

PLANS FOR PROPOSED SURFACE TRANSPORTATION PROGRAM-BRIDGE

LASALLE COUNTY

GRAND RAPIDS ROAD DISTRICT

SECTION 16-14786-00-DR

TOWNSHIP ROAD 469 & 382 OVER COVEL CREEK

PROJECT NO. V5XM(280)

JOB NUMBER C-93-002-20

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES, TYPICAL SECTIONS, DETAILS
3	SUMMARY OF QUANTITIES, SCHEDULES OF QUANTITIES
4	TRAFFIC CONTROL PLAN
5-6	EROSION CONTROL PLAN SHEETS
7-8	PLAN AND PROFILE SHEETS
9-15	STRUCTURE PLANS SN 050-3622 & SOIL BORINGS
16-22	STRUCTURE PLANS SN 050-3623 & SOIL BORINGS
23-30	CROSS SECTIONS

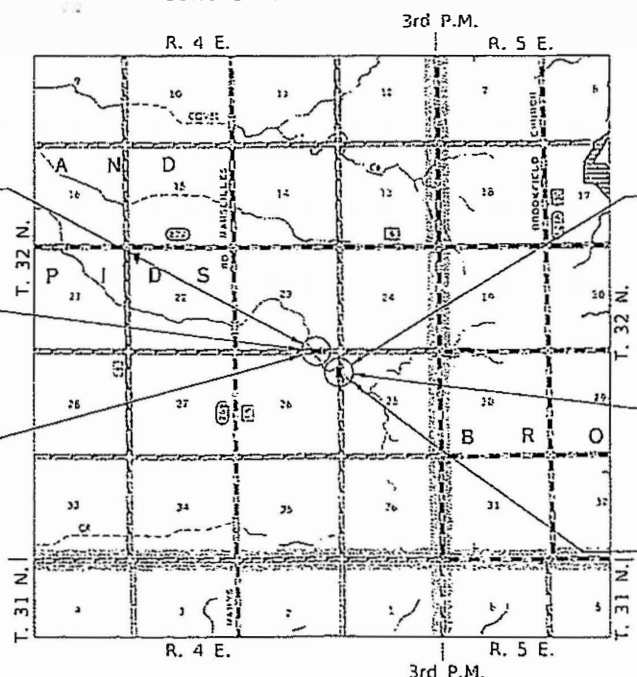
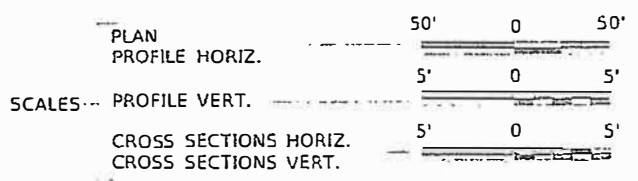
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
16-14786-00-DR		LASALLE	30	1
CONTRACT NO. 87708				



LOCATION OF SECTION INDICATED THIS: - [Symbol] -  
PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

HIGHWAY STANDARDS (INCLUDED IN PROPOSAL)

- 000001-07 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-03 NAME PLATE FOR BRIDGES
- 701901-08 TRAFFIC CONTROL DEVICES
- 725001-01 OBJECT AND TERMINAL MARKERS
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- BLR 22-7 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON RURAL LOCAL HIGHWAYS (2-LANE 2 WAY RURAL TRAFF.) (RD. CLOSED TO TRHU TRAFF.)



TOWNSHIP ROAD 469  
SECTION 16-14786-00-DR  
BEGINS STA. 19+25.00  
ENDS STA. 20+75.00

TOWNSHIP ROAD 382  
SECTION 16-14786-00-DR  
BEGINS STA. 29+00.00  
ENDS STA. 31+00.00

PROPOSED STRUCTURE SN 050-3622  
CAST IN PLACE TRIPLE 11'X11' REINFORCED  
CONCRETE BOX CULVERT, 34'-0" O TO O  
HEADWALLS, NO SKEW.

EXISTING STRUCTURE SN 050-3228  
SINGLE SPAN PRECAST PRESTRESSED  
CONCRETE DECK BEAM SUPERSTRUCTURE  
ON TIMBER PILE BENT ABUTMENTS W/  
CONCRETE CAPS,  
45'-6" BK TO BK, 26'-0" O TO O,  
NO SKEW. (TO BE REMOVED)

PROPOSED STRUCTURE SN 050-3623  
CAST IN PLACE TRIPLE 11'X11' REINFORCED  
CONCRETE BOX CULVERT W/ T-TYPE  
WINGWALLS, 39'-3" O TO O HEADWALLS,  
30° LT AH SKEW

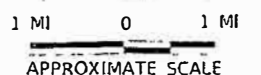
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SINGLE SPAN PRECAST REINFORCED  
CONCRETE DECK BEAM SUPERSTRUCTURE  
ON TIMBER PILE BENT ABUTMENTS W/  
CONCRETE CAPS, 29'-8" BK TO BK, 26'-3"  
O TO O, 30° LT AH SKEW.  
(TO BE REMOVED)

UTILITY COMPANIES

- ComEd  
JOLIET, ILLINOIS
- FRONTIER  
NORMAL, ILLINOIS

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

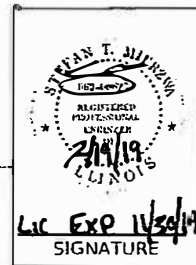
LOCATION MAP



NET LENGTH OF PROJECT = 350.00 FEET = 0.066 MILES

DESIGN CLASSIFICATION: LOCAL ROAD (NON-URBAN)  
T.R. 469 DESIGN ADT = 50 (2019)  
T.R. 382 DESIGN ADT = 25 (2019)  
30 MPH DESIGN SPEED

Hutchison Engineering, Inc.  
JACKSONVILLE-SHOREWOOD  
PEORIA-QUAD CITIES



PLANS DESIGNED IN ACCORDANCE WITH BUREAU OF LOCAL ROADS AND STREETS MANUAL GUIDELINES FOR TWO LANE RURAL COLLECTORS - RECONSTRUCTION

APPROVED 2/19 2019  
*Edward J. Fritzel*  
GRAND RAPIDS ROAD DISTRICT  
HIGHWAY COMMISSIONER

APPROVED 2-19 2019  
*Shirley P. Kruger*  
LASALLE COUNTY ENGINEER

PASSED 2/27 2019  
*David R. [Signature]*  
DISTRICT THREE ENGINEER OF  
LOCAL ROADS & STREETS

Released For  
Bid Based on  
Limited Review 2/27 2019  
*Lynn [Signature]*  
REGION TWO ENGINEER  
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES**

THE REMOVAL OF EXISTING AGGREGATE SURFACE AND GRAVEL OR CRUSHED STONE BASE COURSE WHICH MAY BE NECESSARY FOR THE CONSTRUCTION OF THE PROJECT SHALL BE REMOVED AS EARTH EXCAVATION AND NO COMPENSATION WILL BE ALLOWED FOR ADDITIONAL LABOR OR EQUIPMENT REQUIRED.

ALL WASTE OR UNDESIRABLE MATERIAL AS IDENTIFIED BY THE ENGINEER SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.

ALL EXISTING PRIVATELY OWNED UTILITIES REQUIRING ADJUSTMENT WILL BE MADE BY THE UTILITY COMPANY INVOLVED. WHERE NO PROVISIONS HAVE BEEN MADE FOR ADJUSTMENTS ON THE PLANS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO DELAYS OR INCONVENIENCES CAUSED BY THE SAID UTILITY ADJUSTMENTS. THE PROFILE GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND IN THE STATION CROSS SECTIONS ARE TO THE TOP OF THE FINISHED SURFACE.

THE PROFILE GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND IN THE STATION CROSS SECTIONS ARE TO THE TOP OF THE FINISHED SURFACE.

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

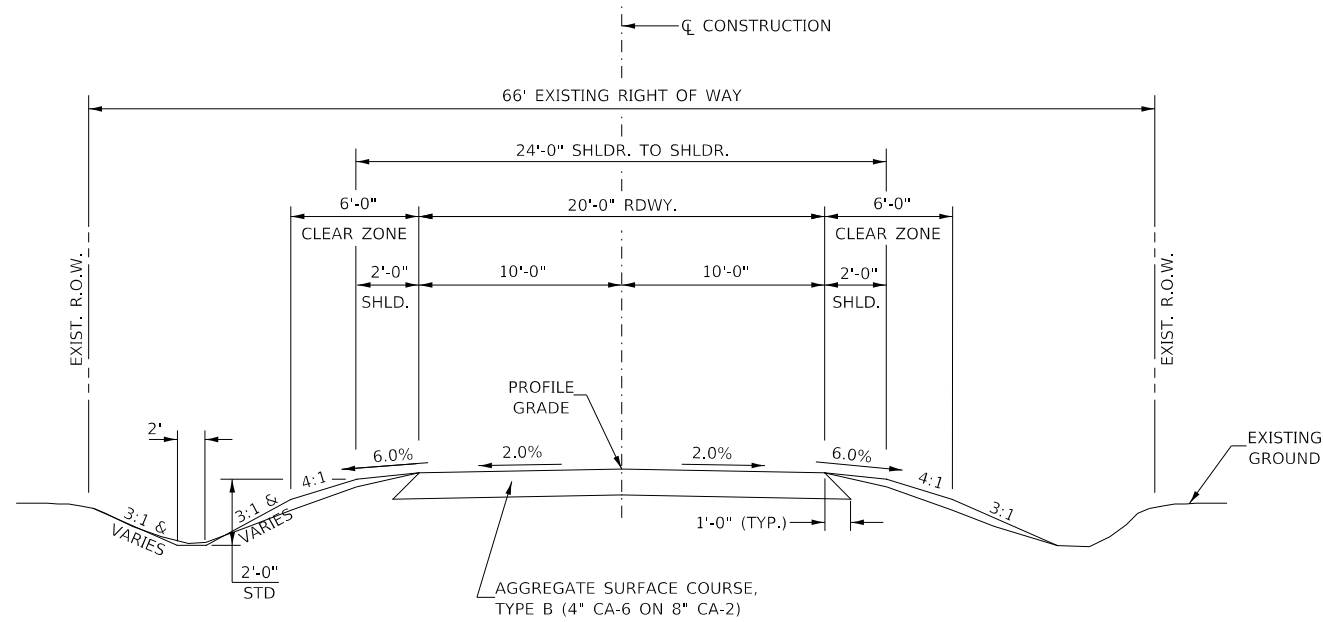
THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE COUNTY, ITS OFFICERS AND EMPLOYEES AGAINST ALL CLAIMS DUE TO DAMAGE TO CORPORATE OR PRIVATE PROPERTY RESULTING FROM HIS CONSTRUCTION OPERATIONS AS DESCRIBED IN ARTICLES 107.20 AND 107.26 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR MAY BE REQUIRED TO CONDUCT SOME OF HIS GRADING AND TRENCHING OPERATIONS AROUND TRANSMISSION POLES AND UNDER TRANSMISSION LINES. THE ADDED COST OF SO DOING SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE PROPERTY MARKERS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE FINAL SURFACE OF ALL DISTURBED/EMBANKMENT AREAS SHALL BE SEEDED. THE TOP 4 INCHES OF THE SEEDED AREAS SHALL BE COHESIVE VEGETATION SUSTAINING SOIL SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COST OF SHAPING THE SLOPES AND PROVIDING VEGETATION SUSTAINING SOIL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF FURNISHED EXCAVATION. TOPSOIL MAY BE STRIPPED AND STOCKPILED FROM THE SITE OR HAULED IN FROM AN ALTERNATE LOCATION AS APPROVED BY THE ENGINEER.

ALL ELEVATIONS SHOWN REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.

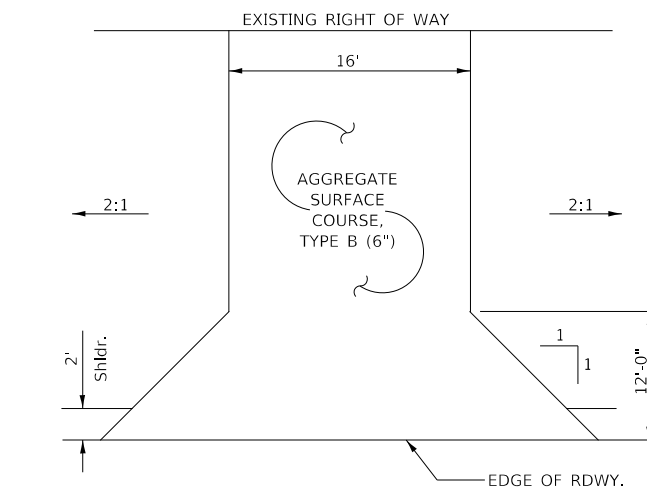


**T.R. 469 PROPOSED TYPICAL SECTION**

STA. 19+25.00 TO STA. 19+81.67  
STA. 20+18.33 TO STA. 20+75.00

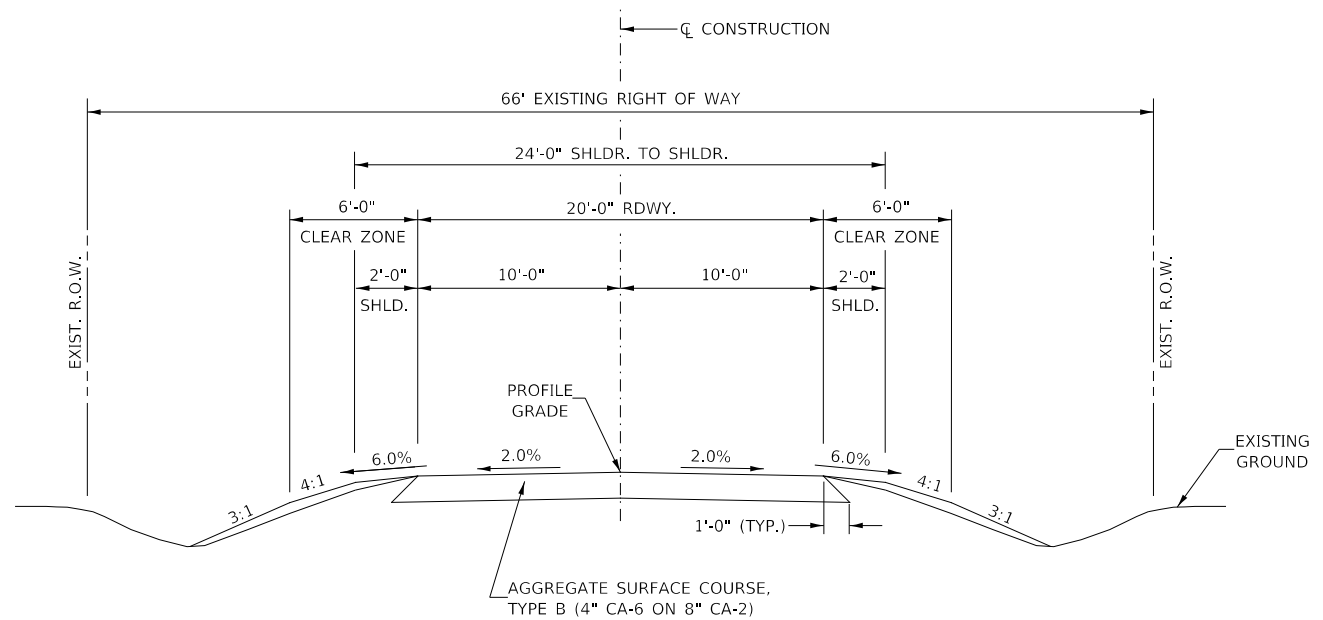
EXCEPT TRANSITIONS

CULVERT OMISSION  
STA. 19+81.67 TO STA. 20+18.33



**FIELD ENTRANCE**

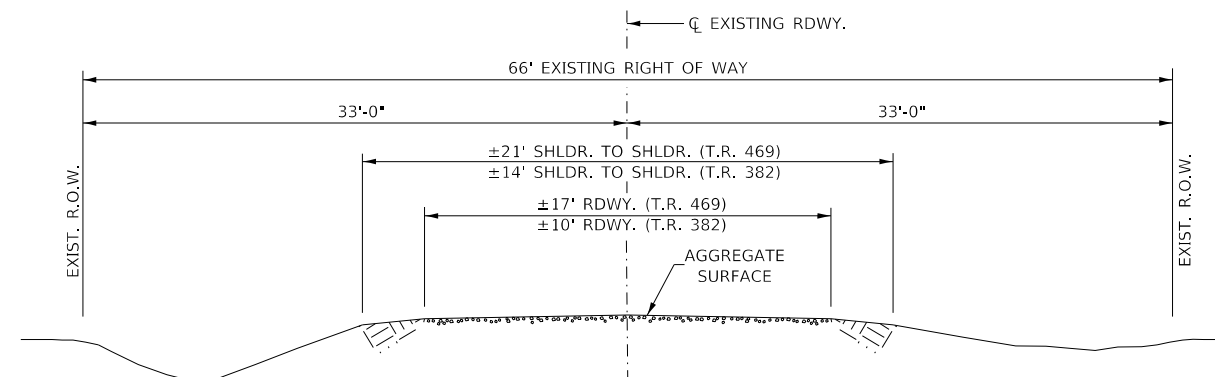
STA 20+49 LT



**T.R. 382 PROPOSED TYPICAL SECTION**

STA. 29+00.00 TO STA. 31+00.00

EXCEPT TRANSITIONS



**EXISTING TYPICAL SECTION**

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	DRAWN -	REVISED -
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PLOT DATE = 2/18/2019	DATE -	REVISED -

**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVELL CREEK**

**GENERAL NOTES, TYPICAL SECTIONS, DETAILS**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 19+25.00 TO STA. 31+00.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 469	16-14786-00-DR	LASALLE	30	2
TR 382				
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 87708	
			FED. AID PROJECT NO. V5XM(280)	

SUMMARY OF QUANTITIES					
CODE NO.	ITEM	UNIT	SN 050-3622 IMPROVEMENTS	SN 050-3623 IMPROVEMENTS	TOTAL QUANTITIES
20200100	EARTH EXCAVATION	CU YD	90	145	235
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	105	145	250
① 20700220	POROUS GRANULAR EMBANKMENT	CU YD	450	540	990
25100630	EROSION CONTROL BLANKET	SQ YD	472	795	1,267
28000305	TEMPORARY DITCH CHECKS	FOOT	12	-	12
28000400	PERIMETER EROSION BARRIER	FOOT	195	300	495
28000500	INLET AND PIPE PROTECTION	EACH	1	-	1
28100107	STONE RIPRAP, CLASS A4	SQ YD	190	210	400
28200200	FILTER FABRIC	SQ YD	190	210	400
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	172	292	464
① 50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1	-	1
① 50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	-	1	1
50105220	PIPE CULVERT REMOVAL	FOOT	30	-	30
50300300	PROTECTIVE COAT	SQ YD	162	-	162
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	40,020	58,150	98,170
51500100	NAME PLATES	EACH	1	1	2
54003000	CONCRETE BOX CULVERTS	CU YD	238.2	315.2	553.4
① 542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	28	-	28
63200310	GUARDRAIL REMOVAL	FOOT	-	112	112
67100100	MOBILIZATION	L SUM	0.5	0.5	1
① X0900064	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	-	170	170
① X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.1	0.2	0.3
① X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	0.5	0.5	1
① Z0013798	CONSTRUCTION LAYOUT	L SUM	0.5	0.5	1
① XX009301	FIELD TILE ADJUSTMENT	FOOT	50	50	100

① SEE SPECIAL PROVISIONS

CONSTRUCTION CODE TYPE: 0010

EARTHWORK SUMMARY			
STATION TO STATION	EARTH EXCAVATION	FILL	WASTE (SHORTAGE)
	CU YD		
SN 050-3622 IMPROVEMENTS			
RDWY 19+25.00 - 19+81.67	40	6	24
SEE SPECIAL PROVISIONS FOR STRUCTURE AREA EXCAVATION			
RDWY 20+18.33 - 20+75.00	50	1	37
SN 050-3623 IMPROVEMENTS			
29+00.00 - 29+78.83	70	0	53
SEE SPECIAL PROVISIONS FOR STRUCTURE AREA EXCAVATION			
30+21.17 - 31+00.00	75	0	56
TOTAL	235	7	170
USE	235	-	170

(@ 25% SHRINKAGE)

TEMPORARY DITCH CHECKS		
STATION	SIDE	FOOT
SN 050-3622 IMPROVEMENTS		
20+29	LEFT	12
TOTAL		12

GUARDRAIL REMOVAL			
STATION TO STATION	SIDE	FOOT	
SN 050-3623 IMPROVEMENTS			
29+49	29+77	RIGHT	28
29+64	29+92	LEFT	28
30+08	30+36	RIGHT	28
30+23	30+51	LEFT	28
TOTAL			112

PERIMETER EROSION BARRIER			
STATION TO STATION	SIDE	FOOT	
SN 050-3622 IMPROVEMENTS			
19+25	19+71	LEFT	55
19+25	19+71	RIGHT	55
20+29	20+75	RIGHT	55
20+42	20+70	LEFT	30
SN 050-3623 IMPROVEMENTS			
29+00	29+82	LEFT	90
29+00	29+49	RIGHT	60
30+18	31+00	RIGHT	90
30+51	31+00	LEFT	60
TOTAL			495

EROSION CONTROL BLANKET					
STATION TO STATION	SIDE	WIDTH	LENGTH	AREA (SQ YD)	
SN 050-3622 IMPROVEMENTS					
19+25	19+81	LEFT	VARIES	56'	136
19+25	19+81	RIGHT	VARIES	56'	137
20+19	20+75	LEFT	VARIES	56'	64
20+19	20+75	RIGHT	VARIES	56'	135
SN 050-3623 IMPROVEMENTS					
29+00	29+73	RIGHT	VARIES	73'	167
29+00	29+88	LEFT	VARIES	88'	233
30+12	31+00	RIGHT	VARIES	88'	225
30+27	31+00	LEFT	VARIES	73'	170
TOTAL					1,267

AGGREGATE SURFACE COURSE, TYPE B					
STATION TO STATION	THICKNESS	WIDTH	LENGTH	TON	
SN 050-3622 IMPROVEMENTS					
19+25.00	19+75.00	1.00'	18.88' AVG.	50.00'	66
19+75.00	19+81.67	1.00'	21.00'	6.67'	10
20+18.33	20+25.00	1.00'	21.00'	6.67'	10
20+25.00	20+75.00	1.00'	19.07' AVG.	50.00'	67
ENTRANCE - 20+49 LT	0.50'	16' & VAR.		22.94'	19
SN 050-3623 IMPROVEMENTS					
29+00.00	29+50.00	1.00'	15.77' AVG.	50.00'	55
29+50.00	29+78.83	1.00'	21.00'	28.83'	42
29+78.83	30+21.17	1.00' & VAR.	32.00'	42.33'	95
30+21.17	30+50.00	1.00'	21.00'	28.83'	42
30+50.00	31+00.00	1.00'	16.47' AVG.	50.00'	58
TOTAL					464

PIPE CULVERTS, CLASS D, TYPE 1 15"			
STATION	SIDE	FOOT	
SN 050-3622 IMPROVEMENTS			
20+49	LEFT	28	
TOTAL			28

PIPE CULVERT REMOVAL			
STATION	SIZE	SIDE	FOOT
SN 050-3622 IMPROVEMENTS			
20+49	15"	LEFT	30
TOTAL			30

INLET AND PIPE PROTECTION		
STATION	SIDE	EACH
SN 050-3622 IMPROVEMENTS		
20+70	LEFT	1
TOTAL		1

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	DATE -	REVISED -

**LASALLE COUNTY**  
**TOWNSHIP ROAD 469 & 382**  
**OVER COVELL CREEK**

**SUMMARY OF QUANTITIES,**  
**SCHEDULES OF QUANTITIES**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 19+25.00 TO STA. 31+00.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 469	16-14786-00-DR	LASALLE	30	3
TR 382				
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. V5XM(280)		

CONTRACT NO. 87708

R 4 E R 5 E, 3rd PM



R 4 E R 5 E, 3rd PM

1 **ROAD CLOSED**  
 1/2 MILES AHEAD  
**LOCAL TRAFFIC ONLY**  
 R11-3

ROAD CLOSED  
 1/2 MILES AHEAD  
 LOCAL TRAFFIC ONLY

2 **EASTBOUND**  
**ROAD CLOSED**  
 1 1/2 MILES AHEAD  
**LOCAL TRAFFIC ONLY**  
 R11-3

EASTBOUND  
 ROAD CLOSED  
 1 1/2 MILES AHEAD  
 LOCAL TRAFFIC ONLY

3 **ROAD CLOSED**  
 1 1/2 MILES AHEAD  
**LOCAL TRAFFIC ONLY**  
 R11-3

ROAD CLOSED  
 1 1/2 MILE AHEAD  
 LOCAL TRAFFIC ONLY

4 **ROAD**  
**CLOSED**  
**AHEAD**  
 W20-3

ROAD CLOSED  
 AHEAD

5 **ROAD**  
**CLOSED**  
**500 FT**  
 W20-3

ROAD CLOSED  
 500 FT

6

TYPE III BARRICADES

7

TYPE III BARRICADES  
 (STAGGERED)

SEE STANDARD BLR 21 & BLR 22  
 AND SPECIAL PROVISIONS

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PLOT DATE = 2/18/2019	DATE -	REVISED -

**LASALLE COUNTY**  
**TOWNSHIP ROAD 469 & 382**  
**OVER COVELL CREEK**

**TRAFFIC CONTROL PLAN**

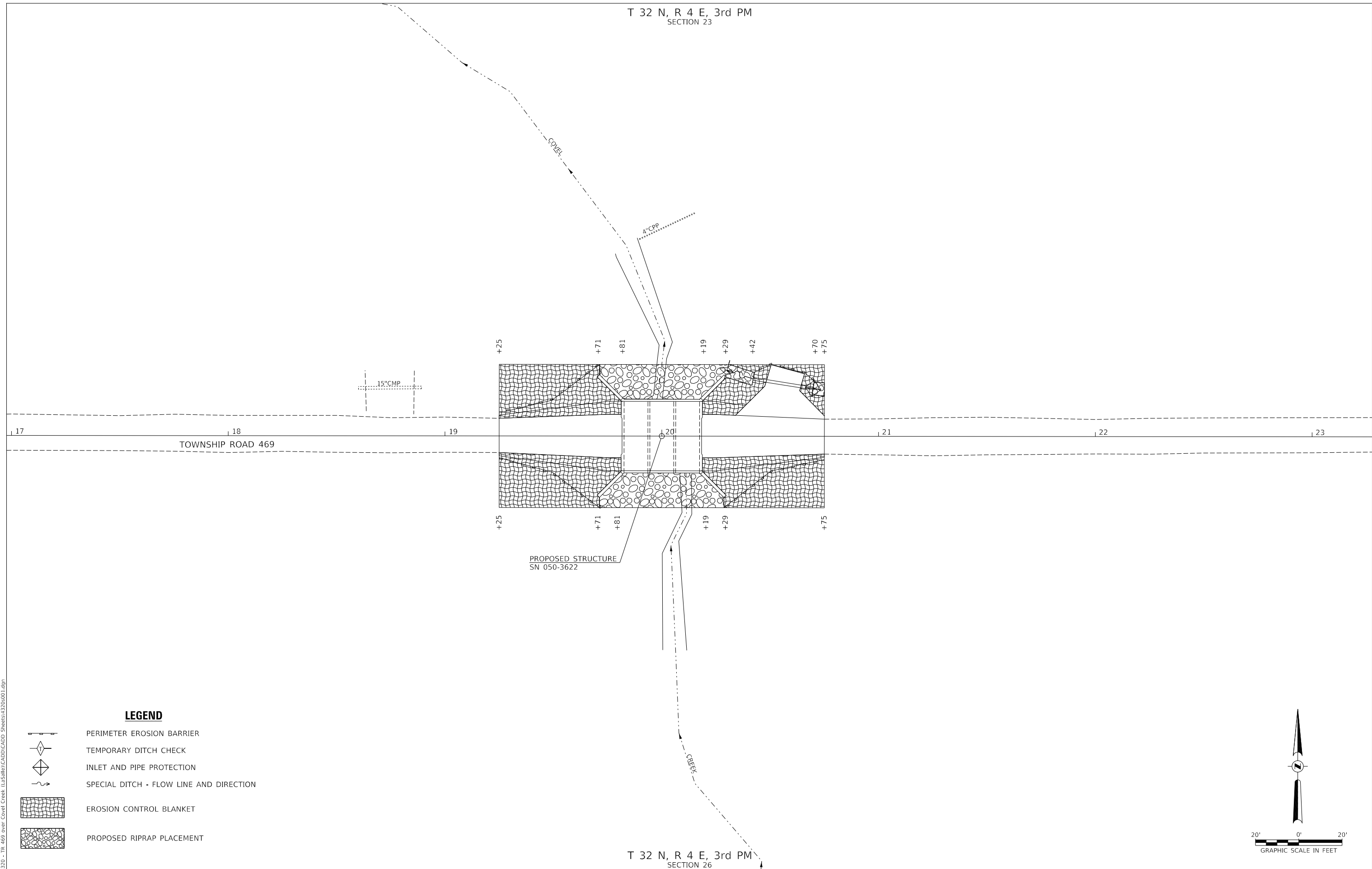
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TR 469	16-14786-00-DR	LASALLE	30	4
TR 382				






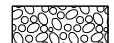
CONTRACT NO. 87708

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. V5XM(280)

T 32 N, R 4 E, 3rd PM  
SECTION 23



**LEGEND**

-  PERIMETER EROSION BARRIER
-  TEMPORARY DITCH CHECK
-  INLET AND PIPE PROTECTION
-  SPECIAL DITCH - FLOW LINE AND DIRECTION
-  EROSION CONTROL BLANKET
-  PROPOSED RIPRAP PLACEMENT

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T 32 N, R 4 E, 3rd PM  
SECTION 26

**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVEL CREEK**

**EROSION CONTROL PLAN  
TOWNSHIP ROAD 469**




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RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 469	16-14786-00-DR	LASALLE	30	5
CONTRACT NO. 87708				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. V5XM(280)		

T 32 N, R 4 E, 3rd PM  
SECTION 26

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**LEGEND**

-  PERIMETER EROSION BARRIER
-  EROSION CONTROL BLANKET
-  PROPOSED RIPRAP PLACEMENT

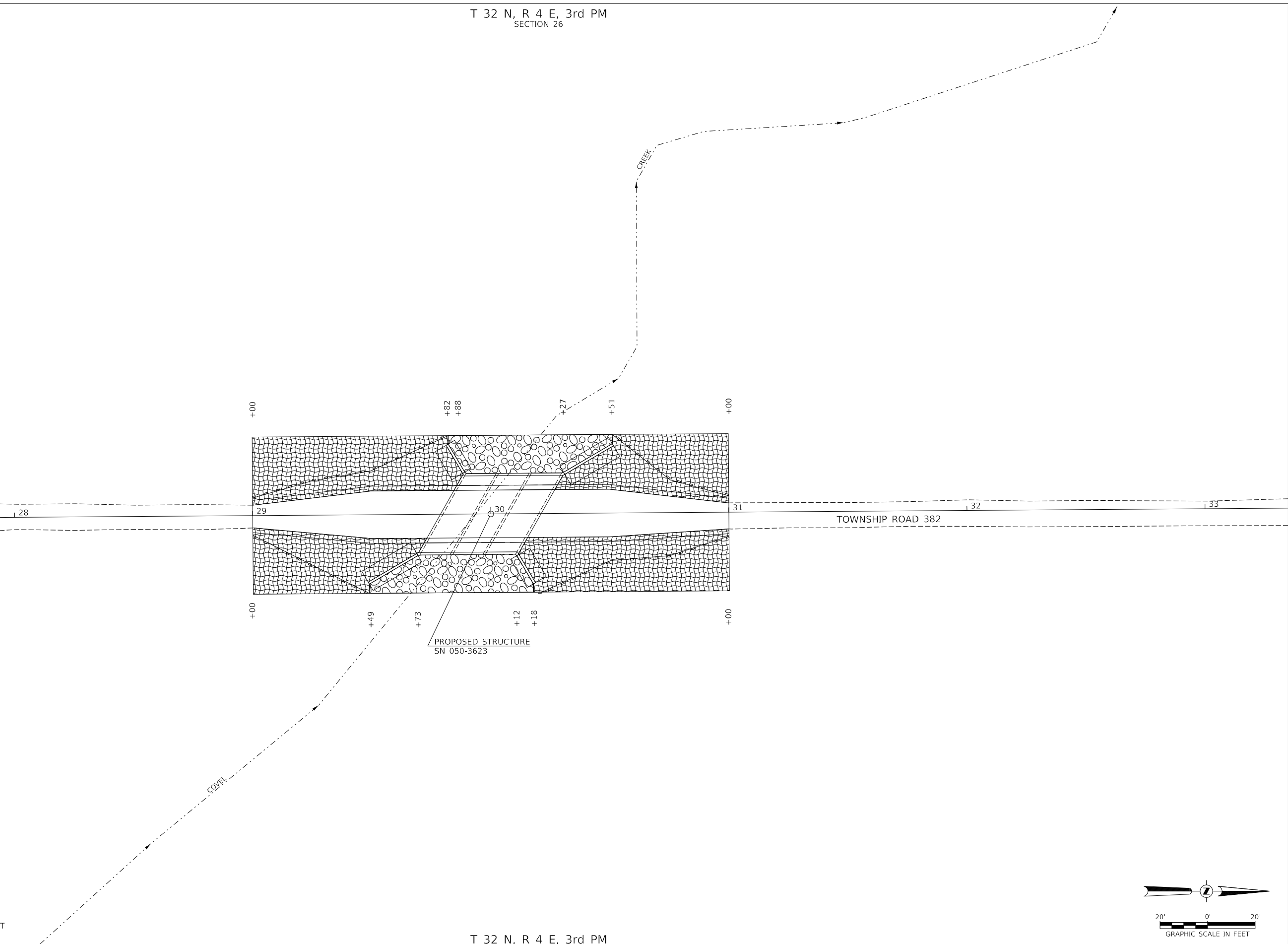
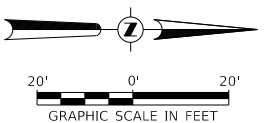
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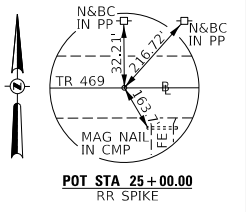
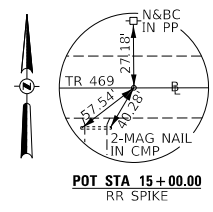
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SECTION 25  
**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVEL CREEK**

**EROSION CONTROL PLAN  
TOWNSHIP ROAD 382**

SCALE: 1"=20' SHEET 1 OF 1 SHEETS STA. 29+00.00 TO STA. 31+00.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 382	16-14786-00-DR	LASALLE	30	6
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 87708	
FED. AID PROJECT NO. V5XM(280)				



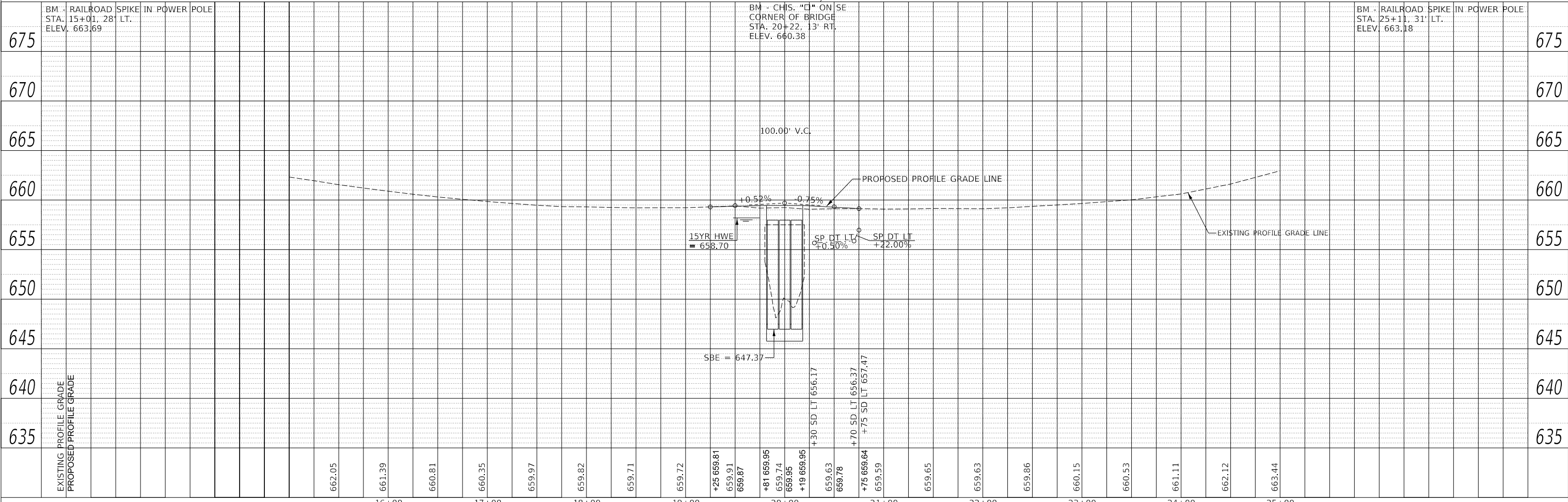
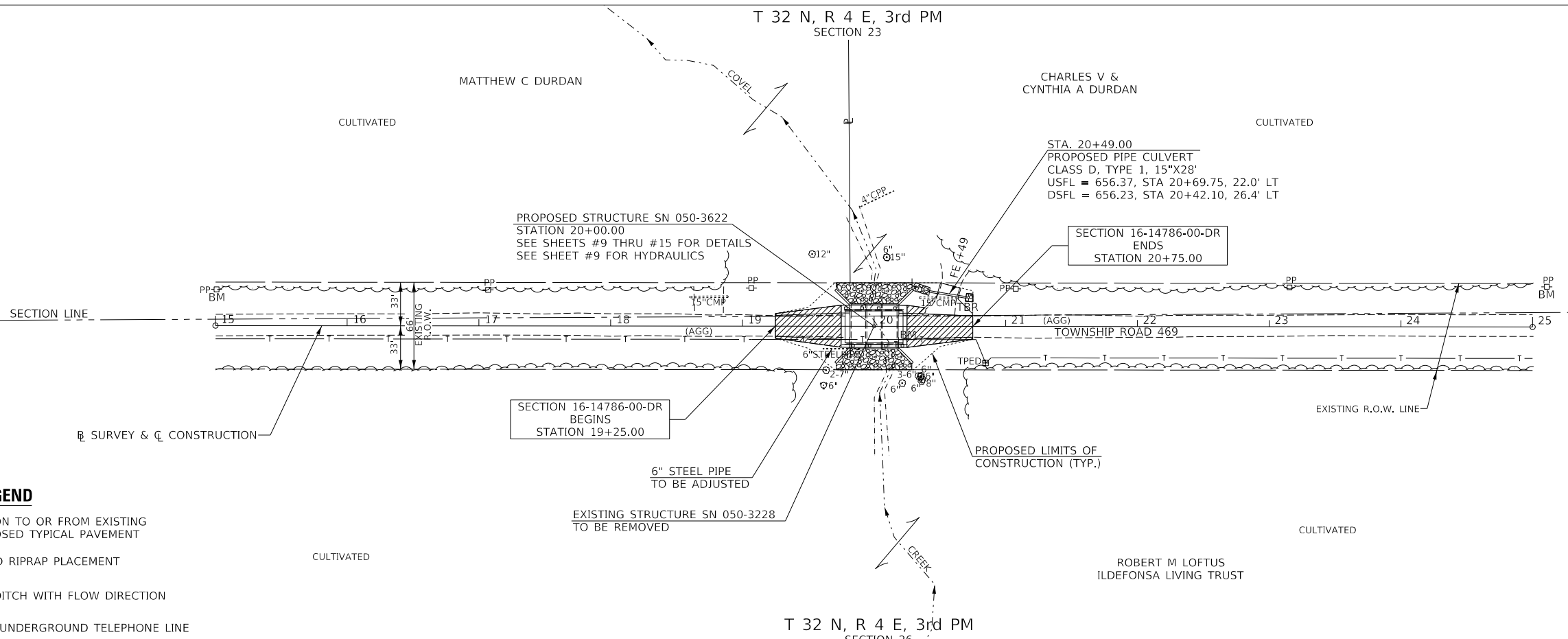


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DATE	
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SURVEYED	
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GRADES CHECKED	
STRUCTURE NOTATIONS CHECKED	
NO.	

**LEGEND**

- TRANSITION TO OR FROM EXISTING TO PROPOSED TYPICAL PAVEMENT
- PROPOSED RIPRAP PLACEMENT
- SPECIAL DITCH WITH FLOW DIRECTION
- EXISTING UNDERGROUND TELEPHONE LINE



USER NAME = SMierzwa	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 2/18/2019	DATE -	REVISED -

**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVEL CREEK**

**PLAN AND PROFILE  
TOWNSHIP ROAD 469**

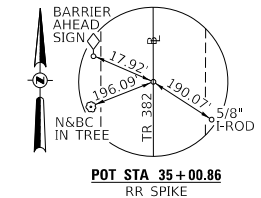
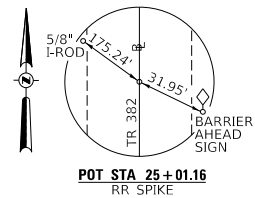
SCALE: 1"=50' SHEET 1 OF 1 SHEETS STA. 19+25.00 TO STA. 20+75.00

RT#	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 469	16-14786-00-DR	LASALLE	30	7
CONTRACT NO. 87708				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. V5XM(280)		

MODEL: SPODEL\MAMES FILE NAME: V03220 - TR\_469 over Covell Creek (16-14786-00-DR) Sheets.dwg

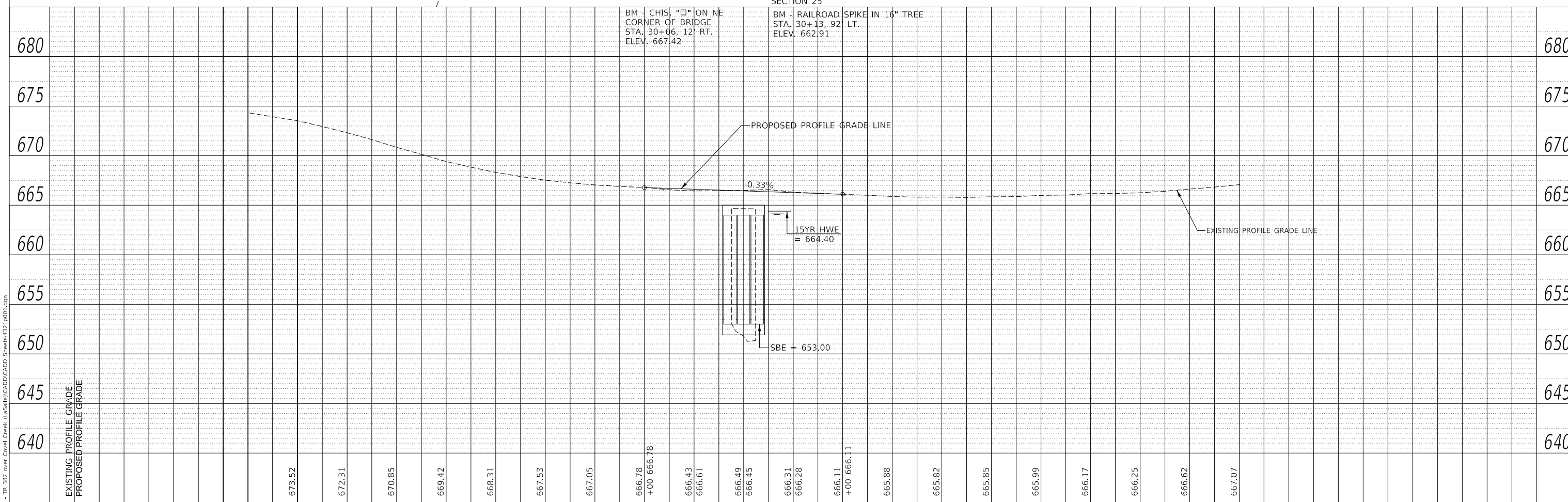
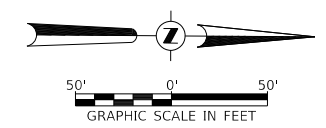
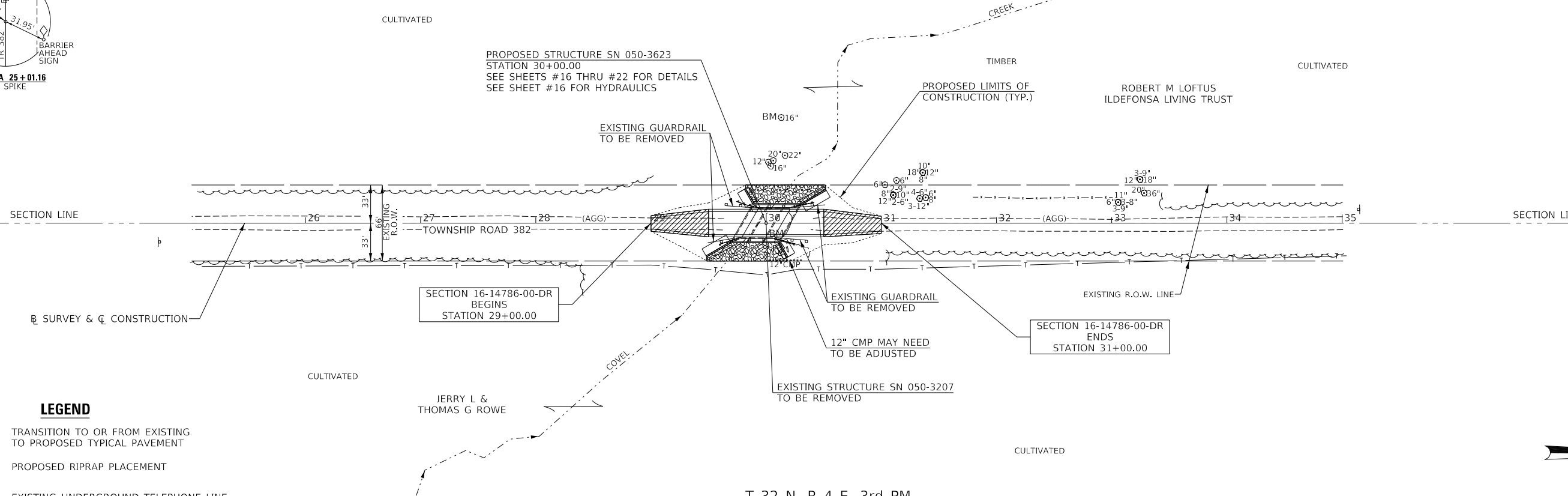
T 32 N, R 4 E, 3rd PM  
SECTION 26

T 32 N, R 4 E, 3rd PM  
SECTION 25



PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	FILE NAME	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES	
	CHECKED	
	STRUCTURE	
	NOTATION	
	NO.	



MODEL: SPODEL\MAMES  
FILE NAME: V:\321 - TR\_382\_over\_Covell\_Creek (L\3\3\3\3\CADD\CADD\_Sheets\321p001.dgn

USER NAME = SMierzwa	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 2/18/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVELL CREEK**

**PLAN AND PROFILE  
TOWNSHIP ROAD 382**

SCALE: 1"=50' SHEET 1 OF 1 SHEETS STA. 29+00.00 TO STA. 31+00.00

RT. 382	SECTION 16-14786-00-DR	COUNTY LASALLE	TOTAL SHEETS 30	SHEET NO. 8
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT NO. 87708	
		FED. AID PROJECT NO. V5XM(280)		



8.M.: Railroad Spike in Power Pole  
Sta. 15+01, 28' Lt.  
Elev. 663.69

Railroad Spike in Power Pole  
Sta. 25+11, 31' Lt.  
Elev. 663.18

**Existing Structure:**  
Single span precast prestressed concrete deck beam superstructure on timber pile bent abutments with concrete caps. The structure is 45'-6" back to back of abutments, 26'-0" out to out of deck, and is not skewed. Str. No. 050-3228

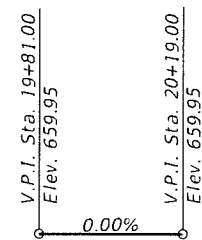
**Salvage: None**  
Road to be closed to traffic during construction.

\*\*Unsuitable Material Removal and Replacement with P.G.E. Limits are 2' outside the bottom slab and extends the length of the barrel.

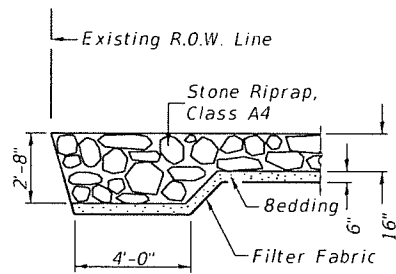
COVEL CREEK BUILT 20\_\_ BY  
GRAND RAPIDS ROAD DISTRICT  
LASALLE COUNTY  
SEC. 16-14786-00-DR  
T.R. 469 STATION 20+00.00  
F.A. PROJ. NO. V5XM(280)  
STR. NO. 050-3622 LOADING HL-93

**NAME PLATE**

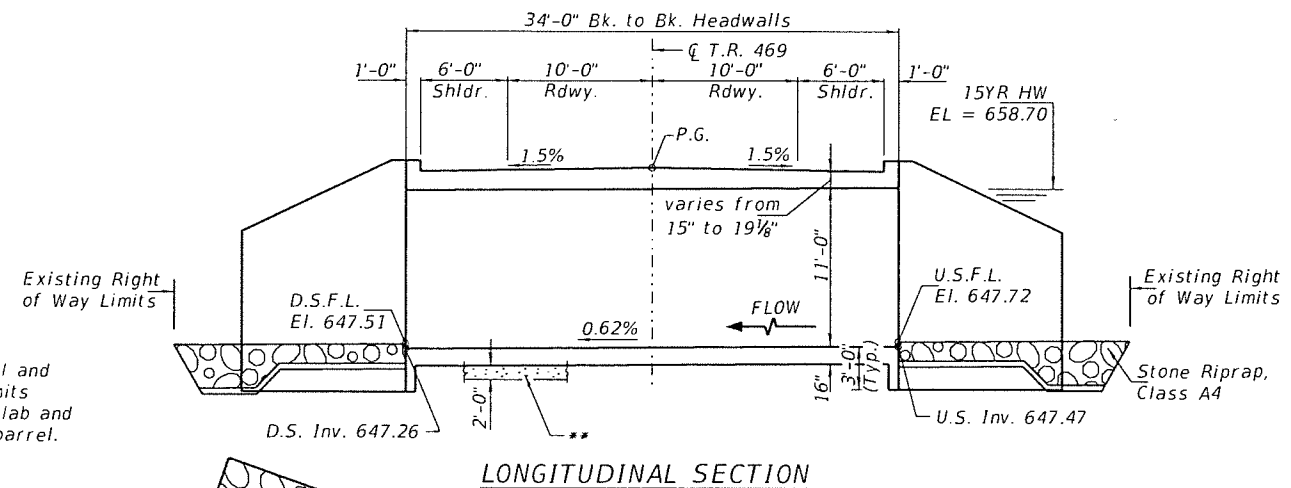
Locate Name Plate at South Headwall  
S.W. Corner of Culvert (See Std. 515001)



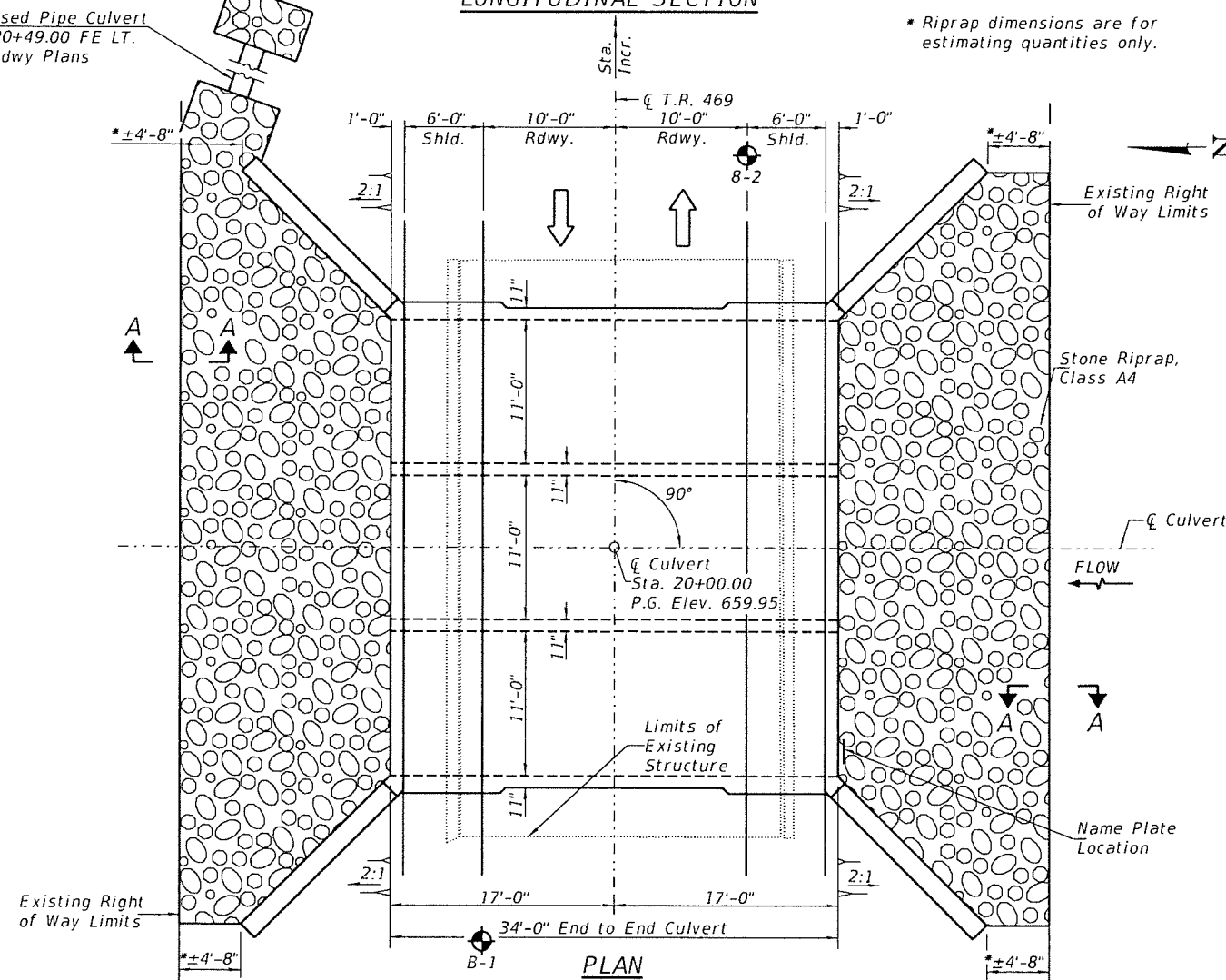
**PROFILE GRADE**  
(T.R. 469)



**SECTION A-A**



**LONGITUDINAL SECTION**



**PLAN**

**DESIGN SPECIFICATIONS**

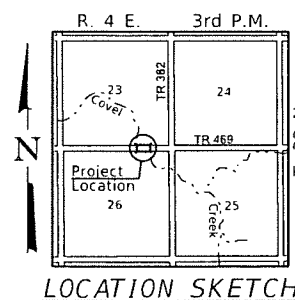
2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

**DESIGN STRESSES**

(FIELD UNITS)  
f'c = 3,500 p.s.i.  
fy = 60,000 p.s.i. (Rein.)

**LOADING HL-93**

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



**LOCATION SKETCH**

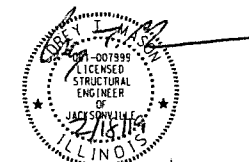
**GENERAL NOTES**

For backfilling and embankment see Standard Specifications. Precast culvert option will not be allowed. All construction joints shall be bonded. Exposed concrete edges shall have a 3/4" chamfer unless otherwise noted. Layout of the stone riprap/slope protection system may be varied in the field to suit ground conditions as directed by the Engineer. Protective Coat shall be applied to the top and sides of the top slab and headwalls. The top surface of the box culvert shall be hand-tined in the longitudinal direction unless otherwise specified by the Engineer. This work can be done with a steel rake producing a rough micro-texture across the surface or done by another approved method by the Engineer. A distance of half the length of the wingwall, but not less than 6 feet of the barrel shall be poured monolithically with the wingwall. All excavation required for removal of the existing structure or construction of the culvert as shown in these plans and in accordance with the Standard Specifications shall be included in the cost of Concrete Box Culverts. Areas of excavation required for construction of the new culvert shall be backfilled with Porous Granular Embankment up to 1'-0" from the top of slab elevation. See Special Provisions for more detailed information. Reinforcement bars designated (E) shall be epoxy coated. The required depth of removal and replacement of unsuitable materials may be adjusted by the Engineer to account for variable subsurface conditions.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Concrete Box Culverts	CU YD	238.2
Reinforcement Bars, Epoxy Coated	POUND	40,020
① Removal of Existing Structures No. 1	EACH	1
Name Plates	EACH	1
Stone Riprap, Class A4	50 YD	190
Filter Fabric	50 YD	190
Removal & Disposal of Unsuitable Material	CU YD	105
Protective Coat	50 YD	162
① Porous Granular Embankment	CU YD	450

① See Special Provisions



Lic. Exp. 11/30/2020

I certify that to the best of my knowledge, information and belief, this culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications. This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

*[Signature]*  
Illinois Structural No. 7999  
Expires 11/30/2020

**WATERWAY INFORMATION**

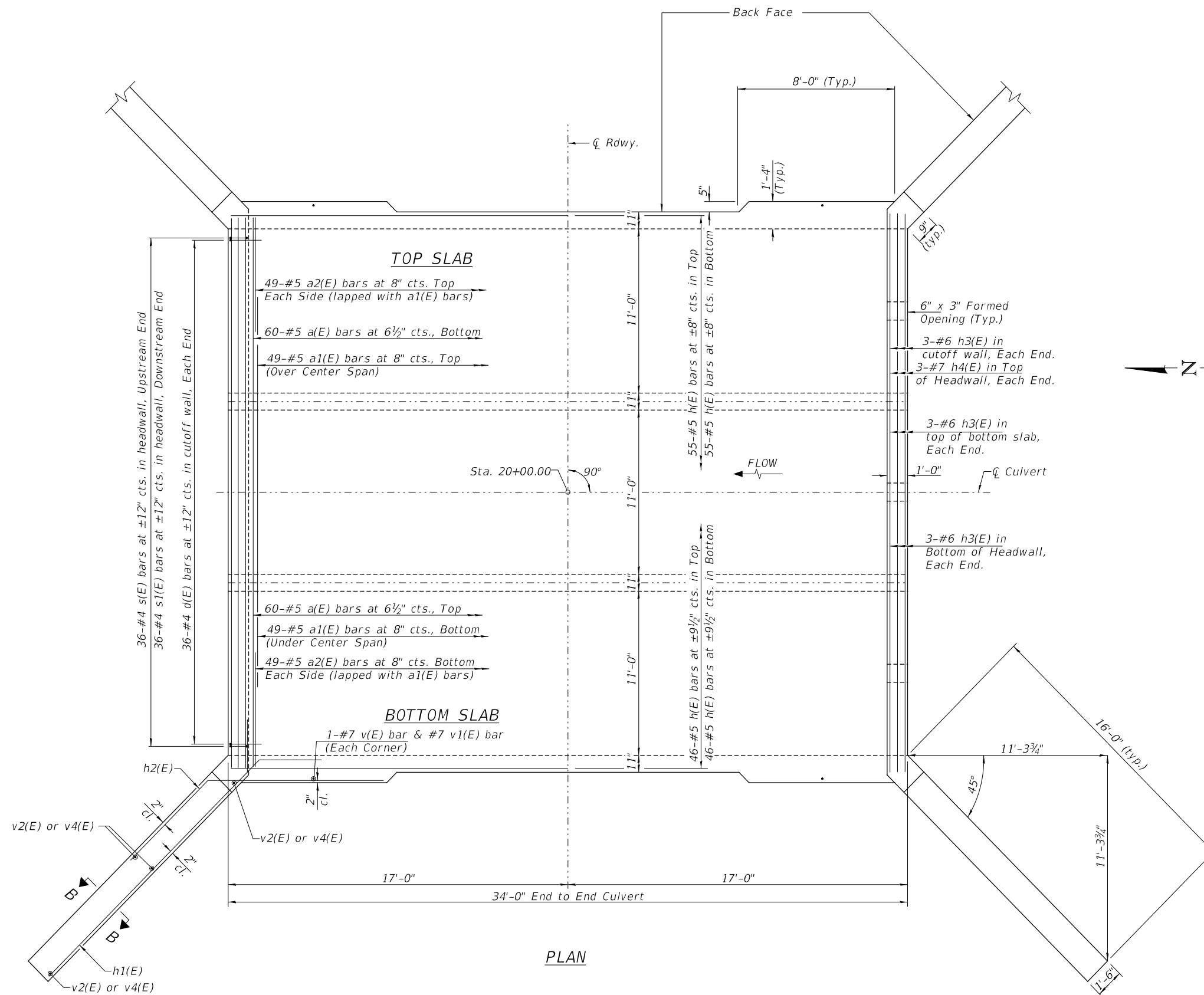
Drainage Area = 3.92 Sq. Mi. Low Grade Elev. = 659.59 @ Sta. 21+00.00

Flood	Freq. Yr.	0 C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	15	1,481	297	363	658.70	0.45	0.11	659.15	658.81
Base	100	2,470	297	363	659.33	0.87	0.60	660.20	659.93

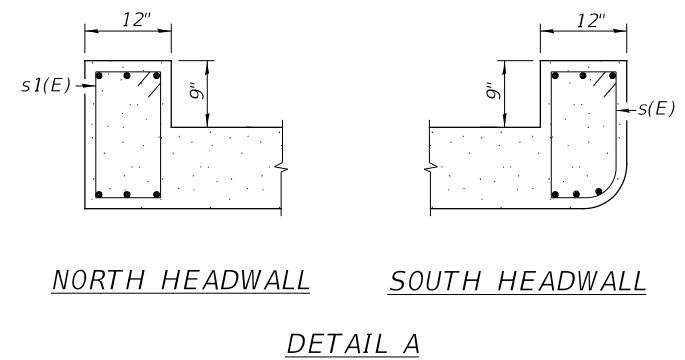
DESIGNED	C.T.M.
CHECKED	B.A.N.
DRAWN	C.T.M.
CHECKED	B.A.N.

**GENERAL PLAN & ELEVATION**

SHEET NO. 1	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	7 SHEETS	TR 469	16-14786-00-DR	LASALLE	30
S.N. 050-3622			CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID. PROJECT NO. V5XM(280)		



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



**PLAN**

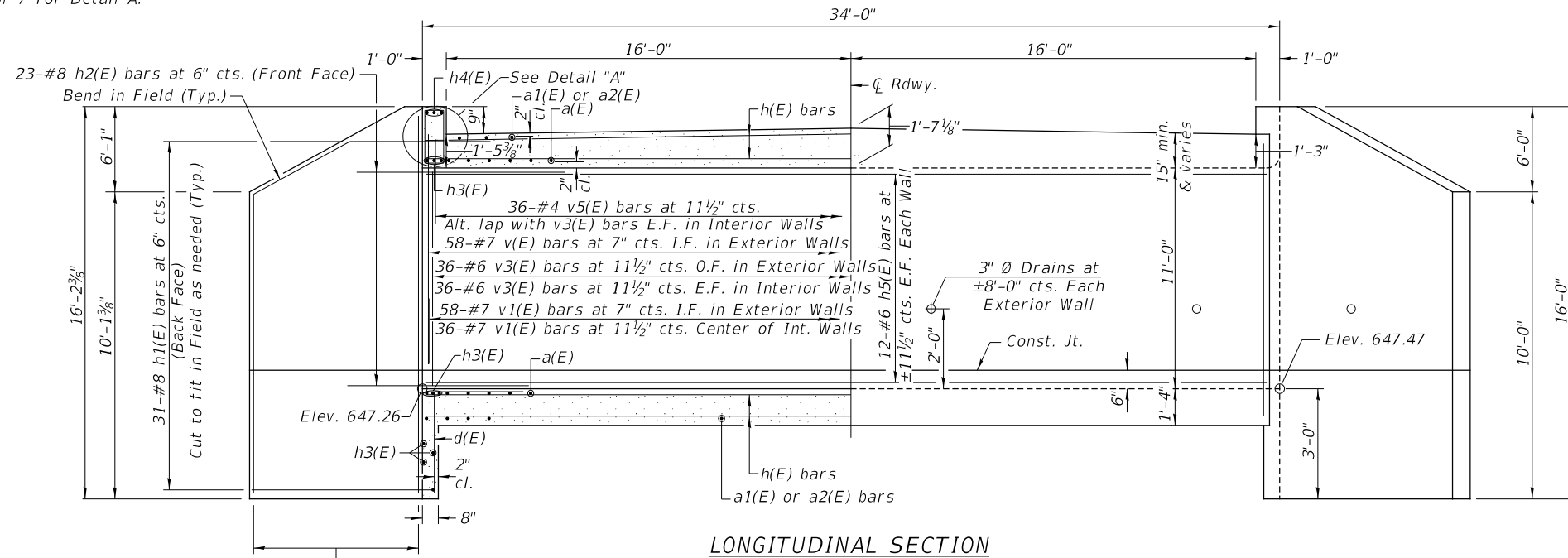
**DETAIL A**

**CULVERT DETAILS**

Notes:  
See Sheet 3 of 7 for Section B-B

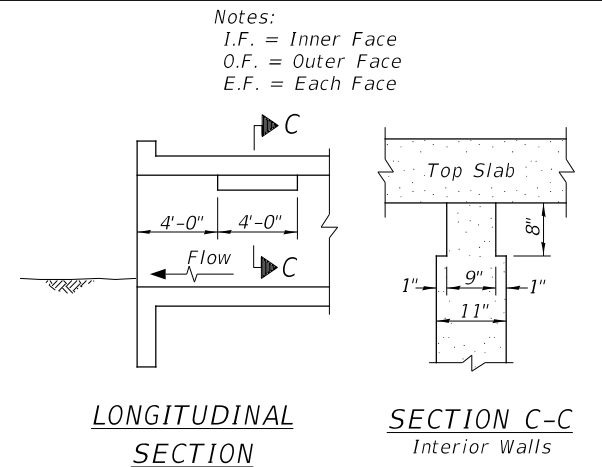
SHEET NO. 2 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 469	16-14786-00-DR	LASALLE	30	10
	S.N. 050-3622		CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		

Notes:  
See Sheet 2 of 7 for Detail A.



LONGITUDINAL SECTION

4-#4 v2(E) bars (N.W. & N.E. Wings)  
4-#4 v4(E) bars (S.W. & S.E. Wings)  
See Plan View

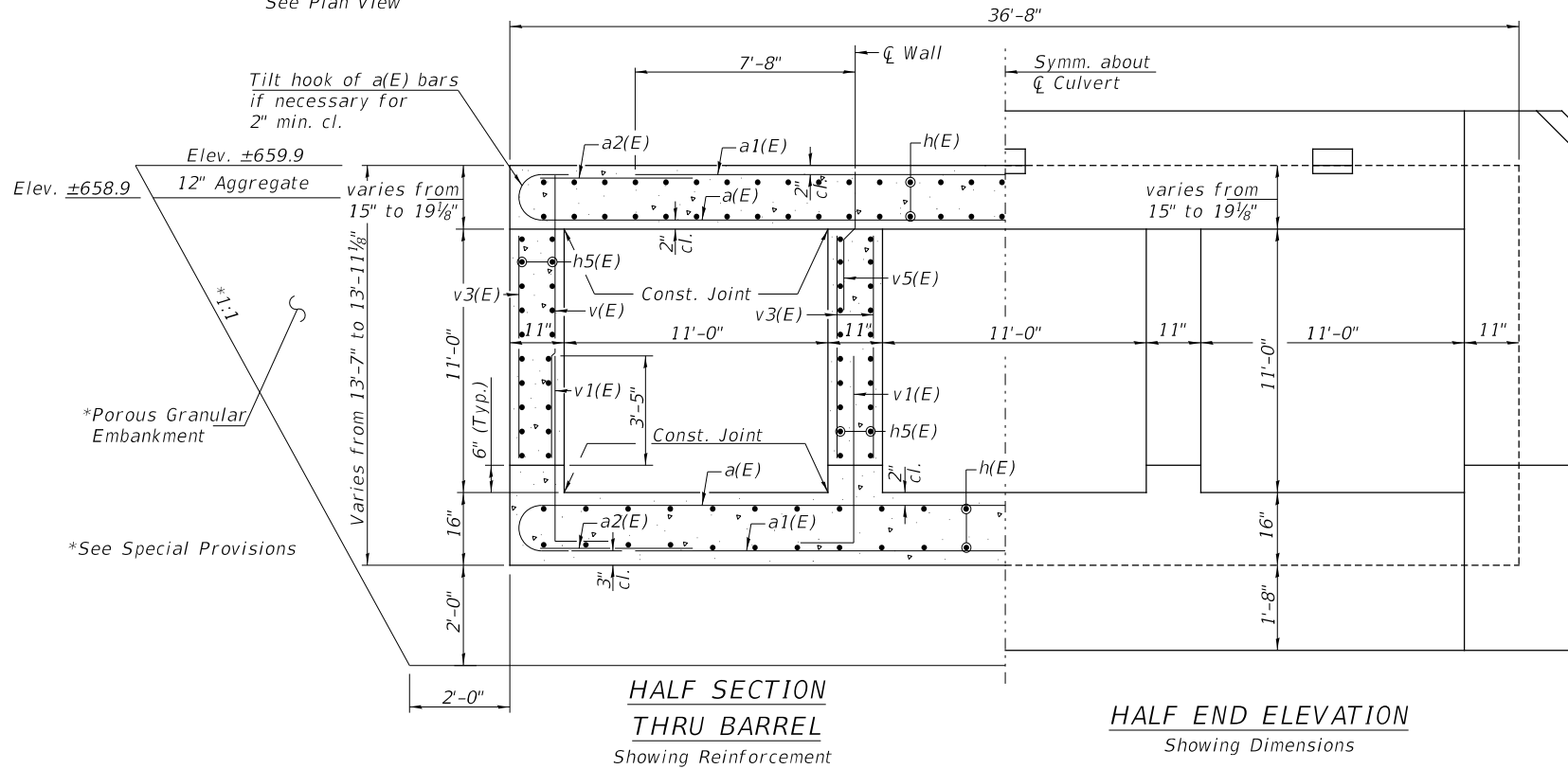


LONGITUDINAL SECTION  
SECTION C-C  
Interior Walls

Note: Notch by rough-finished board attached to and removed with formwork, each interior wall. (Do not chamfer)

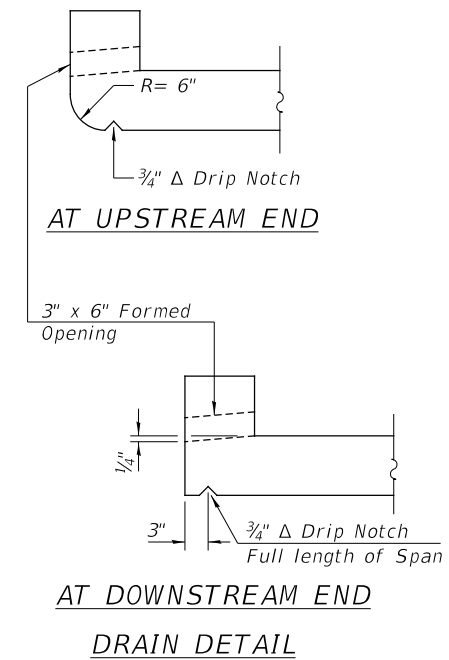
PHOEBE NESTING SITE DETAIL  
(Downstream End Only - Cost included with Concrete Box Culverts)

SECTION B-B



HALF SECTION THRU BARREL  
Showing Reinforcement

HALF END ELEVATION  
Showing Dimensions

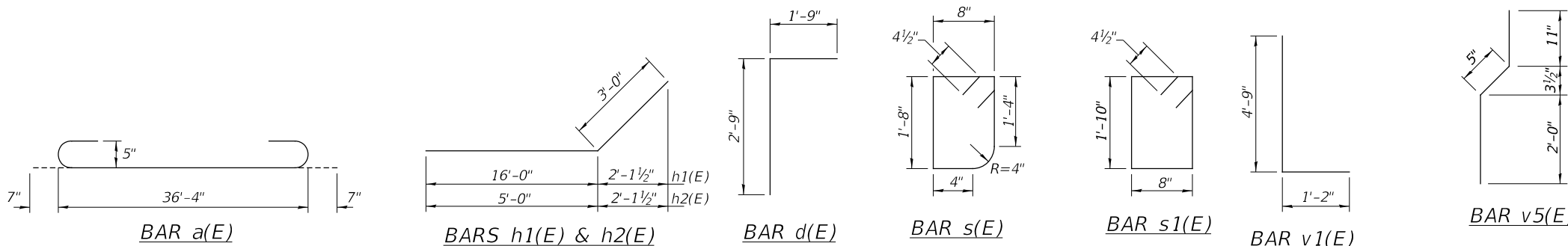


AT UPSTREAM END

AT DOWNSTREAM END  
DRAIN DETAIL

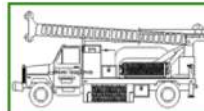
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	120	#5	37'-6"	U
a1(E)	98	#5	27'-4"	—
a2(E)	196	#5	8'-1"	—
d(E)	72	#4	4'-6"	┌
h(E)	202	#5	33'-8"	—
h1(E)	124	#8	19'-0"	┌
h2(E)	92	#8	8'-0"	┌
h3(E)	18	#6	36'-9"	—
h4(E)	6	#7	36'-9"	—
h5(E)	96	#6	33'-8"	—
s(E)	36	#4	5'-4"	□
s1(E)	36	#4	5'-9"	□
v(E)	120	#7	11'-5"	—
v1(E)	192	#7	5'-11"	┌
v2(E)	8	#4	15'-9"	—
v3(E)	216	#6	10'-2"	—
v4(E)	8	#4	15'-7"	—
v5(E)	72	#4	3'-4"	—
Concrete Box Culverts	CU YD		238.2	
Reinforcement Bars, Epoxy Coated	POUND		40,020	



CULVERT DETAILS

SHEET NO. 3 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 469	16-14786-00-DR	LASALLE	30	11
	S.N. 050-3622		CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		



**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 1 of 4

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

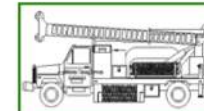
Client: Hutchison Engineering, Inc.  
Project Name: TR-469 Over Covel Creek  
Project Site: Section 16 - 14786-00-BR  
LaSalle, Illinois

Boring No. B-1  
Surface Elev. 659.80  
Auger Depth 66' Rotary Depth NA  
Start Date 07/07/18 Finish Date 07/07/18

Location: 10' Left Of Station 19+70

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
659.80										Randy Safranski Diedrich D-120	
658.80	Stiff Brown Clay (Fill)		1								
657.80			2								
656.80			3	1	SS	1.8	9	S	16		
655.80	Stiff Black Silty Clay		4								
654.80			5	2	SS	1.4	6	B	22		
653.80			6								
652.80	Medium Brown Fine To Coarse Sand		7								
651.80			8	3	SS	---	10	---	15		
650.80			9								
649.80	Stiff Gray Clay Till		10	4	SS	---	12	---	---		
648.80			11								
647.80			12								
646.80	Stiff Gray Clay Till		13	5	SS	1.8	10	B	19		
645.80			14								
644.80			15	6	SS	1.4	7	B	22		
643.80	Stiff Gray Clay Till		16								
642.80			17								
641.80			18	7	SS	1.6	10	B	20		
640.80	Stiff Gray Clay Till		19								
639.80			20	8	SS	1.9	11	B	20		

Groundwater Data: Static water level after auger removal elevation 650.5  
Comments:



**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 2 of 4

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.  
Project Name: TR-469 Over Covel Creek  
Project Site: Section 16 - 14786-00-BR  
LaSalle, Illinois

Boring No. B-1  
Surface Elev. 659.80  
Auger Depth 66' Rotary Depth NA  
Start Date 07/07/18 Finish Date 07/07/18

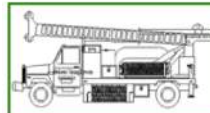
Location: 10' Left Of Station 19+70

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
638.80										Randy Safranski Diedrich D-120	
637.80	Stiff Gray Clay Till		22								
636.80			23	9	SS	1.7	9	B	22		
635.80			24								
634.80	Stiff Gray Clay Till		25								
633.80			26	10	SS	1.8	11	B	22		
632.80			27								
631.80	Stiff Gray Clay Till		28	11	SS	1.8	10	B	21		
630.80			29								
629.80			30	12	SS	1.4	8	B	22		
628.80	Stiff Gray Clay Till		31								
627.80			32								
626.80			33								
625.80	Very Stiff Gray Clay Till		34								
624.80			35	13	SS	2.1	12	B	18		
623.80			36								
622.80	Very Stiff Gray Clay Till		37								
621.80			38								
620.80			39								
619.80	Very Stiff Gray Clay Till		40	14	SS	2.0	11	B	20		
618.80			41								

Groundwater Data: Static water level after auger removal elevation 650.5  
Comments:

*SOIL BORINGS*

SHEET NO. 4 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 469	16-14786-00-DR	LASALLE	30	12
	S.N. 050-3622		CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		



**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 3 of 4

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

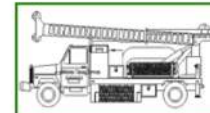
Client: Hutchison Engineering, Inc.  
Project Name: TR-469 Over Covell Creek  
Project Site: Section 16 - 14786-00-BR  
LaSalle, Illinois

Boring No. B-1  
Surface Elev. 659.80  
Auger Depth 66' Rotary Depth NA  
Start Date 07/07/18 Finish Date 07/07/18

Location: 10' Left Of Station 19+70

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
617.80										Randy Safranski Diedrich D-120	
616.80	Very Stiff Gray Clay Till With Sand Seams		43								
615.80			44								
614.80			45	15	SS	2.6	16	B	14		
613.80			46								
612.80			47								
611.80			48								
610.80			49								
609.80	Medium Gray Fine To Coarse Sand		50	16	SS	---	20	---	---		
608.80			51								
607.80			52								
606.80	Very Stiff Gray Silty Clay Loam Till		53								
605.80			54								
604.80			55	17	SS	3.4	28	B	16		
603.80			56								
602.80			57								
601.80			58								
600.80			59								
599.80			60	18	SS	3.0	25	B	14		
598.80			61								
597.80			62								

Groundwater Data: Static water level after auger removal elevation 650.5  
Comments:



**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 4 of 4

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.  
Project Name: TR-469 Over Covell Creek  
Project Site: Section 16 - 14786-00-BR  
LaSalle, Illinois

Boring No. B-1  
Surface Elev. 659.80  
Auger Depth 66' Rotary Depth NA  
Start Date 07/07/18 Finish Date 07/07/18

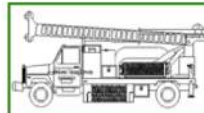
Location: 10' Left Of Station 19+70

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
596.80										Randy Safranski Diedrich D-120	
595.80	Hard Gray Silty Loam Till		64								
594.80			65	19	SS	4.3	39	S	12		
593.80			66								
592.80			67								
591.80			68								
590.80			69								
589.80			70								
588.80			71								
587.80			72								
586.80			73								
585.80			74								
584.80			75								
583.80			76								
582.80			77								
581.80			78								
580.80			79								
579.80			80								
578.80			81								
577.80			82								
576.80			83								

Groundwater Data: Static water level after auger removal elevation 650.5  
Comments:

**SOIL BORINGS**

SHEET NO. 5  7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 469	16-14786-00-DR	LASALLE	30	13
	S.N. 050-3622		CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		



**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 1 of 4

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

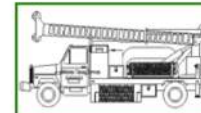
Client: Hutchison Engineering, Inc.  
Project Name: TR-469 Over Covel Creek  
Project Site: Section 16 - 14786-00-BR  
LaSalle, Illinois

Boring No. B-2  
Surface Elev. 659.60  
Auger Depth 66' Rotary Depth NA  
Start Date 07/07/18 Finish Date 07/07/18

Location: 10' Right Of Station 20+30

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Pulge / Shear	Moisture (%)		
659.60										Randy Safranski Diedrich D-120	
658.60	Very Stiff Brown Clay (Fill)		1								
657.60			2								
656.60			3	1	SS	2.2	11	S	14		
655.60	Stiff Black Silty Clay		4								
654.60			5	2	SS	1.5	8	B	21		
653.60			6								
652.60	Medium Brown Fine To Coarse Sand		7								
651.60			8	3	SS	---	12	---	13		
650.60			9								
649.60	Stiff Gray Clay Till		10	4	SS	---	11	---	---		
648.60			11								
647.60			12								
646.60	Stiff Gray Clay Till		13	5	SS	1.9	10	B	21		
645.60			14								
644.60			15								
643.60	Stiff Gray Clay Till		16								
642.60			17								
641.60			18	7	SS	1.5	8	B	22		
640.60	Stiff Gray Clay Till		19								
639.60			20	8	SS	1.8	10	B	21		

Groundwater Data: Static water level after auger removal elevation 650.5  
Comments:



**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 2 of 4

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.  
Project Name: TR-469 Over Covel Creek  
Project Site: Section 16 - 14786-00-BR  
LaSalle, Illinois

Boring No. B-2  
Surface Elev. 659.60  
Auger Depth 66' Rotary Depth NA  
Start Date 07/07/18 Finish Date 07/07/18

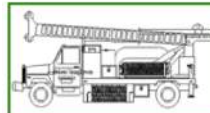
Location: 10' Right Of Station 20+30

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Pulge / Shear	Moisture (%)		
638.60										Randy Safranski Diedrich D-120	
637.60	Stiff Gray Clay Till		22								
636.60			23	9	SS	1.8	10	B	22		
635.60			24								
634.60	Stiff Gray Clay Till		25								
633.60			26	10	SS	1.5	8	B	23		
632.60			27								
631.60	Stiff Gray Clay Till		28	11	SS	1.6	8	B	23		
630.60			29								
629.60			30								
628.60	Very Stiff Gray Clay Till		31	12	SS	1.6	9	B	23		
627.60			32								
626.60			33								
625.60	Very Stiff Gray Clay Till		34								
624.60			35								
623.60			36	13	SS	2.1	11	B	21		
622.60	Very Stiff Gray Clay Till		37								
621.60			38								
620.60			39								
619.60	Very Stiff Gray Clay Till		40								
618.60			41	14	SS	2.4	13	B	18		

Groundwater Data: Static water level after auger removal elevation 650.5  
Comments:

**SOIL BORINGS**

SHEET NO. 6 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 469	16-14786-00-DR	LASALLE	30	14
	S.N. 050-3622		CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		



**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 3 of 4

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

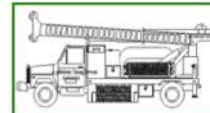
Client: Hutchison Engineering, Inc.  
Project Name: TR-469 Over Covell Creek  
Project Site: Section 16 - 14786-00-BR  
LaSalle, Illinois

Boring No. B-2  
Surface Elev. 659.60  
Auger Depth 66' Rotary Depth NA  
Start Date 07/07/18 Finish Date 07/07/18

Location: 10' Right Of Station 20+30

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
617.60										Randy Safranski Diedrich D-120	
616.60			43								
615.60			44								
614.60			45	15	SS	2.6	16	B	18		
613.60	Very Stiff Gray Clay Till With Sand Seams		46								
612.60			47								
611.60			48								
610.60			49								
609.60			50	16	SS	3.5	21	B	15		
608.60			51								
607.60			52								
606.60	Very Stiff Gray Silty Loam Till		53								
605.60			54								
604.60			55	17	SS	3.1	24	S	13		
603.60			56								
602.60			57								
601.60			58								
600.60			59								
599.60	Dense Gray Fine To Coarse Sand		60	18	SS	---	34	---	---		
598.60			61								
597.60			62								

Groundwater Data: Static water level after auger removal elevation 650.5  
Comments:



**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354

**BORING LOG**

Sheet 4 of 4

Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.  
Project Name: TR-469 Over Covell Creek  
Project Site: Section 16 - 14786-00-BR  
LaSalle, Illinois

Boring No. B-2  
Surface Elev. 659.60  
Auger Depth 66' Rotary Depth NA  
Start Date 07/07/18 Finish Date 07/07/18

Location: 10' Right Of Station 20+30

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
596.60										Randy Safranski Diedrich D-120	
595.60			64								
594.60	Very Stiff Gray Silty Loam Till		65								
593.60			66	19	SS	3.6	35	S	10		
592.60			67								
591.60			68								
590.60			69								
589.60			70								
588.60			71								
587.60			72								
586.60			73								
585.60			74								
584.60			75								
583.60			76								
582.60			77								
581.60			78								
580.60			79								
579.60			80								
578.60			81								
577.60			82								
576.60			83								

Groundwater Data: Static water level after auger removal elevation 650.5  
Comments:

*SOIL BORINGS*

SHEET NO. 7 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 469	16-14786-00-DR	LASALLE	30	15
	S.N. 050-3622		CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		

8.M.: RR Spike in 16" Tree  
Sta. 30+13, 92' Lt.  
Elev. 662.91

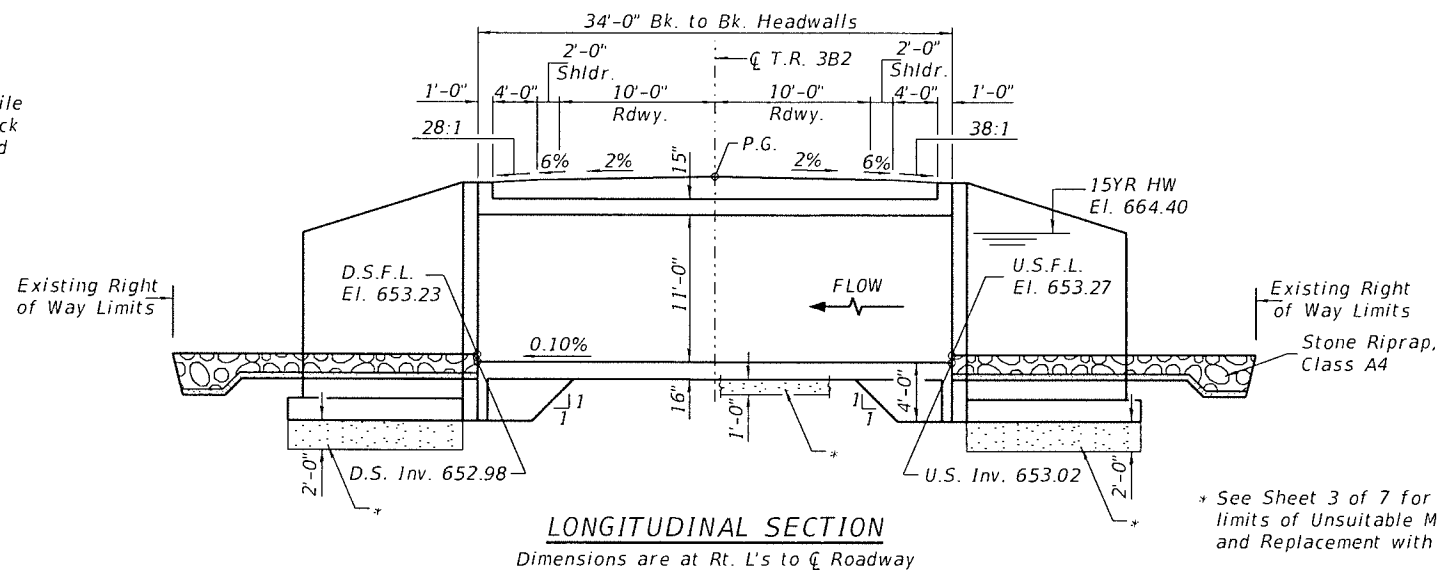
Existing Structure:  
Single span precast channel beam superstructure on timber pile bent abutments with concrete caps. The structure is 29'-8" back to back of abutments, 26'-3" out to out of deck, and is skewed 30° Lt. Ah.  
Str. No. 050-3207

Salvage: None

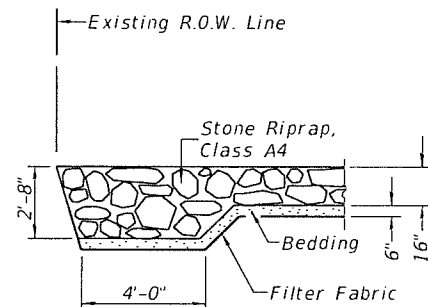
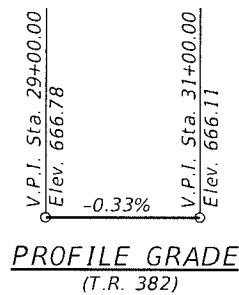
Road to be closed to traffic during construction.

**GENERAL NOTES**

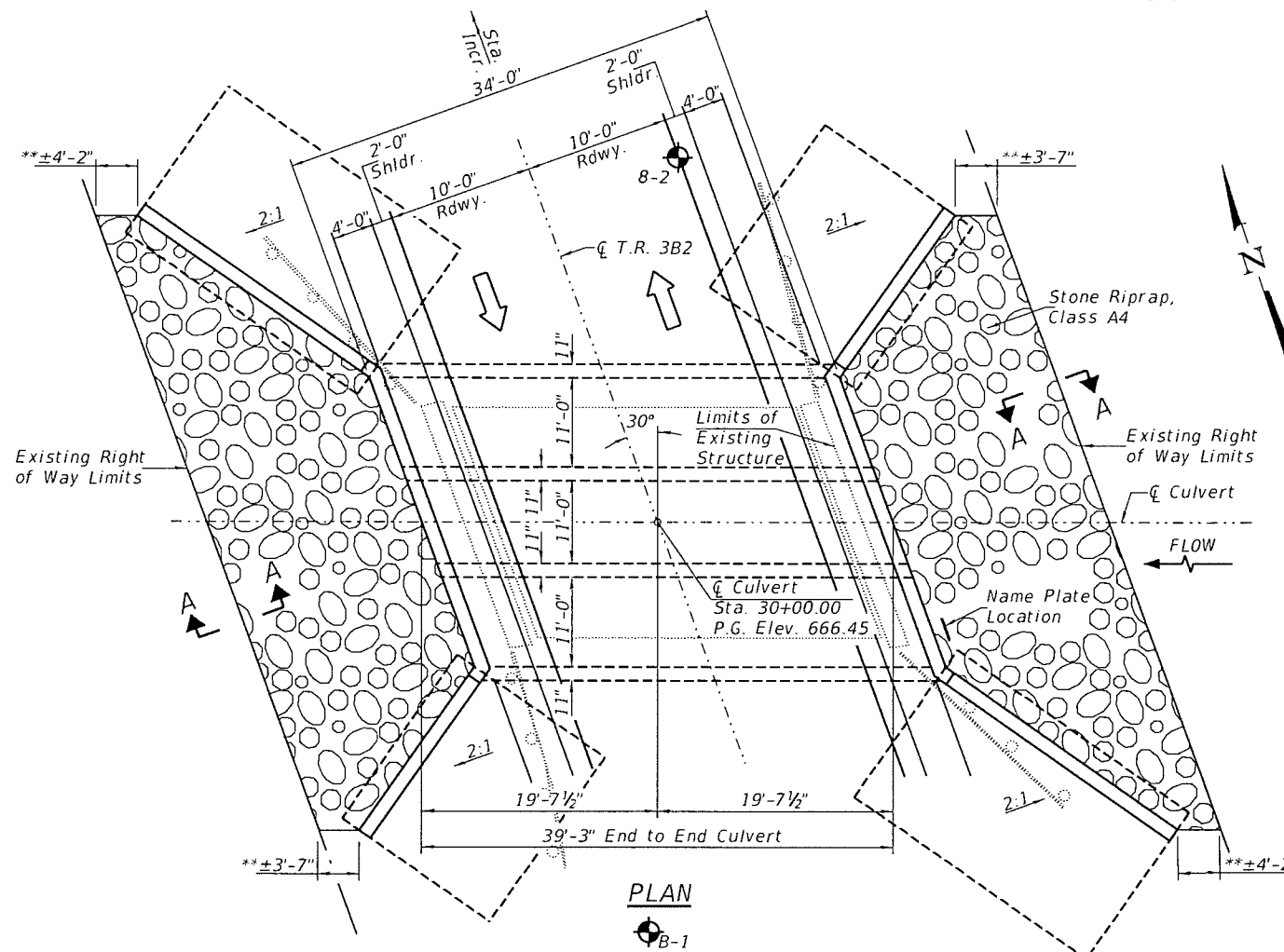
For backfilling and embankment see Standard Specifications. Precast culvert option will not be allowed. All construction joints shall be bonded. Exposed concrete edges shall have a 3/8" chamfer unless otherwise noted. Layout of the stone riprap/slope protection system may be varied in the field to suit ground conditions as directed by the Engineer. All excavation required for removal of the existing structure or construction of the culvert as shown in these plans and in accordance with the Standard Specifications shall be included in the cost of Concrete Box Culverts. Areas of excavation required for construction of the new culvert shall be backfilled with Porous Granular Embankment up to the top of slab elevation. See Special Provisions for more detailed information. Reinforcement bars designated (E) shall be epoxy coated. The required depth of removal and replacement of unsuitable materials may be adjusted by the Engineer to account for variable subsurface conditions. Excavation behind existing abutment walls shall be performed to balance front and back soil pressures before removing the existing superstructure. Membrane Waterproofing System for Buried Structures shall be applied to the top surface of the top slab and shall extend down the sidewall a minimum of 1 foot below the joint between the top slab and sidewall.



\* See Sheet 3 of 7 for details showing limits of Unsuitable Material Removal and Replacement with P.G.E.  
\*\* Riprap dimensions are for estimating quantities only.



SECTION A-A



PLAN

**DESIGN SPECIFICATIONS**

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

**DESIGN STRESSES**

(FIELD UNITS)  
f'c = 3,500 p.s.i.  
fy = 60,000 p.s.i. (Rein.)

**LOADING HL-93**

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

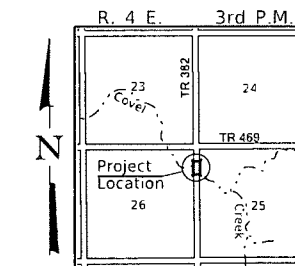
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Concrete Box Culverts	CU YD	315.2
Reinforcement Bars, Epoxy Coated	POUND	58,150
Membrane Waterproofing System for Buried Structures	SO YD	170
Removal of Existing Structures No. 2	EACH	1
Name Plates	EACH	1
Stone Riprap, Class A4	SO YD	210
Filter Fabric	SO YD	210
Removal & Disposal of Unsuitable Material	CU YD	145
Porous Granular Embankment	CU YD	540

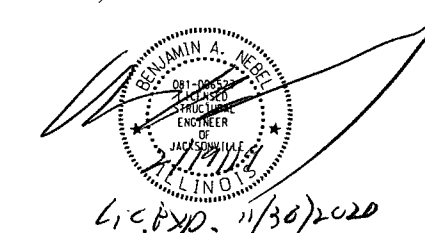
① See Special Provisions

I certify that to the best of my knowledge, information and belief, this culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications. This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

*[Signature]* 4/19/19  
Illinois Structural No. 6577  
Expires 11/30/2020



LOCATION SKETCH



GENERAL PLAN & ELEVATION

COVEL CREEK BUILT 20 BY GRAND RAPIDS ROAD DISTRICT LASALLE COUNTY SEC. 16-14786-00-DR T.R. 382 STATION 30+00.00 F.A. PROJ. NO. V5XM(2B0) STR. NO. 050-3623 LOADING HL-93

**NAME PLATE**

Locate Name Plate at East Headwall S.E. Corner of Culvert (See Std. 515001)

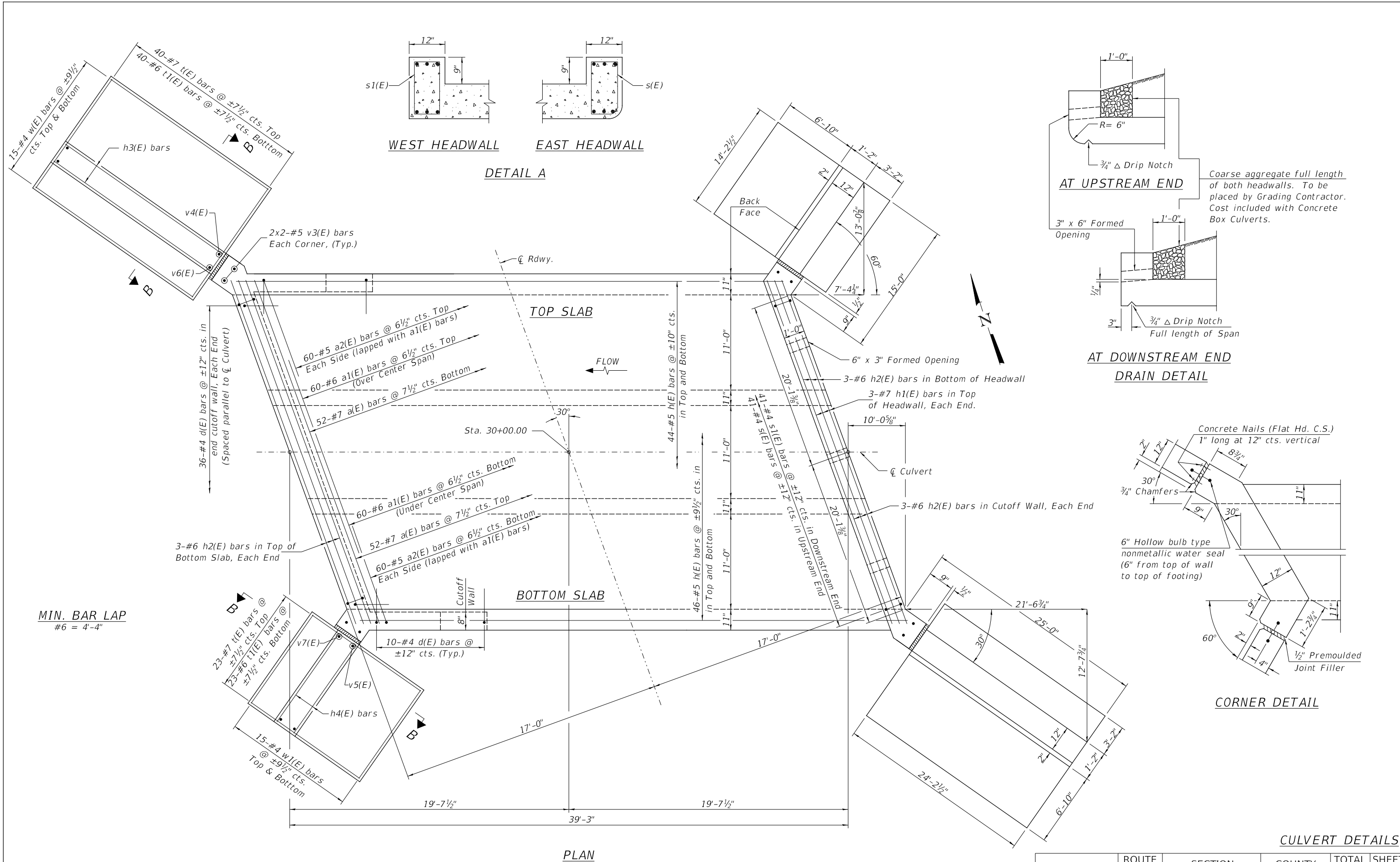
DESIGNED	B.A.N.
CHECKED	C.T.M.
DRAWN	J.C.W.
CHECKED	B.A.N./C.T.M.

**WATERWAY INFORMATION**

Flood		Design		Base	
Freq. Yr.	0 C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E. Exist.	Prop.
15	1,578	262	363	664.40	1.00
100	2,640	267	363	665.67	1.11

Drainage Area = 3.80 Sq. Mi. Low Grade Elev. = 665.81 @ Sta. 31+75.00  
Head - Ft. Headwater El. Exist. Prop. Exist. Prop. Exist. Prop. Exist. Prop.

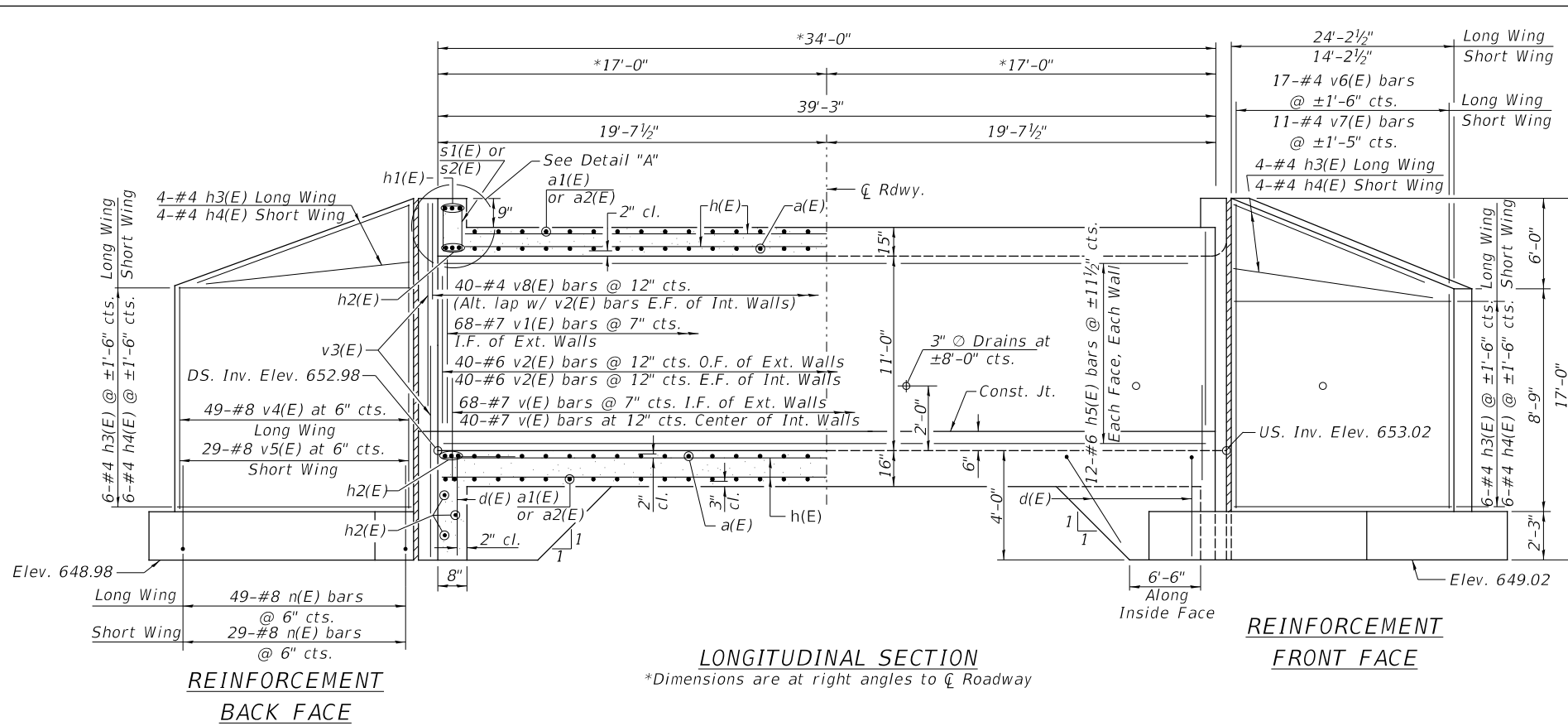




MIN. BAR LAP  
#6 = 4'-4"

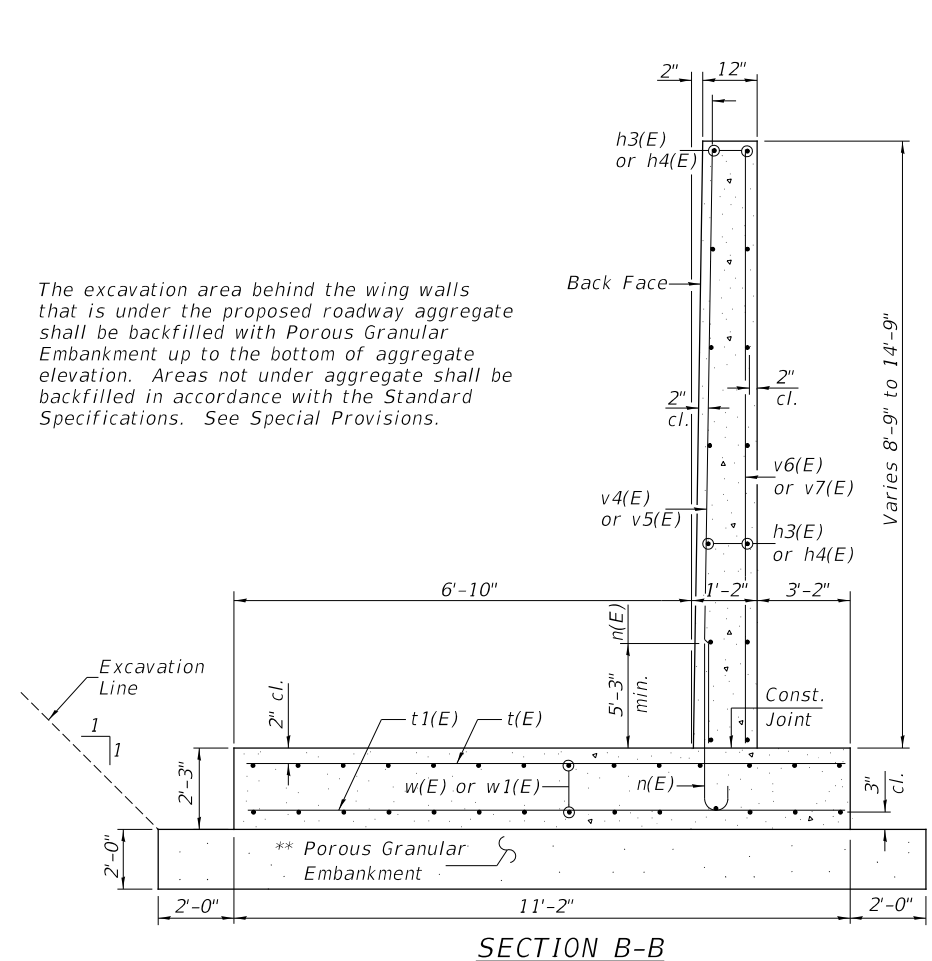
Notes:  
See Sheet 3 of 7 for Section B-B.

SHEET NO. 2 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 382	16-14786-00-DR	LASALLE	30	17
	S.N. 050-3623		CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		



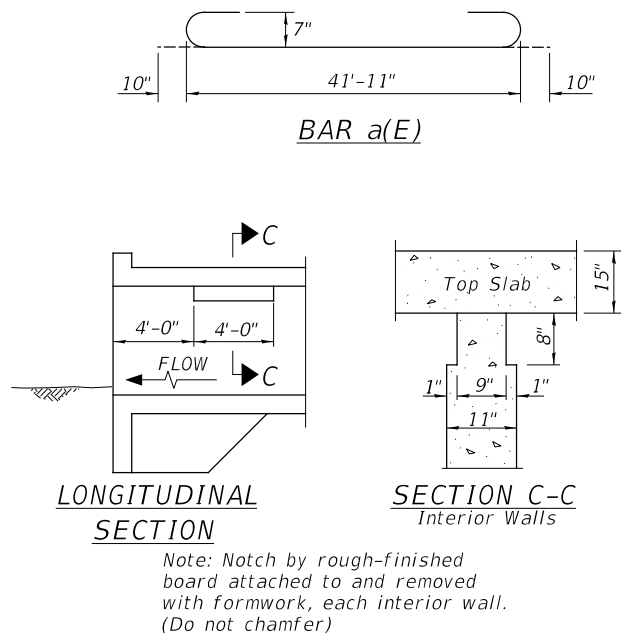
**REINFORCEMENT BACK FACE**

**LONGITUDINAL SECTION**  
\*Dimensions are at right angles to  $\bar{C}$  Roadway



**SECTION B-B**

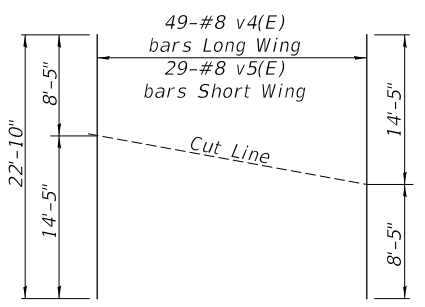
Notes:  
Maximum Soil Pressure under Footing = 2,689 psf.  
The unsuitable material shall be removed and replaced with P.G.E. Limits are 2' outside the footing of each wingwall. The unsuitable material removal shall be paid for with the Removal & Disposal of Unsuitable Material.  
See Sheet 2 of 7 for Detail A.



**LONGITUDINAL SECTION**

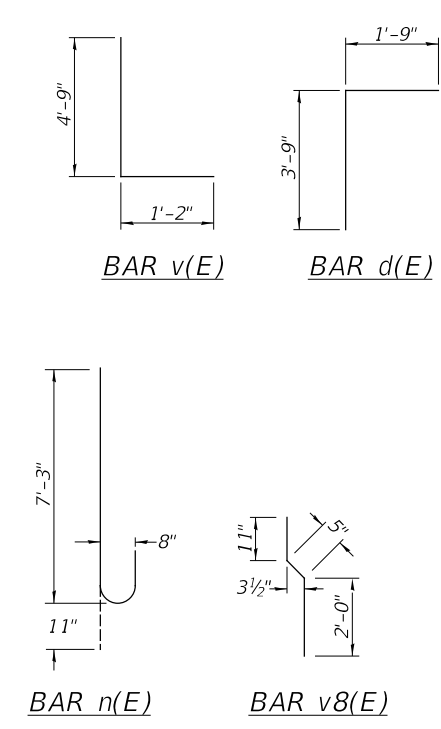
**SECTION C-C Interior Walls**

**PHOEBE NESTING SITE DETAIL**  
(Downstream End Only - Cost included with Concrete Box Culverts)



**BAR CUTTING DIAGRAM**

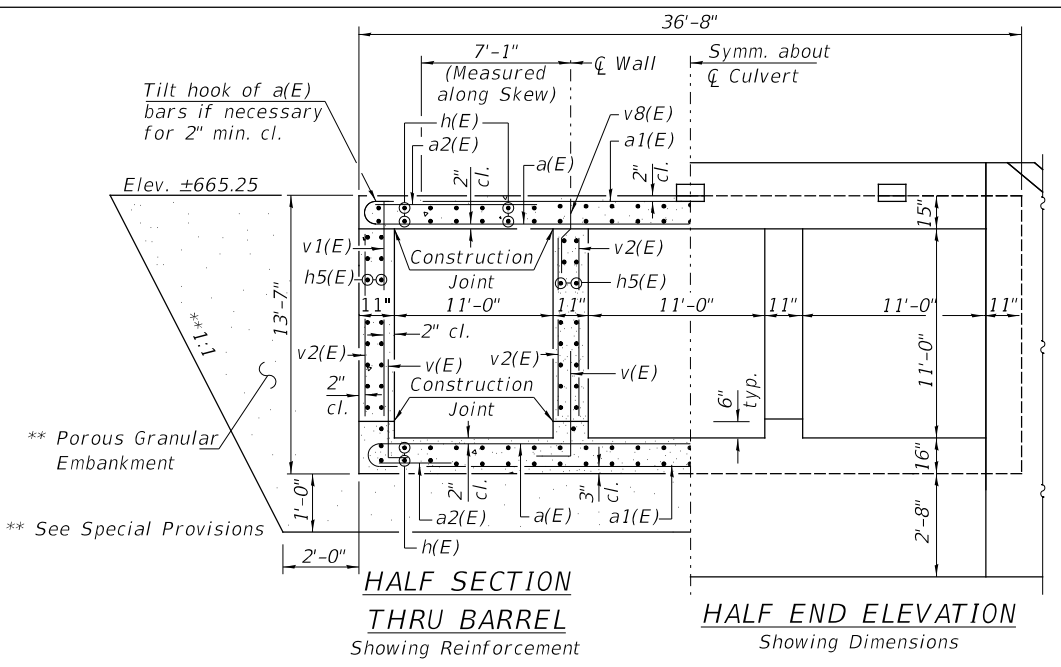
Order v4(E) & v5(E) bars full length. Cut as shown and use remainder of bars in other wing.



**BAR CUTTING DIAGRAM**

Order v6(E) & v7(E) bars full length. Cut as shown and use remainder of bars in other wing.

**REINFORCEMENT FRONT FACE**



**HALF SECTION THRU BARREL**  
Showing Reinforcement

**HALF END ELEVATION**  
Showing Dimensions

**BILL OF MATERIAL**

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	104	#7	43'-7"	U
a1(E)	120	#6	28'-0"	—
a2(E)	240	#5	11'-5"	—
d(E)	112	#4	5'-6"	L
h(E)	180	#5	38'-11"	—
h1(E)	6	#7	41'-5"	—
h2(E)	18	#6	41'-5"	—
h3(E)	40	#4	23'-10"	—
h4(E)	40	#4	13'-10"	—
h5(E)	96	#6	38'-11"	—
n(E)	156	#8	8'-2"	U
s(E)	41	#4	5'-4"	□
s1(E)	41	#4	5'-5"	□
t(E)	126	#7	10'-10"	—
t1(E)	126	#6	10'-10"	—
v(E)	216	#7	5'-11"	L
v1(E)	136	#7	11'-5"	—
v2(E)	240	#6	10'-2"	—
v3(E)	16	#5	9'-6"	—
v4(E)	49	#8	22'-10"	—
v5(E)	29	#8	22'-10"	—
v6(E)	17	#4	22'-10"	—
v7(E)	11	#4	22'-10"	—
v8(E)	80	#4	3'-4"	—
w(E)	60	#4	23'-10"	—
w1(E)	60	#4	13'-10"	—
Concrete Box Culverts			CU YD	315.2
Reinforcement Bars, Epoxy Coated			POUND	58,150

**MIN. BAR LAP**  
#5 = 2'-5" (Corners)  
#7 = 3'-0" (Sidewalls)  
#8 = 5'-1" (Wingwalls)

**CULVERT DETAILS**

SHEET NO. 3	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 382	16-14786-00-DR	LASALLE	30	18
7 SHEETS	S.N. 050-3623		CONTRACT NO. 87708		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		

	<b>Midwest Testing Services, Inc.</b>	<b>BORING LOG</b>	Phone: 815-223-6696
	3705 Progress Blvd.	Sheet <u>1</u> of <u>4</u>	Fax: 815-223-6659
	Peru, IL 61354		e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.  
 Project Name: TR 382 Over Covell Creek  
 Project Site: Section 16-14786-00-DR  
LaSalle County, Illinois

Boring No. B-1  
 Surface Elev. 666.40  
 Auger Depth 66' Rotary Depth NA  
 Start Date 07/06/18 Finish Date 07/06/18

Location: 10' Left Of Station 29+58

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
666.40											
665.40	Stiff Black And Brown Silty Clay (Fill)		1							Randy Safranski Diedrich D-120	
664.40			2								
663.40			3	SS	1.7	8	B	18			
662.40	Stiff Black Silty Clay		4								
661.40			5								
660.40	Stiff Brownish Gray Clay Till		6	SS	1.4	6	B	22			
659.40			7								
658.40			8	SS	1.7	8	B	21			
657.40	Stiff Gray Clay Till		9								
656.40			10								
655.40			11								
654.40	Very Stiff Gray Clay Till		12								
653.40			13	SS	1.9	10	B	19			
652.40			14								
651.40	Stiff Gray Clay Till		15								
650.40			16								
649.40			17								
648.40	Very Stiff Gray Clay Till		18	SS	1.6	9	B	21			
647.40			19								
646.40			20	SS	1.8	10	B	19			

Groundwater Data: No groundwater encountered at time of subsurface investigation.  
 Comments:

	<b>Midwest Testing Services, Inc.</b>	<b>BORING LOG</b>	Phone: 815-223-6696
	3705 Progress Blvd.	Sheet <u>2</u> of <u>4</u>	Fax: 815-223-6659
	Peru, IL 61354		e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.  
 Project Name: TR 382 Over Covell Creek  
 Project Site: Section 16-14786-00-DR  
LaSalle County, Illinois

Boring No. B-1  
 Surface Elev. 666.40  
 Auger Depth 66' Rotary Depth NA  
 Start Date 07/06/18 Finish Date 07/06/18

Location: 10' Left Of Station 29+58

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
645.40											
644.40	Stiff Gray Clay Till		22							Randy Safranski Diedrich D-120	
643.40			23	9	SS	1.9	11	B	20		
642.40			24								
641.40	Very Stiff Gray Clay Till		25								
640.40			26	10	SS	2.1	10	B	19		
639.40			27								
638.40	Stiff Gray Clay Till		28	11	SS	2.1	11	B	23		
637.40			29								
636.40			30								
635.40	Very Stiff Gray Clay Till		31								
634.40			32								
633.40			33								
632.40	Stiff Gray Clay Till		34								
631.40			35								
630.40			36	13	SS	1.7	8	B	22		
629.40	Very Stiff Gray Clay Till		37								
628.40			38								
627.40			39								
626.40	Very Stiff Gray Clay Till		40								
625.40			41	14	SS	2.2	12	B	19		

Groundwater Data: No groundwater encountered at time of subsurface investigation.  
 Comments:

**SOIL BORINGS**

SHEET NO. 4 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 382	16-14786-00-DR	LASALLE	30	19
	S.N. 050-3623			CONTRACT NO. 87708	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		

**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354  
Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

**BORING LOG**

Sheet 3 of 4

Client: Hutchison Engineering, Inc.  
Project Name: TR 382 Over Covell Creek  
Project Site: Section 16-14786-00-DR  
LaSalle County, Illinois

Boring No. B-1  
Surface Elev. 666.40  
Auger Depth 66' Rotary Depth NA  
Start Date 07/06/18 Finish Date 07/06/18

Location: 10' Left Of Station 29+58

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
624.40											
623.40			43								
622.40			44								
621.40			45	15	SS	2.3	12	B	19		
620.40			46								
619.40			47								
618.40			48								
617.40			49								
616.40	Very Stiff Gray Clay Till		50	16	SS	2.5	15	B	18		
615.40			51								
614.40			52								
613.40			53								
612.40			54								
611.40			55	17	SS	2.9	18	B	15		
610.40			56								
609.40			57								
608.40			58								
607.40			59								
606.40	Very Stiff Gray Silty Loam Till		60	18	SS	3.4	27	S	14		
605.40			61								
604.40			62								

Groundwater Data: No groundwater encountered at time of subsurface investigation.  
Comments:

**Midwest Testing Services, Inc.**  
3705 Progress Blvd.  
Peru, IL 61354  
Phone: 815-223-6696  
Fax: 815-223-6659  
e-mail: mts37@comcast.net

**BORING LOG**

Sheet 4 of 4

Client: Hutchison Engineering, Inc.  
Project Name: TR 382 Over Covell Creek  
Project Site: Section 16-14786-00-DR  
LaSalle County, Illinois

Boring No. B-1  
Surface Elev. 666.40  
Auger Depth 66' Rotary Depth NA  
Start Date 07/06/18 Finish Date 07/06/18

Location: 10' Left Of Station 29+58

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
603.40											
602.40			64								
601.40			65								
600.40	Very Stiff Gray Silty Loam Till		66	19	SS	3.8	33	S	13		
599.40			67								
598.40			68								
597.40			69								
596.40			70								
595.40			71								
594.40			72								
593.40			73								
592.40			74								
591.40			75								
590.40			76								
589.40			77								
588.40			78								
587.40			79								
586.40			80								
585.40			81								
584.40			82								
583.40			83								

Groundwater Data: No groundwater encountered at time of subsurface investigation.  
Comments:

*SOIL BORINGS*

SHEET NO. 5 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 382	16-14786-00-DR	LASALLE	30	20
	S.N. 050-3623		CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		

	<b>Midwest Testing Services, Inc.</b>	<b>BORING LOG</b>	Phone: 815-223-6696
	3705 Progress Blvd. Peru, IL 61354		Fax: 815-223-6659 e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.  
 Project Name: TR 382 Over Covell Creek  
 Project Site: Section 16-14786-00-DR  
LaSalle County, Illinois

Boring No. B-2  
 Surface Elev. 666.40  
 Auger Depth 66' Rotary Depth NA  
 Start Date 07/06/18 Finish Date 07/06/18

Location: 10' Right Of Station 30+42

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS	
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)			Dry Density (PCF)
666.40												
665.40	Stiff Black And Brown Clay (Fill)		1							Randy Safranski Diedrich D-120		
664.40			2									
663.40			3	1	SS	1.2	6	B	21			
662.40	Stiff Black Silty Clay		4									
661.40			5	2	SS	1.8	10	B	20			
660.40	Stiff Brownish Gray Clay Till		6									
659.40			7	3	SS	1.9	8	B	22			
658.40			8	4	SS	1.7	9	B	21			
657.40	Very Stiff Gray Clay Till		9									
656.40			10	5	SS	1.6	9	B	22			
655.40	Stiff Gray Clay Till		11									
654.40			12	6	SS	3.2	18	B	14			
653.40	Very Stiff Gray Clay Till		13									
652.40			14	7	SS	1.8	10	B	21			
651.40	Stiff Gray Clay Till		15									
650.40			16	8	SS	1.9	10	B	20			
649.40			17									
648.40			18									
647.40			19									
646.40			20									

Groundwater Data: No groundwater encountered at time of subsurface investigation.  
 Comments:

	<b>Midwest Testing Services, Inc.</b>	<b>BORING LOG</b>	Phone: 815-223-6696
	3705 Progress Blvd. Peru, IL 61354		Fax: 815-223-6659 e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.  
 Project Name: TR 382 Over Covell Creek  
 Project Site: Section 16-14786-00-DR  
LaSalle County, Illinois

Boring No. B-2  
 Surface Elev. 666.40  
 Auger Depth 66' Rotary Depth NA  
 Start Date 07/06/18 Finish Date 07/06/18

Location: 10' Right Of Station 30+42

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS	
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)			Dry Density (PCF)
645.40												
644.40	Very Stiff Gray Clay Till		22							Randy Safranski Diedrich D-120		
643.40			23	9	SS	2.0	10	B	18			
642.40			24	10	SS	2.3	11	B	17			
641.40	Stiff Gray Clay Till		25									
640.40			26	11	SS	2.4	11	B	17			
639.40	Very Stiff Gray Clay Till		27									
638.40			28	12	SS	1.8	9	B	20			
637.40			29	13	SS	1.6	8	B	21			
636.40	Stiff Gray Clay Till		30									
635.40			31	14	SS	2.1	11	B	19			
634.40	Very Stiff Gray Clay Till		32									
633.40			33									
632.40			34									
631.40			35									
630.40			36									
629.40			37									
628.40			38									
627.40			39									
626.40			40									
625.40			41									

Groundwater Data: No groundwater encountered at time of subsurface investigation.  
 Comments:

SOIL BORINGS

SHEET NO. 6 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 382	16-14786-00-DR	LASALLE	30	21
	S.N. 050-3623		CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		

	<b>Midwest Testing Services, Inc.</b>	<b>BORING LOG</b>	Phone: 815-223-6696
	3705 Progress Blvd. Peru, IL 61354	Sheet <u>3</u> of <u>4</u>	Fax: 815-223-6659 e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.  
 Project Name: TR 382 Over Covell Creek  
 Project Site: Section 16-14786-00-DR  
LaSalle County, Illinois

Boring No. B-2  
 Surface Elev. 666.40  
 Auger Depth 66' Rotary Depth NA  
 Start Date 07/06/18 Finish Date 07/06/18

Location: 10' Right Of Station 30+42

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
624.40											
623.40			43								
622.40			44								
621.40			45	15	SS	2.4	12	B	9		
620.40			46								
619.40			47								
618.40			48								
617.40	Very Stiff Gray Clay Till		49								
616.40			50								
615.40			51	16	SS	2.3	12	B	20		
614.40			52								
613.40			53								
612.40			54								
611.40			55	17	SS	2.6	14	B	18		
610.40			56								
609.40			57								
608.40			58								
607.40	Very Stiff Gray Silty Loam Till		59								
606.40			60								
605.40			61	18	SS	3.1	22	B	16		
604.40			62								

Groundwater Data: No groundwater encountered at time of subsurface investigation.  
 Comments:

	<b>Midwest Testing Services, Inc.</b>	<b>BORING LOG</b>	Phone: 815-223-6696
	3705 Progress Blvd. Peru, IL 61354	Sheet <u>4</u> of <u>4</u>	Fax: 815-223-6659 e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.  
 Project Name: TR 382 Over Covell Creek  
 Project Site: Section 16-14786-00-DR  
LaSalle County, Illinois

Boring No. B-2  
 Surface Elev. 666.40  
 Auger Depth 66' Rotary Depth NA  
 Start Date 07/06/18 Finish Date 07/06/18

Location: 10' Right Of Station 30+42

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
603.40											
602.40			64								
601.40			65								
600.40	Very Stiff Gray Silty Loam Till		66	19	SS	3.1	30	S	14		
599.40			67								
598.40			68								
597.40			69								
596.40			70								
595.40			71								
594.40			72								
593.40			73								
592.40			74								
591.40			75								
590.40			76								
589.40			77								
588.40			78								
587.40			79								
586.40			80								
585.40			81								
584.40			82								
583.40			83								

Groundwater Data: No groundwater encountered at time of subsurface investigation.  
 Comments:

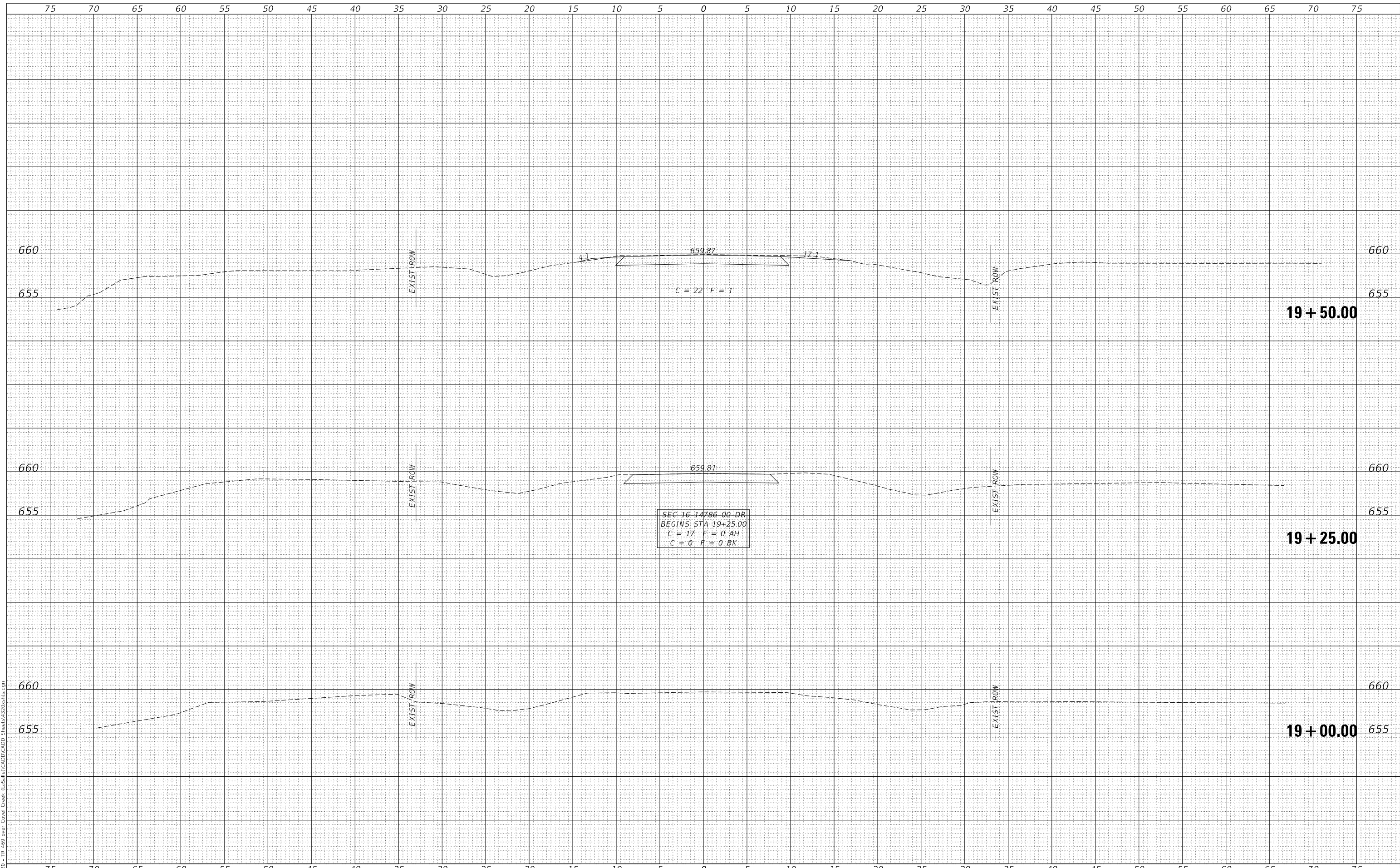
**SOIL BORINGS**

SHEET NO. 7 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 382	16-14786-00-DR	LASALLE	30	22
	S.N. 050-3623		CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID. PROJECT NO. V5XM(280)		

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

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

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19 + 50.00

19 + 25.00

19 + 00.00

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	DRAWN -	REVISED -
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PLOT DATE = 2/18/2019	DATE -	REVISED -

**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVELL CREEK**

**CROSS SECTIONS  
TOWNSHIP ROAD 469**

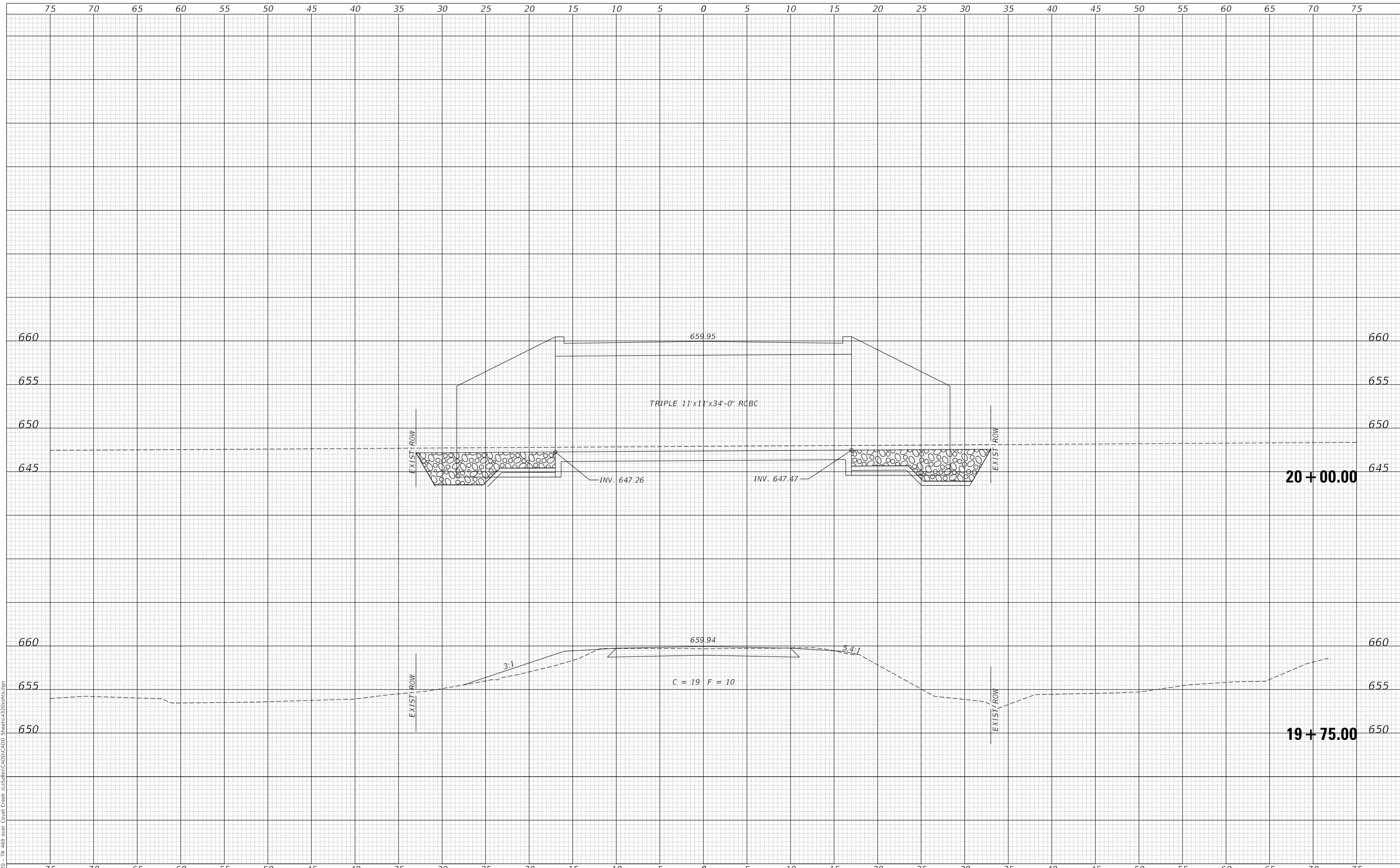
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TR 469	16-14786-00-DR	LASALLE	30	23
		CONTRACT NO. 87708		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. V5XM(280)	

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

DATE	
BY	
ORIGINAL SURVEY NO.	
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NOTE BOOK NO.	
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PLOT DATE = 2/18/2019	DATE -	REVISED -

**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVELL CREEK**

**CROSS SECTIONS  
TOWNSHIP ROAD 469**

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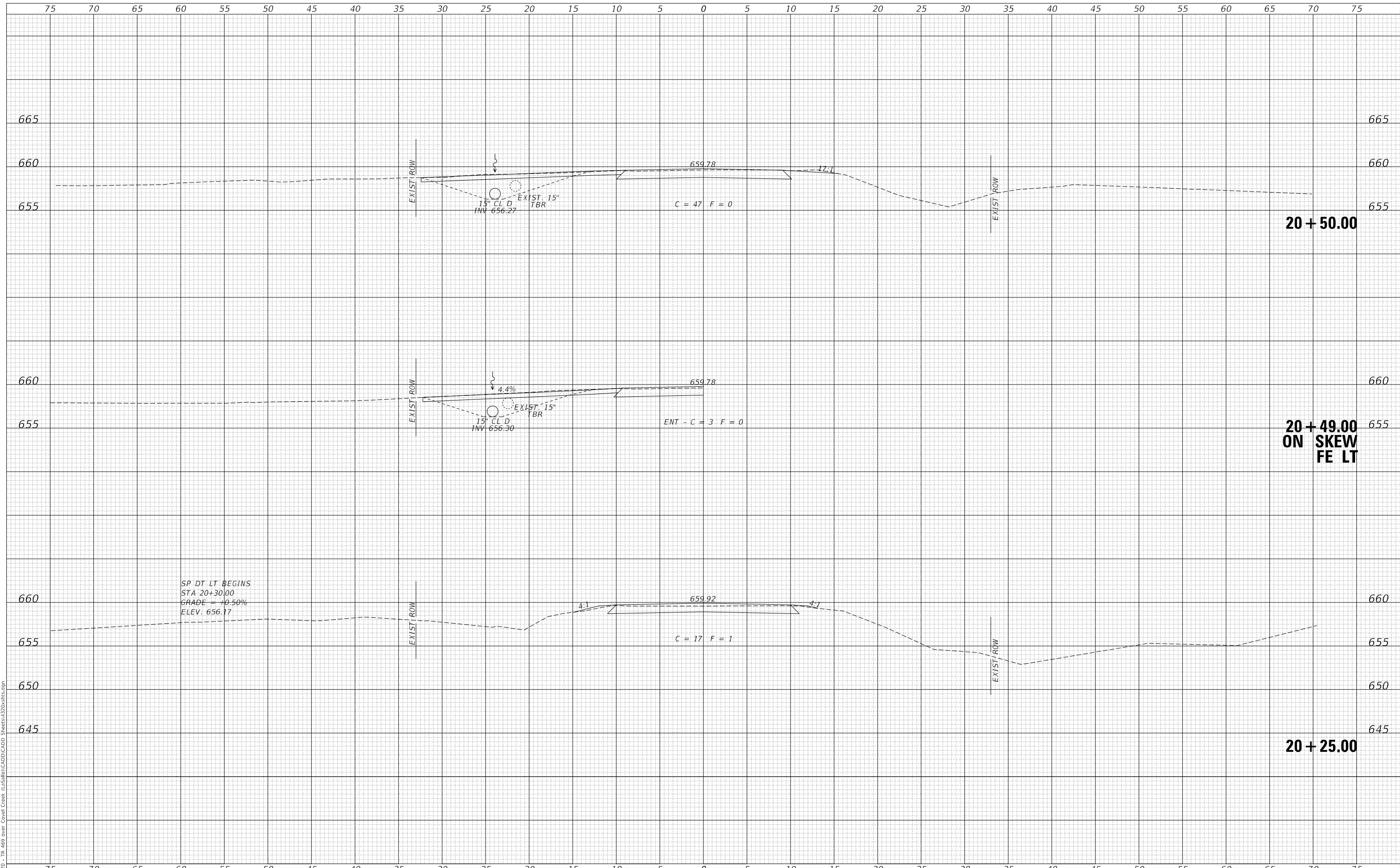
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TR 469	16-14786-00-DR	LASALLE	30	24
FED. ROAD DIST. NO. 7    ILLINOIS			CONTRACT NO. 87708	
			FED. AID PROJECT NO. V5XM(280)	



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

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
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**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVELL CREEK**

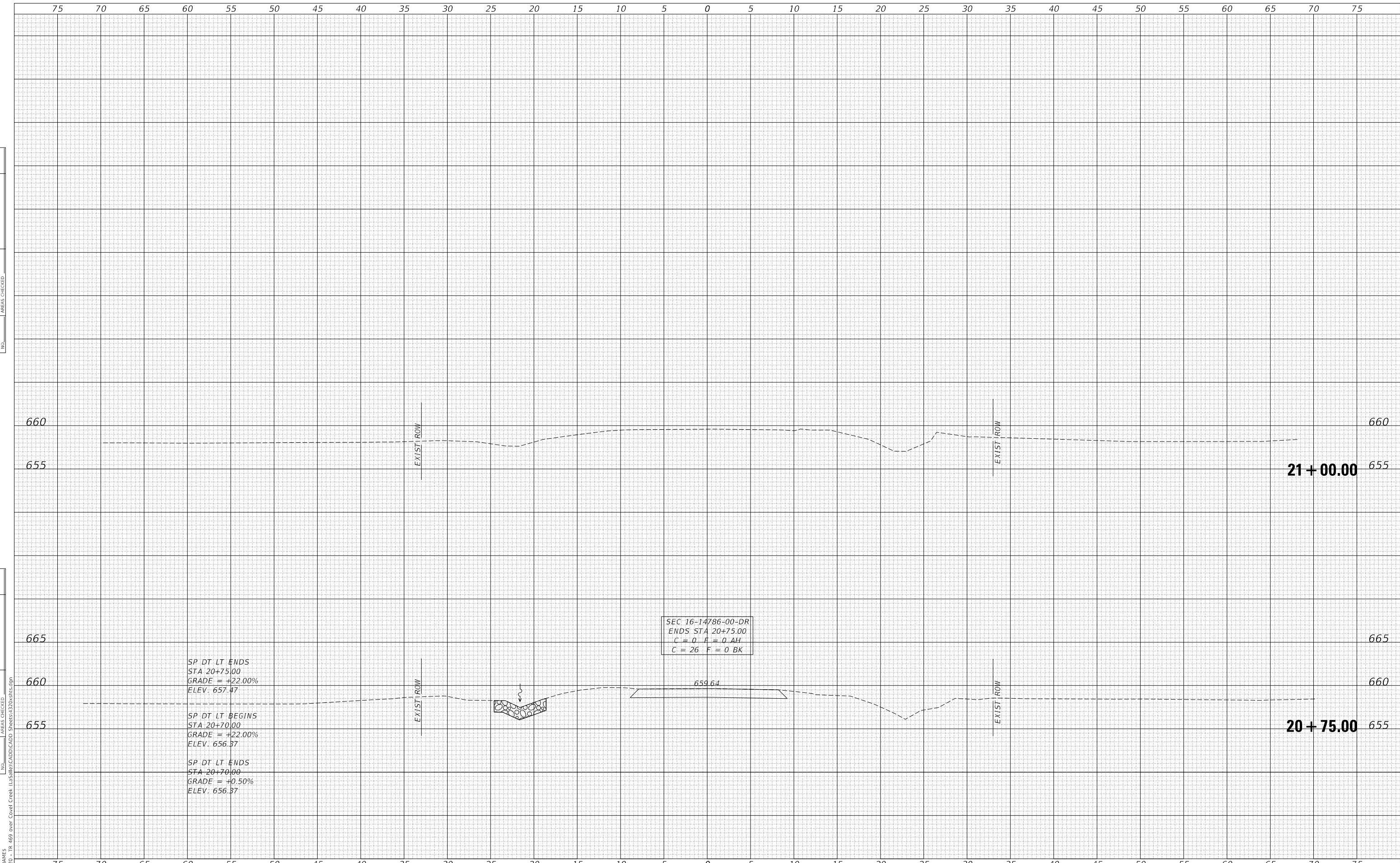
**CROSS SECTIONS  
TOWNSHIP ROAD 469**

SCALE: 1"=5'    SHEET 3 OF 4 SHEETS    STA. 20+25.00 TO STA. 20+50.00

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 469	16-14786-00-DR	LASALLE	30	25
CONTRACT NO. 87708				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. V5XM(280)	

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

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



SP DT LT ENDS  
STA 20+75.00  
GRADE = +22.00%  
ELEV. 657.47

SP DT LT BEGINS  
STA 20+70.00  
GRADE = +22.00%  
ELEV. 656.37

SP DT LT ENDS  
STA 20+70.00  
GRADE = +0.50%  
ELEV. 656.37

SEC. 16-14786-00-DR  
ENDS STA 20+75.00  
C = 0 F = 0.4H  
C = 26 F = 0.8K

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PLOT DATE = 2/18/2019	DATE -	REVISED -

**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVELL CREEK**

**CROSS SECTIONS  
TOWNSHIP ROAD 469**

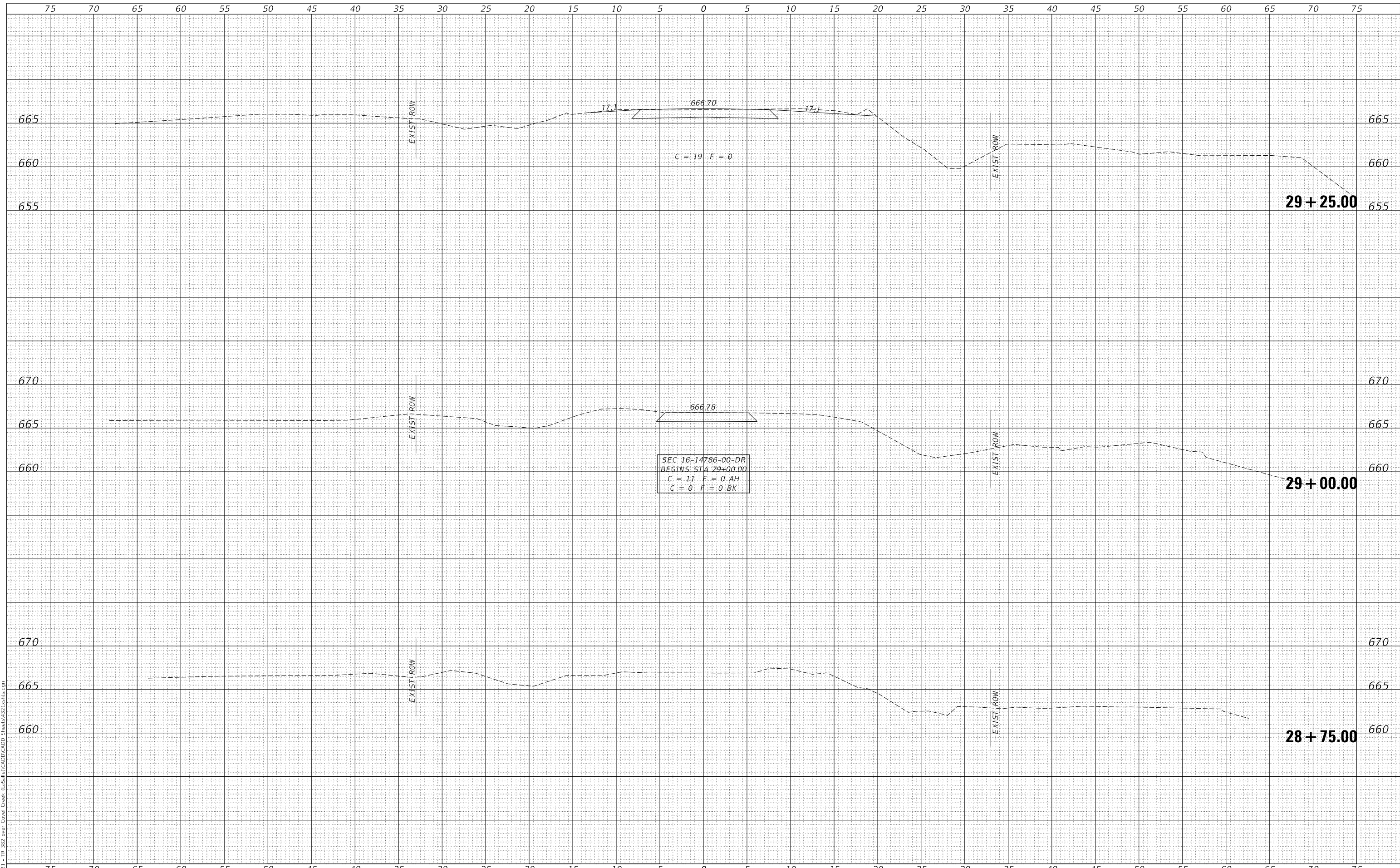
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ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 469	16-14786-00-DR	LASALLE	30	26
CONTRACT NO. 87708				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. V5XM(280)	

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

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
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**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVELL CREEK**

**CROSS SECTIONS  
TOWNSHIP ROAD 382**

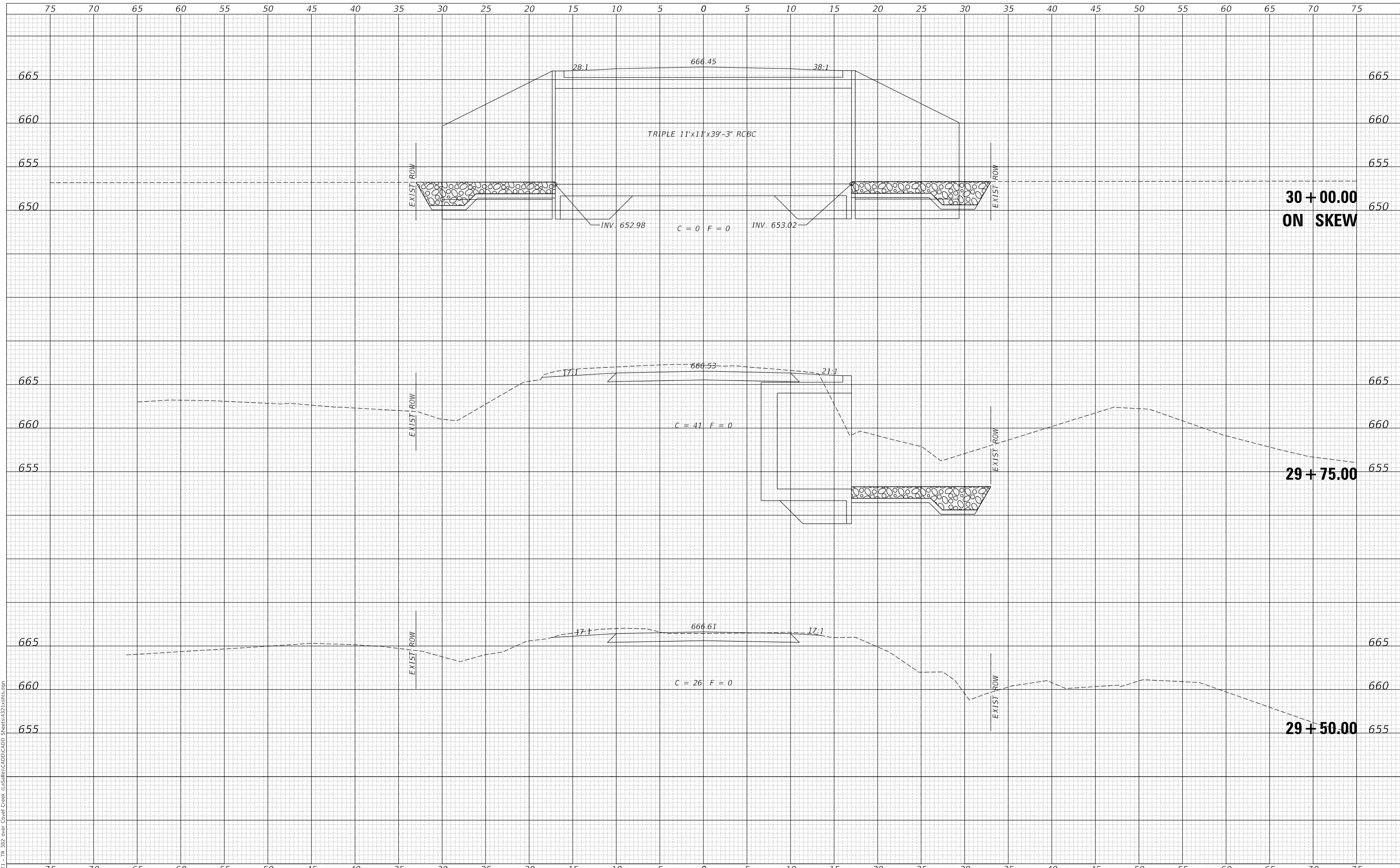
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ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 382	16-14786-00-DR	LASALLE	30	27
CONTRACT NO. 87708				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. V5XM(280)	

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

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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**30 + 00.00  
ON SKEW**

**29 + 75.00**

**29 + 50.00**

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PLOT DATE = 2/18/2019	DATE -	REVISED -

**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVELL CREEK**

**CROSS SECTIONS  
TOWNSHIP ROAD 382**

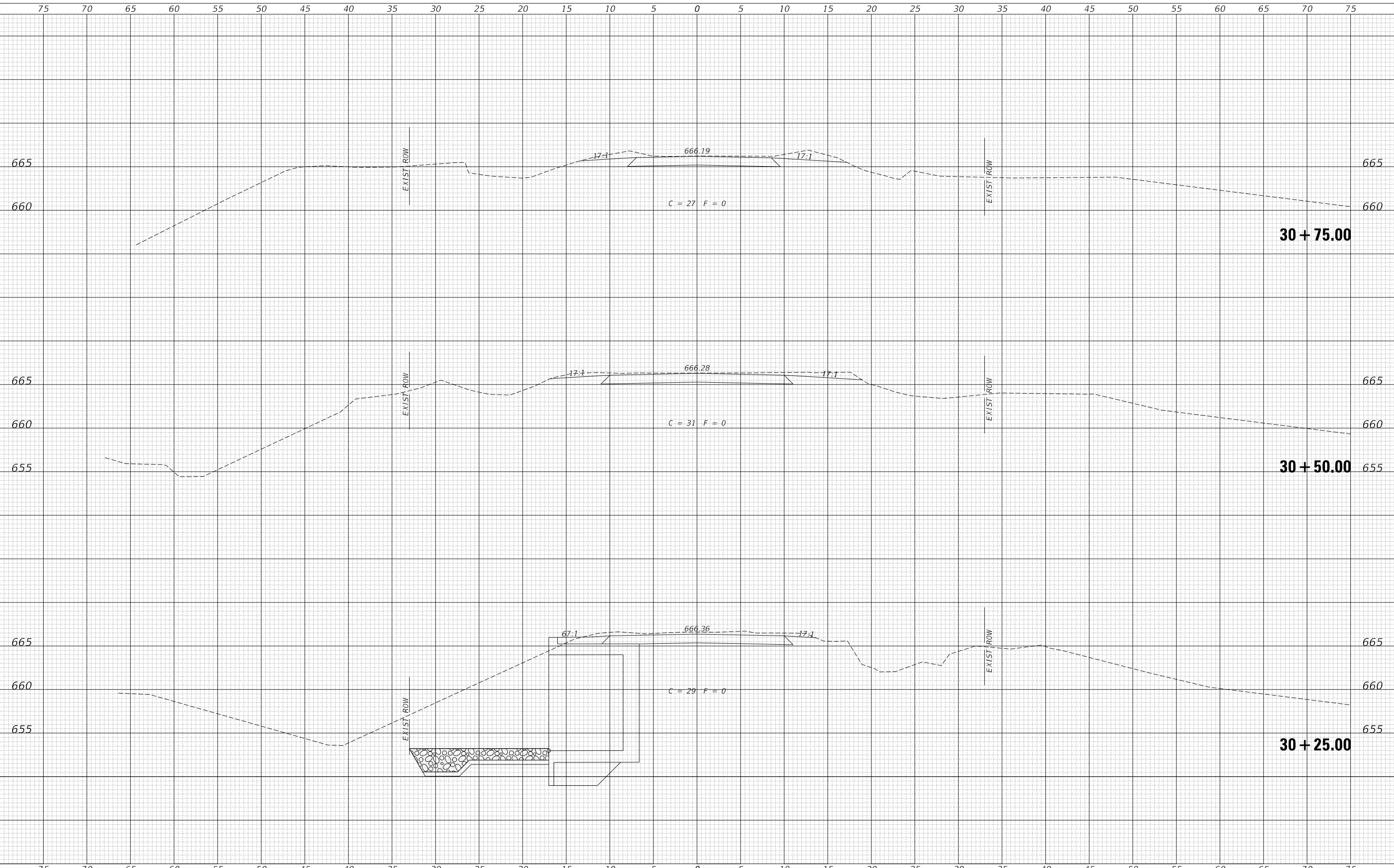
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ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 382	16-14786-00-DR	LASALLE	30	28
FED. ROAD DIST. NO. 7    ILLINOIS			CONTRACT NO. 87708	
			FED. AID PROJECT NO. V5XM(280)	

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

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

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PLOT DATE = 2/18/2019	DATE -	REVISED -

**LASALLE COUNTY  
TOWNSHIP ROAD 469 & 382  
OVER COVELL CREEK**

**CROSS SECTIONS  
TOWNSHIP ROAD 382**

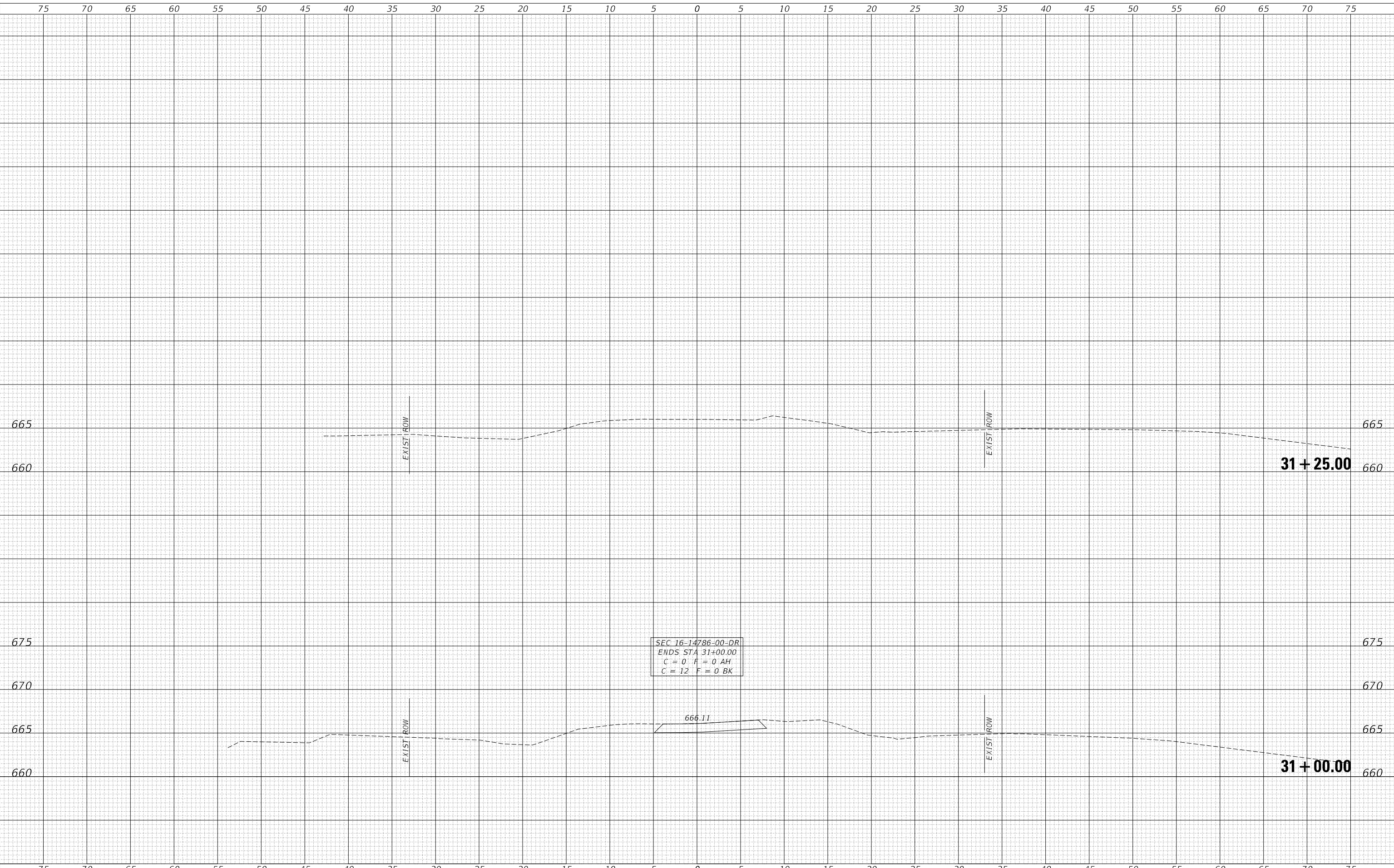
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RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 382	16-14786-00-DR	LASALLE	30	29
CONTRACT NO. 87708				
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT NO. V5XM(280)

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

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
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**LASALLE COUNTY  
 TOWNSHIP ROAD 469 & 382  
 OVER COVEL CREEK**

**CROSS SECTIONS  
 TOWNSHIP ROAD 382**

SCALE: 1"=5'      SHEET 4 OF 4 SHEETS      STA. 31+00.00 TO STA. 31+25.00

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 382	16-14786-00-DR	LASALLE	30	30
CONTRACT NO. 87708				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. V5XM(280)	