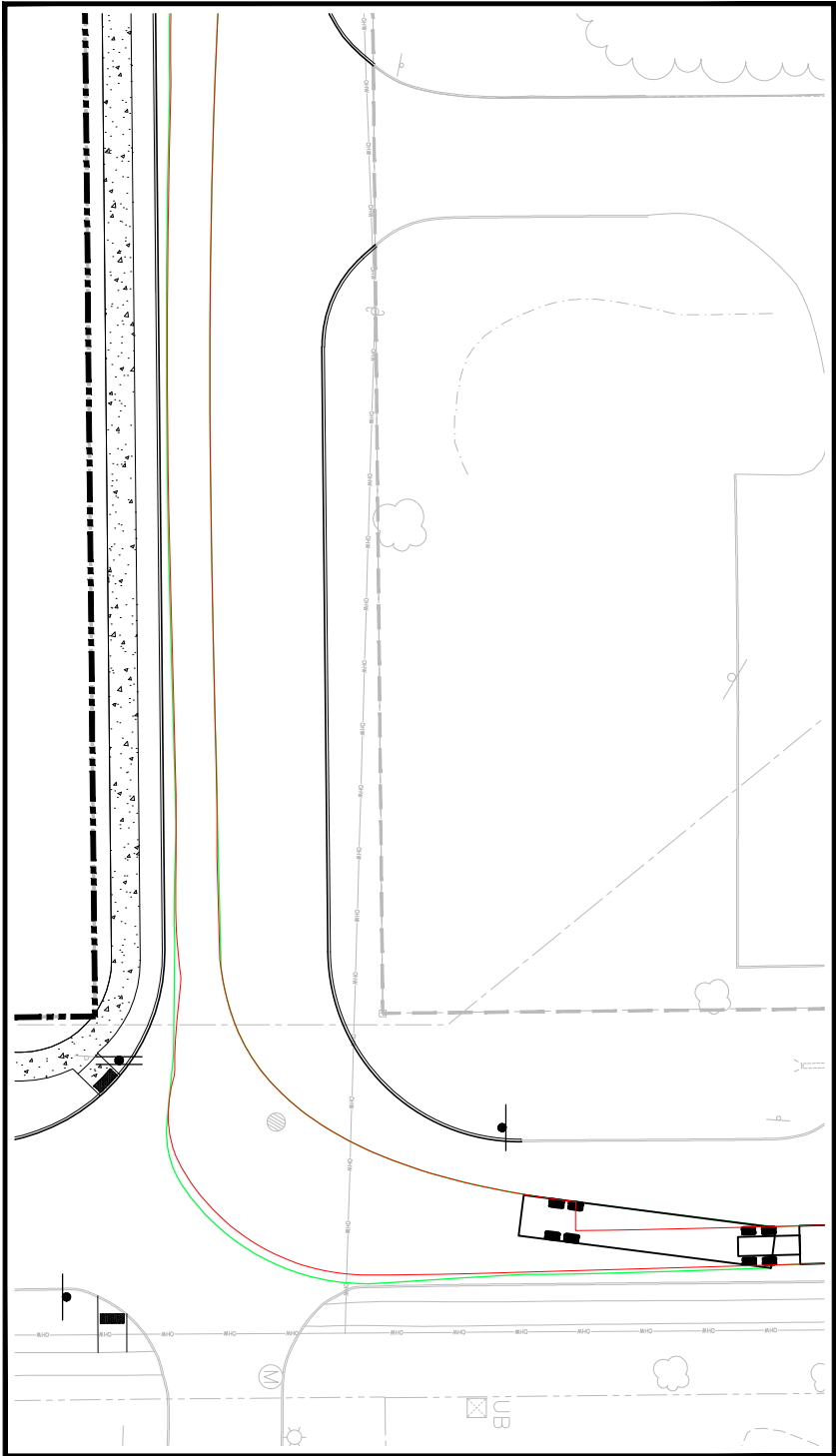
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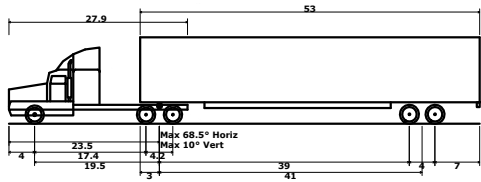
SITE TO ROCHESTER AVENUE



ROCHESTER AVENUE TO STRATHAM STREET



STRATHAM STREET TO NEW HAMPSHIRE AVENUE

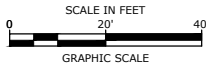


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