URBAN REGIONAL & URBAN ROADS
PROJECT SCOPING WORKSHEET

DATE: 11/18/2021

PRIORITY#2 Regional: Y/N Urban Roads: Y/N

City: Minot Street: 16th St SW from 24th Ave SW to N. Frontage Rd, 20th Ave SW from on/off ramp to 16th St, 22nd Ave from 16th St to/and including on/off ramps west of 16th St

County: Ward Length: 3800’

Proposed Improvement: Improvements include replacement of three traffic signals, concrete diamond grinding, sidewalk replacements with ADA ramps, concrete pavement, median removals to correct negative offsets, striping and other minor items. This work should be included with the planned NDDOT bridge project. The costs below are not reflective of the NDDOT bridge work.

<table>
<thead>
<tr>
<th>Cost Estimates Breakdown (in $1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>200</td>
</tr>
</tbody>
</table>

Present Road: Surface Width? Varies Surface Type? Concrete

On Street Parking Allowed? No Present: (No) One Side Both Sides Angle Parallel
   Proposed: (No) One Side Both Sides Angle Parallel

Proposed Improvements

ADT Present: 18,745 Yr: 2020
ADT Design: _________ Design year _______
Design Speed: ________________________
Maximum Curve: ________________________
Maximum Grade: ________________________

Travel Way Width: Varies
No. of Lanes: 2 to 5
Roadway Width: Varies
Min. R/W Width: 66 feet
**Right of Way**

Will Additional ROW or easement be acquired? **No**  
ROW acquisition by: **City DOT**

Has any ROW easements been acquired since 7-1-72: **Yes**  
ROW Condemnation by: **City DOT**

Est. No. of occupied family dwelling to be displaced? **0**

Est. No. business to be displaced? **0**

**Impacts**

Will there be any additional Impacts (Cultural and Environmental Resources): **None**

Will there be any impacts to 4(f) or 6(f) properties: **No**

Airports: **No**  
Public Hearings: **No**

Environmental Classification (Cat-Ex, EA, EIS): **Cat-Ex**

Transportation Enhancements: **ITS**

Intermodal: **No**

Pedestrian Needs: **ADA Ramps**

---

### Railroads Crossings

<table>
<thead>
<tr>
<th>RR Name</th>
<th>No. Xings</th>
<th>No. Tracks and Type of Crossing</th>
<th>Daily Train Movements</th>
<th>Train Speed</th>
<th>Present Protection</th>
<th>Proposed Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Purpose and Need Statement:**

In addition to the bridge maintenance work, the concrete pavements around this interchange are in need of maintenance. The concrete panels need spall repairs, panel replacements, and diamond grinding. The curb ramps need ADA upgrades and some panel replacements. The three traffic signals in this area are original and need replacement.

**Existing Conditions:**

1. When was the current street section built? Has there been any additional maintenance to the street section?  
   1987. Yes, some concrete panel replacements and general signal maintenance.

2. How many driving lanes and turning lanes does the street section currently have and what is the widths of the driving and turning lanes?  
   16th St is four driving lanes with left and right turn lanes. 20th Ave is four lanes with left a left turn lane. 22nd Ave is two lanes with left and right turn lanes.

3. What is the condition of the pavement section?  
   
   A. If the pavement section is asphalt, is there any alligator cracking, longitudinal cracking, transverse cracking, raveling, bituminous
patching or rutting?
B. If the pavement section is concrete, are there any broken slabs, faulting, bituminous patching, joint spalling, transverse cracking, or longitudinal cracking.
The concrete pavements have a few broken slabs, joint spalling, transverse cracking, and are polished.

4. Any existing geometric concerns?
16th St has negative offset turn lanes that create safety concerns. We receive multiple complaints from the public regarding sight distance issues.

5. Are there any access points to adjoining properties that present a special concern?
The north frontage road connection to 16th St does create some issues, but can be addressed in a future reconstruction. A possible short term solution is a right in right out at the intersection.

6. Are there any existing sidewalks or shared use path in place?
Sidewalks on 16th St and portions of 22nd Ave.

7. What is the condition of the existing storm sewer? Will any additional storm sewer work need to be done along with this project?
Some inlet castings should be replaced. No known pipe concerns.

8. What is the condition of the city’s water and sewer line? Will any work have to be done to the city’s water and sewer lines along with this project?
No known issues.

9. Describe the existing lighting system currently in place? What type of standards and luminaires are currently being used?
Interchange has high mast LED lighting that was recently replaced. Other lighting in the area is being replaced with LED luminaires.

10. What intersections currently have traffic signals? Are there any locations that have a high accident rate? Are additional turning lanes needed?
The traffic signals are original and need total replacement. We are not aware of any high crash locations. No additional turn lanes are needed, but the negative offsets must be corrected.

Remarks:
The City wants to partner with the NDDOT to have this work included with planned 2025 bridge project. The project could move to 2026 if additional funding is needed. We would like the NDDOT to manage this project with their consultant. This work will take place concurrently or shortly after with the 16th St reconstruction ½ mile north of this location. The City desires to complete the 16th St work before starting the South Broadway Reconstruction work.
City Engineer: ______________________________  Date: ___________________

District Engineer: ___________________________   Date: ___________________

Note: Please attach a map showing location and extent of the project, detailed cost estimate, and any additional supporting documents.
# 16th St Interchange City Items Engineer's Estimate

11/16/2021

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
<th>Federal</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Traffic Signal Replacement - Site 1 (15th St SW and 20th Ave)</td>
<td>EA 1</td>
<td>$310,000.00</td>
<td>$310,000.00</td>
<td>$248,000.00</td>
<td>$62,000.00</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Traffic Signal Replacement - Site 2 (16th St SW and 20th Ave)</td>
<td>EA 1</td>
<td>$325,000.00</td>
<td>$325,000.00</td>
<td>$260,000.00</td>
<td>$65,000.00</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Traffic Signal Replacement - Site 3 (16th St SW and 22nd Ave)</td>
<td>EA 1</td>
<td>$325,000.00</td>
<td>$325,000.00</td>
<td>$260,000.00</td>
<td>$65,000.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Concrete Diamond Grinding</td>
<td>SY 26144</td>
<td>$13.00</td>
<td>$339,872.00</td>
<td>$271,897.60</td>
<td>$67,974.40</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Remove Sidewalk</td>
<td>SY 375</td>
<td>$12.00</td>
<td>$4,500.00</td>
<td>$3,600.00</td>
<td>$900.00</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Remove Concrete Pavement</td>
<td>SY 556</td>
<td>$18.00</td>
<td>$10,008.00</td>
<td>$8,006.40</td>
<td>$2,001.60</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Remove Median Pavement</td>
<td>SY 423</td>
<td>$18.00</td>
<td>$7,614.00</td>
<td>$6,091.20</td>
<td>$1,522.80</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Remove Chain-link Fence</td>
<td>LF 245</td>
<td>$8.00</td>
<td>$1,960.00</td>
<td>$1,568.00</td>
<td>$392.00</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>4&quot; Concrete Sidewalk</td>
<td>SY 375</td>
<td>$60.00</td>
<td>$22,500.00</td>
<td>$18,000.00</td>
<td>$4,500.00</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>8&quot; Concrete Pavement Class AE Doweled</td>
<td>SY 979</td>
<td>$115.00</td>
<td>$112,585.00</td>
<td>$90,068.00</td>
<td>$22,517.00</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Truncated Dome Panels</td>
<td>SF 112</td>
<td>$60.00</td>
<td>$6,720.00</td>
<td>$5,376.00</td>
<td>$1,344.00</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Chain-link Fence 10' Black Vinyl</td>
<td>LF 245</td>
<td>$70.00</td>
<td>$17,150.00</td>
<td>$13,720.00</td>
<td>$3,430.00</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Grooved Epoxy Striping</td>
<td>LS 1</td>
<td>$80,000.00</td>
<td>$80,000.00</td>
<td>$64,000.00</td>
<td>$16,000.00</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Remove and Replace Signs</td>
<td>LS 1</td>
<td>$15,000.00</td>
<td>$15,000.00</td>
<td>$12,000.00</td>
<td>$3,000.00</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Route and Seal Concrete Joints</td>
<td>LS 1</td>
<td>$50,000.00</td>
<td>$50,000.00</td>
<td>$40,000.00</td>
<td>$10,000.00</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Traffic Control</td>
<td>LS 1</td>
<td>$75,000.00</td>
<td>$75,000.00</td>
<td>$60,000.00</td>
<td>$15,000.00</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Undeveloped Design Details</td>
<td>LS 1</td>
<td>$170,000.00</td>
<td>$170,000.00</td>
<td>$136,000.00</td>
<td>$34,000.00</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Mobilization</td>
<td>LS 1</td>
<td>$25,000.00</td>
<td>$25,000.00</td>
<td>$20,000.00</td>
<td>$5,000.00</td>
<td></td>
</tr>
</tbody>
</table>

**Construction Total** $1,897,909.00 $1,518,327.20 $379,581.80

10% Contingency $189,790.90 $151,832.72 $37,958.18

**Subtotal** $2,087,699.90 $1,670,159.92 $417,539.98

**Construction Cost Inflated to 2025** $2,349,724.63 $1,879,779.70 $469,944.93

20% Engineering $469,944.93 $375,955.94 $93,988.99

**Total** $2,819,669.56 $2,255,735.64 $563,933.91

---

**Notes:**
- Construction Cost Inflated to 2025
- Engineering Department
- 10% Contingency
- 20% Engineering

---

**Description:**
- Traffic Signal Replacement
- Concrete Diamond Grinding
- Sidewalk Removal
- Concrete Pavement Replacement
- Median Pavement Removal
- Chain-link Fence Removal
- Grooved Epoxy Striping
- Sign Removal and Replacement
- Chain-link Fence Replacement
- Concrete Sidewalk Doweled
- Concrete Pavement Replacement
- Dome Panels Truncated
- Black Vinyl Chain-link Fence
- Traffic Control
- Undeveloped Design Details
- Mobilization

**Section:**
- 15th St SW and 20th Ave
- 16th St SW and 20th Ave
- 16th St SW and 22nd Ave
City Improvement Area

16th St SW Interchange Improvements