

Traffic Analysis & Access Plan

📍 480 Main Street, Bolton, MA



Prepared By:

Kimley»Horn

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October 12, 2023

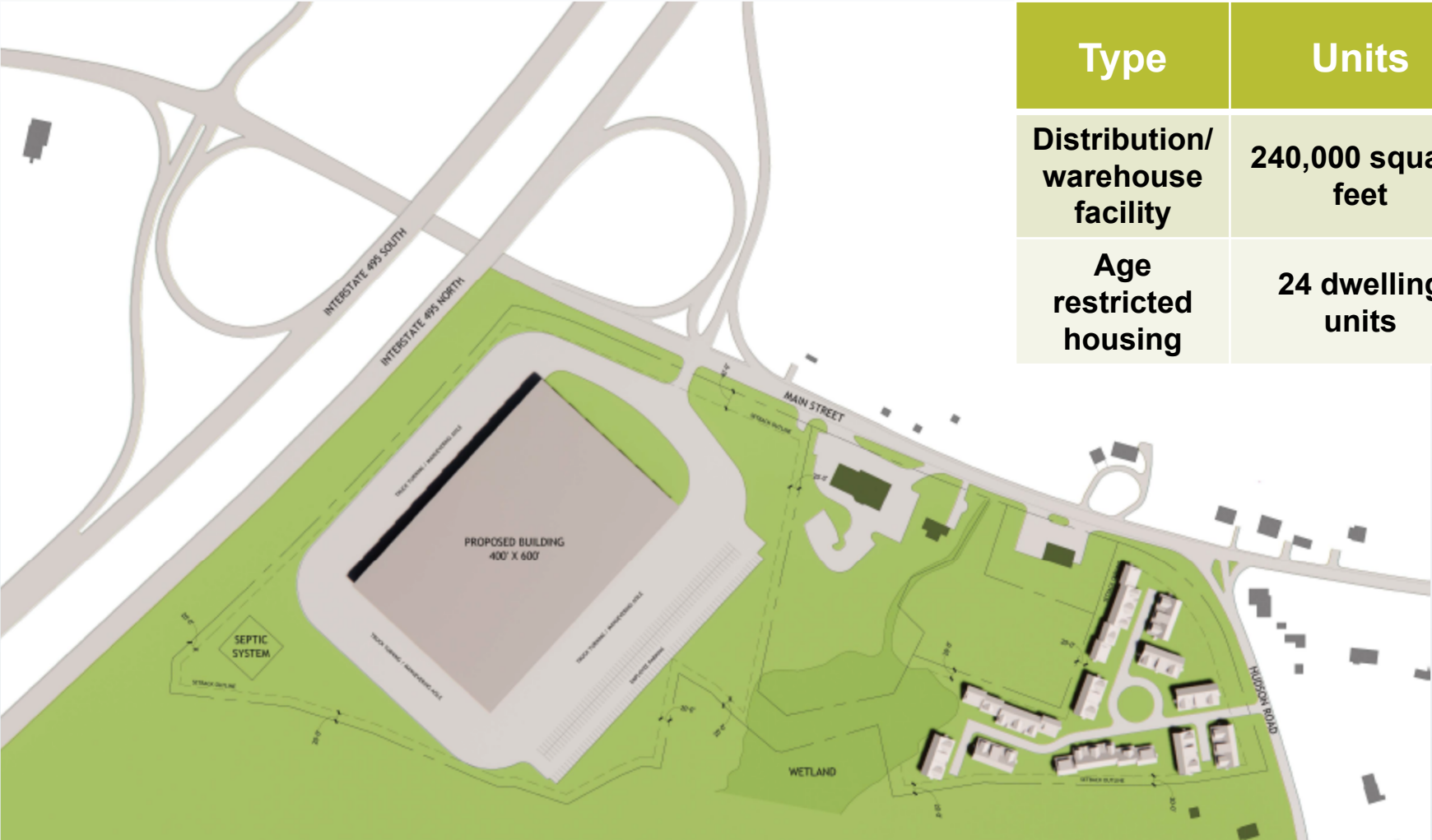


Presentation Outline

- Project Location and Access
- Access Issues/Requirements
- Key Study Highlights
- Analysis Conclusions
- Current Main Street Access Plan



Current Project Description



Type	Units	Access Location
Distribution/warehouse facility	240,000 square feet	Access from Main Street
Age restricted housing	24 dwelling units	Access from Hudson Road



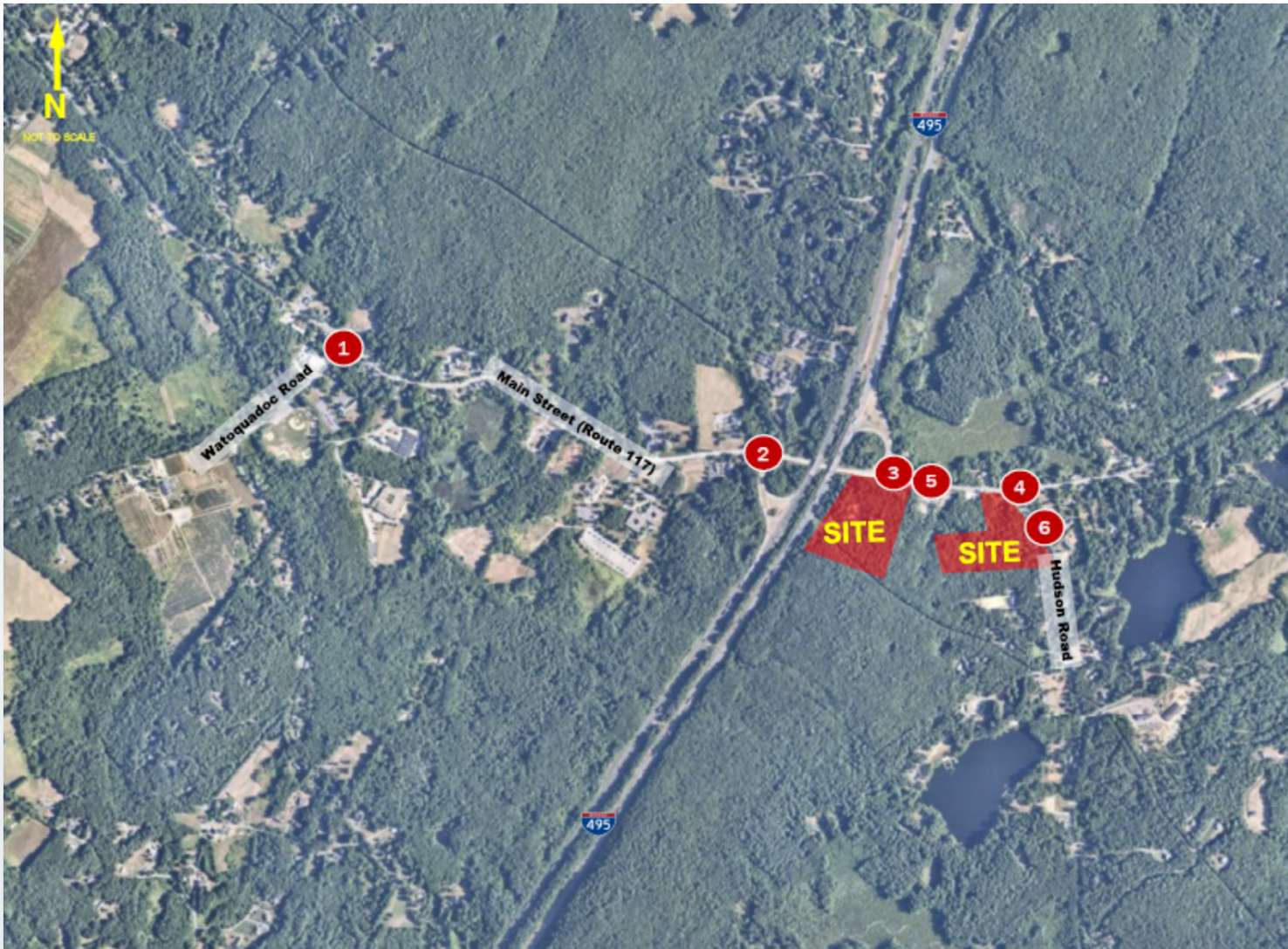
Key Access Issues/Requirements

- MassDOT/FHWA **NO ACCESS** line runs along most of Main Street frontage and will require approval
- MassDOT curb cut permit and design review will be required for the commercial drive on Main Street
- MassDOT will be requiring improvement along Main Street between site and Hudson Road



Scope of Traffic Study

- Study locations included interchange intersections, Hudson Road and the Wattaquoduck Road intersection in the town center
- Completed quantitative and qualitative safety analysis
- Examined two future builds: 2029 (7-year) and 2042 (20-year)
- Used a model to simulate interchange area for PM period
- Developed more detailed concept plans for signal and roundabout access options for evaluation
- Completed evaluation of the access options to support final decision and obtaining a 'break in access' from MassDOT and FHWA





Existing Roadway Characteristics

- The observed 85th percentile speeds are higher than the posted speed limit over the course of the day.
- West of interchange, Main Street volumes exceed 24,000 vehicles per day while east of Hudson Road they drop to about 16,000 vehicles per day.
- Over the day, nearly 6% of the traffic were heavy vehicles.
- Truck volumes are higher during morning peak than during the afternoon and early evening.
- Traffic signal warrant criteria is satisfied at all study locations.



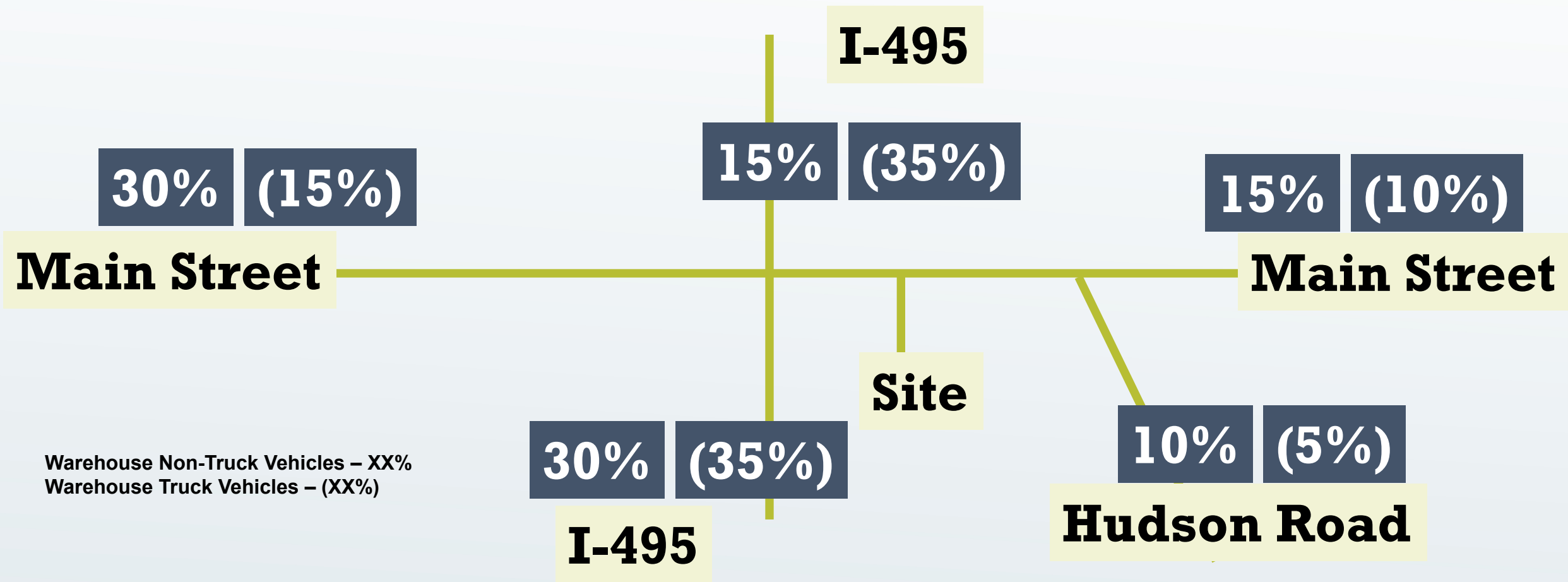
Estimated Project Trip Generation

Vehicle Trip Summary

Land Use	Weekday	AM Peak	PM Peak
Warehouse/Distribution Center (150) – 240ksf	418	41	43
Senior (55+) Housing (251) – 24 dwelling units	176	13	15
Total	594	54	58



Anticipated Project Trip Patterns





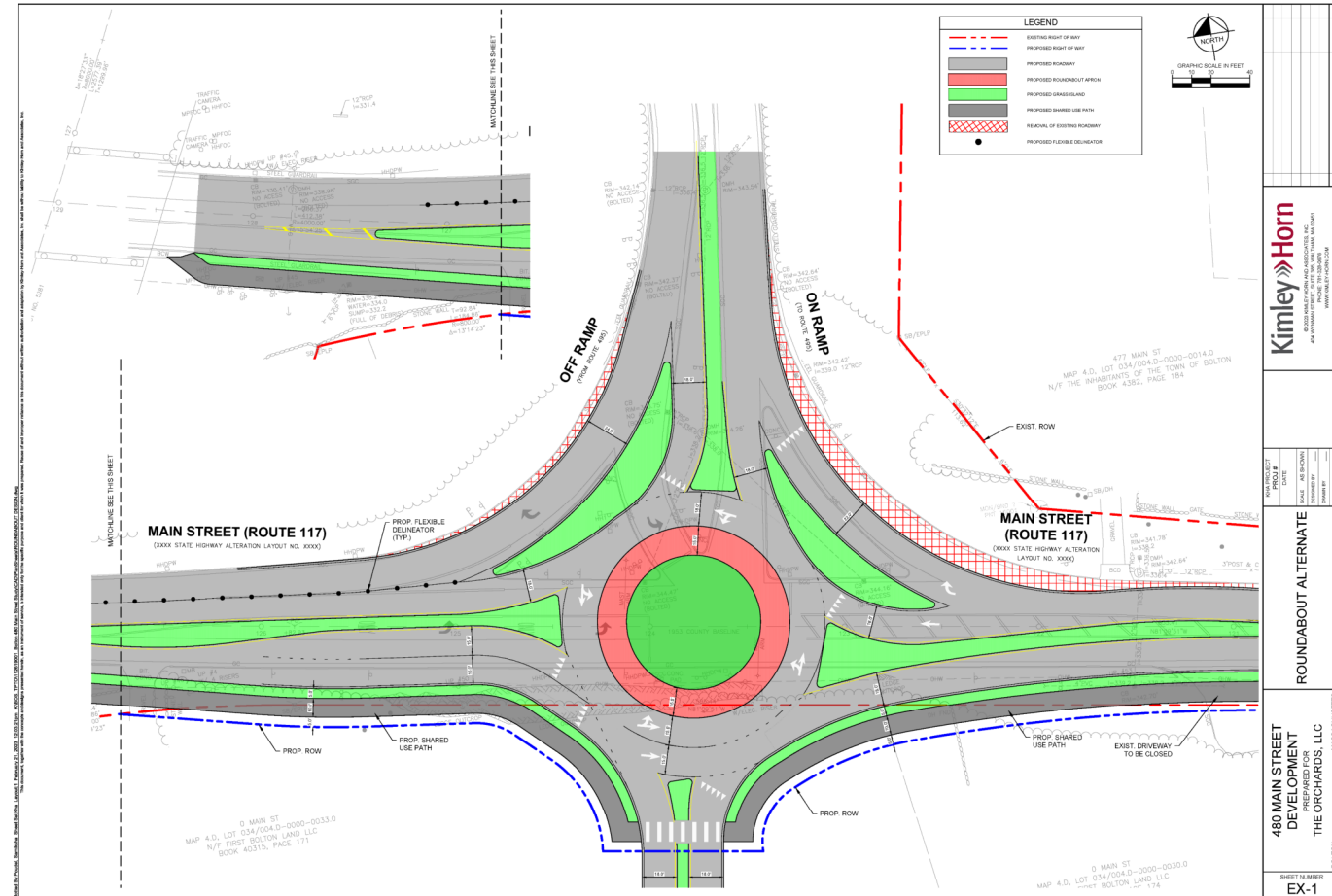
Key Analysis Findings

- Project is a small traffic generator and will have minimal impacts on traffic along Main Street and at the interchange
- PM peak period constraints occur on Main Street west of interchange due to short WB merge, school departure and Town Center signal
- There will be increase in volume over the next 20 years that will have an effect on the corridor but the two lane section to the west under Town jurisdiction with certain traffic control locations create the most significant operational impacts
- A large portion of warehouse trips will be truck related and oriented to I-495
- The project has minimal effect on the I-495 mainline and interchange operations under the preferred access alternative



Main Street Access – Proposed Roundabout

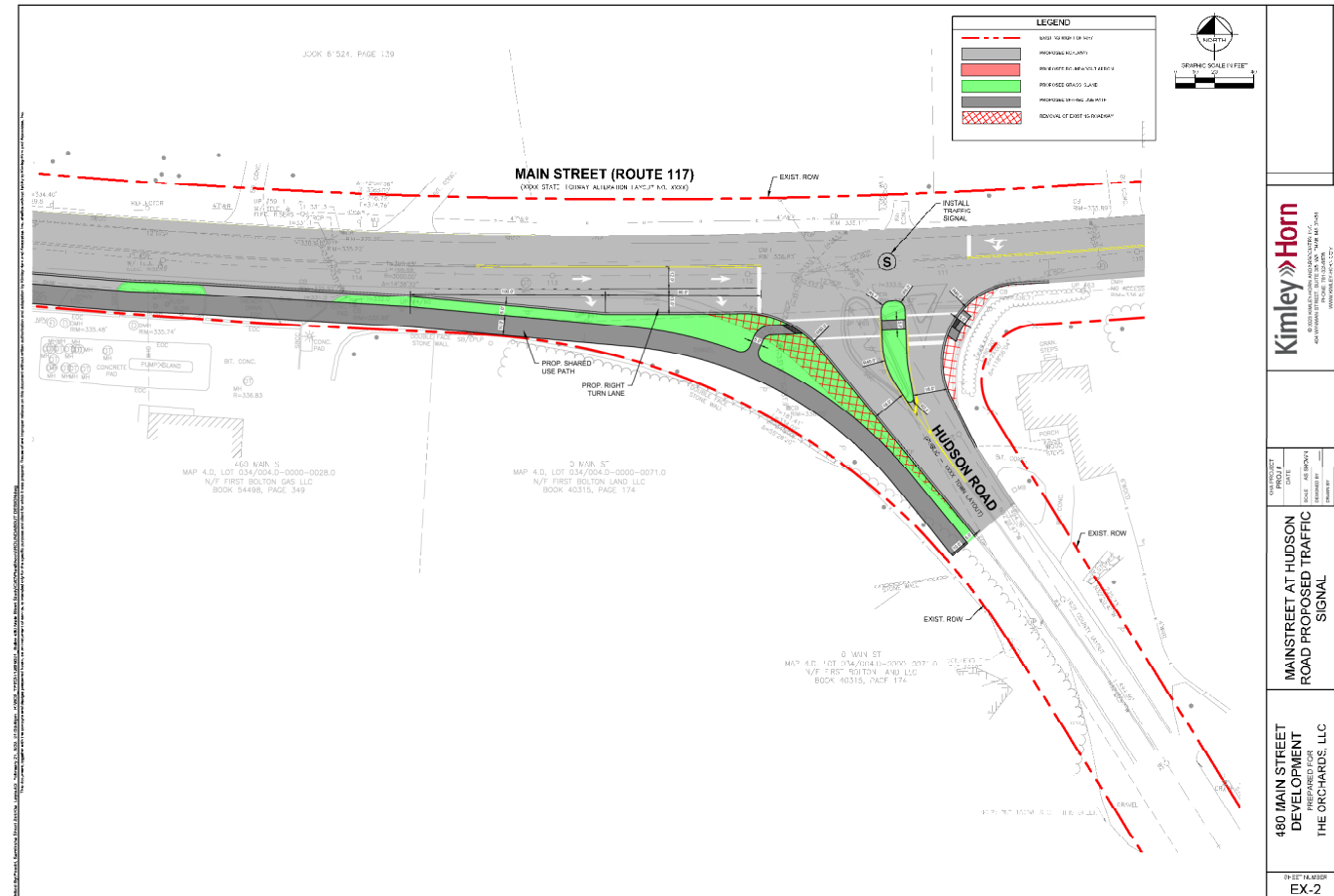
- Close the curb cut at the Existing Driveway.
- Addition of the south leg.
- Convert to a roundabout.
- Major change in lane geometry.
- Not fully within the public right-of-way.





Main/Hudson – Potential Traffic Signal

- Tightens geometry
- Traffic signal
- Does not require any additional property
- Expected to operate acceptably
- Provides for pedestrian crossings and multi-use path alignment





Additional Potential Mitigation

- Multi-use path from I-495 overpass to residential site access off Hudson Road
- Provide buffer zone to separate pedestrians from vehicular traffic
- Install flexible delineators and improved traffic movement signage along the northbound off-ramp (southbound right-turn lane) to Main Street
- May want/need to adjust curbline on right turn exit from NB off-ramp to Main Street
- On-site travel demand management accommodations

Questions