

Ref: 10321

November 21, 2025

Mr. John F. Trefethen, Chair
Zoning Board of Appeals
Town of Ashland
101 Main Street
Ashland, MA 01721

Re: Response to Transportation Peer Review
Proposed Multifamily Residential Development – 55 West Union Street
Ashland, Massachusetts

Dear Chair Trefethen and Members of the Zoning Board of Appeals:

Vanasse & Associates, Inc. (VAI) is providing responses to the comments that were raised in the November 13, 2025 *Transportation Peer Review* memorandum prepared by Howard Stein Hudson (HSH) concerning their review of the June 2025 *Transportation Impact Assessment* (the “June 2025 TIA”) and the accompanying Site Plan and associated materials that were prepared in support of the proposed multifamily residential development to be located at 55 West Union Street in Ashland, Massachusetts (hereafter referred to as the “Project”). Listed below are the comments that were identified by HSH in the subject memorandum followed by a response by VAI or the appropriate member of the Project team on behalf of the Project proponent.

Existing Conditions

Study Area Boundaries

Comment: The Applicant defined the study area to include the following two intersections:

- *Route 135/Memorial Drive/Voyagers Lane; and*
- *Route 135/Summer Street.*

HSH Comment: HSH generally agrees with the study area intersections. Aerial imagery was used to verify the roadway and intersection geometries provided by the Applicant. In general, the existing physical roadway and intersection conditions in the TIA are correct; however, HSH notes that the description of the intersection of Route 135/Memorial Drive/Voyagers Lane omits discussion of all the turn bay lengths. Upon review of the Synchro Reports provided as part of the TIA, it was determined that the turn bay lengths were accounted for in the analysis. No further action is required.

VAI Response: No response required.

Traffic Data Collection and Adjustments

Comment: The Applicant conducted manual turning movement counts (TMCs) on Tuesday, May 7, 2025, during the weekday morning (7:00 – 9:00 a.m.) and weekday evening (2:00 – 6:00 p.m.) peak periods and automatic traffic recorders (ATRs) for a period of 48-hours May 7-8, 2025, on Memorial Drive.

HSH Comment: HSH agrees with the Applicant's traffic data collection methods. No further action is required.

VAI Response: No response required.

Comment: The Applicant reviewed the Massachusetts Department of Transportation (MassDOT) weekday seasonal factors for Urban Group 3 along with traffic volume data from nearby MassDOT Continuous stations (Station No.'s 307 and AET09) to determine monthly variations in traffic volumes. According to the MassDOT data, it was determined that traffic volumes for the month of May are between 3.7 and 7.5 percent above average-month conditions; therefore, to provide a conservative assessment of traffic volumes within the study area, no adjustments were made to the collected May traffic volumes.

HSH Comment: HSH generally agrees with the Applicant's decision to not seasonally adjust the collected May traffic volumes. The Applicant reviewed the latest edition of the MassDOT Weekday Seasonal and Axle Corrections Factors for the appropriate roadway groups within the study area. However, HSH notes that the continuous count station located on Route 9 (Station No. 307) and on I-90 (Station No, AET09), which were selected to determine monthly variations in traffic volumes, are located approximately 12 miles northwest and seven (7) miles northeast, respectively, of the study area and are classified by the MassDOT Office of Transportation Planning as Urban Interstate (U1) and Urban Principal Arterial – Other (Group U3), respectively. Volumes reported at least at the I-90 location may not provide a direct representation of existing conditions within the study area. No further action relating to the continuous station is required.

VAI Response: No response required.

Selection of Peak Hour

Comment: The Applicant studied a weekday morning peak period of 7:00 – 9:00 a.m. and a weekday evening peak period of 2:00 – 6:00 p.m. Based on the collected traffic data, the weekday morning peak hour occurs between 7:30 – 8:30 a.m. and the weekday evening peak hour occurs between 5:00 – 6:00 p.m.

HSH Comment: HSH agrees with the Applicant's selection of peak hour. No further action is required.

VAI Response: No response required.



Future Conditions

Off-site Changes

Comment: *The Applicant asserts that MassDOT and the Town of Ashland were contacted to determine if there were any planned future roadway improvement projects expected to be completed by 2032 within the study area. Based on those discussions, no roadway improvements were identified to be planned within the study area at this time.*

HSH Comment: HSH generally agrees with the determination of the proposed roadway improvement projects in the vicinity of the study area. No further action is required.

VAI Response: **No response required.**

Non-Site Traffic

Comment: *The Applicant explains the methodologies to estimate non-site traffic growth: the most frequently used procedure consists of estimating an annual percentage increase in traffic growth and applying to all traffic volumes along with a second procedure, which consists of estimating traffic generated by planned developments and assigning it to the area roadway network. The Applicant asserts that for this TIA, both procedures were used.*

Traffic-volume data compiled by MassDOT from permanent count stations in the Ashland area were reviewed to determine the general growth trends in the area. This data indicates that traffic volumes have fluctuated over the 10-year period between 2009-2019, with an average growth of 0.14%. To provide a conservative analysis, a slightly higher 1.0% per year compounded annual background traffic growth was used to account for future traffic growth and unforeseen development within the study area.

The Applicant consulted with the Town of Ashland Planning Department to determine if there were any specific planned or approved development projects that would influence future traffic volumes in the study area. Based on those discussions, the following 10 projects were included:

- *9-49 Homer Avenue – 29 residential units and 8,550 sf of commercial space*
- *10-60 Main Street – 250 residential units and 15,000 sf of restaurant/retail space*
- *61 Waverly Street – 226 residential units*
- *100 Chestnut Avenue – 174 residential units and 10,500 sf commercial and/or retail space*
- *167-169 Pleasant Street – Demolition of an existing single-family and the construction of a duplex home*



- 240-260 Pleasant Street – Construction of a recreational youth soccer field, a tot-lot playground area and supporting parking
- 501 Pond Street (Route 126) – 120 residential units
- Arbella at Ashland, Memorial Drive – 180-unit, age-restricted multifamily residential development
- Dog Park, Memorial Drive – Construction of a dog park on 1.47 acres of land
- Regional YMCA, Memorial Drive – Construction of a regional YMCA

HSH Comment 4: HSH generally agrees with the Applicant’s methodology in determining background traffic growth and specific planned development traffic. No further action is required.

VAI Response: No response required.

Trip Generation

Comment: The Applicant states that the Institute of Transportation Engineers’ (ITE’s) Trip Generation, 11th Edition was used to estimate the site-generated traffic for the proposed development. The Applicant utilized ITE Land Use Code (LUC) 221 – Multifamily Housing (Mid-Rise). Applicant has estimated a total of 35 vehicle trips (eight entering and 27 exiting) during the weekday morning peak hour and a total of 41 vehicle trips (25 entering and 16 exiting) during the weekday evening peak hour.

HSH Comment: The trip generation estimate incorporates a mode split obtained by the Applicant using the American Community Survey (ACS) for the census tract where the Project is located. HSH agrees with the Applicant’s travel mode split methodology and the trip generation estimates. No further action is required.

VAI Response: No response required.

Trip Distribution and Assignment

Comment: The Applicant states that directional distribution of generated trips to and from the Project site was based on journey-to-work data obtained from the U.S. Census for the Town of Ashland. Furthermore, the Applicant states that the existing traffic volumes were used to refine the data based on existing traffic patterns along with the distribution prepared for nearby developments. Based on this assessment, 47% of the site-generated traffic is expected to utilize Route 135 east, 23% is expected to utilize Summer Street north, 20% is expected to utilize Route 135 south, and 10% is expected to utilize Memorial Drive west.

HSH Comment: HSH agrees with the Applicant’s trip distribution methodology. No further action is required.

VAI Response: No response required.



Traffic Operations Analysis

Comment: To assess the potential traffic impact of the development on the adjacent traffic network, the following steps are typically involved:

- Determine existing volumes and analyze existing traffic operating conditions for the study intersections;
- Generate and analyze No-build traffic volumes by applying a background growth factor to the existing traffic volumes and adding approved/pending developments as well as planned transportation improvements, if any, and analyze traffic operations;
- Determine the traffic volumes to be generated by the proposed development;
- Distribute and assign traffic throughout the study area network; and
- Combine the background traffic volumes with the proposed traffic volumes to establish Build traffic volumes, analyze traffic operations, and identify mitigation of potential impacts.

The traffic operations analysis presents detailed measures of effectiveness (MOEs) to assess the operating characteristics of the study intersections. The MOEs reported are average vehicle delay, level of service (LOS), volume-to-capacity (v/c) ratio, and queue lengths. The LOS is a letter grade that is assigned to a range of vehicular delays at the intersection. LOS A represents little delay and is usually associated with low volume movements. LOS F represents higher delays and could indicate issues related to traffic congestion. The Applicant used Synchro traffic engineering software to analyze study area intersections. Synchro engineering software is an industry standard that allows engineering practitioners to model traffic operations based on various inputs such as traffic volumes and traffic control devices (stop signs, traffic signals, etc.).

As summarized in Tables 9 and 10 of the TIA, all study area intersections are expected to continue to operate at similar LOS in all three analysis conditions, with the exceptions of the following movements:

- *At the signalized intersection of Route 135/Memorial Drive/Voyagers Lane, the southeast-bound shared left-turn/through movement deteriorates from LOS D in the 2025 Existing Weekday Morning peak hour to LOS E in the 2032 No-Build Weekday Morning peak hour and to LOS F in the 2032 No-Build Weekday Evening peak hour. The movement continues to operate at LOS E and LOS F in the 2032 Build Weekday Morning and Evening peak hours, respectively.*
- *At the signalized intersection of Route 135/Summer Street, the Route 135 northeast-bound left-turn movement deteriorates from LOS D in the 2032 No-Build Weekday Morning peak hour, to LOS E in the 2032 Build Weekday Morning peak hour. The movement continues to operate at LOS D in the 2032 No-Build and 2032 Build Weekday Evening peak hour.*



- *At the new unsignalized intersection of Memorial Drive/East Project Site Driveway, the driveway approach is expected to operate at LOS A and LOS B in the 2032 Build Weekday Morning and Evening Peak Hours, respectively.*
- *At the new unsignalized intersection of Memorial Drive/West Project Site Driveway, the driveway approach is expected to operate at LOS B in the 2032 Build Weekday Morning and Evening Peak Hours.*

To offset the predicted impact of the Project and improve overall intersection operations, the Proponent will design and implement an optimal traffic signal timing and phasing plan at the signalized intersections. Table 12 in the TIA summarizes the operation results with the implementation of the optimal traffic timing and phasing plan, which will be implemented prior to achieving 50% occupancy of the Project's residential units (58 units) and after achieving 80% occupancy of the Project's residential units (93 units). Based on those results, the intersections are expected to improve with no movement operating with a volume-to-capacity ratio above 1.00 and general reduction on overall average delay.

HSH Comment: HSH generally agrees with the traffic operations analysis methodology and results. As part of the mitigation, HSH concurs with the proposed signal timing and phasing plan. No further action is required.

VAI Response: No response required.

Parking Demand

Comment:

ISSUE 1

The Applicant states in the TIA that 184 parking spaces, or a parking ratio of 1.58 spaces per unit, will be provided on-site. The Applicant asserts that this parking ratio is within the range of observed parking demands for a multifamily residential development in a similar setting documented by the ITE Parking Generation, 6th Edition. Sheet 5 – Parking Layout Plan of the 55 West Union Street Proposed Site Plan Set, Ashland, MA, indicates 184 total spaces will be provided, including 19 for visitors. According to the Parking Summary Table on Sheet 2, the parking requirements will not be met as the guidelines require 232 spaces or two spaces per unit.

HSH Comment: HSH acknowledges that the proposed parking ratio of 1.58 spaces per unit is within the range of the average observed peak-parking demand of 1.23 spaces per unit as reported by the ITE Parking Generation Manual, 6th Edition. However, this proposed parking ratio includes 19 parking spaces designated for visitors, which increases the number of spaces per unit. Excluding these visitor spaces, the proposed parking ratio decreases to 1.42 spaces per unit. Based on the Town of Ashland's Zoning Bylaws, there is no specific minimum parking requirement for visitor spaces. HSH requests the Applicant revise the proposed parking ratio to exclude the proposed visitor parking spaces, or alternatively, consider revising the overall parking plan for the Project.



VAI Response: The visitor parking spaces (19) will be shared as a part of the overall parking supply and will not be defined for exclusive use by residents or guests. Consistent with HSH's comment, the 1.58 parking spaces per unit is within the range of observed peak parking demands documented by the ITE for similarly situated multifamily residential communities and includes both resident and visitor parking demands.

On-Site Planning and Parking

Comment: As previously mentioned, HSH has reviewed the materials contained within the 55 West Union Street Proposed Site Plan Set, Ashland, MA prepared by Connorstone Engineering Inc. Sheet 5 – Parking Layout Plan of the proposed Plan Set indicates 184 total spaces will be provided, including 19 for visitors. The Parking Layout Plan also indicates that all parking spaces measure 9 feet in width and 18 feet in length. The Town of Ashland's Zoning Code requires a minimum of 232 parking spaces on-site for residential use.

ISSUE 2

ON-SITE PARKING SPACE TOTAL

HSH Comment: The Applicant does not meet the Town of Ashland's parking requirements for residential spaces, as defined in the Zoning Code. The Applicant asserts that the proposed parking ratio is within the parking demand based on the ITE Parking Generation Manual, 6th Edition. HSH requests the Applicant confirm whether the Project intends to seek a waiver to the Planning Board for not meeting the Town's minimum parking requirements.

VAI Response: A waiver from the Town's minimum parking requirements has been requested.

Comment: ISSUE 3

ON-SITE PARKING SPACE DIMENSIONS

HSH Comment: HSH notes that the on-site spaces identified on the Plan Set do not comply with the dimensional requirements of the Town of Ashland's Zoning Code. According to the Town's code, the width of a parking space shall not be less than nine (9) feet, and the length shall be 20 feet. HSH requests the Applicant confirm whether a zoning-compliant parking lot layout has been considered. If not, the Applicant should also confirm whether the Project intends to seek a waiver to the Planning Board for the non-compliant parking space dimensions.

Response: A waiver has been requested to allow the parking dimensions as shown at 9 feet wide by 18 feet long. The proposed dimensions align with typical industry standards.



Comment: **ON-SITE PARKING LOT DESIGN**

HSH Comment: *The proposed parking layout includes drive aisles ranging from 24 feet and 25.5 feet in width. HSH find these dimensions acceptable. No further action is required.*

VAI Response: **No response required.**

Comment: **ISSUE 4 AND 5**

SITE ACCESS AND CIRCULATION

Access to the Project site will be provided via two (2) full-access driveways that will intersect the south side of Memorial Drive approximately 300 feet and 650 feet west of Route 135, respectively. The Site driveways should be a minimum of 24 feet in width and designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle. Vehicles exiting the Project site will be placed under STOP-sign control with a marked STOP-line provided.

Additionally, Sheet 5 – Parking Layout Plan of the proposed Plan Set indicates a designated area for drop-off/pick-up under a covered entry on the northeast side of the Project site and a “Loading Area” west of the of East Project Site Driveway.

A Truck Turn Exhibit prepared by Connorstone Engineering Inc. was provided with the entering and exiting maneuvers of a Town of Ashland’s Fire Tuck at the two proposed Site driveways.

HSH Comment: *HSH generally agrees with the site access recommendations made by the Applicant. However, the Applicant does not provide sufficient information on loading and trash/recycling accommodations. HSH requests the Applicant provide a detailed plan as to where move-in/move-out activity will take place, including a comprehensive AutoTURN analysis to demonstrate that all anticipated vehicles (moving, delivery, and trash/recycling trucks) can safely circulate the site and the designated loading area.*

Response: **As requested, a vehicle turning analysis has been prepared and is attached to verify anticipated vehicle circulation through the site and/or access to loading area. The loading/trash area is located to the west side of the main access and has been shown to accommodate the required movements of a garbage truck (SU-40). Delivery vehicles and moving vans (SU-30), which would access near the covered entry, have also been shown to have sufficient space to circulate through the entire site.**



Comment: ***HSH Comment:*** *Additionally, HSH generally agrees with the submitted fire truck maneuvers; but requests that the Applicant provide the vertical clearance of the covered entry to confirm it is sufficient for all anticipated vehicles, including delivery and emergency vehicles.*

Response: The vertical clearance of the covered entry is 14-feet.

Comment: ISSUE 6

ON-SITE SNOW STORAGE

The TIA asserts that snow accumulations (windrows) within the sight triangle areas of the Project site driveways will be promptly removed where such accumulations would impede sight lines. Additionally, the proposed Plan Set identifies two designated areas for snow storage on-site.

HSH Comment: *HSH notes the area of snow storage is proposed to be located in front of numerous residents and visitors parking spaces on-site. HSH requests the Applicant clarify how snow removal vehicles will access the snow storage locations when all parking spaces are occupied.*

Response: Snow removal operations will be managed and coordinated by the property manager with residents, and will include a staged snow removal operation where residents will be required to move vehicles to clear the parking lot. Residents will be informed of the snow removal plan upon initial occupancy and will be reminded of the procedures prior to the start of the winter season.

Pedestrians/Cyclists

Comment: ISSUE 7 AND 8

Based on the submitted Plan Set, pedestrian walkways around the proposed building are 5 foot wide and ADA-compliant ramps are provided on both sides of the two proposed Site driveways. Based on the TIA, marked crosswalks will be provided at the Project site driveways. Additionally, the Project will provide interior, weather protected bicycle parking and an exterior bicycle rack.

HSH Comment: *HSH generally agrees with the proposed on-site pedestrian and bicycle accommodations; however, at the East Project Site Driveway, a short sidewalk is provided on the west side of the driveway that terminates at the Loading Area. HSH recommends providing a crosswalk between this sidewalk and the sidewalk in front of the building, as well as installing warning signage and/or an audible alarm for vehicles exiting the Loading Area.*

VAI Response: The subject sidewalk segment will be relocated to the east side of the driveway to better align with the pedestrian entrance to the building and a crosswalk with accompanying ADA compliant wheelchair ramps will be provided to link the sidewalk to the proposed building.



Comment: **HSH Comment: HSH requests the Applicant provide a plan indicating the location of the indoor bicycle parking and confirm the number of bicycle spaces to be accommodated. HSH also requests the Applicant identify on the Site Plan the proposed outdoor bicycle racks.**

VAI Response: Bicycle parking will be provided on the ground floor of the building in a bicycle room that will be accessible from the lobby area as shown on Drawing A-101 of the Architectural Drawings (attached). The bicycle room has been designed to accommodate 44 bicycles. Exterior bicycle racks have been added to the Site Plan (also attached).

Geometric Design Criteria

Comment: *The Applicant conducted a sight distance evaluation at the two proposed driveways along Memorial Drive. Both Stopping Sight Distance (SSD) and Intersection Sight Distance (ISD) measurements were performed. In accordance with the American Association of State Highway and Transportation Officials' (AASHTO's) A Policy on the Geometric Design of Highways and Street (the Green Book), to maintain a safe operation of an unsignalized intersection, ISD should be at least equal to the SSD, though it is desirable to meet ISD requirements on its own.*

The Applicant utilized the design speed of 40 miles per hour (mph) along each travel direction of Memorial Drive to calculate the required SSD and ISD. Note that the 85th percentile vehicle travel speeds measured along the roadway were 36/37 mph and the posted speed limit in the vicinity of the Project site is 30 mph. The SSD values were adjusted to account for the average grade of Memorial Drive approaching the driveways. Based on this evaluation, the required SSD at the East Site Driveway is 285 feet for vehicles traveling northwest-bound and 325 feet for vehicles traveling southeast-bound and the required SSD at the West Site Driveway is 290 feet for vehicles traveling both northwest-bound and southeast-bound. The Applicant's measured distances exceed the required SSD in both directions.

The recommended ISD at the East Site Driveway is calculated at 445 feet for vehicles turning left and 385 feet for vehicles turning right. The Applicant's measured distances do not exceed the recommended ISD on its own, but they exceed the SSD values with 319 feet for vehicles turning left and 378 feet for vehicles turning right. Similarly, the recommended ISD at the West Site Driveway is calculated at 445 feet for vehicles turning left and 385 feet for vehicles turning right. The Applicant's measured distances do not exceed the recommended ISD on its own, but they exceed the SSD values with more than 500 feet for vehicles turning left and 434 feet for vehicles turning right.

The Applicant concludes that the driveway operations meet the SSD requirements to function in a safe manner based on the appropriate approach speed. The Applicant recommends that no objects should be placed within the sight triangle



areas that would exceed 3.5 feet in height, and any signs and landscaping be designed and maintained so as not to restrict lines of sight.

HSH Comment: HSH generally agrees with the Applicant’s calculations of the SSD and ISD, and planting and vegetation recommendations. No further action is required.

VAI Response: No response required.

Site Improvements

*Comment: ISSUE 9
The Applicant asserts that the existing trees and vegetation will be cleared prior to construction but that as many trees as possible will be preserved. Based on the Proposed Site Plan of 55 West Union Street in Ashland, MA, the Project appears to include general site improvements such as standard sidewalks, ADA-compliant ramps, and designated areas for parking, loading, and drop-off/pick-up area.*

HSH Comment: HSH requests the Applicant provide a signage and pavement marking plan that includes all the appropriate crosswalk locations throughout the proposed Site, including the two proposed driveways.

VAI Response: Signs and pavement markings have been added to the Site Plan.

Transportation Demand Management

Comment: The Applicant asserts that in an effort to encourage the use of alternative modes of transportation instead of single-occupant vehicles, the following Transportation Demand Management (TDM) measures will be explored:

- *A Transportation Coordinator (TC) will be employed to coordinate the traffic reduction program for the Project;*
- *The TC will facilitate a rideshare matching program for residents to encourage carpooling;*
- *A “welcome packet” will be provided to new residents detailing available public transportation services, bicycle, and walking alternatives, and other commuting options;*
- *Information regarding public transportation services, maps, schedules, and fare information will be posted in a central location and/or otherwise made available to residents;*
- *New residents of the Project that sign a 12-month lease will be offered a transit pass subsidy for the first month of tenancy limited to \$50 per unit;*
- *A pick-up/drop-off area has been provided at the front of the building for use by carshare and delivery service providers, as well as Amazon, UPS, and FedEx;*



- *A minimum of 20% of the parking spaces will include accommodations for the installation of electric vehicle (EV) charging stations for use by residents and guests;*
- *Secure bicycle parking will be provided within the Project site to include interior, weather protected bicycle parking and an exterior bicycle rack; and*
- *Parking will be unbundled from the lease for each residential unit in order to encourage lower automobile ownership.*

HSH Comment: HSH agrees with the proposed TDM measures. No further action is required.

VAI Response: No response required.

Construction Period Issues

Comment: **ISSUE 10**
The Applicant does not provide details on any anticipated construction period issues.

HSH Comment: HSH encourages the Applicant to evaluate the short-term construction impacts of the Project, and provide details of the overall construction schedule, working hours, number of construction workers, transportation and parking, number of construction vehicles, and routes to and from the Project site. To minimize transportation impacts during the construction period, HSH suggests the Project proponent provide secure spaces on-site for workers' supplies and tools as well as limit the number of construction worker parking spaces on-site and encourage workers to carpool and/or use the MBTA Commuter Rail.

VAI Response: Construction impacts associated with the Project will be limited in duration and in number to the extent that the overall impact of construction-related traffic will be lower than the impact of the completed Project as assessed in the June 2025 TIA. That being said, it is important that a Construction Traffic Management Plan (CTMP) be an integral part of the Project. The CTMP will include the measures that have been suggested by HSH to include the following:

- **The General Contractor will encourage workers to carpool or use public transportation, including the MBTA Commuter Rail, to access the Project site to the extent practicable.**
- **Truck routes will be established that use regional roadways or where such vehicles cannot be accommodated due to reduced roadway width (i.e., less than 22-feet in width) or deteriorated pavement conditions to the extent practicable.**
- **Equipment storage areas will be provided in order to reduce trips associated with the transporting of equipment to the Project site.**



Mr. John F. Trefethen, Chair
Zoning Board of Appeals
Town of Ashland
November 21, 2025
Page 13 of 13

- **Construction worker parking will be prohibited along Memorial Drive.**
- **The hours of construction will be consistent with local ordinances.**

We trust that this information is responsive to the comments that were identified in the November 13, 2025 memorandum prepared by HSH concerning their review of the Project. If you should have any questions or would like to discuss our responses in more detail, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.



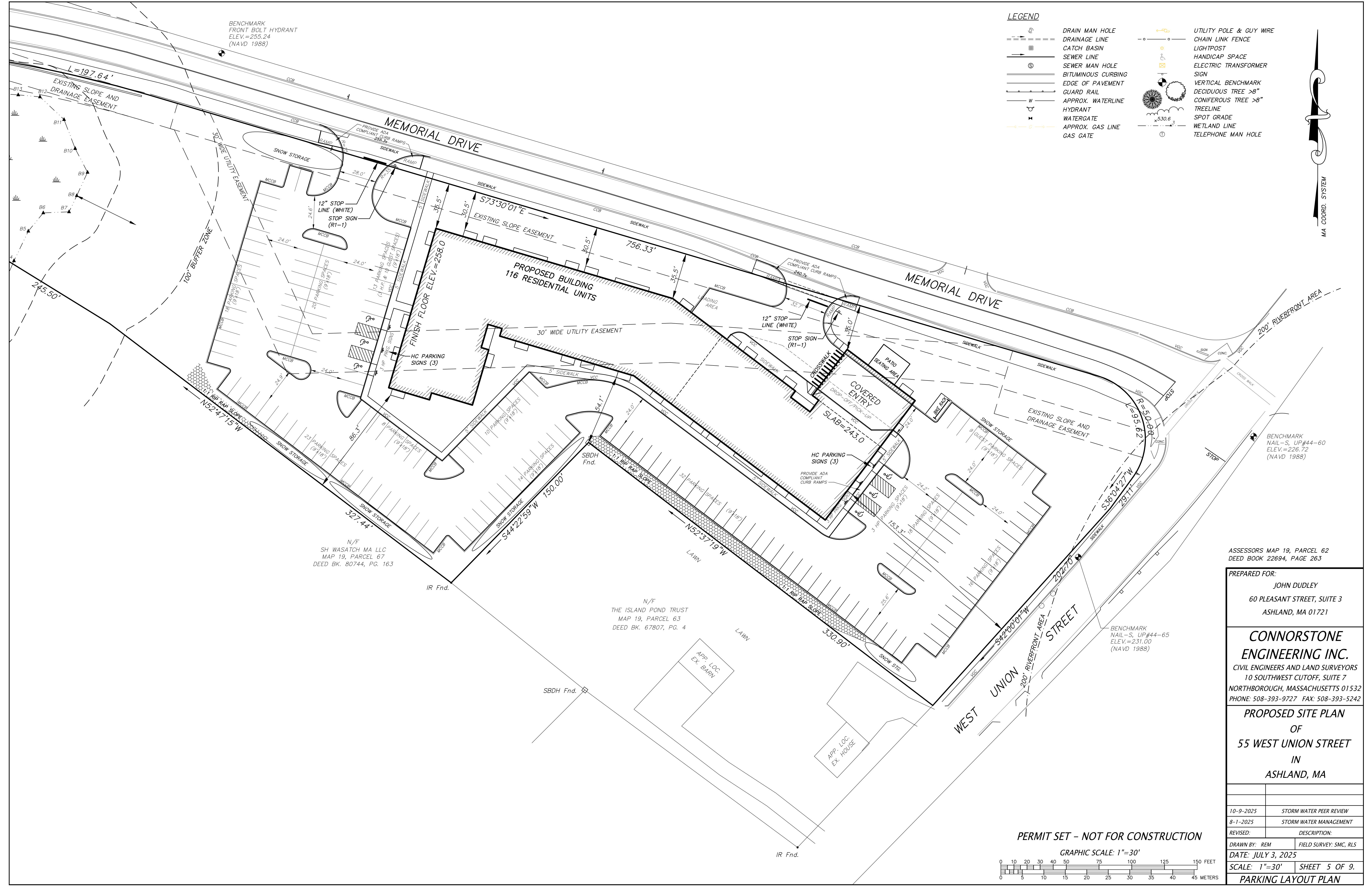
Jeffrey S. Dirk, P.E., PTOE, FITE
Managing Partner

Professional Engineer in CT, MA, ME, NH, RI, and VA

JSD/jsd

Attachments





- LEGEND**
- DRAIN MAN HOLE
 - DRAINAGE LINE
 - CATCH BASIN
 - SEWER LINE
 - SEWER MAN HOLE
 - BITUMINOUS CURBING
 - EDGE OF PAVEMENT
 - GUARD RAIL
 - APPROX. WATERLINE
 - HYDRANT
 - WATERGATE
 - APPROX. GAS LINE
 - GAS GATE
 - UTILITY POLE & GUY WIRE
 - CHAIN LINK FENCE
 - LIGHTPOST
 - HANDICAP SPACE
 - ELECTRIC TRANSFORMER SIGN
 - VERTICAL BENCHMARK
 - DECIDUOUS TREE >8"
 - CONIFEROUS TREE >8"
 - TREELINE
 - SPOT GRADE
 - WETLAND LINE
 - TELEPHONE MAN HOLE

ASSESSORS MAP 19, PARCEL 62
DEED BOOK 22694, PAGE 263

PREPARED FOR:
JOHN DUDLEY
60 PLEASANT STREET, SUITE 3
ASHLAND, MA 01721

CONNORSTONE ENGINEERING INC.
CIVIL ENGINEERS AND LAND SURVEYORS
10 SOUTHWEST CUTOFF, SUITE 7
NORTHBOROUGH, MASSACHUSETTS 01532
PHONE: 508-393-9727 FAX: 508-393-5242

PROPOSED SITE PLAN OF 55 WEST UNION STREET IN ASHLAND, MA

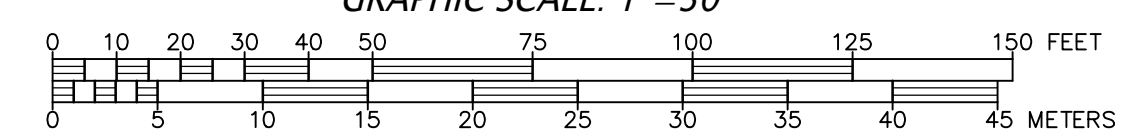
10-9-2025 STORM WATER PEER REVIEW
8-1-2025 STORM WATER MANAGEMENT

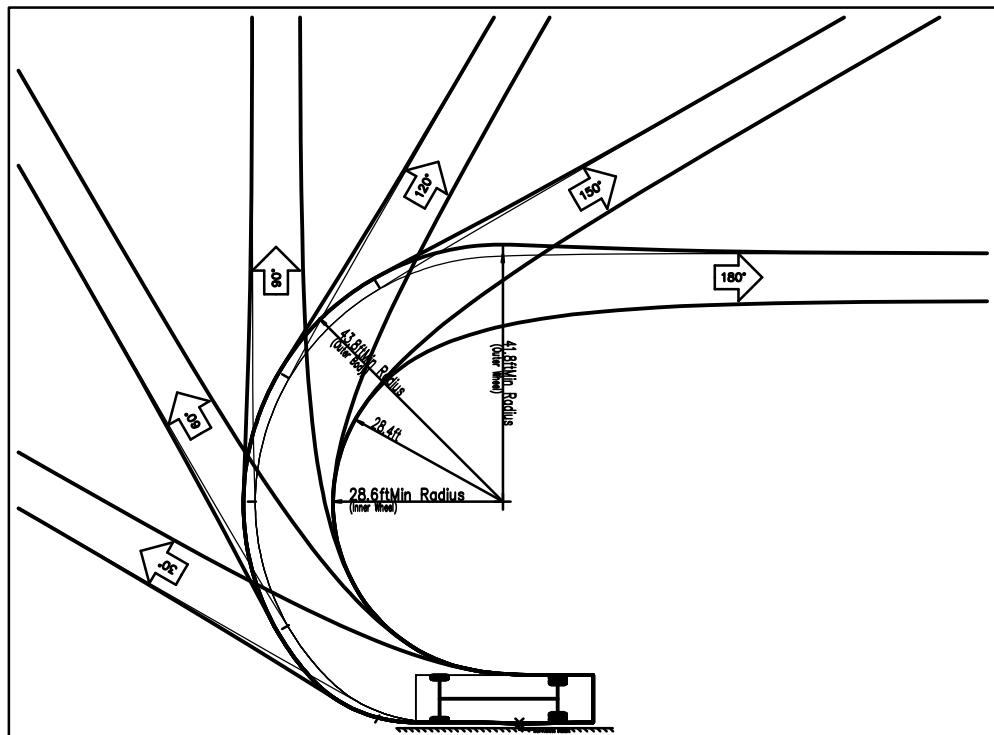
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DATE: JULY 3, 2025
SCALE: 1"=30' SHEET 5 OF 9

PARKING LAYOUT PLAN

PERMIT SET - NOT FOR CONSTRUCTION
GRAPHIC SCALE: 1"=30'

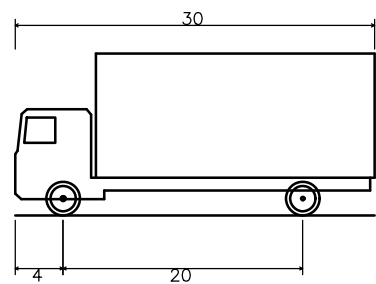




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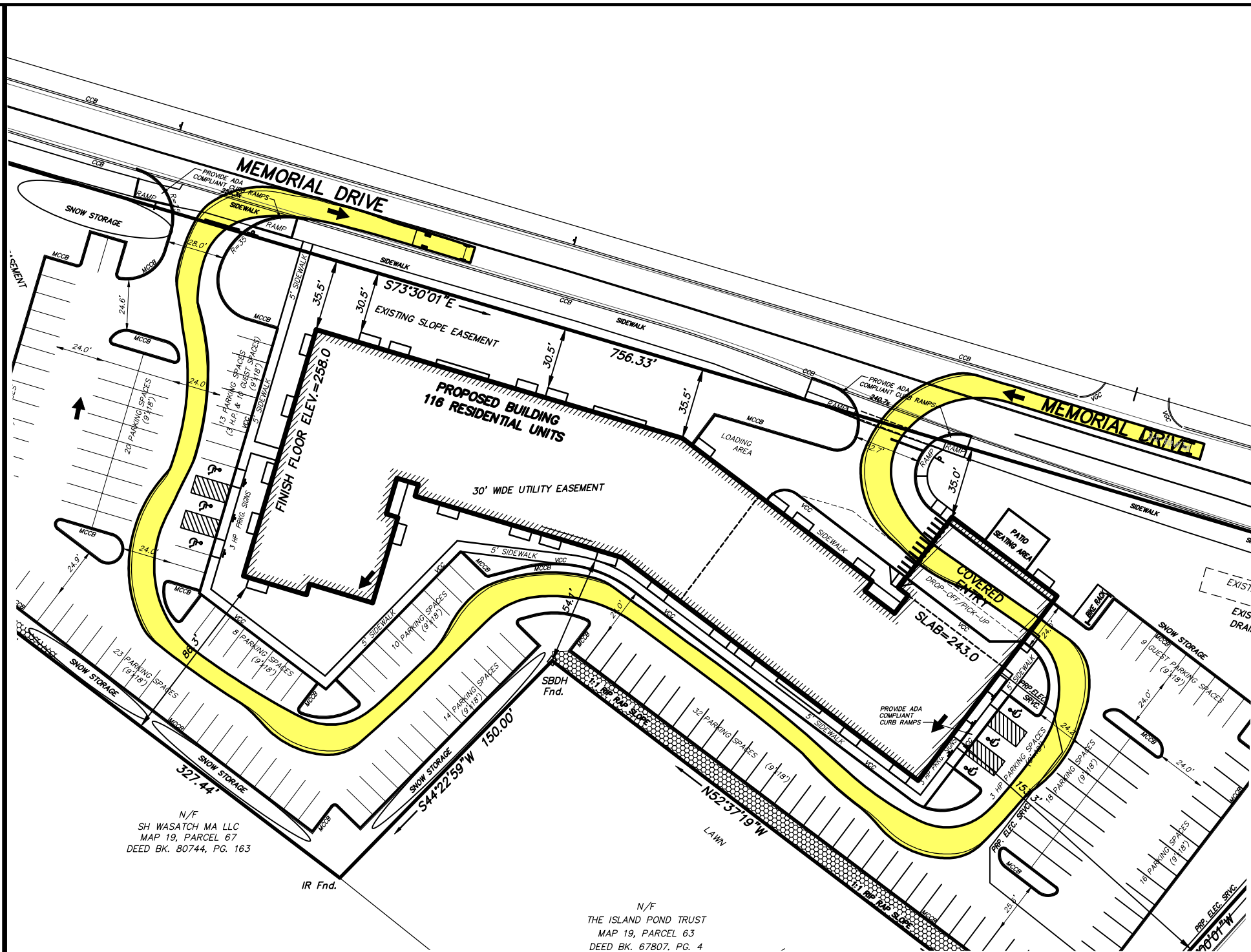
Turn(s) based upon a design speed of 5.00mph. After transition, center of front axle follows smallest possible circular arc. Curb is located 0.98ft from the vehicle. Maximum kick out distance is 0.202ft.

SU-30
Single Unit Truck



SU-30 - Single Unit Truck

Overall Length	30.000ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock to Lock Time	5.00s
Curb to Curb Turning Radius	41.800ft

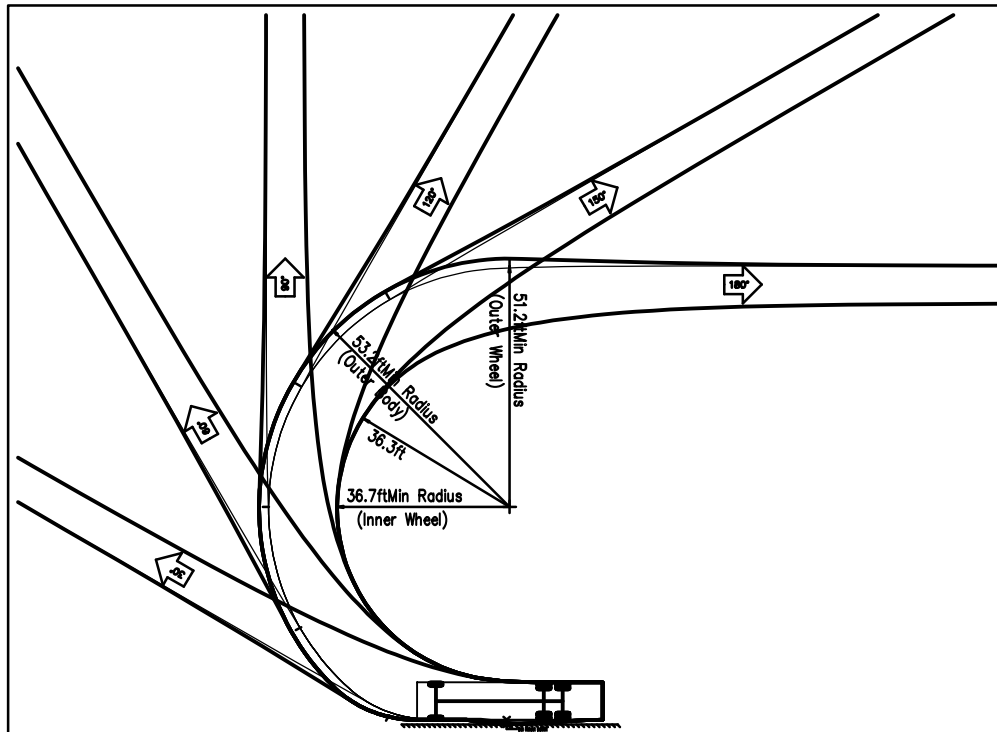


SU-30 DELIVERY TRUCK - SWEEP PATH
OF
55 WEST UNION STREET
IN
ASHLAND, MA

PREPARED BY:
CONNORSTONE
ENGINEERING INC.

DATE:
NOVEMBER 20, 2025

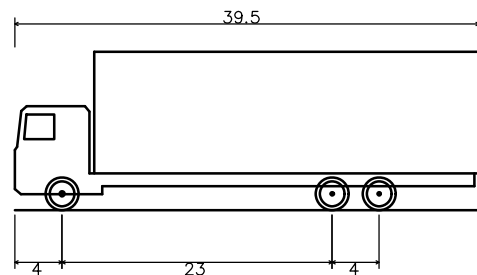
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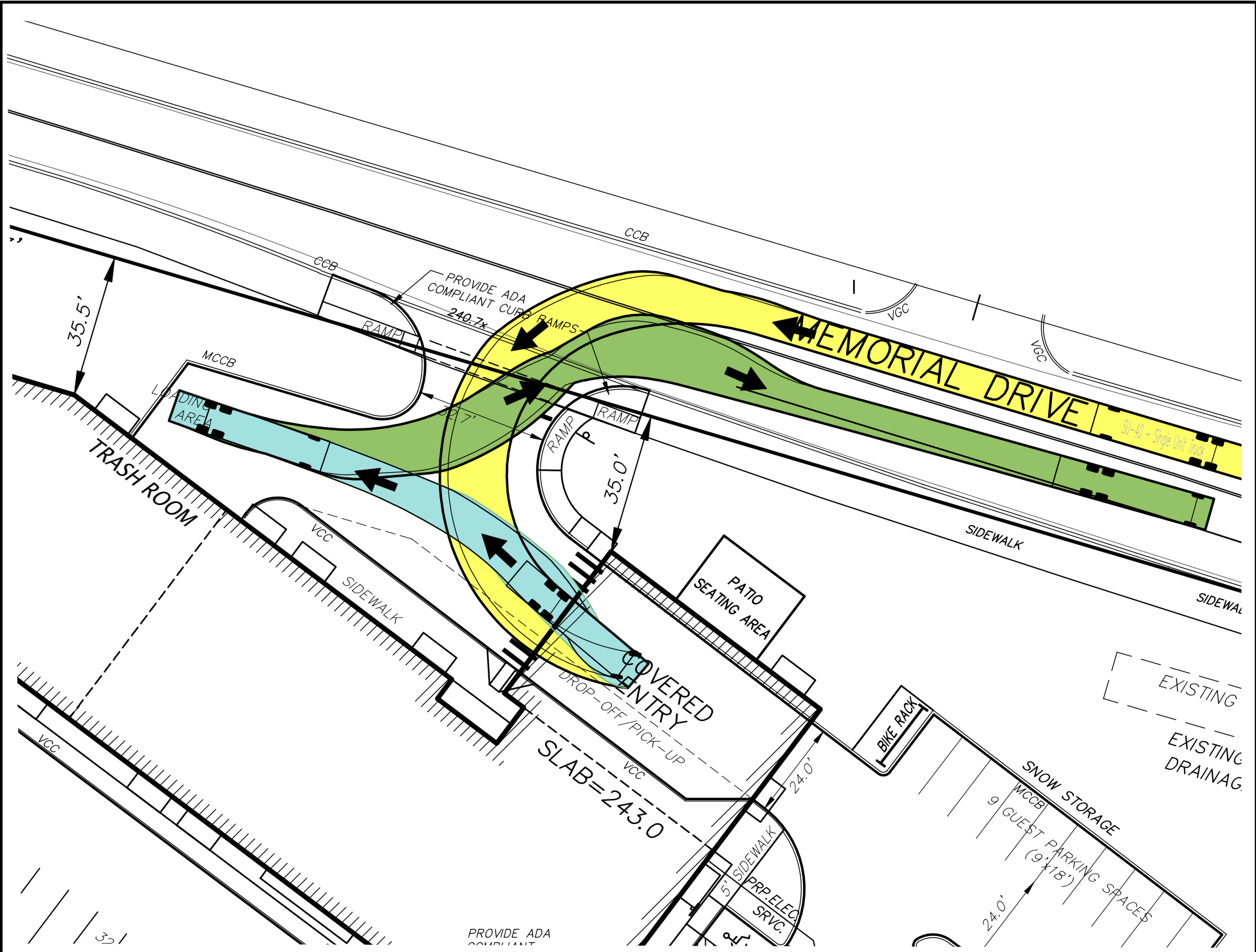
Turn(s) based upon a design speed of 5.00mph. After transition, center of front axle follows smallest possible circular arc. Curb is located 0.98ft from the vehicle. Maximum kick out distance is 0.895ft.

SU-40
Single Unit Truck



SU-40 - Single Unit Truck

Overall Length	39.500ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock to Lock Time	5.00s
Curb to Curb Turning Radius	51.200ft



SU-40 GARBAGE TRUCK - SWEEP PATH
AT
55 WEST UNION STREET
IN
ASHLAND, MA

PREPARED BY:
CONNORSTONE
ENGINEERING INC.

DATE:
NOVEMBER 20, 2025

SCALE: 1"=30'

