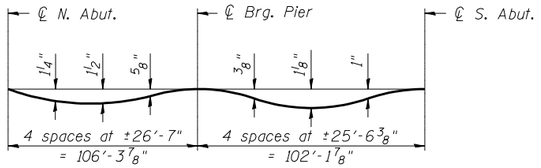
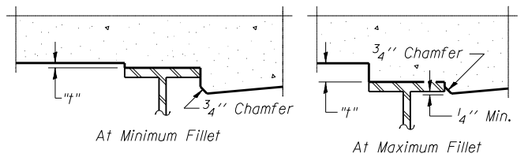


DEAD LOAD DEFLECTION DIAGRAM

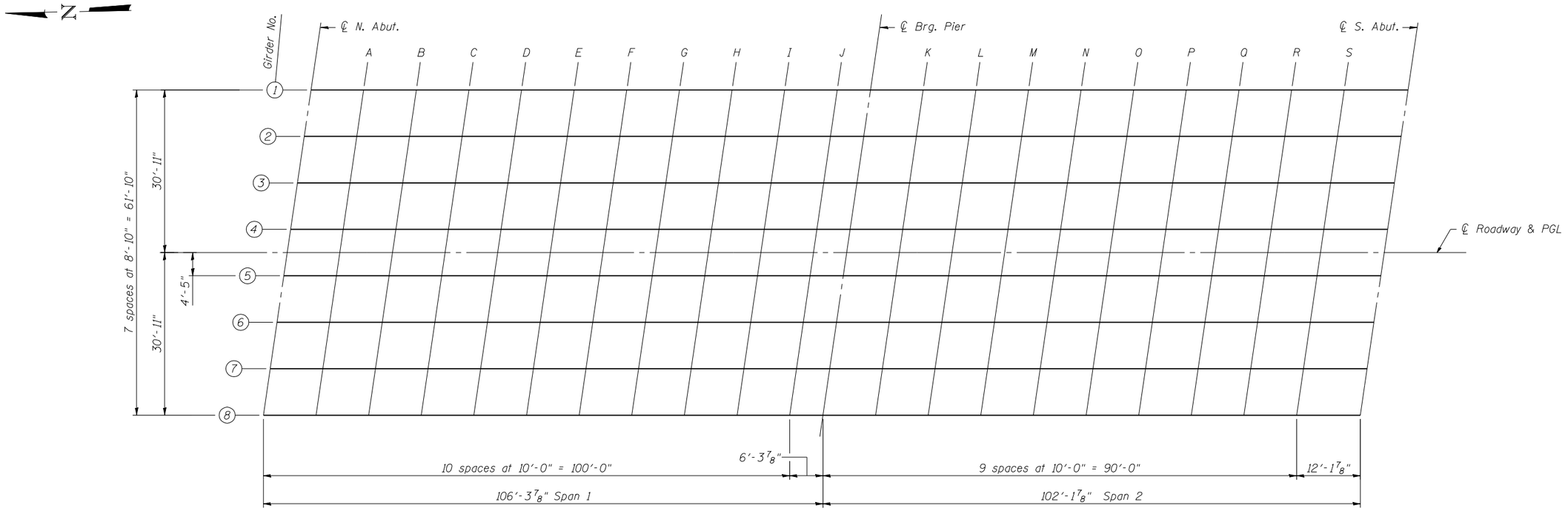
(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 4 & 5 of 23, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



PLAN

E-S

7-1-10

Coombe-Bloxdorf P.C. -CIVIL ENGINEERS- -STRUCTURAL ENGINEERS- -LAND SURVEYORS- Design Firm License No. 184-002703	USER NAME = _MML_	DESIGNED - RKM	REVISED -
		CHECKED -	REVISED -
	PLOT SCALE = 2i:4 'i' / IN.	DRAWN - MML	REVISED -
	PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 036-0065
SHEET NO. 3 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	501
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FILE NAME = ...\036D065-68409-003-top_of_slab-plan.dgn
CB PROJECT NO 04065

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	2567.17	-30.92	737.70	737.70
CL North Abut.	2568.43	-30.92	737.71	737.71
A	2578.43	-30.92	737.76	737.81
B	2588.43	-30.92	737.80	737.89
C	2598.43	-30.92	737.84	737.96
D	2608.43	-30.92	737.88	738.01
E	2618.43	-30.92	737.91	738.04
F	2628.43	-30.92	737.93	738.05
G	2638.43	-30.92	737.96	738.04
H	2648.43	-30.92	737.97	738.03
I	2658.43	-30.92	737.99	738.01
J	2668.43	-30.92	738.00	738.00
CL Pier	2674.75	-30.92	738.00	738.00
K	2684.75	-30.92	738.00	738.00
L	2694.75	-30.92	738.00	738.02
M	2704.75	-30.92	737.99	738.04
N	2714.75	-30.92	737.98	738.05
O	2724.75	-30.92	737.97	738.05
P	2734.75	-30.92	737.95	738.04
Q	2744.75	-30.92	737.92	738.01
R	2754.75	-30.92	737.89	737.97
S	2764.75	-30.92	737.86	737.90
CL South Abut.	2776.90	-30.92	737.81	737.81
Bk. South Abut.	2778.17	-30.92	737.81	737.81

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	2565.87	-22.08	738.03	738.03
CL North Abut.	2567.14	-22.08	738.03	738.03
A	2577.14	-22.08	738.08	738.13
B	2587.14	-22.08	738.13	738.22
C	2597.14	-22.08	738.17	738.28
D	2607.14	-22.08	738.20	738.33
E	2617.14	-22.08	738.23	738.36
F	2627.14	-22.08	738.26	738.37
G	2637.14	-22.08	738.28	738.37
H	2647.14	-22.08	738.30	738.36
I	2657.14	-22.08	738.32	738.34
J	2667.14	-22.08	738.33	738.33
CL Pier	2673.46	-22.08	738.33	738.33
K	2683.46	-22.08	738.33	738.33
L	2693.46	-22.08	738.33	738.35
M	2703.46	-22.08	738.32	738.37
N	2713.46	-22.08	738.31	738.38
O	2723.46	-22.08	738.30	738.39
P	2733.46	-22.08	738.28	738.37
Q	2743.46	-22.08	738.25	738.35
R	2753.46	-22.08	738.23	738.30
S	2763.46	-22.08	738.19	738.24
CL South Abut.	2775.61	-22.08	738.15	738.15
Bk. South Abut.	2776.87	-22.08	738.14	738.14

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	2564.58	-13.25	738.15	738.15
CL North Abut.	2565.84	-13.25	738.16	738.16
A	2575.84	-13.25	738.21	738.26
B	2585.84	-13.25	738.25	738.34
C	2595.84	-13.25	738.29	738.41
D	2605.84	-13.25	738.33	738.46
E	2615.84	-13.25	738.36	738.49
F	2625.84	-13.25	738.39	738.50
G	2635.84	-13.25	738.41	738.50
H	2645.84	-13.25	738.43	738.49
I	2655.84	-13.25	738.45	738.47
J	2665.84	-13.25	738.46	738.46
CL Pier	2672.16	-13.25	738.46	738.46
K	2682.16	-13.25	738.47	738.47
L	2692.16	-13.25	738.46	738.48
M	2702.16	-13.25	738.46	738.50
N	2712.16	-13.25	738.45	738.52
O	2722.16	-13.25	738.43	738.52
P	2732.16	-13.25	738.41	738.51
Q	2742.16	-13.25	738.39	738.48
R	2752.16	-13.25	738.36	738.44
S	2762.16	-13.25	738.33	738.38
CL South Abut.	2774.32	-13.25	738.29	738.29
Bk. South Abut.	2775.58	-13.25	738.28	738.28

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	2563.29	-4.42	738.28	738.28
CL North Abut.	2564.55	-4.42	738.28	738.28
A	2574.55	-4.42	738.34	738.38
B	2584.55	-4.42	738.38	738.47
C	2594.55	-4.42	738.42	738.54
D	2604.55	-4.42	738.46	738.59
E	2614.55	-4.42	738.49	738.62
F	2624.55	-4.42	738.52	738.63
G	2634.55	-4.42	738.54	738.63
H	2644.55	-4.42	738.56	738.62
I	2654.55	-4.42	738.58	738.60
J	2664.55	-4.42	738.59	738.59
CL Pier	2670.87	-4.42	738.59	738.59
K	2680.87	-4.42	738.60	738.60
L	2690.87	-4.42	738.60	738.62
M	2700.87	-4.42	738.59	738.64
N	2710.87	-4.42	738.58	738.65
O	2720.87	-4.42	738.57	738.66
P	2730.87	-4.42	738.55	738.65
Q	2740.87	-4.42	738.53	738.62
R	2750.87	-4.42	738.50	738.57
S	2760.87	-4.42	738.47	738.51
CL South Abut.	2773.02	-4.42	738.42	738.42
Bk. South Abut.	2774.29	-4.42	738.42	738.42

℄ ROADWAY & PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	2562.64	0.00	738.34	738.34
CL North Abut.	2563.90	0.00	738.35	738.35
A	2573.90	0.00	738.40	738.45
B	2583.90	0.00	738.44	738.53
C	2593.90	0.00	738.49	738.60
D	2603.90	0.00	738.52	738.65
E	2613.90	0.00	738.56	738.68
F	2623.90	0.00	738.59	738.70
G	2633.90	0.00	738.61	738.69
H	2643.90	0.00	738.63	738.68
I	2653.90	0.00	738.64	738.67
J	2663.90	0.00	738.66	738.66
CL Pier	2670.22	0.00	738.66	738.66
K	2680.22	0.00	738.66	738.67
L	2690.22	0.00	738.66	738.68
M	2700.22	0.00	738.66	738.70
N	2710.22	0.00	738.65	738.72
O	2720.22	0.00	738.64	738.72
P	2730.22	0.00	738.62	738.71
Q	2740.22	0.00	738.59	738.69
R	2750.22	0.00	738.57	738.64
S	2760.22	0.00	738.54	738.58
CL South Abut.	2772.38	0.00	738.49	738.49
Bk. South Abut.	2773.64	0.00	738.49	738.49

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	2561.99	4.42	738.27	738.27
CL North Abut.	2563.26	4.42	738.28	738.28
A	2573.26	4.42	738.33	738.38
B	2583.26	4.42	738.38	738.46
C	2593.26	4.42	738.42	738.53
D	2603.26	4.42	738.45	738.59
E	2613.26	4.42	738.49	738.62
F	2623.26	4.42	738.52	738.63
G	2633.26	4.42	738.54	738.63
H	2643.26	4.42	738.56	738.61
I	2653.26	4.42	738.58	738.60
J	2663.26	4.42	738.59	738.59
CL Pier	2669.58	4.42	738.59	738.59
K	2679.58	4.42	738.60	738.60
L	2689.58	4.42	738.60	738.62
M	2699.58	4.42	738.59	738.64
N	2709.58	4.42	738.58	738.65
O	2719.58	4.42	738.57	738.66
P	2729.58	4.42	738.55	738.65
Q	2739.58	4.42	738.53	738.62
R	2749.58	4.42	738.50	738.58
S	2759.58	4.42	738.47	738.52
CL South Abut.	2771.73	4.42	738.43	738.43
Bk. South Abut.	2772.99	4.42	738.42	738.42

FILE NAME = ...\036065-68409-004-top_of_slab-1.dgn
CB PROJECT NO 04065

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

USER NAME = _MML.	DESIGNED - RKM	REVISED -
	CHECKED -	REVISED -
PLOT SCALE = 0.2 '' / IN.	DRAWN - MML	REVISED -
PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 036-0065
SHEET NO. 4 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	502
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	2560.70	13.25	738.13	738.13
CL North Abut.	2561.96	13.25	738.14	738.14
A	2571.96	13.25	738.19	738.24
B	2581.96	13.25	738.24	738.33
C	2591.96	13.25	738.28	738.40
D	2601.96	13.25	738.32	738.45
E	2611.96	13.25	738.35	738.48
F	2621.96	13.25	738.38	738.49
G	2631.96	13.25	738.41	738.49
H	2641.96	13.25	738.43	738.48
I	2651.96	13.25	738.44	738.47
J	2661.96	13.25	738.45	738.46
CL Pier	2668.28	13.25	738.46	738.46
K	2678.28	13.25	738.46	738.47
L	2688.28	13.25	738.46	738.48
M	2698.28	13.25	738.46	738.51
N	2708.28	13.25	738.45	738.52
O	2718.28	13.25	738.44	738.53
P	2728.28	13.25	738.42	738.52
Q	2738.28	13.25	738.40	738.49
R	2748.28	13.25	738.37	738.45
S	2758.28	13.25	738.34	738.39
CL South Abut.	2770.44	13.25	738.30	738.30
Bk. South Abut.	2771.70	13.25	738.30	738.30

GIRDER 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	2559.41	22.08	737.99	737.99
CL North Abut.	2560.67	22.08	738.00	738.00
A	2570.67	22.08	738.05	738.10
B	2580.67	22.08	738.10	738.19
C	2590.67	22.08	738.14	738.26
D	2600.67	22.08	738.18	738.31
E	2610.67	22.08	738.22	738.34
F	2620.67	22.08	738.24	738.36
G	2630.67	22.08	738.27	738.36
H	2640.67	22.08	738.29	738.35
I	2650.67	22.08	738.31	738.33
J	2660.67	22.08	738.32	738.32
CL Pier	2666.99	22.08	738.33	738.33
K	2676.99	22.08	738.33	738.33
L	2686.99	22.08	738.33	738.35
M	2696.99	22.08	738.33	738.37
N	2706.99	22.08	738.32	738.39
O	2716.99	22.08	738.31	738.40
P	2726.99	22.08	738.29	738.39
Q	2736.99	22.08	738.27	738.36
R	2746.99	22.08	738.25	738.32
S	2756.99	22.08	738.22	738.26
CL South Abut.	2769.14	22.08	738.17	738.17
Bk. South Abut.	2770.41	22.08	738.17	738.17

GIRDER 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. North Abut.	2558.11	30.92	737.65	737.65
CL North Abut.	2559.38	30.92	737.66	737.66
A	2569.38	30.92	737.71	737.76
B	2579.38	30.92	737.76	737.85
C	2589.38	30.92	737.81	737.92
D	2599.38	30.92	737.85	737.98
E	2609.38	30.92	737.88	738.01
F	2619.38	30.92	737.91	738.02
G	2629.38	30.92	737.94	738.02
H	2639.38	30.92	737.96	738.01
I	2649.38	30.92	737.98	738.00
J	2659.38	30.92	737.99	737.99
CL Pier	2665.70	30.92	738.00	738.00
K	2675.70	30.92	738.00	738.00
L	2685.70	30.92	738.00	738.02
M	2695.70	30.92	738.00	738.04
N	2705.70	30.92	737.99	738.06
O	2715.70	30.92	737.98	738.07
P	2725.70	30.92	737.96	738.06
Q	2735.70	30.92	737.94	738.04
R	2745.70	30.92	737.92	737.99
S	2755.70	30.92	737.89	737.93
CL South Abut.	2767.85	30.92	737.85	737.85
Bk. South Abut.	2769.11	30.92	737.84	737.84

FILE NAME = ...\036065-68409-005-top_of_slab-2.dgn
CB PROJECT NO 04065

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

USER NAME = _MML_	DESIGNED - RKM	REVISED -
	CHECKED -	REVISED -
PLOT SCALE = 0.2 '' / IN.	DRAWN - MML	REVISED -
PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 036-0065
SHEET NO. 5 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	503
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	2537.47	-33.00	737.45
A	2547.47	-33.00	737.51
B	2557.47	-33.00	737.57
S. End N. Approach	2567.47	-33.00	737.62

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	2536.01	-23.00	737.84
A	2546.01	-23.00	737.90
B	2556.01	-23.00	737.96
S. End N. Approach	2566.01	-23.00	738.01

EAST EDGE OF MEDIAN STRIPING

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	2533.96	-9.00	738.03
A	2543.96	-9.00	738.10
B	2553.96	-9.00	738.16
S. End N. Approach	2563.96	-9.00	738.21

℄ ROADWAY & PGL

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	2532.64	0.00	738.16
A	2542.64	0.00	738.23
B	2552.64	0.00	738.29
S. End N. Approach	2562.64	0.00	738.34

WEST EDGE OF MEDIAN STRIPING

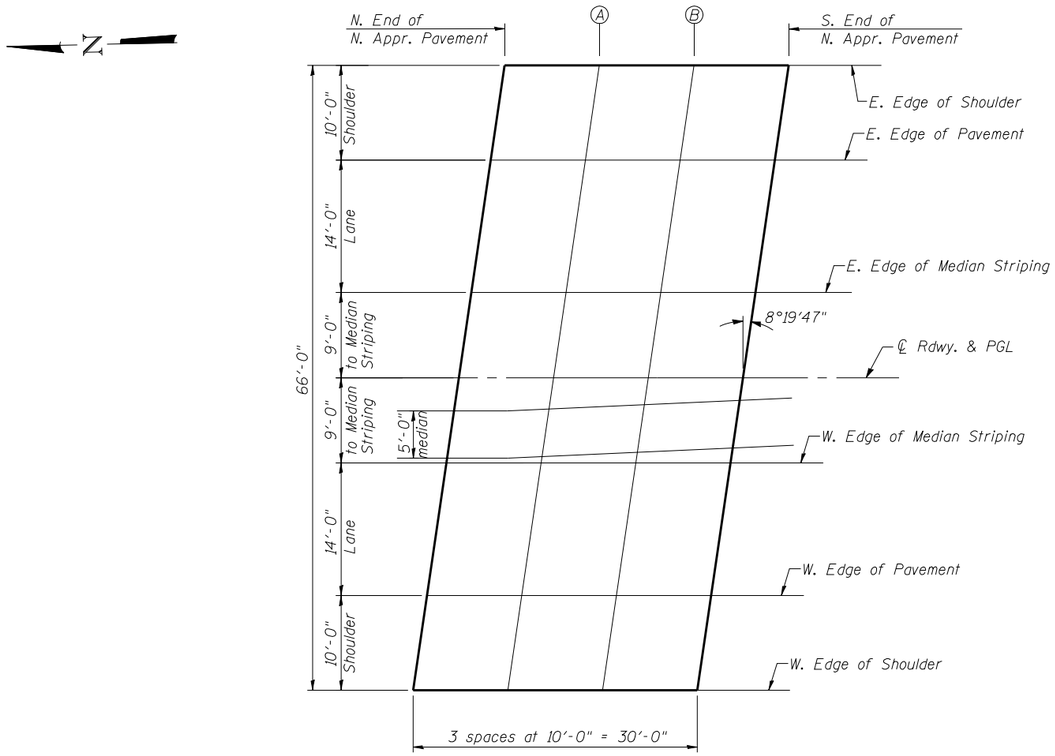
Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	2531.32	9.00	738.02
A	2541.32	9.00	738.08
B	2551.32	9.00	738.14
S. End N. Approach	2561.32	9.00	738.20

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	2529.27	23.00	737.79
A	2539.27	23.00	737.86
B	2549.27	23.00	737.92
S. End N. Approach	2559.27	23.00	737.98

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Approach	2527.81	33.00	737.38
A	2537.81	33.00	737.45
B	2547.81	33.00	737.51
S. End N. Approach	2557.81	33.00	737.57



PLAN

E-AS

7-1-10

FILE NAME = ...\036065-68409-006-top_appr-slab-n.dgn
CB PROJECT NO 04065

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

USER NAME = .MML.	DESIGNED - RKM	REVISED -
	CHECKED -	REVISED -
PLOT SCALE = 16.0 '' / IN.	DRAWN - MML	REVISED -
PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF N APPROACH SLAB ELEVATIONS
STRUCTURE NO. 036-0065

SHEET NO. 6 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	504
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End S. Approach	2778.47	-33.00	737.72
C	2788.47	-33.00	737.68
D	2798.47	-33.00	737.63
S. End S. Approach	2808.47	-33.00	737.58

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End S. Approach	2777.01	-23.00	738.13
C	2787.01	-23.00	738.08
D	2797.01	-23.00	738.04
S. End S. Approach	2807.01	-23.00	737.99

EAST EDGE OF MEDIAN STRIPING

Location	Station	Offset	Theoretical Grade Elevations
N. End S. Approach	2774.96	-9.00	738.35
C	2784.96	-9.00	738.30
D	2794.96	-9.00	738.26
S. End S. Approach	2804.96	-9.00	738.21

℄ ROADWAY & PGL

Location	Station	Offset	Theoretical Grade Elevations
N. End S. Approach	2773.64	0.00	738.49
C	2783.64	0.00	738.45
D	2793.64	0.00	738.40
S. End S. Approach	2803.64	0.00	738.35

WEST EDGE OF MEDIAN STRIPING

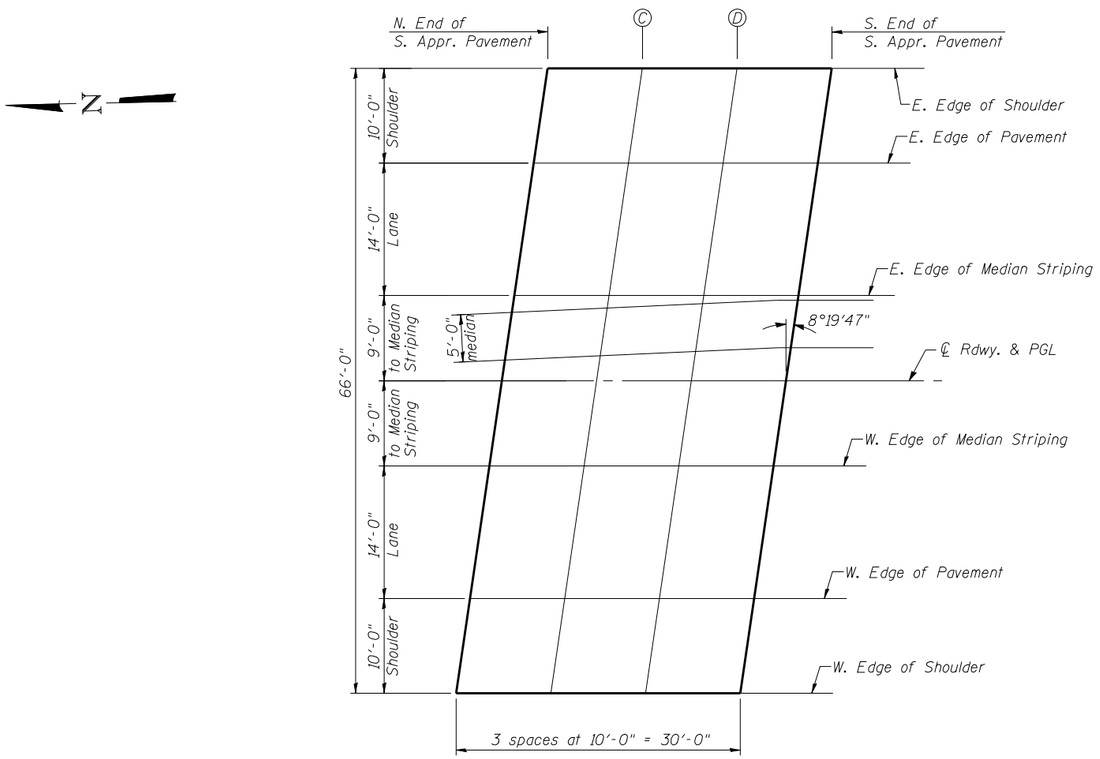
Location	Station	Offset	Theoretical Grade Elevations
N. End S. Approach	2772.32	9.00	738.36
C	2782.32	9.00	738.32
D	2792.32	9.00	738.27
S. End S. Approach	2802.32	9.00	738.22

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End S. Approach	2770.27	23.00	738.15
C	2780.27	23.00	738.11
D	2790.27	23.00	738.07
S. End S. Approach	2800.27	23.00	738.02

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End S. Approach	2768.81	33.00	737.76
C	2778.81	33.00	737.72
D	2788.81	33.00	737.68
S. End S. Approach	2798.81	33.00	737.63



PLAN

E-AS

7-1-10

FILE NAME = ...\036065-68409-007-top_appr-slab-s.dgn
CB PROJECT NO 04065

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USER NAME = .MML.	DESIGNED - RKM	REVISED -
	CHECKED -	REVISED -
PLOT SCALE = 16.0 '' / IN.	DRAWN - MML	REVISED -
PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
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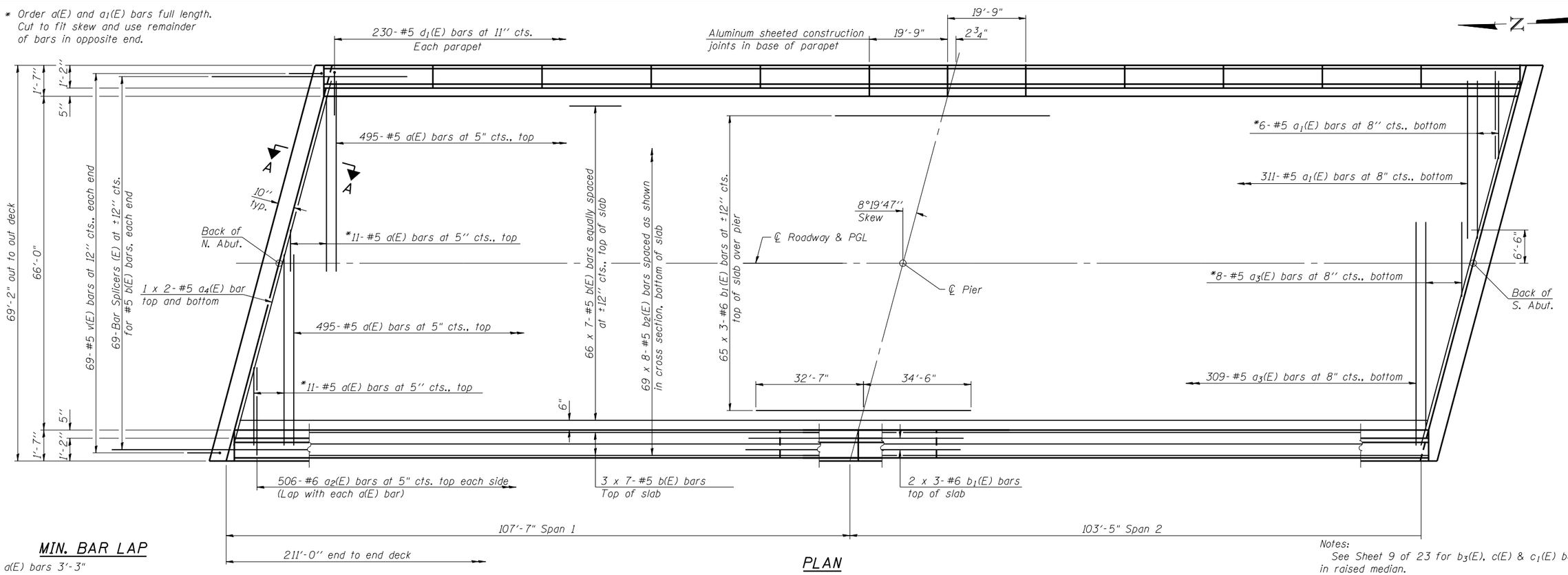
TOP OF S APPROACH SLAB ELEVATIONS
STRUCTURE NO. 036-0065
SHEET NO. 7 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	505
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

* Order a(E) and a_1(E) bars full length.
Cut to fit skew and use remainder
of bars in opposite end.

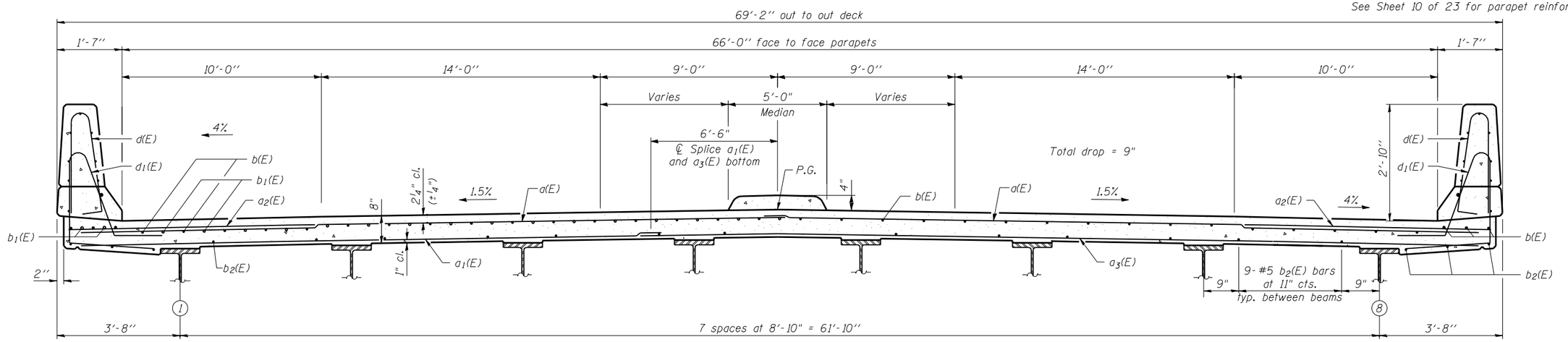


PLAN

MIN. BAR LAP

#5 a(E) bars 3'-3"
#5 a_4(E) bars 3'-8"
#5 bars 2'-7" (except a(E) & a_4(E) bars)
#6 bars 3'-1"

Notes:
See Sheet 9 of 23 for b_3(E), c(E) & c_1(E) bars in raised median.
See Sheet 10 of 13 for superstructure details and Bill of Material.
Bars indicated thus 66 x 7- #5 etc. indicates 66 lines of bars with 7 lengths per line.
See Sheet 10 of 23 for parapet reinforcement.



NEAR PIER NEAR MIDSPAN

CROSS SECTION
(Looking South)

SI-2-L 1-27-12

FILE NAME = ...\036065-68409-008-deck.dgn
CB PROJECT NO. 04065

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USER NAME = _MML_	DESIGNED - RKM	REVISED -
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PLOT SCALE = 0:2.000000 ':' / IN.	DRAWN - MML	REVISED -
PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
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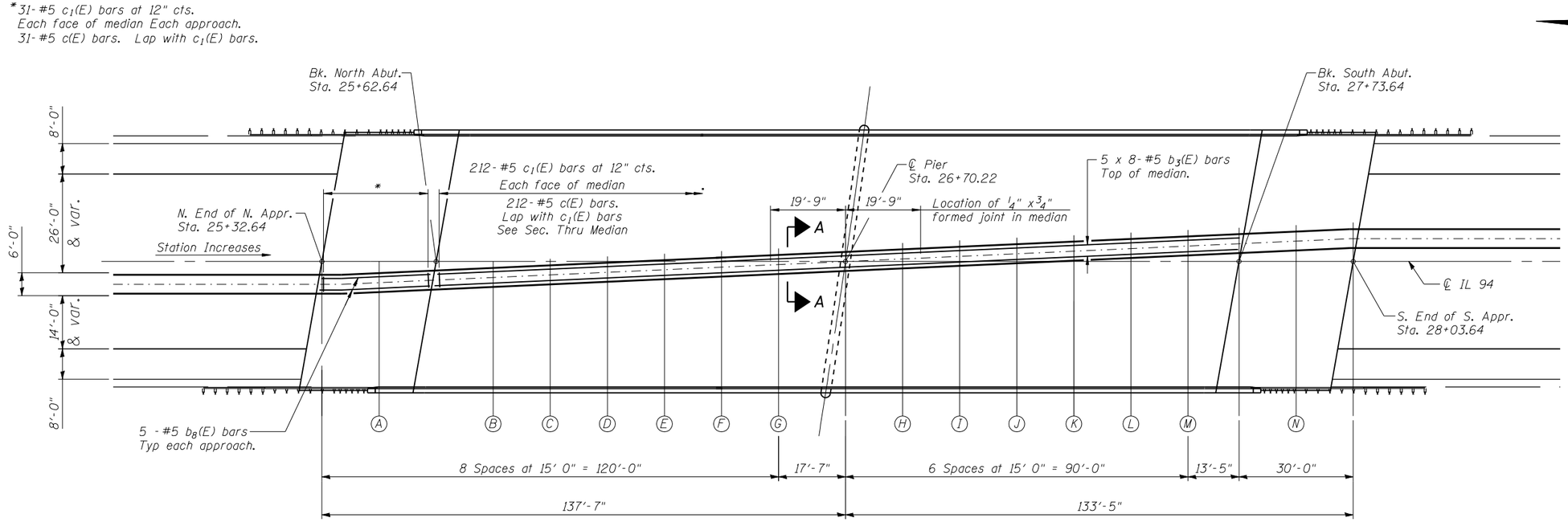
SUPERSTRUCTURE
STRUCTURE NO. 036-0065
SHEET NO. 8 OF 23 SHEETS

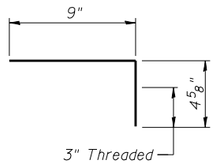
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	506
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



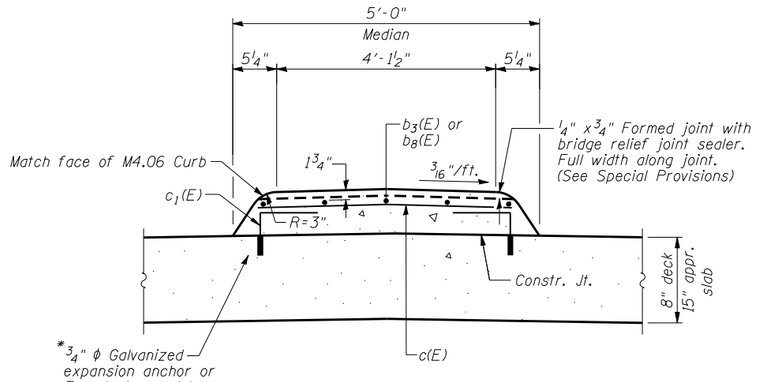
MEDIAN PLAN

OFFSET OF ℄ MEDIAN FROM ℄ ROADWAY

Location	Station	Offset
N. End of N. Appr.	25+32.64	6.00
A	25+47.64	5.55
Bk. of N. Abut.	25+62.64	4.87
B	25+77.64	4.20
C	25+92.64	3.52
D	26+07.64	2.84
E	26+22.64	2.16
F	26+37.64	1.48
G	26+52.64	0.80
℄ Brg. Pier	26+70.22	0
H	26+85.22	-0.68
I	27+00.22	-1.36
J	27+15.22	-2.03
K	27+30.22	-2.71
L	27+45.22	-3.40
M	27+60.22	-4.07
Bk. S. Abut.	27+73.64	-4.68
N	27+88.64	-5.36
S. End of S. Appr.	28+03.64	-6.00



BAR $c_1(E)$



SECTION THRU MEDIAN

*Cost included in the cost of Reinforcement Bars, Epoxy Coated.

Note: Concrete and epoxy coated reinforcement bars in the median are included in the bill of material on sheet 10 & 13 of 23.

FILE NAME = ...\036D065-68409-D09-median_det.dgn
CB PROJECT NO 04065

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Design Firm License No. 184-002703

USER NAME = _MML_	DESIGNED - RKM	REVISED -
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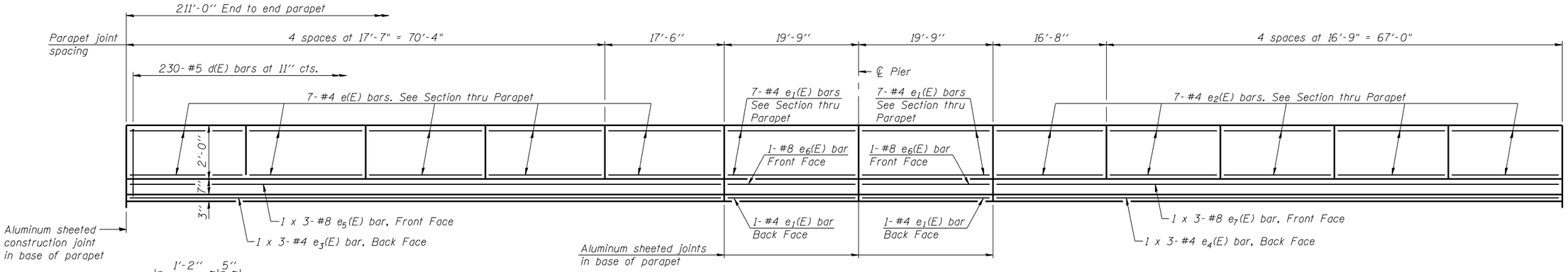
PLOT SCALE = 32:0.000000 '' / IN.	DRAWN - MML	REVISED -
PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

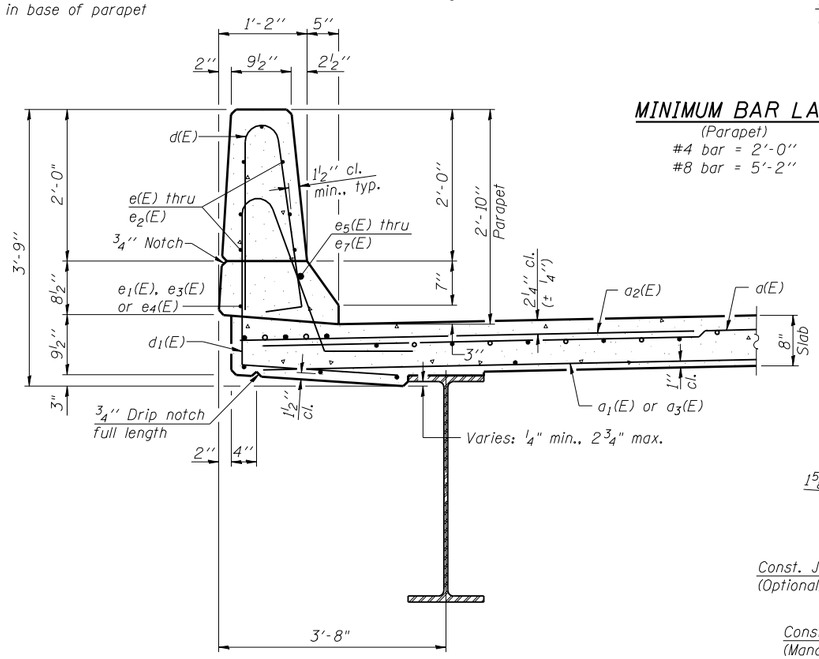
MEDIAN DETAILS
STRUCTURE NO. 036-0065
SHEET NO. 9 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	507
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



INSIDE ELEVATION OF PARAPET

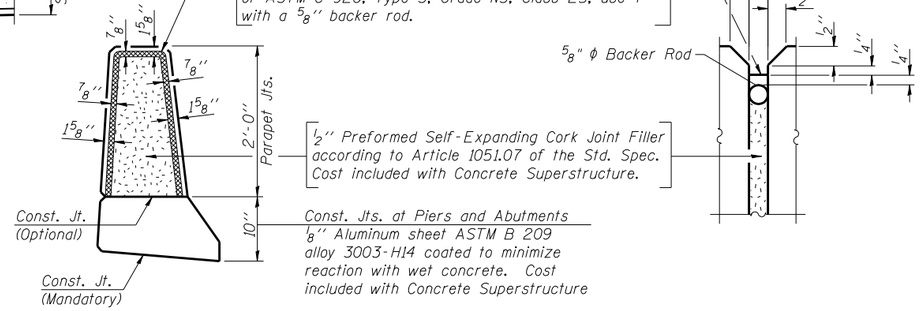
(Looking East)



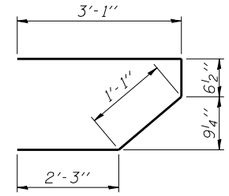
SECTION THRU PARAPET

MINIMUM BAR LAP

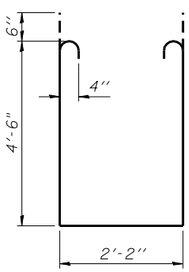
(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"



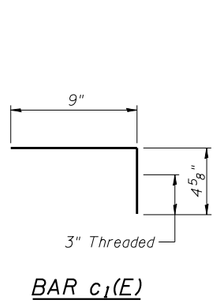
PARAPET JOINT DETAILS



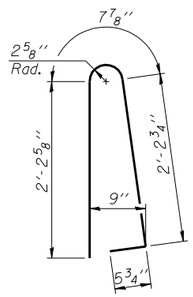
BAR s(E)



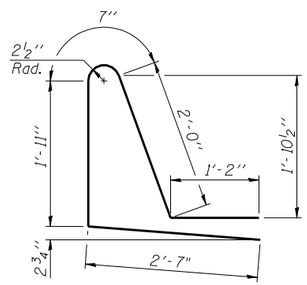
BAR s1(E)



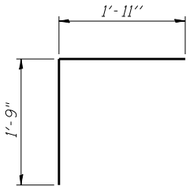
BAR c1(E)



BAR d(E)



BAR d1(E)



BAR v(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	1012	#5	35'-11"	——
a1(E)	317	#5	28'-9"	——
a2(E)	1012	#6	6'-6"	——
a3(E)	317	#5	41'-9"	——
a4(E)	8	#5	36'-5"	——
b(E)	504	#5	32'-5"	——
b1(E)	207	#6	24'-5"	——
b2(E)	552	#5	28'-8"	——
b3(E)	40	#5	29'-3"	——
c(E)	212	#5	4'-6"	——
c1(E)	424	#5	1'-2"	⌐
d(E)	460	#5	5'-7"	⌊
d1(E)	460	#5	8'-3"	L
e(E)	70	#4	17'-2"	——
e1(E)	32	#4	19'-5"	——
e2(E)	70	#4	16'-4"	——
e3(E)	6	#4	30'-6"	——
e4(E)	6	#4	29'-2"	——
e5(E)	6	#8	32'-8"	——
e6(E)	4	#8	19'-5"	——
e7(E)	6	#8	31'-3"	——
m(E)	30	#6	25'-6"	——
m1(E)	32	#6	11'-9"	——
m2(E)	14	#6	8'-6"	——
m3(E)	4	#6	3'-5"	——
s(E)	138	#5	7'-0"	⊐
s1(E)	124	#4	12'-2"	⊔
v(E)	138	#5	3'-8"	⌐
Reinforcement Bars, Epoxy Coated		Pound	129,820	
Concrete Superstructure		Cu. Yds.	491.8	

Bars indicated thus 1 x 3 -#4 etc. indicates 1 line of bars with 3 lengths per line.

S-I-D

1-27-12

FILE NAME = ...\0360065-68409-010-parapet.dgn
CB PROJECT NO 04065

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USER NAME = _MML_	DESIGNED - RKM	REVISED -
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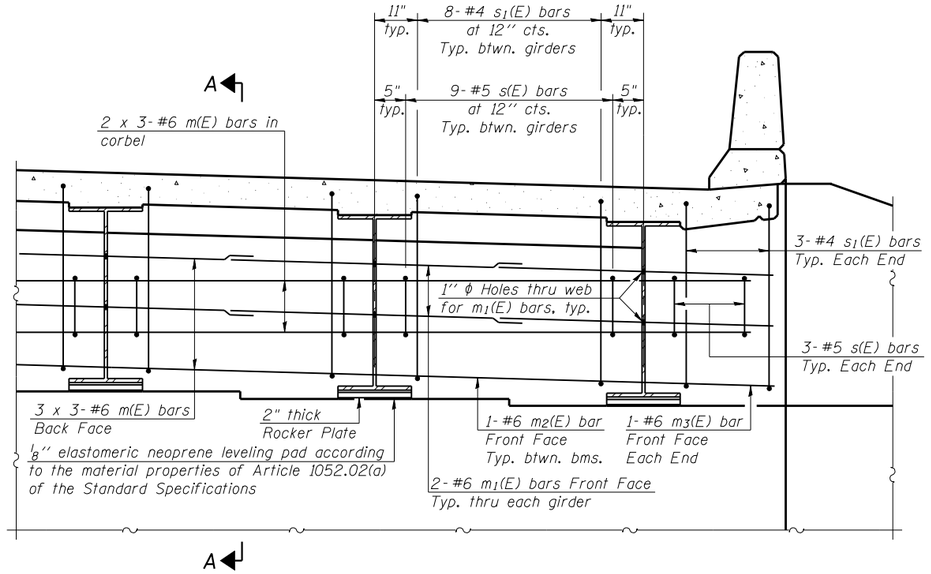
PLOT SCALE = 0:2 '' / IN.	DRAWN - MML	REVISED -
PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 036-0065
SHEET NO. 10 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	508
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



DIAPHRAGM ELEVATION AT ABUTMENT

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 23.

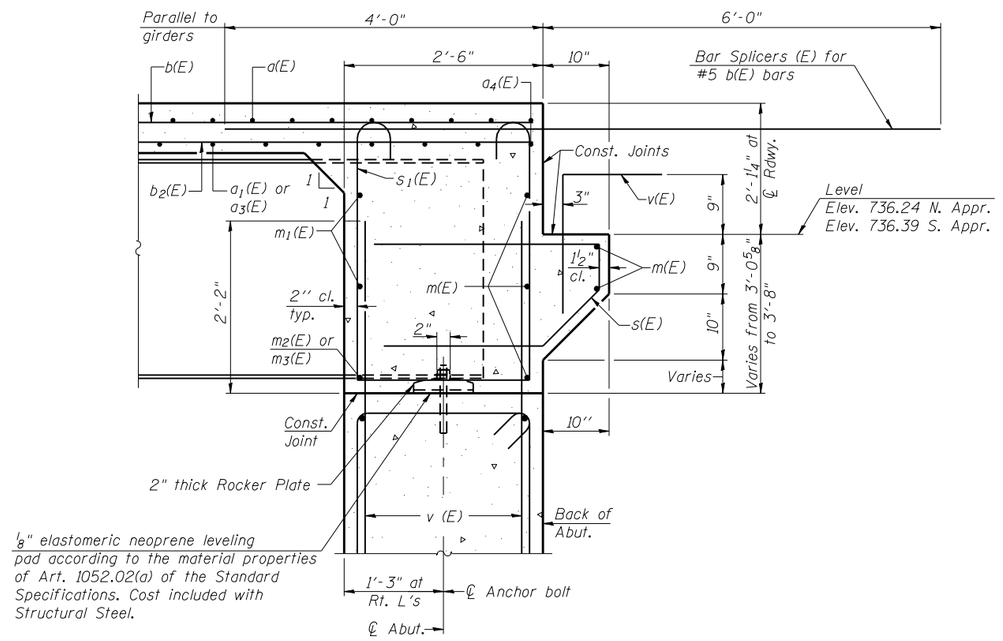
Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 23.

For details of bars s(E) & s_1(E) see sheet 10 of 23.

The s(E) and s_1(E) bars shall be placed parallel to the girders. Spacing for these bars shall be at right angles to the girders.

MIN. BAR LAP

#6 bar = 3'-4"



SECTION A-A

Dimensions at right angles to abutment, except as shown.

SI-DSI

1-27-12

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	PLOT SCALE = 0:2.000000 ' / IN.	DRAWN - MML	REVISED -
	PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
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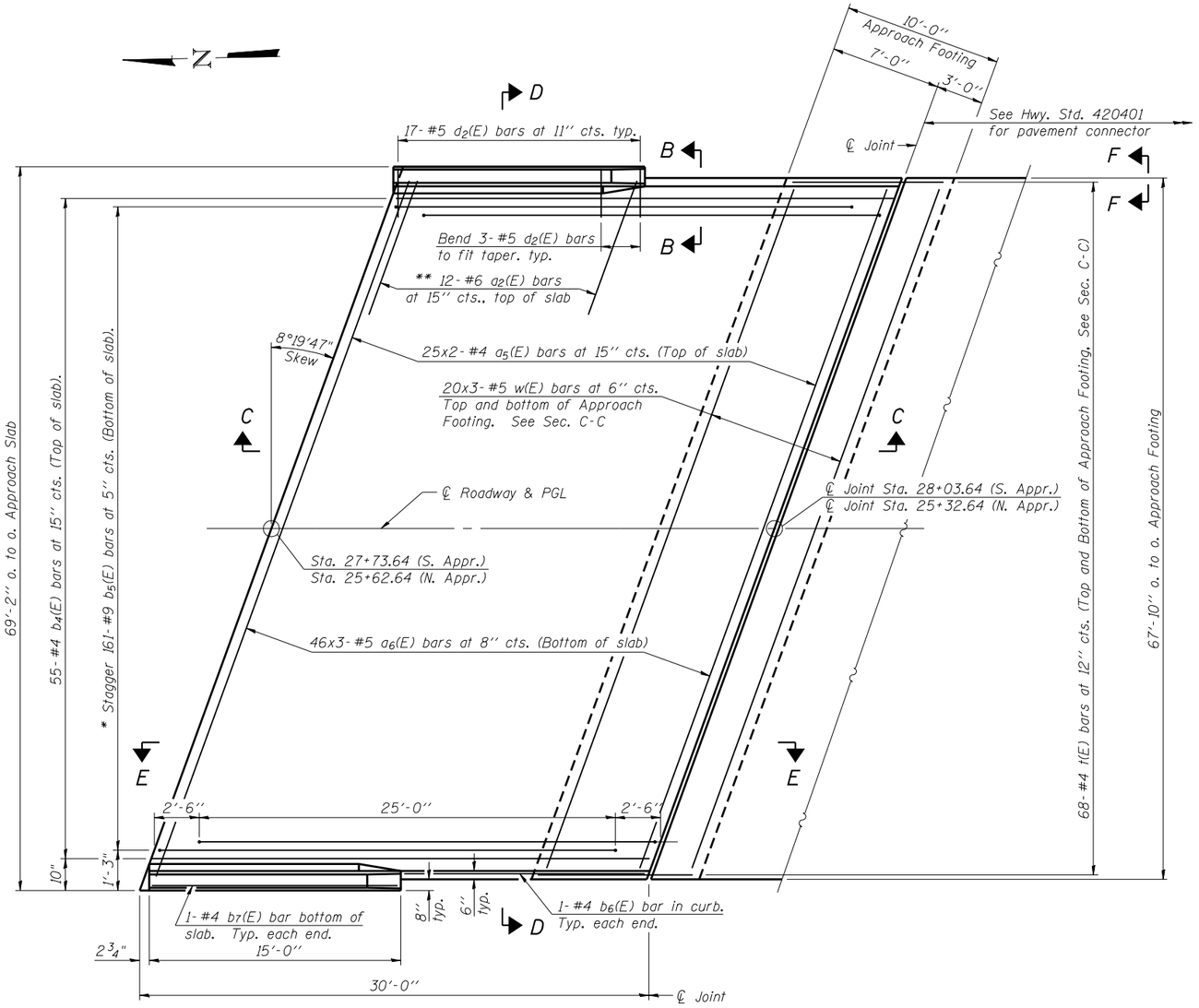
INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 036-0065
SHEET NO. 11 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	509
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FILE NAME = ...\036065-68409-011-diaphragm details.dgn
CB PROJECT NO 04065

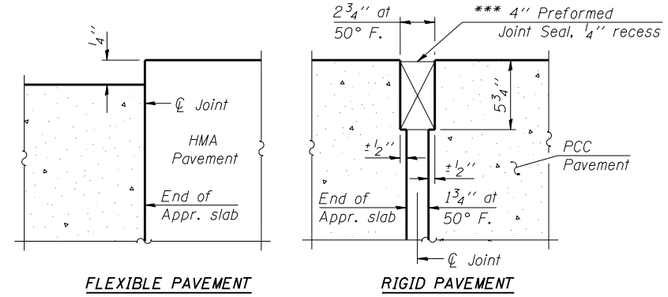
Notes:
See sheet 13 of 23 for Sections C-C & D-D and View E-E.
a_5(E) and a_6(E) bar spacings measured along ℄ Rdwy.
See sheet 9 of 23 for median details.
Concrete and reinforcement in median on approaches are billed on sheet 13 of 23.



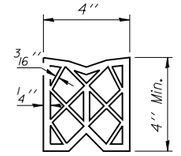
PLAN - S. APPROACH
(N. Approach similar)

* Tilt #9 b_5(E) bars as required to maintain clearance.
** Space between a_5(E) bars, typ. each parapet.

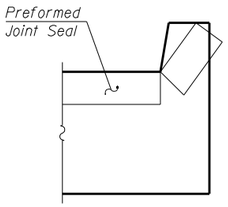
*** Cost included with Concrete Superstructure.



DETAIL A

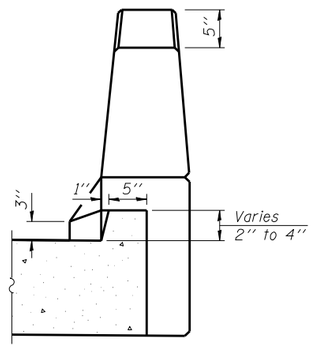


PREFORMED JOINT SEAL



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



VIEW B-B

MIN. BAR LAP
#4 = 2'-4"
#5 = 2'-7"

BA-L 1-27-12

(Sheet 1 of 2)

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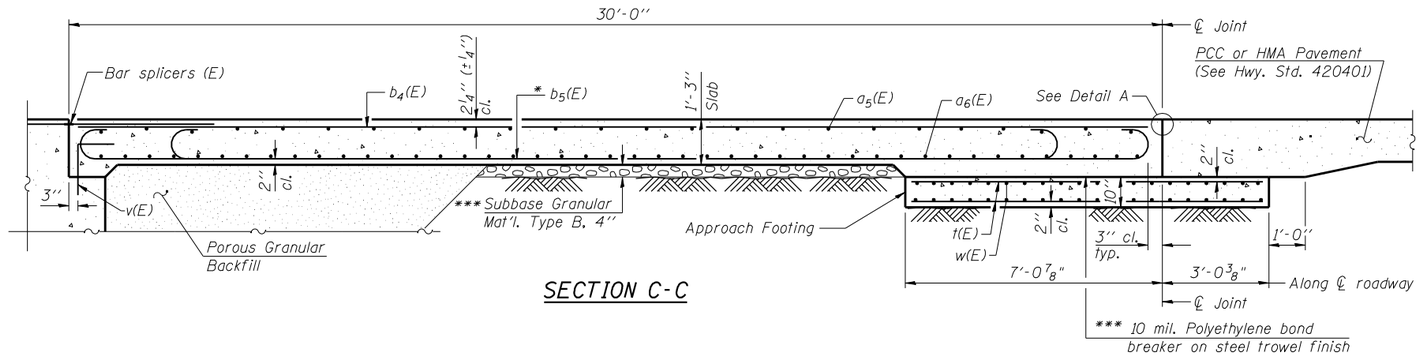
	PLOT DATE = 11/28/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

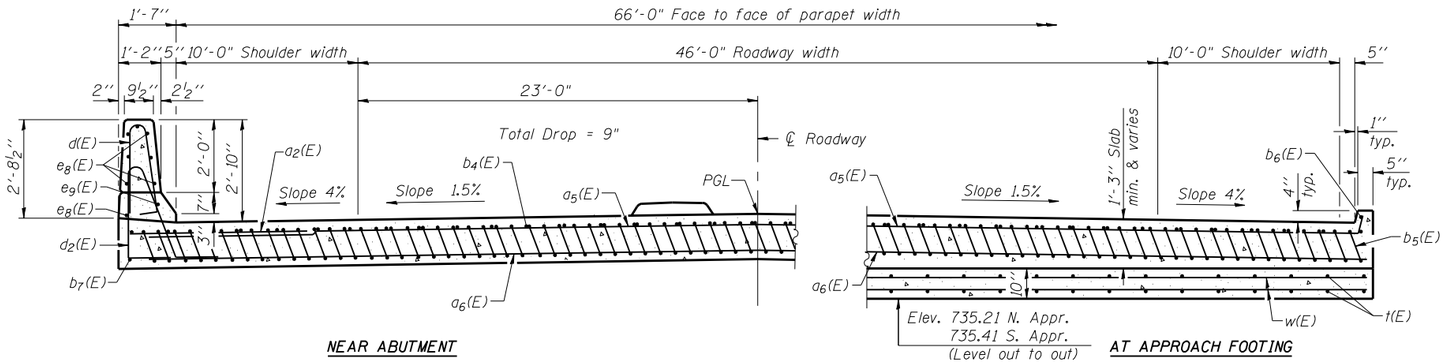
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 036-0065
SHEET NO. 12 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	510
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FILE NAME = ...\036065-68409-012-oppr-slab-s.dgn
CB PROJECT NO 04065

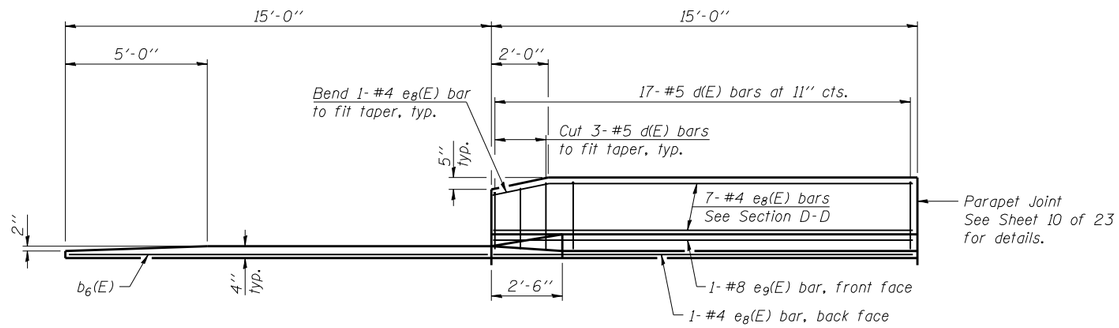


SECTION C-C

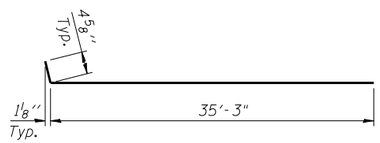


SECTION D-D

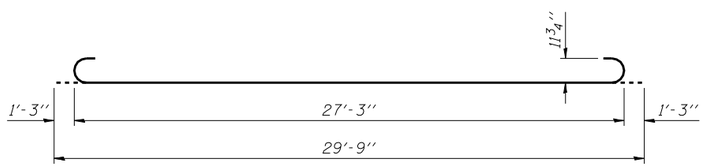
(See Plan for dimensions not shown)



VIEW E-E



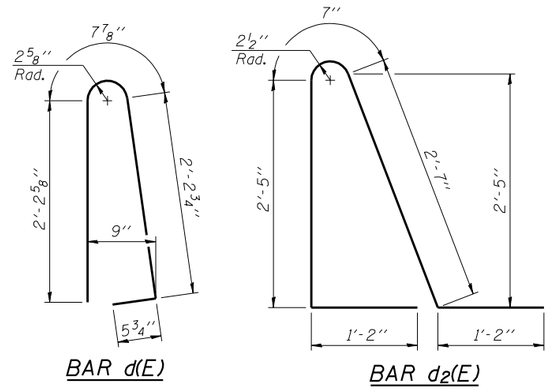
BAR a5(E)



BAR b5(E)

Notes:

See sheet 12 of 23 for Detail A and View B-B.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 10 of 23.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 21 of 23.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Backfill and drainage treatment details, see sheet 2 of 23.
For additional parapet details, see sheet 10 of 23.
See sheet 9 of 23 for Median Details.



BAR d(E)

BAR d2(E)

* Tilt #9 b5(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a2(E)	48	#6	6'-6"	
a5(E)	100	#4	35'-8"	
a6(E)	276	#5	24'-11"	
b4(E)	110	#4	29'-8"	
b5(E)	322	#9	29'-9"	
b6(E)	4	#4	14'-6"	
b7(E)	4	#4	14'-8"	
b8(E)	10	#5	29'-8"	
c(E)	62	#5	4'-6"	
c1(E)	124	#5	1'-2"	
d(E)	68	#5	5'-7"	
d2(E)	68	#5	7'-11"	
e8(E)	32	#4	14'-8"	
e9(E)	4	#8	14'-8"	
t(E)	272	#4	9'-9"	
w(E)	240	#5	24'-6"	
Concrete Superstructure			Cu. Yd.	218.6
Concrete Structures			Cu. Yd.	42.1
* Reinforcement Bars, Epoxy Coated			Pound	54,930

* 47,030 lbs superstructure
7,900 lbs substructure

BA-L

1-27-12

(Sheet 2 of 2)

FILE NAME = ...\036D065-68409-013-appr-slab-de1.dgn
CB PROJECT NO 04065

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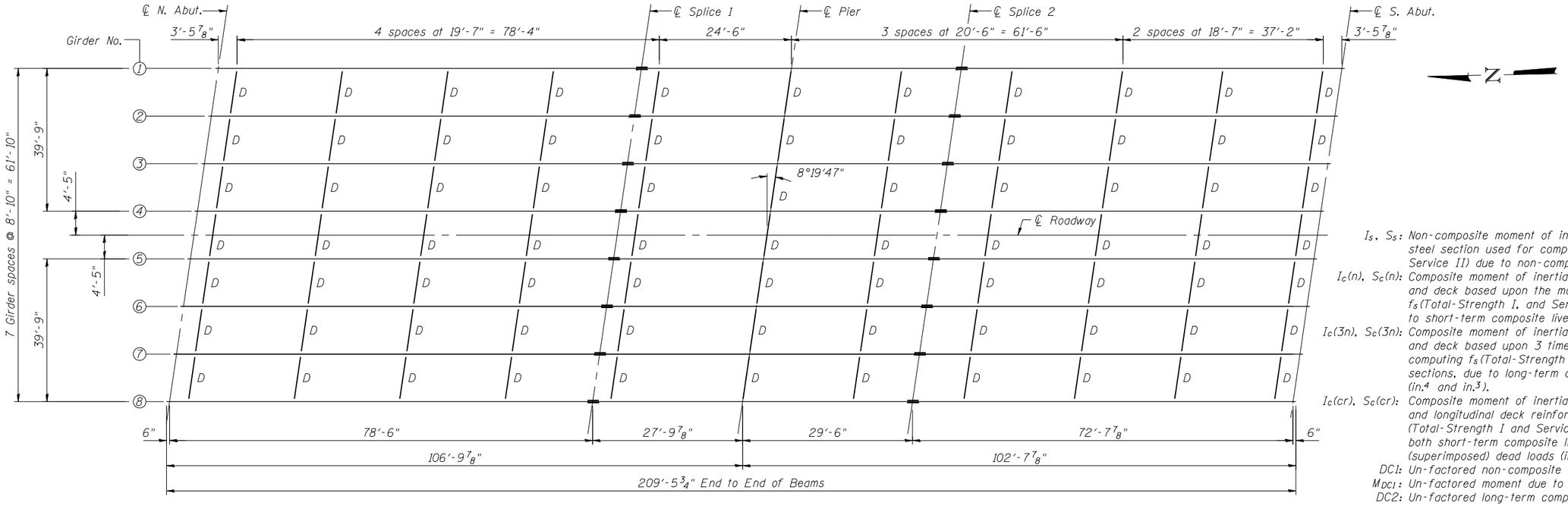
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

USER NAME = _MML_	DESIGNED - RKM	REVISED -
	CHECKED -	REVISED -
PLOT SCALE = 0:2 '1' / IN.	DRAWN - MML	REVISED -
PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 036-0065
SHEET NO. 13 OF 23 SHEETS

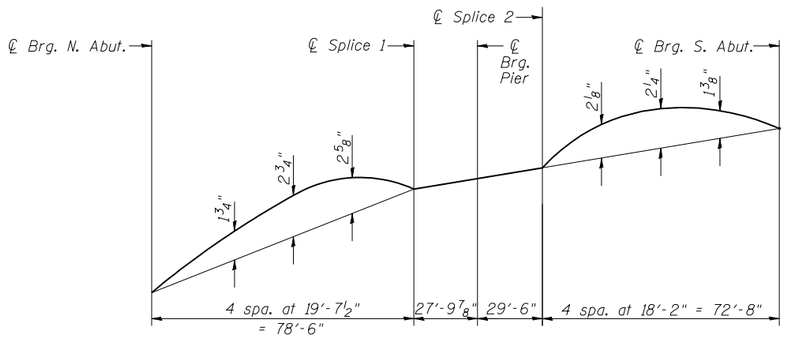
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	511
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



TOP OF WEB ELEVATIONS

(for fabrication only)

Location	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7	Girder 8
℄ Brg. N. Abut.	736.90	737.22	737.35	737.47	737.47	737.33	737.19	736.85
℄ Splice 1	737.08	737.41	737.54	737.67	737.67	737.53	737.40	737.07
℄ Pier	737.08	737.41	737.55	737.68	737.68	737.54	737.41	737.08
℄ Splice 2	737.09	737.42	737.55	737.69	737.69	737.55	737.42	737.09
℄ Brg. S. Abut.	737.00	737.34	737.47	737.61	737.62	737.49	737.36	737.04



CAMBER DIAGRAM

NOTES

All girders are AASHTO M270 Grade 50.

All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

See Sheet 15 of 37 for splice and diaphragm details.

FRAMING PLAN

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in^4)	19,592	45,205	19,592
$I_c(n)$	(in^4)	47,923	87,370	47,923
$I_c(3n)$	(in^4)	36,106	66,387	36,106
$I_c(cr)$	(in^4)	-	52,533	-
S_s	(in^3)	784	1739	784
$S_c(n)$	(in^3)	1094	2118	1094
$S_c(3n)$	(in^3)	1001	1970	1001
$S_c(cr)$	(in^3)	-	1830	-
DC1	(k/')	1.147	1.268	1.147
M_{DC1}	('k)	769	1969	649
DC2	(k/')	0.168	0.168	0.168
M_{DC2}	('k)	120	270	102
DW	(k/')	0.441	0.44	0.441
M_{DW}	('k)	314	710	268
M_{L+IM}	('k)	1548	1965	1497
M_u (Strength I)	('k)	4291	7303	3961
$\phi_f M_n$	('k)	5348	-	5446
f_s DC1	(ksi)	11.8	13.6	9.9
f_s DC2	(ksi)	1.4	1.8	1.2
f_s DW	(ksi)	3.8	4.7	3.2
f_s (L+IM)	(ksi)	17.0	12.9	16.4
f_s (Service II)	(ksi)	39.0	36.8	35.7
$0.95R_hF_{yf}$	(ksi)	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	51.9	48.7	47.5
V_f	(k)	32.7	32.7	32.7

* Compact sections

** Non-Compact sections

INTERIOR GIRDER REACTION TABLE				
		N. Abut.	Pier	S. Abut.
R_{DC1}	(k)	43	157	39
R_{DC2}	(k)	6	22	6
R_{DW}	(k)	17	60	16
R_{L+IM}	(k)	99	200	98
R_{Total}	(k)	165	440	159

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: 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-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_s(L+IM)$

V_f: Maximum factored shear range in span computed according to Article 6.10.10.

FILE NAME = ...\036D0065-68409-B14-framing.dgn
CB PROJECT NO 04065

Coombe-Bloxdorf P.C.
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-LAND SURVEYORS-
Design Firm License No. 184-002703

USER NAME = _MML_	DESIGNED - RKM	REVISED -
	CHECKED -	REVISED -
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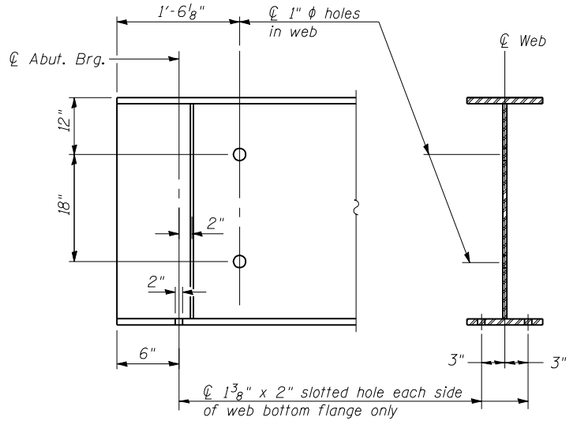
PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

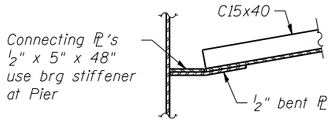
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 036-0065
SHEET NO. 14 OF 23 SHEETS

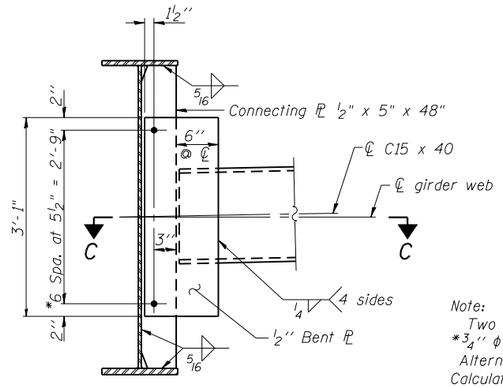
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	512
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



END OF GIRDER DETAIL
(Showing required hole locations)

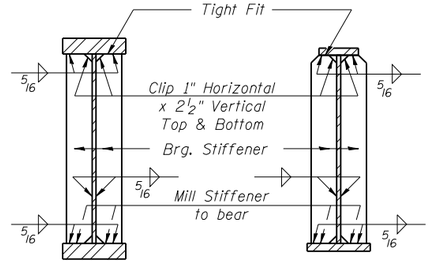


SECTION C-C



DIAPHRAGM 'D'

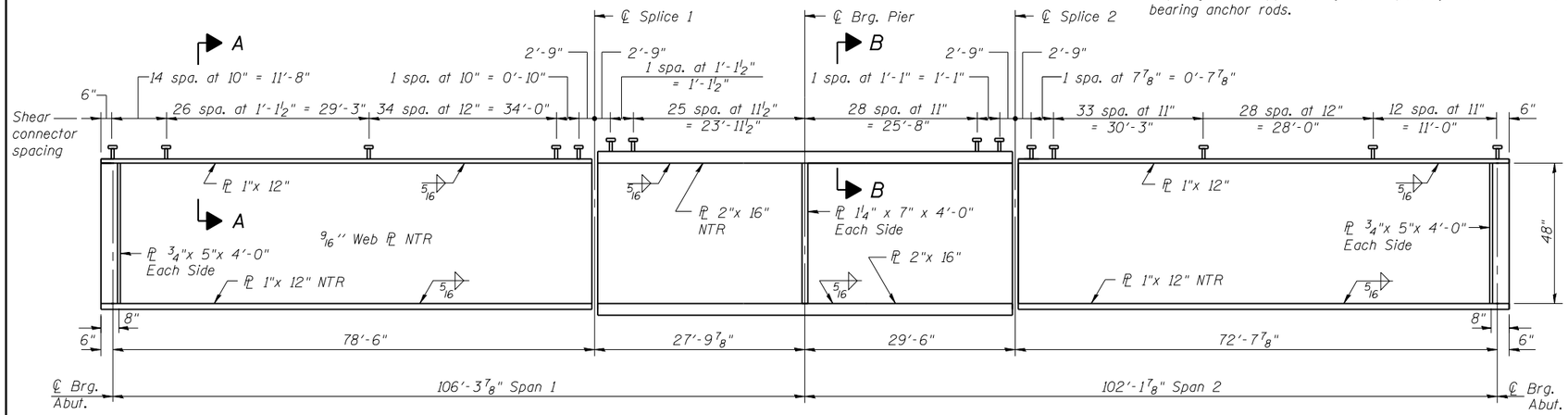
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



SECTION AT PIER

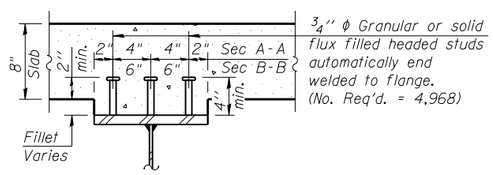
SECTION AT ABUTMENT

Note:
Two hardened washers required for each set of oversized holes.
*3/4" ϕ HS bolts, 15/16" ϕ holes
Alternate channels C15x50 are permitted to facilitate material aquisition.
Calculated weight of Structural Steel is based on C15x40 Sections.
The alternate, if utilized, shall be provided at no extra cost to the Department.



GIRDER ELEVATION

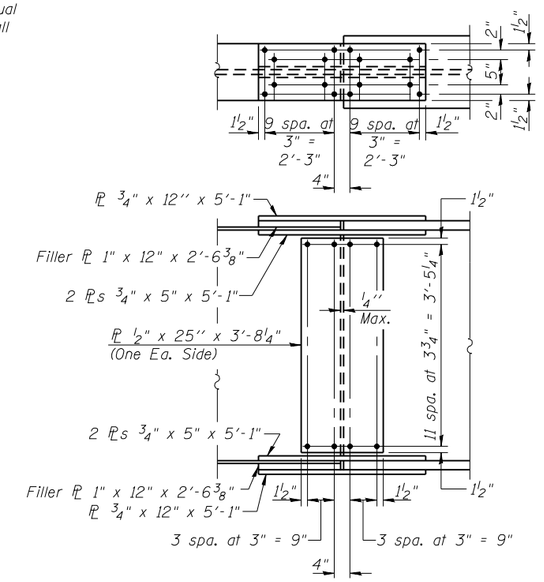
Load carrying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.



3/4" ϕ Granular or solid flux filled headed studs automatically end welded to flange. (No. Req'd. = 4,968)

SECTION A-A & B-B

Note:
All plate girder and splice material shall be AASHTO M270 Grade 50.
All splice plates except filler plates shall meet the requirements of Impact Testing, Zone 2.



FIELD SPLICE DETAIL

Splice 1 shown
Splice 2 opposite hand

G-1

7-1-10

FILE NAME = ...\036065-68409-015-struct_steel.dgn
CB PROJECT NO 04065

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-LAND SURVEYORS-
Design Firm License No. 184-002703

USER NAME = .MML.	DESIGNED - RKM	REVISED -
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PLOT SCALE = 0.2 '' / IN.	DRAWN - MML	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL
STRUCTURE NO. 036-0065
SHEET NO. 15 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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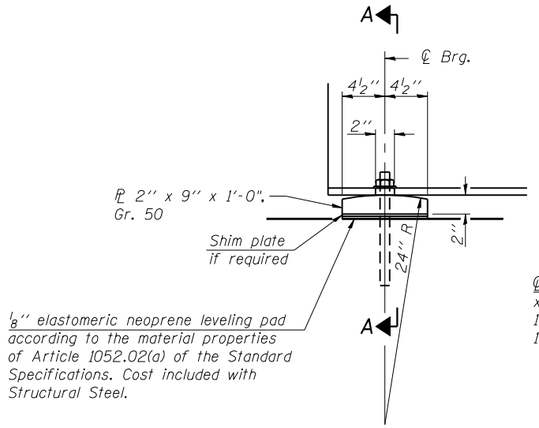
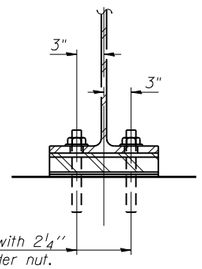
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

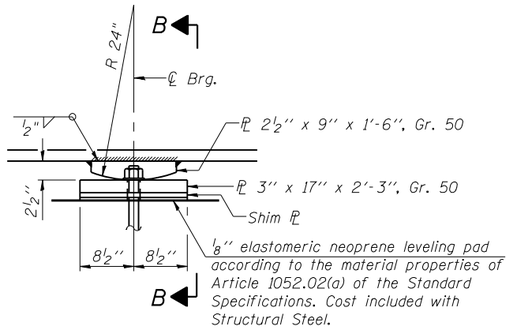


ELEVATION AT ABUTMENT

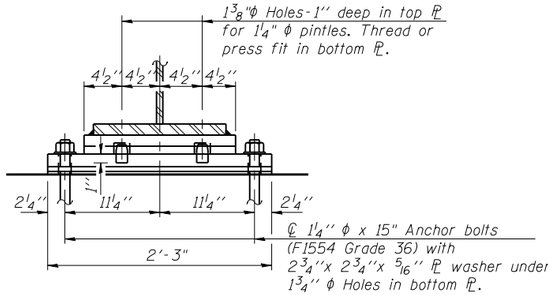


SECTION A-A

FIXED BEARING PLATE AT ABUTMENTS

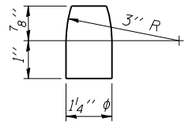


ELEVATION AT PIER



SECTION B-B

FIXED BEARING AT PIER



PINTLE

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts 1" Dia.	Each	32
Anchor Bolts 1¼" Dia.	Each	16

FILE NAME = ...\036D065-68409-016-bearing.dgn
CB PROJECT NO 04065

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PLOT SCALE = 0.2 '/ IN.	DRAWN - MML	REVISED -
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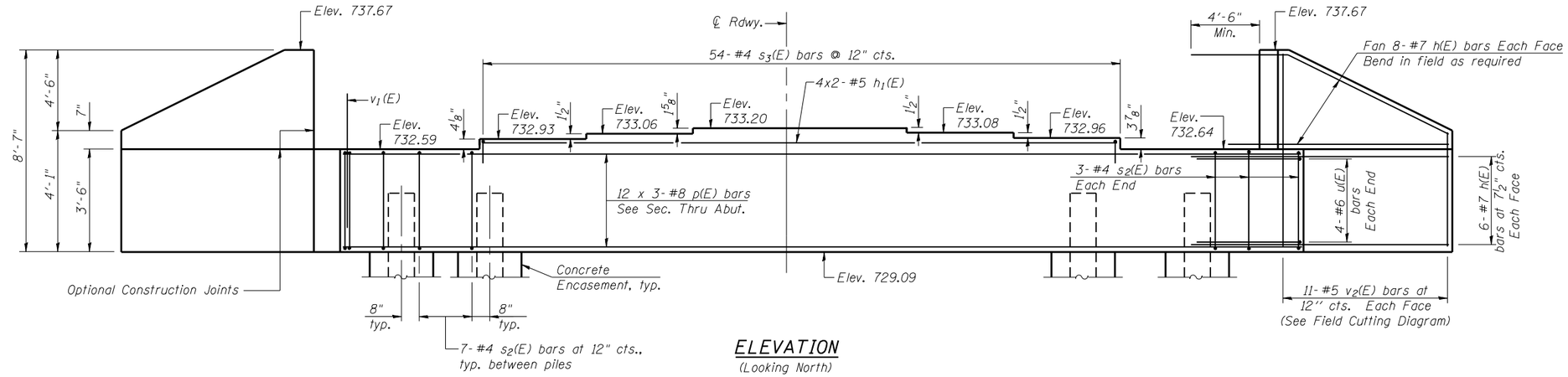
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

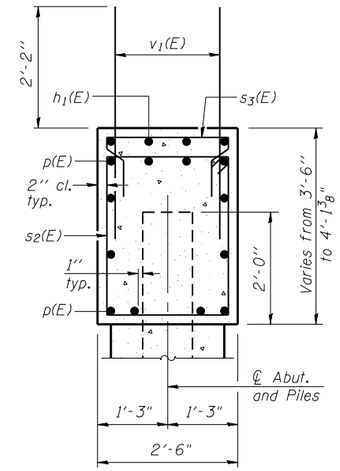
BEARING DETAILS
STRUCTURE NO. 036-0065
SHEET NO. 16 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	514
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

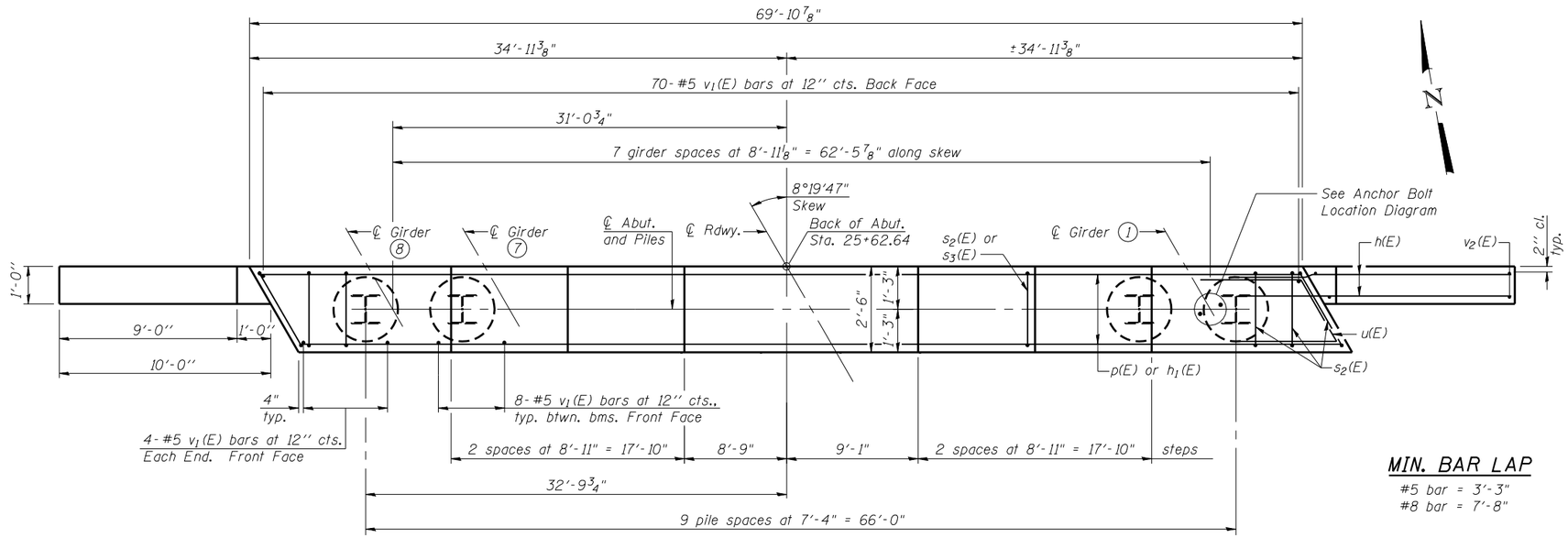
Notes:
Pour steps monolithically with cap.



ELEVATION
(Looking North)



SEC. THRU ABUT.



PLAN

BILL OF MATERIAL

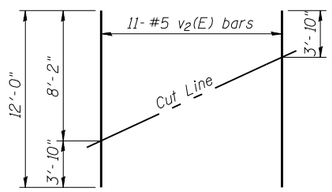
Bar	No.	Size	Length	Shape
h(E)	56	#7	14'-6"	
h_1(E)	8	#5	28'-3"	
p(E)	36	#8	28'-3"	
s_2(E)	69	#4	11'-5"	
s_3(E)	54	#4	5'-2"	
u(E)	8	#6	11'-0"	
v_1(E)	134	#5	4'-4"	
v_2(E)	22	#5	12'-0"	
Structure Excavation		Cu. Yd.	61	
Concrete Structures		Cu. Yd.	29.9	
Reinforcement Bars, Epoxy Coated		Pound	5,730	
Furnishing Steel Piles, HP 14 x 89		Foot	765	
Driving Piles		Foot	765	
Test Pile, Steel HP 14 x 89		Each	1	
Concrete Encasement		Cu. Yd.	5.5	

For details of piles and Concrete Encasement, see sheet 20 of 23.

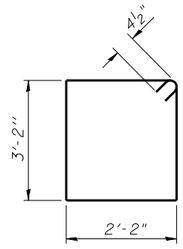
PILE DATA

Type: Steel HP 14x89
Nominal Required Bearing: 705 kip
Factored Resistance Available: 388 kip
Est. Length: 85'
No. Production Piles: 9
No. Test Piles: 1

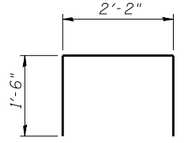
Note:
Piles shall be driven thru 22" ϕ precored holes extending to elevation 705.2 according to Article 512.09c of the Standard Specifications. Cost included in driving piles.



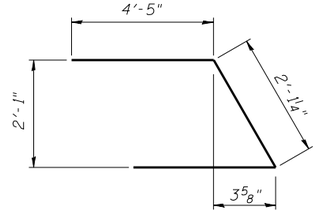
FIELD CUTTING DIAGRAM
Order v_2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s_2(E)

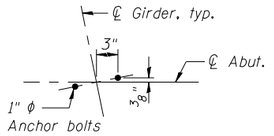


BARS s_3(E)



BAR u(E)

MIN. BAR LAP
#5 bar = 3'-3"
#8 bar = 7'-8"



ANCHOR BOLT LOCATION DIAGRAM

AI-L 7-1-10

FILE NAME = ...\036065-68409-017-abut_n.dgn
CB PROJECT NO 04065

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USER NAME = _MML_	DESIGNED - RKM	REVISED -
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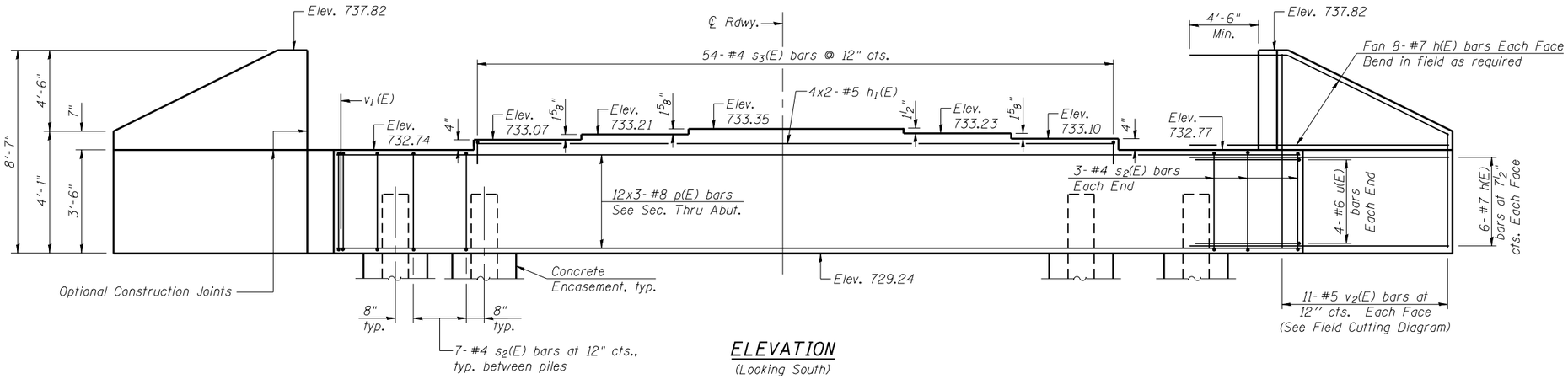
PLOT SCALE = 0:2 '1' / IN.	DRAWN - MML	REVISED -
PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

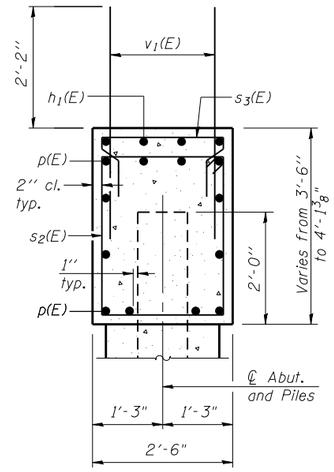
NORTH ABUTMENT
STRUCTURE NO. 036-0065
SHEET NO. 17 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	515
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

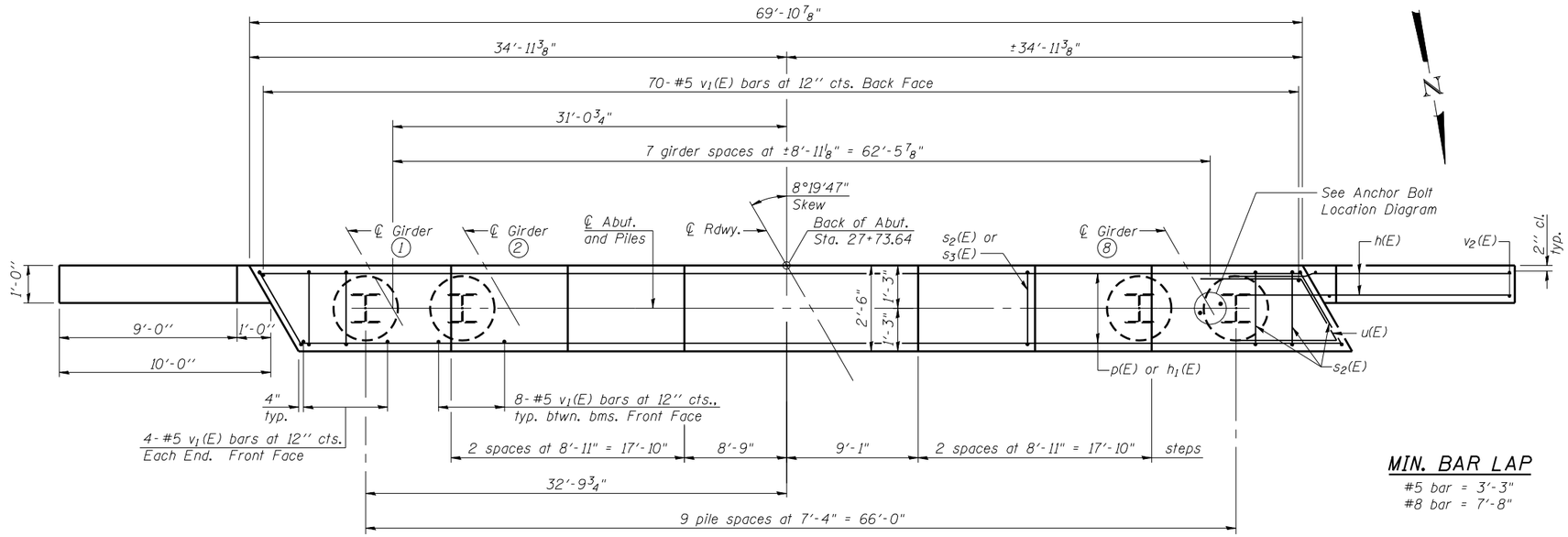
Notes:
Pour steps monolithically with cap.



ELEVATION
(Looking South)



SEC. THRU ABUT.



PLAN

BILL OF MATERIAL

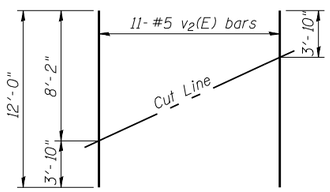
Bar	No.	Size	Length	Shape
h(E)	56	#7	14'-6"	
$h_1(E)$	8	#5	28'-3"	
p(E)	36	#8	28'-3"	
$s_2(E)$	69	#4	11'-5"	
$s_3(E)$	54	#4	5'-2"	
u(E)	8	#6	11'-0"	
$v_1(E)$	134	#5	4'-4"	
$v_2(E)$	22	#5	12'-0"	
Structure Excavation		Cu. Yd.	61	
Concrete Structures		Cu. Yd.	29.9	
Reinforcement Bars, Epoxy Coated		Pound	5,730	
Furnishing Piles, HP 14x89		Foot	910	
Driving Piles		Foot	910	
Concrete Encasement		Cu. Yd.	5.5	

For details of piles and Concrete Encasement, see sheet 20 of 23.

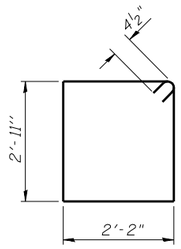
MIN. BAR LAP
#5 bar = 3'-3"
#8 bar = 7'-8"

PILE DATA
Type: Steel HP 14x89
Nominal Required Bearing: 705 kip
Factored Resistance Available: 388 kip
Est. Length: 91'
No. Production Piles: 10
No. Test Piles: Not required

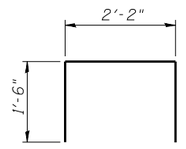
Note:
Piles shall be driven thru 22" ϕ precored holes extending to elevation 703.2 according to Article 512.09c of the Standard Specifications. Cost included in driving piles.



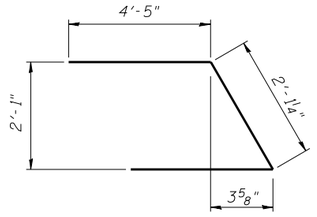
FIELD CUTTING DIAGRAM
Order $v_2(E)$ full length. Cut as shown and use remainder of bars in opposite face.



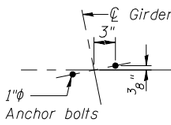
BARS s2(E)



BARS s3(E)



BAR u(E)



ANCHOR BOLT LOCATION DIAGRAM

AI-L 7-1-10

FILE NAME = ...\036065-68409-018-abut_s.dgn
CB PROJECT NO 04065

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PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

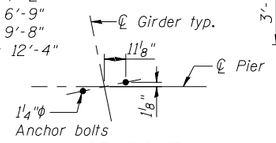
SOUTH ABUTMENT
STRUCTURE NO. 036-0065
SHEET NO. 18 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	516
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

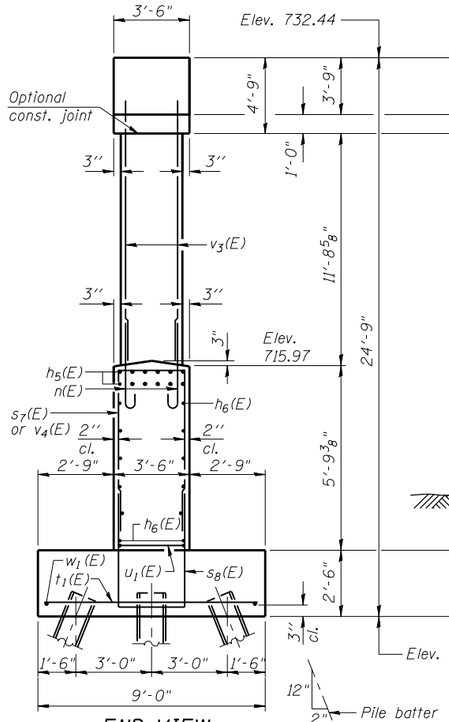
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 20 of 23.

MIN. BAR LAP

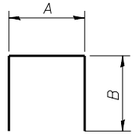
#5 bar = 2'-11"
#6 bar = 3'-10"
#7 bar = 4'-2"
#8 bar = 6'-9"
#9 bar = 9'-8"
#10 bar = 12'-4"



ANCHOR BOLT LOCATION DIAGRAM



END VIEW



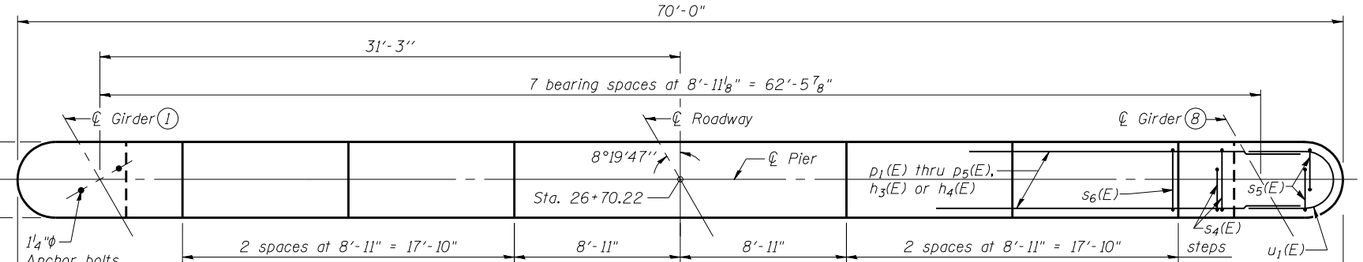
A & B DIMENSIONS

Bar	A	B
$s_5(E)$	2'-2"	3'-6"
$s_6(E)$	3'-2"	1'-11"
$s_7(E)$	3'-2"	5'-5"
$s_8(E)$	3'-2"	6'-3"

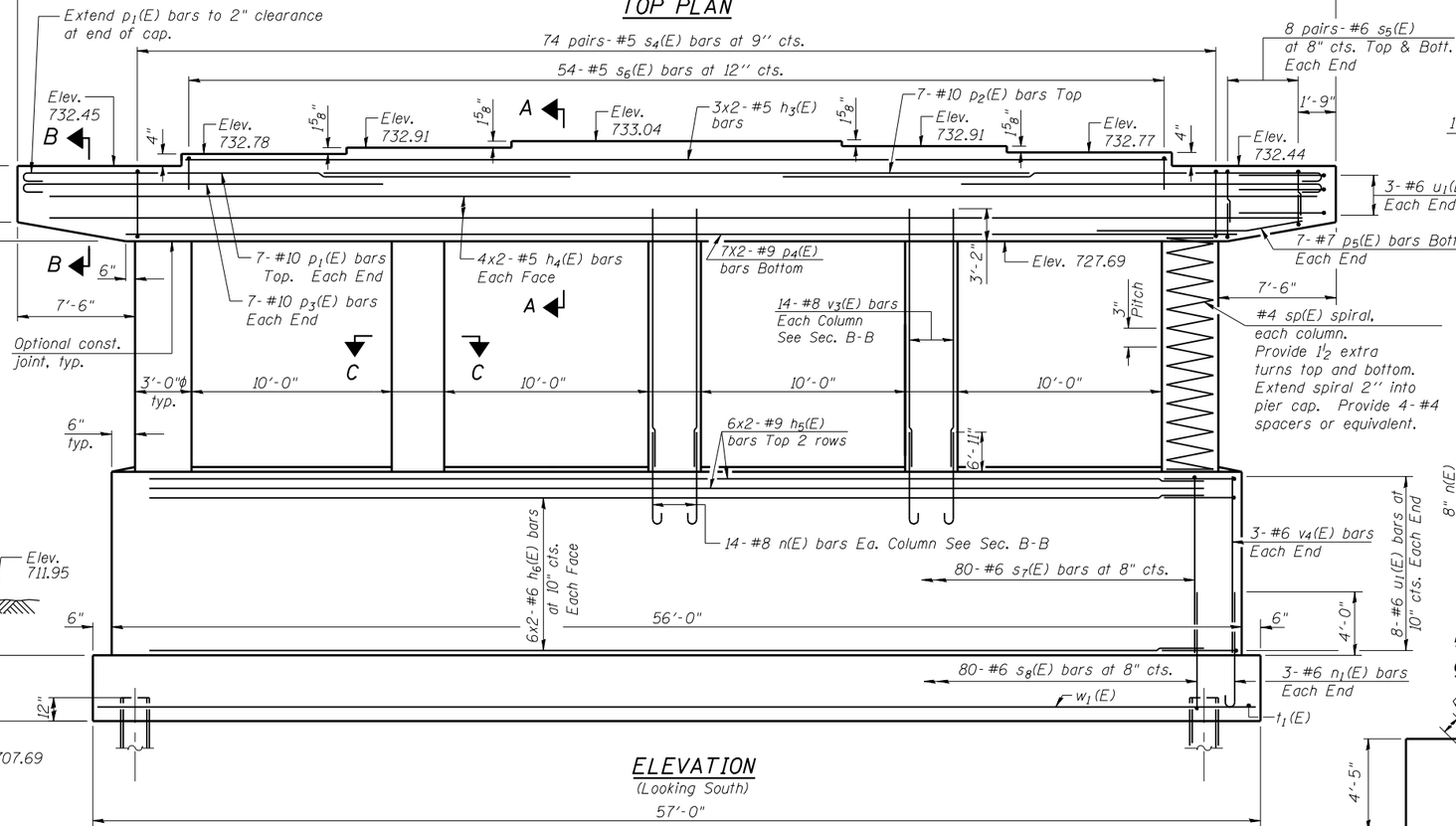
BARS $s_5(E)$, $s_6(E)$, $s_7(E)$ and $s_8(E)$

PILE DATA

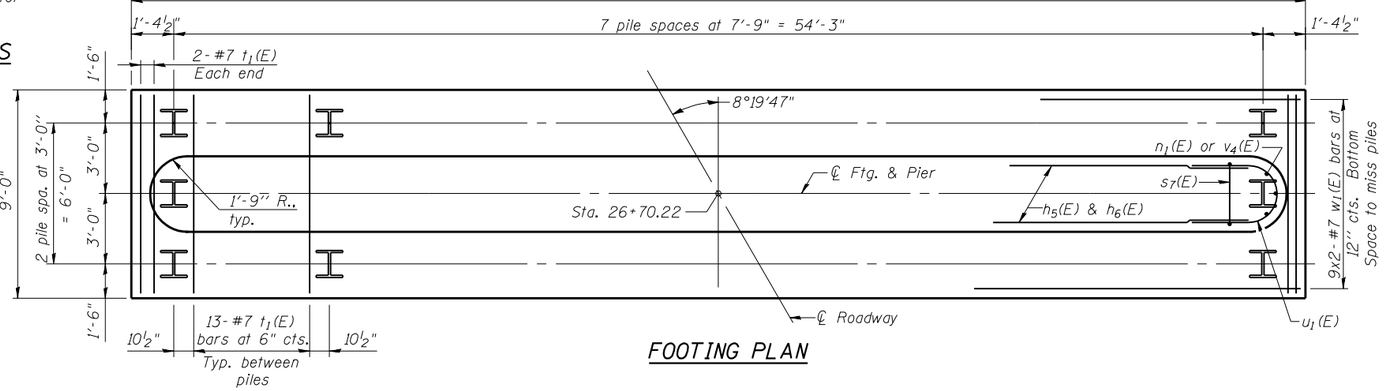
Type: Steel HP 14x89
Nominal Required Bearing: 705
Factored Resistance Available: 388
Est. Length: 53'
No. Production Piles: 24
No. Test Piles: None required



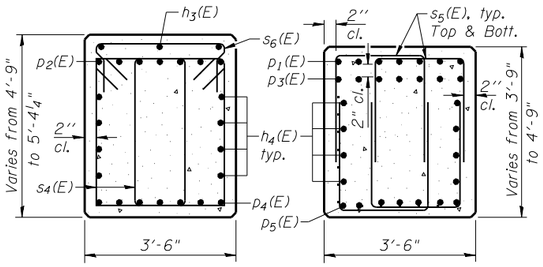
TOP PLAN



ELEVATION
(Looking South)

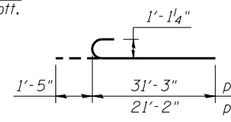


FOOTING PLAN

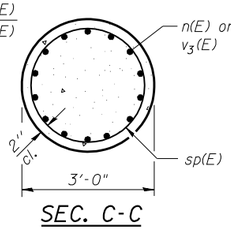


SEC. A-A

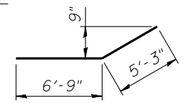
SEC. B-B



BAR $p_1(E)$ and $p_3(E)$



SEC. C-C

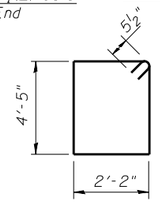


BAR $p_5(E)$

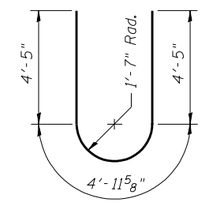
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_3(E)$	6	#5	28'-1"	
$h_4(E)$	16	#5	34'-7"	
$h_5(E)$	24	#9	32'-8"	
$h_6(E)$	24	#6	28'-2"	
$n(E)$	70	#8	10'-8"	
$n_1(E)$	6	#6	6'-11"	
$p_1(E)$	14	#10	32'-8"	
$p_2(E)$	7	#10	32'-0"	
$p_3(E)$	14	#10	22'-7"	
$p_4(E)$	14	#9	32'-4"	
$p_5(E)$	14	#7	12'-0"	
$s_4(E)$	148	#5	14'-1"	
$s_5(E)$	64	#6	9'-2"	
$s_6(E)$	54	#5	7'-0"	
$s_7(E)$	80	#6	14'-0"	
$s_8(E)$	80	#6	15'-8"	
$sp(E)$	5	#4	12'-0" **	
$t_1(E)$	95	#7	8'-8"	
$u_1(E)$	22	#6	13'-10"	
$v_3(E)$	70	#8	14'-9"	
$v_4(E)$	6	#6	5'-5"	
$w_1(E)$	18	#7	30'-7"	
Structure Excavation		Cu. Yd.	126	
Concrete Structures		Cu. Yd.	150.2	
Reinforcement Bars, Epoxy Coated		Pound	26,990	
Furnishing Steel Piles, HP 14x89		Foot	1272	
Driving Piles		Foot	1272	

** Length is height of spiral.



BAR $s_4(E)$



BARS $u_1(E)$

P-26 7-1-10

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STATE OF ILLINOIS
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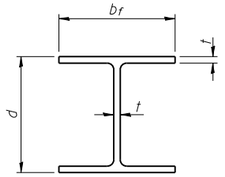
PIER
STRUCTURE NO. 036-0065
SHEET NO. 19 OF 23 SHEETS

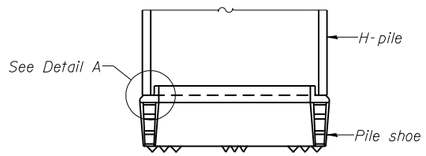
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	517
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FILE NAME = ...\036D065-68409-019-pier.dgn
CB PROJECT NO 04065

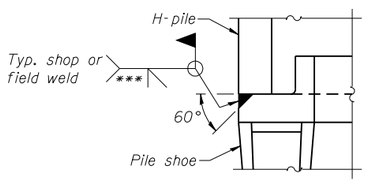


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

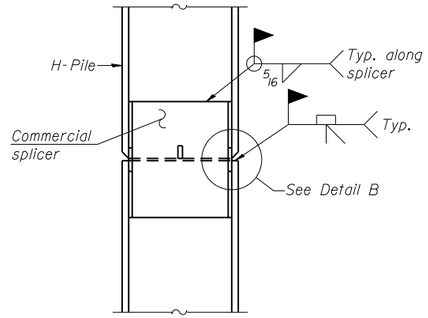


ELEVATION

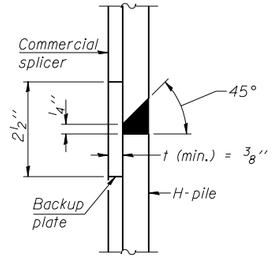


DETAIL A

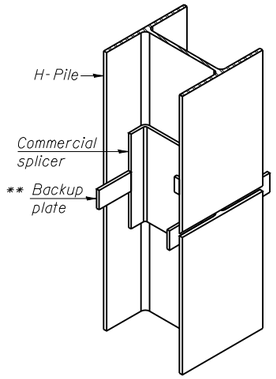
H-PILE SHOE ATTACHMENT



ELEVATION

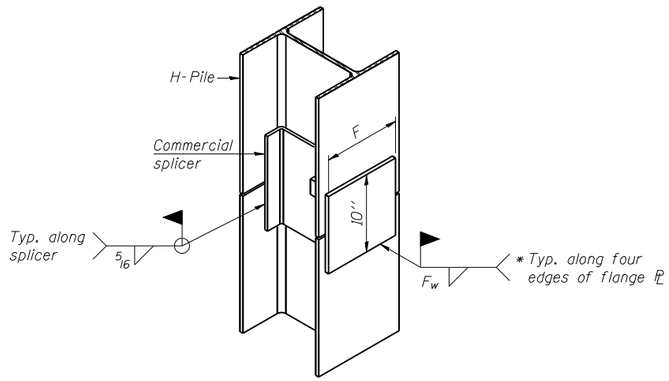


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



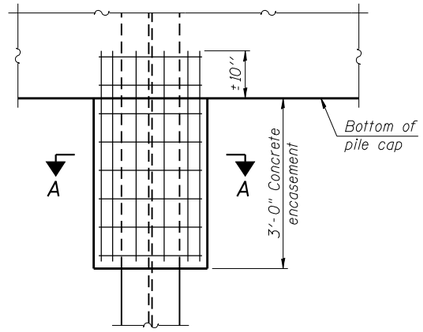
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

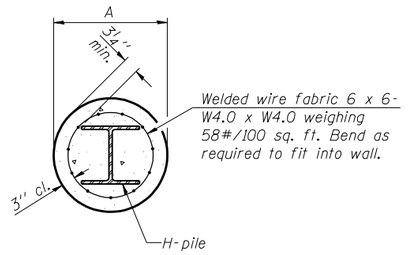
* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



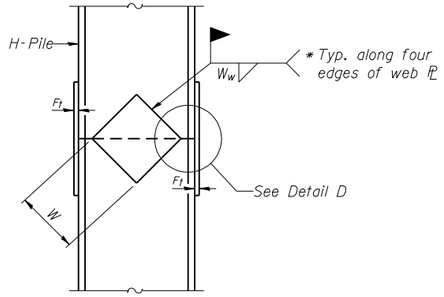
ELEVATION



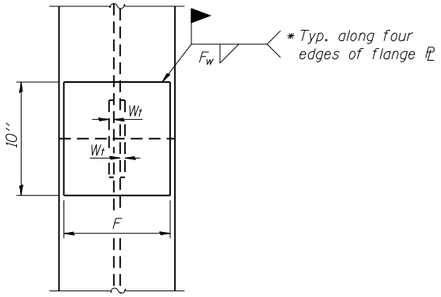
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

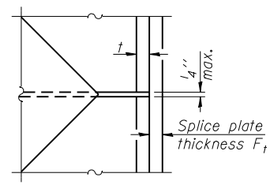
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP 1-27-12

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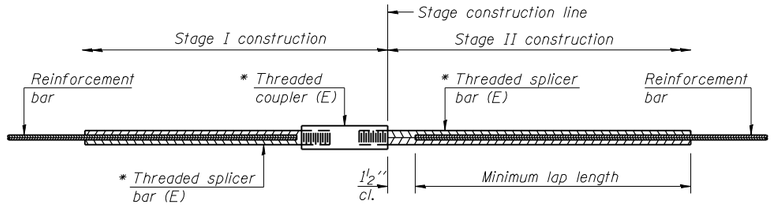
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 036-0065
SHEET NO. 20 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	518
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = ...\036065-68409-020-piles.dgn
CB PROJECT NO 04065



STANDARD BAR SPLICER ASSEMBLY

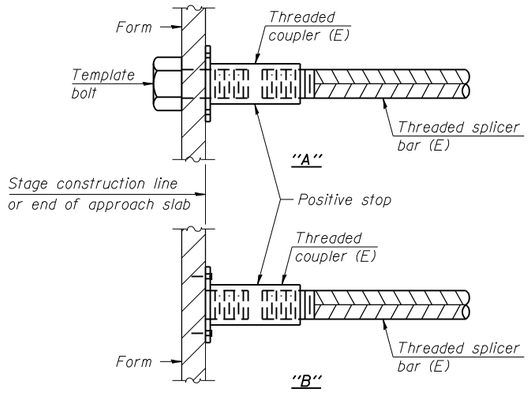
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Class C
Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

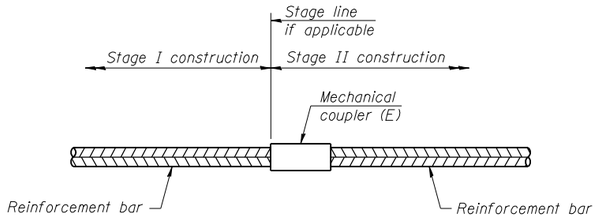
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



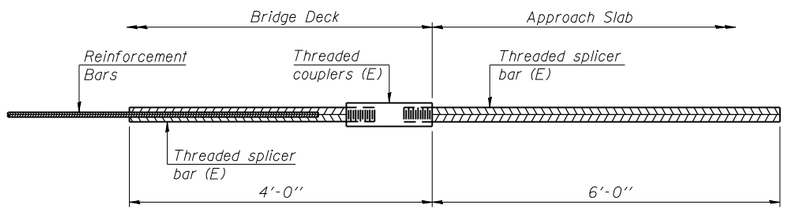
INSTALLATION AND SETTING METHODS

"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.



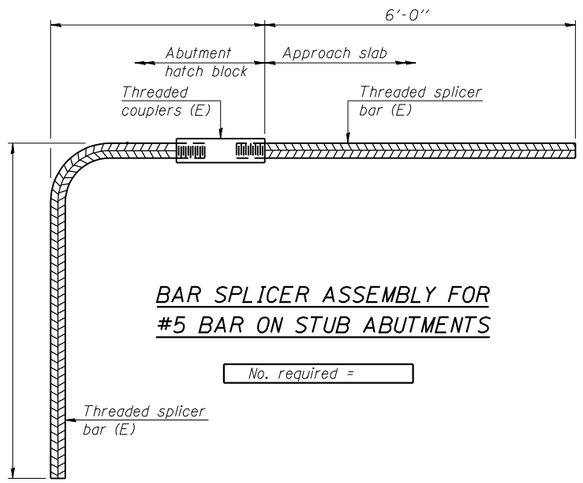
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 138



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

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

1-27-12

FILE NAME = ...\036065-68409-021-splicer.dgn
CB PROJECT NO 04065

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 036-0065
SHEET NO. 21 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	519
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date 5/10/11

ROUTE U. S. 34 DESCRIPTION Route 94 Bridge
SECT. 7-2:6-1 STRUCT. NO. _____ DRILLED BY B. Williamson
COUNTY Henderson LOCATION Gladstone Township S. 24 , TWP. 10N , RNG. 5W

Boring No. R94-06
Station 25+65
Offset 31.00ft RT
Surface Elev. 718.20 ft

DEPTH	BLOWS	Qu tsf	W %
Dark brown SILTY LOAM			
717.20			
Medium stiff dark brown-brown SILTY CLAY LOAM	2 2 2	B 0.82	27
715.20			
Soft to medium stiff brown-gray SILTY CLAY LOAM	2 2 1	B 0.41	30
-5			
	PUSH TUBE	P 0.3	33 35 29
	0 1 2	S 0.85	29
-10			
707.20			
Medium stiff brown SILTY CLAY LOAM	1 2 2	B 0.81	29
	PUSH TUBE		
-15			
	1 2 3	B 0.78	24
700.20			
Very stiff to stiff brown SILTY CLAY LOAM	2 4 6	B 3.88	26
-20			
	3 4 5	S 1.07	27
-25			

DEPTH	BLOWS	Qu tsf	W %
Stiff brown SILTY CLAY LOAM			
691.20			
Hard brown SILTY CLAY LOAM			
-30	3 9 13	S 4.33	13
-35	5 7 9	S 4.95	16
	3 4 7	B 4.12	15
-40			
676.20			
Very stiff gray SILTY CLAY LOAM			
-45	3 5 7	S 3.27	15
-50	3 6 7	B 3.05	16

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date 5/10/11

STRUCTURE NO. _____
ROUTE U. S. 34
SECTION 7-2:6-1
COUNTY Henderson

Boring No. R94-06
Station 25+65
Offset 31.00ft RT
Elevation 668.20 ft

DEPTH	BLOWS	Qu tsf	W %
Very stiff gray SILTY CLAY LOAM			
666.20			
Hard brown SILTY CLAY LOAM			
-55	4 6 13	B 4.08	14
660.20			
Very stiff gray SANDY LOAM	4 7 13	S 2.62	17
658.20 -60			
SHALE			
Hard drilling at 60'			
	5 21 40	S 4.98	13
-65			
Very hard drilling at 65'			
	25 40 75/5"	S 6.22	17
-70			
643.90	29 100/3"		11
-75			

STRUCTURE NO. _____
ROUTE U. S. 34
SECTION 7-2:6-1
COUNTY Henderson

Elevation 643.20 ft

DEPTH	BLOWS	Qu tsf	W %
End of Boring at 74.3'			
-80			
-85			
-90			
-95			
-100			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Date 5/9/11

ROUTE U. S. 34 DESCRIPTION Route 94 Bridge
SECT. 7-2:6-1 STRUCT. NO. _____ DRILLED BY B. Williamson
COUNTY Henderson LOCATION Biggsville Township S. 19 , TWP. 10N , RNG. 4W

Boring No. R94-07
Station 26+72
Offset 38.00ft LT
Surface Elev. 718.80 ft

DEPTH	BLOWS	Qu tsf	W %
Stiff dark brown SILTY LOAM			
	2 2 2	P 1.25	26
715.80			
Stiff brown-gray SILTY CLAY LOAM	2 2 1	B 1.28	29
-5			
713.30			
Medium stiff brown-gray SILTY CLAY LOAM	1 1 2	B 0.54	28
686.80			
Hard to very stiff brown SILTY CLAY LOAM			
	1 1 1	B 0.54	27
-10			
708.30			
Stiff brown-gray SILTY CLAY LOAM	0 2 2	B 1.44	26
705.80			
Stiff gray-brown SILTY LOAM	1 1 3	B 1.36	26
-15			
702.80			
Medium stiff brown SILTY CLAY LOAM	0 2 3	S 0.62	23
700.80			
Very stiff brown SILTY CLAY LOAM	0 4 7	S 2.02	29
-20			
696.80			
Stiff brown SILTY CLAY LOAM	2 3 4	B 1.24	19
-25			

DEPTH	BLOWS	Qu tsf	W %
Very stiff brown SILTY CLAY LOAM			
	9 7 12	S 3.27	12
-30			
	5 7 11	B 4.85	13
-35			
	2 5 7	B 2.47	14
-40			
676.80			
Very stiff gray-brown SILTY CLAY LOAM			
	3 6 8	S 3.71	14
-45			
670.80			
Very stiff gray SILTY CLAY LOAM	3 6 9	B 3.10	14
-50			
668.80			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

LOG_BORING 76378.GPJ IDOT.GDT 5/9/11

FILE NAME = ...\036B065-68409-022-borings.dgn
CB PROJECT NO 04065

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Design Firm License No. 184-002703

USER NAME = _MML_	DESIGNED - RKM	REVISED -
	CHECKED -	REVISED -
PLOT SCALE = 0:2 ':' / IN.	DRAWN - MML	REVISED -
PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 036-0065
SHEET NO. 22 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	520
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Page 2 of 2
Date 5/9/11

STRUCTURE NO. ______ ROUTE U. S. 34 SECTION 7-2:6-1 COUNTY Henderson

Boring No. R94-07
Station 26+72
Offset 38.00ft LT
Elevation 668.80 ft

Description	Depth	Blows	Qu tsf	W %
Hard brown SILTY LOAM				
		4 7 14	B 6.01	16
	-55			
660.80 Hard brown-gray SILTY LOAM		5 29 18	B 4.89	19
Sand seam in sample 658.80	-60			
SHALE				
Hard drilling at 60'				
		8 16 30	B 9.21	18
	-65			
Very hard drilling at 68'		16 52 54/4"	S 1.24	19
	-70			
644.80		100/6"		9
	-75			

STRUCTURE NO. ______ ROUTE U. S. 34 SECTION 7-2:6-1 COUNTY Henderson

Elevation 643.80 ft

Description	Depth	Blows	Qu tsf	W %
End of Boring at 74'				
	-80			
	-85			
	-90			
	-95			
	-100			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

IDOT_BORING 76379.GPJ IDOT.GDT 5/26/11

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Page 1 of 2
Date 5/10/11

ROUTE U. S. 34 DESCRIPTION Route 94 Bridge
SECT. 7-2:6-1 STRUCT. NO. ______ DRILLED BY B. Williamson
COUNTY Henderson LOCATION Gladstone Township S. 24, TWP. 10N, RNG. 5W

Boring No. R94-08
Station 27+68
Offset 28.00ft RT
Surface Elev. 718.20 ft

Description	Depth	Blows	Qu tsf	W %
Dark brown SILTY LOAM 717.20				
Medium stiff dark brown-brown SILTY CLAY LOAM		2 2 4	S 0.74	24
715.20 Soft to medium stiff brown-gray SILTY CLAY LOAM		3 2 3	S 0.39	33
	-5			
		1 2 3	B 0.54	32
		PUSH TUBE	P 0.6	28 26
709.20 Soft brown-gray SILTY LOAM	-10			
		1 1 1	S 0.39	27
705.20 Medium stiff brown-gray SILTY CLAY LOAM		1 1 2	B 0.54	31
	-15			
702.70 Very stiff brown-gray SILTY CLAY LOAM		2 4 5	B 2.47	29
		2 4 7	S 2.62	21
	-20			
		PUSH TUBE	P 2.0	24 22 22
	-25			

Surface Water Elev. ______
Groundwater Elev.:
when drilling 712.2
at Completion 714.2
after ____ Hrs. ______

Description	Depth	Blows	Qu tsf	W %
Very stiff brown-gray SILTY CLAY LOAM				
691.20 Hard brown SILTY CLAY LOAM		7 9 13	S 4.80	11
	-30			
686.20 Very stiff brown SILTY LOAM		3 6 9	S 3.71	13
	-35			
		3 5 7	B 3.49	14
	-40			
		3 7 9	S 2.84	16
	-45			
		4 4 4	S 3.27	17
	-50			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Page 2 of 2
Date 5/10/11

STRUCTURE NO. ______ ROUTE U. S. 34 SECTION 7-2:6-1 COUNTY Henderson

Boring No. R94-08
Station 27+68
Offset 28.00ft RT
Elevation 668.20 ft

Description	Depth	Blows	Qu tsf	W %
Very stiff brown SILTY LOAM				
665.20 Very stiff gray-brown SILTY CLAY LOAM		1 5 8	B 3.05	17
	-55			
661.20 Hard gray-brown SILTY CLAY LOAM		5 10 12	S 4.74	13
658.20	-60			
SHALE				
Hard drilling at 60'				
		4 14 24	S 6.33	13
	-65			
Very hard drilling at 66'				
648.90		25 75/3"		11
End of Boring at 69.3'	-70			
	-75			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Coombe-Bloxdorf P.C. -CIVIL ENGINEERS- -STRUCTURAL ENGINEERS- -LAND SURVEYORS- Design Firm License No. 184-002703	USER NAME = _MML_	DESIGNED - RKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED -	REVISED -	
	PLOT SCALE = 0:2 ':' / IN.	DRAWN - MML	REVISED -	
	PLOT DATE = 10/16/2012	CHECKED - MCB	REVISED -	

BORING LOGS
STRUCTURE NO. 036-0065
SHEET NO. 23 OF 23 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
534	7-2, 6-1	HENDERSON	976	521
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		

FILE NAME = ..\0360065-68409-023-borings.dgn
CB PROJECT NO 04065

PROP. CURVE RAMPD-1
PI STA. = 11+25.40
Δ = 24° 07' 17" (RT)
D = 6° 51' 42"
R = 835.00'
T = 178.41'
L = 351.53'
E = 18.85'
e = 6.0% (50 MPH)
T.R. = N/A
S.E. RUN = 207'
P.C. STA. = 9+46.99
P.T. STA. = 12+98.52

℄ IL ROUTE 94 / 116

STA. 21+98.13 (RAMP A) =
STA. 20+94.65 (IL 94)

STA. 0+00.00 (RAMP D) =
STA. 21+63.45 (IL 94)

CONSTRUCTION LIMITS

601+16.57
206.90' LT

℄ RAMP D

PI Sta 12+98.52

PI Sta 11+25.40

PC Sta 9+46.99

PC Sta 603+90.37

EARTHWORK SHEAR LINE

PR WB US 34

℄ US ROUTE 34

AC

155+00
150+00
600+00
605+00
610+00
10+00
5+00
0+00
120+00
125+00

715
720
725
730
735
710
705

N

50' 0 50' 100'
SCALE: 1" = 50'

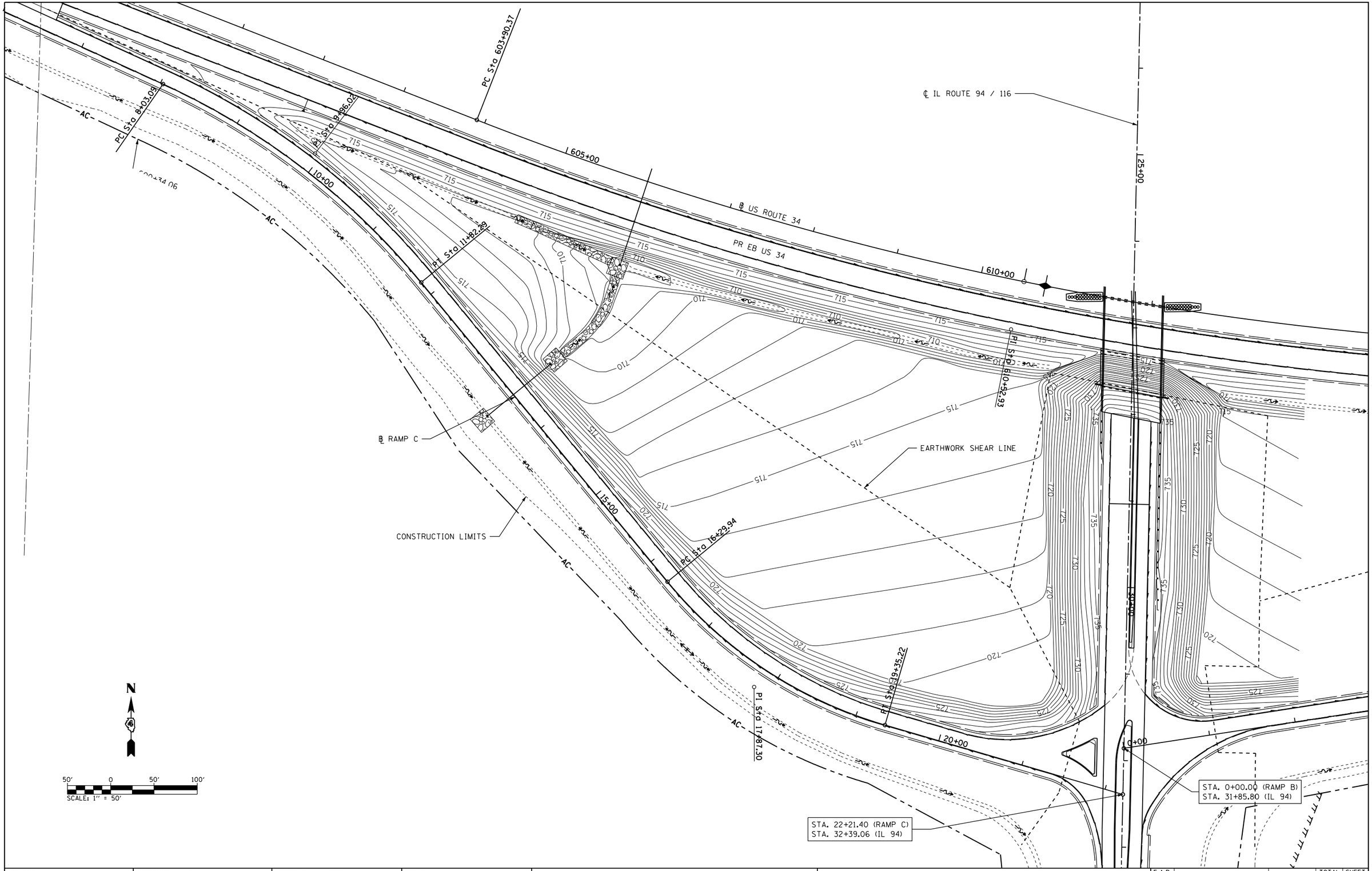
FILE NAME = D468409-SHT-01-DETAILS-IC-GRADING-RAMPD.dgn	USER NAME = zachl	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
INTERCHANGE GRADING PLANS (1 OF 4)

SCALE: 1" = 50' | SHEET 1 OF 21 SHEETS | STA. 599+00 LT TO STA. 611+79 LT

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2; 6-1	HENDERSON	976	522
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		



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		DRAWN - PSBA	REVISED -
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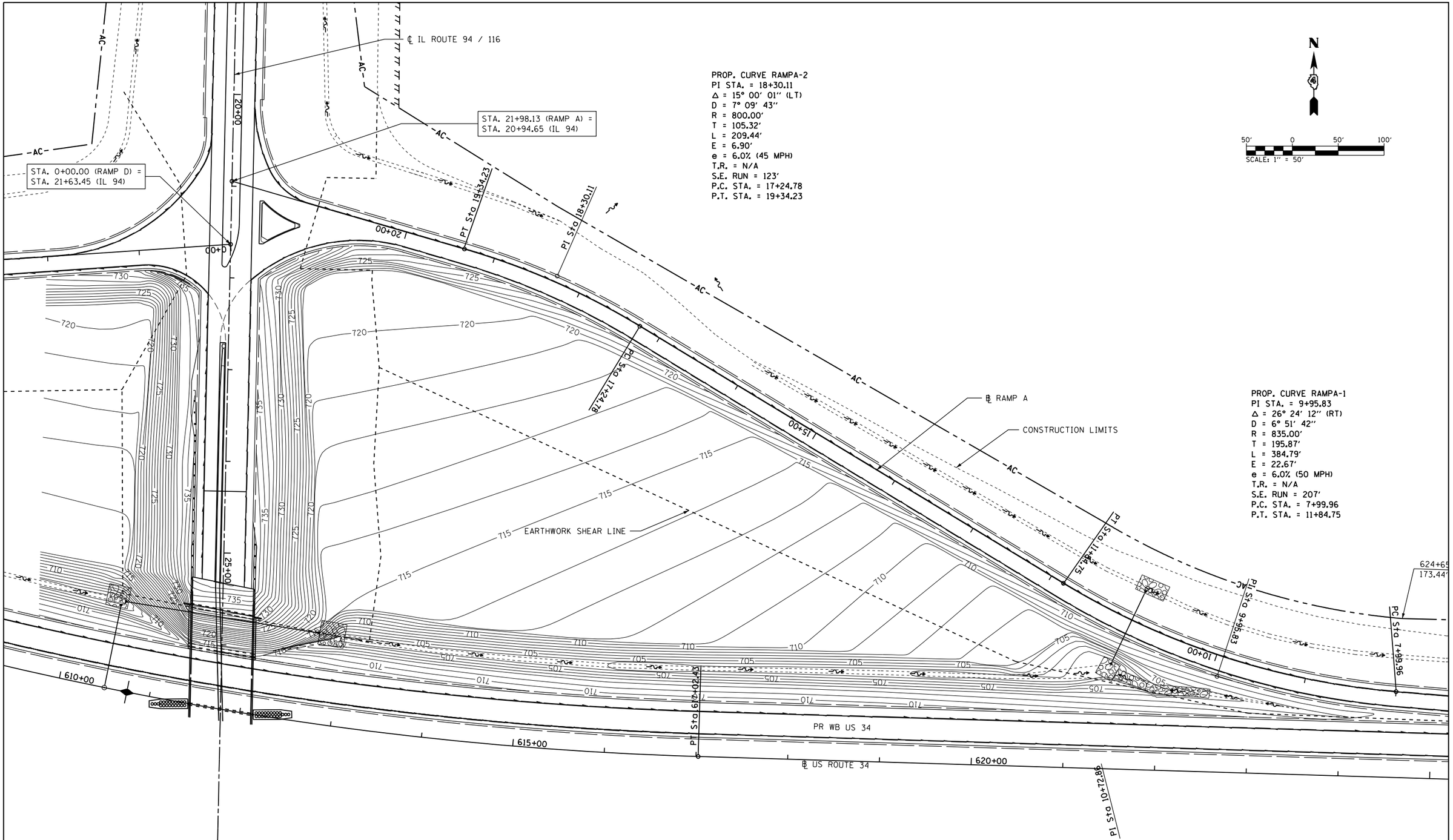
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
INTERCHANGE GRADING PLANS (2 OF 4)

SCALE: 1″ = 50′ | SHEET 2 OF 21 SHEETS | STA. 601+00 RT TO STA. 611+79 RT

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2; 6-1	HENDERSON	976	523
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



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		DRAWN - PSBA	REVISED -
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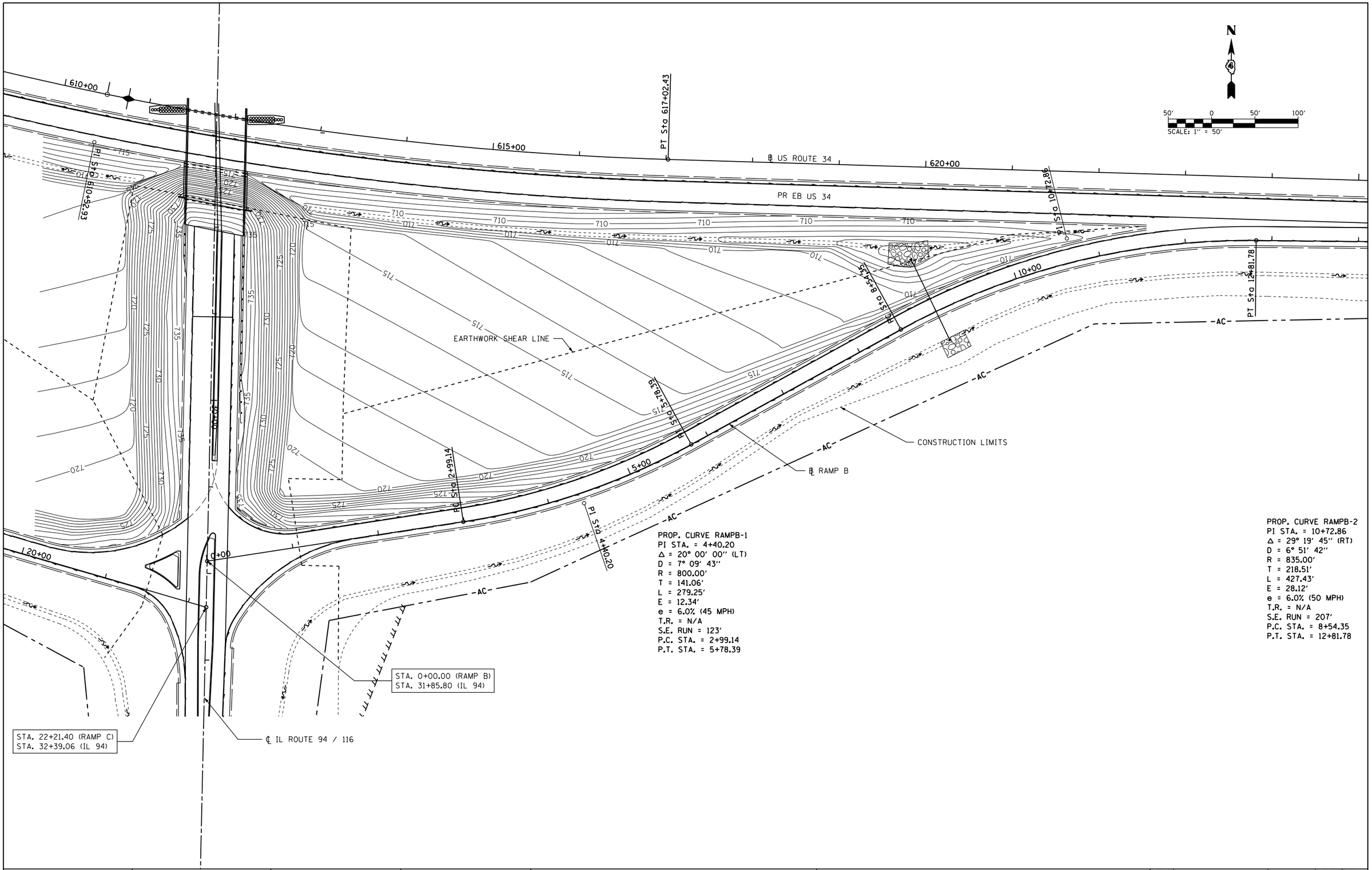
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
INTERCHANGE GRADING PLANS (3 OF 4)

SCALE: 1″ = 50′ | SHEET 3 OF 21 SHEETS | STA. 611+79 LT TO STA. 625+00 LT

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2; 6-1	HENDERSON	976	524
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



PROP. CURVE RAMPB-1
PI STA. = 4+40.20
Δ = 20° 00′ 00″ (LT)
D = 7° 09′ 43″
R = 800.00′
T = 141.06′
L = 279.25′
E = 12.34′
e = 6.0% (45 MPH)
T.R. = N/A
S.E. RUN = 123′
P.C. STA. = 2+99.14
P.T. STA. = 5+78.39

PROP. CURVE RAMPB-2
PI STA. = 10+72.86
Δ = 29° 19′ 45″ (RT)
D = 6° 51′ 42″
R = 835.00′
T = 218.51′
L = 427.43′
E = 28.12′
e = 6.0% (50 MPH)
T.R. = N/A
S.E. RUN = 207′
P.C. STA. = 8+54.35
P.T. STA. = 12+81.78

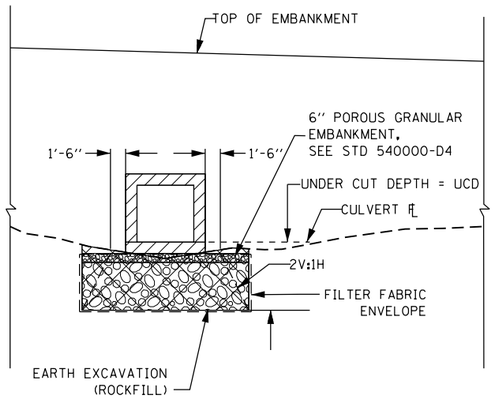
FILE NAME = D468409-SHT-04-DETAILS-IC-GRADING-RAMPB.dgn	USER NAME = zachl	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
INTERCHANGE GRADING PLANS (4 OF 4)

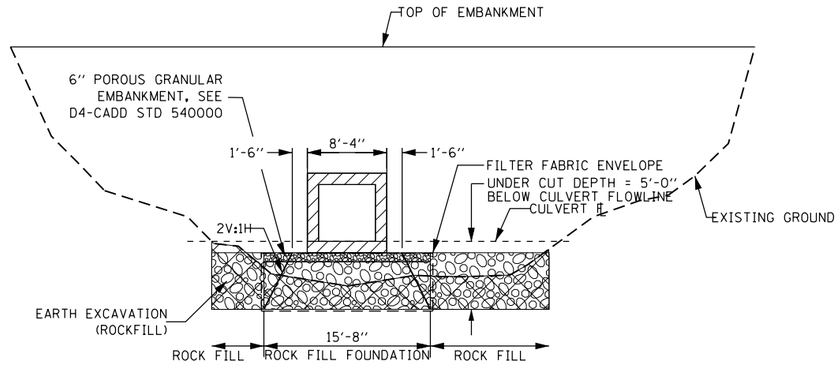
SCALE: 1" = 50' | SHEET 4 OF 21 SHEETS | STA. 611+79 RT TO STA. 625+00 RT

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2; 6-1	HENDERSON	976	525
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



LOCATION:

1. STA 551+94.84 ℄ (US 34)	36" DIA CULVERT	UCD = 2.0'
2. STA 556+78.12 ℄ (US 34)	48" DIA CULVERT	UCD = 4.0'
3. STA 670+31.68 ℄ (US 34)	72" DIA CULVERT	UCD = 8.0'
4. STA 692+70.00 ℄ (US 34)	42" DIA CULVERT	UCD = 2.0'
5. STA 11+00 ℄ (RAMP A)	6' X 3' PCB CULVERT	UCD = 2.0'



LOCATION:

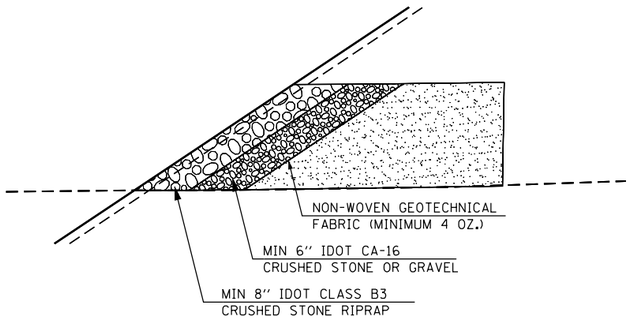
STA 679+73 ℄ (US 34) 7' X 7' PCB CULVERT UCD = 5.0'

DETAIL: ROCK FILL-FOUNDATION

NOT TO SCALE

NOTES: ROCK FILL & ROCK FILL - FOUNDATION

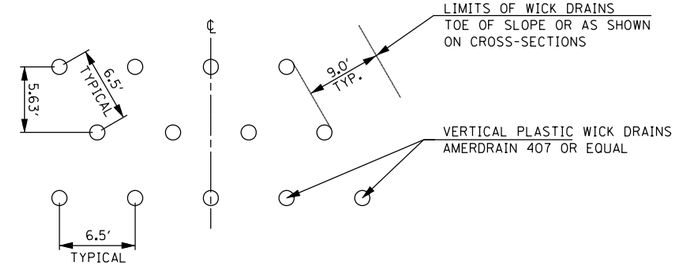
1. UNDER CUT BELOW FLOW LINE OF CULVERT TO REQUIRED DEPTH AND LIMITS. SEE DETAIL
2. UNDER CUT EXCAVATION WILL BE MEASURED IN CUBIC YARDS AND PAID FOR AS EARTH EXCAVATION (ROCKFILL).
3. SEE SPECIAL PROVISIONS FOR ROCK FILL AND ROCK FILL - FOUNDATION MATERIAL REQUIREMENTS.
4. CAP ROCK FILL FOUNDATION WITH 6" POROUS GRANULAR EMBANKMENT. SEE D4-CADD STD 540000.
5. WRAP ROCK FILL-FOUNDATION WITH FILTER FABRIC FILTER FABRIC NOT REQUIRED FOR ROCK FILL.
6. USE APPROVED EMBANKMENT MATERIAL ABOVE ROCK FILL.
7. LIMITS AND UNDER CUT DEPTH OF ROCK FILL ARE ESTIMATED. EXACT LIMITS TO BE DETERMINED BY ENGINEER.



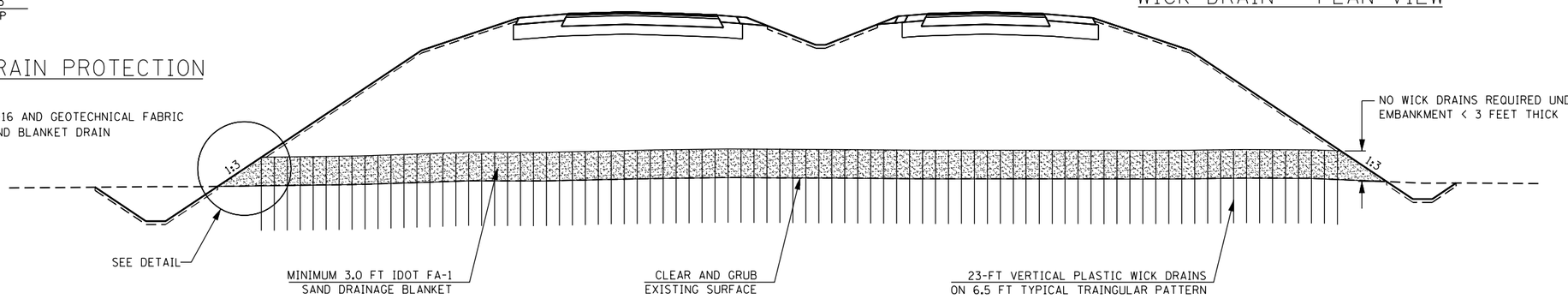
DETAIL - BLANKET DRAIN PROTECTION

NOT TO SCALE

STONE RIPRAP B3, COARSE AGGREGATE CA-16 AND GEOTECHNICAL FABRIC TO BE INCLUDED IN THE COST OF THE SAND BLANKET DRAIN



WICK DRAIN - PLAN VIEW



DETAIL - SAND DRAINAGE BLANKET - CROSS-SECTION

NOT TO SCALE

SEE CROSS-SECTIONS AND ROADWAY PLANS FOR LOCATION OF PROPOSED SAND DRAINAGE BLANKET

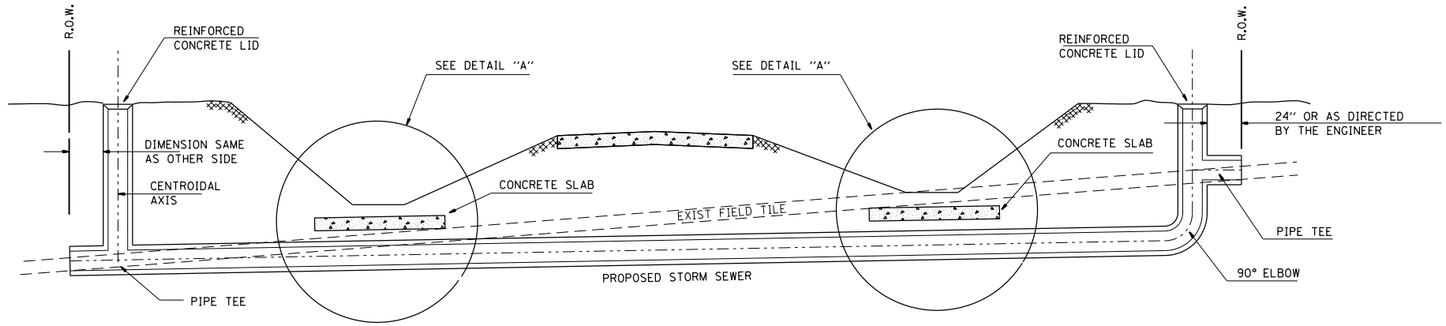
FILE NAME = D468409-SHT-05-DETAILS-SAND BLANKET.dgn	USER NAME = zachl	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

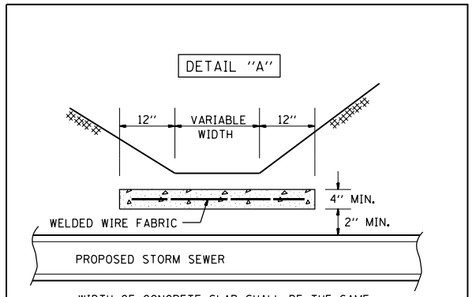
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
SAND DRAINAGE BLANKET

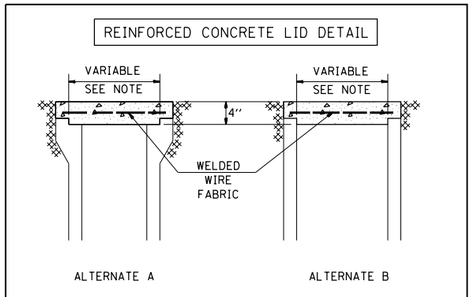
SCALE: N.A. | SHEET NO. 5 OF 21 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2; 6-1	HENDERSON	976	526
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		

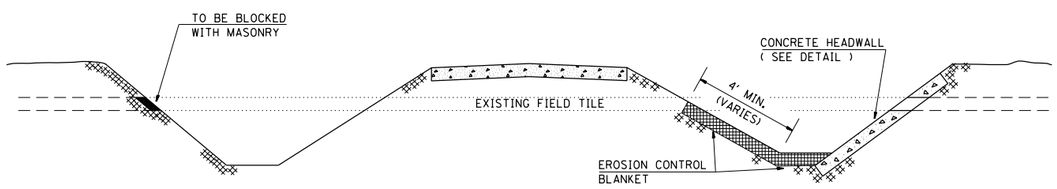


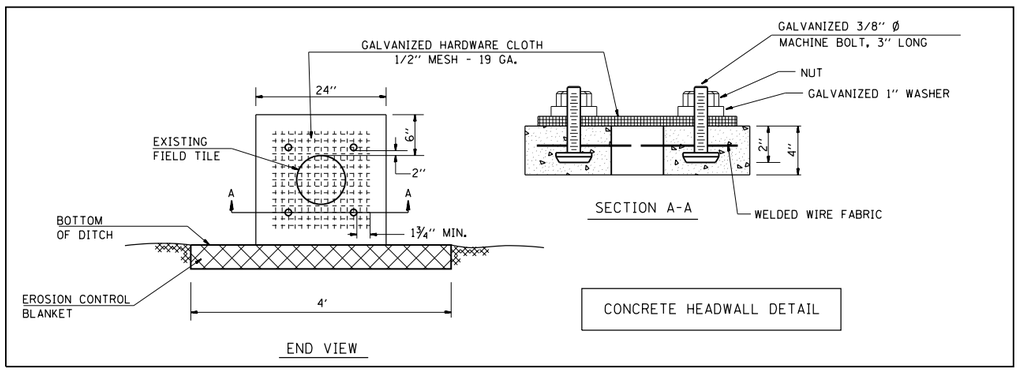


WIDTH OF CONCRETE SLAB SHALL BE THE SAME AS THE TRENCH WIDTH IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.



NOTE : DIMENSIONS WILL VARY TO MATCH NOMINAL SIZE OF PROPOSED STORM SEWER





GENERAL NOTES

1. EXISTING FIELD TILE SHALL BE LOCATED BOTH HORIZONTALLY AND VERTICALLY BY THE USE OF AN EXPLORATION TRENCH. THIS TRENCH SHALL BE NOT LESS THAN 54" IN DEPTH, MEASURED FROM THE EXISTING GROUND ELEVATION. THE WIDTH OF THE TRENCH SHALL BE SUFFICIENT TO ALLOW PROPER INVESTIGATION OF THE ENTIRE TRENCH.

2. THE EXISTING TILE DRAINAGE SYSTEM SHALL BE MAINTAINED IN A FUNCTIONAL CONDITION BY IMMEDIATE CONSTRUCTION OF THE NEW STORM SEWER SYSTEM OR BY REPAIRING THE CUT TILE WITH THE SAME DIAMETER UNTIL SUCH TIME AS THE NEW SYSTEM IS COMPLETED.

3. FIELD TILE SHALL BE REPLACED IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS. THE COST PER CONTRACT UNIT PRICE OF ITEMS INCLUDED IN THIS CONTRACT SHALL BE PAID FOR AS STATED IN SECTION 611 OF THE STANDARD SPECIFICATIONS.

4. THE DIAMETER OF THE PROPOSED STORM SEWER SHALL BE EQUAL TO OR GREATER THAN THE EXISTING FIELD TILE.

5. ALL EXISTING FIELD TILE SHALL BE REPLACED WITH STORM SEWER OF THE TYPE REQUIRED FOR THE DEPTH OF COVER. ALL STORM SEWER WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER METER (FOOT) FOR STORM SEWER TYPE 2 REGARDLESS OF THE DEPTH. THE LINEAL METER (FOOT) MEASUREMENT WILL BE ALONG THE CENTROID AXIS AND INCLUDE ALL BENDS, ELBOWS, OR PIPE TEE'S WHICH ARE REQUIRED.

6. WELDED WIRE FABRIC SHALL BE 6" X 6" MESH. 57 lbs/100 sq. ft. CONFORMING TO REQUIREMENTS OF A.S.T.M. A158. THE COST OF FURNISHING AND PLACING THE WELDED WIRE FABRIC WILL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CLASS SI CONCRETE (MISCELLANEOUS). THE CONCRETE SLAB AND CONCRETE HEADWALL WILL BE PAID AT THE CONTRACT UNIT PRICE PER CUBIC METER (CU YD) FOR CLASS SI CONCRETE (MISCELLANEOUS).

7. THE REINFORCED CONCRETE LID SHALL BE CLASS SI CONCRETE (MISCELLANEOUS) OR PRECAST REINFORCED CONCRETE AND THE COST WILL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE PROPOSED STORM SEWER.

FILE NAME = D468409-SHT-06-DETAILS-FIELD TILE REPLACEMENT.dgn	USER NAME = zach1	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
FIELD TILE REPLACEMENT

SCALE: N.A. | SHEET NO. 6 OF 21 SHEETS | STA. | TO STA.

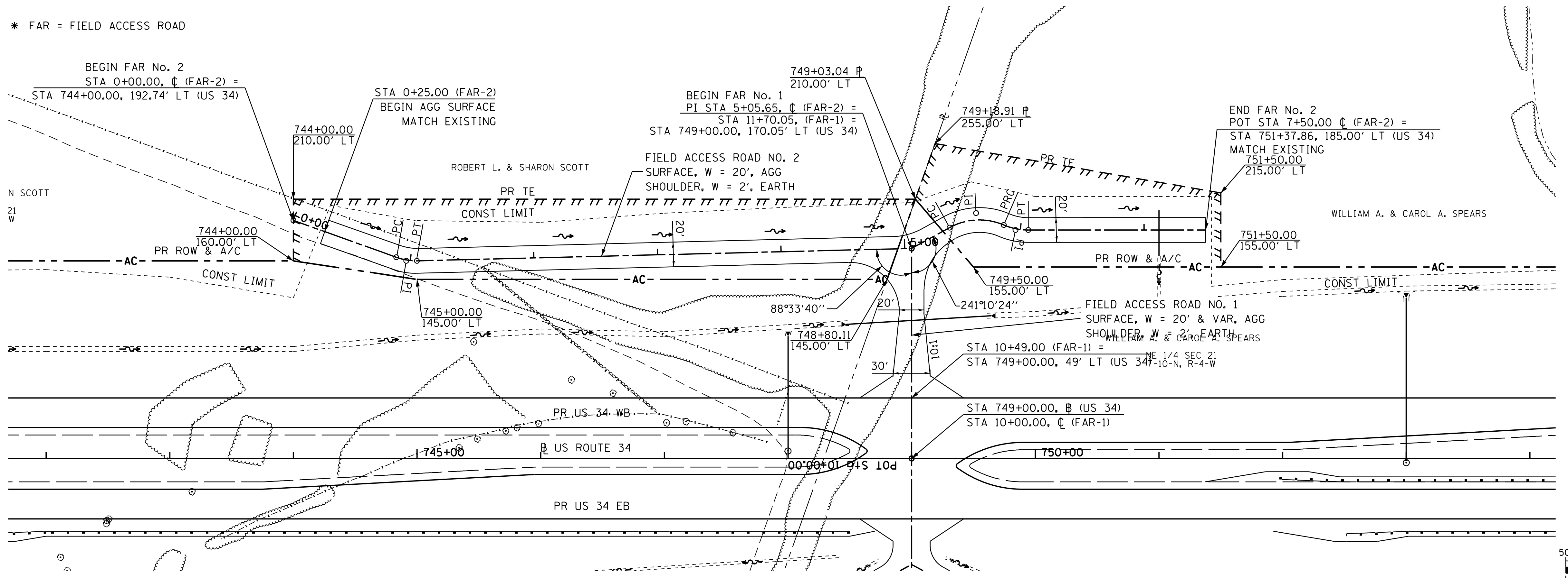
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2; 6-1	HENDERSON	976	527
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		

CURVE DATA

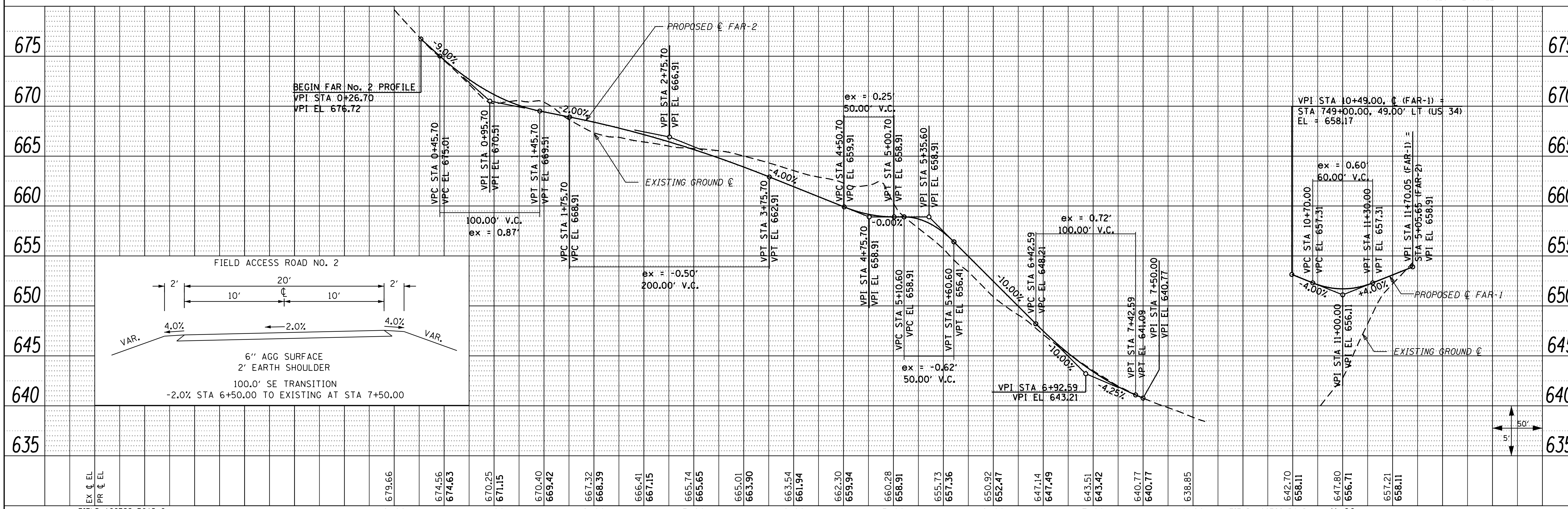
PROP. CURVE 1 FAR-2
PI STA. = 0+96.94
Δ = 19° 35′ 10″ (LT)
D = 114° 35′ 30″
R = 50.00′
T = 8.63′
L = 17.09′
E = 0.74′
P.C. STA. = 0+88.31
P.T. STA. = 1+05.40

PROP. CURVE 2 FAR-2
PI STA. = 5+65.08
Δ = 52° 04′ 55″ (RT)
D = 114° 35′ 30″
R = 50.00′
T = 24.43′
L = 45.45′
E = 5.65′
P.C. STA. = 5+40.65
PRC STA. = 5+86.10

PROP. CURVE 3 FAR-2
PI STA. = 5+96.38
Δ = 23° 15′ 19″ (LT)
D = 114° 35′ 30″
R = 50.00′
T = 10.29′
L = 20.29′
E = 1.05′
PRC STA. = 5+86.10
P.T. STA. = 6+06.39



* FAR = FIELD ACCESS ROAD
BEGIN FAR No. 2
STA 0+00.00, ℄ (FAR-2) =
STA 744+00.00, 192.74′ LT (US 34)
STA 0+25.00 (FAR-2)
BEGIN AGG SURFACE
MATCH EXISTING
744+00.00
210.00′ LT
BEGIN FAR No. 1
PI STA 5+05.65, ℄ (FAR-2) =
STA 11+70.05, (FAR-1) =
STA 749+00.00, 170.05′ LT (US 34)
749+03.04 ℙ
210.00′ LT
749+18.91 ℙ
255.00′ LT
END FAR No. 2
POT STA 7+50.00 ℄ (FAR-2) =
STA 751+37.86, 185.00′ LT (US 34)
MATCH EXISTING
751+50.00
215.00′ LT
ROBERT L. & SHARON SCOTT
FIELD ACCESS ROAD NO. 2
SURFACE, W = 20′, AGG
SHOULDER, W = 2′, EARTH
N SCOTT
PR TE
CONST LIMIT
744+00.00
160.00′ LT
PR ROW & A/C
CONST LIMIT
745+00.00
145.00′ LT
88°33′40″
748+80.11
145.00′ LT
241°10′24″
749+50.00
155.00′ LT
FIELD ACCESS ROAD NO. 1
SURFACE, W = 20′ & VAR. AGG
SHOULDER, W = 2′, EARTH
WILLIAM A. & CAROL A. SPEARS
NE 1/4 SEC 21
T-10-N, R-4-W
STA 10+49.00 (FAR-1) =
STA 749+00.00, 49′ LT (US 34)
STA 749+00.00, ℙ (US 34)
STA 10+00.00, ℄ (FAR-1)
WILLIAM A. & CAROL A. SPEARS
751+50.00
155.00′ LT
PR ROW & A/C
CONST LIMIT
PR US 34 WB
ℙ US ROUTE 34
745+00
750+00
POT Sta 10+00.00
PR US 34 EB
N
50′ 0 50′ 100′
HORIZONTAL SCALE



PROPOSED ℄ FAR-2
BEGIN FAR No. 2 PROFILE
VPI STA 0+26.70
VPI EL 676.72
-9.00%
VPC STA 0+45.70
VPC EL 675.01
VPI STA 0+95.70
VPI EL 670.51
VPT STA 1+45.70
VPT EL 669.51
100.00′ V.C.
ex = 0.87′
-2.00%
VPC STA 1+75.70
VPC EL 668.91
VPI STA 2+75.70
VPI EL 666.91
EXISTING GROUND ℄
ex = -0.50′
200.00′ V.C.
VPT STA 3+75.70
VPT EL 662.91
-4.00%
ex = 0.25
50.00′ V.C.
VPC STA 4+50.70
VPC EL 659.91
VPI STA 5+00.70
VPI EL 658.91
VPT STA 5+35.60
VPT EL 658.91
VPI STA 4+75.70
VPI EL 658.91
-0.00%
VPC STA 5+10.60
VPC EL 658.91
VPT STA 5+60.60
VPT EL 656.41
ex = -0.62′
50.00′ V.C.
ex = 0.72′
100.00′ V.C.
-10.00%
VPC STA 6+42.59
VPC EL 648.21
VPI STA 6+92.59
VPI EL 643.21
VPT STA 7+42.59
VPT EL 641.09
VPI STA 7+50.00
VPI EL 640.77
-4.25%
VPI STA 10+49.00, ℄ (FAR-1) =
STA 749+00.00, 49.00′ LT (US 34)
EL = 658.17
ex = 0.60
60.00′ V.C.
VPC STA 10+70.00
VPC EL 657.31
VPI STA 11+00.00
VPI EL 656.11
VPT STA 11+30.00
VPT EL 657.31
VPI STA 11+70.05 (FAR-1) =
STA 5+05.65 (FAR-2)
VPI EL 658.91
-4.00%
+4.00%
PROPOSED ℄ FAR-1
EXISTING GROUND ℄
675
670
665
660
655
650
645
640
635
50′
5′
FIELD ACCESS ROAD NO. 2
20′
2′
10′
℄
10′
2′
4.0%
-2.0%
4.0%
VAR.
VAR.
6″ AGG SURFACE
2′ EARTH SHOULDER
100.0′ SE TRANSITION
-2.0% STA 6+50.00 TO EXISTING AT STA 7+50.00
EX ℄ EL
PR ℄ EL
679.66
674.56
674.63
670.25
671.15
670.40
669.42
667.32
668.39
666.41
667.15
665.74
665.65
665.01
663.90
663.54
661.94
662.30
659.94
660.28
658.91
655.73
657.36
650.92
652.47
647.14
647.49
643.51
643.42
640.77
640.77
638.85
642.70
658.11
647.80
656.71
657.21
658.11
FIELD ACCESS ROAD 2
0+00
1+00
2+00
3+00
4+00
5+00
6+00
7+00
8+00
FIELD ACCESS ROAD 1
11+00

FILE NAME = D468409-SHT-07-DETAILS-FAR1-2.dgn	USER NAME = zachl	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ′ / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
FIELD ACCESS ROAD No. 1 & 2

SCALE: 1″=50′ | SHEET NO. 7 OF 21 SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	528

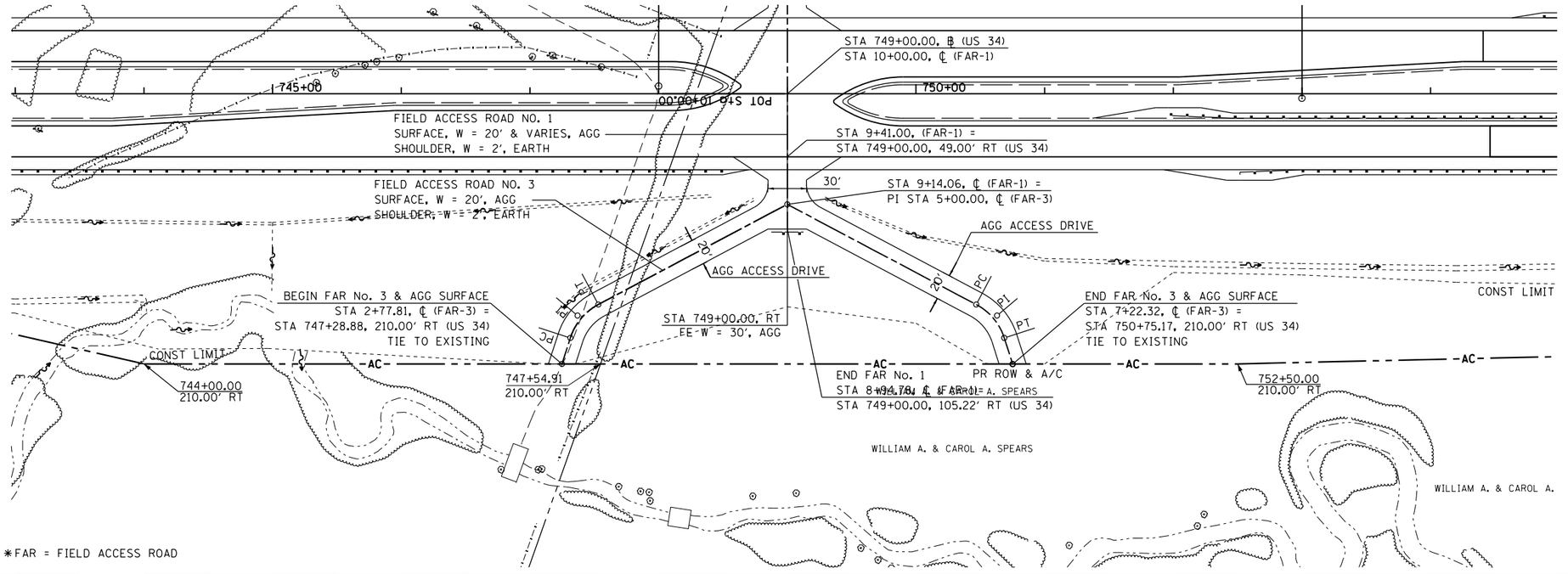
CONTRACT NO. 68409

ILLINOIS FED. AID PROJECT

PLAN: NOTE BOOK NO. ___ SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED / CADD FILE NAME — BY — DATE

PROFILE: NOTE BOOK NO. ___ SURVEYED / PLOTTED / GRADES CHECKED / BM. NOTED / STRUCTURE NOTAT'NS CHK'D — BY — DATE

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE



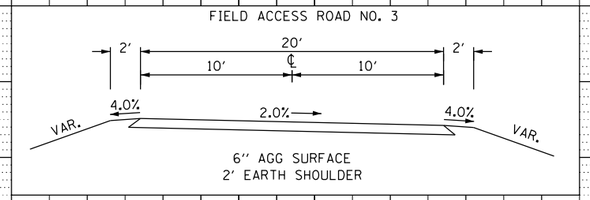
*FAR = FIELD ACCESS ROAD

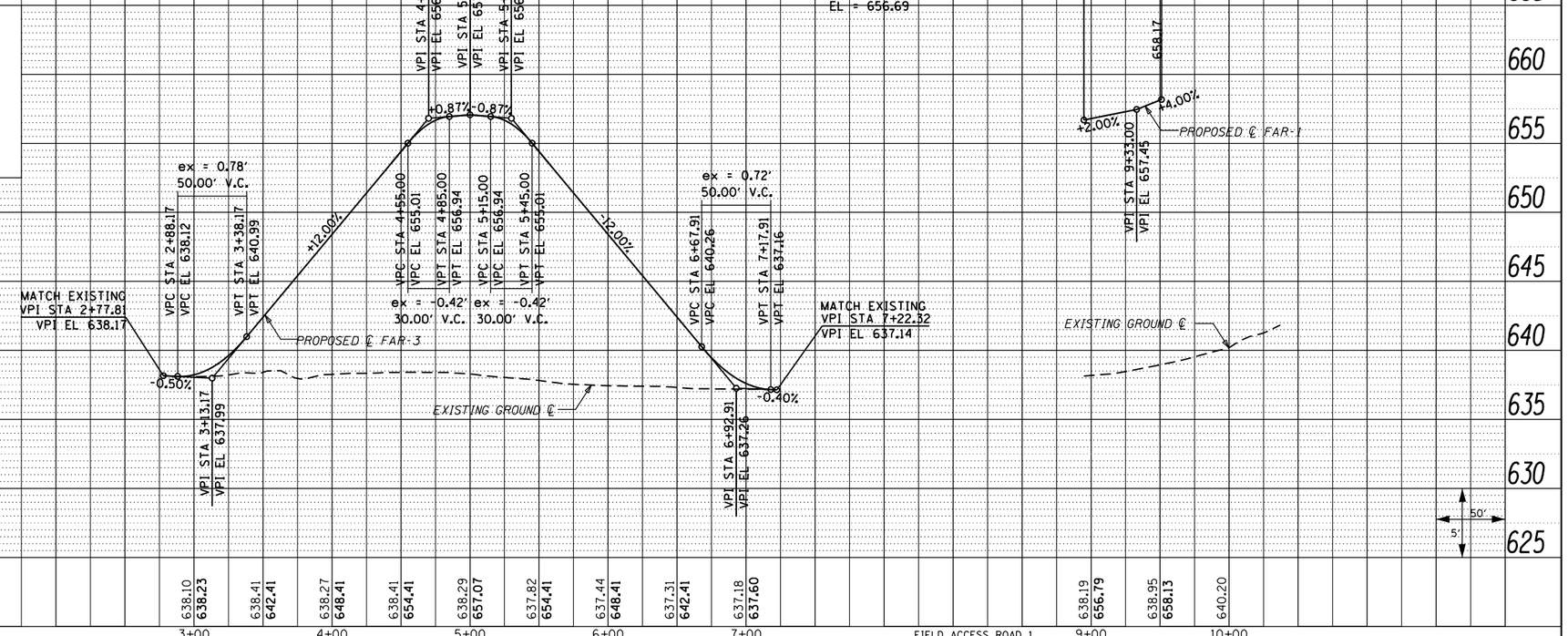
CURVE DATA

PROP. CURVE FAR-3-1
PI STA. = 3+17.32
△ = 44° 10' 05" (RT)
D = 127° 19' 26"
R = 45.00'
T = 18.26'
L = 34.69'
E = 3.56'
P.C. STA. = 2+99.06
P.T. STA. = 3+33.75

PROP. CURVE FAR-3-2
PI STA. = 6+84.50
△ = 44° 10' 05" (RT)
D = 127° 19' 26"
R = 45.00'
T = 18.26'
L = 34.69'
E = 3.56'
P.C. STA. = 6+66.24
P.T. STA. = 7+00.93

PROFILE
SURVEYED
PLOTTED
CROSS SECS CHECKED
BAK. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE





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		DRAWN - PSBA	REVISED -
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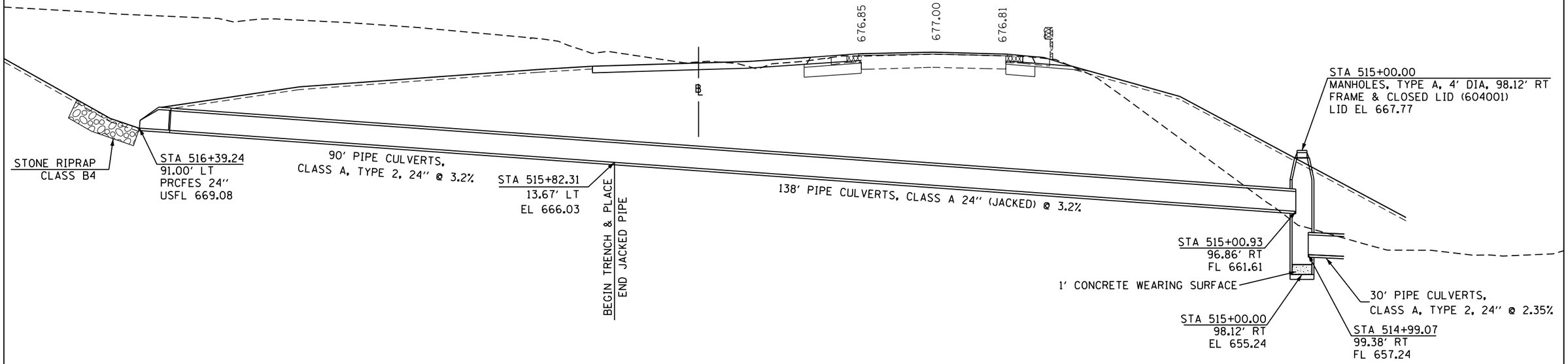
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
FIELD ACCESS ROAD No. 1 & 3

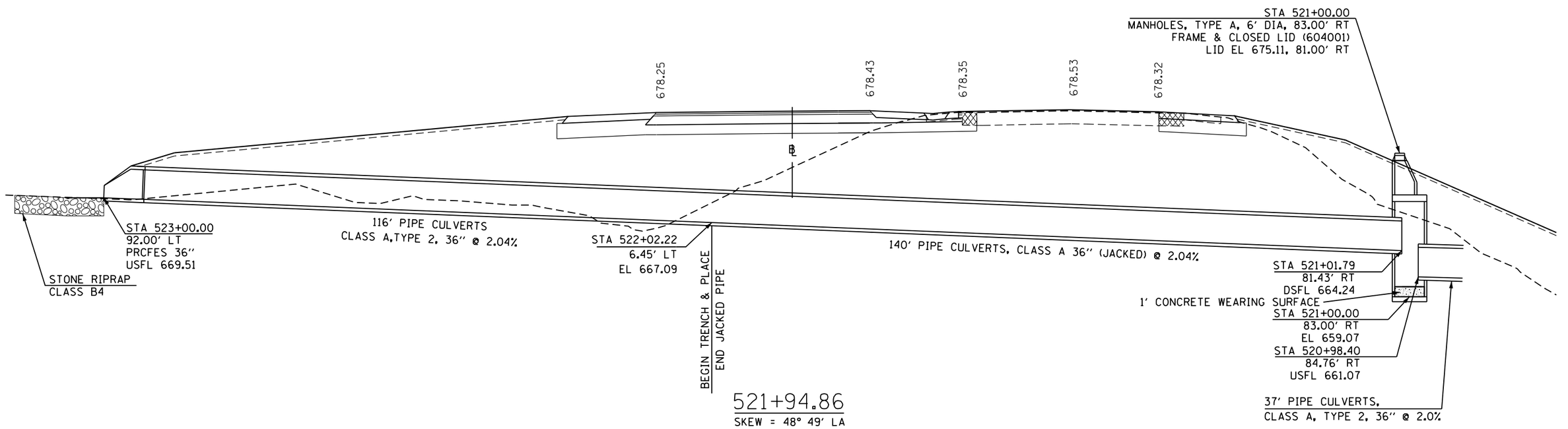
SCALE: 1"=50' | SHEET NO. 8 OF 21 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	529
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



515+72.24

SKEW = 36° 22' LA



521+94.86

SKEW = 48° 49' LA

FILE NAME = D468409-SHT-09-DETAILS-JACKED-PIPE1.dgn	USER NAME = zachl	DESIGNED - TCD	REVISED -
		DRAWN - PSBA	REVISED -
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	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
JACKED PIPE INSTALLATION

SCALE: N.A. | SHEET NO. 9 OF 21 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2; 6-1	HENDERSON	976	530
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		

PROPOSED CONSTRUCTION SEQUENCE

MAINTAIN ACCESS TO ZURMUELHEN CORPORATION PROPERTY AND OLSON PRIVATE RESIDENCE AT ALL TIMES.
INSTALL PROPOSED CULVERT IN STAGE 3, DURING REMOVAL OF TEMPORARY DETOUR NO. 1.
SEE ROADWAY PLAN AND PROFILE, DETOUR NO. 1 - TEMPORARY ACCESS DRIVE PLAN SHEET.

STAGE 3A

WIDEN RIGHT SHOULDER OF DETOUR NO. 1 FOR TEMPORARY ACESS DRIVE.

INSTALL DOWNSTREAM CULVERT END SECTION AND 40 FT OF PIPE CULVERT, CLASS A, TYPE 3, 60".
REGRADE OUTLET DITCH AND PLACE OUTLET STONE RIPRAP PROTECTION.

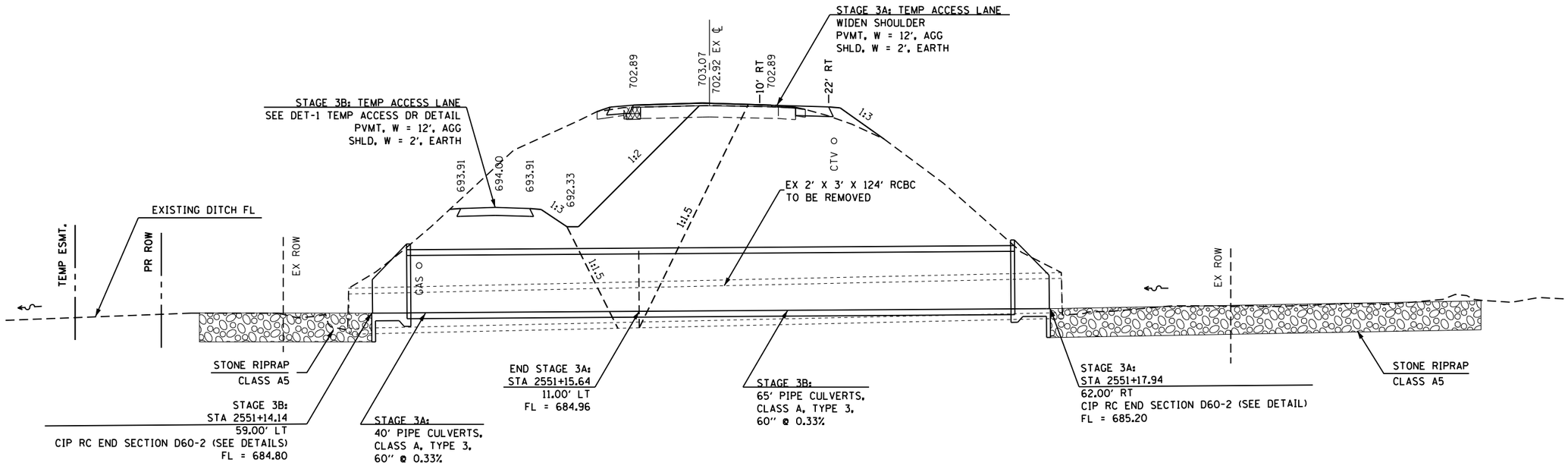
STAGE 3B

PROVIDE TEMPORARY ACCESS DRIVE OVER NEW CULVERT SECTION.

COMPLETE PIPE CULVERT INSTALLATION, TRENCH BACKFILL, INSTALL UPSTREAM CULVERT END SECTION,
MINOR UPSTREAM DITCH GRADING AND INLET STONE RIPRAP PROTECTION.

STAGE 3C

RESTORE ORIGINAL TYPICAL SECTION OVER CULVERT.
PROVIDE FINAL SURFACE OVER TRENCH USING A CLASS D PATCH, 8". (11' X 30') = 36.7 USE 37 SQYD.



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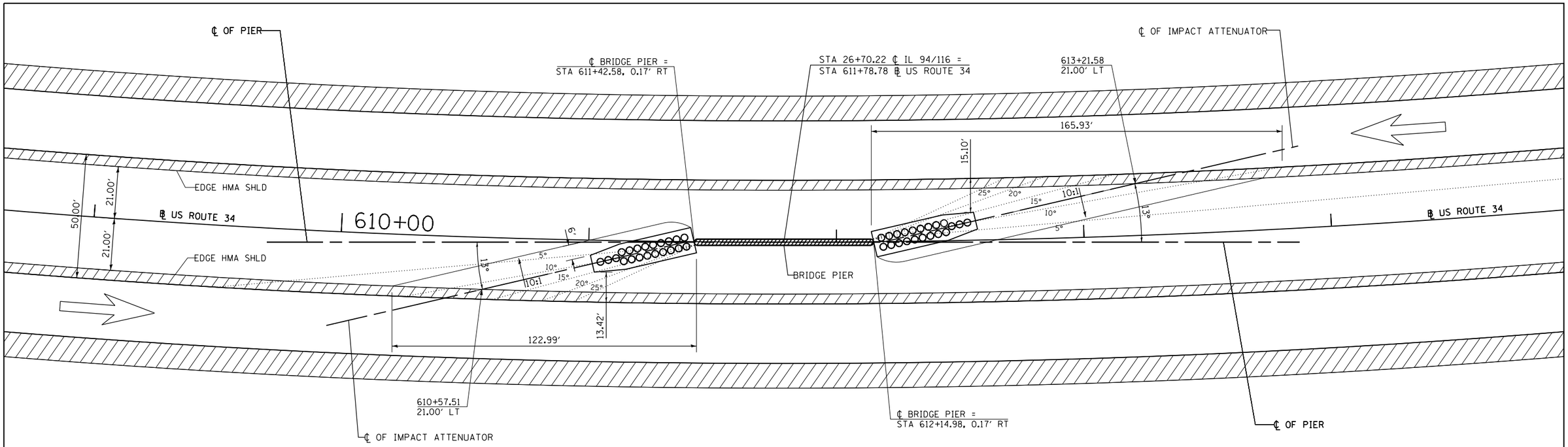
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

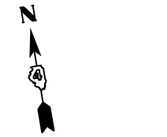
SPECIAL DETAILS
CULVERT STA 2551+16.02 (DETOUR NO. 1)

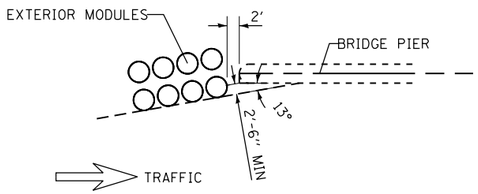
SCALE: N.A. | SHEET NO. 10 OF 21 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2; 6-1	HENDERSON	976	531
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		

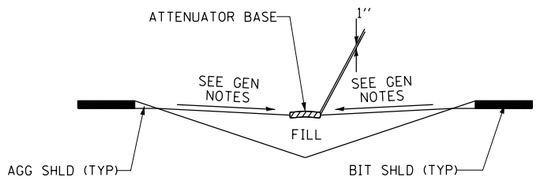


IMPACT ATTENUATOR LAYOUT AND GRADING PLAN





EXTERIOR MODULE LAYOUT



SECTION A - A

QUANTITIES

ITEM	UNIT	TOTAL
IMPACT ATTENUATOR (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2

GENERAL NOTES

1. ALL 1:10 SLOPES SHOWN ON THIS DETAIL SHALL BE CONSTRUCTED 1:10 OR FLATTER.
2. THE SLOPES AS SHOWN ON THIS DETAIL SHALL APPLY TO BOTH ENDS OF THE BRIDGE PIER.
3. FOR SAND MODULE ARRAY REFER TO STANDARD 643001, TEST LEVEL 3.
4. IN AREAS OF 1:10 SLOPES PRECEDING THE ATTENUATOR IN THE MEDIAN INSTALLATION, FOUR WOOD POSTS SHALL BE PLACED AT 5' INTERVALS IN THE MEDIAN ℄, SEE SPECIAL PROVISIONS.
5. ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
6. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

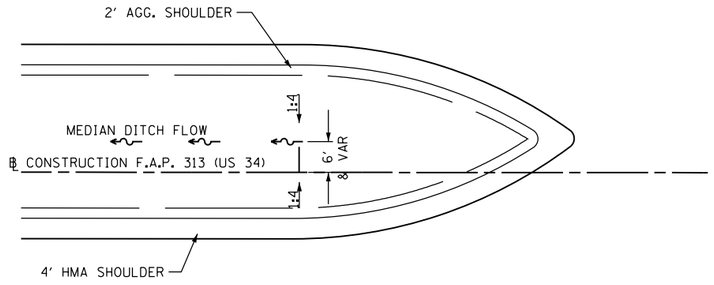
FILE NAME = D468409-SHT-11-DETAILS-IMPACT-ATTENUATOR_2.dgn	USER NAME = zach1	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
IMPACT ATTENUATOR MEDIAN SAND MODULE

SCALE: 1' = 20' | SHEET NO. 11 OF 21 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	532
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		

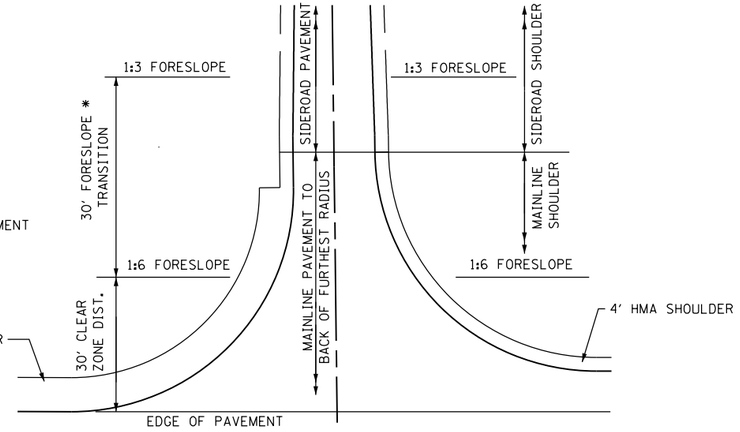


DETAIL B

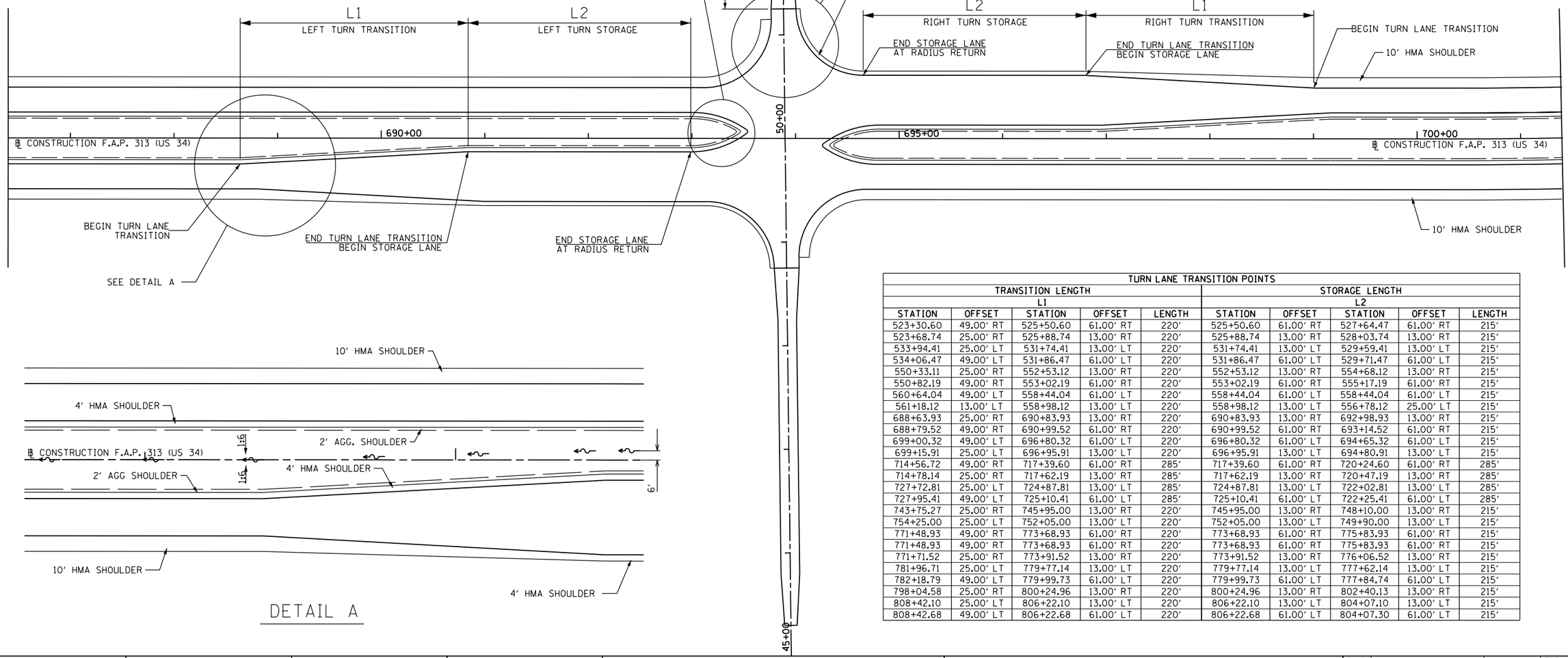
* USE A 20' TRANSITION DISTANCE WHEN GOING FROM 1:6 TO 1:4

** TRANSITION SIDEROAD PAVEMENT WIDTH FROM 24' TO 18' MIN ADJACENT US ROUTE 34 IN 50'

*** TRANSITION PROPOSED SIDEROAD PAVEMENT WIDTH IN 50' TO EXISTING AT BEGIN AND END OF IMPROVEMENTS



DETAIL C



DETAIL A

TURN LANE TRANSITION POINTS

TRANSITION LENGTH L1					STORAGE LENGTH L2				
STATION	OFFSET	STATION	OFFSET	LENGTH	STATION	OFFSET	STATION	OFFSET	LENGTH
523+30.60	49.00' RT	525+50.60	61.00' RT	220'	525+50.60	61.00' RT	527+64.47	61.00' RT	215'
523+68.74	25.00' RT	525+88.74	13.00' RT	220'	525+88.74	13.00' RT	528+03.74	13.00' RT	215'
533+94.41	25.00' LT	531+74.41	13.00' LT	220'	531+74.41	13.00' LT	529+59.41	13.00' LT	215'
534+06.47	49.00' LT	531+86.47	61.00' LT	220'	531+86.47	61.00' LT	529+71.47	61.00' LT	215'
550+33.11	25.00' RT	552+53.12	13.00' RT	220'	552+53.12	13.00' RT	554+68.12	13.00' RT	215'
550+82.19	49.00' RT	553+02.19	61.00' RT	220'	553+02.19	61.00' RT	555+17.19	61.00' RT	215'
560+64.04	49.00' LT	558+44.04	61.00' LT	220'	558+44.04	61.00' LT	558+44.04	61.00' LT	215'
561+18.12	13.00' LT	558+98.12	13.00' LT	220'	558+98.12	13.00' LT	556+78.12	25.00' LT	215'
688+63.93	25.00' RT	690+83.93	13.00' RT	220'	690+83.93	13.00' RT	692+98.93	13.00' RT	215'
688+79.52	49.00' RT	690+99.52	61.00' RT	220'	690+99.52	61.00' RT	693+14.52	61.00' RT	215'
699+00.32	49.00' LT	696+80.32	61.00' LT	220'	696+80.32	61.00' LT	694+65.32	61.00' LT	215'
699+15.91	25.00' LT	696+95.91	13.00' LT	220'	696+95.91	13.00' LT	694+80.91	13.00' LT	215'
714+56.72	49.00' RT	717+39.60	61.00' RT	285'	717+39.60	61.00' RT	720+24.60	61.00' RT	285'
714+78.14	25.00' RT	717+62.19	13.00' RT	285'	717+62.19	13.00' RT	720+47.19	13.00' RT	285'
727+72.81	25.00' LT	724+87.81	13.00' LT	285'	724+87.81	13.00' LT	722+02.81	13.00' LT	285'
727+95.41	49.00' LT	725+10.41	61.00' LT	285'	725+10.41	61.00' LT	722+25.41	61.00' LT	285'
743+75.27	25.00' RT	745+95.00	13.00' RT	220'	745+95.00	13.00' RT	748+10.00	13.00' RT	215'
754+25.00	25.00' LT	752+05.00	13.00' LT	220'	752+05.00	13.00' LT	749+90.00	13.00' LT	215'
771+48.93	49.00' RT	773+68.93	61.00' RT	220'	773+68.93	61.00' RT	775+83.93	61.00' RT	215'
771+48.93	49.00' RT	773+68.93	61.00' RT	220'	773+68.93	61.00' RT	775+83.93	61.00' RT	215'
771+71.52	25.00' RT	773+91.52	13.00' RT	220'	773+91.52	13.00' RT	776+06.52	13.00' RT	215'
781+96.71	25.00' LT	779+77.14	13.00' LT	220'	779+77.14	13.00' LT	777+62.14	13.00' LT	215'
782+18.79	49.00' LT	779+99.73	61.00' LT	220'	779+99.73	61.00' LT	777+84.74	61.00' LT	215'
798+04.58	25.00' RT	800+24.96	13.00' RT	220'	800+24.96	13.00' RT	802+40.13	13.00' RT	215'
808+42.10	25.00' LT	806+22.10	13.00' LT	220'	806+22.10	13.00' LT	804+07.10	13.00' LT	215'
808+42.68	49.00' LT	806+22.68	61.00' LT	220'	806+22.68	61.00' LT	804+07.30	61.00' LT	215'

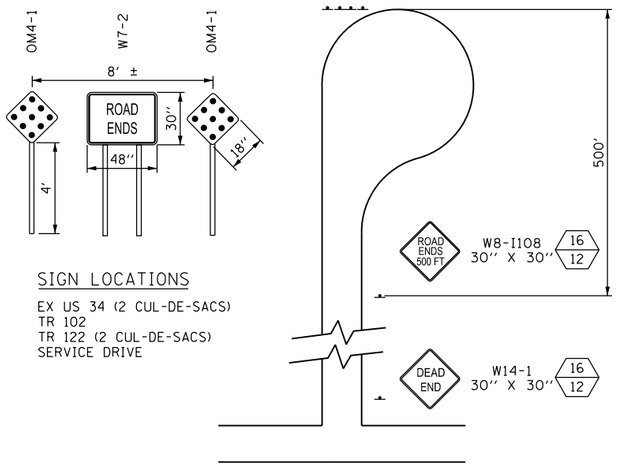
FILE NAME = D468409-SHT-12-DETAILS-TURN_LANES.dgn	USER NAME = zachl	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
TURN LANES

SCALE: 1"=50' | SHEET NO. 12 OF 21 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	533
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



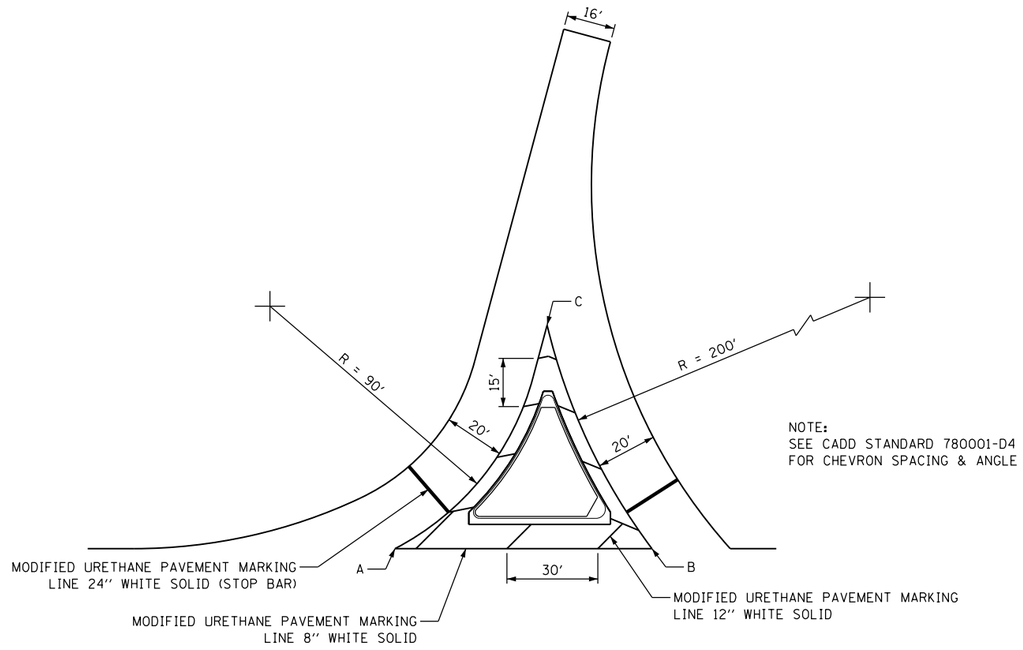
SIGN LOCATIONS

EX US 34 (2 CUL-DE-SACS)
TR 102
TR 122 (2 CUL-DE-SACS)
SERVICE DRIVE

SIGNING FOR CUL-DE-SAC ROAD CLOSURES

DEAD END SIGN LOCATIONS

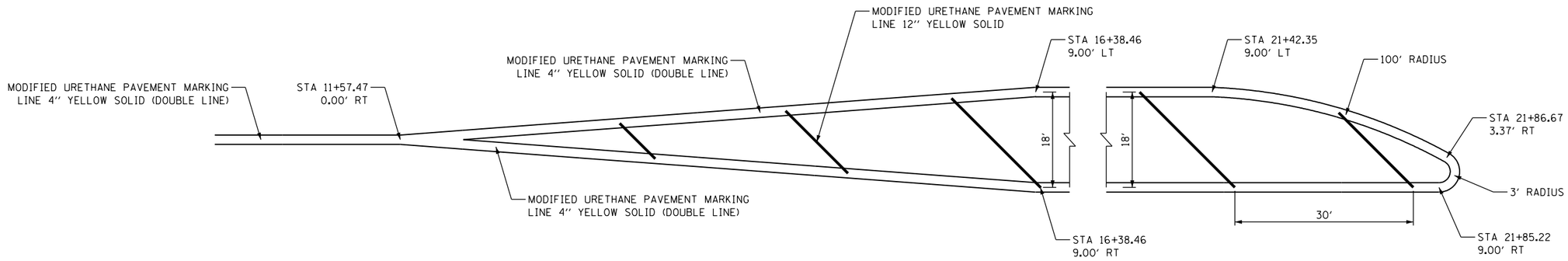
SOUTHWEST QUADRANT INTERSECTION TR 102 & EX US 34
SOUTHWEST QUADRANT INTERSECTION TR 122 & EX US 34
NORTHEAST QUADRANT INTERSECTION TR 122 & TR 119
SOUTHWEST QUADRANT INTERSECTION TR 190 & US ROUTE 34



DETAIL: PAINTED ISLAND RAMPS A & C

RAMP A			
POINT	STATION	OFFSET	LT/RT
A	21+76.85	9.47'	RT
B	21+54.90	72.48'	LT
C	20+92.60	20.00'	LT

RAMP C			
POINT	STATION	OFFSET	LT/RT
A	22+00.10	9.36'	RT
B	21+79.20	68.65'	LT
C	21+19.98	20.00'	LT



NOTE:
SEE CADD STANDARD 780001-D4
FOR CHEVRON SPACING & ANGLE

DETAIL: PAINTED MEDIAN IL 94/116

FILE NAME = D468409-SHT-13-DETAILS-PMK-SIGNS.dgn	USER NAME = zach1	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
PAVEMENT MARKING & SIGNING

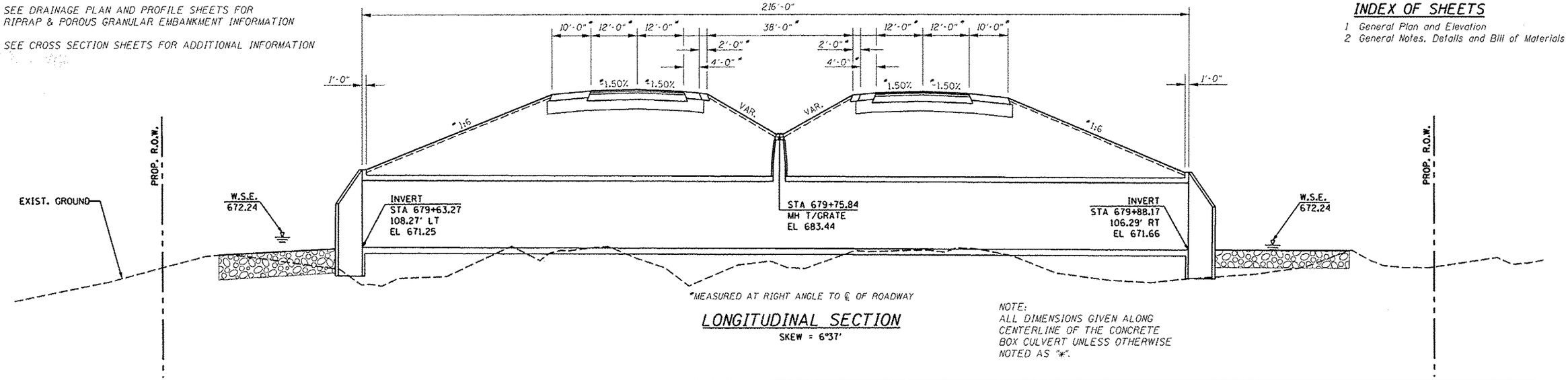
SCALE: NTS | SHEET 13 OF 21 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2; 6-1	HENDERSON	976	534
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

SEE DRAINAGE PLAN AND PROFILE SHEETS FOR RIPRAP & POROUS GRANULAR EMBANKMENT INFORMATION

SEE CROSS SECTION SHEETS FOR ADDITIONAL INFORMATION

INDEX OF SHEETS

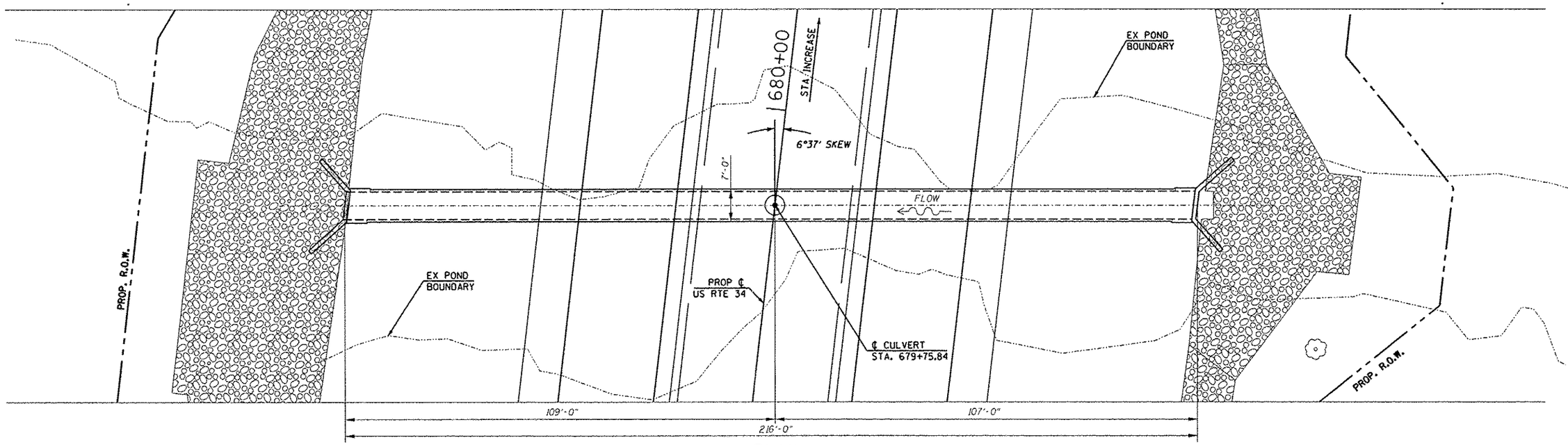


*MEASURED AT RIGHT ANGLE TO ℄ OF ROADWAY

LONGITUDINAL SECTION

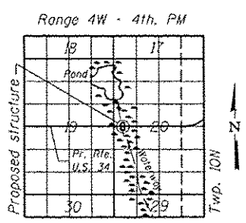
SKEW = 6°37'

NOTE:
ALL DIMENSIONS GIVEN ALONG CENTERLINE OF THE CONCRETE BOX CULVERT UNLESS OTHERWISE NOTED AS "*".

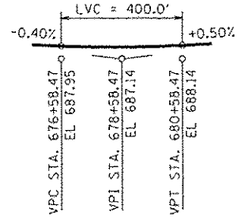


PLAN

N



LOCATION SKETCH



PROFILE GRADE

(along ℄ roadway)

DESIGNED	TCD
CHECKED	DSP
DRAWN	ZDL
CHECKED	DSP

TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS CULVERT DESIGN IS STRUCTURALLY ADEQUATE FOR THE DESIGN LOADING SHOW ON THE PLANS. THE DESIGN IS AN ECONOMICAL ONE FOR THE STYLE OF STRUCTURE AND COMPLIES WITH THE REQUIREMENTS OF THE CURRENT "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."

D.S.P. 10-17-12

STRUCTURAL ENGINEER PSBA — EXPIRES: 11/30/2012

LICENSED STRUCTURAL ENGINEER — DAVID S. POLAND 081-005124 — STATE OF ILLINOIS

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6th EDITION 2012 INTERIM REVISIONS

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi

GENERAL PLAN AND ELEVATION
C.I.P. 7' X 7' BOX CULVERT
F.A.P. RT. 313 - SEC. 7-2 : 6-1
HENDERSON COUNTY
STATION 679+75.84

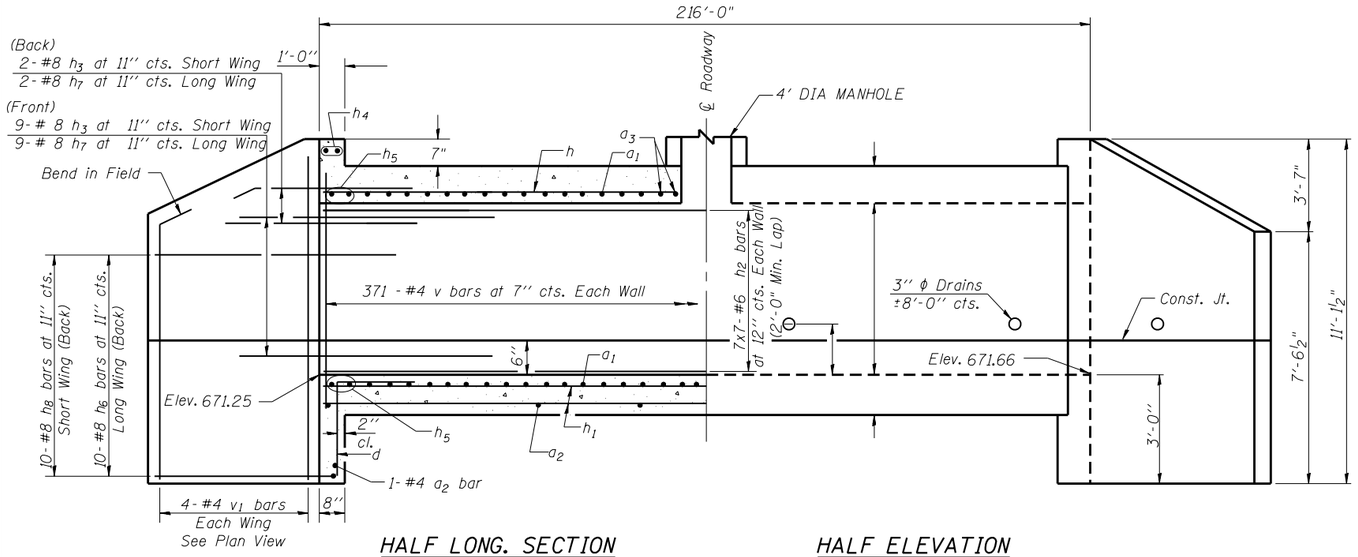
FILE NAME = D468489-SHT-14-DETAIL-7X7 BOX CULVERT.dgn	USER NAME = danw	DESIGNED - DBS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	DRAWN - PSBA	REVISED -
	PLOT DATE = 10/16/2012	CHECKED - CSB	REVISED -
		DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
CAST IN PLACE 7' X 7' BOX CULVERT

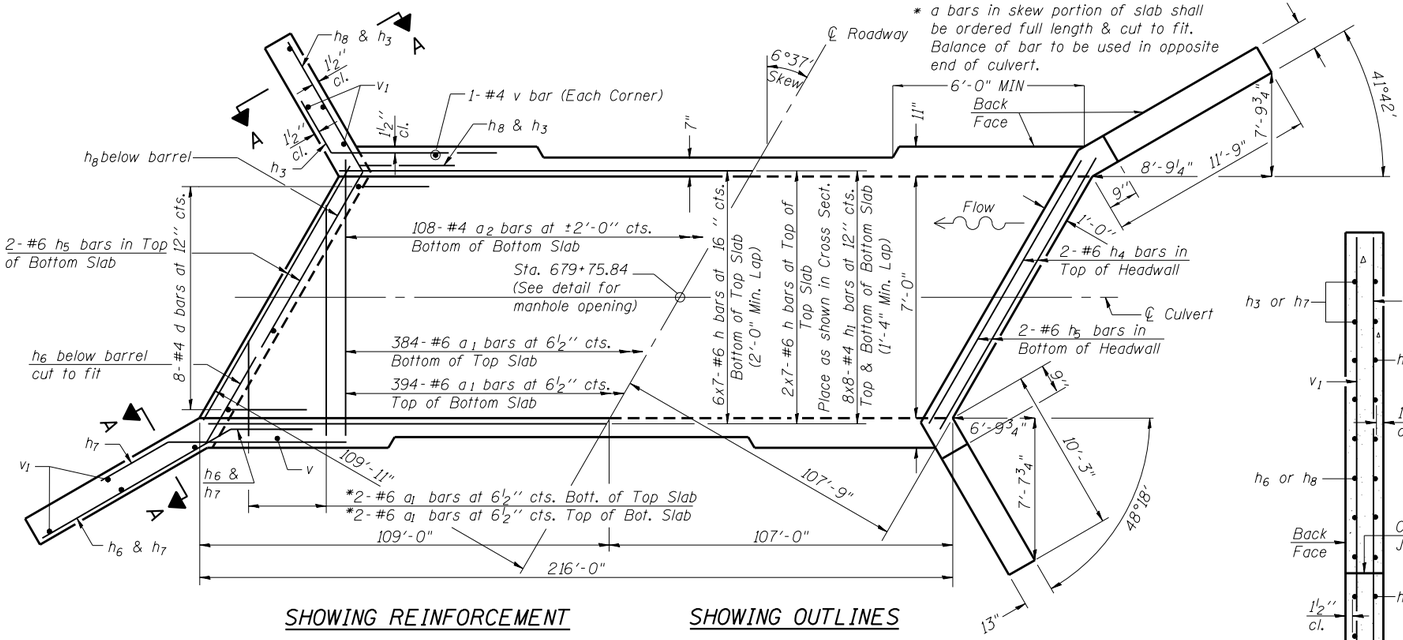
SCALE: NTS | SHEET 14 OF 21 SHEETS | STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 : 6-1	HENDERSON	976	535
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		



HALF LONG. SECTION

HALF ELEVATION

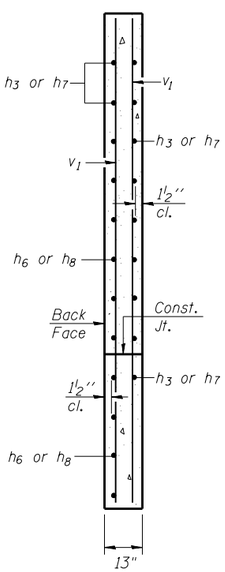


SHOWING REINFORCEMENT

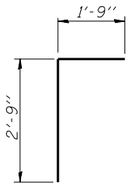
SHOWING OUTLINES

PLAN

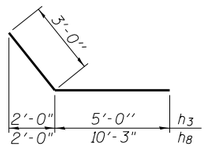
N



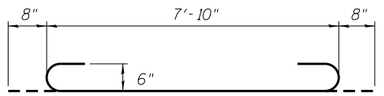
SECTION A-A



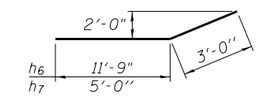
BAR d



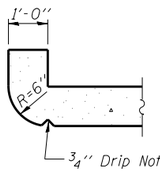
BARS h3 & h8



BAR a1

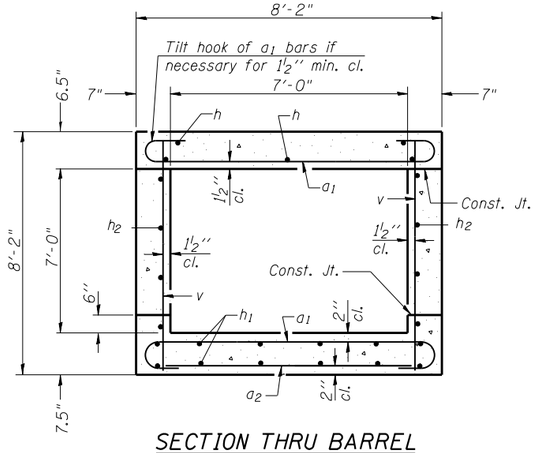


BARS h6 & h7

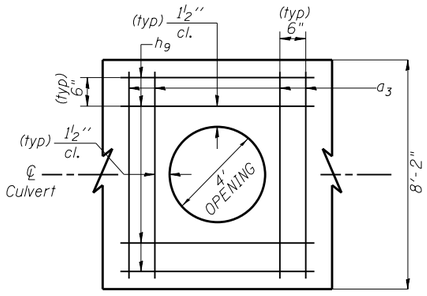


SECTION THRU HEADWALL

(Up Stream End Only)



SECTION THRU BARREL



DETAIL FOR MANHOLE OPENING

REINF. IN BOTTOM OF SLAB

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1	782	#6	9'-2''	
a2	110	#4	7'-3''	
a3	4	#8	7'-3''	
d	16	#4	4'-6''	
h	56	#6	32'-7"	
h1	128	#4	28'-2"	
h2	98	#6	32'-7"	
h3	22	#8	8'-0''	
h4	4	#6	8'-1''	
h5	8	#6	8'-1''	
h6	20	#8	14'-9''	
h7	22	#8	8'-0''	
h8	20	#8	13'-3''	
h9	4	#6	8'-0''	
v	742	#4	7'-10''	
v1	16	#4	10'-9''	
Porous Granular Embankment			Cu. Yd.	861
Concrete Box Culverts			Cu. Yd.	162.0
Reinforcement Bars			Pound	28,000

DESIGN STRESSES

fy = 60,000 psi
f'c = 3,500 psi

LOADING HL-93

NOTES

A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.

DESIGNED	TCD
CHECKED	DSP
DRAWN	ZDL
CHECKED	DSP

SSB-H-R 7-1-10

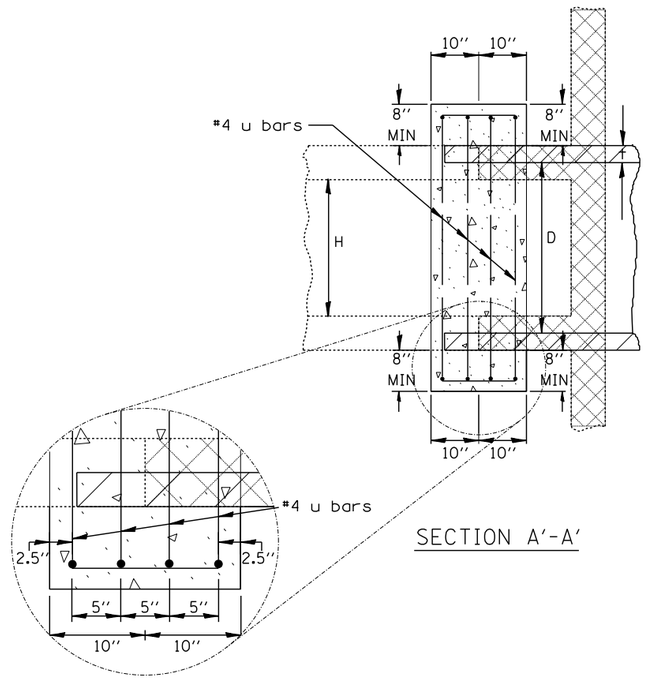
FILE NAME = D468409-SHT-15-DETAIL-7X7 BOX CULVERT_2.dgn	USER NAME = zachl	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 '/ in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

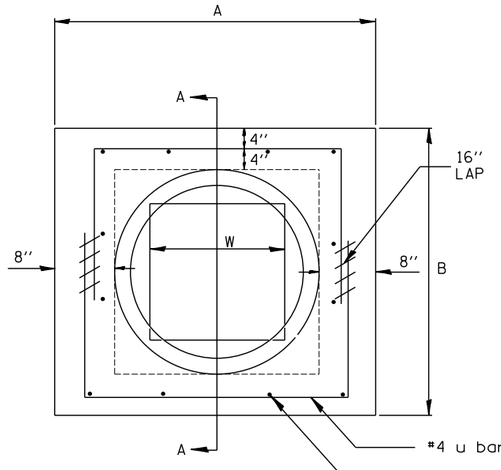
SPECIAL DETAILS
CAST IN PLACE 7' X 7' BOX CULVERT

SCALE: NTS | SHEET 15 OF 21 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	536
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		

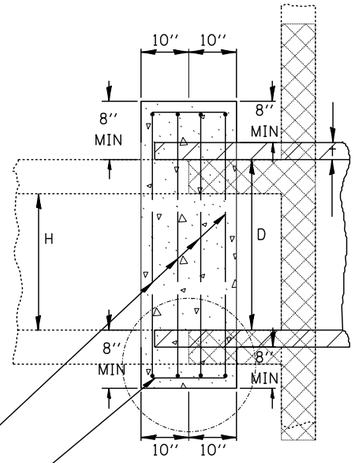


SECTION A'-A'

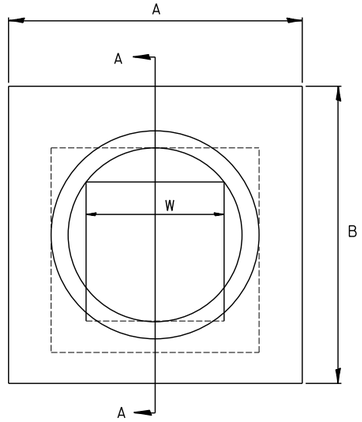


END VIEW

DOWN STREAM



SECTION A'-A'



END VIEW

UP STREAM

#4 u bars
8 REQUIRED EACH COLLAR

Existing Headwall Removal

CONCRETE COLLAR SCHEDULE

STATION	OFFSET	SKEW	EXISTING BOX CULVERT (WxH)	PROPOSED CULVERT			COLLAR		REINFORCEMENT BARS										POUNDS	CONC COLLAR CLASS SI
				D	O.D.	t			h BAR			U BAR								
				IN	IN	IN	A	B	NO	SIZE	LENGTH	NO	SIZE	X	Y	LAP	LENGTH		CU YD
US ROUTE 34																				
809+96.50	7.97' RT	0	2'x2'	36	44	4	5'-0"	5'-0"	20	#4	1'-3"	8	#4	4'4"	2'-10"	1'-4"	10'-0"	70.1	1.0
821+91.60	85.00' RT	0	2'x2'	30	37	3.5	4'-5"	4'-5"	16	#4	1'-3"	8	#4	3'-9"	2'-7"	1'-4"	8'-11"	61.0	0.8
TOTAL																		**131.1**	**1.8**
USE																		**140**	**1.8**

GENERAL NOTES

1. The collar shall be constructed entirely of class SI concrete and in accordance with the applicable portions of section 503 of the Standard Specifications. Reinforcement bars shall conform to section 508.
2. This work will be paid for by the cubic yard for CONCRETE COLLAR, and by the pound for REINFORCEMENT BARS.
3. Class SI quantity is only an estimate. Revise based on Thickness of existing box wall thickness.
4. A portion of the reinforced concrete box culvert barrel shall be removed to accommodate the concrete collar. This work shall be included in the cost of CONCRETE HEADWALL REMOVAL or CULVERT REMOVAL.

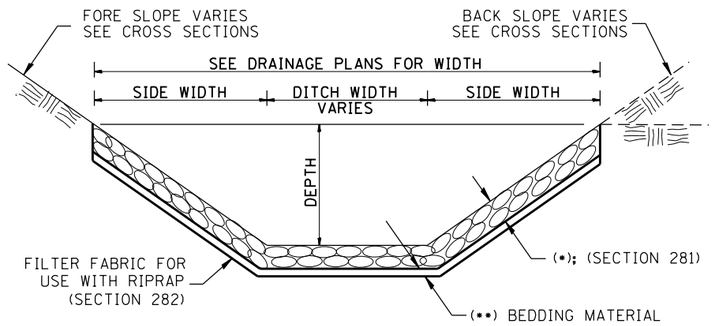
FILE NAME = $FILES$	USER NAME = $USER$	DESIGNED - DBS	REVISED - -
		DRAWN - PSBA	REVISED - -
	PLOT SCALE = $SCALE$	CHECKED - CSB	REVISED - -
	PLOT DATE = $DATE$	DATE - 10/2012	REVISED - -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
CONCRETE COLLAR AND CULVERT EXTENSION

SCALE: N.A. | SHEET NO. 16 OF 21 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2; 6-1	HENDERSON	976	537
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		



CASE 1

(DITCH)

DEPTH	SIDE WIDTH	
	1:3 SLOPE	1:6 SLOPE
6''	1.5'	3.0'
12''	3.0'	6.0'
18''	4.5'	9.0'
24''	6.0'	12.0'

NOTE:
IN TRANSITIONAL AREAS, SIDE WIDTH WILL VARY ACCORDING TO SIDE SLOPE

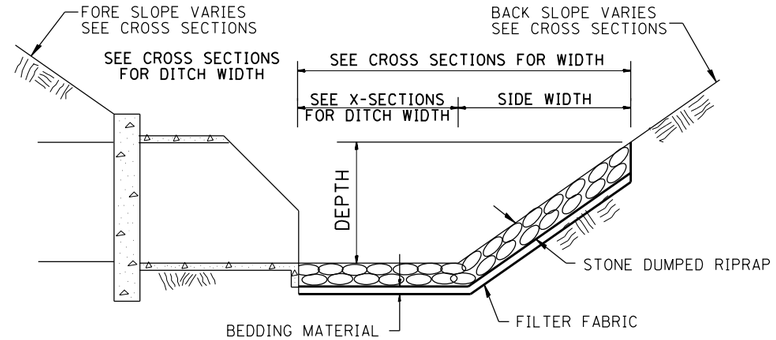
GRADATION	MIN. THICKNESS	BEDDING THICKNESS
6''	1.5'	---
12''	3.0'	6''
18''	4.5'	8''
24''	6.0'	10''

NOTES

THE EXACT LENGTH, WIDTH AND DEPTH FOR RIPRAP PLACEMENT WILL BE DETERMINED BY THE ENGINEER.

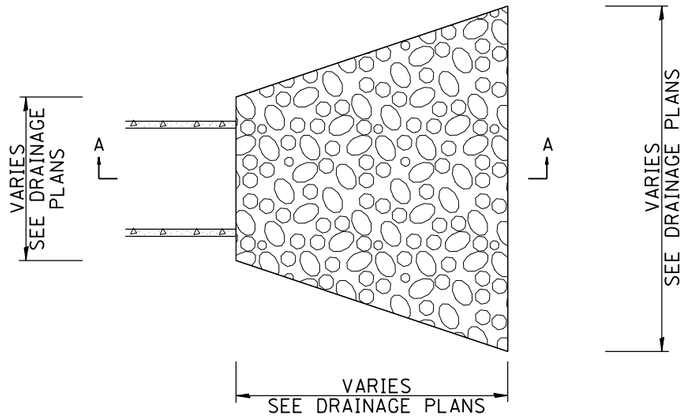
THE RIPRAP MATERIAL SHALL CONFORM TO CLASS A OR CLASS B QUALITY.

FILTER FABRIC WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR FILTER FABRIC FOR USE WITH RIPRAP.



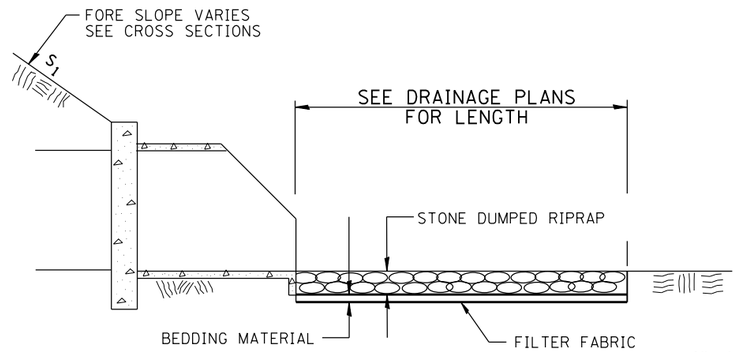
CASE 2

(CULVERT & SLOPE)



CASE 3

(OUTLET END RIPRAP APRON)



SECTION A-A

(CULVERT OUTLET-RIPRAP APRON)

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

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

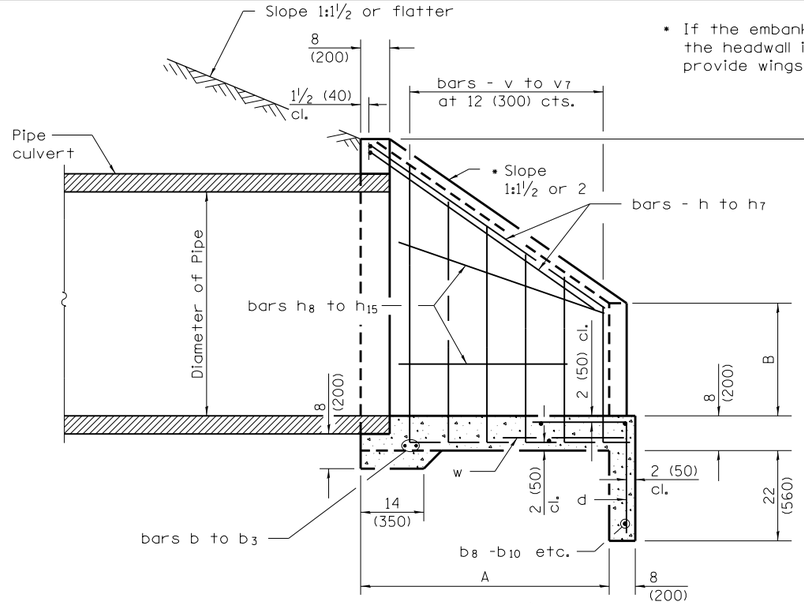
FILE NAME = D468409-SHT-17-DETAILS-RIPRAP DITCH FOR EROSION PROTECTION.dgn	USER NAME = zach1	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS
RIPRAP DITCH FOR EROSION PROTECTION

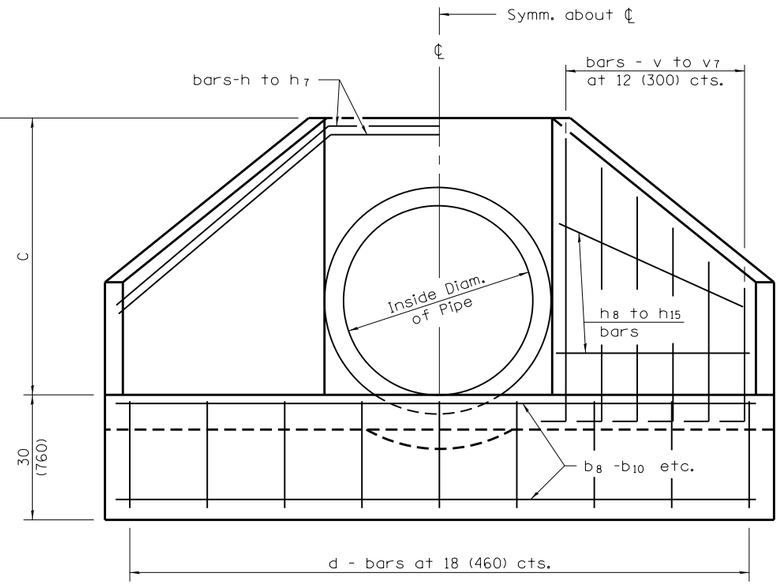
SCALE: | SHEET NO. 17 OF 21 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	538
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		

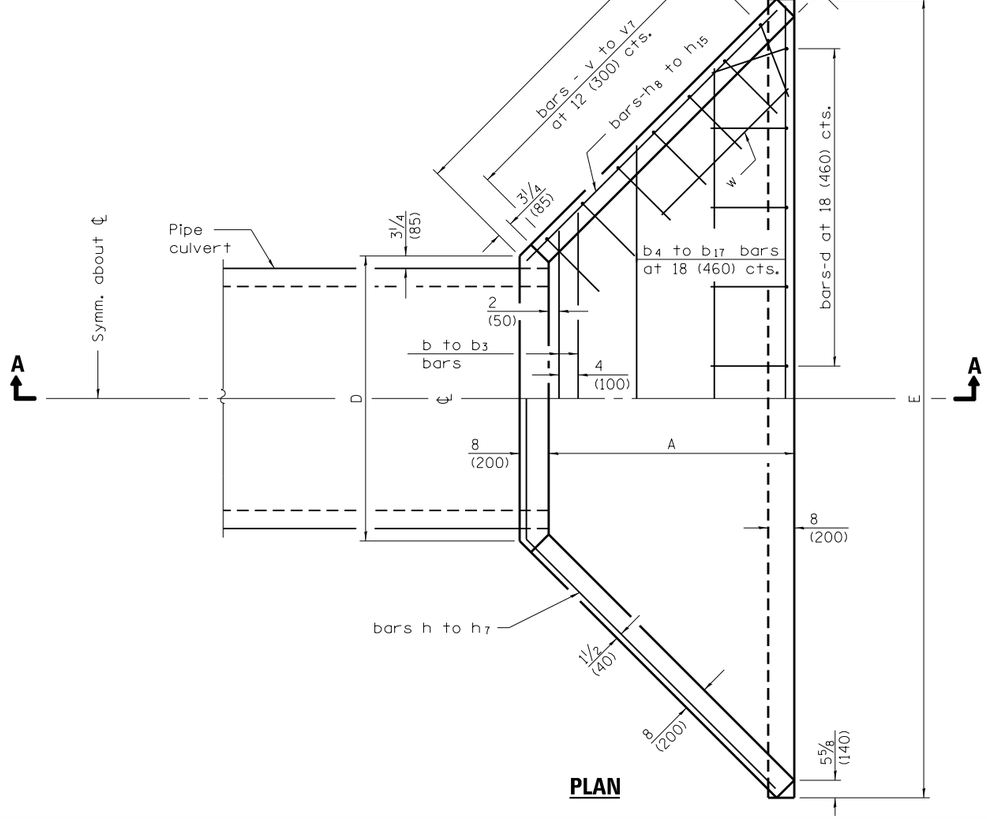


SECTION A-A

* If the embankment slope above the headwall is flatter than 1:2, provide wings for a 1:2 slope.



END ELEVATION



PLAN

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

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

FILE NAME = D468409-SHT-18-19-DETAILS-REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS 42-60.dgn	USER NAME = zach1	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

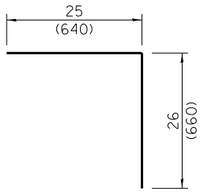
SPECIAL DETAILS
REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS 42" – 60"

SCALE: | SHEET NO. 18 OF 21 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	539
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		

DIMENSIONS OF STRAIGHT BARS

Bar	Size	Length
b	No. 5 (No. 16)	6′-3″ (1.9 m)
b_1	No. 5 (No. 16)	6′-9″ (2.06 m)
b_2	No. 5 (No. 16)	7′-3″ (2.21 m)
b_3	No. 5 (No. 16)	8′-0″ (2.44 m)
b_4	No. 4 (No. 13)	8′-3″ (2.51 m)
b_5	No. 4 (No. 13)	9′-0″ (2.74 m)
b_6	No. 4 (No. 13)	10′-0″ (3.05 m)
b_7	No. 4 (No. 13)	10′-6″ (3.2 m)
b_8	No. 4 (No. 13)	11′-3″ (3.43 m)
b_9	No. 4 (No. 13)	12′-0″ (3.66 m)
b_{10}	No. 4 (No. 13)	13′-0″ (3.96 m)
b_{11}	No. 4 (No. 13)	13′-6″ (4.11 m)
b_{12}	No. 4 (No. 13)	14′-3″ (4.34 m)
b_{13}	No. 4 (No. 13)	15′-0″ (4.75 m)
b_{14}	No. 4 (No. 13)	15′-6″ (4.72 m)
b_{15}	No. 4 (No. 13)	16′-6″ (5.03 m)
b_{16}	No. 4 (No. 13)	17′-0″ (5.18 m)
b_{17}	No. 4 (No. 13)	19′-0″ (5.79 m)
h_8	No. 4 (No. 13)	4′-9″ (1.45 m)
h_9	No. 4 (No. 13)	6′-3″ (1.9 m)
h_{10}	No. 4 (No. 13)	5′-3″ (1.6 m)
h_{11}	No. 4 (No. 13)	7′-3″ (2.2 m)
h_{12}	No. 4 (No. 13)	6′-0″ (1.83 m)
h_{13}	No. 4 (No. 13)	8′-0″ (2.44 m)
h_{14}	No. 4 (No. 13)	6′-6″ (1.98 m)
h_{15}	No. 4 (No. 13)	8′-9″ (2.67 m)
w	No. 4 (No. 13)	4′-0″ (1.22 m)



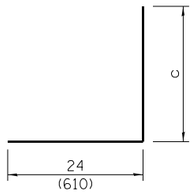
No. 4 (No. 13) BAR–d

BARS IN ONE END SECTION

42 (1050) Pipe				48 (1200) Pipe				54 (1350) Pipe				60 (1500) Pipe			
D42-1½ (D1.05-1½)		D42-2 (D1.05-2)		D48-1½ (D1.2-1½)		D48-2 (D1.2-2)		D54-1½ (D1.35-1½)		D54-2 (D1.35-2)		D60-1½ (D1.5-1½)		D60-2 (D1.5-2)	
Bars	No.	Bars	No.	Bars	No.	Bars	No.	Bars	No.	Bars	No.	Bars	No.	Bars	No.
d	8	d	9	d	9	d	10	d	10	d	12	d	11	d	13
b	2	b	2	b_1	2	b_1	2	b_2	2	b_2	2	b_3	2	b_3	2
b_5	1	b_4	1	b_7	1	b_6	1	b_5	1	b_5	1	b_7	1	b_7	1
b_8	2	b_8	1	b_{10}	2	b_{10}	1	b_9	1	b_9	1	b_{11}	1	b_{11}	1
		b_{11}	2			b_{14}	2	b_{12}	2	b_{13}	1	b_{14}	2	b_{15}	1
										b_{16}	2			b_{17}	2
h	2	h_1	2	h_2	2	h_1	2	h_4	2	h_5	2	h_6	2	h_7	2
h_8	4	h_9	4	h_{10}	4	h_9	4	h_{12}	4	h_{13}	4	h_{14}	4	h_{15}	4
v_3	2	v_3	2	v_2	2	v_2	2	v_1	2	v_1	2	v	2	v	4
v_4	2	v_4	2	v_3	2	v_3	4	v_2	2	v_2	4	v_1	2	v_1	2
v_5	2	v_5	4	v_4	2	v_4	2	v_3	2	v_3	2	v_2	2	v_2	2
v_6	2	v_6	2	v_5	2	v_5	2	v_4	2	v_4	2	v_3	2	v_3	4
v_7	2	v_7	2	v_6	2	v_6	4	v_5	2	v_5	4	v_4	2	v_4	2
								v_6	2	v_6	2	v_5	4	v_5	4
w	2	w	2	w	2	w	2	w	2	w	2	w	2	w	2

DIMENSIONS OF BENT BARS

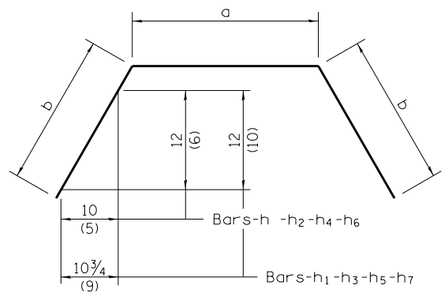
No. 5 (No. 16) - bars v to v_7			No. 5 (No. 16) - bars h to h_7			
BARS	c	TOTAL LENGTH	BARS	a	b	TOTAL LENGTH
v	6′-0″ (1.83 m)	8′-0″ (2.44 m)	h	4′-8″ (1.42 m)	5′-2″ (1.57 m)	15′-0″ (4.56 m)
v_1	5′-6″ (1.68 m)	7′-6″ (2.29 m)	h_1	4′-8″ (1.42 m)	6′-8″ (2.03 m)	18′-0″ (5.48 m)
v_2	5′-0″ (1.52 m)	7′-0″ (2.13 m)	h_2	5′-3″ (1.6 m)	5′-10½″ (1.79 m)	17′-0″ (5.18 m)
v_3	4′-6″ (1.37 m)	6′-6″ (1.98 m)	h_3	5′-3″ (1.6 m)	7′-6″ (2.29 m)	20′-3″ (6.18 m)
v_4	4′-0″ (1.22 m)	6′-0″ (1.83 m)	h_4	5′-10″ (1.78 m)	6′-7″ (2.01 m)	19′-0″ (5.78 m)
v_5	3′-6″ (1.07 m)	5′-6″ (1.68 m)	h_5	5′-10″ (1.78 m)	8′-4″ (2.54 m)	22′-6″ (6.86 m)
v_6	36 (920)	5′-0″ (1.53 m)	h_6	6′-5″ (1.96 m)	7′-2″ (2.18 m)	20′-9″ (6.32 m)
v_7	24 (610)	4′-6″ (1.22 m)	h_7	6′-5″ (1.96 m)	9′-3½″ (2.83 m)	25′-0″ (7.59 m)



BARS – v to v_7

DIMENSIONS AND QUANTITIES

Design No.	Nominal Inside Dia. of Pipe	Slope of Wing Walls	Dimensions A	B	C	D	E	F	Concrete 2 End Secs. cu. yds. (m^3)	Reinf. Bars 2 End Secs. lbs. (kg)
D42-1½ (D1.05-1½)	42 (1050)	1:1½	3′-4″ (1.01 m)	26 (660)	4′-4½″ (1.33 m)	4′-10″ (1.48 m)	11′-10½″ (3.63 m)	5′-0″ (1.52 m)	4.8 (3.7)	330 (150)
D42-2 (D1.05-2)	42 (1050)	1:2	4′-5″ (1.35 m)	26 (660)	1.33 m (1.33 m)	4′-10″ (1.48 m)	14′-0½″ (4.29 m)	6′-6¼″ (1.99 m)	6.2 (4.7)	400 (180)
D48-1½ (D1.2-1½)	48 (1200)	1:1½	3′-9″ (1.14 m)	29 (740)	4′-11″ (1.5 m)	5′-5″ (1.65 m)	13′-3½″ (4.05 m)	5′-7″ (1.7 m)	5.8 (4.4)	360 (163)
D48-2 (D1.2-2)	48 (1200)	1:2	5′-0″ (1.52 m)	29 (740)	4′-11″ (1.5 m)	5′-5″ (1.65 m)	15′-9½″ (4.82 m)	7′-4¼″ (2.24 m)	7.6 (5.8)	460 (210)
D54-1½ (D1.35-1½)	54 (1350)	1:1½	4′-2″ (1.27 m)	32 (815)	5′-5½″ (1.66 m)	6′-0″ (1.83 m)	14′-8½″ (4.49 m)	6′-2″ (1.88 m)	6.8 (5.2)	430 (195)
D54-2 (D1.35-2)	54 (1350)	1:2	5′-7″ (1.7 m)	32 (815)	5′-5½″ (1.66 m)	6′-0″ (1.83 m)	17′-6½″ (5.35 m)	8′-2″ (2.49 m)	9.2 (7.0)	550 (250)
D60-1½ (D1.5-1½)	60 (1500)	1:1½	4′-7″ (1.4 m)	35 (890)	6′-0″ (1.83 m)	6′-7″ (2.0 m)	16′-1½″ (4.91 m)	6′-9″ (2.06 m)	8.0 (6.1)	490 (223)
D60-2 (D1.5-2)	60 (1500)	1:2	6′-2″ (1.88 m)	35 (890)	6′-0″ (1.83 m)	6′-7″ (2.0 m)	19′-3½″ (5.88 m)	9′-0″ (2.74 m)	10.8 (8.3)	630 (285)



BARS – h to h_7

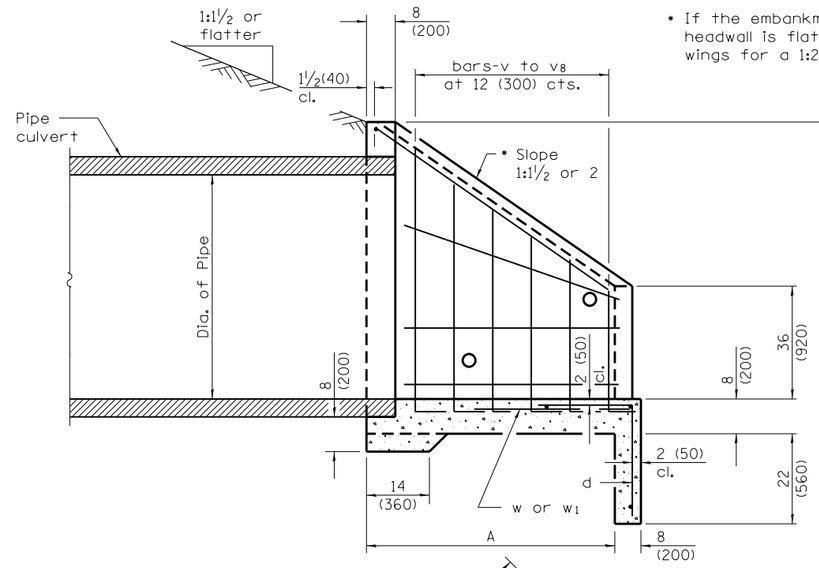
FILE NAME =	USER NAME = zachl	DESIGNED - DBS	REVISED -
D468409-SHT-18-19-DETAILS-REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS 42-60.DGN		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

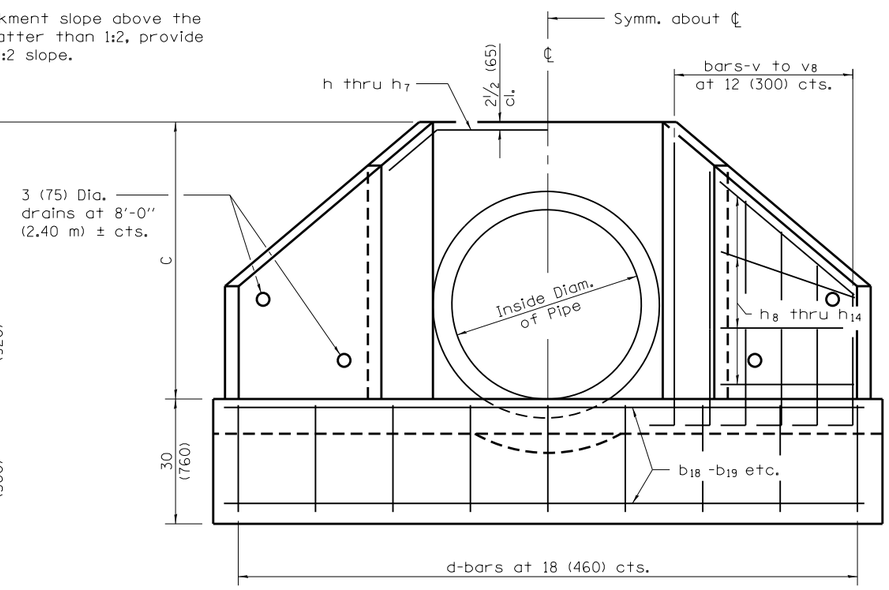
SPECIAL DETAILS
REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS 42″ – 60″

SCALE: | SHEET NO. 19 OF 21 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	540
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

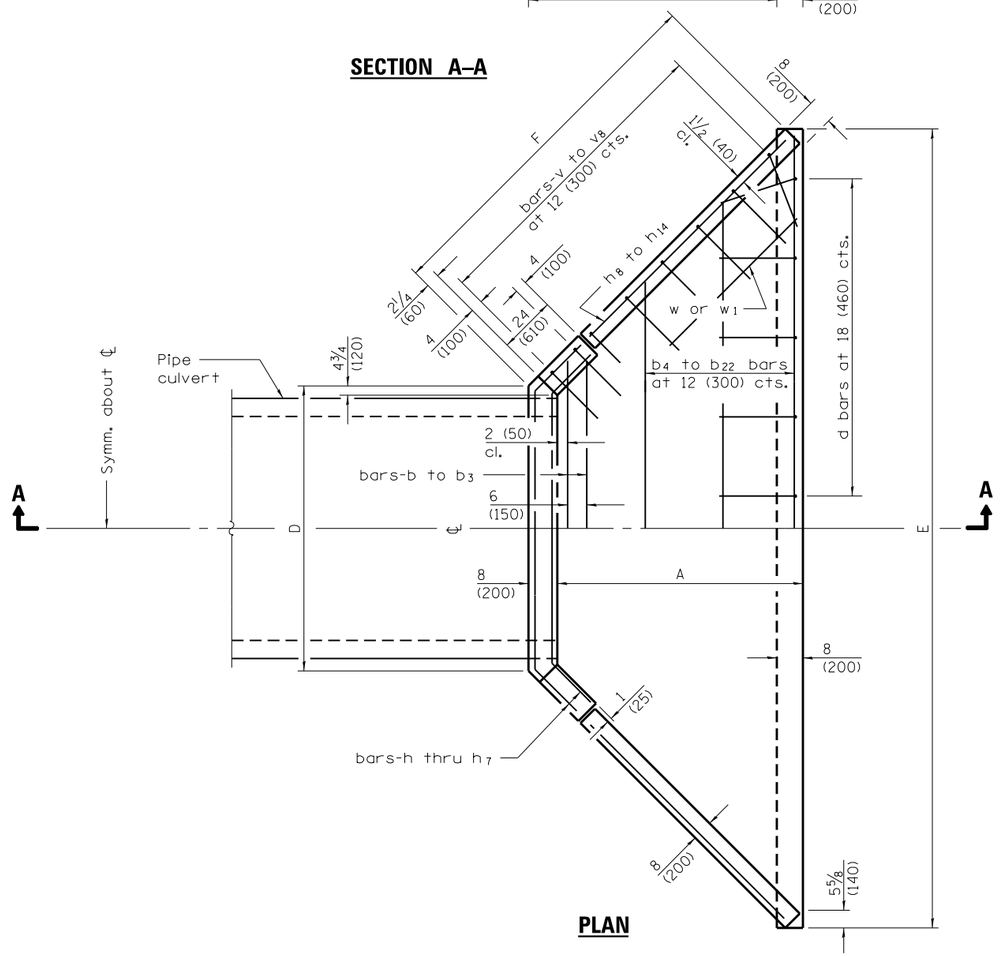


• If the embankment slope above the headwall is flatter than 1:2, provide wings for a 1:2 slope.

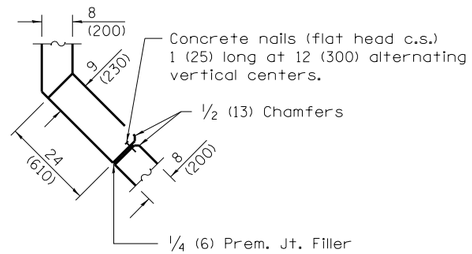


SECTION A–A

END ELEVATION



PLAN



CORNER DETAIL

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

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

FILE NAME = D468409-SHT-20-21-DETAILS-REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS 66-84.DGN	USER NAME = zach1	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

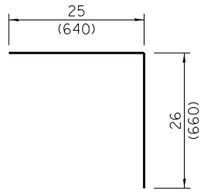
SPECIAL DETAILS
REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS 66" – 84"

SCALE: | SHEET NO. 20 OF 21 SHEETS | STA. | TO STA.

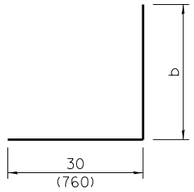
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	541
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		

DIMENSIONS OF STRAIGHT BARS

Bar	Size	Length	Bar	Size	Length
b	No. 5 (No. 16)	8′-3″ (2.51 m)	b_{16}	No. 4 (No. 13)	20′-3″ (6.17 m)
b_1	No. 5 (No. 16)	9′-0″ (2.74 m)	b_{17}	No. 4 (No. 13)	21′-0″ (6.4 m)
b_2	No. 5 (No. 16)	9′-6″ (2.9 m)	b_{18}	No. 4 (No. 13)	22′-6″ (6.86 m)
b_3	No. 5 (No. 16)	10′-3″ (3.12 m)	b_{19}	No. 4 (No. 13)	24′-0″ (7.32 m)
b_4	No. 4 (No. 13)	11′-3″ (3.43 m)	b_{20}	No. 4 (No. 13)	24′-9″ (7.54 m)
b_5	No. 4 (No. 13)	12′-0″ (3.66 m)	b_{21}	No. 4 (No. 13)	27′-0″ (8.23 m)
b_6	No. 4 (No. 13)	13′-0″ (3.96 m)	b_{22}	No. 4 (No. 13)	29′-6″ (8.99 m)
b_7	No. 4 (No. 13)	13′-6″ (4.11 m)	h_8	No. 4 (No. 13)	5′-3″ (1.6 m)
b_8	No. 4 (No. 13)	14′-0″ (4.27 m)	h_9	No. 4 (No. 13)	6′-6″ (1.98 m)
b_9	No. 4 (No. 13)	14′-9″ (4.5 m)	h_{10}	No. 4 (No. 13)	7′-6″ (2.29 m)
b_{10}	No. 4 (No. 13)	15′-6″ (4.72 m)	h_{11}	No. 4 (No. 13)	8′-9″ (2.67 m)
b_{11}	No. 4 (No. 13)	16′-3″ (4.95 m)	h_{12}	No. 4 (No. 13)	9′-3″ (2.82 m)
b_{12}	No. 4 (No. 13)	16′-9″ (5.11 m)	h_{13}	No. 4 (No. 13)	10′-9″ (3.28 m)
b_{13}	No. 4 (No. 13)	17′-6″ (5.33 m)	h_{14}	No. 4 (No. 13)	12′-3″ (3.73 m)
b_{14}	No. 4 (No. 13)	18′-6″ (5.64 m)	w	No. 4 (No. 13)	6′-0″ (1.83m)
b_{15}	No. 4 (No. 13)	19′-6″ (5.94 m)	w_1	No. 4 (No. 13)	10′-0″ (3.05 m)



No. 4 (No. 13) BAR–d



BARS – v to v_8

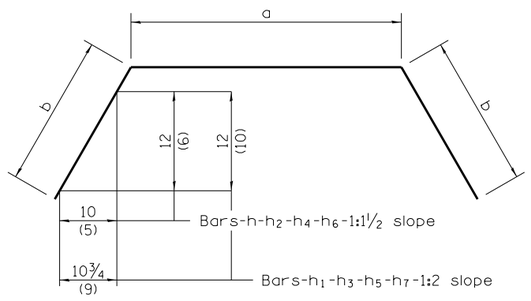
BARS IN ONE END SECTION

66 (1650) Pipe				72 (1800) Pipe				78 (1950) Pipe				84 (2100) Pipe			
66-1½ (1.65-1½)		66-2 (1.65-2)		72-1½ (1.8-1½)		72-2 (1.8-2)		78-1½ (1.95-1½)		78-2 (1.95-2)		84-1½ (2.1-1½)		84-2 (2.1-2)	
BARS	No.	BARS	No.	BARS	No.	BARS	No.	BARS	No.	BARS	No.	BARS	No.	BARS	No.
d	12	d	14	d	14	d	17	d	16	d	19	d	17	d	20
b	2	b	2	b_1	2	b_1	2	b_2	2	b_2	2	b_3	2	b_3	2
b_4	1	b_4	1	b_5	1	b_5	1	b_5	1	b_5	1	b_6	1	b_6	1
b_7	1	b_7	1	b_8	1	b_8	1	b_8	1	b_9	1	b_9	1	b_9	1
b_{10}	1	b_{10}	1	b_{11}	1	b_{11}	1	b_{11}	1	b_{11}	1	b_{12}	1	b_{12}	1
b_{13}	2	b_{13}	1	b_{14}	1	b_{14}	1	b_{14}	1	b_{14}	1	b_{14}	1	b_{14}	1
		b_{15}	1	b_{16}	2	b_{16}	1	b_{16}	1	b_{17}	1	b_{17}	1	b_{17}	1
		b_{17}	2			b_{18}	1	b_{18}	2	b_{18}	1	b_{18}	1	b_{18}	1
						b_{19}	2			b_{20}	1	b_{19}	2	b_{20}	1
										b_{21}	2			b_{21}	1
														b_{22}	2
h	2	h_1	2	h_2	2	h_3	2	h_4	2	h_5	2	h_6	2	h_7	2
h_8	8	h_{10}	8	h_9	10	h_{12}	10	h_{10}	12	h_{13}	12	h_{11}	12	h_{14}	12
								v	4	v	4	v	4	v	4
v	4	v	4	v	4	v	4	v_1	4	v_1	8	v_1	4	v_1	6
v_1	4	v_1	6	v_1	4	v_1	8	v_2	4	v_2	6	v_2	4	v_2	4
v_2	4	v_2	4	v_2	4	v_3	6	v_4	4	v_4	6	v_4	4	v_4	6
v_4	8	v_4	10	v_4	10	v_5	10	v_5	8	v_6	8	v_6	4	v_6	6
												v_7	8	v_8	8
h_8	4	h_9	4	h_8	4	h_{10}	4	h_9	4	h_{11}	4	h_{10}	4	h_{12}	4
w	2	w	2	w	2	w_1	2	w	2	w_1	2	w_1	2	w_1	2

DIMENSIONS OF BENT BARS

No. 5 (No. 16) - bars v to v_8		
BAR	b	TOTAL LENGTH
v	39 (990)	5′-9″ (1.75 m)
v_1	4′-0″ (1.22 m)	6′-6″ (1.98 m)
v_2	5′-0″ (1.52 m)	7′-6″ (2.28 m)
v_3	5′-6″ (1.68 m)	8′-0″ (2.44 m)
v_4	6′-0″ (1.83 m)	8′-6″ (2.59 m)
v_5	6′-6″ (1.98 m)	9′-0″ (2.74 m)
v_6	7′-0″ (2.13 m)	9′-6″ (2.89 m)
v_7	7′-6″ (2.29 m)	10′-0″ (3.05 m)
v_8	8′-0″ (2.44 m)	10′-6″ (3.2 m)

No. 5 (No. 16) - bars h to h_7			
BAR	a	b	TOTAL LENGTH
h	7′-0″ (2.13 m)	24 (610)	11′-0″ (3.35 m)
h_1	7′-0″ (2.13 m)	24 (610)	11′-0″ (3.35 m)
h_2	7′-7″ (2.31 m)	23½ (600)	11′-6″ (3.51 m)
h_3	7′-7″ (2.31 m)	23½ (600)	11′-6″ (3.51 m)
h_4	8′-2″ (2.49 m)	23 (580)	12′-0″ (3.65 m)
h_5	8′-2″ (2.49 m)	23 (580)	12′-0″ (3.65 m)
h_6	8′-9″ (2.67 m)	24 (610)	12′-9″ (3.89 m)
h_7	8′-9″ (2.67 m)	24 (610)	12′-9″ (3.89 m)



BARS – h to h_7

DIMENSIONS AND QUANTITIES

Design No.	Nominal Inside Dia. of Pipe	Slope of Wing Walls	Dimensions A	C	D	E	F	Concrete 2 End Secs. cu. yds. (m^3)	Reinf. Bars 2 End Secs. lbs. (kg)
D66-1½ (D1.65-½)	66 (1650)	1:1½	5′-4″ (1.65 m)	6′-6½″ (2.0 m)	7′-4½″ (2.25 m)	18′-5″ (5.63 m)	7′-10″ (2.39 m)	10.2 (7.8)	660 (300)
D66-2 (D1.65-2)	66 (1650)	1:2	7′-1″ (2.18 m)	6′-6½″ (2.0 m)	7′-4½″ (2.25 m)	21′-11″ (6.69 m)	10′-3½″ (3.14 m)	13.5 (10.3)	820 (372)
D72-1½ (D1.8-1½)	72 (1800)	1:1½	6′-2″ (1.9 m)	7′-1″ (2.16 m)	7′-11½″ (2.43 m)	20′-8″ (6.3 m)	9′-0″ (2.74 m)	12.4 (9.5)	770 (350)
D72-2 (D1.8-2)	72 (1800)	1:2	8′-2″ (2.51 m)	7′-1″ (2.16 m)	7′-11½″ (2.43 m)	24′-8″ (7.54 m)	11′-10″ (3.61 m)	16.5 (12.6)	1020 (463)
D78-1½ (D1.95-1½)	78 (1950)	1:1½	6′-11″ (2.12 m)	7′-7½″ (2.32 m)	8′-6½″ (2.6 m)	22′-9″ (6.93 m)	10′-0½″ (3.06 m)	14.5 (11.1)	910 (413)
D78-2 (D1.95-2)	78 (1950)	1:2	9′-3″ (2.82 m)	7′-7½″ (2.32 m)	8′-6½″ (2.6 m)	27′-5″ (8.37 m)	13′-4½″ (4.08 m)	19.6 (15.0)	1210 (550)
D84-1½ (D2.1-1½)	84 (2100)	1:1½	7′-9″ (2.38 m)	8′-2″ (2.49 m)	9′-1½″ (2.78 m)	25′-0″ (7.63 m)	11′-3″ (3.43 m)	17.1 (13.1)	1090 (495)
D84-2 (D2.1-2)	84 (2100)	1:2	10′-4″ (3.17 m)	8′-2″ (2.49 m)	9′-1½″ (2.78 m)	30′-2″ (9.2 m)	14′-10¾″ (4.54 m)	23.2 (17.7)	1360 (617)

FILE NAME = D468409-SHT-20-21-DETAILS-REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS 66-84 INCH	USER NAME = zachl	DESIGNED - DBS	REVISED -
		DRAWN - PSBA	REVISED -
	PLOT SCALE = 100.0000 ′ / in.	CHECKED - CSB	REVISED -
	PLOT DATE = 10/16/2012	DATE - 10/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

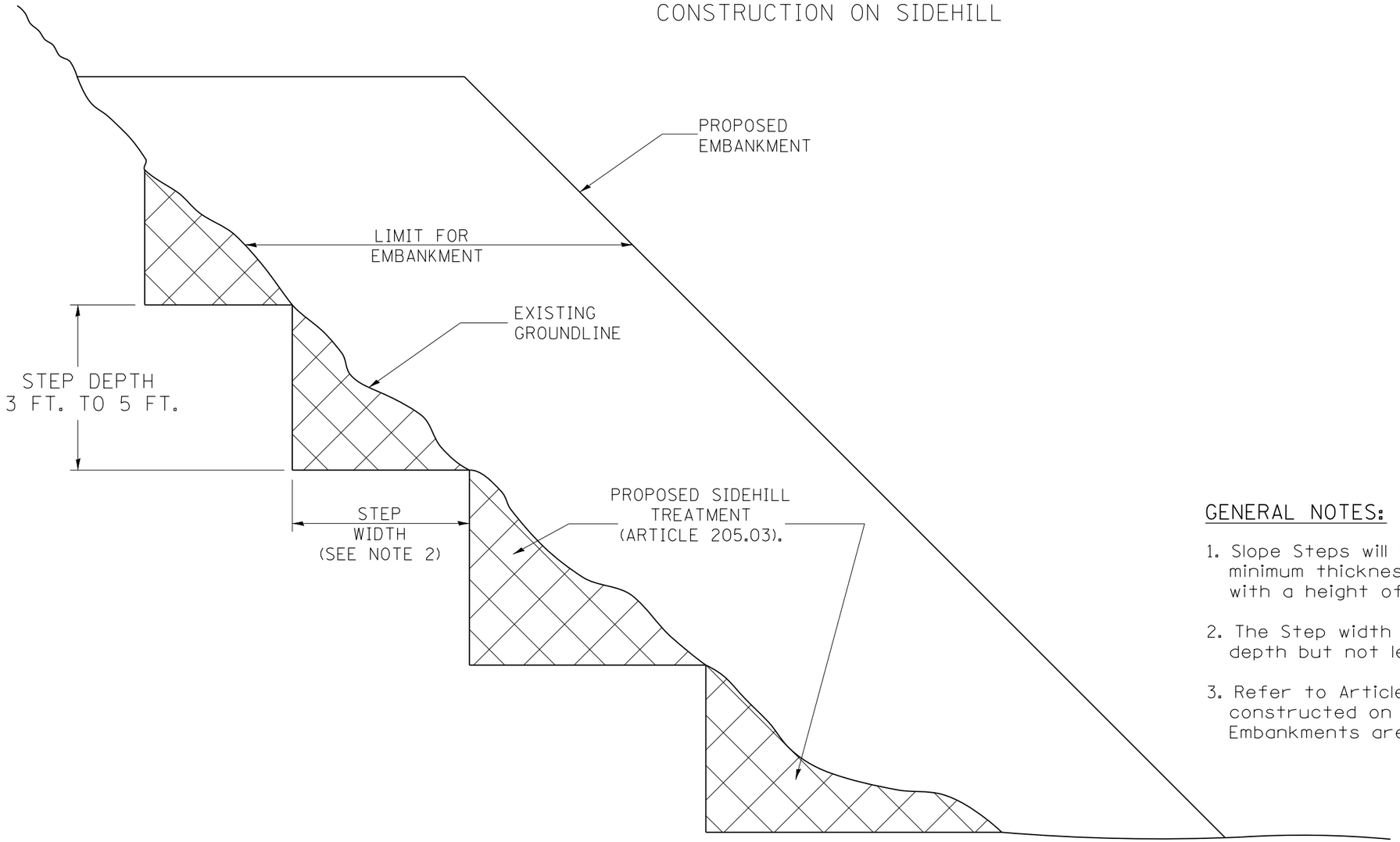
SPECIAL DETAILS
REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS 66″ – 84″

SCALE: | SHEET NO. 21 OF 21 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	542
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

SLOPE STEPS DETAIL

TYPICAL CROSS-SECTION EMBANKMENT
CONSTRUCTION ON SIDEHILL



GENERAL NOTES:

1. Slope Steps will be required for all 12(300) minimum thickness "silver fills" and on a fills with a height of 10'(3.0m).

2. The Step width shall be twice the Step depth but not less than 6 feet.

3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

REPLACEMENT MATERIAL:

STANDARD EMBANKMENT
(IN ACCORDANCE WITH
205 OF THE STANDARD SPECIFACATION).

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

1-1-97	RENUM. L-5.03, NEW REVISION BOX, REVISED TITLE	T.P.									
	BOX, REVISED GENERAL NOTES.										
10-16-06	REVISED TO 2007 SPEC.	M.A.									

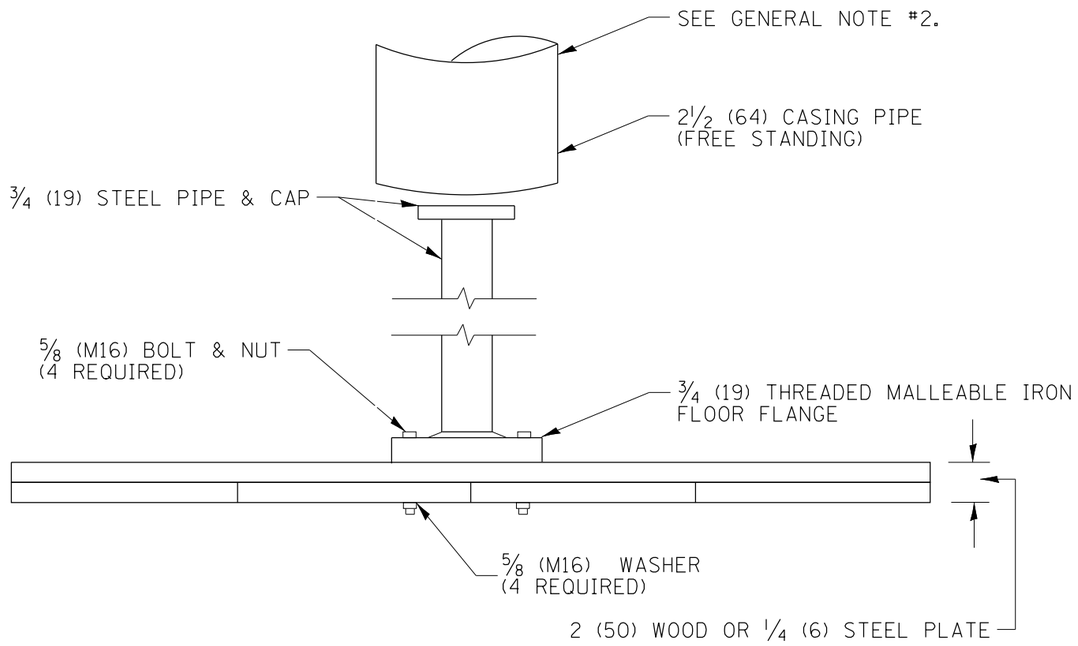
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

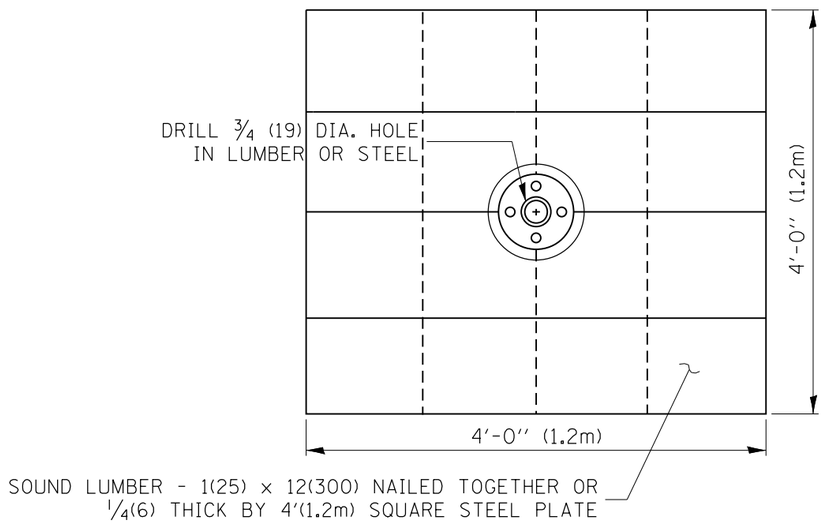
SLOPE STEPS DETAIL

NOT TO SCALE

CADD STD. 205001-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	543
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





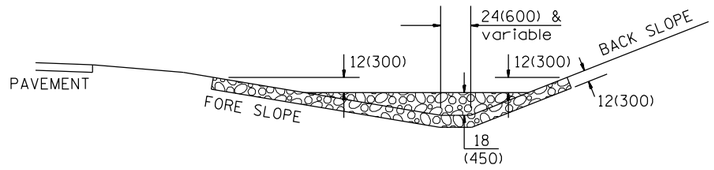
GENERAL NOTES:

1. Settlement Platform shall be in accordance with the appicable portions of Article 204.06 of the Standard Specifications.

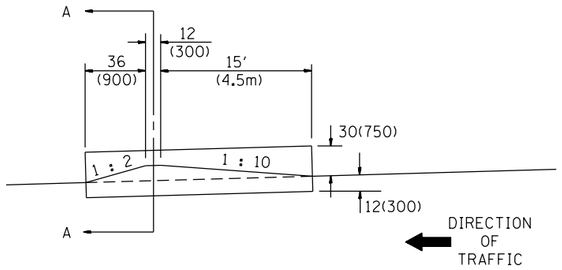
2. Do Not install casing pipe until after one section of 3/4"(19 mm) has been covered with earth. The casing pipe should not rest on platform.

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

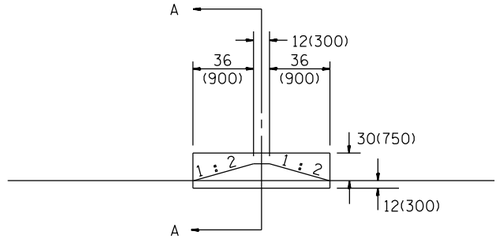
1-1-97	RENUM. L-5.04, NEW REVISION BOX, REVISED NOTES,	T.P.	8-23-01	UPDATE FOR NEW SPEC.	M.A.	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SETTLEMENT PLATFORM	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	REVISED TITLE BOX		10-16-06	REVISED TO 2007 SPEC.	M.A.			313	7-2 ; 6-1	HENDERSON	976	544
4-14-99	ADDED "CASING PIPE" REQUIREMENT	J.A.								CONTRACT NO. 68409		
5-19-99	CORRECTIONS TO CASING PIPE	J.A.					NOT TO SCALE CADD STD. 205101-D4	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SECTION A - A

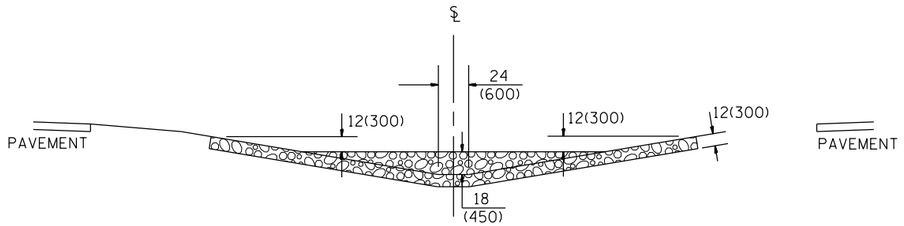


SIDE VIEW
(WITHIN CLEAR ZONE)

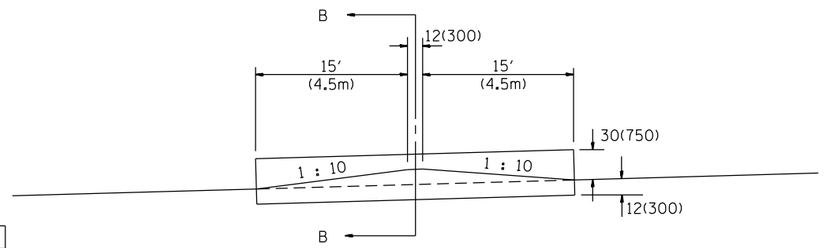


SIDE VIEW
(OUTSIDE OF CLEAR ZONE)

SIDE DITCH AGGREGATE DITCH CHECK



SECTION B - B



SIDE VIEW

MEDIAN AGGREGATE DITCH CHECK

NOTES:

1. FOR DITCH BOTTOM PROTECTED BY EROSION CONTROL BLANKET, USE 400'(120m) SPACING.
   FOR SEEDED DITCH BOTTOM, USE 200'(60m) SPACING.
2. THIS WORK CONSISTS OF THE COMPLETE INSTALLTION OF EROSION CONTROL DITCH CHECK AT LOCATIONS AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. THE AGGREGATE GRADATION SHALL BE RR3 WITH A MINIMUM QUALITY OF CLASS B.

LOCATION				NUMBER OF DITCH CHECKS	FORE SLOPE	DITCH BOTTOM WIDTH	BACK SLOPE	BERM SLOPE
STATION	MEDIAN	SIDE DITCH LEFT	SIDE DITCH RIGHT					

SEE AGGREGATE DITCH CHECK SCHEDULE IN PLANS

ESTIMATE QUANTITIES

	FORE SLOPE	DITCH BOTTOM	BACK SLOPE	BERM SLOPE	AGGREGATE DITCH CHECK * EROSION CONTROL TON (METRIC TON)
MEDIAN DITCH	1 : 6	24(600)	—	1 : 10	95(86)
SIDE DITCH	1 : 6	24(600)	1 : 4	1 : 10 & 1 : 2	50(45)
SIDE DITCH	1 : 6	24(600)	1 : 4	1 : 2 & 1 : 2	19(17)
SIDE DITCH	1 : 4	24(600)	1 : 3	1 : 10 & 1 : 2	18(16)
SIDE DITCH	1 : 4	24(600)	1 : 3	1 : 2 & 1 : 2	14(13)
SIDE DITCH	1 : 3	24(600)	1 : 3	1 : 2 & 1 : 2	12(11)
SIDE DITCH	1 : 3	48(1200)	1 : 3	1 : 2 & 1 : 2	14(13)
SIDE DITCH	1 : 3.4	48(1200)	1 : 3	1 : 2 & 1 : 2	15(14)
SIDE DITCH	1 : 3 / 1 : 6	48(1200)	1 : 3	1 : 2 & 1 : 2	17(15)
SIDE DITCH	1 : 4	48(1200)	1 : 3	1 : 2 & 1 : 2	16(15)

* 0.065 TON/FT³

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

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

QUANTITIES

CALC. BY: _____ DATE:

CHECKED BY: _____ DATE:

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

1-1-97	RENUM. A-12.04, NEW REVISION BOX, REVISED TITLE	T.P.
	BOX, ADDED QUANTITY CALCULATION BOX	
9-15-05	REVISED DESIGNER NOTE	M.A.
10-16-06	REVISED RR3 QUALITY & TO 2007 SPEC.	M.A.

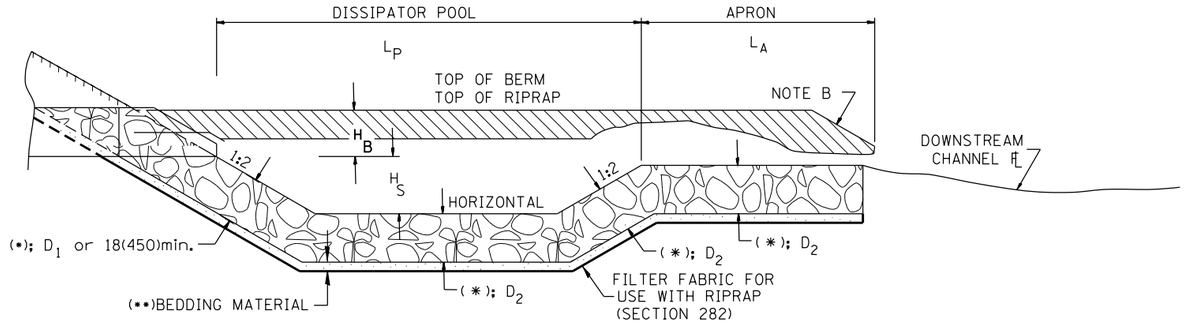
03-15-12	CHANGED NOTE 1.	R.D.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

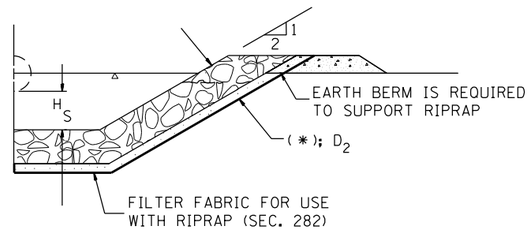
EROSION CONTROL AGGREGATE DITCH CHECK

NOT TO SCALE — CADD STD. 280101-D4

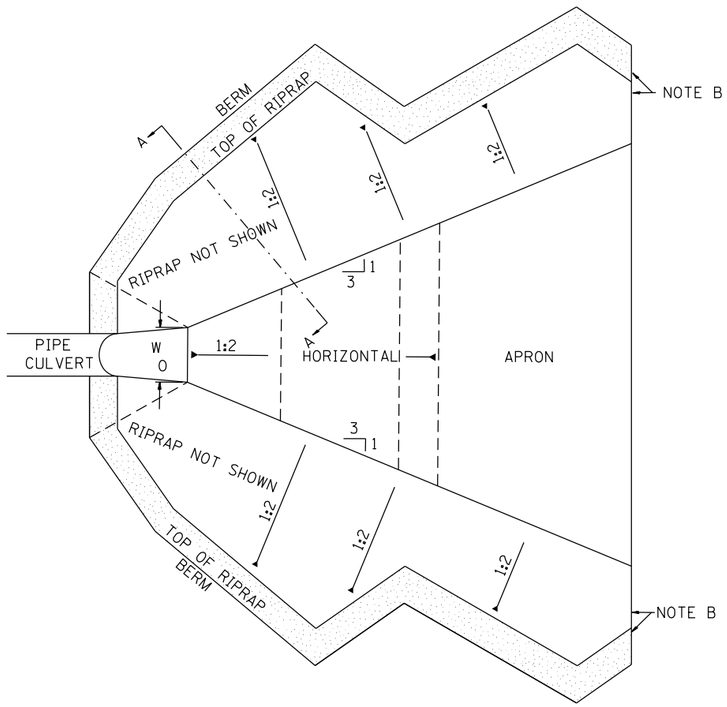
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	545
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



℄ SECTION



SECTION A-A



TOP VIEW

STATION	W_O	L_P	L_A	H_S	H_B	(*) D_1	(*) D_2	(**) D_3
	FT	FT	FT	FT	FT	FT	FT	IN
663+15	6.0	18.6	9.3	1.9	2.6	2.4	1.8	6.0

NOTE B: WARP BASIN TO CONFORM TO NATURAL STREAM CHANNEL

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

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

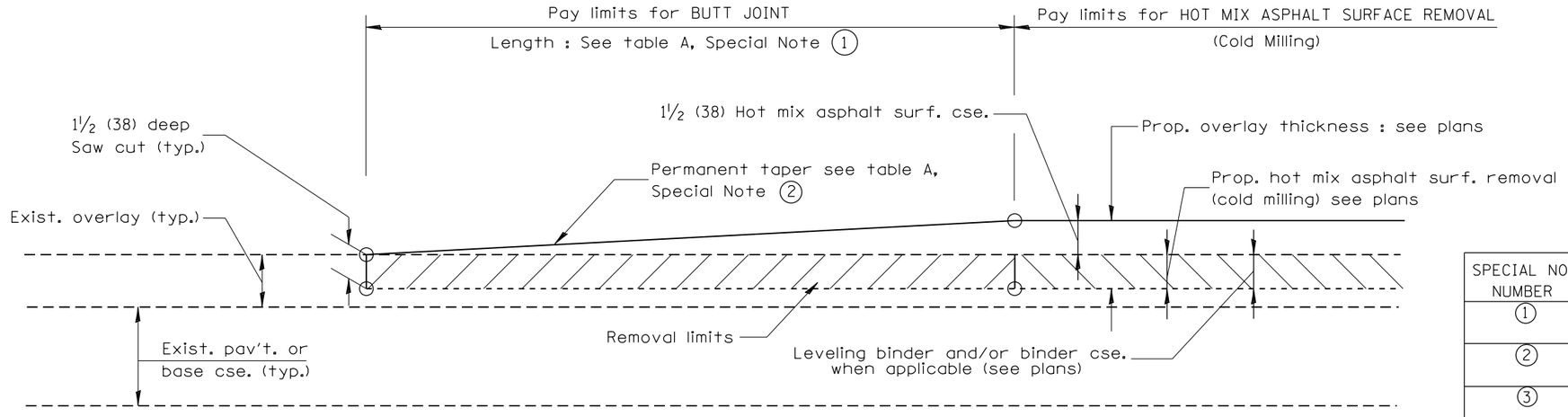
1-1-97	RENUM. A-12.03. NEW REVISION BOX	T.P.
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIPRAP ENERGY DISSIPATOR

NOT TO SCALE — CADD STD. 281101-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	546
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

TABLE A
(LENGTHS AND TAPER RATES)

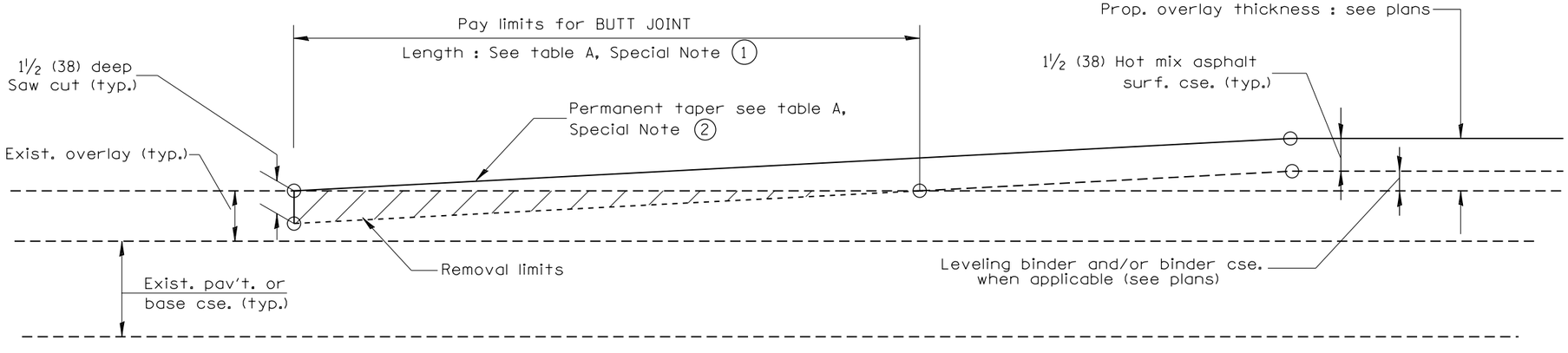
SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
(1)	LENGTH OF BUTT JOINT	60'(18.0 m)	30'(9.0 m)
(2)	PERMANENT TAPER RATE	1:480	1:240
(3)	TEMPORARY RAMP TAPER RATE	1:80	1:40
(4)	TEMPORARY RAMP LENGTH	10'(3.0 m)	5'(1.5 m)
(5)	LENGTH OF BUTT JOINT	10'(3.0 m)	10'(3.0 m)

GENERAL NOTES

1. The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.

2. The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.

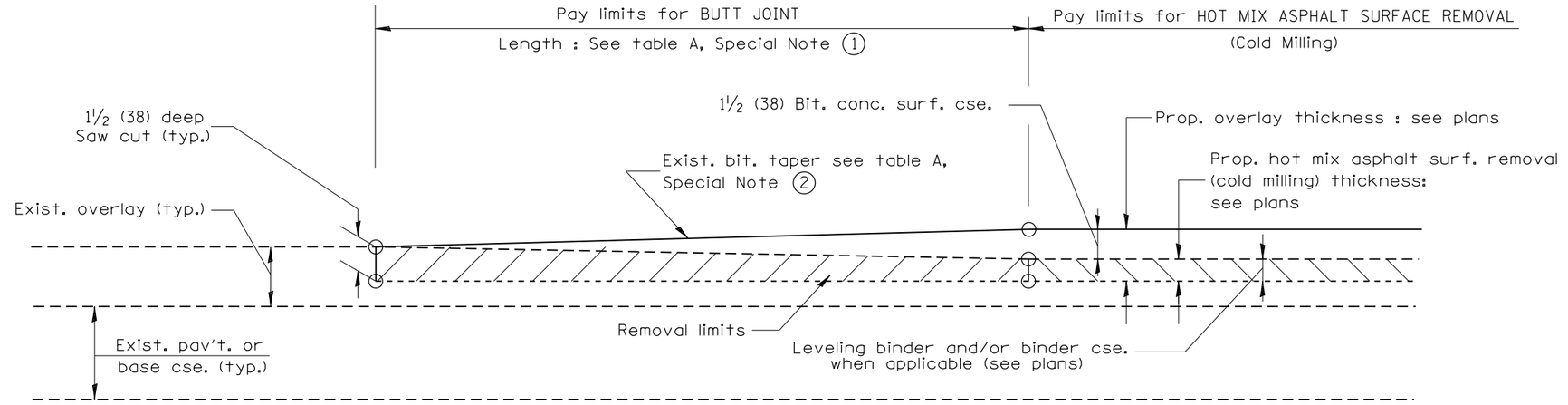
3. The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.



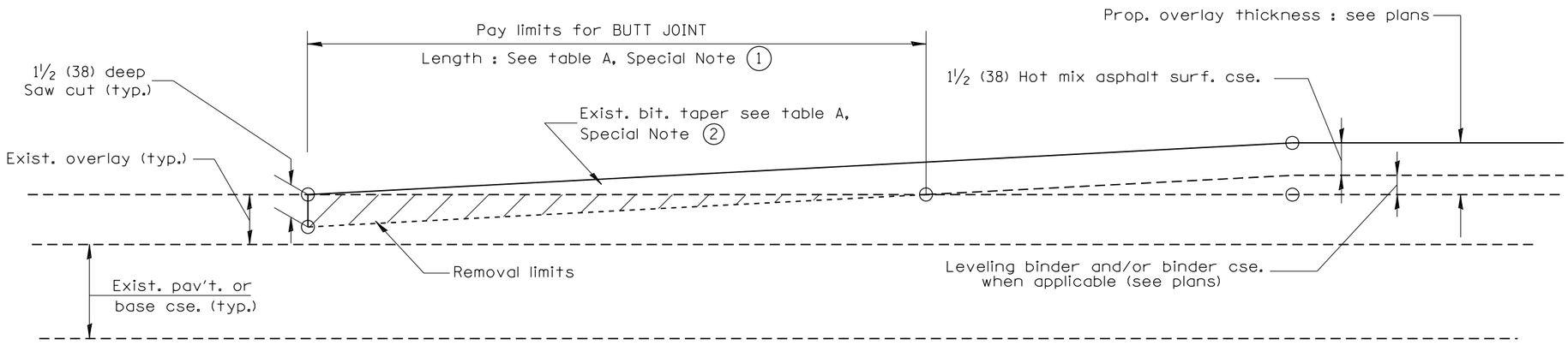
CASE 2 : NO HOT MIX ASHALT SURFACE REMOVAL (COLD MILLING)

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

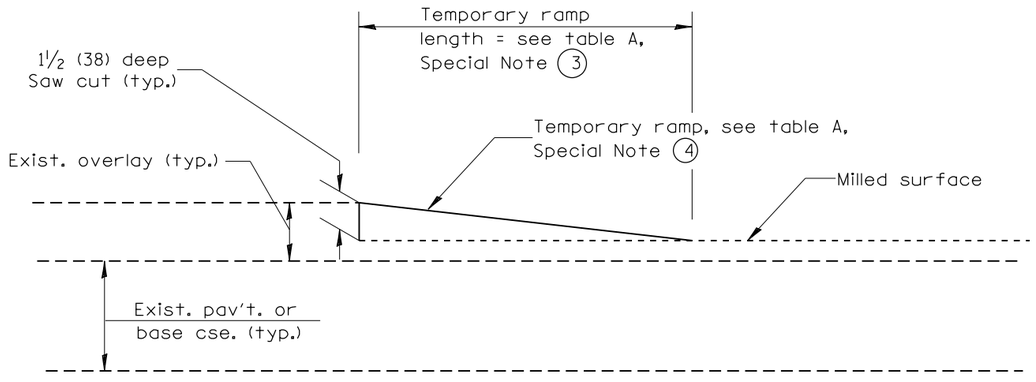
01-01-97	RENUM. C-23.01, NEW REVISION BOX	T.P.				STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTT JOINTS	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
04-01-97	CORRECTION TO DEPTH	J.A.						313	7-2 : 6-1	HENDERSON	976	547
09-15-05	REVISED DESIGNER NOTE	M.M.A.					SHT. 1 OF 3			CONTRACT NO. 68409		
10-16-06	REVISED TO 2007 SPEC.	M.A.					NOT TO SCALE CADD STD. 406101-D4	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CASE 3 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER



CASE 4 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER



DETAIL TEMPORARY RAMP

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

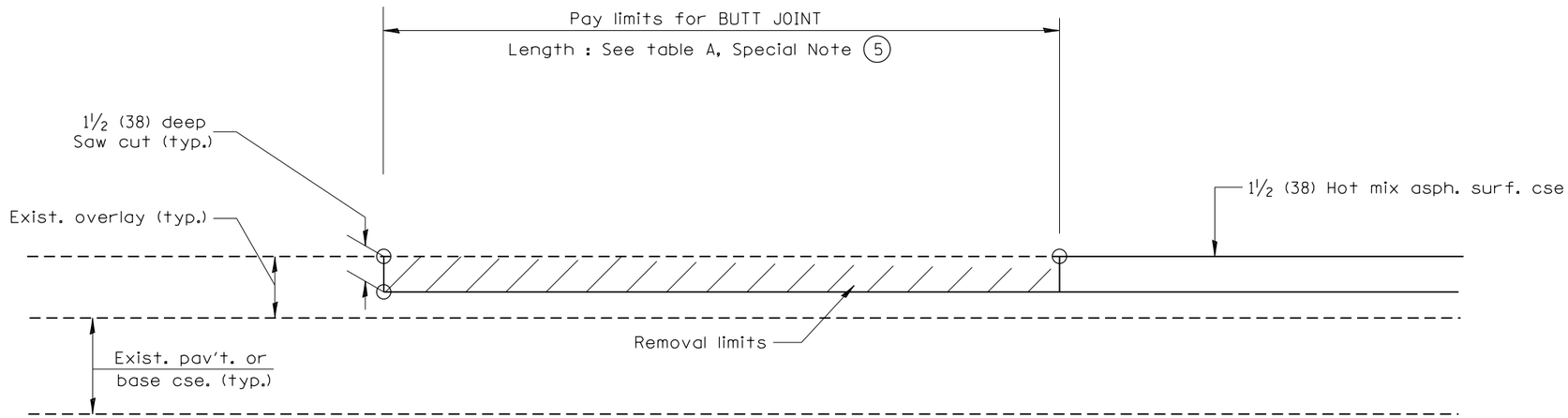
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

NOT TO SCALE

SHT. 2 OF 3
CADD STD. 406101-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	548
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CASE 5 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

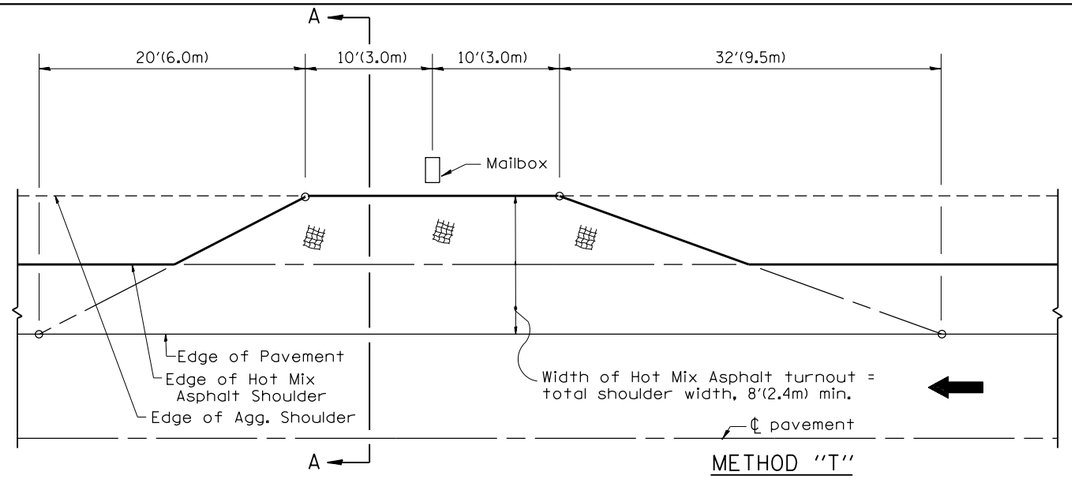
NOT TO SCALE

SHT. 3 OF 3
CADD STD. 406101-D4

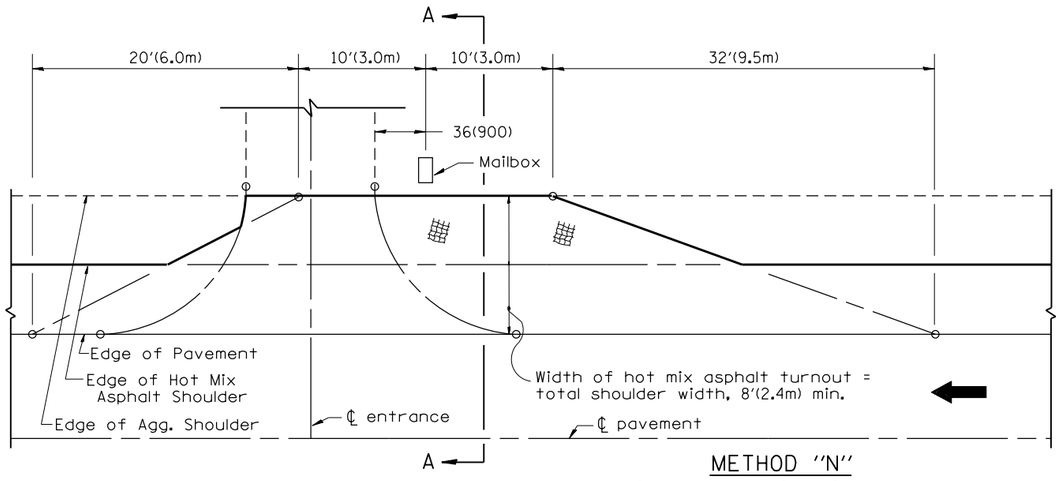
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	549

CONTRACT NO. 68409

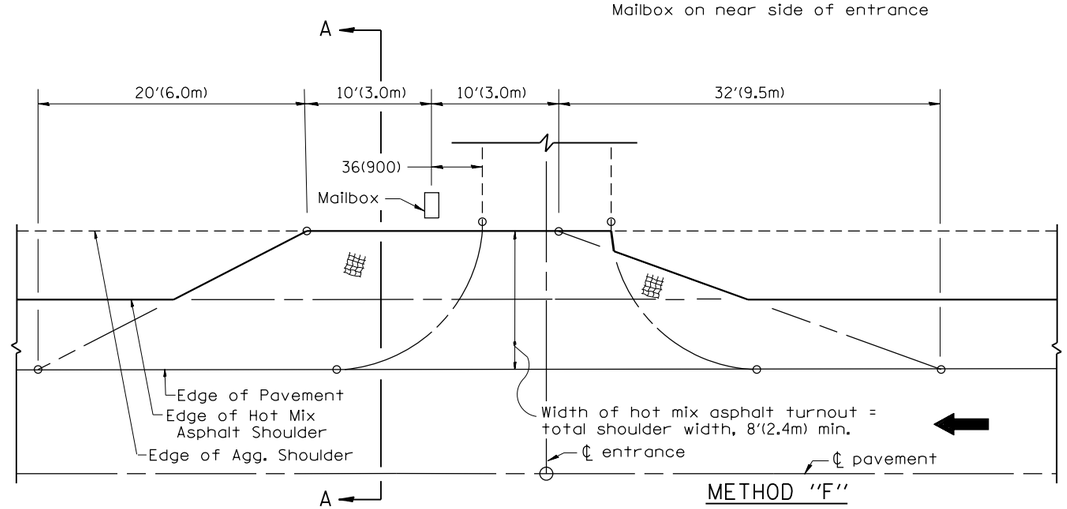
FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT



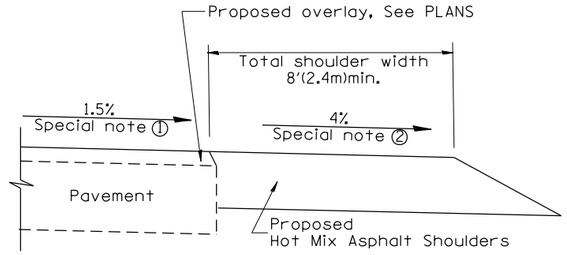
METHOD "T"
Typical Application



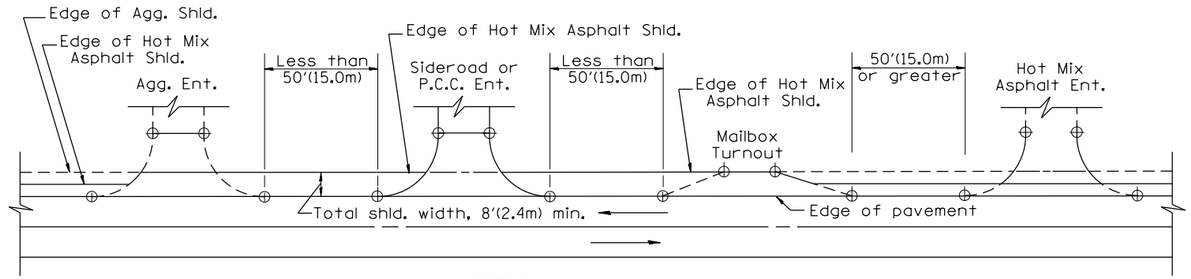
METHOD "N"
Mailbox on near side of entrance



METHOD "F"
Mailbox on far side of entrance



SECTION A-A



DETAIL A

SHOULDER TREATMENT FOR CLOSELY SPACED SIDEROADS, ENTRANCES, AND/OR MAILBOX TURNOUTS

GENERAL NOTES

1. Mailbox turnouts shall slope away from the pavement edge at a rate equal to the shoulder slope. See SECTION A-A.

2. The total shoulder width, 8'(2.4m) minimum, shall be paved between sideroads entrances and/or mailbox turnouts at locations where the distance between radius or taper control points is less than 50'(15.0m). See DETAIL A.

3. Mailboxes shall be mounted such that the face of the mailbox is 6(150) to 12(300) and the post a minimum of 24(600) from the edge of the turnout surfacing.

SPECIAL NOTES

① The mainline pavement cross-slope is 1.5% for tangent alignment. See PLANS for cross-slope on superelevated horizontal curves.

② The shoulder slope shall control the turnout slope. The standard cross-slope is 4% for tangent alignment. Through superelevated curves, the maximum pavement-shoulder breakover should not be greater than 10% for shoulders 6'(1.8m) and wider and 12% for shoulders 4'(1.2m) and less. Where 12(300) paved shoulders are provided, the breakover should be at the edge of the paved shoulder rather than at the pavement edge.

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

01-01-97	RENUM. C-90.01, NEW REVISION BOX	T.P.
07-01-97	REVISE DESIGNER NOTES	J.A.
09-15-05	REVISED DESIGNER NOTE	M.M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAILBOX TURNOUTS FOR "3R" PROJECTS

NOT TO SCALE

CADD STD. 406201-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	550
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

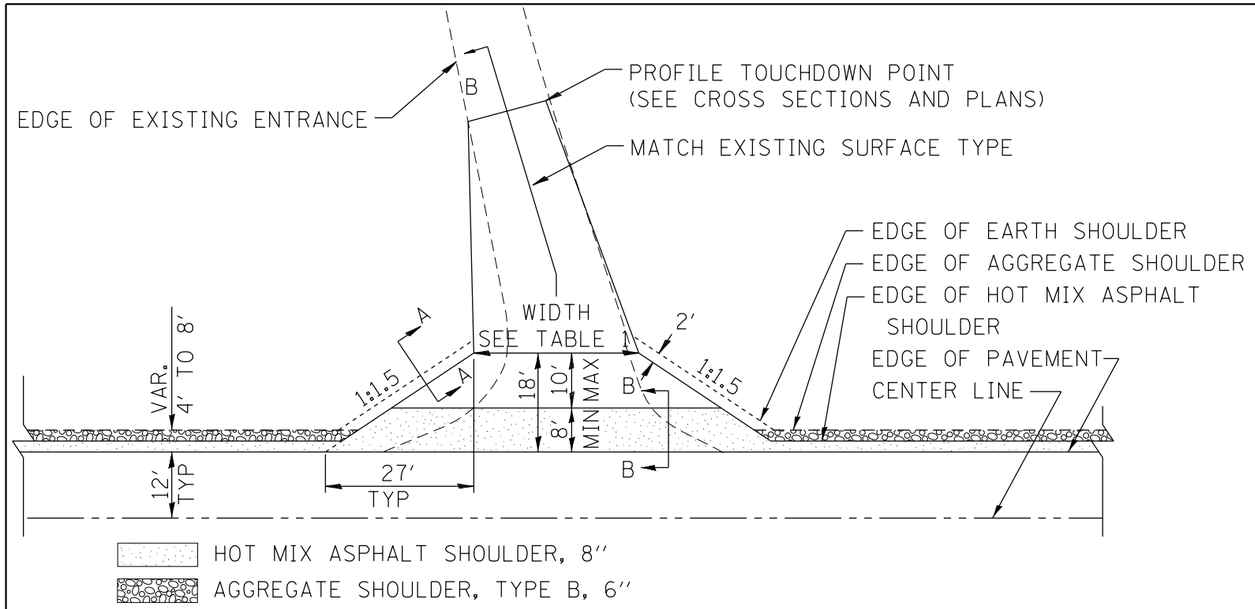
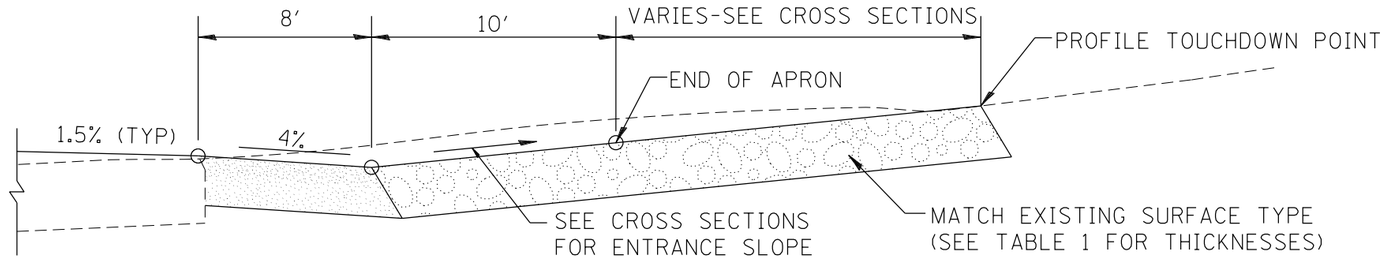


TABLE 1								
RURAL ENTRANCE DESIGN								
ELEMENT	NON-COMMERCIAL		NON-COMMERCIAL W/ LARGE FARM EQUIPMENT		COMMERCIAL			
					1-WAY OPERATION		2-WAY OPERATION	
WIDTH (W)	12'(3.6m) Min.	24'(7.2m) Max.	20' (6.1m)Max.	30' (9.0m)Max.	14'(4.3m) Min.	24'(7.2m) Max.	24'(7.2m) Min.	35'(10.7m) Max.
FLARE	1:1.5							
MAX. GRADE (G)	12%		12%		10%			
SURFACE TYPE								
INCIDENTAL HOT MIX ASPHALT SURFACING	6''		—		8''			
AGGREGATE SURFACE COURSE	6''		8''		8''			
PCC DRIVEWAY PAVEMENT	6''		—		7''			

PLAN

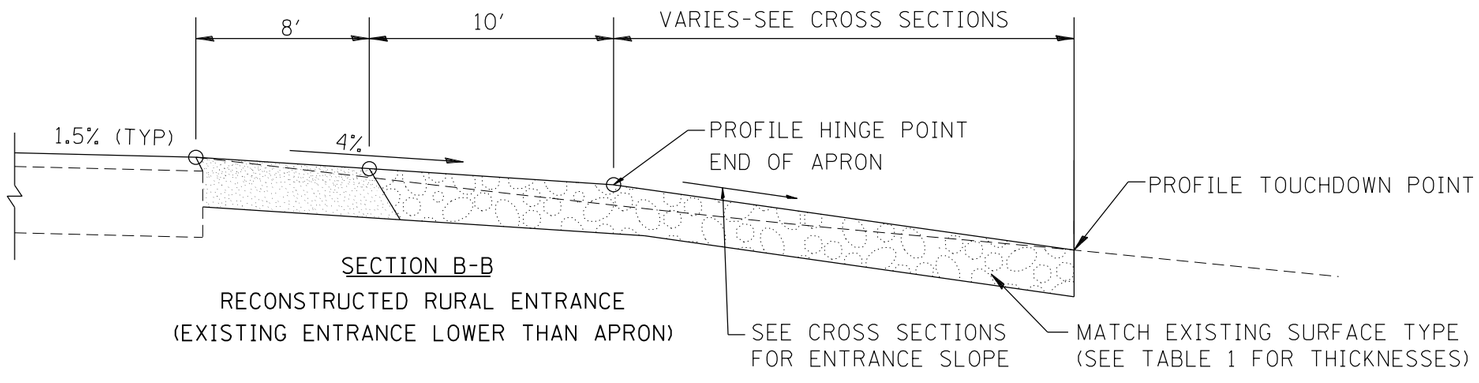
COMMERCIAL / FARM-RELATED ENTRANCE



SECTION B-B

RECONSTRUCTED RURAL ENTRANCE

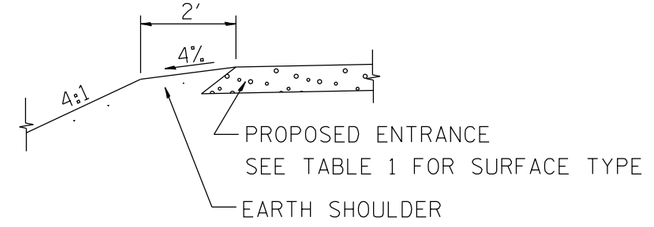
(EXISTING ENTRANCE HIGHER THAN APRON)



SECTION B-B

RECONSTRUCTED RURAL ENTRANCE

(EXISTING ENTRANCE LOWER THAN APRON)



SECTION A-A

SHOULDER TREATMENT FOR RURAL ENTRANCES

GENERAL NOTES

1. ENTRANCES SHALL SLOPE AWAY FROM THE PAVEMENT AT A RATE EQUAL TO THE SHOULDER SLOPE FOR A MINIMUM DISTANCE OF 8'.

2. A MINIMUM 8' PAVED SHOULDER SHALL BE CONSTRUCTED BETWEEN LOCATIONS WHERE THE RURAL ENTRANCE IS LESS THAN 50' FROM AN ADJACENT SIDEROAD, ENTRANCE OR MAILBOX TURNOUT.

3. A TAPER RATE OF 5:1 IS DESIRABLE WHEN TRANSITING FROM THE RURAL ENTRANCE WIDTH SHOWN IN TABLE 1, TO THE EXISTING ENTRANCE WIDTH.

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

01-01-97	RENUM. C-103.06. NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.	M.A.
07-01-97	REVISE DESIGNER NOTES	J.A.			
01-17-03	ADJUST DESIGN, CHANGE ENTRANCE	JATR			
09-15-05	RADIUS FOR FLARE	M.M.A.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

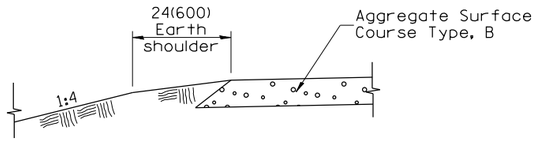
RURAL ENTRANCES FOR "3R" PROJECTS

NOT TO SCALE

SHT. 1 OF 2

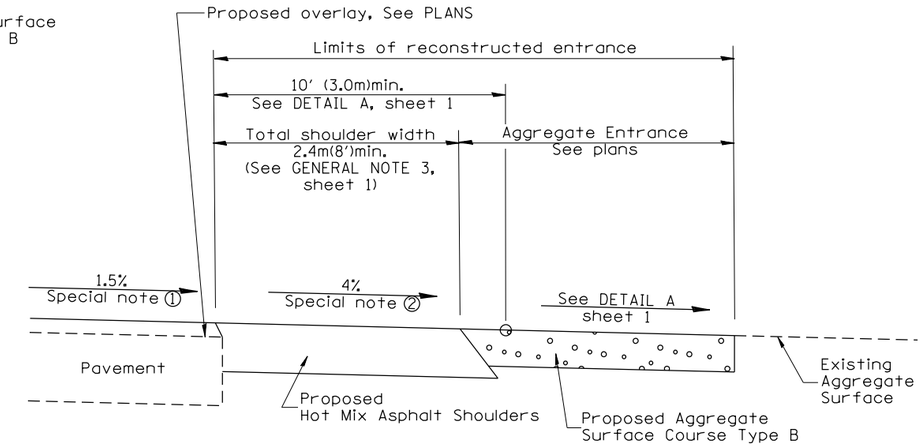
CADD STD. 406301-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	551
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



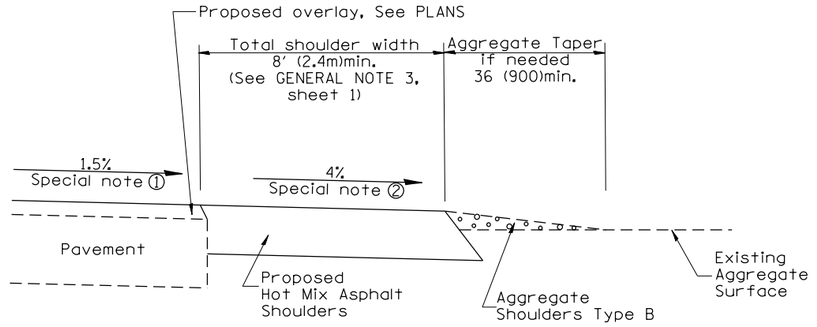
SECTION A-A

SHOULDER TREATMENT FOR AGGREGATE ENTRANCES



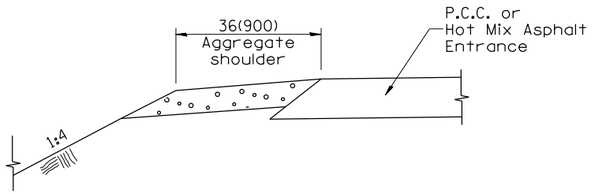
SECTION B-B

RECONSTRUCTED AGGREGATE ENTRANCE



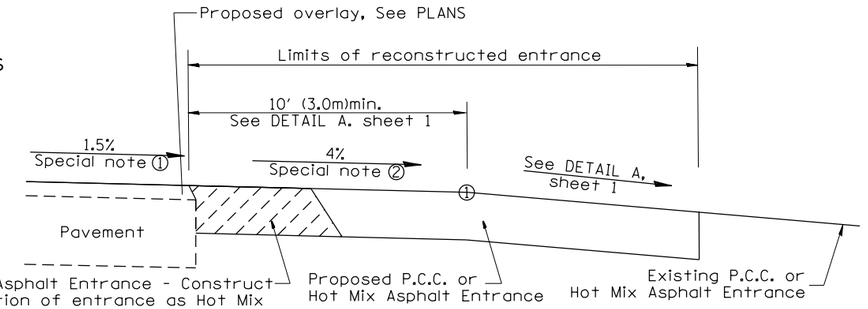
SECTION B-B

EXISTING AGGREGATE ENTRANCE



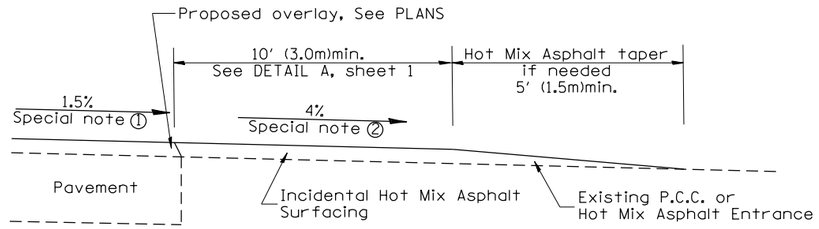
SECTION C-C

SHOULDER TREATMENT FOR P.C.C. OR HOT MIX ASPHALT ENTRANCES



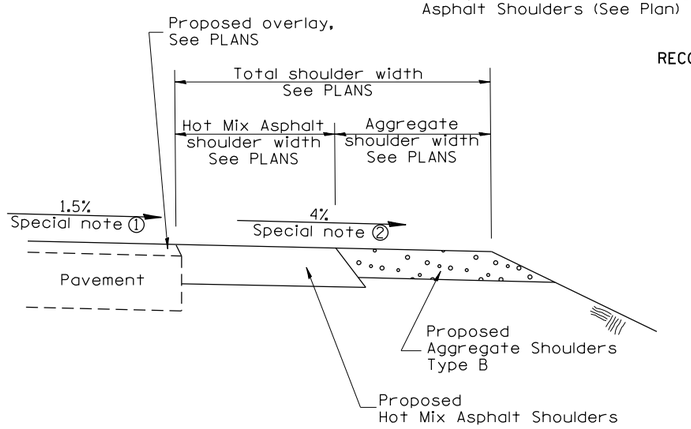
SECTION D-D

RECONSTRUCTED P.C.C. OR HOT MIX ASPHALT ENTRANCE



SECTION D-D

EXISTING P.C.C. OR HOT MIX ASPHALT ENTRANCE



SECTION E-E

MAINLINE SHOULDER TREATMENT

SPECIAL NOTES

(1) The mainline pavement cross-slope is 1.5% for tangent alignment. See PLANS for cross-slope on superelevated horizontal curves.

(2) The shoulder slope shall control the entrance profile for a distance of 10' (3.0m) minimum from the pavement edge. The shoulder cross-slope is 4% for tangent alignment. Through superelevated curves, the maximum pavement-shoulder breakover should not be greater than 10% for shoulders 6' (1.8m) and wider and 12% for shoulders 4' (1.2m) and less. Where 12' (366cm) paved shoulders are provided, the breakover should be at the edge of the paved shoulder rather than at the pavement edge.

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

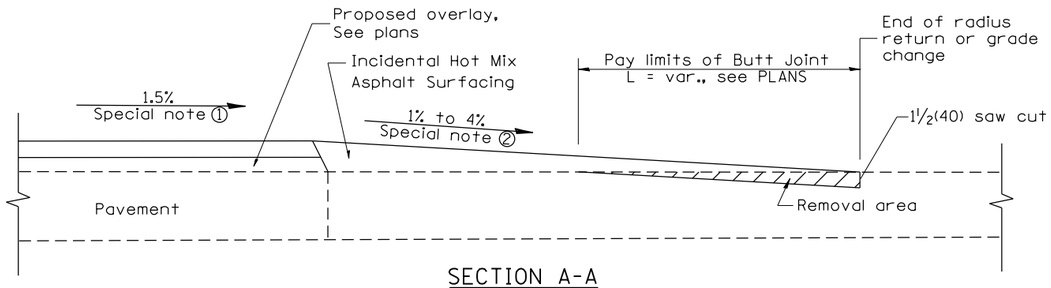
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RURAL ENTRANCES FOR "3R" PROJECTS

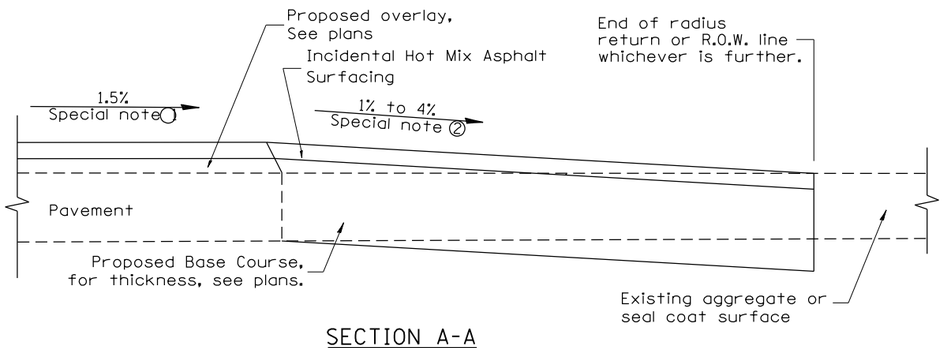
NOT TO SCALE

SHT. 2 OF 2
CADD STD. 406301-D4

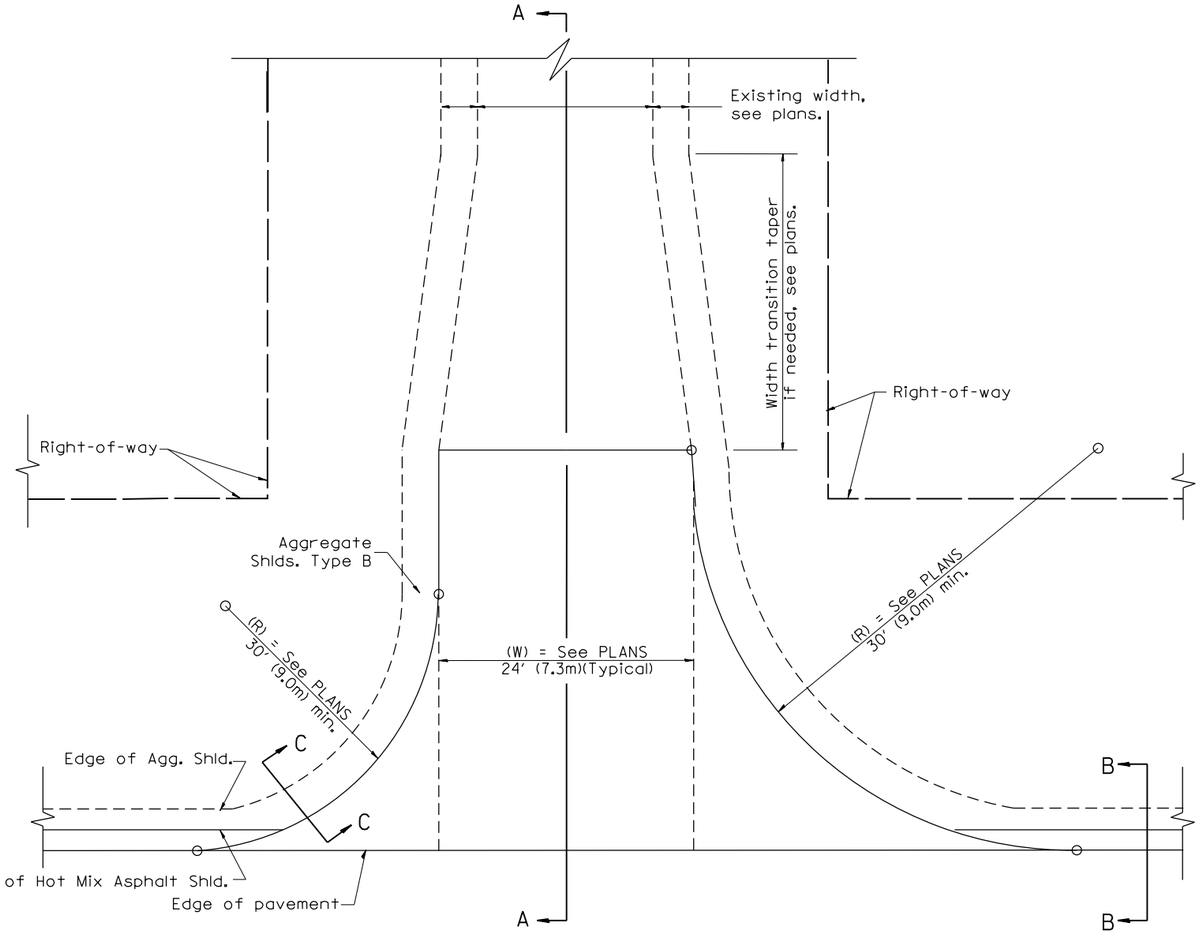
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	552
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



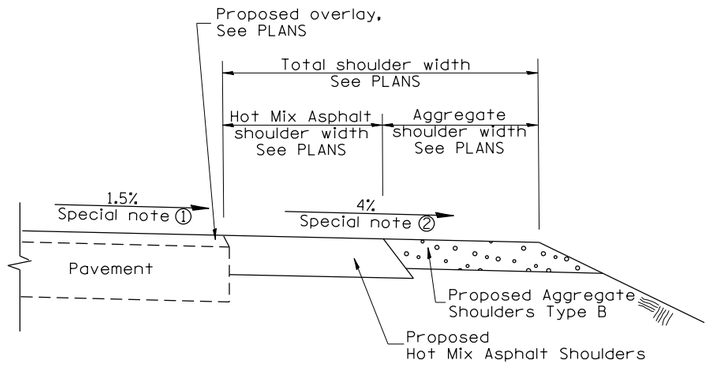
SECTION A-A
EXISTING PCC OR HOT MIX ASPHALT SIDEROAD



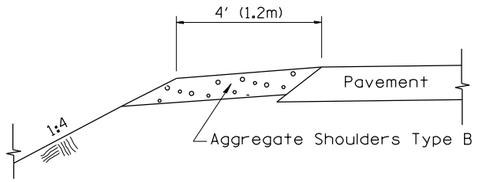
SECTION A-A
EXISTING AGGREGATE OR SEAL COAT SIDEROAD



PLAN



SECTION B-B
MAINLINE SHOULDER TREATMENT



SECTION C-C
SIDEROAD SHOULDER TREATMENT

SPECIAL NOTES

① The mainline pavement cross-slope is 1.5% for tangent alignment. See Plans for cross-slope on superelevated horizontal curves.

② The sideroad profile should drain away from the mainline at 1% to 4% for 50' (15.0m) to 100' (30.0m), or as a minimum to the end of the radius return. When the sideroad is on the high side of a mainline superelevated curve, - 2% maximum should be provided in order to minimize breakover at the pavement edge. See plans for sideroad profiles.

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

01-01-97	RENUM. C-105.02, NEW REVISION BOX	T.P.			
07-01-97	REVISE DESIGNER NOTES	J.A.			
09-15-05	REVISED DESIGNER NOTE	M.M.A.			
10-16-06	REVISED TO 2007 SPEC.	M.A.			

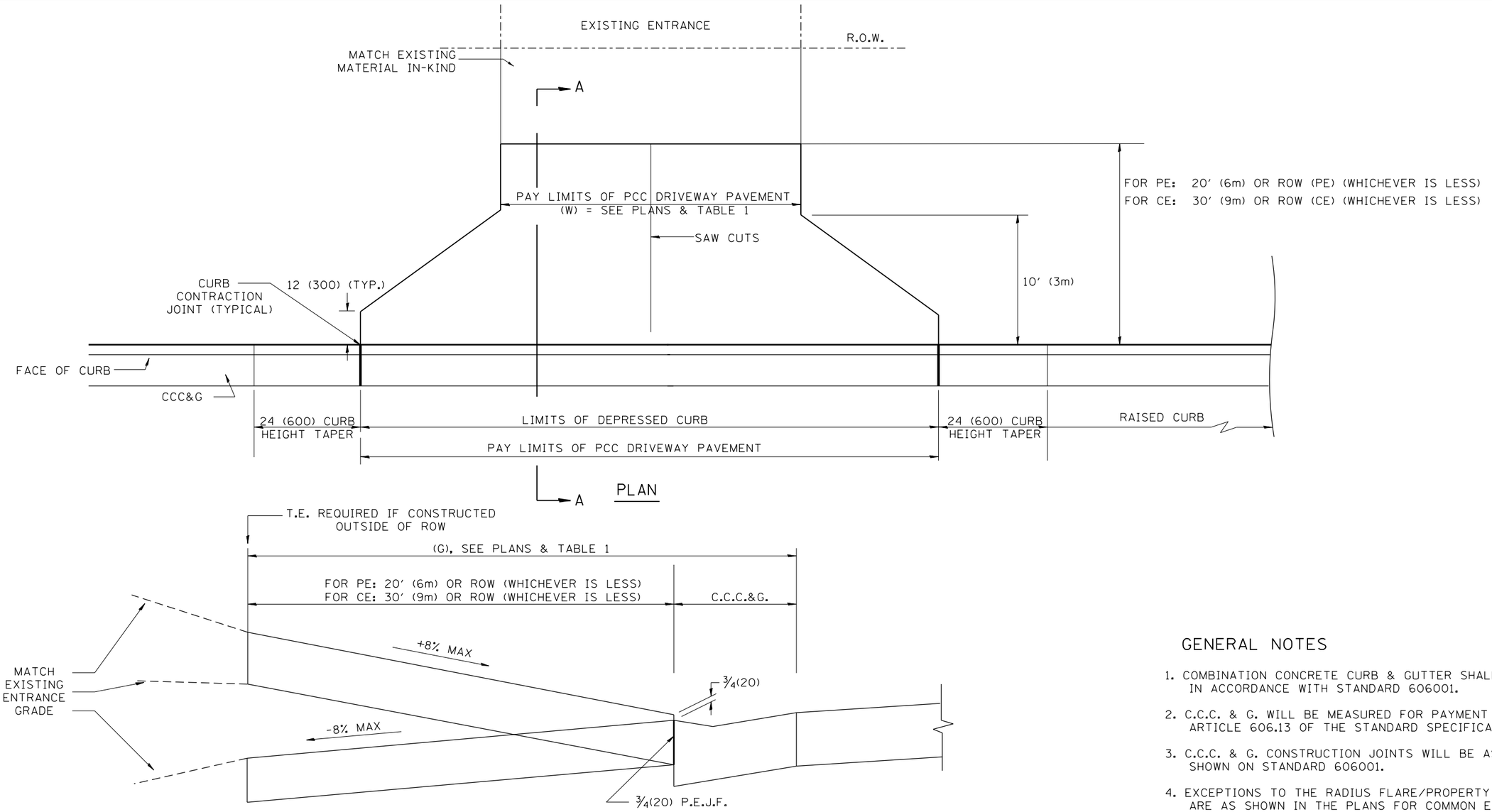
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RURAL SIDEROADS FOR "3R" PROJECTS

NOT TO SCALE

CADD STD. 406401-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	553
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SECTION A-A

TABLE 1						
URBAN ENTRANCE DESIGN CONTROLS						
ELEMENT	NON-COMMERCIAL		COMMERCIAL			
			1-WAY OPERATION		2-WAY OPERATION	
WIDTH (W)	12' (3.6m)MIN.	24' (7.2m)MAX.	14' (4.3m)MIN.	24' (7.2m)MAX.	24' (7.2m)MIN.	35' (10.7m)MAX.
RADIUS EQUIVALENT 1:1 FLARE (F)	5' (1.5m)MIN.	25' (7.6m)MAX.	15' (4.6m)MIN.	40' (12.0m)MAX.	15' (4.6m)MIN.	40' (12.0m)MAX.
MAX. GRADE (G)	8%		6%			

GENERAL NOTES

1. COMBINATION CONCRETE CURB & GUTTER SHALL BE DEPRESSED IN ACCORDANCE WITH STANDARD 606001.
2. C.C.C. & G. WILL BE MEASURED FOR PAYMENT AS SPECIFIED IN ARTICLE 606.13 OF THE STANDARD SPECIFICATIONS.
3. C.C.C. & G. CONSTRUCTION JOINTS WILL BE AS SHOWN ON STANDARD 606001.
4. EXCEPTIONS TO THE RADIUS FLARE/PROPERTY LINE RELATIONSHIP ARE AS SHOWN IN THE PLANS FOR COMMON ENTRANCES, WITH JOINTLY EXECUTED ACCESS PERMITS.

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

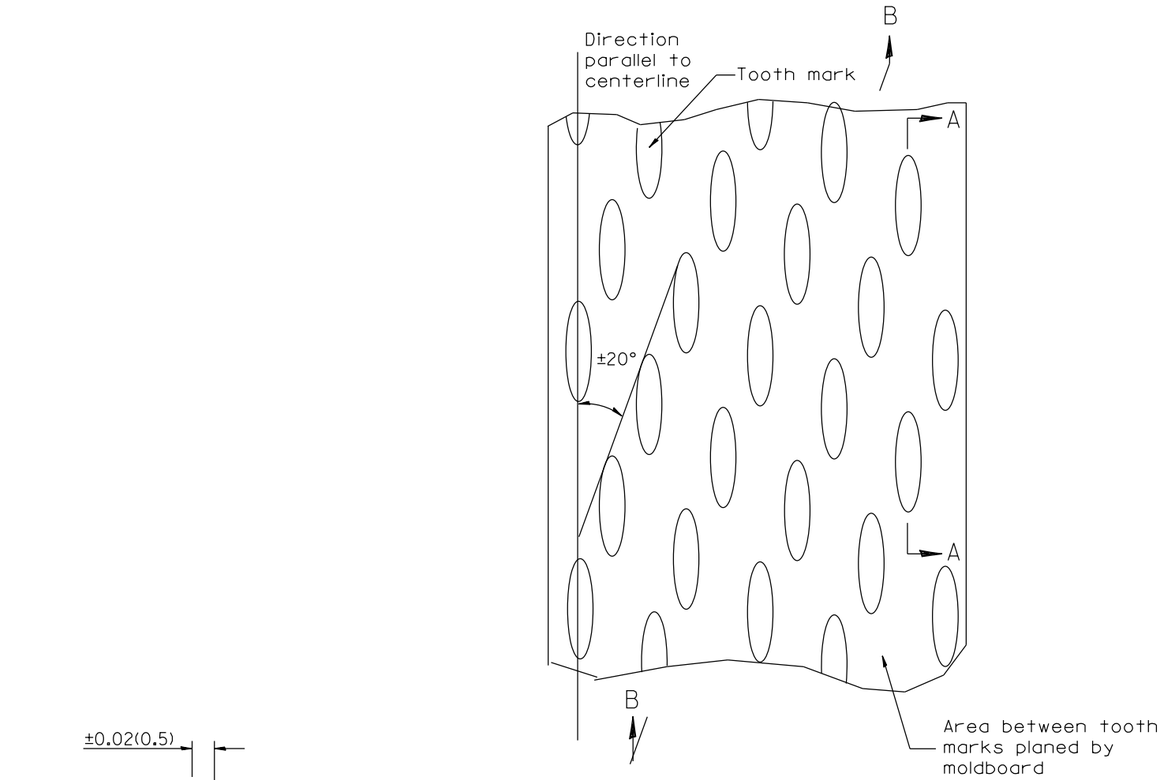
0-15-05	NEW DETAIL	M.M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

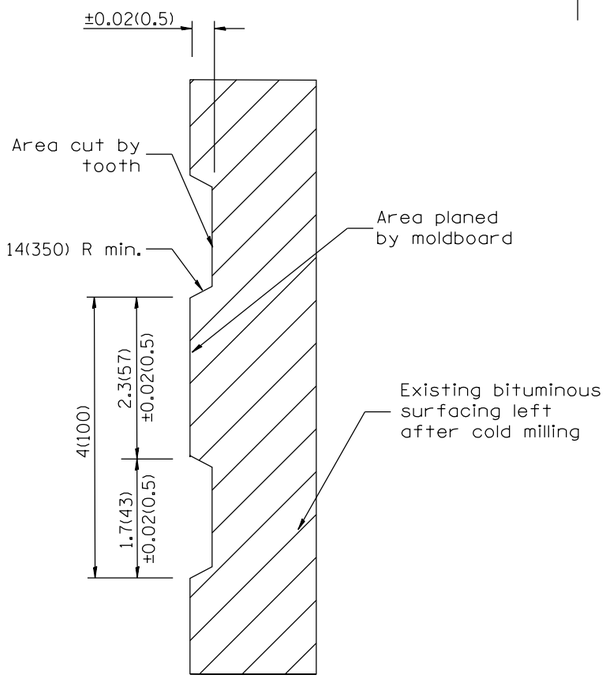
URBAN ENTRANCES WITHOUT SIDEWALKS

NOT TO SCALE — CADD STD. 423002-D4

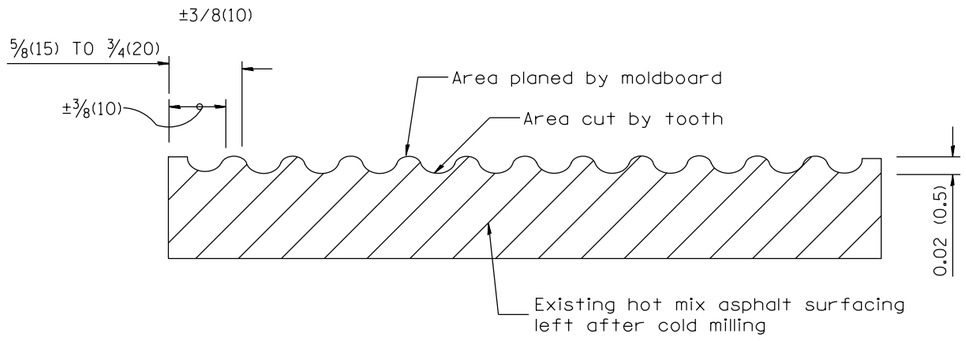
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	554
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN



SECTION A-A



SECTION B-B PROJECTED
PERPENDICULAR TO CENTERLINE

General notes:

1. Coldmilling shall consist of two processes: Cutting with carbide teeth mounted on a rotating drum, and planing with a moldboard mounted immediately behind the cutting drum.
2. Other similar patterns will be acceptable if they consist of a smooth, flat, planed surface interspersed with a pattern of discontinuous longitudinal striations.

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

01-01-97	RENUM. C-104.01, NEW REVISION BOX	T.P.
04-20-98	REMOVED MILLING DETAIL FROM STANDARD	J.A.
09-08-98	CORRECT NOTE LEADER PLACEMENT	R.W.
10-16-06	REVISED TO 2007 SPEC.	M.A.

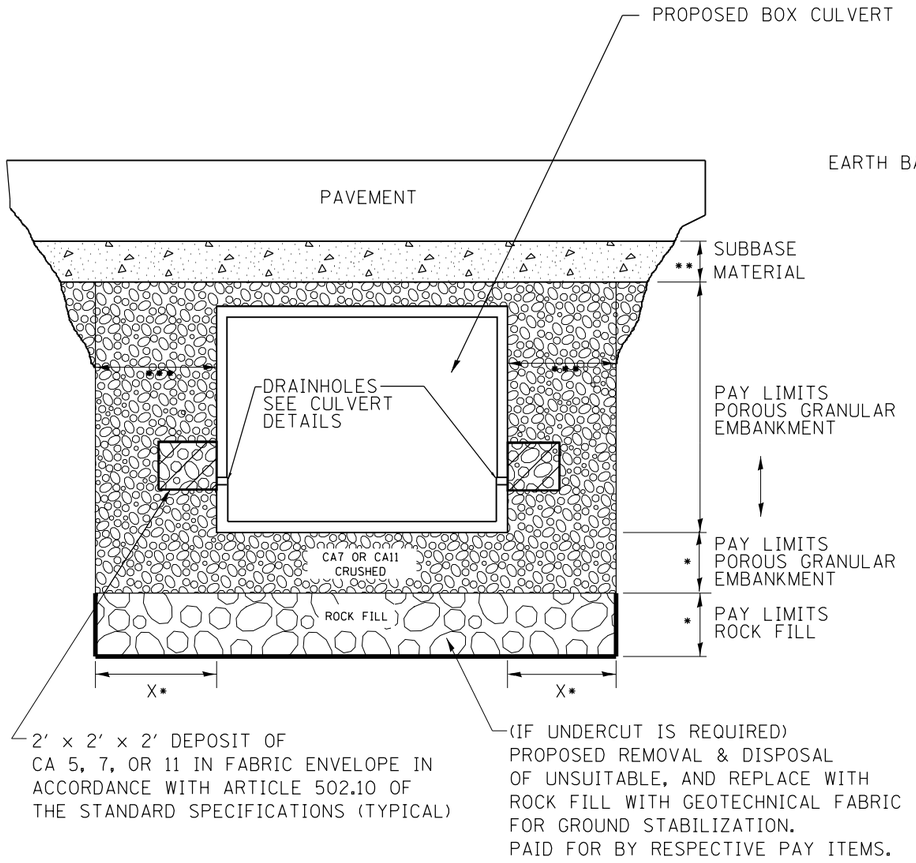
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

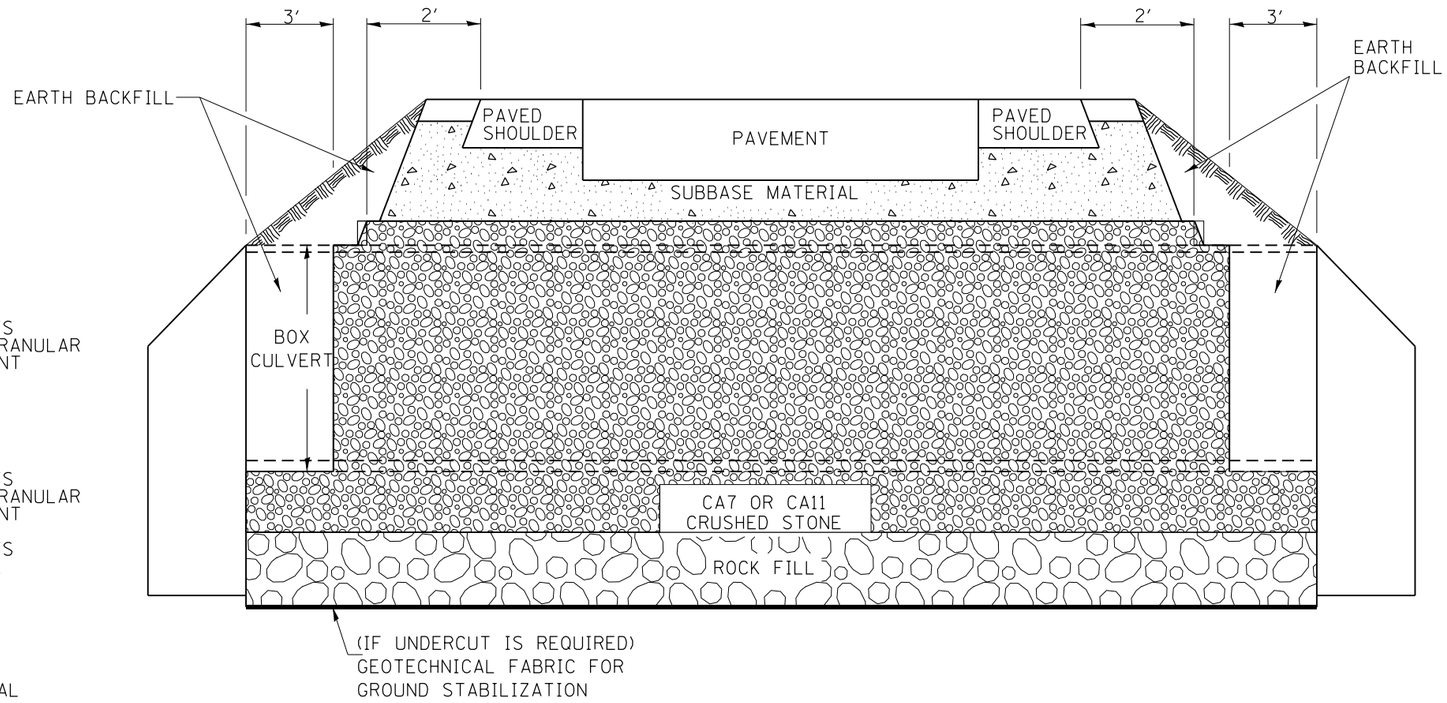
NOT TO SCALE — CADD STD. 440001-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	555
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

ROADWAY PROFILE VIEW



ROADWAY CROSS SECTION VIEW



* IF APPLICABLE, SEE UNDERCUT DETAIL FOR DEPTHS AND WIDTHS. IF THERE IS NO UNDERCUT, X = 2 FEET AND SEE NOTE 3 THIS SHEET.

** SUBBASE SHALL BE 6″ MINIMUM LAYER OF CA6 CRUSHED STONE OR OTHER MATERIAL AS SPECIFIED IN THE PLANS.

*** PAY LIMITS OF POROUS GRANULAR EMBARKMENT SHALL BE 2 FEET UNLESS OTHERWISE SHOWN IN THE PLANS.

NOTES:

1. EXCEPT AS SPECIFIED IN THIS DETAIL, THE PLACEMENT AND COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS.
2. POROUS GRANULAR EMBARKMENT SHALL BE PLACED IN ACCORDANCE WITH SECTION 207 OF THE STANDARD SPECIFICATIONS.
3. IF NO UNDERCUT IS REQUIRED, A 6″ MINIMUM LAYER OF POROUS GRANULAR EMBANKMENT SHALL BE PLACED BELOW THE ELEVATION OF THE BOTTOM OF BOX CULVERT.

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

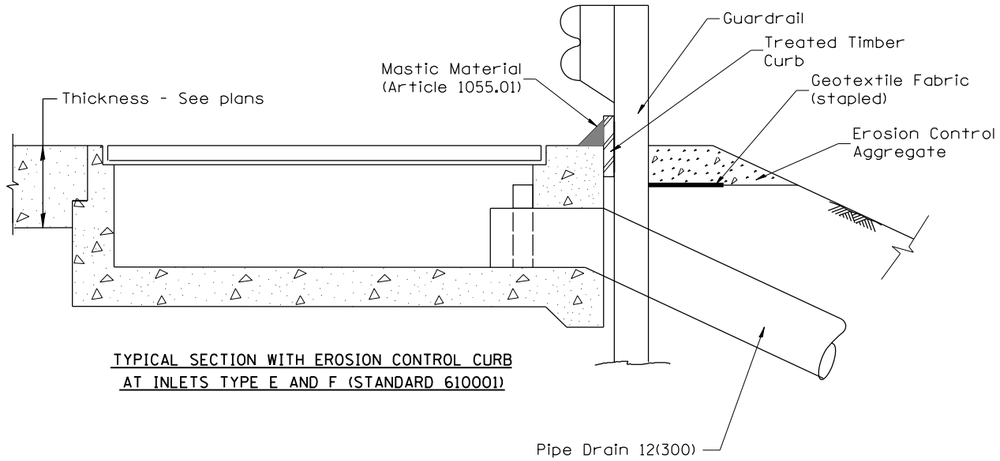
6-12-12	CREATED NEW STD.	R.D.									

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

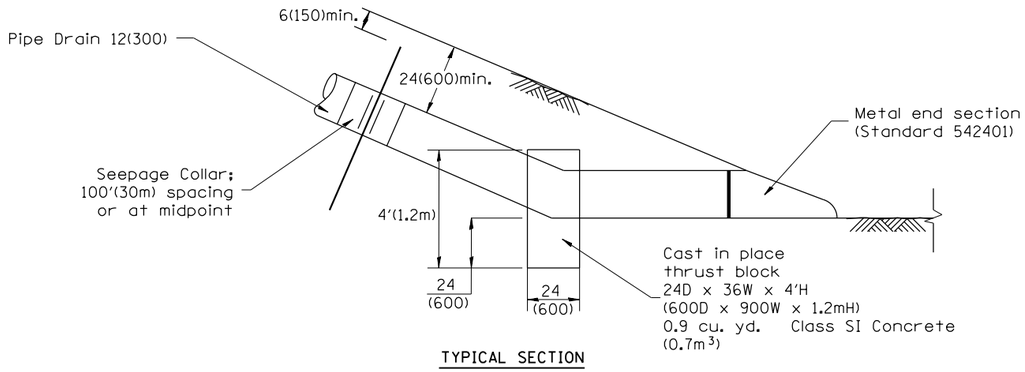
DETAIL OF EXCAVATION AND BACKFILL FOR BOX CULVERTS

NOT TO SCALE — CADD STD. 540000

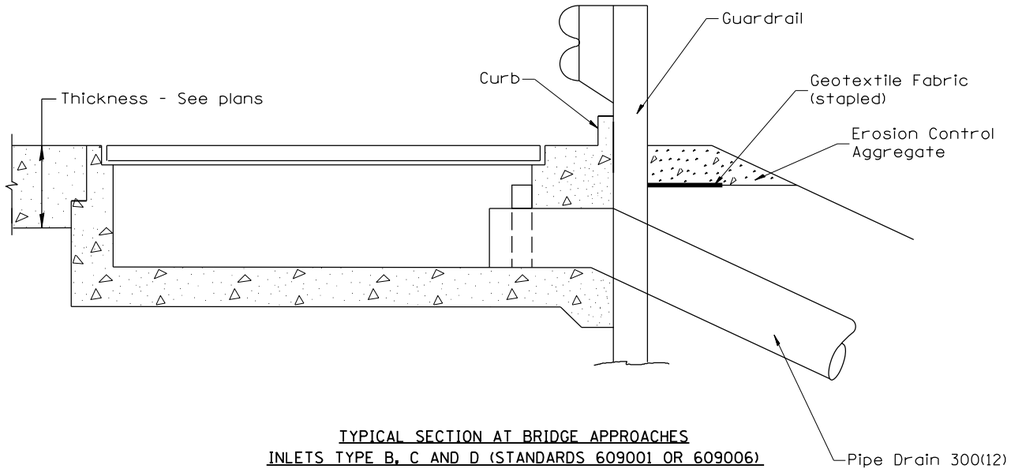
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	556
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL SECTION WITH EROSION CONTROL CURB AT INLETS TYPE E AND F (STANDARD 610001)



TYPICAL SECTION



TYPICAL SECTION AT BRIDGE APPROACHES
INLETS TYPE B, C AND D (STANDARDS 609001 OR 609006)

GENERAL NOTES

1. The material for Pipe Drains shall be bituminous coated galvanized corrugated steel culvert pipe or bituminous coated corrugated aluminum alloy pipe in accordance with Article 601.02(f) or 601.02(i).

2. An approved mastic material (Article 1055.01) shall be applied to the inside of the connecting bands.

QUANTITIES
CALC. BY: _____ DATE:
CHECKED BY: _____ DATE:
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

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

01-01-97	RENUM. H-1.04, NEW REVISION BOX, REVISED TITLE	T.P.
	BOX, REVISED DESIGNER NOTES, ADDED QUANTITY	
	CALCULATION BOX	
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE DRAIN DETAILS FOR BURIED PIPES

NOT TO SCALE — CADD STD. 601101-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	557
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

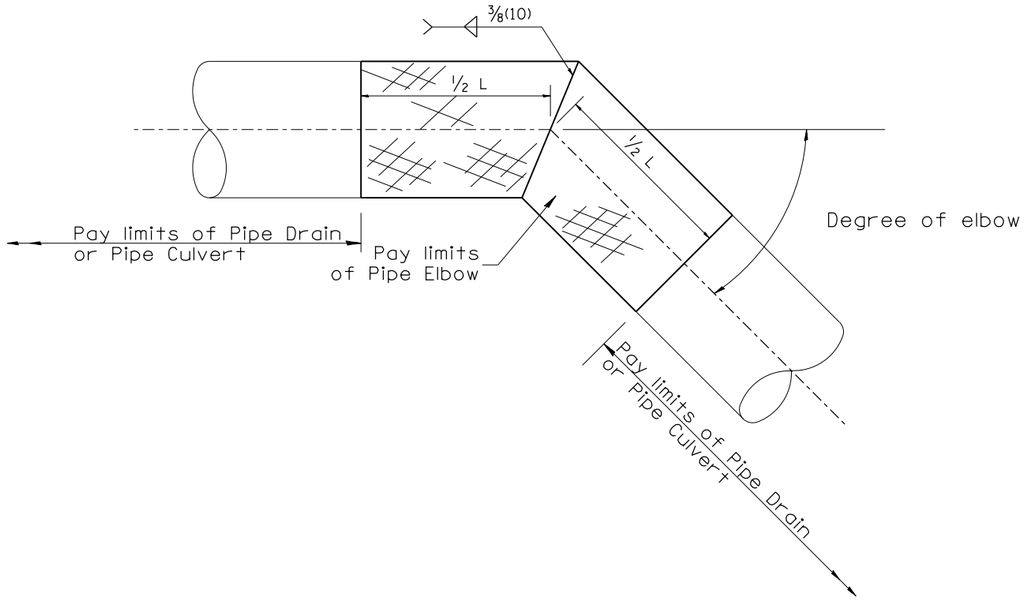


TABLE A		
ELBOW DESIGN CONTROLS		
PIPE DIAMETER	L = Pay limits of Pipe Elbow and minimum length of pipe required for fabrication	
	DEGREE OF ELBOW ≤ 45°	DEGREE OF ELBOW ≥ 46°
12(300)	24(600)	4'(1.22M)
15(375)	24(600)	4'(1.22M)
18(450)	24(600)	4'(1.22M)
21(525)	24(600)	4'(1.22M)
24(600)	4'(1.22M)	4'(1.22M)
30(750)	4'(1.22M)	6'(1.83M)
36(900)	4'(1.22M)	6'(1.83M)

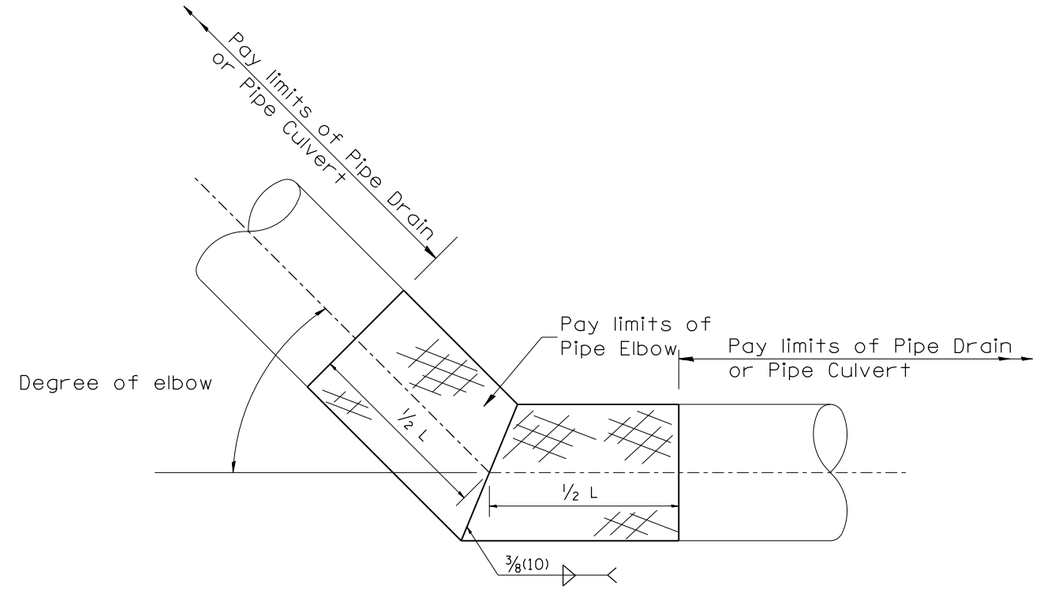
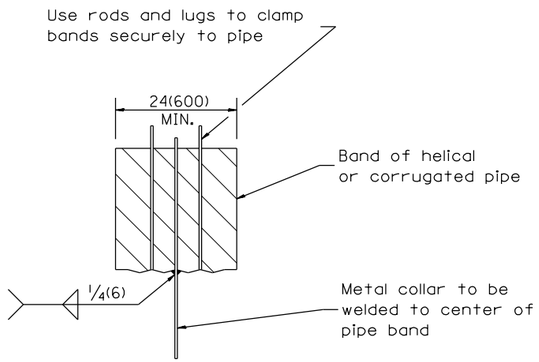


TABLE B	
ELBOW DESIGN CONTROLS	
EARTH SLOPE (V:H)	DEGREE OF ELBOW *
1:6	9°
1:4	14°
1:3	18°
1:2	26°
1:1 1/2	33°

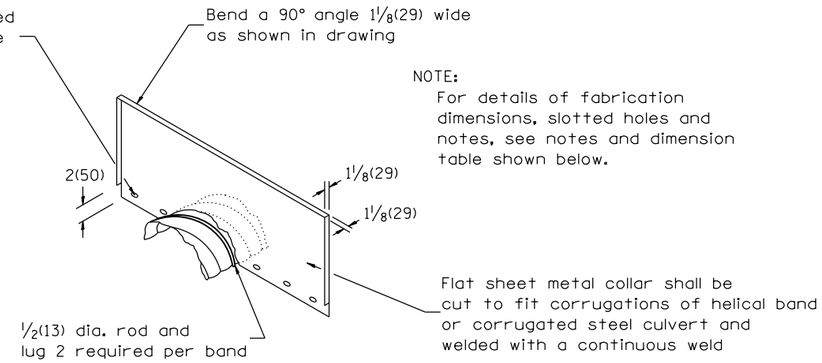
* Approximate - based upon 0.5% inlet and outlet flowlines.

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

01-01-97	RENUM. J-11.05, NEW REVISION BOX.	T.P.			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIPE ELBOW	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	REVISED TITLE BOX						313	7-2 ; 6-1	HENDERSON	976	558
10-16-06	REVISED TO 2007 SPEC.	M.A.							CONTRACT NO. 68409		
						NOT TO SCALE CADD STD. 601301-D4	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PARTIAL ELEVATION



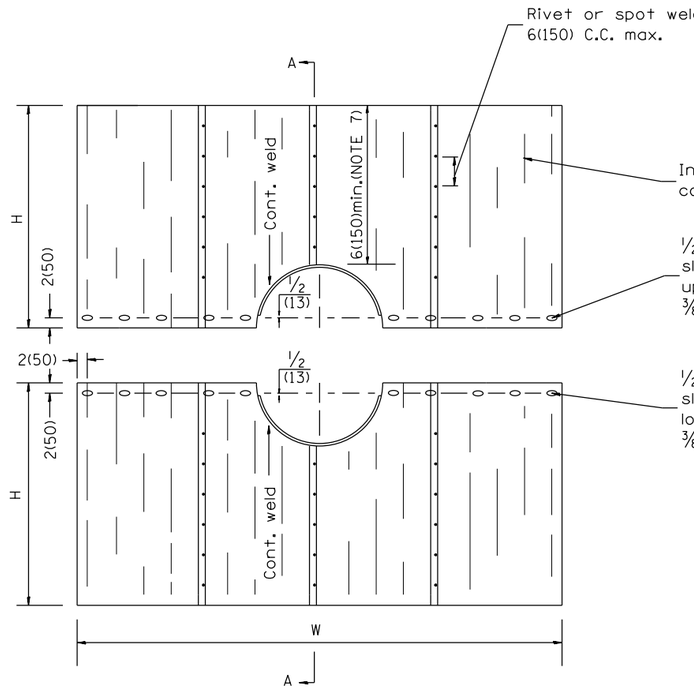
ISOMETRIC VIEW

NOTE:
For details of fabrication dimensions, slotted holes and notes, see notes and dimension table shown below.

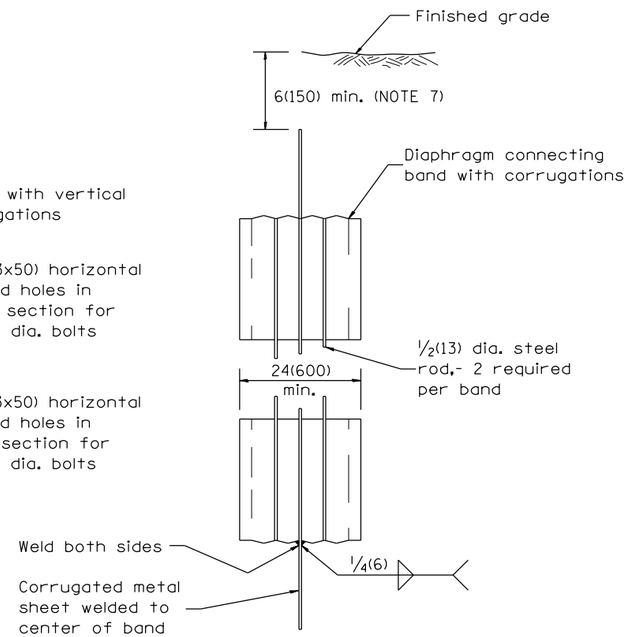
DETAILS OF CORRUGATED PIPE COLLAR

NOTES FOR COLLARS:

1. Materials and coatings for all collars shall be the same as that specified for the pipe.
2. Collars shall be shop fabricated, assembled and marked by painting to identify matching half sections of each collar.
3. The laps between the half sections and between the pipe and connecting bands shall be caulked with fiberized asphalt mastic at the time of installation.
4. All tank lugs, rods, and nuts shall be galvanized steel. Where aluminum collars are used, The rods and lugs shall be separated from the aluminum bands. By at least two (2) layers of 2(50) wide plastic tape with a total thickness of 2 1/4 mils or more.
5. The collars shall be welded to the connecting bands as shown on the drawings, all welds shall be treated as specified for class I, II, and III welds, miscellaneous. (Refer to AWS Standard Specifications)
6. Bands shall be fabricated from material having the same class of corrugations as the pipe to which it is to be attached.
7. Upper half of sheet may be cut shorter to provide 6(150) min. earth cover.



ELEVATION



SECTION A-A

DETAILS OF SEEPAGE COLLAR

SEEPAGE COLLAR DIMENSION TABLE

PIPE DIAMETER	NOMINAL COLLAR SIZE	FABRICATIONS DIMENSIONS	
		W(WIDTH)	H(HEIGHT)
12(300) 15(375), 18(450) 21(525), 24(600)	8'x6' (2.4m x 1.8m)	8'-0" (2.44m)	38(966)
27(675) 30(750)	8'x7' (2.4m x 2.1m)	8'-0" (2.44m)	3'-8" (1.12m)
36(900), 42(1050) 48(1200)	10'x7' (3.0m x 2.1m)	10'-0" (3.05m)	3'-8" (1.12m)

Collar dimensions shown may be increased to allow fabrication from standard size sheets.

SEEPAGE COLLAR SPACING
Less than 24(600) pipe: 100' (30m) spacing or midpoint
Equal to or greater than 24(600) pipe: 80' (24m) spacing or midpoint

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

01-01-97	RENUM. J-10.02, NEW REVISION BOX, REVISED				
	TITLE BOX, REVISED DESIGNER NOTES				
10-16-06	REVISED TO 2007 SPEC.				

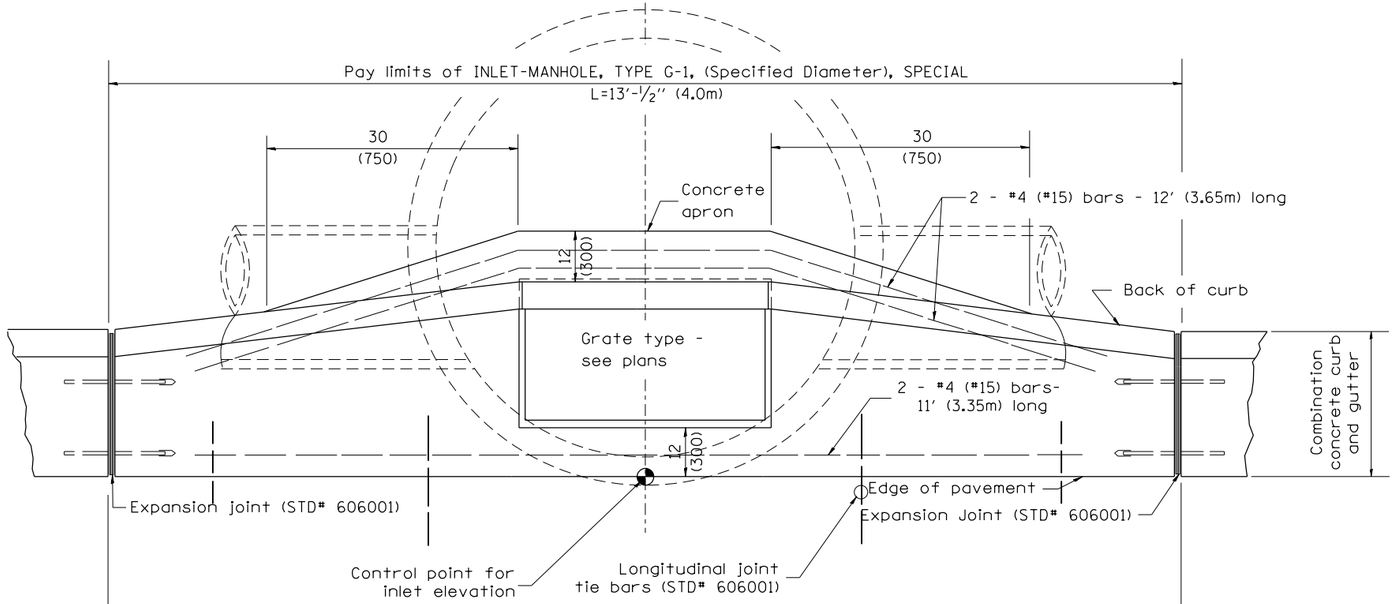
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS OF SEEPAGE COLLARS FOR BURIED PIPES

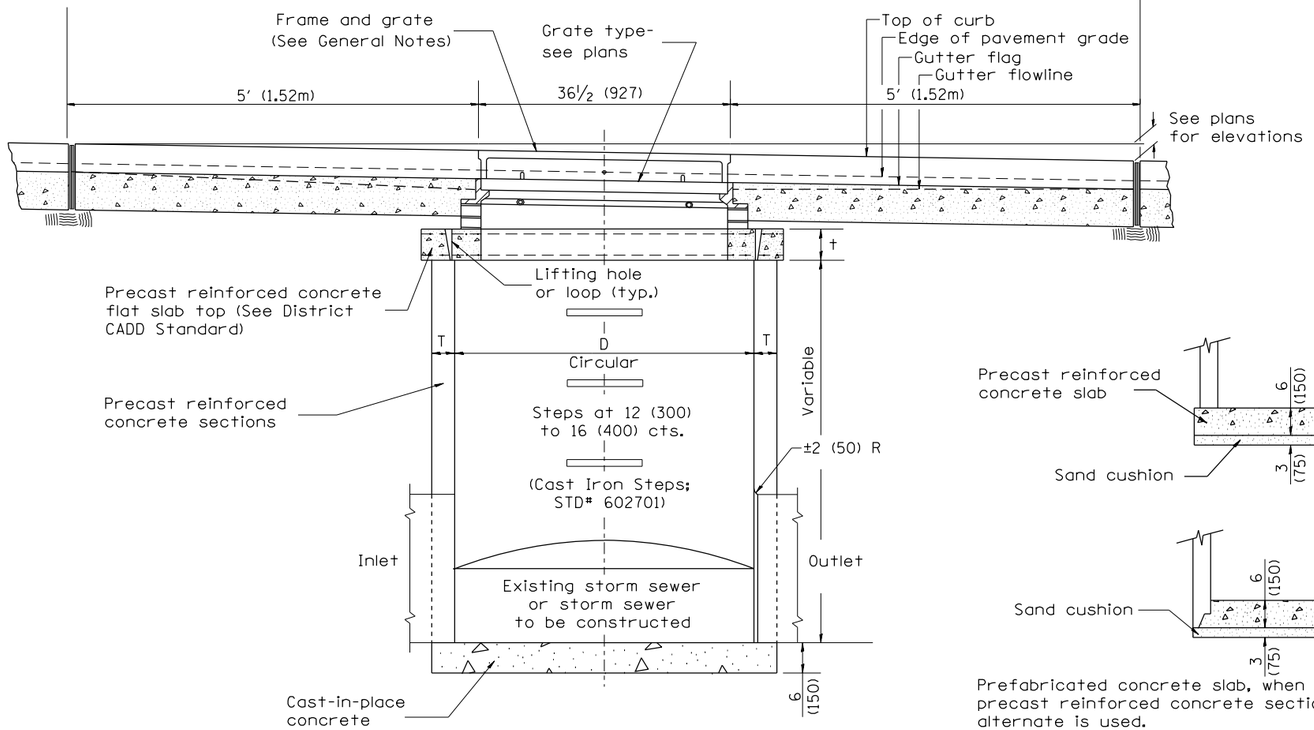
NOT TO SCALE

CADD STD. 601401-D4

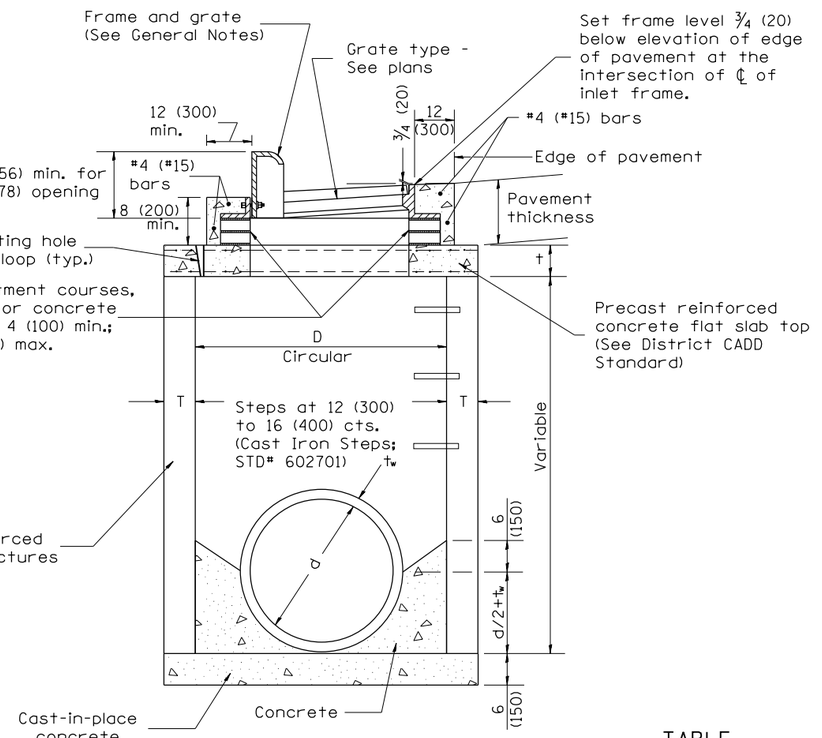
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	559
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN



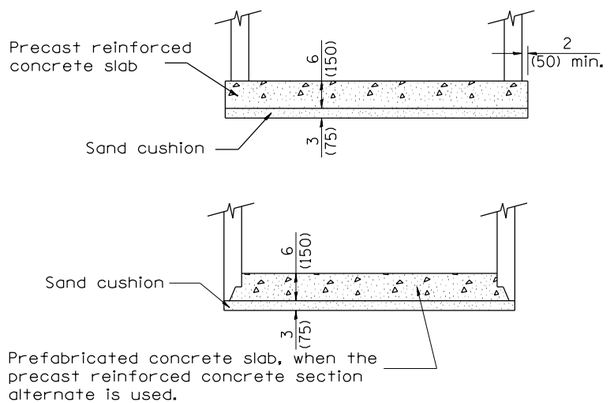
ELEVATION
(FRONT)



ELEVATION
(SIDE)

TABLE

D	T	t
4' (1.2m)	5 (125)	6 (150)
5' (1.5m)	6 (150)	8 (200)
6' (1.8m)	7¾ (195)	8 (200)
8' (2.4m)	9 (225)	10 (250)



ALTERNATE BOTTOM SLAB

GENERAL NOTES

1. Inlet-manhole construction shall be in accordance with Section 602 of the Standard Specifications.
2. Combination concrete curb and gutter shall be constructed in accordance with Section 606 of the Standard Specifications.
3. See District CADD Standard 604001-D4 for frame and grates.
4. See District CADD Standard for precast reinforced concrete flat slab top.

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

01-01-97	RENUM. B-4.06, NEW REVISION BOX	T.P.
12-01-98	CORRECT E.O.P. NOTE	J.A.
10-99	REVISION TO GENERAL NOTES	J.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

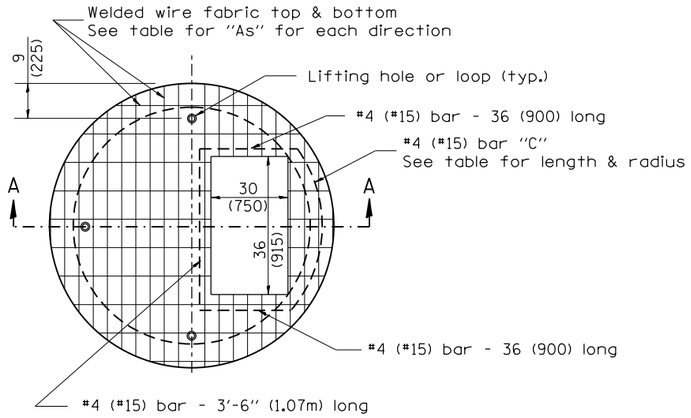
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INLET-MANHOLE, TYPE G-1, SPECIAL

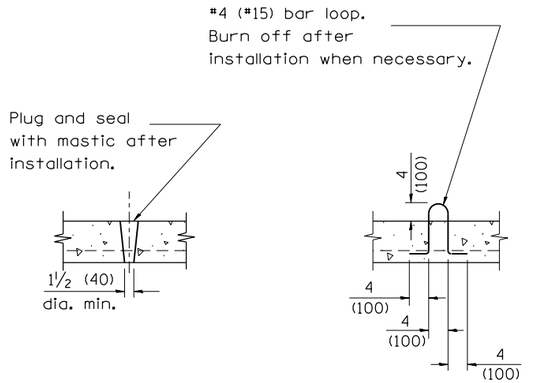
NOT TO SCALE

CADD STD. 602026-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	560
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

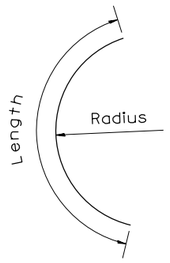


PLAN



LIFTING HOLE OR LIFTING LOOP TYPICAL

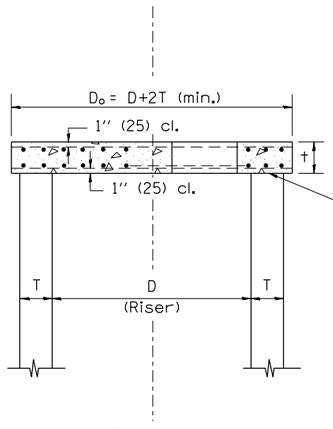
(3 required per slab)



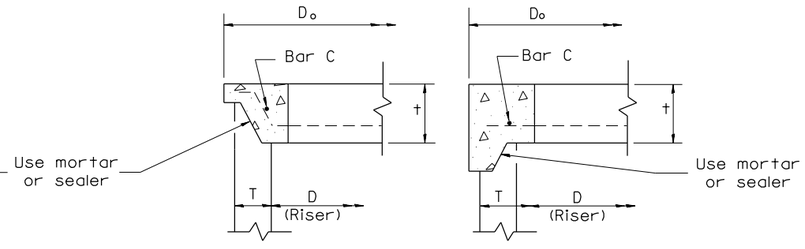
BAR "C"

TABLE

D	T	D_o (min.)	t	Reinforcement "As" W.W.F. each direction	Bar size	No. 15 (No. 4) Bar C Length	No. 15 (No. 4) Bar C Radius
4' (1.2m)	5 (125)	4'-10" (1.5m)	6 (150)	0.70 sq. inch/lin. ft. (1480mm ²/m)	No. 15 (No. 5)	1.35m (4'-6")	660 (26)
5' (1.5m)	6 (150)	6'-0" (1.8m)	8 (200)	0.70 sq. inch/lin. ft. (1480mm ²/m)	No. 15 (No. 5)	1.5m (5'-0")	810 (32)
6' (1.8m)	7¾ (195)	7'-3½" (2.2m)	8 (200)	0.88 sq. inch/lin. ft. (1860mm ²/m)	No. 20 (No. 6)	1.8m (6'-0")	965 (38)
8' (2.4m)	9 (225)	9'-6" (2.9m)	10 (250)	0.88 sq. inch/lin. ft. (1860mm ²/m)	No. 20 (No. 6)	2.3m (7'-6")	1.27m (4'-2")



SECTION A-A



ALTERNATE JOINT CONFIGURATIONS

GENERAL NOTES

1. The precast reinforced concrete flat slab top shall be used with INLET-MANHOLE, TYPE G-1 and INLET-MANHOLE, TYPE G-1, SPECIAL.
2. Joint configuration and dimensions of flat slab top shall match and fit the riser joint detail.
3. Lifting devices shall be approved by the Engineer.

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

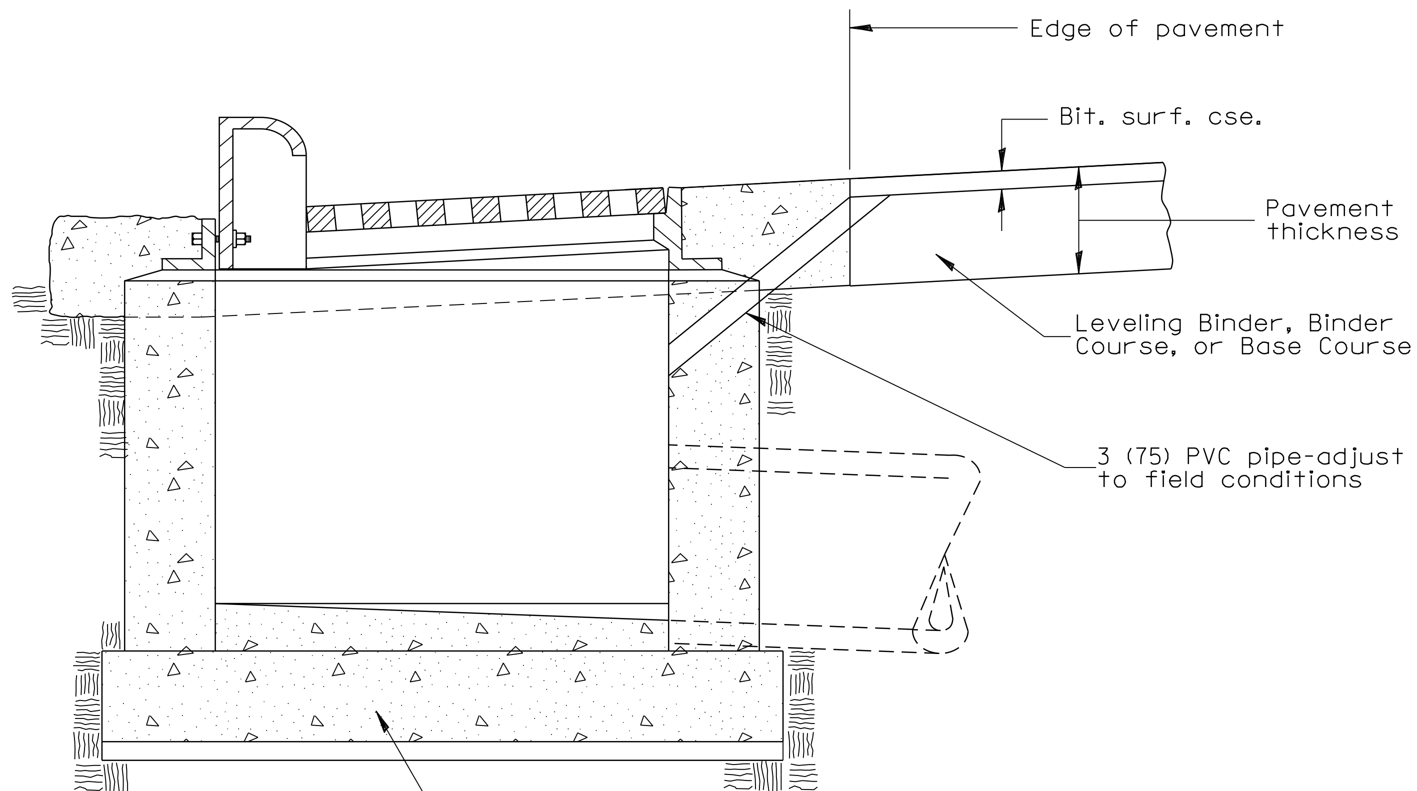
01-01-97	RENUM. B-4.07. NEW REVISION BOX	T.P.
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST REINFORCED CONCRETE FLAT SLAB TOP FOR INLET-MANHOLE, TYPE G-1 AND TYPE G-1, SPECIAL

NOT TO SCALE — CADD STD. 602101-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	561
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



GENERAL NOTES:

1. Temporary Drainage - This work consists of furnishing and installing a 3 (75) PVC pipe in the proposed inlet to facilitate drainage off the pavement prior to the placement of bituminous surface course.

2. Adequate pavement drainage shall be maintained during all phases of constructiion.

3. The PVC pipe is to be filled with mortar prior to surface course placement.

4. This detail applies to all inlet types.

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

01-01-97	RENUM. B-4.11, NEW REVISION BOX	T.P.
12-01-98	CORRECT GENERAL NOTE	J.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY INLET DRAINAGE TREATMENT

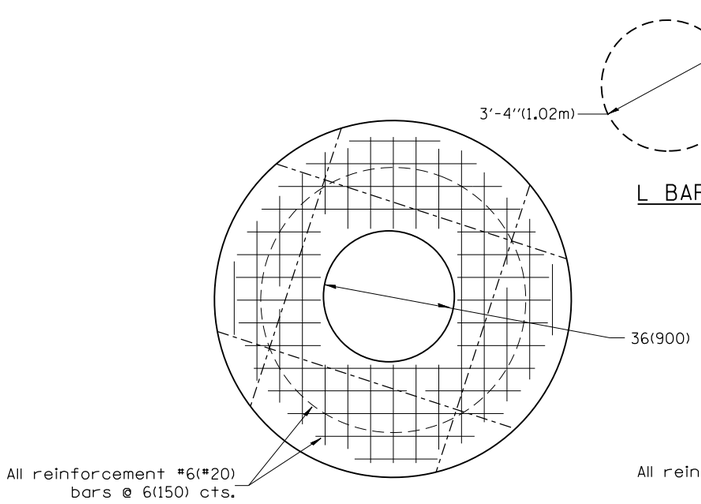
NOT TO SCALE

CADD STD. 602401-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	562

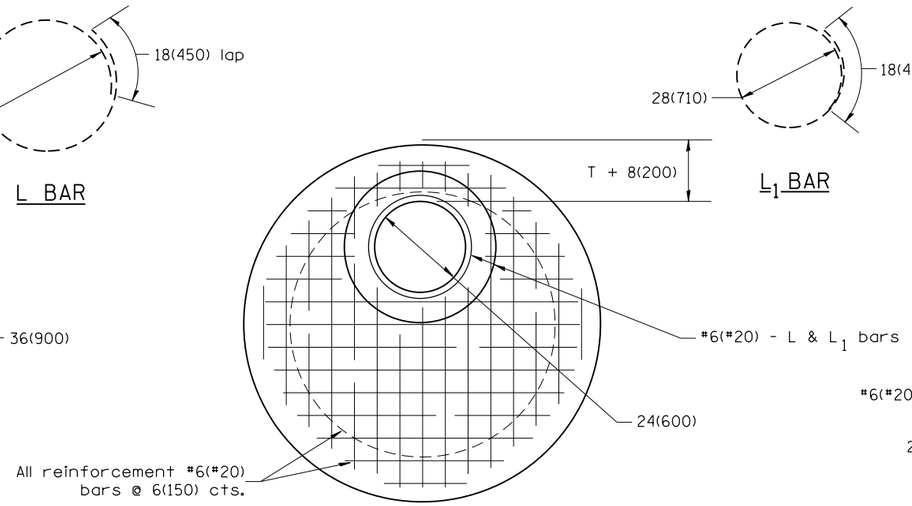
CONTRACT NO. 68409

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT



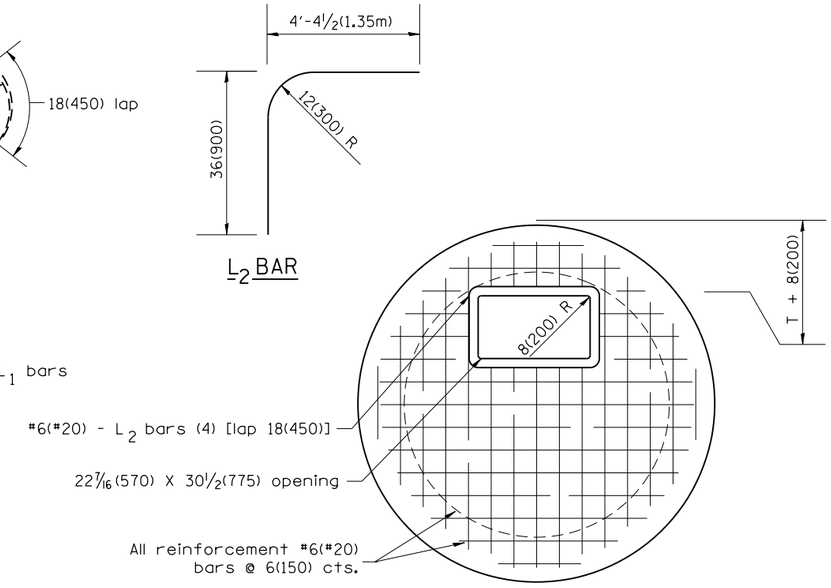
L BAR

PLAN #1



L_1 BAR

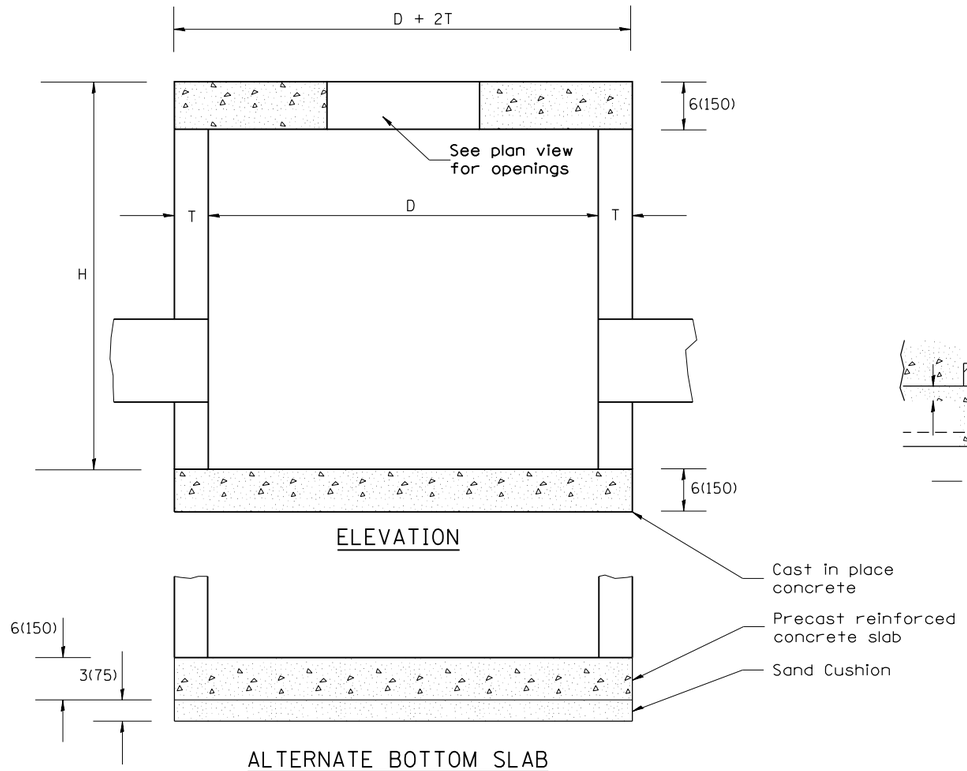
PLAN #2



L_2 BAR

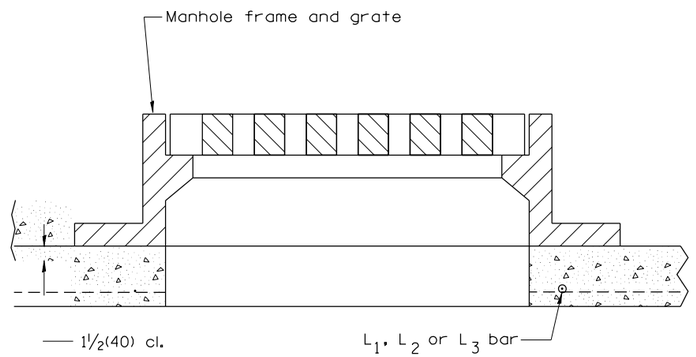
PLAN #3

ALTERNATES: FLAT SLAB TOP



ELEVATION

ALTERNATE BOTTOM SLAB
(See Standard 602401 for other options)



ELEVATION

ALTERNATE MATERIALS FOR WALLS	D	T (min.)
CONCRETE MASONRY UNITS	4' (1.2m) 5' (1.5m)	5 (125) 5 (125)
BRICK MASONRY	4' (1.2m) 5' (1.5m)	8 (200) 8 (200)
PRECAST REINFORCED CONCRETE RISERS	4' (1.2m) 5' (1.5m)	4 (100) 5 (125)
CAST-IN-PLACE CONCRETE	4' (1.2m) 5' (1.5m)	6 (150) 6 (150)

NOTES

1. Manhole construction shall be in accordance with Section 602 of the Standard Specifications.
2. See Standards 602401 and 602406 for invert details and optional construction details.
3. See Standards 602701 for cast iron steps.

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

01-01-97	RENUM. B-6.03, NEW REVISION BOX	T.P.
10-16-06	REVISED TO 2007 SPEC.	M.A.

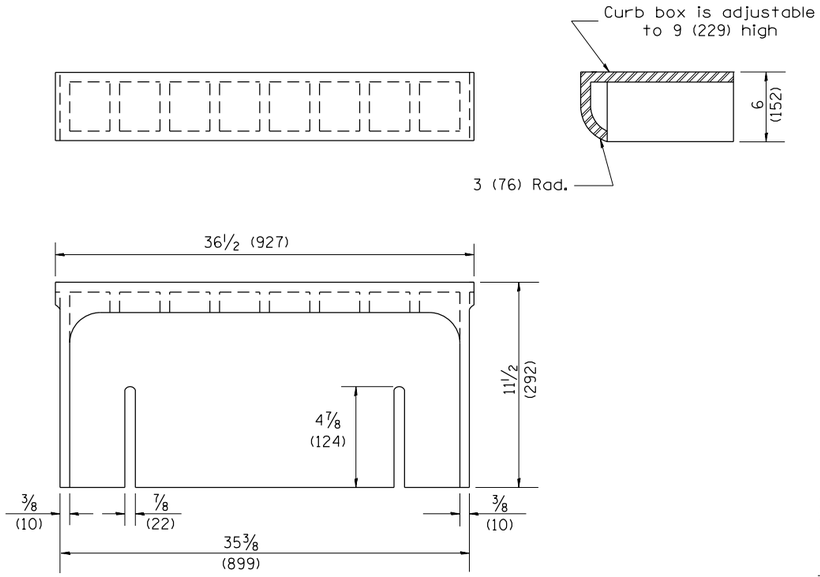
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MANHOLE, SPECIAL

NOT TO SCALE

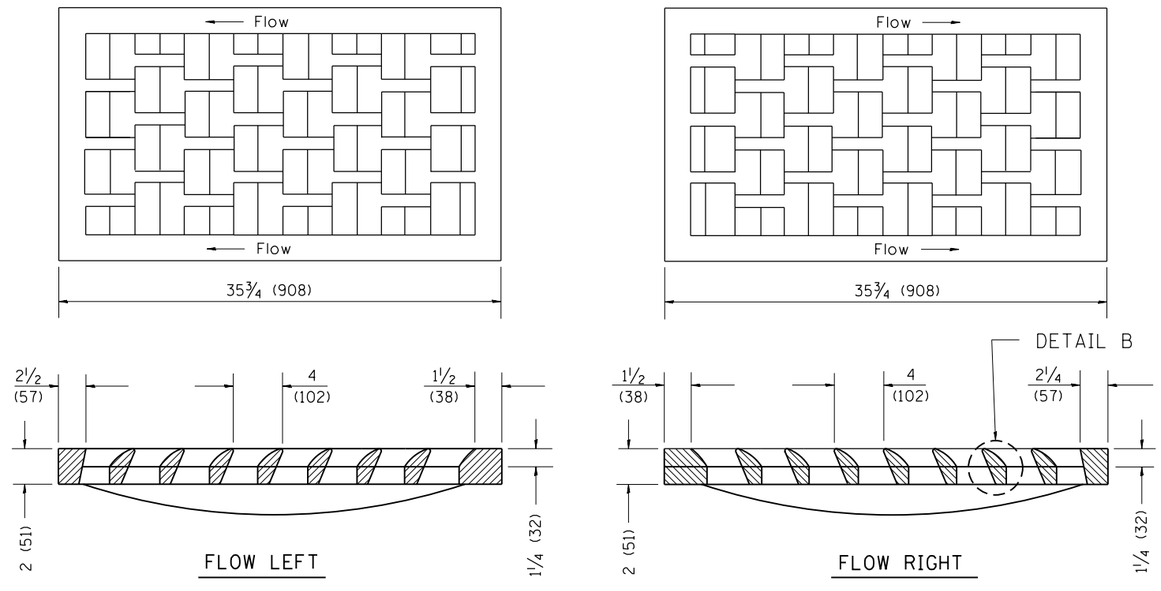
CADD STD. 602501-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	563
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



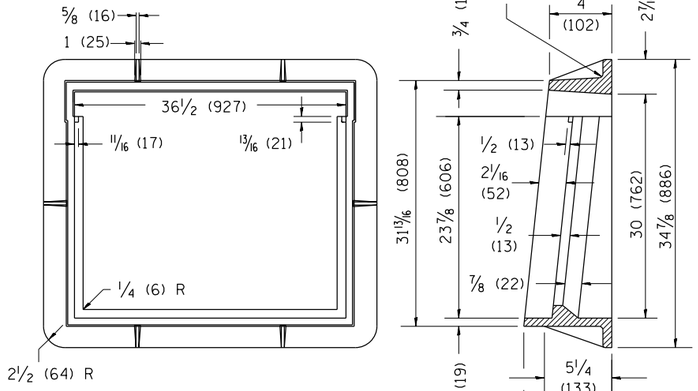
CAST CURB BOX

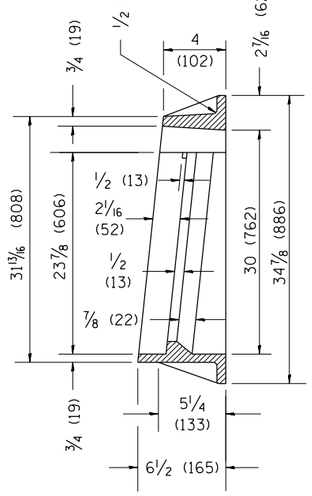
110 lbs. (50 kg)

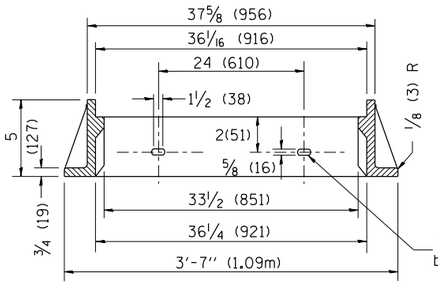


CAST VANE GRATES

(SPECIFY LEFT OR RIGHT FLOW)
230 lbs. (104 KG)



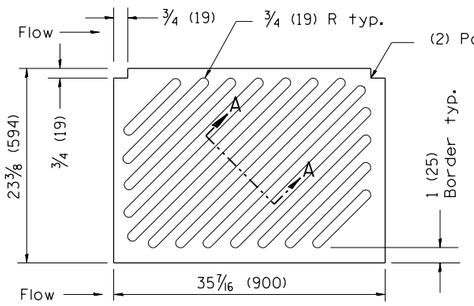




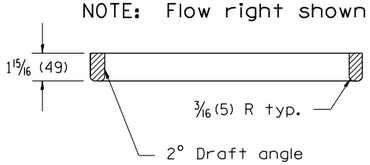
Slot for galvanized ½x 2½ (M12 x 64) bolt, nut and washer

CAST FRAME

271 lbs. (123 kg)

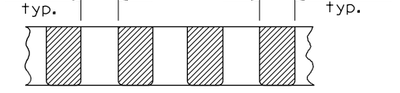


NOTE: Flow right shown

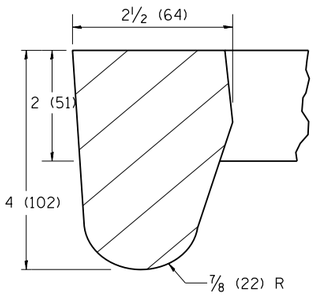


CAST DIAGONAL GRATE

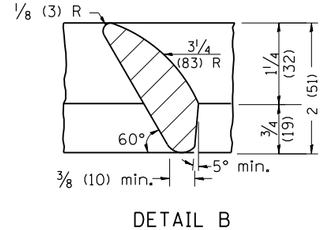
(Reversible for flow)
217 lbs. (98 kg)



SECTION A-A



DETAIL A



DETAIL B

GENERAL NOTES

1. The frame and grate shown on this drawing are for use with all TYPE G-1 and TYPE G-1, SPECIAL DRAINAGE STRUCTURES. See plans for grate type and flow direction.
2. Flow direction: As viewed from street side.
3. Material: cast gray iron.

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

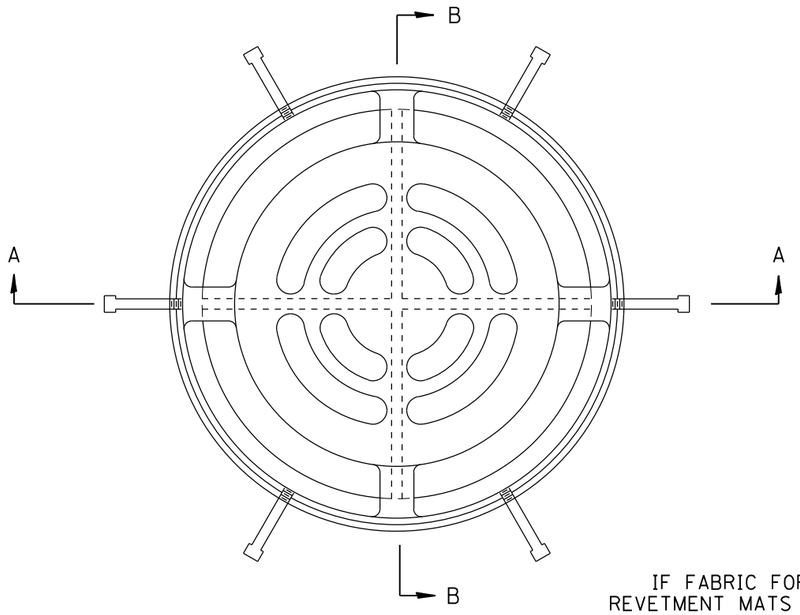
01-01-97	RENUM. B-10.01, NEW REVISION BOX	T.P.
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAME & GRATES FOR TYPE G-1 AND TYPE G-1, SPECIAL DRAINAGE STRUCTURES

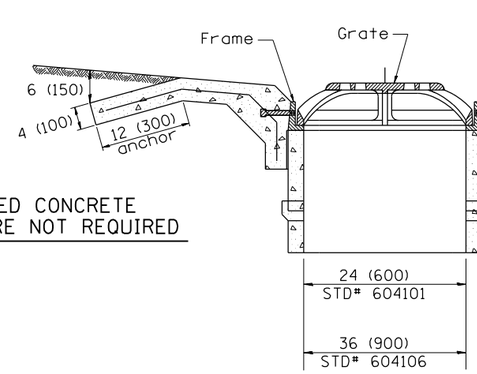
NOT TO SCALE — CADD STD. 604001-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	564
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



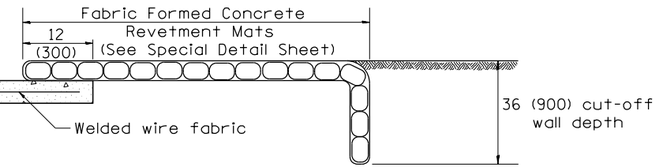
PLAN
(STD# 604101 & 604106)

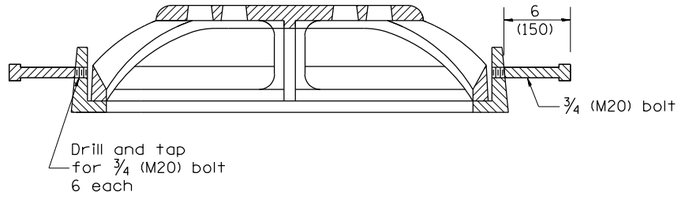
IF FABRIC FORMED CONCRETE
REVETMENT MATS ARE NOT REQUIRED



SECTION B-B
(STD# 604101 & 604106)

IF FABRIC FORMED CONCRETE
REVETMENT MATS ARE REQUIRED





SECTION A-A
(STD# 604101 & 604106)

GENERAL NOTES

1. The applicable portions of Highway Standards 604101 and/or 604106 shall apply, except as noted herin.

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

01-01-97	RENUM. B-4.09. NEW REVISION BOX. REVISED	T.P.			
	DESIGNER NOTES				
10-16-06	REVISED TO 2007 SPEC.	M.A.			

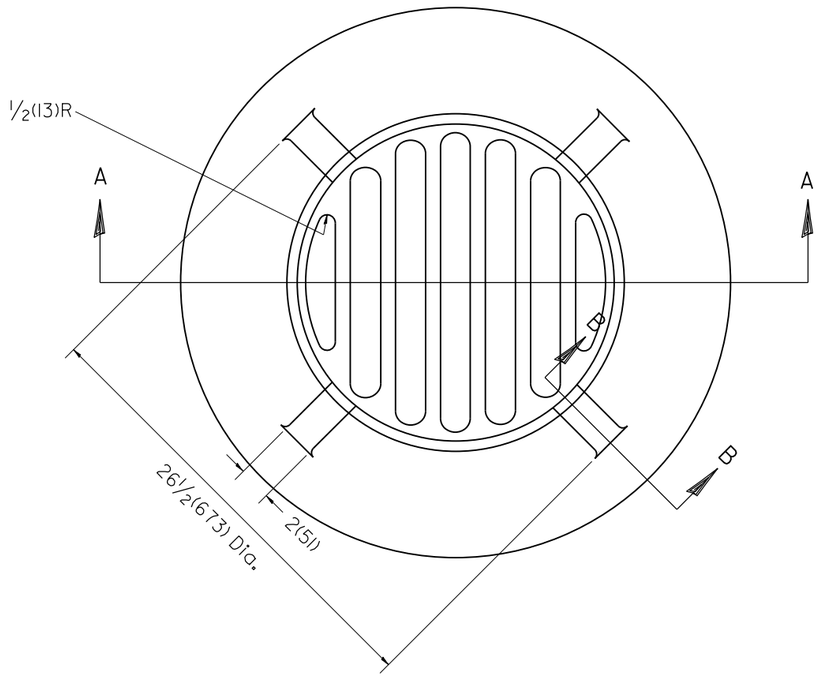
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MEDIA INLET (604101), SPECIAL AND
MEDIA INLET (604106), SPECIAL

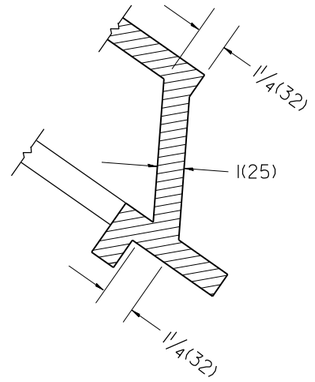
NOT TO SCALE

CADD STD. 604101-D4

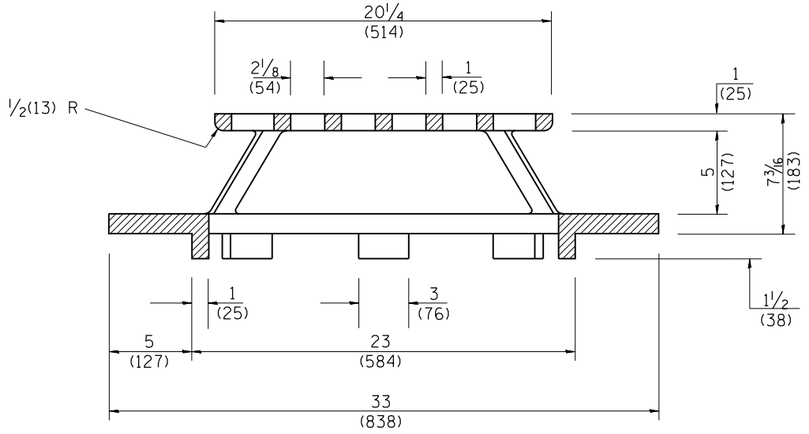
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	565
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN



SECTION B - B



SECTION A - A

GENERAL NOTES

1. MATERIAL - Cast Gray Iron
   Weight 209 lbs (95 kg)

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

01-01-97	RENUM. B-10.02. NEW REVISION BOX	T.P.
10-16-06	REVISED TO 2007 SPEC.	M.A.

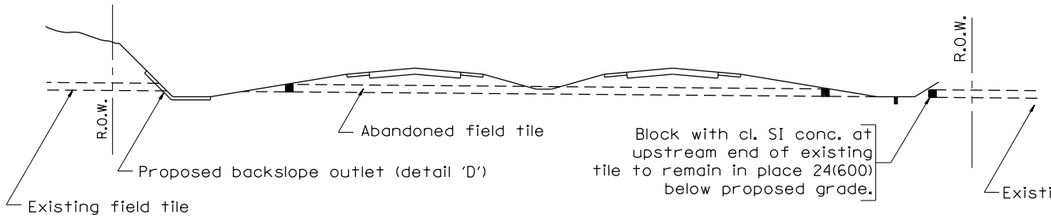
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPE 37 GRATE

NOT TO SCALE

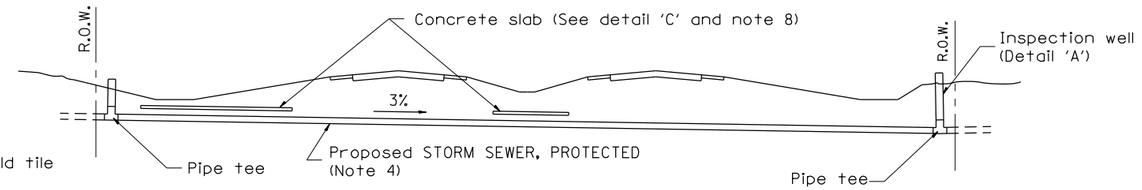
CADD STD. 604301-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	566
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



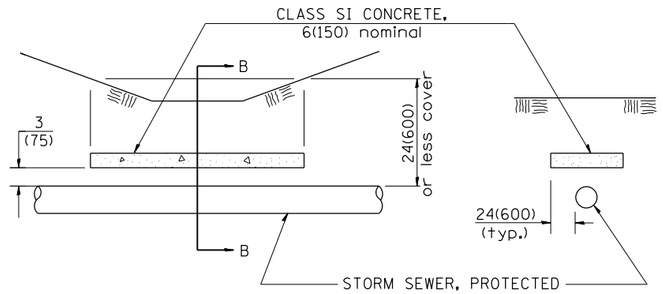
METHOD 'A'

Storm sewer flowline at 6(150) or more above proposed ditch flowline



METHOD 'B'

Storm sewers below proposed ditch flowline



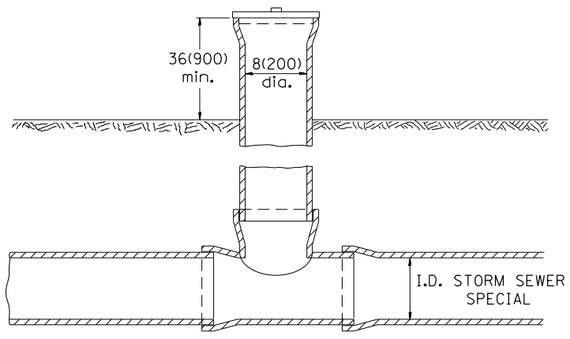
ELEVATION SECTION B-B

CONCRETE SLAB

Detail "C"

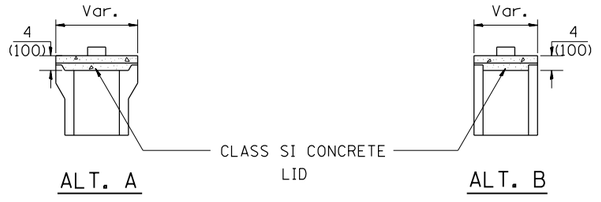
GENERAL NOTES:

1. Method 'A' is the preferred method of installation and should be used to minimize non-essential pipe crossing under pavement. The engineer should consider adjusting ditch elevations to accomadate the field tile outletting 6(150) above the ditch flowline.
2. Method 'B' shall be used only if ditch elevations cannot be adjusted to accomodate the use of method 'A'.
3. Abandoned field tile shall be plugged, as directed by the engineer, cost incidental.
4. Non-circular field tile shall be replaced with STORM SEWER, PROTECTED of at least the same cross sectional area. All existing field tile shall be replaced with storm sewer of the type required for the minimum depth of cover.
5. STORM SEWER, PROTECTED 8(200) shall be used for the inspection well and riser regardless of existing tile size. PVC pipe shall not be used for inspection wells.
6. Inspection wells shall be placed approximately 24(600) inside of both R.O.W. lines at the locations shown on the plans unless arrangements are made by the land aquisition unit to have the wells placed on the property owners side of the R.O.W.
7. The inspection well concrete lid shall be contructed of P.C. concrete CLASS SI CONCRETE and provide with a handle shaped from a #4 (#15) reinforcing bar.
8. The 6(150) concrete slab shall be poured the full length of the trench at the ditch flowline locations within the right of way with less than 24(600) of earth cover P.C. CONCRETE CLASS SI shall be used.
9. The existing field tile shall be connected to STORM SEWER, PROTECTED by a P.C. CONCRETE CLASS SI COLLAR as directed by the engineer.
10. Applicable portion of the Special Provision for STORM SEWER, PROTECTED apply.



INSPECTION WELL

Detail "A"



ALT. A ALT. B

INSPECTION WELL CONCRETE LID

Detail "B"

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

01-01-97	RENUM. A-18.02, NEW REVISION BOX, REVISED TITLE	T.P.
	BOX	
06-01-97	REVISED DRAWING & TITLE BOX	J.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

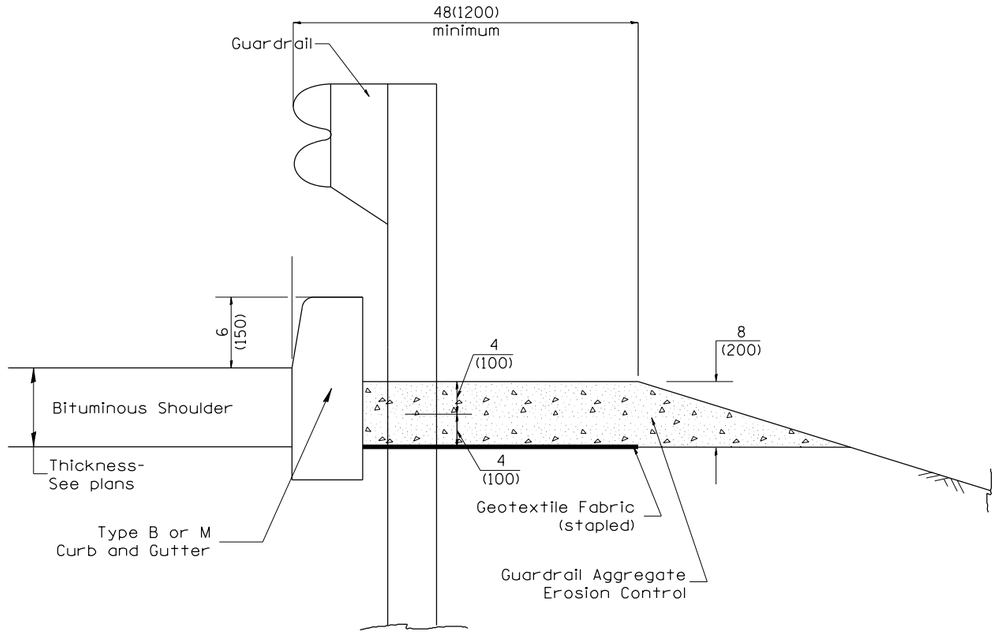
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STORM SEWER PROTECTED

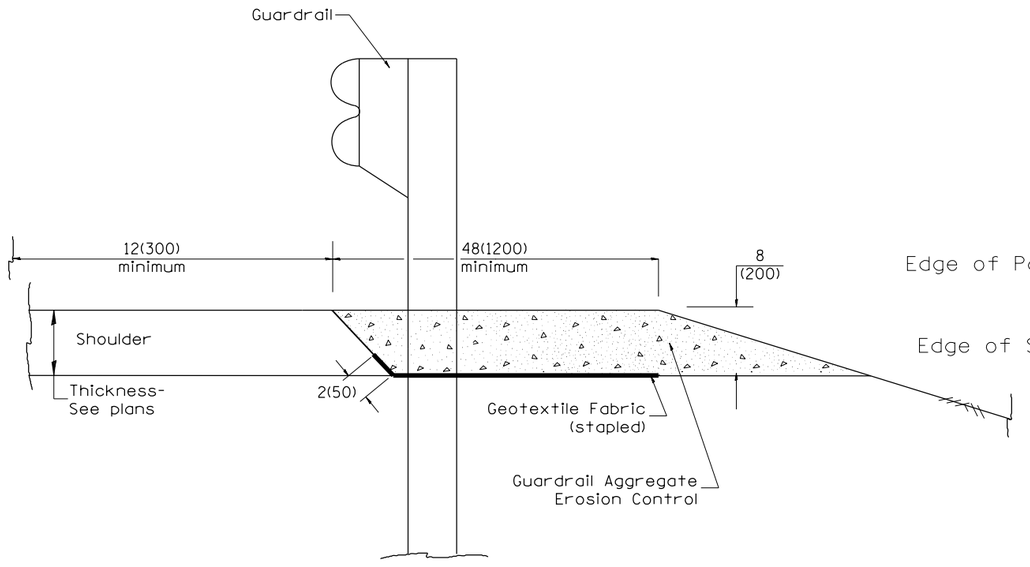
NOT TO SCALE

CADD STD. 611001-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	567
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL SECTION WITH EROSION CONTROL CURB



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.

2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.

3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.

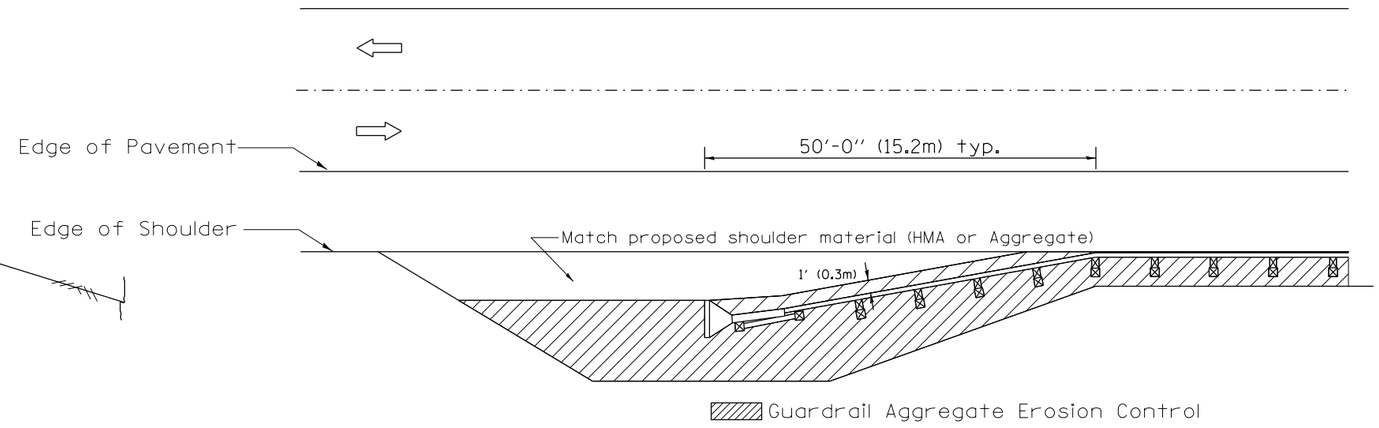
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.

5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.

6. Materials shall meet the following requirements:

   A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.

   B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.



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

01-01-97	RENUM. C-22.01, NEW REVISION BOX	T.P.	3-7-11	Added Detail showing plan view	R.D.
03-01-97	CORRECT STD. NUMBERS IN NOTES PG. 2	J.A.	8-10-12	Revised curb "B" and aggregate	R.D.
11-03-00	CORRECTION TO NOTES	M.A.			
10-16-06	REVISED TO 2007 SPEC.	M.A.			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

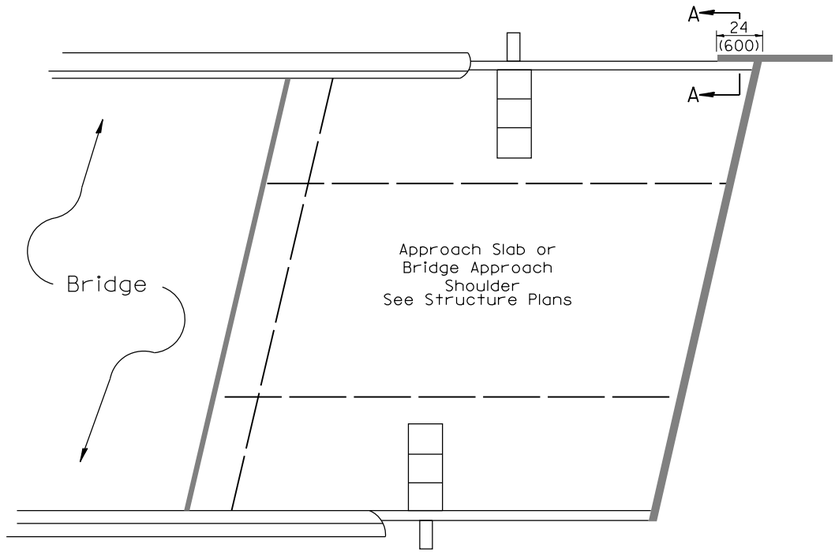
GUARDRAIL EROSION CONTROL TREATMENTS

NOT TO SCALE

SHT. 1 OF 2

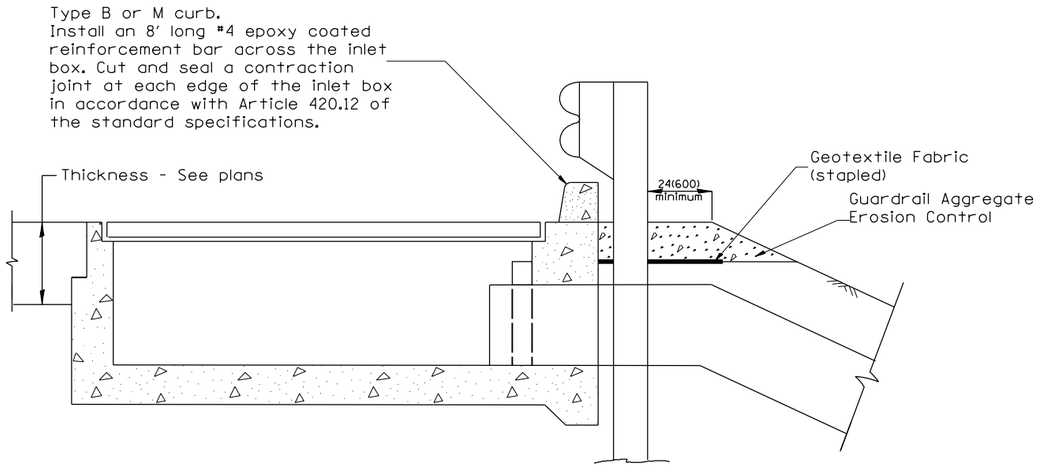
CADD STD. 630101-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	568
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

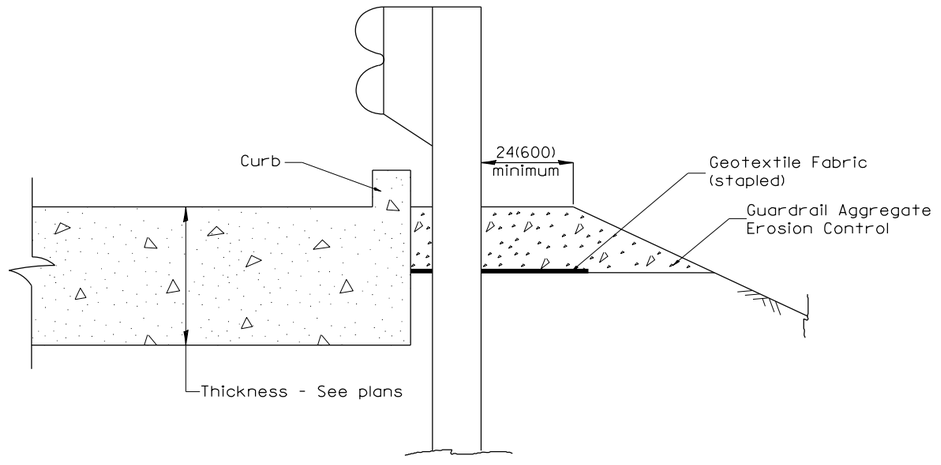


PLAN VIEW

APPROACH SLAB OR BRIDGE APPROACH SHOULDER
(STANDARD 609001 or 609006)



TYPICAL SECTION AT INLETS
TYPE E & F (STANDARD 610001)

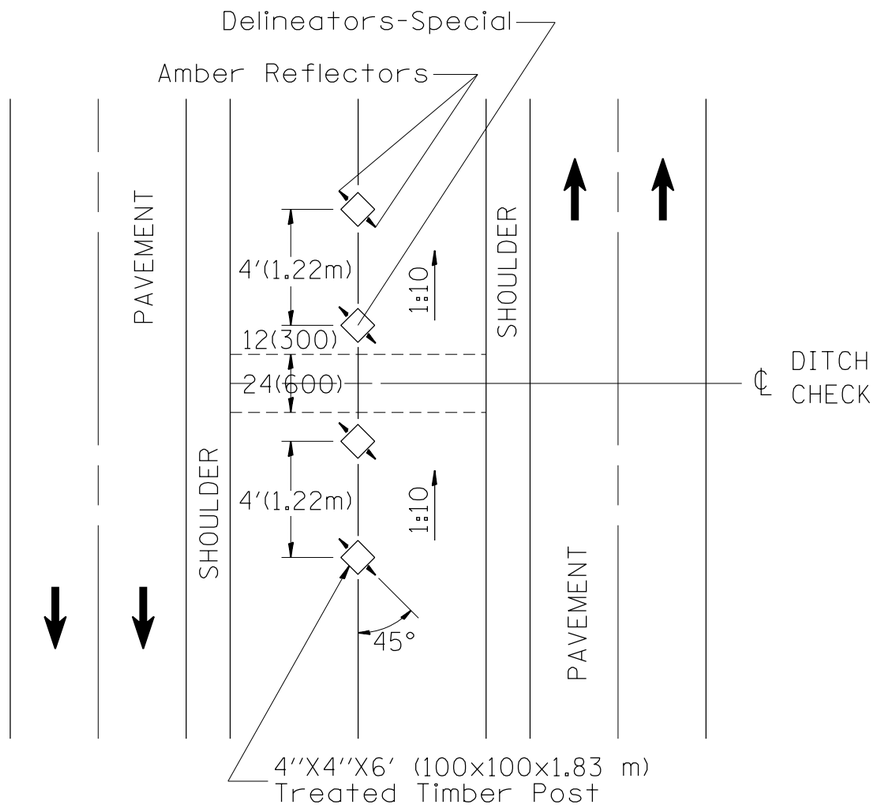


SECTION A-A
TYPICAL SECTION WITH BRIDGE APPROACH CURB

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

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GUARDRAIL EROSION CONTROL TREATMENTS SHT. 2 OF 2 NOT TO SCALE CADD STD. 630101-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	569
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. DELINEATORS, SPECIAL shall be constructed of 4'' x 4'' x 6' (100 x 100 x 1.83 m) treated timber.
2. Each post shall be buried a minimum of 36(900) deep.
3. Timber shall be treated in accordance with Article 1007.12 of the Standard Specifications. Waterborne Preservatives, ASA and CCA, shall have A 0.40 lbs/ft^3(6.4 kg/m^3) minimum retention.
4. Amber Reflectors shall meet the requirements of Article 1097.03 of the Standard Specifications.

All slope ratios are expressed as units of vertical displacement to units of horizonal displacement (V:H).

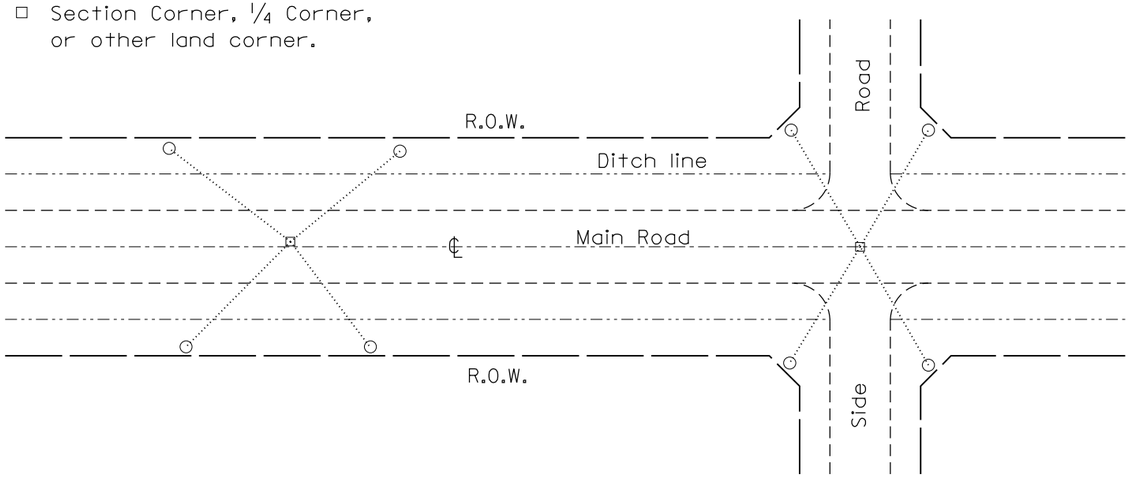
All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	RENUM. E-10.01, METRICS, NEW REVISION BOX, ADDED	T.P.	8-8-12	REVISED NOTES	R.D.	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DELINEATORS-SPECIAL
	DESIGNER NOTE, REVISED GENERAL NOTES, REVISED						NOT TO SCALE CADD STD. 635001-D4
	TITLE BOX						
10-16-06	REVISED TO 2007 SPEC.	M.A.					

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	570
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PERMANENT SURVEY TIES

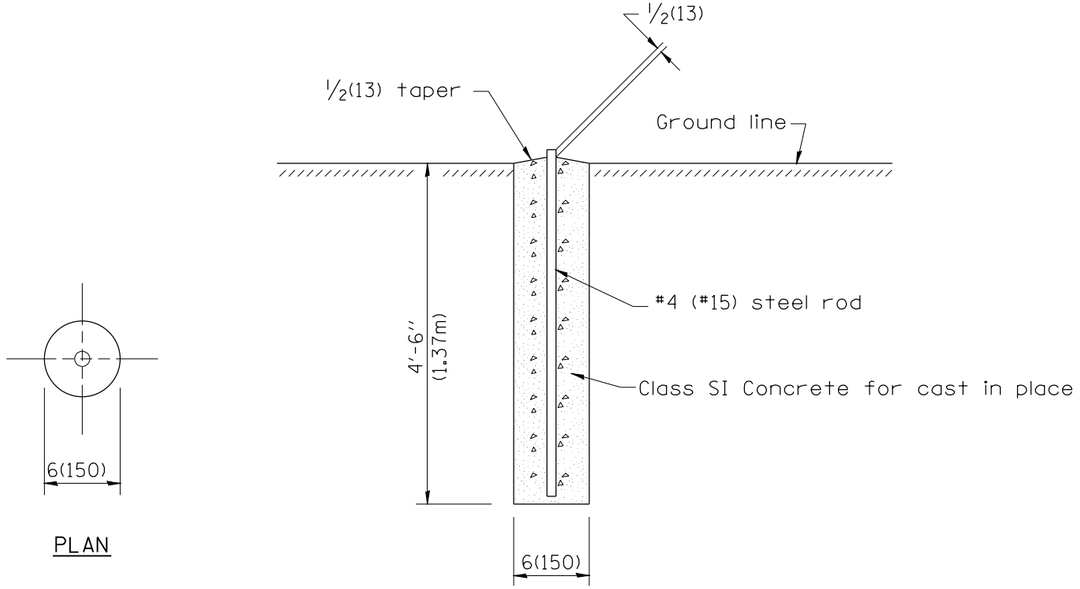
○ Permanent Survey Tie
□ Section Corner, 1/4 Corner, or other land corner.



TYPICAL APPLICATION

GENERAL NOTES

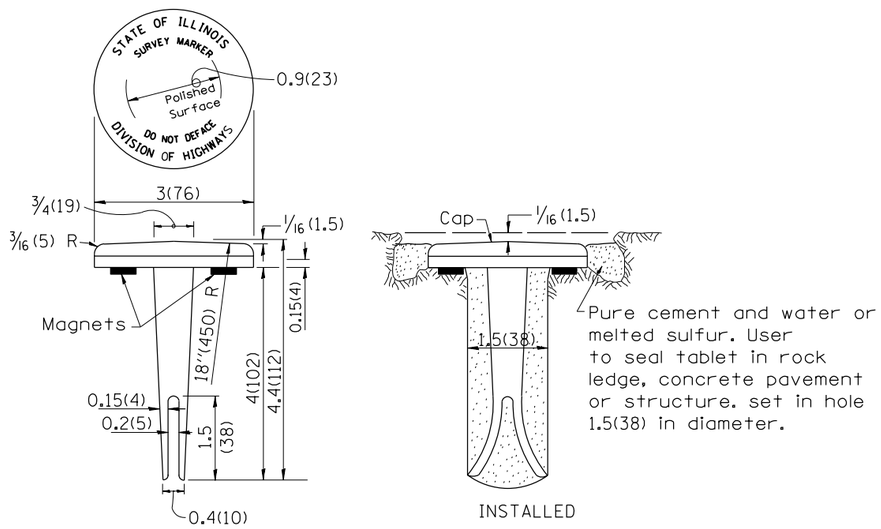
1. The marker shall be cast in place of Class SI Concrete.
2. Tie marker shall be installed after the final seeding has been completed unless otherwise specified by the Engineer.
3. The tie distances to the section corner shall be measured and recorded by the surveyor setting the PSM. All ties shall be turned over to the IDOT Chief of Surveys or Chief of Plats for recordation.
4. All documentation shall be performed by a PLS



PLAN

SECTION

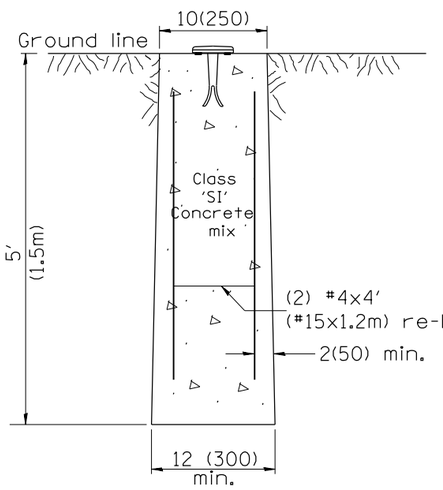
PERMANENT SURVEY MARKERS



TYPE I

GENERAL NOTES

1. All type II markers shall be cast in place, and precast markers will not be allowed.
2. Two permanent magnets, each having a diameter of 3/4 (19) and a thickness of 1/4 (6), or equivalent, shall be attached to the underside of the tablet with an approved epoxy bonding agent.
3. The location of the markers shall be in accordance with the plans in general, the markers will be placed at the P.T.'s, P.C.'s, and P.I.'s llocated within the R.O.W. of horizontal curves and spaces along the tangents in a way that a minimum of two markers are always inter-visible, and not to exceed 1000' (300m).
4. The markers shall be placed under the direction of the Engineer and shall be installed in a workmanlike manner in order that there will be no further settlement or horizontal shifting. The monuments shall be placed in a way that the survey point will fall within the portion of the plaque provided for that purpose.
5. The project designation, the centerline station, the survey point, and the elevation shall be permanently marked by the use of metal dies after marker has been installed.



MARKER CAST IN PLACE
TYPE II

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

01-01-97	RENUM. D-3.01, NEW REVISION BOX, REVISED	T.P.	10-16-06	REVISED TO 2007 SPEC.	M.A.	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PERMANENT SURVEY TIE & PERMANENT SURVEY MARKERS TY.I – TY.II	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TITLE BOX, ADD DESIGNER NOTE		01-04-11	REVISED FOR CORRECTIONS	R.D.			313	7-2 ; 6-1	HENDERSON	976	571
07-07-98	ADD DESIGNER NOTE	J.A.									CONTRACT NO. 68409	
05-24-06	REMOVED GEN. NOTE UNDER TIES	M.A.					NOT TO SCALE CADD STD. 667101-D4	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGN NUMBER	STATION	A	B	C*	D**
001	STA 524+56 (US ROUTE 34)	15'-0"	14'-0"	10'-4"	35'-0"
002	STA 550+96 (US ROUTE 34)	15'-0"	14'-0"	6'-3"	35'-0"
003	STA 592+36 (US ROUTE 34)	15'-0"	15'-0"	5'-0"	35'-0"
004	STA 599+52 (US ROUTE 34)	5'-6"	4'-6"	7'-0"	9'-5"
005	STA 625+36 (US ROUTE 34)	5'-6"	4'-6"	7'-0"	9'-5"
006	STA 632+59 (US ROUTE 34)	15'-0"	15'-0"	5'-0"	35'-0"
007	STA 658+99 (US ROUTE 34)	15'-0"	14'-0"	5'-0"	49'-3"
008	STA 685+39 (US ROUTE 34)	15'-0"	14'-0"	9'-4"	44'-3"
009	STA 19+63 (IL 94/116)	14'-0"	12'-0"	5'-0"	35'-0"
010	STA 23+63 (IL 94/116)	14'-0"	6'-0"	5'-0"	35'-0"
011	STA 29+86 (IL 94/116)	14'-6"	8'-0"	5'-0"	35'-0"
012	STA 33+86 (IL 94/116)	14'-0"	12'-0"	5'-0"	35'-0"
013	STA 20+75 (RAMP A)	19'-6"	13'-0"	5'-0"	35'-0"
014	STA 21+00 (RAMP C)	19'-6"	14'-0"	5'-0"	35'-0"

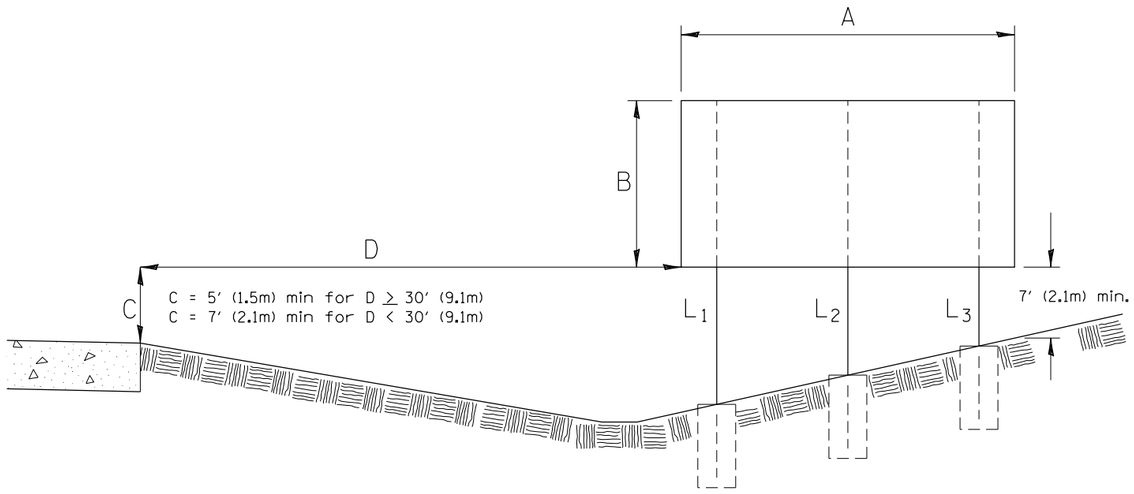
C * (A) For signs less than 30'(9.1m) from edge of pavement, the bottom edge of Sign shall be set level at an elevation of at least 7'(2.1m) above grade Elevation at edge of pavement.

(B) For signs 30'(9.1m) and greater from edge of pavement, the bottom edge of sign shall be set level at an elevation of at least 5'(1.5m) above grade elevation at edge of pavement.

(C) For signs on rising embankmentslopes, the bottom edge of the sign shall be set so as to obtain at least 7'(2.1 m) between the top of the stub post and the slot at the fuse plate on the far post. This may be reduced to 5'(1.5m) when the distance from the edge of pavement is 30'(9.1m) or greater and the slope is 1:2 or steeper or where it would be unlikely for an out of control vehicle to reach the post.

D ** All signs will be placed 35'(10.7m) or more off of main line wherever possible, except when placed behind guardrail. Signs on ramps will be placed 18'(5.5m) or more off the edge of pavement.

In general, the location of shoulder mounted signs may vary in order to take advantage of flatter cross sections which can result in considerable cost savings.



L_1 is always the post nearest to the edge of pavement. (See Sign Structures Manual)

7' (2.1m) min. between top of stud post & fuse plate. May be reduced to 5' (1.5m) when D = 30' (9.1m) & the slope is 1:2 or steeper or where it would be unlikely for an out of control vehicle to reach the post.

All post sizes and support lengths shown on plans shall be verified in field prior to construction.

All post sizes will be verified by the I.D.O.T. Shoulder Mounted Sign Post Stress Analysis (See Special Provisions).

All slope ratios are expressed as units of vertical displacement to units of horizonal displacement (V:H).

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

01-01-97	RENUM. E-3.01, METRICS, NEW REVISION BOX, REVISED	T.P.
	TITLE BOX, ADDED GENERAL NOTES	
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING SCHEDULE

NOT TO SCALE

CADD STD. 720001-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	572
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

ROUTE	STATION	SIGN NO.	MAIN SIGN	SIGN PANEL REFL. SQ FT (m^2)	NO. POSTS	POST SIZE	C - C POSTS	POST LENGTH (LIN. FT.)			SUPPORT STEEL LBS(kg)	FOUNDATION CL. SI CONCRETE CU YD (m^3)	FOUNDATION REINFORCEMENT LBS(kg)	STUB POSTS LBS(kg)	FUSE PLATE BOLT			REMARKS
								L - 1	L - 2	L - 3					SIZE	LENGTH	SPECS	
US 34	524+56	001		210	2	W14 x 38	9.00	24.250	21.250		1,729	4.18	244	266	3/4"	2 1/2"	M 164	
US 34	550+96	002		210	2	W14 x 38	9.00	23.375	21.000		1,686	4.18	244	266	3/4"	2 1/2"	M 164	
US 34	592+36	003		225	2	W14 x 38	9.00	23.625	23.625		1,796	4.18	244	266	7/8"	2 1/2"	M 164	
US 34	599+52	004		24.75	2	W6 x 9	3.30	12.375	12.375		223	1.40	156	41	1/2"	1 1/2"	M 164	
US 34	625+36	005		24.75	2	W6 x 9	3.30	12.375	12.375		223	1.40	156	41	1/2"	1 1/2"	M 164	
US 34	632+59	006		225	2	W14 x 38	9.00	25.125	26.875		1,976	4.18	244	266	7/8"	2 1/2"	M 164	
US 34	658+99	007		210	2	W14 x 38	9.00	24.125	22.625		1,777	4.18	244	266	3/4"	2 1/2"	M 164	
US 34	685+39	008		210	2	W14 x 30	9.00	21.750	21.000		1,283	3.80	226	180	3/4"	2 1/4"	M 164	
IL 94/116	19+63	009		168	2	W14 x 38	8.40	23.375	26.125		1,881	4.18	244	266	3/4"	2 1/2"	M 164	
IL 94/116	23+63	010		84	2	W10 x 22	8.40	17.375	20.125		825	2.36	184	132	1/2"	2"	M 164	
IL 94/116	29+86	011		116	2	W14 x 30	8.70	20.125	23.000		1,294	3.80	226	180	1/2"	2"	M 164	
IL 94/116	33+86	012		168	2	W14 x 38	8.40	23.375	26.125		1,881	4.18	244	266	3/4"	2 1/2"	M 164	
RAMP A	20+75	013		253.5	3	W16 x 45	6.825	26.625	29.000	31.125	3,904	6.69	390	473	5/8"	2 1/4"	M 164	
RAMP C	21+00	014		273	3	W16 x 45	6.825	27.000	29.125	31.125	3,926	6.69	390	473	3/4"	2 1/2"	M 164	
TOTAL				2,234							24,404	55.4		3,382				

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

01-01-97	RENUM. E-3.03, METRICS, NEW REVISION BOX, REVISED	T.P.			
	TITLE BOX, ADDED GENERAL NOTES				
10-16-06	REVISED TO 2007 SPEC.	M.A.			

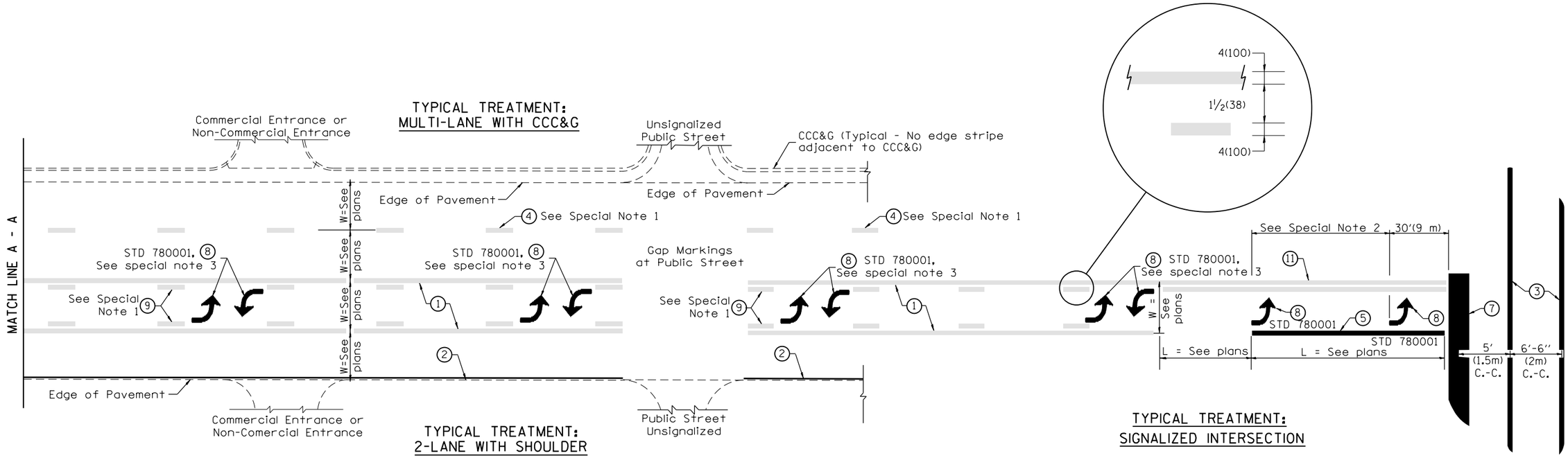
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GROUND MOUNT SIGN STRUCTURE DETAILS

NOT TO SCALE

CADD STD. 720006-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	573
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend. Some elements may not apply to specific project.)

1. 4(100) Solid (Yellow)
2. 4(100) Solid (White)
3. 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
   2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
4. 6(150) Skip-Dash (White) — 10' (3.05m) / 30' (9.14m) / 10' (3.05m) (See Special Note 1)
5. 8(200) Solid (White)
6. 12(300) Diagonal (White) (Item 6 is shown on Std. 780001)
7. 24(600) Stop Bar (White)
8. Letters & Arrows — 33' (10m) (See Std. 780001 and Special Notes 2 & 3)
9. 4(100) Skip-Dash (Yellow) — 10' (3.05m) / 30' (9.14m) / 10' (3.05m) (See Special Note 1)
10. 12(300) Diagonal (Yellow) (See Table A) — 45°; 11(280) C.-C.; See Table A
11. 4(100) Double Solid (Yellow)

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversly across the pavement.
2. The following shall apply to arrows located in one-way left turn lanes:
   A. A minimum of two (2) arrows is required.
   B. The maximum spacing between arrows is 80' (24 m).
   C. Arrows shall be evenly spaced if three (3) or more are required.
3. The following shall apply to arrow pairs located in two-way left turn lanes:
   A. A minimum of two (2) arrow pairs is required.
   B. The maximum spacing between arrow pairs is 200' (61 m).
   C. Arrow pairs shall be evenly spaced if three (3) or more are required.
   D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

GENERAL NOTES

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.

01-01-97	RENUM. F-8.03, NEW REVISION BOX	T.P.		10-16-06	REVISED TO 2007 SPEC.		
02-07-97	ADD BI DIRECTIONAL DIMENSION	J.A.					
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.					
08-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.					

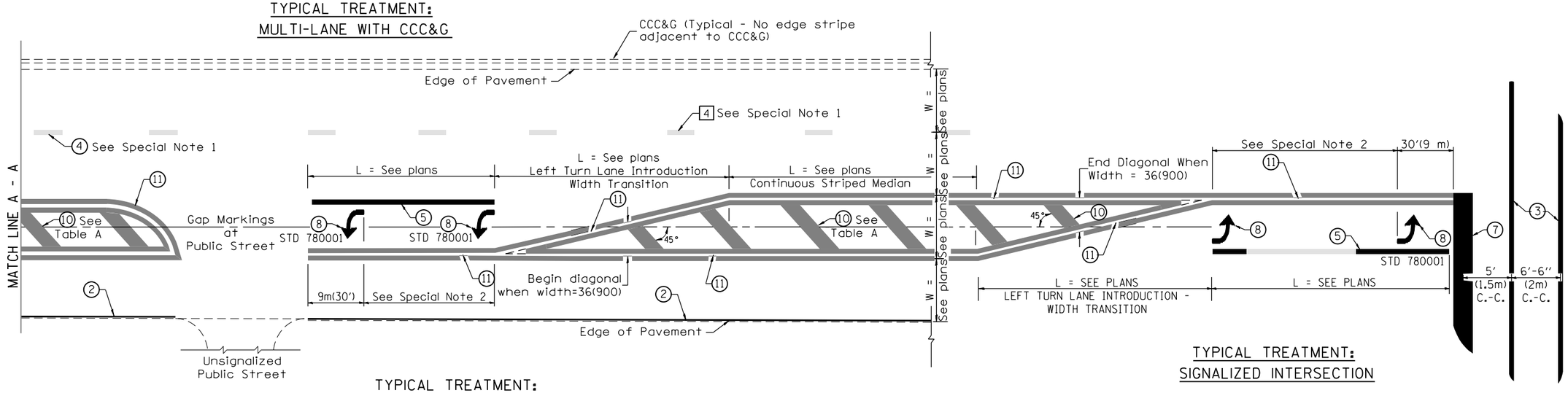
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS

NOT TO SCALE

SHT. 1 OF 2
CADD STD. 780001-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	574
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



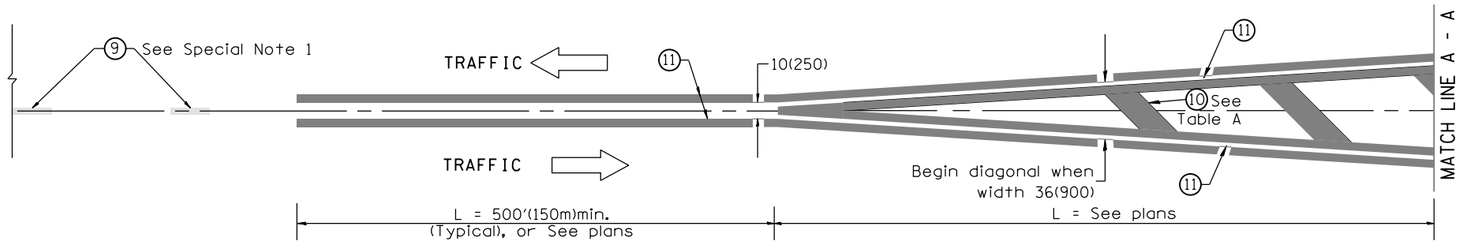
TYPICAL MEDIAN TRANSITIONS

FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A

RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION (Includes Width Transitions for Median and Left Turn Lane Introductions)
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)



MEDIAN INTRODUCTION - WIDTH TRANSITIONS

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS

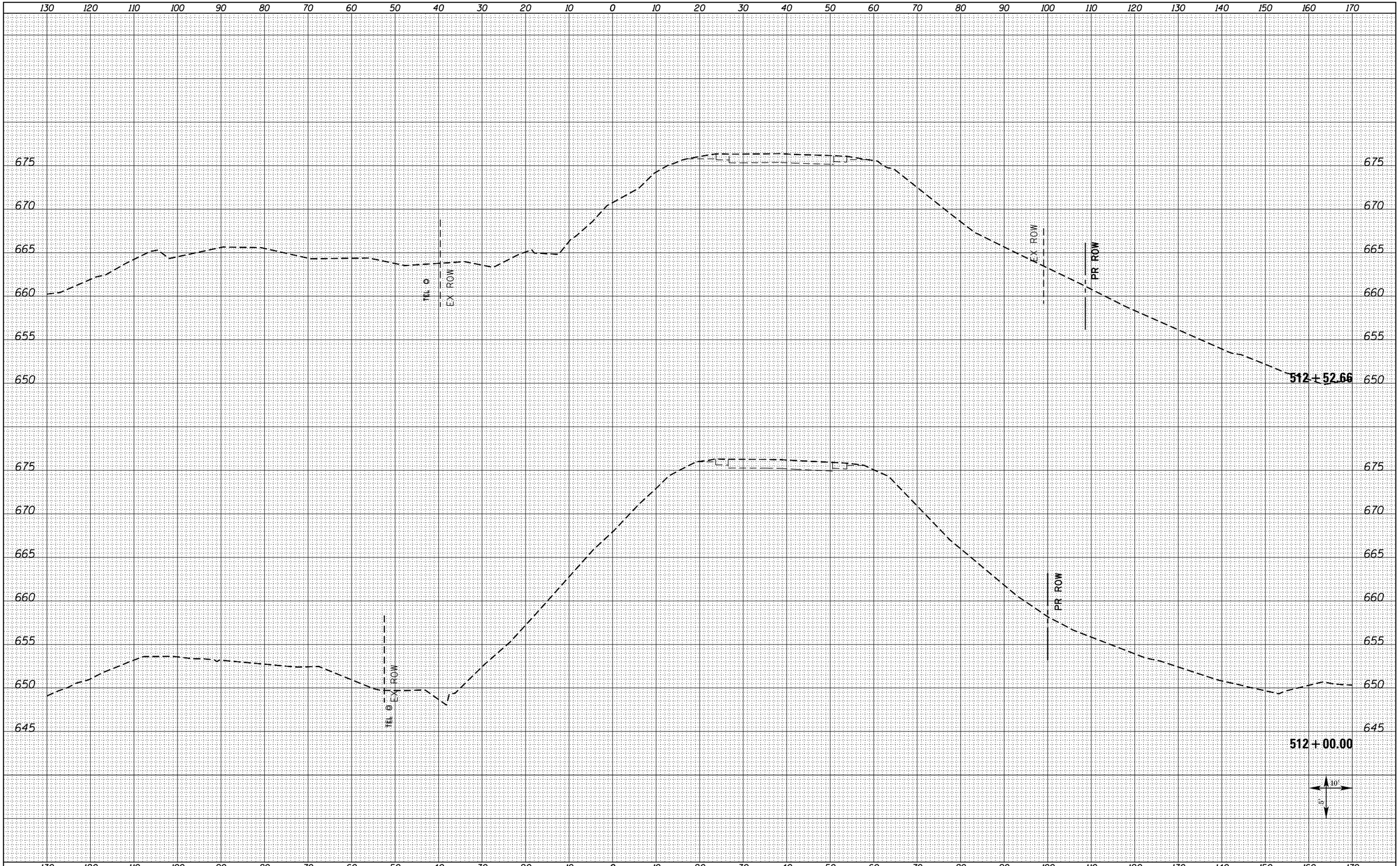
NOT TO SCALE

SHT. 2 OF 2
CADD STD. 780001-D4

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	575
		CONTRACT NO. 68409		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	



FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 1 OF 209 SHEETS | STA. 512+00.00 TO STA. 512+52.66

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	576
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170

680 675 670 665 660 655

PR ROW

EX ROW

TEL Ø

L16

EX ROW

PR ROW

514 + 00.00

STAGE 1
CUT - 4 S.F.
FILL - 4 S.F.
TOPSOIL - 7 S.F.
UNSUITABLE - 0 S.F.

675 670 665 660 655

TEL Ø

EX ROW

EX ROW

PR ROW

513 + 00.00

STAGE 1
CUT - 0 S.F.
FILL - 0 S.F.
TOPSOIL - 0 S.F.
UNSUITABLE - 0 S.F.

10
5

130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170

FINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn

USER NAME = danw	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

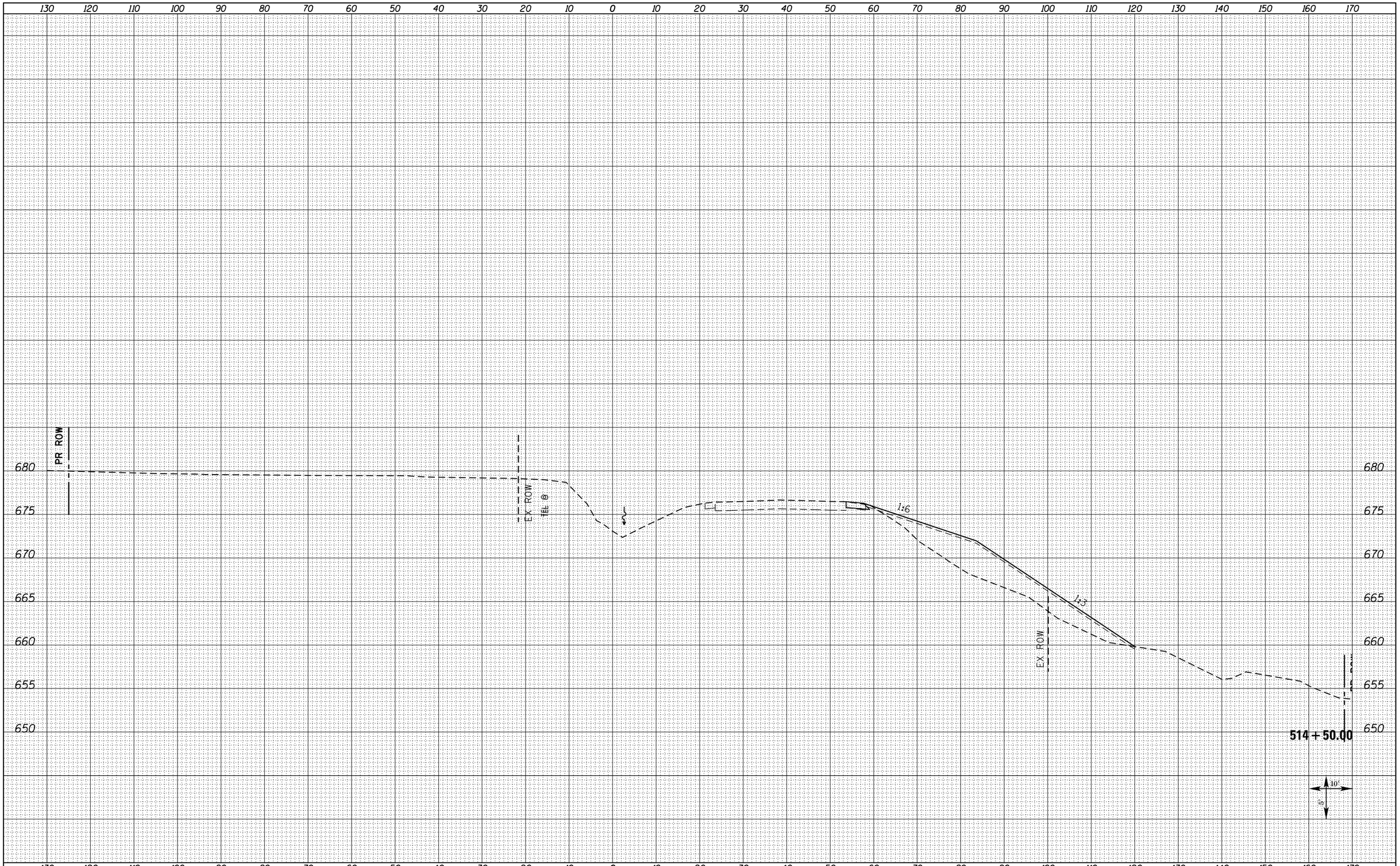
CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 2 OF 209 SHEETS | STA. 513+00.00 TO STA. 514+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	577
		CONTRACT NO. 68409		
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

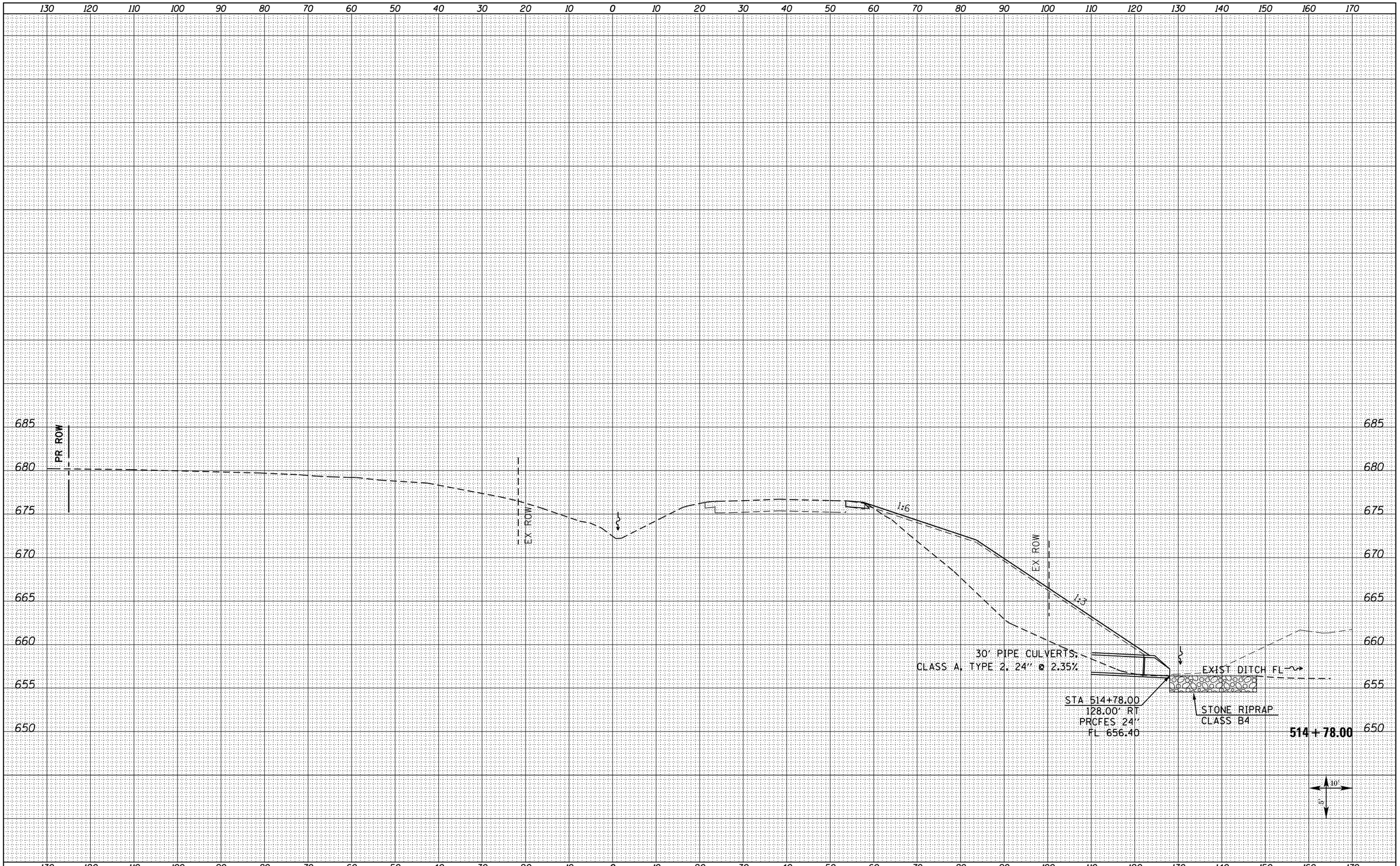
CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 3 OF 209 SHEETS | STA. 514+50.00 TO STA. 514+50.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	578
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		



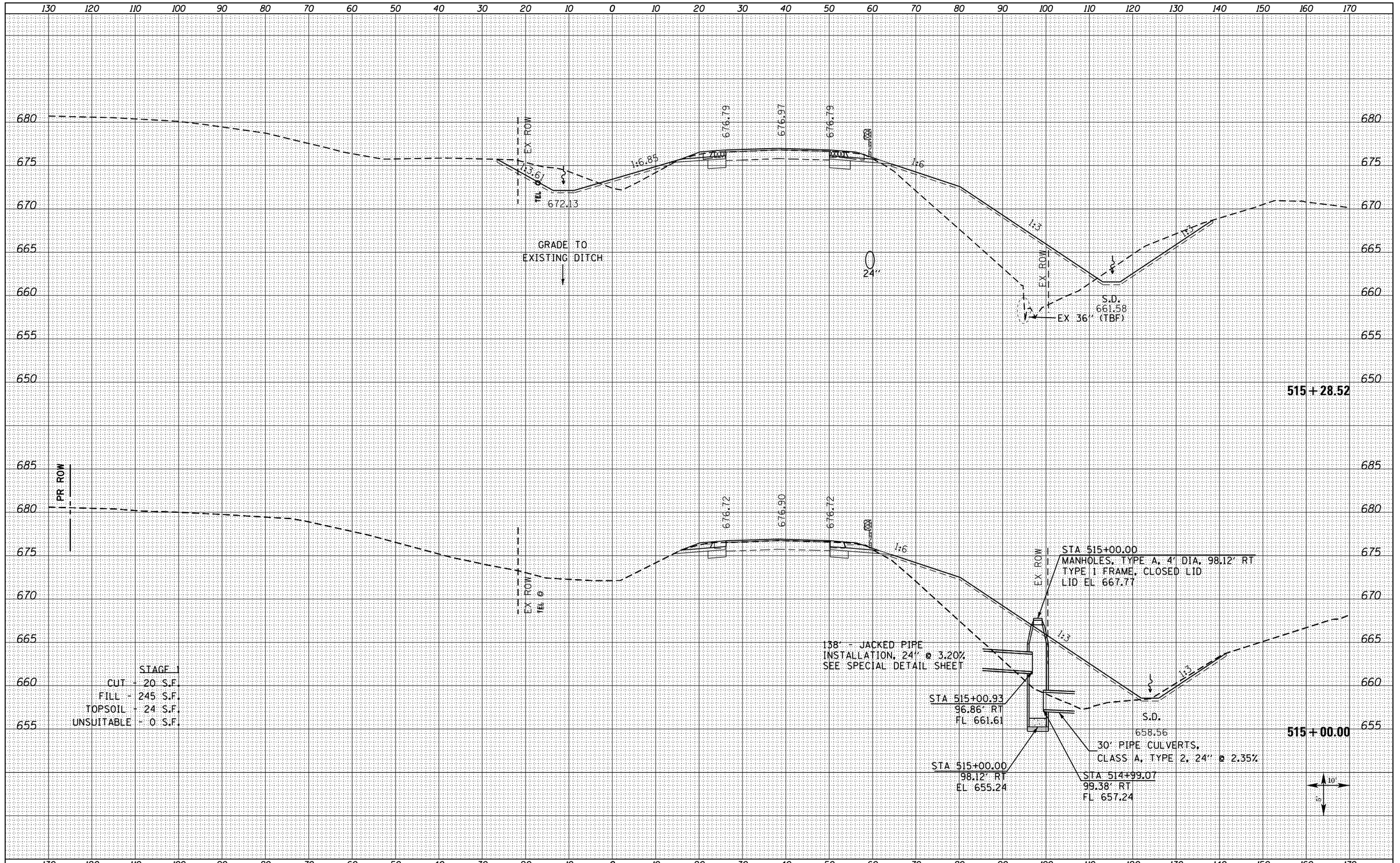
FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 4 OF 209 SHEETS | STA. 514+78.00 TO STA. 514+78.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	579
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	

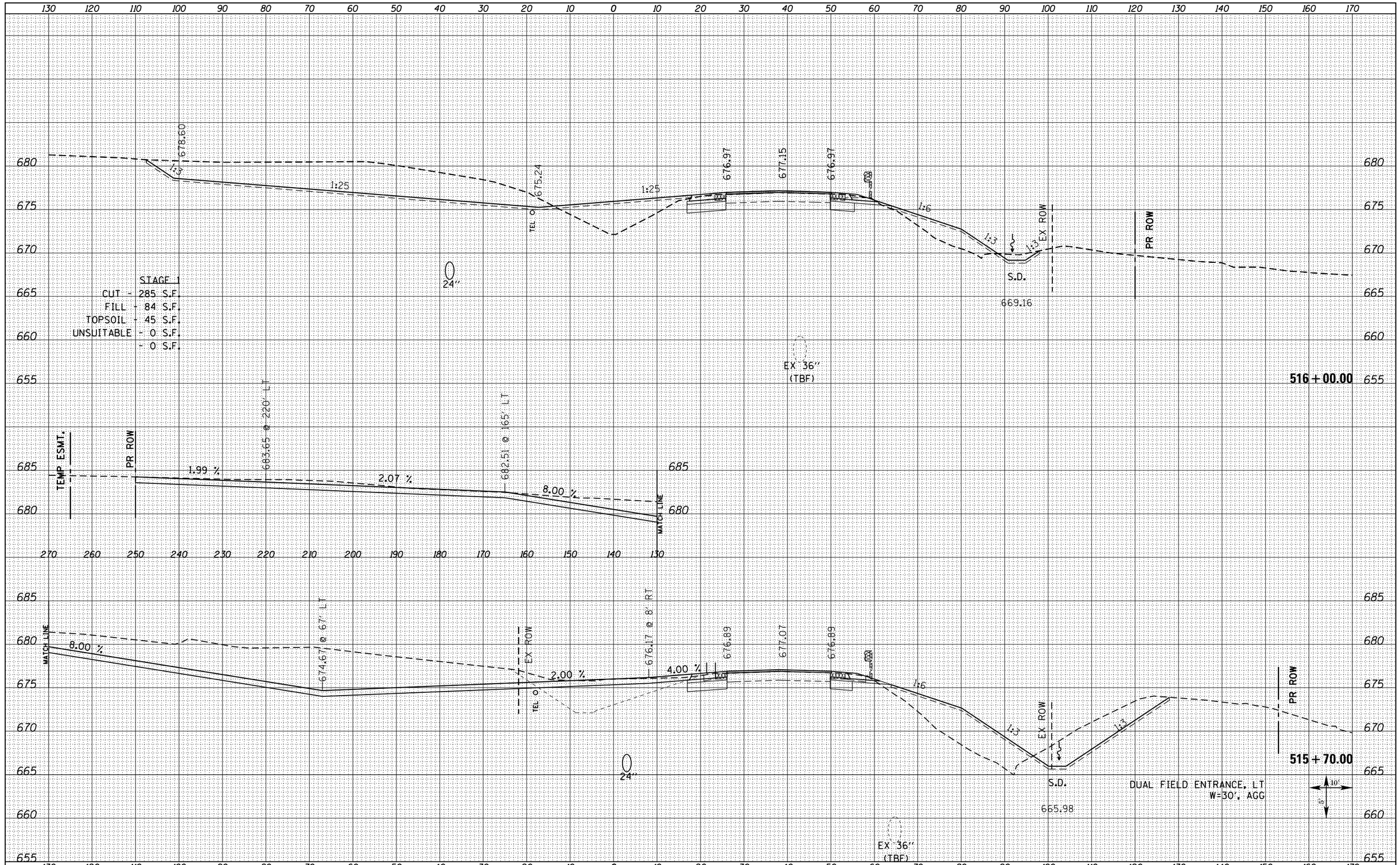
FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 5 OF 209 SHEETS | STA. 515+00.00 TO STA. 515+28.52

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	580
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

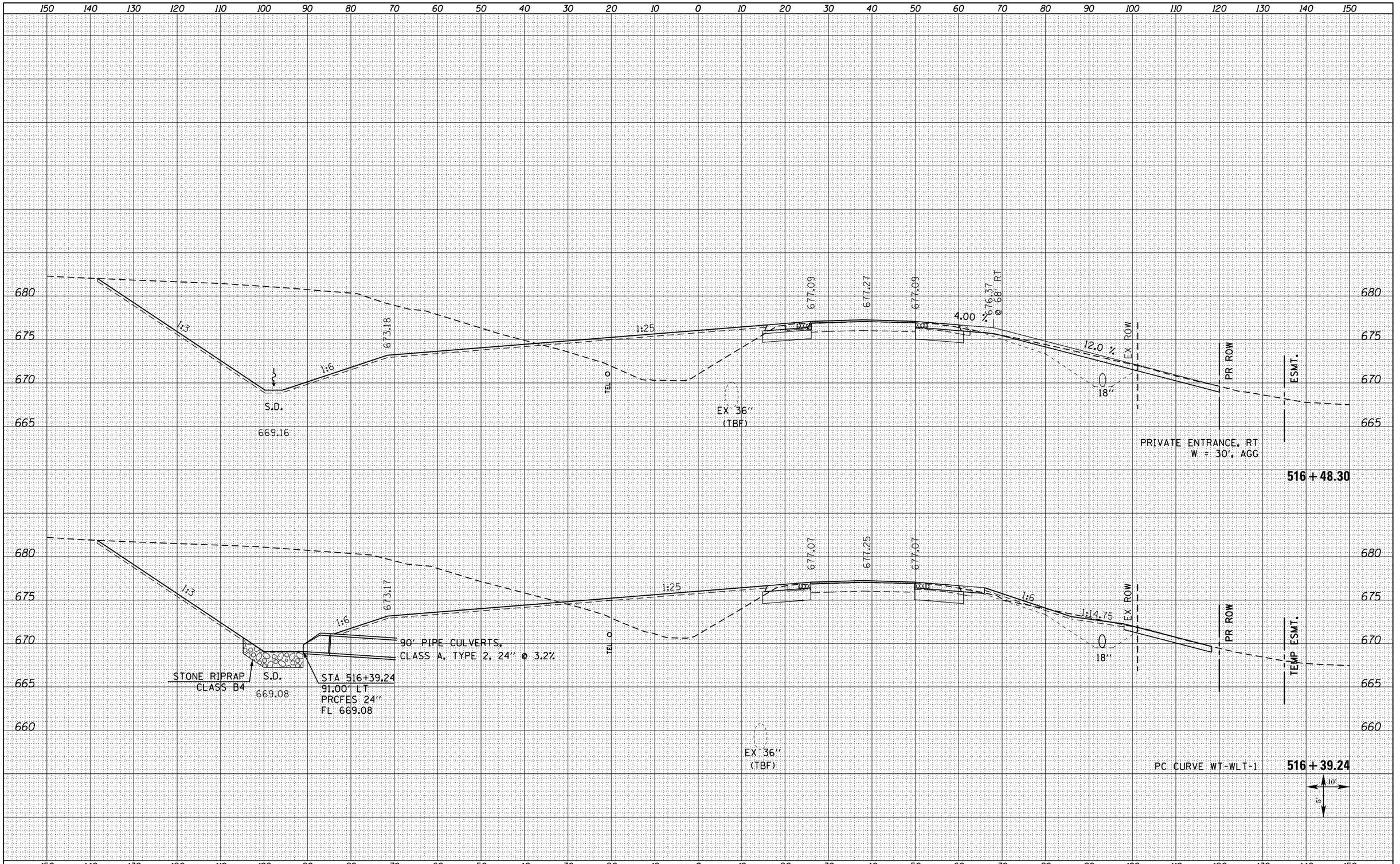
CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 6 OF 209 SHEETS | STA. 515+70.00 TO STA. 516+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	581
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	NOTE BOOK	NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



ORIGINAL SURVEY	NOTE BOOK	NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

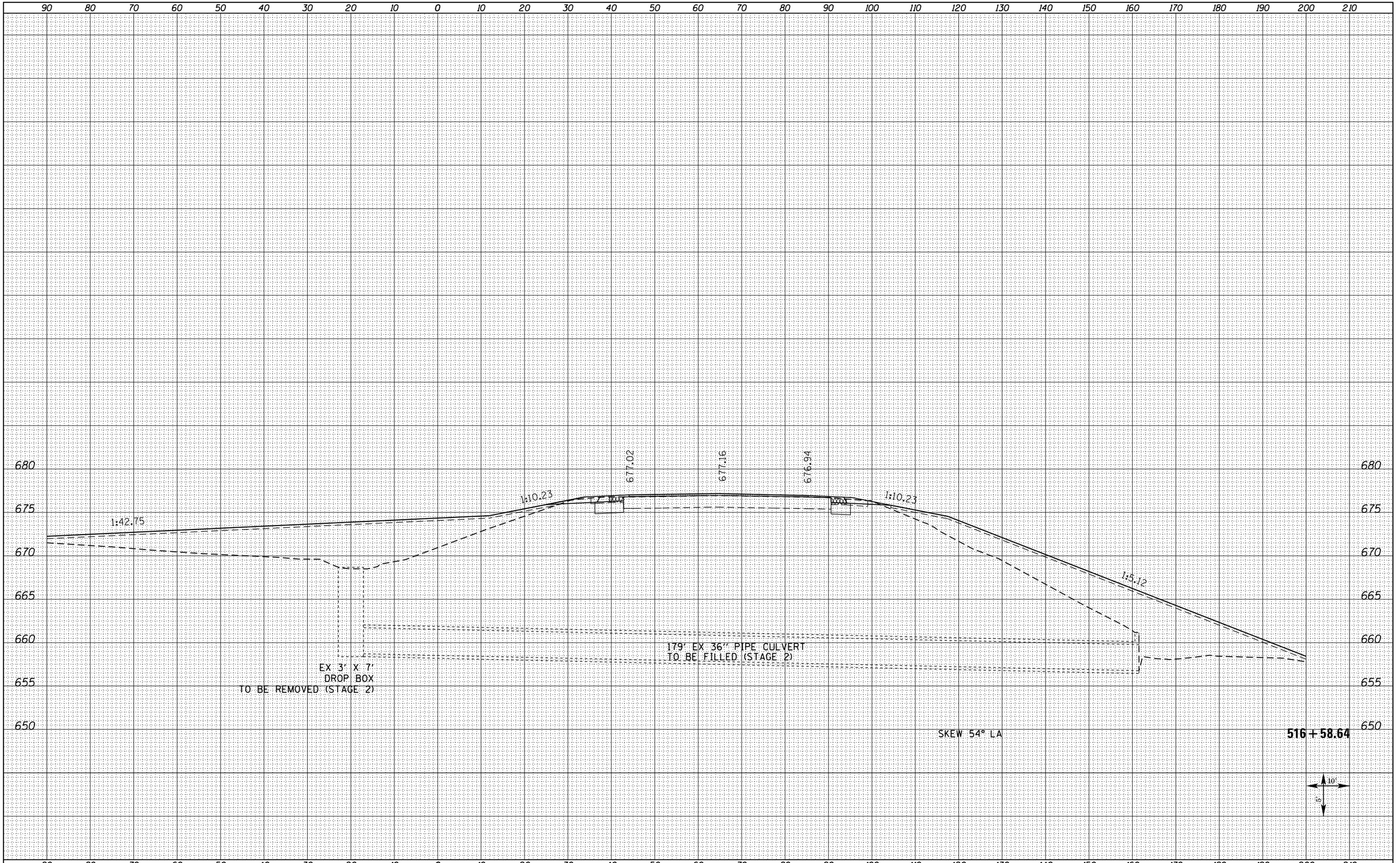
CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 7 OF 209 SHEETS | STA. 516+39.24 TO STA. 516+48.30

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	582
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	



FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
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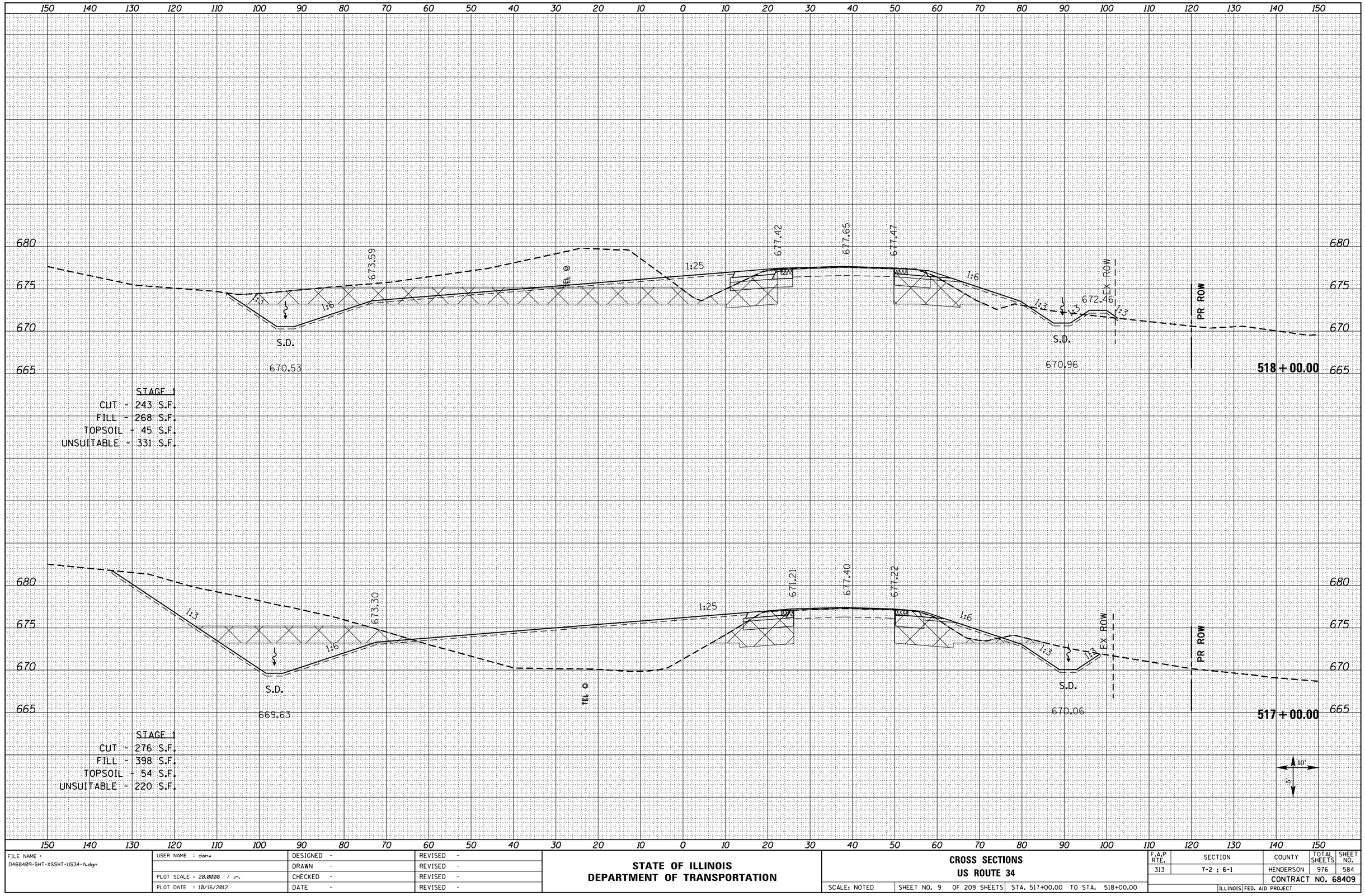
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 8 OF 209 SHEETS | STA. 516+58.64 TO STA. 516+58.64

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	583
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		



STAGE 1
CUT - 243 S.F.
FILL - 268 S.F.
TOPSOIL - 45 S.F.
UNSUITABLE - 331 S.F.

STAGE 1
CUT - 276 S.F.
FILL - 398 S.F.
TOPSOIL - 54 S.F.
UNSUITABLE - 220 S.F.

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

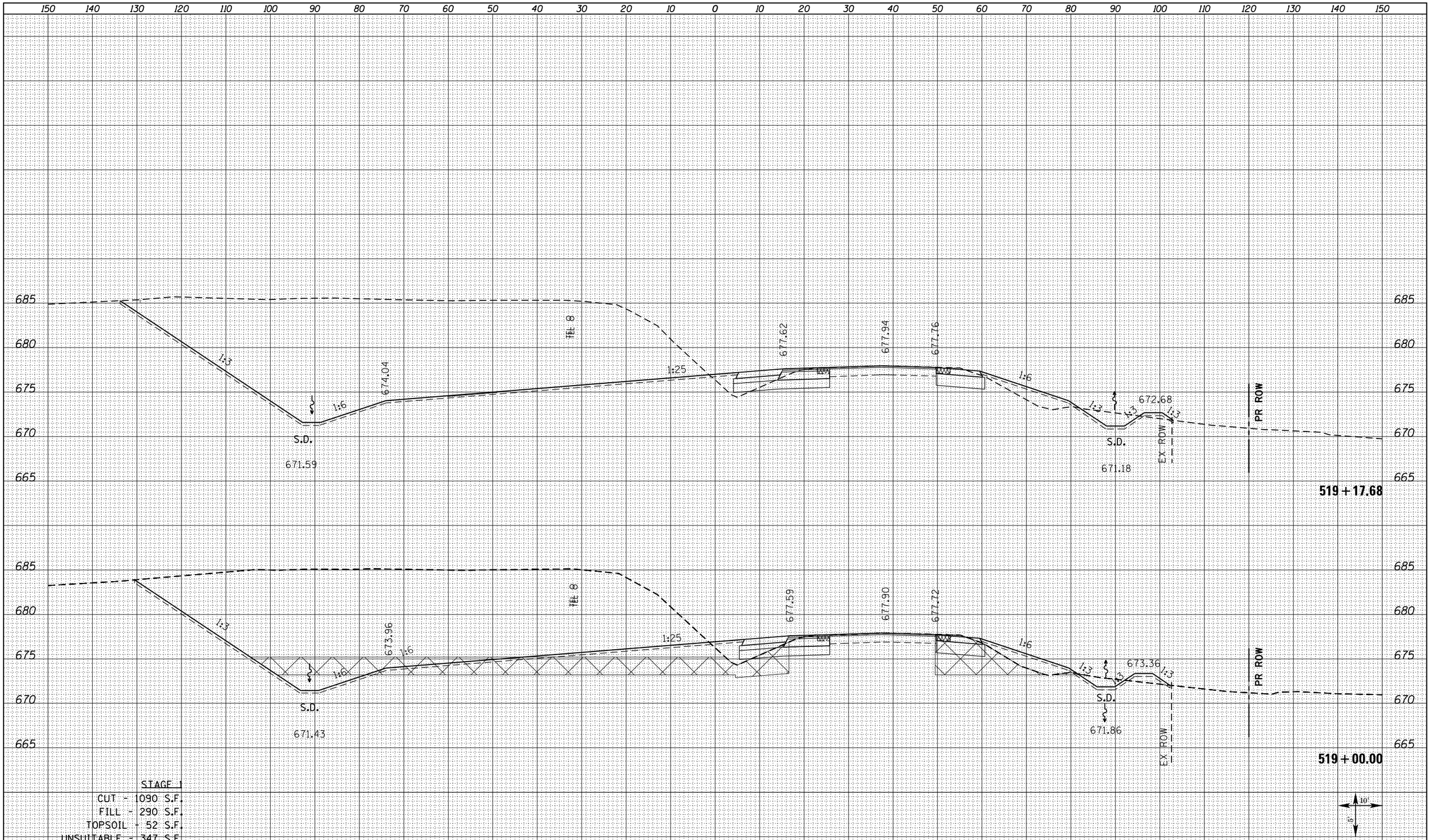
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 9 OF 209 SHEETS | STA. 517+00.00 TO STA. 518+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	584
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED	DATE	



STAGE 1
CUT - 1090 S.F.
FILL - 290 S.F.
TOPSOIL - 52 S.F.
UNSUITABLE - 347 S.F.

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED	DATE	

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 10 OF 209 SHEETS | STA. 519+00.00 TO STA. 519+17.68

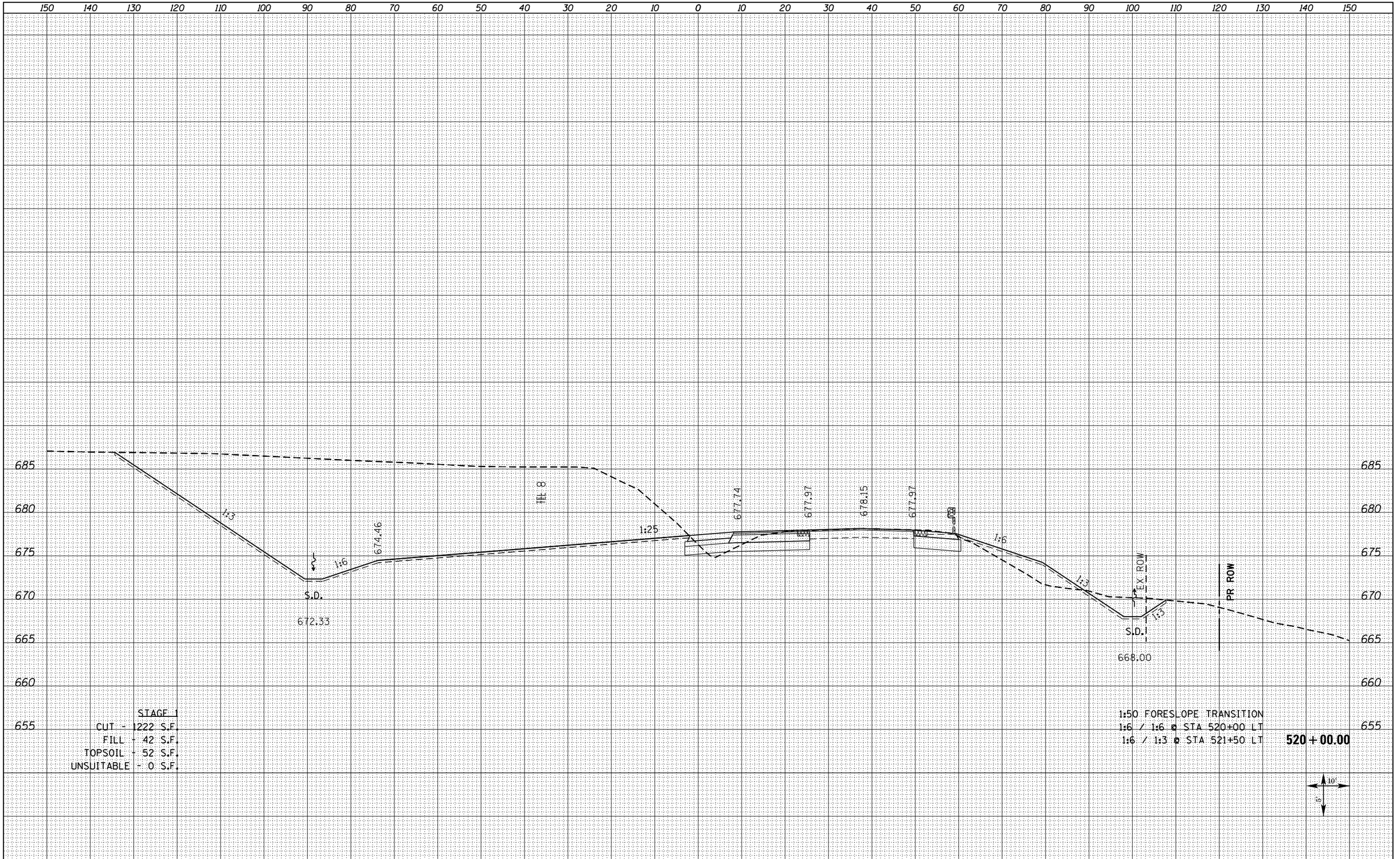
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	585
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	
NOTE BOOK	
NO.	

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	
NOTE BOOK	
NO.	

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



STAGE 1
CUT - 1222 S.F.
FILL - 42 S.F.
TOPSOIL - 52 S.F.
UNSUITABLE - 0 S.F.

1:50 FORESLOPE TRANSITION
1:6 / 1:6 @ STA 520+00 LT
1:6 / 1:3 @ STA 521+50 LT

520+00.00

10
6

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

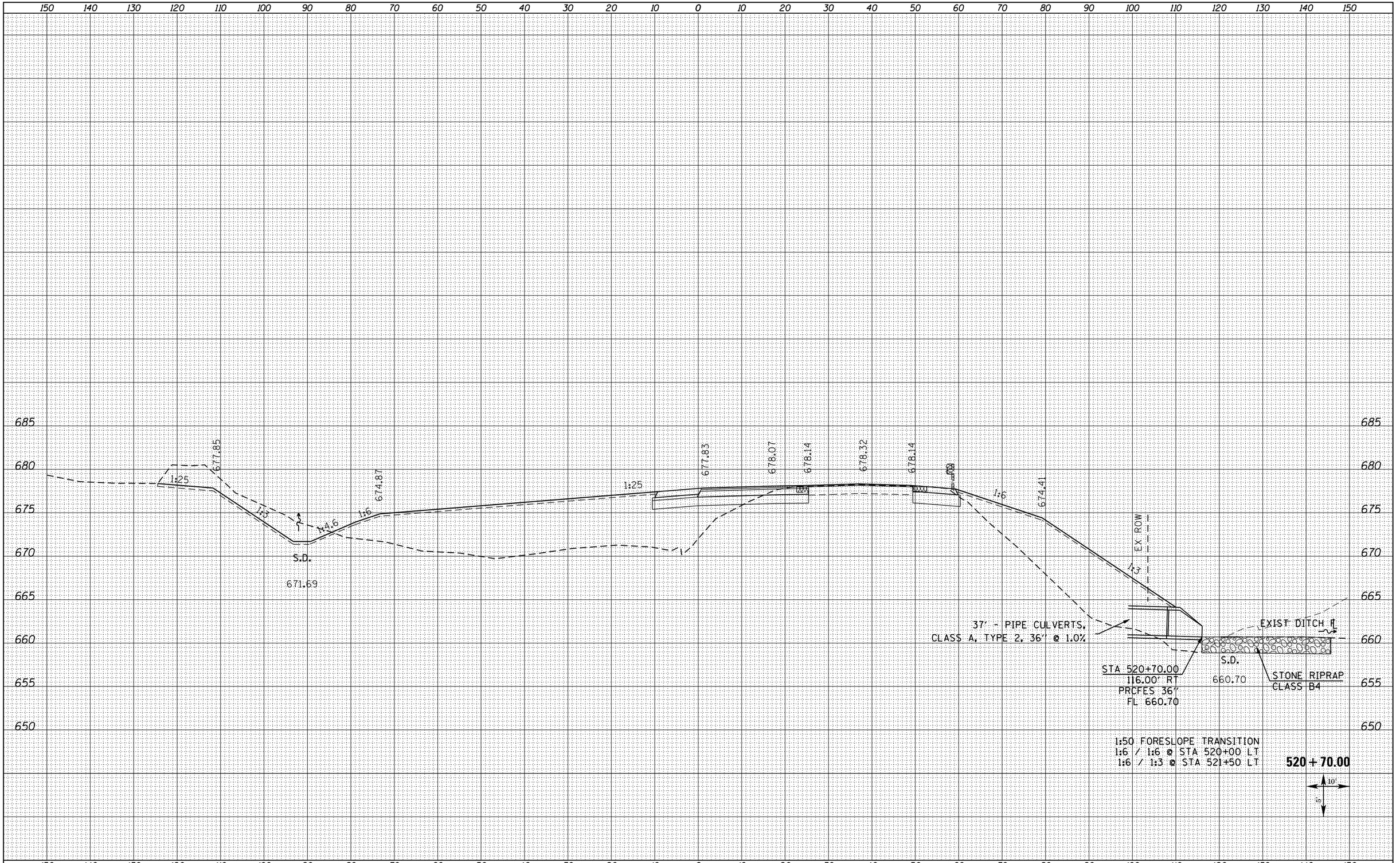
CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 11 OF 209 SHEETS | STA. 520+00.00 TO STA. 520+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	586
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	



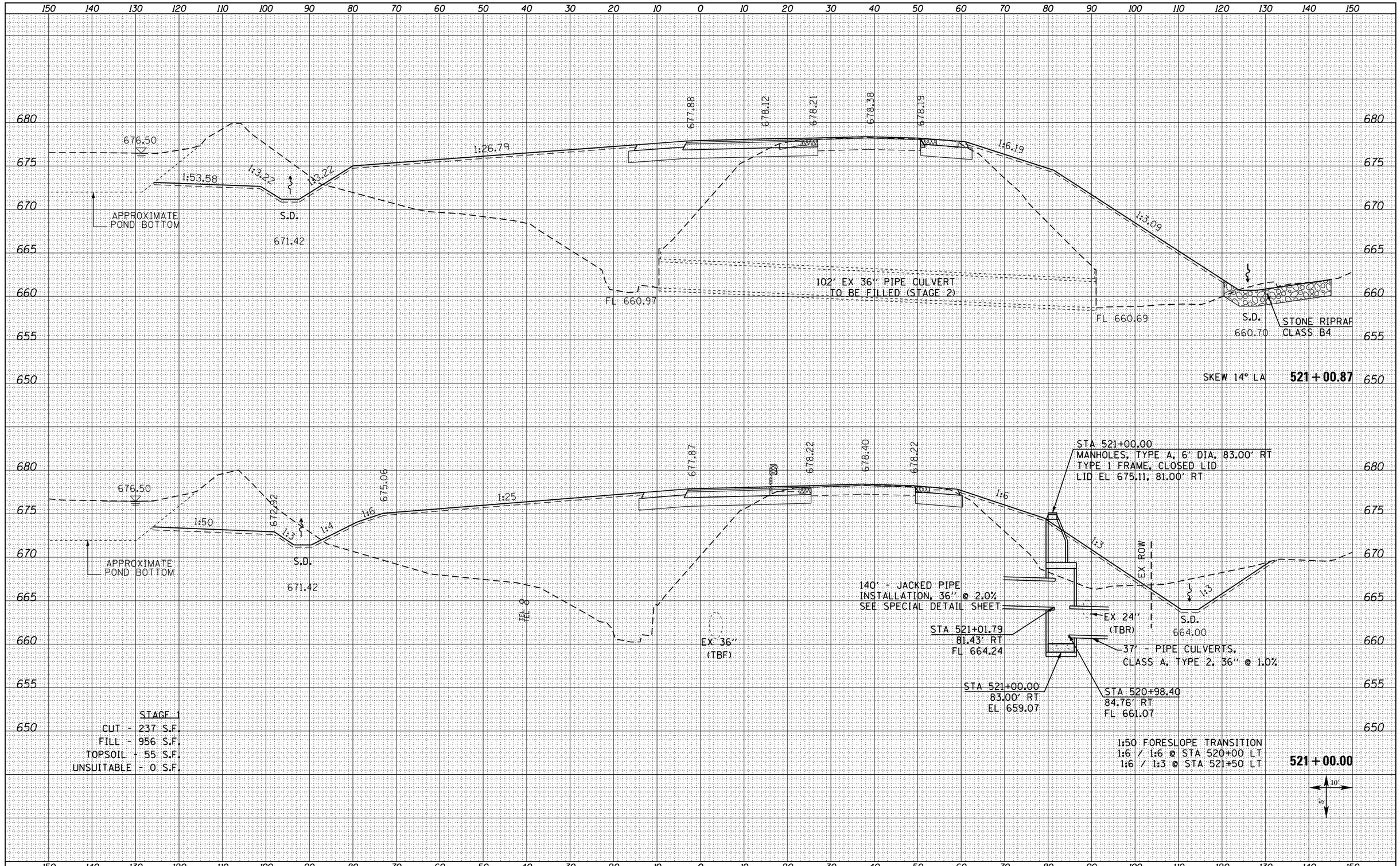
FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 12 OF 209 SHEETS | STA. 520+70.00 TO STA. 520+70.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	587
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

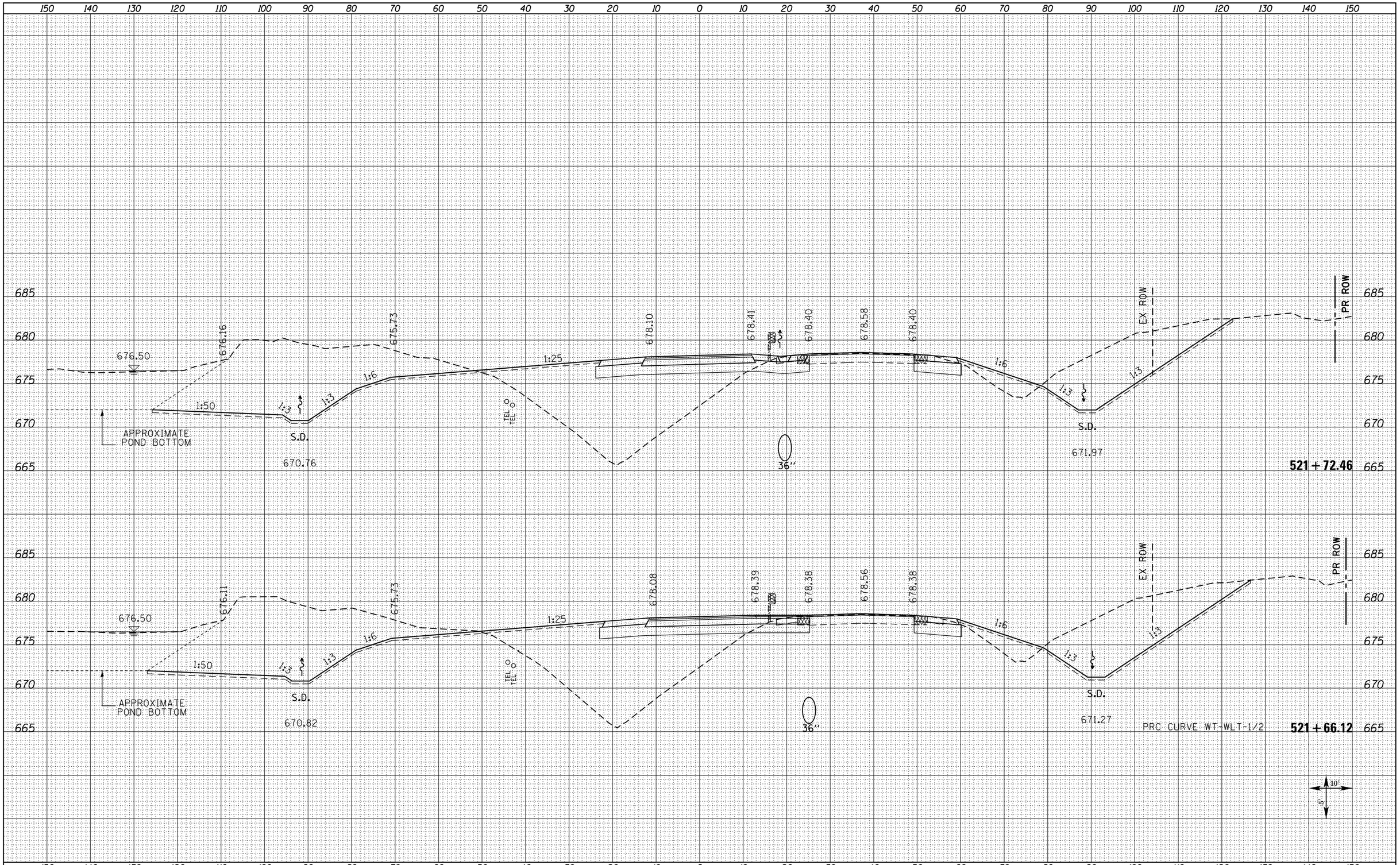
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 13 OF 209 SHEETS | STA. 521+00.00 TO STA. 521+00.87

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	588
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	NO.	BY	DATE
ORIGINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	NO.	BY	DATE



ORIGINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	NO.	BY	DATE

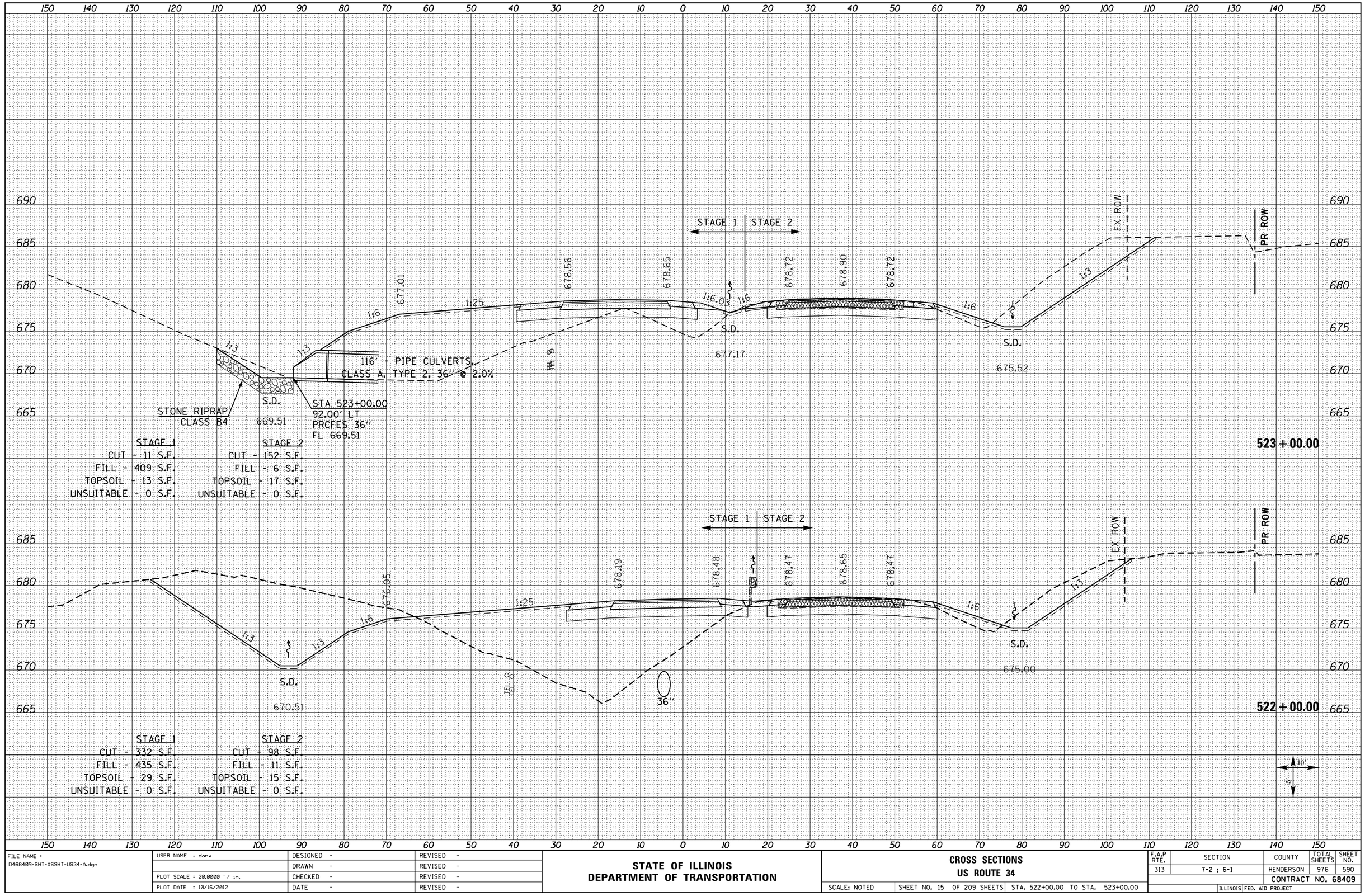
FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 14 OF 209 SHEETS | STA. 521+66.12 TO STA. 521+72.46

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	589
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			



FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

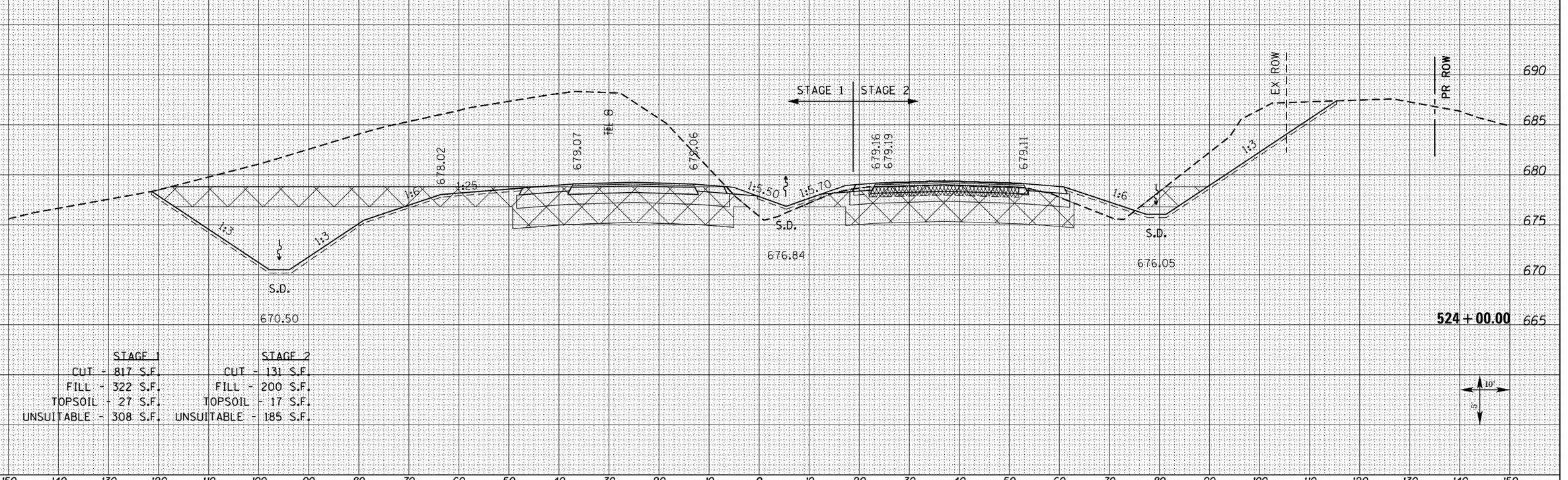
ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS US ROUTE 34
		DRAWN -	REVISED -		
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -		SCALE: NOTED / SHEET NO. 15 OF 209 SHEETS / STA. 522+00.00 TO STA. 523+00.00
	PLOT DATE = 10/16/2012	DATE -	REVISED -		

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	590
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



STAGE 1	STAGE 2
CUT - 817 S.F.	CUT - 131 S.F.
FILL - 322 S.F.	FILL - 200 S.F.
TOPSOIL - 27 S.F.	TOPSOIL - 17 S.F.
UNSUITABLE - 308 S.F.	UNSUITABLE - 185 S.F.

10
5

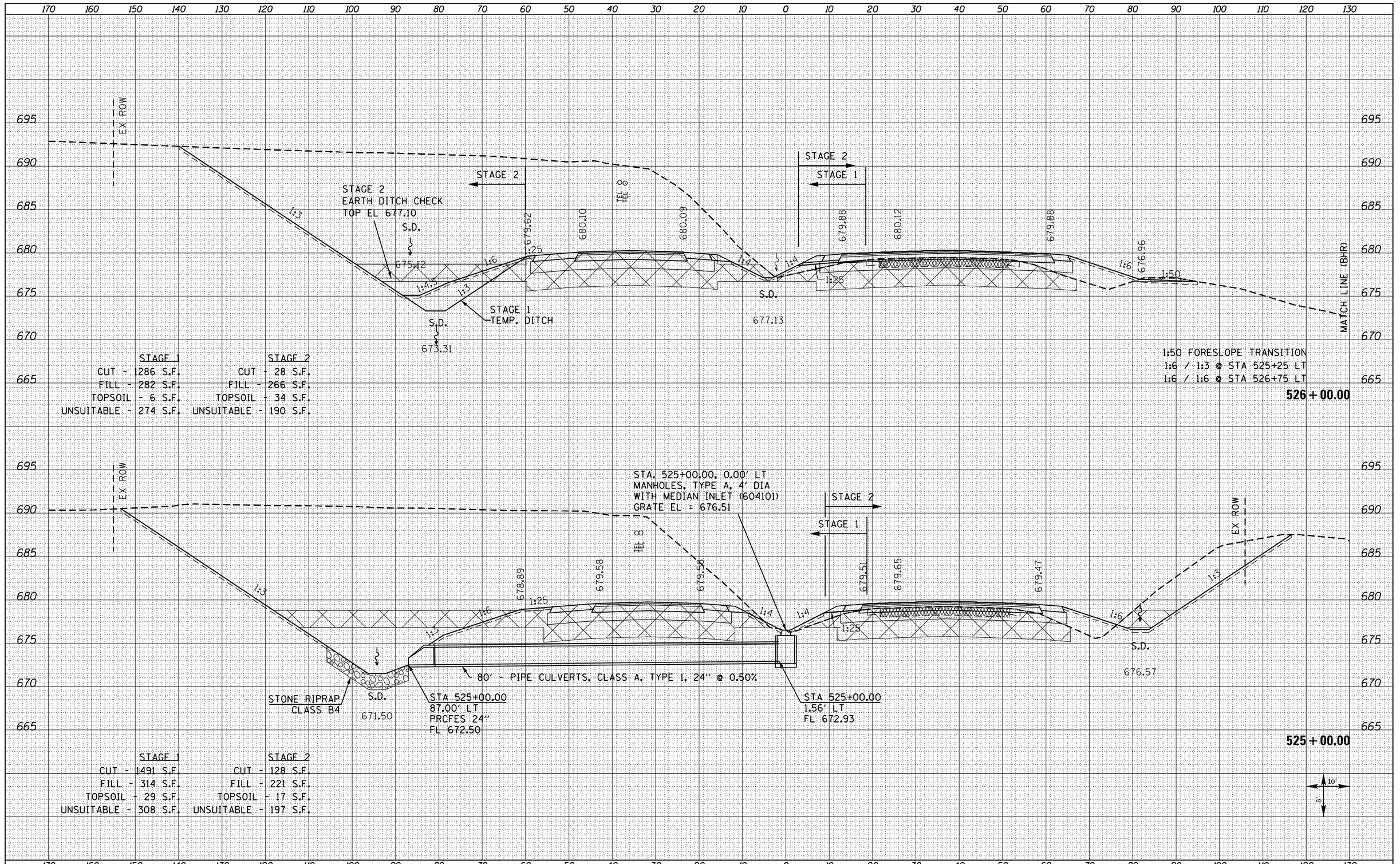
FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 16 OF 209 SHEETS | STA. 524+00.00 TO STA. 524+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	591
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		



STAGE 1	STAGE 2
CUT - 1286 S.F.	CUT - 28 S.F.
FILL - 282 S.F.	FILL - 266 S.F.
TOPSOIL - 6 S.F.	TOPSOIL - 34 S.F.
UNSUITABLE - 274 S.F.	UNSUITABLE - 190 S.F.

STAGE 1	STAGE 2
CUT - 1491 S.F.	CUT - 128 S.F.
FILL - 314 S.F.	FILL - 221 S.F.
TOPSOIL - 29 S.F.	TOPSOIL - 17 S.F.
UNSUITABLE - 308 S.F.	UNSUITABLE - 197 S.F.

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

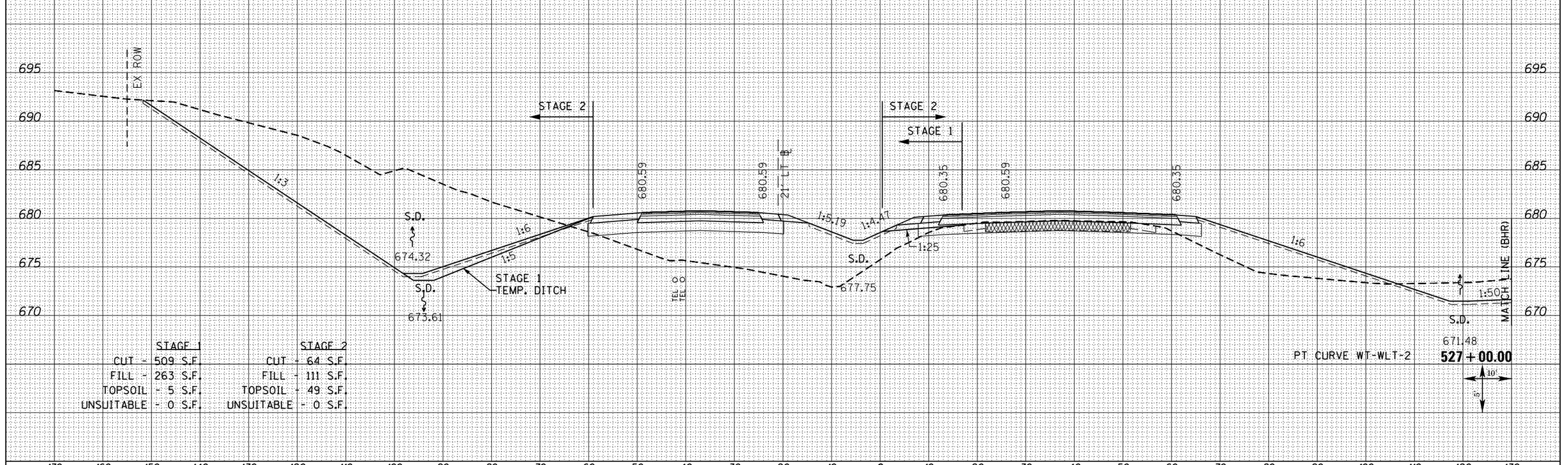
CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 17 OF 209 SHEETS | STA. 525+00.00 TO STA. 526+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	592
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



STAGE 1	STAGE 2
CUT - 509 S.F.	CUT - 64 S.F.
FILL - 263 S.F.	FILL - 111 S.F.
TOPSOIL - 5 S.F.	TOPSOIL - 49 S.F.
UNSUITABLE - 0 S.F.	UNSUITABLE - 0 S.F.

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 18 OF 209 SHEETS | STA. 527+00.00 TO STA. 527+00.00

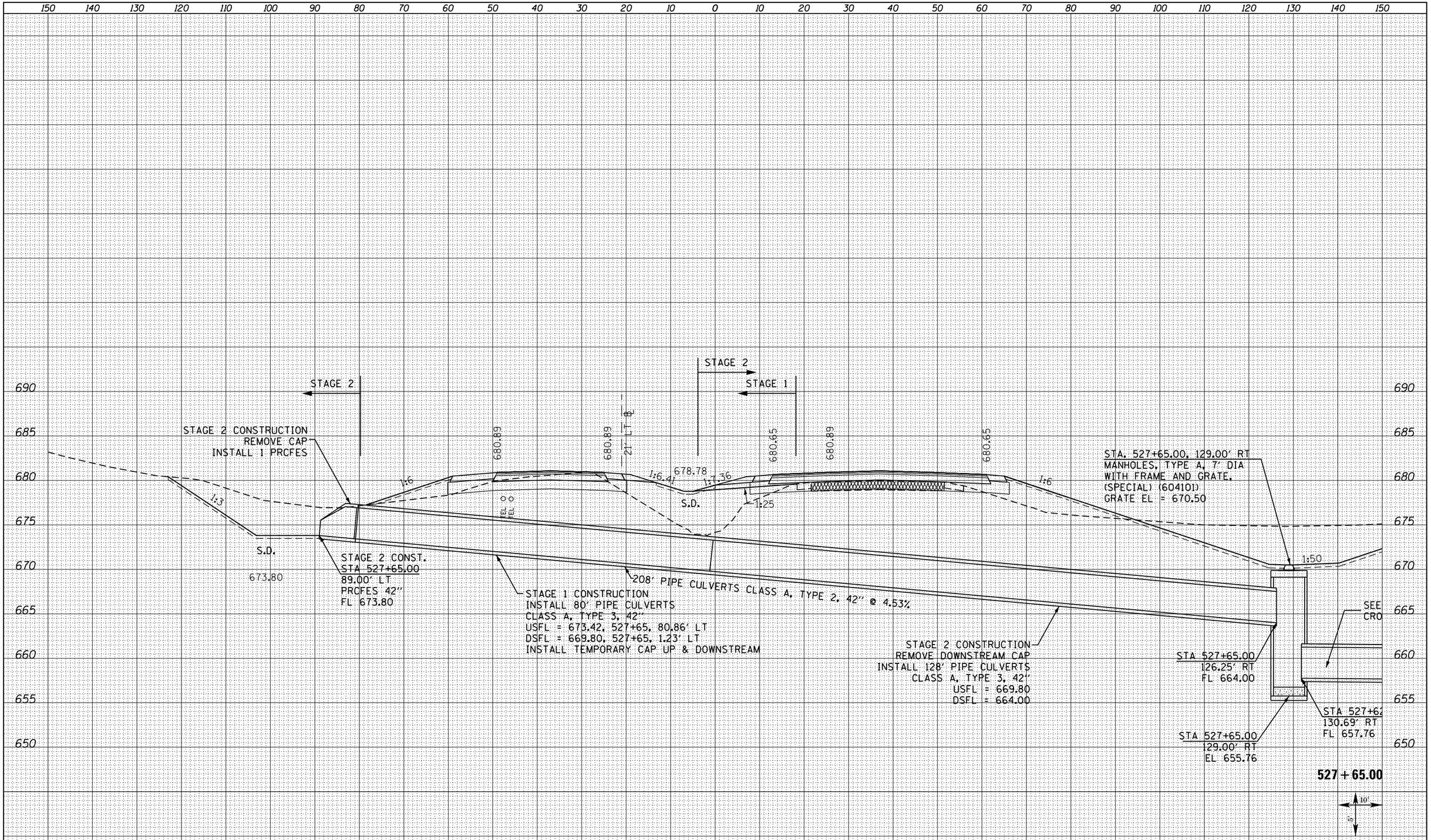
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	593
		CONTRACT NO. 68409		
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY	NOTE BOOK	PAGE NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	NOTE BOOK	PAGE NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



527 + 65.00

10
6

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 19 OF 209 SHEETS | STA. 527+65.00 TO STA. 527+65.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	594
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY

NO.	NOTE BOOK	SURVEYED	BY
		PLOTTED	
		TEMPLATE	
		AREAS	
		AREAS CHECKED	

ORIGINAL SURVEY

NO.	NOTE BOOK	SURVEYED	BY
		PLOTTED	
		TEMPLATE	
		AREAS	
		AREAS CHECKED	

SEE TR 111 (1350 E) CROSS SECTIONS

MATCHLINE 127.13' LT

TR 111 (1350 E)

681.71

681.71

681.21

EX 24" (TBR)

528 + 92.63

BOGUS HOLLOW ROAD

MATCHLINE PC STA 8+61.40 (BHR)

SEE BOGUS HOLLOW Rt CROSS SECTIONS

681.20

681.63

681.56

SKEW 19°42'21" LA

528 + 91.39

STAGE 2

STAGE 1

681.08

681.02

21' LT

680.84

681.08

680.66

1:6

1:6.35

1:7.14

1:6

1:3

1:6

S.D.

1:50

679.34

STONE RIPRAP CLASS B4

S.D.

673.96

528 + 00.00

STAGE 1		STAGE 2	
CUT -	342 S.F.	CUT -	0 S.F.
FILL -	107 S.F.	FILL -	75 S.F.
TOPSOIL -	14 S.F.	TOPSOIL -	7 S.F.
UNSUITABLE -	0 S.F.	UNSUITABLE -	0 S.F.

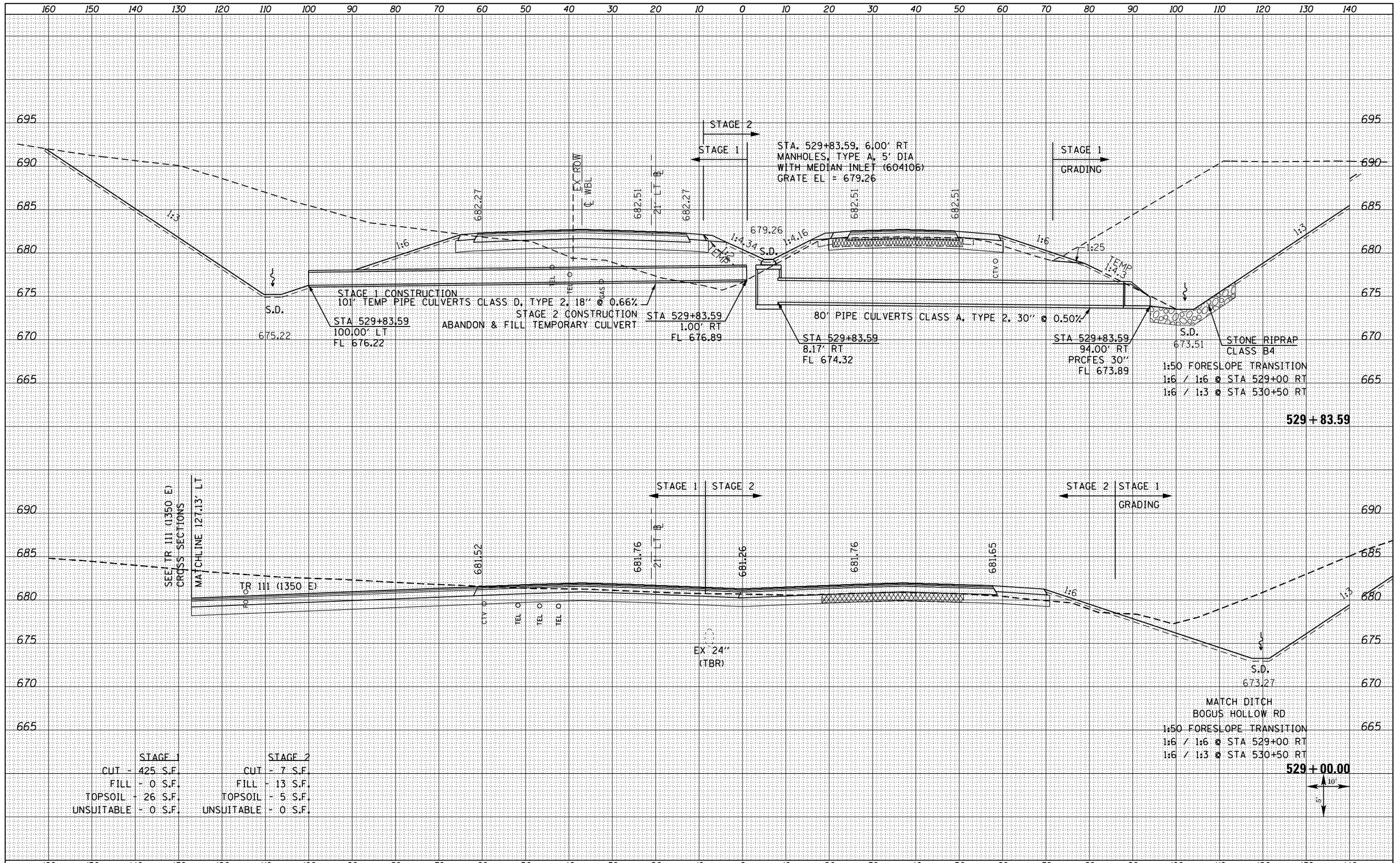
FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 20 OF 209 SHEETS | STA. 528+00.00 TO STA. 528+92.63

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	595
		CONTRACT NO. 68409		
	ILLINOIS	FED. AID PROJECT		



STAGE 1	STAGE 2
CUT - 425 S.F.	CUT - 7 S.F.
FILL - 0 S.F.	FILL - 13 S.F.
TOPSOIL - 26 S.F.	TOPSOIL - 5 S.F.
UNSUITABLE - 0 S.F.	UNSUITABLE - 0 S.F.

FINAL SURVEY / ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn

USER NAME = danw	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

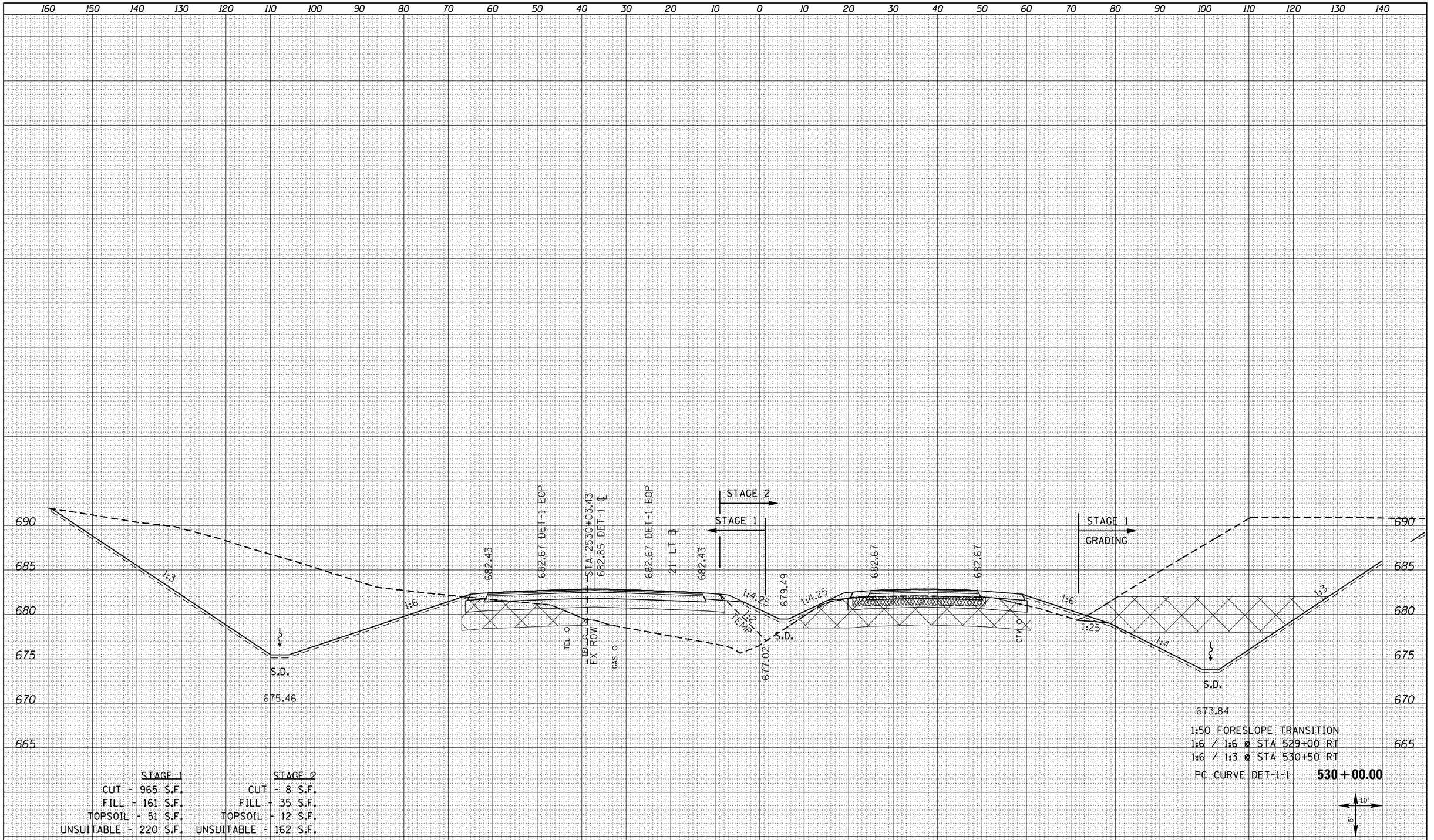
CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 21 OF 209 SHEETS | STA. 529+00.00 TO STA. 529+83.59

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	596
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		



STAGE 1	STAGE 2
CUT - 965 S.F.	CUT - 8 S.F.
FILL - 161 S.F.	FILL - 35 S.F.
TOPSOIL - 51 S.F.	TOPSOIL - 12 S.F.
UNSUITABLE - 220 S.F.	UNSUITABLE - 162 S.F.

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

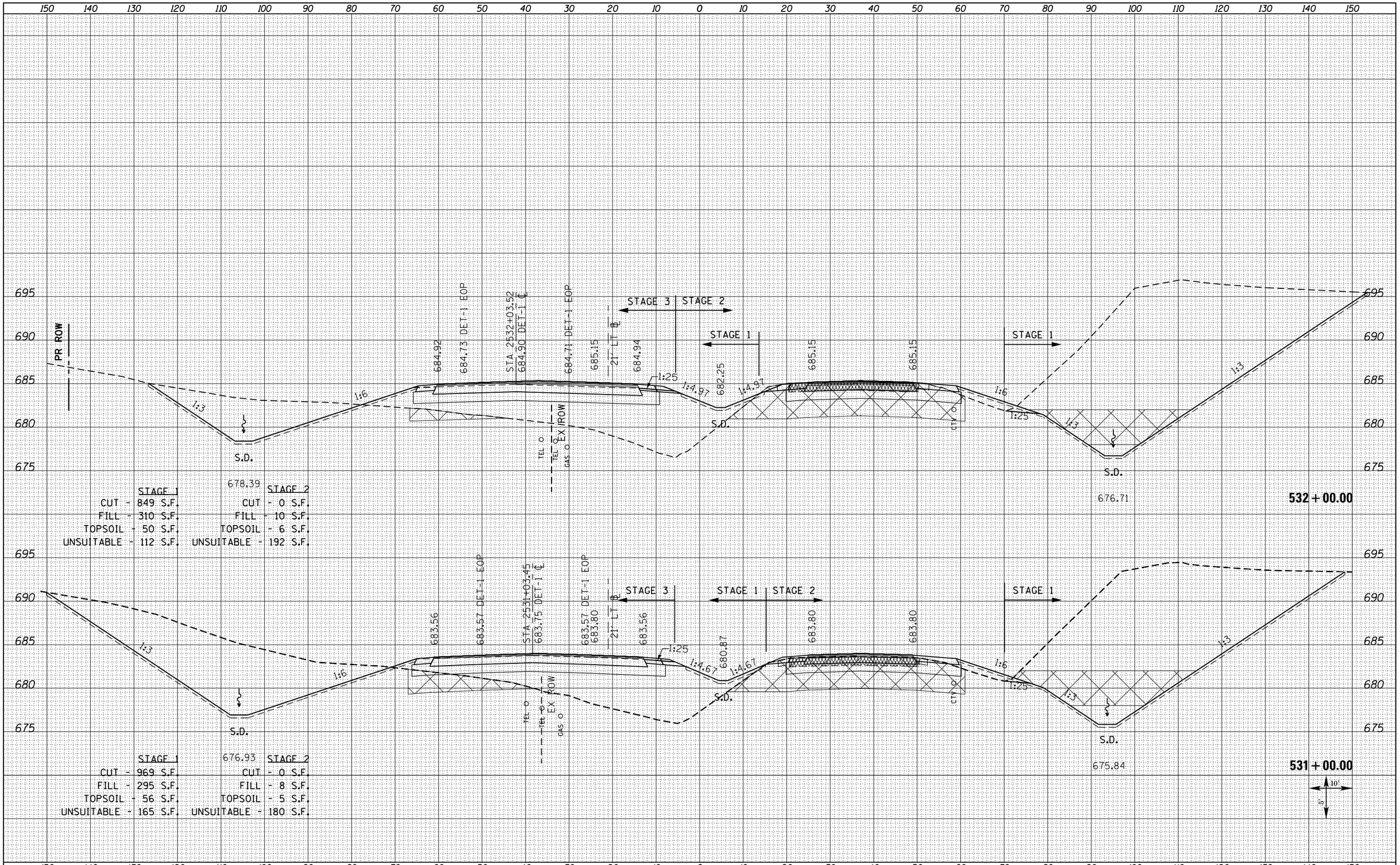
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 22 OF 209 SHEETS | STA. 530+00.00 TO STA. 530+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	597
		CONTRACT NO. 68409		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	NO.	BY	DATE
ORIGINAL SURVEY	NOTE BOOK	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	NO.	BY	DATE



FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

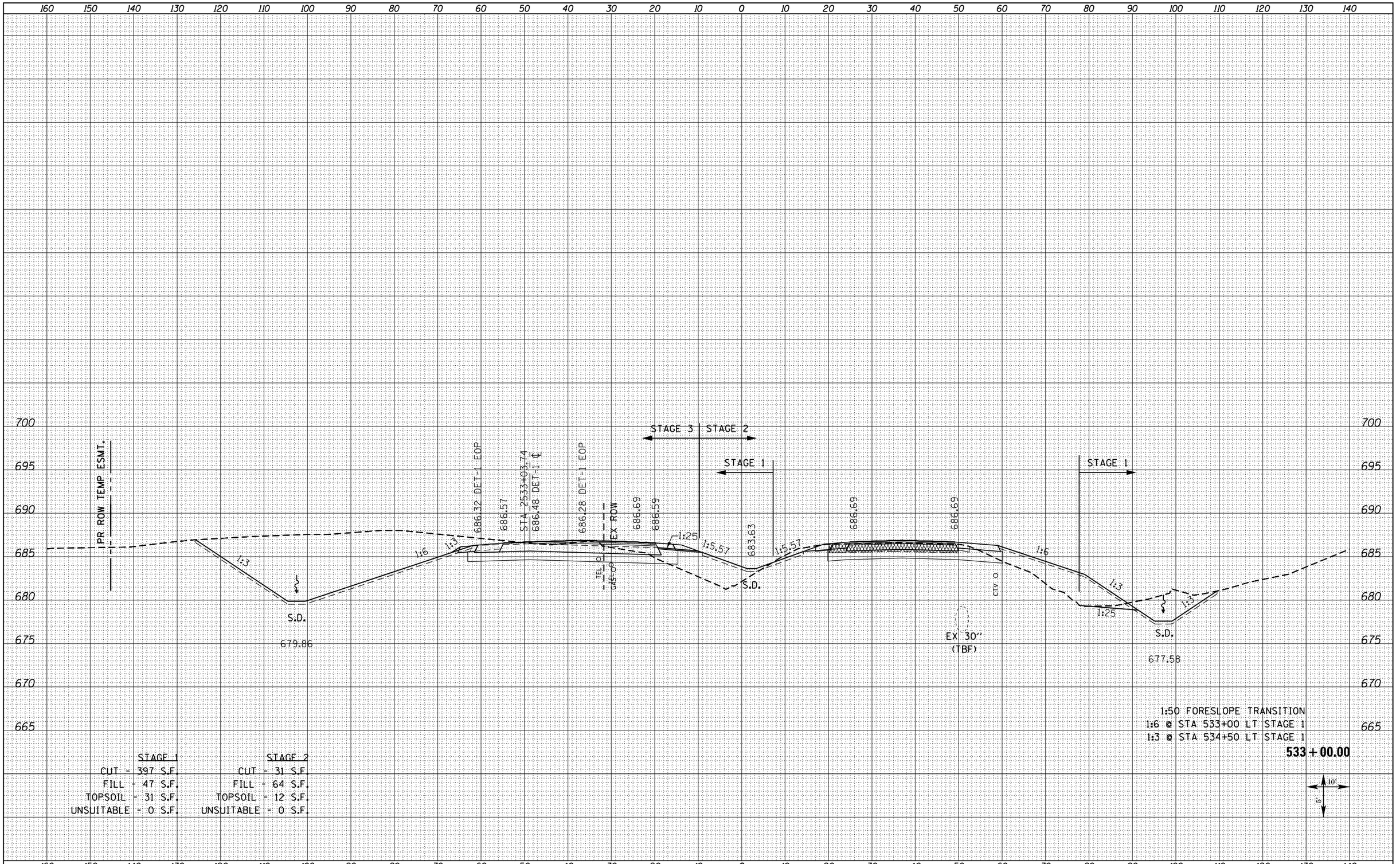
CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 23 OF 209 SHEETS | STA. 531+00.00 TO STA. 532+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	598
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



STAGE 1	STAGE 2
CUT - 397 S.F.	CUT - 31 S.F.
FILL - 47 S.F.	FILL - 64 S.F.
TOPSOIL - 31 S.F.	TOPSOIL - 12 S.F.
UNSUITABLE - 0 S.F.	UNSUITABLE - 0 S.F.

1:50 FORESLOPE TRANSITION
1:6 @ STA 533+00 LT STAGE 1
1:3 @ STA 534+50 LT STAGE 1

533 + 00.00

FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

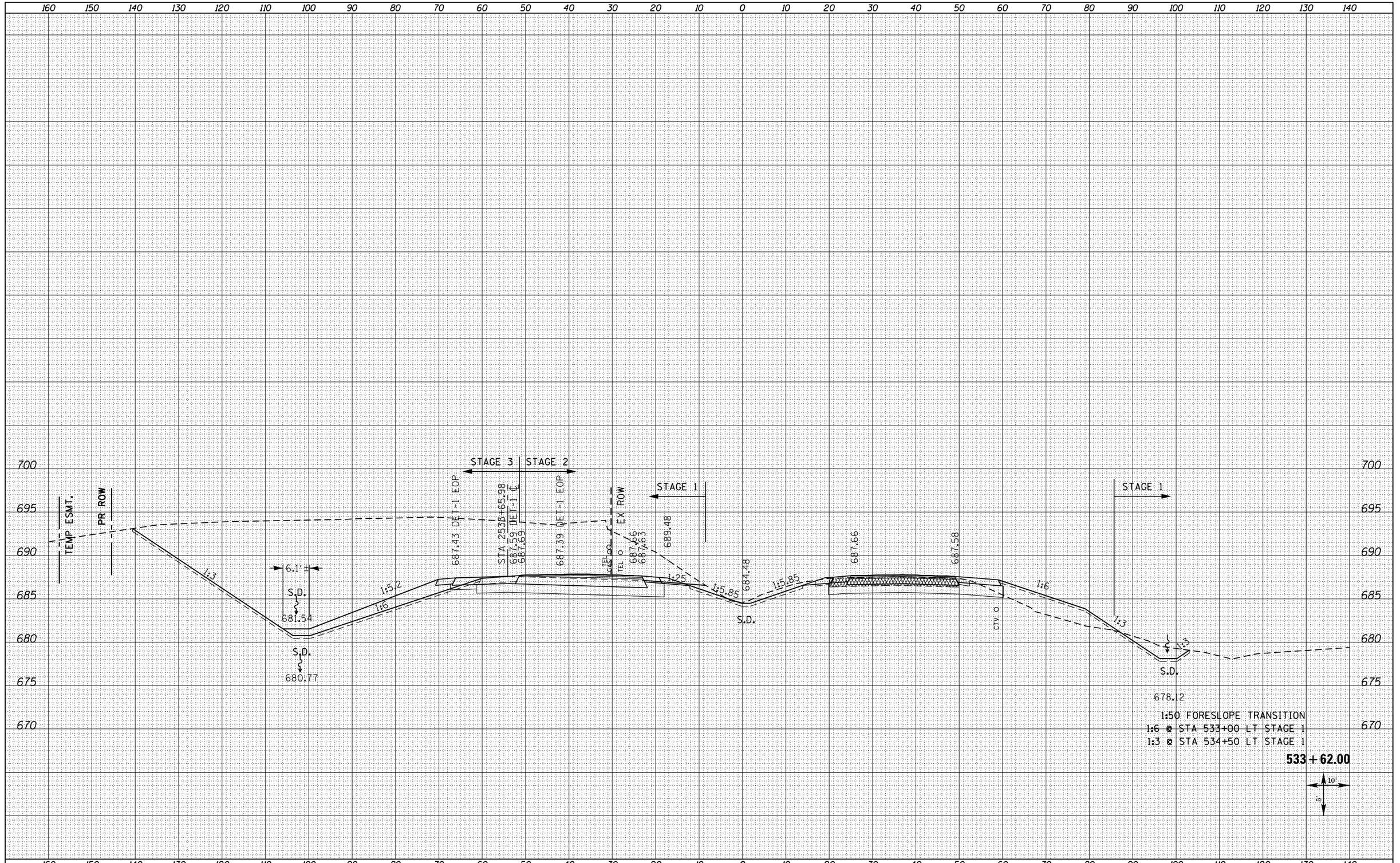
CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 24 OF 209 SHEETS | STA. 533+00.00 TO STA. 533+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	599
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



FILE NAME = D468409-SHT-XSSHT-US34-A.dgn	USER NAME = danw	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
US ROUTE 34

SCALE: NOTED | SHEET NO. 25 OF 209 SHEETS | STA. 533+62.00 TO STA. 533+62.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	7-2 ; 6-1	HENDERSON	976	600
		CONTRACT NO. 68409		
	ILLINOIS FED. AID PROJECT			