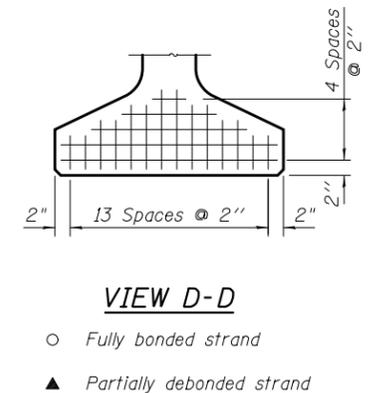
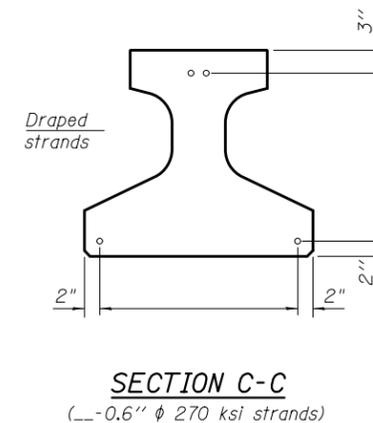
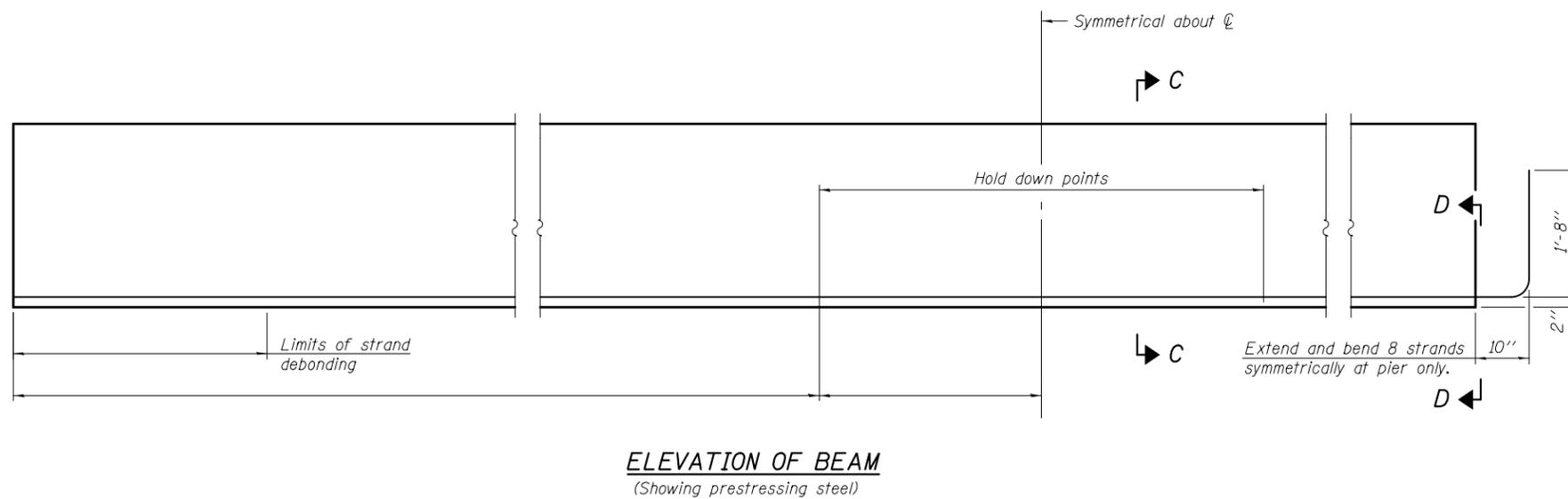
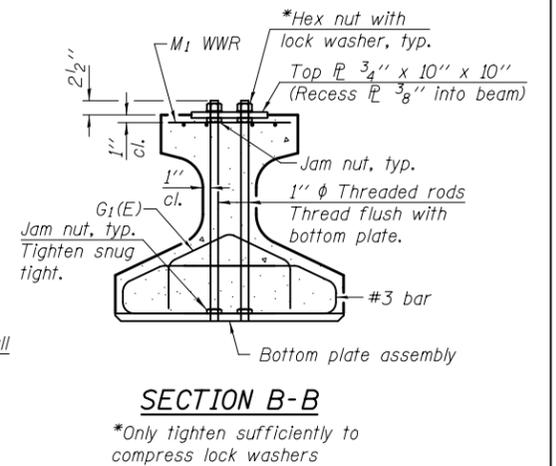
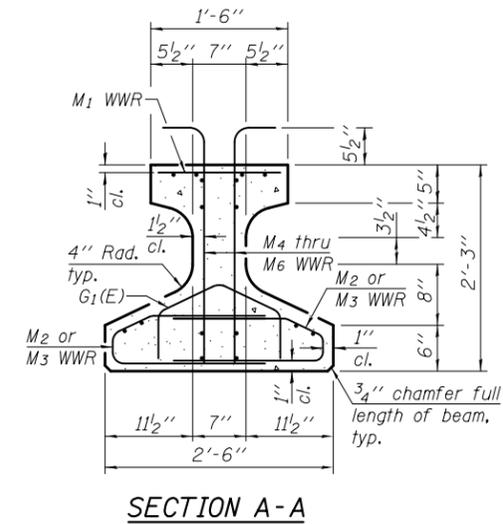
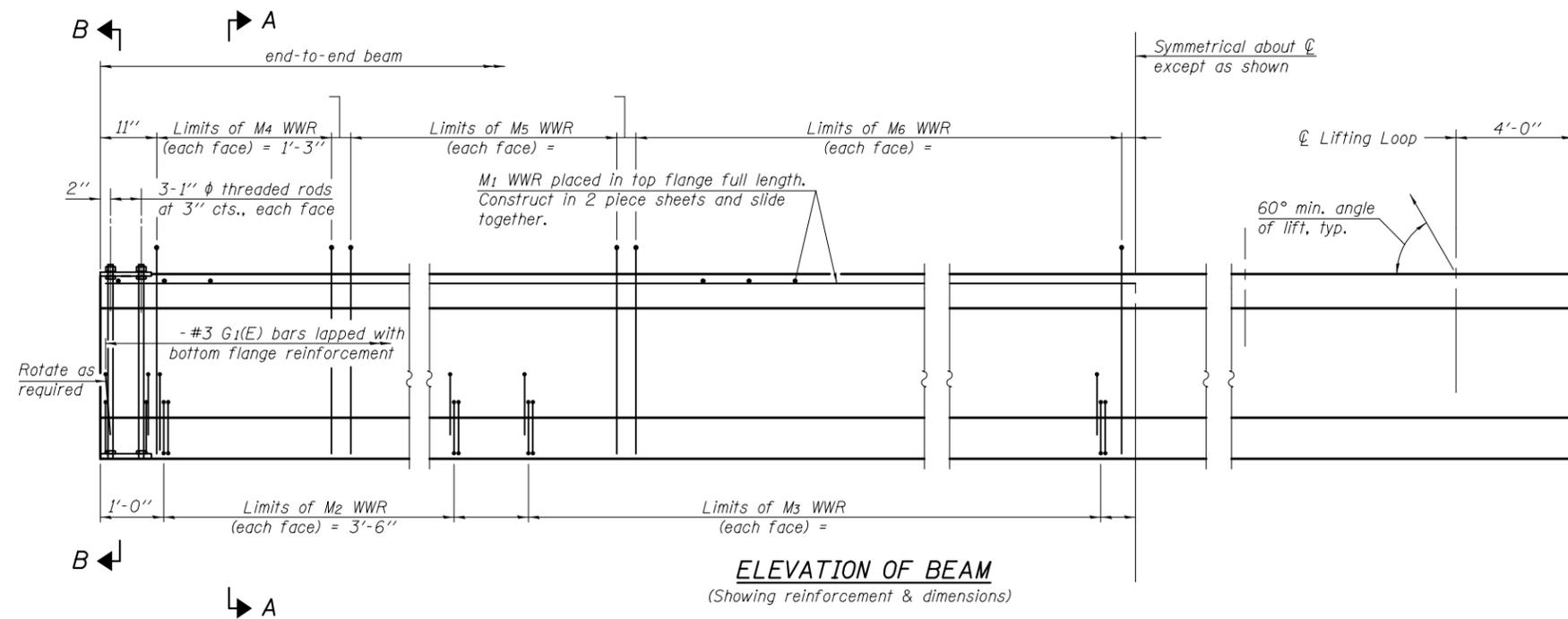


CELL / MODEL NAME	DESCRIPTION	DATE
IL27-1830	27" Prestressed I-Bm. - 18" & 30" Flanges	10/7/2016
IL27-1830D	27" Prestressed I-Bm. - 18" & 30" Flanges - Detail Sheet	10/7/2016
IL36-2438	36" Prestressed I-Bm. - 24" & 38" Flanges	10/7/2016
IL36-2438D	36" Prestressed I-Bm. - 24" & 38" Flanges - Detail Sheet	10/7/2016
IL36-3838	36" Prestressed I-Bm. - 38" Flanges	10/7/2016
IL36-3838D	36" Prestressed I-Bm. - 38" Flanges - Detail Sheet	10/7/2016
IL45-2438	45" Prestressed I-Bm. - 24" & 38" Flanges	10/7/2016
IL45-2438D	45" Prestressed I-Bm. - 24" & 38" Flanges - Detail Sheet	10/7/2016
IL45-3838	45" Prestressed I-Bm. - 38" Flanges	10/7/2016
IL45-3838D	45" Prestressed I-Bm. - 38" Flanges - Detail Sheet	10/7/2016
IL54-2438	54" Prestressed I-Bm. - 24" & 38" Flanges	10/7/2016
IL54-2438D	54" Prestressed I-Bm. - 24" & 38" Flanges - Detail Sheet	10/7/2016
IL54-3838	54" Prestressed I-Bm. - 38" Flanges	10/7/2016
IL54-3838D	54" Prestressed I-Bm. - 38" Flanges - Detail Sheet	10/7/2016
IL63-2438	63" Prestressed I-Bm. - 24" & 38" Flanges	10/7/2016
IL63-2438D	63" Prestressed I-Bm. - 24" & 38" Flanges - Detail Sheet	10/7/2016
IL63-3838	63" Prestressed I-Bm. - 38" Flanges	10/7/2016
IL63-3838D	63" Prestressed I-Bm. - 38" Flanges - Detail Sheet	10/7/2016
IL72-2438	72" Prestressed I-Bm. - 24" & 38" Flanges	10/7/2016
IL72-2438D	72" Prestressed I-Bm. - 24" & 38" Flanges - Detail Sheet	10/7/2016
IL72-3838	72" Prestressed I-Bm. - 38" Flanges	10/7/2016
IL72-3838D	72" Prestressed I-Bm. - 38" Flanges - Detail Sheet	10/7/2016
PBT-4-63	63 inch PPC bulb T beam	10/7/2016
PBT-4-63D	63 inch PPC bulb T beam details	11/22/2016
PBT-4-72	72 inch PPC bulb T beam	10/7/2016
PBT-4-72D	72 inch PPC bulb T beam details	11/22/2016
PI-4-36	36 inch PPC I beam	10/7/2016
PI-4-36D	36 inch PPC I beam details	11/22/2016
PI-4-42	42 inch PPC I beam	10/7/2016
PI-4-42D	42 inch PPC I beam details	11/22/2016
PI-4-48	48 inch PPC I beam	10/7/2016
PI-4-48D	48 inch PPC I beam details	11/22/2016
PI-4-54	54 inch PPC I beam	10/7/2016

CELL / MODEL NAME	DESCRIPTION	DATE
PI-4-54D	54 inch PPC I beam details	11/22/2016



Note:
See sheet of for additional details and Bill of Material.

IL27-1830

10-7-2016

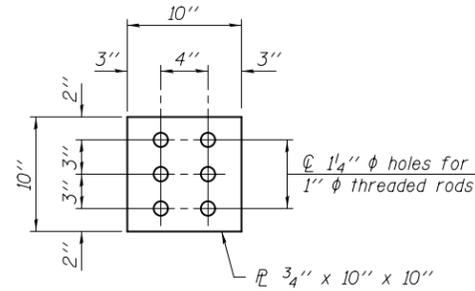
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

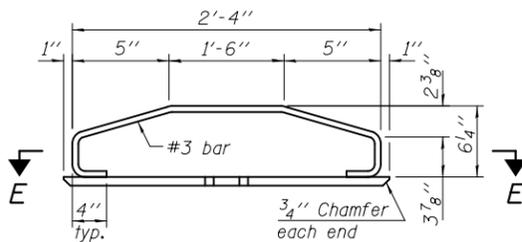
IL27N BEAM
STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				

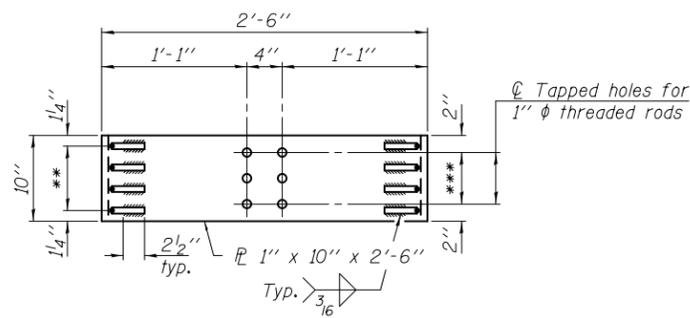
ILLINOIS FED. AID PROJECT



PLAN - TOP PLATE



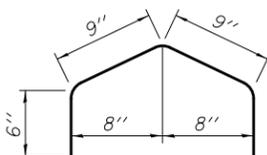
ELEVATION - BOTTOM PLATE ASSEMBLY



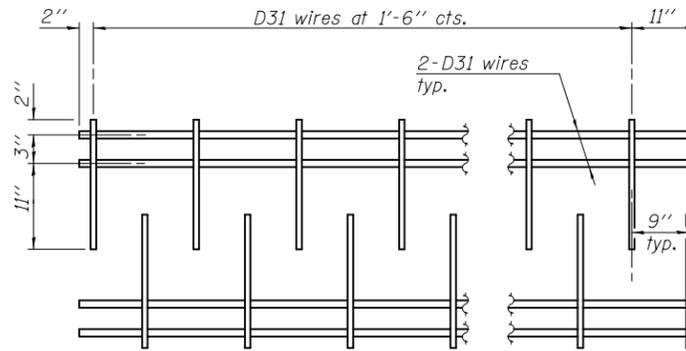
SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"

*** 2 Spaces at 3" = 6"

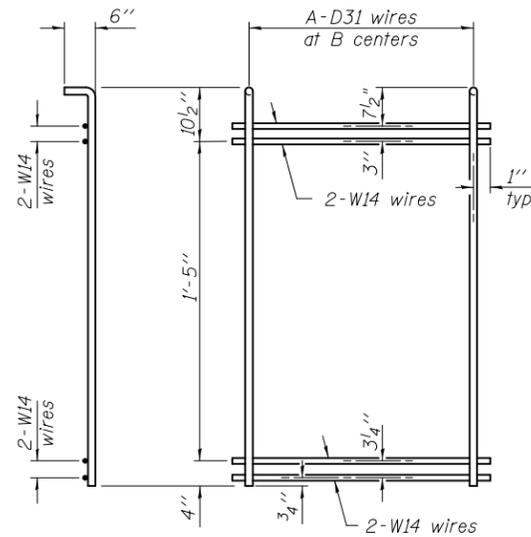


BAR G1(E)



M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M4 THRU M6 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

SPAN -

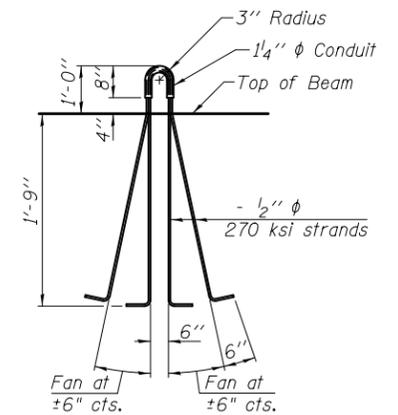
WWR	A	B
M2	15	3"
M3	-	1'-6"
M4	6	3"
M5	-	6"
M6	-	1'-0"

SPAN -

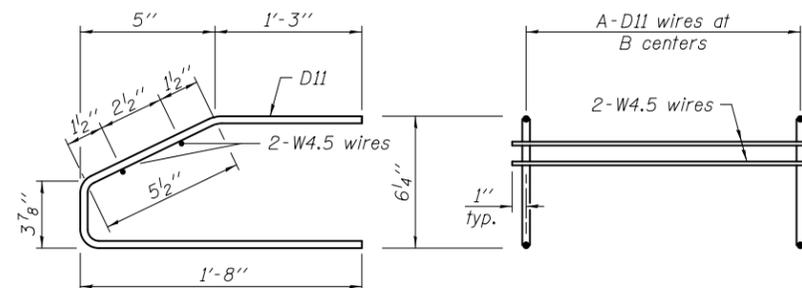
WWR	A	B
M2	15	3"
M3	-	1'-6"
M4	6	3"
M5	-	6"
M6	-	1'-0"

NOTES

Inserts for 3/4" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in. The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi. A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1/2" clearance inside the pier diaphragm. The top and bottom plates shall be AASHTO M270 Grade 50. The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55. Beams shall not be released from the fabricator until they have attained 45 days of age or older. Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.



LIFTING LOOP DETAIL



M2 AND M3 WWR DETAIL

(See Table of Dimensions)

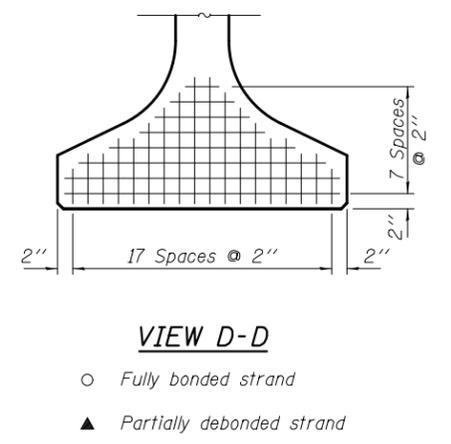
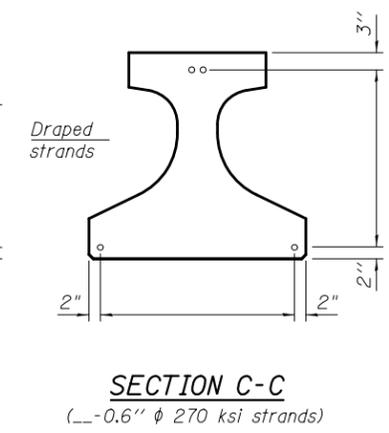
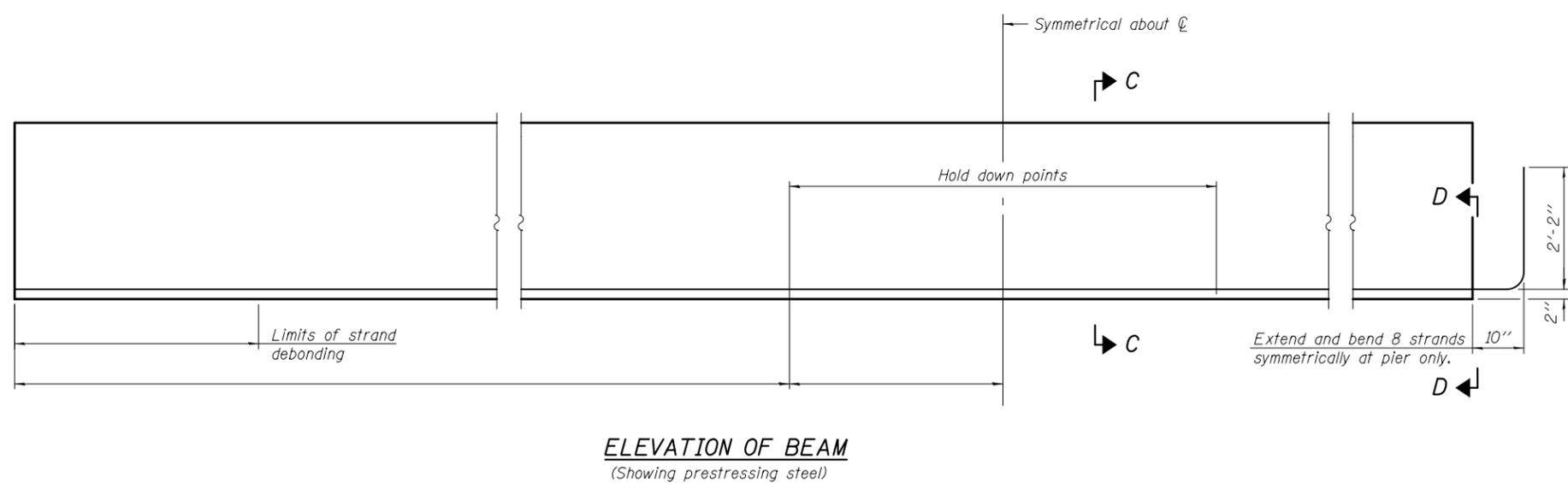
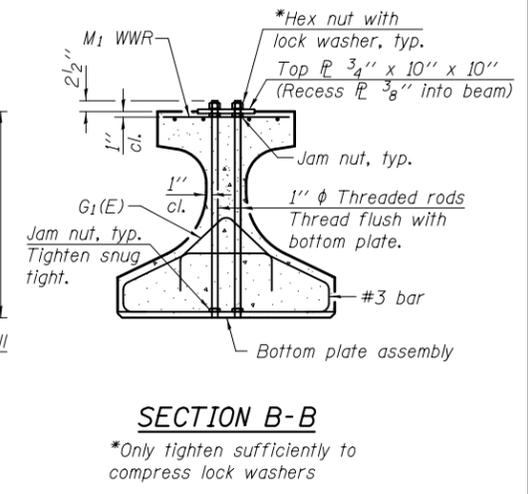
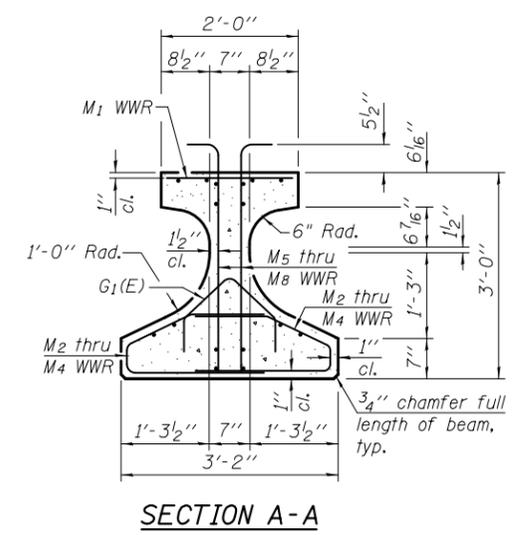
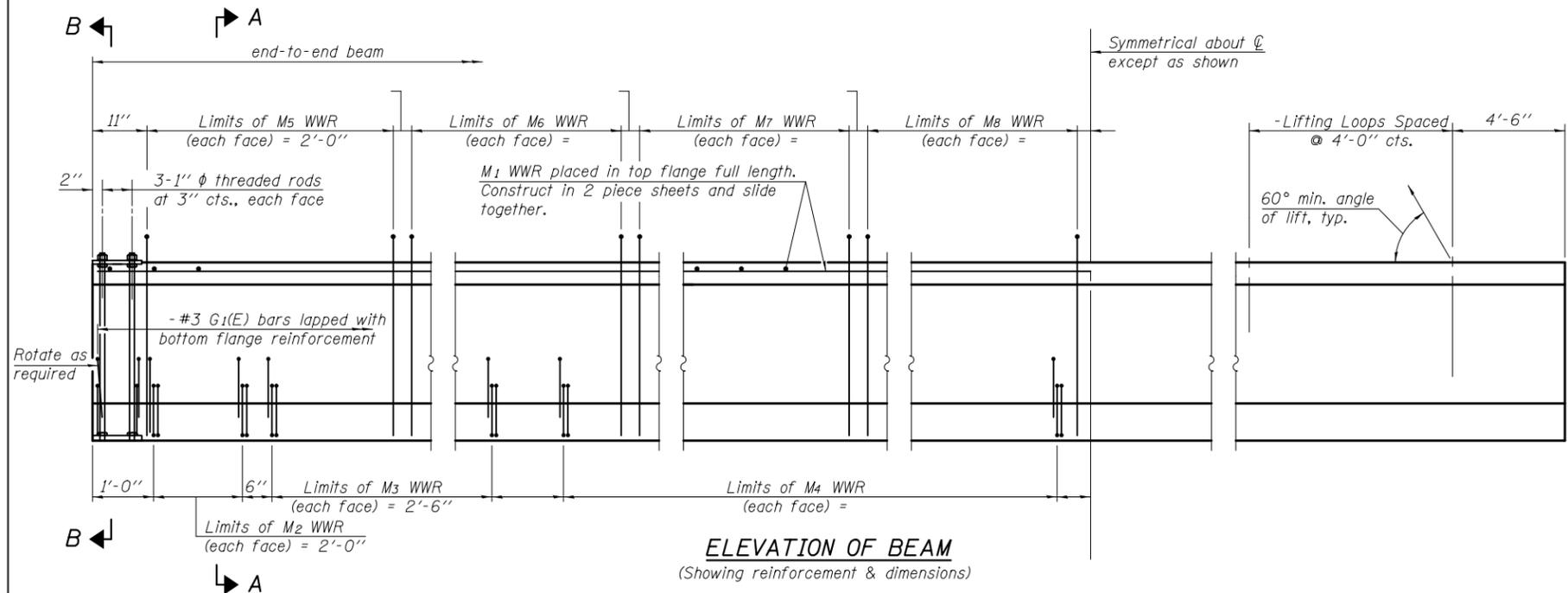
BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL27N	Ft.	

IL27-1830D

10-7-2016

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		CHECKED -	REVISD -			CONTRACT NO.					
		PLOT SCALE =	REVISD -			ILLINOIS FED. AID PROJECT					
		PLOT DATE =	REVISD -								



Note:
See sheet of for additional details and Bill of Material.

IL36-2438

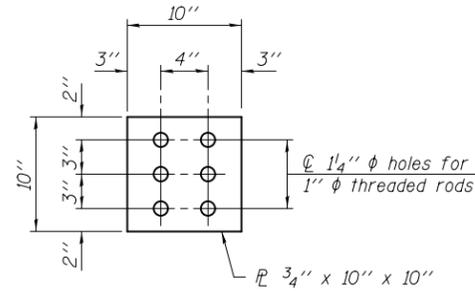
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD -
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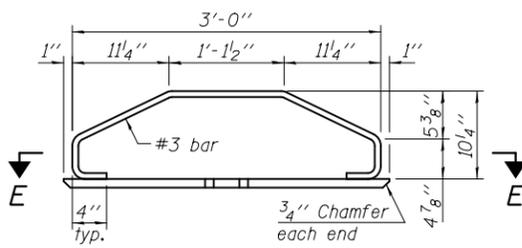
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL36N BEAM
STRUCTURE NO.

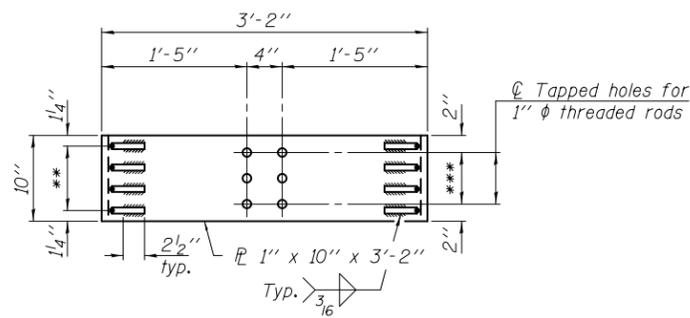
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CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PLAN - TOP PLATE



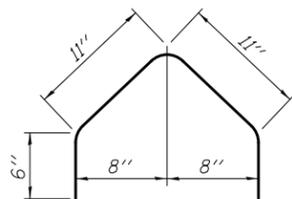
ELEVATION - BOTTOM PLATE ASSEMBLY



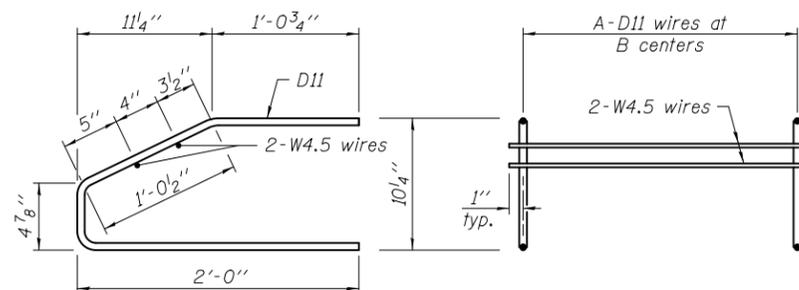
SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"

*** 2 Spaces at 3" = 6"

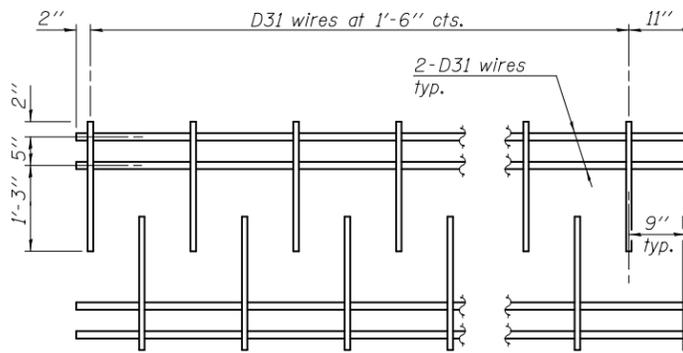


BAR G1(E)



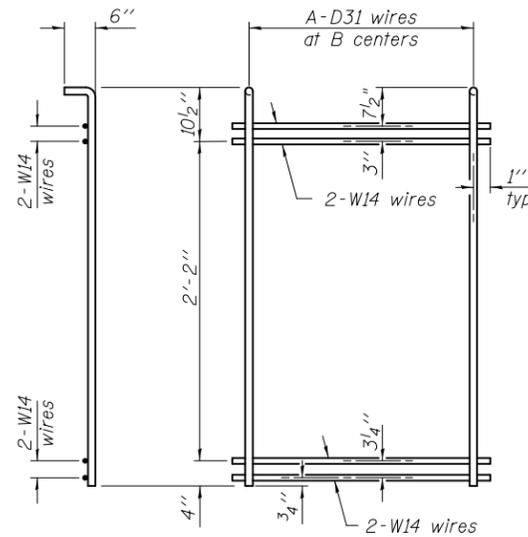
M2 THRU M4 WWR DETAIL

(See Table of Dimensions)



M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

SPAN =

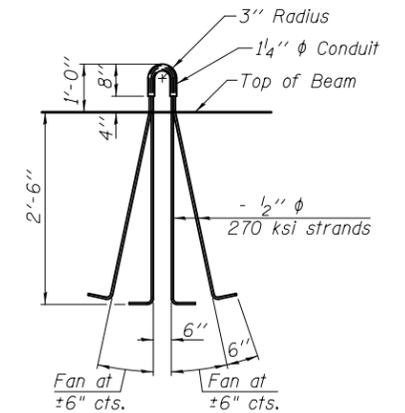
WWR	A	B
M2	9	3"
M3	6	6"
M4	-	1'-6"
M5	9	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

SPAN =

WWR	A	B
M2	9	3"
M3	6	6"
M4	-	1'-6"
M5	9	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

NOTES

Inserts for 3/4" diameter threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in. The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi. A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1/2" clearance inside the pier diaphragm. The top and bottom plates shall be AASHTO M270 Grade 50. The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55. Beams shall not be released from the fabricator until they have attained 45 days of age or older. Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.



LIFTING LOOP DETAIL

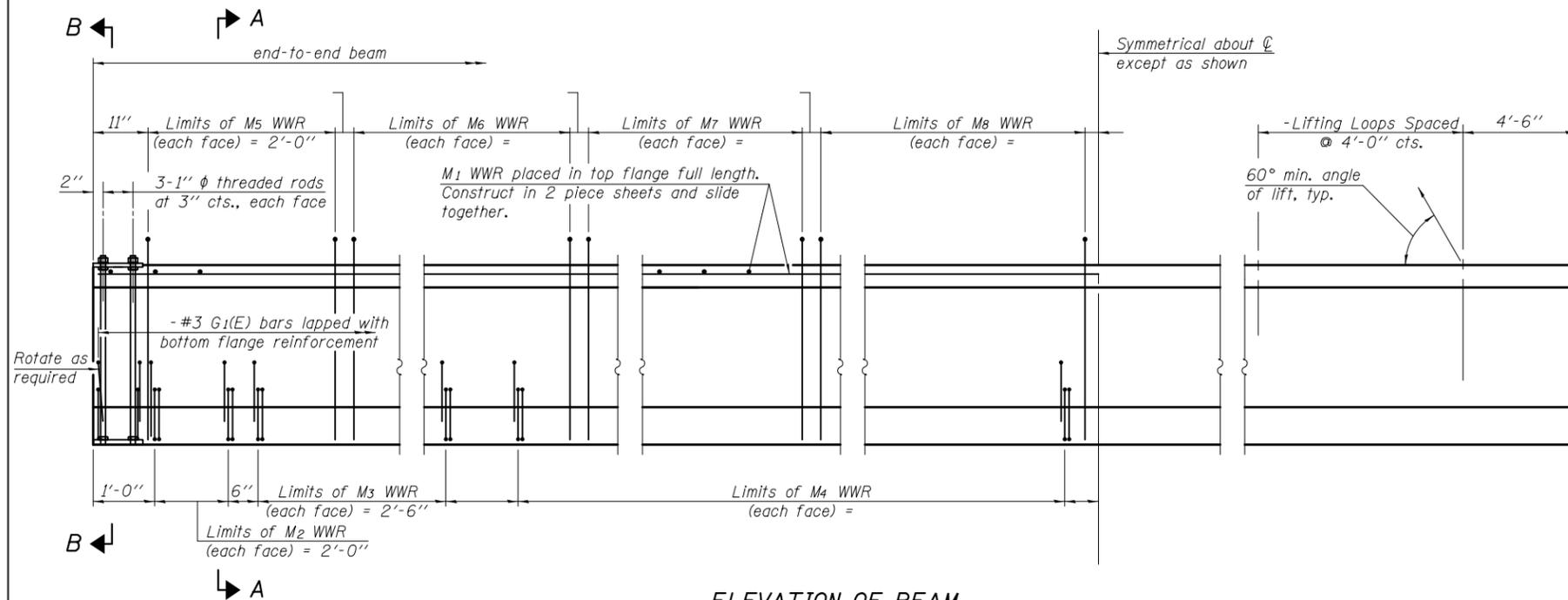
BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL36N	Ft.	

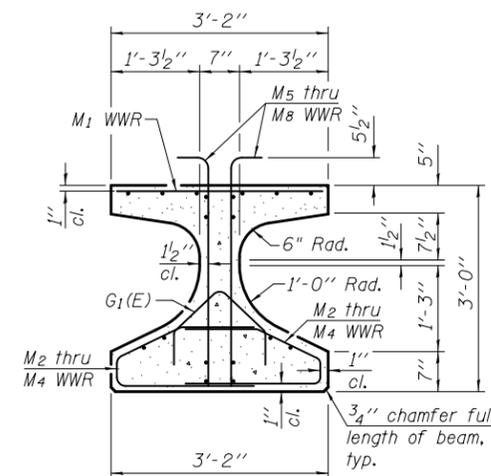
IL36-2438D

10-7-2016

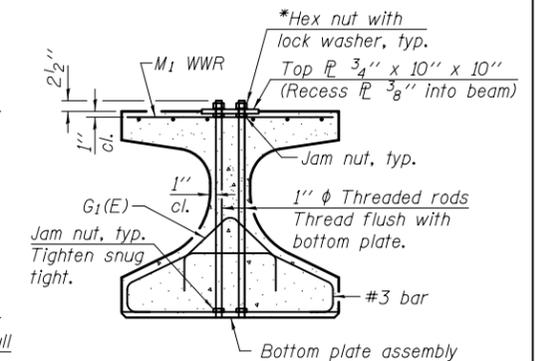
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		CHECKED -	REVISD -			CONTRACT NO.					
		PLOT SCALE =	REVISD -			ILLINOIS FED. AID PROJECT					
		PLOT DATE =	REVISD -								



ELEVATION OF BEAM
(Showing reinforcement & dimensions)

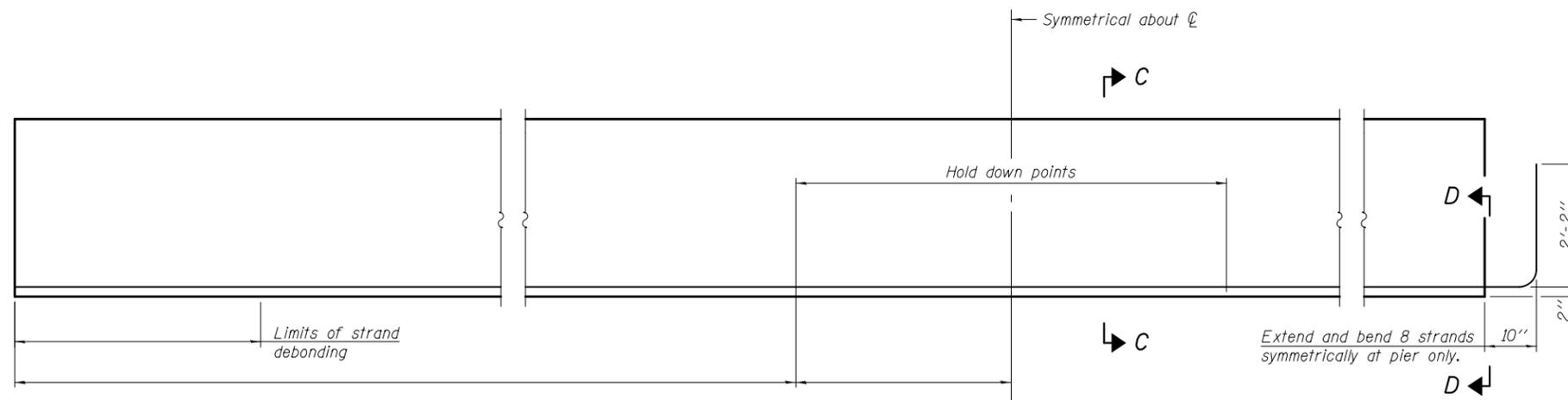


SECTION A-A

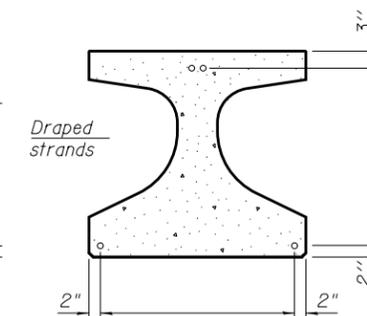


SECTION B-B

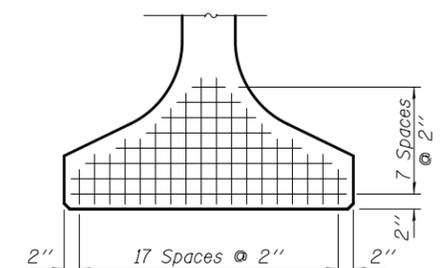
*Only tighten sufficiently to compress lock washers



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C
(-- 0.6 inch diameter 270 ksi strands)



VIEW D-D

○ Fully bonded strand
▲ Partially debonded strand

Note:
See sheet of for additional details and Bill of Material.

IL36-3838

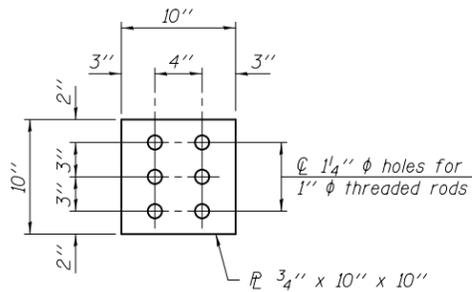
10-7-2016

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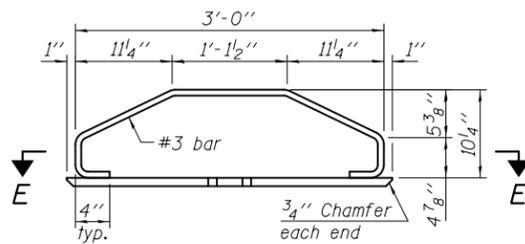
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL36 BEAM
STRUCTURE NO.

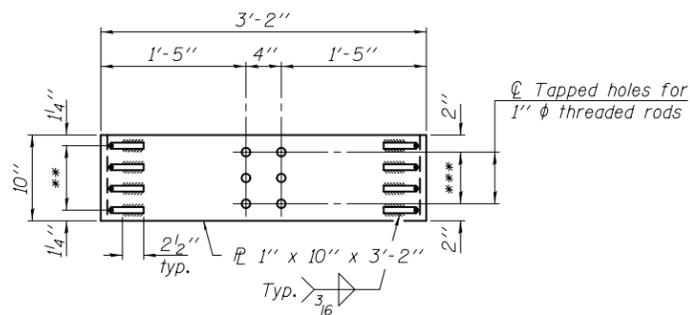
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CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PLAN - TOP PLATE

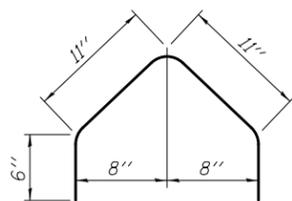


ELEVATION - BOTTOM PLATE ASSEMBLY

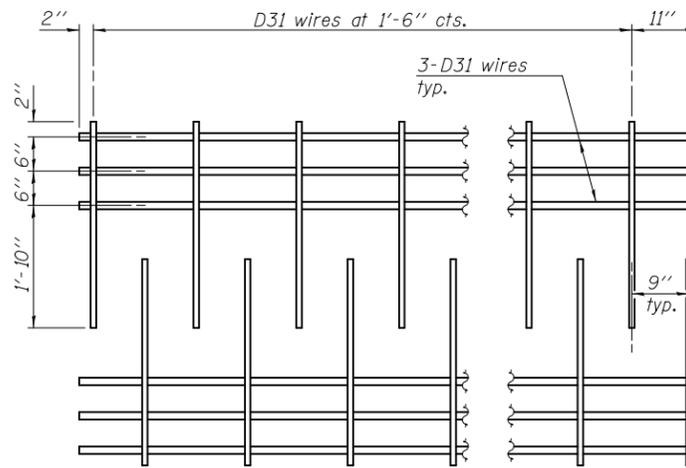


SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"
 *** 2 Spaces at 3" = 6"

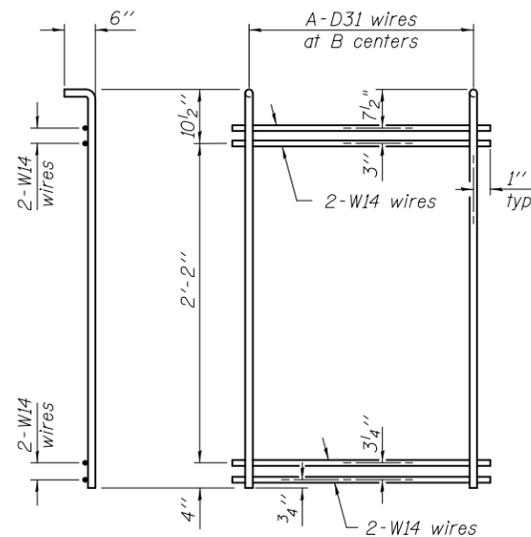


BAR G1(E)



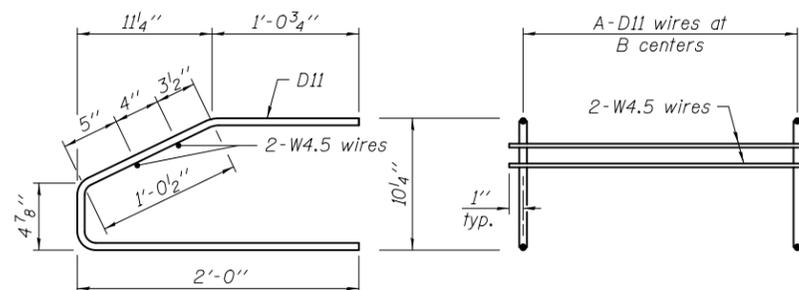
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

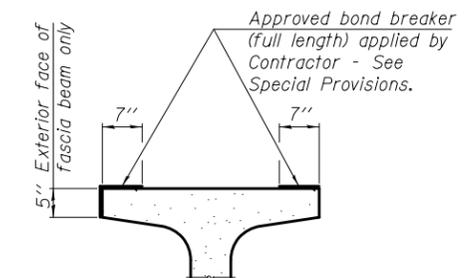
SPAN -

WWR	A	B
M2	9	3"
M3	6	6"
M4	-	1'-6"
M5	9	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

SPAN -

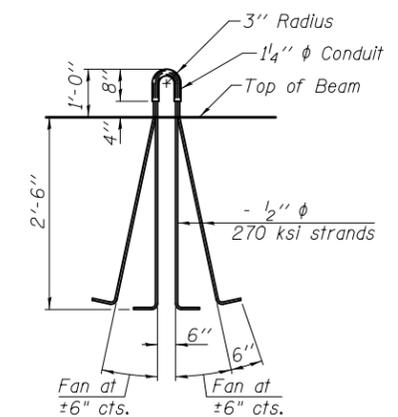
WWR	A	B
M2	9	3"
M3	6	6"
M4	-	1'-6"
M5	9	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

NOTES
 Inserts for 3/4" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in. The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi. A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1/2" clearance inside the pier diaphragm. The top and bottom plates shall be AASHTO M270 Grade 50. The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55. Beams shall not be released from the fabricator until they have attained 45 days of age or older. Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.



SECTION THRU TOP FLANGE

(Showing limits of bond breaker)



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL36	Ft.	

IL36-3838D

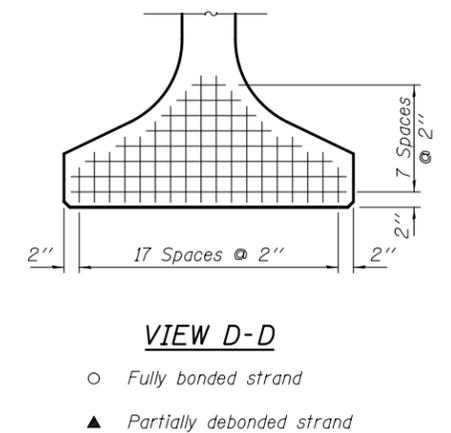
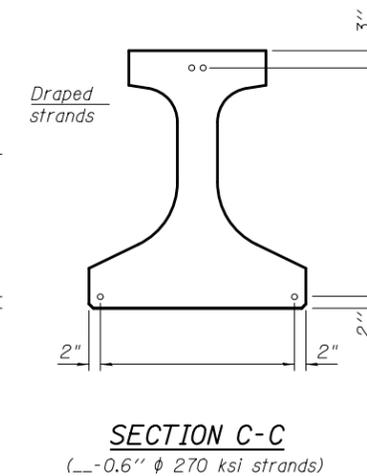
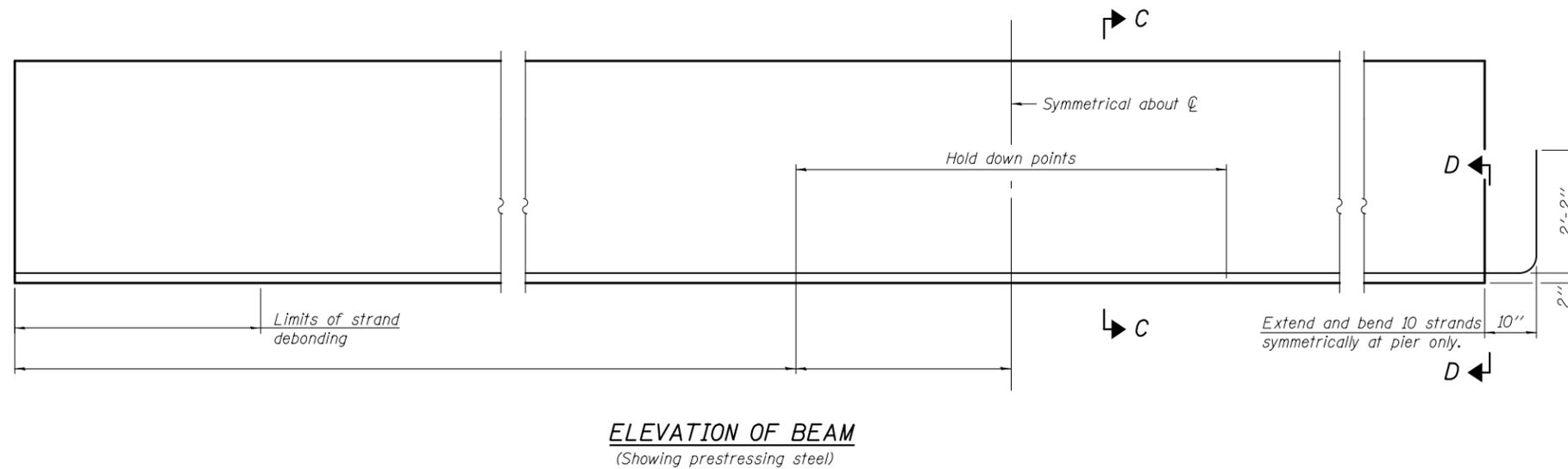
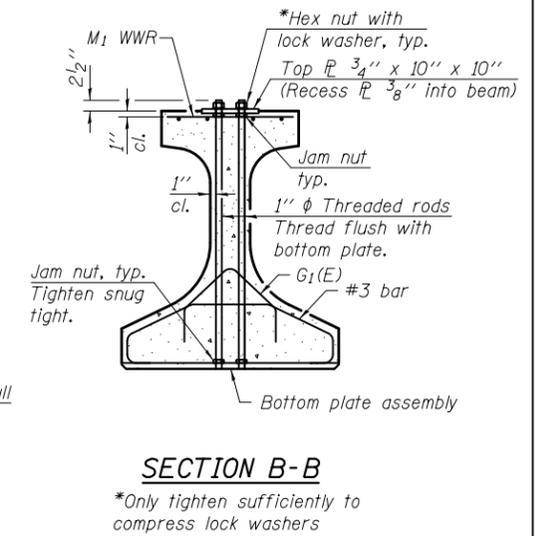
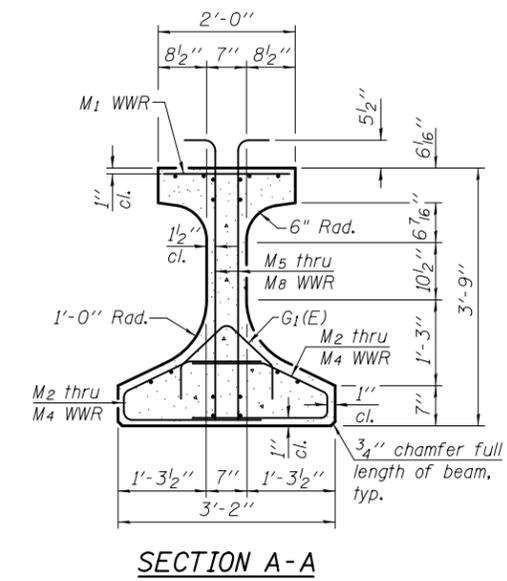
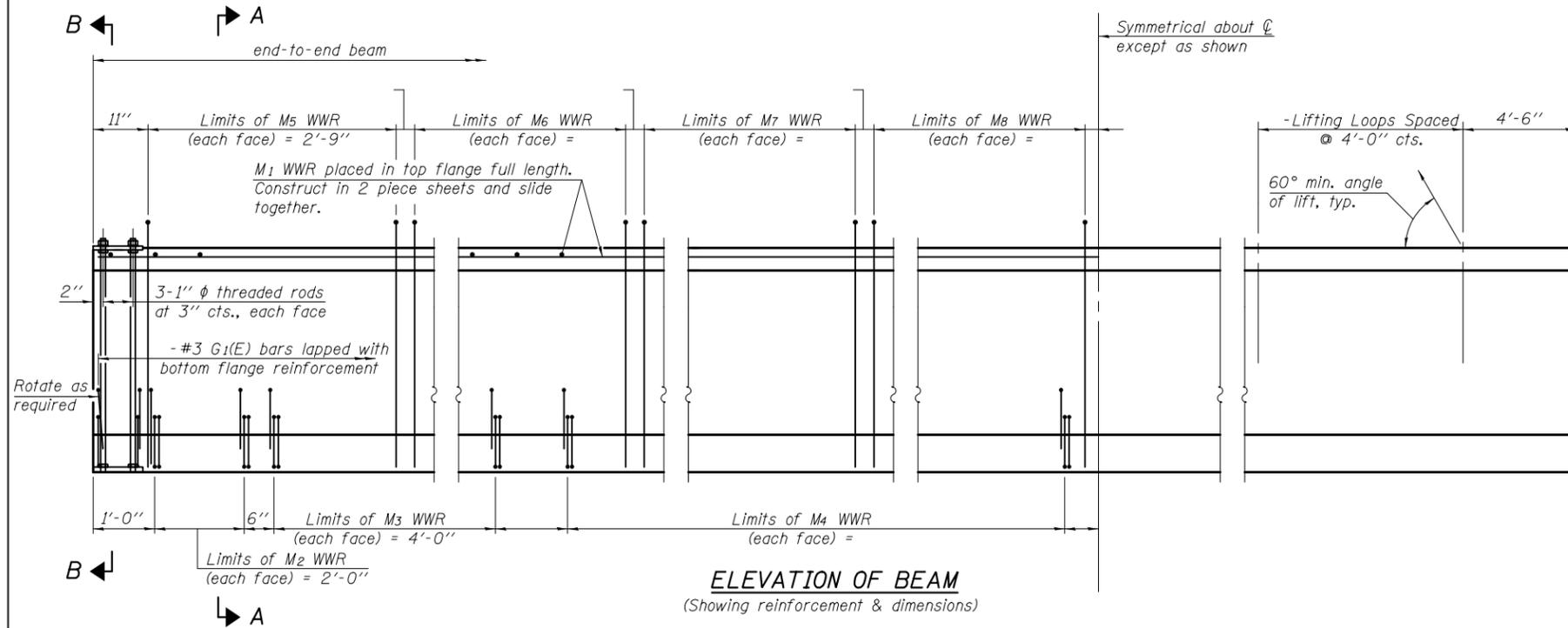
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISIONS -
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		DRAWN -	REVISIONS -
		CHECKED -	REVISIONS -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL36 BEAM DETAILS
 STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



Note:
See sheet of for additional details and Bill of Material.

IL45-2438

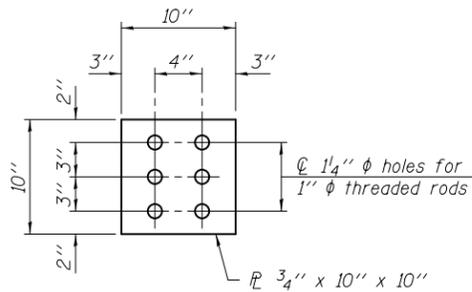
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
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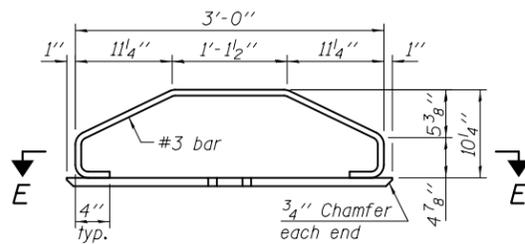
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL45N BEAM
STRUCTURE NO.

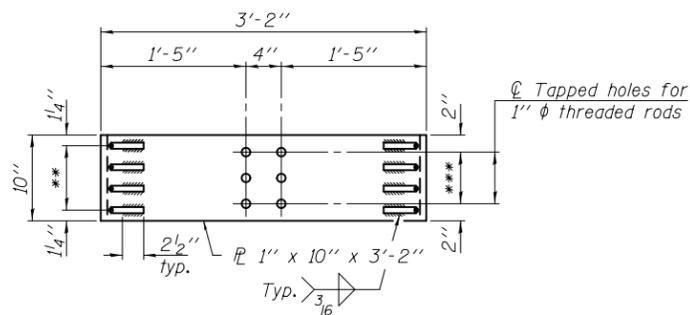
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PLAN - TOP PLATE

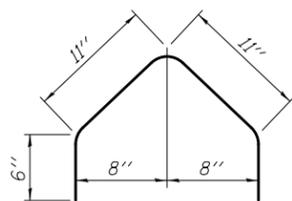


ELEVATION - BOTTOM PLATE ASSEMBLY

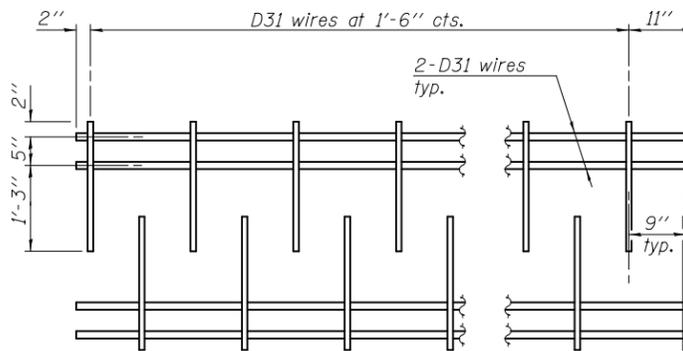


SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"
 *** 2 Spaces at 3" = 6"

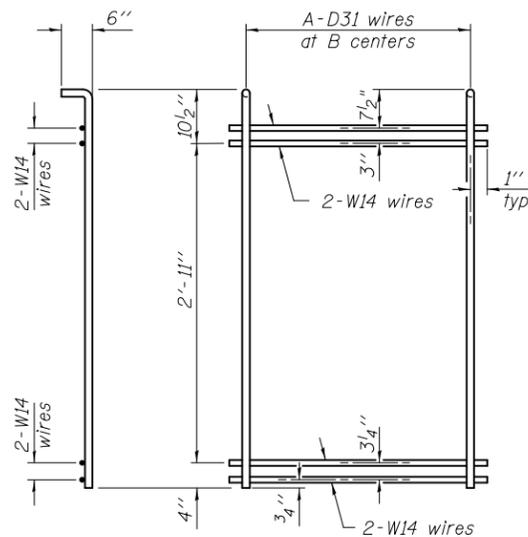


BAR G1(E)



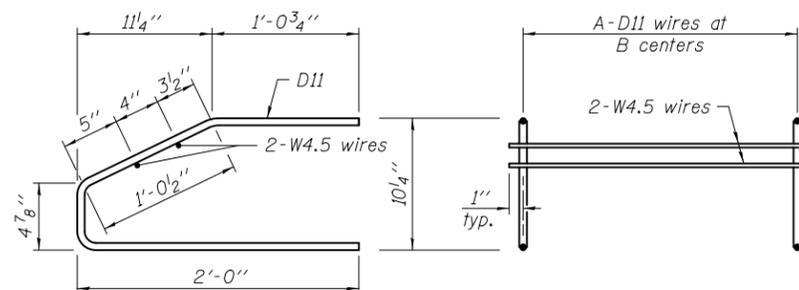
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

SPAN -

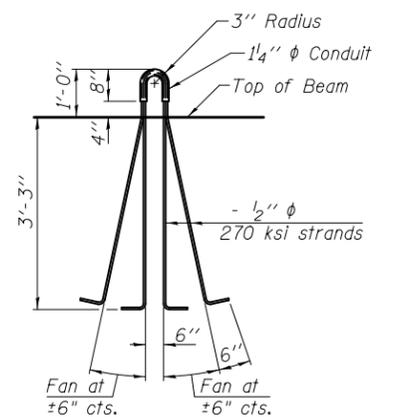
WWR	A	B
M2	9	3"
M3	9	6"
M4	-	1'-6"
M5	12	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

SPAN -

WWR	A	B
M2	9	3"
M3	9	6"
M4	-	1'-6"
M5	12	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

NOTES

Inserts for 3/4" diameter threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in. The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi. A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1/2" clearance inside the pier diaphragm. The top and bottom plates shall be AASHTO M270 Grade 50. The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55. Beams shall not be released from the fabricator until they have attained 45 days of age or older. Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.



LIFTING LOOP DETAIL

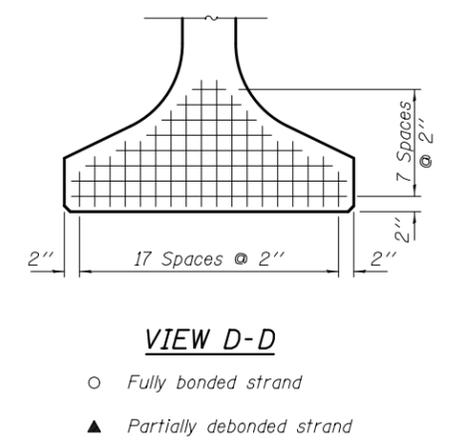
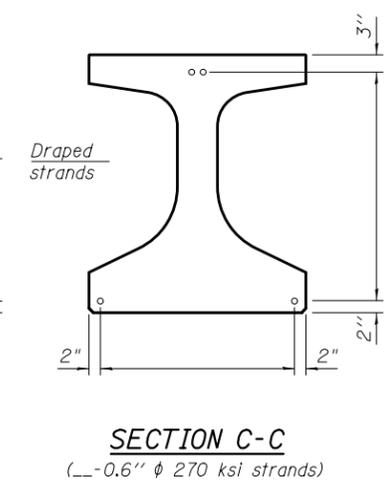
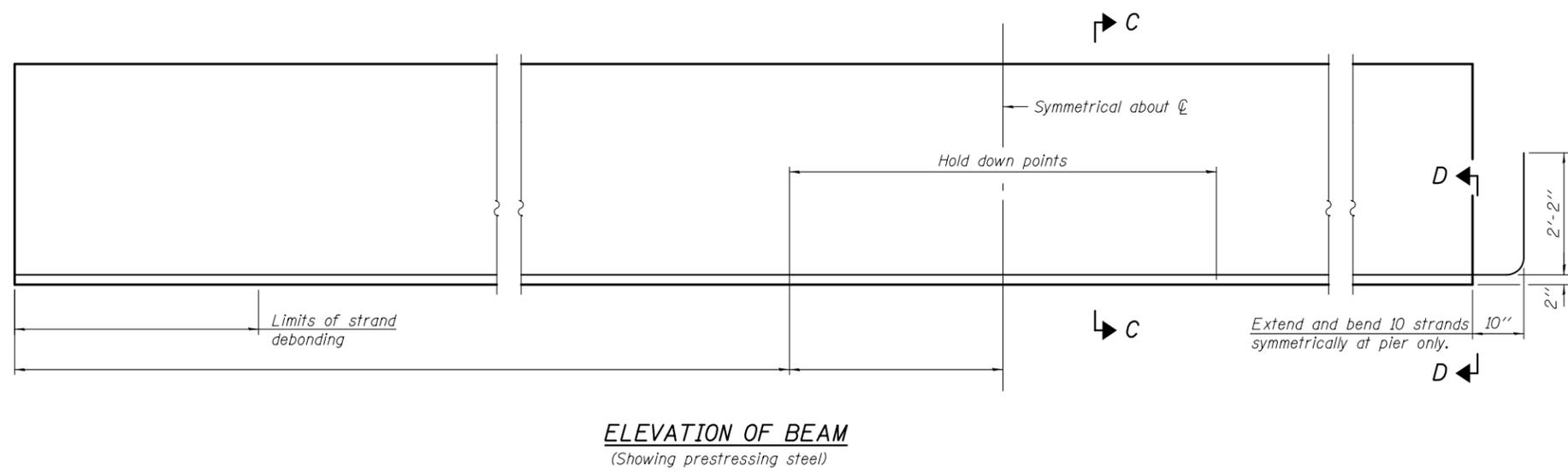
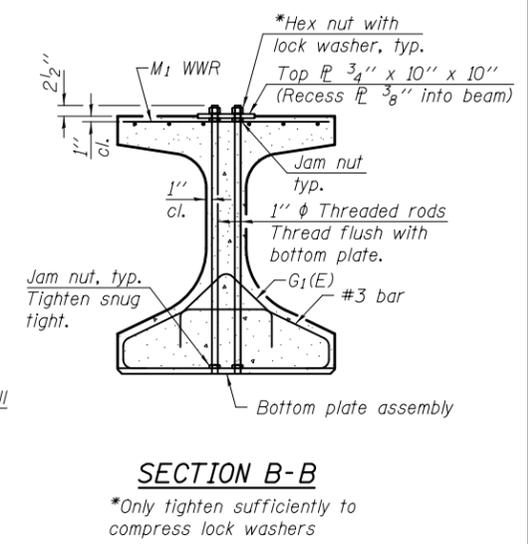
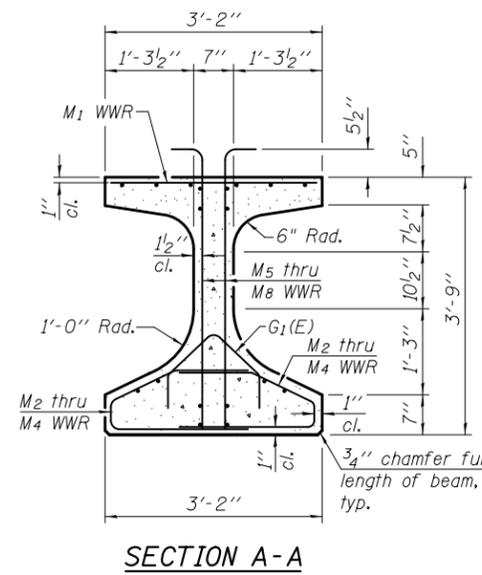
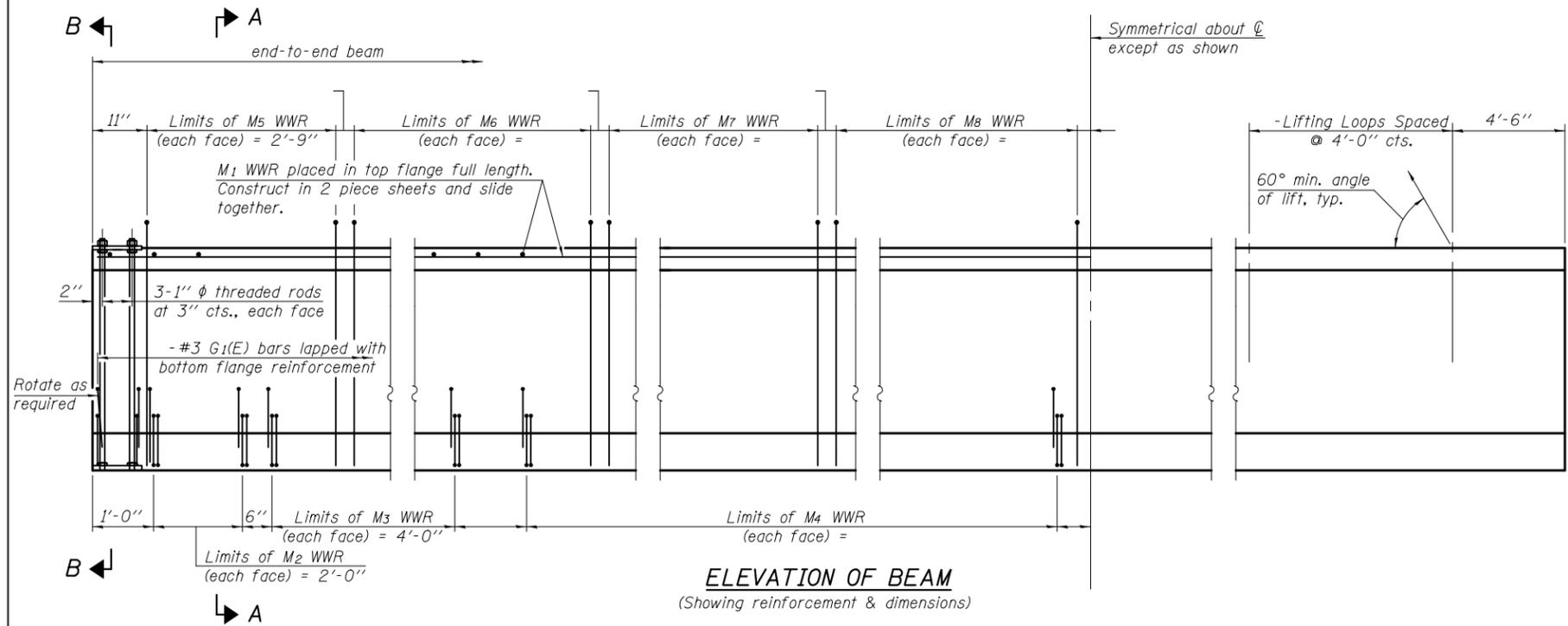
BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL45N	Ft.	

IL45-2438D

10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL45N BEAM DETAILS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED -	REVISD -			CONTRACT NO.					
		DRAWN -	REVISD -			ILLINOIS FED. AID PROJECT					
		CHECKED -	REVISD -								



Note:
See sheet of for additional details and Bill of Material.

IL45-3838

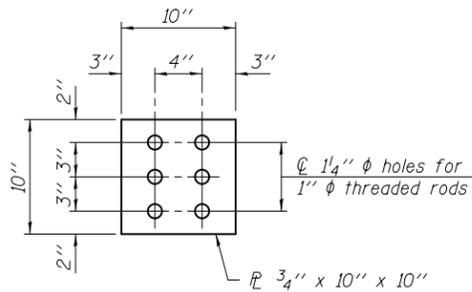
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISOR -
		CHECKED -	REVISIONS -
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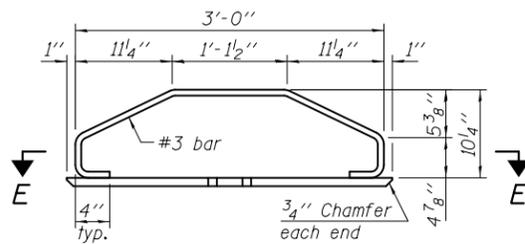
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL45 BEAM
STRUCTURE NO.

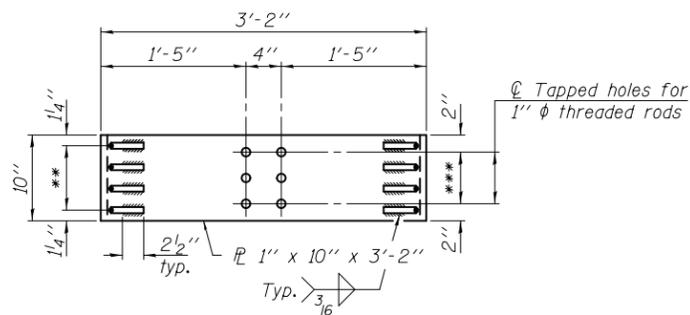
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PLAN - TOP PLATE

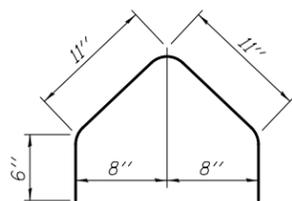


ELEVATION - BOTTOM PLATE ASSEMBLY

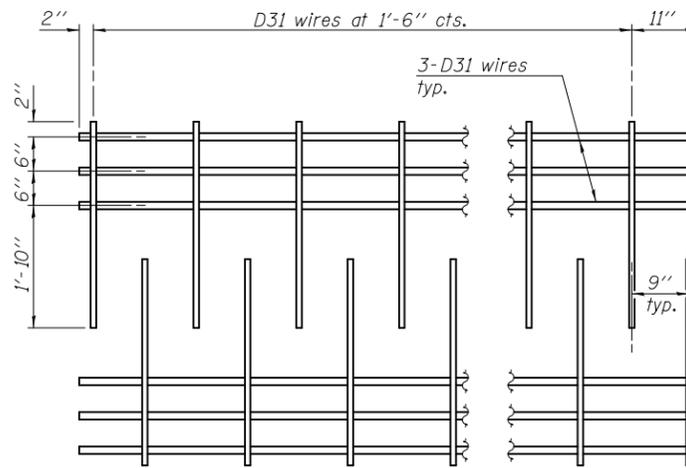


SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"
 *** 2 Spaces at 3" = 6"

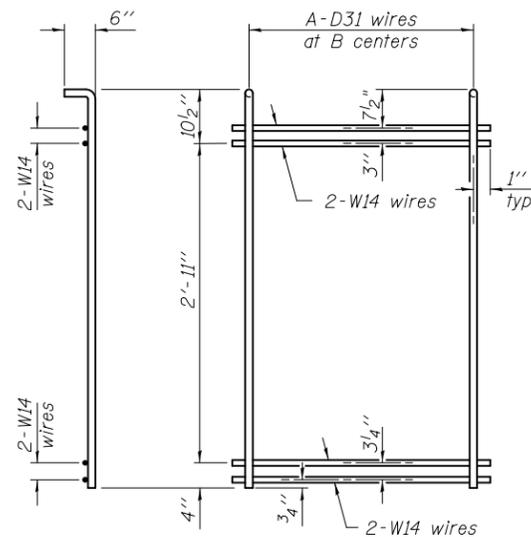


BAR G1(E)



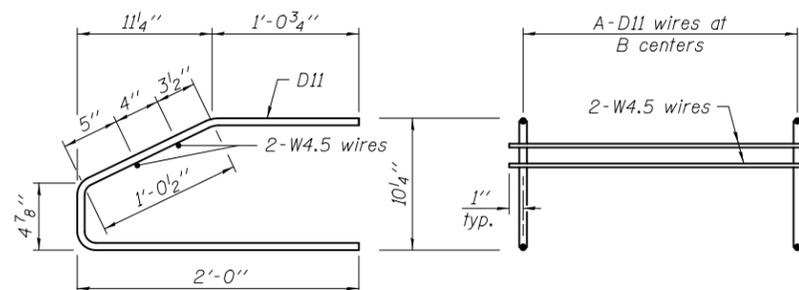
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

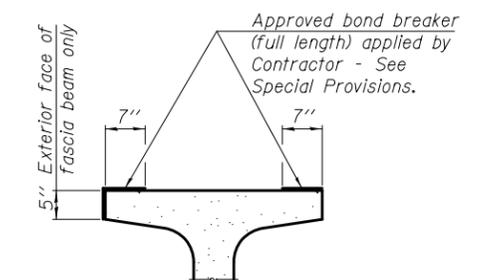
TABLE OF DIMENSIONS

SPAN -

WWR	A	B
M2	9	3"
M3	9	6"
M4	-	1'-6"
M5	12	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

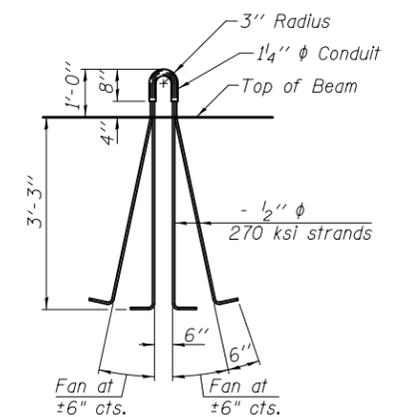
SPAN -

WWR	A	B
M2	9	3"
M3	9	6"
M4	-	1'-6"
M5	12	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"



SECTION THRU TOP FLANGE

(Showing limits of bond breaker)



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL45	Ft.	

IL45-3838D

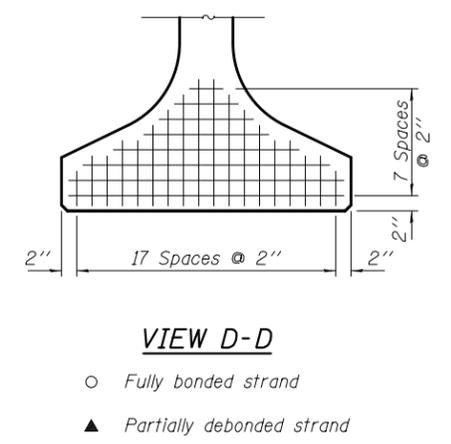
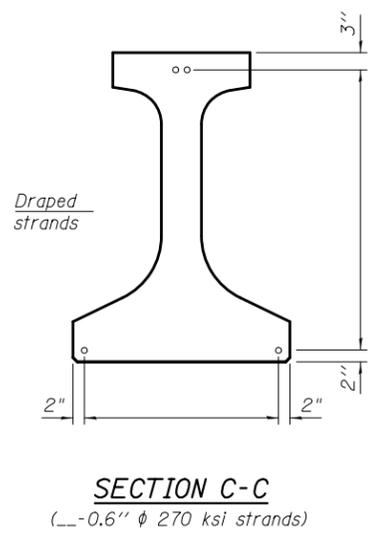
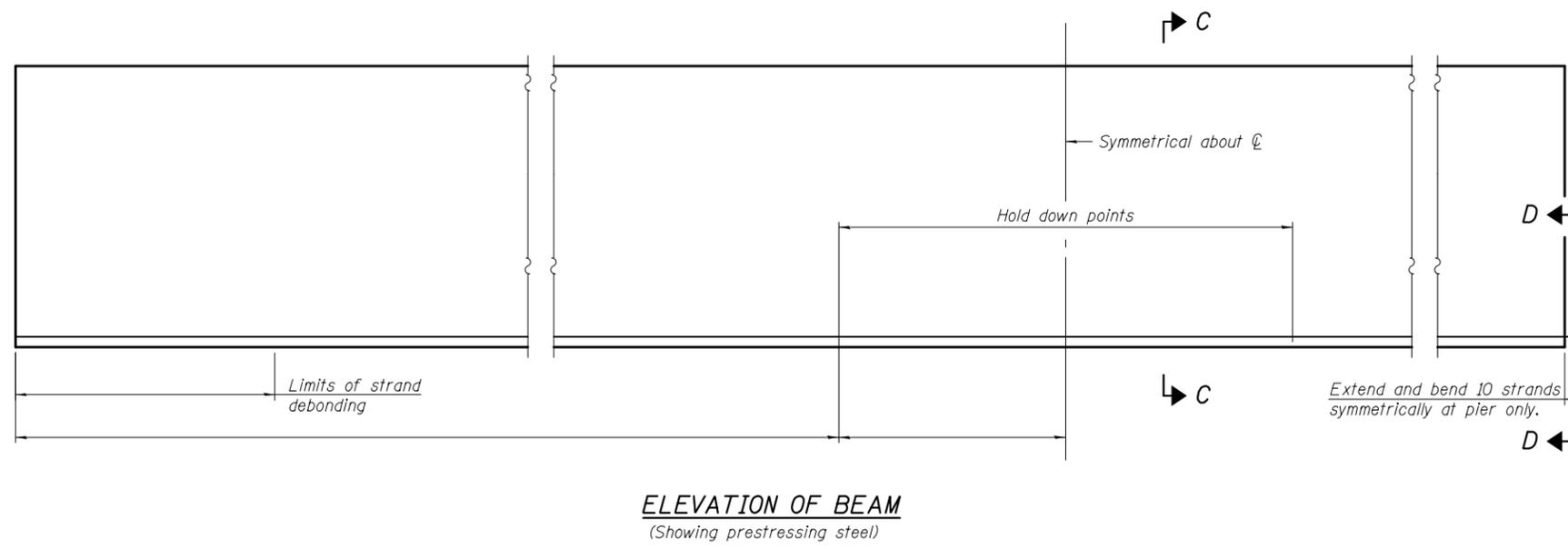
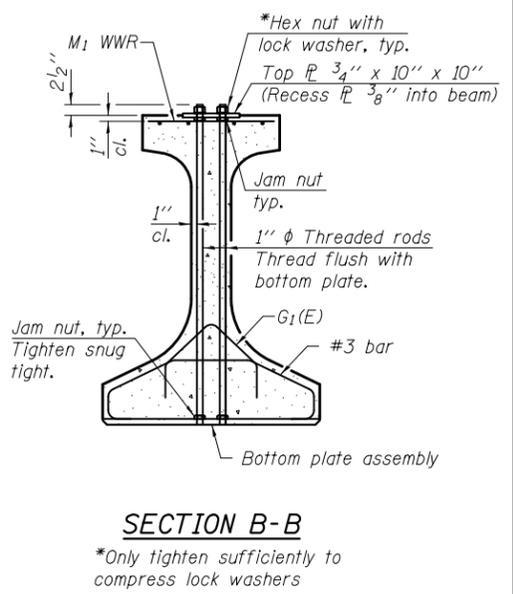
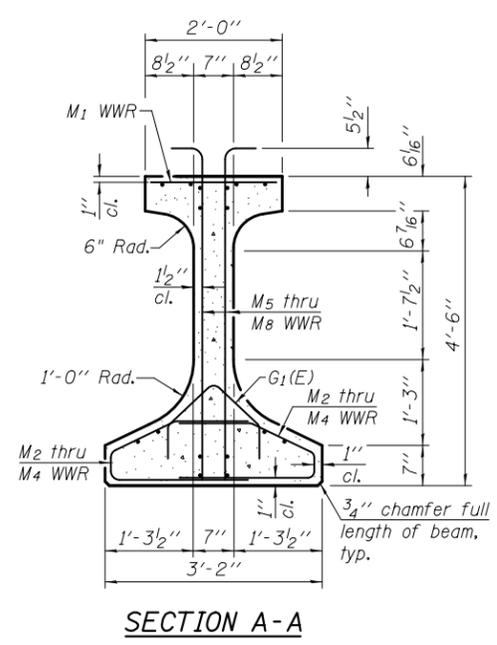
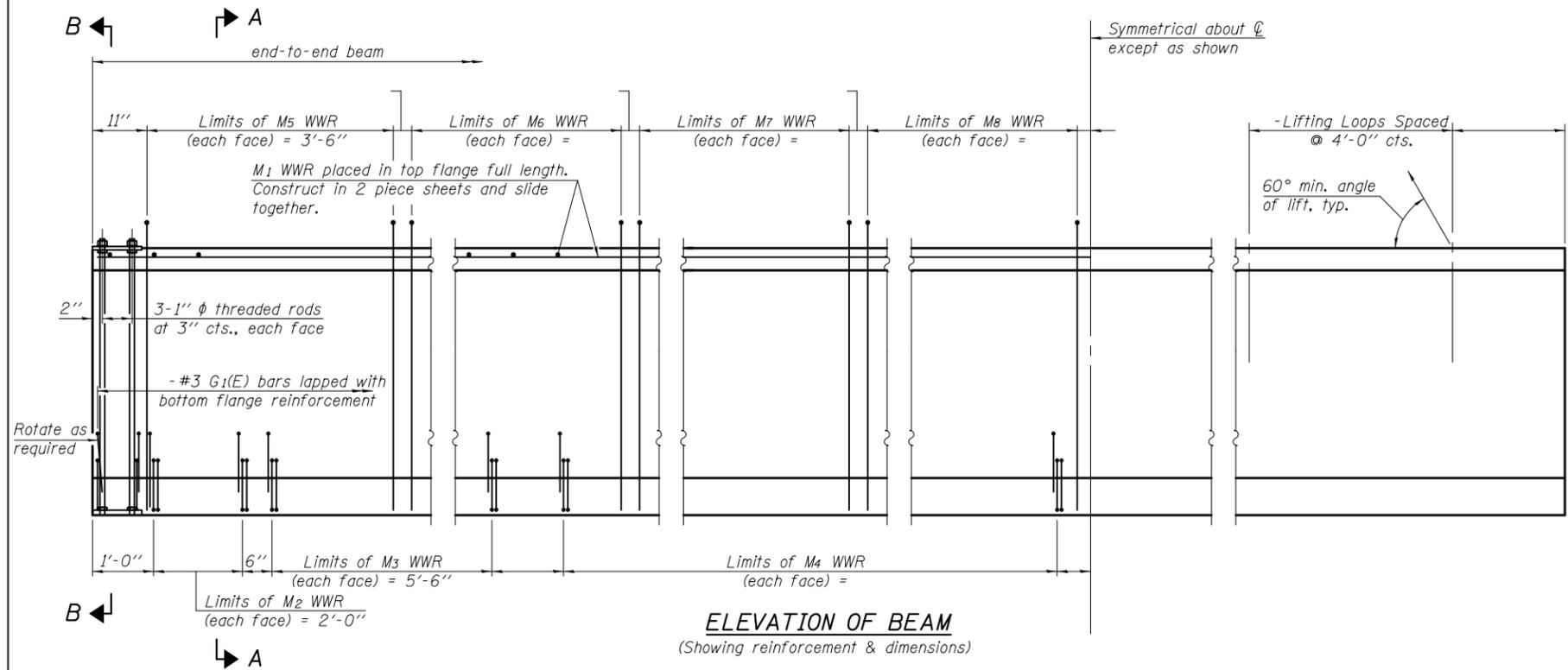
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD -
		CHECKED -	REVISD -
		DRAWN -	REVISD -
		CHECKED -	REVISD -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL45 BEAM DETAILS
 STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



Note:
See sheet of for additional details and Bill of Material.

IL54-2438

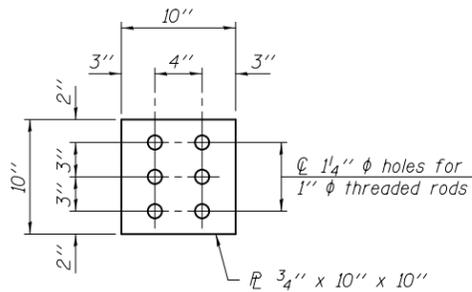
10-7-2016

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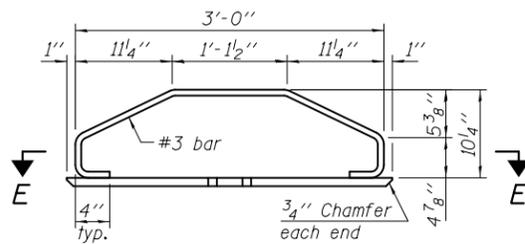
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL54N BEAM
STRUCTURE NO.

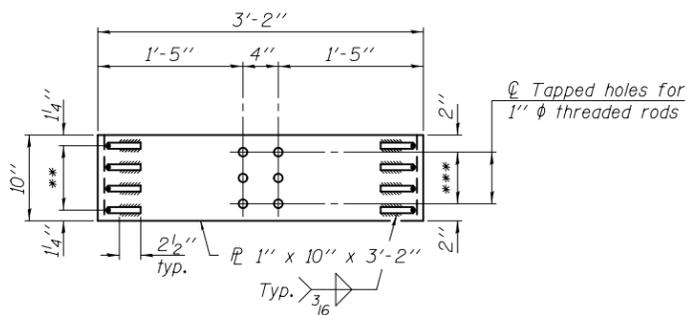
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PLAN - TOP PLATE

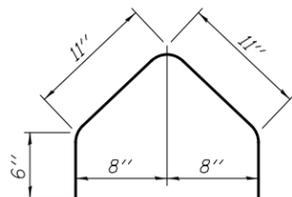


ELEVATION - BOTTOM PLATE ASSEMBLY

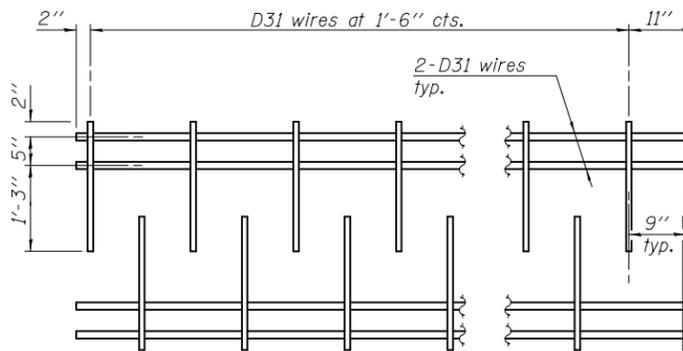


SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"
 *** 2 Spaces at 3" = 6"

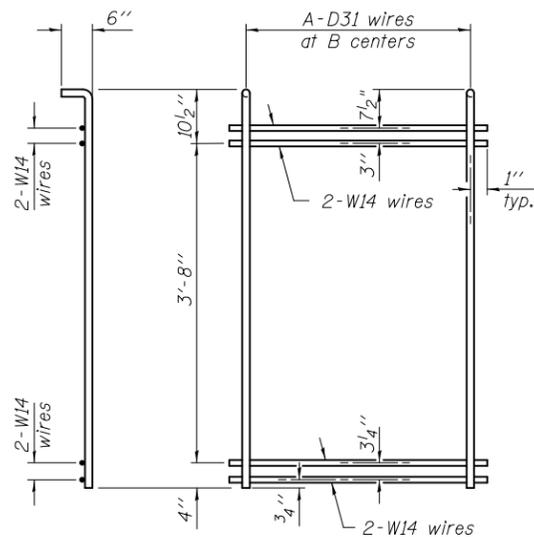


BAR G1(E)



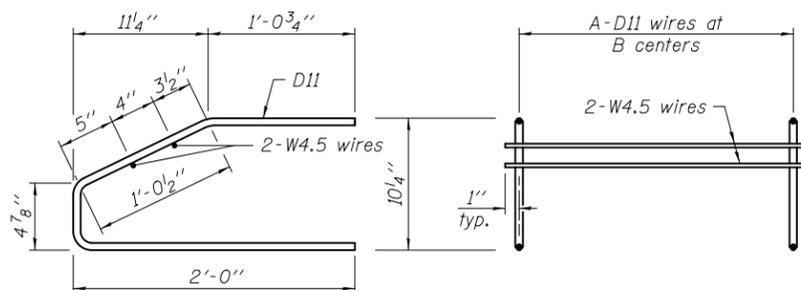
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

SPAN -

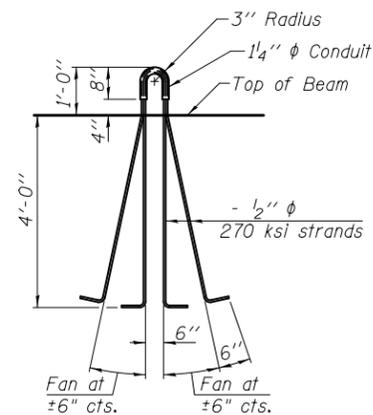
WWR	A	B
M2	9	3"
M3	12	6"
M4	-	1'-6"
M5	15	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

SPAN -

WWR	A	B
M2	9	3"
M3	12	6"
M4	-	1'-6"
M5	15	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

NOTES

Inserts for 3/4" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in. The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi. A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1/2" clearance inside the pier diaphragm. The top and bottom plates shall be AASHTO M270 Grade 50. The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55. Beams shall not be released from the fabricator until they have attained 45 days of age or older. Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL54N	Ft.	

IL54-2438D

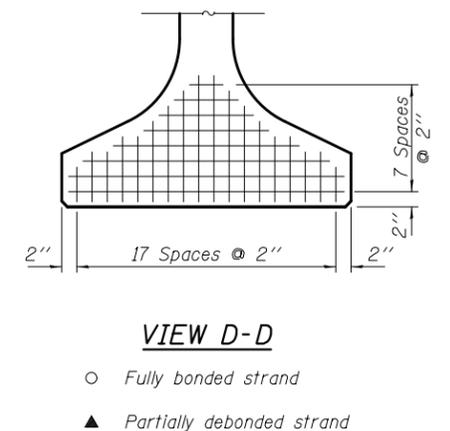
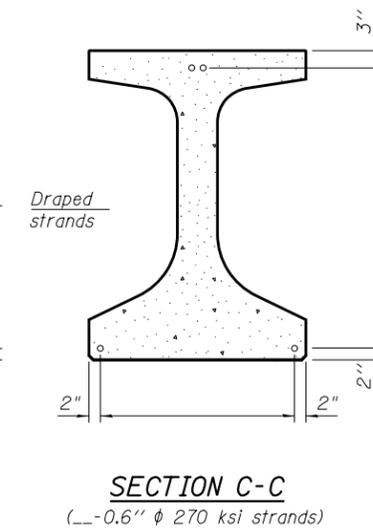
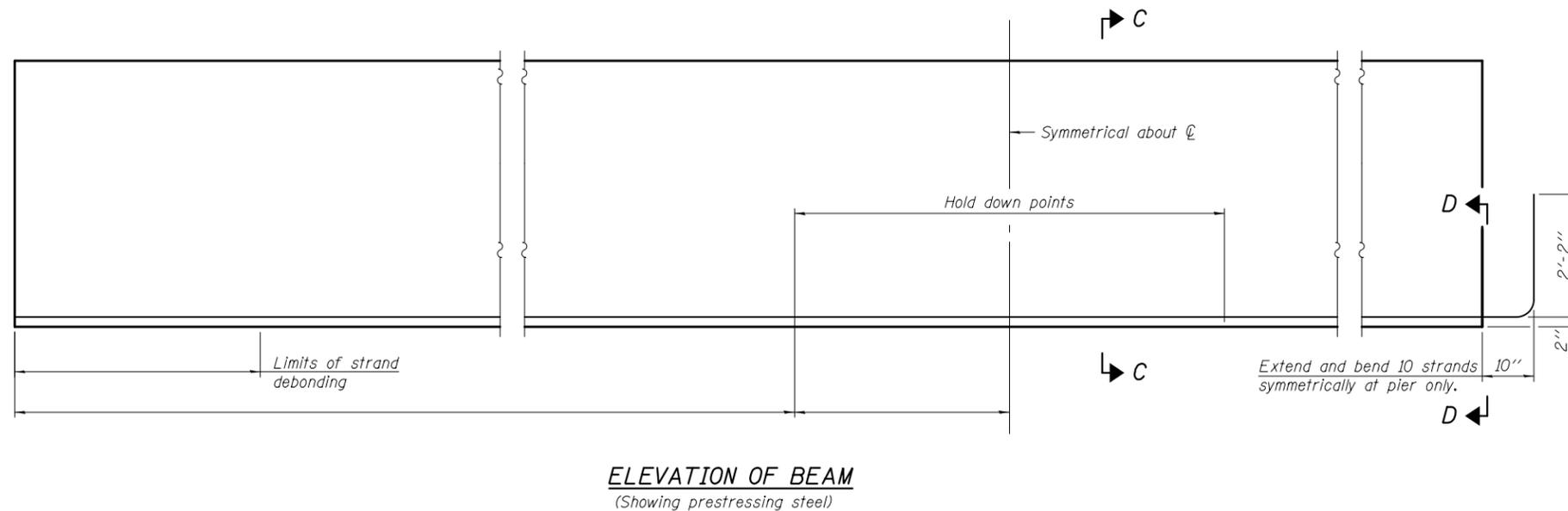
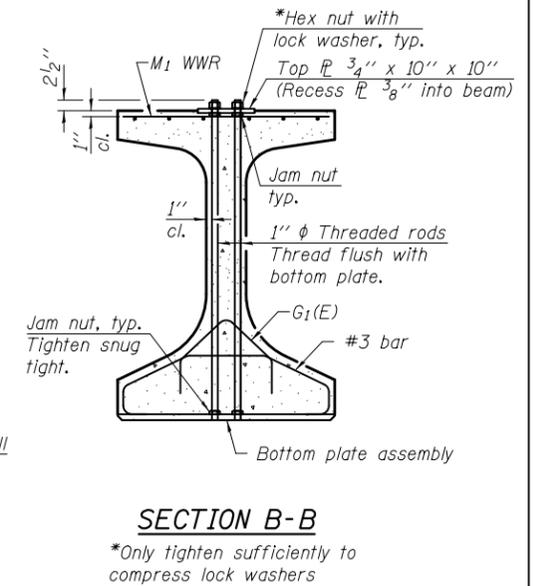
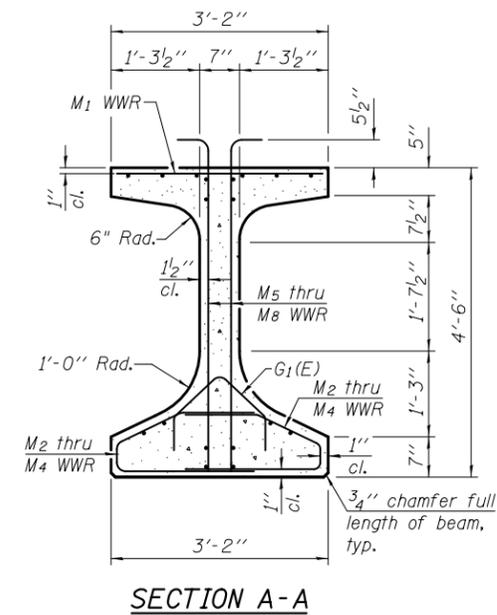
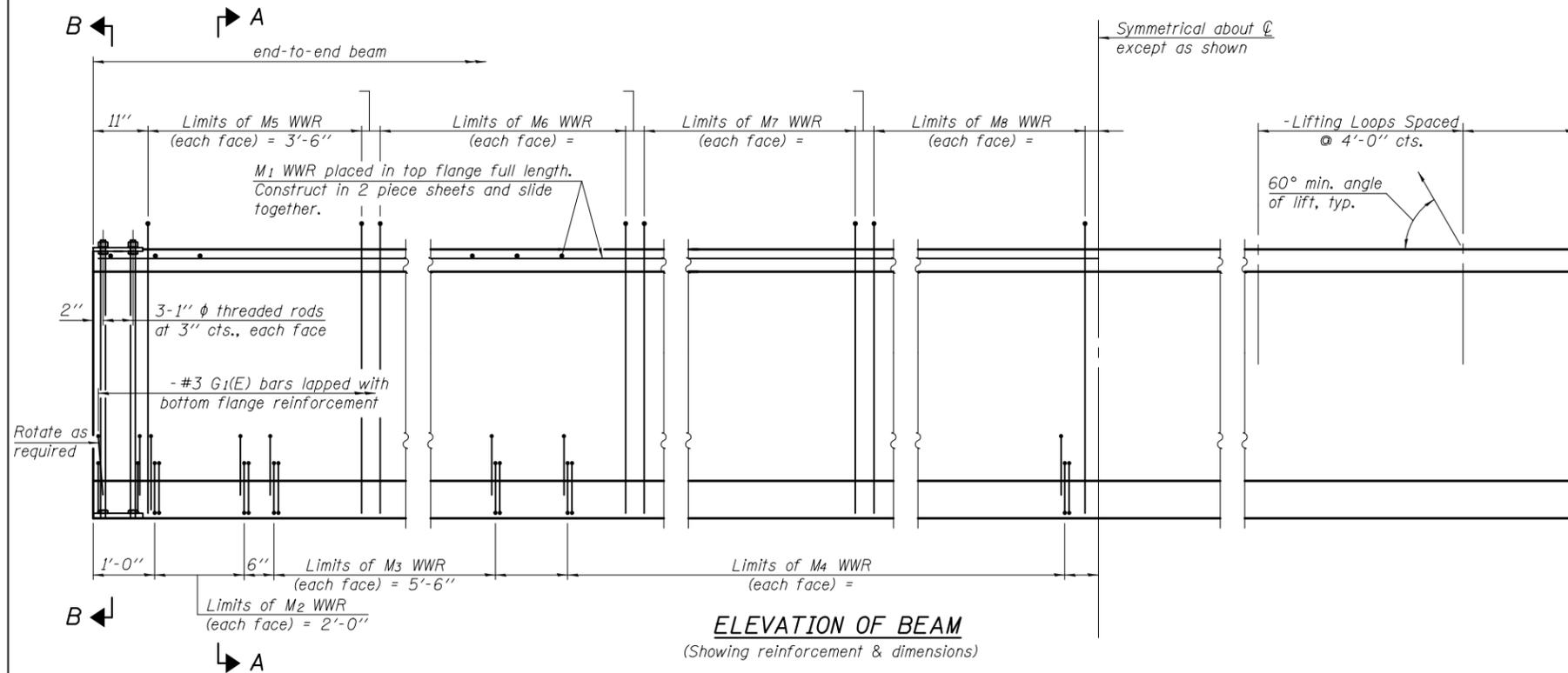
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL54N BEAM DETAILS
 STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



Note:
See sheet of for additional details and Bill of Material.

IL54-3838

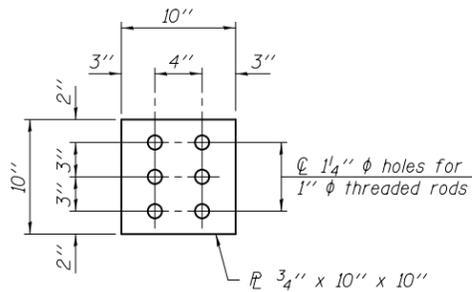
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
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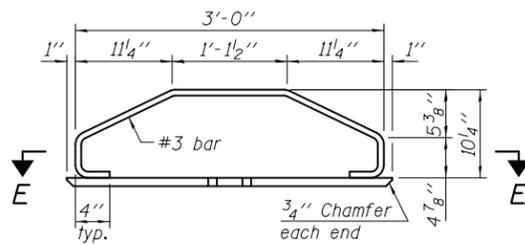
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL54 BEAM
STRUCTURE NO.

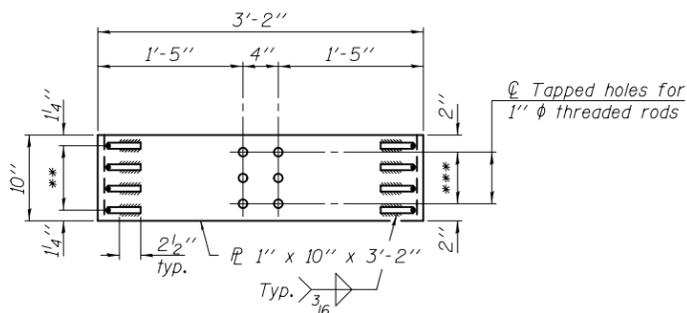
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PLAN - TOP PLATE

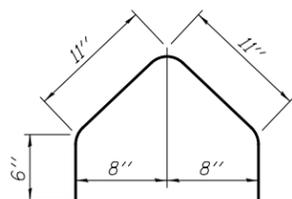


ELEVATION - BOTTOM PLATE ASSEMBLY

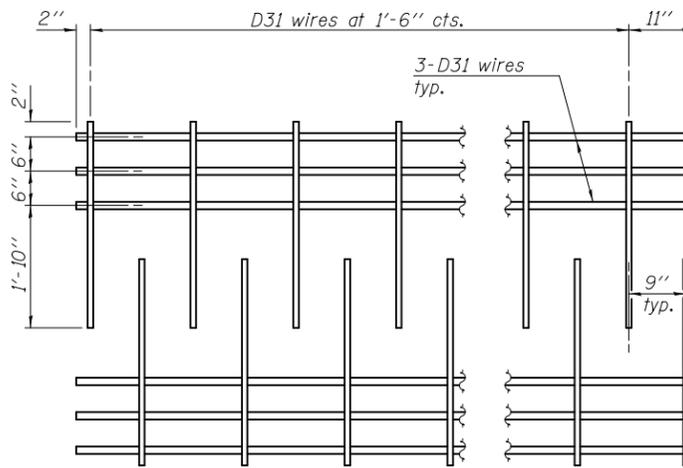


SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"
 *** 2 Spaces at 3" = 6"

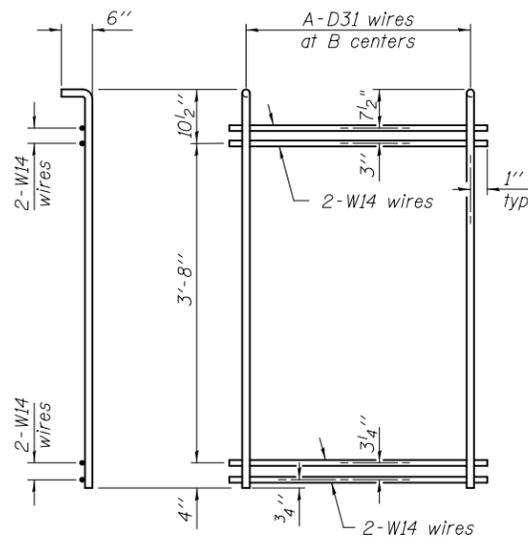


BAR G1(E)



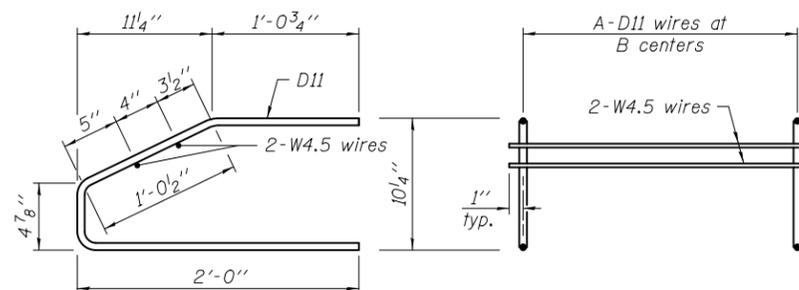
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

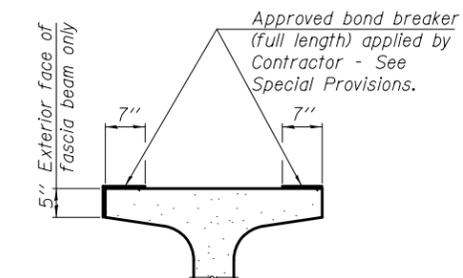
SPAN -

WWR	A	B
M2	9	3"
M3	12	6"
M4	-	1'-6"
M5	15	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

SPAN -

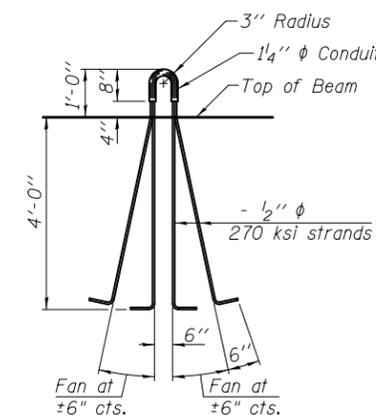
WWR	A	B
M2	9	3"
M3	12	6"
M4	-	1'-6"
M5	15	3"
M6	-	6"
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NOTES
 Inserts for 3/4" φ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in. The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi. A minimum 2 1/2" φ lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1 1/2" clearance inside the pier diaphragm. The top and bottom plates shall be AASHTO M270 Grade 50. The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55. Beams shall not be released from the fabricator until they have attained 45 days of age or older. Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.



SECTION THRU TOP FLANGE

(Showing limits of bond breaker)



LIFTING LOOP DETAIL

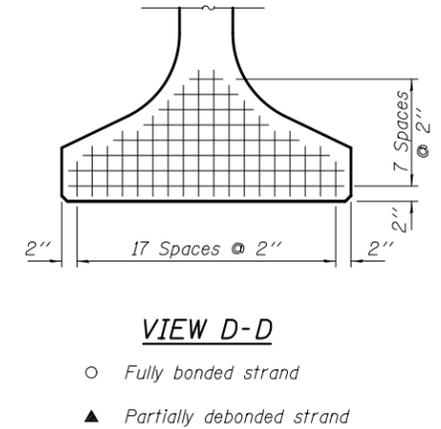
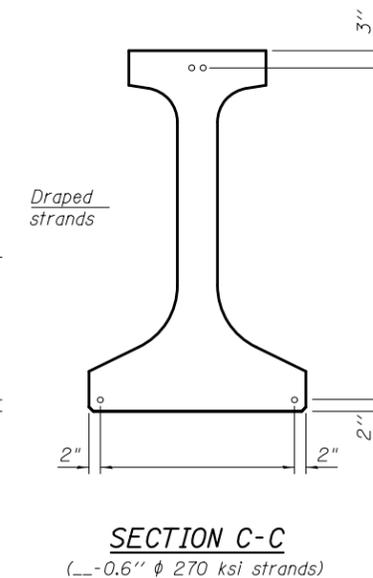
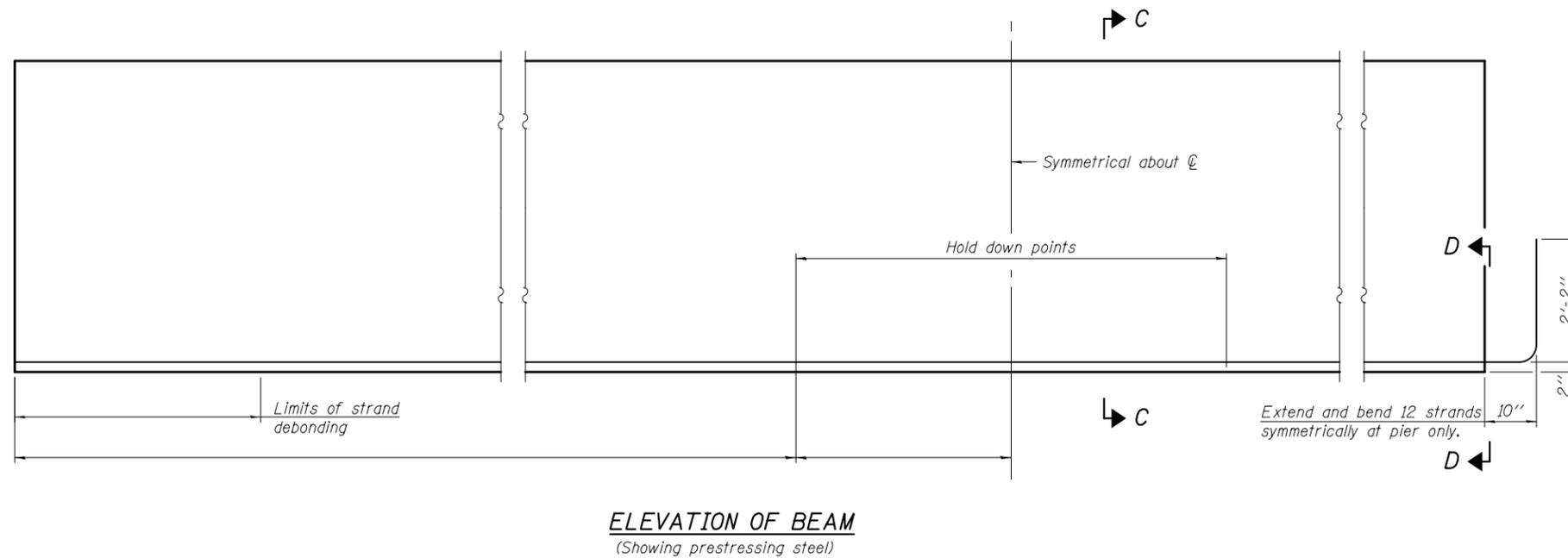
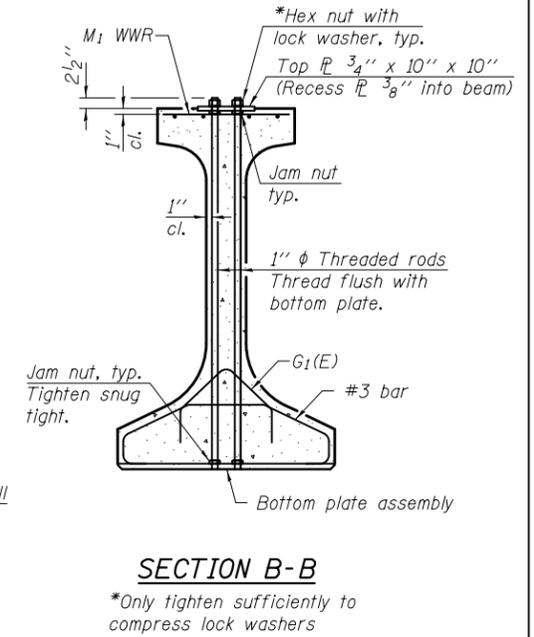
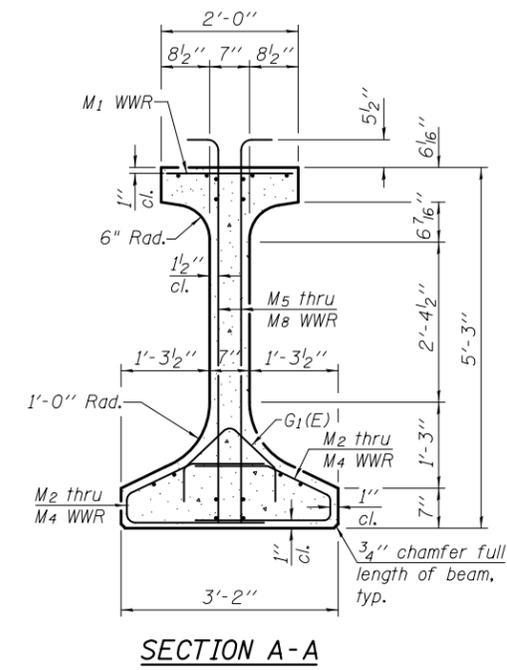
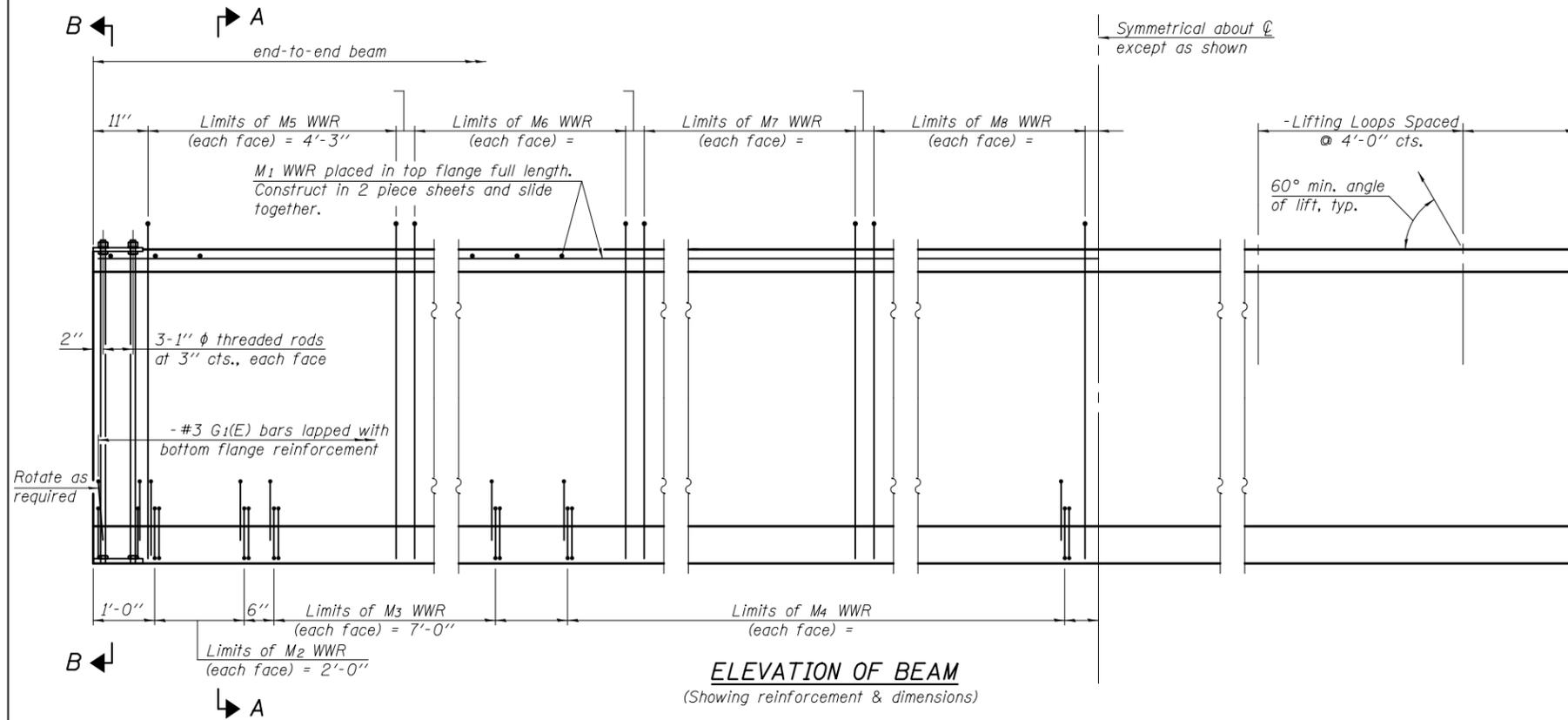
BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL54	Ft.	

IL54-3838D

10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL54 BEAM DETAILS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED -	REVISIONS -			CONTRACT NO.					
PLOT SCALE =		DRAWN -	REVISIONS -			ILLINOIS FED. AID PROJECT					
PLOT DATE =		CHECKED -	REVISIONS -								



Note:
See sheet of for additional details and Bill of Material.

IL63-2438

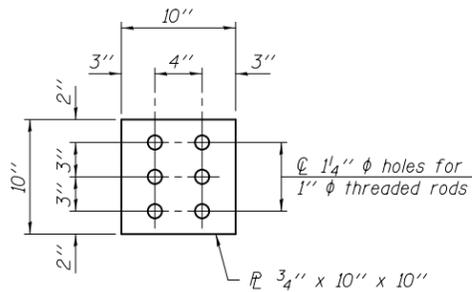
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
		DRAWN -	REVISED -
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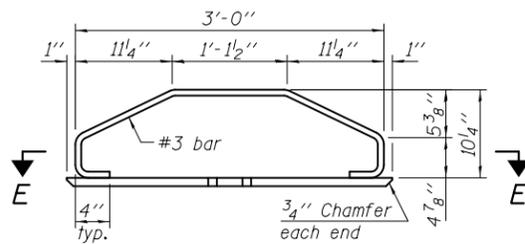
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL63N BEAM
STRUCTURE NO.

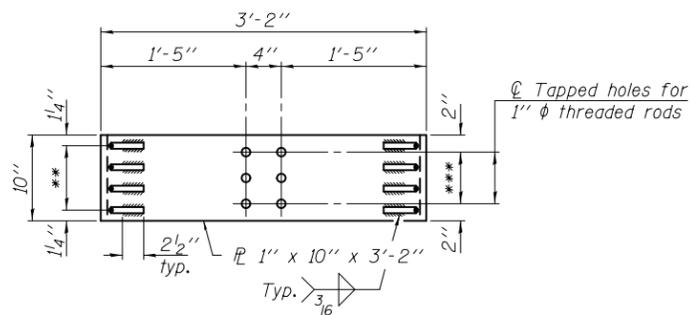
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PLAN - TOP PLATE

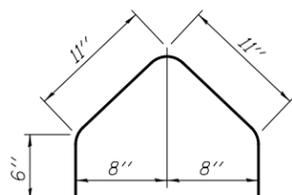


ELEVATION - BOTTOM PLATE ASSEMBLY

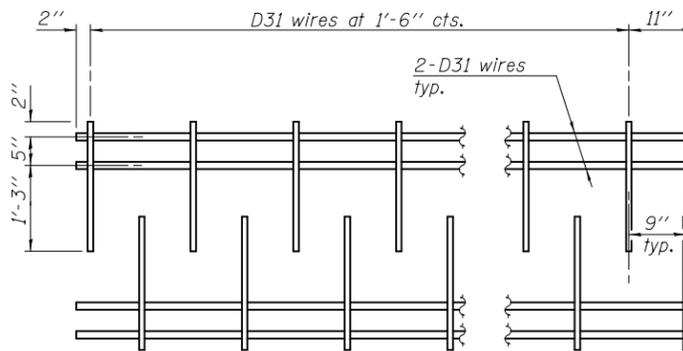


SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"
 *** 2 Spaces at 3" = 6"

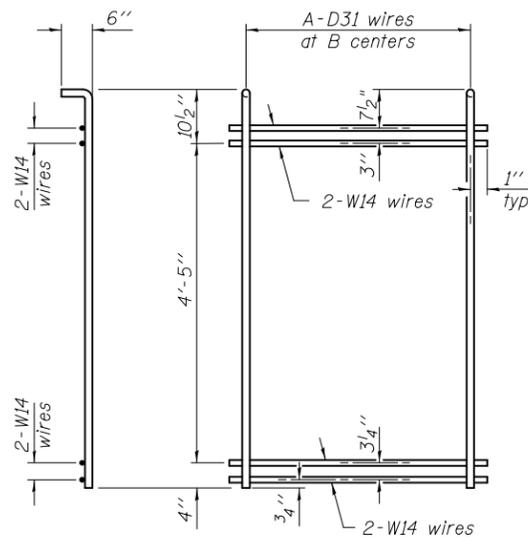


BAR G (E)



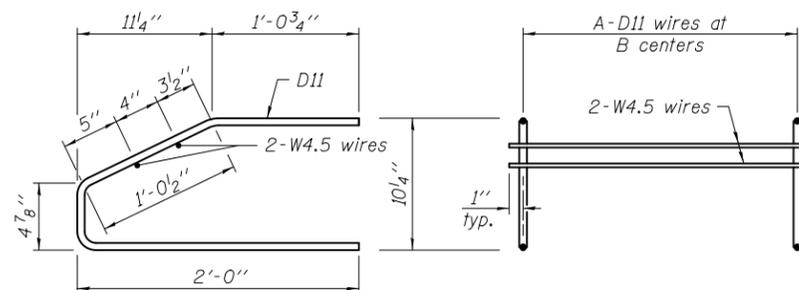
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

SPAN -

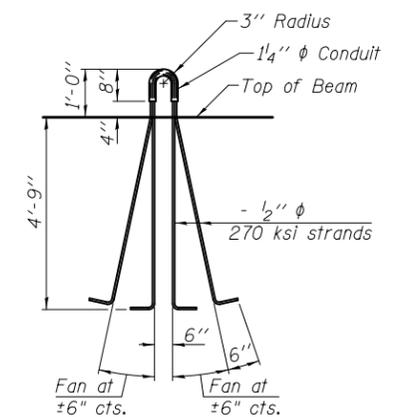
WWR	A	B
M2	9	3"
M3	15	6"
M4	-	1'-6"
M5	18	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

SPAN -

WWR	A	B
M2	9	3"
M3	15	6"
M4	-	1'-6"
M5	18	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

NOTES

Inserts for 3/4" diameter threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in. The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi. A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1/2" clearance inside the pier diaphragm. The top and bottom plates shall be AASHTO M270 Grade 50. The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55. Beams shall not be released from the fabricator until they have attained 45 days of age or older. Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.



LIFTING LOOP DETAIL

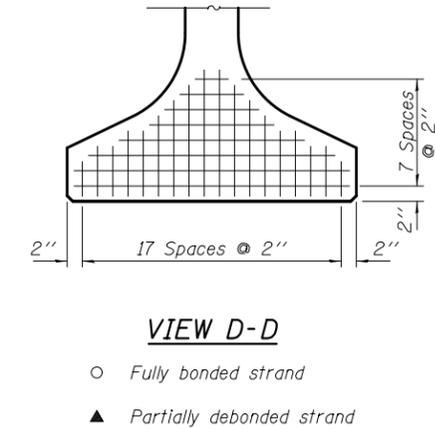
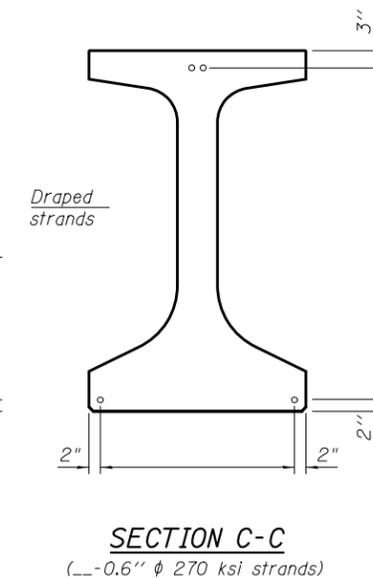
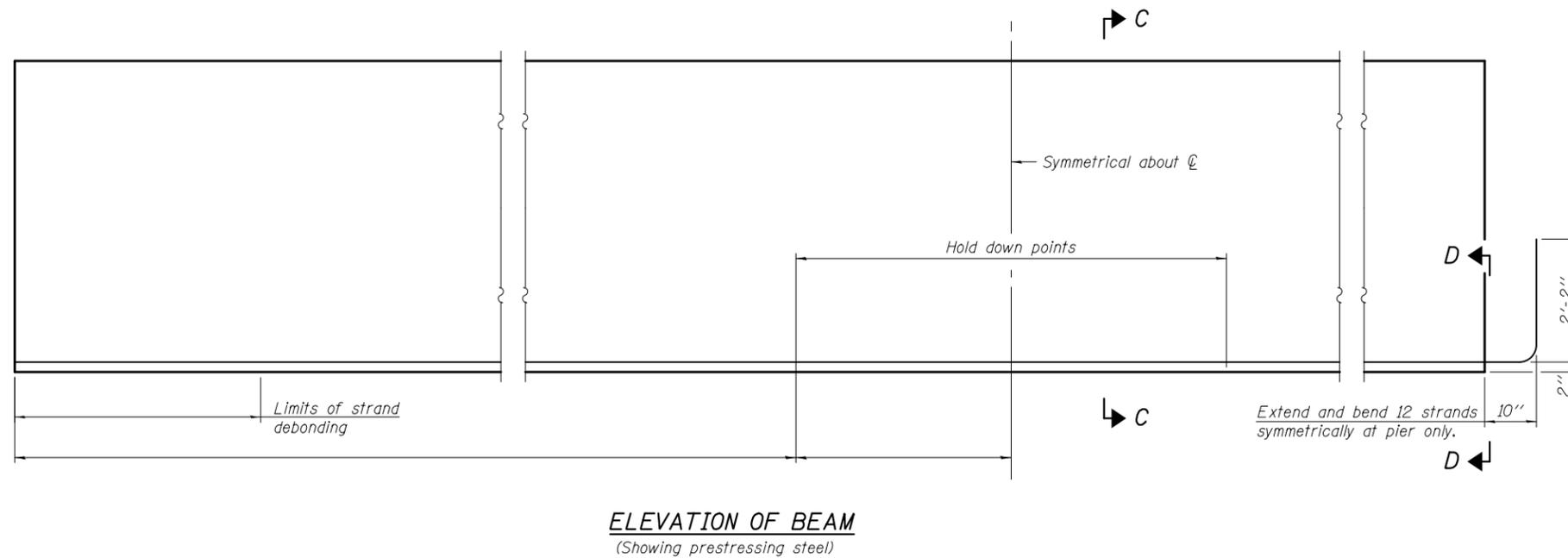
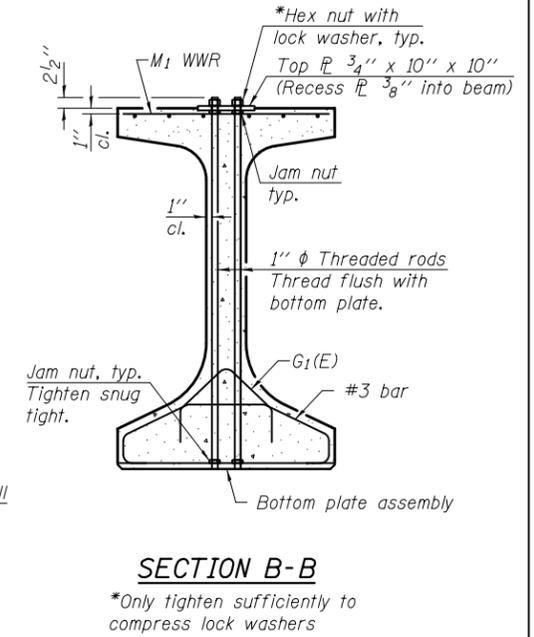
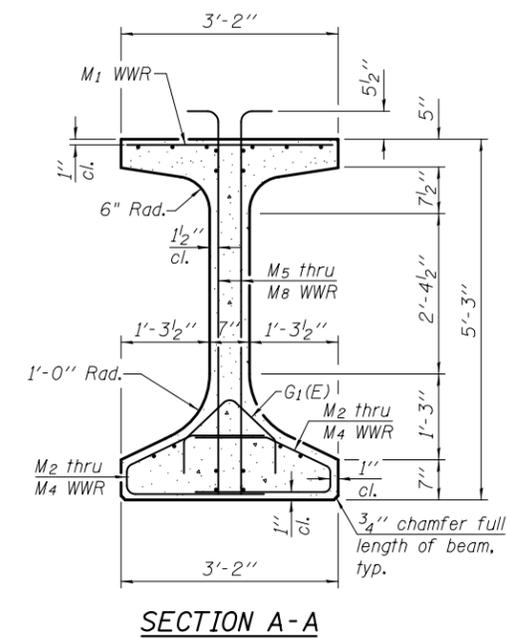
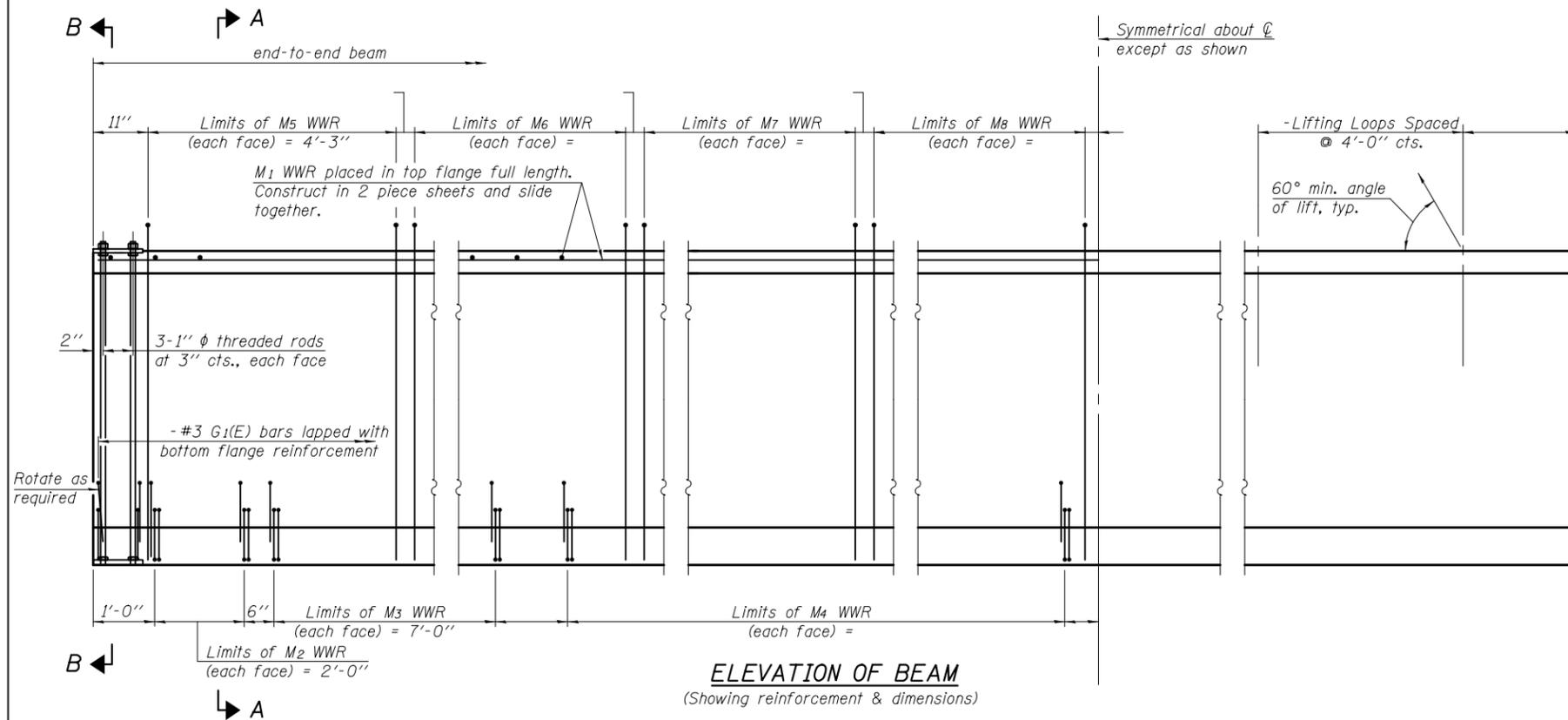
BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL63N	Ft.	

IL63-2438D

10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL63N BEAM DETAILS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED -	REVISD -			CONTRACT NO.					
		DRAWN -	REVISD -			ILLINOIS FED. AID PROJECT					
		CHECKED -	REVISD -								



Note:
See sheet of for additional details and Bill of Material.

IL63-3838

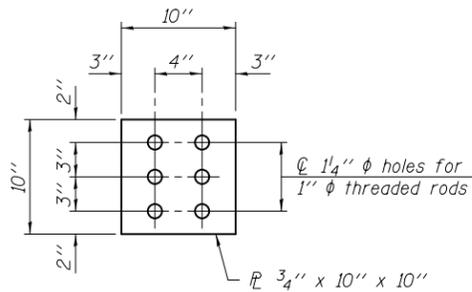
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -

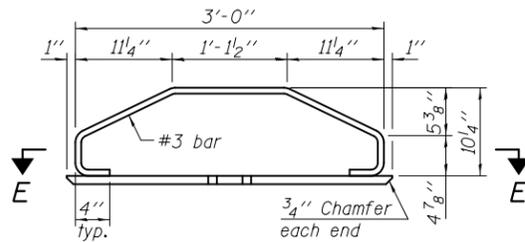
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL63 BEAM
STRUCTURE NO.

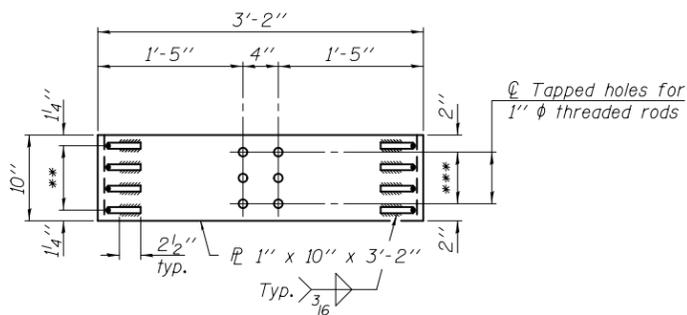
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PLAN - TOP PLATE

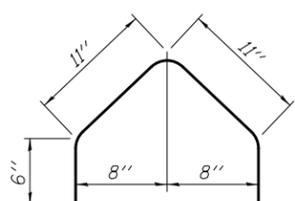


ELEVATION - BOTTOM PLATE ASSEMBLY

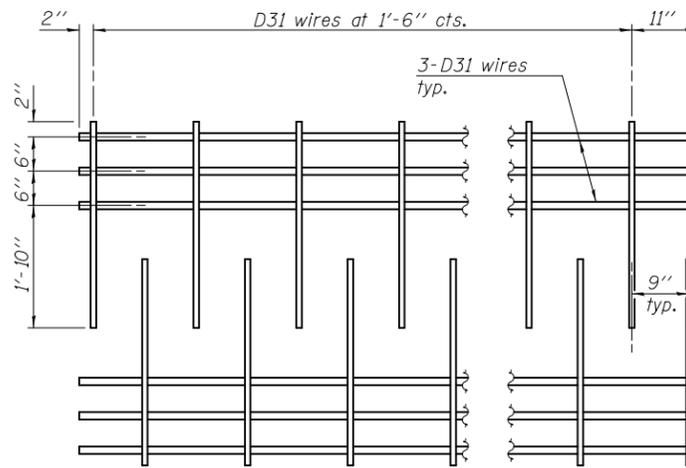


SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"
 *** 2 Spaces at 3" = 6"

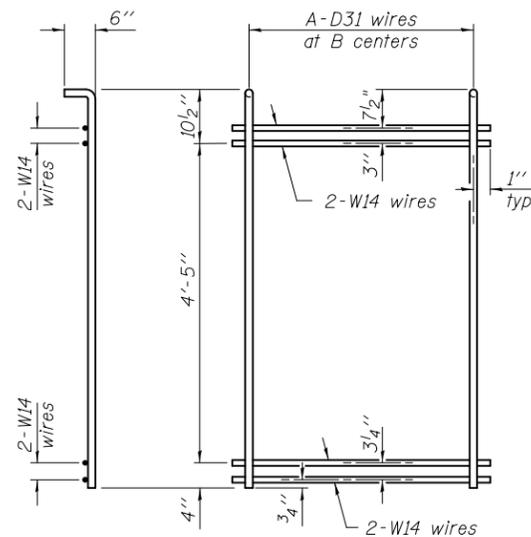


BAR G1(E)



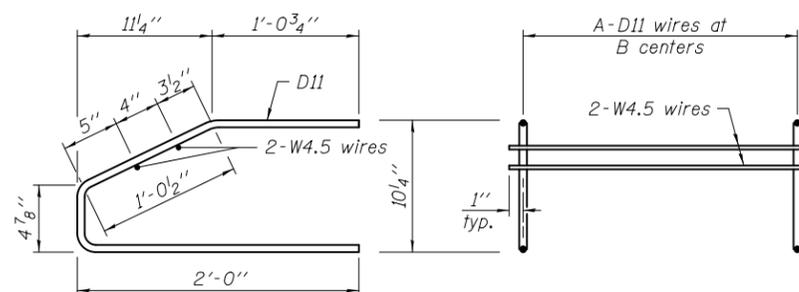
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

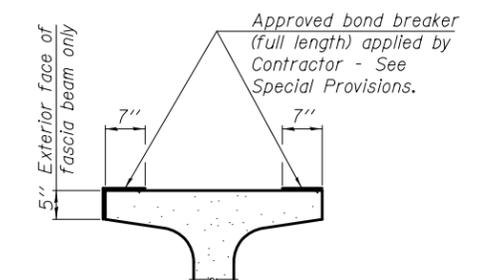
TABLE OF DIMENSIONS

SPAN -

WWR	A	B
M2	9	3"
M3	15	6"
M4	-	1'-6"
M5	18	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

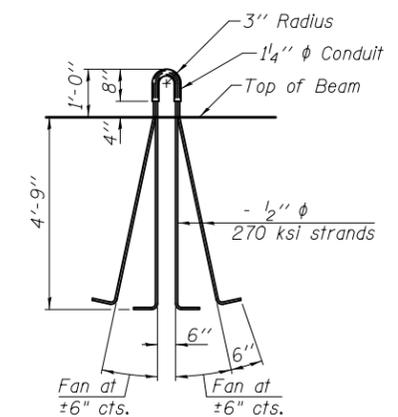
SPAN -

WWR	A	B
M2	9	3"
M3	15	6"
M4	-	1'-6"
M5	18	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"



SECTION THRU TOP FLANGE

(Showing limits of bond breaker)



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL63	Ft.	

IL63-3838D

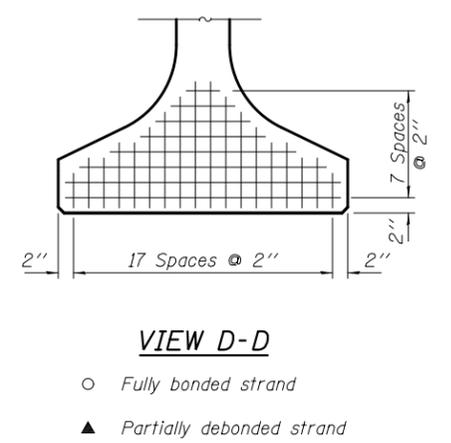
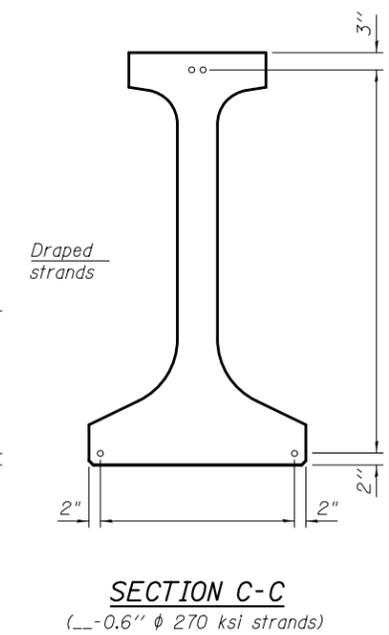
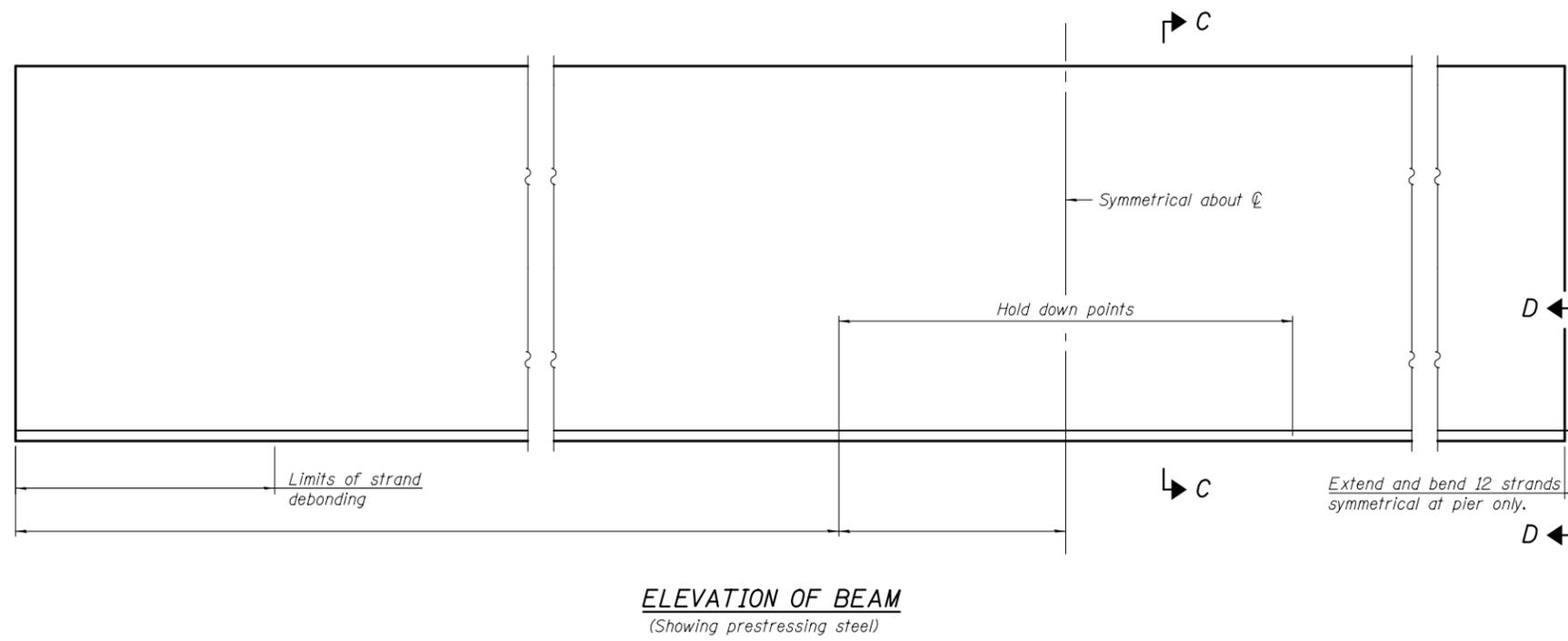
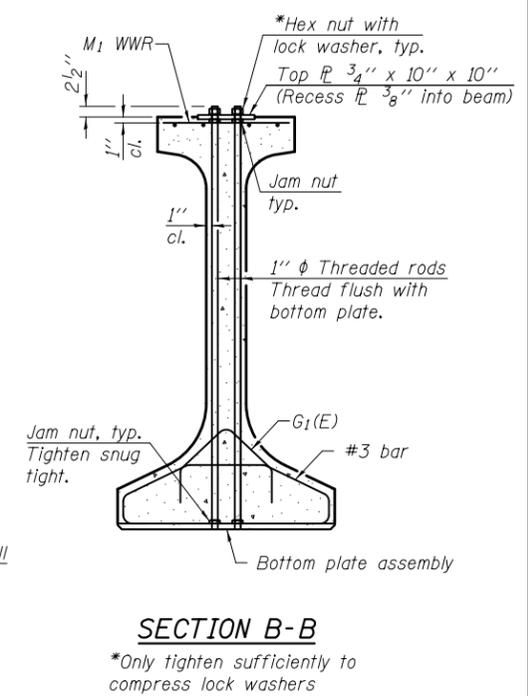
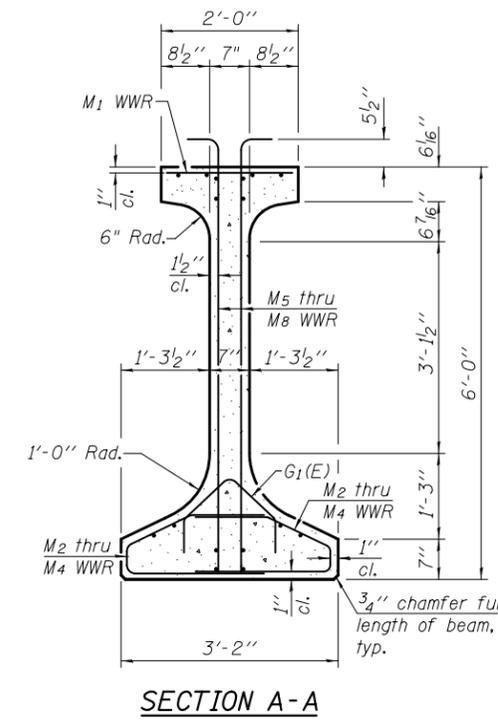
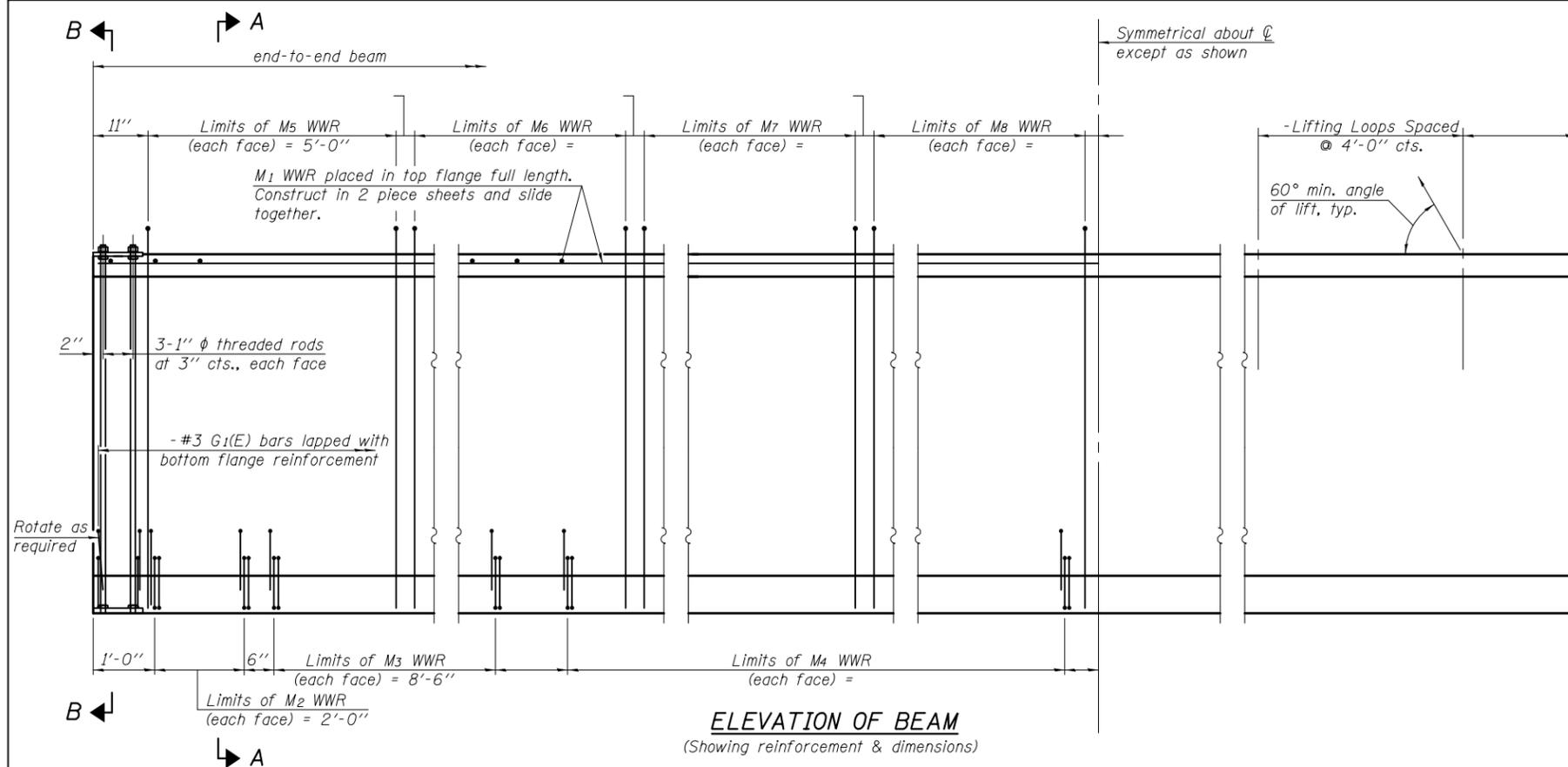
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD -
		CHECKED -	REVISD -
		DRAWN -	REVISD -
		CHECKED -	REVISD -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL63 BEAM DETAILS
 STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



Note:
See sheet of for additional details and Bill of Material.

IL72-2438

10-7-2016

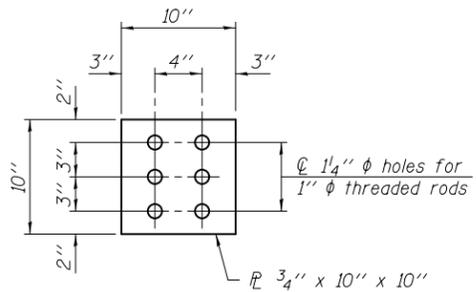
FILE NAME =	USER NAME =	DESIGNED -	REVISD -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

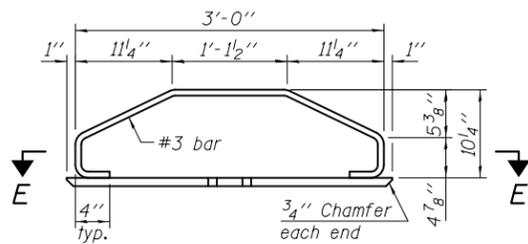
IL72N BEAM
STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				

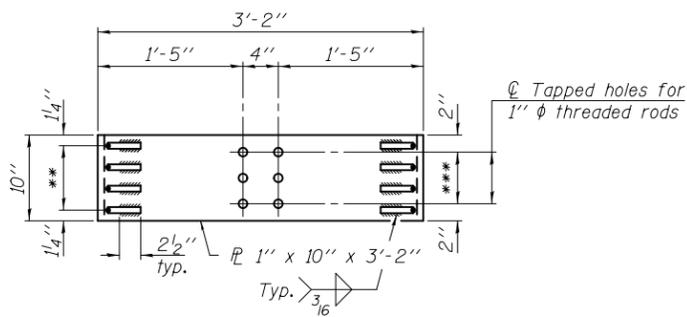
ILLINOIS FED. AID PROJECT



PLAN - TOP PLATE

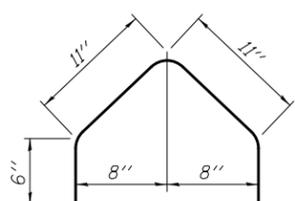


ELEVATION - BOTTOM PLATE ASSEMBLY

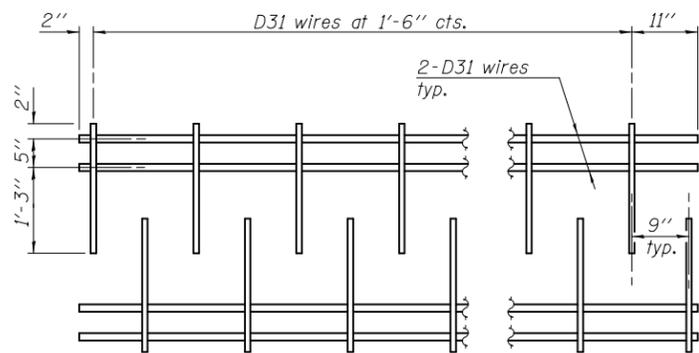


SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"
 *** 2 Spaces at 3" = 6"

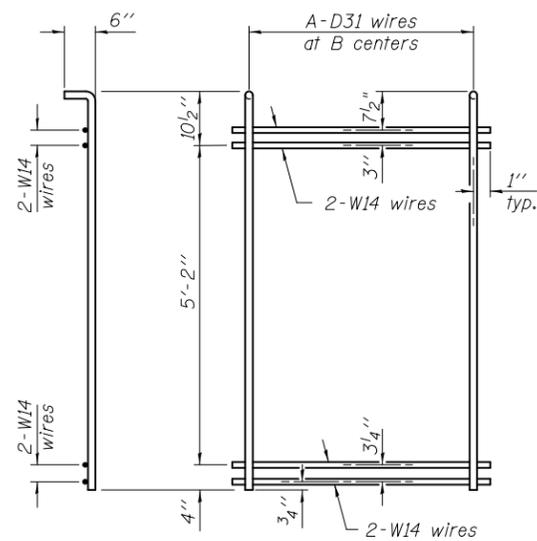


BAR G1(E)



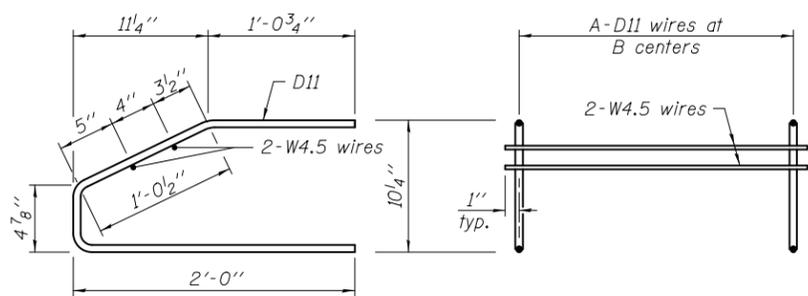
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

SPAN -

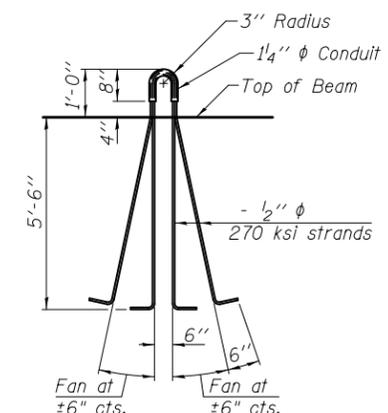
WWR	A	B
M2	9	3"
M3	18	6"
M4	-	1'-6"
M5	21	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

SPAN -

WWR	A	B
M2	9	3"
M3	18	6"
M4	-	1'-6"
M5	21	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

NOTES

Inserts for 3/4" diameter threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6 inches and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2 inch and the nominal cross sectional area shall be 0.153 sq. in. The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi. A minimum 2 1/2 inch diameter lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1/2 inch clearance inside the pier diaphragm. The top and bottom plates shall be AASHTO M270 Grade 50. The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55. Beams shall not be released from the fabricator until they have attained 45 days of age or older. Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.



LIFTING LOOP DETAIL

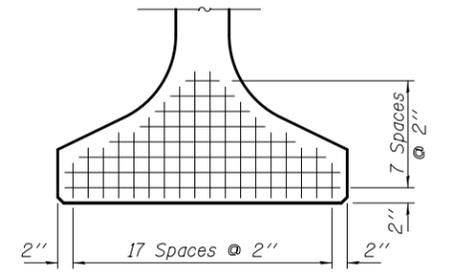
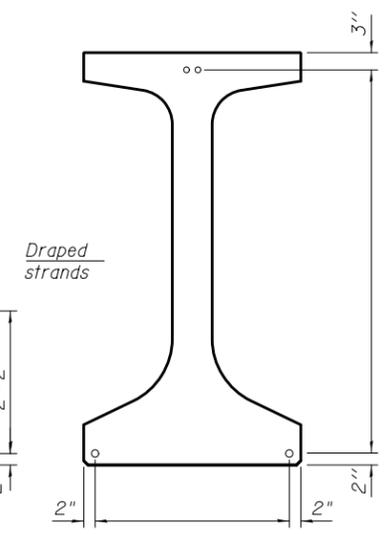
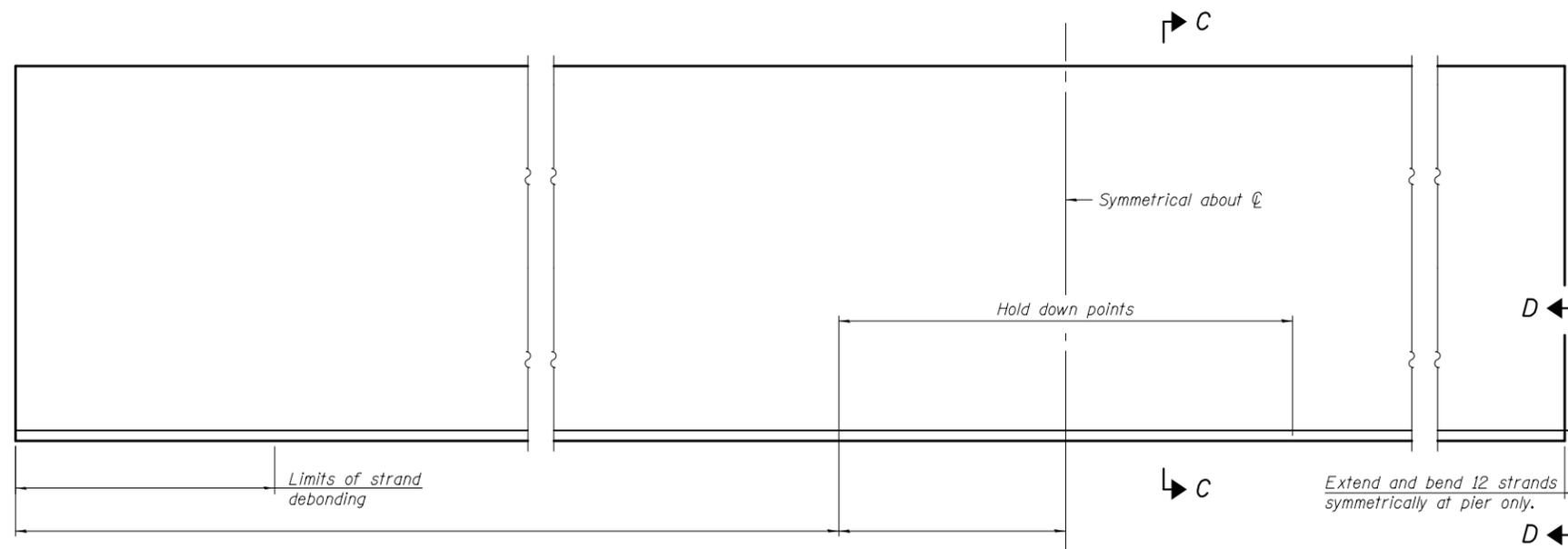
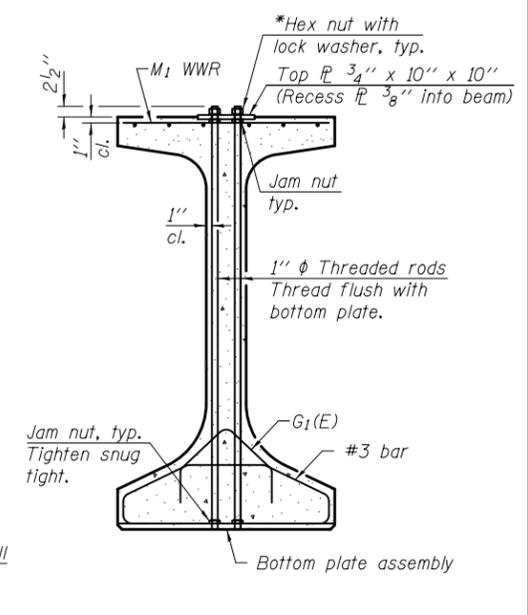
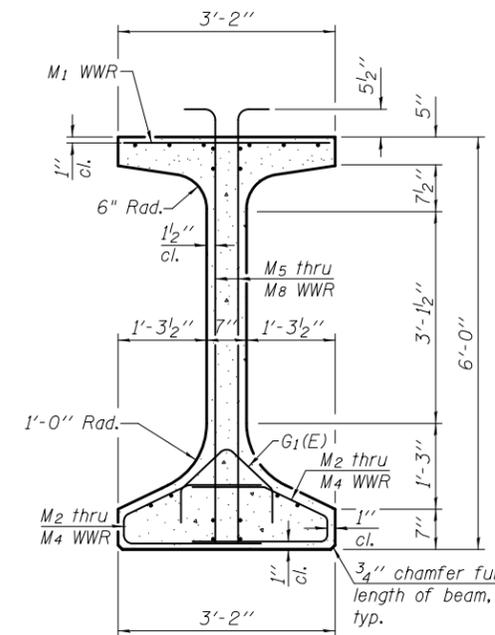
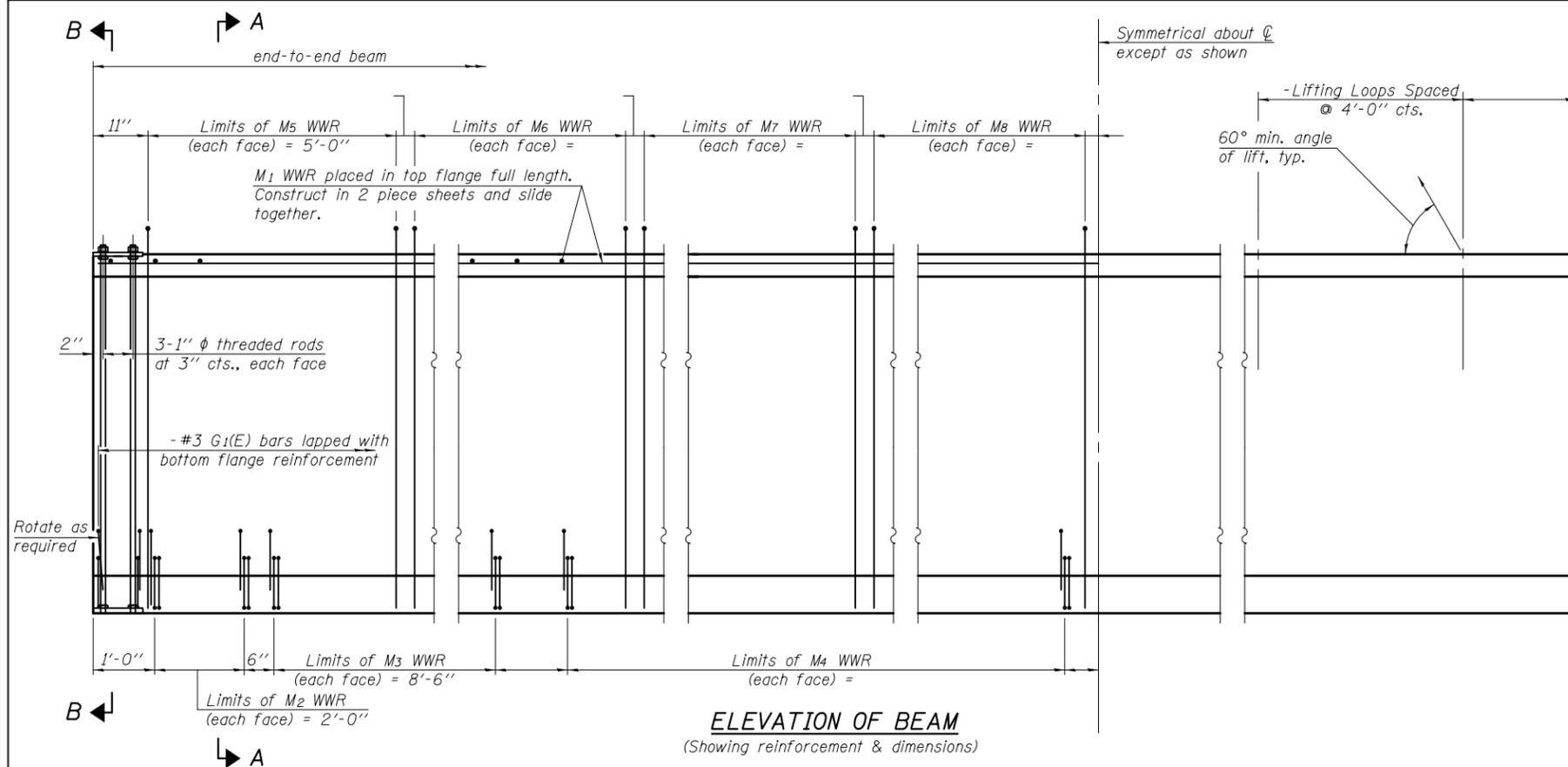
BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL72N	Ft.	

IL72-2438D

10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL72N BEAM DETAILS STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED -	REVISD -			CONTRACT NO.					
		DRAWN -	REVISD -			ILLINOIS FED. AID PROJECT					
		PLOT SCALE =	REVISD -								
		PLOT DATE =	CHECKED -								



Note:
See sheet of for additional details and Bill of Material.

IL72-3838

10-7-2016

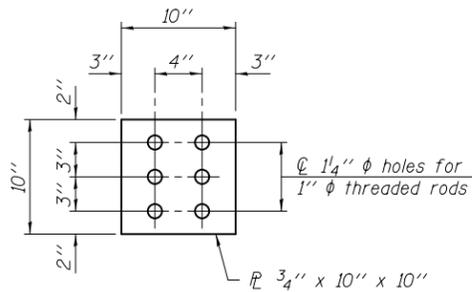
FILE NAME =	USER NAME =	DESIGNED -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

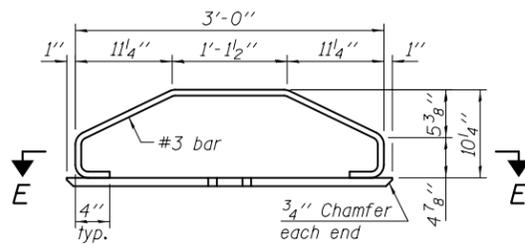
IL72 BEAM
STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				

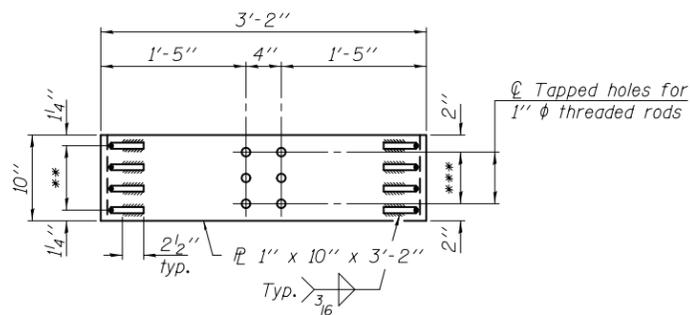
ILLINOIS FED. AID PROJECT



PLAN - TOP PLATE

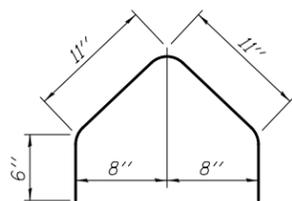


ELEVATION - BOTTOM PLATE ASSEMBLY

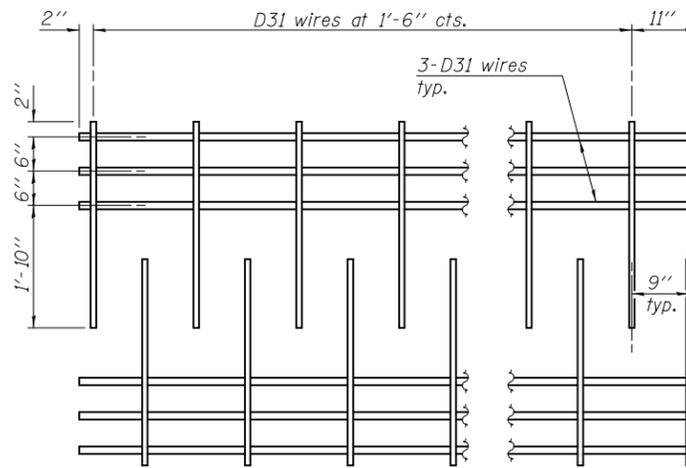


SECTION E-E

** 3 Spaces at 2 1/2" = 7 1/2"
 *** 2 Spaces at 3" = 6"

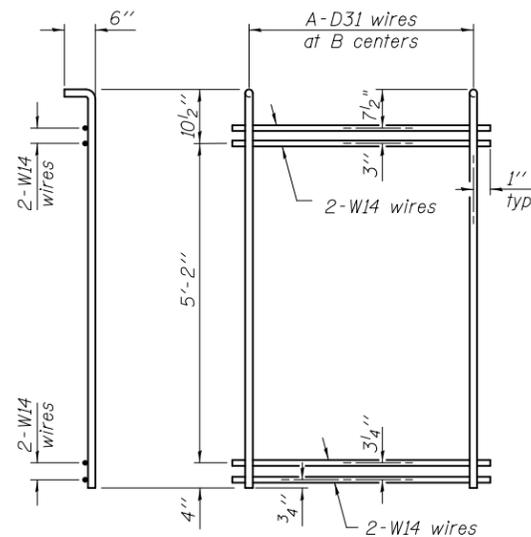


BAR G1(E)



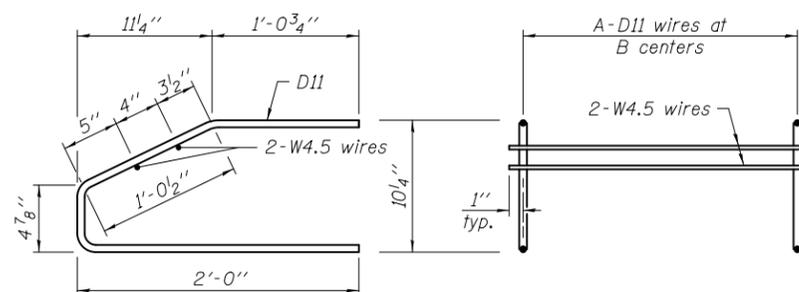
M1 WWR DETAIL

When multiple sheets of M1 WWR are required along the beam length, #5(E) bars (5'-0" long) shall be used to splice the longitudinal D31 wires together (Min. Lap 2'-2").



M5 THRU M8 WWR DETAIL

(See Table of Dimensions)



M2 THRU M4 WWR DETAIL

(See Table of Dimensions)

TABLE OF DIMENSIONS

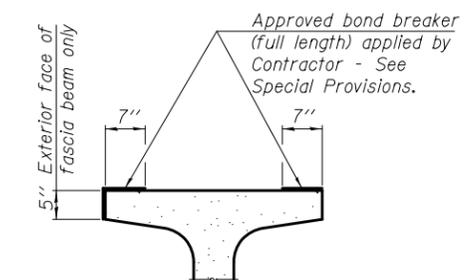
SPAN -

WWR	A	B
M2	9	3"
M3	18	6"
M4	-	1'-6"
M5	21	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

SPAN -

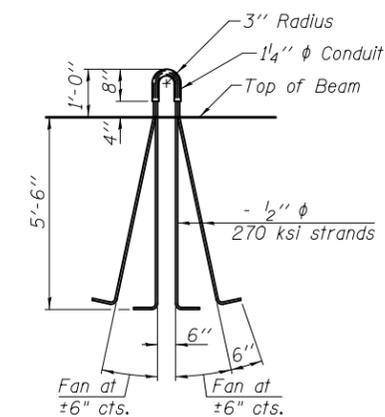
WWR	A	B
M2	9	3"
M3	18	6"
M4	-	1'-6"
M5	21	3"
M6	-	6"
M7	-	1'-0"
M8	-	2'-0"

NOTES
 Inserts for 3/4" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter for beam strands shall be 0.6" and the nominal cross-sectional area shall be 0.217 sq. in. The nominal diameter for lifting loops shall be 1/2" and the nominal cross sectional area shall be 0.153 sq. in. The beams shall have a final concrete compressive strength, f'c, of 8500 psi and a release concrete compressive strength, f'ci, of 7000 psi. A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling. Bend the extended strands inward on the fascia beams to maintain 1/2" clearance inside the pier diaphragm. The top and bottom plates shall be AASHTO M270 Grade 50. The top plates and bottom plate assemblies shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55. Beams shall not be released from the fabricator until they have attained 45 days of age or older. Welded Wire Reinforcement (WWR) shall conform to ASTM A884 with a Class A, Type 1 epoxy coating.



SECTION THRU TOP FLANGE

(Showing limits of bond breaker)



LIFTING LOOP DETAIL

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Beams, IL72	Ft.	

IL72-3838D

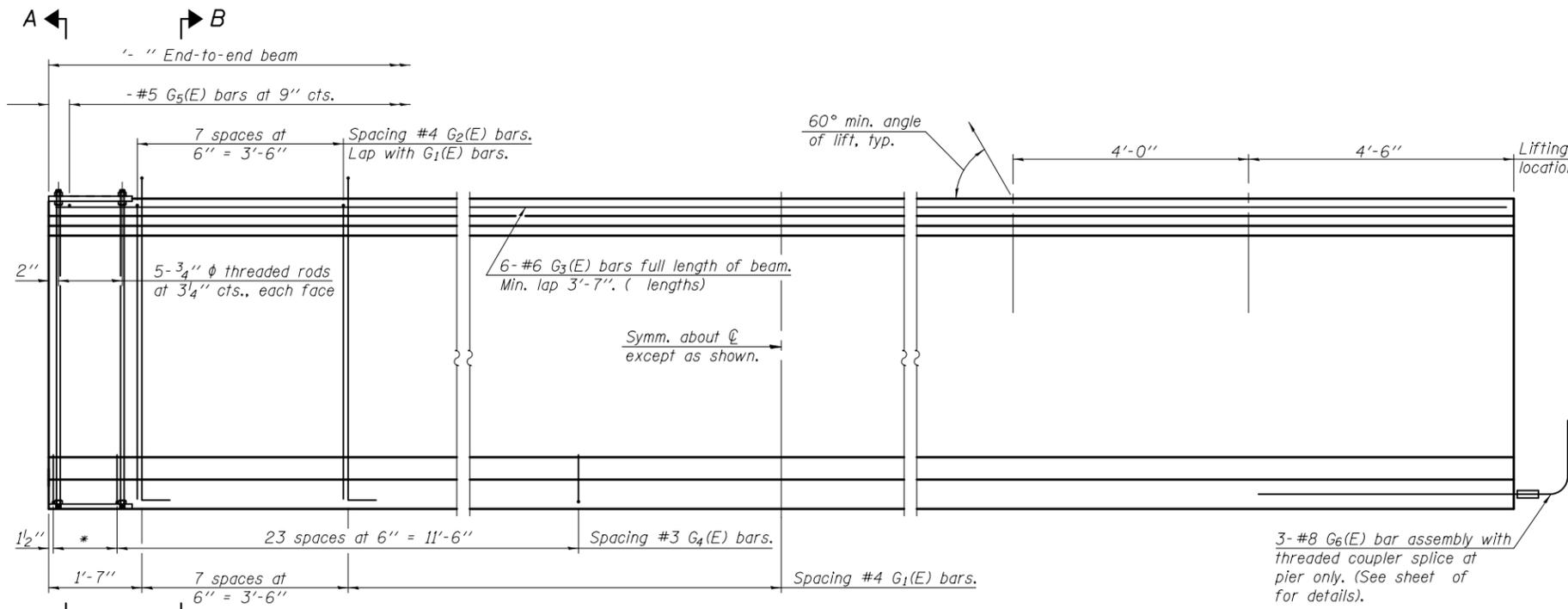
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD -
		CHECKED -	REVISD -
		DRAWN -	REVISD -
		CHECKED -	REVISD -

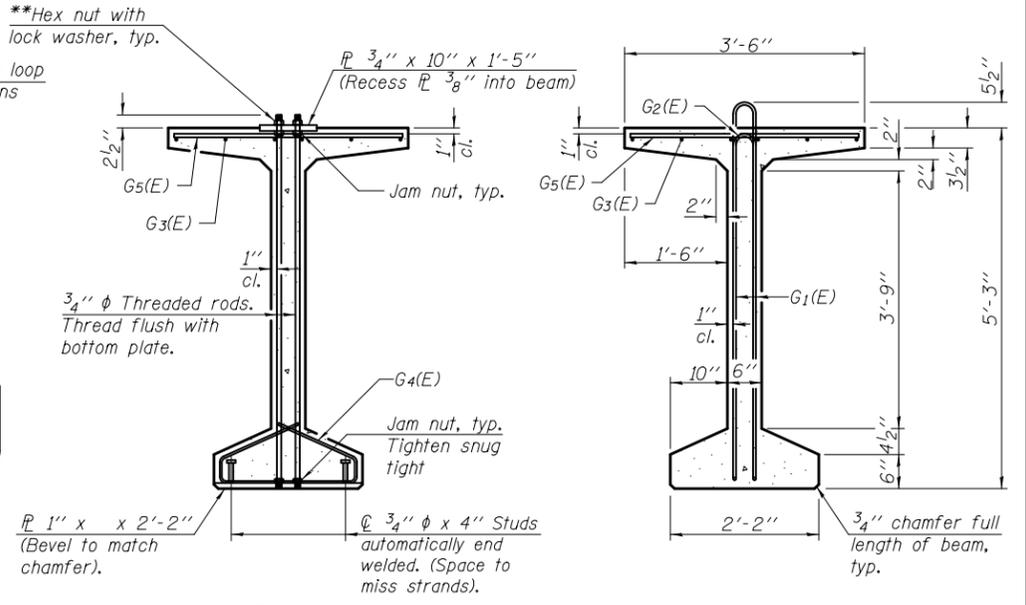
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL72 BEAM DETAILS
 STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



ELEVATION OF BEAM
(Showing reinforcement & dimensions)



SECTION A-A

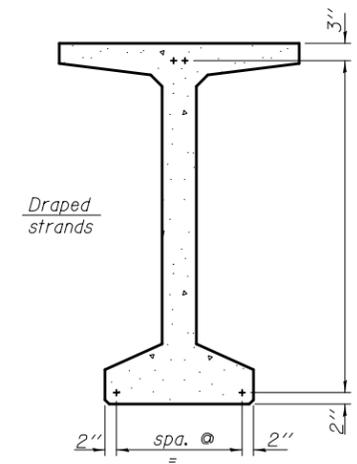
**Only tighten sufficiently to compress lock washers

SECTION B-B

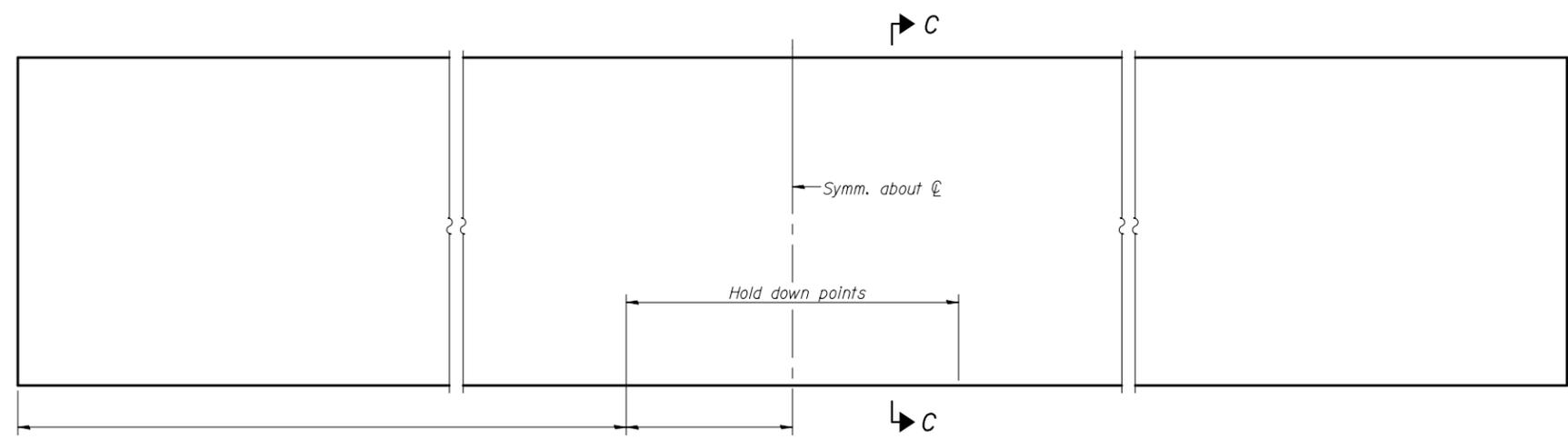
BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
G ₁ (E)		#4	12'-1"	∩L
G ₂ (E)		#4	10'-2"	∩
G ₃ (E)		#6		∩
G ₄ (E)		#3	4'-11"	∩
G ₅ (E)		#5	3'-4"	∩
G ₆ (E)		#8	6'-6"	∩

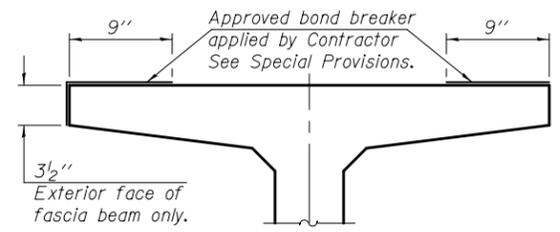
Notes:
See sheet of for additional details and Bill of Material.



SECTION C-C
(-1/2" ϕ 270 ksi strands)



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION THRU TOP FLANGE
(Showing limits of bond breaker)

PBT-4-63

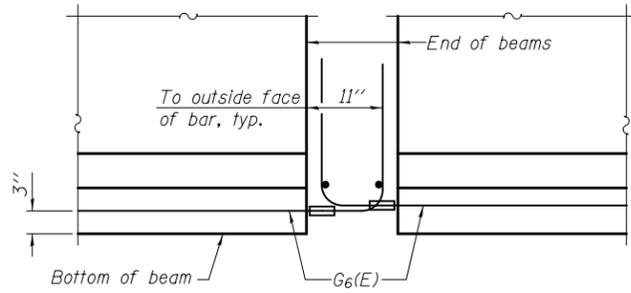
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -

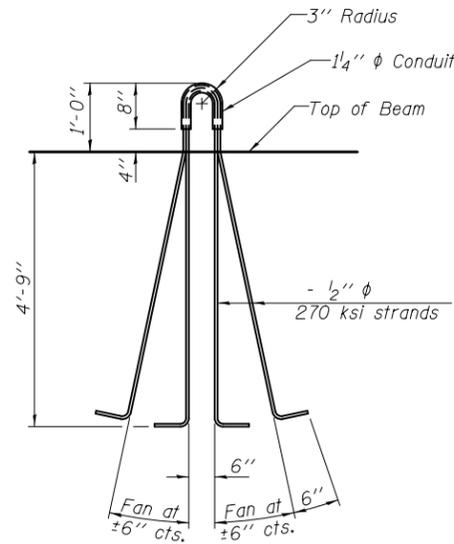
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

63" PPC BULB T-BEAM
STRUCTURE NO.

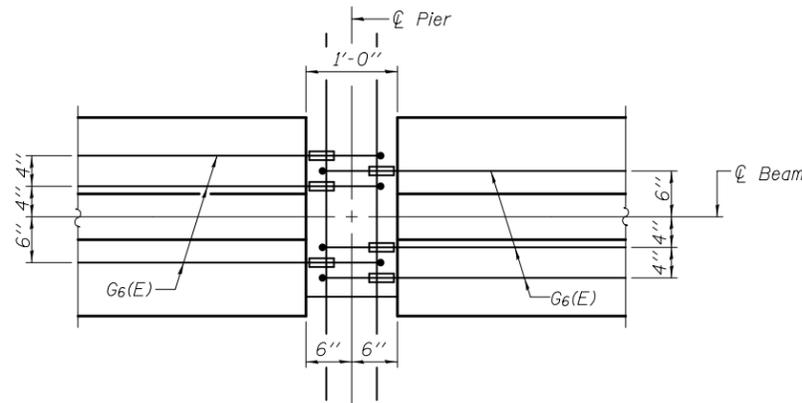
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



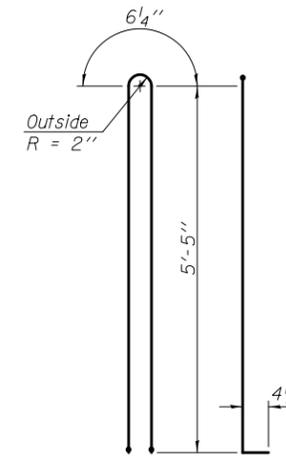
ELEVATION OF BEAM AT PIER



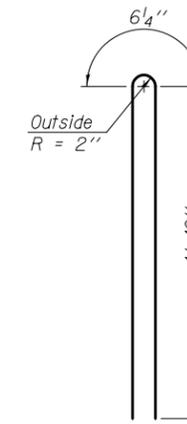
LIFTING LOOP DETAIL



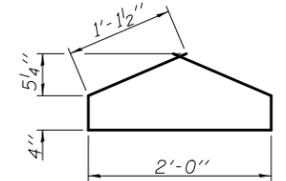
PLAN OF BEAM AT PIER



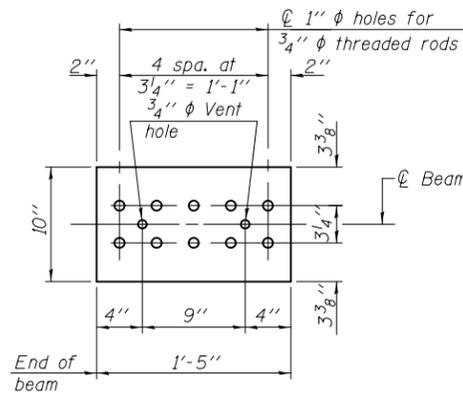
BAR G1(E)



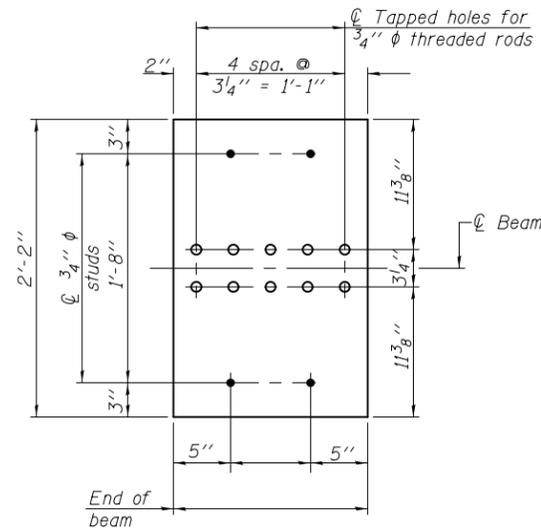
BAR G2(E)



BAR G4(E)

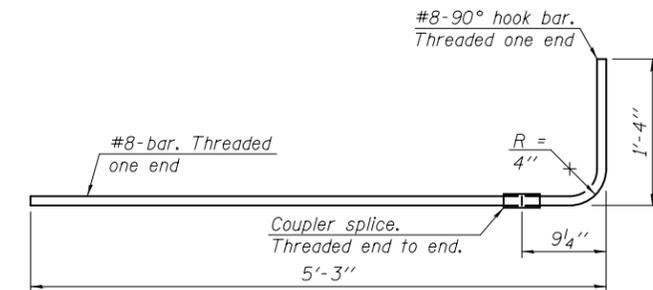


TOP PLATE



BOTTOM PLATE

See bearing details for pintle hole locations when required.



G6(E) BAR ASSEMBLY

NOTES

Inserts for 3/4" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, $f'c$, of psi and a release concrete compressive strength, $f'ci$, of psi.

A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling.

Tilt $G_6(E)$ bars when necessary to maintain 1 1/2" clearance.

The top and bottom plates shall be AASHTO M270 Grade 50. The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55. The $G_6(E)$ bar assembly shall develop, in tension, at least 125 percent of the yield strength of a grade 60 reinforcement bar times the nominal cross-sectional area of a #8 bar. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.

Beams shall not be released from the fabricator until they have attained 45 days of age or older.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 63"	Ft.	

PBT-4-63D

11-22-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISIONS -
		CHECKED -	REVISIONS -
		DRAWN -	REVISIONS -
		CHECKED -	REVISIONS -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**63" PPC BULB T-BEAM DETAILS
STRUCTURE NO.**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

NOTES

Inserts for $\frac{3}{4}$ " ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, $f'c$, of _____ psi and a release concrete compressive strength, $f'ci$, of _____ psi.

A minimum $2\frac{1}{2}$ " ϕ lifting pin shall be used to engage the lifting loops during handling.

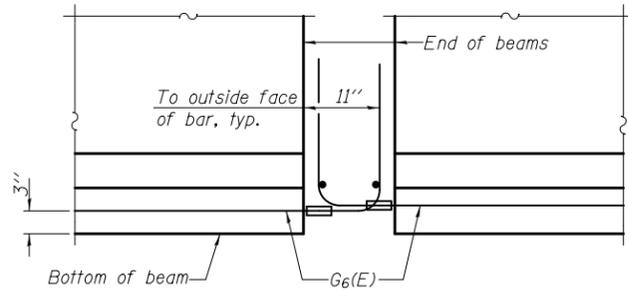
Tilt $G_6(E)$ bars when necessary to maintain $1\frac{1}{2}$ " clearance.

The top and bottom plates shall be AASHTO M270 Grade 50. The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

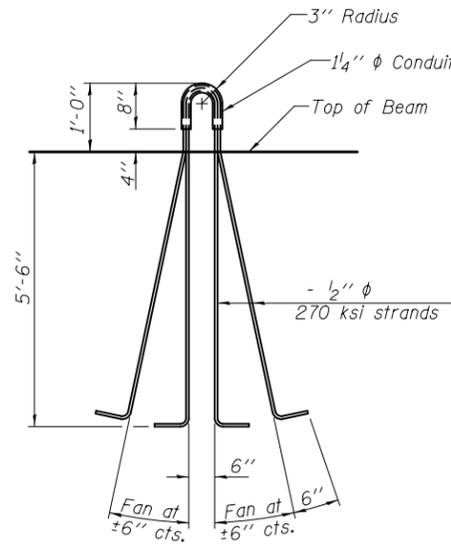
Threaded rods shall be ASTM F 1554 Grade 55.

The $G_6(E)$ bar assembly shall develop, in tension, at least 125 percent of the yield strength of a grade 60 reinforcement bar times the nominal cross-sectional area of a #8 bar. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.

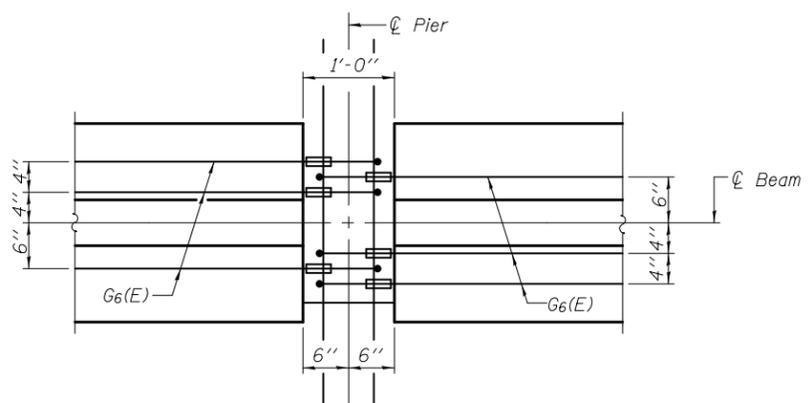
Beams shall not be released from the fabricator until they have attained 45 days of age or older.



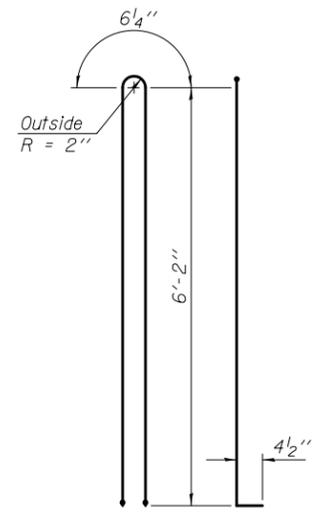
ELEVATION OF BEAM AT PIER



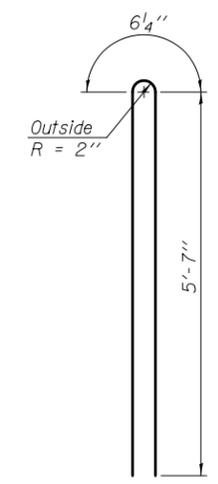
LIFTING LOOP DETAIL



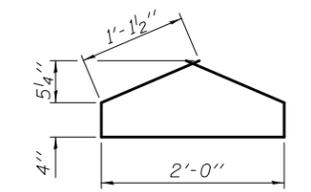
PLAN OF BEAM AT PIER



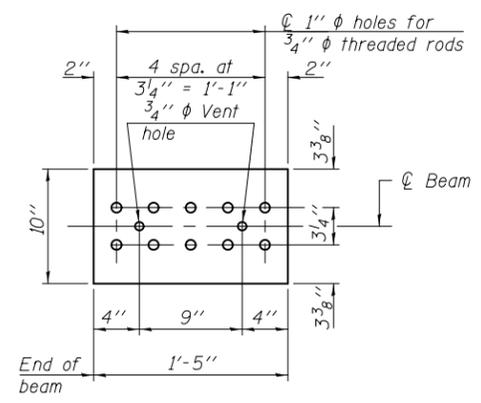
BAR G1(E)



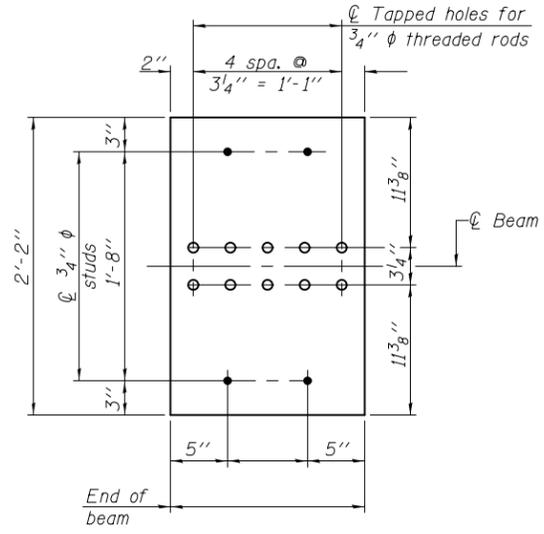
BAR G2(E)



BAR G4(E)

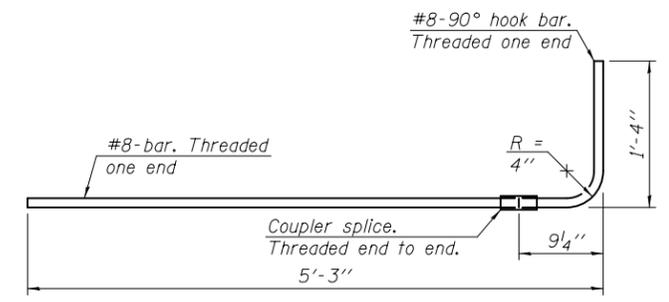


TOP PLATE



BOTTOM PLATE

See bearing details for pintle hole locations when required.



G6(E) BAR ASSEMBLY

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 72"	Ft.	

PBT-4-72D

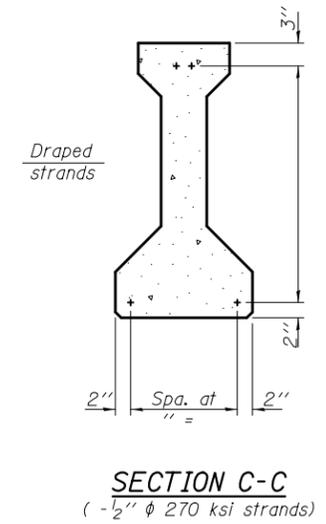
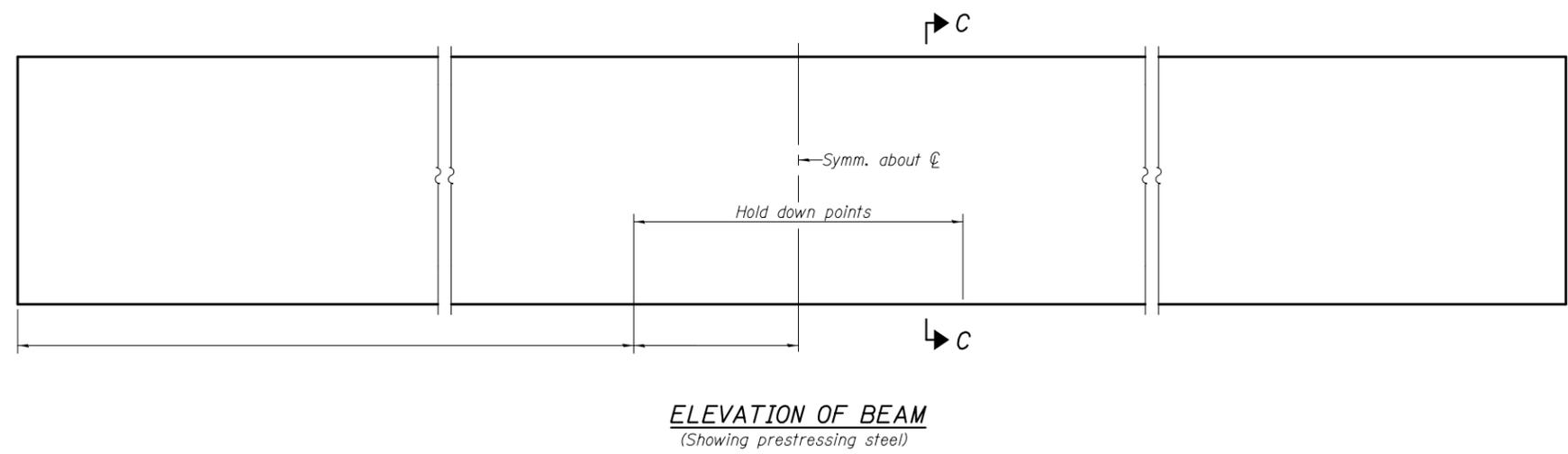
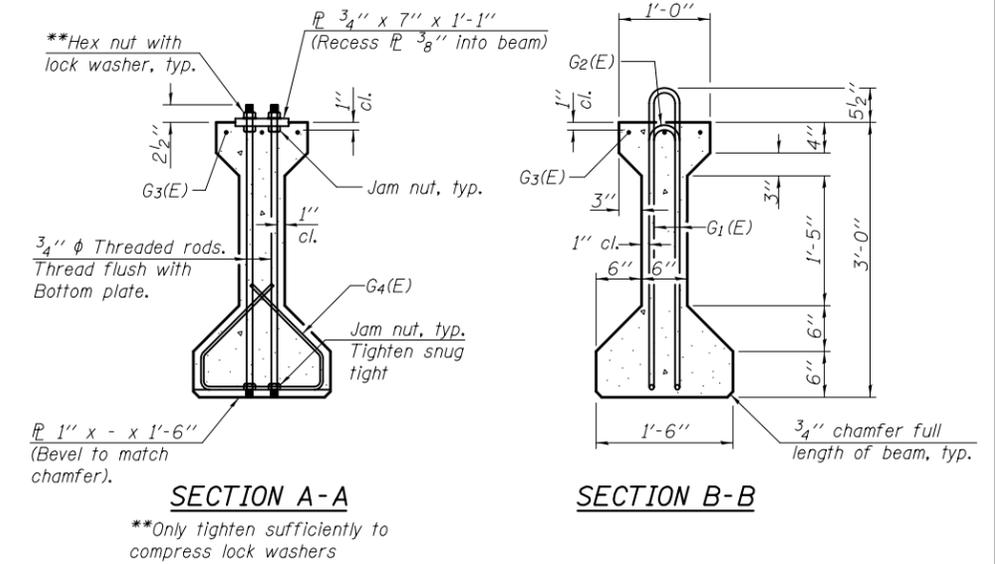
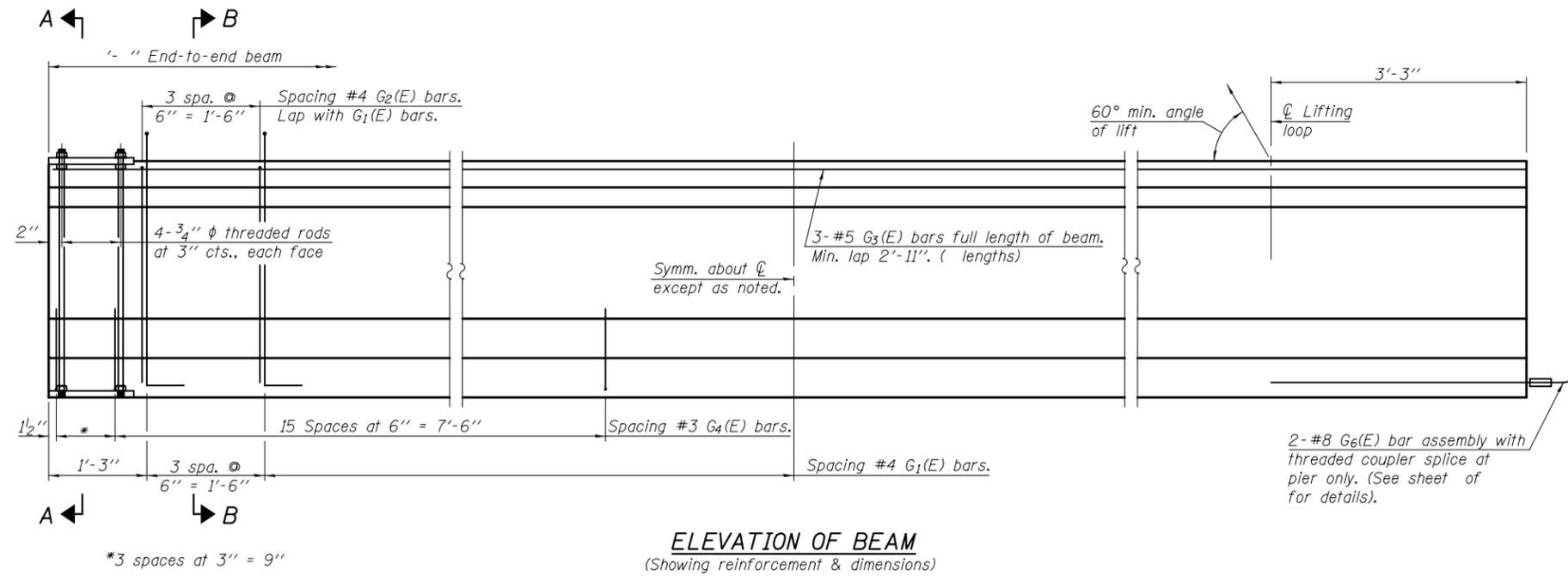
11-22-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISIONS -
		CHECKED -	REVISIONS -
		DRAWN -	REVISIONS -
		CHECKED -	REVISIONS -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**72" PPC BULB T-BEAM DETAILS
STRUCTURE NO.**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
G ₁ (E)		#4	7'-7"	
G ₂ (E)		#4	5'-8"	
G ₃ (E)		#5		
G ₄ (E)		#3	4'-1"	
G ₆ (E)		#8	6'-6"	

Notes:
See sheet of for additional details and Bill of Material.

PI-4-36

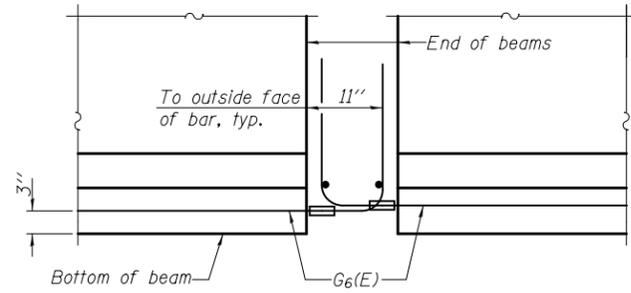
10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

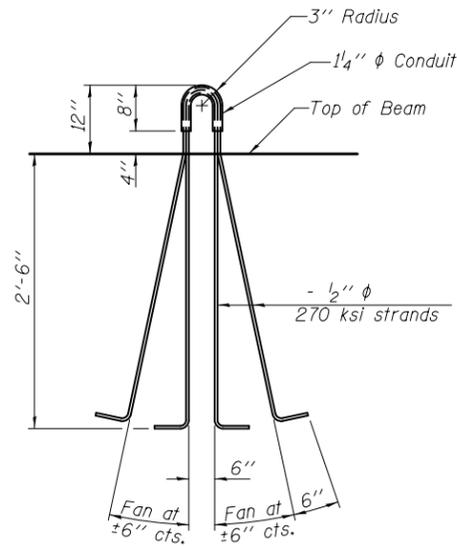
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

36" PPC I-BEAM
STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

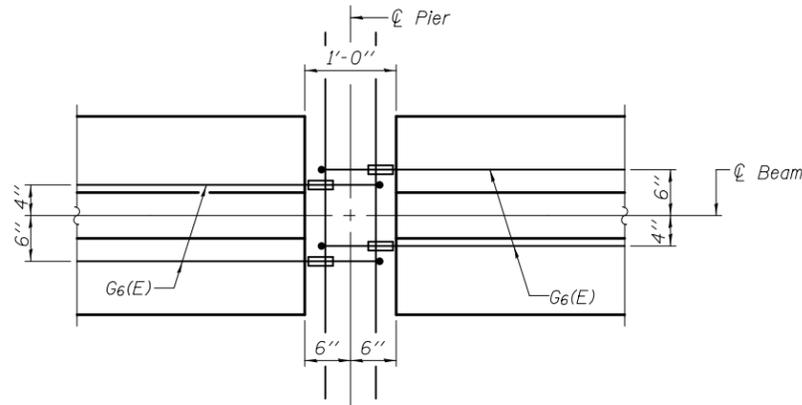


ELEVATION OF BEAM AT PIER

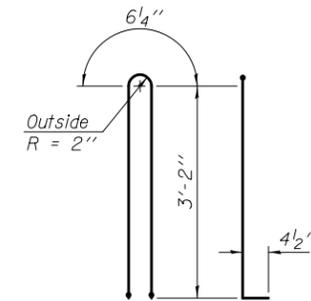


LIFTING LOOP DETAIL

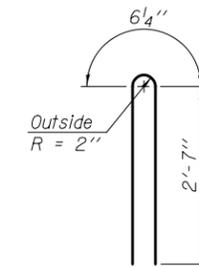
NOTES
 Inserts for 3/4" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
 The beams shall have a final concrete compressive strength, $f'c$, of _____ psi and a release concrete compressive strength, $f'ci$, of _____ psi.
 A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling. Tilt $G_6(E)$ bars when necessary to maintain 1 1/2" clearance.
 The top and bottom plates shall be AASHTO M270 Grade 50.
 The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.
 Threaded rods shall be ASTM F 1554 Grade 55.
 The $G_6(E)$ bar assembly shall develop, in tension, at least 125 percent of the yield strength of a grade 60 reinforcement bar times the nominal cross-sectional area of a #8 bar. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.
 Beams shall not be released from the fabricator until they have attained 45 days of age or older.



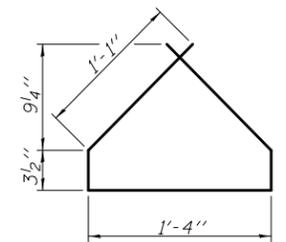
PLAN OF BEAM AT PIER



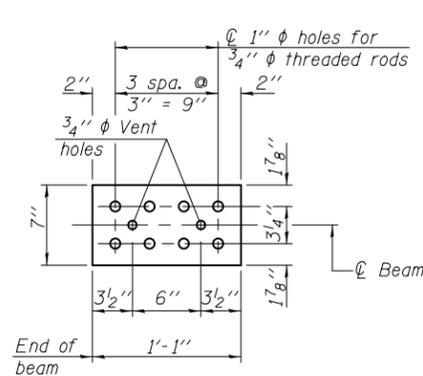
BAR $G_1(E)$



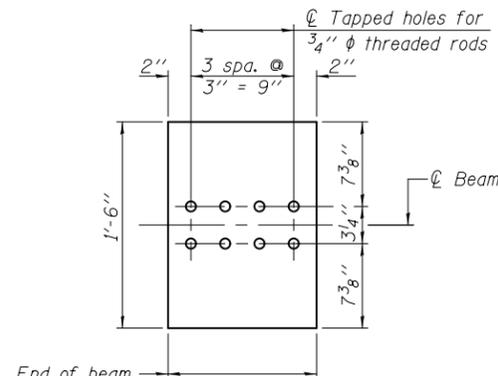
BAR $G_2(E)$



BAR $G_4(E)$

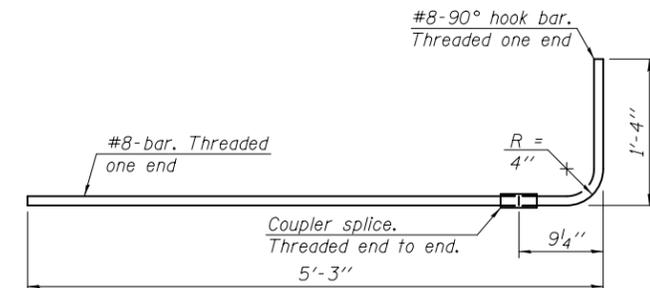


TOP PLATE



BOTTOM PLATE

See bearing details for pintle hole locations when required.



$G_6(E)$ BAR ASSEMBLY

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	Ft.	

PI-4-36D

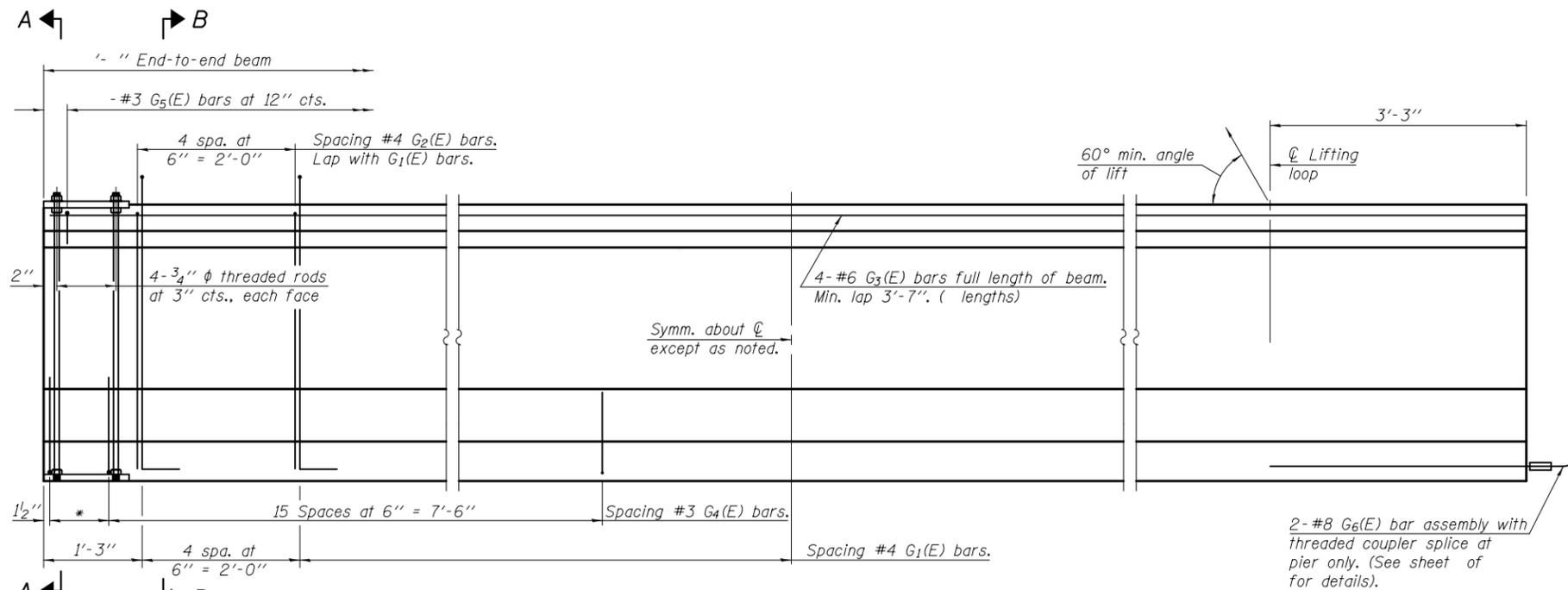
11-22-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISIONS -
		CHECKED -	REVISIONS -
		DRAWN -	REVISIONS -
		CHECKED -	REVISIONS -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

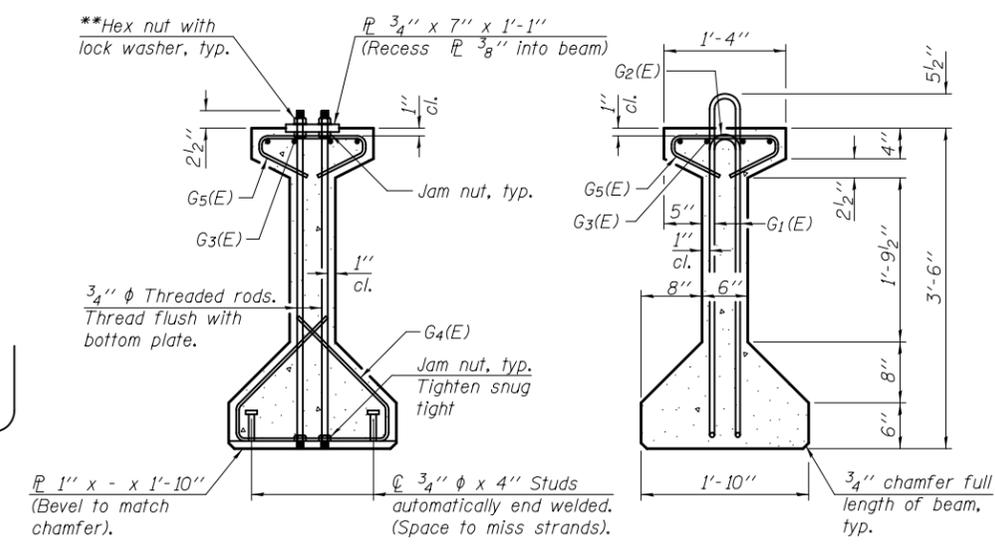
**36" PPC I-BEAM DETAILS
STRUCTURE NO.**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



ELEVATION OF BEAM
(Showing reinforcement & dimensions)

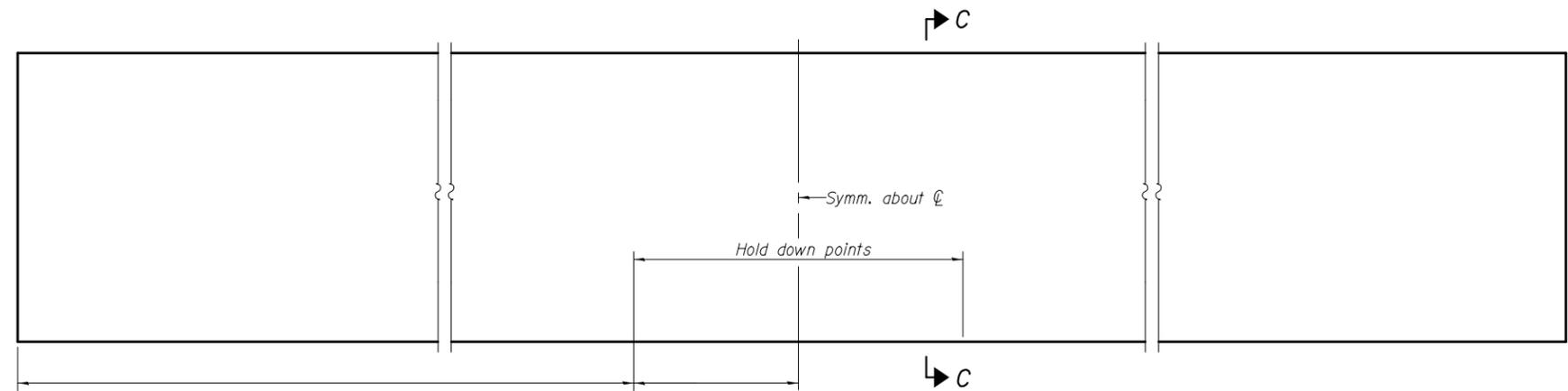
*3 spaces at 3" = 9"



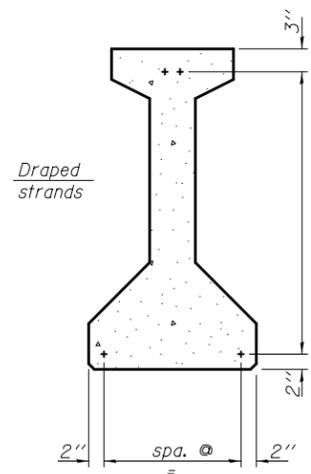
SECTION A-A

**Only tighten sufficiently to compress lock washers

SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C
(- 1/2 inch diameter 270 ksi strands)

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
G ₁ (E)		#4	8'-7"	∩L
G ₂ (E)		#4	6'-8"	∩
G ₃ (E)		#6		
G ₄ (E)		#3	4'-11"	∩
G ₅ (E)		#3	2'-6"	∩
G ₆ (E)		#8	6'-6"	U

Notes:
See sheet of for additional details and Bill of Material.

PI-4-42

10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISIONS -
		CHECKED -	REVISIONS -
		DRAWN -	REVISIONS -
		CHECKED -	REVISIONS -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

42" PPC I-BEAM
STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				

ILLINOIS FED. AID PROJECT

NOTES

Inserts for $\frac{3}{4}$ " ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, $f'c$, of psi and a release concrete compressive strength, $f'ci$, of psi.

A minimum $2\frac{1}{2}$ " ϕ lifting pin shall be used to engage the lifting loops during handling. Tilt $G_6(E)$ bars when necessary to maintain $1\frac{1}{2}$ " clearance.

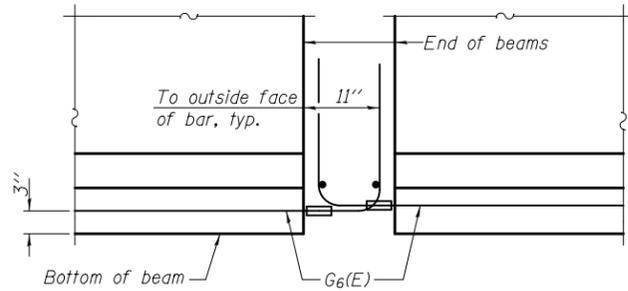
The top and bottom plates shall be AASHTO M270 Grade 50.

The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

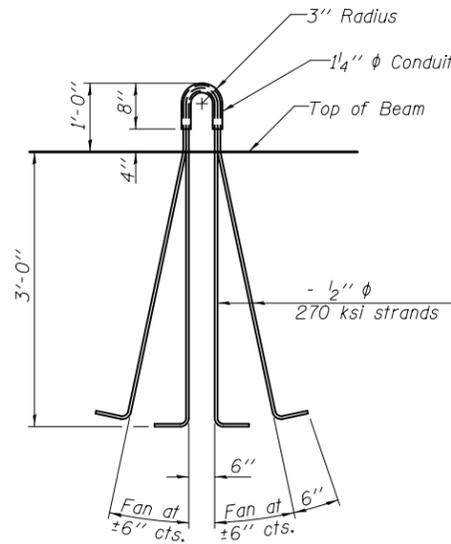
Threaded rods shall be ASTM F 1554 Grade 55.

The $G_6(E)$ bar assembly shall develop, in tension, at least 125 percent of the yield strength of a grade 60 reinforcement bar times the nominal cross-sectional area of a #8 bar. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.

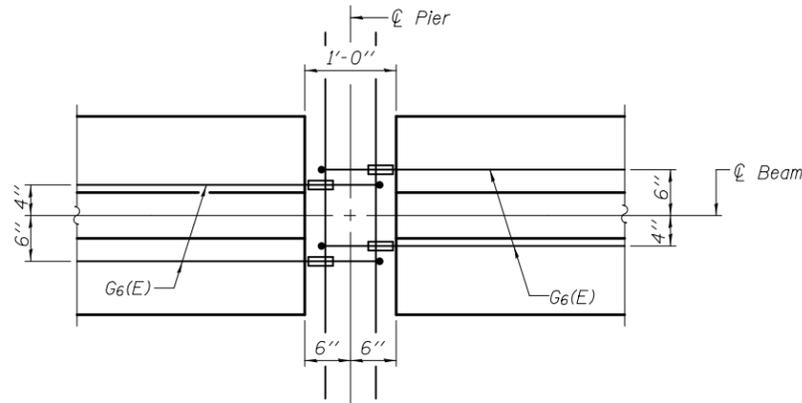
Beams shall not be released from the fabricator until they have attained 45 days of age or older.



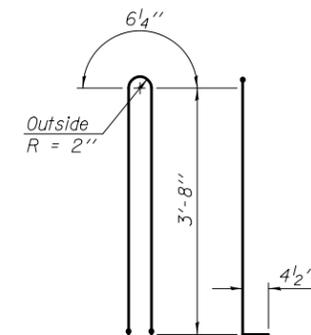
ELEVATION OF BEAM AT PIER



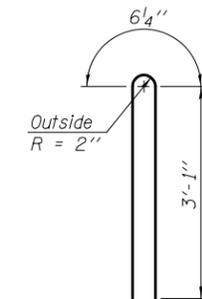
LIFTING LOOP DETAIL



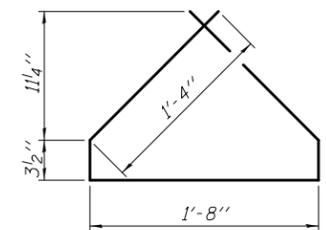
PLAN OF BEAM AT PIER



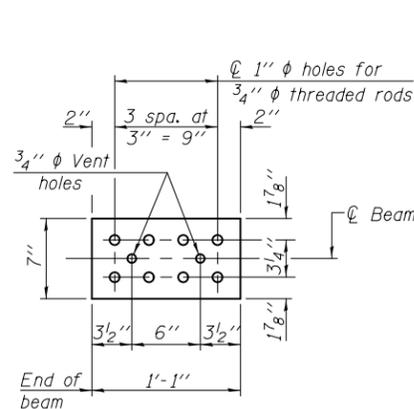
BAR G1(E)



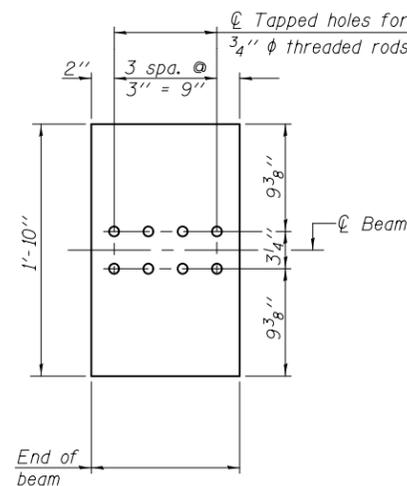
BAR G2(E)



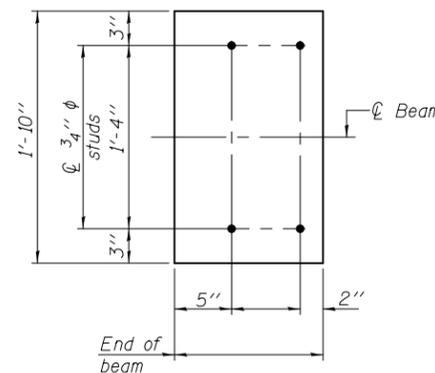
BAR G4(E)



TOP PLATE

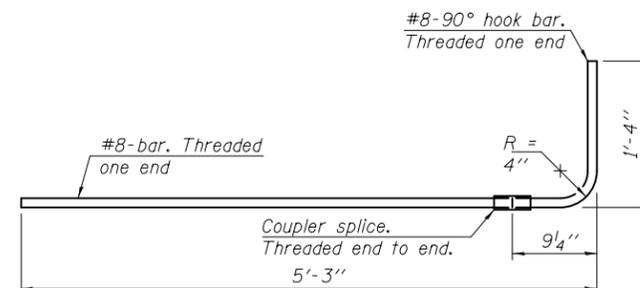


BOTTOM PLATE (Showing threaded rods)

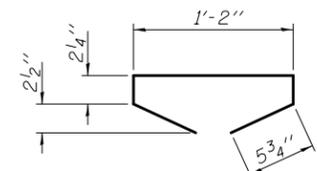


BOTTOM PLATE (Showing studs)

See bearing details for pintle hole locations when required.



G6(E) BAR ASSEMBLY



BAR G5(E)

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42"	Ft.	

PI-4-42D

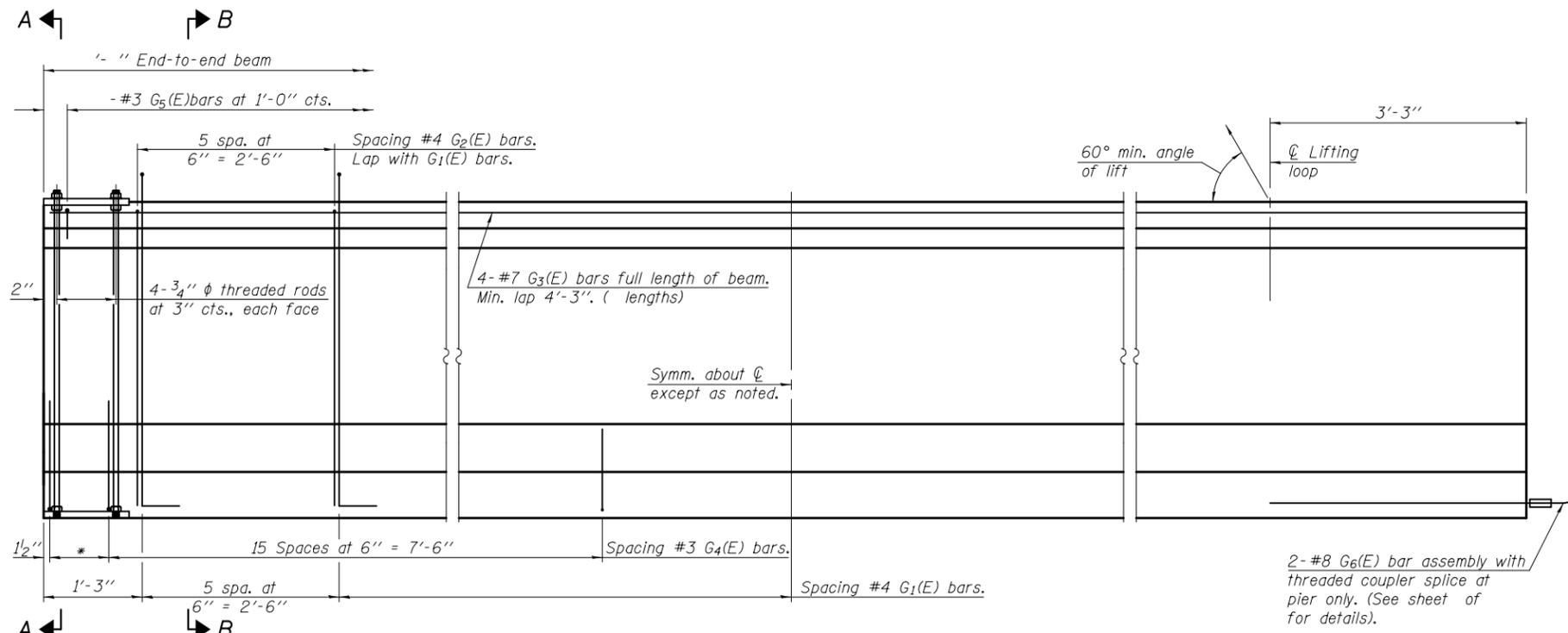
11-22-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

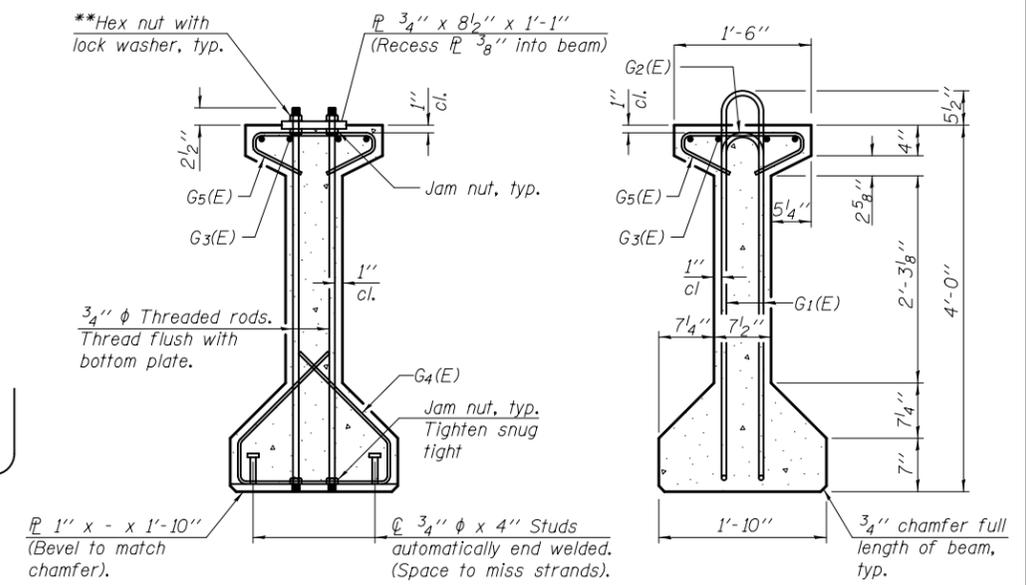
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**42" PPC I-BEAM DETAILS
STRUCTURE NO.**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



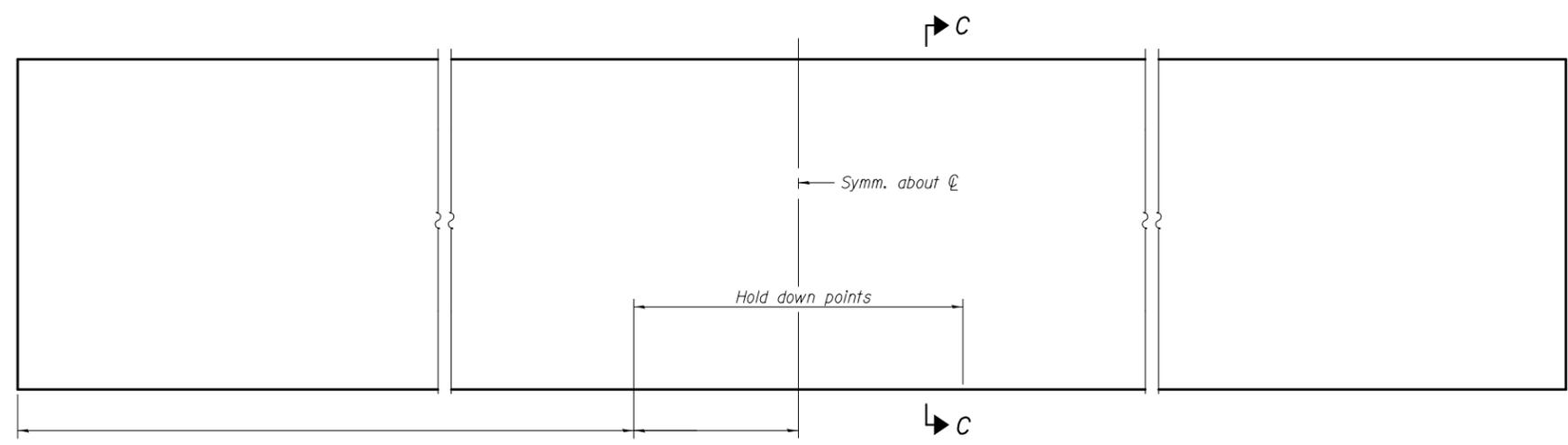
ELEVATION OF BEAM
(Showing reinforcement & dimensions)



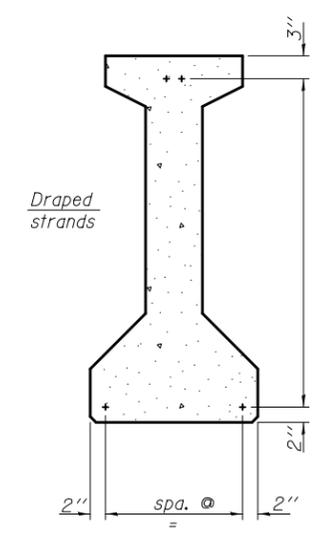
SECTION A-A
**Only tighten sufficiently to compress lock washers

SECTION B-B

*3 spaces at 3" = 9"



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C
(-1/2" φ 270 ksi strands)

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
G ₁ (E)		#4	9'-8"	⊏
G ₂ (E)		#4	7'-11"	⊏
G ₃ (E)		#7		⊏
G ₄ (E)		#3	5'-3"	⊏
G ₅ (E)		#3	2'-9"	⊏
G ₆ (E)		#8	6'-6"	⊏

Notes:
See sheet of for additional details and Bill of Material.

PI-4-48

10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE =	DRAWN -	REVISED -
	PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

48" PPC I-BEAM
STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

NOTES

Inserts for $\frac{3}{4}$ " ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.

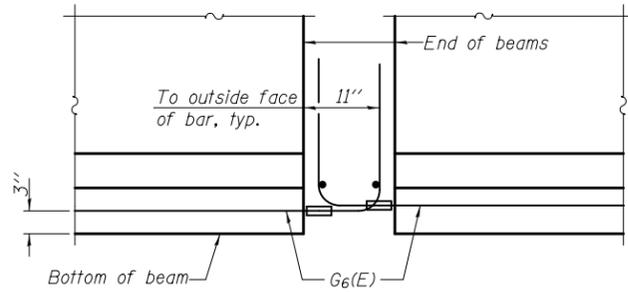
The beams shall have a final concrete compressive strength, f'_c , of _____ psi and a release concrete compressive strength, f'_{ci} , of _____ psi.

A minimum $2\frac{1}{2}$ " ϕ lifting pin shall be used to engage the lifting loops during handling. Tilt $G_6(E)$ bars when necessary to maintain $1\frac{1}{2}$ " clearance.

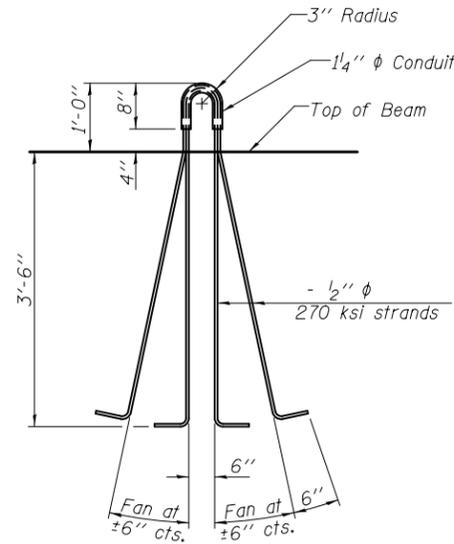
The top and bottom plates shall be AASHTO M270 Grade 50. The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55.

The $G_6(E)$ bar assembly shall develop, in tension, at least 125 percent of the yield strength of a grade 60 reinforcement bar times the nominal cross-sectional area of a #8 bar. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.

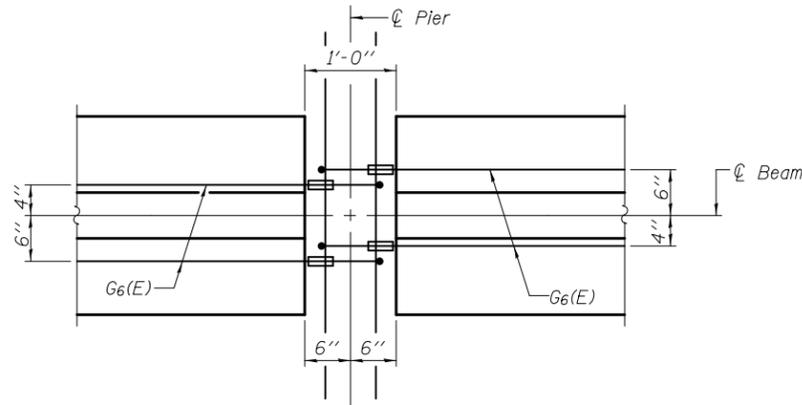
Beams shall not be released from the fabricator until they have attained 45 days of age or older.



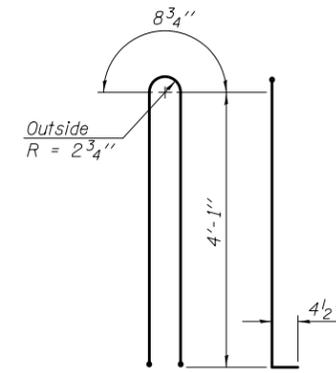
ELEVATION OF BEAM AT PIER



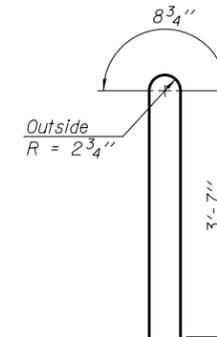
LIFTING LOOP DETAIL



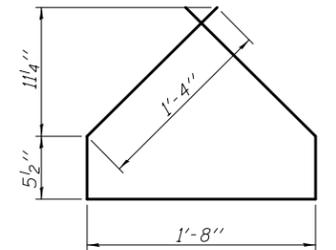
PLAN OF BEAM AT PIER



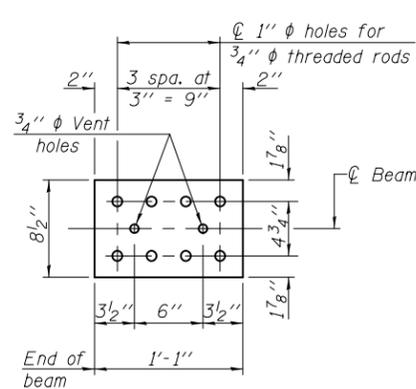
BAR G1(E)



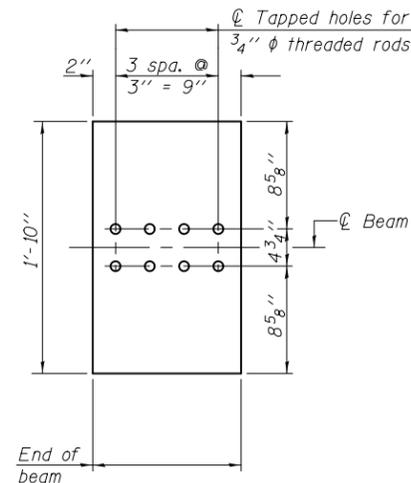
BAR G2(E)



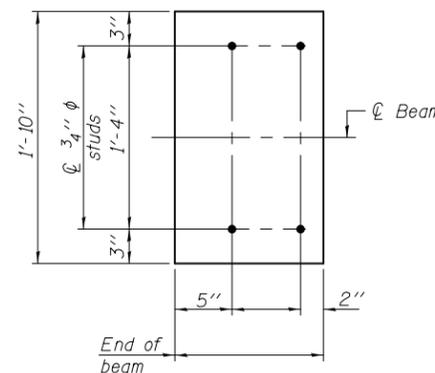
BAR G4(E)



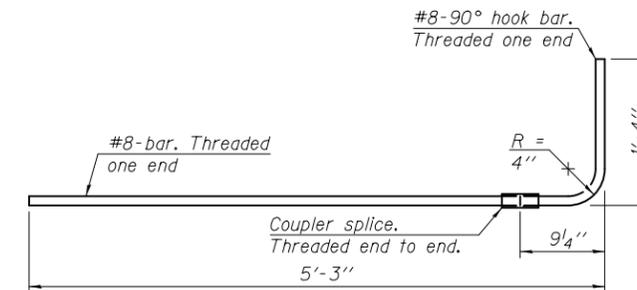
TOP PLATE



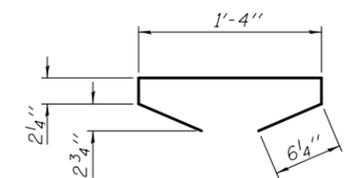
BOTTOM PLATE
(Showing threaded rods)



BOTTOM PLATE
(Showing studs)



G6(E) BAR ASSEMBLY



BAR G5(E)

See bearing details for pintle hole locations when required.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48"	Ft.	

PI-4-48D

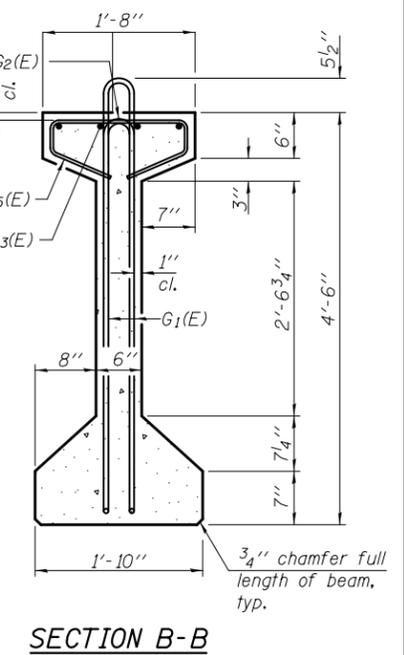
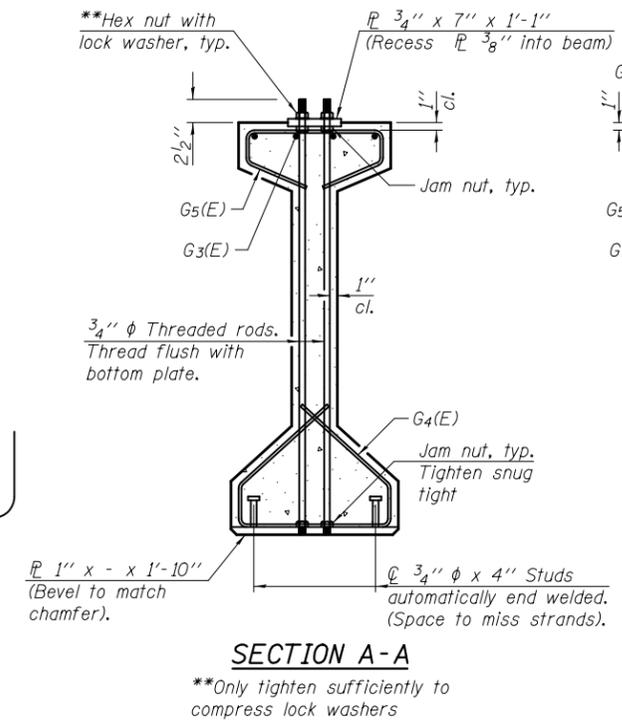
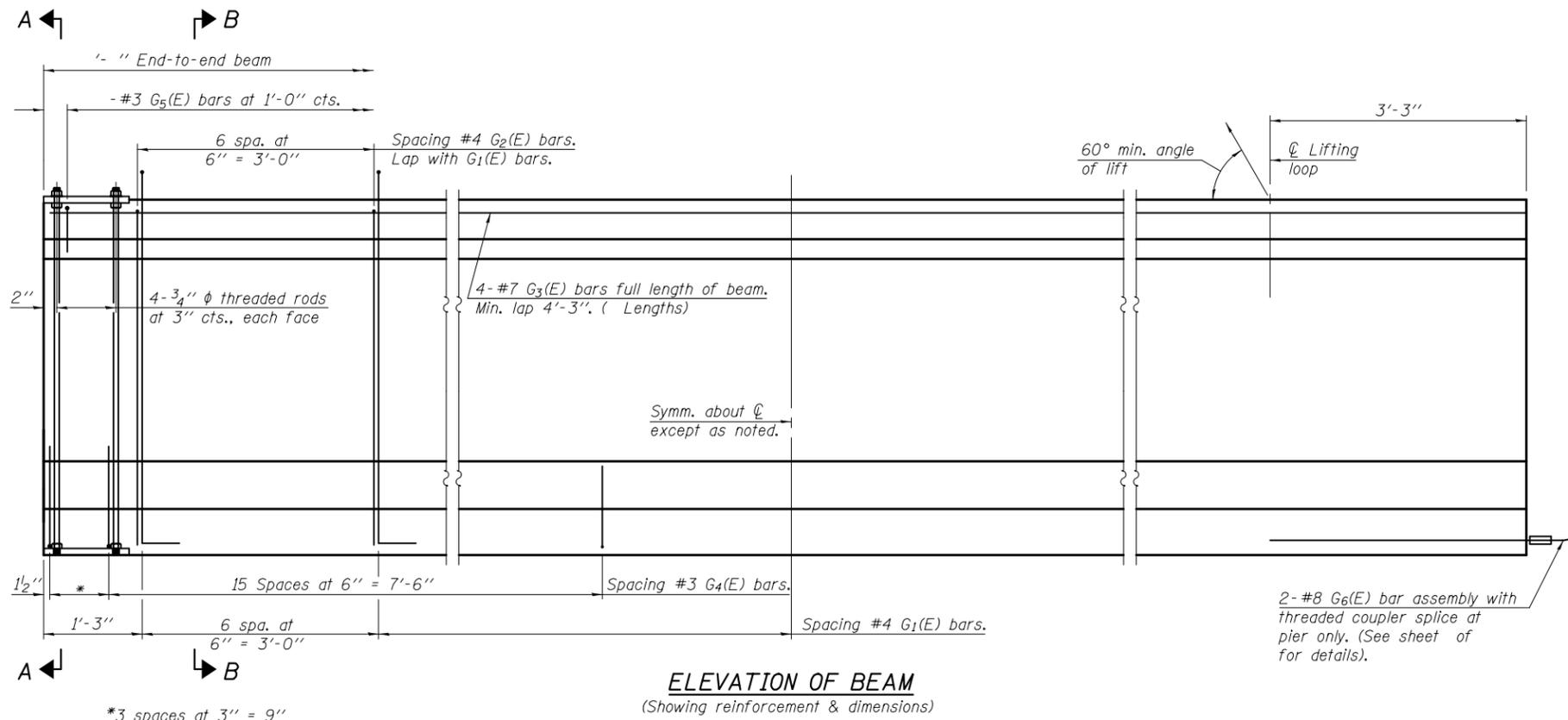
11-22-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD -
		CHECKED -	REVISD -
		DRAWN -	REVISD -
		CHECKED -	REVISD -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**48" PPC I-BEAM DETAILS
STRUCTURE NO.**

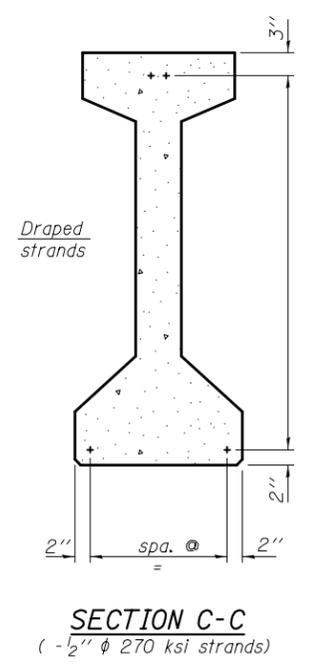
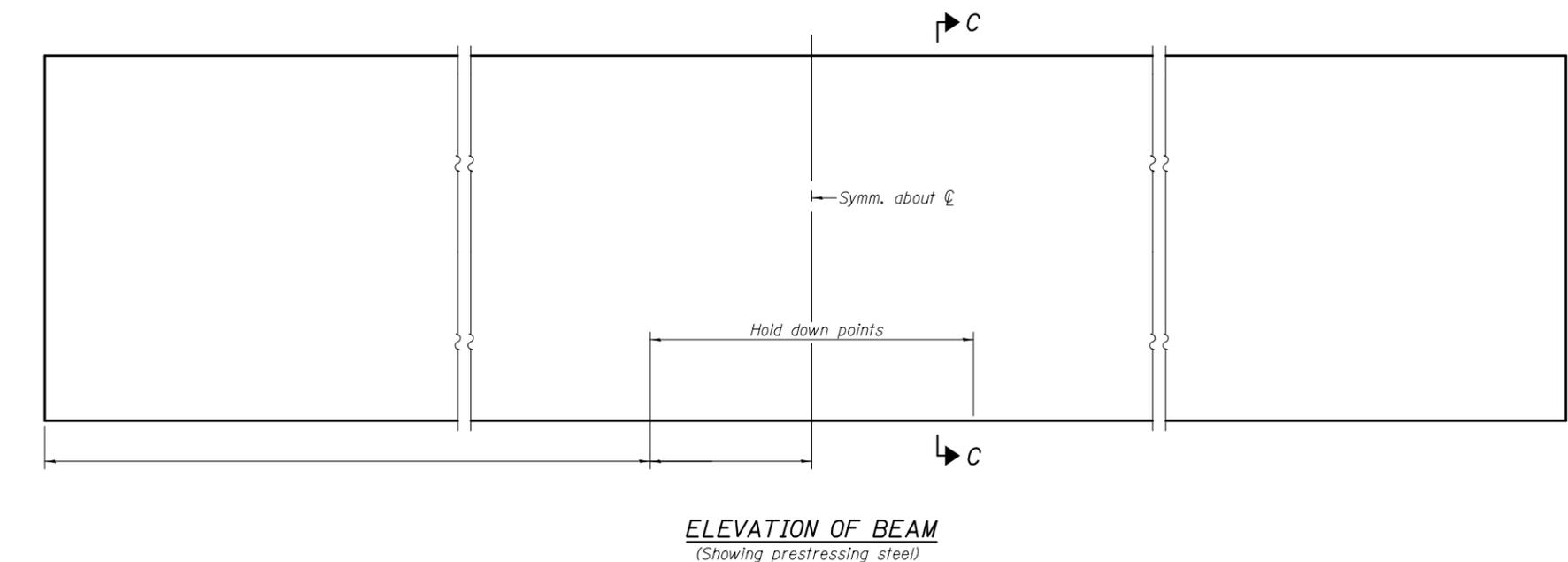
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
G ₁ (E)		#4	10'-7"	⊏
G ₂ (E)		#4	8'-8"	⊏
G ₃ (E)		#7		⊏
G ₄ (E)		#3	4'-11"	⊏
G ₅ (E)		#3	3'-5"	⊏
G ₆ (E)		#8	6'-6"	⊏

Notes:
See sheet of for additional details and Bill of Material.



PI-4-54

10-7-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD -
		CHECKED -	REVISD -
		DRAWN -	REVISD -
		CHECKED -	REVISD -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

54" PPC I-BEAM
STRUCTURE NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

NOTES

Inserts for $\frac{3}{4}$ " ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.

The beams shall have a final concrete compressive strength, f'_c , of psi and a release concrete compressive strength, f'_{ci} , of psi.

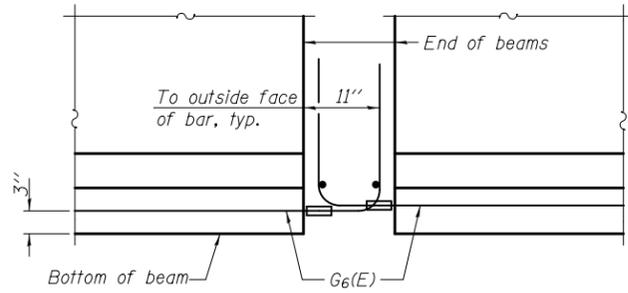
A minimum $2\frac{1}{2}$ " ϕ lifting pin shall be used to engage the lifting loops during handling.

Tilt $G_6(E)$ bars when necessary to maintain $1\frac{1}{2}$ " clearance.

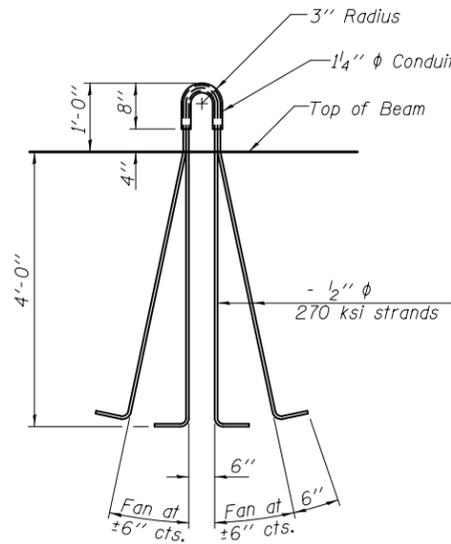
The top and bottom plates shall be AASHTO M270 Grade 50. The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232. Threaded rods shall be ASTM F 1554 Grade 55.

The $G_6(E)$ bar assembly shall develop, in tension, at least 125 percent of the yield strength of a grade 60 reinforcement bar times the nominal cross-sectional area of a #8 bar. The assembly shall allow completion of the splice without turning of the hook bar. The hook bar shall be threaded such that the entire coupler can be threaded onto the hook bar.

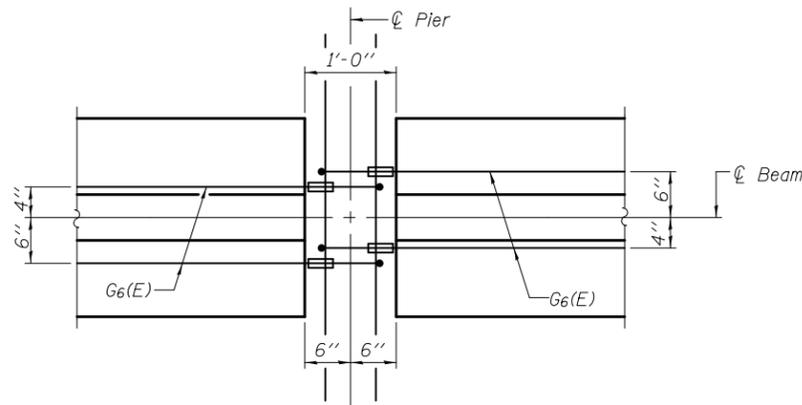
Beams shall not be released from the fabricator until they have attained 45 days of age or older.



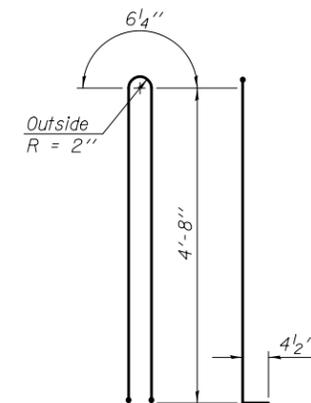
ELEVATION OF BEAM AT PIER



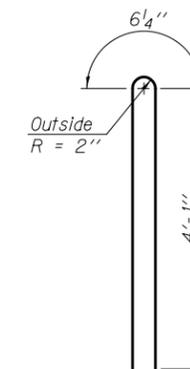
LIFTING LOOP DETAIL



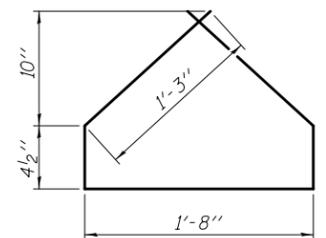
PLAN OF BEAM AT PIER



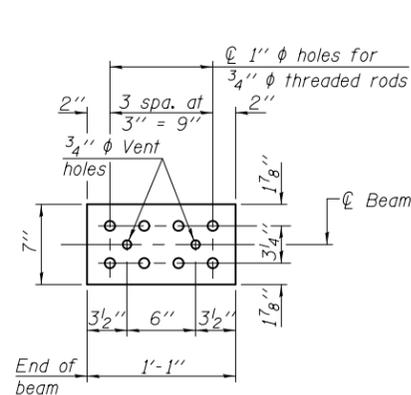
BAR G1(E)



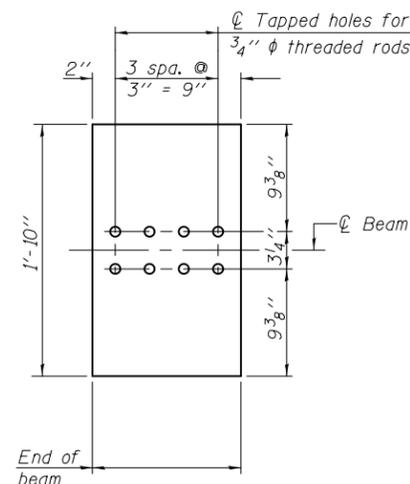
BAR G2(E)



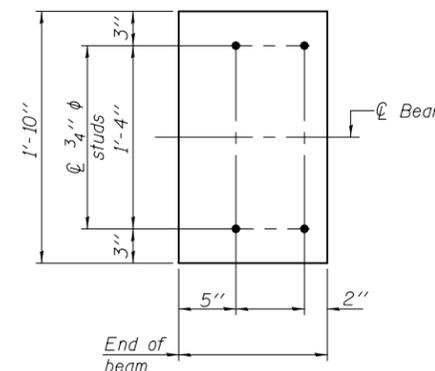
BAR G4(E)



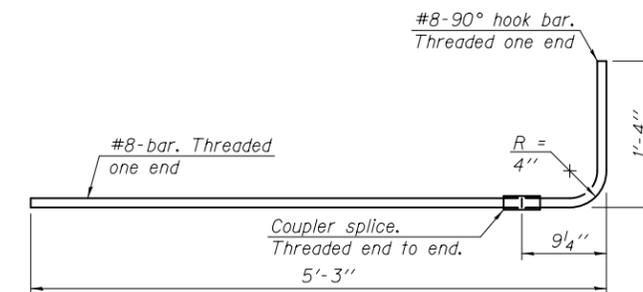
TOP PLATE



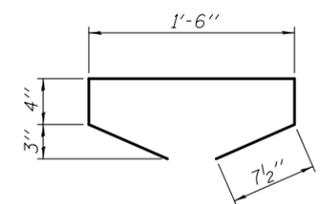
BOTTOM PLATE
(Showing threaded rods)



BOTTOM PLATE
(Showing studs)



G6(E) BAR ASSEMBLY



BAR G5(E)

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54"	Ft.	

See bearing details for pintle hole locations when required.

PI-4-54D

11-22-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**54" PPC I-BEAM DETAILS
STRUCTURE NO.**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				