## SCHEDULE OF QUANTITIES FOR ENTIRE BRIDGE

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2421.512</td>
<td>BRIDGE SLAB CONCRETE (233 SF/PI)</td>
<td>SF/FT.</td>
<td>9400 SF</td>
</tr>
<tr>
<td>2421.513</td>
<td>TYPE P-2 TL-4 REARING CONCRETE (346 SF/PI)</td>
<td>LF/FT.</td>
<td>165 LF</td>
</tr>
<tr>
<td>2421.514</td>
<td>TYPE MOD P-2 TL-4 REARING CONCRETE (346 SF/PI)</td>
<td>LF/FT.</td>
<td>165 LF</td>
</tr>
<tr>
<td>2421.515</td>
<td>TYPE MOD P-1 TL-29 REARING CONCRETE (346 SF/PI)</td>
<td>LF/FT.</td>
<td>165 LF</td>
</tr>
<tr>
<td>2421.516</td>
<td>STRUCTURAL TUBE REARING DESIGN T-1</td>
<td>LF/FT.</td>
<td>314 LF</td>
</tr>
<tr>
<td>2421.505</td>
<td>STRUCTURAL TUBE REARING DESIGN T-1</td>
<td>LF/FT.</td>
<td>165 LF</td>
</tr>
<tr>
<td>2421.506</td>
<td>STRUCTURAL TUBE REARING DESIGN T-1</td>
<td>LF/FT.</td>
<td>165 LF</td>
</tr>
<tr>
<td>2421.507</td>
<td>ELASTOMERIC BEARING PAD TYPE 1</td>
<td>EACH</td>
<td>6 EACH</td>
</tr>
<tr>
<td>2421.508</td>
<td>ELASTOMERIC BEARING PAD TYPE 2</td>
<td>EACH</td>
<td>6 EACH</td>
</tr>
<tr>
<td>2421.509</td>
<td>ELASTOMERIC BEARING PAD TYPE 3</td>
<td>EACH</td>
<td>6 EACH</td>
</tr>
<tr>
<td>2421.502</td>
<td>SHEAR STUDS</td>
<td>EACH</td>
<td>120 EACH</td>
</tr>
<tr>
<td>2421.503</td>
<td>PRECAST PIER WALL</td>
<td>LUMP SUM</td>
<td>1 LUMP</td>
</tr>
<tr>
<td>2421.504</td>
<td>PRECAST PIER CAP</td>
<td>EACH</td>
<td>4 EACH</td>
</tr>
<tr>
<td>2421.505</td>
<td>PRECAST PIER BASE</td>
<td>EACH</td>
<td>4 EACH</td>
</tr>
<tr>
<td>2421.506</td>
<td>PRECAST WINDWALL</td>
<td>EACH</td>
<td>4 EACH</td>
</tr>
<tr>
<td>2421.507</td>
<td>PRECAST ABUTMENT</td>
<td>EACH</td>
<td>4 EACH</td>
</tr>
<tr>
<td>2421.508</td>
<td>PRECAST BEAMS INV-T 18&quot; TYPE 1</td>
<td>LF/FT.</td>
<td>121 LF</td>
</tr>
<tr>
<td>2421.509</td>
<td>PRECAST BEAMS INV-T 18&quot; TYPE 2</td>
<td>LF/FT.</td>
<td>131 LF</td>
</tr>
<tr>
<td>2421.510</td>
<td>PRECAST BEAMS INV-T 18&quot; TYPE 3</td>
<td>LF/FT.</td>
<td>131 LF</td>
</tr>
<tr>
<td>2421.511</td>
<td>ARCH CONC TEXTURE (ASHIAL STONE)</td>
<td>SF/FT.</td>
<td>2363 SF</td>
</tr>
<tr>
<td>2421.512</td>
<td>ARCH SURFACE FINISH (MULTI COLOR)</td>
<td>SF/FT.</td>
<td>2363 SF</td>
</tr>
<tr>
<td>2421.513</td>
<td>ANTI-GRAFFITI COATING</td>
<td>SF/FT.</td>
<td>2363 SF</td>
</tr>
<tr>
<td>2421.514</td>
<td>ANCHORAGE TYPE REINF BARS</td>
<td>EACH</td>
<td>269 EACH</td>
</tr>
<tr>
<td>2421.515</td>
<td>ANCHORAGE TYPE REINF BARS (STAINLESS STEEL)</td>
<td>EACH</td>
<td>248 EACH</td>
</tr>
<tr>
<td>2421.516</td>
<td>PRECAST CONCRETE SHEET (4&quot; THICK)</td>
<td>EACH</td>
<td>39 EACH</td>
</tr>
</tbody>
</table>

## SCHEDULE OF QUANTITIES FOR ENTIRE BRIDGE

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ITEM</th>
<th>UNIT</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2431.502</td>
<td>REMOVE ANCHORAGE</td>
<td>EACH</td>
<td>1 EACH</td>
</tr>
<tr>
<td>2431.503</td>
<td>REMOVE EXISTING BRIDGE</td>
<td>EACH</td>
<td>1 EACH</td>
</tr>
<tr>
<td>2431.504</td>
<td>PRECAST BEAMS INV-T 18&quot; TYPE 1</td>
<td>EACH</td>
<td>5 EACH</td>
</tr>
<tr>
<td>2431.505</td>
<td>PRECAST BEAMS INV-T 18&quot; TYPE 2</td>
<td>EACH</td>
<td>5 EACH</td>
</tr>
<tr>
<td>2431.506</td>
<td>PRECAST BEAMS INV-T 18&quot; TYPE 3</td>
<td>EACH</td>
<td>5 EACH</td>
</tr>
<tr>
<td>2431.507</td>
<td>ARCH CONC TEXTURE</td>
<td>EACH</td>
<td>1 EACH</td>
</tr>
<tr>
<td>2431.508</td>
<td>ARCH SURFACE FINISH</td>
<td>EACH</td>
<td>1 EACH</td>
</tr>
<tr>
<td>2431.509</td>
<td>ANTI-GRAFFITI COATING</td>
<td>EACH</td>
<td>1 EACH</td>
</tr>
<tr>
<td>2431.510</td>
<td>ANCHORAGE TYPE REINF BARS</td>
<td>EACH</td>
<td>1 EACH</td>
</tr>
<tr>
<td>2431.511</td>
<td>ANCHORAGE TYPE REINF BARS (STAINLESS STEEL)</td>
<td>EACH</td>
<td>1 EACH</td>
</tr>
</tbody>
</table>

**Certified by:**

NAME: JOSHA Y. LON

LICENSE NO: 1915

**Title:**

TRANSVERSE SECTION & SCHEDULE OF QUANTITIES

**Sheet No:**

20524
PROPOSED PIER CONSTRUCTION SEQUENCE:

1. Contract shall prepare site for construction, contractor is to clear and grub, contractor shall design & install crane pads based on the recommended soil properties in the geotechnical report. Contractor is responsible to maintain the geotechnical stability of the site during the entire period of bridge construction.

2. Provide leveling and bore for erection of pile base elements to the elevation per the plan. All information and instructions are in this sheet.

3. Install pile base element to final location and approximate elevation as per the plan. All information and instructions are in this sheet.

4. Install pile using pile base element as a template. Maintain piles within specified tolerances per the tolerance table in this sheet. All information and instructions are in this sheet.

5. Install necessary temporary supporting collars on piles or other types of supports per the elevation per the plan. All information and instructions are in this sheet.

6. Contract shall verify location of pile tip with respect to tolerances. Engineer approval is needed to proceed after this step. All information and instructions are in this sheet.

7. Install precast cap elements C or E, using leveling device, adjust precast cap element into position as shown in the plan. All information and instructions are in this sheet.

8. Contract shall verify location of piles and elevations of precast elements. Engineer approval is needed to proceed after this step. All information and instructions are in this sheet.

9. Prepare precast cap elements for grouting operations, including all necessary forms, prepare precast base element for grouting operations, including all necessary forms. All forms shall be watertight to avoid any loss during grouting.

10. Performance grouting operations, see special provisions for material & construction requirements.

11. Wait at least 24 hours or until grout has achieved the required strength before placing superstructure elements.

12. Remove temporary supporting collars, leveling devices and any temporary supports.

13. Contract shall verify elevations and locations of precast elements. Engineer approval is needed to proceed after this step.

14. Prepare precast wall element B or D for erection. Install shear studs on piles and threaded rods into inserts in the precast wall elements per the plan.

15. Install precast wall elements B or D into a form around the pier wall elements & void below pier wall elements.

16. Install waterproofing to form water tight.

17. Place SCC concrete in void between precast pier panel elements.

18. Grout to full approx 50% void between the top of pier wall elements & the bottom of pier cap.

PROCEDURE COST TABLE:

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>STAGE</th>
<th>APPROX. WEIGHT (TONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MINIMAL</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>ABUT</td>
<td>1</td>
<td>43</td>
</tr>
<tr>
<td>ABUT</td>
<td>2</td>
<td>45</td>
</tr>
<tr>
<td>PIER A</td>
<td>3</td>
<td>34</td>
</tr>
<tr>
<td>PIER A</td>
<td>4</td>
<td>34</td>
</tr>
<tr>
<td>PIER B</td>
<td>5</td>
<td>29</td>
</tr>
<tr>
<td>PIER C</td>
<td>6</td>
<td>29</td>
</tr>
<tr>
<td>PIER D</td>
<td>7</td>
<td>29</td>
</tr>
</tbody>
</table>

PRECAST ELEMENT TOLERANCES:

| A | Precast Element Height | +10% |
| B | Precast Element Length | +10% |
| C | Precast Element Depth  | +10% |
| D | Pile Thru Hole Location| +10% |
| E | Pier Wall Height      | +10% |
| F | Pier Wall Length      | +10% |

ELEVATION VIEW PRECAST PIER WALL ELEMENTS

Fabricator shall be responsible for erecting, marking, and transporting the precast elements to prevent cracking or damage. Elements shall be lifted by devices as specified by the contractor and reviewed by the engineer.

Use the PCC design handout, precast and prestressed concrete, seventh edition with all necessary and required for the design and fabrication of lifting supports and handling considerations no cracking criteria listed in the plan shall be used. All elements shall be clean and contain no dirt, oil, grease, or other loose material before placing grout or concrete. Water blast after cleaning.

Final Pile Head Position shall not deviate from the location designated by more than 1" in any direction in order to allow the precast elements to be installed.

The contractor shall submit to the engineer for review a detailed construction sequence. The work tasks to be performed before starting of construction, details, work tasks and methods for pile removal, including bored and driven piles. The engineer geometries of special provisions. Details, work tasks and methods for adjusting elevations for precast structures, elements. Special provisions. Details, work tasks and methods for placing SCC concrete in void at precast. The plans have been developed following the following construction sequence.

Certified:

Title: Construction Notes

Sheet No. 3 of 54 Sheets

Bridge No. 25024
NOTES:
B.F. denotes back face.
F.F. denotes front face.
E.F. denotes each face.

Placed in field before pile is filled with concrete.

NORTH WEST WINGWALL PLAN VIEW

NORTH WEST WINGWALL ELEVATION
SECTION E-E: STAGE 2 - PIERS

FILL BETWEEN PIER WALL ELEMENTS WITH CONCRETE 3,000 PSI. SEE SPECIAL PROVISIONS.

20'-6" PIER WALL ELEMENT B

SECTION F-F: STAGE 2 - PIERS

NOTES:
1. PRESSURE INJECT EPOXY TO SEAL THE VIG THRU HOLES BETWEEN ELEMENTS A & B TO WATERPROOF BEFORE PLACING SCC.
2. INTENTIONALLY ROUGHEN SURFACES FOR CLOSED POUR.
3. 1/2" x 12" x 3/4" EMBEDDED HEADED STUDS.
4. CONCRETE INSERTS (TYP).

CONTRACTOR TO FORM THE END OF PIERS TO WATERPROOF.
NOTES:
CONTRACTOR TO SUBMIT FORM WORK FOR HOLDING THE PIER WALL ELEMENTS TO THE COLUMN FOR ENGINEERS APPROVAL. SEE SPECIAL PROVISIONS.
SEE SECTION C-C ON SHEET NO. 22 AND SECTION F-F ON SHEET NO. 24 FOR ADDITIONAL DETAILS.

BILLY OF REINFORCEMENT
FOR 2 PIER WALL ELEMENTS B & D

<table>
<thead>
<tr>
<th>BAR</th>
<th>NEC LENGTH</th>
<th>SHAPE</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>#10</td>
<td>2'-0&quot;</td>
<td>VERTICAL</td>
<td></td>
</tr>
<tr>
<td>#3</td>
<td>3'-0&quot;</td>
<td>HORIZONTAL</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td>4'-0&quot;</td>
<td>HORIZONTAL</td>
<td></td>
</tr>
</tbody>
</table>

NOTES:

1. PAYMENT FOR QUANTITIES TO BE INCLUDED IN PRICE BID FOR PAY ITEM "PRECAST PIER WALL".
2. CONCRETE INSERTS TO BE 3'-0" MAX. SPACING & AT LEAST 3'-0" CLEAR OF PILES. STAGGERED PATTERN FOR OPPPOSING WALL PANELS TO PREVENT INTERFERENCE IN CONSTRUCTION.

SUMMARY OF QUANTITIES
FOR 2 PIER WALL ELEMENTS B & D

| STRUCTURAL CONCRETE (F240) | 85 CU. YD. |
| REINFORCEMENT BARS, EPOXY COATED | 6,368 POUND |
| CONCRETE INSERTS WITH 5/8" THREADED RODS | 356 EACH |
ELASTOMERIC BEARING PADS & ABUTMENTS

ELASTOMERIC BEARING PADS & PIERS

ELASTOMERIC BEARING PAD TYPE 1 PLAN VIEW

ELASTOMERIC BEARING PAD TYPE 2 PLAN VIEW

ELASTOMERIC BEARING PAD TYPE 3 PLAN VIEW

NOTES:
1. 1" POLYSTYRENE TYPE B SEE ABUTMENT SHEETS FOR DETAILS.
2. 1" POLYSTYRENE TYPE B SEE PIER SHEETS FOR DETAILS.
3. 1/8" POLYSTYRENE TYPE A SEE ABUTMENT & PIER SHEETS FOR DETAILS.
NOTES:
1. CONTRACTOR SHALL PLACE ANCHOR BOLTS AS SHOWN AS TO AVOID HITTING DECK LONGITUDINAL STEMS WHILE DRILLING.
2. TEMPORARY BARriers TO BE INCLUDED IN SPACING PORTION OF CONTRACT. THE ANCHORAGEs ON THE BARriers TO BE INCLUDED IN PRICE BID "ANCHORAGEs TYPE 3" PER EACH.
3. ALL REMOVAL OF THE ANCHORAGEs TO BE DONE DURING STAGE 3 CONSTRUCTION. ALL REMOVAL ITEMS TO BE INCLUDED IN PRICE BID "REMOVAL ANCHORAGE" PER EACH.
4. TO BE CONSTRUCTED DURING STAGE 3.
5. SEE SHEET NO. 64 & 65 FOR WORKING ANCHORAGE SPACING. ANCHORAGEs FOR THE CONCRETE PARAPET TYPE MOD P-L-TL-2 TO BE PAID FOR UNDER BID ITEM "ANCHORAGE TYPE REINF BARS" PER EACH.
OUTSIDE ELEVATION OF BARRIER
(SIDEWALK FACE SHOWN)

NOTES:
1. CONTROL JOINT SPACING.
2. RAIL POST SPACING.
N.F. DENOTES NEAR FACE.
B.F. DENOTES BACK FACE.
ELEVATION

THE DASHED NUMBERS SHOWN ABOVE ARE FOR ILLUSTRATION.
DATA TO BE SHOWN ON NAMEPLATE AS FOLLOWS:

BRIDGE NO. 25024
YEAR 2001

1234567890 - 1" -
NUMBERS FOR NAMEPLATE

NOTES:
NO SHOP DRAWING REQUIRED.
MATERIAL SHALL COMPLY WITH FWD DOT SPEC. 3327.
LETTERS AND NUMBERS SHALL CONFORM TO THOSE SHOWN.
DRAFT ON LETTERS AND NUMBERS SHALL NOT BE MORE THAN 1" IN 12".
HORIZONTAL SPACING OF LETTERS AND NUMBERS SHALL PRODUCE A
BALANCED LAYOUT IN PROPORTION TO SPACING SHOWN.
TOP SURFACE OF LETTERS, NUMBERS AND FRAMES SHALL BE BURNISHED.
FINISH 2 STEEL BOLTS M-35 1/2" x 3" LONG WITH EACH PLATE.
ALL DIMENSIONS FOR 3/8" HIGH LETTERS AND NUMBERS SHALL BE
IN DIRECT PROPORTION TO THOSE SHOWN FOR THE 1" HIGH
LETTERS AND NUMBERS.

PLAN VIEW SPlice
PRE-WHT SHOWN

SECTION A-A

SECTION B-B
PILE NOT SHOWN

SPlice BACK-UP RING
FULL BUTT WELD
ALL AROUND TYPJ

PILE SHELL

NOTES:
APPROVED COMMERCIAL PILE SPICE BACK-UP RING MAY BE
USED IN LIEU OF THE TYPE DETAILED. BACK-UP RING SHALL
HAVE A TIGHT FIT.
WELDING ELECTRODES SHALL BE CELLULOSIC TYPE ELECTRODES
E-6010 OR E-6020.
ELECTRODES WHICH HAVE BECOME WET, SOILED OR DAMAGED SHALL
NOT BE USED.
WELDING SHALL NOT BE DONE WHEN THE AMBIENT TEMPERATURE
IS LOWER THAN 35°F OR WHEN THE PILE IS WET OR EXPOSED
TO FALRING RAIN OR SHOW. WHEN THE PILE WELD TEMPERATURE
IS BELOW 70°F, THE PILE METAL IN THE AREA OF THE WELD SHALL
BE HEATED TO A TEMPERATURE OF 10°F, AND MAINTAINED
AT THIS TEMPERATURE DURING WELDING.
(1) FOR PILE SHELL THICKNESSES GREATER THAN 1/2", USE A
B-LUG WELD CONFIGURATION.
SUMMARY OF QUANTITIES FOR DRAINAGE SYSTEM

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot; GDL, PERFORATED PIPE</td>
<td>60 LIN FT</td>
<td></td>
</tr>
<tr>
<td>4&quot; GDL, NON-PERFORATED PIPE</td>
<td>60 LIN FT</td>
<td></td>
</tr>
<tr>
<td>ADJ. TRUCKS</td>
<td>2 EACH</td>
<td></td>
</tr>
<tr>
<td>4&quot; GDL, END CAP</td>
<td>2 EACH</td>
<td></td>
</tr>
<tr>
<td>4&quot; GDL, COUPLING</td>
<td>2 EACH</td>
<td></td>
</tr>
<tr>
<td>PIPE SLEEVE</td>
<td>2 EACH</td>
<td></td>
</tr>
<tr>
<td>PRECAST CONCRETE HEADWALL</td>
<td>2 EACH</td>
<td></td>
</tr>
</tbody>
</table>

THE SUMMARY OF QUANTITIES FOR DRAINAGE SYSTEM IS AS SHOWN ABOVE. ANY ADDITIONAL WORK ITEMS OR SLIGHT CHANGES IN QUANTITIES WILL BE INCLUDED IN THE SCHEDULE OF CONTRACTS. THE CONTRACTOR IS NOT TO BE COMPENSATED WITH NO ADDITIONAL COMPENSATION.

PAYMENT WILL BE INCLUDED IN THE SINGLE LUMP SUM PRICE FOR ITEM 20000.025 "DRAINAGE SYSTEM TYPE B910."
CONCRETE WEARING COURSE

EXPANSION JOINTS

JOINT MANUFACTURER

MANUFACTURER'S IDENTIFICATION

GLAND MANUFACTURER

SIZE OF GLAND

MANUFACTURER'S IDENTIFICATION

ELASTOMERIC BEARING PADS

PAD MANUFACTURER

SPECIAL SURFACE FINISH

FINISHING ROADWAY FACES OF BARRIER RAILING

ANTI-GRAFFITI COATING

PAINT SYSTEM

MUTCD SPECIFICATION NUMBER

MANUFACTURER

PRIME COAT

MUTCD MATERIAL SPECIFICATION NUMBER

INTERMEDIATE COAT

MUTCD MATERIAL SPECIFICATION NUMBER

FINISH COAT

MUTCD MATERIAL SPECIFICATION NUMBER

PLAN QUALITY

RATE 1 (AGREE), 2 (NEUTRAL), OR 3 (DISAGREE). PLEASE COMMENT BELOW:

DIMENSIONS AND DETAILING ADEQUATELY DESCRIBED REQUIRED CONSTRUCTION INFORMATION.

BAR LISTS AND QUANTITIES TYPICALLY COMPLETE AND FREE OF ERRORS.

SCALE OF DRAWINGS AND OVERALL LEGIBILITY OF LINES AND TEXT WAS GOOD.

ISI SPECIAL PROVISIONS ADEQUATELY DESCRIBED; SPECIAL WORK AND PAYMENT.

COMMENTS:

NUMBER OF BRIDGE SUPPLEMENTAL AGREEMENTS

COST: $0

LIST SIGNIFICANT ERRORS OR OMISSIONS IN PLAN DETAILS OR PAY QUANTITIES ON THE SPACE PROVIDED AT RIGHT.

BRIDGE REMOVAL / BRIDGE OPENING

NUMBER OF AND DATE OLD BRIDGE WAS REMOVED (IF APPLICABLE):

BRIDGE NUMBER

DATE REMOVED

DATE NEW BRIDGE WAS OPENED TO TRAFFIC

NOTIFY THE BRIDGE OFFICE BRIDGE MANAGEMENT UNIT WITH THIS INFORMATION AS SOON AS POSSIBLE: 9501 365-4537

THE AS-BUILT INFORMATION WAS ADDED TO THE PLAN BY:

INSPECTOR'S SIGNATURE

DATE

CHECKED BY: PROJECT ENGINEER-SUPERVISOR SIGNATURE

DATE

AT THE TIME OF THE FINAL AS-BUILT BRIDGE DATA SHEET MUST BE SUBMITTED TO THE BRIDGE OFFICE. ETA: REGIONAL CONSTRUCTION ENGINEERagar.