Benchmark: Chiseled Cross in sidewalk, 38.9' west of ℄ of Cicero Ave. and 442.3' north of ℄ of 159th street. Elevation 642.37

Existing Structure: The structure carrying US Route 6 (159th Street) (SN 016-2843) over Midlothian Creek was constructed in 1930 as a single span reinforced concrete slab bridge. The structure was extended to the south in 1931 under Construction Route SBI 53, Section 537-X. In 1946, the roadway above the structure was widened and the wearing surface was replaced. In 1991, under Contract 80782 as Construction Route FA 351, Section 3277 WRS & 1212.1 BR (90) the pavement above the structure was resurfaced. Two closed wall abutments supported on spread footings support the bridge. The structure has multiple kinks due to various widenings. The out to out length of the structure is 120 ft., the skew angle of the section under westbound 27°36' and eastbound is 38°52'. The structure carrying IL Route 50 (SN 016-0423) over Midlothian Creek is a double cell 10'-0" wide x 4'-6" high cast in place concrete box culvert. The overall culvert length is 90' out to out of headwalls and skew is 48°40'. Traffic shall be maintained utilizing staged construction for IL Route 50 construction. All traffic will be detoured for US Route 6 construction.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	D.S. Invert	U.S. Invert
	630.70	632.35

WATERWAY INFORMATION

Drainage Area = 11.7 sq.mi — Low Grade Elev. - 645.20 @ Sta. 230+85 (US-6); - 645.20 @ Sta. 62+78.50 (IL-50) apprx.

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Peak	2	90							
	10	212	17	63	639.4	3.10	-0.5	642.50	638.90
Design	50	319	20	85	640.1	4.70	-0.6	644.80	639.50
Base	100	598	28	130	641.6	3.60	-0.9	645.20	640.70
Overtop Existing									
Overtop Proposed									
Max. Calc.	500	1216	28	152	645.0	1.40	0.6	646.40	645.60

HIGHWAY CLASSIFICATION

F.A.P. Rte. 351 - US Rte. 6
Functional Class: Strategic Regional Arterial
ADT: 32,700 (2012); 34,000 (2040)
ADTT: 2.3% (2012); 2.3% (2040)
DHV: 2585
Design Speed: 45 m.p.h.
Posted Speed: 40 m.p.h.
Two - Way Traffic
Directional Distribution: 52/48

HIGHWAY CLASSIFICATION

F.A.P. Rte. 350 - Illinois Rte. 50
Functional Class: Strategic Regional Arterial
ADT: 29,800 (2012); 39,000 (2040)
ADTT: 3.3% (2012); 3.3% (2040)
DHV: 2635
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two - Way Traffic
Directional Distribution: 57/43

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interim Revisions

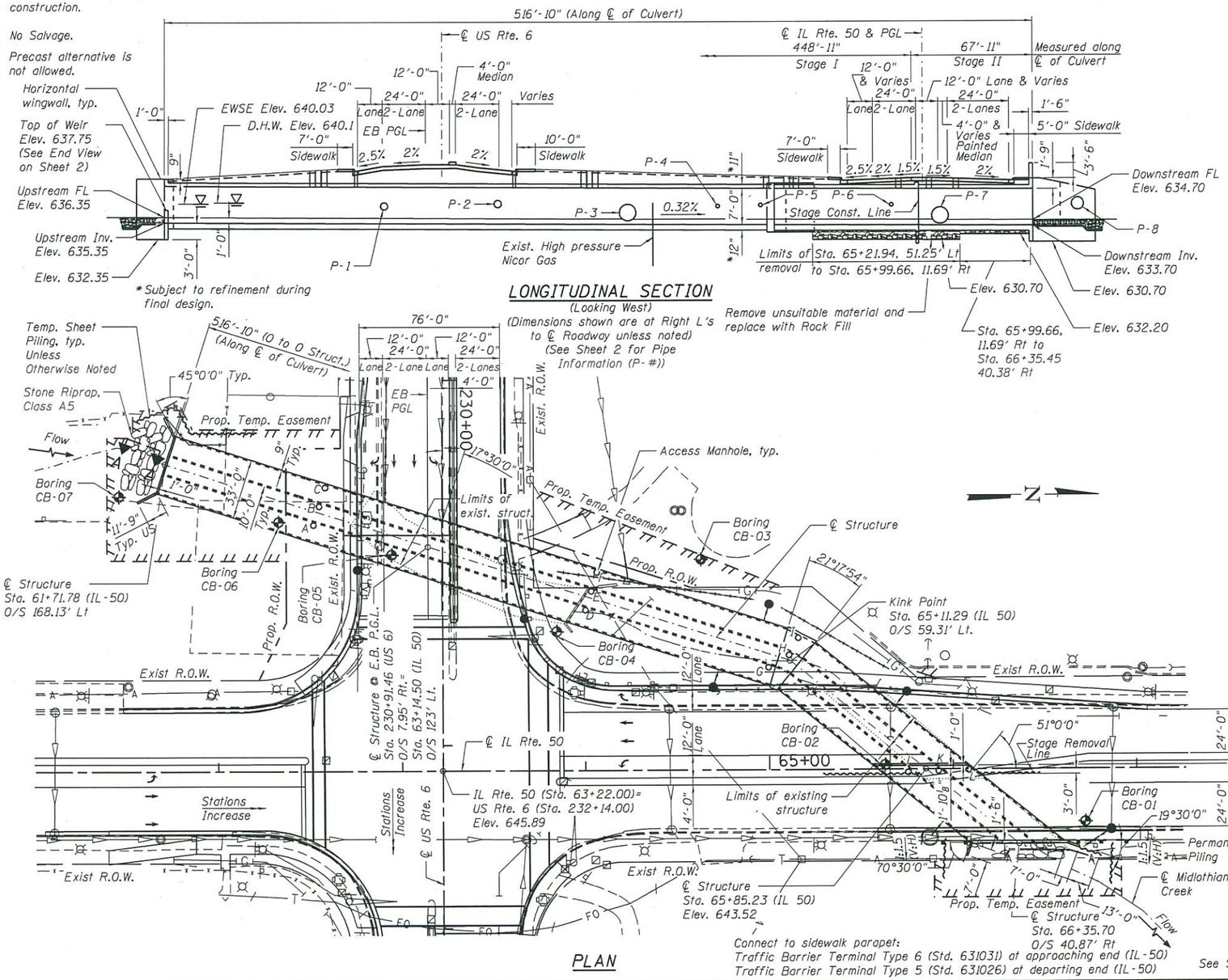
LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

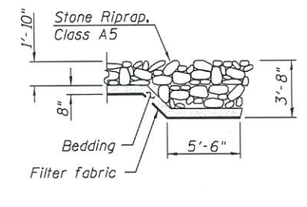
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)



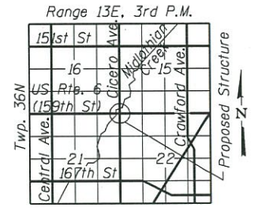
LONGITUDINAL SECTION

(Looking West)
(Dimensions shown are at Right L's to ℄ Roadway unless noted)
(See Sheet 2 for Pipe Information (P-#))

PLAN



SECTION A-A



LOCATION SKETCH

APPROVED
SEP 30 2014
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN & ELEVATION
U.S. ROUTE 6 AND IL ROUTE 50
OVER MIDLOTHIAN CREEK
F.A.P. RTE. 351 & F.A.P. RTE 350
SECTION 537 (SB & SF) 1
COOK COUNTY
STATION 230+97.00 (U.S. RTE 6)
STRUCTURE NO. 016-2849

See Sheet 2 for Access Manhole Information

USER NAME = sapant	DESIGNED - AB		REVISED
	CHECKED - JMT		REVISED
PLOT SCALE = 64.0 '/ in.	DRAWN - JN		REVISED
PLOT DATE = 9/30/2014	CHECKED - JMT		REVISED

Accurate GROUP, INC.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 3 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0351	537 (SB & SF) 1	COOK		
		CONTRACT NO. 60K73		
	ILLINOIS FED. AID PROJECT			

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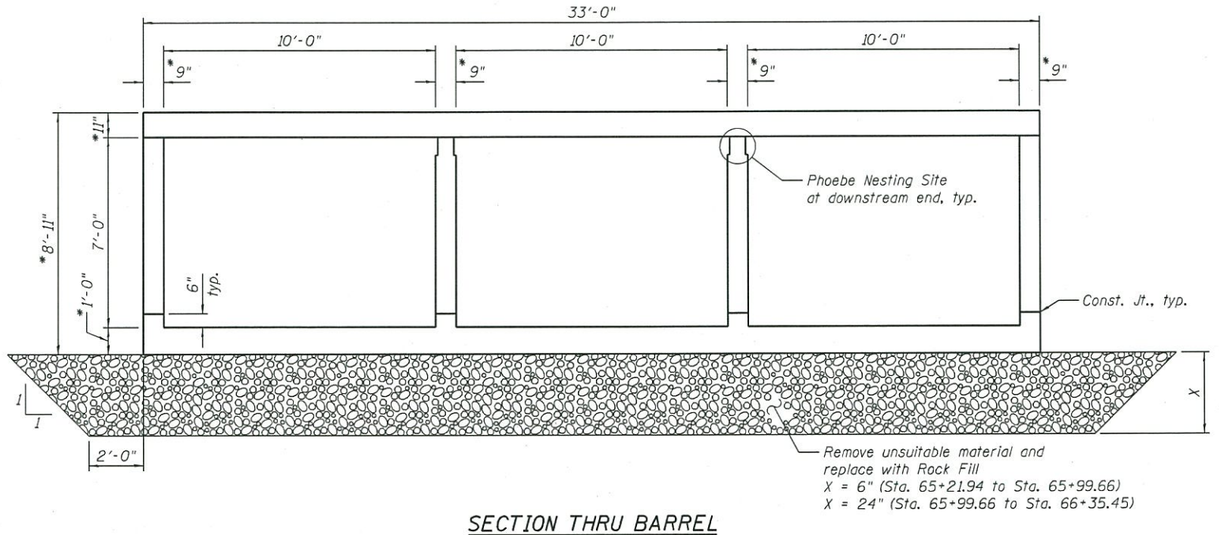
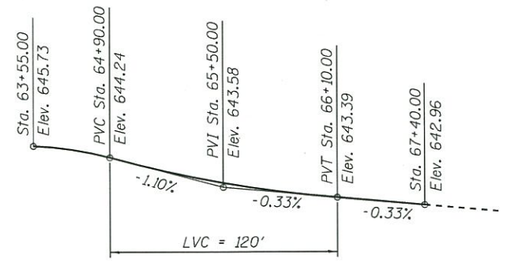


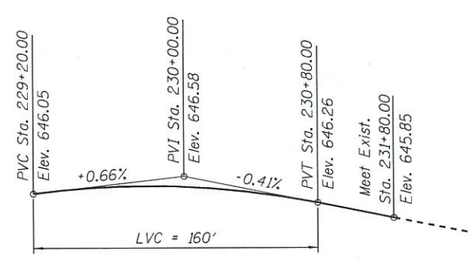
SECTION THRU BARREL

(At Right L's to ℄ Culvert)
* Subject to refinement during final design.



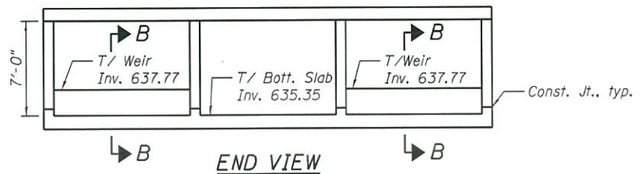
PROFILE GRADE

(Along ℄ Illinois Rte. 50)



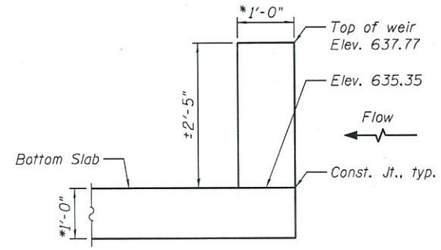
PROFILE GRADE

(Along EB PGL US Rte. 6)



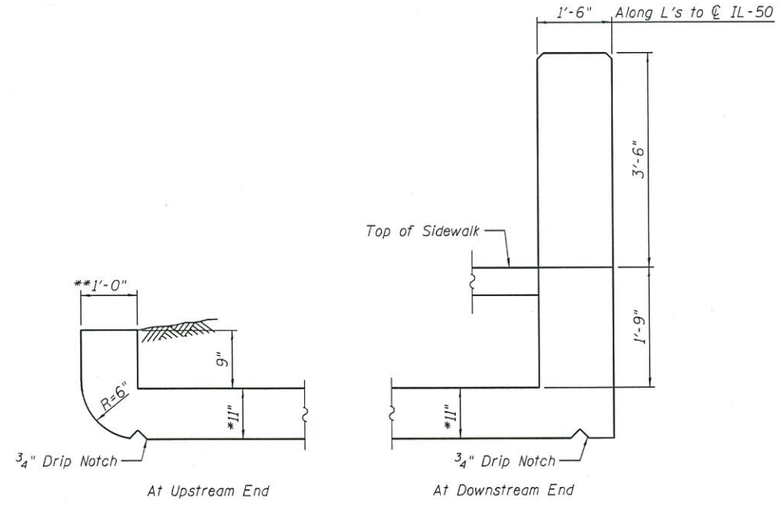
END VIEW

(Upstream End)



SECTION B-B

* Subject to refinement during final design.



SECTION AT HEADWALL

* Subject to refinement during final design.
** At right L's to ℄ culvert.

APPROVED
SEP 30 2014
AS A BASIS FOR
PREPARATION OF DETAILED PLANS

SCOPE OF WORK

1. Detour traffic for US-6 to the proposed detour route.
2. Remove existing roadway and bridge on US-6.
3. Remove 72" dia. RCP at the upstream end of the bridge.
4. Locate and protect gas line.
5. Construct proposed culvert, wingwalls and roadway.
6. Install temporary sheet piling at IL-50 stage removal line.
7. Remove existing roadway and culvert on IL-50 as shown in Stage I Removal details.
8. Perform subgrade improvement work under IL-50.
9. Construct proposed culvert and roadway as shown in Stage I Construction details.
10. Shift Traffic to the newly constructed roadway on top of the new culvert.
11. Remove existing roadway and culvert on IL-50 as shown in Stage II Removal details.
12. Perform subgrade improvement work under IL-50.
13. Construct proposed culvert, wingwalls and roadway as shown in Stage II Construction details.

ACCESS MANHOLE SCHEDULE

No.	Station (IL-50)	Offset
A	62+52.42	134.66' (LT)
B	62+55.56	144.93' (LT)
C	62+58.85	155.20' (LT)
D	65+00.14	87.67' (LT)
E	65+11.03	97.94' (LT)
F	65+16.13	108.24' (LT)
G	64+99.83	55.94' (LT)
H	65+10.99	62.69' (LT)
I	65+16.08	72.02' (LT)
J	65+72.06	1.65' (RT)
K	65+88.75	1.01' (RT)
L	66+03.30	0.54' (RT)

DRAINAGE PIPE SCHEDULE

No.	Pipe Dia.	Location	Station	Offset	Invert Elev.	Skew Angle
P-1	24"	S. Sidewall	62+91.29 (IL-50)	147.31' (LT)	Match Exist.	16°47'21"
P-2	24"	S. Sidewall	63+53.40 (IL-50)	127.49' (LT)	Match Exist.	17°06'38"
P-3	54"	N. Sidewall	64+23.66 (IL-50)	106.17' (LT)	635.80	25°43'20"
P-4	12"	N. Sidewall	64+73.32 (IL-50)	54.77' (LT)	639.10	90°00'00"
P-5	12"	N. Sidewall	64+96.74 (IL-50)	81.94' (LT)	639.40	90°00'00"
P-6	12"	N. Sidewall	65+68.20 (IL-50)	35.06' (LT)	639.10	90°00'00"
P-7	54"	S. Sidewall	65+94.69 (IL-50)	28.92' (RT)	635.00	90°00'00"
P-8	48"	N. Wingwall	66+69.55 (IL-50)	43.72' (RT)	634.70	37°37'46"

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Accurate GROUP, INC.

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PLOT DATE = 9/30/2014		CHECKED - JMT	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DETAILS
STRUCTURE NO. 016-2849
SHEET NO. 2 OF 3 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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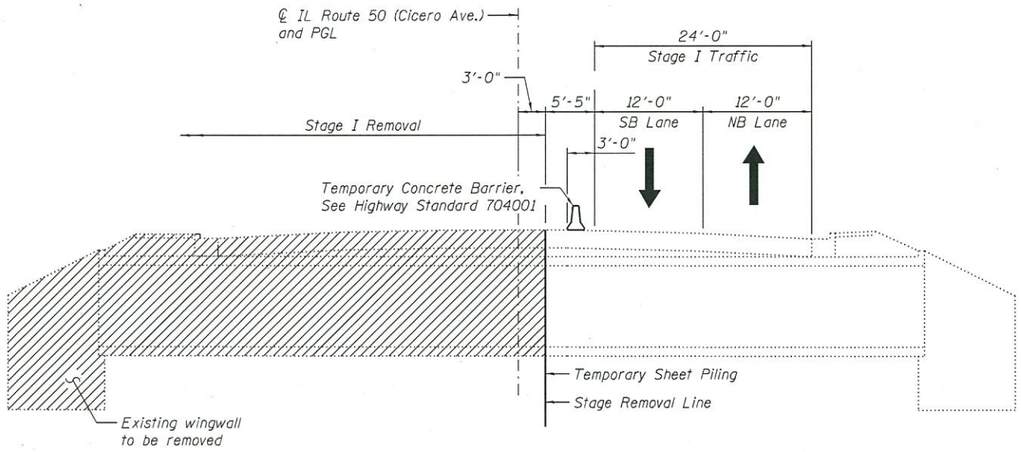
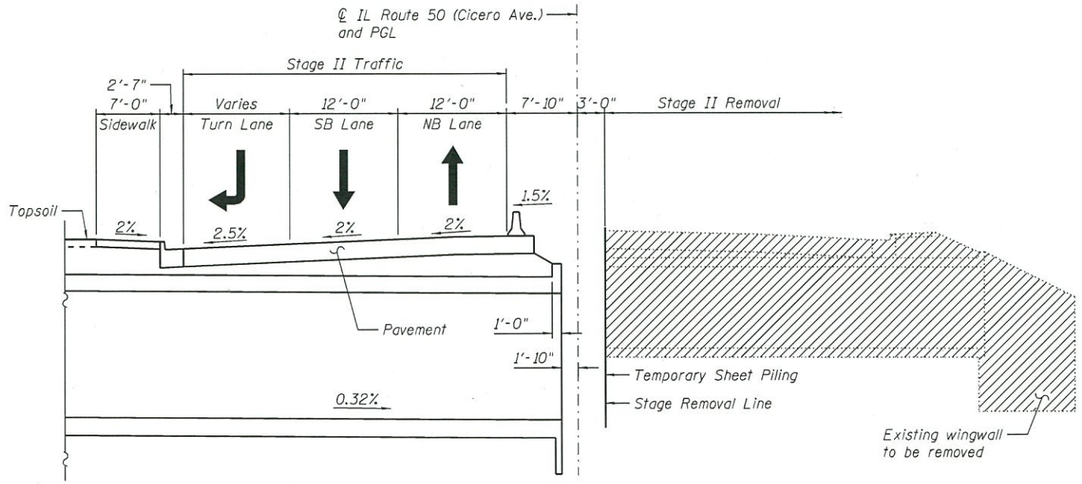
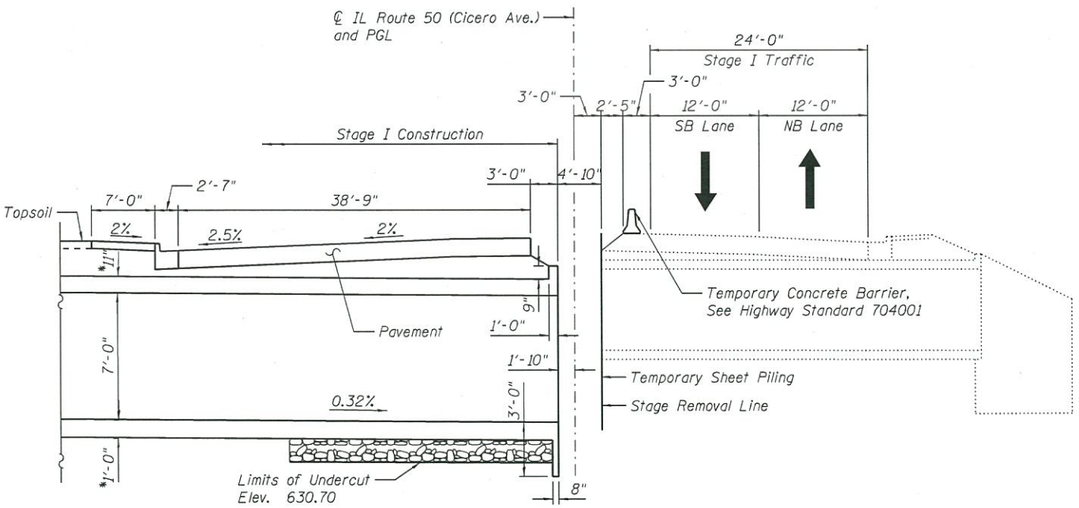
		CONTRACT NO. 60K73		
	ILLINOIS FED. AID PROJECT			



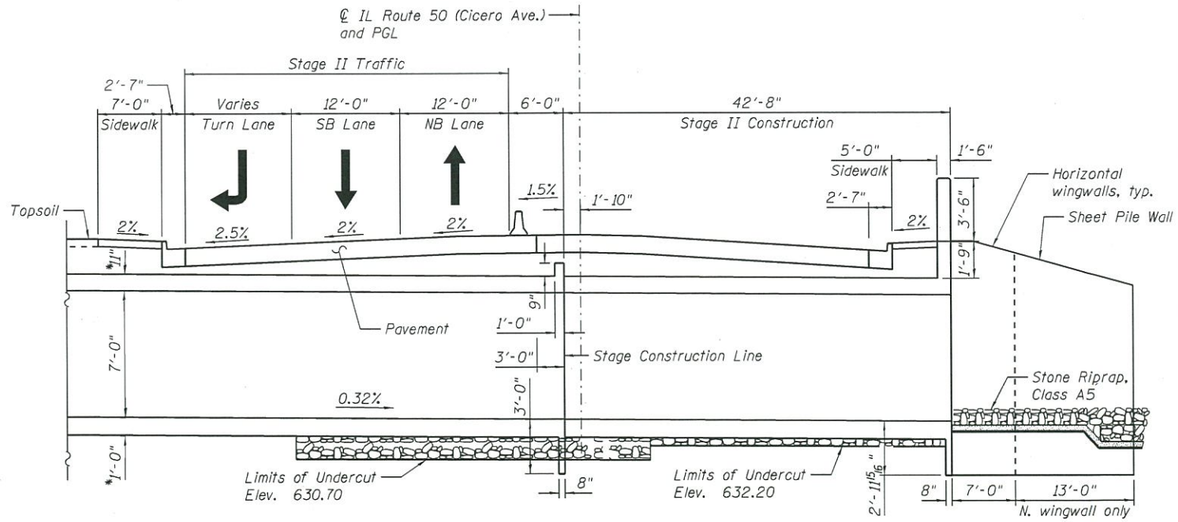
STAGE I REMOVAL



STAGE II REMOVAL



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION

APPROVED

SEP 30 2014

AS A BASIS FOR
PREPARATION OF DETAILED PLANS

LEGEND

Removal of existing structure and Roadway

NOTES:

1. All dimensions are measured perpendicular to roadway.
2. All Sections are looking North.

*Subject to refinement during final design.

Accurate GROUP, INC.	USER NAME = jent	DESIGNED - SAT	REVISED
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	PLOT DATE = 9/30/2014	CHECKED - JMT	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION STAGING IL ROUTE 50 (CICERO AVE.)
STRUCTURE NO. 016-2849
SHEET NO. 3 OF 3 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0351	537 (SB & SF) 1	COOK		
		CONTRACT NO. 60K73		
	ILLINOIS FED. AID PROJECT			

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