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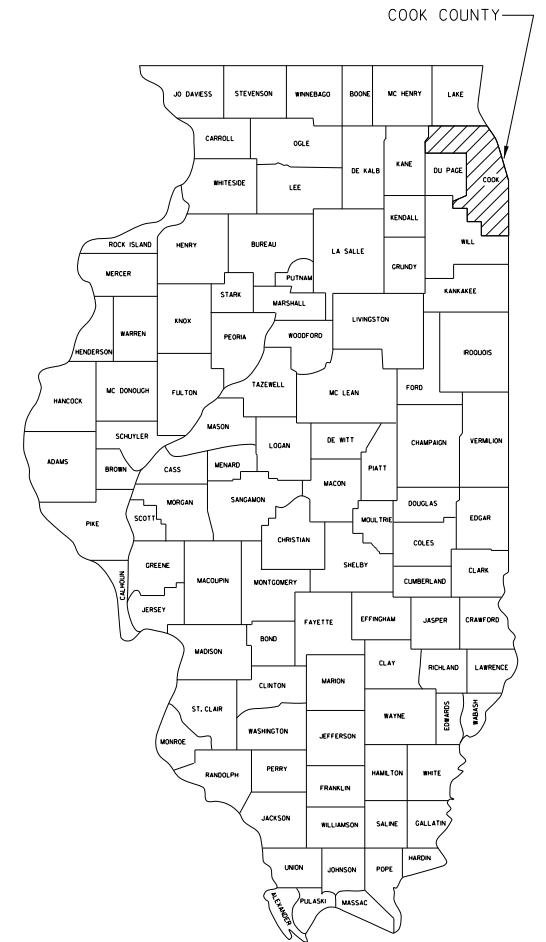
**STANDARDS**

- 000001 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 542301 PRECAST REINFORCED CONCRETE FLARED END SECTION
- 602701 CAST IRON STEPS
- 604001 FRAME AND LIDS TYPE 1
- 606001 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
- 664001 CHAIN LINK FENCE
- 701006 OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
- 701501 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
- 701901 TRAFFIC CONTROL DEVICES
- 704001 TEMPORARY CONCRETE BARRIER
- 780001 TYPICAL PAVEMENT MARKINGS

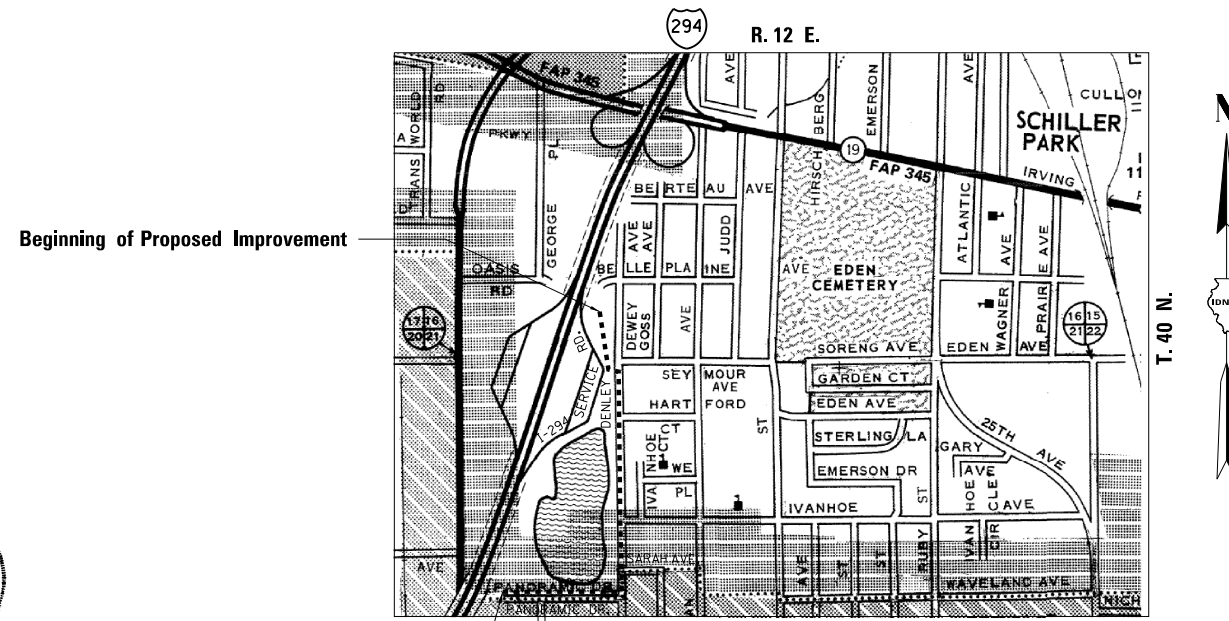
**STATE OF ILLINOIS**  
**DEPARTMENT OF NATURAL RESOURCES**  
**OFFICE OF WATER RESOURCES**  
**CRYSTAL CREEK FLOOD CONTROL PROJECT**  
**PHASE II B**  
**VILLAGES OF**  
**FRANKLIN PARK AND SCHILLER PARK**  
**COOK COUNTY**

**FR-425**

**2013**



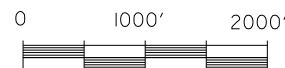
REGIONAL MAP



Beginning of Proposed Improvement

End of Proposed Improvement

LOCATION MAP



*Ted Montrey* 6/26/13  
ILLINOIS REGISTERED STRUCTURAL ENGINEER NO. 081-005450



*Ted Montrey* 6/26/13  
ILLINOIS REGISTERED PROFESSIONAL ENGINEER NO. 052-049591



APPROVED BY *Alan J. Hill* DATE 6-26-13  
DIRECTOR

**UTILITY REFERENCE TABLE**

<b>J.U.L.I.E.</b>	Call 48 hours prior to construction	(800) 892-0123
<b>Telephone</b>	Mr. John Bachelder OSP National Support / Investigations MCI / Network Services, Inc. 2400 North Glenville Drive Richardson, Texas 75082	(972) 729-6016
	Mr. William O'Conner SBC 162 South York Road Elmhurst, Illinois 60126	(630) 941-4200
<b>Electricity</b>	Mr. John D. Pribich Program Manager, Public Relocation ComEd Three Lincoln Centre Fourth Floor Oakbrook Terrace, Illinois 60181-4260	(630) 437-2212
<b>Water &amp; Sewer</b>	Mr. Ron Sieraski Superintendent of Public Works Village of Schiller Park 9526 West Irving Park Road Schiller Park, Illinois 60176	(847) 822-8592 (847) 671-8521
	Mr. Scott Stogsdill Utility Consultant Nicor Gas 1844 Ferry Road Naperville, Illinois 60563-9600	(630) 983-8676
<b>Cable Television</b>	Mr. Robert L. Schulte, Jr. Right of Way Manager Comcast Cable Communications, Inc. Greater Chicago Market Affirmation 688 Industrial Drive Elmhurst, Illinois 60126	(630) 600-6316

**GENERAL NOTES**

All elevations refer to N.G.V.D. (National Geodetic Vertical Datum).

The Contractor shall furnish, erect, and when directed by the Engineer, completely remove two construction signs. The exact location of the signs shall be determined by the Engineer in the field.

All lateral drainage that exists prior to construction shall be restored as shown on the plans and as directed by the Engineer. Unless otherwise specified all costs of restoration shall be considered included in the Contract and no additional compensation will be allowed.

All excess excavation and unsuitable materials shall be disposed of at locations provided by the Contractor at his expense and at locations inspected and approved by the Engineer.

All construction operations shall be contained within the easement area or work limits as indicated on the plans. It shall be the full responsibility of the Contractor to secure all rights of ingress and egress to said Right-of-Way including the satisfactory protection and restoration of property as required in Art. 107.20 and 107.23 of the Standard Specifications.

Class SI Concrete shall be used throughout. All exposed edges of concrete shall be beveled 3/4".

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60.

Plan dimensions and details relative to the existing structures have been taken from existing plans and/or past surveys and reports and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The Contractor is reminded to protect and restore at his expense, in accordance with Article 107.20 of the Standard Specifications, any private or public property, including access roads, which may be damaged or destroyed due to construction operations.

All open excavations are to be surrounded with a four foot high construction fence during non-working hours. The fence material shall be approved by the Engineer. The cost shall be considered included in the contract.

All material excavated from the bottom of the existing channel must be deposited in a self-contained area in compliance with all State statutes, regulations, and permit requirements with no discharge to public waters unless a permit has been issued by the Illinois E.P.A.

The location, maintenance, removal, and restoration to original condition of all haul roads shall be as approved by the Engineer and all costs shall be considered included in the Contract.

The Contractor shall notify the Village of Franklin Park, the Village of Schiller Park and the Township concerning the closing of Village streets and shall conform to all requirements so specified without additional cost to the State.

All dewatering costs shall be considered included in the Contract.

The Contractor shall take due care while excavating near existing structures. Any damages caused by the construction activity shall be corrected at the expense of the contractor.

Prior to the beginning of work in the vicinity of the utilities, the Contractor shall contact the owners listed in the Utility Reference Table and schedule work so as not to interfere with required adjustments.

With the exception of those utilities designated on the plans to be adjusted by the Contractor, all existing utilities within or adjacent to the construction areas affected by the construction operations shall be adjusted by others. Unless otherwise specified, all utilities shall be protected and not disturbed. All cost of protection shall be considered included in the contract and no additional compensation will be allowed.

The contractor shall submit his/her method of maintaining channel flows, for approval by the Engineer, prior to beginning construction.

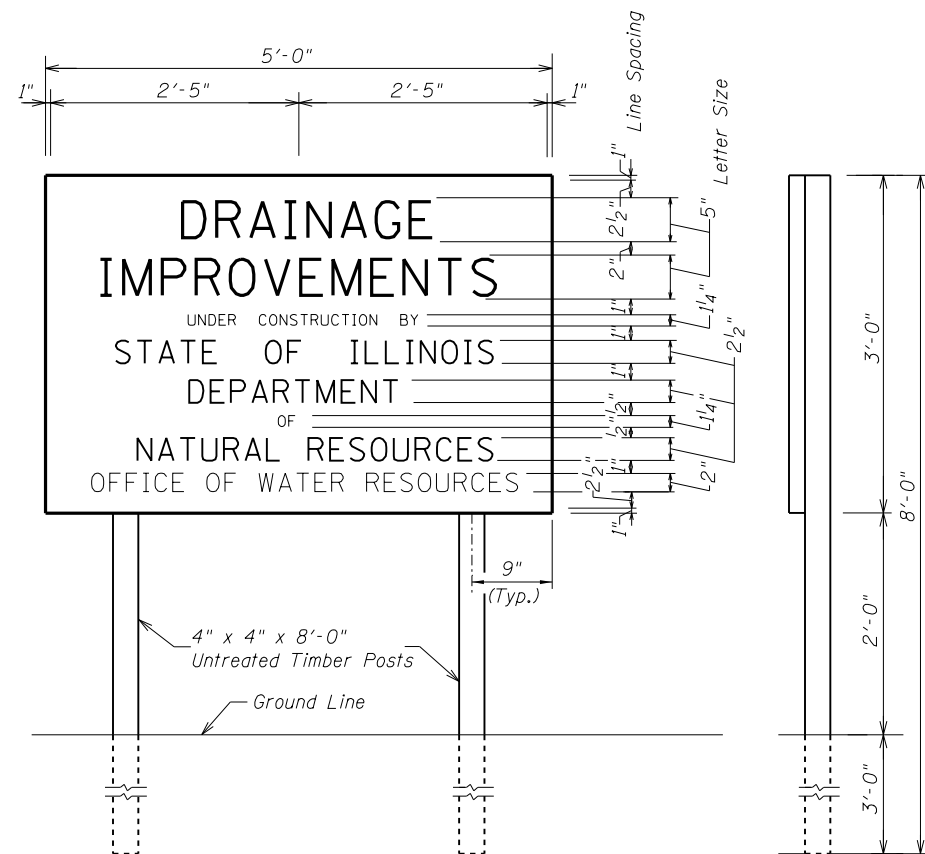
All construction joints shall be bonded unless otherwise noted.

**GENERAL NOTES**

Signs shall be made of 3/4" plywood or oxford, or of metal (18 ga.). The Contractor shall furnish all material and labor for constructing and erecting the signs. The signs shall be placed prior to the starting of actual construction operations at each end of the construction section or as directed by the Engineer. Before any sign is erected, it shall be approved by the Engineer as to its appearance and quality of construction. The signs shall remain in place and shall be maintained in satisfactory condition until the project is accepted by the department. The Contractor shall then remove the signs and the material will become his property.

The letters on the sign shall be black mechanical style on a white background and appropriate border lines.

Paid for as Wood Information Signs.



SUMMARY OF QUANTITIES

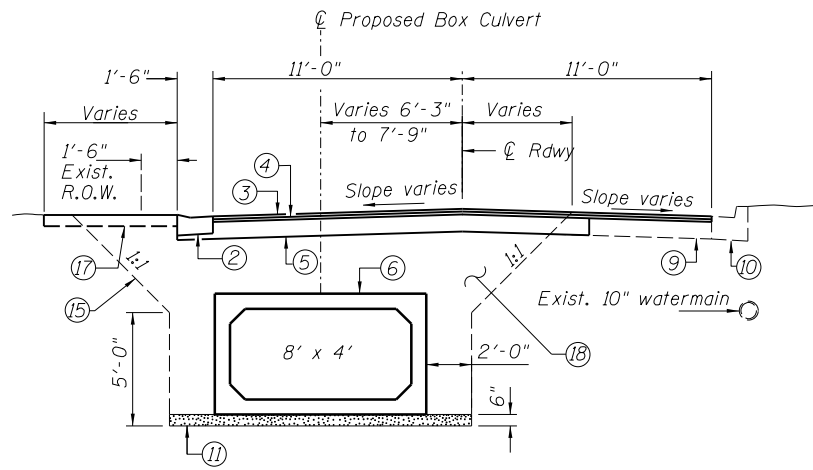
CODE NO.	PAY ITEM	UNIT	QUANTITY
20100110	TREE REMOVAL (6-15 UNITS DIAMETER)	UNIT	39
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	42
20100500	TREE REMOVAL, ACRES	ACRE	1.12
20300100	CHANNEL EXCAVATION	CU YD	1091
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	471
25000312	SEEDING, CLASS 4A	ACRE	0.18
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	16
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	16
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	16
25100125	MULCH, METHOD 3	ACRE	0.18
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	3,152
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	161
28000300	TEMPORARY DITCH CHECKS	FOOT	75
28000400	PERIMETER EROSION BARRIER	FOOT	523
28000500	INLET AND PIPE PROTECTION	EACH	2
28000510	INLET FILTERS	EACH	11
28100107	STONE RIPRAP, CLASS A4	SQ YD	823
28200200	FILTER FABRIC	SQ YD	823
35102100	AGGREGATE BASE COURSE, TYPE B, 9"	SQ YD	1,935
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	155
40600300	AGGREGATE (PRIME COAT)	TON	4
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	168
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	197
44000100	PAVEMENT REMOVAL	SQ YD	1,935
44000161	HOT-MIX ASPHALT SURFACE REMOVAL 3"	SQ YD	400
*44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	1,225
50105220	PIPE CULVERT REMOVAL	FOOT	259
50200100	STRUCTURE EXCAVATION	CU YD	211
50300225	CONCRETE STRUCTURES	CU YD	47.6
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	10,670
54001001	BOX CULVERT END SECTION, CULVERT NO. 1	EACH	2
54001002	BOX CULVERT END SECTION, CULVERT NO. 2	EACH	1
54001004	BOX CULVERT END SECTION, CULVERT NO. 4	EACH	2
54002020	EXPANSION BOLTS 3/4 INCH	EACH	14
54010903	PRECAST CONCRETE BOX CULVERT 9' X 3'	FOOT	143
54010704	PRECAST CONCRETE BOX CULVERT 7' X 4'	FOOT	131
54020702	PRECAST CONCRETE BOX CULVERT 7' X 2'	FOOT	1,084
54020804	PRECAST CONCRETE BOX CULVERT 8' X 4'	FOOT	588
54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	1
550A0330	STORM SEWERS, CLASS A, TYPE 2 10"	FOOT	10

\* INDICATES NON-STANDARD ITEM COVERED BY SPECIAL PROVISION

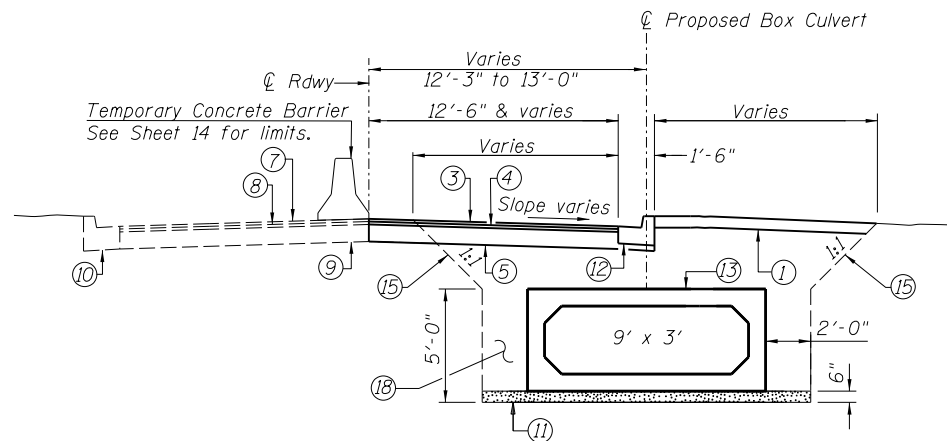
SUMMARY OF QUANTITIES

CODE NO.	PAY ITEM	UNIT	QUANTITY
550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	20
550A0360	STORM SEWERS, CLASS A, TYPE 2 15"	FOOT	15
*66410400	CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED	FOOT	663
*67000500	ENGINEERS FIELD OFFICE, TYPE B	CAL MO	10
67100100	MOBILIZATION	L SUM	1
70400100	TEMPORARY CONCRETE BARRIER	FOOT	385
*	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
*	WOOD INFORMATION SIGNS	EACH	2
*	CONSTRUCTION STAKING	L SUM	1
*	TEMPORARY COFFERDAM SYSTEM	L SUM	1
*	SEEDING, MULCHING, AND FERTILIZING	ACRE	0.78
*	SEEDING AND FERTILIZING	ACRE	0.65

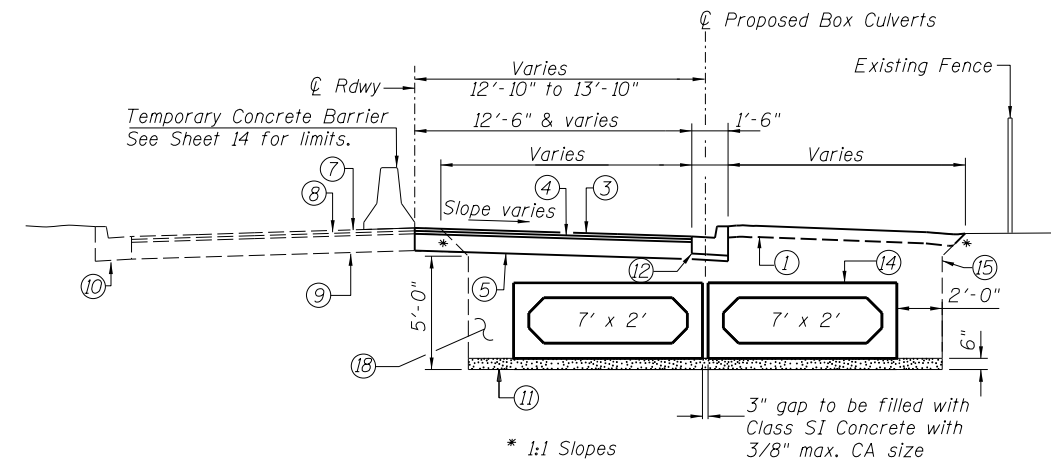
Designed By TMM Checked By RJM Drawn By TMM  
 7/8/2013 10:04:53 AM O:\OwrProj\p\Projects\Crystal Creek IIB\Plan Sheets\3 Summary of Quantities.dgn



**TYPICAL SECTION**  
DENLEY AVENUE  
Sta. 2+00 to Sta. 7+39



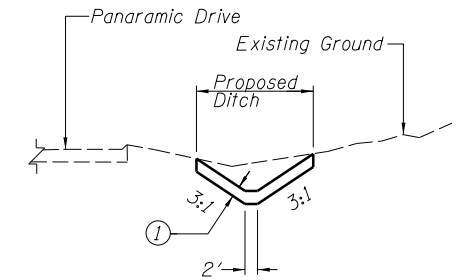
**TYPICAL SECTION**  
DORA STREET  
Sta. 13+69 to Sta. 14+45



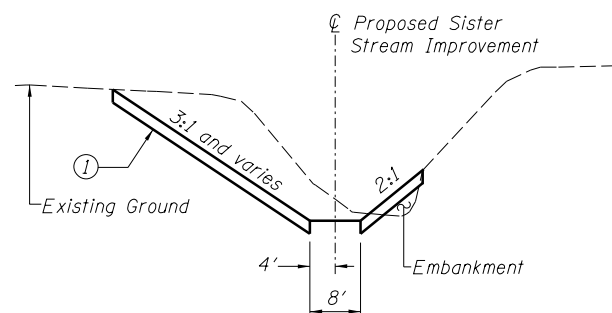
**TYPICAL SECTION**  
DORA STREET  
Sta. 14+55 to Sta. 19+47

**LEGEND**

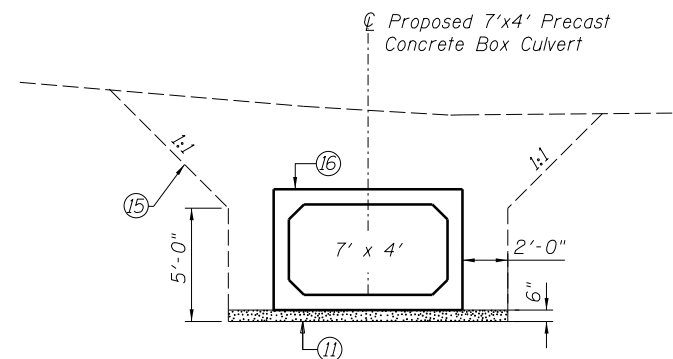
- ① 6" Topsoil
- ② Proposed Depressed B-6.12 Curb and Gutter
- ③ Proposed Hot Mix Asphalt Surface Course, 1 1/2"
- ④ Proposed Hot Mix Asphalt Binder Course, 1 1/2"
- ⑤ Proposed Aggregate Base Course, Type B, 9"
- ⑥ Proposed 8'x4' Precast Concrete Box Culvert (M273)
- ⑦ Existing Bituminous Concrete Surface Course, 1 1/2"
- ⑧ Existing Bituminous Concrete Binder Course, 1 1/2"
- ⑨ Existing Aggregate Base Course, Type B, 9"
- ⑩ Existing B-6.12 Curb and Gutter
- ⑪ Porous Granular Material (CA-18)
- ⑫ Proposed B-6.12 Curb and Gutter
- ⑬ Proposed 9'x3' Precast Concrete Box Culvert
- ⑭ Proposed Double 7'x2' Precast Concrete Box Culvert
- ⑮ Limits of Excavation
- ⑯ Proposed 7'x4' Precast Concrete Box Culvert
- ⑰ Bituminous parking surface and/or sidewalk to be removed and replaced in kind. Cost included with Precast Concrete Box Culvert 8' x 4' (M273).
- ⑱ Porous Granular Embankment



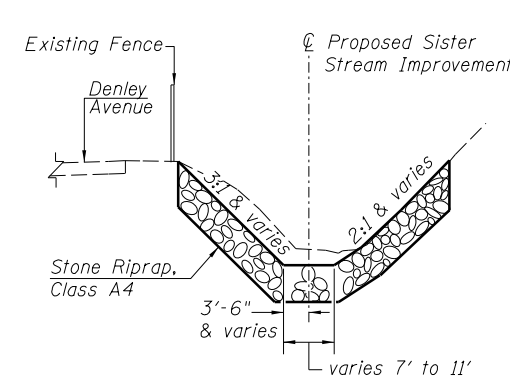
**TYPICAL SECTION**  
Sta. 20+50 to Sta. 28+00



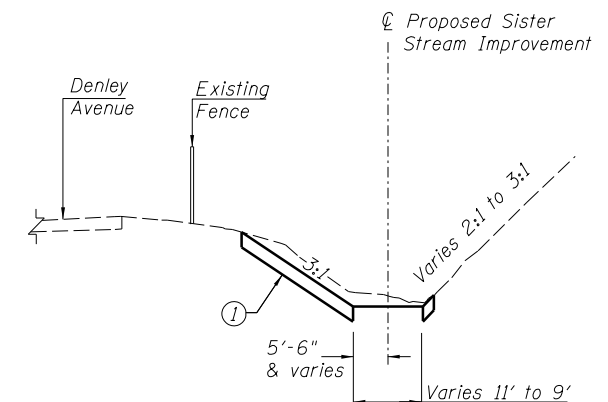
**TYPICAL SECTION**  
Sister Stream Sta. 100+25 to Sta. 102+79.31



**TYPICAL SECTION**  
SEYMORE AVENUE  
Sister Stream Sta. 102+85.31 to Sta. 104+16.31



**TYPICAL SECTION**  
Sister Stream Sta. 104+22.64 to Sta. 105+35.  
Transition from 7' channel bottom to 11' channel bottom.



**TYPICAL SECTION**  
Sister Stream Sta. 105+35 to Sta. 105+75

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7/6/2013

Designed By TMM Checked By RJM  
Drawn By RJM Checked By TMM

TREE REMOVAL SCHEDULE			
STATION	OFFSET	(6 to 15 UNITS DIAMETER)	(OVER 15 UNITS DIAMETER)
20+14	12' Rt.		18
20+32	11' Rt.	15	
20+36	11' Rt.	12	
20+43	11' Rt.	12	
22+61	4' Rt.		24
TOTAL		39	42

TREE REMOVAL, ACRES	
LOCATION	ACRES
100+00 - 105+75	1.12

SCHEDULE OF EARTHWORK					
LOCATION	CHANNEL EXCAVATION CU YD	STRUCTURE EXCAVATION CU YD	TOPSOIL EXCAVATION ** CU YD	TOPSOIL PLACEMENT (NOT PAID FOR) CU YD	EMBANKMENT (for informational purposes only) CU YD
100+00 - 105+75	889		164	202	15
13+48 - 28+00			307	229	
20+00 - 28+00	202				
14+50		92			
7+29.5		119			
TOTAL	1091	211	471	431	

\*\* PAID FOR AS TOPSOIL EXCAVATION AND PLACEMENT

SEEDING & EROSION CONTROL SCHEDULE												
LOCATION	SEEDING & FERTIL.	SEEDING MULCHING & FERTIL.	HEAVY DUTY EROSION CONTROL BLANKET	SEEDING CLASS 4A W/ MULCH METHOD 3	TEMPORARY EROSION CONTROL SEEDING	PERIMETER EROSION BARRIER	TEMPORARY DITCH CHECKS	NITROGEN FERTILIZER NUTRIENT @ 90 LBS./ACRE	PHOSPHOROUS FERTILIZER NUTRIENT @ 90 LBS./ACRE	POTASSIUM FERTILIZER NUTRIENT @ 90 LBS./ACRE	INLET & PIPE PROTECTION	INLET FILTER
	ACRE	ACRE	SQUARE YARD	ACRE	POUND	FOOT	FOOT	POUND	POUND	POUND	EACH	EACH
100+00 - 105+75	0.65		3,152		65		51				1	1
2+00 - 7+39		0.02			2		10					4
13+00 - 18+00		0.21			21	468						6
18+00 - 24+00		0.31		0.12	43	55	6	11	11	11	1	
24+00 - 28+00		0.24		0.06	30		8	5	5	5		
TOTAL	0.65	0.78	3,152	0.18	161	523	75	16	16	16	2	11

PAVING SCHEDULE						
LOCATION	AGGREGATE BASE COURSE, TYPE B, 9"	BIT. MATL. PRIME COAT (GAL)	AGGREGATE (PRIME COAT) TON	HOT-MIX ASPHALT BINDER CSE, IL-19.0, N50 (TON) 1 1/2"	HOT-MIX ASPHALT SURFACE CSE, MIX "D", N50 (TON) 1 1/2"	HOT-MIX ASPHALT SURFACE REMOVAL 3"
	SQ YD	0.08 GAL/SQ YD	4 POUNDS/SQ YD	112 POUNDS/SQ YD-IN	112 POUNDS/SQ YD-IN	SQ YD
1+61 LT & RT to 7+36 LT & RT	969	78	2	87	116	
13+01 to 19+65 LT & RT	966	77	2	81	81	
1+94 to 7+34 RT						400
TOTAL	1,935	155	4	168	197	400

PIPE & INLET SCHEDULE						
LOCATION	SIZE & TYPE	INV. ELEV.	LENGTH	PIPE REMOVAL LENGTH*	COMMENTS	
103+72.5	LT & RT 12" IRON PIPE	638.8			EXISTING SEWER LINE TO BE LOWERED AND MANHOLE RELOCATED BY OTHERS	
103+80	LT 10"	639.34	10'	9'	ROUTE EXIST. 10" STORM SEWER INTO PROPOSED CULVERT *	
103+80	LT 15"	636.90	10'	8'	ROUTE EXIST. 15" STORM SEWER INTO PROPOSED CULVERT. REMOVE EXIST. M.H. *	
2+82	LT 15"	636.20	5'	17'	ROUTE EXIST. STORM SEWER INTO PROPOSED CULVERT *	
4+66	LT 12"	639.40	5'	17'	ROUTE EXIST. STORM SEWER INTO PROPOSED CULVERT *	
6+15	LT 12"	639.00	5'	17'	ROUTE EXIST. STORM SEWER INTO PROPOSED CULVERT *	
13+05	RT 12"	639.00±	5'	5'	ROUTE EXIST. STORM SEWER INTO PROPOSED CULVERT *	
16+82	LT 12"	638.12	5'	11'	ROUTE EXIST. STORM SEWER INTO PROPOSED EAST CULVERT *	
16+82	RT			10'	SET TYPE 1 FRAME & OPEN LID IN CURB & DRAIN INTO EAST CULVERT	
20+28.7	4.3' LT END SECTION	637.8			PRC FLARED END SECTION 12" ATTACH TO EXIST. 12" RCP	

\* COST INCLUDED WITH BOX CULVERTS

PRECAST BOX CULVERT SCHEDULE (ASTM C1577)						
Station	Size (Span x height)	Length	Design Fill (Ft.)		***PGE Backfill required	Skew
			Edge of shldr. (Min.)	Max.		
102+85.60-104+16.60	7' x 4'	131'	1'	5'-7"	No	6°
1+36.34-7+24.50	8' x 4'	588'	1'	4'	Yes	45° - 90°
13+02.02-14+45	9' x 3'	143'	2.3'	3.4'	Yes	59° - 90°
14+55-19+97.03	7' x 2'	1,084'	1'	3.5'	Yes	42° - 90°

\*\*\* Cost included with Box Culverts

CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED	
LOCATION	FOOT
100+36 - 105+53 LT	536
19+66 - 21+00 RT	127
TOTAL	663

STONE RIPRAP, CLASS A4 & FILTER FABRIC	
LOCATION	SQ YD
101+22 Rt.	5
102+50.6 - 102+88.6	121
104+13.6 - 105+35.	697
TOTAL	823

TEMPORARY CONCRETE BARRIER	
LOCATION	FOOT
12+93 - 20+20	727

PAVEMENT REMOVAL SCHEDULE	
LOCATION	SQ YD
1+61 LT & RT to 7+36 LT & RT	969
13+01 to 19+65 LT & RT	966
TOTAL	1,935

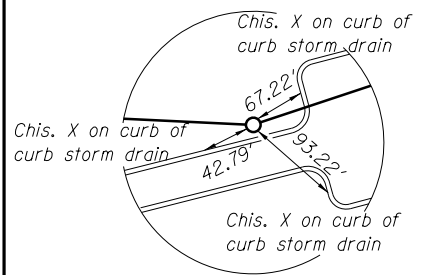
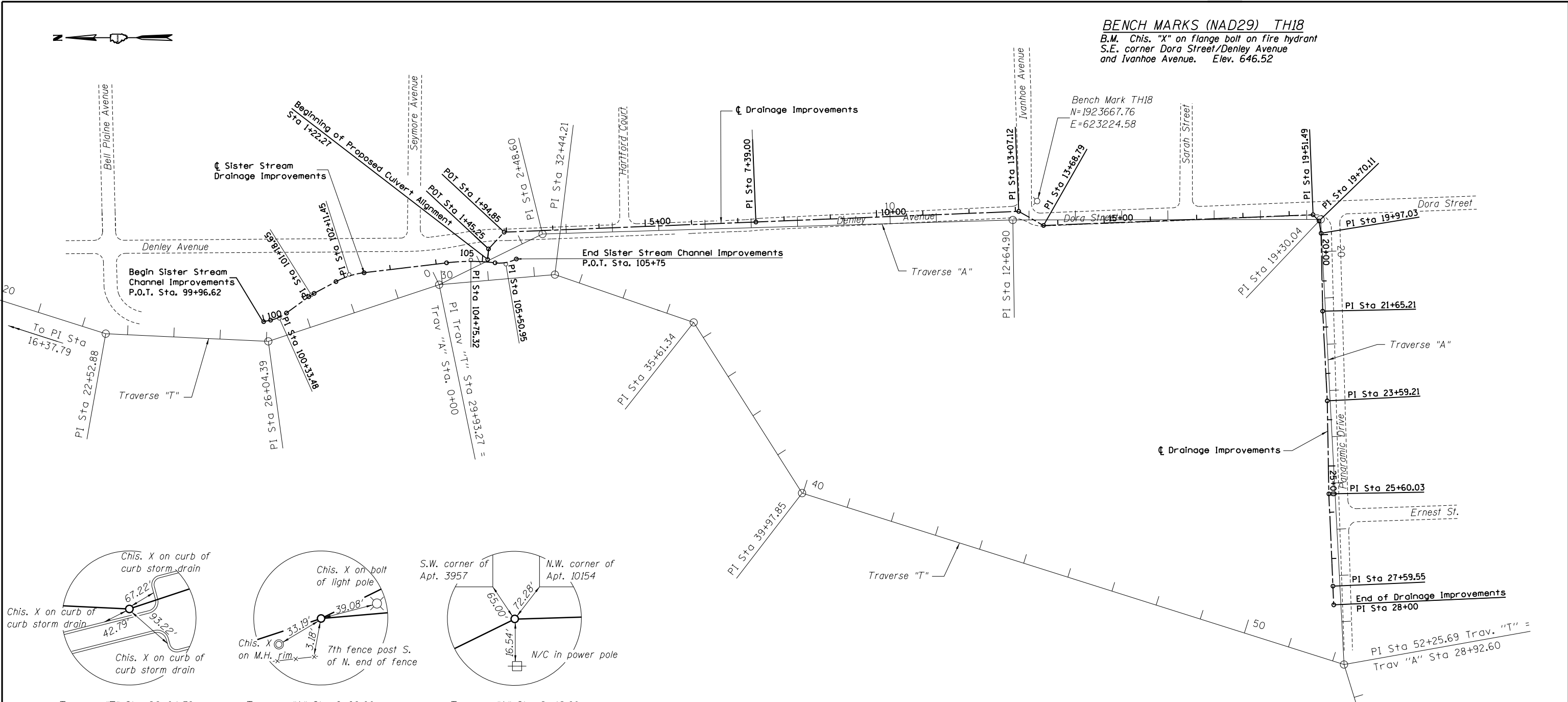
BOX CULVERT END SECTIONS			
SIZE	LOCATION		EACH
7'X4'	CULVERT NO. 1	102+79.60	1
7'X4'	CULVERT NO. 1	104+22.60	1
8'X4'	CULVERT NO. 2	1+36.34	1
7'X2'	CULVERT NO. 4	19+97.03	2

PIPE CULVERT REMOVAL		
SIZE	LOCATION	FOOT
48"	Sta. 102+79.6 - Sta. 104+22.6	143
24"	Sta. 7+00 RT.	116
Bulk-Head	Sta. 7+34	
Bulk-Head	Sta. 13+05	
TOTAL		259

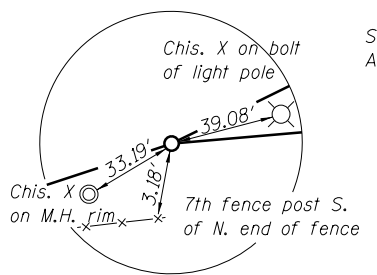
COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT	
LOCATION	LENGTH (FT)
1+71 RT. & LT.	29
1+92 - 4+32 LT.	247
4+69 - 7+34 LT.	267
13+03 RT. - 19+78 LT.	682
TOTAL	1,225

**BENCH MARKS (NAD29) TH18**

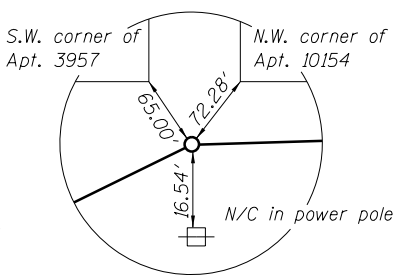
B.M. Chis. "X" on flange bolt on fire hydrant  
S.E. corner Dora Street/Denley Avenue  
and Ivanhoe Avenue. Elev. 646.52



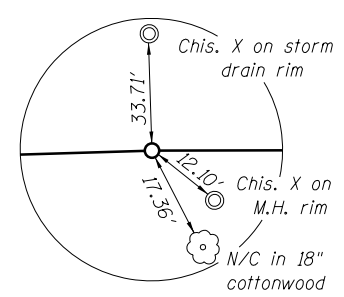
Traverse "T" Sta. 26+04.39  
Chis. X on curb



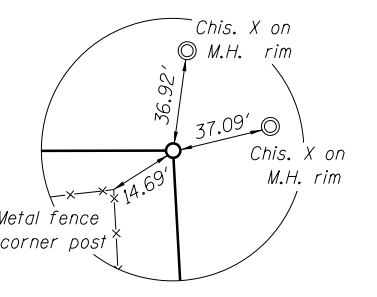
Traverse "A" Sta. 0+00.00 =  
Traverse "T" Sta. 29+93.27  
Rebar



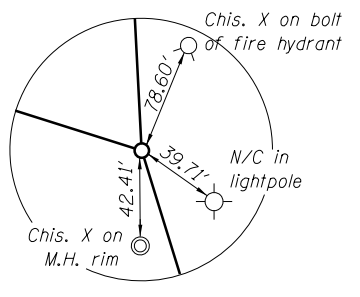
Traverse "A" Sta. 2+48.60  
Chis. X on M.H. rim



Traverse "A" Sta. 12+64.90  
Rebar



Traverse "A" Sta. 19+30.04  
Rebar



Traverse "A" Sta. 28+92.60 =  
Traverse "T" Sta. 52+25.69  
Chis. X on curb

**SURVEY TRAVERSE REFERENCE MARKS**

**SURVEY TRAVERSE "A" COORDINATES**

PI Sta. 0+00	N 1924959.46	E 623044.07
PI Sta 2+48.60	N 1924736.26	E 623153.55
PI Sta 12+64.90	N 1923720.41	E 623183.75
PI Sta 19+30.04	N 1923055.27	E 623185.00
PI Sta 28+92.60	N 1923004.89	E 622223.76

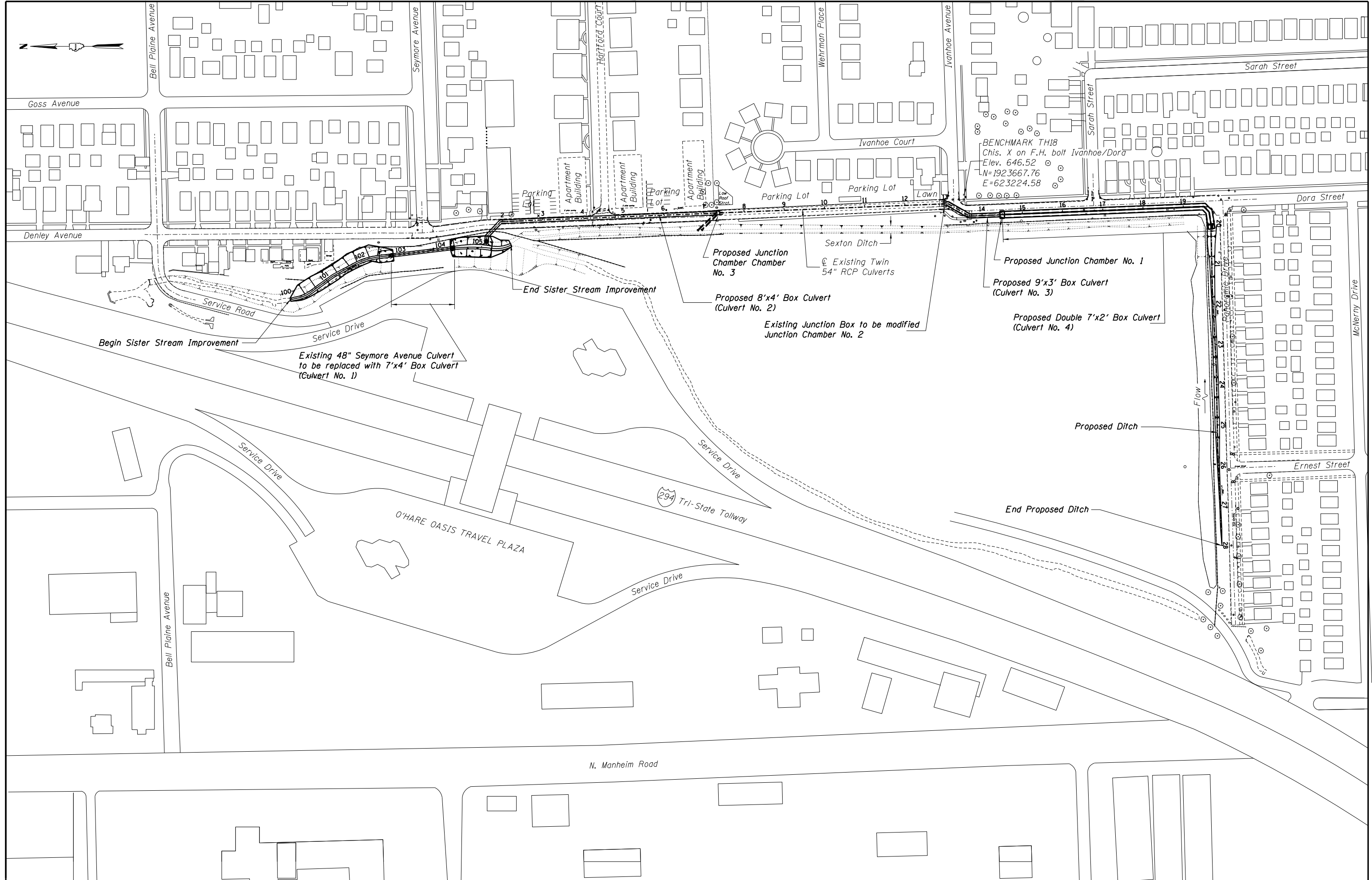
**SURVEY TRAVERSE "T" COORDINATES**

PI Sta 22+52.88	N 1925679.67	E 622938.21
PI Sta 26+04.39	N 1925328.56	E 622921.62
PI Sta 29+93.27	N 1924959.46	E 623044.07
PI Sta 32+44.21	N 1924709.45	E 623065.78
PI Sta 35+61.34	N 1924409.63	E 622962.49
PI Sta 39+97.85	N 1924175.56	E 622594.03
PI Sta 52+25.69	N 1923004.89	E 622223.76
PI Sta 56+39.04	N 1922882.61	E 621828.91

**CL DRAINAGE IMPROVEMENT COORDINATES**

POT STA. 99+96.62	N 1,925,340.81	E 622,963.71
PI STA. 100+33.48	N 1,925,304.78	E 622,971.49
PI STA. 101+18.65	N 1,925,235.60	E 623,022.12
PI STA. 102+11.45	N 1,925,153.78	E 623,065.96
PI STA. 104+75.32	N 1,924,891.04	E 623,097.47
PI STA. 105+50.95	N 1,924,815.45	E 623,088.42
POT STA. 105+75	N 1,924,792.68	E 623,099.54
POT STA. 1+22.27	N 1,924,854.69	E 623,098.34
PI STA. 1+45.25	N 1,924,852.77	E 623,121.24
PI STA. 1+94.85	N 1,924,818.94	E 623,157.51
PI STA. 7+39.00	N 1,924,275.23	E 623,179.36
PI Sta 13+07.12	N 1,923,707.57	E 623,202.33
PI Sta 13+68.79	N 1,923,653.96	E 623,171.84
PI Sta 19+51.49	N 1,923,071.73	E 623,195.02
PI Sta 19+70.11	N 1,923,058.79	E 623,181.62
PI Sta 19+97.03	N 1,923,054.41	E 623,155.07
PI Sta 21+65.21	N 1,923,050.93	E 622,986.92
PI Sta 23+59.21	N 1,923,041.04	E 622,793.17
PI Sta 25+60.03	N 1,923,037.62	E 622,592.38
PI Sta 27+59.55	N 1,923,028.79	E 622,393.05
POT Sta 28+00	N 1,923,027.00	E 622,352.65

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 7/6/2013  
 Designed By TMM checked by RLP  
 Drawn By RJM checked by JUF



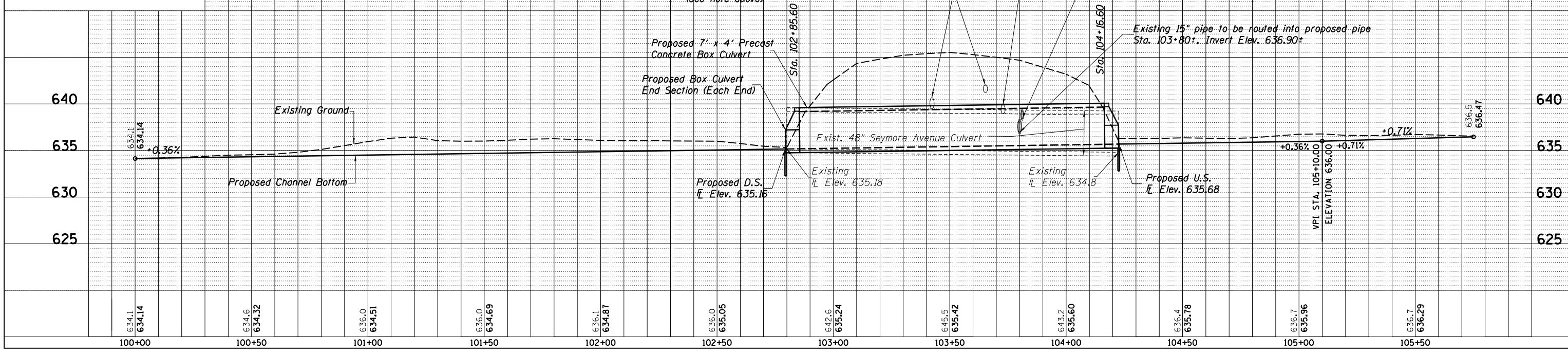
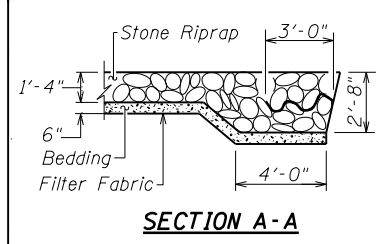
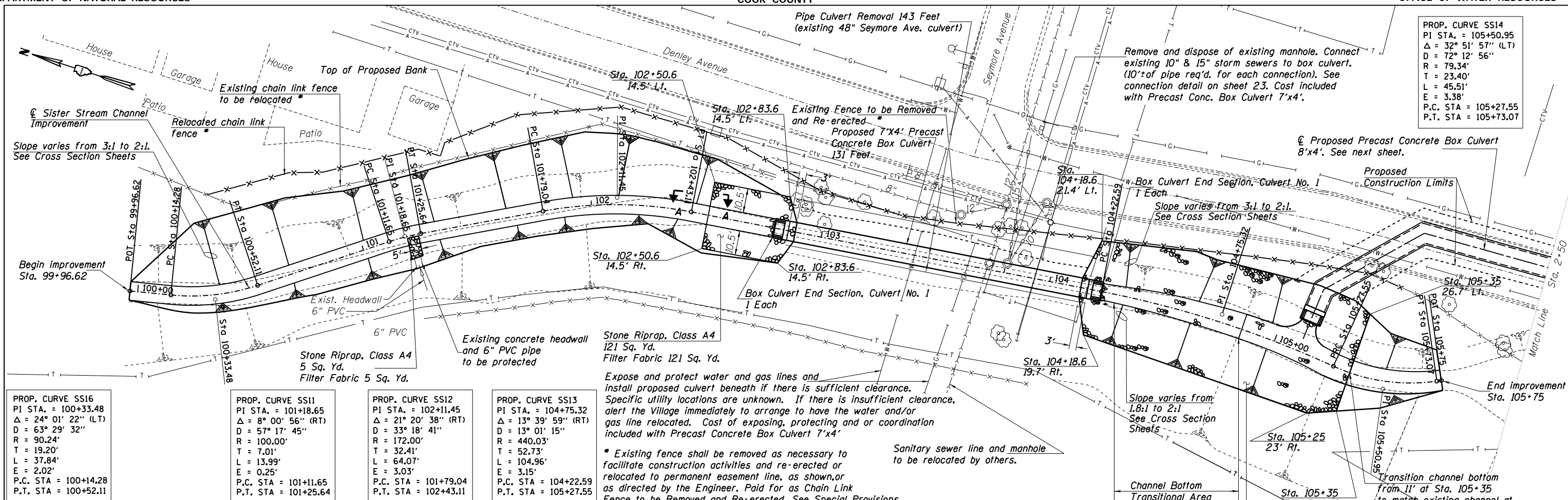
Designed By RLP Checked By RLP  
 Drawn By TMM Checked By TMM

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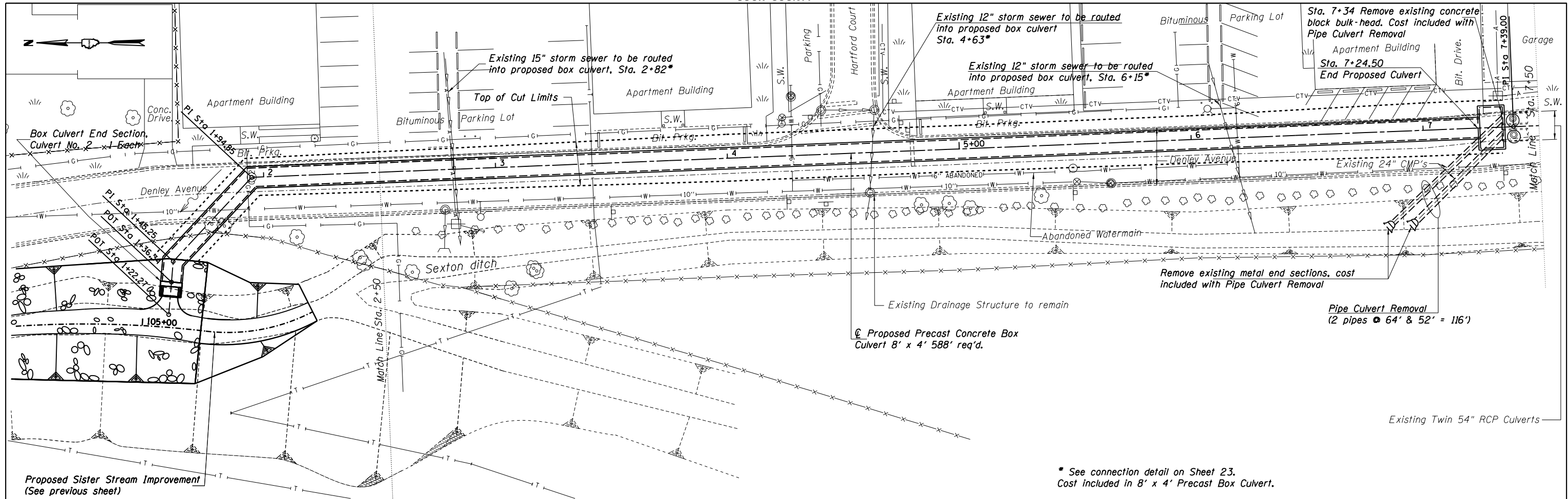
7/5/2013



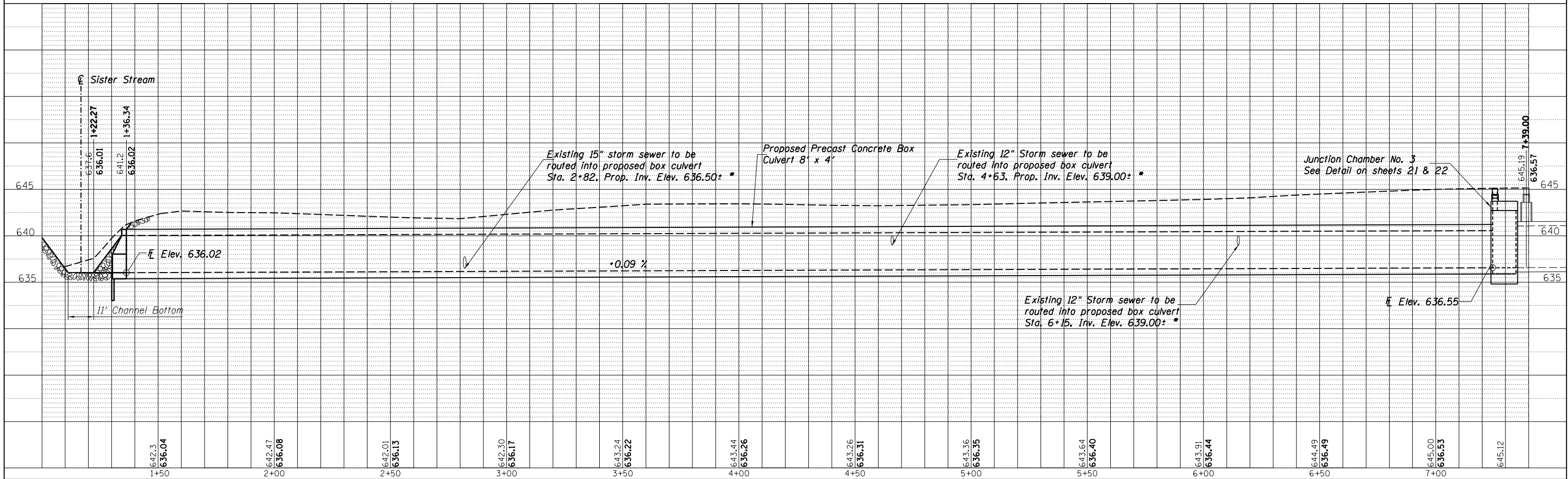
DESIGNED BY: TMM  
DRAWN BY: RJM

CHECKED BY: RLP  
CHECKED BY: JUF

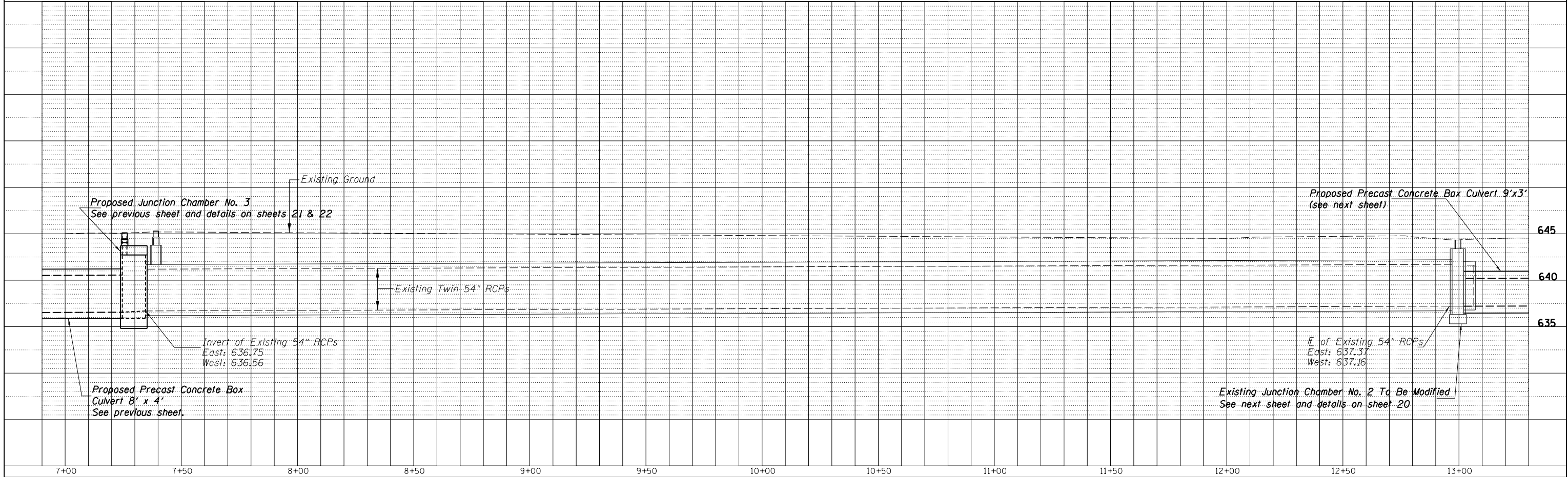
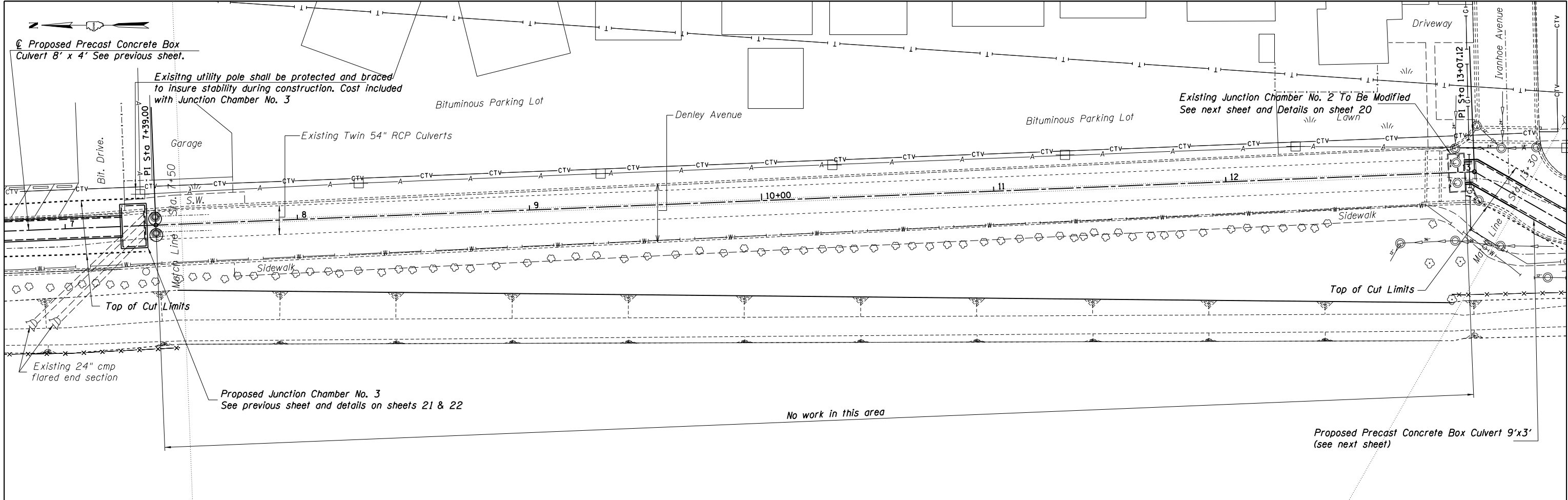




\* See connection detail on Sheet 23.  
Cost included in 8' x 4' Precast Box Culvert.



DESIGNED BY: TMM  
DRAWN BY: RUM  
CHECKED BY: RLP  
CHECKED BY: JUF



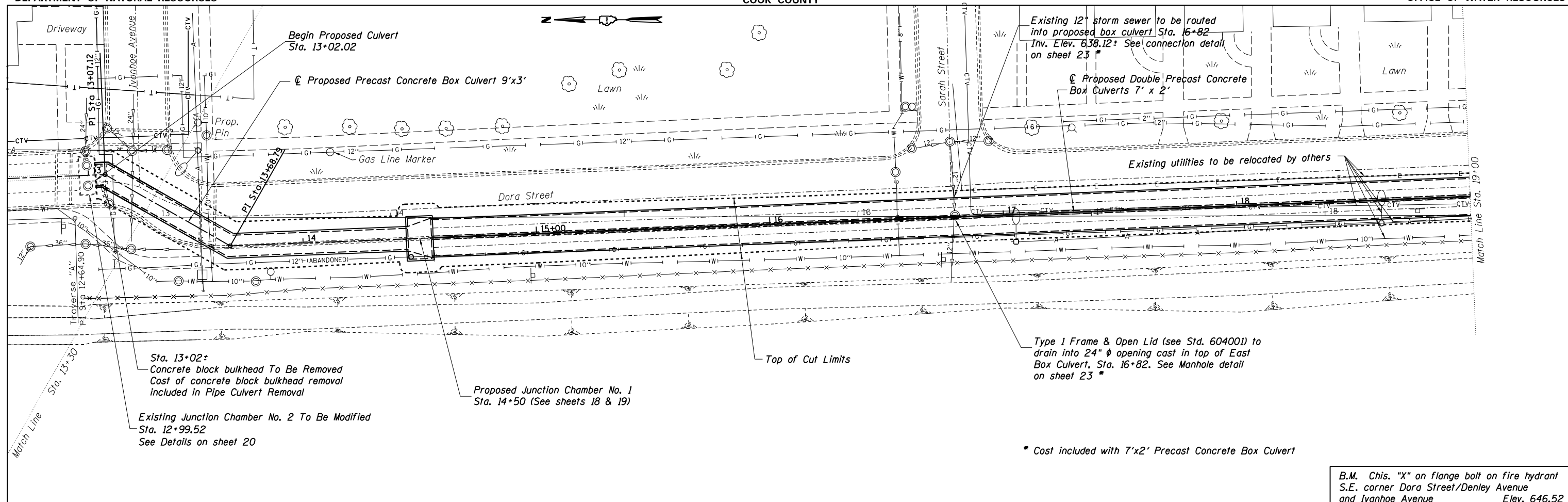
DESIGNED BY: TMM  
DRAWN BY: RUM  
CHECKED BY: RLP  
CHECKED BY: JUF

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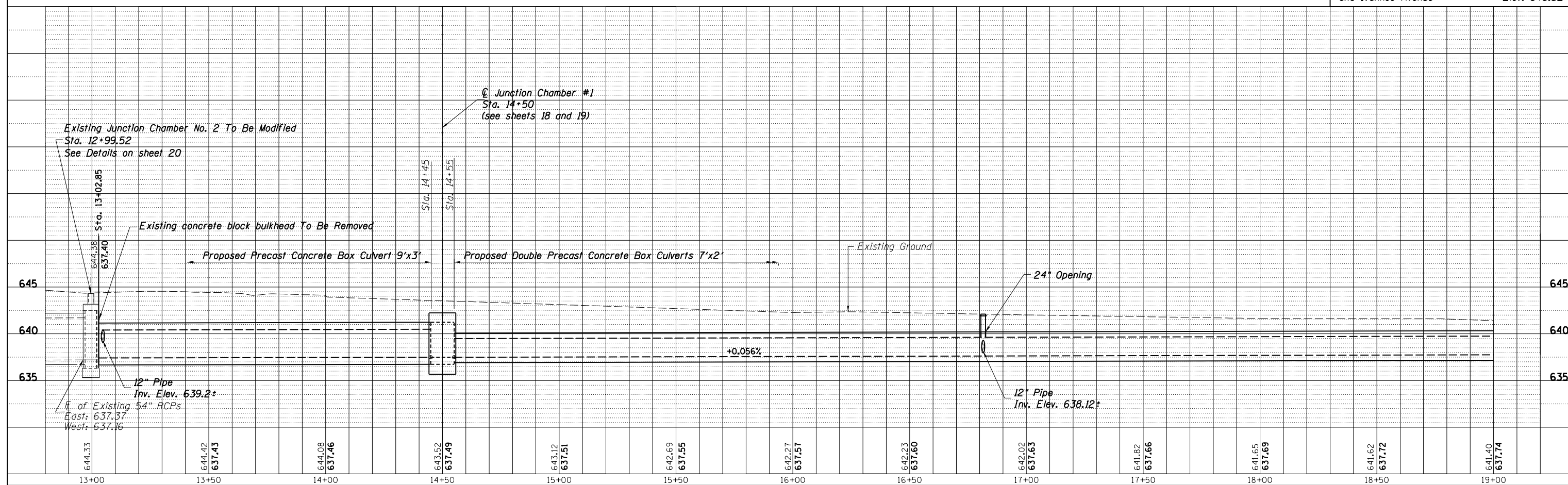
7/6/2013

DESIGNED BY: TMM  
DRAWN BY: RJM  
CHECKED BY: RLP  
CHECKED BY: JJF



\* Cost included with 7'x2' Precast Concrete Box Culvert

B.M. Chis. "X" on flange bolt on fire hydrant  
S.E. corner Dora Street/Denley Avenue  
and Ivanhoe Avenue  
Elev. 646.52

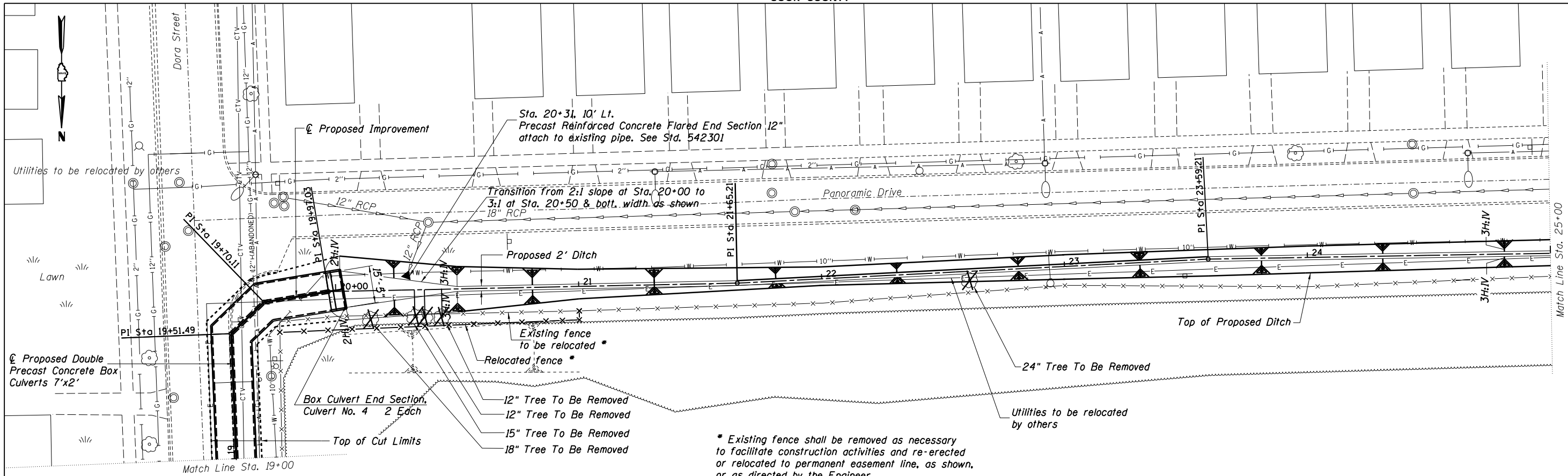


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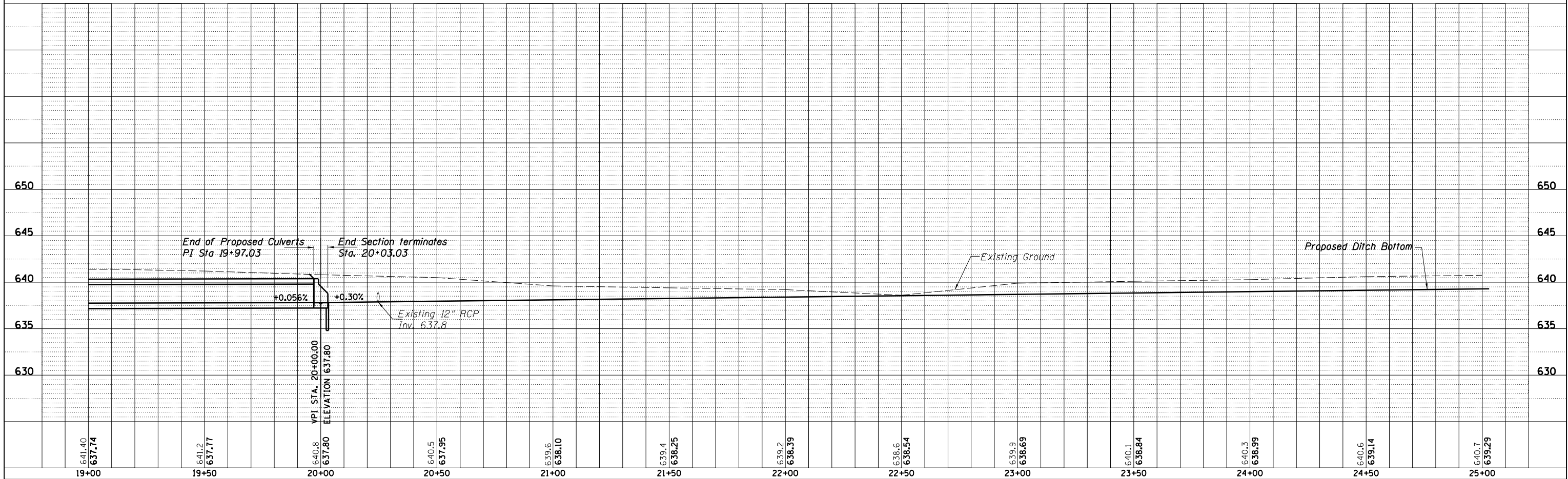
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7/5/2013

DESIGNED BY: TMM  
DRAWN BY: RJM  
CHECKED BY: RLP  
CHECKED BY: JUF



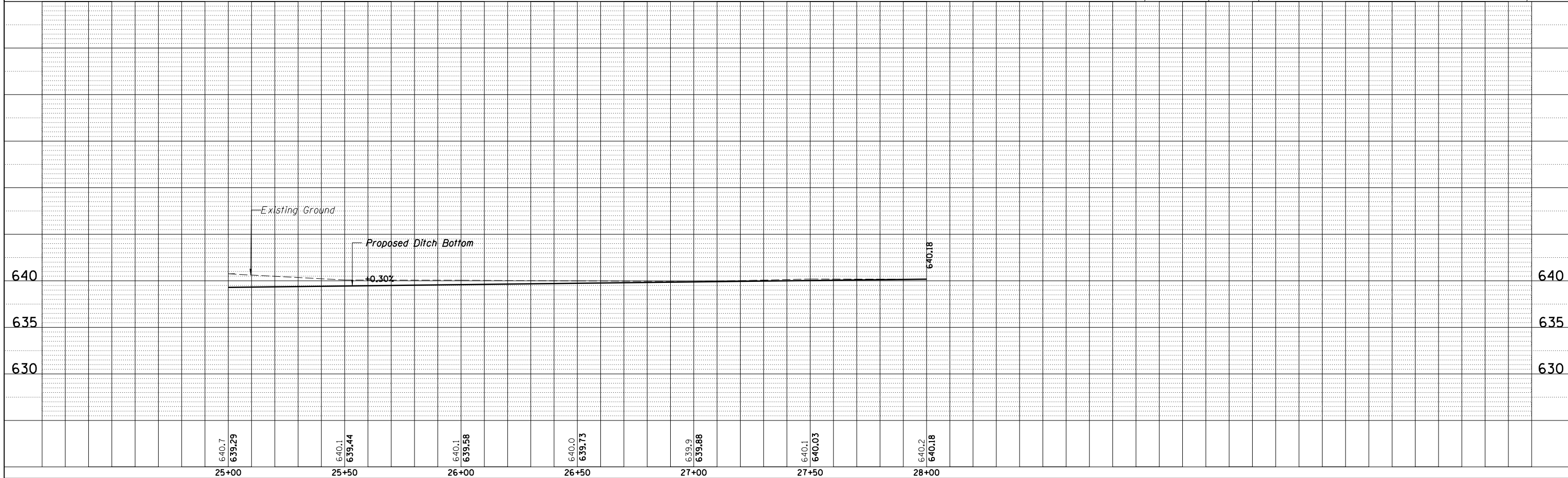
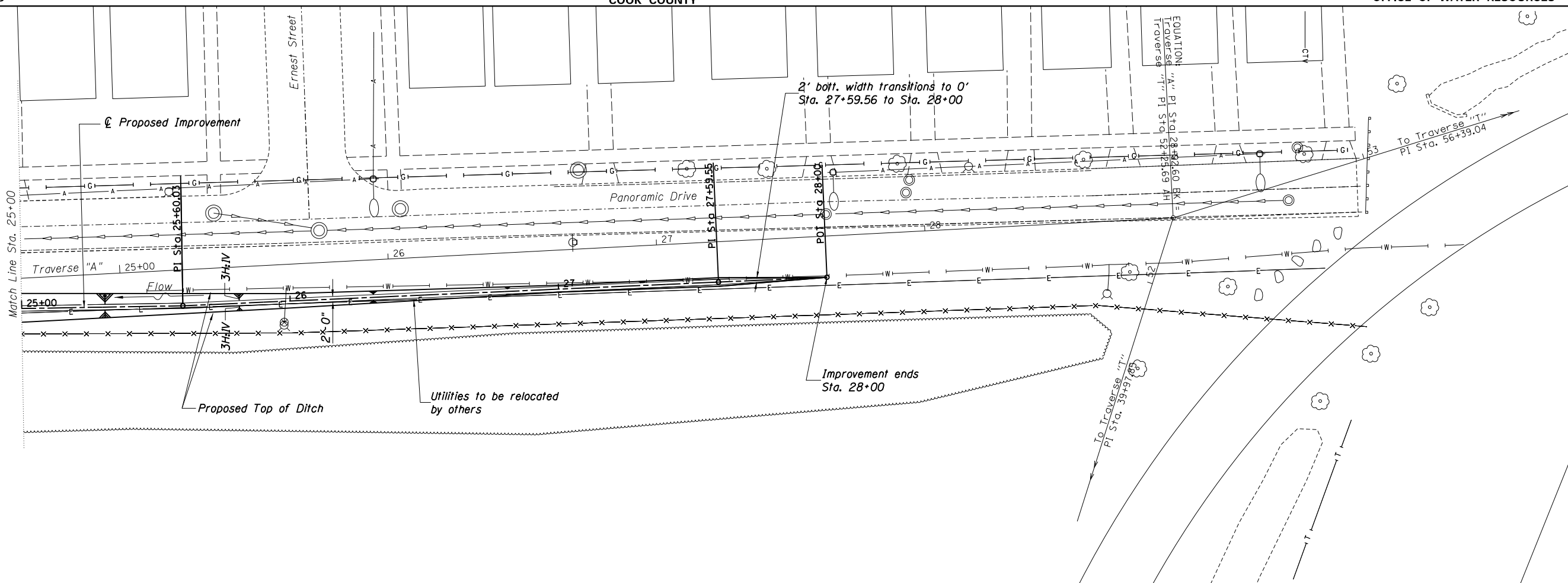
\* Existing fence shall be removed as necessary to facilitate construction activities and re-erected or relocated to permanent easement line, as shown, or as directed by the Engineer. Paid for as Chain Link Fence to be Removed and Re-erected. See Special Provisions



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7/5/2013



DESIGNED BY: TMM  
DRAWN BY: RJM

CHECKED BY: GMS  
CHECKED BY: GMS

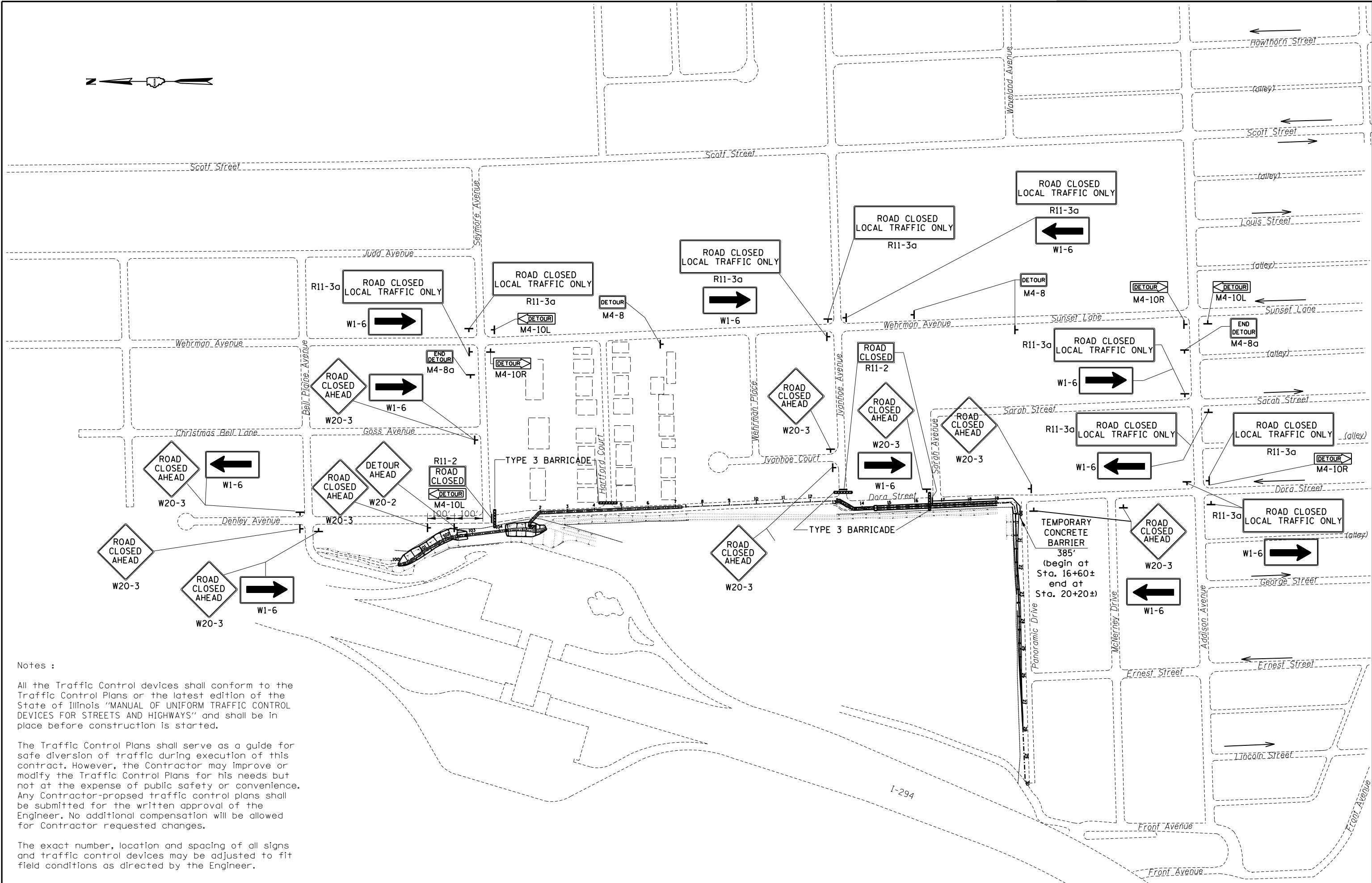


O:\OwrProj\mpl\Projects\CrystalCreek II B\Plan Sheets\14 Traffic Control.dgn

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7/20/13

Designed By          Checked By          GMS  
Drawn By          Checked By          RLP



Notes :

All the Traffic Control devices shall conform to the Traffic Control Plans or the latest edition of the State of Illinois "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" and shall be in place before construction is started.

The Traffic Control Plans shall serve as a guide for safe diversion of traffic during execution of this contract. However, the Contractor may improve or modify the Traffic Control Plans for his needs but not at the expense of public safety or convenience. Any Contractor-proposed traffic control plans shall be submitted for the written approval of the Engineer. No additional compensation will be allowed for Contractor requested changes.

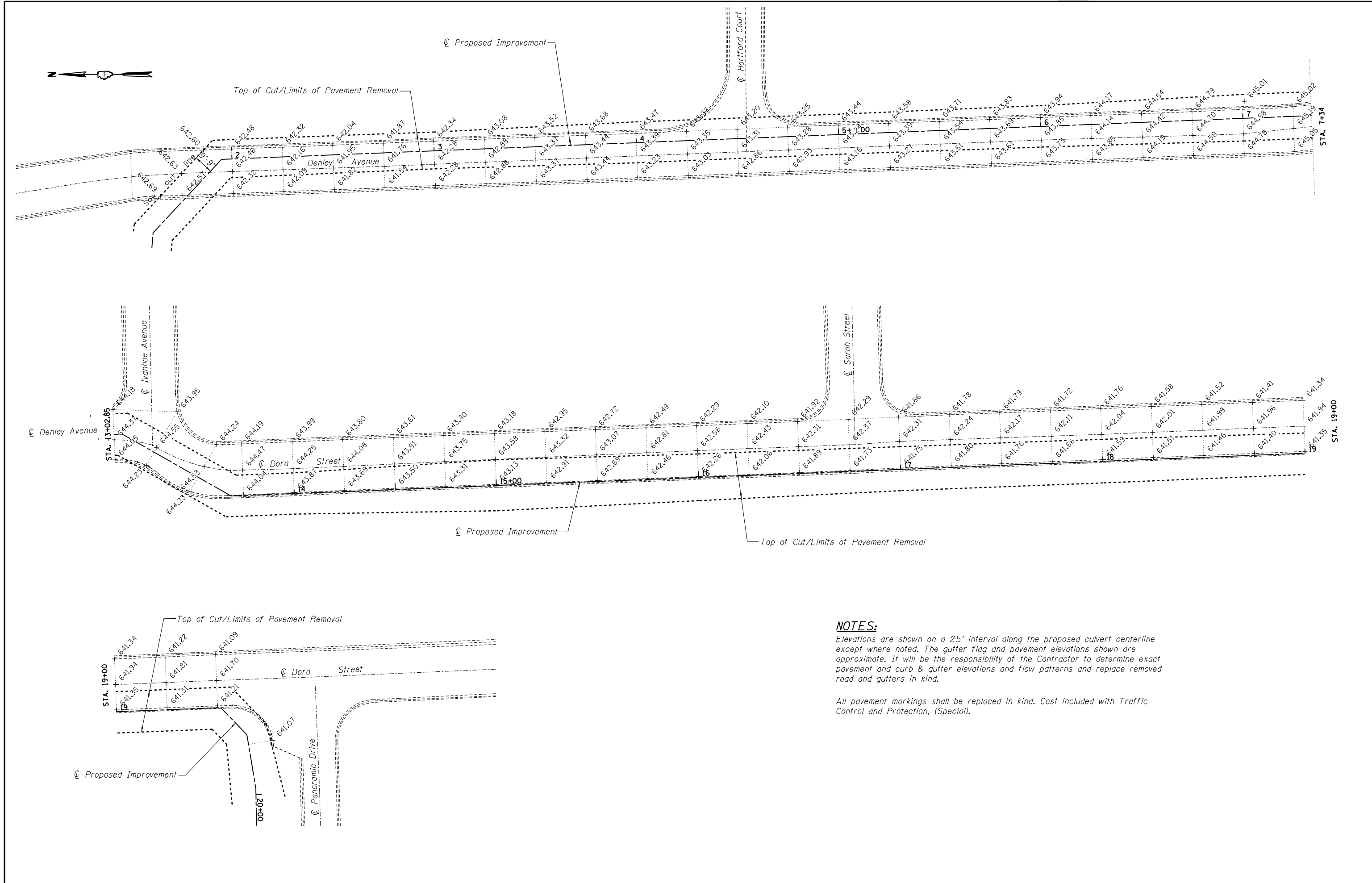
The exact number, location and spacing of all signs and traffic control devices may be adjusted to fit field conditions as directed by the Engineer.

O:\OwrProj\m\p\Projects\CrystalCreek II B\Plan Sheets\15 Gutter Flag and Centerline Elevatn

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7/20/03

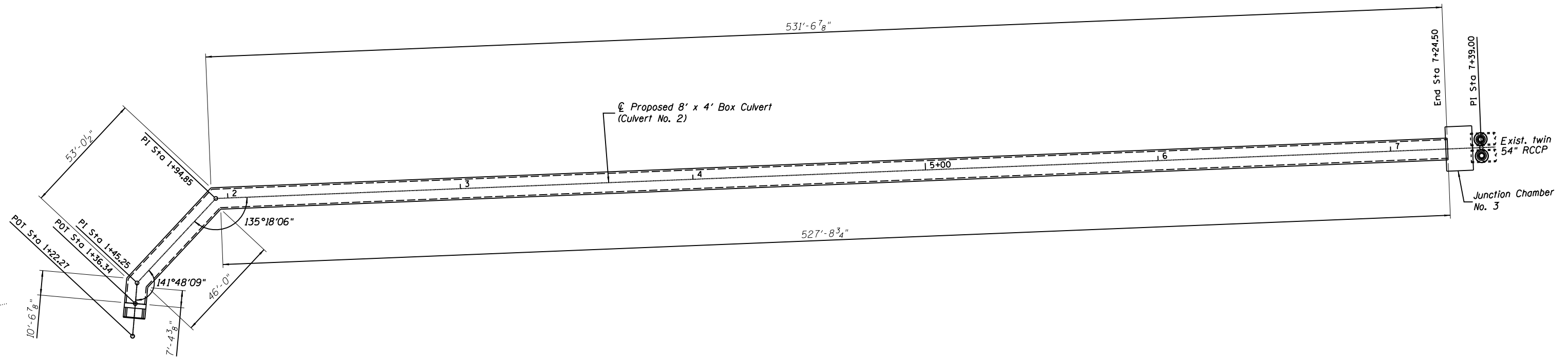
Designed By JUF Checked By GMS  
Drawn By JUF Checked By GMS



**NOTES:**

Elevations are shown on a 25' interval along the proposed culvert centerline except where noted. The gutter flag and pavement elevations shown are approximate. It will be the responsibility of the Contractor to determine exact pavement and curb & gutter elevations and flow patterns and replace removed road and gutters in kind.

All pavement markings shall be replaced in kind. Cost included with Traffic Control and Protection, (Special).



PLAN

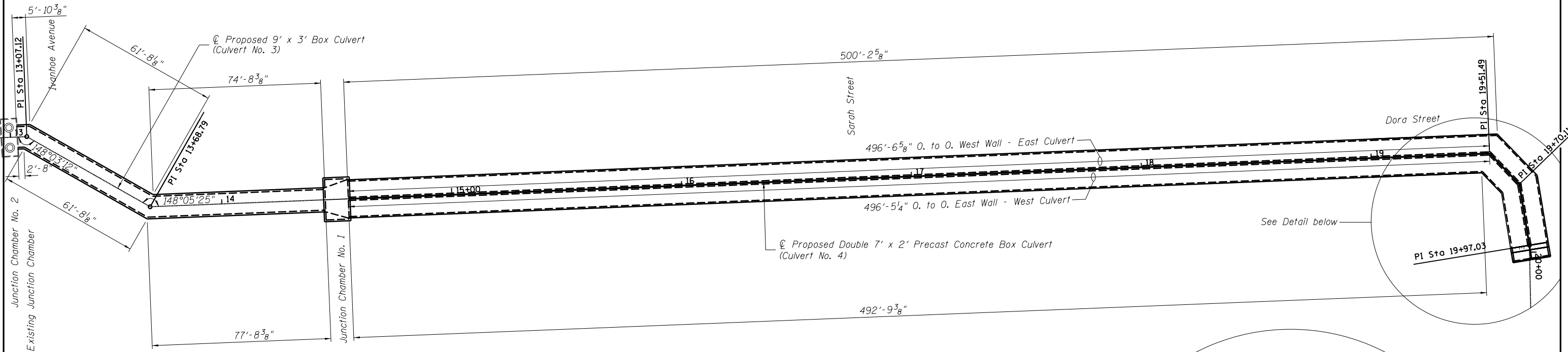
**Notes**  
The Contractor shall field verify the locations of the existing junction chamber and twin 54" diameter RCCP's and make necessary approved adjustments to the box culvert layout prior to construction or ordering of materials as approved by the Engineer.

Designed By JJF Checked By TMM  
 Drawn By JJF Checked By TMM  
 O:\OwrProj\proj\CrystalCreek IIB\Plan Sheets\16 Box Culvert Layout I.dgn  
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 7/20/03

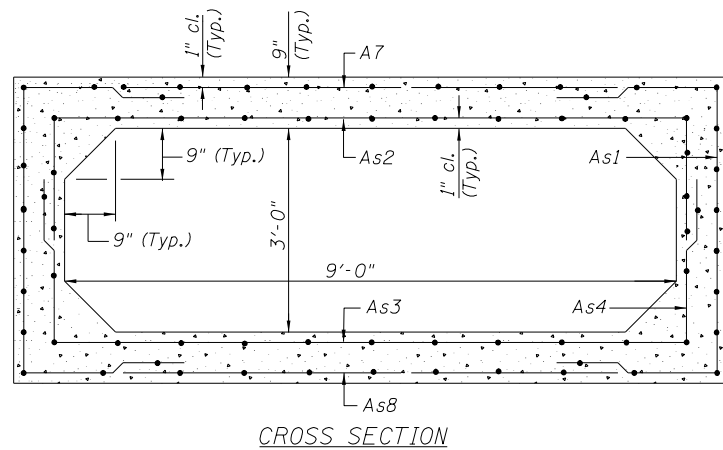


**Notes**

The Contractor shall field verify the locations of the existing junction chamber and twin 54" diameter RCCP's and make necessary approved adjustments to the box culvert layout prior to construction or ordering of materials as approved by the Engineer.



**PLAN**

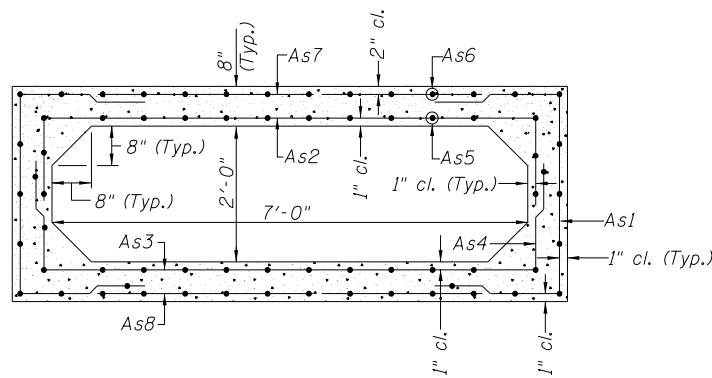


**CROSS SECTION**

CIRCUMFERENTIAL REINFORCEMENT AREA (Inch<sup>2</sup>/Ft.)

As1	As2	As3	As4	As5	As6	As7	As8
0.46	0.34	0.35	0.22	—	—	0.22	0.22

**PROPOSED 9' X 3' PRECAST BOX CULVERT**

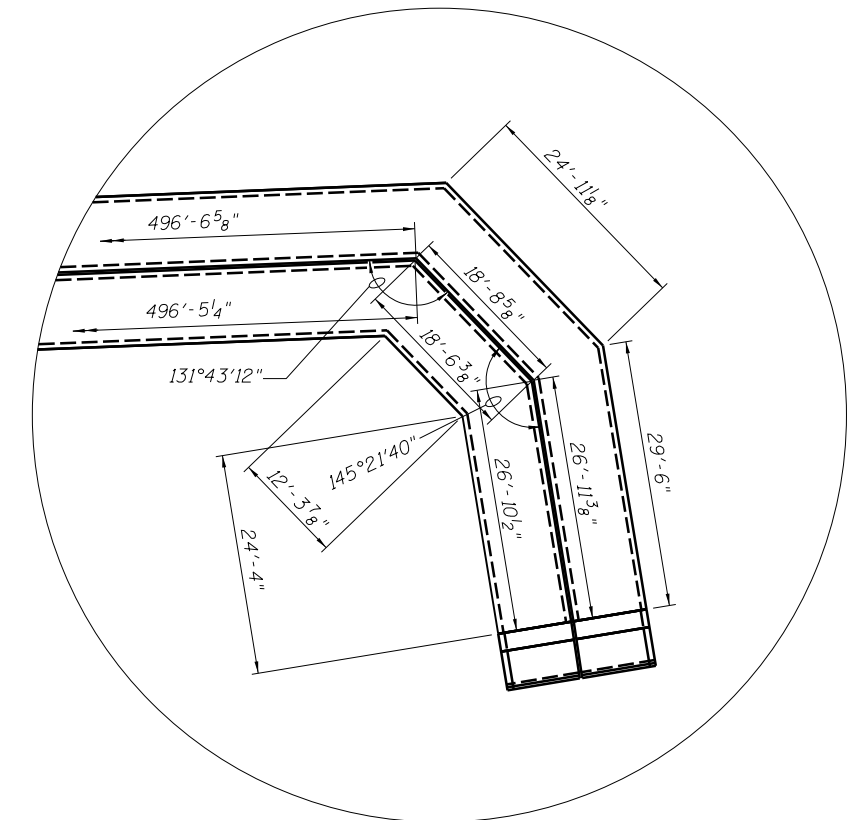


**CROSS SECTION**

CIRCUMFERENTIAL REINFORCEMENT AREA (Inch<sup>2</sup>/Ft.)

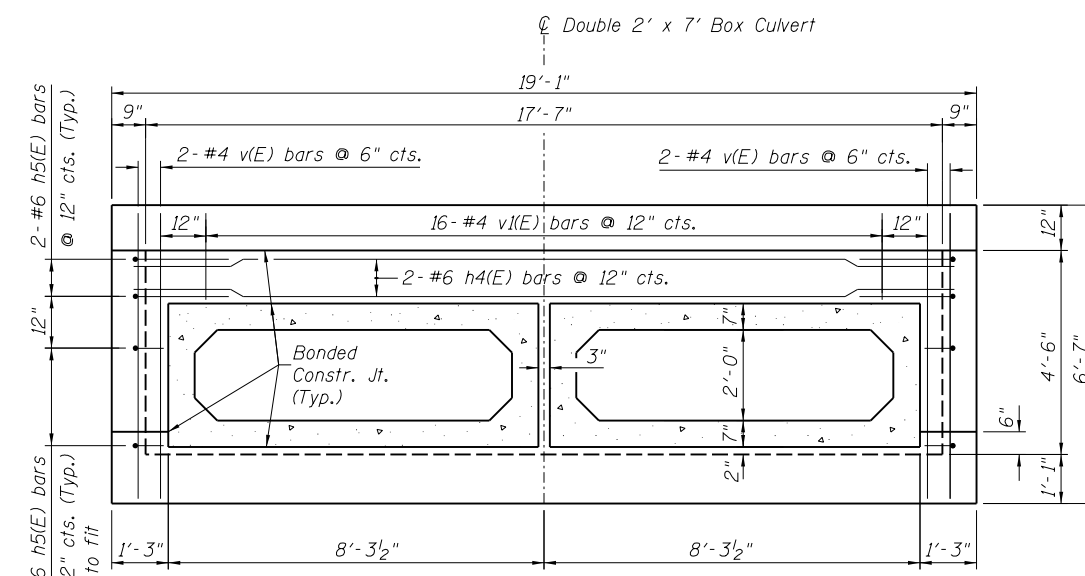
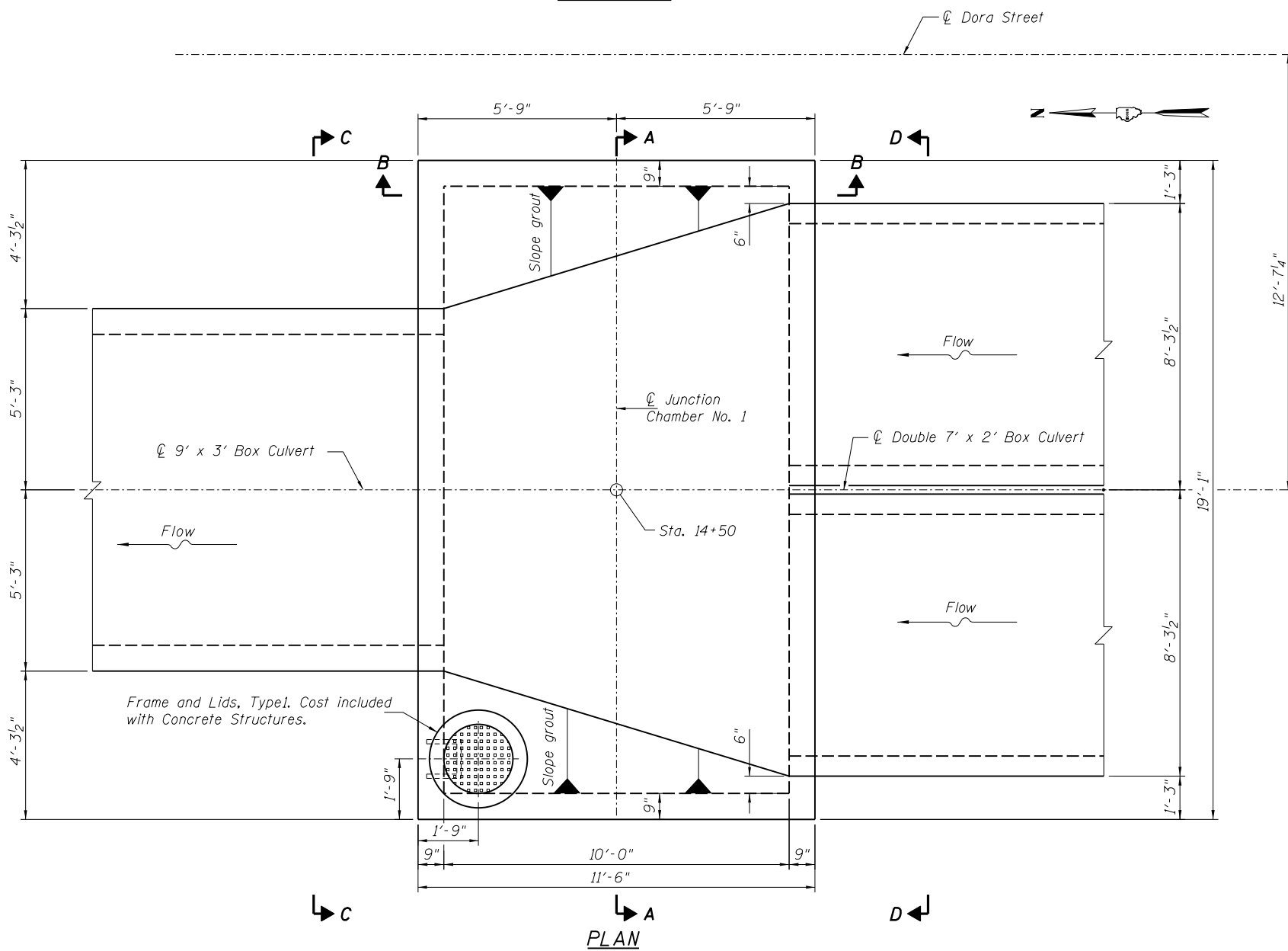
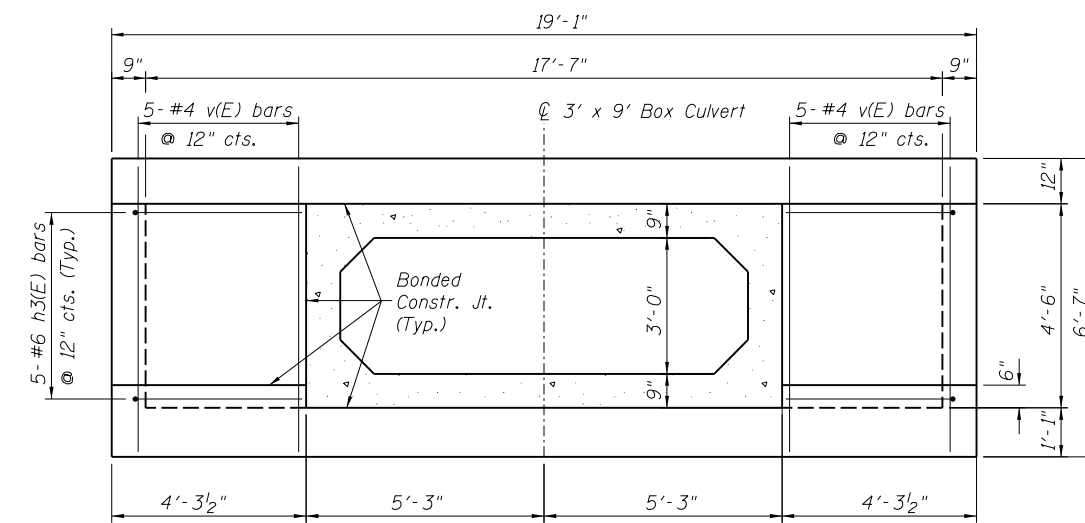
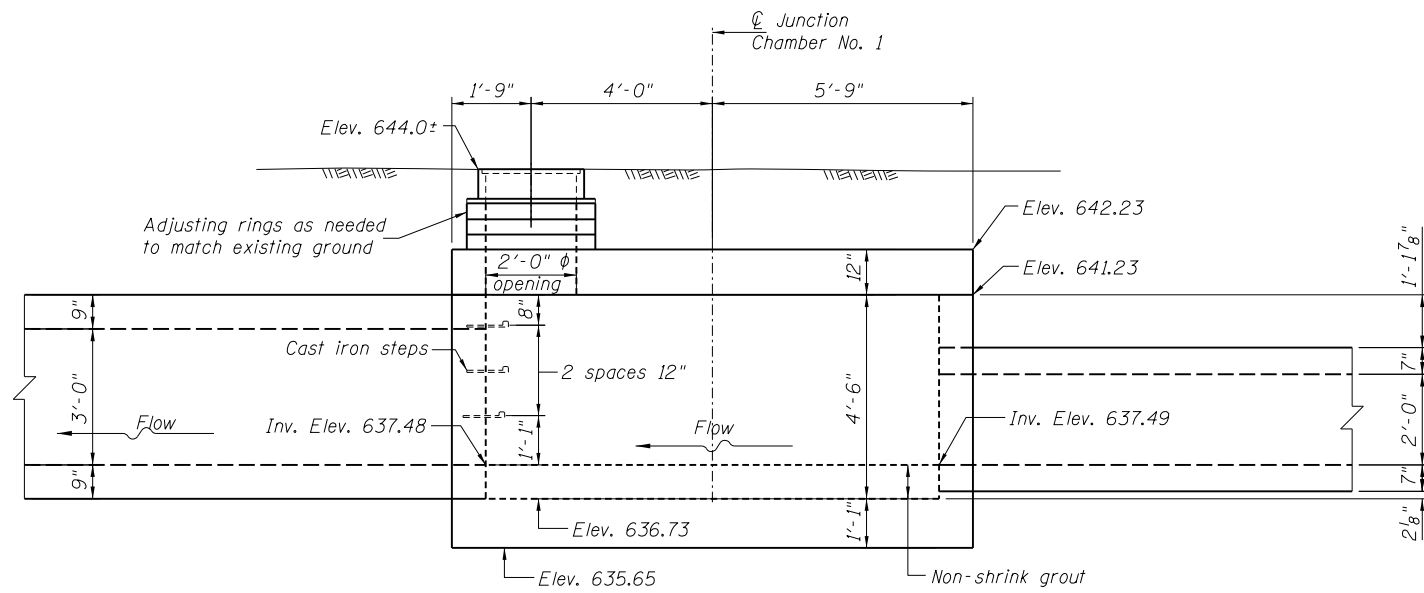
As1	As2	As3	As4	As5	As6	As7	As8
0.38	0.28	0.25	0.20	0.20	0.20	0.20	0.20

**PROPOSED 7' X 2' PRECAST BOX CULVERT**



**DETAIL**

Designed By JUF Checked By TMM  
 Drawn By JUF Checked By TMM  
 O:\OwrProj\m\Projects\CrystalCreek IIB\Plan Sheets\17 Box Culvert Layout II.dgn  
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**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications

**LOADING HL-93**

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

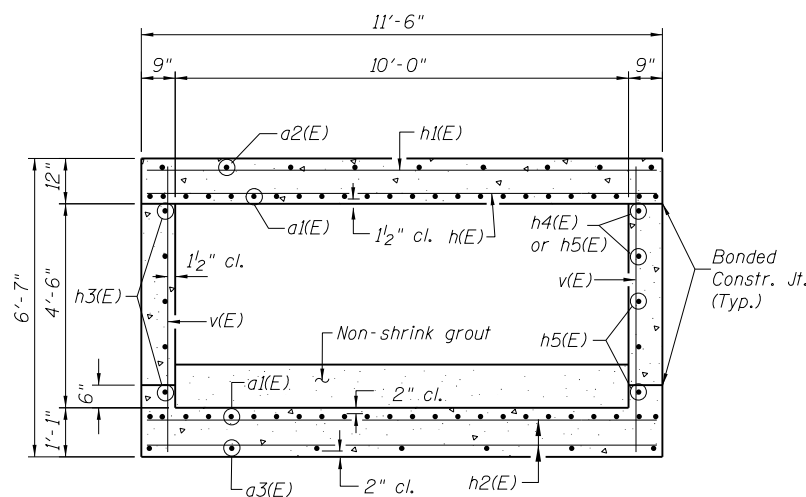
**DESIGN STRESSES**

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

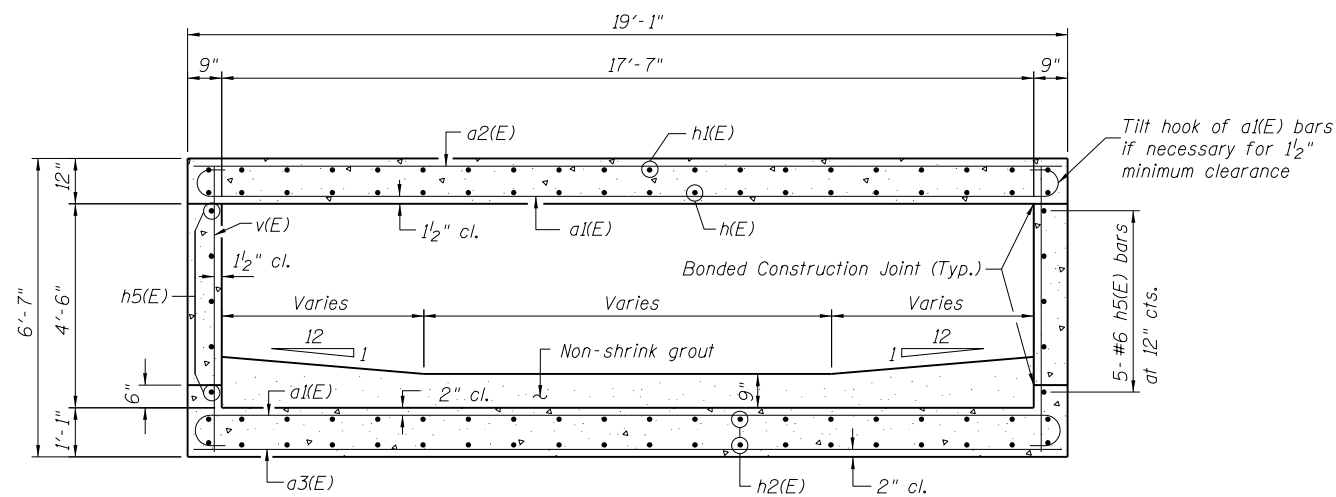
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 Drawn By JUF Checked By TMM  
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 7/20/13

Notes:

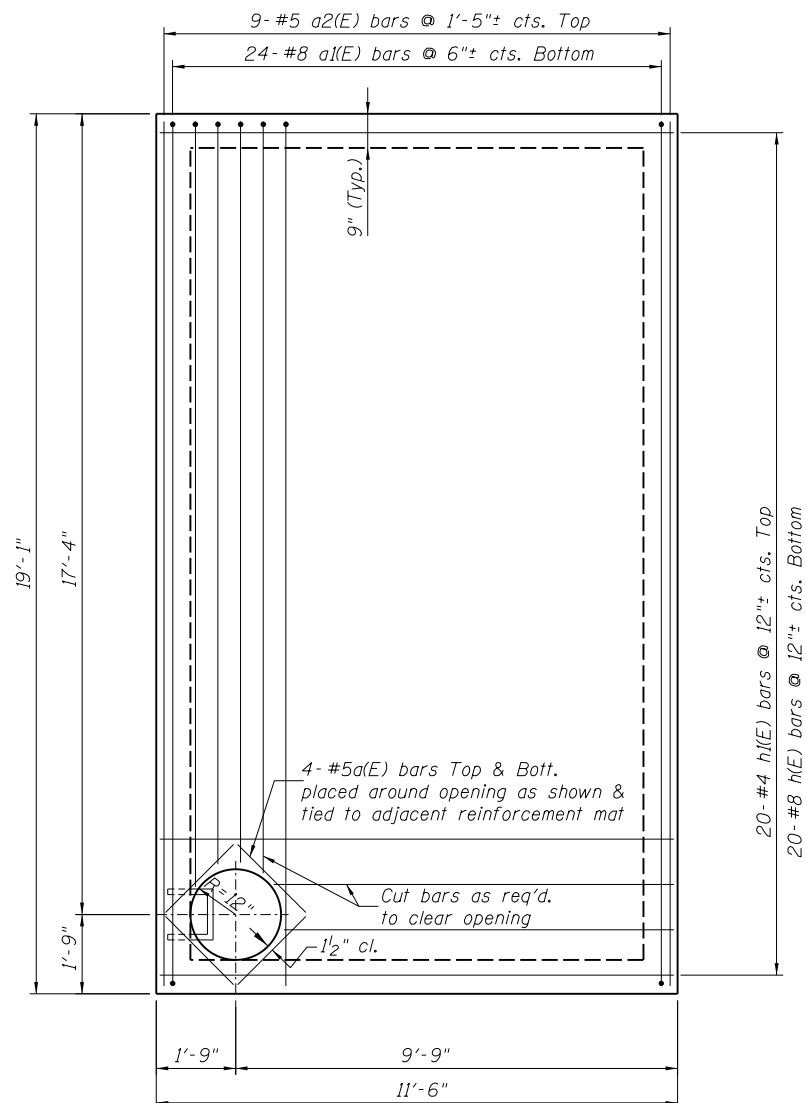
- All exposed edges of concrete shall have a 3/4" chamfer unless noted otherwise.
- Reinforcement bars designated (E) shall be epoxy coated.
- Contractor shall construct top slab or brace junction chamber walls prior to backfilling.
- Cost of cast iron steps included with Concrete Structures.
- Precast alternate is not allowed.
- Cost of non shrink grout included with Concrete Structures.



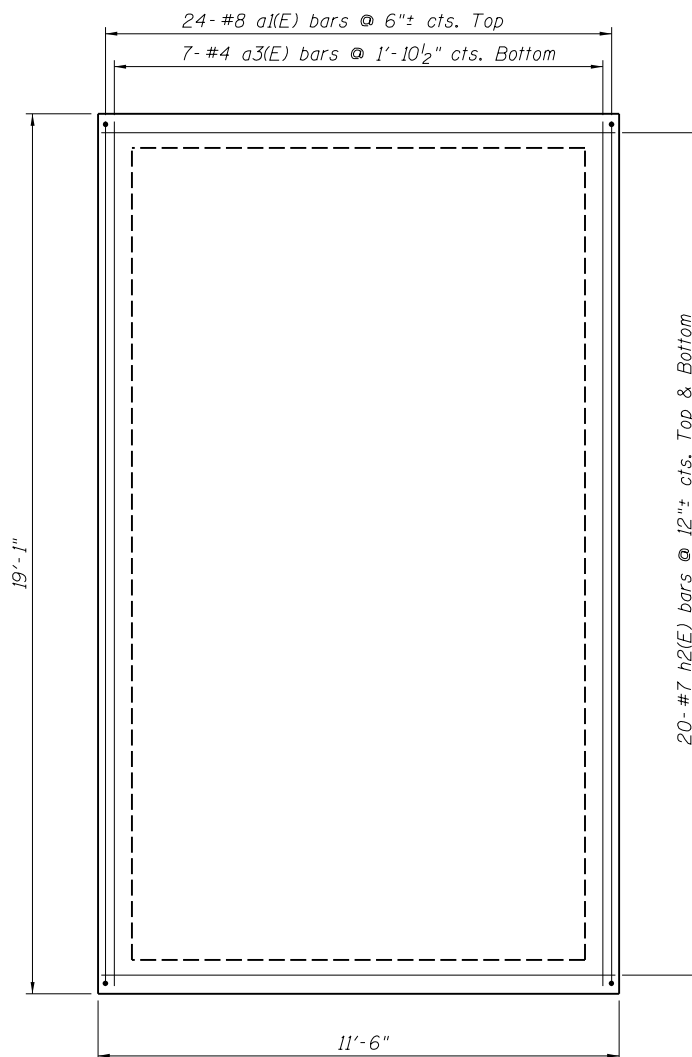
SECTION B-B



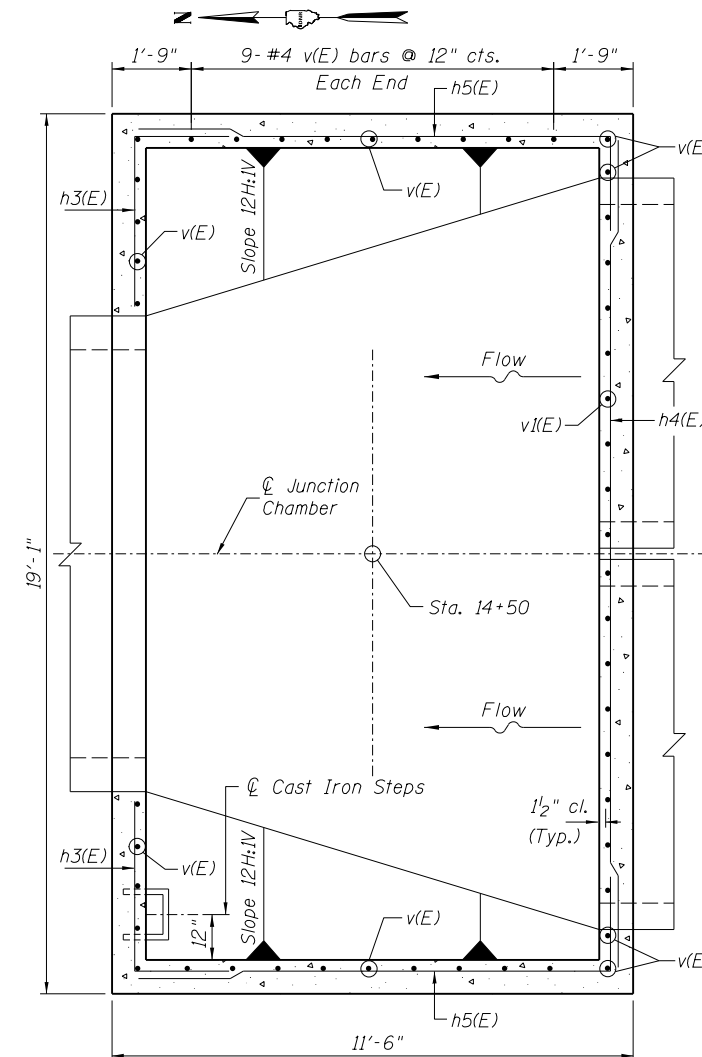
SECTION A-A



TOP SLAB

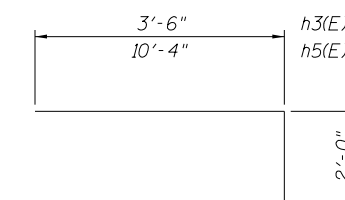


BOTTOM SLAB

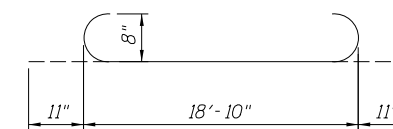


PLAN

(Showing reinforcement in walls)



BARS h3(E) & h5(E)



BAR a1(E)

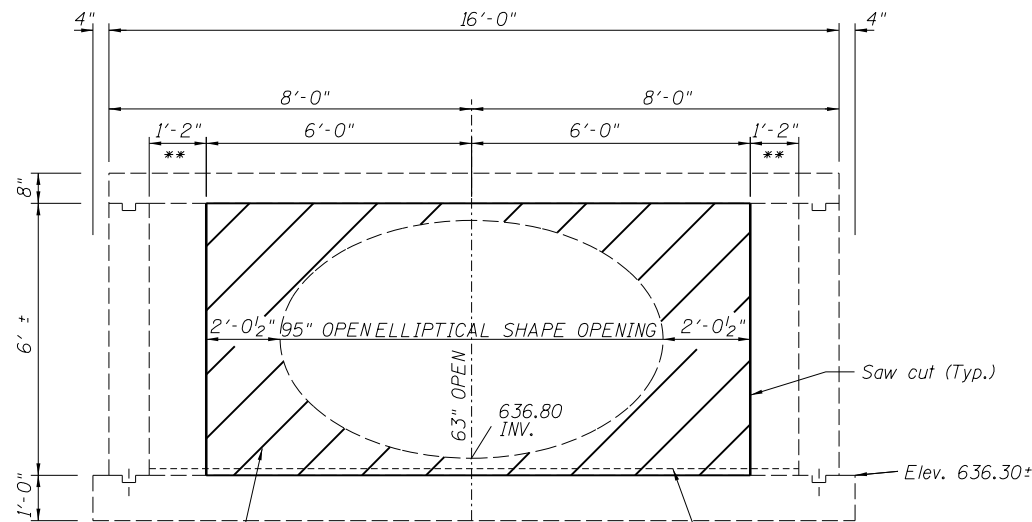
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	8	#5	2'-3"	—
a1(E)	48	#8	20'-8"	—
a2(E)	9	#5	18'-10"	—
a3(E)	7	#4	18'-10"	—
h(E)	20	#8	11'-3"	—
h1(E)	20	#4	11'-3"	—
h2(E)	40	#7	11'-3"	—
h3(E)	10	#6	5'-6"	—
h4(E)	2	#6	18'-0"	—
h5(E)	10	#6	12'-4"	—
v(E)	32	#4	6'-3"	—
v1(E)	16	#4	1'-11"	—
Concrete Structures			Cu Yd	21.3
Reinforcement Bars, Epoxy Coated			Pound	5,080
Structure Excavation			Cu Yd	92

Designed By TMM Checked By JUF  
 Drawn By JUF Checked By TMM  
 O:\OwrProj\mpl\Projects\CrystalCreek IIB\Plan Sheets\9 Junction Chamber No 1 Details.dgn  
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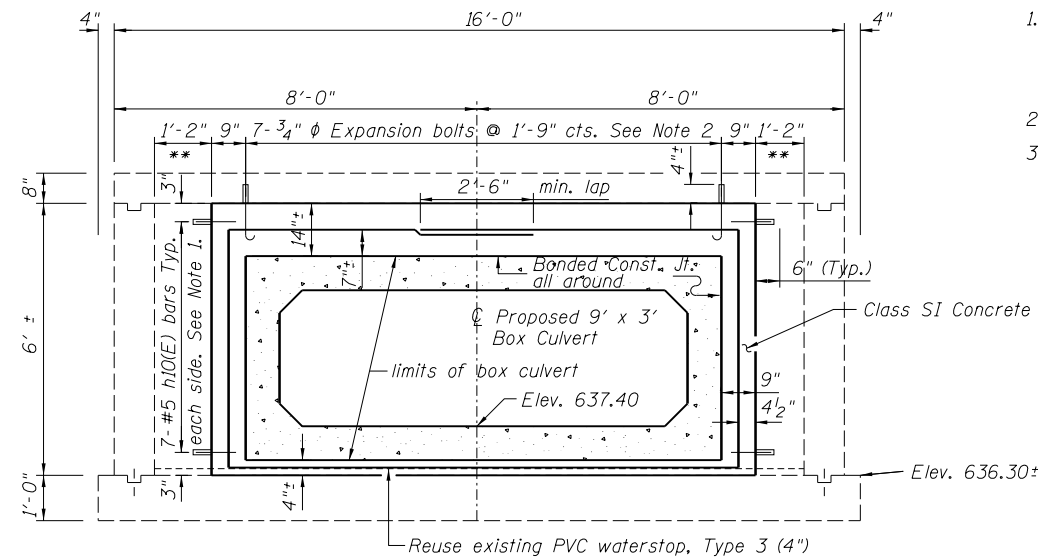
Notes:

1. Epoxy grouting of bars shall be done according to Section 584 of the Std. Spec's. The grout and method of application shall be approved by the Engineer. Cost included with Reinforcement Bars, Epoxy Coated.
2. Hooked bolts shall extend a minimum of 9" into new concrete.
3. Reinforcement bars designated (E) shall be epoxy coated.

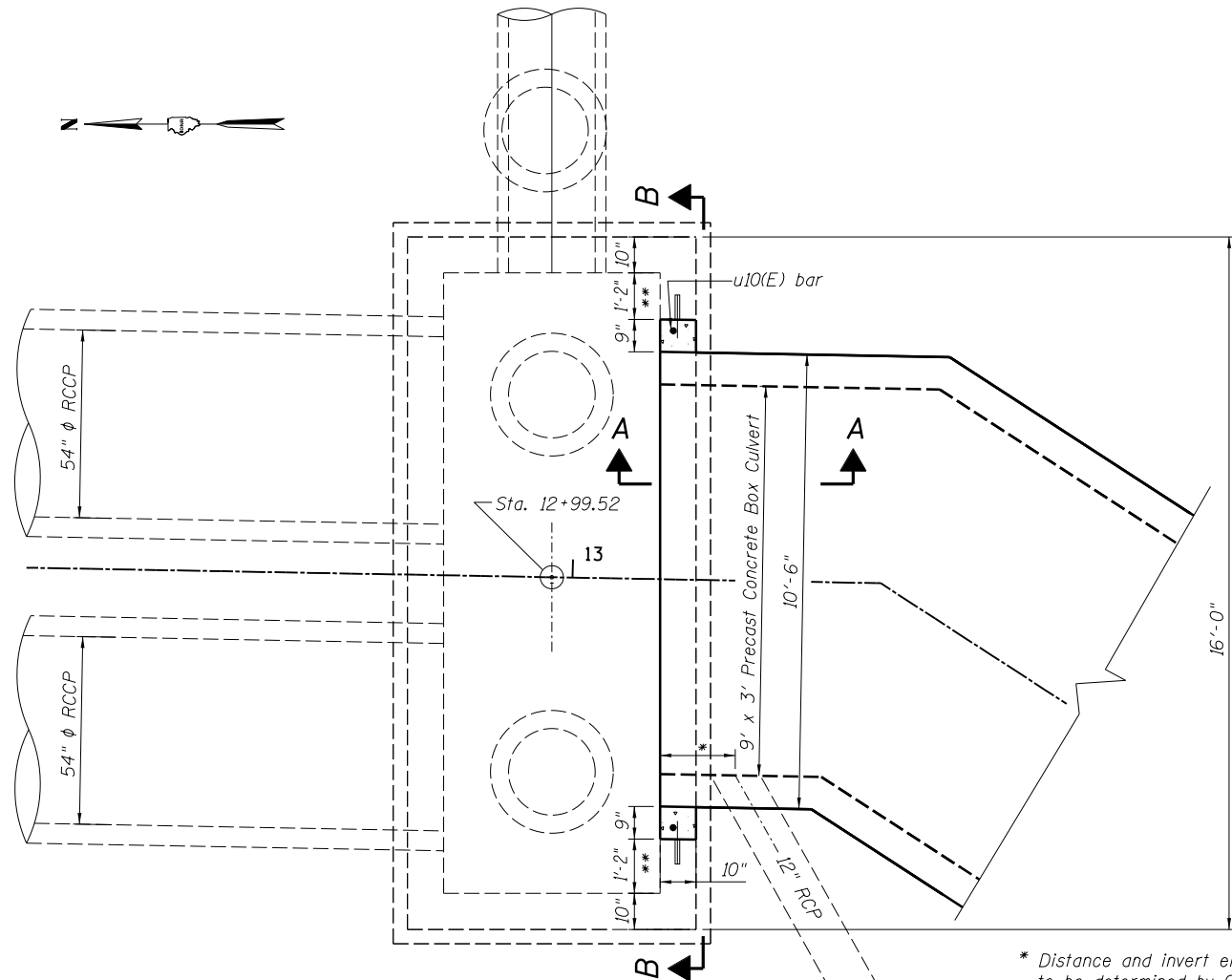


Concrete Removal. Cost included with Concrete Structures.

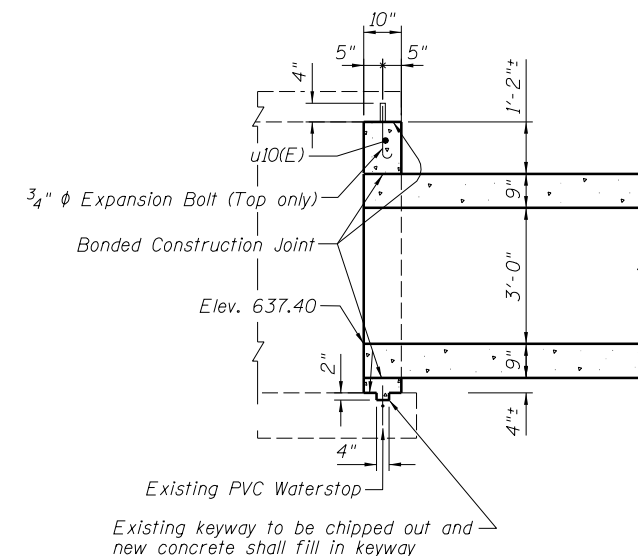
**SECTION B-B**  
(Showing Concrete Removal Area)



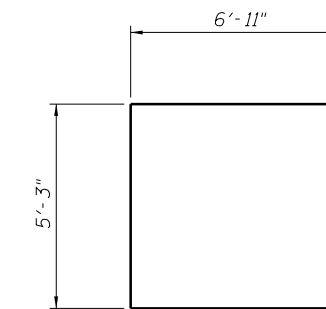
**SECTION B-B**  
(Showing Concrete Collar)



**PLAN - JUNCTION CHAMBER NO. 2**



**SECTION A-A**



**BAR u10(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h10(E)	14	#5	1'-1"	—
u10(E)	2	#5	19'-1"	□
Concrete Structures			Cu Yd	1
Reinforcement Bars, Epoxy Coated			Pound	60
3/4" Expansion Bolts			Each	14

\* Distance and invert elevation of 12" RCP to be determined by Contractor in field. Do not fabricate prior to verifying dimension and Elev. 639.2±

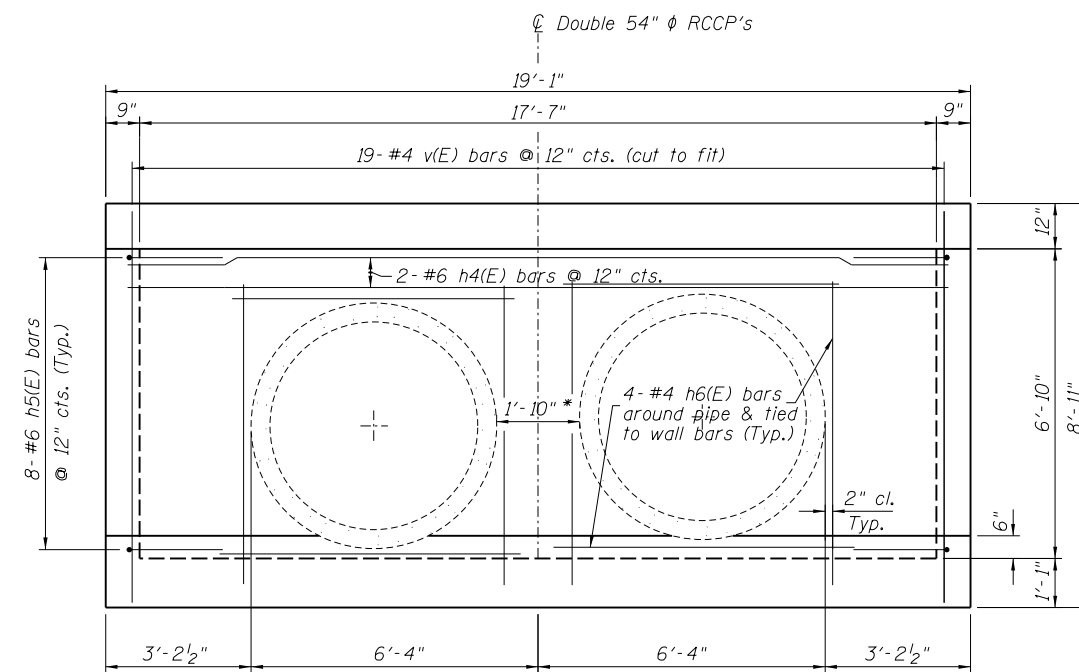
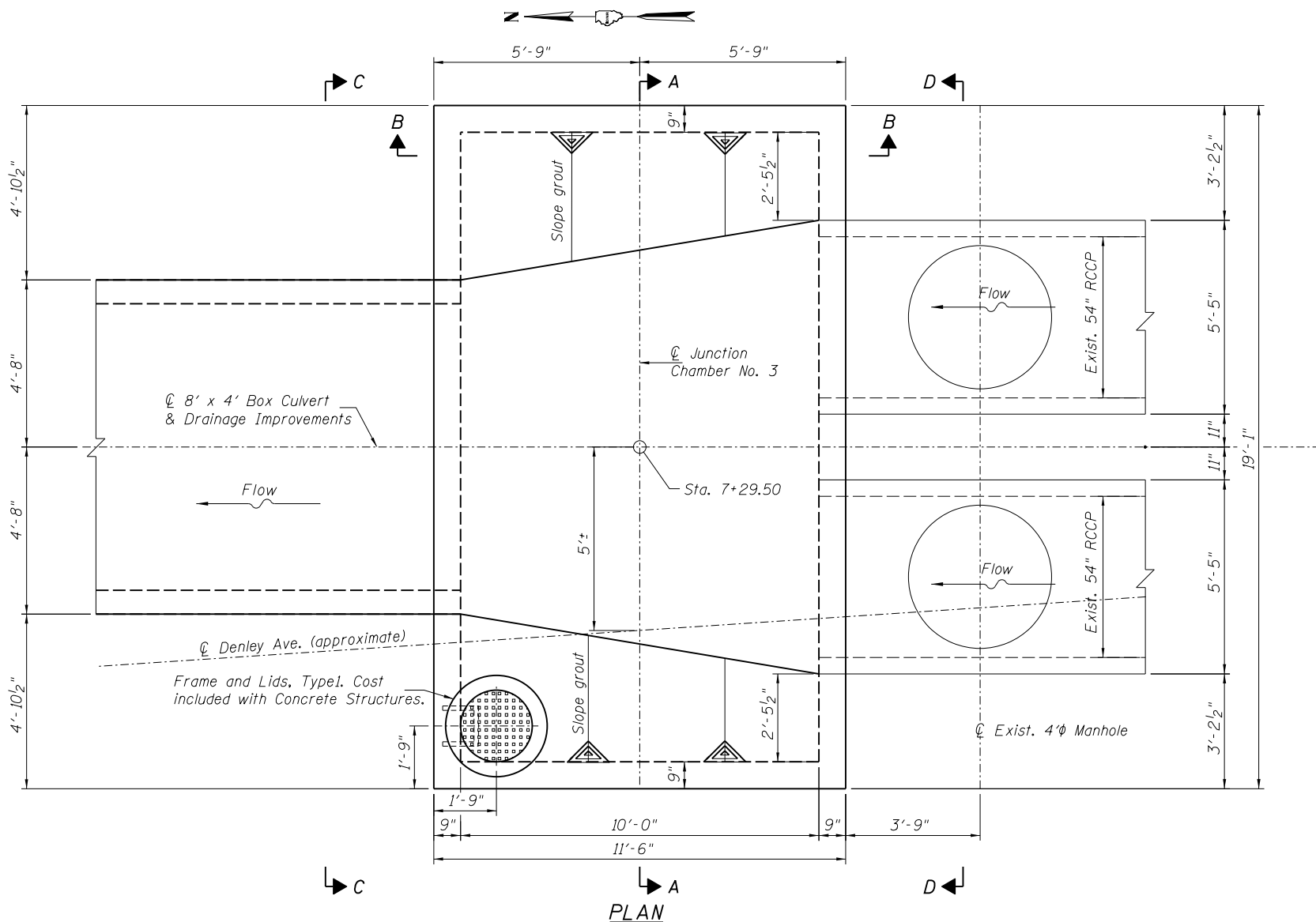
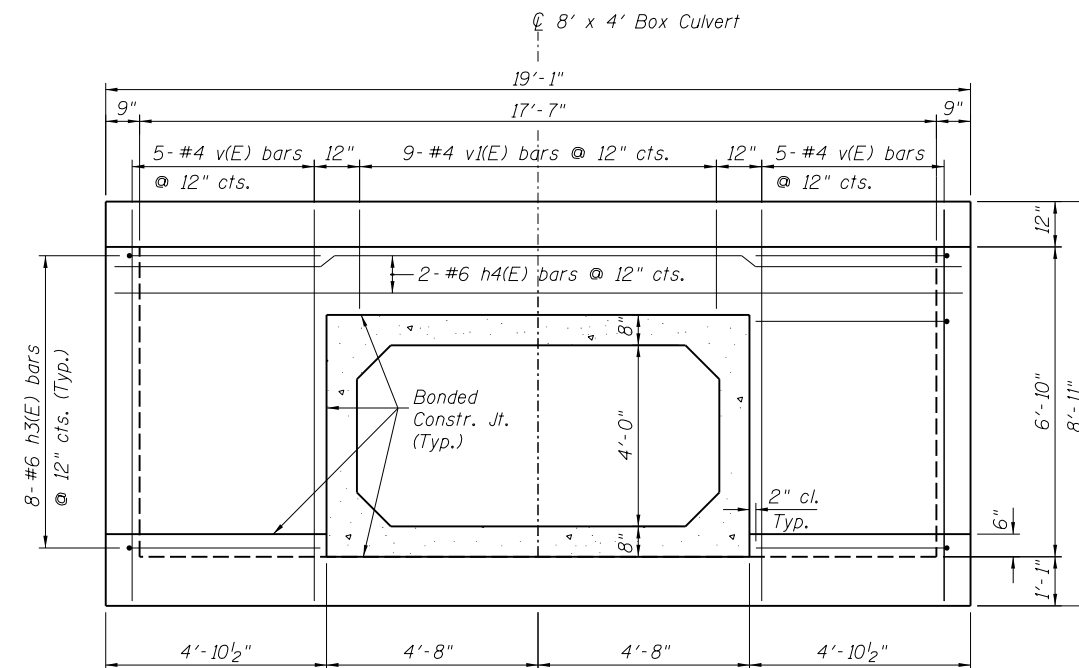
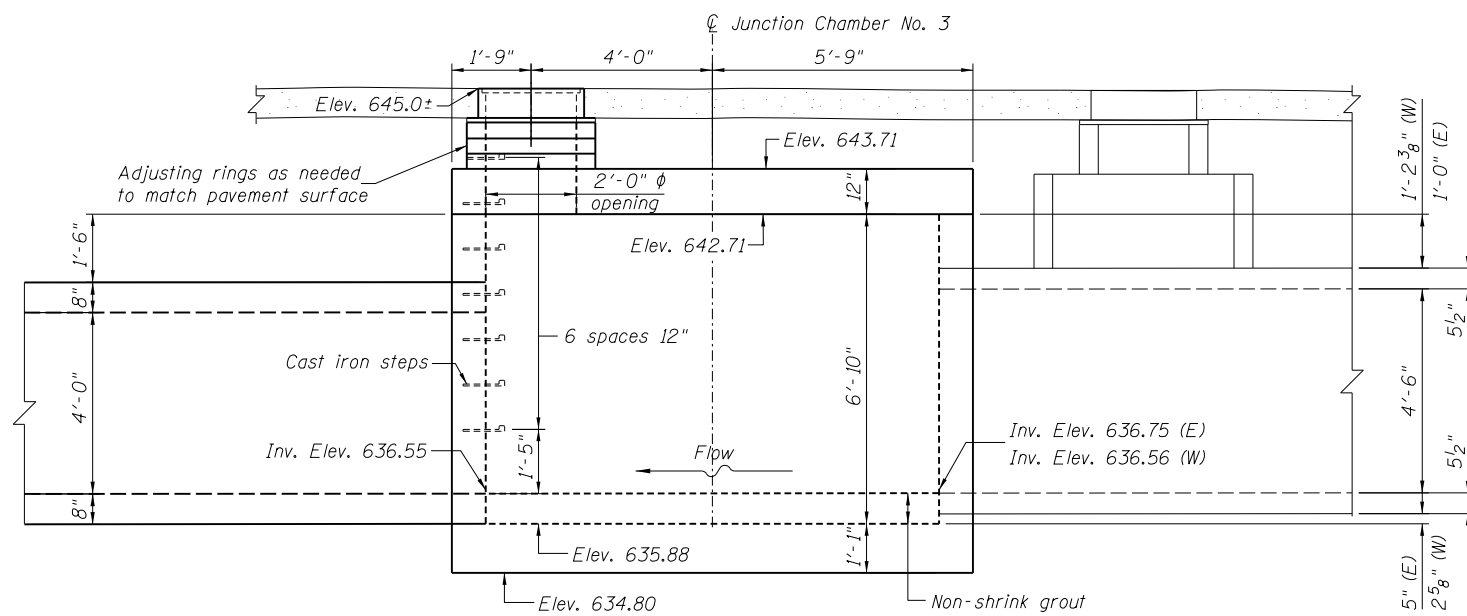
\*\* This dimension may vary slightly from what is shown. Actual dimension will be governed by proposed culvert alignment as it crosses existing box.

O:\OwrProj\mpl\Projects\CrystalCreek IIB\Plan Sheets\20 Junction Chamber No 2.dgn

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7/6/2013

Designed By JUF Checked By TMM  
Drawn By JUF Checked By TMM



**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications

**LOADING HL-93**

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

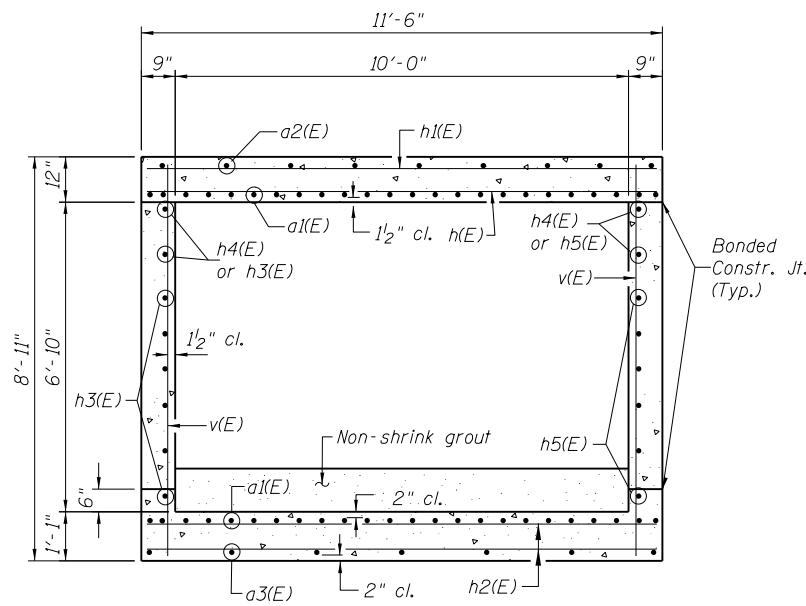
**DESIGN STRESSES**

f'c = 3,500 psi

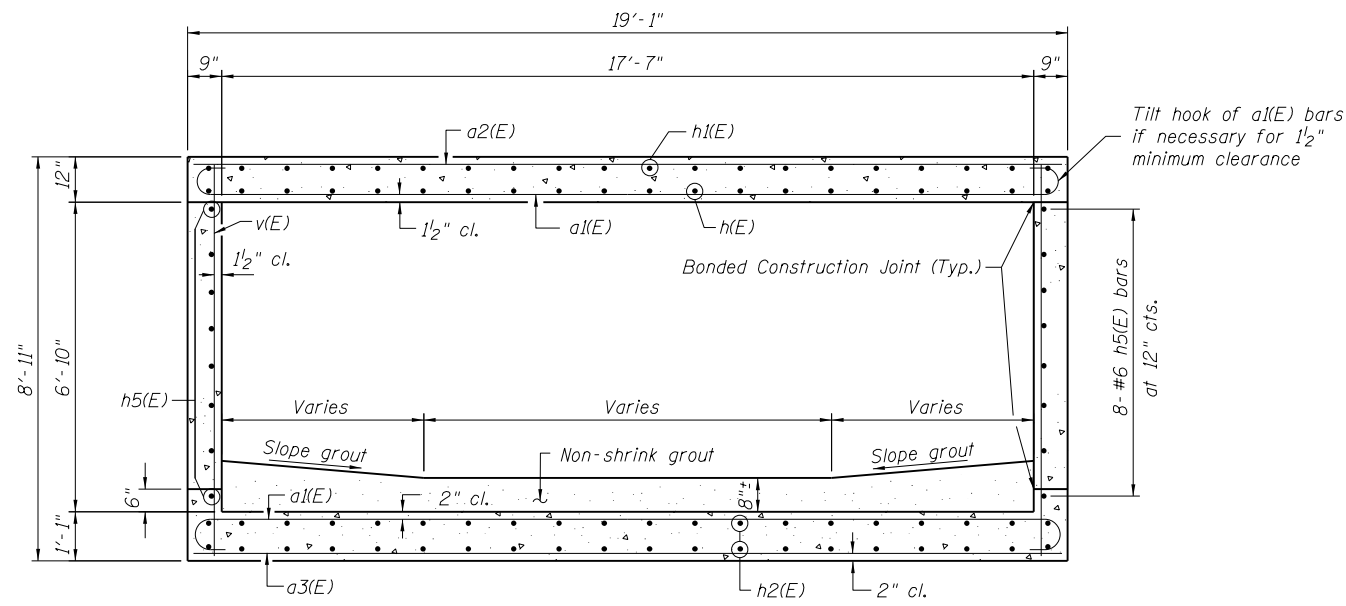
fy = 60,000 psi (Reinforcement)

\* Contractor to field verify dimension and adjust structure, as approved by the Engineer, if field measured dimension is greater than 1'-10".

Designed By: RLP, Checked By: TMM  
 Drawn By: JUF, Checked By: RLP  
 O:\OwrProj\mpl\Projects\CrystalCreek IIB\Plan Sheets\2 Junction Chamber No. 3.dgn  
 7/6/2013 8:11:53 AM

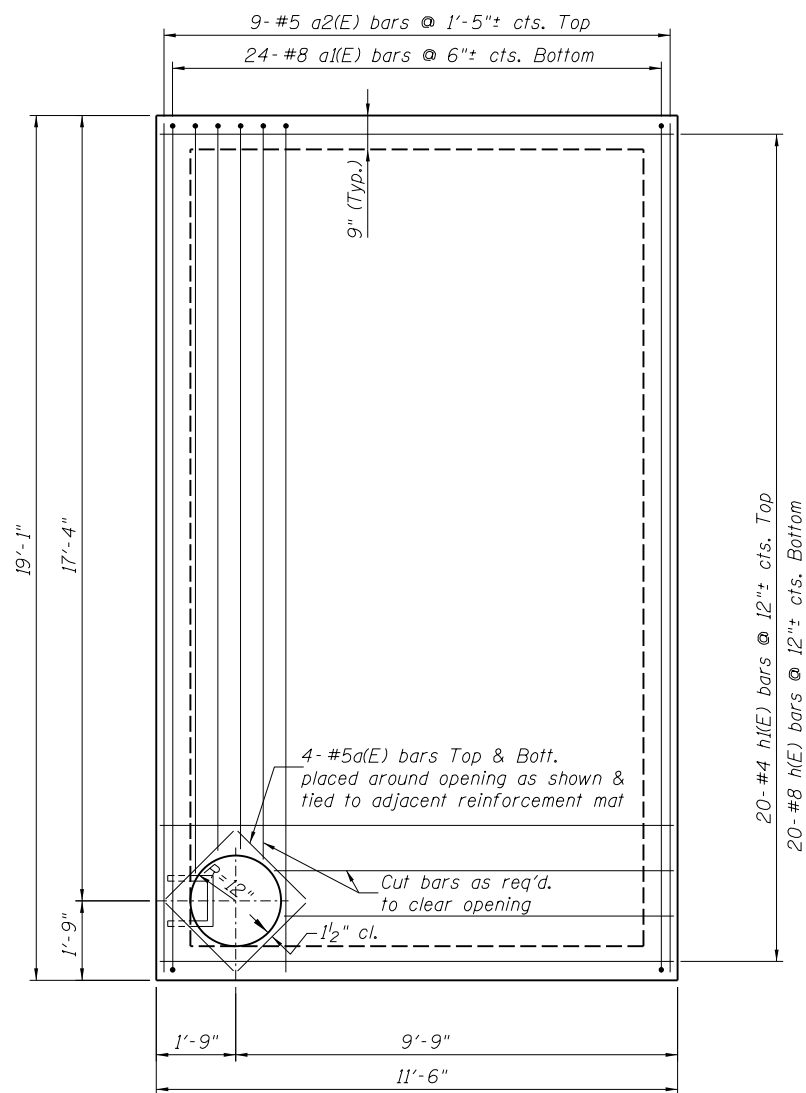


SECTION B-B

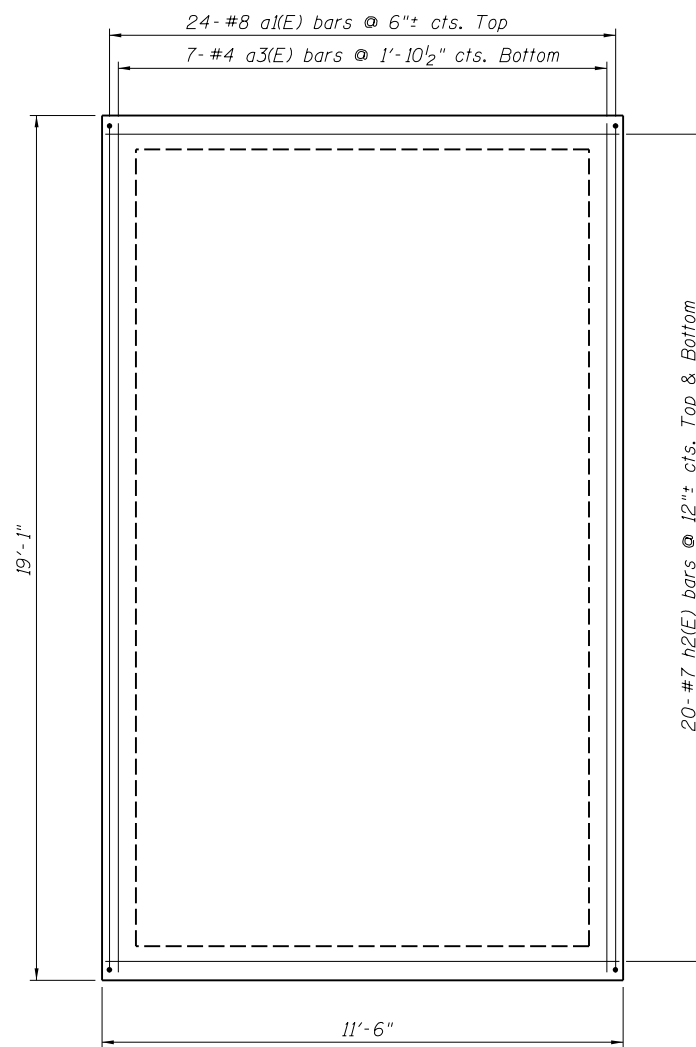


SECTION A-A

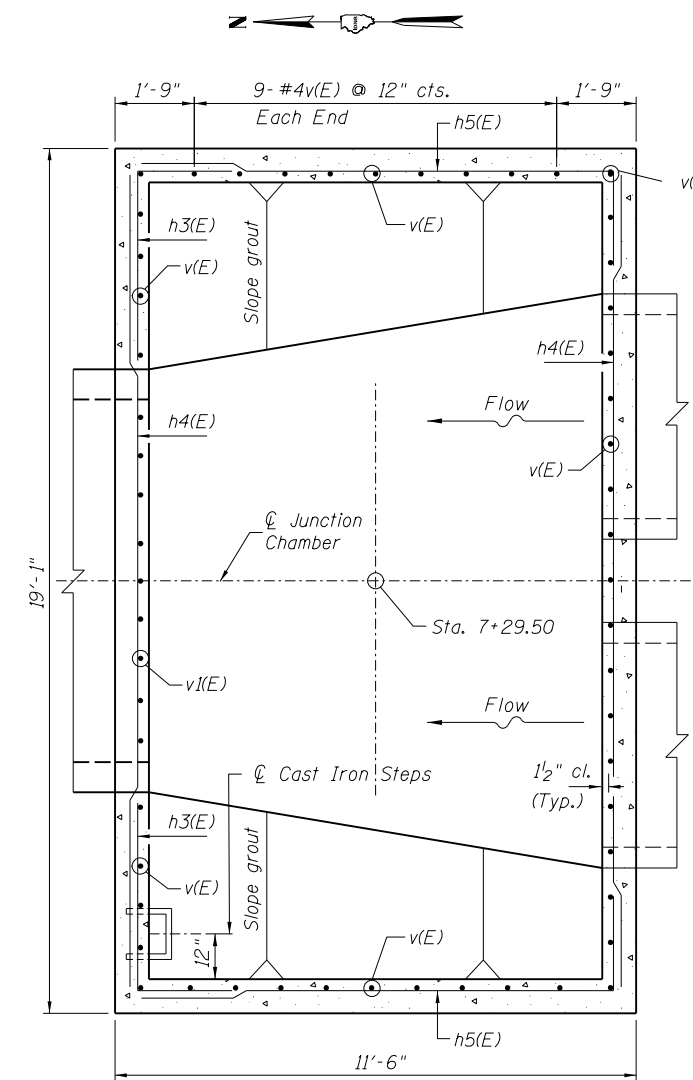
- Notes:
- All exposed edges of concrete shall have a  $\frac{3}{4}$ " chamfer unless noted otherwise.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - Contractor shall construct top slab or brace junction chamber walls prior to backfilling.
  - Cost of cast iron steps included with Concrete Structures.
  - Precast alternate is not allowed.
  - Cost of non-shrink grout included with Concrete Structures.



TOP SLAB

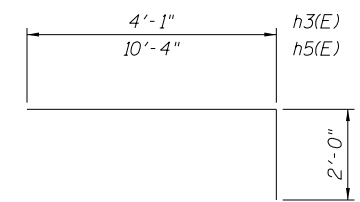


BOTTOM SLAB

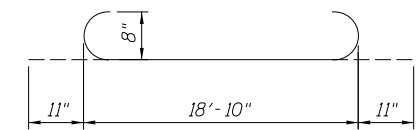


PLAN

(Showing reinforcement in walls)



BARS h3(E) & h5(E)



BAR a1(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	8	#5	2'-3"	—
a1(E)	48	#8	20'-8"	—
a2(E)	9	#5	18'-10"	—
a3(E)	7	#4	18'-10"	—
h(E)	20	#8	11'-3"	—
h1(E)	20	#4	11'-3"	—
h2(E)	40	#7	11'-3"	—
h3(E)	16	#6	6'-1"	—
h4(E)	4	#6	18'-0"	—
h5(E)	16	#6	12'-4"	—
h6(E)	8	#6	7'-6"	—
v(E)	47	#4	8'-7"	—
v1(E)	9	#4	2'-3"	—
Concrete Structures			Cu Yd	25.3
Reinforcement Bars, Epoxy Coated			Pound	5530
Structure Excavation			Cu Yd	119

O:\OwrProj\m\Projects\CrystalCreek IIB\Plan Sheets\22 Junction Chamber No 3 Details.dgn

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7/6/2013

Checked By TMM

Checked By RLP

Designed By RLP

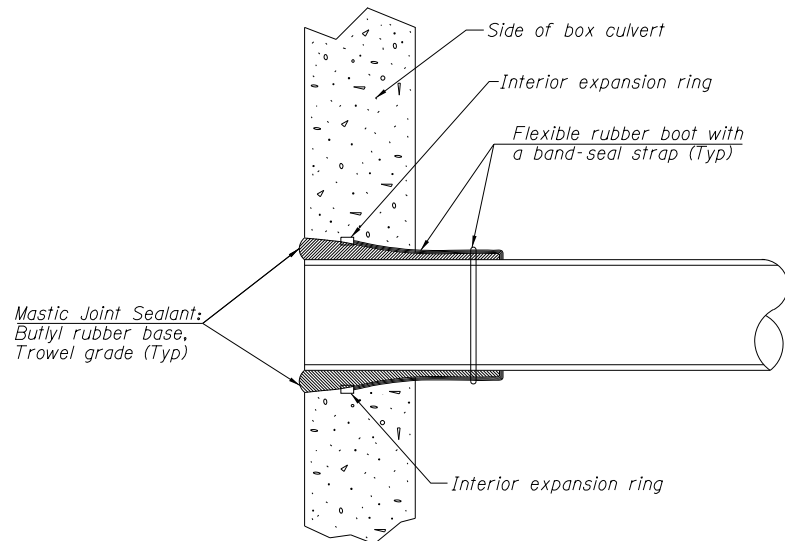
Drawn By JUF

O:\OwrProj\mpl\Projects\CrystalCreek IIB\Plan Sheets\23 Pavement Utility and Box Culvert Details.dgn

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7/6/2013

Designed By JUF Checked By GMS  
Drawn By JUF Checked By TMM



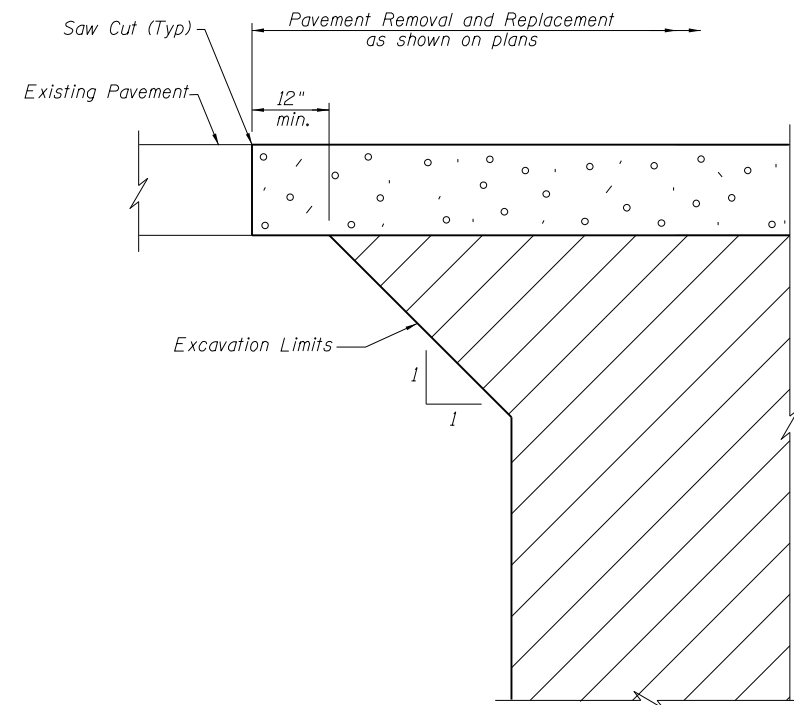
**Notes**

Contractor to field verify position, depth and diameter of pipe to be connected to box culvert. Pipe shall be extended as required. Extension pipe shall be joined to existing pipe at existing joint with an approved joint seal or by means of band seals. The section of pipe on the opposite side of the trench shall be abandoned. The abandoned pipe shall be cut back a minimum of 2' from outside face of proposed box culvert. Plug abandoned pipe according to Section 550.05 of the Standard Specifications. All associated costs included with Box Culverts.

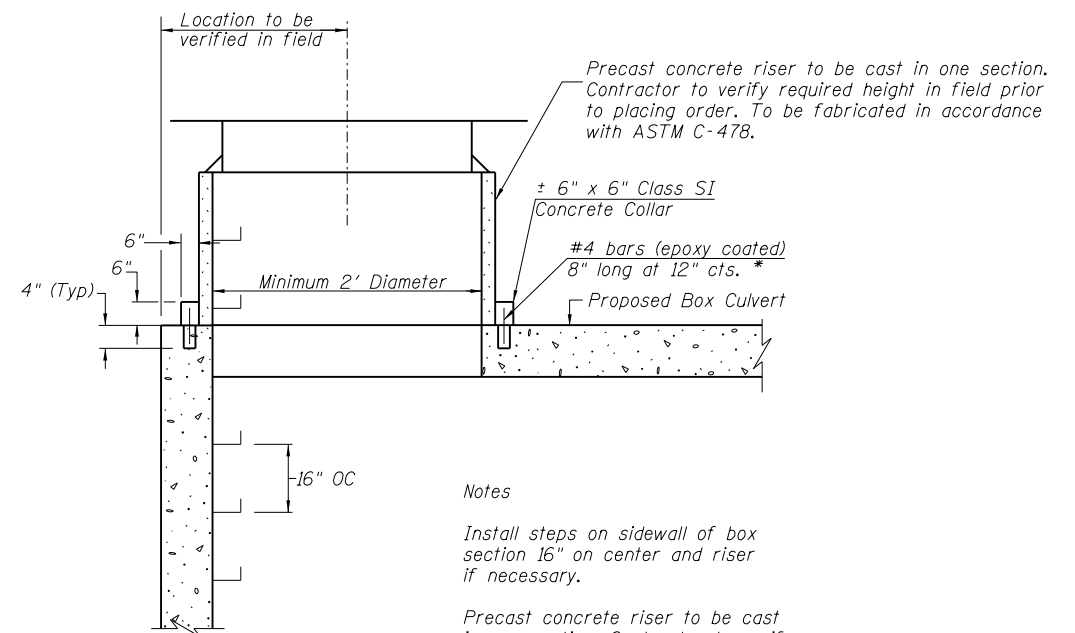
Openings in the precast box culverts for intersecting pipe shall be formed in the shop with additional reinforcing placed around the opening. The location of all intersecting pipes shall be verified by the contractor in the field. The openings in the precast box shall then be located accordingly. A minimum clearance of 12" shall be maintained from the end of an individual box section and the opening. If necessary, the intersecting pipes shall be adjusted to meet this requirement. The cost of verifying pipe location, making the openings and adjusting the pipes shall be included with box culverts.

**CONNECTION DETAIL - PIPE INTERCEPT WITH BOX CULVERT**

Cost of connecting and sealing pipe to box culvert included with box culvert.



**PAVEMENT RESTORATION**



**Notes**

Install steps on sidewall of box section 16" on center and riser if necessary.

Precast concrete riser to be cast in one section. Contractor to verify required height in field prior to placing order.

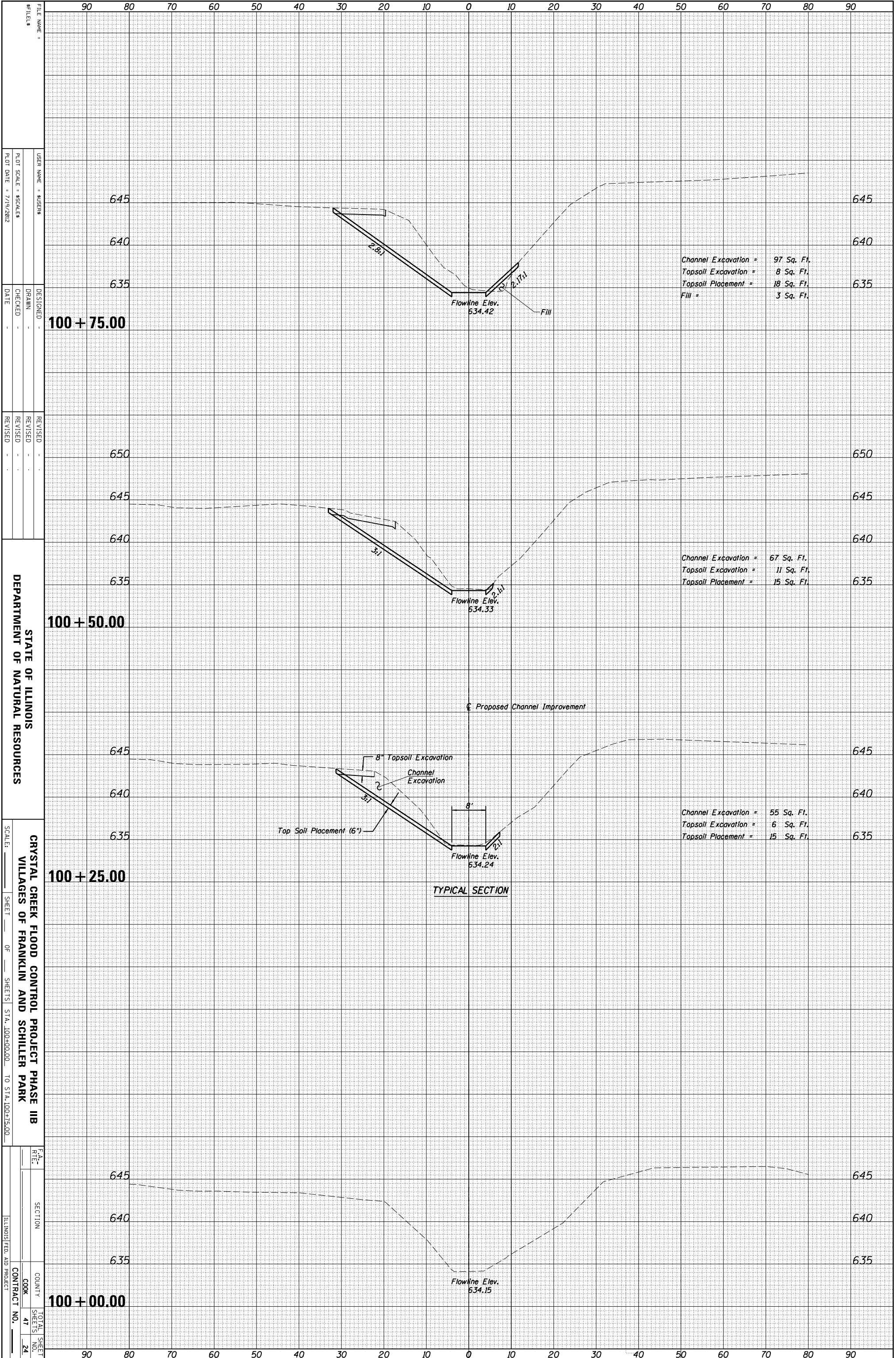
**MANHOLE DETAIL**

(Cost included with box culvert)

\*Epoxy grouting of bars shall be done according to Section 584 of the Standard Spec's. The grout and method of application shall be approved by the Engineer.

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		

FINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		



FILE NAME: \_\_\_\_\_  
 USER NAME: \$USER\$  
 PLOT SCALE: \$SCALE\$  
 PLOT DATE: 7/19/2012

DESIGNED: \_\_\_\_\_  
 DRAWN: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DATE: \_\_\_\_\_

REVISED: \_\_\_\_\_  
 REVISED: \_\_\_\_\_  
 REVISED: \_\_\_\_\_

STATE OF ILLINOIS  
 DEPARTMENT OF NATURAL RESOURCES

CRYSTAL CREEK FLOOD CONTROL PROJECT PHASE IIB  
 VILLAGES OF FRANKLIN AND SCHILLER PARK

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 100+00.00 TO STA. 100+75.00

SECTION \_\_\_\_\_  
 COUNTY \_\_\_\_\_  
 CONTRACT NO. \_\_\_\_\_

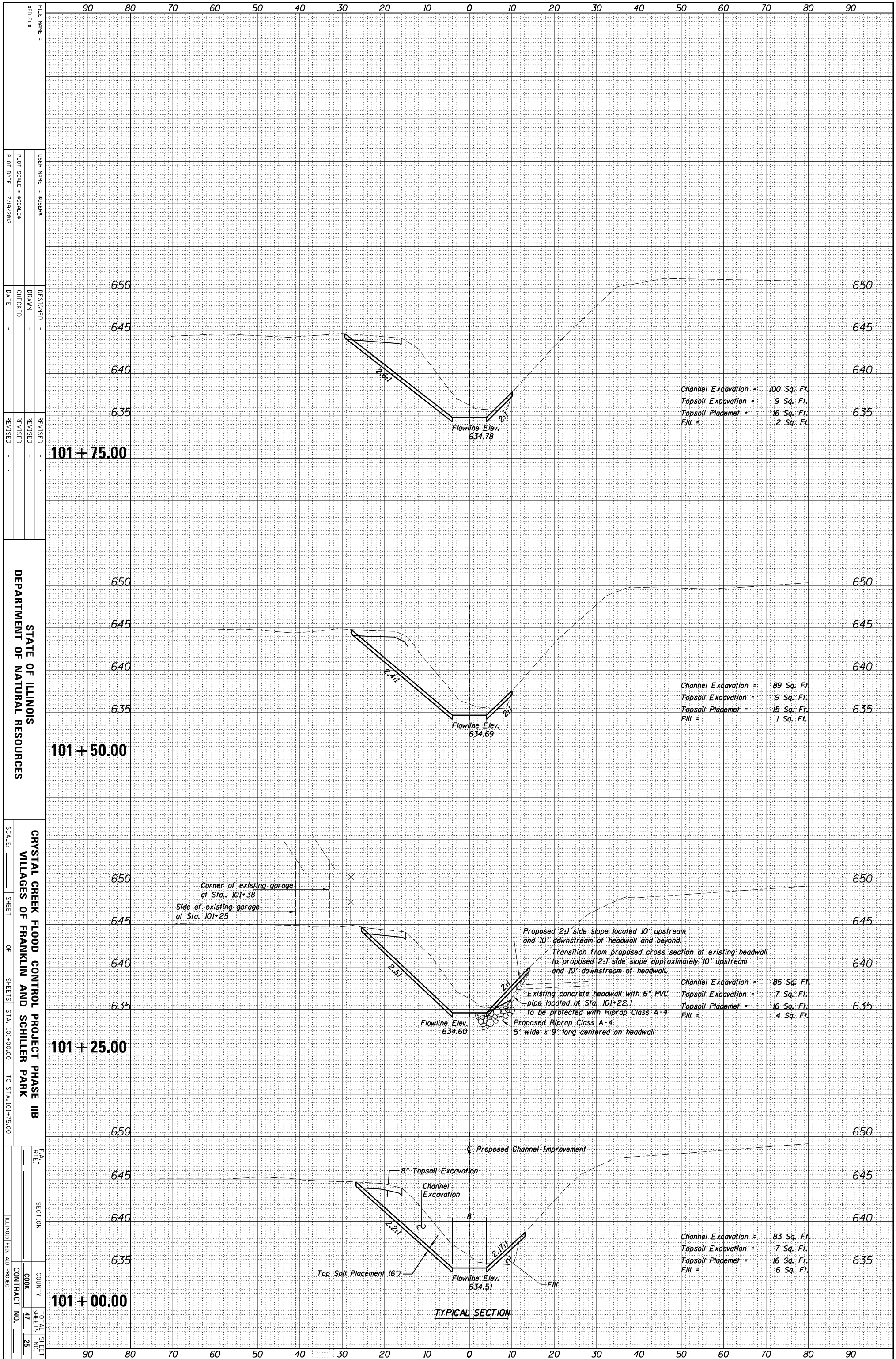
TOTAL SHEET NO. 47  
 SHEET NO. 24

ILLINOIS FED. AID PROJECT



ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		

FINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		



Channel Excavation = 100 Sq. Ft.  
 Topsoil Excavation = 9 Sq. Ft.  
 Topsoil Placemet = 16 Sq. Ft.  
 Fill = 2 Sq. Ft.

Channel Excavation = 89 Sq. Ft.  
 Topsoil Excavation = 9 Sq. Ft.  
 Topsoil Placemet = 15 Sq. Ft.  
 Fill = 1 Sq. Ft.

Channel Excavation = 85 Sq. Ft.  
 Topsoil Excavation = 7 Sq. Ft.  
 Topsoil Placemet = 16 Sq. Ft.  
 Fill = 4 Sq. Ft.

Channel Excavation = 83 Sq. Ft.  
 Topsoil Excavation = 7 Sq. Ft.  
 Topsoil Placemet = 16 Sq. Ft.  
 Fill = 6 Sq. Ft.

TYPICAL SECTION

FILE NAME: \_\_\_\_\_  
 USER NAME: SJSEBNS  
 PLLOT SCALE: 1"=40' (SCALE)  
 PLOT DATE: 7/19/2012  
 DESIGNED: \_\_\_\_\_  
 DRAWN: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 REVISED: \_\_\_\_\_  
 REVISED: \_\_\_\_\_  
 REVISED: \_\_\_\_\_  
 REVISED: \_\_\_\_\_

STATE OF ILLINOIS  
 DEPARTMENT OF NATURAL RESOURCES

CRYSTAL CREEK FLOOD CONTROL PROJECT PHASE IIB  
 VILLAGES OF FRANKLIN AND SCHILLER PARK

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 101+00.00 TO STA. 101+75.00

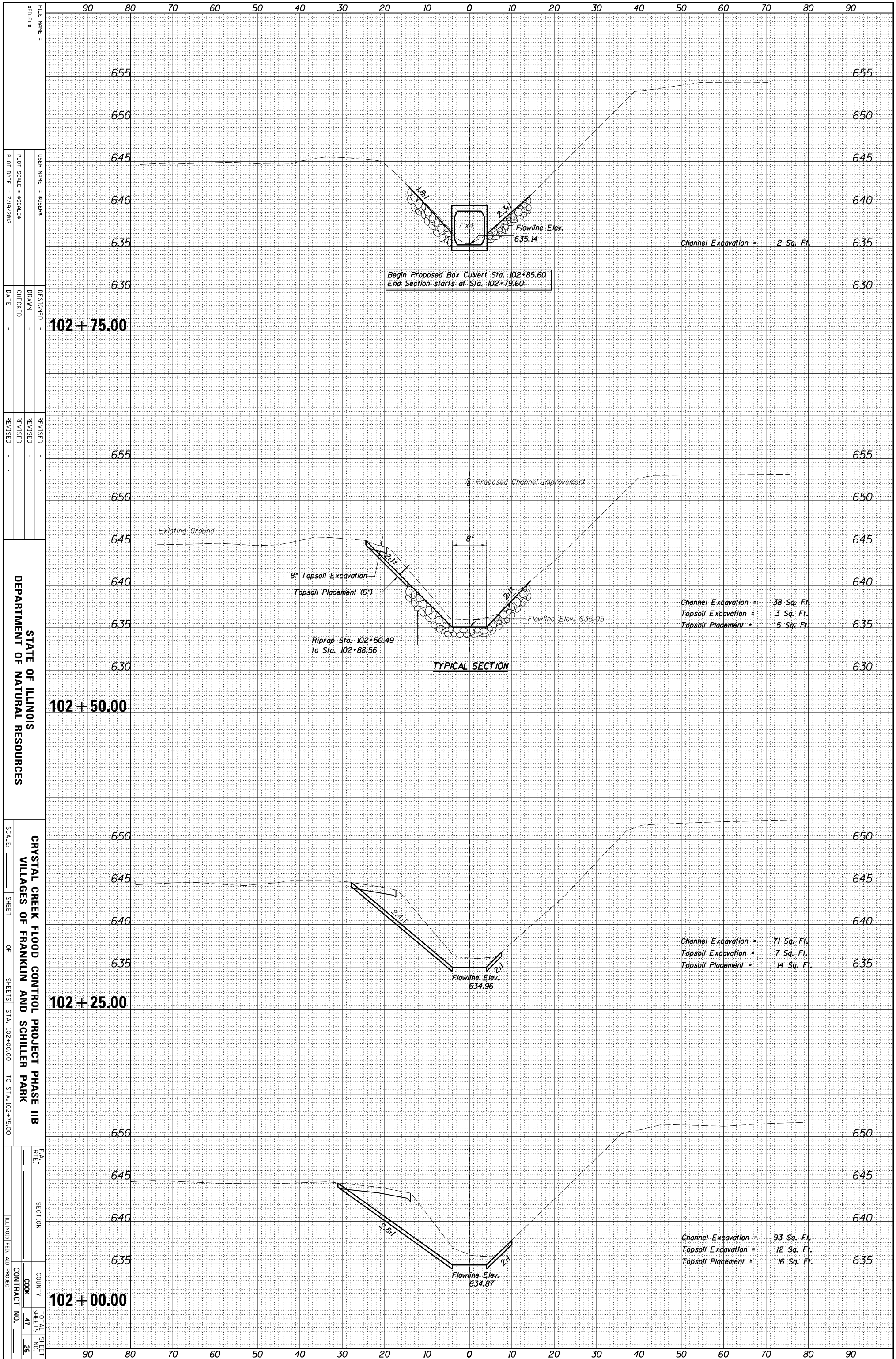
SECTION \_\_\_\_\_ COUNTY \_\_\_\_\_ CONTRACT NO. \_\_\_\_\_

FEA-RT-SECTION COUNTY CONTRACT NO. TOTAL SHEET SHEETS NO. 47 25

ILLINOIS FED. AID PROJECT

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		

FINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		



FILE NAME: \_\_\_\_\_  
 USER NAME: SUSENS  
 PLOT SCALE: 1"=40' (SCALE)  
 PLOT DATE: 7/19/2012

DESIGNED: \_\_\_\_\_  
 DRAWN: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DATE: \_\_\_\_\_

REVISOR: \_\_\_\_\_  
 REVISION: \_\_\_\_\_  
 REVISION: \_\_\_\_\_  
 REVISION: \_\_\_\_\_

STATE OF ILLINOIS  
 DEPARTMENT OF NATURAL RESOURCES

CRYSTAL CREEK FLOOD CONTROL PROJECT PHASE IIB  
 VILLAGES OF FRANKLIN AND SCHILLER PARK

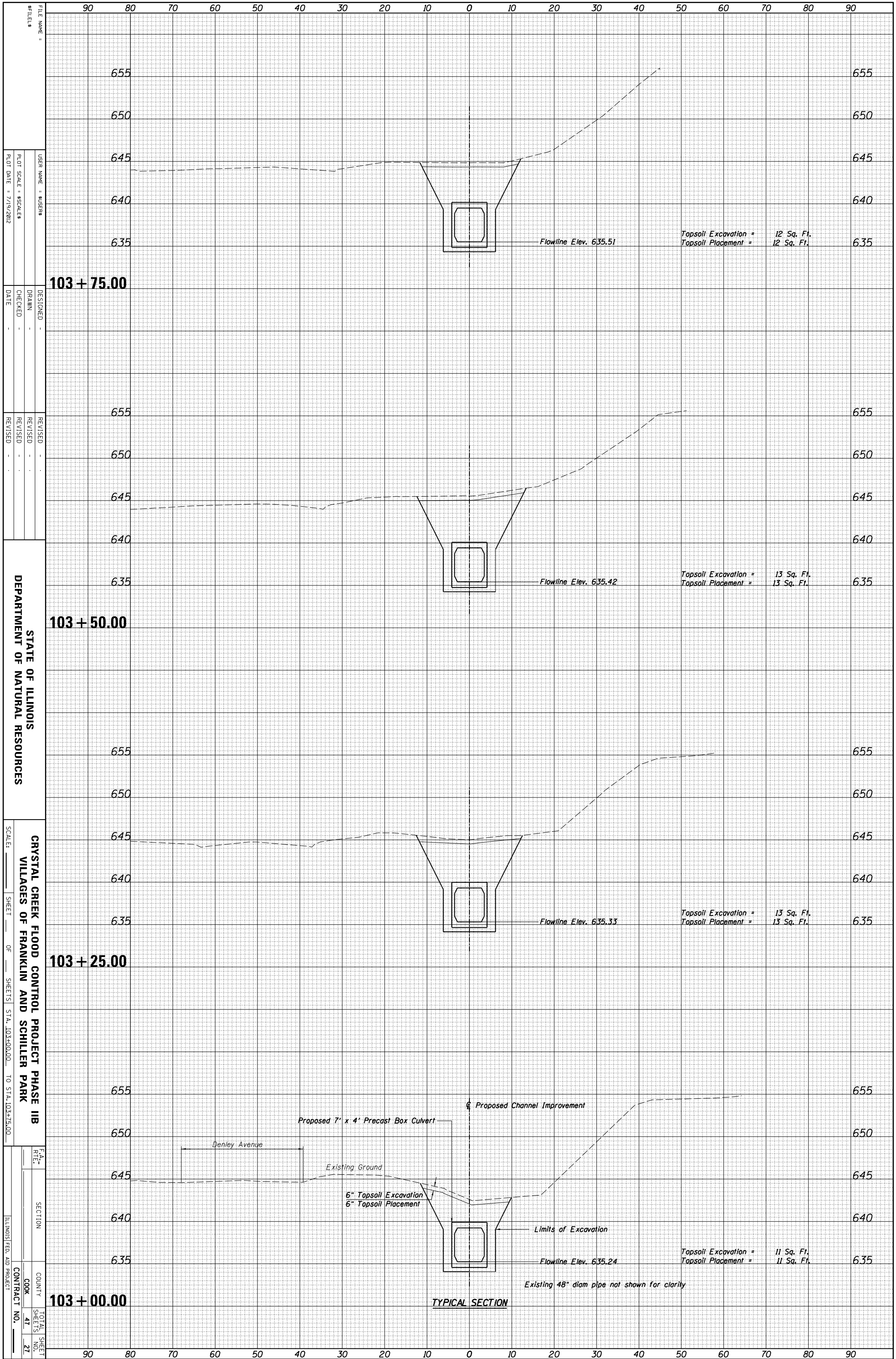
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SECTION \_\_\_\_\_  
 COUNTY \_\_\_\_\_  
 CONTRACT NO. \_\_\_\_\_

TOTAL SHEET NO. 26  
 SHEET NO. 47

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		

FINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		



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DESIGNED: \_\_\_\_\_  
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 CHECKED: \_\_\_\_\_  
 DATE: \_\_\_\_\_

REVISED: \_\_\_\_\_  
 REVISED: \_\_\_\_\_  
 REVISED: \_\_\_\_\_

STATE OF ILLINOIS  
 DEPARTMENT OF NATURAL RESOURCES

CRYSTAL CREEK FLOOD CONTROL PROJECT PHASE IIB  
 VILLAGES OF FRANKLIN AND SCHILLER PARK

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 103+00.00 TO STA. 103+75.00

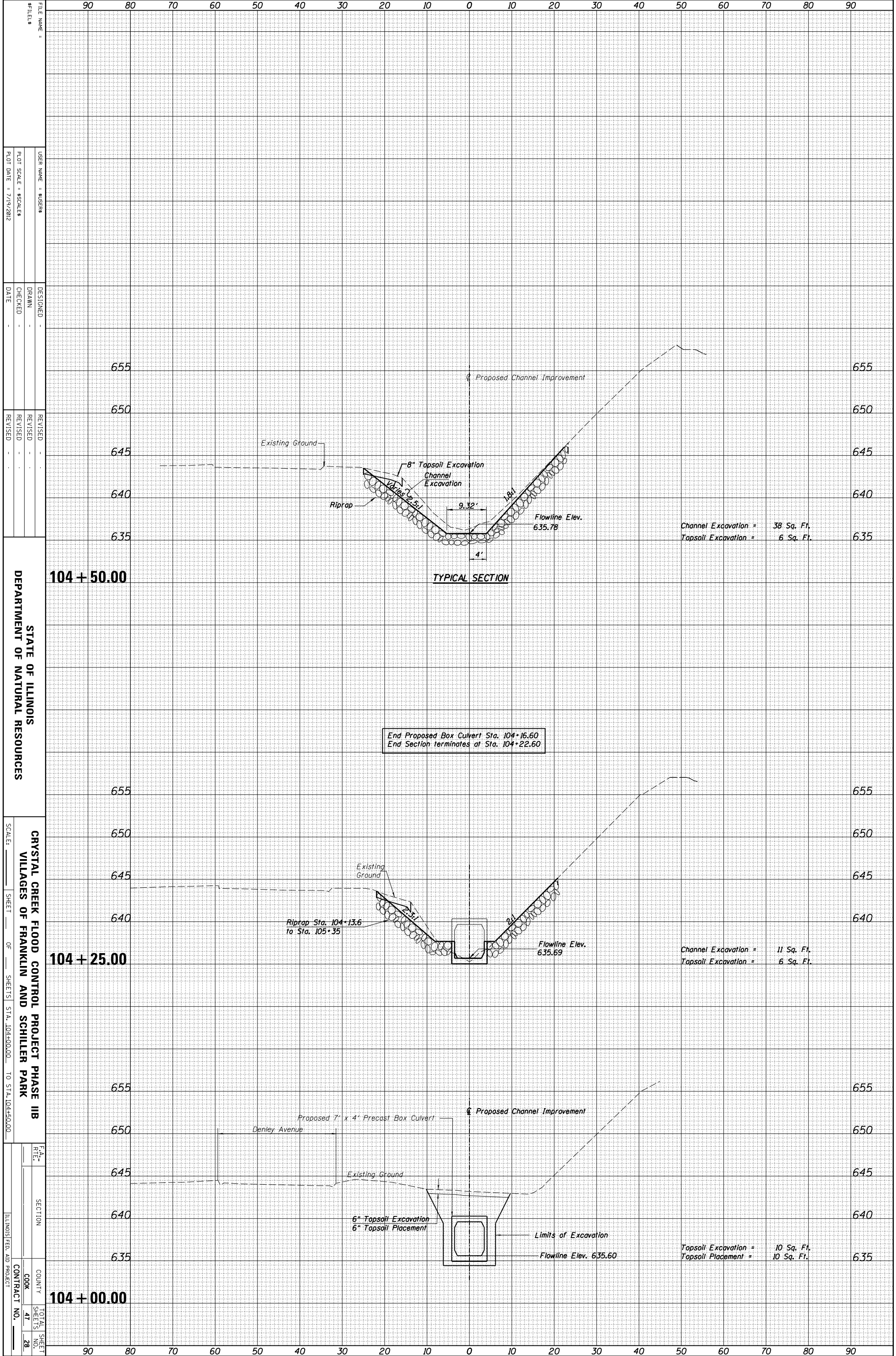
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 COUNTY \_\_\_\_\_  
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 ILLINOIS FED. AID PROJECT CONTRACT NO. \_\_\_\_\_

TOTAL SHEET NO. 27

TYPICAL SECTION

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NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



DEPARTMENT OF NATURAL RESOURCES  
 STATE OF ILLINOIS

CRYSTAL CREEK FLOOD CONTROL PROJECT PHASE IIB  
 VILLAGES OF FRANKLIN AND SCHILLER PARK

STA. 104+00.00 TO STA. 104+50.00  
 SHEET 47 OF 28  
 CONTRACT NO.

Channel Excavation = 38 Sq. Ft.  
 Topsoll Excavation = 6 Sq. Ft.

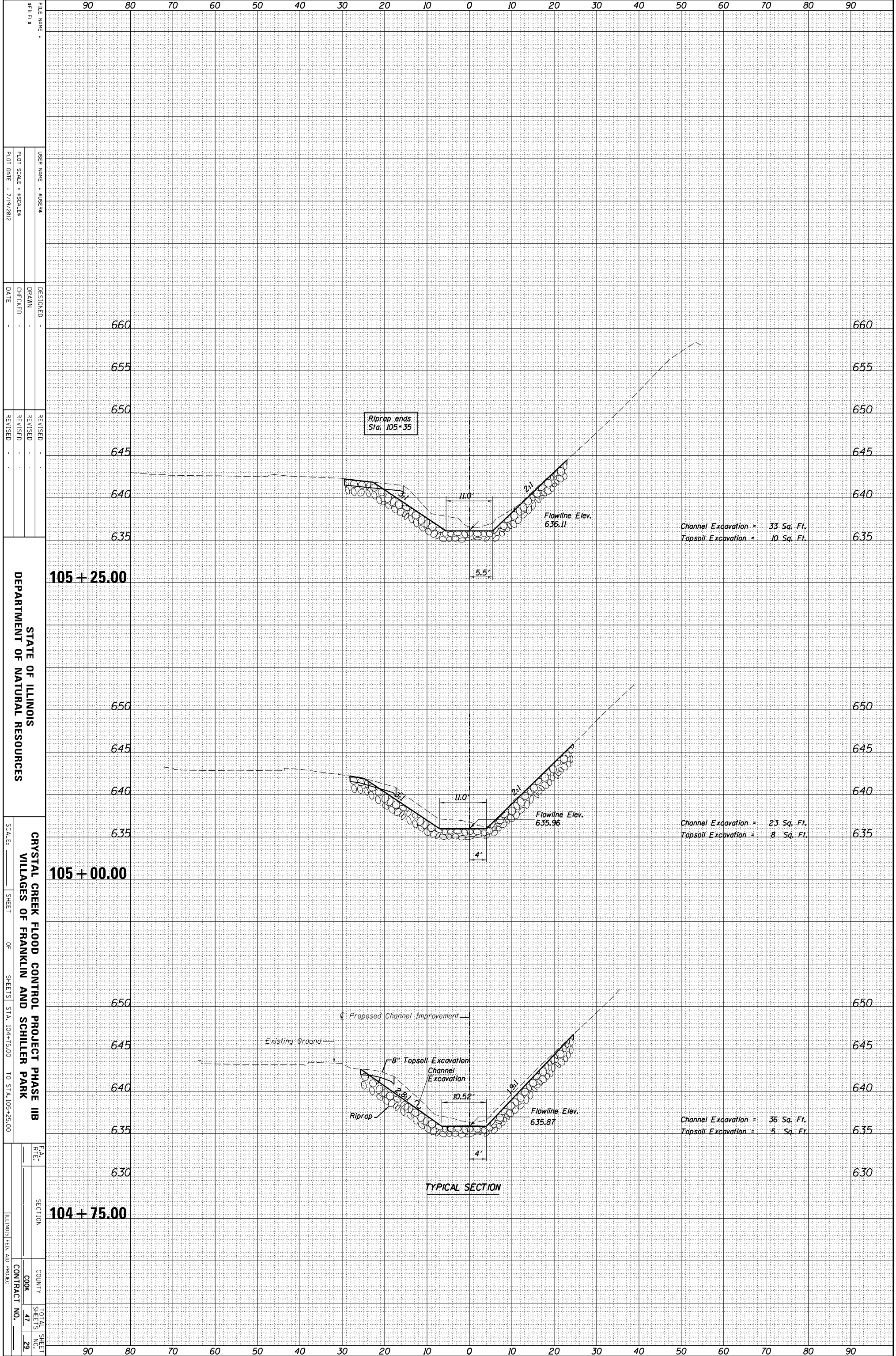
End Proposed Box Culvert Sta. 104+16.60  
 End Section terminates at Sta. 104+22.60

Channel Excavation = 11 Sq. Ft.  
 Topsoll Excavation = 6 Sq. Ft.

Topsoll Excavation = 10 Sq. Ft.  
 Topsoll Placement = 10 Sq. Ft.

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



Channel Excavation = 33 Sq. Ft.  
 Topsoil Excavation = 10 Sq. Ft.

Channel Excavation = 23 Sq. Ft.  
 Topsoil Excavation = 8 Sq. Ft.

Channel Excavation = 36 Sq. Ft.  
 Topsoil Excavation = 5 Sq. Ft.

TYPICAL SECTION

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 PLOT SCALE: \$SCALE\$  
 PLOT DATE: 7/19/2012

DESIGNED: \_\_\_\_\_  
 DRAWN: \_\_\_\_\_  
 CHECKED: \_\_\_\_\_  
 DATE: \_\_\_\_\_

REVISED: \_\_\_\_\_  
 REVISED: \_\_\_\_\_  
 REVISED: \_\_\_\_\_  
 REVISED: \_\_\_\_\_

STATE OF ILLINOIS  
 DEPARTMENT OF NATURAL RESOURCES

CRYSTAL CREEK FLOOD CONTROL PROJECT PHASE IIB  
 VILLAGES OF FRANKLIN AND SCHILLER PARK

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 104+75.00 TO STA. 105+25.00

SECTION \_\_\_\_\_ COUNTY \_\_\_\_\_ TOTAL SHEET NO. \_\_\_\_\_  
 CONTRACT NO. \_\_\_\_\_

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660 655 650 645 640 635

105 + 25.00

650 645 640 635

105 + 00.00

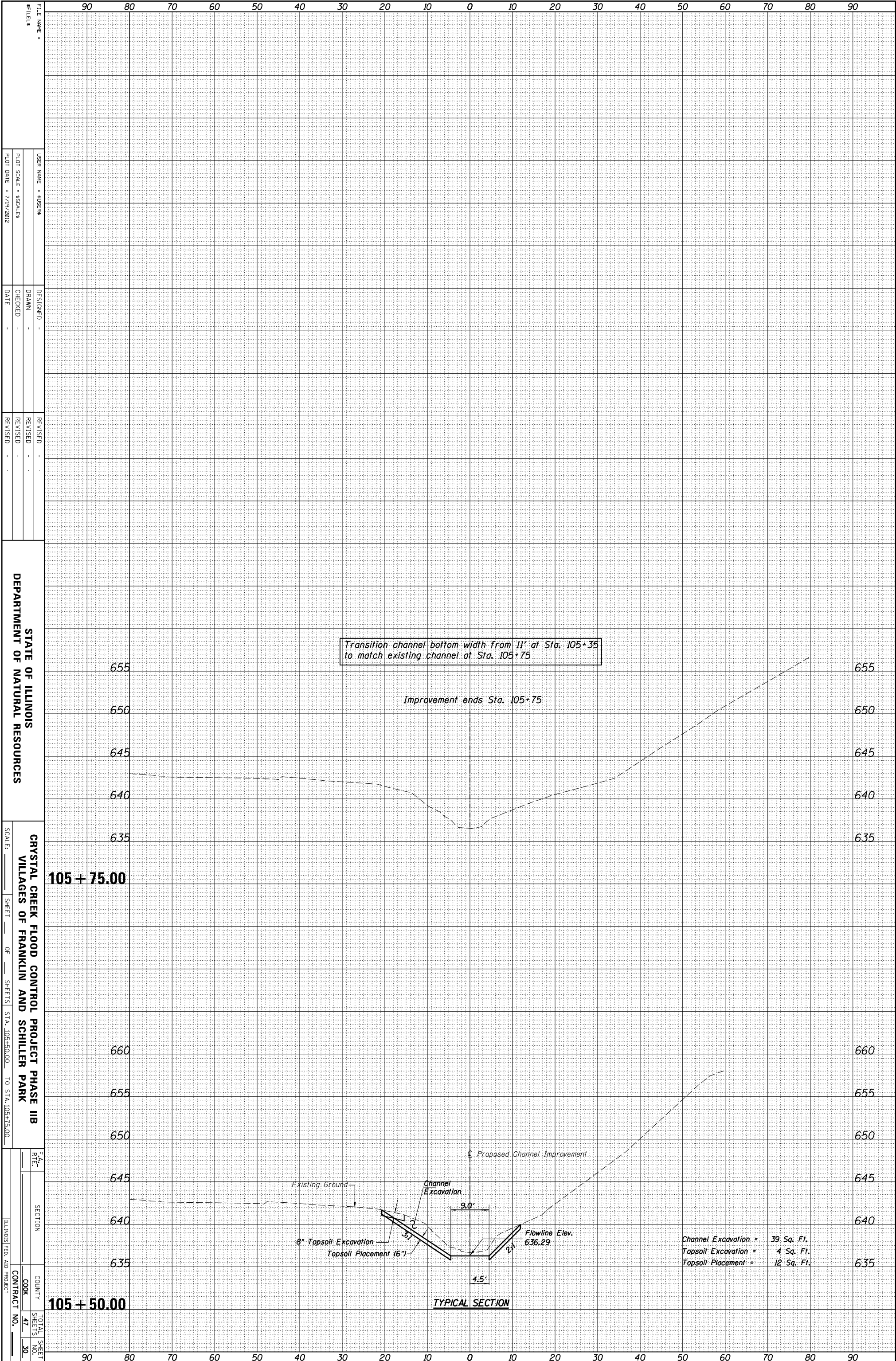
650 645 640 635 630

104 + 75.00

90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90

ORIGINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		

FINAL SURVEY	SURVEYED _____	BY _____	DATE _____
NOTE BOOK	PLOTTED _____		
	TEMPLATE _____		
	AREAS _____		
	AREAS CHECKED _____		



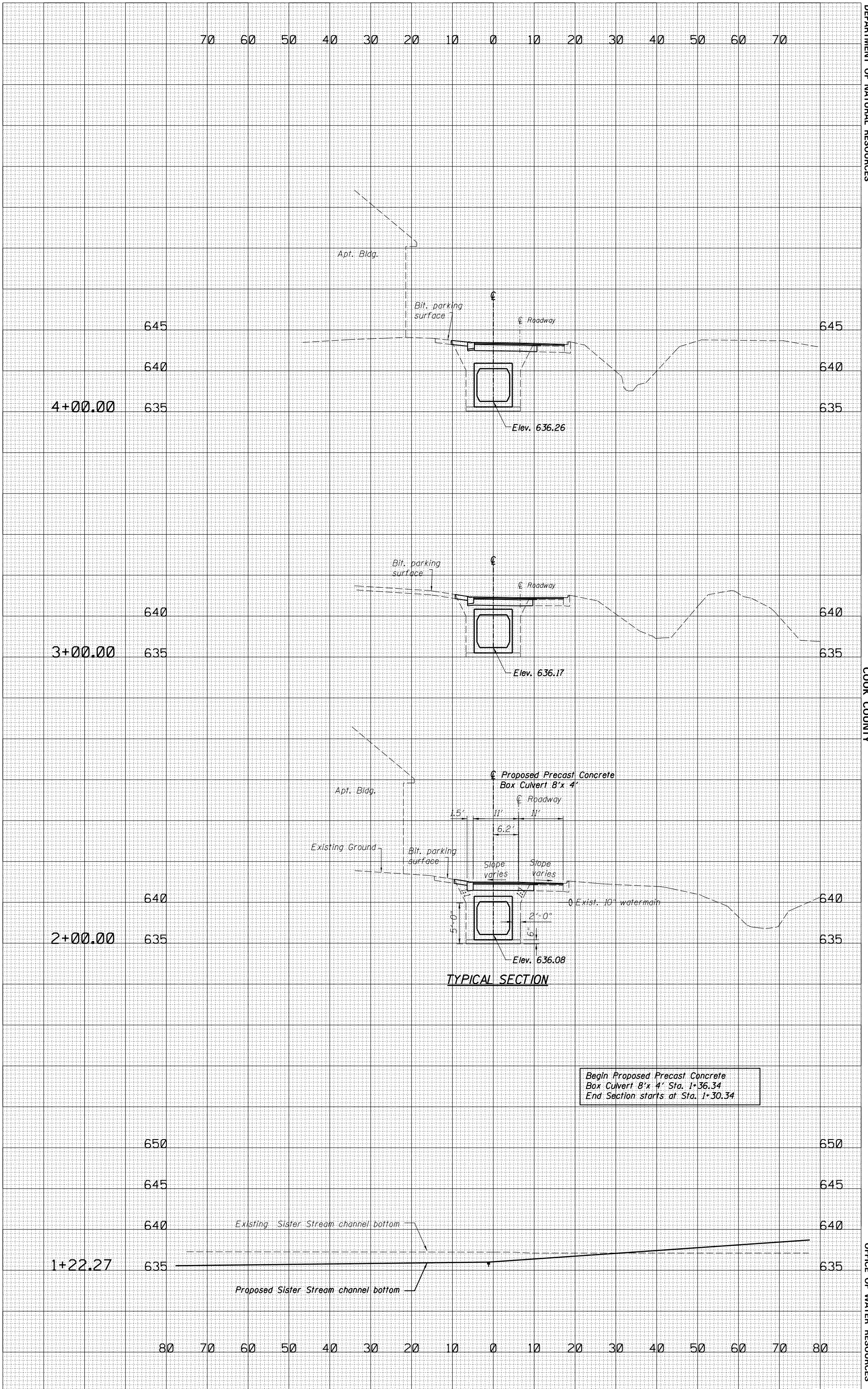
STATE OF ILLINOIS  
DEPARTMENT OF NATURAL RESOURCES

CRYSTAL CREEK FLOOD CONTROL PROJECT PHASE IIB  
VILLAGES OF FRANKLIN AND SCHILLER PARK

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 105+50.00 TO STA. 105+75.00

SECTION	COUNTY	TOTAL SHEET NO.
	COOK	47
		30

ILLINOIS FED. AID PROJECT CONTRACT NO. \_\_\_\_\_

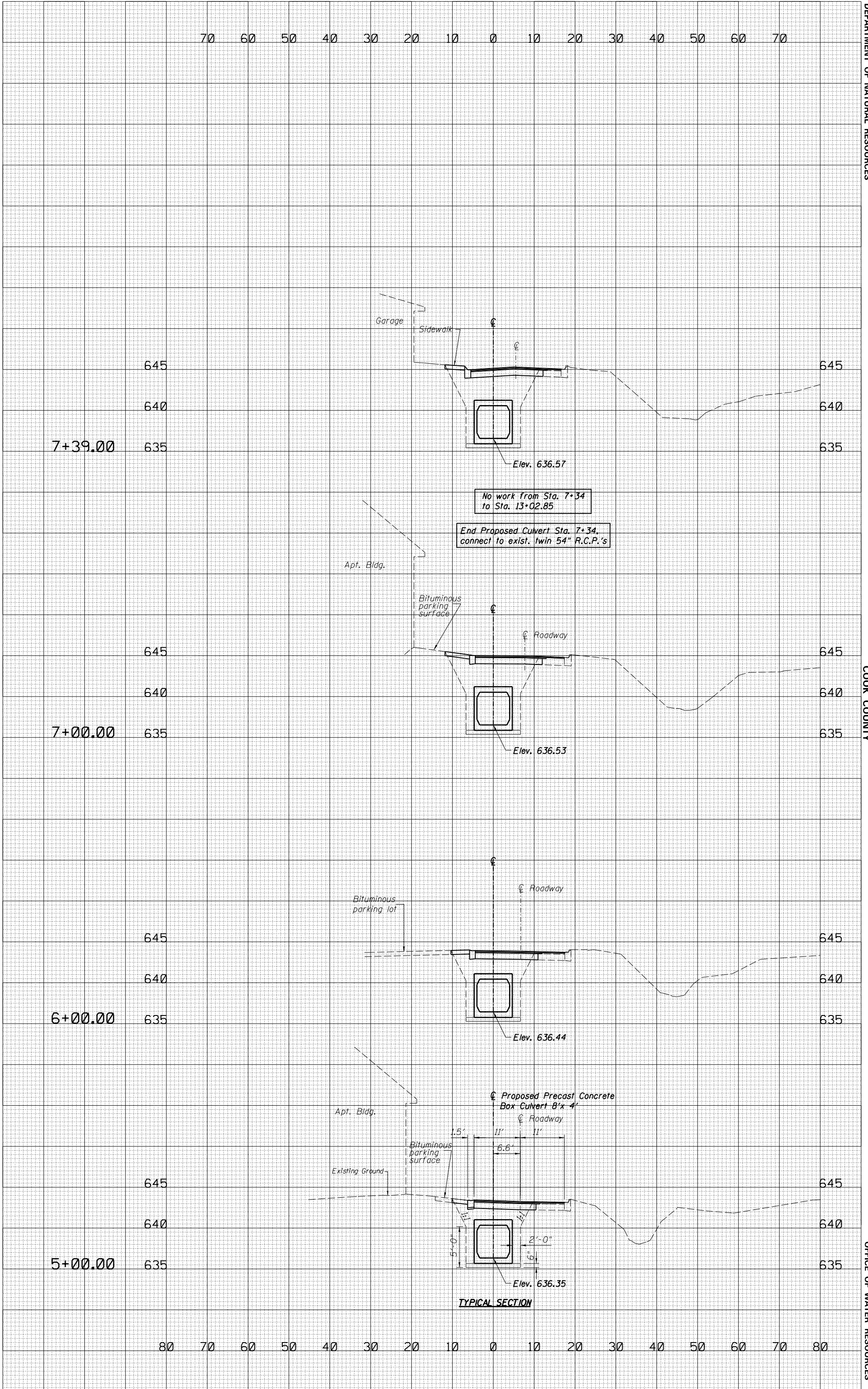


Begin Proposed Precast Concrete  
 Box Culvert 8' x 4' Sta. 1+36.34  
 End Section starts at Sta. 1+30.34

CROSS SECTIONS

FR-425

Sheet 31 of 47



CROSS SECTIONS

FR-425

Sheet 32 of 47

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

7+39.00

7+00.00

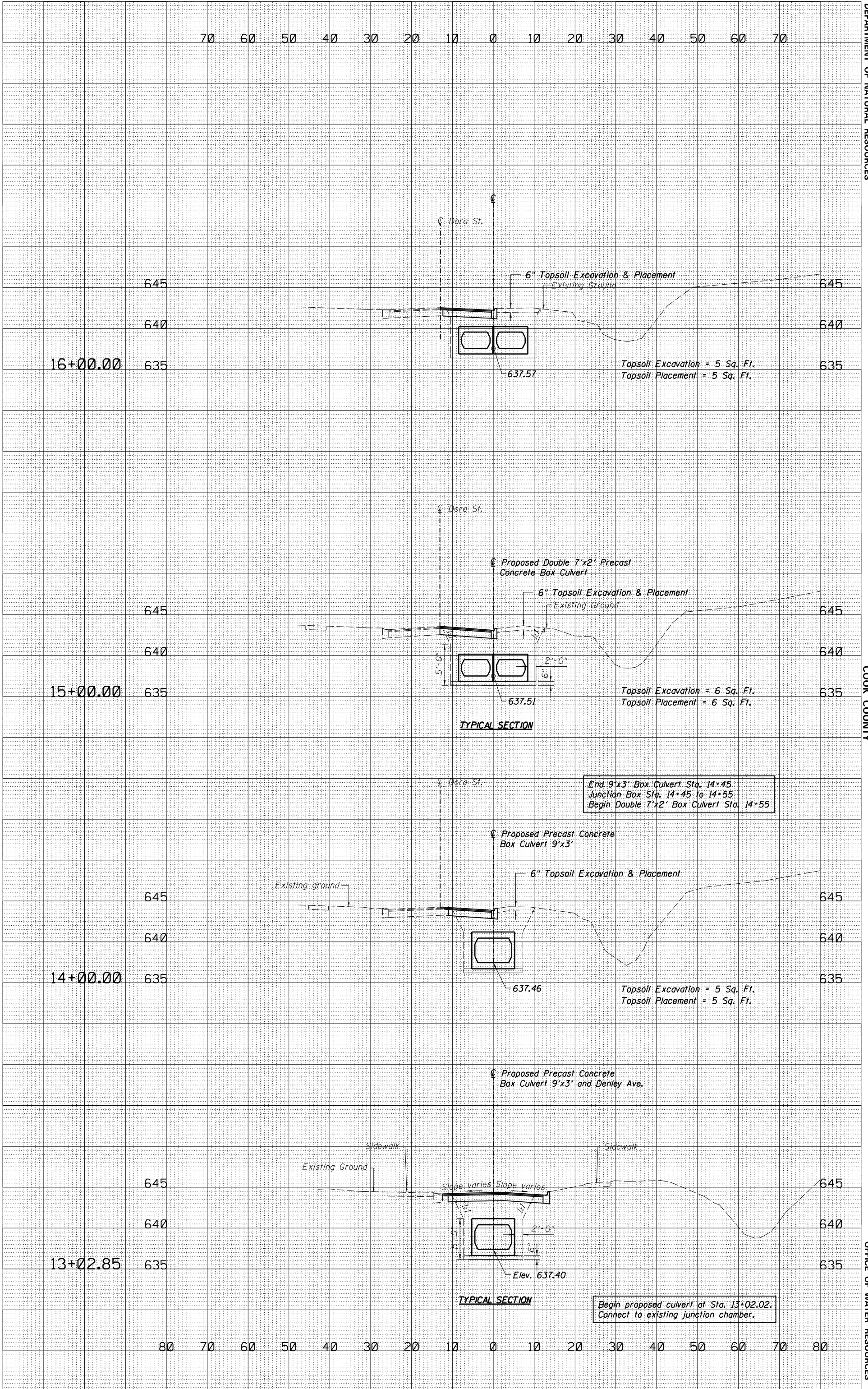
6+00.00

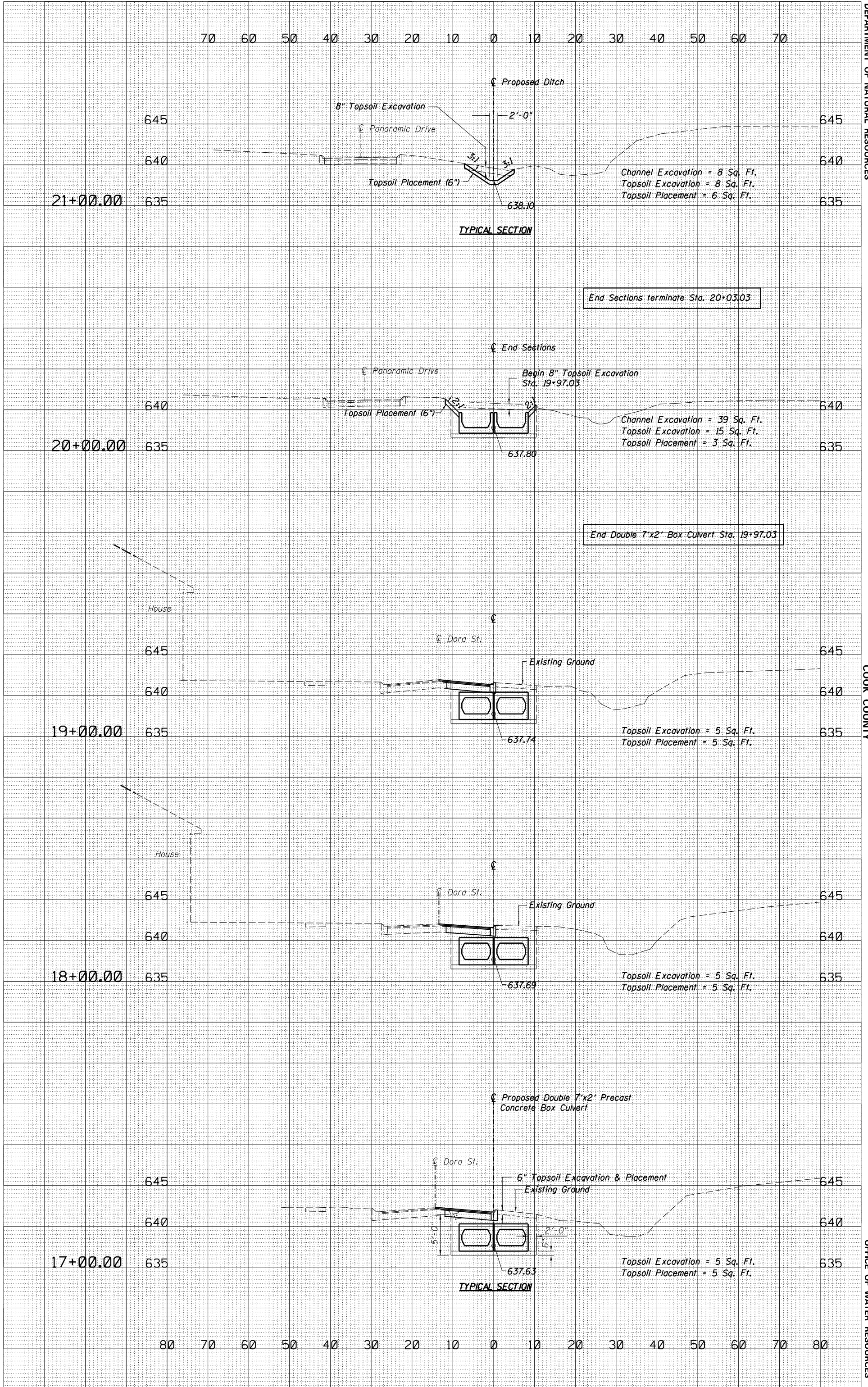
5+00.00

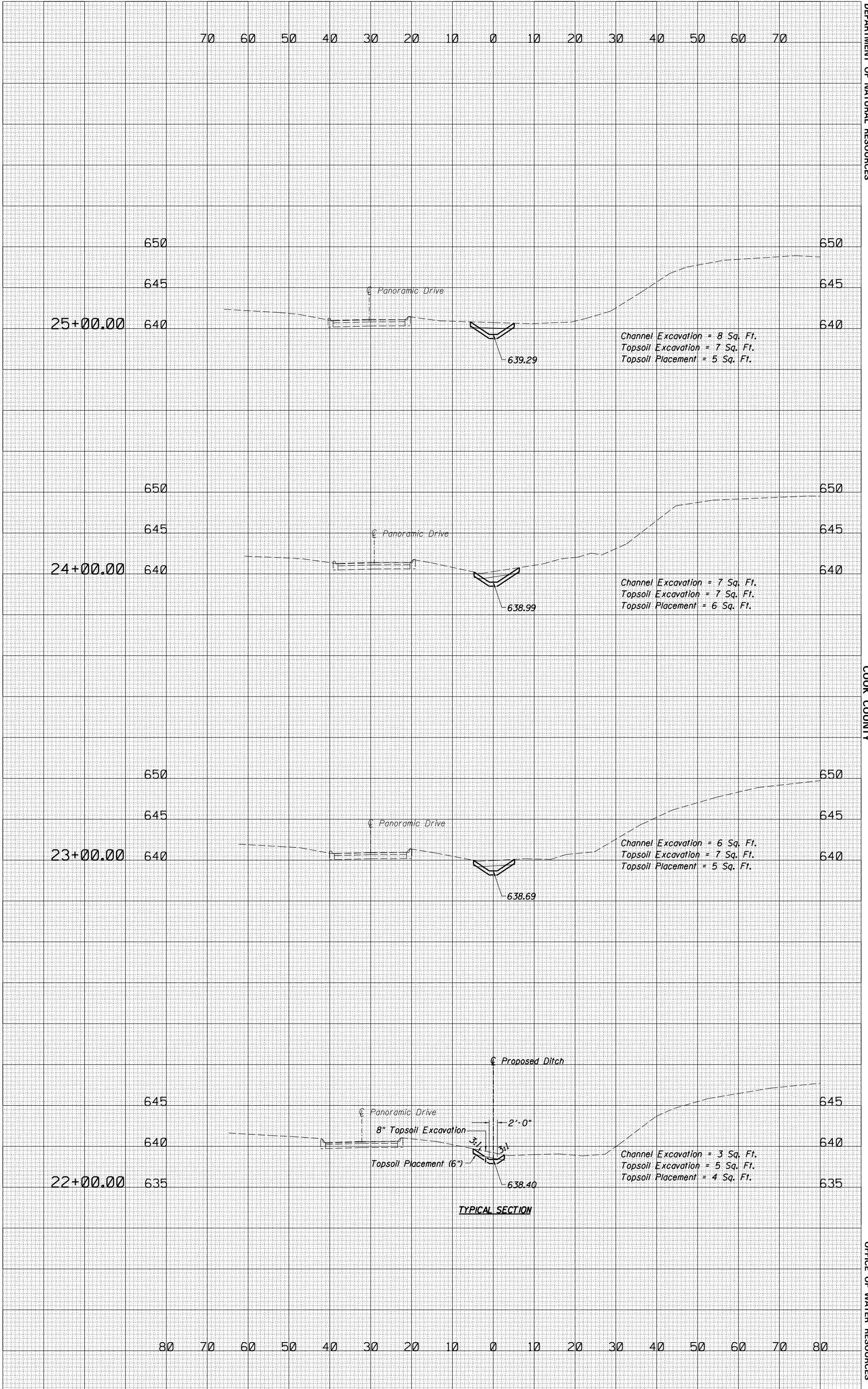
No work from Sta. 7+34 to Sta. 13+02.85  
 End Proposed Culvert Sta. 7+34 connect to exist. twin 54" R.C.P.'s

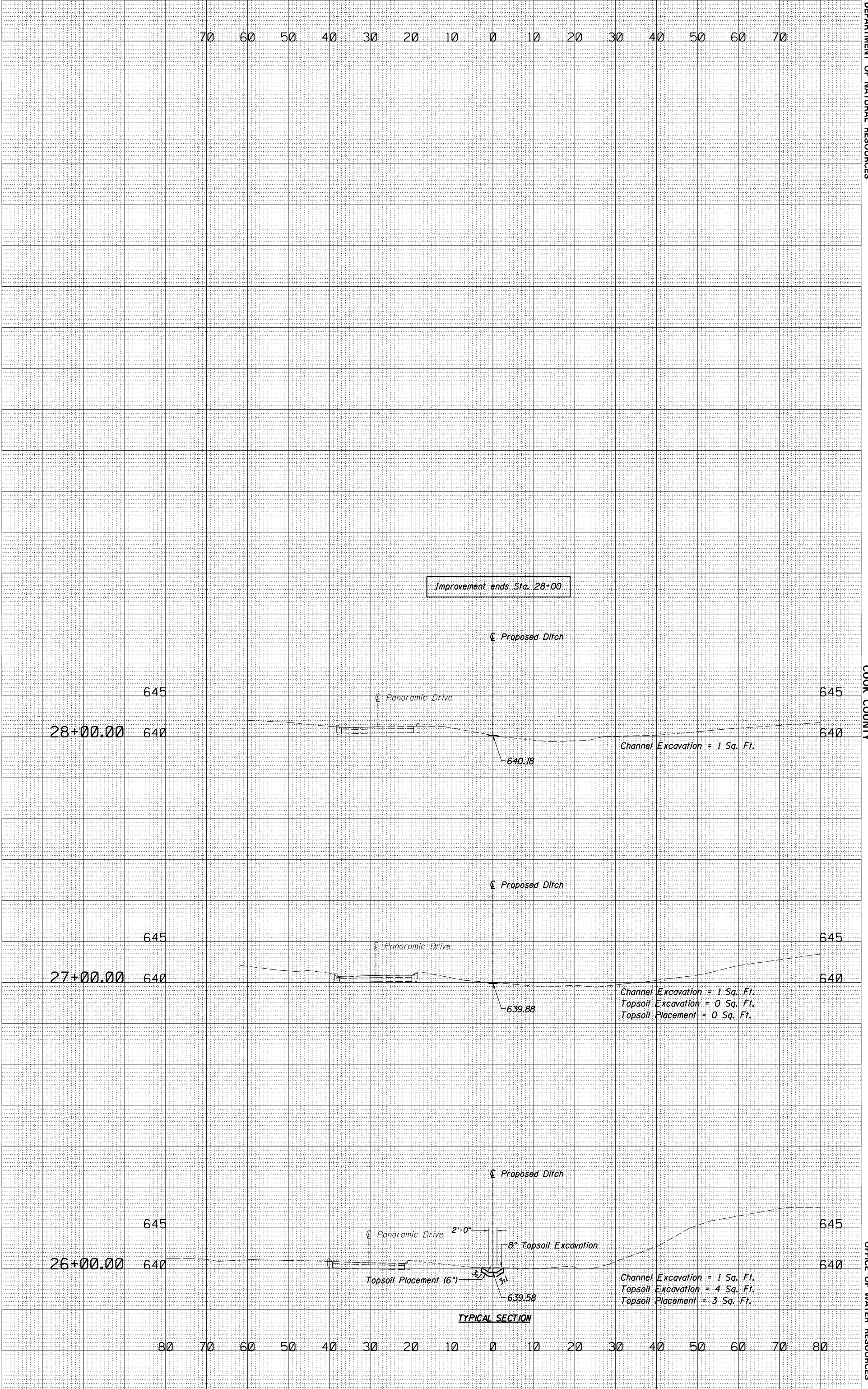
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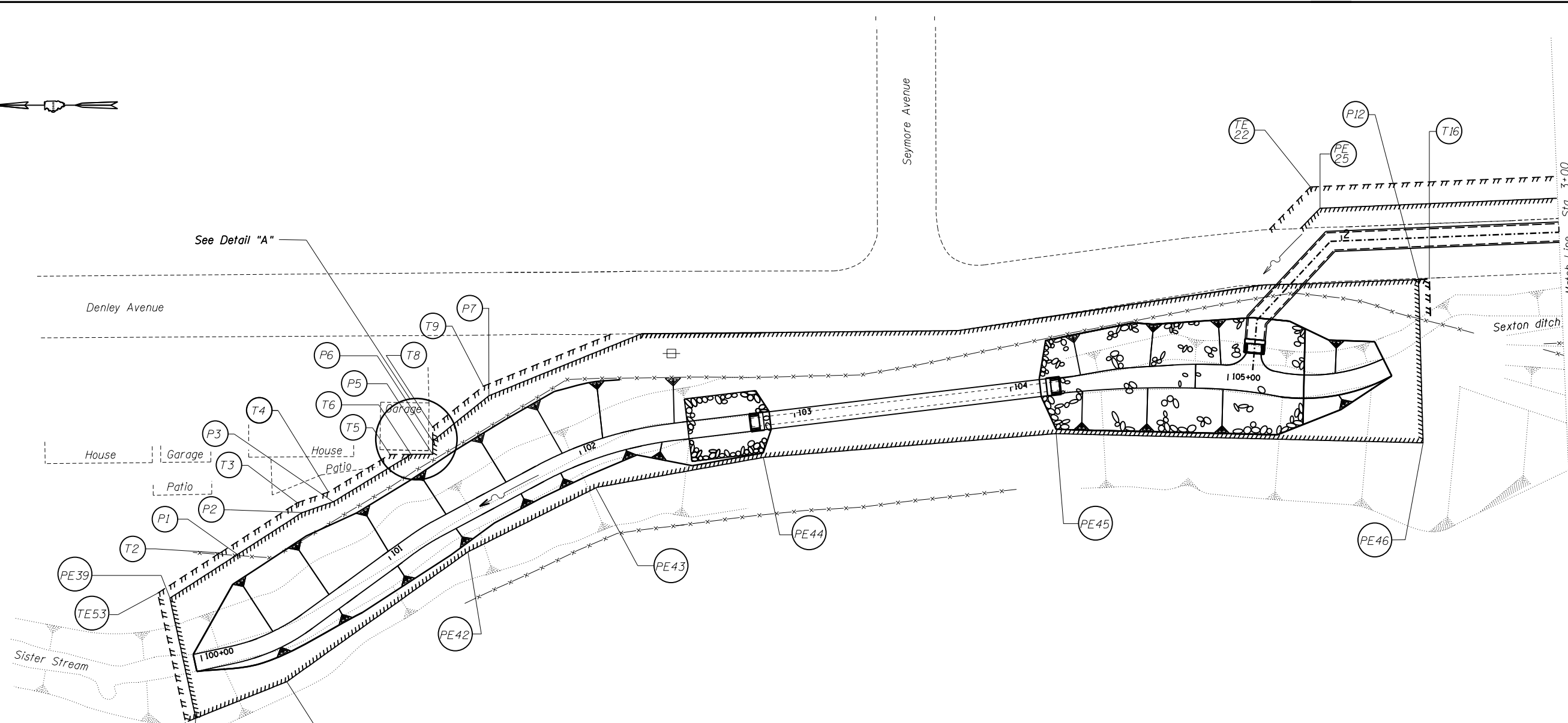




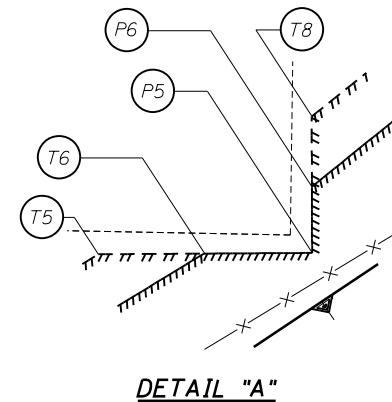
CROSS SECTIONS

FR-425

Sheet 36 of 47



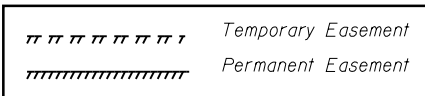
See Detail "A"



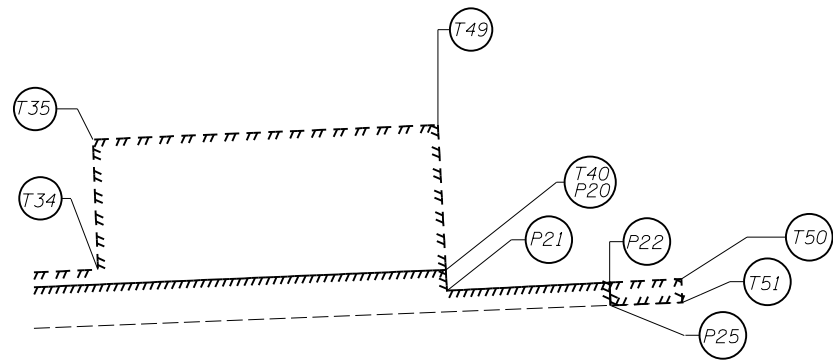
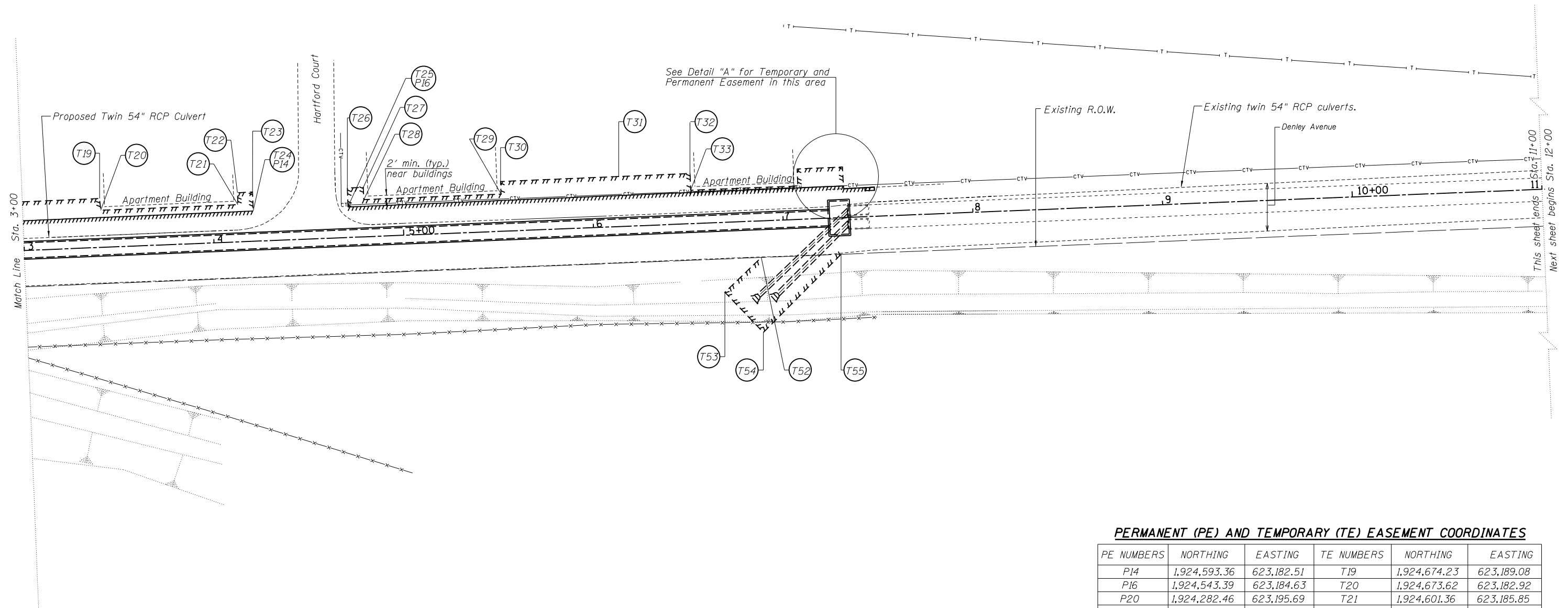
**PERMANENT (P and PE) AND TEMPORARY (T and TE) EASEMENT COORDINATES**

PE NUMBERS	NORTHING	EASTING	TE NUMBERS	NORTHING	EASTING
P1	1,925,321.27	622,013.61	T2	1,925,329.23	623,014.32
P2	1,925,291.58	623,032.83	T3	1,925,293.78	623,037.36
P3	1,925,277.28	623,037.75	T4	1,925,279.42	623,042.31
P5	1,925,231.56	623,059.65	T5	1,925,251.21	623,059.53
P6	1,925,231.56	623,065.77	T6	1,925,241.51	623,059.59
P7	1,925,205.72	623,086.56	T8	1,925,231.59	623,072.17
PE25	1,924,823.73	623,172.73	T9	1,925,208.29	623,090.93
P12	1,924,778.43	623,139.98	TE22	1,924,828.15	623,182.55
PE39	1,925,352.35	622,993.50	T16	1,924,773.44	623,140.19
PE40	1,925,340.45	622,938.33	TE53	1,925,357.97	622,995.82
PE41	1,925,298.62	622,955.12	TE54	1,925,345.16	622,936.45
PE42	1,925,215.51	623,014.69			
PE43	1,925,156.27	623,044.39			
PE44	1,925,079.40	623,058.25			
PE45	1,924,945.01	623,069.14			
PE46	1,924,776.37	623,064.91			

**LEGEND**



Designed By RJM Checked By GMS  
 Drawn By RJM Checked By GMS  
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 7/6/2013



DETAIL "A"

LEGEND

	Temporary Easement
	Permanent Easement

PERMANENT (PE) AND TEMPORARY (TE) EASEMENT COORDINATES

PE NUMBERS	NORTHING	EASTING	TE NUMBERS	NORTHING	EASTING
P14	1,924,593.36	623,182.51	T19	1,924,674.23	623,189.08
P16	1,924,543.39	623,184.63	T20	1,924,673.62	623,182.92
P20	1,924,282.46	623,195.69	T21	1,924,601.36	623,185.85
P21	1,924,282.38	623,194.25	T22	1,924,601.62	623,192.16
P22	1,924,271.17	623,194.82	T23	1,924,593.66	623,192.50
P25	1,924,271.11	623,193.24	T24	1,924,593.36	623,182.51
			T25	1,924,543.39	623,184.63
			T26	1,924,543.70	623,194.62
			T27	1,924,535.34	623,194.98
			T28	1,924,535.08	623,188.52
			T29	1,924,462.76	623,191.42
			T30	1,924,463.02	623,198.05
			T31	1,924,400.83	623,200.69
			T32	1,924,363.27	623,202.27
			T33	1,924,362.93	623,193.45
			T34	1,924,306.45	623,195.70
			T35	1,924,306.81	623,204.67
			T40	1,924,282.46	623,195.69
			T49	1,924,283.01	623,205.68
			T50	1,924,266.22	623,195.06
			T51	1,924,266.16	623,193.43
			T52	1,924,325.74	623,158.04
			T53	1,924,344.87	623,139.72
			T54	1,924,324.63	623,118.57
			T55	1,924,283.68	623,159.72

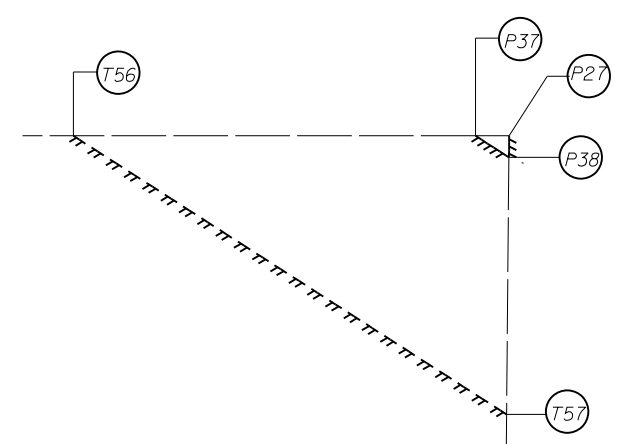
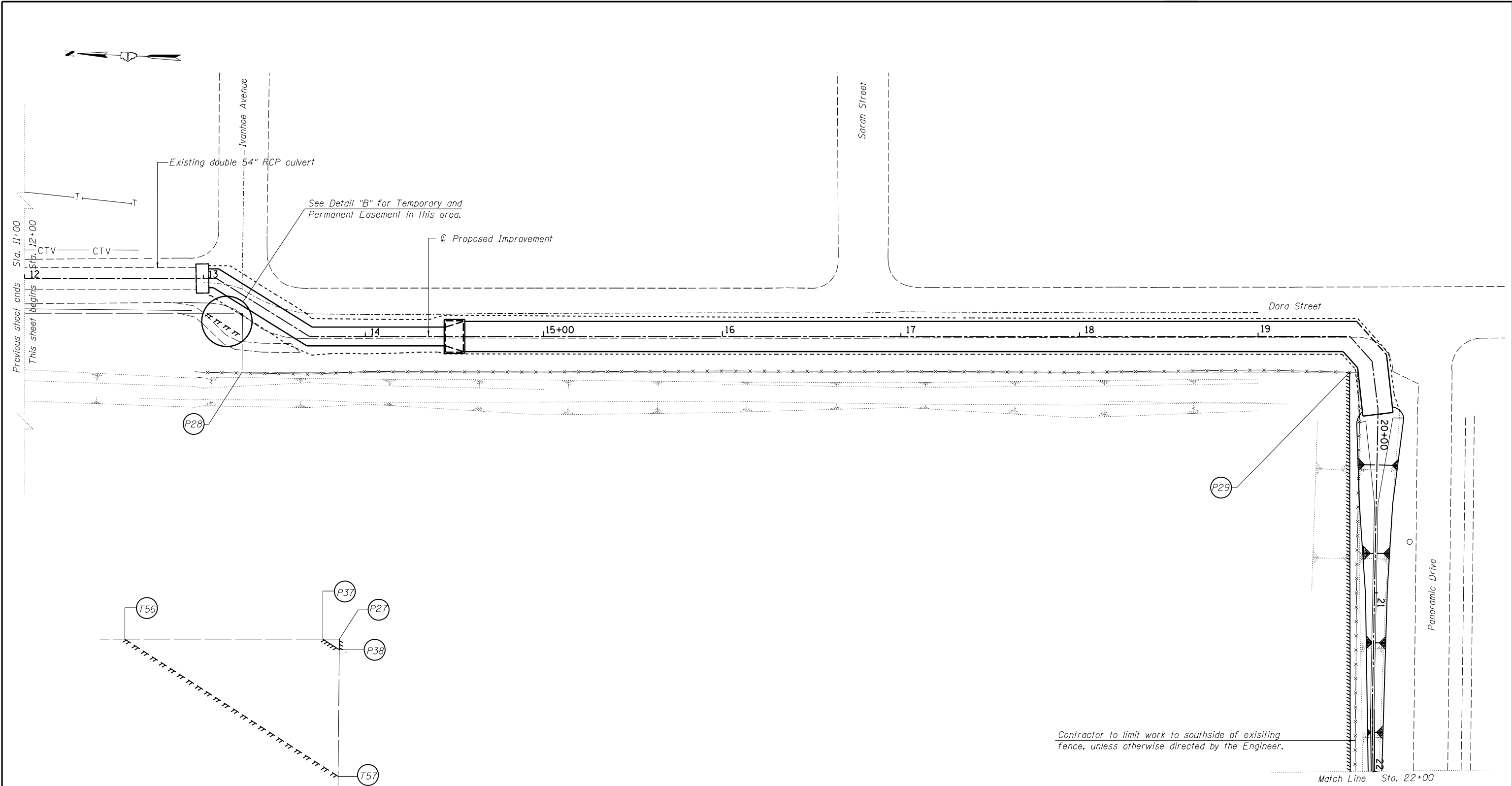
O:\OwrProj\m\Projects\CrystalCreek IIB\Plan Sheets\38 Temporary and Permanent Easements 2.dgn

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7/20/13

Designed By RJM Checked By SMS  
Drawn By RJM Checked By TMM

Designed By            Checked By GMS  
 Drawn By            Checked By GMS  
 7/6/2013 8:47:27 AM O:\OwrProj\mpl\Projects\CrystalCreek II B\Plan Sheets\39 Temporary and Permanent Easements 3.dgn



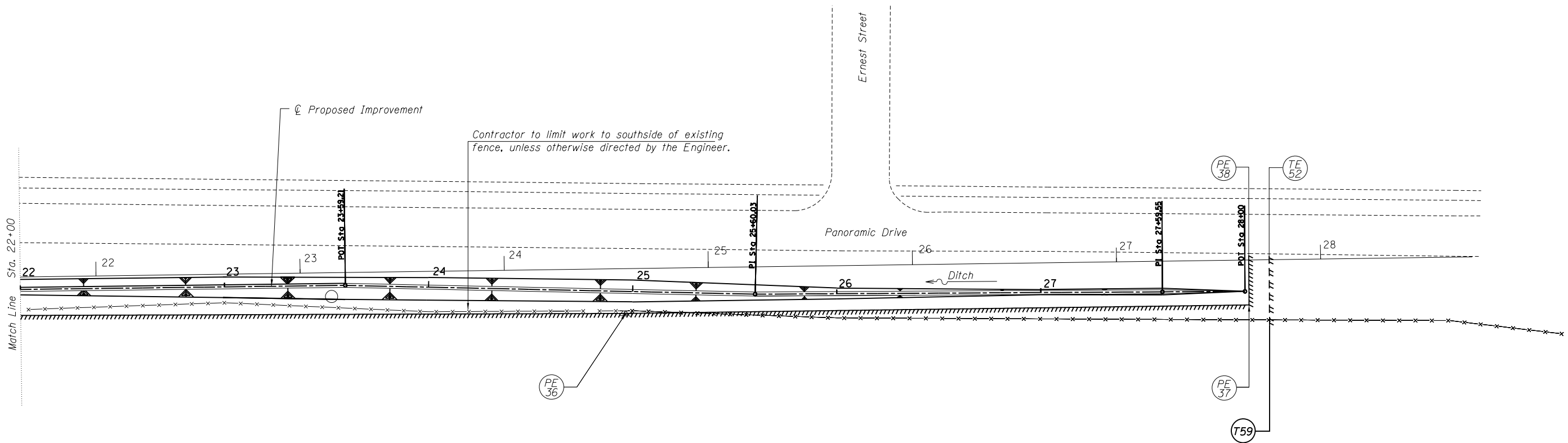
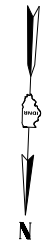
Contractor to limit work to southside of existing fence, unless otherwise directed by the Engineer.

**PERMANENT (PE) AND TEMPORARY (TE) EASEMENT COORDINATES**

PE NUMBERS	NORTHING	EASTING	TE NUMBERS	NORTHING	EASTING
P27	1,923,691.94	623,183.33	T56	1,923,711.96	623,182.53
P28	1,923,690.93	623,150.34	T57	1,923,691.55	623,170.52
P29	1,923,071.16	623,175.07			
P37	1,923,693.49	623,183.27			
P38	1,923,691.92	623,182.34			

**LEGEND**

	Temporary Easement
	Permanent Easement



**PERMANENT (PE) AND TEMPORARY (TE) EASEMENT COORDINATES**

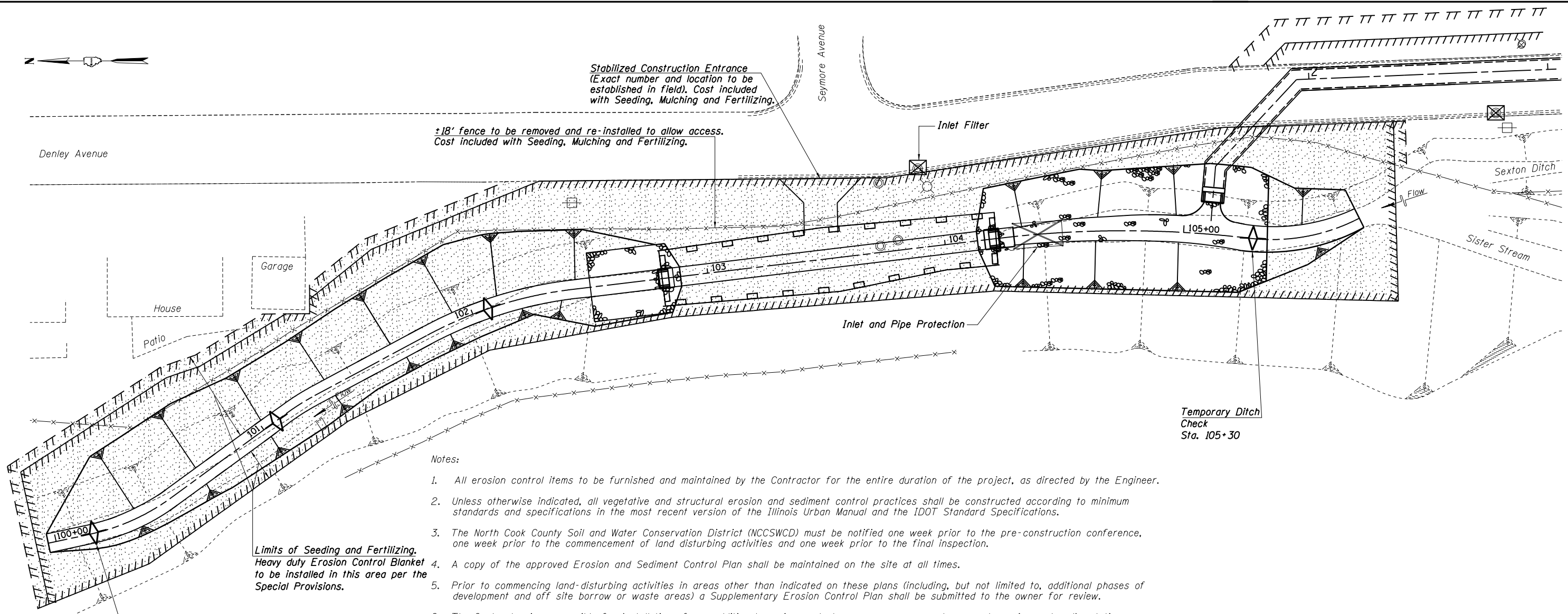
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PE 36	1,923,049.49	622,655.35	T59	1,923,043.05	622,339.96
PE 37	1,923,033.58	622,350.40	TE52	1,923,008.92	622,341.51
PE 38	1,923,009.22	622,351.51			

**LEGEND**

	Temporary Easement
	Permanent Easement

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**Notes:**

1. All erosion control items to be furnished and maintained by the Contractor for the entire duration of the project, as directed by the Engineer.
2. Unless otherwise indicated, all vegetative and structural erosion and sediment control practices shall be constructed according to minimum standards and specifications in the most recent version of the Illinois Urban Manual and the IDOT Standard Specifications.
3. The North Cook County Soil and Water Conservation District (NCCSWCD) must be notified one week prior to the pre-construction conference, one week prior to the commencement of land disturbing activities and one week prior to the final inspection.
4. A copy of the approved Erosion and Sediment Control Plan shall be maintained on the site at all times.
5. Prior to commencing land-disturbing activities in areas other than indicated on these plans (including, but not limited to, additional phases of development and off site borrow or waste areas) a Supplementary Erosion Control Plan shall be submitted to the owner for review.
6. The Contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the NCCSWCD.
7. During any dewatering operations, water will be pumped from sump pit into sediment basins or sediment filter bags (IL Urban Manual Practice Standard, Dewatering Code 813. Dewatering directly into field tiles or storm water structures is prohibited. Refer to Sump Pit Plan shown on Erosion Control Details sheet for cofferdam dewatering.
8. All adjacent streets must be kept clear of debris, inspected daily and cleaned when necessary.
9. All erosion control measures must be inspected weekly and after each 1/2" rain event.
10. Mulch shall be installed on all slopes and in critical areas immediately upon final grading. Cost included with permanent Seeding type specified for particular area.
11. The priority shall be given to the completion and stabilization of the disturbed areas. Work in these areas shall not be prolonged in attempt that all final grading and stabilization can take place at one time.
12. Stockpiles of soil and other materials to remain in place more than three (3) days shall be furnished with erosion and sediment control measures (I.E. perimeter erosion barrier). Stockpiles to remain in place for 21 days or more shall receive temporary seeding.
13. In areas where work is complete, permanent stabilization shall occur within 7 days of completion, and in areas where work has temporarily ceased for 21 days or more, temporary stabilization shall occur by the 14th day after work has ceased.
14. Completed slopes shall be seeded and mulched as the excavation proceeds to the extent considered desirable and practical. Permanent seeding shall be used whenever possible. Under no circumstances shall the contractor prolong final grading and shaping so that the entire project can be permanently seeded at one time.
15. The condition of the construction site for winter shutdown shall be addressed early in the fall growing season so that slopes and other bare earth areas may be stabilized with temporary and/or permanent vegetative cover for proper erosion and sediment control. All open areas that are to remain idle throughout the winter shall receive temporary erosion control measures including temporary seeding, mulching and/or erosion control blanket prior to the end of the fall growing season. Costs of Mulching and Erosion Control Blanket included with Temporary Seeding. The areas to be worked beyond the end of the growing season must incorporate soil stabilization measures that do not rely on vegetative cover such as erosion control blanket and heavy mulching. Costs included with Seeding, Mulching and Fertilizing.
16. No work shall be performed in flowing water. Any work within the stream or on the banks shall be isolated from concentrated flows or stream flow. Cost of this work shall be paid for as "TEMPORARY COFFERDAM SYSTEM". See Special Provisions and Sheet 42 for details. The stream banks should be stabilized at the end of each day. Once work in this area begins, priority shall be given to the completion of the work and final stabilization of all disturbed areas.

Limits of Seeding and Fertilizing.  
Heavy duty Erosion Control Blanket to be installed in this area per the Special Provisions.

Temporary Ditch checks shall be placed every 100' starting with Sta. 100+05 and ending at Sta. 102+05.

**INSPECTION AND MAINTENANCE SCHEDULE**

ACTIVITY	RESPONSIBLE PARTY	DURATION
Stabilization during construction maintenance	Contractor	Weekly and after every 1/2" of rainfall
Stabilization during construction-observation	Engineer	Weekly and after every 1/2" of rainfall
Vegetation maintenance	Contractor	Completion of Contract
Vegetation and stabilization maintenance	Village of Schiller Park	Ongoing after construction completion

**LEGEND**

	SEEDING AND FERTILIZING
	TEMPORARY DITCH CHECK
	PERIMETER EROSION BARRIER
	INLET AND PIPE PROTECTION
	INLET FILTER

**CONTRACTOR CERTIFICATION**

"I certify under penalty of law that I understand the terms and conditions of the General National Pollutant Discharge Elimination System (NPDES) Permit (ILR10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this Certification."

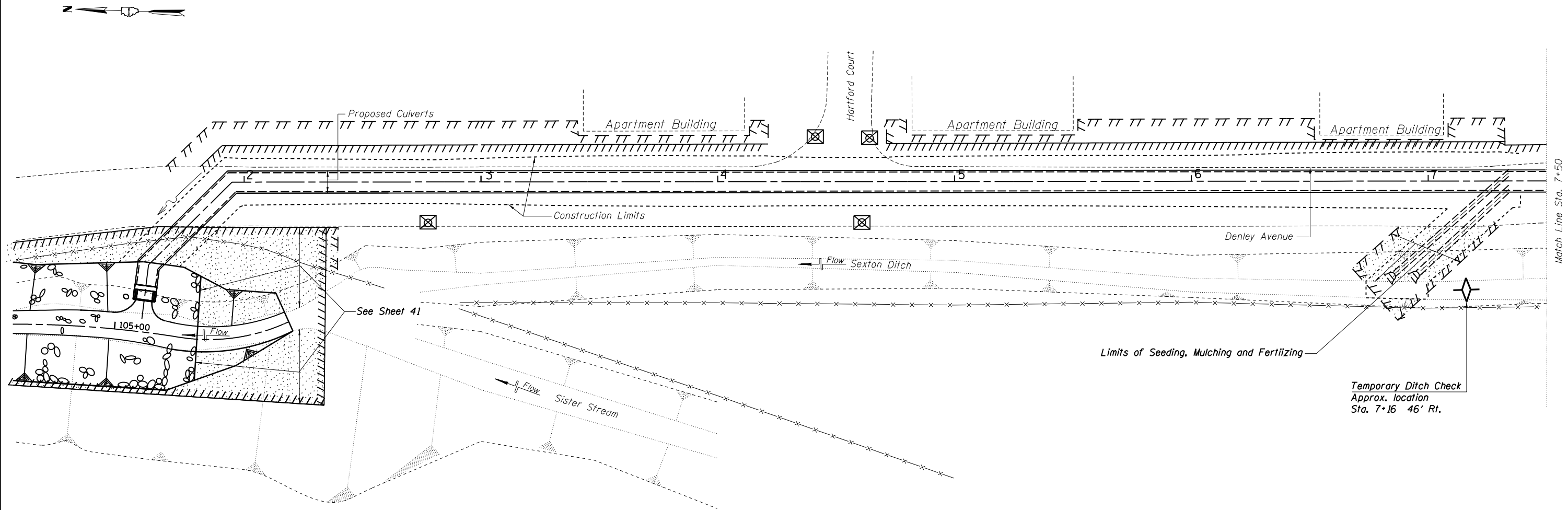
<b>GENERAL CONTRACTOR</b>	
Signature _____	Title _____
Company _____	Date _____
<b>SUB-CONTRACTOR</b> Responsible for: _____	
Signature _____	Title _____
Company _____	Date _____
<b>WITNESSED BY OWNER</b>	
Signature _____	Title _____
Company _____	Date _____

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**TEMPORARY COFFERDAM SYSTEM**

**Notes:**

The Contractor is responsible for providing an approved method for the detention of local storm water and runoff that naturally collects within the coffered area. This water should be released into the stream flow provided it meets all permit requirements for sediment control. The Contractor will be responsible for providing any and all methods required as mandated by the existing or an amended permit for the treatment, if necessary, of the local drainage prior to the discharge into the stream flow.

The Contractor is responsible for the design and construction / installation of the selected temporary cofferdam system, as Approved by the Engineer.

The height of the cofferdam shall be sufficient to prevent overtopping by a flood with a recurrence interval selected by the Contractor.

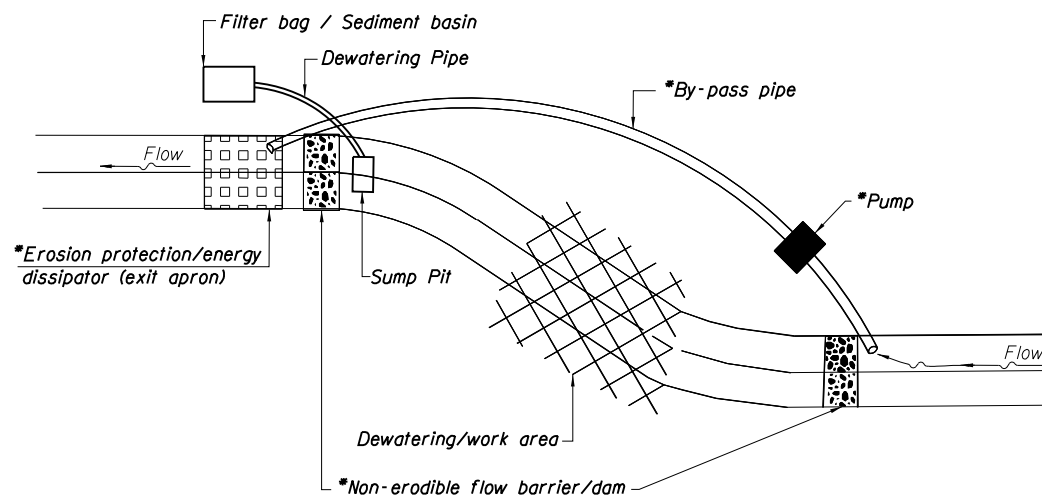
The Contractor shall assume all risk of damages to his/her equipment and the work caused by flooding for the cofferdam design based on the existing or an amended permit.

The Contractor shall submit his proposed method of maintaining channel flows, for approval by the Engineer, prior to beginning construction.

Place geotextile under riprap when riprap is used for energy dissipator, or erosion control.

Geotextiles shall meet material specification 592 GEOTEXTILE, table 2, Class 1 (refer to the Illinois Urban Manual, which can be found online at [www.aiswcd.org/IUM](http://www.aiswcd.org/IUM))

Multiple temporary cofferdam systems may be required throughout project site depending on location of construction activities. The cost of multiple systems is included in the lump sum price for "TEMPORARY COFFERDAM SYSTEM".



\* To be designed by Contractor and approved by Engineer

**TEMPORARY COFFERDAM SYSTEM**  
(Typical Pumped Diversion Plan)

**LEGEND**

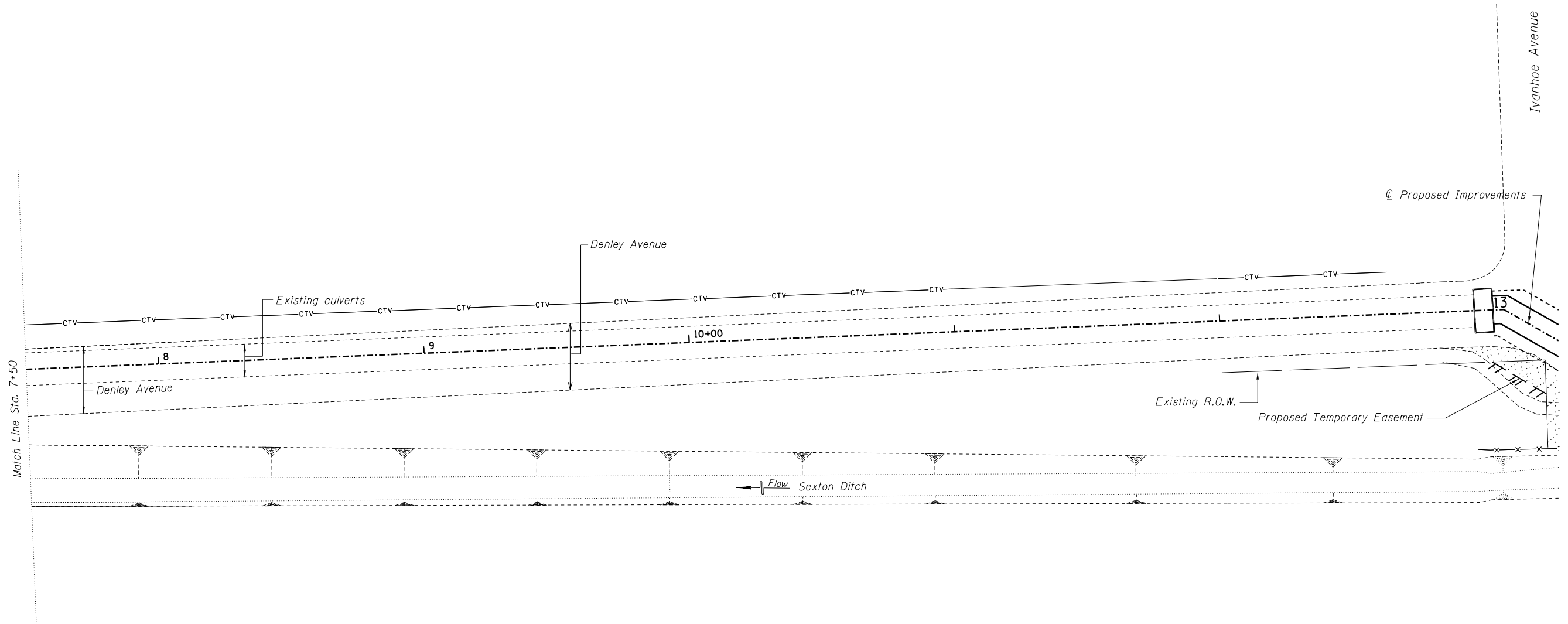
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	PERIMETER EROSION BARRIER
	INLET AND PIPE PROTECTION
	INLET FILTER

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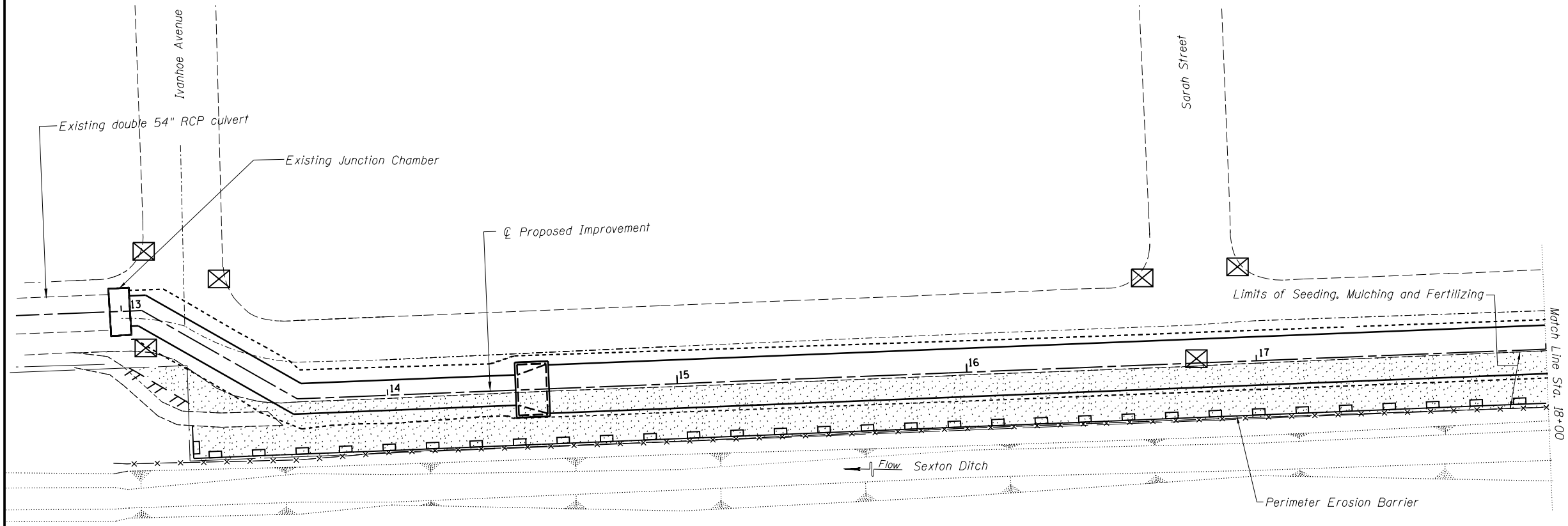
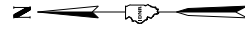
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	INLET FILTER

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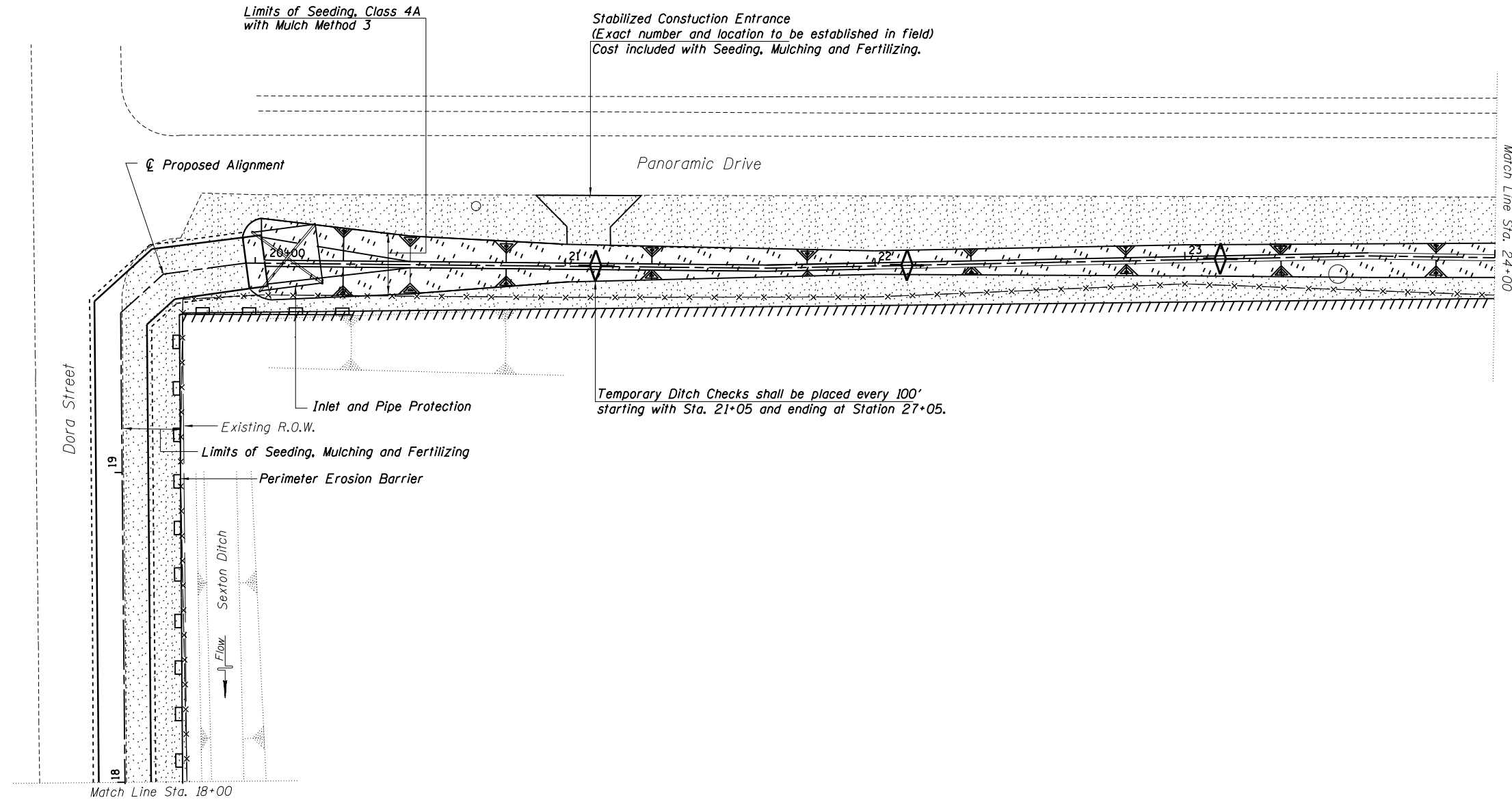
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Drawn By: RJM Checked By: RLP

**LEGEND**

	SEEDING, MULCHING AND FERTILIZING
	TEMPORARY DITCH CHECK
	PERIMETER EROSION BARRIER
	INLET AND PIPE PROTECTION
	INLET FILTER



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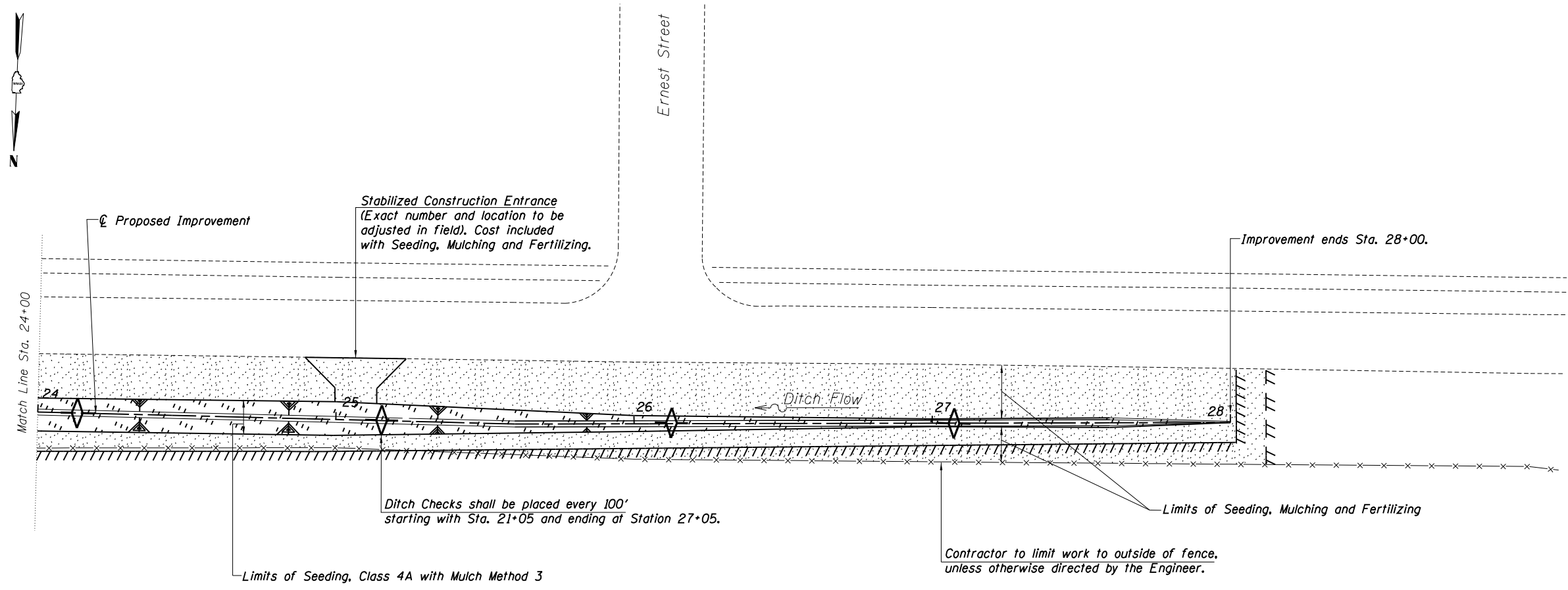
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**LEGEND**

	SEEDING, MULCHING AND FERTILIZING
	SEEDING, CLASS 4A WITH MULCH METHOD 3
	TEMPORARY DITCH CHECK
	PERIMETER EROSION BARRIER
	INLET AND PIPE PROTECTION
	INLET FILTER



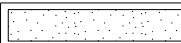
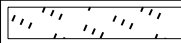

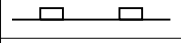
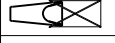

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**LEGEND**

	SEEDING, MULCHING AND FERTILIZING
	SEEDING, CLASS 4A WITH MULCH METHOD 3
	TEMPORARY DITCH CHECK
	PERIMETER EROSION BARRIER
	INLET AND PIPE PROTECTION
	INLET FILTER

