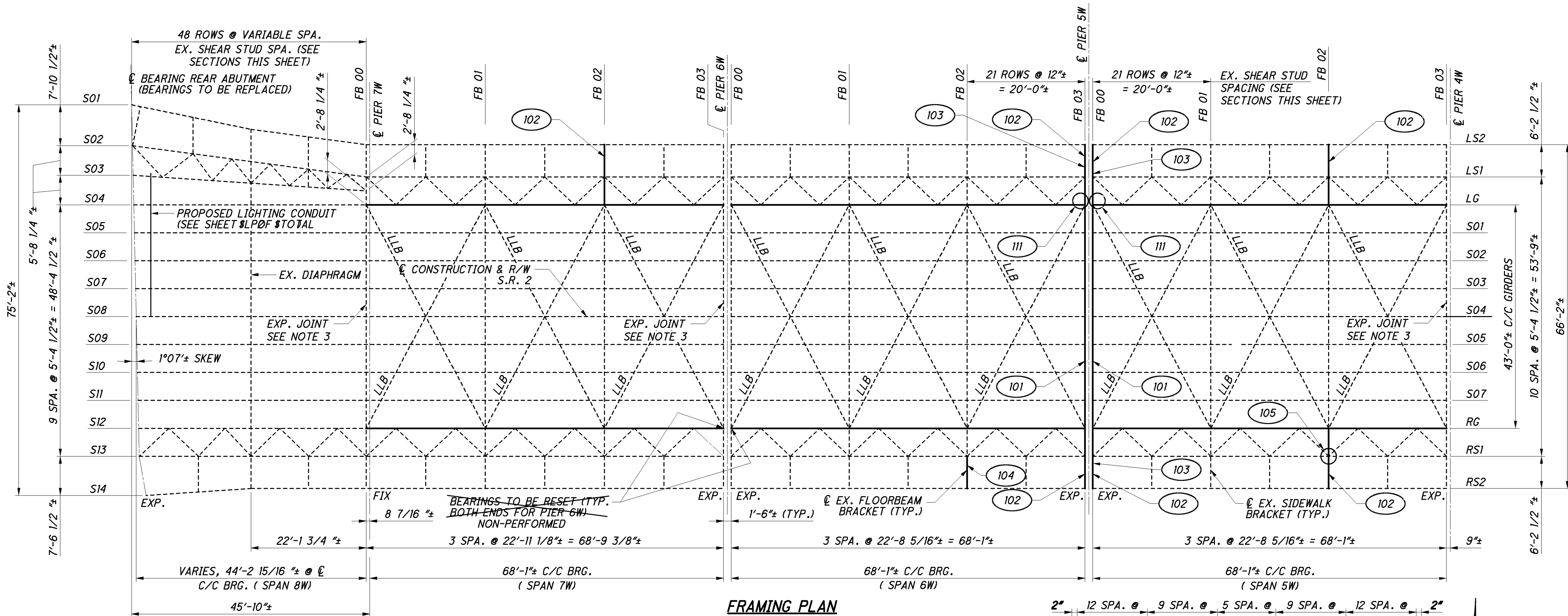
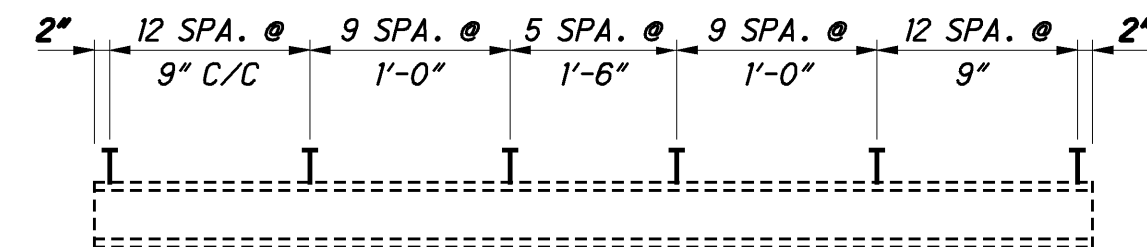


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FRAMING PLAN



SHEAR STUD SPACING

IN SPANS 8W, 8E, 9E, 10E, 11E AND 12E

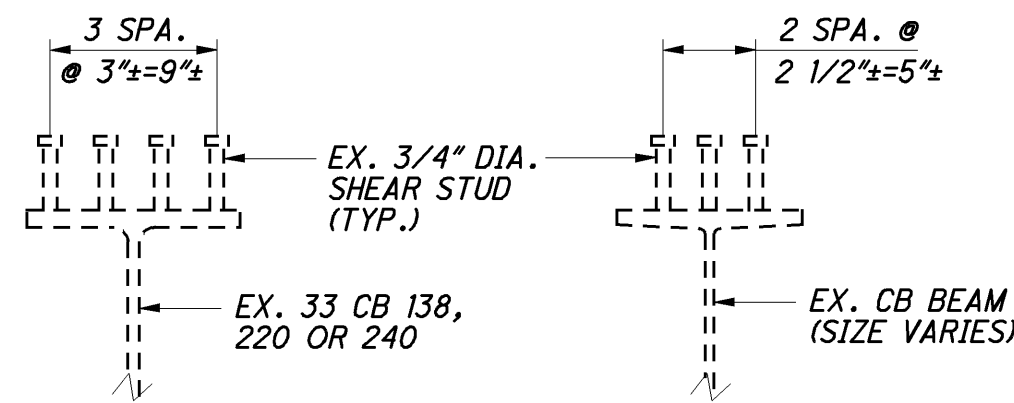
NOTE:

- BEARINGS TO BE AND RESET AS PER GENERAL NOTE ON SHEET 12227. THE BEARINGS SHALL BE REPLACED AT THE CONTRACTORS OPTION.
- FOR REPAIR NOTES REFER TO SHEETS 95227 THRU 99227.
- FOR EXPANSION JOINT DETAILS SEE SHEETS 198227 THRU 200227.

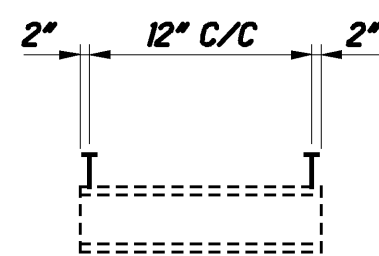
LEGEND

LG = LEFT GIRDER
RG = RIGHT GIRDER
LS = LEFT STRINGER
RS = RIGHT STRINGER
FB = FLOOR BEAM
S = STRINGER
LLB = LOWER LATERAL BRACING
EG = EAST APPROACH GIRDER SPANS
WG = WEST APPROACH GIRDER SPANS
WR = WEST REPLACEMENT SPANS
ER = EAST REPLACEMENT SPANS

MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
101	REPLACE FLOOR BEAM TOP FLANGE ANGLES AND COVERPLATE WITH WT SECTION	95
102	REPLACE PORTION OF CANTILEVERED FLOOR BEAM TOP FLANGE ANGLES AND TOP FLANGE STRAP PLATE	96
103	REPLACE PORTION OF CANTILEVERED FLOOR BEAM BOTTOM FLANGE ANGLES	96
111	REPLACE FLOOR BEAM BEARING KNEE BRACES	99

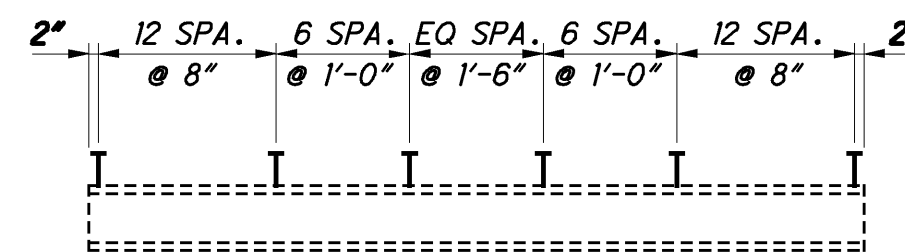


EXISTING SHEAR STUD SECTIONS



SHEAR STUD SPACING

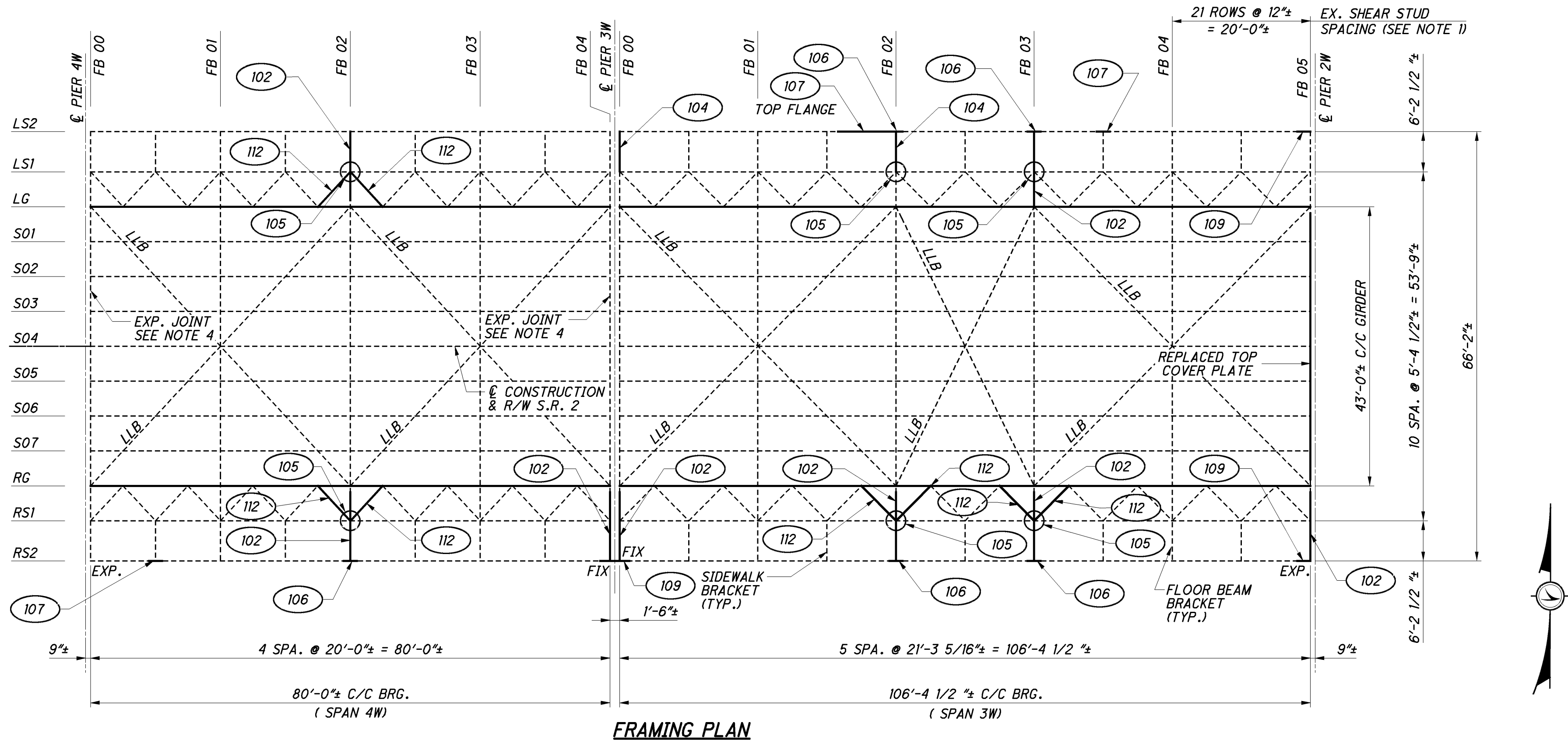
IN CB STRINGER ADJACENT TO STEEL EXPANSION JOINTS @ PIERS 5W, 2W, B, E, 2E AND 6E AND SPAN 15E



SHEAR STUD SPACING

IN SPANS 13E AND 14E

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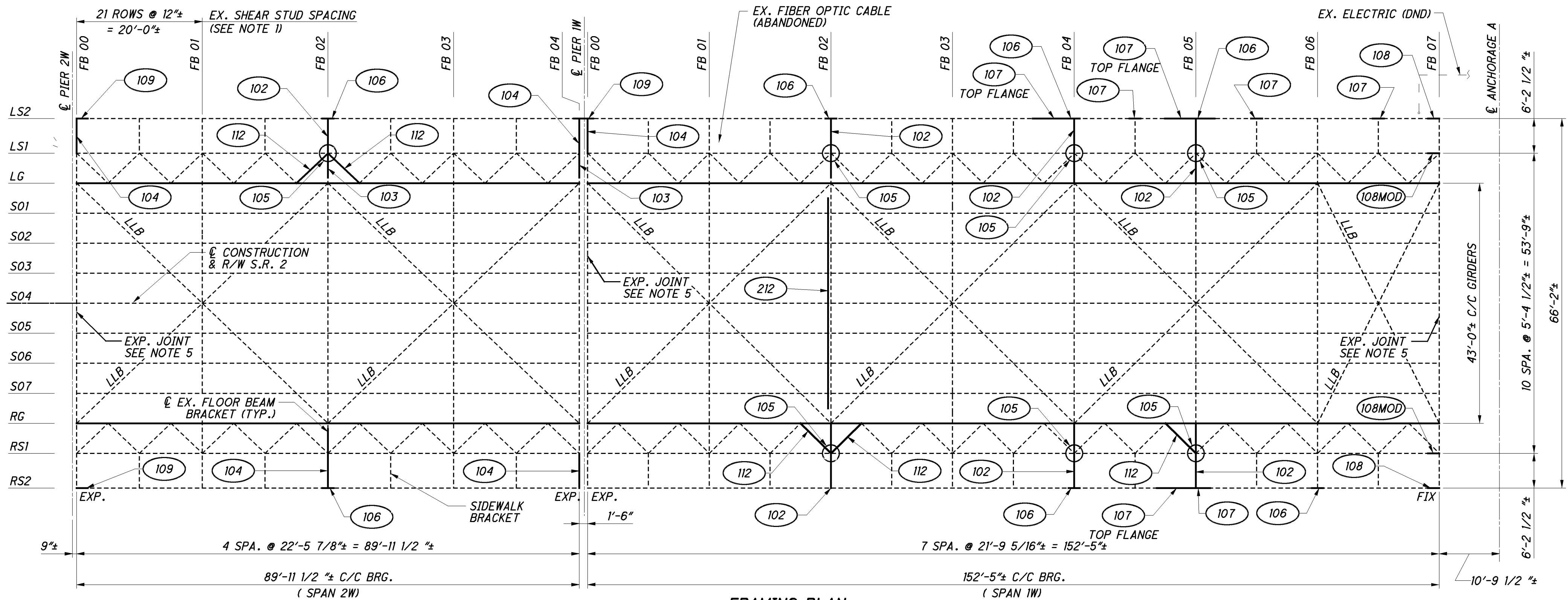


MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
101	REPLACE FLOOR BEAM TOP FLANGE AND COVER PLATE WITH WT SECTION	95
102	REPLACE PORTION OF CANTILEVERED FLOOR BEAM TOP FLANGE ANGLES AND TOP FLANGE STRAP PLATE	96
103	REPLACE PORTION OF CANTILEVERED FLOOR BEAM BOTTOM FLANGE ANGLES	96
105	REPLACE GUSSET PLATE FOR THE CANTILEVERED FLOOR BEAM BRACKET BRACING ANGLE CONNECTION	97
106	REPLACE PORTIONS OF FASCIA STRINGER WEB PLATES AND FLANGES	98
107	REPLACE PORTION OF FASCIA STRINGER BOTTOM FLANGE	98
109	REPLACE PORTIONS OF FASCIA STRINGER WEB PLATES AND BOTTOM FLANGES	98
112	REPLACE CANTILEVERED FLOOR BEAM BRACKET BRACING ANGLES	97

NOTES:

- FOR EXISTING SHEAR STUD CONNECTOR DETAILS, SEE SHEET 74227.
- FOR LEGEND OF ABBREVIATIONS SEE SHEET 74227.
- FOR ADDITIONAL NOTES SEE SHEET 74227.
- FOR EXPANSION JOINT DETAILS SEE SHEETS 198227 THRU 200227.

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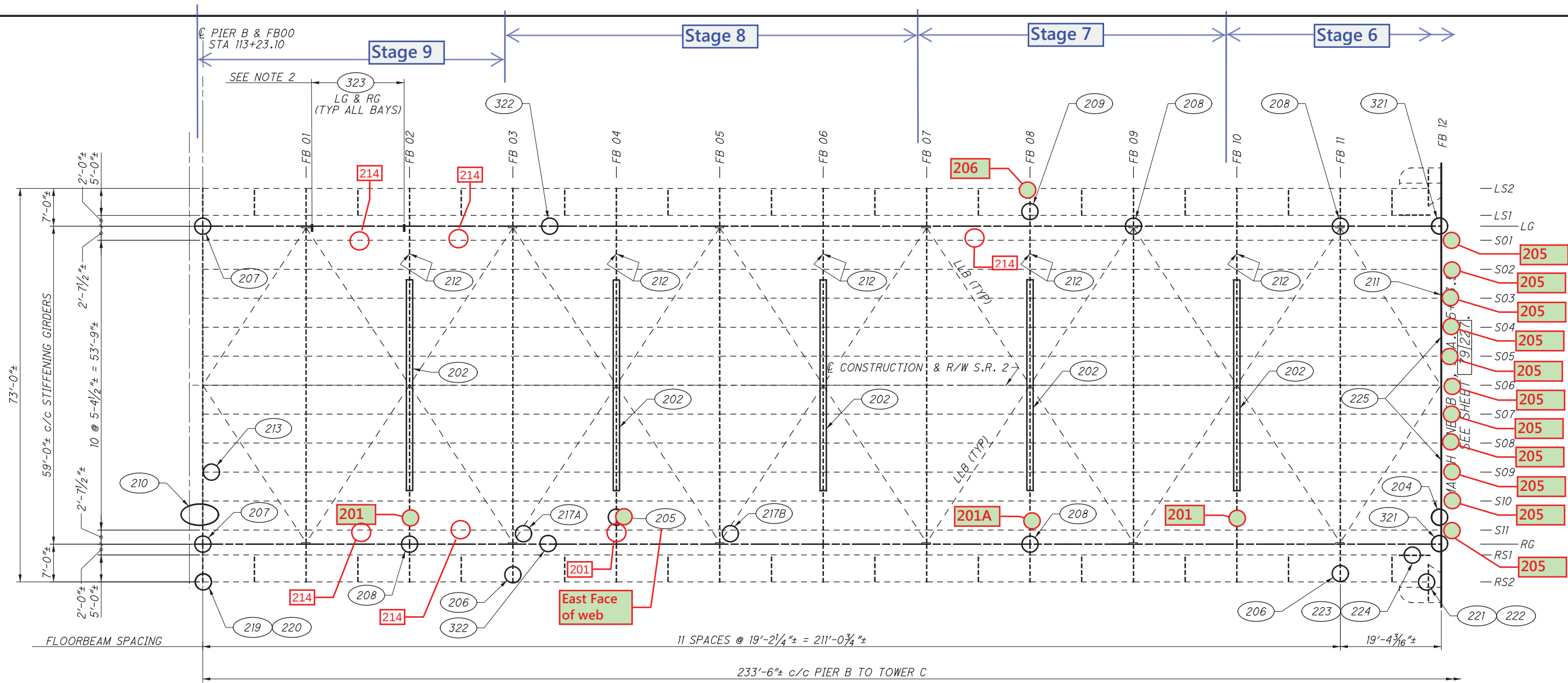
FRAMING PLAN

MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
101	REPLACE FLOOR BEAM TOP FLANGE AND COVER PLATE WITH WT SECTION	95
102	REPLACE PORTION OF CANTILEVERED FLOOR BEAM TOP FLANGE ANGLES AND TOP FLANGE STRAP PLATE	96
103	REPLACE PORTION OF CANTILEVERED FLOOR BEAM BOTTOM FLANGE ANGLES	96
105	REPLACE GUSSET PLATE FOR THE CANTILEVERED FLOOR BEAM BRACKET BRACING ANGLE CONNECTION	97
106	REPLACE PORTIONS OF FASCIA STRINGER WEB PLATES AND FLANGES	98
107	REPLACE PORTION OF FASCIA STRINGER BOTTOM FLANGE	98
108	REPLACE PORTIONS OF THE FASCIA STRINGERS TOP AND BOTTOM FLANGE ANGLES, WEB PLATES AND PORTIONS OF THE DIAPHRAGM CONNECTION ANGLES	98
109	REPLACE PORTIONS OF FASCIA STRINGER WEB PLATES AND BOTTOM FLANGES	98
112	REPLACE CANTILEVERED FLOOR BEAM BRACKET BRACING ANGLES	97
212	REPLACE CORRODED INSPECTION HANDRAIL	110

NOTES:

- FOR EXISTING SHEAR STUD CONNECTOR DETAILS, SEE SHEET 74227.
- FOR LEGEND OF ABBREVIATIONS SEE SHEET 74227.
- FOR ADDITIONAL NOTES SEE SHEET 74227.
- GIRDERS LG AND RG ARE MADE OF SILICON STEEL IN SPANS 1W ONLY.
- FOR EXPANSION JOINT DETAILS SEE SHEETS 198227 THRU 200227.

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FRAMING PLAN - WEST SIDE SUSPENSION SPAN

LEGEND:

LG = LEFT (DOWNSTREAM) GIRDER
RG = RIGHT (UPSTREAM) GIRDER
S = ROADWAY STRINGER
RS# = RIGHT (UPSTREAM) SIDEWALK STRINGER #
LS# = LEFT (DOWNSTREAM) SIDEWALK STRINGER #
LLB = LOWER LATERAL BRACING
FB = FLOOR BEAM

MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE SEE NOTE (.)	SCOPE OF WORK	BRIDGE SHT. NO.
202	REPLACE FLOORBEAM TOP FLANGE COVER PLATE	102
204	REPAIR FLOORBEAM WEB HOLE	104
205	REPLACE FLOORBEAM WEB STIFFENER	104
206	REPLACE / STRENGTHEN SIDEWALK FASCIA STRINGER SUPPORT	105
207	REPLACE TOP STRAP PLATE ON SIDEWALK BRACKET	106
208	REPLACE SIDEWALK BRACKET WEB STRAP PLATE	107
209	REPLACE SIDEWALK STRINGER SUPPORT WEB PLATE	108
210	RELOCATE & REPAIR CRACKED LADDER CAGE	109
211	INSTALL NEW INSPECTION ACCESS HANDRAIL	110
212	REPLACE CORRODED INSPECTION HANDRAIL	110
213	REPLACE STRINGER END CONNECTION	111
217A/B	STRENGTHEN LLB GUSSET PLATE	115
219	REPAIR LOWER FLANGE OF FASCIA STRINGER	119
220	STRENGTHEN LOWER FLANGE OF FASCIA STRINGER	119
221 (1)	REPLACE SIDEWALK STRINGER BOTTOM FLANGE ANGLES	120
222 (1)	REPLACE SIDEWALK STRINGER GUIDE ANGLES & BEARING PLATE	121

MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE SEE NOTE (.)	SCOPE OF WORK	BRIDGE SHT. NO.
223 (1)	REPLACE TOWER BRACKET TOP FLANGE ANGLES	122
224 (1)	REPLACE SIDEWALK STRINGER GUIDE CHANNEL & BEARING PLATE	122
225	REPLACE EXPANSION JOINT SUPPORT STEEL ATOP FLOORBEAM	204

MISCELLANEOUS STEEL REPAIR DETAILS (STIFFENING GIRDERS)		
REPAIR TYPE SEE NOTE (.)	SCOPE OF WORK	BRIDGE SHT. NO.
321	REPLACE GIRDER TOP COVER PLATES AT TOWER	123
322	REPAIR END OF GIRDER TOP COVER PLATES DAMAGED BY PACK RUST	124
323 (2)	INSTALL 7/8" DIA. SHEAR BOLTS THROUGH NEW HOLES IN GIRDER WEB (EMBEDDED IN CONCRETE DECK)	125

NOTES:

1. TYPICAL REPAIR ON EACH TOWER. SEE SHEET [120/227] FOR ENLARGED TOWER SIDEWALK FRAMING AND REPAIR LOCATIONS.
2. FOR SHEAR BOLT SPACING AND DETAILS, SEE SHEETS [125/227] AND [185/227]. HOLES DRILLED THROUGH INTERMEDIATE STIFFENERS FOR DECK REINFORCING, SEE SHEET [185/227] FOR DETAILS.
3. FOR REPAIR NOTES SEE SHEETS [14/227] THROUGH [23/227].

APPROVED

By Eric F. Dues, P.E. at 5:14 pm, Apr 02, 2014

Additional repairs resulting from the field inspection on 03/24/2014.

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
401 WESTVALE DRIVE
ASTORIA, OR 97103

DATE
8/12

REVIEWED
DEK

DRAWN
EFD/GCK

DESIGNED
DEK

CHECKED
PLC

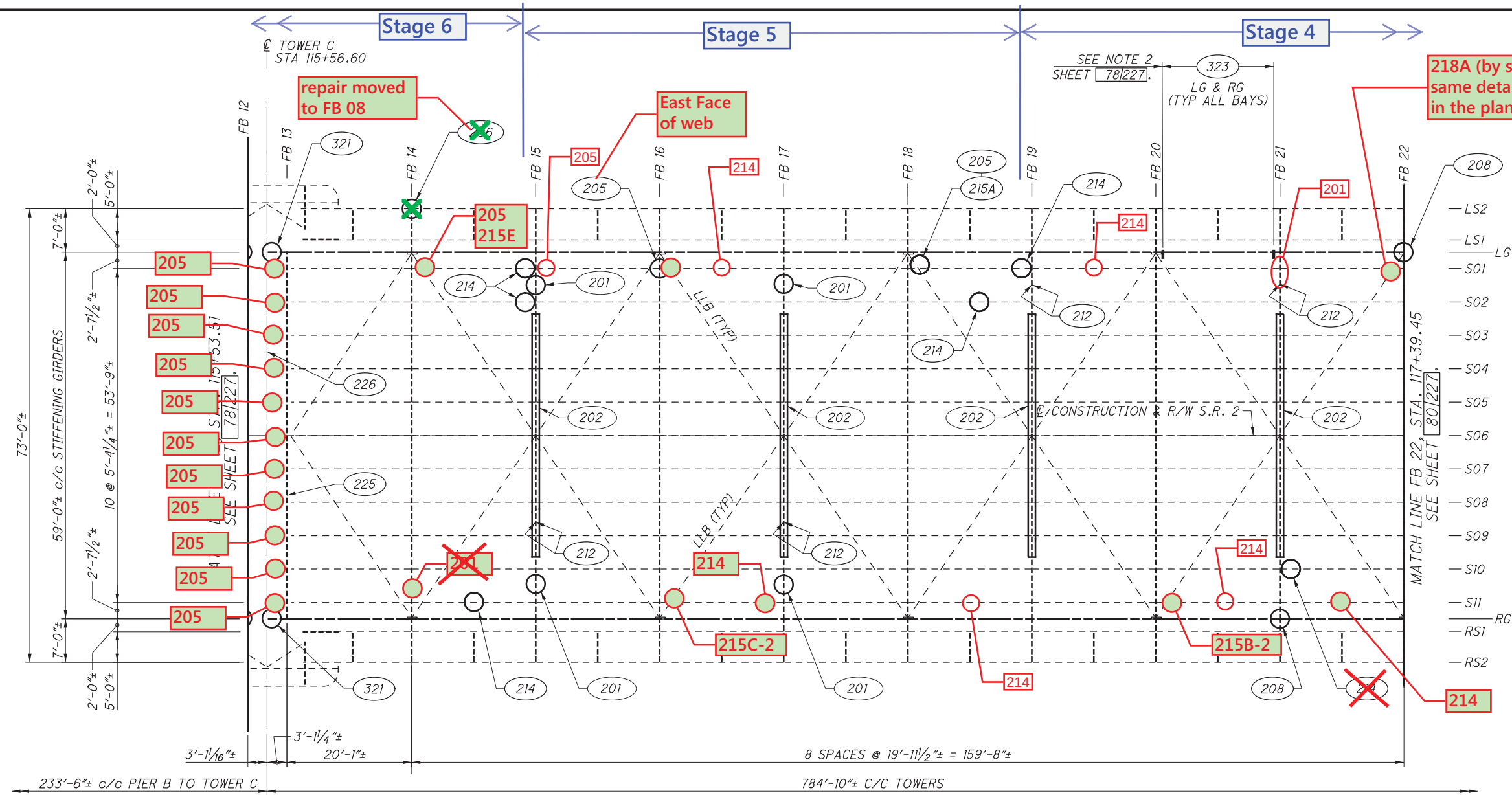
STRUCTURE FILE NUMBER
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FRAMING PLAN - SUSPENSION SPANS 1 OF 6
BRIDGE NO. LUC - 2 - 1862
STATE ROUTE 2 OVER MAUMEE RIVER

LUC-2-18.62
PID No. 80551

78 / 227
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FRAMING PLAN - MAIN SUSPENSION SPAN

MISCELLANEOUS STEEL REPAIR DETAILS

REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
201	REPLACE PORTION OF FLOORBEAM TOP FLANGE	101
202	REPLACE FLOORBEAM TOP FLANGE COVER PLATE	102
205	REPLACE FLOORBEAM STIFFENER	104
206	REPLACE / STRENGTHEN SIDEWALK FASCIA STRINGER SUPPORT	105
208	REPLACE SIDEWALK BRACKET WEB STRAP PLATE	107
212	REPLACE CORRODED INSPECTION HANDRAIL	110
214	REPLACE STRINGER	111
215A	STRENGTHEN EXISTING LOWER LATERAL (LLB) GUSSET	113
225	REPLACE EXPANSION JOINT SUPPORT STEEL ATOP FLOORBEAM	204
226	REPLACE EXPANSION JOINT SUPPORT STEEL ATOP TOWER STRUT	204

MISCELLANEOUS STEEL REPAIR DETAILS (STIFFENING GIRDERS)

REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
321	REPLACE GIRDER TOP COVER PLATES AT TOWER	123
323	INSTALL 7/8" DIA. SHEAR BOLTS THROUGH NEW HOLES IN GIRDER WEB (EMBEDDED IN CONCRETE DECK)	125

APPROVED

By Eric F. Dues, P.E. at 5:14 pm, Apr 02, 2014

NOTES:

1. FOR FRAMING PLAN ABBREVIATION LEGEND AND NOTES, SEE SHEET 78/227.
2. FOR REPAIR NOTES SEE SHEETS 14/227 THROUGH 23/227.

Additional repairs resulting from the field inspection on 03/24/2014.

LUC-2-18.62

PID No. 80551

FRAMING PLAN - SUSPENSION SPANS 2 OF 6

BRIDGE NO. LUC - 2 - 1862

STATE ROUTE 2 OVER MAUMEE RIVER

DESIGNED DEK
DRAWN EFD/GCK
REVIEWED DEK
DATE 8/12

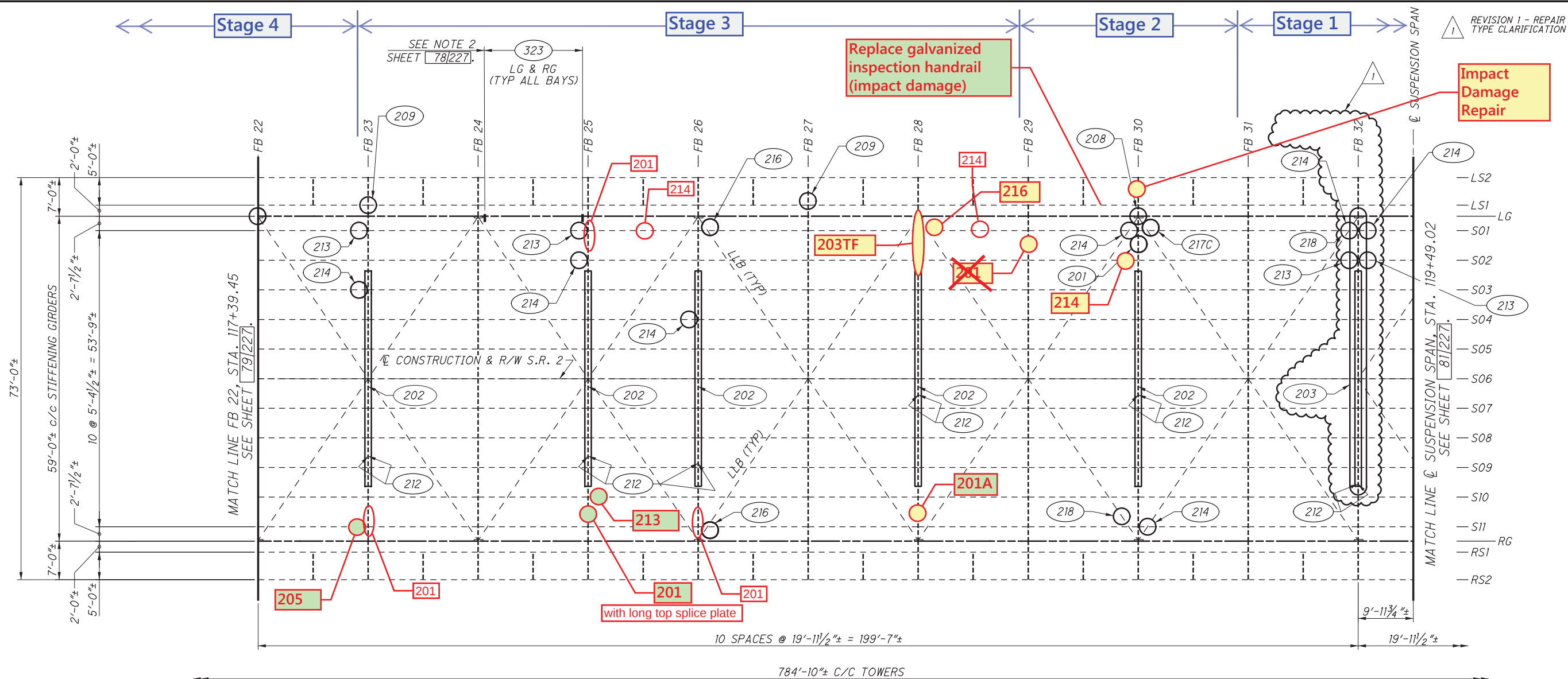
CHECKED PLC
STRUCTURE FILE NUMBER 4800303

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
401 WESTVILLE ROAD
WESTVILLE, OHIO 43081-380

79/227

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327

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MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
201	REPLACE PORTION OF FLOORBEAM TOP FLANGE	101
202	REPLACE FLOORBEAM TOP FLANGE COVER PLATE	102
203	REPAIR FLOORBEAM END	103
208	REPLACE SIDEWALK BRACKET WEB STRAP PLATE	107
209	REPLACE SIDEWALK STRINGER SUPPORT WEB PLATE	108
212	REPLACE CORRODED INSPECTION HANDRAIL	110
213	REPLACE STRINGER END CONNECTION	111
214	REPLACE STRINGER	111
216	STRENGTHEN EXISTING LOWER LATERAL (LLB) GUSSET PLATE	115
217C	STRENGTHEN EXISTING LOWER LATERAL (LLB) GUSSET PLATE	116
218	REPLACE LOWER LATERAL BRACING MEMBER ENDS	117

MISCELLANEOUS STEEL REPAIR DETAILS (STIFFENING GIRDERS)		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
323	INSTALL 7/8" DIA. SHEAR BOLTS THROUGH NEW HOLES IN GIRDER WEB (EMBEDDED IN CONCRETE DECK)	125

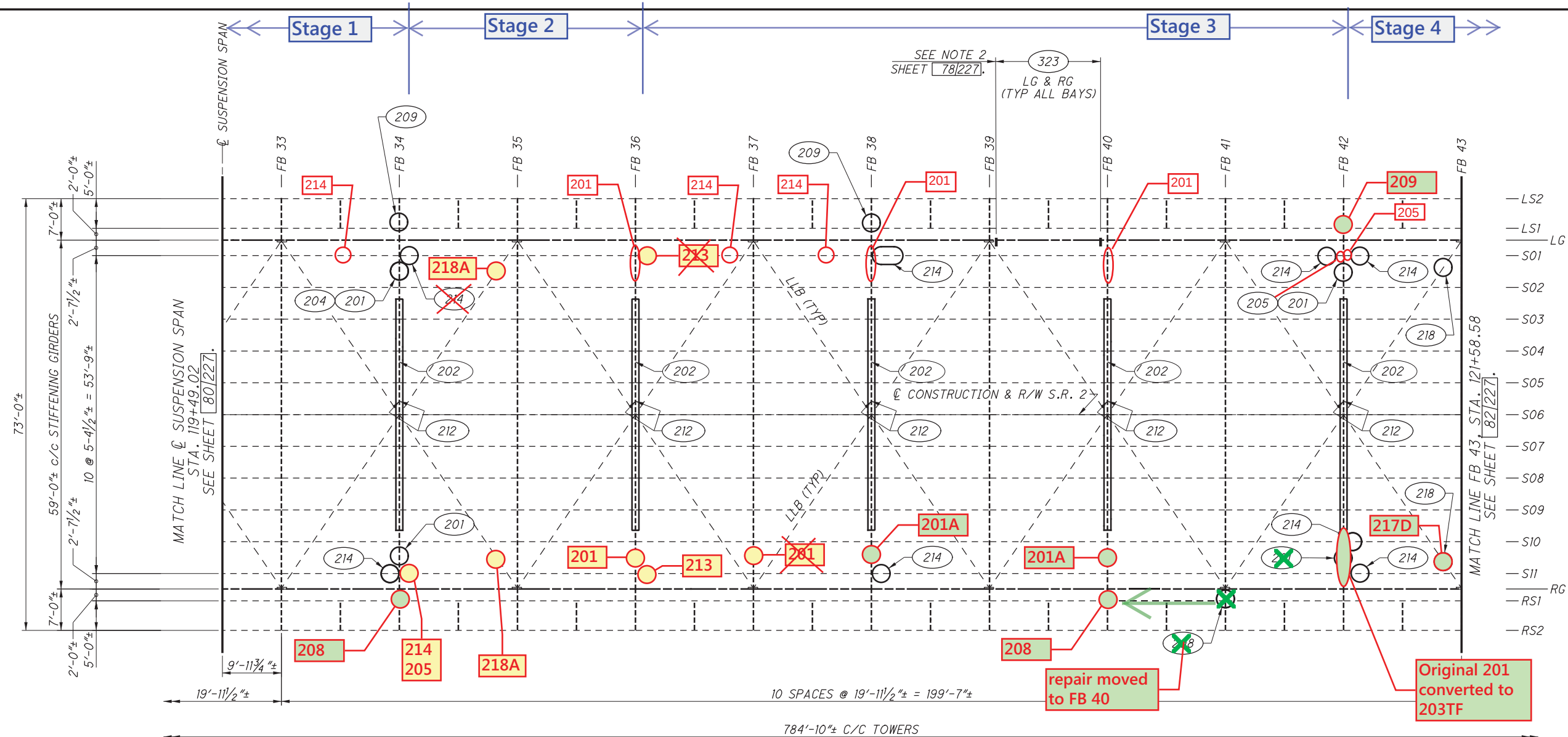
APPROVED

By Eric F. Dues, P.E. at 5:14 pm, Apr 02, 2014

NOTES:

- FOR FRAMING PLAN ABBREVIATION LEGEND AND NOTES, SEE SHEET 78/227.
- FOR REPAIR NOTES SEE SHEETS 14/227 THROUGH 23/227.

Additional repairs resulting from the limited pre-construction field inspection on 02/07/2014.



FRAMING PLAN - MAIN SUSPENSION SPAN

MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
201	REPLACE PORTION OF FLOORBEAM TOP FLANGE	101
202	REPLACE FLOORBEAM TOP FLANGE COVER PLATE	102
204	REPAIR FLOORBEAM WEB HOLE	104
205	REPLACE FLOORBEAM STIFFENER	104
208	REPLACE SIDEWALK BRACKET WEB STRAP PLATE	107
209	REPLACE SIDEWALK STRINGER SUPPORT WEB PLATE	108
212	REPLACE CORRODED INSPECTION HANDRAIL	110
214	REPLACE STRINGER	111
218	REPLACE LOWER LATERAL BRACING MEMBER ENDS	117

MISCELLANEOUS STEEL REPAIR DETAILS (STIFFENING GIRDERS)		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
323	INSTALL 7/8" DIA. SHEAR BOLTS THROUGH NEW HOLES IN GIRDER WEB (EMBEDDED IN CONCRETE DECK)	125

APPROVED

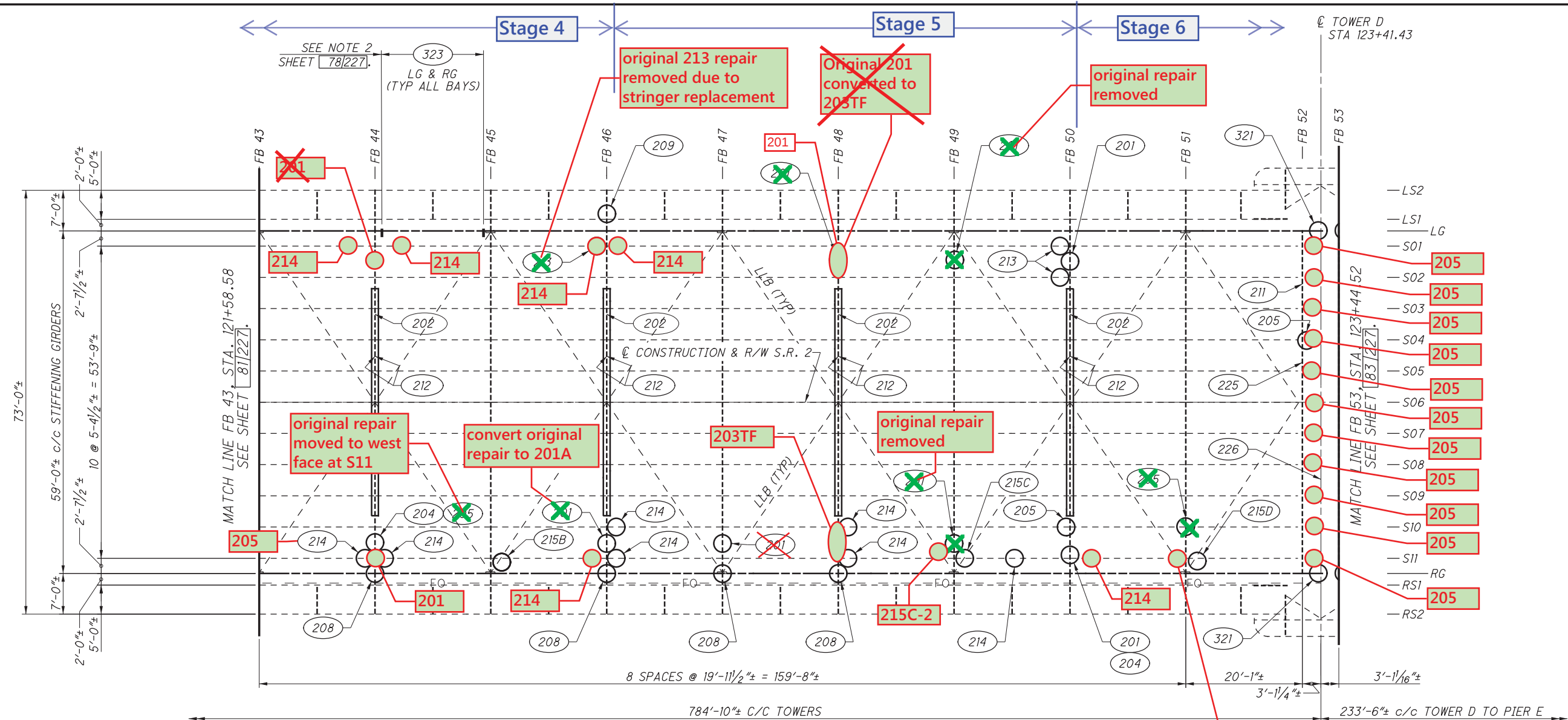
By Eric F. Dues, P.E. at 5:14 pm, Apr 02, 2014

NOTES:

1. FOR FRAMING PLAN ABBREVIATION LEGEND AND NOTES, SEE SHEET 78/227.
2. FOR REPAIR NOTES SEE SHEETS 14/227 THROUGH 23/227.

Additional repairs resulting from the field inspection on 03/24/2014.

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FRAMING PLAN - MAIN SUSPENSION SPAN

MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
201	REPLACE PORTION OF FLOORBEAM TOP FLANGE	101
202	REPLACE FLOORBEAM TOP FLANGE COVER PLATE	102
204	REPAIR FLOORBEAM WEB HOLE	104
205	REPLACE FLOORBEAM STIFFENER	104
208	REPLACE SIDEWALK BRACKET WEB STRAP PLATE	107
209	REPLACE SIDEWALK STRINGER SUPPORT WEB PLATE	108
211	INSTALL NEW INSPECTION ACCESS RAIL	110
212	REPLACE CORRODED INSPECTION HANDRAIL	110
213	REPLACE STRINGER END CONNECTION	111
214	REPLACE STRINGER	111
215B	STRENGTHEN LLB GUSSET PLATE	113
215C/D	STRENGTHEN LLB GUSSET PLATE	114
225	REPLACE EXPANSION JOINT SUPPORT STEEL ATOP FLOORBEAM	204
226	REPLACE EXPANSION JOINT SUPPORT STEEL ATOP TOWER STRUT	204

MISCELLANEOUS STEEL REPAIR DETAILS (STIFFENING GIRDERS)		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
321	REPLACE GIRDER TOP COVER PLATES AT TOWER	123
323	INSTALL 7/8" DIA. SHEAR BOLTS THROUGH NEW HOLES IN GIRDER WEB (EMBEDDED IN CONCRETE DECK)	125

APPROVED

By Eric F. Dues, P.E. at 5:14 pm, Apr 02, 2014

NOTES:

- FOR FRAMING PLAN ABBREVIATION LEGEND AND NOTES, SEE SHEET 78/227.
- FOR REPAIR NOTES SEE SHEETS 14/227 THROUGH 23/227.



Additional repairs resulting from the field inspection on 03/24/2014.

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
401 WESTVALE ROAD, SUITE 300
WESTVALE, OHIO 43081

DATE
8/12

REVIEWED
DEK

DRAWN
EFD

DESIGNED
DEK

CHECKED
PLC

STRUCTURE FILE NUMBER
4800303

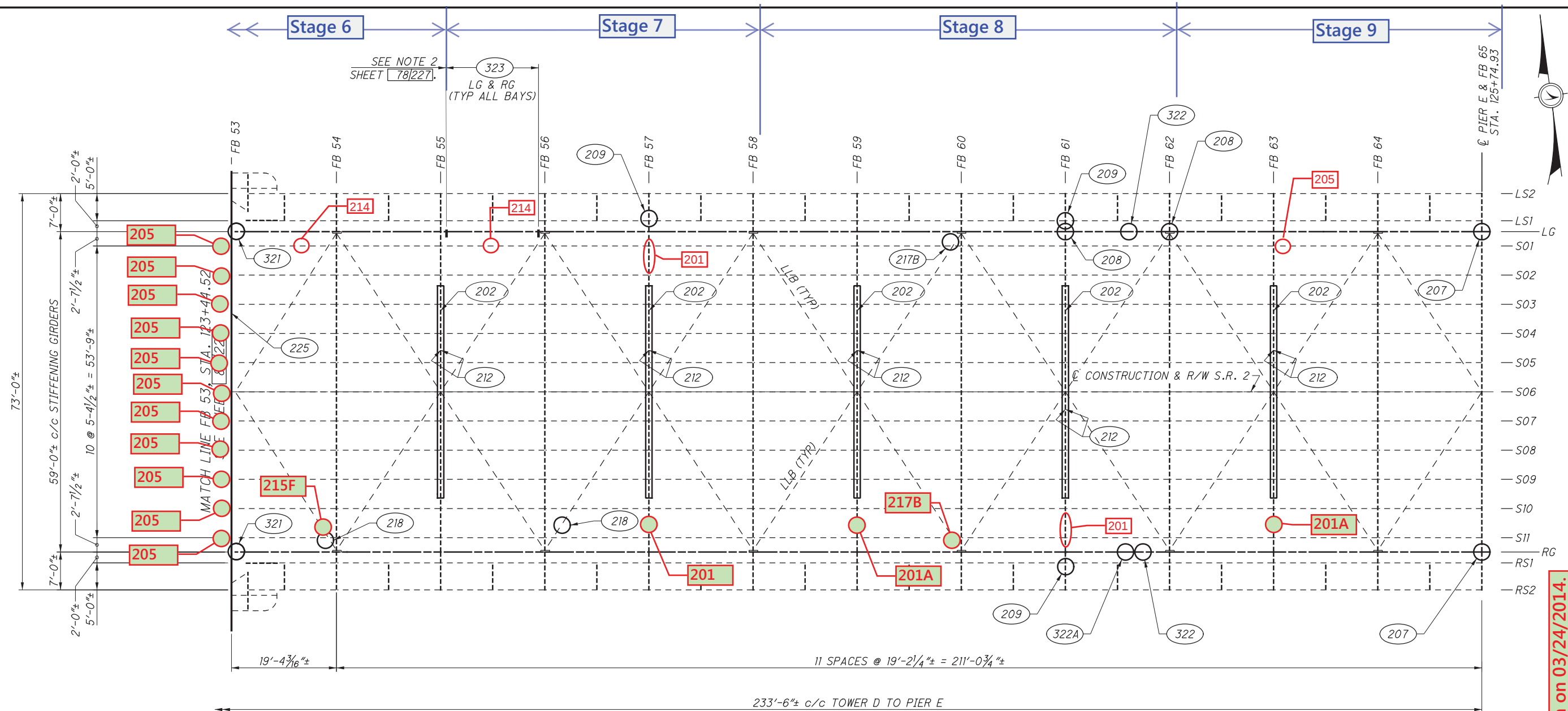
FRAMING PLAN - SUSPENSION SPANS 5 OF 6
BRIDGE NO. LUC - 2 - 1862
STATE ROUTE 2 OVER MAUMEE RIVER

LUC-2-18-62
PID No. 80551

82 / 227

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327

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FRAMING PLAN - EAST SIDE SUSPENSION SPAN

MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
202	REPLACE FLOORBEAM TOP FLANGE COVER PLATE	102
207	REPLACE TOP STRAP PLATE ON SIDEWALK BRACKET	106
208	REPLACE SIDEWALK BRACKET WEB STRAP PLATE	107
209	REPLACE SIDEWALK STRINGER SUPPORT WEB PLATE	108
212	REPLACE CORRODED INSPECTION HANDRAIL	110
217B	STRENGTHEN LLB GUSSET PLATE	116
218	REPLACE LOWER LATERAL BRACING ENDS	117
225	REPLACE EXPANSION JOINT SUPPORT STEEL ATOP FLOORBEAM	204

MISCELLANEOUS STEEL REPAIR DETAILS (STIFFENING GIRDERS)		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
321	REPLACEMENT OF GIRDER TOP COVER PLATES AT TOWER	123
322	REPAIR END OF GIRDER TOP COVER PLATES DAMAGED BY PACK RUST	124
322A	REPAIR END OF GIRDER BOTTOM COVER PLATES DAMAGED BY PACK RUST	124
323	INSTALL 3/8" DIA. SHEAR BOLTS THROUGH NEW HOLES IN GIRDER WEB (EMBEDDED IN CONCRETE DECK)	125

APPROVED

By Eric F. Dues, P.E. at 5:14 pm, Apr 02, 2014

NOTES:

1. FOR FRAMING PLAN ABBREVIATION LEGEND AND NOTES, SEE SHEET 78/227.
2. FOR REPAIR NOTES SEE SHEETS 14/227 THROUGH 23/227.

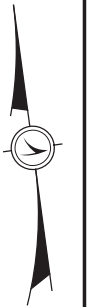
Additional repairs resulting from the field inspection on 03/24/2014.

LUC-2-18.62
PID No. 80551

FRAMING PLAN - SUSPENSION SPANS 6 OF 6
BRIDGE NO. LUC - 2 - 1862
STATE ROUTE 2 OVER MAUMEE RIVER

DESIGNED	DEK	CHECKED	PLC
DRAWN	EFD	REVISED	
REVIEWED	DEK	DATE	8/12
DATE	8/12	STRUCTURE FILE NUMBER	4800303

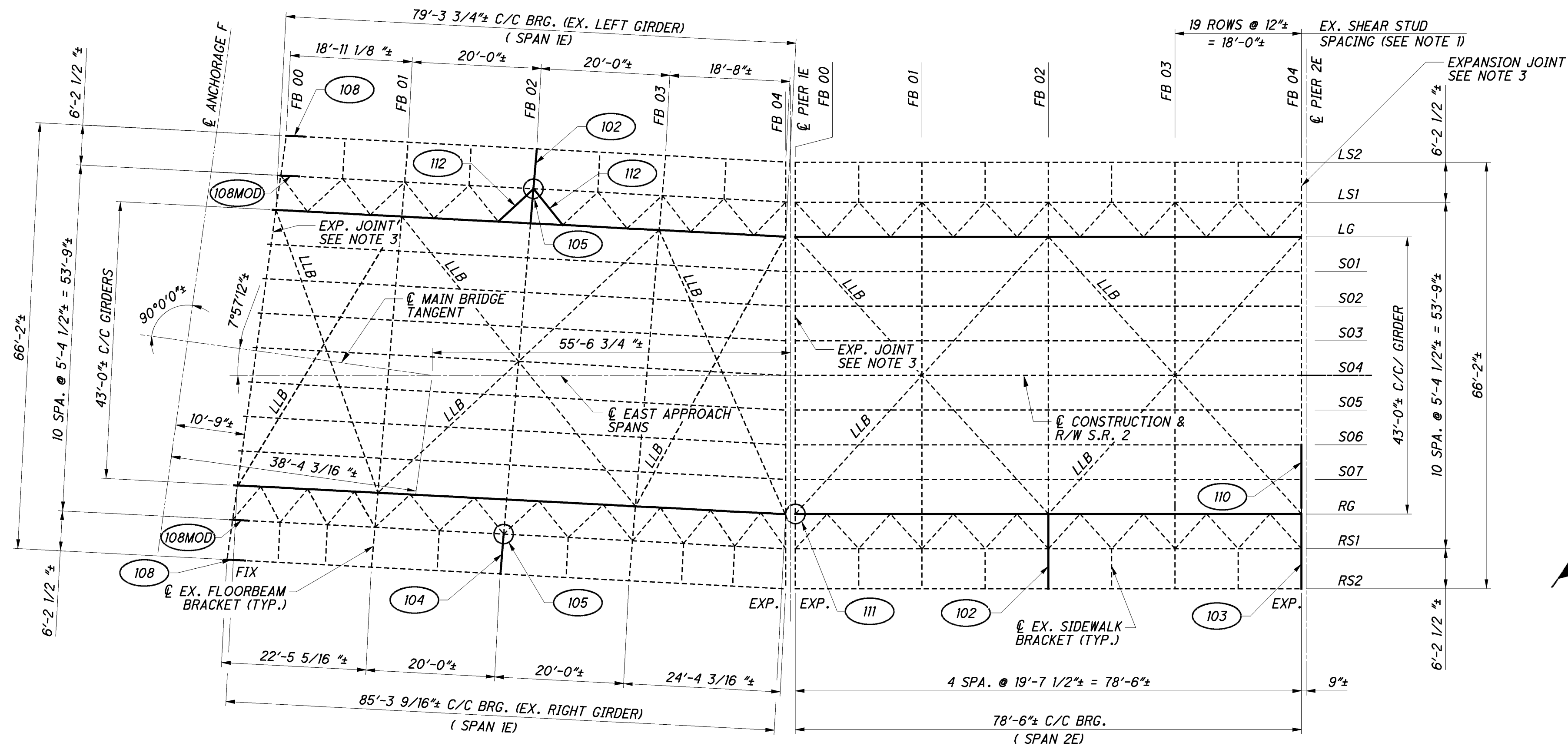
DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
401 WESTVALE DRIVE
WESTVALE, OHIO 43081-380



83/227

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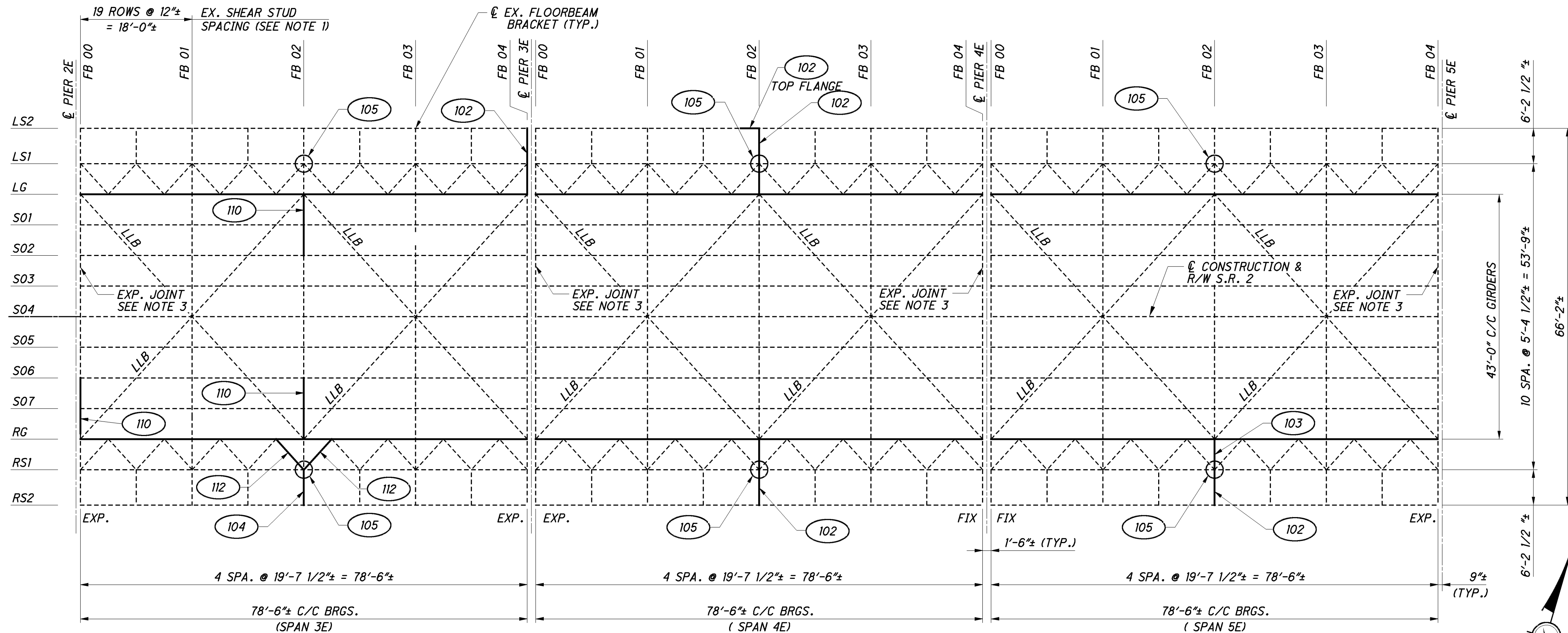
FRAMING PLAN

MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
102	REPLACE PORTION OF CANTILEVERED FLOOR BEAM TOP FLANGE ANGLES AND TOP FLANGE STRAP PLATE	96
103	REPLACE PORTION OF CANTILEVERED FLOOR BEAM BOTTOM FLANGE ANGLES	96
104	REPLACE PORTION OF CANTILEVERED FLOOR BEAM TOP FLANGE ANGLES	97
105	REPLACE GUSSET PLATE FOR THE CANTILEVERED FLOOR BEAM BRACKET BRACING ANGLE CONNECTION	97
110	REPLACE PORTION OF FLOOR BEAM TOP FLANGE ANGLES AND COVER PLATES	99
111	REPLACE FLOOR BEAM BEARING KNEE BRACE	99

NOTES:

- FOR EXISTING SHEAR STUD CONNECTOR DETAILS, SEE SHEET 74227.
- FOR LEGEND OF ABBREVIATIONS SEE SHEET 74227.
- FOR EXPANSION JOINT DETAILS SEE SHEETS 198227 THRU 200227.

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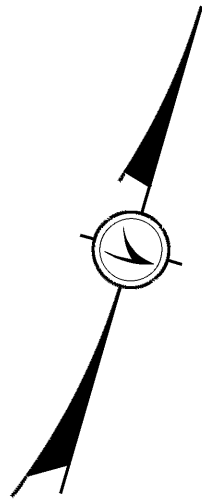
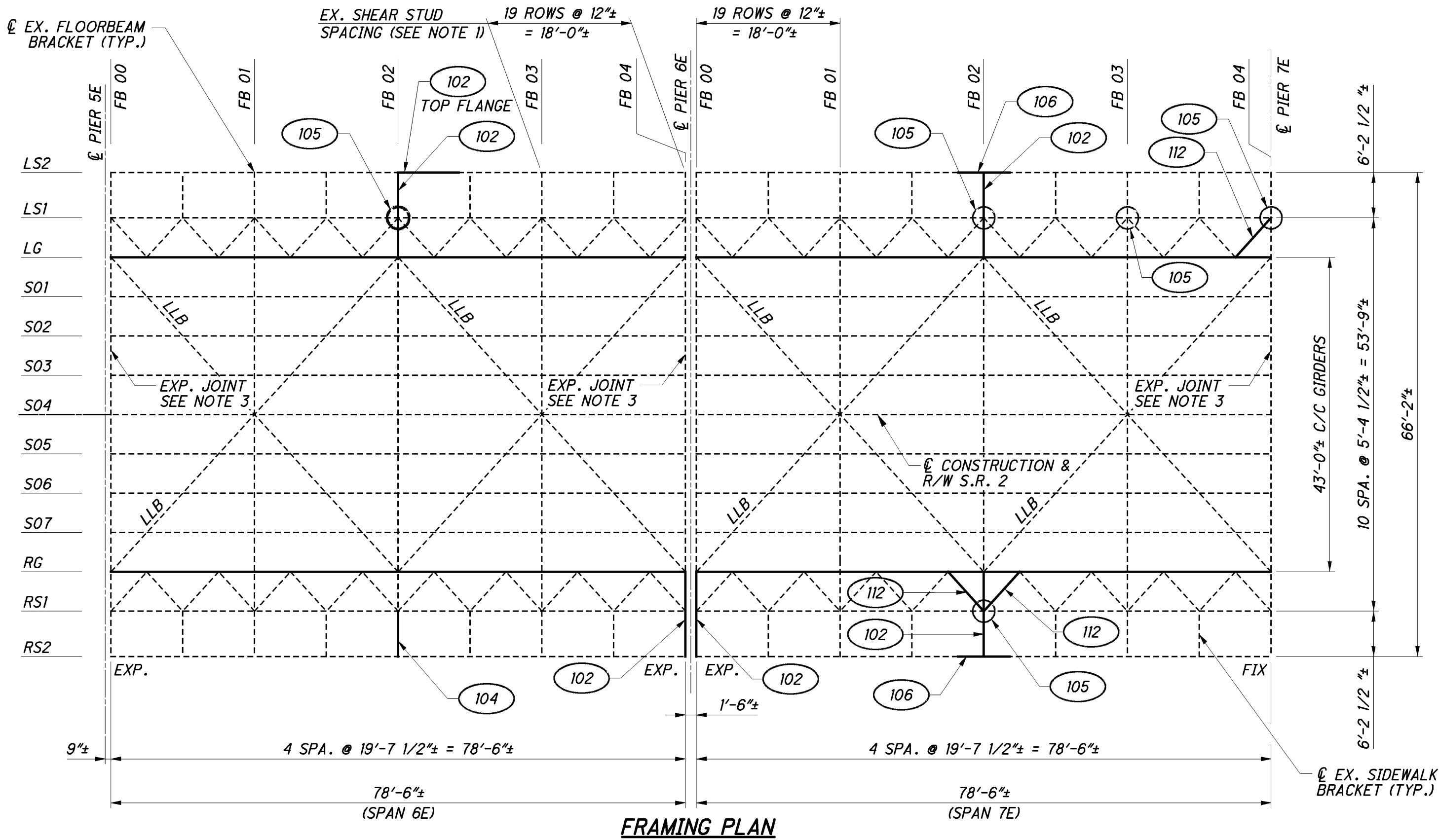
FRAMING PLAN

MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
102	REPLACE PORTION OF CANTILEVERED FLOOR BEAM TOP FLANGE ANGLES AND TOP FLANGE STRAP PLATE	96
103	REPLACE PORTION OF CANTILEVERED FLOOR BEAM BOTTOM FLANGE ANGLES	96
104	REPLACE PORTION OF CANTILEVERED FLOOR BEAM TOP FLANGE ANGLES	97
105	REPLACE MISSING ANGLE AND GUSSET PLATE FOR THE CANTILEVERED FLOOR BEAM BRACKET BRACING ANGLE CONNECTION	97
110	REPLACE PORTION OF FLOOR BEAM TOP FLANGE ANGLES AND COVER PLATES	99
112	REPLACE CANTILEVERED FLOOR BEAM BRACKET BRACING ANGLES	97

NOTES:

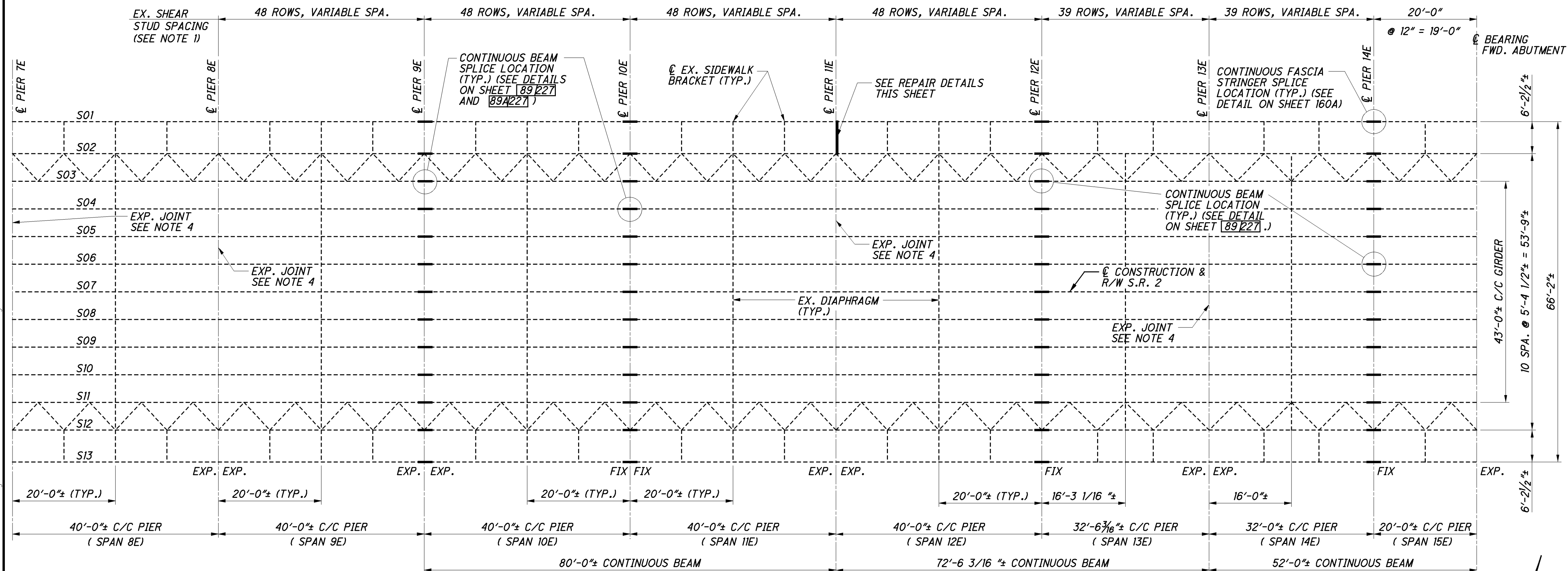
- FOR EXISTING SHEAR STUD CONNECTOR DETAILS, SEE SHEET 74227.
- FOR LEGEND OF ABBREVIATIONS SEE SHEET 74227.
- FOR EXPANSION JOINT DETAILS SEE SHEETS 198227 THRU 200227.

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MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
102	REPLACE PORTION OF CANTILEVERED FLOOR BEAM TOP FLANGE ANGLES AND TOP FLANGE STRAP PLATE	96
103	REPLACE PORTION OF CANTILEVERED FLOOR BEAM BOTTOM FLANGE ANGLES	96
104	REPLACE PORTION OF CANTILEVERED FLOOR BEAM TOP FLANGE ANGLES	97
105	REPLACE GUSSET PLATE FOR THE CANTILEVERED FLOOR BEAM BRACKET BRACING ANGLE CONNECTION	97
106	REPLACE PORTIONS OF FASCIA STRINGER WEB PLATES AND FLANGES	98

- NOTES:**
- FOR EXISTING SHEAR STUD CONNECTOR DETAILS, SEE SHEET 74227.
 - FOR LEGEND OF ABBREVIATIONS SEE SHEET 74227.
 - FOR EXPANSION JOINT DETAILS SEE SHEETS 198227 THRU 200227.

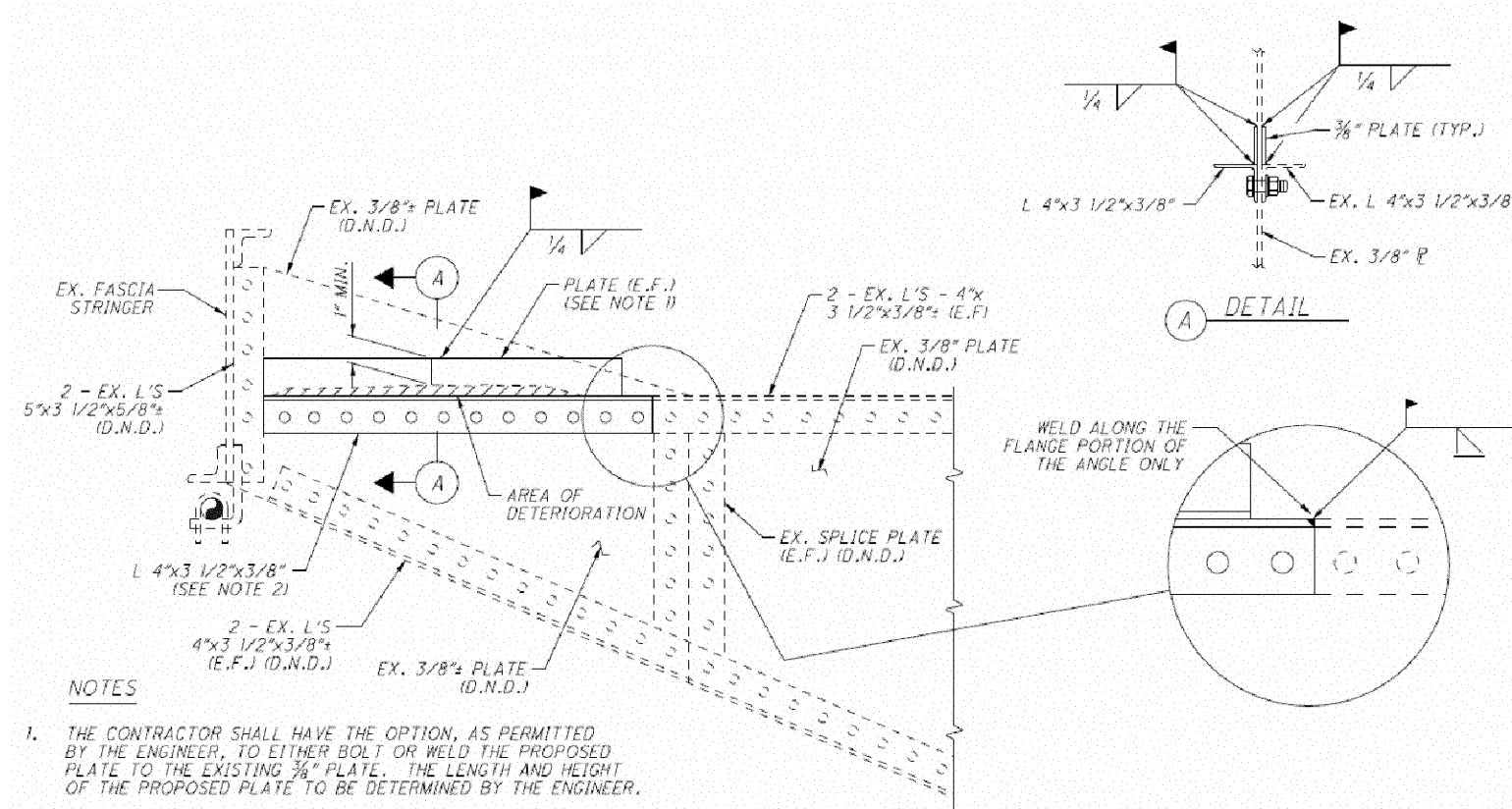


FRAMING PLAN

MISCELLANEOUS STEEL REPAIR DETAILS		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
108	REPLACE PORTIONS OF THE FASCIA STRINGER TOP AND BOTTOM FLANGE ANGLES, WEB PLATE AND PORTIONS OF DIAPHRAGM CONNCTION ANGLES	98

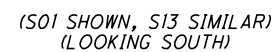
NOTES:

1. FOR EXISTING SHEAR STUD CONNECTOR DETAILS, SEE SHEET 74227.
2. FOR LEGEND OF ABBREVIATIONS SEE SHEET 74227.
3. ALL BEARINGS SHALL BE REPLACED FOR THE MULTI-BEAM SPANS AT PIERS 7E THRU 14E. FOR BEARING DETAILS SEE SHEET 196227 AND 197227.
4. FOR EXPANSION JOINT DETAILS SEE SHEETS 198227 THRU 200227.



SPAN 12E LEFT SIDEWALK OVERHANG BRACKET REPAIR

REVISIONS		
NO.	DATE	VIA
REV. 1	2014.03.21	R.00037
REV. 2	2015.03.10	R.00078

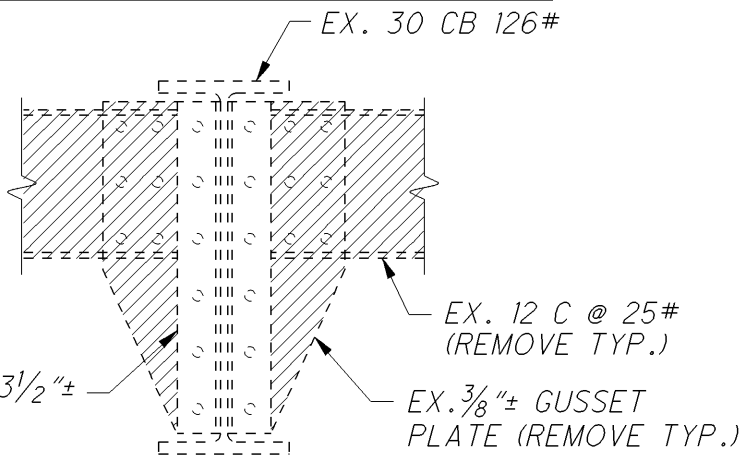


1. ALL DIMENSIONS ARE PLUS OR MINUS
AND SHALL BE FIELD VERIFIED.



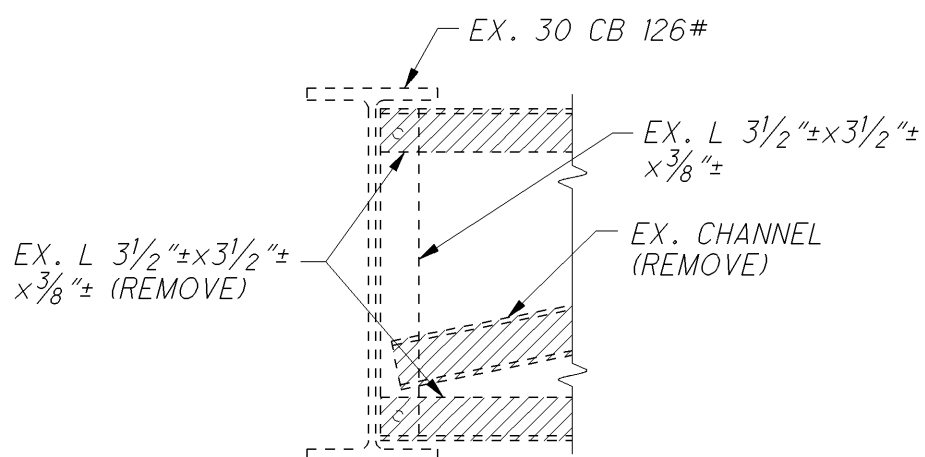
1 REVISION 3/09/15

REVISIONS		
NO.	DATE	VIA
REV. 1	2014.03.21	R.00037



SECTION

(TYPICAL BETWEEN STRINGERS S3 THRU S11)

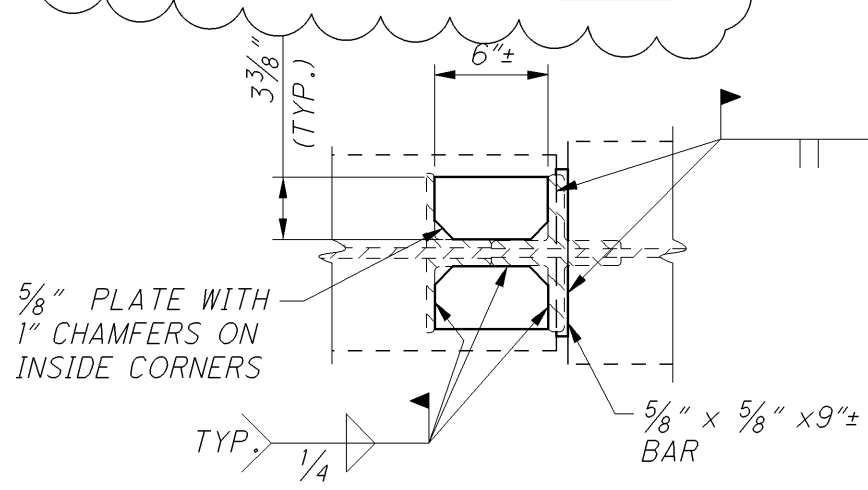


SECTION

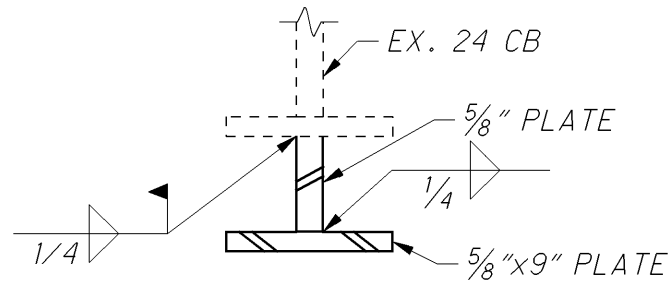
(TYPICAL BETWEEN STRINGERS S2 AND S3,
AND S11 AND S12)

NOTES:

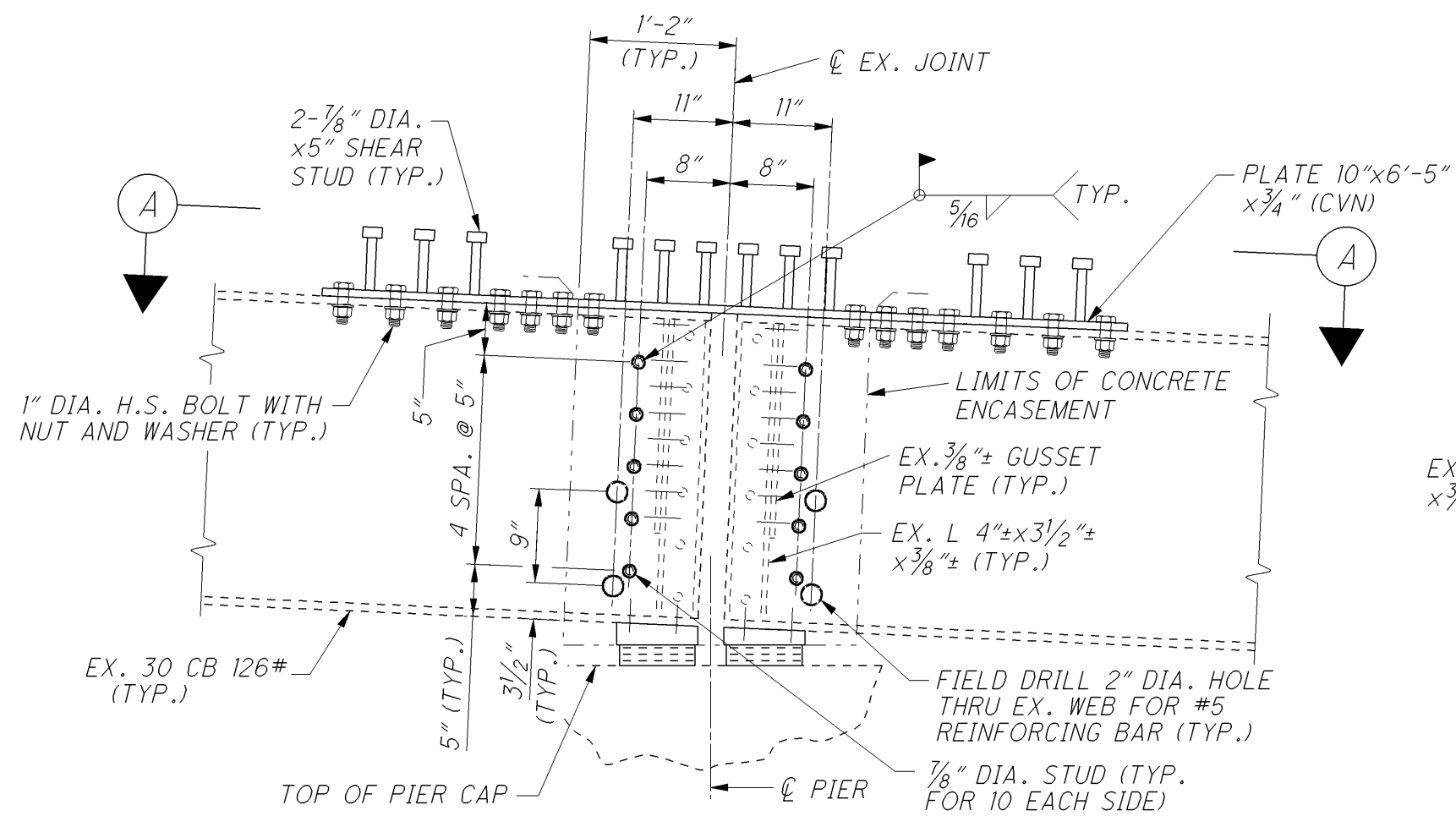
1. FOR EXISTING SHEAR STUD CONNECTOR DETAILS, SEE SHEET 477~~427~~.
2. FOR ADDITIONAL REINFORCING AT PIER 10E, SEE SHEET 156~~227~~.
3. FOR BOLTING LEGEND, SEE SHEET 95~~227~~.
4. FIELD VERIFY EXISTING RIVET SPACINGS FOR STRINGERS S1, S2, S3, S11, S12, AND S13.
5. SPLICE DETAILS FOR STRINGERS S2, S3, S11 AND S12 SEE SHEET 89A~~227~~.



(D) VIEW

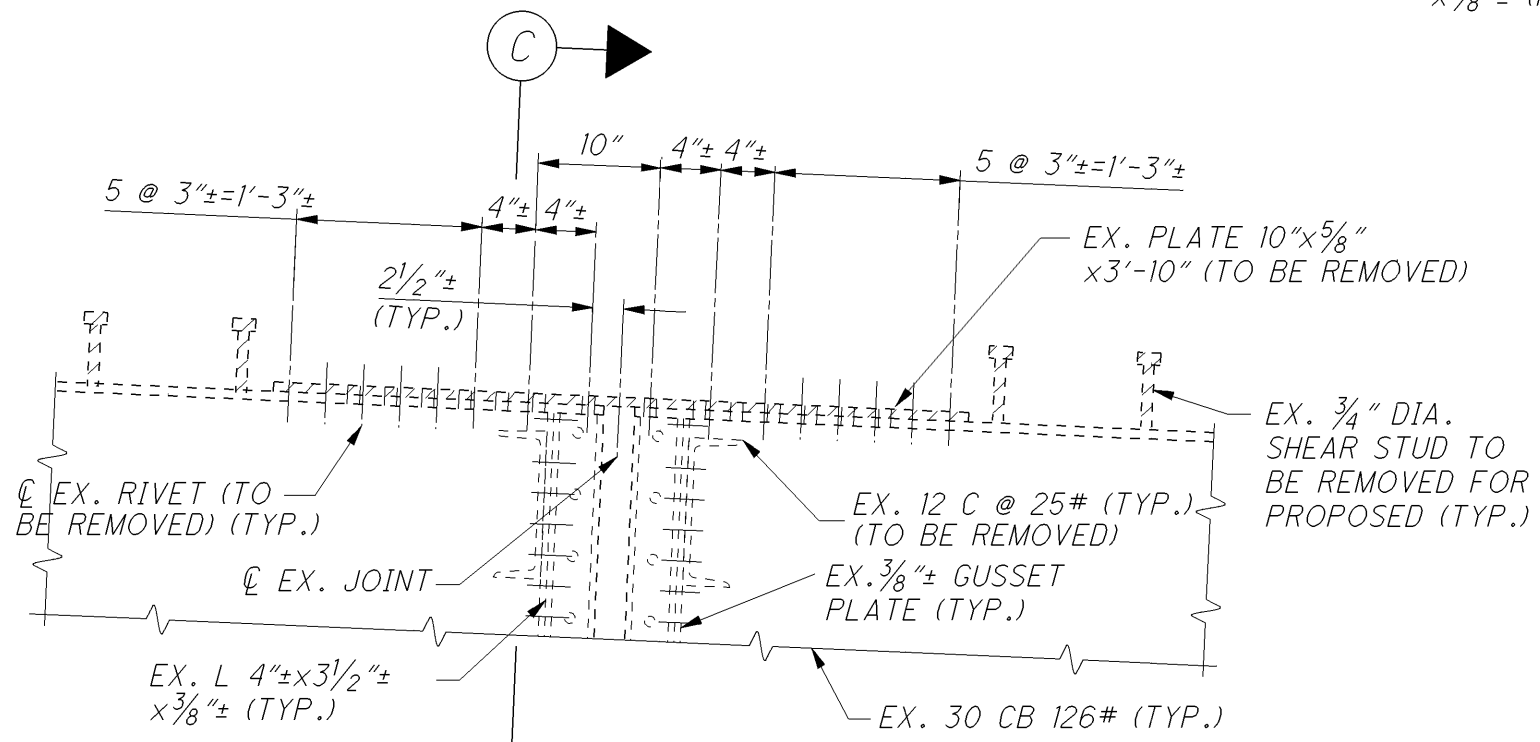


SECTION



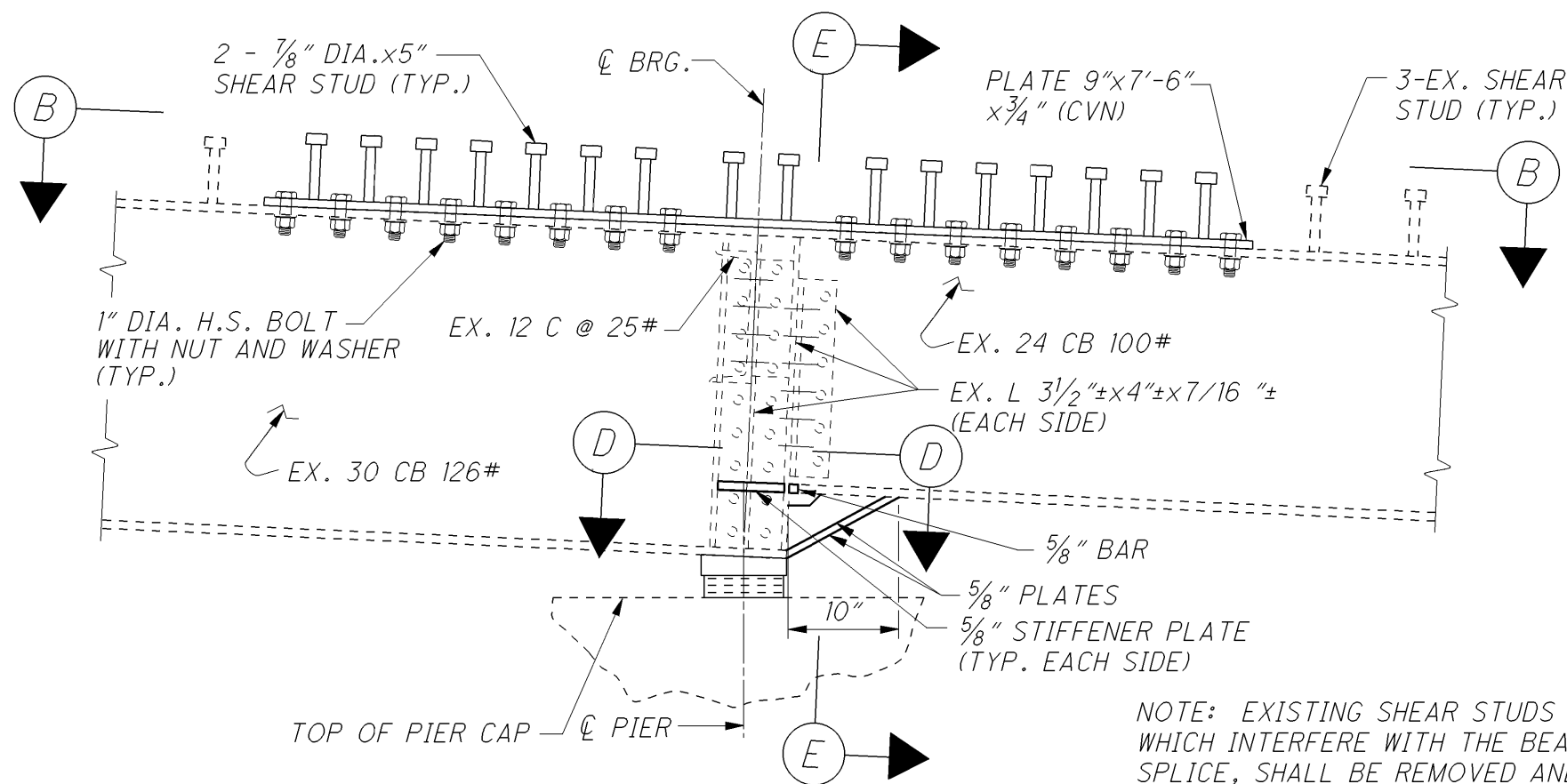
CONTINUOUS BEAM SPLICE DETAIL

(TYPICAL AT PIERS 9E AND 10E)



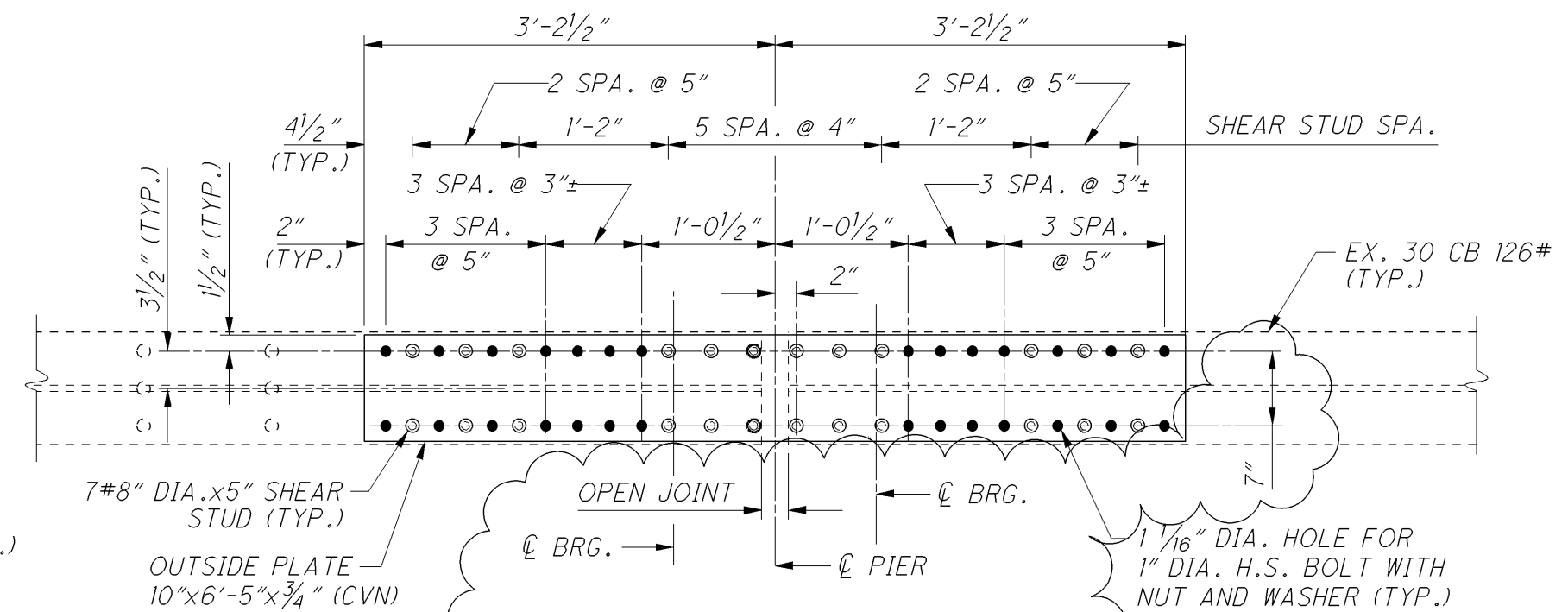
REMOVAL DETAIL

(TYPICAL AT PIER 10E, STRINGERS S4 THRU S10)



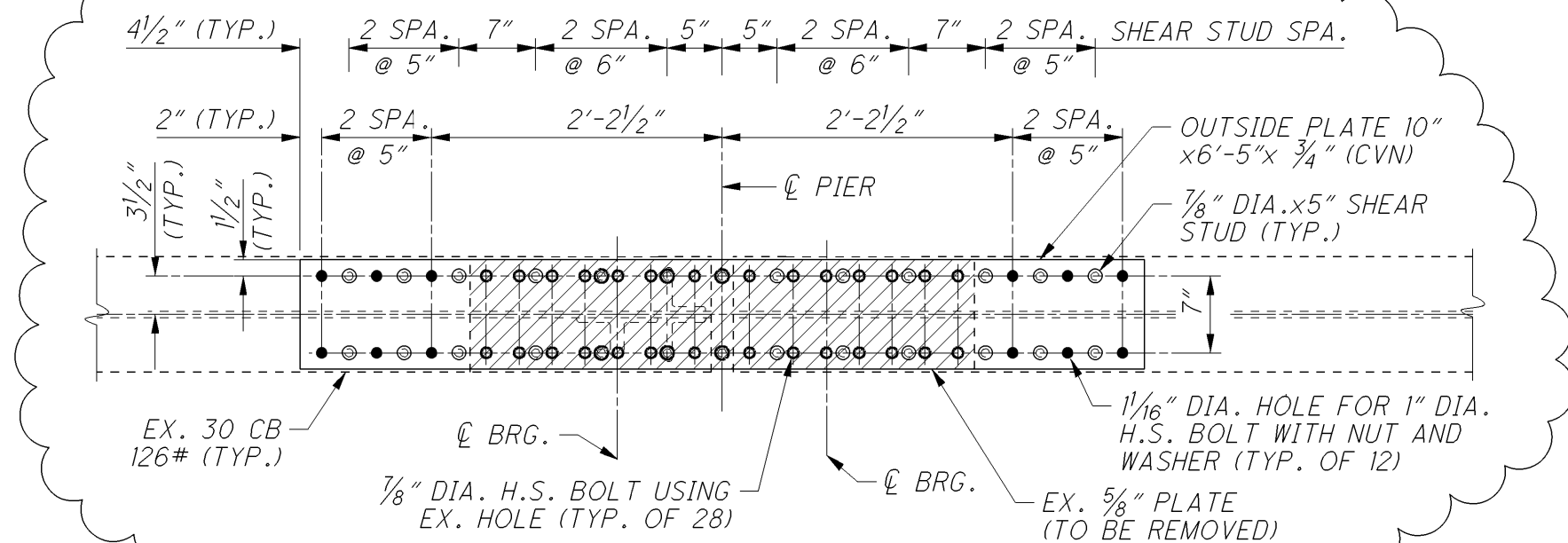
CONTINUOUS BEAM SPLICE DETAIL

(PIER 12E SHOWN, PIER 14E SIMILAR)



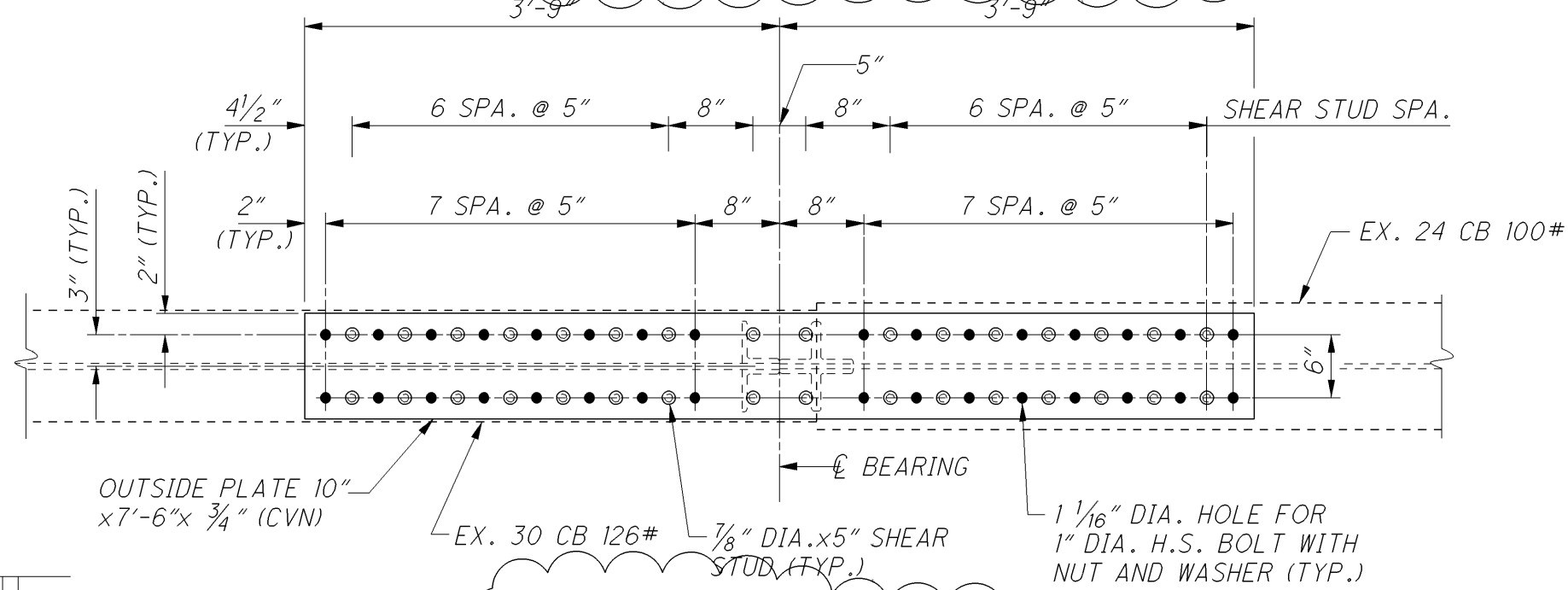
① _____ VIEW

(TYPICAL AT PIER 9E, S04 THRU S10)



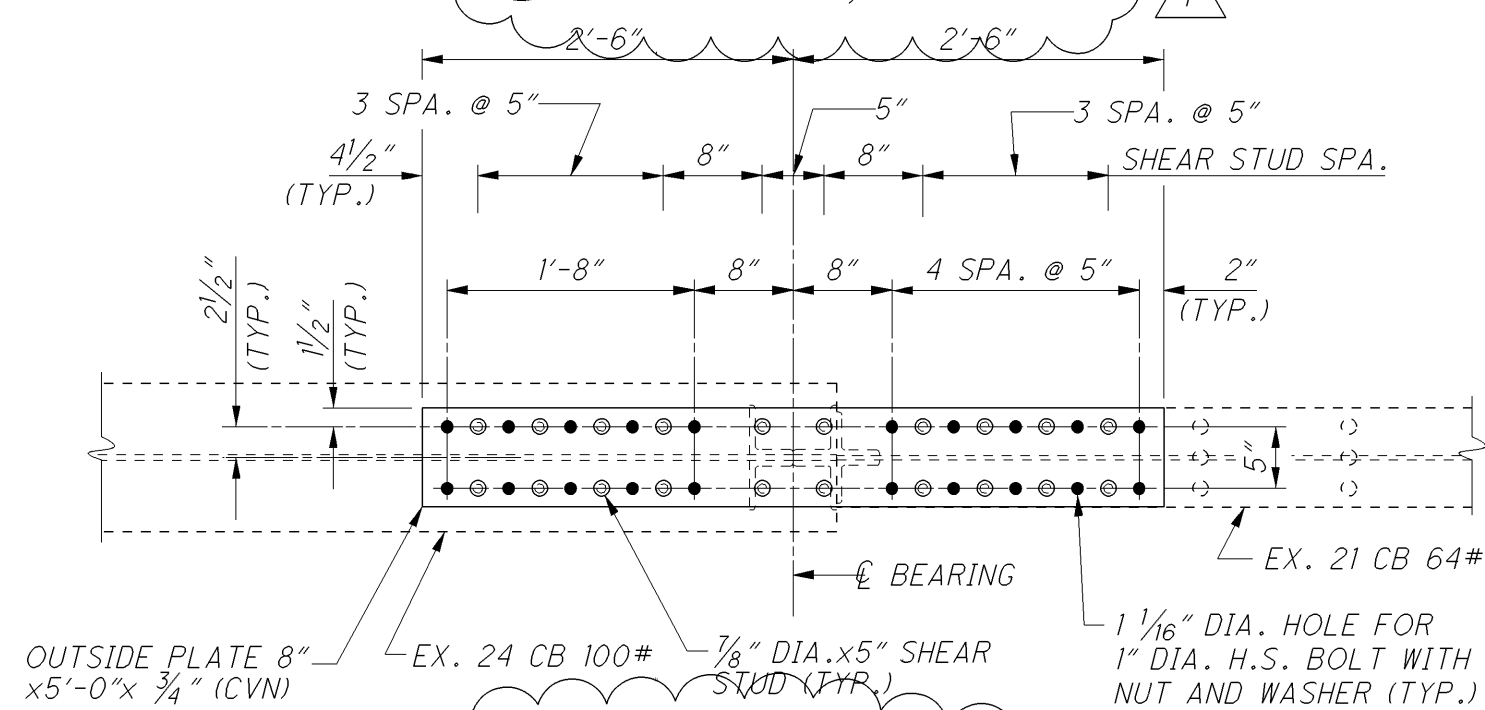
④ VIEW

(TYPICAL AT PIER 10E, S04 THRU S10)



VIEW

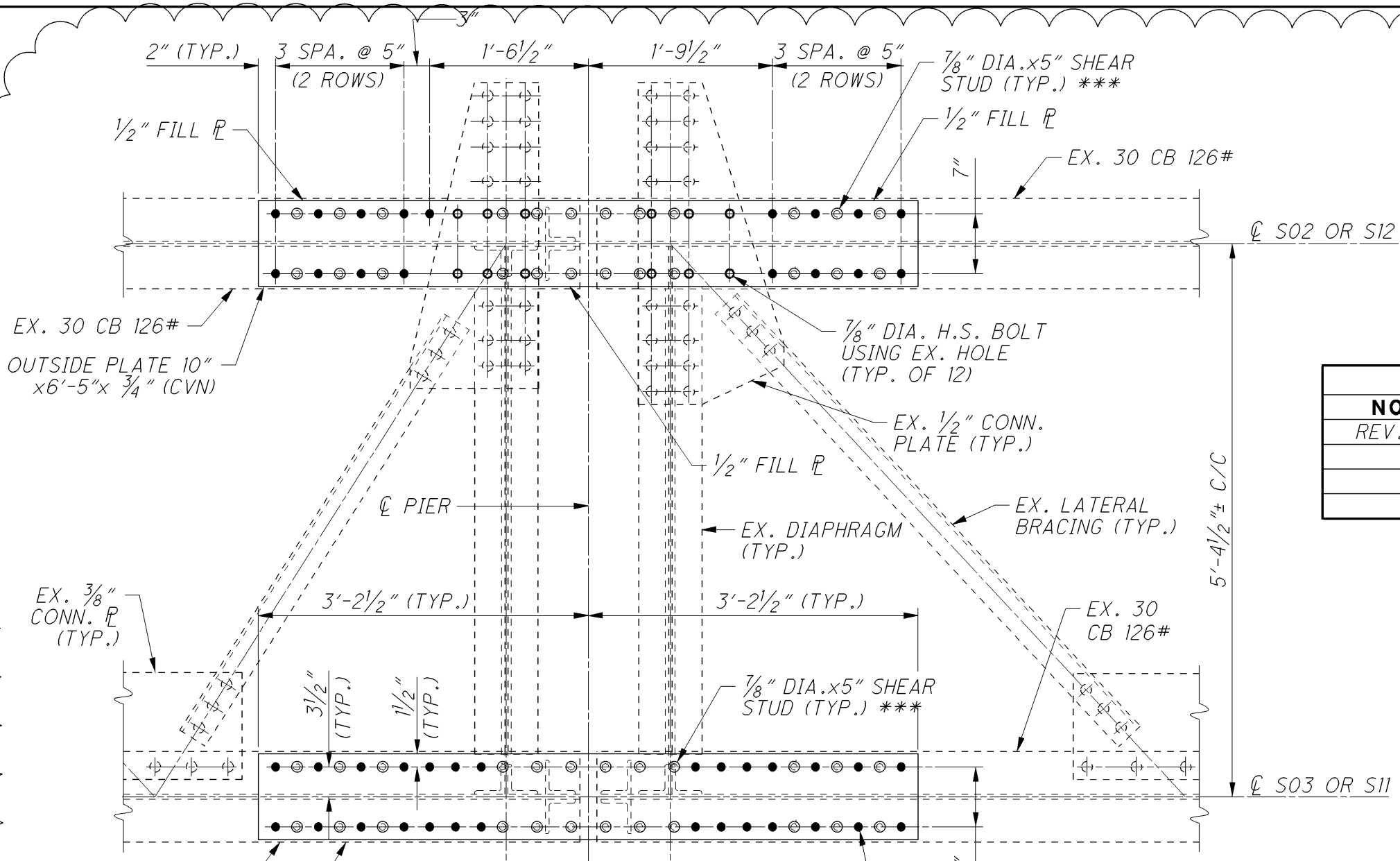
(TYP. AT PIER 12E, S4 THRU S10)



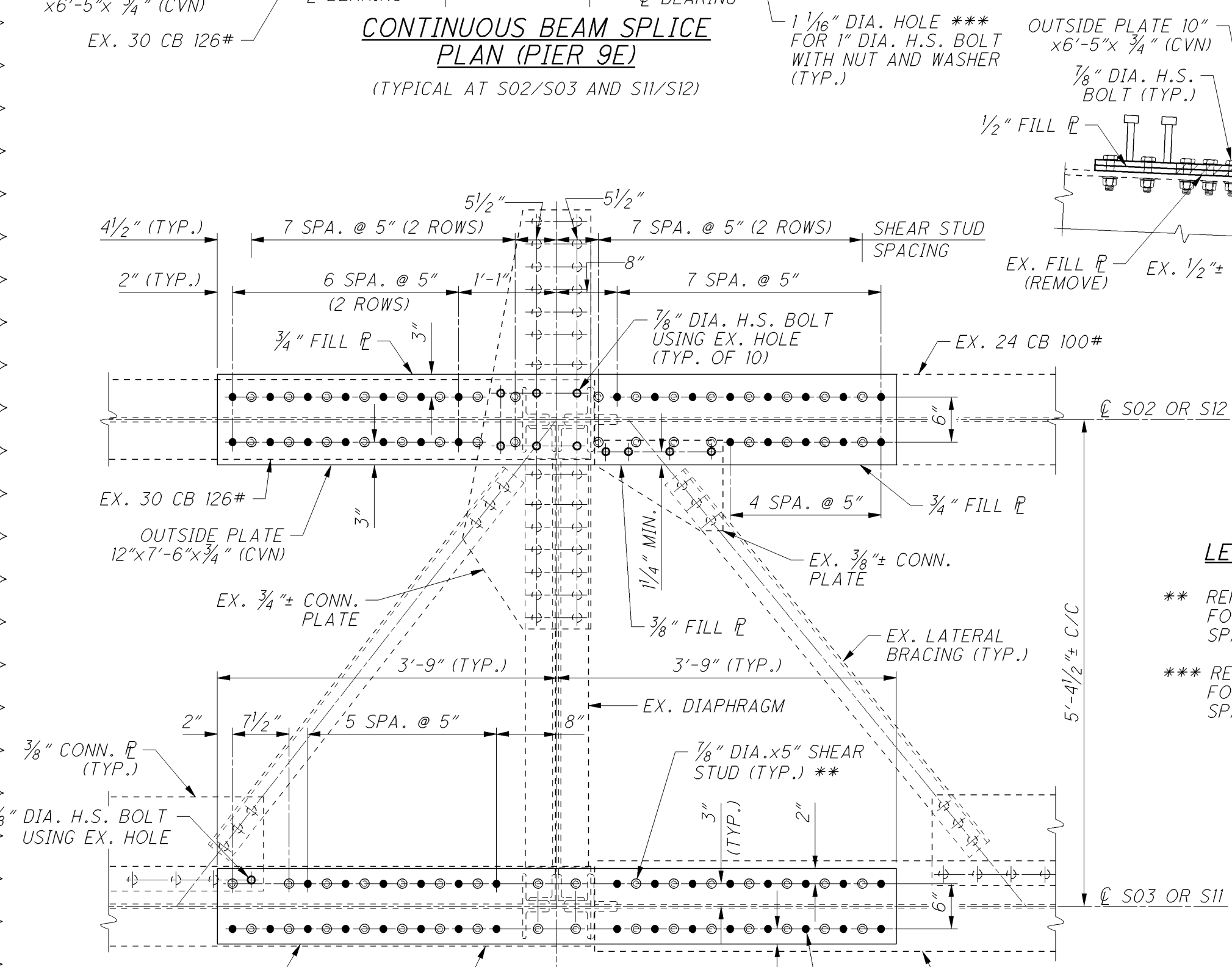
VIEW

(TYP. AT PIER 14E, S4 THRU S10)

\\construction.dot.state.oh.us\Drawings\Root\d02\LUC80551\Contract Docs\Bid Documents\Plans\Revised Plan Sheets\161A_80551-089.Cloud.dgn 21-MAR-2014 8:37AM dgeckle



**CONTINUOUS BEAM SPLICE
PLAN (PIER 9E)**
(TYPICAL AT S02/S03 AND S11/S12)



**CONTINUOUS BEAM SPLICE
PLAN (PIER 12E)**
(TYPICAL AT S02/S03 AND S11/S12)

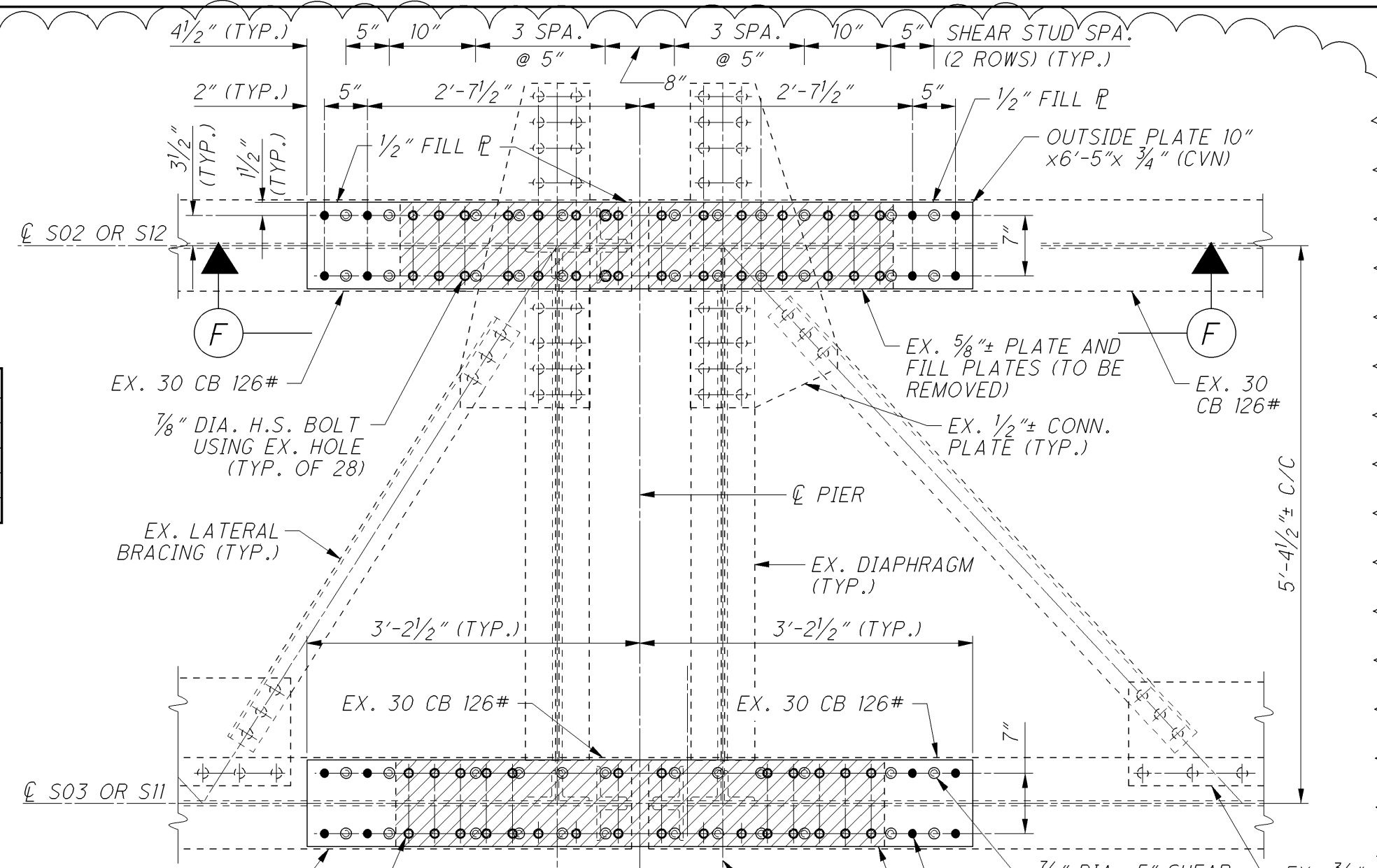
REVISIONS		
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REV. 0	2014.03.21	R.00037

LEGEND

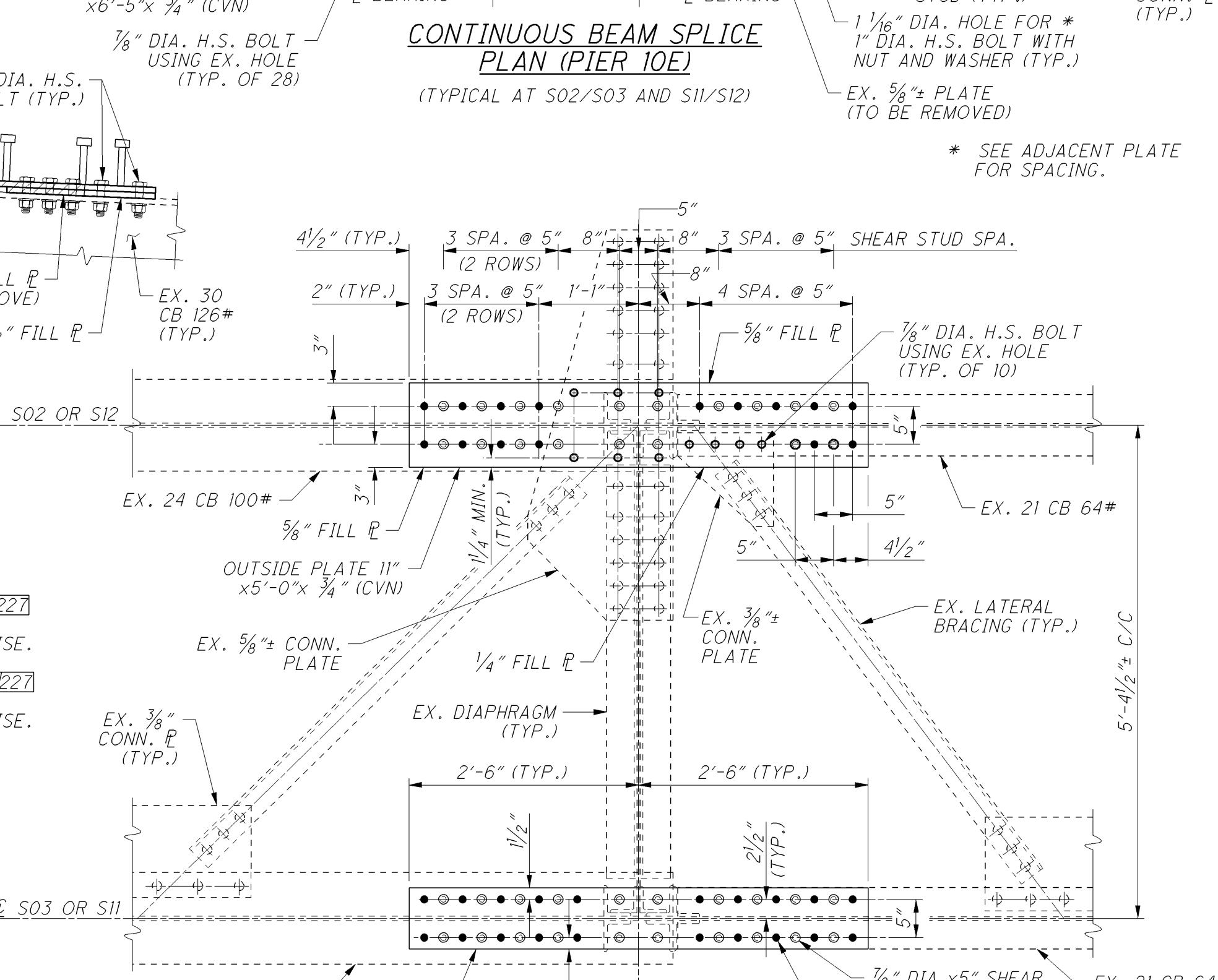
** REFER TO VIEW B ON SHEET 89/227 FOR BOLT HOLE AND SHEAR STUD SPACING, UNLESS NOTED OTHERWISE.

*** REFER TO VIEW A ON SHEET 89/227 FOR BOLT HOLE AND SHEAR STUD SPACING, UNLESS NOTED OTHERWISE.

VIEW



**CONTINUOUS BEAM SPLICE
PLAN (PIER 10E)**
(TYPICAL AT S02/S03 AND S11/S12)

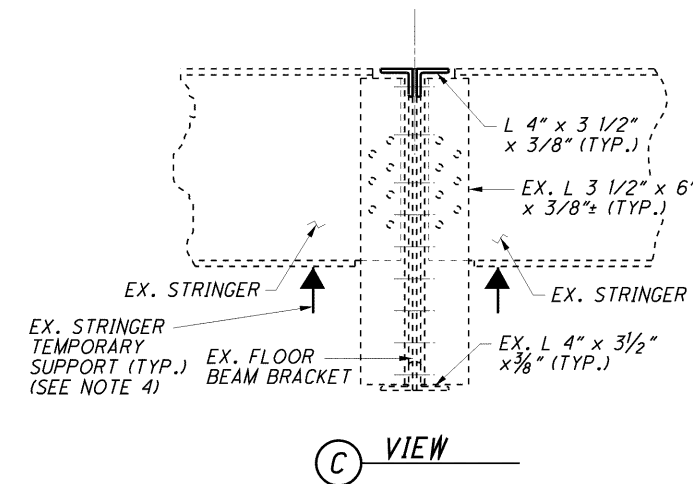
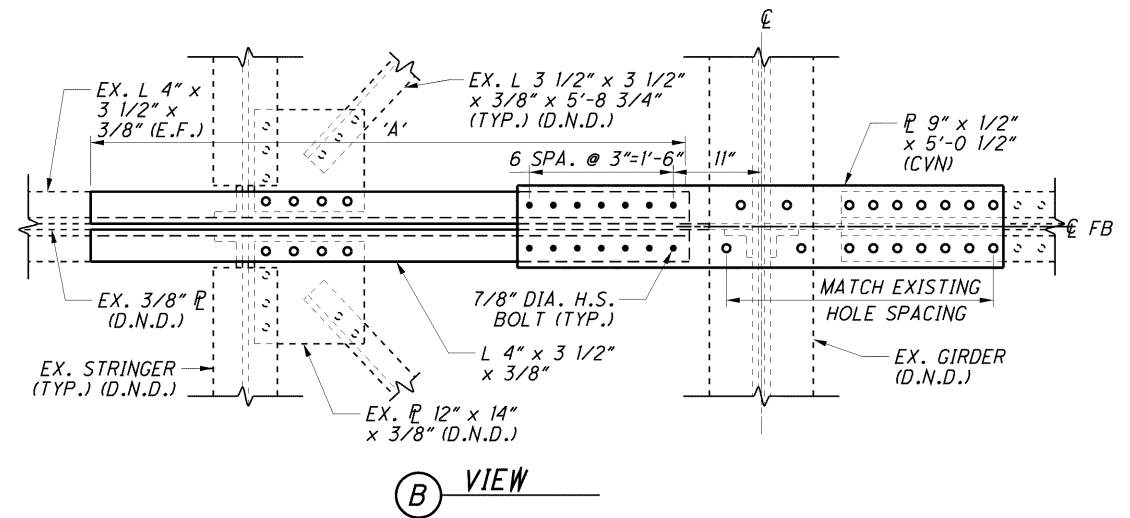
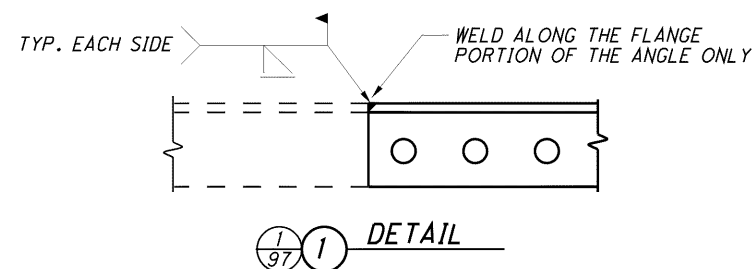
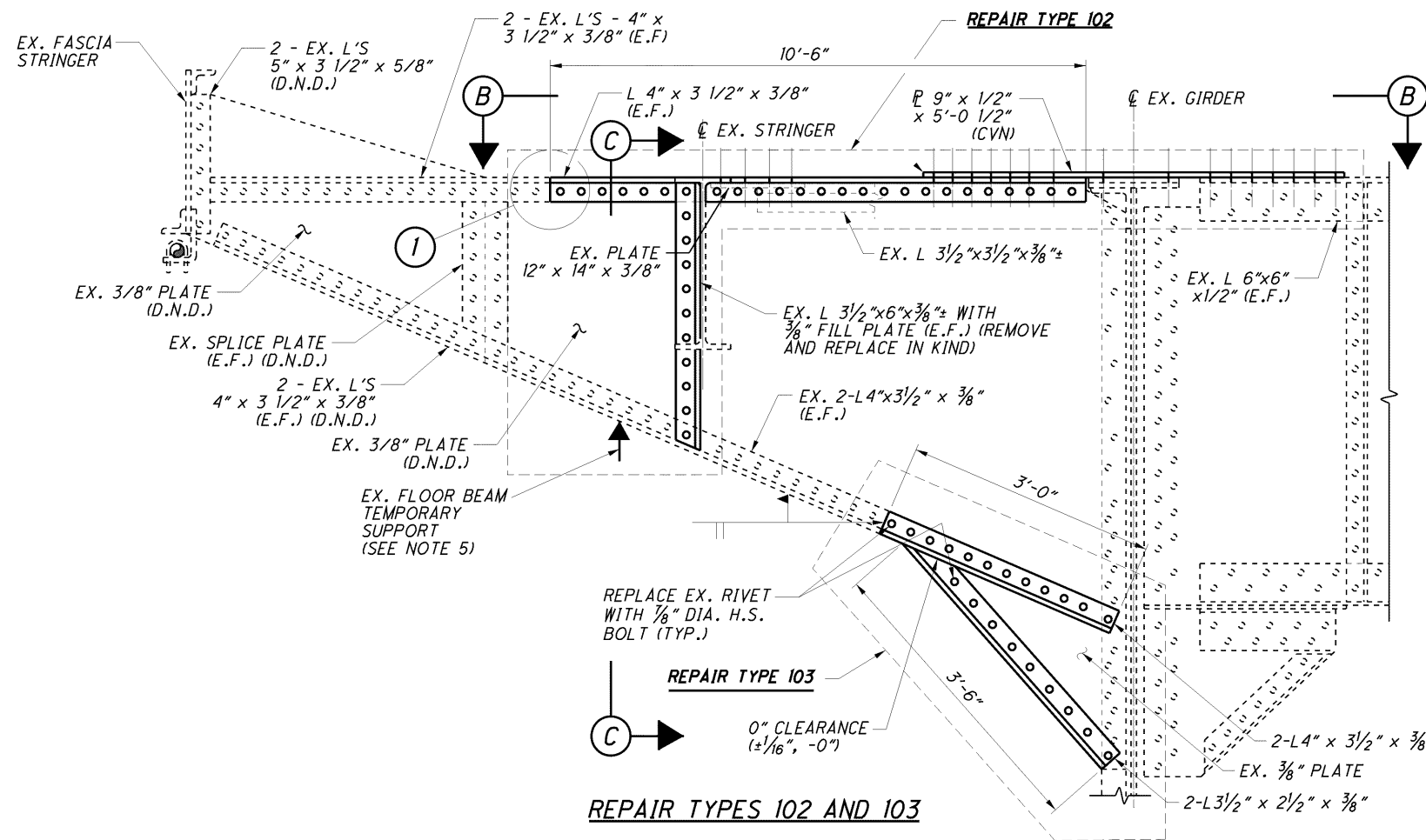


**CONTINUOUS BEAM SPLICE
PLAN (PIER 14E)**
(TYPICAL AT S02/S03 AND S11/S12)



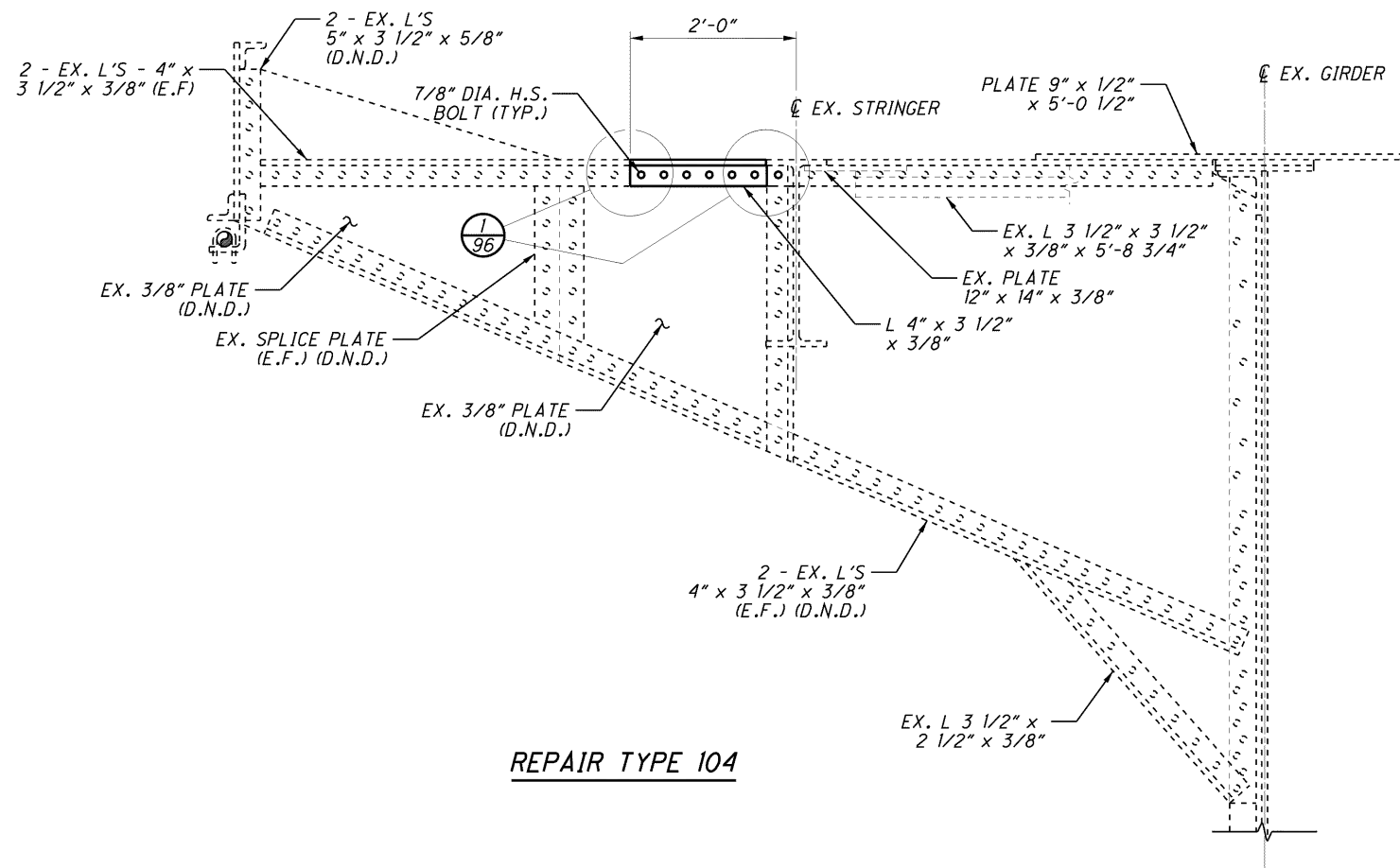
THE CONTRACTOR IS RESPONSIBLE FOR THE
TEMPORARY SUPPORT DESIGN AND DETAILS AND
THE AFFECTS OF ANY COMBINATION OF CONSTRUCTION
LIVE LOADS AND DEAD LOADS EXCEEDING 275 LB/FT.

95 / 227

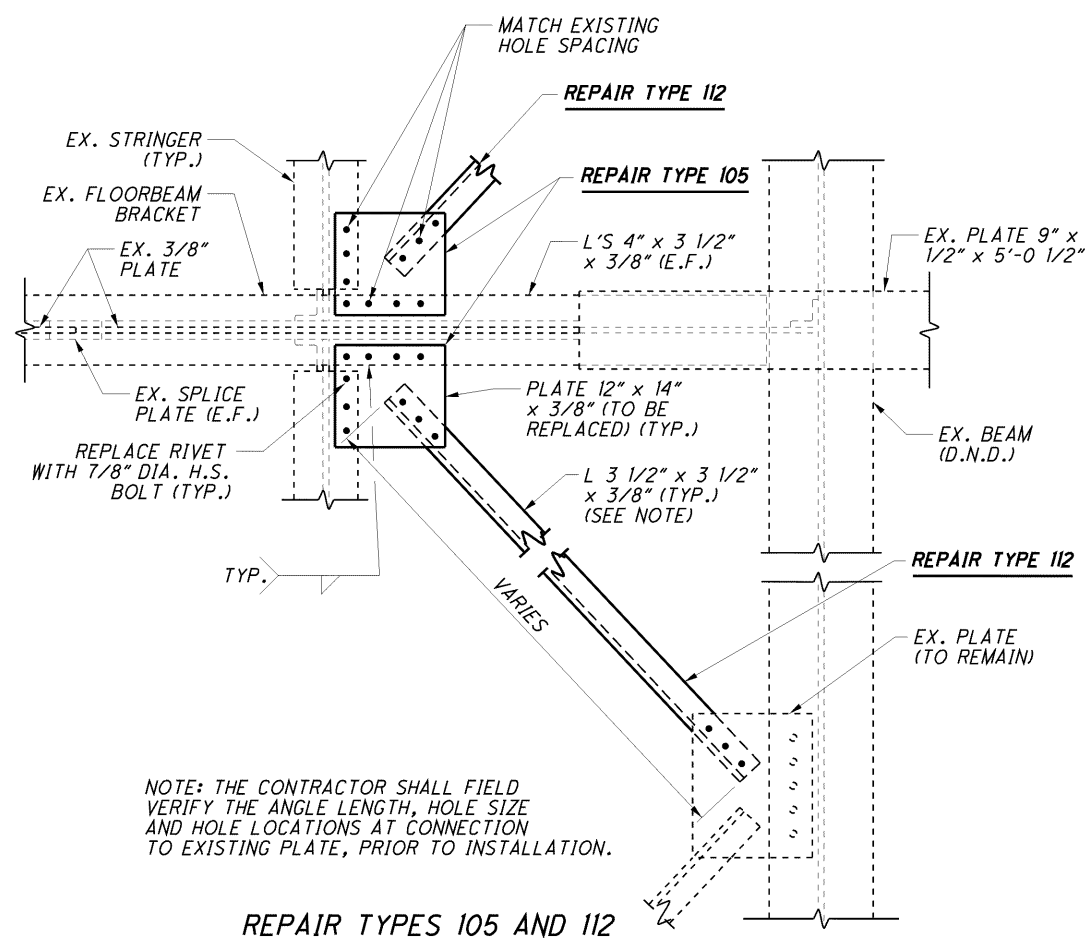


NOTES:

- FOR ADDITIONAL NOTES SEE SHEET [95]227.
- FOR BOLT/RIVET FASTENER LEGEND SEE SHEET [95]227.
- TEMPORARY STRINGER SUPPORTS SHALL BE INSTALLED PRIOR TO THE REMOVAL OF ANY PORTION OF THE FLOOR BEAM, AND SHALL REMAIN UNTIL ALL REPAIR WORK IS COMPLETED. THE TEMPORARY STRINGER SUPPORTS SHALL NOT BE SUPPORTED BY THE FLOOR BEAM.
- TEMPORARY SUPPORTS SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED DEAD LOAD OF 5 KIPS. ALL THE ABOVE REACTIONS INCLUDE AN ALLOWANCE OF 300 LB/FT. OF CONSTRUCTION DEAD LOAD. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN, AND THE AFFECTS OF ANY SPECIFIC CONSTRUCTION LIVE LOADS OR DEAD LOADS EXCEEDING 300 LBS/FT.
- TEMPORARY SUPPORTS SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED DEAD LOAD OF 14 KIPS. ALL THE ABOVE REACTIONS INCLUDE AN ALLOWANCE OF 1,000 LB/FT. OF CONSTRUCTION DEAD LOAD. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN, AND THE AFFECTS OF ANY SPECIFIC CONSTRUCTION LIVE LOADS OR DEAD LOADS EXCEEDING 1,000 LBS/FT.
- FOR LOCATIONS OF REPAIR TYPES 102 AND 103 SEE SHEETS [74]227 THROUGH [76]227 AND [85]227 THROUGH [87]227.



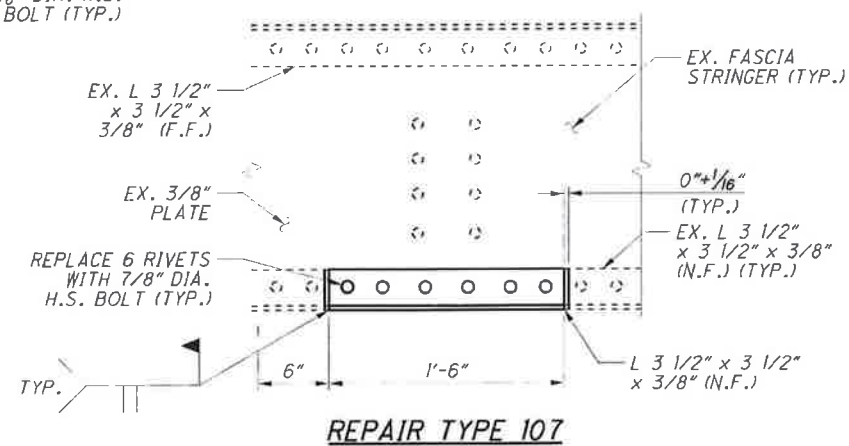
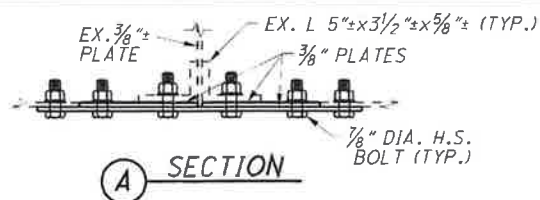
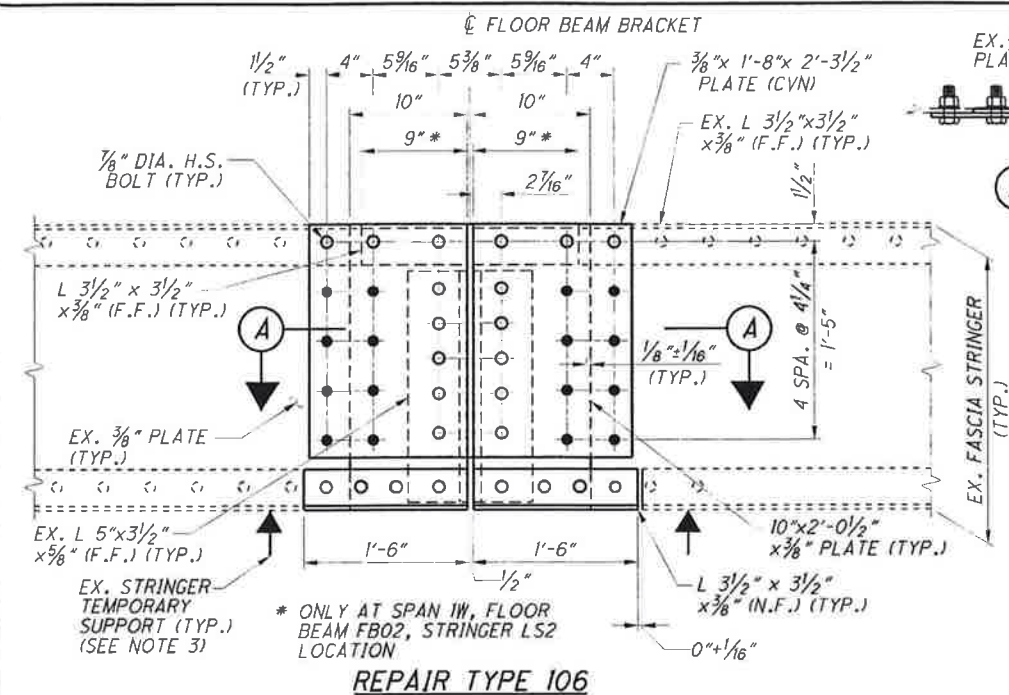
REPAIR TYPE 104



REPAIR TYPES 105 AND 112

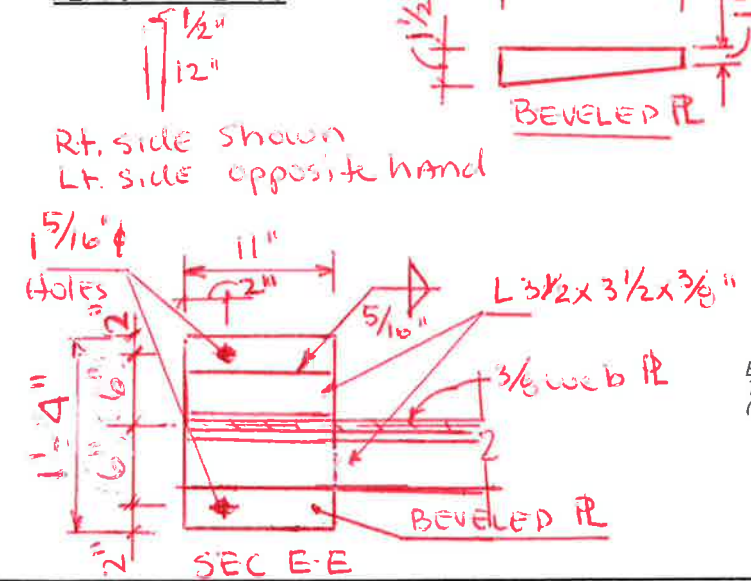
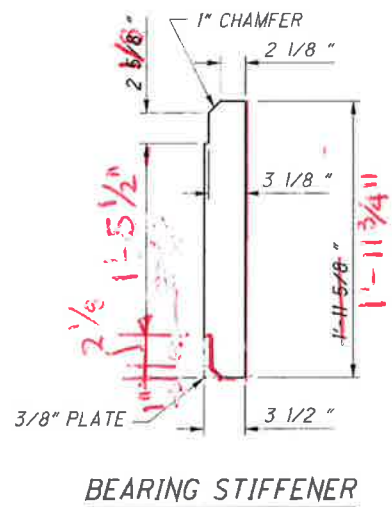
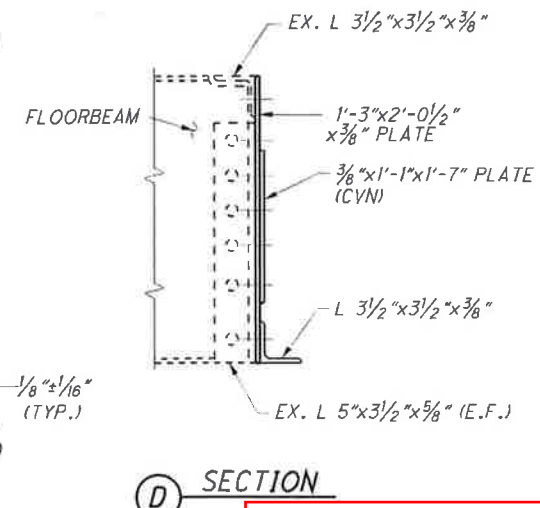
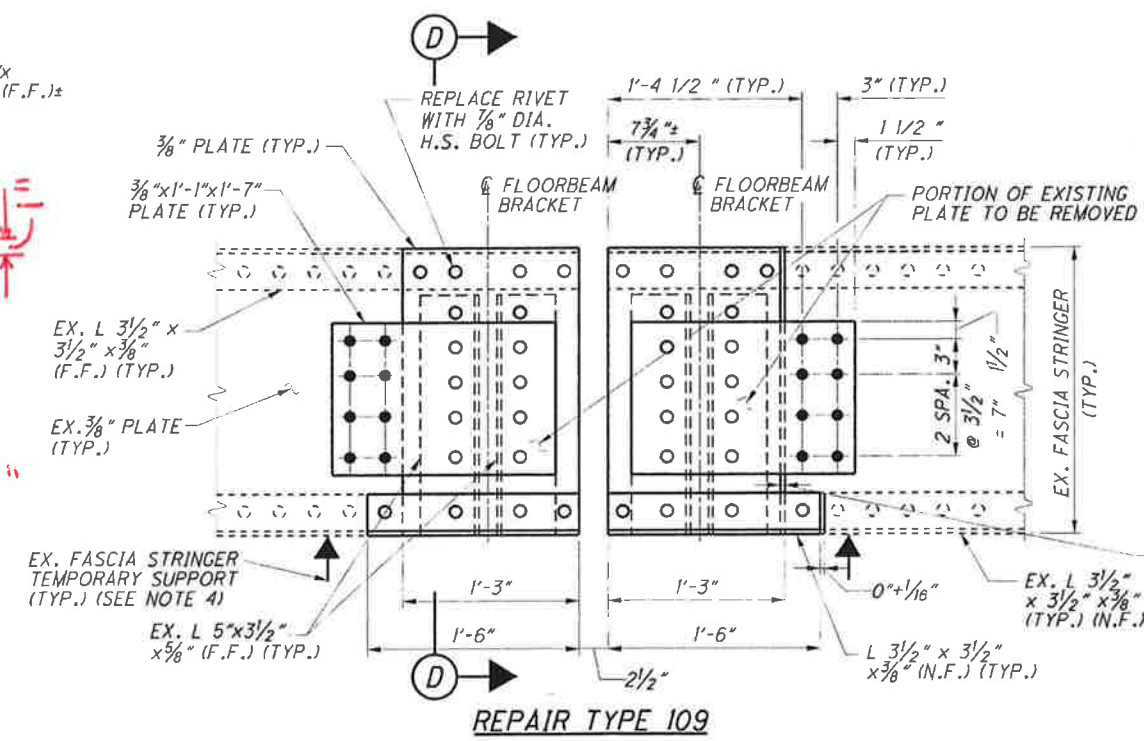
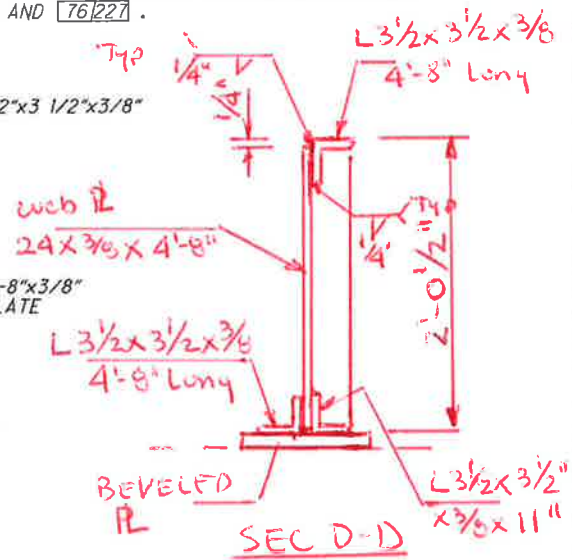
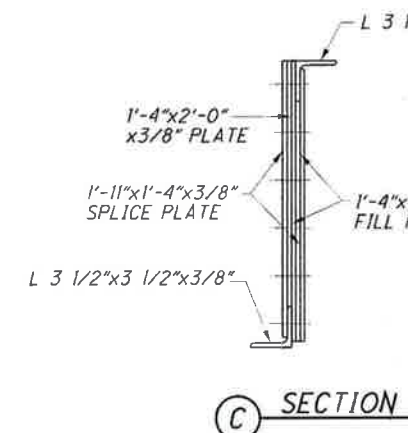
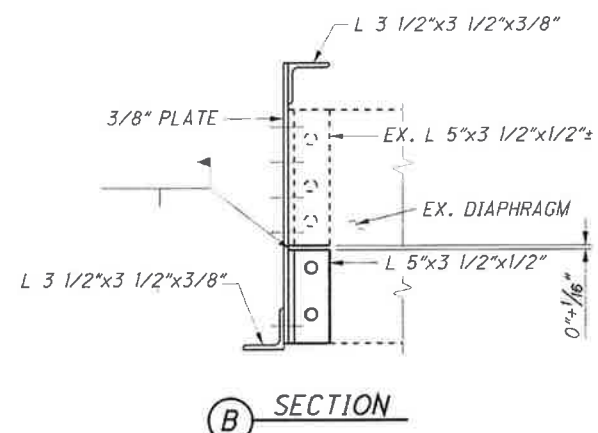
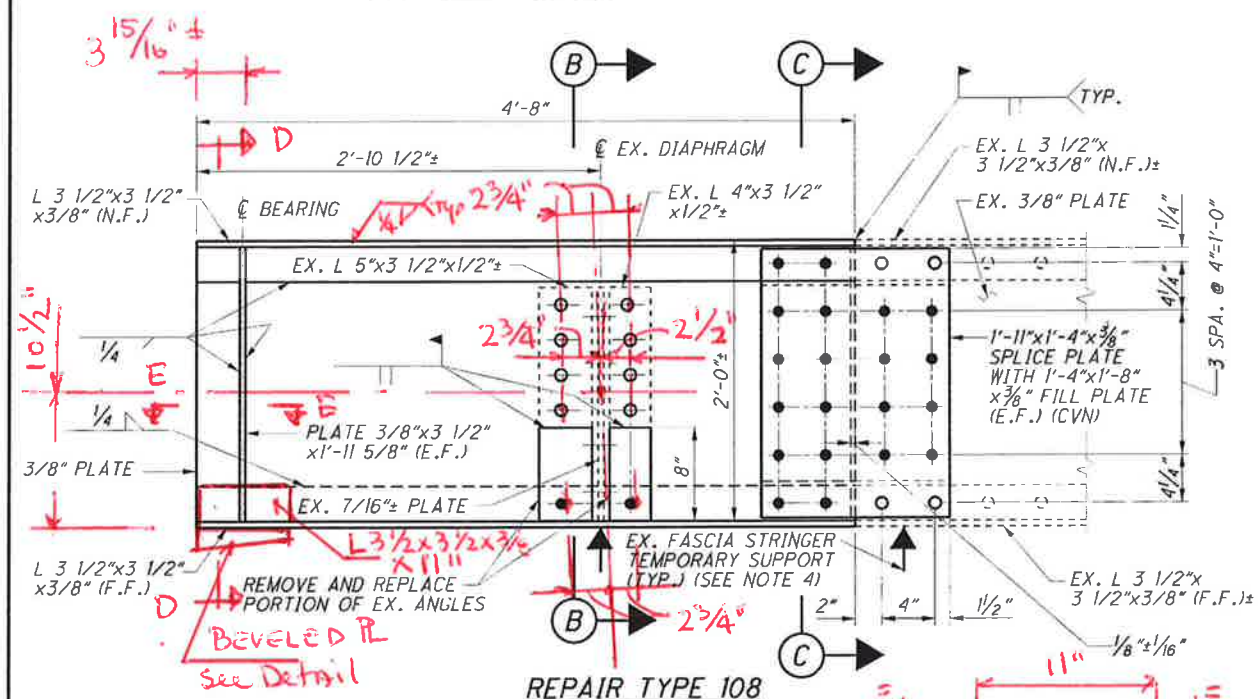
NOTES:

1. FOR ADDITIONAL NOTES AND BOLT/RIVET FASTENER LEGEND, SEE SHEET **95/227**.
2. FOR LOCATIONS OF REPAIR TYPE 104 SEE SHEETS **74/227** AND **85/227** THROUGH **87/227**.
3. FOR LOCATIONS OF REPAIR TYPE 105 SEE SHEETS **75/227** AND **76/227** AND **85/227** THROUGH **87/227**.
4. FOR LOCATIONS OF REPAIR TYPE 112 SEE SHEETS **75/227** AND **76/227** AND **86/227**.

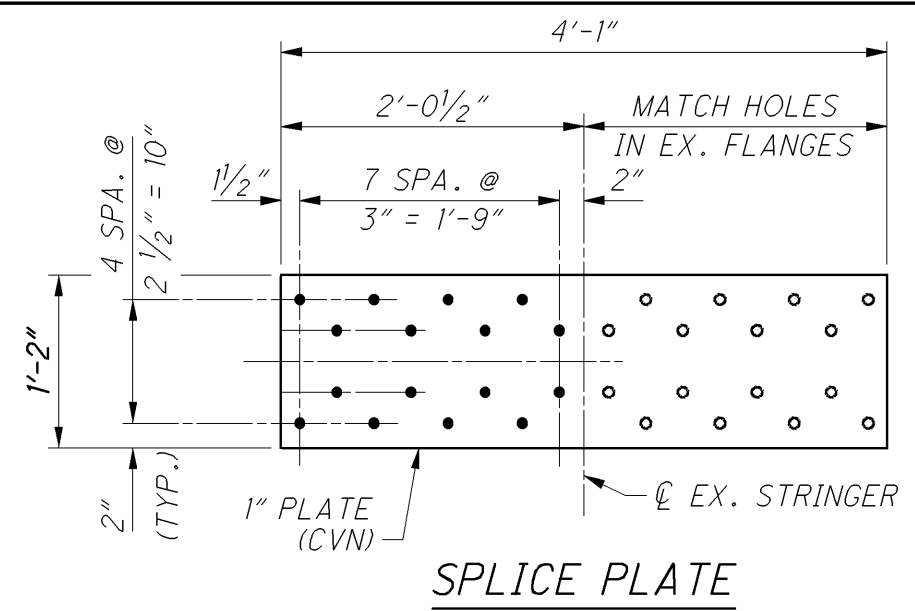
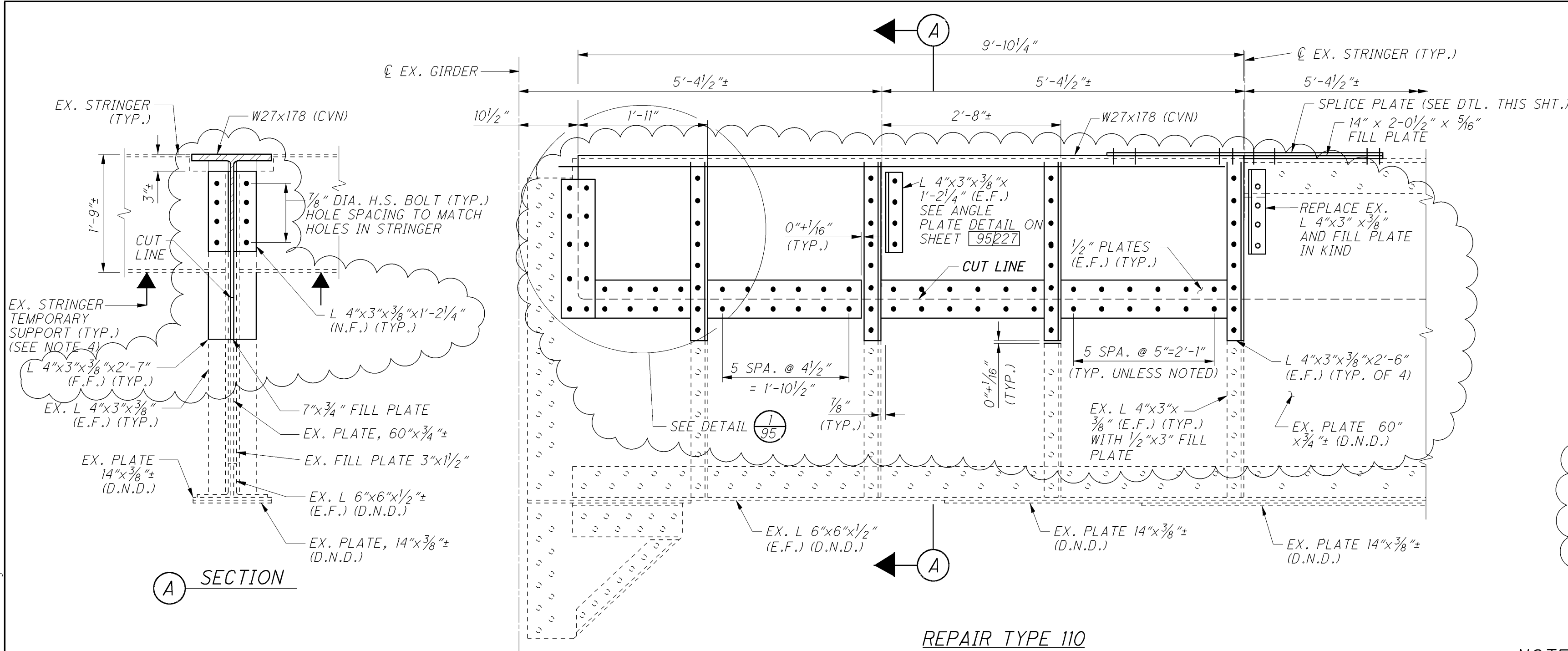


- NOTES:

1. FOR BOLT/RIVET FASTENER LEGEND SEE SHEET 95[227].
2. TEMPORARY FASCIA STRINGER SUPPORTS SHALL BE INSTALLED PRIOR TO THE REMOVAL OF ANY PORTION OF THE FLOOR BEAM, AND SHALL REMAIN UNTIL ALL REPAIR WORK IS COMPLETED. THE TEMPORARY STRINGER SUPPORTS SHALL NOT BE SUPPORTED BY THE FLOOR BEAM.
3. TEMPORARY SUPPORTS SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED DEAD LOAD OF 3 KIPS. ALL THE ABOVE REACTIONS INCLUDE AN ALLOWANCE OF 160 LB/FT. OF CONSTRUCTION DEAD LOAD. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN, AND THE AFFECTS OF ANY COMBINATION OF CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 160 LBS/FT.
4. FOR ADDITIONAL NOTES SEE SHEET 95[227].
5. FOR LOCATIONS OF REPAIR TYPE 106 SEE SHEETS 75[227], 76[227] AND 87[227].
6. FOR LOCATIONS OF REPAIR TYPE 107 SEE SHEETS 75[227] AND 76[227].
7. FOR LOCATIONS OF REPAIR TYPE 108 SEE SHEETS 76[227] AND 88[227].
8. FOR LOCATIONS OF REPAIR TYPE 109 SEE SHEETS 75[227] AND 76[227].



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NOTES:

1. FOR ADDITIONAL NOTES SEE SHEET 95227.
2. FOR BOLT/RIVET FASTENER LEGEND SEE SHEET 95227.
3. TEMPORARY STRINGER SUPPORTS SHALL BE INSTALLED PRIOR TO THE REMOVAL OF ANY PORTION OF THE FLOOR BEAM, AND SHALL REMAIN UNTIL ALL REPAIR WORK IS COMPLETED. THE TEMPORARY STRINGER SUPPORTS SHALL NOT BE SUPPORTED BY THE FLOOR BEAM.

TEMPORARY FLOOR BEAM SUPPORT IS REQUIRED FOR REPAIR TYPE 110. THE TEMPORARY SUPPORT SHALL BE INSTALLED BEFORE REMOVAL OF THE EXISTING TOP FLANGE ANGLES AND SHALL REMAIN UNTIL THE INSTALLATION OF THE TOP FLANGE SPLICE PLATE IS COMPLETE.

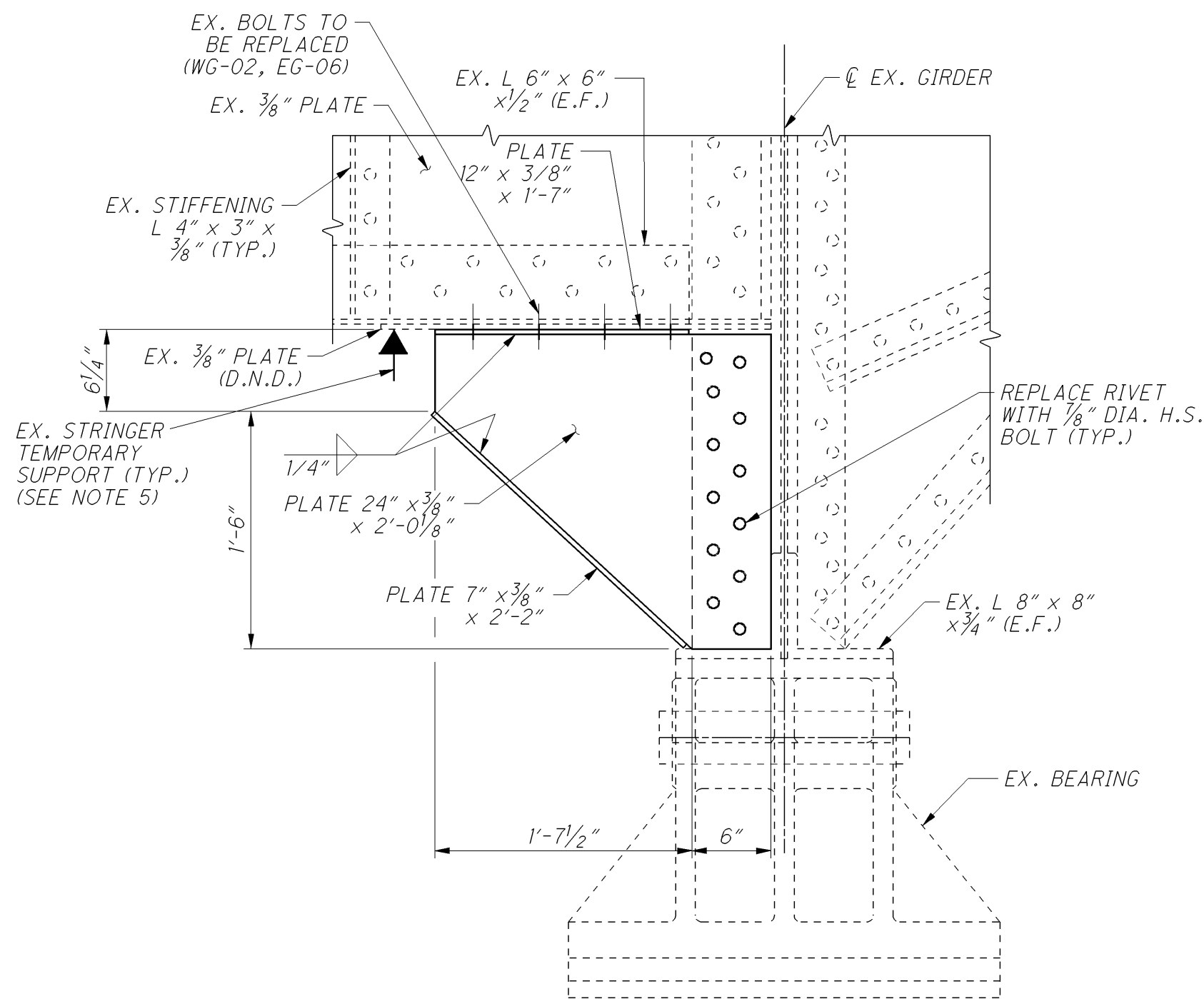
4. THE TEMPORARY SUPPORT SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED LOAD OF 18 KIPS, WHICH INCLUDES AN ALLOWANCE FOR 500 LB/FT OF CONSTRUCTION LOAD APPLIED TO THE REMAINING FLOOR BEAM TOP FLANGE ANGLES.

THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN AND DETAILS AND THE AFFECTS OF ANY COMBINATION OF CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 500 LB/FT.

5. THE TEMPORARY SUPPORT SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED LOAD OF 60 KIPS, WHICH INCLUDES AN ALLOWANCE FOR 2,000 LB/FT OF CONSTRUCTION LOAD APPLIED TO THE REMAINING FLOOR BEAM TOP FLANGE ANGLES.

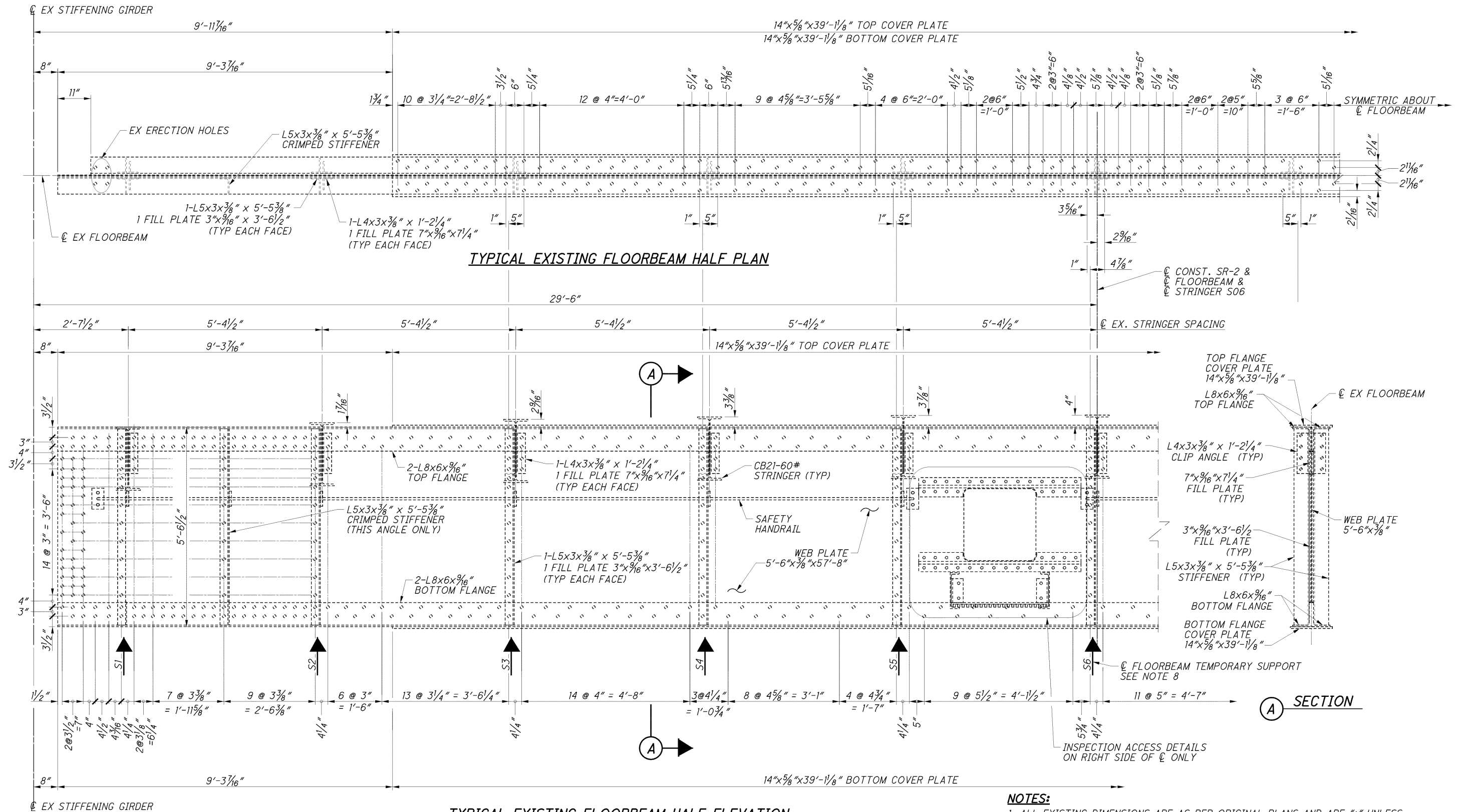
THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN AND DETAILS AND THE AFFECTS OF ANY COMBINATION OF CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 2,000 LB/FT.

6. FOR LOCATIONS OF REPAIR TYPE 110 SEE SHEETS 85227 AND 86227.
7. FOR LOCATIONS OF REPAIR TYPE III SEE SHEETS 74227 AND 85227.

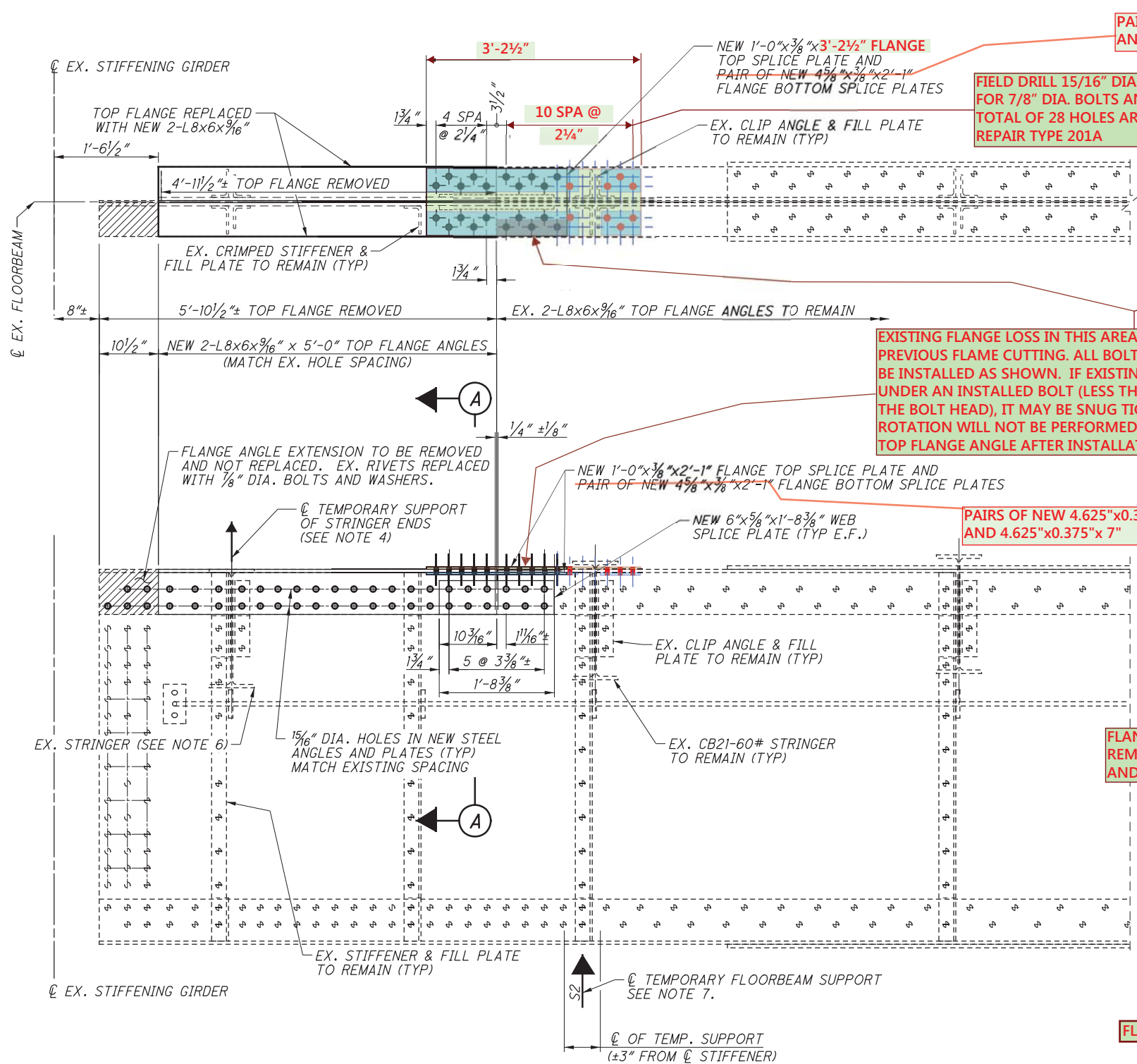


REVISIONS		
NO.	DATE	VIA
REV. 1	2013.10.17	R.00014

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REPAIR TYPE 201

PAIRS OF NEW 4.625"x0.375"x2'-3.25" AND 4.625"x0.375"x 7"

FIELD DRILL 15/16" DIA. HOLES IN EX. FLANGE ANGLES FOR 7/8" DIA. BOLTS AND WASHERS AS SHOWN. A TOTAL OF 28 HOLES ARE TO BE DRILLED AS PART OF REPAIR TYPE 201A

EXISTING FLANGE LOSS IN THIS AREA MAY BE SEVERE DUE TO APPARENT PREVIOUS FLAME CUTTING. ALL BOLTS (THROUGH NEW HOLES) ARE TO BE INSTALLED AS SHOWN. IF EXISTING FLANGE ANGLE IS NOT PRESENT UNDER AN INSTALLED BOLT (LESS THAN 30% OF IN THE AREA UNDER THE BOLT HEAD), IT MAY BE SNUG TIGHT AND THE FINAL TURN OF NUT ROTATION WILL NOT BE PERFORMED. CAULK GAPS LEFT BY MISSING TOP FLANGE ANGLE AFTER INSTALLATION OF SPLICE PLATES

PAIRS OF NEW 4.625"x0.375"x2'-3.25" AND 4.625"x0.375"x 7"

EXISTING BOTTOM OF DECK

FLANGE ANGLE REMOVED AND REPLACED

FLOORBEAM WEB

NEW 4.625"x0.375"x2'-3.25" OR NEW 4.625"x0.375"x 7"

NEW 1'-0"x3/8"x3'-2 1/2" FLANGE TOP SPLICE PLATE

NEW L8x6x9/16" x 5'-0" TOP FLANGE (TYP E.F.)
NEW 4 1/2"x3/8"x2'-1" FLANGE BOTTOM SPLICE PLATE (TYP E.F.)

7/8" BOLT AND WASHER. INSTALL TOP FLANGE SPLICE BOLTS BEFORE WEB SPLICE PLATE AND BOLTS (TYP)

REPLACE EX RIVET WITH 7/8" BOLT AND WASHER

NEW 6"x5/8"x1'-8 3/8" WEB SPLICE PLATE (TYP E.F.)

SECTION A-A

STRINGER S10 WEB



NOTES:

1. FOR ADDITIONAL NOTES AND EXISTING FLOORBEAM DETAILS AND RIVET SPACINGS NOT SHOWN, SEE SHEET 100/227.
2. FOR LOCATIONS OF REPAIR, SEE SHEETS 78/227 THROUGH 83/227.
3. FOR REPAIR DESCRIPTION, SEE SHEET 14/227.
4. FOR REQUIRED CAPACITY OF STRINGER END TEMPORARY SUPPORT (IF USED), SEE EXISTING STRINGER CONNECTION DETAIL ON SHEET 111/227.
5. THE CONTRACTOR HAS THE OPTION TO DISASSEMBLE THE STRINGER CONNECTIONS AND REPLACE THEM PER REPAIR TYPE 213 AT NO ADDITIONAL COST TO THE DEPARTMENT.
6. THIS REPAIR MAY REQUIRE COORDINATION WITH OTHER REPAIR TYPES AT THE SAME LOCATION.
7. TEMPORARY FLOORBEAM SUPPORT IS REQUIRED FOR REPAIR TYPE 201. THE TEMPORARY SUPPORT SHALL BE INSTALLED BEFORE REMOVAL OF THE EXISTING TOP FLANGE ANGLES AND SHALL REMAIN UNTIL THE INSTALLATION OF THE TOP FLANGE SPLICE PLATE IS COMPLETE.

TEMPORARY SUPPORT SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED LOAD OF 66 KIPS, WHICH INCLUDES AN ALLOWANCE FOR 1000 LB/FT OF CONSTRUCTION LOAD APPLIED TO THE REMAINING FLOORBEAM TOP FLANGE ANGLES. CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN AND DETAILS AND THE AFFECTS OF ANY COMBINATION OF CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 1000 LB/FT.

APPROVED

By Eric F. Dues, P.E. at 5:14 pm, Apr 02, 2014

REPAIR TYPE 201A: Top Flange Angle Repair with modified top flange splice

BRIDGE NO. LUC - 2 - 1862
STATE ROUTE 2 OVER MAUMEE RIVER

LUC-2-18-62
PID No. 80551

101/227

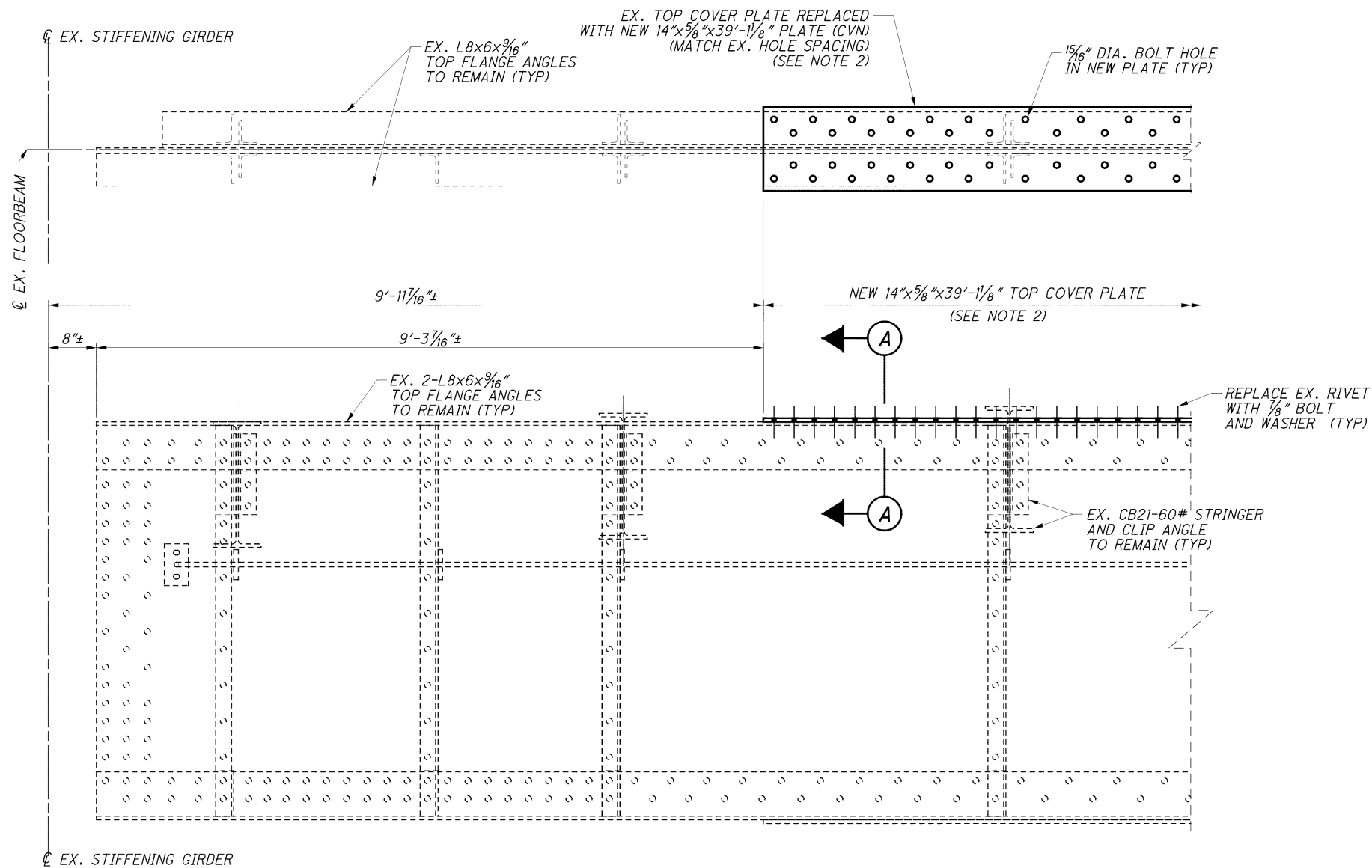
173/327

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
401 WESTVILLE ROAD
WESTVILLE, OHIO 43081-3860

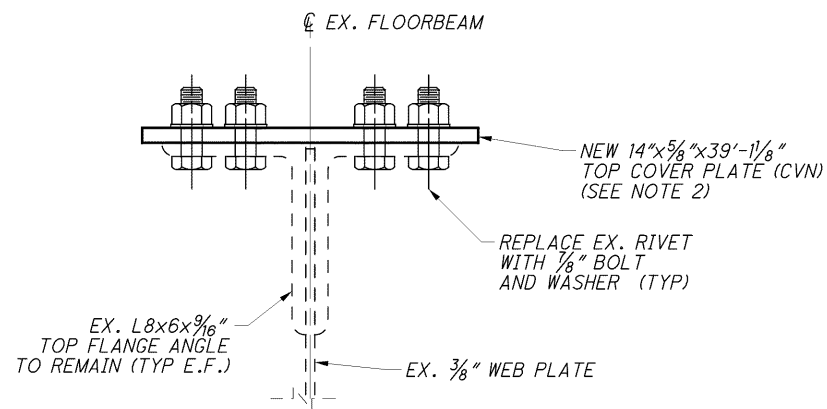
REVIEWED
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PLC 2/13
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CHECKED
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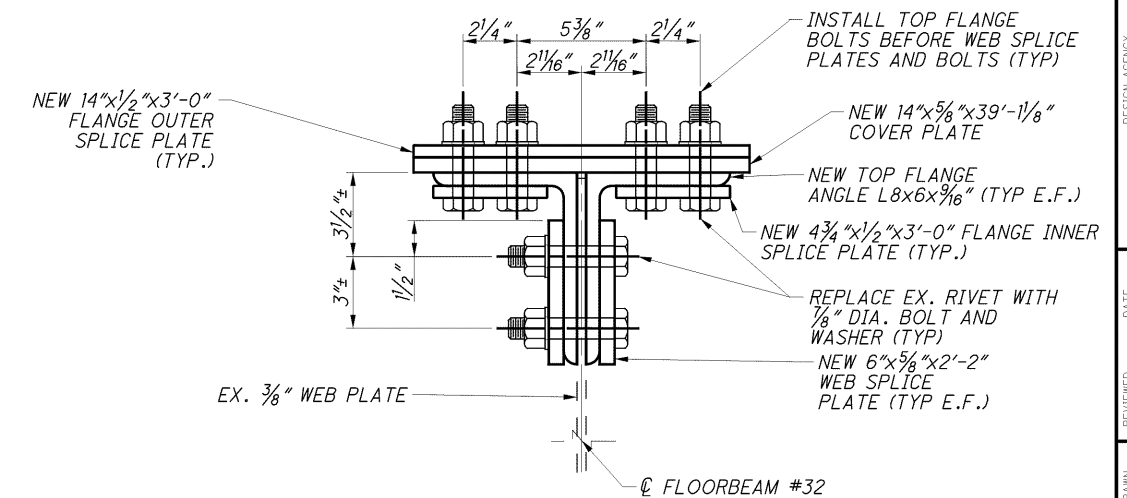
REPAIR TYPE 202



A SECTION

NOTES:

1. FOR ADDITIONAL NOTES AND EXISTING FLOORBEAM DETAILS AND RIVET SPACINGS NOT SHOWN, SEE SHEET 100/227.
2. FLOORBEAM TOP FLANGE COVER PLATE REPLACEMENTS (REPAIR TYPE 202) OCCUR UNDER ALL EXISTING DECK JOINTS (29 TOTAL), AS SHOWN ON THE SUSPENSION SPAN FRAMING PLAN, SHEETS 78/227 THROUGH 83/227.
3. FOR REPAIR DESCRIPTION, SEE SHEET 14/227.
4. THIS REPAIR MAY REQUIRE COORDINATION WITH OTHER REPAIR TYPES AT THE SAME LOCATION.
5. REPAIR TYPE 202 CAN BE COMPLETED WITHOUT ANY TEMPORARY SUPPORTS. HOWEVER, THE CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY SUPPORT DESIGN AND DETAIL AND THE AFFECTS OF ANY COMBINATION OF CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 4500 LB/FT.



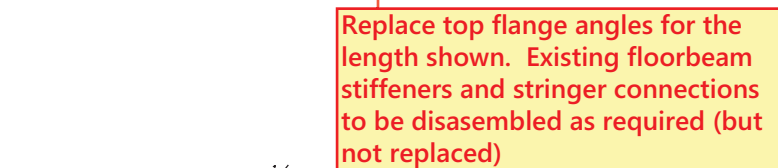
TEMPORARY SUPPORTS S5 & S6 SHALL BE CAPABLE OF SUPPORTING UNFACTORED LOADS OF 22 & 37 KIPS RESPECTIVELY. TEMPORARY SUPPORTS S3 & S4 SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED LOAD OF 7 KIPS EACH. TEMPORARY SUPPORTS S1 & S2 SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED LOAD OF 3 KIPS EACH. ALL ABOVE LOADS INCLUDE AN ALLOWANCE FOR 1000 LB/FT OF CONSTRUCTION LOAD APPLIED TO THE REMAINING FLOORBEAM TOP FLANGE ANGLES. CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN AND DETAILS AND THE EFFECTS OF ANY COMBINATION OF CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 1000 LB/FT.

1. FOR ADDITIONAL NOTES AND EXISTING FLOORBEAM DETAILS AND RIVET SPACINGS NOT SHOWN, SEE SHEET 100[227].
2. EXISTING STRINGERS, CLIP ANGLES AND CONNECTIONS, CLIP ANGLE FILL PLATES, AND SAFETY HANDRAILS ARE REPAIRED AND/OR REPLACED AS PART OF REPAIR TYPES 211, 212, 213 AND 214.
SEE FRAMING PLAN SHEET 80[227] FOR ADDITIONAL INFORMATION.
3. FOR REPAIR LOCATIONS, SEE SHEETS 78[227] THROUGH 83[227].
4. FOR REPAIR DESCRIPTION, SEE SHEET 14[227].
5. FOR REQUIRED CAPACITY OF STRINGER END TEMPORARY SUPPORT, SEE EXISTING STRINGER CONNECTION DETAIL ON SHEET 111[227].

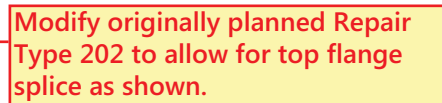
NOTE: FLOORBEAM END REPAIRS
APPLY TO LEFT END ONLY.

By Eric F. Dues, P.E. at 12:46 pm, Feb 19, 2014

BY:edues



NOTE: THIS REPAIR ADDS A LONG TOP FLANGE ANGLE REPLACEMENT TO THE WORK ON FLOORBEAM 28. ALL OTHER PLANNED FLOORBEAM 28 WORK IS UNCHANGED.



Provide web and flange splice plates and connectivity as shown.



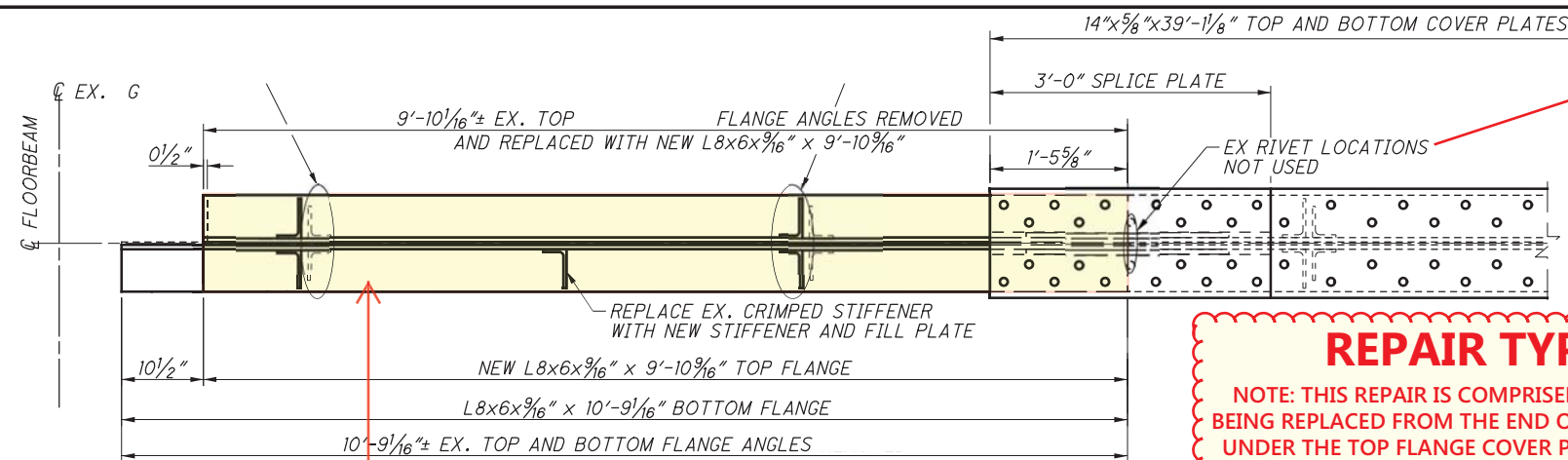
**FLOORBEAM 28 NOTE:
BOTTOM FLANGE
ANGLES AND
COVERPLATE ARE NOT
REPLACED ON FB 28.**

MODIFIED
REPAIR TYPE 203
 NOTE: FLOORBEAM END REPAIRS
 APPLY TO LEFT END ONLY.

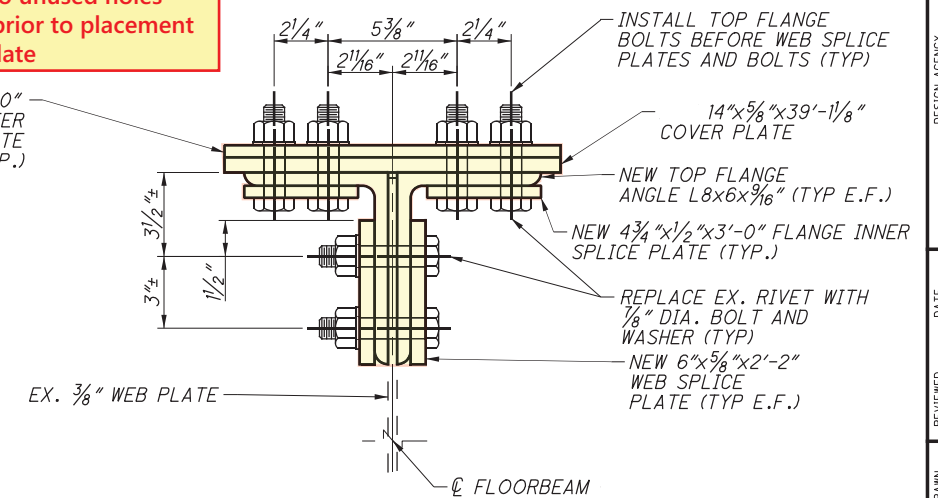
- NOTES:**
1. FOR ADDITIONAL NOTES AND EXISTING FLOORBEAM DETAILS AND RIVET SPACINGS NOT SHOWN, SEE SHEET 100/227.
 2. EXISTING STRINGERS, CLIP ANGLES AND CONNECTIONS, CLIP ANGLE FILL PLATES, AND SAFETY HANDRAILS ARE REPAIRED AND/OR REPLACED AS PART OF REPAIR TYPES 211, 212, 213 AND 214.
SEE FRAMING PLAN SHEET 80/227 FOR ADDITIONAL INFORMATION.
 3. FOR REPAIR LOCATIONS, SEE SHEETS 78/227 THROUGH 83/227.
 4. FOR REPAIR DESCRIPTION, SEE SHEET 14/227.
 5. FOR REQUIRED CAPACITY OF STRINGER END TEMPORARY SUPPORT, SEE EXISTING STRINGER CONNECTION DETAIL ON SHEET 111/227.

6. TEMPORARY FLOORBEAM SUPPORTS ARE REQUIRED FOR REPAIR TYPE 203. THE TEMPORARY SUPPORTS SHALL BE INSTALLED BEFORE REMOVAL OF THE EXISTING FLANGE ANGLES AND SHALL REMAIN UNTIL THE INSTALLATION OF THE FLANGE SPLICE PLATES IS COMPLETE. SEE SHEET 100[227] FOR THE LOCATIONS OF SUPPORTS S4 THROUGH S6.

TEMPORARY SUPPORTS S5 & S6 SHALL BE CAPABLE OF SUPPORTING UNFACTORED LOADS OF 22 & 37 KIPS RESPECTIVELY. TEMPORARY SUPPORTS S3 & S4 SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED LOAD OF 7 KIPS EACH. TEMPORARY SUPPORTS S1 & S2 SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED LOAD OF 3 KIPS EACH. ALL ABOVE LOADS INCLUDE AN ALLOWANCE FOR 1000 LB/FT OF CONSTRUCTION LOAD APPLIED TO THE REMAINING FLOORBEAM TOP FLANGE ANGLES. CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN AND DETAILS AND THE EFFECTS OF ANY COMBINATION OF CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 1000 LB/FT.



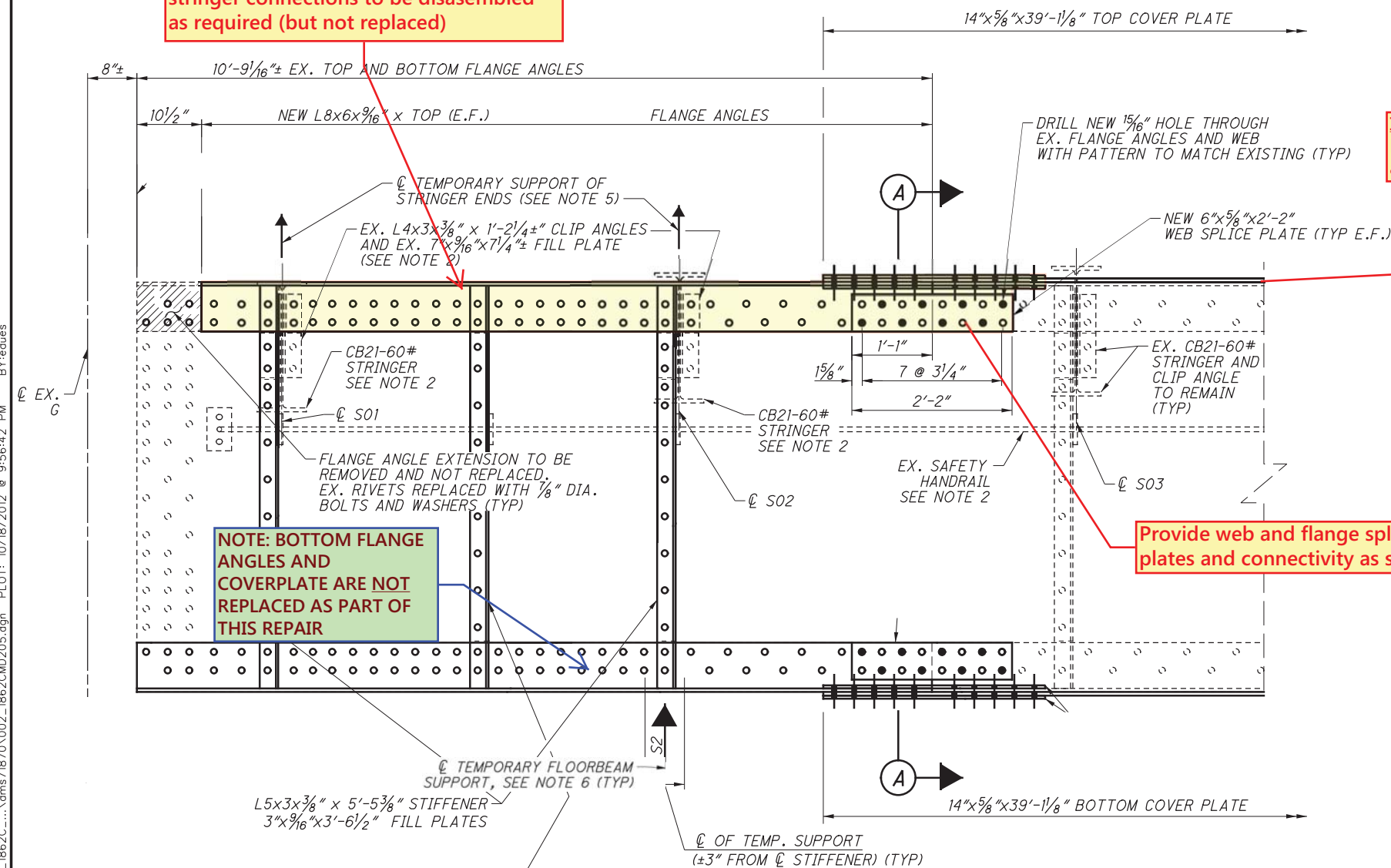
IF APPLICABLE: If pre-fabricated top flange cover plates are used in conjunction with this new repair type, these two unused holes shall be filled with caulk prior to placement of the top flange splice plate



REPAIR TYPE 203TF

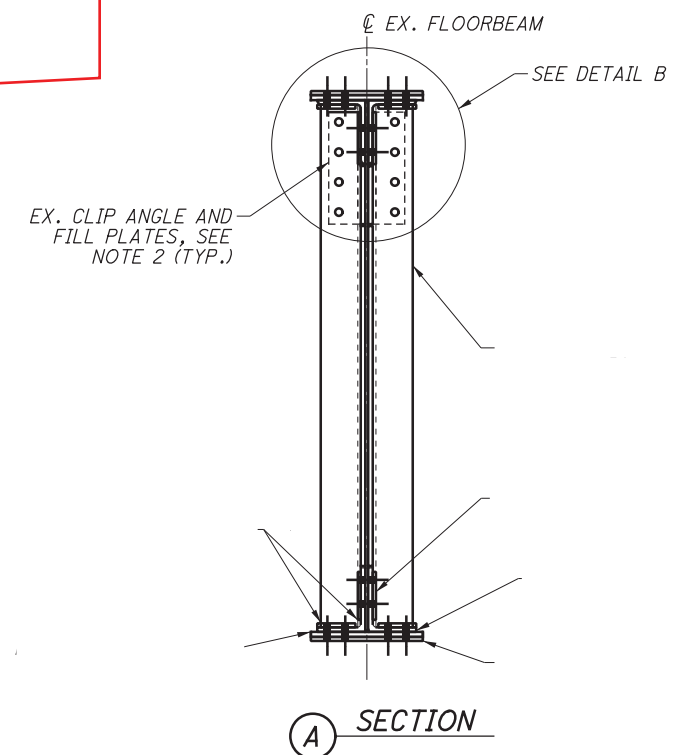
NOTE: THIS REPAIR IS COMPRISED OF A TOP FLANGE ANGLE BEING REPLACED FROM THE END OF A FLOORBEAM TO A POINT UNDER THE TOP FLANGE COVER PLATE. ALL OTHER PLANNED REPAIRS AT AFFECTED FLOORBEAMS (INCLUDING TOP FLANGE COVERPLATE, IF PREVIOUSLY PLANNED) SHALL STILL BE PERFORMED PER THE ORIGINAL CONTRACT DRAWINGS.

Replace top flange angles for the length shown. Existing floorbeam stiffeners and stringer connections to be disassembled as required (but not replaced)



IF APPLICABLE: Modify originally planned Repair Type 202 top flange coverplate to allow for top flange splice as shown.

Provide web and flange splice plates and connectivity as shown.



NOTE: BOTTOM FLANGE ANGLES AND COVERPLATE ARE NOT REPLACED AS PART OF THIS REPAIR

REPLACE EX. CRIMPED STIFFENER WITH
NEW L5x3x $\frac{3}{8}$ " x 5'-5 $\frac{3}{8}$ " STIFFENER
AND NEW 3"x $\frac{9}{16}$ "x4'-2" FILL PLATE
(REFER TO REPAIR TYPE 205
FOR ADDITIONAL DETAILS)

NOTES:

1. FOR ADDITIONAL NOTES AND EXISTING FLOORBEAM DETAILS AND RIVET SPACINGS NOT SHOWN, SEE SHEET 100[227].
2. EXISTING STRINGERS, CLIP ANGLES AND CONNECTIONS, CLIP ANGLE FILL PLATES, AND SAFETY HANDRAILS ARE REPAIRED AND/OR REPLACED AS PART OF REPAIR TYPES 211, 212, 213 AND 214.
SEE FRAMING PLAN SHEET 80[227] FOR ADDITIONAL INFORMATION.
3. FOR REPAIR LOCATIONS, SEE SHEETS 78[227] THROUGH 83[227].
4. FOR REPAIR DESCRIPTION, SEE SHEET 14[227].
5. FOR REQUIRED CAPACITY OF STRINGER END TEMPORARY SUPPORT, SEE EXISTING STRINGER CONNECTION DETAIL ON SHEET 111[227].

6. TEMPORARY FLOORBEAM SUPPORTS ARE REQUIRED FOR REPAIR TYPE 203.
THE TEMPORARY SUPPORT SHALL BE INSTALLED BEFORE REMOVAL OF THE EXISTING
TOP FLANGE ANGLES AND SHALL REMAIN UNTIL THE INSTALLATION OF THE TOP
FLANGE SPLICE PLATE IS COMPLETE.

TEMPORARY SUPPORT SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED LOAD OF 66 KIPS, WHICH INCLUDES AN ALLOWANCE FOR 1000 LB/FT OF CONSTRUCTION LOAD APPLIED TO THE REMAINING FLOORBEAM TOP FLANGE ANGLES. CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN AND DETAILS AND THE EFFECTS OF ANY COMBINATION OF CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 1000 LB/FT.

APPROVED

By Eric F. Dues, P.E. at 5:14 pm, Apr 02, 2014

REPAIR TYPE 203TF

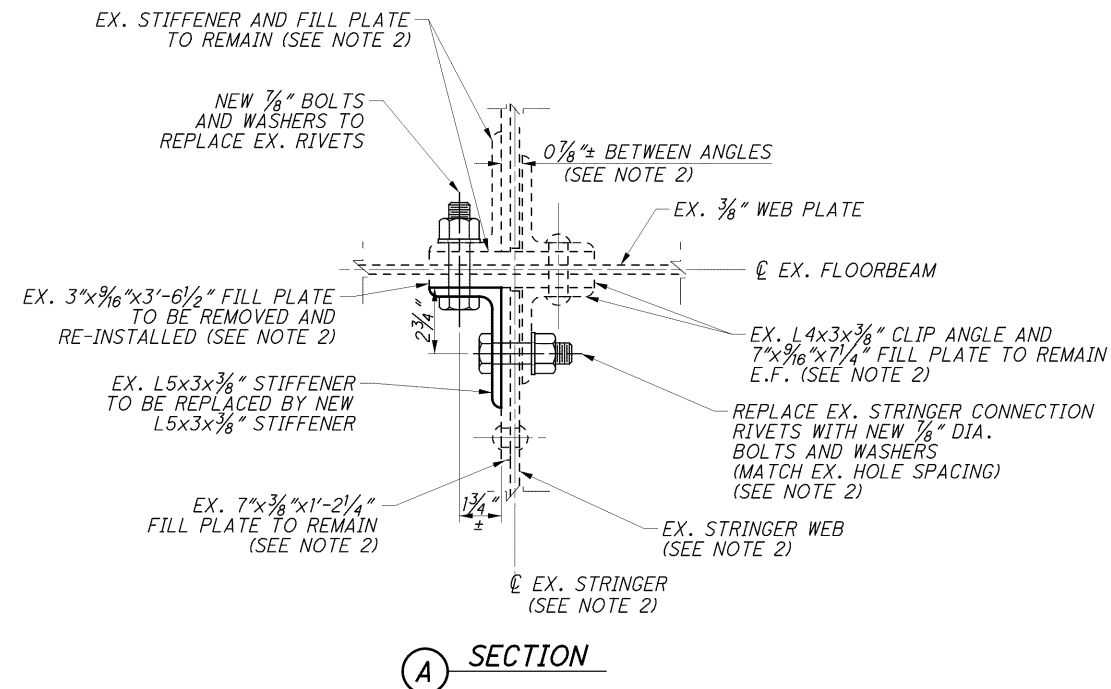
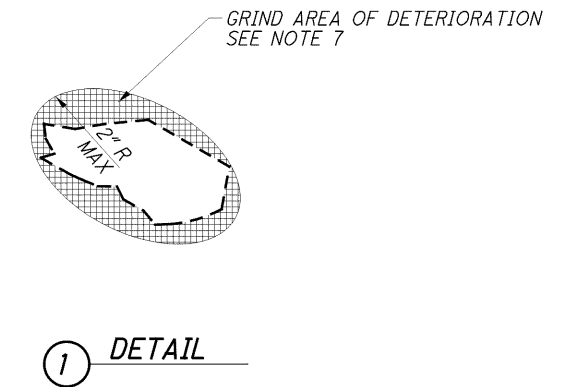
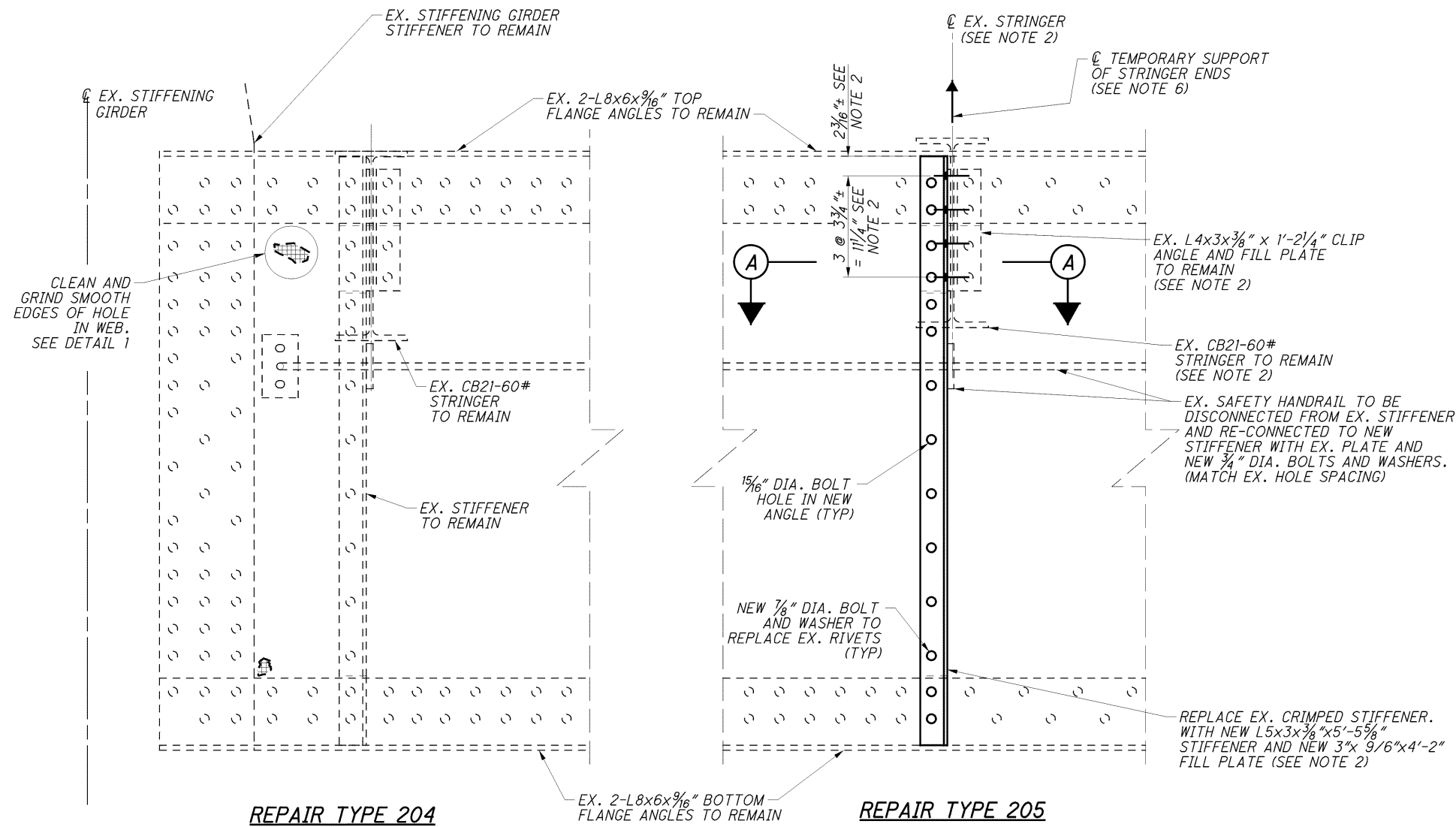
REPAIR TYPE 203TF: Top Flange Angle Repair
Added per 2/7/14 & 3/24/14 Inspections

LUC-2-18.62
PID No. 80551

03/227

$$\frac{175}{327}$$

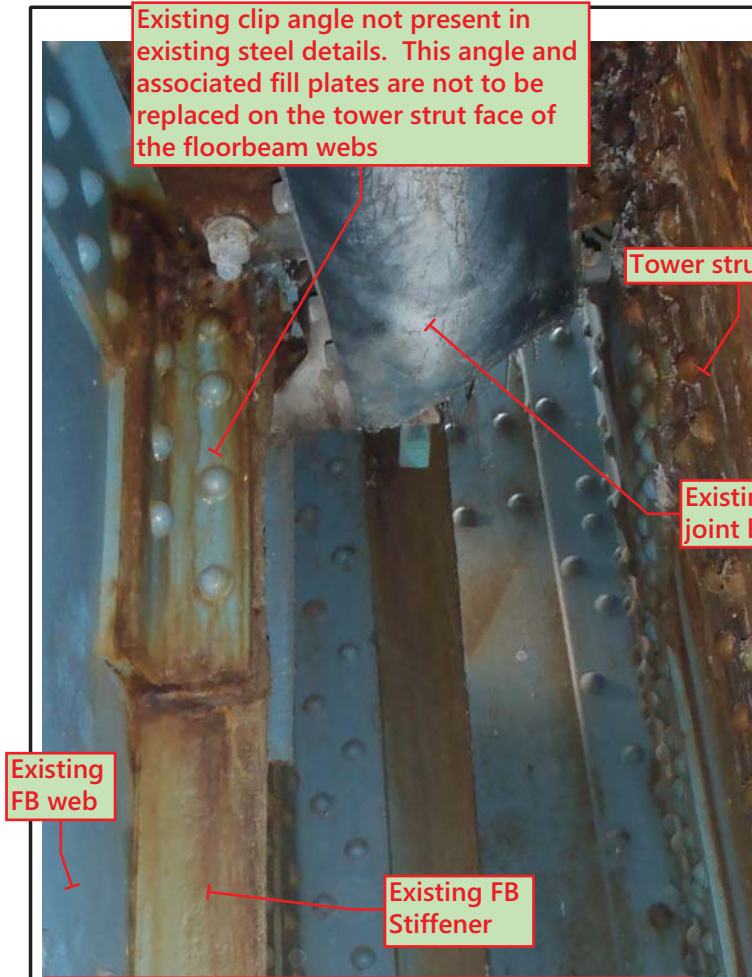
p:\p\01\80551\structures\LUC002_1862C...dms71870\002_1862C\DWG208.dgn PLOT: 10/18/2012 @ 9:56:49 PM BY:redus



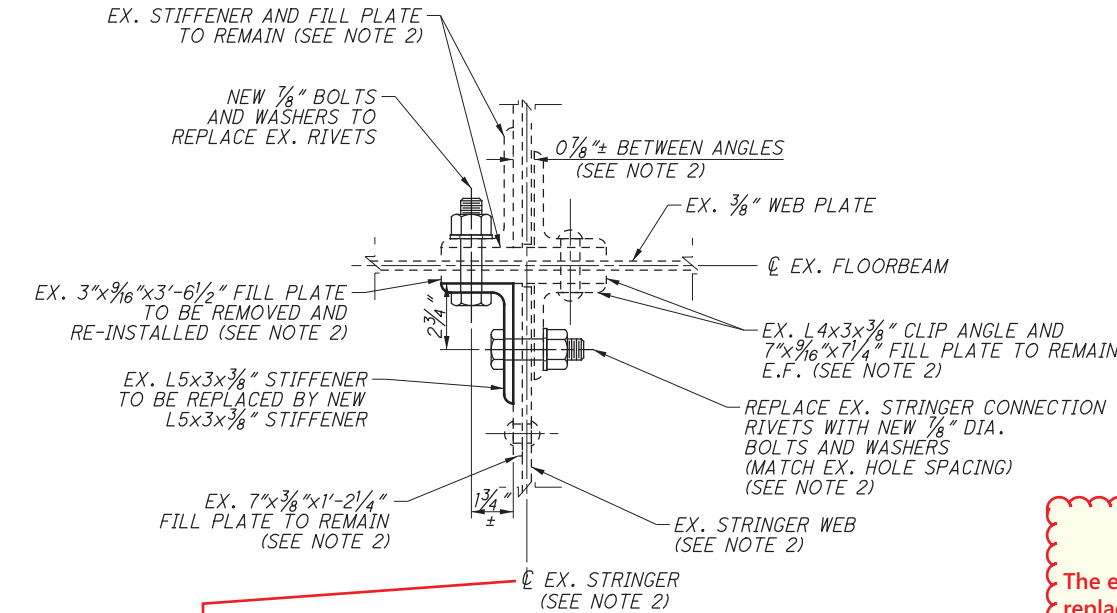
NOTES:

1. FOR ADDITIONAL NOTES AND EXISTING FLOORBEAM DETAILS AND RIVET SPACINGS NOT SHOWN, SEE SHEET [100/227].
2. EXISTING STRINGER AND ASSOCIATED STRINGER CONNECTIONS AND ANGLES ARE NOT PRESENT AT CRIMPED STIFFENERS.
3. FOR REPAIR TYPE 204 LOCATIONS, SEE SHEETS [78/227] THROUGH [83/227].
4. FOR REPAIR TYPE 205 LOCATIONS, SEE SHEETS [78/227] THROUGH [83/227].
5. FOR DESCRIPTIONS OF REPAIR TYPES 204 & 205, SEE SHEET [14/227].
6. TEMPORARY STRINGER SUPPORT IS REQUIRED FOR REPAIR TYPE 205. FOR REQUIRED CAPACITY OF STRINGER END TEMPORARY SUPPORT, SEE EXISTING STRINGER CONNECTION DETAIL ON SHEET [111/227].
7. GRIND DETERIORATED AREAS TO PRODUCE A SMOOTH EDGE. THE THICKNESS OF REMAINING MATERIAL SHOULD BE GREATER THAN $\frac{1}{4}$ " THICK AT THE GRIND LINE. THE MAXIMUM RADIUS OF ACUTE CORNERS SHOULD NOT EXCEED 2".

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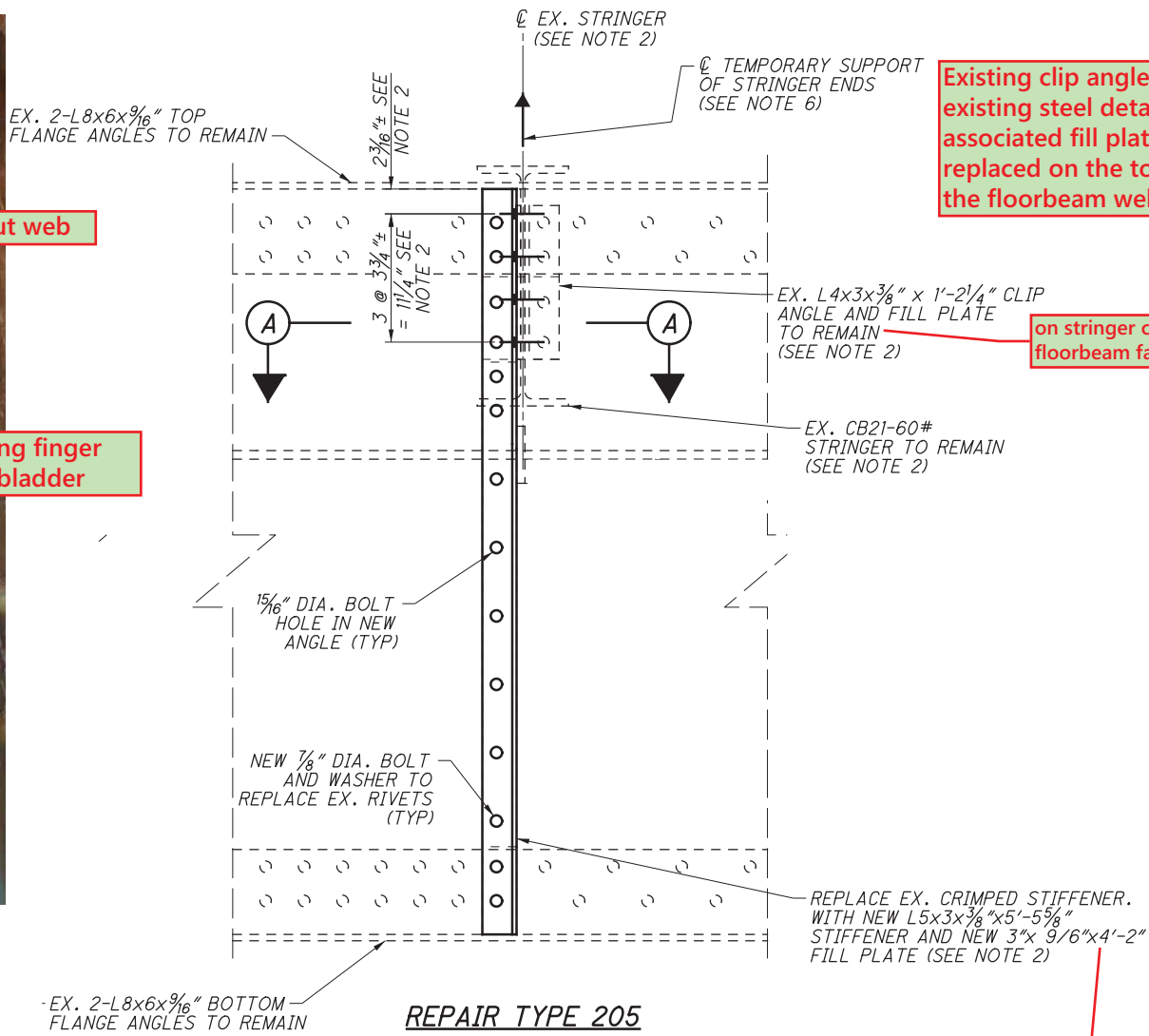


Unexpected Stiffener Detail



On the tower strut face, there is no stringer but it appears that the clip angles and fill plates were added. If present, these should not be replaced. Only a stiffener should be present on the tower strut face.

A SECTION



APPROVED
By Eric F. Dues, P.E. at 5:14 pm, Apr 02, 2014

REPAIR TYPE 205

The existing floorbeam stiffeners adjacent to the tower strut should be replaced with stiffeners and fill plates as part of the suspension span Stage 6 deck and joint replacement. This repair is necessary because the existing condition and modified stiffener arrangement will not work with the proposed modular joint support details. Existing clip angles on the stringer face of the floorbeams may be reused. Clip angles on the tower strut face of the floorbeams shall not be replaced.

Existing clip angle not present in existing steel details. This angle and associated fill plates are not to be replaced on the tower strut face of the floorbeam webs

on stringer connection floorbeam face

Existing FB web

Existing FB Stiffener

Poor Stiffener Condition

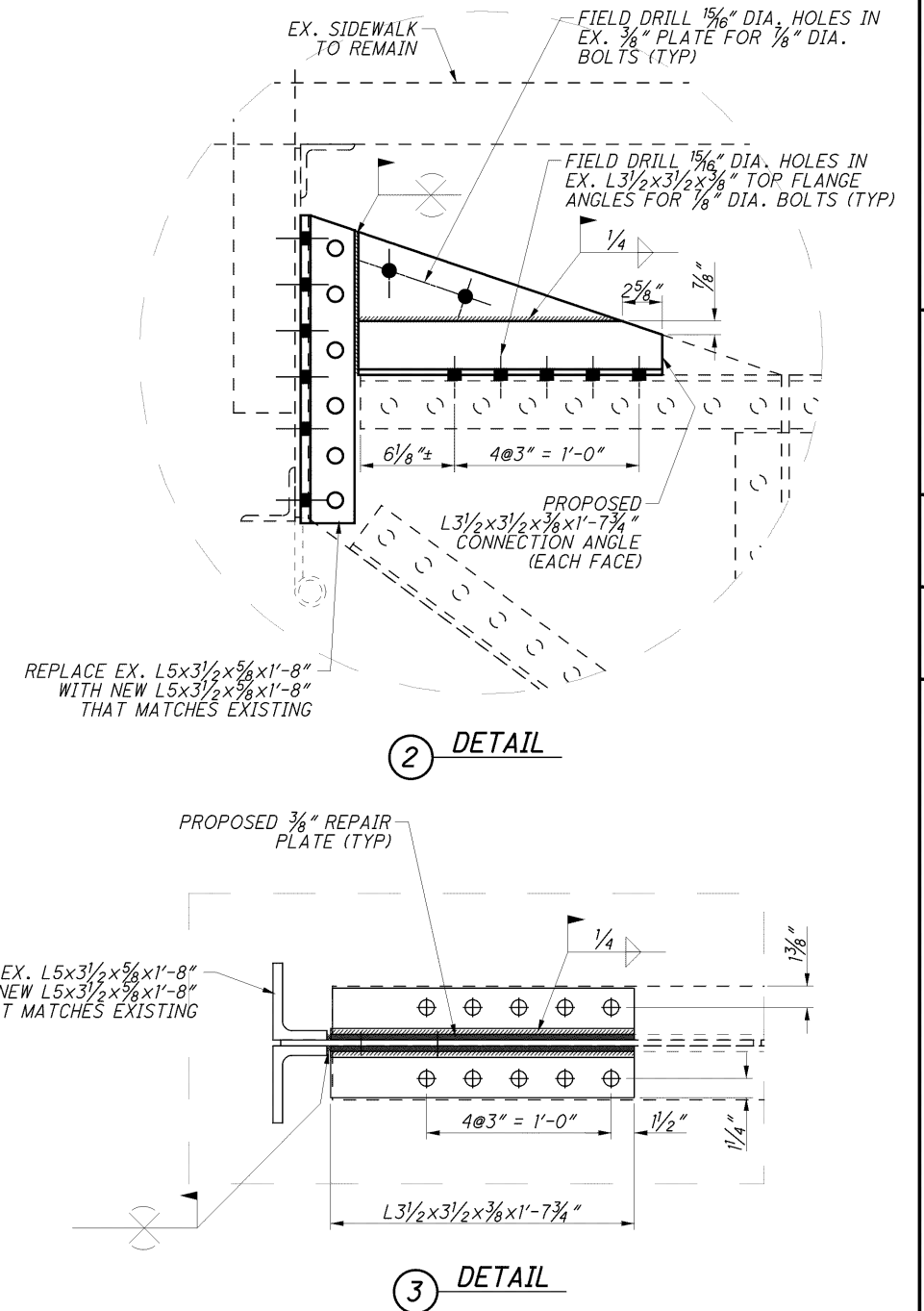
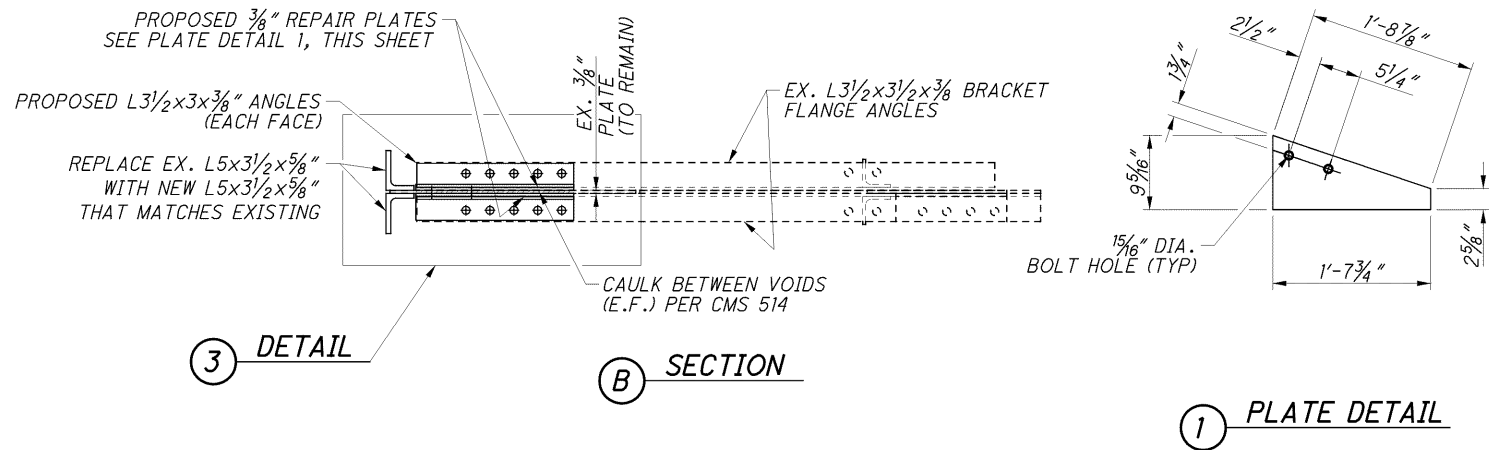


- NOTES:**
1. FOR ADDITIONAL NOTES AND EXISTING FLOORBEAM DETAILS AND RIVET SPACINGS NOT SHOWN, SEE SHEET 100/227.
 2. EXISTING STRINGER AND ASSOCIATED STRINGER CONNECTIONS AND ANGLES ARE NOT PRESENT AT CRIMPED STIFFENERS.
 5. FOR DESCRIPTIONS OF REPAIR TYPE. 205, SEE SHEET 14/227.
 6. TEMPORARY STRINGER SUPPORT IS REQUIRED FOR REPAIR TYPE 205. FOR REQUIRED CAPACITY OF STRINGER END TEMPORARY SUPPORT, SEE EXISTING STRINGER CONNECTION DETAIL ON SHEET 111/227.

REPAIR TYPE 205: Details of Floorbeam Stiffener replacement at Tower Face of Joint Floorbeams

DESIGN AGENCY				
 Gannett Fleming ENGINEERS & ARCHITECTS, P.C. 401 EXECUTIVE PARKWAY SUITE 300 WESTERVILLE, OHIO 43081				
DESIGNED		DRAWN	REVIEWED	DATE
EFD		EFD	PLC	8/12
CHECKED		REVISED	STRUCTURE FILE NUMBER	
MTO			4800303	
BRIDGE NO. LUC - 2 - 1862				
STATE ROUTE 2 OVER MAUMEE RIVER				
replacement at lower Face of Joint Floorbeams				
LUC-2-18.62				
PID No. 80551				
104/227				
176 327				

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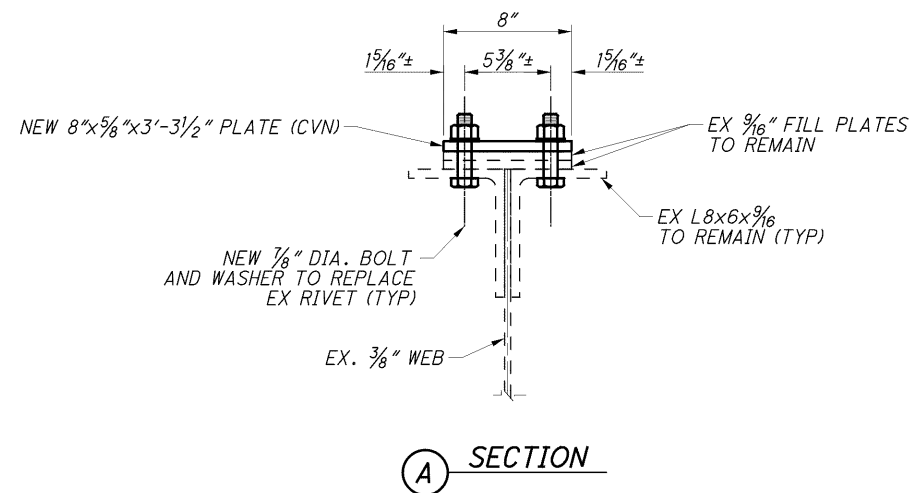
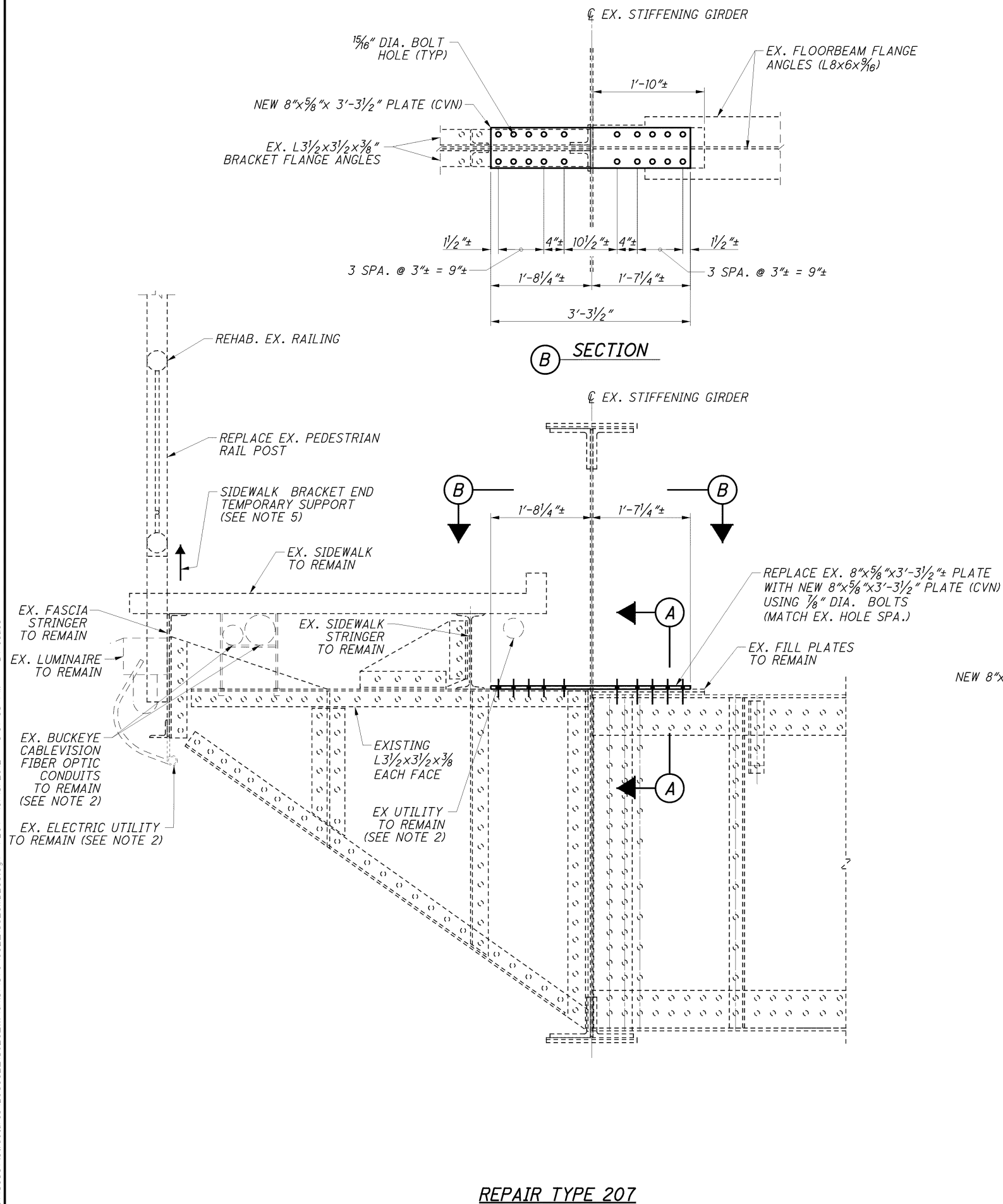


NOTES:

1. SEE SHEET 100227 FOR ADDITIONAL NOTES.
2. UTILITIES SHOWN AT REPRESENTATIVE LOCATIONS. ACTUAL FIELD LOCATIONS VARY. SEE SHEETS 1227 THROUGH 7227 FOR DISPOSITION OF EXISTING UTILITIES.
3. FOR LOCATIONS OF REPAIR, SEE SHEETS 78227 THROUGH 83227.
4. FOR REPAIR DESCRIPTION, SEE SHEET 14227.
5. FASCIA STRINGER TEMPORARY END SUPPORT SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED LOAD OF 5 KIPS, WHICH INCLUDES AN ALLOWANCE FOR 50 PSF CONSTRUCTION LOAD APPLIED TO THE TRIBUTARY AREA OF THE STRINGER. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN AND DETAILS AND THE AFFECTS OF ANY COMBINATION OF ANY CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 50 PSF.

REPAIR TYPE 206

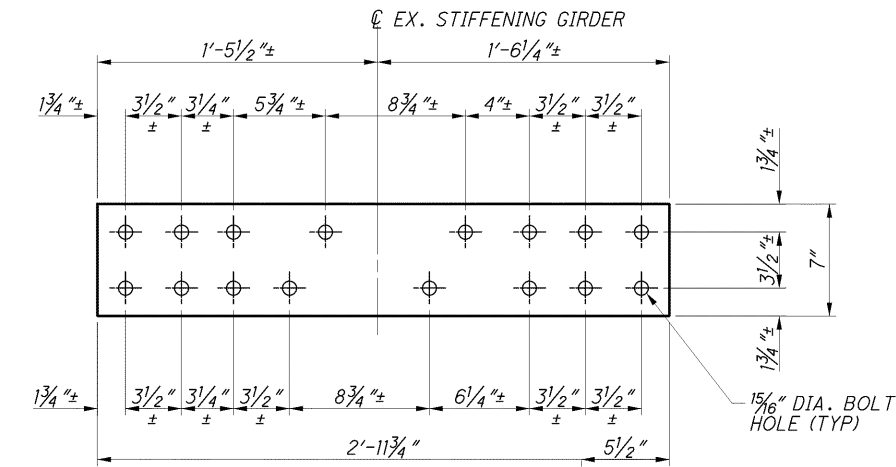
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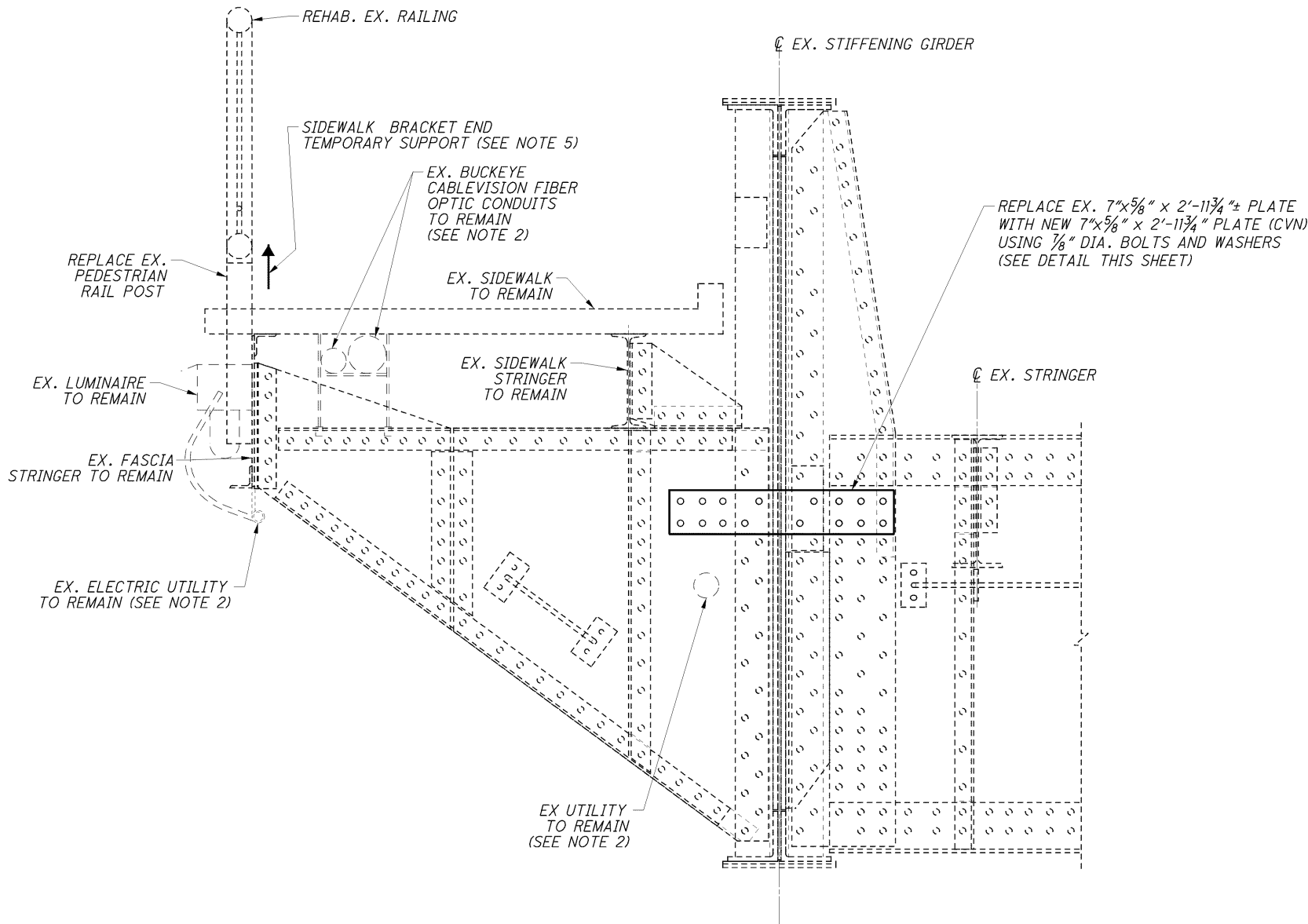
- NOTES:**
1. SEE SHEET 100/227 FOR ADDITIONAL NOTES.
 2. UTILITIES SHOWN AT REPRESENTATIVE LOCATIONS. ACTUAL FIELD LOCATIONS VARY. SEE SHEETS 1/227 THROUGH 7/227 FOR DISPOSITION OF EXISTING UTILITIES.
 3. FOR LOCATIONS OF REPAIR, SEE SHEETS 78/227 THROUGH 83/227.
 4. FOR REPAIR DESCRIPTION, SEE SHEET 14/227.
 5. SIDEWALK BRACKET TEMPORARY END SUPPORT SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED LOAD OF 13 KIPS, WHICH INCLUDES AN ALLOWANCE FOR 50 PSF CONSTRUCTION LOAD APPLIED TO THE SIDEWALK. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN AND DETAILS AND ANY AFFECTS OF ANY COMBINATION OF CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 50 PSF.

REPAIR TYPE 207

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SIDEWALK BRACKET WEB STRAP PLATE DETAIL (CVN)

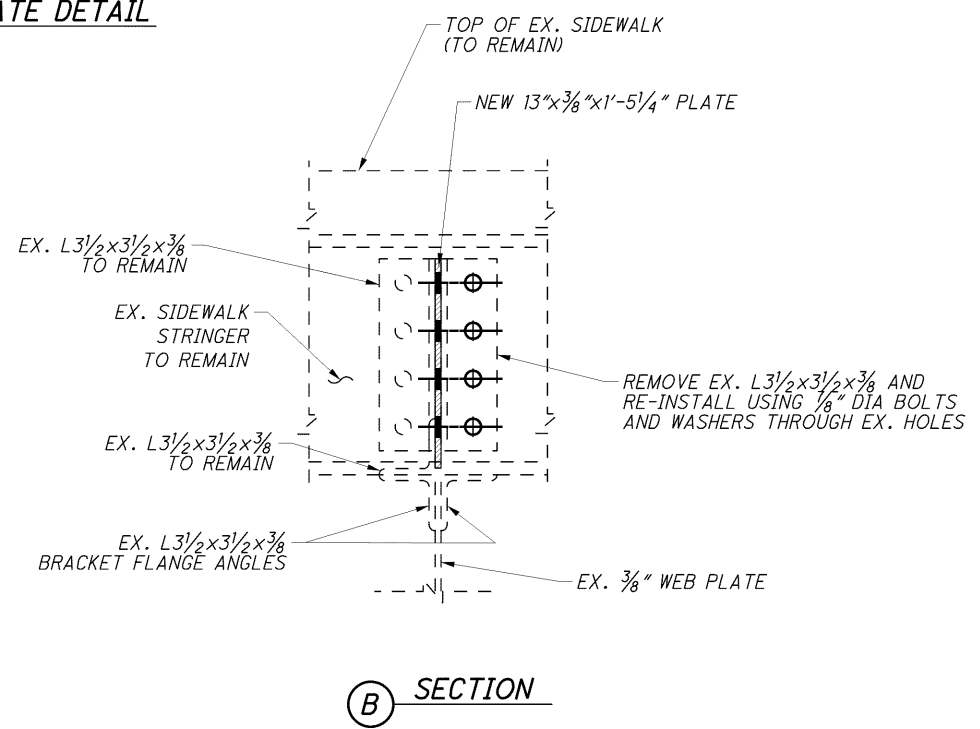
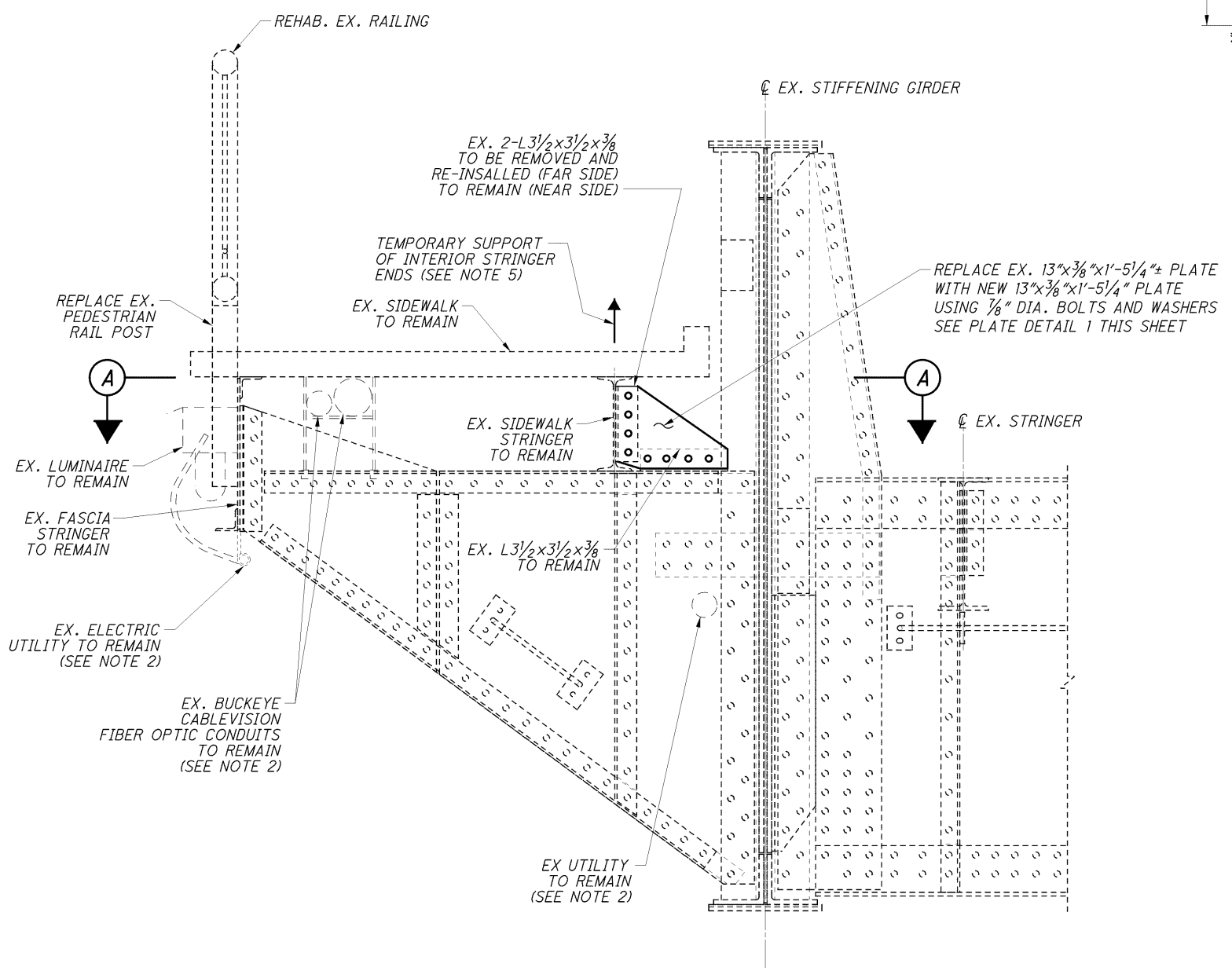
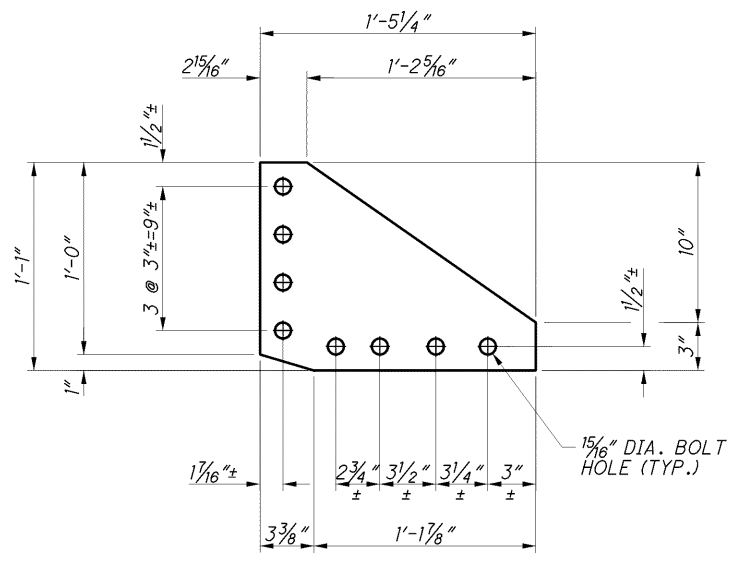
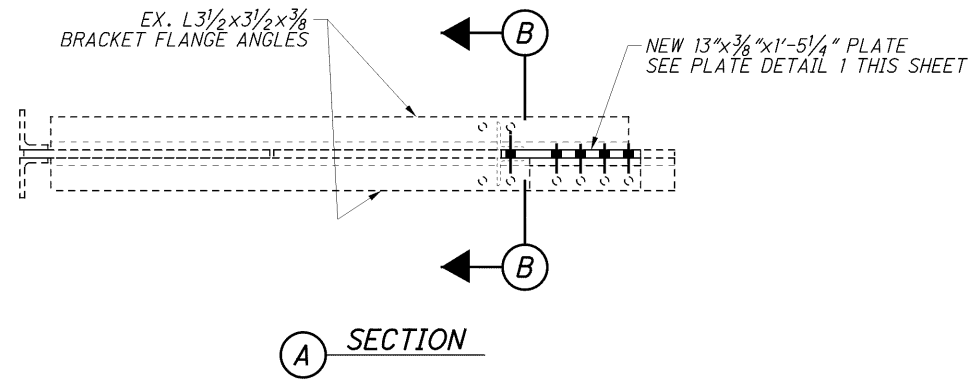


REPAIR TYPE 208

NOTES:

1. SEE SHEET [100/227] FOR ADDITIONAL NOTES.
2. UTILITIES SHOWN AT REPRESENTATIVE LOCATIONS. ACTUAL FIELD LOCATIONS VARY. SEE SHEETS [1/227] THROUGH [7/227] FOR DISPOSITION OF EXISTING UTILITIES.
3. FOR LOCATIONS OF REPAIR, SEE SHEETS [78/227] THROUGH [83/227].
4. FOR REPAIR DESCRIPTION, SEE SHEET [14/227].
5. FOR SIDEWALK BRACKET END TEMPORARY SUPPORT INFORMATION, SEE NOTE 5 ON SHEET [106/227].

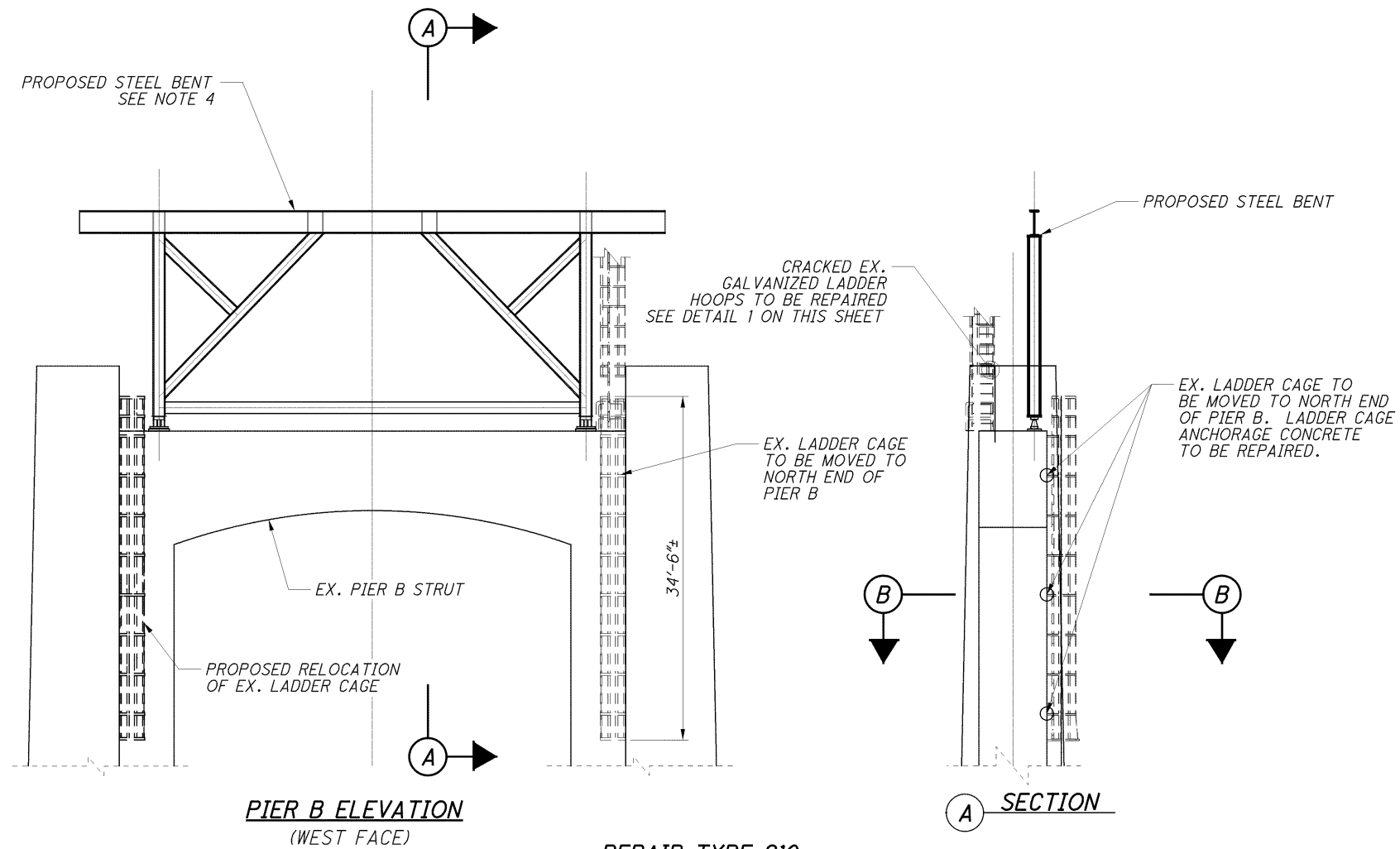
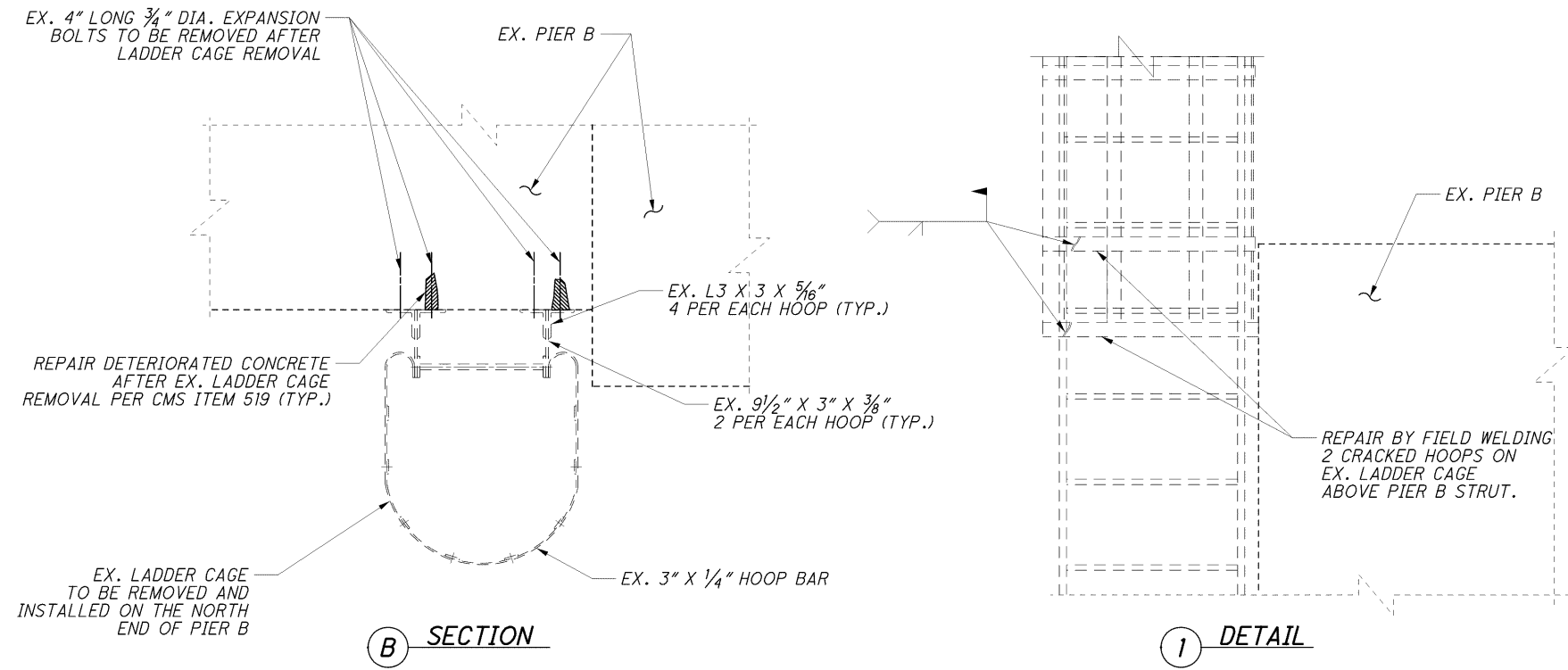
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REPAIR TYPE 209

- NOTES:**
1. SEE SHEET 100227 FOR ADDITIONAL NOTES.
 2. UTILITIES SHOWN AT REPRESENTATIVE LOCATIONS. ACTUAL FIELD LOCATIONS VARY. SEE SHEETS 1227 THROUGH 7227 FOR DISPOSITION OF EXISTING UTILITIES.
 3. FOR LOCATIONS OF REPAIR, SEE SHEETS 78227 THROUGH 83227.
 4. FOR REPAIR DESCRIPTION, SEE SHEET 14227.
 5. INTERIOR STRINGER END TEMPORARY SUPPORT SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED LOAD OF 4.5 KIPS, WHICH INCLUDES AN ALLOWANCE FOR 50 PSF CONSTRUCTION LOAD APPLIED TO THE TRIBUTARY AREA OF THE STRINGER. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN AND DETAILS AND THE AFFECTS OF ANY COMBINATION OF CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 50 PSF.

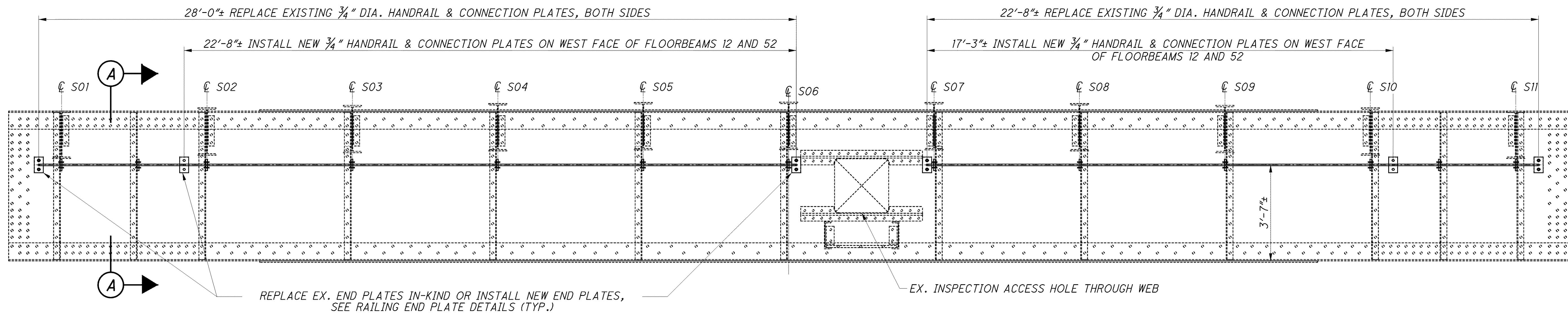
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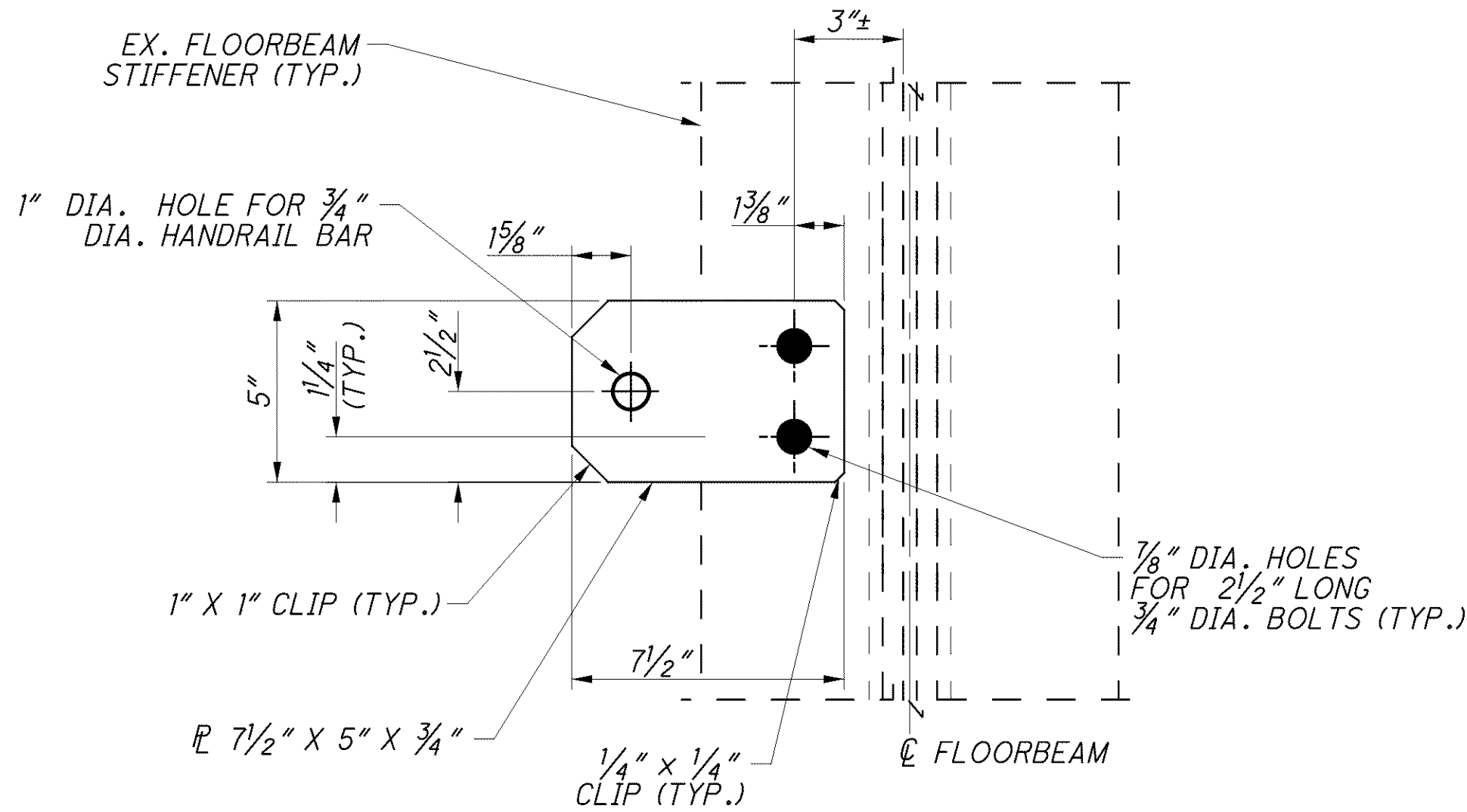
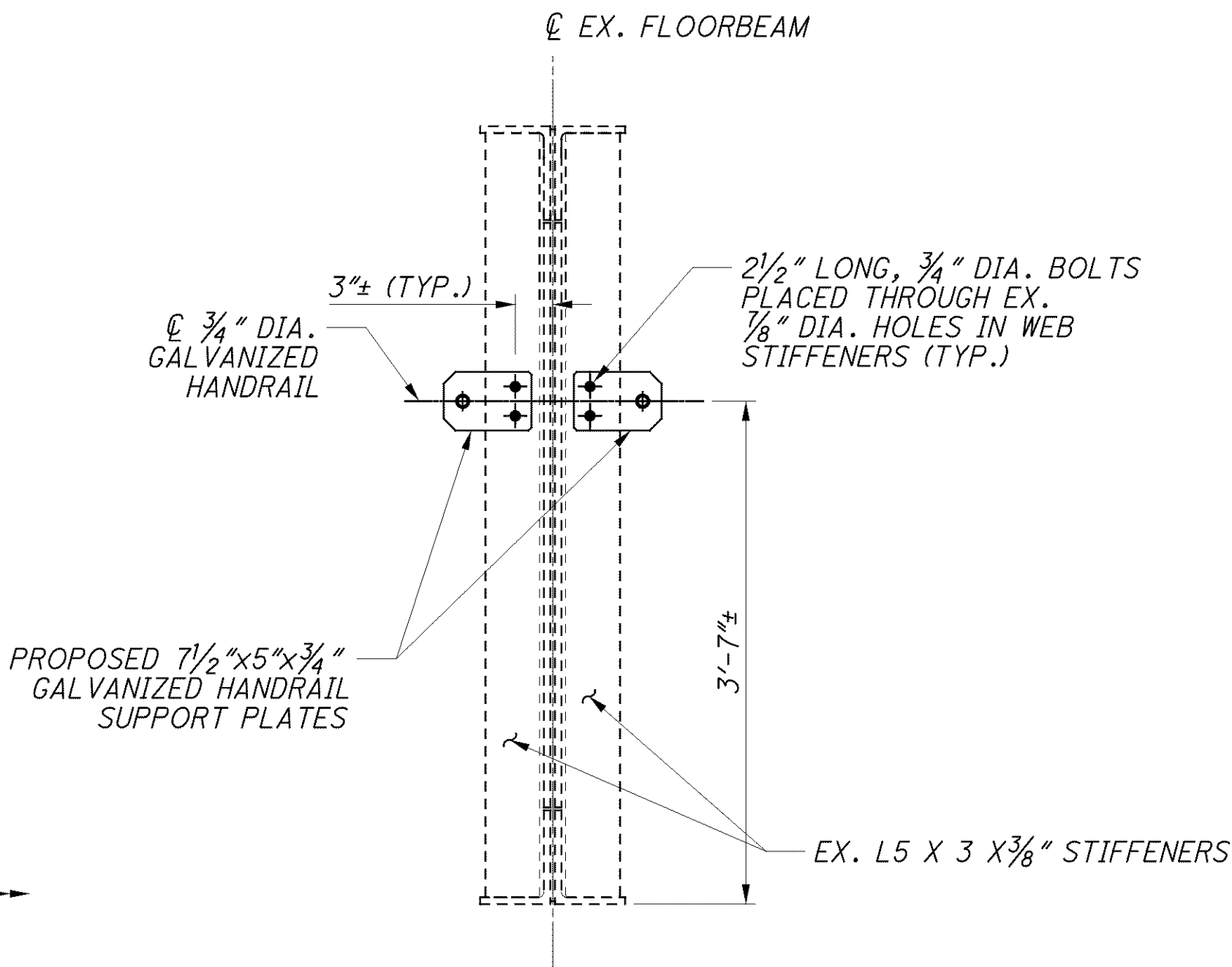
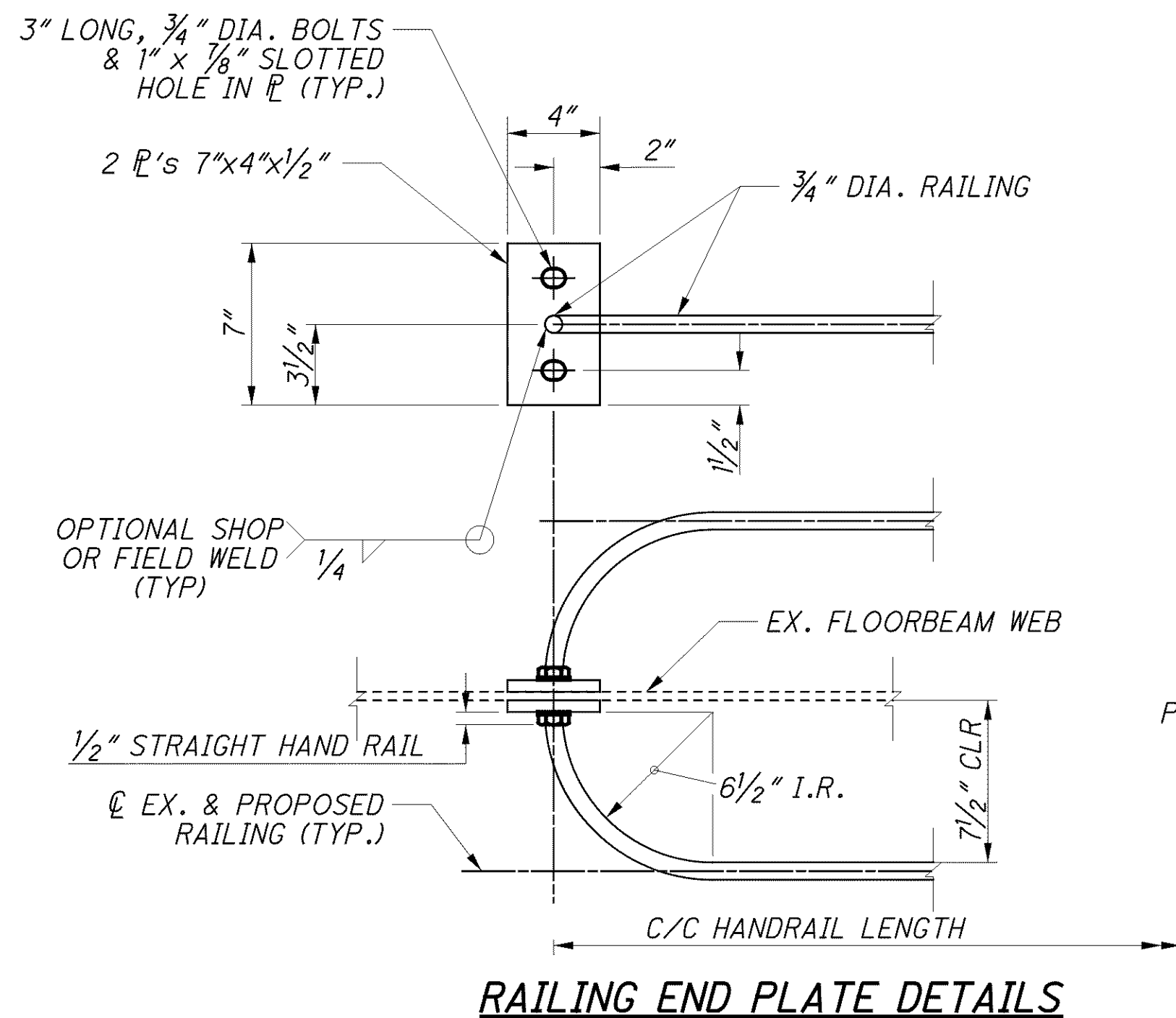
NOTES:

1. RELOCATION OF LADDER CAGE MUST BE COORDINATED WITH PIER B CONCRETE REPAIRS SHOWN ON SHEET 45/227 & 69/227 AND 70/227.
2. FOR REPAIR LOCATIONS, SEE SHEET 78/227.
3. FOR REPAIR DESCRIPTION, SEE SHEET 15/227.
4. FOR PROPOSED BENT DETAILS, SEE SHEET 69/227.

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REPAIR TYPE 211 & 212



RAILING SUPPORT PLATE DETAIL

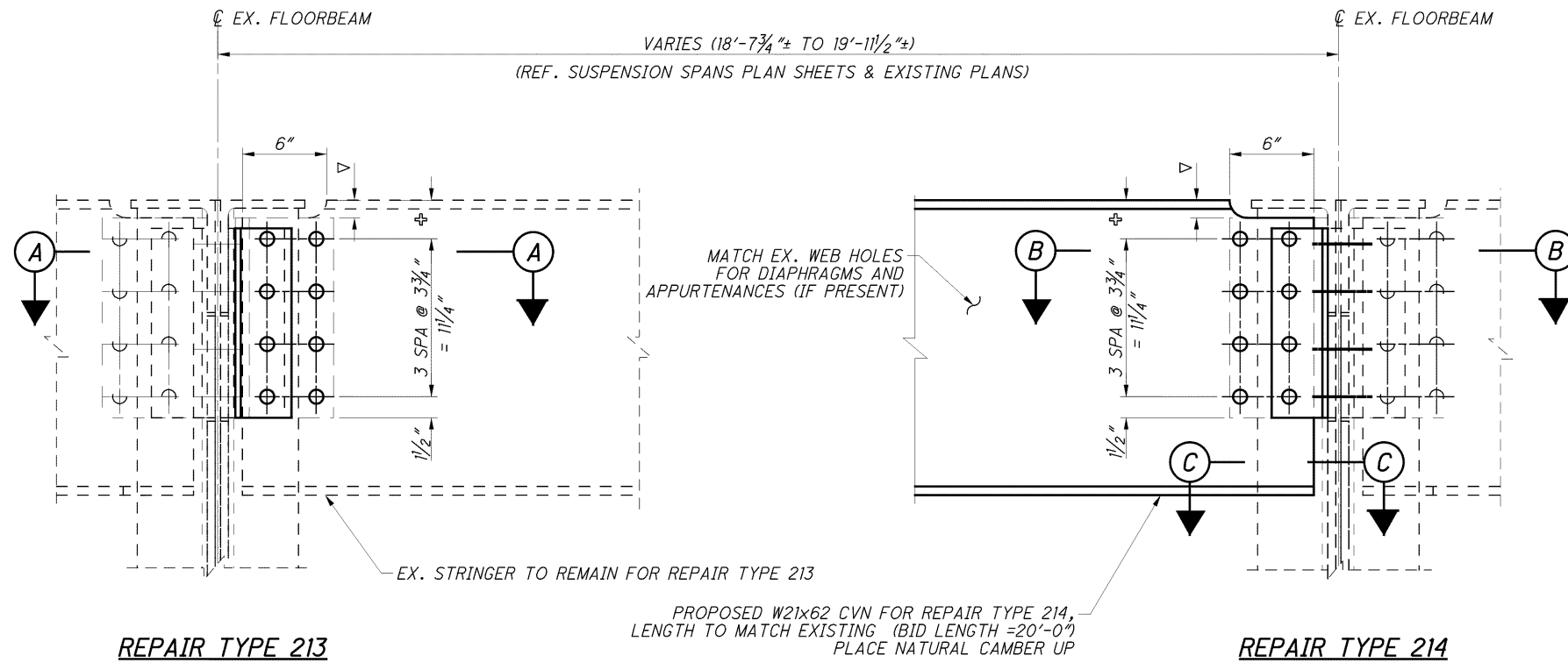
(PLATE ON OPPOSITE SIDE OF WEB NOT SHOWN FOR CLARITY)

NOTES:

1. NEW HANDRAILS, SUPPORT PLATES, END PLATES, BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AS PER CMS 711.02.
2. FOR REPAIR LOCATIONS, SEE SHEET 78|227 THRU 83|227
3. FOR REPAIR DESCRIPTION, SEE SHEET 15|227.

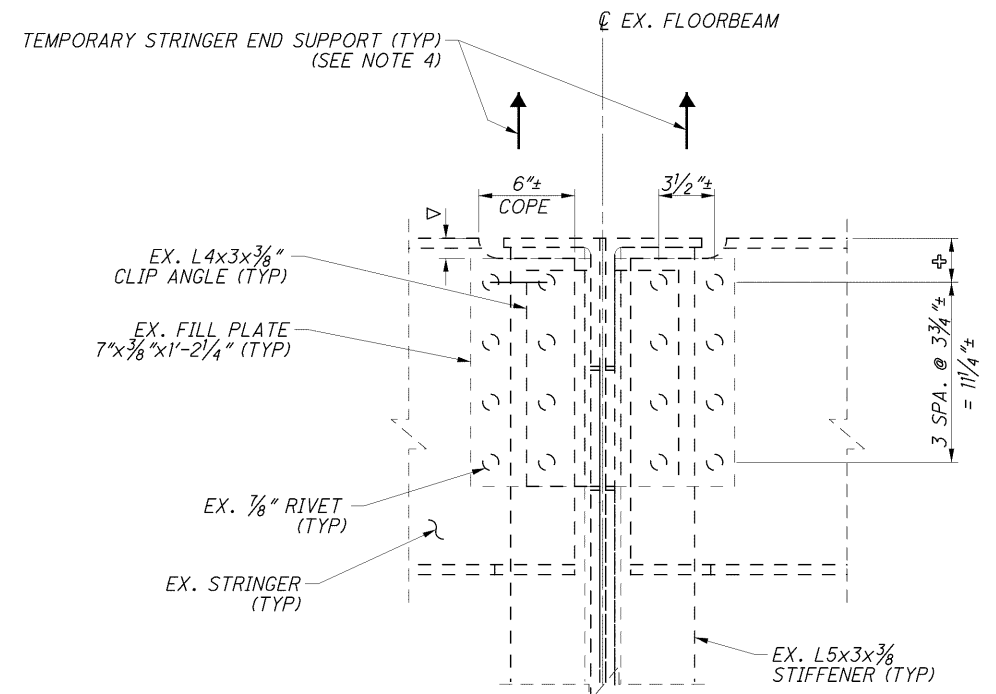
SUSPENSION SPANS INSPECTION ACCESS RAILINGS						
REPAIR TYPE	FLOORBEAMS	# OF 17'-3" C/C HANDRAILS PER FB	# OF 22'-8" C/C HANDRAILS PER FB	# OF 28'-0" C/C HANDRAILS PER FB	# OF SUPPORT PLATES PER FB	# OF END PLATES PER FB
211 INSTALL NEW HANDRAIL	12, 52	1	1	0	9	4
212 REPLACE EXIST. HANDRAIL	2, 4, 6, 8, 10, 15, 17, 19, 21, 23, 25, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 55, 57, 59, 61, 63	0	2	2	26	8

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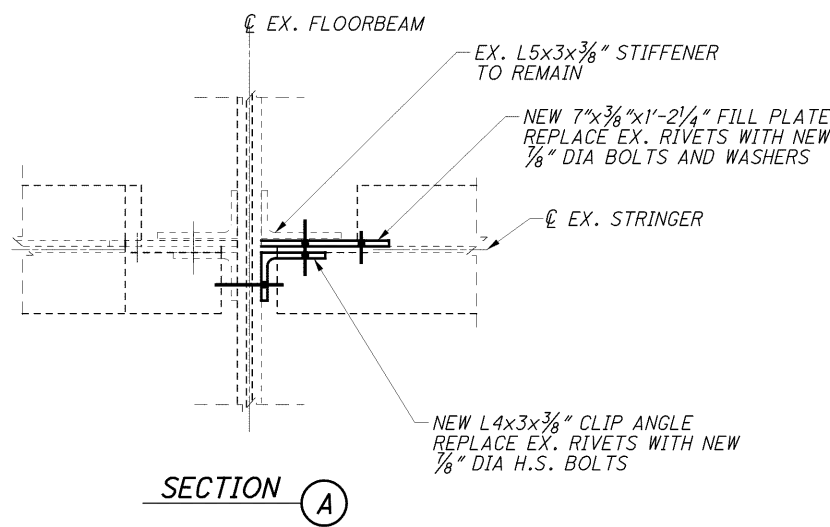


REPAIR TYPE 213

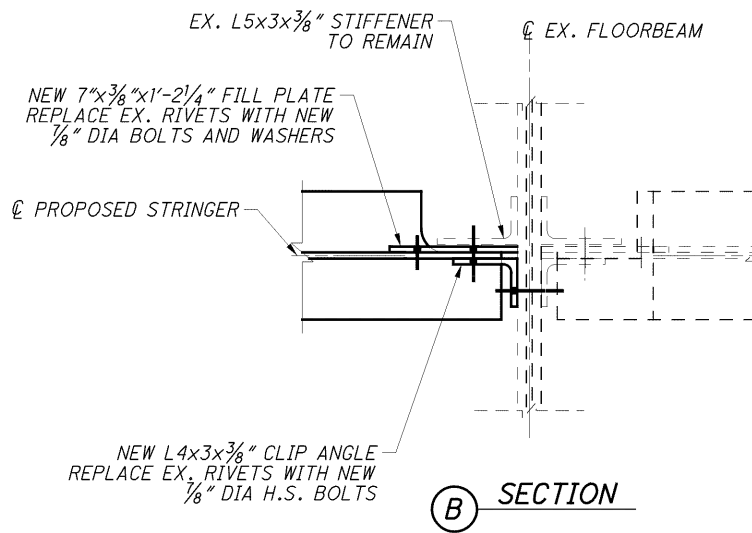
REPAIR TYPE 214



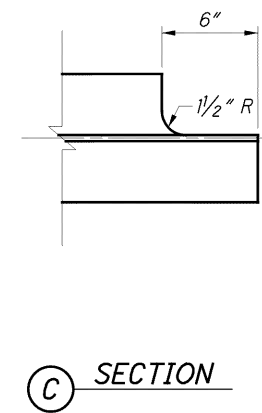
EXISTING STRINGER CONNECTION DETAIL



SECTION A



SECTION B



SECTION C

COPE DIMENSIONS

- $\nabla = 1\frac{1}{4}''$ FOR S01 AND S11
- $\nabla = 2\frac{1}{16}''$ FOR S02 AND S10
- $\nabla = 3\frac{1}{16}''$ FOR S03 AND S09

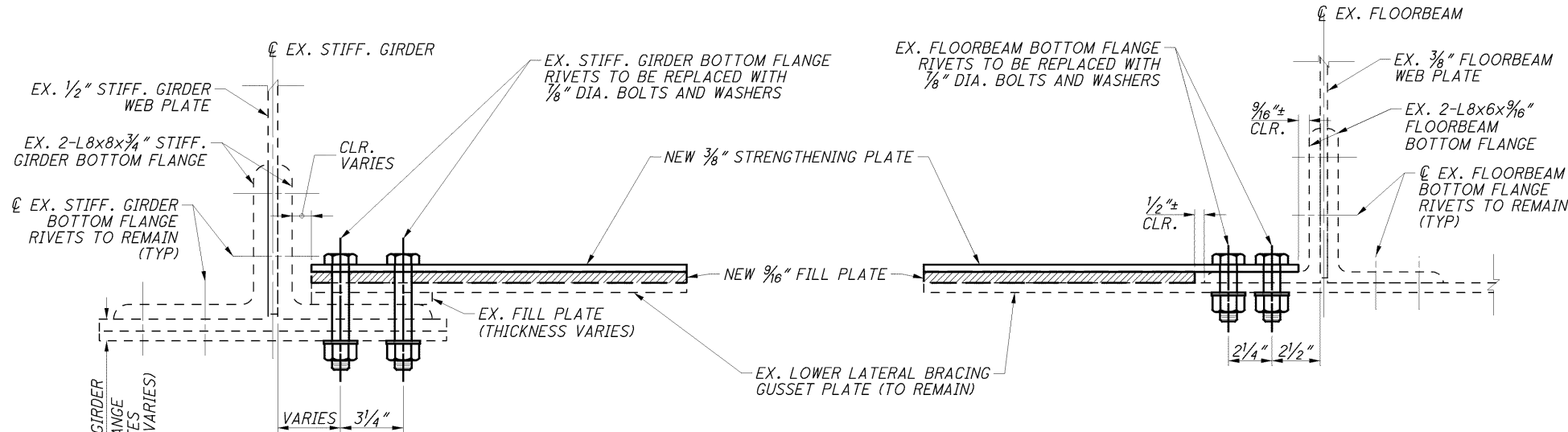
BOLT PATTERN DIMENSIONS

- $\oplus = 2\frac{3}{4}''$ FOR S01 AND S11
- $\oplus = 4\frac{3}{16}''$ FOR S02 AND S10
- $\oplus = 5\frac{5}{16}''$ FOR S03 AND S09

NOTES:

- FOR ADDITIONAL NOTES AND EXISTING FLOORBEAM DETAILS AND RIVET SPACINGS NOT SHOWN, SEE SHEET 100/227.
- FOR REPAIR LOCATIONS, SEE SHEETS 78/227 THRU 82/227.
- FOR REPAIR DESCRIPTIONS, SEE SHEET 15/227.
- TEMPORARY STRINGER END SUPPORT SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED DEAD LOAD OF 9 KIPS, WHICH INCLUDES AN ALLOWANCE FOR 50 PSF CONSTRUCTION DEAD LOAD APPLIED TO THE TRIBUTARY AREA OF THE STRINGER. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN AND CONTRIBUTION OF ANY CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 50 PSF.

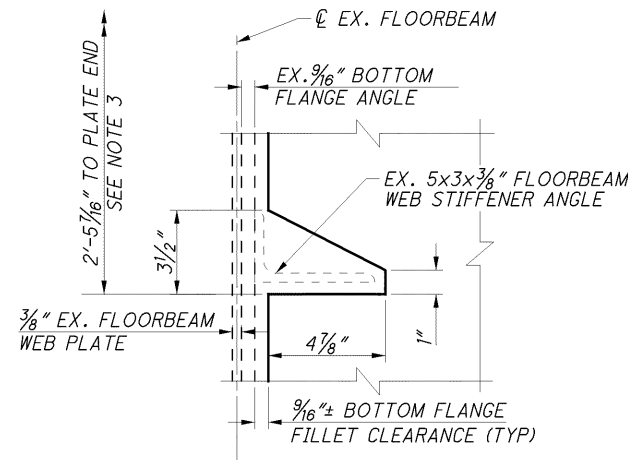
p:\...ofbw01\80551\structures\LUC002_1862C...dms71870\002_1862C\DWG226.dgn PLOT: 10/18/2012 @ 9:57:48 PM BY:edues



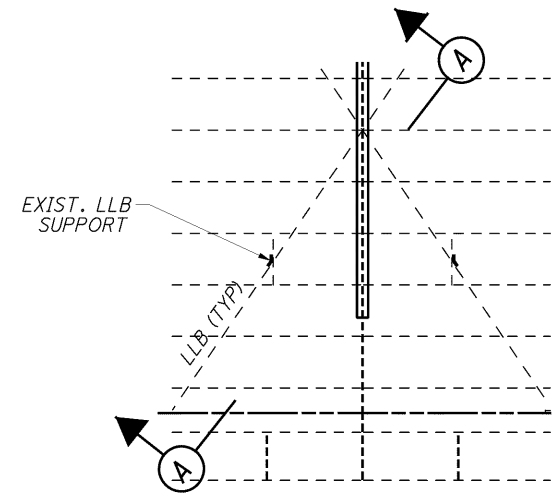
B
113
114
115
116
SECTION AT STIFF GIRDER
EX. LLB NOT SHOWN FOR CLARITY

REPAIR TYPE 215, 216 & 217

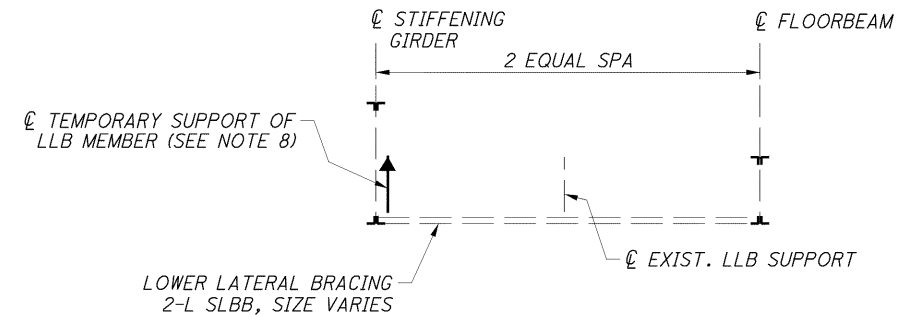
A
113
114
115
116
SECTION AT FLOORBEAM
EX. LLB NOT SHOWN FOR CLARITY



C
113
114
115
116
DETAIL
BOLT HOLES NOT SHOWN FOR CLARITY



PLAN - TYPICAL LOWER LATERAL BRACING

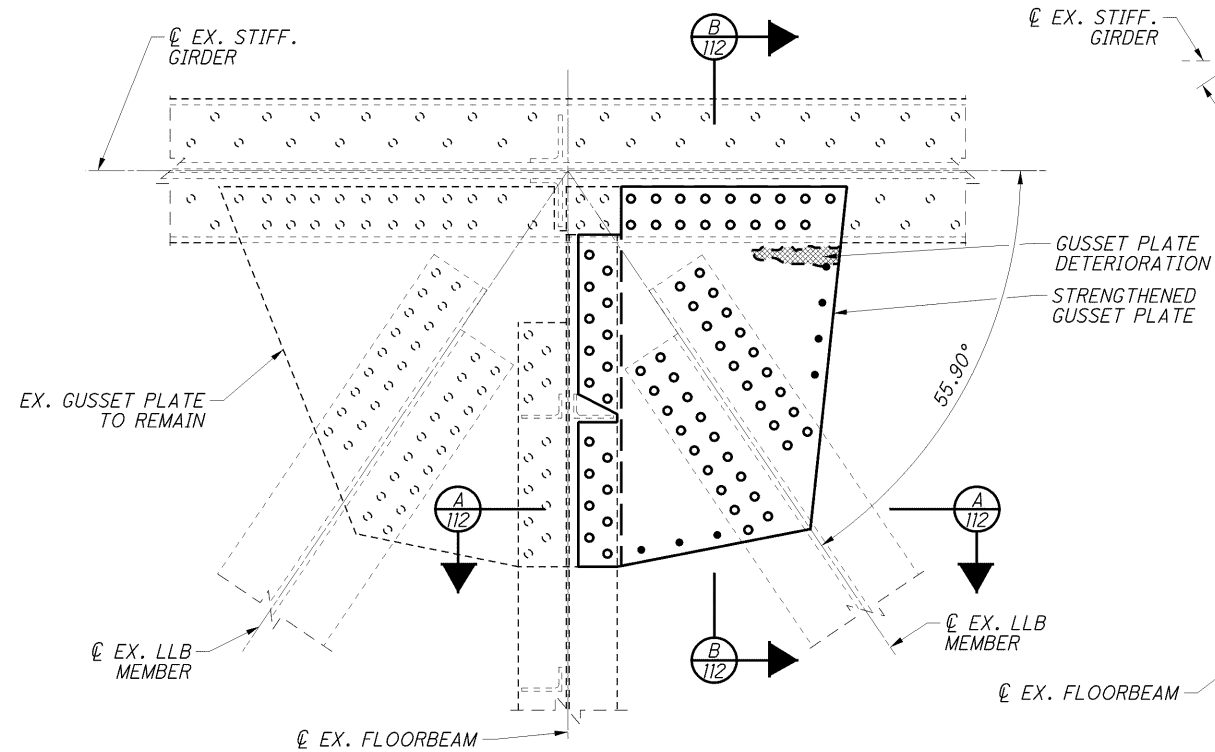


A **SECTION**

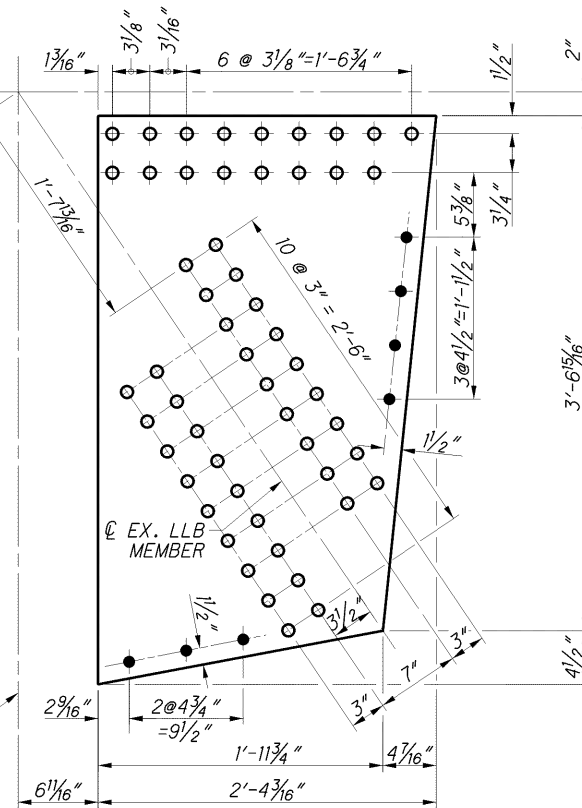
NOTES:

1. FOR ADDITIONAL NOTES AND EXISTING FLOORBEAM DETAILS AND RIVET SPACINGS NOT SHOWN, SEE SHEET 100/227.
2. = NEW 9/16" FILL PLATE
LLB = LOWER LATERAL BRACE
3. FOR REPAIR TYPE 215 PLAN AND DETAILS SEE SHEETS 113/227 AND 114/227.
FOR REPAIR TYPE 216 PLAN AND DETAILS SEE SHEET 115/227.
FOR REPAIR TYPE 217 PLAN AND DETAILS SEE SHEETS 115/227 AND 116/227.
4. FOR LOWER LATERAL BRACE REPAIRS (REPAIR TYPE 218) SEE SHEET 117/227.
5. GUSSET PLATE DIMENSIONS SHOWN IN THESE PLANS ARE FROM DIMENSIONS AND SCALING OFF OF EXISTING PLANS. ALL DIMENSIONS SHALL BE CONSIDERED "±" AND FIELD VERIFIED UNLESS NOTED OTHERWISE.
6. FOR REPAIR LOCATIONS, SEE SHEETS 78/227 THROUGH 83/227.
7. FOR REPAIR DESCRIPTION, SEE SHEET 15/227.
8. 1.0 KIPS CAPACITY IS REQUIRED FOR TEMPORARY SUPPORT OF LOWER LATERAL BRACING DEAD LOAD FOR REPAIRS 215, 216, 217 & 218.

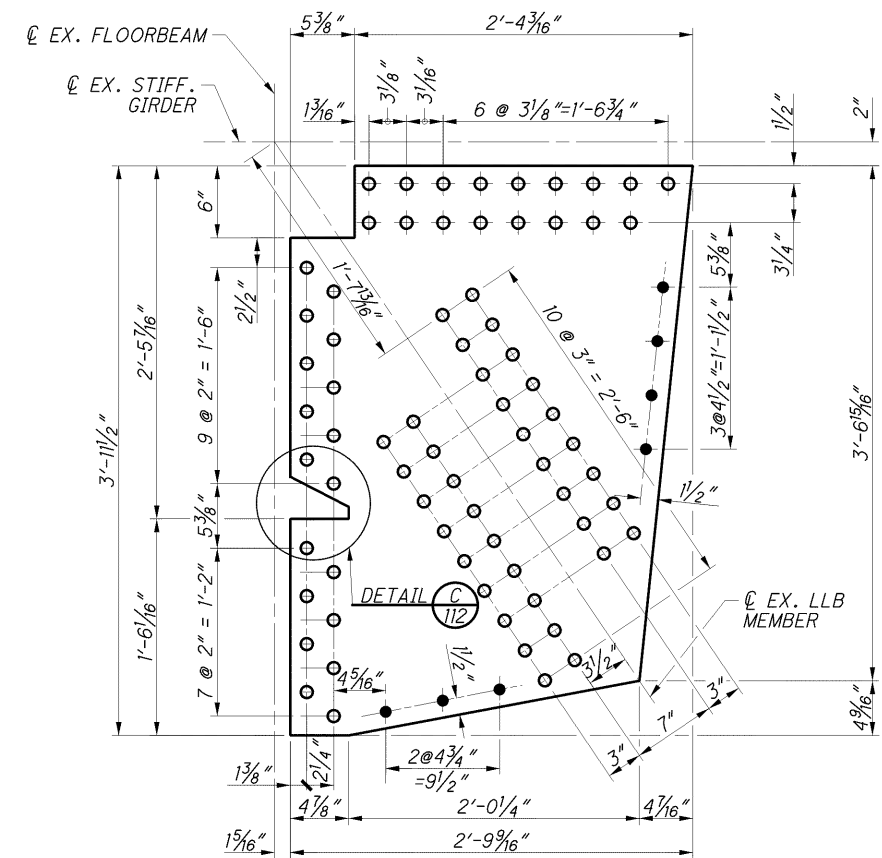
p:\p\01\80551\structures\LUC002_1862C\dms71870\002_1862C\DWG203.dgn PLOT: 10/18/2012 @ 9:57:56 PM BY:redus



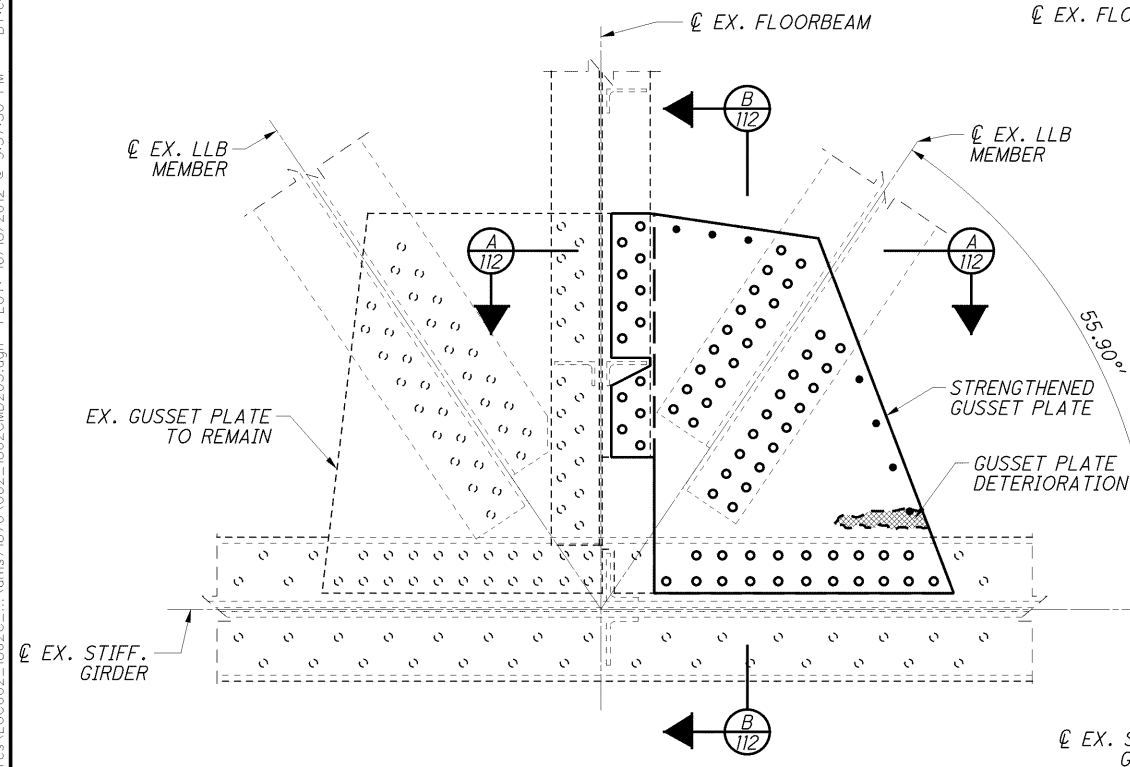
REPAIR TYPE 215A
FLOORBEAM 18 GUSSET PLATE



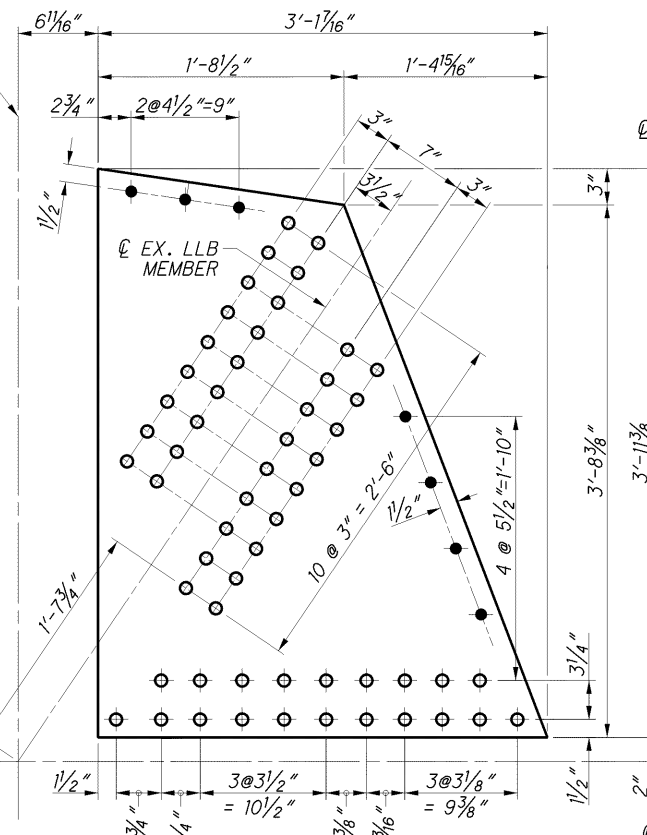
REPAIR TYPE 215A
(FILL PLATE DETAIL)



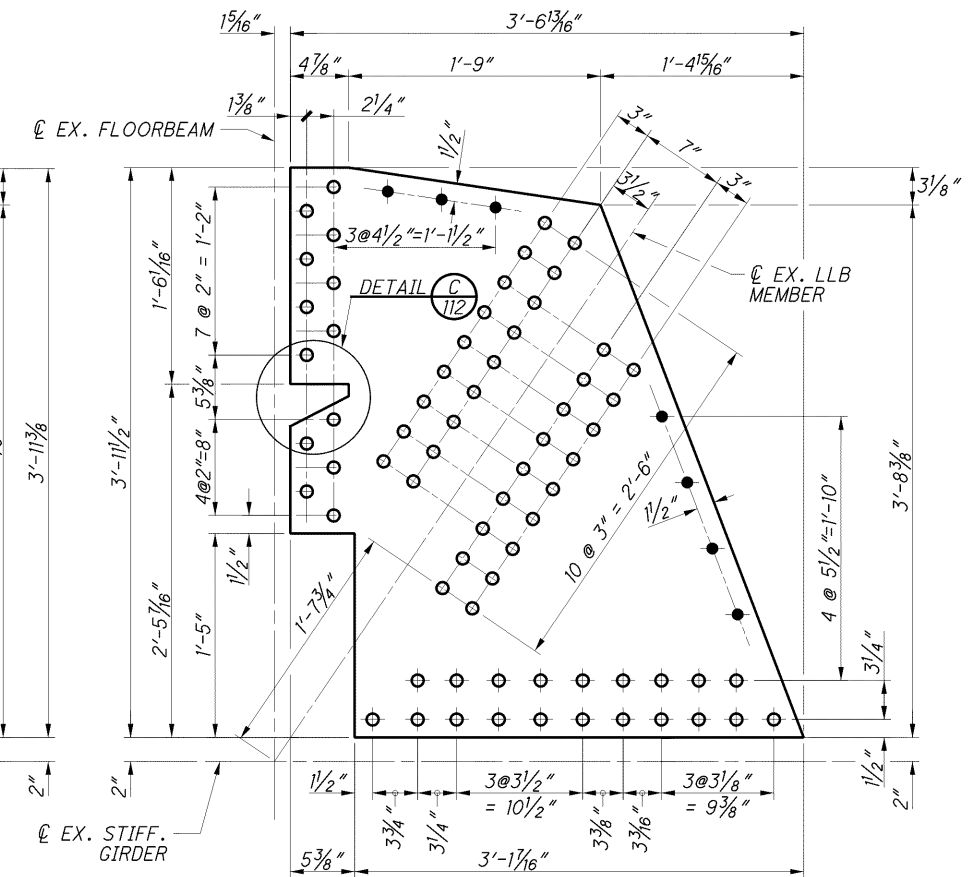
REPAIR TYPE 215A
(STRENGTHENING PLATE DETAIL)



REPAIR TYPE 215B
FLOORBEAM 45 GUSSET PLATE



REPAIR TYPE 215B
(FILL PLATE DETAIL)



REPAIR TYPE 215B
(STRENGTHENING PLATE DETAIL)

- NOTES:**
1. FOR ADDITIONAL NOTES AND ABBREVIATIONS SEE SHEET 112/227.
 2. ALL PROPOSED HOLES ARE 15/16" DIAMETER.

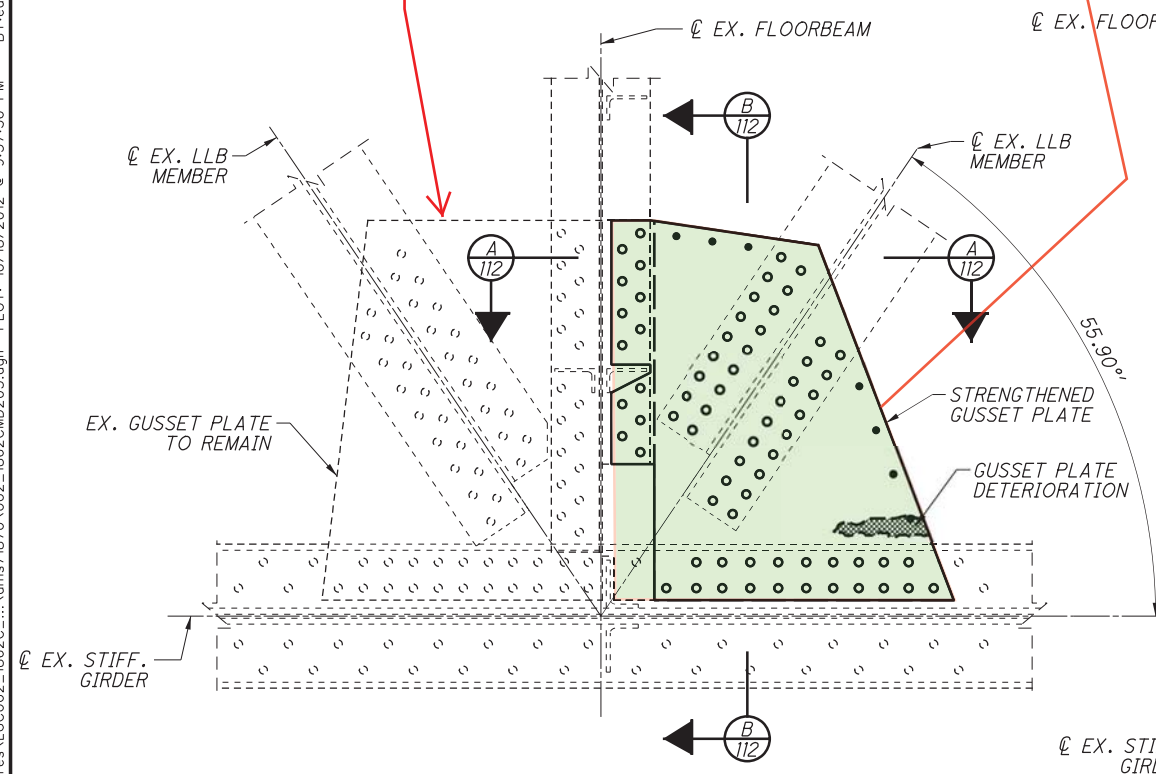
The shape of the lower lateral gusset plate is hexagonal (Repair Type 215). However, the details will differ from those already shown in the contract plan. As such, the existing gusset plate details from the original 1930 steel details have been provided to aid in shop detailing of the additional repair type 215b-2 required at Floorbeam 20.

By Eric F. Dues, P.E. at 5:14 pm, Apr 02, 2014

[illegible]

strengthen this half of the gusset plate with a fill plate and a strengthening plate (REPAIR 215B-2, at FB 20)

strengthen this half of the gusset plate with a fill plate and a strengthening plate (REPAIR 215B-2, at FB 20)

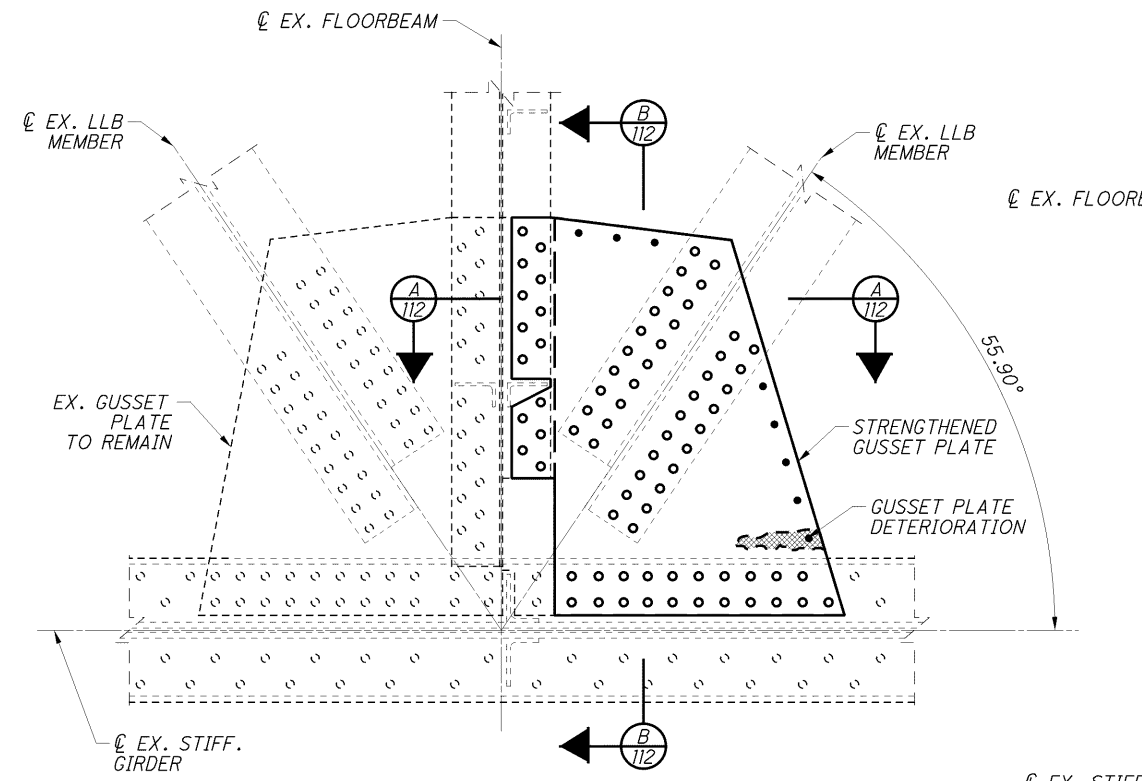
[illegible]

REPAIR TYPE **215B-2**
(STRENGTHENING PLATE DETAIL)

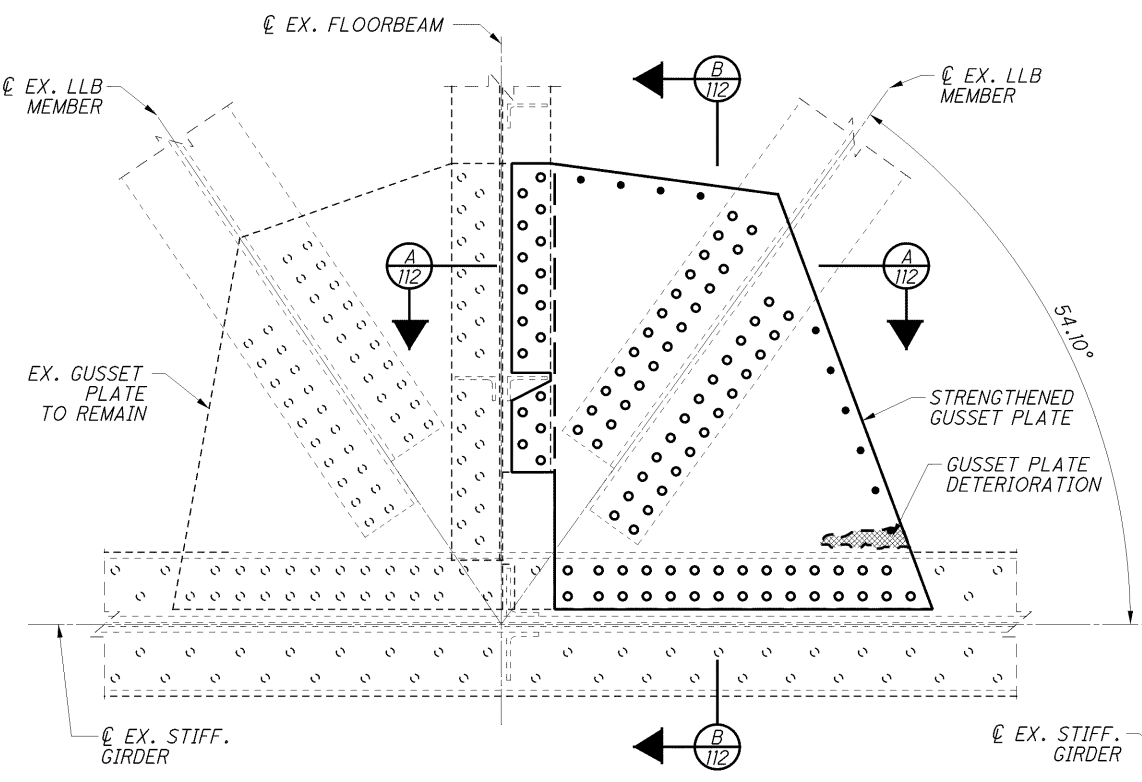
1. FOR ADDITIONAL NOTES AND ABBREVIATIONS SEE SHEET 112/227.
2. ALL PROPOSED HOLES ARE $\frac{15}{16}$ " DIAMETER.

Dimensions to be shop-modified to match existing L16 details above.

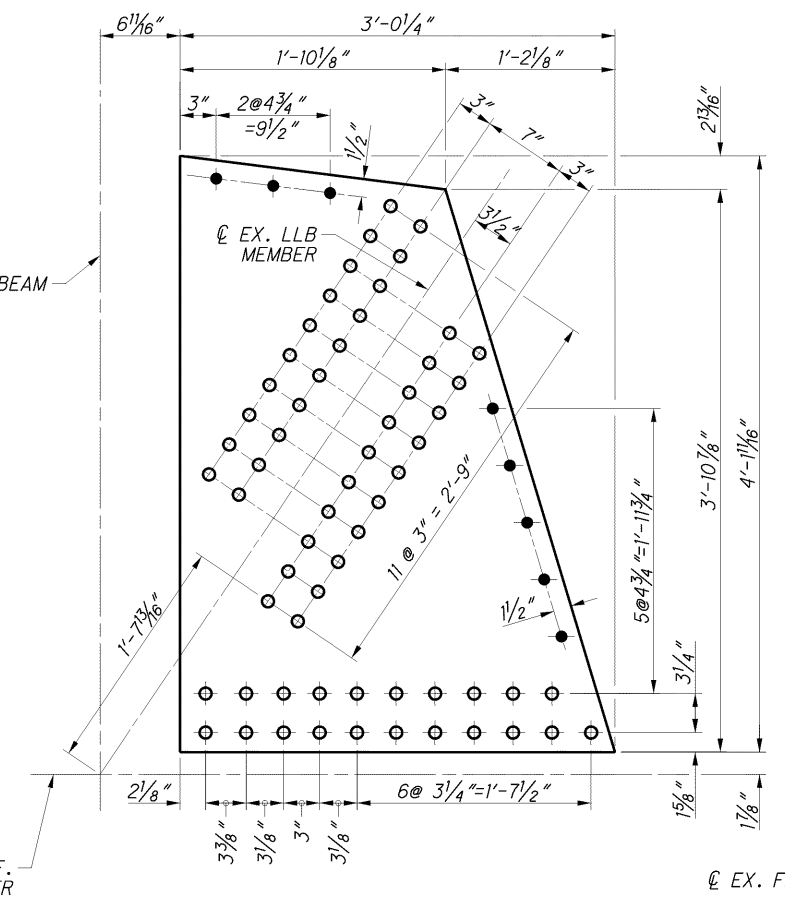
p:\p\01\80551\structures\LUC002_1862C\dms71870\002_1862C\DWG211.dgn PLOT: 10/18/2012 @ 9:58:03 PM BY: edues



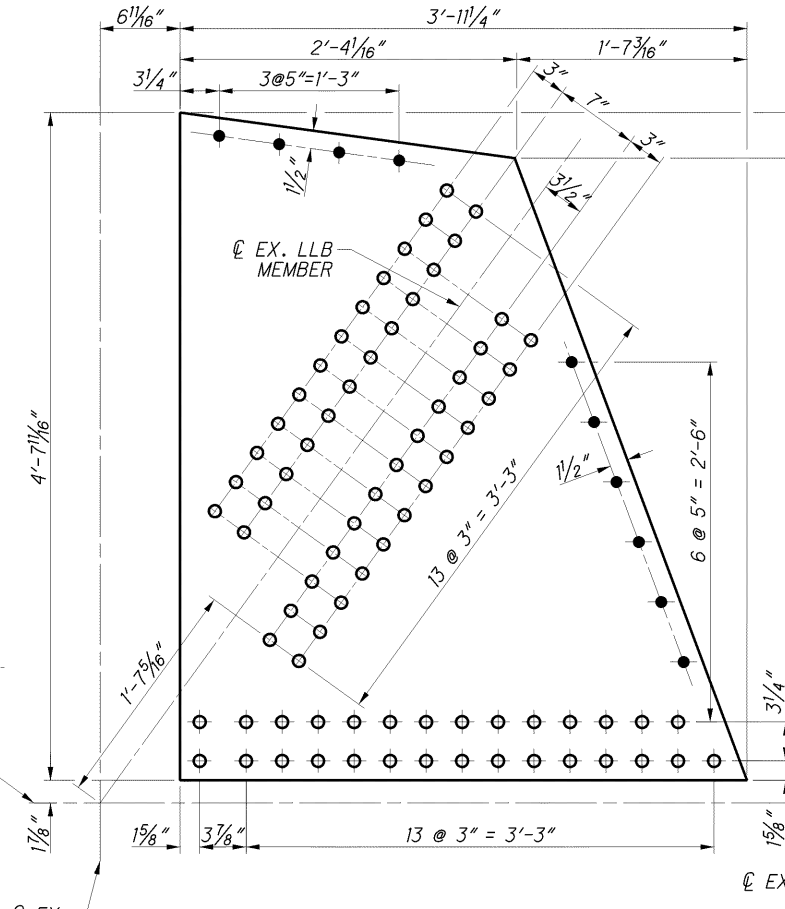
REPAIR TYPE 215C
FLOORBEAM 49 GUSSET PLATE



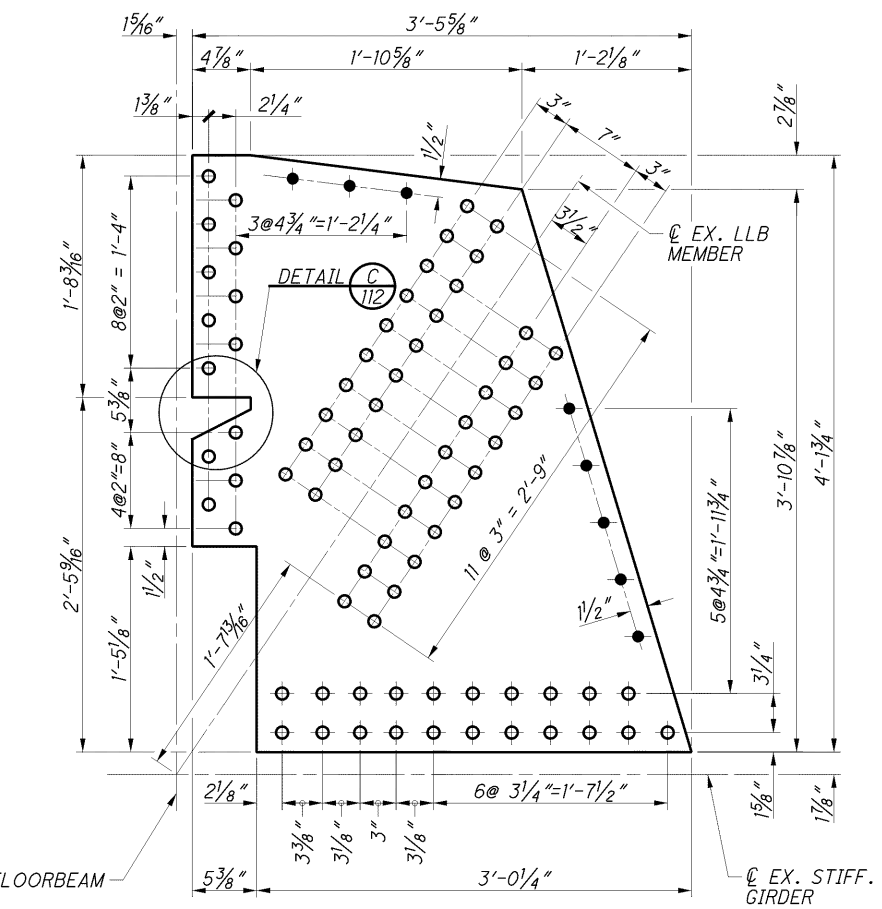
REPAIR TYPE 215D
FLOORBEAM 51 GUSSET PLATE



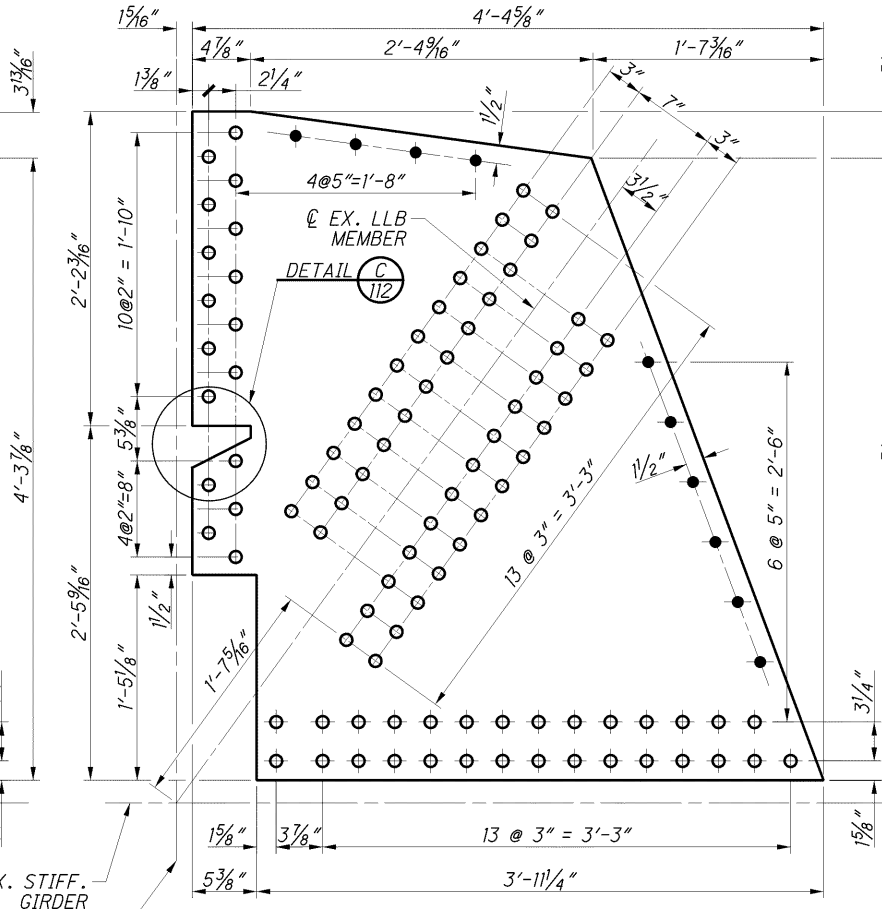
REPAIR TYPE 215C
(FILL PLATE DETAIL)



REPAIR TYPE 215D
(FILL PLATE DETAIL)



REPAIR TYPE 215C
(STRENGTHENING PLATE DETAIL)



REPAIR TYPE 215D
(STRENGTHENING PLATE DETAIL)

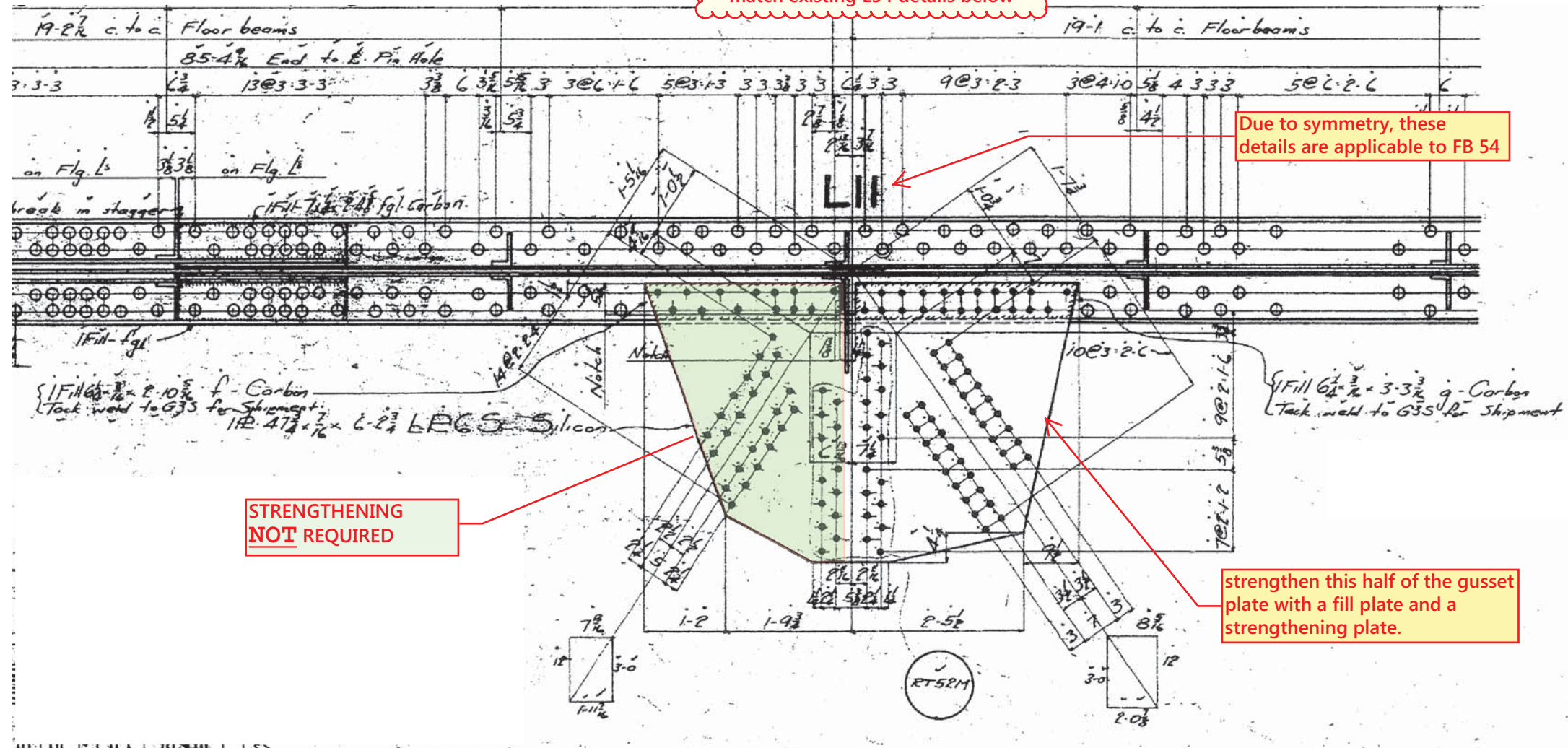
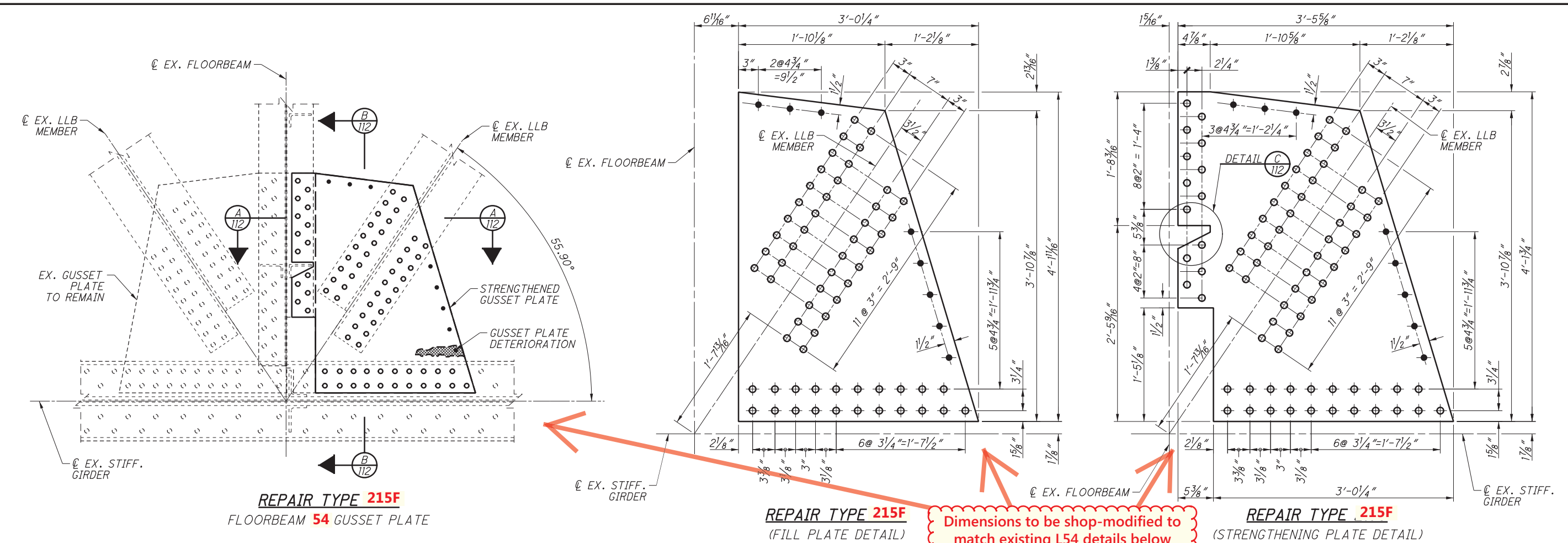
NOTES:
1. FOR ADDITIONAL NOTES AND ABBREVIATIONS SEE SHEET 112/227.
2. ALL PROPOSED HOLES ARE 1 5/16" DIAMETER.

p:\p01\80551\structures\LUC002_1862C.dgn 1862C 10/18/2012 9:58:03 PM BY:edues

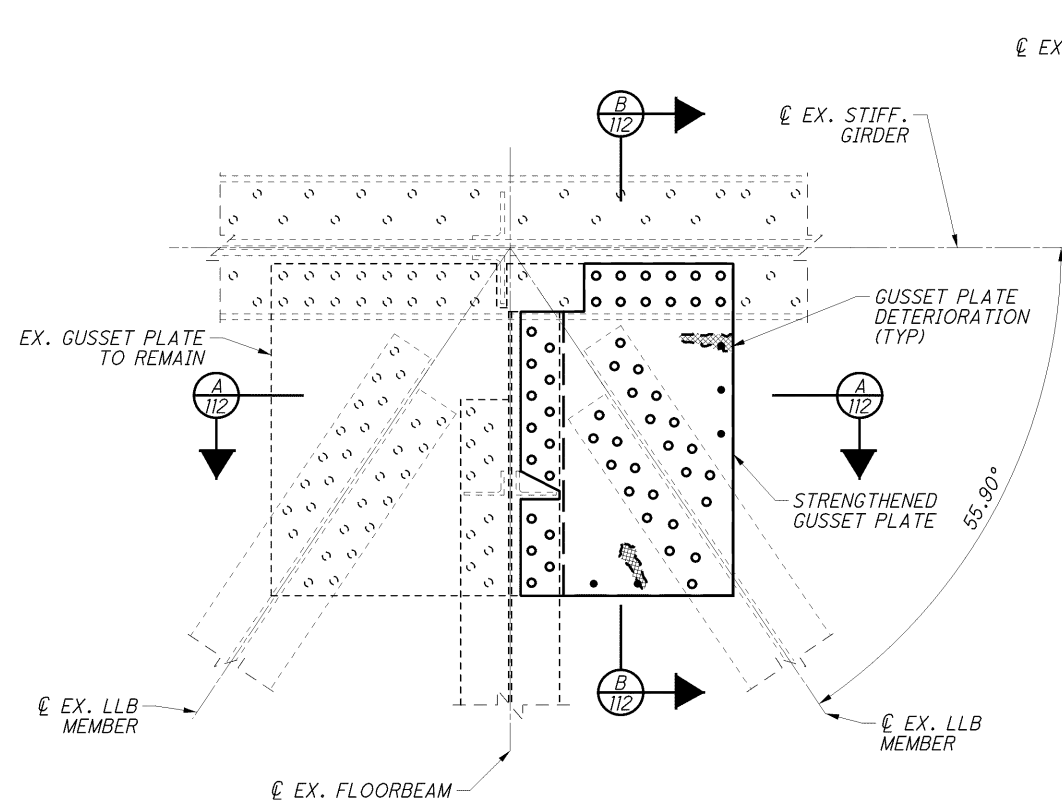
215F NOTE:
The shape of the lower lateral gusset plate is hexagonal (Repair Type 215). However, the details will differ from those already shown in the contract plan. As such, the existing gusset plate details from the original 1930 steel details have been provided to aid in shop detailing of the additional repair type 215F required at Floorbeam 54

APPROVED
By Eric F. Dues, P.E. at 5:14 pm, Apr 02, 2014

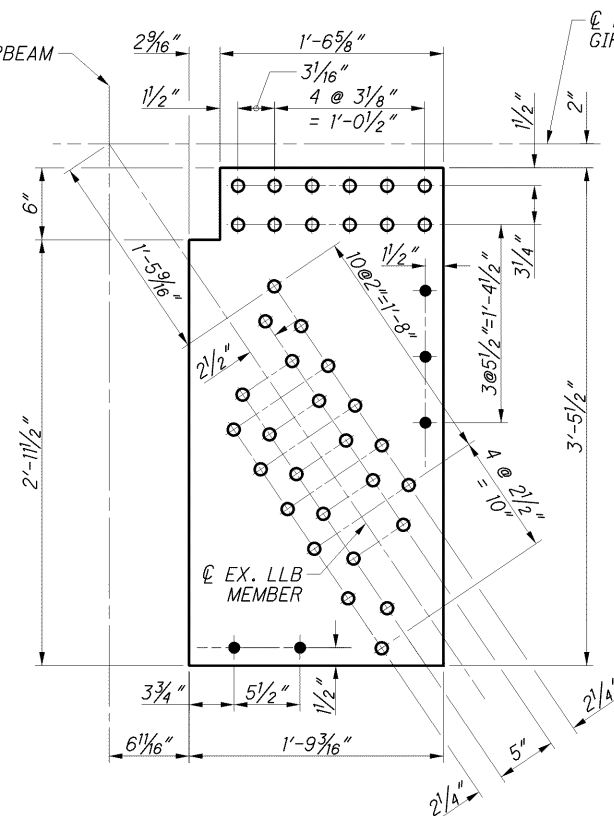
NOTES:
1. FOR ADDITIONAL NOTES AND ABBREVIATIONS SEE SHEET 112/227.
2. ALL PROPOSED HOLES ARE 15/16" DIAMETER.



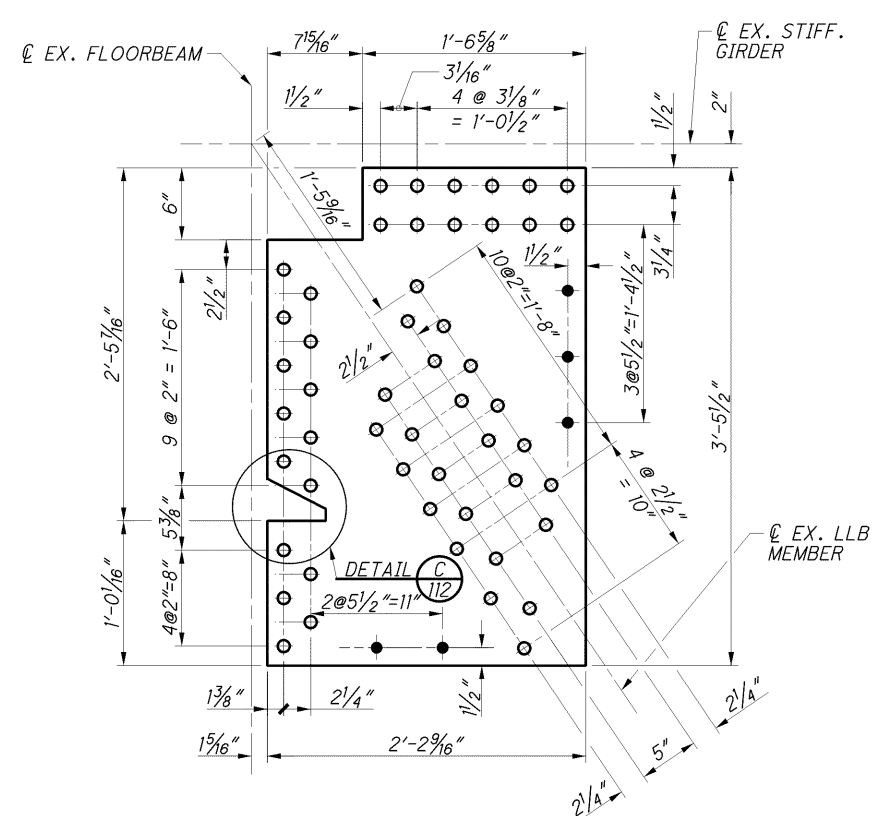
p:\p\...gfbw01\80551\structures\LUC002_1862C...dms71870\002_1862C\MD221.dgn PLOT: 10/18/2012 @ 9:58:11 PM BY:redues



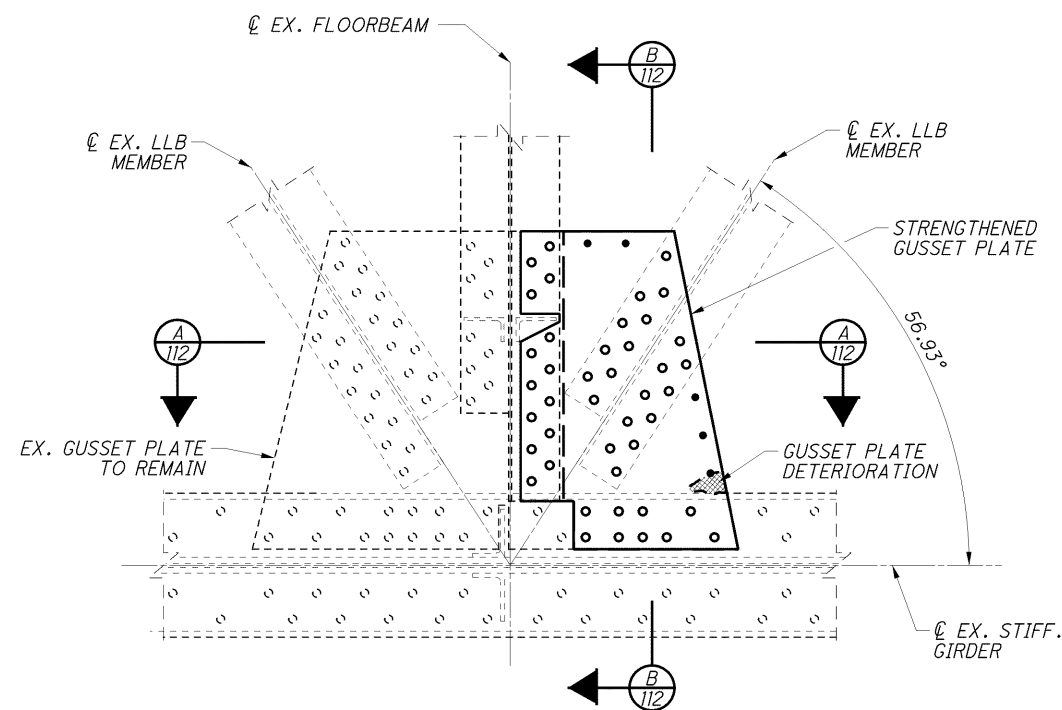
REPAIR TYPE 216
FLOORBEAM 26 GUSSET PLATE
(AT LEFT AND RIGHT GIRDERS)



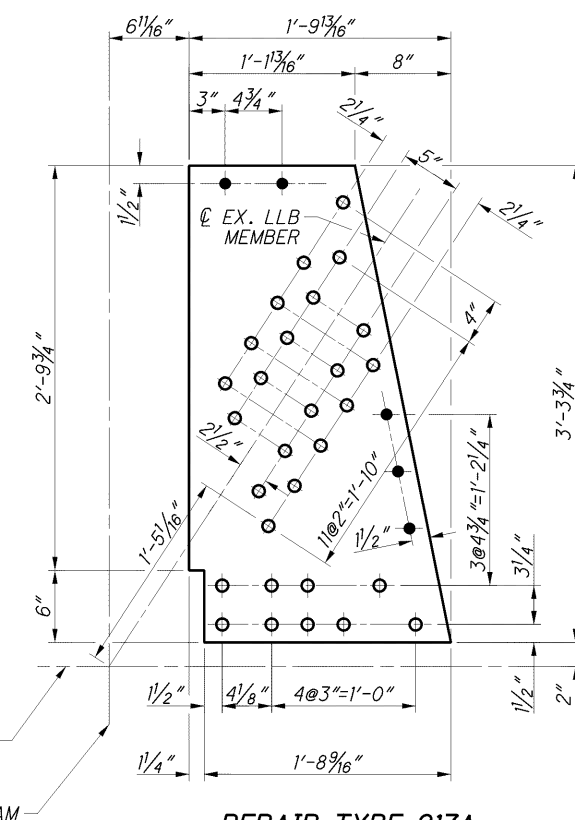
REPAIR TYPE 216
(FILL PLATE DETAIL)



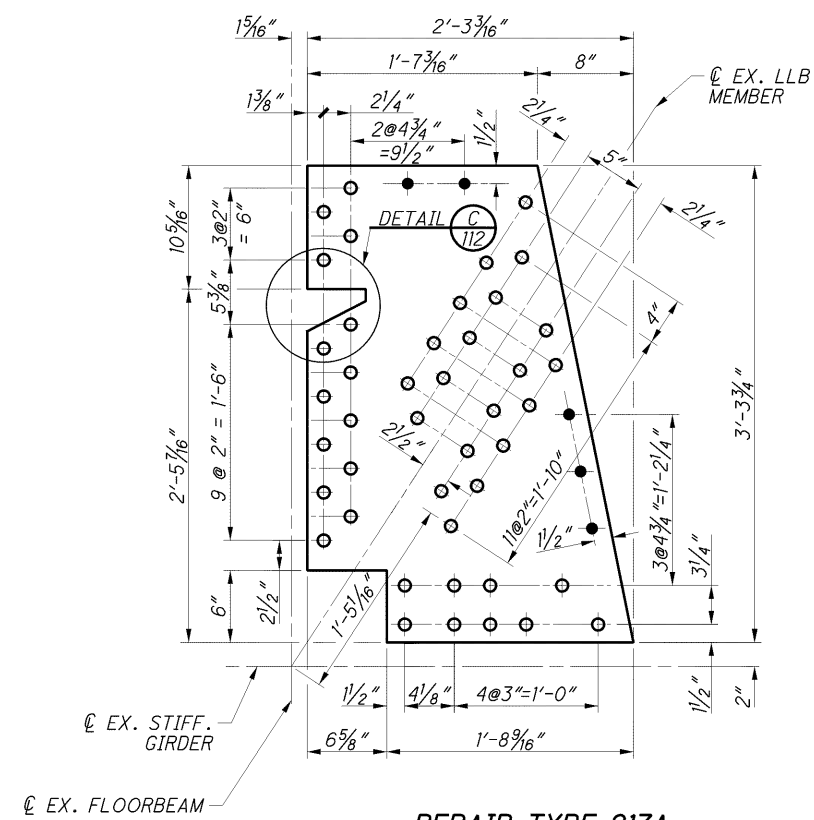
REPAIR TYPE 216
(STRENGTHENING PLATE DETAIL)



REPAIR TYPE 217A
FLOORBEAM 3 GUSSET PLATE



REPAIR TYPE 217A
(FILL PLATE DETAIL)

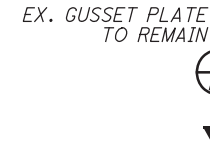


REPAIR TYPE 217A
(STRENGTHENING PLATE DETAIL)

- NOTES:**
1. FOR ADDITIONAL NOTES AND ABBREVIATIONS SEE SHEET 112/227.
 2. ALL PROPOSED HOLES ARE 15/16" DIAMETER.

By Eric F. Dues, P.E. at 12:46 pm, Feb 19, 2014

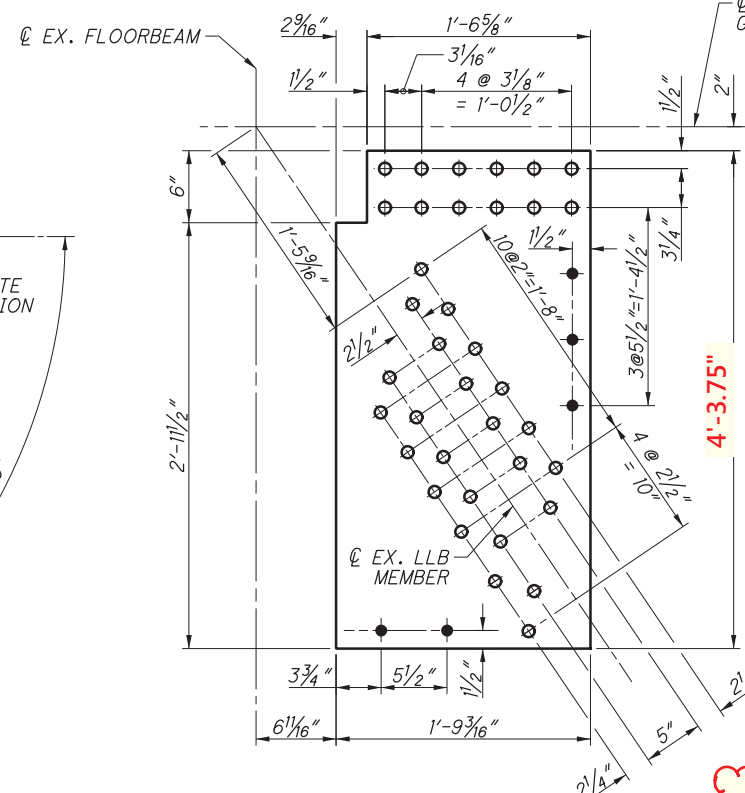
BY:edues



FLOORBEAM 28 GUSSET PLATE
(AT LEFT AND RIGHT GIRDERS)

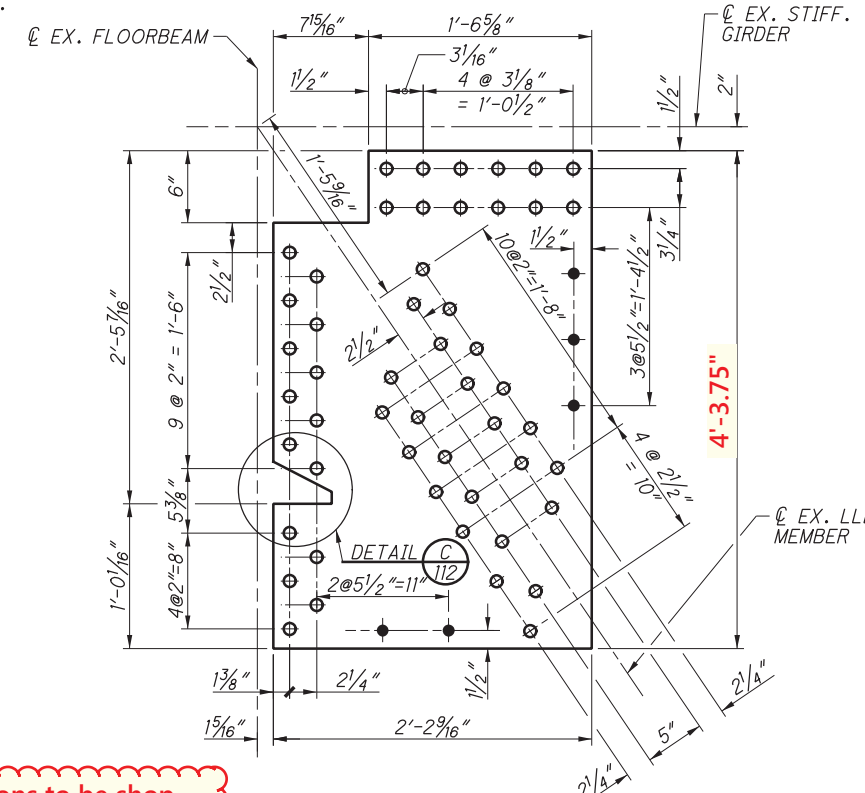
NOTE:

The shape of the lower lateral gusset plate is square (Repair type 216). However, some details may differ from the original repair type 216 details shown above. As such, the existing gusset plate details from the original steel details has been provided to aid in shop detailing of the additional repair type 216 required at Floorbeam 28.

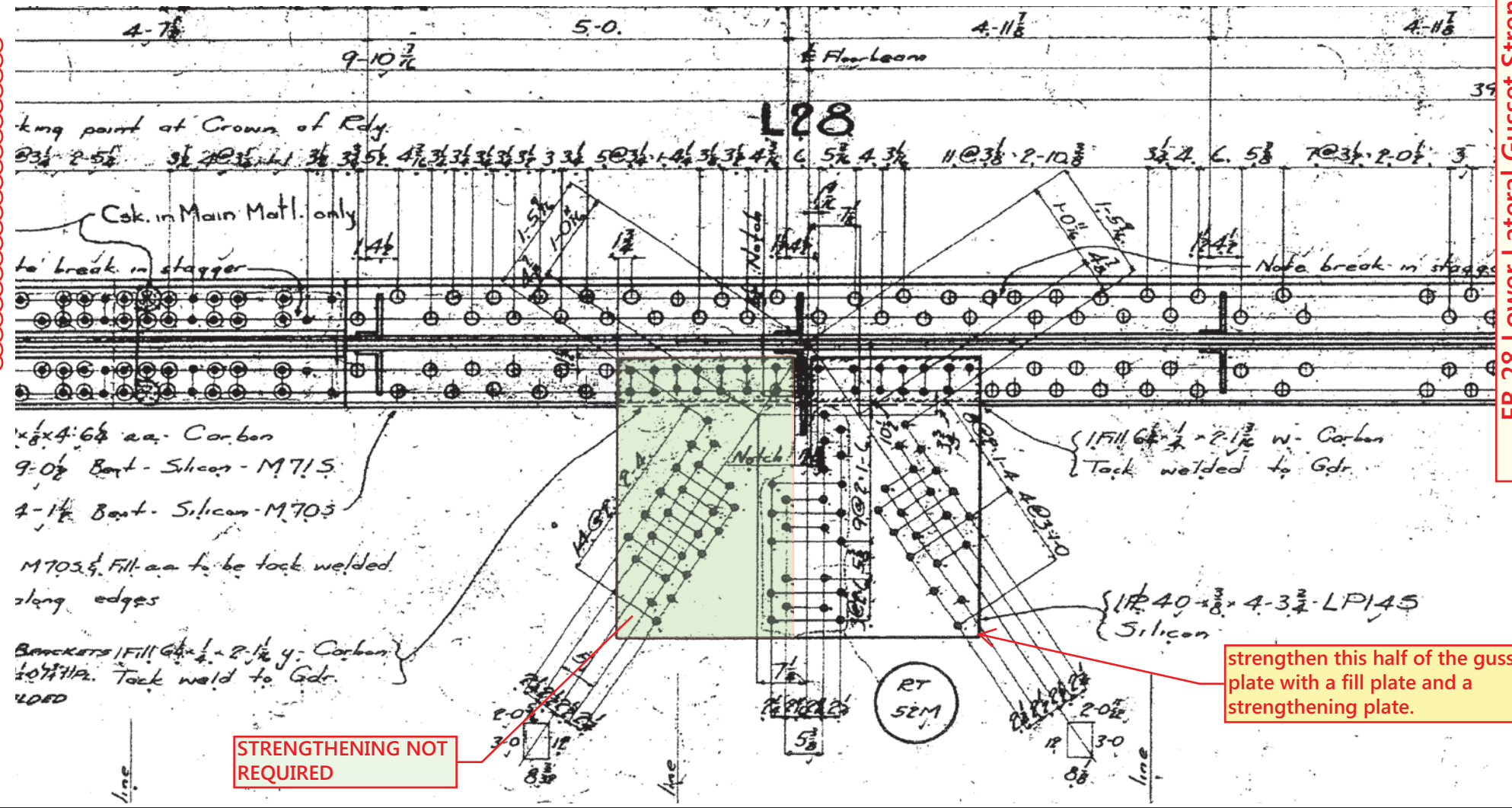


REPAIR TYPE 216
(FILL PLATE DETAIL)

Dimensions to be shop-modified to match existing L28 details below



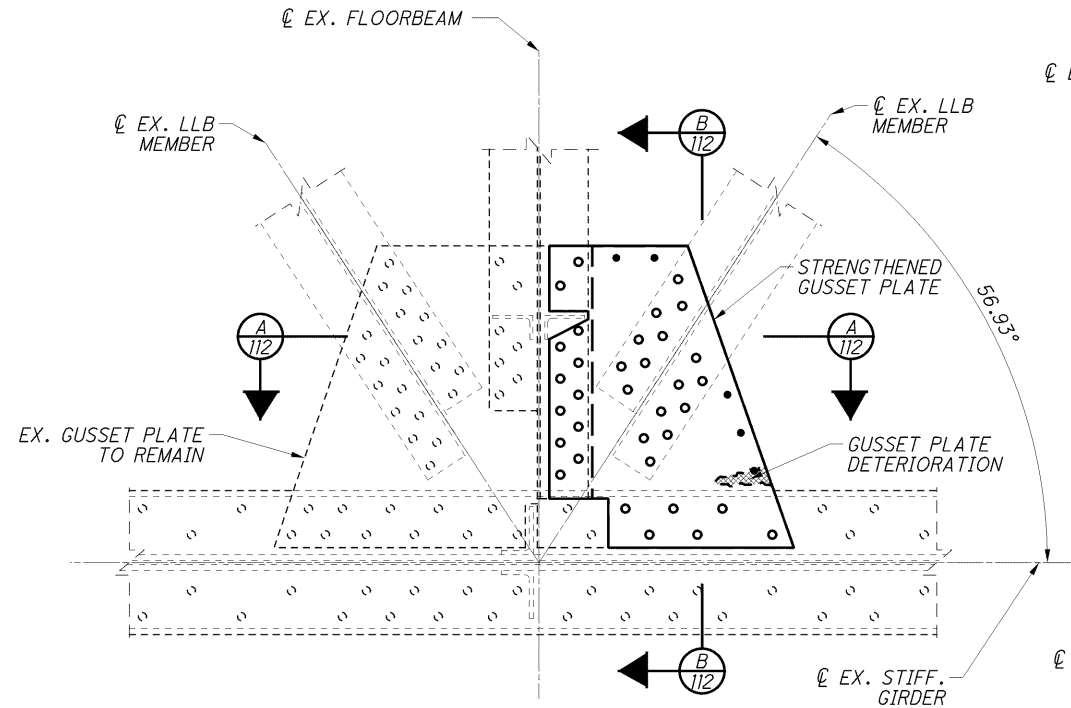
REPAIR TYPE 216
(STRENGTHENING PLATE DETAIL)



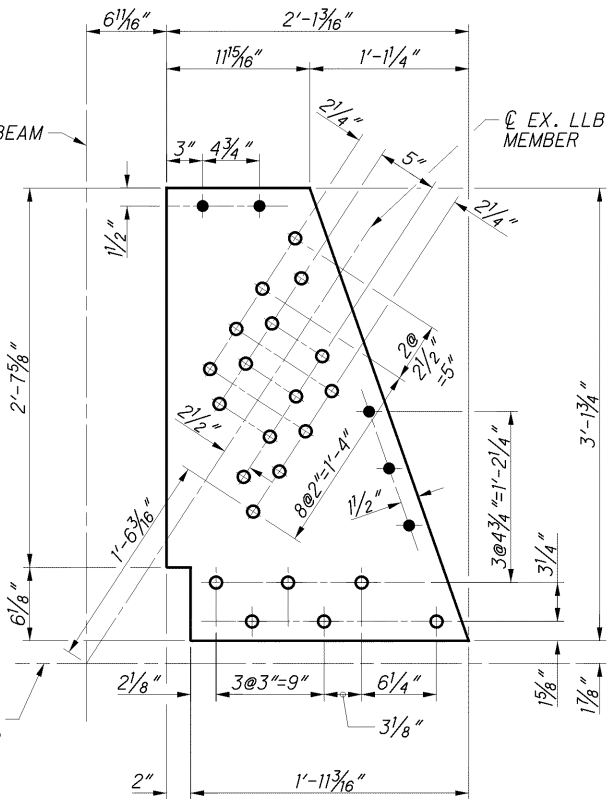
strengthen this half of the gusset plate with a fill plate and a strengthening plate.

STRENGTHENING NOT REQUIRED

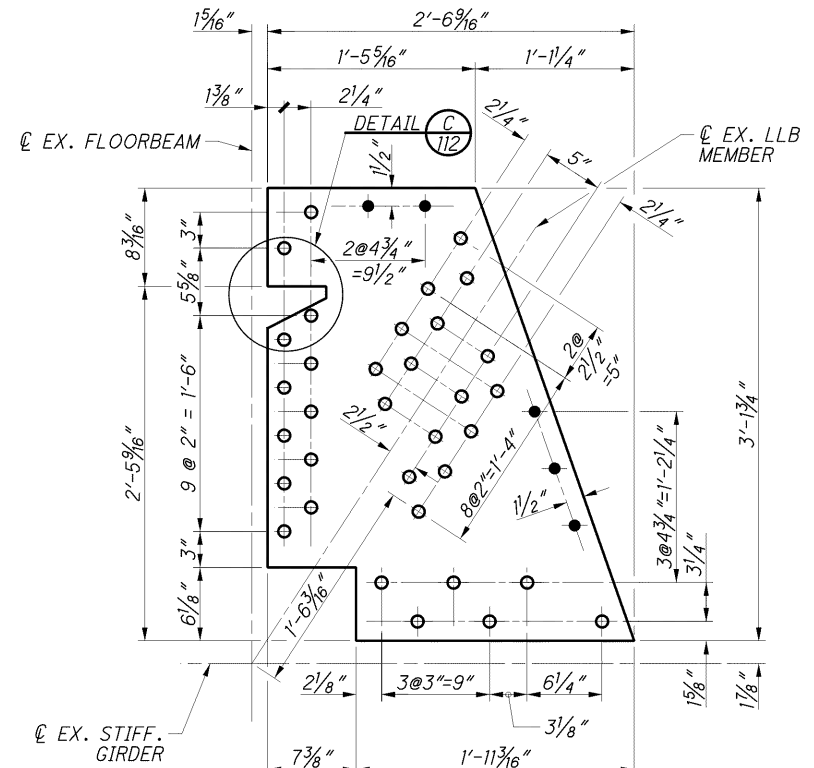
p:\p\01\80551\structures\LUC002_1862C\dms71870\002_1862C\DWG225.dgn PLOT: 10/18/2012 @ 9:58:19 PM BY:edues



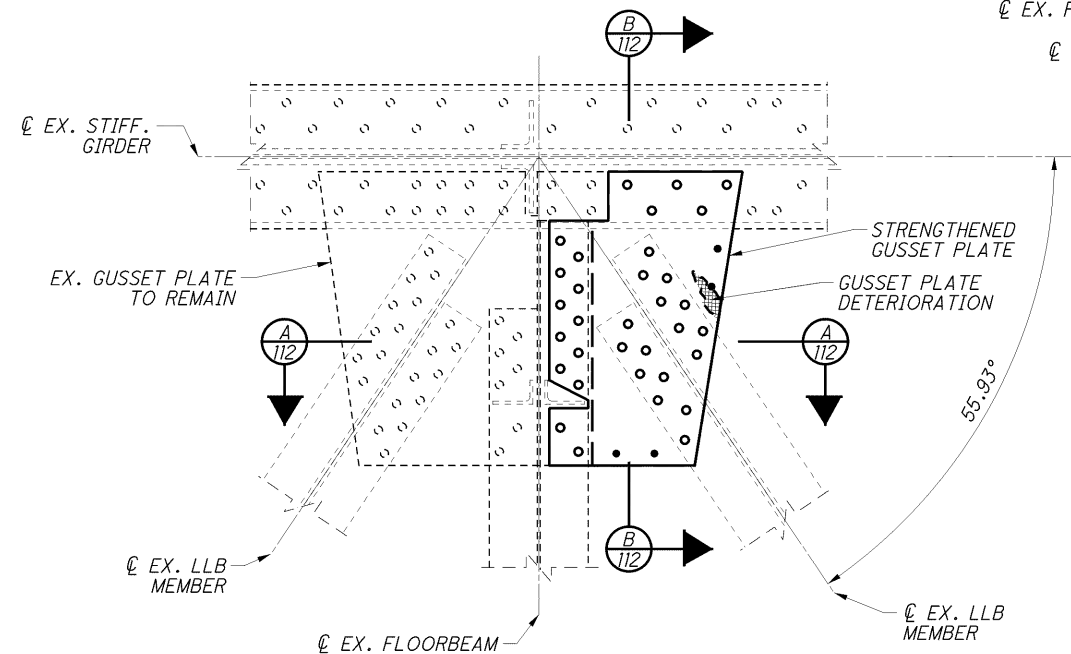
REPAIR TYPE 217B
FLOORBEAM 5 & 60 GUSSET PLATE



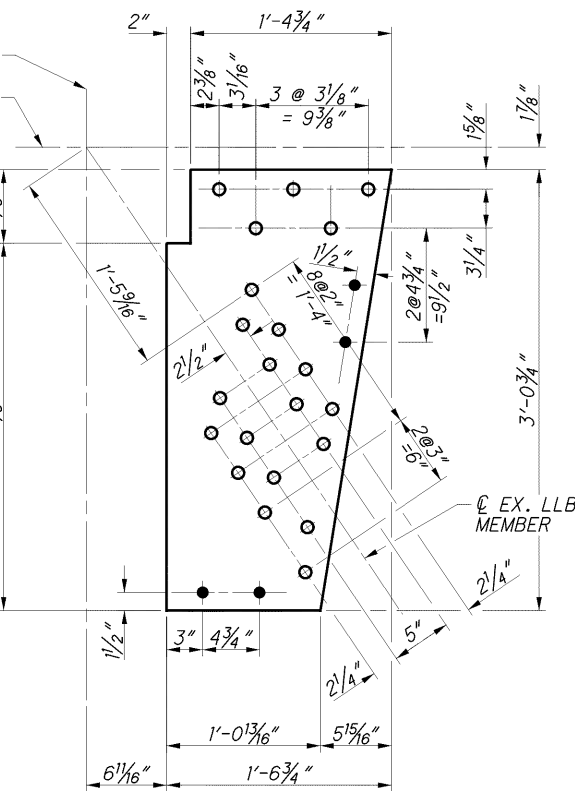
REPAIR TYPE 217B
(FILL PLATE DETAIL)



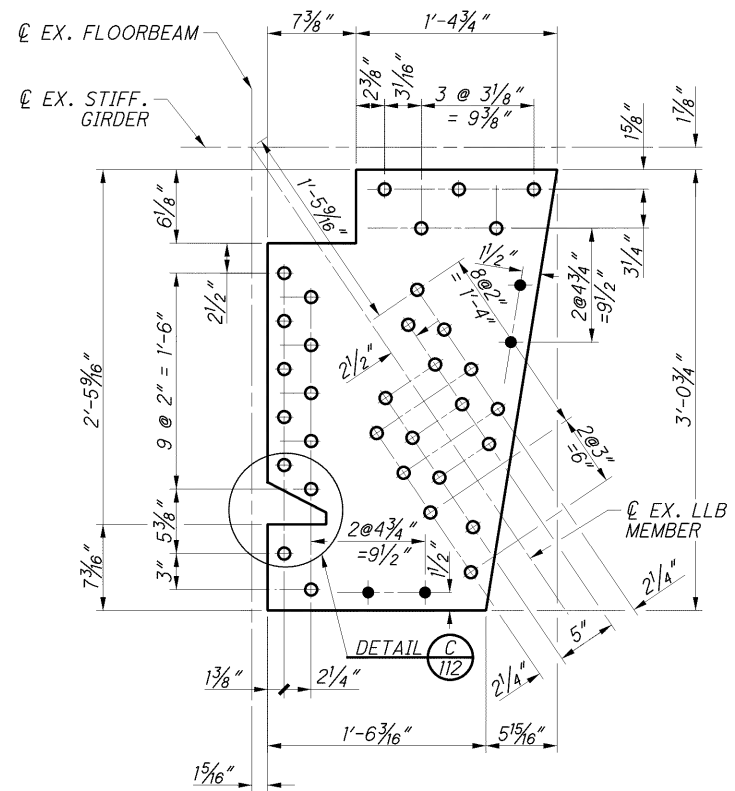
REPAIR TYPE 217B
(STRENGTHENING PLATE DETAIL)



REPAIR TYPE 217C
FLOORBEAM 30 GUSSET PLATE



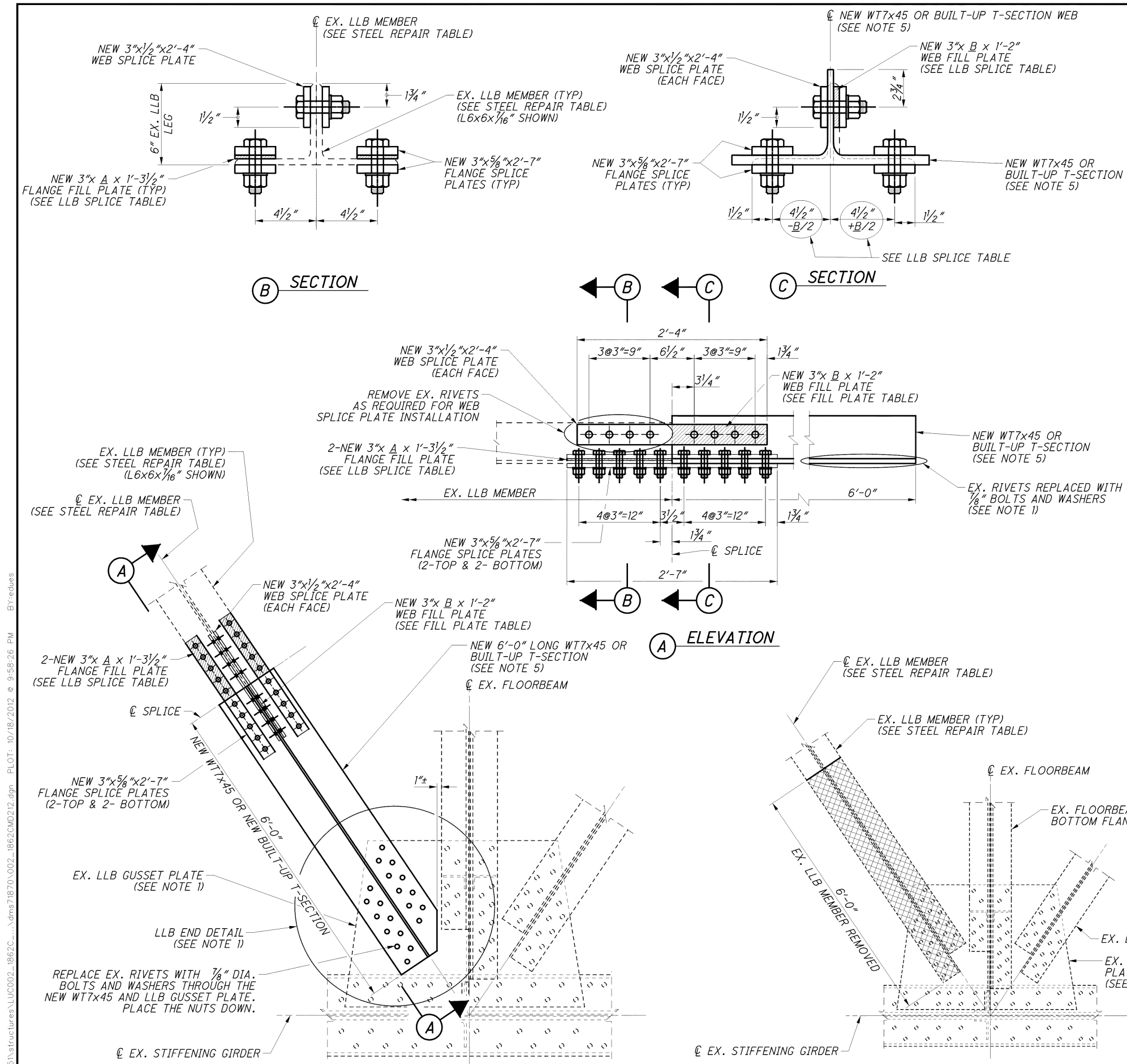
REPAIR TYPE 217C
(FILL PLATE DETAIL)



REPAIR TYPE 217C
(STRENGTHENING PLATE DETAIL)

- NOTES:**
1. FOR ADDITIONAL NOTES AND ABBREVIATIONS SEE SHEET **112/227**.
 2. ALL PROPOSED HOLES ARE $\frac{15}{16}$ " DIAMETER.

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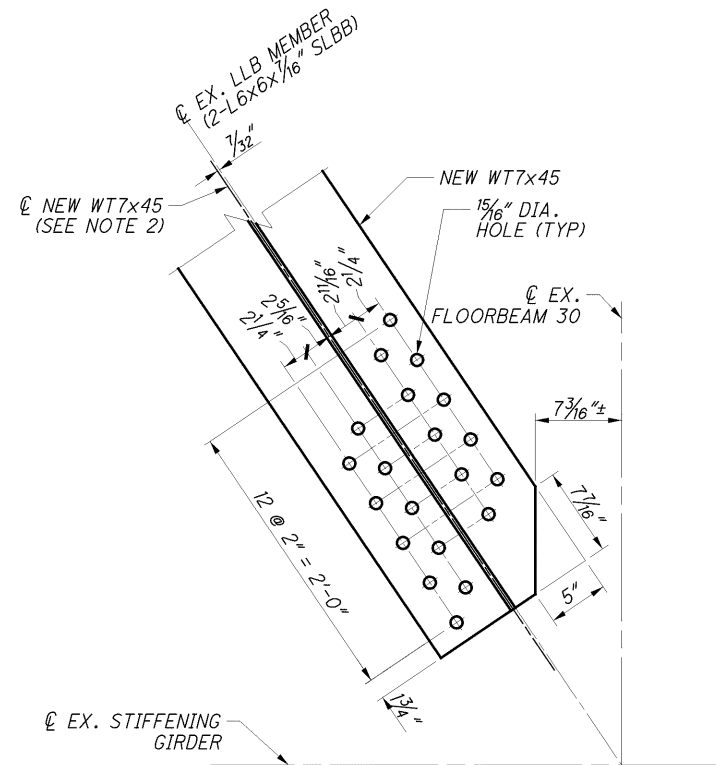
REPAIR TYPE 218
SEE NOTE 1

REPAIR TYPE 218 - REMOVAL LIMITS
SEE NOTE 1

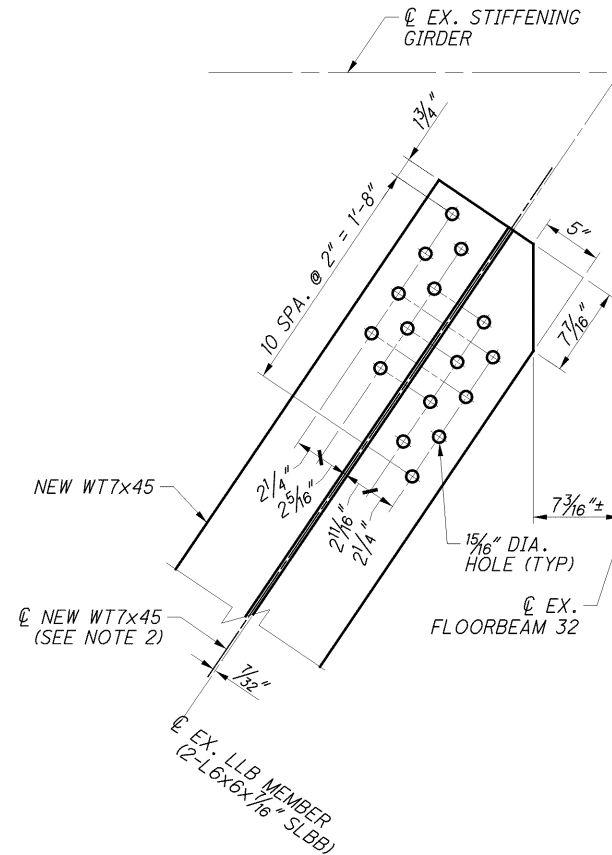
LLB SPLICE TABLE			
EX. LLB MEMBER	REPLACEMENT MEMBER	FILL PLATE THICKNESS	
		FLANGE: A	WEB: B
2-L6x6x $\frac{7}{16}$ " SLBB	WT7x45	0.273"	0.435"
2-L6x6x $\frac{7}{16}$ " SLBB	WT7x45	0.148"	0.685"
2-L8x6x $\frac{7}{16}$ " SLBB	BUILT-UP	0.313"	0.375"

- NOTES:**
1. LOWER LATERAL BRACING END DETAILS (GUSSET PLATES, RIVETS, AND CLIPPED FLANGE) VARY BY LOCATION. DETAILS SHOWN ON THIS SHEET ARE REPRESENTATIVE. FOR ADDITIONAL END DETAILS SEE SHEET 118/227. FOR LLB GUSSET PLATE REPAIRS SEE SHEET 112/227.
 2. = VARIABLE THICKNESS FILL PLATE
 = AREA TO BE REMOVED
LLB = LOWER LATERAL BRACE
SLBB = SHORT LEGS BACK TO BACK
 3. EXISTING LOWER LATERAL BRACE STEEL IS SILICON STEEL.
 4. EXISTING RIVETS ARE $\frac{7}{8}$ " DIAMETER.
 5. NEW WT7x45 SECTION SHALL REPLACE EXISTING 2-L6x6 MEMBERS. NEW BUILT-UP T-SECTION SHALL REPLACE EXISTING 2-L8x6 MEMBERS. SEE SECTION "A" ON SHEET 118/227 FOR BUILT-UP MEMBER DETAILS.
 6. FOR REPAIR LOCATIONS, SEE SHEETS 80/227, 81/227 AND 83/227.
 7. FOR REPAIR DESCRIPTION, SEE SHEET 15/227.
 8. LLB END REACTION FOR TEMPORARY SUPPORT IS 1.0 KIPS. SEE SHEET 112/227 FOR DETAILS.

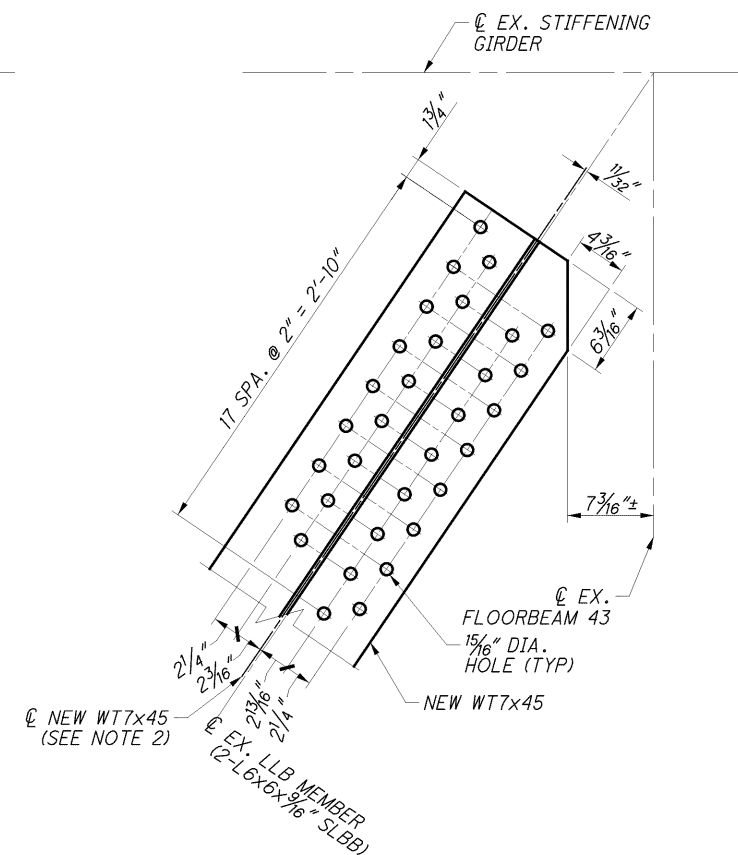
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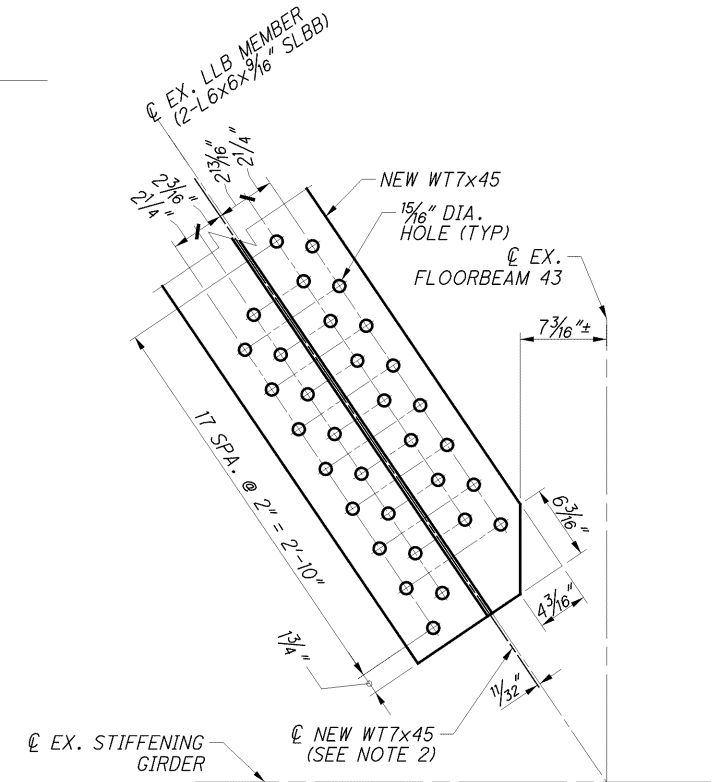
REPAIR TYPE 218A



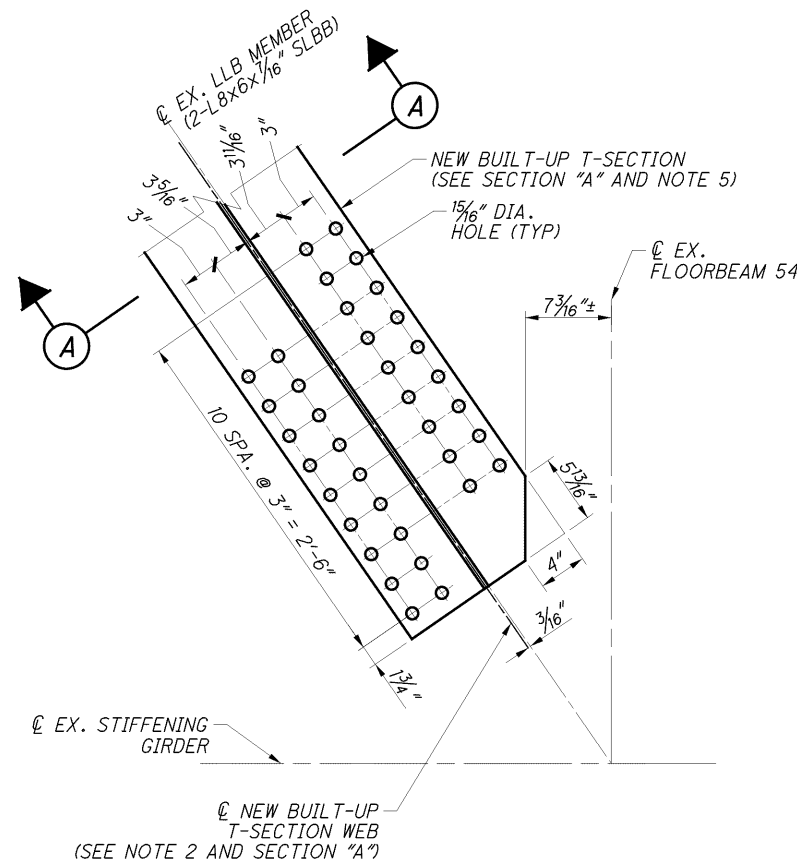
REPAIR TYPE 218A



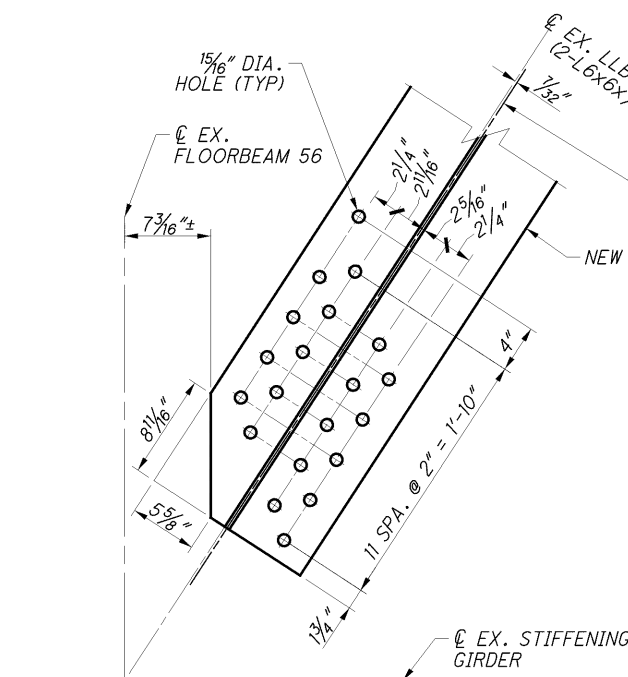
REPAIR TYPE 218A



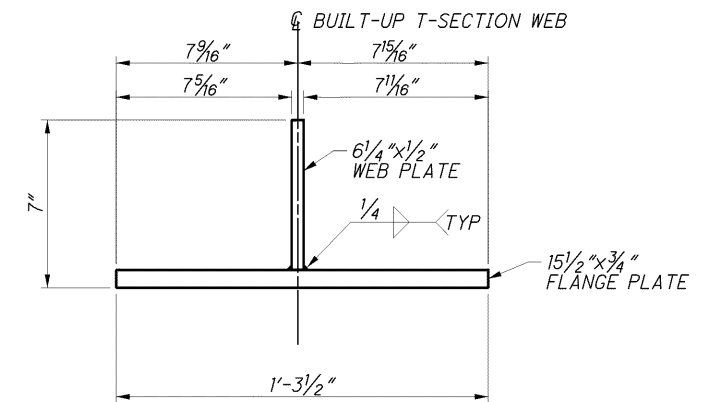
REPAIR TYPE 218A



REPAIR TYPE 218B



REPAIR TYPE 218A

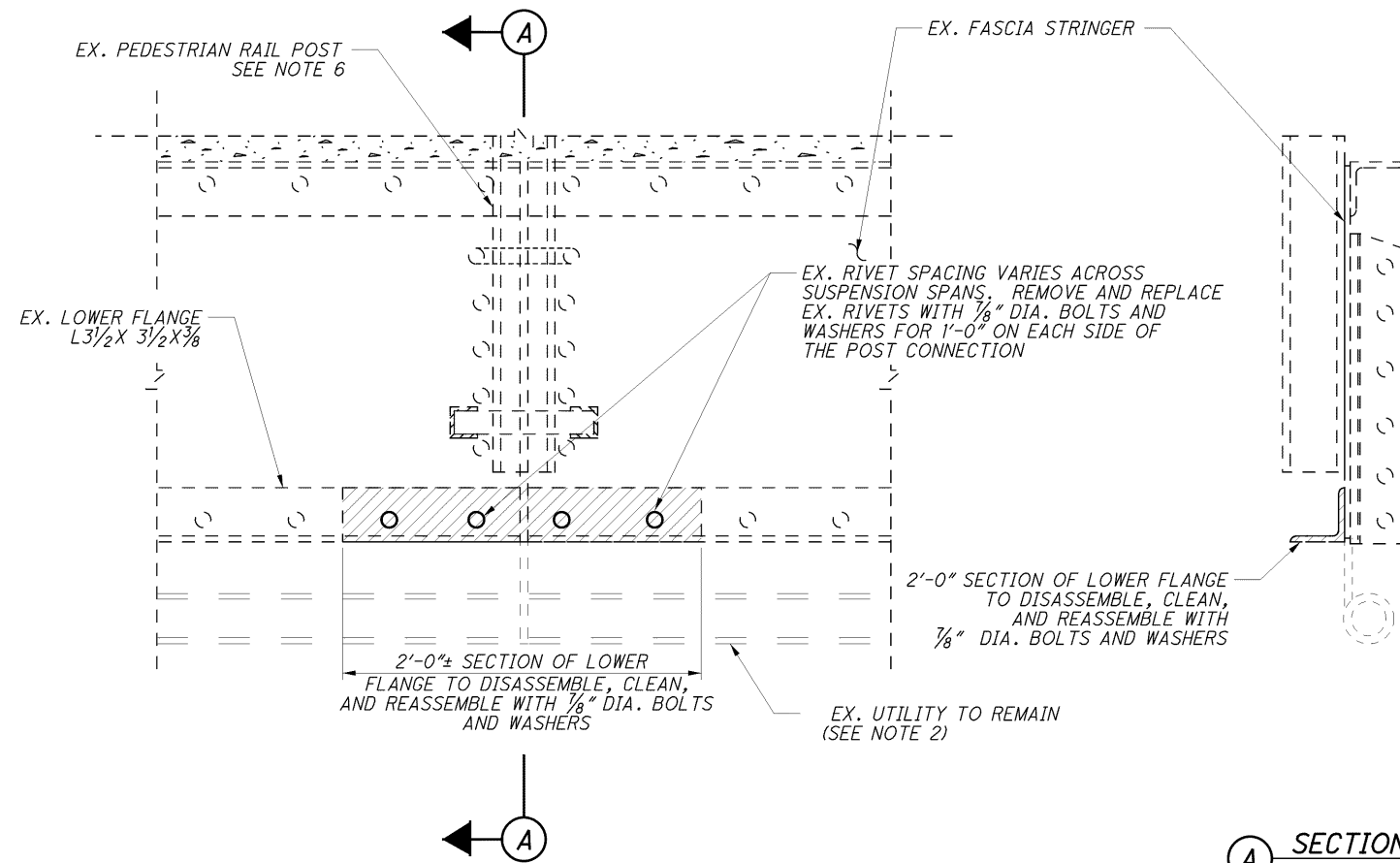


SECTION A

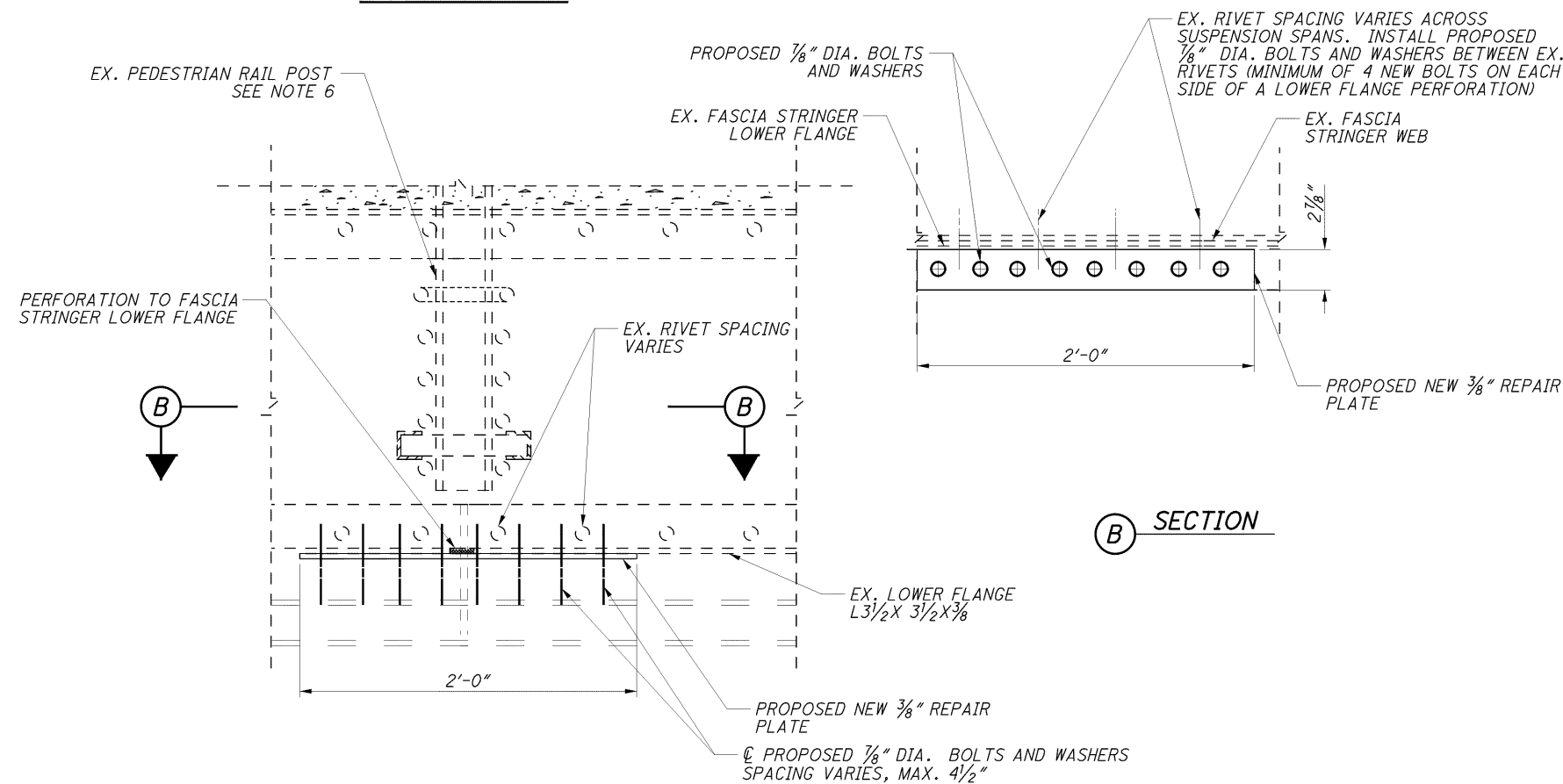
NOTES:

1. LOWER LATERAL GUSSET PLATES ARE NOT SHOWN FOR CLARITY. SEE SHEET 117227 FOR NOTES AND TYPICAL DETAILS FOR REPAIR TYPE 218.
2. ALL PROPOSED HOLE LOCATIONS ARE DIMENSIONED FROM THE EDGES, ENDS, AND CENTERLINE OF WEB OF THE NEW WT7x45 OR NEW BUILT-UP T-SECTION UNLESS OTHERWISE NOTED.
3. ALL PROPOSED HOLES ARE 15/16" DIAMETER.
4. LLB = LOWER LATERAL BRACE
SLBB = SHORT LEGS BACK TO BACK
5. NEW WT7x45 SECTION SHALL REPLACE EXISTING 2-L6x6 MEMBERS.
NEW BUILT-UP T-SECTION SHALL REPLACE EXISTING 2-L8x6 MEMBERS.
SEE SECTION "A" FOR BUILT-UP MEMBER DETAILS.

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REPAIR TYPE 219

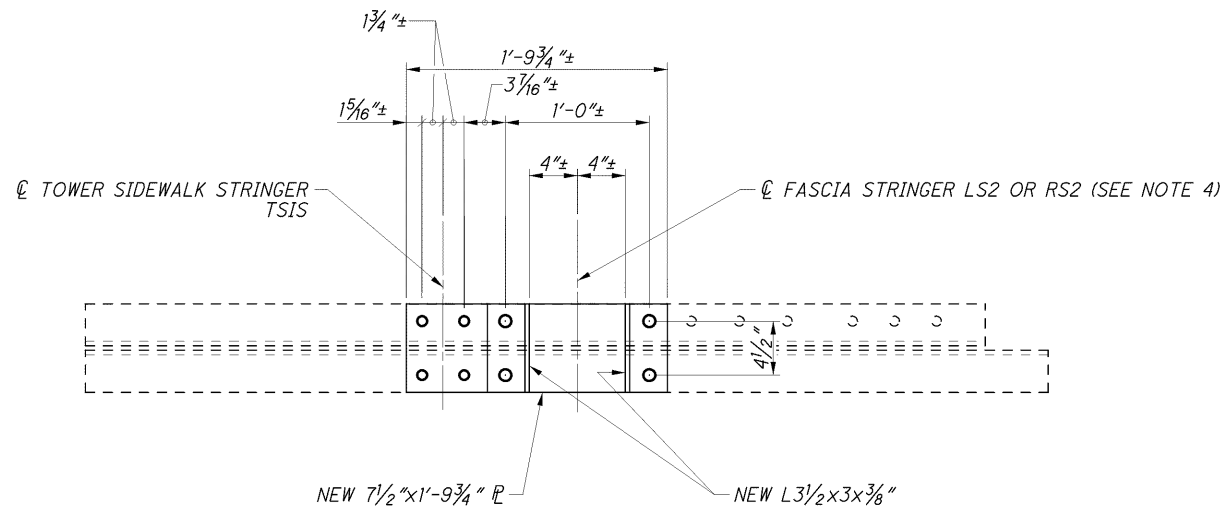


REPAIR TYPE 220

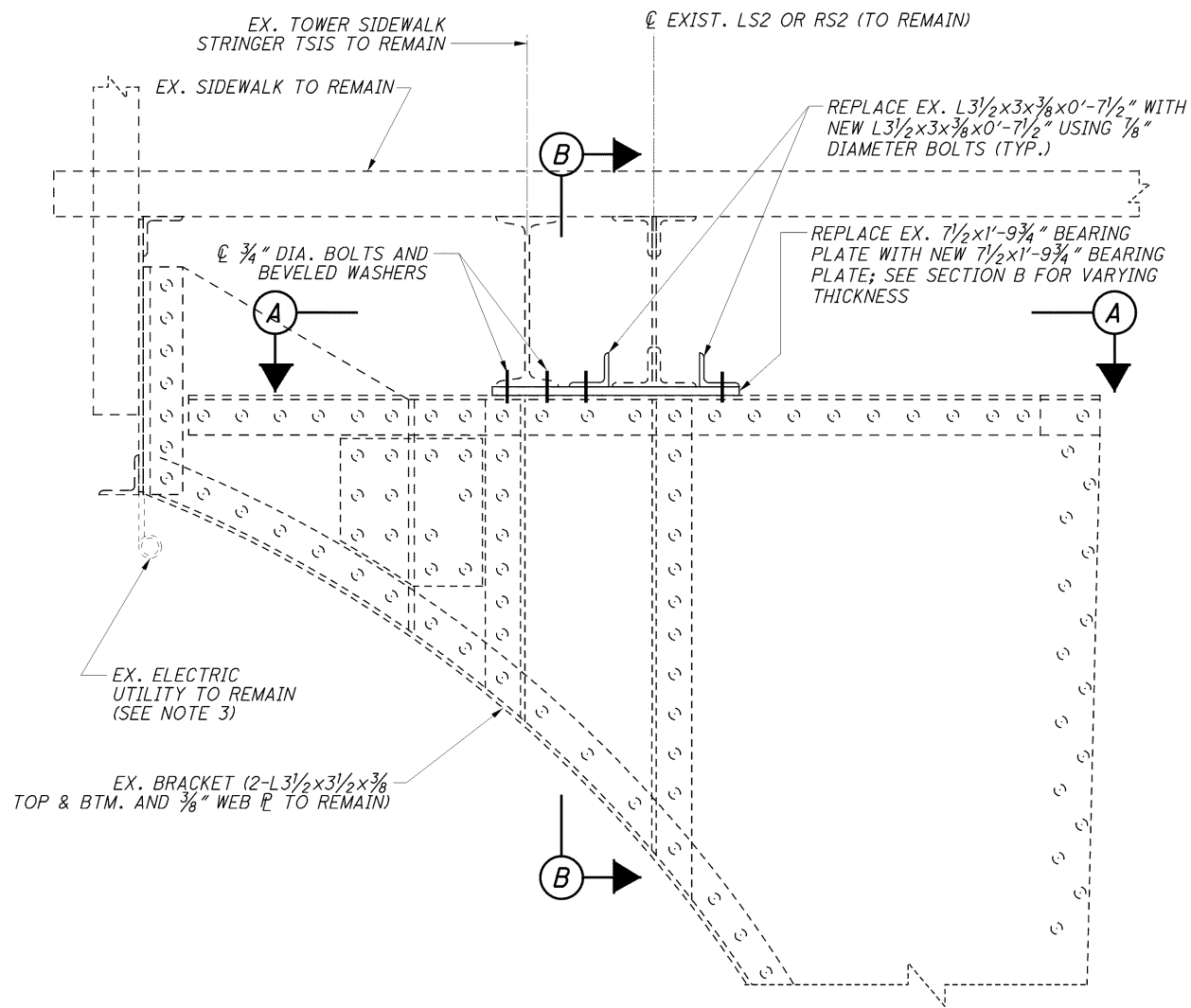
NOTES:

1. SEE SHEET [100/227] FOR ADDITIONAL NOTES.
2. UTILITIES SHOWN AT REPRESENTATIVE LOCATIONS. ACTUAL FIELD LOCATIONS VARY. SEE SHEETS [1/227] THROUGH [7/227] FOR DISPOSITION OF EXISTING UTILITIES.
3. [Hatched Area] DENOTES AREA TO BE REPAIRED.
4. FOR REPAIR LOCATIONS, SEE SHEETS [79/227] THROUGH [83/227].
5. FOR REPAIR DESCRIPTION, SEE SHEET [15/227].
6. SEE SHEETS [59/227], [60/227], AND [193/227] FOR RAILING REMOVAL AND REPLACEMENT DETAILS.

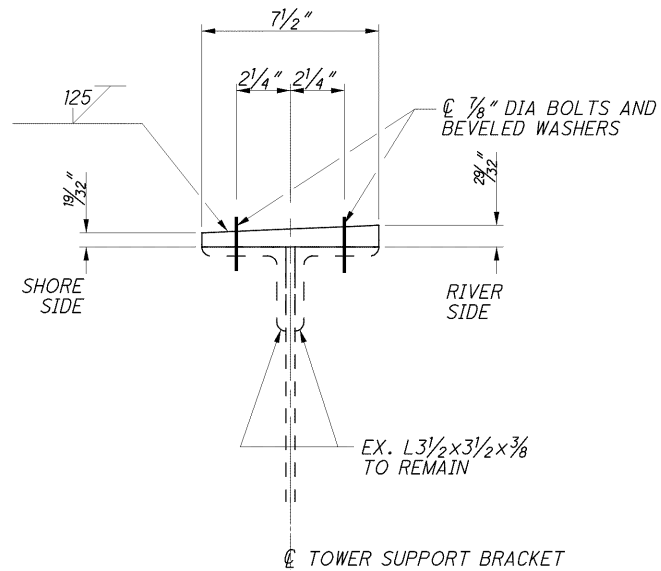
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(A) SECTION



REPAIR TYPE 222

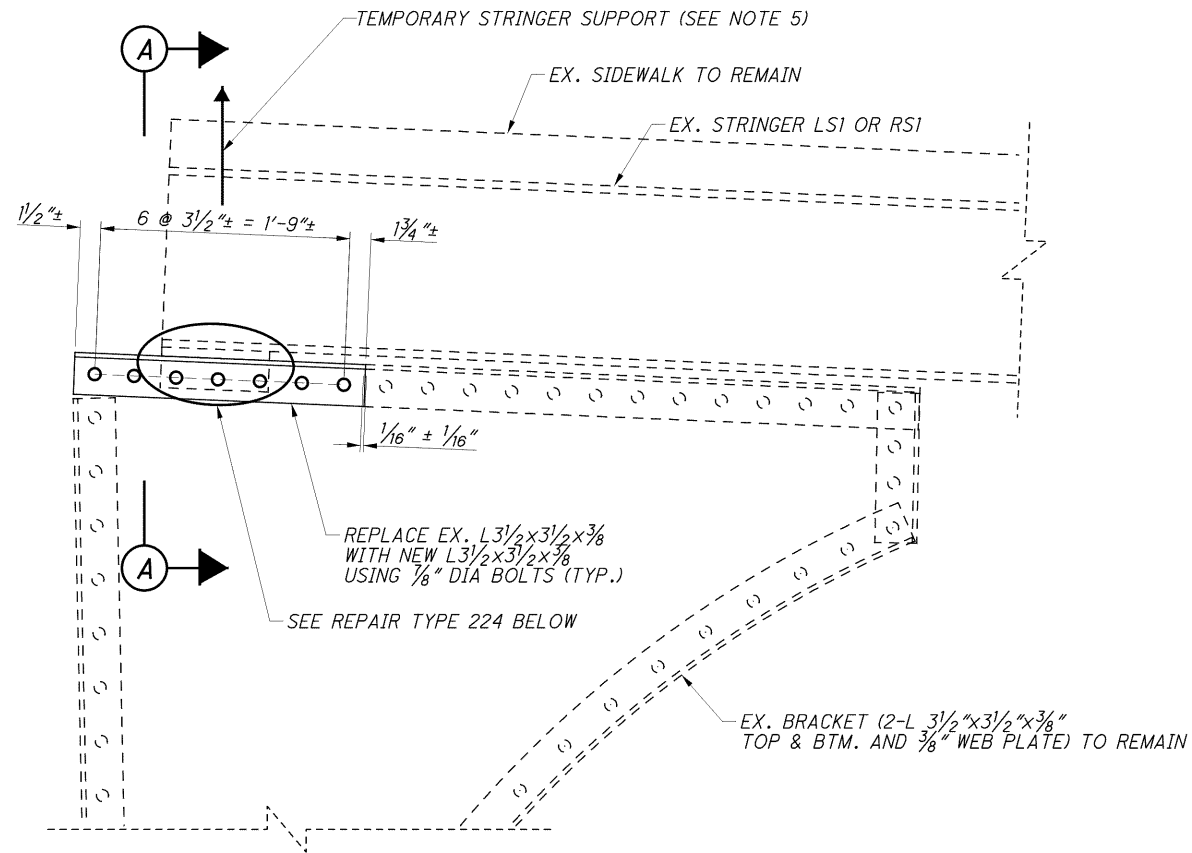


(B) SECTION

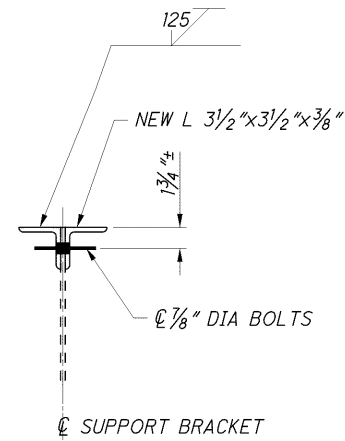
NOTES:

1. FOR TOWER SIDEWALK FRAMING PLAN SEE SHEET [120/227].
2. SEE SHEET [100/227] FOR ADDITIONAL NOTES.
3. UTILITIES SHOWN AT REPRESENTATIVE LOCATIONS. ACTUAL FIELD LOCATIONS VARY. SEE SHEETS [1/227] THROUGH [7/227] FOR DISPOSITION OF EXISTING UTILITIES.
4. SEE SHEET [120/227] FOR CONCURRENT STRINGER LS2 OR RS2 REPAIR TYPE 221A OR 221B.
5. FOR REPAIR LOCATIONS, SEE SHEETS [78/227] AND [120/227].
6. FOR REPAIR DESCRIPTION, SEE SHEET [16/227].
7. SEE SHEET [120/227] FOR REQUIRED TEMPORARY SUPPORT CAPACITY OF SIDEWALK FASCIA STRINGER LS2 & RS2 AND TOWER SIDEWALK STRINGER TSIS.

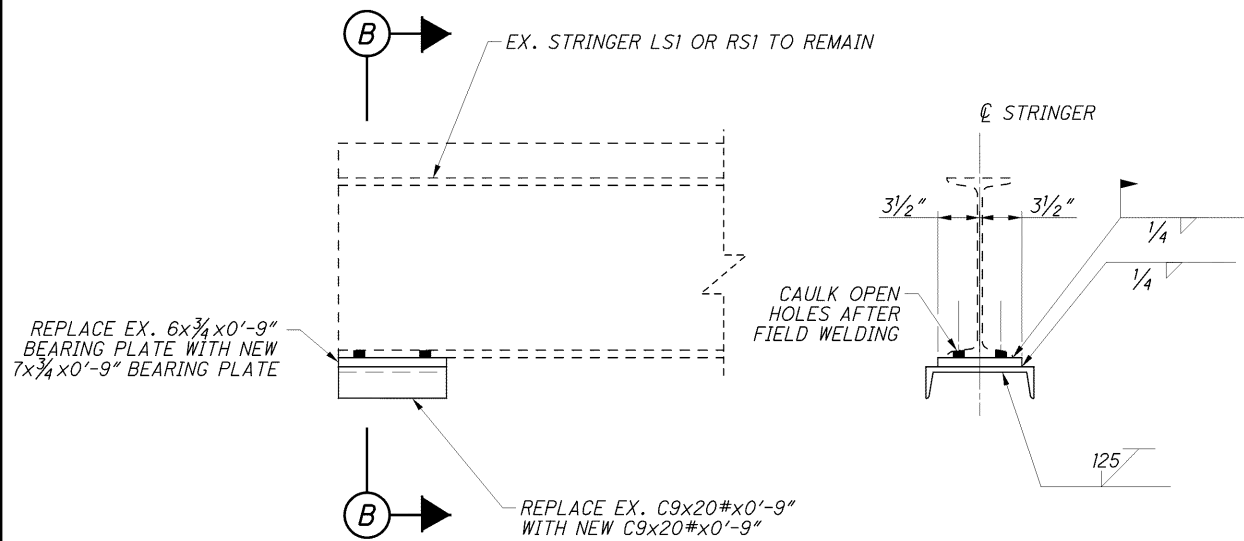
p:\...ofbw01\80551\structures\LUC002_1862C...dms71870\002_1862CWD216.dgn PLOT: 10/18/2012 @ 9:59:02 PM BY:edues



REPAIR TYPE 223



SECTION A
(STRINGER NOT SHOWN FOR CLARITY)

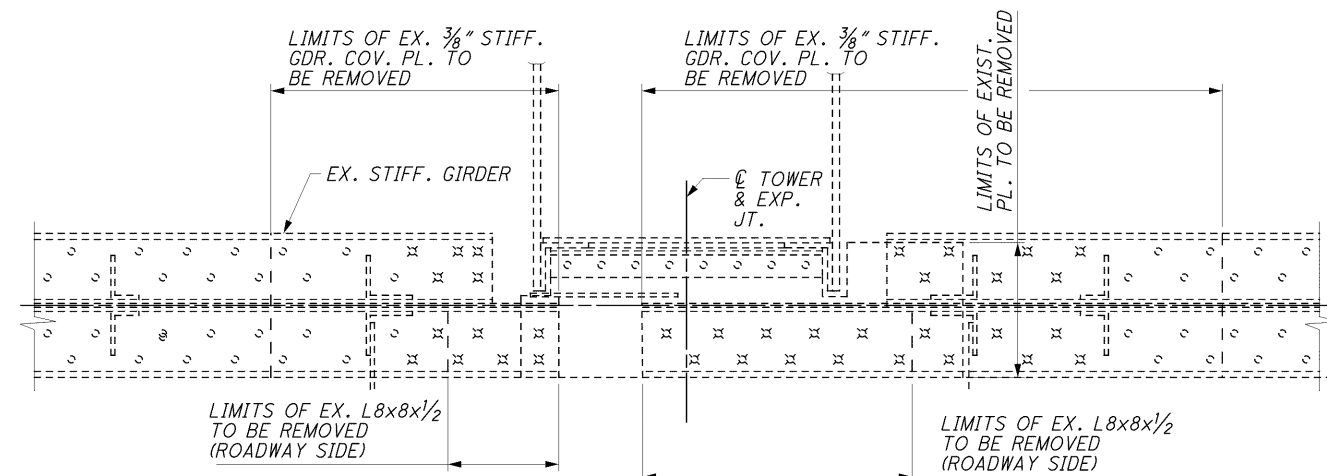


REPAIR TYPE 224

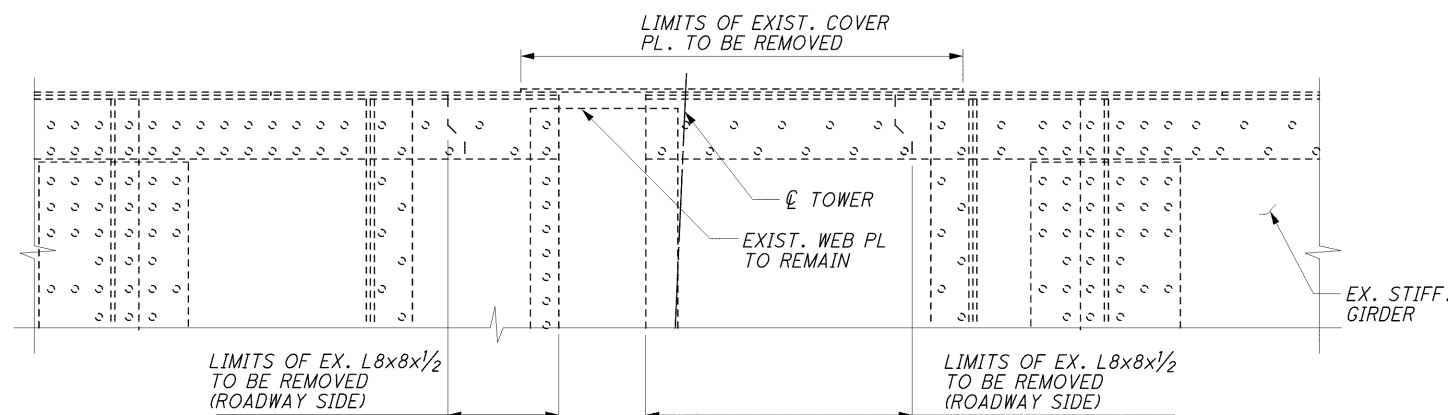
SECTION B

NOTES:

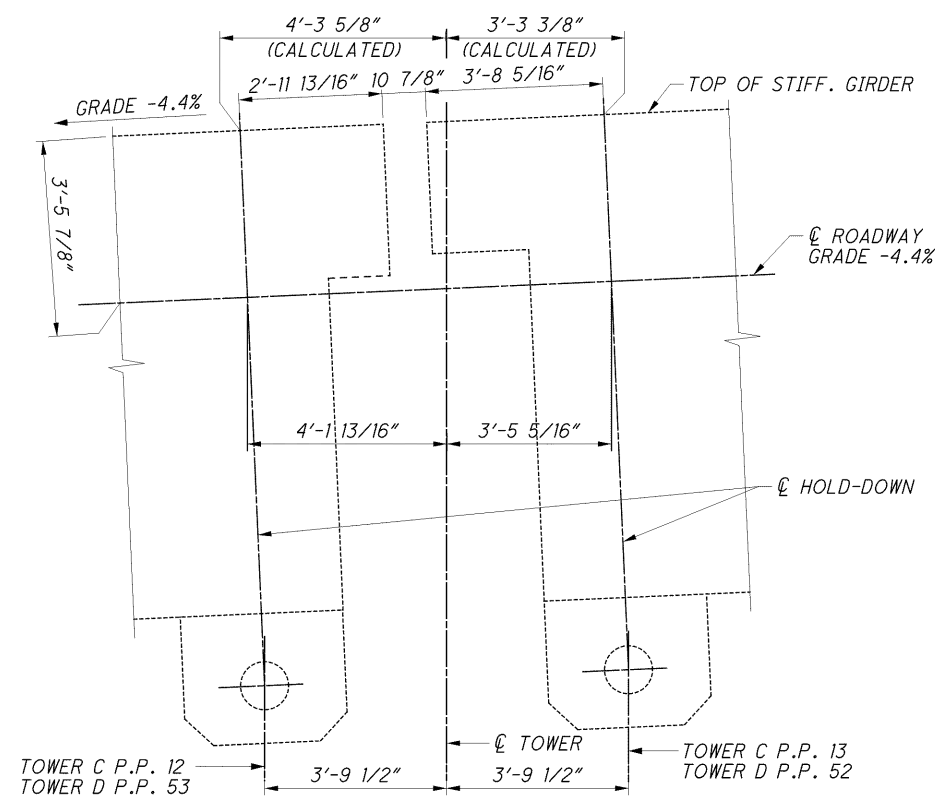
1. FOR TOWER SIDEWALK FRAMING PLAN SEE SHEET [120/227].
2. SEE SHEET [100/227] FOR ADDITIONAL NOTES.
3. FOR REPAIR LOCATIONS, SEE SHEETS [78/227] AND [120/227].
4. FOR REPAIR DESCRIPTION, SEE SHEET [16/227].
5. TEMPORARY INTERIOR STRINGER END SUPPORT SHALL BE CAPABLE OF SUPPORTING AN UNFACTORED DEAD LOAD OF 4.5 KIPS, WHICH INCLUDES AN ALLOWANCE FOR 50 PSF CONSTRUCTION DEAD LOAD APPLIED TO THE TRIBUTARY AREA OF THE STRINGER. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT DESIGN AND CONTRIBUTION OF ANY CONSTRUCTION LIVE LOADS AND DEAD LOADS EXCEEDING 50 PSF.



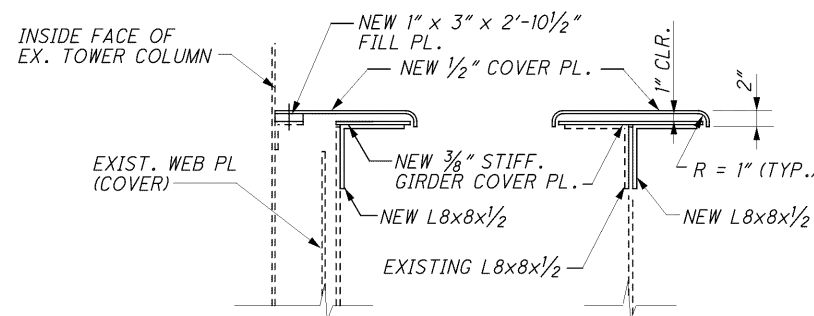
EXISTING PLAN VIEW



EXISTING ELEVATION

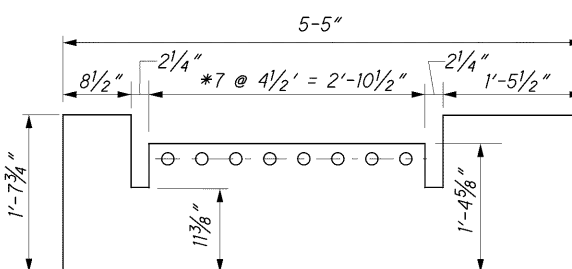


GEOMETRY ELEVATION



SECTION A-A

SECTION B-B

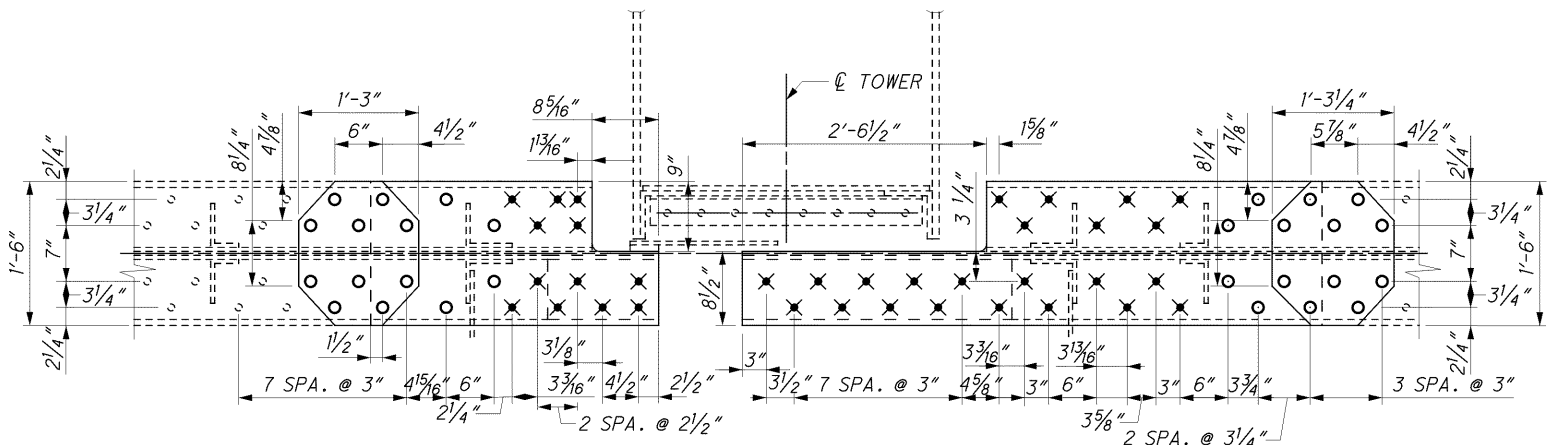


NEW COVER PLATE DETAIL

* MATCH BOLT PATTERN OF THE HOLES ON THE EX. ANGLE

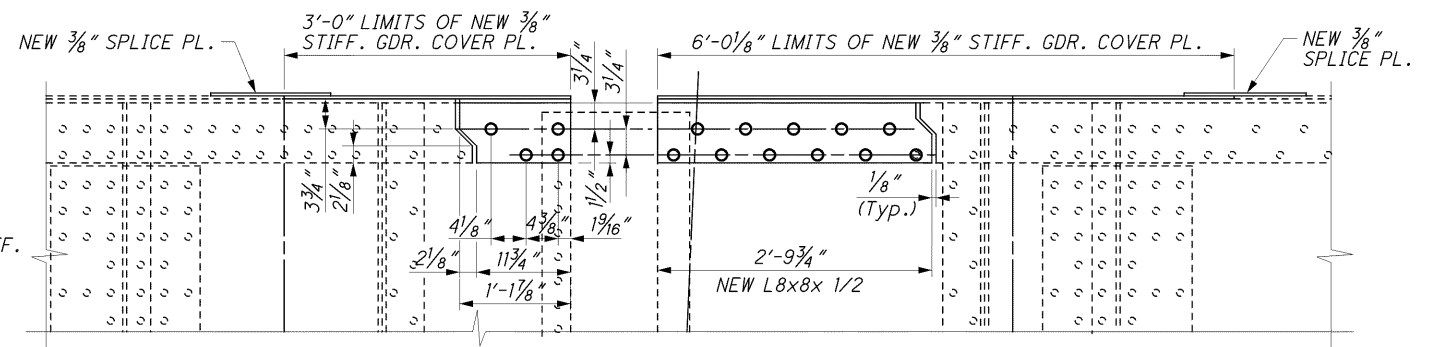
NOTES:

1. ALL EXISTING DIMENSIONS ARE AS PER ORIGINAL PLANS AND ARE "±" UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSIONS AS PER CMS 102.05 AND 105.02 TO ENSURE PROPER FIT OF REPAIRS.
2. CONTRACTOR SHALL VERIFY ALL REPAIR TYPE LOCATIONS IN THE FIELD WITH THE ENGINEER PRIOR TO ORDERING AND FABRICATING MATERIALS.
3. FOR GENERAL NOTES, SEE SHEETS [8 227] THRU [23 227].
4. FOR BOLT/RIVET LEGEND, SEE SHEET [95 227].



NEW PLAN VIEW STIFF. GIRDER COVER PL.

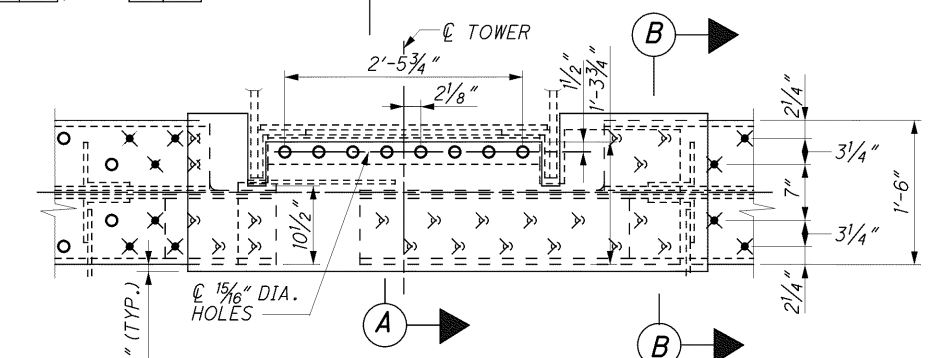
(4 LOCATIONS)



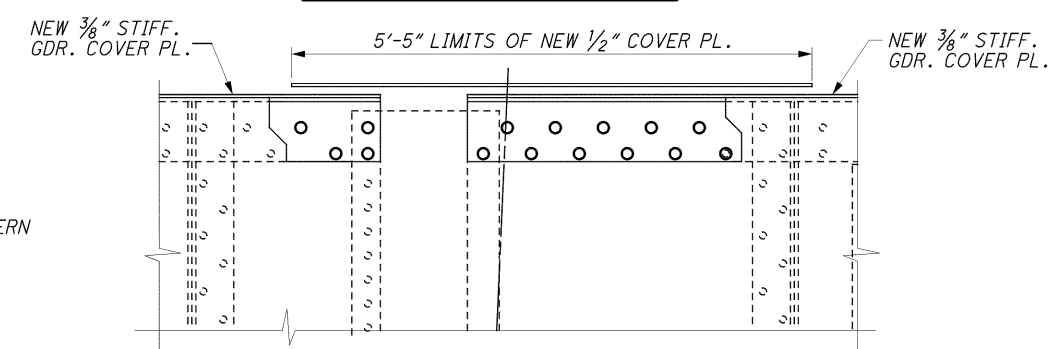
NEW ELEVATION STIFF. GIRDER COVER PL.

REPAIR TYPE 321

FOR REPAIR LOCATIONS, SEE SHEETS [78 227], [79 227], [82 227], AND [83 227].



NEW PLAN VIEW COVER PL.

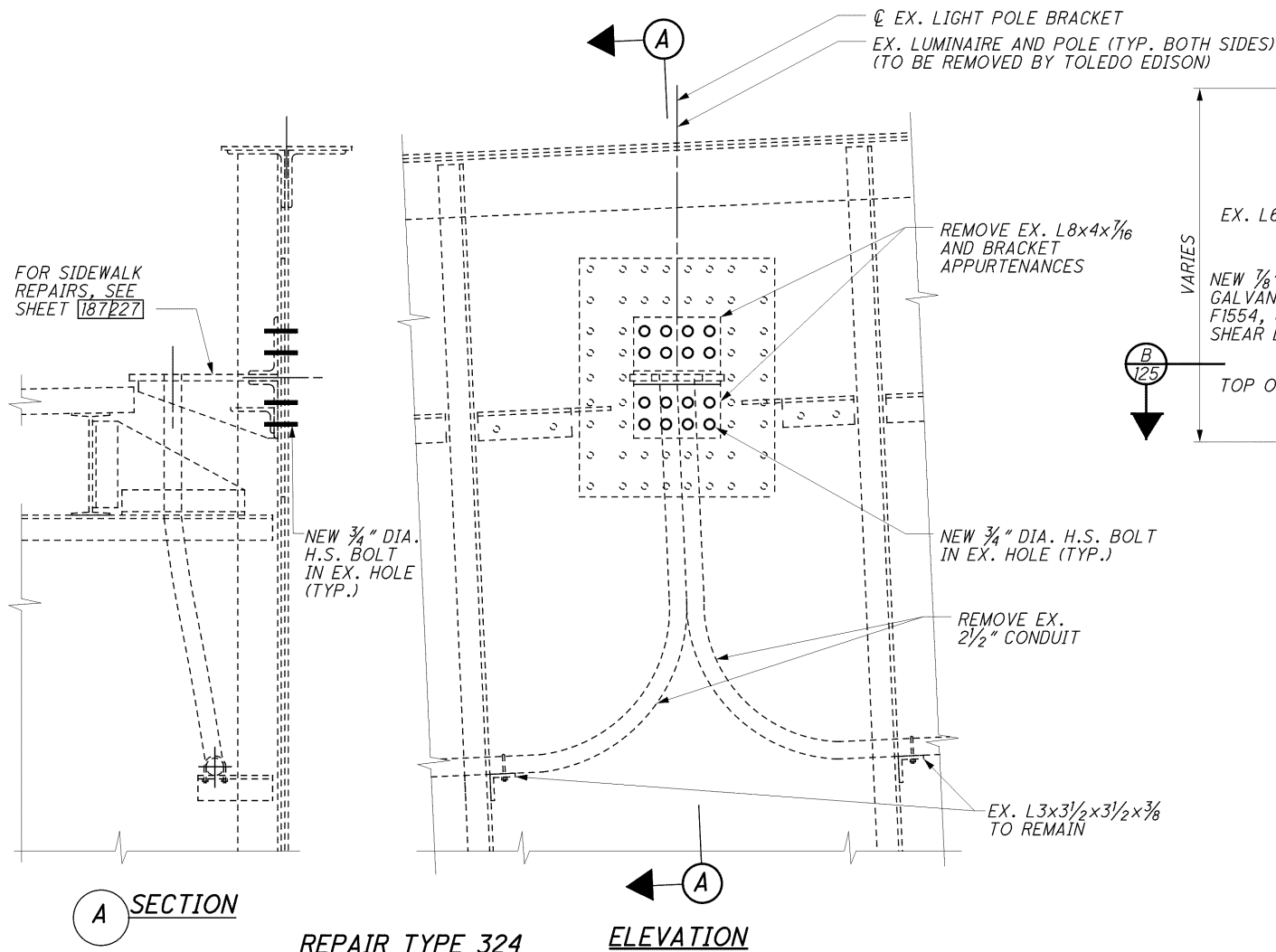


NEW ELEVATION COVER PL.

(4 REQUIRED)

LEGEND:

» DENOTES HIDDEN COUNTERSUNK BOLT.

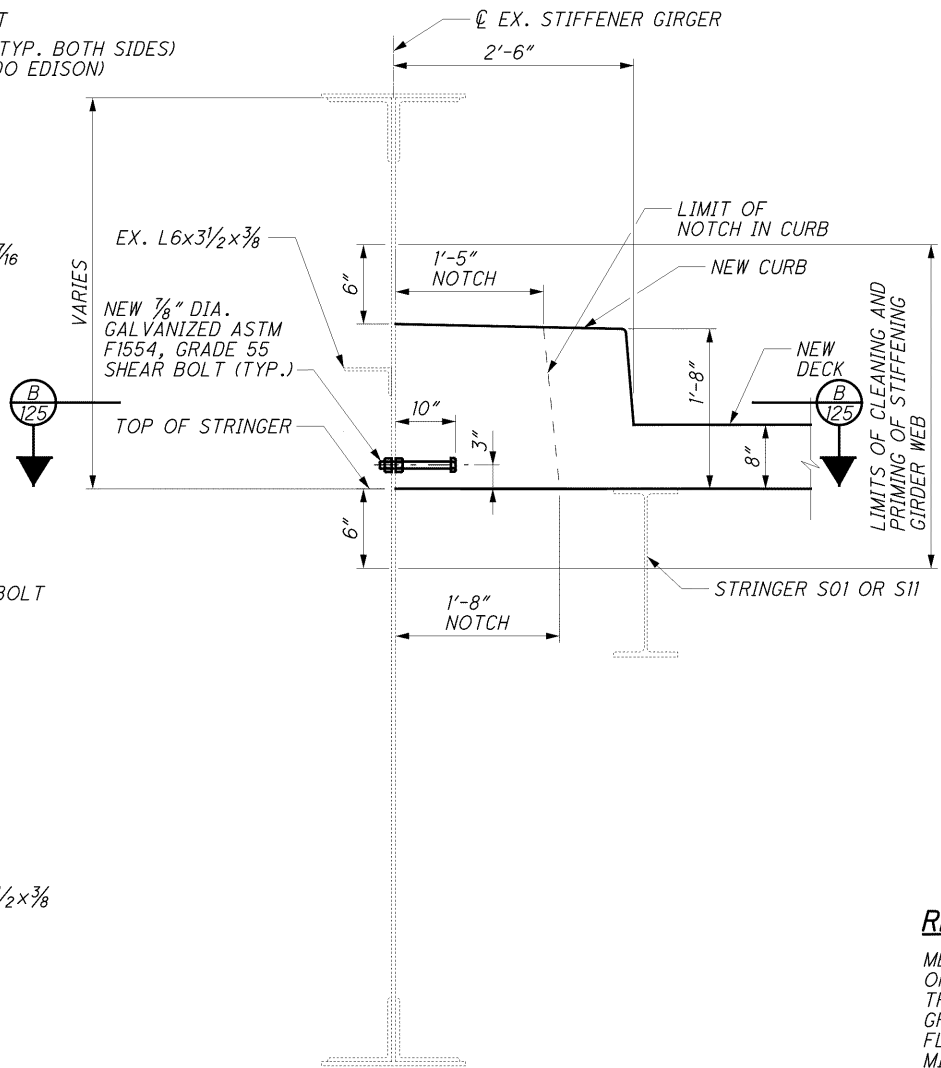


REPAIR TYPE 324
LIGHT POLE BRACKET RETROFIT
AT SUSPENDED SPANS
(19 LOCATIONS)

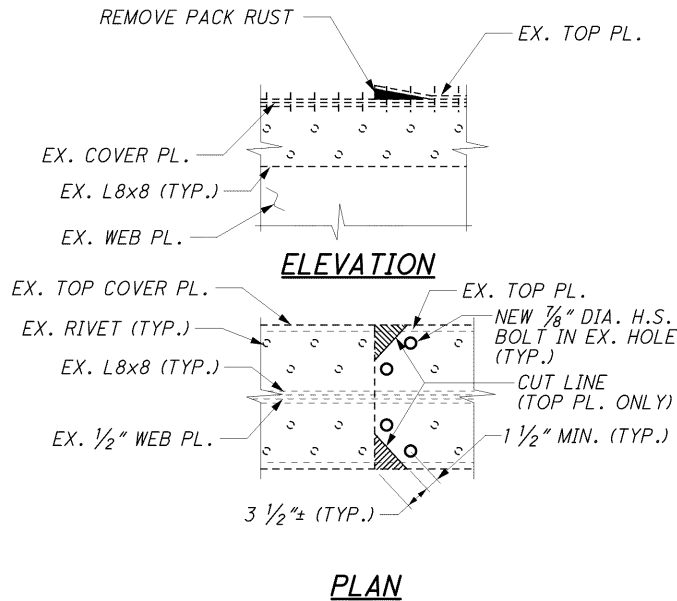
REPAIR TYPE 324 NOTES:

REPLACE 16 EX. H.S. BOLTS IN STIFFENING GIRDER WEB
WITH NEW ASTM A325 3/4" ϕ H.S. BOLTS AFTER BRACKETS ARE REMOVED.

ACTUAL FIELD LOCATIONS VARY.
SEE LIGHTING PLAN SHEETS 66227 THROUGH 68227 FOR DISPOSITION OF EXISTING UTILITIES.



REPAIR TYPE 323
(REINFORCING STEEL NOT SHOWN FOR CLARITY)
LEFT (DOWNSTREAM) GIRDER SHOWN,
RIGHT (UPSTREAM) GIRDER OPPOSITE HAND
FOR REPAIR LOCATIONS, SEE SHEETS 78227 THRU 83227.



REPAIR TYPE 322
(TOP FLANGE REPAIRS SHOWN,
BOTTOM FLANGE REPAIRS SIMILAR)
FOR REPAIR LOCATIONS, SEE SHEETS 78227 AND 83227.

REPAIR TYPE 322 NOTES:

MECHANICALLY CUT THE CORNERS OF THE TOP PLATES. SET GAUGE
ON BLADE TO 1/16" LESS THAN THICKNESS OF PLATE BEING CUT. CUT
THROUGH PLATE, BREAK OFF REMAINING THICKNESS AFTER CUT AND
GRIND SMOOTH EDGES OF STEEL PLATE ALONG CUT LINE. DO NOT
FLAME-CUT THE EXISTING STRUCTURAL STEEL. MAINTAIN A 1 1/2"
MINIMUM SPACE BETWEEN HOLE CENTERLINE AND EDGE OF PLATE.

REMOVE 4 EXISTING RIVETS. REMOVE PACK RUST, CLEAN SURFACES,
APPLY EPOXY PRE-PRIMER AND APPLY EPOXY-TYPE REPAIR MATERIAL
TO CAVITIES. INSTALL 4 NEW BOLTS IN EXISTING HOLES AS INDICATED.

EXISTING RIVET PATTERN MAY VARY PER LOCATION.

REPAIR TYPE 323 NOTES:

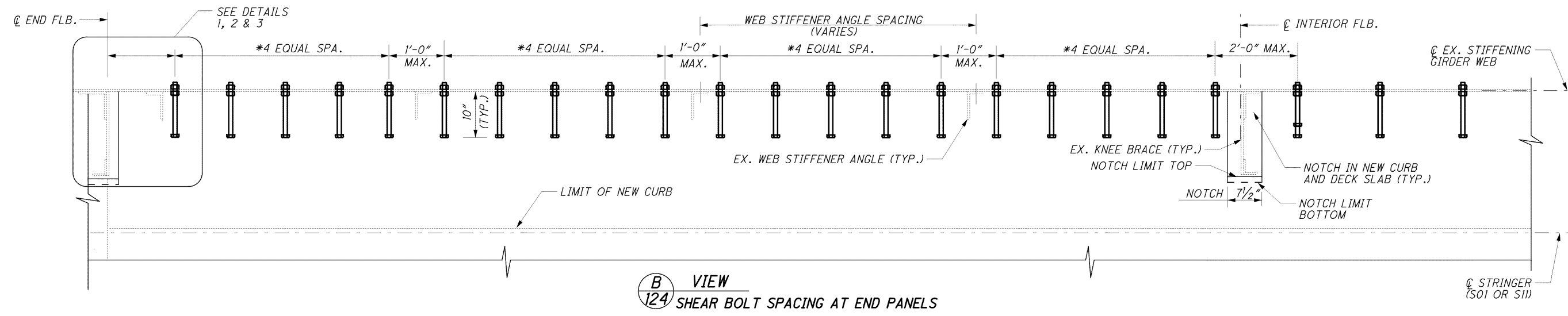
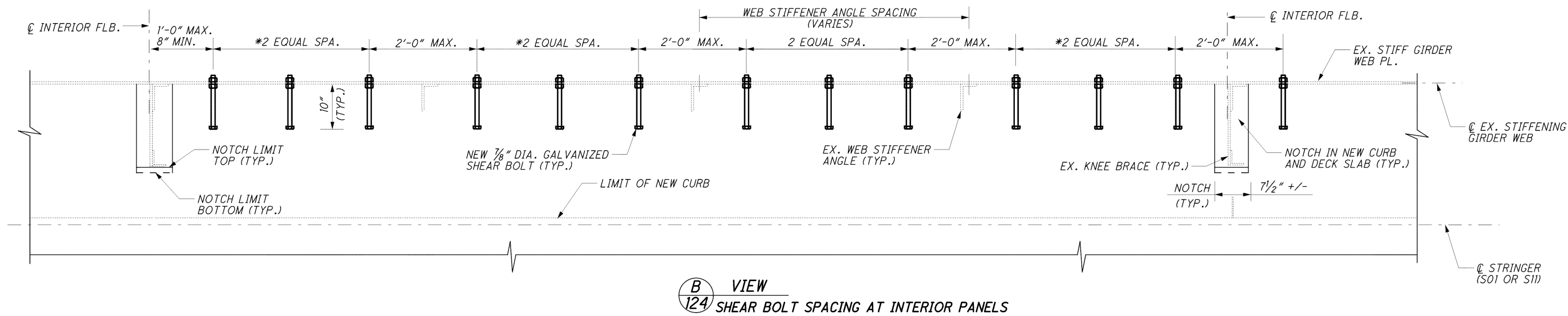
PRIOR TO POURING THE DECK, DRILL NEW HOLES IN THE STIFFENING
GIRDER WEB AND INSTALL NEW 1/8" DIA. GALVANIZED ASTM F1554,
GRADE 55 SHEAR BOLTS AS SHOWN.

CLEAN AND PRIME COAT INSIDE FACE OF STIFFENING GIRDER WEB
FOR AN AREA EXTENDING 0'-6" FROM THE BOTTOM OF THE DECK
AND THE TOP OF THE CURB FULL LENGTH OF THE STIFFENING GIRDER.

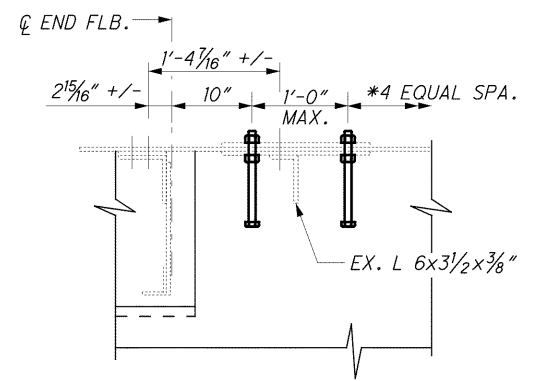
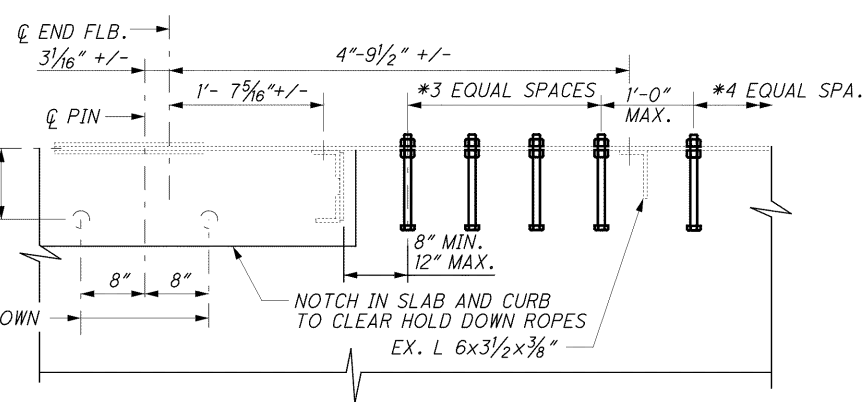
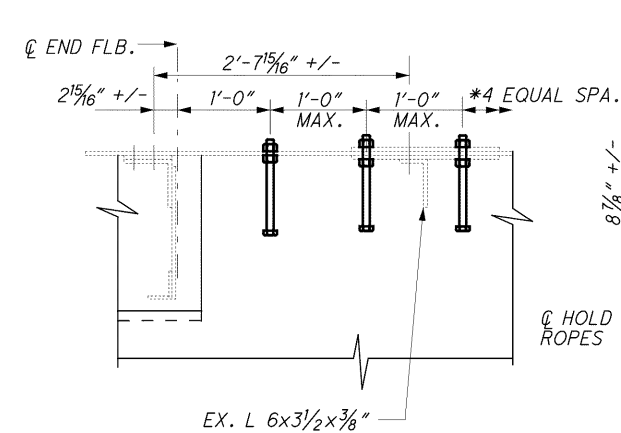
THIS IS AN APPROXIMATE AREA OF 2.67 SQUARE FEET PER FOOT
ALONG THE LENGTH OF THE STIFFENING GIRDER. THE STIFFENING
GIRDER SHALL BE CLEANED AND PRIMED BEFORE THE DECK IS POURED.

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 8227 THRU 23227.
2. FOR ADDITIONAL NOTES, SEE SHEET 123227.
3. FOR BOLT/RIVET LEGEND, SEE SHEET 95227.
4. FOR DECK REINFORCING, SEE SHEETS 171227 THRU 178227.
5. FOR SHEAR BOLT SPACING, SEE SHEET 125227.
6. FOR TRANSVERSE SECTION AT SUSPENSION SPANS, SEE SHEET 59227.
7. FOR ADDITIONAL LUMINAIRE AND LIGHT POLE INFORMATION, SEE SHEET 59227.

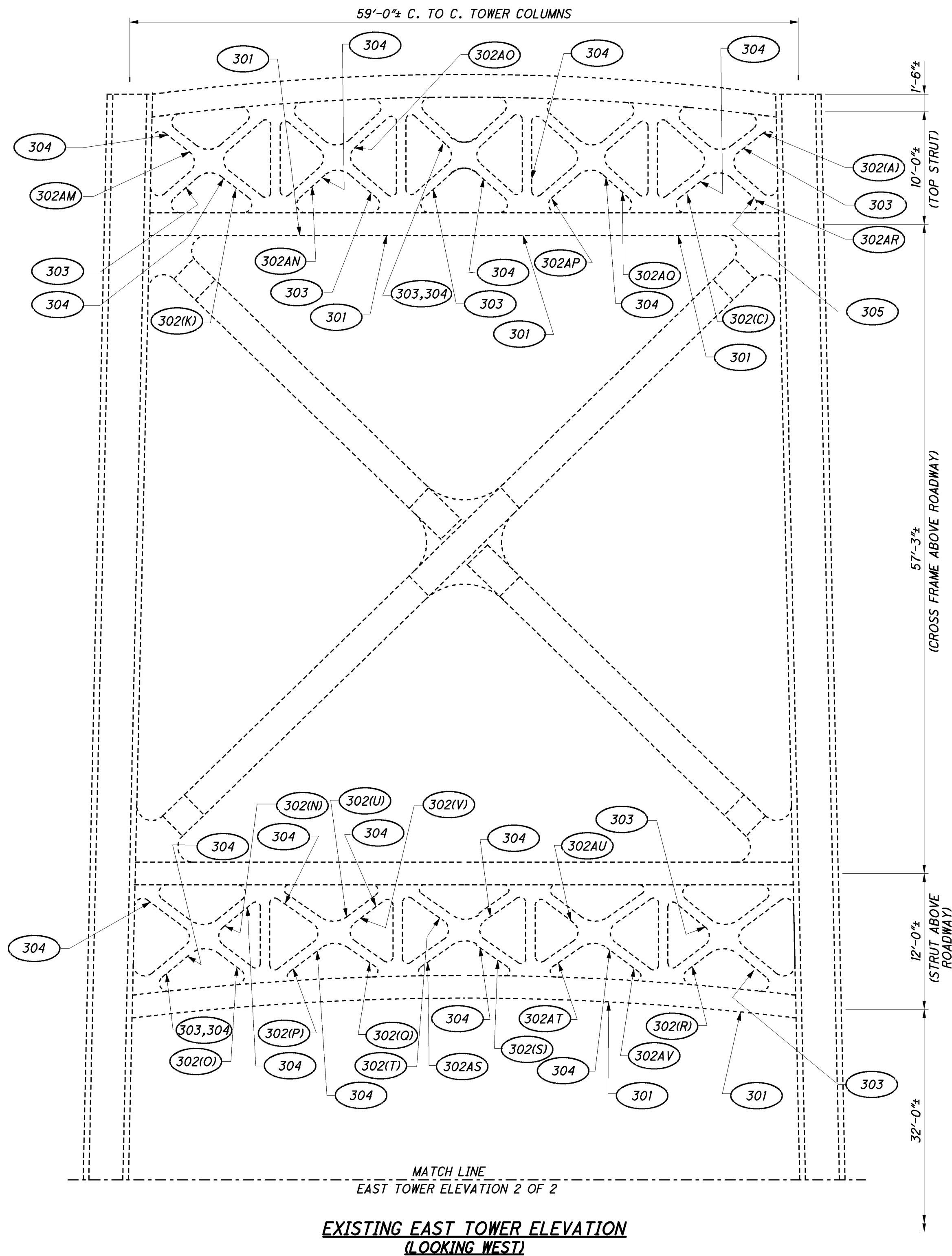


DECK TO STIFFENING GIRDER CONNECTION



- NOTES:**
1. FOR GENERAL NOTES, SEE SHEETS **8 227** THRU **23 227**.
 2. FOR ADDITIONAL NOTES, SEE SHEET **123 227**.
 3. FOR BOLT/RIVET LEGEND, SEE SHEET **95 227**.
 4. FOR CURB & DECK REINFORCING, SEE SHEETS **171 227** THRU **178 227** AND **185 227** THRU **186 227**.

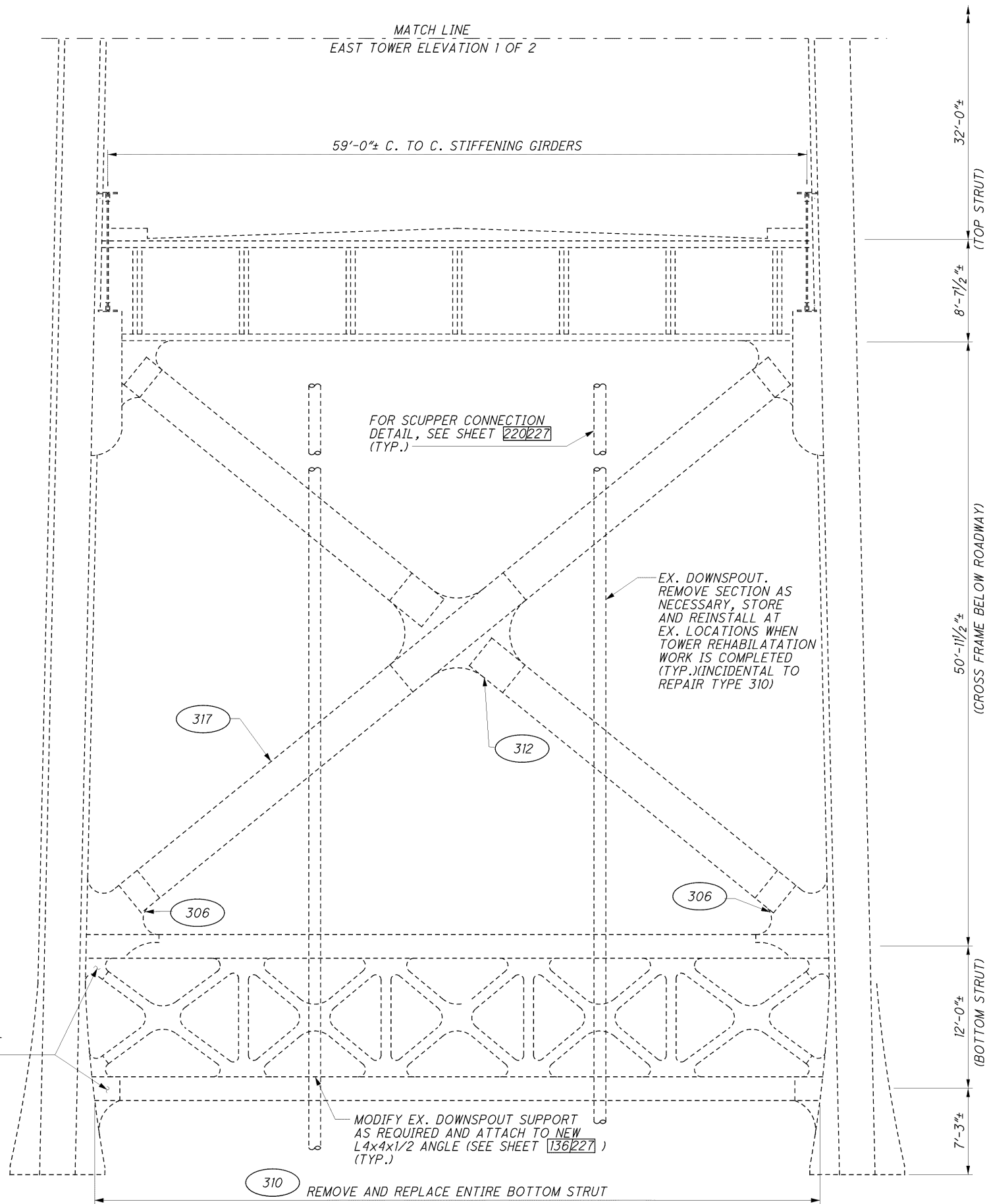
C:\Users\dgeckle\AppData\Local\Temp\LCFEM\194507F01-E357-4AC9-A7E6-85AE179A8DB7\002_1862CMD306.dgn 05-APR-2016 10:50AM dgeckle



MISCELLANEOUS STEEL REPAIR DETAILS - EAST TOWER		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
301	REPLACE LACING ANGLE	130
302	REPLACE BATTEN PLATE AND BATTEN STIFFENING ANGLES	130
303	REPLACE BATTEN END STIFFENING ANGLE	130
304	REPLACE BATTEN INTERIOR STIFFENING ANGLE	130
303, 304	REPLACE BATTEN END STIFFENING ANGLE AND BATTEN INTERIOR STIFFENING ANGLE	130
305	REPLACE LACING ANGLE	130
306	REPLACE BATTEN END STIFFENING ANGLE	130
307	REPLACE LACING ANGLE	131
311	REPLACE BATTEN END STIFFENING ANGLE	131

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 8 227 THRU 23 227.
2. FOR REPAIR TYPE 302, THE REPAIR TYPE (.) PREFIX DESIGNATES SPECIFIC DIMENSIONS FOR THE LOCATION CORRESPONDING TO THE TABLE ON SHEET 130 227.



**EXISTING EAST TOWER ELEVATION
(LOOKING WEST)**

MISCELLANEOUS STEEL REPAIR DETAILS - EAST TOWER		
REPAIR TYPE	SCOPE OF WORK	BRIDGE SHT. NO.
306	REPLACE BATTEN END STIIFENING ANGLE	130
310	REPLACE ENTIRE BOTTOM STRUT	135 THRU 139
312	REPLACE BATTEN STIIFENING ANGLES	131
317	REPLACE BATTEN PLATES, BATTEN STIFFENING ANGLES, LACING ANGLES, AND LACING GUSSETS	133

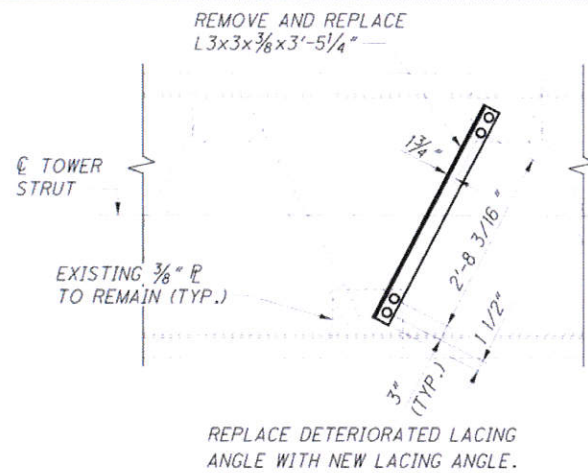
NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 8227 THRU 23227.



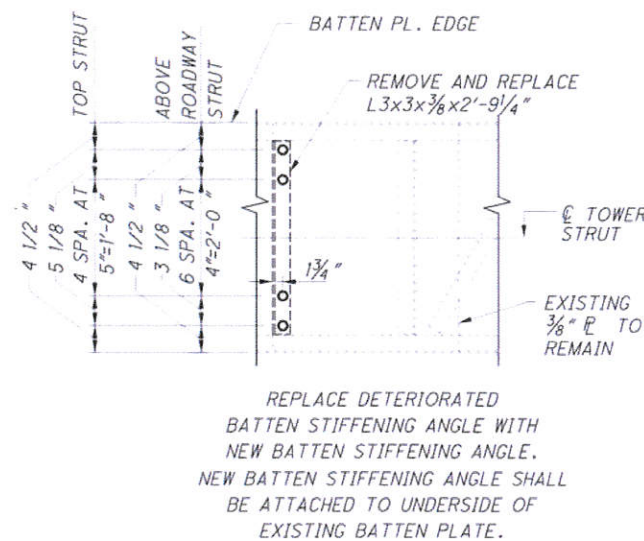
NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 8 227 THRU 23 227.
2. FOR REPAIR TYPE 302, THE REPAIR TYPE (..) PREFIX DESIGNATES SPECIFIC DIMENSIONS FOR THE LOCATION CORRESPONDING TO THE TABLE ON SHEET 130 227.



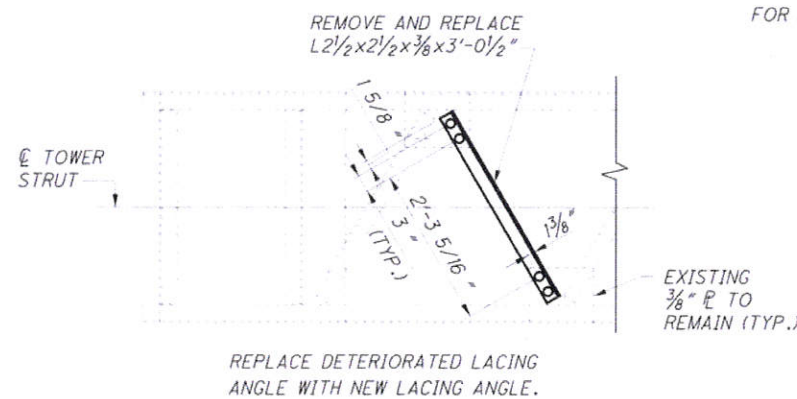
REPAIR TYPE 301

(EX. RIVETS AND NEW BOLTS ARE $\frac{3}{8}$ " ϕ)
FOR REPAIR LOCATIONS, SEE SHEETS [126][227] AND [128][227].



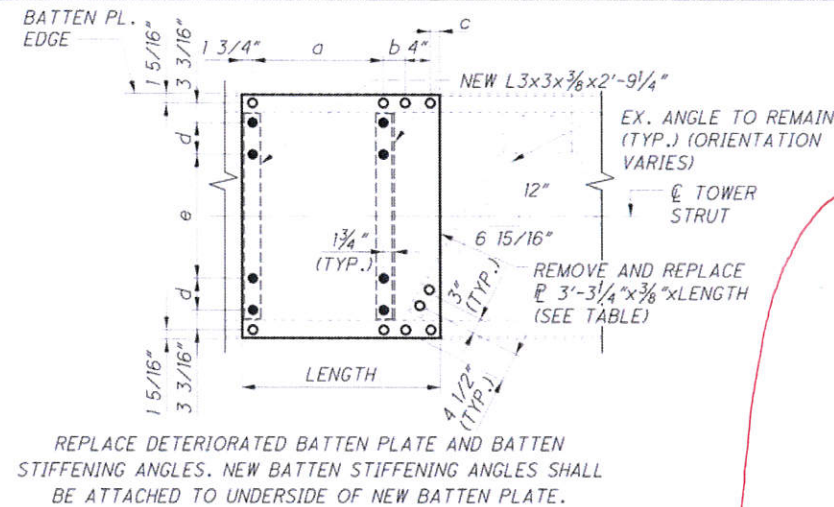
REPAIR TYPE 303

(EX. RIVETS AND NEW BOLTS ARE $\frac{3}{4}$ " ϕ)
FOR REPAIR LOCATIONS, SEE SHEETS [126][227] AND [128][227].



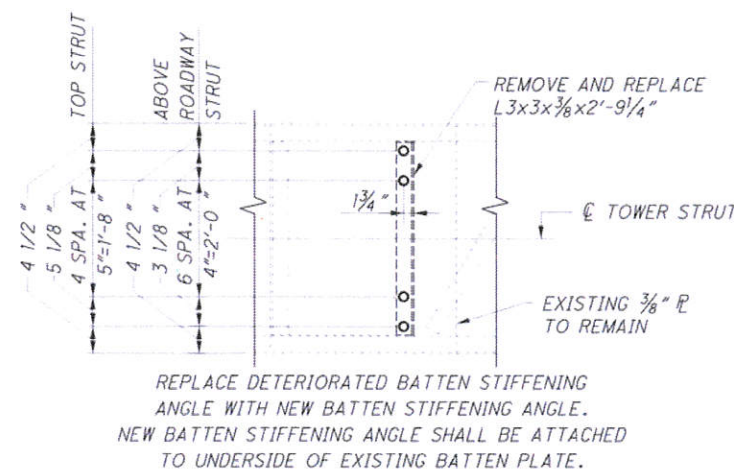
REPAIR TYPE 305

(EX. RIVETS AND NEW BOLTS ARE $\frac{3}{4}$ " ϕ)
FOR REPAIR LOCATIONS, SEE SHEET [126][227].



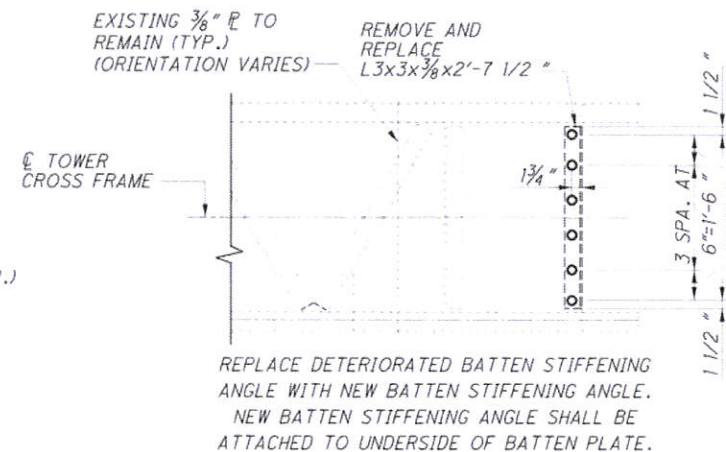
REPAIR TYPE 302

(TOP FLANGE REPLACEMENT SHOWN,
BOTTOM FLANGE REPLACEMENT SIMILAR)
(EX. RIVETS AND NEW BOLTS ARE $\frac{3}{4}$ " ϕ)
FOR REPAIR LOCATIONS, SEE SHEETS [126][227] AND [128][227].



REPAIR TYPE 304

(EX. RIVETS AND NEW BOLTS ARE $\frac{3}{4}$ " ϕ)
FOR REPAIR LOCATIONS, SEE SHEETS [126][227] AND [128][227].



REPAIR TYPE 306

(EX. RIVETS AND NEW BOLTS ARE $\frac{1}{8}$ " ϕ)
FOR REPAIR LOCATIONS, SEE SHEETS [126][227] AND [128][227].

REPAIR TYPE () PREFIX	LENGTH	NO. RIVETS REPLACED WITH BOLTS	DIMENSION				
			a	b	c	d	e
302(A)	1' - 6"	26	2 @ 3 3/4" = 0' - 7 1/2"	3 1/4"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(B)	2' - 2 3/8"	32	5 @ 3 1/8" = 1' - 3 5/8"	3 1/2"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(C)	2' - 2 3/8"	32	5 @ 3 1/8" = 1' - 3 5/8"	3 1/2"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(D)	1' - 6"	26	2 @ 3 3/4" = 0' - 7 1/2"	3 1/4"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(E)	1' - 6"	26	2 @ 3 3/4" = 0' - 7 1/2"	3 1/4"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(F)	2' - 2 3/8"	32	5 @ 3 1/8" = 1' - 3 5/8"	3 1/2"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(G)	2' - 3 1/2"	32	5 @ 3 3/8" = 1' - 4 7/8"	3 5/16"	1 9/16"	5 1/8"	4 @ 5" = 1' - 8"
302(H)	2' - 11 7/8"	38	8 @ 3 1/8" = 2' - 1"	3 1/2"	1 5/8"	5 1/8"	4 @ 5" = 1' - 8"
302(I)	2' - 2 1/4"	32	5 @ 3 1/8" = 1' - 3 5/8"	3 3/8"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(J)	2' - 9 7/8"	36	7 @ 3 3/8" = 1' - 11 5/8"	3"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(K)	2' - 2 3/8"	32	5 @ 3 1/8" = 1' - 3 5/8"	3 1/2"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(L)	2' - 11"	42	8 @ 3" = 2' - 0"	3 9/16"	1 11/16"	3 1/8"	6 @ 4" = 2' - 0"
302(M)	2' - 11"	42	8 @ 3" = 2' - 0"	3 9/16"	1 11/16"	3 1/8"	6 @ 4" = 2' - 0"
302(N)	2' - 0 1/8"	34	4 @ 3 3/8" = 1' - 1 1/2"	3 3/8"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(O)	2' - 11"	42	8 @ 3" = 2' - 0"	3 9/16"	1 11/16"	3 1/8"	6 @ 4" = 2' - 0"
302(P)	2' - 2 3/4"	36	5 @ 3 1/4" = 1' - 4 1/4"	3 1/4"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(Q)	2' - 10"	42	8 @ 3" = 2' - 0"	2 3/4"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(R)	2' - 11"	42	8 @ 3" = 2' - 0"	3 9/16"	1 11/16"	3 1/8"	6 @ 4" = 2' - 0"
302(S)	2' - 0 5/8"	34	4 @ 3 9/16" = 1' - 2 1/4"	3 1/8"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(T)	2' - 0 5/8"	34	4 @ 3 9/16" = 1' - 2 1/4"	3 1/8"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(U)	1' - 11 7/8"	34	4 @ 3 3/8" = 1' - 1 1/2"	3 1/8"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(V)	1' - 11 7/8"	34	4 @ 3 3/8" = 1' - 1 1/2"	3 1/8"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(W)	2' - 11"	42	8 @ 3" = 2' - 0"	3 9/16"	1 11/16"	3 1/8"	6 @ 4" = 2' - 0"
302(X)	2' - 5 7/8"	34	6 @ 3 1/4" = 1' - 7 1/2"	3 1/16"	1 9/16"	5 1/8"	4 @ 5" = 1' - 8"
302(Y)	2' - 2 3/4"	36	5 @ 3 1/4" = 1' - 4 1/4"	3 1/4"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(Z)	2' - 5 1/2"	38	6 @ 3 1/8" = 1' - 6 3/4"	3 1/2"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"

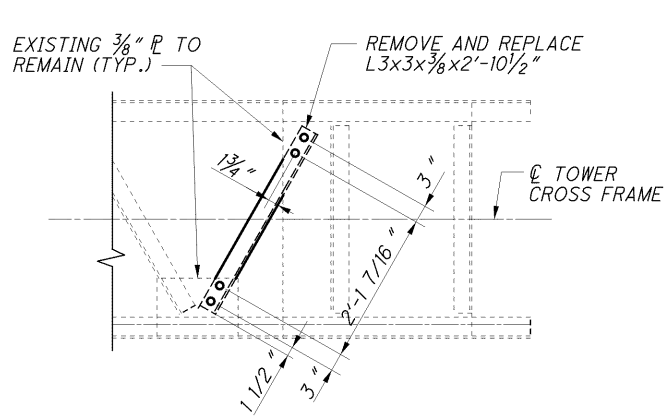
REPAIR TYPE () PREFIX	LENGTH	NO. RIVETS REPLACED WITH BOLTS	DIMENSION				
			a	b	c	d	e
302(AA)	2' - 7 3/4"	36	7 @ 3" = 1' - 9"	3 1/2"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(AB)	2' - 2 3/8"	32	5 @ 3 1/8" = 1' - 3 5/8"	3 1/2"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(AC)	2' - 2 3/8"	32	5 @ 3 1/8" = 1' - 3 5/8"	3 1/2"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(AD)	2' - 7 3/4"	36	7 @ 3" = 1' - 9"	3 1/2"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(AE)	1' - 11 7/8"	34	4 @ 3 3/8" = 1' - 1 1/2"	3 1/8"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(AF)	2' - 10"	42	8 @ 3" = 2' - 0"	2 3/4"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(AG)	2' - 0 5/8"	34	4 @ 3 9/16" = 1' - 2 1/4"	3 1/8"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(AH)	2' - 10"	42	8 @ 3" = 2' - 0"	2 3/4"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(AI)	2' - 0 5/8"	34	4 @ 3 9/16" = 1' - 2 1/4"	3 1/8"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(AJ)	1' - 11 7/8"	34	4 @ 3 3/8" = 1' - 1 1/2"	3 1/8"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(AK)	2' - 10"	42	8 @ 3" = 2' - 0"	2 3/4"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(AL)	2' - 0 1/8"	34	4 @ 3 3/8" = 1' - 1 1/2"	3 3/8"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(AM)	1' - 6"	26	2 @ 3 3/4" = 0' - 7 1/2"	3 1/4"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(AN)	2' - 1"	30	4 @ 3 1/2" = 1' - 2"	3 11/16"	1 9/16"	5 1/8"	4 @ 5" = 1' - 8"
302(AO)	2' - 3 1/2"	32	5 @ 3 3/8" = 1' - 4 7/8"	3 5/16"	1 9/16"	5 1/8"	4 @ 5" = 1' - 8"
302(AP)	2' - 9 7/8"	36	7 @ 3 3/8" = 1' - 11 5/8"	3"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(AQ)	2' - 1"	30	4 @ 3 1/2" = 1' - 2"	3 11/16"	1 9/16"	5 1/8"	4 @ 5" = 1' - 8"
302(AR)	2' - 7 3/4"	36	7 @ 3" = 1' - 9"	3 1/2"	1 1/2"	5 1/8"	4 @ 5" = 1' - 8"
302(AS)	2' - 10"	42	8 @ 3" = 2' - 0"	2 3/4"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(AT)	2' - 10"	42	8 @ 3" = 2' - 0"	2 3/4"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(AU)	1' - 11 7/8"	34	4 @ 3 3/8" = 1' - 1 1/2"	3 1/8"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"
302(AV)	2' - 2 3/4"	36	5 @ 3 1/4" = 1' - 4 1/4"	3 1/4"	1 1/2"	3 1/8"	6 @ 4" = 2' - 0"

NOTE(S):

1. NO CHANGES WERE MADE TO THE EXISTING REPAIR TYPE 302 TABLE
2. SOME OF THE ADDITIONAL REPAIR PLATES HAVE THE SAME DIMENSIONS AS THE REPAIR PLATES SPECIFIED IN THE EXISTING REPAIR TYPE 302 TABLE

NOTES:

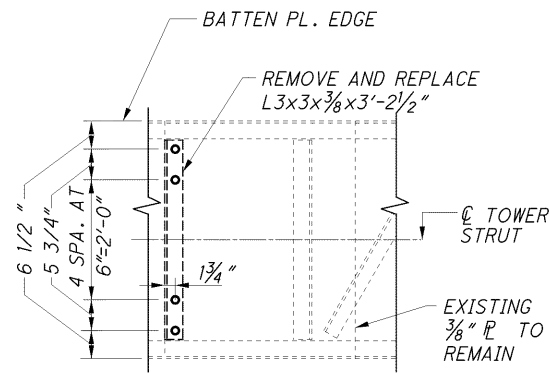
1. FOR GENERAL NOTES, SEE SHEETS [8][227] THRU [23][227].
2. FOR ADDITIONAL NOTES, SEE SHEET [123][227].
3. FOR BOLT/RIVET LEGEND, SEE SHEET [95][227].



REPLACE DETERIORATED LACING
ANGLE WITH NEW LACING ANGLE.

REPAIR TYPE 307

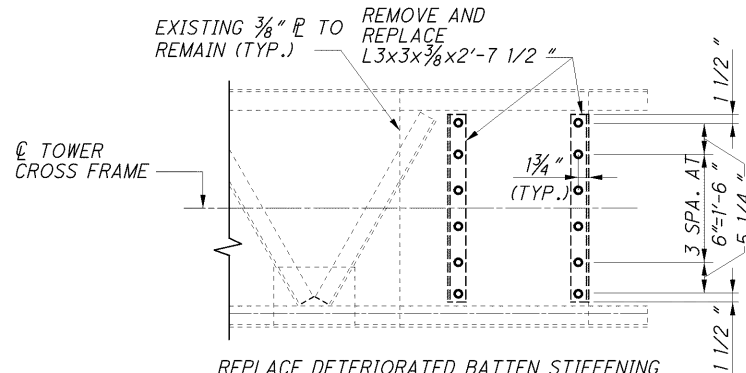
FOR REPAIR LOCATIONS, SEE SHEET 126227 .



REPLACE DETERIORATED
BATTEN STIFFENING ANGLE WITH
NEW BATTEN STIFFENING ANGLE.
NEW BATTEN STIFFENING ANGLE SHALL
BE ATTACHED TO UNDERSIDE OF
EXISTING BATTEN PLATE.

REPAIR TYPE 311

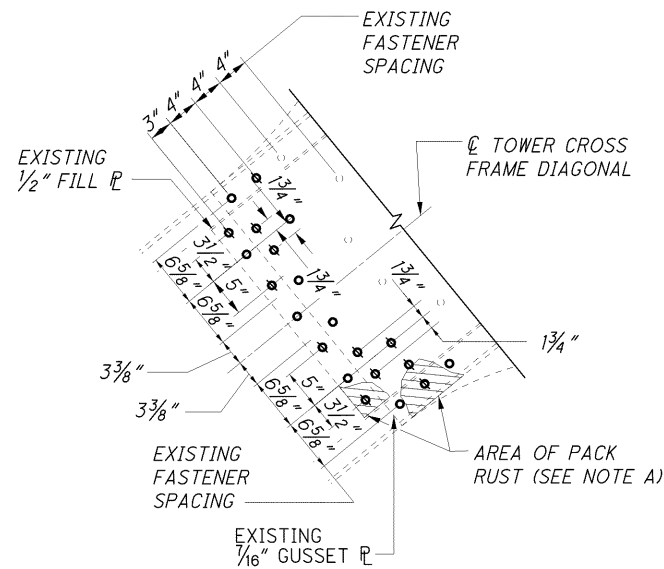
FOR REPAIR LOCATIONS, SEE SHEET 126227.



REPLACE DETERIORATED BATTEN STIFFENING
ANGLES WITH NEW BATTEN STIFFENING ANGLES.
NEW BATTEN STIFFENING ANGLES SHALL BE
ATTACHED TO UNDERSIDE OF EXISTING BATTEN
PLATE.

REPAIR TYPE 312

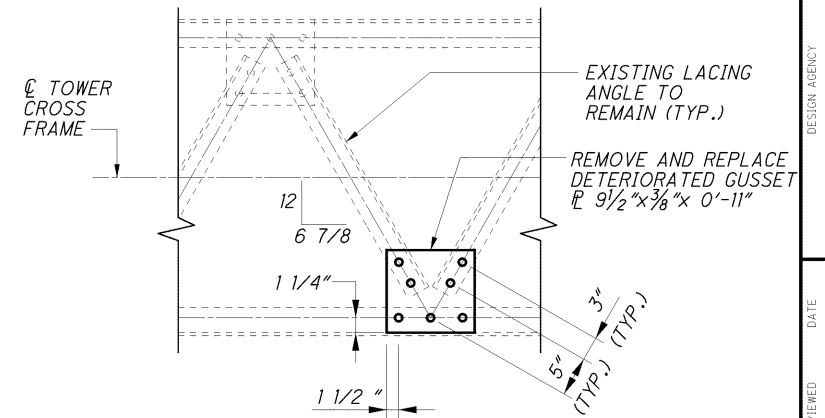
FOR REPAIR LOCATIONS, SEE SHEET 127227.



NOTE A:
DRILL NEW HOLES. REMOVE EXISTING RIVETS AS REQUIRED.
REMOVE PACK RUST, CLEAN SURFACES, APPLY EPOXY
PRE-PRIMER AND APPLY EPOXY-TYPE REPAIR MATERIAL TO
CAVITIES. INSTALL NEW BOLTS IN NEW HOLES AND NEW BOLTS IN
EXISTING HOLES AS INDICATED. THIS WORK SHALL BE DONE TO
BOTH SIDES AT NOTED LOCATIONS.

REPAIR TYPE 316

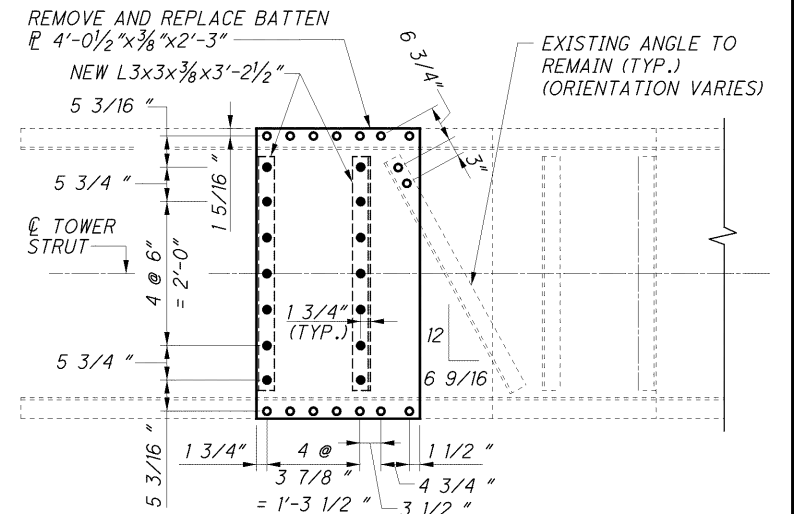
FOR REPAIR LOCATIONS, SEE SHEET 128227 .



REPLACE DETERIORATED GUSSET $\angle$.

REPAIR TYPE 315

FOR REPAIR LOCATIONS, SEE SHEET 129227 .



REPLACE DETERIORATED BATTEN PLATE AND BATTEN
STIFFENING ANGLES. NEW BATTEN STIFFENING ANGLES
SHALL BE ATTACHED TO UNDERSIDE OF NEW BATTEN
PLATE. ASSUMED FIELD ASSEMBLY OF NEW BATTEN PLATE
NEW BATTEN STIFFENING ANGLES.

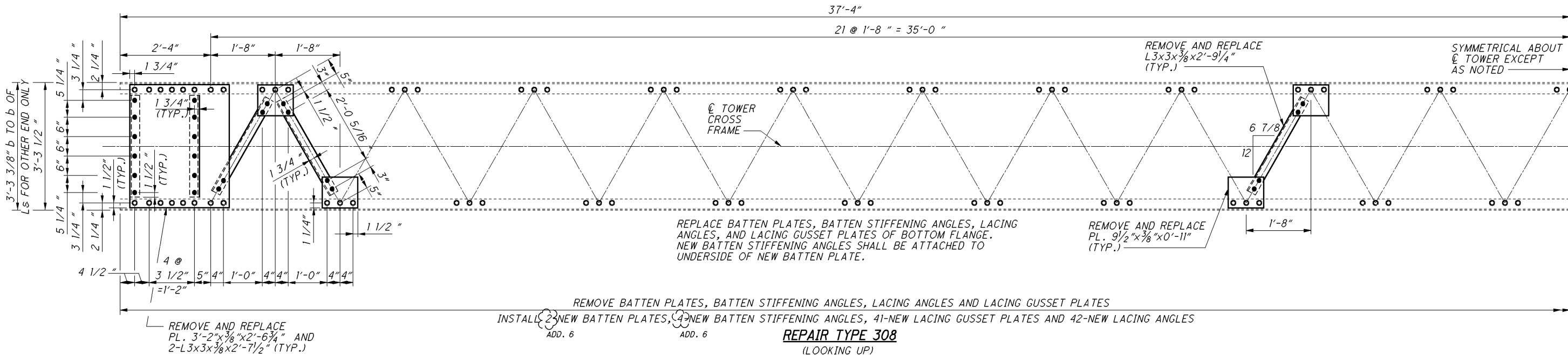
REPAIR TYPE 318

FOR REPAIR LOCATIONS, SEE SHEET 128227 .

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 8227 THRU 23227.
2. FOR ADDITIONAL NOTES, SEE SHEET 123227.
3. FOR BOLT/RIVET LEGEND, SEE SHEET 95227.
4. ALL EX. RIVETS AND NEW BOLTS ON THIS SHEET ARE $\frac{7}{8}\phi$.

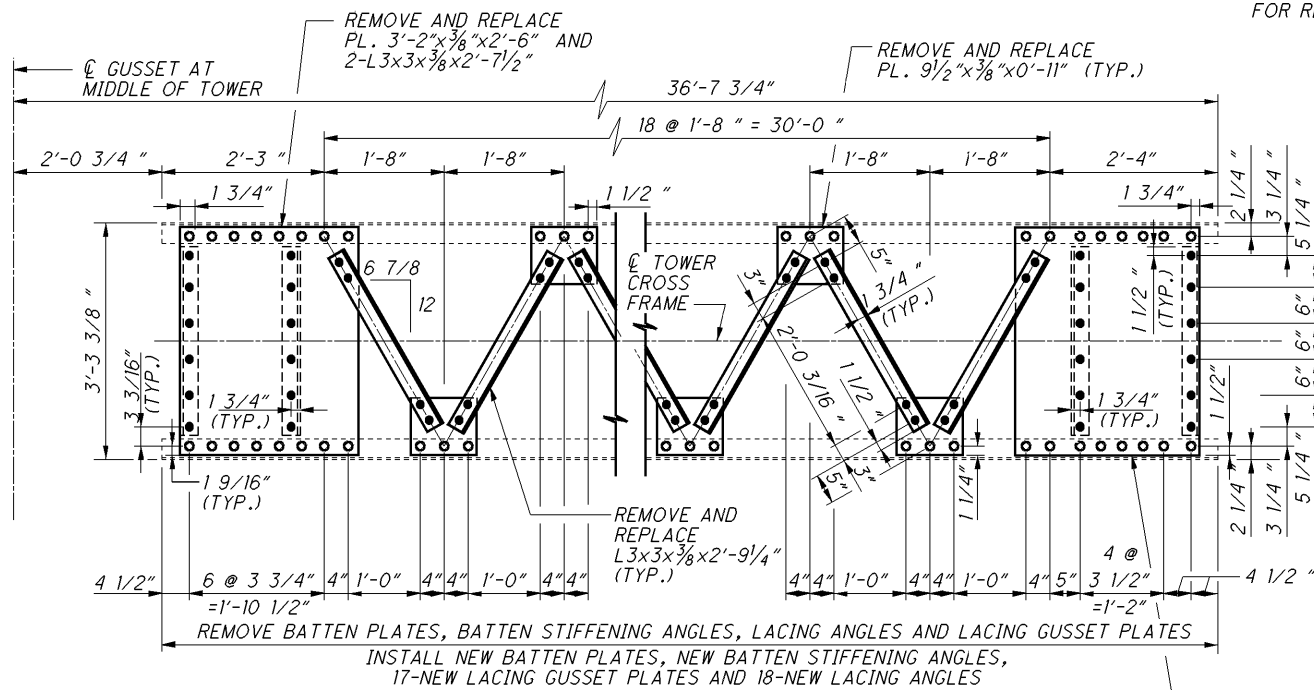
V:\2013 Projects\13-0058\Contract Documents\Plans\Revised Plan Sheets\204_002_1862CMD322.dgn 13-JUN-2013 10:45AM dgeckle



REMOVE BATTEN PLATES, BATTEN STIFFENING ANGLES, LACING ANGLES AND LACING GUSSET PLATES
INSTALL 2-NEW BATTEN PLATES, 4-NEW BATTEN STIFFENING ANGLES, 41-NEW LACING GUSSET PLATES AND 42-NEW LACING ANGLES
ADD. 6

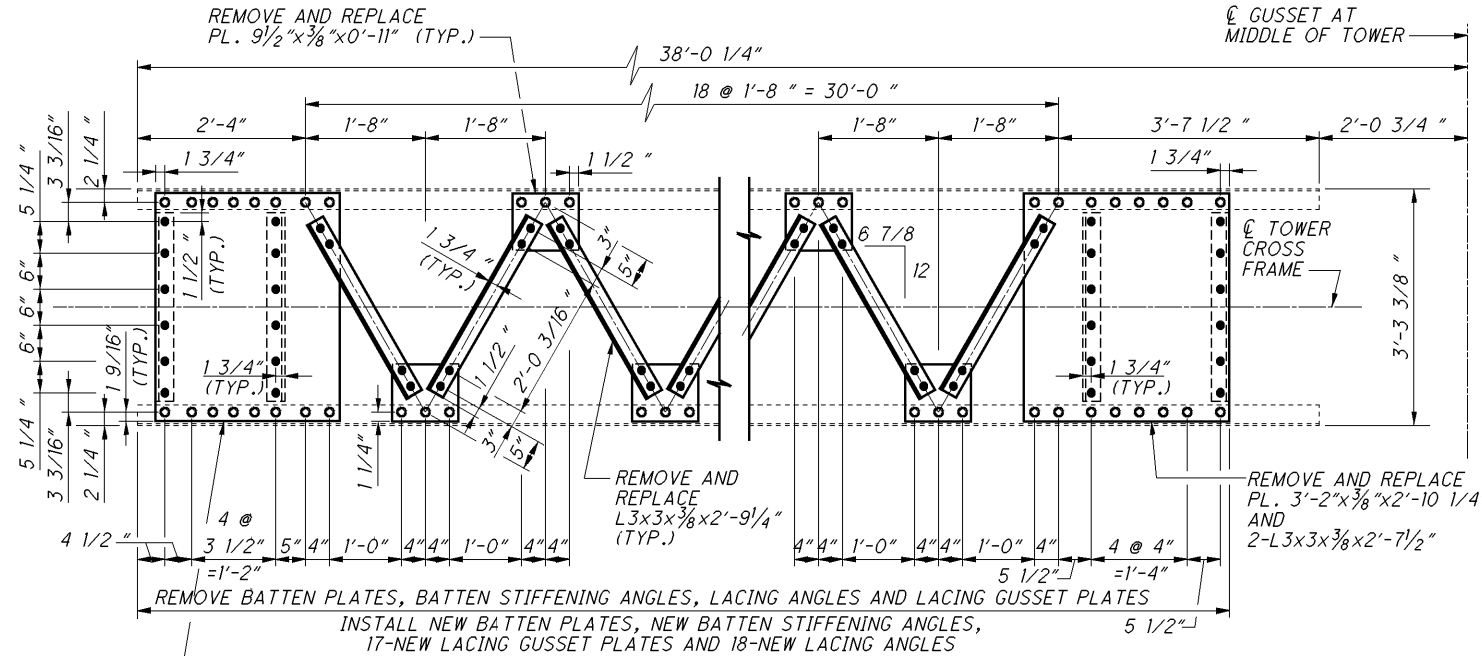
REPAIR TYPE 308

(LOOKING UP)
FOR REPAIR LOCATIONS, SEE SHEET 129227.



REPAIR TYPE 309A

(LOOKING DOWN)
FOR REPAIR LOCATIONS, SEE SHEET 129227.



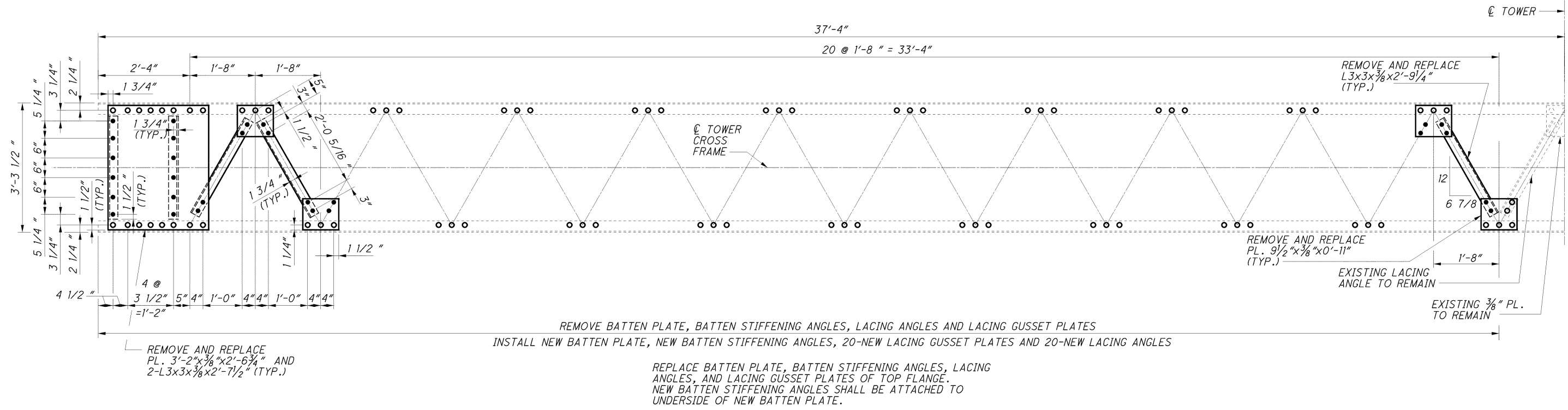
REPAIR TYPE 309B

(LOOKING DOWN)
FOR REPAIR LOCATIONS, SEE SHEET 129227.

REVISIONS		
NO.	DATE	VIA
CONFORMED	2013.04.04	ADD. 6

NOTES:

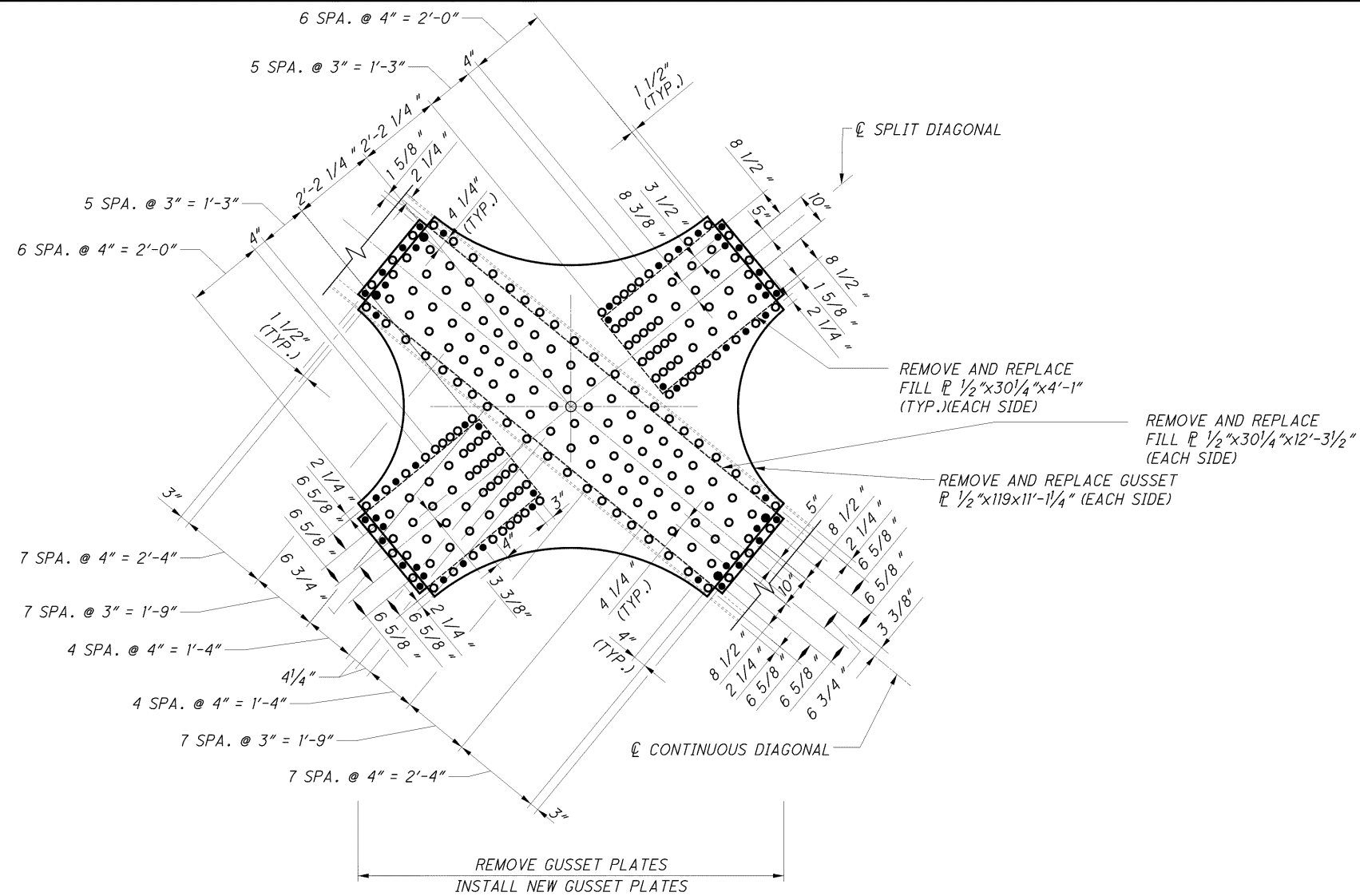
1. FOR GENERAL NOTES, SEE SHEETS 8 227 THRU 23 227.
2. FOR ADDITIONAL NOTES, SEE SHEET 123 227.
3. FOR BOLT/RIVET LEGEND, SEE SHEET 95 227.
4. ALL EXISTING RIVETS AND NEW BOLTS ON THIS SHEET ARE 7/8" DIA.



REPAIR TYPE 317
(LOOKING DOWN)
FOR REPAIR LOCATIONS, SEE SHEET 127227.

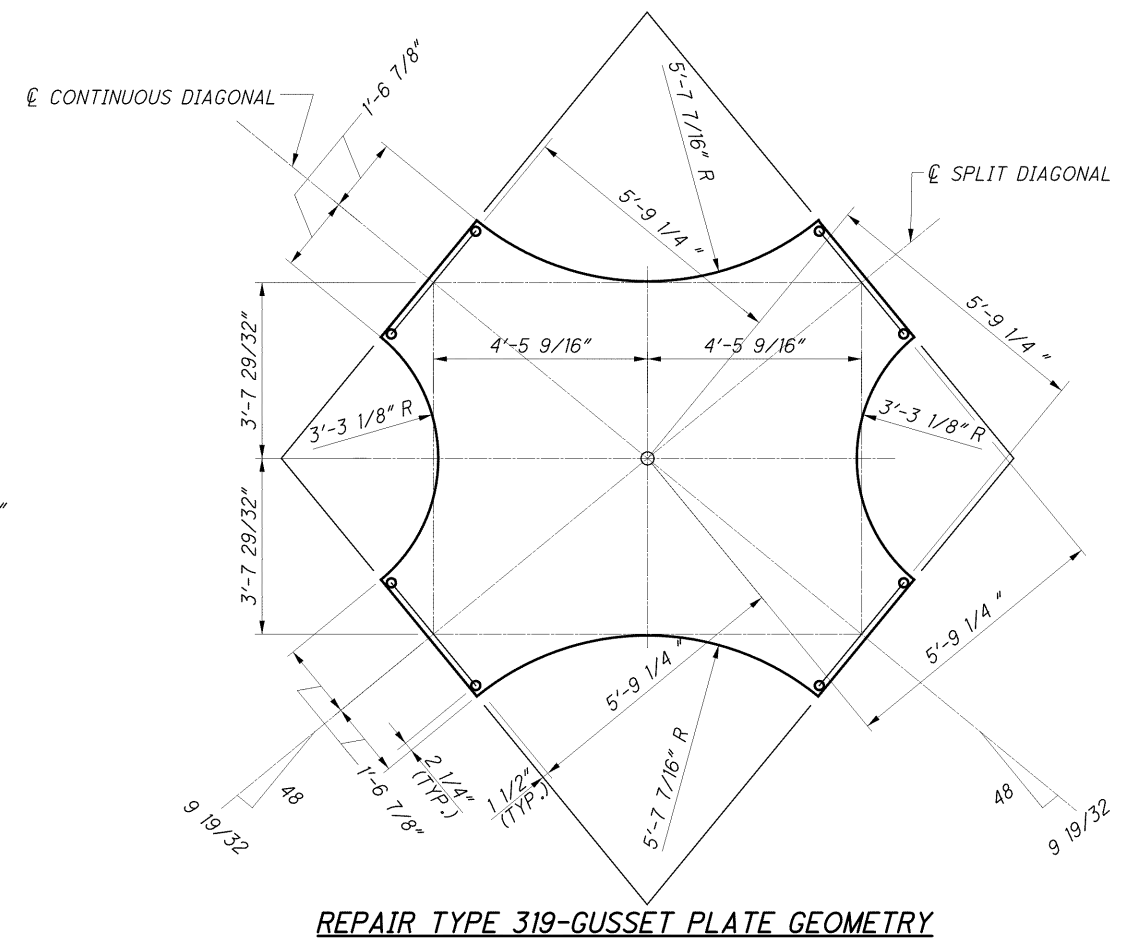
- NOTES:**
1. FOR GENERAL NOTES, SEE SHEETS 8 227 THRU 23 227.
 2. FOR ADDITIONAL NOTES, SEE SHEET 123 227.
 3. FOR BOLT/RIVET LEGEND, SEE SHEET 95 227.
 4. ALL EXISTING RIVETS AND NEW BOLTS ON THIS SHEET ARE 7/8" DIA.

LUC-2-18.62 PID No. 80551	TOWER REPAIR DETAILS 4 OF 10		DESIGN AGENCY MODJESKI and MASTERS, INC. 100 Sterling Parkway, Suite 302 Mechanicsburg, PA 17050	
	DESIGNED MDC	DRAWN MLA	REVIEWED SRE	DATE 8/12
	CHECKED NDT	REVISED	STRUCTURE FILE NUMBER 4800303	
BRIDGE NO. LUC -2 -1862 STATE ROUTE 2 OVER MAUMEE RIVER				
133/227		205 327		



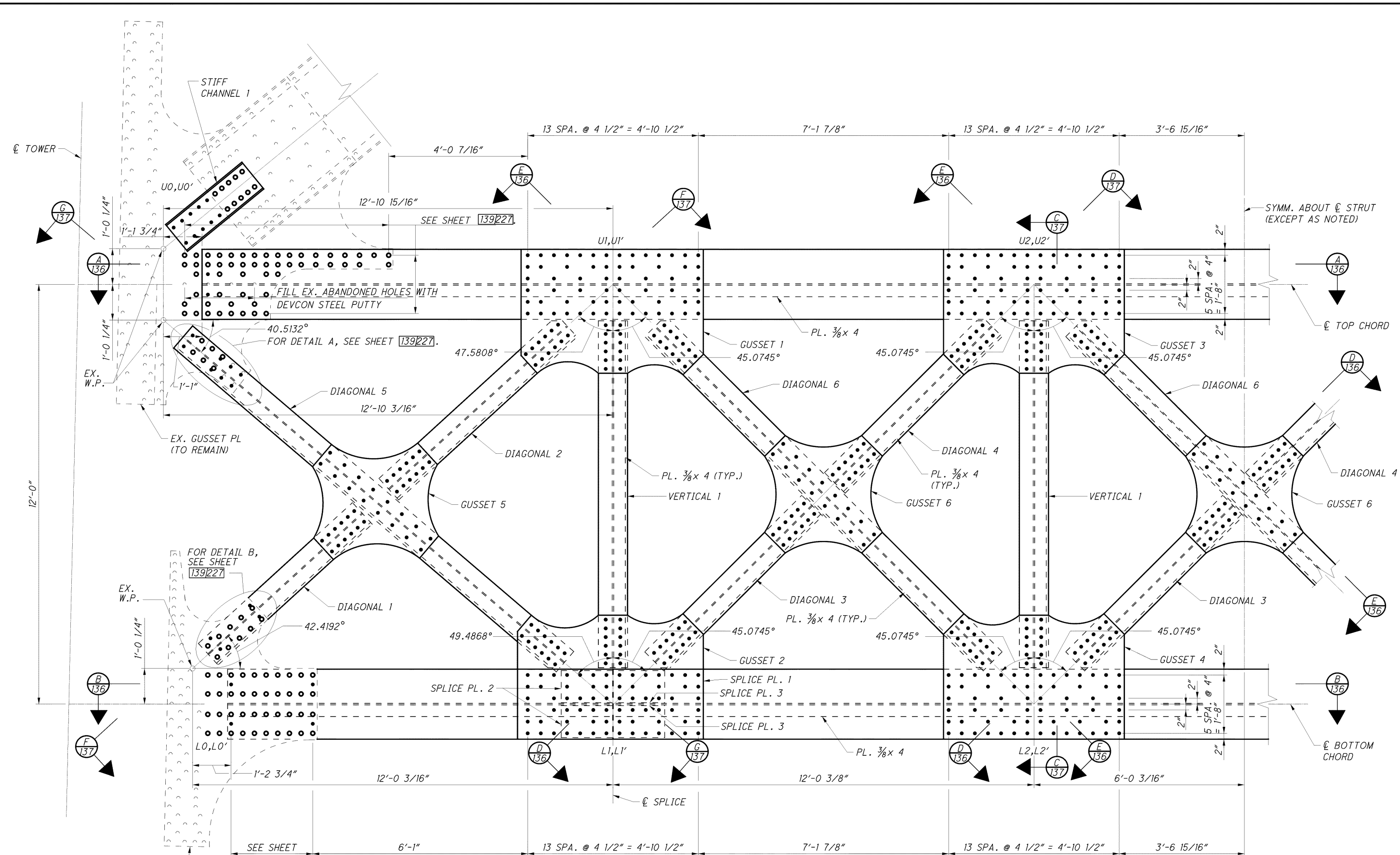
REPAIR TYPE 319

FOR REPAIR LOCATIONS, SEE SHEET 129227.



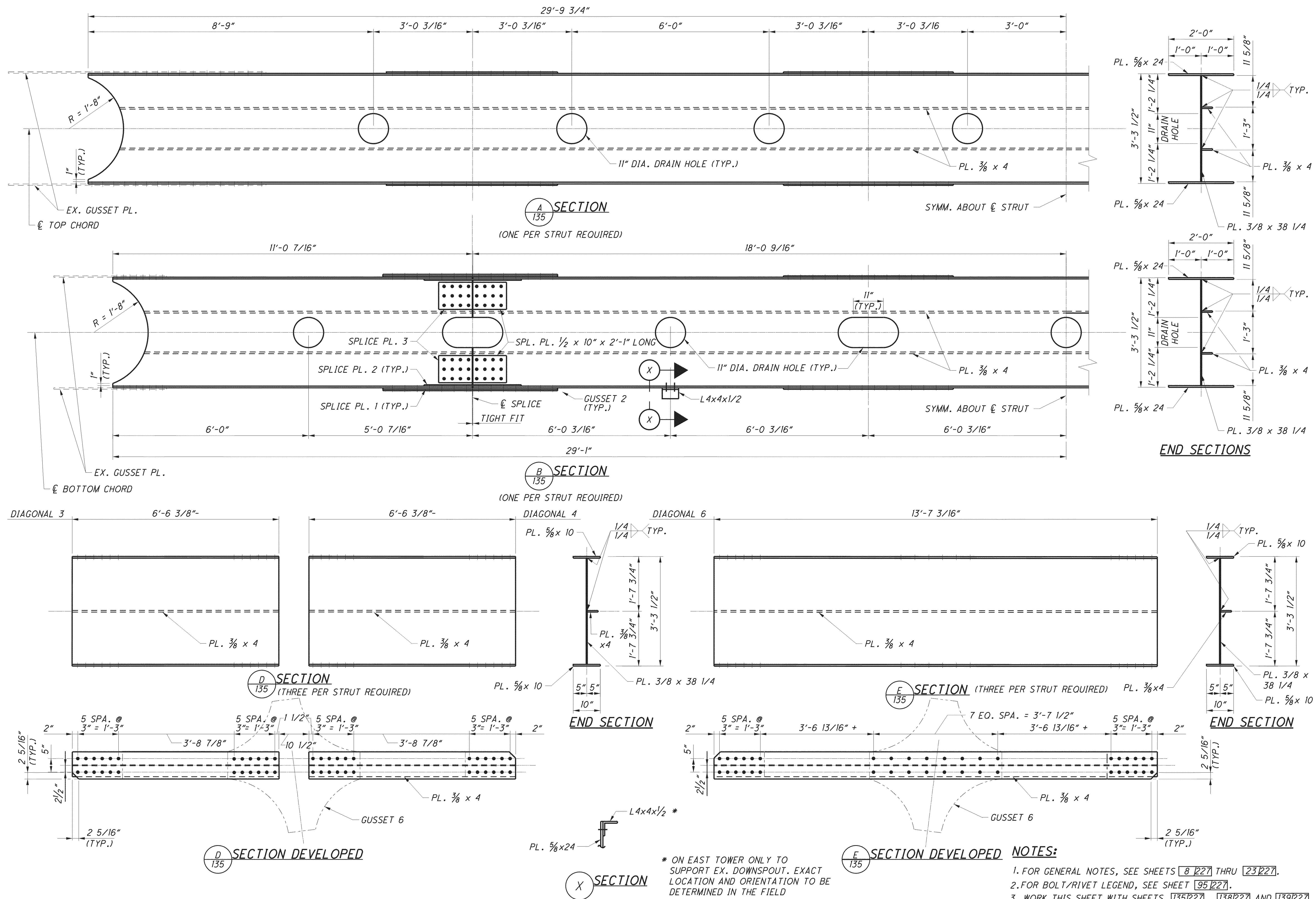
NOTES:

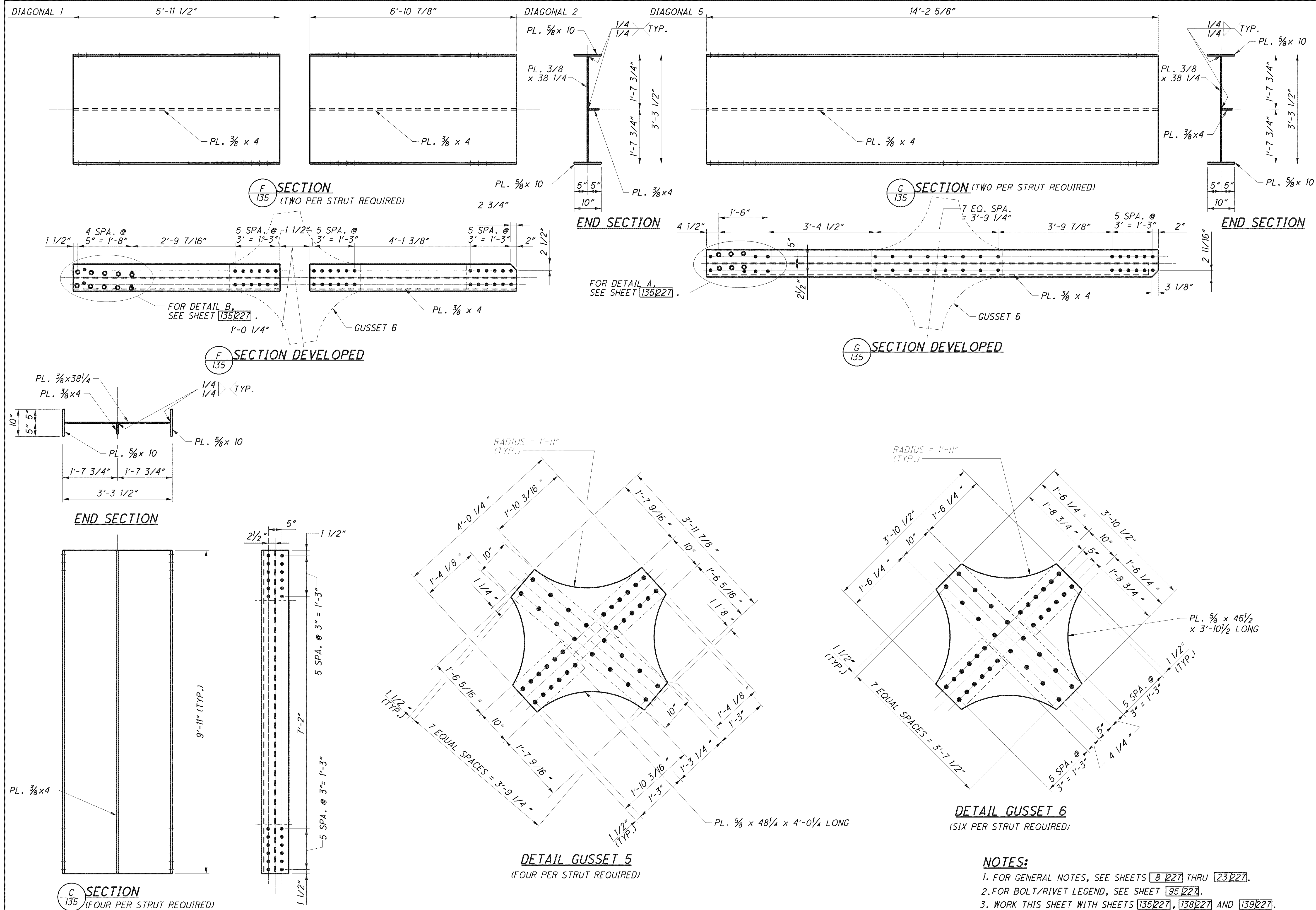
1. FOR GENERAL NOTES, SEE SHEETS 8 227 THRU 23 227.
2. FOR ADDITIONAL NOTES, SEE SHEET 123 227.
3. FOR BOLT/RIVET LEGEND, SEE SHEET 95 227.
4. ALL EX. RIVETS AND NEW BOLTS ON THIS SHEET ARE $\frac{7}{8}$ " ϕ .

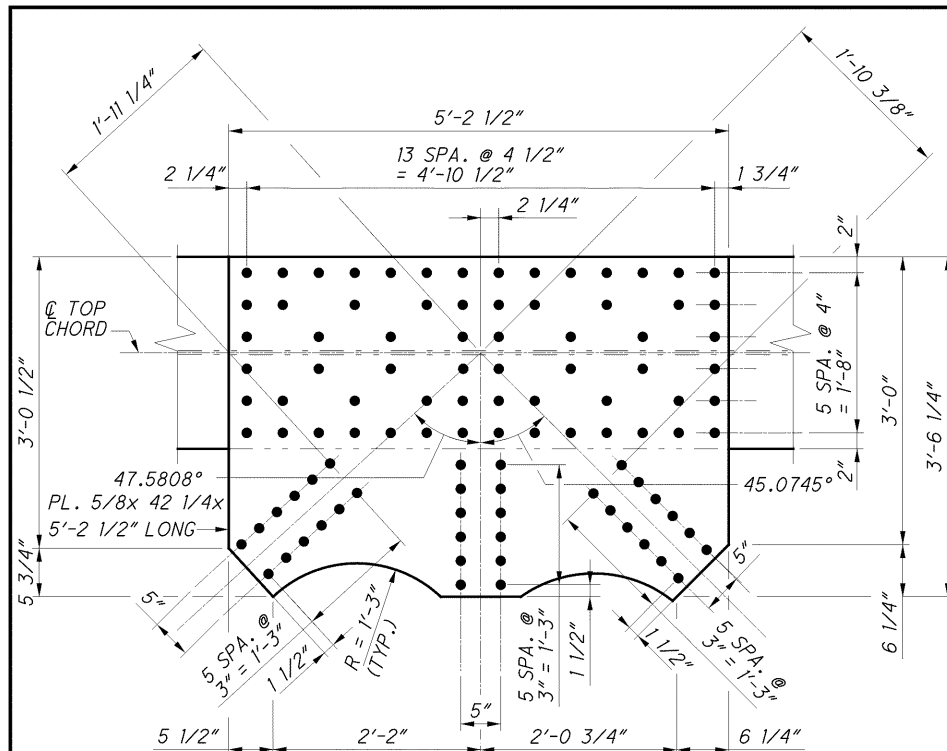


ELEVATION - LOWER STRUT-REPAIR TYPE 310
(EAST TOWER SHOWN, WEST TOWER SIMILAR)
(EAST TOWER LOOKING EAST, WEST TOWER LOOKING WEST)

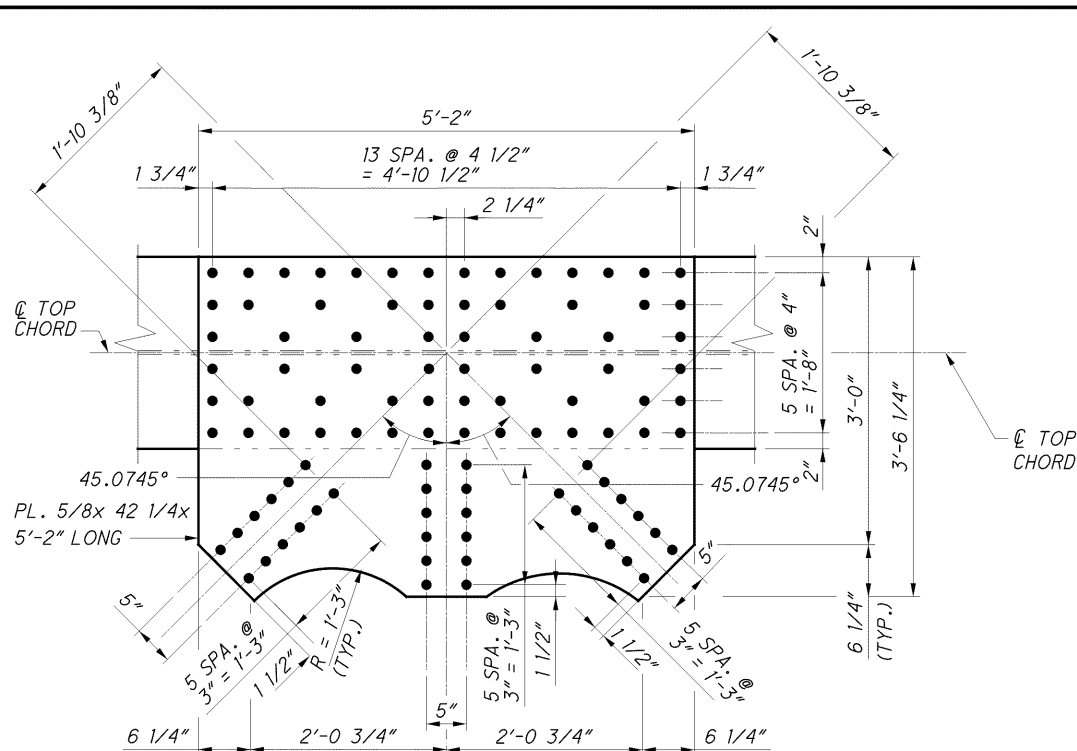
- NOTES:**
- 1. FOR GENERAL NOTES, SEE SHEETS 8 227 THRU 23 227.
 - 2. FOR ADDITIONAL NOTES, SEE SHEET 123 227.
 - 3. FOR BOLT/RIVET LEGEND, SEE SHEET 95 227.
 - 4. WORK THIS SHEET WITH SHEETS 136 227 THRU 139 227.
 - 5. ALL EX. RIVETS AND NEW BOLTS ON THIS SHEET ARE 3/8" φ.



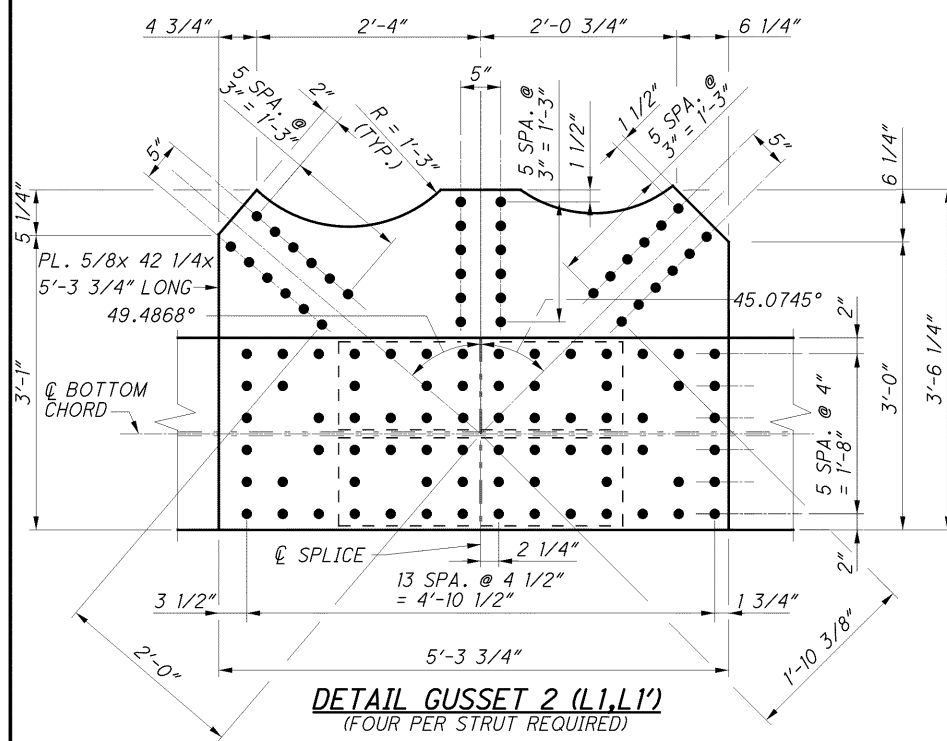




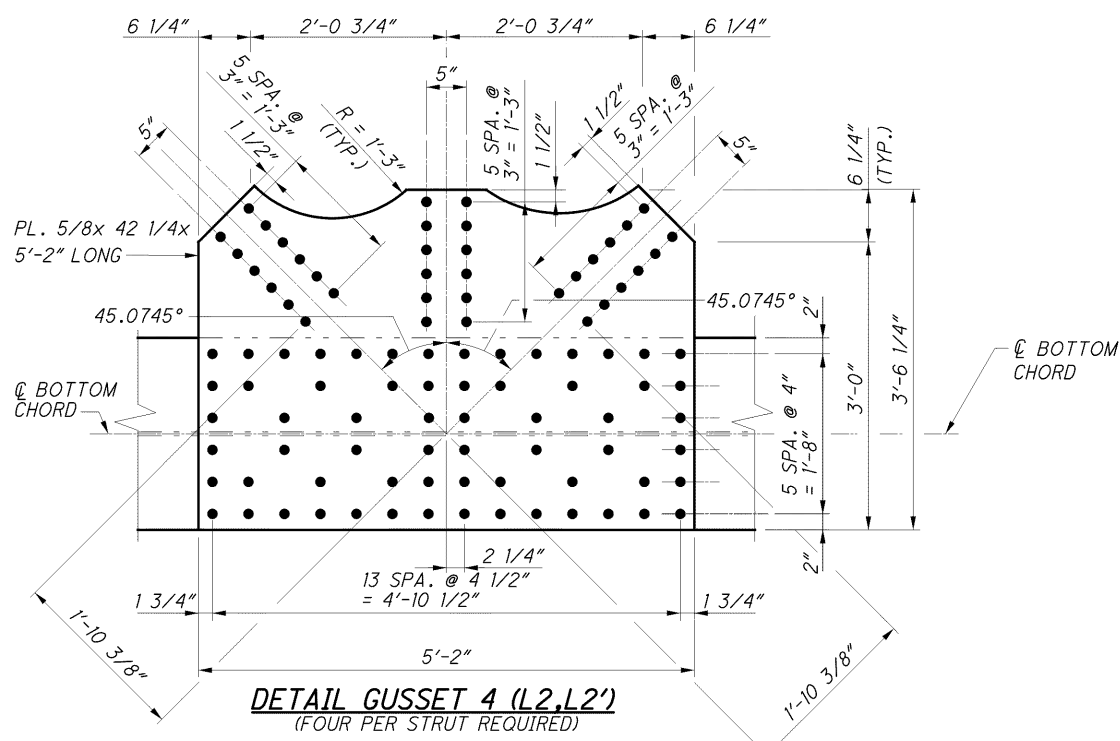
DETAIL GUSSET 1 (U1,U1')
(FOUR PER STRUT REQUIRED)



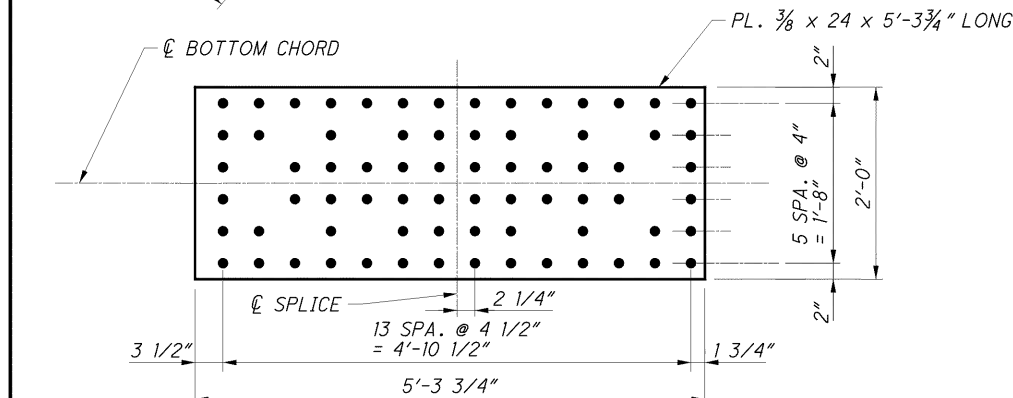
DETAIL GUSSET 3 (U2,U2')
(FOUR PER STRUT REQUIRED)



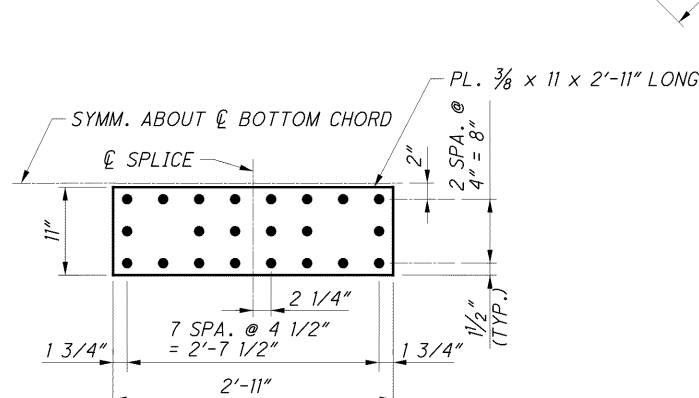
DETAIL GUSSET 2 (L1,L1')
(FOUR PER STRUT REQUIRED)



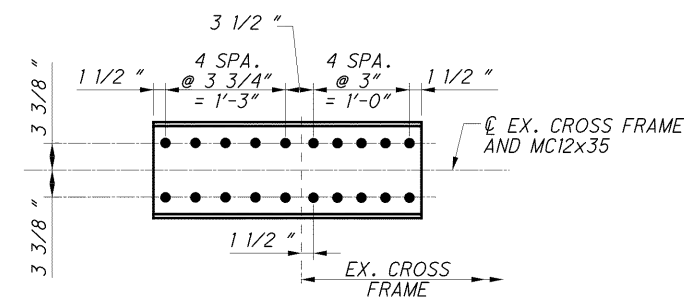
DETAIL GUSSET 4 (L2,L2')
(FOUR PER STRUT REQUIRED)



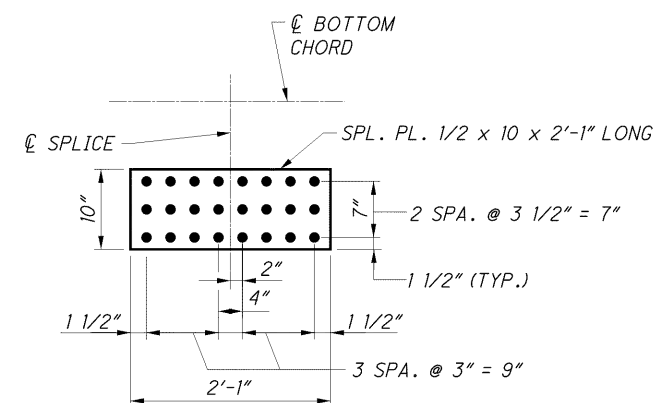
DETAIL SPLICE PL. 1
(FOUR PER STRUT REQUIRED)



DETAIL SPLICE PL. 2
(EIGHT PER STRUT REQUIRED)



DETAIL STIFF CHANNEL 1
(FOUR PER STRUT REQUIRED)



DETAIL SPLICE PL. 3
(EIGHT PER STRUT REQUIRED)

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS [8 227] THRU [23 227].
2. FOR BOLT/RIVET LEGEND, SEE SHEET [95 227].
3. WORK THIS SHEET WITH SHEETS [135 227], [136 227] AND [139 227].



REF. NO.	BOLT LINE DIM. A	BOLT LINE DIM. B
BOLT LINE 1	2 1/2"	2 1/2"
BOLT LINE 2	3 3/16"	3 3/16"
BOLT LINE 3	3 7/16"	3 7/16"
BOLT LINE 4	2 5/8"	2 5/8"
BOLT LINE 5	2 7/8"	2 7/8"
BOLT LINE 6	3 1/16"	3 1/16"

THE PROCEDURE IS A SUGGESTED GENERAL OUTLINE OF THE CONSTRUCTION WORK TO BE PERFORMED. THE CONTRACTOR SHALL SUBMIT A PROCEDURE TO THE ENGINEER FOR APPROVAL.



REF. NO.	BOLT LINE DIM. C	BOLT LINE DIM. D
<i>BOLT LINE 1</i>	<i>2 1/16"</i>	<i>2 1/16"</i>
<i>BOLT LINE 2</i>	<i>2 15/16"</i>	<i>2 15/16"</i>
<i>BOLT LINE 3</i>	<i>1 13/16"</i>	<i>1 13/16"</i>
<i>BOLT LINE 4</i>	<i>1 9/16"</i>	<i>1 9/16"</i>
<i>BOLT LINE 5</i>	<i>1 5/16"</i>	<i>1 5/16"</i>
<i>BOLT LINE 6</i>	<i>1 3/8"</i>	<i>1 3/8"</i>

1. FOR GENERAL NOTES, SEE SHEETS 8 227 THRU 23 227.
2. FOR BOLT/RIVET LEGEND, SEE SHEET 95 227.
3. WORK THIS SHEET WITH SHEETS 135 227 THRU 138 227.