# Statement of Estimated Quantities

## Standard Plates

The following standard plates, approved by the Federal Highway Administration, may be used on this project:

<table>
<thead>
<tr>
<th>Plate No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>Reinforced Concrete Bridge Steel Beam 100</td>
</tr>
<tr>
<td>2000</td>
<td>Simple Span Bridge Steel Beam 200</td>
</tr>
<tr>
<td>3000</td>
<td>Bowstring Bridge Steel Beam 300</td>
</tr>
<tr>
<td>4000</td>
<td>W-Beam Guardrail Steel Beam 400</td>
</tr>
<tr>
<td>5000</td>
<td>Railing Steel Beam 500</td>
</tr>
</tbody>
</table>

## Casting Assembly Information

- **Type of Casting**: Reinforced Concrete
- **Cast-in-Place**: Yes
- **Precast**: No

### Casting Description

<table>
<thead>
<tr>
<th>Casting Area</th>
<th>Volume</th>
<th>Grade</th>
<th>Mix Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Beam</td>
<td>1000 cu ft</td>
<td>No. 2</td>
<td>NA</td>
</tr>
</tbody>
</table>

### Pre-Cast Details

- **Plate Number**: 1000
- **Concrete Beam for Reinforced Plate Type**: NA
- **Reinforcement Type**: Steel

### Reinforcement Details

- **Reinforcement Grade**: No. 2
- **Reinforcement Size**: 3/8"
- **Reinforcement Quantity**: 6000 lb

### Standard Plate Details

- **Standard Plate Number**: 1000
- **Reinforcement Grade**: No. 2
- **Reinforcement Size**: 3/8"
- **Reinforcement Quantity**: 6000 lb

### City of Duluth Standard Plates

The following standard plates, approved by the City of Duluth, shall be used on this project:

<table>
<thead>
<tr>
<th>Plate No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-15</td>
<td>Concrete Beam 10-15</td>
</tr>
<tr>
<td>20-25</td>
<td>Concrete Beam 20-25</td>
</tr>
</tbody>
</table>

## Key Notes

1. **Approach Area**: 6.00 ft wide x 3.00 ft at center overpass 6.00 ft wide 3.00 ft
2. **Reinforcement**: 6.00 ft wide x 3.00 ft
3. **Concrete Beam shall be considered reinforcing to the Reinforcement Climb.**
4. **Concrete Beam shall be considered reinforcing to the Reinforcement Climb.**
5. **All beams fabricated in accordance with the specifications of the Contractor's drawings.**
6. **All beams fabricated in accordance with the specifications of the Contractor's drawings.**
7. **All beams fabricated in accordance with the specifications of the Contractor's drawings.**
8. **All beams fabricated in accordance with the specifications of the Contractor's drawings.**
9. **All beams fabricated in accordance with the specifications of the Contractor's drawings.**
10. **All beams fabricated in accordance with the specifications of the Contractor's drawings.**

### Warning

- **Location of reinforcing steels may be determined according to the directions given in the specifications of the Contractor's drawings.**
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## City of Duluth Proj. No. 1494

State Proj. No. 118-060-012

Sheet No. 02 of 33 Sheets
KEY NOTES:

1. Outside edge of aggregate (spec. 3146) shall be intermittent.
2. To protect areas from sheet flow, maximum contributing area will not be
3. Outside edge of aggregate 4-1/2 feet long and 4-1/2 feet wide should be
4. Held by the point of entry with a plastic sheet avoiding or forming a
5. Horizontal sheet of a properly placed aggregate. The rock log will not be placed
6. Aggregate consisting of sound durable particles of coarse aggregate
7. Comprising to specification 7A-6C, Class 2 rock.
8. To be included in price bid for 3 1/2" silt fence, type 1, and type 2.
9. To be included in price bid for 3 1/2" silt fence, type 1.
10. To be included in price bid for 3 1/2" silt fence, type 2.

SILT FENCE, TYPE HL (TYPE 1) ③④

SILT FENCE, TYPE HL (TYPE 2) ③⑤

ROCK LOG/COMPOST LOG ⑤

Ends must be adjusted accordingly as to not cause

Eroding on roadway that would enter drainage.
## TRAFFIC CONTROL NOTES

1. All signs required to the traffic control plan, except those identified below, shall be furnished, and installed by the contractor, in accordance with the Minnesota Manual on Uniform Traffic Control Devices. All additional signs, when used, shall be of a bright, reflective orange material in accordance with the Minnesota Manual on Uniform Traffic Control Devices. All signs shall be furnished to the contractor, and shall be of a bright, reflective orange material in accordance with the Minnesota Manual on Uniform Traffic Control Devices.

2. The contractor shall be responsible for the installation, maintenance, and removal of all traffic signs and equipment. All signs shall be of a bright, reflective orange material in accordance with the Minnesota Manual on Uniform Traffic Control Devices. All signs shall be furnished to the contractor, and shall be of a bright, reflective orange material in accordance with the Minnesota Manual on Uniform Traffic Control Devices.

3. All traffic signs and equipment shall be removed, in accordance with the Minnesota Manual on Uniform Traffic Control Devices, as soon as they have served their purpose.

## TRAFFIC — BILL OF MATERIALS

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>120-30</td>
<td>Block</td>
<td>22</td>
</tr>
<tr>
<td>120-30</td>
<td>Block</td>
<td>2</td>
</tr>
<tr>
<td>120-40</td>
<td>Block</td>
<td>10</td>
</tr>
<tr>
<td>120-40</td>
<td>Block</td>
<td>4</td>
</tr>
<tr>
<td>120-40</td>
<td>Block</td>
<td>3</td>
</tr>
<tr>
<td>120-40</td>
<td>Block</td>
<td>2</td>
</tr>
<tr>
<td>120-40</td>
<td>Block</td>
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</tr>
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<td>120-40</td>
<td>Block</td>
<td>4</td>
</tr>
<tr>
<td>120-40</td>
<td>Block</td>
<td>4</td>
</tr>
</tbody>
</table>

## KEY NOTES:

1. All signs and equipment required for traffic control are indicated in the plans.
2. All sign panels dimensions are in inches.
TRAFFIC CONTROL NOTES

1. All signs required to the traffic control plan, except those shown are remain in place, shall be furnished and installed to the contractor. The appropriate federal mandated signs shall be maintained by the contractor during the life of the contract. Existing sign forms shall be maintained for the duration of the project.

2. All traffic control devices and barriers shall be certified, and be placed in accordance with the "Minimum Manual on Uniform Traffic Control Devices" (MUTCD) including Part 6 and the field manual for temporary traffic control. Only existing signs listed hereafter shall be considered to be in compliance with the Minnesota State Highway Patrol parts 6 and 8 and the appropriate federal requirements.

3. The contractor shall provide and maintain any temporary traffic control or the use of a "Day by Day" payment plan for temporary traffic control (29CFR30).

4. The contractor shall place selected temporary traffic warning signs and barriers within the work zone to protect workers, travelers, and residents from the construction crews and equipment while construction is occurring. Additional signs may be required, but it is not desired to have the "Day by Day" payment plan for temporary traffic control (29CFR30).

5. All traffic control devices shall be removed or covered as soon as they are no longer required or approved.

6. The final construction barriers shall be erected prior to construction operations.

7. All temporary traffic control devices shall be furnished, installed, and maintained in the manner and at the hours and locations when used. As shown to the Work Zone Plan, the appropriate devices shall be furnished, installed, and maintained in work zones shown. Devices shall be removed after the end of operations as needed or as directed by the inspector for traffic control through work zone. None within the project limits.

8. Flagger shall be required when work is at the edge of the roadway. A flagger is required where there is a high density of traffic. The flagger shall be in accordance with the permanent layout shown in the permanent traffic control plan. All signs shown related to flagging, including flag persons, shall be maintained to be consistent with the Permanent Traffic Control Plan (29CFR30).

9. Road closed signs shall be mounted approximately 10 foot in advance of the construction and the weather protection and shall have a type "A" low intensity flashing amber warning device mounted on them.

10. Road closed signs may be used where the roadway is closed to all traffic and the contractor's equipment or officially authorized vehicles.

11. The "road closed to thru traffic" sign shall be on the "keep out" sign or another 5 foot pole. The sign shall be in the manner as to show local traffic. The signs shall be located at a point in the center to show local traffic the best possible location into which the traffic.

12. Traffic control devices are in inches.

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