BELMONT HIGH SCHOOL Site Access Analysis



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Agenda:

- Summary of Traffic Work Completed
- Overview of Circulation/Safety Issues on Existing Campus
- Key Improvement Measures Needed
- Summary of Site Alternatives

- Multimodal Site Access Observations
 - Traffic queues, drop-off activity, bus unloading, bike activity, walking routes, crosswalk conflicts, u-turns, MBTA activity, etc.
- Traffic Counts: 24 hour, Turning Movements
 - For six on & off-site intersections, for cars, bikes, and walkers
- Parking Inventory and Utilization
- Existing Traffic Performance Analysis (Delays & Queues)
- Crash Data Analysis



Morning Access Demand Patterns and Queues

Morning Drop-off Patterns: ~7:18 – 7:38 = Most congested at Underwood & Hittinger (Overall AM Traffic Peak = 7:15 - 8:15AM)



Existing Traffic Delays AM Level of Service & Queues



Biking and Walking Access Patterns



Existing Traffic Delays AM Level of Service & Queues & Walk/Bike Volumes



No Build Future Traffic Delays AM Level of Service & Queues



Future Traffic Delays (Scenario 2.4)

AM Level of Service & Queues – Assumes 2,215 students in grades 7-12



IMPLEMENTATION MEASURES FOR ALL OPTIONS

- 1. Site access at Concord & Goden with a signal will:
 - a) Reduce queues on Goden
 - b) Eliminate u-turns on Concord
 - c) Improve overall traffic safety
 - d) Make walking to school safer
- 2. Two full-access site driveways will:
 - a) Distribute traffic more evenly to reduce queues
 - b) Providing more circulation options
 - c) Improve fire/safety access
- 3. Providing drop-off loops internal to the site will prevent any queues from spilling onto neighboring streets
- 4. Walking & transit access will be greatly enhanced with:
 - a) A new walk/bike only gateway on Concord
 - b) The new signal at Goden
 - c) An improved walk/bike entry at Underwood & Hittinger

- 5. Biking access will be greatly enhanced with:
 - a) Above improvements at Condord, Goden, and Underwood/Hittinger
 - b) New connections to the future multi-use path
 - c) Cross-campus bike path
- 6. Adding on-site parking near the skating rink/stadium will mitigate gameday spillover on residential streets
- 7. Shorter delay and queues at key intersections: Concord/Goden, Concord/Underwood, Underwood/Hittinger
- 8. Neutral impacts to Hittinger & Brighton
- 9. Enhanced emergency vehicle circulation

IMPLEMENTATION MEASURES FOR ALL OPTIONS Measure 1: Signalized intersection at Concord & Goden



IMPLEMENTATION MEASURES FOR ALL OPTIONS Measure 2: Two full-access site driveways reduce delays

Two full-access site driveways will: Distribute traffic more evenly to reduce a) queues Providing more circulation options b) Improve fire/safety access c) POSSIBLE RINK EXPANSION FOOTPE FOOTBALL / RUGBY HARRIS FIELD LACROSSE BASEBALL 02 FXHIRI BASEBALL EXHLBIT UNDERWOOD SOCCEP PORTS WALK WITH SKATING / HOCKEY EDUCATIONAL 7 HONORS EXHIBITS TRACK AND FIELD / FOOTBAL EXHIBIT PPER SCHOOL ARRIVAL PLAZA RUGBY WELLINGTON ELEMENTARY 500

IMPLEMENTATION MEASURES FOR ALL OPTIONS Measure 3: Internal drop-off loops



IMPLEMENTATION MEASURES FOR ALL OPTIONS Measure 4: Enhanced Pedestrian Circulation



IMPLEMENTATION MEASURES FOR ALL OPTIONS Measure 5: Enhanced Bike Circulation



IMPLEMENTATION MEASURES FOR ALL OPTIONS Measure 6: Mitigating spillover parking effects



IMPLEMENTATION MEASURES FOR ALL OPTIONS Measure 7: Reduced delays & queues at all intersections



IMPLEMENTATION MEASURES FOR ALL OPTIONS Measure 8: Neutral impacts on Hittinger at Brighton



IMPLEMENTATION MEASURES FOR ALL OPTIONS Measure 9: Enhanced Emergency Vehicle Circulation



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IMPLEMENTATION MEASURES FOR ALL OPTIONS

Summary

- Multiple access points for all travelers & needs disperses traffic and eliminates queue impacts
- Traffic impacts on surrounding streets greatly reduced
- New connections for walkers & bikers greatly improves safety
- Distributed parking accommodates campus users better & minimizes spillover

- 1. Site access at Concord & Goden with a signal
- 2. Two full-access site driveways
- 3. Providing drop-off loops internal to the site
- 4. Walking & transit access enhancements
- 5. Biking access greatly enhanced
- 6. Adding on-site parking near the skating rink/stadium
- 7. Shorter delay and queues at key intersections
- 8. Neutral impacts to Hittinger & Brighton
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SCENARIO C2.1: Vehicular Access





SCENARIO C2.1: Emergency Access

EMERGENCY VEHICLE CIRCULATION



SCENARIO C2.1: Pedestrian Circulation

PEDESTRIAN CIRCULATION



SCENARIO C2.1: Bike Circulation



SCENARIO C2.1: Overview



SCENARIO C2.3: Vehicular Access



SCENARIO C2.3 : Emergency Access

EMERGENCY VEHICLE CIRCULATION



SCENARIO C2.3 : Pedestrian Circulation

PEDESTRIAN CIRCULATION SCHEME C2.3 LIMITED ACCESS PLAZ RIOPETEN THEFT 1111111 GARDEN 4 and Trees 1 BIORETENTI ********** T ··· (T) Tasses LEGEND VEHICULAR CIRCULATION LIMITED ACCESS -Tereses T VEHICULAR CIRCULATION PARKING AREA PEDESTRIAN CIRCULATION 4 INTERGENERATIONAL WALK 4 T ARRIVAL PLAZA The state of the s BIKE PATH WELLINGTON 4.... FUTURE BIKE PATH BUS CIRCULATION + BUS PARKING AREA EMERGENCY VEHICLE tes DROP-OFF AREA TRAFFIC SIGNAL $\widehat{\mathbf{T}}$ MBTA BUS STOP

SCENARIO C2.3 : Bike Circulation



SCENARIO C2.3: Overview



SCENARIO C2.4: Vehicular Access



SCENARIO C2.4 : Emergency Access

EMERGENCY VEHICLE CIRCULATION



SCENARIO C2.4: Pedestrian Circulation



SCENARIO C2.4: Bike Circulation



SCENARIO C2.4: Overview



SCENARIO C3.1: Vehicular Access



SCENARIO C3.1: Emergency Access

EMERGENCY VEHICLE CIRCULATION





SCENARIO C3.1: Pedestrian Circulation



SCENARIO C3.1: Bike Circulation



SCENARIO C3.1: Overview



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