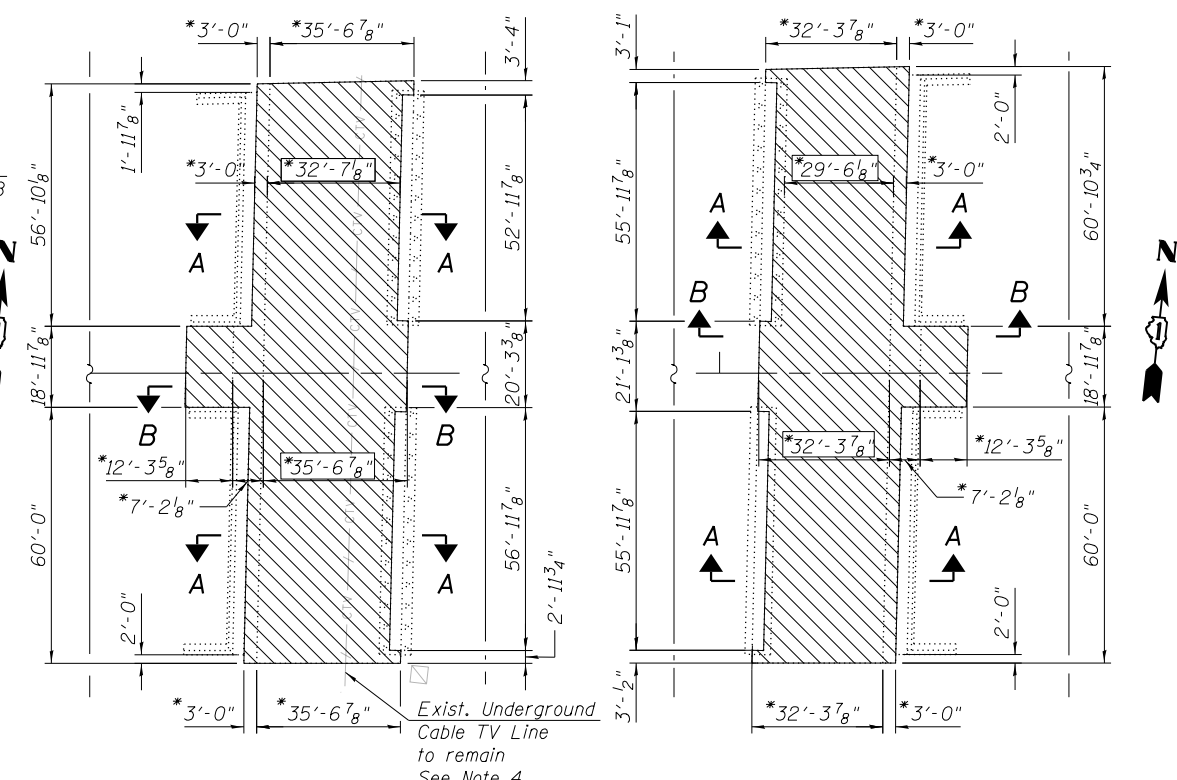
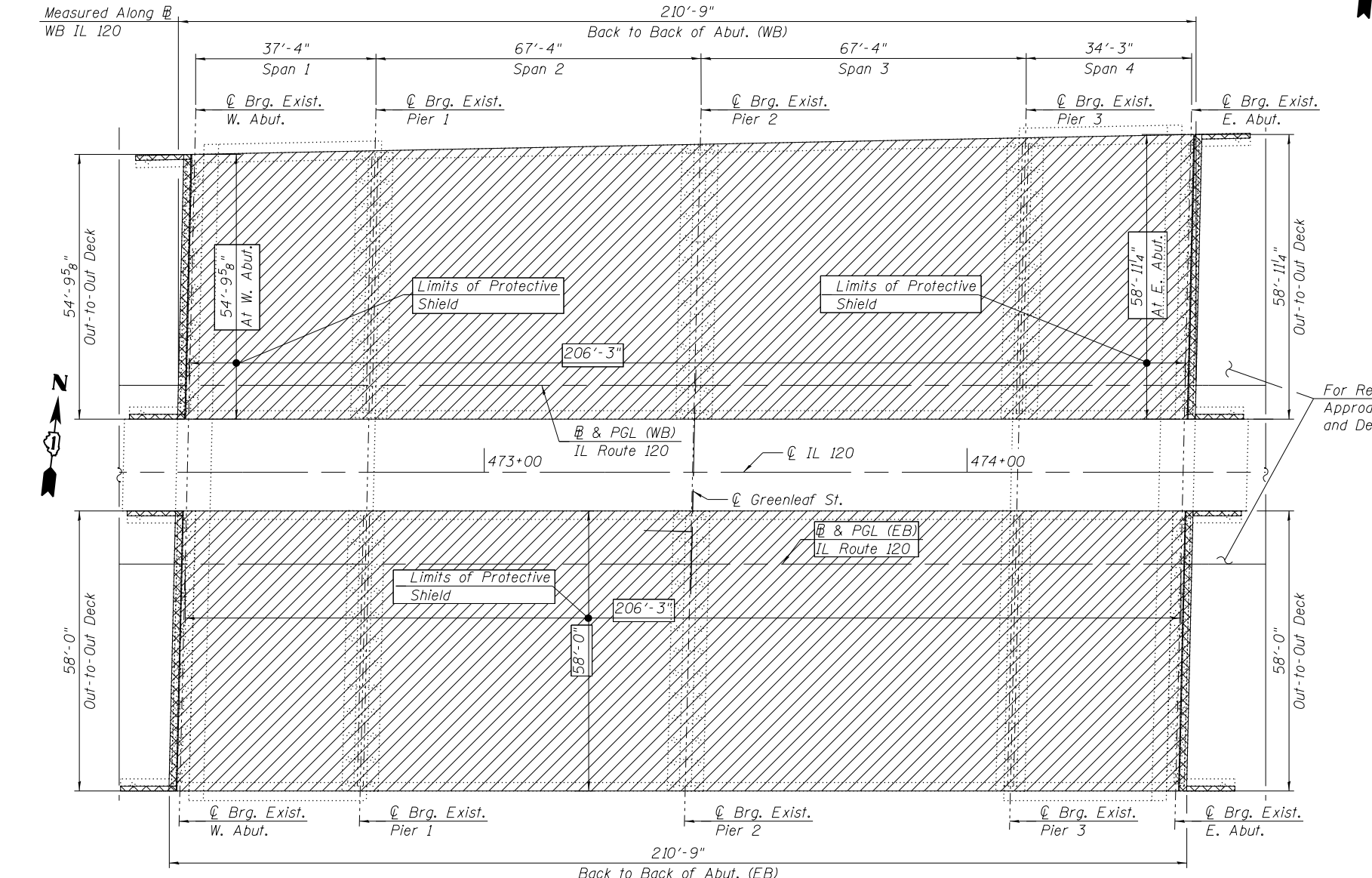


ELEVATION
(Looking North)



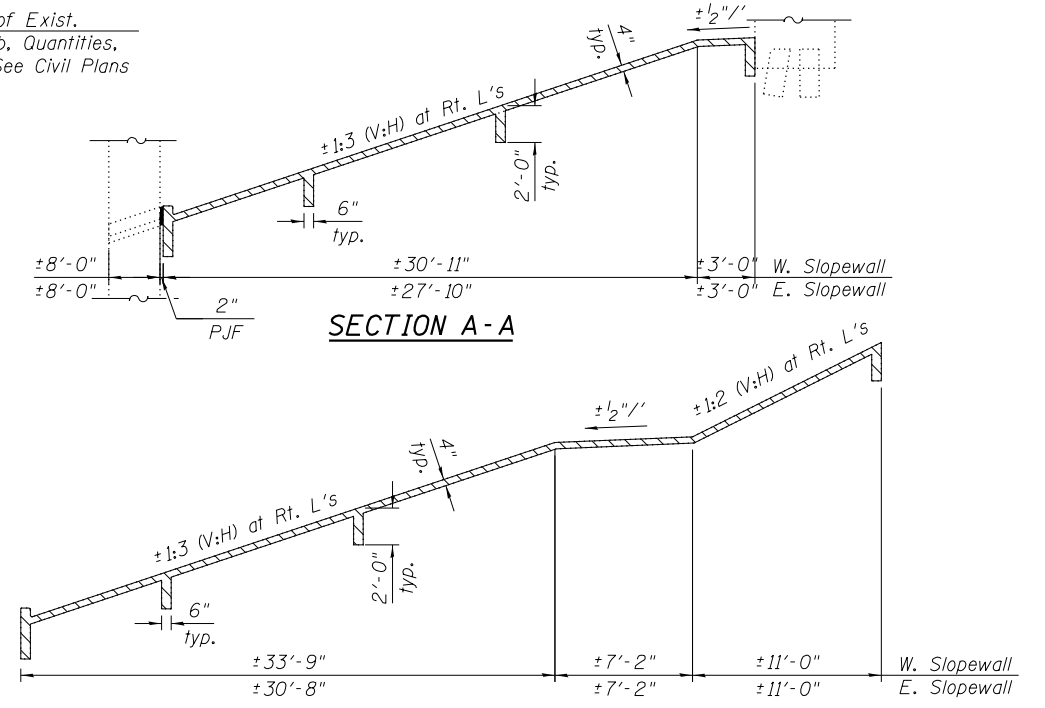
SLOPE WALL REMOVAL PLAN

*Dimensions Measured along surface of Slope wall



PLAN

For Removal of Exist. Approach Slab, Quantities, and Details, See Civil Plans



SECTION A-A

SECTION B-B

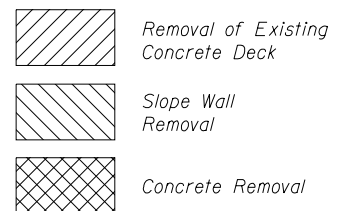
NOTES:

- Dimensions shown have been taken from historical design drawing and may not represent "as built" conditions. The Contractor must verify all dimensions in the field. Variation in the field dimensions shall not warrant additional compensation for Removal of Existing Superstructure.
- Existing utilities in conflict with new construction shall be abandoned or relocated according to directions given on the Roadway Plans.
- The Contractor shall limit the disturbance of the existing soil embankment below the removed slope wall to a minimum during Slope Wall Removal.
- The contractor shall exercise extreme caution during construction to make certain that construction activities, structure excavation, and other loads applied will not have detrimental effects on the cable TV line at the west slope wall. Any damage to the existing cable TV line during construction shall be repaired by the contractor at his expense.
- Prior to the beginning of work, the Contractor shall submit a stage construction sequence for the removal and replacement of slope walls to the Engineer for approval.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	CU YD	61
Bridge Rail Removal	FOOT	1040
Slope Wall Removal	SQ YD	1152
Removal of Existing Concrete Deck No. 5	EACH	1
Removal of Existing Concrete Deck No. 6	EACH	1
Protective Shield	SQ YD	2640

LEGEND:



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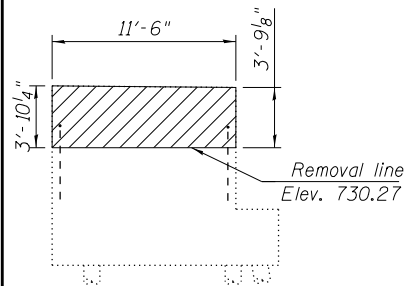
HBM
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4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

05-0490125&26-60X40-RemPlan&Elev.dgn	DESIGNED - SK, KJD	REVISED
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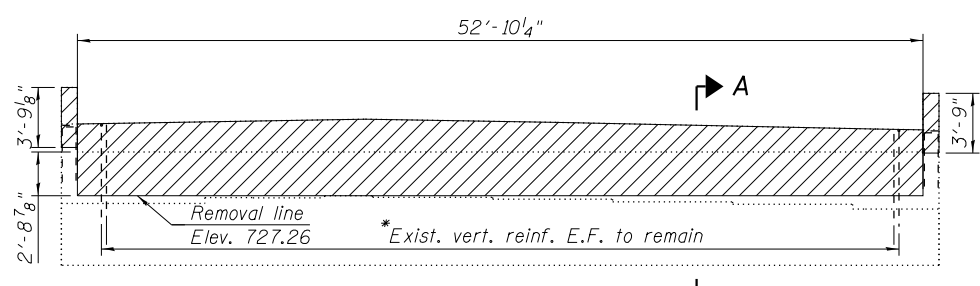
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL PLAN AND ELEVATION
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)
SCALE: SHEET S-05 OF S-55 SHEETS STA. TO STA.

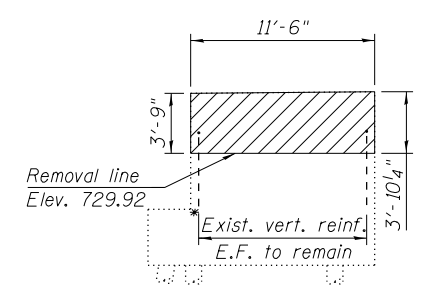
F.A.P. RTE. 333/342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT		CONTRACT NO. 60X40		



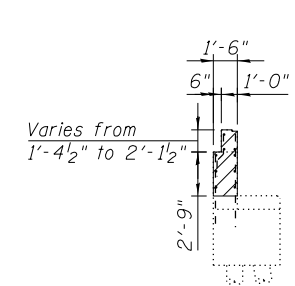
SOUTHWEST WINGWALL
(Looking North)



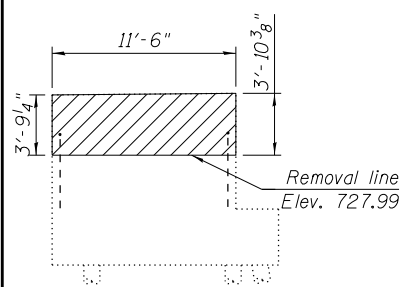
FRONT ELEVATION
West Abutment WB



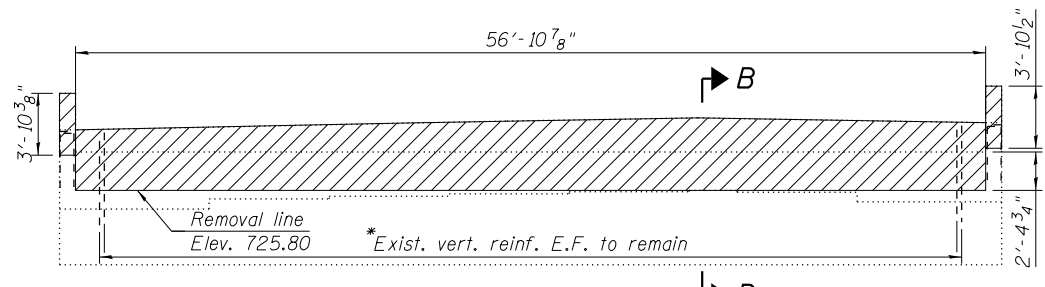
NORTHWEST WINGWALL
(Looking South)



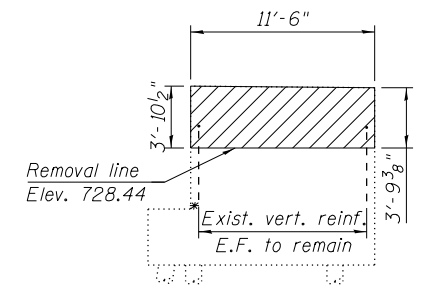
SECTION A-A



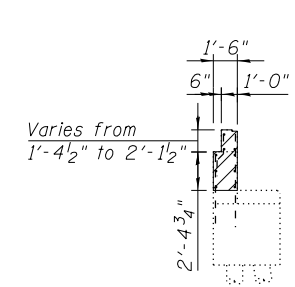
NORTHEAST WINGWALL
(Looking South)



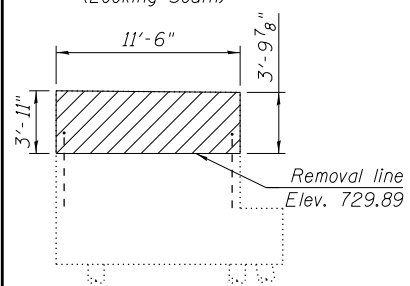
FRONT ELEVATION
East Abutment WB



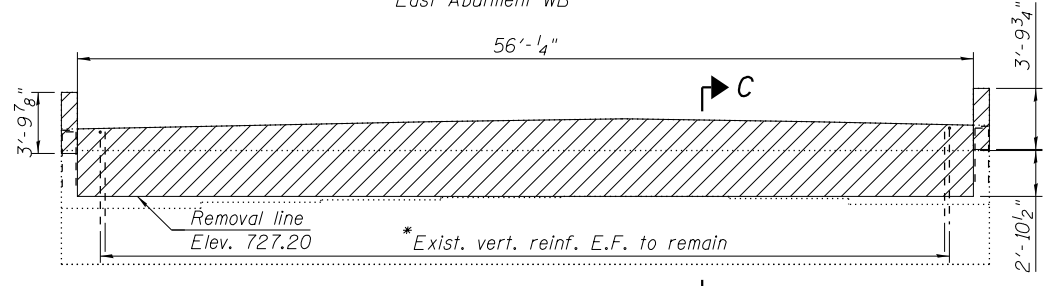
SOUTHEAST WINGWALL
(Looking North)



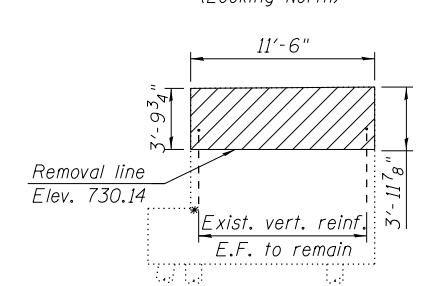
SECTION B-B



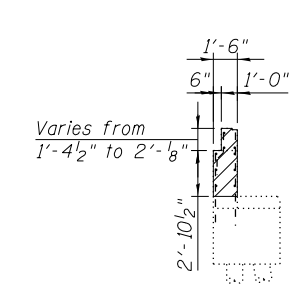
SOUTHWEST WINGWALL
(Looking North)



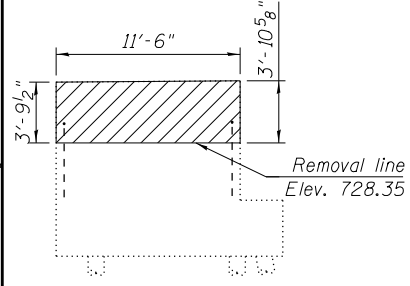
FRONT ELEVATION
West Abutment EB



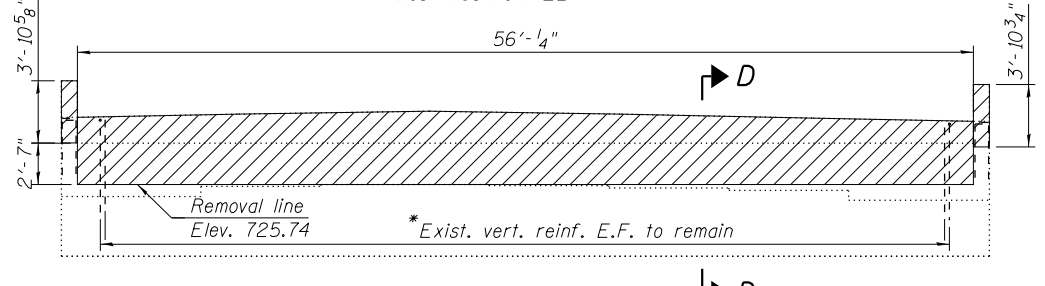
NORTHWEST WINGWALL
(Looking South)



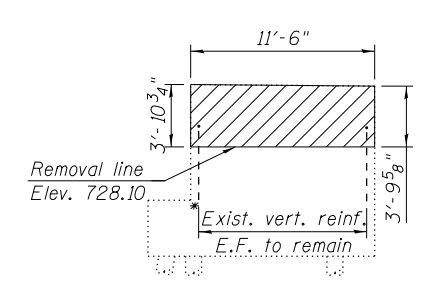
SECTION C-C



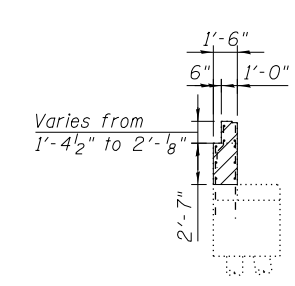
NORTHEAST WINGWALL
(Looking South)



FRONT ELEVATION
East Abutment EB



SOUTHEAST WINGWALL
(Looking North)



SECTION D-D

* Cut/Bend exist. bars to fit.

NOTES:

- Dimensions shown have been taken from historical design drawing and may not represent "as built" conditions. The Contractor must verify all dimensions in the field. Variation in the field dimensions shall not warrant additional compensation for Removal of Existing Superstructure.
- Existing reinforcement extending into new concrete shall be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.
- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with concrete removal.
- Existing utilities in conflict with new construction shall be abandoned or relocated according to directions given on the Roadway Plans.

LEGEND:



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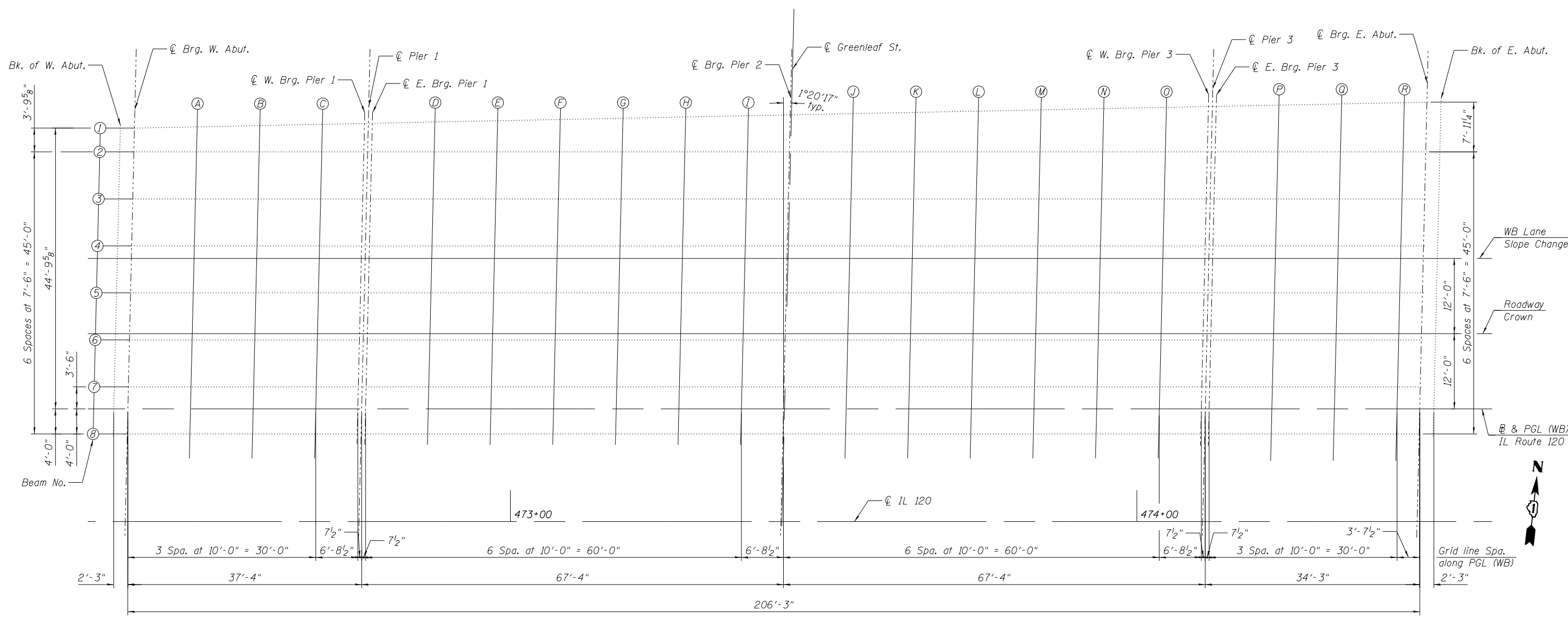
HBM
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HILLSDALE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

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USER NAME = mustafa.lobaidi	DRAWN - SK, FA	REVISED
PLOT SCALE = 12.00' / in.	CHECKED - MAI, MI	REVISED
PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED

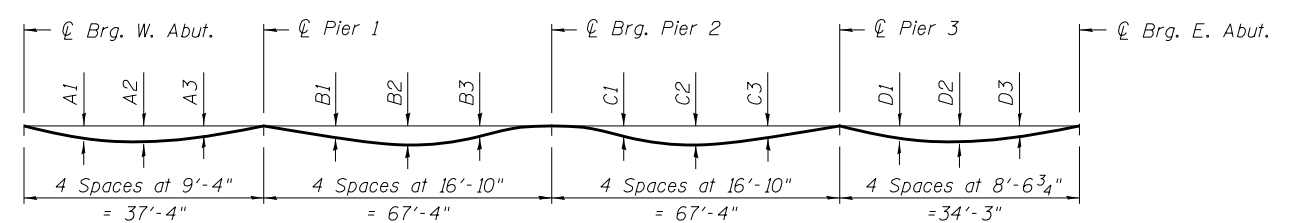
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL SECTIONS AND DETAILS	
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)	
SCALE:	SHEET S-06 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2		LAKE	288	202
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	

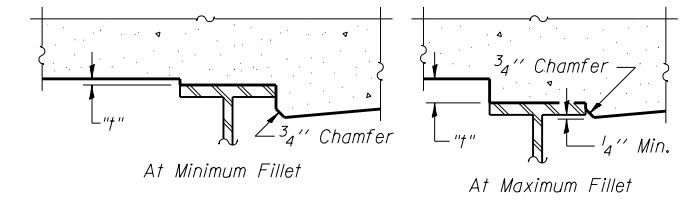


PLAN



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)

Note:
The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection", as shown on Sheets S-08 and S-09.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets S-08 and S-09, minus slab thickness, equals the fillet heights "t" above top flange of girders.

FILLET HEIGHTS

Beam Number	DEAD LOAD DEFLECTIONS											
	Span 1			Span 2			Span 3			Span 4		
	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3
1	1/8"	1/8"	1/8"	3/4"	3/4"	3/8"	1/2"	7/8"	7/8"	1/8"	1/8"	1/8"
2 & 7	1/8"	1/8"	1/8"	5/8"	5/8"	3/8"	3/8"	3/4"	3/4"	1/8"	1/4"	1/8"
3 Thru 6	1/8"	1/4"	1/8"	5/8"	5/8"	1/4"	3/8"	5/8"	5/8"	1/8"	1/4"	1/8"
8	1/8"	1/8"	1/8"	7/8"	1"	1/2"	1/2"	7/8"	7/8"	1/8"	1/8"	1/8"

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USER NAME = mustafa.lobaidi
PLOT SCALE = 16.00' / in.
PLOT DATE = 3/20/2017

DESIGNED - LAB
DRAWN - LAB
CHECKED - MAI, MI
DATE - 03/20/2017

REVISED
REVISED
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS LAYOUT (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-07 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333/342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	203
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+37.72	-44.76'	731.52	731.52
CL. BRG. W. ABUT.	472+39.97	-44.80'	731.50	731.50
A	472+49.98	-45.00'	731.42	731.44
B	472+59.98	-45.20'	731.33	731.36
C	472+69.99	-45.40'	731.24	731.26
CL. W. BRG. PIER 1	472+76.70	-45.54'	731.18	731.18
CL. PIER 1	472+77.32	-45.55'	731.18	731.18
CL. E. BRG. PIER 1	472+77.95	-45.56'	731.17	731.17
D	472+87.95	-45.76'	731.09	731.12
E	472+97.96	-45.96'	731.00	731.06
F	473+07.96	-46.16'	730.91	730.98
G	473+17.97	-46.36'	730.82	730.88
H	473+27.97	-46.56'	730.74	730.77
I	473+37.98	-46.76'	730.65	730.66
CL. BRG. PIER 2	473+44.69	-46.90'	730.59	730.59
J	473+54.69	-47.10'	730.50	730.52
K	473+64.70	-47.30'	730.42	730.45
L	473+74.70	-47.50'	730.33	730.39
M	473+84.71	-47.70'	730.24	730.31
N	473+94.71	-47.90'	730.16	730.21
O	474+04.71	-48.10'	730.07	730.10
CL. W. BRG. PIER 3	474+11.43	-48.23'	730.01	730.01
CL. PIER 3	474+12.05	-48.25'	730.00	730.00
CL. E. BRG. PIER 3	474+12.68	-48.26'	730.00	730.00
P	474+22.68	-48.46'	729.91	729.93
Q	474+32.69	-48.66'	729.82	729.85
R	474+42.69	-48.86'	729.74	729.75
CL. BRG. E. ABUT.	474+46.32	-48.93'	729.71	729.71
BK. E. ABUT.	474+48.57	-48.98'	729.69	729.69

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+37.63	-41.00'	731.60	731.60
CL. BRG. W. ABUT.	472+39.88	-41.00'	731.58	731.58
A	472+49.88	-41.00'	731.50	731.52
B	472+59.88	-41.00'	731.42	731.44
C	472+69.88	-41.00'	731.34	731.35
CL. W. BRG. PIER 1	472+76.59	-41.00'	731.28	731.28
CL. PIER 1	472+77.22	-41.00'	731.27	731.27
CL. E. BRG. PIER 1	472+77.84	-41.00'	731.27	731.27
D	472+87.84	-41.00'	731.19	731.22
E	472+97.84	-41.00'	731.10	731.16
F	473+07.84	-41.00'	731.02	731.09
G	473+17.84	-41.00'	730.94	730.99
H	473+27.84	-41.00'	730.85	730.89
I	473+37.84	-41.00'	730.77	730.78
CL. BRG. PIER 2	473+44.55	-41.00'	730.72	730.72
J	473+54.55	-41.00'	730.63	730.63
K	473+64.55	-41.00'	730.55	730.56
L	473+74.55	-41.00'	730.47	730.50
M	473+84.55	-41.00'	730.38	730.44
N	473+94.55	-41.00'	730.30	730.37
O	474+04.55	-41.00'	730.22	730.27
CL. W. BRG. PIER 3	474+11.26	-41.00'	730.16	730.16
CL. PIER 3	474+11.88	-41.00'	730.16	730.16
CL. E. BRG. PIER 3	474+12.51	-41.00'	730.15	730.15
P	474+22.51	-41.00'	730.07	730.09
Q	474+32.51	-41.00'	729.99	730.01
R	474+42.51	-41.00'	729.90	729.91
CL. BRG. E. ABUT.	474+46.13	-41.00'	729.87	729.87
BK. E. ABUT.	474+48.38	-41.00'	729.85	729.85

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+37.46	-33.50'	731.76	731.76
CL. BRG. W. ABUT.	472+39.71	-33.50'	731.74	731.74
A	472+49.71	-33.50'	731.66	731.68
B	472+59.71	-33.50'	731.58	731.60
C	472+69.71	-33.50'	731.49	731.51
CL. W. BRG. PIER 1	472+76.42	-33.50'	731.44	731.44
CL. PIER 1	472+77.04	-33.50'	731.43	731.43
CL. E. BRG. PIER 1	472+77.67	-33.50'	731.43	731.43
D	472+87.67	-33.50'	731.34	731.38
E	472+97.67	-33.50'	731.26	731.32
F	473+07.67	-33.50'	731.18	731.24
G	473+17.67	-33.50'	731.10	731.15
H	473+27.67	-33.50'	731.01	731.04
I	473+37.67	-33.50'	730.93	730.94
CL. BRG. PIER 2	473+44.37	-33.50'	730.87	730.87
J	473+54.37	-33.50'	730.79	730.80
K	473+64.37	-33.50'	730.71	730.75
L	473+74.37	-33.50'	730.62	730.68
M	473+84.37	-33.50'	730.54	730.61
N	473+94.37	-33.50'	730.46	730.51
O	474+04.37	-33.50'	730.38	730.40
CL. W. BRG. PIER 3	474+11.08	-33.50'	730.32	730.32
CL. PIER 3	474+11.71	-33.50'	730.31	730.31
CL. E. BRG. PIER 3	474+12.33	-33.50'	730.31	730.31
P	474+22.33	-33.50'	730.23	730.24
Q	474+32.33	-33.50'	730.14	730.16
R	474+42.33	-33.50'	730.06	730.07
CL. BRG. E. ABUT.	474+45.96	-33.50'	730.03	730.03
BK. E. ABUT.	474+48.21	-33.50'	730.01	730.01

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+37.28	-26.00'	731.92	731.92
CL. BRG. W. ABUT.	472+39.53	-26.00'	731.90	731.90
A	472+49.53	-26.00'	731.82	731.84
B	472+59.53	-26.00'	731.73	731.76
C	472+69.53	-26.00'	731.65	731.67
CL. W. BRG. PIER 1	472+76.24	-26.00'	731.60	731.60
CL. PIER 1	472+76.86	-26.00'	731.59	731.59
CL. E. BRG. PIER 1	472+77.49	-26.00'	731.59	731.59
D	472+87.49	-26.00'	731.50	731.54
E	472+97.49	-26.00'	731.42	731.48
F	473+07.49	-26.00'	731.34	731.40
G	473+17.49	-26.00'	731.25	731.31
H	473+27.49	-26.00'	731.17	731.20
I	473+37.49	-26.00'	731.09	731.09
CL. BRG. PIER 2	473+44.20	-26.00'	731.03	731.03
J	473+54.20	-26.00'	730.95	730.96
K	473+64.20	-26.00'	730.87	730.90
L	473+74.20	-26.00'	730.78	730.84
M	473+84.20	-26.00'	730.70	730.76
N	473+94.20	-26.00'	730.62	730.67
O	474+04.20	-26.00'	730.53	730.56
CL. W. BRG. PIER 3	474+10.91	-26.00'	730.48	730.48
CL. PIER 3	474+11.53	-26.00'	730.47	730.47
CL. E. BRG. PIER 3	474+12.16	-26.00'	730.47	730.47
P	474+22.16	-26.00'	730.38	730.40
Q	474+32.16	-26.00'	730.30	730.32
R	474+42.16	-26.00'	730.22	730.23
CL. BRG. E. ABUT.	474+45.78	-26.00'	730.19	730.19
BK. E. ABUT.	474+48.03	-26.00'	730.17	730.17

WB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+37.23	-24.00'	731.96	731.96
CL. BRG. W. ABUT.	472+39.48	-24.00'	731.94	731.94
A	472+49.48	-24.00'	731.86	731.88
B	472+59.48	-24.00'	731.78	731.80
C	472+69.48	-24.00'	731.69	731.71
CL. W. BRG. PIER 1	472+76.19	-24.00'	731.64	731.64
CL. PIER 1	472+76.82	-24.00'	731.63	731.63
CL. E. BRG. PIER 1	472+77.44	-24.00'	731.63	731.63
D	472+87.44	-24.00'	731.54	731.58
E	472+97.44	-24.00'	731.46	731.52
F	473+07.44	-24.00'	731.38	731.44
G	473+17.44	-24.00'	731.30	731.35
H	473+27.44	-24.00'	731.21	731.24
I	473+37.44	-24.00'	731.13	731.14
CL. BRG. PIER 2	473+44.15	-24.00'	731.07	731.07
J	473+54.15	-24.00'	730.99	731.00
K	473+64.15	-24.00'	730.91	730.94
L	473+74.15	-24.00'	730.82	730.88
M	473+84.15	-24.00'	730.74	730.81
N	473+94.15	-24.00'	730.66	730.71
O	474+04.15	-24.00'	730.58	730.60
CL. W. BRG. PIER 3	474+10.86	-24.00'	730.52	730.52
CL. PIER 3	474+11.48	-24.00'	730.51	730.51
CL. E. BRG. PIER 3	474+12.11	-24.00'	730.51	730.51
P	474+22.11	-24.00'	730.43	730.44
Q	474+32.11	-24.00'	730.34	730.36
R	474+42.11	-24.00'	730.26	730.27
CL. BRG. E. ABUT.	474+45.73	-24.00'	730.23	730.23
BK. E. ABUT.	474+47.98	-24.00'	730.21	730.21

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+37.11	-18.50'	732.05	732.05
CL. BRG. W. ABUT.	472+39.36	-18.50'	732.03	732.03
A	472+49.36	-18.50'	731.95	731.97
B	472+59.36	-18.50'	731.86	731.89
C	472+69.36	-18.50'	731.78	731.80
CL. W. BRG. PIER 1	472+76.06	-18.50'	731.72	731.72
CL. PIER 1	472+76.69	-18.50'	731.72	731.72
CL. E. BRG. PIER 1	472+77.31	-18.50'	731.71	731.71
D	472+87.31	-18.50'	731.63	731.67
E	472+97.31	-18.50'	731.55	731.61
F	473+07.31	-18.50'	731.47	731.53
G	473+17.31	-18.50'	731.38	731.44
H	473+27.31	-18.50'	731.30	731.33
I	473+37.31	-18.50'	731.22	731.22
CL. BRG. PIER 2	473+44.02	-18.50'	731.16	731.16
J	473+54.02	-18.50'	731.08	731.09
K	473+64.02	-18.50'	730.99	731.03
L	473+74.02	-18.50'	730.91	730.97
M	473+84.02	-18.50'	730.83	730.89
N	473+94.02	-18.50'	730.75	730.80
O	474+04.02	-18.50'	730.66	730.69
CL. W. BRG. PIER 3	474+10.73	-18.50'	730.61	730.61
CL. PIER 3	474+11.36	-18.50'	730.60	730.60
CL. E. BRG. PIER 3	474+11.98	-18.50'	730.60	730.60
P	474+21.98	-18.50'	730.51	730.53
Q	474+31.98	-18.50'	730.43	730.45
R	474+41.98	-18.50'	730.35	730.36
CL. BRG. E. ABUT.	474+45.61	-18.50'	730.32	730.32
BK. E. ABUT.	474+47.86	-18.50'	730.30	730.30

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08-0490125-60X40-TopSlabElev1WB.dgn
USER NAME = mustafa.ahmed
PLOT SCALE = 0.20000' 1" = 11"
PLOT DATE = 3/20/2017

DESIGNED - LAB
DRAWN - LAB
CHECKED - MAI, MI
DATE - 03/20/2017

REVISED
REVISED
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 1 OF 2) (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-08 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333/342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	204
*12VB-1&2&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

ROADWAY CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+36.95	-12.00'	732.15	732.15
CL. BRG. W. ABUT.	472+39.20	-12.00'	732.13	732.13
A	472+49.20	-12.00'	732.05	732.07
B	472+59.20	-12.00'	731.97	731.99
C	472+69.20	-12.00'	731.88	731.90
CL. W. BRG. PIER 1	472+75.91	-12.00'	731.83	731.83
CL. PIER 1	472+76.54	-12.00'	731.82	731.82
CL. E. BRG. PIER 1	472+77.16	-12.00'	731.82	731.82
D	472+87.16	-12.00'	731.73	731.77
E	472+97.16	-12.00'	731.65	731.71
F	473+07.16	-12.00'	731.57	731.63
G	473+17.16	-12.00'	731.49	731.54
H	473+27.16	-12.00'	731.40	731.43
I	473+37.16	-12.00'	731.32	731.33
CL. BRG. PIER 2	473+43.87	-12.00'	731.26	731.26
J	473+53.87	-12.00'	731.18	731.19
K	473+63.87	-12.00'	731.10	731.13
L	473+73.87	-12.00'	731.01	731.07
M	473+83.87	-12.00'	730.93	731.00
N	473+93.87	-12.00'	730.85	730.90
O	474+03.87	-12.00'	730.77	730.79
CL. W. BRG. PIER 3	474+10.58	-12.00'	730.71	730.71
CL. PIER 3	474+11.20	-12.00'	730.70	730.70
CL. E. BRG. PIER 3	474+11.83	-12.00'	730.70	730.70
P	474+21.83	-12.00'	730.62	730.63
Q	474+31.83	-12.00'	730.53	730.55
R	474+41.83	-12.00'	730.45	730.46
CL. BRG. E. ABUT.	474+45.45	-12.00'	730.42	730.42
BK. E. ABUT.	474+47.70	-12.00'	730.40	730.40

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+36.93	-11.00'	732.14	732.14
CL. BRG. W. ABUT.	472+39.18	-11.00'	732.12	732.12
A	472+49.18	-11.00'	732.03	732.05
B	472+59.18	-11.00'	731.95	731.98
C	472+69.18	-11.00'	731.87	731.88
CL. W. BRG. PIER 1	472+75.89	-11.00'	731.81	731.81
CL. PIER 1	472+76.51	-11.00'	731.81	731.81
CL. E. BRG. PIER 1	472+77.14	-11.00'	731.80	731.80
D	472+87.14	-11.00'	731.72	731.75
E	472+97.14	-11.00'	731.64	731.69
F	473+07.14	-11.00'	731.55	731.62
G	473+17.14	-11.00'	731.47	731.52
H	473+27.14	-11.00'	731.39	731.42
I	473+37.14	-11.00'	731.30	731.31
CL. BRG. PIER 2	473+43.85	-11.00'	731.25	731.25
J	473+53.85	-11.00'	731.16	731.18
K	473+63.85	-11.00'	731.08	731.12
L	473+73.85	-11.00'	731.00	731.06
M	473+83.85	-11.00'	730.92	730.98
N	473+93.85	-11.00'	730.83	730.89
O	474+03.85	-11.00'	730.75	730.78
CL. W. BRG. PIER 3	474+10.56	-11.00'	730.69	730.69
CL. PIER 3	474+11.18	-11.00'	730.69	730.69
CL. E. BRG. PIER 3	474+11.81	-11.00'	730.68	730.68
P	474+21.81	-11.00'	730.60	730.62
Q	474+31.81	-11.00'	730.52	730.54
R	474+41.81	-11.00'	730.43	730.44
CL. BRG. E. ABUT.	474+45.43	-11.00'	730.40	730.40
BK. E. ABUT.	474+47.68	-11.00'	730.39	730.39

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+36.76	-3.50'	732.02	732.02
CL. BRG. W. ABUT.	472+39.01	-3.50'	732.00	732.00
A	472+49.01	-3.50'	731.92	731.94
B	472+59.01	-3.50'	731.83	731.86
C	472+69.01	-3.50'	731.75	731.77
CL. W. BRG. PIER 1	472+75.71	-3.50'	731.70	731.70
CL. PIER 1	472+76.34	-3.50'	731.69	731.69
CL. E. BRG. PIER 1	472+76.96	-3.50'	731.69	731.69
D	472+86.96	-3.50'	731.60	731.64
E	472+96.96	-3.50'	731.52	731.58
F	473+06.96	-3.50'	731.44	731.50
G	473+16.96	-3.50'	731.35	731.41
H	473+26.96	-3.50'	731.27	731.30
I	473+36.96	-3.50'	731.19	731.20
CL. BRG. PIER 2	473+43.67	-3.50'	731.13	731.13
J	473+53.67	-3.50'	731.05	731.06
K	473+63.67	-3.50'	730.97	731.00
L	473+73.67	-3.50'	730.88	730.94
M	473+83.67	-3.50'	730.80	730.87
N	473+93.67	-3.50'	730.72	730.77
O	474+03.67	-3.50'	730.63	730.66
CL. W. BRG. PIER 3	474+10.38	-3.50'	730.58	730.58
CL. PIER 3	474+11.01	-3.50'	730.57	730.57
CL. E. BRG. PIER 3	474+11.63	-3.50'	730.57	730.57
P	474+21.63	-3.50'	730.49	730.50
Q	474+31.63	-3.50'	730.40	730.42
R	474+41.63	-3.50'	730.32	730.33
CL. BRG. E. ABUT.	474+45.26	-3.50'	730.29	730.29
BK. E. ABUT.	474+47.51	-3.50'	730.27	730.27

⊕ & PGL (WB) IL ROUTE 120

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+36.67	0.00'	731.97	731.97
CL. BRG. W. ABUT.	472+38.92	0.00'	731.95	731.95
A	472+48.92	0.00'	731.86	731.88
B	472+58.92	0.00'	731.78	731.81
C	472+68.92	0.00'	731.70	731.71
CL. W. BRG. PIER 1	472+75.63	0.00'	731.64	731.64
CL. PIER 1	472+76.26	0.00'	731.64	731.64
CL. E. BRG. PIER 1	472+76.88	0.00'	731.63	731.63
D	472+86.88	0.00'	731.55	731.58
E	472+96.88	0.00'	731.47	731.52
F	473+06.88	0.00'	731.38	731.45
G	473+16.88	0.00'	731.30	731.35
H	473+26.88	0.00'	731.22	731.25
I	473+36.88	0.00'	731.13	731.14
CL. BRG. PIER 2	473+43.59	0.00'	731.08	731.08
J	473+53.59	0.00'	731.00	731.01
K	473+63.59	0.00'	730.91	730.95
L	473+73.59	0.00'	730.83	730.89
M	473+83.59	0.00'	730.75	730.81
N	473+93.59	0.00'	730.66	730.72
O	474+03.59	0.00'	730.58	730.61
CL. W. BRG. PIER 3	474+10.30	0.00'	730.52	730.52
CL. PIER 3	474+10.92	0.00'	730.52	730.52
CL. E. BRG. PIER 3	474+11.55	0.00'	730.51	730.51
P	474+21.55	0.00'	730.43	730.45
Q	474+31.55	0.00'	730.35	730.37
R	474+41.55	0.00'	730.27	730.27
CL. BRG. E. ABUT.	474+45.17	0.00'	730.24	730.24
BK. E. ABUT.	474+47.42	0.00'	730.22	730.22

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+36.58	4.00'	731.88	731.88
CL. BRG. W. ABUT.	472+38.83	4.00'	731.86	731.86
A	472+48.83	4.00'	731.78	731.80
B	472+58.83	4.00'	731.70	731.72
C	472+68.83	4.00'	731.62	731.63
CL. W. BRG. PIER 1	472+75.54	4.00'	731.56	731.56
CL. PIER 1	472+76.16	4.00'	731.55	731.55
CL. E. BRG. PIER 1	472+76.79	4.00'	731.55	731.55
D	472+86.79	4.00'	731.47	731.50
E	472+96.79	4.00'	731.38	731.44
F	473+06.79	4.00'	731.30	731.37
G	473+16.79	4.00'	731.22	731.27
H	473+26.79	4.00'	731.13	731.16
I	473+36.79	4.00'	731.05	731.06
CL. BRG. PIER 2	473+43.50	4.00'	731.00	731.00
J	473+53.50	4.00'	730.91	730.93
K	473+63.50	4.00'	730.83	730.87
L	473+73.50	4.00'	730.75	730.80
M	473+83.50	4.00'	730.66	730.73
N	473+93.50	4.00'	730.58	730.63
O	474+03.50	4.00'	730.50	730.52
CL. W. BRG. PIER 3	474+10.21	4.00'	730.44	730.44
CL. PIER 3	474+10.83	4.00'	730.44	730.44
CL. E. BRG. PIER 3	474+11.46	4.00'	730.43	730.43
P	474+21.46	4.00'	730.35	730.37
Q	474+31.46	4.00'	730.27	730.29
R	474+41.46	4.00'	730.18	730.19
CL. BRG. E. ABUT.	474+45.08	4.00'	730.15	730.15
BK. E. ABUT.	474+47.33	4.00'	730.13	730.13

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09-0490125-60x40-TopSlabElev2WB.dgn
USER NAME = mustafa.ahmed
PLOT SCALE = 0.20000' = 1"
PLOT DATE = 3/20/2017

DESIGNED - LAB
DRAWN - LAB
CHECKED - MAI, MI
DATE - 03/20/2017

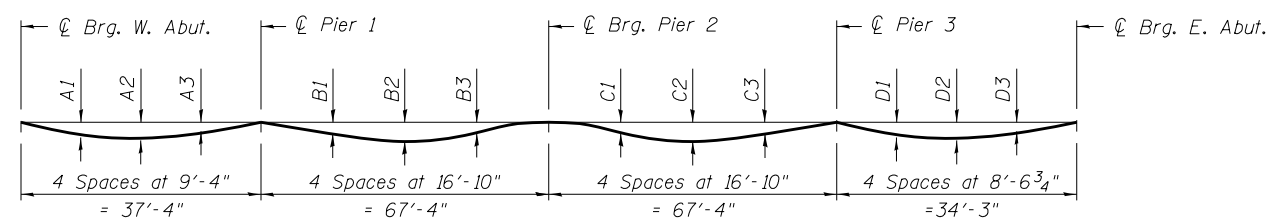
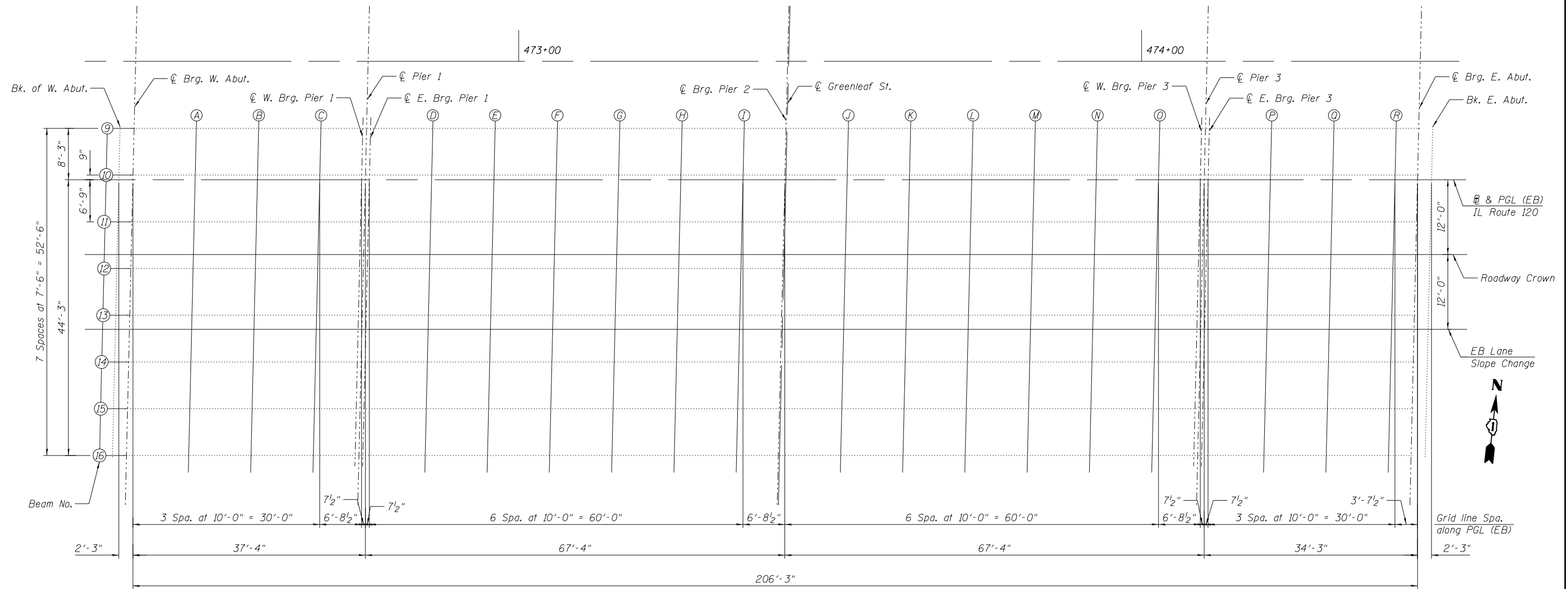
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

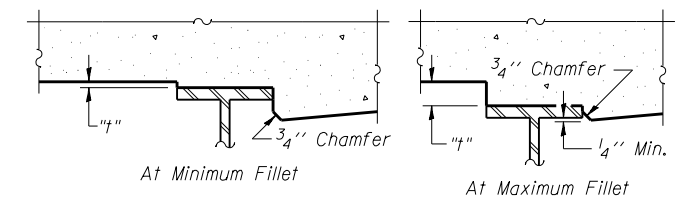
TOP OF SLAB ELEVATIONS (SHEET 2 OF 2) (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET 5-09 OF 5-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	205
*12VB-1&2&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



Note:
The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection", as shown on Sheets S-11 and S-12.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets S-11 and S-12, minus slab thickness, equals the fillet heights "t" above top flange of girders.

Beam Number	DEAD LOAD DEFLECTIONS											
	Span 1			Span 2			Span 3			Span 4		
	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3
9 & 16	1/8"	1/8"	1/8"	5/8"	5/8"	3/8"	1/4"	5/8"	5/8"	1/8"	1/8"	1/8"
10 Thru 15	1/8"	1/4"	1/8"	1/2"	5/8"	1/8"	1/4"	1/2"	1/2"	1/8"	1/4"	1/8"

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HBM
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10-0490126-60x40-TopSlabElevLayoutEB.dgn
USER NAME = mustafa.alobaidi
PLOT SCALE = 16.00' / in.
PLOT DATE = 3/20/2017

DESIGNED - LAB
DRAWN - LAB
CHECKED - MAI, MI
DATE - 03/20/2017

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS LAYOUT (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-10 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2		LAKE	288	206
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	

BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+36.00	-8.25'	731.67	731.67
CL. BRG. W. ABUT.	472+38.25	-8.25'	731.65	731.65
A	472+48.25	-8.25'	731.57	731.59
B	472+58.25	-8.25'	731.49	731.51
C	472+68.25	-8.25'	731.41	731.42
CL. W. BRG. PIER 1	472+74.96	-8.25'	731.35	731.35
CL. PIER 1	472+75.59	-8.25'	731.35	731.35
CL. E. BRG. PIER 1	472+76.21	-8.25'	731.34	731.34
D	472+86.21	-8.25'	731.26	731.29
E	472+96.21	-8.25'	731.18	731.24
F	473+06.21	-8.25'	731.10	731.16
G	473+16.21	-8.25'	731.02	731.07
H	473+26.21	-8.25'	730.94	730.97
I	473+36.21	-8.25'	730.85	730.86
CL. BRG. PIER 2	473+42.92	-8.25'	730.80	730.80
J	473+52.92	-8.25'	730.72	730.73
K	473+62.92	-8.25'	730.64	730.68
L	473+72.92	-8.25'	730.56	730.62
M	473+82.92	-8.25'	730.48	730.54
N	473+92.92	-8.25'	730.40	730.45
O	474+02.92	-8.25'	730.31	730.34
CL. W. BRG. PIER 3	474+09.63	-8.25'	730.26	730.26
CL. PIER 3	474+10.25	-8.25'	730.26	730.26
CL. E. BRG. PIER 3	474+10.88	-8.25'	730.25	730.25
P	474+20.88	-8.25'	730.17	730.19
Q	474+30.88	-8.25'	730.09	730.11
R	474+40.88	-8.25'	730.01	730.02
CL. BRG. E. ABUT.	474+44.50	-8.25'	729.98	729.98
BK. E. ABUT.	474+46.75	-8.25'	729.96	729.96

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+35.83	-0.75'	731.82	731.82
CL. BRG. W. ABUT.	472+38.08	-0.75'	731.81	731.81
A	472+48.08	-0.75'	731.72	731.74
B	472+58.08	-0.75'	731.64	731.67
C	472+68.08	-0.75'	731.56	731.58
CL. W. BRG. PIER 1	472+74.79	-0.75'	731.51	731.51
CL. PIER 1	472+75.41	-0.75'	731.50	731.50
CL. E. BRG. PIER 1	472+76.04	-0.75'	731.50	731.50
D	472+86.04	-0.75'	731.42	731.45
E	472+96.04	-0.75'	731.34	731.39
F	473+06.04	-0.75'	731.26	731.32
G	473+16.04	-0.75'	731.17	731.23
H	473+26.04	-0.75'	731.09	731.12
I	473+36.04	-0.75'	731.01	731.02
CL. BRG. PIER 2	473+42.74	-0.75'	730.96	730.96
J	473+52.74	-0.75'	730.88	730.89
K	473+62.74	-0.75'	730.80	730.83
L	473+72.74	-0.75'	730.72	730.77
M	473+82.74	-0.75'	730.63	730.70
N	473+92.74	-0.75'	730.55	730.61
O	474+02.74	-0.75'	730.47	730.50
CL. W. BRG. PIER 3	474+09.45	-0.75'	730.42	730.42
CL. PIER 3	474+10.08	-0.75'	730.41	730.41
CL. E. BRG. PIER 3	474+10.70	-0.75'	730.41	730.41
P	474+20.70	-0.75'	730.33	730.34
Q	474+30.70	-0.75'	730.25	730.27
R	474+40.70	-0.75'	730.16	730.17
CL. BRG. E. ABUT.	474+44.33	-0.75'	730.14	730.14
BK. E. ABUT.	474+46.58	-0.75'	730.12	730.12

@ & PGL (EB) IL ROUTE 120

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+35.81	0.00'	731.84	731.84
CL. BRG. W. ABUT.	472+38.06	0.00'	731.82	731.82
A	472+48.06	0.00'	731.74	731.76
B	472+58.06	0.00'	731.66	731.69
C	472+68.06	0.00'	731.58	731.59
CL. W. BRG. PIER 1	472+74.77	0.00'	731.52	731.52
CL. PIER 1	472+75.39	0.00'	731.52	731.52
CL. E. BRG. PIER 1	472+76.02	0.00'	731.51	731.51
D	472+86.02	0.00'	731.43	731.47
E	472+96.02	0.00'	731.35	731.41
F	473+06.02	0.00'	731.27	731.34
G	473+16.02	0.00'	731.19	731.24
H	473+26.02	0.00'	731.11	731.14
I	473+36.02	0.00'	731.03	731.04
CL. BRG. PIER 2	473+42.73	0.00'	730.97	730.97
J	473+52.73	0.00'	730.89	730.91
K	473+62.73	0.00'	730.81	730.85
L	473+72.73	0.00'	730.73	730.79
M	473+82.73	0.00'	730.65	730.71
N	473+92.73	0.00'	730.57	730.62
O	474+02.73	0.00'	730.49	730.51
CL. W. BRG. PIER 3	474+09.44	0.00'	730.43	730.43
CL. PIER 3	474+10.06	0.00'	730.43	730.43
CL. E. BRG. PIER 3	474+10.69	0.00'	730.42	730.42
P	474+20.69	0.00'	730.34	730.36
Q	474+30.69	0.00'	730.26	730.28
R	474+40.69	0.00'	730.18	730.19
CL. BRG. E. ABUT.	474+44.31	0.00'	730.15	730.15
BK. E. ABUT.	474+46.56	0.00'	730.13	730.13

BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+35.65	6.75'	731.95	731.95
CL. BRG. W. ABUT.	472+37.90	6.75'	731.93	731.93
A	472+47.90	6.75'	731.85	731.87
B	472+57.90	6.75'	731.77	731.79
C	472+67.90	6.75'	731.69	731.70
CL. W. BRG. PIER 1	472+74.61	6.75'	731.63	731.63
CL. PIER 1	472+75.24	6.75'	731.63	731.63
CL. E. BRG. PIER 1	472+75.86	6.75'	731.62	731.62
D	472+85.86	6.75'	731.54	731.57
E	472+95.86	6.75'	731.46	731.52
F	473+05.86	6.75'	731.38	731.44
G	473+15.86	6.75'	731.30	731.35
H	473+25.86	6.75'	731.22	731.25
I	473+35.86	6.75'	731.13	731.14
CL. BRG. PIER 2	473+42.57	6.75'	731.08	731.08
J	473+52.57	6.75'	731.00	731.01
K	473+62.57	6.75'	730.92	730.96
L	473+72.57	6.75'	730.84	730.90
M	473+82.57	6.75'	730.76	730.82
N	473+92.57	6.75'	730.68	730.73
O	474+02.57	6.75'	730.59	730.62
CL. W. BRG. PIER 3	474+09.28	6.75'	730.54	730.54
CL. PIER 3	474+09.90	6.75'	730.54	730.54
CL. E. BRG. PIER 3	474+10.53	6.75'	730.53	730.53
P	474+20.53	6.75'	730.45	730.47
Q	474+30.53	6.75'	730.37	730.39
R	474+40.53	6.75'	730.29	730.30
CL. BRG. E. ABUT.	474+44.15	6.75'	730.26	730.26
BK. E. ABUT.	474+46.40	6.75'	730.24	730.24

ROADWAY CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+35.53	12.00'	732.03	732.03
CL. BRG. W. ABUT.	472+37.78	12.00'	732.01	732.01
A	472+47.78	12.00'	731.93	731.95
B	472+57.78	12.00'	731.85	731.88
C	472+67.78	12.00'	731.77	731.78
CL. W. BRG. PIER 1	472+74.49	12.00'	731.71	731.71
CL. PIER 1	472+75.11	12.00'	731.71	731.71
CL. E. BRG. PIER 1	472+75.74	12.00'	731.70	731.70
D	472+85.74	12.00'	731.62	731.66
E	472+95.74	12.00'	731.54	731.60
F	473+05.74	12.00'	731.46	731.53
G	473+15.74	12.00'	731.38	731.43
H	473+25.74	12.00'	731.30	731.33
I	473+35.74	12.00'	731.22	731.23
CL. BRG. PIER 2	473+42.45	12.00'	731.16	731.16
J	473+52.45	12.00'	731.08	731.10
K	473+62.45	12.00'	731.00	731.04
L	473+72.45	12.00'	730.92	730.98
M	473+82.45	12.00'	730.84	730.90
N	473+92.45	12.00'	730.76	730.81
O	474+02.45	12.00'	730.68	730.70
CL. W. BRG. PIER 3	474+09.15	12.00'	730.62	730.62
CL. PIER 3	474+09.78	12.00'	730.62	730.62
CL. E. BRG. PIER 3	474+10.40	12.00'	730.61	730.61
P	474+20.40	12.00'	730.53	730.55
Q	474+30.40	12.00'	730.45	730.47
R	474+40.40	12.00'	730.37	730.38
CL. BRG. E. ABUT.	474+44.03	12.00'	730.34	730.34
BK. E. ABUT.	474+46.28	12.00'	730.32	730.32

BEAM 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+35.48	14.25'	731.99	731.99
CL. BRG. W. ABUT.	472+37.73	14.25'	731.98	731.98
A	472+47.73	14.25'	731.90	731.92
B	472+57.73	14.25'	731.81	731.84
C	472+67.73	14.25'	731.73	731.75
CL. W. BRG. PIER 1	472+74.44	14.25'	731.68	731.68
CL. PIER 1	472+75.06	14.25'	731.67	731.67
CL. E. BRG. PIER 1	472+75.69	14.25'	731.67	731.67
D	472+85.69	14.25'	731.59	731.62
E	472+95.69	14.25'	731.51	731.57
F	473+05.69	14.25'	731.43	731.49
G	473+15.69	14.25'	731.35	731.40
H	473+25.69	14.25'	731.26	731.29
I	473+35.69	14.25'	731.18	731.19
CL. BRG. PIER 2	473+42.39	14.25'	731.13	731.13
J	473+52.39	14.25'	731.05	731.06
K	473+62.39	14.25'	730.97	731.00
L	473+72.39	14.25'	730.89	730.94
M	473+82.39	14.25'	730.80	730.87
N	473+92.39	14.25'	730.72	730.78
O	474+02.39	14.25'	730.64	730.67
CL. W. BRG. PIER 3	474+09.10	14.25'	730.59	730.59
CL. PIER 3	474+09.73	14.25'	730.58	730.58
CL. E. BRG. PIER 3	474+10.35	14.25'	730.58	730.58
P	474+20.35	14.25'	730.50	730.51
Q	474+30.35	14.25'	730.42	730.44
R	474+40.35	14.25'	730.34	730.34
CL. BRG. E. ABUT.	474+43.98	14.25'	730.31	730.31
BK. E. ABUT.	474+46.23	14.25'	730.29	730.29

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4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

11-0490126-60x40-TopSlabElevIEB.dgn
USER NAME = mustafa.ahmed
PLOT SCALE = 0.20000' 1' = 11.0'
PLOT DATE = 3/20/2017

DESIGNED - LAB
DRAWN - LAB
CHECKED - MAI, MI
DATE - 03/20/2017

REVISED
REVISED
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 1 OF 2) (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-11 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*121VB-1&2&12R-1HB-2(BR)&12-RS-2	LAKE	ILLINOIS	288	207
CONTRACT NO. 60X40			ILLINOIS FED. AID PROJECT	

BEAM 13

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+35.30	21.75'	731.88	731.88
CL. BRG. W. ABUT.	472+37.55	21.75'	731.86	731.86
A	472+47.55	21.75'	731.78	731.80
B	472+57.55	21.75'	731.70	731.72
C	472+67.55	21.75'	731.62	731.63
CL. W. BRG. PIER 1	472+74.26	21.75'	731.56	731.56
CL. PIER 1	472+74.89	21.75'	731.56	731.56
CL. E. BRG. PIER 1	472+75.51	21.75'	731.55	731.55
D	472+85.51	21.75'	731.47	731.51
E	472+95.51	21.75'	731.39	731.45
F	473+05.51	21.75'	731.31	731.38
G	473+15.51	21.75'	731.23	731.28
H	473+25.51	21.75'	731.15	731.18
I	473+35.51	21.75'	731.07	731.07
CL. BRG. PIER 2	473+42.22	21.75'	731.01	731.01
J	473+52.22	21.75'	730.93	730.94
K	473+62.22	21.75'	730.85	730.89
L	473+72.22	21.75'	730.77	730.83
M	473+82.22	21.75'	730.69	730.75
N	473+92.22	21.75'	730.61	730.66
O	474+02.22	21.75'	730.53	730.55
CL. W. BRG. PIER 3	474+08.93	21.75'	730.47	730.47
CL. PIER 3	474+09.55	21.75'	730.47	730.47
CL. E. BRG. PIER 3	474+10.18	21.75'	730.46	730.46
P	474+20.18	21.75'	730.38	730.40
Q	474+30.18	21.75'	730.30	730.32
R	474+40.18	21.75'	730.22	730.23
CL. BRG. E. ABUT.	474+43.80	21.75'	730.19	730.19
BK. E. ABUT.	474+46.05	21.75'	730.17	730.17

EB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+35.25	24.00'	731.84	731.84
CL. BRG. W. ABUT.	472+37.50	24.00'	731.83	731.83
A	472+47.50	24.00'	731.75	731.76
B	472+57.50	24.00'	731.66	731.69
C	472+67.50	24.00'	731.58	731.60
CL. W. BRG. PIER 1	472+74.21	24.00'	731.53	731.53
CL. PIER 1	472+74.83	24.00'	731.52	731.52
CL. E. BRG. PIER 1	472+75.46	24.00'	731.52	731.52
D	472+85.46	24.00'	731.44	731.47
E	472+95.46	24.00'	731.36	731.42
F	473+05.46	24.00'	731.28	731.34
G	473+15.46	24.00'	731.19	731.25
H	473+25.46	24.00'	731.11	731.14
I	473+35.46	24.00'	731.03	731.04
CL. BRG. PIER 2	473+42.17	24.00'	730.98	730.98
J	473+52.17	24.00'	730.90	730.91
K	473+62.17	24.00'	730.82	730.85
L	473+72.17	24.00'	730.74	730.79
M	473+82.17	24.00'	730.65	730.72
N	473+92.17	24.00'	730.57	730.63
O	474+02.17	24.00'	730.49	730.52
CL. W. BRG. PIER 3	474+08.87	24.00'	730.44	730.44
CL. PIER 3	474+09.50	24.00'	730.43	730.43
CL. E. BRG. PIER 3	474+10.12	24.00'	730.43	730.43
P	474+20.12	24.00'	730.35	730.36
Q	474+30.12	24.00'	730.27	730.29
R	474+40.12	24.00'	730.18	730.19
CL. BRG. E. ABUT.	474+43.75	24.00'	730.16	730.16
BK. E. ABUT.	474+46.00	24.00'	730.14	730.14

BEAM 14

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+35.13	29.25'	731.74	731.74
CL. BRG. W. ABUT.	472+37.38	29.25'	731.72	731.72
A	472+47.38	29.25'	731.64	731.66
B	472+57.38	29.25'	731.56	731.58
C	472+67.38	29.25'	731.47	731.49
CL. W. BRG. PIER 1	472+74.09	29.25'	731.42	731.42
CL. PIER 1	472+74.71	29.25'	731.42	731.42
CL. E. BRG. PIER 1	472+75.34	29.25'	731.41	731.41
D	472+85.34	29.25'	731.33	731.36
E	472+95.34	29.25'	731.25	731.31
F	473+05.34	29.25'	731.17	731.23
G	473+15.34	29.25'	731.09	731.14
H	473+25.34	29.25'	731.01	731.04
I	473+35.34	29.25'	730.92	730.93
CL. BRG. PIER 2	473+42.04	29.25'	730.87	730.87
J	473+52.04	29.25'	730.79	730.80
K	473+62.04	29.25'	730.71	730.75
L	473+72.04	29.25'	730.63	730.69
M	473+82.04	29.25'	730.55	730.61
N	473+92.04	29.25'	730.47	730.52
O	474+02.04	29.25'	730.38	730.41
CL. W. BRG. PIER 3	474+08.75	29.25'	730.33	730.33
CL. PIER 3	474+09.38	29.25'	730.32	730.32
CL. E. BRG. PIER 3	474+10.00	29.25'	730.32	730.32
P	474+20.00	29.25'	730.24	730.26
Q	474+30.00	29.25'	730.16	730.18
R	474+40.00	29.25'	730.08	730.08
CL. BRG. E. ABUT.	474+43.63	29.25'	730.05	730.05
BK. E. ABUT.	474+45.88	29.25'	730.03	730.03

BEAM 15

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+34.95	36.75'	731.58	731.58
CL. BRG. W. ABUT.	472+37.20	36.75'	731.56	731.56
A	472+47.20	36.75'	731.48	731.50
B	472+57.20	36.75'	731.40	731.43
C	472+67.20	36.75'	731.32	731.34
CL. W. BRG. PIER 1	472+73.91	36.75'	731.27	731.27
CL. PIER 1	472+74.53	36.75'	731.26	731.26
CL. E. BRG. PIER 1	472+75.16	36.75'	731.26	731.26
D	472+85.16	36.75'	731.17	731.21
E	472+95.16	36.75'	731.09	731.15
F	473+05.16	36.75'	731.01	731.08
G	473+15.16	36.75'	730.93	730.99
H	473+25.16	36.75'	730.85	730.88
I	473+35.16	36.75'	730.77	730.78
CL. BRG. PIER 2	473+41.87	36.75'	730.72	730.72
J	473+51.87	36.75'	730.63	730.65
K	473+61.87	36.75'	730.55	730.59
L	473+71.87	36.75'	730.47	730.53
M	473+81.87	36.75'	730.39	730.46
N	473+91.87	36.75'	730.31	730.36
O	474+01.87	36.75'	730.23	730.26
CL. W. BRG. PIER 3	474+08.58	36.75'	730.17	730.17
CL. PIER 3	474+09.20	36.75'	730.17	730.17
CL. E. BRG. PIER 3	474+09.83	36.75'	730.16	730.16
P	474+19.83	36.75'	730.08	730.10
Q	474+29.83	36.75'	730.00	730.02
R	474+39.83	36.75'	729.92	729.93
CL. BRG. E. ABUT.	474+43.45	36.75'	729.89	729.89
BK. E. ABUT.	474+45.70	36.75'	729.87	729.87

BEAM 16

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. W. ABUT.	472+34.78	44.25'	731.43	731.43
CL. BRG. W. ABUT.	472+37.03	44.25'	731.41	731.41
A	472+47.03	44.25'	731.33	731.35
B	472+57.03	44.25'	731.25	731.27
C	472+67.03	44.25'	731.17	731.18
CL. W. BRG. PIER 1	472+73.73	44.25'	731.11	731.11
CL. PIER 1	472+74.36	44.25'	731.11	731.11
CL. E. BRG. PIER 1	472+74.98	44.25'	731.10	731.10
D	472+84.98	44.25'	731.02	731.05
E	472+94.98	44.25'	730.94	731.00
F	473+04.98	44.25'	730.86	730.92
G	473+14.98	44.25'	730.78	730.83
H	473+24.98	44.25'	730.70	730.73
I	473+34.98	44.25'	730.61	730.62
CL. BRG. PIER 2	473+41.69	44.25'	730.56	730.56
J	473+51.69	44.25'	730.48	730.49
K	473+61.69	44.25'	730.40	730.44
L	473+71.69	44.25'	730.32	730.38
M	473+81.69	44.25'	730.24	730.30
N	473+91.69	44.25'	730.16	730.21
O	474+01.69	44.25'	730.07	730.10
CL. W. BRG. PIER 3	474+08.40	44.25'	730.02	730.02
CL. PIER 3	474+09.03	44.25'	730.02	730.02
CL. E. BRG. PIER 3	474+09.65	44.25'	730.01	730.01
P	474+19.65	44.25'	729.93	729.95
Q	474+29.65	44.25'	729.85	729.87
R	474+39.65	44.25'	729.77	729.77
CL. BRG. E. ABUT.	474+43.28	44.25'	729.74	729.74
BK. E. ABUT.	474+45.53	44.25'	729.72	729.72

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ENGINEERING GROUP, LLC
4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

12-0490126-60X40-TopSlabElev2EB.dgn
USER NAME = mustafa.ajobaidi
PLOT SCALE = 0:2.0000' = 1" / 10'
PLOT DATE = 3/20/2017

DESIGNED - LAB
DRAWN - LAB
CHECKED - MAI, MI
DATE - 03/20/2017

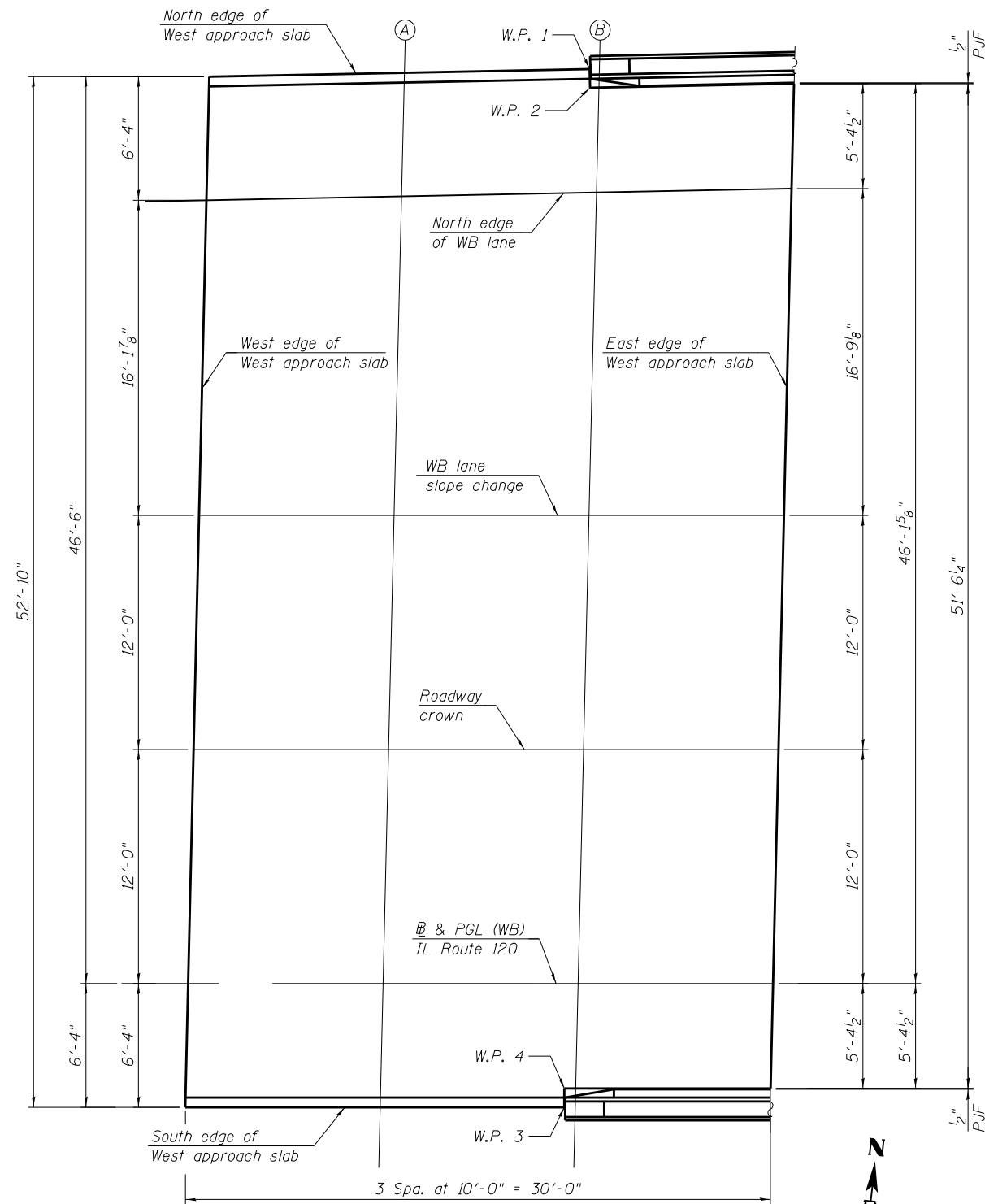
REVISED
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REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 2 OF 2) (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-12 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	208
*12VB-1&2&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



PLAN

NORTH EDGE OF WEST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+08.26	-46.50'	731.73
A	472+18.27	-46.70'	731.65
W.P. 1	472+27.76	-46.89'	731.56
W.P. 2	472+27.78	-45.93'	731.58
B	472+28.25	-45.94'	731.58
E. End West Appr. Slab	472+38.25	-46.14'	731.49

NORTH EDGE OF WB LANE

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+08.11	-40.16'	731.87
A	472+18.12	-40.36'	731.78
B	472+28.12	-40.56'	731.69
E. End West Appr. Slab	472+38.13	-40.76'	731.60

WB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+07.73	-24.00'	732.21
A	472+17.73	-24.00'	732.12
B	472+27.73	-24.00'	732.04
E. End West Appr. Slab	472+37.73	-24.00'	731.96

ROADWAY CROWN

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+07.45	-12.00'	732.40
A	472+17.45	-12.00'	732.31
B	472+27.45	-12.00'	732.23
E. End West Appr. Slab	472+37.45	-12.00'	732.15

B & PGL (WB) IL ROUTE 120

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+07.17	0.00'	732.21
A	472+17.17	0.00'	732.13
B	472+27.17	0.00'	732.04
E. End West Appr. Slab	472+37.17	0.00'	731.96

SOUTH EDGE OF WEST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+07.03	6.34'	732.08
A	472+17.03	6.34'	732.00
W.P. 3	472+26.47	6.34'	731.92
W.P. 4	472+26.47	5.38'	731.94
B	472+27.05	5.38'	731.93
E. End West Appr. Slab	472+37.05	5.38'	731.85

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DATE - 03/20/2017

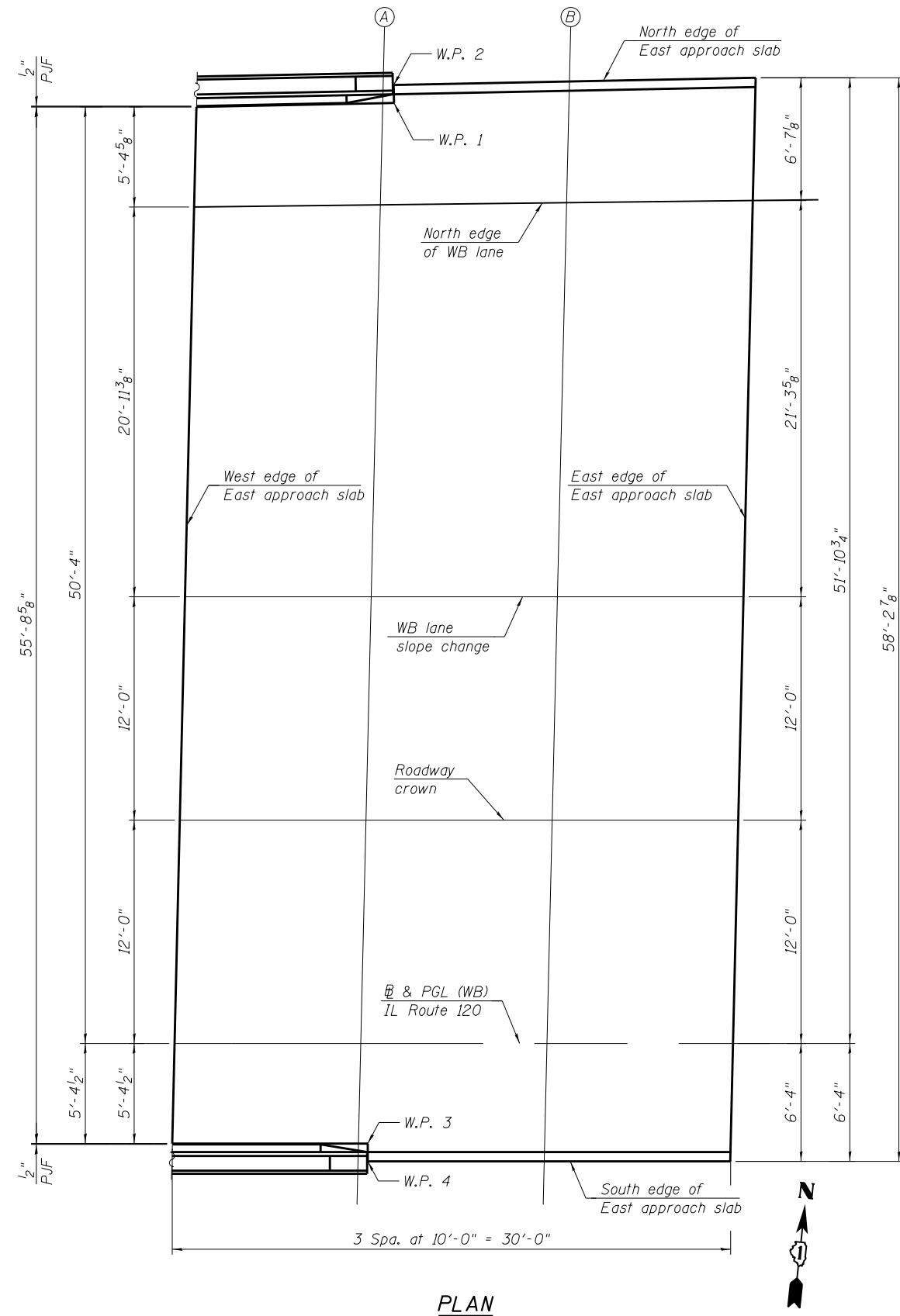
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-13 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	209
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



PLAN

NORTH EDGE OF EAST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	474+48.10	-50.34'	729.66
A	474+58.10	-50.54'	729.57
W.P. 1	474+58.71	-50.55'	729.57
W.P. 2	474+58.69	-51.51'	729.55
B	474+68.13	-51.70'	729.47
E. End East Appr. Slab	474+78.14	-51.90'	729.38

NORTH EDGE OF WB LANE

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	474+47.97	-44.95'	729.78
A	474+57.98	-45.07'	729.69
B	474+67.98	-45.19'	729.60
E. End East Appr. Slab	474+77.98	-45.31'	729.52

WB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	474+47.48	-24.00'	730.22
A	474+57.48	-24.00'	730.13
B	474+67.48	-24.00'	730.05
E. End East Appr. Slab	474+77.48	-24.00'	729.97

ROADWAY CROWN

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	474+47.20	-12.00'	730.41
A	474+57.20	-12.00'	730.32
B	474+67.20	-12.00'	730.24
E. End East Appr. Slab	474+77.20	-12.00'	730.16

B & PGL (WB) IL ROUTE 120

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	474+46.92	0.00'	730.22
A	474+56.92	0.00'	730.14
B	474+66.92	0.00'	730.05
E. End East Appr. Slab	474+76.92	0.00'	729.97

SOUTH EDGE OF EAST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	474+46.80	5.38'	730.11
A	474+56.80	5.38'	730.03
W.P. 3	474+57.30	5.38'	730.02
W.P. 4	474+57.30	6.34'	730.00
B	474+66.78	6.34'	729.92
E. End East Appr. Slab	474+76.78	6.34'	729.84

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CHECKED - MAI, MI
DATE - 03/20/2017

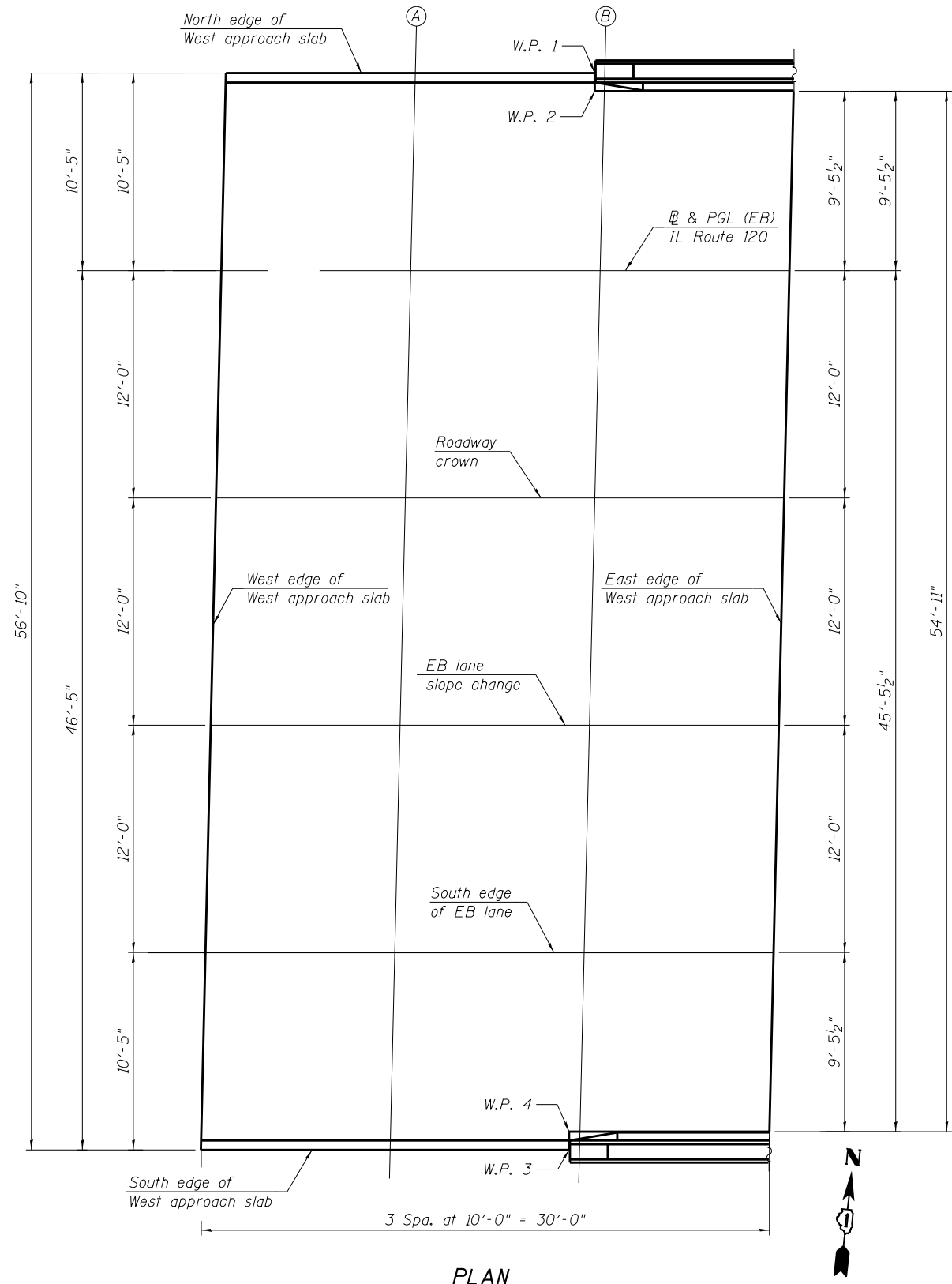
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-14 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	210
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



PLAN

NORTH EDGE OF WEST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+06.55	-10.42'	731.86
A	472+16.55	-10.42'	731.78
W.P. 1	472+26.03	-10.42'	731.70
W.P. 2	472+26.03	-9.46'	731.72
B	472+26.53	-9.46'	731.72
E. End West Appr. Slab	472+36.53	-9.46'	731.64

B & PGL (EB) IL ROUTE 120

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+06.31	0.00'	732.08
A	472+16.31	0.00'	732.00
B	472+26.31	0.00'	731.92
E. End West Appr. Slab	472+36.31	0.00'	731.84

ROADWAY CROWN

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+06.03	12.00'	732.27
A	472+16.03	12.00'	732.19
B	472+26.03	12.00'	732.11
E. End West Appr. Slab	472+36.03	12.00'	732.03

EB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+05.75	24.00'	732.08
A	472+15.75	24.00'	732.00
B	472+25.75	24.00'	731.92
E. End West Appr. Slab	472+35.75	24.00'	731.84

SOUTH EDGE OF EB LANE

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+05.75	-36.00'	731.84
A	472+15.75	-36.00'	731.75
B	472+25.75	-36.00'	731.67
E. End West Appr. Slab	472+35.75	-36.00'	731.59

SOUTH EDGE OF WEST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	472+05.23	-46.41'	731.62
A	472+15.23	-46.41'	731.54
W.P. 3	472+24.67	-46.41'	731.46
W.P. 4	472+24.67	-45.45'	731.48
B	472+25.25	-45.45'	731.48
E. End West Appr. Slab	472+35.25	-45.45'	731.40

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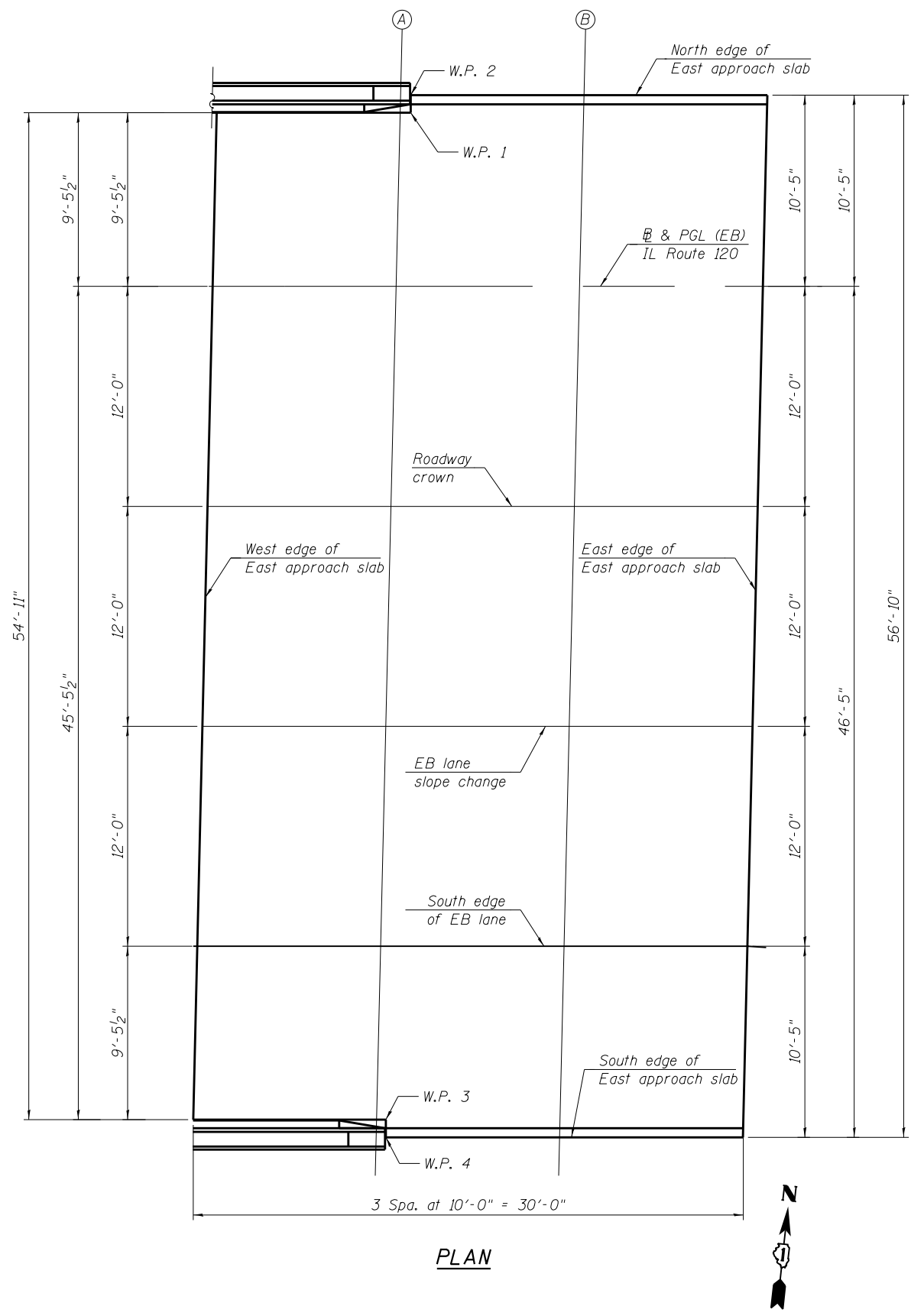
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-15 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	211
*12VB-1&2&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



PLAN

NORTH EDGE OF EAST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	474+46.28	-9.46'	729.94
A	474+56.28	-9.46'	729.86
W.P. 1	474+56.86	-9.46'	729.85
W.P. 2	474+56.86	-10.42'	729.83
B	474+66.30	-10.42'	729.76
E. End West Appr. Slab	474+76.30	-10.42'	729.67

EB & PGL (EB) IL ROUTE 120

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	474+46.06	0.00'	730.14
A	474+56.06	0.00'	730.06
B	474+66.06	0.00'	729.97
E. End East Appr. Slab	474+76.06	0.00'	729.89

ROADWAY CROWN

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	474+45.78	12.00'	730.33
A	474+55.78	12.00'	730.25
B	474+65.78	12.00'	730.16
E. End East Appr. Slab	474+75.78	12.00'	730.08

EB LANE SLOPE CHANGE

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	474+45.50	24.00'	730.14
A	474+55.50	24.00'	730.06
B	474+65.50	24.00'	729.98
E. End East Appr. Slab	474+75.50	24.00'	729.90

SOUTH EDGE OF EB LANE

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	474+45.22	36.00'	729.89
A	474+55.22	36.00'	729.81
B	474+65.22	36.00'	729.73
E. End East Appr. Slab	474+75.22	36.00'	729.65

SOUTH EDGE OF EAST APPROACH SLAB

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	474+45.00	45.45'	729.70
A	474+55.00	45.45'	729.62
W.P. 3	474+55.50	45.45'	729.61
W.P. 4	474+55.50	46.41'	729.59
B	474+64.98	46.41'	729.52
E. End East Appr. Slab	474+74.98	46.41'	729.44

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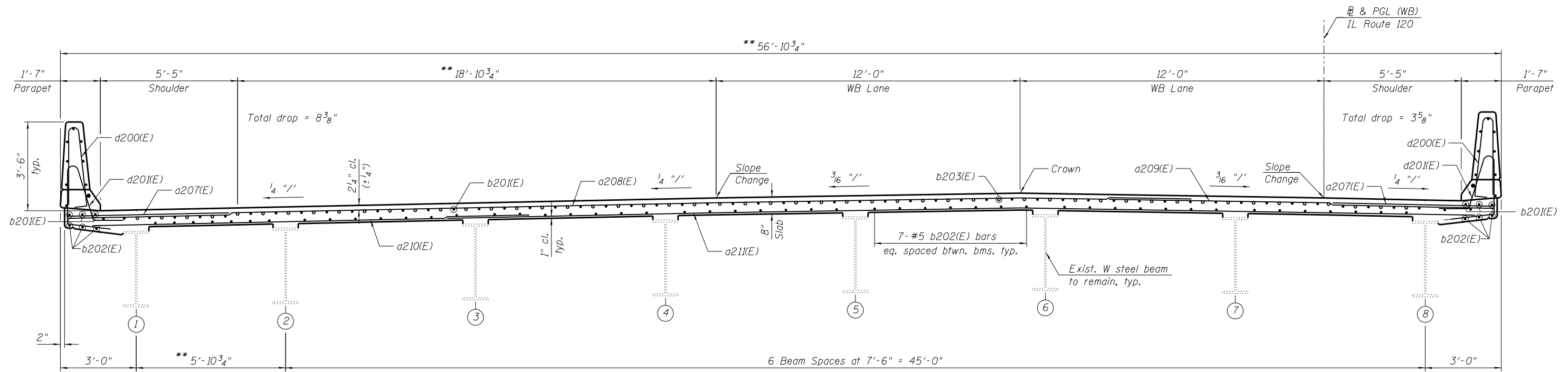
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STATE OF ILLINOIS
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TOP OF EAST APPROACH SLAB ELEVATIONS (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

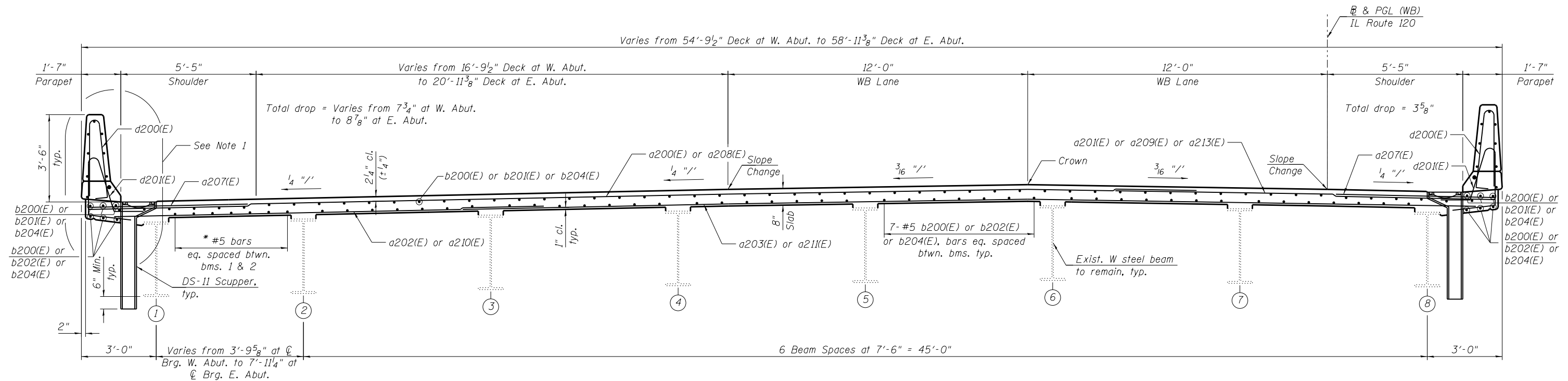
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F.A.P. RTE. 333/342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	



DECK CROSS SECTION (NEAR PIER 2)

(Looking East)



DECK CROSS SECTION (NEAR MIDSPAN)

(Looking East)

NOTES:

1. For Section Thru Parapet, bar diagrams and bill of materials see Sheet S-20.

- * 4- #5 b200(E) for Segment 1.
- 7- #5 b202(E) for Segment 2.
- 8- #5 b204(E) for Segment 3.

** Measured along ϕ Pier 2.

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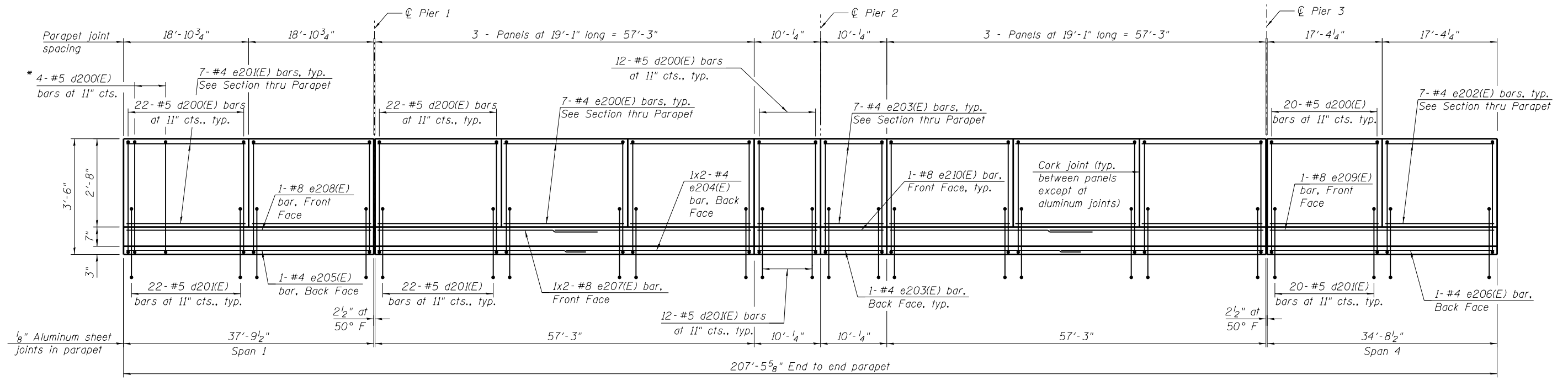
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DEPARTMENT OF TRANSPORTATION**

**DECK CROSS SECTION (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)**

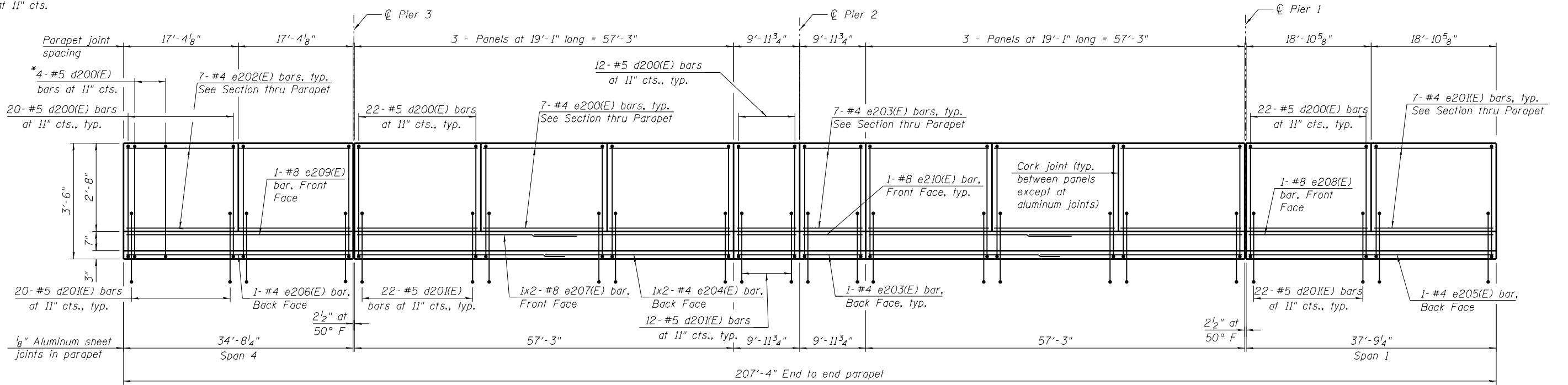
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F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	



INSIDE ELEVATION OF NORTH PARAPET
(Looking North)

* Typical at parapet ends and each side of full depth joints. Bars between #5 d200(E) bars at 11" cts.



INSIDE ELEVATION OF SOUTH PARAPET
(Looking South)

NOTES:

1. For notes, bar diagrams and bill of material, see Sheet S-20.
2. For approach slabs parapet details, see Sheet S-42.
3. Bars noted thus 1x2-#4 etc. indicates 1 line of bars with 2 bars per line.

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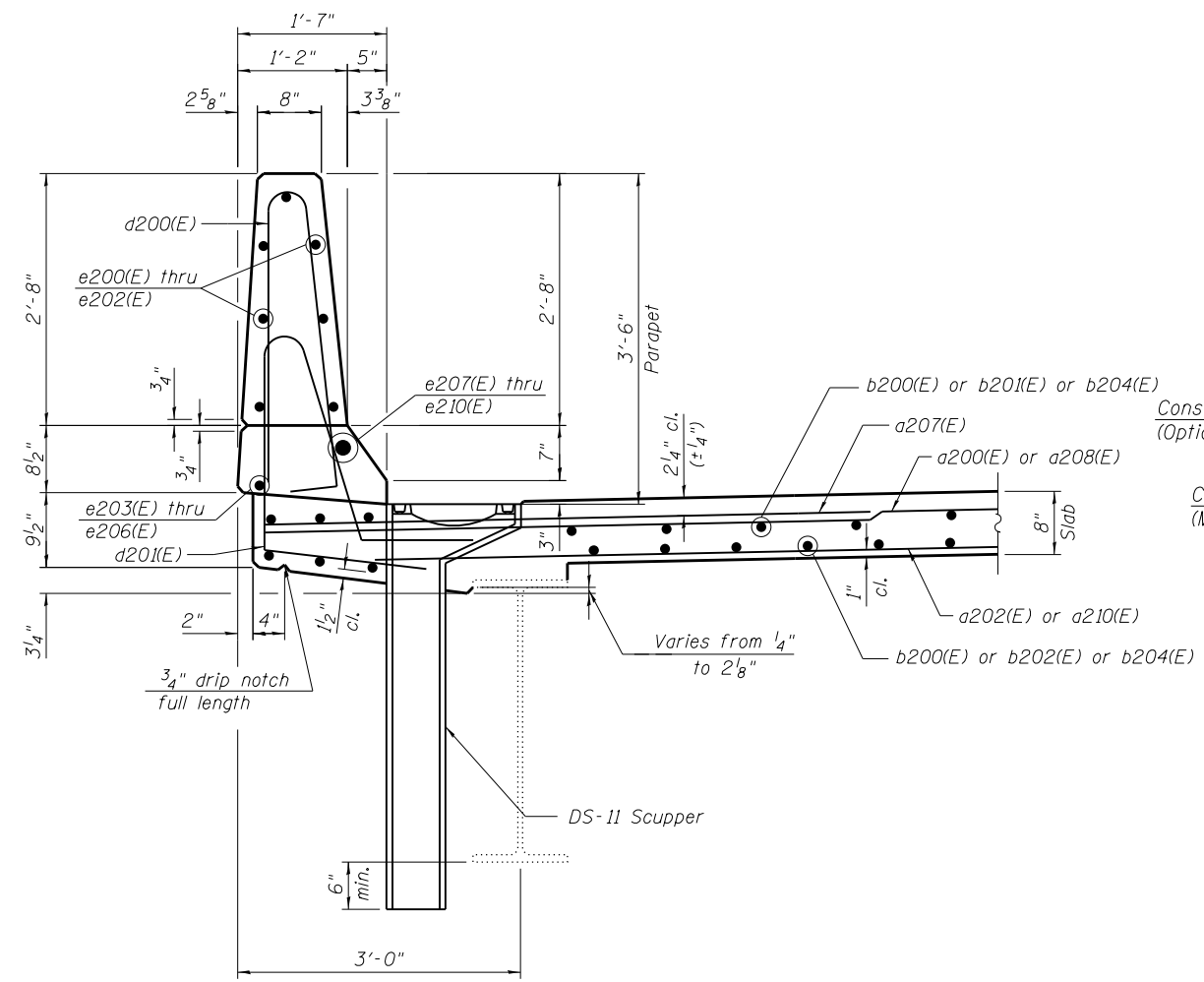
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET ELEVATIONS (WB)		
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)		
SCALE:	SHEET S-19 OF S-55 SHEETS	STA. TO STA.

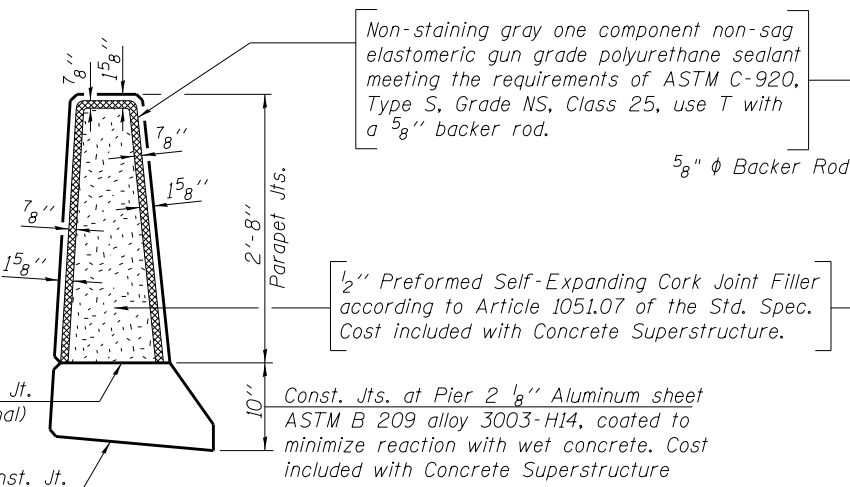
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ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a200(E)	76	#5	33'-3"	—
a201(E)	76	#5	24'-10"	—
a202(E)	102	#5	26'-2"	—
a203(E)	53	#5	31'-11"	—
a204(E)	3	#5	4'-8"	—
a205(E)	108	#5	8'-5"	—
a206(E)	6	#5	5'-5"	—
a207(E)	832	#6	6'-6"	—
a208(E)	340	#5	38'-6"	—
a209(E)	270	#5	22'-3"	—
a210(E)	182	#5	25'-5"	—
a211(E)	231	#5	35'-4"	—
a212(E)	6	#5	8'-2"	—
a213(E)	70	#5	22'-11"	—
a214(E)	3	#5	8'-10"	—
a215(E)	48	#5	1'-6"	—
b200(E)	112	#5	37'-6"	—
b201(E)	248	#5	35'-11"	—
b202(E)	275	#5	29'-4"	—
b203(E)	58	#6	44'-4"	—
b204(E)	119	#5	34'-4"	—
d200(E)	576	#5	6'-10"	—
d201(E)	480	#5	8'-1"	—
e200(E)	84	#4	18'-9"	—
e201(E)	28	#4	18'-7"	—
e202(E)	28	#4	17'-1"	—
e203(E)	32	#4	9'-8"	—
e204(E)	8	#4	29'-9"	—
e205(E)	2	#4	37'-7"	—
e206(E)	2	#4	34'-6"	—
e207(E)	8	#8	31'-10"	—
e208(E)	2	#8	37'-7"	—
e209(E)	2	#8	34'-6"	—
e210(E)	4	#8	9'-8"	—
x200(E)	286	#5	6'-5"	—
Concrete Superstructure		Cu. Yd.	361.1	
Bridge Deck Grooving		Sq. Yd.	1303	
Protective Coat		Sq. Yd.	1437	
Reinforced Bars, Epoxy Coated		Pound	97,320	



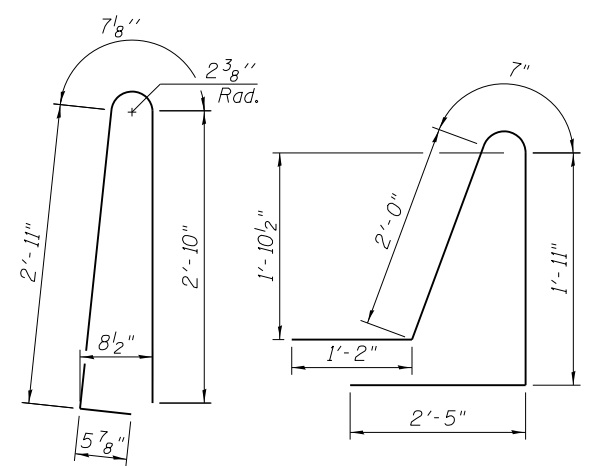
SECTION THRU PARAPET



PARAPET JOINT DETAILS
(At Pier 2)

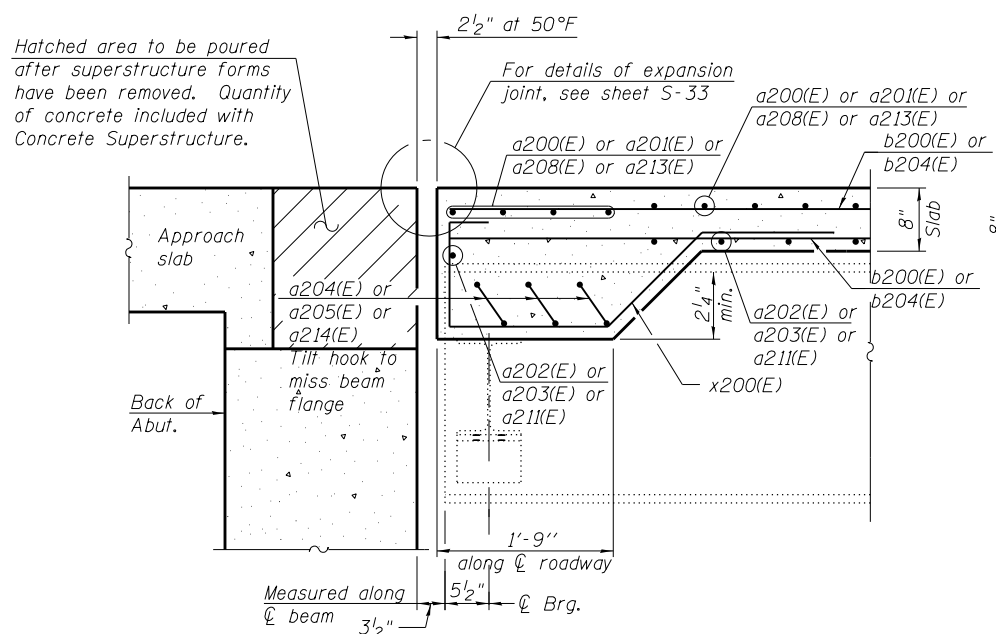
Bar	A
a204(E)	3'-6"
a205(E)	7'-3"
a206(E)	4'-3"
a212(E)	7'-0"
a214(E)	7'-8"

BARS a204(E), a205(E), a206(E), a212(E) & a214(E)

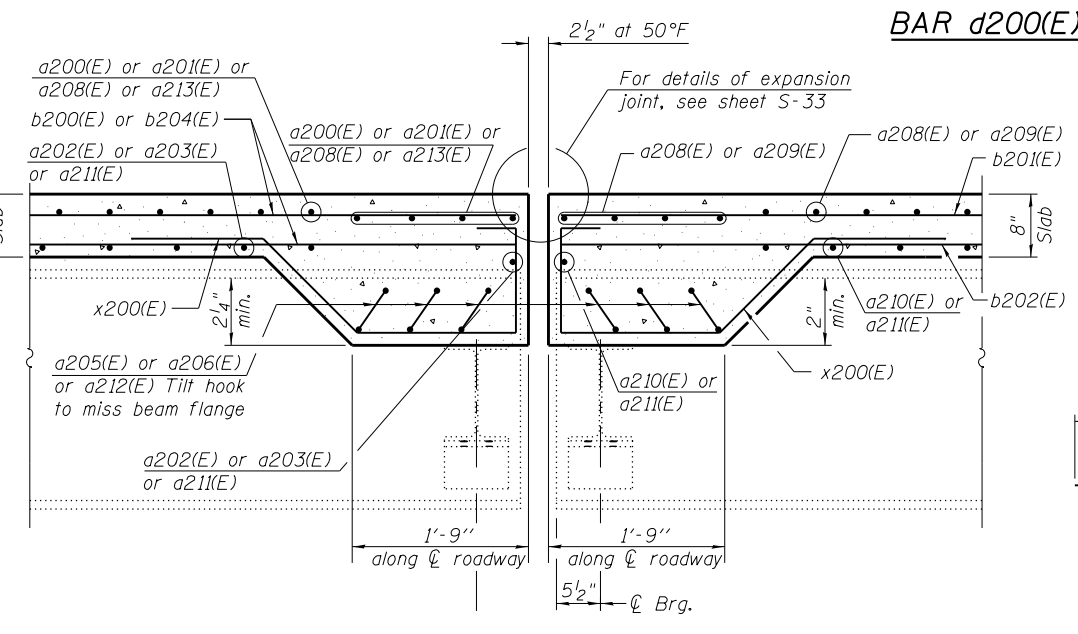


BAR d200(E)

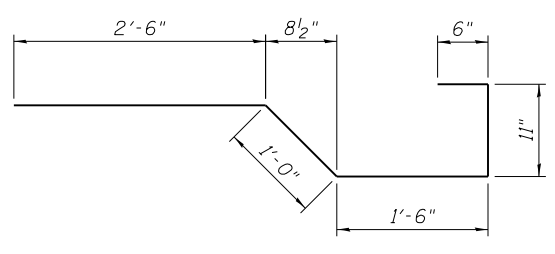
BAR d201(E)



SECTION A-A



SECTION B-B



BAR x200(E)

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#8	6'-9"

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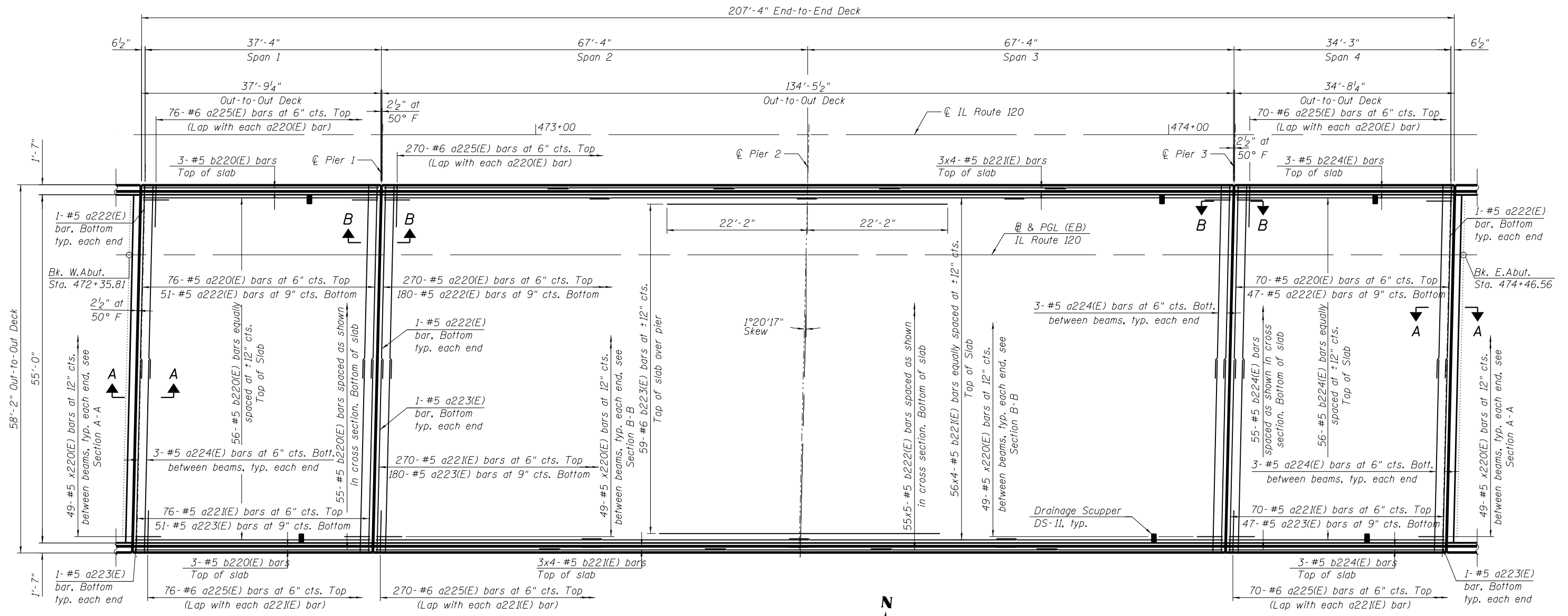
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK DETAILS, BAR LIST AND BILL OF MATERIAL (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-20 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	216
*12VB-1&2&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

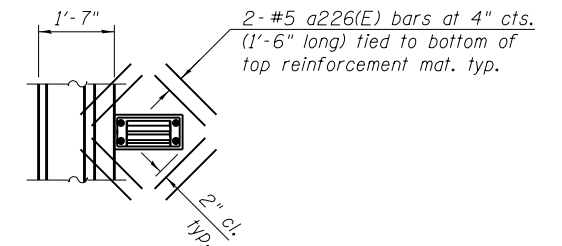


DECK PLAN (EB)



NOTES:

1. For cross section details, see Sheet S-22.
2. For section thru parapet, sections A-A & B-B at expansion joint, bar diagrams and bill of material, see Sheet S-24.
3. For scupper locations, see Sheet S-01.
4. Bars noted thus 3x4- #5 etc. indicates 3 lines of bars with 4 bars per line.



PLAN

(Cut longitudinal reinforcement to clear drainage scuppers)

FILE PATH = F:\1305-591_IL_120_Dwr_GreenLeaf\CADD_Sheets\21-0490126-60X40-DeckPlanEB.dgn

HBM
ENGINEERING GROUP, LLC
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PHONE: (708) 236-0900 FAX: (708) 236-0901

21-0490126-60X40-DeckPlanEB.dgn
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PLOT SCALE = 1/8" = 1'-0"
PLOT DATE = 3/20/2017

DESIGNED - MA
DRAWN - KJD, MA
CHECKED - MAI, MI
DATE - 03/20/2017

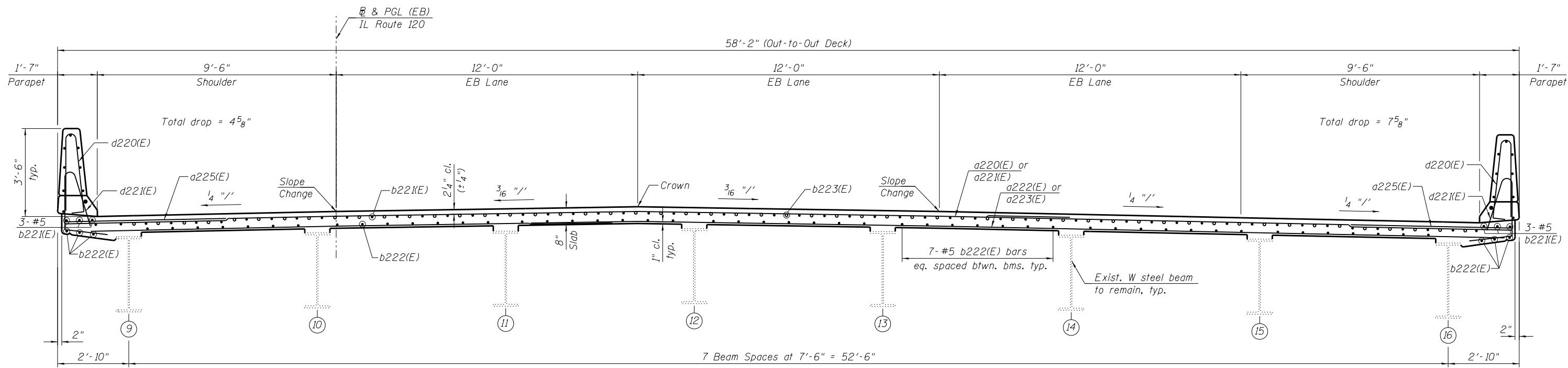
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PLAN (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

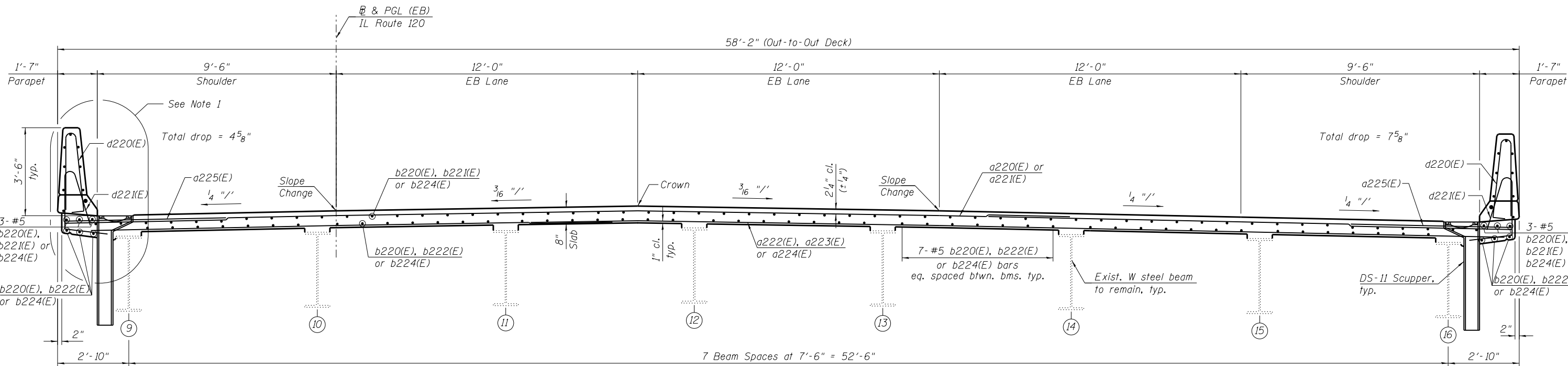
SCALE: SHEET S-21 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	



DECK CROSS SECTION (NEAR PIER 2)

(Looking East)



DECK CROSS SECTION (NEAR MIDSPAN)

(Looking East)

NOTES:

1. For Section Thru Parapet, bar diagrams and bill of materials see Sheet S-24.

FILE PATH = F:\1305-591_IL_120_Dvr_GreenLeaf_CADD_Sheets\22-0490126-60X40-DeckXSEB.dgn

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USER NAME = mustafa.alobaidi
PLOT SCALE = 4:0.0000 1' = 1/4"
PLOT DATE = 3/20/2017

DESIGNED - MA
DRAWN - KJD, MA
CHECKED - MAI, MI
DATE - 03/20/2017

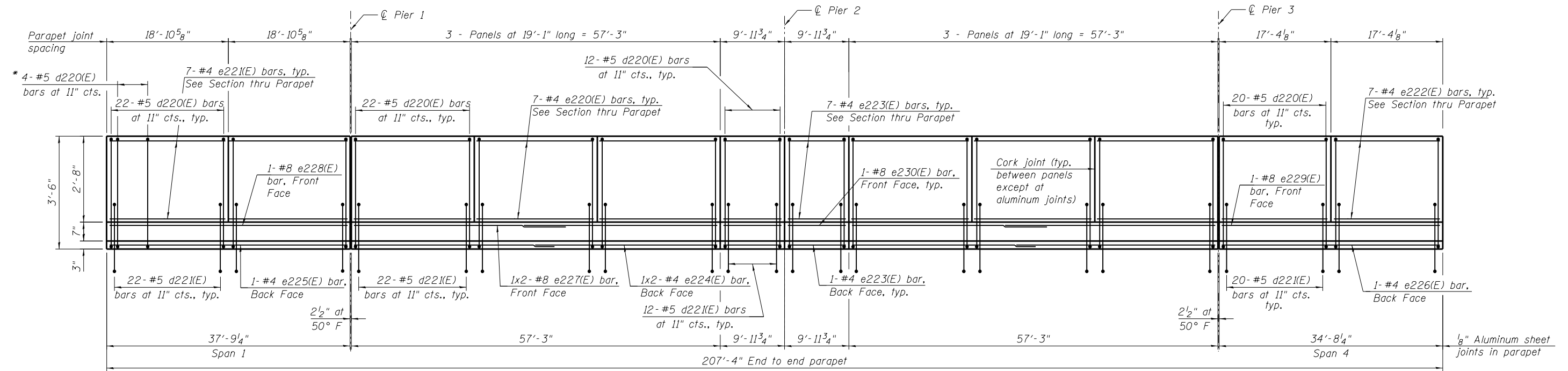
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REVISED

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**DECK CROSS SECTION (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)**

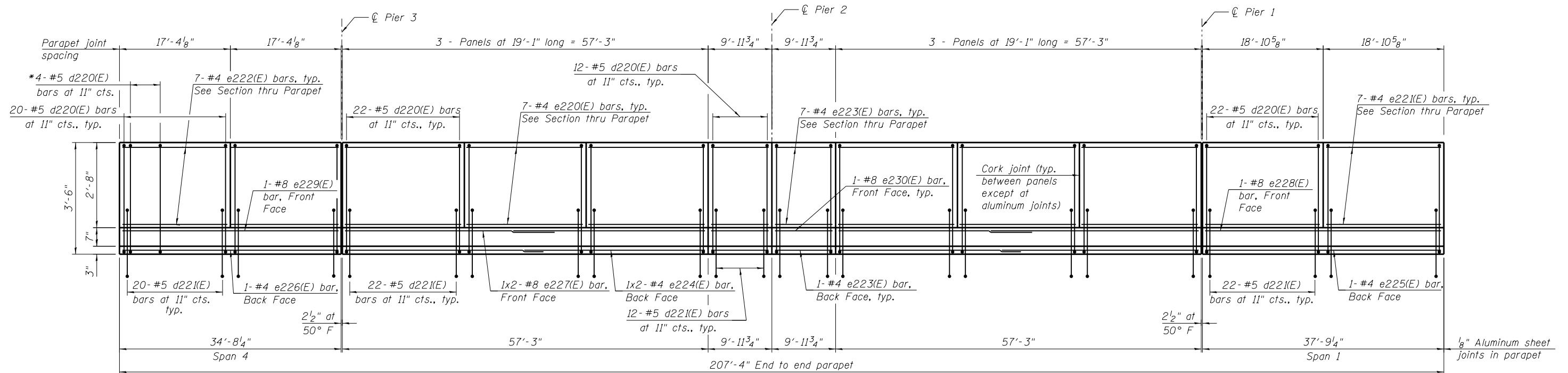
SCALE: SHEET S-22 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	218
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



INSIDE ELEVATION OF NORTH PARAPET
(Looking North)

* Typical at parapet ends and each side of full depth joints. Bars between #5 d220(E) bars at 11" cts.



INSIDE ELEVATION OF SOUTH PARAPET
(Looking South)

NOTES:

1. For notes, bar diagrams and bill of material, see Sheet S-24.
2. For approach slabs parapet details, see Sheet S-45.
3. Bars noted thus 1x2-#4 etc. indicates 1 line of bars with 2 bars per line.

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PLOT SCALE = 1/8" = 1'-0"
PLOT DATE = 3/20/2017

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CHECKED - MAI, MI
DATE - 03/20/2017

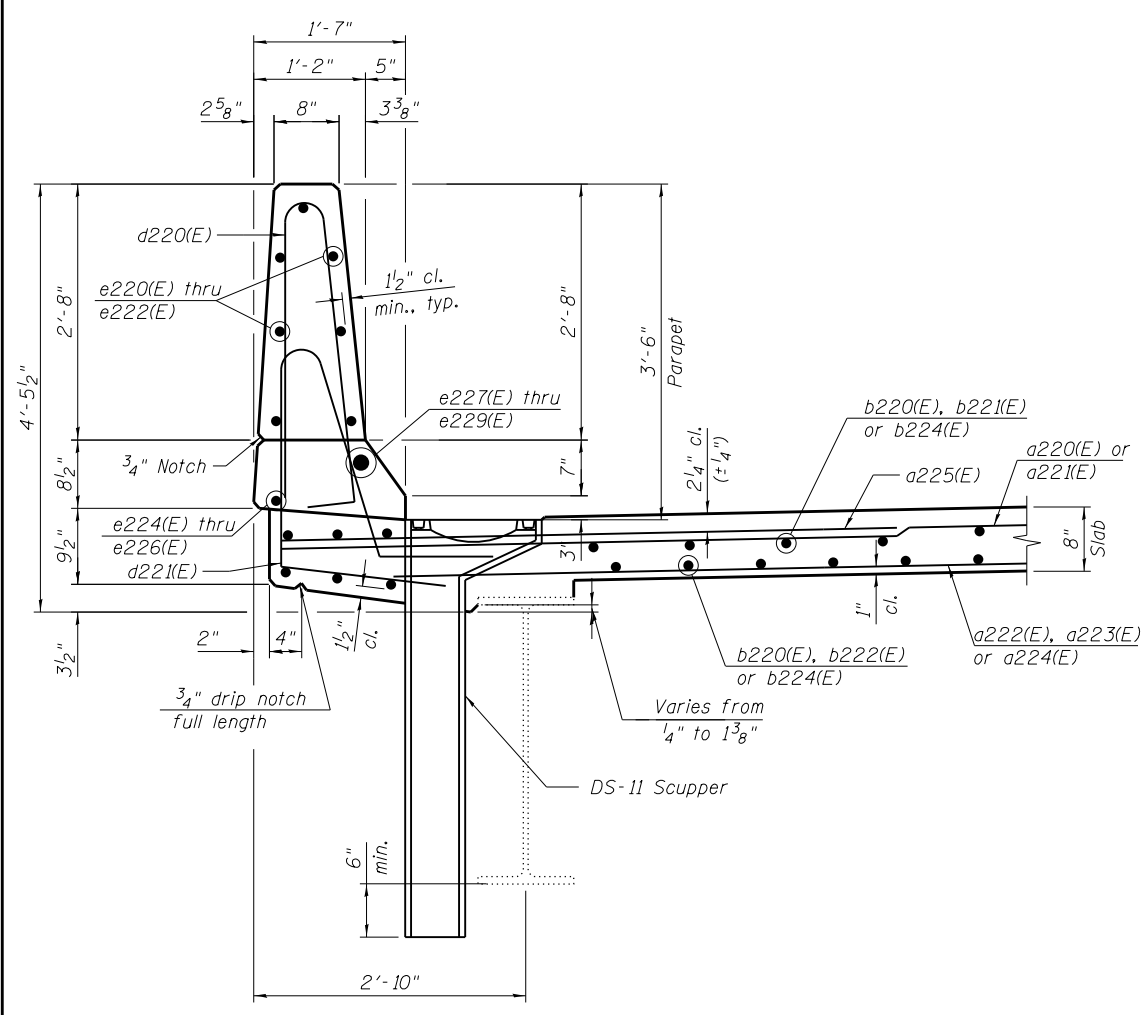
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DEPARTMENT OF TRANSPORTATION

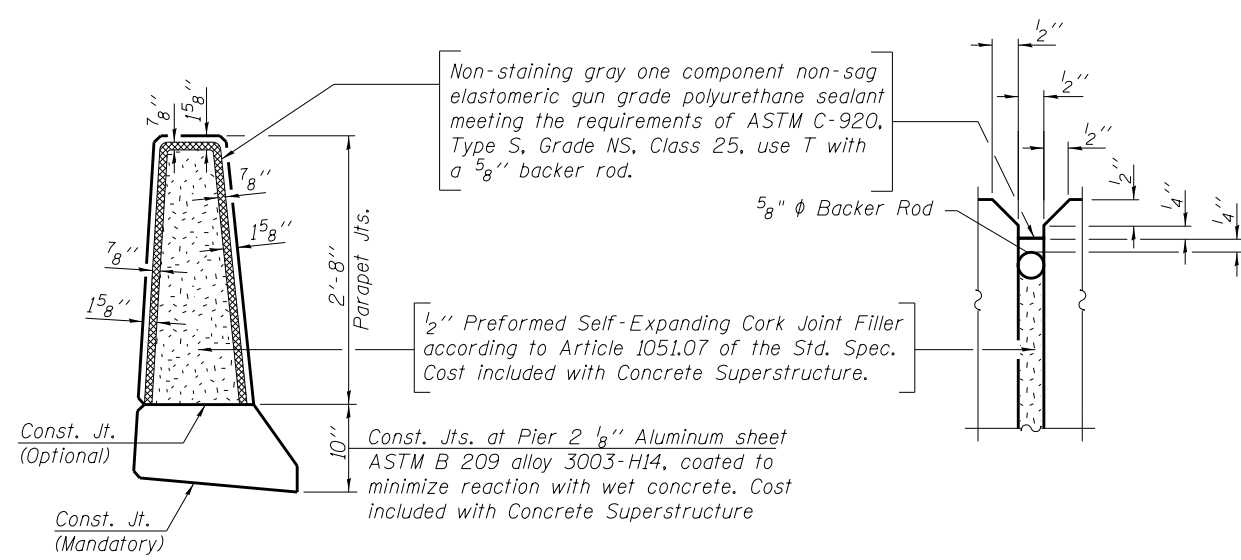
PARAPET ELEVATIONS (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-23 OF S-55 SHEETS STA. TO STA.

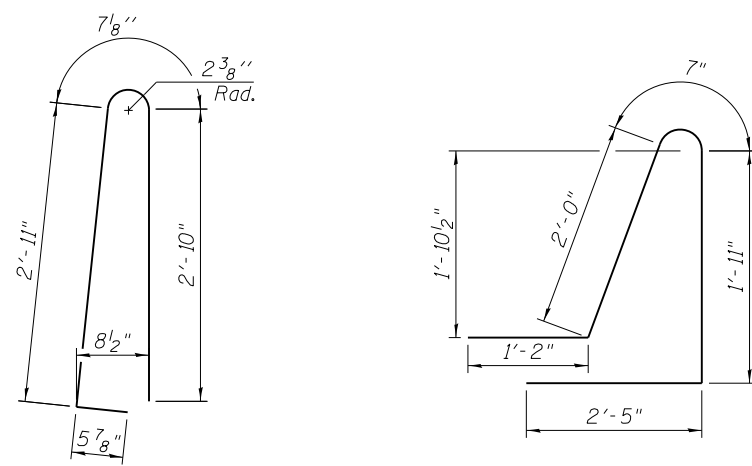
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	



SECTION THRU PARAPET

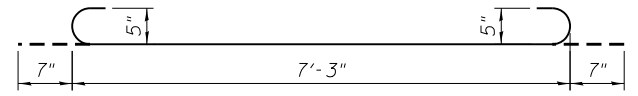


PARAPET JOINT DETAILS
(At Pier 2)

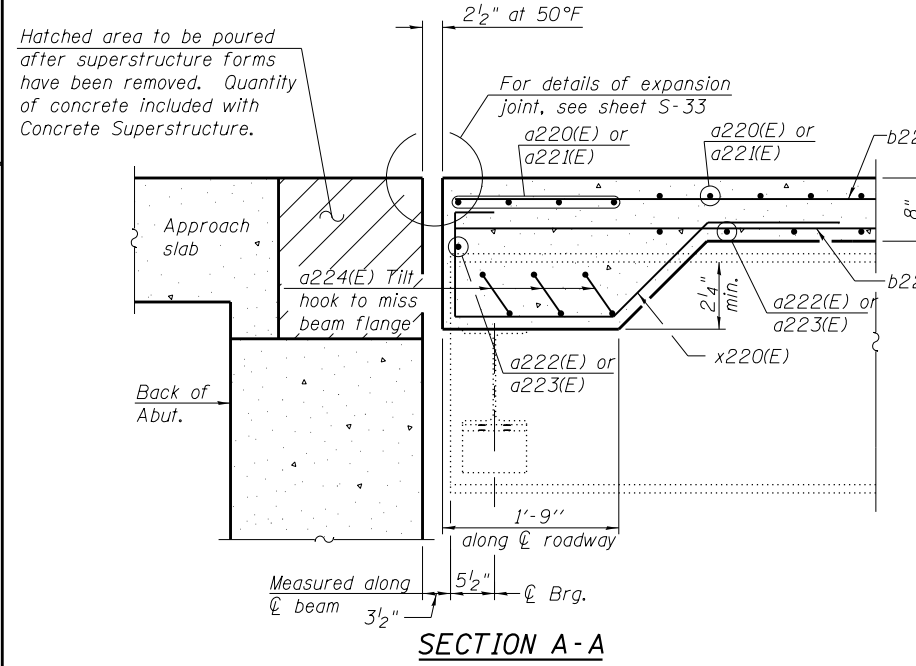


BAR d220(E)

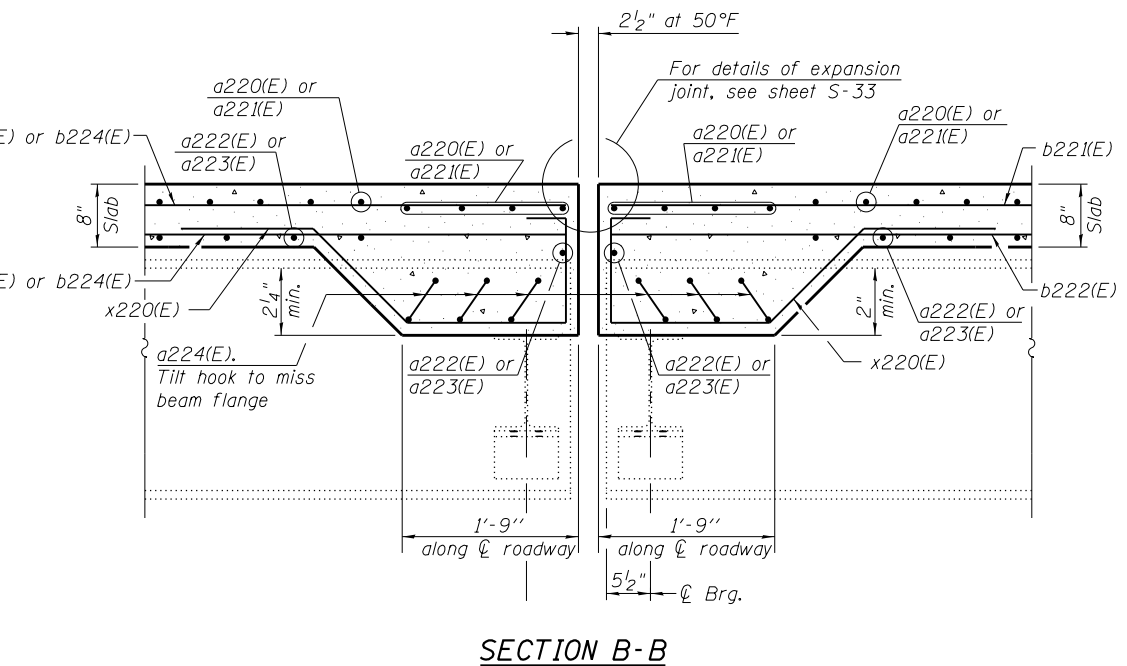
BAR d221(E)



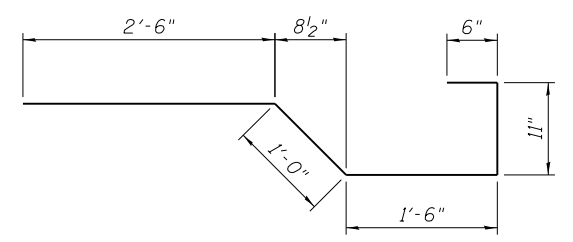
BARS a224(E)



SECTION A-A



SECTION B-B

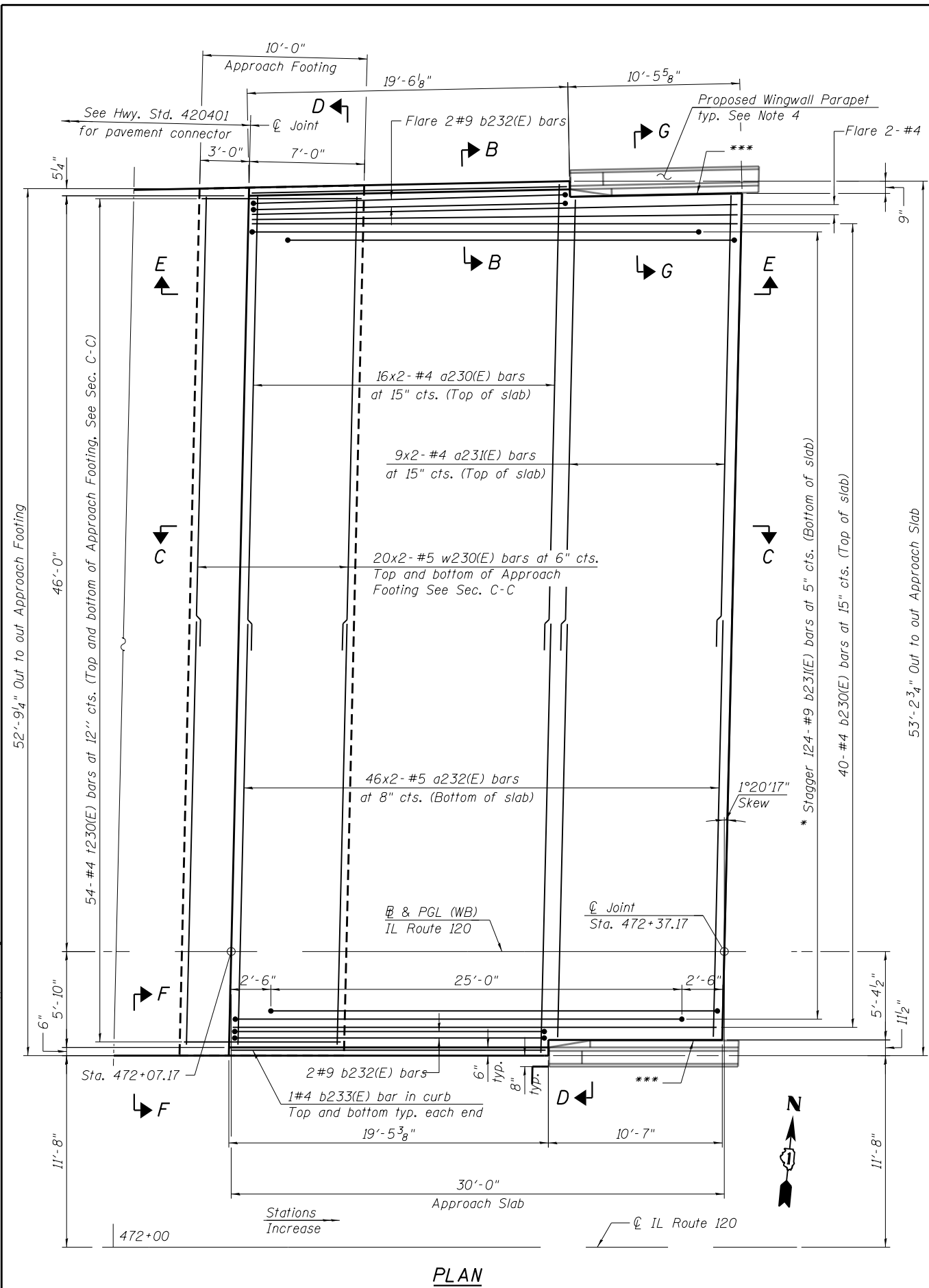


BAR x220(E)

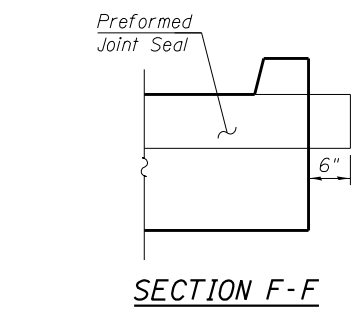
Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#8	6'-9"

BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
a220(E)	416	#5	40'-0"	—
a221(E)	416	#5	20'-8"	—
a222(E)	284	#5	20'-11"	—
a223(E)	284	#5	39'-9"	—
a224(E)	126	#5	8'-5"	—
a225(E)	832	#6	6'-6"	—
a226(E)	48	#5	1'-6"	—
b220(E)	117	#5	37'-5"	—
b221(E)	248	#5	35'-11"	—
b222(E)	275	#5	29'-5"	—
b223(E)	59	#6	44'-4"	—
b224(E)	117	#5	34'-4"	—
d220(E)	576	#5	6'-10"	—
d221(E)	480	#5	8'-1"	—
e220(E)	84	#4	18'-9"	—
e221(E)	28	#4	18'-7"	—
e222(E)	28	#4	17'-1"	—
e223(E)	32	#4	9'-8"	—
e224(E)	8	#4	29'-9"	—
e225(E)	2	#4	37'-7"	—
e226(E)	2	#4	34'-6"	—
e227(E)	8	#8	31'-10"	—
e228(E)	2	#8	37'-7"	—
e229(E)	2	#8	34'-6"	—
e230(E)	4	#8	9'-8"	—
x220(E)	294	#5	6'-5"	—
Concrete Superstructure		Cu. Yd.	369.7	
Bridge Deck Grooving		Sq. Yd.	1268	
Protective Coat		Sq. Yd.	1467	
Reinforced Bars, Epoxy Coated		Pound	97,480	

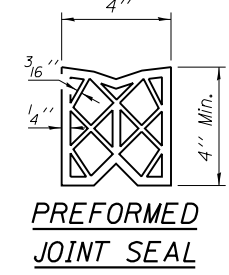
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 HBM ENGINEERING GROUP, LLC
 4415 WEST HARRISON STREET, SUITE 231
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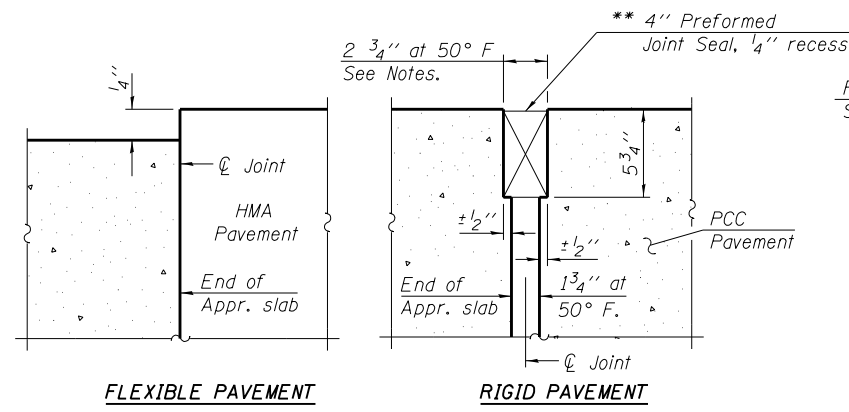
PLAN



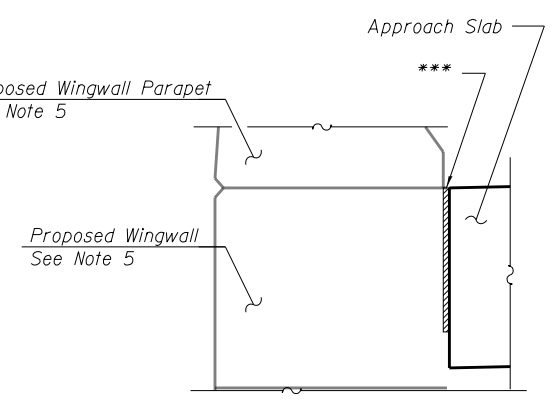
SECTION F-F



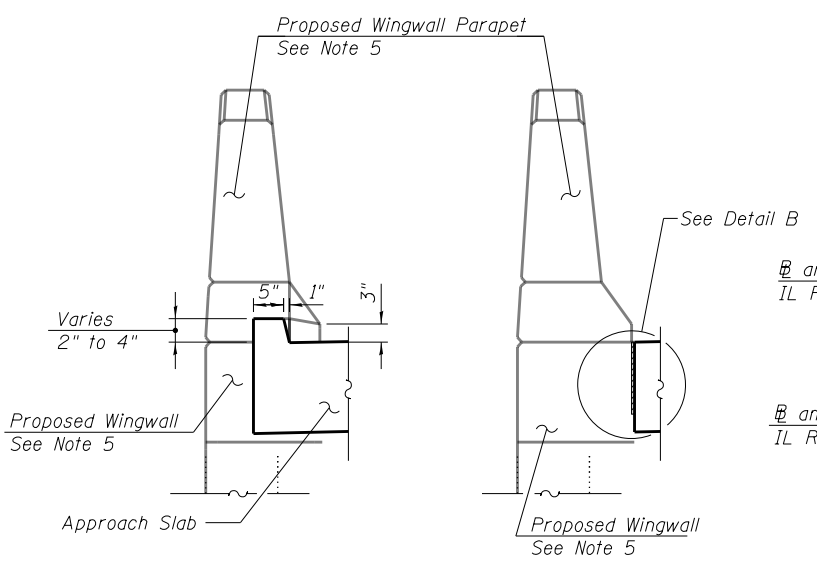
PREFORMED JOINT SEAL



DETAIL A

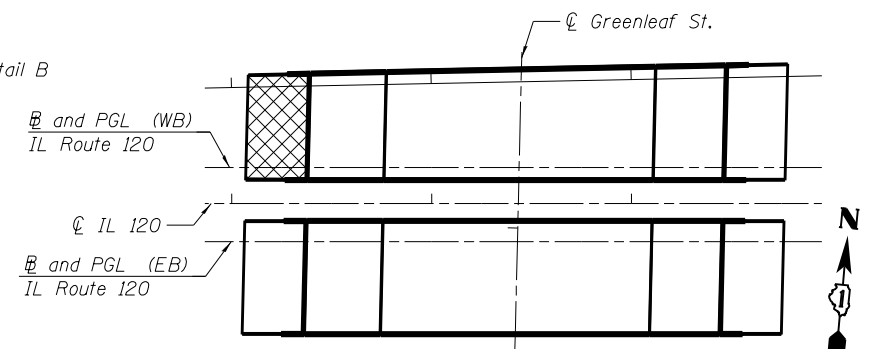


DETAIL B



SECTION B-B

SECTION G-G



KEY PLAN

NOTES:

1. See sheet S-26 for Sections C-C, D-D, & E-E.
2. a230(E), a231(E) and a232(E) bar spacings measured along \hat{C} Rdwy.
3. Bars indicated thus 20x2-#5 etc. indicates 20 lines of bars with 2 lengths per line.
4. For Proposed Wingwall & Wingwall Parapet Details See Sheet S-42.

- * Tilt #9 b231(E) bars as required to maintain clearance.
- ** Cost included with Concrete Superstructure (Approach Slab).
- *** Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet along the edges where the approach slab meets the wingwalls. Typ. each parapet.

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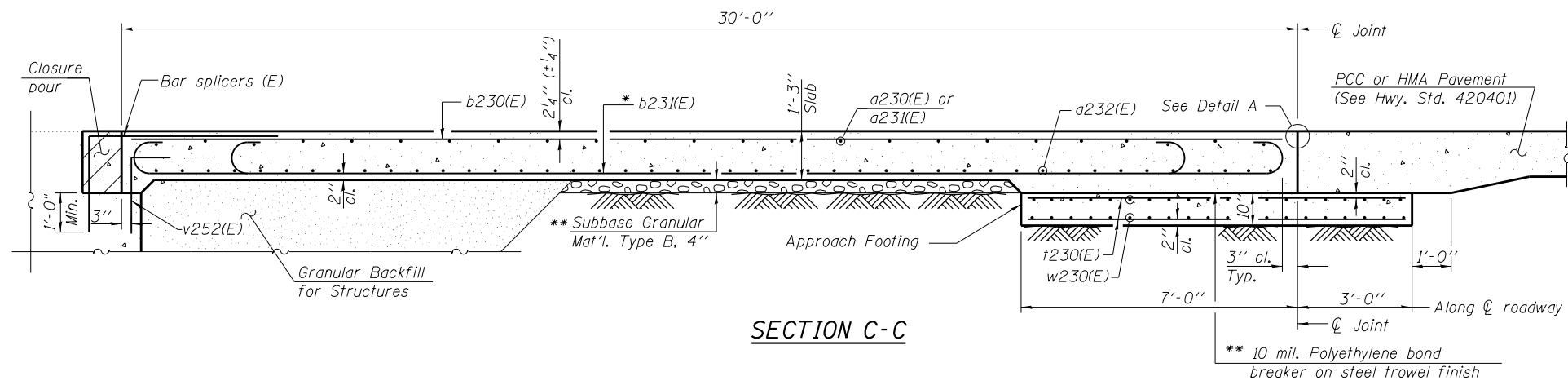
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PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST APPROACH SLAB (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)**

SCALE: SHEET S-25 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2		LAKE	288	221
CONTRACT NO. 60X40			ILLINOIS FED. AID PROJECT	



SECTION C-C

NOTES:

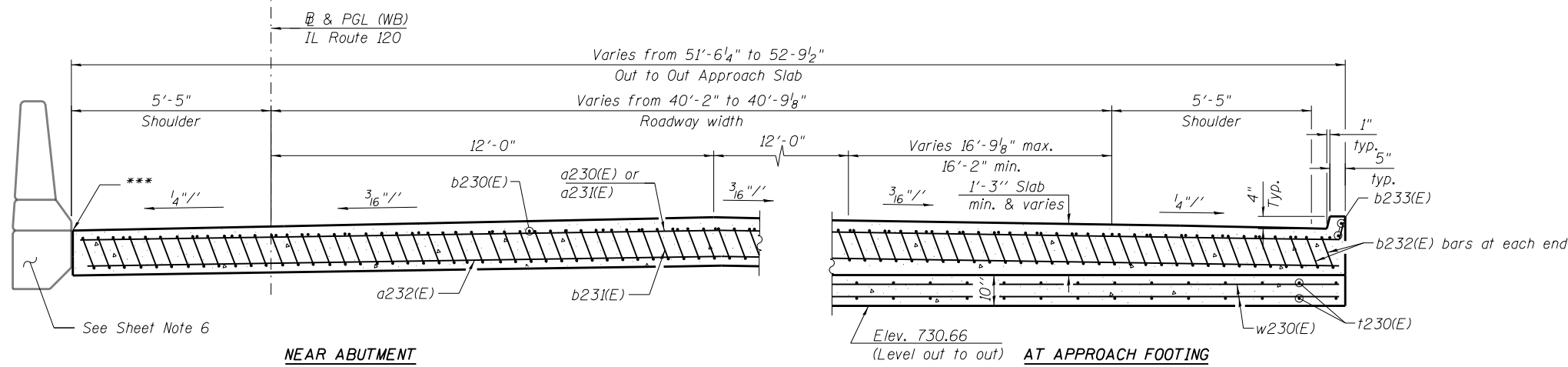
1. See sheet S-25 for Detail A.
2. Approach slab shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v252(E) bar detail, see sheet S-40
6. For Proposed Wingwall & Wingwall Parapet Details See Sheet S-42.

- * Tilt #9 b231(E) and b232(E) bars as required to maintain clearance.
- ** Cost included with Concrete Superstructure (Approach Slab).
- *** Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet along the edges where the approach slab meets the wingwalls. Typ. each parapet.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a230(E)	32	#4	28'-6"	—
a231(E)	18	#4	26'-10"	—
a232(E)	92	#5	28'-5"	—
b230(E)	42	#4	29'-8"	—
b231(E)	124	#9	29'-9"	—
b232(E)	4	#9	21'-5"	—
b233(E)	4	#4	19'-1"	—
t230(E)	108	#4	9'-8"	—
w230(E)	80	#5	28'-1"	—
Concrete Structures			Cu. Yd.	16.3
Bridge Deck Grooving			Sq. Yd.	165
Protective Coat			Sq. Yd.	175
Concrete Superstructure (Approach Slab)			Cu. Yd.	78.3
Reinforcement Bars, Epoxy Coated			Pound	20,419

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"

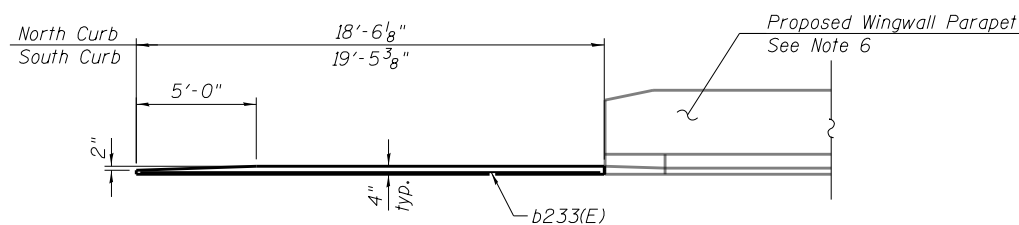


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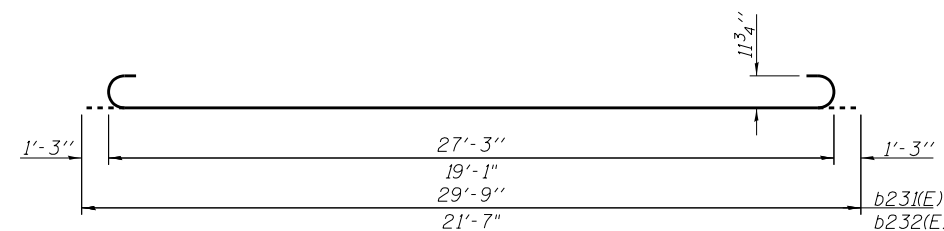
SECTION D-D

(See Plan for dimensions not shown)

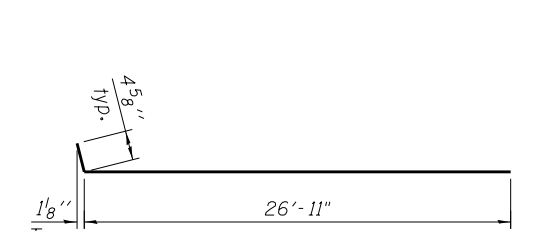
AT APPROACH FOOTING



SECTION E-E



BAR b231(E) or b232(E)



BAR a230(E)

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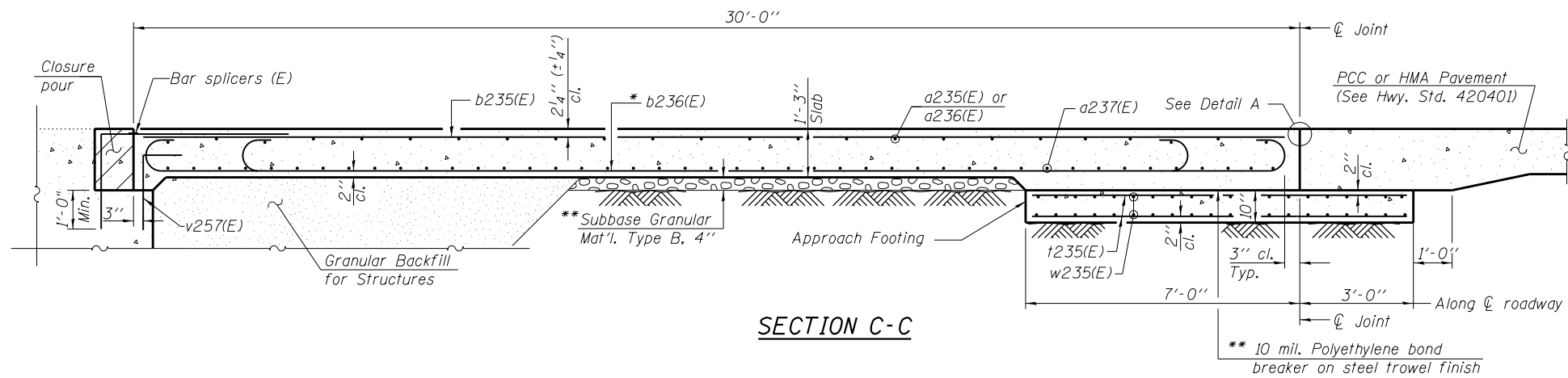
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PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST APPROACH SLAB SECTIONS AND DETAILS (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)**

SCALE: SHEET S-26 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2		LAKE	288	222
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	



Notes:

1. See sheet S-27 for Detail A.
2. Approach slab shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v257(E) bar details, see sheet S-41.

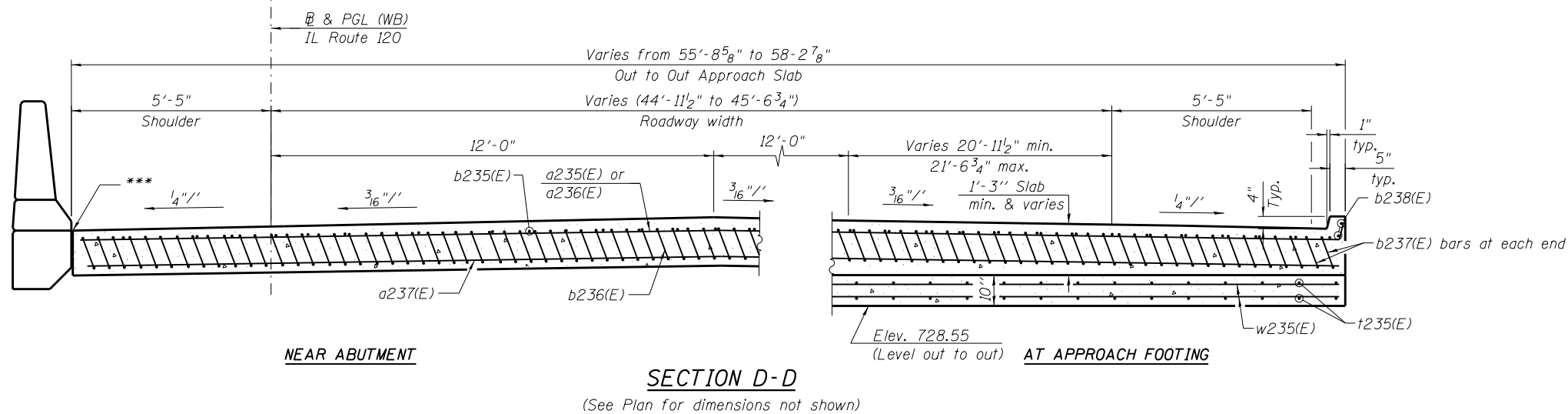
* Tilt #9 b236(E) and b237(E) bars as required to maintain clearance.

** Cost included with Concrete Superstructure (Approach Slab).

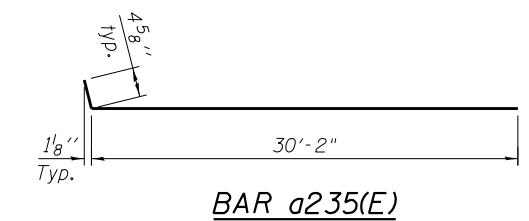
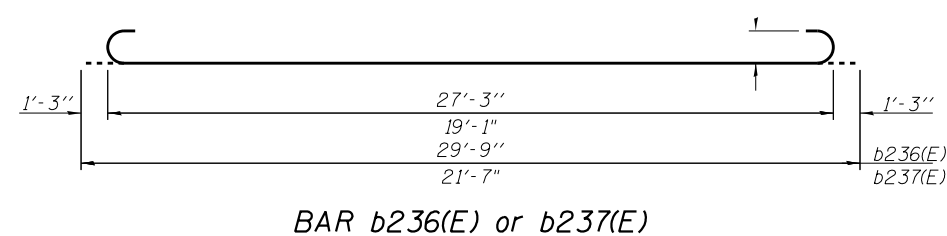
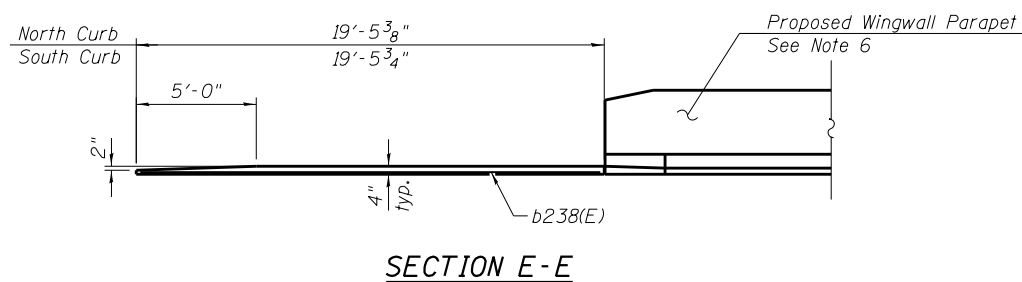
*** Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet along the edges where the approach slab meets the wingwalls. Typ. each parapet.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a235(E)	32	#4	30'-8"	—	
a236(E)	18	#4	29'-1"	—	
a237(E)	92	#5	30'-6"	—	
b235(E)	46	#4	29'-8"	—	
b236(E)	135	#9	29'-9"	—	
b237(E)	4	#9	21'-7"	—	
b238(E)	4	#4	19'-1"	—	
t235(E)	118	#4	9'-8"	—	
w235(E)	80	#5	30'-6"	—	
Concrete Structures				Cu. Yd.	17.9
Bridge Deck Grooving				Sq. Yd.	181
Protective Coat				Sq. Yd.	191
Concrete Superstructure (Approach Slab)				Cu. Yd.	85.5
Reinforcement Bars, Epoxy Coated				Pound	22,152



Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"



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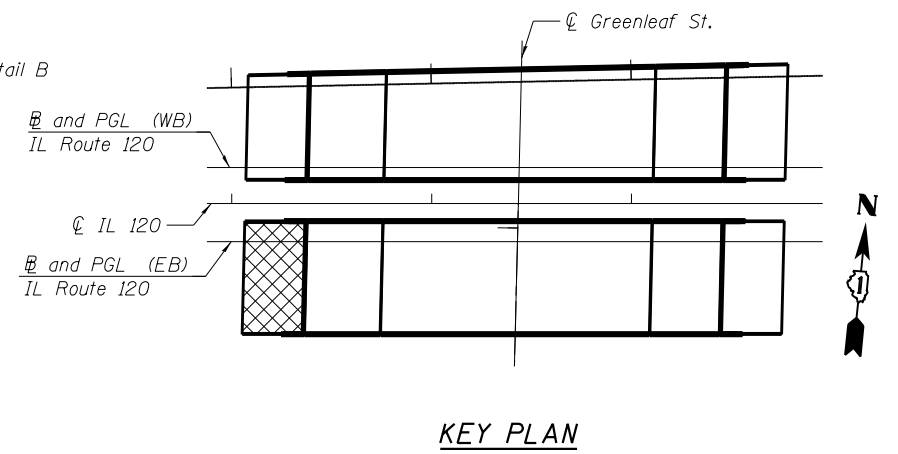
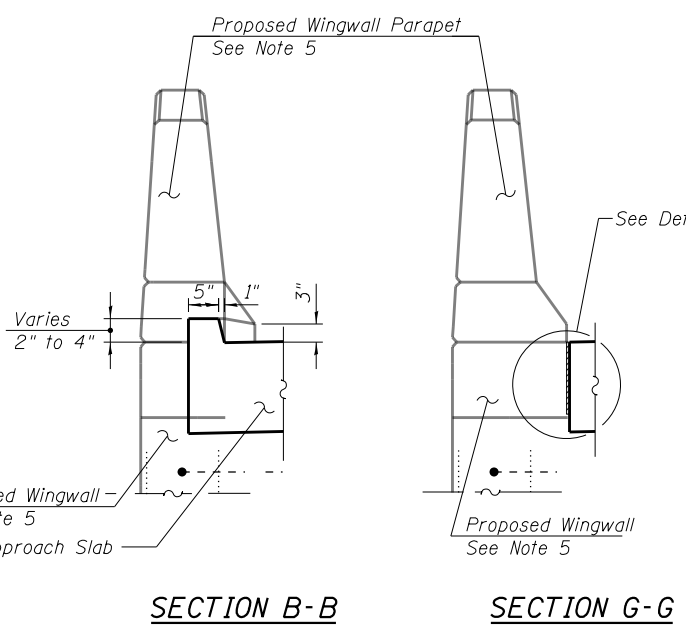
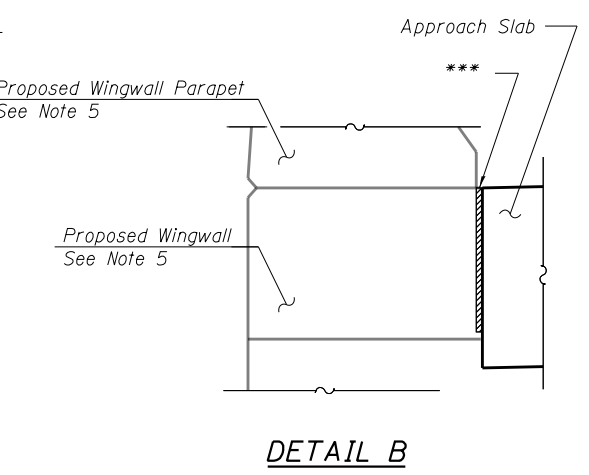
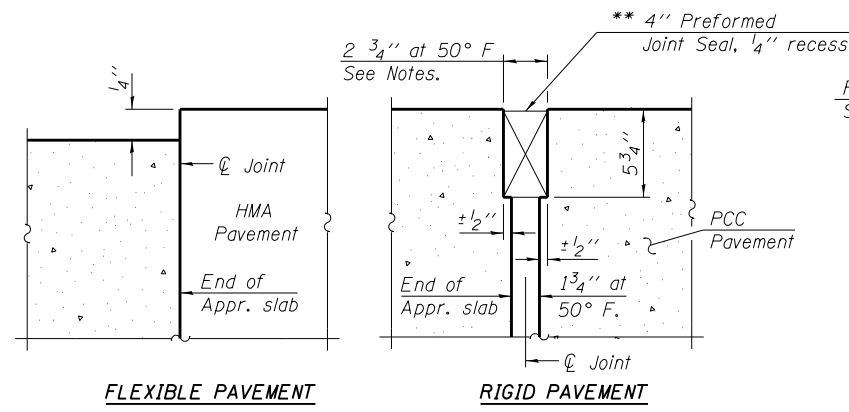
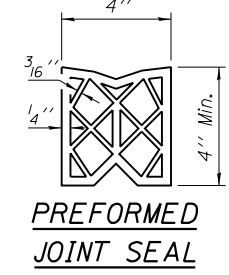
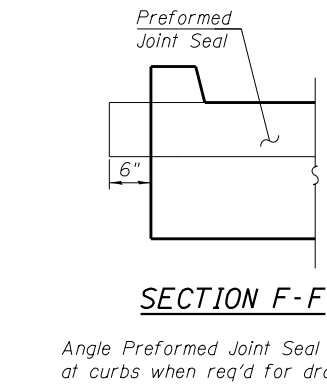
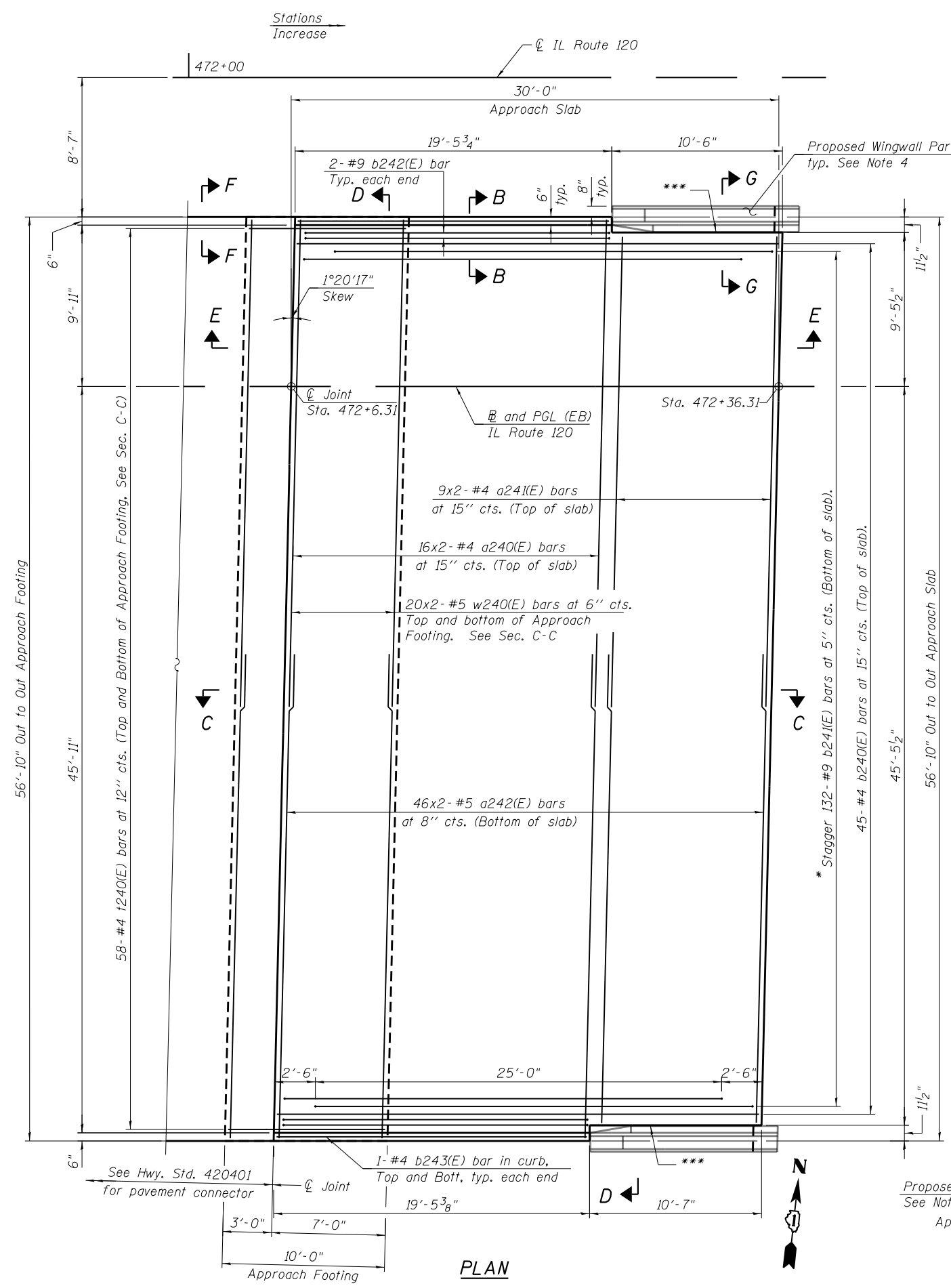
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PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST APPROACH SLAB SECTIONS AND DETAILS (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-28 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333/342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2		LAKE	288	224
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	



NOTES:

1. See Sheet S-30 for Sections C-C, D-D and E-E.
 2. a240(E), a241(E) and a242(E) bar spacings measured along \bar{C} Rdwy.
 3. Bars indicated thus 20x2-#5 etc. indicates 20 lines of bars with 2 lengths per line.
 4. For Proposed Wingwall & Wingwall Parapet Details See Sheet S-45.
- * Tilt #9 b241(E) bars as required to maintain clearance.
 ** Cost included with Concrete Superstructure (Approach Slab).
 *** Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet along the edges where the approach slab meets the wingwalls. Typ. each parapet.

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 4415 WEST HARRISON STREET, SUITE 231
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 PHONE: (708) 236-0900 FAX: (708) 236-0901

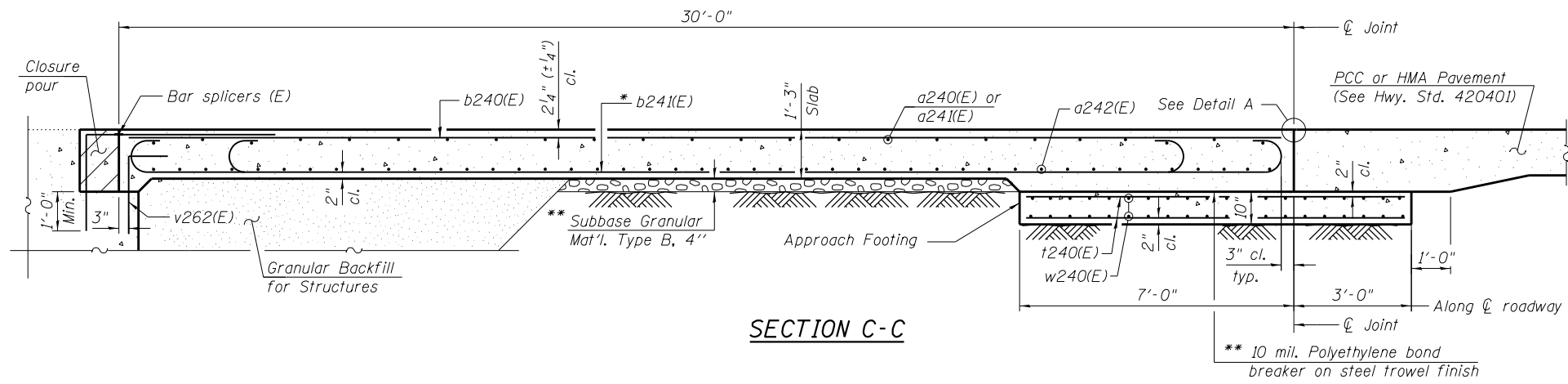
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PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST APPROACH SLAB (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-29 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	

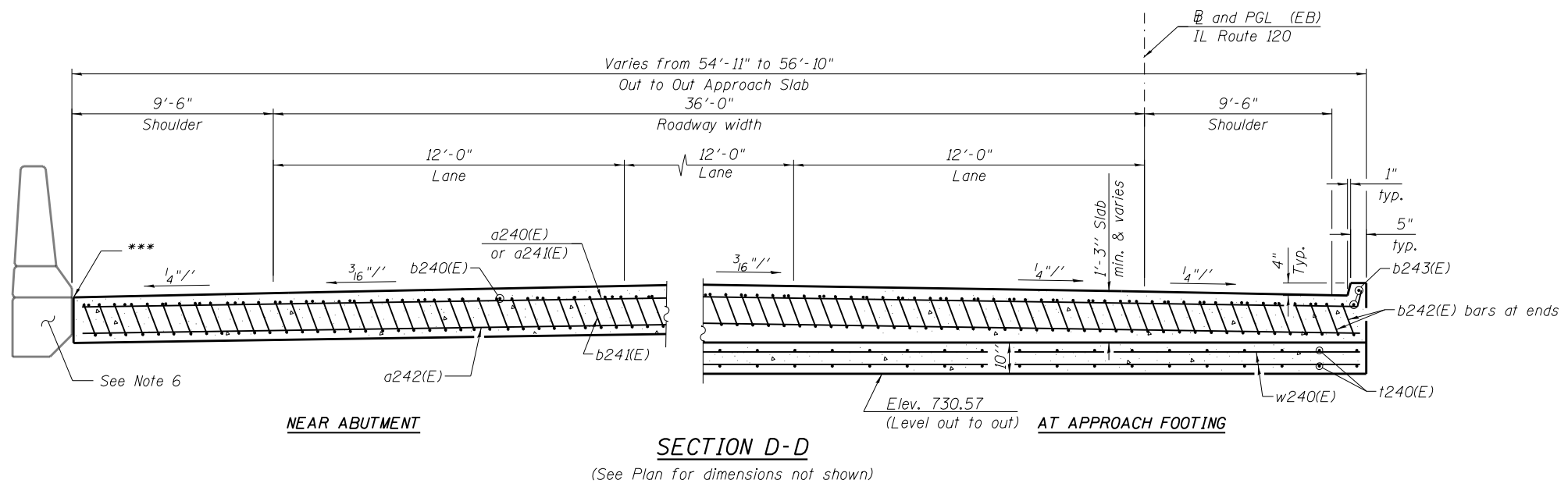


Notes:

1. See sheet S-29 for Detail A.
2. Approach slab shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v262(E) bar details, see sheet S-43.
6. For Proposed Wingwall & Wingwall Parapet Details See Sheet S-45.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a240(E)	32	#4	30'-0"	—
a241(E)	18	#4	28'-7"	—
a242(E)	92	#5	29'-10"	—
b240(E)	45	#4	29'-8"	—
b241(E)	132	#9	29'-9"	—
b242(E)	4	#9	21'-8"	—
b243(E)	4	#4	19'-2"	—
t240(E)	116	#4	9'-8"	—
w240(E)	80	#5	29'-10"	—
Concrete Structures			Cu. Yd.	17.5
Bridge Deck Grooving			Sq. Yd.	177
Protective Coat			Sq. Yd.	189
Concrete Superstructure (Approach Slab)			Cu. Yd.	83.9
Reinforcement Bars, Epoxy Coated			Pound	21,680



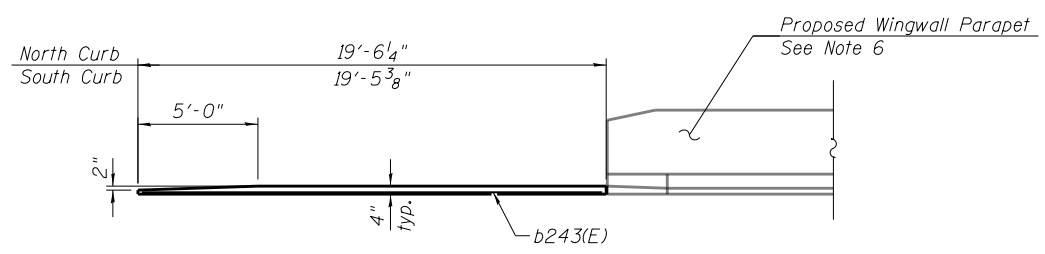
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SECTION D-D

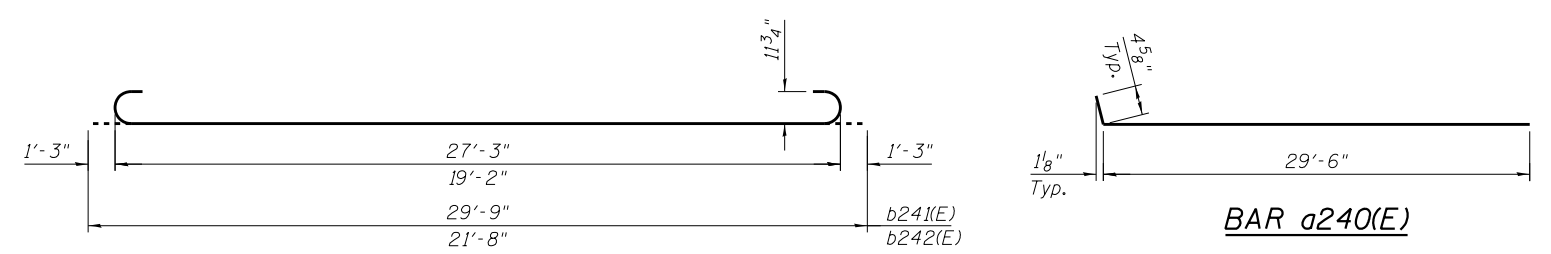
(See Plan for dimensions not shown)

- * Tilt #9 b241(E) and b242(E) bars as required to maintain clearance.
- ** Cost included with Concrete Superstructure (Approach Slab).
- *** Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet along the edges where the approach slab meets the wingwalls. Typ. each parapet.

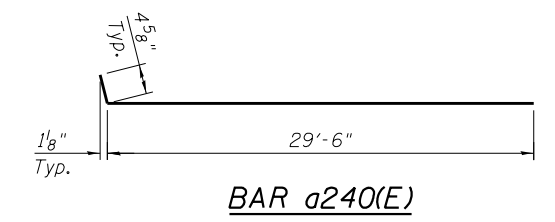
Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"



SECTION E-E



BARS b241(E) OR b242(E)



BAR a240(E)

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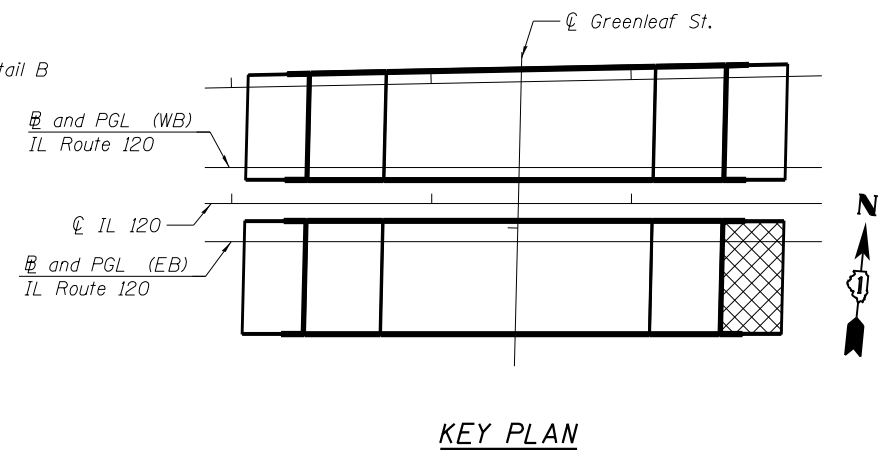
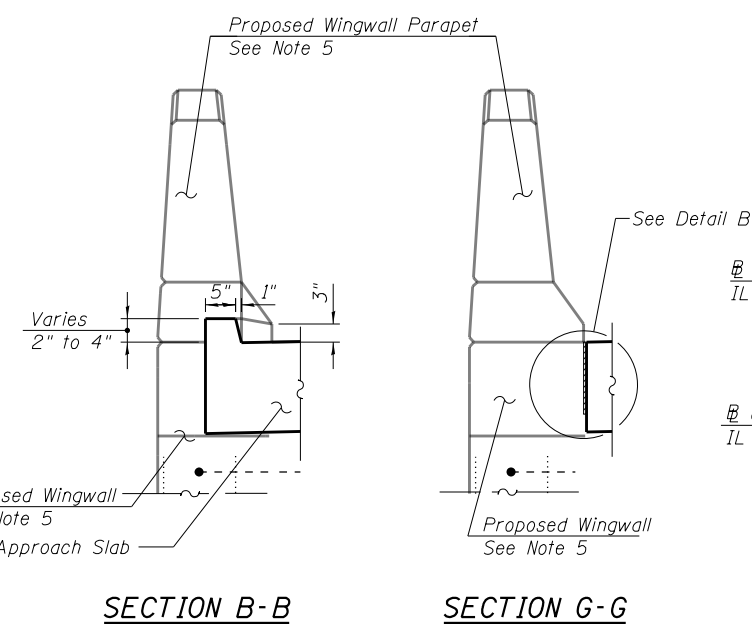
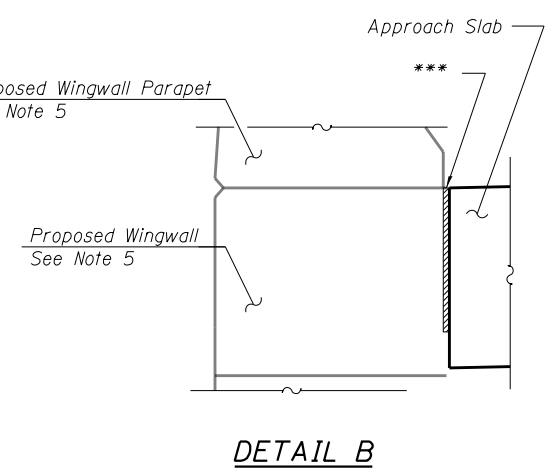
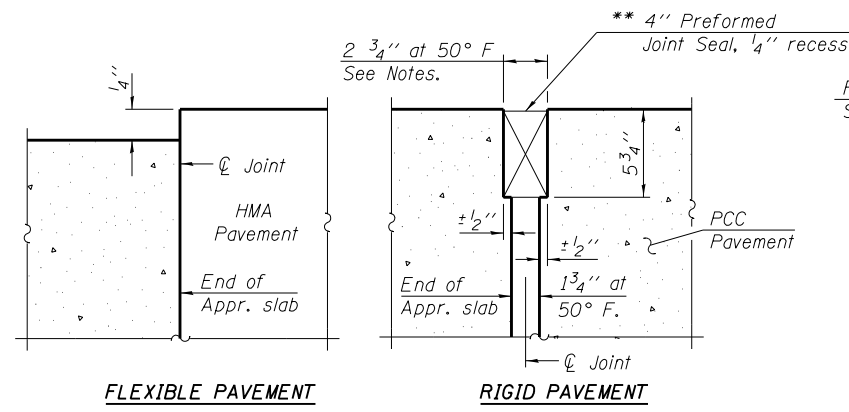
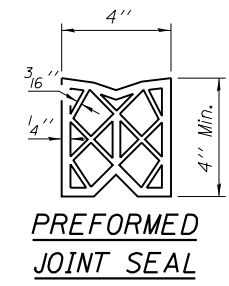
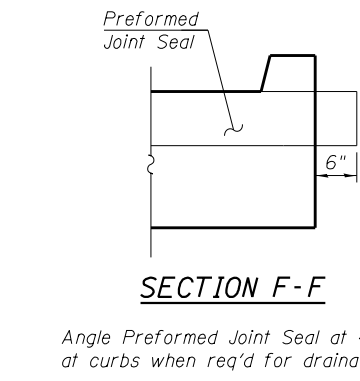
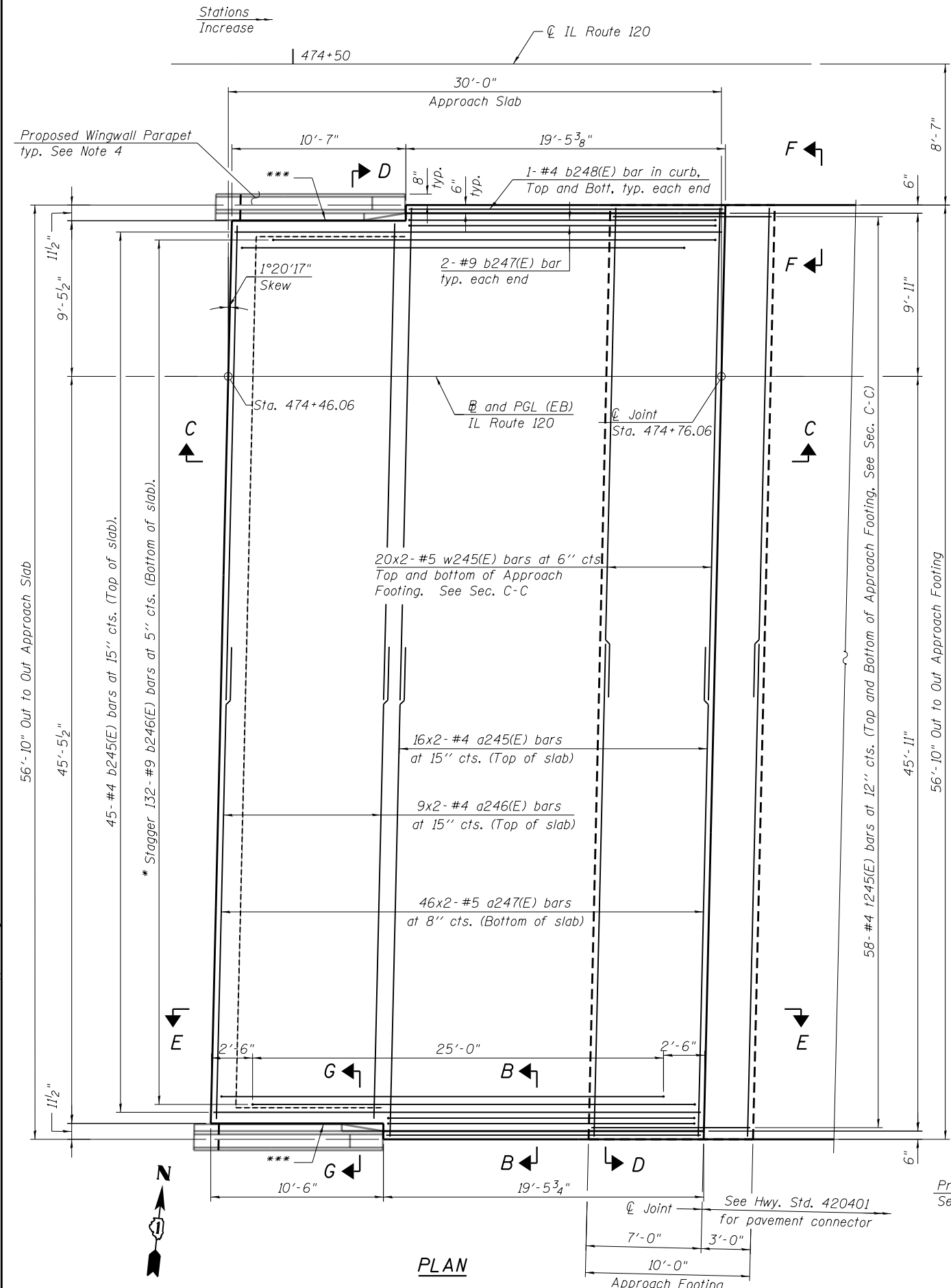
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PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST APPROACH SLAB SECTIONS AND DETAILS (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-30 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*12VB-1&2&12R-1HB-2(BR)&12-RS-2	•	LAKE	288	226
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	



- NOTES:**
- See Sheet S-32 for Sections C-C, D-D and E-E.
 - a245(E), a246(E) and a247(E) bar spacings measured along \bar{C} Rdwy.
 - Bars indicated thus 20x2-#5 etc. indicates 20 lines of bars with 2 lengths per line.
 - For Proposed Wingwall & Wingwall Parapet Details See Sheet S-45.
- * Tilt #9 b246(E) bars as required to maintain clearance.
 - ** Cost included with Concrete Superstructure (Approach Slab).
 - *** Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet along the edges where the approach slab meets the wingwalls. Typ. each parapet.

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ENGINEERING GROUP, LLC
4415 WEST HARRISON STREET, SUITE 231
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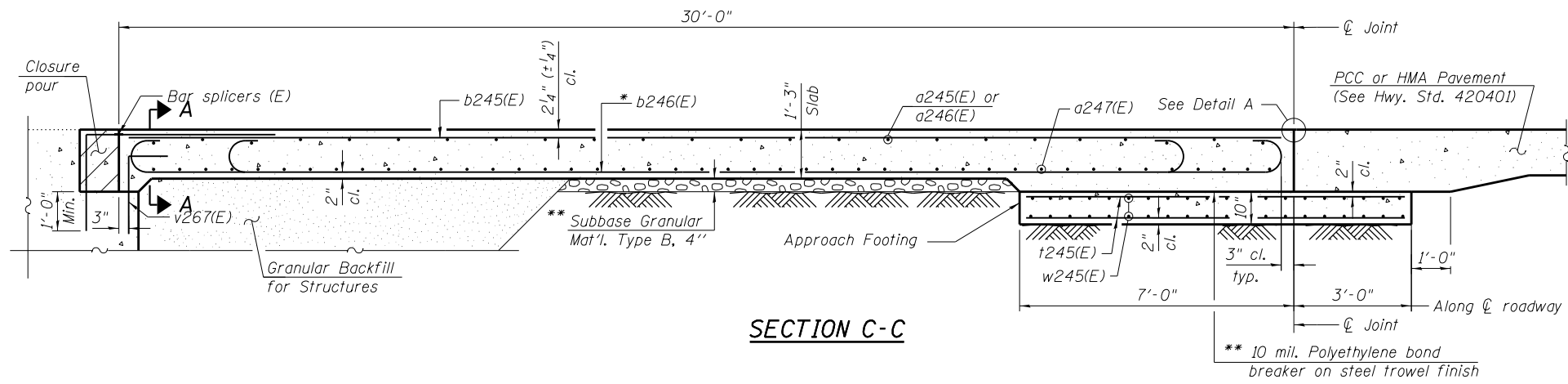
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST APPROACH SLAB (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-31 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	

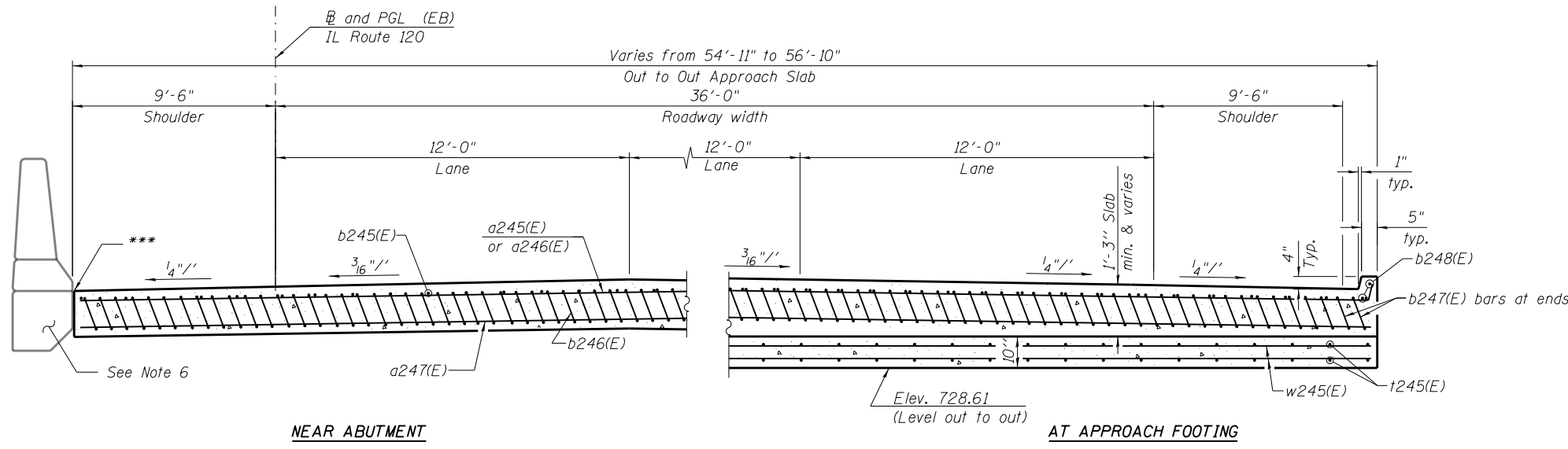


Notes:

1. See Sheet S-31 for Detail A.
2. Approach slab shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v267(E), see Sheet S-44.
6. For Proposed Wingwall & Wingwall Parapet Details See Sheet S-45.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a245(E)	32	#4	30'-0"	—
a246(E)	18	#4	28'-7"	—
a247(E)	92	#5	29'-10"	—
b245(E)	45	#4	29'-8"	—
b246(E)	132	#9	29'-9"	—
b247(E)	4	#9	21'-7"	—
b248(E)	4	#4	19'-1"	—
t245(E)	116	#4	9'-8"	—
w245(E)	80	#5	29'-10"	—
Concrete Structures			Cu. Yd.	17.5
Bridge Deck Grooving			Sq. Yd.	177
Protective Coat			Sq. Yd.	189
Concrete Superstructure (Approach Slab)			Cu. Yd.	83.9
Reinforcement Bars, Epoxy Coated			Pound	21,680



NEAR ABUTMENT

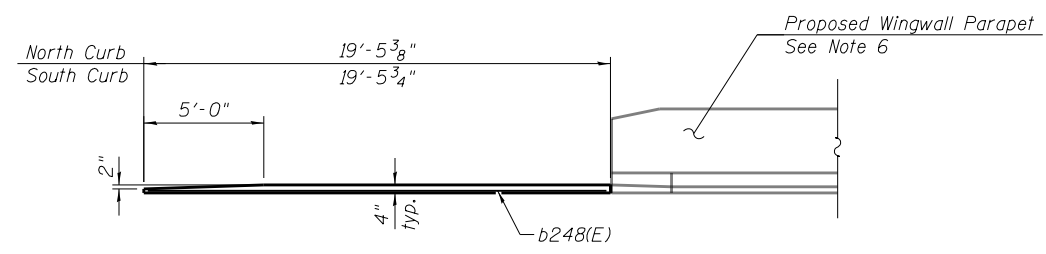
SECTION D-D

(See Plan for dimensions not shown)

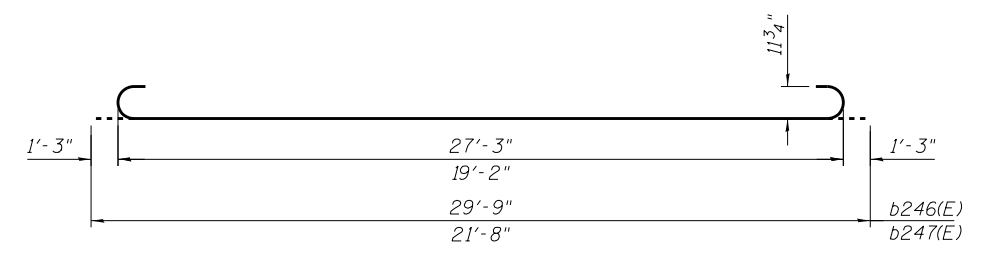
AT APPROACH FOOTING

- * Tilt #9 b246(E) and b247(E) bars as required to maintain clearance.
- ** Cost included with Concrete Superstructure (Approach Slab).
- *** Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet along the edges where the approach slab meets the wingwalls. Typ. each parapet.

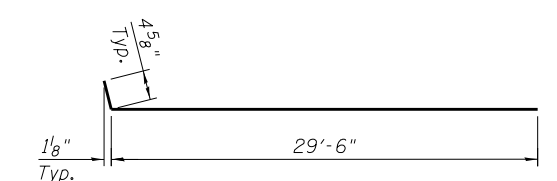
Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"



SECTION E-E



BARS b246(E) OR b247(E)



BAR a245(E)

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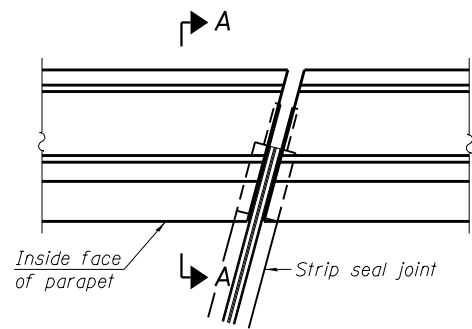
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PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

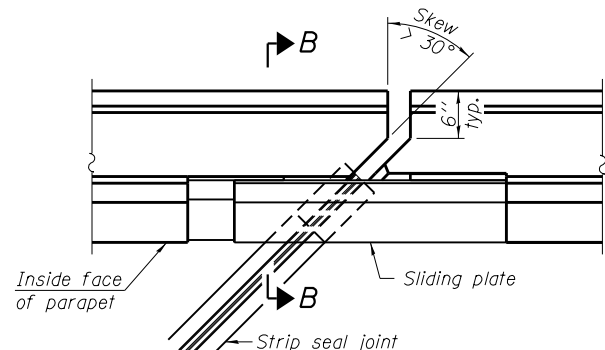
**EAST APPROACH SLAB SECTIONS AND DETAILS (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)**

SCALE: SHEET S-32 OF S-55 SHEETS STA. TO STA.

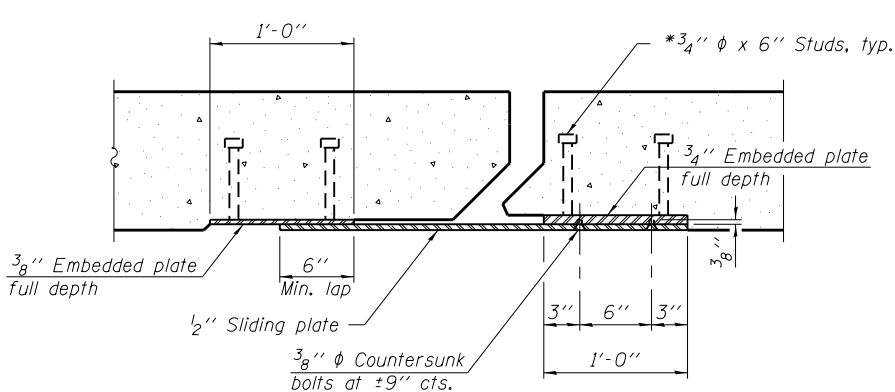
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 60X40	



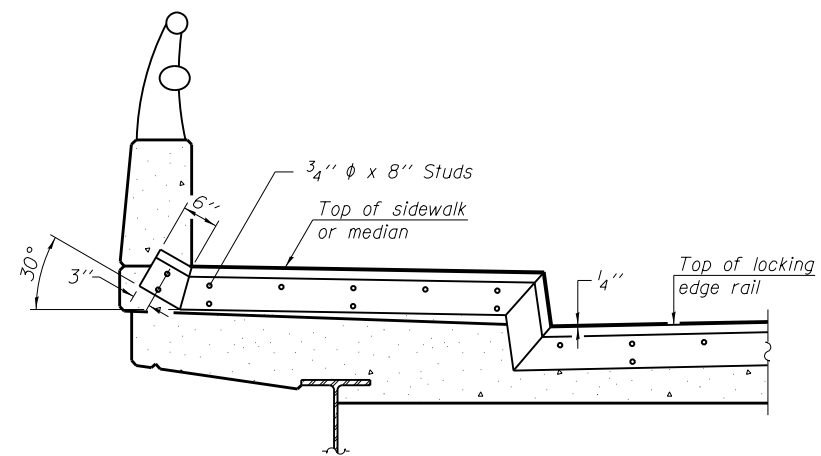
PLAN
(For skews $\le 30^\circ$)



PLAN
(For skews $> 30^\circ$)
Showing point block

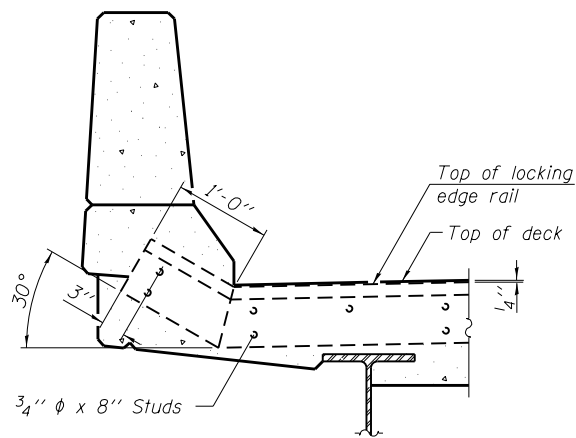


SECTION C-C

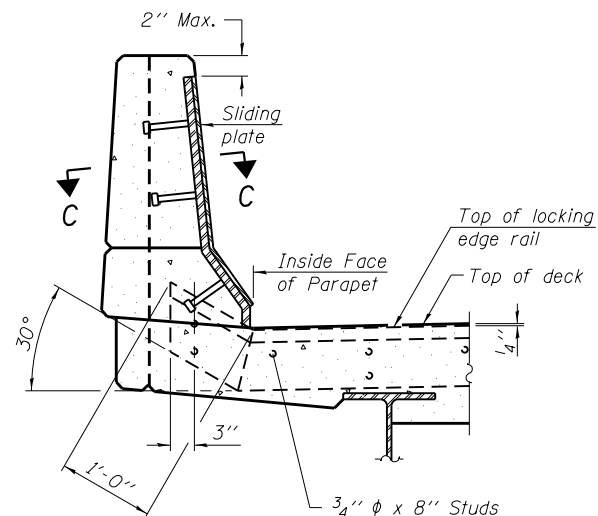


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

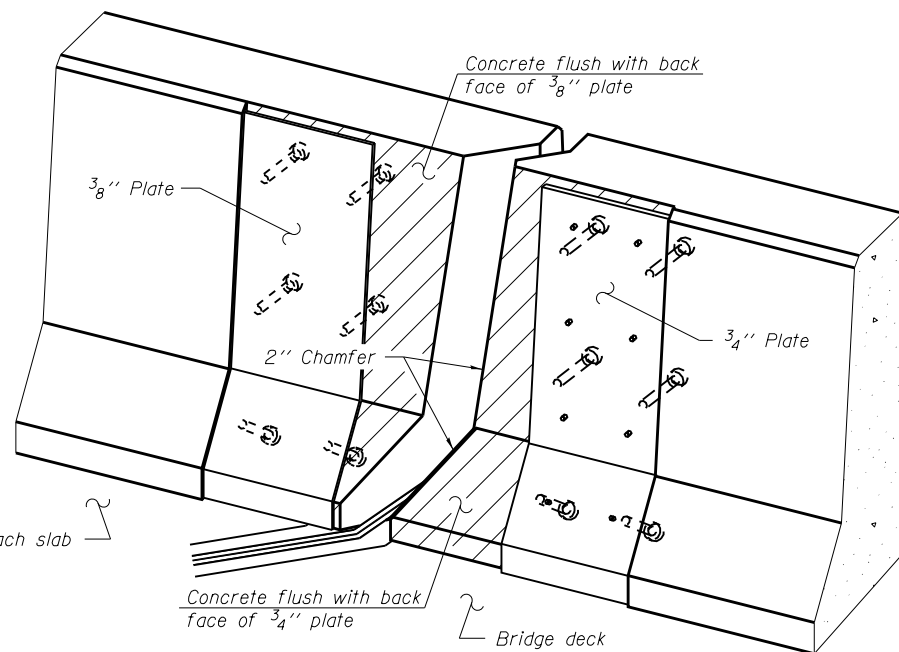
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



SECTION A-A



SECTION B-B



TRIMETRIC VIEW
(Showing back plates only)

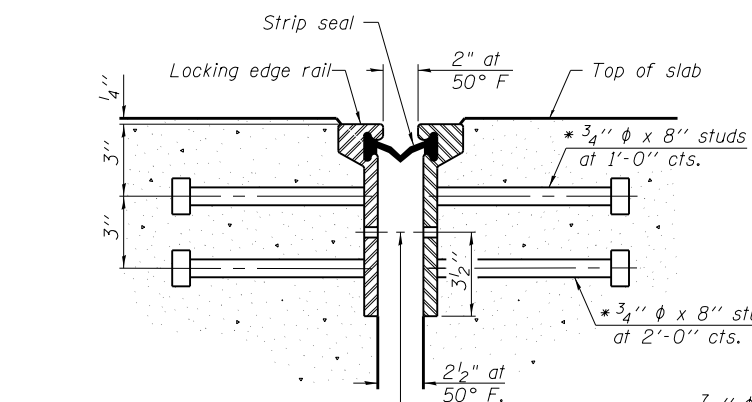
Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

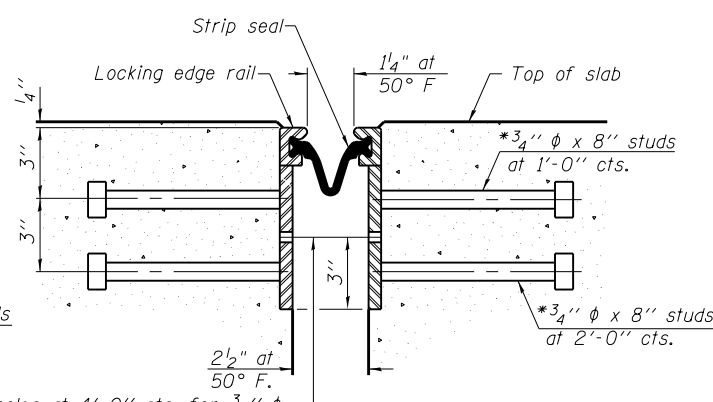
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Parapet plates and anchorage studs for skews $> 30^\circ$ included in the cost of Preformed Joint Strip Seal.



SECTION THRU ROLLED RAIL JOINT

7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



SECTION THRU WELDED RAIL JOINT

7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

ROLLED EXTRUDED RAIL

WELDED RAIL

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	461

EJ-SSJ

11-22-2016

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PLOT DATE = 3/20/2017

DESIGNED - SK
DRAWN - SK
CHECKED - MAI, MI
DATE - 03/20/2017

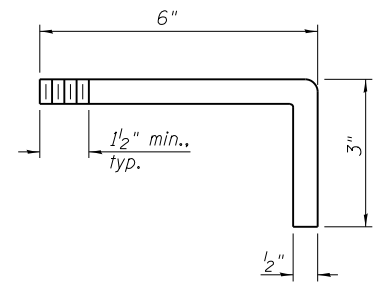
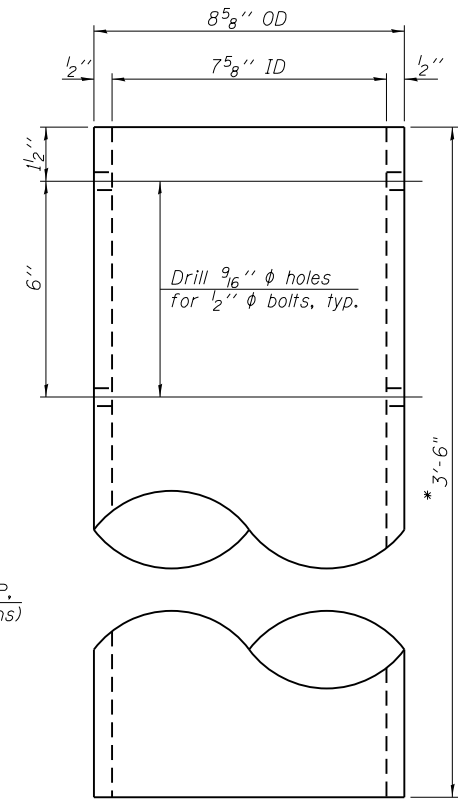
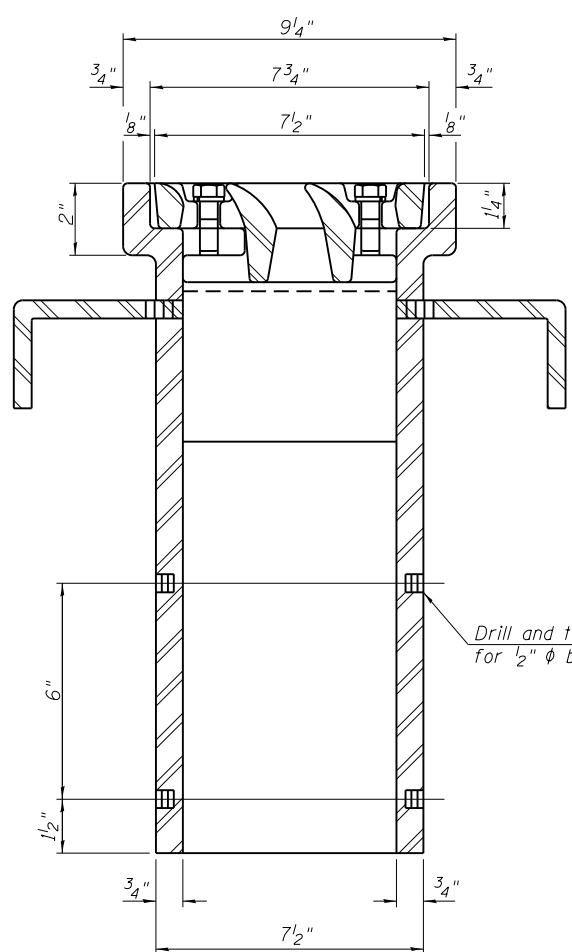
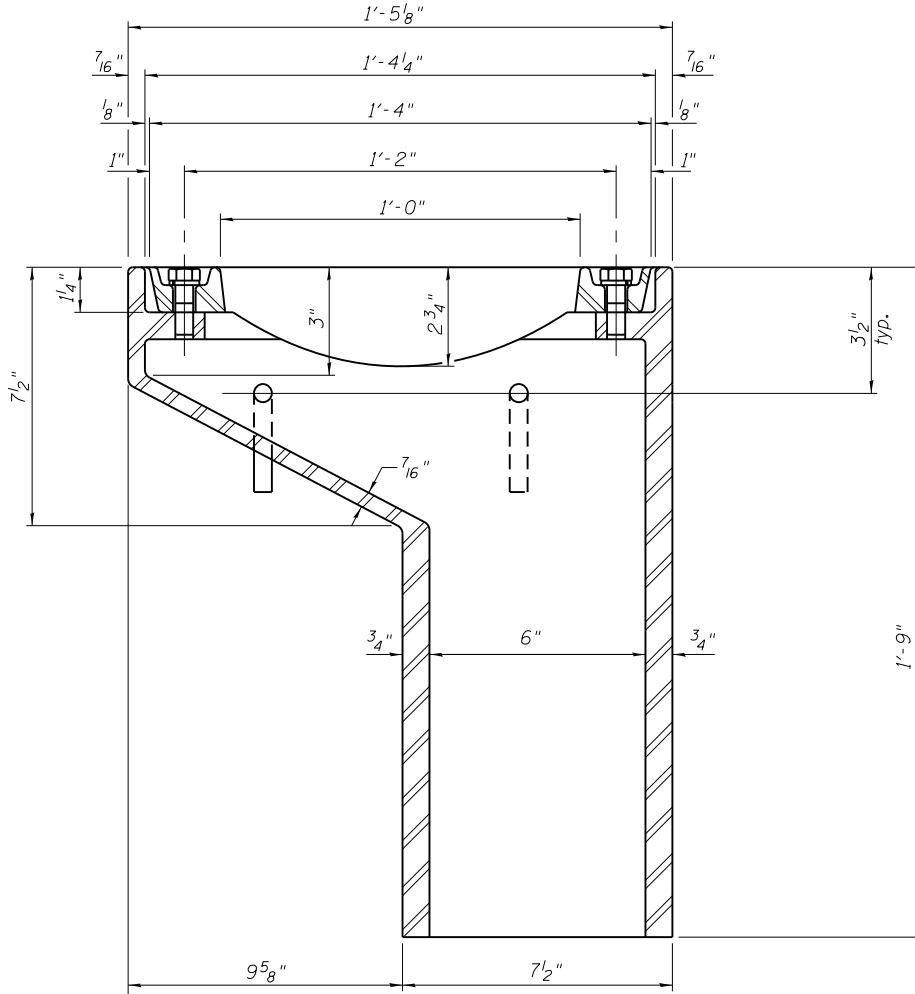
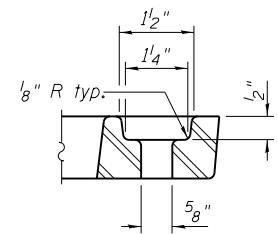
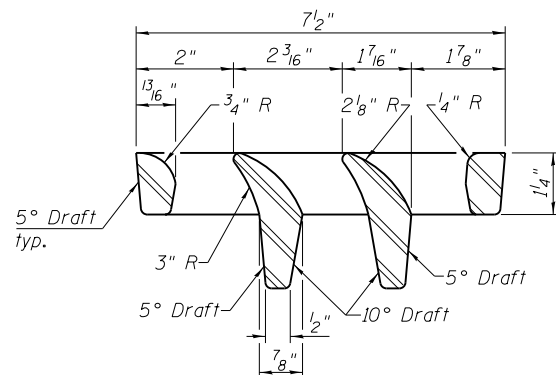
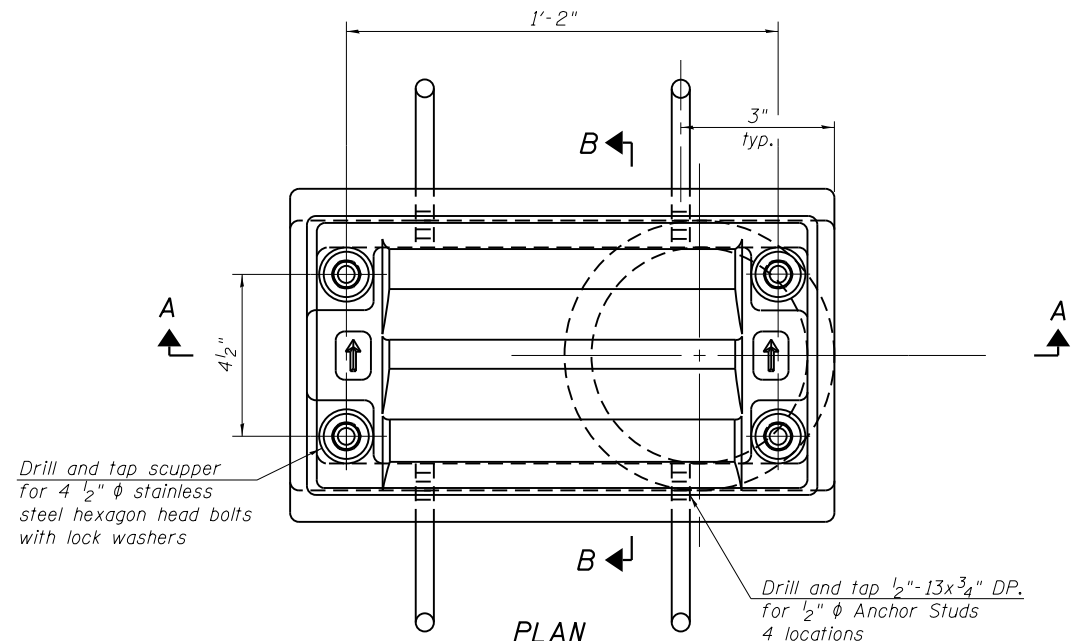
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-33 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	.	LAKE	288	229
342				
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

* Verify dimension in field prior to ordering material.

See sheet of for scupper location relative to parapet.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers, DS-11	Each	12

DS-11 11-22-2016

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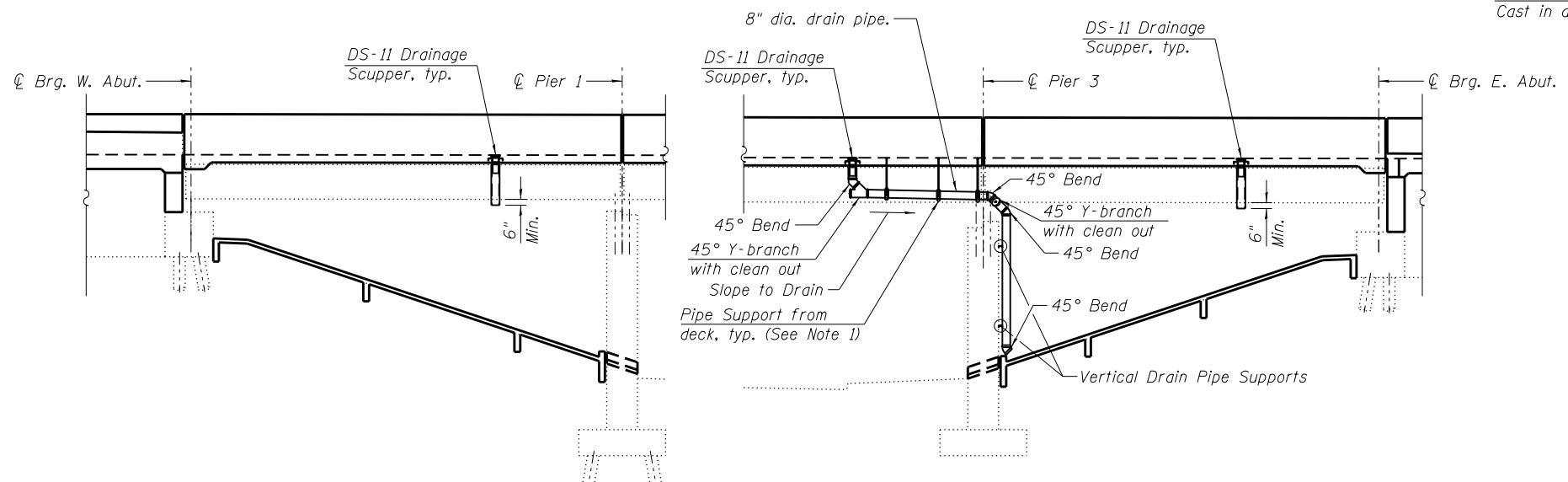
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PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED

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DEPARTMENT OF TRANSPORTATION

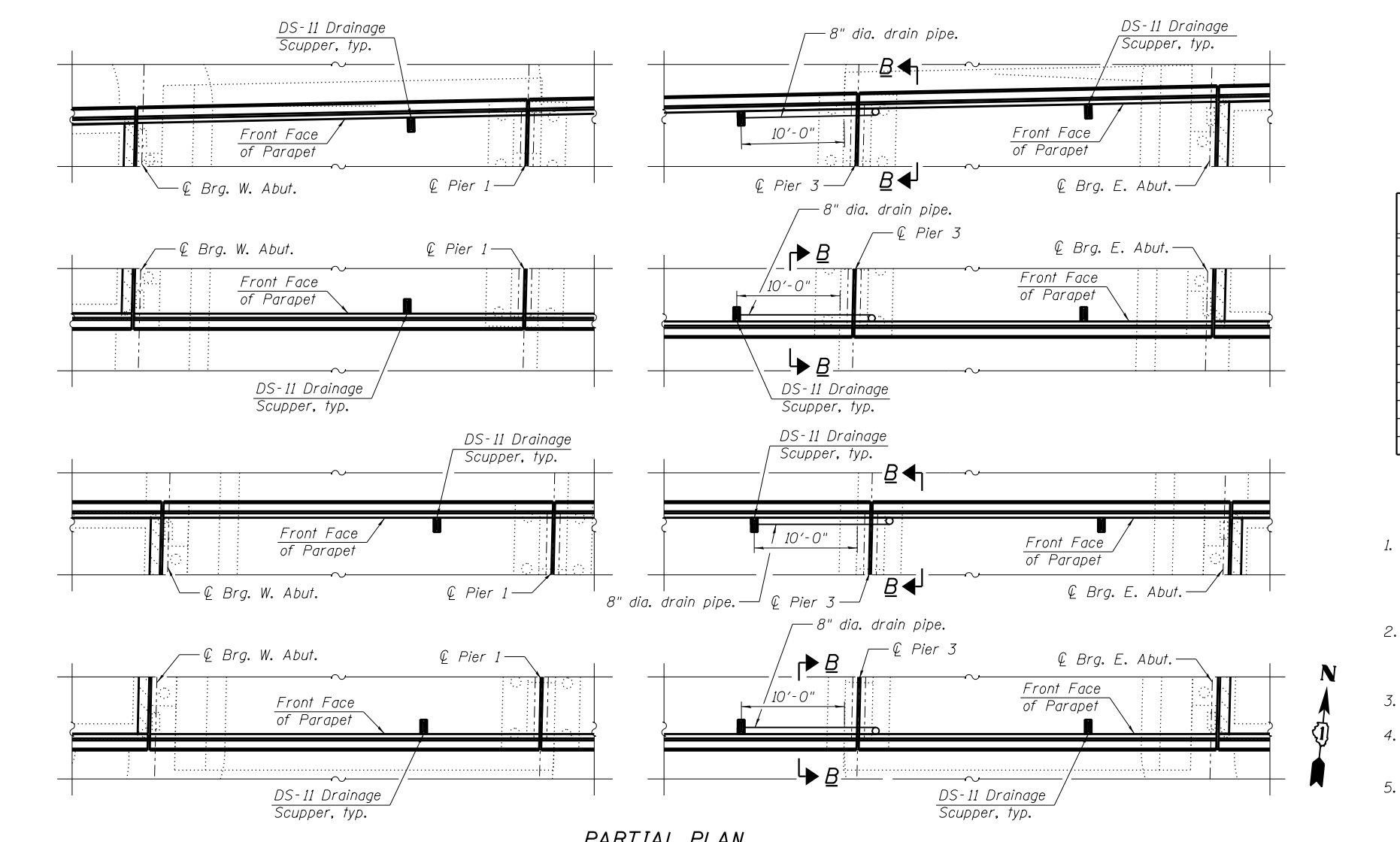
DRAINAGE SCUPPER, DS-11
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-34 OF S-55 SHEETS STA. TO STA.

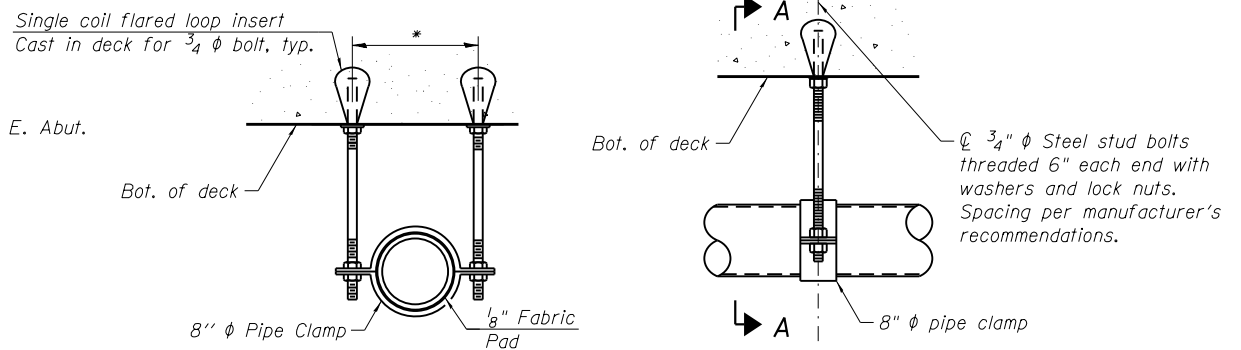
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ILLINOIS FED. AID PROJECT				



ELEVATION

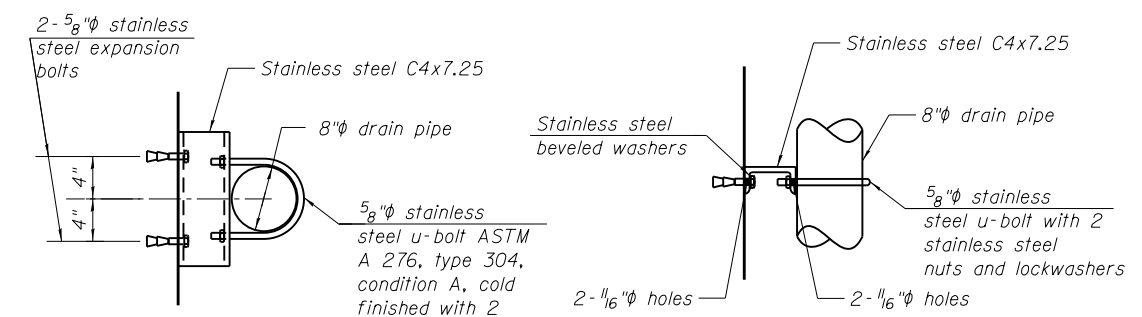


PARTIAL PLAN



SECTION A-A

* Dimension as required by Pipe Clamp



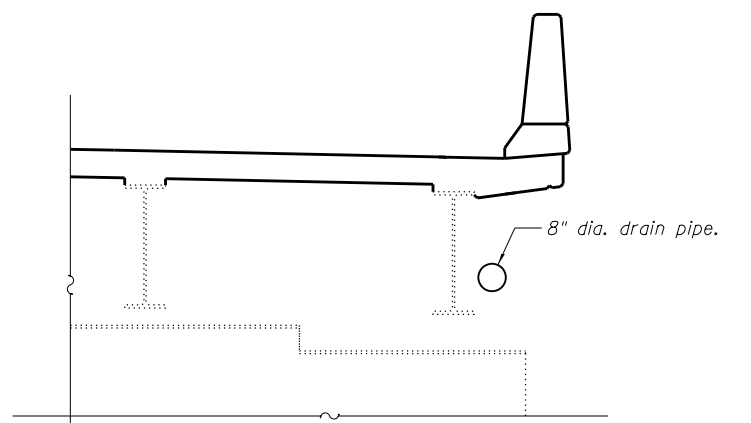
ELEVATION

PLAN

VERTICAL DRAIN SUPPORT PIPE DETAILS

SCUPPERS

Station	Offset (to front face of parapet)
472+66.02	64.74 Lt.
474+00.72	67.43 Lt.
474+34.43	68.11 Lt.
472+64.76	12.58 Lt.
473+99.46	12.58 Lt.
474+33.13	12.58 Lt.
472+64.28	9.50 Rt.
473+98.95	9.50 Rt.
474+32.61	9.50 Rt.
472+63.00	64.60 Rt.
473+97.67	64.50 Rt.
474+31.33	64.50 Rt.



SECTION B-B

NOTES:

1. Provide structural support from proposed deck slab for drain pipe per manufacturer's recommendation, not to exceed 6' cts. Cost included with "Drainage System".
2. All pipes, pipe fittings and brackets needed shall be included with cost of "Drainage System".
3. Drain Pipes and fittings shall be 8".
4. Bolt pattern and size in drain pipe flange to match scupper flange.
5. DS-II Drainage scuppers in Span 3 shall be connected to a drainage pipe with a down fall in Span 4 located at 10'-0" to the east of Pier 3.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage System	L. Sum	1

FILE PATH = F:\1305-591_IL_120_Dwr_GreenLeaf_CADD_Sheet\35-0490125&26-60X40-DrainagePlan&Elev.dgn

HBM
ENGINEERING GROUP, LLC
4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

35-0490125&26-60X40-DrainagePlan&Elev.dgn
USER NAME = Ken.drobant
PLOT SCALE = 14x0.0000 '1' / in.
PLOT DATE = 4/20/2017

DESIGNED - KJD
DRAWN - KJD
CHECKED - MAI, MI
DATE - 03/20/2017

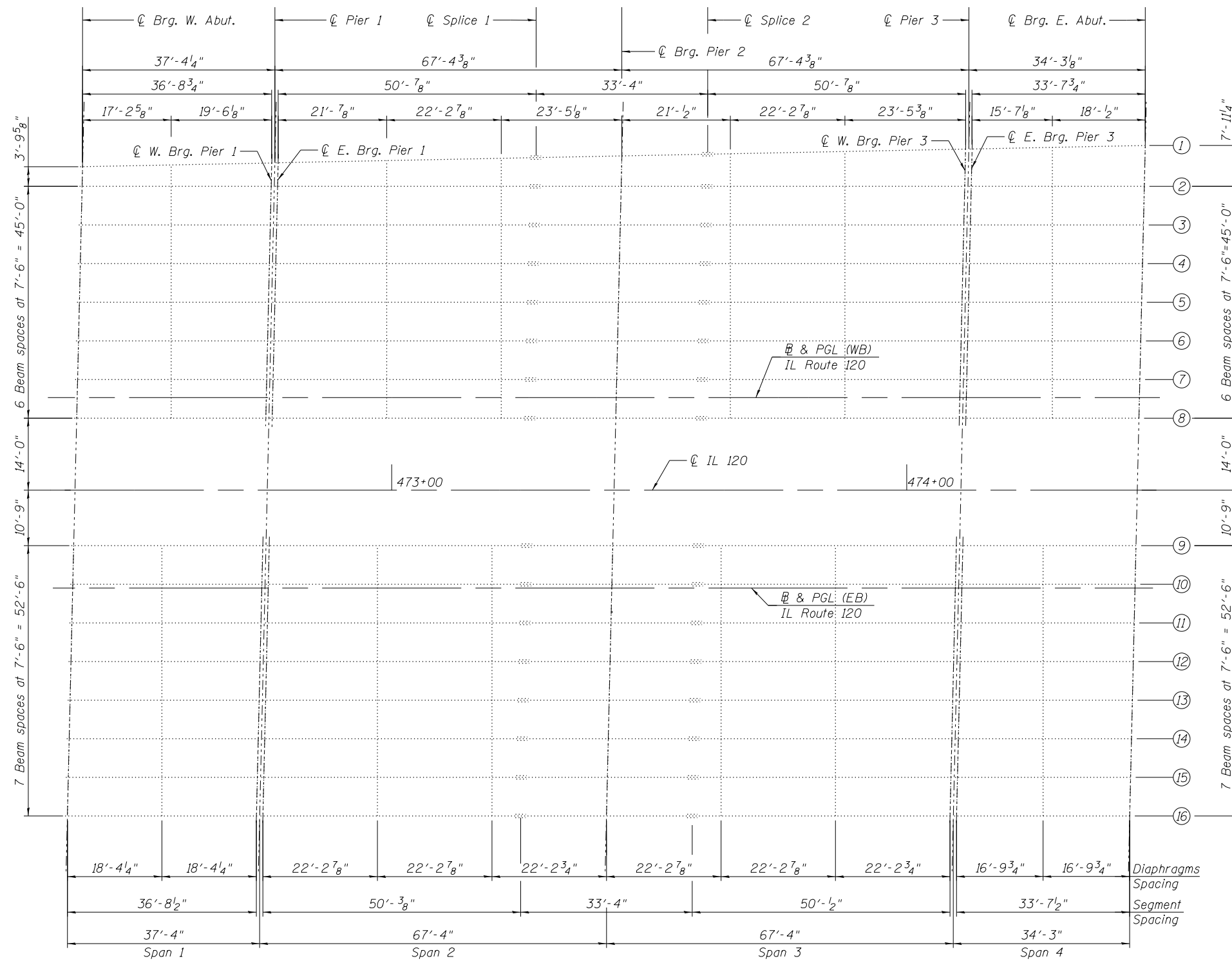
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SYSTEM
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)
SCALE: SHEET S-35 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
333 LAKE 288 231
342
*12VB-1&2&12R-1HB-2(BR)&12-RS-2 CONTRACT NO. 60X40
ILLINOIS FED. AID PROJECT

NOTES:

1. For existing beams elevations and proposed shear studs spacing, see Sheet S-37.
2. For bearing details, see Sheet S-38.
3. For fabricated steel extension details at bearing locations, see Sheet S-39.



EXISTING FRAMING PLAN



FILE PATH = F:\1305-591_IL_120_Dwr_GreenLeaf\CADD_Sheet\36-0490125&26-60X40-ExistFramingPlan.dgn

HBM
ENGINEERING GROUP, LLC
4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

36-0490125&26-60X40-ExistFramingPlan.dgn
USER NAME = mustafajalobaidi
PLOT SCALE = 24x0 1/4" / 1in.
PLOT DATE = 3/20/2017

DESIGNED - MA, SK
DRAWN - MA, SK
CHECKED - MAI, MI
DATE - 03/20/2017

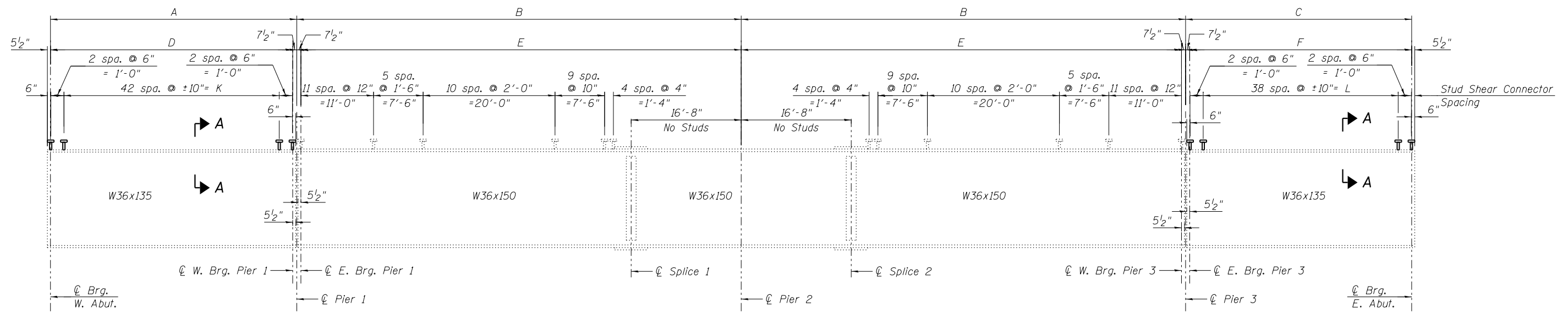
REVISED
REVISED
REVISED
REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

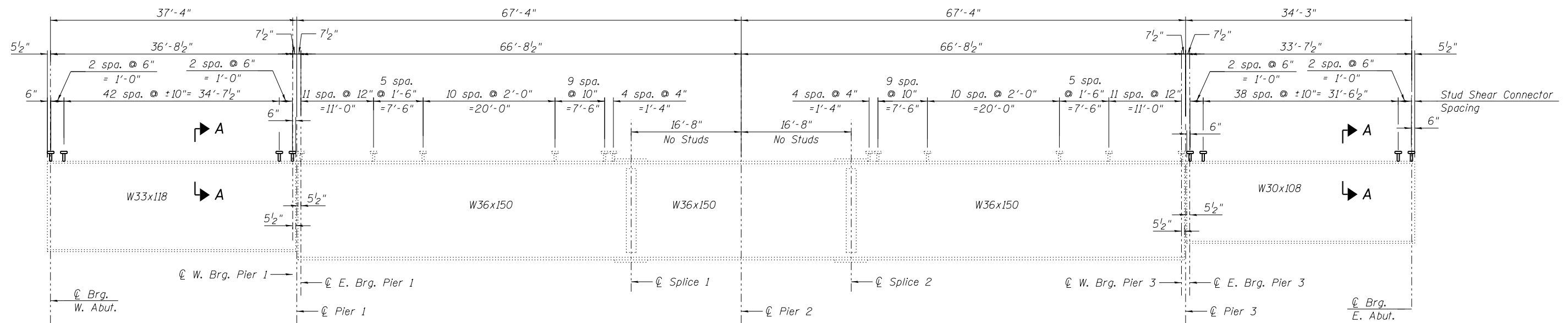
**EXISTING FRAMING PLAN
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)**

SCALE: SHEET S-36 OF S-55 SHEETS STA. TO STA.

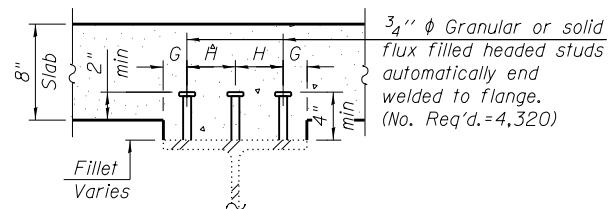
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333 342		LAKE	288	232
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



ELEVATION - EXTERIOR BEAMS



ELEVATION - INTERIOR BEAMS



SECTION A-A

GIRDER DIMENSIONS

Girder	A	B	C	D	E	F	K	L
1	37'-4 3/8"	67'-4 1/2"	34'-3 1/4"	36'-8 7/8"	66'-9"	33'-7 3/4"	34'-9 7/8"	31'-8 3/4"
2-16	37'-4"	67'-4"	34'-3"	36'-8 1/2"	66'-8 1/2"	33'-7 1/2"	34'-9 1/2"	31'-8 1/2"

Girder	G	H
W30x108	2 1/4"	3"
W33x118	1 3/4"	4"
W36x135	2"	4"

FILE PATH = F:\1305-591 IL 120 Dvr GreenLeaf\CADD\Sheet\37-0490125&26-60x40-BeamsElev.dgn

HBM
ENGINEERING GROUP, LLC
4415 WEST HARRISON STREET, SUITE 231
HILLSDALE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

37-0490125&26-60x40-BeamsElev.dgn
USER NAME = mustafa.alobaidi
PLOT SCALE = 16x0.0000 1' / in.
PLOT DATE = 3/20/2017

DESIGNED - SK
DRAWN - SK
CHECKED - MAI, MI
DATE - 03/20/2017

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM ELEVATIONS (SPANS 1 AND 4)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)
SCALE: SHEET S-37 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2		LAKE	288	233
CONTRACT NO. 60X40				
ILLINOIS FED. AID PROJECT				

GIRDER MOMENT AND REACTION TABLES STRUCTURE NO. 049-0125 (WB):

EXTERIOR GIRDER 8 (SPAN 1) MOMENT TABLE		
0.5 Sp. 1		
I_s	(in ⁴)	7,800
$I_c(n)$	(in ⁴)	21,814
$I_c(3n)$	(in ⁴)	15,724
S_s	(in ³)	439
$S_c(n)$	(in ³)	672
$S_c(3n)$	(in ³)	601
Z	(in ³)	-
ϕ	(k/')	0.90
$M\phi$	('k)	152
$s\phi$	(k/')	0.39
$M_s\phi$	('k)	66
$M\ddot{t}$	('k)	213
M_{IM}	('k)	64
$\int_3 [M\ddot{t} + I]$	('k)	462
M_o	('k)	884
M_u	('k)	2,823
$f_s \phi$ non-comp	(ksi)	4.15
$f_s \phi$ (comp)	(ksi)	1.32
$f_s \int_3 [M\ddot{t} + M_I]$	(ksi)	8.26
f_s (Overload)	(ksi)	13.72
f_s (Total)	(ksi)	-
VR	(k)	26.97

INTERIOR GIRDER 5 (SPAN 1) MOMENT TABLE		
0.5 Sp. 1		
I_s	(in ⁴)	5,899
$I_c(n)$	(in ⁴)	17,943
$I_c(3n)$	(in ⁴)	13,178
S_s	(in ³)	359
$S_c(n)$	(in ³)	567
$S_c(3n)$	(in ³)	312
Z	(in ³)	-
ϕ	(k/')	0.91
$M\phi$	('k)	152
$s\phi$	(k/')	0.51
$M_s\phi$	('k)	82
$M\ddot{t}$	('k)	276
M_{IM}	('k)	83
$\int_3 [M\ddot{t} + I]$	('k)	598
M_o	('k)	1,083
M_u	('k)	2,433
$f_s \phi$ non-comp	(ksi)	5.09
$f_s \phi$ (comp)	(ksi)	3.17
$f_s \int_3 [M\ddot{t} + M_I]$	(ksi)	12.65
f_s (Overload)	(ksi)	20.91
f_s (Total)	(ksi)	-
VR	(k)	36.89

EXTERIOR GIRDER 1 (SPAN 4) MOMENT TABLE		
0.5 Sp. 1		
I_s	(in ⁴)	7,800
$I_c(n)$	(in ⁴)	21,714
$I_c(3n)$	(in ⁴)	15,630
S_s	(in ³)	439
$S_c(n)$	(in ³)	672
$S_c(3n)$	(in ³)	601
Z	(in ³)	-
ϕ	(k/')	0.90
$M\phi$	('k)	131
$s\phi$	(k/')	0.39
$M_s\phi$	('k)	57
$M\ddot{t}$	('k)	206
M_{IM}	('k)	62
$\int_3 [M\ddot{t} + I]$	('k)	447
M_o	('k)	826
M_u	('k)	2,824
$f_s \phi$ non-comp	(ksi)	3.59
$f_s \phi$ (comp)	(ksi)	1.14
$f_s \int_3 [M\ddot{t} + M_I]$	(ksi)	7.98
f_s (Overload)	(ksi)	12.70
f_s (Total)	(ksi)	-
VR	(k)	25.64

INTERIOR GIRDER 3 (SPAN 4) MOMENT TABLE		
0.5 Sp. 1		
I_s	(in ⁴)	4,469
$I_c(n)$	(in ⁴)	14,323
$I_c(3n)$	(in ⁴)	10,547
S_s	(in ³)	359
$S_c(n)$	(in ³)	487
$S_c(3n)$	(in ³)	439
Z	(in ³)	-
ϕ	(k/')	0.90
$M\phi$	('k)	126
$s\phi$	(k/')	0.51
$M_s\phi$	('k)	70
$M\ddot{t}$	('k)	235
M_{IM}	('k)	71
$\int_3 [M\ddot{t} + I]$	('k)	510
M_o	('k)	918
M_u	('k)	2,098
$f_s \phi$ non-comp	(ksi)	4.22
$f_s \phi$ (comp)	(ksi)	1.91
$f_s \int_3 [M\ddot{t} + M_I]$	(ksi)	12.57
f_s (Overload)	(ksi)	18.70
f_s (Total)	(ksi)	-
VR	(k)	36.49

EXTER. GIRDER 8 (SPAN 1) REACTION TABLE		
	W. Abut.	Pier 1
$R\phi$	(k)	25.12
$R\ddot{t}$	(k)	27.88
R_I	(k)	8.36
R_{Total}	(k)	56.91

INTER. GIRDER 5 (SPAN 1) REACTION TABLE		
	W. Abut.	Pier 1
$R\phi$	(k)	27.53
$R\ddot{t}$	(k)	38.50
R_I	(k)	11.55
R_{Total}	(k)	77.58

EXTER. GIRDER 1 (SPAN 4) REACTION TABLE		
	Pier 3	E. Abut.
$R\phi$	(k)	23.36
$R\ddot{t}$	(k)	26.99
R_I	(k)	8.10
R_{Total}	(k)	58.45

INTER. GIRDER 3 (SPAN 4) REACTION TABLE		
	Pier 3	E. Abut.
$R\phi$	(k)	25.11
$R\ddot{t}$	(k)	38.32
R_I	(k)	11.49
R_{Total}	(k)	74.92

EXTERIOR GIRDER 8 (SPANS 2 & 3) MOMENT TABLE			
	0.4 Sp. 2 or 0.6 Sp. 3	Pier 2	
I_s	(in ⁴)	9,040	9,040
$I_c(n)$	(in ⁴)	24,202	-
$I_c(3n)$	(in ⁴)	17,379	-
S_s	(in ³)	504	504
$S_c(n)$	(in ³)	761	-
$S_c(3n)$	(in ³)	684	-
Z	(in ³)	-	579
ϕ	(k/')	1.49	1.49
$M\phi$	('k)	436	786
$s\phi$	(k/')	0.39	0.39
$M_s\phi$	('k)	126	223
$M\ddot{t}$	('k)	415	321
M_{IM}	('k)	108	84
$\int_3 [M\ddot{t} + I]$	('k)	873	674
M_o	('k)	1,865	2,187
M_u	('k)	2,342	2,259
$f_s \phi$ non-comp	(ksi)	10.37	18.71
$f_s \phi$ (comp)	(ksi)	2.21	4.63
$f_s \int_3 [M\ddot{t} + M_I]$	(ksi)	13.77	13.96
f_s (Overload)	(ksi)	26.35	37.29
f_s (Total)	(ksi)	-	-
VR	(k)	34.38	47.38

INTERIOR GIRDER 7 (SPANS 2 & 3) MOMENT TABLE			
	0.4 Sp. 2 or 0.6 Sp. 3	Pier 2	
I_s	(in ⁴)	9,040	9,040
$I_c(n)$	(in ⁴)	25,012	-
$I_c(3n)$	(in ⁴)	18,126	-
S_s	(in ³)	504	504
$S_c(n)$	(in ³)	753	-
$S_c(3n)$	(in ³)	673	-
Z	(in ³)	-	581
ϕ	(k/')	0.95	0.95
$M\phi$	('k)	344	603
$s\phi$	(k/')	0.51	0.51
$M_s\phi$	('k)	150	270
$M\ddot{t}$	('k)	474	392
M_{IM}	('k)	124	102
$\int_3 [M\ddot{t} + I]$	('k)	996	824
M_o	('k)	1,937	2,206
M_u	('k)	2,483	2,315
$f_s \phi$ non-comp	(ksi)	8.19	14.35
$f_s \phi$ (comp)	(ksi)	2.68	5.58
$f_s \int_3 [M\ddot{t} + M_I]$	(ksi)	15.87	17.04
f_s (Overload)	(ksi)	26.74	36.96
f_s (Total)	(ksi)	-	-
VR	(k)	48.89	63.44

EXTERIOR GIRDER 8 (SPANS 2 & 3) REACTION TABLE			
	Pier 1	Pier 2	Pier 3
$R\phi$	(k)	46.64	46.67
$R\ddot{t}$	(k)	30.95	30.98
R_I	(k)	8.07	8.08
R_{Total}	(k)	85.66	85.73

INTERIOR GIRDER 7 (SPANS 2 & 3) REACTION TABLE			
	Pier 1	Pier 2	Pier 3
$R\phi$	(k)	39.72	39.61
$R\ddot{t}$	(k)	42.37	42.38
R_I	(k)	11.05	11.05
R_{Total}	(k)	93.14	93.04

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in⁴ and in³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in⁴ and in³).

Z: Plastic Section Modulus of the steel section in non-composite areas (in³).

ϕ : Un-factored non-composite dead load (kips/ft.).

$M\phi$: Un-factored moment due to non-composite dead load (kip-ft.).

$s\phi$: Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s\phi$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M\ddot{t}$: Un-factored live load moment (kip-ft.).

M_I : Un-factored moment due to impact (kip-ft.).

M_o : Factored design moment (kip-ft.).

M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).

VR : Maximum \ddot{t} + impact shear range within the composite portion of the span for stud shear connector design (kips).

* Compact section

** Braced non-compact and partially braced section

FILE PATH = F:\1305-591_IL_120_Dwr_GreenLeaf_Cad001_Sheet\38-0490125-EB\40-GirderMomRxn.dgn

GIRDER MOMENT AND REACTION TABLES STRUCTURE NO. 049-0126 (EB):

EXTERIOR GIRDER 9 (SPAN 1) MOMENT TABLE		
0.5 Sp. 1		
I_s	(in ⁴)	7,800
$I_c(n)$	(in ⁴)	21,676
$I_c(3n)$	(in ⁴)	15,595
S_s	(in ³)	439
$S_c(n)$	(in ³)	671
$S_c(3n)$	(in ³)	599
Z	(in ³)	-
ϕ	(k/')	0.89
$M\phi$	('k)	150
$s\phi$	(k/')	0.38
$M_s\phi$	('k)	65
M_t	('k)	206
M_{IM}	('k)	62
$^5_3[M_t + I]$	('k)	446
M_o	('k)	859
M_u	('k)	2,806
$f_s \phi$ non-comp	(ksi)	4.09
$f_s \phi$ (comp)	(ksi)	1.30
$f_s \ ^5_3[M_t + M_I]$	(ksi)	7.98
f_s (Overload)	(ksi)	13.36
f_s (Total)	(ksi)	-
VR	(k)	25.80

INTERIOR GIRDER 11 (SPAN 1) MOMENT TABLE		
0.5 Sp. 1		
I_s	(in ⁴)	5,899
$I_c(n)$	(in ⁴)	17,943
$I_c(3n)$	(in ⁴)	13,178
S_s	(in ³)	359
$S_c(n)$	(in ³)	567
$S_c(3n)$	(in ³)	512
Z	(in ³)	-
ϕ	(k/')	0.92
$M\phi$	('k)	152
$s\phi$	(k/')	0.51
$M_s\phi$	('k)	83
M_t	('k)	277
M_{IM}	('k)	83
$^5_3[M_t + I]$	('k)	601
M_o	('k)	1,086
M_u	('k)	2,433
$f_s \phi$ non-comp	(ksi)	5.07
$f_s \phi$ (comp)	(ksi)	1.94
$f_s \ ^5_3[M_t + M_I]$	(ksi)	12.71
f_s (Overload)	(ksi)	19.72
f_s (Total)	(ksi)	-
VR	(k)	36.88

EXTERIOR GIRDER 9 (SPAN 4) MOMENT TABLE		
0.5 Sp. 1		
I_s	(in ⁴)	7,800
$I_c(n)$	(in ⁴)	21,674
$I_c(3n)$	(in ⁴)	15,592
S_s	(in ³)	439
$S_c(n)$	(in ³)	671
$S_c(3n)$	(in ³)	599
Z	(in ³)	-
ϕ	(k/')	0.88
$M\phi$	('k)	128
$s\phi$	(k/')	0.38
$M_s\phi$	('k)	55
M_t	('k)	182
M_{IM}	('k)	55
$^5_3[M_t + I]$	('k)	395
M_o	('k)	751
M_u	('k)	2,806
$f_s \phi$ non-comp	(ksi)	3.50
$f_s \phi$ (comp)	(ksi)	1.11
$f_s \ ^5_3[M_t + M_I]$	(ksi)	7.06
f_s (Overload)	(ksi)	11.66
f_s (Total)	(ksi)	-
VR	(k)	24.10

INTERIOR GIRDER 11 (SPAN 4) MOMENT TABLE		
0.5 Sp. 1		
I_s	(in ⁴)	5,899
$I_c(n)$	(in ⁴)	17,943
$I_c(3n)$	(in ⁴)	13,178
S_s	(in ³)	359
$S_c(n)$	(in ³)	567
$S_c(3n)$	(in ³)	512
Z	(in ³)	-
ϕ	(k/')	0.90
$M\phi$	('k)	126
$s\phi$	(k/')	0.51
$M_s\phi$	('k)	70
M_t	('k)	241
M_{IM}	('k)	72
$^5_3[M_t + I]$	('k)	522
M_o	('k)	934
M_u	('k)	2,098
$f_s \phi$ non-comp	(ksi)	4.21
$f_s \phi$ (comp)	(ksi)	1.64
$f_s \ ^5_3[M_t + M_I]$	(ksi)	11.05
f_s (Overload)	(ksi)	16.90
f_s (Total)	(ksi)	-
VR	(k)	34.55

EXTER. GIRDER 9 (SPAN 1) REACTION TABLE		
	W. Abut.	Pier 1
$R\phi$	(k)	24.71
R_t	(k)	26.79
R_I	(k)	8.04
R_{Total}	(k)	59.54

INTER. GIRDER 11 (SPAN 1) REACTION TABLE		
	W. Abut.	Pier 1
$R\phi$	(k)	27.53
R_t	(k)	38.49
R_I	(k)	11.55
R_{Total}	(k)	77.57

EXTER. GIRDER 9 (SPAN 4) REACTION TABLE		
	Pier 3	E. Abut.
$R\phi$	(k)	22.91
R_t	(k)	25.9
R_I	(k)	7.77
R_{Total}	(k)	56.58

INTER. GIRDER 11 (SPAN 4) REACTION TABLE		
	Pier 3	E. Abut.
$R\phi$	(k)	25.16
R_t	(k)	37.28
R_I	(k)	11.18
R_{Total}	(k)	73.62

EXTERIOR GIRDER 9 (SPANS 2 & 3) MOMENT TABLE			
	0.4 Sp. 2 or 0.6 Sp. 3	Pier 2	
I_s	(in ⁴)	9,040	9,040
$I_c(n)$	(in ⁴)	24,041	-
$I_c(3n)$	(in ⁴)	17,236	-
S_s	(in ³)	504	504
$S_c(n)$	(in ³)	751	-
$S_c(3n)$	(in ³)	671	-
Z	(in ³)	-	579
ϕ	(k/')	0.90	0.90
$M\phi$	('k)	285	508
$s\phi$	(k/')	0.38	0.38
$M_s\phi$	('k)	123	219
M_t	('k)	403	310
M_{IM}	('k)	105	81
$^5_3[M_t + I]$	('k)	846	651
M_o	('k)	1,631	1,792
M_u	('k)	2,581	2,288
$f_s \phi$ non-comp	(ksi)	6.78	12.10
$f_s \phi$ (comp)	(ksi)	2.21	4.54
$f_s \ ^5_3[M_t + M_I]$	(ksi)	13.52	13.49
f_s (Overload)	(ksi)	22.51	30.12
f_s (Total)	(ksi)	-	-
VR	(k)	33.02	43.51

INTERIOR GIRDER 11 (SPANS 2 & 3) MOMENT TABLE			
	0.4 Sp. 2 or 0.6 Sp. 3	Pier 2	
I_s	(in ⁴)	9,040	9,040
$I_c(n)$	(in ⁴)	25,012	-
$I_c(3n)$	(in ⁴)	18,126	-
S_s	(in ³)	504	504
$S_c(n)$	(in ³)	761	-
$S_c(3n)$	(in ³)	684	-
Z	(in ³)	-	589
ϕ	(k/')	0.95	0.95
$M\phi$	('k)	298	532
$s\phi$	(k/')	0.51	0.51
$M_s\phi$	('k)	158	282
M_t	('k)	482	404
M_{IM}	('k)	126	105
$^5_3[M_t + I]$	('k)	1,013	848
M_o	('k)	1,910	2,161
M_u	('k)	2,539	2,328
$f_s \phi$ non-comp	(ksi)	7.10	12.66
$f_s \phi$ (comp)	(ksi)	2.77	5.75
$f_s \ ^5_3[M_t + M_I]$	(ksi)	15.98	17.28
f_s (Overload)	(ksi)	25.85	35.69
f_s (Total)	(ksi)	-	-
VR	(k)	47.56	58.52

EXTERIOR GIRDER 9 (SPANS 2 & 3) REACTION TABLE			
	Pier 1	Pier 2	Pier 3
$R\phi$	(k)	33.36	33.33
R_t	(k)	29.87	30.17
R_I	(k)	7.79	7.87
R_{Total}	(k)	71.02	71.37

INTERIOR GIRDER 11 (SPANS 2 & 3) REACTION TABLE			
	Pier 1	Pier 2	Pier 3
$R\phi$	(k)	37.73	37.72
R_t	(k)	41.31	41.85
R_I	(k)	10.77	10.91
R_{Total}	(k)	89.81	90.48

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in⁴ and in³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in⁴ and in³).

Z: Plastic Section Modulus of the steel section in non-composite areas (in³).

ϕ : Un-factored non-composite dead load (kips/ft.).

$M\phi$: Un-factored moment due to non-composite dead load (kip-ft.).

$s\phi$: Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_s\phi$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_t : Un-factored live load moment (kip-ft.).

M_I : Un-factored moment due to impact (kip-ft.).

M_o : Factored design moment (kip-ft.).

M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).

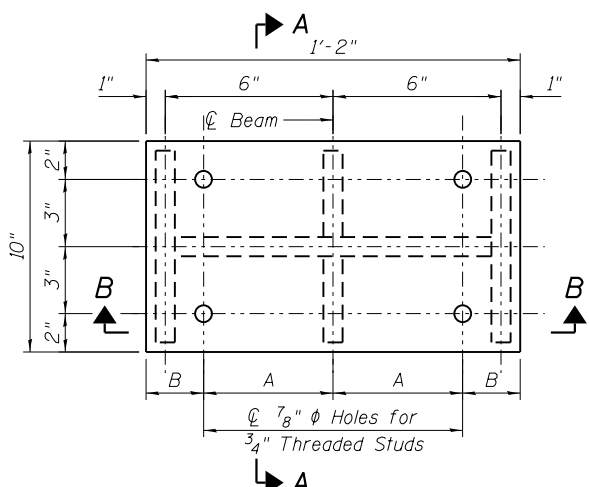
f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).

VR: Maximum ϕ + impact shear range within the composite portion of the span for stud shear connector design (kips).

* Compact section

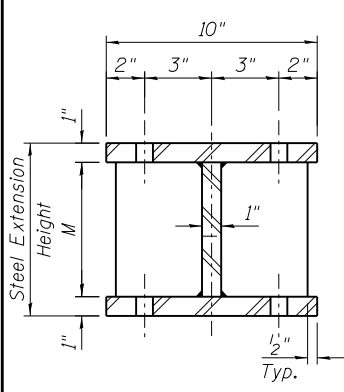
** Braced non-compact and partially braced section

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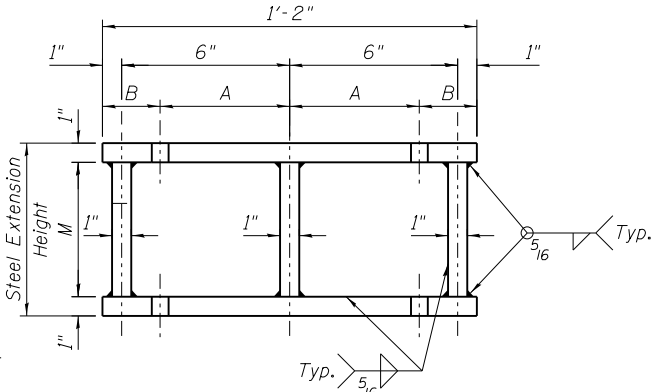


PLAN STEEL EXTENSION AT EXPANSION BEARINGS
(Showing Top & Bottom Steel Extension Plates)

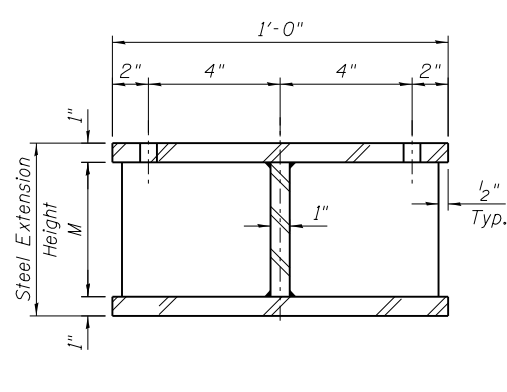
Location	A	B
W. Abut. Exterior Beams (W36x135)	4"	3"
Interior Beams (W33x118)	3 ³ / ₄ "	3 ¹ / ₄ "
E. Abut. Exterior Beams (W36x135)	4"	3"
Interior Beams (W30x108)	3 ¹ / ₄ "	3 ³ / ₄ "
Piers 1 & 3 Interior & Exterior Beams (W36x150)	4"	3"



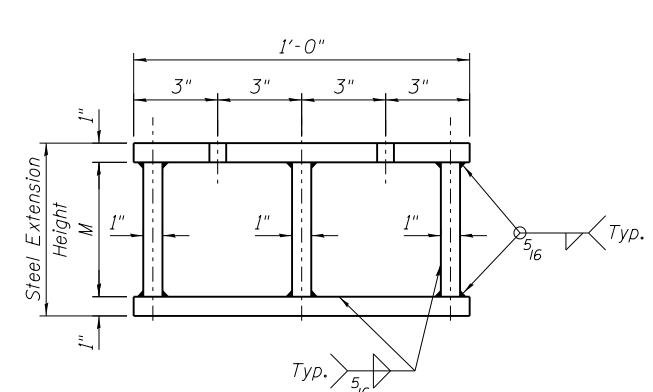
SECTION A-A



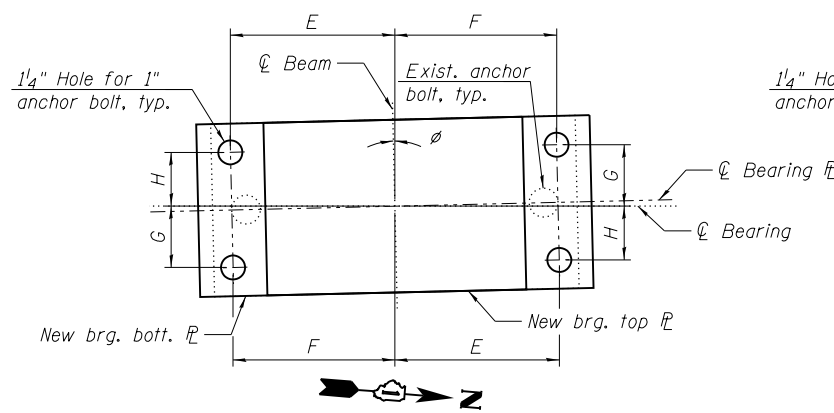
SECTION B-B



SECTION C-C

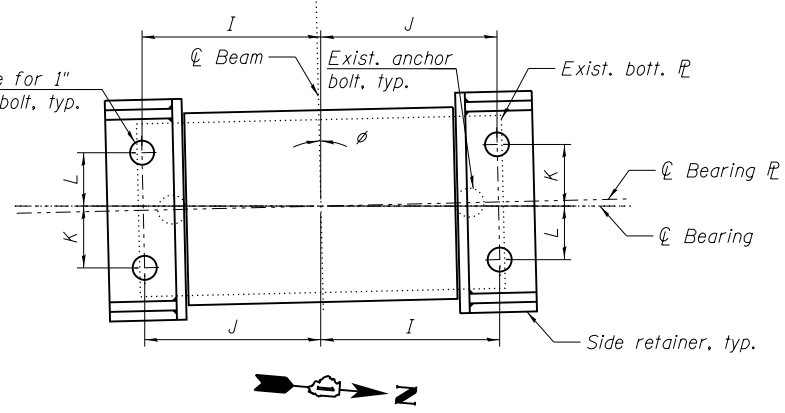


SECTION D-D



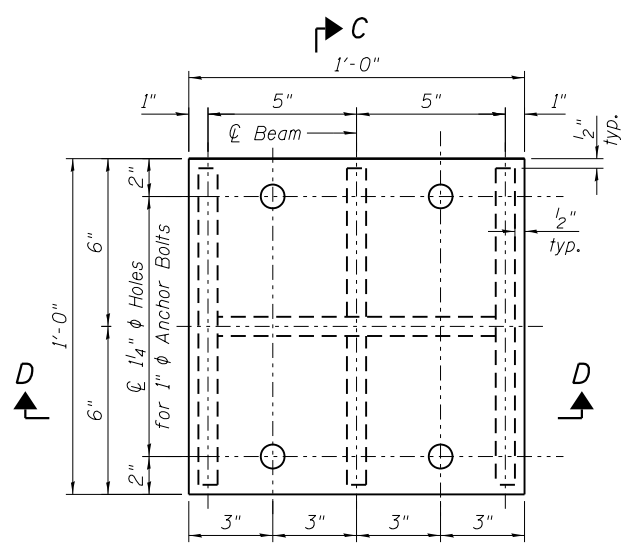
FIXED BEARING ANCHOR BOLT LAYOUT

Location	E	F	G	H	φ
Fixed Beams 2 thru 16	8 ⁵ / ₈ "	8 ³ / ₈ "	3 ¹ / ₄ "	2 ³ / ₄ "	1°20'17"
Bearing Beam 1	8 ⁵ / ₈ "	8 ³ / ₈ "	3 ³ / ₈ "	2 ⁵ / ₈ "	2°29'05"

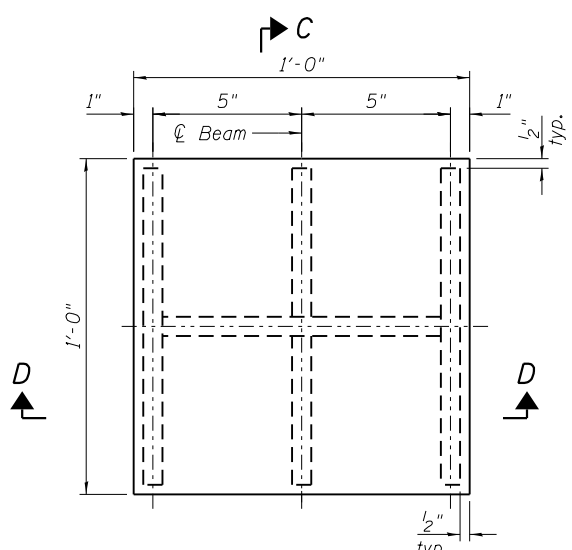


EXPANSION BEARING ANCHOR BOLT LAYOUT

Location	I	J	K	L	φ
Expansion Beams 1 thru 16	9 ³ / ₈ "	9 ¹ / ₈ "	3 ¹ / ₄ "	2 ³ / ₄ "	1°20'17"
Bearing Beam 1	9 ³ / ₈ "	9 ¹ / ₈ "	3 ³ / ₈ "	2 ⁵ / ₈ "	2°29'05"



PLAN TOP PLATE



PLAN BOTTOM PLATE

STEEL EXTENSIONS AT FIXED BEARINGS

STEEL EXTENSION HEIGHT

Steel Extension Name	Steel Extension Height	M	Total Quantity Required
Exp. 1	9 ³ / ₄ "	7 ³ / ₄ "	2
Exp. 2	10"	8"	12
Exp. 3	10 ³ / ₈ "	8 ³ / ₈ "	32
Exp. 4	10 ⁷ / ₈ "	8 ⁷ / ₈ "	2
Exp. 5	11 ¹ / ₂ "	9 ¹ / ₂ "	16
Fix 1	11 ¹ / ₈ "	9 ¹ / ₈ "	14
Fix 2	11 ³ / ₄ "	9 ³ / ₄ "	2
Fix 3	1'-0 ⁵ / ₈ "	10 ⁵ / ₈ "	16

STEEL EXTENSION ASSIGNMENT

Girder	W. Abut.	Pier 1 (W. Brg.)	Pier 1 (E. Brg.)	Pier 3 (W. Brg.)	Pier 3 (E. Brg.)	E. Abut.
1	Exp. 5	Fix 3	Exp. 3	Exp. 3	Fix 3	Exp. 5
2	Exp. 5	Fix 3	Exp. 3	Exp. 3	Fix 3	Exp. 5
3	Exp. 5	Fix 3	Exp. 3	Exp. 3	Fix 3	Exp. 5
4	Exp. 5	Fix 3	Exp. 3	Exp. 3	Fix 3	Exp. 5
5	Exp. 5	Fix 3	Exp. 3	Exp. 3	Fix 3	Exp. 5
6	Exp. 5	Fix 3	Exp. 3	Exp. 3	Fix 3	Exp. 5
7	Exp. 5	Fix 3	Exp. 3	Exp. 3	Fix 3	Exp. 5
8	Exp. 5	Fix 3	Exp. 3	Exp. 3	Fix 3	Exp. 5
9	Exp. 2	Fix 1	Exp. 3	Exp. 3	Fix 1	Exp. 1
10	Exp. 2	Fix 1	Exp. 3	Exp. 3	Fix 1	Exp. 2
11	Exp. 2	Fix 1	Exp. 3	Exp. 3	Fix 1	Exp. 2
12	Exp. 3	Fix 2	Exp. 4	Exp. 4	Fix 2	Exp. 3
13	Exp. 2	Fix 1	Exp. 3	Exp. 3	Fix 1	Exp. 2
14	Exp. 2	Fix 1	Exp. 3	Exp. 3	Fix 1	Exp. 2
15	Exp. 2	Fix 1	Exp. 3	Exp. 3	Fix 1	Exp. 2
16	Exp. 2	Fix 1	Exp. 3	Exp. 3	Fix 1	Exp. 1

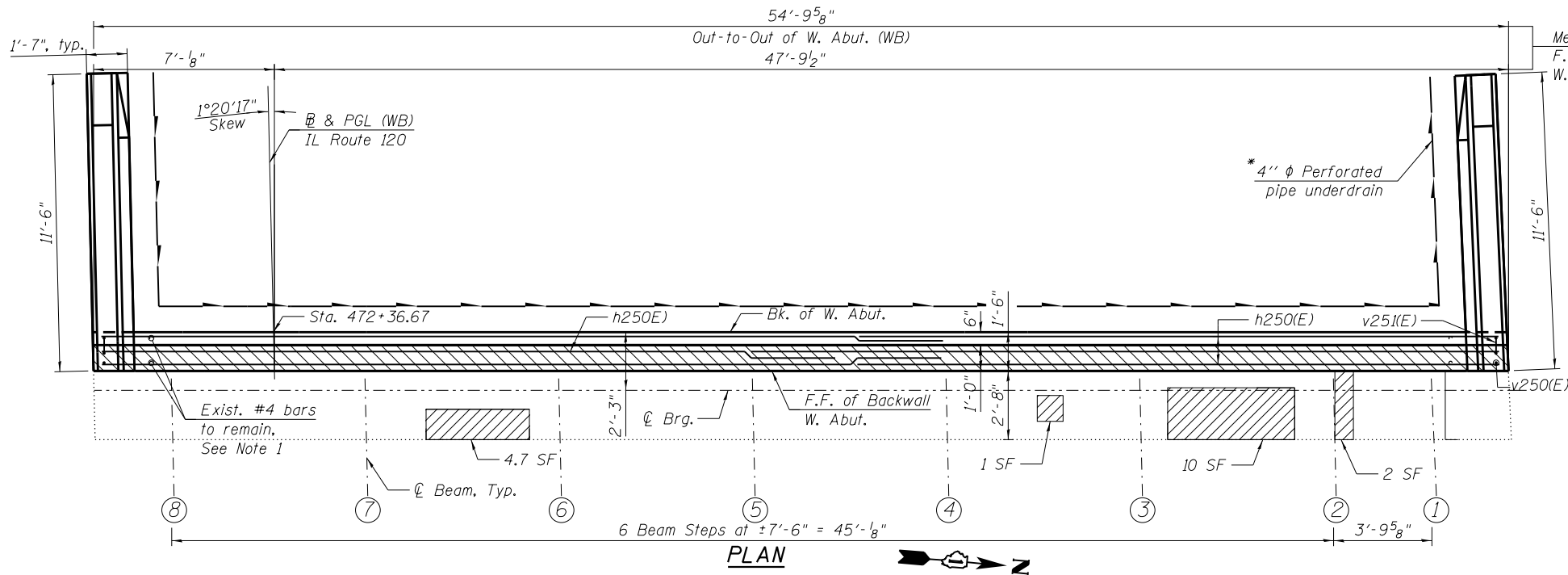
SHIM PLATE TABLE

Girder	W. Abut.	Pier 1 (W. Brg.)	Pier 1 (E. Brg.)	Pier 3 (W. Brg.)	Pier 3 (E. Brg.)	E. Abut.
1	-	-	-	-	-	-
2	1/16"	1/8"	-	-	3/16"	3/16"
3	1/16"	1/8"	-	-	3/16"	3/16"
4	1/16"	1/8"	-	-	3/16"	3/16"
5	1/16"	1/8"	-	-	3/16"	3/16"
6	1/16"	1/8"	-	-	3/16"	3/16"
7	1/16"	1/8"	-	-	3/16"	3/16"
8	-	1/16"	-	-	-	-
9	-	-	-	-	-	-
10	1/16"	1/8"	1/16"	-	3/16"	-
11	1/16"	1/8"	-	-	3/16"	-
12	1/4"	1/16"	1/16"	1/16"	3/16"	3/16"
13	1/16"	1/8"	-	-	3/16"	-
14	1/16"	1/8"	-	-	3/16"	-
15	1/16"	1/8"	-	-	3/16"	-
16	1/16"	-	-	-	-	-

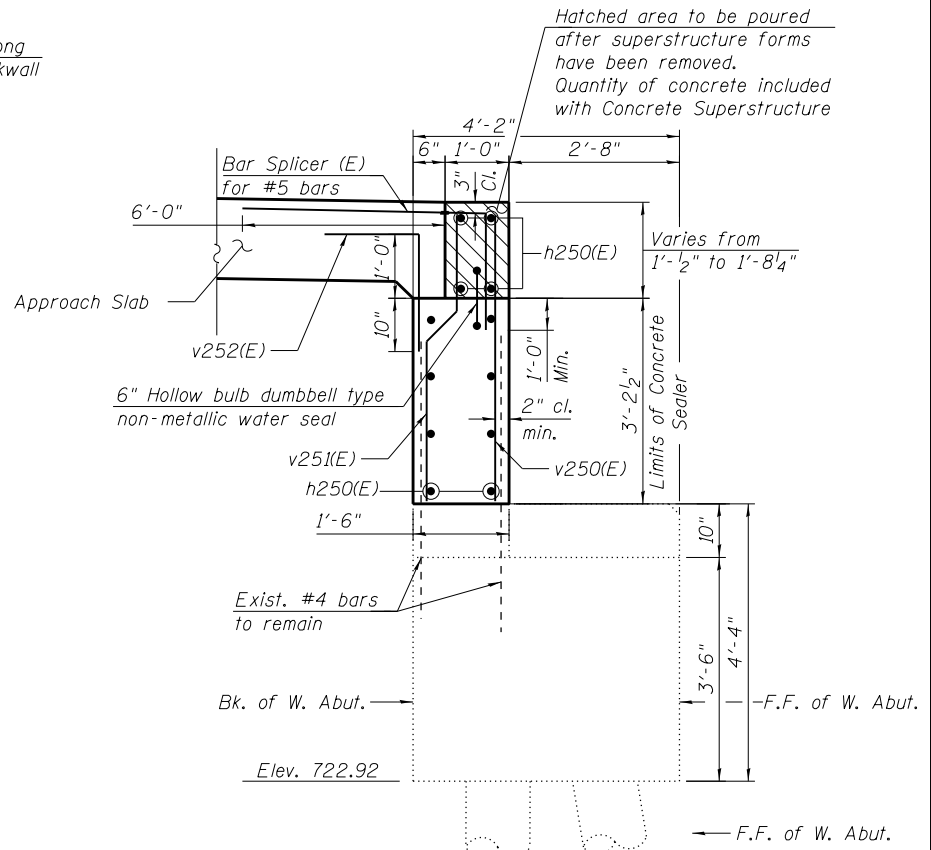
NOTES:

- Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
- Steel extension, shim plates and connection bolts shall be paid as "Furnishing and Erecting Structural Steel".
- Cost of removal and re-installing of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with "Jack and Remove Existing Bearings".

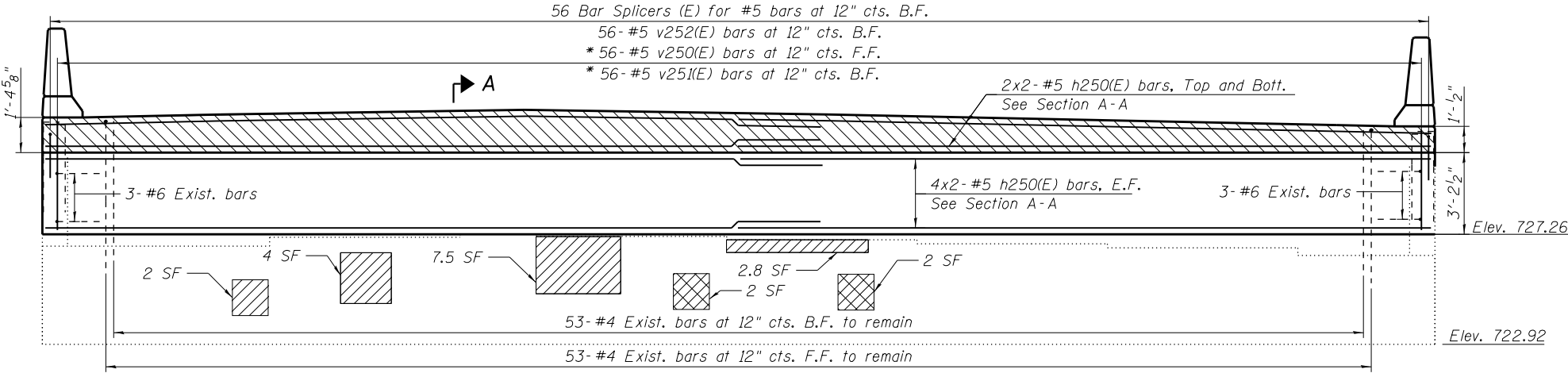
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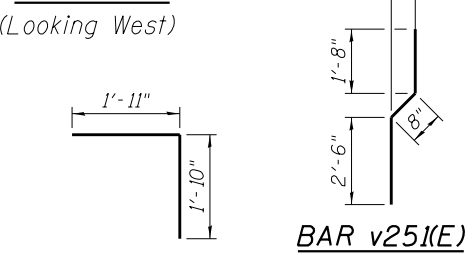
PLAN



Section A-A



ELEVATION
(Looking West)



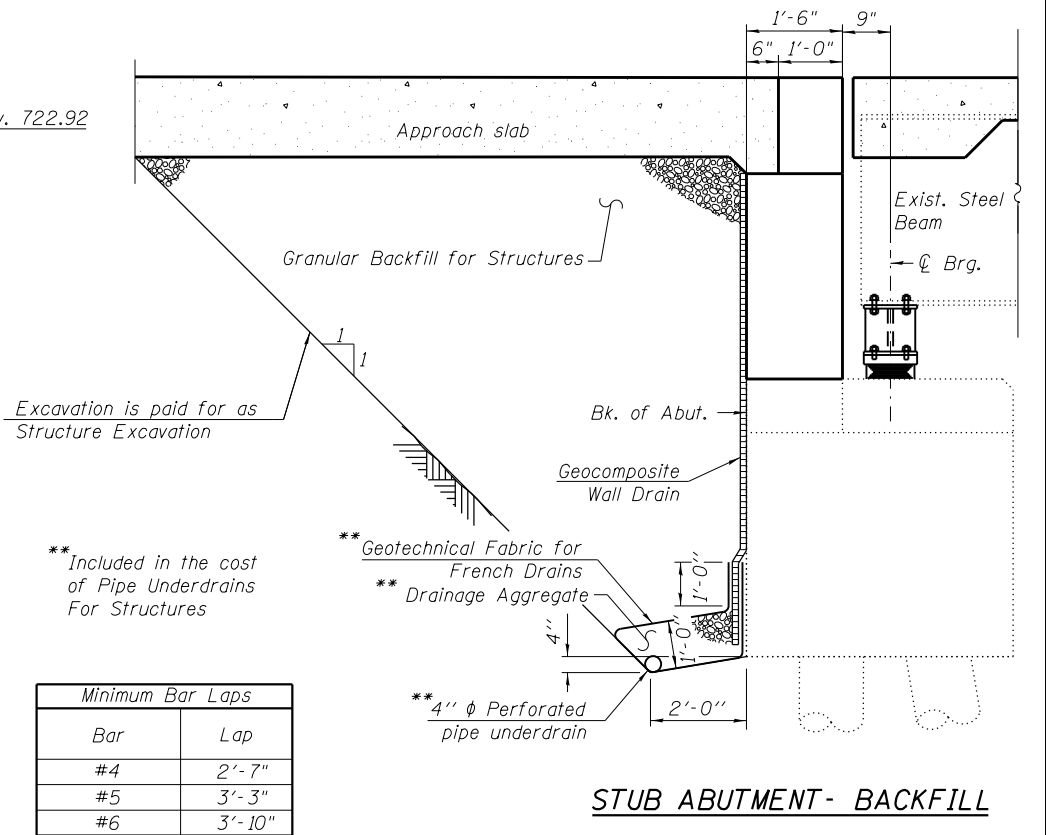
- LEGEND**
- Area to be poured after superstructure forms been removed
 - Structural Repair of Concrete (Depth Equal to or Less Than 5")
 - Structural Repair of Concrete (Depth Greater Than 5")
 - SF - Square Foot

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h250(E)	24	#5	28'-10"	—
v250(E)	56	#5	4'-7"	—
v251(E)	56	#5	4'-10"	—
v252(E)	56	#5	3'-9"	└
Structure Excavation		Cu. Yd.	87	
Concrete Structures		Cu. Yd.	9.8	
Concrete Superstructure		Cu. Yd.	2.8	
Protective Coat		Sq. Yd.	6	
Reinforcement Bars, Epoxy Coated		Pound	1,491	
Concrete Sealer		Sq. Ft.	166	
Geocomposite Wall Drain		Sq. Yd.	44	
Granular Backfill For Structures		Cu. Yd.	87.0	
Cleaning Bridge Seats		Sq. Ft.	147	
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)		Sq. Ft.	34	
Structural Repair of Concrete (Depth Greater Than 5 Inches)		Sq. Ft.	4	
Pipe Underdrains For Structures, 4"		Foot	52	

NOTES

1. Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
2. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with concrete removal.
3. The presented elevations and limits of the existing abutment have been taken from historical design drawings and may not present "as-built" condition. All existing structure limits shall be field verified by the contractor and coordinated with the engineer prior to ordering materials, fabrication and construction of the proposed abutment extension.
4. Bars indicated thus 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.
5. For wingwalls and parapet sections, details and quantities, see Sheet S-44.
6. All drainage system components shall extend 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)



STUB ABUTMENT - BACKFILL

Minimum Bar Laps

Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"

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HBM
ENGINEERING GROUP, LLC
4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

42-0490125-60x40-WestAbutWB.dgn
USER NAME = mustafa.ahobaidi
PLOT SCALE = 6/8.0000 1" = 10'
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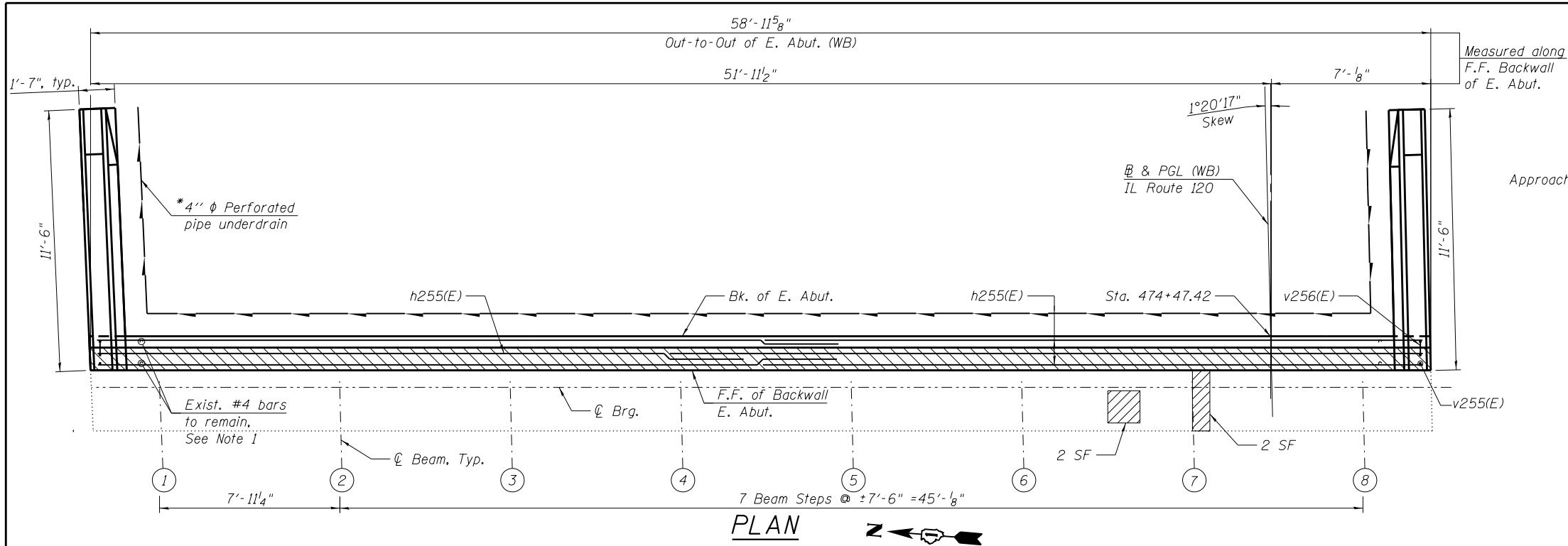
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DRAWN - MAA
CHECKED - MAI, MI
DATE - 03/20/2017

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REVISED

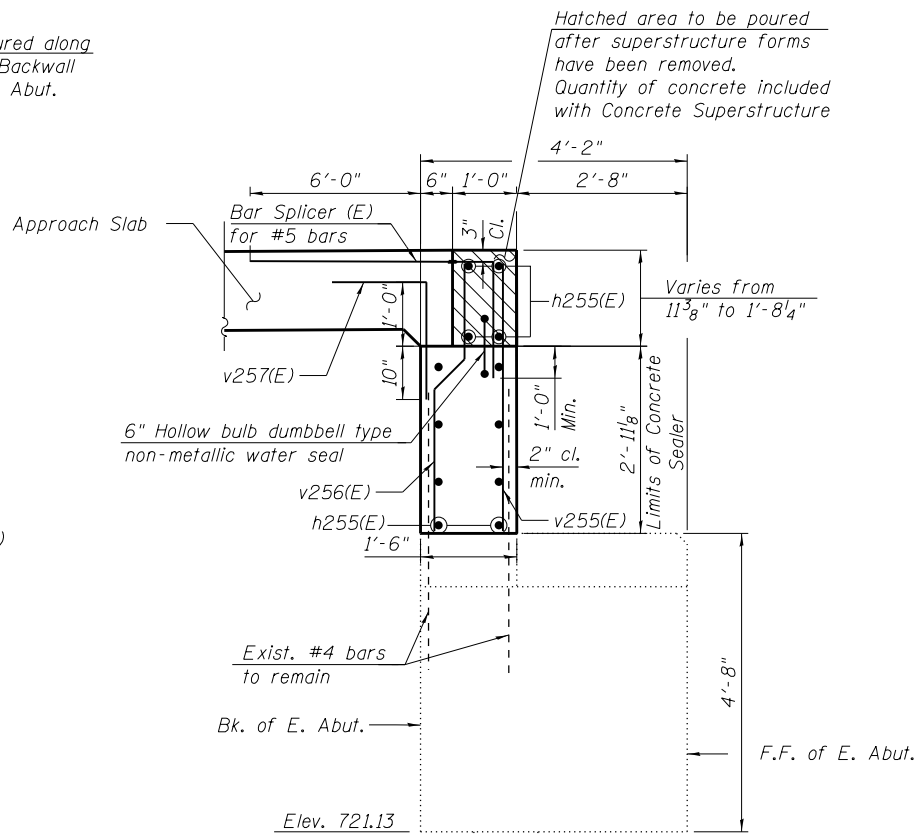
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT MODIFICATIONS (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)**
SCALE: SHEET S-42 OF S-55 SHEETS STA. TO STA.

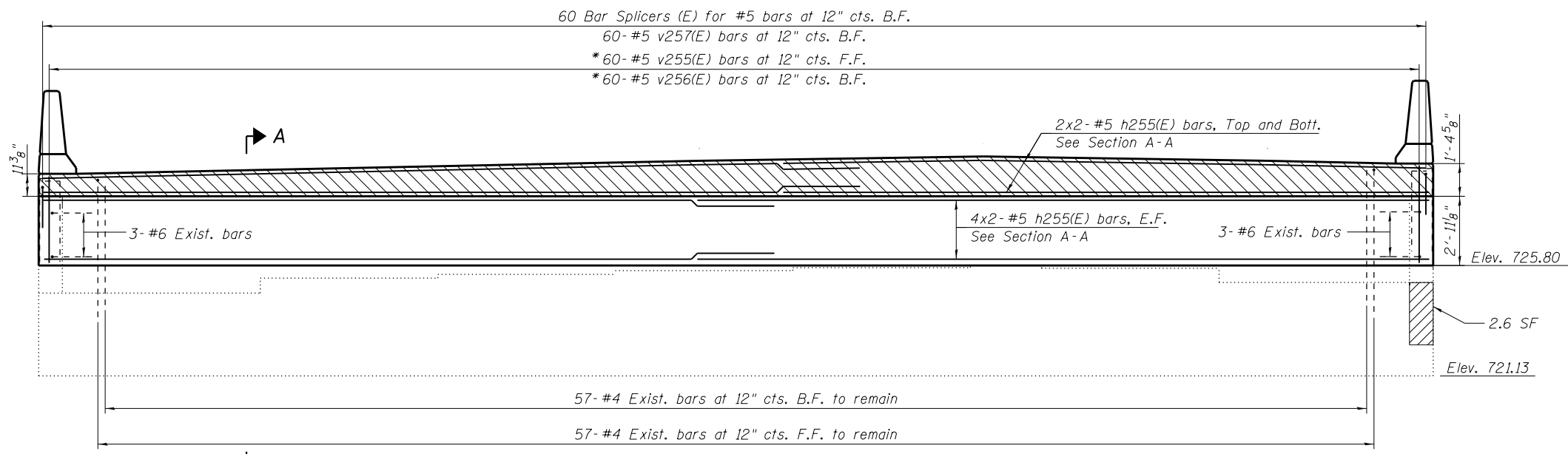
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333 LAKE 288 238
342
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2 CONTRACT NO. 60X40
ILLINOIS FED. AID PROJECT



PLAN



SECTION A-A



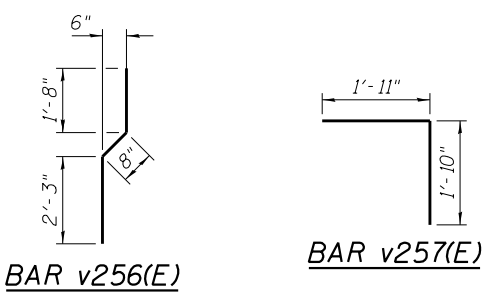
ELEVATION
(Looking East)

NOTES

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with concrete removal.
- The presented elevations and limits of the existing abutment have been taken from historical design drawings and may not present "as-built" condition. All existing structure limits shall be field verified by the contractor and coordinated with the engineer prior to ordering materials, fabrication and construction of the proposed abutment extension.
- Bars indicated thus 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.
- For wingwalls and parapet sections, details and quantities, see Sheet S-44.
- For Stub abutment backfill section, see Sheet S-42.

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"

* Cut in field to fit



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h255(E)	24	#5	30'-10"	—
v255(E)	60	#5	4'-5"	—
v256(E)	60	#5	4'-7"	—
v257(E)	60	#5	3'-9"	└
Structure Excavation			Cu. Yd.	94
Concrete Structures			Cu. Yd.	9.1
Concrete Superstructure			Cu. Yd.	2.9
Protective Coat			Sq. Yd.	7
Reinforcement Bars, Epoxy Coated			Pound	1,572
Concrete Sealer			Sq. Ft.	164
Geocomposite Wall Drain			Sq. Yd.	48
Granular Backfill For Structures			Cu. Yd.	94
Cleaning Bridge Seats			Sq. Ft.	158
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)			Sq. Ft.	7
Pipe Underdrains For Structure 4"			Foot	55

LEGEND

- Area to be poured after superstructure forms been removed
- Structural Repair of Concrete (Depth Equal to or Less Than 5")

SF - Square Foot

FILE PATH = FAX1305-591 IL 120 Dwr GreenLeaf CAD001 Sheet 1 of 3 04/01/25 09:40 E-AsAbutWB.dgn

HBM
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4415 WEST HARRISON STREET, SUITE 231
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43-0490125-60X40-E-AsAbutWB.dgn
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PLOT SCALE = 6:0.0000 1' = 11"
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DESIGNED - MA, MAA
DRAWN - MAA
CHECKED - MAI, MI
DATE - 03/20/2017

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REVISED
REVISED
REVISED

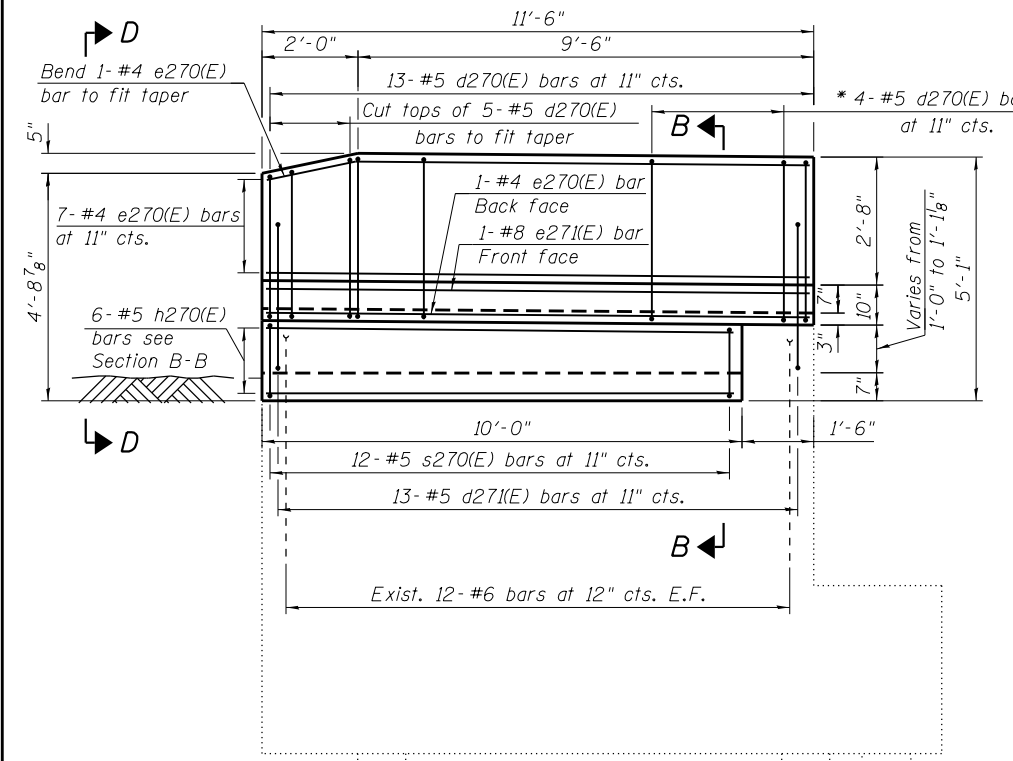
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT MODIFICATIONS (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

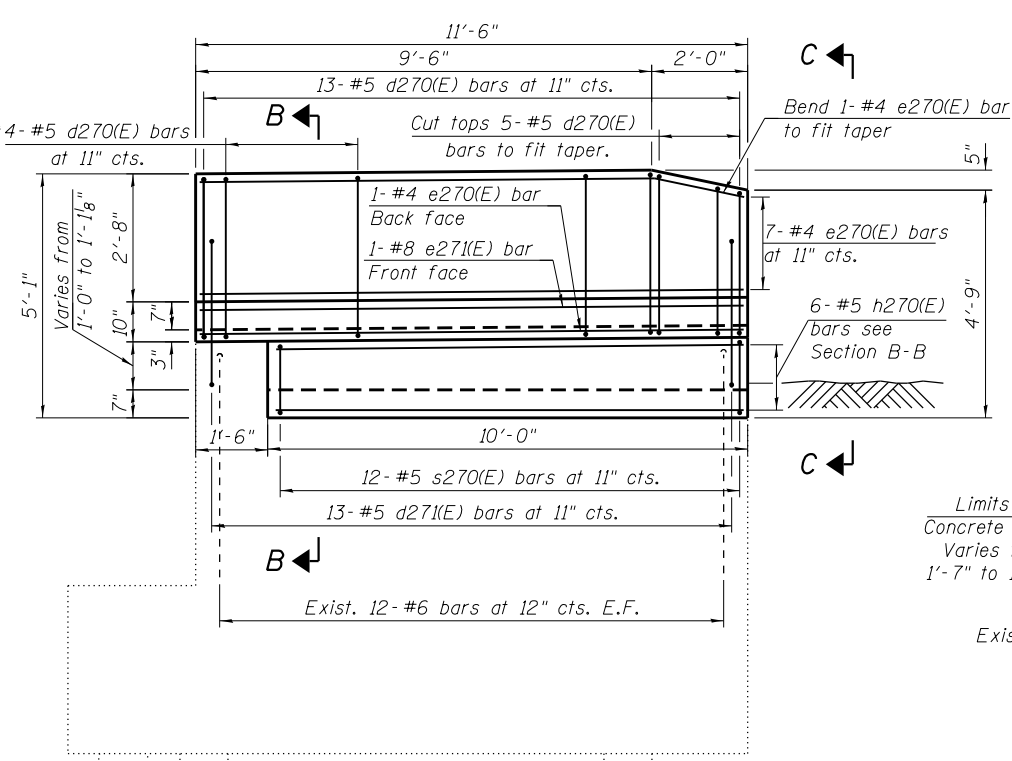
SCALE: SHEET S-43 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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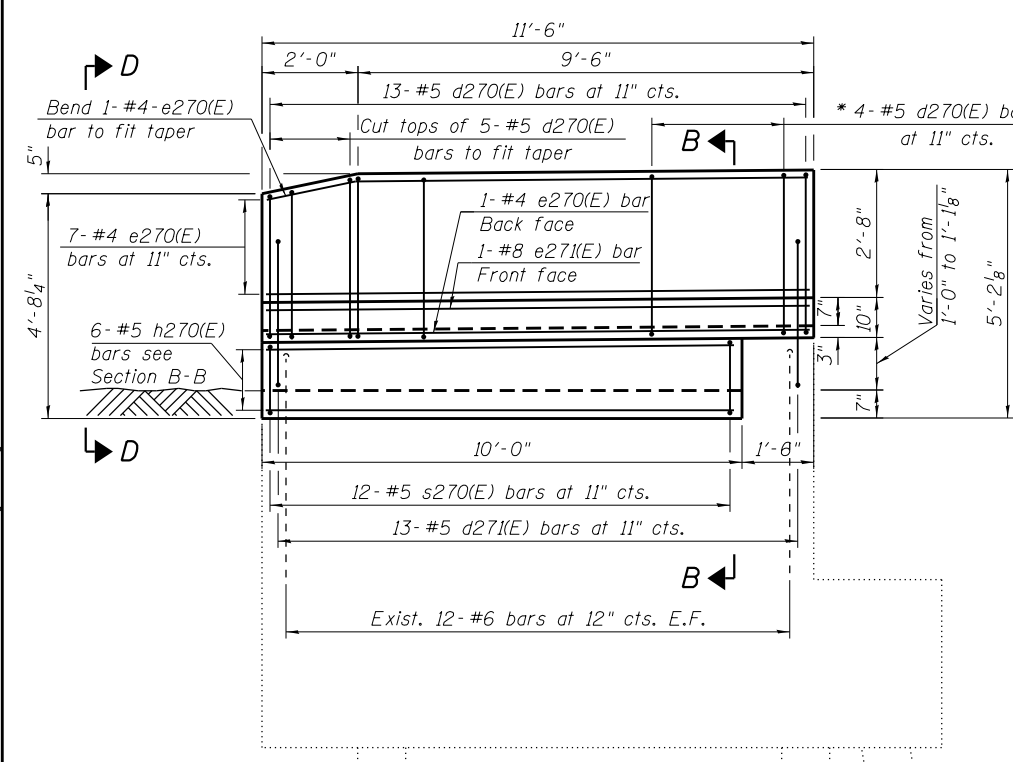
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2 CONTRACT NO. 60X40
ILLINOIS FED. AID PROJECT



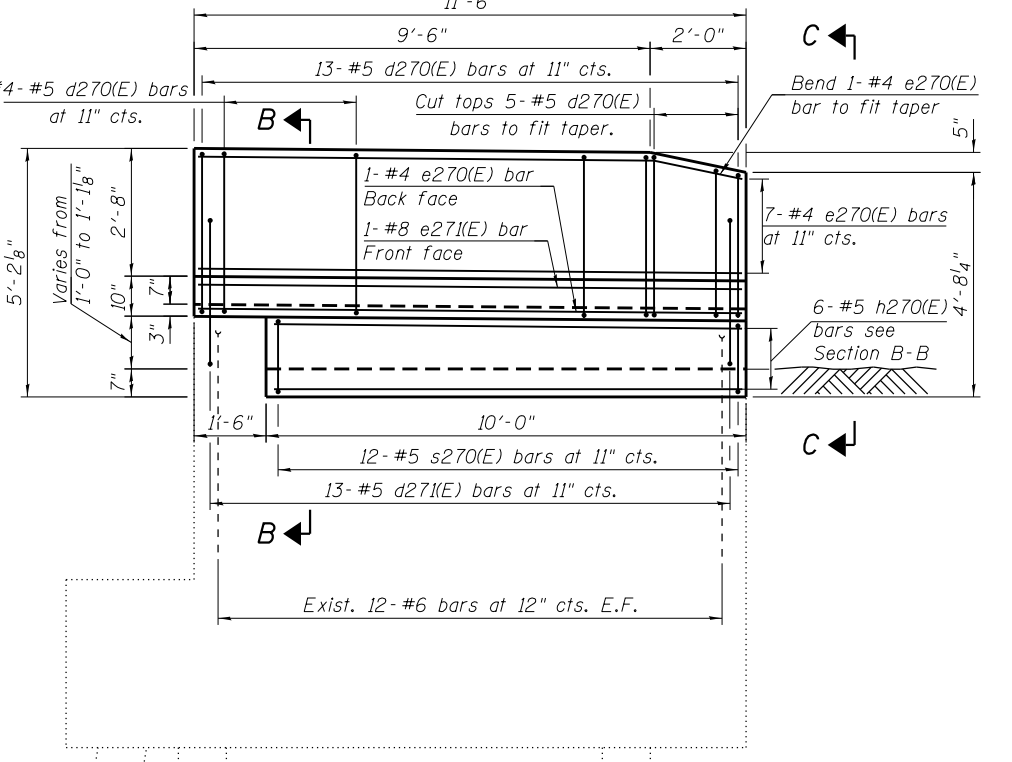
**SOUTH WINGWALL ELEVATION
WEST ABUTMENT**
(Looking North)



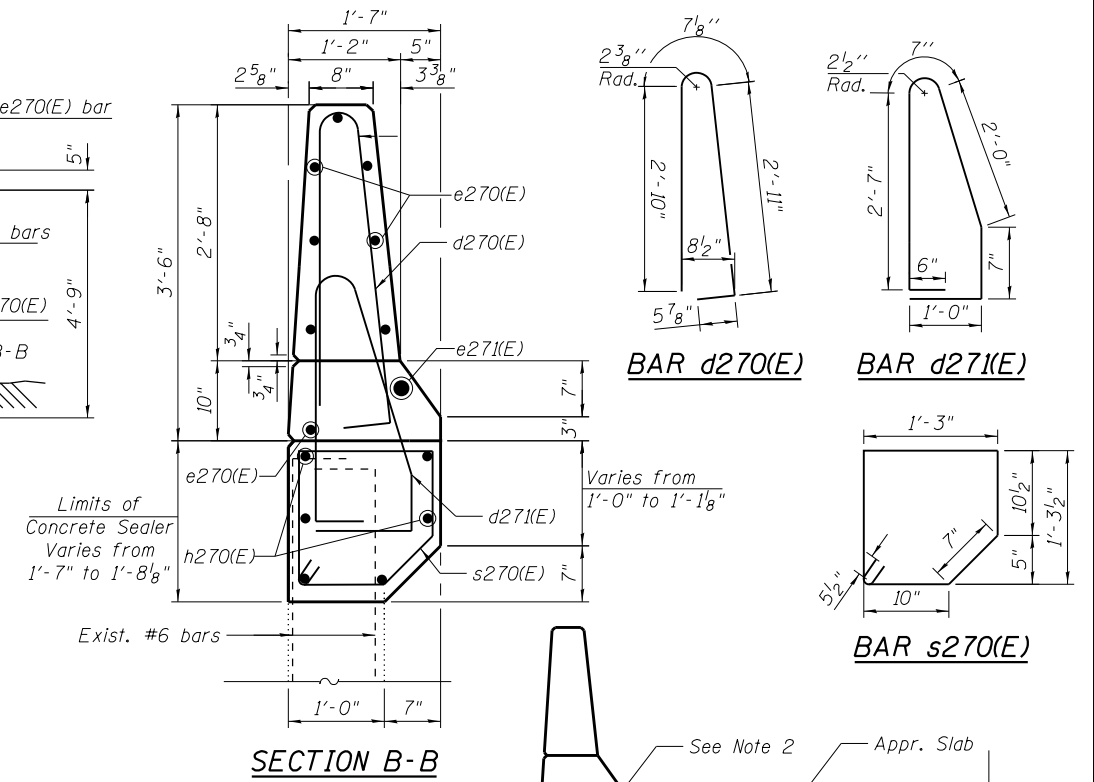
**NORTH WINGWALL ELEVATION
WEST ABUTMENT**
(Looking South)



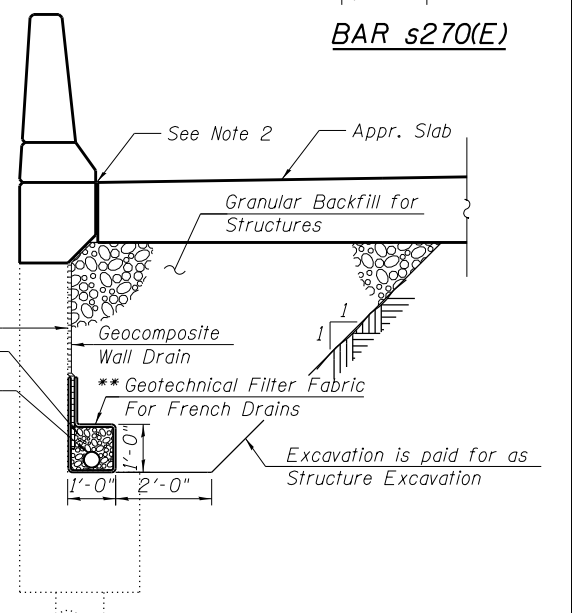
**NORTH WINGWALL ELEVATION
EAST ABUTMENT**
(Looking South)



**SOUTH WINGWALL ELEVATION
EAST ABUTMENT**
(Looking North)



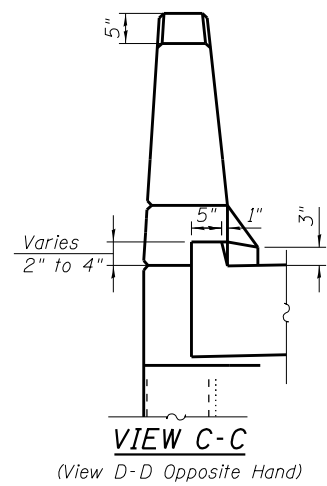
SECTION B-B



TYPICAL WINGWALL SECTION

NOTES:

- For abutments details and additional notes, see Sheets S-42 & S-43.
- Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet along the edges where the approach slab meets the wingwalls. Typ. each parapet.



VIEW C-C

(View D-D Opposite Hand)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d270(E)	84	#5	6'-10"	D
d271(E)	52	#5	7'-3"	D
e270(E)	32	#4	11'-2"	—
e271(E)	4	#8	11'-2"	—
h270(E)	24	#5	9'-8"	—
s270(E)	48	#5	5'-9"	D
Structure Excavation			Cu. Yd.	22
Concrete Structures			Cu. Yd.	3.6
Concrete Superstructure			Cu. Yd.	6.0
Protective Coat			Sq. Yd.	22
Reinforcement Bars, Epoxy Coated			Pound	1,880
Concrete Sealer			Sq. Ft.	68
Geocomposite Wall Drain			Sq. Yd.	22
Granular Backfill for Structures			Cu. Yd.	40
Pipe Underdrains for Structures 4"			Foot	40

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HBM
ENGINEERING GROUP, LLC
4415 WEST HARRISON STREET, SUITE 231
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PHONE: (708) 236-0900 FAX: (708) 236-0901

44-0490125-60X40-Wingwall1WB.dgn
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PLOT DATE = 3/20/2017

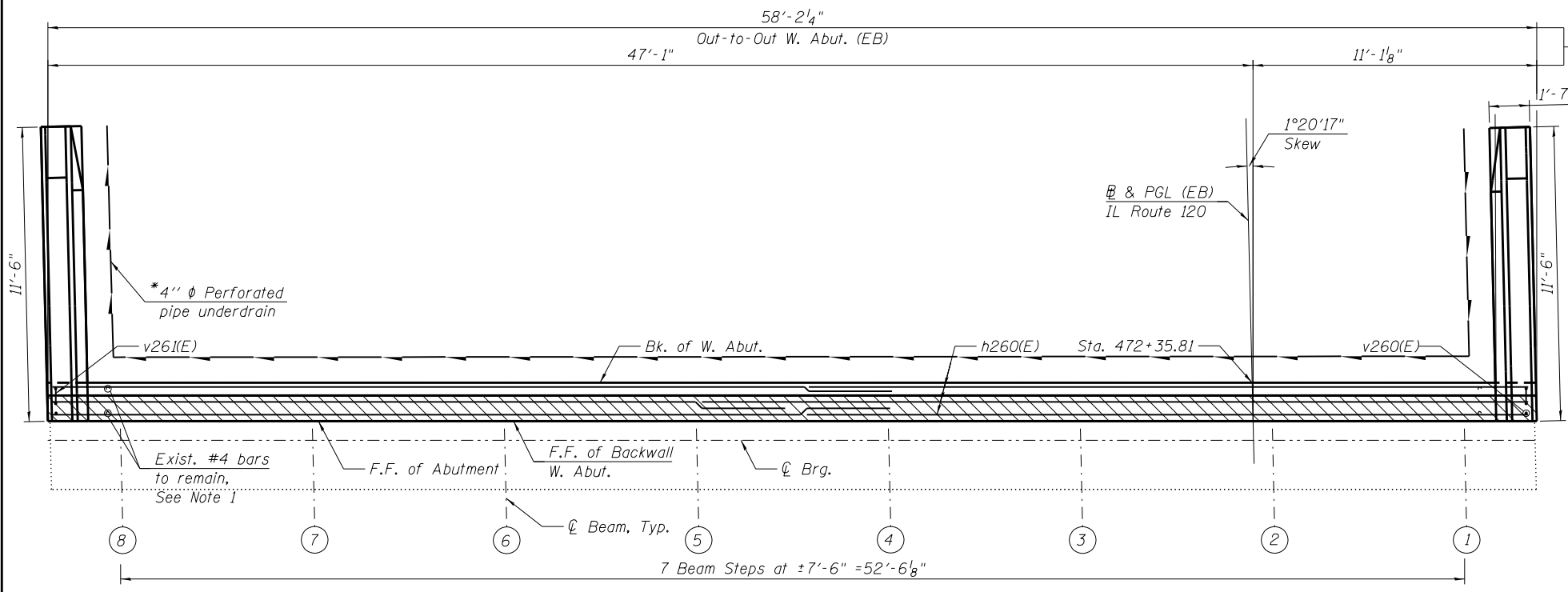
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DRAWN - MAA
CHECKED - MAI, MI
DATE - 03/20/2017

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REVISED
REVISED
REVISED

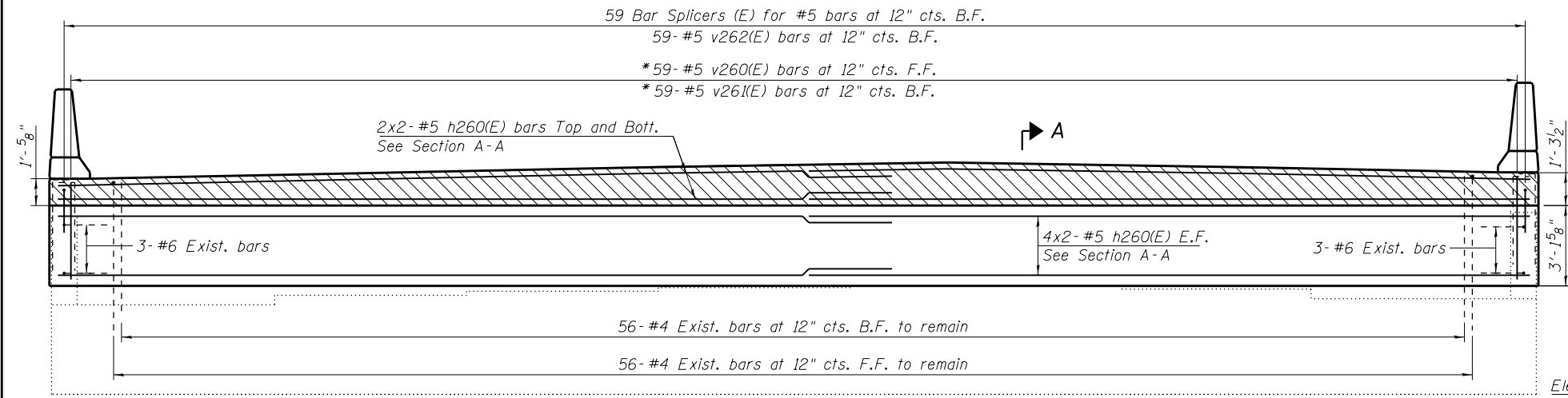
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

WINGWALLS MODIFICATIONS (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)
SCALE: SHEET S-44 OF S-55 SHEETS STA. TO STA.

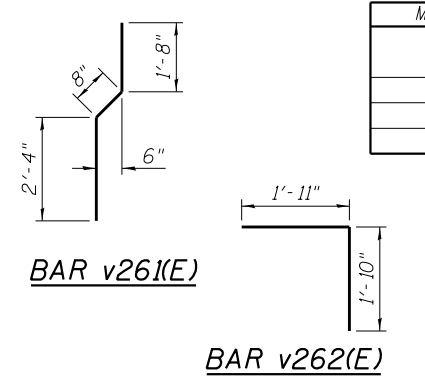
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*121VB-1&2&12R-1HB-2(BR)&12-RS-2 CONTRACT NO. 60X40
ILLINOIS FED. AID PROJECT



PLAN

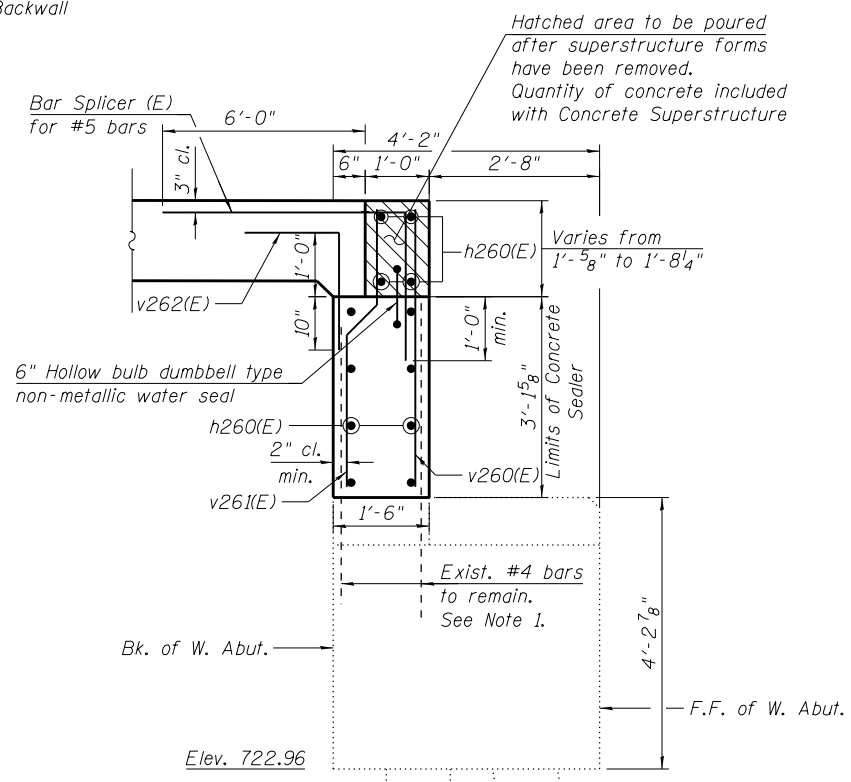


ELEVATION
(Looking West)

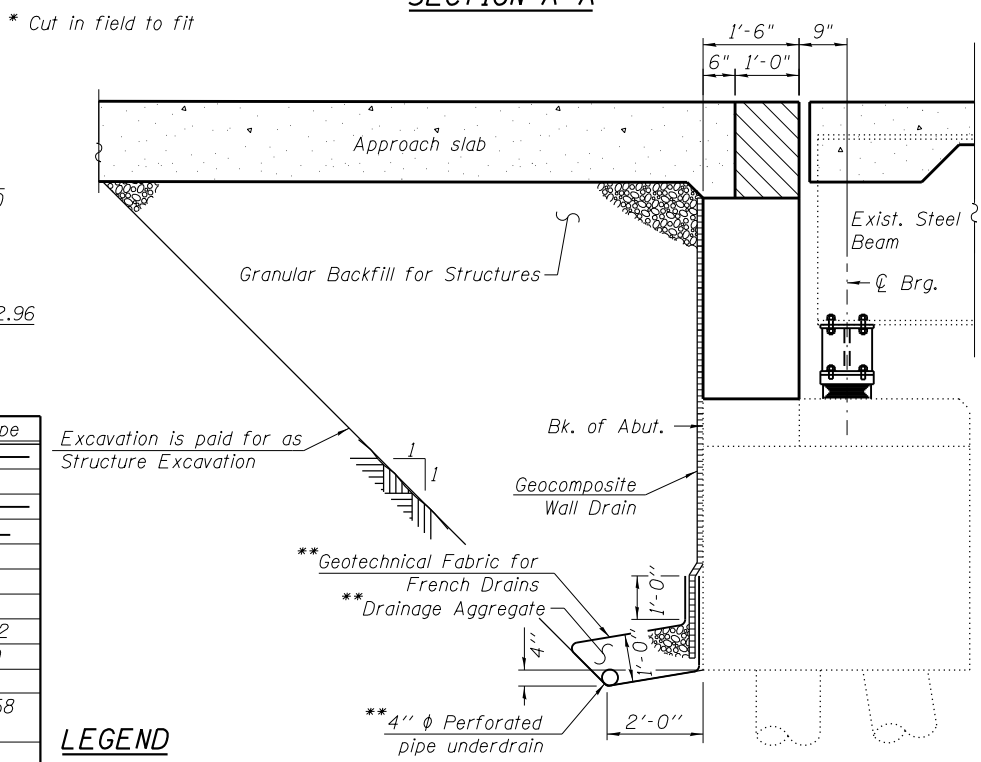


Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"

- NOTES**
- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
 - Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with concrete removal.
 - The presented elevations and limits of the existing abutment have been taken from historical design drawings and may not present "as-built" condition. All existing structure limits shall be field verified by the contractor and coordinated with the engineer prior to ordering materials, fabrication and construction of the proposed abutment extension.
 - Bars indicated thus 4x2-#5 etc. indicates 4 lines of bars with 2 lengths per line.
 - For wingwalls and parapet sections, details and quantities, see Sheet S-47.
 - All drainage system components shall extend 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)



SECTION A-A



STUB ABUTMENT - BACKFILL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h260(E)	24	#5	30'-6"	
v260(E)	59	#5	4'-6"	
v261(E)	59	#5	4'-8"	
v262(E)	59	#5	3'-9"	
Structure Excavation		Cu. Yd.	87	
Concrete Structures		Cu. Yd.	10.2	
Concrete Superstructure		Cu. Yd.	3.0	
Protective Coat		Sq. Yd.	7	
Reinforcement Bars, Epoxy Coated		Pound	1,558	
Concrete Sealer		Sq. Ft.	183	
Geocomposite Wall Drain		Sq. Yd.	46	
Granular Backfill for Structures		Cu. Yd.	87	
Cleaning Bridge Seats		Sq. Ft.	155	
Pipe Underdrains For Structures 4"		Foot	55	

LEGEND

Area to be poured after superstructure forms been removed

** Included in the cost of Pipe Underdrains For Structures

FILE PATH = F:\1305-591 IL 120 Over GreenLeaf\CADD\Sheet\45-0490126-60x40-WestAbutEB.dgn

HBM
ENGINEERING GROUP, LLC
4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

45-0490126-60x40-WestAbutEB.dgn
USER NAME = mustafa.lobaidi
PLOT SCALE = 6:0 1/2" = 1"
PLOT DATE = 3/20/2017

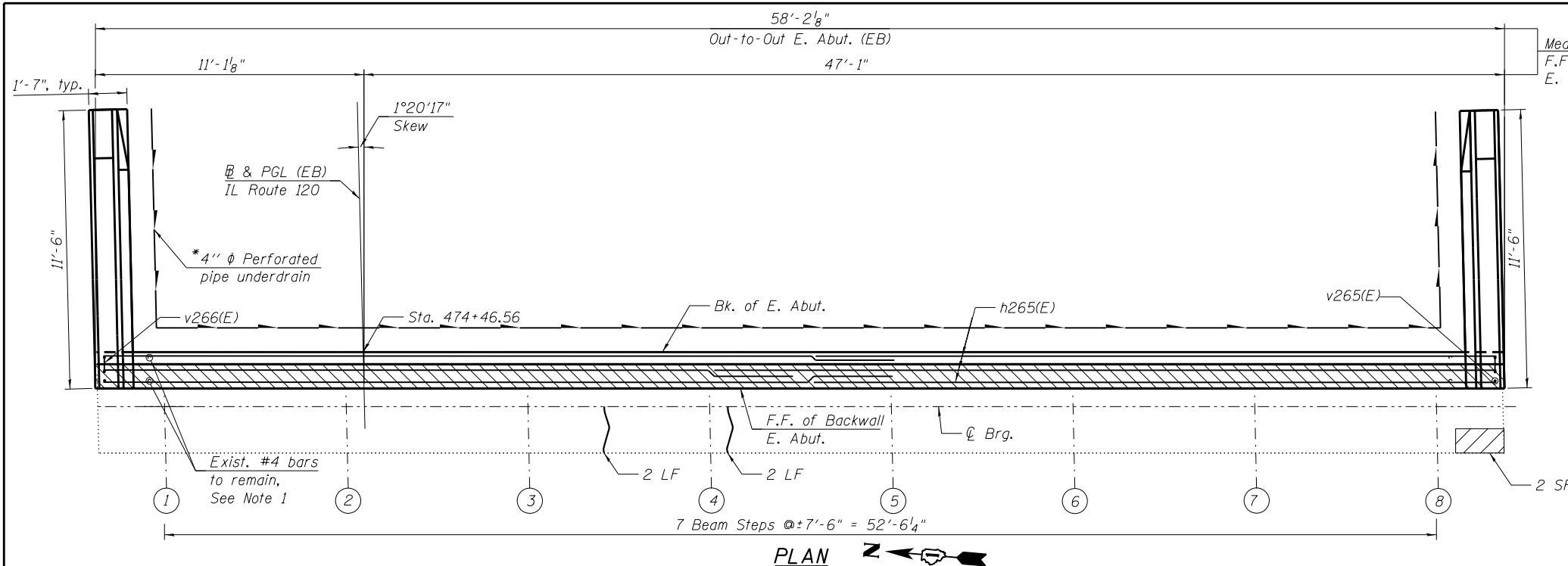
DESIGNED - MA, FA
DRAWN - FA
CHECKED - MAI, MI
DATE - 03/20/2017

REVISED
REVISED
REVISED
REVISED

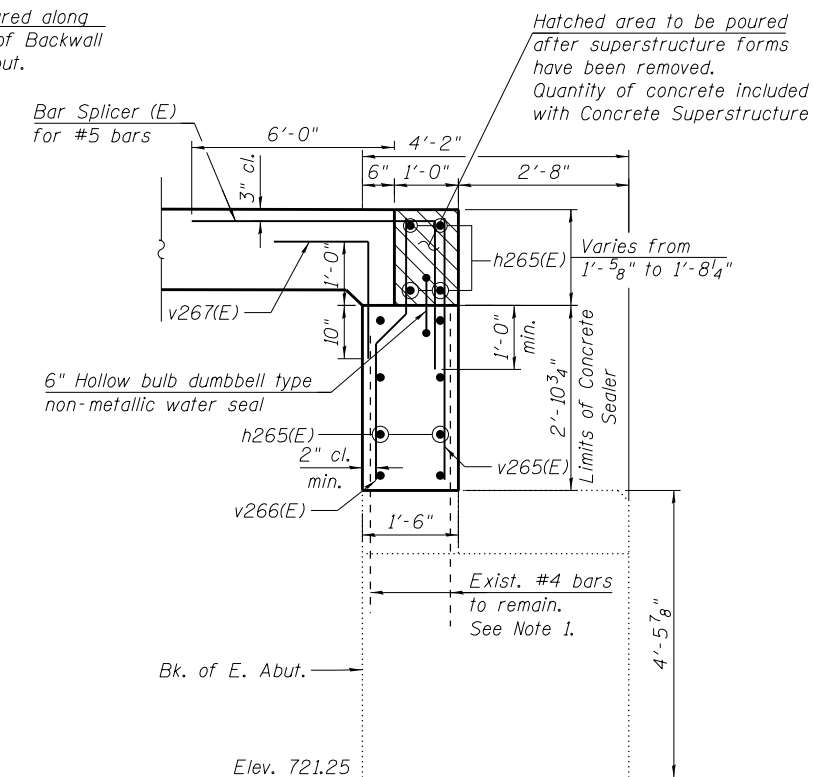
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT MODIFICATIONS (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)
SCALE: SHEET S-45 OF S-55 SHEETS STA. TO STA.

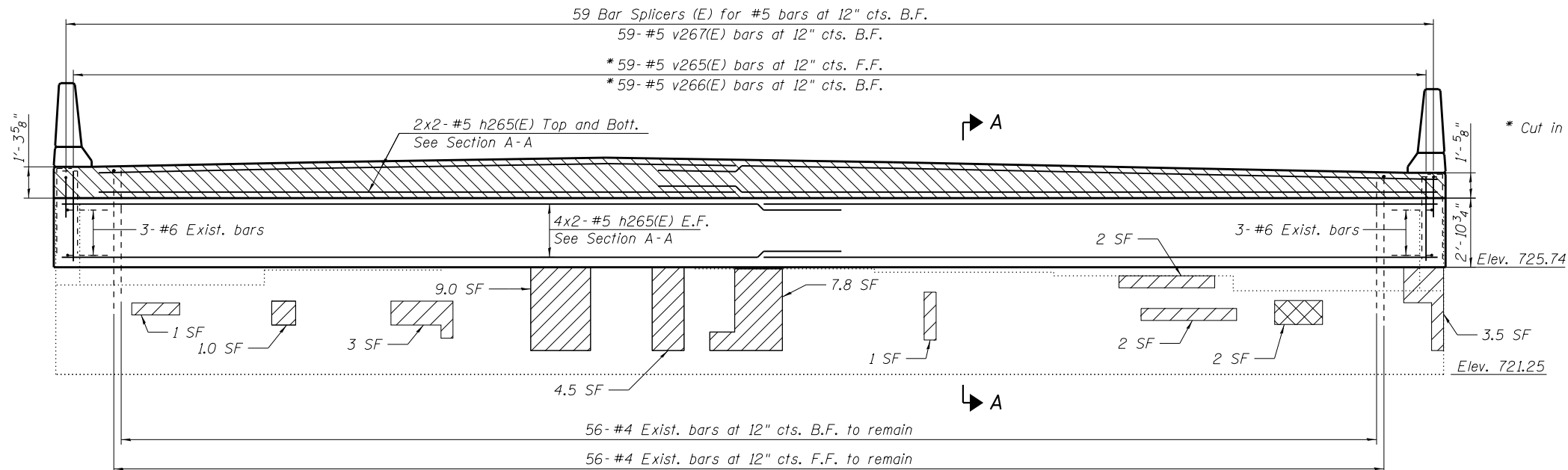
F.A.P. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
333 LAKE 288 241
342
*12VB-1&2&12R-1HB-2(BR)&12-RS-2 CONTRACT NO. 60X40
ILLINOIS FED. AID PROJECT



PLAN



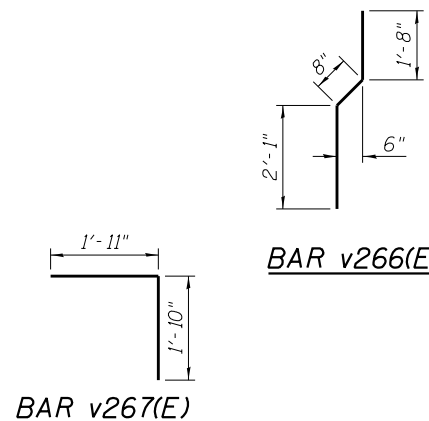
SECTION A-A



ELEVATION

(Looking East)

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"



LEGEND

- Area to be poured after superstructure forms been removed
- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- Structural Repair of Concrete (Depth Greater Than 5")
- Low Pressure Epoxy Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

NOTES

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
- Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with concrete removal.
- The presented elevations and limits of the existing abutment have been taken from historical design drawings and may not present "as-built" condition. All existing structure limits shall be field verified by the contractor and coordinated with the engineer prior to ordering materials, fabrication and construction of the proposed abutment extension.
- Bars indicated thus 4x2- #5 etc. indicates 4 lines of bars with 2 lengths per line.
- For wingwalls and parapet sections, details and quantities, see Sheet S-47.
- For Stub abutment backfill section, see Sheet S-45.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h265(E)	24	#5	30'-6"	—
v265(E)	59	#5	4'-3"	—
v266(E)	59	#5	4'-5"	—
v267(E)	59	#5	3'-9"	└
Structure Excavation		Cu. Yd.	87	
Concrete Structures		Cu. Yd.	9.4	
Concrete Superstructure		Cu. Yd.	3.0	
Protective Coat		Sq. Yd.	7	
Reinforcement Bars, Epoxy Coated		Pound	1,528	
Concrete Sealer		Sq. Ft.	169	
Epoxy Crack Injection		Foot	4	
Geocomposite Wall Drain		Sq. Yd.	46	
Granular Backfill For Structures		Cu. Yd.	87	
Cleaning Bridge Seats		Sq. Ft.	155	
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)		Sq. Ft.	37	
Structural Repair of Concrete (Depth Greater Than 5 Inches)		Sq. Ft.	2	
Pipe Underdrains For Structure 4"		Foot	55	

FILE PATH = FAX1305-591 IL 120 Dwr GreenLeaf CAD05 Sheet\46-049-0126-02\40-EastAbutEB.dgn

HBM
ENGINEERING GROUP, LLC
4415 WEST HARRISON STREET, SUITE 231
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46-0490126-60X40-EastAbutEB.dgn
USER NAME = mustafa.alobaidi
PLOT SCALE = 6:0 1/2" = 1"
PLOT DATE = 3/20/2017

DESIGNED - MA, FA
DRAWN - FA
CHECKED - MAI, MI
DATE - 03/20/2017

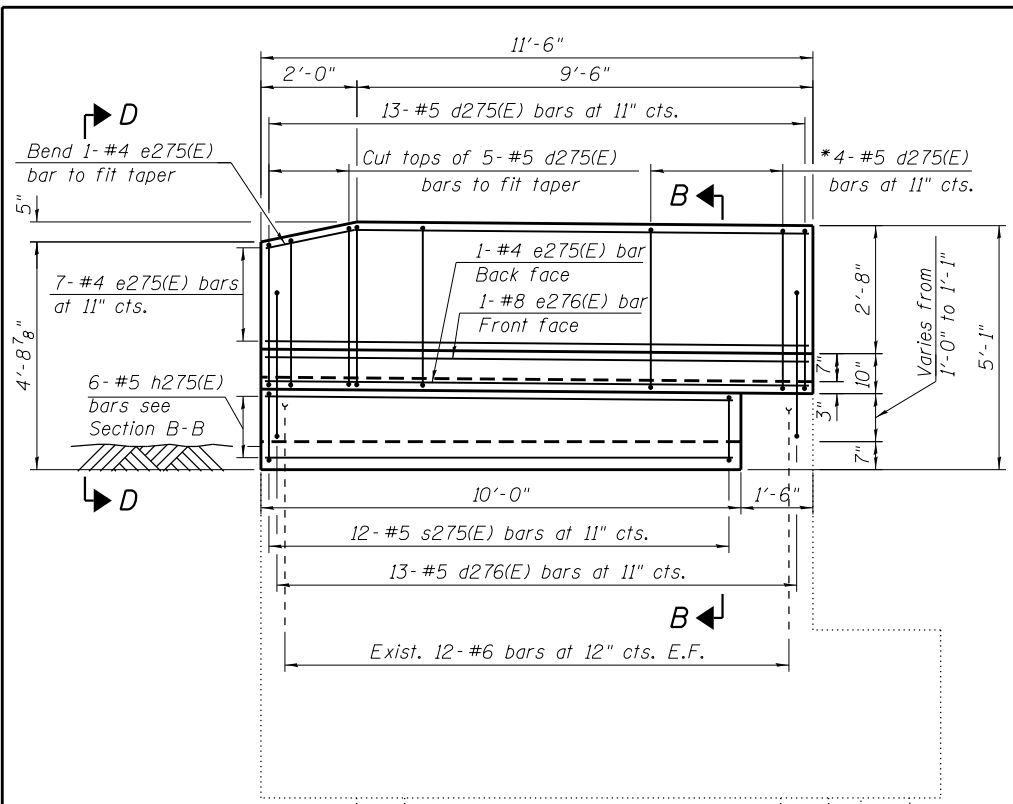
REVISED
REVISED
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

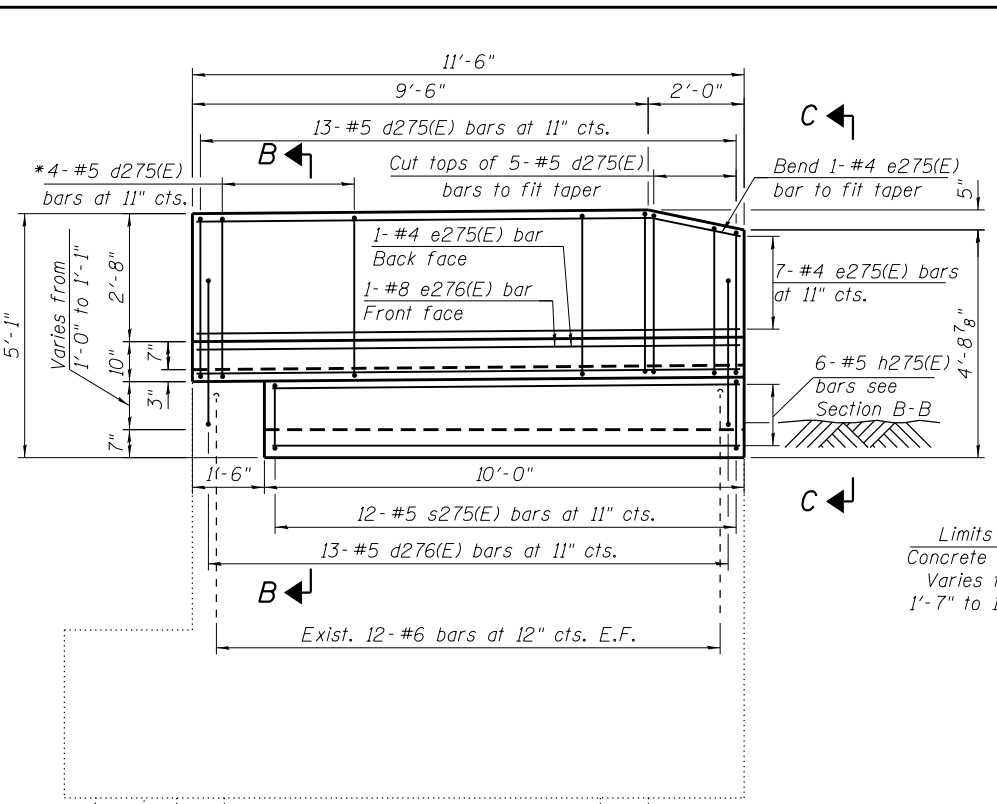
EAST ABUTMENT MODIFICATIONS (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-46 OF S-55 SHEETS STA. TO STA.

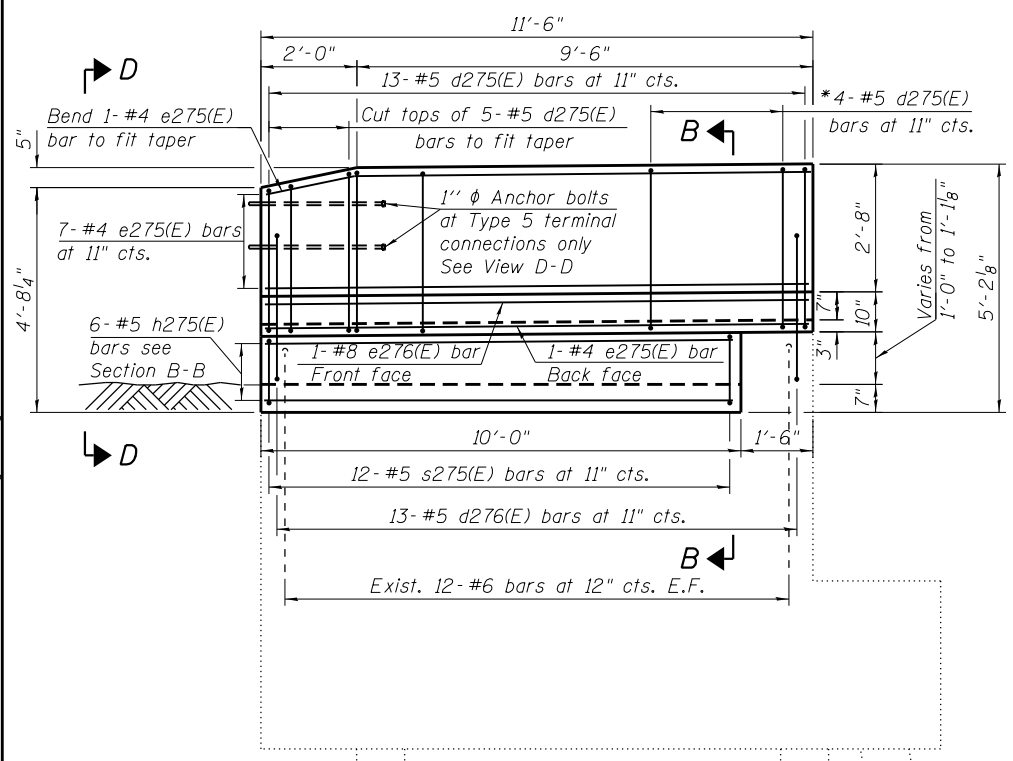
F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	242
*121VB-1&2&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



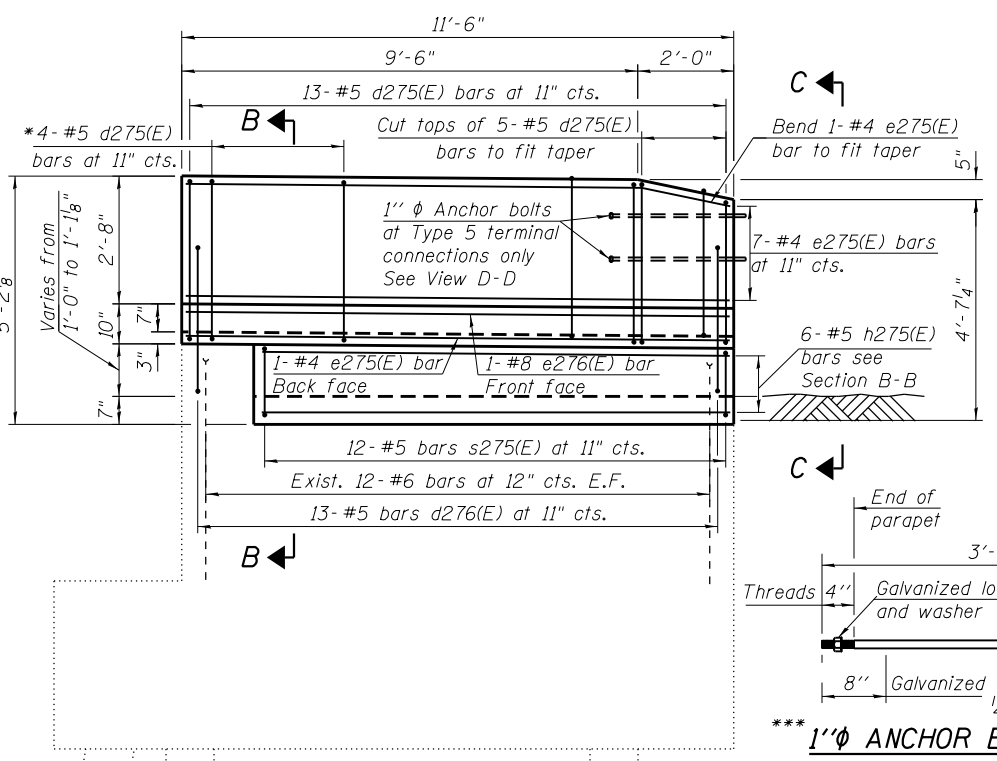
**SOUTH WINGWALL ELEVATION
WEST ABUTMENT**
(Looking North)



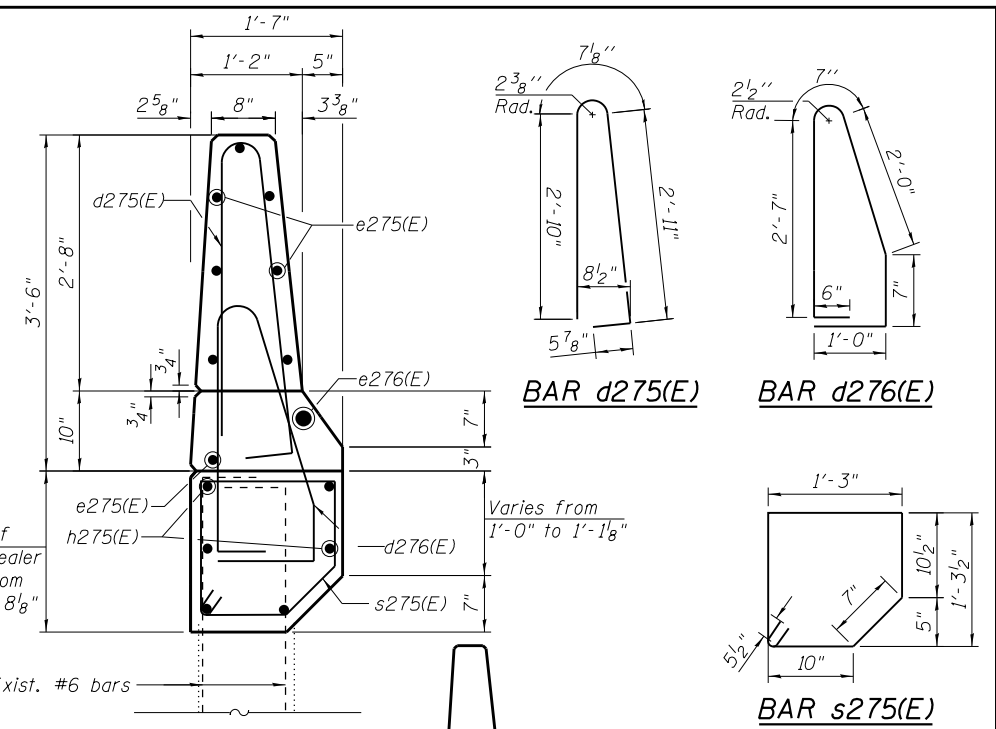
**NORTH WINGWALL ELEVATION
WEST ABUTMENT**
(Looking South)



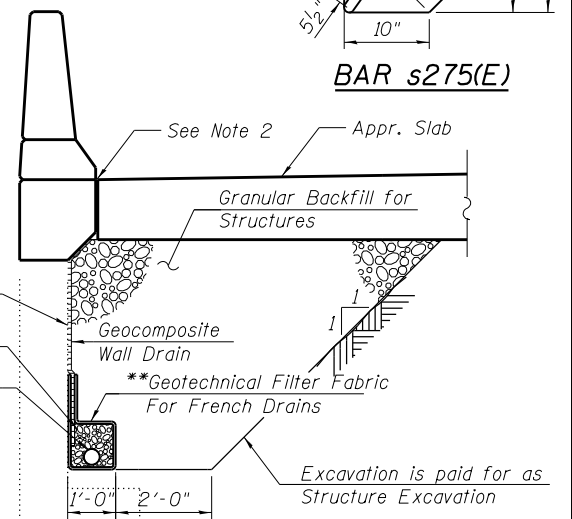
**NORTH WINGWALL ELEVATION
EAST ABUTMENT**
(Looking North)



**SOUTH WINGWALL ELEVATION
EAST ABUTMENT**
(Looking North)



SECTION B-B

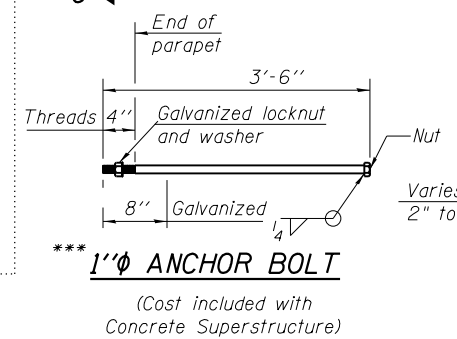


TYPICAL WINGWALL SECTION

** Included in the cost of Pipe Underdrains for Structures.

NOTES:

- For abutments details and additional notes, see Sheets S-45 & S-46.
- Preformed Expansion Joint Filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet along the edges where the approach slab meets the wingwalls. Typ. each parapet.



VIEW C-C
(View D-D Opposite Hand)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d275(E)	84	#5	6'-10"	U
d276(E)	52	#5	7'-3"	U
e275(E)	32	#4	11'-2"	—
e276(E)	4	#8	11'-2"	—
h275(E)	24	#5	9'-8"	—
s275(E)	48	#5	5'-9"	D
Structure Excavation			Cu. Yd.	23
Concrete Structures			Cu. Yd.	3.7
Concrete Superstructure			Cu. Yd.	6.0
Protective Coat			Sq. Yd.	22
Reinforcement Bars, Epoxy Coated			Pound	1,880
Concrete Sealer			Sq. Ft.	68
Geocomposite Wall Drain			Sq. Yd.	23
Granular Backfill for Structures			Cu. Yd.	40
Pipe Underdrains for Structures 4"			Foot	40

FILE PATH = F:\1305-591 IL 120 Dvr GreenLeaf\CADD\Sheet\47-0490126-00\40-Wingwall1EB.dgn

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4415 WEST HARRISON STREET, SUITE 231
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47-0490126-00\40-Wingwall1EB.dgn	DESIGNED - MA, MAA	REVISED
USER NAME = mustafa.alobaidi	DRAWN - MAA	REVISED
PLOT SCALE = 4:0.0000 1/4" = 1"	CHECKED - MAI, MI	REVISED
PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

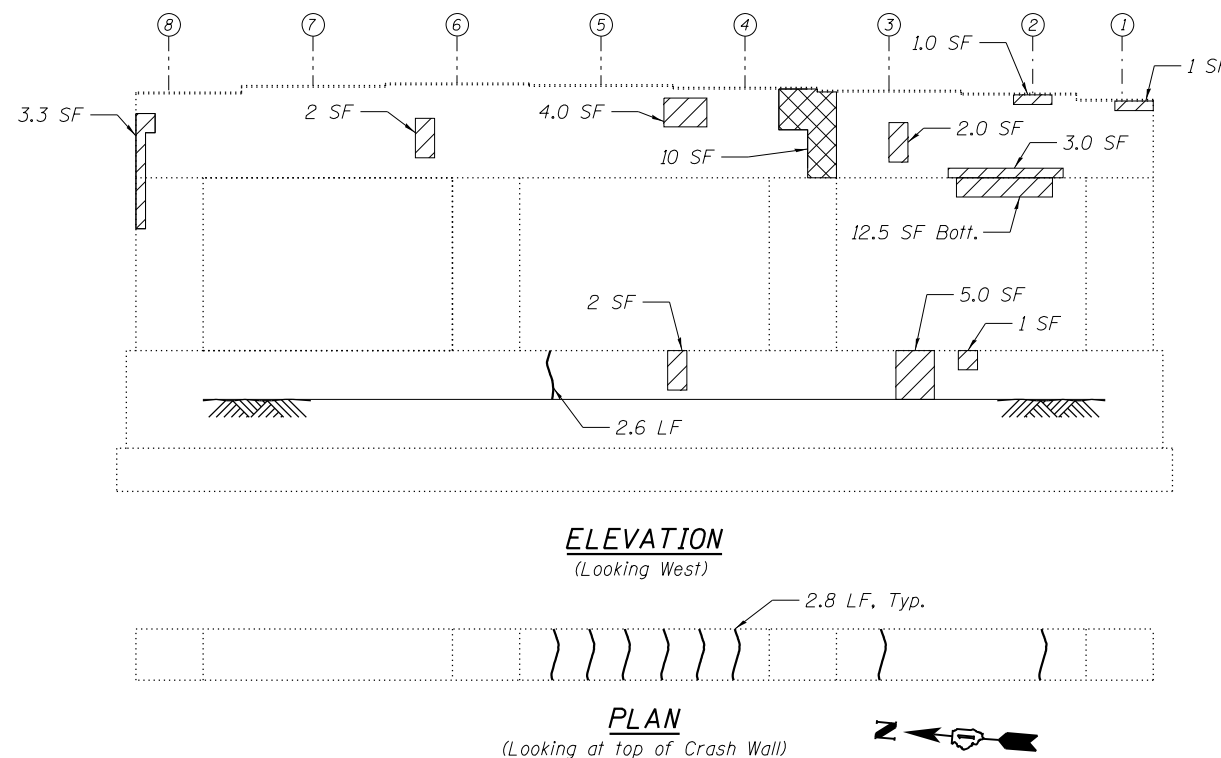
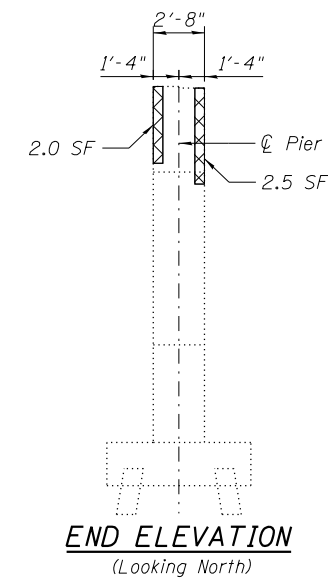
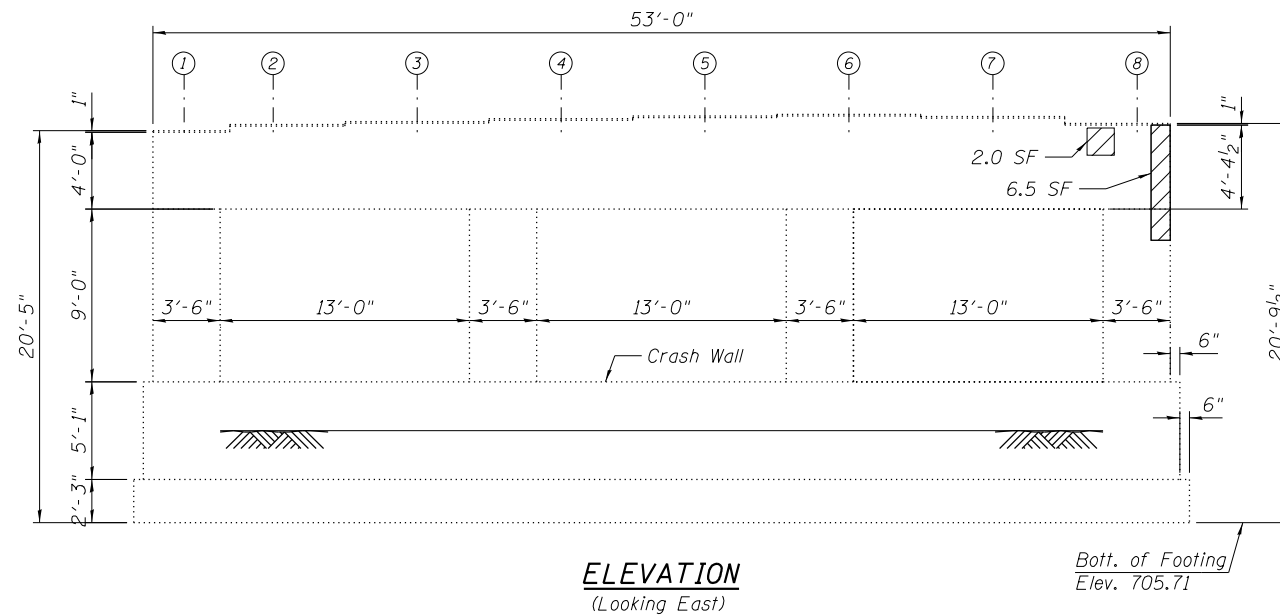
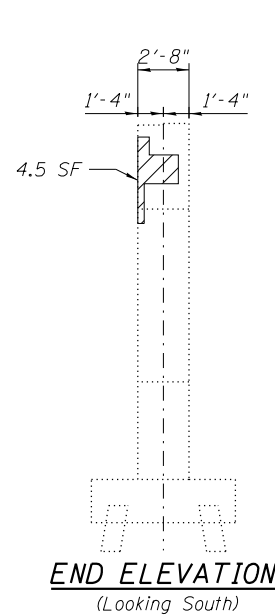
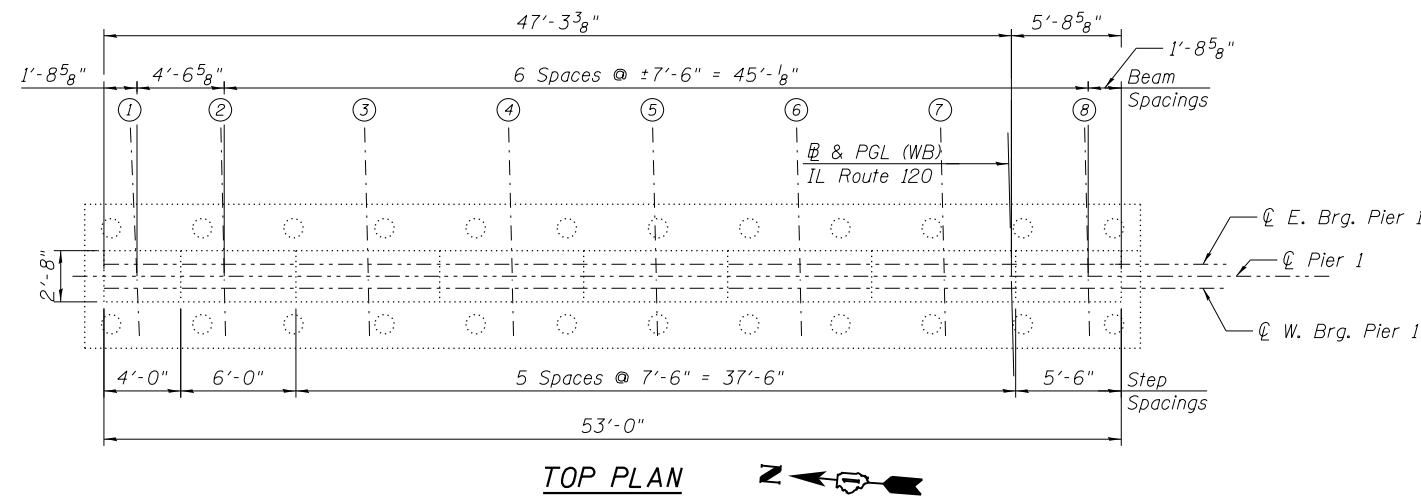
**WINGWALLS MODIFICATIONS (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)**

SCALE: SHEET S-47 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY LAKE	TOTAL SHEETS 288	SHEET NO. 243
*121VB-1&2&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Epoxy Crack Injection	Foot	25
Cleaning Bridge Seats	Sq. Ft.	142
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	50
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	15



NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
- The Contractor is responsible to remove, support and reinstall all existing utilities interfering with the work. Cost shall be included with Structural Repair of Concrete (Depth Equal to or Less Than 5").
- For bearing replacement type and details, see Sheets S-40 and S-41.
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after the removal and replacement of the bearings.

LEGEND

- Structural Repair of Concrete (Depth Greater Than 5")
- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- Low Pressure Epoxy Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

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HBM
ENGINEERING GROUP, LLC.
4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

48-0490125-60x40-Pier1WB.dgn
USER NAME = mustafa.lobaidi
PLOT SCALE = 100.0000 ' / in.
PLOT DATE = 3/20/2017

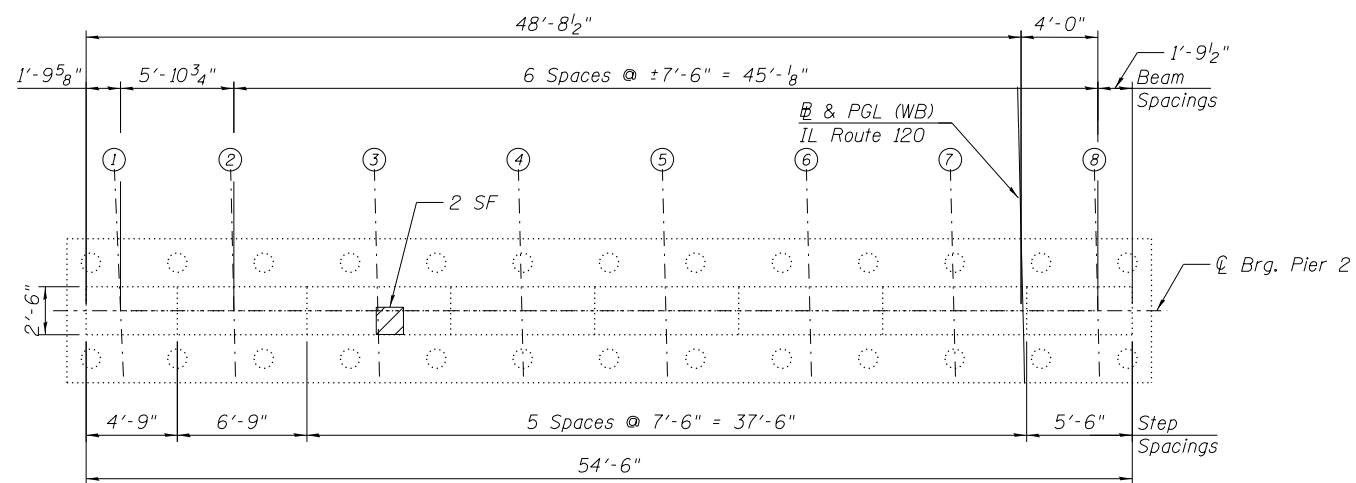
DESIGNED - MA, MAA
DRAWN - MAA
CHECKED - MAI, MI
DATE - 03/20/2017

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REVISED
REVISED
REVISED

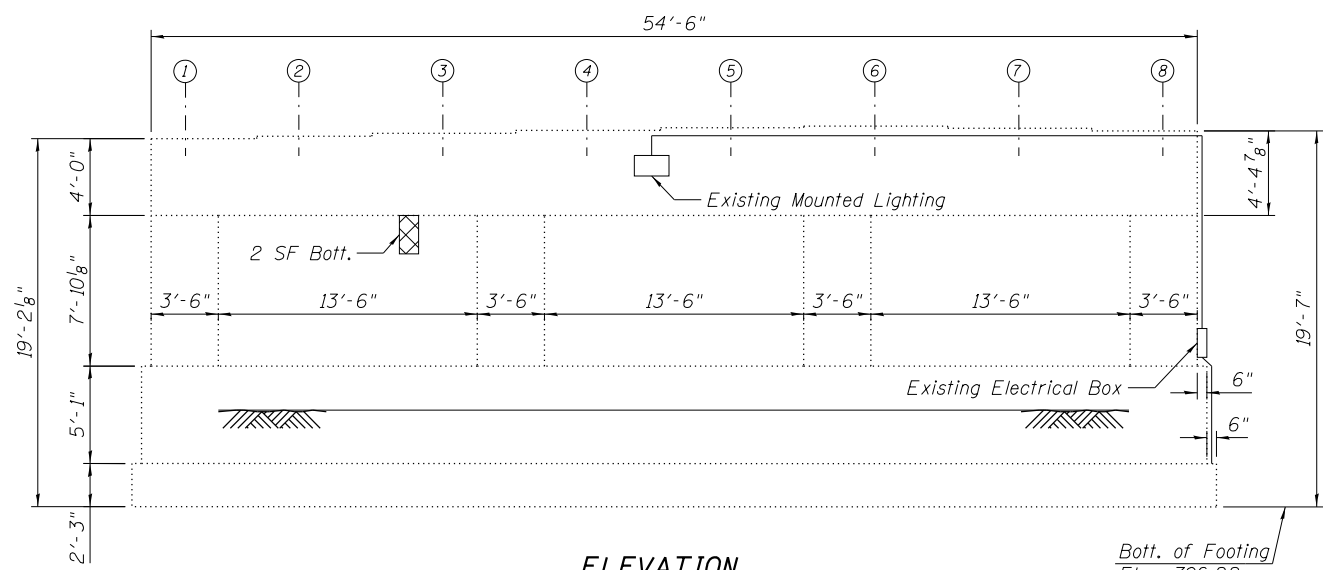
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 REPAIRS (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)
SCALE: SHEET S-48 OF S-55 SHEETS STA. TO STA.

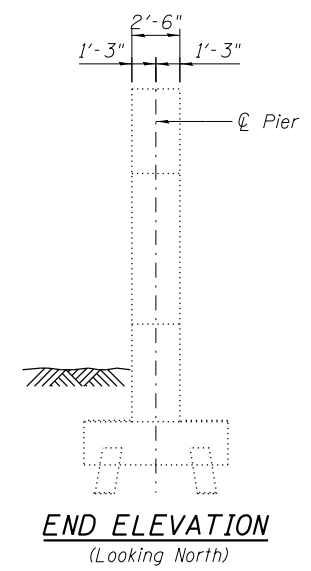
F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	244
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



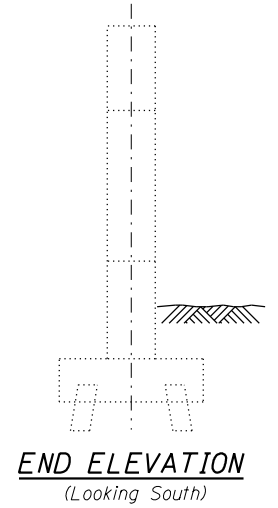
PLAN



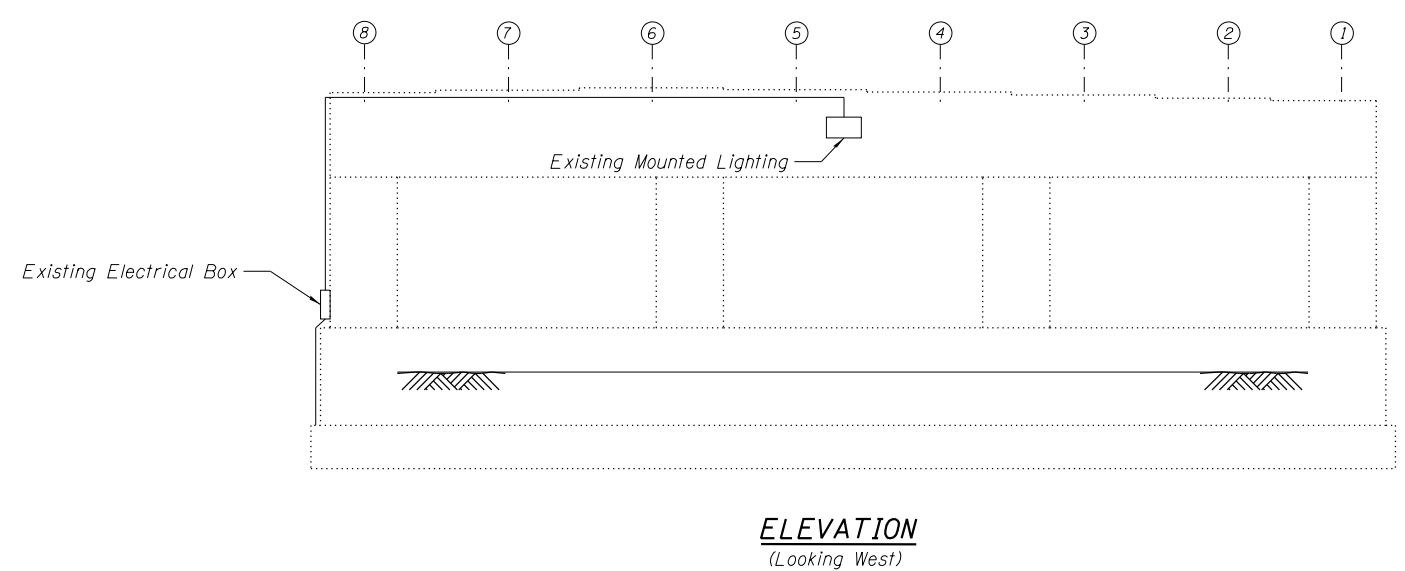
ELEVATION
(Looking East)



END ELEVATION
(Looking North)



END ELEVATION
(Looking South)



ELEVATION
(Looking West)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Less Than 5 Inches)	Sq. Ft.	2
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	2

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
- The Contractor is responsible to remove, support and reinstall all existing utilities interfering with the work. Cost shall be included with Structural Repair of Concrete (Depth Equal to or Less Than 5").
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after the removal and replacement of the bearings.

LEGEND

- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- Structural Repair of Concrete (Depth Greater Than 5")
- SF - Square Foot

FILE PATH = F:\1305-591_IL_120_Dwr_GreenLeaf\CADD_Sheet\49-0490125-60x40-Pier-2WB.dgn

HBM
ENGINEERING GROUP, LLC.
4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

49-0490125-60x40-Pier-2WB.dgn
USER NAME = mustafa.ajobaidi
PLOT SCALE = 10x0.0000 ' / in.
PLOT DATE = 3/20/2017

DESIGNED - MA, MAA
DRAWN - MAA
CHECKED - MAI, MI
DATE - 03/20/2017

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REVISED
REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIER 2 REPAIRS (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)**

SCALE: SHEET S-49 OF S-55 SHEETS STA. TO STA.

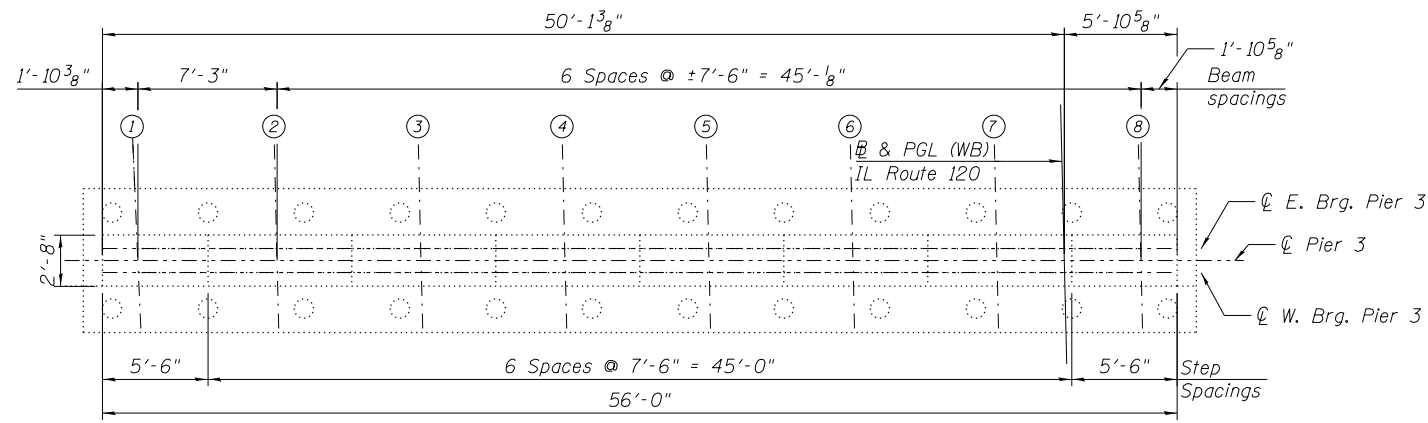
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333 342	•	LAKE	288	245
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

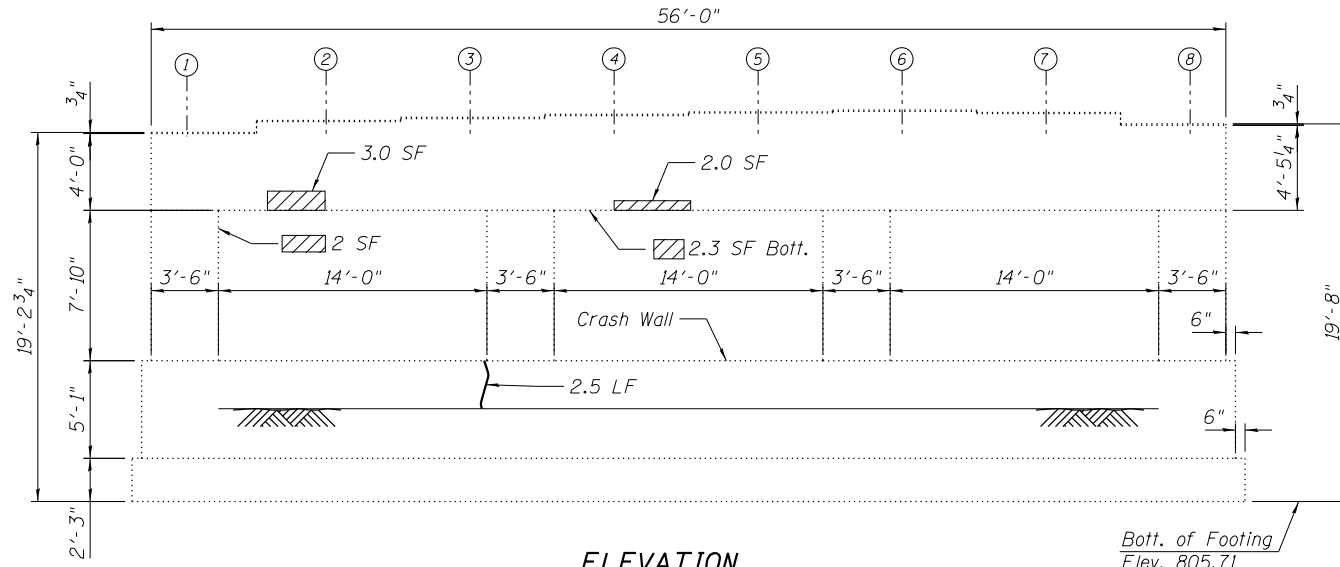
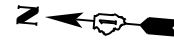
ITEM	UNIT	QUANTITY
Epoxy Crack Injection	Foot	14
Cleaning Bridge Seats	Sq. Ft.	150
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	23
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	27

NOTES:

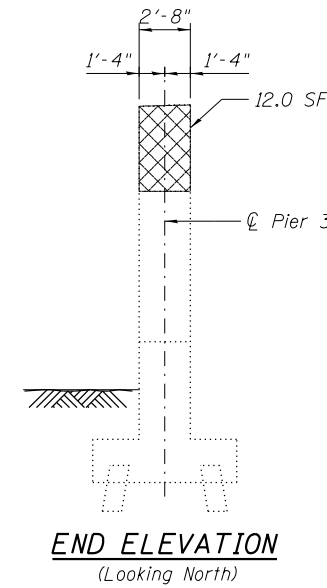
- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
- The Contractor is responsible to remove, support and reinstall all existing utilities interfering with the work. Cost shall be included with Structural Repair of Concrete (Depth Equal to or Less Than 5").
- For bearing replacement type and details, see Sheets S-40 and S-41.
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after the removal and replacement of the bearings.



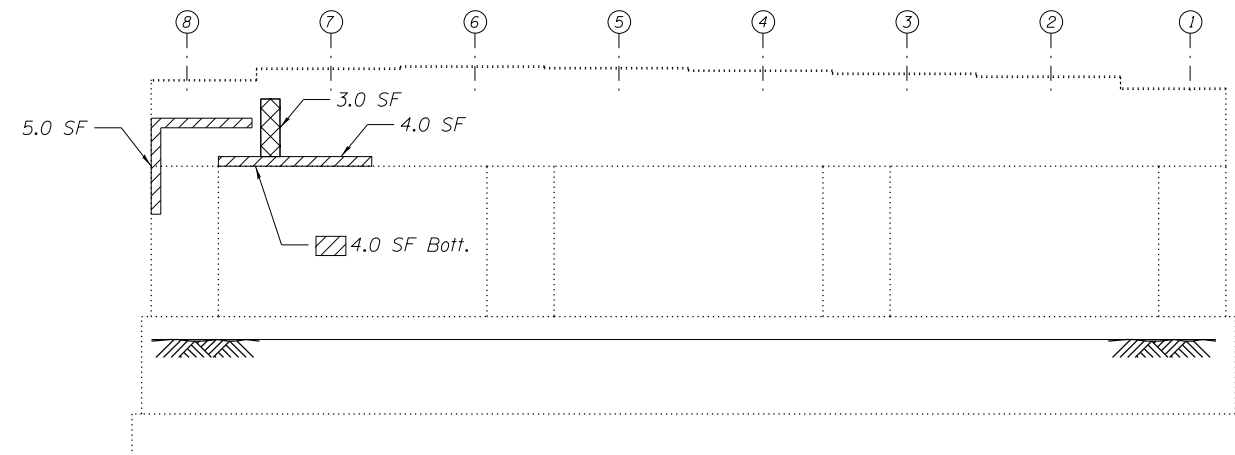
TOP PLAN



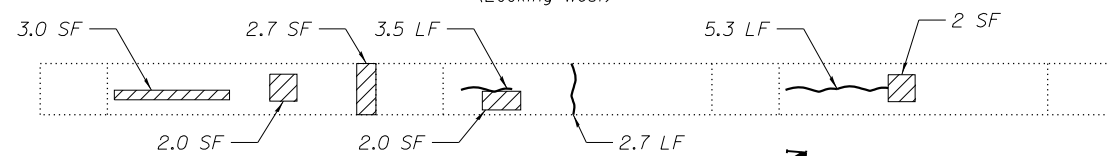
ELEVATION
(Looking East)



END ELEVATION
(Looking North)



ELEVATION
(Looking West)



PLAN
(Looking at top of Crash Wall)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 REPAIRS (WB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333 342	•	LAKE	288	246
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

SCALE: SHEET S-50 OF S-55 SHEETS STA. TO STA.

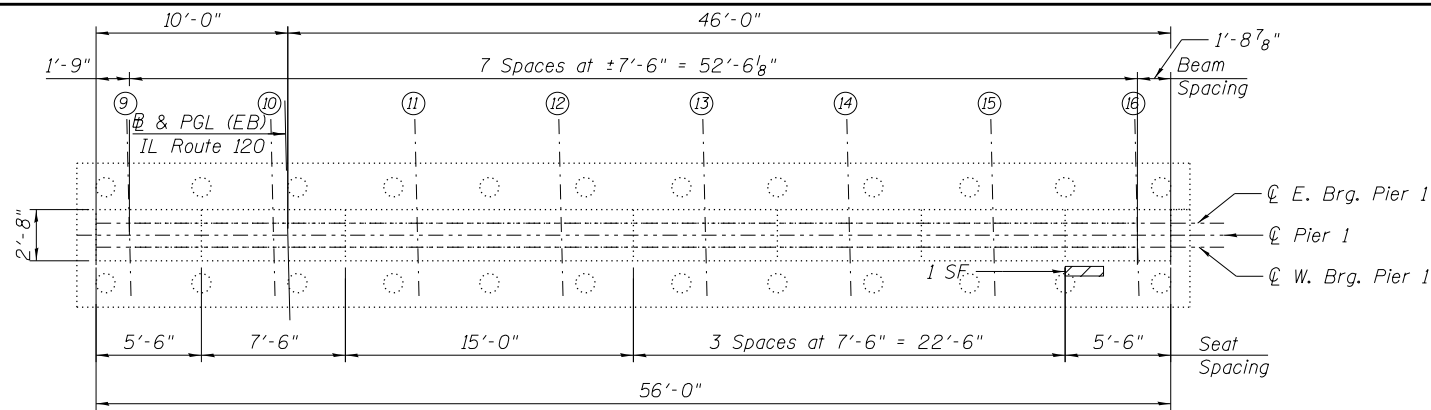
LEGEND

- Structural Repair of Concrete (Depth Greater Than 5")
- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- Low Pressure Epoxy Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

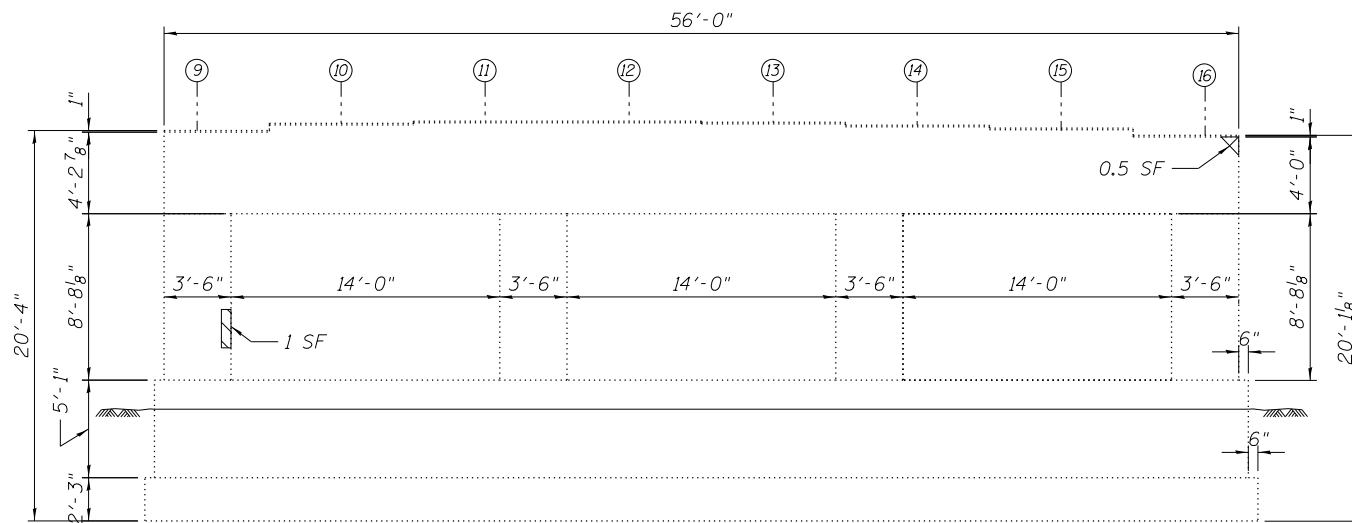
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HBM
ENGINEERING GROUP, LLC.
4415 WEST HARRISON STREET, SUITE 231
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PHONE: (708) 236-0900 FAX: (708) 236-0901

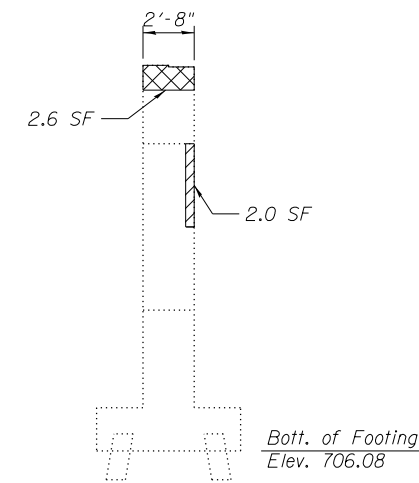
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USER NAME = mustafa.ahobaidi	DRAWN - MAA	REVISED
PLOT SCALE = 10x0.0000 '1' / in.	CHECKED - MAI, MI	REVISED
PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED



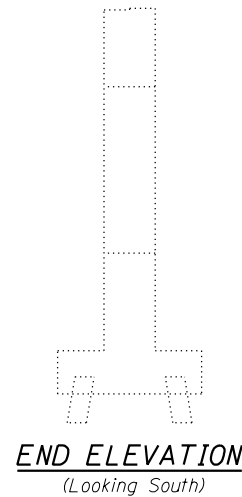
TOP PLAN



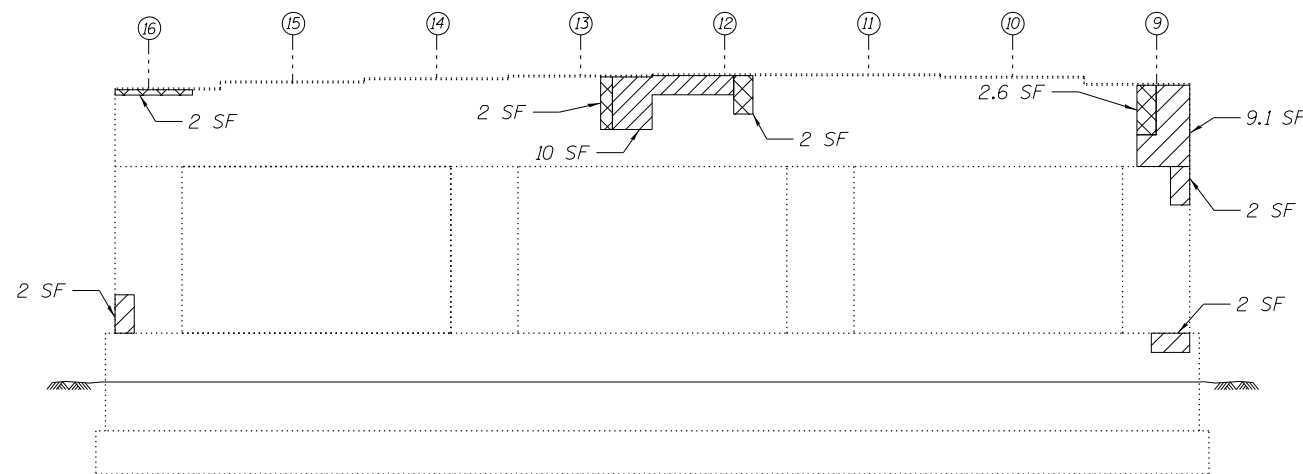
ELEVATION
(Looking East)



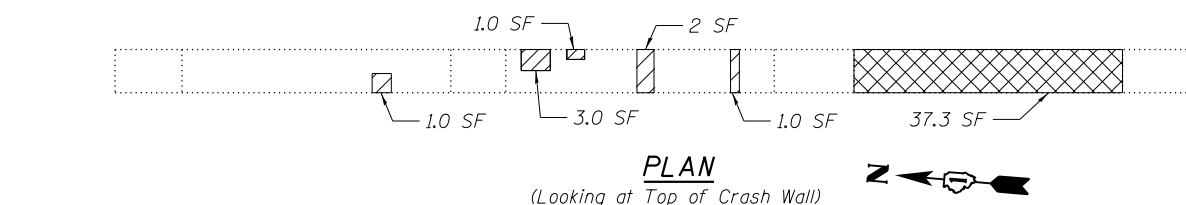
END ELEVATION
(Looking North)



END ELEVATION
(Looking South)



ELEVATION
(Looking West)



PLAN
(Looking at Top of Crash Wall)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Cleaning Bridge Seats	Sq. Ft.	150
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	38
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	49

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
- The Contractor is responsible to remove, support and reinstall all existing utilities interfering with the work. Cost shall be included with Structural Repair of Concrete (Depth Equal to or Less Than 5").
- For bearing replacement type and details, see Sheets S-40 and S-41.
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after the removal and replacement of the bearings.

LEGEND

- Structural Repair of Concrete (Depth Greater Than 5")
- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- SF - Square Foot

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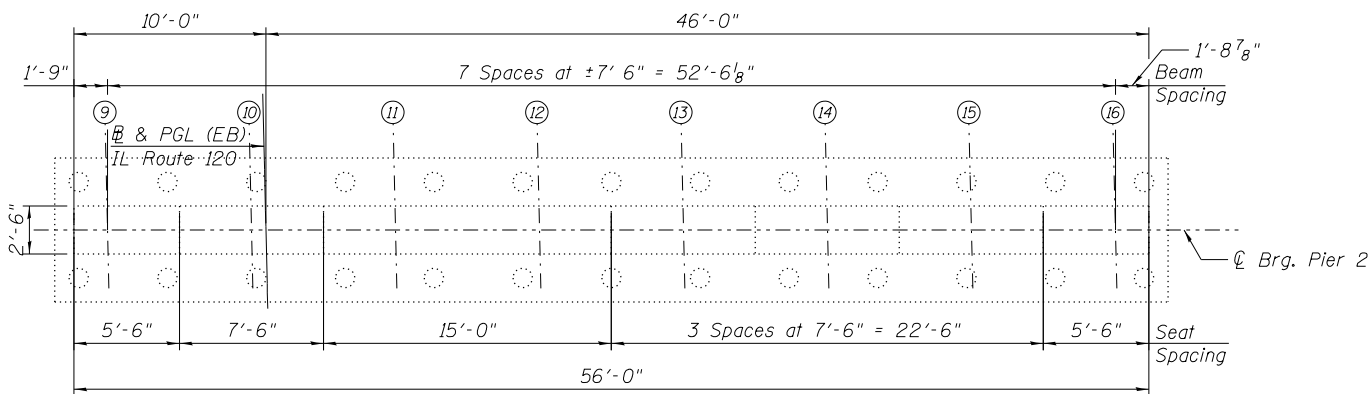
HBM
ENGINEERING GROUP, LLC.
4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

51-0490126-60X40-Pier1EB.dgn	DESIGNED - MA, FA	REVISED
USER NAME = mustafa.alobaidi	DRAWN - FA	REVISED
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PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED

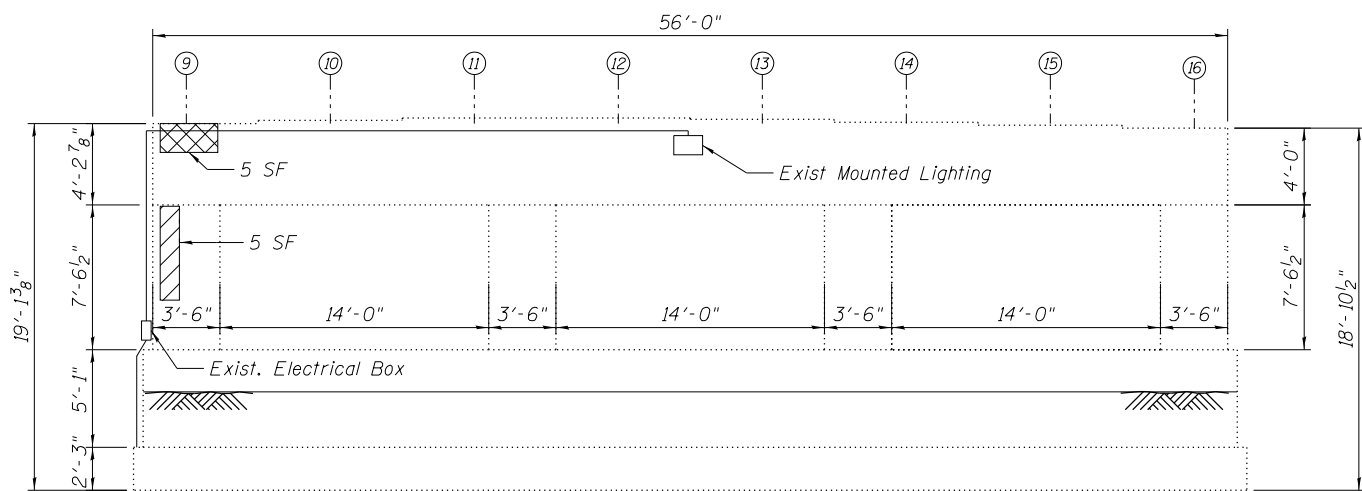
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 REPAIRS (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)
SCALE: SHEET S-51 OF S-55 SHEETS STA. TO STA.

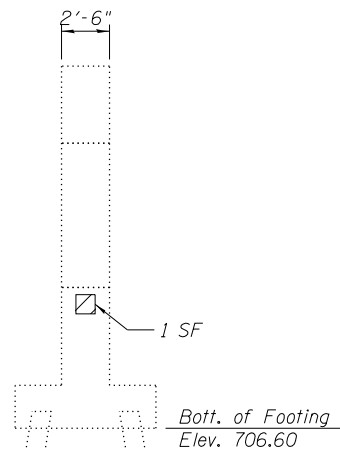
F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	247
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



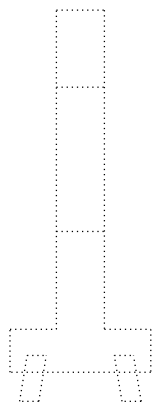
TOP PLAN



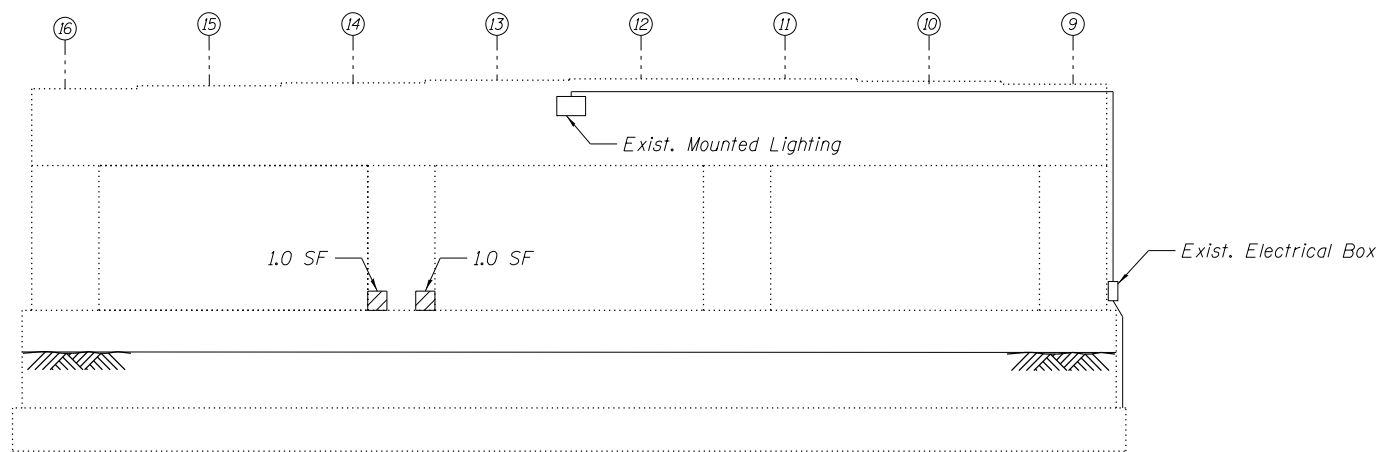
ELEVATION
(Looking East)



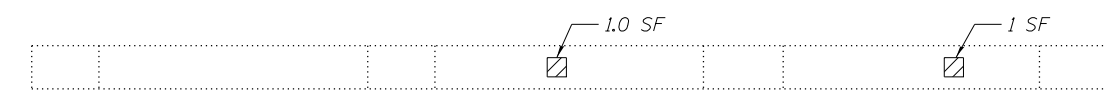
END ELEVATION
(Looking North)



END ELEVATION
(Looking South)



ELEVATION
(Looking West)



PLAN
(Looking at Top of Crash Wall)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	10
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	5

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
- The Contractor is responsible to remove, support and reinstall all existing utilities interfering with the work. Cost shall be included with Structural Repair of Concrete (Depth Equal to or Less Than 5").
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after the removal and replacement of the bearings.

LEGEND

- Structural Repair of Concrete (Depth Greater Than 5")
- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- SF - Square Foot

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HBM
ENGINEERING GROUP, LLC.
4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

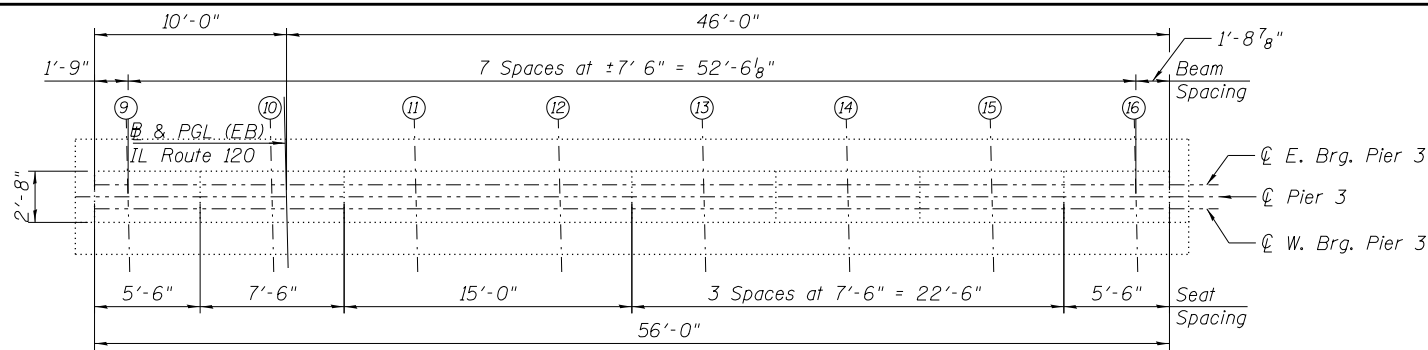
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PLOT DATE = 3/20/2017	DATE - 03/20/2017	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

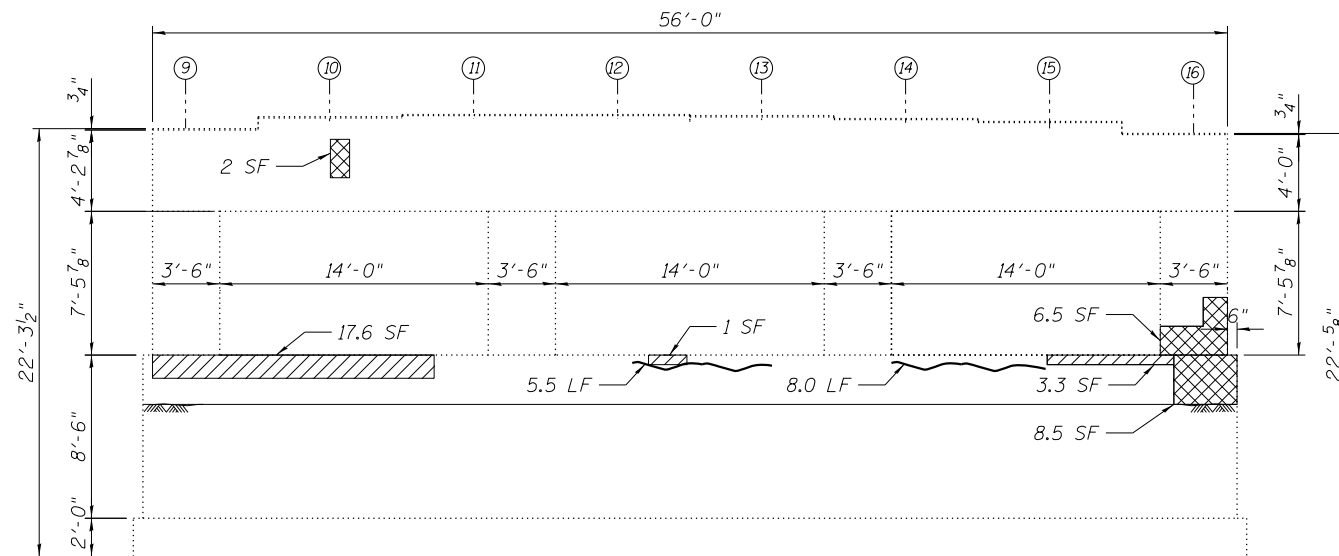
PIER 2 REPAIRS (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-52 OF S-55 SHEETS STA. TO STA.

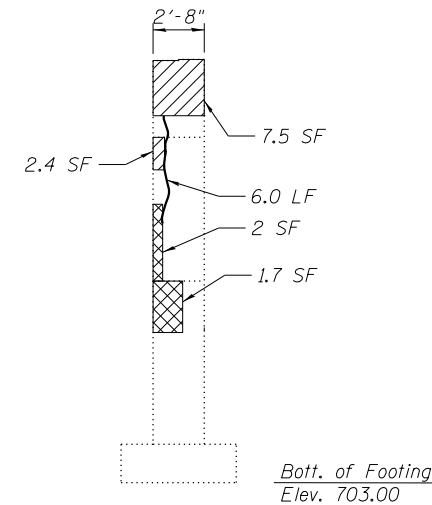
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333		LAKE	288	248
342				
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				



TOP PLAN

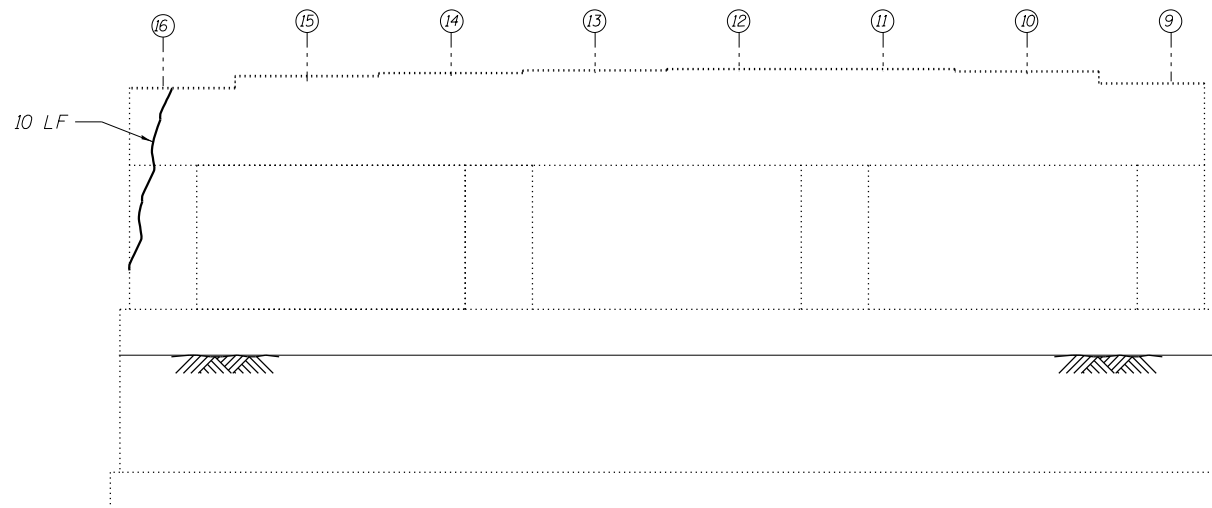


ELEVATION
(Looking East)

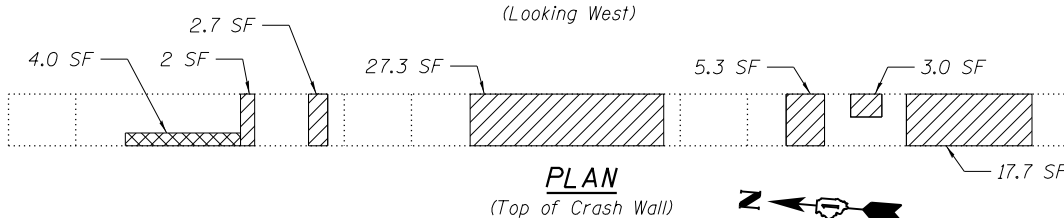


END ELEVATION
(Looking North)

END ELEVATION
(Looking South)



ELEVATION
(Looking West)



PLAN
(Top of Crash Wall)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Epoxy Crack Injection	Foot	24
Cleaning Bridge Seats	Sq. Ft.	150
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	98
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.	25

NOTES:

- Quantities and limits shown are estimated for bidding purposes only. The actual areas to be repaired and the type(s) of repairs to be used will be determined by the Engineer in the field at the time of construction.
- The Contractor is responsible to remove, support and reinstall all existing utilities interfering with the work. Cost shall be included with Structural Repair of Concrete (Depth Equal to or Less Than 5").
- For bearing replacement type and details, see Sheets S-40 and S-41.
- Temporary shoring and cribbing shall be installed prior to the start of the structural repair of concrete and shall be removed after the removal and replacement of the bearings.

LEGEND

- Structural Repair of Concrete (Depth Greater Than 5")
- Structural Repair of Concrete (Depth Equal to or Less Than 5")
- Low Pressure Epoxy Injection (Width > 0.06")
- SF - Square Foot
- LF - Linear Foot

FILE PATH = F:\1305-591_IL_120_Dvr_GreenLeaf\CADD_Sheet\53-0490126-60X40-Pier-3EB.dgn

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ENGINEERING GROUP, LLC.
4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

53-0490126-60X40-Pier-3EB.dgn
USER NAME = mustafa.lobaidi
PLOT SCALE = 10x0.0000 ' / in.
PLOT DATE = 3/20/2017

DESIGNED - MA, FA
DRAWN - FA
CHECKED - MAI, MI
DATE - 03/20/2017

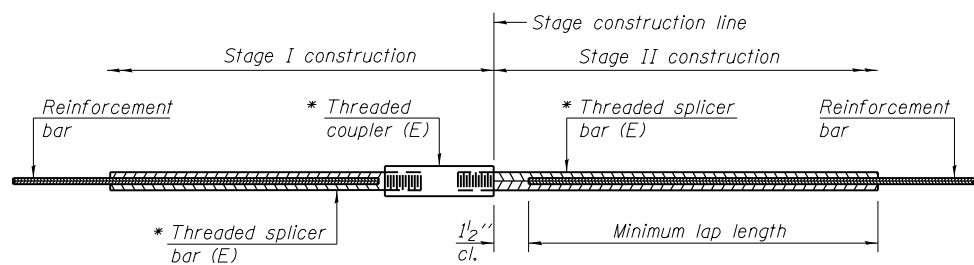
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 REPAIRS (EB)
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)

SCALE: SHEET S-53 OF S-55 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333		LAKE	288	249
342				
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

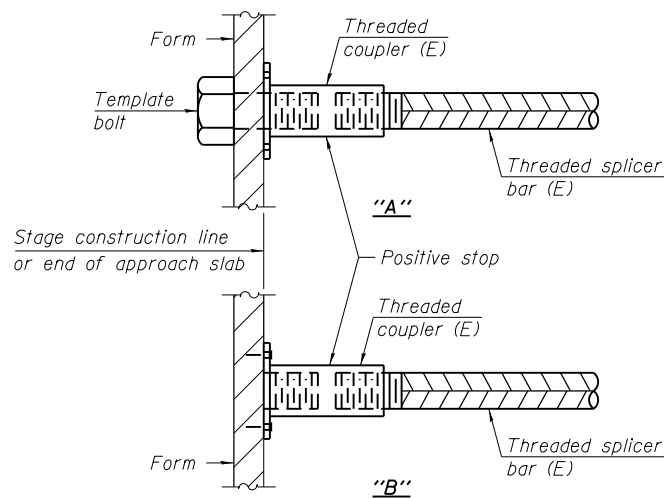


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1/2" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length

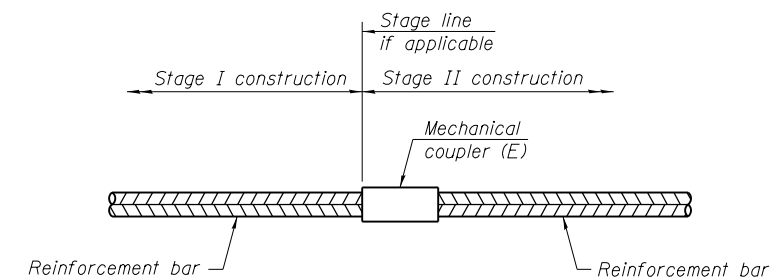


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

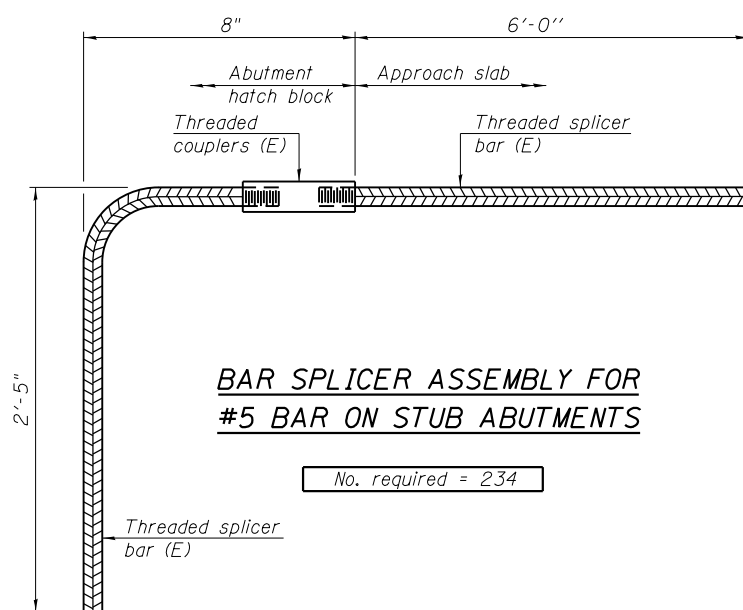
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 234

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

11-22-2016

FILE PATH = F:\1305-591_IL_120_Dwr_GreenLeaf_CAD05_Sheet\05-04910125&26-60x40-Bar Splicer.dgn

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ENGINEERING GROUP, LLC
4415 WEST HARRISON STREET, SUITE 231
HILLSIDE, IL 60162
PHONE: (708) 236-0900 FAX: (708) 236-0901

55-0490125&26-60x40-Bar Splicer.dgn	DESIGNED - FA	REVISED
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

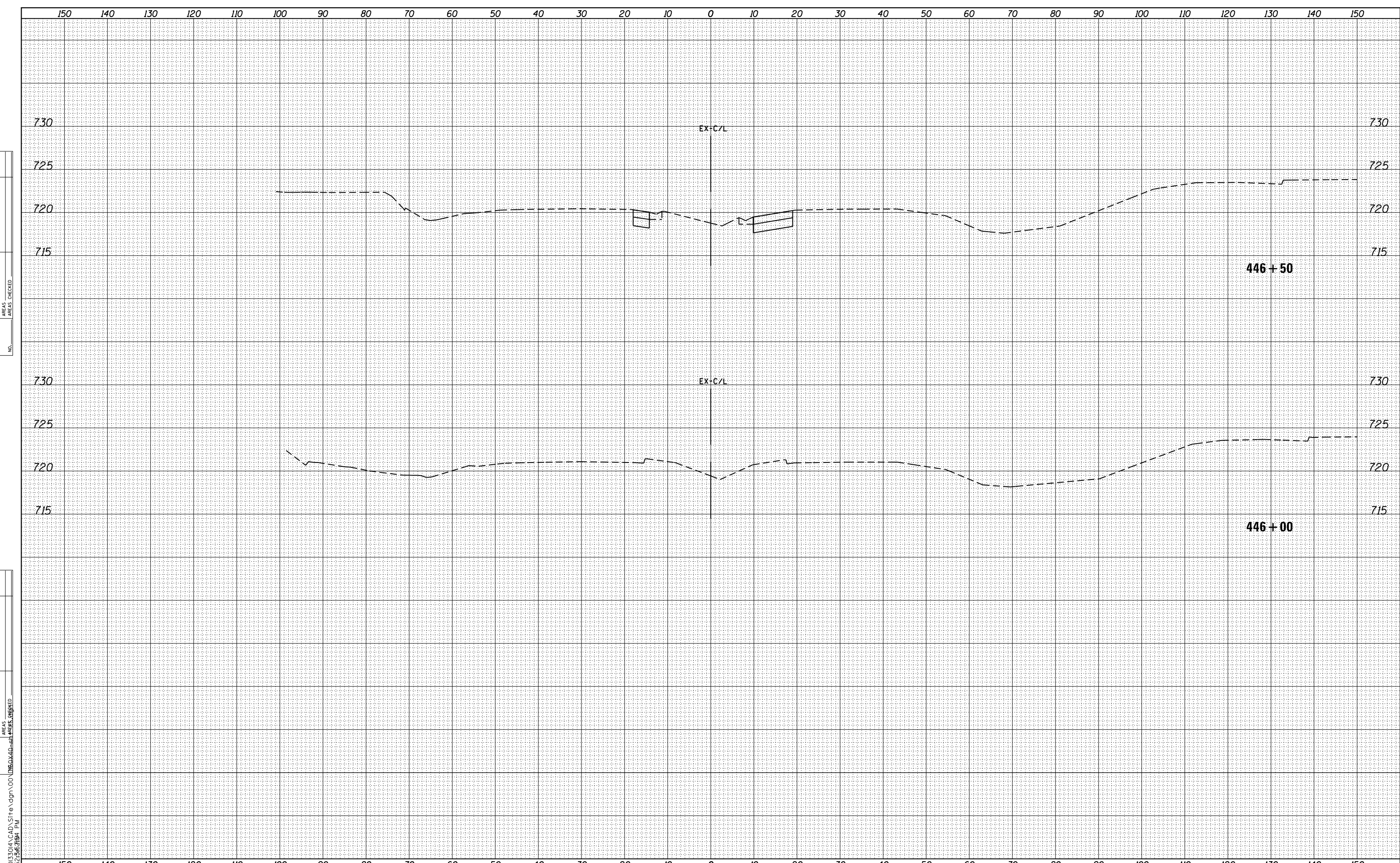
**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NOS. 049-0125 (WB) & 049-0126 (EB)**

SCALE: SHEETS-55 OF 55 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	288	251
*12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

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BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

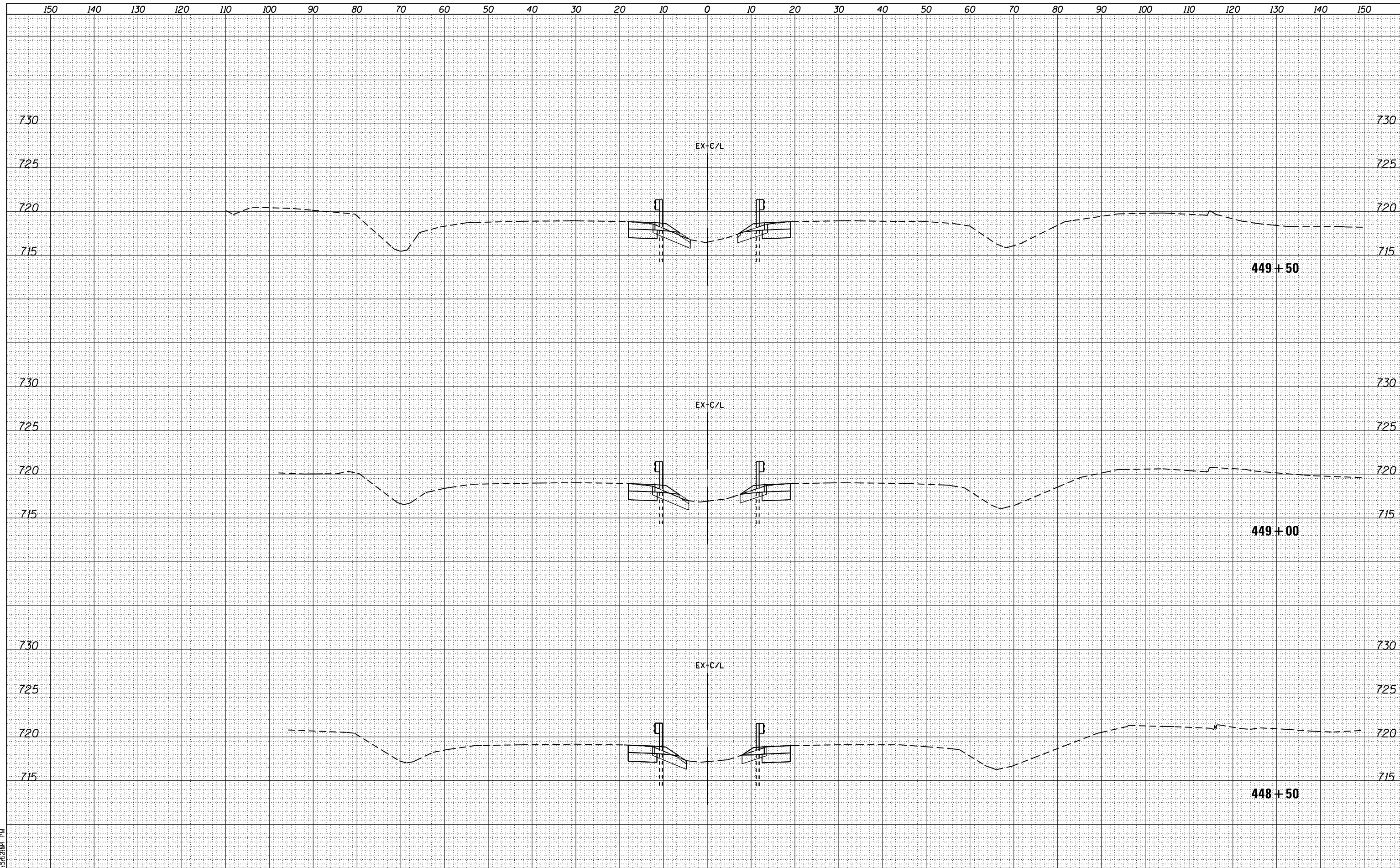
**FAP 333 (IL 120)
CROSS SECTIONS**

SCALE: SHEET 1 OF 22 SHEETS STA. TO STA.

F.A.P. RTE. 333 342	SECTION *	COUNTY LAKE	TOTAL SHEETS 288	SHEET NO. 252
* 12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

DATE	
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(773) 399-0112

USER NAME : *USERS*	DESIGNED - RS	REVISED -
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PLOT SCALE : 240.0000' / ft.	CHECKED -	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

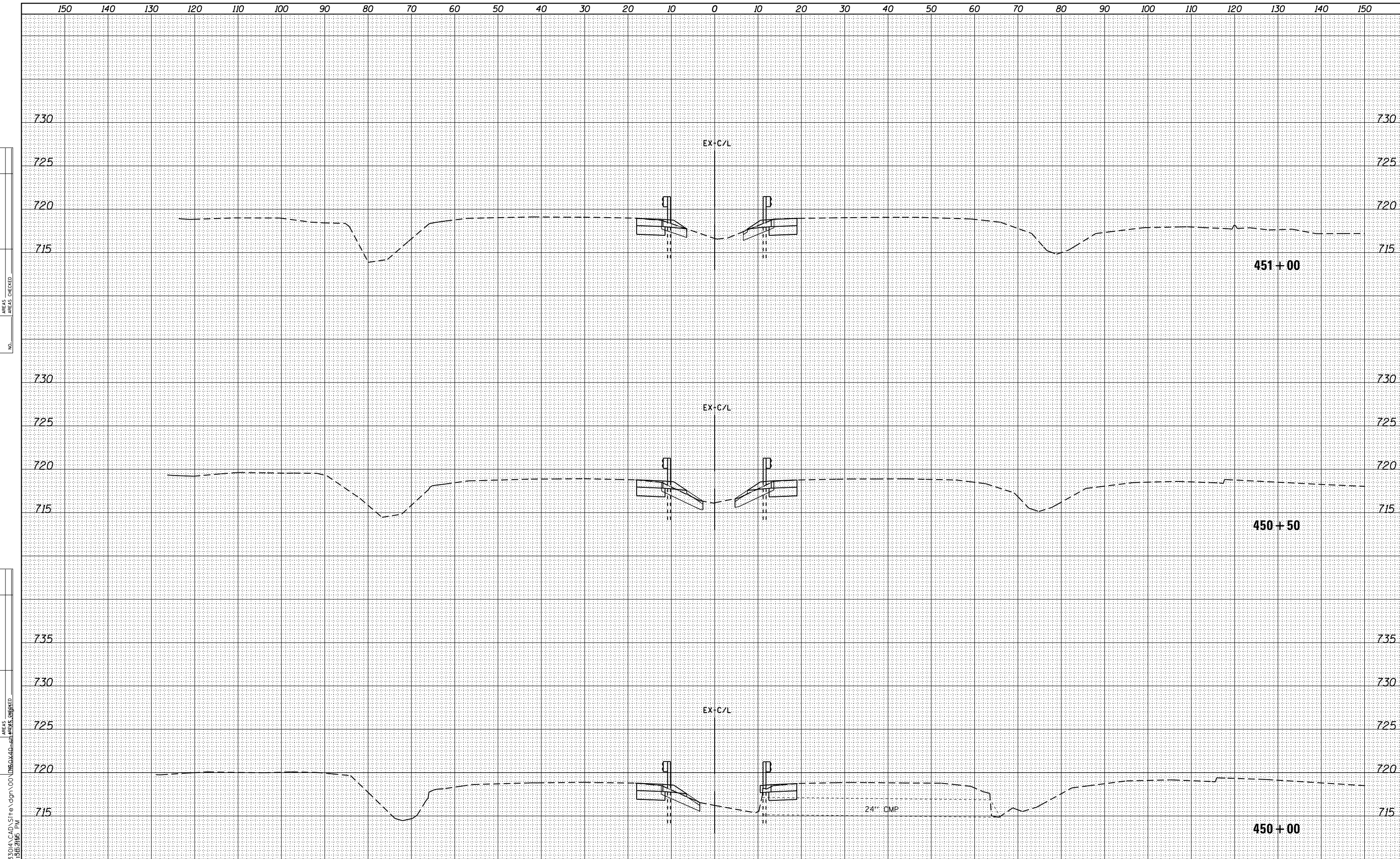
**FAP 333 (IL 120)
CROSS SECTIONS**

SCALE: SHEET 3 OF 22 SHEETS STA. TO STA.

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ILLINOIS FED. AID PROJECT				

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NOTE BOOK	PLOTTED
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GRAEF 8501 W. Higgins Road, Suite 200
 Chicago, Illinois 60631
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**FAP 333 (IL 120)
 CROSS SECTIONS**

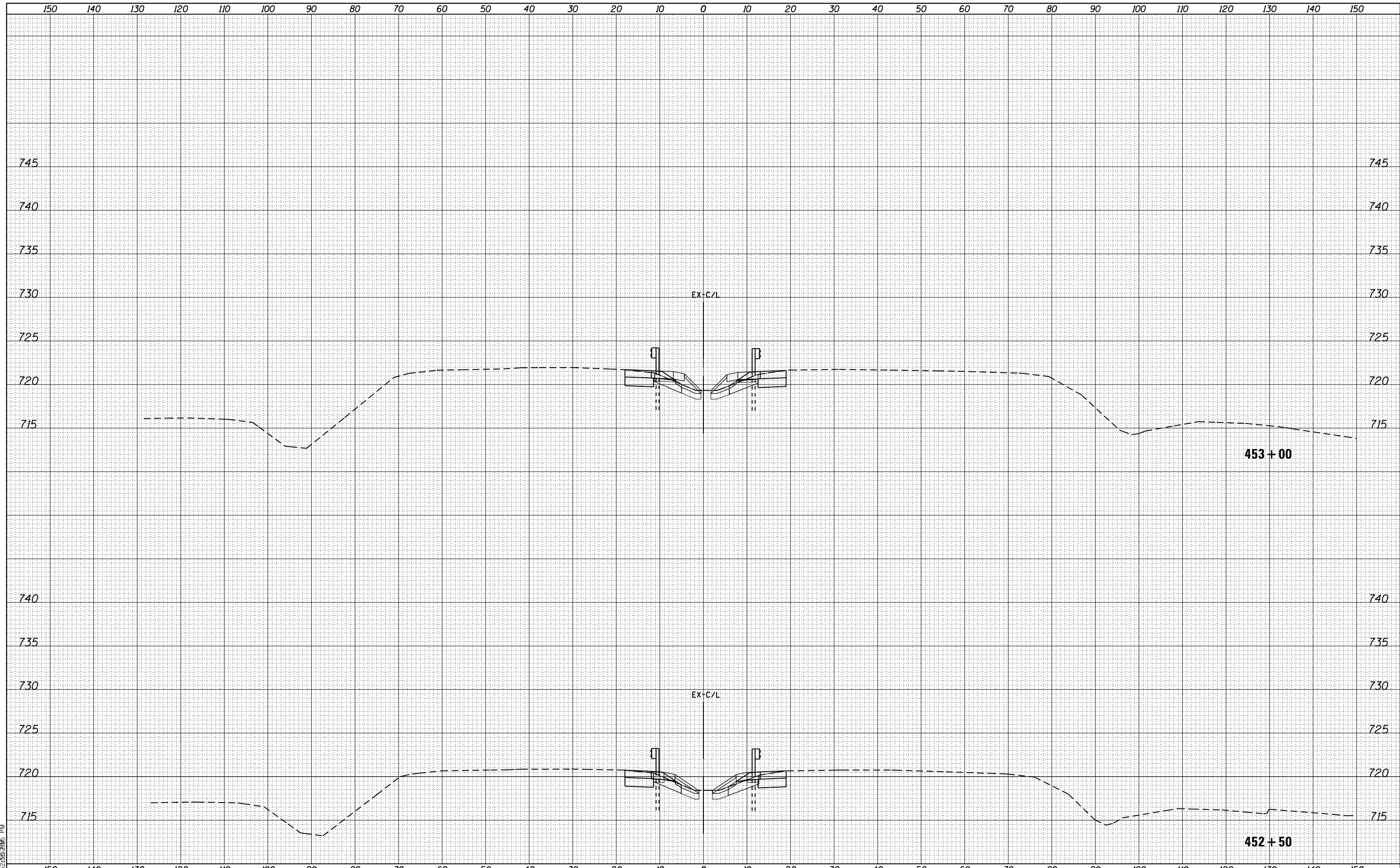
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* 12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

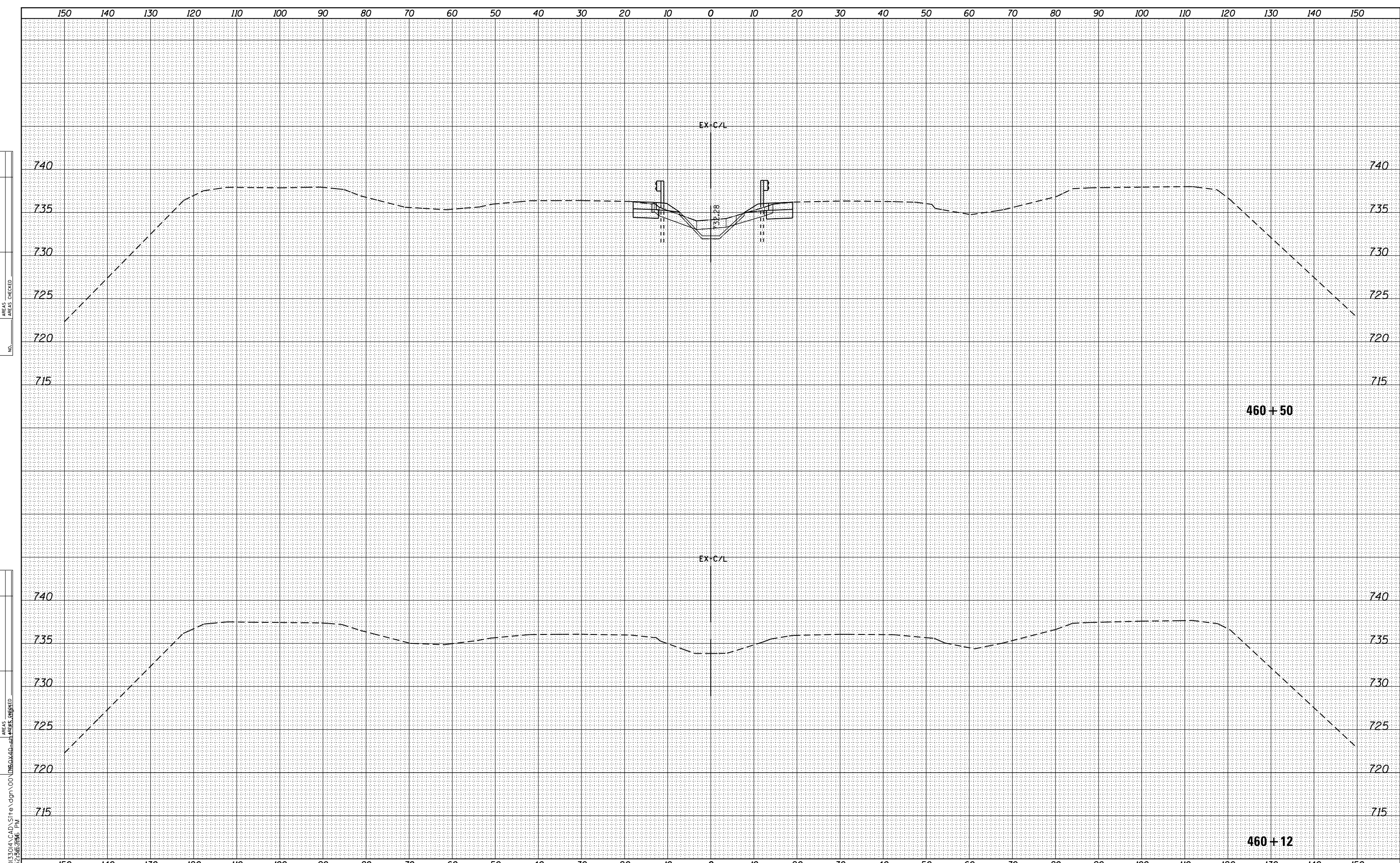
**FAP 333 (IL 120)
CROSS SECTIONS**

SCALE: SHEET 6 OF 22 SHEETS STA. 452+50 TO STA. 453+00

F.A.P. RTE. 333 342	SECTION *	COUNTY LAKE	TOTAL SHEETS 288	SHEET NO. 257
* 12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**FAP 333 (IL 120)
 CROSS SECTIONS**

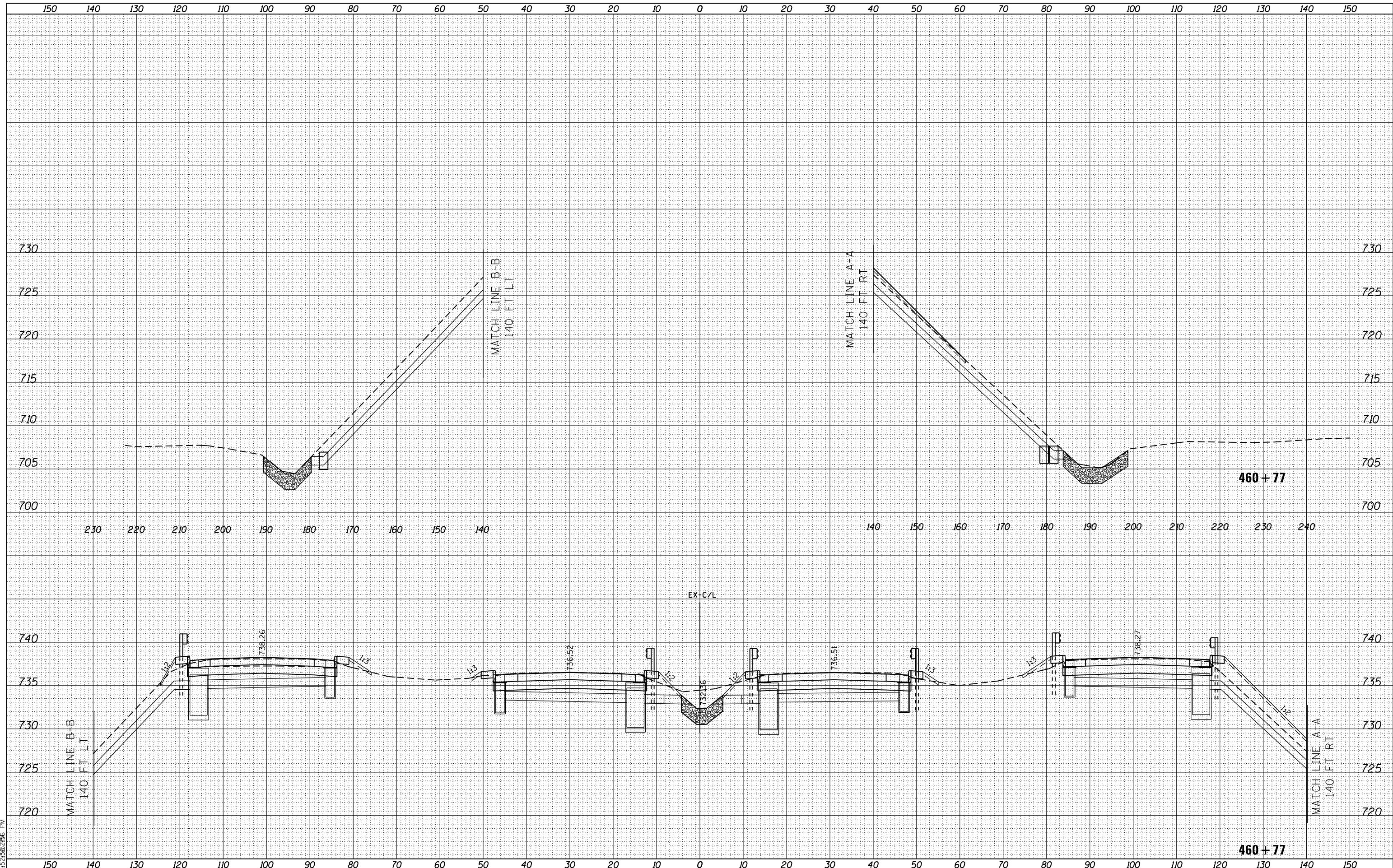
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ILLINOIS FED. AID PROJECT				

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USER NAME : susers	DESIGNED - RS	REVISED -
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DEPARTMENT OF TRANSPORTATION**

**FAP 333 (IL 120)
CROSS SECTIONS**

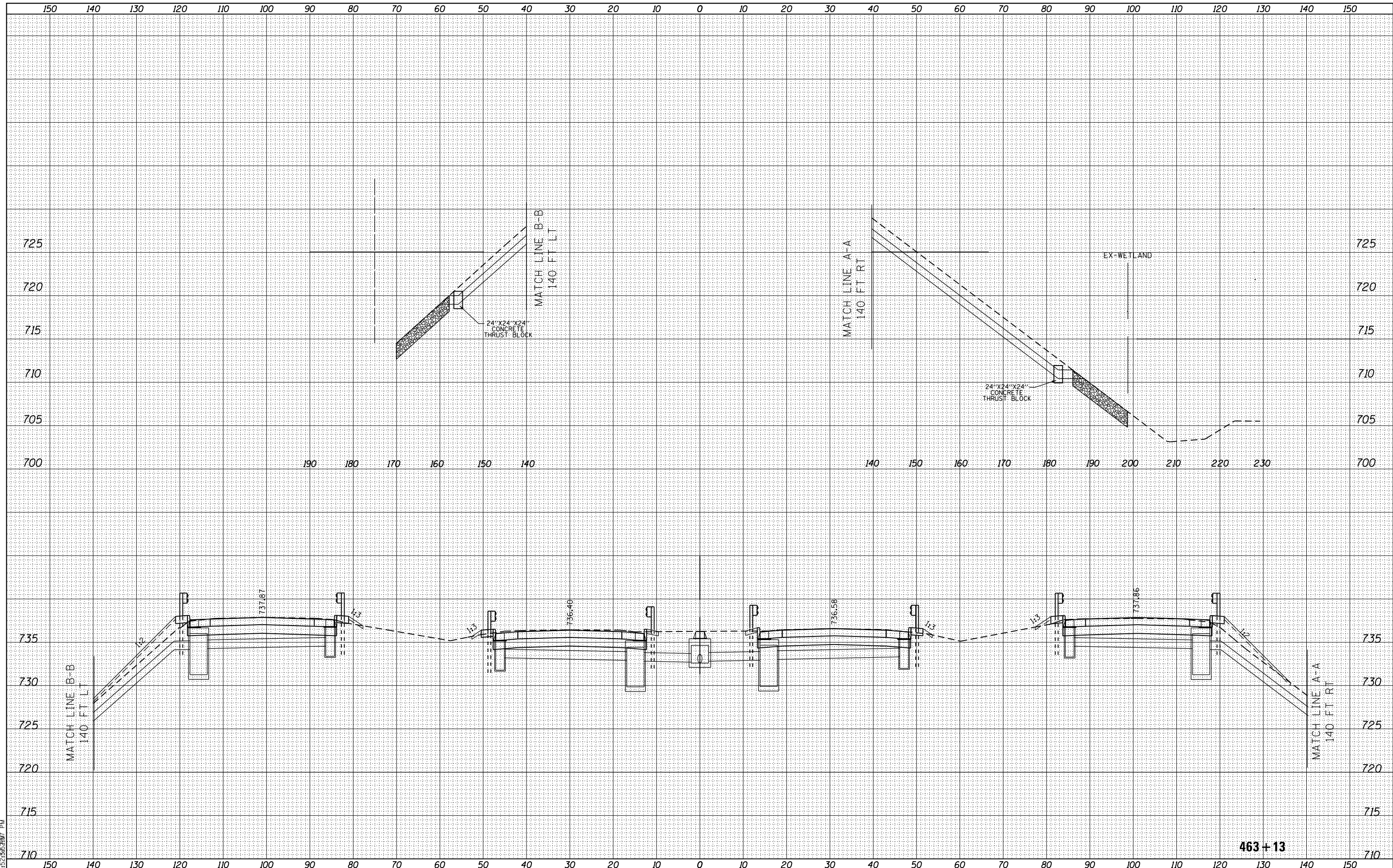
SCALE: SHEET 15 OF 22 SHEETS STA. 460+77 TO STA. 460+80

F.A.P. RTE. 333 342	SECTION *	COUNTY LAKE	TOTAL SHEETS 288	SHEET NO. 266
* 12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

DATE	
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 (773) 399-0112

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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

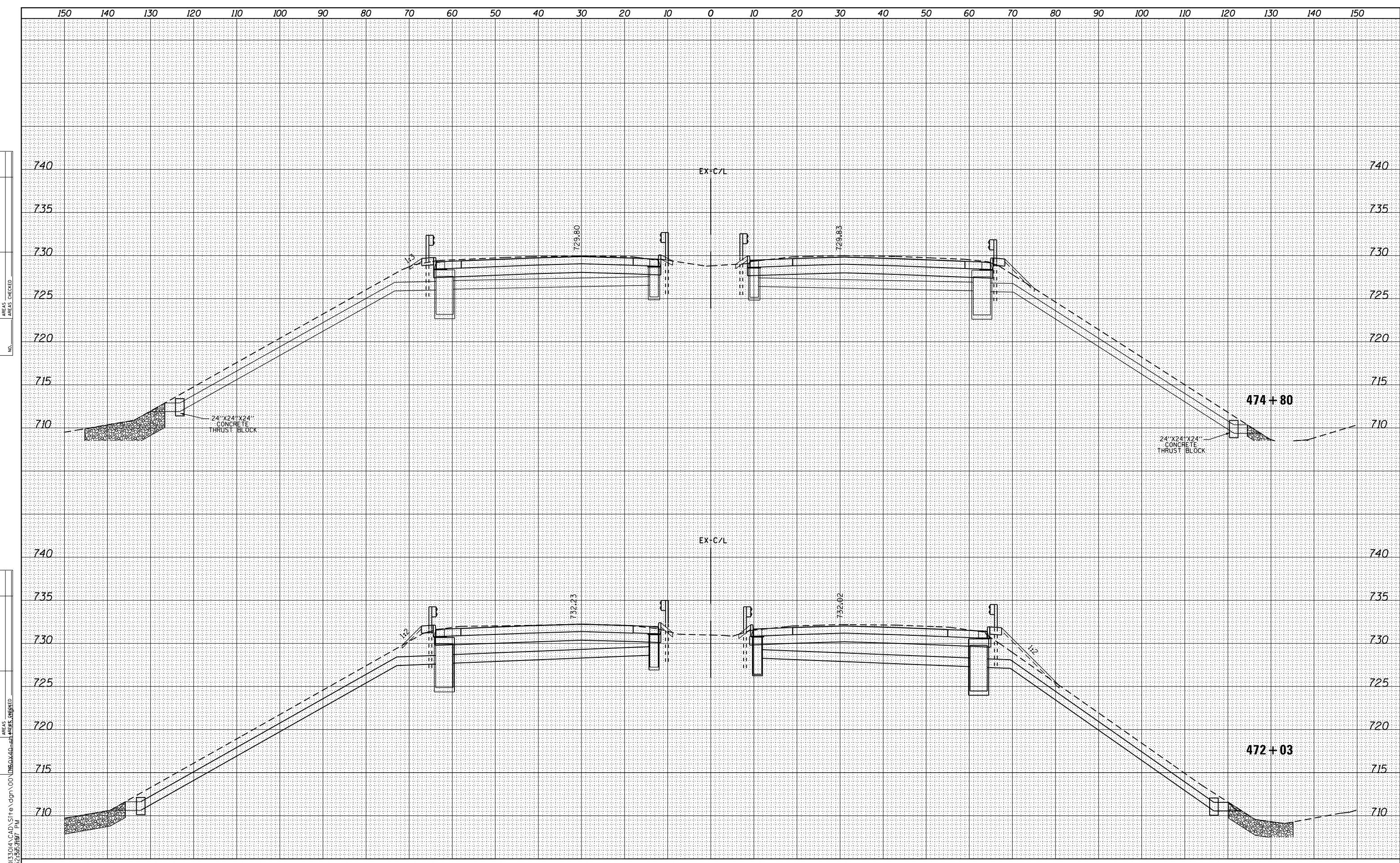
**FAP 333 (IL 120)
 CROSS SECTIONS**

SCALE: SHEET 17 OF 22 SHEETS STA. 463+13 TO STA. 472+03

F.A.P. RTE. 333 342	SECTION *	COUNTY LAKE	TOTAL SHEETS 288	SHEET NO. 268
* 12(VB-1&2)&12R-1HB-2(BR)&12-RS-2			CONTRACT NO. 60X40	
ILLINOIS FED. AID PROJECT				

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NOTE BOOK	PLOTTED
NO.	TEMPLATE
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ORIGINAL SURVEY	SURVEYED
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	AREAS
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 Chicago, Illinois 60631
 (773) 399-0112

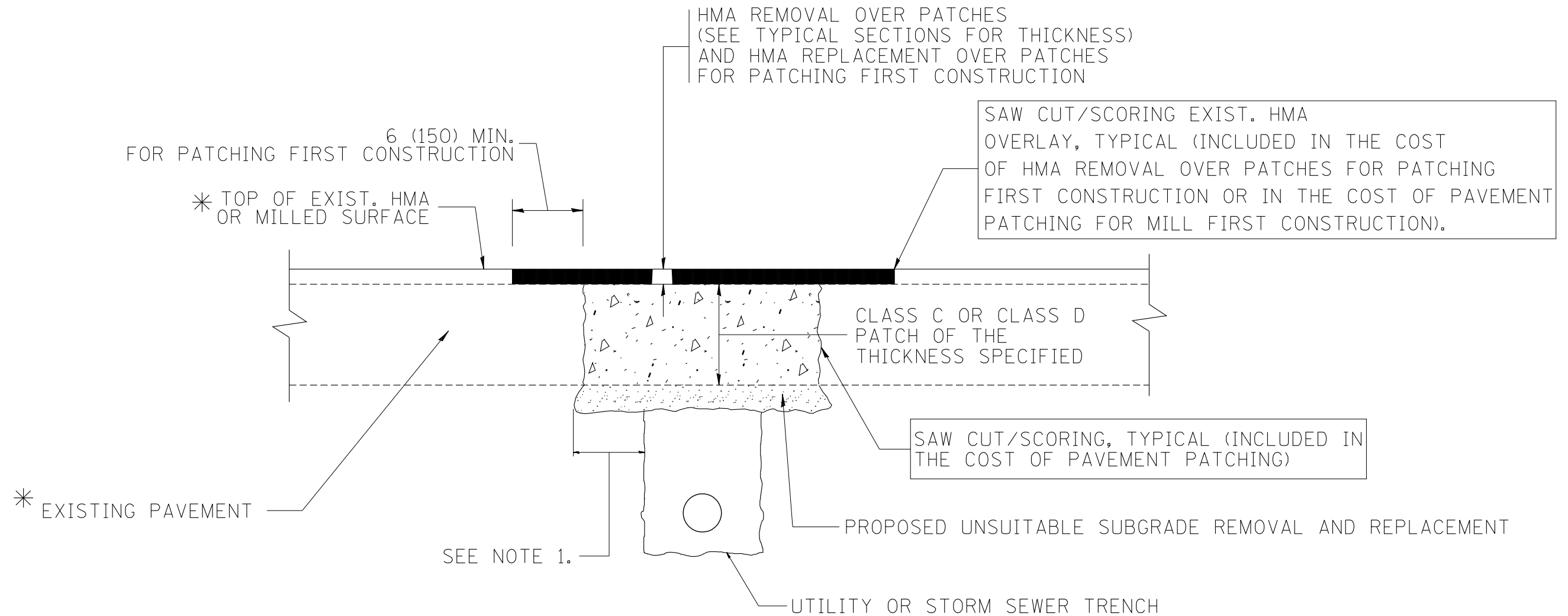
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PLOT SCALE	= 240.0000' / ft.				
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SCALE:	SHEET 18	OF 22 SHEETS	STA. 474+80	TO STA. 475+00
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**FAP 333 (IL 120)
 CROSS SECTIONS**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333 342	*	LAKE	288	269
* 12(VB-1&2)&12R-1HB-2(BR)&12-RS-2		CONTRACT NO.	60X40	
ILLINOIS FED. AID PROJECT				



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

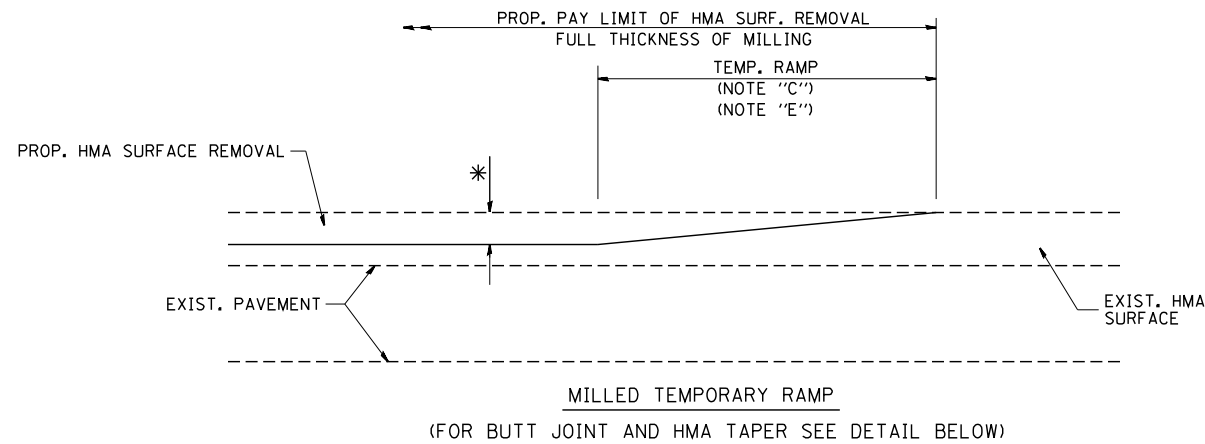
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

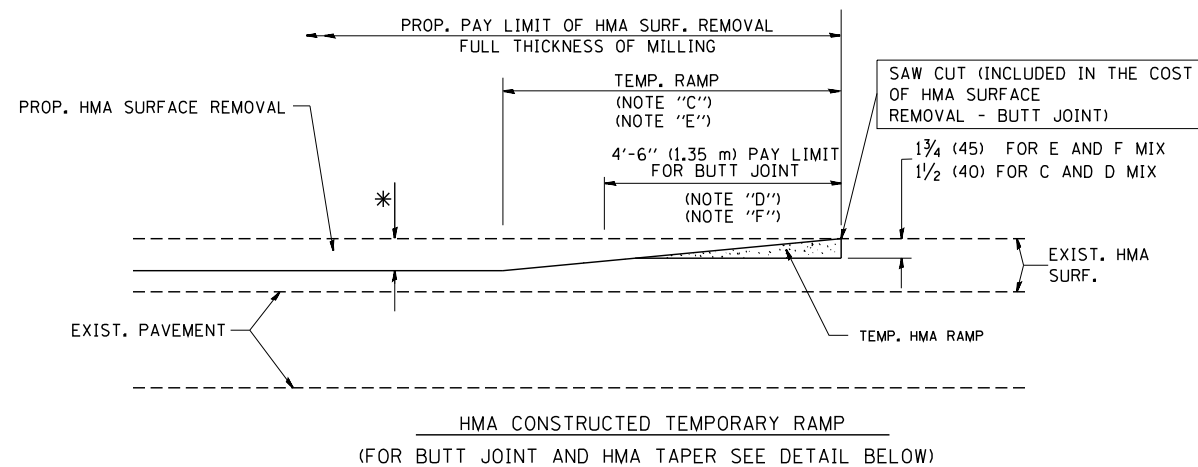
1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = c:\projects\diststd22x34\bd22.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. BORO 01-01-07		SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.	288	274
		PLOT SCALE = 50.000' / IN.	REVISOR - R. BORO 09-04-07		BD400-04 (BD-22)			CONTRACT NO.				
		PLOT DATE = 10/27/2008	DATE - 10-25-94		REVISED - K. ENG 10-27-08	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						

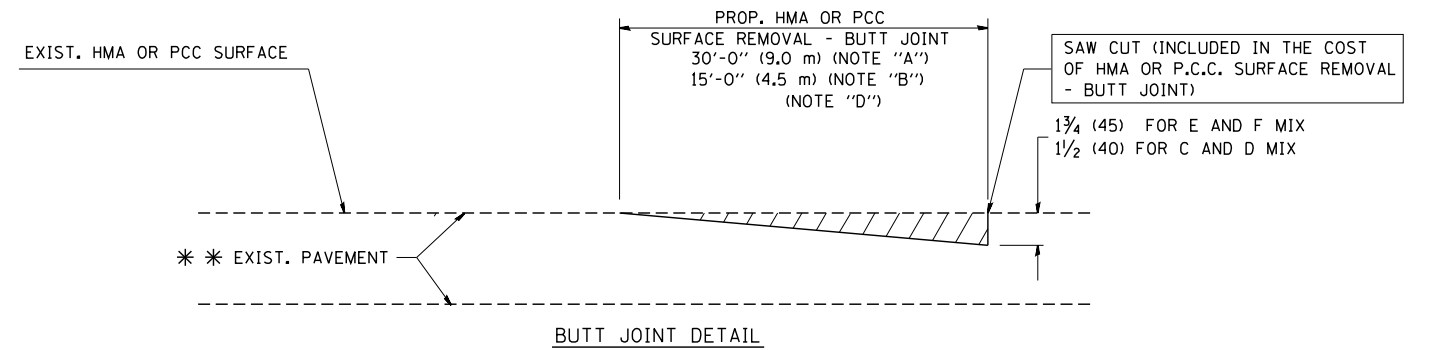


OPTION 1

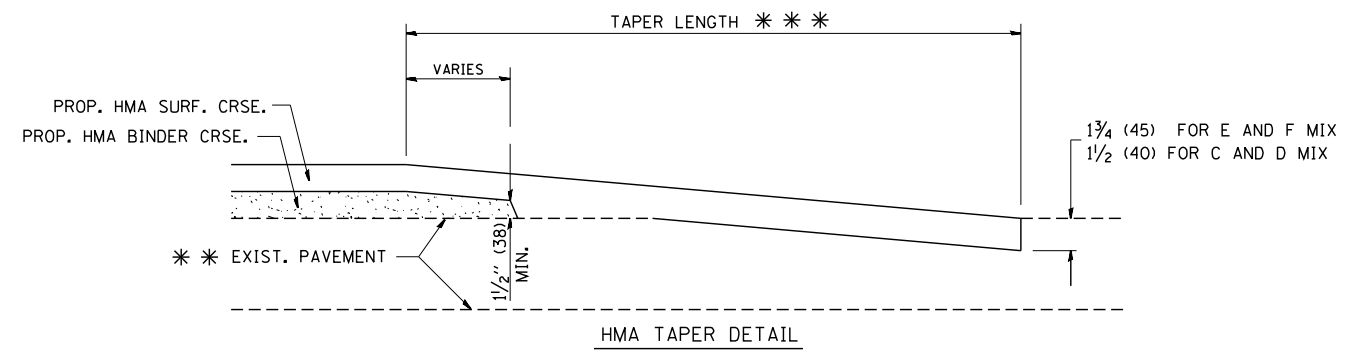


OPTION 2

TYPICAL TEMPORARY RAMP



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

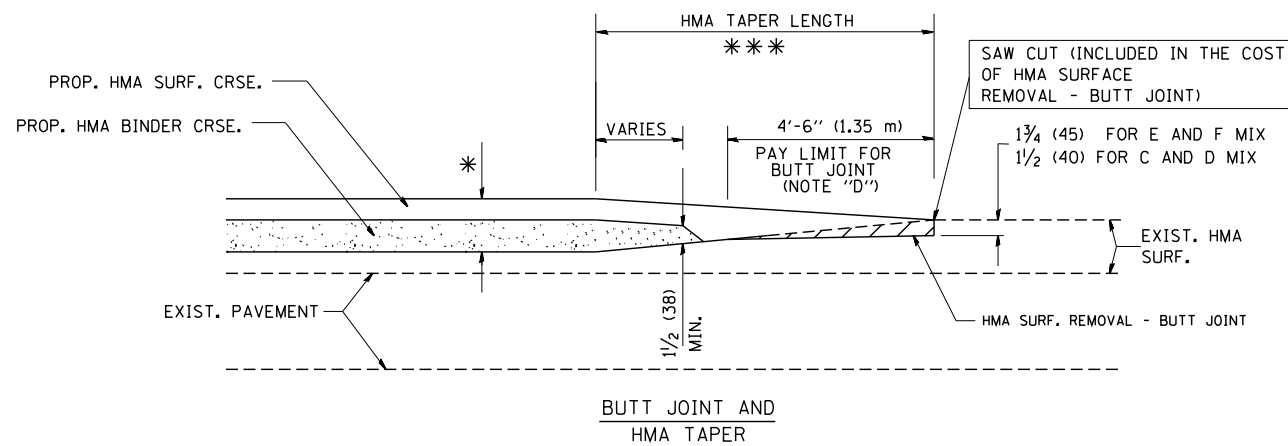
NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



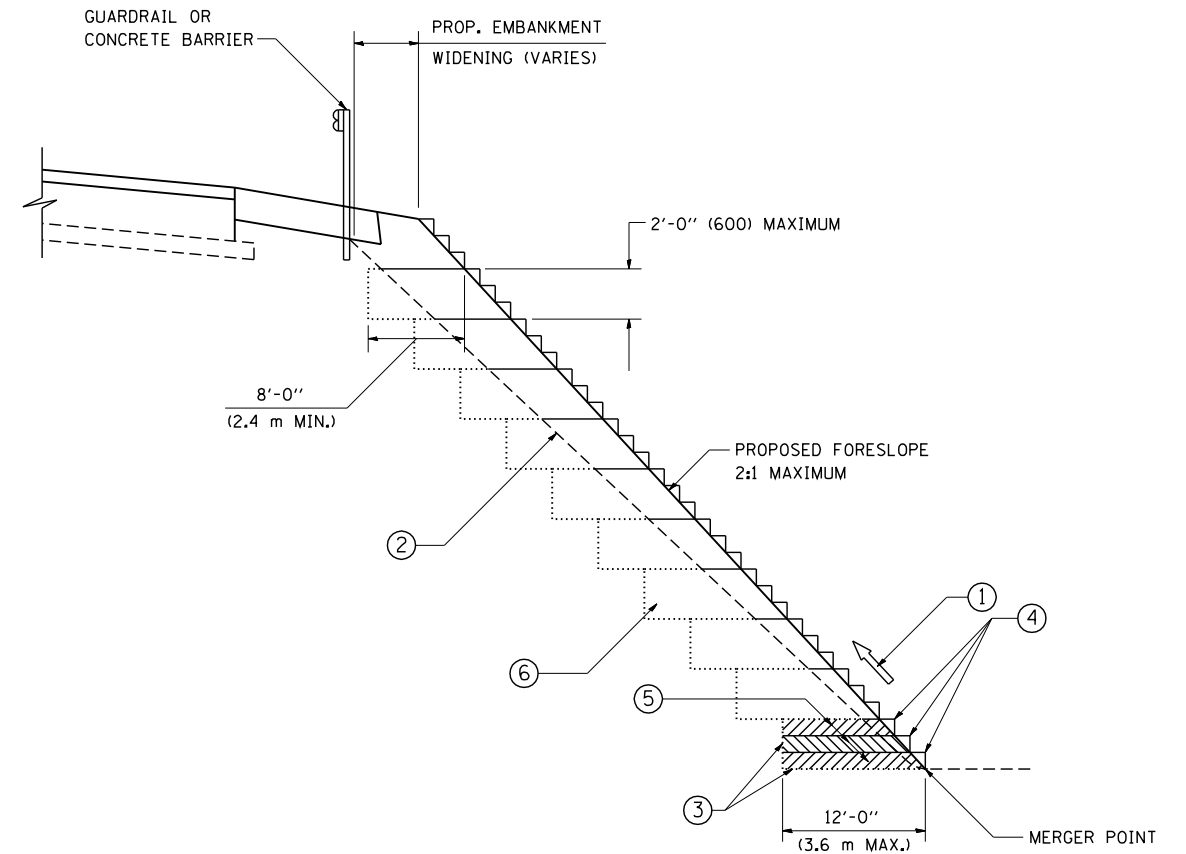
TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

FILE NAME = W:\diststd\22x34\bd32.dgn	USER NAME = gegl@nabt	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BUTT JOINT AND HMA TAPER DETAILS	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			288	275
BD400-05 BD32		CONTRACT NO.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TYPICAL BENCHING DETAIL
FOR EMBANKMENT

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

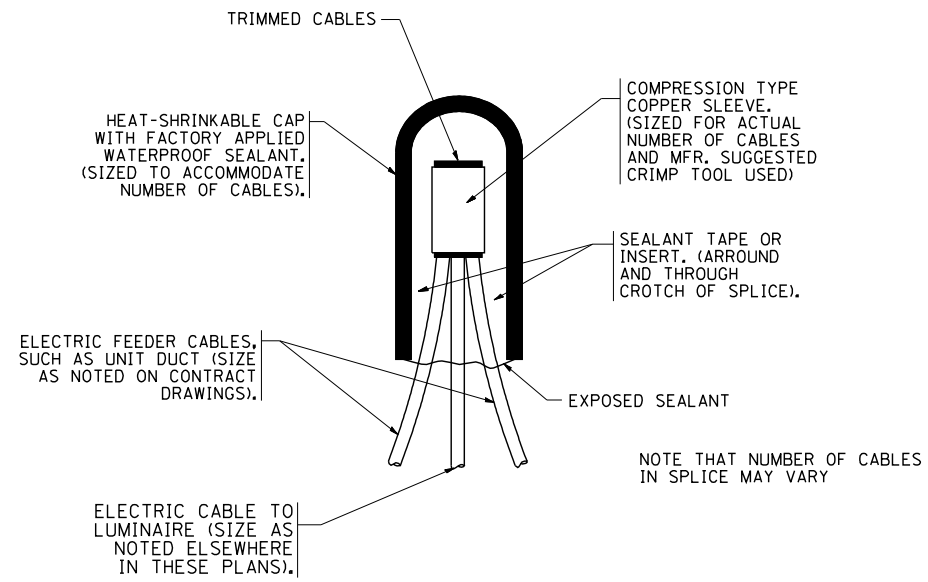
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

FILE NAME = W:\diststd\22x34\bd51.dgn	USER NAME = gegl1enobt	DESIGNED -	REVISED -
		DRAWN - CADD	REVISED -
	PLOT SCALE = 50.0000' / IN.	CHECKED - S.E.B.	REVISED -
	PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

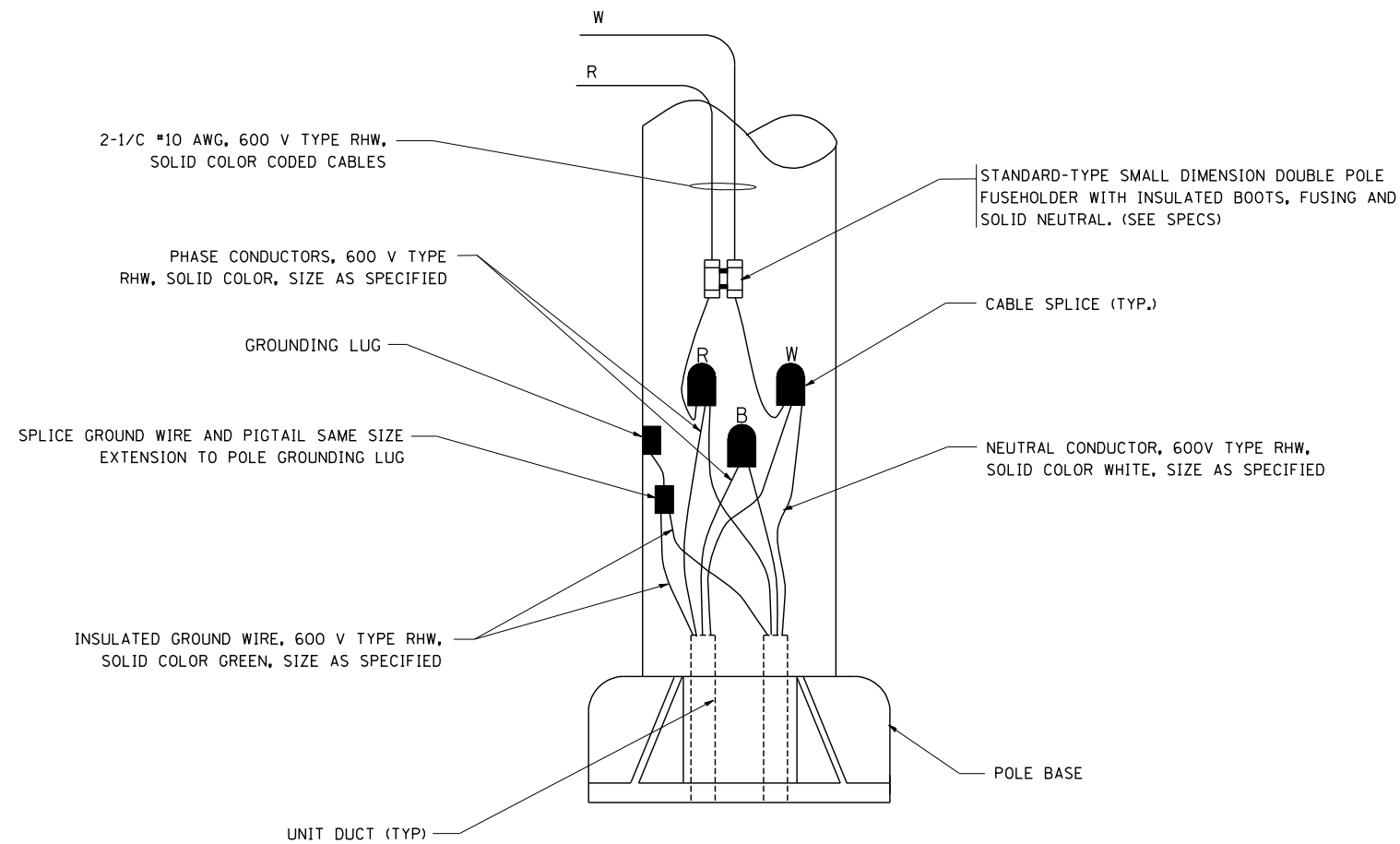
BENCHING DETAIL FOR EMBANKMENT WIDENING			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			288	276
BD-51		CONTRACT NO.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



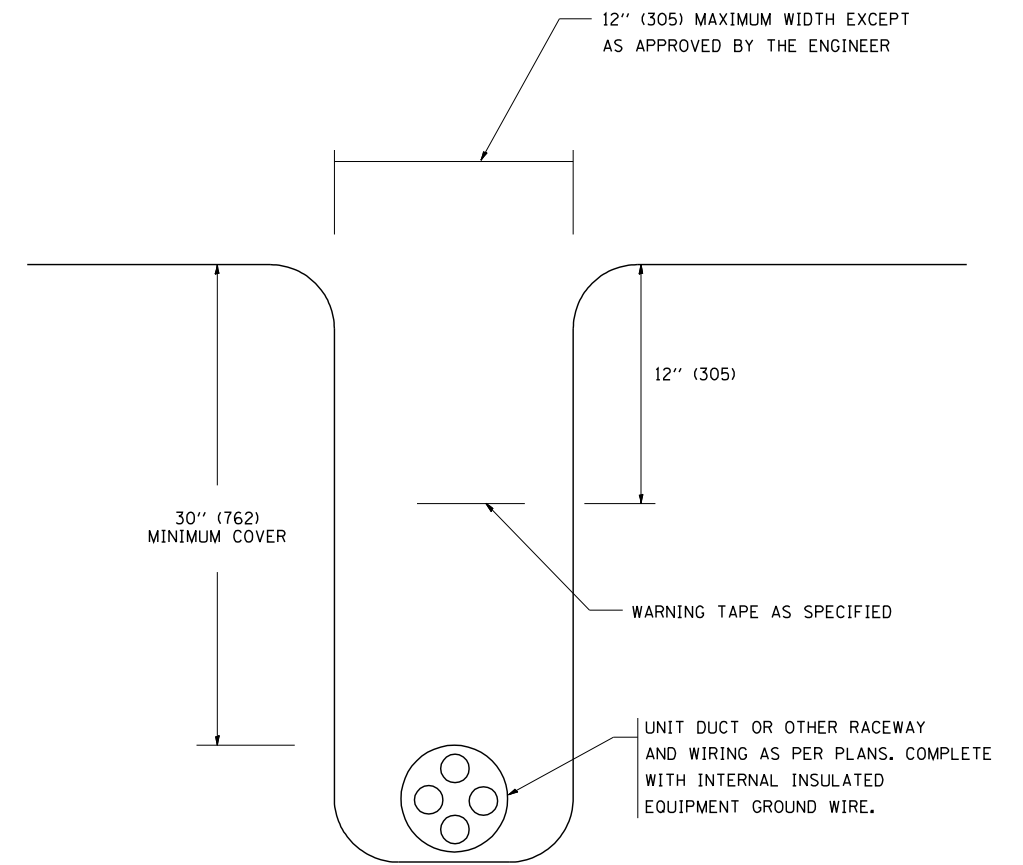
TYPICAL SPLICE DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.

FILE NAME = W:\diststd\22x34\be702.dgn

USER NAME = geglanobt
 PLOT SCALE = 50.000' / IN.
 PLOT DATE = 1/4/2008

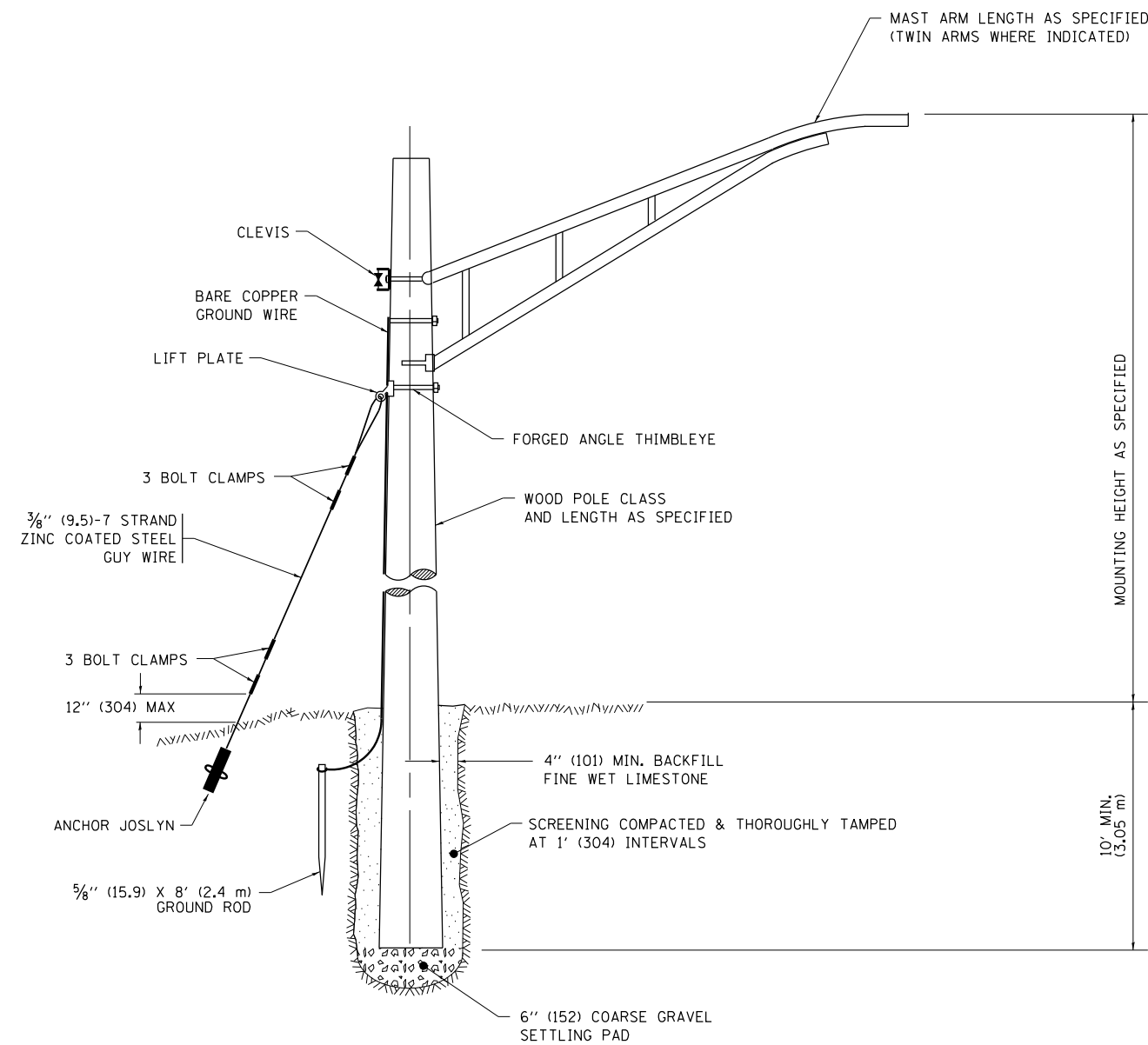
DESIGNED -	REVISED - 08-08-03
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**MISC. ELECTRICAL DETAILS
 SHEET A**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

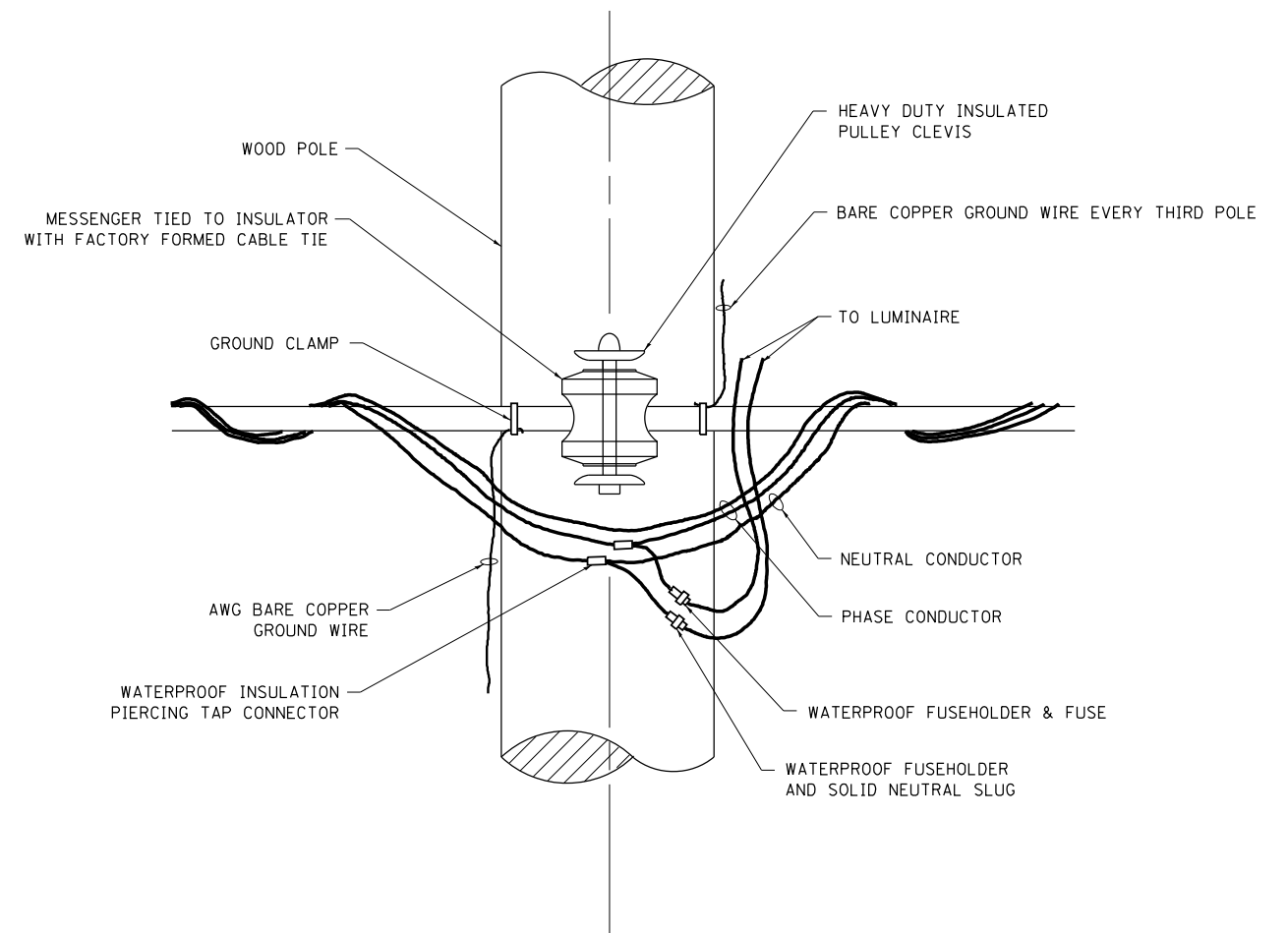
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			288	277
BE-702		CONTRACT NO.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TEMPORARY LIGHT POLE DETAIL

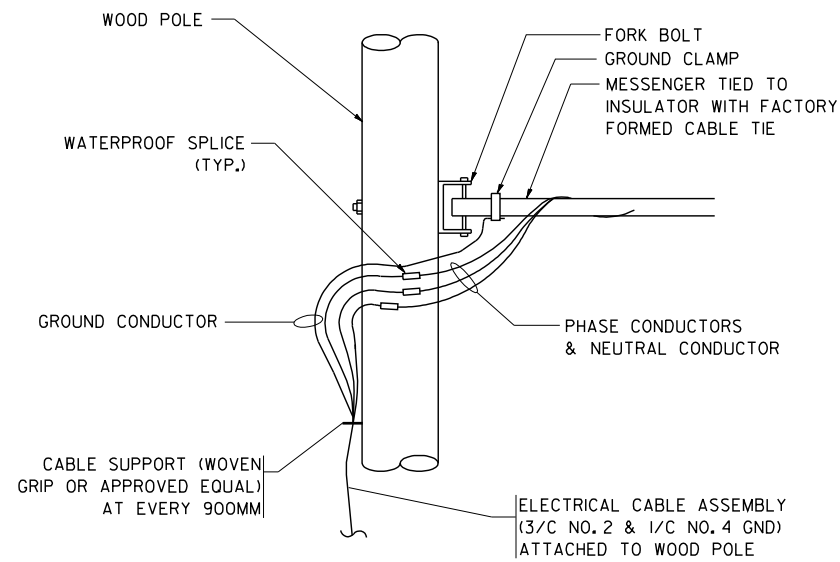
NOTE:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. MAST ARM SHALL BE RATED FOR THE SPECIFIED MOUNTING HEIGHT.

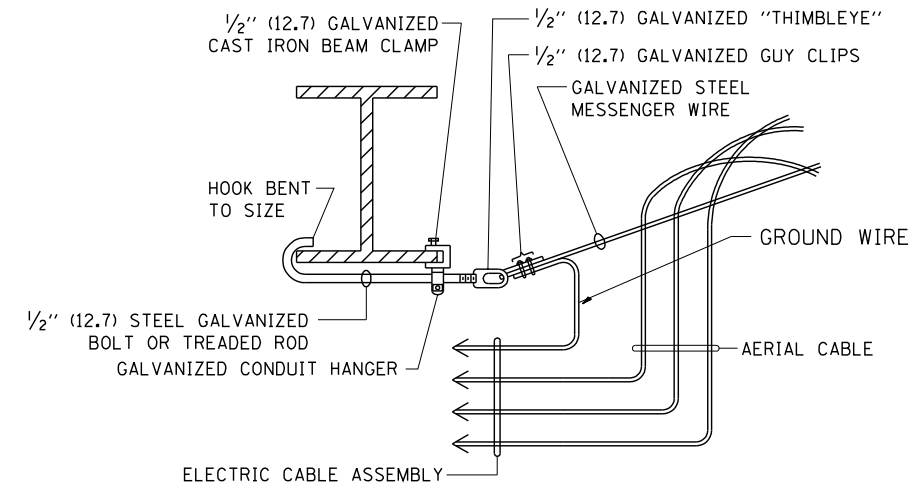


TEMPORARY LIGHT POLE ATTACHMENT DETAIL

FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY LIGHT POLE DETAILS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\IL\084EBID\INTEG\illinois.gov\PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist 1\BROADWAY\CAD\Drawings\CADsheets\be000.dgn	DRAWN	REVISED - R.T. 07-26-16	REVISED -								288	278
Default	PLOT SCALE = 50.000' / in.	CHECKED -	REVISED -		SCALE: NONE			SHEET 1 OF 1 SHEETS			STA.	TO STA.
	PLOT DATE = 9/1/2016	DATE -	REVISED -		BE-800			CONTRACT NO.			ILLINOIS FED. AID PROJECT	



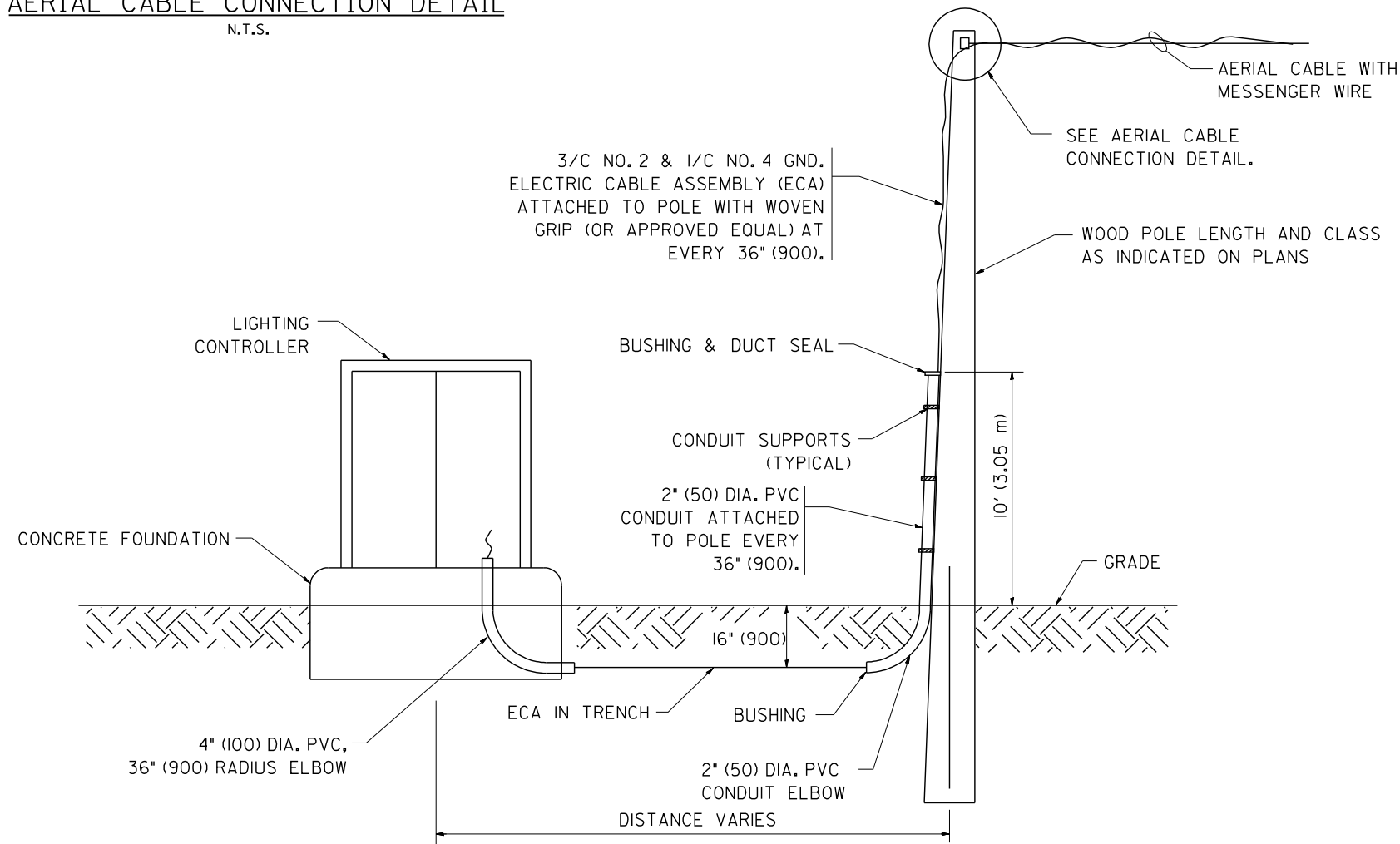
AERIAL CABLE CONNECTION DETAIL
N.T.S.



AERIAL CABLE ATTACHED TO STRUCTURE
NOT TO SCALE

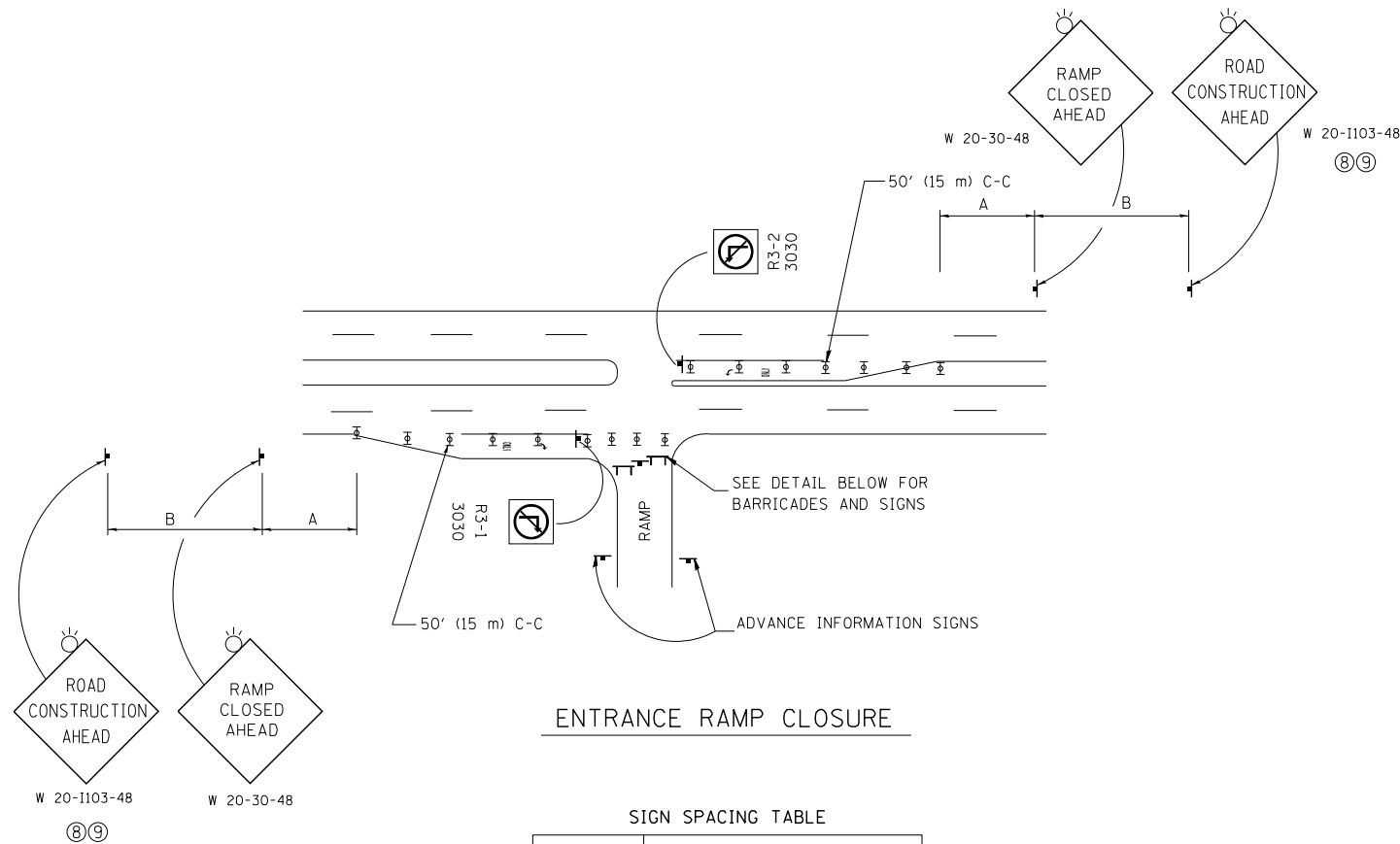
NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. SEE PROPOSED LIGHTING PLAN FOR CONDUIT, CABLE AND ROUTING.
3. THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES. REFER TO AERIAL AERIAL CABLE ATTACHED TO STRUCTURE DETAIL.
4. COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.



WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION DETAIL
N.T.S.

FILE NAME = W:\diststd\22x34\be001.dgn	USER NAME = gaglianobt	DESIGNED - DRAWN -	REVISED - REVISED -	08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY AERIAL CABLE INSTALLATION			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED -	REVISED -			BE-001						288	279
PLOT DATE = 1/4/2008	DATE -	REVISED -	REVISED -			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO.			
										FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

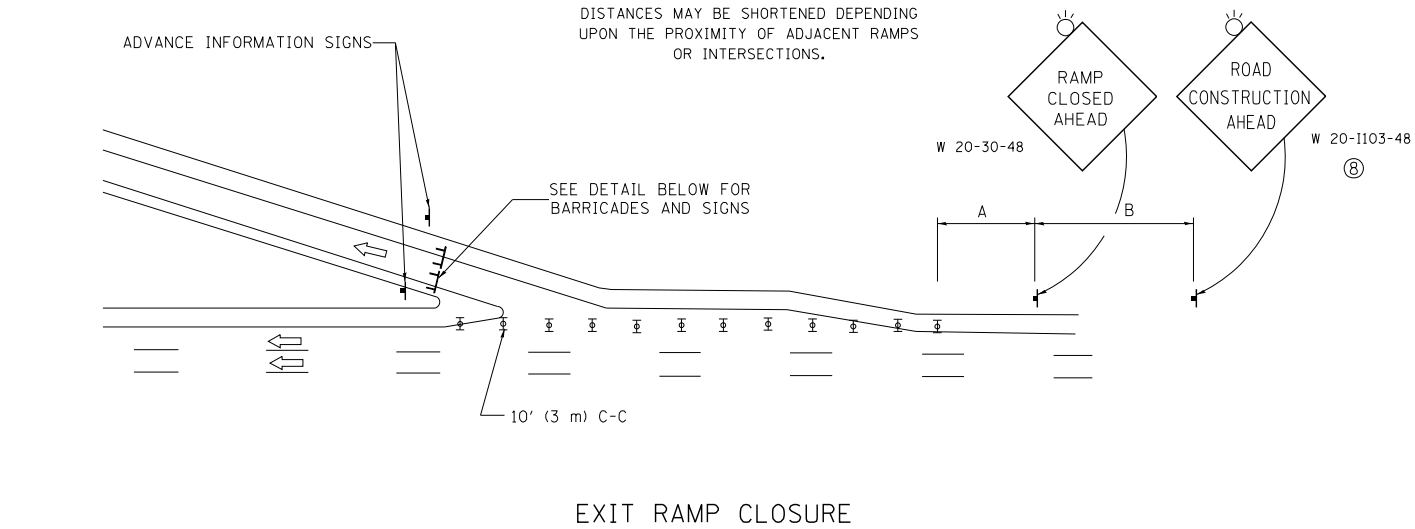


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY <24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

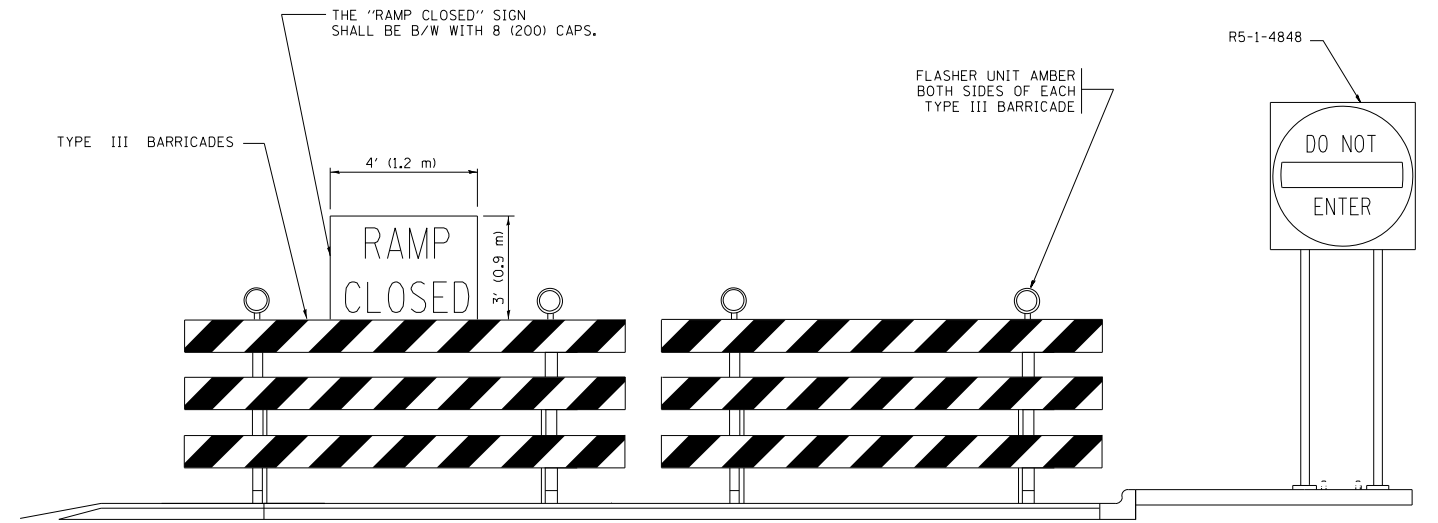
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

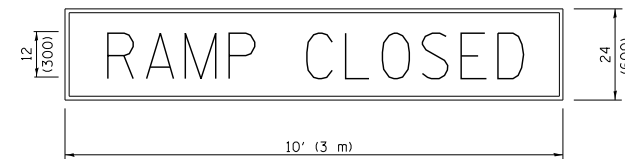
SYMBOLS

- ⊥ TYPE II BARRICADE OR DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- ⊥ TYPE III BARRICADE WITH 2 FLASHING LIGHTS



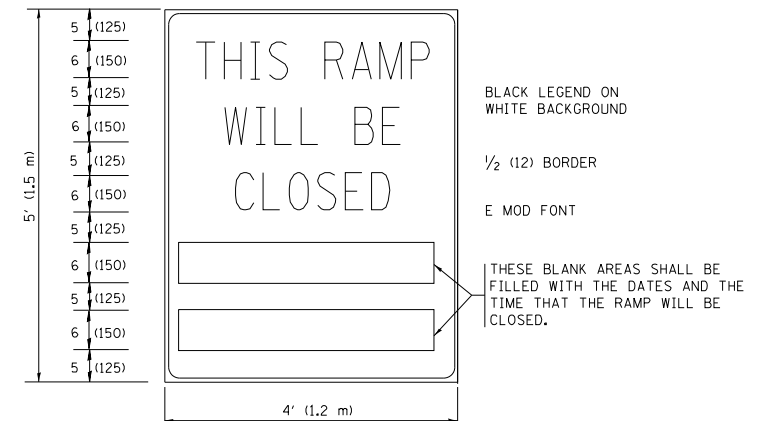
DETAIL FOR REQUIRED BARRICADES & SIGNS

RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY E MOD FONT 1 (25) BORDER
 THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.
 THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

GENERAL NOTES:

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEDED BY A W20-7 FLAGGER WARNING SIGN.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

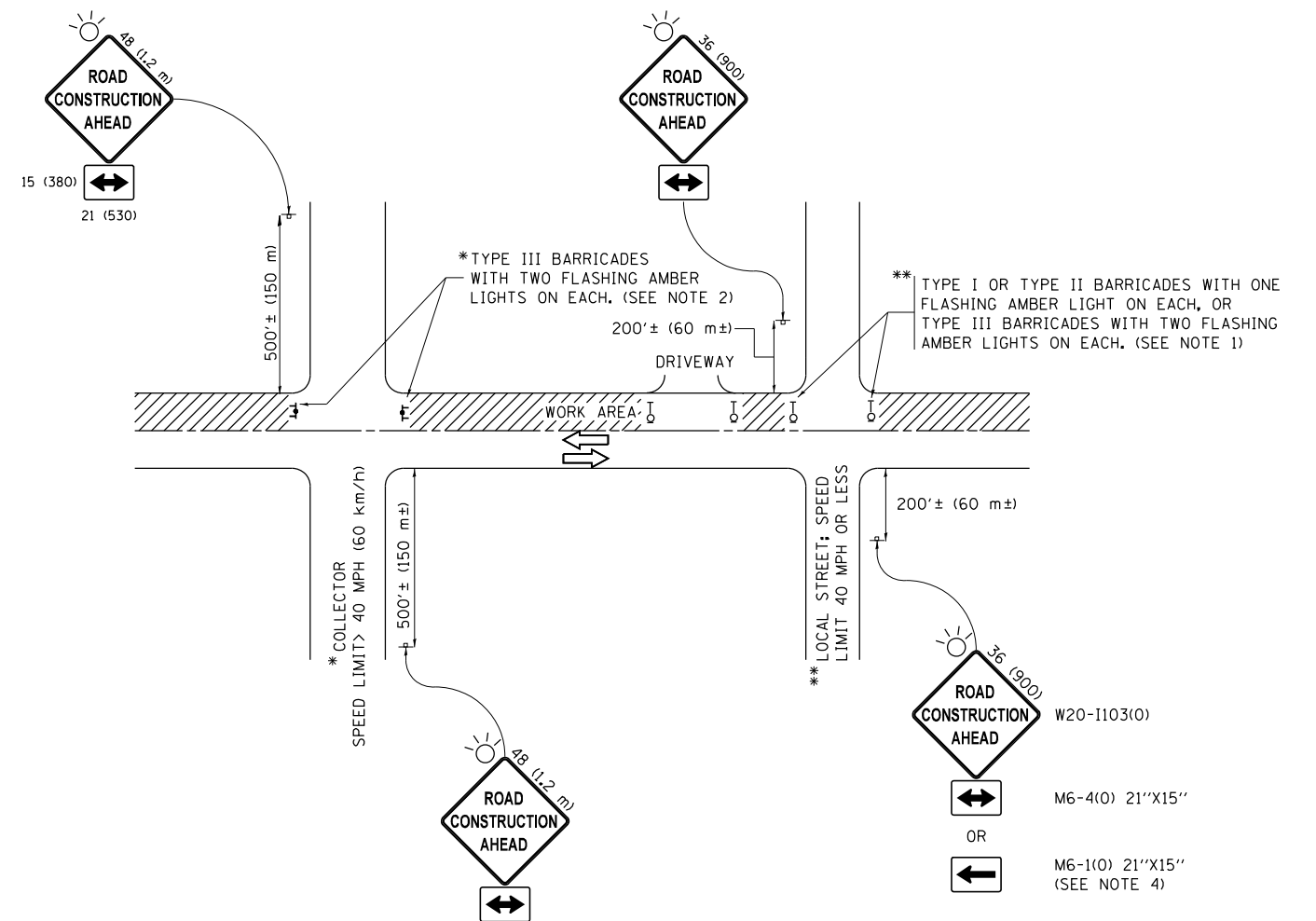
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	PLOT SCALE = 50.000' / in.	CHECKED -	REVISED - SPB 12-09
	PLOT DATE = 7/8/2013	DATE - 02-83	REVISED - MD 06-13

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ENTRANCE AND EXIT RAMP
CLOSURE DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TC-08		288	280
FED. ROAD DIST. NO. 1 ILLINOIS			CONTRACT NO.	
FED. AID PROJECT				



NOTES:

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
4. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

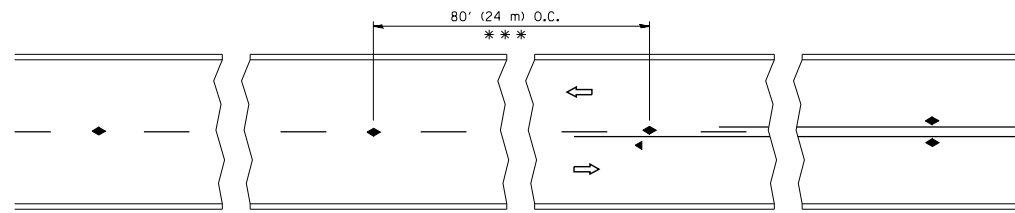
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Default	PLOT SCALE = 50.000' / in.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
	PLOT DATE = 9/15/2016	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS**

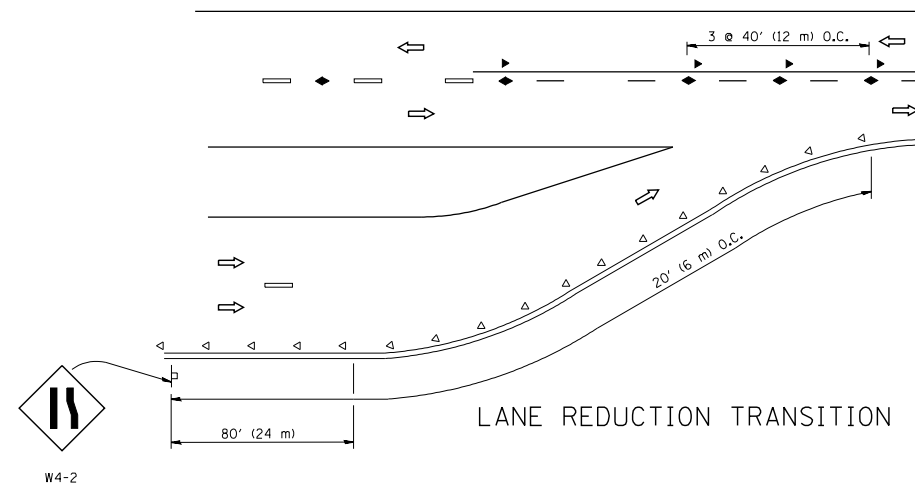
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			288	281
TC-10			CONTRACT NO.	
ILLINOIS FED. AID PROJECT				

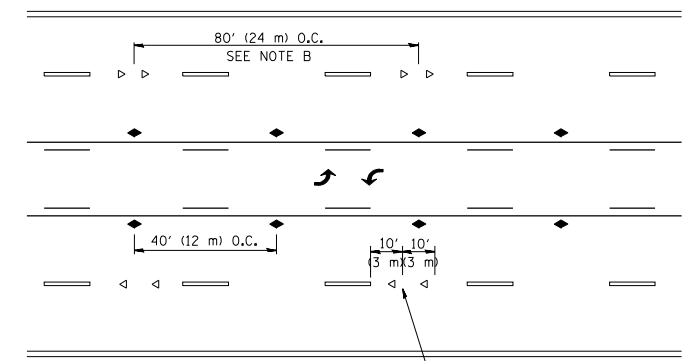


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

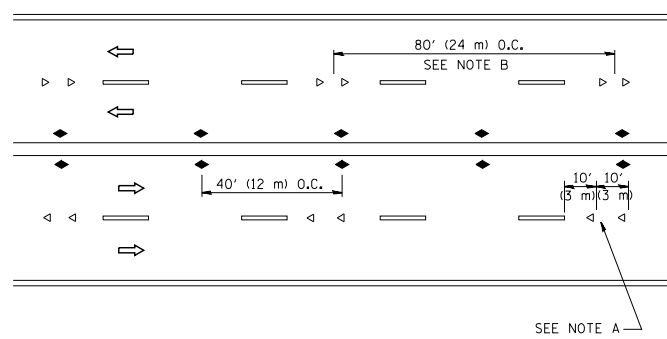
TWO-LANE/TWO-WAY



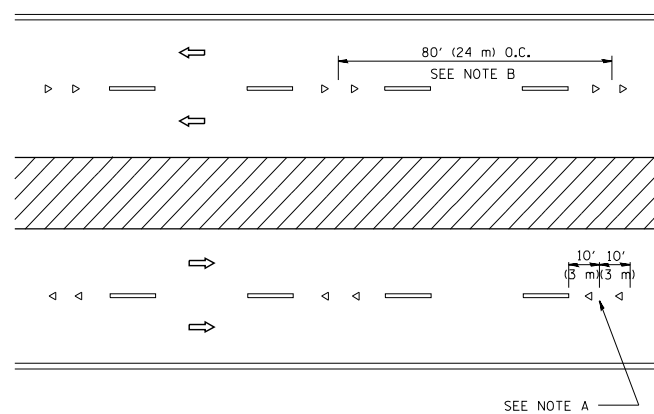
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

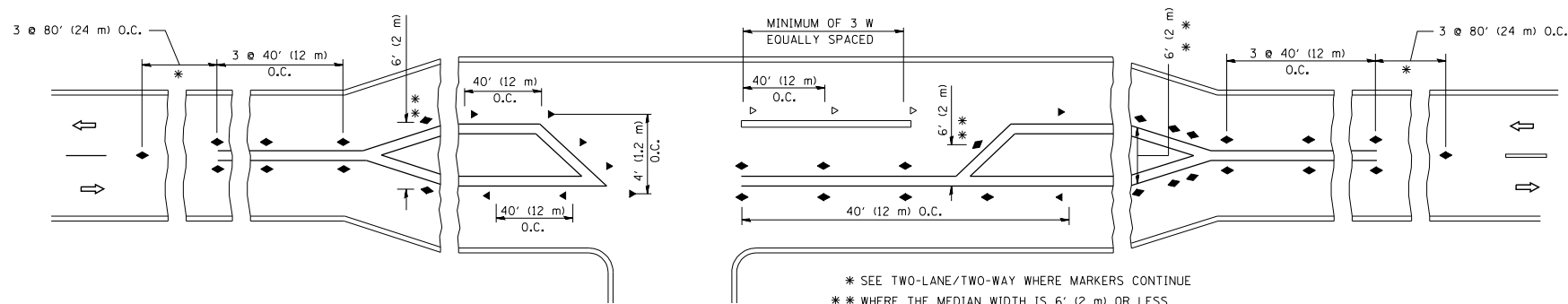
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

LEFT TURN

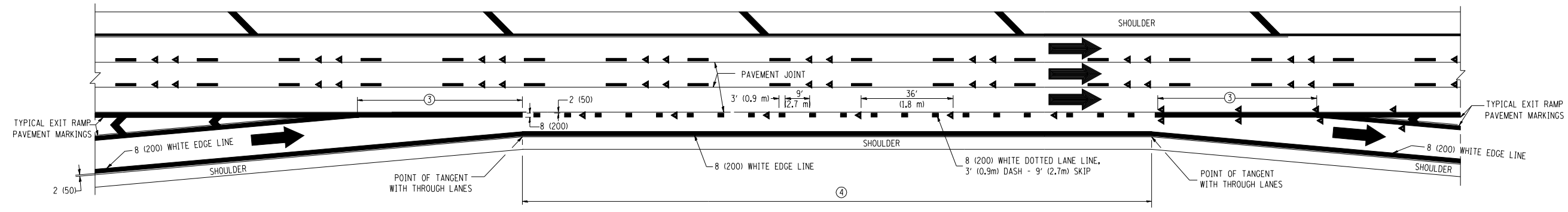
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = lryso	DESIGNED -	REVISED - T. RAMMACHER 09-19-94
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		CHECKED -	REVISED - T. RAMMACHER 01-06-00
		DATE -	REVISED - C. JUCIUS 09-09-09

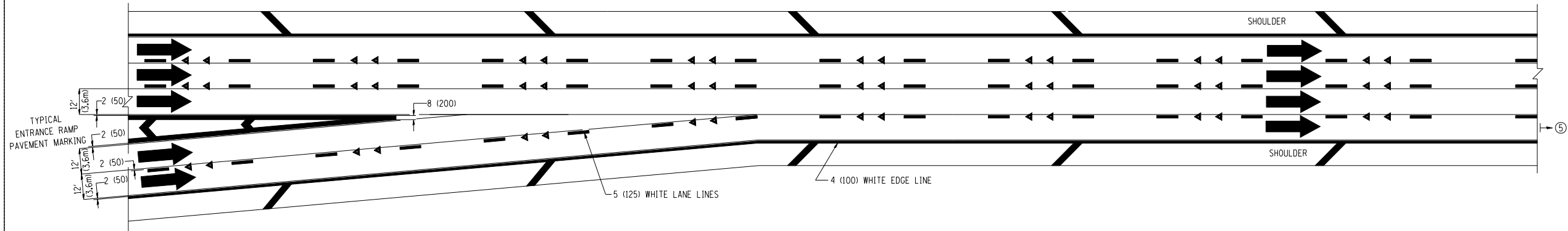
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS			
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

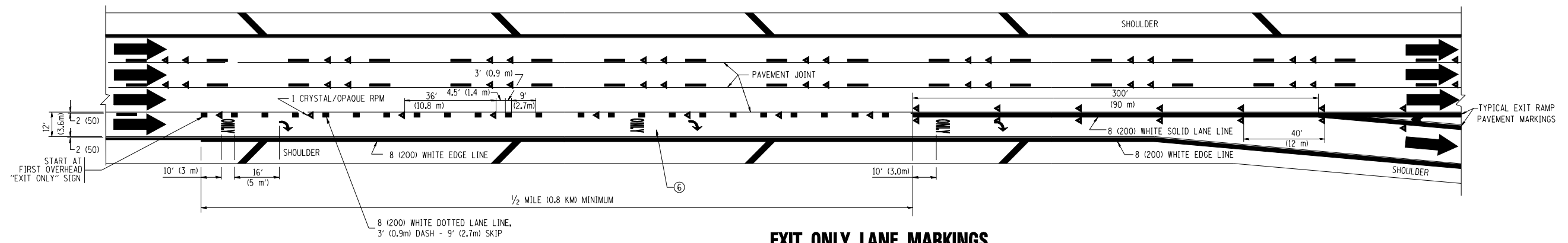
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			288	282
TC-11			CONTRACT NO.	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



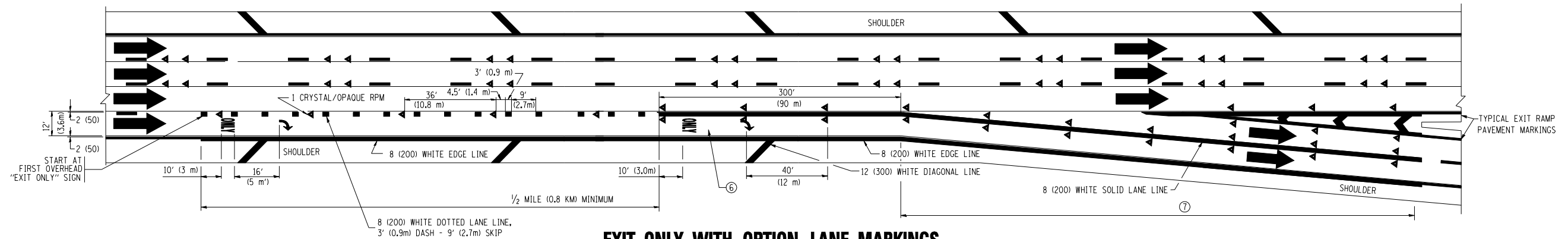
AUXILIARY LANE MARKINGS



TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS



EXIT ONLY LANE MARKINGS



EXIT ONLY WITH OPTION LANE MARKINGS

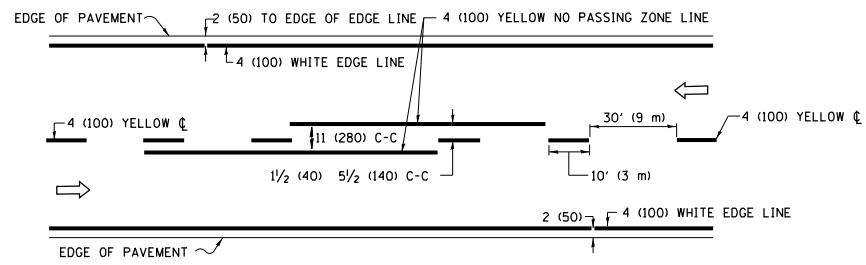
- NOTES**
- ③ OMIT WHEN LENGTH OF AUXILIARY LANE IS LESS THAN 500' (150 m).
 - ④ 8-INCH WIDE DOTTED LANE LINE MARKINGS SHALL BE USED WHEN THE LENGTH OF THE AUXILIARY LANE IS 2 MILES OR LESS.
 - ⑤ FOR TWO-LANE ENTRANCE RAMP, IF RIGHT LANE ENDS, USE TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS.
 - ⑥ ONLY AND ARROWS EQUALLY SPACED, 500' (150 m) MAXIMUM SPACING. FULL SIZE LETTERS AND ARROW SHALL BE USED.
 - ⑦ CONTINUE 8" SOLID LANE LINE THROUGH EXIT TO END OF PAVED GORE.

FILE NAME =	USER NAME = leysa	DESIGNED - D.W.S.	REVISED - D.W.S. 07-96
ca:\pw\work\PIWID01\LEYSAN\0108315\c12.dgn		DRAWN -	REVISED - J.A.F. 02-06
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - S.P.B. 01-07
	PLOT DATE = 1/22/2010	DATE - 01-90	REVISED - S.P.B. 01-10

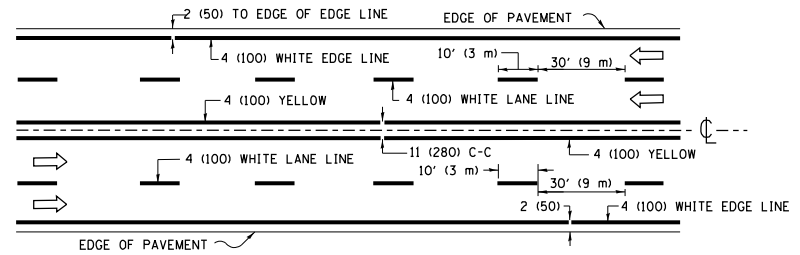
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS			
SCALE: NONE	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.

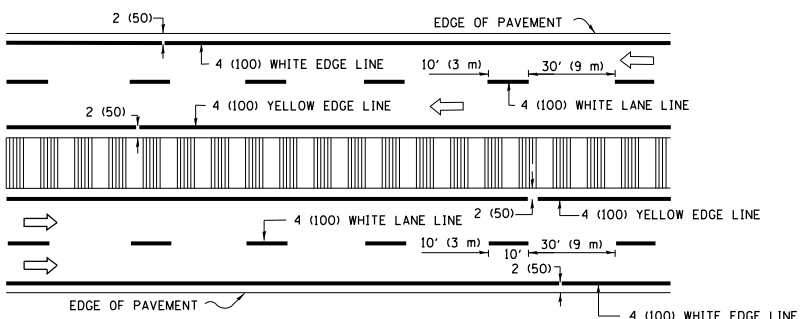
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TC-12		288	284
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO.	



2-LANE ROADWAY

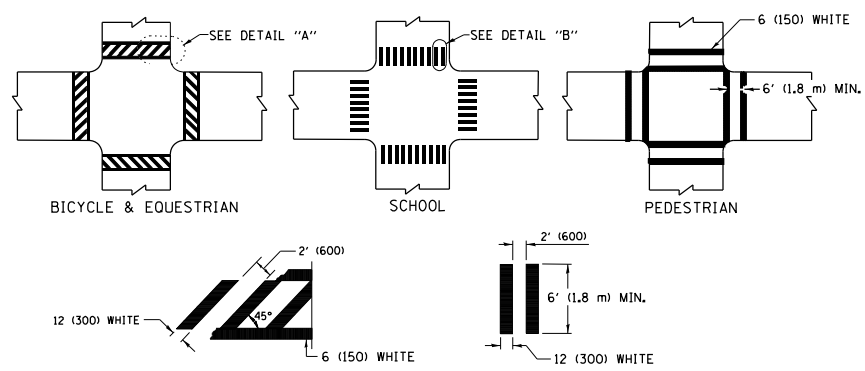


MULTI-LANE UNDIVIDED



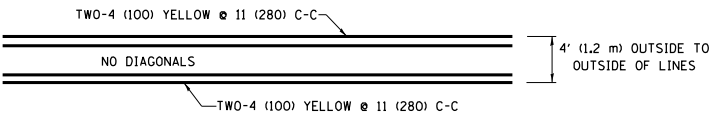
MULTI-LANE DIVIDED WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

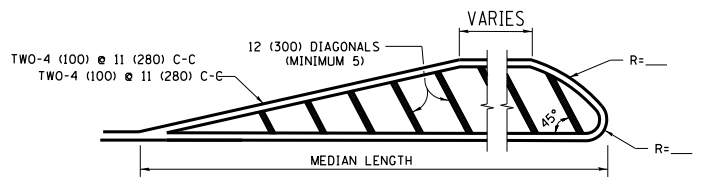


TYPICAL CROSSWALK MARKING

* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES

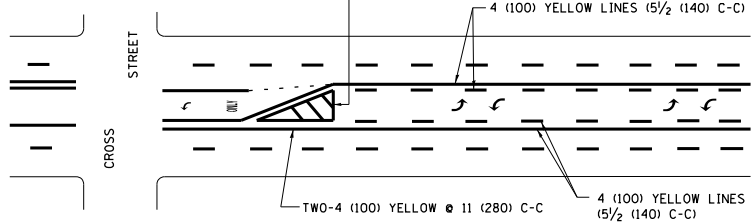


4' (1.2 m) WIDE MEDIANS ONLY



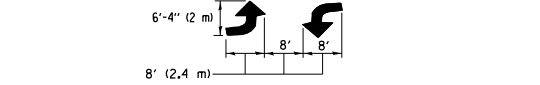
MEDIANS OVER 4' (1.2 m) WIDE

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))



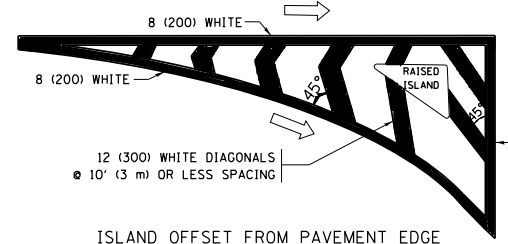
MEDIAN WITH TWO-WAY LEFT TURN LANE TYPICAL PAINTED MEDIAN MARKING

A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.

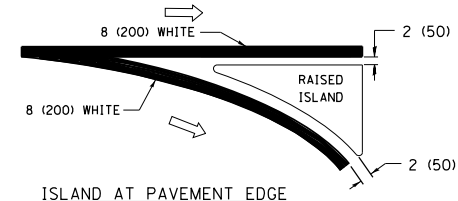


TYPICAL LEFT (OR RIGHT) TURN LANE TYPICAL TURN LANE MARKING

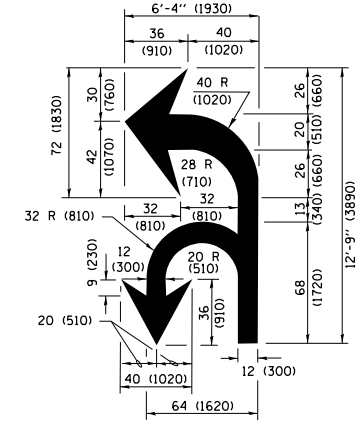
FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".



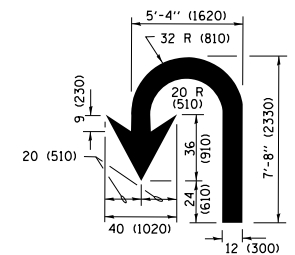
ISLAND OFFSET FROM PAVEMENT EDGE



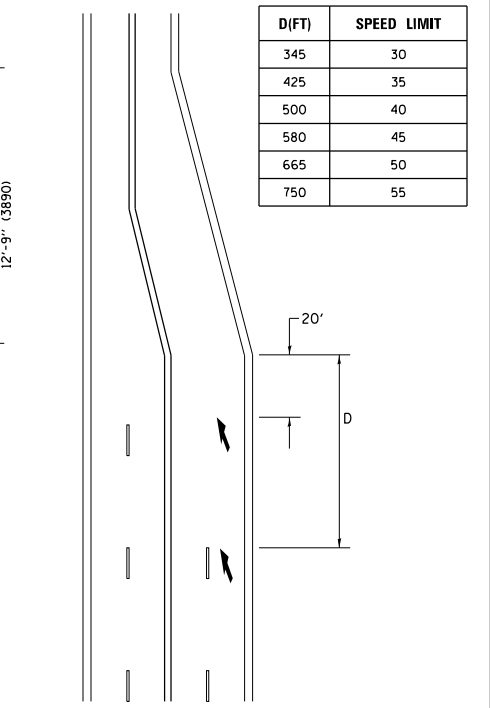
ISLAND AT PAVEMENT EDGE TYPICAL ISLAND MARKING



COMBINATION LEFT AND U-TURN



U-TURN



LANE REDUCTION TRANSITION

* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING /REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE.
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

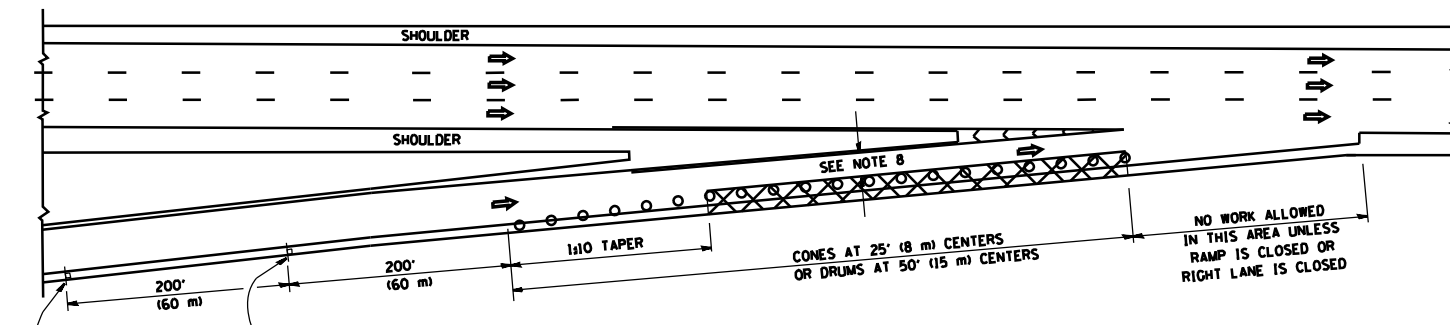
FILE NAME =	USER NAME = footemj	DESIGNED - EVERS	REVISED - C. JUCIUS 09-09-09
pw:\j\084EBID\INTEG\11\inois.gov\PIWDDT\Documents\DOT Offices\District 1\Projects\Dist 084EBID\CADD\cadd\CAD\sheet\13.dgn		CHECKED -	REVISED - C. JUCIUS 07-01-13
Default	PLOT SCALE = 50.000' / in.	DATE - 03-19-90	REVISED - C. JUCIUS 12-21-15
	PLOT DATE = 4/13/2016		REVISED - C. JUCIUS 04-12-16

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

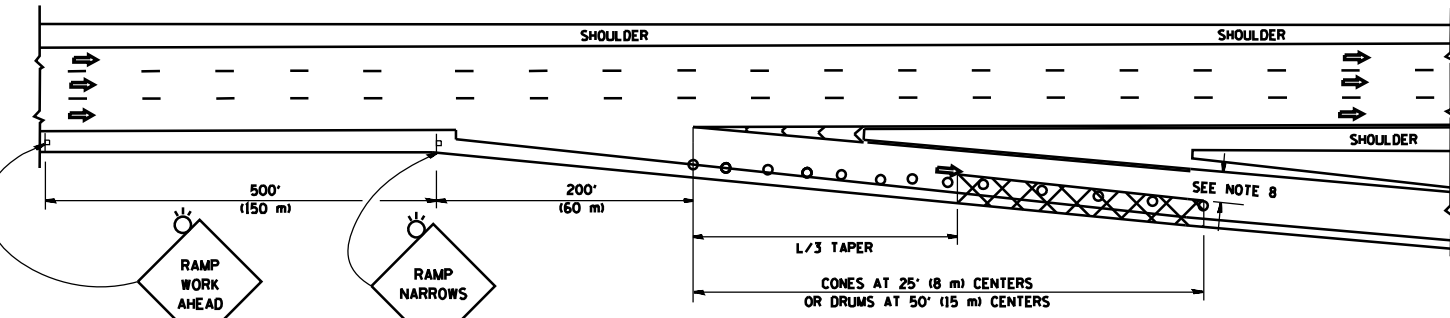
DISTRICT ONE TYPICAL PAVEMENT MARKINGS			
SCALE: NONE	SHEET 1	OF 1 SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TC-13		288	285
ILLINOIS FED. AID PROJECT			CONTRACT NO.	

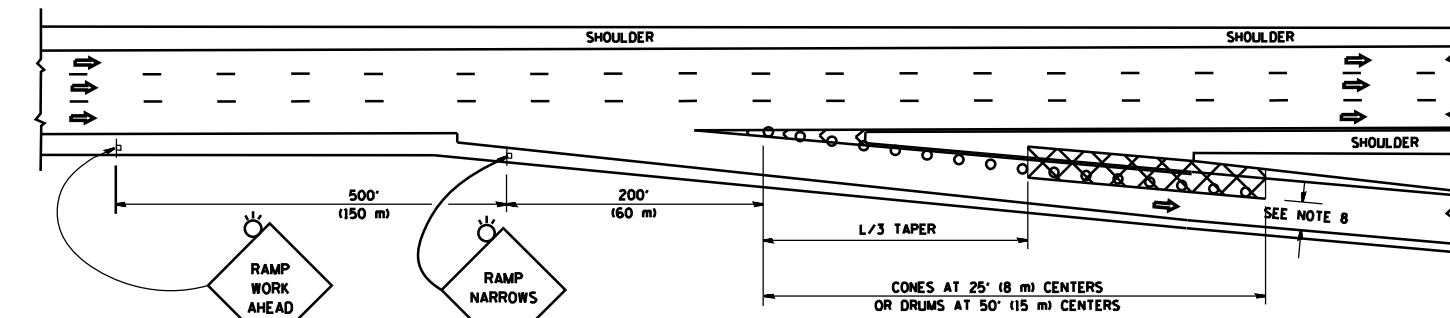
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

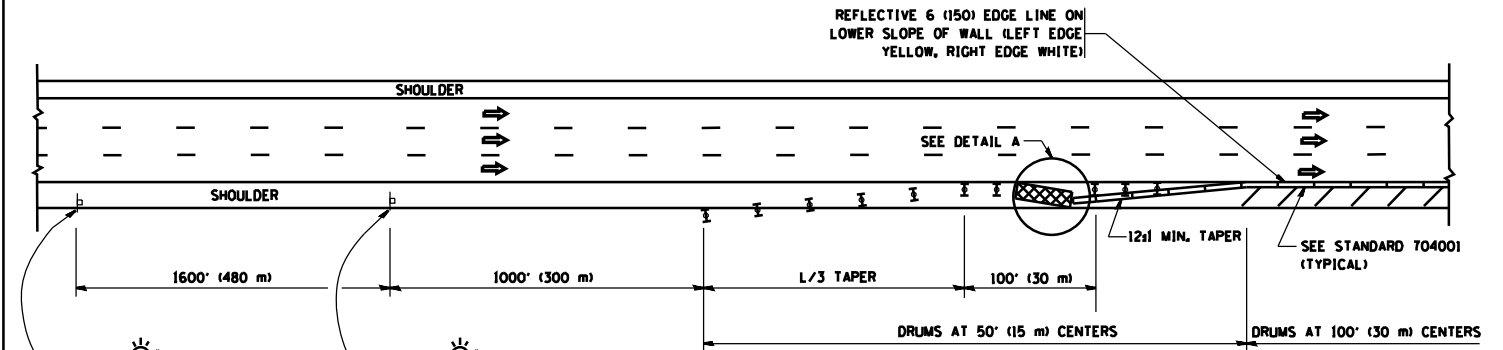
GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

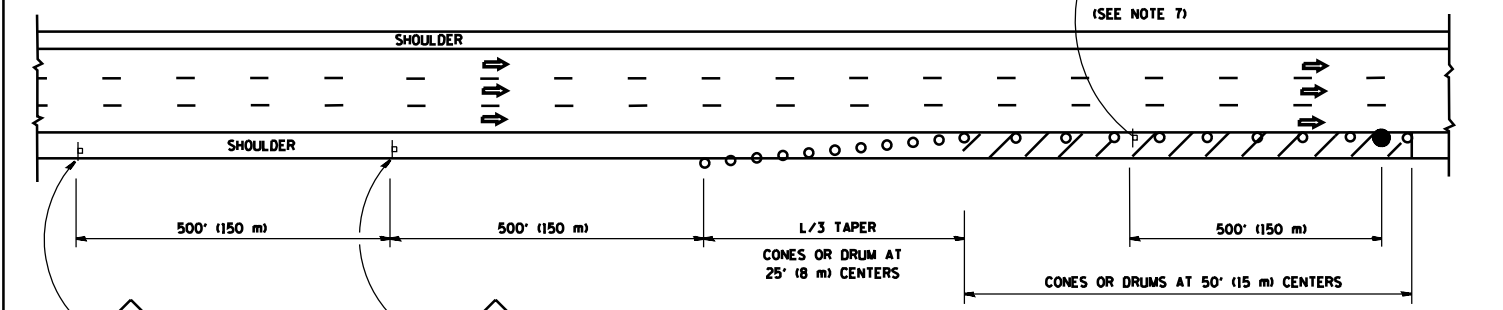
SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC ENGLISH
	$L = 0.65(WNS)$ $L = (WNS)$

W = WIDTH OF OFFSET IN FEET (METERS)
S = NORMAL POSTED SPEED MPH (KM/H)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

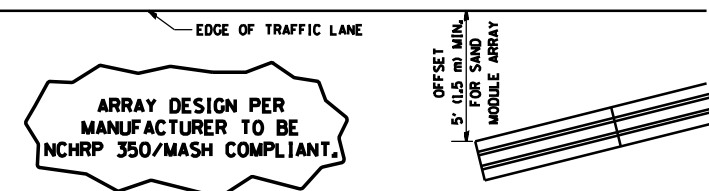
SHOULDER CLOSURE DETAILS



PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE



DETAIL "A" IMPACT ATTENUATOR, TEMPORARY (SEE NOTE 5)

5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
 - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
 - b. THE WORK ACTIVITY REQUIRES FREQUENT ENCRUCHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12' MIN. WIDTH TANGENT SECTION
16' MIN. WIDTH CURVE SECTION.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = lveysa	DESIGNED -	REVISED - J.A.F. 12-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
es:\pwwork\pwwork\lveysa\d0108315\17.dgn		DRAWN - D.W.S.	REVISED - S.P.B. 01-07		SCALE: NONE						288	286
		CHECKED -	REVISED - S.P.B. 12-09		SHEET NO. 1 OF 1 SHEETS			TC-17			CONTRACT NO.	
		DATE - 11-96	REVISED - M.D. 06-13		STA. TO STA.			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

ROUTE MARKERS

FOR U.S. ROUTES
M1-40-2424

FOR ILLINOIS ROUTES
M1-50-2424

R,R, UNMARKED ROUTES
SPECIAL 24" x 18" VARIABLE
4" BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND

ARROWS SIGNS

M5-1L-2115

M5-1R-2115

M6-1-2115

M6-1-2115

M6-3-2115

CARDINAL DIRECTION & DETOUR SIGNS

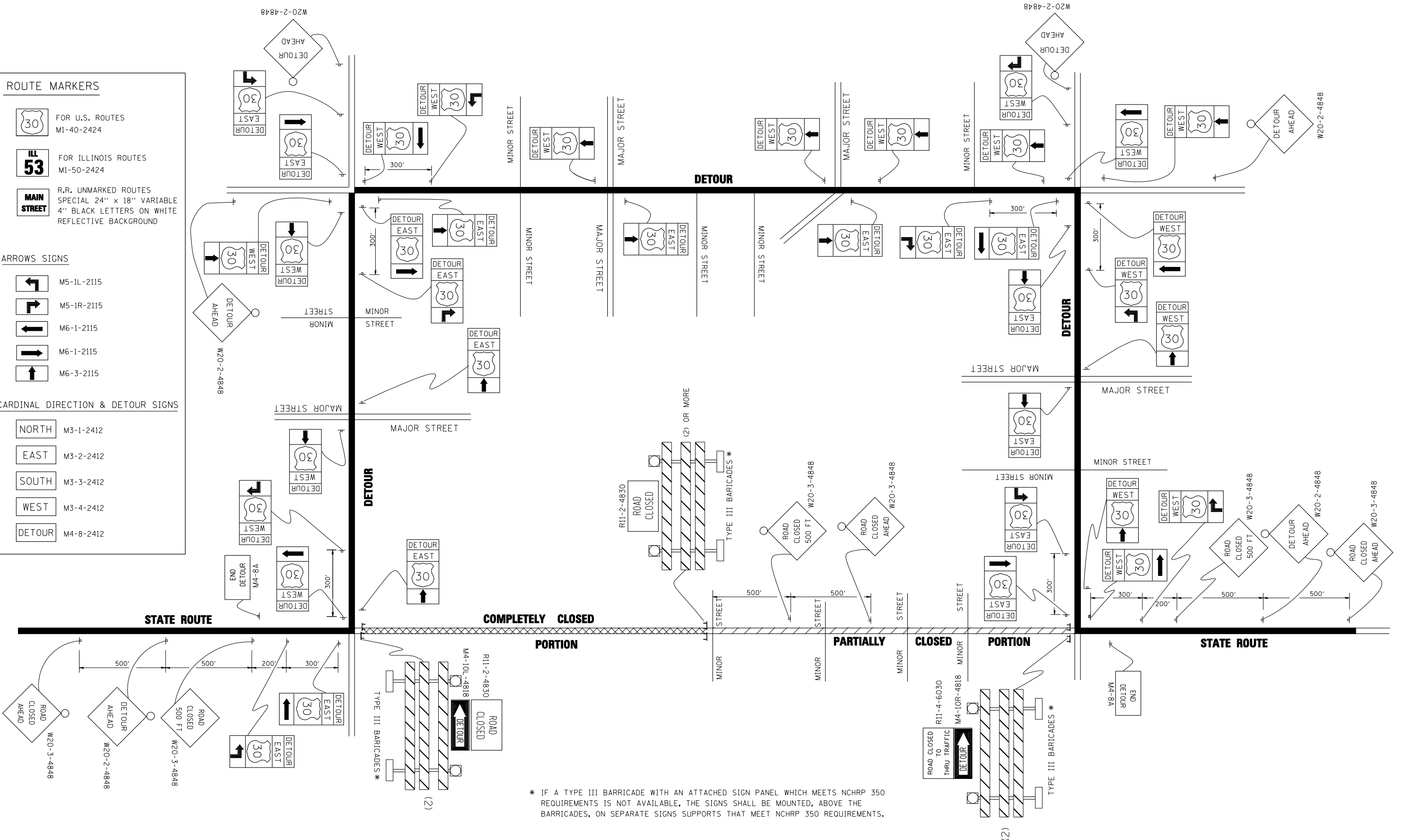
NORTH M3-1-2412

EAST M3-2-2412

SOUTH M3-3-2412

WEST M3-4-2412

DETOUR M4-8-2412



* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

FILE NAME =	USER NAME = drivakosgn	DESIGNED -	REVISED - 10-18-02
ct:\pw\work\p\WIDOT\DRIVAKOSGN\108315\1121.dgn		DRAWN -	REVISED - R. BORO 09-14-09
		PLOT SCALE = 49.9999' / IN.	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETOUR SIGNING FOR CLOSING STATE HIGHWAYS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			288	287
TC-21		CONTRACT NO.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				