

**VERTICAL GRADE DATA**

STA. 0+37.00	ELEV. 968.89
STA. 0+68.00	ELEV. 969.11

+0.71%

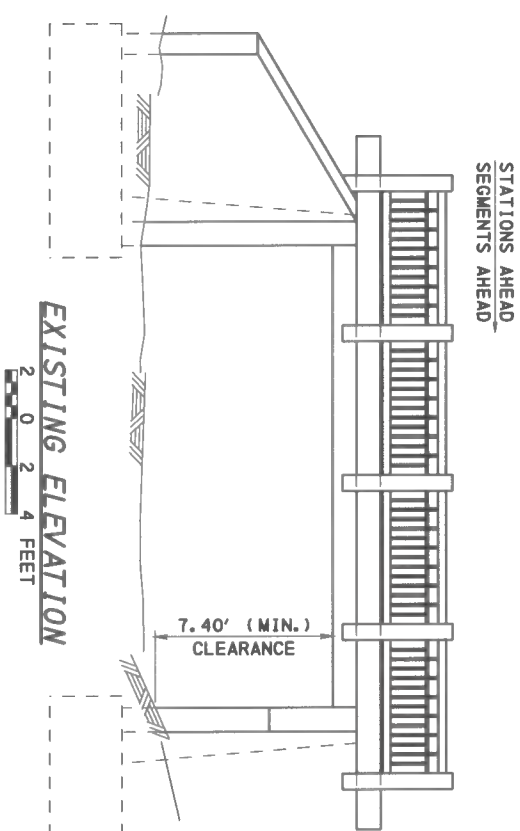
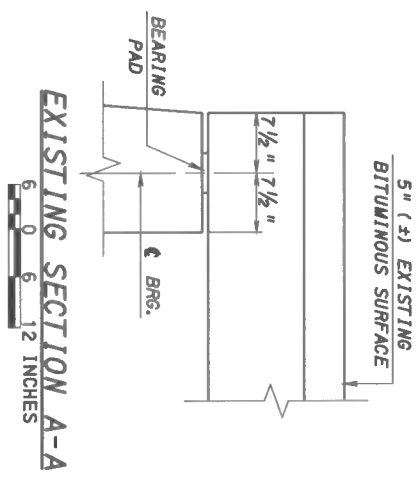
**EXISTING STRUCTURE DATA**

STA. 0+53.03  
 TYPE - P/S ADJACENT BOX BEAM  
 CLEAR SPAN - 20.0'  
 DESIGN UNDER CLEAR - 8.78'  
 CURB TO CURB WIDTH - 31.6'  
 SKW - 75°

**LEGEND**

INDICATES PORTION OF EXISTING STRUCTURE TO BE REMOVED

\* = LOOKING STATIONS AHEAD



**INDEX OF DRAWINGS**

SHEET NUMBER	TITLE
1	GENERAL PLAN & ELEVATION
2	GENERAL NOTES & QUANTITIES
3	PHASE CONSTRUCTION DETAILS
4	EXISTING ABUTMENT 1 DETAILS
5	PROPOSED ABUTMENT 1 DETAILS
6	EXISTING ABUTMENT 2 DETAILS
7	PROPOSED ABUTMENT 2 DETAILS
8	EXISTING BEAM DETAILS
9	PROPOSED BEAM DETAILS 1
10	PROPOSED BEAM DETAILS 2
11	PROPOSED BEAM DETAILS 3
12	PROPOSED BEAM BEARING DETAILS
13	RATINGS
14	BARRIER DETAILS
15	SLAB PLAN & PROPOSED DECK SECTION
16	REINFORCEMENT BAR SCHEDULE

**NOTES**

1. FOR GENERAL NOTES, SUPPLEMENTAL DRAWING TABLE, SEE SHEET 2.

**SCOPE OF WORK**

- 1) ALL WORK TO BE COMPLETED UTILIZING HALF-WIDTH CONSTRUCTION.
- 2) REMOVE EXISTING BITUMINOUS WEARING SURFACE, CONCRETE CURB, BEAMS AND GUIDERAIL AS DETAILED.
- 3) REPAIR SUBSTRUCTURE AS DETAILED.
- 4) RE-GROUT ANY SHEAR KEYS THAT ARE DAMAGED OR DETERIORATED.
- 5) PLACE NEW CONCRETE DECK, BEAMS AND VERTICAL WALL BARRIER AS DETAILED.
- 6) PLACE FOUNDATION DRAIN AND MEMBRANE WATERPROOFING BEHIND ABUTMENTS AS DETAILED.
- 7) APPLY PROTECTIVE COATING (PENETRATING SEALER) TO THE NEW CONCRETE DECK AND WALL BARRIER.
- 8) APPLY PROTECTIVE COATING (EPOXY RESIN) TO BOTTOM AND OUTSIDE FACE OF FASCIA BEAMS.
- 9) PLACE NEW BENCHMARK P.D.T. DISC AT SAME LOCATION ON TOP OF NEW PARAPET (NEAR RIGHT). EXISTING P.D.T. ELEVATION 967.9064.

Mark	Description	By	Chk'd.	Reconf'd.	Date
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF TRANSPORTATION  
 BRADFORD COUNTY  
**S.R. 4013 SECTION 039**  
 SEGMENT 0320 OFFSET 0000  
 S.R. 4013-039 STA. 0+53.03  
 OVER THREE FALLS RUN  
**1-SPAN P/S PLANK BEAM DECK REPLACEMENT  
 GENERAL PLAN & ELEVATION**

SCALE AS NOTED

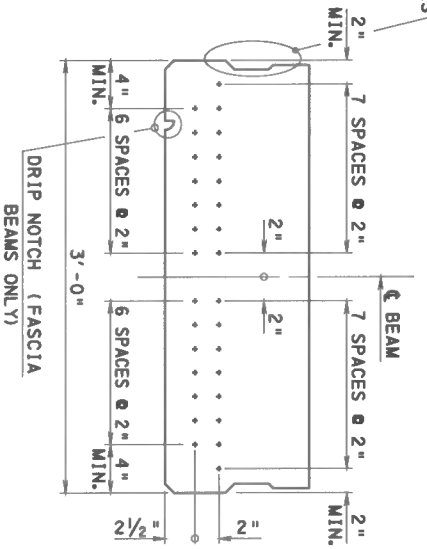
DES: LEI DWG: LEI CKD: APP

PREPARED BY:  
 DISTRICT 3-0 BRIDGE UNIT

DISTRICT BRIDGE ENGINEER  
 DATE:

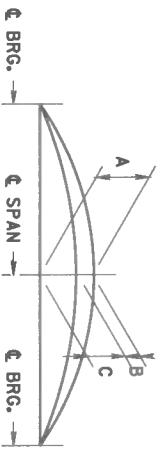
RECOMMENDED SHEET 1 OF 16 + SUPPLEMENTAL DRAWINGS  
 DISTRICT BRIDGE ENGINEER S - 37288

SHEAR KEY (OMIT ON OUTSIDE FACE) SEE BC-775M FOR DETAILS



1. DO NOT PLACE PRESTRESSING STRANDS AT CORNER LOCATION IN BOTTOM ROW.

**TYPICAL STRAND PATTERN**



**BEAM CAMBER DIAGRAM**

- A= ESTIMATED PRESTRESS CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF BEAM TIMES CREEP FACTOR (CHECK IN FIELD).
- B= DEFLECTION DUE TO ALL DEAD LOAD EXCEPT BEAM WEIGHT AND FUTURE WEARING SURFACE.
- C= A-B = NET FINAL CAMBER
- A-B = THE THICKNESS OF THE CONCRETE HAUNCH SHALL BE VARIED TO ACHIEVE THE REQUIRED VERTICAL GEOMETRY AND TO COMPENSATE FOR ANY INACCURACIES IN BEAM CAMBER.
- A, B AND C ARE THEORETICAL VALUES AND MAY VARY WITH ACTUAL CONCRETE STRENGTH (AGE), PRESTRESSING CONDITIONS, CREEP FACTOR AND PRESTRESS LOSSES.
- USE A CREEP FACTOR EQUAL TO 1.60 AND P/S LOSS EQUAL TO 10%.

**PRESTRESSING DATA**

CONCRETE STRENGTH AT STRAND RELEASE  
 JACKING PRESTRESS STRESS  
 270 ksi LOW RELAXATION STRANDS  
 1/2" DIA., 0.167 In<sup>2</sup> STRAND AREA

6800 psi  
 8000 psi  
 202500 psi

**CAMBER AND PRESTRESS TABLE**

BEAM NO.	TOTAL NO. OF STRANDS	JACKING PRESTRESS FORCE (KIPS)	A	B	C
1	10	338.2	0.35	0.08	0.27

**PRESTRESSING DATA**

Row Number	Distance From Bottom of Beam (in.)	Number of Strands (End of Beam to 10,645')
2	4.5	4
1	2.5	6
Total Number of Developed Strands		10
Center of Gravity of Developed Strands from Bottom of Basic Beam		3.300

DES: LEL DWG: LEL CKD: APP

SCALE AS NOTED



**COMMONWEALTH OF PENNSYLVANIA**  
 DEPARTMENT OF TRANSPORTATION

**BRADFORD COUNTY**

**S.R. 4013 SECTION 039**

SEGMENT 0320 OFFSET 0000  
 S.R. 4013-039 STA. 0+53.03

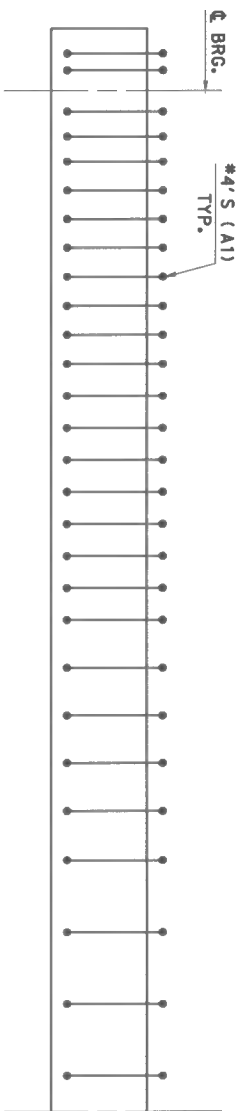
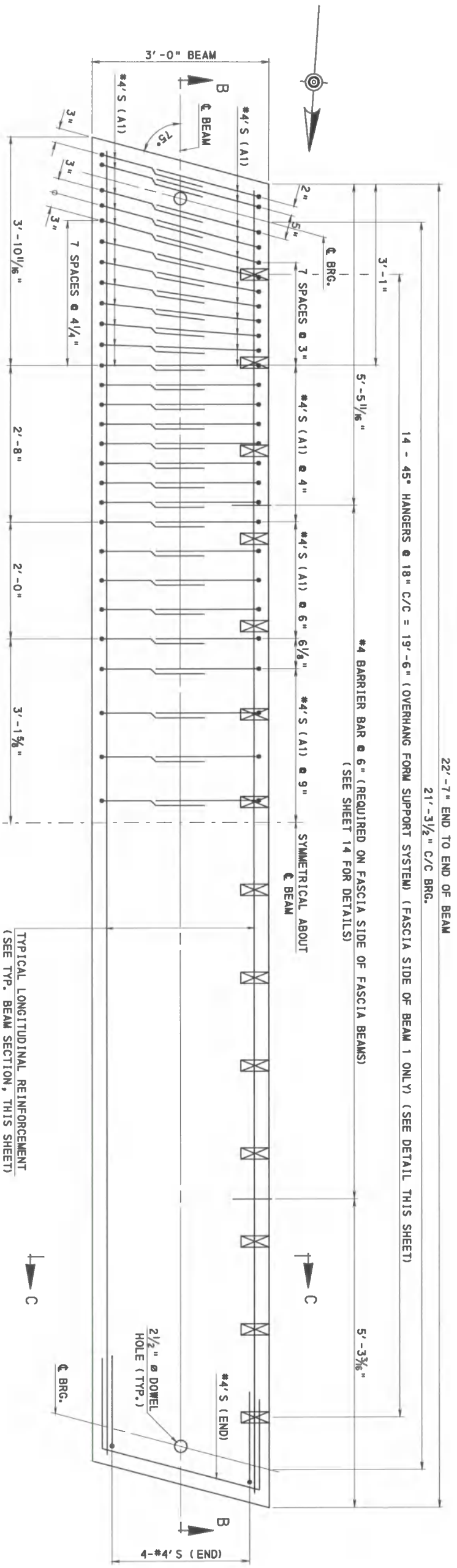
OVER THREE FALLS RUN  
**1-SPAN P/S PLANK BEAM DECK REPLACEMENT**  
**PROPOSED BEAM DETAILS 1**

RECOMMENDED \_\_\_\_\_

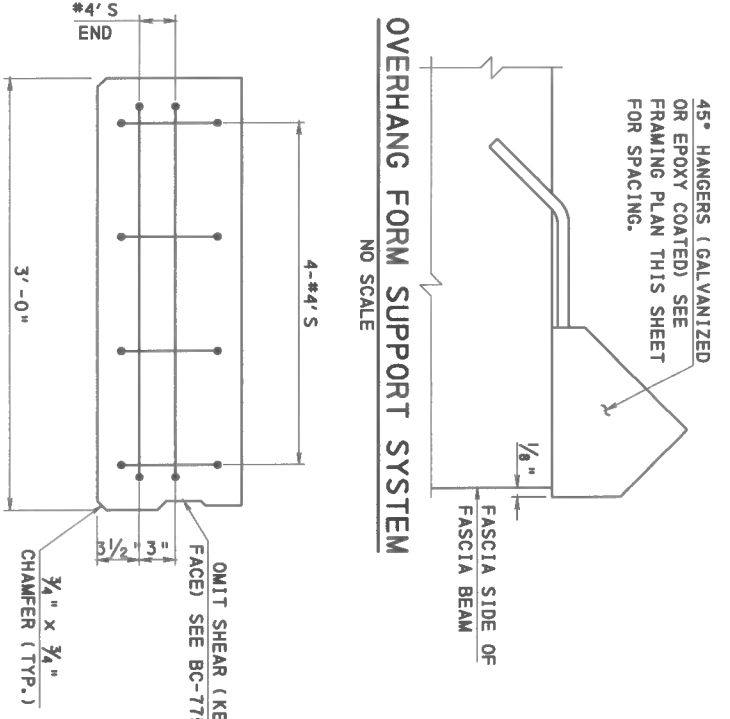
SHEET 9 OF 16

S - 37288

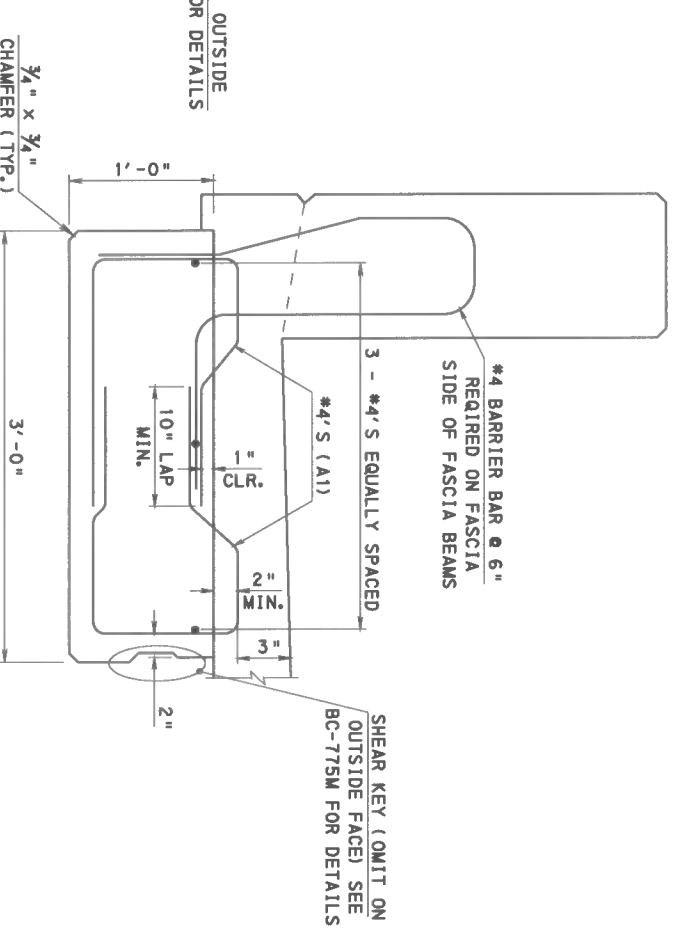
Mark	Description	By	Chk'd	Revised	Date
REVISIONS					



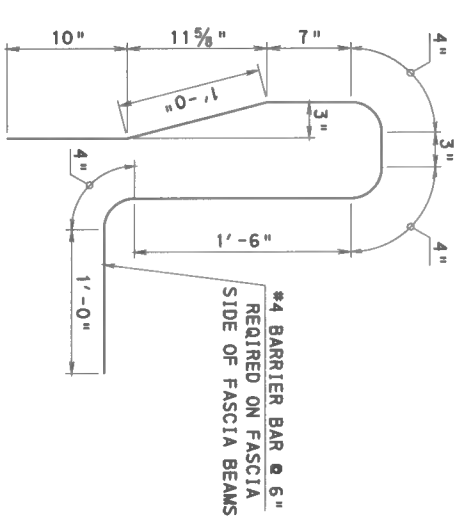
SECTION B-B  
6 0 6 12 INCHES



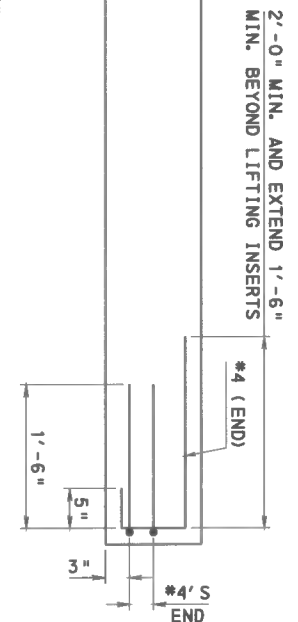
OVERHANG FORM SUPPORT SYSTEM  
NO SCALE



TYPICAL PROPOSED BEAM SECTION (BEAM NO. 1 & 11)  
6 0 6 INCHES



BARRIER REINFORCEMENT BAR  
6 0 6 INCHES



**NOTES**

- 1. FOR ADDITIONAL BEAM DETAILS, SEE SHEET 9 & 11.
- 2. END BLOCK REINFORCEMENT MAY BE INCREASED BY THE FABRICATOR TO REFLECT FABRICATORS EXPERIENCE AND/OR CONTROL CRACKING.

REVISIONS			
Mark	Description	By	Date

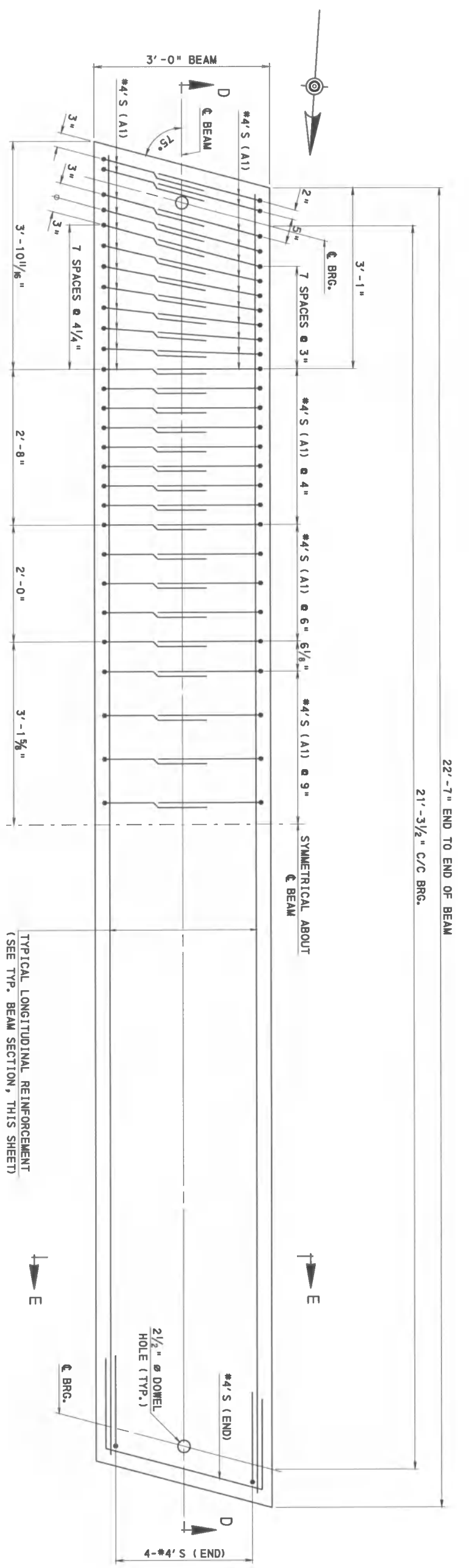
COMMONWEALTH OF PENNSYLVANIA  
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OVER THREE FALLS RUN  
1-SPAN P/S PLANK BEAM DECK REPLACEMENT  
PROPOSED BEAM DETAILS 2

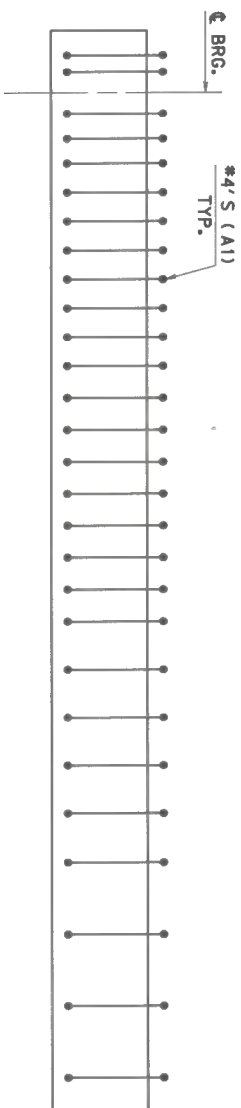
RECOMMENDED SHEET 10 OF 16  
S - 37288

SCALE AS NOTED

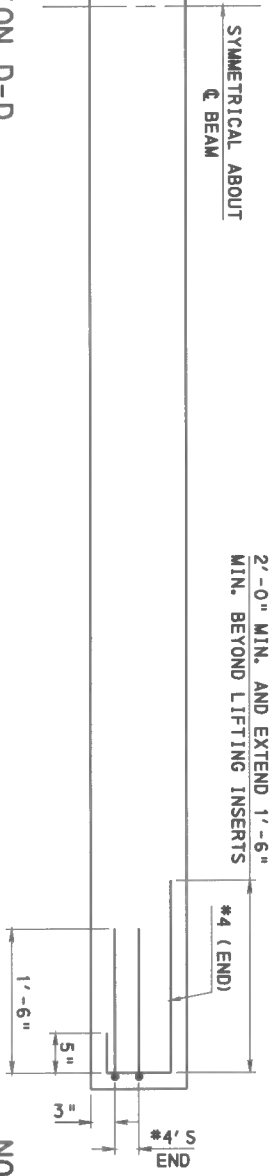




PROPOSED INTERIOR BEAM PLAN VIEW (BEAM NO. 9 & 10)



SECTION D-D



SECTION E-E

NOTES

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MARK	Description	By	Chk'd.	Reconf'd.	Date
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OVER THREE FALLS RUN

1-SPAN P/S PLANK BEAM DECK REPLACEMENT  
PROPOSED BEAM DETAILS 3

RECOMMENDED

SHEET 11 OF 16

S - 37288

TYPICAL PROPOSED BEAM SECTION (BEAM NO. 9 & 10)

6 0 6 INCHES

SECTION E-E

6 0 6 INCHES

SCALE AS NOTED

