

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	531-2.1-1	COOK	10	1

#1  
11

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

# PROPOSED HIGHWAY PLANS

FAP RTE. 342: IL 53  
OVER SALT CREEK BRANCH  
SECTION: 531-2.1-1  
CULVERT WINGWALL REPAIR  
COOK COUNTY  
C-91-211-07

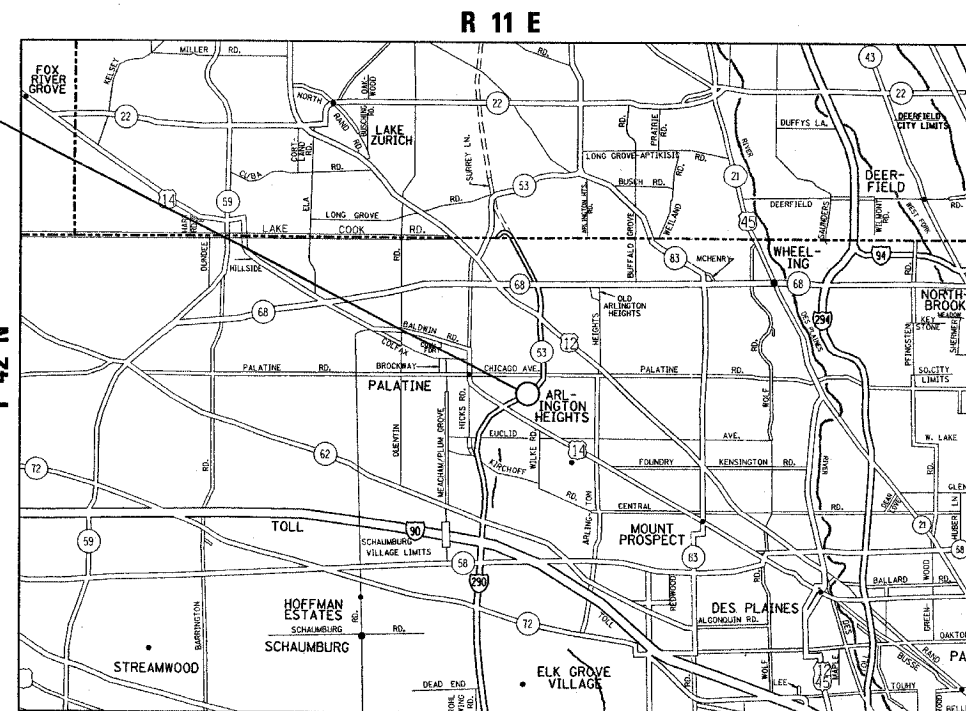
FOR INDEX OF SHEETS, SEE SHEET NO. 2

THE IMPROVEMENT IS LOCATED IN THE VILLAGE OF ARLINGTON HEIGHTS

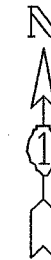
### TRAFFIC DATA (IL 53)

2006 ADT= 144,200  
SPEED LIMIT= 55 MPH

IMPROVEMENT LOCATION



WHEELING TOWNSHIP



LOCATION OF SECTION INDICATED THUS: ———

DISTRICT ONE- DESIGN - PLAN PREPARATION ENGINEER:  
KEN ENG / ROBERT BORO (847) 705-4178

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123 OR 811

CONTRACT NO. 60C42

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED APRIL 3, 2008

Diana M. O'Keefe  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 9, 2008  
Eric E. Horn  
Interim ENGINEER OF DESIGN AND ENVIRONMENT

May 9, 2008  
Christine M. Reed  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

REF-  
REF-  
REF-

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	531-2.1-1	COOK	10	2
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 60C42				

INDEX OF SHEET

SHEET NO.

- 1 TITLE SHEET
- 2 INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- \*4-8 WINGWALL PLAN
- 9 TRAFFIC CONTROL FOR SHOULDER CLOSURES
- 10 TRAFFIC CONTROL FOR SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES

\* INCLUDES 5A.

LIST OF STANDARDS

- 280001-04 TEMPORARY EROSION CONTROL SYSTEM
- 664001-01 CHAIN LINK FENCE
- 701006-02 OFF ROAD OPERATIONS, 2L, 2W, 4.5m (15') TO 600mm(24') FROM PAVEMENT EDGE
- 701101-01 OFF ROAD OPERATIONS, MULTILANE, 4.5m (15') TO 600mm(24') FROM PAVEMENT EDGE
- 704001-04 TEMPORARY CONCRETE BARRIER
- 701901 TRAFFIC CONTROL DEVICES

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED)

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR 60 (IL MODIFIED). SEE SPECIAL PROVISIONS.

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO ROUTINE VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED BASED UPON THE UNIT PRICE BID FOR THE WORK.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4151. A MINIMUM OF 72 HRS IN ADVANCE OF BEGINNING WORK.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

CONCRETE STRUCTURES SHALL HAVE A SEVEN DAY MINIMUM CURE.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		INDEX OF SHEETS, LIST OF STATE STANDARDS AND GENERAL NOTES
SCALE:	VERT. DATE 4/8/2008	DRAWN BY CHECKED BY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
342	531-2.1-1	COOK	10	3
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

SUMMARY OF QUANTITIES			URBAN 100% STATE	CONSTRUCTION TYPE CODE				
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	SFTY-2A				
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	45	45				
20200100	EARTH EXCAVATION	CU YD	121	121				
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	29.5	29.5				
20900110	POROUS GRANULAR BACKFILL	CU YD	9	9				
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	177	177				
25000312	SEEDING, CLASS 4A	ACRE	0.04	0.04				
25100630	EROSION CONTROL BLANKET	SQ YD	177	177				
28000400	PERIMETER EROSION BARRIER	FOOT	40	40				
50102400	CONCRETE REMOVAL	CU YD	6.4	6.4				
50200100	STRUCTURE EXCAVATION	CU YD	26.8	26.8				
50300225	CONCRETE STRUCTURES	CU YD	6	6				
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	710	710				
51100300	SLOPE WALL 6 INCH	SQ YD	9.5	9.5				
51205200	TEMPORARY SHEET PILING	SQ FT	1420	1420				
60107700	PIPE UNDERDRAINS 6"	FOOT	18	18				
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	65	65				
63200310	GUARDRAIL REMOVAL	FOOT	65	65				
66400305	CHAIN LINK FENCE, 6'	FOOT	80	80				
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3				
67100100	MOBILIZATION	L SUM	1	1				
70400100	TEMPORARY CONCRETE BARRIER	FOOT	125	125				
X0322879	GRADING AND SHAPING FORESLOPES	SQ YD	177	177				
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	1	1				
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1				

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE				
CODE NO	ITEM	UNIT	TOTAL QUANTITIES				

4/8/2008  
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\*SPECIALTY ITEMS

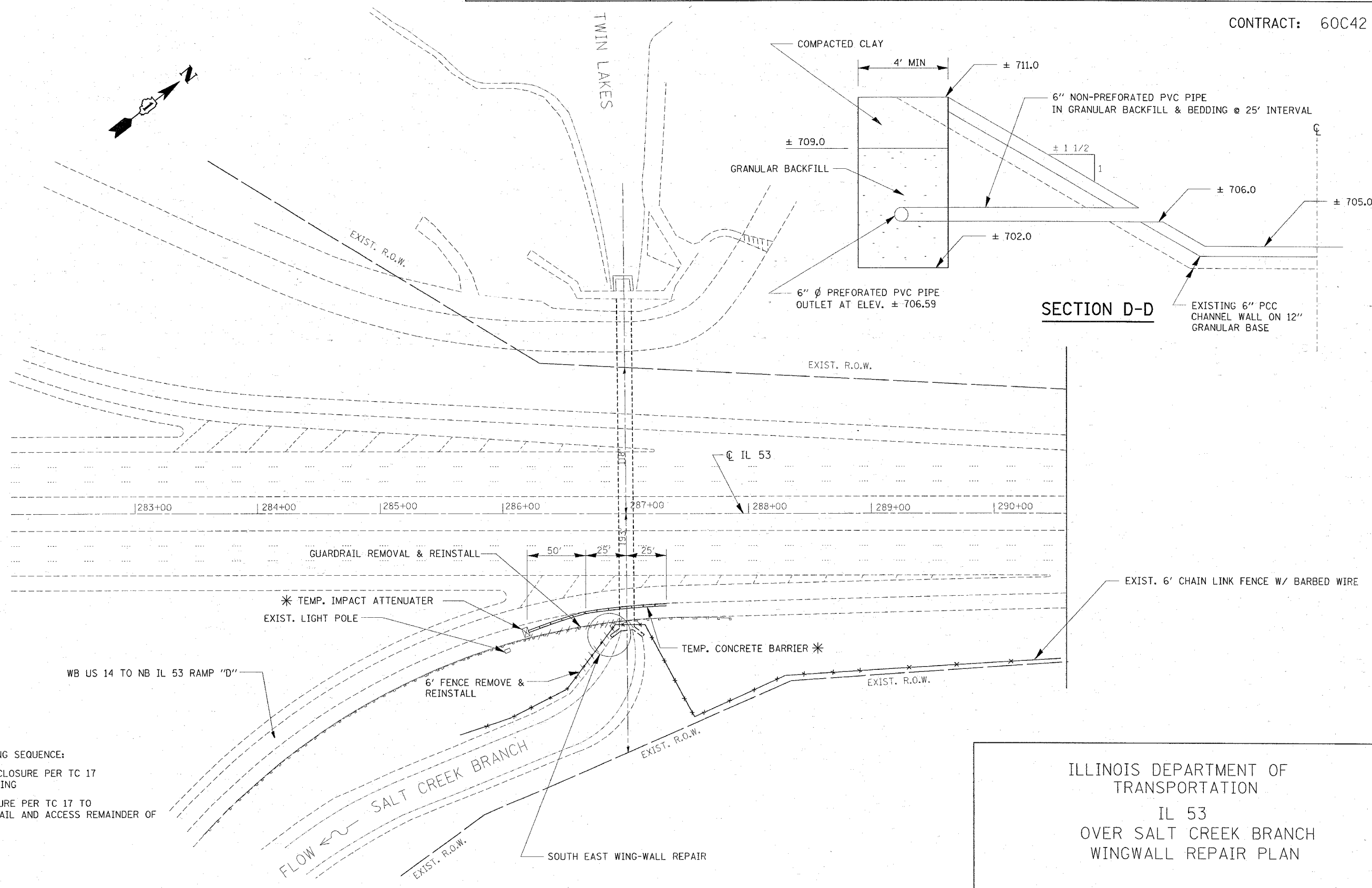
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SUMMARY OF QUANTITIES

PLOT DATE: 4/8/2008

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 342	531-2.1-I	COOK	10	4

CONTRACT: 60C42

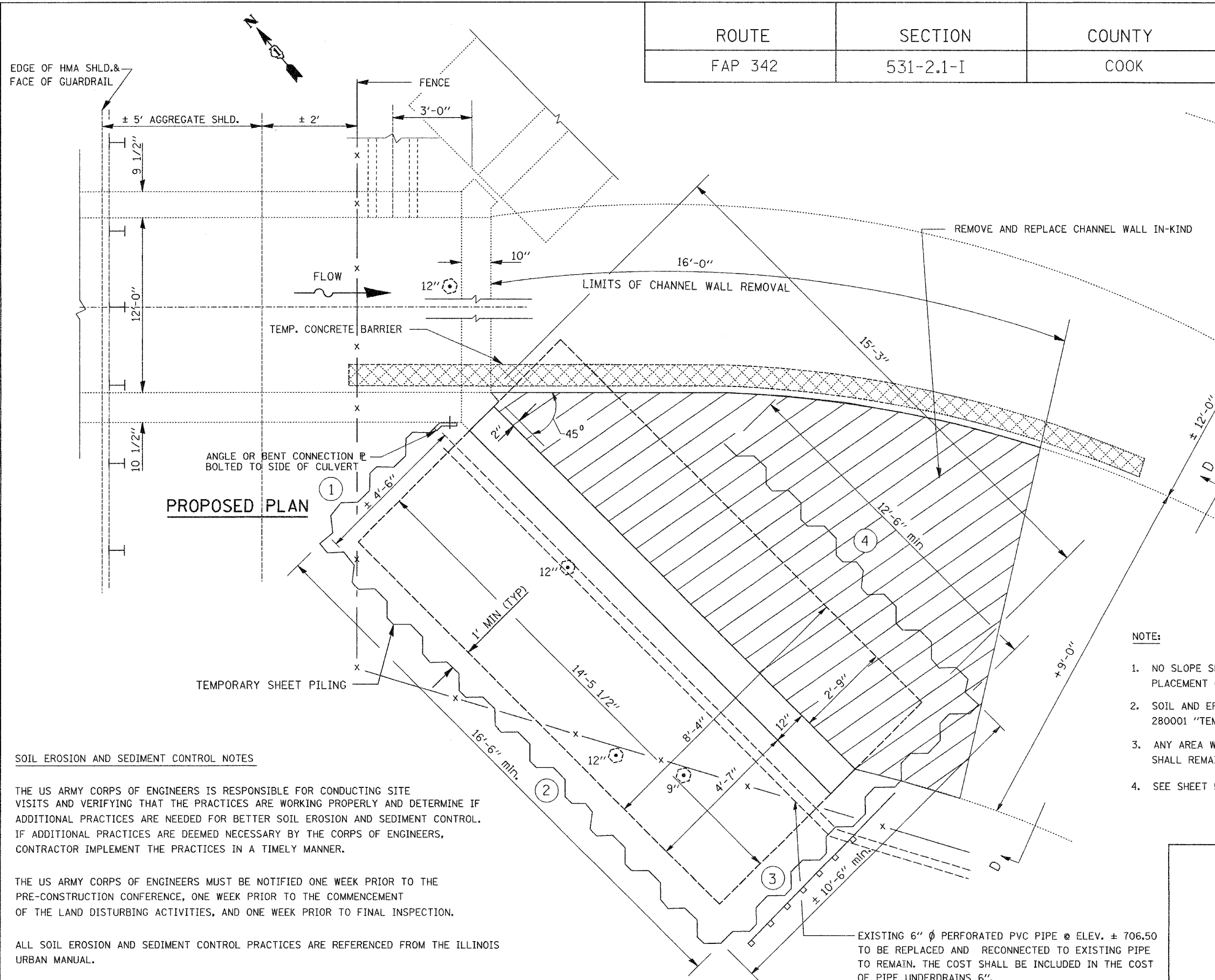


- RECOMMENDED STAGING SEQUENCE:
1. PARTIAL RAMP CLOSURE PER TC 17 TO DRIVE SHEETING
  - \* 2. SHOULDER CLOSURE PER TC 17 TO REMOVE GUARDRAIL AND ACCESS REMAINDER OF OF REPAIRS

ILLINOIS DEPARTMENT OF  
TRANSPORTATION  
IL 53  
OVER SALT CREEK BRANCH  
WINGWALL REPAIR PLAN

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 342	531-2.1-I	COOK	10	5

CONTRACT: 60C42



- LEGEND:**
- TEMPORARY SHEET PILING
  - 2 SECTION OF TEMP. CONCRETE BARRIER ADAPTED TO RETAIN WATER/SILT
  - PERIMETER EROSION BARRIER TO BE PLACED AFTER BACKFILL
  - REMOVE EXISTING TREE OF DIAMETER SPECIFIED

- NOTE:**
1. NO SLOPE SHALL BE LEFT UNDISTURBED FOR MORE THAN 14 DAYS WITHOUT THE PLACEMENT OF TEMPORARY OR PERMANENT SEEDING.
  2. SOIL AND EROSION CONTROL PRACTICE SHALL BE IN ACCORDANCE WITH STANDARD 280001 "TEMPORARY EROSION CONTROL SYSTEM".
  3. ANY AREA WHERE THERE IS NO PROPOSED GRADING, THE EXISTING GROUND COVER SHALL REMAIN.
  4. SEE SHEET 5A FOR SHEET PILE ELEVATION VIEW.

**SOIL EROSION AND SEDIMENT CONTROL NOTES**

THE US ARMY CORPS OF ENGINEERS IS RESPONSIBLE FOR CONDUCTING SITE VISITS AND VERIFYING THAT THE PRACTICES ARE WORKING PROPERLY AND DETERMINE IF ADDITIONAL PRACTICES ARE NEEDED FOR BETTER SOIL EROSION AND SEDIMENT CONTROL. IF ADDITIONAL PRACTICES ARE DEEMED NECESSARY BY THE CORPS OF ENGINEERS, CONTRACTOR IMPLEMENT THE PRACTICES IN A TIMELY MANNER.

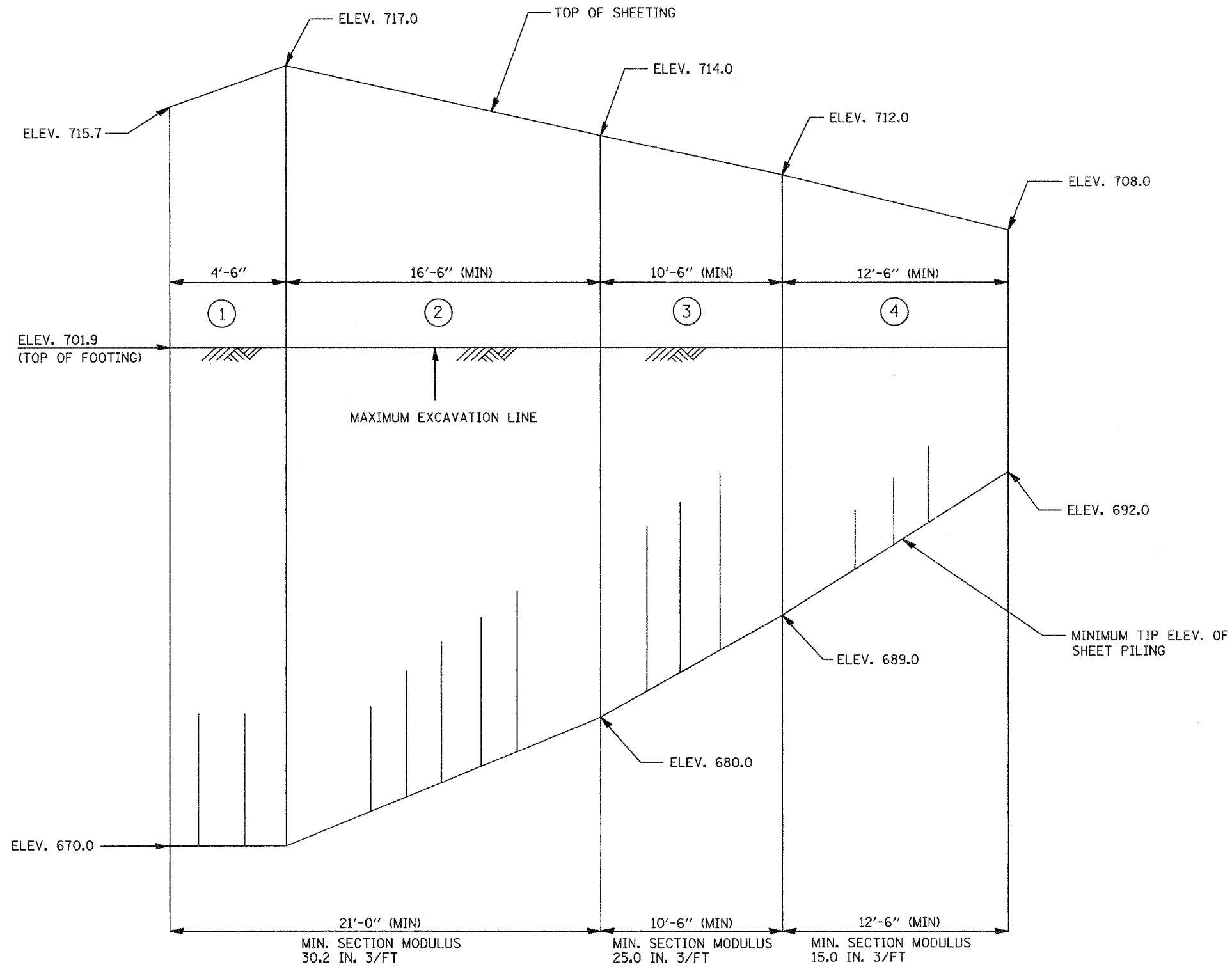
THE US ARMY CORPS OF ENGINEERS MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF THE LAND DISTURBING ACTIVITIES, AND ONE WEEK PRIOR TO FINAL INSPECTION.

ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE REFERENCED FROM THE ILLINOIS URBAN MANUAL.

ILLINOIS DEPARTMENT OF  
TRANSPORTATION  
IL 53  
OVER SALT CREEK BRANCH  
CULVERT AND EROSION CONTROL PLAN

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 342	531-2.1-I	COOK	10	5A

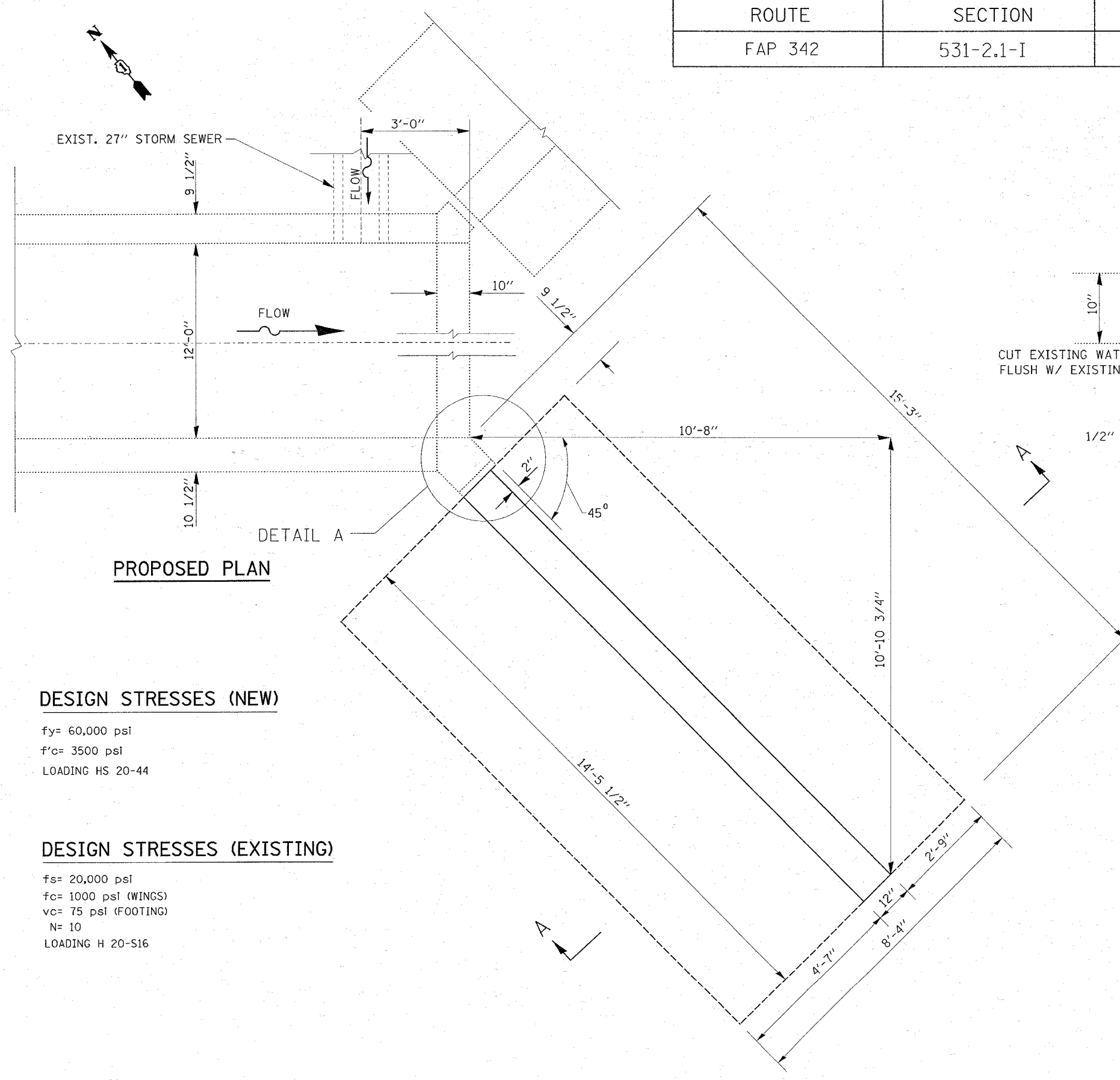
CONTRACT: 60C42



ILLINOIS DEPARTMENT OF  
TRANSPORTATION  
IL 53  
OVER SALT CREEK BRANCH  
SHEET PILE ELEVATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 342	531-2.1-I	COOK	10	6

CONTRACT: 60C42



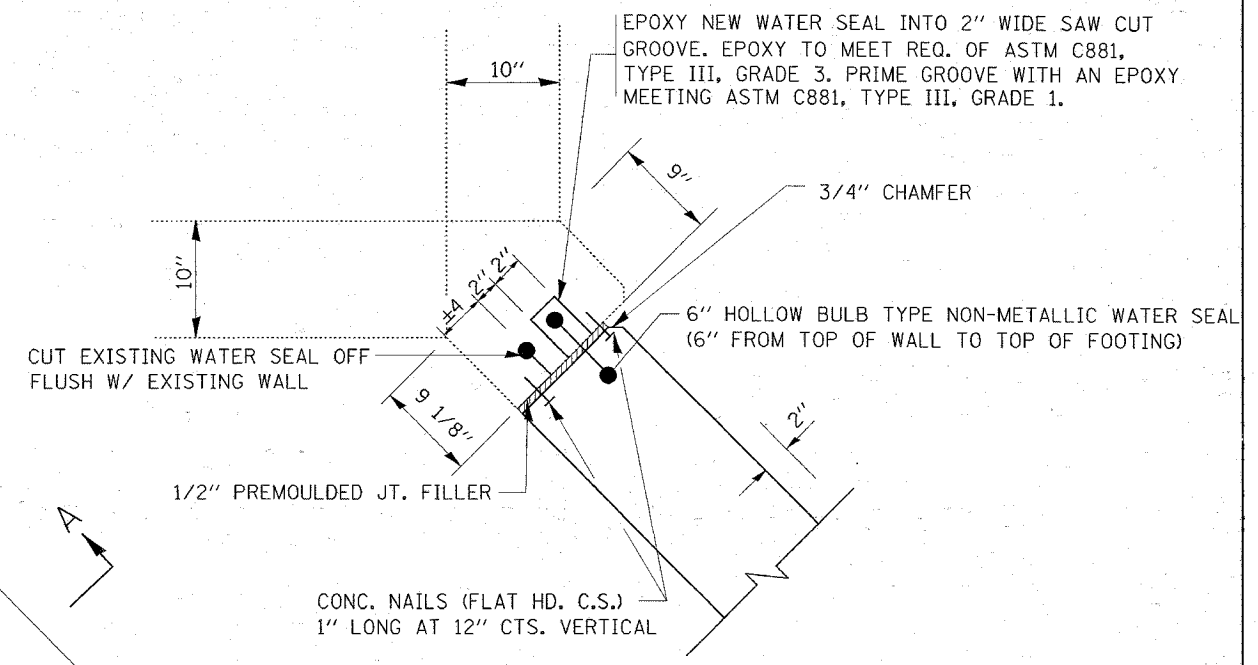
**PROPOSED PLAN**

**DESIGN STRESSES (NEW)**

fy= 60,000 psi  
 f'c= 3500 psi  
 LOADING HS 20-44

**DESIGN STRESSES (EXISTING)**

fs= 20,000 psi  
 fc= 1000 psi (WINGS)  
 vc= 75 psi (FOOTING)  
 N= 10  
 LOADING H 20-S16

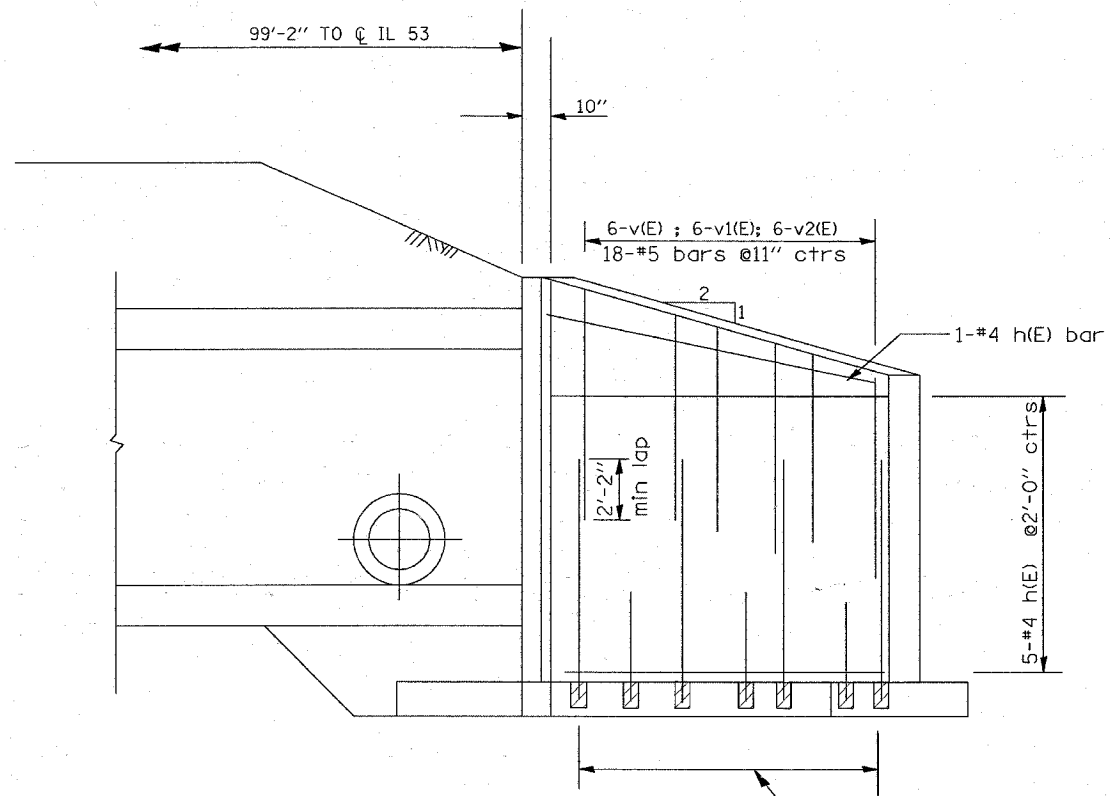


**DETAIL A**

ILLINOIS DEPARTMENT OF  
 TRANSPORTATION  
 IL 53  
 OVER SALT CREEK BRANCH  
 WINGWALL REPAIR PLAN

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 342	531-2.1-I	COOK	10	7

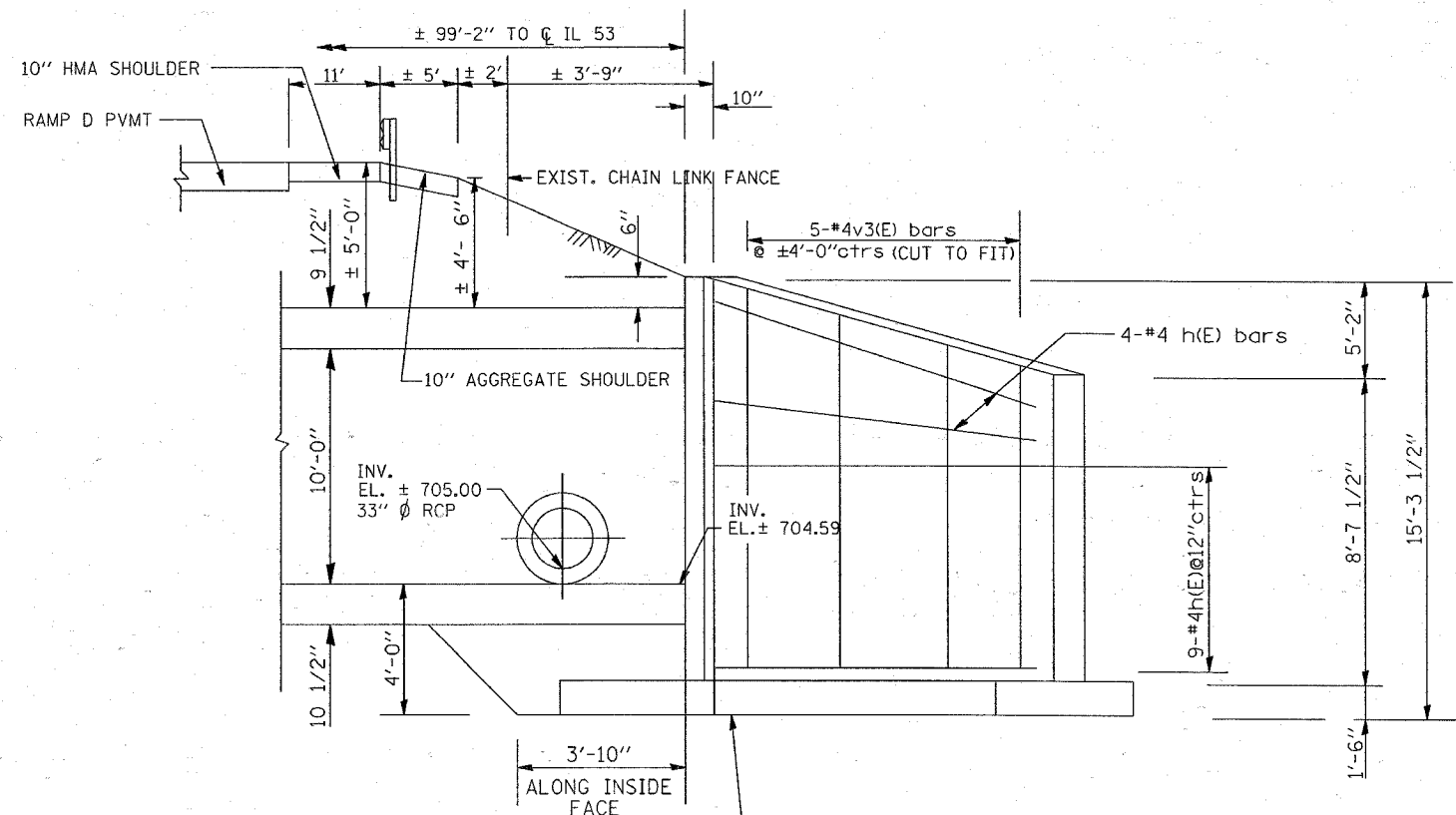
CONTRACT: 60C42



**ELEVATION**  
(SHOWING REINF. BACK FACE)

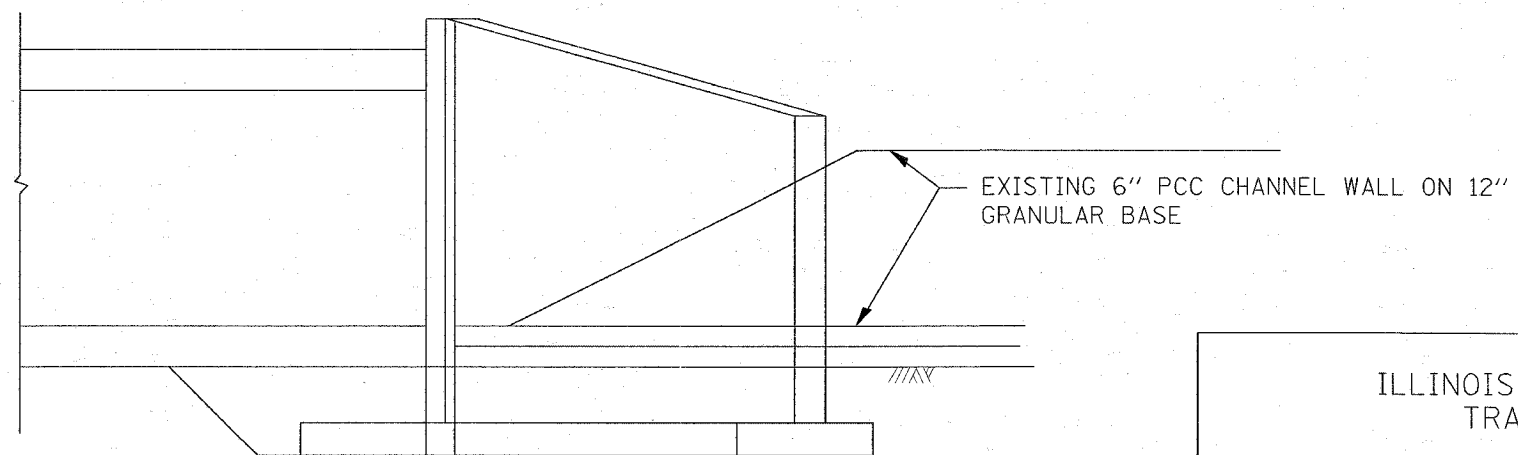
17-#6 n(E) \* bars @ 11" ctrs alternate with  
18-#7 n1(E) \* bars @ 11" ctrs

\* DRILL AND EPOXY GROUT 9" MINIMUM INTO EXISTING  
CONCRETE ACCORDING TO ARTICLE 584 OF THE  
STANDARD SPECIFICATION



**ELEVATION**  
(SHOWING REINF. FRONT FACE)

ELEV. ± 700.39



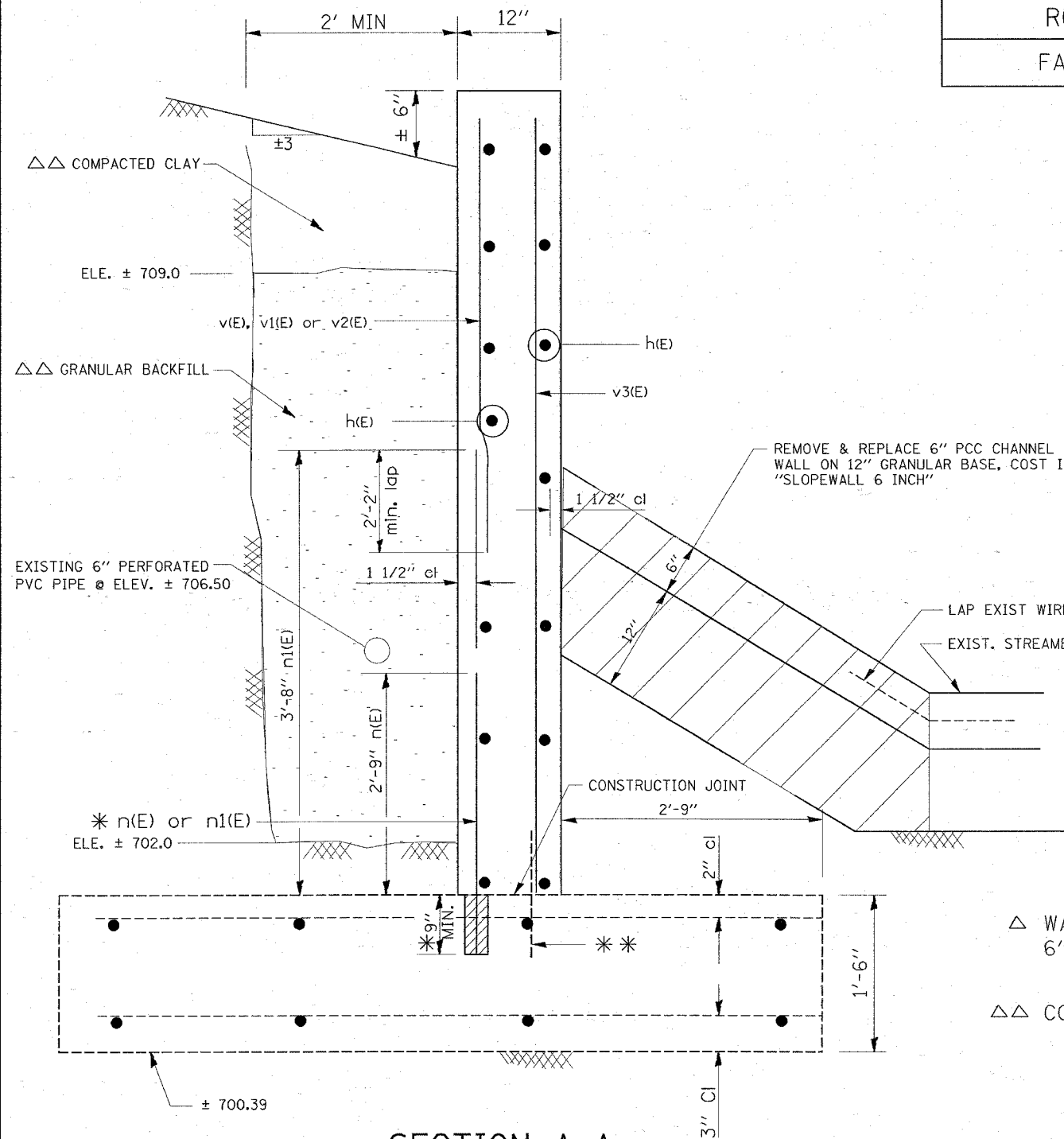
PCC CHANNEL WALL

ILLINOIS DEPARTMENT OF  
TRANSPORTATION  
IL 53  
OVER SALT CREEK BRANCH  
WINGWALL REPLACEMENT ELEVATION



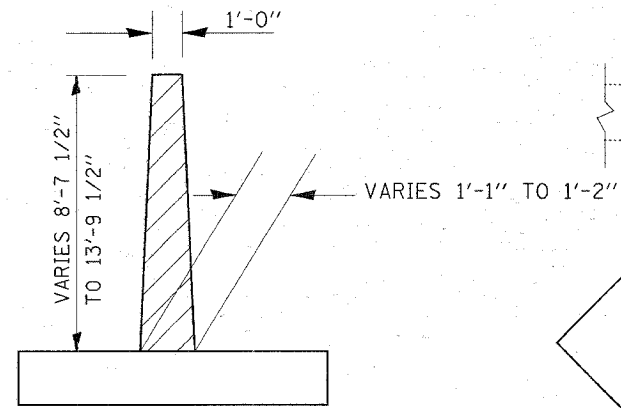
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 342	531-2.1-I	COOK	10	8

CONTRACT: 60C42

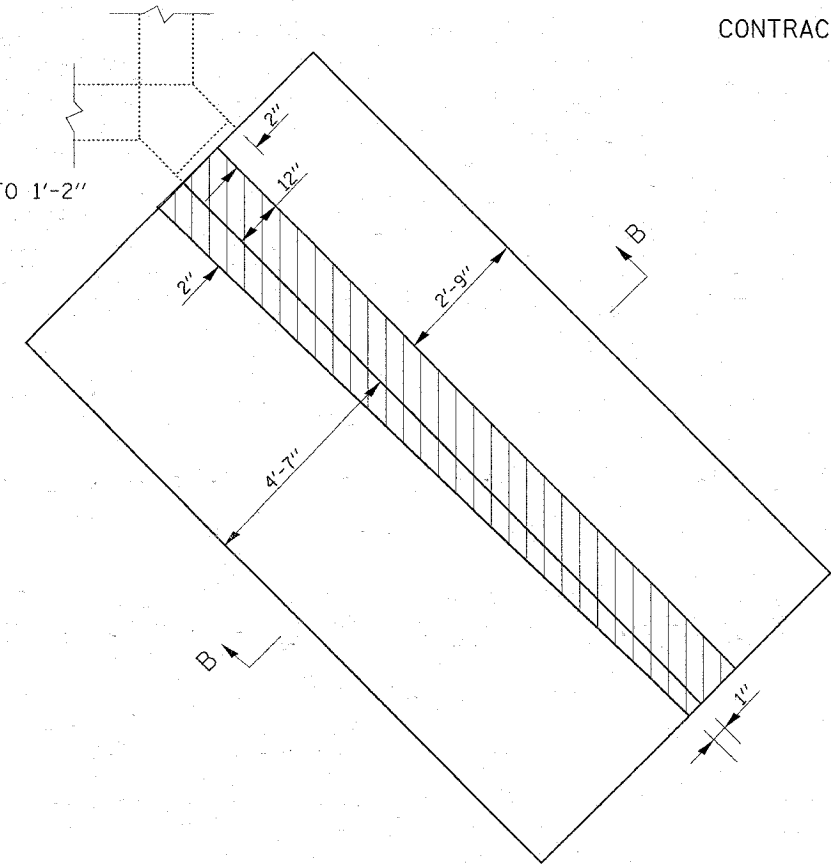


**SECTION A-A  
PROPOSED**

- \* DRILL & EPOXY GRAUT 9" MIN. INTO EXISTING CONCRETE ACCORDING TO ARTICLE 584 OF THE STANDARD SPECIFICATIONS.
- \*\* EXISTING REINFORCEMENT BARS EXTENDING INTO REMOVAL AREA SHALL BE CLEAN, STRAIGHTEN AND INCORPORATED INTO THE NEW CONSTRUCTION. ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONCRETE REMOVAL SHALL BE REPLACED WITH AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM. COST INCLUDED WITH CONCRETE REMOVAL.



**EXIST. SECTION B-B**



**EXIST. FOOTING PLAN**

(SHOWING CONCRETE REMOVAL OF EXISTING STEM)

△ WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6" X 6" - W4.0 X W 4.0, WEIGHING 58 LBS PER 100 SQ FT.

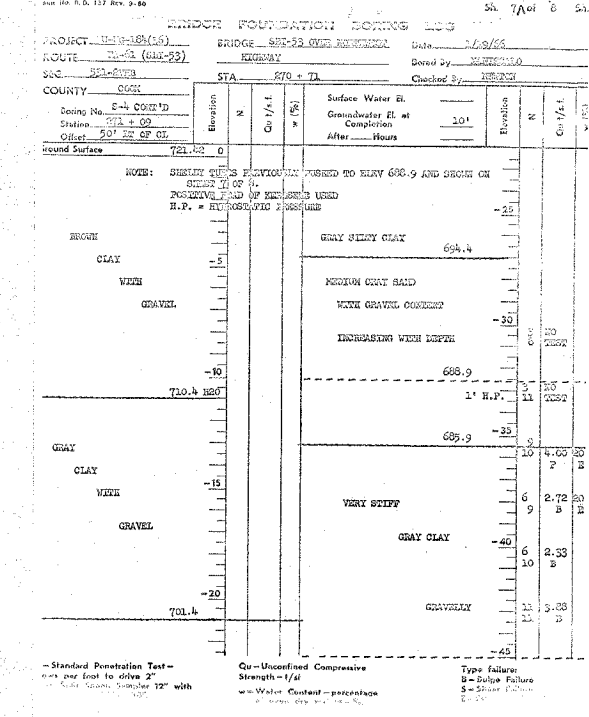
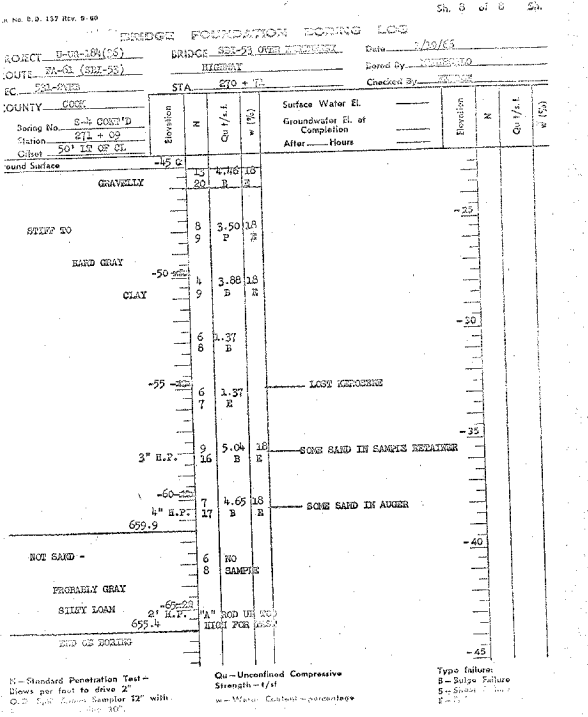
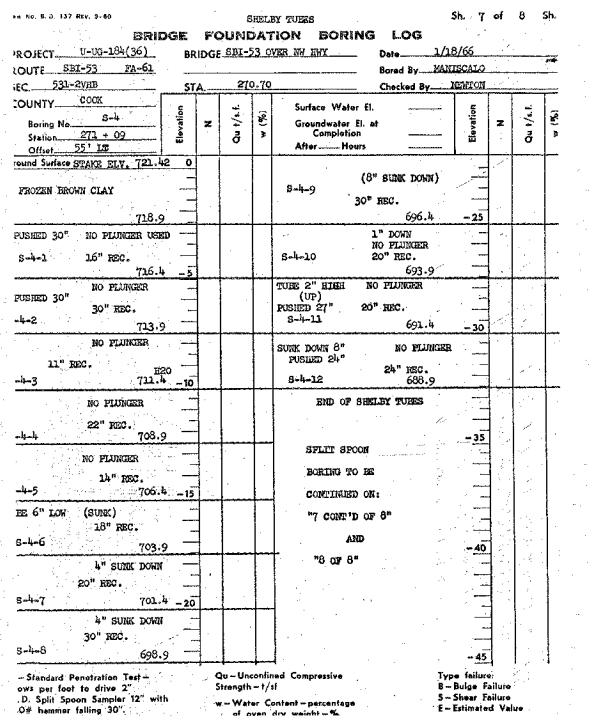
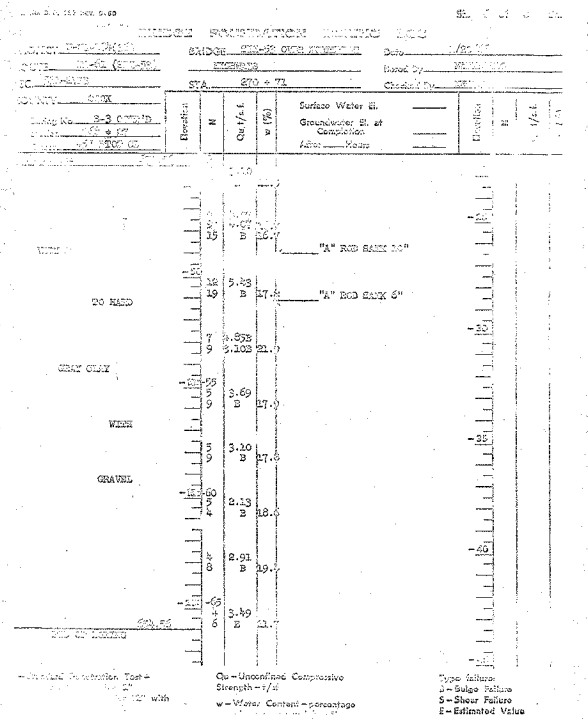
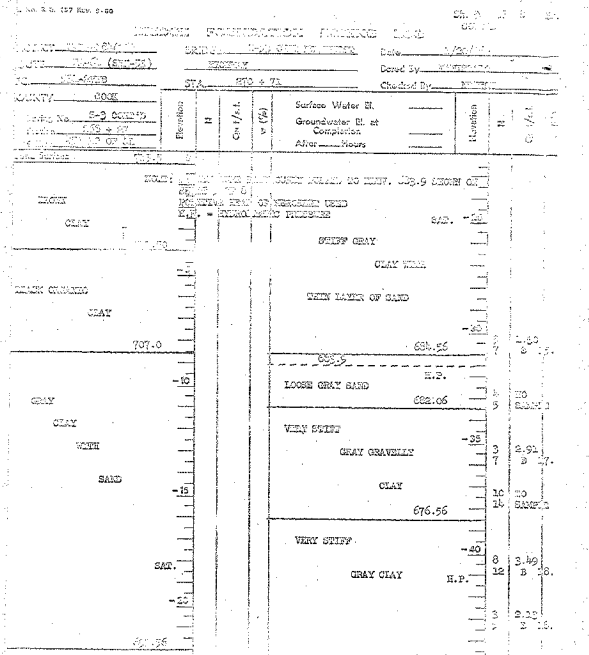
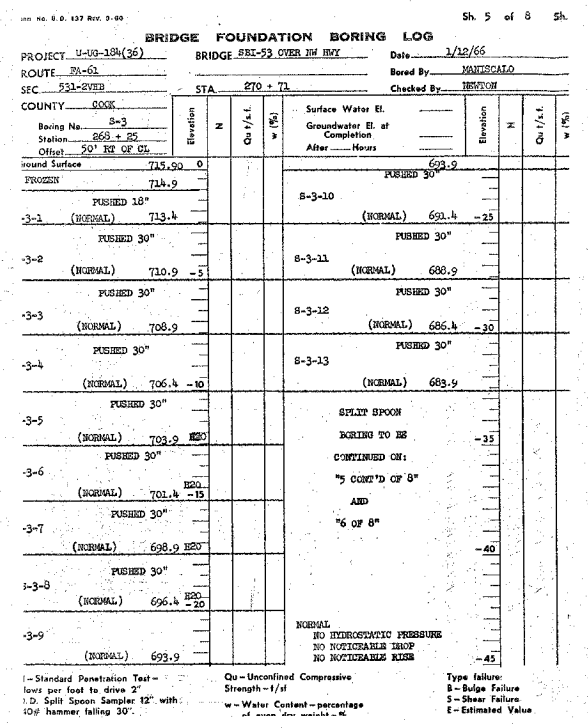
△△ COST INCLUDED IN COST OF "POROUS GRANULAR BACKFILL"

BAR LIST				
BAR	NO.	SIZE	LENGTH	SHAPE
h (E)	19	# 4	14'-2"	—
n (E)	18	# 6	3'-6"	—
n1 (E)	17	# 7	4'-5"	—
v (E)	6	# 5	10'-9"	—
v1 (E)	6	# 5	9'-0"	—
v2 (E)	6	# 5	7'-4"	—
v3 (E)	5	# 4	13'-6"	—

ILLINOIS DEPARTMENT OF  
TRANSPORTATION  
IL 53  
OVER SALT CREEK BRANCH  
WINGWALL REPAIR DETAIL

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 342	531-2.1-I	COOK	10	9

CONTRACT: 60C42

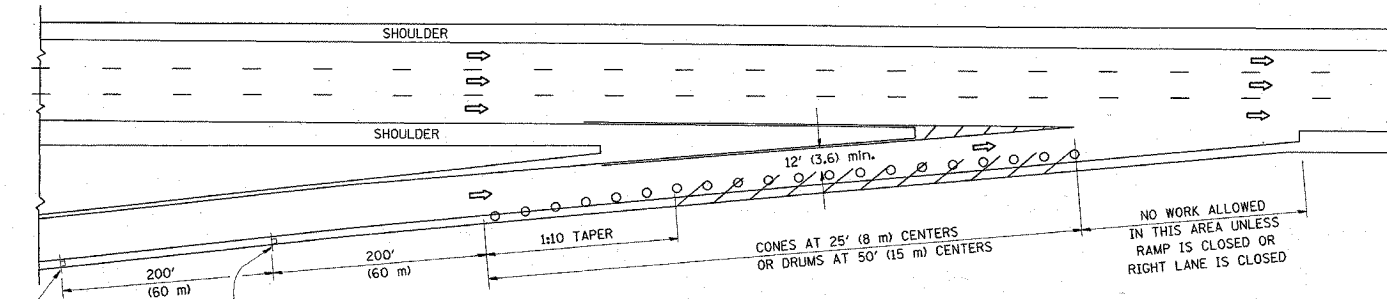


ILLINOIS DEPARTMENT OF TRANSPORTATION  
 IL 53  
 OVER SALT CREEK BRANCH  
 SOIL BORINGS

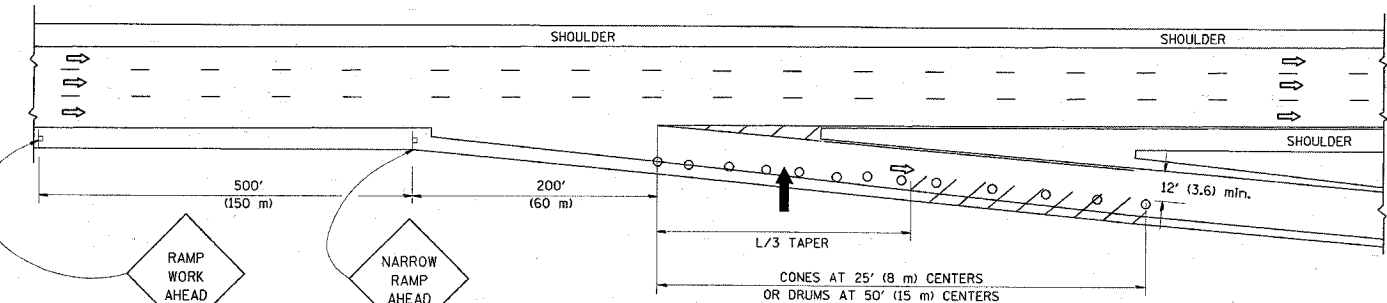
PARTIAL RAMP CLOSURE DETAILS

SHOULDER CLOSURE DETAILS

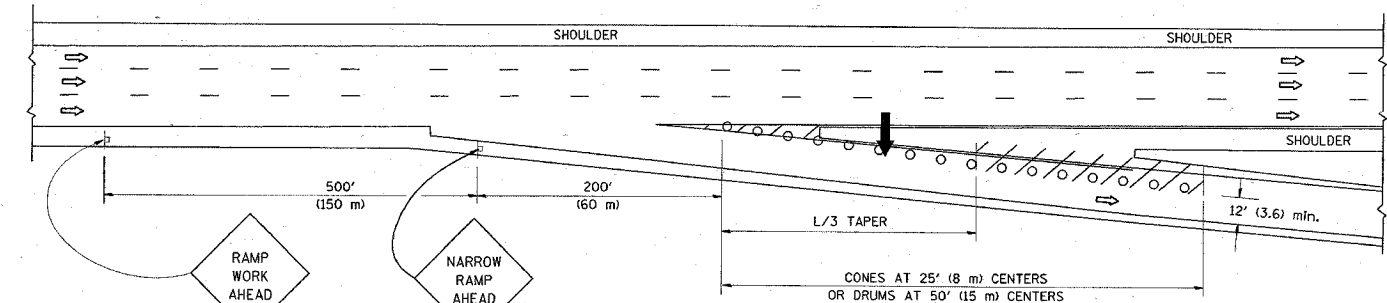
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
392	531-2.1-I	Cook	10	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

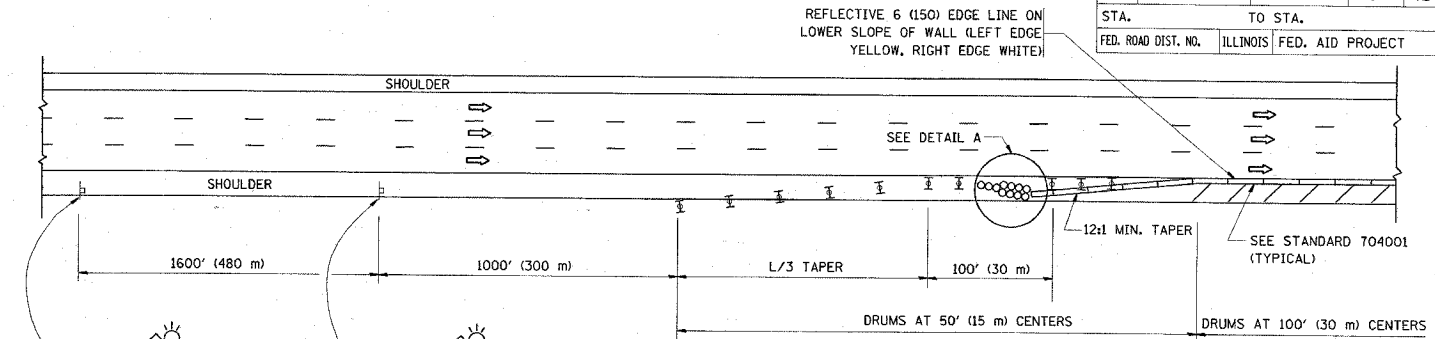
SYMBOLS

- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

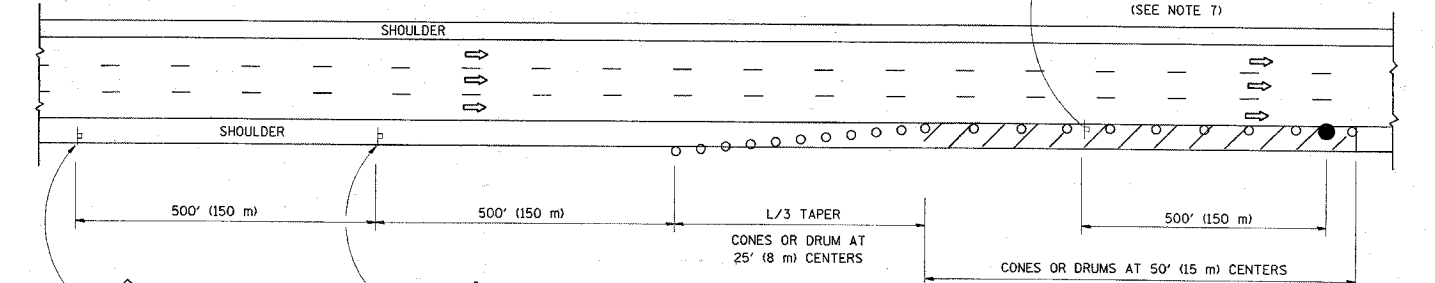
GENERAL NOTES

- THE "L" DISTANCE EQUALS:  

SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC: $L=0.65(W)(S)$ ENGLISH: $L=(W)(S)$
W = WIDTH OF OFFSET IN FEET (METERS)	S = NORMAL POSTED SPEED MPH (KM/H)
- PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

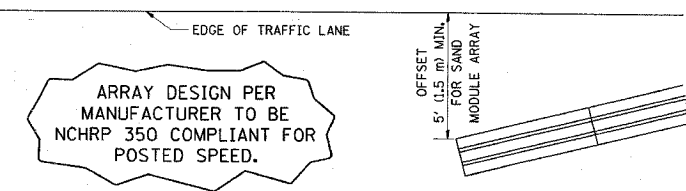


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:  
 1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



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

- THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE "TRAFFIC BARRIER TERMINAL, TYPE III, TEMPORARY" DEVICE TO MEET NCHRP350 FOR POSTED SPEED.
- AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
- THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - THE WORK ACTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.

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

REVISIONS	
NAME	DATE
DWS	11/96
JAF	12/02
NCHRP 350	04/03
JAF	2/06
SPB	1/07

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 TRAFFIC CONTROL DETAILS  
 FOR FREEWAY  
 SHOULDER CLOSURES  
 PARTIAL RAMP CLOSURES

SCALE: NONE

DESIGNED BY: DWS  
 DRAWN BY:  
 CHECKED BY: