F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	453

STA.	TO STA.

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

62302

* (1818, ETC, 2324.6-1P)R-9

—N—→

PLAN

Showing situation with
Drop Shaft oriented South,
See Note 3 for North orientation

C← ℄ West Pipe
B←
Existing Access Shaft
X
South Riser Shaft
North Riser Shaft
A
Ø 3'-0"
Ø 3'-0"
W.P.
℄ Junction Chamber
Existing Drop Shaft
X
B←
C← ℄ East Pipe

16'-10"
14'-10"
1'-0"
1'-0"
7'-5"
7'-5"
9'-8"
7'-8"****
8'-8"***
4'-10"
4'-10"
6"
16'-10"

MIN. BAR LAPS

#5:	2'-2"
#6:	2'-7"
#7:	3'-5"
#8:	4'-6"

SECTION A-A

Cast Iron Steps (Typ.)
See IDOT Standard 602701
Match Existing Step Spacing
or space @ 12" to 16" cts.
Cost included with Junction Chamber

Pipe Opening Varies

Provide 12" layer of
well-compacted
CA-6 as a Base for
the Bottom Slab as
directed by the Engineer.
Cost included with
Junction Chamber, of
the number specified.

℄ East or West Pipe

EL. b

1'-0" 3'-0" 8'-10" 3'-0" 1'-0"
e (North Pipe)
f (South Pipe)
8'-9"
6'-3"
2'-0"
1'-2"
1'-6"
1'-0"
1'-0" 3'-0"** 10" 2'-10"
2'-0"***
4'-7" 4'-7"** 6'-8"** 1'-0"
5'-7"*** 5'-8"***
16'-10"

SECTION B-B

℄ Junction Chamber
Type 1 Frame and Open Lid
See IDOT Std. 604001
Cost included with Junction Chamber
Rim EL.
Varies — Any Combination of Precast Rings See Note 5
2'-8" Cone
Provide Mastic Seal as directed by the Engineer
EL. a
Inv. El. East Pipe
Inv. El. West Pipe
Bonded Const. Jt. (Mandatory) (Typ.)
EL. b

c or d
Pipe Opening Varies
8'-9"
1'-2" 1'-2"
2'-4" 3'-0" 2'-4"
1'-0" 1'-0"
1'-6"** 6'-8"** 1'-6"**
2'-0"*** 5'-8"*** 2'-0"***
9'-8"

SECTION C-C

℄ Junction Chamber
Type 1 Frame and Open Lid
See IDOT Std. 604001
Cost included with Junction Chamber
Rim EL.
Varies — Any Combination of Precast Rings See Note 5
2'-8" Cone
EL. a
Inv. El. East Pipe
Inv. El. West Pipe
Bonded Const. Jt. (Mandatory) (Typ.)
EL. b

c or d
Pipe Opening Varies
8'-9"
1'-2" 1'-2"
2"
1'-0" 7'-8" 1'-0"
9'-8"

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN LOADING

Live Load = HS20-44
Future Wearing Surface = 50 psf
Traffic Surcharge = 250 psf
Equivalent Fluid Soil Pressure = 50 pcf
Earth Load = 120 pcf

DESIGN STRESSES

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

NOTES:

1. For additional information, see Special Provisions.

2. For reinforcement details, see Sheets JC-3, JC-4, & JC-5.

3. Work point (W.P.) located at outside edge of existing drop manhole as shown. Mirror proposed Junction Chamber about line X-X when existing drop shaft is located north of existing access shaft. ℄ Junction Chamber is parallel to ℄ Main Drain.

4. For elevations a and b, rim elevations, invert elevations, pipe openings, and dimensions c, d, e, & f, see "Table of Junction Chamber Information" on Sheet JC-2.

5. Precast concrete rings shall conform to ASTM C76 for 'Reinforced Concrete Culvert, Storm Drain and Sewer Pipe', Class II, Wall B. Standard lengths of rings are: 4'-0", 2'-8", 1'-4", 0'-8", and 0'-4" collar. Cost included with Junction Chamber. All reinforcement steel required for precast concrete rings shall be included with Junction Chamber.

6. The maximum width of excavation is the width of the junction chamber plus 2 feet either side, and the maximum length is the length of the junction chamber plus 2 feet either side. Excavation outside the maximum dimensions specified will not be measured for payment.

7. The design of the excavation for junction chambers and jacking/receiving pits is the responsibility of the Contractor. The Contractor shall submit drawings and design for the braced excavation to the Engineer for approval. The braced excavation design and drawings shall be signed and sealed by an Illinois Licensed Structural Engineer, submitted and approved prior to the start of any work. The Engineer's approval shall not relieve the Contractor from the sole responsibility of the structural integrity of the braced excavation system. Excavation shall be paid as "Braced Excavation", see Special Provisions and Drainage Plans and Schedule.

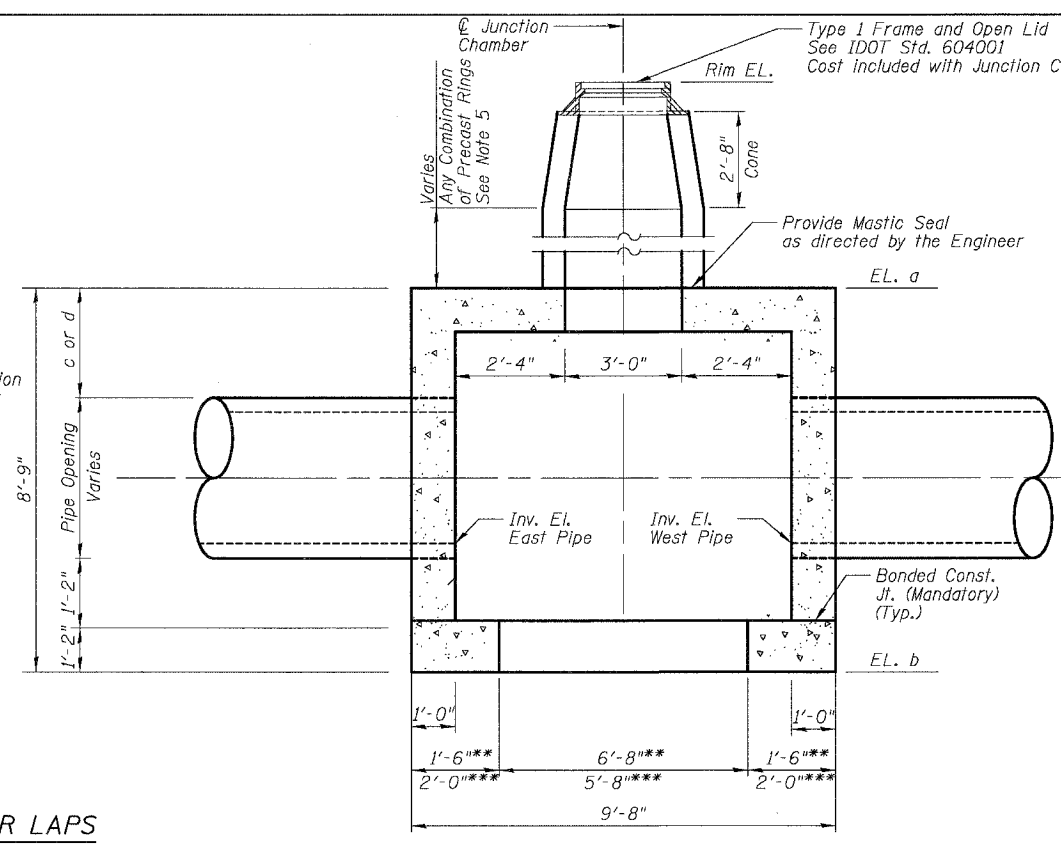8. Work this sheet with Sheets JC-2, JC-3, JC-4, and JC-5.
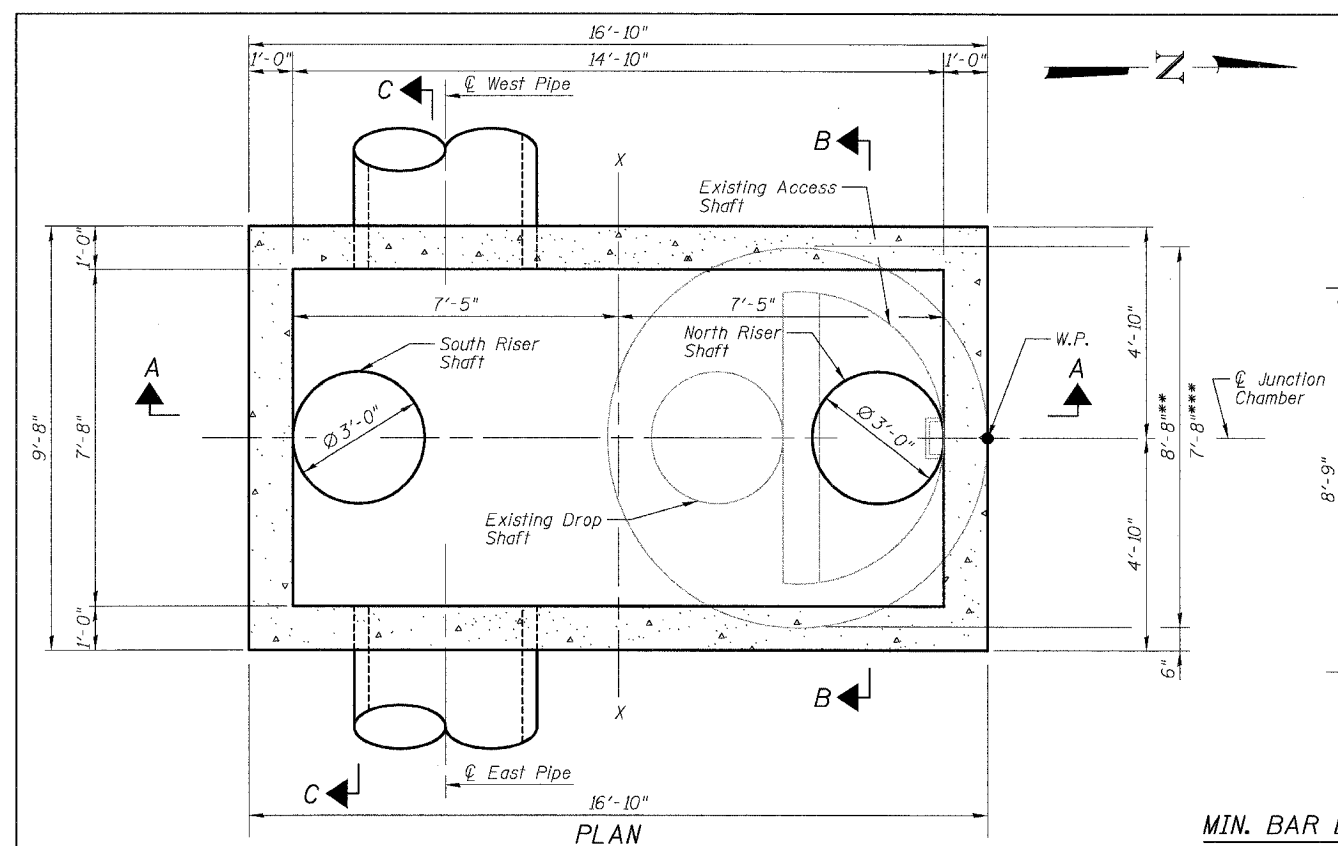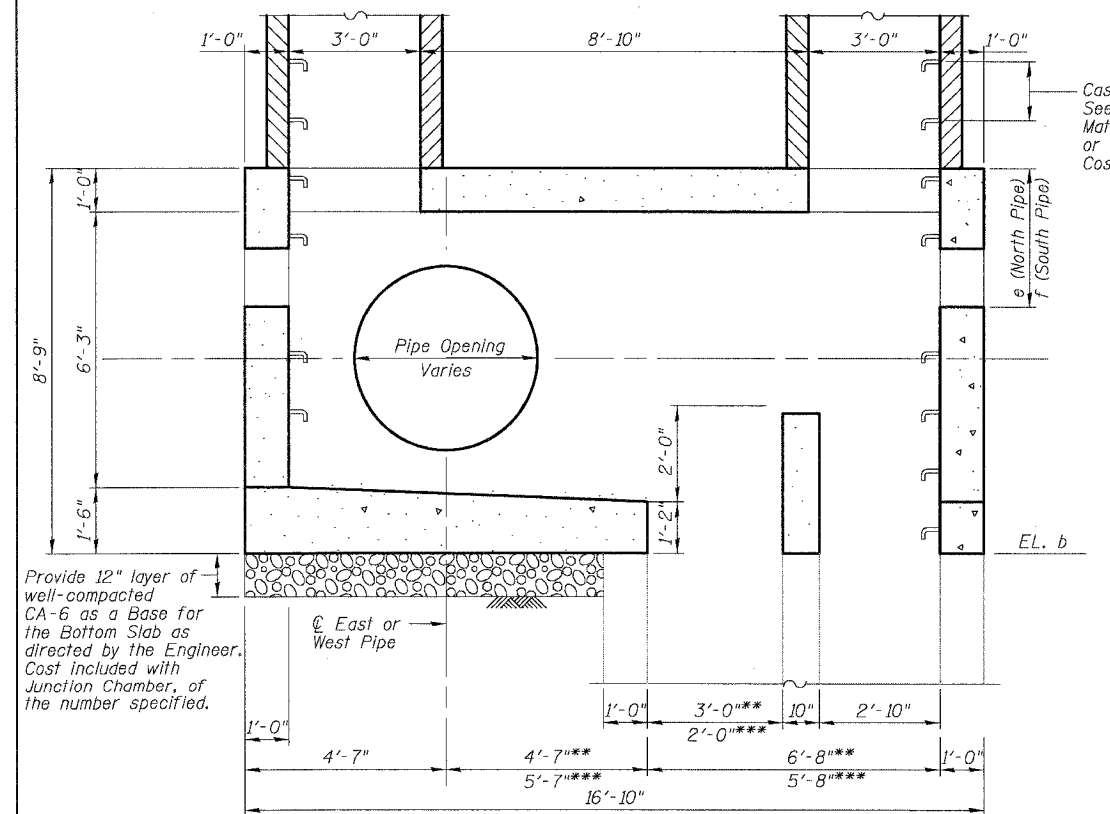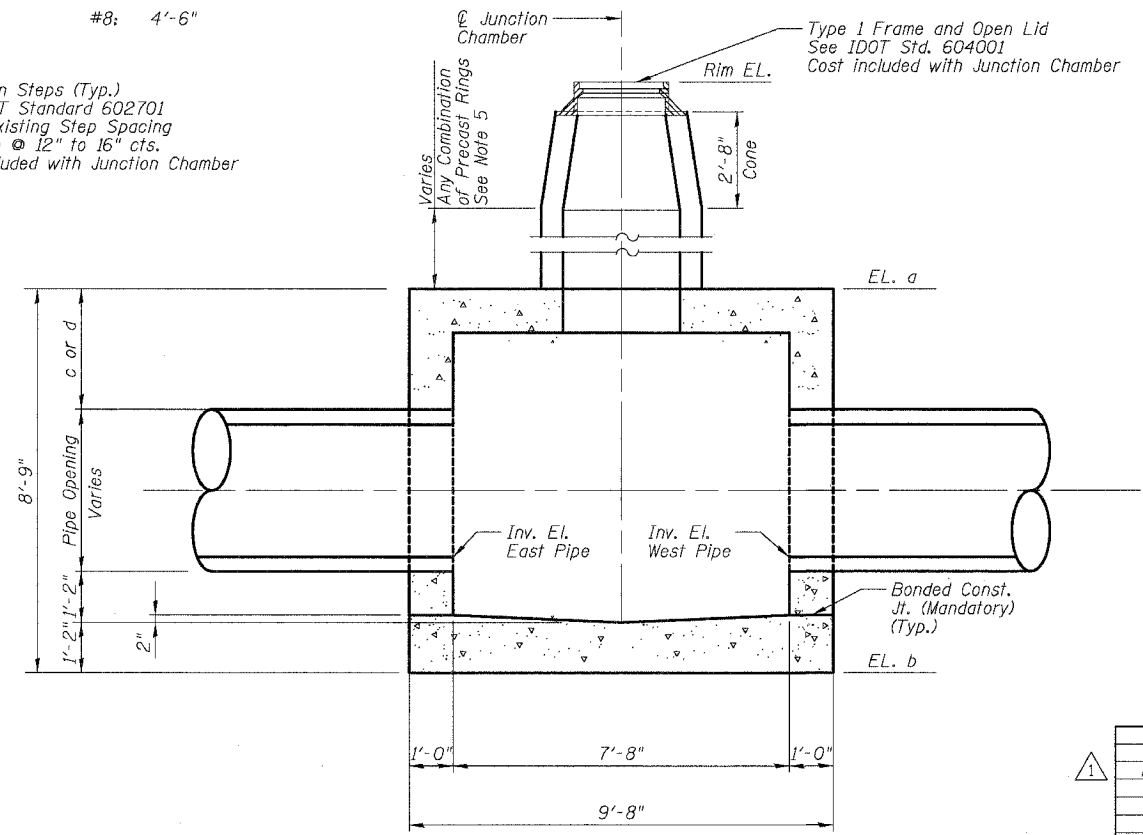
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Junction Chamber, No. 1	Each	1
Junction Chamber, No. 2	Each	1
Junction Chamber, No. 3	Each	1
Junction Chamber, No. 4	Each	1
Junction Chamber, No. 5	Each	1
Junction Chamber, No. 6	Each	1
Junction Chamber, No. 7	Each	1
Junction Chamber, No. 8	Each	1
Junction Chamber, No. 9	Each	1
Junction Chamber, No. 10	Each	1
Junction Chamber, No. 11	Each	1

SHEET JC-1 OF JC-22

REVISIONS		
NAME	DATE	
ADDENDUM 1	8/12/05	

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
31ST STREET TO 71ST STREET
SB EXPRESS LANE RECONSTRUCTION
JUNCTION CHAMBER, TYPE 2
GENERAL PLAN AND ELEVATION

SCALE: N.T.S.   DRAWN BY: DJM
DATE: 07/07/05   CHECKED BY: BLU