PRECAST PANEL TYPE A - PLAN

NOTES:
1. FOR REINFORCEMENT BAR SPACING, SEE DWG. NO. ST-203.
2. FOR PRECAST DECK PANEL SECTIONS, SEE DWG. NO. ST-203.
3. ALL CONCRETE AND GALVANIZED BAR REINFORCEMENT IN THE PRECAST DECK PANELS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRECAST, POST TENSIONED CONCRETE DECK SYSTEM, ITEM 557.00010001.
4. ALL GALVANIZED BAR REINFORCEMENT IN THE CLOSURE POURS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR GALVANIZED BAR REINFORCEMENT FOR STRUCTURES, ITEM 556.0203.
5. ALL CLOSURE POUR CONCRETE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ARCH SPAN CLOSURE PLACEMENT CONCRETE TYPE 3 FRICTION, ITEM 557.01030001.

LEGEND:
(a) INDICATES GALVANIZED BAR REINFORCEMENT
NOTES:
1. FOR REINFORCEMENT BAR SPACING, SEE DWG. NO. ST-203.
2. FOR PRECAST DECK PANEL SECTIONS, SEE DWG. NO. ST-203.
3. ALL CONCRETE AND GALVANIZED BAR REINFORCEMENT IN THE PRECAST DECK PANELS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRECAST, POST TENSIONED CONCRETE DECK SYSTEM, ITEM 557.00010001.
4. ALL GALVANIZED BAR REINFORCEMENT IN THE CLOSURE POURS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR GALVANIZED BAR REINFORCEMENT FOR STRUCTURES, ITEM 556.0203.
5. ALL CLOSURE POUR CONCRETE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ARCH SPAN CLOSURE PLACEMENT CONCRETE TYPE 3 FRICTION, ITEM 557.01030001.
6. FOR REINFORCEMENT PLAN AT SCUPPER, SEE DWG. NO. ST-229.

PRECAST PANEL TYPE B - PLAN
10'-0" x 1'-0"

LEGEND:
G02 = GALVANIZED BAR REINFORCEMENT
1. PRECAST PANEL
2. 5" BRUSH CURB
3. 3'-3" CABLE HANGER
4. 3'-6" CABLE HANGER
5. 2'-8"
6. 1" SCUPPER
7. INDICATES GALVANIZED BAR REINFORCEMENT
8. FOR CLARITY
9. STRAND TENSD OR SHOWN FOR CLARITY

SPECIAL REQUIREMENTS:
PRECAST PANEL TYPE B

HNTB NY ENGINEERING & ARCHITECTURE, P.C.

NOTE: IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.
NOTES:

1. FOR REINFORCEMENT BAR SPACING, SEE DWG. NO. ST-203.
2. FOR PRECAST DECK PANEL SECTIONS, SEE DWG. NO. ST-203.
3. ALL CONCRETE AND GALVANIZED BAR REINFORCEMENT IN THE PRECAST DECK PANELS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRECAST, POST TENSIONED CONCRETE DECK SYSTEM, ITEM 557.00010001.
4. ALL GALVANIZED BAR REINFORCEMENT IN THE CLOSURE POURS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR GALVANIZED BAR REINFORCEMENT FOR STRUCTURES, ITEM 556.0203.
5. ALL CLOSURE POUR CONCRETE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLOSURE POUR CONCRETE TYPE 3 FRICTION, ITEM 557.01030001.

LEGEND:

ID INDICATES GALVANIZED BAR REINFORCEMENT
PRECAST PANEL TYPE D - PLAN
N = 1'-0"

PRECAST PANEL TYPE E - PLAN
N = 1'-0"

NOTES:
1. FOR PRECAST DECK PANEL SECTIONS, SEE DWG. NO. ST-203.
2. ALL CONCRETE AND GALVANIZED BAR REINFORCEMENT IN THE PRECAST SIDEWALK PANELS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRECAST, POST TENSIONED CONCRETE SIDEWALK, ITEM 557.0002.
3. ALL GALVANIZED BAR REINFORCEMENT IN THE CLOSURE POURS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR GALVANIZED BAR REINFORCEMENT FOR STRUCTURES, ITEM 556.0202.
4. ALL CLOSURE POUR CONCRETE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ARCH SPAN CLOSURE PLACEMENT CONCRETE TYPE 3 FRICTION, ITEM 557.0103.

LEGEND:
G: Indicates galvanized bar reinforcement
(1") = 3⁄8"
(1") = 3⁄8" (T & B)
(1") = 3⁄8" (T)
(1") = 3⁄8" (B)
(1") = 3⁄8" (T & B)
(1") = 3⁄8" (T)
(1") = 3⁄8" (B)

CABLE HANGER (TYP.)
ARCH SPAN
PEDESTRIAN RAILING (TYP.)
RAILING POST SPACING
STRAND TENDON - NOT SHOWN FOR CLARITY
PRECAST PANEL
SCALE FEET
3⁄8" = 1'-0"
NOTES:

1. FOR PRECAST DECK PANEL TYPICAL SECTION, SEE DWG. NO. ST-203.

2. ALL CONCRETE AND GALVANIZED BAR REINFORCEMENT IN THE PRECAST SIDEWALK PANELS SHALL BE INCLUDED IN THE UNIT PRICE BD FOR PRECAST, POST TENSIONED CONCRETE SIDEWALK, ITEM 557.00020001.

3. ALL GALVANIZED BAR REINFORCEMENT IN THE CLOSURE POURS SHALL BE INCLUDED IN THE UNIT PRICE BD FOR GALVANIZED BAR REINFORCEMENT FOR STRUCTURES, ITEM 556.0203.

4. ALL CLOSURE POUR CONCRETE SHALL BE INCLUDED IN THE UNIT PRICE BD FOR ARCH SPAN CLOSURE PLACEMENT CONCRETE TYPE 3 FRICTION, ITEM 557.01030001.

LEGEND:

10. INDICATES GALVANIZED BAR REINFORCEMENT

This sheet does not supersede any sheet for the precast deck panel typical section, see DWG. NO. ST-203.
NOTES:

1. All reinforcement shall be threaded bar or approved equal with a yield strength of 105 ksi and an ultimate strength of 120 ksi.

2. Prior to lifting or handling from brackets, threaded bars to be tensioned to a minimum of 25 kips using a calibrated torque wrench.

3. Torque to achieve this level of pretensioning shall be based upon the manufacturer's recommendations.

4. Support brackets may be used for lifting and handling of precast panels. However, spreader beams are required to ensure loads are vertical and equally divided to all four supports.

5. In order to remove HILMAN rollers, panels are to be jacked at the support brackets. To achieve profile grade, the brackets are to be supported on the Nelson studs. Given the small clearances between brackets and flange from top flange, the jacks or a similar low profile alternative is required.

PRECAST DECK PANEL SUPPORT DETAILS

SECTION A-A

11/4 x 1'-0"
NOTES:

2. FOR CONCRETE DECK PLACEMENT SEQUENCE, SEE Dwg. No. ST-216.
3. POST TENSIONING STRANDS IN THE DECK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRECAST, POST TENSIONED CONCRETE DECK SYSTEM, ITEM 557.00010001.
4. POST TENSIONING STRANDS IN THE SIDEWALK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRECAST, POST TENSIONED CONCRETE SIDEWALK, ITEM 557.00020001.

SCALE 1/2" = 1'-0"
**TABLE 1 - POST-TENSIONING STRAND ASSUMPTIONS**

<table>
<thead>
<tr>
<th>Post-Tensioning Strand</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wire Low-Relaxation Rends</td>
<td>Guaranteed Ultimate Tensile Strength (GUTS) 270 000</td>
</tr>
<tr>
<td>2. Wire Low-Relaxation Rends</td>
<td>Guaranteed Ultimate Tensile Strength (GUTS) 270 000</td>
</tr>
<tr>
<td>3. Wire Low-Relaxation Rends</td>
<td>Guaranteed Ultimate Tensile Strength (GUTS) 270 000</td>
</tr>
</tbody>
</table>

### LEGEND:
- **G** Galvanized steel reinforcement
- **P** Post-tensioning strand
- **B** Bursting
- **C** Concrete
- **A** Anchor

### NOTES:
1. All post-tensioning details are shown on this sheet with the exception of the post-tensioning sequence shown on drawing ST-212 and ST-216.
2. Post-tensioning strands, tendons, and anchorages shall be installed in accordance with the specifications.
3. Post-tensioning notes:
   - Post-tensioning details and quantities are provided for estimating purposes only.
   - Post-tensioning details are subject to review and approval by the DCES.
   - Post-tensioning details are subject to review and approval by the DCES.

### POST-TENSIONING SEQUENCE:
1. Post-tensioning sequence:
   - Place tendons in ducts.
   - Install concrete with ducts in place.
   - Place post-tensioning anchors.
   - Seal ducts and joints.

### POST-TENSIONING DUCTS:
1. Post-tensioning ducts shall be polyethylene or galvanized metal corrugated and supported.
2. Post-tensioning ducts shall be supported at least 300 feet from the edge.
3. Locate post-tensioning ducts at the fixed points and live loads of post-tensioning span, and other post-tensioning locations shall be submitted to the DCES for approval.

### POST-TENSIONING BEARING PLATE AND CONFINEMENT REINFORCEMENT:
1. Post-tensioning bearing plate and confinement reinforcement shall be installed in accordance with AASHTO LRFD Bridge Construction Specifications, Article 10.3.2. and 10.3.2.3.
2. Post-tensioning bearing plate and confinement reinforcement shall be subject to review and approval by the DCES.
3. Post-tensioning bearing plate and confinement reinforcement shall be subject to review and approval by the DCES.

### POST-TENSIONING BURSTING:
1. Post-tensioning bursting shall be installed in accordance with the specifications.
2. Bursting shall be installed in accordance with the specifications.
3. Bursting shall be installed in accordance with the specifications.

### POST-TENSIONING GROUT:
1. Post-tensioning grout shall be installed in accordance with the specifications.
2. Post-tensioning grout shall be installed in accordance with the specifications.
3. Post-tensioning grout shall be installed in accordance with the specifications.

### POST-TENSIONING SEQUENCE:
1. Post-tensioning sequence:
   - Place post-tensioning anchorage.
   - Install post-tensioning grout.
   - Seal ducts and joints.

### POST-TENSIONING MATERIALS:
1. Post-tensioning materials shall be installed in accordance with the specifications.
2. Post-tensioning materials shall be installed in accordance with the specifications.
3. Post-tensioning materials shall be installed in accordance with the specifications.
TABLE 1 - POST-TENSIONING STRAND ASSUMPTIONS

<table>
<thead>
<tr>
<th>PT Strand</th>
<th>T-WIRE LOW-RELAXATION MATERIALS (COMPLIANCE TO AASHTO M203, SUPPLEMENT 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>124 MSG, 0.0371 in, 1270 ksi</td>
</tr>
<tr>
<td></td>
<td>127 MSG, 0.0371 in, 1270 ksi</td>
</tr>
<tr>
<td></td>
<td>STEEL (TYP.)</td>
</tr>
<tr>
<td></td>
<td>GALVANIZED DUCT 0.25&quot;</td>
</tr>
<tr>
<td></td>
<td>7-WIRE LOW-RELAXATION WELDLESS STRAND S1, GRADE 270 (ASTM A416)</td>
</tr>
</tbody>
</table>

NOTES:
1. THE POST-TENSIONING SEQUENCE SHOWN HERES IS THE SEQUENCE INDICATED FOR THE DECK ONLY. THE CONTRACTOR SHALL SUBMIT REVISED PRESTRESSING DETAILS AND CALCULATIONS FOR REVIEW AND APPROVAL BY THE DCES.
2. THE POST-TENSIONING NOTES AND QUANTITIES ARE PROVIDED FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL SUBMIT DETAILS OF THE PROPOSED POST-TENSIONING SYSTEM FOR APPROVAL BY THE DCES.
3. POST-TENSIONING SEQUENCES ARE SUBJECT TO THE REQUIREMENTS FOR SPECIAL ANCHORAGES IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS.
4. POST-TENSIONING DUCTS SHALL BE METAL OR NON-METAL AND SUPPORTED AT A MAXIMUM SPACING OF 36 INCHES (914 MILMETERS).
5. LOCATE PT GROUT VENT AND DRAIN TUBES AT DUCT HIGH POINTS AND LOW POINTS OF PRECAST PANELS. GROUT TUBE AT HIGH POINTS AND LOW POINTS OF PRECAST PANELS. SEAL ALL DUCT JOINTS, CONNECTIONS, ETC. WITH HEAT SHRINK TUBING.
6. LOCATE PT GROUT VENT AND DRAIN TUBES AT DUCT HIGH POINTS AND LOW POINTS OF PRECAST PANELS. SEAL ALL DUCT JOINTS, CONNECTIONS, ETC. WITH HEAT SHRINK TUBING.
DECK CONCRETE PLACEMENT PLAN - ARCH SPAN

CLOSURE POUR SEQUENCE:
1. Pour transverse joints between deck precast panels, not including end pours. Pour transverse closures between concrete precast panels, not including end pours.
2. Pour transverse end joints may be poured simultaneously with typical transverse joints.
4. Pour longitudinal closure joint between deck and sidewalk precast panels including cast in place sidewalk pour.
5. Pour transverse joint over end floorbeam.

NOTES:
1. For concrete deck placement notes, see DWG. No. ST-217.
2. Pour this drawing with NY approach deck placement sequence, DWG. No. ST-215, and VT approach deck placement sequence, DWG. No. ST-217.

LEGEND:
CX denotes precast concrete panel placement sequence number and direction of pour.

9'-0" 240'-0"
32 eq. spa. @ 12'-0" = 384'-0"

NOTES:
CX denotes precast concrete panel placement sequence number.

CONCRETE PLACEMENT SECTION:

TYPICAL TRANSVERSE CLOSURE JOINTS
TRANSVERSE END JOINT
LONGITUDINAL CLOSURE JOINT
END FLOORBEAM JOINT

CLOSURE POUR DETAIL:

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 1

ST-216

240'-0"

GIRDER (TYP.)
CLOSURE POUR DETAIL
LEGEND:

TGL, PROPOSED C, HCL AND STA. LINE

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NOTES:
1. ALL SPACES TO BE EMBEDDED AND ERECTED ACCORDING TO SECTION 5.4 OF THE STANDARD SPECIFICATIONS.
2. PROOF OF WELDING OF ASSEMBLED POSTS, ENSURE ALL RAILS TO A
   WELDING PATTERN, 6.366.
3. BOLTS SHALL BE TIGHTENED TO APPROXIMATELY 100 LB-FT.
4. FASTENERS CAUSED BY MELTING OR GALVANIZING ARE NOT
   PERMITTED ON THE ADJOINING SURFACES OF THE TWO BEAM RAILS,
   SPICE TUBES AND END PLATES.

SCALE 1'-0" = 1'-0"

SECTION C-C
ELEVATION
EXPANSION SPICE TUBE
1/2" x 1'-0"
EXPANSION SPICE ASSEMBLY
1/2" x 1'-0"

SECTION D-D
ELEVATION
EXPANSION SPICE TUBE
1/2" x 1'-0"
EXPANSION SPICE ASSEMBLY
1/2" x 1'-0"

NOTES:
1. ALL RAILS TO BE EMBEDDED AND ERECTED ACCORDING TO SECTION 5.4 OF THE STANDARD SPECIFICATIONS.
2. PROOF OF WELDING OF ASSEMBLED POSTS, ENSURE ALL RAILS TO A
   WELDING PATTERN, 6.366.
3. BOLTS SHALL BE TIGHTENED TO APPROXIMATELY 100 LB-FT.
4. FASTENERS CAUSED BY MELTING OR GALVANIZING ARE NOT
   PERMITTED ON THE ADJOINING SURFACES OF THE TWO BEAM RAILS,
   SPICE TUBES AND END PLATES.

SECTION B-B
COVER PLATE DETAILS
1/2" x 1'-0"

SECTION A-A
EXPANSION SPICE TUBE
1/2" x 1'-0"
EXPANSION SPICE ASSEMBLY
1/2" x 1'-0"

SECTION A-A
EXPANSION SPICE TUBE
1/2" x 1'-0"
EXPANSION SPICE ASSEMBLY
1/2" x 1'-0"

NOTES:
1. ALL RAILS TO BE EMBEDDED AND ERECTED ACCORDING TO SECTION 5.4 OF THE STANDARD SPECIFICATIONS.
2. PROOF OF WELDING OF ASSEMBLED POSTS, ENSURE ALL RAILS TO A
   WELDING PATTERN, 6.366.
3. BOLTS SHALL BE TIGHTENED TO APPROXIMATELY 100 LB-FT.
4. FASTENERS CAUSED BY MELTING OR GALVANIZING ARE NOT
   PERMITTED ON THE ADJOINING SURFACES OF THE TWO BEAM RAILS,
   SPICE TUBES AND END PLATES.

SECTION B-B
COVER PLATE DETAILS
1/2" x 1'-0"

SECTION A-A
EXPANSION SPICE TUBE
1/2" x 1'-0"
EXPANSION SPICE ASSEMBLY
1/2" x 1'-0"

NOTES:
1. ALL RAILS TO BE EMBEDDED AND ERECTED ACCORDING TO SECTION 5.4 OF THE STANDARD SPECIFICATIONS.
2. PROOF OF WELDING OF ASSEMBLED POSTS, ENSURE ALL RAILS TO A
   WELDING PATTERN, 6.366.
3. BOLTS SHALL BE TIGHTENED TO APPROXIMATELY 100 LB-FT.
4. FASTENERS CAUSED BY MELTING OR GALVANIZING ARE NOT
   PERMITTED ON THE ADJOINING SURFACES OF THE TWO BEAM RAILS,
   SPICE TUBES AND END PLATES.

SECTION B-B
COVER PLATE DETAILS
1/2" x 1'-0"

SECTION A-A
EXPANSION SPICE TUBE
1/2" x 1'-0"
EXPANSION SPICE ASSEMBLY
1/2" x 1'-0"

NOTES:
1. ALL RAILS TO BE EMBEDDED AND ERECTED ACCORDING TO SECTION 5.4 OF THE STANDARD SPECIFICATIONS.
2. PROOF OF WELDING OF ASSEMBLED POSTS, ENSURE ALL RAILS TO A
   WELDING PATTERN, 6.366.
3. BOLTS SHALL BE TIGHTENED TO APPROXIMATELY 100 LB-FT.
4. FASTENERS CAUSED BY MELTING OR GALVANIZING ARE NOT
   PERMITTED ON THE ADJOINING SURFACES OF THE TWO BEAM RAILS,
   SPICE TUBES AND END PLATES.
G. TOW
C. BROSIO
P. R. ELLA

ST-241

Details on the drawings labeled as "not to scale" are intentionally drawn not to scale for visual clarity. All other details, for which no scale is shown, are drawn proportional and are fully dimensioned.

The minimum distance from the post to an expansion joint shall be determined by the minimum edge distance of 5" from any anchor stud to the end of the slab, or to the expansion joint recess pour, if one is used. On prestressed concrete bridges, the post shall be located to minimize anchor plate/end block reinforcement conflicts. Post spacing shall be adjusted accordingly.

Brush curb shall be included in unit price bid for granite bridge curb (type F1), item 609.0302.

1/2" dia. bar shall conform to N.Y.S. standard specifications subsection 709-07 and galvanized in accordance with subsection 719-01. 40 ksi steel may be used in lieu of 60 ksi or 75 ksi steel. Pay for under stone curb-bridge (type F1), item 609.0302.

Curb anchors shall be inserted into holes drilled in the rear face of the stone curb. The holes shall be thoroughly cleaned and filled with concrete grouting material conforming to N.Y.S. standard specifications subsection 705-06 - toolable type only. Curb anchors shall be securely supported in position until the grout has hardened. The cost shall be included in the unit price bid for the curb type specified.

All mortar shall conform to N.Y.S. standard specifications subsection 705-21.

This sheet supersedes sheet 336-366A of steel bridge railing two rail and brush curb details.
A detailed engineering drawing with annotations and specifications for a steel bridge railing to box beam guide railing transition. The drawing includes a plan and elevation view with dimensions, notes, and construction details. The text provides instructions for the installation of heavy posts, fixed splice assembly, and turnback splice assembly, among other requirements. The notes section describes the inclusion of certain elements in the price bid for the transition item and the inclusion of typical rail to post connection detail. Additional notes cover alteration and compliance with state laws.
NOTES:

1. All railing steel shall be architecturally exposed structural steel conforming to Section 10 of AISC Code of Standard Practice, and shall be hot-dip galvanized.

2. Rails shall be perpendicular to the theoretical grade line, and mesh panels shall have square corners.

3. Rail clamp shall be A36 steel and hot-dip galvanized to match railing posts.

4. All bolts shall conform to ASTM A325 and be hot-dip galvanized.

5. Railing clamps shall be included in the unit price bid for ornamental pedestrian railing, Item 568.80010010.

6. For sections C-C and C'-C', see Dwg. No. ST-244.

7. All steel for ornamental pedestrian railing shall not be painted and shall be hot-dip galvanized in accordance with ASTM A123. The cost of galvanizing shall be included in the unit price bid for ornamental pedestrian railing, Item 568.80010010.

8. Where pedestrian railing shall be included in the unit price bid for ornamental pedestrian railing, Item 568.80010010.

9. See Dwg. No. ST-244 for further details.

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STAGE NOTES:
1. INSTALL SHEET PILES TO ADVANCE SIZE OF EXCAVATION AND CONSTRUCT PIER 7 ASSUMED CAISSON (ASSUMED LAND ACTIVITY)
2. CONSTRUCT VELOCITY ALIGNMENT (ASSUMED LAND ACTIVITY)

STAGE 1
1" = 100'-0"

STAGE NOTES:
1. DRILL SHAFTS, INSTALL COFFERDAMS AND TREMIE SEAL CONCRETE AND CONSTRUCT PIER 2 (ASSUMED WATER ACTIVITY)
2. INSTALL SHEET PILES TO MINIMIZE SIZE OF EXCAVATION AND CONSTRUCT PIER 7 (ASSUMED CAISSON/LAND ACTIVITY)
3. CONSTRUCT VELOCITY ALIGNMENT (ASSUMED LAND ACTIVITY)

STAGE 2
1" = 100'-0"

STAGE NOTES:
1. INSTALL SHEET PILES, INSTALL COFFERDAMS AND THEME SEAL CONCRETE AND CONSTRUCT PIER 6 (ASSUMED WATER ACTIVITY)
2. INSTALL SHEET PILES, INSTALL COFFERDAMS AND THEME SEAL CONCRETE AND CONSTRUCT PIER 8 (ASSUMED CAISSON/LAND ACTIVITY)

STAGE 3
1" = 100'-0"

STAGE NOTES:
1. INSTALL SHEET PILES, INSTALL COFFERDAMS AND THEME SEAL CONCRETE AND CONSTRUCT PIER 4 (ASSUMED WATER ACTIVITY)
2. INSTALL SHEET PILES, INSTALL COFFERDAMS AND THEME SEAL CONCRETE AND CONSTRUCT PIER 6 (ASSUMED WATER ACTIVITY)
3. CONSTRUCT VELOCITY ALIGNMENT (ASSUMED LAND ACTIVITY)
STAGE NOTES:
1. Erect "angel wings" on Piers 1 and 6 (assumed causeway activity)
2. Erect temporary falsework towers on Piers 4 and 5 (assumed water activity)
3. Erect delta frame legs at Piers 4 and 5 (assumed water activity)
4. Erect pier table girder segments at Piers 1 and 6 (assumed causeway activity)

STAGE NOTES:
1. Erect temporary falsework towers on top of Piers 4 and 5 (assumed water activity)
2. Erect temporary falsework towers on existing Piers 5 and 6 (assumed water activity)
3. Erect main span half of the delta frame top girders (assumed water activity)
4. Erect girder segments in Spans 1 and 6 (assumed causeway activity)

NOTES:
1. Pier construction shown complete.
2. Staged construction anticipated.
3. For steel erection notes, see DWG. No. ST-251.
4. Girder cambers for steel dead load as shown in the camber tables are for the fully erected dead load condition only.

LEGEND:
F denotes fixed bearing
E denotes expansion bearing
TE denotes temporary expansion bearing

NOTE: IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.
SUGGESTED ERECTION SEQUENCE
5 OF 5

1. Erect closure girder segments at span 3 (assumed land activity)
2. Erect girder segments at span 5 (assumed land activity)
3. Erect temporary falsework towers supported on existing new york approach pier 5 and 6 (assumed land activity)
4. Erect girder segments at span 1 (assumed land activity)
5. Erect girder segments at span 6 and 7 (assumed land activity)
6. Erect closure girder segments at span 4 (assumed water activity)
7. Erect temporary falsework towers north of new york abutment on existing approach piers (assumed causeway or land activity)
8. Erect girder segments at span 2 (assumed water activity)
9. Erect closure girder segments at span 4 (assumed water activity)

EMERGENCY AERIAL BRIDGE REPLACEMENT OVER LAKE CHAMPLAIN
VT ROUTE 17
NYS ROUTE 185, S.H. 9527

LAKE CHAMPLAIN BRIDGE REPLACEMENT OVER LAKE CHAMPLAIN
VT ROUTE 17
NYS ROUTE 185, S.H. 9527

NOTES:

1. For steel erection notes, see DRG.
   NO. 51-061.
2. Erection towers for steel girder beam as shown in the camber tables are for the fully erected dead load condition only.

STAGE NOTES:

STAGE 7
F = 100'-0"
1. Erect closure girder segments at span 3 (assumed land activity)
2. Erect girder segments at span 5 (assumed land activity)
3. Erect temporary falconry towers from piers 3 and 9 to pier 7 (assumed land activity)
4. Install "angel wings" on pier 7 (assumed land activity)
5. Erect girder segments at span 7 (assumed land activity)
6. Erect girder segments in span 1 (assumed land activity)

LEGEND:
F = Centers fixt. bearing
E = Centers expansion bearing
TE = Centers temporary expansion bearing

STAGE 8
F = 100'-0"
1. Erect "angel wings" on pier 2 (assumed water activity)
2. Erect girder segments at span 3 (assumed water activity)
3. Erect temporary falsework towers from pier 3 to pier 9 and 5 (assumed land activity)
4. Install "angel wings" on pier 7 (assumed land activity)
5. Erect girder segments at span 2 (assumed water activity)
6. Erect girder segments at pier 5 (assumed weather activity)

STAGE 9
F = 100'-0"
1. Erect "angel wings" on pier 2 (assumed water activity)
2. Erect girder segments at pier 2 (assumed water activity)
3. Erect temporary falconry towers from piers 3 and 9 to pier 7 (assumed land activity)
4. Install "angel wings" on pier 7 (assumed land activity)
5. Erect girder segments at span 6 and 7 (assumed land activity)
6. Erect girder segments at span 4 (assumed water activity)
7. Erect girder segments at span 1 (assumed land activity)
8. Erect girder segments at span 6 (assumed water activity)
9. Erect girder segments at span 5 (assumed water activity)
10. Erect girder segments at span 7 (assumed water activity)

NOTES:

1. For steel erection notes, see DRG.
   NO. 51-061.
2. Erection towers for steel girder beam as shown in the camber tables are for the fully erected dead load condition only.

STAGE NOTES:

STAGE 7
F = 100'-0"
1. Erect closure girder segments at span 3 (assumed land activity)
2. Erect girder segments at span 5 (assumed land activity)
3. Erect temporary falconry towers from pier 3 to pier 9 and 5 (assumed land activity)
4. Install "angel wings" on pier 7 (assumed land activity)
5. Erect girder segments at span 7 (assumed land activity)
6. Erect girder segments in span 1 (assumed land activity)

LEGEND:
F = Centers fixt. bearing
E = Centers expansion bearing
TE = Centers temporary expansion bearing

STAGE 8
F = 100'-0"
1. Erect "angel wings" on pier 2 (assumed water activity)
2. Erect girder segments at span 3 (assumed water activity)
3. Erect temporary falsework towers from pier 3 to pier 9 and 5 (assumed land activity)
4. Install "angel wings" on pier 7 (assumed land activity)
5. Erect girder segments at span 2 (assumed water activity)
6. Erect girder segments at pier 5 (assumed weather activity)

STAGE 9
F = 100'-0"
1. Erect "angel wings" on pier 2 (assumed water activity)
2. Erect girder segments at pier 2 (assumed water activity)
3. Erect temporary falconry towers from pier 3 to pier 9 and 5 (assumed land activity)
4. Install "angel wings" on pier 7 (assumed land activity)
5. Erect girder segments at span 6 and 7 (assumed land activity)
6. Erect girder segments at span 4 (assumed water activity)
7. Erect girder segments at span 1 (assumed land activity)
8. Erect girder segments at span 6 (assumed water activity)
9. Erect girder segments at span 5 (assumed water activity)
10. Erect girder segments at span 7 (assumed water activity)
11. Erect girder segments at span 4 (assumed water activity)
STAGE 1 - ERECT END FLOORBEAM AND LIFTING BEAMS ON TEMPORARY BLOCKING

SECTION A-A

STAGE 2 - LIFT ARCH USING STRAND JACKS

CROSS BEAM

STAGE 3 - SPLICE CROSS BEAM

STAGE 4 - SPLICE END FLOORBEAM AND PLACE ON JACKS

STAGE 5 - INSTALL BEARING AND REMOVE BLOCKING

NOTES:
1. SEQUENCE SHOWN IS SCHEMATIC AND IS INTENDED TO DEMONSTRATE DESIGN INTENT. THE CONTRACTOR BEARS SOLE RESPONSIBILITY FOR HIS ADOPTED SEQUENCE. CONTRACTOR'S PLANS AND CALCULATIONS SHALL BE SUBMITTED TO A LICENSED NEW YORK STATE PROFESSIONAL ENGINEER TO DCE FOR APPROVAL.

2. STRAND JACKING WORK SHALL BE DONE PRIOR TO INSTALLING PRECAST DECK PANELS. SEE ERCTION SEQUENCE.

3. INSTALL TEMPORARY LONGITUDINAL KEEPERS FOR BEARINGS AT PIERS 3 AND 6 PRIOR TO LIFTING ACTIVITIES.

4. ALL TEMPORARY SUPPORT AND ERECTION WORK INCLUDING STRAND JACK SYSTEM, LIFTING BEAMS AND BLOCKING SHALL BE INCLUDED IN THE UNIT BID PRICE FOR STRUCTURAL STEEL TYPE 2, ITEM 564.0502.
NOTES:
1. For location of detail, see DWG. NO. ST-256A.
2. ASTM A193 GRADE B7 THREADED BAR OR APPROVED EQUAL WITH A YIELD STRENGTH OF 105 KSI AND AN ULTIMATE STRENGTH OF 120 KSI.
3. PRIOR TO LIFTING OR HANDLING FROM BRACKETS, THREADED BARS TO BE TENSIONED TO A MINIMUM OF 25 KIPS USING A CALIBRATED TORQUE WRENCH.
4. TORQUE TO ACHIEVE THIS LEVEL OF PRETENSIONING SHALL BE BASED UPON THE MANUFACTURER'S RECOMMENDATIONS.
5. SUPPORT BRACKETS MAY BE USED FOR LIFTING AND HANDLING OF PRECAST PANELS. HOWEVER SPREADER BEAMS ARE REQUIRED TO ENSURE LOADS ARE VERTICAL AND EQUALIZED TO ALL FOUR SUPPORTS.
6. IN ORDER TO REMOVE HILMAN ROLLERS, PANELS ARE TO BE JACKED AT THE SUPPORT BRACKETS. TO ACHIEVE PROFILE GRADE, THE BRACKETS ARE TO BE SUPPORTED ON THE NELSON STUDS. GIVEN THE SMALL CLEARANCES BETWEEN BRACKET AND FLOORBEAM TOP FLANGE, TOE JACKS OR A SIMILAR LOW PROFILE ALTERNATIVE IS REQUIRED.

HAUNCH FORMWORK SUPPORT

SECTION A-A

PRECAST PANEL ERECTION DETAILS - 2

SUGGESTED ARCH SPAN

383A OF

THIS SHEET DOES NOT SUPERSEDE ANY SHEET

T.P. ZOLI
R. J. LEE

NOTE: IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER ANY ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.