US 58 Arterial Preservation Plan

Figure 21

Intersections & Median Crossovers
Mecklenburg County

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Recommendation</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersection 47: Goods Ferry Rd with US 58</td>
<td>Reconfigure intersection to Continuous Green-T (CGT).</td>
<td>$1.0M to $1.5M</td>
</tr>
<tr>
<td>Intersection 48: Maple Ln with US 58</td>
<td>Construct turn right-turn lanes on Maple Lane</td>
<td>$0.3M to $0.6M</td>
</tr>
</tbody>
</table>
US 58 Arterial Preservation Plan
Figure 22
Intersections & Median Crossovers
Mecklenburg County

Intersection 49: Country Ln with US 58
Recommendation: See Figure 23
Cost: $1.9M to $3.1M

Crossover 42: Crowder St with US 58
Recommendation: See Figure 23
Cost: Intersection 53: High St with US 58

Intersection 50: Thompson St with US 58
Recommendation: See Figure 23
Cost: Intersection 53: High St with US 58

Intersection 51: Peebles St with US 58
Recommendation: See Figure 23
Cost: Intersection 53: High St with US 58

Intersection 52: Cycle Ln with US 58
Recommendation: See Figure 23
Cost: Intersection 53: High St with US 58

Intersection 53: High St with US 58
Recommendation: See Figure 23
Cost: $6.4M to $8.3M
Intersection #49: US 58 with Country Ln
Town of South Hill

Recommendation:
Reconfigure the existing intersection and traffic signal to a three-phase signal. Permit only through and right-turn movements on US 58. Permit only left and right-turn movements from US 58 BUS southbound onto US 58 and full movements from Country Ln northbound. Construct U-turn area west of existing intersection to permit movements destined to Country Ln from US 58 westbound or US 58 BUS southbound. Eradicate existing I-85 off ramp onto US 58 BUS and construct continuous flow right-turn lane from US 58 westbound onto US 58 BUS. Eastbound US 58 left-turns to be managed at Maple Lane or interchange (depending on interchange configuration).

ROW Impacts: All improvements are within the ROW

Improvement Type: Congestion Mitigation, Economic Development, Safety, Travel Time Preservation

Operations:

<table>
<thead>
<tr>
<th>2040 Future Delay (sec - LOS)</th>
<th>No Build</th>
<th>Build</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>24.6-C</td>
<td>17.4-C</td>
</tr>
<tr>
<td>PM</td>
<td>30.4-C</td>
<td>20.4-C</td>
</tr>
</tbody>
</table>

Cost: $1.9M to $3.1M
Route 58 Arterial Management Plan
Figure 25
I-85 Interchange
Town of South Hill

Recommendation: Reconfigure interchange to Diverging Diamond Interchange or a Roundabouts Interchange (Inset). Interchange will require an Interchange Modification Report (IMR) to be submitted to the FHWA to determine ultimate configuration.

ROW Impacts: All improvements are within the ROW.

Improvement Type: Economic Development, Safety, Travel Time Preservation

Traffic Operations & Safety:
- Traffic Operations: Reduced travel times for vehicles due to reduced weave and merge areas.
- Safety: Decreased risk of side-swipes and rear end crashes on both I-85 and US 58.

Cost: $7.7M to $28.0M
Interim Improvements Shown

Interim Recommendation: Reconfigure Thompson St intersection to right-in/right-out only, improve storage length of eastbound US 58 left-turn lane onto Peebles St, reconfigure Crowder St intersection to right-in/right-out only, reconfigure Cycle Lane to a two-phase signal, and construct a roundabout at the intersection of High St. Construct inter-parcel connections to maintain access between Thompson St and Peebles St, and between Cycle Ln and High St. Town maintained streets should be investigated further to determine pavement condition and capacity improvements to maintain efficient traffic flow.

Long-term Recommendation: As development occurs, additional improvements will be needed at the intersection of Peebles St and US 58. These improvements may require reviews and approvals by district, state, and FHWA officials. The roundabout at High St will need to be reconfigured to remove northbound left and thru movements to maintain capacity of the corridor.

ROW Impacts: All improvements on US 58 are within the ROW. Inter-parcel connections and Town maintained street improvement may require significant ROW acquisition.

Improvement Type: Economic Development, Safety, Travel Time Preservation

Traffic Operations:

<table>
<thead>
<tr>
<th></th>
<th>US 58 Improvements: $6.4M to $8.3M</th>
<th>Town Street Improvements: $1.6M to $10.0M</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Condition</strong></td>
<td><strong>No Build</strong></td>
<td><strong>Build</strong></td>
</tr>
<tr>
<td><strong>AM</strong></td>
<td>1:02</td>
<td>0:54</td>
</tr>
<tr>
<td><strong>PM</strong></td>
<td>1:32</td>
<td>1:17</td>
</tr>
<tr>
<td>Intersection</td>
<td>Recommendation</td>
<td>Cost</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------</td>
<td>------------</td>
</tr>
<tr>
<td>Crossover 43</td>
<td>Remove crossover</td>
<td>$0.2M to $0.3M</td>
</tr>
<tr>
<td>Crossover 44</td>
<td>No recommendation</td>
<td>$0.3M to $0.5M</td>
</tr>
<tr>
<td>Crossover 45</td>
<td>See Figure 28</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Intersection 54</td>
<td>See Figure 28</td>
<td>$0.7M to $1.0M</td>
</tr>
<tr>
<td>Intersection 55</td>
<td>Reconfigure intersection to permit US 58 left-turn movements.</td>
<td>$0.1M to $0.2M</td>
</tr>
<tr>
<td>Intersection 56</td>
<td>Lengthen all existing turn lanes and construct eastbound right-turn lane on US 58.</td>
<td>$0.7M to $1.0M</td>
</tr>
<tr>
<td>Crossover 46</td>
<td>Lengthen existing left-turn lanes on US 58</td>
<td>$0.4M to $0.5M</td>
</tr>
</tbody>
</table>
Recommendation: Reconfigure the existing intersection and traffic signal to a two-phase signal. Permit only through and right-turn movements on US 58. Permit only right-turn movements from Country Club Rd onto US 58 and full movements from northbound N Main St to US 58. Reconfigure Crossover #45 to U-turn area for vehicles destined eastbound US 58 or the Town of LaCrosse. Eastbound US 58 vehicles destined to Country Club Road can use existing Crossover #46.

ROW Impacts: All improvements are within the ROW

Improvement Type: Safety, Travel Time Preservation

Traffic Operations & Safety:
- Traffic Operations: Reduced delay times for vehicles traveling on US 58 and N Main St.
- Safety: Significant reduction in risk of angle crashes and reduced risk of rear end crashes.

Cost: $0.7M to $1.1M
US 58 Arterial Preservation Plan
Figure 29
Intersections & Median Crossovers
Mecklenburg County

Crossover 47:
Recommendation: Lengthen existing westbound turn lane on US 58.
Cost: $0.4M to $0.6M

Crossover 48:
Recommendation: Lengthen all existing turn lanes on US 58.
Cost: $0.4M to $0.5M

Intersection 57: Regional Airport Rd with US 58
Recommendation: Reconfigure intersection to directional median permitting left turns and U-Turns from westbound US 58. Lengthen existing westbound left-turn lane and eastbound right-turn lane on US 58.
Cost: $0.5M to $0.9M

Intersection 58: Brown Town Rd with US 58
Recommendation: Reconfigure intersection to directional median permitting left turns and U-Turns from eastbound US 58. Lengthen existing eastbound left-turn lane and westbound right-turn lane on US 58.
Cost: $0.5M to $0.9M

Crossover 49:
Recommendation: Remove crossover
Cost: $0.2M to $0.3M
**US 58 Arterial Preservation Plan**

**Figure 30**

**Intersections & Median Crossovers**

**Brunswick County**

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Recommendation</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-59: Main St with US 58</td>
<td>Construct eastbound right-turn lane and westbound left-turn lane on US 58.</td>
<td>$2.6M to $3.8M</td>
</tr>
<tr>
<td>I-60: Dornia Ave with US 58</td>
<td>Construct westbound right-turn lane and eastbound left-turn lane on US 58.</td>
<td>$2.6M to $3.8M</td>
</tr>
<tr>
<td>C-50:</td>
<td>Remove crossover.</td>
<td>$0.2M to $0.3M</td>
</tr>
<tr>
<td>C-51:</td>
<td>No recommendation</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>C-52:</td>
<td>Remove crossover</td>
<td>$0.2M to $0.3M</td>
</tr>
<tr>
<td>C-53:</td>
<td>No recommendation</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>C-54:</td>
<td>No recommendation</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>