

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**EVERGREEN AVENUE**

**FAU 8390**

HPS & STR FUNDS

SECTION 04-00084-01-PV

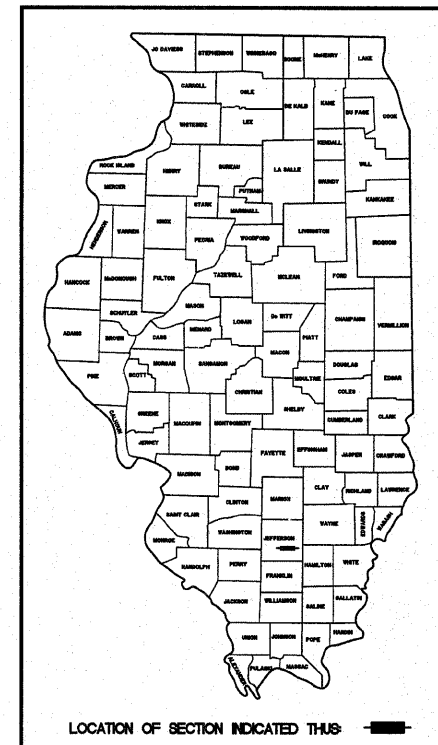
PROJECT NO. RS-HPP-1785(101)

EFFINGHAM COUNTY, ILLINOIS

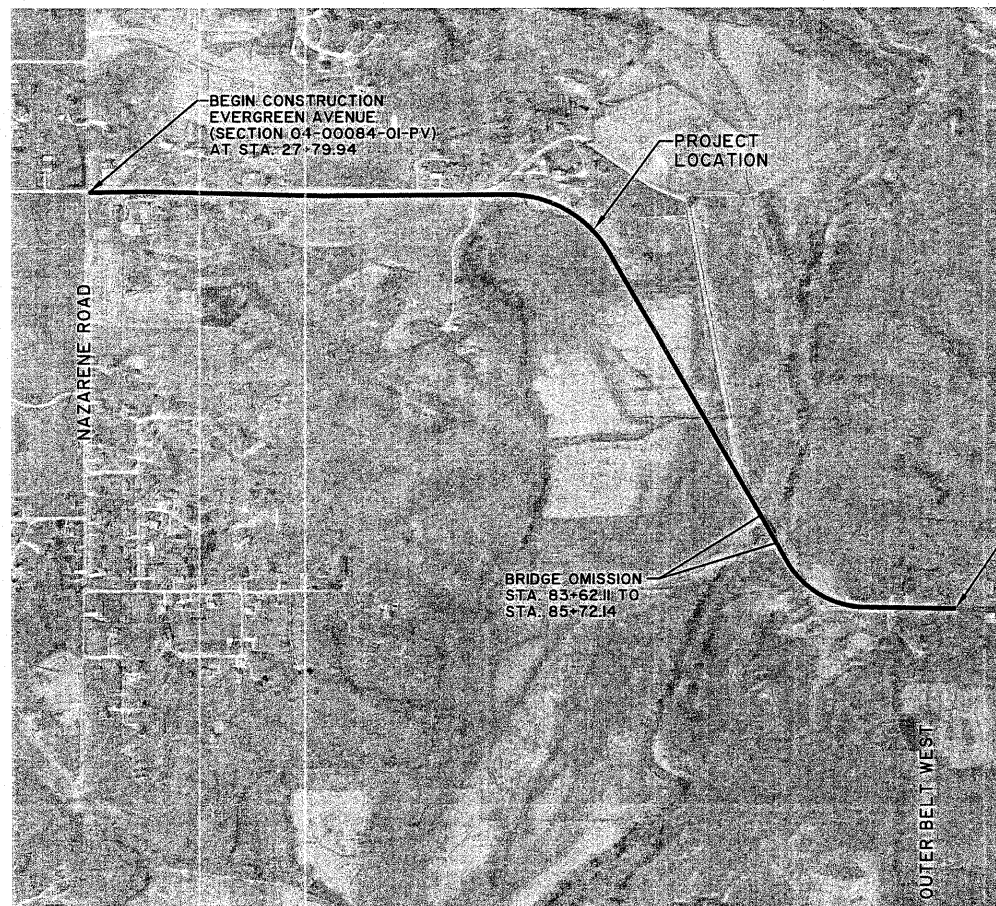
C-97-016-07

CONTRACT #95639

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	1
FED. ROAD DIST. NO. 7		ILLINOIS		



FOR INDEX OF SHEETS  
SEE SHEET 2  
FOR STANDARDS  
SEE SHEET 3



APPROVED March 10 20.11  
[Signature]  
COUNTY ENGINEER

APPROVED 3-10 20.11  
[Signature]  
CITY ENGINEER

PASSED 4-13 20.11  
[Signature]  
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review 4/13 20.11  
[Signature]  
DEPUTY DIRECTOR OF HIGHWAYS,  
REGION FOUR ENGINEER  
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**SCALES**

PLAN	0 50 100
PROFILE (HORIZONTAL)	0 50 100
PROFILE (VERTICAL)	0 5 10
CROSS SECTIONS (HORIZONTAL)	0 10 20
CROSS SECTIONS (VERTICAL)	0 5 10

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

**UTILITY NOTE**

THE LOCATIONS OF THOSE BURIED AND ABOVEGROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVEGROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES, REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR MUST CONTACT J.U.L.I.E. 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.

**EVERGREEN AVENUE**  
FUNCTIONAL CLASSIFICATION - Urban Collector  
ADT - 3807 vpd  
DESIGN SPEED - 40 MPH

**LOCATION MAP**  
SUMMIT TOWNSHIP  
**LENGTH OF PROJECT**  
EVERGREEN AVENUE (SECTION 04-00084-01-PV) = 7159.31 Feet (1.35 Mile)  
BRIDGE OMISSION = 210.03 Feet (0.04 Mile)  
TOTAL = 6949.28 Feet (1.31 Mile)

PLANS DATED:  
February 9, 2011

**MILANO & GRUNLOH ENGINEERS, LLC**  
14 WEST WASHINGTON  
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Phone: (207) 547-7952  
(800) 677-2174  
Fax #: (207) 542-5433  
Web Address: www.mgengineers.com  
Design Firm #: 19-003008

File name: S:\DWG\05\05227.dwg>Title Sht.dwg  
Plot date: 02/08/11 at 15:55

**EVERGREEN AVENUE**  
FAU 8390  
SECTION 04-00084-01-PV

[Signature]  
CHARLES A. GRUNLOH  
REGISTERED PROFESSIONAL ENGINEER  
ILLINOIS  
P.E. No. 35131  
My License Expires 11-30-11

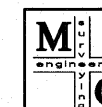
Contract No. 95639

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084- 01-PV	EFFINGHAM	139	2
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639

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INDEX OF SHEETS  
 EVERGREEN AVENUE  
 CITY OF EFFINGHAM, ILLINOIS  
 COUNTY OF EFFINGHAM, ILLINOIS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084- 01-PV	EFFINGHAM	139	3
FED. ROAD DIST. NO. 7		ILLINOIS		

CONTRACT #95639

## STANDARDS

000001-06	Standard Symbols, Abbreviations, and Patterns	630001-09	Steel Plate Beam Guardrail
280001-05	Temporary Erosion Control Systems	630301-05	Shoulder Widening for Type I (Special) Guardrail Terminals
420001-07	Pavement Joints	631032-06	Traffic Barrier Terminal, Type 6A
420101-04	(24') 7.2m Joint PCC Pavement	635006-03	Reflector and Terminal Marker Placement
424001-05	Curb Ramps for Sidewalk	635011-02	Reflector Marker and Mounting Details
515001-03	Name Plate for Bridges	701006-03	Off-Road Operations, 2L, 2W, 4.5m (15') to 600mm (24") from Pavement Edge
542301-03	Precast Reinforced Concrete Flared End Section	701011-02	Off-Road Moving Operations 2L, 2W, Day Only
542401-01	Aluminum End Section	701301-04	Lane Closure 2L, 2W Short Time Operations
542606-02	Reinforced Concrete Pipe Tee	701306-03	Lane Closure 2L, 2W Slow Moving Operations Day Only for Speeds $\geq$ 45 MPH
602301-03	Inlet, Type A	701311-03	Lane Closure 2L, 2W, Moving Operations - Day Only
602306-03	Inlet, Type B	701336-06	Lane Closure 2L, 2W Work Areas in Series. for Speeds $\geq$ 45 MPH
602401-03	Manhole, Type A	701801-04	Lane Closure, Multilane, 1W or 2W, Crosswalk or Sidewalk Closure
602601-02	Precast Reinforced Concrete Flat Slab Top	701901-01	Traffic Control Devices
602701-02	Manhole Steps	720001-01	Sign Panel Mounting Details
604001-03	Frame and Lid, Type 1	720006-02	Sign Panel Erection Details
604006-04	Frame and Grate, Type 3	780001-02	Typical Pavement Markings
604011-04	Frame and Grate, Type 3V	BLR 21-8	Typical Application of Traffic Control Devices for Construction on Rural Local Highways
604041-02	Frame and Grate, Type 9		
606001-04	Concrete Curb Type B and Combination Concrete Curb and Gutter		
606006-02	Outlet for Concrete Curb and Gutter, Type B-15.60 (B-6.24)		
606201-02	Type B Gutter (Inlet, Outlet and Entrance)		



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STANDARDS SHEET  
 EVERGREEN AVENUE  
 CITY OF EFFINGHAM, ILLINOIS  
 COUNTY OF EFFINGHAM, ILLINOIS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-06-PV	EFFINGHAM	139	4
FED. ROAD DIST. NO. 7		ILLINOIS		

CONTRACT #95639

1. The following rates of application have been assumed in calculating plan quantities:

Crushed Stone	2.05 Tons/CY
Bituminous Concrete	115 lbs/Inch/SY
Bituminous Materials (Prime Coat) on Aggregate Bases	0.50 Gal/SY
Nitrogen Fertilizer Nutrient	90 lbs/Acre
Phosphorus Fertilizer Nutrient	90 lbs/Acre
Potassium Fertilizer Nutrient	90 lbs/Acre
Agricultural Ground Limestone	2 Tons/Acre
Mulch, Method 2 (Procedure 1)	2 Tons/Acre
Temporary Erosion Control Seeding	100 lbs/Acre

2. Before ordering storm sewers, pipe culverts or pipe drains, the Contractor shall consult the Engineer for exact lengths.

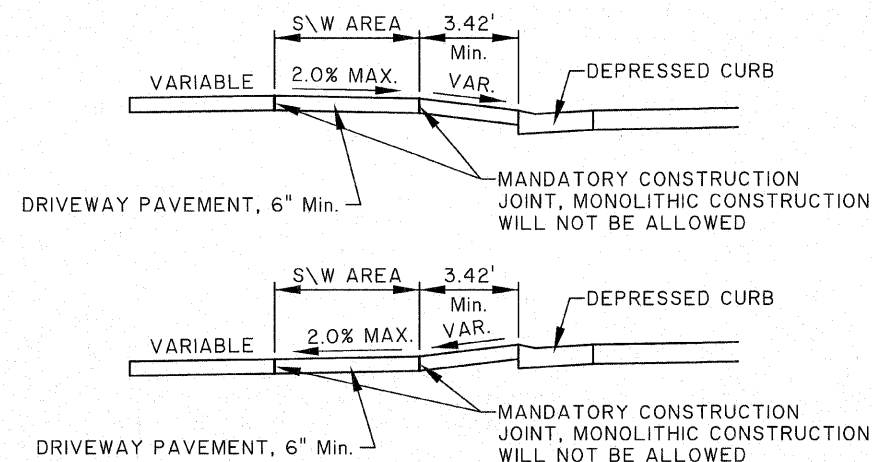
3. The Engineer shall be the sole judge concerning curing time for the various bituminous lifts.

4. For the pay item Bituminous Materials (Prime Coat), the Contractor shall use either RC-70 or an emulsified polymer prime SS-IHP.

#### 5. WALKS AND SLABS

A. Concrete walks, islands, and other slabs shall be in accordance with IDOT Std. Spec. Unless otherwise shown, locate sidewalk contraction joints at 5 ft on center and expansion joints at 50 ft on center, unless otherwise shown, locate contraction joints in larger slabs at 15 ft intervals in each direction, reinforced with lubricated smooth dowel bars (3/4 in. diameter, 18 in. length, at 12 in. centers).

B. Concrete walks crossing through entrances shall be constructed in accordance with the detail shown below. Monolithically constructed sidewalks will not be allowed.

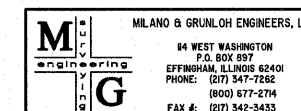


**DETAIL OF SIDEWALK THROUGH ENTRANCES**

6. Removal of concrete pipe culverts and concrete encased clay pipe culverts will be paid for as pipe culvert removal. All other pipe culvert removal and headwall removal shall be considered included in the cost of Earth Excavation.

#### LEGEND

○	IRON PIN FOUND
○ 1/4	1/4" IRON PIN FOUND
○ IP	IRON PIPE FOUND
○ NGW	NAIL & WASHER FOUND
○ N	NAIL FOUND
○ PK	PK NAIL FOUND
○ RR	RAILROAD SPIKE FOUND
○ T	"T" FENCE POST FOUND
○ X	CHISELED "X" IN CONCRETE FOUND
○ DH	DRILLED HOLE IN CONCRETE FOUND
⊙	SURVEY DISC FOUND
⊘	STONE FOUND
☼	TREE (DECIDUOUS)
★	TREE (EVERGREEN)
⊙	FIRE HYDRANT
⊕	WATER METER
— v —	WATER MAIN (EXISTING)
— w —	WATER SERVICE LINE (EXISTING)
⊕	VALVE (GAS OR WATER)
⊕	GAS METER
— g —	GAS MAIN (EXISTING)
— g —	GAS SERVICE LINE (EXISTING)
⊕ C	CABLE TV PEDESTAL
— CT —	UNDERGROUND CABLE TV (EXISTING)
⊕ T	TELEPHONE PEDESTAL
⊕ T	TELEPHONE MANHOLE
— T —	TELEPHONE CABLE (EXISTING)
— t —	TELEPHONE SERVICE WIRE (EXISTING)
— ○ —	POWER POLE
⊕	POWER POLE w/LIGHT
←	GUY ANCHOR
⊕	LIGHTPOLE (EXISTING)
⊕ E	ELECTRIC PEDESTAL
— EHE —	OVERHEAD ELECTRIC (EXISTING)
— E —	UNDERGROUND ELECTRIC (EXISTING)
L/S	LANDSCAPING
⊕	FENCE POST
— x — x — x —	FENCE
⊕	MAILBOX
⊕	SIGN



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GENERAL NOTES  
 EVERGREEN AVENUE  
 CITY OF EFFINGHAM, ILLINOIS  
 COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05227\dwg\Title Sh1.dwg  
 Plot date: 02/08/11 at 15:55

SUMMARY OF QUANTITIES WEST EVERGREEN AVENUE						
ITEM NO.	PAY CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	80% FEDERAL 20% LOCAL	100% LOCAL
1	20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	145	104	41
2	20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	235	107	128
3	20100500	TREE REMOVAL ACRES	ACRE	6.85	6.7	0.15
4	20200100	EARTH EXCAVATION	CU YD	58302	56350	1952
5	20400800	FURNISHED EXCAVATION	CU YD	15702	15702	0
6	20700110	POROUS GRANULAR EMBANKMENT	TON	125	0	125
7	20800150	TRENCH BACKFILL	CU YD	262	229	33
8	28000305	TEMPORARY DITCH CHECKS	FOOT	2212	2212	0
9	28000400	PERIMETER EROSION BARRIER	FOOT	1657	1292	365
10	28000500	INLET AND PIPE PROTECTION	EACH	36	30	6
11	28000510	INLET FILTERS	EACH	25	19	6
12	28100809	STONE DUMPED RIPRAP, CLASS A5	TON	765	765	0
13	28200200	FILTER FABRIC	SQ YD	2708	2569	139
14	28400100	GABIONS	CU YD	478	177	301
15	28400700	SLOPE MATRESS 9"	SQ YD	86	86	0
16	31100100	SUBBASE GRANULAR MATERIAL, TYPE A	TON	400	0	400
17	35100100	AGGREGATE BASE COURSE, TYPE A	TON	3850	3769	81
18	35200410	PROCESSING SOIL-CEMENT BASE COURSE 10"	SQ YD	18432	18432	0
19	35200500	CEMENT	100 WT	15593	15593	0
20	40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	7483	7401	82
21	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	2552	2552	0
22	40600300	AGGREGATE (PRIME COAT)	TON	51	51	0
23	40603135	HOT-MIX ASPHALT BINDER COURSE, IL-25.0, N70	TON	3739	3739	0
24	40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	2564	2564	0
25	40800010	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	729	634	95
26	40800030	AGGREGATE (PRIME COAT)	TON	5	4.4	0.6
27	40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	207	173	34
28	42000300	PORTLAND CEMENT CONCRETE PAVEMENT 8"	SQ YD	1350	0	1350
29	42001300	PROTECTIVE COAT	SQ YD	4225	1935	2290
30	42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	6364	0	6364
31	42400800	DETECTABLE WARNINGS	SQ FT	10	0	10
32	44000600	SIDEWALK REMOVAL	SQ FT	1100	0	1100
33	50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1	1	0
34	50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1	1	0
35	50100500	REMOVAL OF EXISTING STRUCTURES NO. 3	EACH	1	1	0
36	50100600	REMOVAL OF EXISTING STRUCTURES NO. 4	EACH	1	1	0
37	50100700	REMOVAL OF EXISTING STRUCTURES NO. 5	EACH	1	0	1
38	50100800	REMOVAL OF EXISTING STRUCTURES NO. 6	EACH	1	0	1
39	50105220	PIPE CULVERT REMOVAL	FOOT	282	250	32
40	50200100	STRUCTURE EXCAVATION	CU YD	166	166	0
41	50300225	CONCRETE STRUCTURES	CU YD	68.9	68.9	0
42	50300280	CONCRETE ENCASEMENT	CU YD	4.2	4.2	0
43	50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	3562	3562	0
44	50800105	REINFORCEMENT BARS	POUND	5790	5790	0
45	50901050	STEEL RAILING, TYPE SM	FOOT	216	216	0
46	51201400	FURNISHING STEEL PILES HP10X42	FOOT	1242	1242	0
47	51202305	DRIVING PILES	FOOT	1242	1242	0
48	51203400	TEST PILE STEEL HP10X42	EACH	3	3	0
49	51500100	NAME PLATES	EACH	1	0	1
50	54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	1	0	1
51	54213669	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 24"	EACH	4	4	0
52	54213681	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"	EACH	1	1	0
53	54213717	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 72"	EACH	1	1	0
54	54214089	ALUMINUM END SECTIONS 24"	EACH	10	10	0
55	54214095	ALUMINUM END SECTIONS 30"	EACH	2	2	0
56	54214101	ALUMINUM END SECTIONS 36"	EACH	2	2	0
57	54217680	REINFORCED CONCRETE PIPE TEE, 24" PIPE WITH 24" RISER	EACH	1	1	0
58	542C1069	PIPE CULVERTS, CLASS C, TYPE 2 24"	FOOT	295	295	0
59	542C1075	PIPE CULVERTS, CLASS C, TYPE 2 30"	FOOT	80	80	0
60	542C1081	PIPE CULVERTS, CLASS C, TYPE 2 36"	FOOT	80	80	0
61	550A2520	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 2 12"	FOOT	851	558	93
62	550A2530	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 2 15"	FOOT	829	472	157
63	550A2540	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 2 18"	FOOT	837	804	33
64	550A2560	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 2 24"	FOOT	694	694	0
65	550A2600	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 2 36"	FOOT	102	102	0
66	550A2860	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 3 7 2"	FOOT	95	95	0
67	56100050	DUCTILE IRON WATER MAIN TEE, 12" X 6"	EACH	1	0	1
68	56100600	WATER MAIN 6"	FOOT	4	0	4
69	56100900	WATER MAIN 12"	FOOT	751	0	751

SUMMARY OF QUANTITIES WEST EVERGREEN AVENUE						
ITEM NO.	PAY CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	80% FEDERAL 20% LOCAL	100% LOCAL
70	56104900	WATER VALVES 6"	EACH	1	0	1
71	56109100	TAPPING VALVES AND SLEEVES 12"	EACH	2	0	2
72	56109404	DUCTILE IRON WATER MAIN FITTINGS 12" 11.25 DEGREE BEND	EACH	2	0	2
73	56109412	DUCTILE IRON WATER MAIN FITTINGS 12" 22.50 DEGREE BEND	EACH	2	0	2
74	56109438	DUCTILE IRON WATER MAIN FITTINGS 12" 90.00 DEGREE BEND	EACH	1	0	1
75	56400600	FIRE HYDRANTS	EACH	1	0	1
76	60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	15	14	1
77	60221100	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1	0
78	60223800	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1	0
79	60235700	INLETS, TYPE A, TYPE 3 FRAME AND GRATE	EACH	4	1	3
80	60236600	INLETS, TYPE A, TYPE 9 FRAME AND GRATE	EACH	1	0	1
81	60240215	INLETS, TYPE B, TYPE 1 FRAME, CLOSED LID	EACH	1	0	1
82	60240220	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	EACH	1	0	1
83	60240303	INLETS, TYPE B, TYPE 9 FRAME AND GRATE	EACH	1	0	1
84	60600095	CLASS SI CONCRETE (OUTLET)	CU YD	25	25	0
85	60603450	GUTTER INLET (SPECIAL)	EACH	3	3	0
86	60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	3532	2908.5	623.5
87	63000015	STEEL PLATE BEAM GUARDRAIL, TYPE D	FOOT	100	100	0
88	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	2	2	0
89	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	2	0
90	63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	138	0	138
91	63301990	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 1	EACH	2	0	2
92	67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	24	24	0
93	67100100	MOBILIZATION	LUMP SUM	1	1	0
94	70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	LUMP SUM	1	1	0
95	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	LUMP SUM	1	1	0
96	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	16105	15101	1004
97	78001180	PAINT PAVEMENT MARKING - LINE 24"	FOOT	26	26	0
98	78200410	GUARDRAIL MARKERS, TYPE A	EACH	4	4	0
99	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	2	0
100	K1005418	TEMPORARY SEEDING	ACRE	18.5	17.5	1
101	X0325592	REMOVE AND REPLACE STONE RIPRAP	SQ YD	1778	1778	0
102	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	18.5	17.5	1
103	X6022230	GRATE	EACH	1	1	0
104	X6023212	INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE, SPECIAL	EACH	1	1	0
105	X6023508	INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE	EACH	16	16	0
106	X6063000	CONCRETE GUTTER, TYPE B (SPECIAL)	FOOT	1381	1381	0
107	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	LUMP SUM	1	1	0
108	Z0013300	CONCRETE REMOVAL (SPECIAL)	SQ YD	4	0	4
109	Z0018900	DRILL AND GROUT DOWEL BARS	EACH	34	0	34
110	Z0023202	SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER	EACH	25	19	6
111	Z0077002	CLEANING	FOOT	1382	0	1382
112	XX000610	WATER MAIN REMOVAL	FOOT	10	8	2
113	XX005776	RELOCATE EXISTING MAILBOX	EACH	1	0	1
114	XX006571	DUCTILE IRON WATER MAIN FITTINGS 12" 45.00 DEGREE BEND	EACH	1	0	1
115	XX006571	REMOVE AND REPLACE BOLLARDS	EACH	3	0	3
115	XX007712	12" PLUG	EACH	2	0	2

Δ SPECIALTY ITEMS



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 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 PHONE: (217) 547-7262  
 (800) 677-2774  
 FAX #: (217) 542-3433

SUMMARY OF QUANTITIES  
 EVERGREEN AVENUE EXTENSION  
 CITY OF EFFINGHAM, ILLINOIS  
 COUNTY OF EFFINGHAM, ILLINOIS

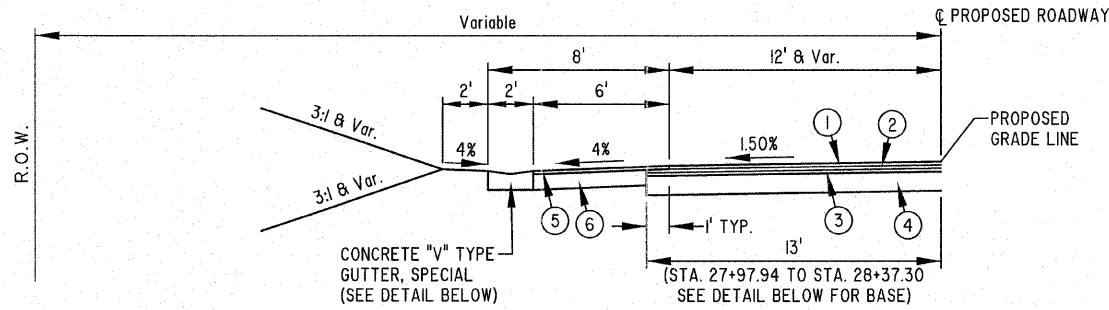
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	6
FED. ROAD DIST. NO. 7	ILLINOIS			

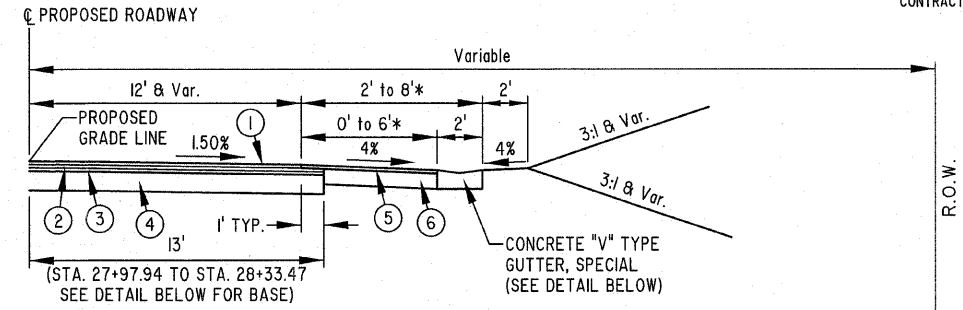
CONTRACT #95639

**PAVING LEGEND**

- ① HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70, 1 3/4"
- ② HOT-MIX ASPHALT BINDER COURSE, IL-25.0, N70, 1 3/4"
- ③ HOT-MIX ASPHALT BINDER COURSE, IL-25.0, N70, 1 3/4"
- ④ 10" SOIL CEMENT BASE COURSE, CONSIST OF 5" AGGREGATE BASE COURSE, TYPE A AND 5" OF SOIL ALL MIXED WITH 12% CEMENT (BY VOLUME)
- ⑤ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70, 1 3/4"
- ⑥ AGGREGATE BASE COURSE, TYPE A, 8"

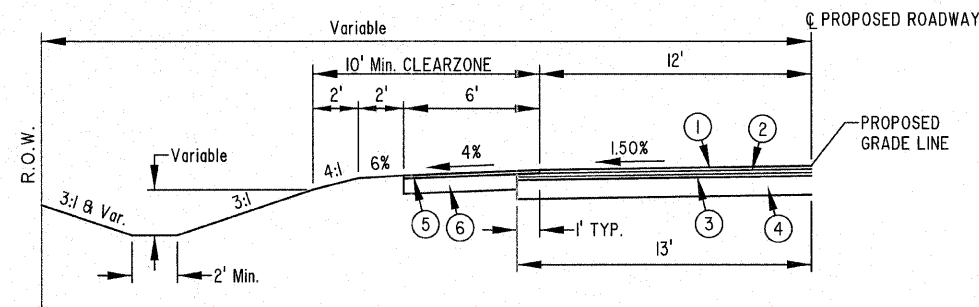


**TYPICAL SECTION - EVERGREEN AVENUE**  
LT STA. 27+79.94 TO STA. 32+35.30

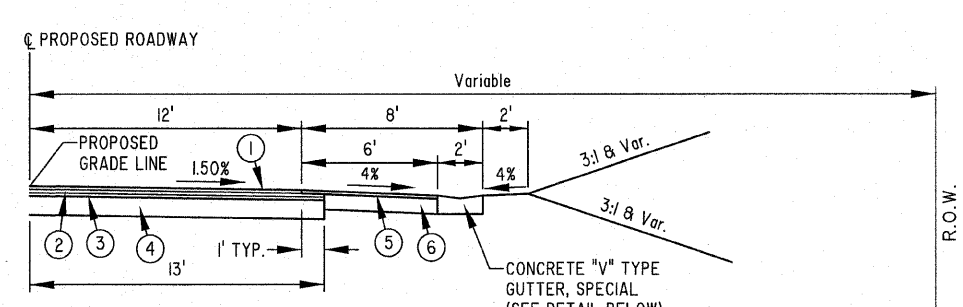


**TYPICAL SECTION - EVERGREEN AVENUE**  
RT STA. 27+79.94 TO STA. 28+33.47

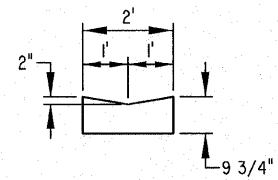
\* STA. 28+08.49 TO STA. 28+33.47



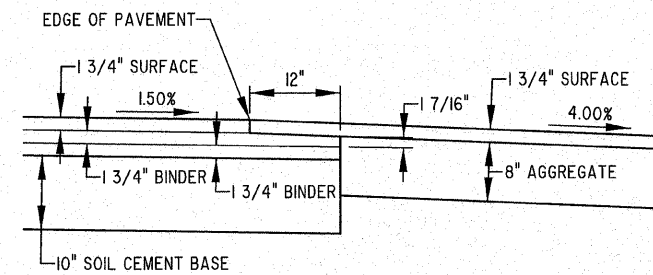
**TYPICAL SECTION - EVERGREEN AVENUE**  
LT STA. 32+35.30 TO STA. 32+63.87



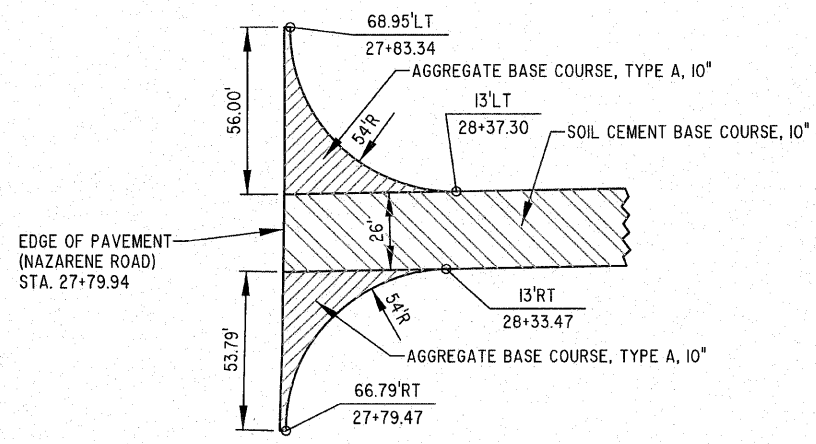
**TYPICAL SECTION - EVERGREEN AVENUE**  
RT STA. 28+33.47 TO STA. 32+63.87



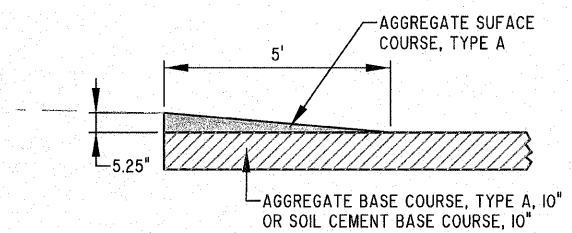
**"V" TYPE GUTTER, SPECIAL**



**THICKNESS TRANSITION - HOT-MIX BINDER**



**NAZARENE ROAD AND EVERGREEN AVENUE INTERSECTION BASE DETAIL**



**NAZARENE ROAD AND EVERGREEN AVENUE TEMPORARY FILLET DETAIL**

**PAVEMENT DESIGN - EVERGREEN AVENUE**  
SECTION 04-00084-01-PV  
STA. 27+79.94 TO STA. 94+92.73  
WINPAS PAVEMENT ANALYSIS SOFTWARE  
CLASS II STREET: LOCAL ROAD (80,000 lb Trucks)  
URBAN  
STRUCTURAL DESIGN PV=2966  
TRAFFIC (2021): SU=III  
MU=7  
TOTAL FLEXIBLE ESALS: 3,207,562  
REQUIRED STRUCTURAL NUMBER: 5.47  
DESIGNED STRUCTURAL NUMBER: 5.67

STA. 27+79.94 TO STA. 32+63.87

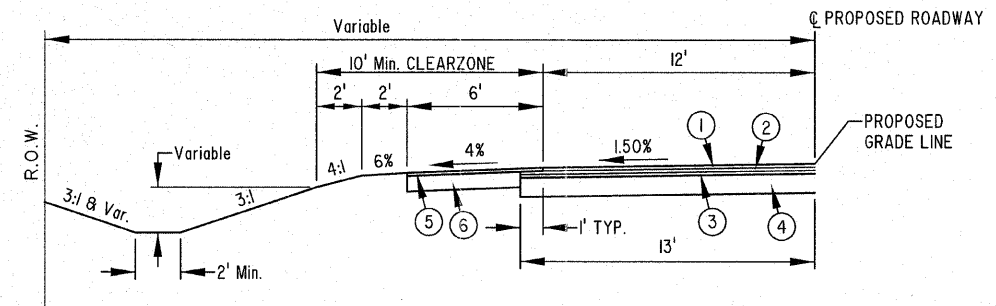
	MILANO & GRUNLOH ENGINEERS, LLC	TYPICAL SECTIONS
	84 WEST WASHINGTON P.O. BOX 897 EFFINGHAM, ILLINOIS 62401	EVERGREEN AVENUE
	PHONE: (217) 347-7282 (800) 677-2714	COUNTY OF EFFINGHAM, ILLINOIS
	FAX #: (217) 342-3433	
File name: S:\DWG\05\05227\dwg\Typical.dwg Plot date: 02/08/11 at 16:00		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	7
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639

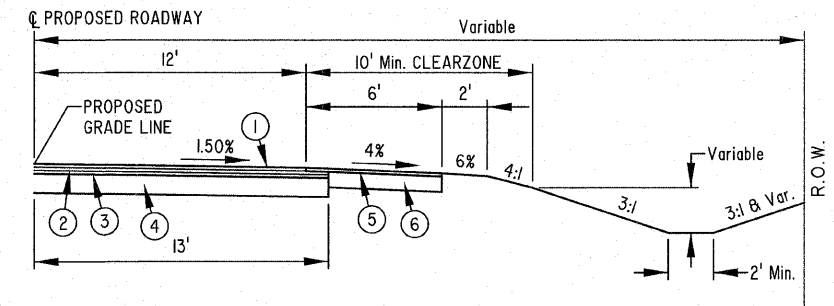
**PAVING LEGEND**

- ① HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70, 1 3/4"
- ② HOT-MIX ASPHALT BINDER COURSE, IL-25.0, N70, 1 3/4"
- ③ HOT-MIX ASPHALT BINDER COURSE, IL-25.0, N70, 1 3/4"
- ④ 10" SOIL CEMENT BASE COURSE, CONSIST OF 5" AGGREGATE BASE COURSE, TYPE A AND 5" OF SOIL ALL MIXED WITH 12% CEMENT (BY VOLUME)
- ⑤ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70, 1 3/4"
- ⑥ AGGREGATE BASE COURSE, TYPE A, 8"



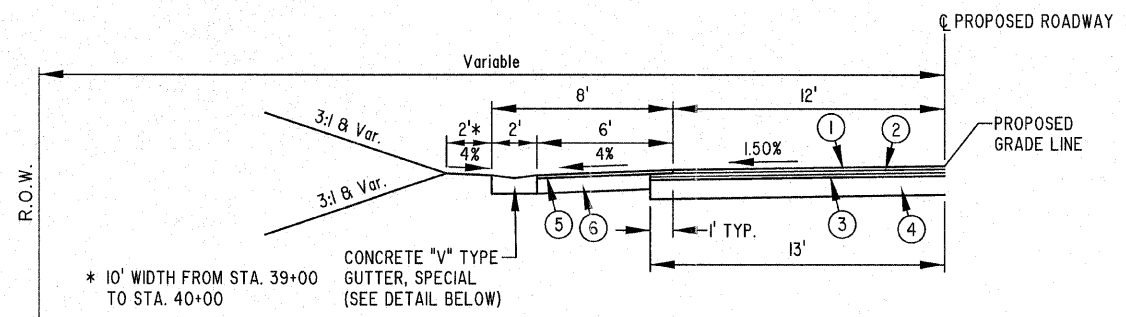
**TYPICAL SECTION - EVERGREEN AVENUE**

LT STA. 32+63.87 TO STA. 34+96.43  
LT STA. 37+00.00 TO STA. 38+76.00



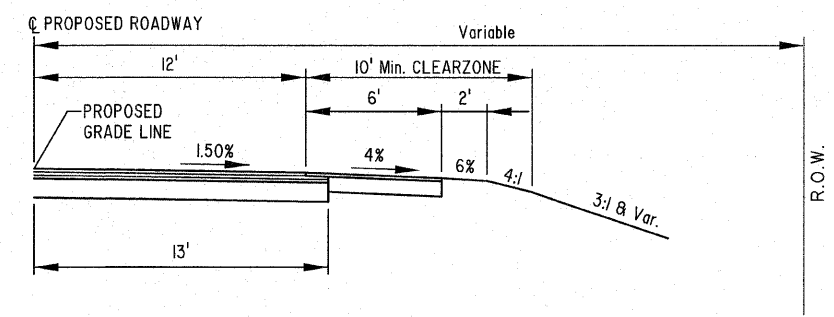
**TYPICAL SECTION - EVERGREEN AVENUE**

RT STA. 32+63.87 TO STA. 33+50.00  
RT STA. 37+88.65 TO STA. 38+76.00



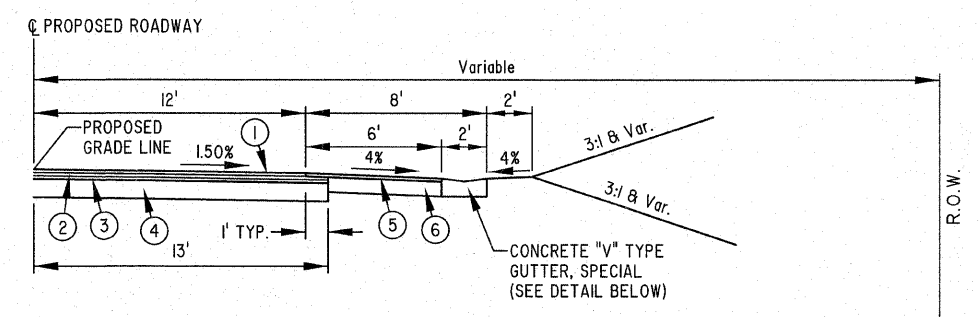
**TYPICAL SECTION - EVERGREEN AVENUE**

LT STA. 34+96.43 TO STA. 37+00.00  
LT STA. 38+76.00 TO STA. 41+12.40



**TYPICAL SECTION - EVERGREEN AVENUE**

RT STA. 33+50.00 TO STA. 37+88.65



**TYPICAL SECTION - EVERGREEN AVENUE**

RT STA. 38+76.00 TO STA. 41+12.40

STA. 32+63.87 TO STA. 41+12.40

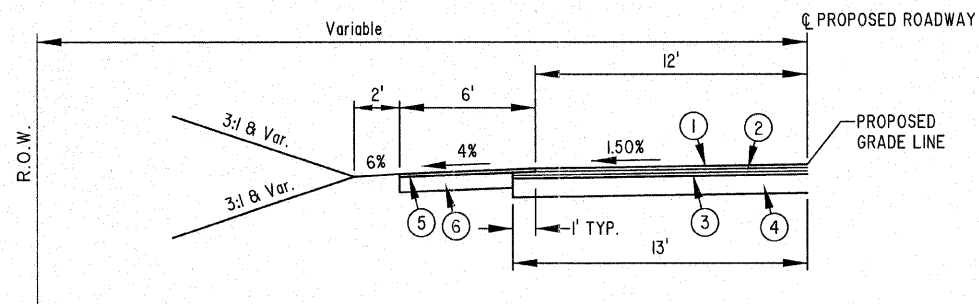
	MILANO & GRUNLOH ENGINEERS, LLC	TYPICAL SECTIONS
	84 WEST WASHINGTON P.O. BOX 897 EFFINGHAM, ILLINOIS 62401	EVERGREEN AVENUE
	PHONE: (217) 347-7262 (800) 677-2774	COUNTY OF EFFINGHAM, ILLINOIS
	FAX #: (217) 342-3433	

File name: B:\DWG\05\05227\dwg\Typical.dwg  
Plot date: 02/03/11 at 16:00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 6390	04-00084-01-PV	EFFINGHAM	139	8
FED. ROAD DIST. NO. 7	ILLINOIS			

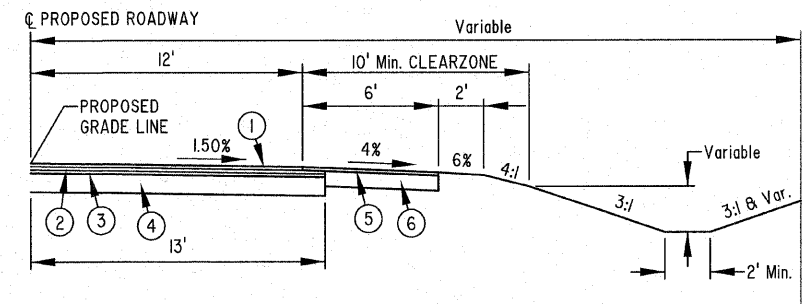
CONTRACT #95639

- PAVING LEGEND**
- ① HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70, 1 3/4"
  - ② HOT-MIX ASPHALT BINDER COURSE, IL-25.0, N70, 1 3/4"
  - ③ HOT-MIX ASPHALT BINDER COURSE, IL-25.0, N70, 1 3/4"
  - ④ 10" SOIL CEMENT BASE COURSE, CONSIST OF 5" AGGREGATE BASE COURSE, TYPE A AND 5" OF SOIL ALL MIXED WITH 12% CEMENT (BY VOLUME)
  - ⑤ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70, 1 3/4"
  - ⑥ AGGREGATE BASE COURSE, TYPE A, 8"



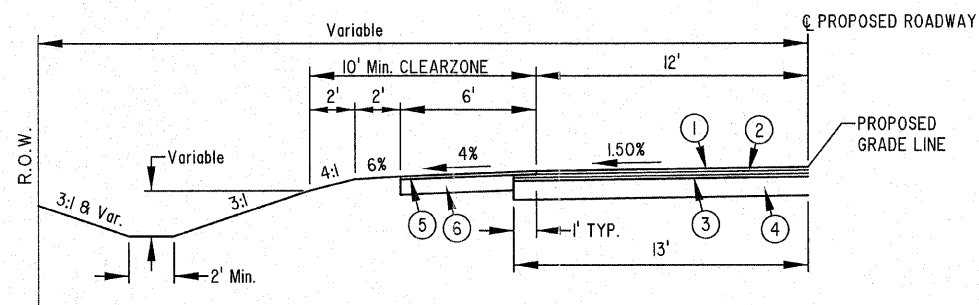
**TYPICAL SECTION - EVERGREEN AVENUE**

LT STA. 41+12.40 TO STA. 49+75.00  
LT STA. 50+50.00 TO STA. 52+50.00



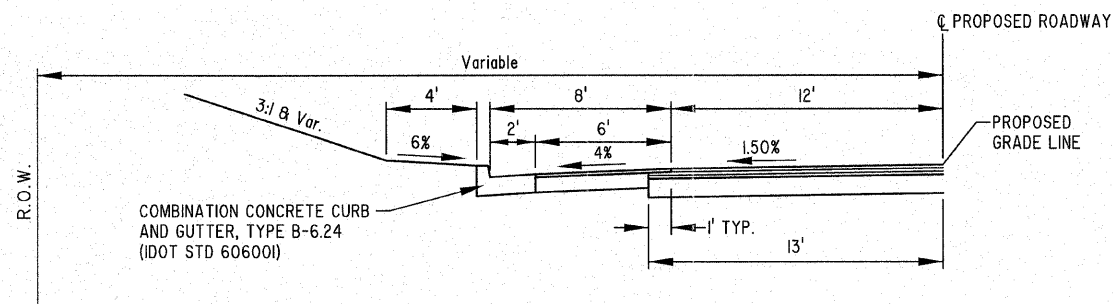
**TYPICAL SECTION - EVERGREEN AVENUE**

RT STA. 41+12.40 TO STA. 54+61.75



**TYPICAL SECTION - EVERGREEN AVENUE**

LT STA. 49+75.00 TO STA. 50+50.00



**TYPICAL SECTION - EVERGREEN AVENUE**

LT STA. 52+50.00 TO STA. 54+61.75

STA. 41+12.40 TO STA. 54+61.75

**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 697  
 EFFINGHAM, ILLINOIS 62401  
 PHONE: (217) 347-7262  
 (800) 677-2704  
 FAX #: (217) 342-3433

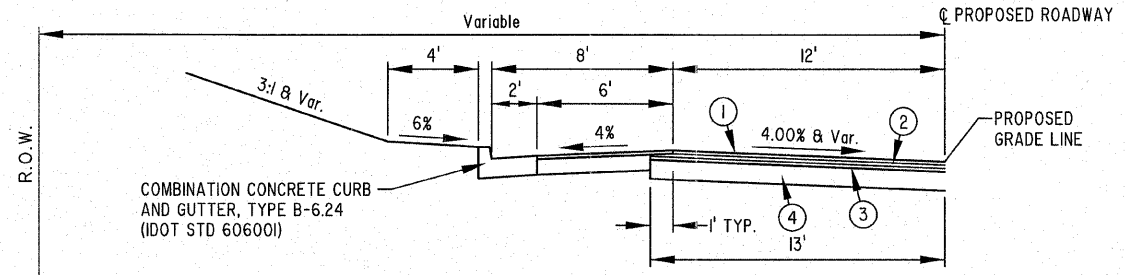
TYPICAL SECTIONS  
 EVERGREEN AVENUE  
 COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05227.dwg\Typical.dwg  
 Plot date: 02/06/11 at 16:00



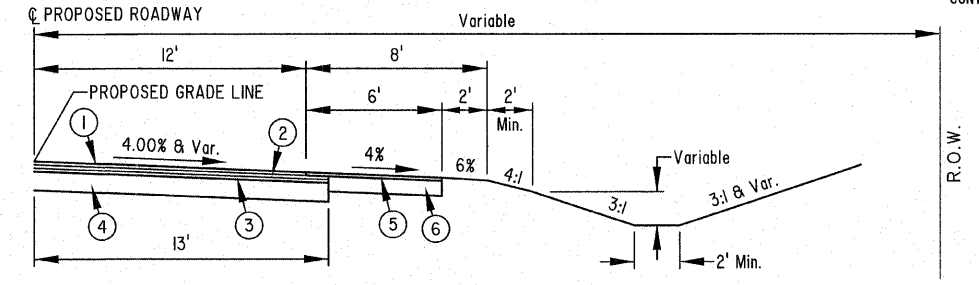
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	9
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639



ATTAINMENT: STA 54+61.75 TO STA 55+75.75  
STA 63+27.47 TO STA 64+41.47

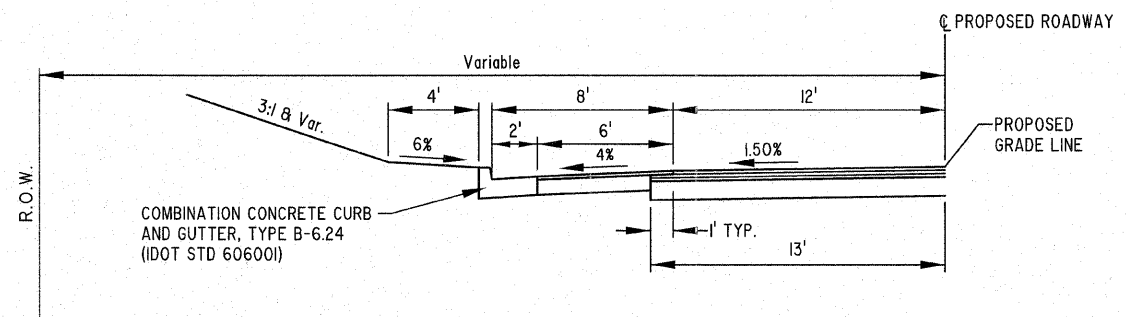
**TYPICAL SECTION - EVERGREEN AVENUE**  
LT STA. 54+61.75 TO STA. 64+41.47



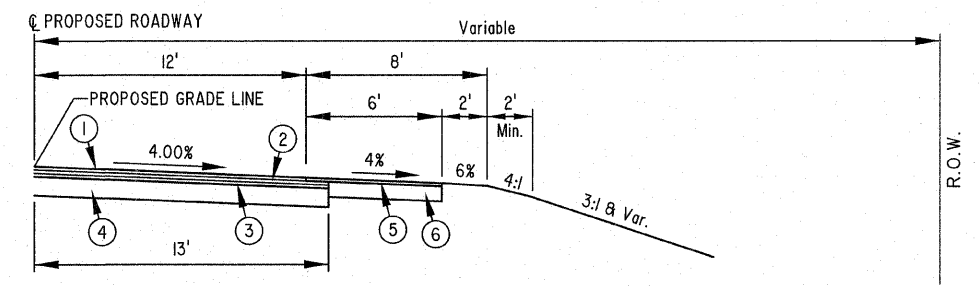
ATTAINMENT: STA 54+61.75 TO STA 55+75.75  
STA 63+27.47 TO STA 64+41.47

**TYPICAL SECTION - EVERGREEN AVENUE**  
RT STA. 54+61.75 TO STA. 56+50.00  
RT STA. 59+00.00 TO STA. 64+41.47

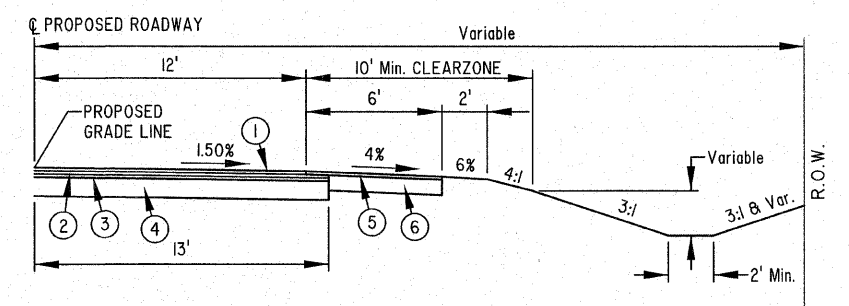
- PAVING LEGEND**
- ① HOT-MIX ASPHALT SURFACE COURSE, MIX "c", N70, 1 3/4"
  - ② HOT-MIX ASPHALT BINDER COURSE, IL-25.0, N70, 1 3/4"
  - ③ HOT-MIX ASPHALT BINDER COURSE, IL-25.0, N70, 1 3/4"
  - ④ 10" SOIL CEMENT BASE COURSE, CONSIST OF 5" AGGREGATE BASE COURSE, TYPE A AND 5" OF SOIL ALL MIXED WITH 12% CEMENT (BY VOLUME)
  - ⑤ HOT-MIX ASPHALT SURFACE COURSE, MIX "c", N70, 1 3/4"
  - ⑥ AGGREGATE BASE COURSE, TYPE A, 8"



**TYPICAL SECTION - EVERGREEN AVENUE**  
LT STA. 64+41.47 TO STA. 65+24.00



**TYPICAL SECTION - EVERGREEN AVENUE**  
RT STA. 56+50.00 TO STA. 59+00.00



**TYPICAL SECTION - EVERGREEN AVENUE**  
RT STA. 64+41.47 TO STA. 65+24.00

STA. 54+61.75 TO STA. 65+24.00

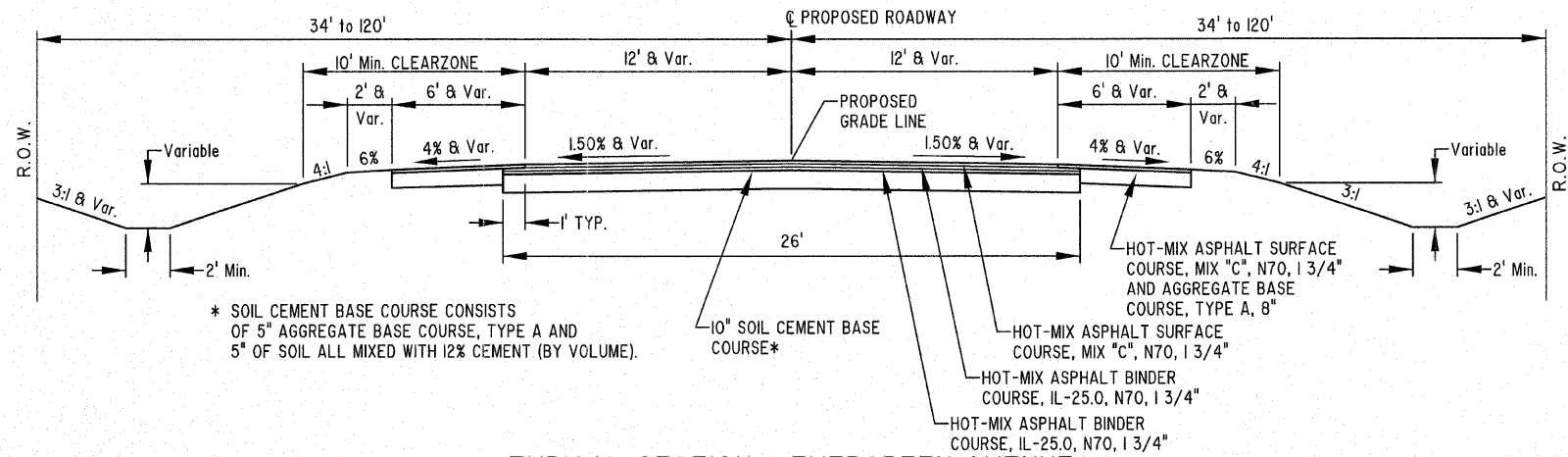
**MILANO & GRUNLOH ENGINEERS, LLC**  
94 WEST WASHINGTON  
P.O. BOX 897  
EFFINGHAM, ILLINOIS 62401  
PHONE: (217) 347-7262  
(800) 677-2724  
FAX #: (217) 342-3433

TYPICAL SECTIONS  
EVERGREEN AVENUE  
COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05227.dwg\Typical.dwg  
Plot date: 02/06/11 at 16:00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	10
FED. ROAD DIST. NO. 7	ILLINOIS			

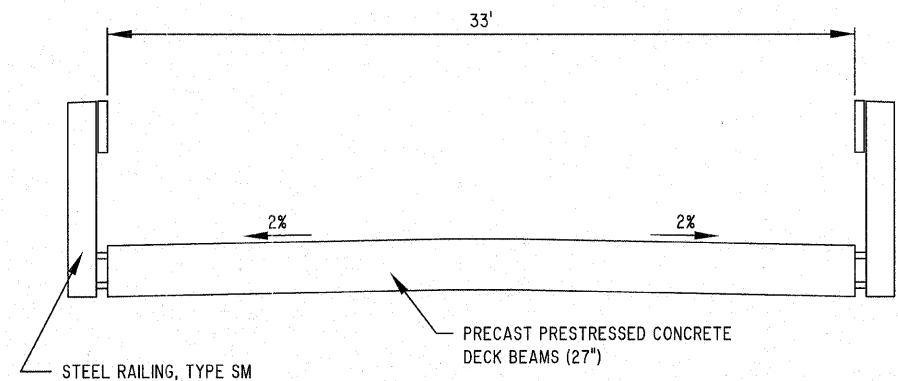
CONTRACT #95639



\* SOIL CEMENT BASE COURSE CONSISTS OF 5" AGGREGATE BASE COURSE, TYPE A AND 5" OF SOIL ALL MIXED WITH 12% CEMENT (BY VOLUME).

**TYPICAL SECTION - EVERGREEN AVENUE**

STA. 65+24.00 TO STA. 75+81.00  
STA. 76+91.00 TO STA. 83+62.11



**TYPICAL SECTION - OVERFLOW STRUCTURE**

STA. 75+81.00 TO STA. 76+91.00  
(SEE SHEETS 56 TO 62 FOR DETAILS)

STA. 65+24.00 TO STA. 83+62.11  
BRIDGE OMISSION STA. 83+62.11 TO STA. 85+72.14

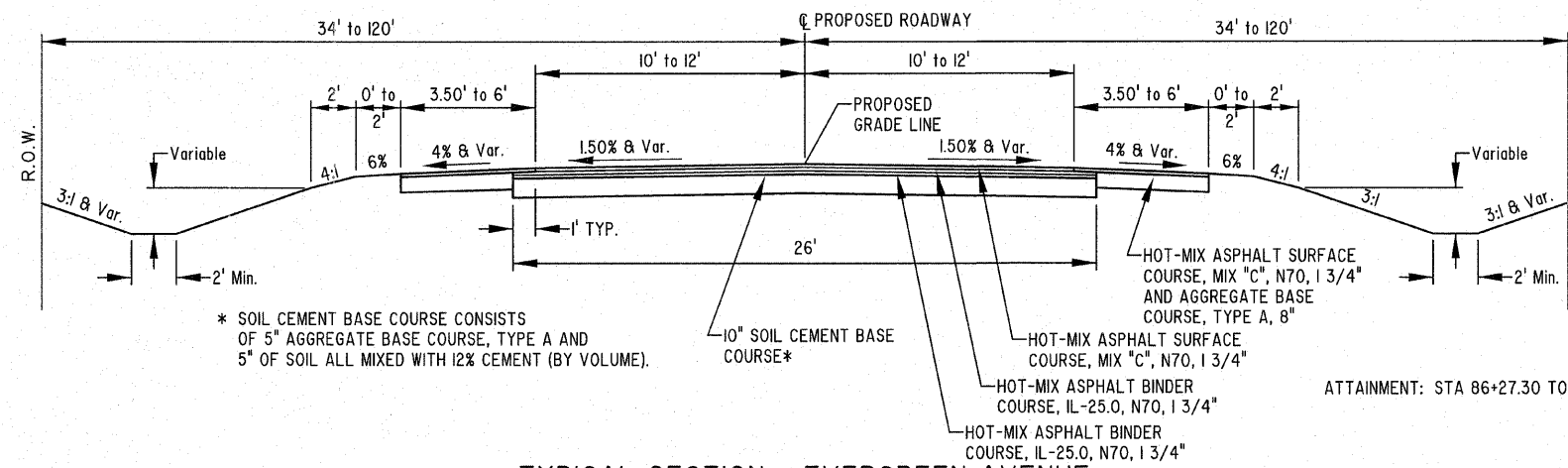
**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 PHONE: (217) 347-7262  
 (800) 677-2714  
 FAX #: (217) 342-3433

TYPICAL SECTIONS  
EVERGREEN AVENUE  
COUNTY OF EFFINGHAM, ILLINOIS

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Plot date: 02/06/11 at 16:00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-01-PV	EFFINGHAM	139	11
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639

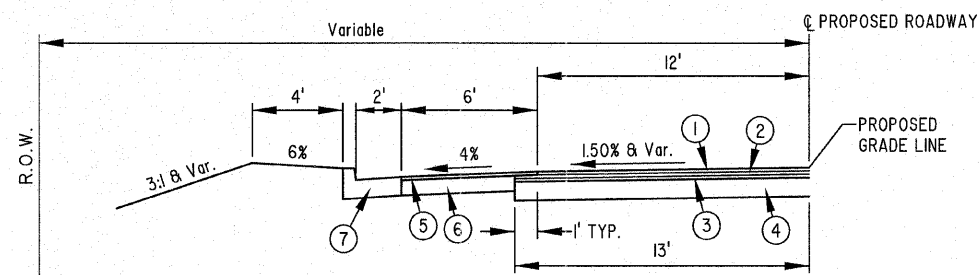


\* SOIL CEMENT BASE COURSE CONSISTS OF 5" AGGREGATE BASE COURSE, TYPE A AND 5" OF SOIL ALL MIXED WITH 12% CEMENT (BY VOLUME).

ATTAINMENT: STA 86+27.30 TO STA 87+41.30

**TYPICAL SECTION - EVERGREEN AVENUE**

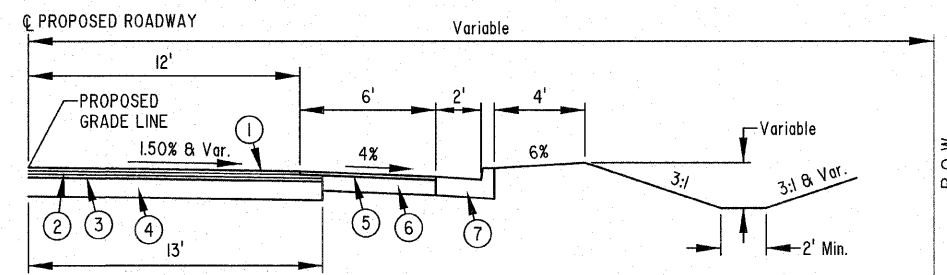
STA. 85+72.14 TO LT STA. 86+55.84



ATTAINMENT: STA 86+27.30 TO STA 87+41.30

**TYPICAL SECTION - EVERGREEN AVENUE**

LT STA. 86+55.84 TO STA. 87+12.80



ATTAINMENT: STA 86+27.30 TO STA 87+41.30

**TYPICAL SECTION - EVERGREEN AVENUE**

RT STA. 86+55.84 TO STA. 87+12.80

**PAVING LEGEND**

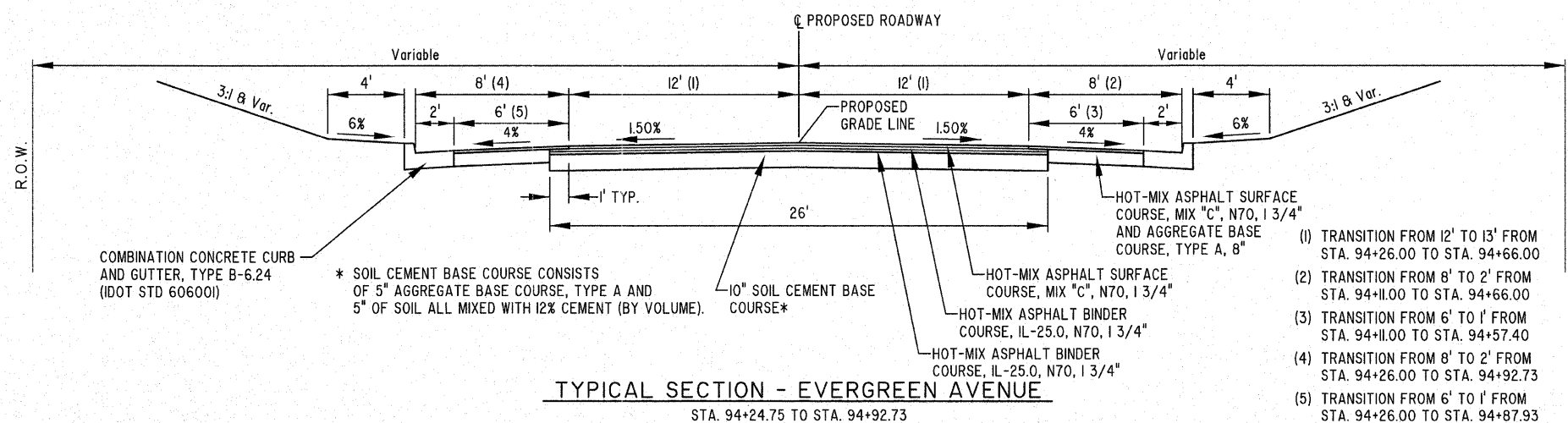
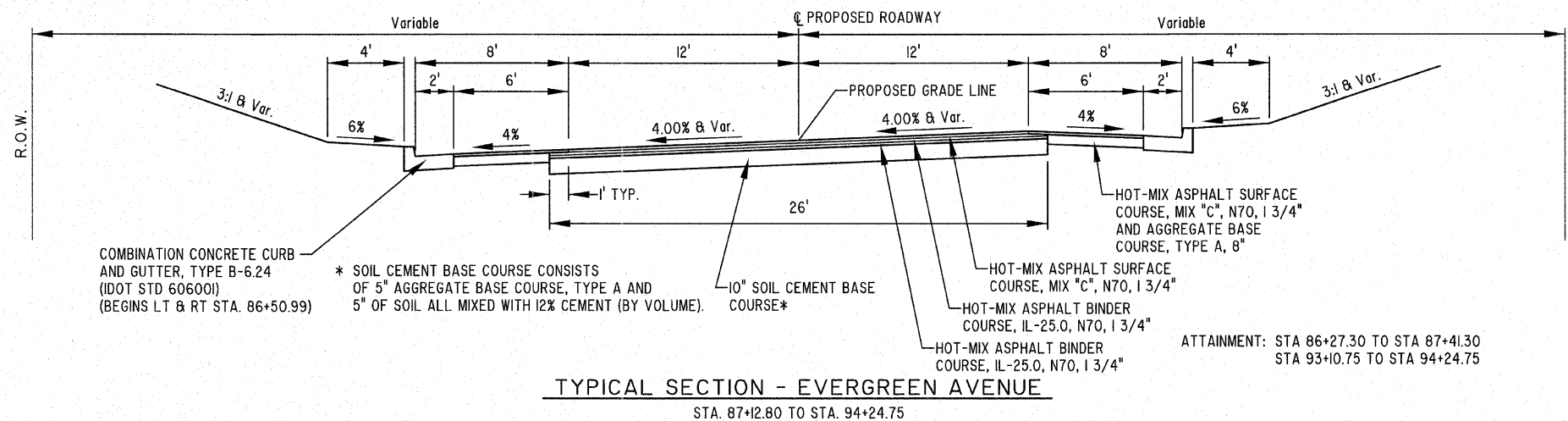
- ① HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70, 1 3/4"
- ② HOT-MIX ASPHALT BINDER COURSE, IL-25.0, N70, 1 3/4"
- ③ HOT-MIX ASPHALT BINDER COURSE, IL-25.0, N70, 1 3/4"
- ④ 10" SOIL CEMENT BASE COURSE, CONSIST OF 5" AGGREGATE BASE COURSE, TYPE A AND 5" OF SOIL ALL MIXED WITH 12% CEMENT (BY VOLUME)
- ⑤ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70, 1 3/4"
- ⑥ AGGREGATE BASE COURSE, TYPE A, 8"
- ⑦ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24

STA. 85+72.14 TO STA. 87+12.80

	MILANO & GRUNLOH ENGINEERS, LLC	TYPICAL SECTIONS
	84 WEST WASHINGTON P.O. BOX 897 EFFINGHAM, ILLINOIS 62401	EVERGREEN AVENUE
	PHONE: (217) 347-7262 (800) 677-2774	COUNTY OF EFFINGHAM, ILLINOIS
	FAX #: (217) 342-3433	
<small>File name: S:\DWG\05_05227.dwg\Typical.dwg Plot date: 02/06/11 at 16:00</small>		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	12
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639



STA. 87+12.80 TO STA. 94+92.73

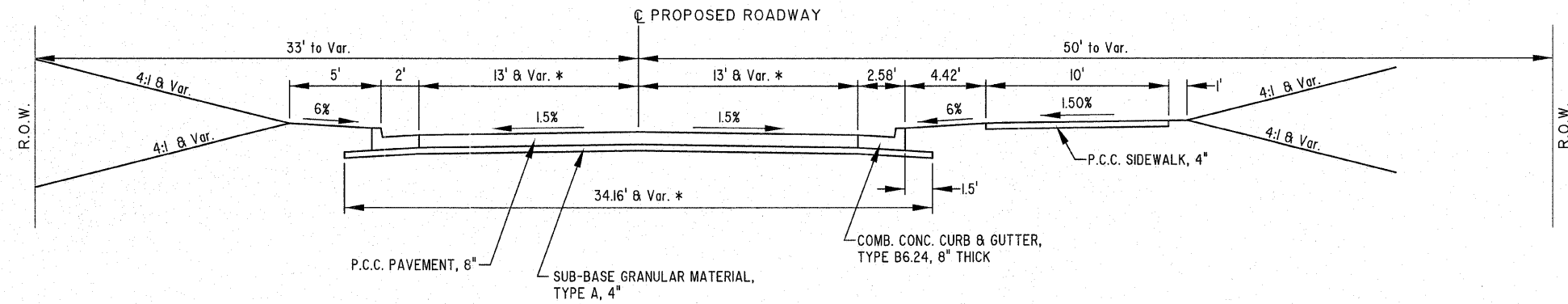
**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 PHONE: (217) 347-7262  
 (800) 677-2714  
 FAX #: (217) 342-3433

TYPICAL SECTIONS  
EVERGREEN AVENUE  
COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05227\dwg\Typical.dwg  
Plot date: 02/08/11 at 16:00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	13
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639



\* LANE WIDTH BOTH SIDES VARIES FROM 13'-0" TO 17'-0" WIDE STA. 97+50 TO 17'-0" AT STA. 99+50

**TYPICAL SECTION - EVERGREEN AVENUE**  
STA. 94+92.73 TO STA. 99+39.25

STA. 94+92.73 TO STA. 99+39.25

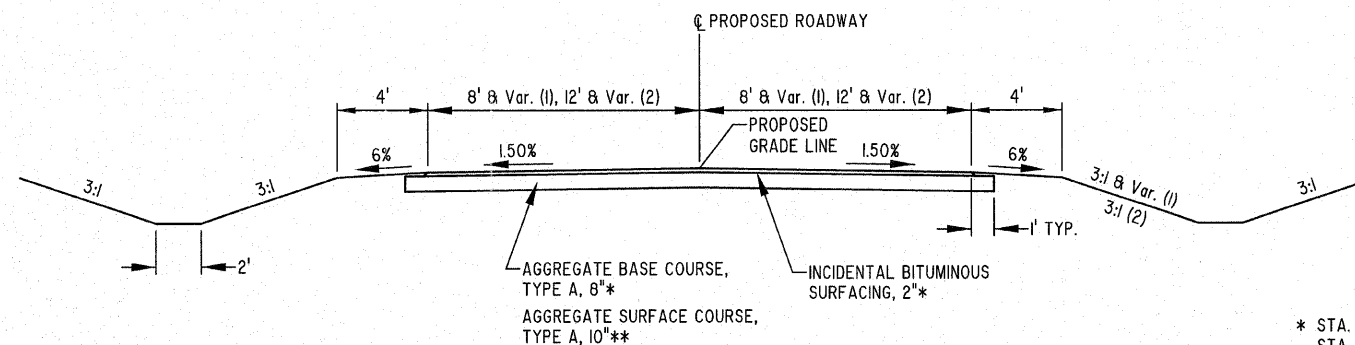
**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 PHONE: (217) 347-7262  
 (800) 677-2714  
 FAX #: (217) 342-3433

TYPICAL SECTIONS  
EVERGREEN AVENUE  
COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05227\dwg\Typical.dwg  
Plot date: 02/09/11 at 16:00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	14
FED. ROAD DIST. NO. 7	ILLINOIS			

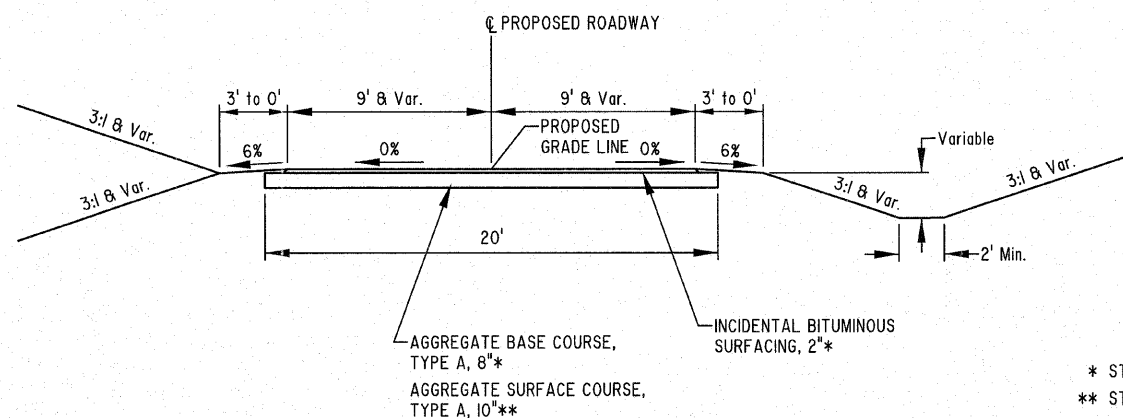
CONTRACT #95639



**TYPICAL SECTION - SIDE ROADS**

STA. 210+13.00 TO STA. 214+96.87 - UPPER CONNECTION (1)  
 STA. 200+13.00 TO STA. 206+50.00 - LOWER CONNECTION (2)

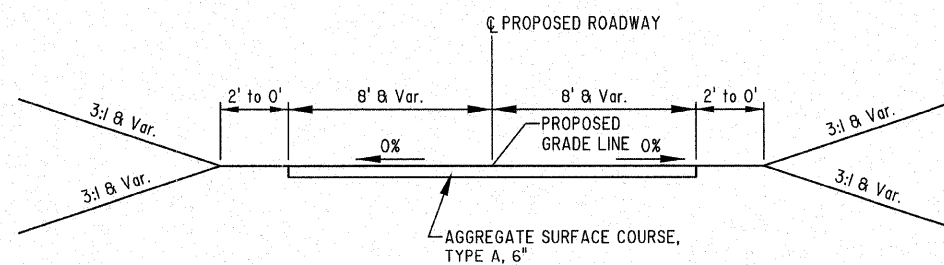
\* STA. 210+13 TO STA. 210+57  
 STA. 200+13 TO STA. 200+72  
 \*\* STA. 210+57 TO STA. 214+96.87  
 STA. 200+72 TO STA. 206+50



**TYPICAL SECTION - WILLENBORG DRIVEWAY**

STA. 17+18.00 TO STA. 20+06.55

\* STA. 17+12 TO STA. 17+48  
 \*\* STA. 17+48 TO STA. 20+06.55



**TYPICAL SECTION - CATTLE CROSSING**

STA. 9+92.93 TO STA. 10+91.71  
 STA. 11+27.99 TO STA. 12+10.38

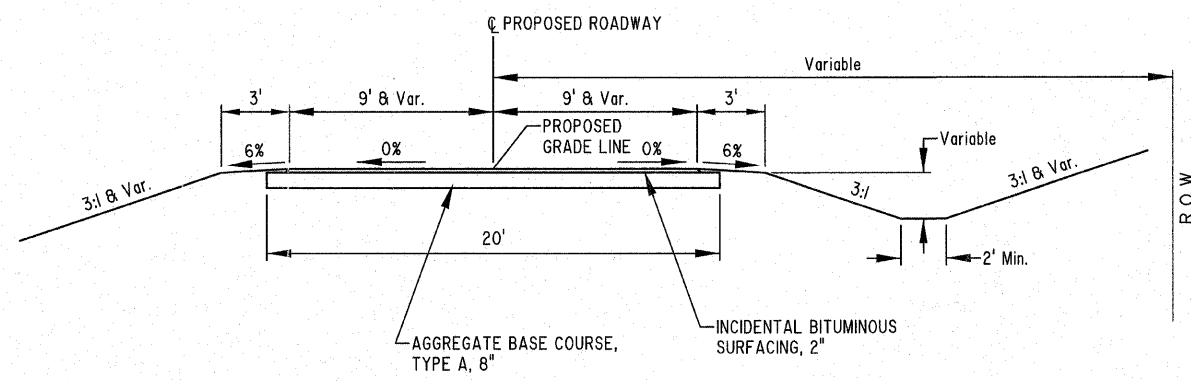
**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 887  
 EFFINGHAM, ILLINOIS 62401  
 PHONE: (217) 347-7282  
 (800) 677-2714  
 FAX #: (217) 342-3433

TYPICAL SECTIONS  
 SIDE ROADS  
 COUNTY OF EFFINGHAM, ILLINOIS

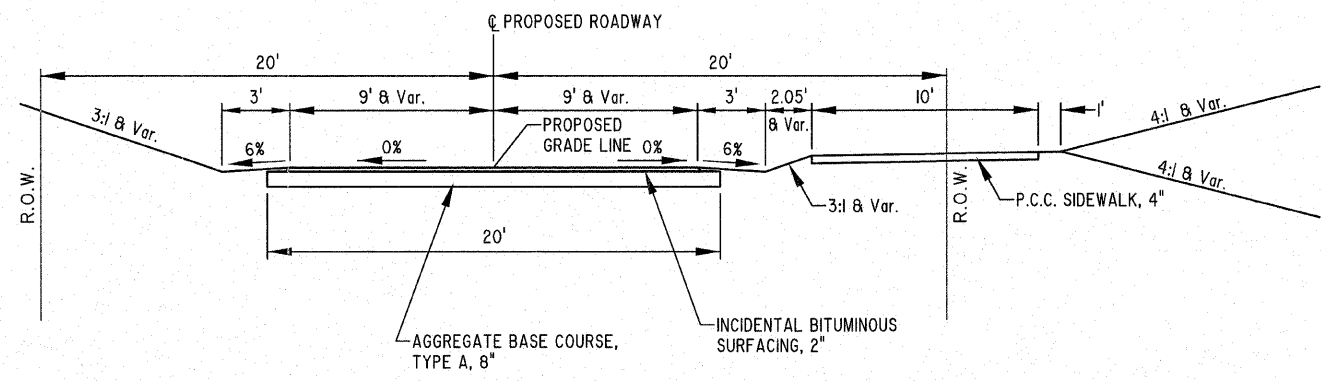
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0004-01-PV	EFFINGHAM	139	15
FED. ROAD DIST. NO. 7	ILLINOIS			

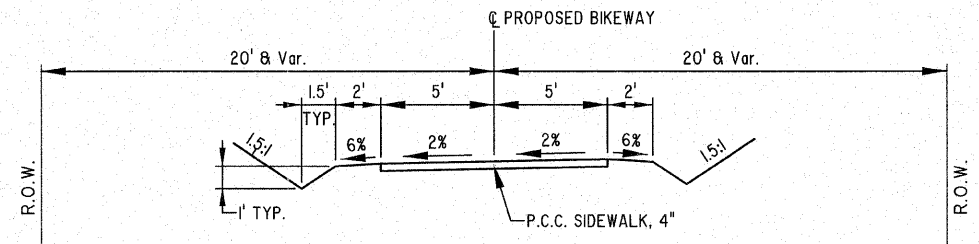
CONTRACT #95639



**TYPICAL SECTION - LSAWC ACCESS DRIVE**  
STA. 105+20.62 TO STA. 107+61.19



**TYPICAL SECTION - CALICO ROAD**  
STA. 1+81.80 TO STA. 2+84.42



**TYPICAL SECTION - BIKEWAY**  
STA. 125+00.00 TO STA. 125+97.44

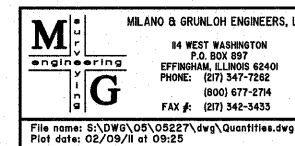
	MILANO & GRUNLOH ENGINEERS, LLC	TYPICAL SECTIONS
	84 WEST WASHINGTON P.O. BOX 897 EFFINGHAM, ILLINOIS 62401	SIDE ROADS
	PHONE: (217) 347-7262 (800) 677-2774	COUNTY OF EFFINGHAM, ILLINOIS
	FAX #: (217) 342-3433	
<small>File name: S:\DWG\05\05227.dwg\Typical.dwg Plot date: 02/08/11 at 16:00</small>		





STRUCTURE NUMBER	STATION	OFFSET	STRUCTURE TYPE											TEES				END SECTIONS				ELEVATIONS					REMARKS				
			TYPE A, TYPE 3 FRAME & GRATE	TYPE A, TYPE V FRAME & GRATE	TYPE A, TYPE 9 FRAME & GRATE	TYPE A, TYPE 37 GRATE	TYPE B, TYPE 3 FRAME & GRATE	TYPE B, TYPE 9 FRAME & GRATE	TYPE B, TYPE 1 FRAME, CLOSED LID	INLET, TYPE A, (SPECIAL), TYPE 37 GRATE	TYPE A, 4' DIA., TYPE 1 FRAME, CLOSED LID	TYPE A, 4' DIA., WITH SPECIAL FRAME & GRATE	TYPE A, 6' DIA., TYPE 1 FRAME, CLOSED LID	TYPE A, 6' DIA., TYPE 1 FRAME, CLOSED LID	24"X24"	18" FLARED	24" FLARED	36" FLARED	72" FLARED	INLET FILTER	SEDIMENT CONTROL	EDGE OF PAVEMENT	EDGE OF SHOULDER	LID OR GRATE FLOWLINE	(IN) INVERT	(OUT) INVERT					
1	33+37.05	53.75'L																									567.43(N)	563.33(S)	OPEN PIPE		
2	33+51.16	47.57'R																										573.24(N)	565.85(S)	OPEN PIPE	
3	37+61.68	48.18'L																										578.20	573.19(N)	566.57(S)	
4	37+64.13	37.46'L																										578.20	573.19(N)	566.57(S)	
5	37+87.40	64.40'R																										590.94	589.09(N)	589.09(S)	
6	50+50	25.55'L																										592.80	589.06(S)	589.05(E)	
7	50+50	35'L																										588.08(W)	588.08(E)	558.08(S)	
8	51+00	35'L																										589.65(S)			
9	51+00	27.64'R																										589.30	586.02(W)	586.02(E)	
10	52+00	35'L																										588.35	584.10(W)	584.10(N)	
11	53+00	35'L																										583.20(N)			
12	53+15.41	99.07'L																										579.86	577.54(N)		
13	54+00	19.72'L																										581.15	577.50(S)	577.50(E)	
14	54+00	26.58'L																										567.64	567.52	564.69(N)	
15	56+00	19.72'L																										569.60	564.63(W)	564.63(E)	
16	56+00	28.58'L																										558.42	555.53(N)	564.63(S)	
17	57+40	19.72'L																										549.56	546.40(N)	555.47(S)	
18	57+40	28.58'L																										549.56	546.40(N)	555.47(S)	
19	58+80	19.72'L																										542.23	546.40(N)	546.40(N)	
20	58+80	28.58'L																										542.23	546.05(NW)	546.05(SE)	
21	60+20	19.72'L																										539.10(N)	539.04(SW)	546.34(SW)	
22	60+20	28.58'L																										543.10	536.88(NW)	536.83(SE)	
23	61+60	19.72'L																										537.03	533.90(E)	539.04(SW)	
24	61+60	28.58'L																										537.90	533.11(N)	533.90(E)	
25	63+00	19.72'L																										533.95	533.83	530.80(E)	
26	63+00	28.58'L																										535.60	529.58(N)	529.58(S)	
27	64+50	19.72'L																										532.33	532.21	529.20(E)	
28	64+50	28.58'L																										533.75	526.92(N)	526.42(S)	
29	66+00	28'L																										528.23	524.69(N)	524.69(S)	
30	66+47.19	45.48'L																										523.75(S)	523.75(S)	529.16(W)	
31	86+27.30	42.55'L																										528.95(N)	528.95(N)		
32	86+60	40.62'L																										533.00	529.25(S)	529.25(N)	
33	88+00	19.72'R																										543.33	543.21	540.20(E)	
34	88+00	19.72'L																										542.37	542.25	539.26(W)	
35	88+00	26.58'L																										543.20	538.60(SE)	539.00(E)	
36	90+00	19.72'R																										543.20	538.60(SE)	538.10(N)	
37	90+00	19.72'L																										557.33	554.85(NE)	538.96(W)	
38	90+00	26.58'L																										557.33	554.85(NE)	554.85(NE)	
39	90+00	19.72'L																										556.49	553.91(SW)	553.75(N)	
40	92+00	19.72'R																										557.70	553.40(SE)	553.40(NW)	
41	92+00	26.58'L																										557.70	553.40(SE)	553.40(NW)	
42	94+00	19.72'R																										575.45	575.33	572.22(N)	
43	94+00	19.72'L																										574.49	574.37	571.75(N)	
44	94+00	26.58'L																										575.70	571.60(E)	571.35(NW)	
100	97+30	14.72'L																										589.72	589.60	587.35(N)	
101	97+30	14.72'R																										589.58	589.46	587.16(S)	
102	97+30	35'R																										590.90	587.06(S)	586.75(W)	
104	98+90	16.77'L																										590.66	590.66	587.50(S)	
105	98+90	16.62'R																										590.66	587.23(N)	587.15(S)	
103	98+90	35'R																										592.85	586.97(N)	585.50(E)	
106	99+00	17.53'L																										587.68	584.39(E)	584.00(S)	
107	99+00	17.66'R																										587.68	583.70(N)	583.00(S)	
108	98+84	60'R																										587.00	581.59(W)	573.74(S)	
TOTAL																													587.70	584.50(W)	584.50(W)
TOTAL			4	15*	1	1*	1	1	1	1	1	1	1	1	1	4	1	1	25	25								573.50(S)			

\* PAID FOR AS INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE  
 \*\* PAID FOR AS INLETS, TYPE A, WITH SPECIAL FRAME AND GRATE, SPECIAL



MILANO & GRUNLOH ENGINEERS, LLC  
 84 WEST WASHINGTON  
 P.O. BOX 187  
 EFFINGHAM, ILLINOIS 62401  
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 (815) 577-2774  
 FAX #: (815) 546-3433

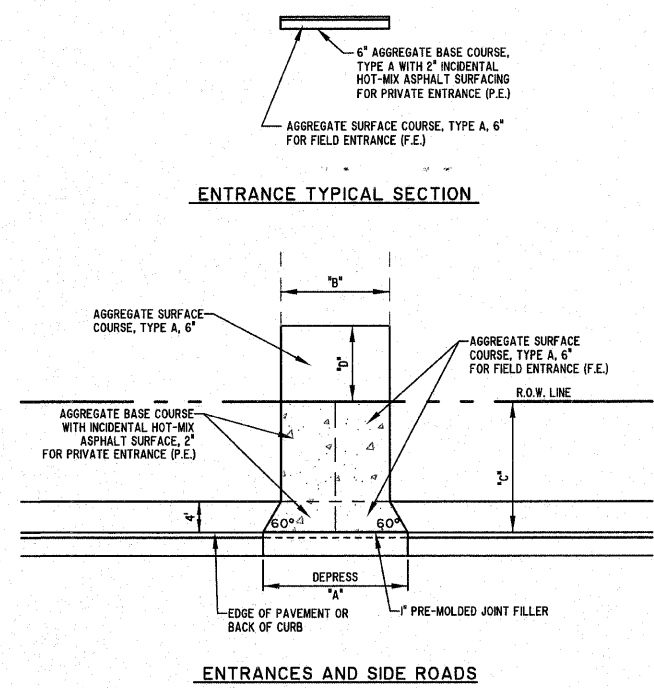
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SCHEDULE OF QUANTITIES  
 EVERGREEN AVENUE EXTENSION  
 COUNTY OF EFFINGHAM, ILLINOIS  
 COUNTY OF EFFINGHAM, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-01-PV	EFFINGHAM	139	18
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639

SCHEDULE OF QUANTITIES/DRAINAGE PIPE SCHEDULE											
FROM STRUCTURE	INVERT ELEVATION	TO STRUCTURE	INVERT ELEVATION	PIPE SLOPE %	STORM SEWER RUBBER GASKET, CLASS A, TYPE 2					STORM SEWER RUBBER GASKET, CLASS A, TYPE 3	TRENCH BACKFILL
					12"	15"	18"	24"	36"	72"	CU YD
1	567.43	2	563.33	4.00						95	133.0
3	573.24	4	573.19	0.70					8		
4	566.57	5	565.85	1.40					94		28.2
6	589.09	7	589.06	0.50	7						
7	589.05	8	588.08	2.02				46			5.0
8	588.08	9	589.65	2.55				55			11.0
8	588.08	10	586.02	2.02				92			5.0
10	586.02	11	584.10	2.02				92			
11	584.10	12	583.20	1.42				58			5.0
13	577.54	14	577.50	1.00	4						0.4
15	565.69	16	565.63	1.00	6						0.4
14	577.50	16	564.63	6.50	198						
17	555.53	18	555.47	1.00	6						0.4
16	564.63	18	555.47	6.50	141						
19	546.40	20	546.34	1.00	6						0.4
18	555.22	20	546.05	6.50		141					
21	539.10	22	539.04	1.00	6						0.4
20	546.05	22	536.63	6.50		141					
23	533.90	24	533.84	1.00	6						0.4
22	536.63	24	533.11	6.50			141				
25	530.80	26	530.74	1.00	6						0.4
24	533.11	26	529.58	2.50			141				
27	529.20	28	529.16	1.00	4						0.4
26	529.58	28	526.92	1.80			148				
28	526.42	29	523.80	1.80				100			
29	523.80	30	523.75	0.10				94			0.6
31	528.95	32	529.25	1.00				25			
33	540.20	34	539.26	2.50	38						7.6
34	539.00	35	538.96	1.00	4						0.4
32	529.25	35	538.10	6.70				132			6.0
36	554.85	37	553.91	2.50	38						7.6
37	553.75	38	553.71	1.00	4						0.4
35	538.60	38	553.40	7.94			187				
39	572.22	40	571.85	1.00	38						7.6
40	571.75	41	571.71	1.00	4						0.4
38	553.40	41	571.35	9.63			187				
42	587.35	43	587.16	0.50	38						7.6
43	587.10	44	587.06	1.00	4						0.4
41	571.60	44	586.75	8.00		190					
100	587.50	101	587.23	1.00	28						4
101	587.15	102	586.97	1.00	18						2
102	585.50	103	581.59	2.50		157					
106	584.50	104	584.39	1.50	8						2
104	584.00	105	583.70	1.00	31						4
107	584.50	105	584.39	1.50	8						2
105	583.00	103	582.78	1.50			15				2
103	573.74	108	573.50	1.00			18				
TOTAL					651	629	837	694	102	95	245



ENTRANCE DIMENSIONS				
LOCATION	A	B	C	D
P.E. LT. STA. 28+37	32'	14'	12'	25'
P.E. RT. STA. 30+08	40'	30'	18'	50'
P.E. LT. STA. 34+05	28'	16'	30'	50'
F.E. RT. STA. 40+78	26'	16'	22'	0'
P.E. LT. STA. 40+90	26'	16'	26'	16'
F.E. RT. STA. 47+59	30'	20'	24'	0'
F.E. LT. STA. 47+59	24'	14'	20'	0'
P.E. LT. STA. 49+48	28'	18'	26'	0'
P.E. LT. STA. 50+95	34'	20'	24'	0'
P.E. RT. STA. 51+50	26'	16'	24'	274'
S.R. LT. STA. 51+50	60'	16'	45'	440'
F.E. RT. STA. 65+80	28'	16'	40'	56'
F.E. LT. STA. 65+80	28'	16'	45'	36'
S.R. LT. STA. 70+00	74'	24'	60'	578'
F.E. RT. STA. 74+00	30'	20'	42'	50'
F.E. LT. STA. 78+50	30'	20'	130'	0'
F.E. RT. STA. 83+43	50'	14'	25'	0'
F.E. RT. STA. 86+89	28'	20'	65'	0'
F.E. LT. STA. 86+89	28'	20'	28'	0'
C.E. RT. STA. 87+40	28'	18'	240'	0'
S.R. RT. STA. 94+93	40'	18'	10'	100'
F.E. LT. STA. 1+92	28'	18'	35'	0'
P.E. RT. STA. 1+75	18'	16'	40'	0'
P.E. LT. STA. 95+16	28'	20'	10'	40'
P.E. LT. STA. 96+40	28'	20'	10'	40'

INLET AND PIPE PROTECTION		
LOCATION	INLET PROTECTION EACH	PIPE PROTECTION EACH
LT 33+37		1
LT 34+40		1
LT 37+62		1
RT 47+40		1
LT 47+45		1
LT 50+50	1	
RT 51+00		1
LT 52+00	1	
LT 54+00	1	
LT 56+00	1	
LT 57+40	1	
LT 58+80	1	
LT 60+20	1	
LT 61+60	1	
LT 63+00	1	
LT 64+50	1	
RT 65+29		1
LT 65+50	1	
LT 69+00		1
RT 73+70		1
LT 78+85		1
RT 87+19		1
RT 88+00	1	
LT 88+00	1	
RT 90+00	1	
LT 90+00	1	
RT 92+00	1	
LT 92+00	1	
RT 94+00	1	
LT 94+00	1	
LT 97+30	1	
RT 97+30	1	
LT 98+90	1	
RT 98+90	1	
LT 99+00	1	
RT 99+00	1	
TOTAL		36

PIPE CULVERTS, CLASS C, TYPE 2					
ENTRANCE STATION	PIPE SIZE & LENGTH*			ALUMINUM END SECTIONS	
	24" CMP	30" CMP	36" CMP	24"	30"
LT 34+04.95	70			2	
RT 47+58.80	40			2	
RT 65+80	65			2	
LT 70+00			80		2
RT 74+00		60			2
LT 78+50	72			2	
RT 86+89.30	48			2	
TOTAL	295	60	80	10	2

\* MATERIAL SHALL BE RESTRICTED TO ALUMINIZED STEEL TYPE 2 CORRUGATED PIPE.

REMOVE EXISTING STRUCTURES				
STRUCTURE NUMBER	LOCATION	UNIT	QUANTITY	DESCRIPTION
1	AR. STA. 33+43	EACH	1	6.5' (S) X 5.0' (W) X 4.0' (L)
2	AR. STA. 37+86	EACH	1	4.0' (S) X 3.0' (W) X 36' (L)
3	AR. STA. 52+85	EACH	1	2.0' (S) X 2.0' (W) X 27' (L)
4	LT. STA. 77+00	EACH	1	8.0' (S) X 6.0' (W) X 26' (L)
5	LT. STA. 154+20	EACH	1	6' 0" X 8' 0" X 5' 0" 6" THICK
6	LT. STA. 154+35	EACH	1	6' 0" X 8' 0" X 5' 0" 6" THICK

PIPE CULVERT REMOVAL		
STATION	UNIT	FOOT
LT. 28+32.55	12" CMP	30
AR. 29+07.33	12" RCCP	28
LT. 33+80	12" Steel	52
LT. 50+95.36	12" CMP	36
RT. 53+16.15	12" CMP	26
LT. 54+44.45	8" Steel	12
RT. 89+00	12" CMP	22
AR. 92+37.71	15" CMP	30
LT. 96+19.69	8" CMP	32
LT. 205+00.12	12" CMP	14
TOTAL		282

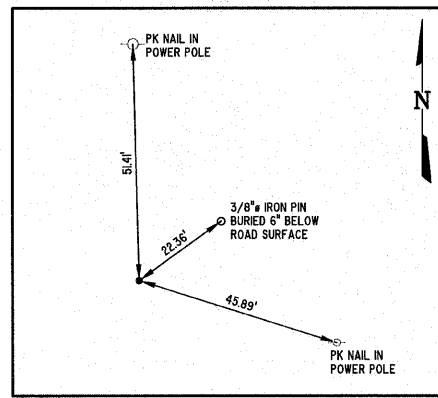
**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 PHONE: (217) 347-7262  
 (800) 677-2794  
 FAX #: (217) 342-3433

SCHEDULE OF QUANTITIES  
 EVERGREEN AVENUE EXTENSION  
 COUNTY OF EFFINGHAM, ILLINOIS  
 COUNTY OF EFFINGHAM, ILLINOIS

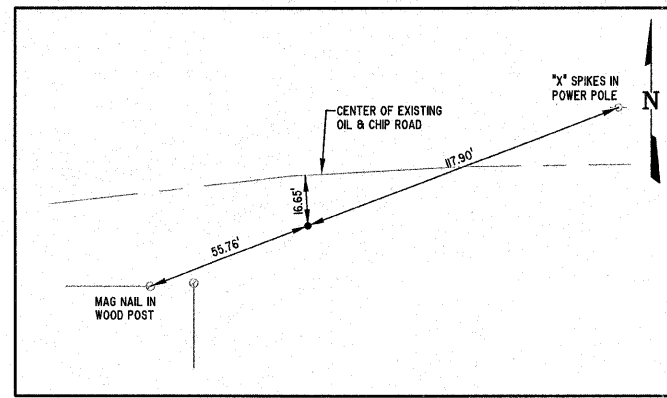
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-01-PV	EFFINGHAM	139	19
FED. ROAD DIST. NO. 7		ILLINOIS		

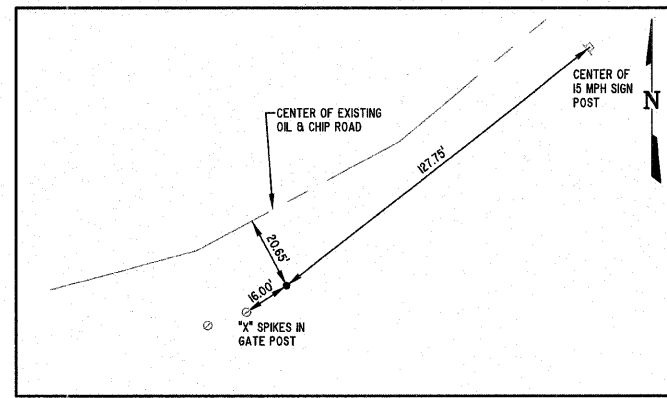
CONTRACT #95639



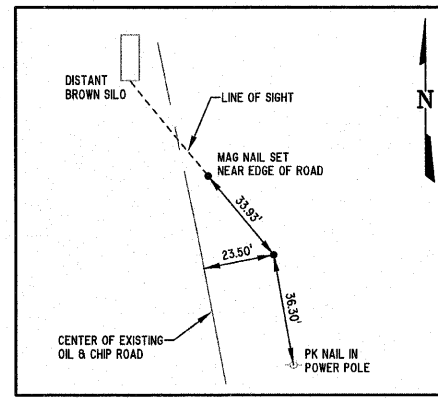
**TRAVERSE POINT #1**  
IRON PIN  
20.17' RT, STA. 27+44.53



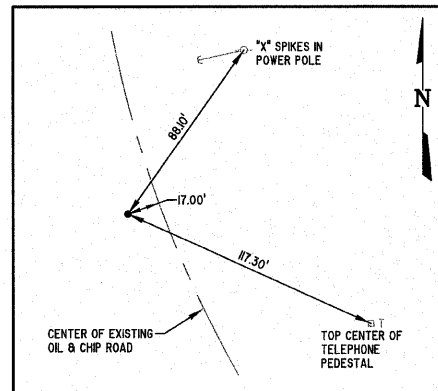
**TRAVERSE POINT #4**  
IRON PIN  
11.90' LT, STA. 4+32.61



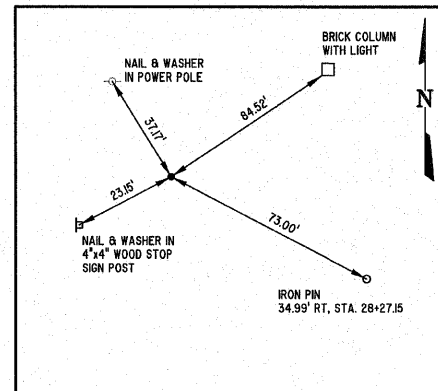
**TRAVERSE POINT #5**  
IRON PIN  
22.61' LT, STA. 54+64.79



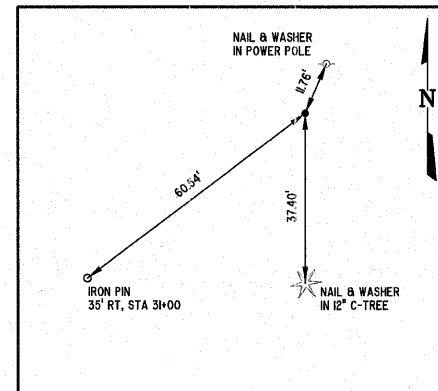
**TRAVERSE POINT #6**  
IRON PIN  
272.50' LT, STA. 73+76.69



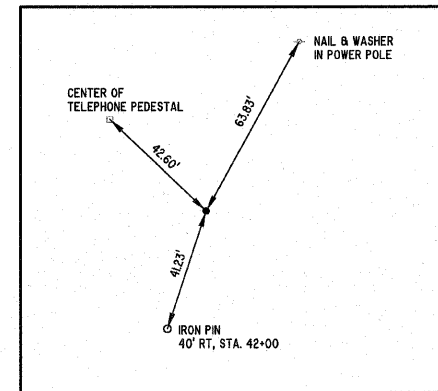
**TRAVERSE POINT #7**  
IRON PIN  
7.26' RT, STA. 8+11.97



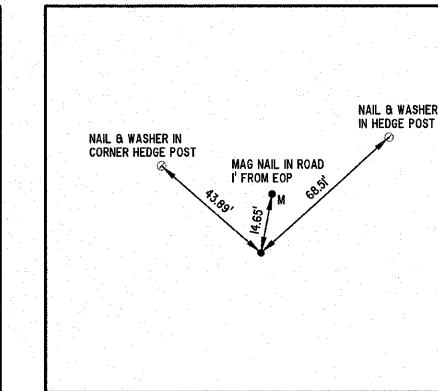
**P.O.T. STA. 27+63.05**  
1/2" IRON PIN  
(EVERGREEN AVENUE)



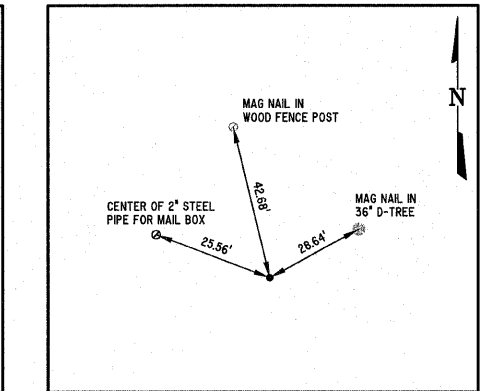
**P.I. STA. 31+48.22**  
1/2" IRON PIN  
(EVERGREEN AVENUE)



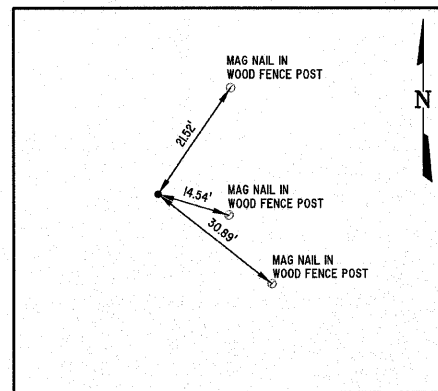
**P.I. STA. 42+12.41**  
1/2" IRON PIN  
(EVERGREEN AVENUE)



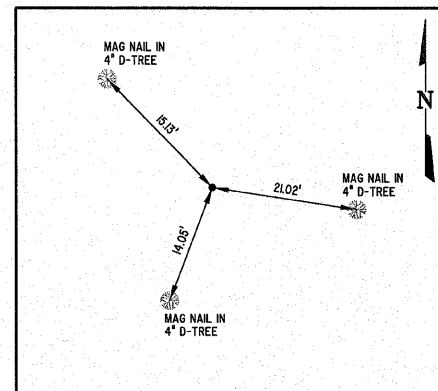
**P.O.T. STA. 51+50.00**  
1/2" IRON PIN  
(EVERGREEN AVENUE)



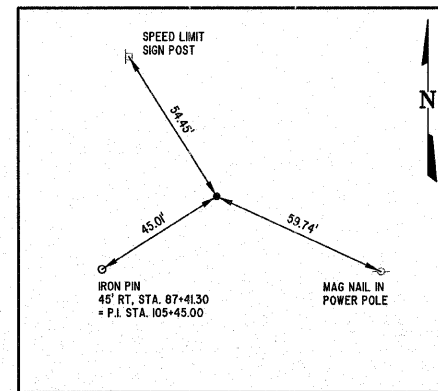
**P.O.T. STA. 54+00.00**  
1/2" IRON PIN  
(EVERGREEN AVENUE)



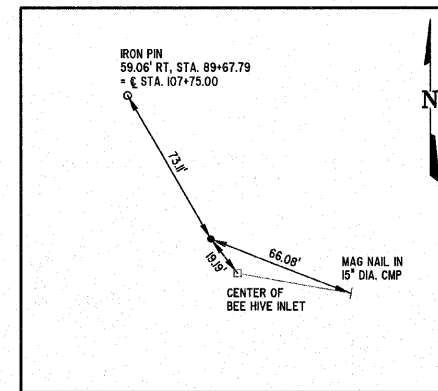
**P.T. STA. 63+55.97**  
1/2" IRON PIN  
(EVERGREEN AVENUE)



**P.O.T. STA. 70+00.00**  
1/2" IRON PIN  
(EVERGREEN AVENUE)



**P.O.C. STA. 87+41.30**  
1/2" IRON PIN  
(EVERGREEN AVENUE)



**P.I. STA. 90+57.60**  
1/2" IRON PIN  
(EVERGREEN AVENUE)

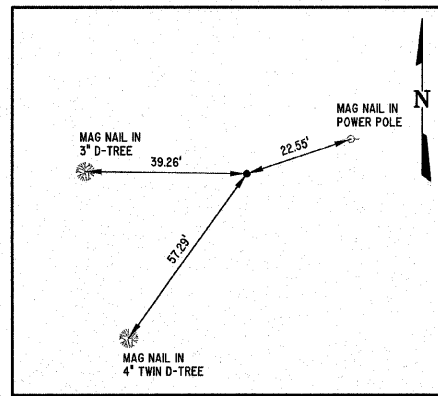
**MILANO & GRUNLOH ENGINEERS, LLC**  
34 WEST WASHINGTON  
P.O. BOX 897  
EFFINGHAM, ILLINOIS 62401  
Phone: (217) 347-7282  
(800) 677-2714  
Fax: (217) 342-3433  
Web Address: www.mgengineers.com  
Design Firm #: 04-00300

REFERENCE TIES  
CENTERLINE - EVERGREEN AVENUE  
AND TRAVERSE POINTS  
COUNTY OF EFFINGHAM, ILLINOIS

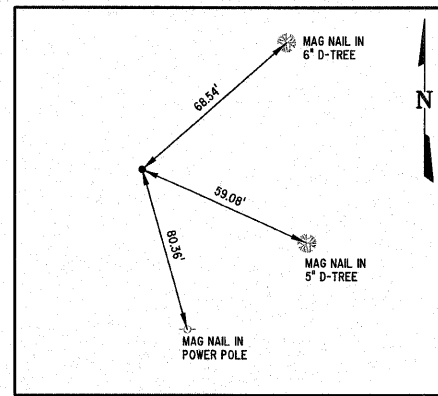
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	20
FED. ROAD DIST. NO. 7		ILLINOIS		

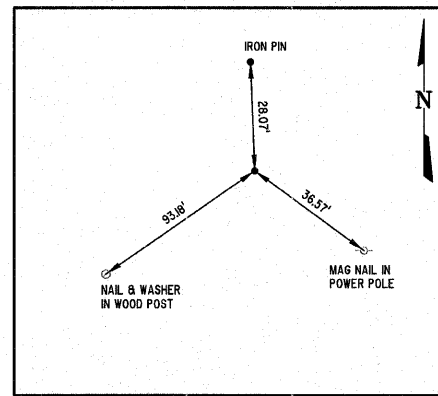
CONTRACT #95639



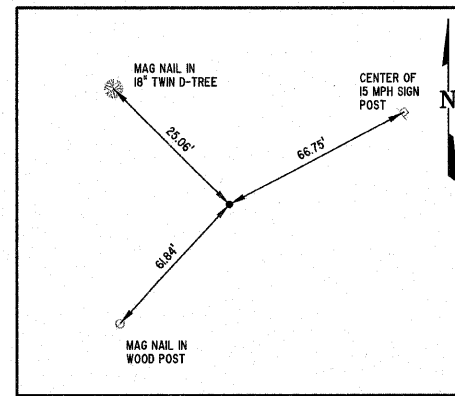
**P.I. STA. 203+75.99**  
1/2" IRON PIN  
(LOWER TOWNSHIP ROAD)



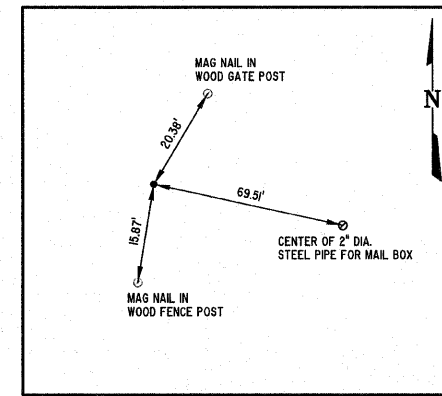
**P.O.T. STA. 206+60.00**  
1/2" IRON PIN  
(LOWER TOWNSHIP ROAD)



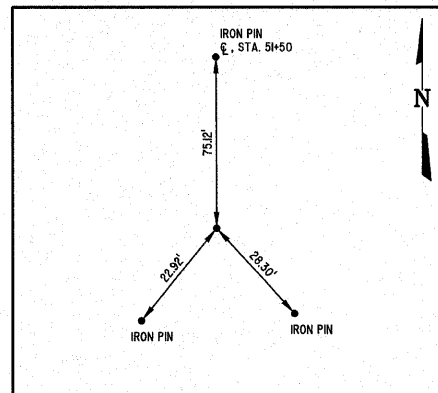
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1/2" IRON PIN  
(UPPER TOWNSHIP ROAD)



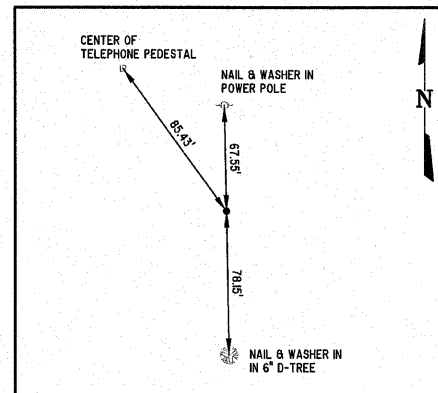
**P.I. STA. 214+13.99**  
1/2" IRON PIN  
(UPPER TOWNSHIP ROAD)



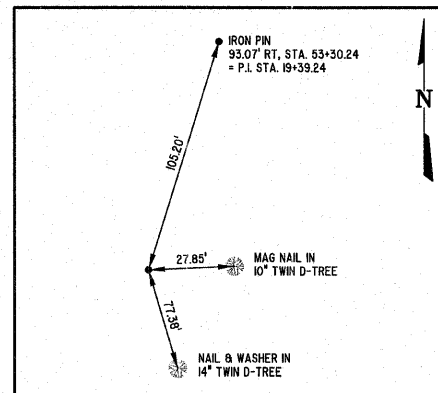
**P.O.T. STA. 215+00.00**  
NAIL & WASHER  
(UPPER TOWNSHIP ROAD)



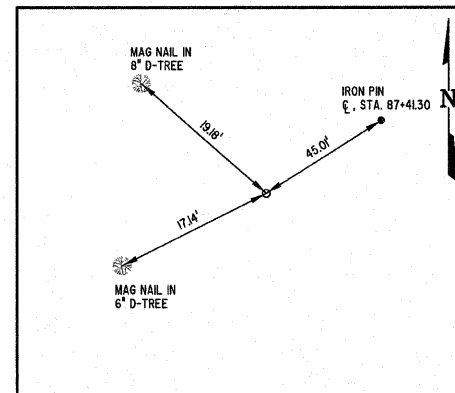
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1/2" IRON PIN  
(WILLENBORG ACCESS)



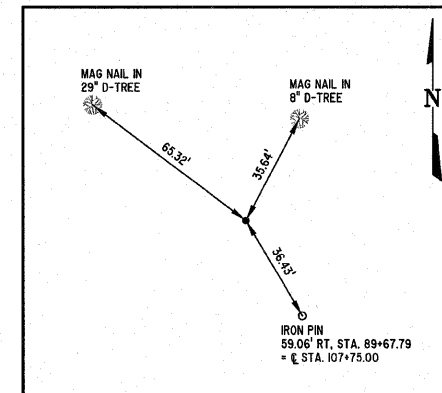
**P.I. STA. 19+39.24**  
1/2" IRON PIN  
(WILLENBORG ACCESS)



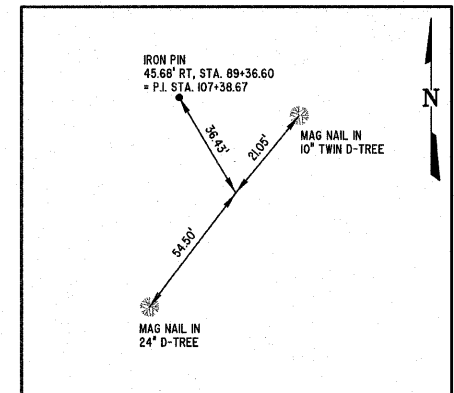
**P.O.T. STA. 20+10.00**  
1/2" IRON PIN  
(WILLENBORG ACCESS)



**P.I. STA. 105+45.00**  
1/2" IRON PIN  
(LSAWC ACCESS)



**P.I. STA. 107+38.67**  
1/2" IRON PIN  
(LSAWC ACCESS)



**P.O.T. STA. 107+75.00**  
1/2" IRON PIN  
(LSAWC ACCESS)

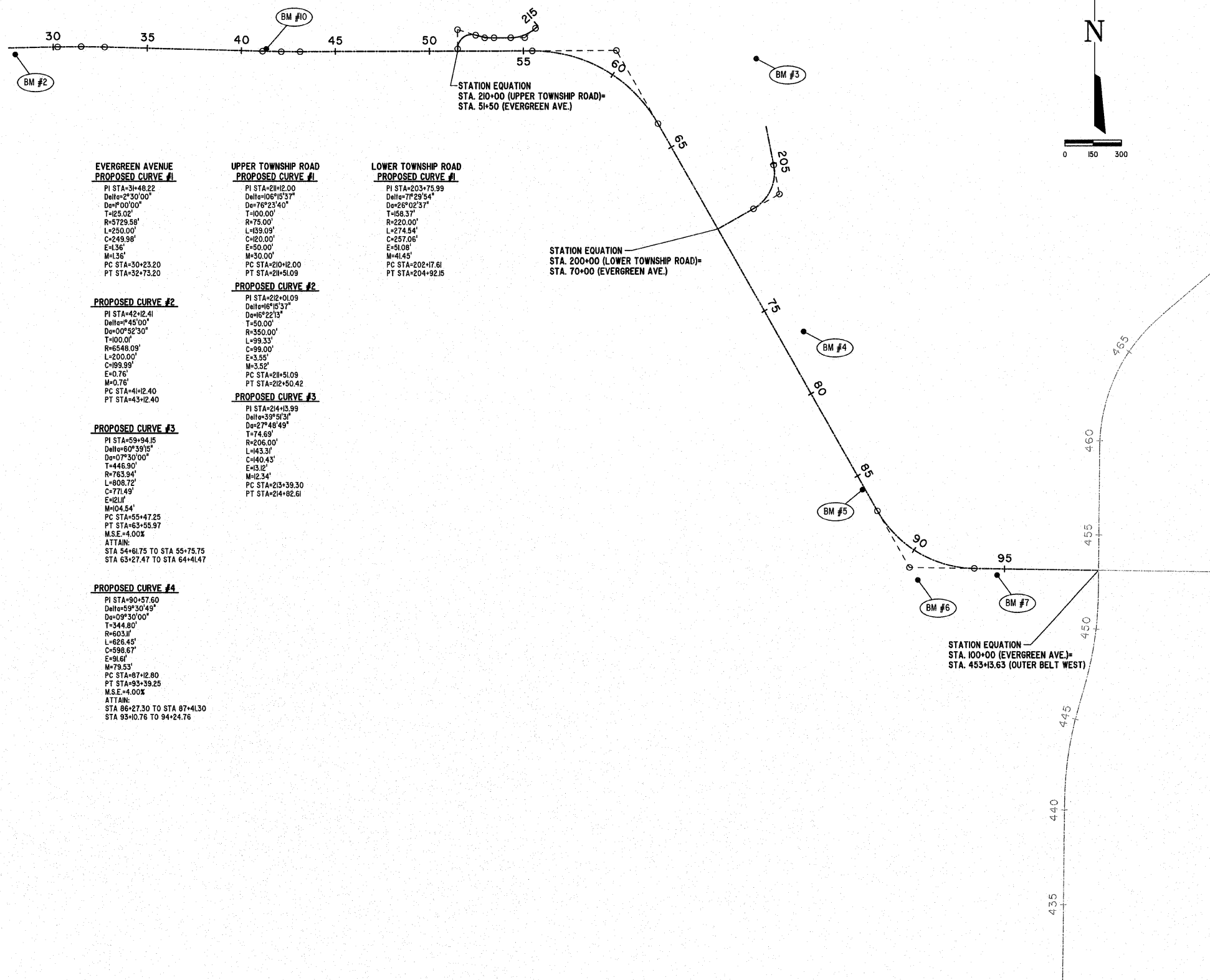
**MILANO & GRUNLOH ENGINEERS, LLC**  
14 WEST WASHINGTON  
P.O. BOX 897  
EFFINGHAM, ILLINOIS 62401  
Phone: (271) 347-7282  
(800) 877-2714  
Fax #: (271) 342-3433  
Web Address: www.mgengineers.com  
Design Firm #: 184-00308

REFERENCE TIES  
CENTERLINE - SIDE ROADS AND  
ACCESS DRIVES  
COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05227\dwg\Alignment\_Ties.dwg  
Plot date: 02/08/11 at 16:10  
P. 8 of 130

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	21
FED. ROAD DIST. NO. 7		ILLINOIS		

CONTRACT #95639



**EVERGREEN AVENUE  
PROPOSED CURVE #1**  
 PI STA=31+48.22  
 Delta=2°30'00"  
 D=100'00"  
 T=125.02'  
 R=5729.58'  
 L=250.00'  
 C=249.98'  
 E=1.36'  
 M=1.36'  
 PC STA=30+23.20  
 PT STA=32+73.20

**UPPER TOWNSHIP ROAD  
PROPOSED CURVE #1**  
 PI STA=21+12.00  
 Delta=106°15'37"  
 D=76°23'40"  
 T=100.00'  
 R=75.00'  
 L=139.09'  
 C=20.00'  
 E=50.00'  
 M=30.00'  
 PC STA=21+12.00  
 PT STA=21+51.09

**LOWER TOWNSHIP ROAD  
PROPOSED CURVE #1**  
 PI STA=203+75.99  
 Delta=77°29'54"  
 D=28°02'37"  
 T=158.37'  
 R=220.00'  
 L=274.54'  
 C=257.06'  
 E=51.06'  
 M=41.45'  
 PC STA=202+17.61  
 PT STA=204+92.15

**PROPOSED CURVE #2**  
 PI STA=42+12.41  
 Delta=45°00'  
 D=0°52'30"  
 T=100.00'  
 R=6548.09'  
 L=200.00'  
 C=199.99'  
 E=0.76'  
 M=0.76'  
 PC STA=41+12.40  
 PT STA=43+12.40

**PROPOSED CURVE #2**  
 PI STA=212+01.09  
 Delta=16°15'37"  
 D=16°22'13"  
 T=50.00'  
 R=350.00'  
 L=99.33'  
 C=99.00'  
 E=3.55'  
 M=3.52'  
 PC STA=211+51.09  
 PT STA=212+50.42

**PROPOSED CURVE #3**  
 PI STA=214+13.99  
 Delta=33°51'31"  
 D=27°48'49"  
 T=74.69'  
 R=206.00'  
 L=143.31'  
 C=140.43'  
 E=13.12'  
 M=12.34'  
 PC STA=213+39.30  
 PT STA=214+82.61

**PROPOSED CURVE #3**  
 PI STA=59+94.15  
 Delta=60°39'15"  
 D=0°30'00"  
 T=445.90'  
 R=763.94'  
 L=808.72'  
 C=771.49'  
 E=21.17'  
 M=21.17'  
 PC STA=55+47.25  
 PT STA=63+55.97  
 M.S.E.=4.00%

**PROPOSED CURVE #4**  
 PI STA=90+57.60  
 Delta=59°30'49"  
 D=0°30'00"  
 T=344.80'  
 R=603.11'  
 L=828.45'  
 C=598.67'  
 E=91.61'  
 M=79.53'  
 PC STA=87+12.80  
 PT STA=93+39.25  
 M.S.E.=4.00%

**BM #2**  
 TOP CAP BOLT ON FIRE HYDRANT  
 AT POINT OF "OPEN" ARROW  
 SE QUADRANT OF CADILLAC DR.  
 AND NAZARENE RD.  
 35.48'Rt, STA. 27+97.56  
 ELEVATION=599.63

**BM #3**  
 TOP OF RAILROAD SPIKE IN POWER POLE  
 SOUTH OF EXISTING FIELD ENTRANCE  
 625.87'Lt, STA. 63+33.18  
 ELEVATION=531.04

**BM #4**  
 CHISELED SQUARE IN CENTER OF  
 CONCRETE HEADWALL  
 128.02'Lt, STA. 76+96.19  
 ELEVATION=528.88

**BM #5**  
 CHISELED SQUARE IN SW CORNER  
 OF BRIDGE ABUTMENT  
 12.74'Rt, Sta. 85+76.23  
 ELEVATION=536.42

**BM #6**  
 TOP OF RAILROAD SPIKE IN METER POLE  
 EAST OF LSAWC PUMP STATION  
 130.12'Lt, STA. 90+85.71  
 ELEVATION=577.94

**BM #7**  
 TOP CAP BOLT ON FIRE HYDRANT  
 AT POINT OF "OPEN" ARROW  
 31.5' WEST OF CALICO ROAD  
 34.18'Rt, STA. 94+61.48  
 ELEVATION=585.38

**BM #10**  
 TOP OF IRON PIN (CONTROL POINT #4)  
 11.90'Lt, STA. 41+32.61  
 ELEVATION=595.69

EVERGREEN AVENUE			
Station	Northing	Easting	Description
Sta. 27+63.05	90176.5416	910034.6095	P.O.T.
Sta. 30+23.20	901721.0483	910294.7181	P.C.
Sta. 31+48.22	901723.2142	910419.7193	P.I.
Sta. 32+73.20	901719.9254	910544.6959	P.T.
Sta. 41+12.40	901697.8497	91383.6077	P.C.
Sta. 42+12.41	901695.2190	91483.5810	P.I.
Sta. 43+12.40	901695.6424	91583.5878	P.T.
Sta. 55+47.25	901700.8716	91288.4284	P.C.
Sta. 59+94.15	901702.7640	913265.3216	P.I.
Sta. 63+55.97	901314.1449	913485.9848	P.T.
Sta. 87+12.80	899264.6670	914649.7053	P.C.
Sta. 90+57.60	898964.8284	914819.9577	P.I.
Sta. 93+39.25	898959.4251	915164.7182	P.T.
Sta. 100+00.00	898949.0708	915823.3823	P.O.T.

UPPER TOWNSHIP ROAD			
Station	Northing	Easting	Description
Sta. 210+00.00	901699.1894	912421.1796	P.O.T.
Sta. 210+12.00	901711.8933	912421.1287	P.C.
Sta. 211+12.00	901811.8884	912420.7053	P.I.
Sta. 211+51.09	901783.5951	912516.8230	P.T./P.C.
Sta. 212+01.09	901769.7986	912564.8819	P.I.
Sta. 212+50.42	901770.0103	912614.8814	P.T.
Sta. 213+39.30	901770.3866	912703.7578	P.C.
Sta. 214+13.99	901770.7029	912778.4475	P.I.
Sta. 214+82.61	901818.8140	912835.5785	P.T.
Sta. 215+00.00	901830.0179	912848.8830	P.O.T.

LOWER TOWNSHIP ROAD			
Station	Northing	Easting	Description
Sta. 200+00.00	900754.1042	913803.9833	P.O.T.
Sta. 202+17.61	900861.5544	913993.2185	P.C.
Sta. 203+75.99	900939.7536	914130.9385	P.I.
Sta. 204+92.15	901095.1705	914100.4838	P.T.
Sta. 206+60.00	901259.8905	914068.2063	P.O.T.

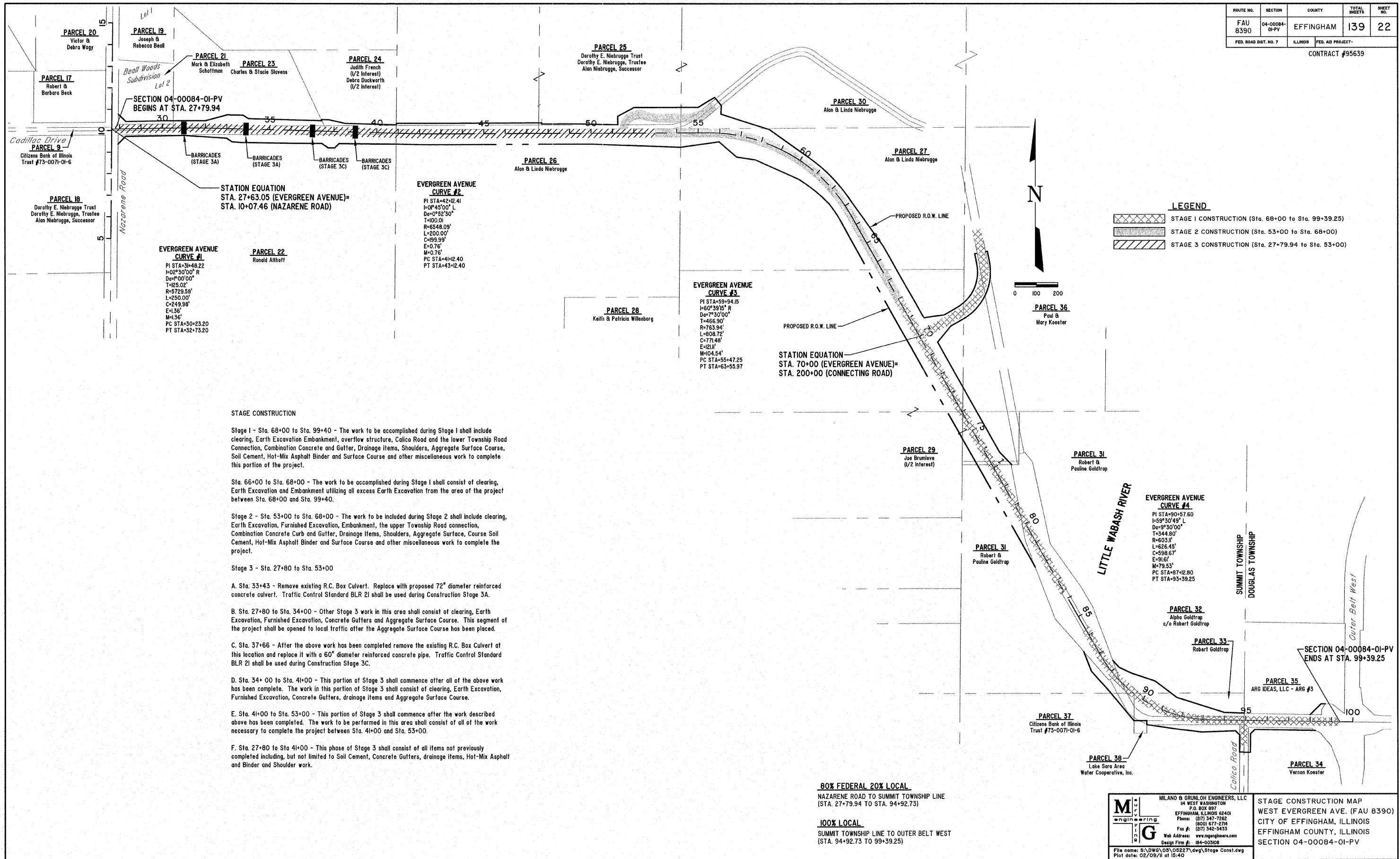
**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7282  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-00309

ALIGNMENT AND BENCHMARKS  
 EVERGREEN AVENUE  
 COUNTY OF EFFINGHAM, ILLINOIS  
 COUNTY OF EFFINGHAM, ILLINOIS

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 Plot date: 02/06/11 at 16:10

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

CONTRACT #95639



**STAGE CONSTRUCTION**

Stage 1 - Sta. 68+00 to Sta. 99+40 - The work to be accomplished during Stage 1 shall include clearing, Earth Excavation Embankment, overflow structure, Calico Road and the lower Township Road Connection, Combination Concrete and Gutter, Drainage items, Shoulders, Aggregate Surface Course, Soil Cement, Hot-Mix Asphalt Binder and Surface Course and other miscellaneous work to complete this portion of the project.

Sta. 66+00 to Sta. 68+00 - The work to be accomplished during Stage 1 shall consist of clearing, Earth Excavation and Embankment utilizing all excess Earth Excavation from the area of the project between Sta. 68+00 and Sta. 99+40.

Stage 2 - Sta. 53+00 to Sta. 68+00 - The work to be included during Stage 2 shall include clearing, Earth Excavation, Furnished Excavation, Embankment, the upper Township Road connection, Combination Concrete Curb and Gutter, Drainage Items, Shoulders, Aggregate Surface, Course Soil Cement, Hot-Mix Asphalt Binder and Surface Course and other miscellaneous work to complete the project.

Stage 3 - Sta. 27+80 to Sta. 53+00

A. Sta. 33+43 - Remove existing R.C. Box Culvert. Replace with proposed 72" diameter reinforced concrete culvert. Traffic Control Standard BLR 21 shall be used during Construction Stage 3A.

B. Sta. 27+80 to Sta. 34+00 - Other Stage 3 work in this area shall consist of clearing, Earth Excavation, Furnished Excavation, Concrete Gutters and Aggregate Surface Course. This segment of the project shall be opened to local traffic after the Aggregate Surface Course has been placed.

C. Sta. 37+66 - After the above work has been completed remove the existing R.C. Box Culvert at this location and replace it with a 60" diameter reinforced concrete pipe. Traffic Control Standard BLR 21 shall be used during Construction Stage 3C.

D. Sta. 34+00 to Sta. 41+00 - This portion of Stage 3 shall commence after all of the above work has been complete. The work in this portion of Stage 3 shall consist of clearing, Earth Excavation, Furnished Excavation, Concrete Gutters, drainage items and Aggregate Surface Course.

E. Sta. 41+00 to Sta. 53+00 - This portion of Stage 3 shall commence after the work described above has been completed. The work to be performed in this area shall consist of all of the work necessary to complete the project between Sta. 41+00 and Sta. 53+00.

F. Sta. 27+80 to Sta. 41+00 - This phase of Stage 3 shall consist of all items not previously completed including, but not limited to Soil Cement, Concrete Gutters, drainage items, Hot-Mix Asphalt and Binder and Shoulder work.

**80% FEDERAL 20% LOCAL**  
 NAZARENE ROAD TO SUMMIT TOWNSHIP LINE  
 (STA. 27+79.94 TO STA. 94+92.73)

**100% LOCAL**  
 SUMMIT TOWNSHIP LINE TO OUTER BELT WEST  
 (STA. 94+92.73 TO 99+39.25)

**MILANO & GRUNLOH ENGINEERS, LLC**  
 94 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (271) 347-7262  
 (800) 577-2714  
 Fax #: (271) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-00308

STAGE CONSTRUCTION MAP  
 WEST EVERGREEN AVE. (FAU 8390)  
 CITY OF EFFINGHAM, ILLINOIS  
 EFFINGHAM COUNTY, ILLINOIS  
 SECTION 04-00084-01-PV

File name: S:\DWG\05\05227.dwg\Stage Const.dwg  
 Plot date: 02/09/11 at 15:40

**STAGE CONSTRUCTION**

Stage 1 - Sta. 68+00 to Sta. 99+40 - The work to be accomplished during Stage 1 shall include clearing, Earth Excavation Embankment, overflow structure, Calico Road and the lower Township Road Connection, Combination Concrete and Gutter, Drainage Items, Shoulders, Aggregate Surface Course, Soil Cement, Hot-Mix Asphalt Binder and Surface Course and other miscellaneous work to complete this portion of the project.

Sta. 66+00 to Sta. 68+00 - The work to be accomplished during Stage 1 shall consist of clearing, Earth Excavation and Embankment utilizing all excess Earth Excavation from the area of the project between Sta. 68+00 and Sta. 99+40.

Stage 2 - Sta. 53+00 to Sta. 68+00 - The work to be included during Stage 2 shall include clearing, Earth Excavation, Furnished Excavation, Embankment, the upper Township Road connection, Combination Concrete Curb and Gutter, Drainage Items, Shoulders, Aggregate Surface, Course Soil Cement, Hot-Mix Asphalt Binder and Surface Course and other miscellaneous work to complete the project.

Stage 3 - Sta. 27+80 to Sta. 53+00

A. Sta. 33+43 - Remove existing R.C. Box Culvert. Replace with proposed 72" diameter reinforced concrete culvert.

B. Sta. 27+80 to Sta. 34+00 - Other Stage 3 work in this area shall consist of clearing, Earth Excavation, Furnished Excavation, Concrete Gutters and Aggregate Surface Course. This segment of the project shall be opened to local traffic after the Aggregate Surface Course has been placed.

C. Sta. 37+66 - After the above work has been completed remove the existing R.C. Box Culvert at this location and replace it with a 60" diameter reinforced concrete pipe.

D. Sta. 34+00 to Sta. 41+00 - This portion of Stage 3 shall commence after all of the above work has been complete. The work in this portion of Stage 3 shall consist of clearing, Earth Excavation, Furnished Excavation, Concrete Gutters, drainage Items and Aggregate Surface Course.

E. Sta. 41+00 to Sta. 53+00 - This portion of Stage 3 shall commence after the work described above has been completed. The work to be performed in this area shall consist of all of the work necessary to complete the project between Sta. 41+00 and Sta. 53+00.

F. Sta. 27+80 to Sta 41+00 - This phase of Stage 3 shall consist of all items not previously completed including, but not limited to Soil Cement, Concrete Gutters, drainage items, Hot-Mix Asphalt and Binder and Shoulder work.

WEST EVERGREEN AVENUE EFFINGHAM COUNTY PROPERTY OWNERS	
PARCEL NUMBER	OWNER
21	MARK & ELIZABETH SCHOTTMAN
22	RONALD ALTHOFF
23	CHARLES & STACIE SLAVENS
24	JUDITH FRENCH & DEBRA DUCKWORTH
25	DOROTHY E. NIEBRUGGE TRUST
26	ALAN L. & LINDA D. NIEBRUGGE
27	ALAN L. & LINDA D. NIEBRUGGE
28	KEITH & PATRICIA WILLENBORG
29	JOSEPH F. BRUMLEVE HEIRS
30	ALAN L. & LINDA D. NIEBRUGGE
31	ROBERT & PAULINE GOLDTRAP
32	GOLDTRAP HEIRS
33	GOLDTRAP HEIRS
34	VERNON KOESTER
35	ARG IDEAS
36	PAUL & MARY KOESTER
37	CITIZENS BANK TRUST #73-0071-01-6
38	LAKE SARA AREA WATER COOPERATIVE

TRAFFIC CONTROL STAGE CONSTRUCTION		PARCEL NUMBER																			
STAGE	STATION TO STATION	CONSTRUCTION OPERATIONS	TRAFFIC	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
1	68+00 - 99+40	ALL	T,L	W	W	W	W	W	W	W	W	W	X	X	X	X	X	X	X	X	X
2	53+00 - 68+00	ALL	L	W	W	W	W	W	W	W	W	E	E	E	E	E	E	E	E	E	E
3A	33+43	A.R. CULVERT	L	W	W	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
3B	27+80 - 34+00	B	L	W	W	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
3C	37+66	A.R. CULVERT	L	W	W	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
3D	34+00 - 41+00	B	L	W	W	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
3E	41+00 - 53+00	B,C,D	L	W	W	W	W	E	E	E	E	E	E	E	E	E	E	E	E	E	E
3F	27+80 - 41+00	C,D	L	W	W	B	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E

The contractor shall present a plan to the Engineer outlining the method of notifying adjacent owners or occupants of each change in operation which may impact public convenience or safety. This plan shall be presented in writing to the Engineer at the preconstruction conference and will be approved or revised by the Engineer, in writing, within seven (7) calendar days after receipt by the Engineer.

The cost of equipment, labor and materials to perform this work shall be included in the contract Lump Sum Price for TRAFFIC CONTROL COMPLETE.

This special provision supplements the requirements of Article 107.09. The conditions outlined in Article 107.09 shall remain in full force and effect.

**LEGEND**

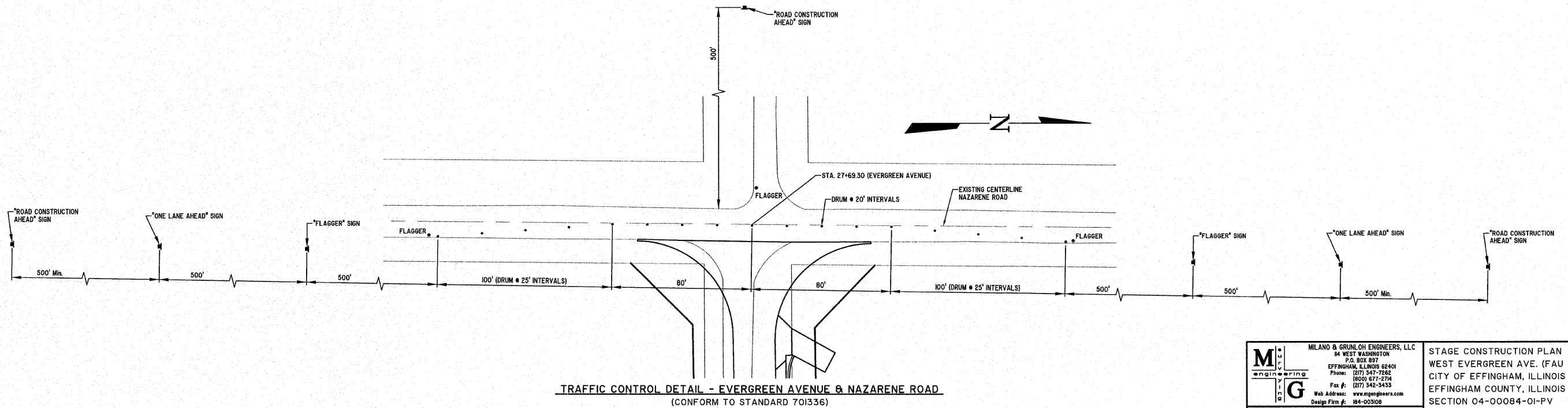
Traffic Through-T Local-L  
Direction East- E West- W Both East and West- B Special Treatment- X

**CONSTRUCTION OPERATIONS**

- A Structure
- B Clearing, Grading Drainage items, Excavation, Embankment, Aggregate Surface Course, Type A for Soil Cement Sub-base Granular Material, Type A
- C Processing Soil Cement
- D Hot-Mix Asphalt Binder & Surface on Rural Section, P.C.C. Pavement & Concrete Curb & Gutter on City Section, all other miscellaneous work to complete project.

**STAGE I ACCESS**

Parcels 29, 31, 32, 33, and 37 are unimproved properties. The use of these properties is agricultural in nature. Parcel 38 is owned by a public water supply co-operative and must be accessible at all times. Parcels 34 and 35 are residential and must be accessible at all times. The contractor shall furnish the Engineer a phasing schedule for Stage I, which provides adequate access to these properties throughout Stage I. The contractor shall co-operate with the Engineer by providing an updated schedule to provide local access for property owners as well as mail delivery, school buses, refuse collectors, emergency service agencies and utility companies.



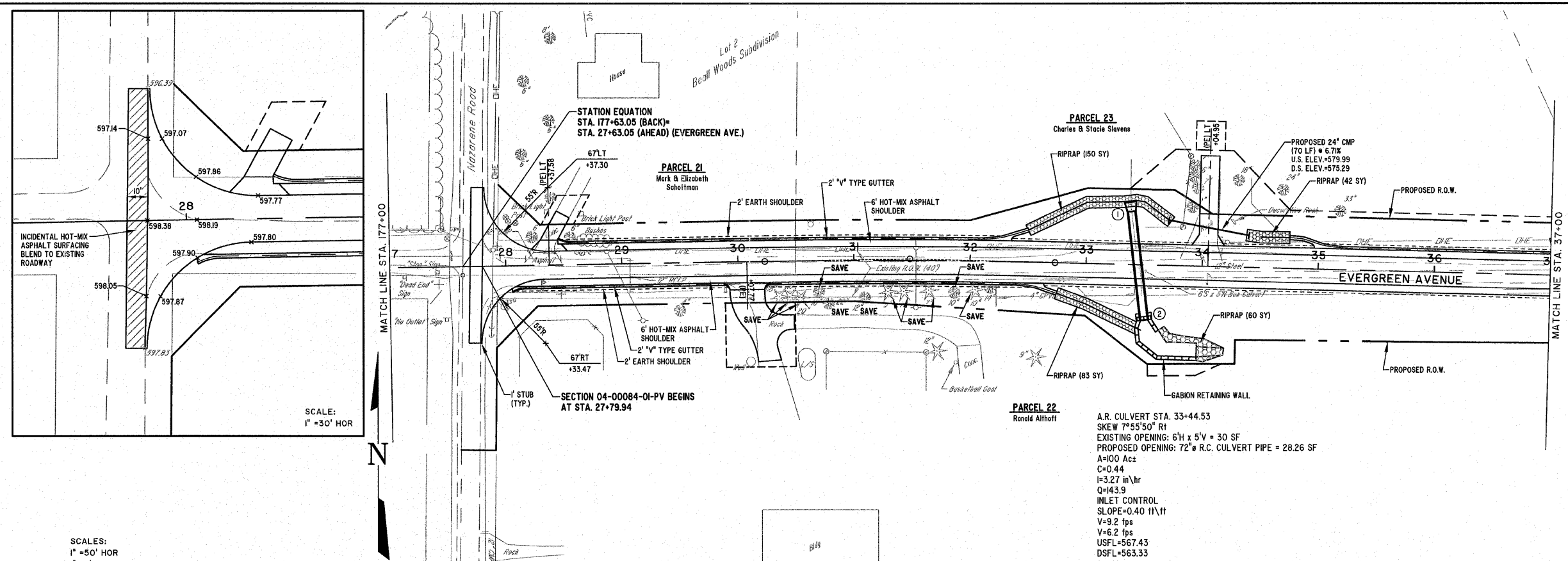
**TRAFFIC CONTROL DETAIL - EVERGREEN AVENUE & NAZARENE ROAD**  
(CONFORM TO STANDARD 701336)

**MILANO & GRUNLOH ENGINEERS, LLC**  
P.O. BOX 837  
EFFINGHAM, ILLINOIS 62401  
Phone: (271) 347-7262  
(800) 577-2714  
Fax #: (271) 342-3433  
Web Address: www.mgengineers.com  
Design Firm #: 184-00308

STAGE CONSTRUCTION PLAN  
WEST EVERGREEN AVE. (FAU 8390)  
CITY OF EFFINGHAM, ILLINOIS  
EFFINGHAM COUNTY, ILLINOIS  
SECTION 04-00084-01-PV

File name: S:\DWG\05\105227.dwg\Stage Const.dwg  
Plot date: 02/09/11 at 15:40

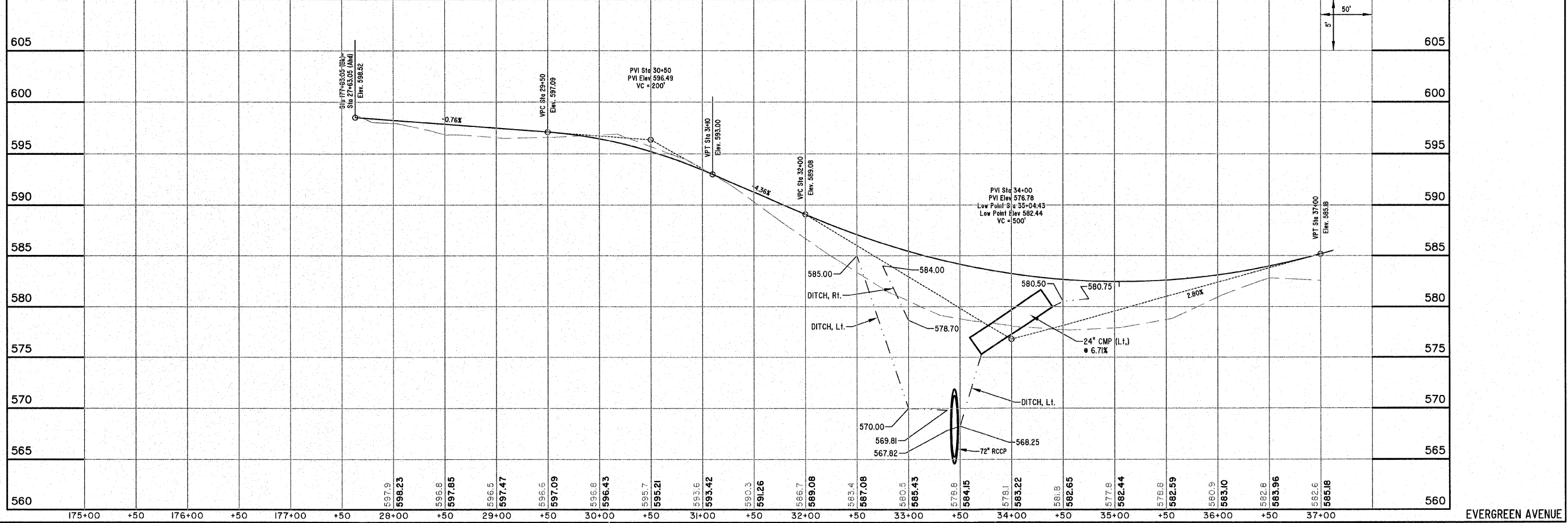
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-01-PV	EFFINGHAM	139	24
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95639				



**CURVE #5**  
 PI STA=31+48.22  
 I=2°30'00" R  
 D=100'00"  
 T=125.02'  
 R=5729.56'  
 L=250.00'  
 C=249.98'  
 E=1.36'  
 M=1.36'  
 PC STA=30+23.20  
 PT STA=32+73.20

SCALES:  
 1" = 50' HOR  
 1" = 5' VER

**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 887  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7282  
 (800) 577-2734  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003108  
 File name: S:\DWG\05\05227\dwg\Street Plan.dwg  
 Plot date: 02/08/11 at 16:15

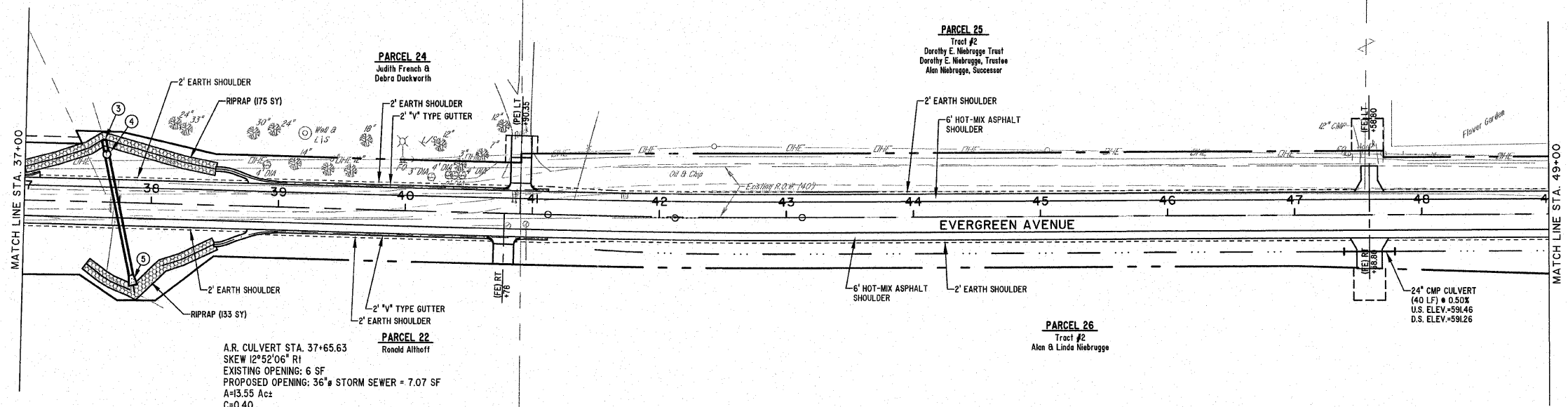


EVERGREEN AVENUE



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	25
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

CONTRACT #95639



A.R. CULVERT STA. 37+65.63  
 SKEW 12°52'06" RT  
 EXISTING OPENING: 6 SF  
 PROPOSED OPENING: 36" STORM SEWER = 7.07 SF  
 A=3.55 Ac±  
 C=0.40  
 I=7.6 in/hr  
 Q=40.92  
 INLET CONTROL  
 SLOPE=0.14 11\11  
 V=7.71 fps  
 V=7.99 fps  
 USFL=573.24  
 DSFL=565.85

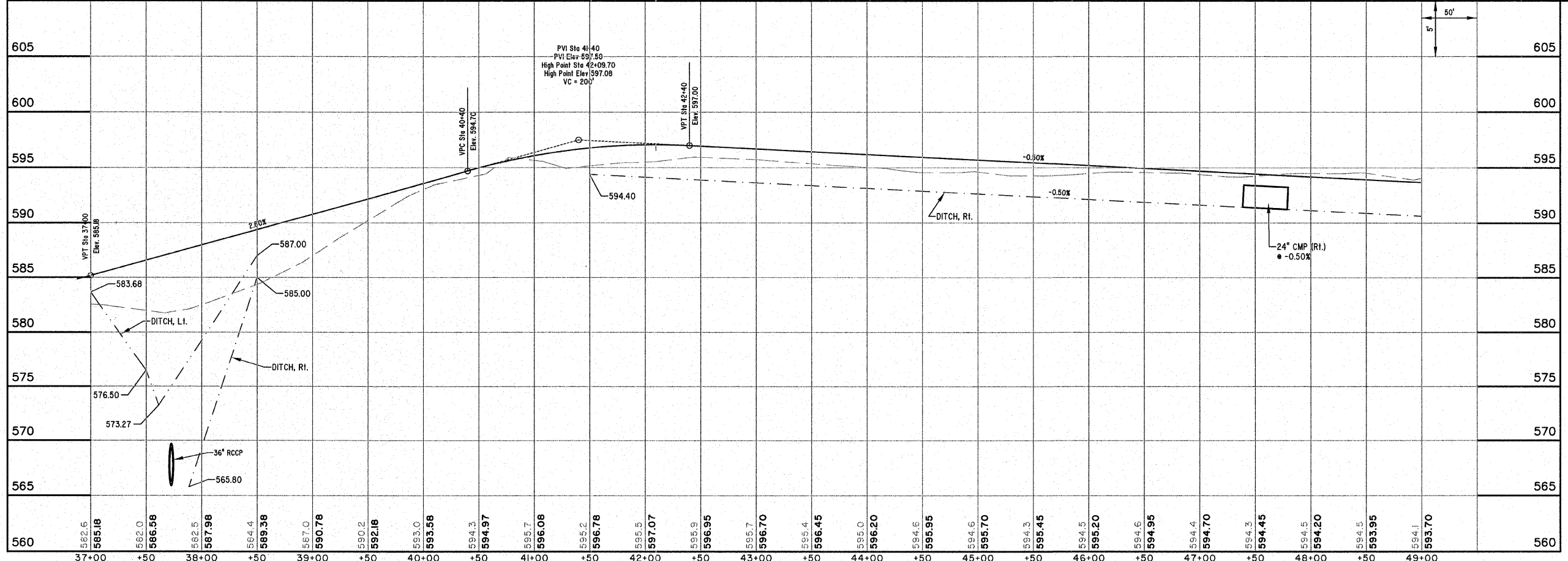
**CURVE #6**  
 PI STA=42+12.41  
 I=45°00' L  
 Da=0°52'30"  
 T=100.01'  
 R=6548.09'  
 L=200.00'  
 C=199.99'  
 E=0.76'  
 M=0.76'  
 PC STA=41+12.40  
 PT STA=43+12.40



SCALES:  
 1" = 30' HOR  
 1" = 5' VER

**MILANO & GRUNLOH ENGINEERS, LLC**  
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 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mge-engineers.com  
 Design Firm #: IS4-00308

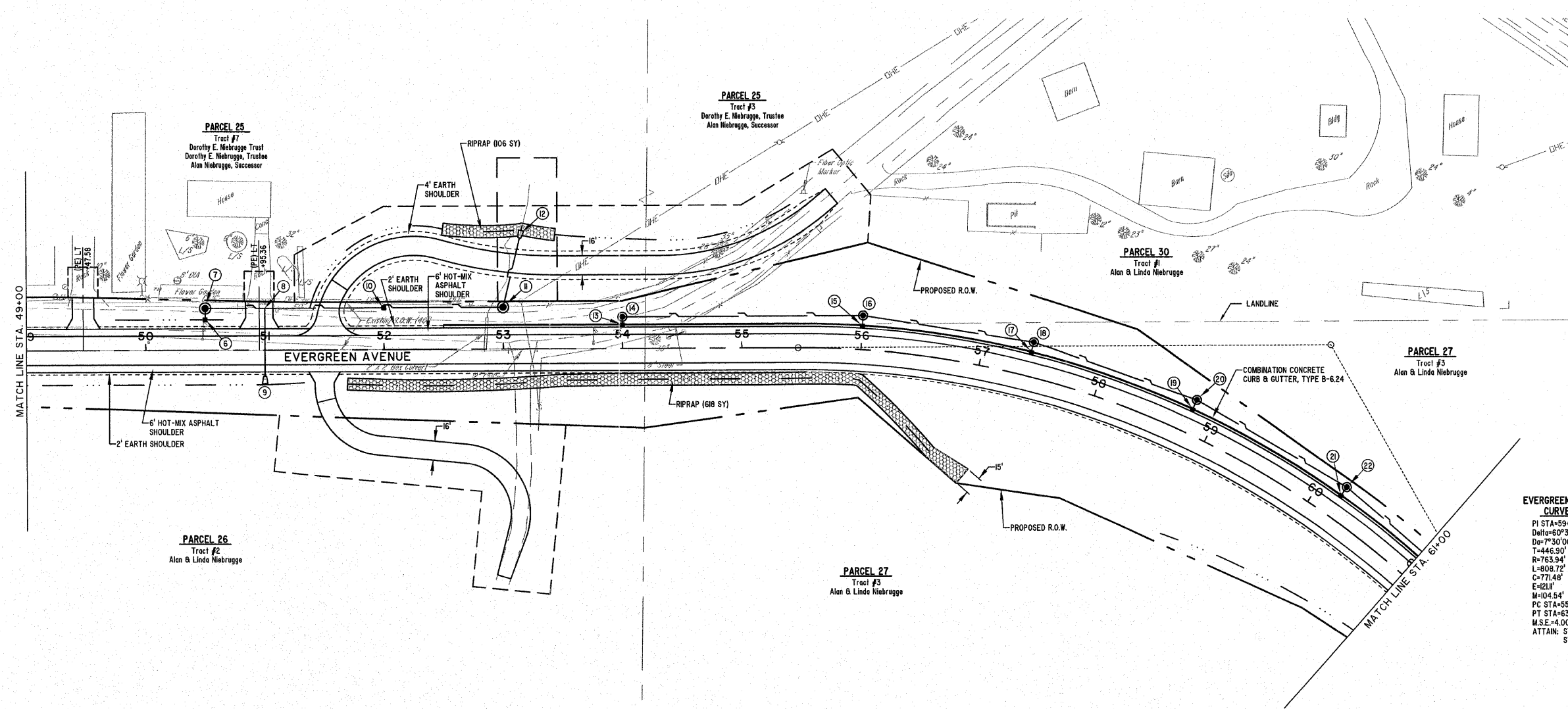
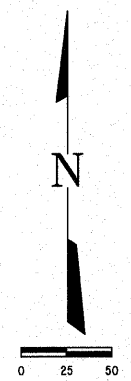
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 F.B. 568,990



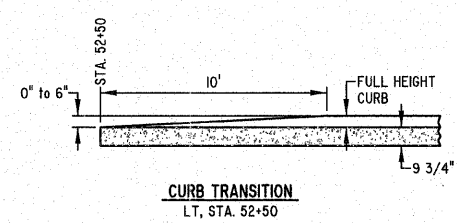
EVERGREEN AVENUE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-01-PV	EFFINGHAM	139	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

CONTRACT #95639



**EVERGREEN AVENUE  
CURVE #7**  
 PI STA=59+94.15  
 DALLE=60°39'15"  
 DE=7°30'00"  
 T=446.90'  
 R=763.94'  
 L=808.72'  
 C=771.48'  
 E=ELU'  
 M=104.54'  
 PC STA=55+47.25  
 PT STA=63+55.97  
 M.S.E.=4.008  
 ATTAIN: STA 54+61.75 TO STA 55+75.75  
 STA 63+27.47 TO STA 64+41.47



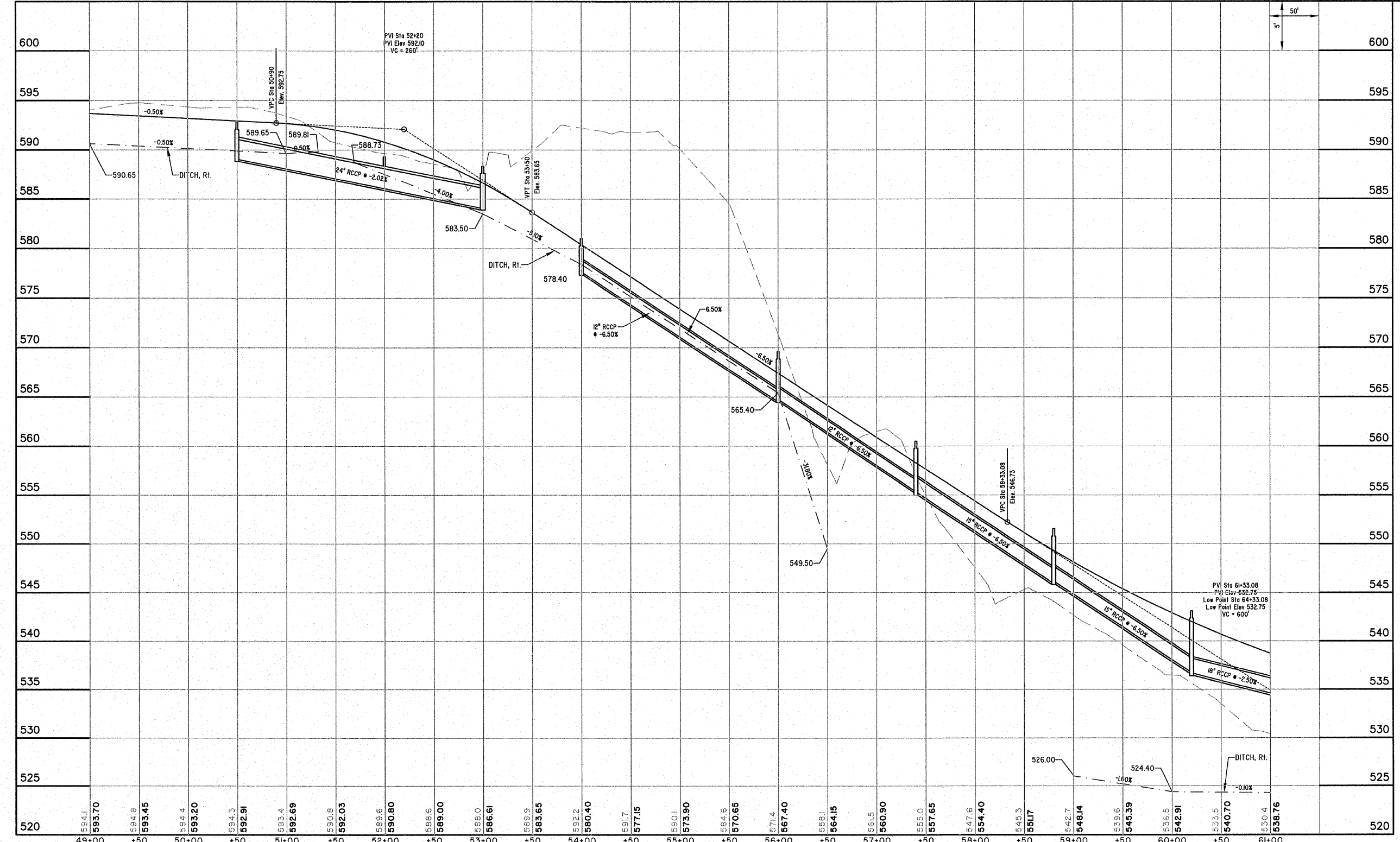
**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62409  
 Phone: (217) 547-7252  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003108

CONTRACT #95639

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	27
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

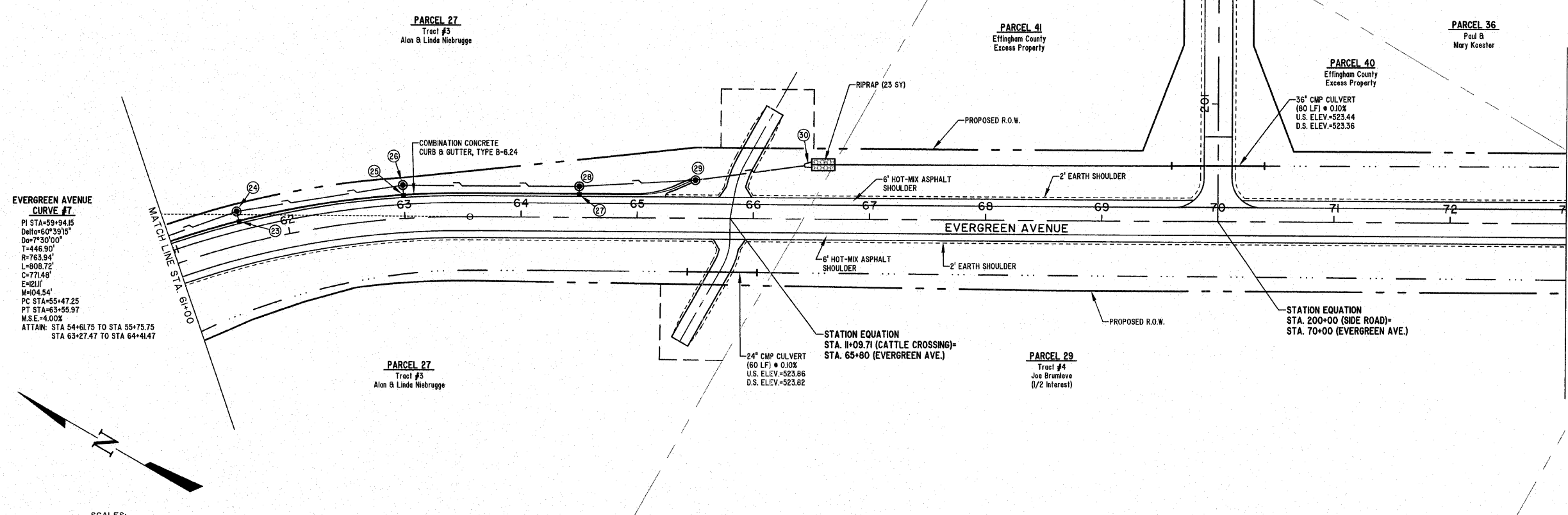
**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (271) 347-7282  
 (800) 677-2714  
 Fax #: (271) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003008  
 File name: S:\DWG\05\08227.dwg\01street Plan.dwg  
 Plot date: 02/08/11 at 16:45  
 FB: 595,590

SCALES:  
 1" = 30' HOR  
 1" = 5' VER



EVERGREEN AVENUE

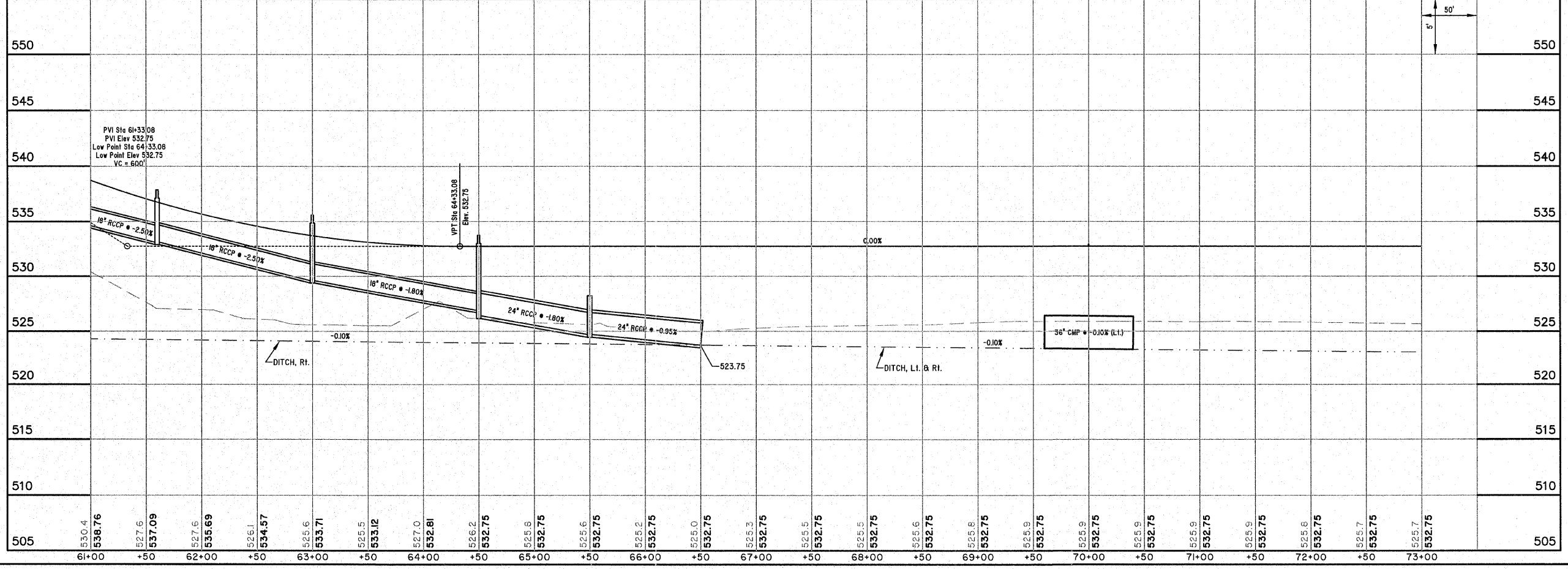
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FAU 8390	04-0004-01-PV	EFFINGHAM	139	28
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95639				



**EVERGREEN AVENUE CURVE #1**  
 PI STA=59+34.15  
 Delta=60°39'55"  
 D=730'00"  
 T=446.90'  
 R=763.94'  
 L=808.72'  
 C=771.48'  
 E=421'  
 M=104.54'  
 PC STA=55+47.25  
 PT STA=63+55.97  
 M.S.E.=4.002  
 ATTAIN: STA 54+61.75 TO STA 55+75.75  
 STA 63+27.47 TO STA 64+41.47

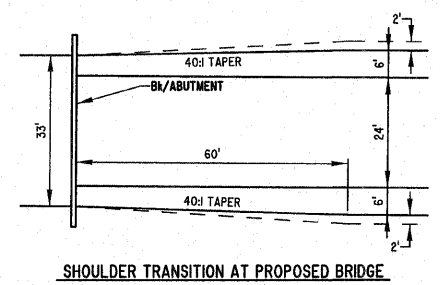
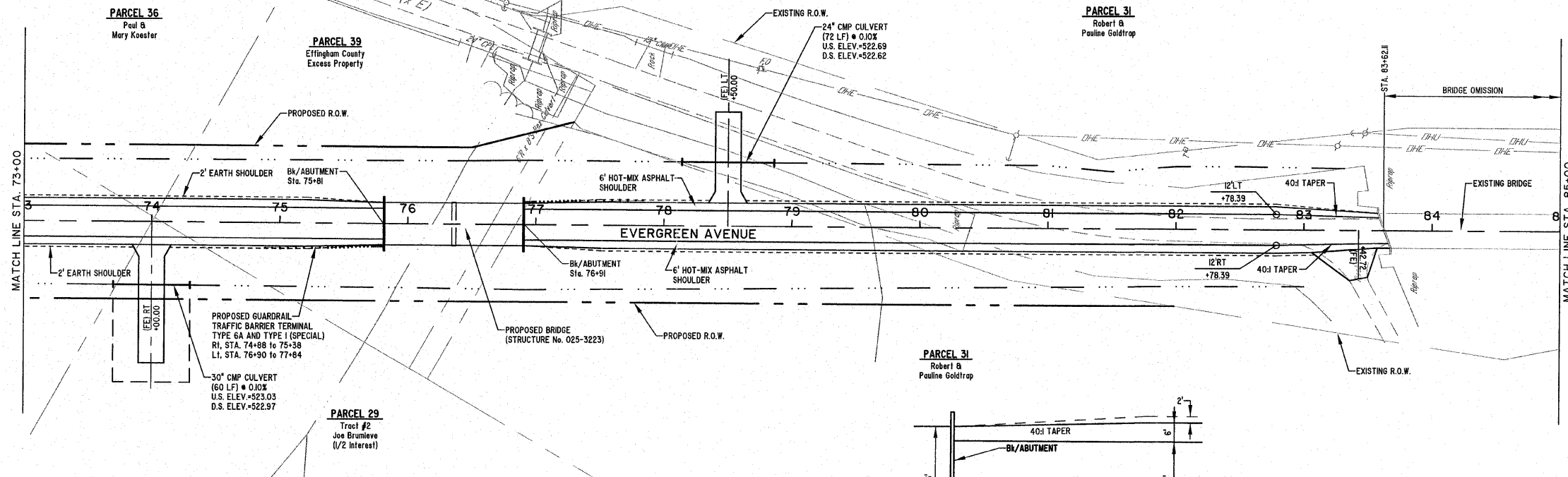
SCALES:  
 1" = 30' HOR  
 1" = 5' VER

**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7882  
 (800) 577-2704  
 Fax: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003108  
 File name: S:\DWG\05\08227\dwg\Street Plan.dwg  
 Plot date: 02/06/11 at 10:15



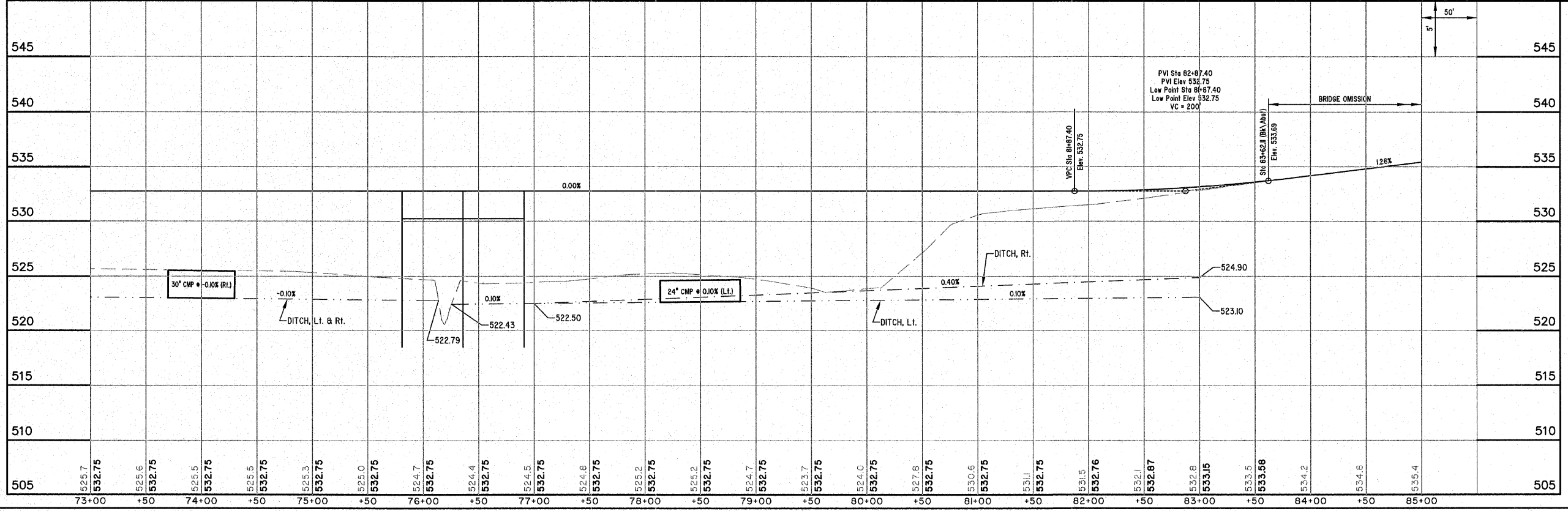
EVERGREEN AVENUE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	29
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95639				



SCALES:  
 1" = 30' HOR  
 1" = 5' VER

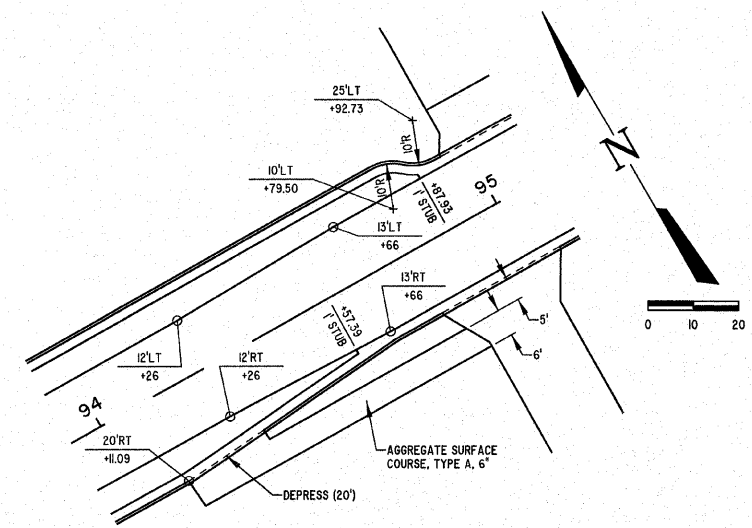
**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7262  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgengr.com  
 Design Firm #: 84-003108  
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 Plot date: 02/09/11 of 16:16 F.B. 869,890



EVERGREEN AVENUE

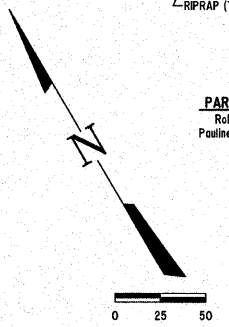
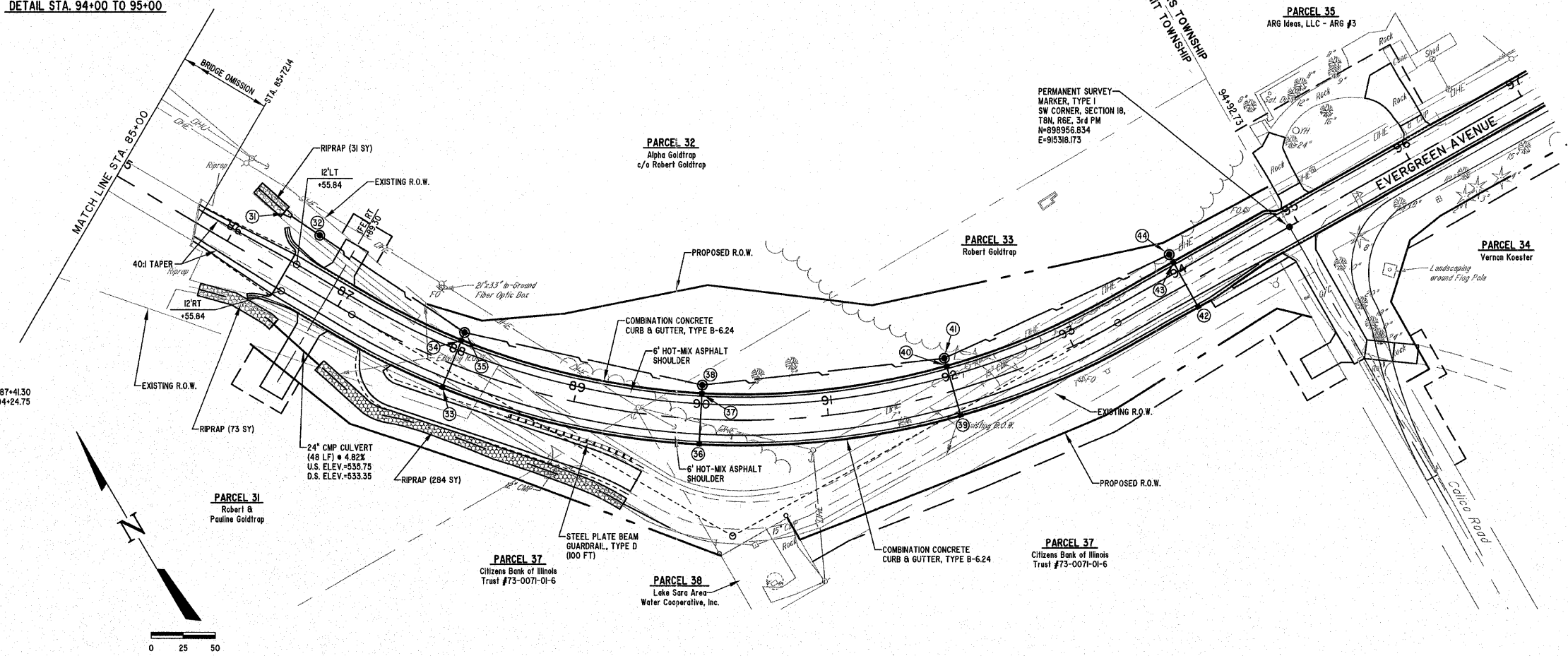
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FAU 8390	04-0084-01-PV	EFFINGHAM	139	30
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

CONTRACT #95639



DETAIL STA. 94+00 TO 95+00

**EVERGREEN AVENUE  
CURVE #8**  
 PI STA=90+57.60  
 Delta=59°30'49"  
 D=9°30'00"  
 T=344.80'  
 R=603.11'  
 L=626.46'  
 C=598.67'  
 E=91.61'  
 M=79.53'  
 PC STA=87+12.80  
 PT STA=93+39.25  
 M.S.E.=4.00%  
 ATTAIN: STA 86+27.30 TO STA 87+11.30  
 STA 93+10.75 TO STA 94+24.75



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 (800) 677-2714  
 Fax #: (217) 542-3433  
 Web Address: www.mge-engineers.com  
 Design Firm #: 184-023108

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	31
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

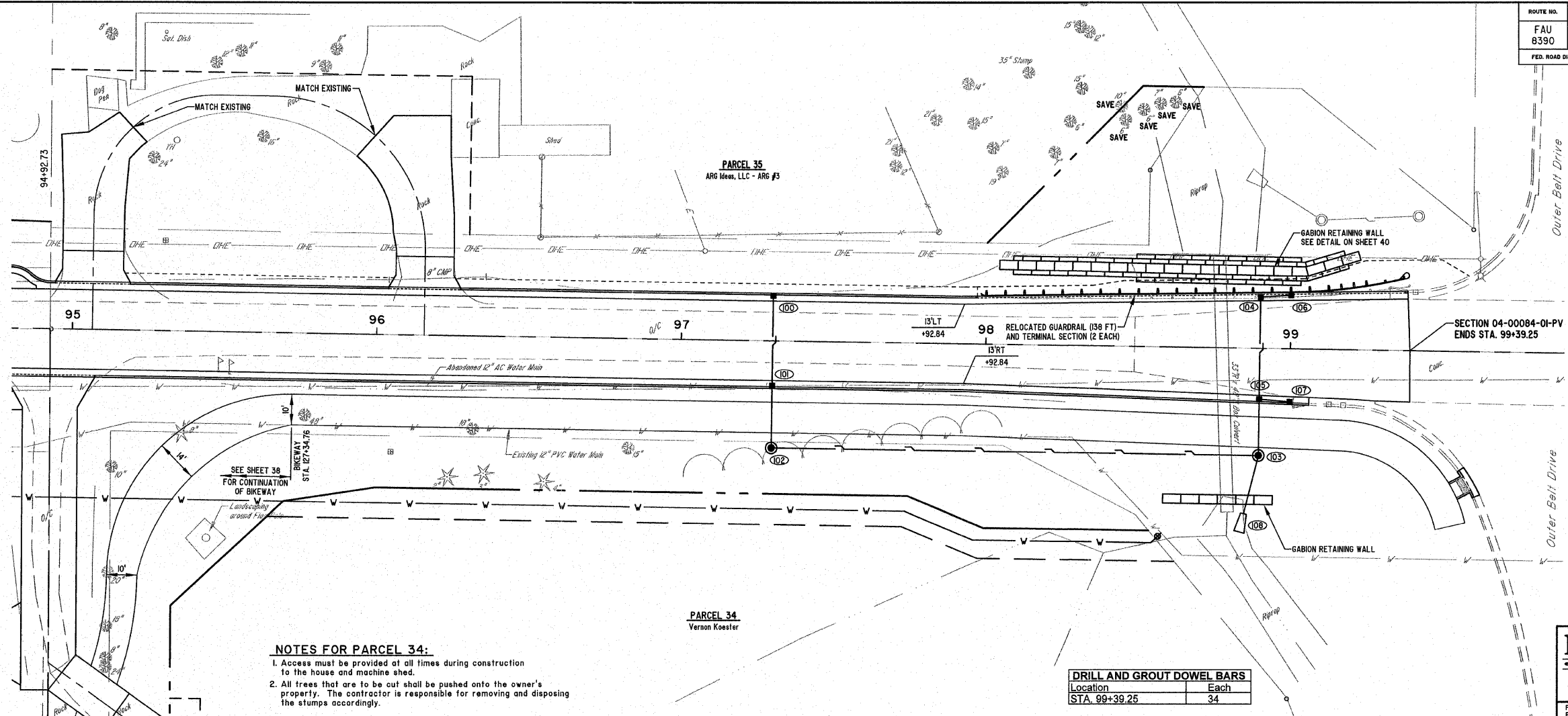
**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7862  
 (800) 677-2714  
 (217) 342-3433  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-00308

File name: S:\DWG\05\08227\dwg\Street Plan.dwg  
 Plot date: 02/08/11 at 16:35

SCALES:  
 1" = 30' HOR  
 1" = 5' VER



ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 32
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT- CONTRACT #95639	

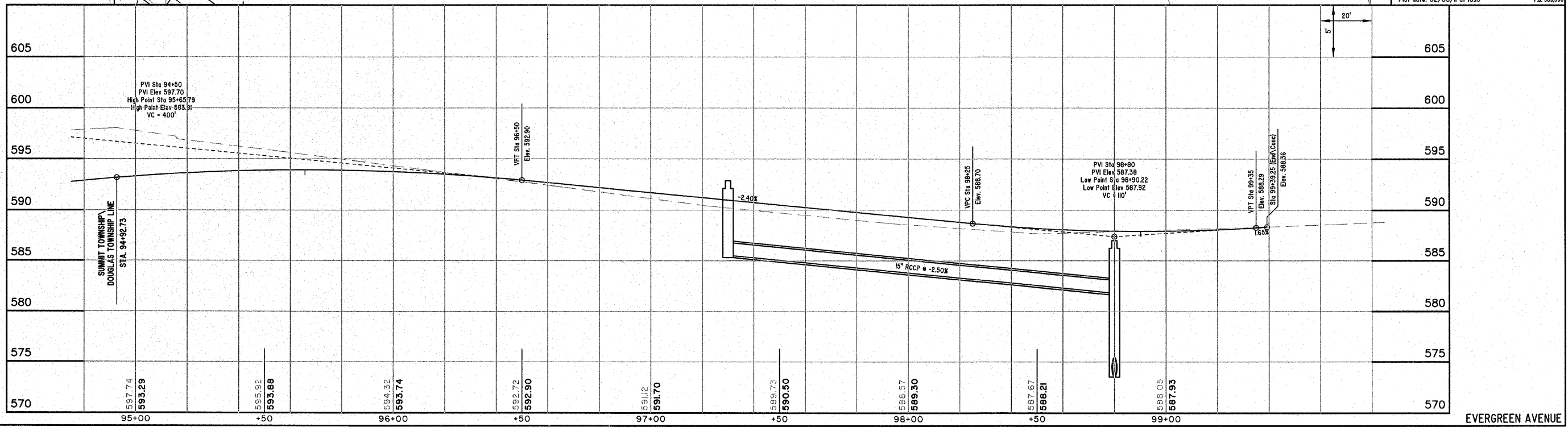


SCALES:  
1" = 20' HOR  
1" = 5' VER

**NOTES FOR PARCEL 34:**  
 1. Access must be provided at all times during construction to the house and machine shed.  
 2. All trees that are to be cut shall be pushed onto the owner's property. The contractor is responsible for removing and disposing the stumps accordingly.

DRILL AND GROUT DOWEL BARS	
Location	Each
STA. 99+39.25	34

**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
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 Phone: (217) 347-7282  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mge-engineers.com  
 Design Firm #: 184-003006  
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 Plot date: 02/08/11 of 16:45 F.B. 589,590



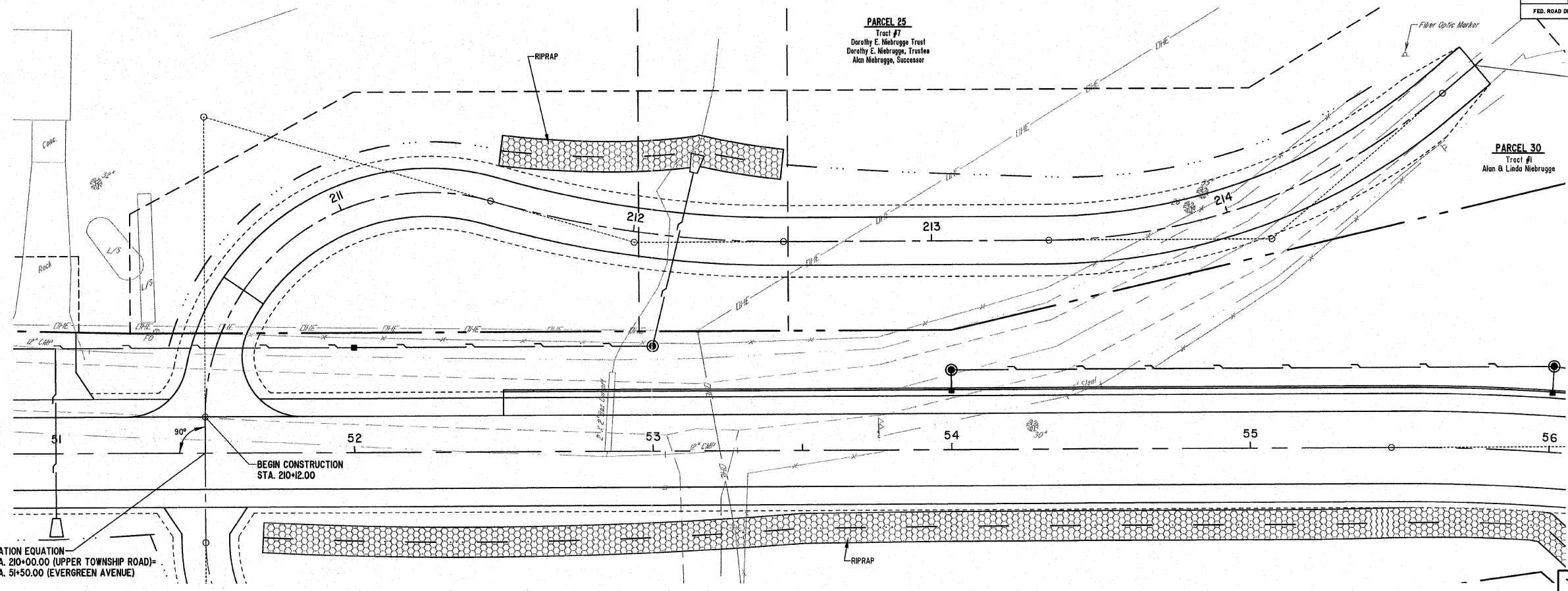
EVERGREEN AVENUE



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	33
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

CONTRACT #95639

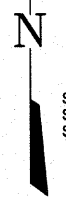
END CONSTRUCTION STA. 214+96.87



**CURVE #1**  
 PI STA=210+00  
 Delta=106°15'37"  
 D=76°23'40"  
 T=100.00'  
 R=75.00'  
 L=139.09'  
 C=103.00'  
 E=50.00'  
 M=30.00'  
 PC STA=210+12.00  
 PT STA=211+51.09

**CURVE #2**  
 PI STA=212+01.09  
 Delta=16°15'37"  
 D=16°22'13"  
 T=50.00'  
 R=50.00'  
 L=99.33'  
 C=99.00'  
 E=3.55'  
 M=3.52'  
 PC STA=211+51.09  
 PT STA=212+50.42

**CURVE #3**  
 PI STA=214+13.99  
 Delta=33°57'31"  
 D=27°48'49"  
 T=74.69'  
 R=206.00'  
 L=143.31'  
 C=140.43'  
 E=13.12'  
 M=12.34'  
 PC STA=213+39.30  
 PT STA=214+82.61

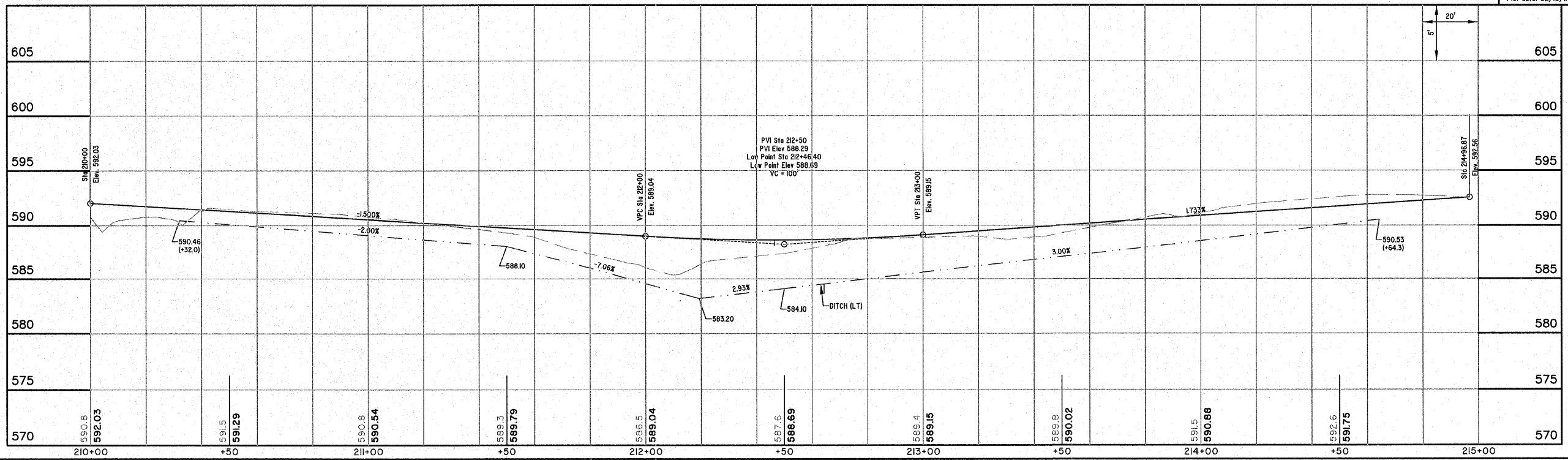


STATION EQUATION  
 STA. 210+00.00 (UPPER TOWNSHIP ROAD)  
 STA. 51+50.00 (EVERGREEN AVENUE)

SCALES:  
 1" = 20' HOR  
 1" = 5' VER

**MILANO & GRINLOH ENGINEERS, LLC**  
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 Fax #: (217) 548-3433  
 Web Address: www.mgeengineers.com  
 Design Firm # 184-03308

File name: S:\DWG\05\05227.dwg\Street Plan 20.dwg  
 Plot date: 02/10/11 at 07:40  
 F.B. 589,590

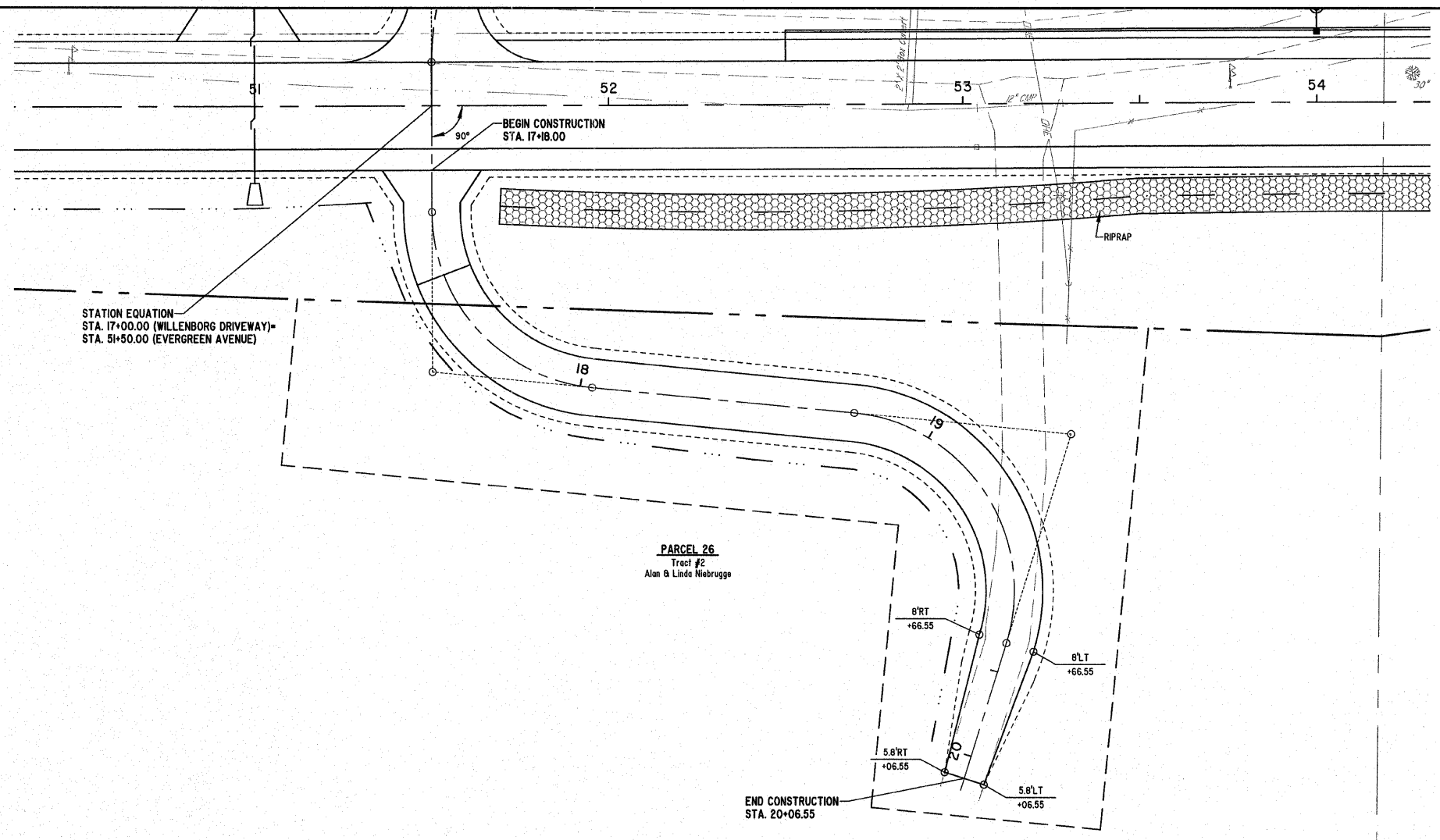


UPPER TOWNSHIP  
 ROAD CONNECTION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	34
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95639				

**CURVE #1**  
 PI STA=17+75.05  
 Del=0°41'22"  
 Da=14°35'30"  
 T=45.25'  
 R=50.00'  
 L=73.56'  
 C=67.10'  
 E=17.44'  
 M=12.93'  
 PC STA=17+29.80  
 PT STA=18+03.36

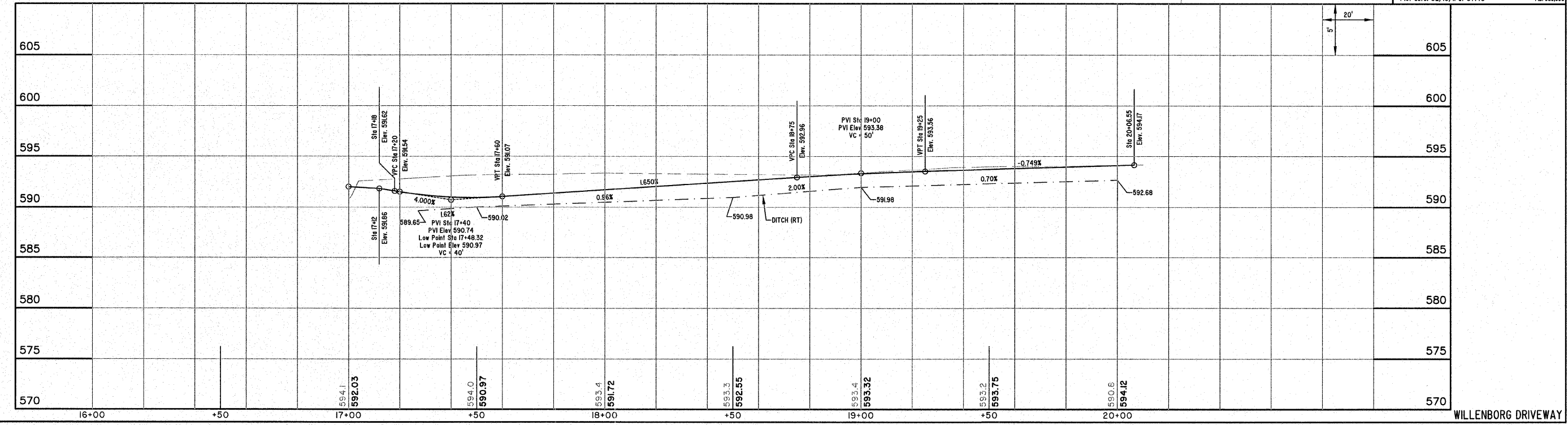
**CURVE #2**  
 PI STA=19+39.24  
 Del=10°46'28"  
 Da=14°35'30"  
 T=61.53'  
 R=50.00'  
 L=88.84'  
 C=77.61'  
 E=29.29'  
 M=8.47'  
 PC STA=18+77.71  
 PT STA=19+66.55



SCALES:  
 1" = 20' HOR  
 1" = 5' VER

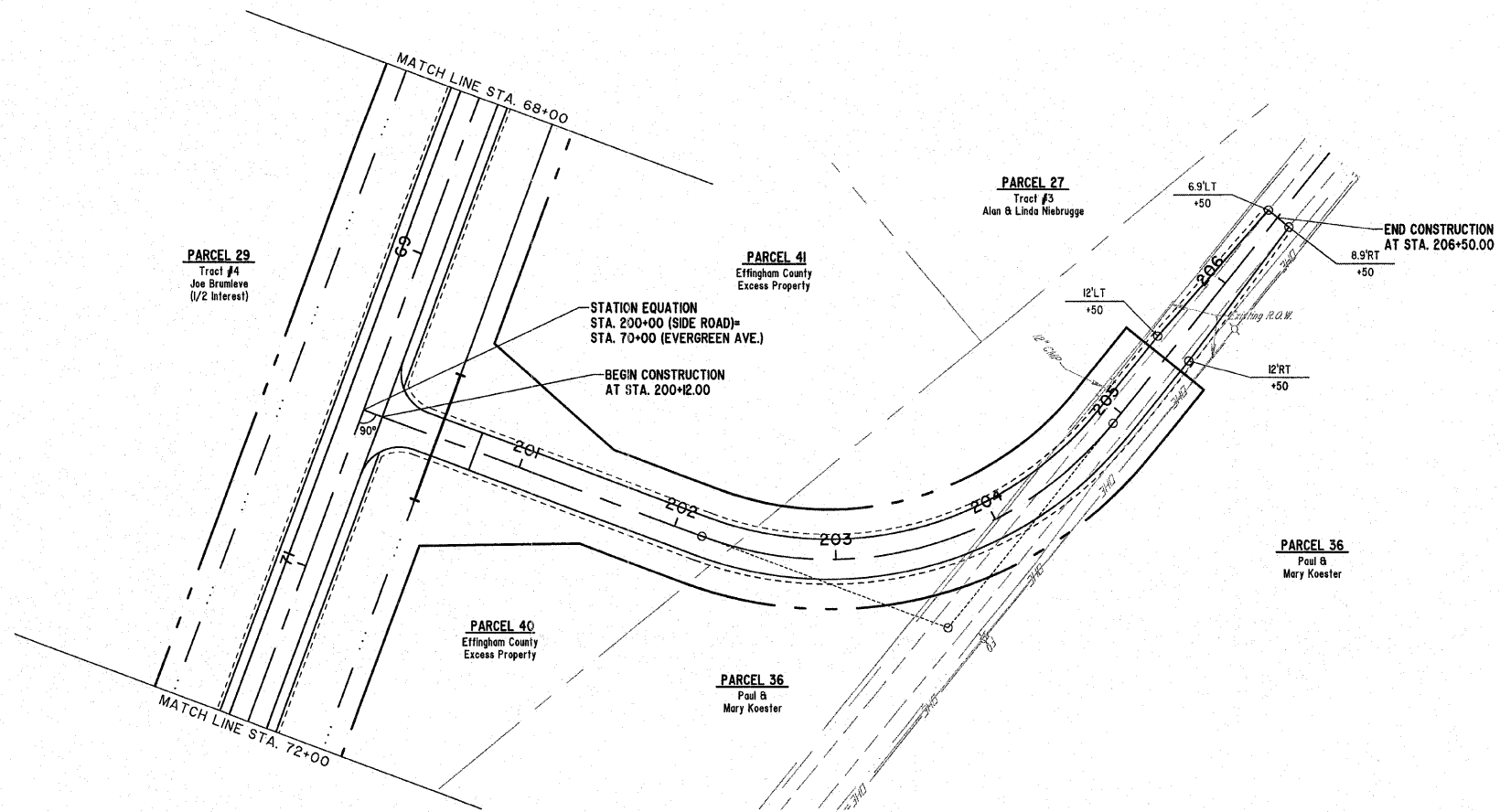
**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 697  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 547-7252  
 (800) 677-2714  
 Fax #: (217) 542-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003108

File name: S:\DWG\05\05227\dwg\Street Plan 20.dwg  
 Plot date: 02/10/11 at 07:40

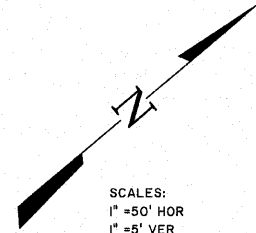


WILLENBORG DRIVEWAY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-01-PV	EFFINGHAM	139	35
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95639				



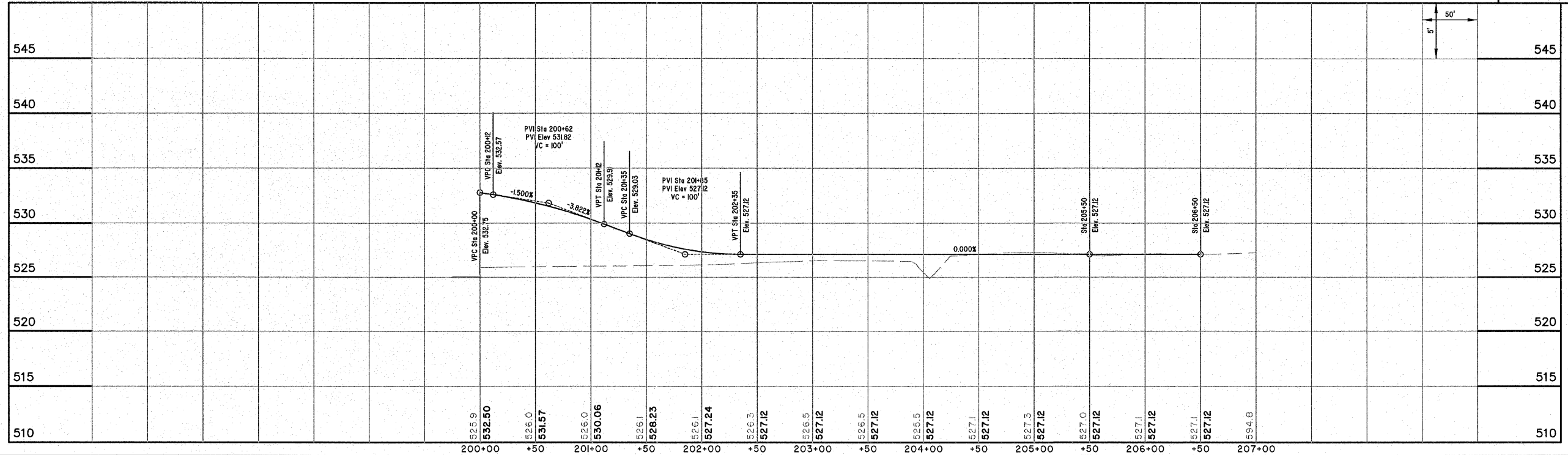
**CURVE**  
 PI STA=203+75.99  
 Delta=7°29'54"  
 D=26°02'37"  
 T=158.37'  
 R=220.00'  
 L=274.54'  
 C=257.06'  
 E=51.08'  
 M=41.45'  
 PC STA=202+17.61  
 PT STA=204+92.15



SCALES:  
 1" = 50' HOR  
 1" = 5' VER

**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
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 (800) 677-2314  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003108

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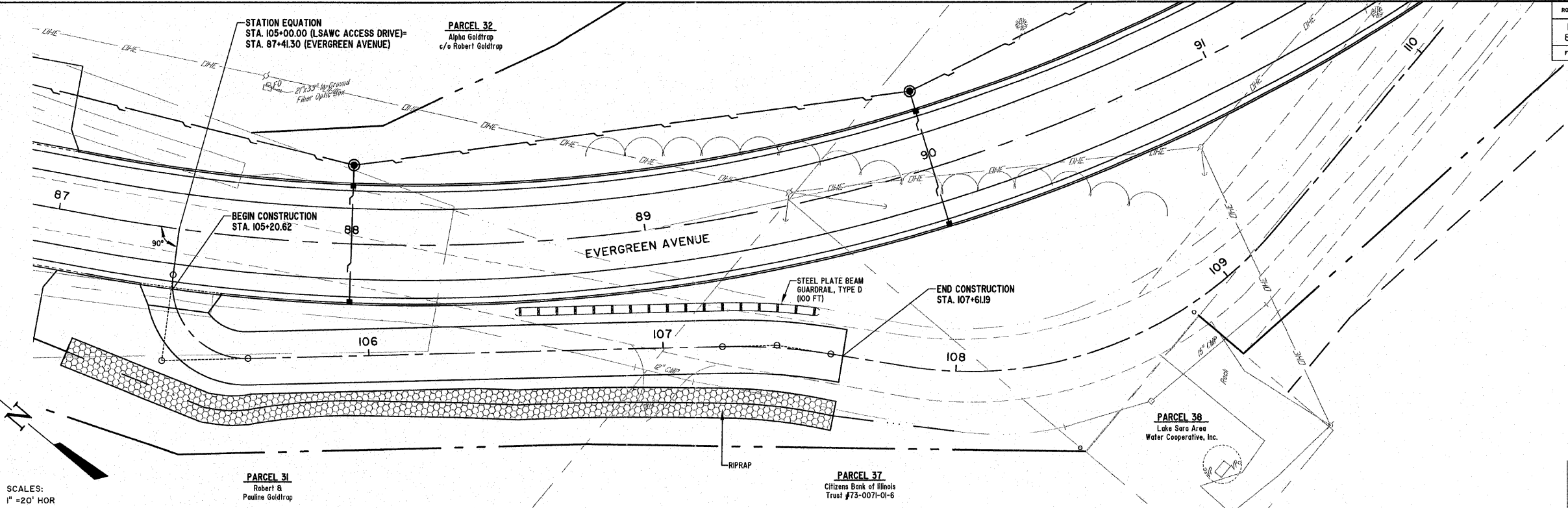


LOWER TOWNSHIP  
 ROAD CONNECTION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	36
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95639				

**CURVE #1**  
 PI STA=105+45.00  
 Delta=99°05'30"  
 D=229'10'59"  
 T=29.32'  
 R=25.00'  
 L=43.24'  
 C=38.05'  
 E=3.53'  
 M=8.78'  
 PC STA=105+15.68  
 PT STA=105+58.92

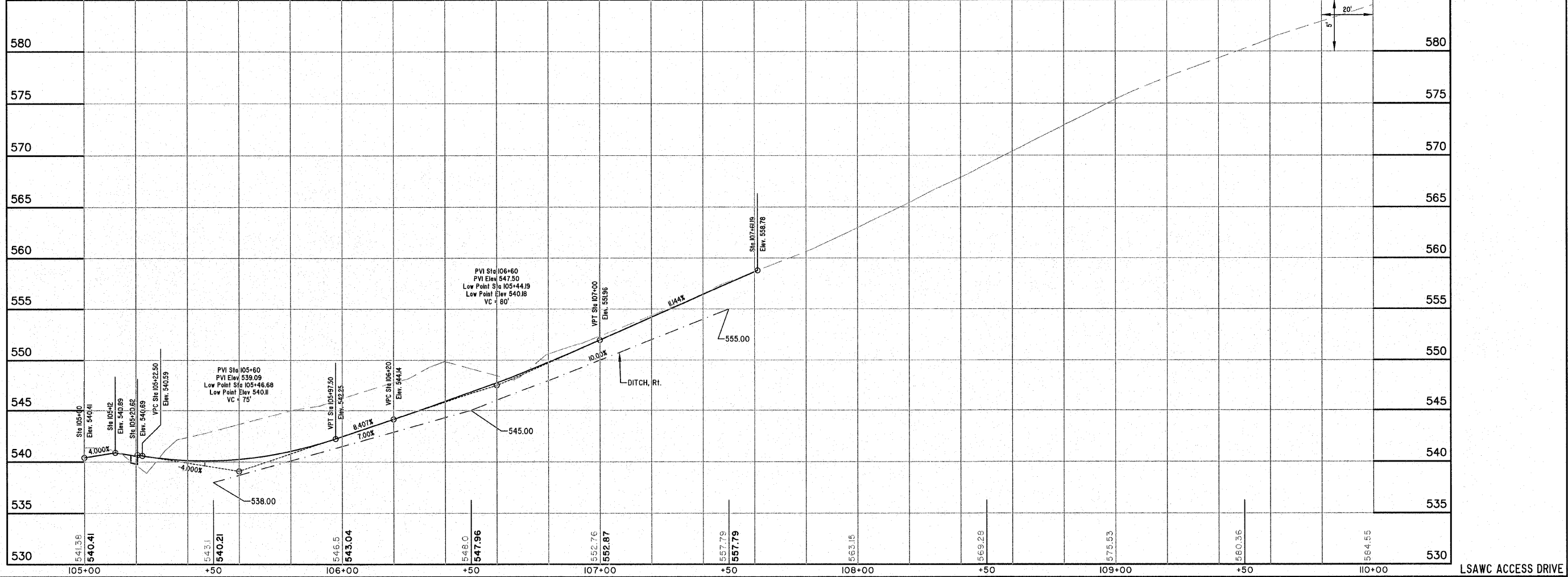
**CURVE #2**  
 PI STA=107+38.67  
 Delta=10°34'54"  
 D=28°38'52"  
 T=8.52'  
 R=200.00'  
 L=36.94'  
 C=36.88'  
 E=0.86'  
 M=0.85'  
 PC STA=107+20.15  
 PT STA=107+57.09



SCALES:  
 1" = 20' HOR  
 1" = 5' VER

**MILANO & GRUNLOH ENGINEERS, LLC**  
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 (800) 677-2714  
 (217) 342-3433  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003108

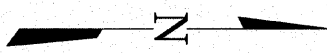
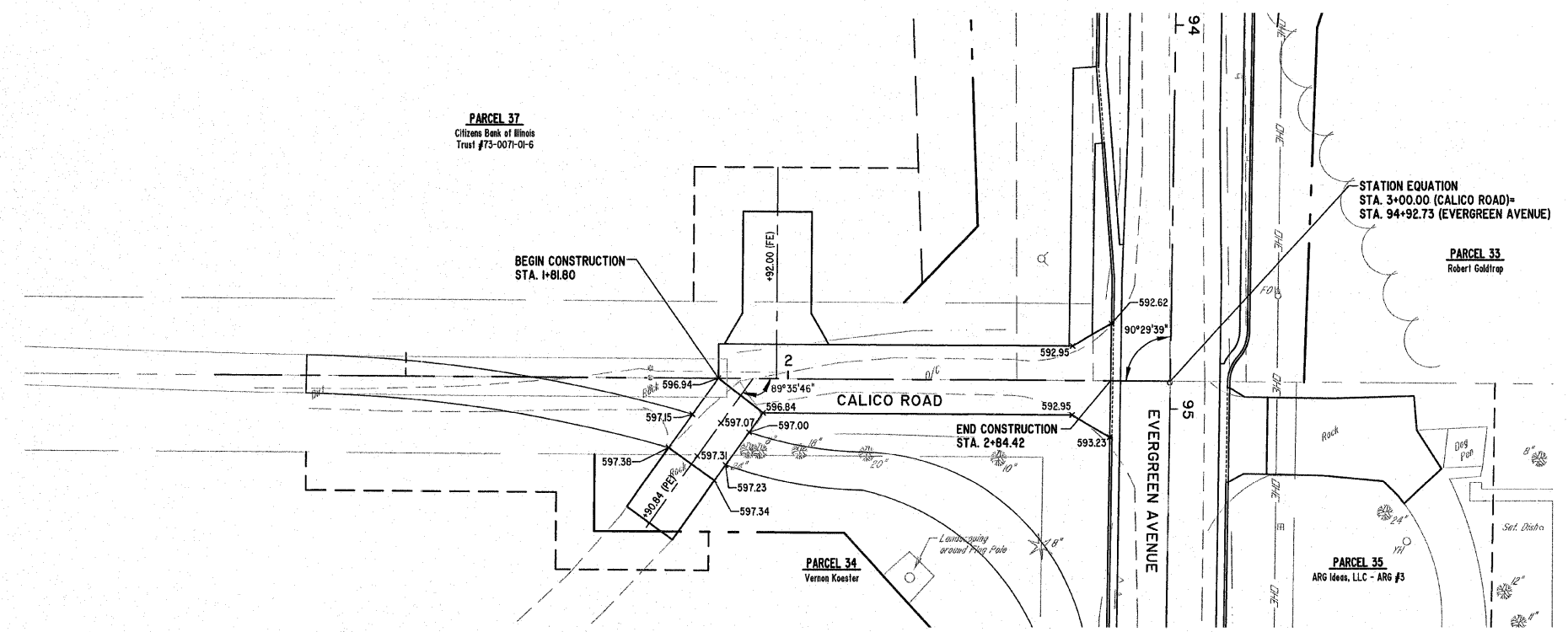
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 Plot date: 02/10/11 at 07:40



LSAWC ACCESS DRIVE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-01-PV	EFFINGHAM	139	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

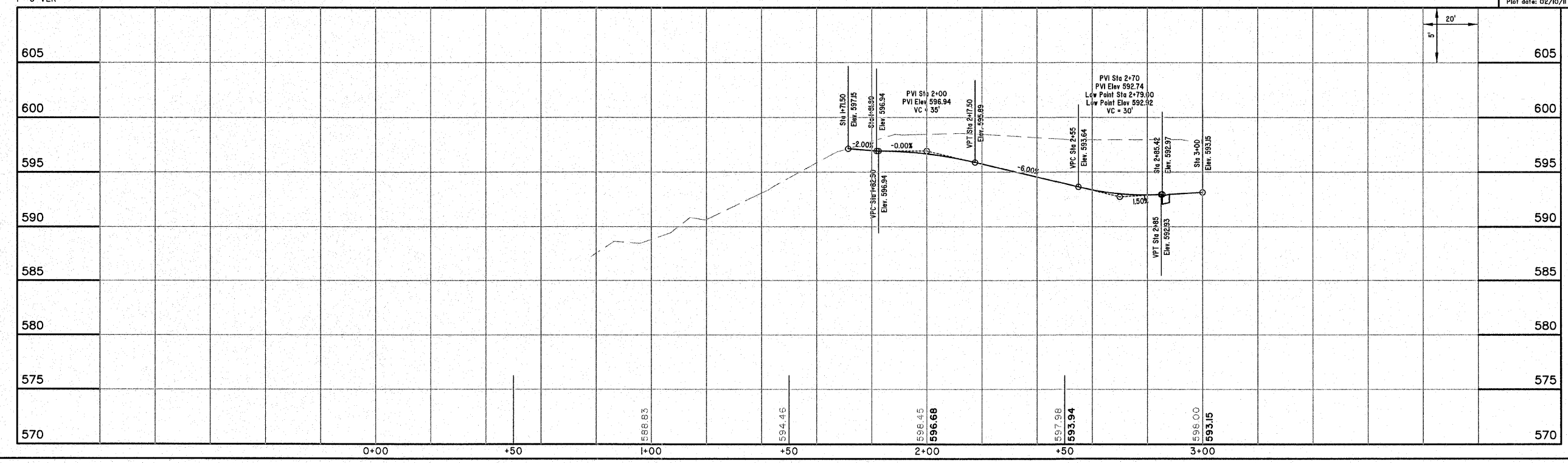
CONTRACT #95639



SCALES:  
1" = 20' HOR  
1" = 5' VER

**MILANO & GRUNLOH ENGINEERS, LLC**  
14 WEST WASHINGTON  
P.O. BOX 897  
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Phone: (217) 547-7262  
(800) 677-2314  
Fax #: (217) 342-3433  
Web Address: www.mgengineers.com  
Design Firm #: 184-00308

File name: S:\DWG\05\0227\dwg\Street Plan 20.dwg  
Plot date: 02/10/11 at 07:40



CALICO ROAD

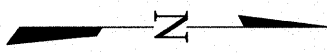
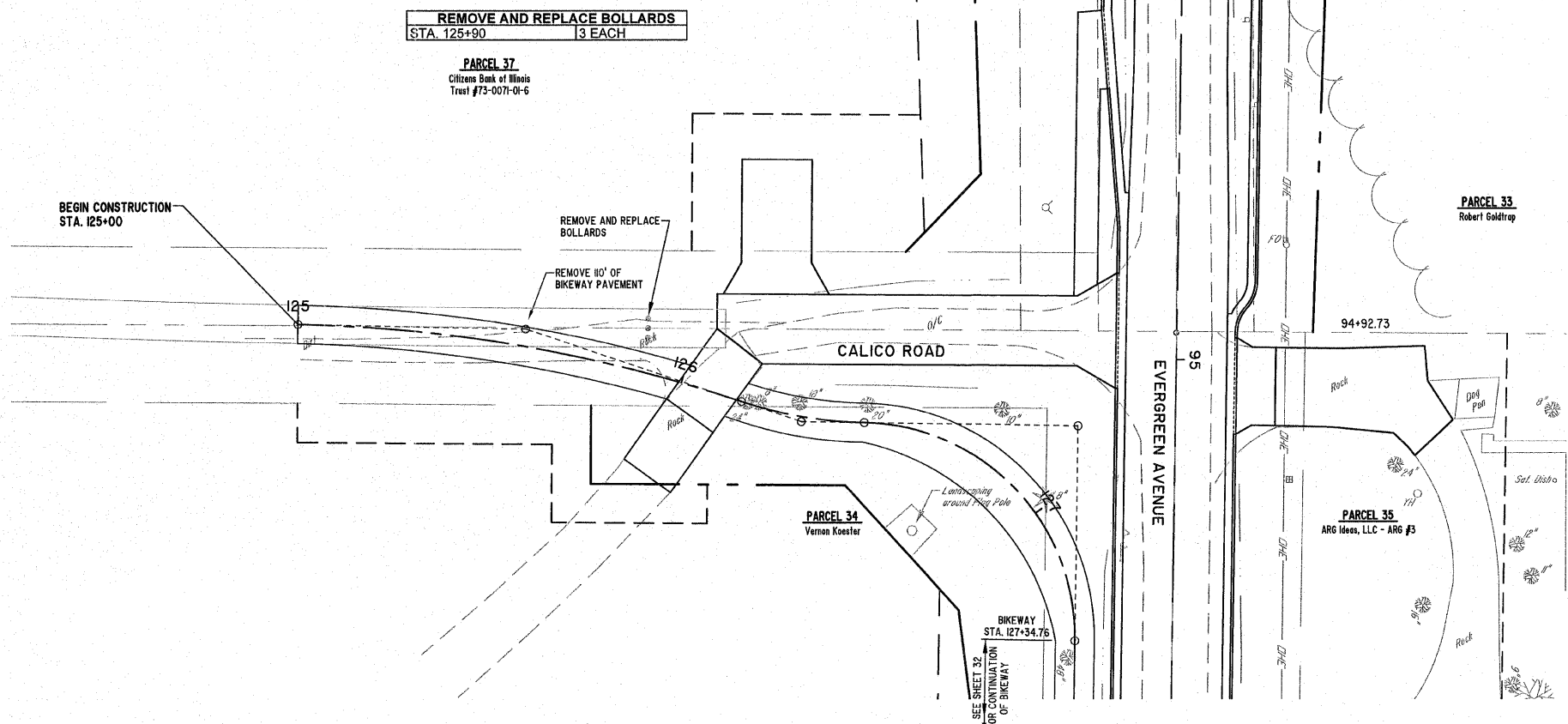
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	38
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

CONTRACT #95639

**CURVE #1**  
 PI STA=125+58.57  
 Delta=17°26'07"  
 D=15°00'00"  
 T=58.57'  
 R=381.97'  
 L=16.24'  
 C=15.79'  
 E=4.46'  
 M=4.41'  
 PC STA=125+00  
 PT STA=126+16.24

**CURVE #2**  
 PI STA=126+32.43  
 Delta=17°42'05"  
 D=55°05'09"  
 T=16.20'  
 R=104.01'  
 L=32.13'  
 C=32.01'  
 E=1.25'  
 M=1.24'  
 PC STA=126+16.24  
 PT STA=126+48.37

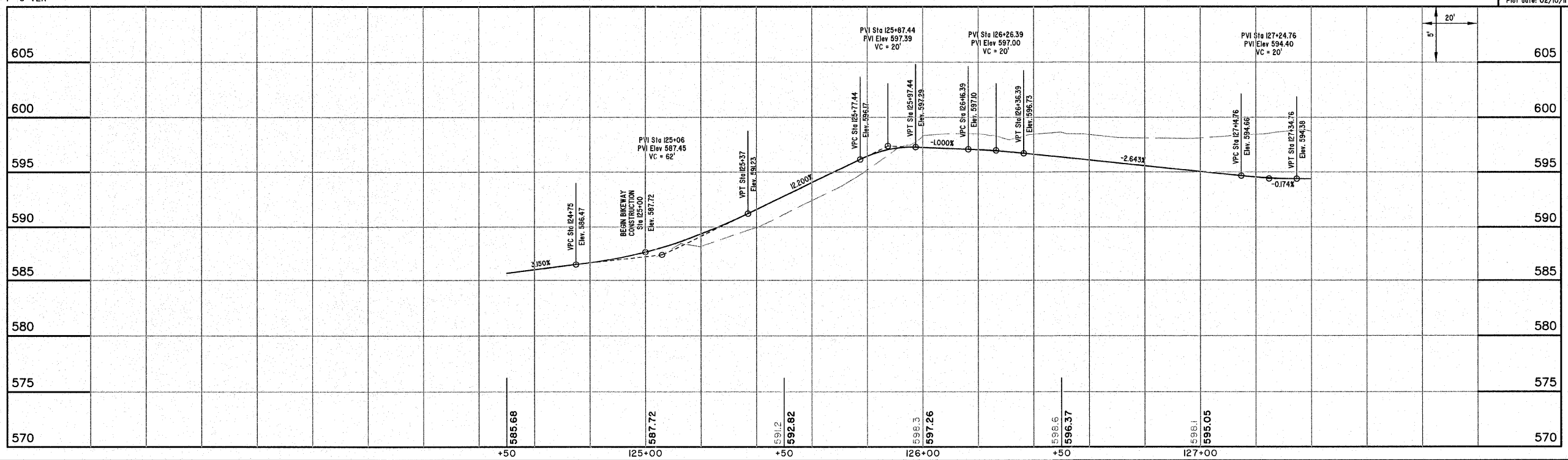
**CURVE #3**  
 PI STA=127+03.37  
 Delta=90°00'00"  
 D=104°10'27"  
 T=55.00'  
 R=55.00'  
 L=65.35'  
 C=71.73'  
 E=22.78'  
 M=16.11'  
 PC STA=126+48.37  
 PT STA=127+34.76



SCALES:  
 1" = 20' HOR  
 1" = 5' VER

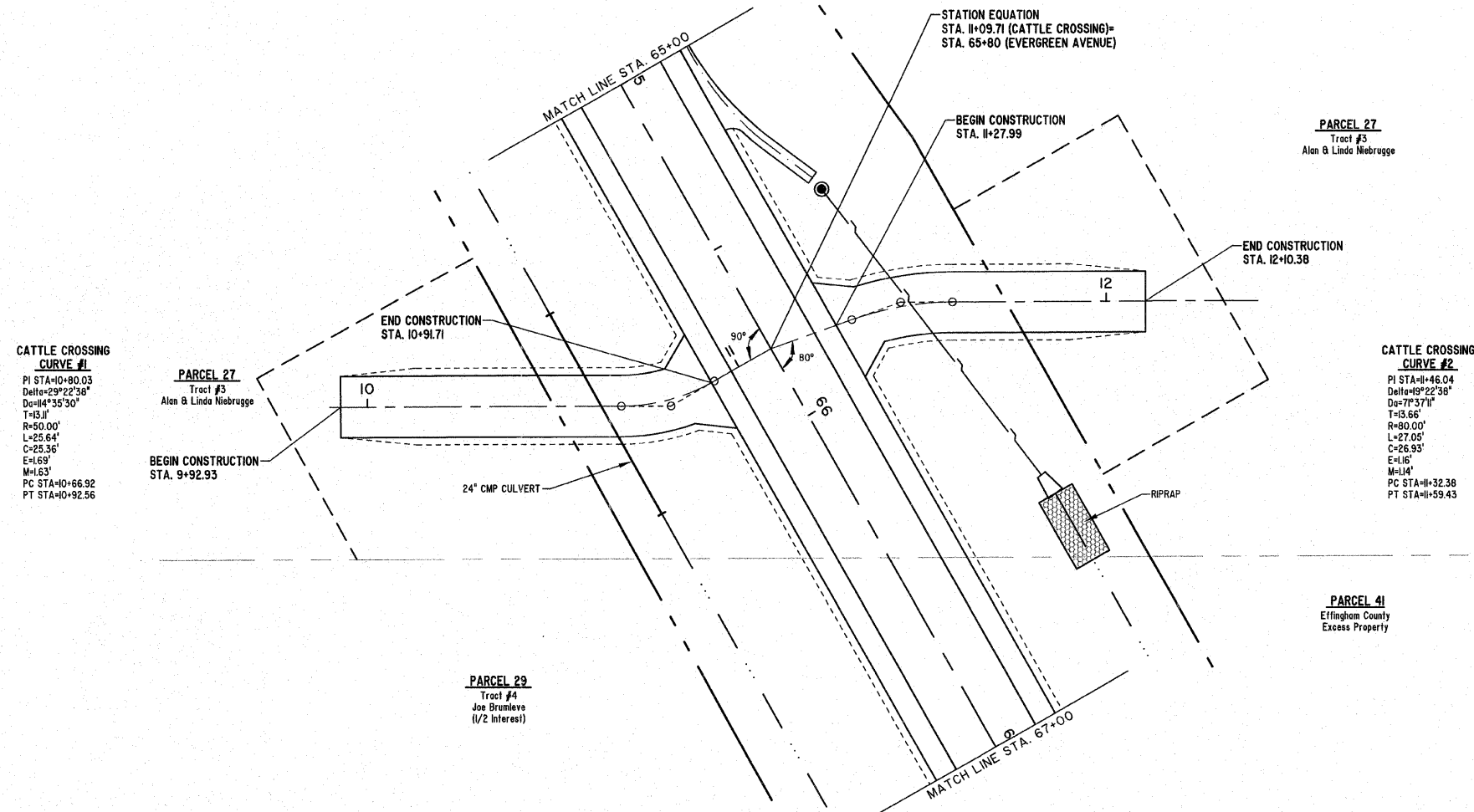
**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 697  
 EFFINGHAM, ILLINOIS 62404  
 Phone: (217) 347-7282  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003108

File name: S:\DWG\05\05227.dwg\Street Plan 20.dwg  
 Plot date: 02/10/11 at 07:45



BIKEWAY

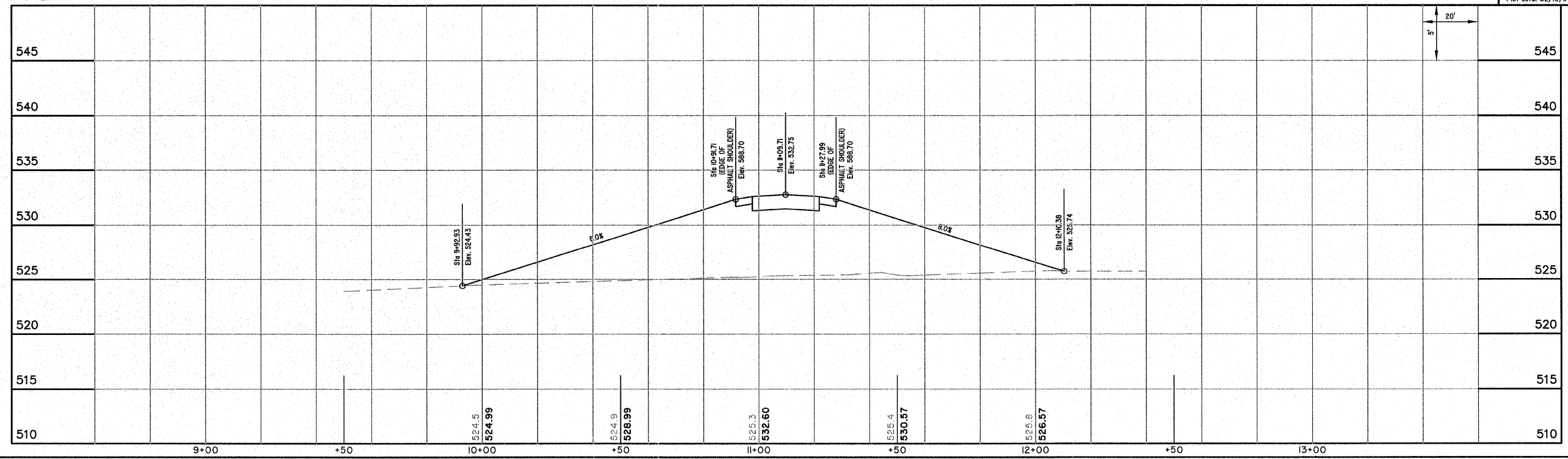
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FAU 8390	04-00084-01-PV	EFFINGHAM	139	39
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95639				



SCALES:  
 1" = 20' HOR  
 1" = 5' VER

**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 697  
 EFFINGHAM, ILLINOIS 62408  
 Phone: (217) 347-7252  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003108

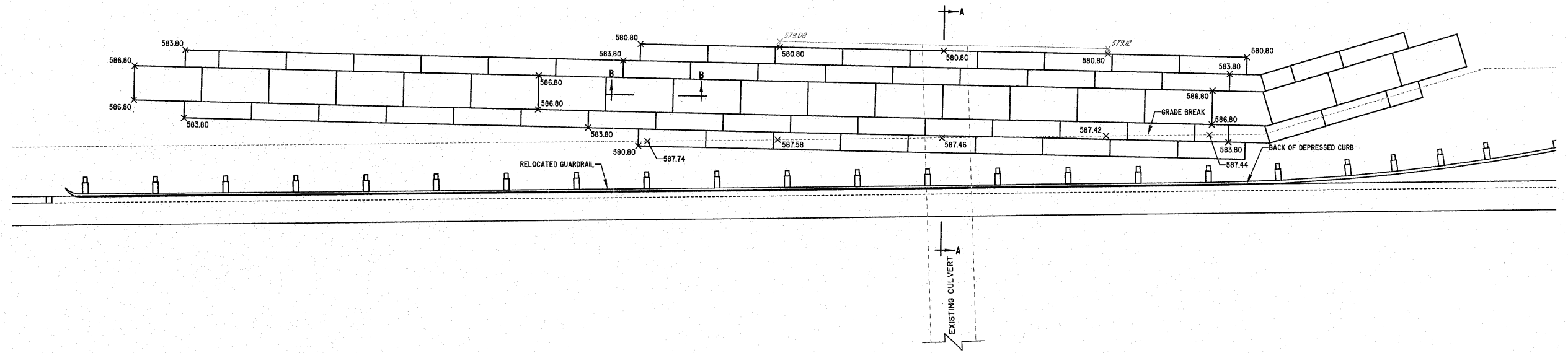
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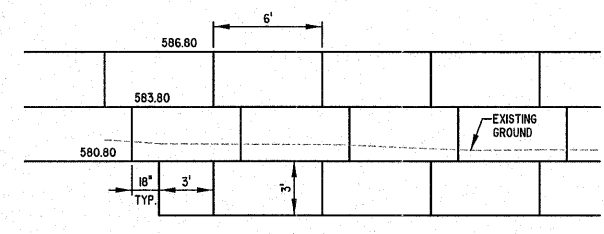
CATTLE CROSSING

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-01-PV	EFFINGHAM	139	40
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

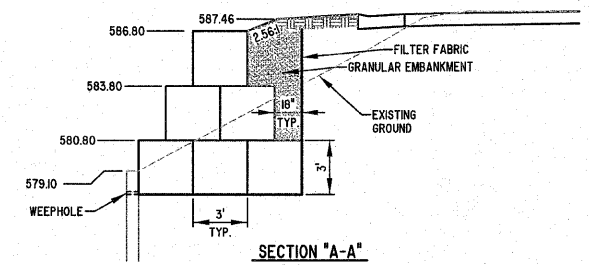
CONTRACT #95639



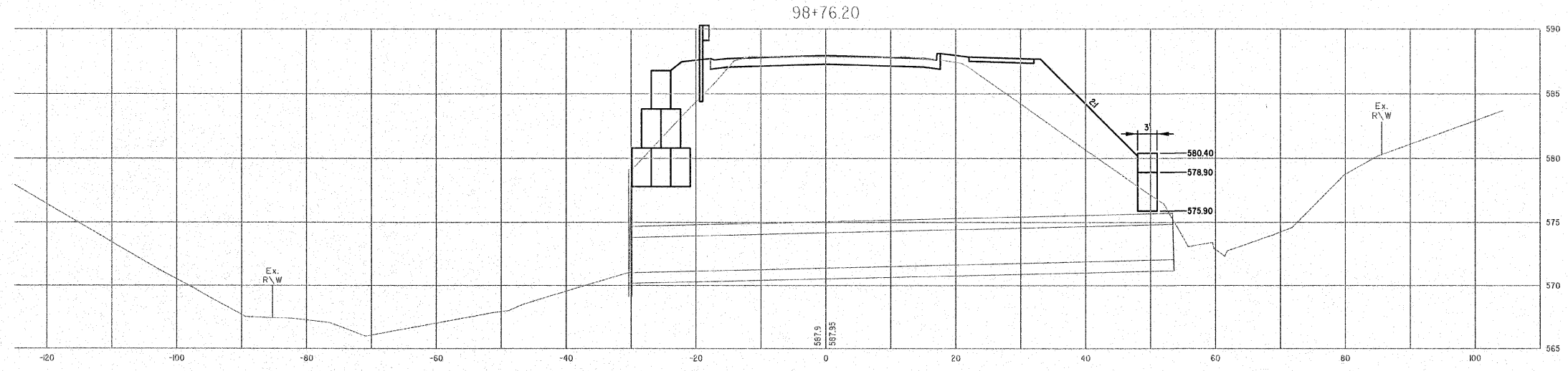
PLAN VIEW



SECTION "B-B"



SECTION "A-A"



**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7262  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-00308

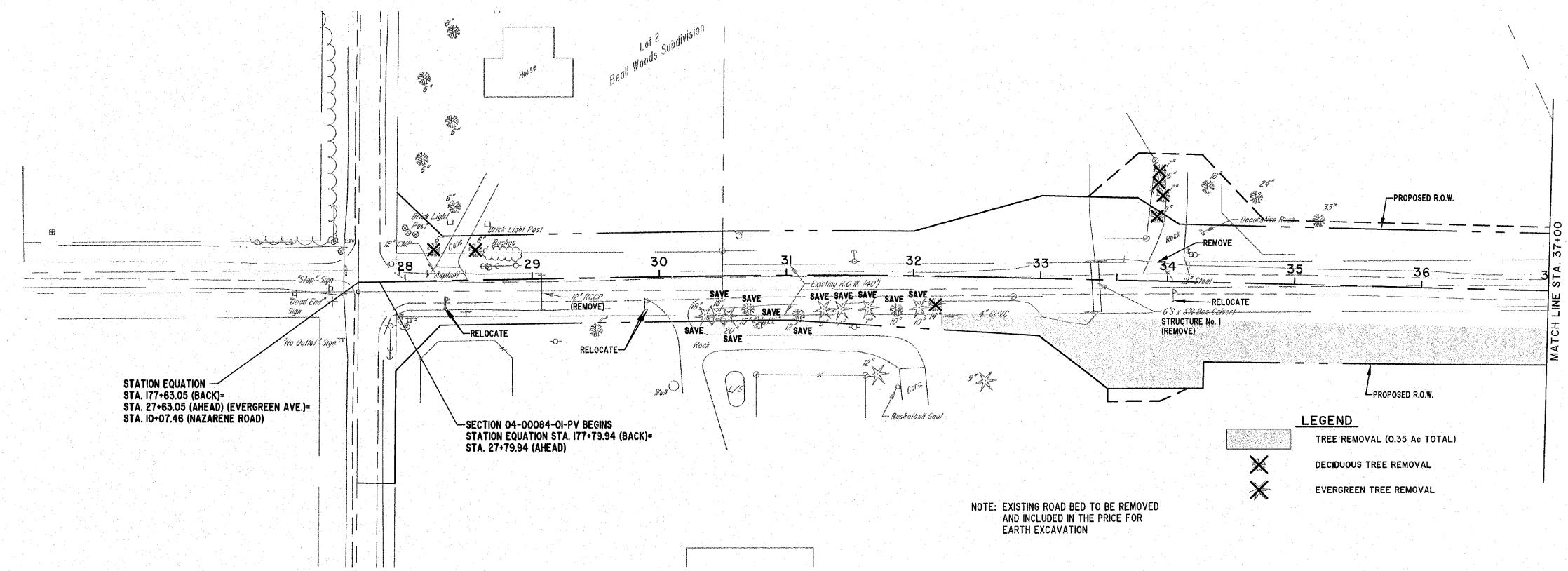
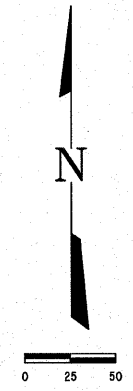
GABION RETAINING WALL  
 EVERGREEN AVENUE EXTENSION  
 COUNTY OF EFFINGHAM, ILLINOIS

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 6390	04-00084-01-PV	EFFINGHAM	139	41
FED. ROAD DIST. NO. 7		ILLINOIS		

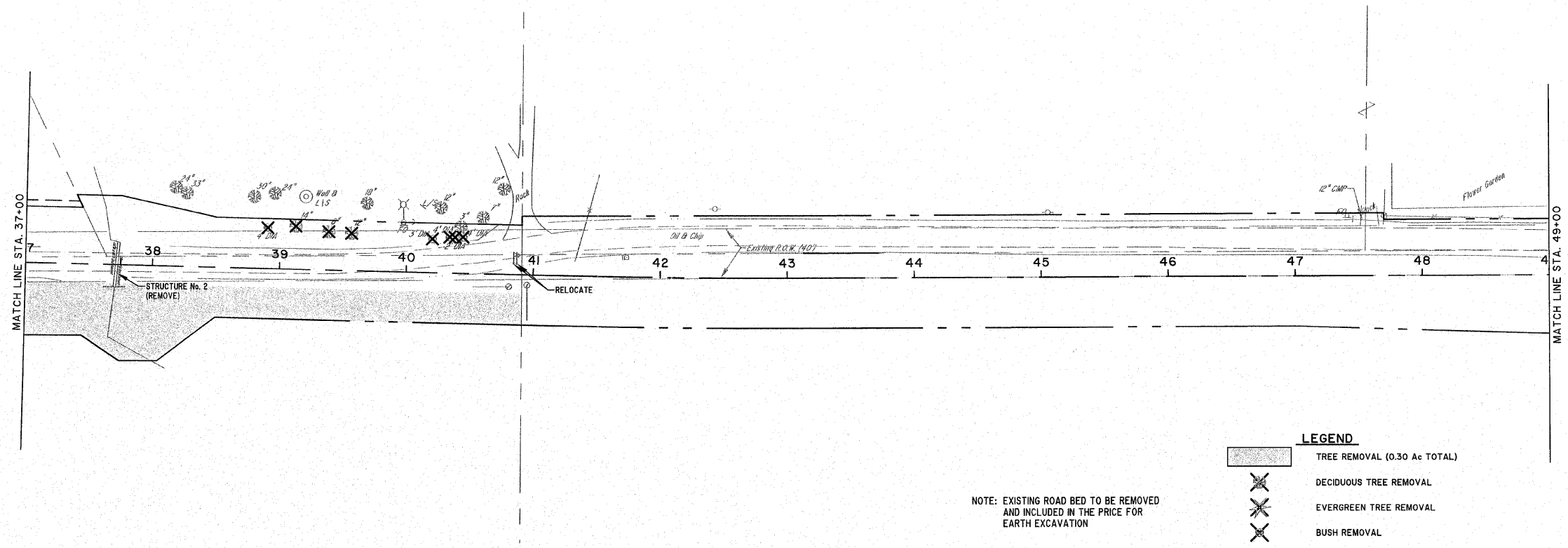
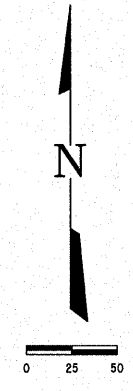
CONTRACT #95639



**LEGEND**

	TREE REMOVAL (0.35 A <sub>c</sub> TOTAL)
	DECIDUOUS TREE REMOVAL
	EVERGREEN TREE REMOVAL

NOTE: EXISTING ROAD BED TO BE REMOVED AND INCLUDED IN THE PRICE FOR EARTH EXCAVATION



**LEGEND**

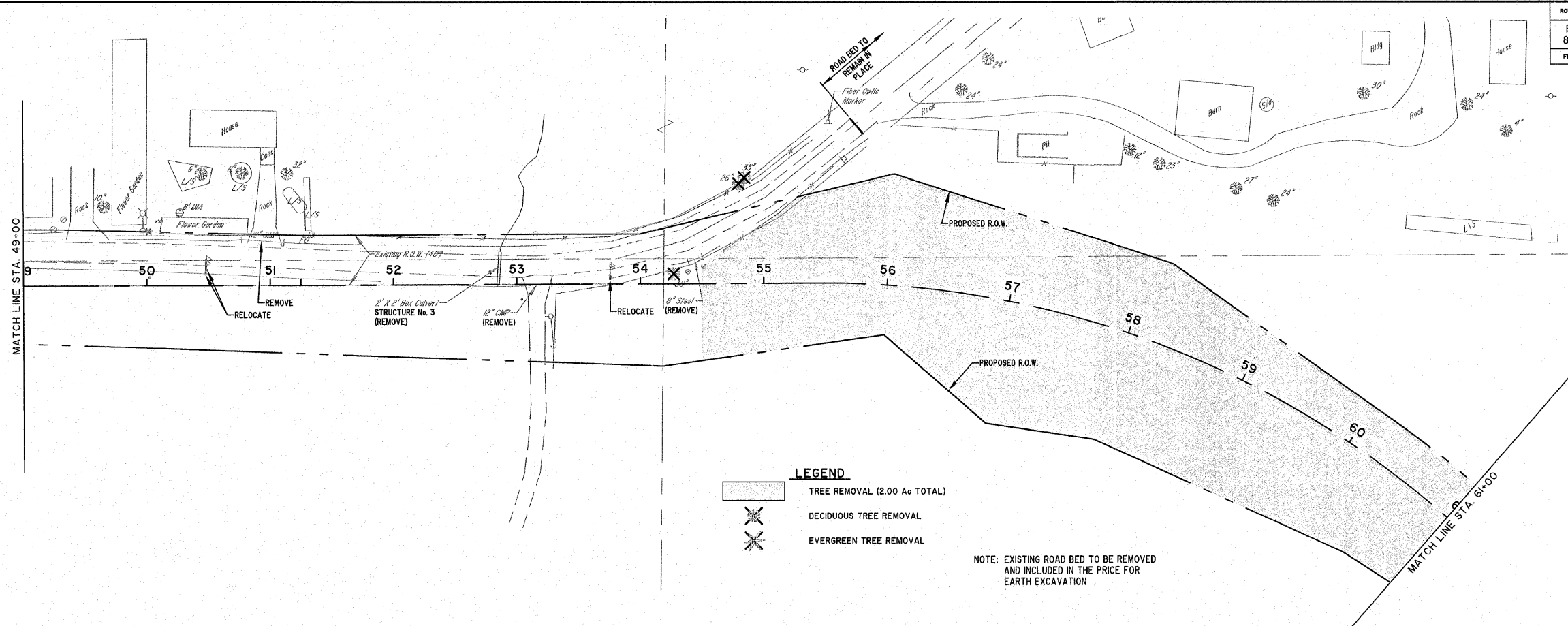
	TREE REMOVAL (0.30 A <sub>c</sub> TOTAL)
	DECIDUOUS TREE REMOVAL
	EVERGREEN TREE REMOVAL
	BUSH REMOVAL

NOTE: EXISTING ROAD BED TO BE REMOVED AND INCLUDED IN THE PRICE FOR EARTH EXCAVATION

**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7282  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003028  
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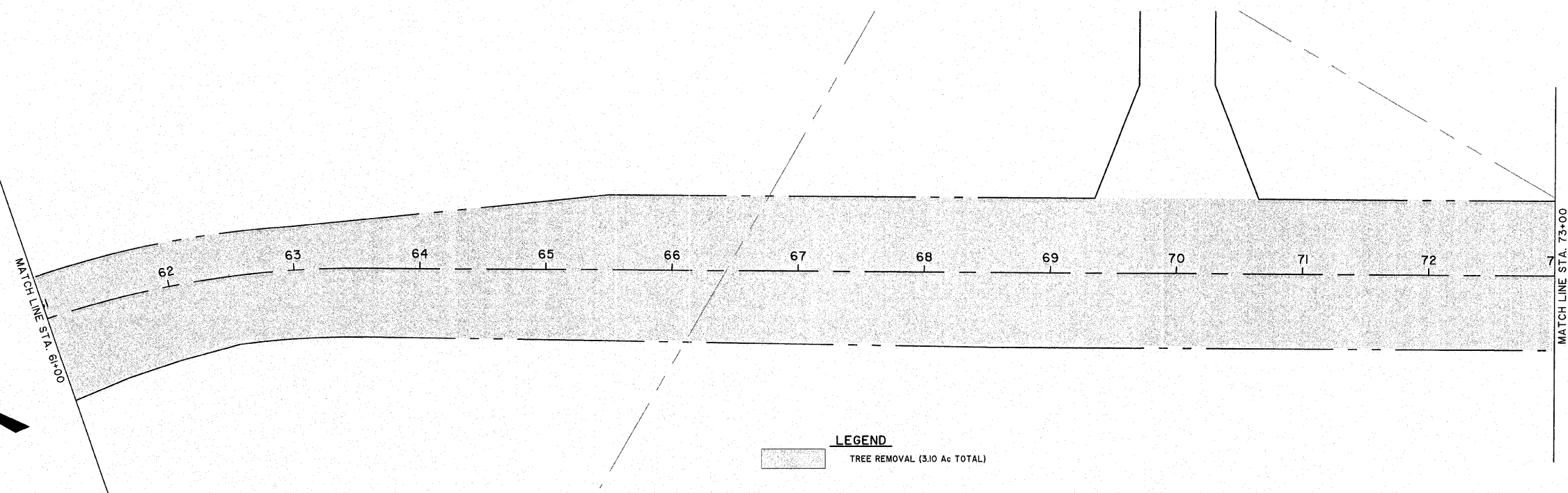
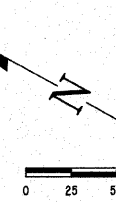
REMOVAL PLAN  
 EVERGREEN AVENUE  
 STA. 27+00 TO STA. 49+00  
 COUNTY OF EFFINGHAM, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-DI-PV	EFFINGHAM	139	42
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



- LEGEND**
- TREE REMOVAL (2.00 Ac TOTAL)
  - DECIDUOUS TREE REMOVAL
  - EVERGREEN TREE REMOVAL

NOTE: EXISTING ROAD BED TO BE REMOVED AND INCLUDED IN THE PRICE FOR EARTH EXCAVATION



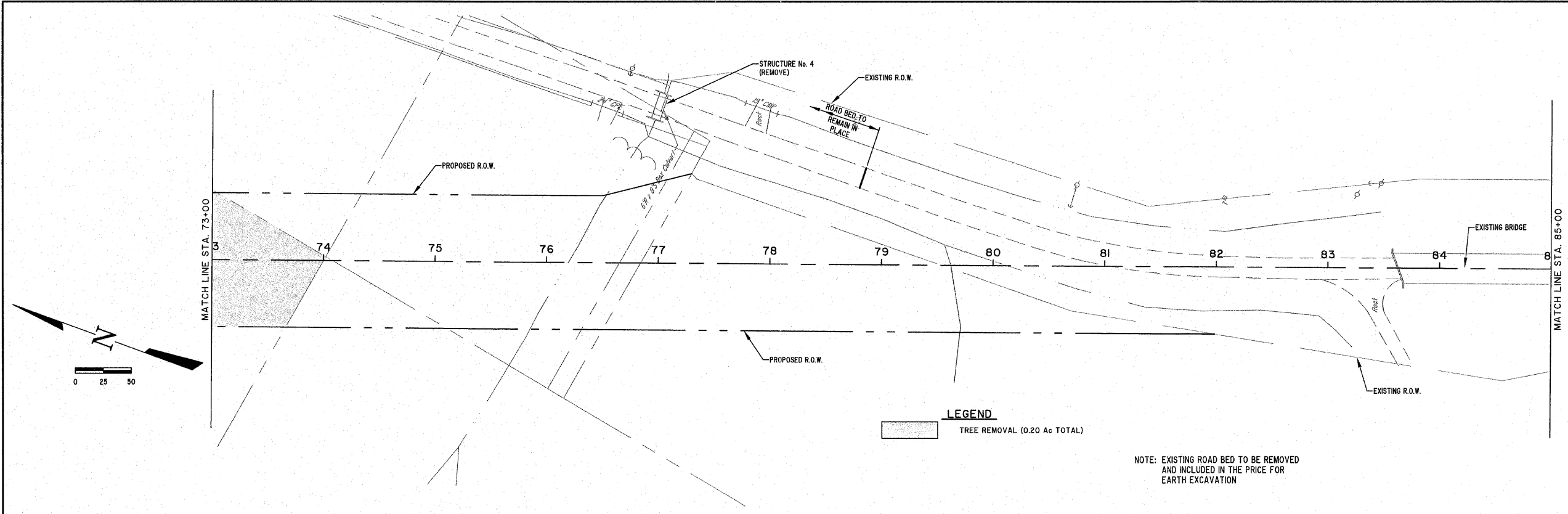
- LEGEND**
- TREE REMOVAL (3.10 Ac TOTAL)

**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7262  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 04-003008  
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 Plot date: 02/09/11 at 07:50

REMOVAL PLAN  
 EVERGREEN AVENUE  
 STA. 49+00 TO STA. 73+00  
 COUNTY OF EFFINGHAM, ILLINOIS

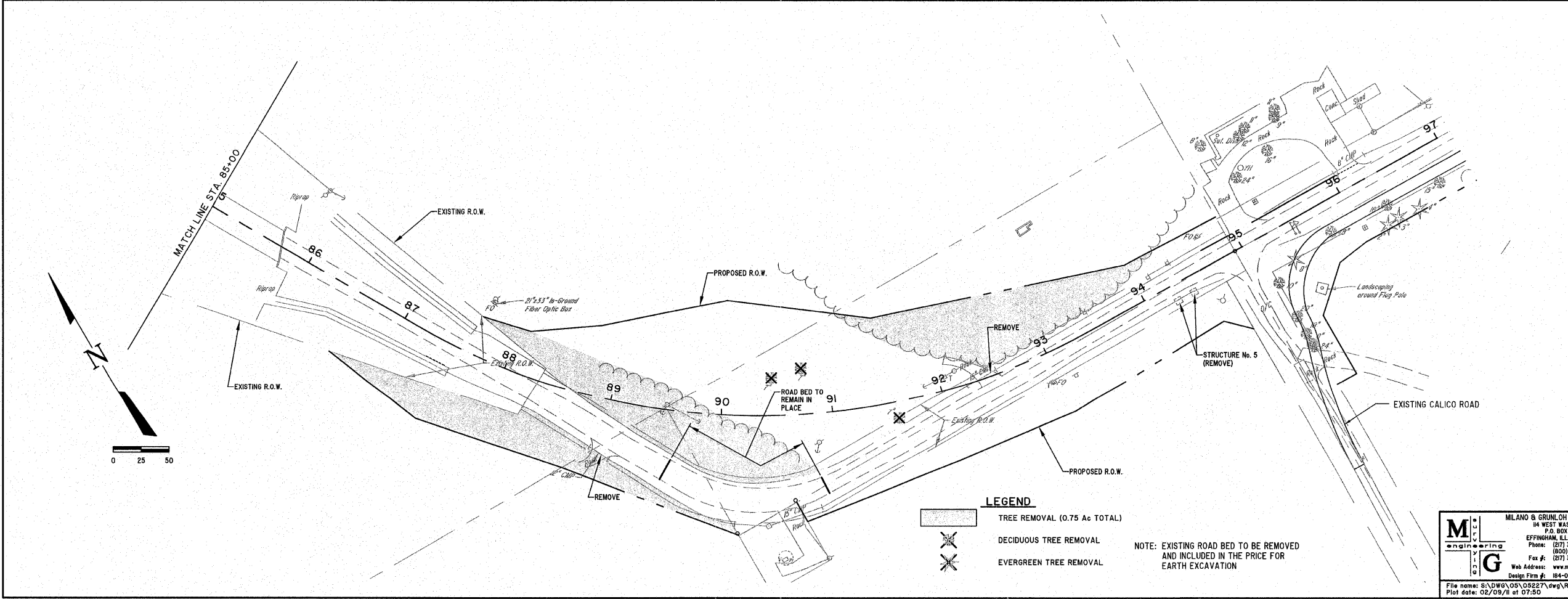
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FAU 8390	04-0084-01-PV	EFFINGHAM	139	43
FED. ROAD DIST. NO. 7		ILLINOIS		

CONTRACT #95639



**LEGEND**  
 TREE REMOVAL (0.20 Ac TOTAL)

NOTE: EXISTING ROAD BED TO BE REMOVED AND INCLUDED IN THE PRICE FOR EARTH EXCAVATION



**LEGEND**  
 TREE REMOVAL (0.75 Ac TOTAL)  
 DECIDUOUS TREE REMOVAL  
 EVERGREEN TREE REMOVAL

NOTE: EXISTING ROAD BED TO BE REMOVED AND INCLUDED IN THE PRICE FOR EARTH EXCAVATION

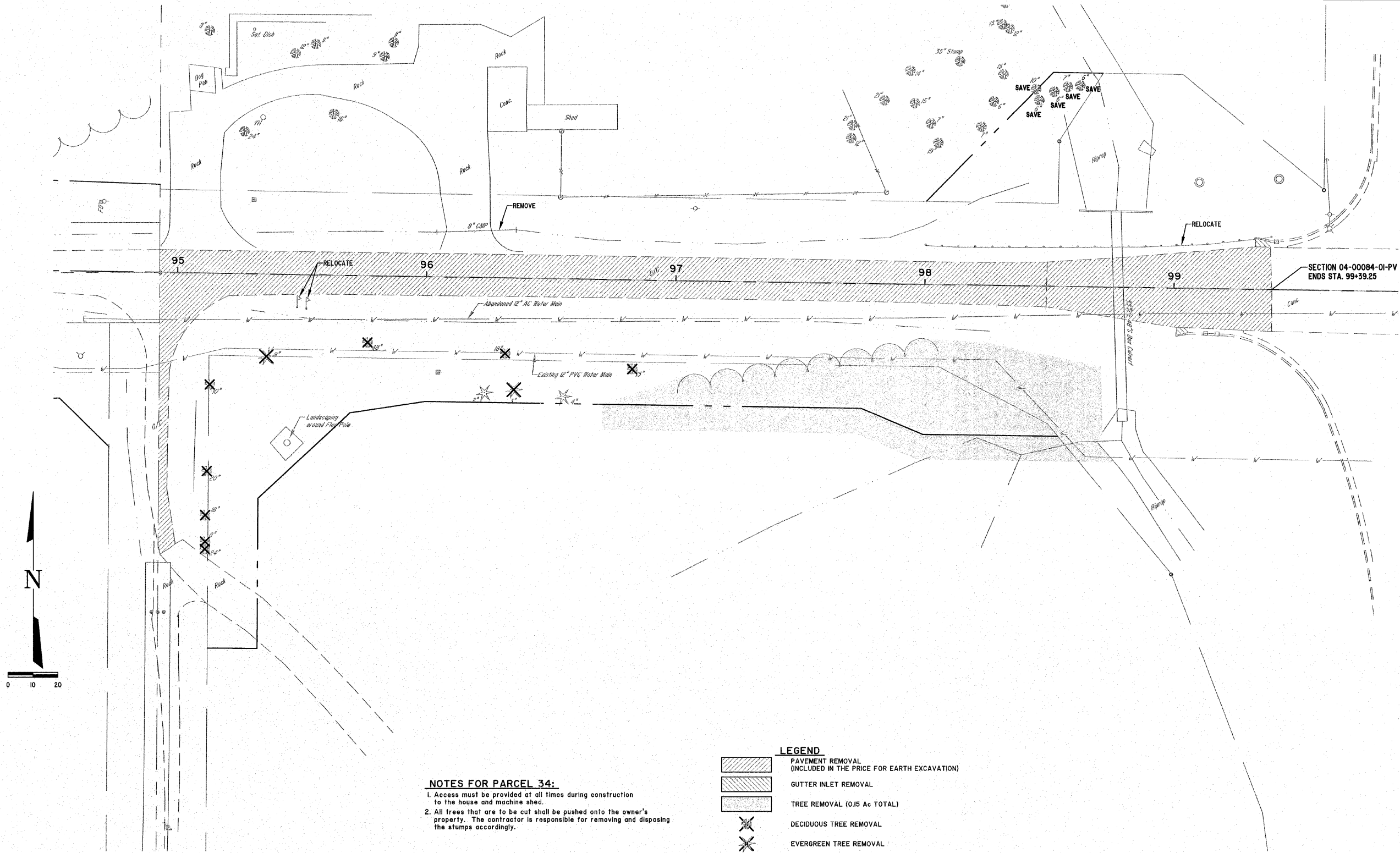
**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7222  
 (800) 877-2714  
 Fax #: (217) 342-3453  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-00308

REMOVAL PLAN  
 EVERGREEN AVENUE  
 STA. 73+00 TO STA. 94+92.73  
 COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05227\dwg\Removal.dwg  
 Plot date: 02/09/11 at 07:50  
 F.S. 985,590

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	44
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639



**NOTES FOR PARCEL 34:**  
 1. Access must be provided at all times during construction to the house and machine shed.  
 2. All trees that are to be cut shall be pushed onto the owner's property. The contractor is responsible for removing and disposing the stumps accordingly.

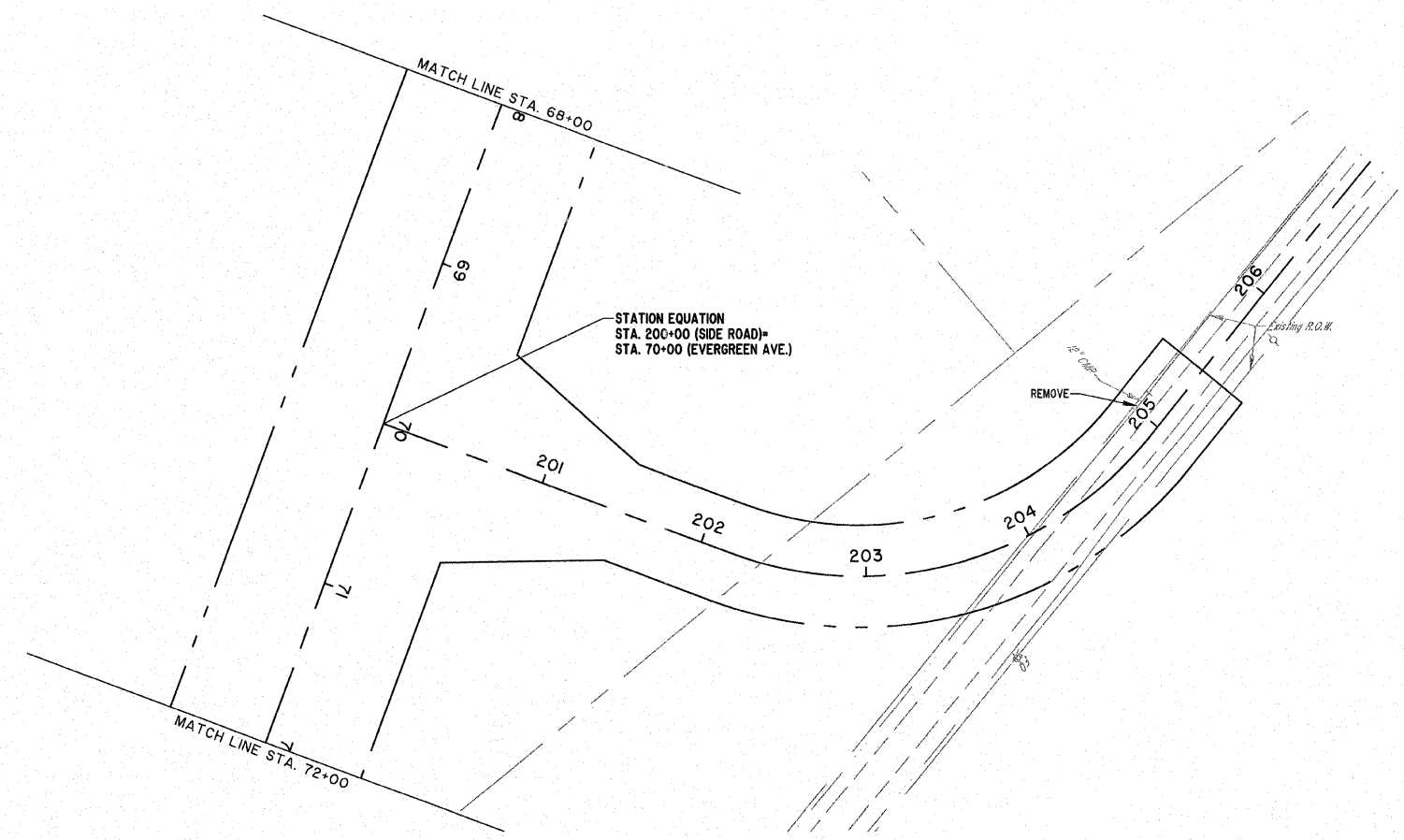
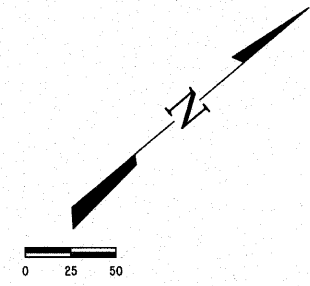
**LEGEND**

	PAVEMENT REMOVAL (INCLUDED IN THE PRICE FOR EARTH EXCAVATION)
	GUTTER INLET REMOVAL
	TREE REMOVAL (0.15 AC TOTAL)
	DECIDUOUS TREE REMOVAL
	EVERGREEN TREE REMOVAL

	MILANO & GRUNLOH ENGINEERS, LLC	<b>REMOVAL PLAN</b> EVERGREEN AVENUE STA. 94+92.73 TO STA. 100+00 CITY OF EFFINGHAM, ILLINOIS COUNTY OF EFFINGHAM, ILLINOIS
	94 WEST WASHINGTON P.O. BOX 857 EFFINGHAM, ILLINOIS 62401	
	Phone: (217) 347-7262 (800) 577-2714 Fax #: (217) 342-3433	
	Web Address: www.mgengineers.com Design Firm #: 164-00308	
File name: S:\DWG\05_082707\dwg\Removal.dwg Plot date: 02/09/11 at 07:50		F.A. 589,590

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	45
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639



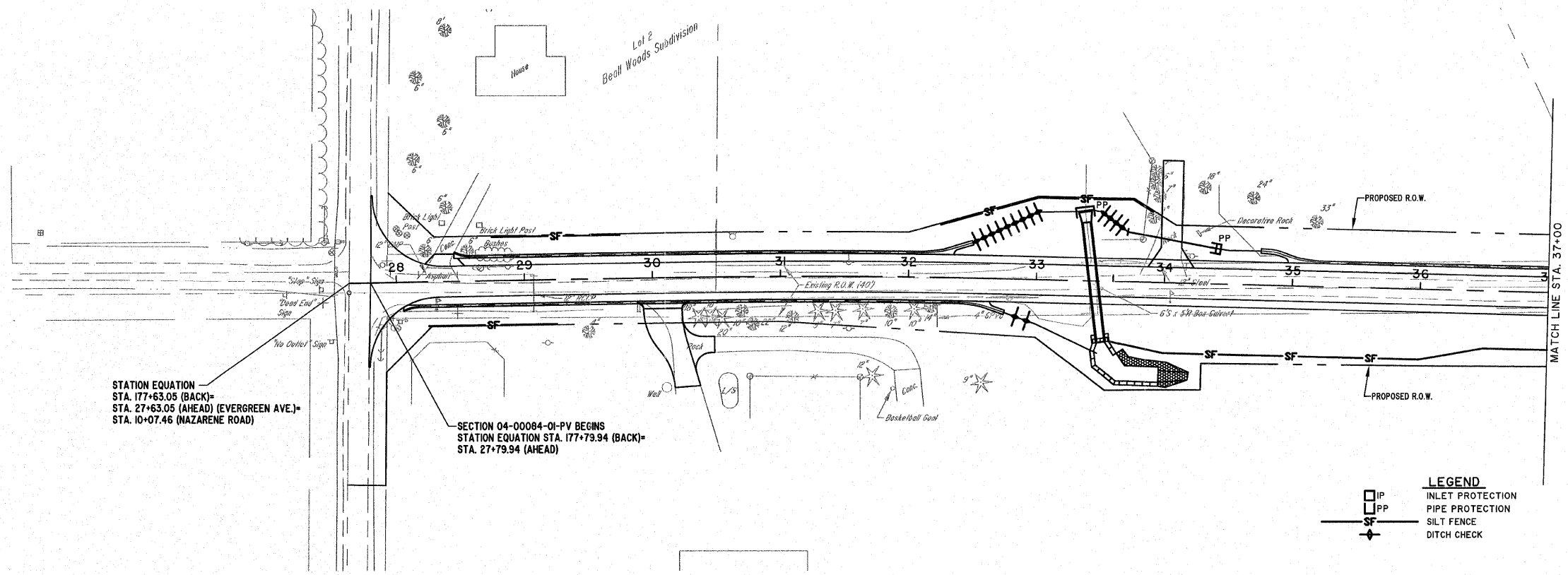
**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 887  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7282  
 (800) 577-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-00308

REMOVAL PLAN  
 EVERGREEN AVENUE  
 STA. 200+00 TO STA. 206+50  
 COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05227\dwg\Removal.dwg  
 Plot date: 02/07/11 at 15:55 P. 589,590

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	46
FED. ROAD DIST. NO. 7		ILLINOIS		

CONTRACT #95639

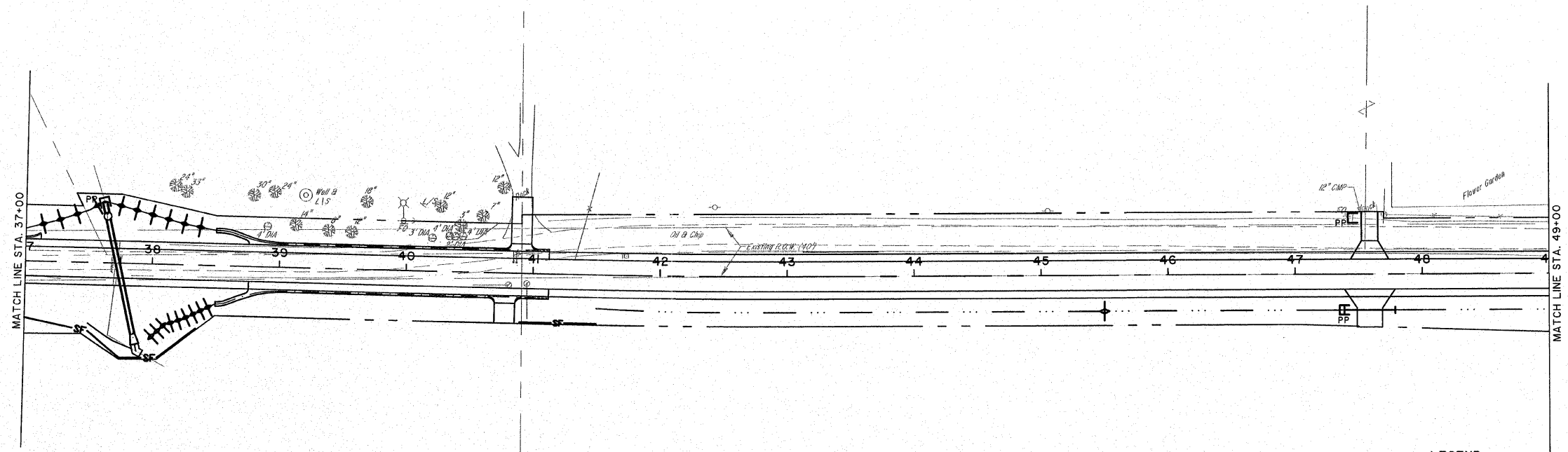


STATION EQUATION  
 STA. 177+63.05 (BACK)=  
 STA. 27+63.05 (AHEAD) (EVERGREEN AVE.)=  
 STA. 10+07.46 (NAZARENE ROAD)

SECTION 04-00084-01-PV BEGINS  
 STATION EQUATION STA. 177+79.94 (BACK)=  
 STA. 27+79.94 (AHEAD)

**LEGEND**

	INLET PROTECTION
	PIPE PROTECTION
	SILT FENCE
	DITCH CHECK



**PERIMETER EROSION BARRIER**

	FOOT
RT 28+25 TO 29+25	100
LT 28+75 TO 29+75	100
LT 32+25 TO 33+00	172
RT 33+57 TO 38+35	500
RT 40+80 TO 41+50	80
RT 58+50 TO 59+50	185
LT 86+05 TO 88+00	175
LT 98+10 TO 98+65	180
LT 98+88 TO 99+40	185
<b>TOTAL</b>	<b>1657</b>

**TEMPORARY DITCH CHECKS**

	FOOT
SHEET 46	980
SHEET 47	896
SHEET 48	338

**LEGEND**

	INLET PROTECTION
	PIPE PROTECTION
	SILT FENCE
	DITCH CHECK

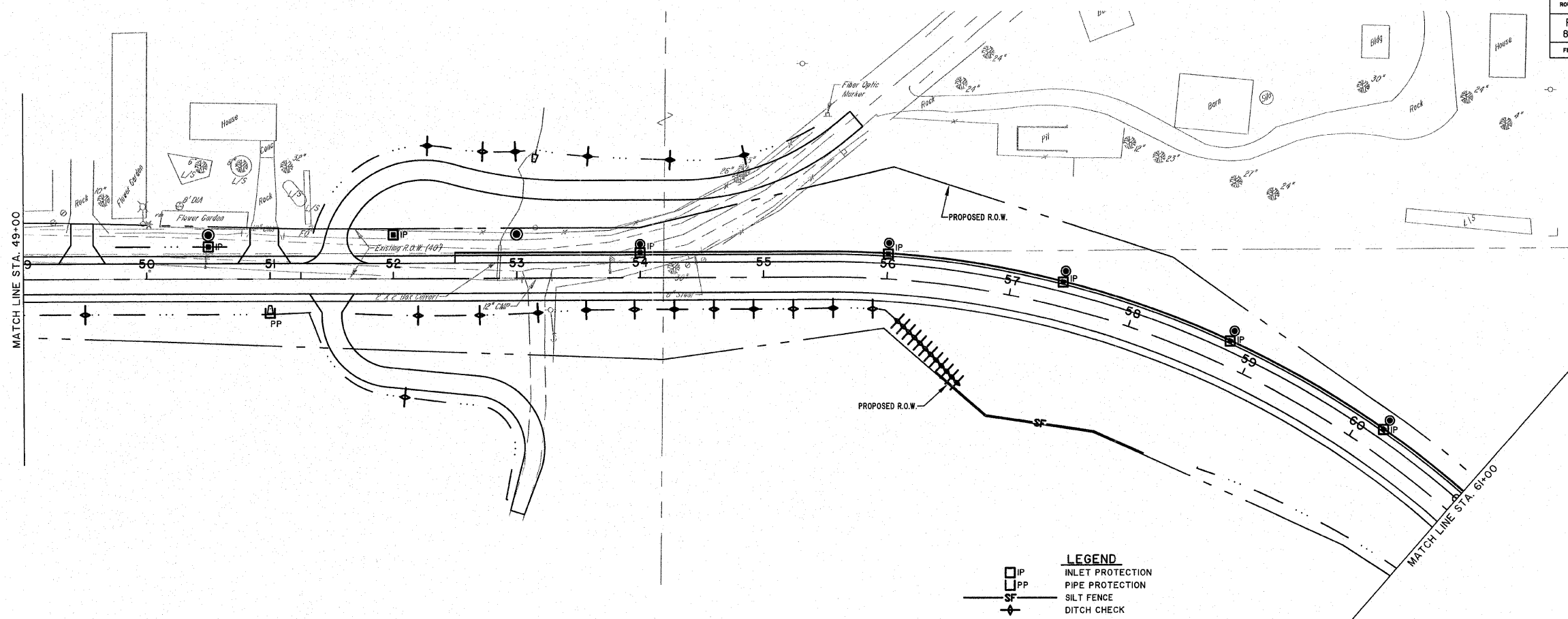
**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7262  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgeengineers.com  
 Design Firm #: 184-003068

**EROSION CONTROL PLAN**  
 EVERGREEN AVENUE  
 STA. 27+00 TO STA. 49+00  
 COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\_08227.dwg\Erosion Ctrl.dwg  
 Plot date: 02/09/11 at 07:50  
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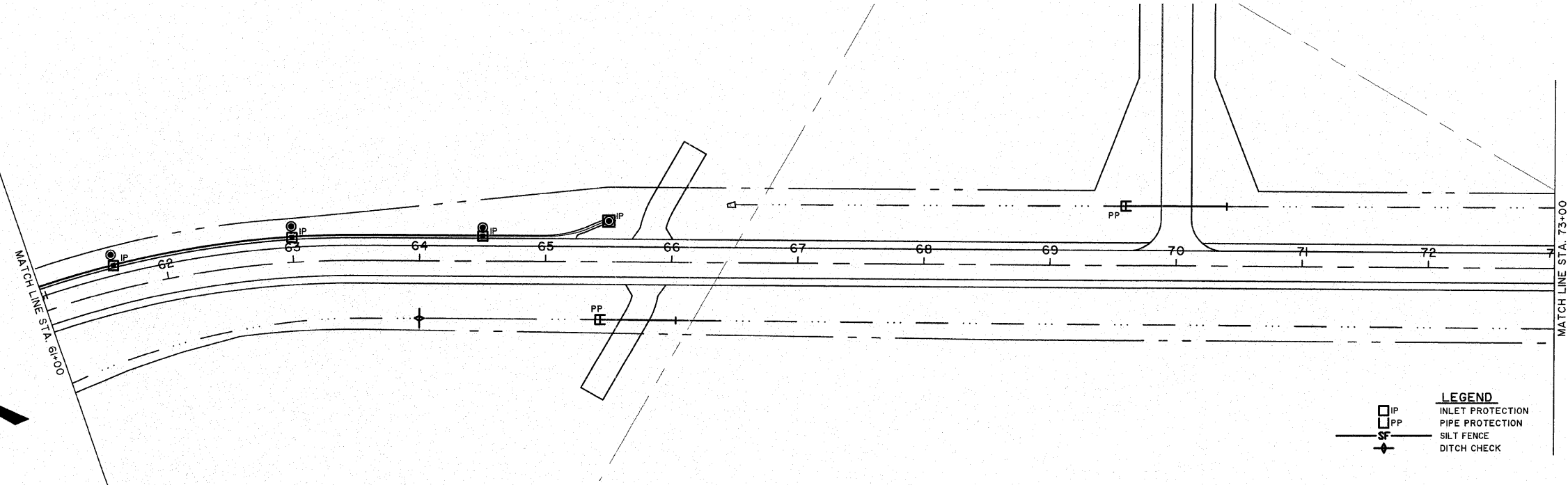
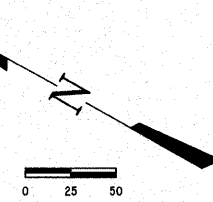
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FAU 8390	04-0084-01-PV	EFFINGHAM	139	47
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639



**LEGEND**

	INLET PROTECTION
	PIPE PROTECTION
	SILT FENCE
	DITCH CHECK



**LEGEND**

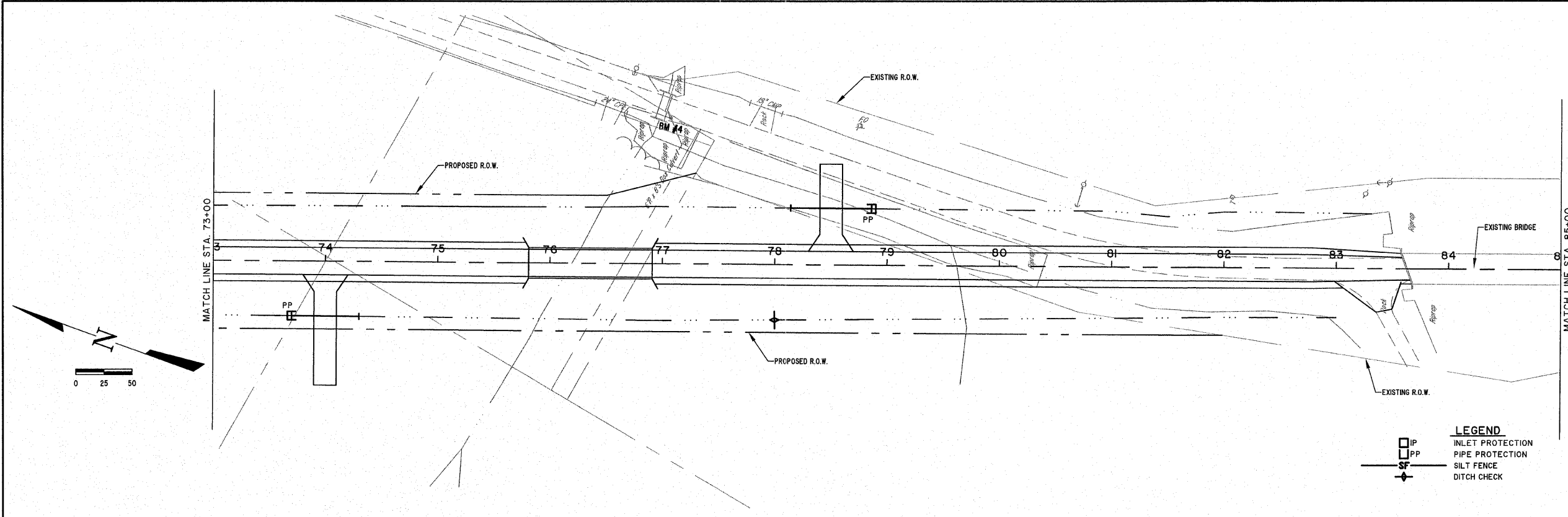
	INLET PROTECTION
	PIPE PROTECTION
	SILT FENCE
	DITCH CHECK

**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7282  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003029  
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 Plot date: 02/09/11 at 08:20

EROSION CONTROL PLAN  
 EVERGREEN AVENUE  
 STA. 49+00 TO STA. 73+00  
 COUNTY OF EFFINGHAM, ILLINOIS

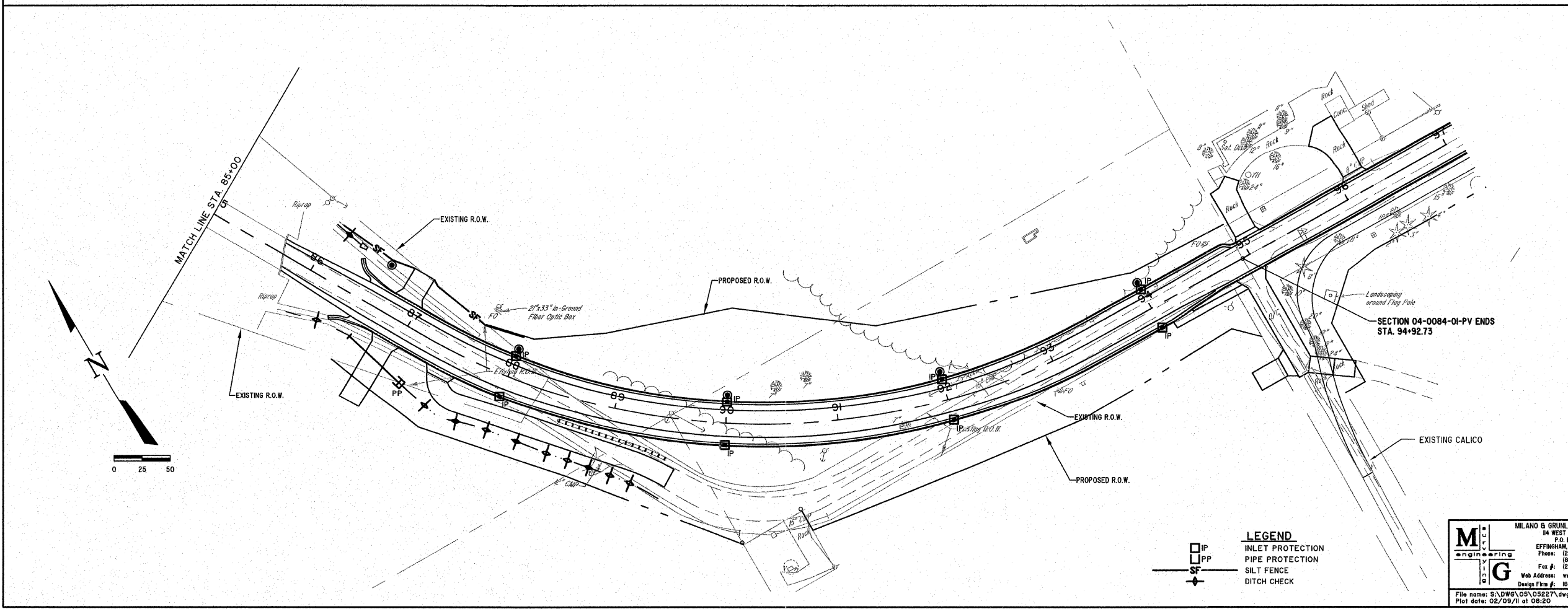
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FAU 8390	04-0084-01-PV	EFFINGHAM	139	48
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639



**LEGEND**

	INLET PROTECTION
	PIPE PROTECTION
	SILT FENCE
	DITCH CHECK



**LEGEND**

	INLET PROTECTION
	PIPE PROTECTION
	SILT FENCE
	DITCH CHECK

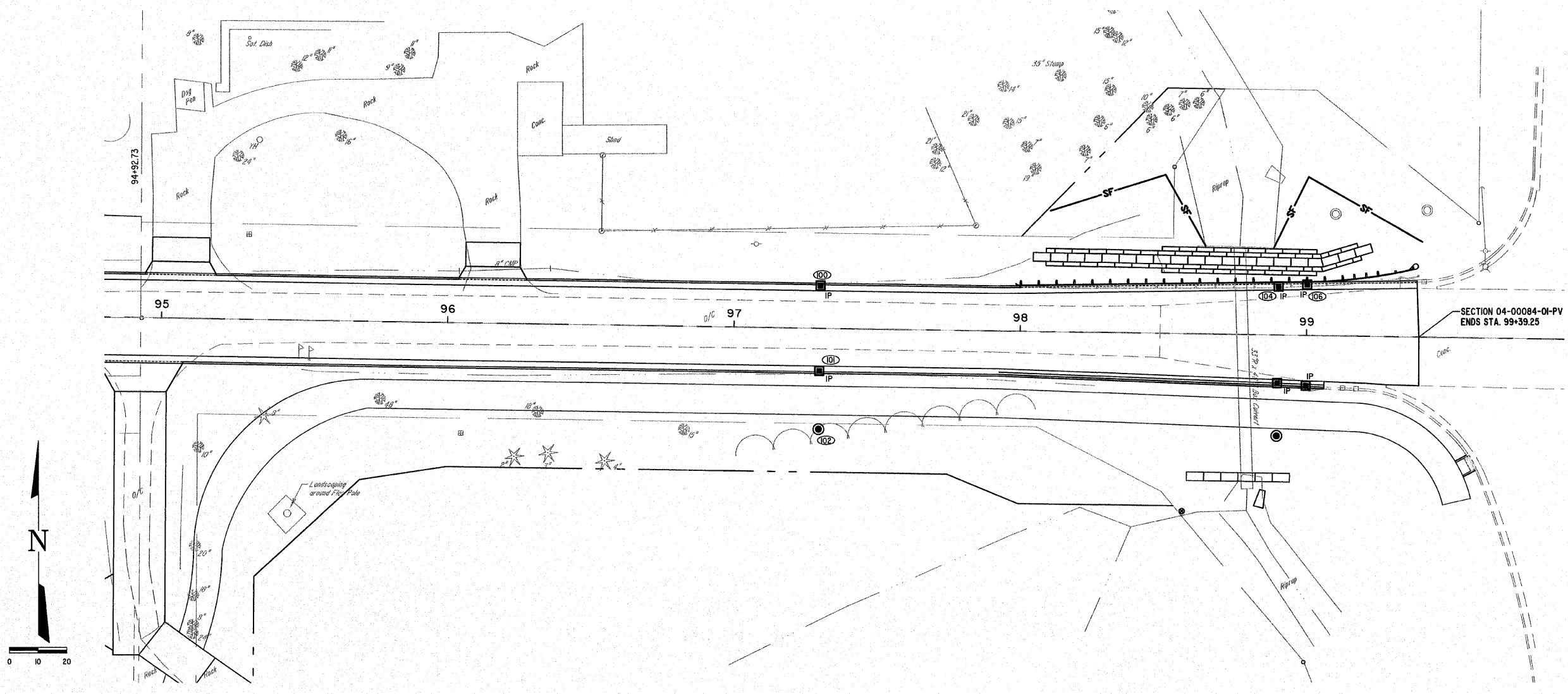
**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7282  
 (800) 677-2764  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 164-00309  
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**EROSION CONTROL PLAN**  
 EVERGREEN AVENUE  
 STA. 73+00 TO STA. 94+92.73  
 COUNTY OF EFFINGHAM, ILLINOIS



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	49
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639



SECTION 04-00084-01-PV  
ENDS STA. 99+39.25

**LEGEND**

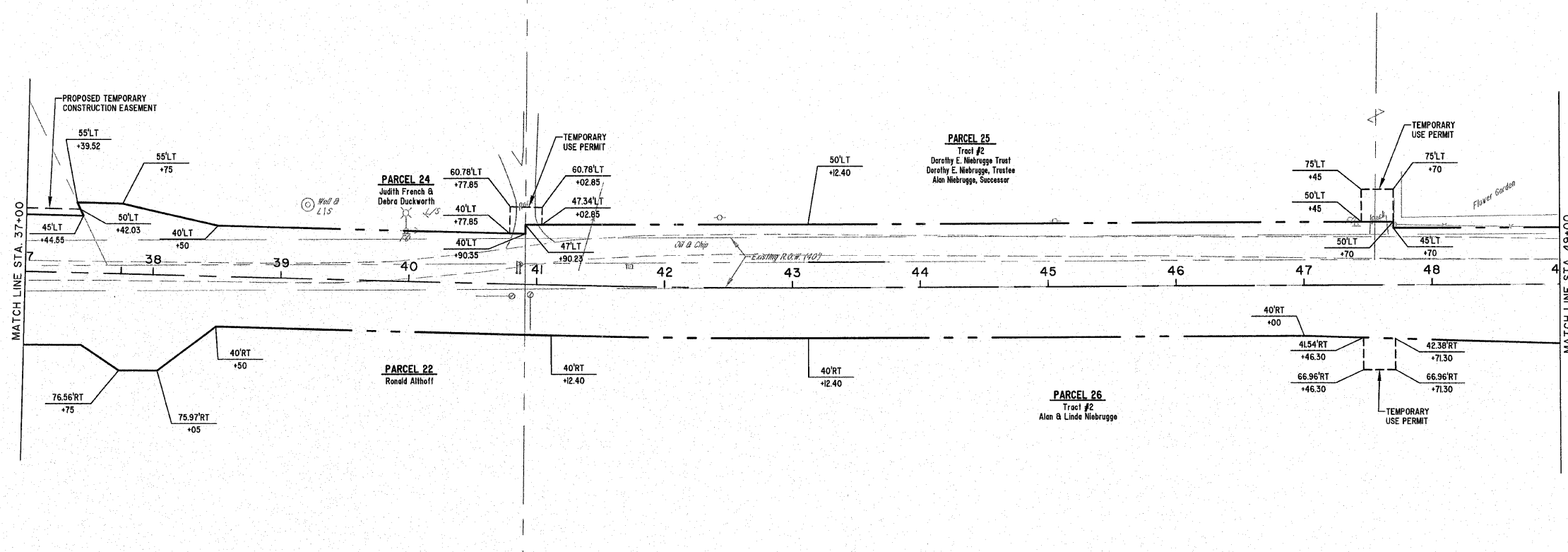
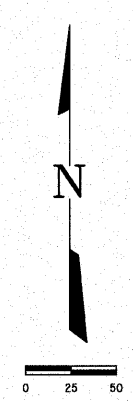
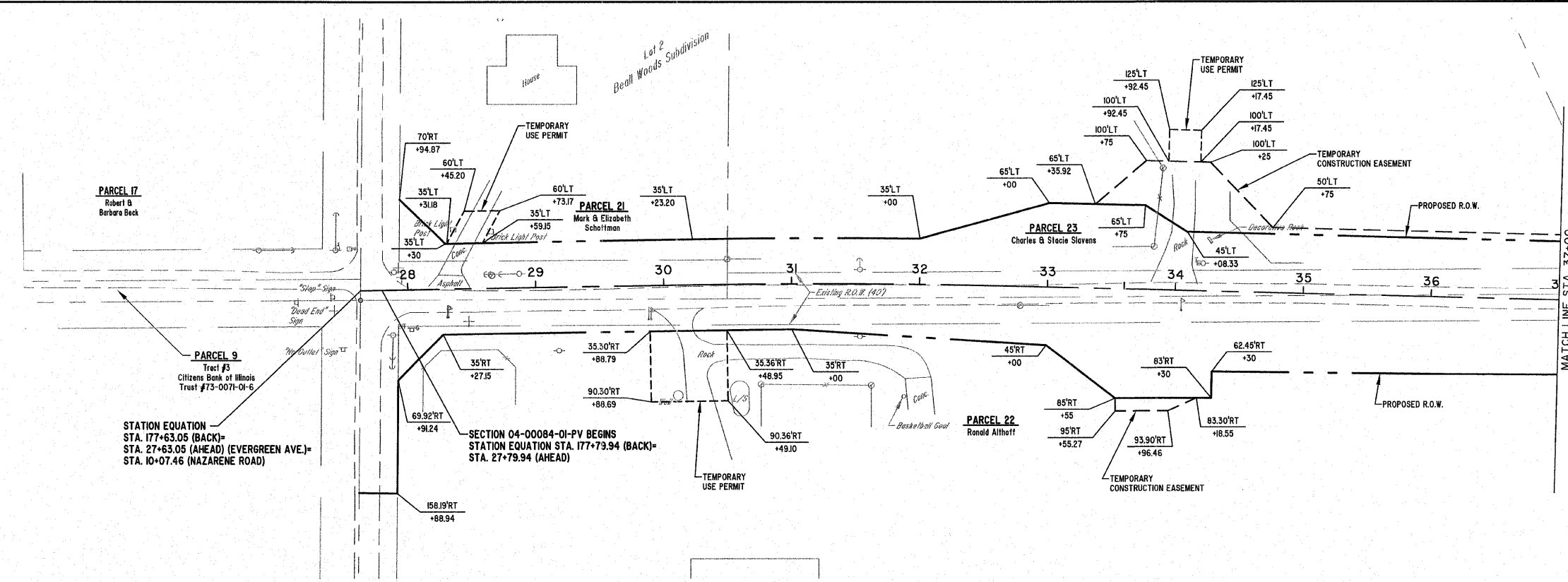
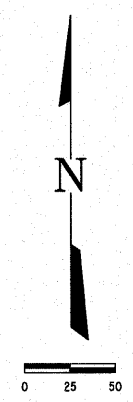
	INLET PROTECTION
	PIPE PROTECTION
	SILT FENCE

**MILANO & GRUNLOH ENGINEERS, LLC**  
 94 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (271) 347-7262  
 (800) 877-2714  
 Fax #: (271) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-00308

**EROSION CONTROL PLAN**  
 EVERGREEN AVENUE  
 STA. 94+92.73 TO STA. 100+00  
 CITY OF EFFINGHAM, ILLINOIS  
 COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\_052270T\dwg\Erosion Control.dwg  
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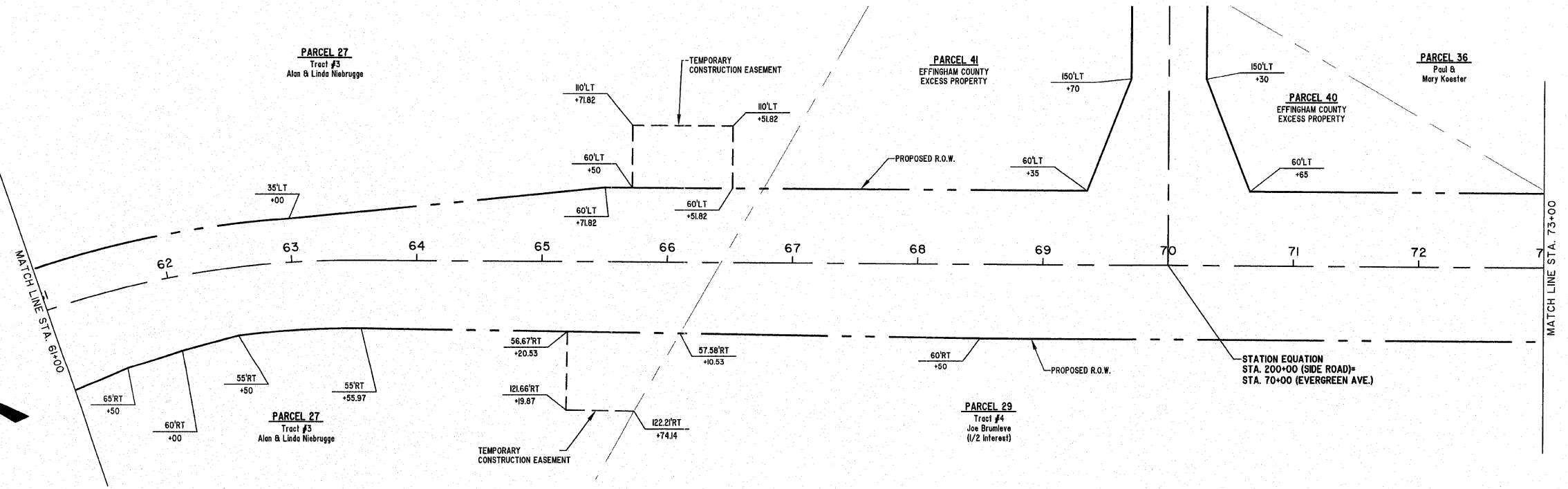
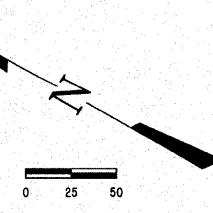
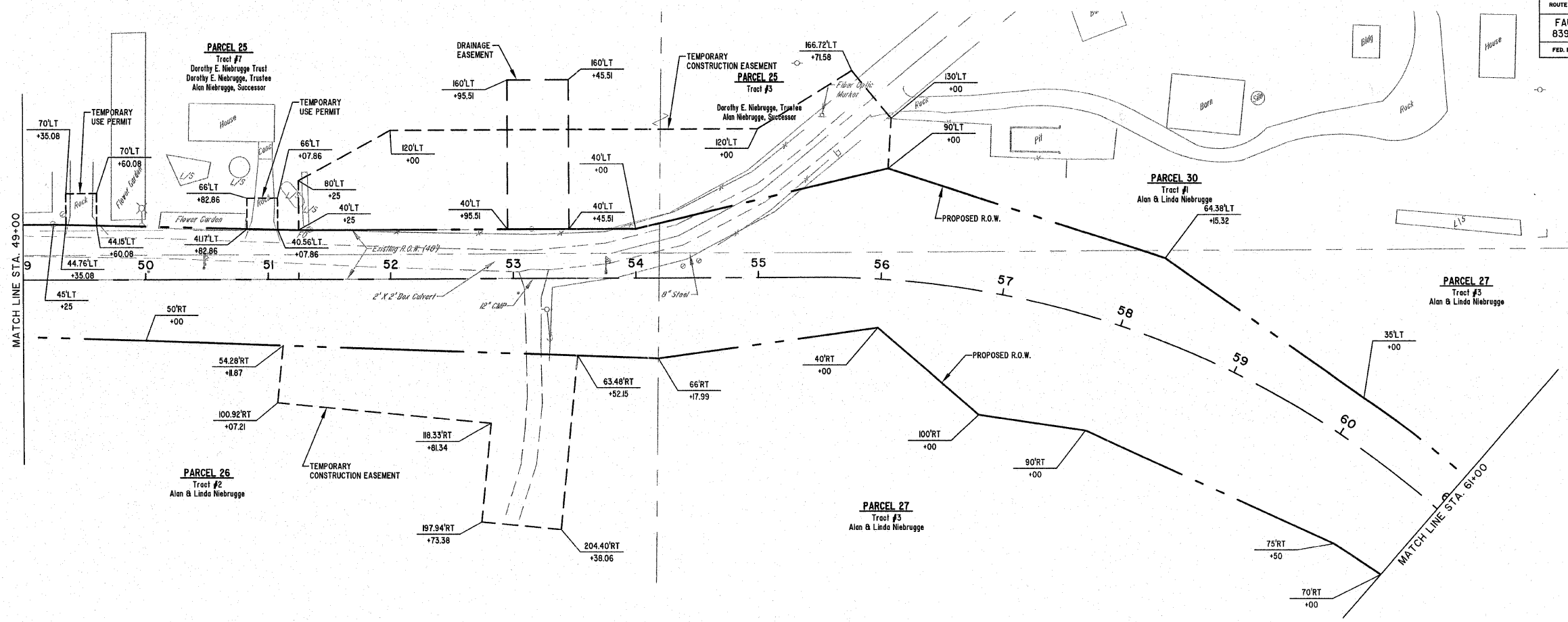
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FAU 8390	04-00084-01-PV	EFFINGHAM	139	50
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT #95639		



	MILANO & GRUNLOH ENGINEERS, LLC 14 WEST WASHINGTON P.O. BOX 897 EFFINGHAM, ILLINOIS 62401	<b>RIGHT-OF-WAY PLAN</b> <b>EVERGREEN AVENUE</b> <b>STA. 27+00 TO STA. 49+00</b> <b>COUNTY OF EFFINGHAM, ILLINOIS</b>
	Phone: (217) 347-7262 (800) 677-2714 Fax #: (217) 342-3433	
	Web Address: www.mgengr.com Design Firm #: 04-00084	
	File name: S:\DWG\05_082271.dwg\ROW Plans.dwg Plot date: 02/09/11 at 08:20 F.B. 568,590	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	51
FED. ROAD DIST. NO. 7		ILLINOIS		

CONTRACT #95639



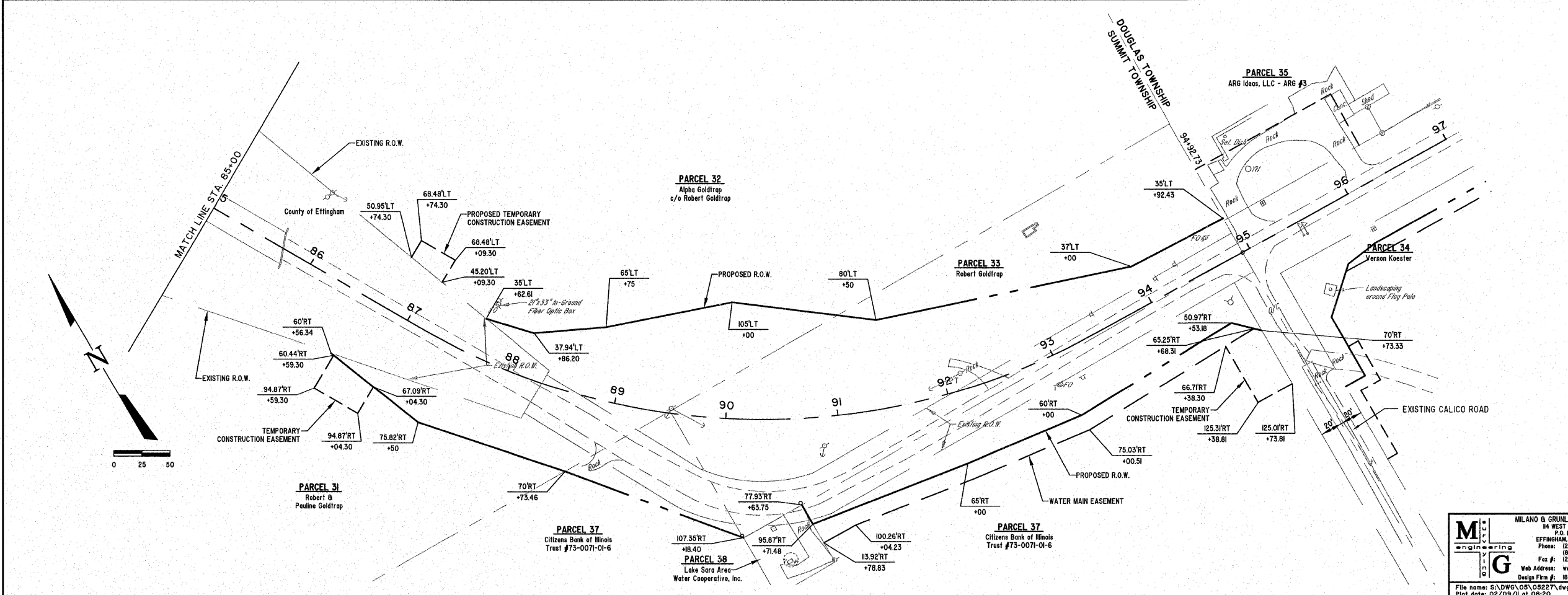
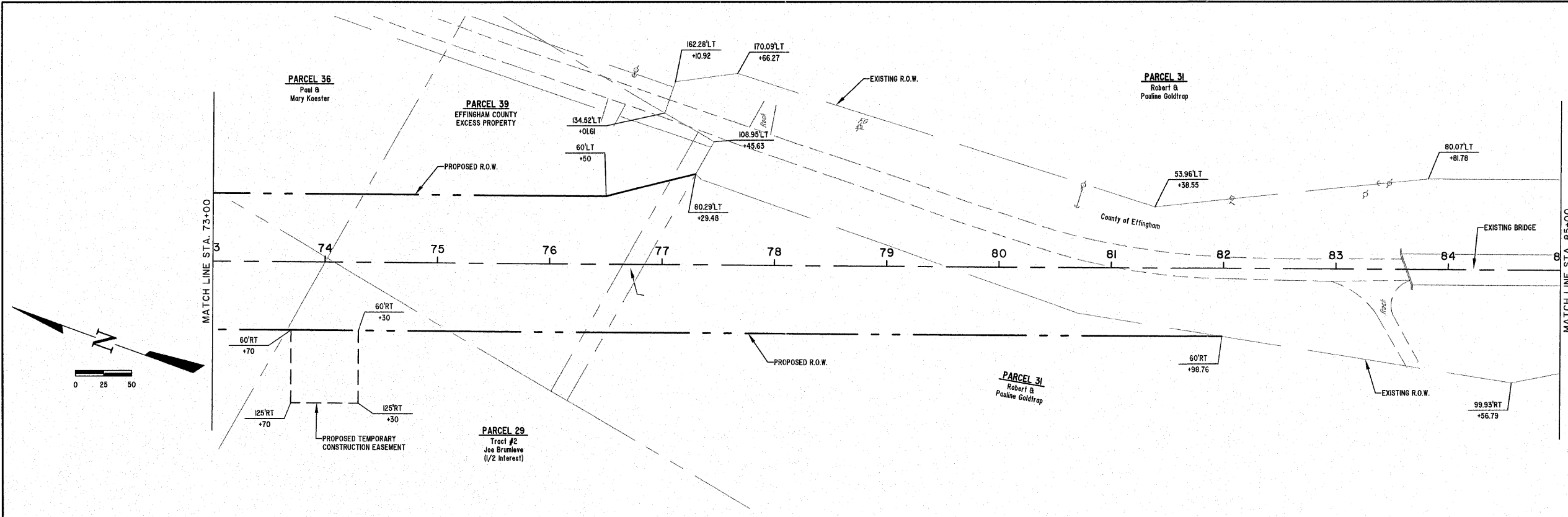
**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7282  
 (800) 577-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 84-00308

RIGHT-OF-WAY PLAN  
 EVERGREEN AVENUE  
 STA. 49+00 TO STA. 73+00  
 COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05227\dwg\ROW Plans.dwg  
 Plot date: 02/09/11 at 08:20 F.S. 966,590

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO. 7		ILLINOIS		

CONTRACT #95639



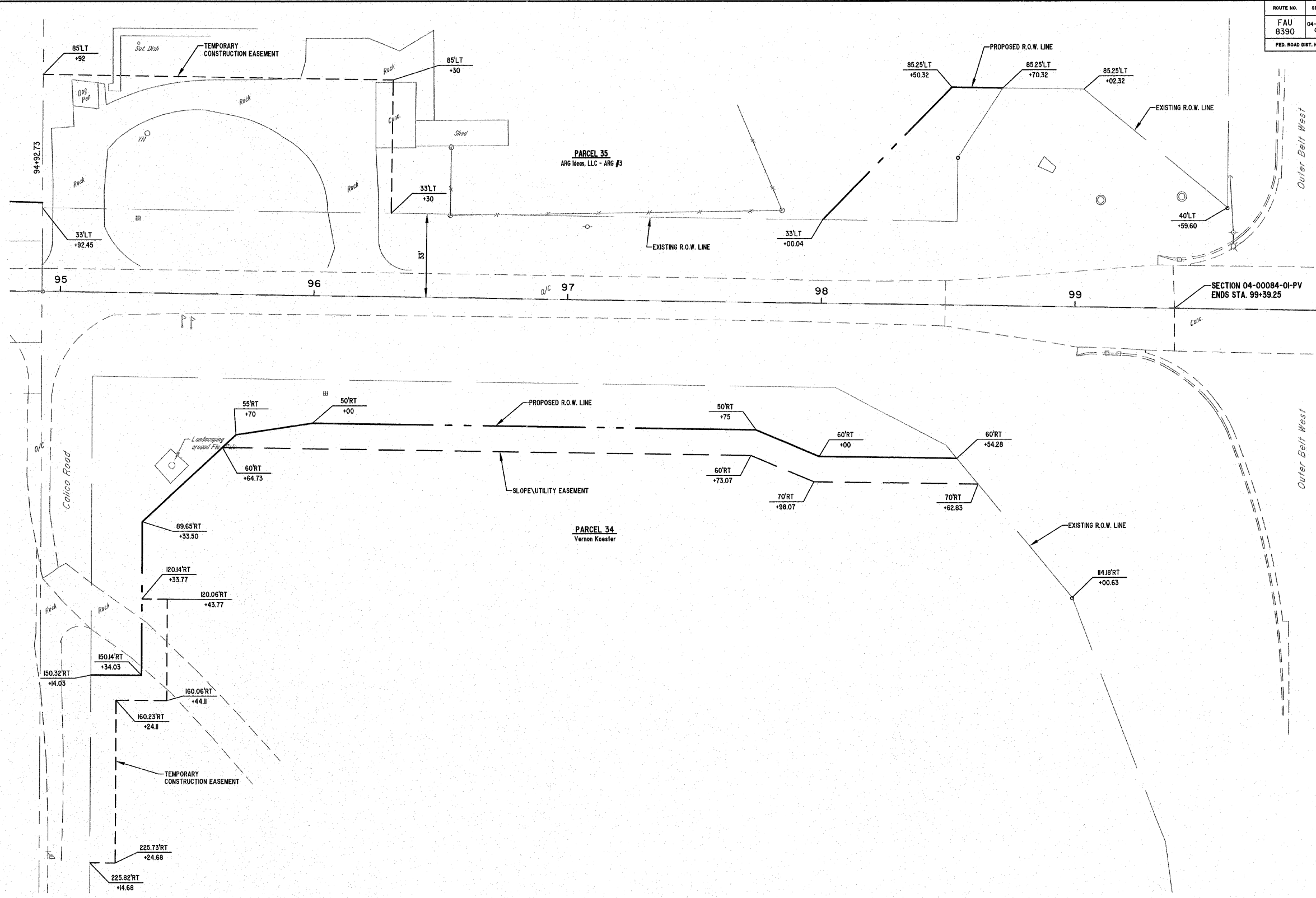
**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7262  
 (600) 677-2704  
 Fax #: (217) 342-3433  
 Web Address: www.mgeengineers.com  
 Design Firm #: 184-003508

RIGHT-OF-WAY PLAN  
 EVERGREEN AVENUE  
 STA. 73+00 TO STA. 94+92.73  
 COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\_062277.dwg\ROW Plans.dwg  
 Plot date: 02/09/11 at 08:20 F.S. 589,590

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO. 7		ILLINOIS		

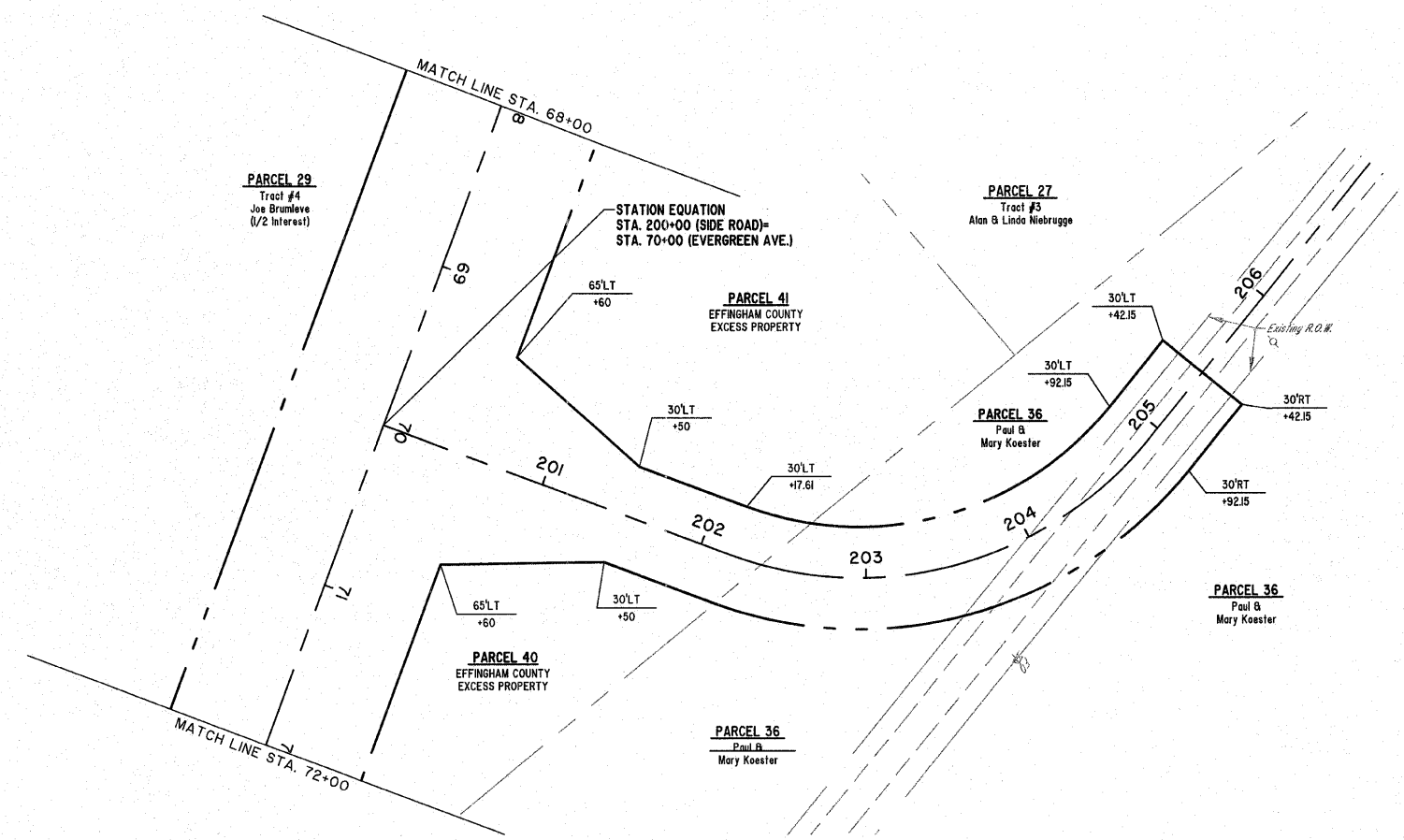
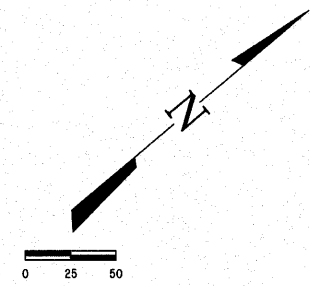
CONTRACT #95639



	MILANO & GRUNLOH ENGINEERS, LLC	<b>RIGHT-OF-WAY PLAN</b> EVERGREEN AVENUE STA. 94+92.73 TO STA. 100+00 CITY OF EFFINGHAM, ILLINOIS COUNTY OF EFFINGHAM, ILLINOIS
	14 WEST WASHINGTON P.O. BOX 897 EFFINGHAM, ILLINOIS 62401	
	Phone: (217) 347-7282 (800) 677-2714 Fax #: (217) 342-3433	
	Web Address: www.mgengineers.com Design Firm #: 184-003000	
File name: S:\DWG\05\05227DTT.dwg ROW Plans.dwg Plot date: 02/09/11 at 08:20		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-DI-PV	EFFINGHAM	139	54
FED. ROAD DIST. NO. 7	ILLINOIS			

CONTRACT #95639



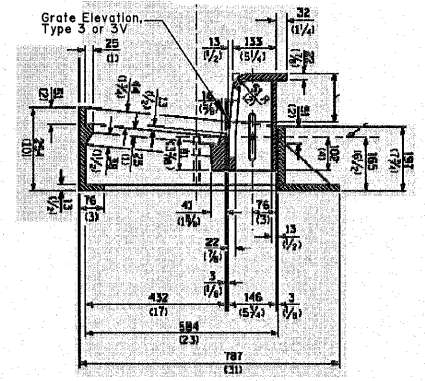
**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7862  
 (800) 577-2754  
 Fax #: (217) 342-3433  
 Web Address: www.mpeengineers.com  
 Design Firm #: 184-003028

RIGHT-OF-WAY PLAN  
 EVERGREEN AVENUE  
 STA. 200+00 TO STA. 206+50  
 COUNTY OF EFFINGHAM, ILLINOIS

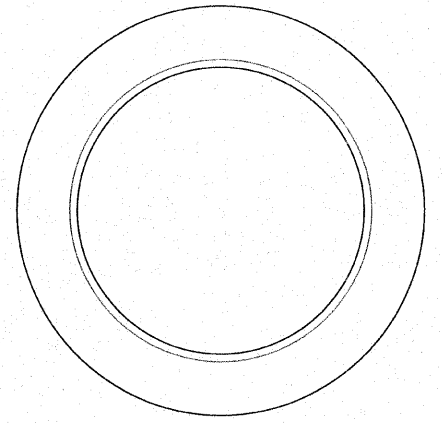
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 Plot date: 02/09/11 at 08:20 F.S. 585,590

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	55
FED. ROAD DIST. NO. 7		ILLINOIS		

CONTRACT #95639

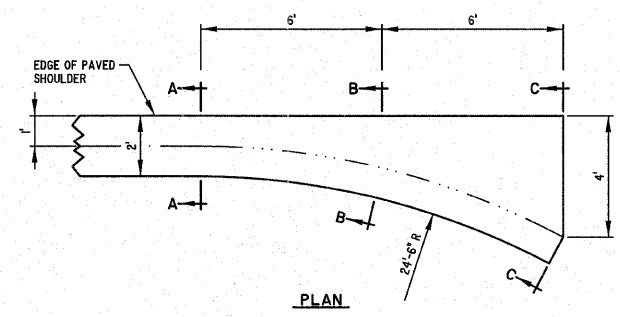


**TYPE 3 or 3V GRATE**

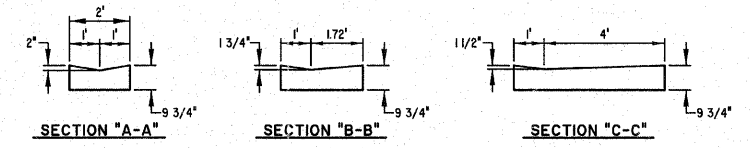


**GENERAL NOTES:**  
**FRAME:** Top flange fabricated from 1/8" flat stock. Base rim fabricated from 1 1/2" x 1/2" x 1/8" channel. All domestic steel conforming to ASTM-A36.  
**SEDIMENT BAG:** Bag fabricated from 4 oz./sq.yd. non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel strap and lock.

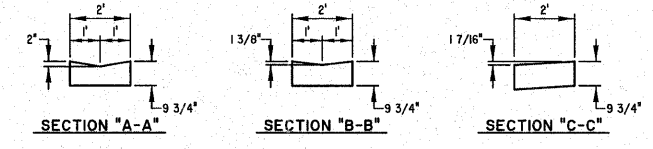
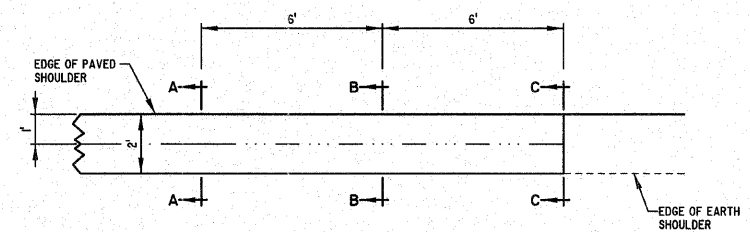
**INLET PROTECTION FILTER**



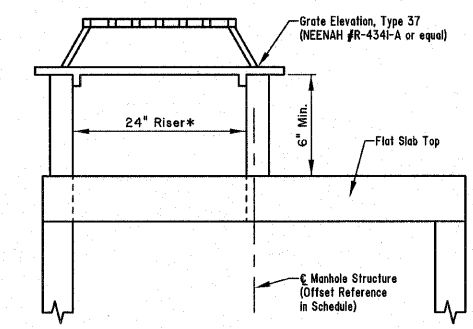
**PLAN**



**GUTTER INLET (SPECIAL)**

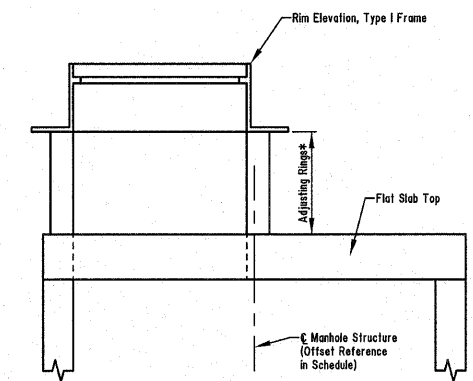


**TRANSITION DETAIL - "V" GUTTER TO EARTH SHOULDER**  
 LT. & RT. STA. 4H00.40 TO 4H12.40



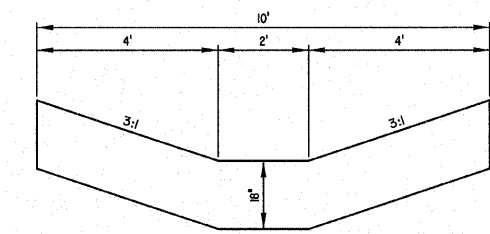
\* Included in the price of the Manhole structure

**TYPE 37 GRATE**

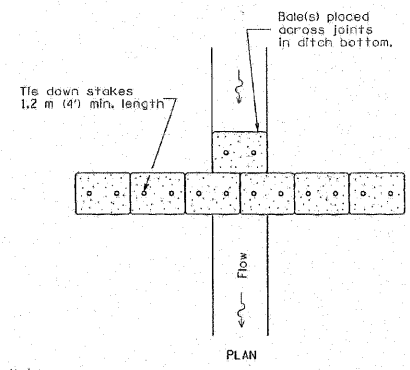


\* Included in the price of the Manhole structure

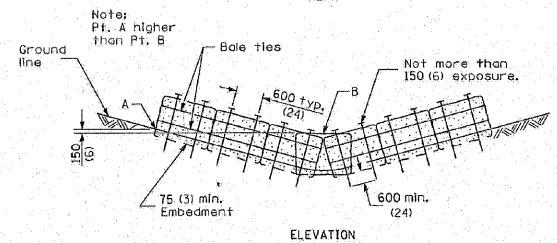
**TYPE I FRAME & LID**



**DETAIL OF RIPRAP**



**PLAN**



**ELEVATION**

**STRAW BALE DITCH CHECK DETAIL**

**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7262  
 (600) 677-2764  
 Fax #: (217) 342-3433  
 Web Address: www.mgengineers.com  
 Design Firm #: 184-003008

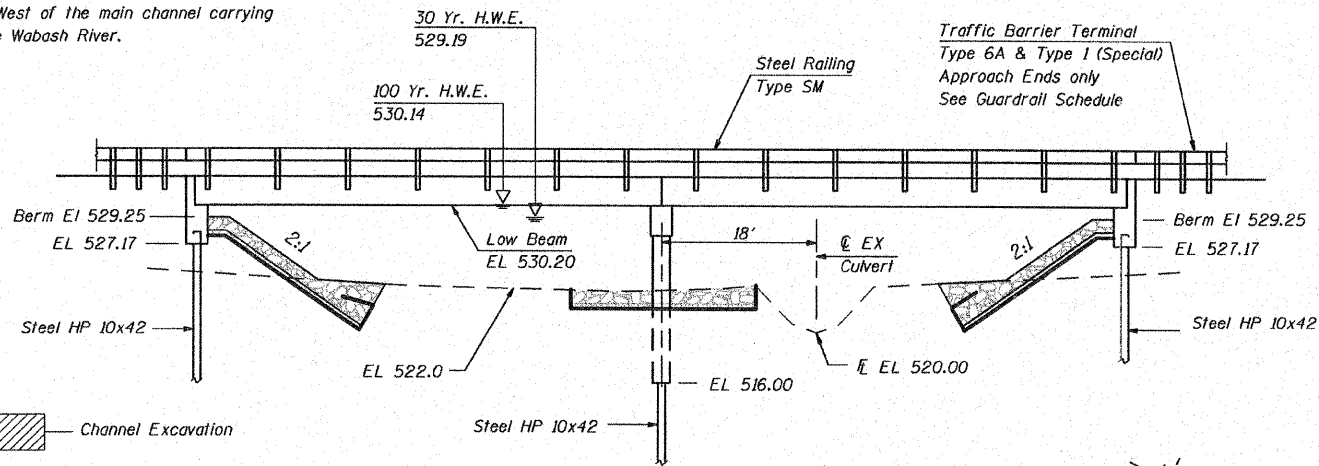
MISCELLANEOUS DETAILS  
 EVERGREEN AVENUE  
 CITY OF EFFINGHAM, ILLINOIS  
 COUNTY OF EFFINGHAM, ILLINOIS

File name: S:\DWG\05\05227.dwg\Details.dwg  
 Plot date: 02/09/11 at 08:25

B.M. #4-Chiseled "□" in middle of West concrete headwall on box culvert just North of bridge (500'±) Elev 528.88

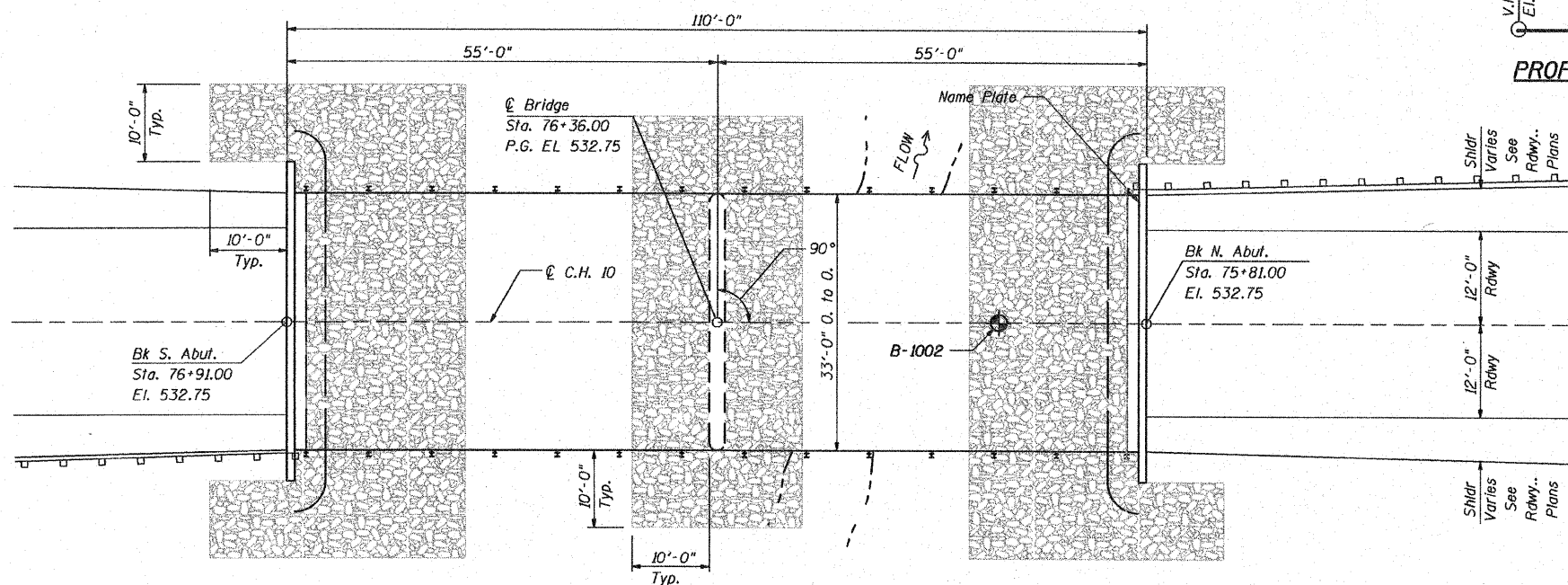
EXISTING STRUCTURE:  
6' x 8' concrete box culvert located approximately 700' North and West of the main channel carrying CH 10 over Little Wabash River.

No Salvage.



- Channel Excavation
- Structure Excavation
- Stone Dumped Riprap Class A5

ELEVATION



PLAN

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec (SD1) = 0.149  
Design Spectral Acceleration at 0.2 sec. (SDs) = 0.360  
Soil Site Class = C

**WATERWAY INFORMATION**

Drainage Area	213.3	Sq.Mi.
Required Opening (15yr.)	610	Sq.Ft.
Provided Opening	610	Sq.Ft.
Present Opening	48	Sq.Ft.
30 yr. Discharge	16,377	cfs
100yr. Discharge	21,060	cfs
Created Head at Bridge (100yr.)	<1.0	Fi.
Created Head 1000' upstream (100yr.)	<0.5	Fi.

**DESIGN STRESSES**

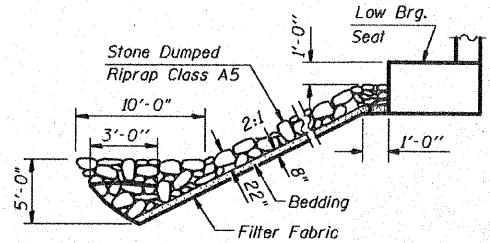
Precast Unit  
f'c = 6,000 psi  
f'ci = 5,000 psi  
f's = 270,000 psi  
f'si = 189,000 psi

Cast-in-Place Unit  
f'c = 3,500 psi  
f's = 60,000 psi  
n = 9

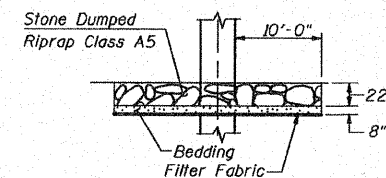
LOADING HL-93  
DESIGN SPECIFICATION:  
2010 AASHTO LRFD Bridge Design Specifications, 5th Edition  
FUTURE WEARING SURFACE: 50 lb/Sq. Ft.

LITTLE WABASH RIVER TRIB.  
BUILT 20XX BY  
EFFINGHAM COUNTY  
SEC. 04-00084-01-PV  
CH 10 STA. 76+36.00  
STR. NO. 025-3223 LOADING HL-93

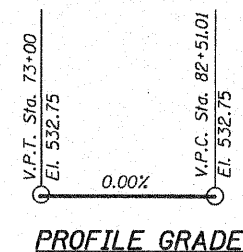
NAME PLATE  
(See Std. 515001)



STONE RIPRAP ANCHOR DETAIL



STONE RIPRAP AT PIER DETAIL



PROFILE GRADE

**GENERAL NOTES**

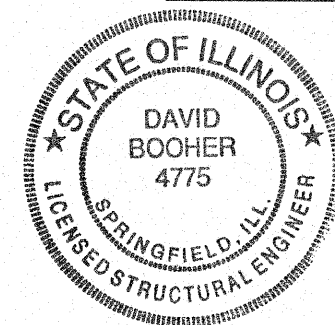
See Proposal for Boring Data  
The Contractor shall drive one steel test pile at each abutment and at the pier as directed by the Engineer before ordering the remainder of the piles.  
Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

**GUARDRAIL SCHEDULE**

STA.	TO STA.	LT/RT	TRAF BAR TERM 6A (EACH)	TRAF BAR TERM TI SPL TAN (EACH)	GUARDRAIL MARKER TYPE A (EACH)	TERMINAL MARKER DA (EACH)
74+88	75+38	RT		1	1	1
75+38	75+82	RT	1		1	
76+90	77+34	LT	1		1	
77+34	77+84	LT		1	1	1
TOTALS			2	2	4	2

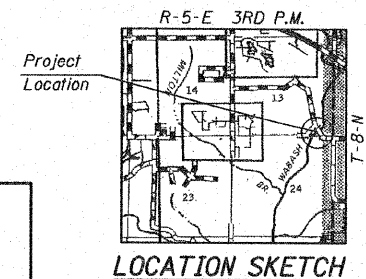
**BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		166	166
Concrete Structures	Cu. Yd.		68.9	68.9
Reinforcement Bars	Pound		5790	5790
Precast Prestressed Concrete				
Deck Beams (27" Depth)	Sq. Ft.	3562		3562
Steel Railing, Type SM	Foot	216		216
Furnishing Steel Piles HP 10 x 42	Foot		1242	1242
Driving Piles	Foot		1242	1242
Test Pile Steel HP 10 x 42	Each		3	3
Concrete Encasement	Cu. Yd.		4.2	4.2
Name Plates	Each	1		1
Stone Dumped Riprap, Class A5	Ton		765	765
Filter Fabric	Sq. Yd.		579	579
Traffic Barrier Terminal, Type 6A	Each	2		2
Traffic Barrier Terminal, Type 1 (Special) Tangent	Each	2		2
Guardrail Markers, Type A	Each	4		4
Terminal Marker - Direct Applied	Each	2		2



I certify that to the best of my knowledge, information and belief, this bridge 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 Standard Specifications for Highway Bridges.

David Booher, Illinois S.E. 081-004775  
Expires 11-30-2012

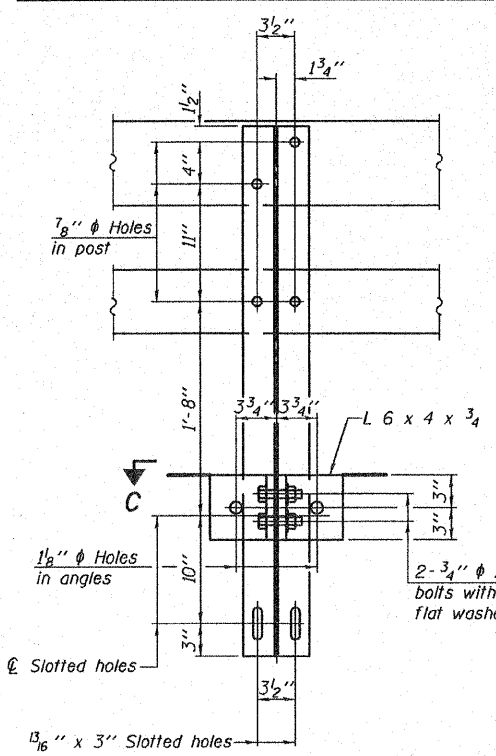
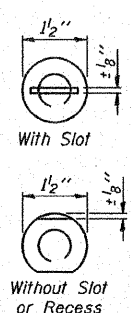
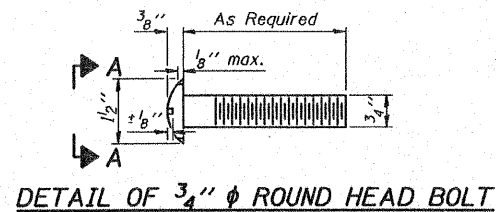


LOCATION SKETCH

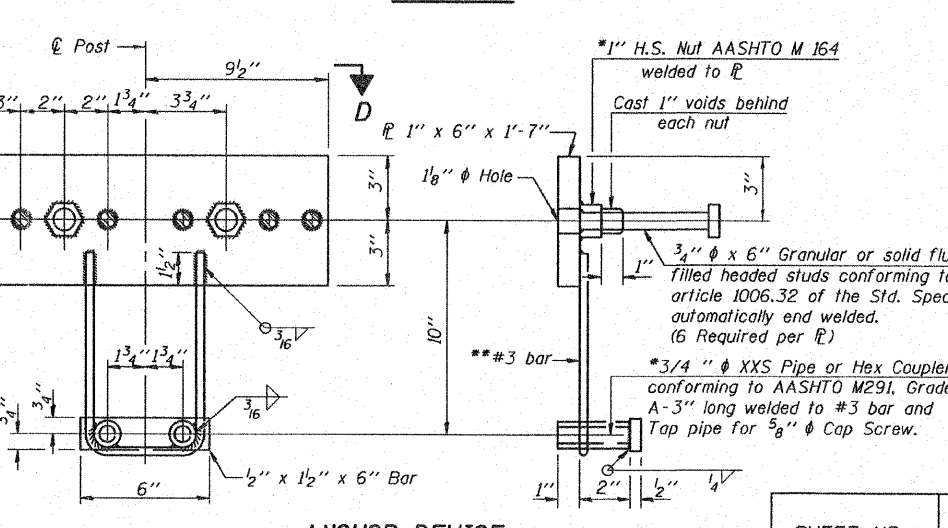
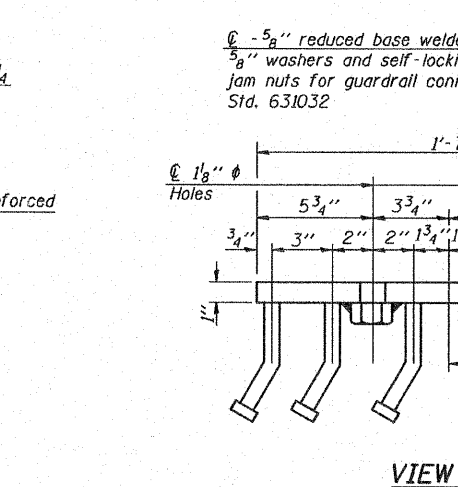
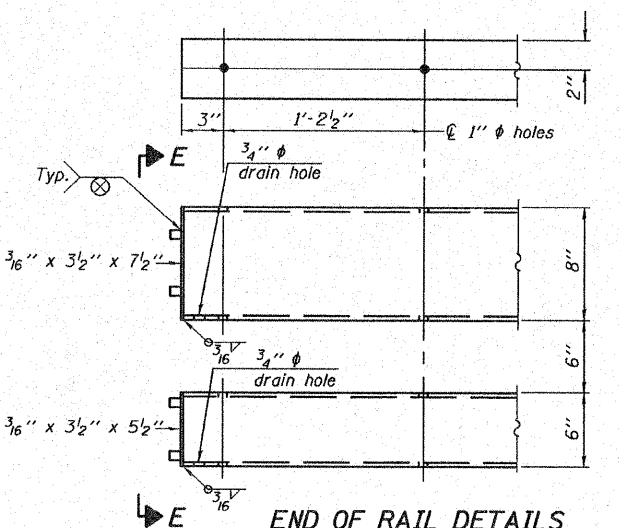
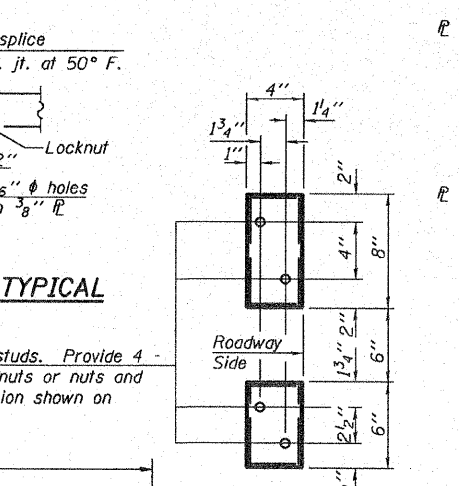
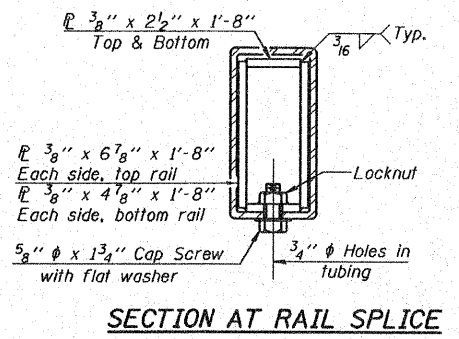
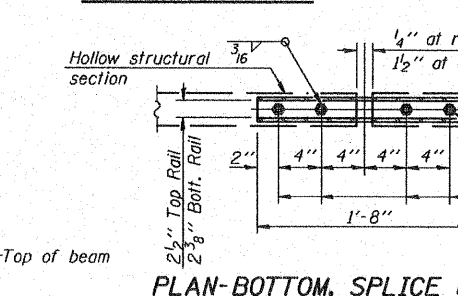
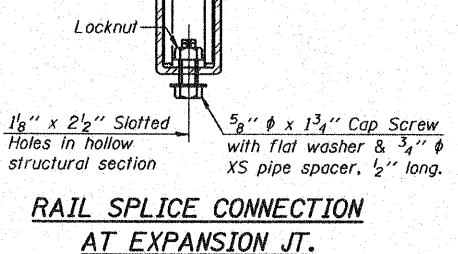
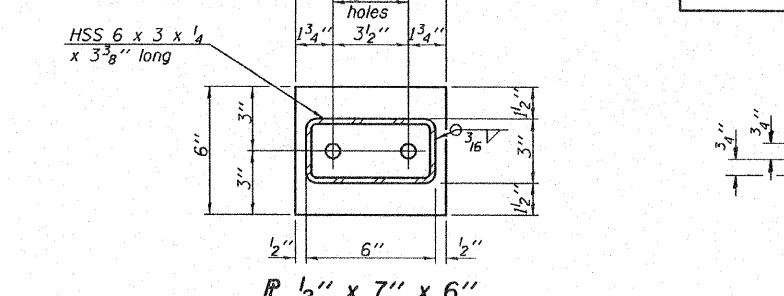
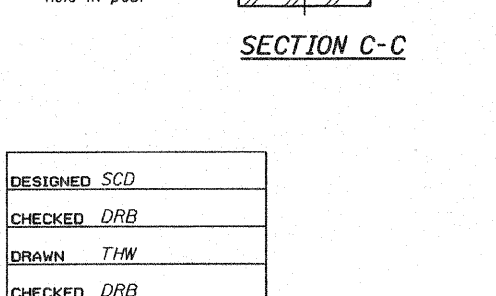
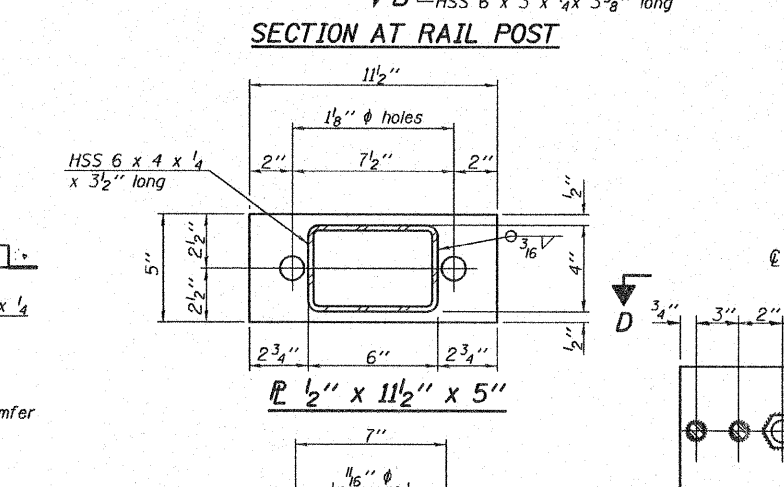
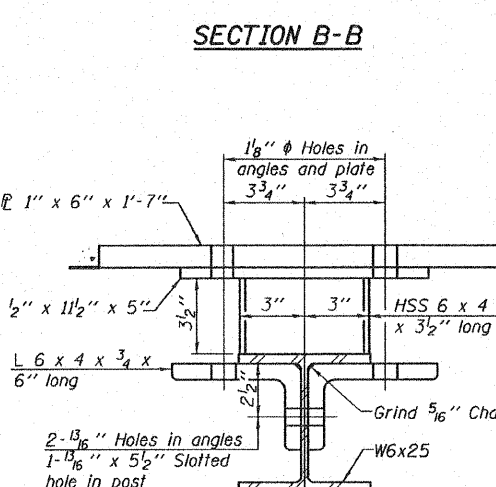
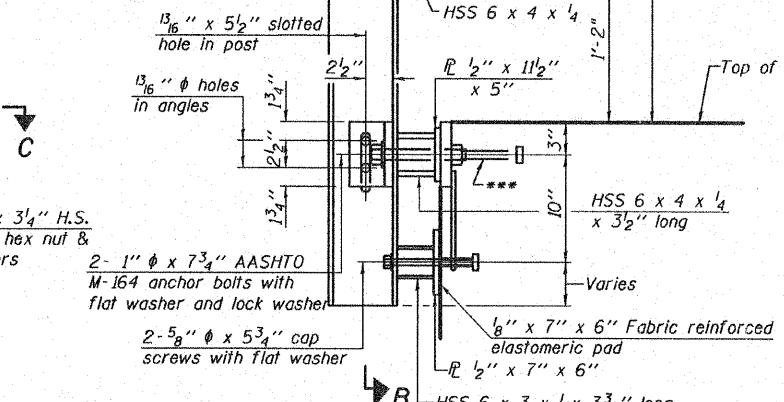
**GENERAL PLAN AND ELEVATION**  
C.H. 10 OVER  
LITTLE WABASH TRIBUTARY  
SEC. 04-00084-01-PV  
EFFINGHAM COUNTY  
STRUCTURE NO. 025-3223  
STA. 76+36.00

SHEET NO. 1 of 7 SHEETS	ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 10	04-00084-01-PV	EFFINGHAM	139	56
CONTRACT NO. 95639			ILLINOIS FED. AID PROJECT		





**VIEW A-A**  
 4- 3/4"  $\phi$  x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8"  $\phi$  holes in hollow structural section may be drilled in the field.



**Notes:**  
 All field drilled holes shall be coated with an approved zinc rich paint before erection.  
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.  
 All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.  
 \*\*The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.  
 \*\*Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type SM	Foot	216

See sheet 4 of 7 for Rail Post Spacing.

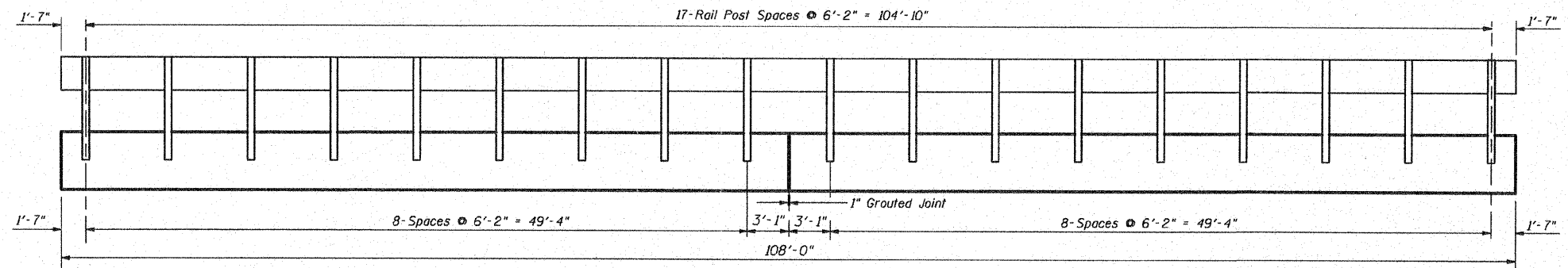
**STEEL RAILING, TYPE SM  
 STRUCTURE NO. 025-3223**

DESIGNED SCD
CHECKED DRB
DRAWN THW
CHECKED DRB

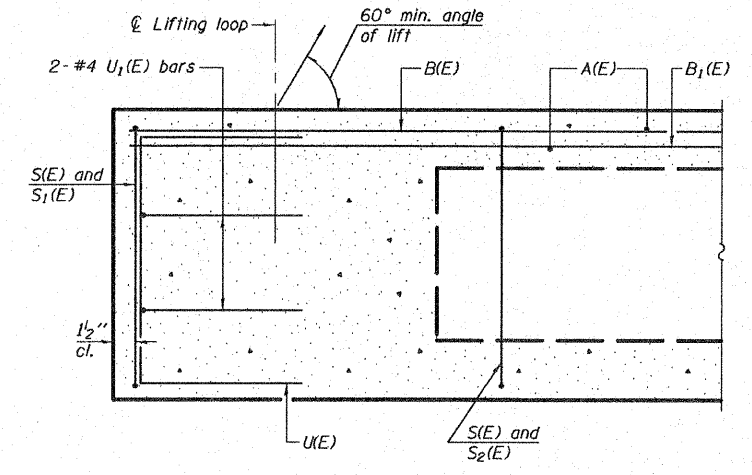
R-34HMAWS 5-16-08 (6'-3" Maximum Post Spacing) (1 1/4" minimum to 3 1/8" maximum HMA thickness)

\*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

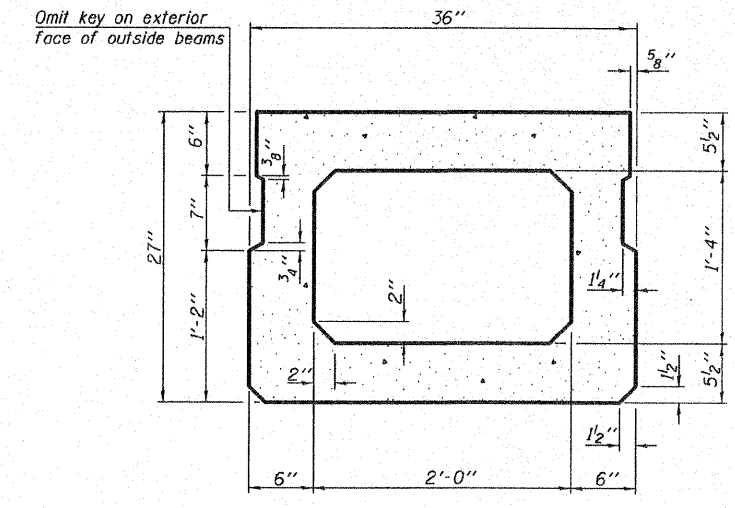
SHEET NO. 2 of 7 SHEETS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 10	04-00084-01-PV	EFFINGHAM	139	57
CONTRACT NO. 95639					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					



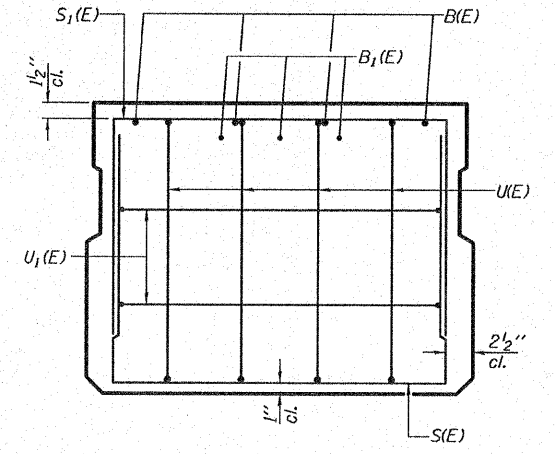
**RAIL POST SPACING ON OUTSIDE BEAMS - ELEVATION VIEW**  
See sheet 2 of 7 for Railing Details



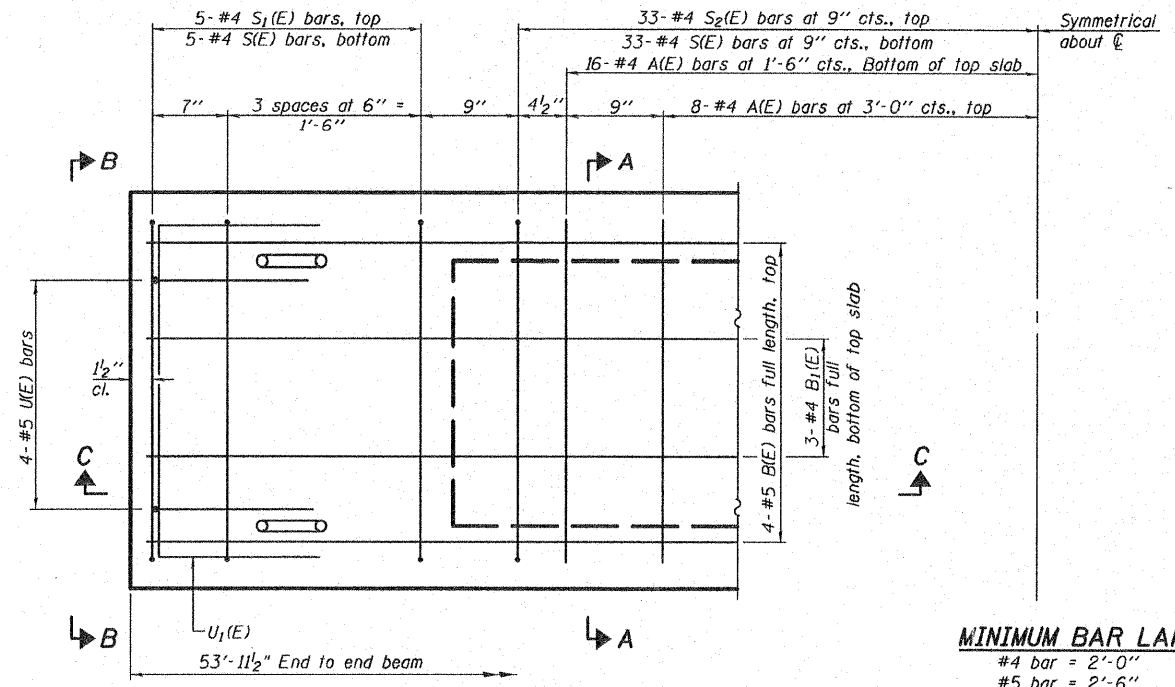
**SECTION C-C**



**SECTION A-A**  
(Showing dimensions)



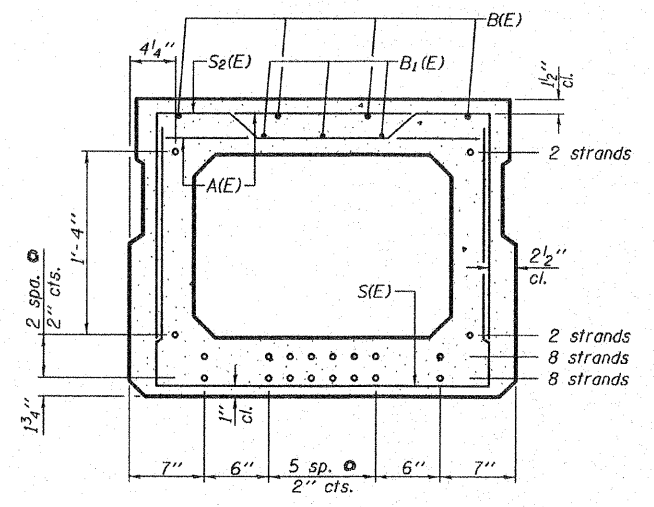
**VIEW B-B**



**PLAN VIEW**

**MINIMUM BAR LAP**  
#4 bar = 2'-0"  
#5 bar = 2'-6"

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



**SECTION A-A**

(Showing reinforcement and permissible strand locations)  
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

**BAR LIST**  
**ONE BEAM ONLY**  
(For information only)

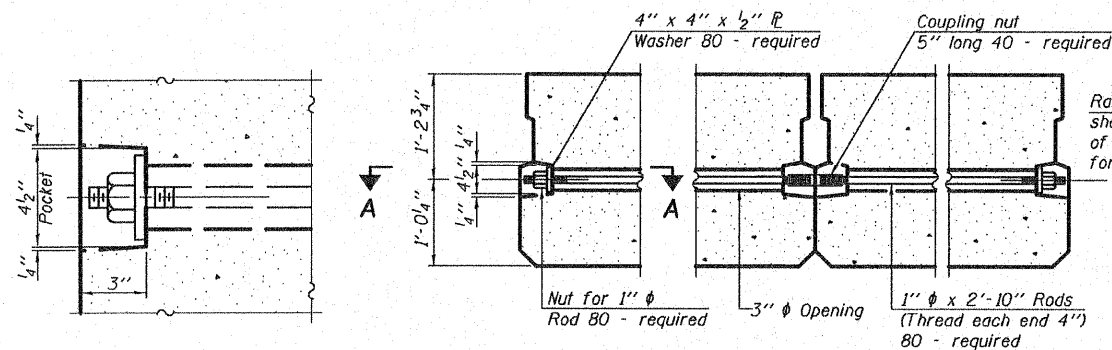
Bar	No.	Size	Length	Shape
A(E)	48	#4	2'-7"	—
B1(E)	4	#5	53'-9"	—
B2(E)	3	#4	53'-9"	—
S(E)	76	#4	6'-5"	⌊
S1(E)	10	#4	5'-11"	⌊
S2(E)	66	#4	6'-2"	⌊
U(E)	8	#5	4'-6"	⌊
U1(E)	4	#4	5'-0"	⌊

Note: See sheet 4 of 7 for additional details and Bill of Material.

**27" X 36" PPC DECK BEAMS**  
**STRUCTURE NO. 025-3223**

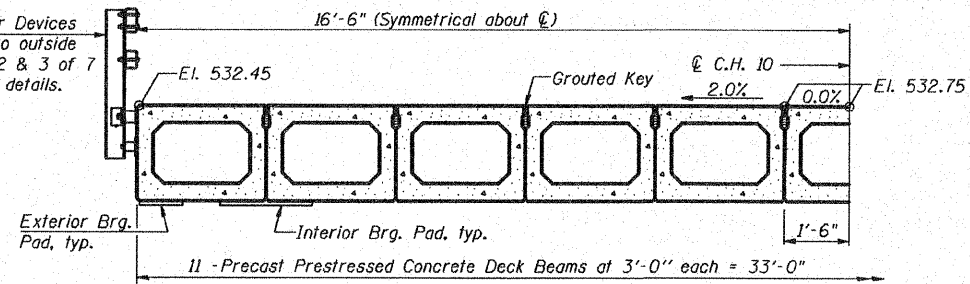
DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	DRB

SHEET NO. 3 of 7 SHEETS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 10	04-00084-01-PV	EFFINGHAM	139	58
	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 95639	

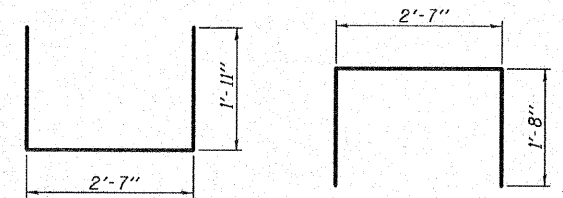


SECTION A-A

TYPICAL TRANSVERSE TIE ASSEMBLY

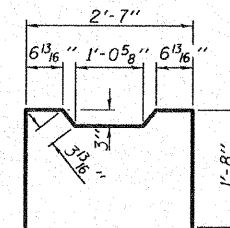


HALF CROSS SECTION



BAR S1(E)

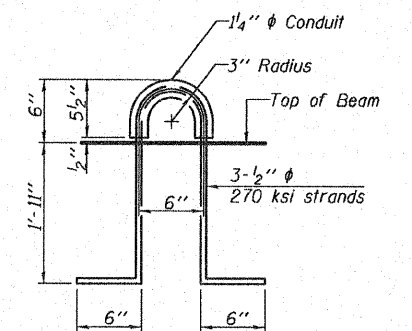
BAR S2(E)



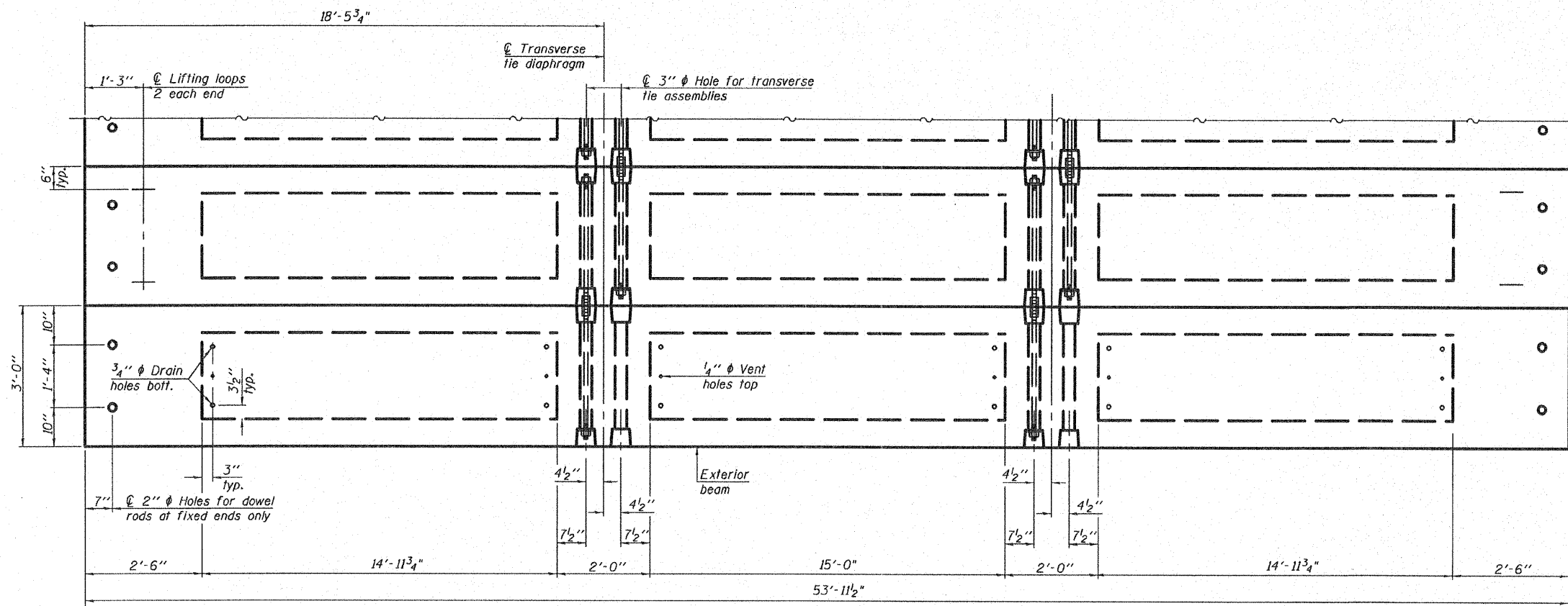
BAR U1(E)

BAR U2(E)

BAR U3(E)



LIFTING LOOP DETAIL



PLAN VIEW

BILL OF MATERIAL

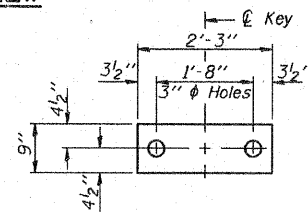
Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	3,562
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Note: Connect beams in pairs with the transverse tie configuration shown.

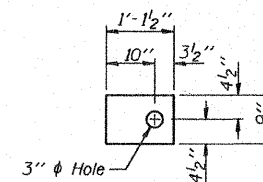
NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	DRB



FABRIC BEARING PAD (Interior)



FABRIC BEARING PAD (Exterior)

FIXED

Notes: All bearing pads shall be 1" thick. Omit holes when using expansion bearings.

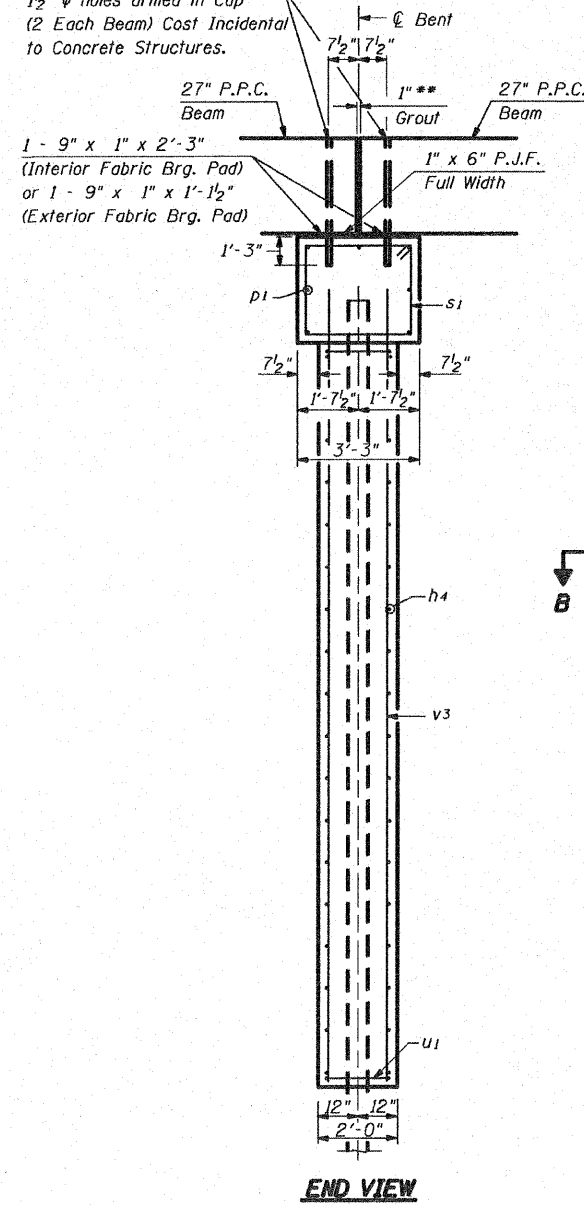
27" X 36" PPC DECK BEAM DETAILS  
STRUCTURE NO. 025-3223

SHEET NO. 4 of 7 SHEETS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 10	04-00084-01-PV	EFFINGHAM	139	59
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 95639					

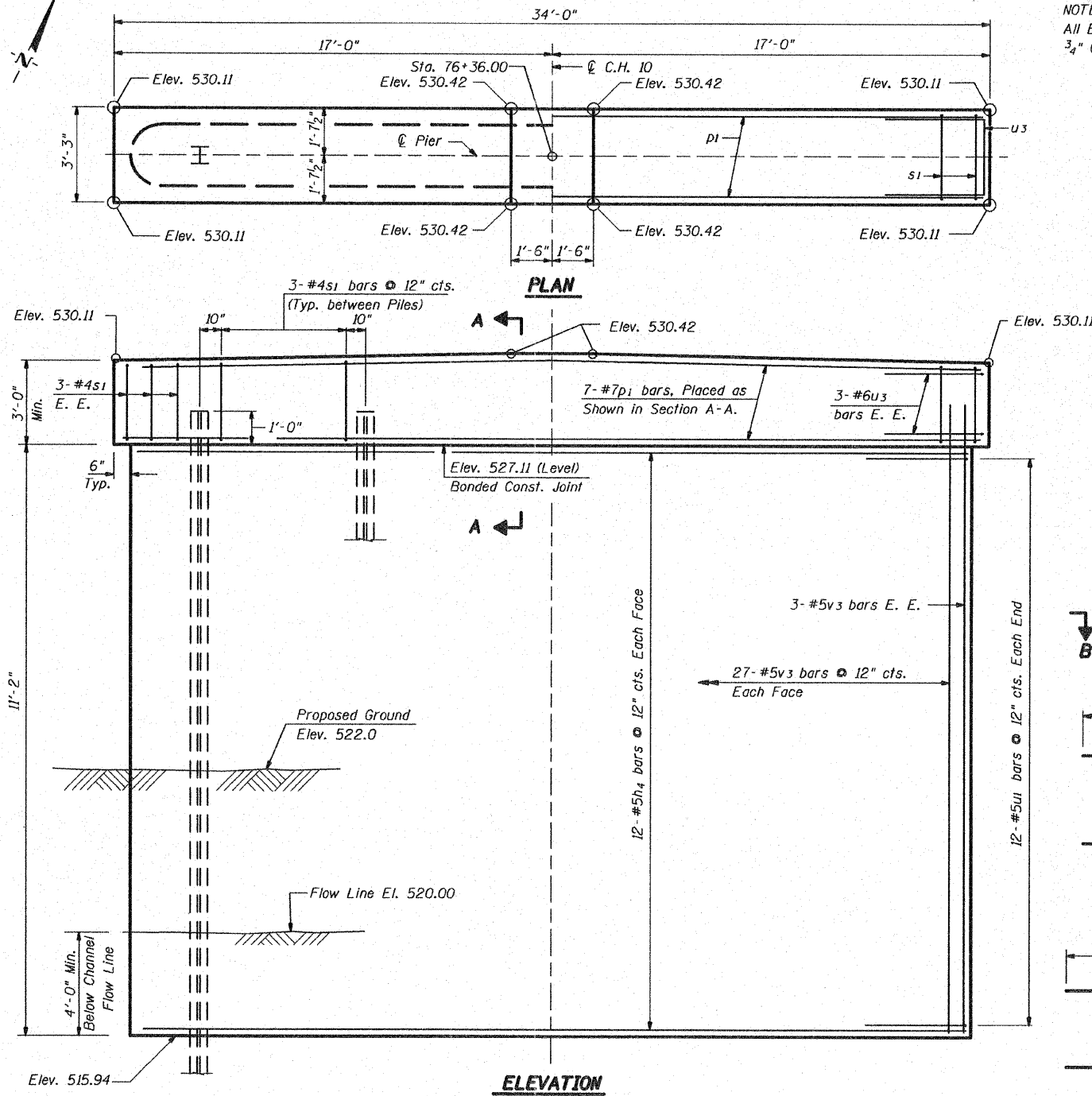
\*\* 1" Joint shall be packed with a very dry mix of 2:1 sand and P.C. mortar. 1" Dimension may Vary plus or Minus to accommodate Tolerance in Beam Lengths.

\*\*\* Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hours) prior to grouting Shear Keys.

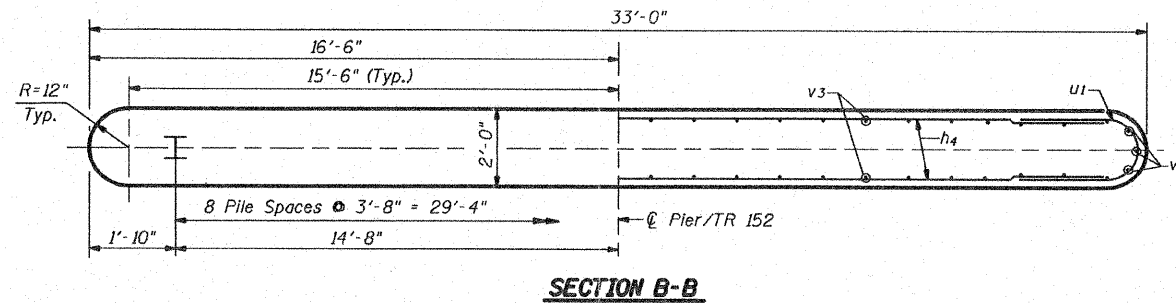
\*\*\* 1"  $\phi$  x 2'-6" Dowel Rods in 1/2"  $\phi$  holes drilled in Cap (2 Each Beam) Cost Incidental to Concrete Structures.



END VIEW

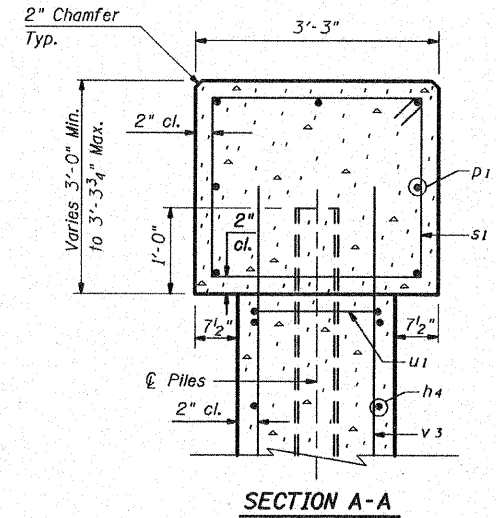


ELEVATION

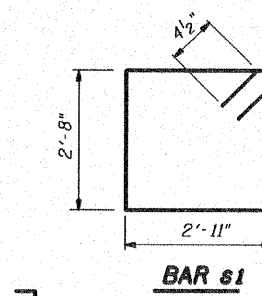


SECTION B-B

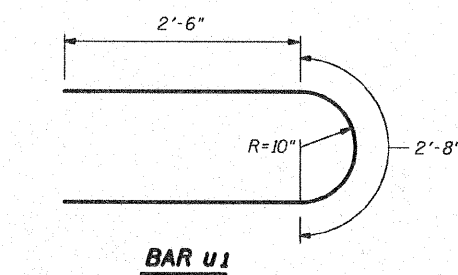
NOTE:  
All Edges shall have Standard 3/4" Chamfer except as Noted.



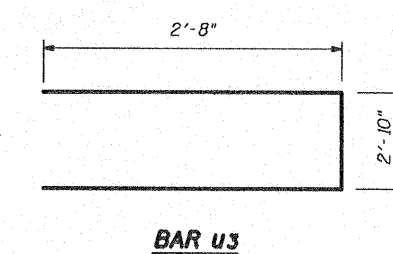
SECTION A-A



BAR s1



BAR u1



BAR u3

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h4	24	#5	30'-4"	—
p1	7	#7	33'-6"	—
s1	33	#4	11'-11"	U
u1	24	#5	7'-8"	U
u3	6	#6	8'-2"	—
v3	72	#5	12'-10"	—

ITEM	UNIT	QUANTITY
Reinforcement Bars	Pound	2740
Concrete Structures	Cu. Yd.	39.9
Furnishing Steel Piles, HP 10 x 42	Foot	552
Driving Piles	Foot	552
Test Piles Steel HP 10 x 42	Each	1
Structure Excavation	Cu. Yd.	66

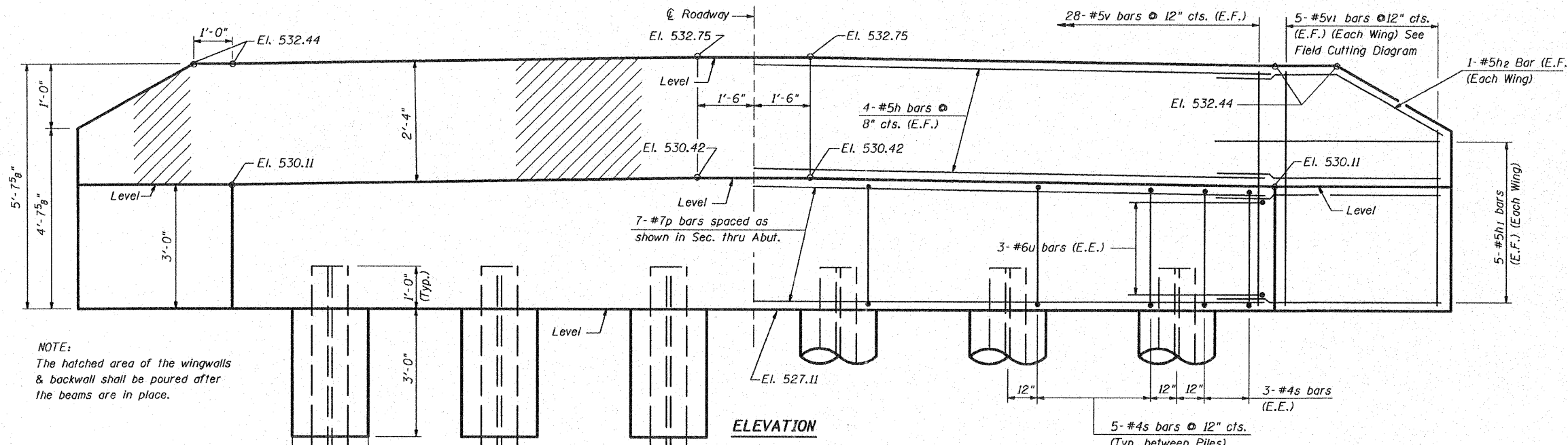
PILE DATA

Type & Size	=	HP 10 x 42
Nominal Required Bearing	=	335 kips
Allowable Resistance Available	=	167 kips
Estimated Length	=	69'
Number of Production Piles	=	8
Number of Test Piles	=	1

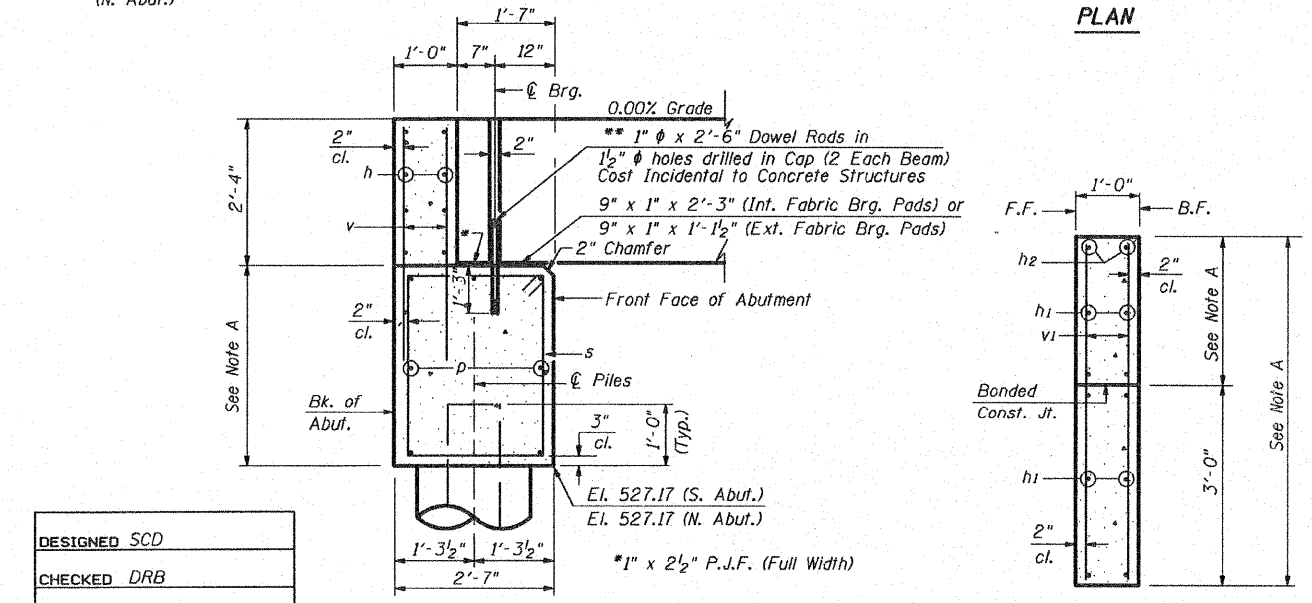
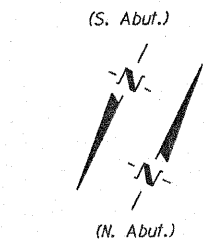
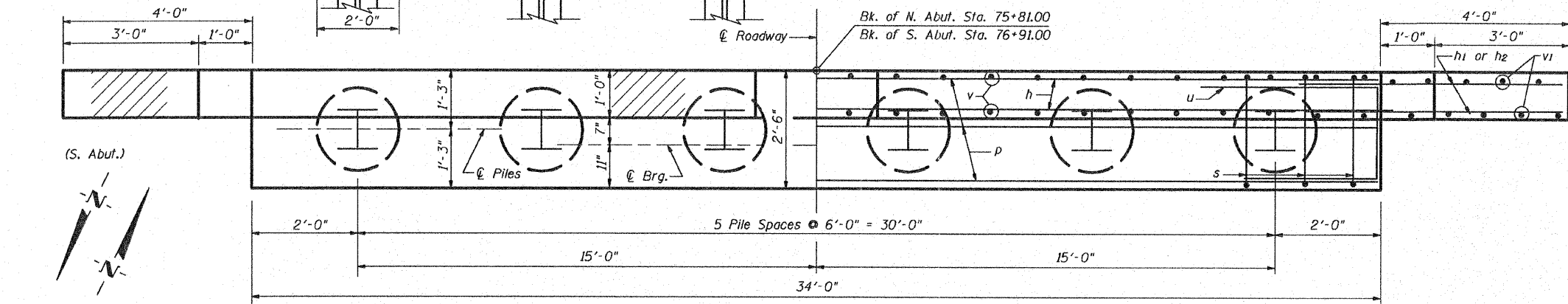
PIER DETAIL  
STRUCTURE NO. 025-3223

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	DRB

SHEET NO.	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5 of 7 SHEETS	CH 10	04-00084-01-PV	EFFINGHAM	139	60
			CONTRACT NO. 95639		
FED. ROAD DIST. NO. -		ILLINOIS	FED. AID PROJECT		

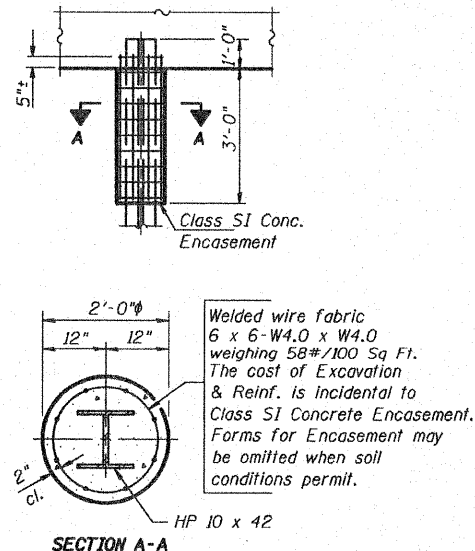


NOTE:  
The hatched area of the wingwalls & backwall shall be poured after the beams are in place.

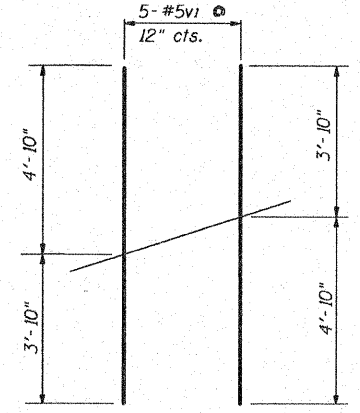


**SECTION THRU ABUTMENT**  
\*\*Dowel Rods to be grouted after beams are in place and prior to grouting the shear keys.

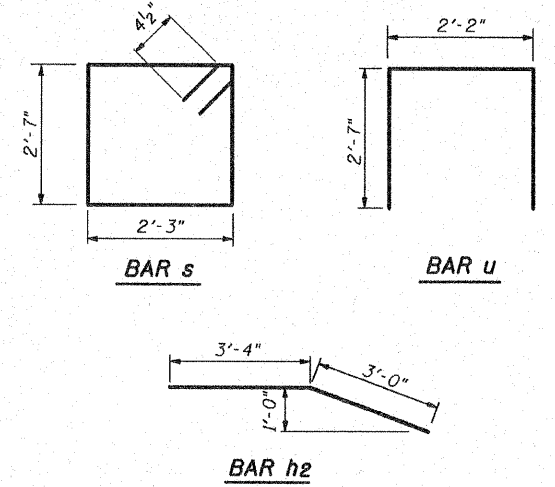
**SECTION THRU WINGWALLS**  
NOTE A: See Elev. given on Elev. View



**PILE ENCASEMENT DETAIL**



**FIELD CUTTING DIAGRAM**  
Order v1 bars full length, cut to fit in field



**ABUTMENT DETAIL**  
STRUCTURE NO. 025-3223

**BILL OF MATERIAL**  
(2 Abutments)

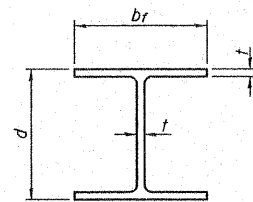
Bar	No.	Size	Length	Shape
h	16	#5	33'-6"	
h1	40	#5	6'-2"	
h2	8	#5	6'-4"	
p	14	#7	33'-6"	
s	62	#4	10'-5"	
u	12	#6	7'-4"	
v	112	#5	4'-0"	
v1	20	#5	8'-8"	
<b>ITEM</b>				
<b>Reinforcement Bars</b>		<b>Unit</b>	<b>Quantity</b>	
Concrete Structures		Pound	3050	
Furnishing Steel Piles, HP 10x42		Cu. Yd.	29.0	
Driving Piles		Lin. Ft.	690	
Test Piles Steel HP 10 x 42		Each	2	
Structure Excavation		Cu. Yd.	100	
Concrete Encasement		Cu. Yd.	4.2	

**PILE DATA**

- Type & Size = Steel HP 10 x 42
- Nominal Required Bearing = 335 kips
- Allowable Resistance Available = 167 kips
- Estimated Length = 69'
- Number of Production Piles = 10
- Number of Test Piles = 2

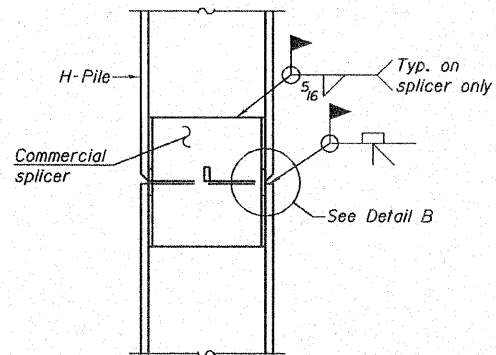
DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	DRB

SHEET NO. 6 of 7 SHEETS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 10	04-00084-01-PV	EFFINGHAM	139	61
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 95639					

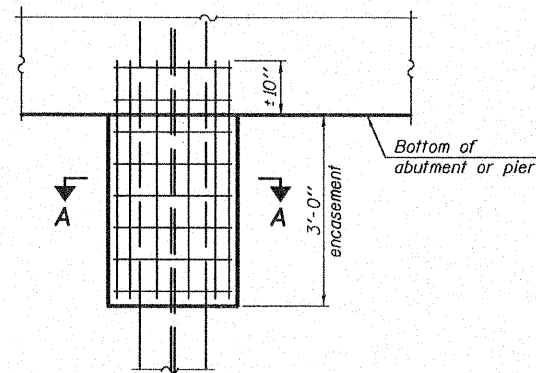


**STEEL PILE TABLE**

Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

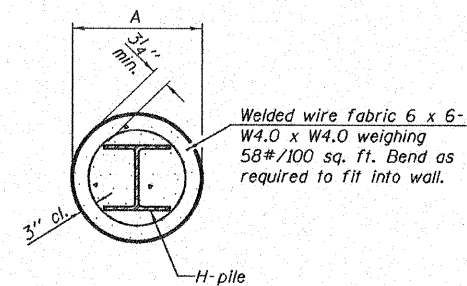


**ELEVATION**



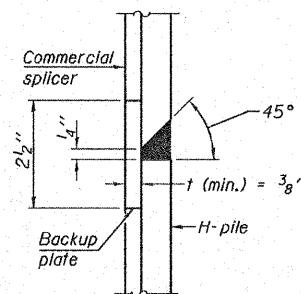
**ELEVATION**

**PILE ENCASEMENT**



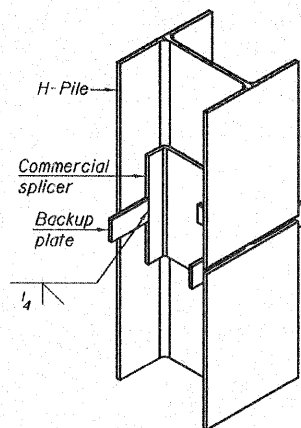
**SECTION A-A**

Note:  
Forms for encasement may be omitted when soil conditions permit.

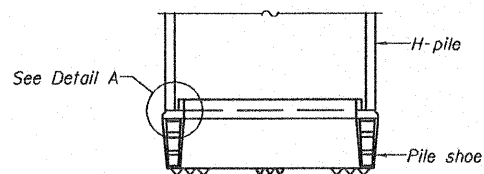


**DETAIL "B"**

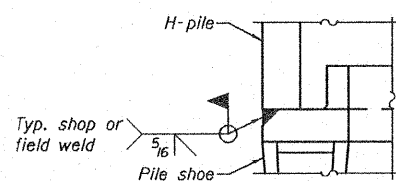
**WELDED COMMERCIAL SPLICE**



**ISOMETRIC VIEW**

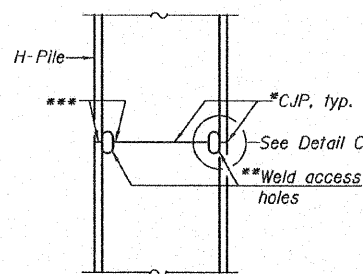


**ELEVATION**



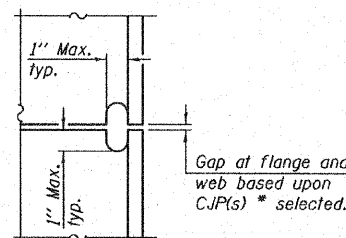
**DETAIL A**

**H-PILE SHOE ATTACHMENT**

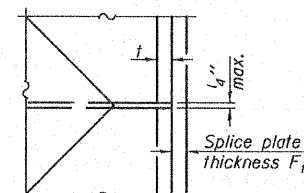


**ELEVATION**

**COMPLETE PENETRATION WELD SPLICE**



**DETAIL C**



**DETAIL D**

**WELDED PLATE FIELD SPLICE**

Note:  
The steel H-piles shall be according to AASHTO M270 Grade 50.

\*Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.

\*\*Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.

\*\*\*Interrupt welds 1/4" from end of each pile.

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	DRB

F-HP

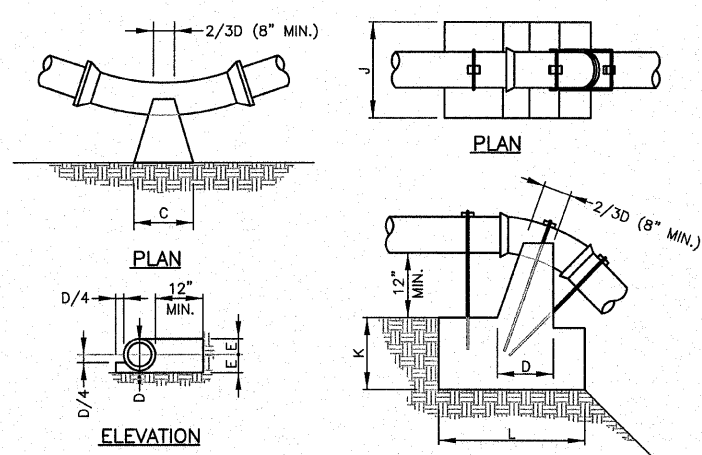
9-3-07

**H PILE DETAIL  
STRUCTURE NO. 025-3223**

SHEET NO. 7 of 7 SHEETS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 10	04-00084-01-PV	EFFINGHAM	139	62
	CONTRACT NO. 95639				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

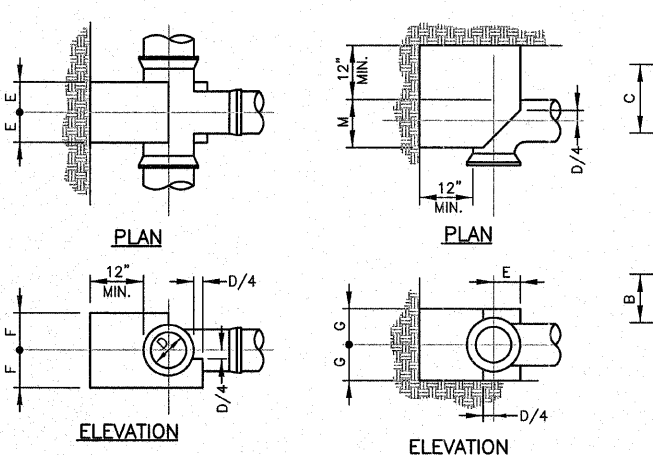
**SPECIAL PROVISIONS FOR WATER MAIN CONSTRUCTION**

- The proposed water main shall be constructed in accordance with the plans and "THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS," July, 2009.
- The minimum depth of bury shall be 42".
- All water mains must have a 12 gauge single strand tracer wire placed in the trench with the pipe during construction. The tracer wire shall be brought to above-grade at locations designated by the Director of Water. Locating Stations shall be furnished and installed by the Contractor. In no case shall tracer wire be more than 1,000 feet between Locating Stations. There shall be no splices between Locating Stations unless approved by the Director of Water. If allowed, the splices shall be clearly marked on the as-built plans.
- The completed water main shall be pressure tested at 100 PSI for a minimum of one (1) hour. The test shall be observed by City personnel.
- DISINFECTION shall be in accordance with "THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS," July, 2009. The location and frequency of sampling shall be shown in a sampling schedule in the construction plans. Sampling and analysis is the responsibility of the contractor. All sample results shall be submitted to the Director of Water.
- Protection of the water main from sanitary sewers, storm sewers, drains and other sources of potential contamination shall be in accordance with IEPA Rules and Regulations.
- FIRE HYDRANTS shall be installed at ten (10) feet from back of curb line or edge of surface or as directed by the Fire Official. Fire Hydrants shall also have a gate valve between it and the water main.
- IN-LINE GATE VALES shall be installed at locations determined by the Director or Water. These valves allow isolation of smaller sections of water main in the event of a main break or other emergency situations.
- BACKFILL OF WATERLINE UNDER PERMANENT TYPE SURFACES. Where the waterline is located in an area which now or will have a permanent type street or sidewalk surface, the backfill of the pipe to the level of the bottom of the permanent type surface shall be made with the materials specified for Select Granular Backfill. The remainder of the trench shall be backfilled the Aggregate Base Course Type B. The Aggregate Base Course, Type B shall be a minimum of eight (8) inch depth or as indicated on the plans.
- POLYVINYL CHLORIDE (PVC) PIPE under this provision shall be manufactured in the U.S.A. and shall be class 200 psi for water main with a Standard Dimension Ratio of 21 of the diameter specified. PVC Pipe shall meet all requirements of Type I, Grade I or Type I, Grade II of ASTM D1784 for PVC Compound, ASTM D2241.
- DUCTILE CAST IRON PIPE (DIP) under this provision shall be manufactured in the U.S.A. under the latest revision of Specification ANSI A21.51 (AWWA C151). Pipe shall be asphaltic coated and cement lined per the latest revision of ANSI A 21.4 (AWWA C104) and supplied with compression slip joints meeting the latest revision of ANSI A 21.11 (AWWA C110) unless otherwise specified on the Plans. The pipe is to be supplied in the size and class thickness as specified on the Plans.
- FITTINGS under this provision shall be manufactured in the U.S.A. and shall be ductile iron or gray iron, short body, lightweight and rated for 250 psi working pressure. All fittings shall be furnished with Mechanical Joints meeting or exceeding the latest revision of ANSI A21.11 (AWWA C110) and ANSI A21.10 (AWWA C110) unless otherwise indicated on the Material Proposal. All fittings shall be asphaltic coated and cement lined per the latest revision of ANSI A21.4 (AWWA C104).
- GATE VALVES under this provision shall be manufactured in the U.S.A. The minimum design, material and workmanship required for all gate valves shall conform to the specifications of AWWA C-500 and shall be furnished with "O" ring stem seals, non-rising stem and open left (counter clockwise). Gate valves shall be resilient seat type conforming to the standards of AWWA C-509.
- SST TAPPING SLEEVES under this provision shall be manufactured in the U.S.A. and the sleeve shall be 304 stainless steel body with a ductile iron flange that has a rubber seal. The sleeve shall have a full gridded SBR rubber gasket that wraps completely around the pipe for the full length of the sleeve. All nuts and bolts shall be 304 stainless steel. The sleeve shall have a built tolerance for variances in type and class for each pipe materials as shown on the material proposal. All Tapping Sleeves shall be furnished with a 304 stainless steel 3/4" NPT test plug for pressure testing and have a locator groove on the mating surface between tapping valve and sleeve to allow positive alignment (see specifications for Tapping Valve). Tapping sleeve shall be ROMAC, POWERSEAL, MUELLER.
- TAPPING VALVES under this provision shall be manufactured in the U.S.A. and shall be furnished with a combination Flange and Mechanical Joint for cast iron branch. These valves shall be resilient seat type conforming to AWWA C-509 except that the seat rings are to be of larger diameter to permit entry of full size tapping machine cutters. Valves are to be furnished with "O" ring stem seals, non-rising stem, are to open left (counter clockwise) and shall meet or exceed AWWA C-500 or C-509 Standards. Valves shall have a raised lip on the surface between valve and tapping sleeve (see specifications for SST TAPPING SLEEVE) which ensures positive alignment.
- VALVE BOXES under this provision shall be manufactured in the U.S.A. and shall be cast iron of suitable pattern for use with the supplied valves. Valve boxes shall be screw adjustable to lengths specified in Plans and have covers of at least six inch diameter. The word "WATER" shall be cast on the lid of each box.
- CUTTING-IN VALVES AND SLEEVES shall conform to Clow F-5067 and F-1220 or approved equal.
- STEEL CASING PIPE supplied under these provisions shall be 20'+1/4" in length unless otherwise specified, bituminous coated and meet all requirements of Specification ASTM A53, Grade B, for size and wall thickness as specified on the Plans.
- ELASTOMERIC SEALS (GASKETS) used for push on joints shall comply with ASTM Standard F477.
- FIRE HYDRANTS shall be Mueller A-423, 5 1/4" main valve opening, three way with 2 hose nozzles and 1 pumper nozzle 6" shoe, open right, Chicago Thread on nozzles, yellow with the bury as specified on the Schedule of Prices. These specifications have been adopted by the City of Effingham Water and Fire Department as the Standard Fire Hydrant for the City of Effingham and alternates will not be considered.
- The Contractor shall install restrained joints on all fittings. The restrained joint system shall consist of a UNI-FLANO2 Series 1500s "circle lock" for Ductile Iron and PVC pipe or equal. The retainer shall supply full circle contact and support of the pipe wall. The retainer shall also utilize screws that are designed to twist off at the correct installation torque leaving a hex head for future removal.
- All testing (pressure and sampling) shall be included in the cost of Water Main.



THRUST BLOCK FOR HORIZONTAL BENDS

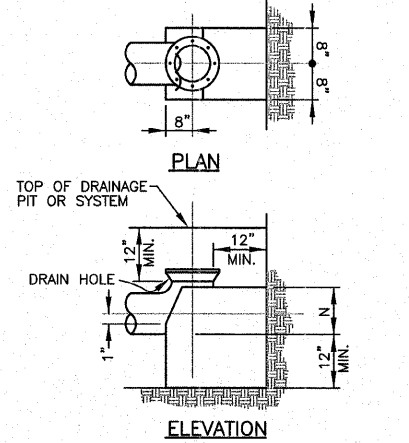
THRUST BLOCK FOR VERTICAL BENDS



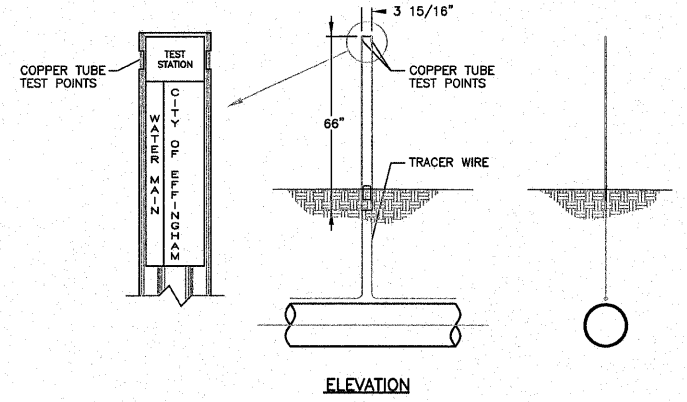
THRUST BLOCK FOR TEES

THRUST BLOCK FOR HORIZONTAL ELBOWS

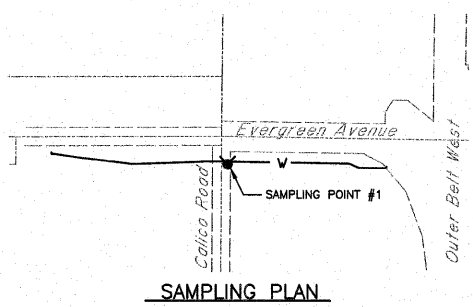
DIMENSION TABLE										
D	B	C	E	F	G	J	K	L	M	N
4'-8 1/2"	11"	1'-5"	8"	8"	8"	2'-6"	2'-6"	3'-6"	10"	10"
8"	1'-2"	1'-8"	9"	10"	9"	3'-0"	2'-9"	4'-0"	12"	12"
10"	1'-10"	2'-10"	1'-3"	1'-4"	1'-3"	4'-10"	4'-6"	6'-6"	1'-8"	1'-8"
12"	2'-0"	3'-0"	1'-6"	1'-8"	1'-8"	N/A	N/A	N/A	2'-0"	2'-0"



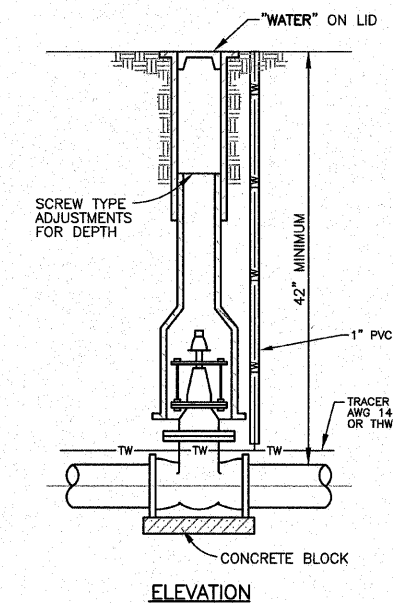
THRUST BLOCK AND DRAINAGE FOR FLUSHING/FIRE HYDRANTS



TRACER WIRE TEST STATION

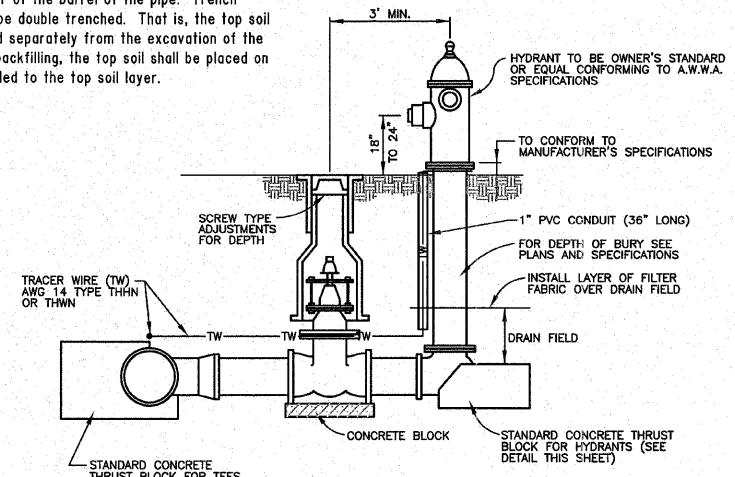


SAMPLING PLAN

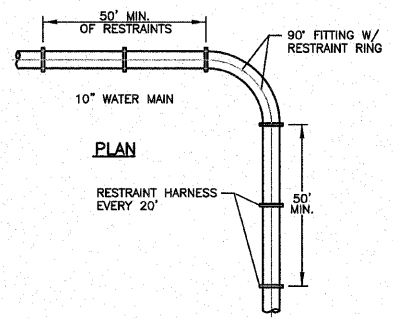


VALVE BOX INSTALLATION TO BE INSTALLED AT ROAD R.O.W. WHERE POSSIBLE

**TRENCH WIDTH**  
The trench width at the ground surface may vary with, and depend upon, its depth, the nature of the ground encountered, and surface structures to be preserved. The minimum clear width of unshelved or shelved trench measured at the horizontal diameter of the pipe shall be six inches (6") greater than the outside diameter of the barrel of the pipe. Trench widths exceeding 18 inches shall be double trenched. That is, the top soil shall be excavated and stockpiled separately from the excavation of the remainder of the trench. When backfilling, the top soil shall be placed on top after the trench has been filled to the top soil layer.



FLUSHING/FIRE HYDRANT WITH AUXILIARY VALVE SETTING

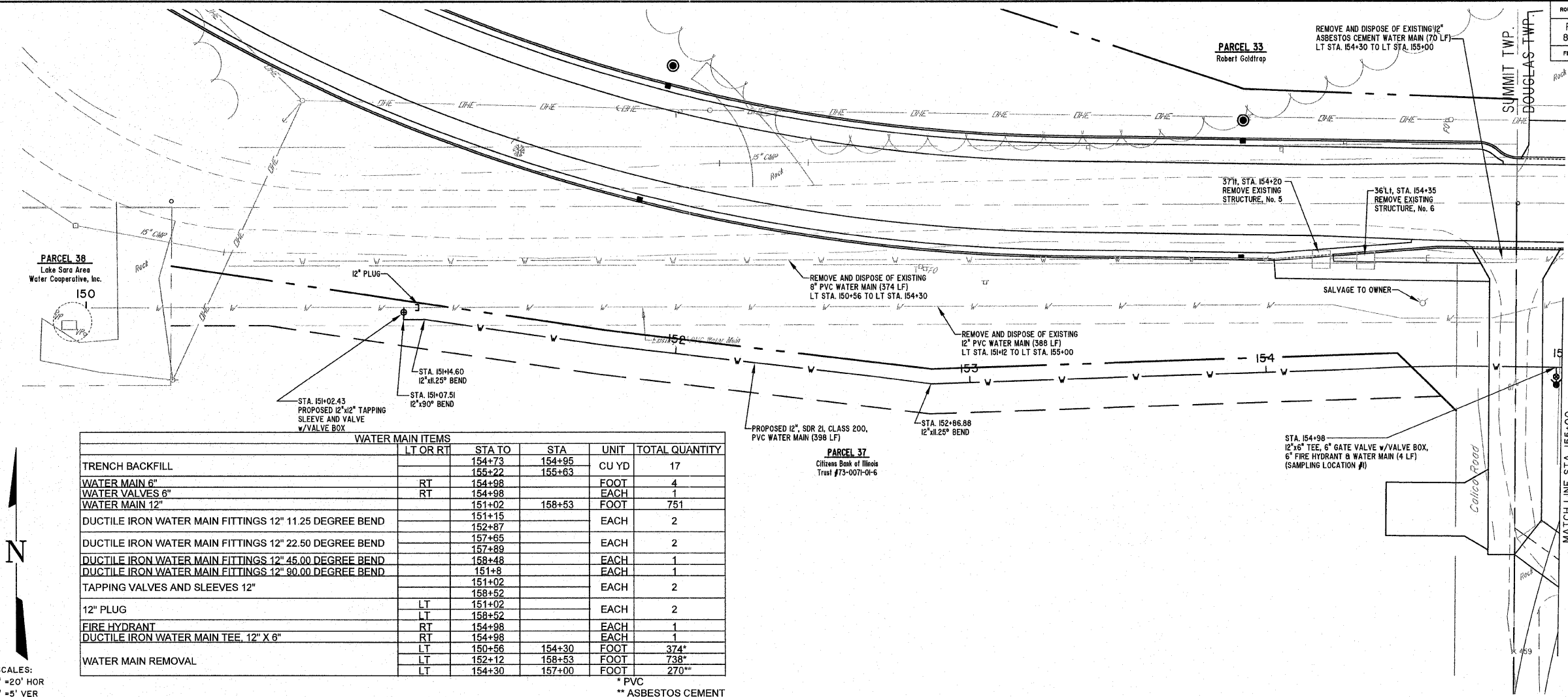


BELL RESTRAINT HARNESS FOR ALL FITTINGS FOR PVC & DIP

**MILANO & GRUNLOH ENGINEERS, LLC**  
14 WEST WASHINGTON  
P.O. BOX 897  
EFFINGHAM, ILLINOIS 62401  
Phone: (618) 347-7532  
(800) 677-2714  
Fax #: (618) 342-3433  
Web Address: www.mgeengineers.com  
Design Firm #: 184-00308

SPECIAL PROVISIONS AND STANDARD WATER MAIN DETAILS  
EVERGREEN AVENUE  
EFFINGHAM, ILLINOIS

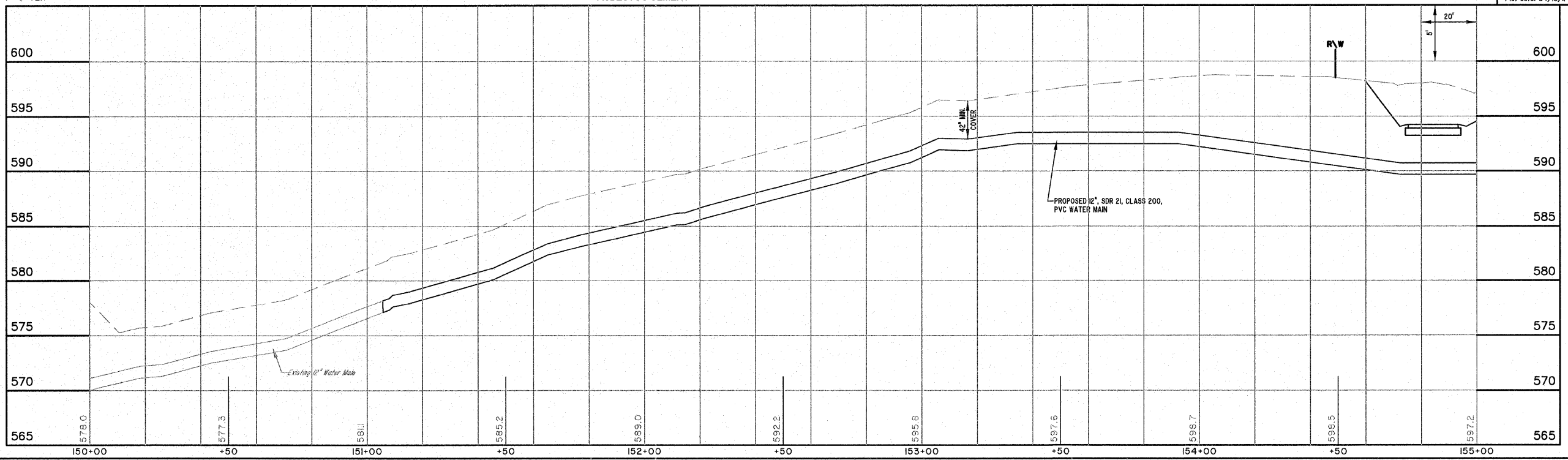
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-01-PV	EFFINGHAM	139	64
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95639				



WATER MAIN ITEMS					
	LT OR RT	STA TO	STA	UNIT	TOTAL QUANTITY
TRENCH BACKFILL		154+73	154+95	CU YD	17
WATER MAIN 6"	RT	154+98	155+22	FOOT	4
WATER VALVES 6"	RT	154+98	155+63	EACH	1
WATER MAIN 12"		151+02	158+53	FOOT	751
DUCTILE IRON WATER MAIN FITTINGS 12" 11.25 DEGREE BEND		151+15		EACH	2
DUCTILE IRON WATER MAIN FITTINGS 12" 22.50 DEGREE BEND		152+87		EACH	2
DUCTILE IRON WATER MAIN FITTINGS 12" 45.00 DEGREE BEND		157+65		EACH	2
DUCTILE IRON WATER MAIN FITTINGS 12" 90.00 DEGREE BEND		157+89		EACH	1
TAPPING VALVES AND SLEEVES 12"		158+48		EACH	1
		151+02		EACH	2
		158+52		EACH	2
12" PLUG	LT	151+02		EACH	2
	RT	158+52		EACH	2
FIRE HYDRANT	RT	154+98		EACH	1
DUCTILE IRON WATER MAIN TEE, 12" X 6"	RT	154+98		EACH	1
	LT	150+56	154+30	FOOT	374*
	LT	152+12	158+53	FOOT	738*
	LT	154+30	157+00	FOOT	270**

\* PVC  
\*\* ASBESTOS CEMENT

SCALES:  
1" = 20' HOR  
1" = 5' VER

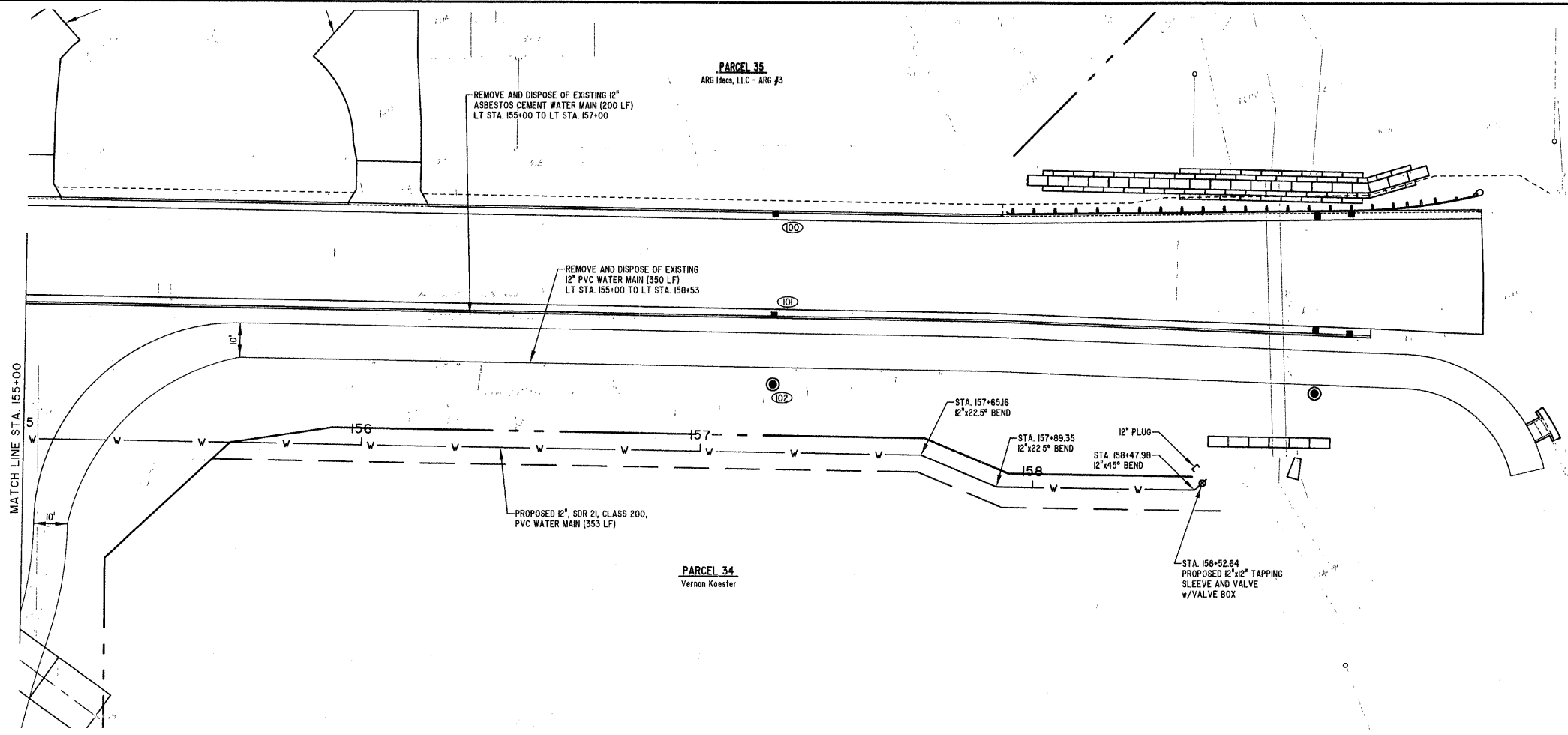


WATER MAIN

**MILANO & GRUNLOH ENGINEERS, LLC**  
 14 WEST WASHINGTON  
 P.O. BOX 897  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7222  
 (800) 677-2714  
 Fax #: (217) 342-3433  
 Web Address: www.mge-engineers.com  
 Design Firm #: 184-003108  
 File name: S:\DWG\05\052270T.dwg\Water.dwg  
 Plot date: 04/19/11 at 02:00



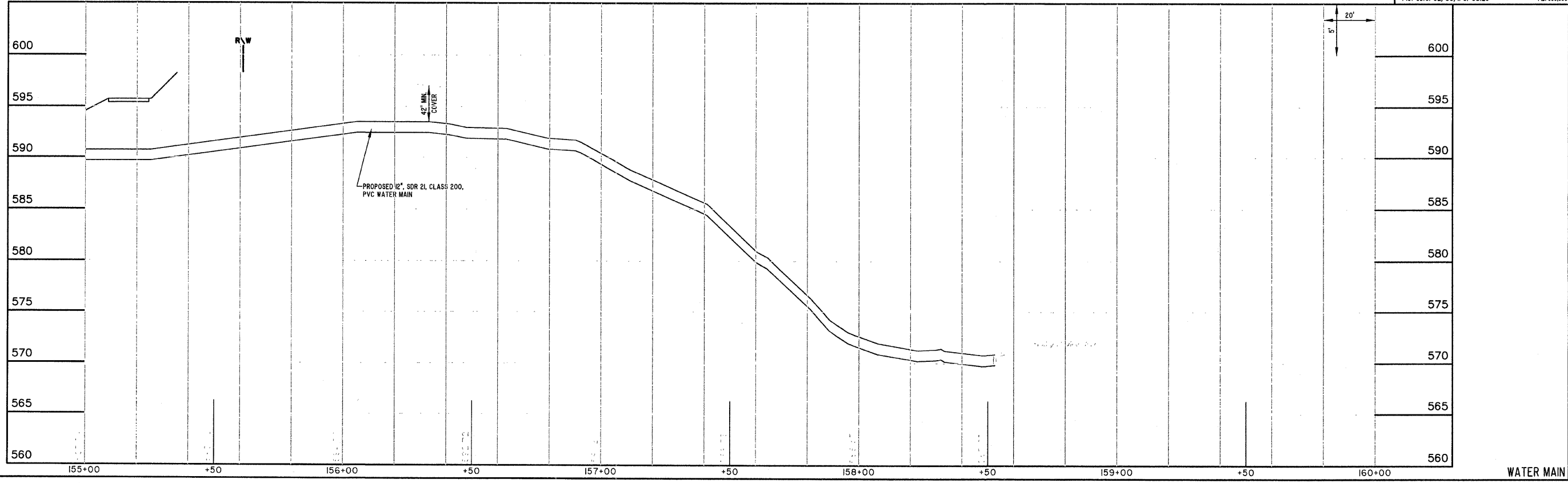
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	65
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
CONTRACT #95639				



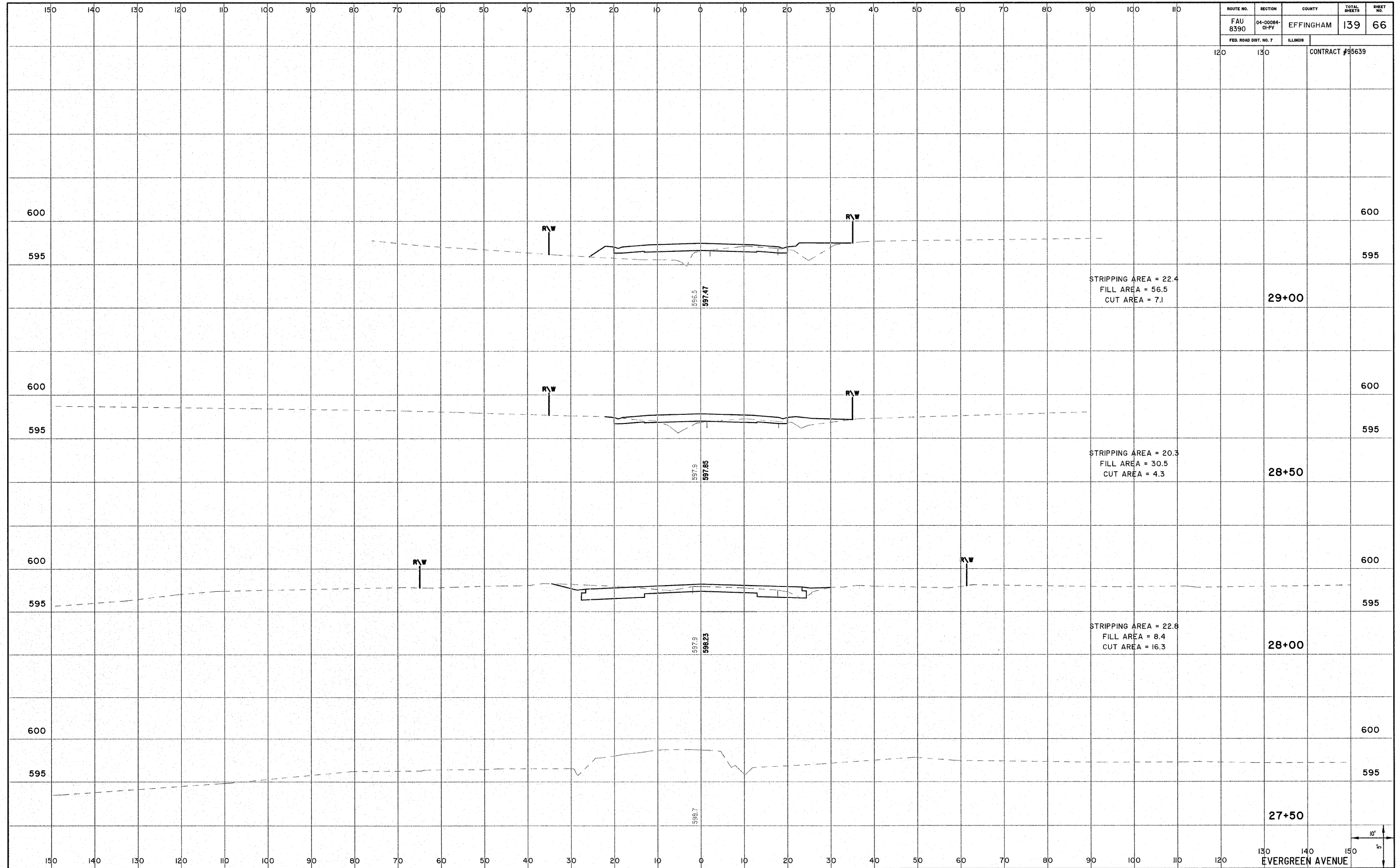
SCALES:  
1" = 20' HOR  
1" = 5' VER

**MILANO & GRUNLOH ENGINEERS, LLC**  
 84 WEST WASHINGTON  
 P.O. BOX 887  
 EFFINGHAM, ILLINOIS 62401  
 Phone: (217) 347-7662  
 (800) 677-2774  
 Fax #: (217) 342-3433  
 Web Address: www.mgeengineers.com  
 Design Firm # 184-00308

File name: S:\DWG\05\05227D1.dwg\Water.dwg  
 Plot date: 02/09/11 of 08:25 FB.589.590



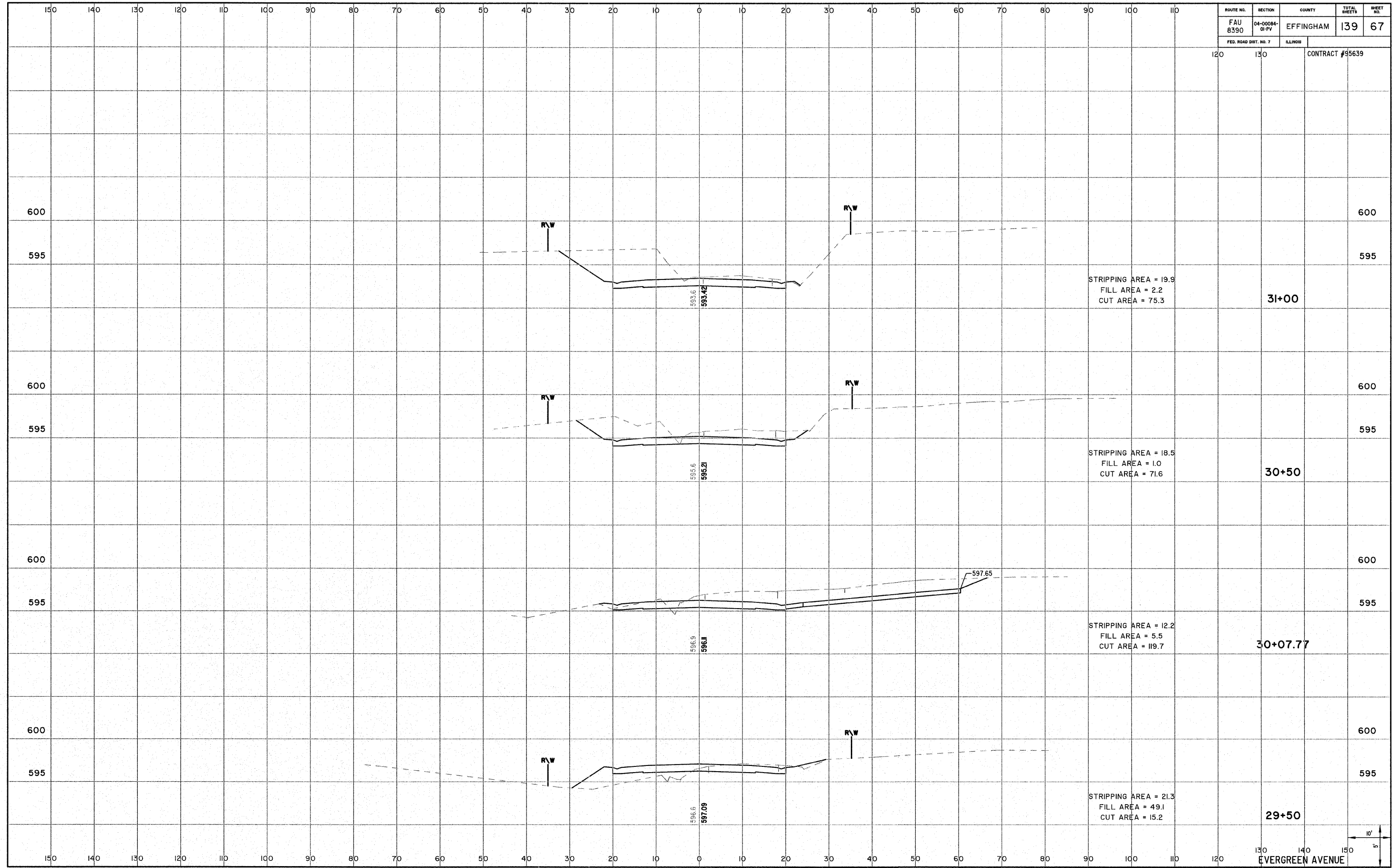
ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 66
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



EVERGREEN AVENUE

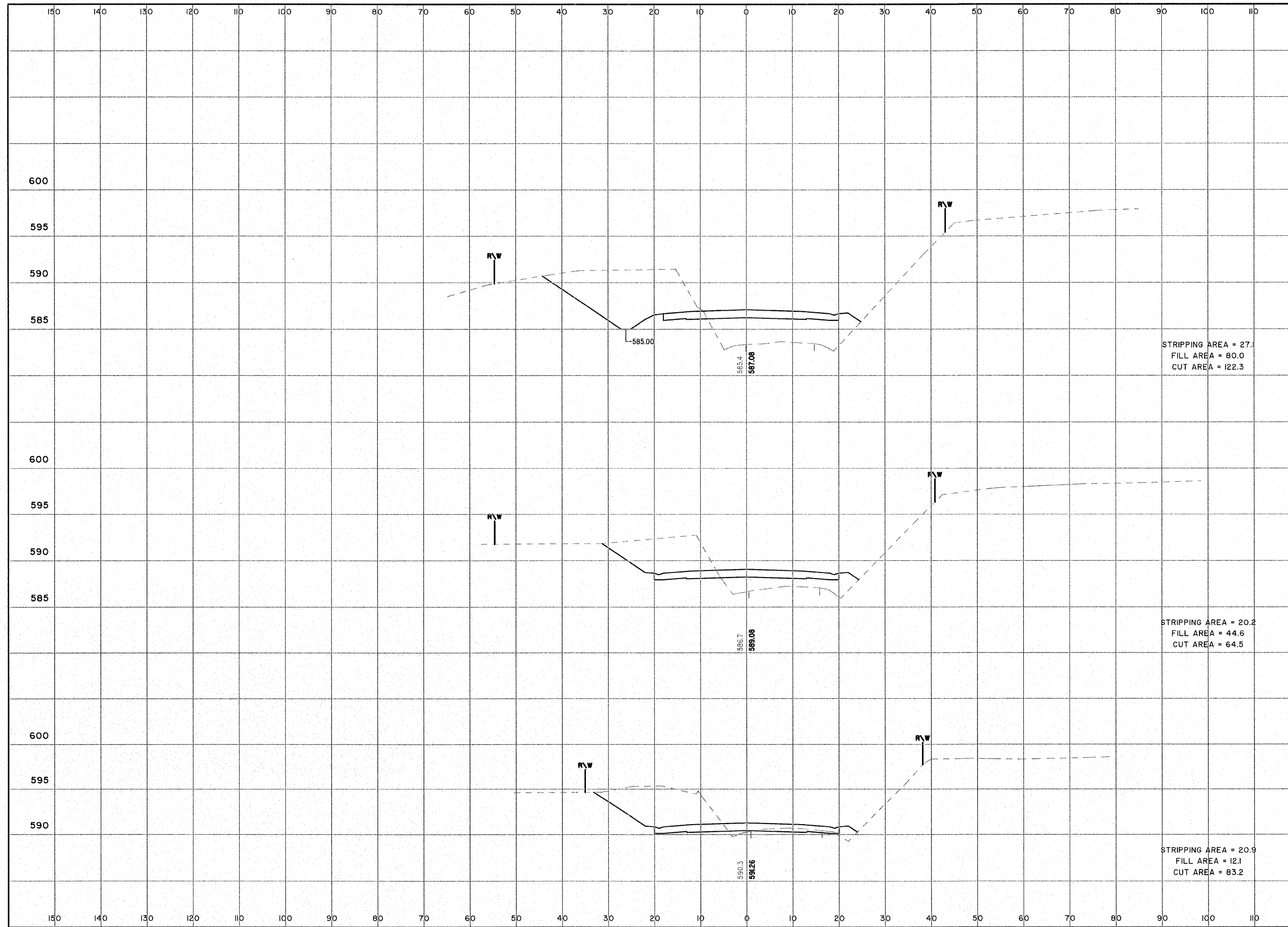


ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 67
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



10' 10'  
EVERGREEN AVENUE

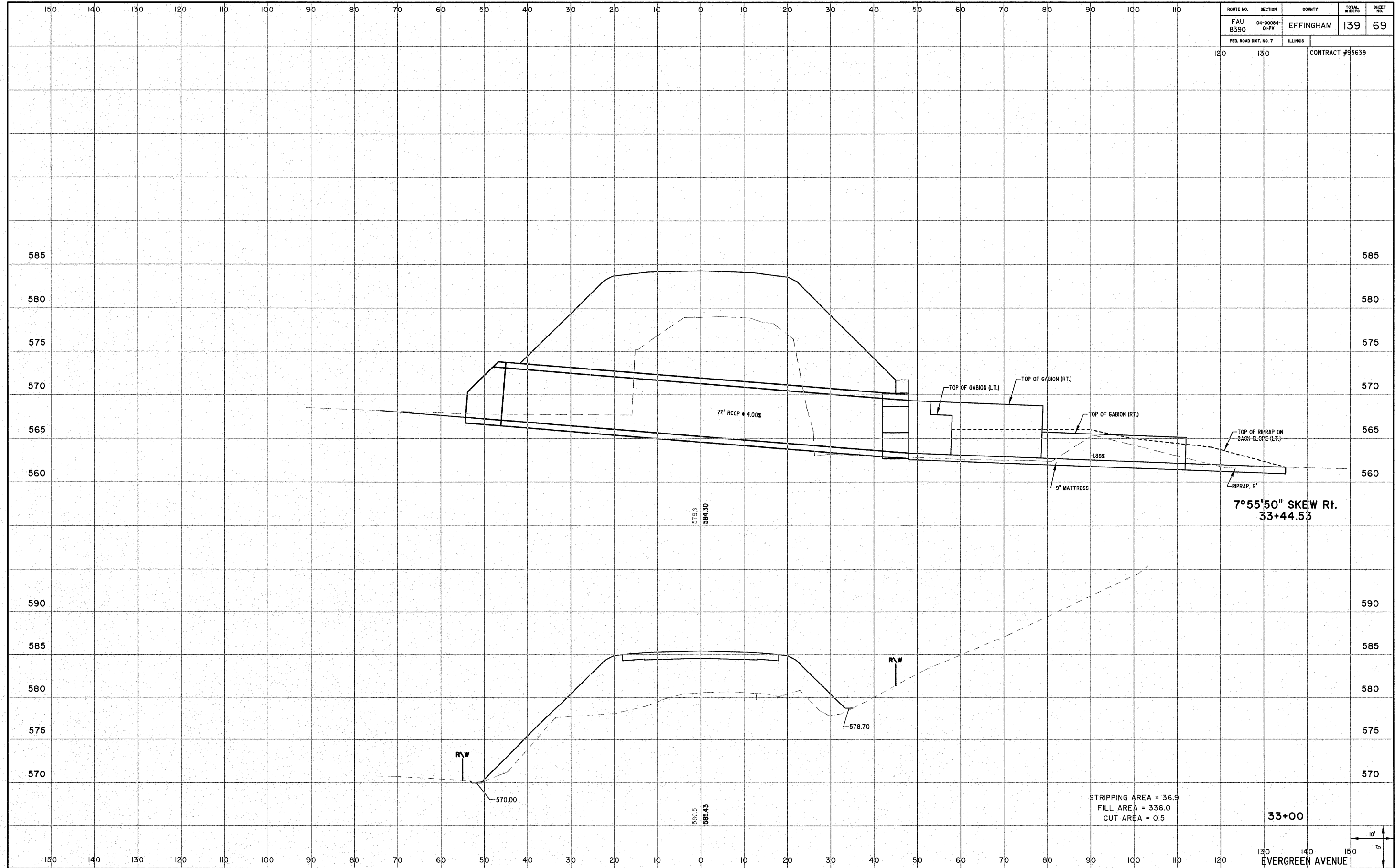
ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 68
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



10'  
1" = 10'

130 140 150  
EVERGREEN AVENUE

ROUTE NO. 8390	SECTION 04-0084-01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 69
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



7°55'50" SKEW Rt.  
33+44.53

578.9  
584.30

500.5  
585.43

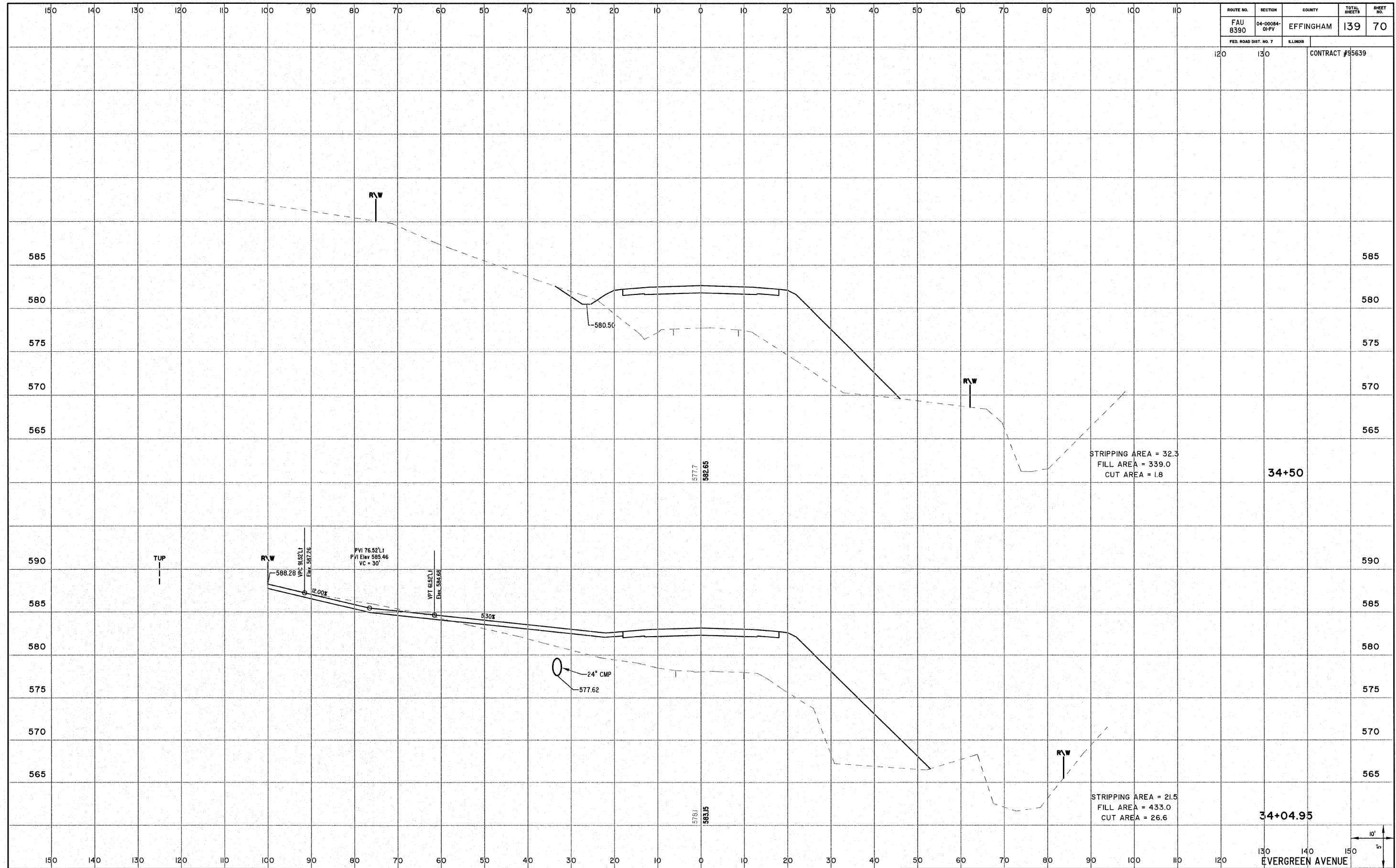
STRIPPING AREA = 36.9  
FILL AREA = 336.0  
CUT AREA = 0.5

33+00

EVERGREEN AVENUE



ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 70
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



STRIPPING AREA = 32.3  
 FILL AREA = 339.0  
 CUT AREA = 1.8

34+50

PVI 76.52'L1  
 PVI Elev 585.46  
 VC = 30'

VPI 91.32'L1  
 Elev. 587.26

VPT 61.82'L1  
 Elev. 584.66

R/W

TUP

24° CMP  
 577.62

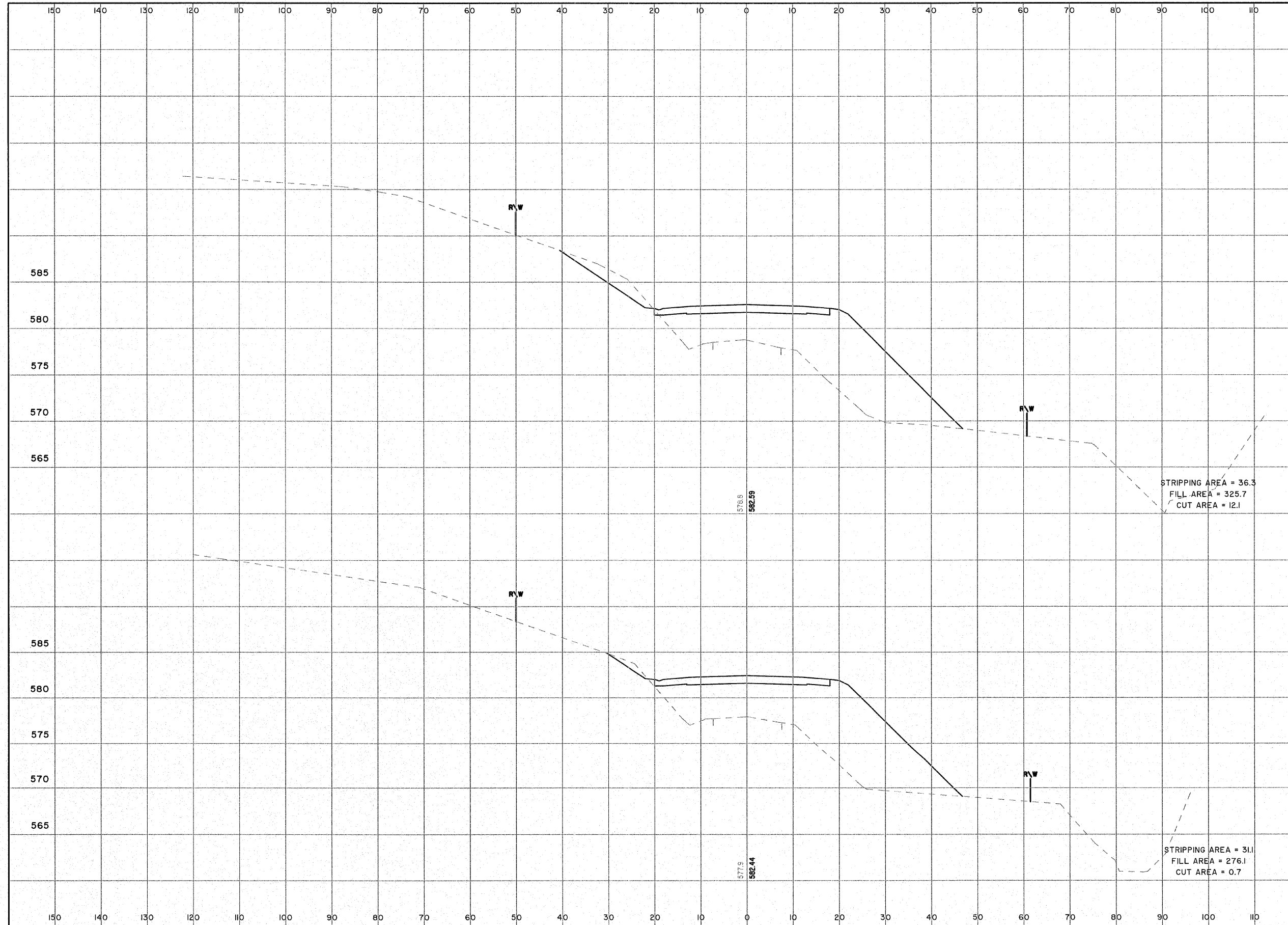
STRIPPING AREA = 21.5  
 FILL AREA = 433.0  
 CUT AREA = 26.6

34+04.95



EVERGREEN AVENUE

ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 71
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



576.9  
992.59

577.9  
992.44

STRIPPING AREA = 36.3  
FILL AREA = 325.7  
CUT AREA = 12.1

STRIPPING AREA = 31.1  
FILL AREA = 276.1  
CUT AREA = 0.7

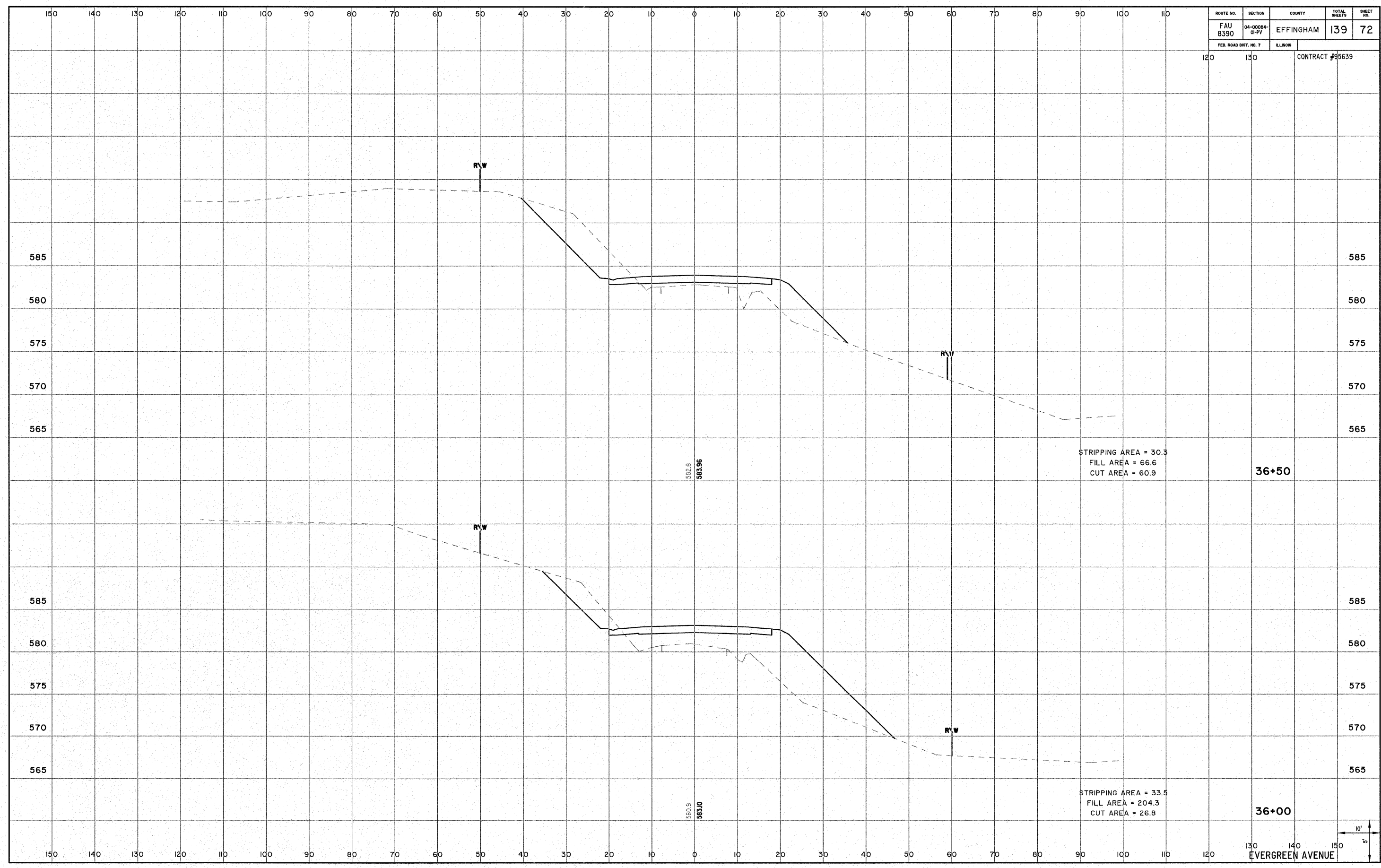
35+50

35+00

EVERGREEN AVENUE



ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 72
FED. ROAD DIST. NO. 7		LLINOS	CONTRACT #95639	

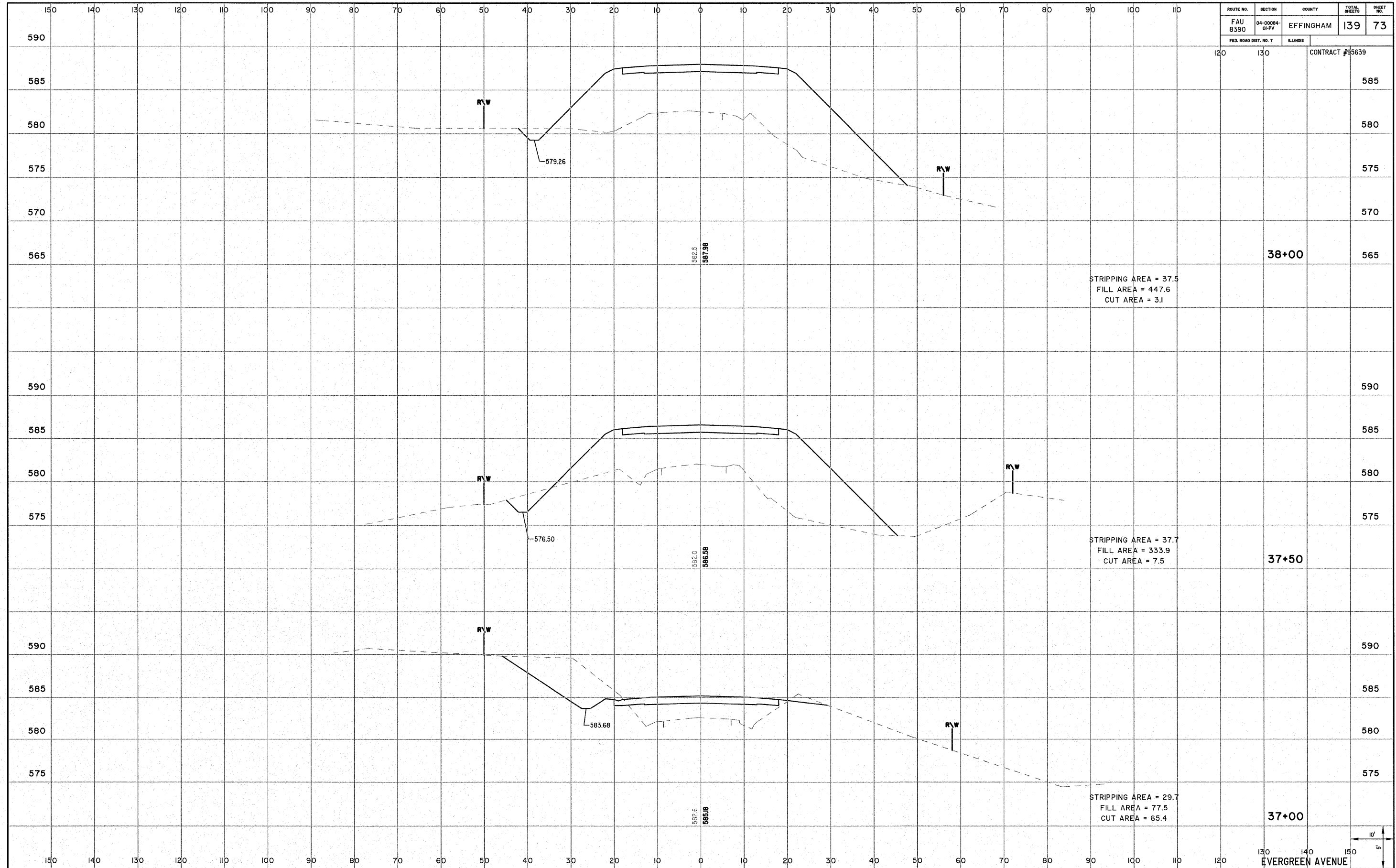


130 140 150  
EVERGREEN AVENUE



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	73
FED. ROAD DIST. NO. 7	ILLINOIS			

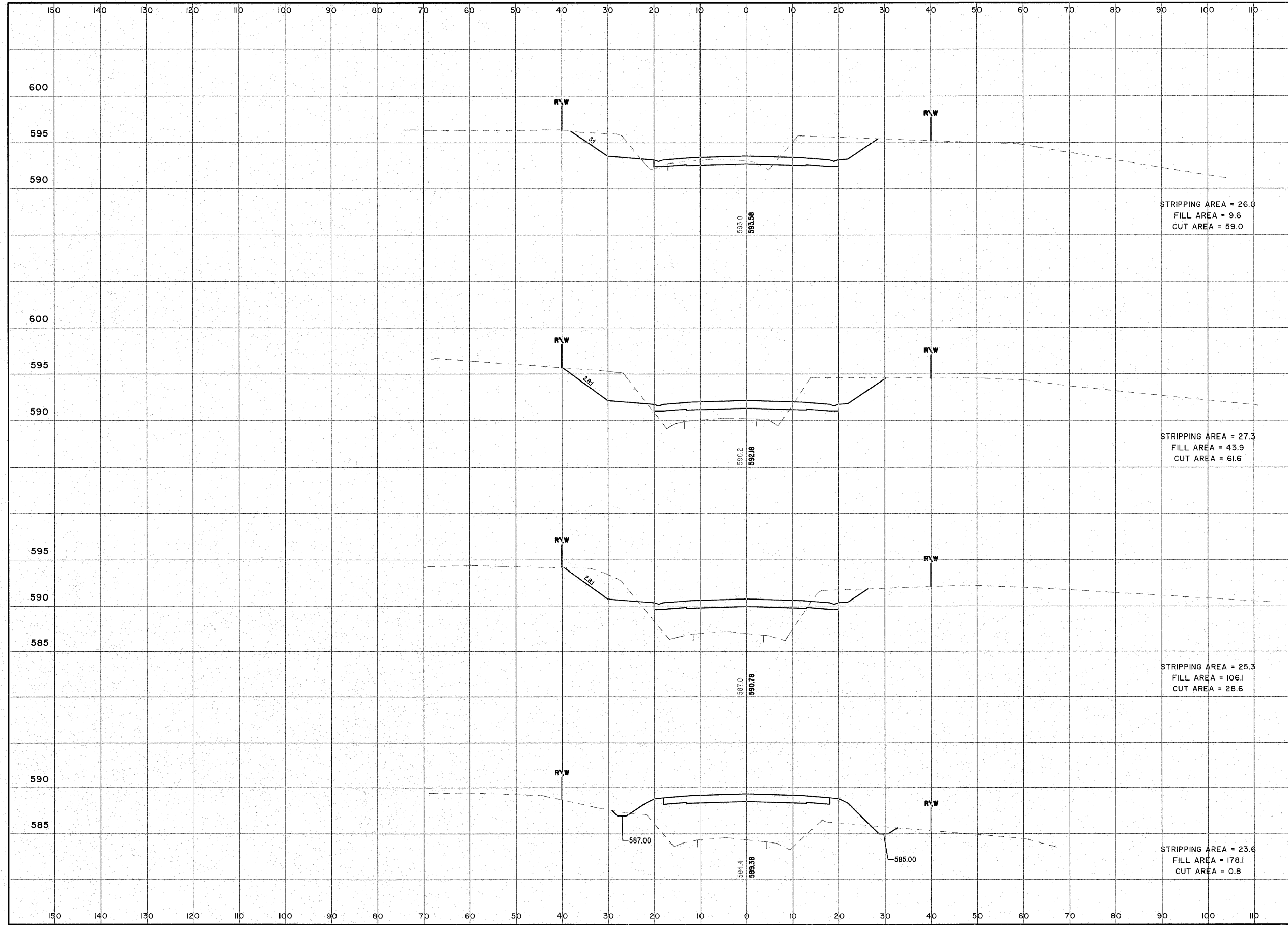
CONTRACT #95639



EVERGREEN AVENUE

10' 1" scale bar

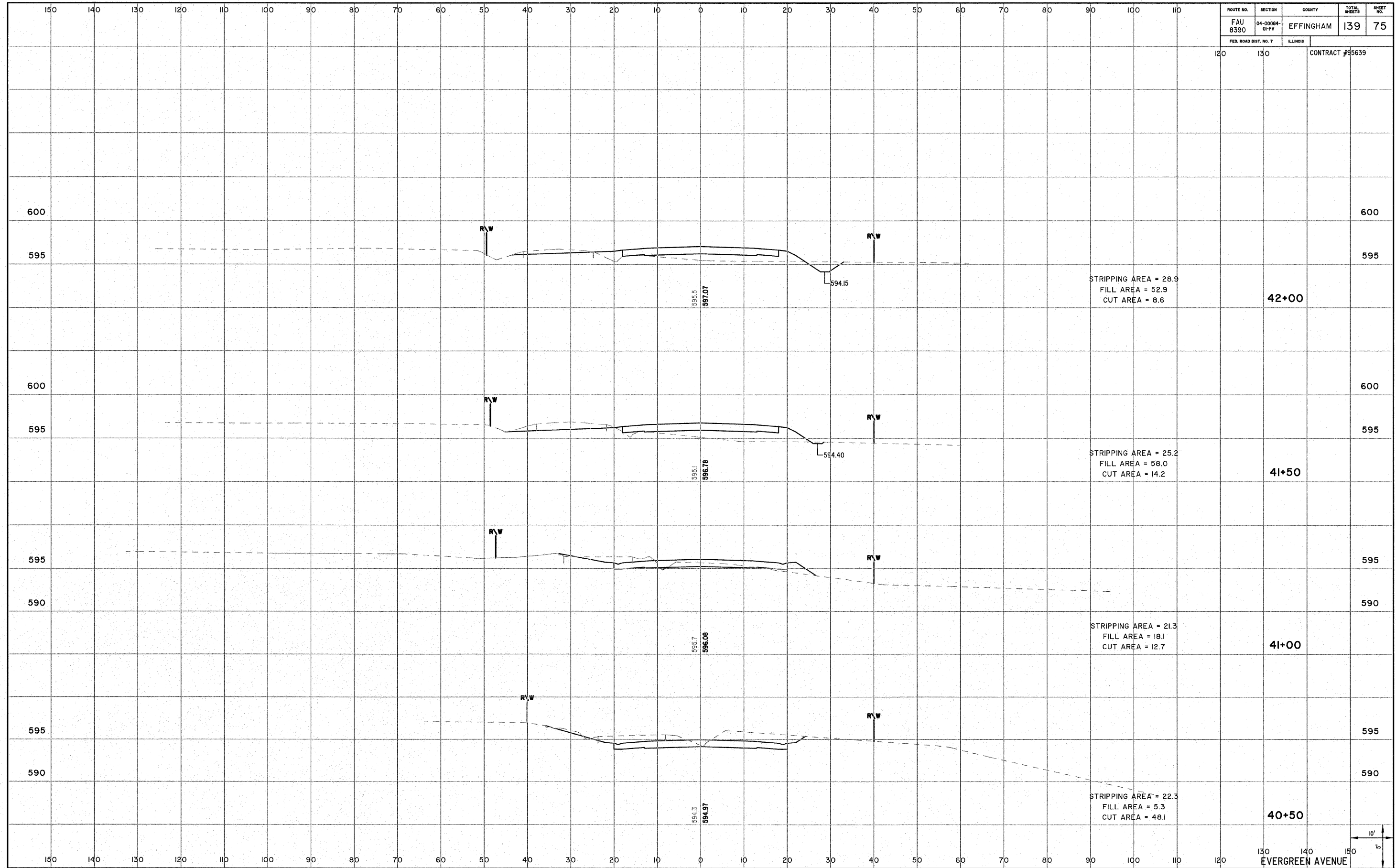
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	74
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



EVERGREEN AVENUE



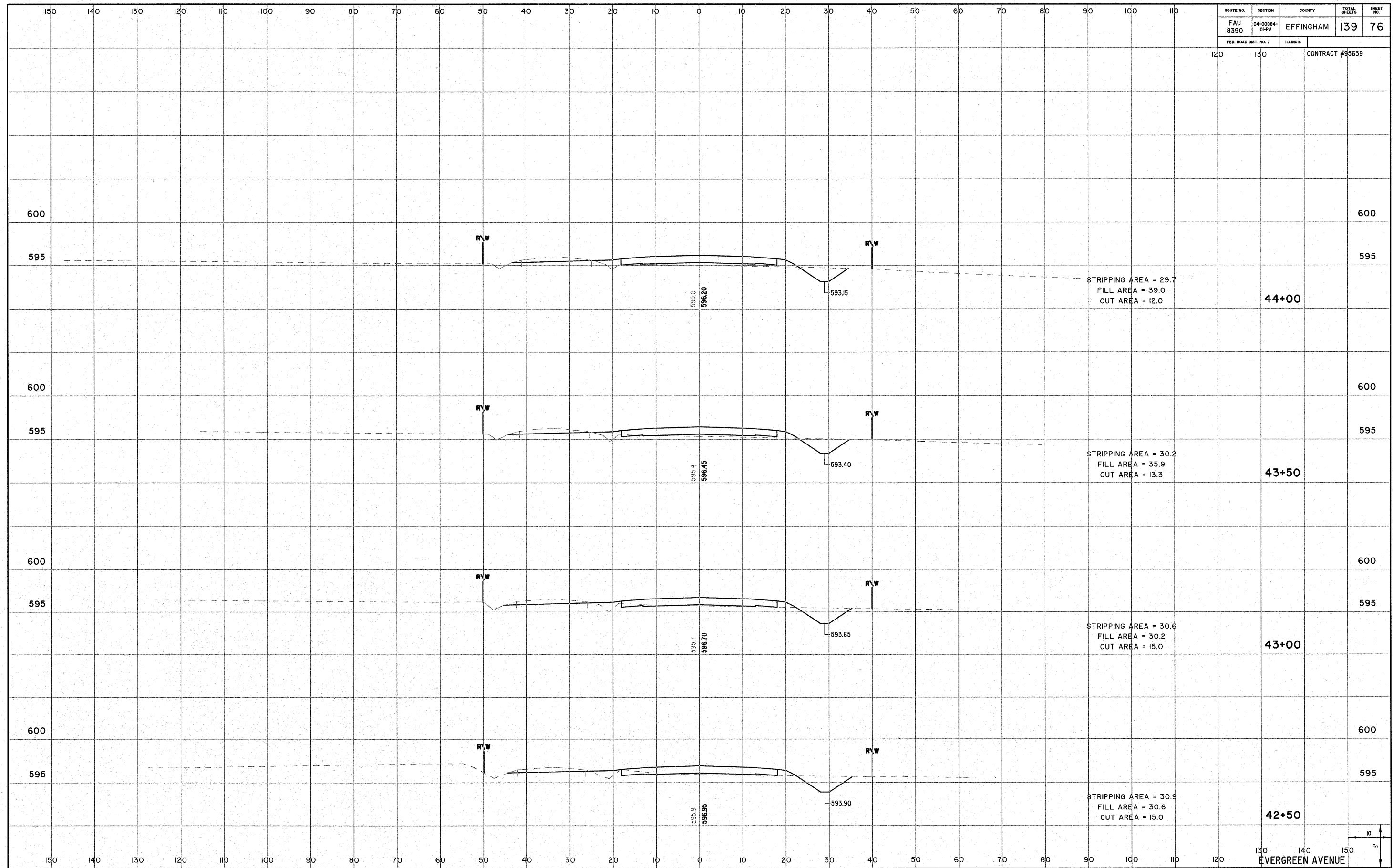
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-0084-01-PV	EFFINGHAM	139	75
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT #95639		



EVERGREEN AVENUE

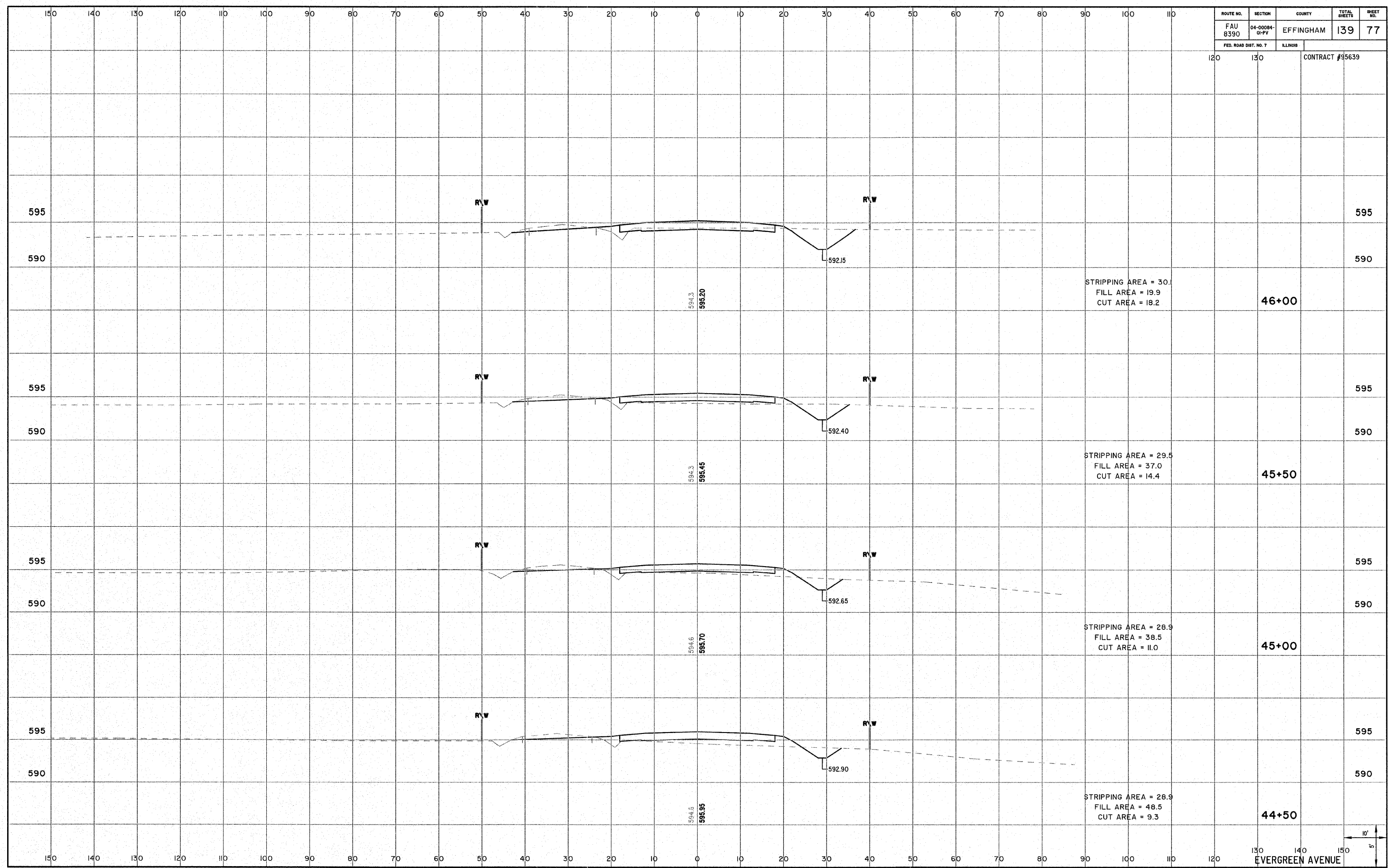
10' 10'

ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 76
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #495639	



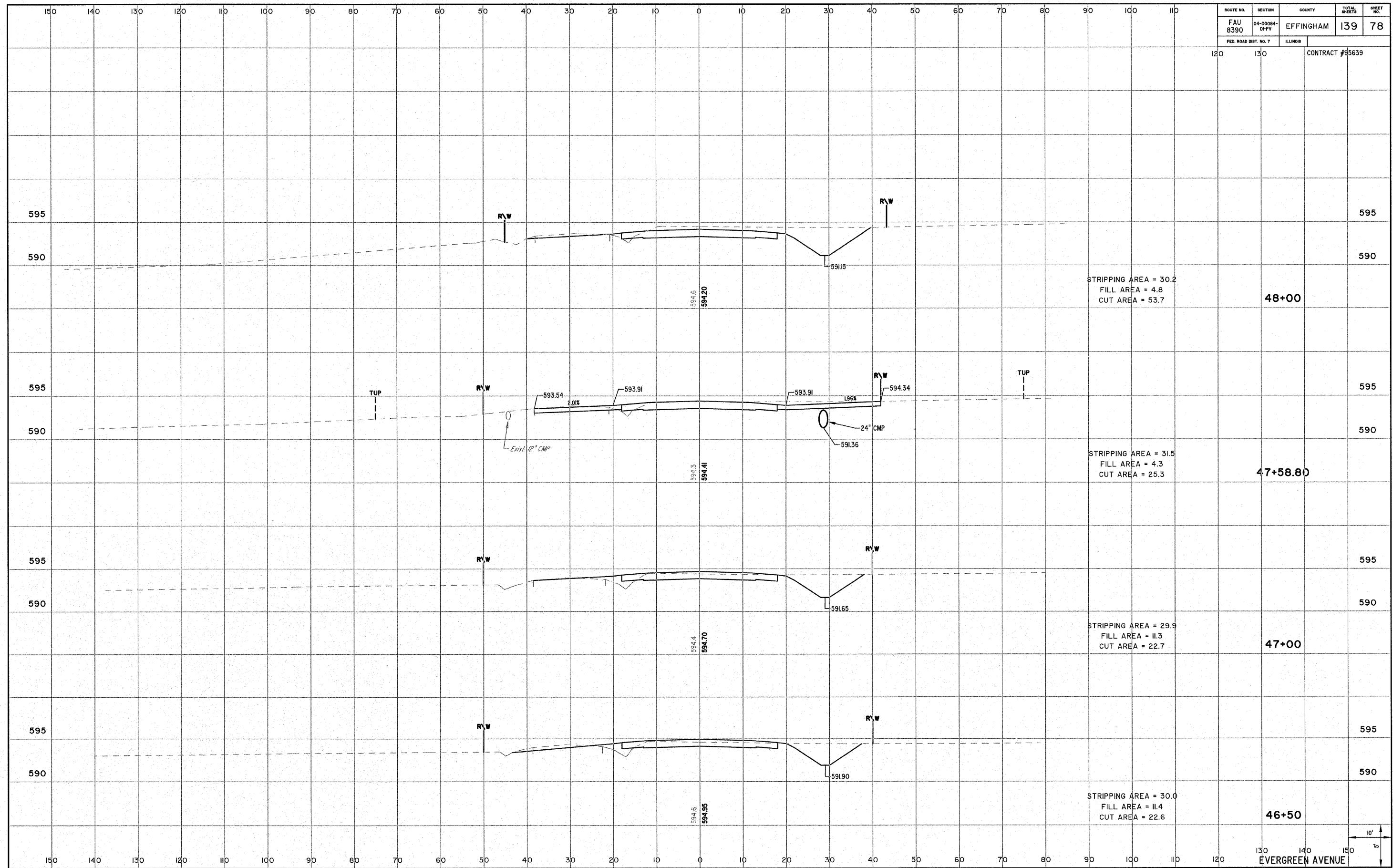
EVERGREEN AVENUE

ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 77
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



EVERGREEN AVENUE

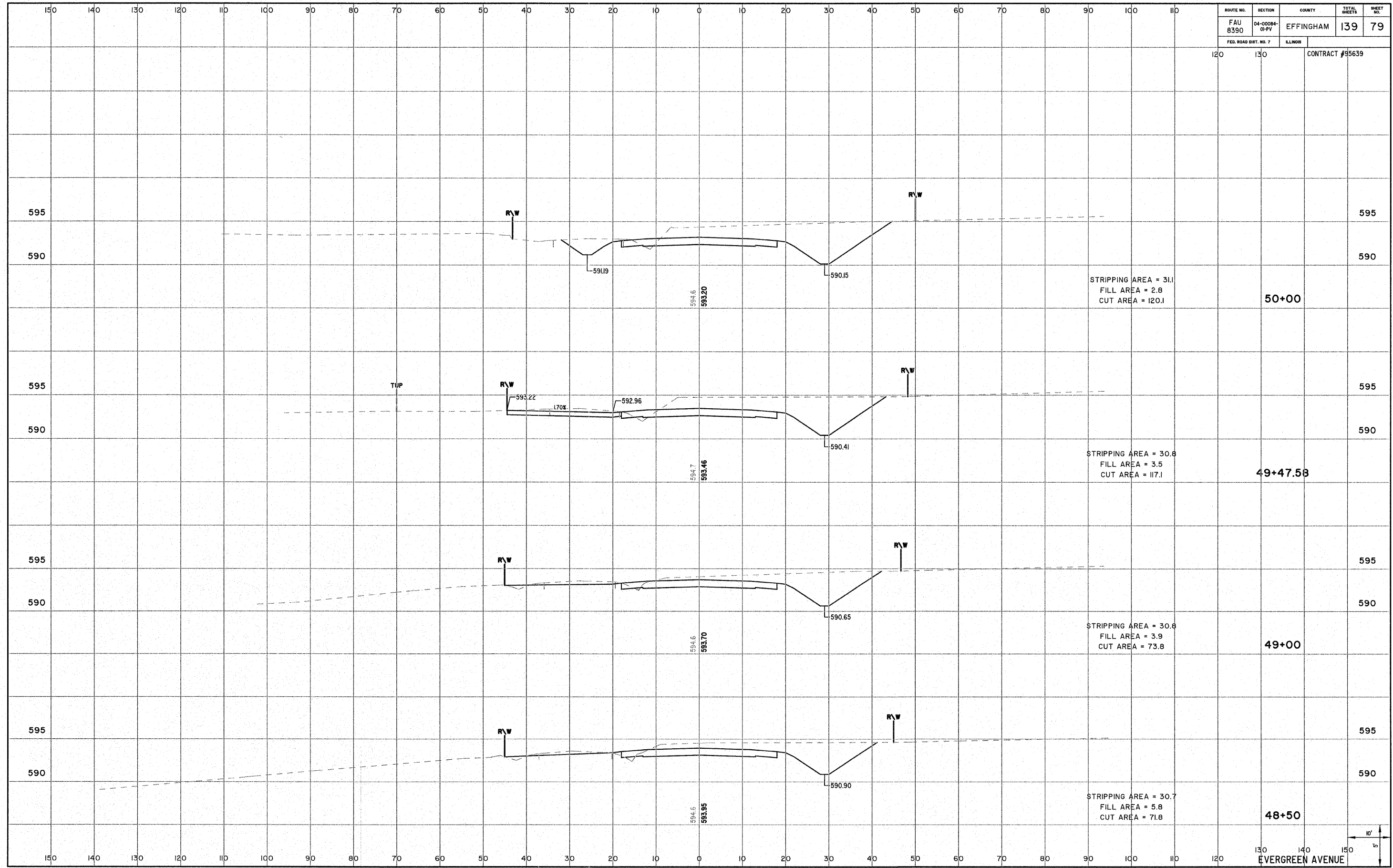
ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 78
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



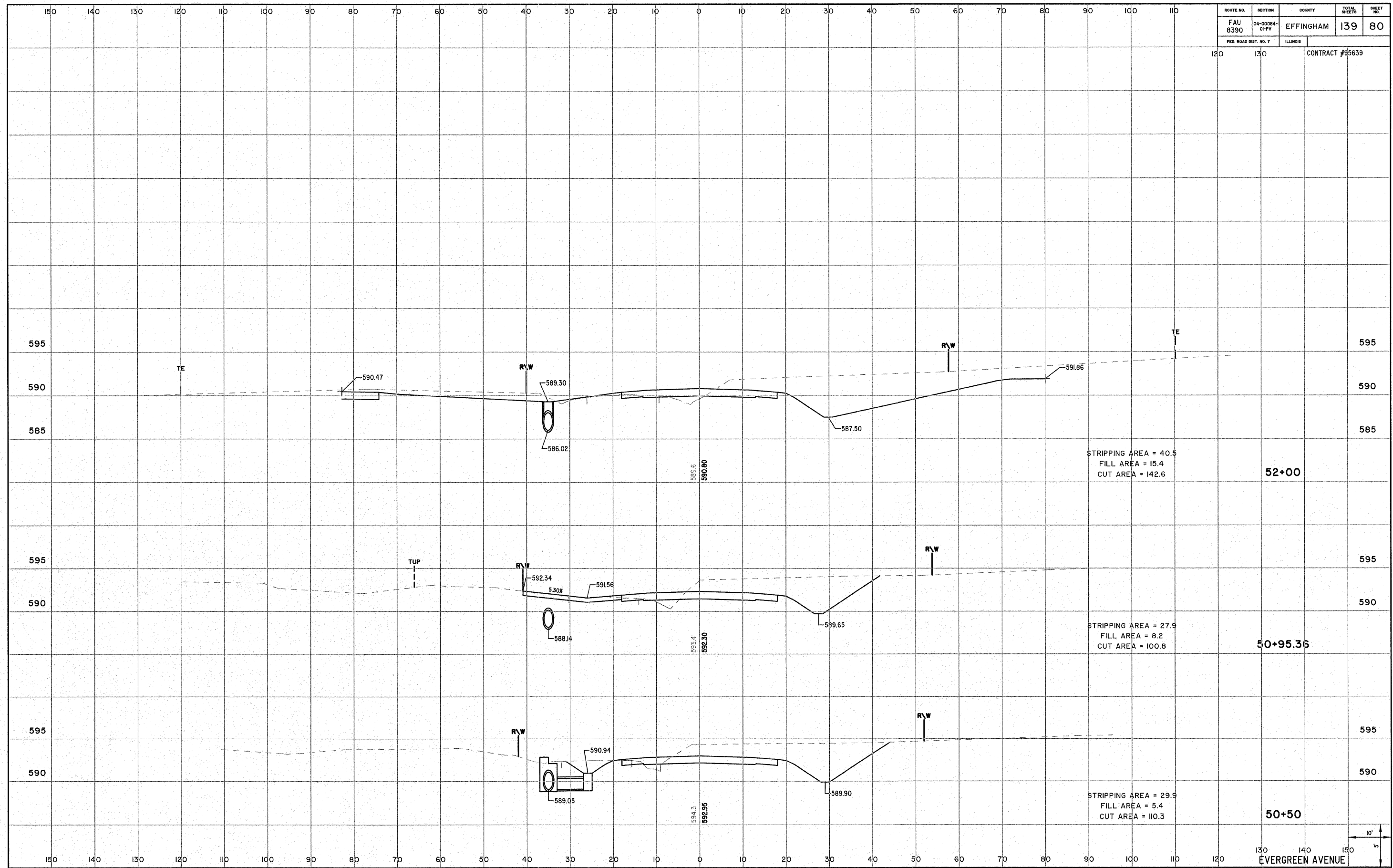
130 140 150  
EVERGREEN AVENUE



ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 79
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



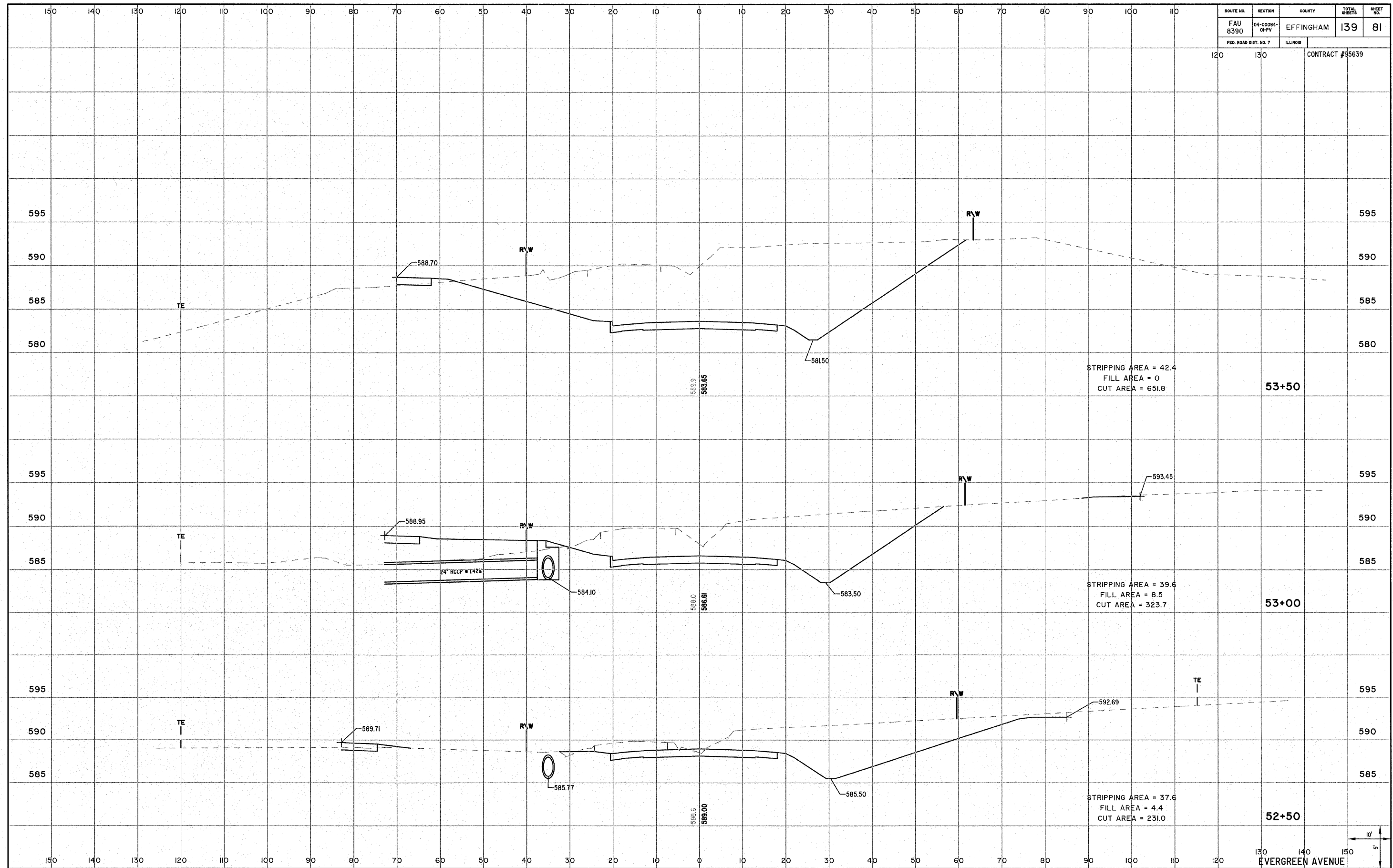
ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 80
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



130 140 150  
EVERGREEN AVENUE



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	81
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT #95639		



STRIPPING AREA = 42.4  
 FILL AREA = 0  
 CUT AREA = 651.8

53+50

STRIPPING AREA = 39.6  
 FILL AREA = 8.5  
 CUT AREA = 323.7

53+00

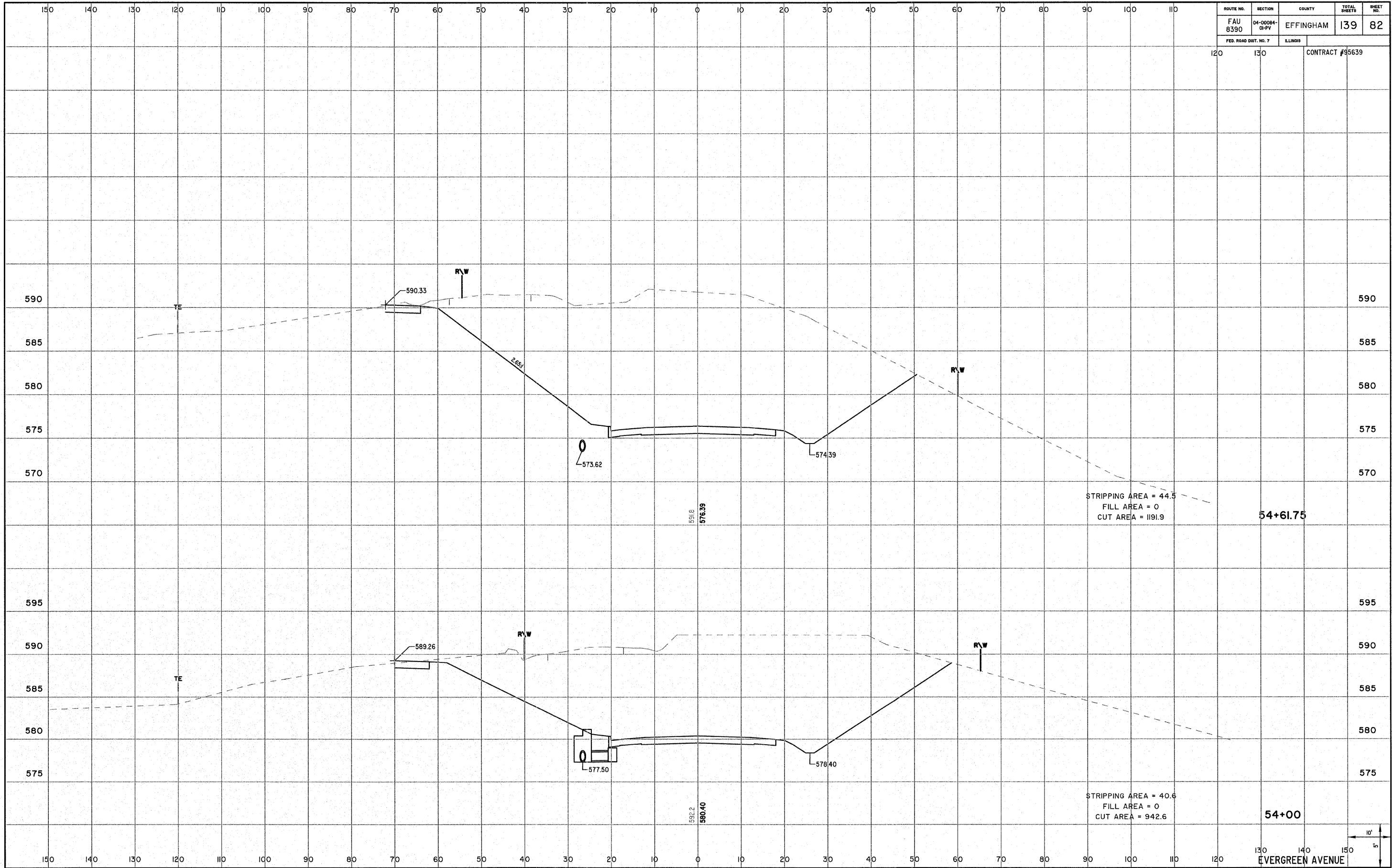
STRIPPING AREA = 37.6  
 FILL AREA = 4.4  
 CUT AREA = 231.0

52+50



EVERGREEN AVENUE

ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 82
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



STRIPPING AREA = 44.5  
 FILL AREA = 0  
 CUT AREA = 1191.9

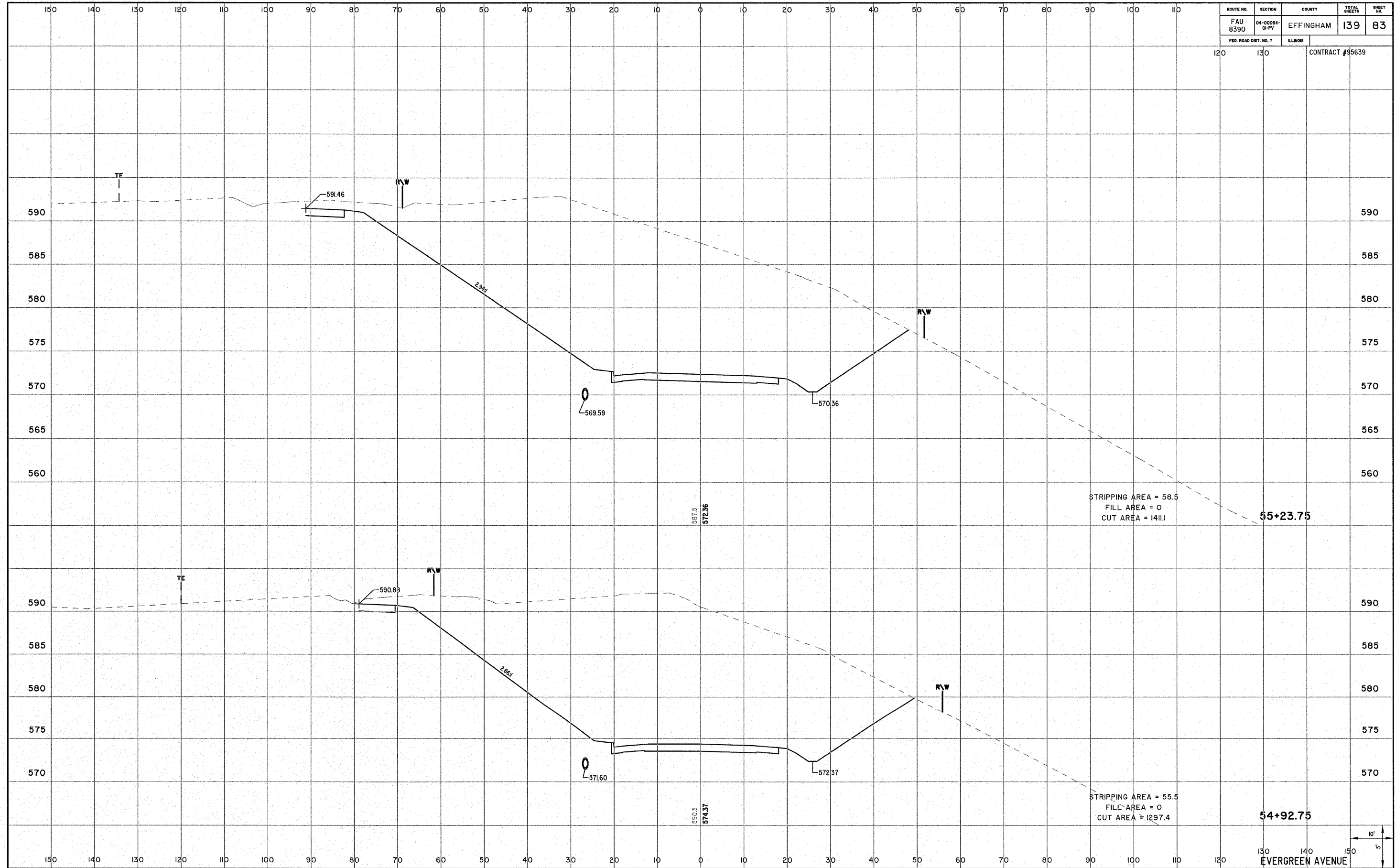
54+61.75

STRIPPING AREA = 40.6  
 FILL AREA = 0  
 CUT AREA = 942.6

54+00

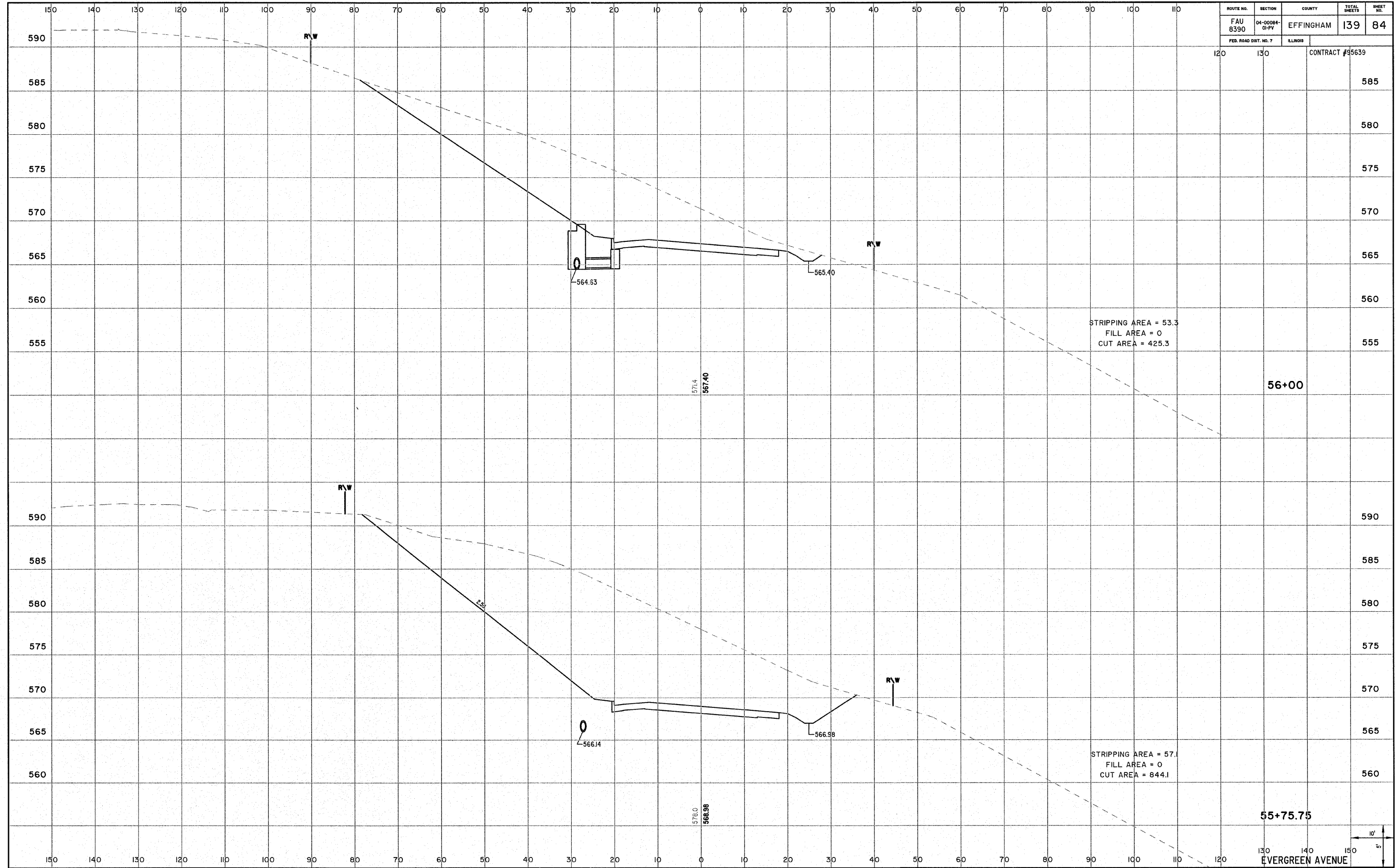
EVERGREEN AVENUE

ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 83
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



EVERGREEN AVENUE

ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 84
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #85639	



STRIPPING AREA = 53.3  
 FILL AREA = 0  
 CUT AREA = 425.3

STRIPPING AREA = 57.1  
 FILL AREA = 0  
 CUT AREA = 844.1

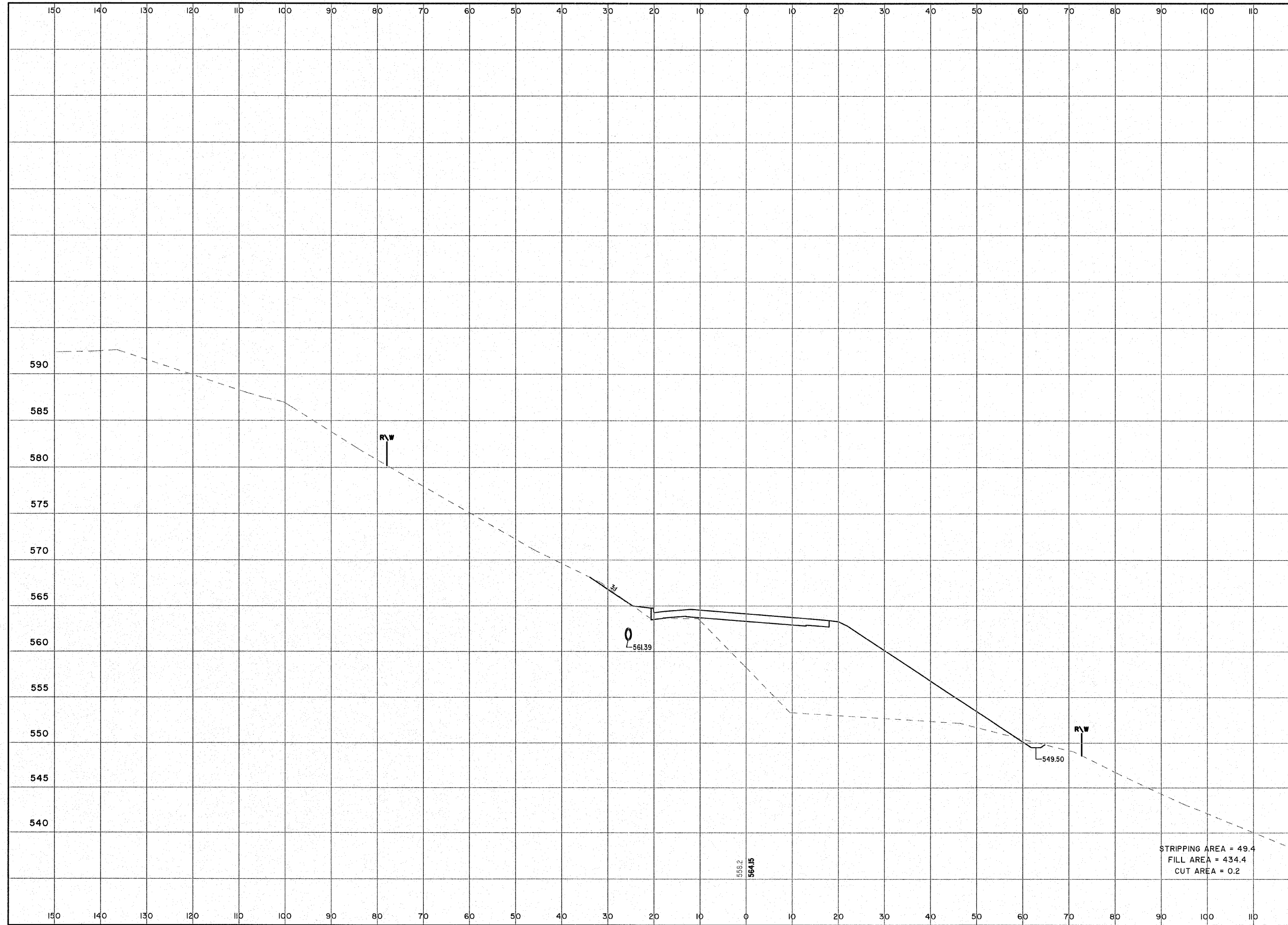
56+00

55+75.75

EVERGREEN AVENUE



ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 85
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



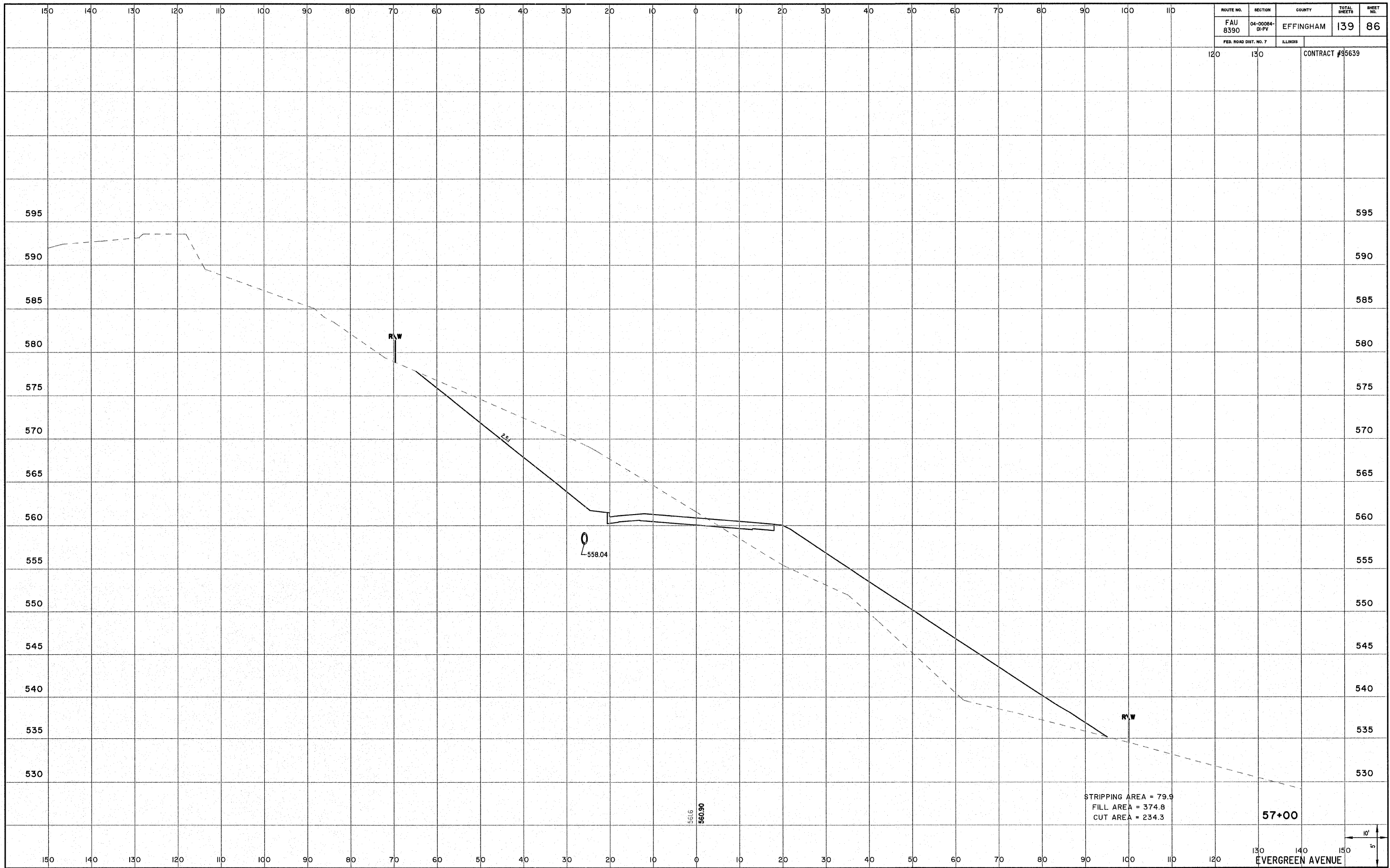
STRIPPING AREA = 49.4  
 FILL AREA = 434.4  
 CUT AREA = 0.2

56+50

EVERGREEN AVENUE



ROUTE NO. FAU 8390	SECTION 04-00084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 86
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	

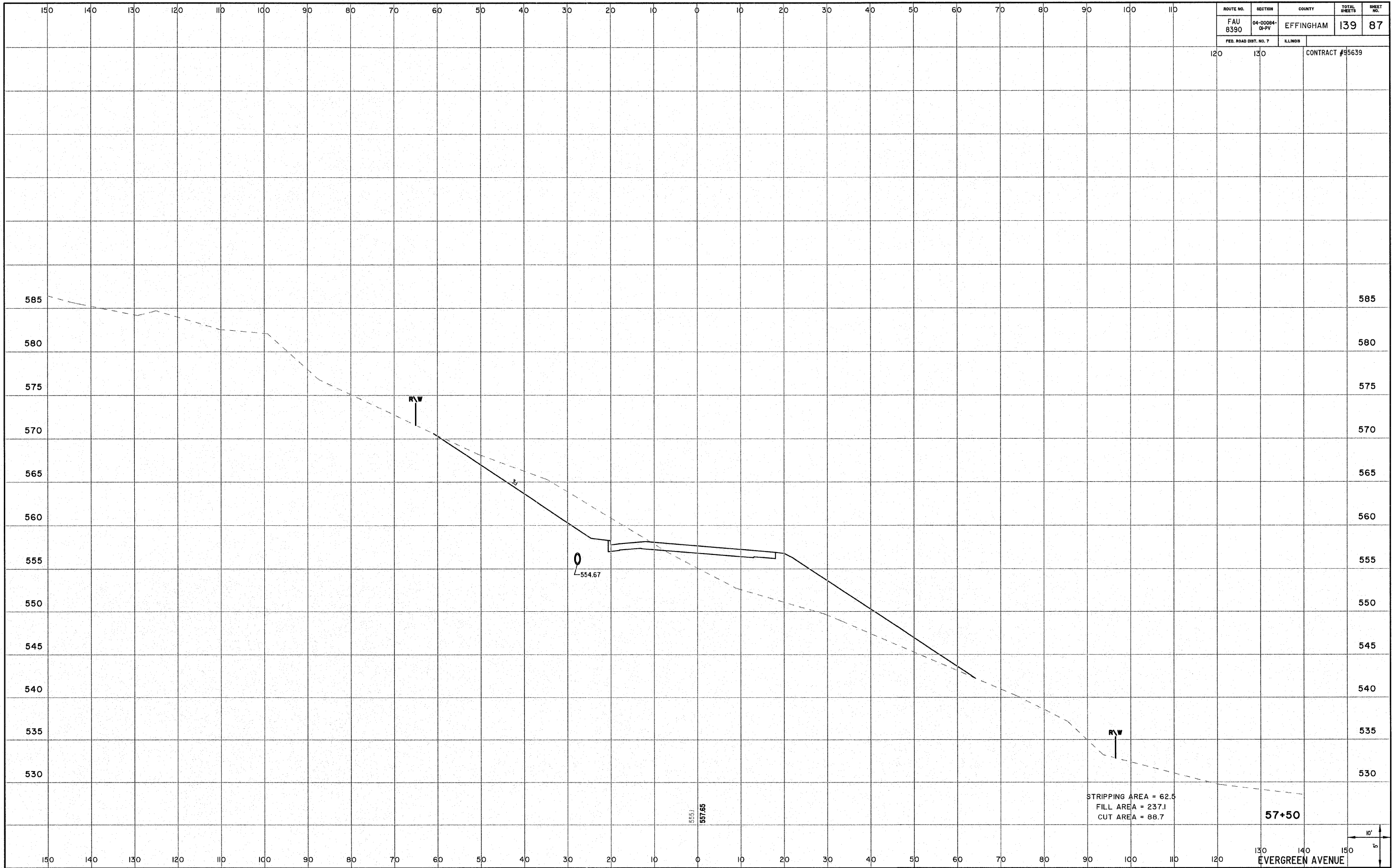


STRIPPING AREA = 79.9  
 FILL AREA = 374.8  
 CUT AREA = 234.3

57+00

EVERGREEN AVENUE

ROUTE NO. FAU 8390	SECTION 04-0084- 04-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 87
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



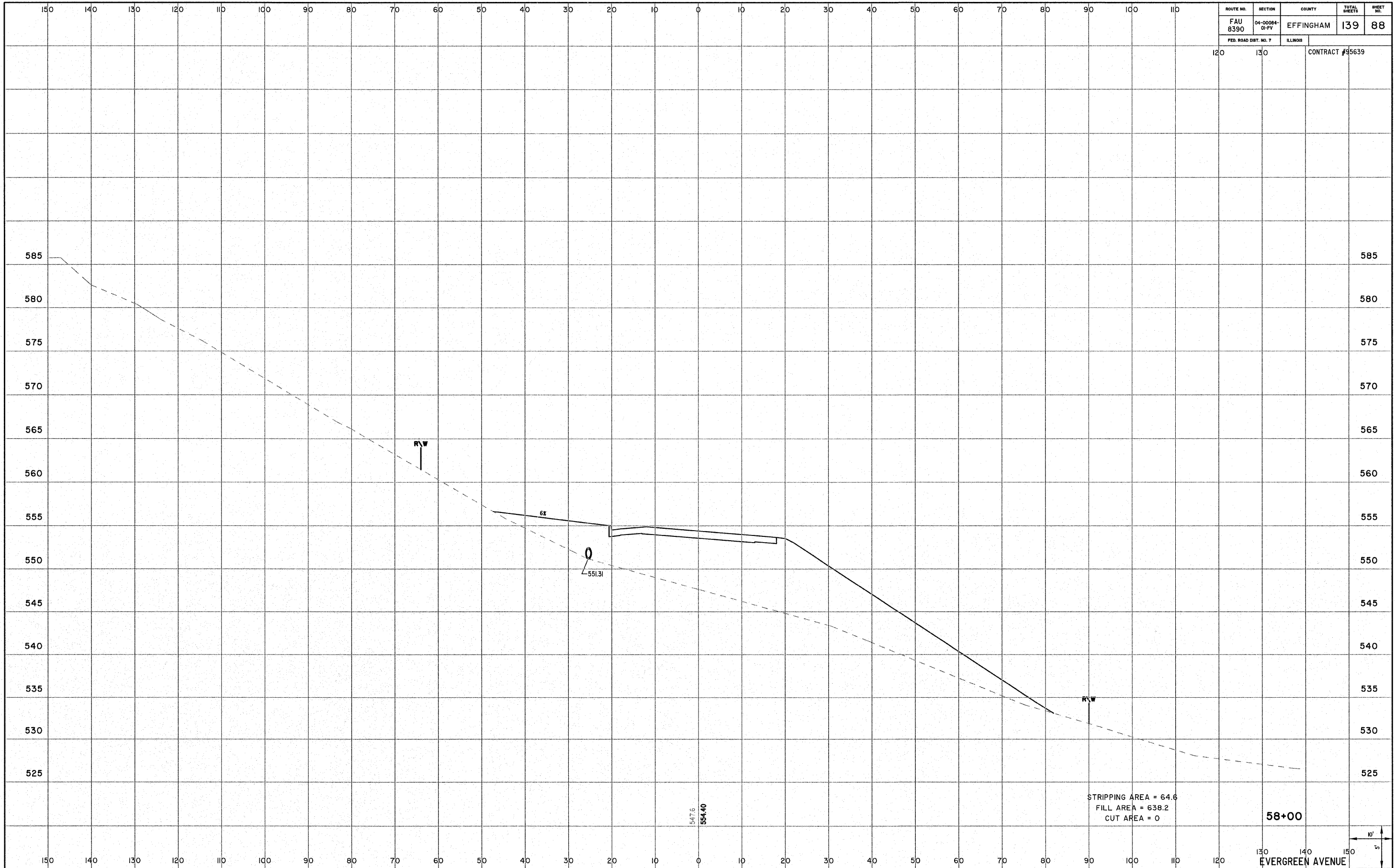
STRIPPING AREA = 62.5  
 FILL AREA = 237.1  
 CUT AREA = 88.7

57+50

EVERGREEN AVENUE



ROUTE NO. FAU 8390	SECTION 04-0004- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 88
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



STRIPPING AREA = 64.6  
 FILL AREA = 638.2  
 CUT AREA = 0

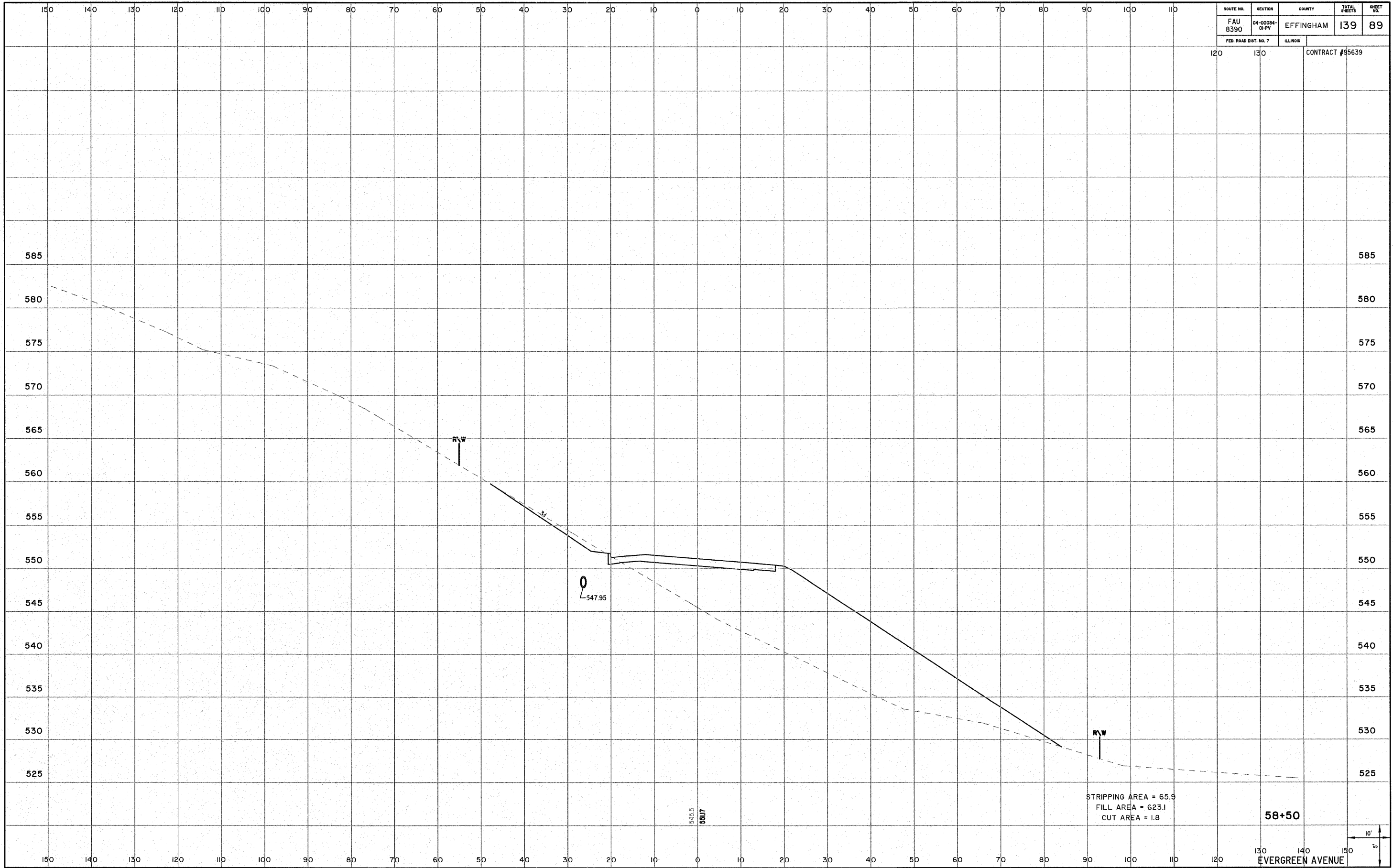
58+00

EVERGREEN AVENUE





ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 89
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



STRIPPING AREA = 65.9  
 FILL AREA = 623.1  
 CUT AREA = 1.8

58+50

EVERGREEN AVENUE

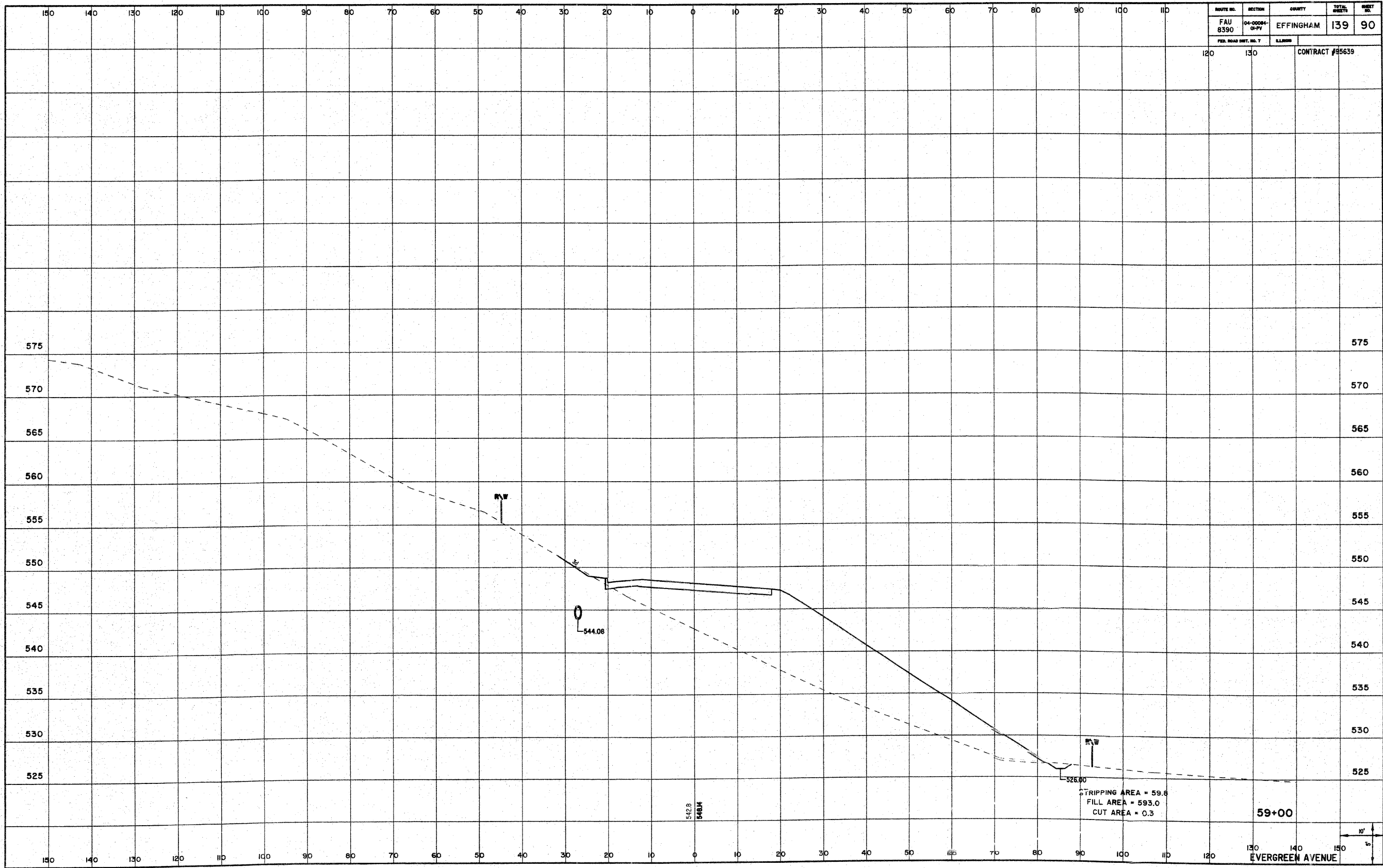


545.5  
5817

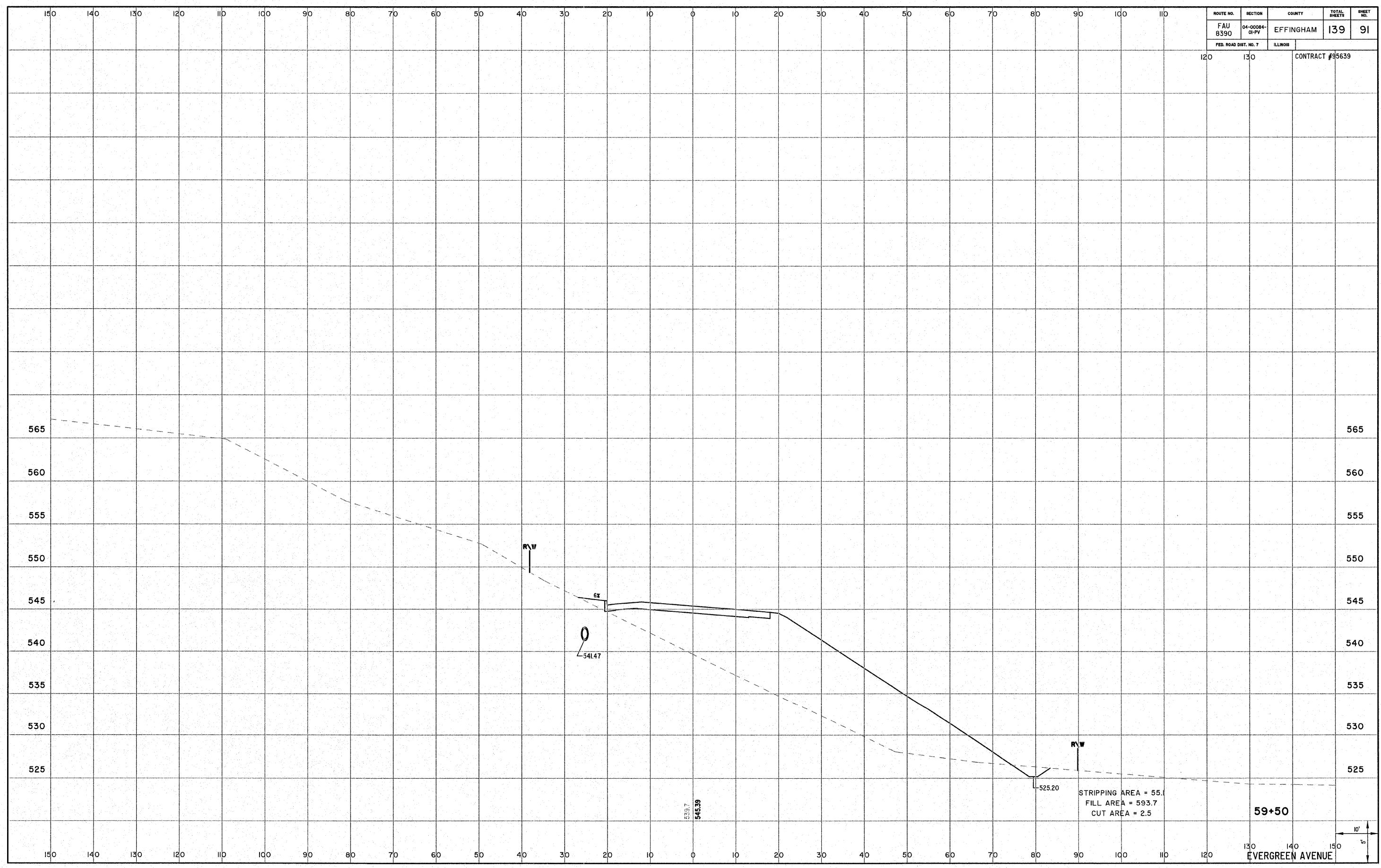
0  
547.95

RW

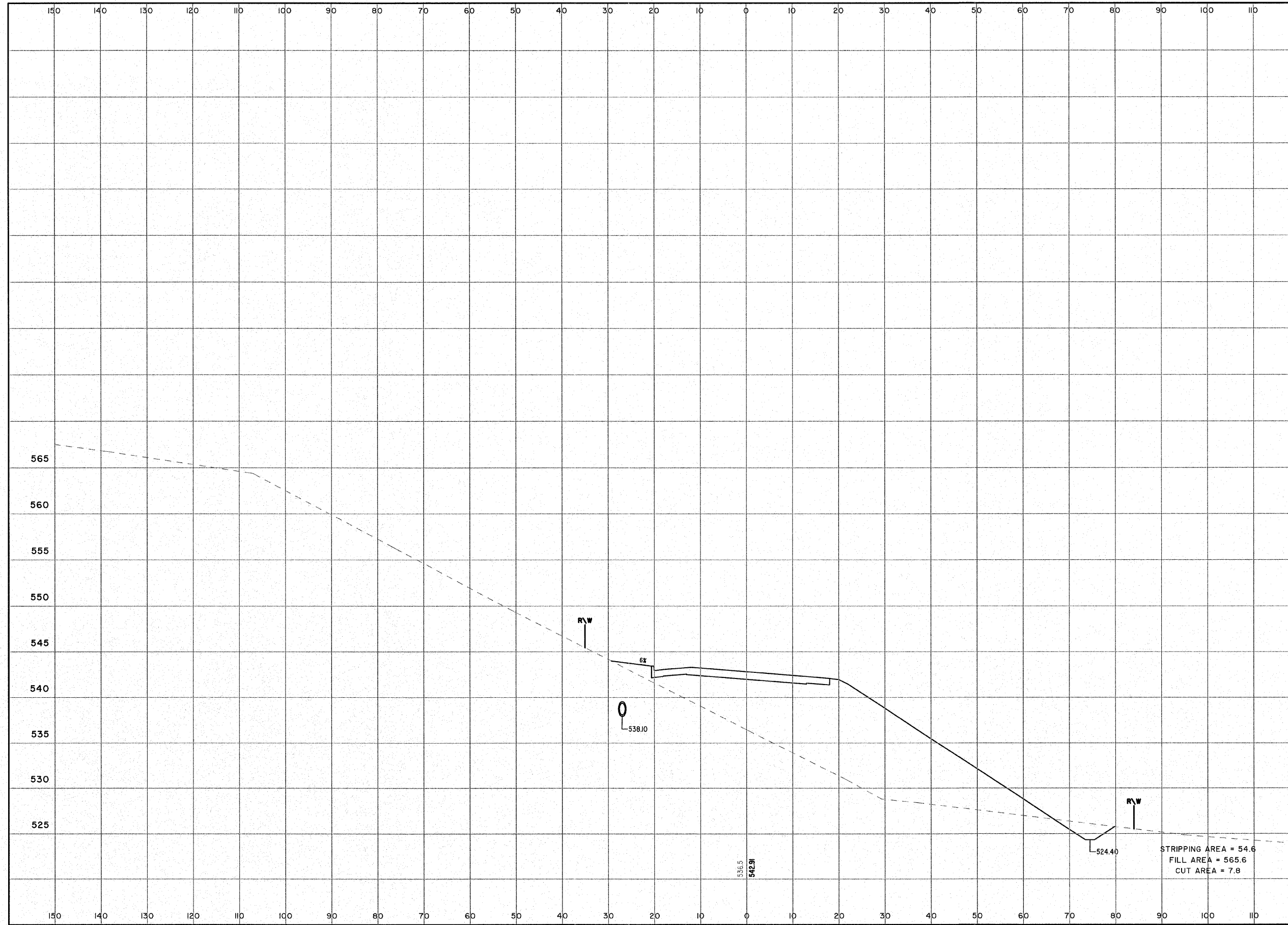
RW



ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 91
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



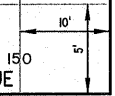
ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 92
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



STRIPPING AREA = 54.6  
 FILL AREA = 565.6  
 CUT AREA = 7.8

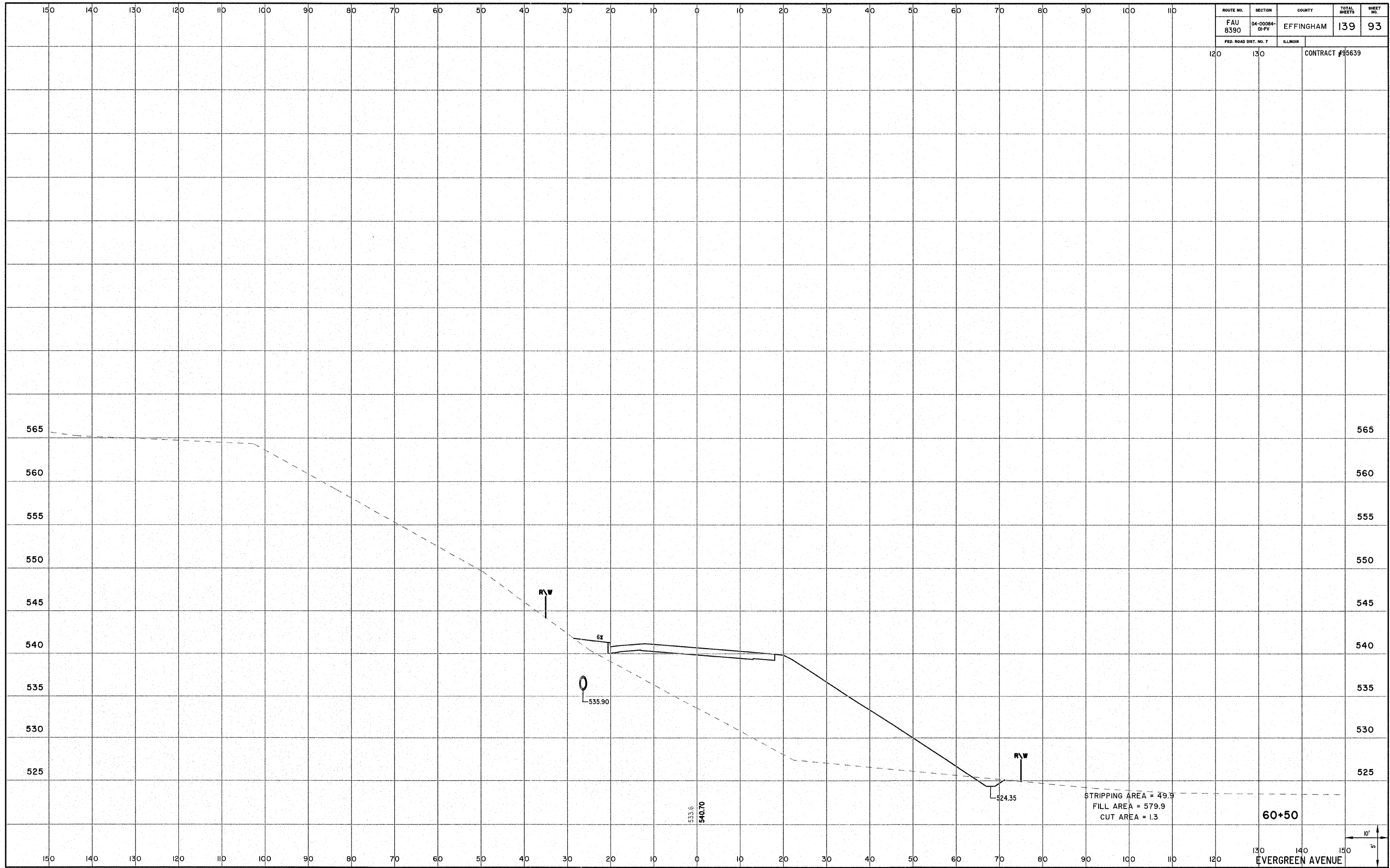
60+00

EVERGREEN AVENUE

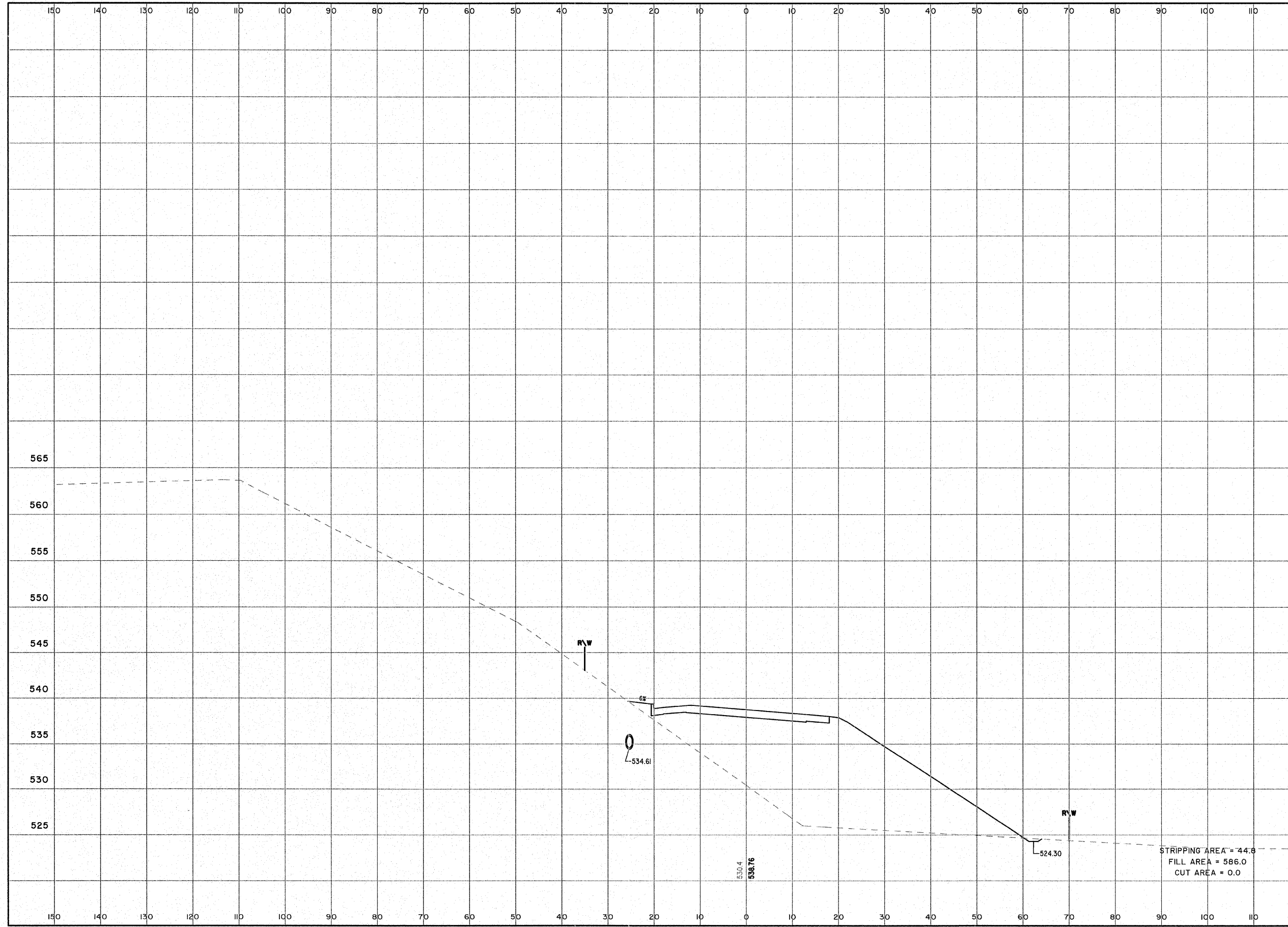


531.5  
542.91

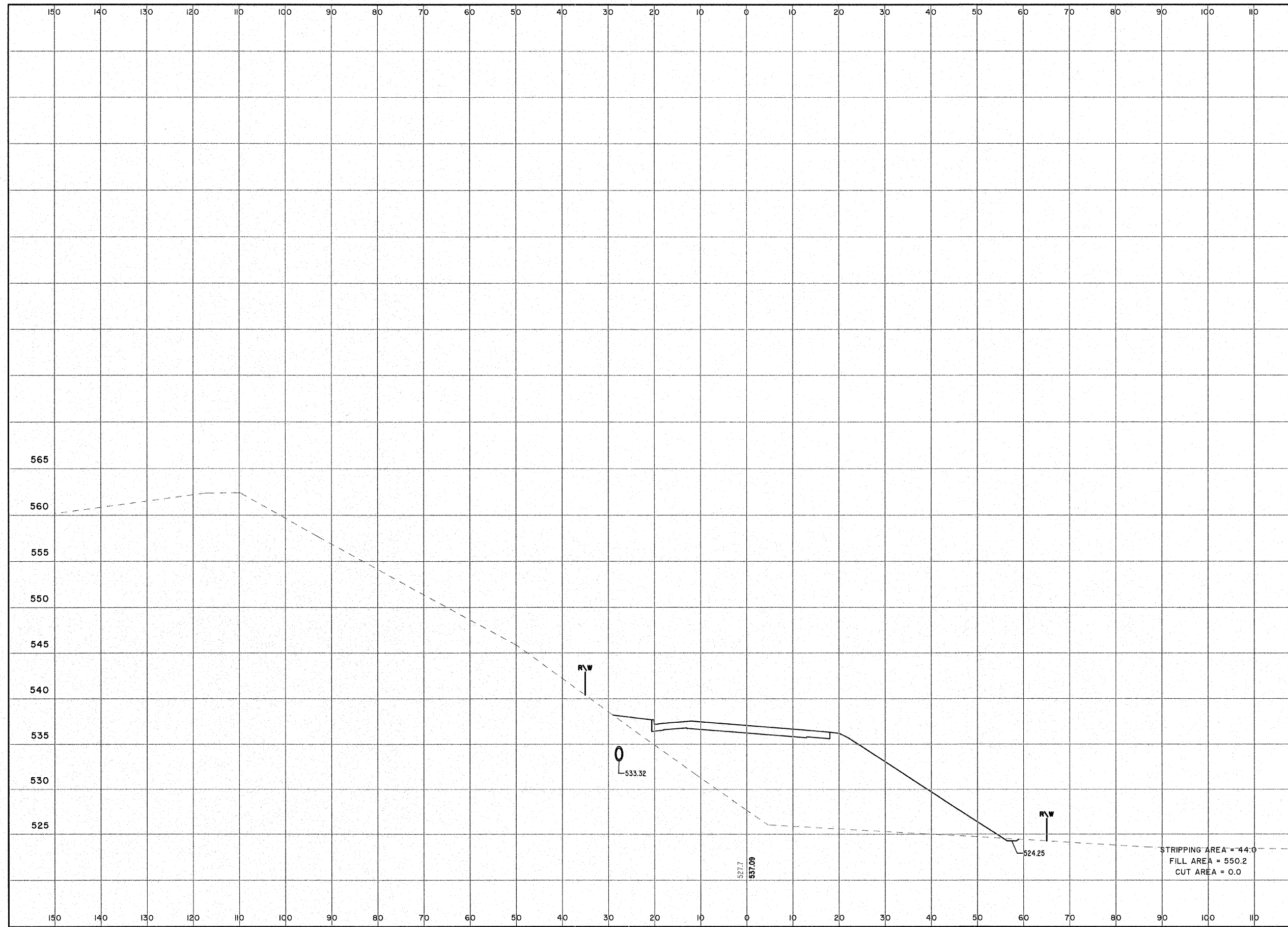
ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 93
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 94
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 95
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



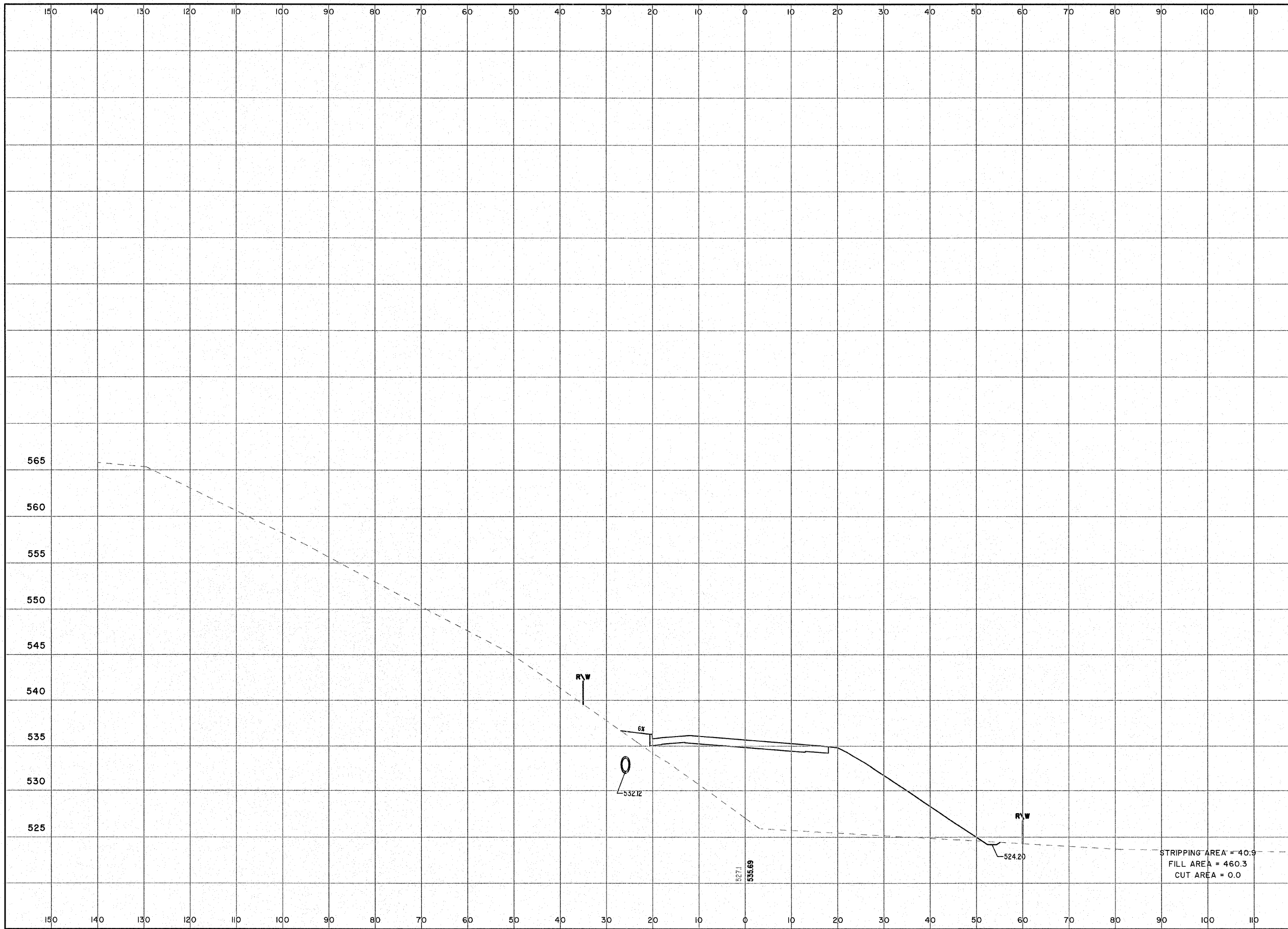
STRIPPING AREA = 44.0  
 FILL AREA = 550.2  
 CUT AREA = 0.0

61+50



EVERGREEN AVENUE

ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 96
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT #95639		



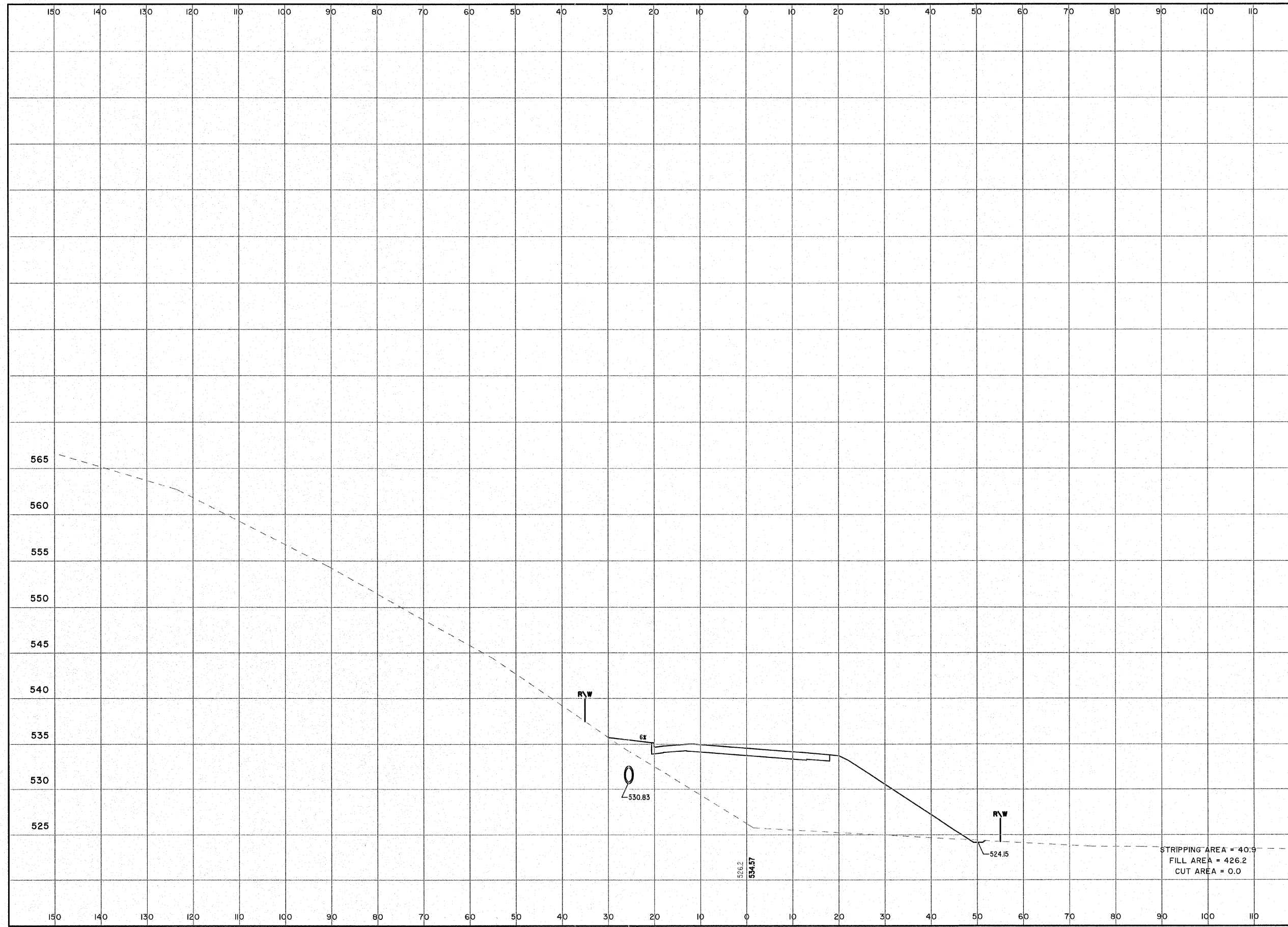
62+00

EVERGREEN AVENUE





ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 97
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



62+50

STRIPPING AREA = 40.9  
FILL AREA = 426.2  
CUT AREA = 0.0

526.2  
534.57

0  
530.83

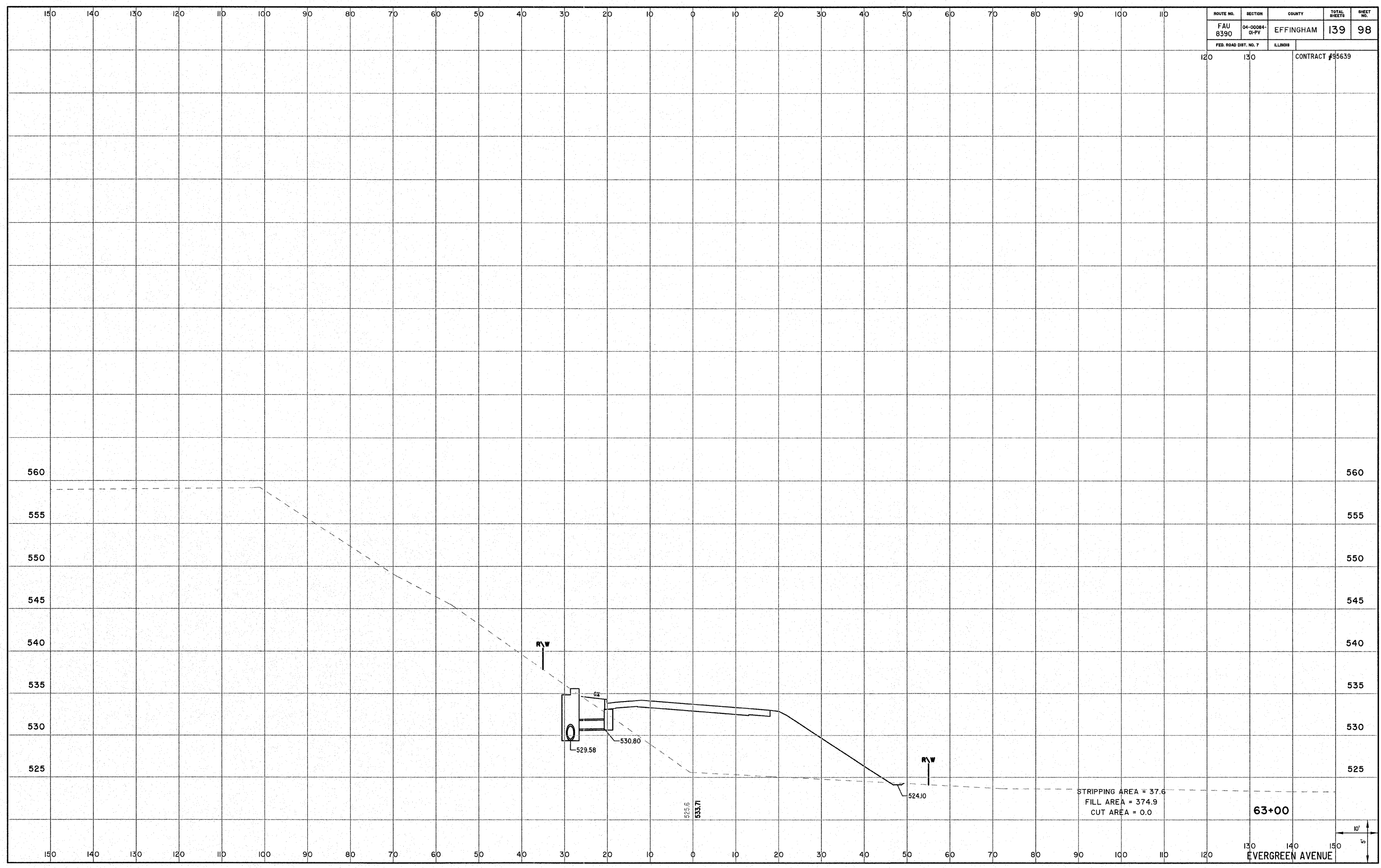
RW

RW



EVERGREEN AVENUE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 8390	04-00084-01-PV	EFFINGHAM	139	98
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT #95639		

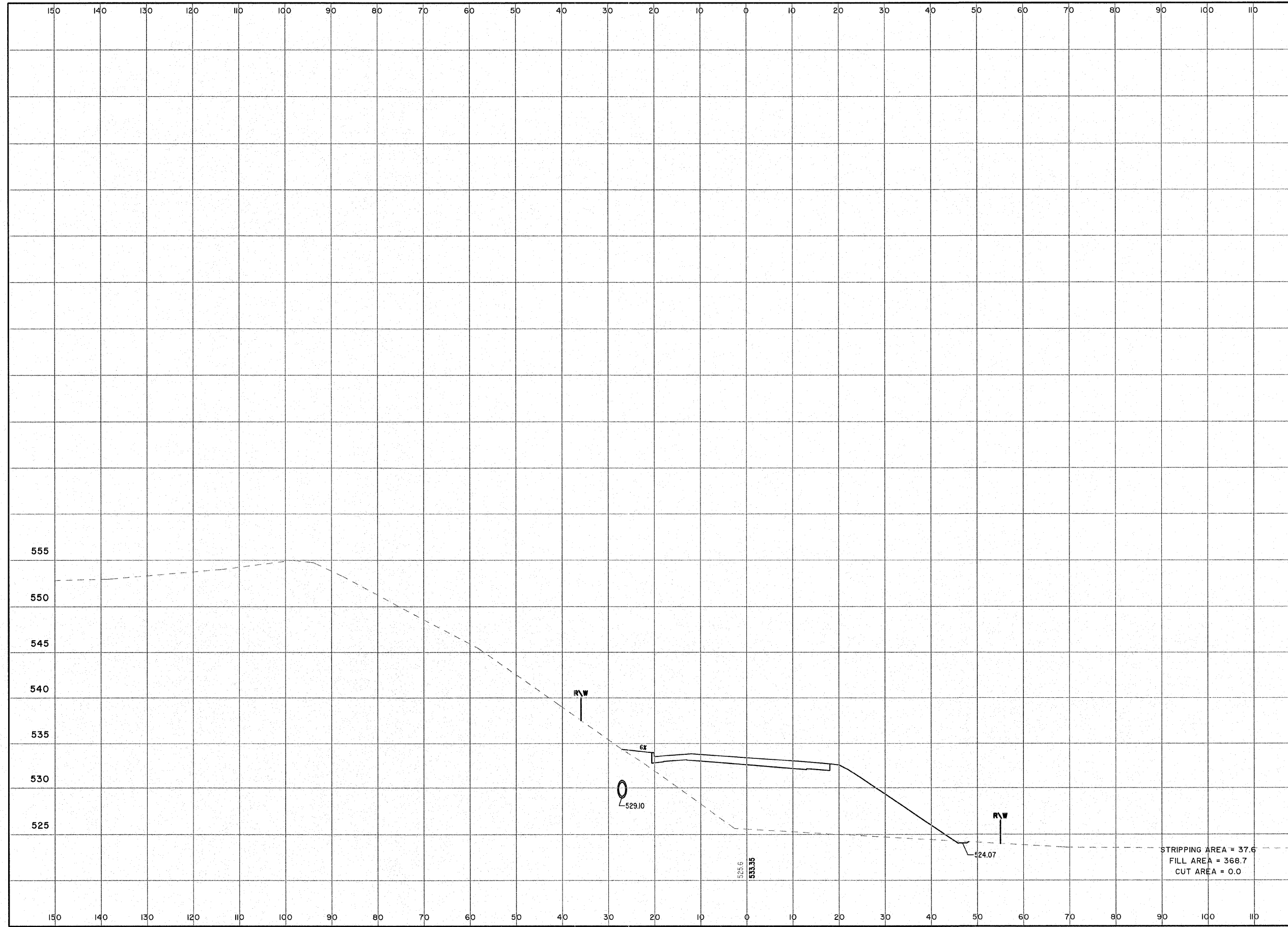


STRIPPING AREA = 37.6  
 FILL AREA = 374.9  
 CUT AREA = 0.0

63+00

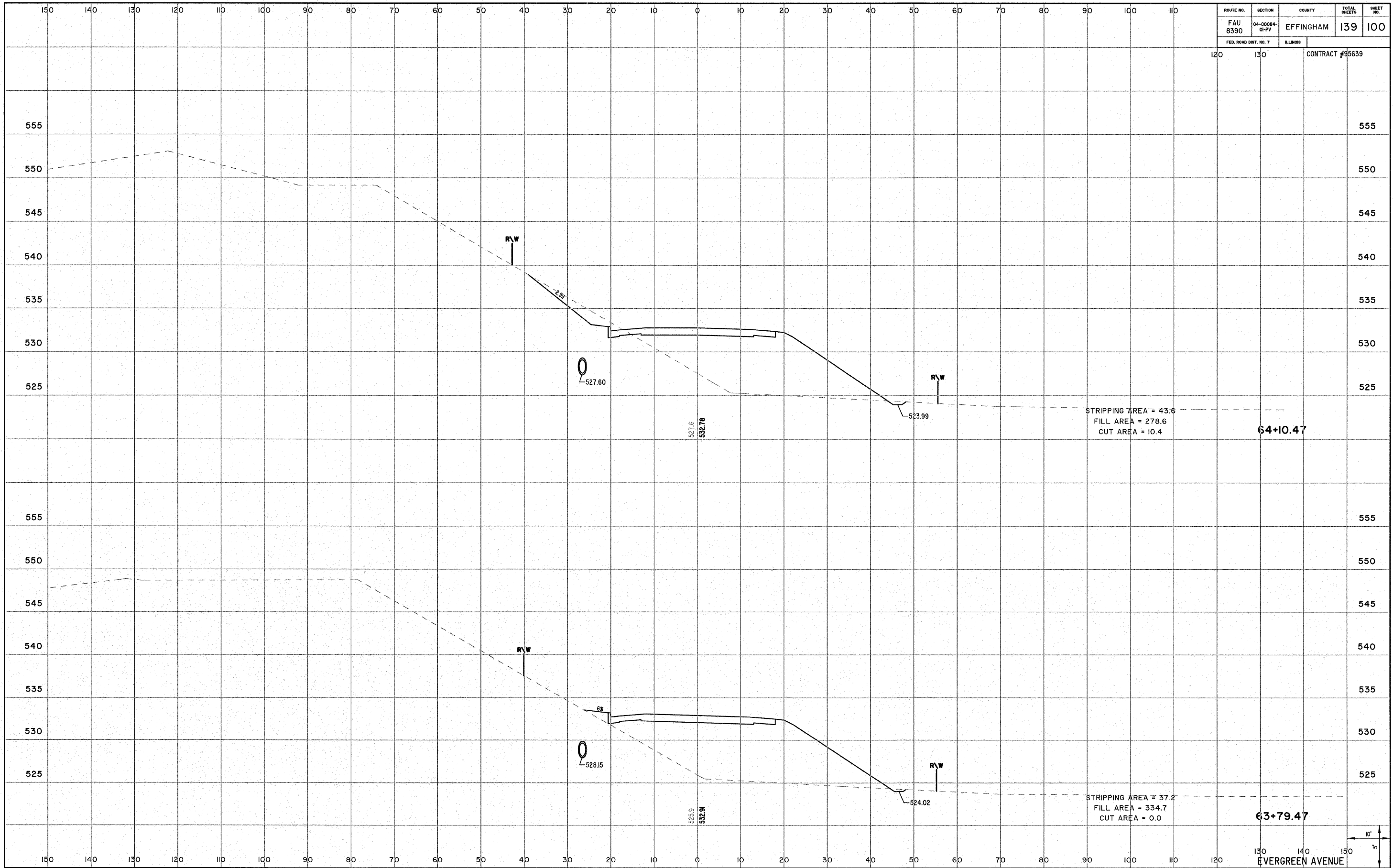
EVERGREEN AVENUE

ROUTE NO. FAU 8390	SECTION 04-0084- 01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 99
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



130 140 150  
EVERGREEN AVENUE

ROUTE NO. 8390	SECTION 04-00084-01-PV	COUNTY EFFINGHAM	TOTAL SHEETS 139	SHEET NO. 100
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT #95639	



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