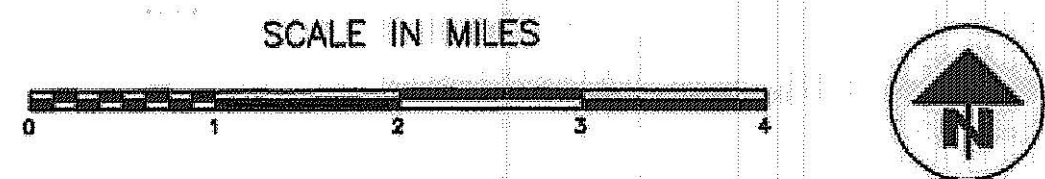


LOCATION MAP  
 LATITUDE: 41°41'12" LONGITUDE: 81°10'30"



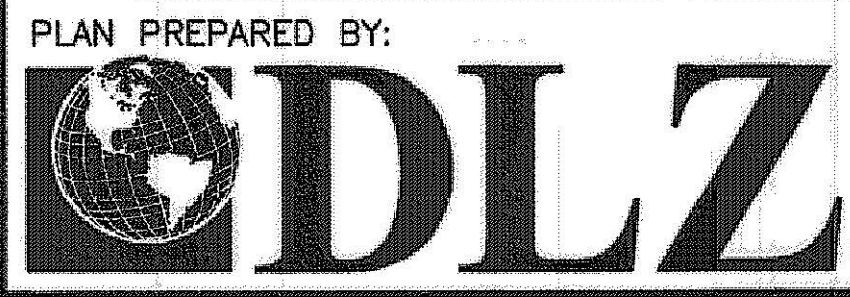
PORTION TO BE IMPROVED  
 INTERSTATE HIGHWAY  
 UNDIVIDED STATE & FEDERAL ROUTES  
 OTHER ROADS

**DESIGN DESIGNATION**  
 CURRENT ADT (2009) 11259  
 DESIGN YEAR ADT (2029) 15761  
 DESIGN HOURLY VOLUME (2029) 1141  
 DIRECTIONAL DISTRIBUTION 50%  
 TRUCKS (24 HOUR B&C) 5.0  
 DESIGN SPEED / LEGAL SPEED  
 SR-86 60 / 55 MPH  
 VROOMAN RD 45 / 40 MPH  
 LEROY CENTER RD 50 / 45 MPH  
 HUNTOON RD 55 / 55 MPH

DESIGN FUNCTIONAL CLASSIFICATION:  
 SR-86 & VROOMAN RD RURAL MAJOR COLLECTOR  
 LEROY CENTER RD & HUNTOON RD RURAL LOCAL  
 NHS PROJECT NO

**DESIGN EXCEPTIONS** NONE

**UNDERGROUND UTILITIES**  
 CONTACT BOTH SERVICES  
 CALL TWO WORKING DAYS  
**BEFORE YOU DIG**  
 CALL  
 1-800-362-2764  
 (TOLL FREE)  
 OHIO UTILITIES PROTECTION SERVICE  
 NON-MEMBERS  
 MUST BE CALLED DIRECTLY  
 OIL & GAS PRODUCERS PROTECTIVE  
 SERVICE CALL: 1-800-925-0988



# LAKE COUNTY, OHIO

## LAK - VROOMAN ROAD ROUNDABOUT

### LEROY TOWNSHIP

**PROJECT DESCRIPTION**  
 CONSTRUCTION OF ROUNDABOUT IMPROVEMENTS AT THE INTERSECTION OF SR 86, VROOMAN ROAD, AND LEROY CENTER ROAD IN LEROY TOWNSHIP, OHIO AND REALIGN THE HUNTOON ROAD/SR 86 INTERSECTION. PROJECT INCLUDES APPROACH WORK, SIGNING, PAVEMENT MARKING, DRAINAGE, AND ALL OTHER ITEMS NECESSARY TO COMPLETE CONSTRUCTION.

PROJECT EARTH DISTURBED AREA: 4.17 ACRES  
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.00 ACRES  
 NOTICE OF INTENT EARTH DISTURBED AREA: 5.17 ACRES

**2010 SPECIFICATIONS**  
 THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

AS BUILT SURVEY COMPLETED 4/28/2014

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ENGINEERS SEAL:  
 SIGNED: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 ENGINEERS SEAL:  
  
 SIGNED: *Joan M. Zbin*  
 DATE: 01/24/2013

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	4/20/12	DM-1.4	7/15/11	TC-41.10	10/19/07	HL-10.11	4/17/09	800	7/20/12
BP-4.1	7/16/04	DM-4.2	7/20/12	TC-41.20	1/19/01	HL-10.12	10/15/10	802	1/20/12
BP-5.1	7/26/00	DM-4.3	7/20/12	TC-41.40	7/16/04	HL-10.13	10/16/09	832	5/5/09
		DM-4.4	7/20/12	TC-41.41	1/21/11	HL-20.11	1/19/07	835	4/18/08
RM-1.1	7/15/11			TC-41.50	1/19/07	HL-30.11	10/16/09	836	4/15/05
		WQ-1.2	7/20/12	TC-42.10	1/19/07	HL-30.21	10/16/11		
CB-1.1	7/20/12	WQ-1.3	7/20/12	TC-42.20	1/21/11	HL-30.22	4/17/09		
CB-1.2	7/20/12			TC-51.11	1/21/11	HL-40.10	1/19/07		
CB-2.1	7/20/12	TC-21.10	1/19/07	TC-51.12	10/21/11	HL-60.11	10/21/11		
CB-2.2	7/20/12	TC-21.20	4/15/11	TC-52.10	1/19/07	HL-60.12	10/21/11		
		TC-22.20	1/21/11	TC-52.20	1/19/07	HL-60.31	1/19/07		
HW-2.2	7/20/12								SPECIAL PROVISIONS
				TC-73.10	4/20/12				
MH-1.2	7/20/12								
				MT-101.60	7/20/12				
DM-1.1	7/20/12			MT-105.10	7/20/12				
DM-1.2	7/20/12								

APPROVED: *James R. Gallo*  
 DATE: 3-11-2013 LAKE COUNTY ENGINEER

LAKE COUNTY COMMISSIONERS

APPROVED: *Robert E. Aufuldish*  
 DATE: 3-19-13 COMMISSIONER ROBERT E. AUFULDISH

APPROVED: *Daniel P. Troy*  
 DATE: 3/19/13 COMMISSIONER DANIEL P. TROY

APPROVED: *Judy Moran*  
 DATE: 3-19-13 COMMISSIONER JUDY MORAN

FEDERAL PROJECT NO. NONE  
 PID NO. NONE  
 CONSTRUCTION PROJECT NO. NONE  
 RAILROAD INVOLVEMENT NONE  
 LAK-VROOMAN RD  
 1  
 76

(A1)  
 PI STA = 105+62.15  
 $\Delta = 21^{\circ}54'10''$   
 $D_c = 28^{\circ}38'52''$   
 $R = 200.00$   
 $T = 38.70$   
 $L = 76.45$   
 $E = 3.71$   
 $C = 75.99$   
 $CB = N 30^{\circ}10'19'' W$

(A2)  
 PI STA = 106+29.43  
 $\Delta = 26^{\circ}35'14''$   
 $D_c = 57^{\circ}17'45''$   
 $R = 100.00$   
 $T = 23.63$   
 $L = 46.40$   
 $E = 2.75$   
 $C = 45.99$   
 $CB = N 5^{\circ}55'37'' W$

(A3)  
 PI STA = 108+07.10  
 $\Delta = 18^{\circ}49'18''$   
 $D_c = 19^{\circ}05'55''$   
 $R = 300.00$   
 $T = 49.72$   
 $L = 98.55$   
 $E = 4.09$   
 $C = 98.11$   
 $CB = N 2^{\circ}02'39'' W$

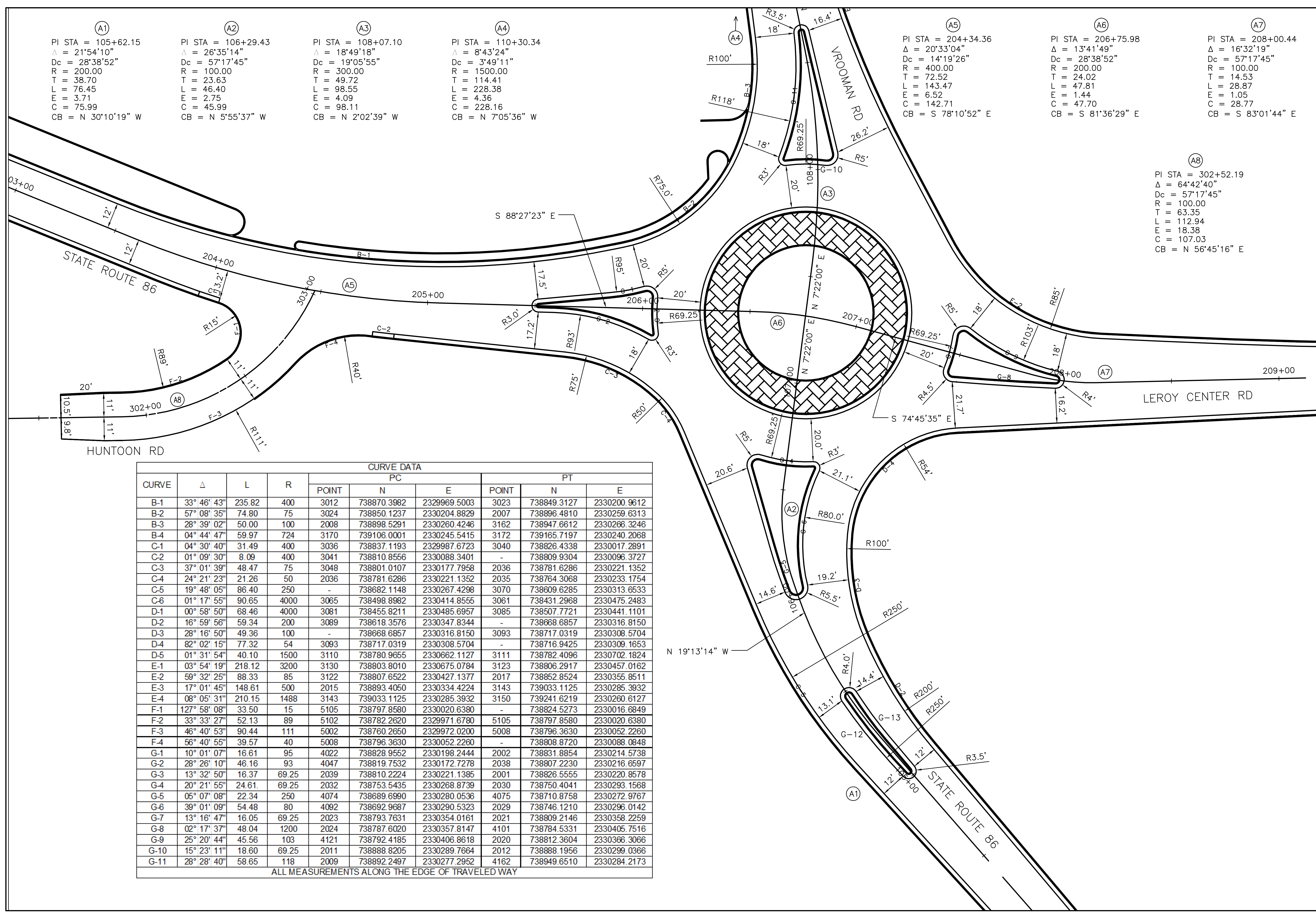
(A4)  
 PI STA = 110+30.34  
 $\Delta = 8^{\circ}43'24''$   
 $D_c = 3^{\circ}49'11''$   
 $R = 1500.00$   
 $T = 114.41$   
 $L = 228.38$   
 $E = 4.36$   
 $C = 228.16$   
 $CB = N 7^{\circ}05'36'' W$

(A5)  
 PI STA = 204+34.36  
 $\Delta = 20^{\circ}33'04''$   
 $D_c = 14^{\circ}19'26''$   
 $R = 400.00$   
 $T = 72.52$   
 $L = 143.47$   
 $E = 6.52$   
 $C = 142.71$   
 $CB = S 78^{\circ}10'52'' E$

(A6)  
 PI STA = 206+75.98  
 $\Delta = 13^{\circ}41'49''$   
 $D_c = 28^{\circ}38'52''$   
 $R = 200.00$   
 $T = 24.02$   
 $L = 47.81$   
 $E = 1.44$   
 $C = 47.70$   
 $CB = S 81^{\circ}36'29'' E$

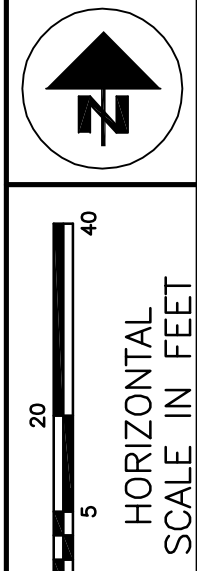
(A7)  
 PI STA = 208+00.44  
 $\Delta = 16^{\circ}32'19''$   
 $D_c = 57^{\circ}17'45''$   
 $R = 100.00$   
 $T = 14.53$   
 $L = 28.87$   
 $E = 1.05$   
 $C = 28.77$   
 $CB = S 83^{\circ}01'44'' E$

(A8)  
 PI STA = 302+52.19  
 $\Delta = 64^{\circ}42'40''$   
 $D_c = 57^{\circ}17'45''$   
 $R = 100.00$   
 $T = 63.35$   
 $L = 112.94$   
 $E = 18.38$   
 $C = 107.03$   
 $CB = N 56^{\circ}45'16'' E$



CURVE	$\Delta$	L	R	PC			PT		
				POINT	N	E	POINT	N	E
B-1	33° 46' 43"	235.82	400	3012	738870.3982	2329969.5003	3023	738849.3127	2330200.9612
B-2	57° 08' 35"	74.80	75	3024	738850.1237	2330204.8829	2007	738896.4810	2330259.6313
B-3	28° 39' 02"	50.00	100	2008	738898.5291	2330260.4246	3162	738947.6612	2330266.3246
B-4	04° 44' 47"	59.97	724	3170	739106.0001	2330245.5415	3172	739165.7197	2330240.2068
C-1	04° 30' 40"	31.49	400	3036	738837.1193	2329987.6723	3040	738826.4338	2330017.2891
C-2	01° 09' 30"	8.09	400	3041	738810.8556	2330088.3401	-	738809.9304	2330096.3727
C-3	37° 01' 39"	48.47	75	3048	738801.0107	2330177.7958	2036	738781.6286	2330221.1352
C-4	24° 21' 23"	21.26	50	2036	738781.6286	2330221.1352	2035	738764.3068	2330233.1754
C-5	19° 48' 05"	86.40	250	-	738682.1148	2330267.4298	3070	738609.6285	2330313.6533
C-6	01° 17' 55"	90.65	4000	3065	738498.8982	2330414.8555	3061	738431.2968	2330475.2483
D-1	00° 58' 50"	68.46	4000	3081	738455.8211	2330485.6957	3085	738507.7721	2330441.1101
D-2	16° 59' 56"	59.34	200	3089	738618.3576	2330347.8344	-	738668.6857	2330316.8150
D-3	28° 16' 50"	49.36	100	-	738668.6857	2330316.8150	3093	738717.0319	2330308.5704
D-4	82° 02' 15"	77.32	54	3093	738717.0319	2330308.5704	-	738716.9425	2330309.1653
D-5	01° 31' 54"	40.10	1500	3110	738780.9655	2330662.1127	3111	738782.4096	2330702.1824
E-1	03° 54' 19"	218.12	3200	3130	738803.8010	2330675.0784	3123	738806.2917	2330457.0162
E-2	59° 32' 25"	88.33	85	3122	738807.6522	2330427.1377	2017	738852.8524	2330355.8511
E-3	17° 01' 45"	148.61	500	2015	738893.4050	2330334.4224	3143	739033.1125	2330285.3932
E-4	08° 05' 31"	210.15	1488	3143	739033.1125	2330285.3932	3150	739241.6219	2330260.6127
F-1	127° 58' 08"	33.50	15	5105	738797.8580	2330020.6380	-	738824.5273	2330016.6849
F-2	33° 33' 27"	52.13	89	5102	738782.2620	2329971.6780	5105	738797.8580	2330020.6380
F-3	46° 40' 53"	90.44	111	5002	738760.2650	2329972.0200	5008	738796.3630	2330052.2260
F-4	56° 40' 55"	39.57	40	5008	738796.3630	2330052.2260	-	738808.8720	2330088.0848
G-1	10° 01' 07"	16.61	95	4022	738828.9552	2330198.2444	2002	738831.8854	2330214.5738
G-2	28° 26' 10"	46.16	93	4047	738819.7532	2330172.7278	2038	738807.2230	2330216.6597
G-3	13° 32' 50"	16.37	69.25	2039	738810.2224	2330221.1385	2001	738826.5555	2330220.8578
G-4	20° 21' 55"	24.61	69.25	2032	738753.5435	2330268.8739	2030	738750.4041	2330293.1568
G-5	05° 07' 08"	22.34	250	4074	738689.6990	2330280.0536	4075	738710.8758	2330272.9767
G-6	39° 01' 09"	54.48	80	4092	738692.9687	2330290.5323	2029	738746.1210	2330296.0142
G-7	13° 16' 47"	16.05	69.25	2023	738793.7631	2330354.0161	2021	738809.2146	2330358.2259
G-8	02° 17' 37"	48.04	1200	2024	738787.6020	2330357.8147	4101	738784.5331	2330405.7516
G-9	25° 20' 44"	45.56	103	4121	738792.4185	2330406.8618	2020	738812.3604	2330366.3066
G-10	15° 23' 11"	18.60	69.25	2011	738888.8205	2330289.7664	2012	738888.1956	2330299.0366
G-11	28° 28' 40"	58.65	118	2009	738892.2497	2330277.2952	4162	738949.6510	2330284.2173

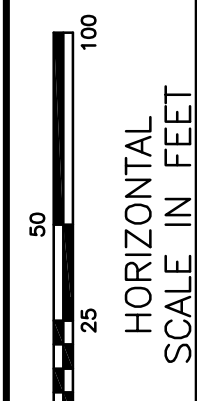
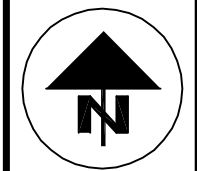
ALL MEASUREMENTS ALONG THE EDGE OF TRAVELED WAY



CALCULATED  
 SUB  
 CHECKED  
 SPR

ROUNDABOUT ALIGNMENT DETAIL  
 ALIGNMENT DETAIL

LAK-VROOMAN RD

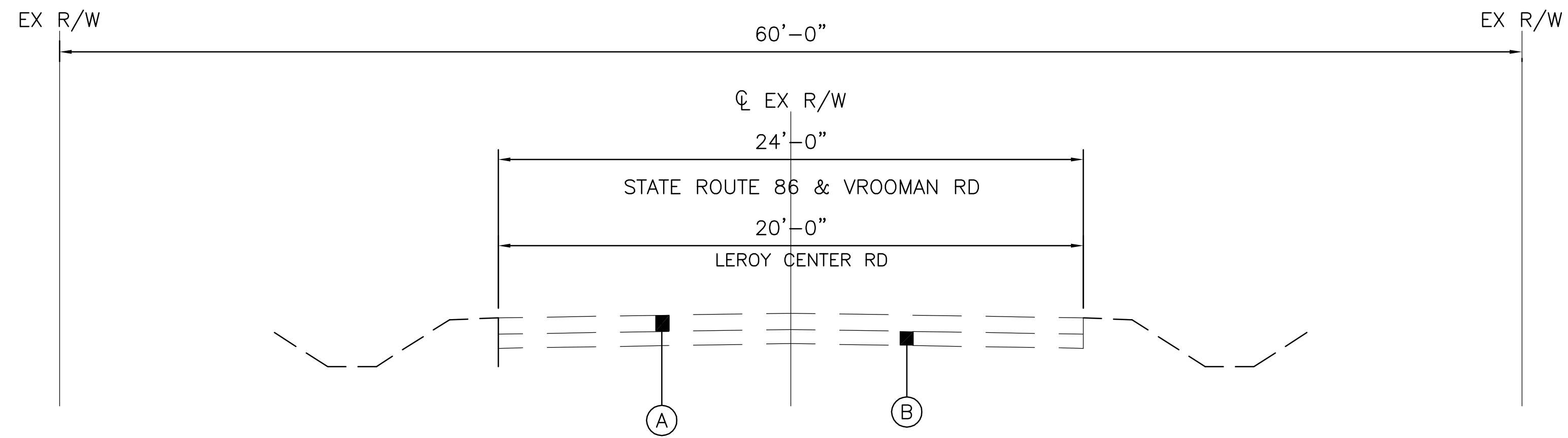


CALCULATED	MEMBER	CHECKED	CHM
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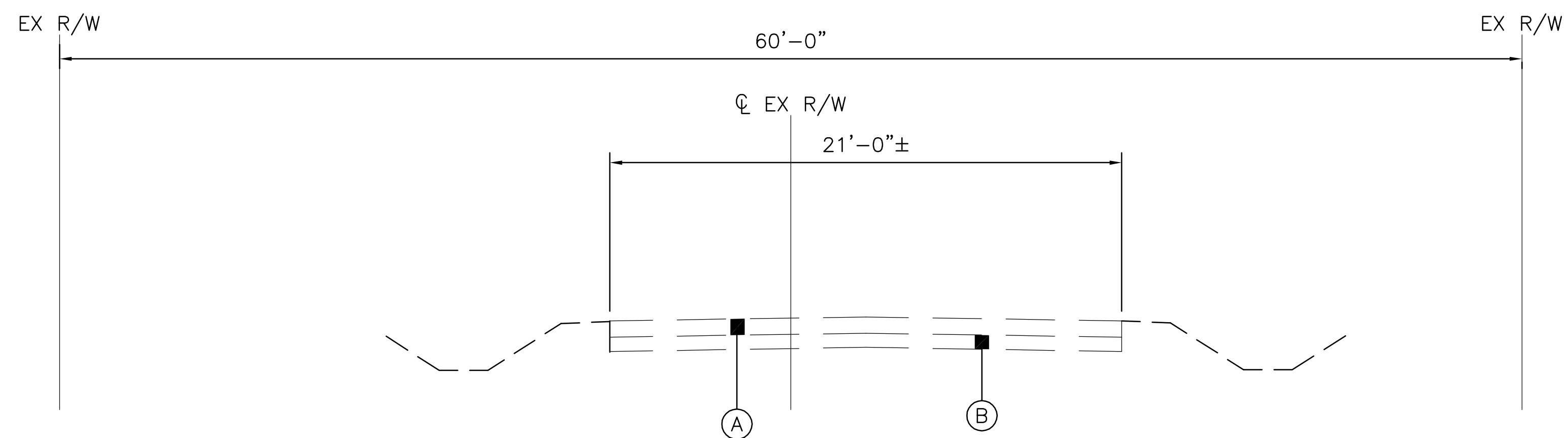
**SURVEY CONTROL**

**LAK-VROOMAN RD**

SURVEY CONTROL POINTS						
HUNTOON ROAD						
POINT	NORTHING	EASTING	STATION	OFFSET	ELEV	DESCRIPTION
PT #4	738786.54	2330020.53	302+40.81	1.51' L	943.19'	(CONTROL PT No. 4) MAG NAIL SET
BM 5	738748.30	2329727.33	201+67.74	192.22' R	936.10'	(BM TBM 5) BENCHMARK FOUND AT THE N.E. CORNER OF A CONC. HEADWALL S. SIDE OF HUNTOON W. OF CAPPS TAVERN
STATE ROUTE 86/ LEROY CENTER ROAD						
POINT	NORTHING	EASTING	STATION	OFFSET	ELEV	DESCRIPTION
PT #1	738969.98	2329750.35	201+05.69	21.84' L	938.92'	(CONTROL PT No. 1) 5/8" PIN w/ CAP "DLZ"
PT #5	738767.52	2330645.60	210+35.28	24.60' R	953.29'	(CONTROL PT No. 5) 5/8" PIN w/ CAP "DLZ"
BM 2	738758.15	2330677.11	210+66.57	34.69' R	953.77'	(BM TBM 2) BENCHMARK FOUND AT THE N.W. CORNER OF THE CONC. TELEPHONE PEDISTALE #12888612 (LEROY CENTER RD.)
BM 6	738943.32	2329848.59	202+06.83	34.00' L	940.02'	(BM TBM 6) BENCHMARK FOUND AT THE S.E. CORNER OF THE CONC. PAD IN FRONT OF THE V.F.W. POST #7939
STATE ROUTE 86/ VROOMAN ROAD						
POINT	NORTHING	EASTING	STATION	OFFSET	ELEV	DESCRIPTION
PT #2	738633.00	2330272.58	105+59.21	35.78' L	946.99'	(CONTROL PT No. 2) MAG NAIL SET
PT #43	739181.86	2330267.51	110+97.82	15.33' R	942.80'	LAKE COUNTY MONUMENT DISK #0043
PT #6	738438.68	2330554.93	102+33.31	52.88' R	950.72'	(CONTROL PT No. 6) 5/8" PIN w/ CAP "DLZ"
BM 3	738619.51	2330219.96	105+69.92	88.27' L	947.74'	(BM TBM 3) BENCHMARK FOUND AT THE N.E. CORNER OF A CONC. WALK IN FRONT OF A CLARK GAS STATION "FIVE POINTS COUNTRY STORE"
BM 4	738182.55	2330668.87	99+65.43	29.74' L	954.78'	(BM TBM 4) BENCHMARK FOUND AT THE N.E. CORNER OF A CONC. TELEPHONE PEDISTAL # F-12920 (RT. 86)



STATE ROUTE 86, VROOMAN ROAD  
& LEROY CENTER ROAD  
EXISTING TYPICAL SECTION



HUNTOON ROAD  
EXISTING TYPICAL SECTION

LEGEND

STATE ROUTE 86

(A) 15" ± ASPHALT CONCRETE

(B) 10" AGGREGATE BASE

VROOMAN ROAD

(A) 20" ASPHALT CONCRETE

(B) NONE

LEROY CENTER ROAD

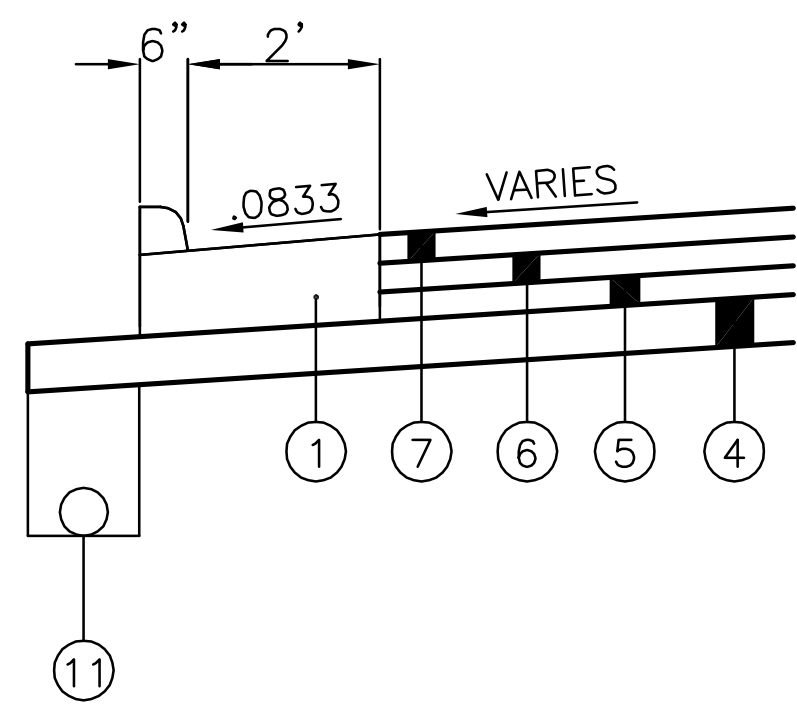
(A) 10" ASPHALT CONCRETE

(B) 8" PORTLAND CEMENT CONCRETE

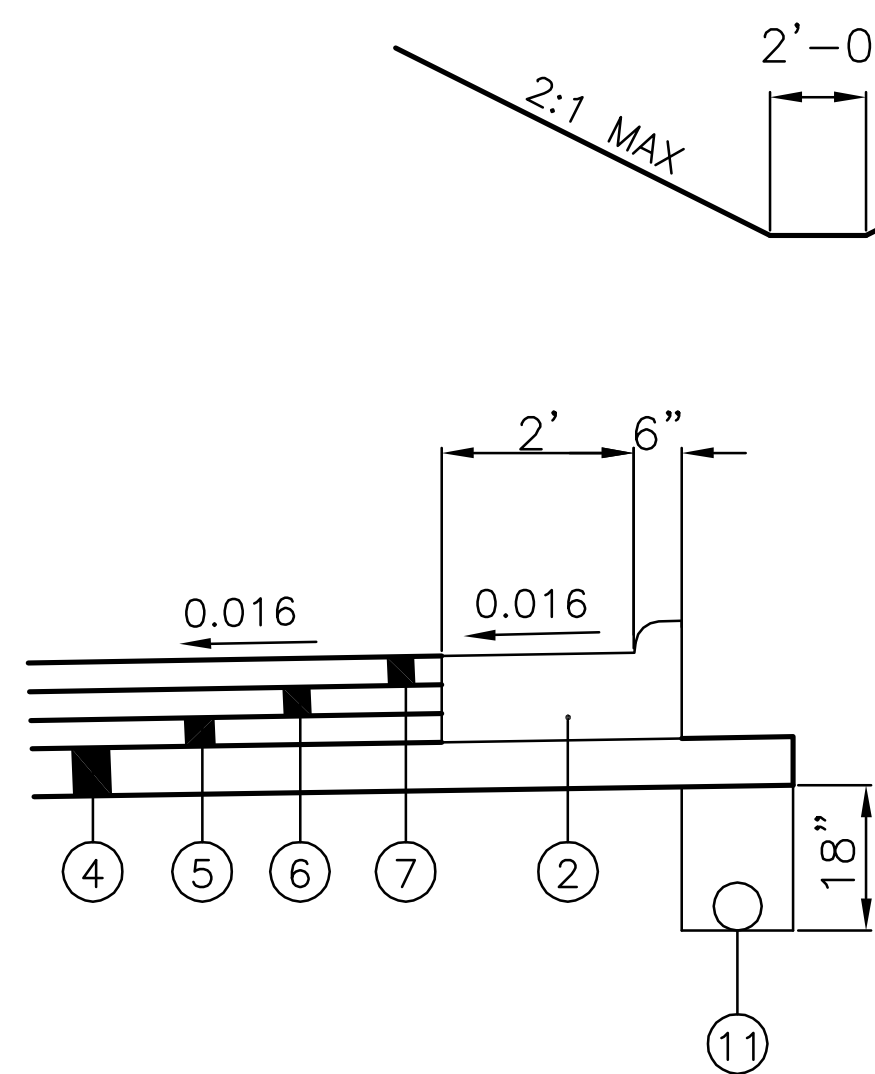
HUNTOON ROAD

(A) 15" ± ASPHALT CONCRETE

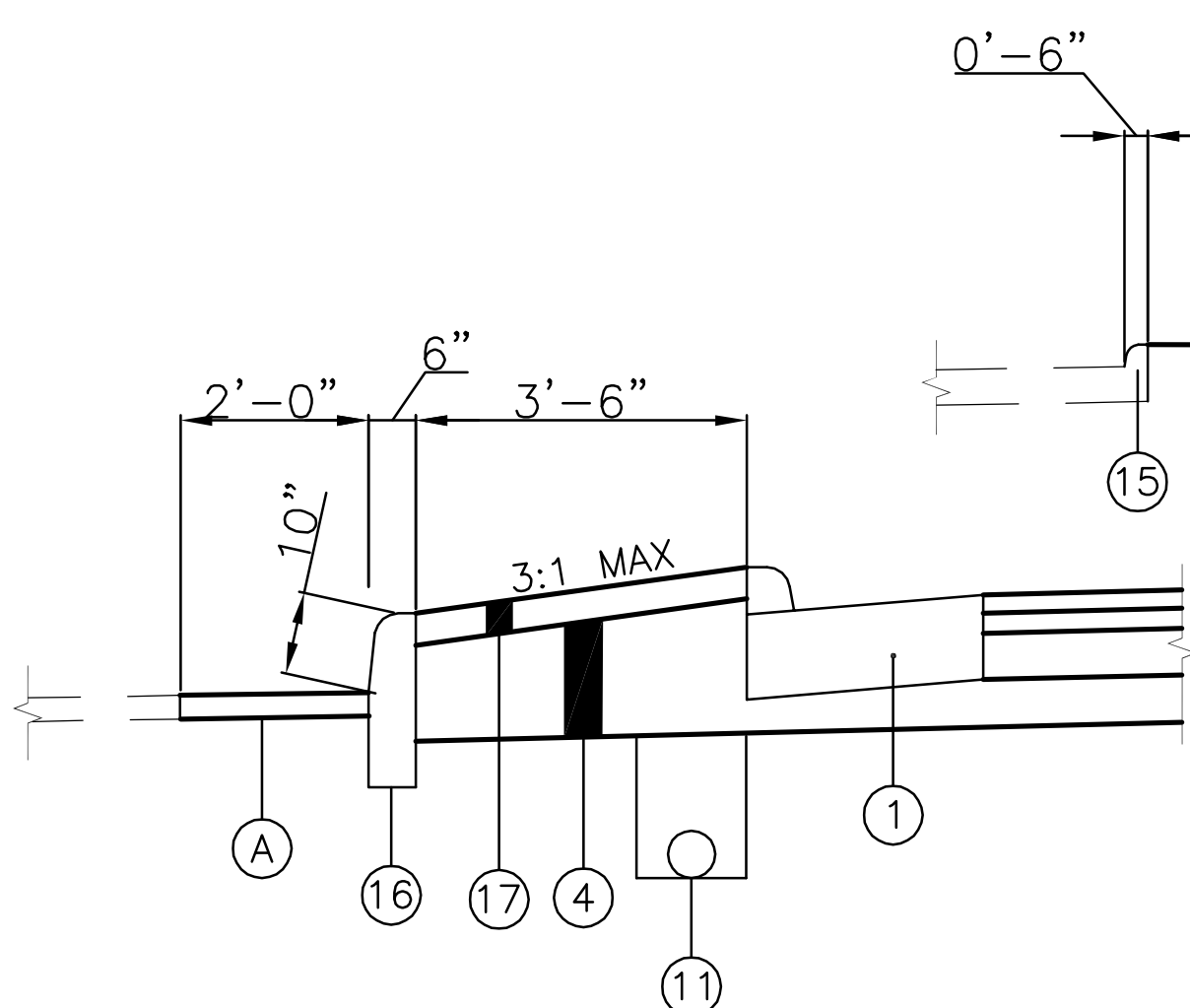
(B) 10" AGGREGATE BASE



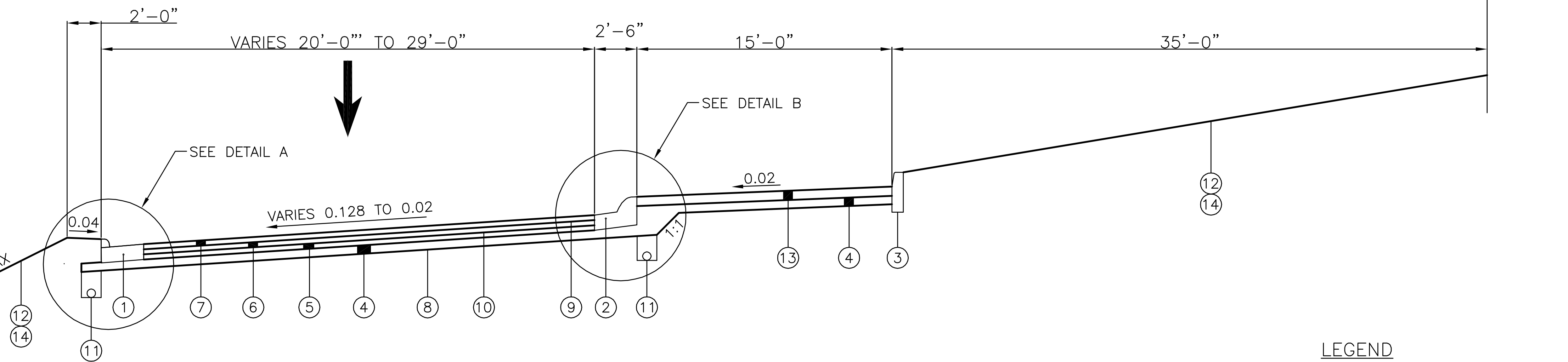
DETAIL A  
COMBINATION  
CURB AND GUTTER, TYPE 2



DETAIL B  
COMBINATION  
CURB AND GUTTER,  
TYPE 3 AS PER PLAN



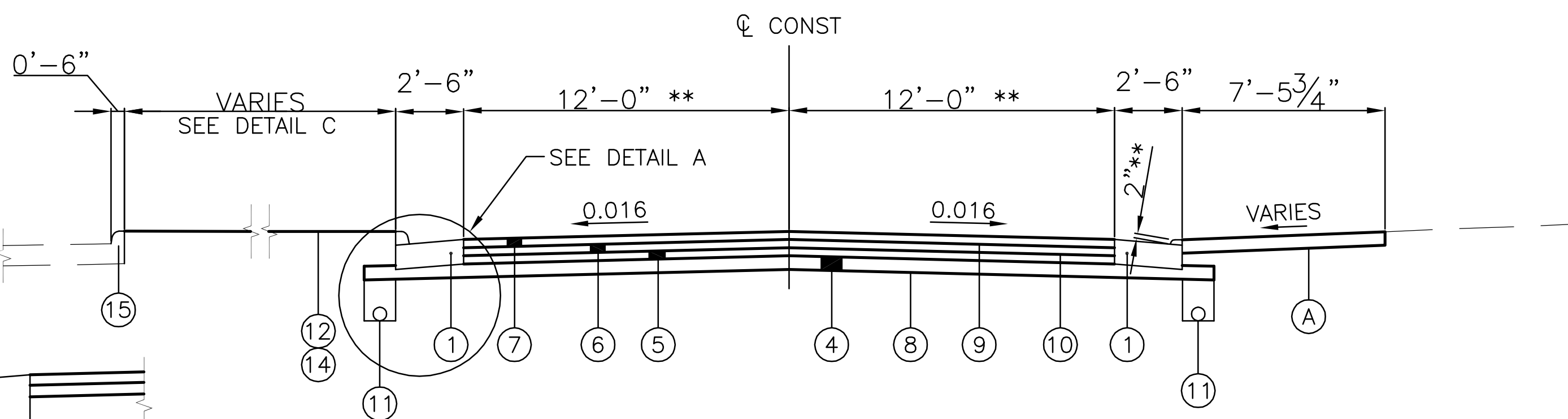
DETAIL C  
CURB, TYPE 6, AS PER PLAN  
STA 204+36 TO STA 205+50 - STATE ROUTE 86  
NOTE: FOR LIMITS OF 10" CURB, SEE SHEET 48



NORMAL SECTION  
STA 206+04.22 TO STA 207+47.50 STATE ROUTE 86 & LEROY CENTER RD  
STA 106+61.22 TO STA 108+04.82 STATE ROUTE 86 & VROOMAN RD  
PROPOSED ROUNDABOUT TYPICAL SECTION

LEGEND

- ① ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
- ② ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 3, AS PER PLAN
- ③ ITEM 609 - CURB, TYPE 7
- ④ ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN
- ⑤ ITEM 301 - 6" ASPHALT CONCRETE BASE, PG 64-22
- ⑥ ITEM 448 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
- ⑦ ITEM 448 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN
- ⑧ ITEM 204 - SUBGRADE COMPACTION
- ⑨ ITEM 407 - TACK COAT
- ⑩ ITEM 407 - TACK COAT FOR INTERMEDIATE COARSE
- ⑪ ITEM 605 - 6" BASE PIPE UNDERDRAINS
- ⑫ ITEM 659 - SEEDING AND MULCHING
- ⑬ ITEM 452 - 8" NON REINFORCED CONCRETE PAVEMENT, AS PER PLAN
- ⑭ ITEM 659 - TOPSOIL
- ⑮ ITEM 609 - CURB, TYPE 6
- ⑯ ITEM 609 - CURB, TYPE 6, AS PER PLAN
- ⑰ ITEM 452 - 4" NON-REINFORCED CONCRETE PAVEMENT
- (A) PARKING LOT PAVEMENT - SEE SHEET 52 FOR DRIVE PAVEMENT REQUIREMENTS



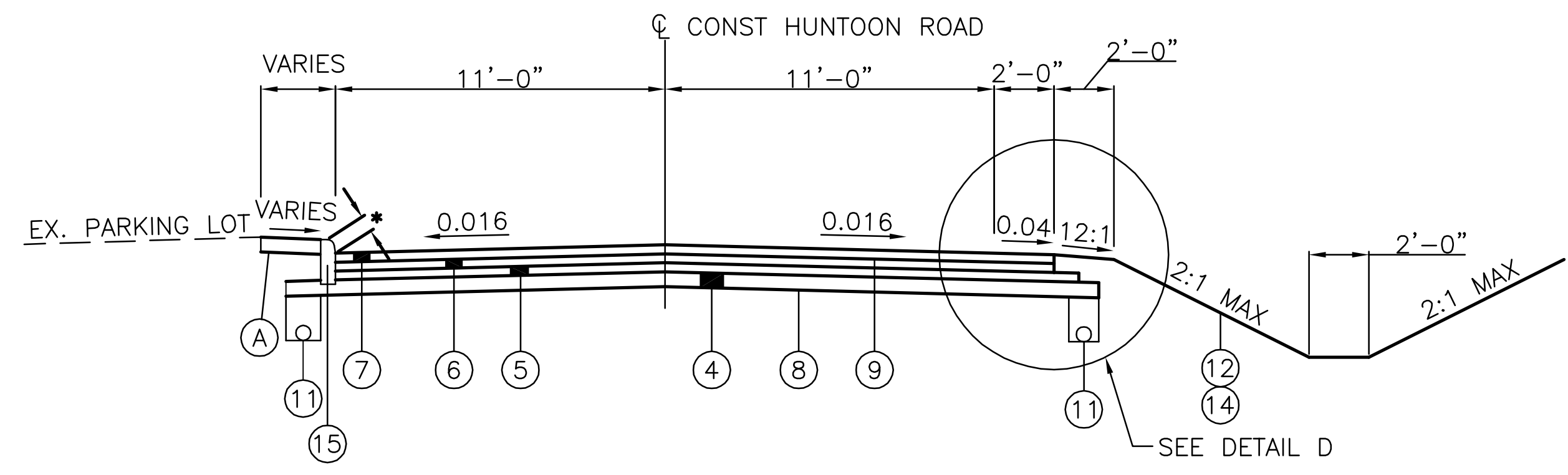
NORMAL SECTION  
STA 201+00.00 TO STA 205+50.00 - STATE ROUTE 86  
PROPOSED TYPICAL SECTION

\* VARIES 12'-0" TO 20'-5" STA 203+96.20 TO STA 205+50.00

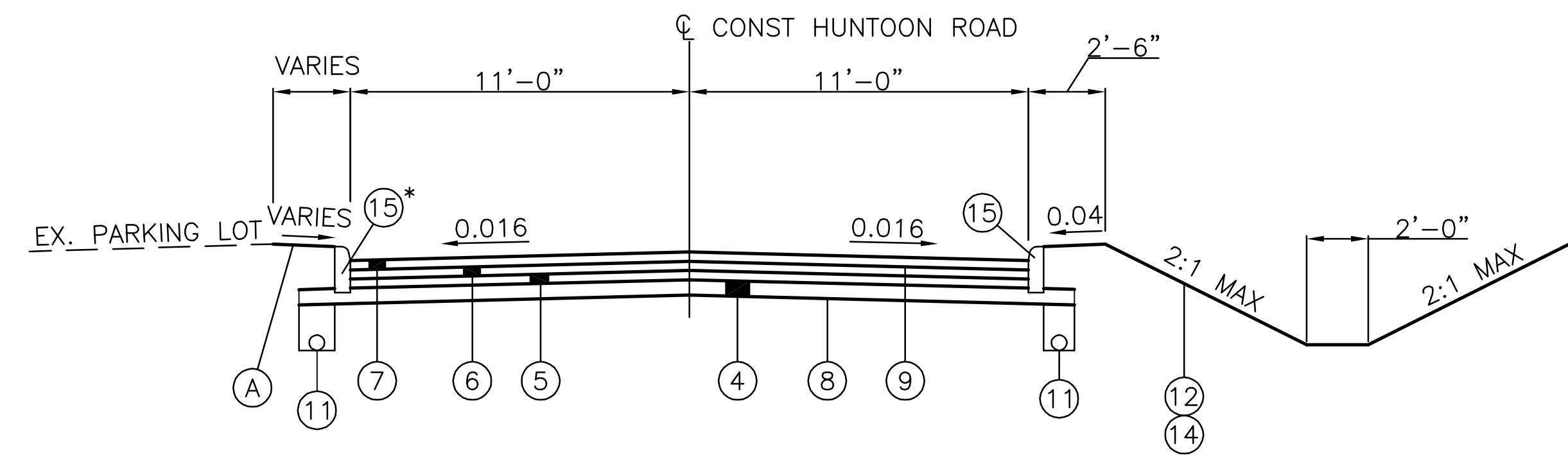
\*\* CURB REVEAL IS 2" IN FRONT OF PARKING LOT,  
BETWEEN STA 201+05.86 AND STA 203+84.79

SEE SHEET 52 FOR SPLITTER ISLAND DETAIL

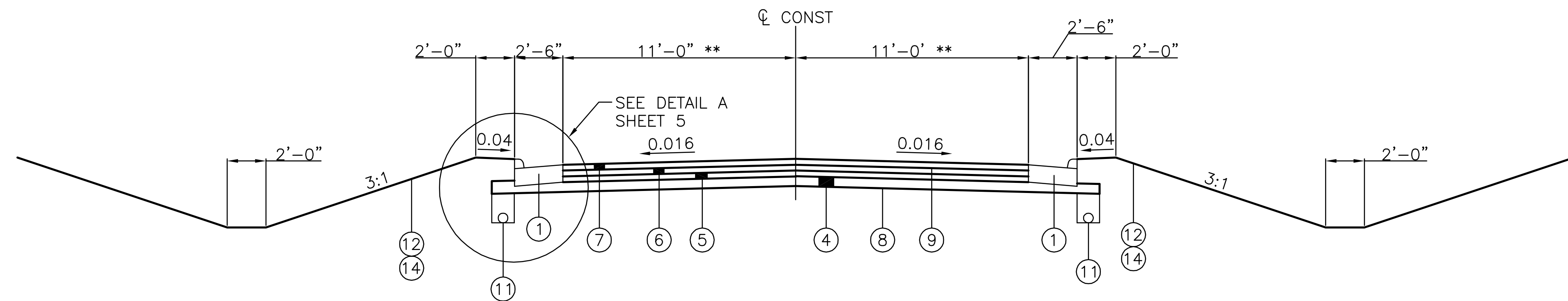
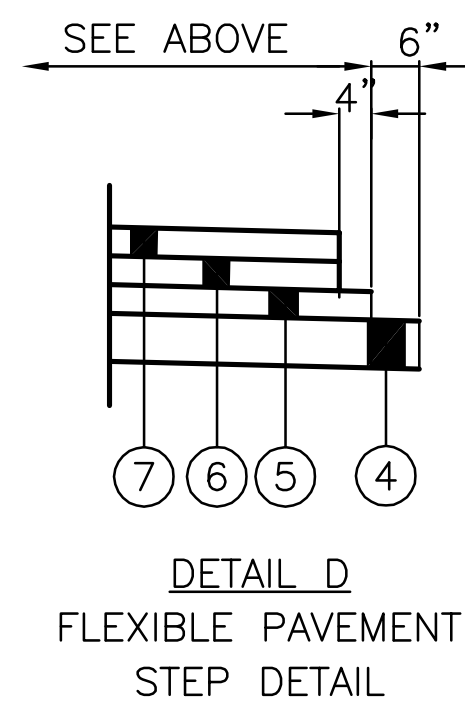
\* CURB REVEAL IS 2" IN FRONT OF PARKING LOT,  
BETWEEN STA 301+60.32 AND STA 302+33.85



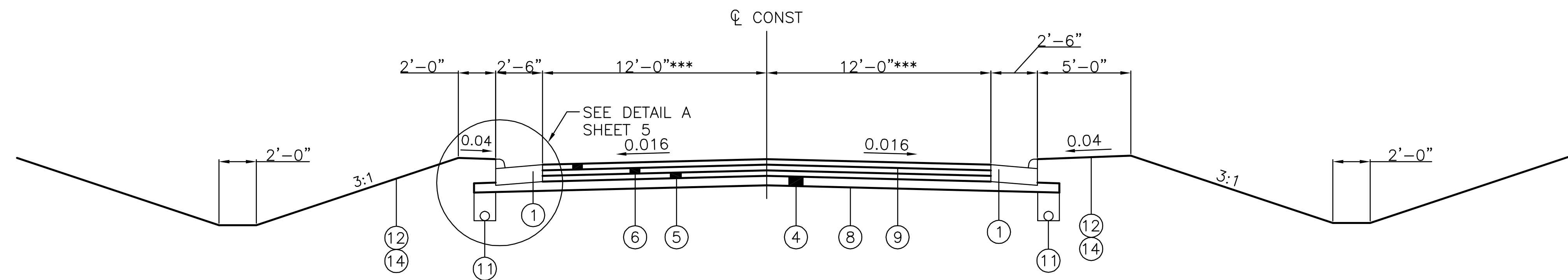
NORMAL SECTION  
STA 301+60.32 TO STA 302+22.96 - HUNTOON ROAD  
PROPOSED TYPICAL SECTION



NORMAL SECTION  
STA 302+22.96 TO STA 302+65.52 - HUNTOON ROAD  
PROPOSED TYPICAL SECTION



NORMAL SECTION  
\*\*VARIES 22'-0" TO 11'-0" STA 208+00.00 TO STA 211+50.00 - LEROY CENTER ROAD  
PROPOSED TYPICAL SECTION



NORMAL SECTION  
STA 102+50.00 TO STA 105+00.00 - STATE ROUTE 86  
PROPOSED TYPICAL SECTION  
\*\*\*VARIES 12'-0" TO 16'-0" STA 102+80.16 TO STA 105+00.00  
\*\*\* VARIES 20'-5" TO 12'-0" STA 208+00.00 TO STA 210+92.20

FOR LEGEND SEE SHEET 5

TYPICAL SECTION

LAK-VROOMAN RD

**UTILITIES**

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AT&T  
13630 LORAIN AVE  
ROOM 350  
CLEVELAND OH 44111  
216-476-6638  
RALPH HUTCHINSON

TIME WARNER  
7820 DIVISION DR.  
MENTOR, OH 44060  
440-974-3401  
LARRY BOCK

THE ILLUMINATING COMPANY  
6896 MILLER ROAD  
BRECKSVILLE, OH 44141  
440-350-7741  
RALPH N. DELLIGATTI

ORWELL NATURAL GAS  
95 EAST MAIN ST.  
ORWELL, OH 44076  
440-669-1602  
CHRIS DOMONKOS

LAKE COUNTY DEPARTMENT OF UTILITIES  
ADMINISTRATION BUILDING  
105 MAIN ST.  
PAINESVILLE, OH 44077  
440-350-2652  
DOUG BRADLEY

LAKE COUNTY ENGINEER  
505 BLACKBROOK ROAD  
PAINESVILLE, OH 44077  
440-350-2770  
TOM TRIVISONNO

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C., OR BY FIELD SURVEY.

**ROUNDING**

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

**WORK LIMITS**

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

**ELEVATION DATUM**

THE HORIZONTAL AND VERTICAL CONTROL IS BASED ON THE OHIO NORTH ZONE STATE PLANE COORDINATE SYSTEM NAD 83 AND THE NAVD 88 VERTICAL DATUM.

**CLEARING AND GRUBBING**

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL AS WELL AS APPROXIMATELY 400 FEET OF BRUSH LINE ALONG LEROY CENTER ROAD WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED BUT DOES NOT INCLUDE THE BRUSH LINE MENTIONED ABOVE.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	14	0	14
48"	5	0	5

**ITEM 204 – PROOF ROLLING**

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEET NO. 5-6 FOR ADDITIONAL INFORMATION.

ITEM 204 – PROOF ROLLING 5 HOURS.

**UNSUITABLE SOILS**

UNSUITABLE SOILS MAY BE ENCOUNTERED AROUND THE AREAS OF BORINGS B-2, B-4 AND B-6 AS DESCRIBED IN THE "MODIFIED REPORT OF SUBSURFACE EXPLORATION FOR ROADWAY IMPROVEMENTS VROOMAN ROAD ROUNDABOUT" ON FILE AT THE OFFICE OF THE LAKE COUNTY ENGINEER. UNDERCUTTING AND REPLACEMENT WITH SUITABLE MATERIALS IS RECOMMENDED. ACTUAL DEPTHS AND LIMITS OF OF UNDERCUTTING SHOULD BE DETERMINED BY THE PROJECT ENGINEER IN THE FIELD BASED ON THE RESULTS OF PROOF ROLLING IN ACCORDANCE WITH ITEM 204.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 204 – GRANULAR MATERIAL, TYPE B	3000	CY
ITEM 204 – GEOTEXTILE FABRIC	4700	SY
ITEM 204 – EXCAVATION OF SUBGRADE	3000	CY

**ADDITIONAL SOIL INFORMATION**

THE SOIL PROFILE AND/OR STRUCTURE FOUNDATION INVESTI-GATIONS SHEETS CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATION INFORMATION IS AVAILABLE FROM THE LAKE COUNTY ENGINEER.

**PART WIDTH CONSTRUCTION**

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT IN SECTIONS, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

**MONUMENT ASSEMBLIES**

ALL PROPOSED MONUMENT ASSEMBLIES LOCATED ON VROOMAN, LEROY CENTER AND HUNTOON ROADS SHALL BE CONSTRUCTED PER THE LAKE COUNTY DETAIL AS SHOWN ON SHEET 53 OF 76. MONUMENT ASSEMBLIES CONSTRUCTED ON SR 86 SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN IN THE PLANS.

THE EXISTING LAKE COUNTY MONUMENT DISK #0043 LOCATED ON VROOMAN RD AT STA 110+97.82, 15.33' RT SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES.

**ITEM SPECIAL – MAILBOX SUPPORT**

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4" BY 4" SQUARE OR 4 1/2" DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2" I.D. O.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, (SINGLE) (DOUBLE). THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY OF THE WORK NOTED ABOVE:

ITEM SPECIAL – MAILBOX SUPPORT (SINGLE) 9 EACH

**ITEM 304 – AGGREGATE BASE, AS PER PLAN**

THE FURNISHED MATERIALS SHALL CONFORM TO 703.17 WITH THE EXCEPTION OF THE GRADATION REQUIREMENTS. THE GRADATION SHOWN IN 703.17A SHALL BE MODIFIED AS FOLLOWS.

SIEVE SIZE	MAXIMUM % PASSING
NO. 4	40
NO. 30	15
NO. 200	8

PRIOR TO THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL SUBMIT THE JOB MIX FORMULA (JMF) GRADATION, AND THE CALCULATION TO SHOW THE AGGREGATE BASE SUPPLIED MEETS THESE REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM QUALITY CONTROL TESTS TO ENSURE THE AGGREGATE BASE SUPPLIED FOR THIS CONTRACT IS WITHIN GRADATION SPECIFICATIONS AS SHOW ABOVE. GRADATION TESTING ON EACH SAMPLE WILL BE PERFORMED TO DETERMINE THE PERCENT PASSING EACH SIEVE SIZE LISTED IN TABLE 703.17A, WITH THE ABOVE-MENTIONED MODIFICATION. TESTS SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY, APPROVED BY THE ENGINEER. A QUALITY CONTROL REPORT SHALL BE GIVEN TO THE ENGINEER DOCUMENTING THE TESTING PROCEDURE AND RESULTS. NO PAYMENT FOR THE AGGREGATE PORTION OF THIS CONTRACT WILL BE MADE UNTIL THE QUALITY CONTROL REPORT, DESCRIBED IN THE SPECIFICATIONS, HAS BEEN APPROVED BY THE ENGINEER. NO AGGREGATE BASE SHALL BE INSTALLED PRIOR TO THE APPROVAL OF THE JMF. PAYMENT FOR AGGREGATE BASE, AS PER PLAN, SHALL BE MADE AT THE CONVERSION RATE SUPPLIED WITH THE APPROVED JMF.

**CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES**

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

**FARM DRAINS**

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE (RIGHT OF WAY) LIMITS BY ITEM 603 CONDUIT, TYPE B, AND SHALL MATCH THE SIZE OF THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

603 6" CONDUIT, TYPE B 100 FT.

603 6" CONDUIT, TYPE E 100 FT.

603 6" CONDUIT, TYPE F 100 FT.

601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER  
50 CU. YD.

**REVIEW OF DRAINAGE FACILITIES**

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

**UNRECORDED STORM WATER DRAINAGE**

FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT WHERE WORK ENCROACHES OUTSIDE THE RIGHT OF WAY.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

603, 4" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION 100 FT.

603, 4" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION 100 FT.

603, 4" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION 100 FT.

603, 4" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION 100 FT.

**ITEM SPECIAL - MISCELLANEOUS METAL**

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL SHALL MEET ITEM 604 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MISCELLANEOUS METAL 1000 POUNDS.

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

**SEEDING AND MULCHING**

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	990 CU. YD.
659, REPAIR SEEDING AND MULCHING	446 SQ. YD.
659, INTER-SEEDING	446 SQ. YD.
659, COMMERCIAL FERTILIZER	1.2 TON
659, LIME	1.9 ACRES
659, WATER	24 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

**ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN**

THIS WORK CONSISTS OF THE CONSTRUCTION OF A CONCRETE TRUCK APRON IN THE CENTER OF THE PROPOSED ROUNDABOUT, AS SHOWN IN THE PLANS. ALL SPECIFICATIONS OF ITEM 452 SHALL APPLY, EXCEPT THE CONCRETE SHALL BE STAMPED AND COLORED. THE CONTRACTOR SHALL FOLLOW ALL METHODS AND PROCEDURES AS SET FORTH BY THE CONCRETE MANUFACTURER. THE COLOR AND STAMP PATTERN ARE TO BE AS DETERMINED BY THE LAKE COUNTY ENGINEER'S OFFICE.

THE PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR THE CONSTRUCTION OF THE STAMPED CONCRETE TRUCK APRON AND SHALL BE PAID FOR UNDER THE CONTRACT UNIT PRICE BID FOR:

ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN

**ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN**

THE COARSE AGGREGATE FOR THIS ITEM SHALL BE A BLEND OF 50% MINIMUM AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE.

FOR THIS ITEM, A THIRD ROLLER IS REQUIRED FOR MAINLINE PAVING OPERATIONS. THE ROLLER SHALL CONFORM TO THE REQUIREMENTS OF 401.13.

ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN

**ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN**

THE COARSE AGGREGATE FOR THIS ITEM SHALL BE COMPRISED OF LIMESTONE ONLY.

ITEM 448 - ASPHALT INTERMEDIATE SURFACE COURSE, TYPE 2, PG64-22, AS PER PLAN

**GENERAL NOTES**

**LAK-VROOMAN RD**



**POST CONSTRUCTION STORM WATER TREATMENT**

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

**ITEM 835 – EXFILTRATION TRENCH, TYPE A**

THIS PLAN UTILIZES EXFILTRATION TRENCHES FOR WATER QUALITY TREATMENT. THE EXFILTRATION TRENCH SHALL COMPLY WITH ALL THE MOST RECENT REQUIREMENTS OF ITEM 835 AS WELL AS THE OHIO DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS WQ 1.2 & 1.3. IN ADDITION TO THE WORK SPECIFIED IN SS 835, THE CONTRACTOR SHALL TEMPORARILY FILL THE EXFILTRATION TRENCHES WITH ODOT #57 STONE. ONCE FINAL SITE STABILIZATION IS COMPLETE, THE CONTRACTOR SHALL FILL WITH THE FILTER MEDIA AS SPECIFIED IN SS835. THE FOLLOWING ARE THE LOCATIONS WHERE THESE WATER QUALITY CONTROL MEASURES ARE USED:

STA		OFFSET	SIDE	LT	TYPE
FROM	TO				
SR 86					
203+41	203+49	14.0	LT	8	A
105+28	105+36	17.8	LT	8	A
105+25	105+33	19.0	RT	8	A
105+67	105+77	22.0	RT	8	A
VROOMAN ROAD					
109+22	109+35	16.3	RT	12	A
109+27	109+35	19.0	LT	8	A
110+81	110+85	14.6	RT	4	A
110+81	110+85	15.3	LT	4	A
LEROY CENTER ROAD					
208+03	208+11	20.4	RT	8	A
208+41	208+49	19.1	RT	8	
207+97	208+07	23.7	LT	8	A
208+41	208+49	20.6	LT	8	A
TOTAL				92	

THE POST CONSTRUCTION BMP STRUCTURES INSTALLED WITHIN THE RIGHT OF WAY OF VROOMAN ROAD AND LEROY CENTER ROAD SHALL BE MAINTAINED BY THE MAINTAINING GOVERNMENTAL AGENCY IN ACCORDANCE WITH THE OHIO EPA REGULATIONS. THE POST CONSTRUCTION BMP'S INSTALLED WITHIN THE RIGHT OF WAY OF SR 86 (PAINSVILLE WARREN ROAD) SHALL BE MAINTAINED BY THE ODOT.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE WORK DESCRIBED ABOVE:

ITEM 835 – EXFILTRATION TRENCH, TYPE A            92 FT

ENVIRONMENTAL WORK

INTRODUCTION

SOIL ADJACENT TO THE PROJECT SITE WAS NOT TESTED BUT MAY CONTAIN PETROLEUM SUBSTANCES. THESE SUBSTANCES MAY BE PRESENT WITHIN THE EXCAVATION LIMITS FOR THE PROJECT. THIS MATERIAL SHALL BE HANDLED BY THE CONTRACTOR ACCORDING THE FOLLOWING NOTES.

SITE SPECIFIC HEALTH AND SAFETY PLAN (SSHSP)

THE CONTRACTOR SHALL CERTIFY IN WRITING TO THE ENGINEER WITHIN TWO WEEKS AFTER CONTRACT EXECUTION THAT THE CONTRACTOR HAS PREPARED A SSHSP IN ACCORDANCE WITH OSHA 29 CFR PART 1910.120 FOR OPERATIONS INVOLVING HAZARDOUS SUBSTANCES WITHIN THE AFOREMENTIONED LIMITS. THE CONTRACTOR SHALL MAKE THE SSHSP AVAILABLE AT THE PROJECT SITE.

MATERIAL SAMPLING

THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FIVE (5) DAYS NOTICE PRIOR BEGINNING ANY EXCAVATION WITHIN THE AFOREMENTIONED LIMITS TO PERMIT ARRANGING FOR THE NECESSARY TESTING SERVICES. ALL MATERIAL EXCAVATED BY THE CONTRACTOR BETWEEN THESE LIMITS DURING CONSTRUCTION SHALL BE SUBJECT TO TESTING BY AN INSPECTOR PROVIDED BY THE ENGINEER. THE INSPECTOR SHALL FIELD-SCREEN THE EXCAVATED MATERIAL FOR PETROLEUM CONTAMINATION USING AN ORGANIC VAPOR ANALYZER (OVA). AT THE DISCRETION OF THE INSPECTOR, THE EXCAVATED MATERIAL WHICH EXHIBITS PETROLEUM CONTAMINATION SHALL BE STOCKPILED AND SEGREGATED WHILE SAMPLES OF THE MATERIAL ARE ANALYZED BY AN INDEPENDENT ANALYTICAL LABORATORY. FIELD-SCREENING RESULTS AND VISUAL OBSERVATION WILL BE THE BASIS FOR SEGREGATING EXCAVATED MATERIAL. SOIL SAMPLES SHALL TO BE TESTED FOR BTEX (BENZENE, TOLUENE, ETHYL BENZENE, & XYLENE) BY METHOD 8020 AND TPH BY METHOD 8015. IF THE BTEX AND/OR TPH LEVEL EXCEED LEVELS SET FORTH BY THE OHIO EPA PETROLEUM CONTAMINATED SOIL POLICY, THE MATERIAL SHALL BE TREATED AS PETROLEUM- CONTAMINATED SOIL. ALL FIELD-SCREENING INSTRUMENTS AND INITIAL SAMPLING AND ANALYSIS OF SOILS WILL BE PROVIDED BY THE ENGINEER AT NO COST TO THE CONTRACTOR.

TEMPORARY STORAGE OF CONTAMINATED SOILS

ALL EXCAVATED MATERIAL WHICH IS DETERMINED TO BE POTENTIALLY CONTAMINATED WITH PETROLEUM SUBSTANCES SHALL TO BE STOCKPILED IN AN AREA PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL STOCKPILE THE MATERIAL IN A LEAK PROOF, COVERED CONTAINER PROVIDED BY THE CONTRACTOR. THE MATERIAL SHALL REMAIN ON-SITE UNTIL ANALYTICAL RESULTS ARE RECEIVED BY THE ENGINEER. AS AN ALTERNATE, THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF SUSPECTED CONTAMINATED SOILS ON AN IMPERMEABLE MEMBRANE. THE MEMBRANE SHOULD BE SURROUNDED BY BALES OF STRAW TO PREVENT THE SUSPECT SOILS FROM COMING IN CONTACT WITH THE ORIGINAL SOILS. AN IMPERMEABLE MEMBRANE SHALL BE PLACED OVER THE STOCKPILE TO PREVENT CONTACT WITH PRECIPITATION AND/OR SURFACE RUN-OFF.

MATERIAL EVALUATION

THE INSPECTOR SHALL USE THE ANALYTICAL RESULTS DETERMINE THE REGULATORY CLASSIFICATION OF THE EXCAVATED MATERIALS. THE EXCAVATED MATERIAL MAY BE CLASSIFIED IN THE FOLLOWING CATEGORY:

ITEM SPECIAL WORK INVOLVING PETROLEUM-CONTAMINATED SOIL

THE INSPECTOR WILL DETERMINE IF THE EXCAVATED MATERIAL IS PETROLEUM-CONTAMINATED SOIL (PCS) BASED ON THE ANALYTICAL TEST RESULTS. THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH THESE TEST RESULTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS AND TO TRANSPORT THE MATERIAL TO A LICENSED (BY THE LOCAL HEALTH DEPT.) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) SOLID WASTE FACILITY OR A PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY (PCSRF) FOR PROPER DISPOSAL OR REMEDIATION. PRIOR TO DISPOSAL, THE CONTRACTOR SHALL CONTACT THE PROPOSED FACILITY TO DETERMINE THE ADDITIONAL TESTING REQUIRED FOR DISPOSAL OR REMEDIATION AT THAT FACILITY. THE PRICES FOR THESE TESTS ARE TO BE INCLUDED IN THE ABOVE PAY ITEM. THE WORK INVOLVED IN THIS PAY ITEM INCLUDES DEVELOPING AND COMPLYING WITH A SSHSP; HANDLING, STORAGE, TESTING (FOR DISPOSAL OR REMEDIATION), AND DISPOSAL OR REMEDIATION OF PCS. WHEN DIRECTED BY THE PROPOSED FACILITY, THE CONTRACTOR SHALL HAVE AN INDEPENDENT LABORATORY COLLECT SAMPLES AND TEST THE EXCAVATED OR STORED MATERIALS FOR PCS DISPOSAL OR REMEDIATION APPROVAL.

POTENTIAL DEWATERING OF EXCAVATED AREAS

IF EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS REQUIRE DEWATERING FOR CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL DEWATER AND SUBSEQUENTLY DISPOSE OF WATERS BY METHODS APPROVED BY THE ENGINEER. ALL WATER CONTAINERIZED BY THE CONTRACTOR BETWEEN THESE LIMITS SHALL BE SUBJECT TO TESTING BY AN INSPECTOR PROVIDED BY THE ENGINEER. SAMPLES WILL BE TESTED BY THE FOLLOWING USEPA TEST METHODS:

1. SW-846 METHOD 6260 VOLATILE ORGANIC COMPOUNDS
2. SW-846 METHOD 6270 SEMI-VOLATILE ORGANIC COMPOUNDS
3. OTHER METHODS AS REQUIRED BY THE RECEIVING FACILITY OR ENGINEER

THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS AND/OR AUTHORIZATIONS NEEDED TO STORE, TRANSPORT AND DISPOSE OF THE WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE OR FEDERAL REGULATIONS.

THE ENGINEER WILL CLASSIFY THE WATER REMOVED FROM THE EXCAVATION INTO ONE OF THE TWO FOLLOWING CATEGORIES.

1. ITEM SPECIAL – WORK INVOLVING WATER.

THE ENGINEER WILL DETERMINE IF THE WATER IS NON-REGULATED. THE METHOD FOR DISPOSING OF THE NONREGULATED WATER SHALL BE APPROVED BY THE ENGINEER. WORK INVOLVED WITH THIS ITEM SPECIAL INCLUDES THE HANDLING, STORAGE, AND DISPOSAL OF THE NON-REGULATED WATER.

2. ITEM SPECIAL – WORK INVOLVING REGULATED WATER

THE ENGINEER WILL DETERMINE IF THE WATER IS REGULATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF THE REGULATED WATER. THE METHOD FOR DISPOSING OF THE REGULATED WATER SHALL BE APPROVED BY THE ENGINEER. THE WORK INVOLVED IN THIS ITEM SPECIAL INCLUDES THE HANDLING, STORAGE, TESTING, AND DISPOSAL OF REGULATED WATER.

BASIS OF PAYMENT

THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY HANDLE, STORE, TEST, TRANSPORT, AND DISPOSE OF REGULATED MATERIALS, INCLUDING ANY REQUIRED PERMITS, APPROVALS, OR FEES WITHIN THE LIMITS IDENTIFIED ABOVE. PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICE BID PER TON AND/OR CUBIC YARD.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- ITEM SPECIAL – WORK INVOLVING PETROLEUM CONTAMINATED SOIL    20 TON
- ITEM SPECIAL – WORK INVOLVING WATER                            200 GAL
- ITEM SPECIAL – WORK INVOLVING REGULATED WATER            100 GAL

CALCULATED  
RDC  
CHECKED  
JMJ

**GENERAL NOTES**

**LAK-VROOMAN RD**

**ITEM 614 – MAINTAINING TRAFFIC**

THE MAINTENANCE OF TRAFFIC PLAN CONSISTS OF FOUR PHASES AS DESCRIBED BELOW:

**PHASE 1**

CLOSE LEROY CENTER ROAD. MAINTAIN TWO WAY TRAFFIC ON S.R. 86, VROOMAN ROAD AND HUNTOON ROAD USING THE EXISTING PAVEMENT.

CONSTRUCT EASTERLY HALF OF ROUNDABOUT AND EASTERLY CONNECTION TO LEROY CENTER ROAD INCLUDING CURB AND GUTTER, SPLITTER ISLANDS AND DRAINAGE. CONTRACTOR TO MAINTAIN LOCAL ACCESS TO PROPERTIES AT ALL TIMES EXCEPT DURING RECONSTRUCTION OF DRIVES. PARKING SHALL BE PROVIDED DURING DRIVE RECONSTRUCTION.

**PHASE 2**

CLOSE VROOMAN ROAD. LEROY CENTER ROAD TO REMAIN CLOSED. MAINTAIN TWO WAY TRAFFIC ON S.R. 86 AND HUNTOON ROAD USING THE EXISTING PAVEMENT.

CONSTRUCT REMAINING HALF OF ROUNDABOUT AND NORTHERLY CONNECTION TO VROOMAN ROAD INCLUDING CURB AND GUTTER, AND DRAINAGE. CONTRACTOR TO MAINTAIN LOCAL ACCESS AS IN PHASE 1.

**PHASE 3**

CLOSE S.R. 86 SOUTHWEST OF ROUNDABOUT AND HUNTOON ROAD. OPEN VROOMAN ROAD AND LEROY CENTER ROAD. MAINTAIN TRAFFIC BETWEEN VROOMAN ROAD AND LEROY CENTER ROAD ON THE NEWLY CONSTRUCTED ROUNDABOUT. MAINTAIN ACCESS ON S.R. 86 AND HUNTOON ROAD.

CONSTRUCT THE SOUTHEASTERLY CONNECTION TO S.R. 86 INCLUDING CURB AND GUTTER, AND DRAINAGE FROM S.R. 86 TO HUNTOON. CONTRACTOR TO MAINTAIN LOCAL ACCESS AS IN PHASE 1. A MINIMUM OF ONE DRIVE IS TO BE OPEN AT ALL TIMES TO GAS STATION.

**PHASE 4**

CLOSE S.R. 86 NORTHWEST OF ROUNDABOUT. OPEN VROOMAN ROAD, LEROY CENTER ROAD, AND S.R. 86 SOUTHWEST OF ROUNDABOUT. MAINTAIN TRAFFIC BETWEEN VROOMAN ROAD, LEROY CENTER ROAD AND S.R. 86 SOUTHWEST ON THE NEWLY CONSTRUCTED ROUNDABOUT.

CONSTRUCT THE NORTHWESTERLY CONNECTION TO S.R. 86. CONSTRUCT THE INTERSECTION OF S.R. 86 AND HUNTOON ROAD. CONTRACTOR TO MAINTAIN LOCAL ACCESS AS IN PHASE 1. A MINIMUM OF ONE DRIVE IS TO BE OPEN AT ALL TIMES TO GAS STATION.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE A OR B	458 CU. YD.
ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE C	229 CU. YD.
ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	1100 CU. YD.
ITEM 616, WATER	14 M. GAL.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

**DUST CONTROL**

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 30 M. GAL

**CONSTRUCTION ADJACENT TO DRIVES**

ACCESS TO COMMERCIAL AND HANDICAP PROPERTY SHALL BE MAINTAINED AT ALL TIMES. IN ADDITION, THE CONTRACTOR SHALL MAKE REASONABLE PROVISIONS TO ALLOW RESIDENTIAL ACCESS AT ALL TIMES OR OTHERWISE ALLOW RESIDENTS TO PARK SAFELY WITHIN THE PROJECT WORK LIMITS WHEN ACCESS IS NOT POSSIBLE; ALL AT THE APPROVAL/DIRECTION OF THE ENGINEER. THE MAXIMUM OUT OF SERVICE TIME FOR ANY RESIDENTIAL DRIVE SHALL BE FIVE (5) DAYS. THE PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO MAINTAIN COMMERCIAL, HANDICAP AND RESIDENTIAL ACCESS AND/OR SAFE PARKING AREAS FOR RESIDENTS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR "ITEM 614 – MAINTAINING TRAFFIC"; EXCEPT FOR THE SEPARATELY ESTIMATED ITEMS/QUANTITIES ADDITIONALLY PROVIDED IN THE PLANS FOR MAINTAINING TRAFFIC (ACCESS).

THE CONTRACTOR SHALL PLAN/STAGE ALL WORK TO MAINTAIN SAFE ACCESS TO COMMERCIAL AND HANDICAP PROPERTY AT ALL TIMES AND TO MAINTAIN SAFE ACCESS TO RESIDENTIAL PROPERTY OR PROVIDE SAFE PARKING WITHIN REASONABLE PROXIMITY TO RESIDENTIAL PROPERTY WHEN ACCESS IS UNAVAILABLE. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A PLAN FOR THE APPROVAL OF THE ENGINEER WHICH OUTLINES HIS/HER STRATEGY FOR THE MAINTENANCE OF SAFE ACCESS TO COMMERCIAL, HANDICAP AND RESIDENTIAL PROPERTY AND/OR FOR ALLOWING RESIDENTS TO PARK SAFELY WITHIN THE PROJECT LIMITS WHEN ACCESS IS NOT POSSIBLE. EXCEPT AS NOTED ABOVE, ALL ASSOCIATED COSTS SHALL BE INCLUDED UNDER "ITEM 614 – MAINTAINING TRAFFIC".

**ITEM 614 – LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS**

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED IN THIS NOTE WILL NOT GENERALLY BE PERMITTED AT PROJECT COST UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER. LEOS SHOULD NOT BE USED WHERE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED. IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

ROUTINE PATROLLING THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) AS SPECIFIED IN THE PLANS.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A LIST OF THE APPROPRIATE LAW ENFORCEMENT AGENCY(S), INCLUDING ADDRESS AND TELEPHONE NUMBER.

THE LEO SHOULD REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING THE SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF THE SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHOULD NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF THE SHIFT.

LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE

80 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR.

**ROUNDABOUT NOTE**

THE ROUNDABOUTS SHALL NOT BE OPEN TO TRAFFIC AT FULL CAPACITY UNTIL THE PROPOSED LIGHTING, SIGNING, AND PAVEMENT MARKINGS HAVE BEEN INSTALLED.

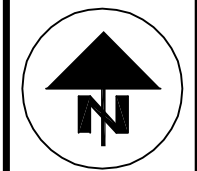
**TEMPORARY RAMPING OF VERTICAL SURFACES**

IN ORDER TO PROVIDE FOR LOCAL ACCESS, LONGITUDINAL VERTICAL FACES ABUTTING DRIVES SHALL BE TEMPORARILY RAMPED. TRANSVERSE VERTICAL FACES SHALL BE TEMPORARILY RAMPED A MINIMUM OF TEN (10) FEET IN LENGTH AND TRAFFIC SHALL BE WARNED WITH W8-1 "BUMP" SIGNS IN ADVANCE OF THE RAMPED AREAS.

ALL CASTINGS ENCOUNTERED SHALL BE SET TO GRADE AND PAID FOR UNDER VARIOUS ITEMS DESCRIBED ELSEWHERE IN THE GENERAL NOTES OR SPECIFICATIONS. THE CASTING ELEVATION DIFFERENTIAL SHALL NOT BE GREATER THAN ONE AND ONE QUARTER (1-1/4) INCH WHEN EXPOSED TO TRAFFIC.

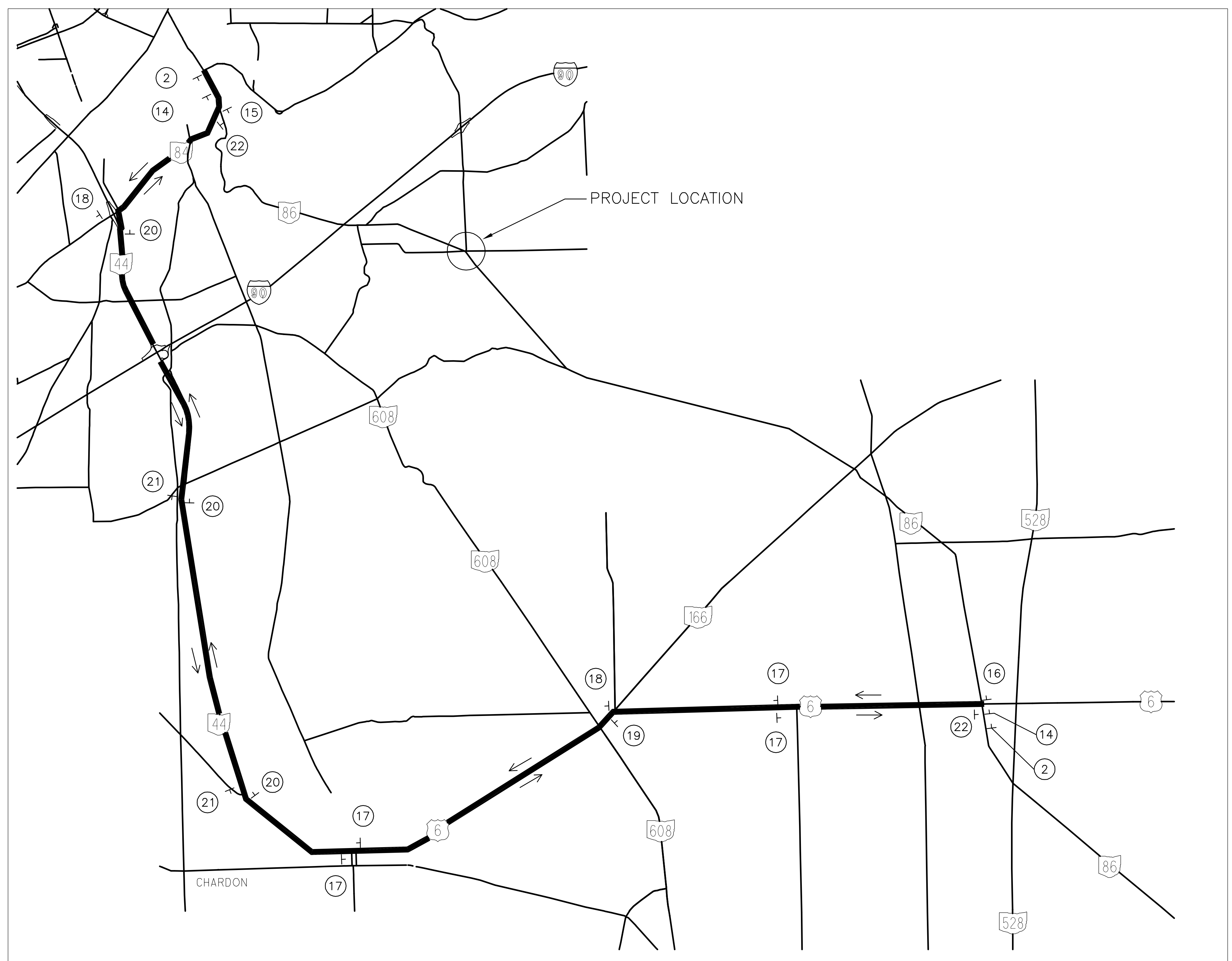
ALL TEMPORARY RAMPING SHALL BE INSTALLED, AT THE DIRECTION OF THE ENGINEER, USING ITEM 614 – ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

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**MAINTENANCE OF TRAFFIC  
STATE ROUTE 86 DETOUR MAP**

**LAK-VROOMAN RD**

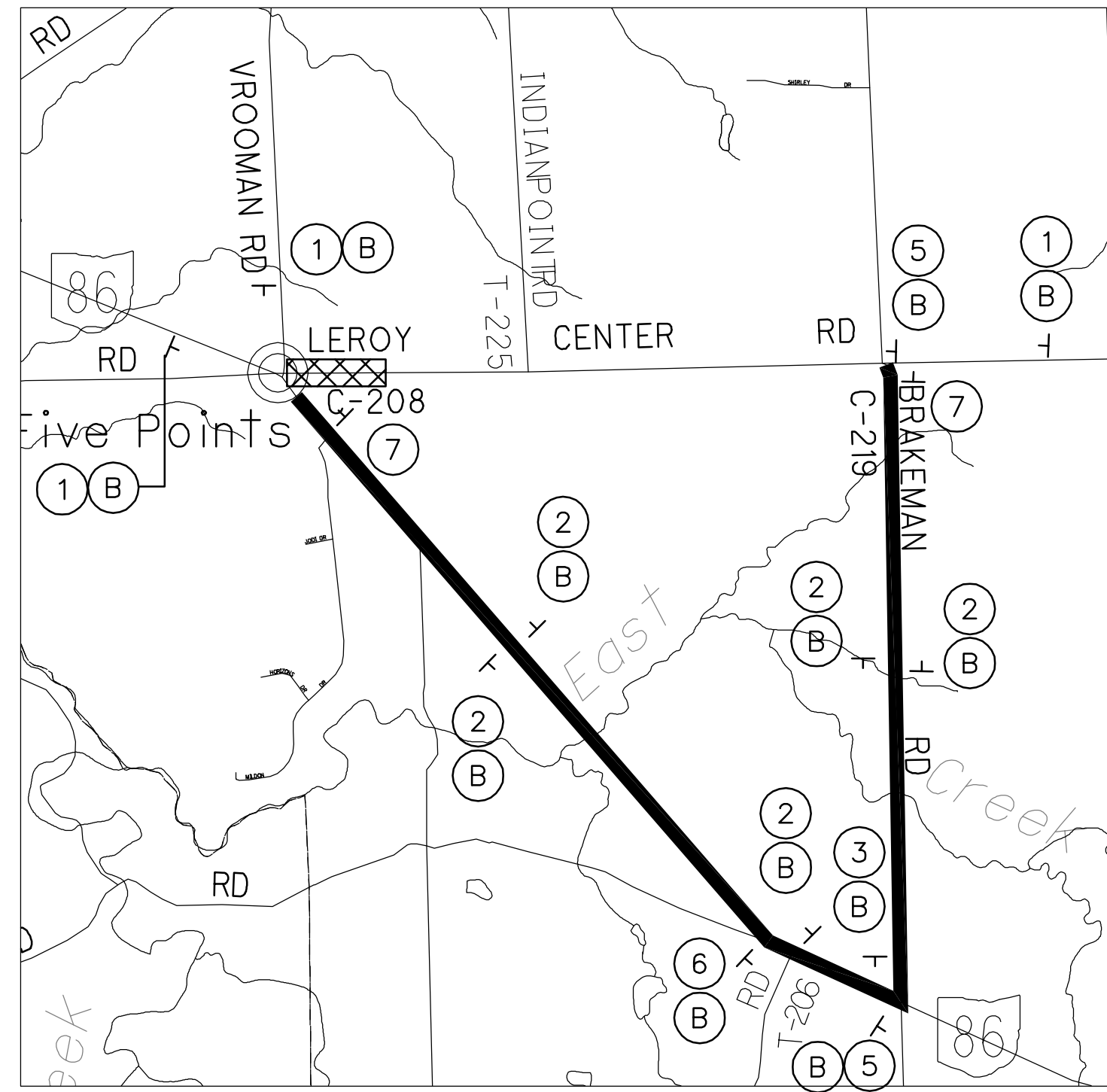


**MOT LEGEND**

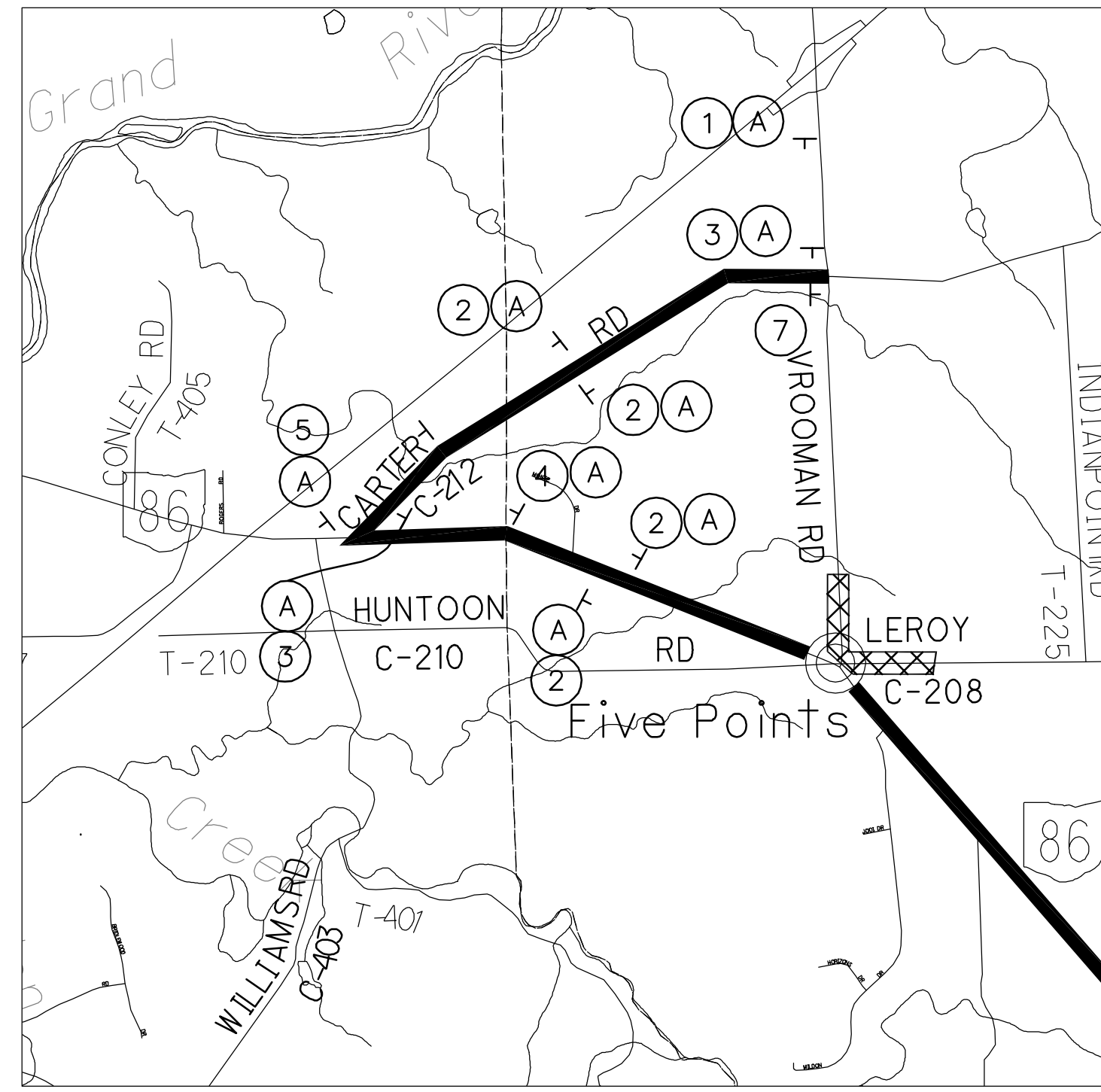
- ① ROAD WORK AHEAD  
W20-1-48
- ② ROAD CLOSED AHEAD  
W20-3-48
- ③ LEROY CENTER RD  
W16-8-60
- ④ TYPE III BARRICADE WITH TYPE B FLASHING WARNING LIGHT
- ⑤ 1000 FEET  
W16-2-30
- ⑥ 500 FEET  
W16-2-30
- ⑦ ROAD CLOSED TO THRU TRAFFIC  
R11-4-60
- ⑧ ROAD CLOSED  
R11-2-48
- ⑨ END ROAD WORK  
G20-2-48
- ⑩ VROOMAN RD  
W16-8-60
- ⑪ 86  
M1-5-30-2
- ⑫ SOUTH  
M3-3-30
- ⑬ NORTH  
M3-1-30
- A TYPE A WARNING LIGHT
- ④A DETOUR  
M4-10L-48
- ④B DETOUR  
M4-10R-48
- ⊠ WORK ZONE
- ▨ PAVEMENT FOR MAINTAINING TRAFFIC
- ELW EDGE LINE WHITE
- ELY EDGE LINE YELLOW
- DRUM
- ⊥ SIGN

- ⑭ DETOUR AHEAD  
W20-2-48
- ⑮ ROAD CLOSED 4 MILES AHEAD LOCAL TRAFFIC ONLY  
R11-3-48  
 DETOUR  
M4-10R-48
- ⑯ ROAD CLOSED 9 MILES AHEAD LOCAL TRAFFIC ONLY  
R11-3-48  
 DETOUR  
M4-10L-48
- ⑰ DETOUR 86 ↑  
M4-8-30  
M1-5-30-2  
M6-3-30
- ⑱ DETOUR 86 ←  
M4-8-30  
M1-5-30-2  
M6-1L-30
- ⑲ DETOUR 86 →  
M4-8-30  
M1-5-30-2  
M6-1R-30
- ⑳ DETOUR 86 ↗  
M4-8-30  
M1-5-30-2  
M6-2R-30
- ㉑ DETOUR 86 ↙  
M4-8-30  
M1-5-30-2  
M6-2L-30
- ㉒ END DETOUR  
M4-8A-24

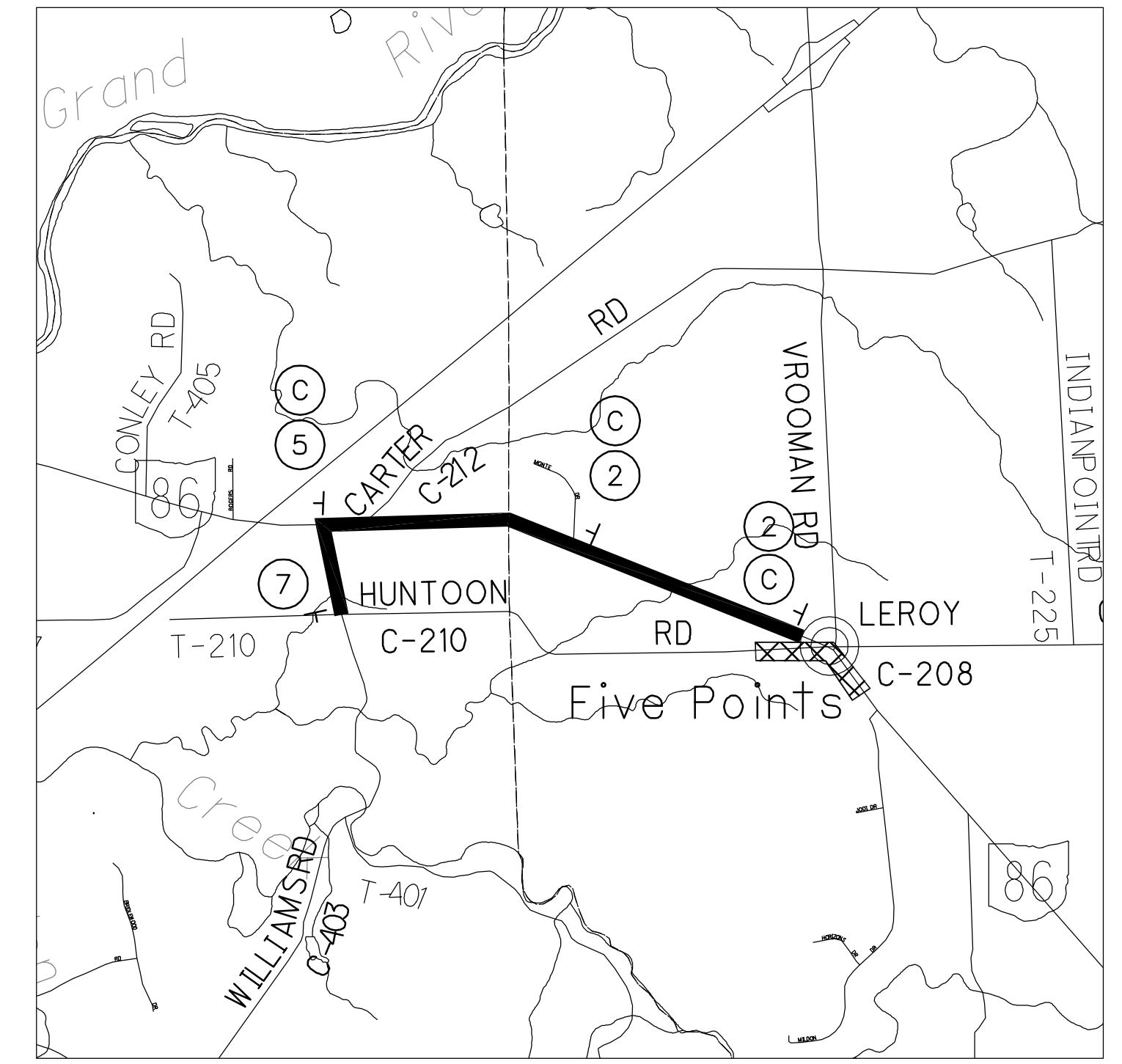
- NOTES:**
- SIGN SPACING IS 500' UNLESS OTHERWISE SHOWN (TYPICAL FOR ALL MOT PHASES)
  - SIGN SPACING DURING MOT SHOULD BE ADJUSTED AS NECESSARY TO AVOID EXISTING SIGNS
  - MAX DRUM SPACING IS 50'



LOCAL DETOUR PHASE ONE  
LEROY CENTER RD CLOSED






LOCAL DETOUR PHASE TWO  
LEROY CENTER RD CLOSED  
VROOMAN RD CLOSED  
(PHASE ONE DETOUR REMAINS)

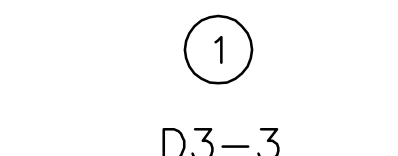
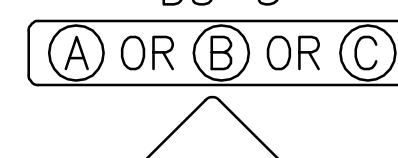



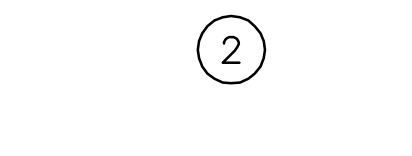
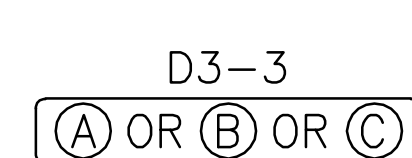

LOCAL DETOUR PHASE THREE  
HUNTOON RD CLOSED  
STATE ROUTE 86 CLOSED  
(SEE SHEET 11 FOR SR 86 DETOUR)


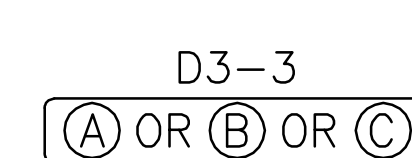

LEGEND


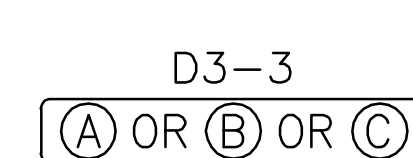
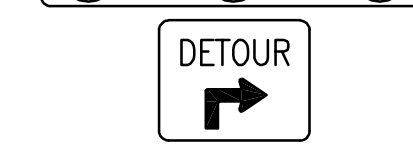
 WORK ZONE  
 SIGN


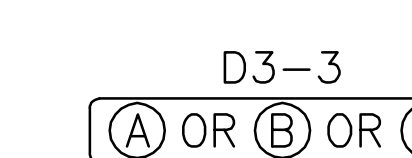
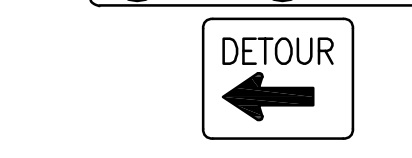
(A)  VROOMAN RD  
D3-3  
(B)  LEROY CENTER RD  
D3-3  
(C)  HUNTOON RD  
D3-3


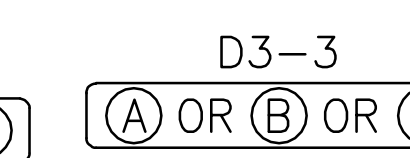
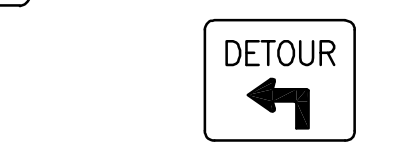
(1)  D3-3  
 (A) OR (B) OR (C)  
 DETOUR AHEAD  
W20-2-36


(2)  D3-3  
 (A) OR (B) OR (C)  
 DETOUR

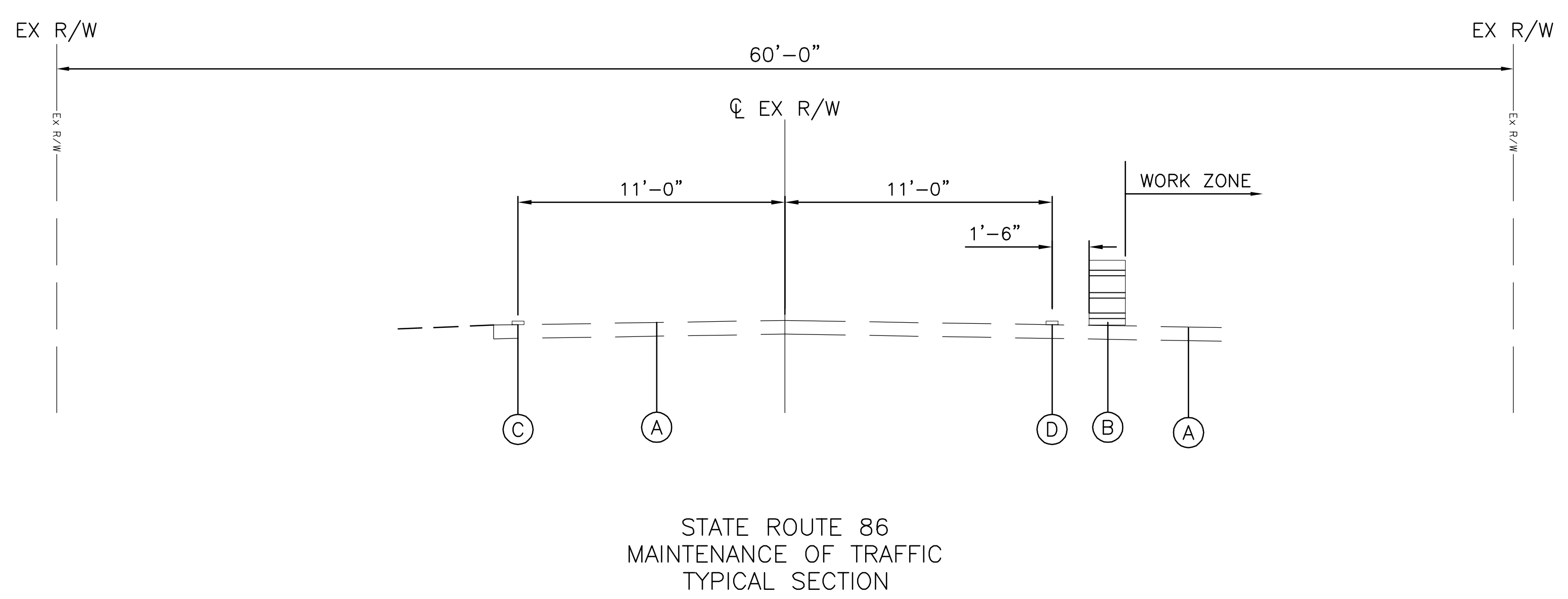
(3)  D3-3  
 (A) OR (B) OR (C)  
 DETOUR

(4)  D3-3  
 (A) OR (B) OR (C)  
 DETOUR

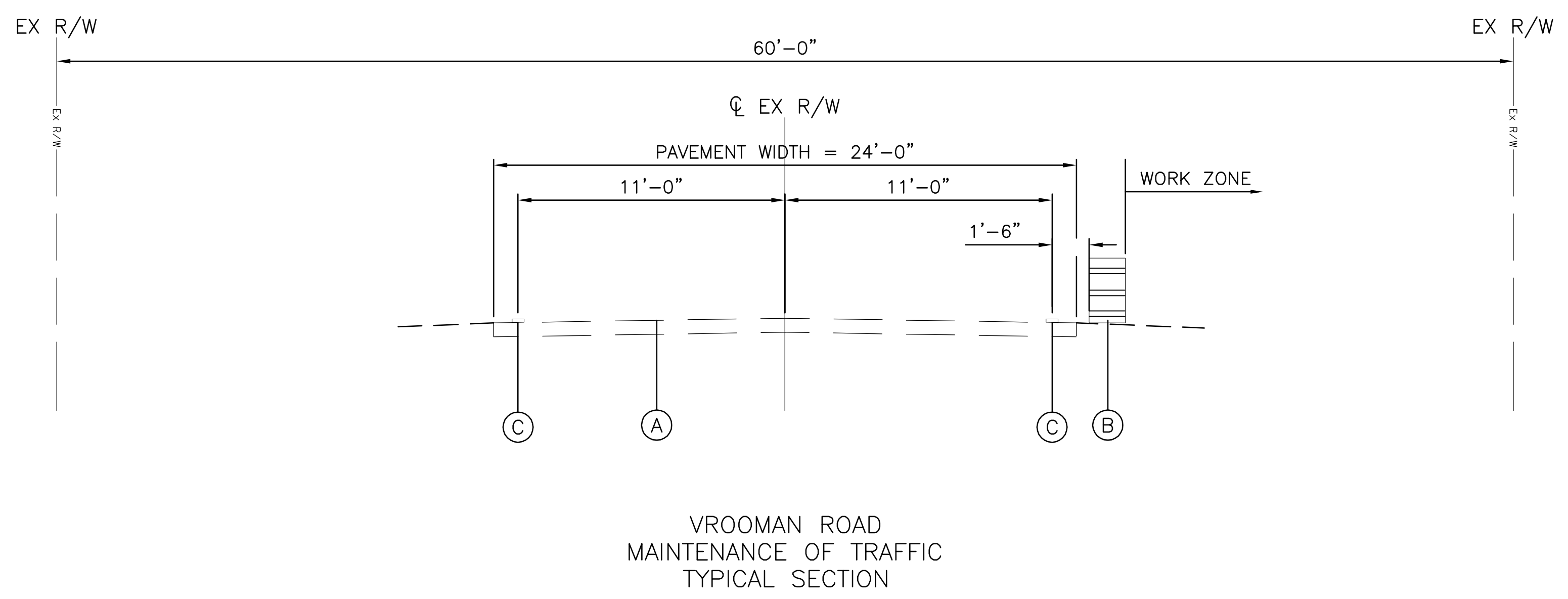
(5)  D3-3  
 (A) OR (B) OR (C)  
 DETOUR

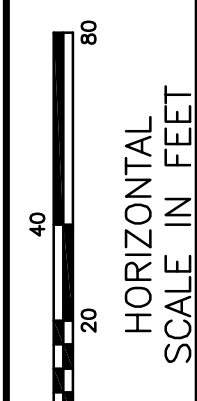
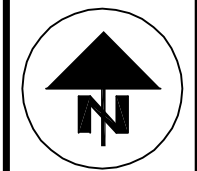
(6)  D3-3  
 (A) OR (B) OR (C)  
 DETOUR

(7)  END DETOUR  
M4-8A-24



- LEGEND**
- (A) EXISTING PAVEMENT
  - (B) DRUM
  - (C) EXISTING EDGE LINE
  - (D) PROPOSED EDGE LINE





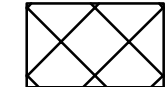





CALCULATED  
SPR  
CHECKED  
JMJ

**MAINTENANCE OF TRAFFIC PHASE ONE**

**LAK-VROOMAN RD**

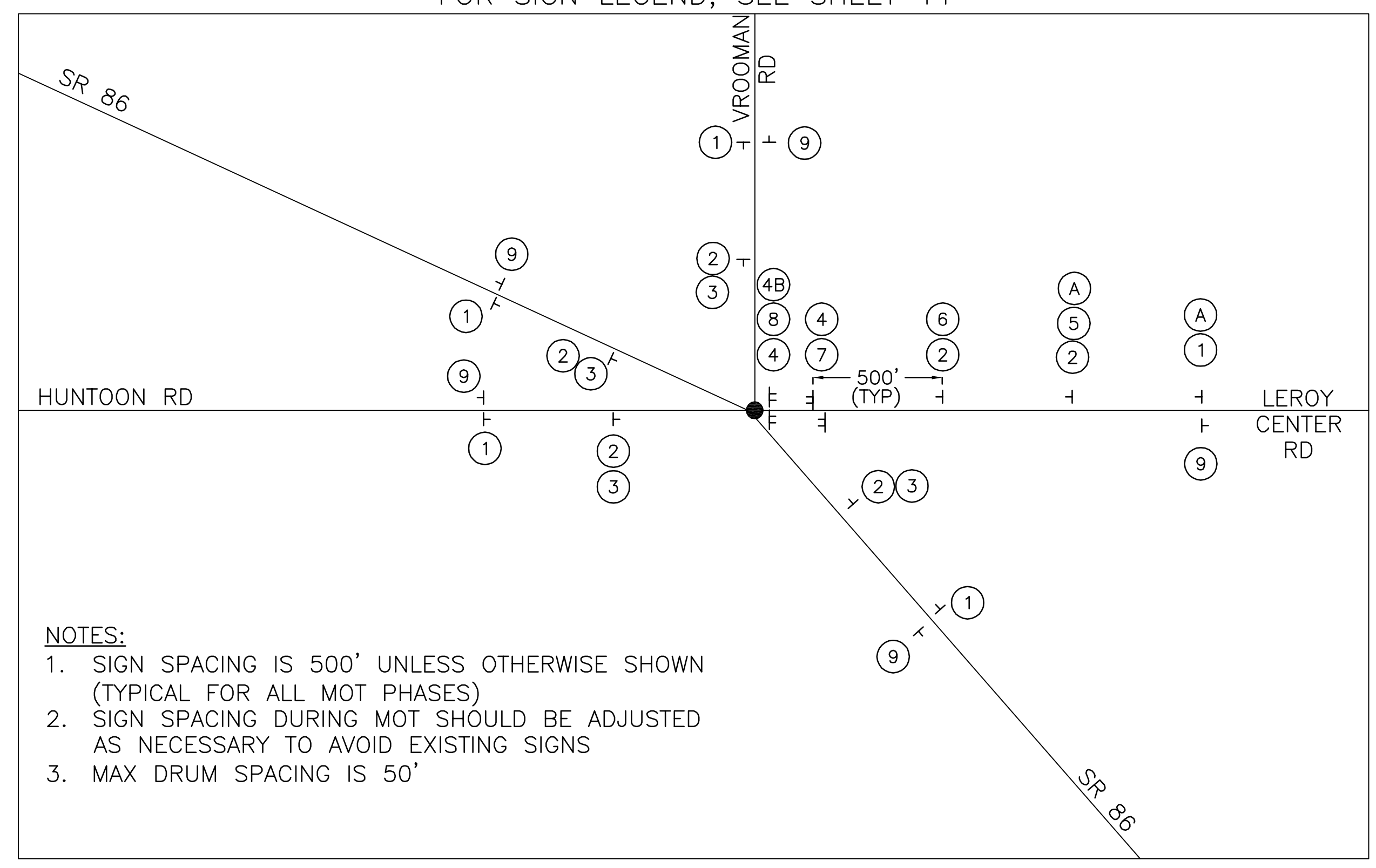
FOR SIGN LEGEND, SEE SHEET 11

**MOT LEGEND**

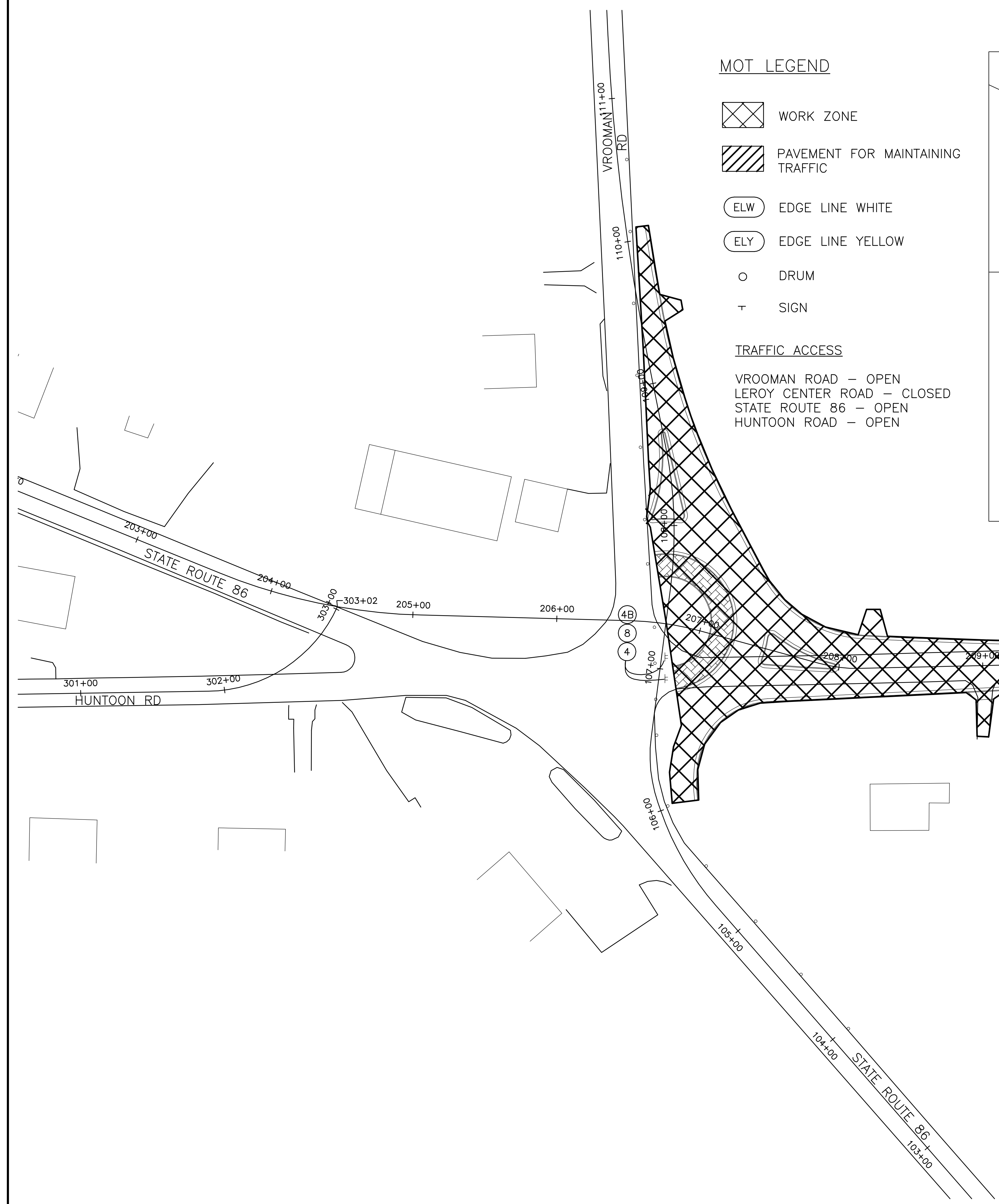
-  WORK ZONE
-  PAVEMENT FOR MAINTAINING TRAFFIC
-  EDGE LINE WHITE
-  EDGE LINE YELLOW
-  DRUM
-  SIGN

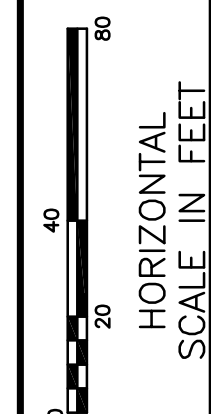
**TRAFFIC ACCESS**

VROOMAN ROAD - OPEN  
 LEROY CENTER ROAD - CLOSED  
 STATE ROUTE 86 - OPEN  
 HUNTOON ROAD - OPEN



- NOTES:**
1. SIGN SPACING IS 500' UNLESS OTHERWISE SHOWN (TYPICAL FOR ALL MOT PHASES)
  2. SIGN SPACING DURING MOT SHOULD BE ADJUSTED AS NECESSARY TO AVOID EXISTING SIGNS
  3. MAX DRUM SPACING IS 50'



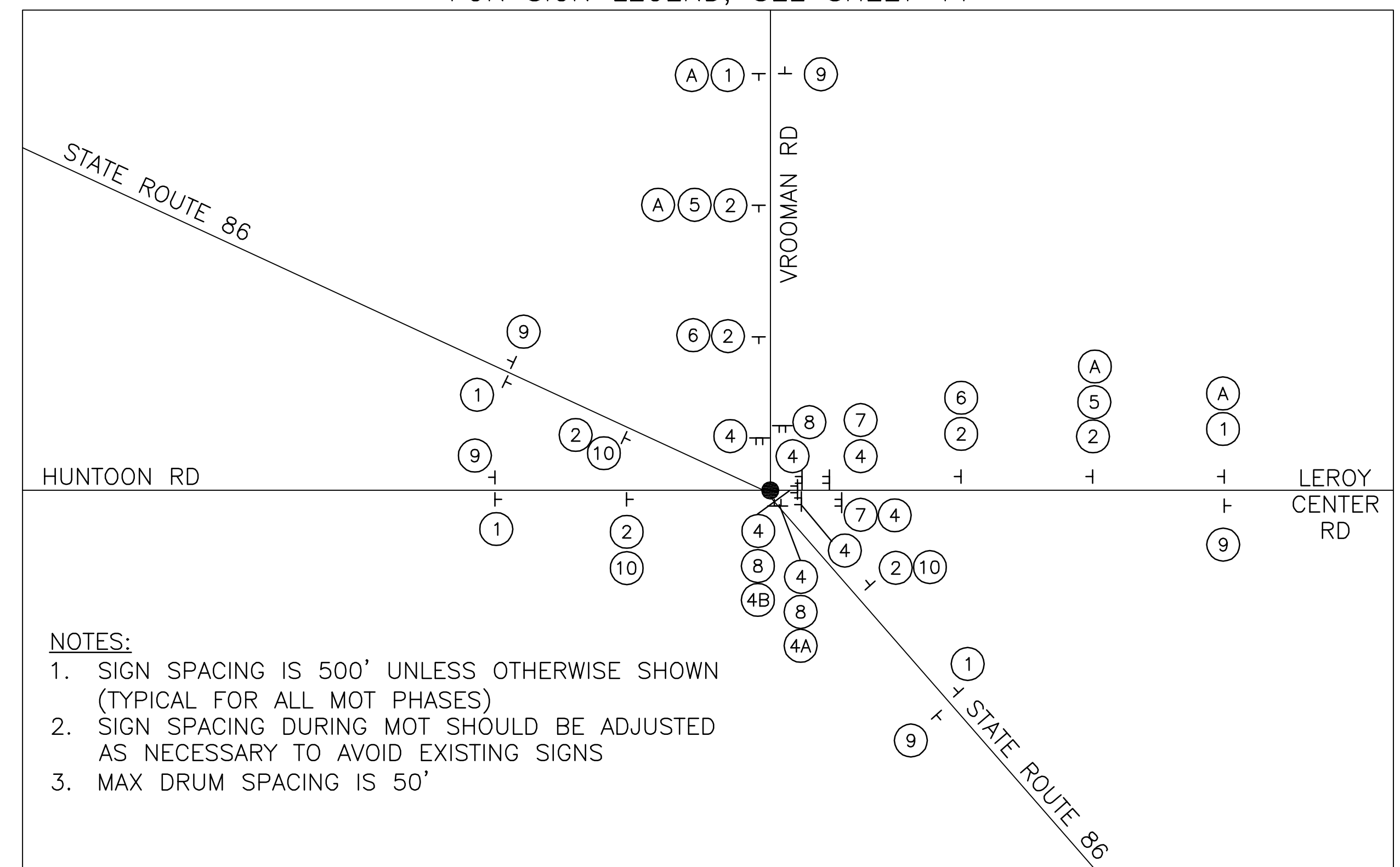


CALCULATED  
SPR  
CHECKED  
JMJ

**MAINTENANCE OF TRAFFIC PHASE TWO**

**LAK-VROOMAN RD**

FOR SIGN LEGEND, SEE SHEET 11



**NOTES:**

- 1. SIGN SPACING IS 500' UNLESS OTHERWISE SHOWN (TYPICAL FOR ALL MOT PHASES)
- 2. SIGN SPACING DURING MOT SHOULD BE ADJUSTED AS NECESSARY TO AVOID EXISTING SIGNS
- 3. MAX DRUM SPACING IS 50'

**MOT LEGEND**

- WORK ZONE
- PAVEMENT FOR MAINTAINING TRAFFIC
- EDGE LINE WHITE
- EDGE LINE YELLOW
- DRUM
- SIGN

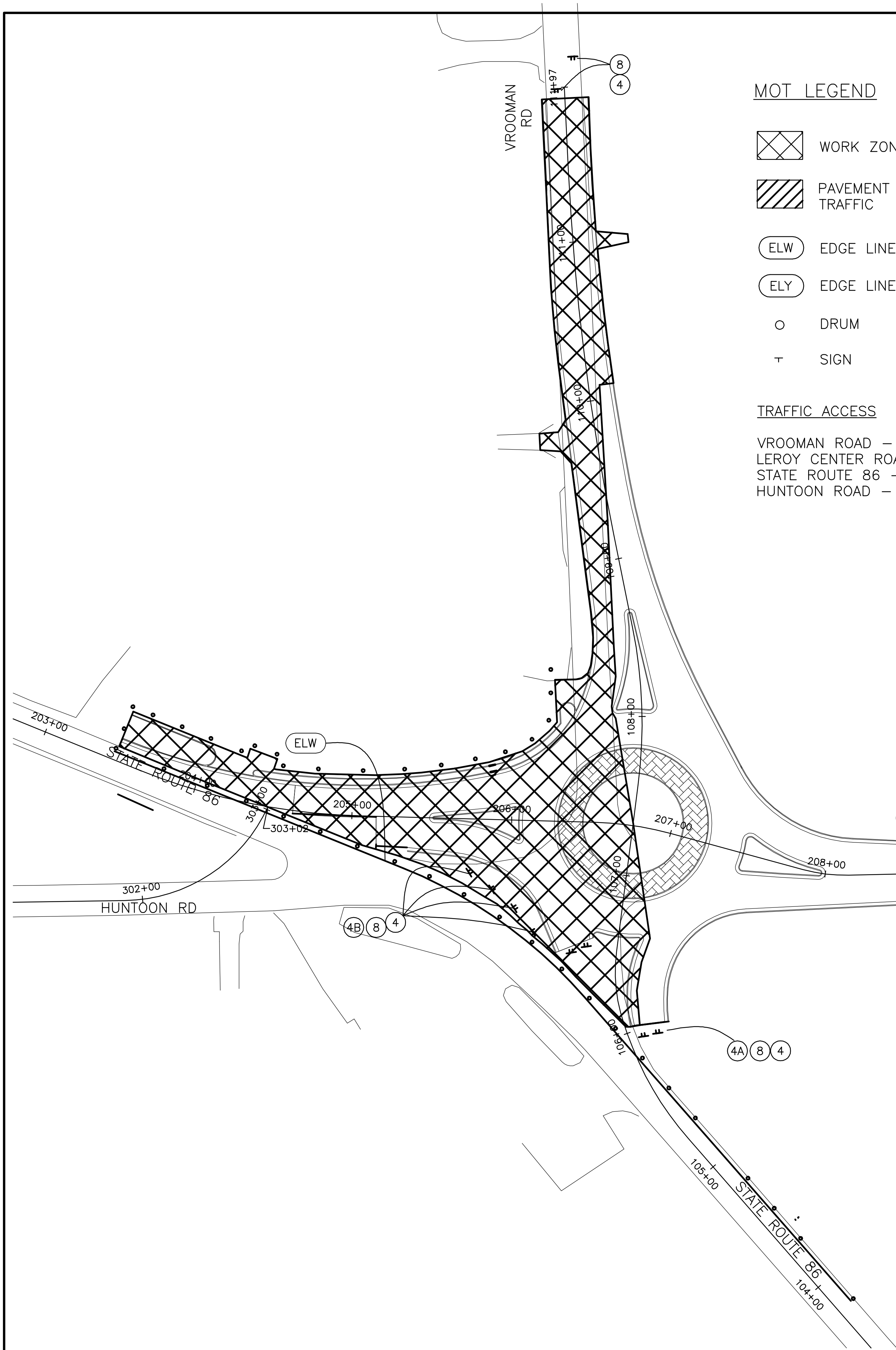
**TRAFFIC ACCESS**

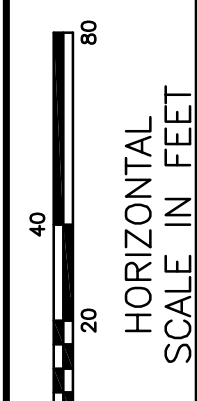
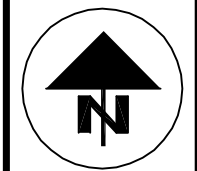
- VROOMAN ROAD - CLOSED
- LEROY CENTER ROAD - CLOSED
- STATE ROUTE 86 - OPEN
- HUNTOON ROAD - OPEN

THE FOLLOWING QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - WORK ZONE EDGE LINE, CLASS 1

0.05 MI





CALCULATED  
SPR  
CHECKED  
JWZ







**MAINTENANCE OF TRAFFIC PHASE THREE**

**LAK-VROOMAN RD**

**NOTES:**

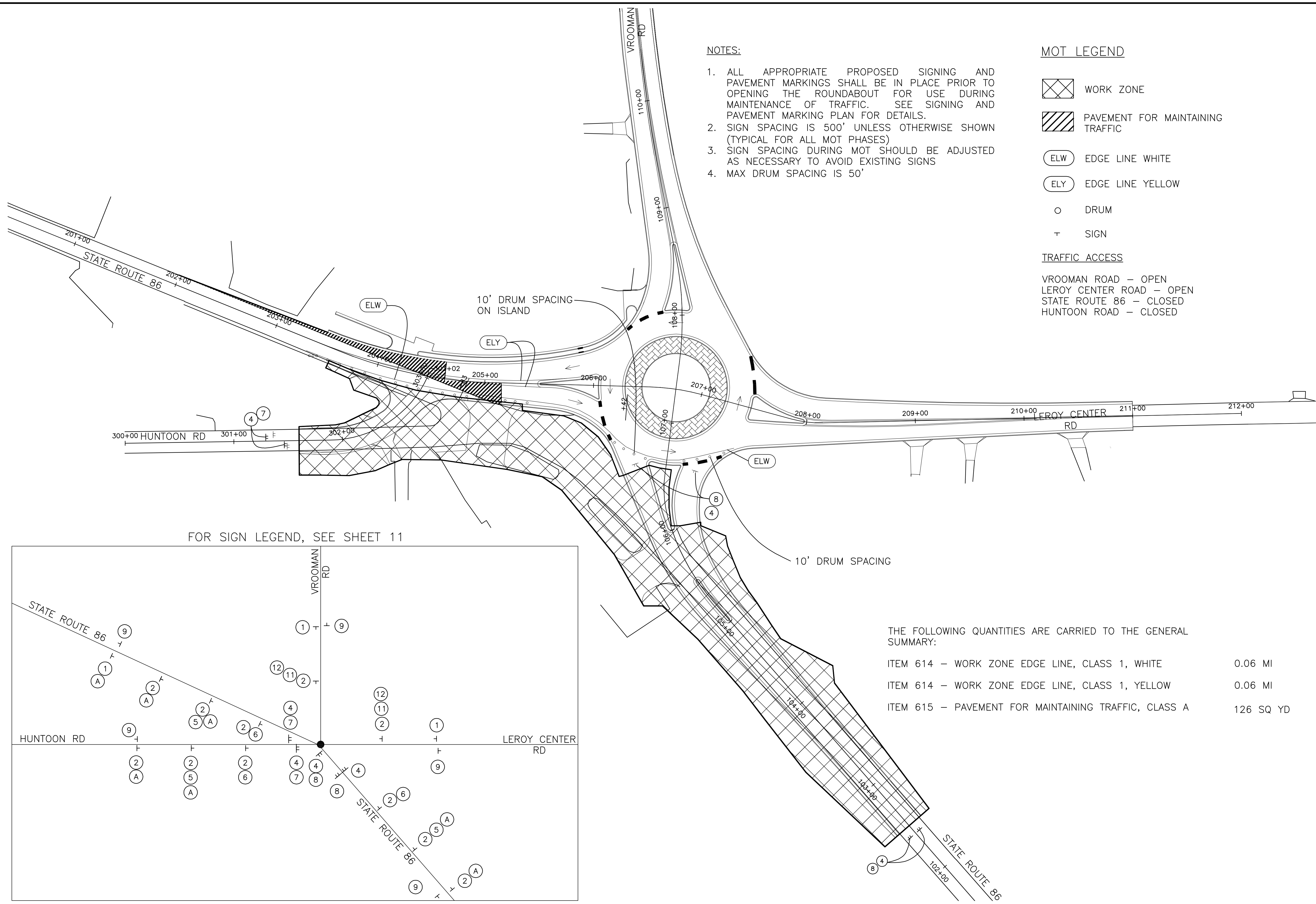
1. ALL APPROPRIATE PROPOSED SIGNING AND PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO OPENING THE ROUNDABOUT FOR USE DURING MAINTENANCE OF TRAFFIC. SEE SIGNING AND PAVEMENT MARKING PLAN FOR DETAILS.
2. SIGN SPACING IS 500' UNLESS OTHERWISE SHOWN (TYPICAL FOR ALL MOT PHASES)
3. SIGN SPACING DURING MOT SHOULD BE ADJUSTED AS NECESSARY TO AVOID EXISTING SIGNS
4. MAX DRUM SPACING IS 50'

**MOT LEGEND**

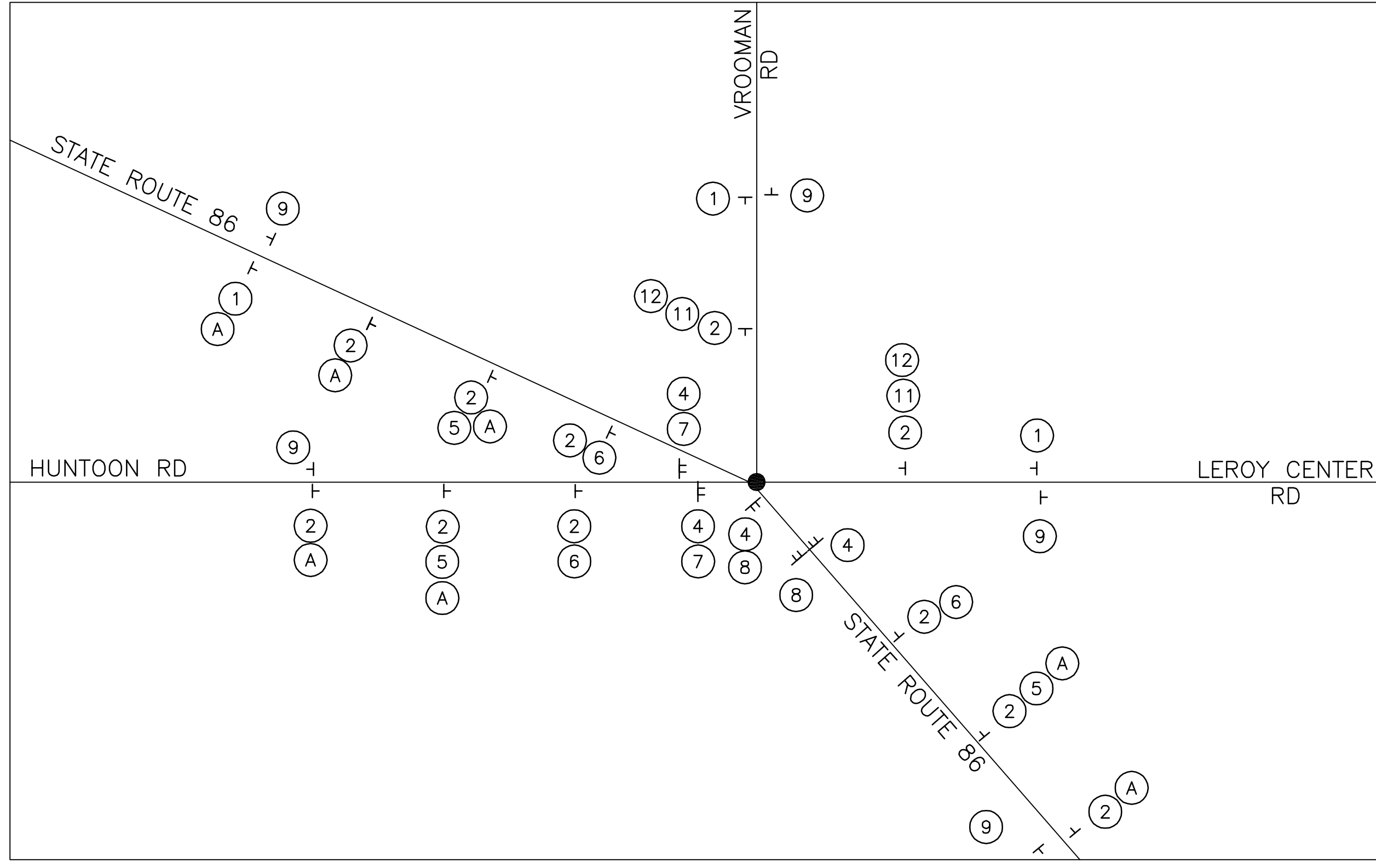
-  WORK ZONE
-  PAVEMENT FOR MAINTAINING TRAFFIC
-  EDGE LINE WHITE
-  EDGE LINE YELLOW
-  DRUM
-  SIGN

**TRAFFIC ACCESS**

- VROOMAN ROAD - OPEN
- LEROY CENTER ROAD - OPEN
- STATE ROUTE 86 - CLOSED
- HUNTOON ROAD - CLOSED



FOR SIGN LEGEND, SEE SHEET 11



THE FOLLOWING QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - WORK ZONE EDGE LINE, CLASS 1, WHITE	0.06 MI
ITEM 614 - WORK ZONE EDGE LINE, CLASS 1, YELLOW	0.06 MI
ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	126 SQ YD









THE FOLLOWING QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - WORK ZONE EDGE LINE, CLASS 1, WHITE 0.04 MI

NOTES:

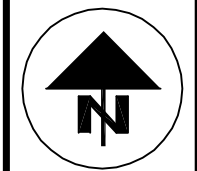
1. ALL APPROPRIATE PROPOSED SIGNING AND PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO OPENING THE ROUNDABOUT FOR USE DURING MAINTENANCE OF TRAFFIC. SEE SIGNING AND PAVEMENT MARKING PLAN FOR DETAILS.
2. SIGN SPACING IS 500' UNLESS OTHERWISE SHOWN (TYPICAL FOR ALL MOT PHASES)
3. SIGN SPACING DURING MOT SHOULD BE ADJUSTED AS NECESSARY TO AVOID EXISTING SIGNS
4. MAX DRUM SPACING IS 10'

MOT LEGEND

-  WORK ZONE
-  PAVEMENT FOR MAINTAINING TRAFFIC
-  EDGE LINE WHITE
-  EDGE LINE YELLOW
-  DRUM
-  SIGN

TRAFFIC ACCESS

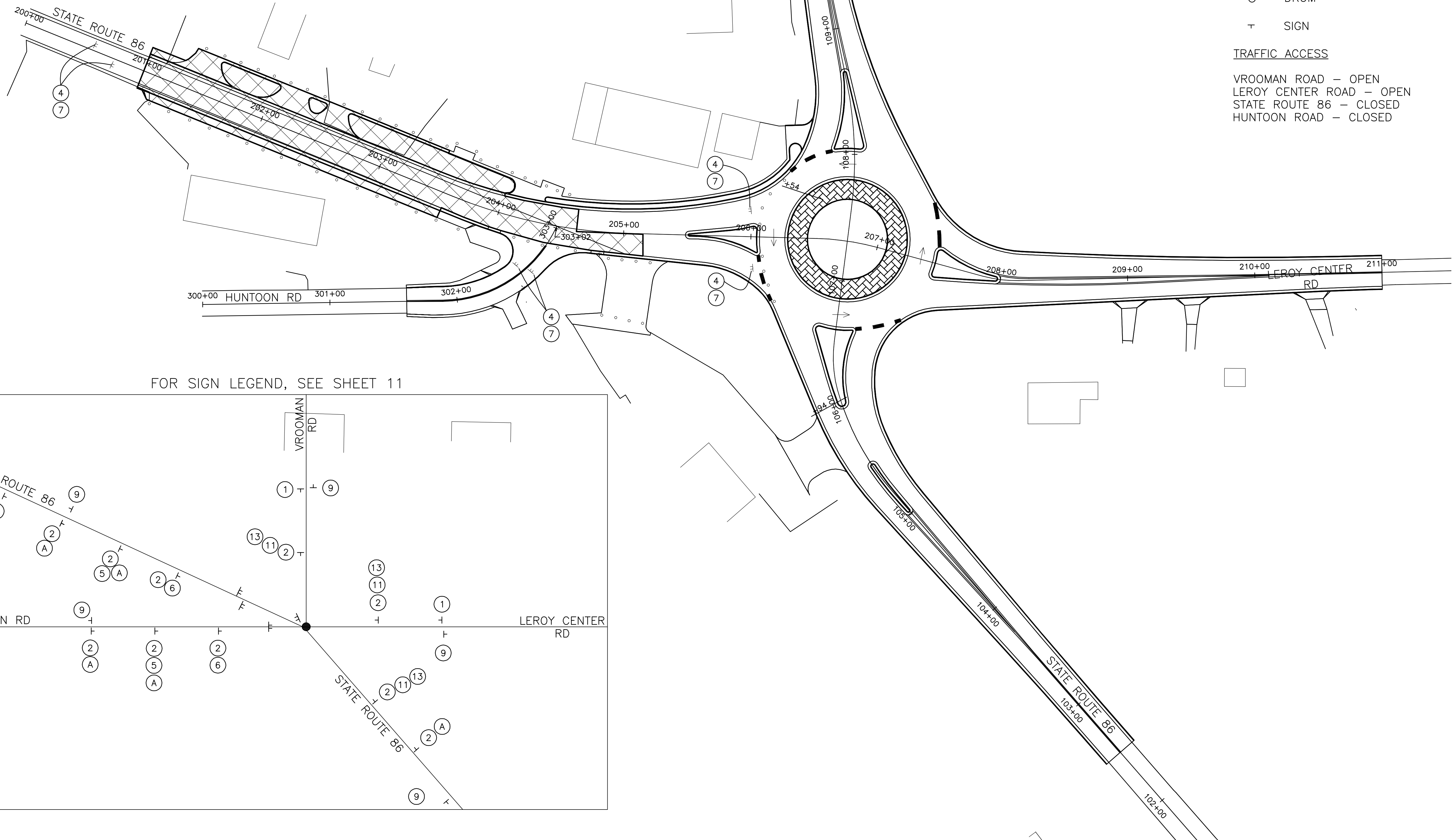
VROOMAN ROAD - OPEN  
 LEROY CENTER ROAD - OPEN  
 STATE ROUTE 86 - CLOSED  
 HUNTOON ROAD - CLOSED



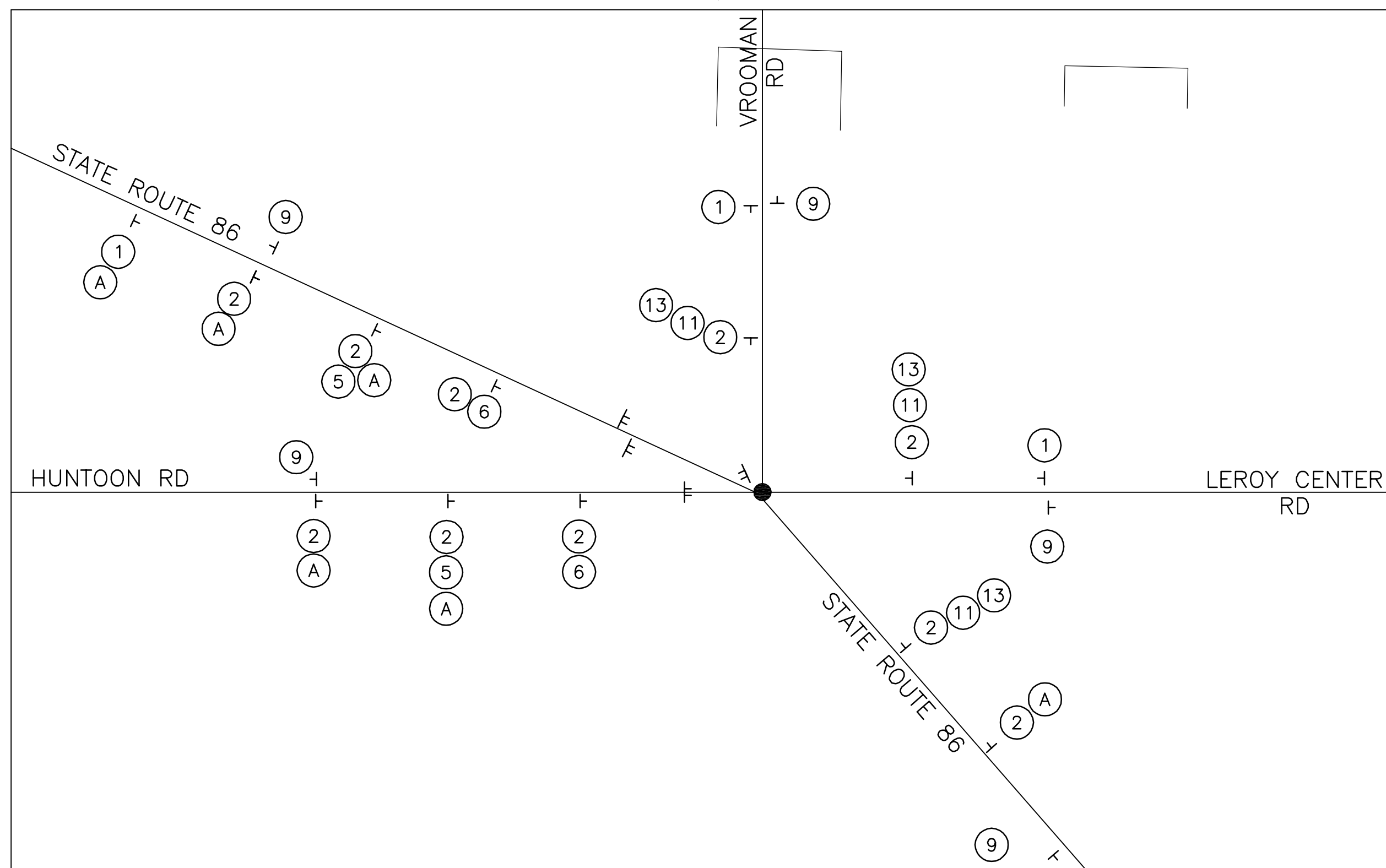
CALCULATED  
 SPR  
 CHECKED  
 JMJ

MAINTENANCE OF TRAFFIC PHASE FOUR

LAK-VROOMAN RD



FOR SIGN LEGEND, SEE SHEET 11



REF NO.	SHEET NO.	STATION TO STATION		SIDE	202	202	202	202	202	202	202	202	202										
		FROM	TO		HEADWALL REMOVED EACH	PAVEMENT REMOVED, ASPHALT SQ. YD.	FENCE REMOVED FT	PIPE REMOVED, 24" AND UNDER FT	PIPE REMOVED, OVER 24" FT	MAILBOX REMOVED EACH	REMOVAL MISC.: BRICK WALL REMOVED FT	REMOVAL MISC.: FLOWER BED REMOVED EACH	CATCH BASIN REMOVED EACH										
R-1	26	102+50	105+00	RT/LT		712																	
R-2		103+98	104+18	LT				20															
R-1	27	105+29	105+45	LT			25																
R-2		105+43	105+76	LT				50															
R-3		105+68	105+83	LT	2				48														
R-4		105+90		LT						1													
R-5		105+00	109+00	RT/LT		2705																	
R-6		105+75	106+20	LT			65																
R-7		106+40	106+70	LT							1												
R-8		106+18	106+53	LT				50															
R-9		205+13	205+74	RT			68																
R-10		106+63	107+23	LT	2				60														
R-11		204+35	108+28	LT		977																	
R-12		208+90		LT						1													
R-1	29	109+48		LT						1													
R-2		108+50	111+90	RT/LT		925																	
R-3		109+69	109+89	LT				20															
R-1	30	200+49	200+88	LT				40															
R-2		201+83	201+93	LT							1												
R-3		202+43		LT						4													
R-4		203+09		LT						1													
R-5		203+47	203+63	LT							50	1											
R-6		204+20	204+39	LT							53	1											
R-7		201+00	205+00	RT/LT		1355																	
R-8		203+53	204+44	LT				90							1								
R-1	32	209+00	211+50	RT/LT		515																	
R-2		208+98	209+18	RT				21															
R-3		209+50	209+70	RT				20															
R-4		210+58	210+82	RT/LT					40														
R-1	33	204+38	204+56	RT					24														
R-2		204+38		RT						1													
R-3		204+77	205+11	RT					40														
R-4		301+60	205+00	RT/LT		460																	
<b>TOTALS</b>					<b>4</b>	<b>7649</b>	<b>158</b>	<b>311</b>	<b>212</b>	<b>9</b>	<b>103</b>	<b>4</b>	<b>1</b>										

CALCULATED SPR CHECKED JWZ	ROADWAY SUBSUMMARY	LAK-VROOMAN RD
21 76		

REF NO.	SHEET NO.	STATION TO STATION		SIDE	601	602			603	603	603	603	603	604	604	604	604		604		670	836	836		
					ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY			12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" CONDUIT, TYPE D	30" CONDUIT, TYPE B	30" CONDUIT, TYPE C	CATCH BASIN NO 2-2B	CATCH BASIN NO 2-3	CATCH BASIN NO 3	CATCH BASIN NO 3A		MANHOLE NO 3		DITCH EROSION PROTECTION	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2		
		FROM	TO		CU YD	CU YD			FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH		EACH		SQ. YD.	SQ. YD.	SQ. YD.		
D-1	26	102+50	104+00	RT																		125			
D-2		104+00	104+50	RT		0.56						78													
D-3		104+50	105+50	RT										104		1									
D-1	27	105+50	106+73	LT									191		1										
D-2		205+50	205+50	RT							14			1											
D-3		205+50	204+50	RT									117						1						
D-4		208+25	208+25	RT/LT					42								1								
D-5		208+25	208+25	LT		0.2					16						1								
D-6		108+00	209+50	RT																			192		
D-7		105+50	105+50	RT/LT					40								1								
D-8		105+50	105+50	LT							10						1								
D-1	29	109+00	109+50	RT																			42		
D-2		109+69	109+89	LT							20														
D-3		109+50	109+50	RT/LT					32									1							
D-4		109+50	109+50	RT		0.2					18							1							
D-5		111+00	111+00	RT/LT					30									1							
D-6		111+00	111+00	RT		0.2					20							1							
D-7		110+00	111+50	RT																			125		
D-8		108+50	109+00	RT																	42				
D-1	30	200+41	203+25	LT	2	0.2						285							1						
D-2		203+25	203+25	LT								6													
D-3		203+25	203+25	RT/LT					28									1							
D-1	32	209+50	210+00	LT																	42				
D-2		210+80	211+50	RT																	59				
D-3		210+00	210+50	LT																		42			
D-4		210+50	211+00	LT																		42			
D-1	33	302+25	302+50	RT	2	0.2							32						1						
D-2		302+50	302+50	RT							19														
D-3		302+50	204+83	RT							64														
SUBTOTAL THIS SHEET					4	1.6			172	452	20	78	444	1	2	4	8		3		185	484	42		

**DRAINAGE SUBSUMMARY**

**LAK-VROOMAN RD**

CALCULATED  
SPR  
CHECKED  
JWZ

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DESCRIPTION	AREA	204	301	304	407	407	448	448	452	452	609		609	609	609		605	603	603		
		SUBGRADE COMPACTION	ASPHALT CONCRETE BASE, PG64-22	AGGREGATE BASE, AS PER PLAN	TACK COAT (@ 0.075 GAL/SY)	TACK COAT FOR INTERMEDIATE COURSE (@ 0.04 GAL/SY)	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, AS PER PLAN	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN	4" NON-REINFORCED CONCRETE PAVEMENT	8" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN	COMBINATION CURB AND GUTTER, TYPE 2	COMBINATION CURB AND GUTTER, TYPE 3, AS PER PLAN	CURB, TYPE 6	CURB, TYPE 7	6" BASE PIPE UNDERDRAINS	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	6" CONDUIT, TYPE B				
	SQ. FT.	SQ. YD.	CU. YD.	CU. YD.	GAL	GAL	CU. YD.	CU. YD.	SQ. YD.	SQ. YD.	FT		FT	FT	FT		FT	FT	FT		
SUBGRADE AREA - ENTIRE PROJECT	88180	9798		1633																	
PAVEMENT AREA - ENTIRE PROJECT	60932		1128		508	271	235	329													
NORTHWEST QUADRANT - CURB QUANTITIES											940						940	50			
NORTHEAST QUADRANT - CURB QUANTITIES											808						808	60			
SOUTHWEST QUADRANT - CURB QUANTITIES											914						914	60			
SOUTHEAST QUADRANT - CURB QUANTITIES											792						792	60			
WEST SPLITTER ISLAND	748			12					83		145										
NORTH SPLITTER ISLAND	984			15					109		162										
EAST SPLITTER ISLAND	880			14					98		140										
SOUTH SPLITTER ISLAND	1667			26					185		286										
NW QUADRANT CONCRETE ISLAND	1262	168		51					140												
CENTER CIRCLE													309		200		309		34		
HUNTOON RIGHT/LEFT											95			111			206	20			
TRUCK APRON	3700									411											
NOTE: ALL AREAS ARE CALCULATED BY CADD																					
TOTALS CARRIED TO GENERAL SUMMARY		9966	1128	1751	508	271	235	329	616	411	4282		309	111	200		3969	250	34		

CALCULATED	SPR	CHECKED	JWZ		
<b>PAVEMENT SUBSUMMARY</b>					
<b>LAK-VROOMAN RD</b>					
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>23</td> </tr> <tr> <td>76</td> </tr> </table>				23	76
23					
76					

STATION	SIDE	DRIVE TYPE	CURBED/UNCURBED (C/U)	SKEW	EXISTING COMPOSITION - APRON/DRIVE, A=ASPHALT, G=GRAVEL,	APRON AREA (CADD)	DRIVE AREA (CADD)	203		204	301	407	411	448	452	609	609																																		
								EXCAVATION	EMBANKMENT	SUBGRADE COMPACTION	ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)	TACK COAT @0.075 GAL/SY	STABILIZED CRUSHED AGGREGATE	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	6" NON-REINFORCED CONCRETE PAVEMENT	CURB, TYPE 6	CURB, TYPE 6, AS PER PLAN																																		
<b>SR 86/VROOMAN ROAD</b>																																																			
105+73	LT	COM	U	81	A/A		1298	29	6	144	20	11		5																																					
108+17	LT	COM	C	87	A/A		795	10	61	88	12	7			40																																				
109+75	LT	RES	U	81	G/G	101	137	5	5	26			3		11																																				
<b>SR 86/LEROY CENTER RD</b>																																																			
201+44	LT	COM	C	92	A/A		595	115		66	9	5		2		68																																			
202+17	LT	COM	C	90	A/A		630	12		70	10	5		2		70																																			
202+56	LT	COM	C	96	A/G		617	12		69	10	5		2		114																																			
202+40	RT	COM	C	XX	A/A		1656	31		184	26	14		6																																					
204+21	LT	COM	C	90	A/A		603	11	38	67	9	5		2		91						294																													
205+09	RT	COM	U	88	A/A		2476		80	275	27	21		10																																					
209+03	RT	RES	U	94	A/A	123	258	8		42	3	2		1	14																																				
209+52	RT	RES	U	94	A/A	121	154	9		31	2	1		1	13																																				
210+39	RT	RES	U	69	A/G	133	116	5		28			3		15																																				
<b>HUNTOON ROAD</b>																																																			
302+35	RT	RES	U	90	G/G	126	297	8		47			7		14																																				
302+00	LT	COM	U	90	A/A		247	5		27	3	2		1																																					
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>								260	190	1165	131	78	13	35	67	383	294																																		

CALCULATED	DRIVE SUBSUMMARY
SPR CHECKED	
JMJ	LAK-VROOMAN RD

GENERAL NOTES:

AT NO TIME SHALL THE EXISTING DITCHES BE LEFT OPEN TO DISTURBED SOIL WITHOUT EROSION CONTROL PRACTICES IN PLACE. FILTER FABRIC FENCE SHALL BE PLACED ON THE TOP OF SLOPE TO PREVENT EROSION INTO THE EXISTING CHANNELS.

THE ENTIRE PROPOSED CROSS SECTION, ALONG WITH PROPOSED DITCHES SHALL BE GRADED TOGETHER. IF PROPOSED DITCHES ARE GRADED BUT UNSTABILIZED, THEY SHALL BE PROTECTED WITH ROCK CHECK DAMS EVERY ONE HUNDRED (100) FEET.

ALL PROPOSED CATCH BASINS SHALL BE PROTECTED WITH INLET PROTECTION UNTIL FINAL SITE STABILIZATION.

SEDIMENT CONTROL, RUNOFF CONTROL AND ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AS PER THE CURRENT EDITION OF THE "RAINWATER AND LAND DEVELOPMENT MANUAL".

ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IN PLACE BEFORE ANY GIVEN PHASE OF CONSTRUCTION COMMENCES. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY DIVERSION FIRST, FOLLOWED BY THE SEDIMENT TRAP. FOR SEQUENCE OF CONSTRUCTION, SEE SHEET 10.

SEE GENERAL NOTES FOR EXFILTRATION TRENCH LENGTHS.

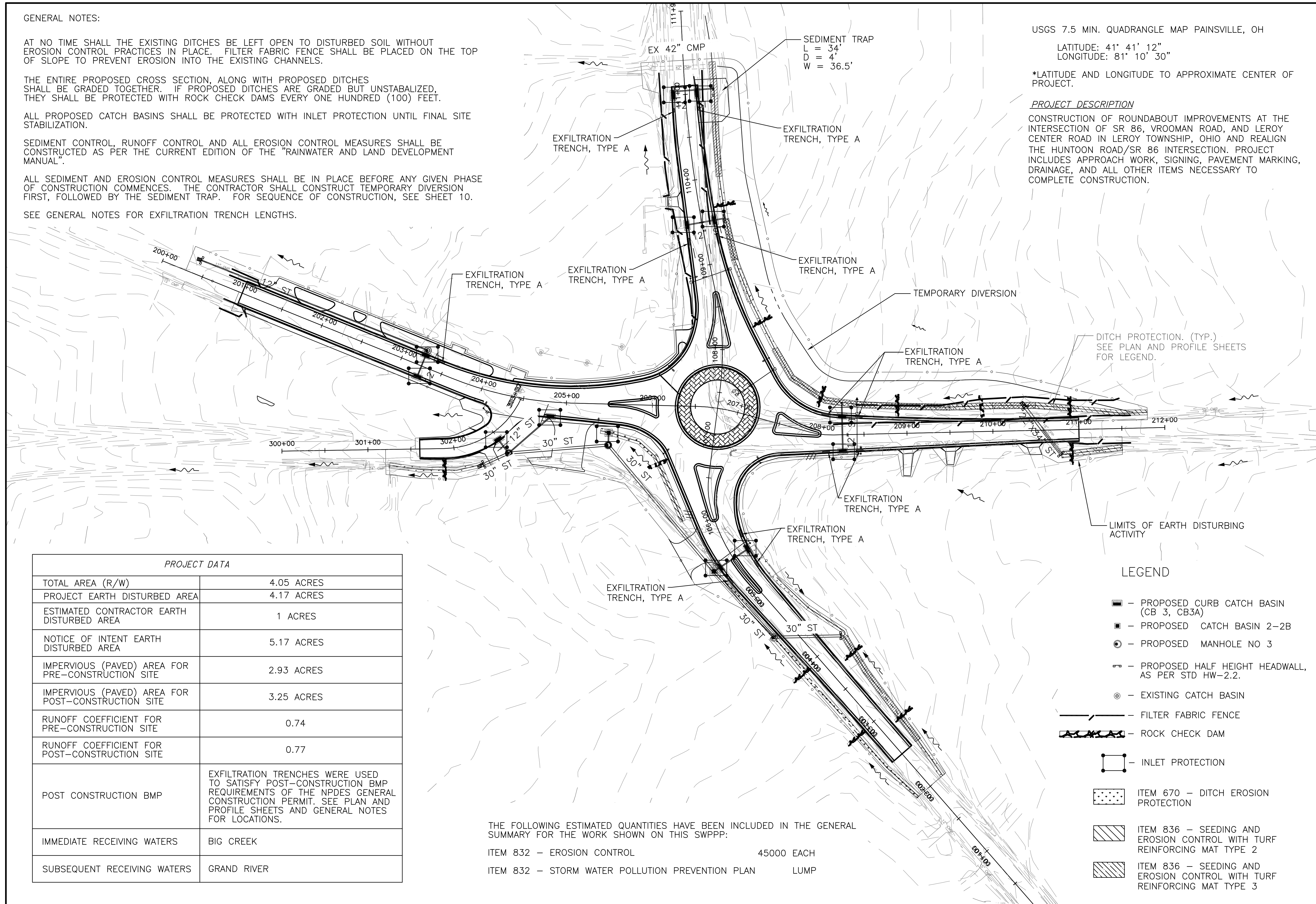
USGS 7.5 MIN. QUADRANGLE MAP PAINSVILLE, OH

LATITUDE: 41° 41' 12"  
LONGITUDE: 81° 10' 30"

\*LATITUDE AND LONGITUDE TO APPROXIMATE CENTER OF PROJECT.

PROJECT DESCRIPTION

CONSTRUCTION OF ROUNDABOUT IMPROVEMENTS AT THE INTERSECTION OF SR 86, VROOMAN ROAD, AND LEROY CENTER ROAD IN LEROY TOWNSHIP, OHIO AND REALIGN THE HUNTOON ROAD/SR 86 INTERSECTION. PROJECT INCLUDES APPROACH WORK, SIGNING, PAVEMENT MARKING, DRAINAGE, AND ALL OTHER ITEMS NECESSARY TO COMPLETE CONSTRUCTION.



PROJECT DATA	
TOTAL AREA (R/W)	4.05 ACRES
PROJECT EARTH DISTURBED AREA	4.17 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	1 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA	5.17 ACRES
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	2.93 ACRES
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE	3.25 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.74
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.77
POST CONSTRUCTION BMP	EXFILTRATION TRENCHES WERE USED TO SATISFY POST-CONSTRUCTION BMP REQUIREMENTS OF THE NPDES GENERAL CONSTRUCTION PERMIT. SEE PLAN AND PROFILE SHEETS AND GENERAL NOTES FOR LOCATIONS.
IMMEDIATE RECEIVING WATERS	BIG CREEK
SUBSEQUENT RECEIVING WATERS	GRAND RIVER

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK SHOWN ON THIS SWPPP:

- ITEM 832 - EROSION CONTROL 45000 EACH
- ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN LUMP

LEGEND

- ▣ - PROPOSED CURB CATCH BASIN (CB 3, CB3A)
- ▣ - PROPOSED CATCH BASIN 2-2B
- ⊙ - PROPOSED MANHOLE NO 3
- ▤ - PROPOSED HALF HEIGHT HEADWALL, AS PER STD HW-2.2.
- ⊙ - EXISTING CATCH BASIN
- / — - FILTER FABRIC FENCE
- / — - ROCK CHECK DAM
- - INLET PROTECTION
- ⋯ - ITEM 670 - DITCH EROSION PROTECTION
- ▨ - ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 2
- ▨ - ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 3

STORM WATER POLLUTION PREVENTION PLAN

LAK-VROOMAN RD

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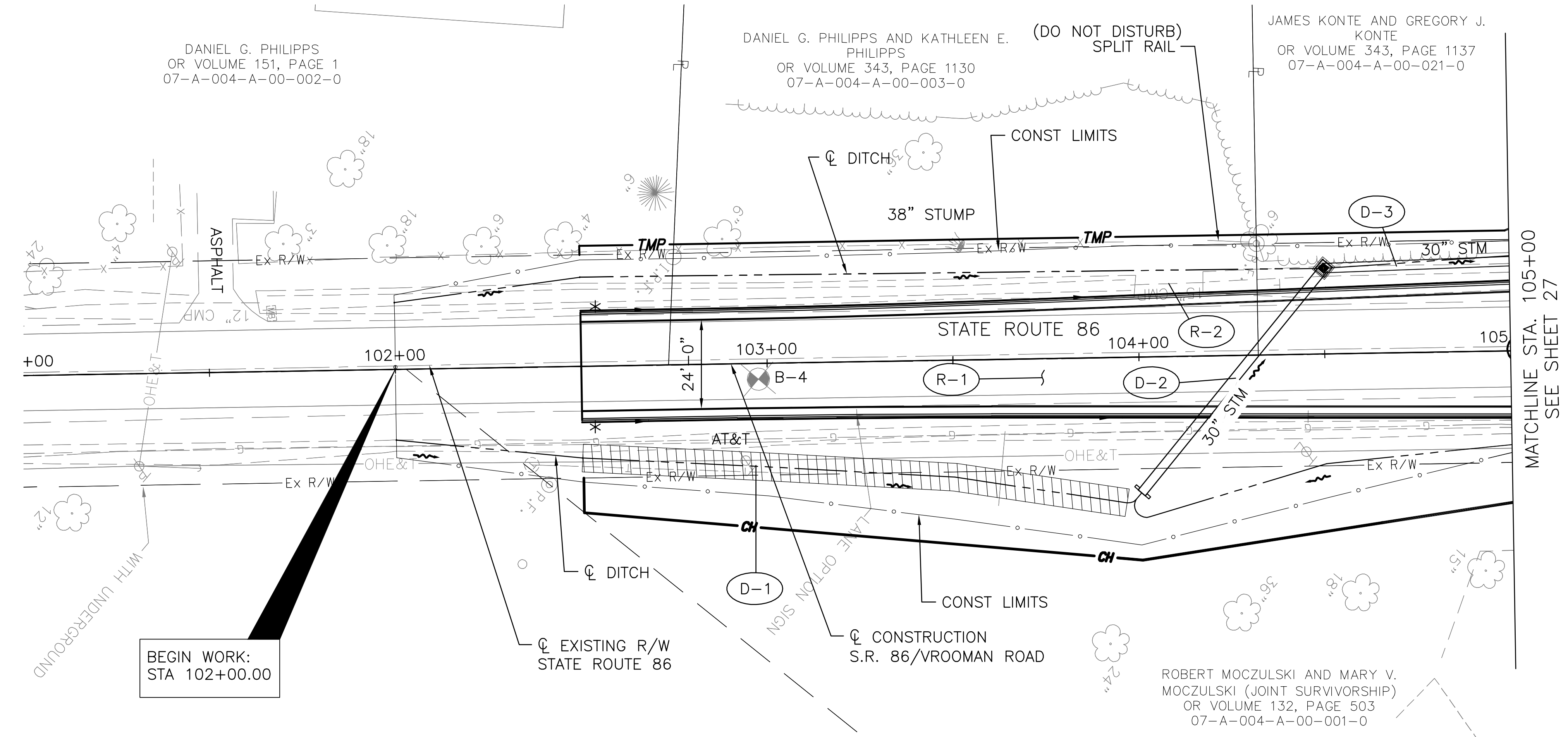


0 10 20 30  
HORIZONTAL SCALE IN FEET

CALCULATED  
SPR  
CHECKED  
JMJ

**PLAN AND PROFILE - STATE ROUTE 86  
STA 100+00 TO STA 105+00**

**LAK-VROOMAN RD**



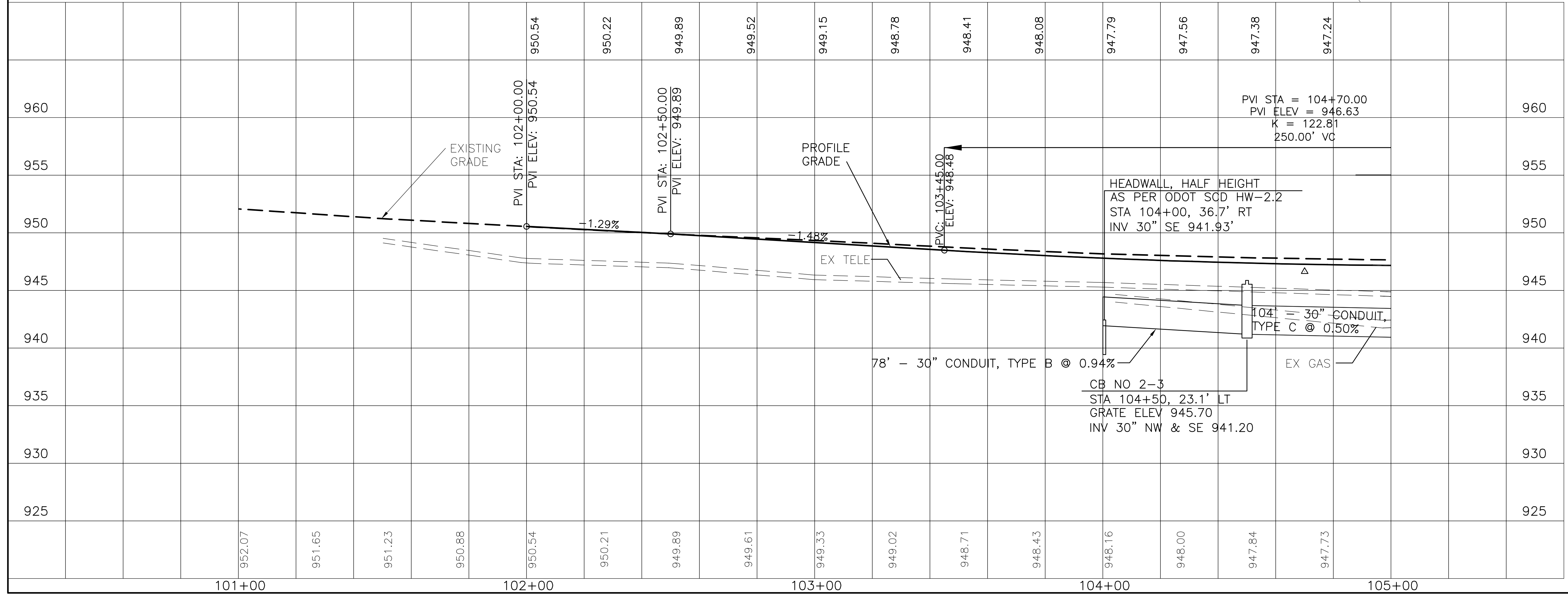
**BENCHMARK 4**  
CHISELED SQUARE ON THE NORTHEAST CORNER OF THE CONCRETE PAD FOR TELEPHONE PEDESTAL #F-12920 ON STATE ROUTE 86  
ELEV = 954.78  
NORTHING = 738182.5500  
EASTING = 2330668.8700

- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 1

\* CURB HEIGHT TRANSITIONS FROM 0 TO 6" IN 10'

\* CONNECT PROPOSED UNDERDRAIN TO EXISTING UNDERDRAIN.

PAVEMENT TRANSITIONS FROM UNCURBED TO CURBED AT A 4:1 RATE (LONGITUDINAL : LATERAL)



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CALCULATED  
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JMJ

**PLAN AND PROFILE - STATE ROUTE 86  
STA 100+00 TO STA 105+00**

**LAK-VROOMAN RD**

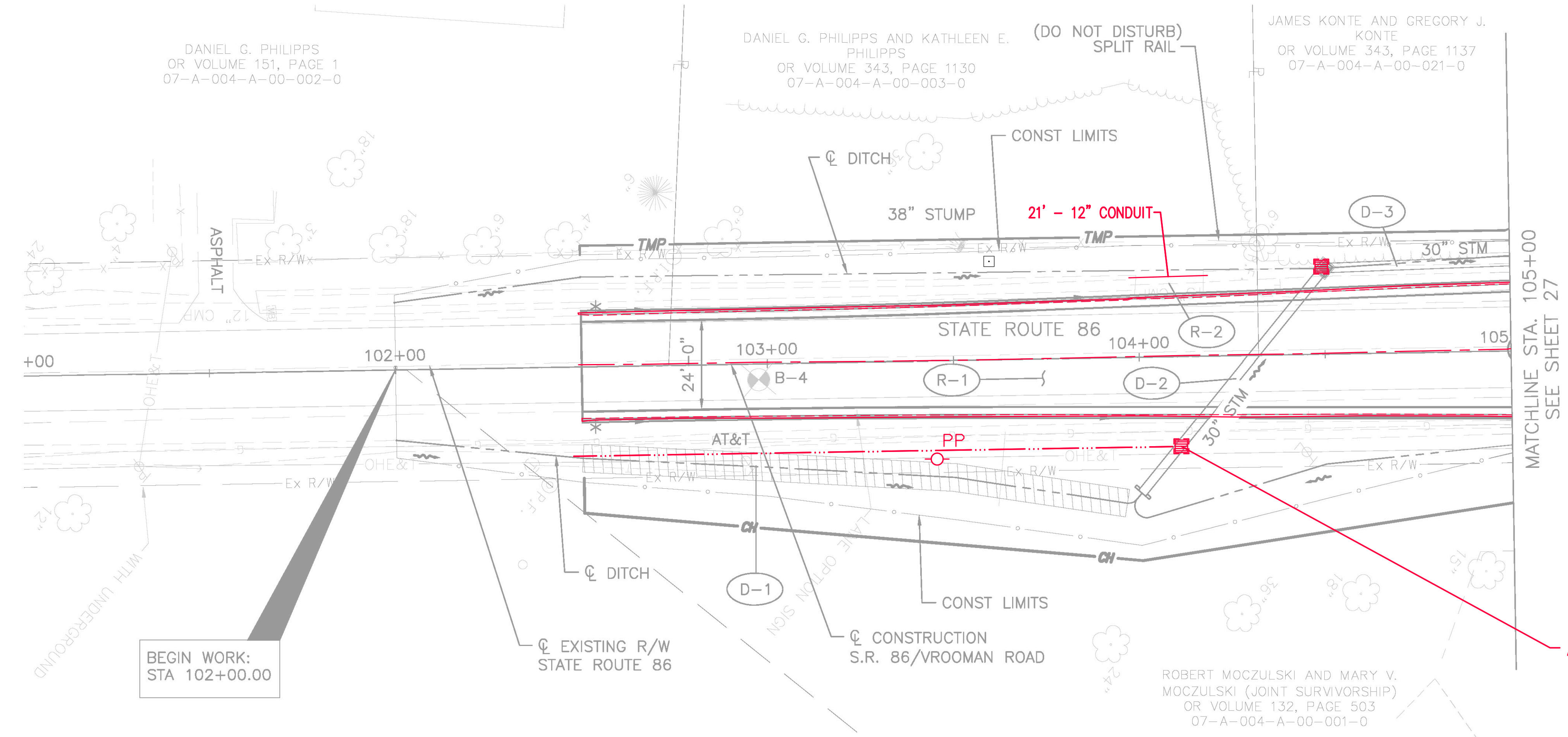
**BENCHMARK 4**  
CHISELED SQUARE ON THE NORTHEAST  
CORNER OF THE CONCRETE PAD FOR  
TELEPHONE PEDESTAL #F-12920 ON  
STATE ROUTE 86  
ELEV = 954.78  
NORTHING = 738182.5500  
EASTING = 2330668.8700

- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 1

\* CURB HEIGHT TRANSITIONS FROM 0 TO 6" IN 10'

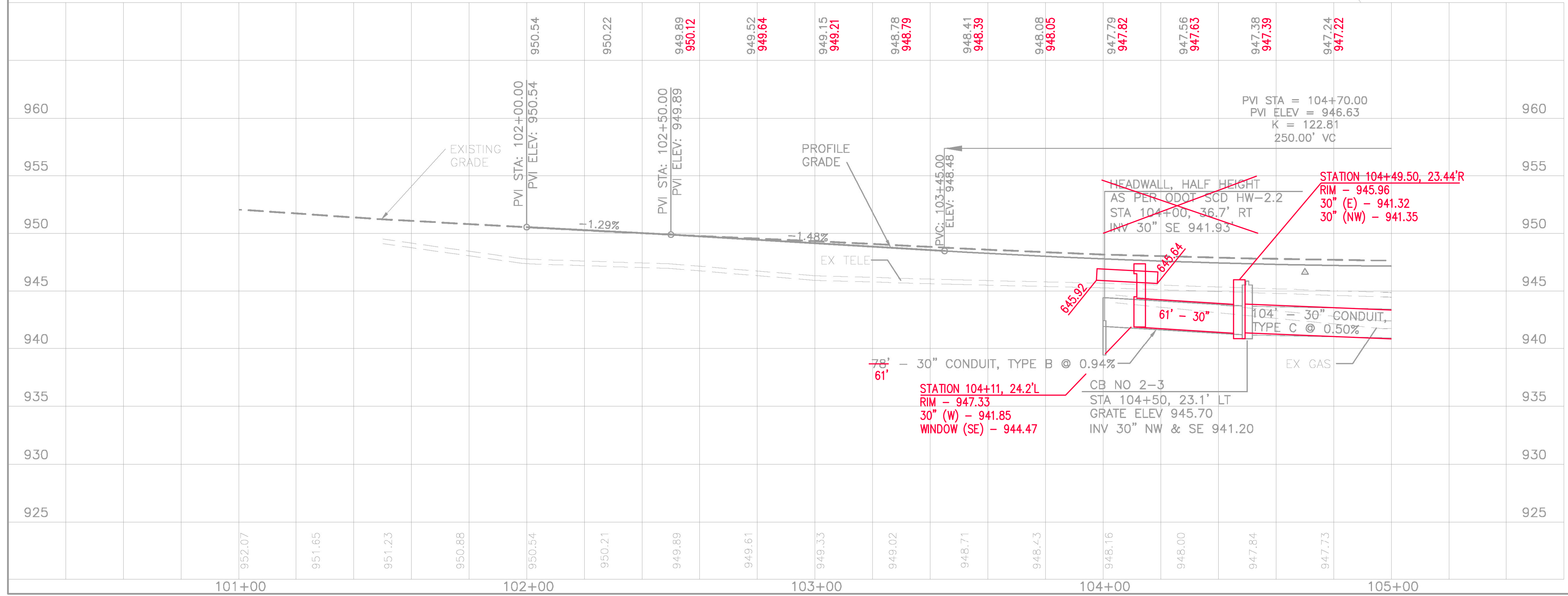
\* CONNECT PROPOSED UNDERDRAIN TO EXISTING UNDERDRAIN.

PAVEMENT TRANSITIONS FROM UNCURBED TO CURBED AT A 4:1 RATE (LONGITUDINAL : LATERAL)



BEGIN WORK:  
STA 102+00.00


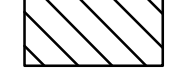
ADDED DRAINAGE STRUCTURE



AS BUILT SURVEY  
COMPLETED 4/28/2014



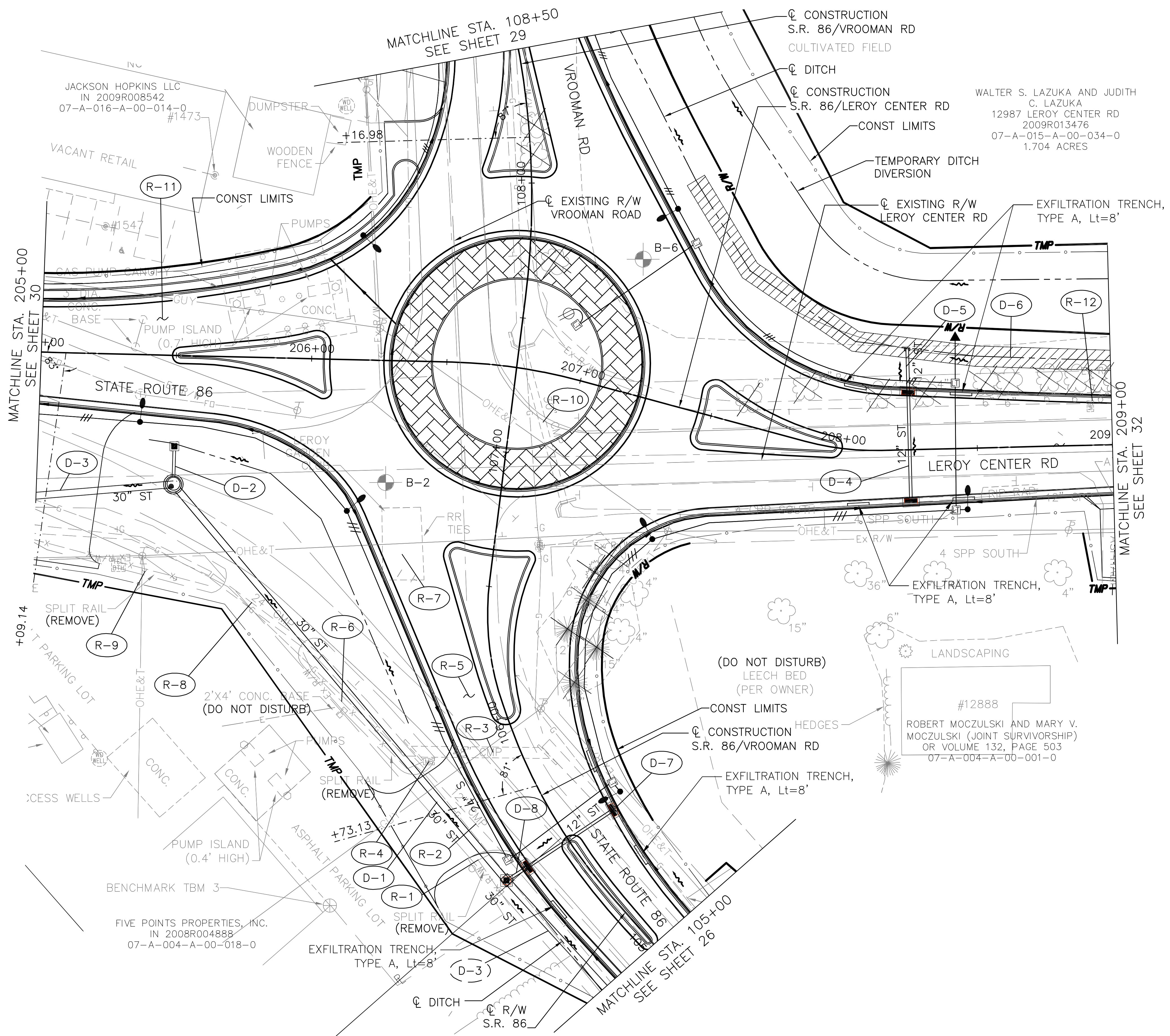
BENCHMARK 3  
 CHISLED SQUARE ON THE NORTHEAST CORNER  
 OF THE CONCRETE WALK AT THE FIVE POINTS  
 COUNTRY STORE  
 ELEV = 947.74  
 STA = 105+69.92, 88.27' LT

-  ITEM 670 - DITCH EROSION PROTECTION
-  ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 1

FOR ALIGNMENT DETAIL SEE SHEET 2  
 FOR ROUNDABOUT GRADING DETAIL SEE SHEETS 48-49  
 FOR ROUNDABOUT GRADING PLAN SEE SHEET 50

CALCULATED  
 SPR  
 CHECKED  
 JMJ

0 10 20  
 HORIZONTAL  
 SCALE IN FEET





**PLAN - ROUNDABOUT**  
**STA 105+00 TO STA 108+50, STA 205+00 TO STA 209+00**

**LAK-VROOMAN RD**

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BENCHMARK 3  
 CHISLED SQUARE ON THE NORTHEAST CORNER  
 OF THE CONCRETE WALK AT THE FIVE POINTS  
 COUNTRY STORE  
 ELEV = 947.74  
 STA = 105+69.92, 88.27' LT

-  ITEM 670 - DITCH EROSION PROTECTION
-  ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 1

FOR ALIGNMENT DETAIL SEE SHEET 2  
 FOR ROUNDABOUT GRADING DETAIL SEE SHEETS 48-49  
 FOR ROUNDABOUT GRADING PLAN SEE SHEET 50



STATION 106+87.00, 122.42'L =  
 STATION 205+49.53, 33.31'R  
 SEE SHEET 28

STATION 106+75.51, 119.33'L =  
 STATION 205+51.33, 46.05'R  
 SEE SHEET 28

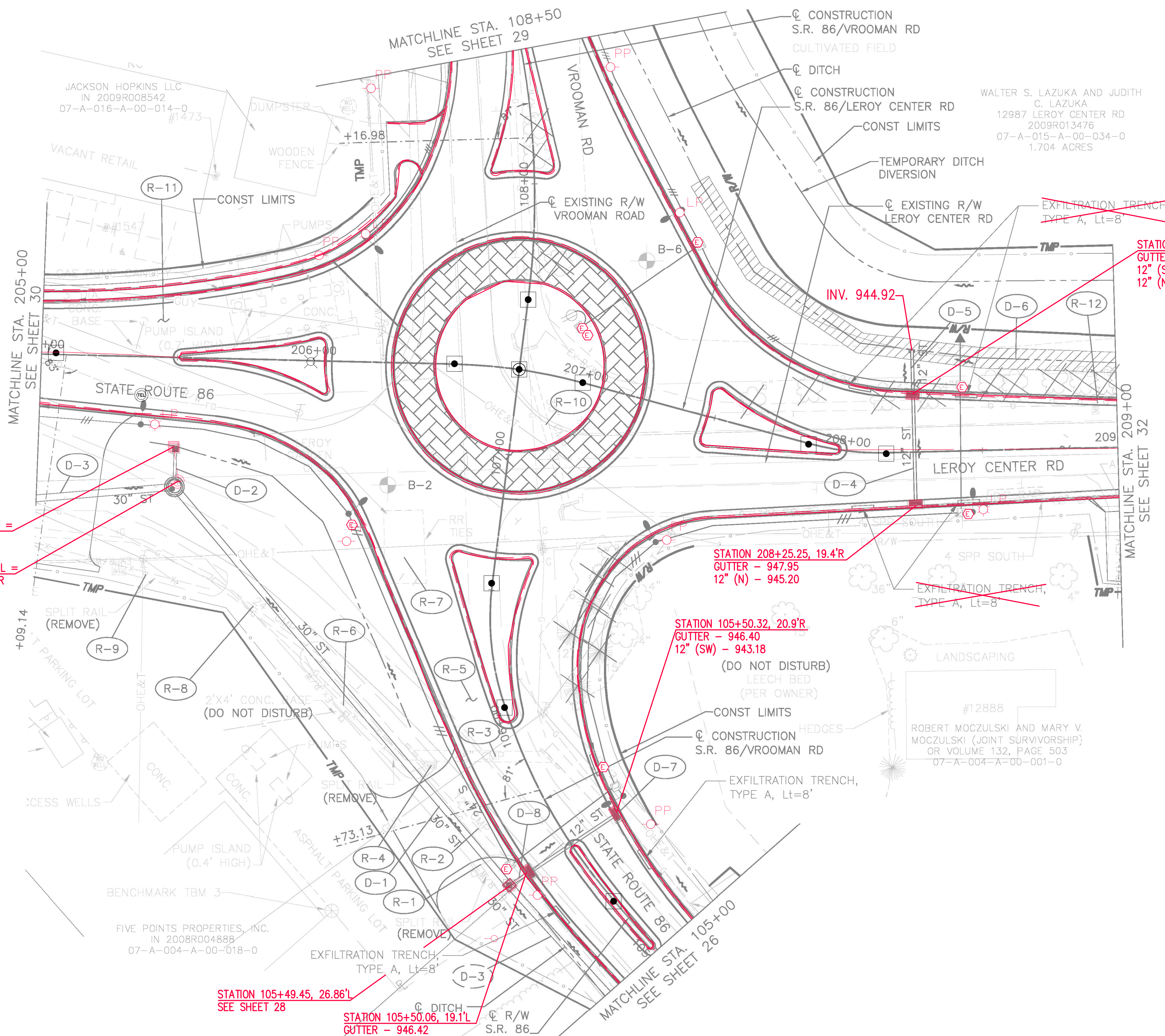
STATION 208+25.25, 19.4'R  
 GUTTER - 947.95  
 12" (N) - 945.20

STATION 105+50.32, 20.9'R  
 GUTTER - 946.40  
 12" (SW) - 943.18

STATION 105+49.45, 26.86'L  
 SEE SHEET 28

STATION 105+50.06, 19.1'L  
 GUTTER - 946.42  
 12" (SW) - 943.00  
 12" (NE) - 943.00

STATION 208+24.98, 21.8'L  
 GUTTER - 948.12  
 12" (S) - 945.09  
 12" (N) - 945.09

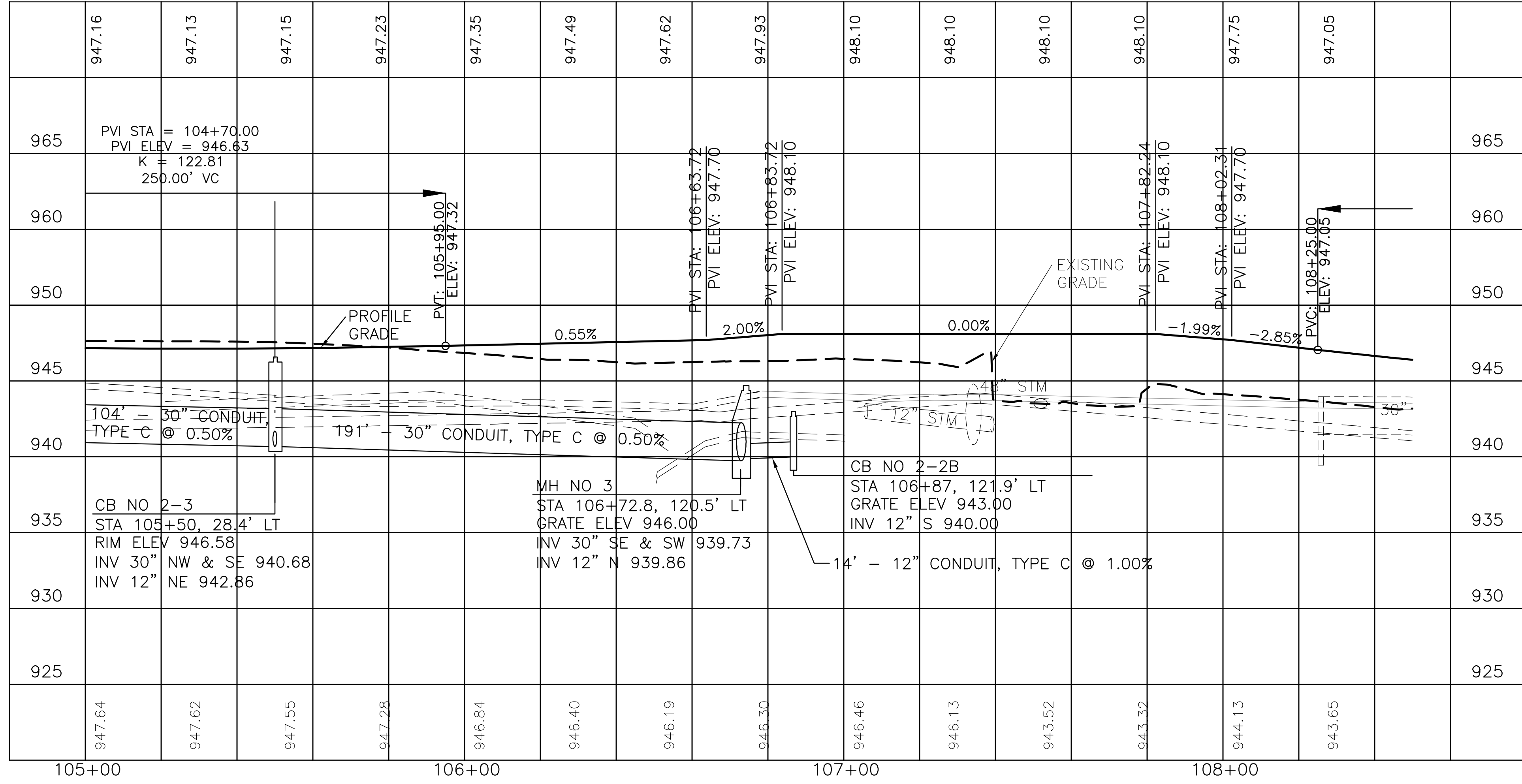


PLAN - ROUNDABOUT  
 STA 105+00 TO STA 108+50, STA 205+00 TO STA 209+00

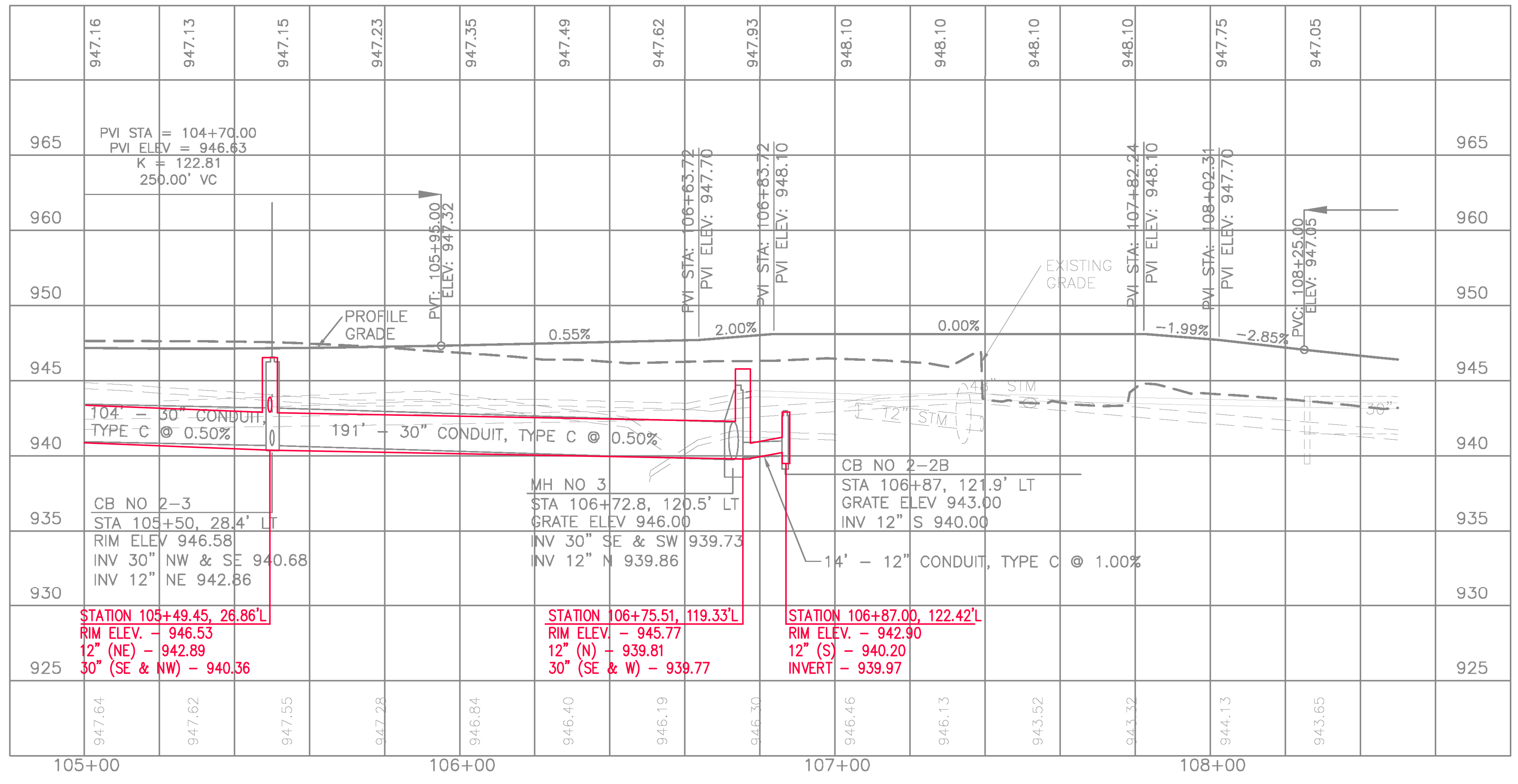
LAK-VROOMAN RD

AS BUILT SURVEY  
 COMPLETED 4/28/2014

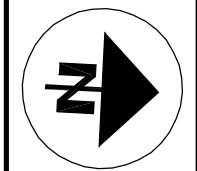
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**PROFILE - VROOMAN ROAD  
STA 105+00 TO STA 108+50**



**PROFILE - VROOMAN ROAD  
STA 105+00 TO STA 108+50**



HORIZONTAL SCALE IN FEET  
0 10 20 30

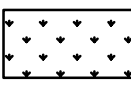

CALCULATED  
SPR  
CHECKED  
JMJ

**PLAN AND PROFILE - VROOMAN ROAD  
STA 108+50 TO STA 111+90**

**LAK-VROOMAN RD**

29  
76

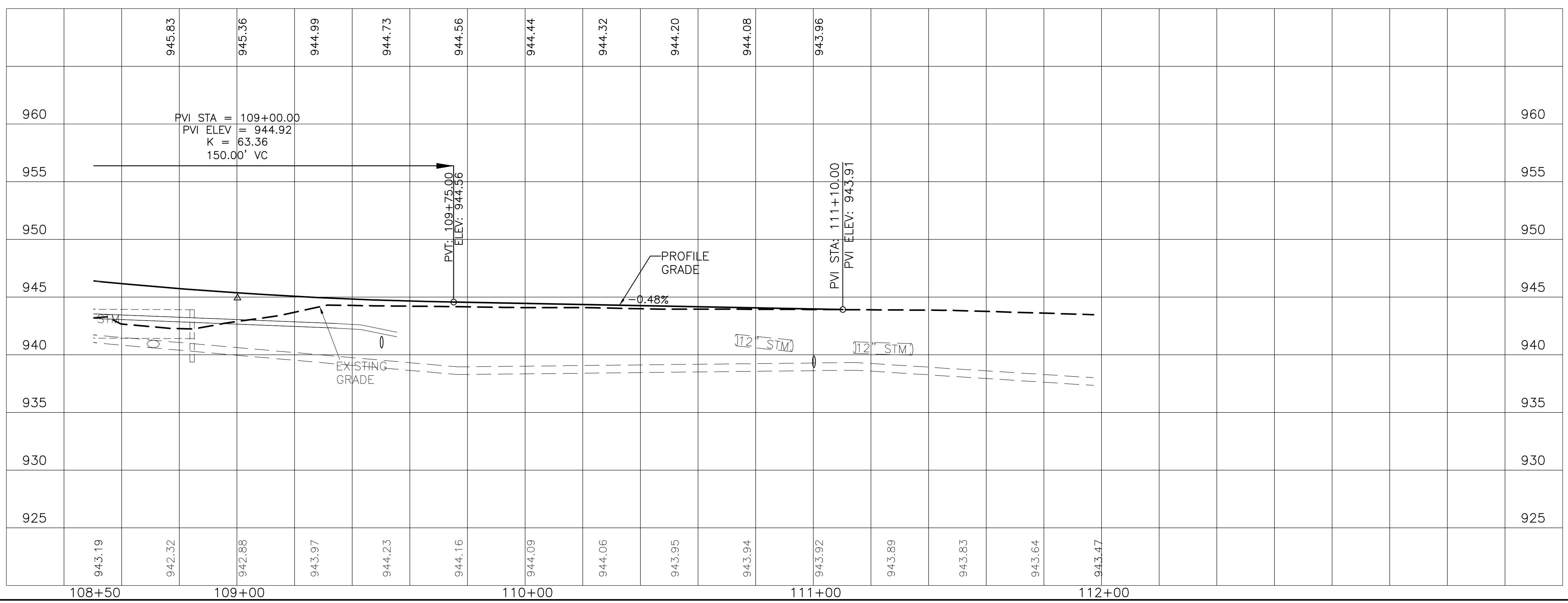
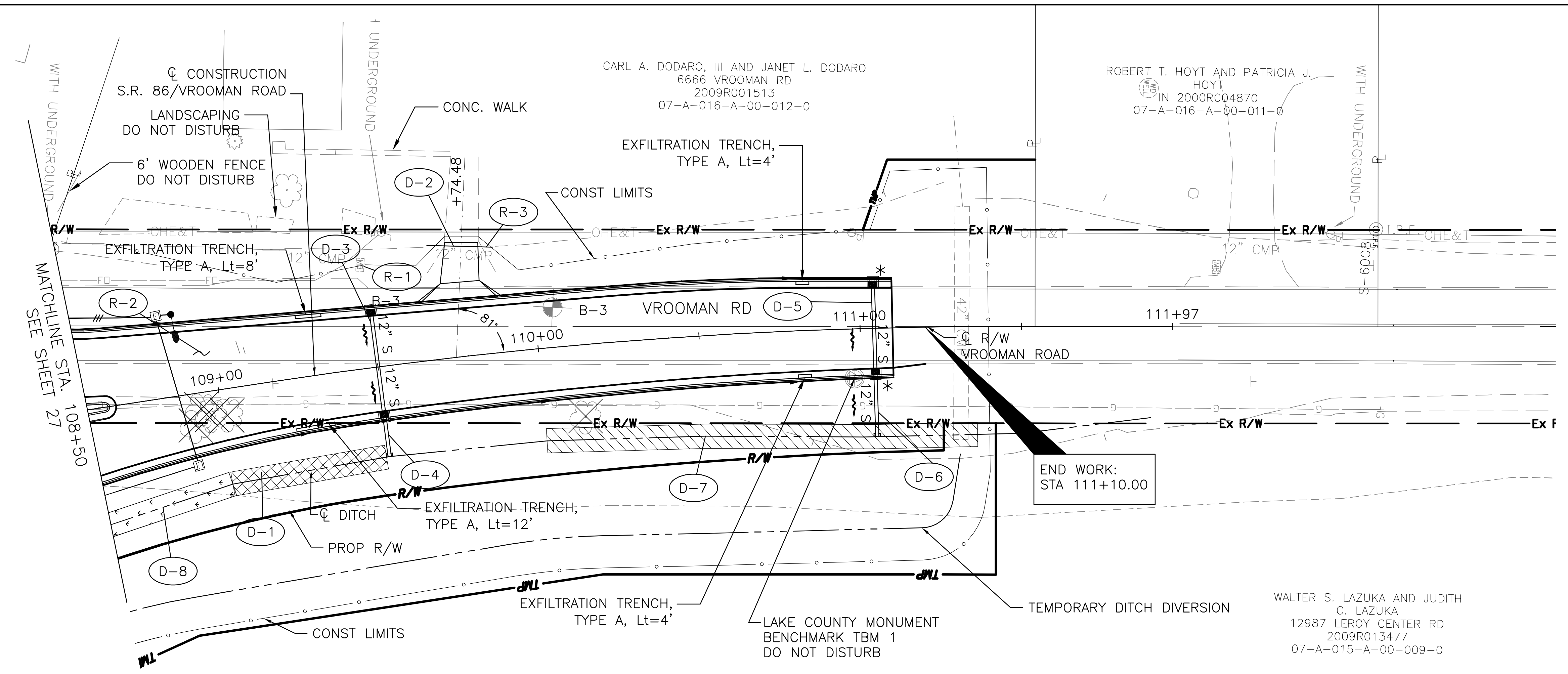
BENCHMARK 1  
LAKE COUNTY MONUMENT 0043  
ELEV = 942.80  
STA = 110+97.82, 15.33' RT

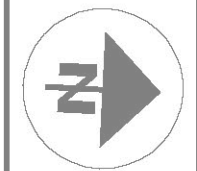
-  ITEM 670 - DITCH EROSION PROTECTION
-  ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 1

\* CURB HEIGHT TRANSITIONS FROM 0 TO 6" IN 10'

\* CONNECT PROPOSED UNDERDRAIN TO EXISTING UNDERDRAIN

PAVEMENT TRANSITIONS FROM UNCURBED TO CURBED AT A 4:1 RATE (LONGITUDINAL : LATERAL)





CALCULATED  
SPR  
CHECKED  
JMJZ

**PLAN AND PROFILE - VROOMAN ROAD  
STA 108+50 TO STA 111+90**

**LAK-VROOMAN RD**

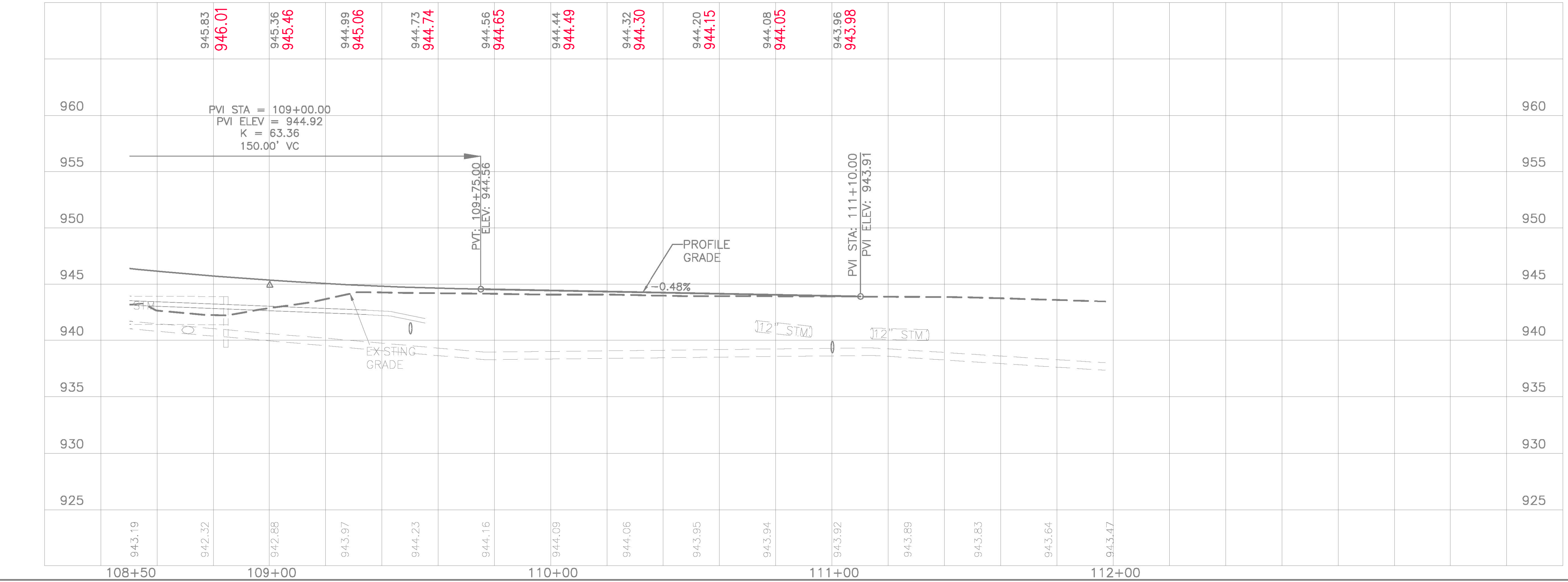
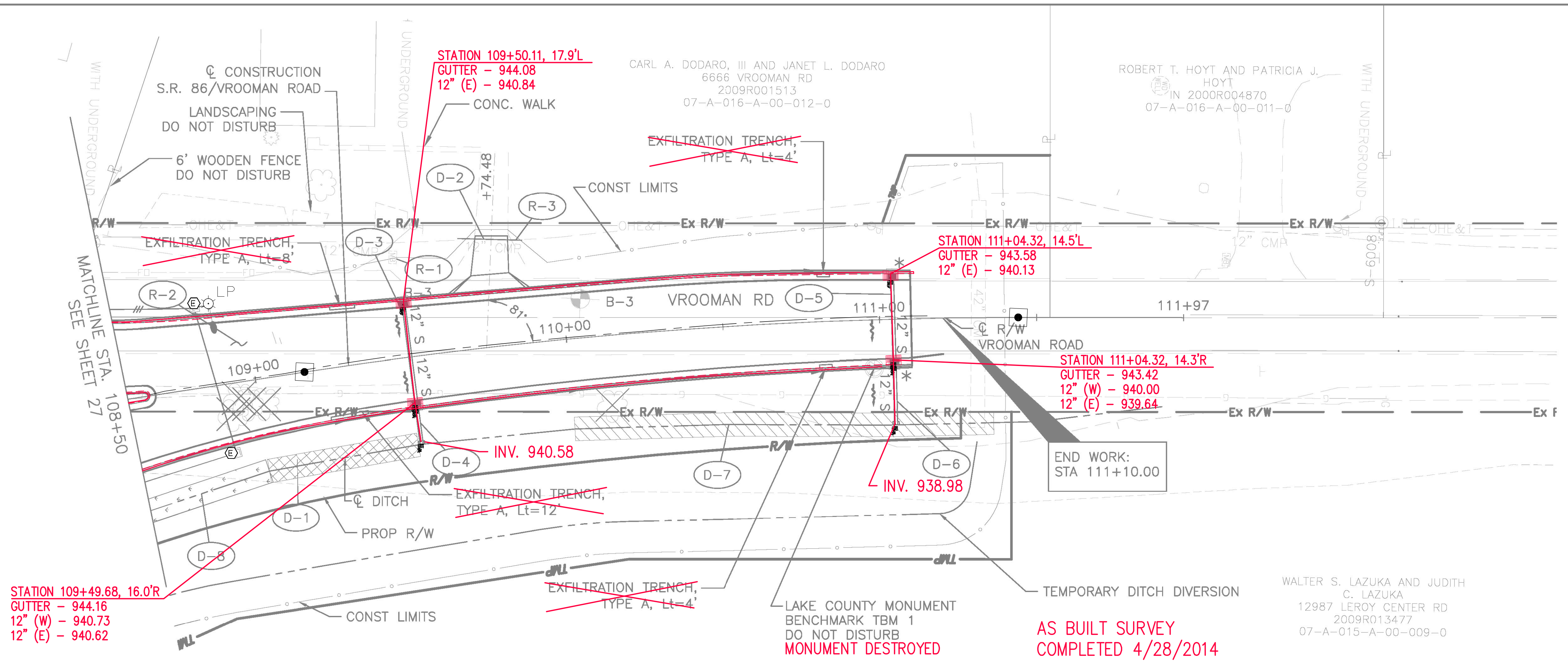
BENCHMARK 1  
LAKE COUNTY MONUMENT 0043  
ELEV = 942.80  
STA = 110+97.82, 15.33' RT

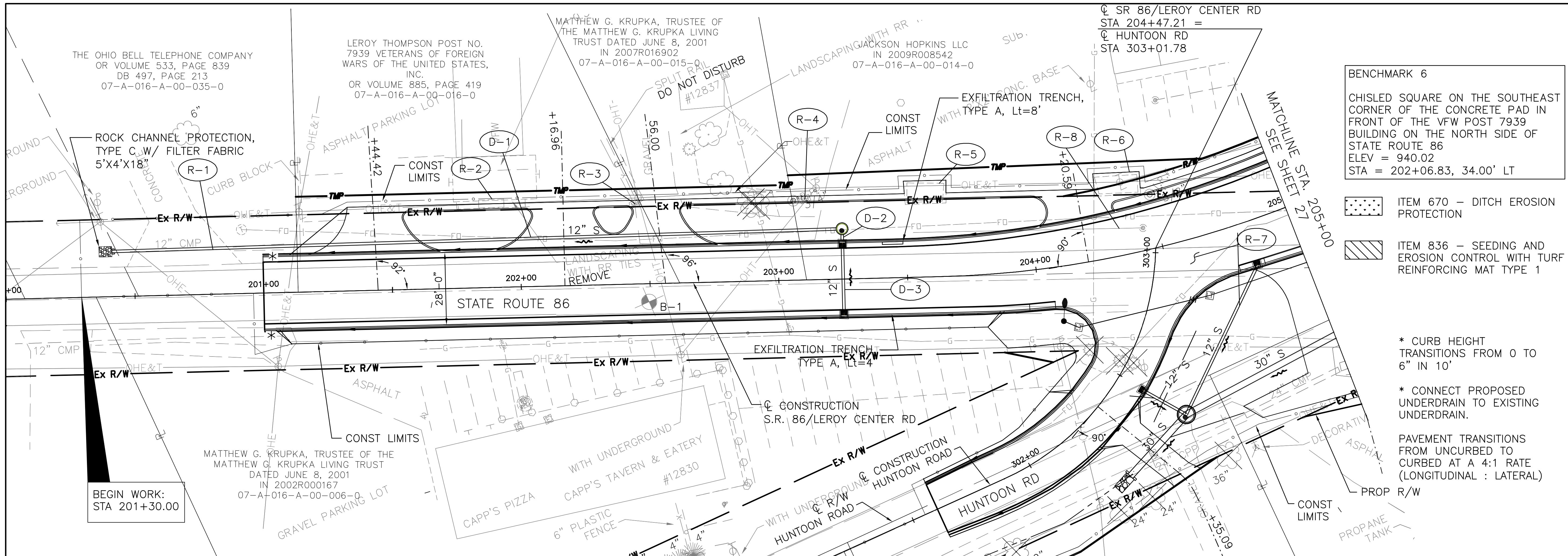
- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 1

\* CURB HEIGHT TRANSITIONS FROM 0 TO 6" IN 10'

\* CONNECT PROPOSED UNDERDRAIN TO EXISTING UNDERDRAIN

PAVEMENT TRANSITIONS FROM UNCURBED TO CURBED AT A 4:1 RATE (LONGITUDINAL : LATERAL)





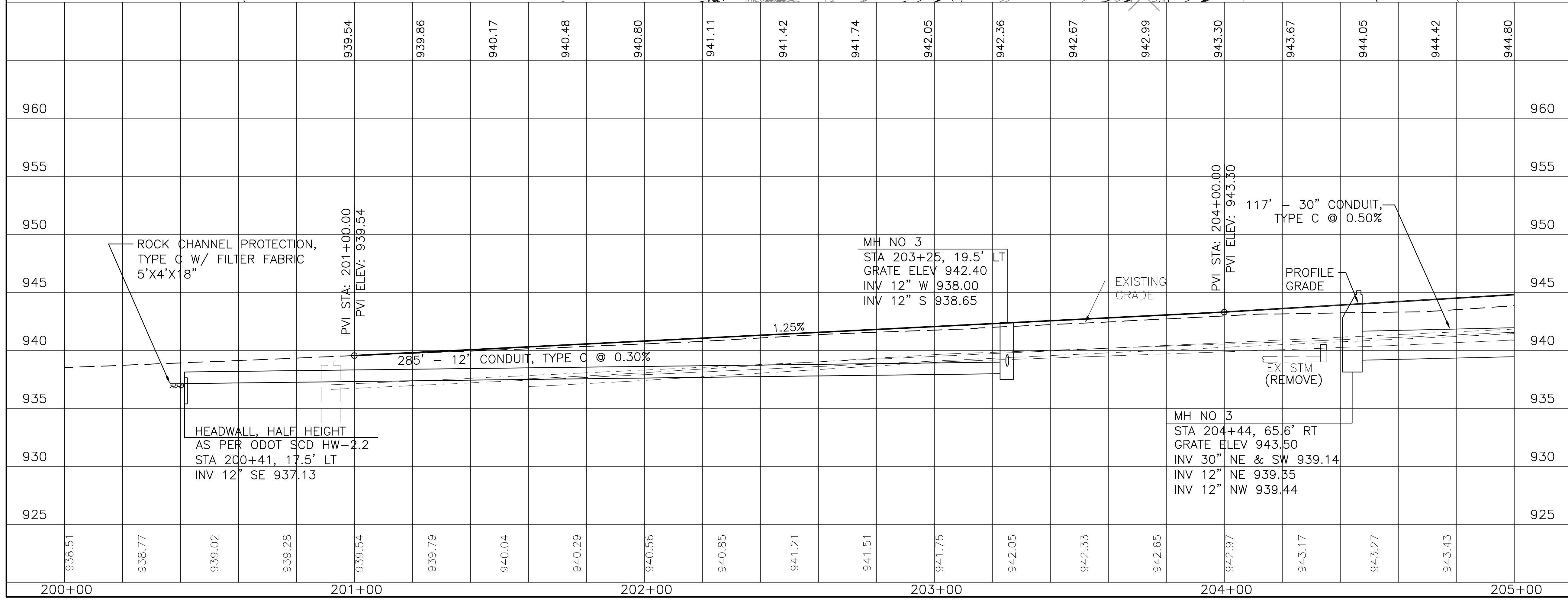
**BENCHMARK 6**  
 CHISLED SQUARE ON THE SOUTHEAST CORNER OF THE CONCRETE PAD IN FRONT OF THE VFW POST 7939 BUILDING ON THE NORTH SIDE OF STATE ROUTE 86  
 ELEV = 940.02  
 STA = 202+06.83, 34.00' LT

- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 1

\* CURB HEIGHT TRANSITIONS FROM 0 TO 6" IN 10'

\* CONNECT PROPOSED UNDERDRAIN TO EXISTING UNDERDRAIN.

PAVEMENT TRANSITIONS FROM UNCURED TO CURBED AT A 4:1 RATE (LONGITUDINAL : LATERAL)



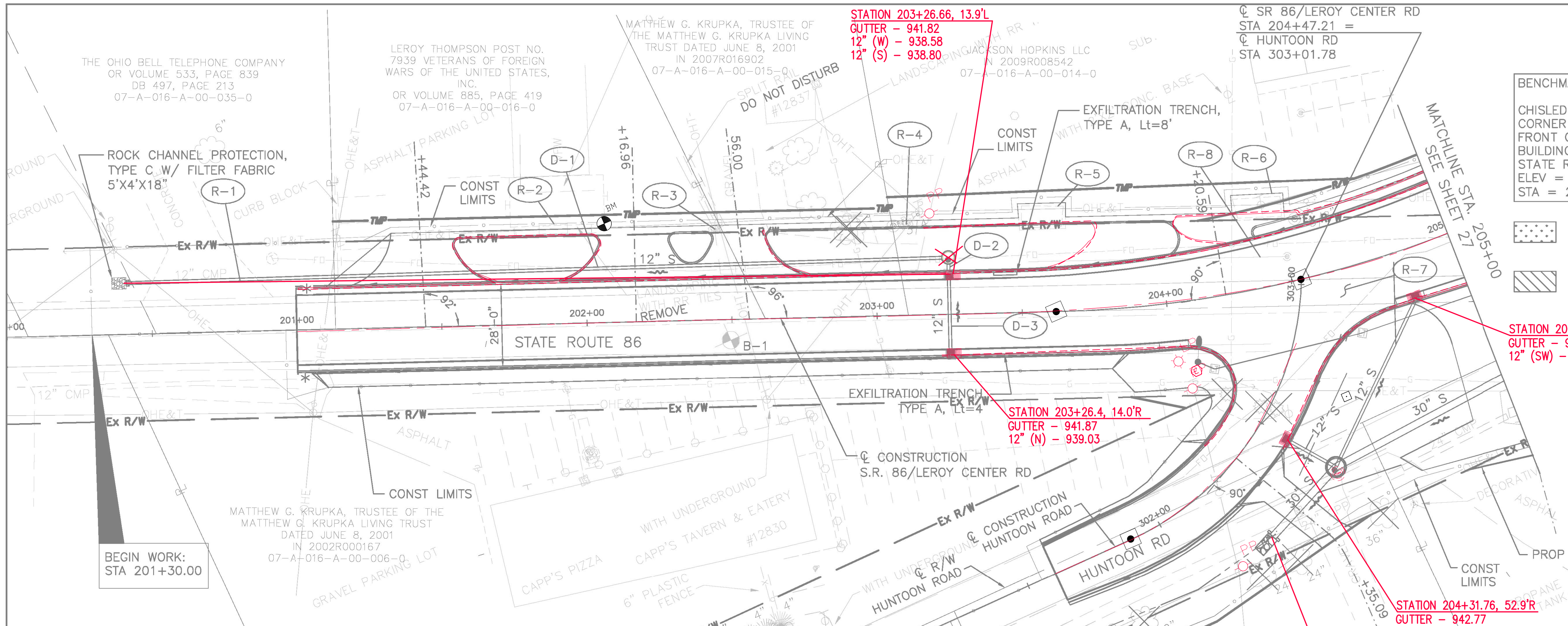
**PLAN AND PROFILE - STATE RT 86 & LEROY CENTER RD  
 STA 200+00 TO STA 205+00**

**LAK-VROOMAN RD**

CALCULATED SPR JUNZ  
 CHECKED JUNZ

HORIZONTAL SCALE IN FEET  
 0 10 20

30  
76

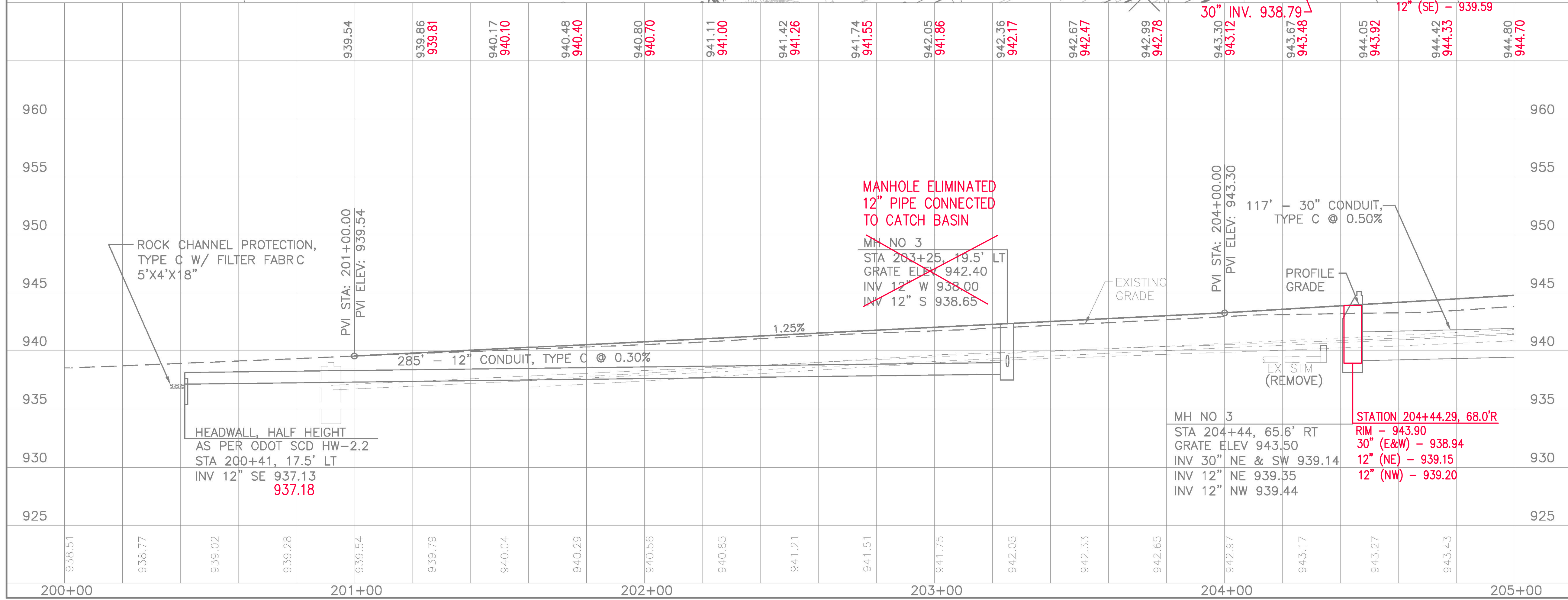
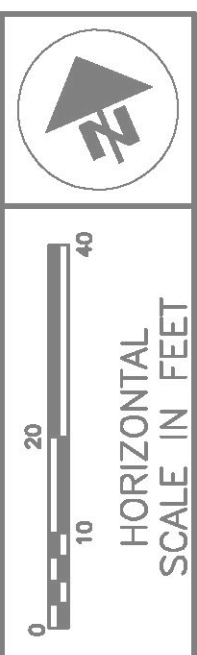


**BENCHMARK 6**

CHISELED SQUARE ON THE SOUTHEAST CORNER OF THE CONCRETE PAD IN FRONT OF THE VFW POST 7939 BUILDING ON THE NORTH SIDE OF STATE ROUTE 86  
 ELEV = 940.02  
 STA = 202+06.83, 34.00' LT

- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 1

- \* CURB HEIGHT TRANSITIONS FROM 0 TO 6" IN 10'
- \* CONNECT PROPOSED UNDERDRAIN TO EXISTING UNDERDRAIN.
- PAVEMENT TRANSITIONS FROM UNCURBED TO CURBED AT A 4:1 RATE (LONGITUDINAL : LATERAL)



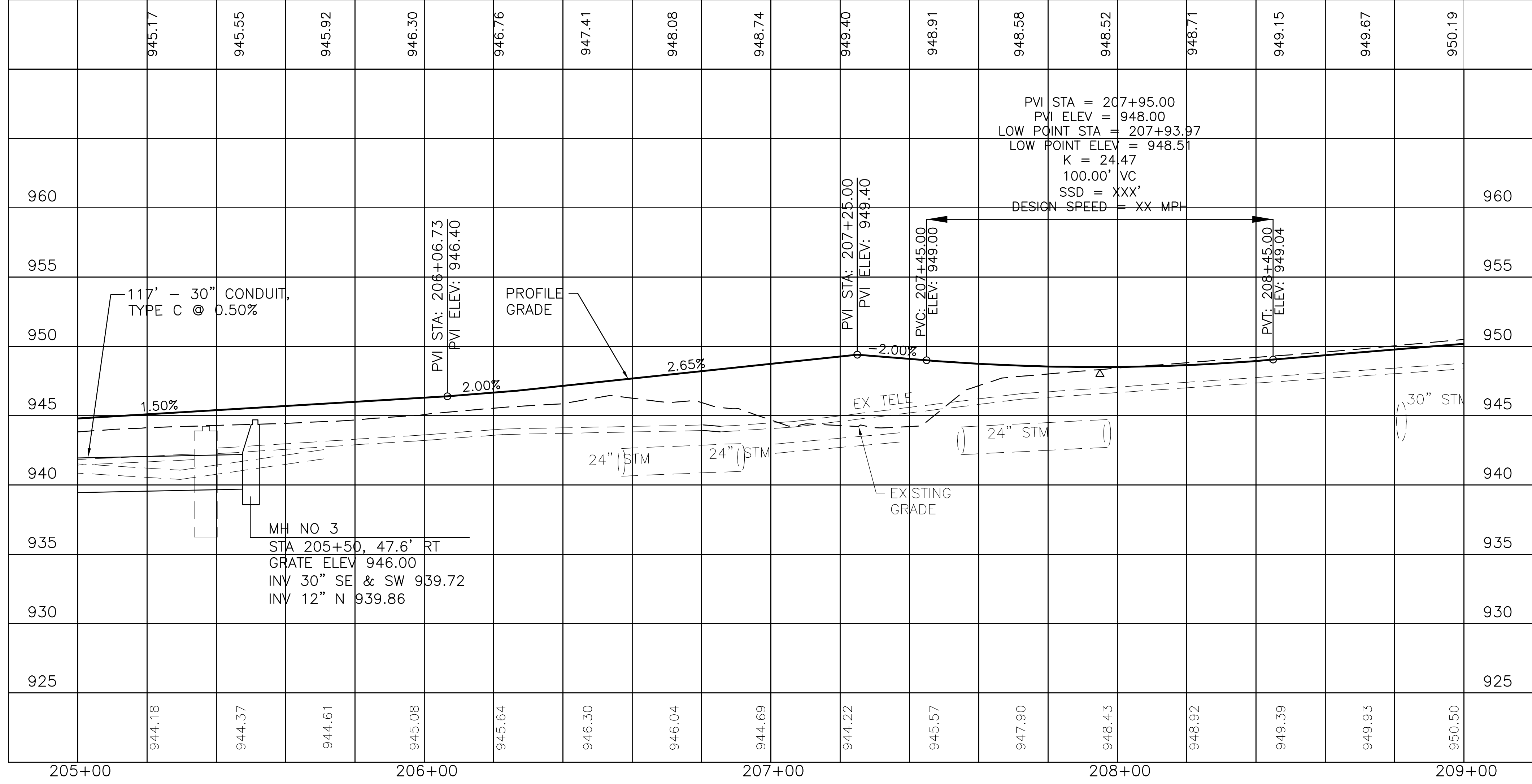
AS BUILT SURVEY  
 COMPLETED 4/28/2014

**PLAN AND PROFILE - STATE RT 86 & LEROY CENTER RD  
 STA 200+00 TO STA 205+00**

**LAK-VROOMAN RD**

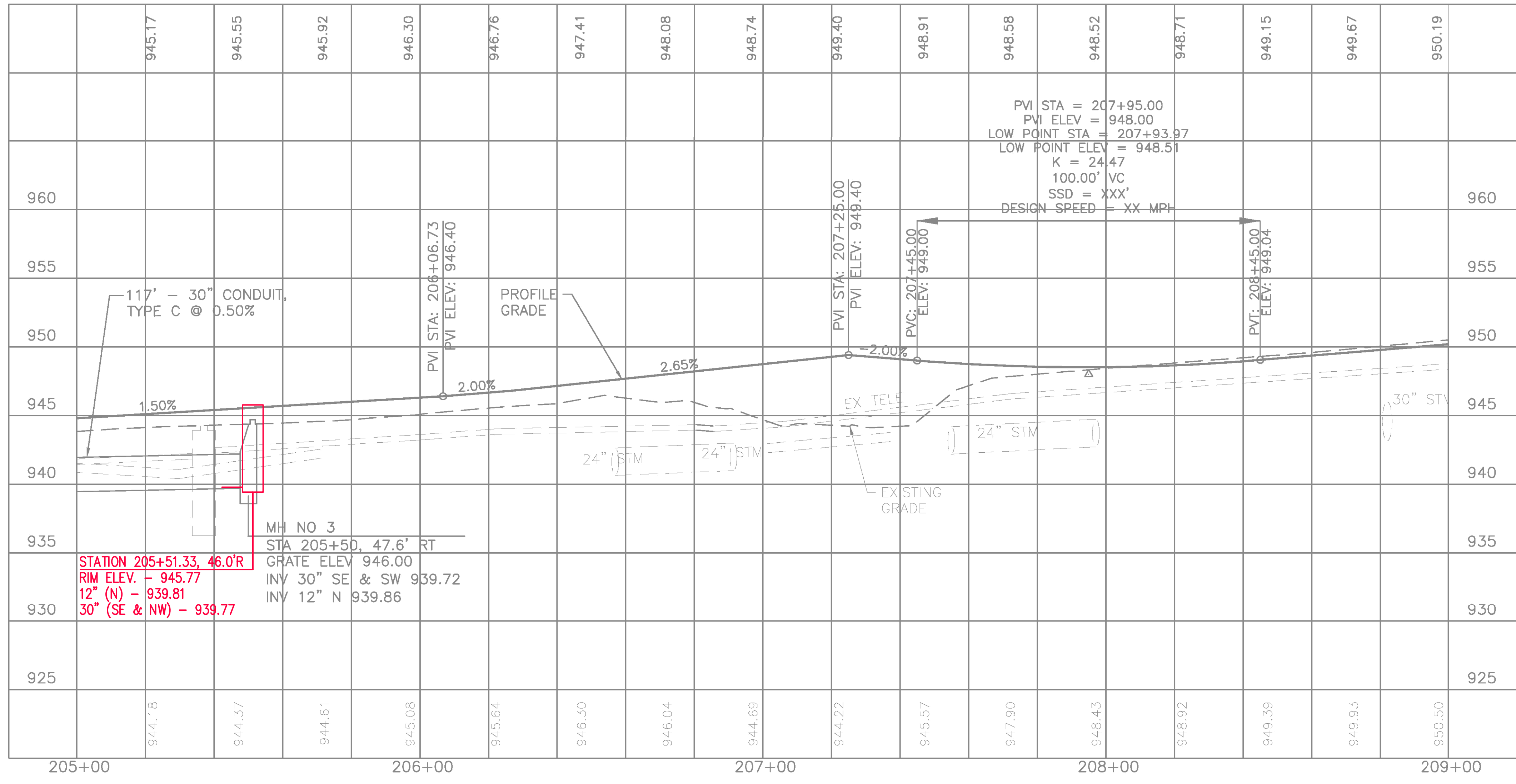
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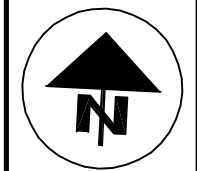


CALCULATED  
SPR  
CHECKED  
JMZ

**PROFILE - LEROY CENTER ROAD  
STA 205+00 TO STA 209+00**



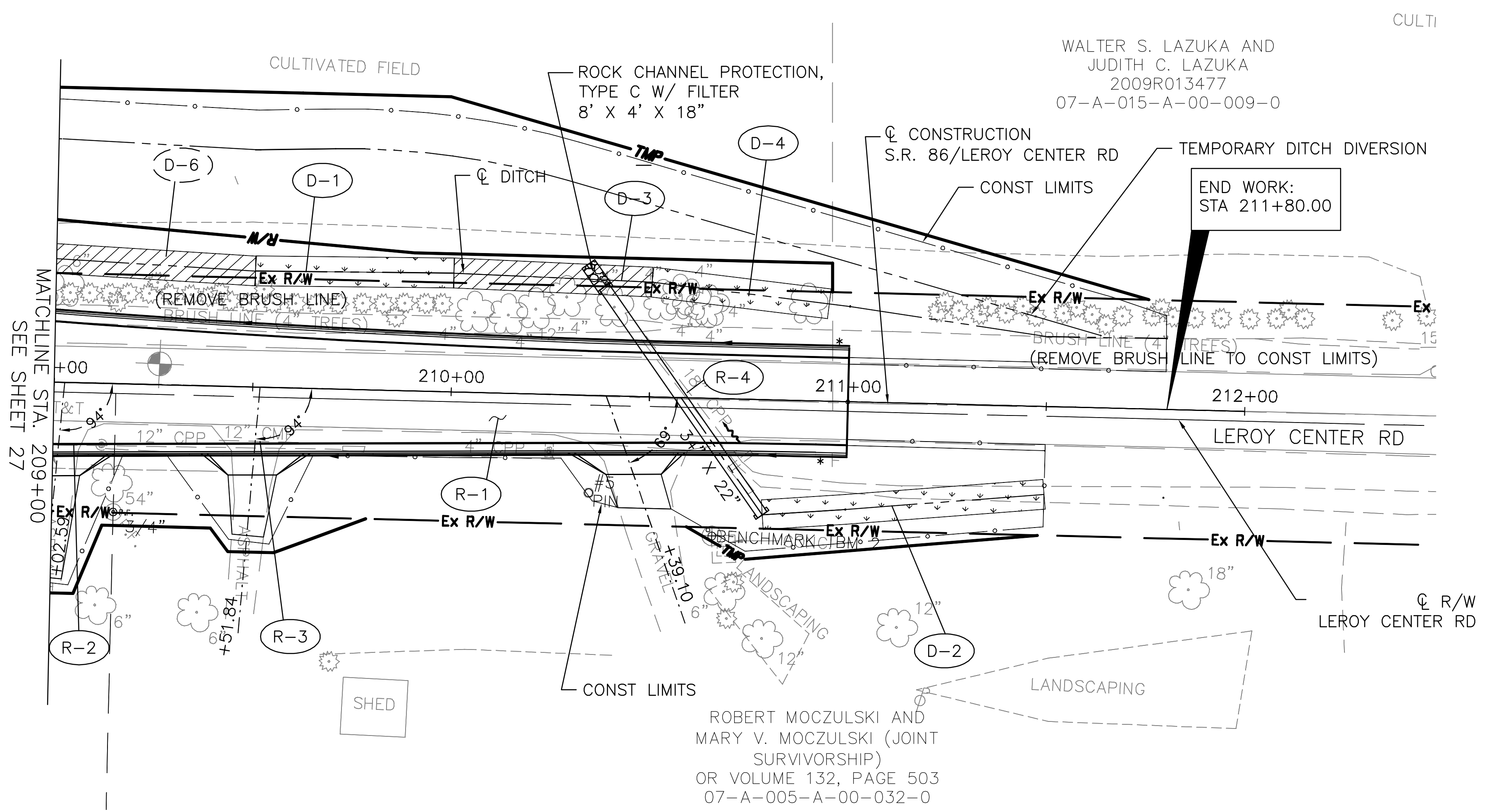
**PROFILE - LEROY CENTER ROAD  
 STA 205+00 TO STA 209+00**



CALCULATED  
SPR  
CHECKED  
JMJ

**PLAN AND PROFILE - STATE RT 86 & LEROY CENTER RD  
STA 209+00 TO STA 212+50**

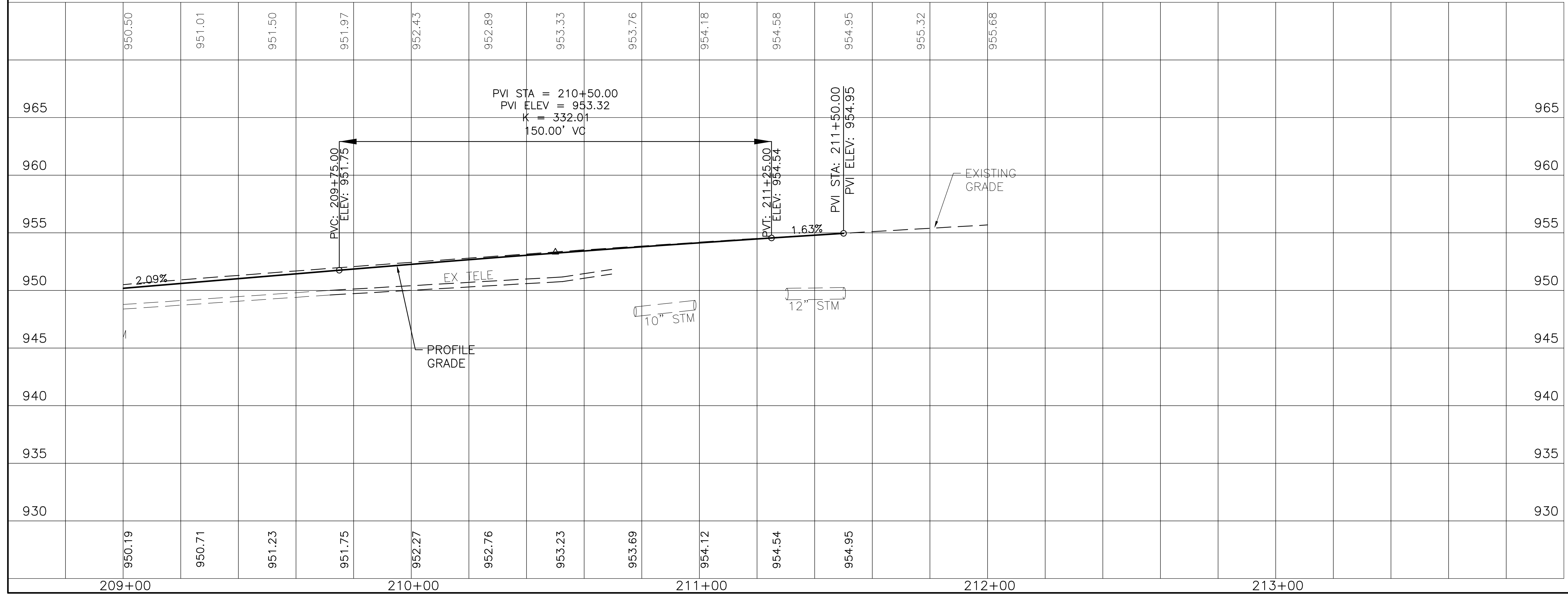
**LAK-VROOMAN RD**

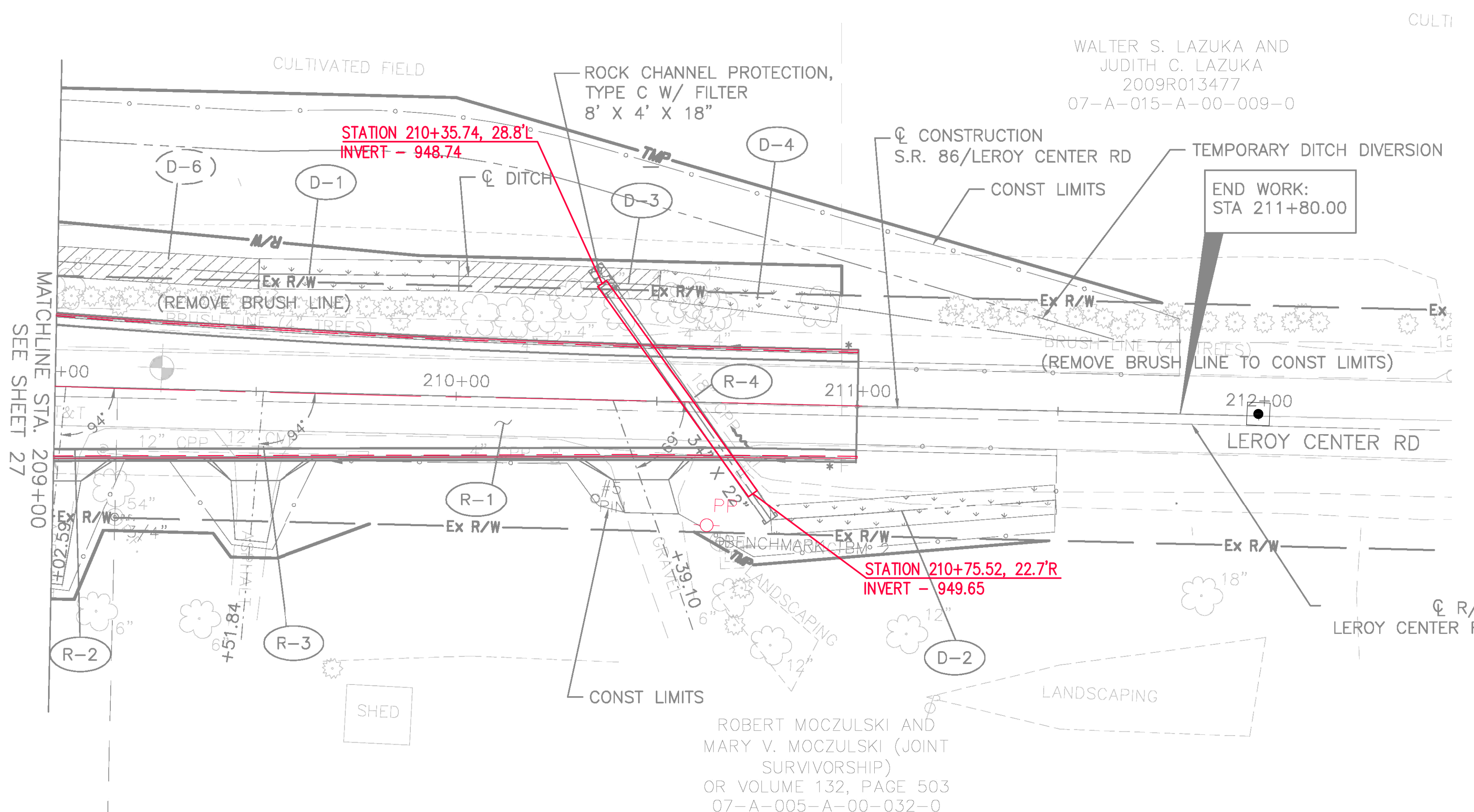


**BENCHMARK 2**  
CHISELED SQUARE ON THE NORTHEAST  
CORNER OF THE CONCRETE WALK AT  
THE FIVE POINTS COUNTRY STORE  
ELEV = 953.77  
STA = 210+66.57, 34.69' RT

- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 1

- \* CURB HEIGHT TRANSITIONS FROM 0 TO 6" IN 10'
- \* CONNECT PROPOSED UNDERDRAIN TO EXISTING UNDERDRAIN.
- PAVEMENT TRANSITIONS FROM UNCURBED TO CURBED AT A 4:1 RATE (LONGITUDINAL : LATERAL)



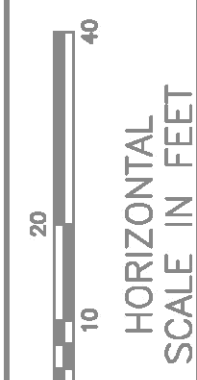


BENCHMARK 2  
 CHISELED SQUARE ON THE NORTHEAST CORNER OF THE CONCRETE WALK AT THE FIVE POINTS COUNTRY STORE  
 ELEV = 953.77  
 STA = 210+66.57, 34.69' RT

- ITEM 670 - DITCH EROSION PROTECTION
- ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 1

- \* CURB HEIGHT TRANSITIONS FROM 0 TO 6" IN 10'
- \* CONNECT PROPOSED UNDERDRAIN TO EXISTING UNDERDRAIN.
- PAVEMENT TRANSITIONS FROM UNCURBED TO CURBED AT A 4:1 RATE (LONGITUDINAL : LATERAL)

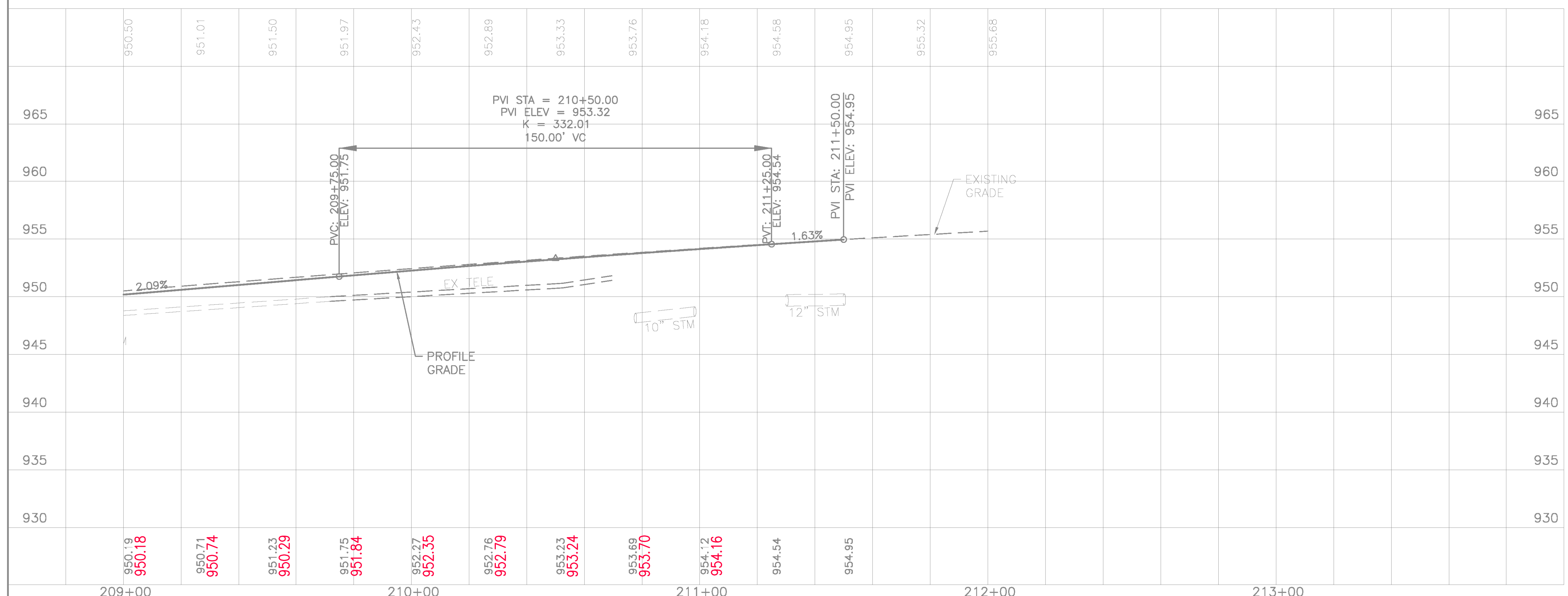
SEE SHEET 54 FOR CULVERT DETAILS



CALCULATED SPR CHECKED JMJ

**PLAN AND PROFILE - STATE RT 86 & LEROY CENTER RD  
STA 209+00 TO STA 212+50**

**LAK-VROOMAN RD**



AS BUILT SURVEY  
 COMPLETED 4/28/2014

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CALCULATED  
SPR  
CHECKED  
JMJ

**PLAN AND PROFILE - HUNTOON ROAD  
STA 301+00 TO STA 303+00**

**LAK-VROOMAN RD**

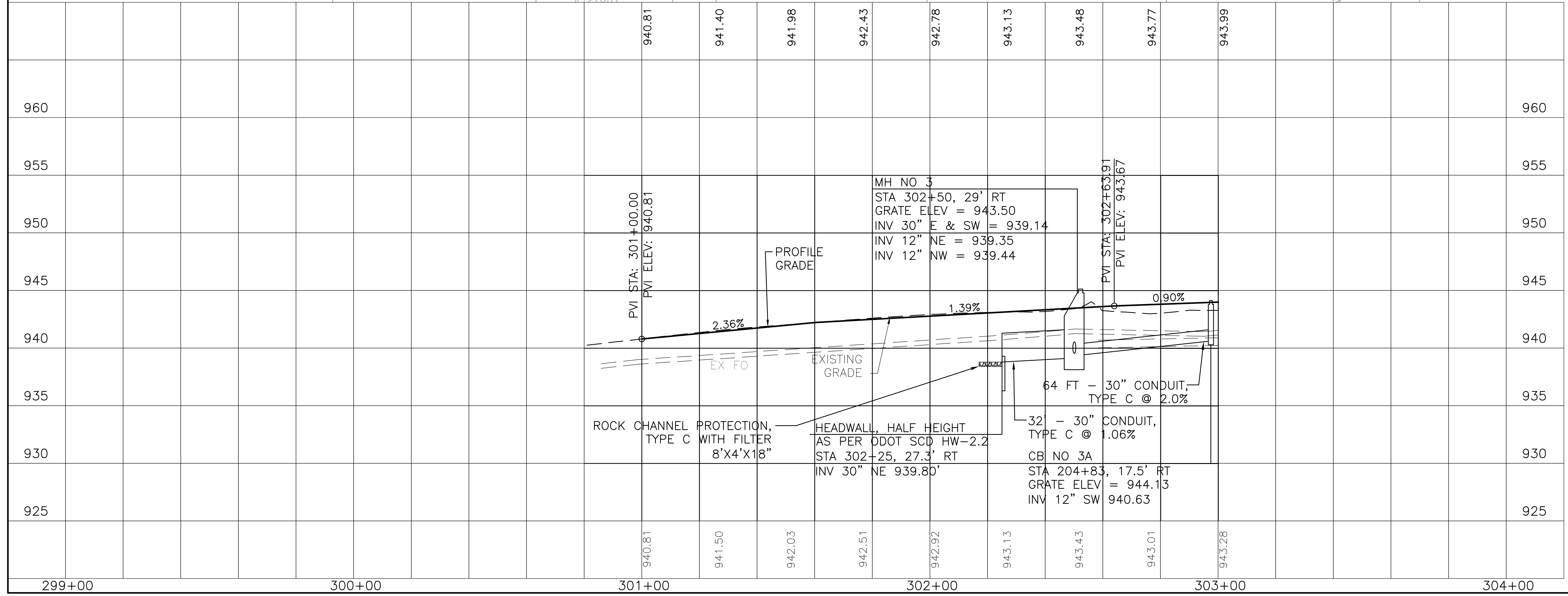
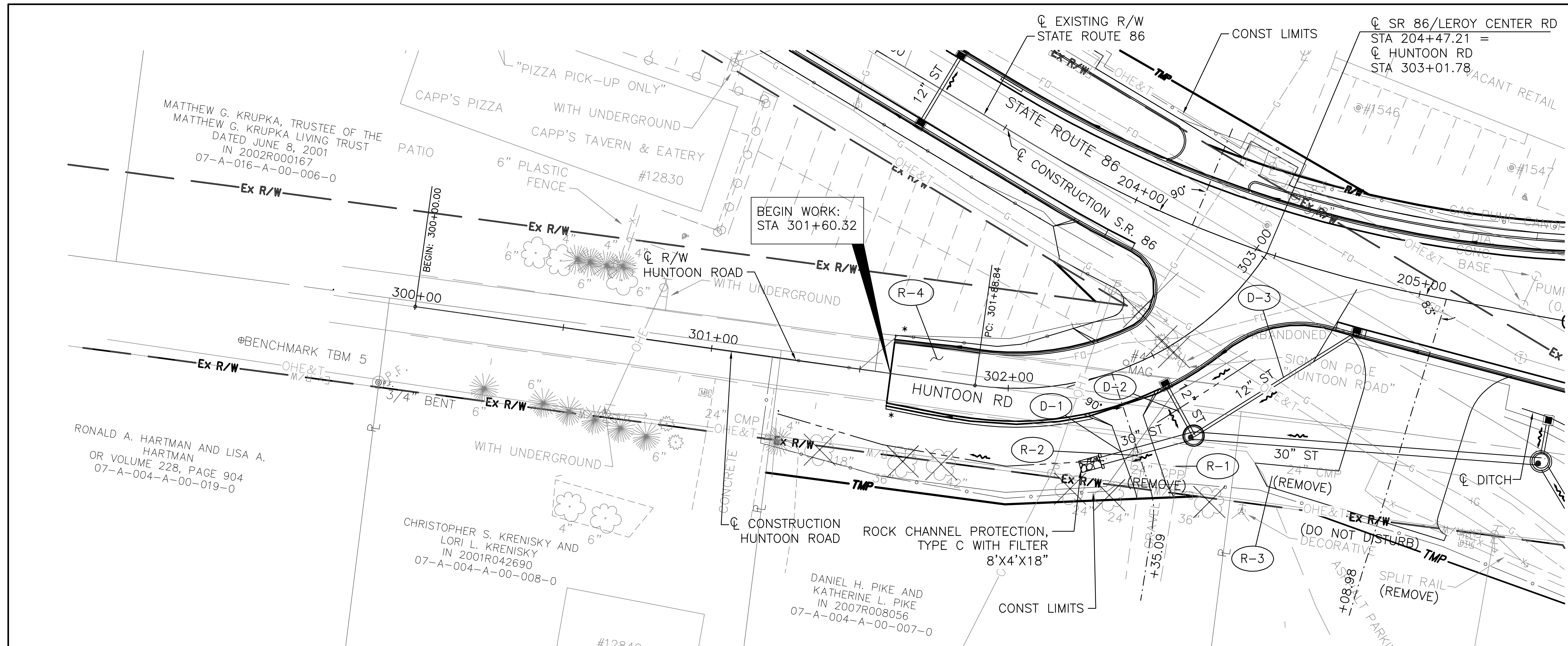
BENCHMARK 5  
CHISLED SQUARE ON THE NORTHEAST  
CORNER OF THE CONCRETE HEADWALL  
AT THE SOUTH RIGHT-OF-WAY OF  
HUNTOON ROAD WEST OF CAPP'S  
TAVERN  
ELEV = 936.10  
NORTHING = 738748.3000  
EASTING = 2329727.3300

ITEM 670 - DITCH EROSION  
PROTECTION

ITEM 836 - SEEDING AND  
EROSION CONTROL WITH TURF  
REINFORCING MAT TYPE 1

\* CONNECT PROPOSED  
UNDERDRAIN TO EXISTING  
UNDERDRAIN.

PAVEMENT TRANSITIONS  
FROM UNCURBED TO  
CURBED AT A 4:1 RATE  
(LONGITUDINAL : LATERAL)



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CALCULATED  
SPR  
CHECKED  
JMJ

**PLAN AND PROFILE - HUNTOON ROAD  
STA 301+00 TO STA 303+00**

**LAK-VROOMAN RD**

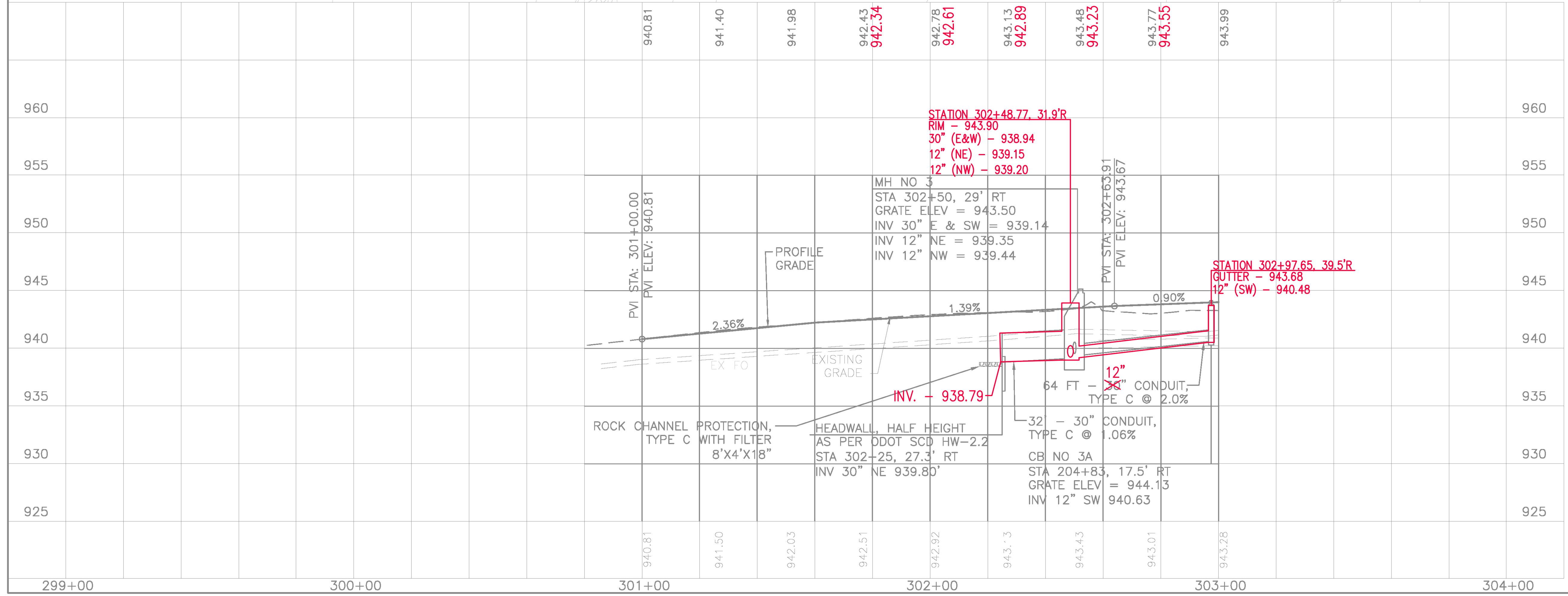
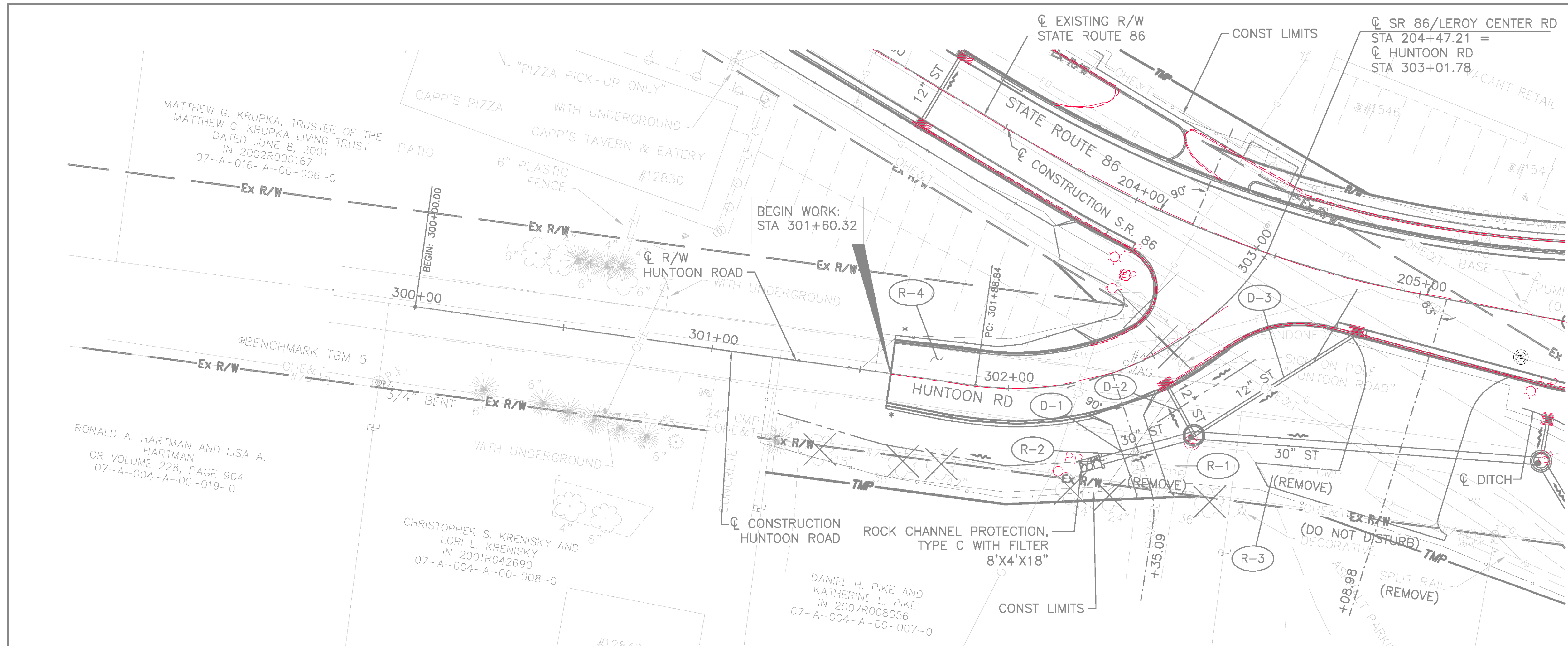
**BENCHMARK 5**  
CHISLED SQUARE ON THE NORTHEAST  
CORNER OF THE CONCRETE HEADWALL  
AT THE SOUTH RIGHT-OF-WAY OF  
HUNTOON ROAD WEST OF CAPP'S  
TAVERN  
ELEV = 936.10  
NORTHING = 738748.3000  
EASTING = 2329727.3300

ITEM 670 - DITCH EROSION PROTECTION

ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT TYPE 1

\* CONNECT PROPOSED UNDERDRAIN TO EXISTING UNDERDRAIN.

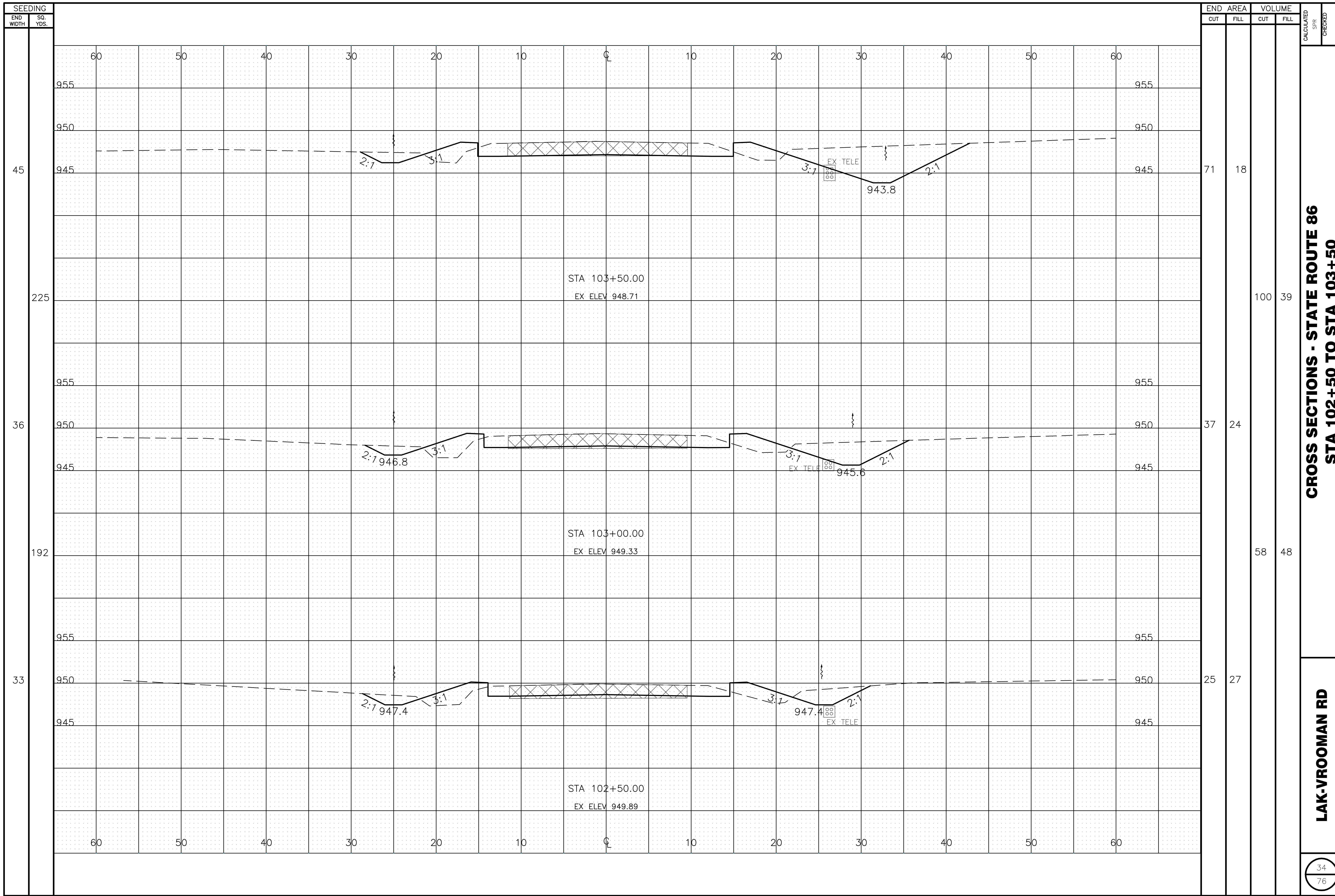
PAVEMENT TRANSITIONS FROM UNCURBED TO CURBED AT A 4:1 RATE (LONGITUDINAL : LATERAL)



AS BUILT SURVEY  
COMPLETED 4/28/2014

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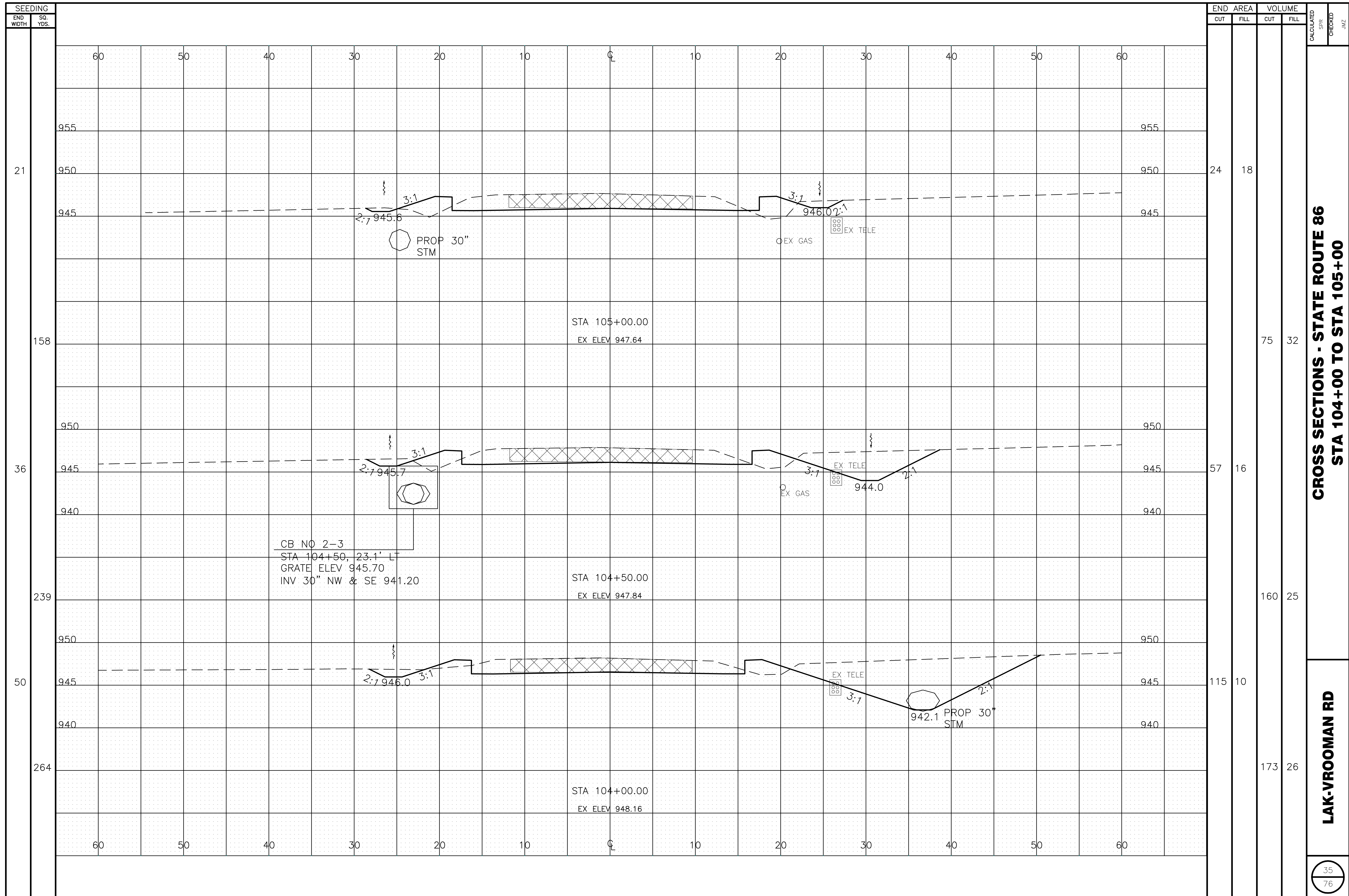
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**CROSS SECTIONS - STATE ROUTE 86  
STA 102+50 TO STA 103+50**

**LAK-VROOMAN RD**

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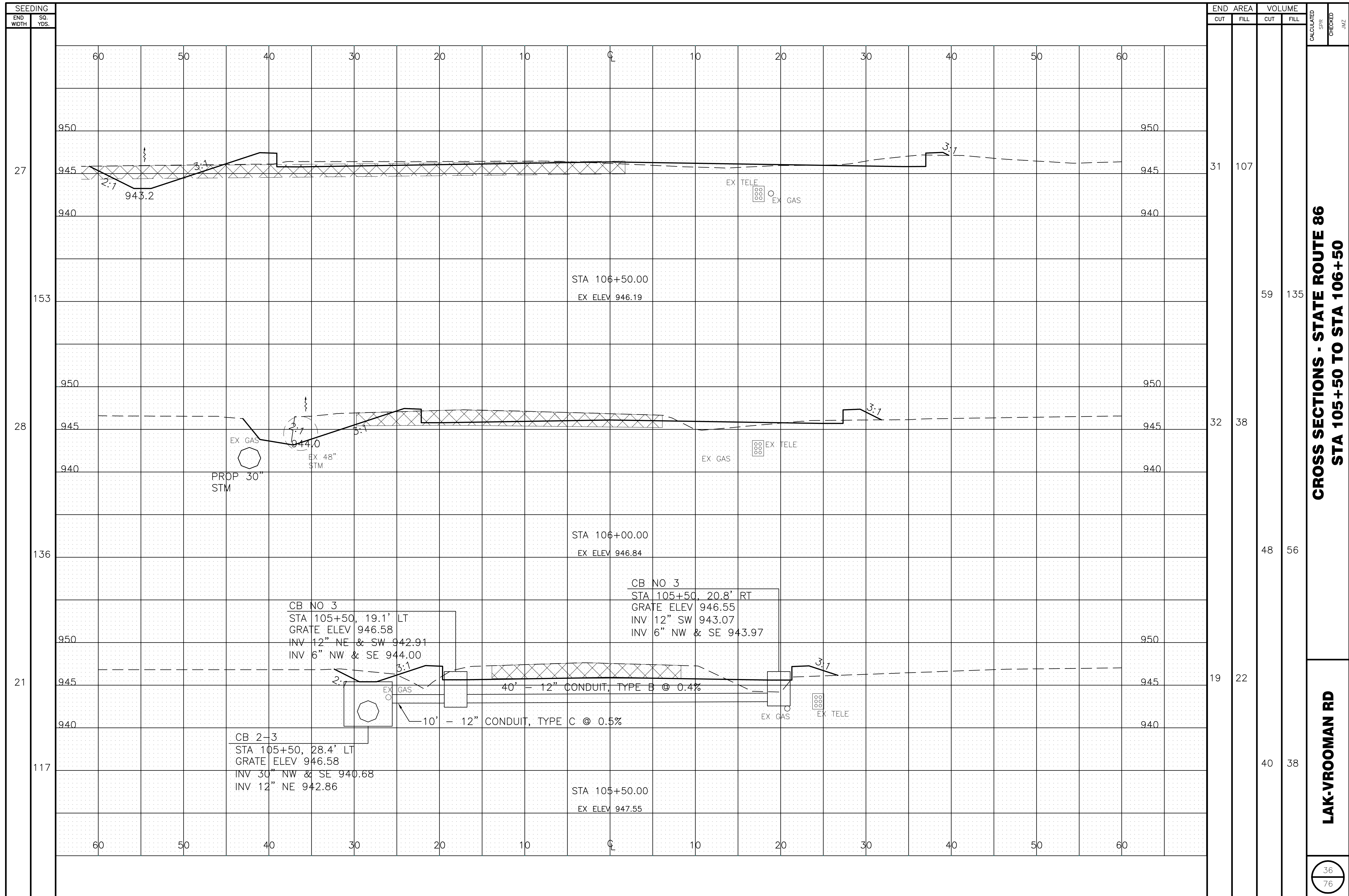


**CROSS SECTIONS - STATE ROUTE 86  
STA 104+00 TO STA 105+00**

**LAK-VROOMAN RD**



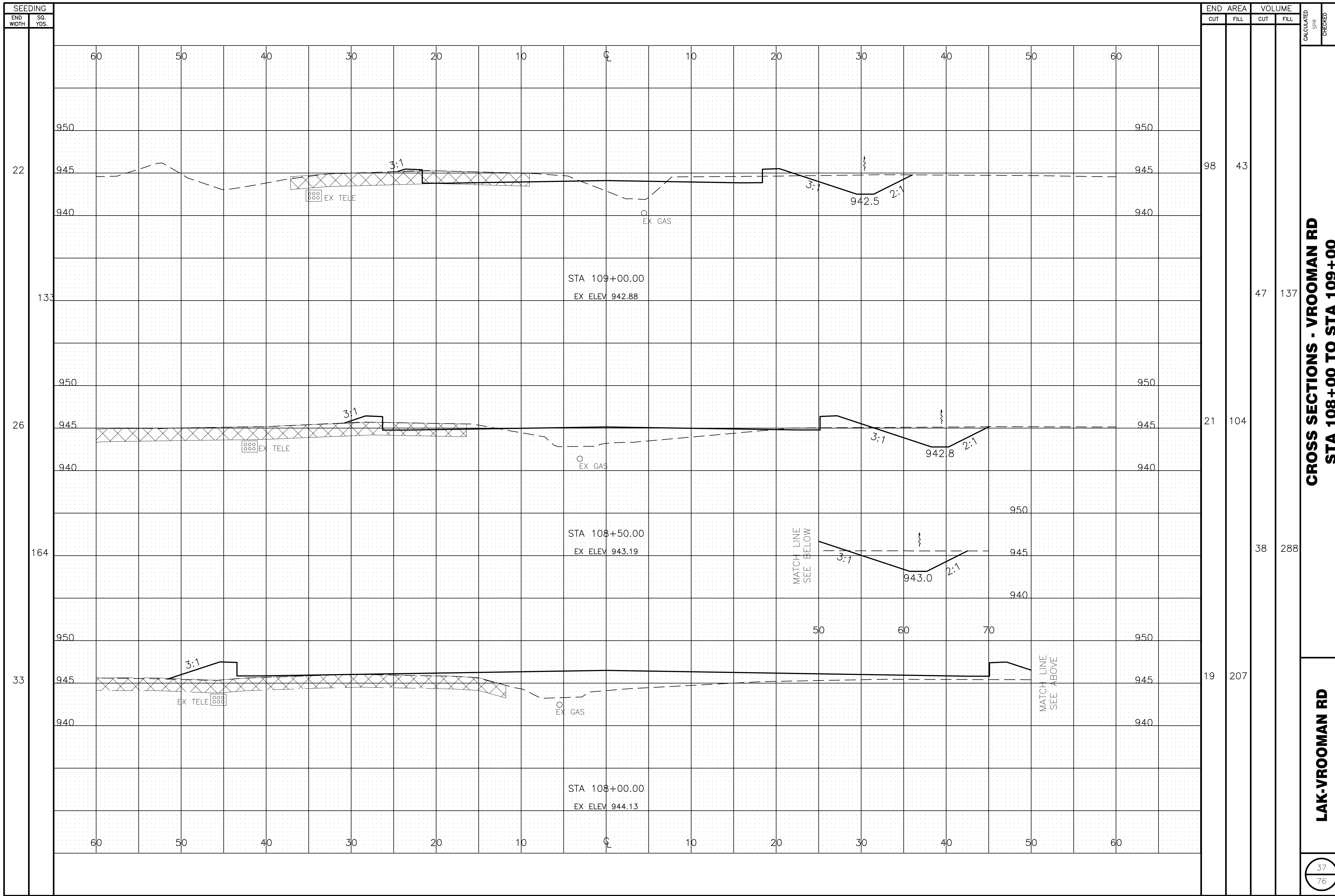
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**CROSS SECTIONS - STATE ROUTE 86  
STA 105+50 TO STA 106+50**

**LAK-VROOMAN RD**

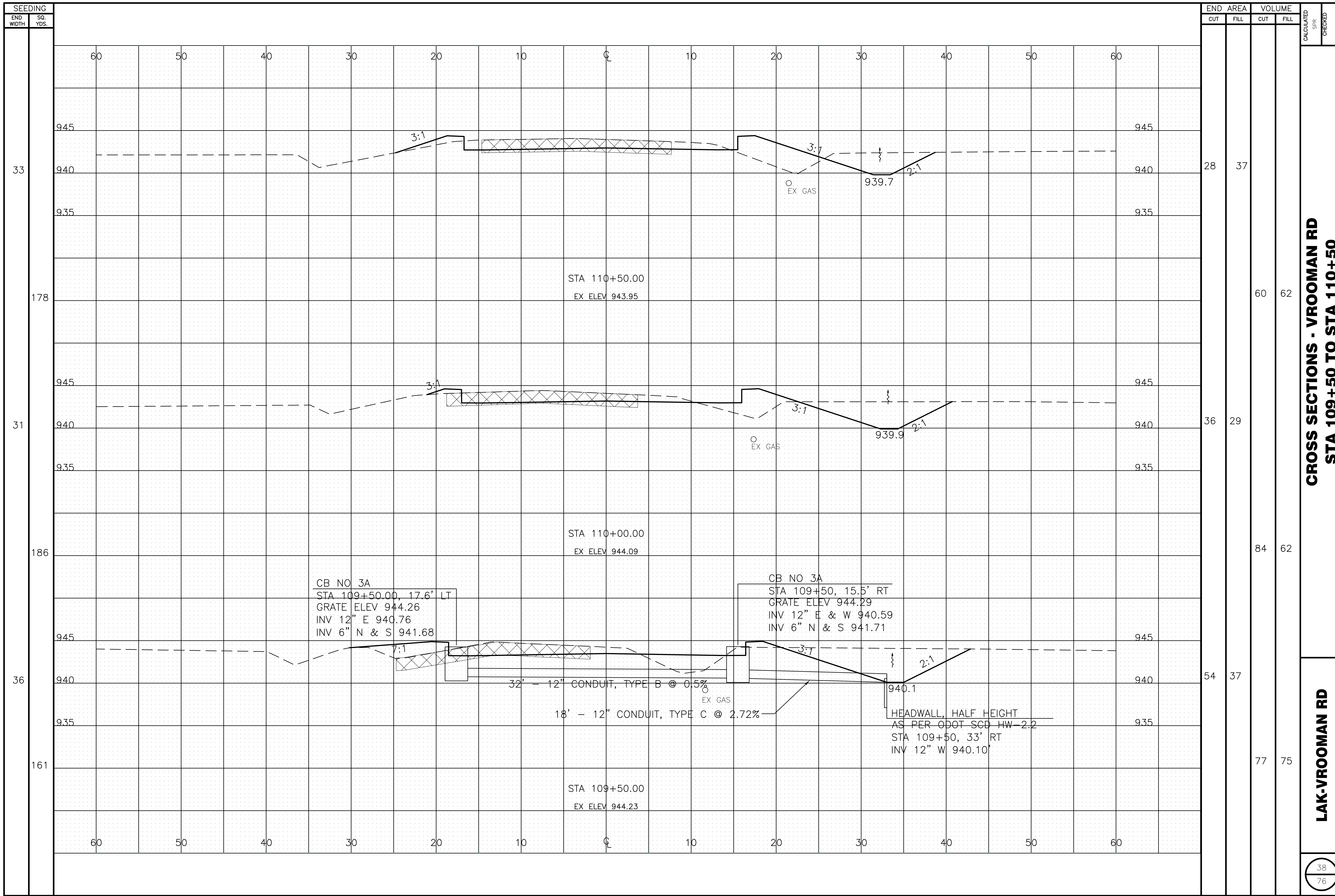
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**CROSS SECTIONS - VROOMAN RD  
STA 108+00 TO STA 109+00**

**LAK-VROOMAN RD**

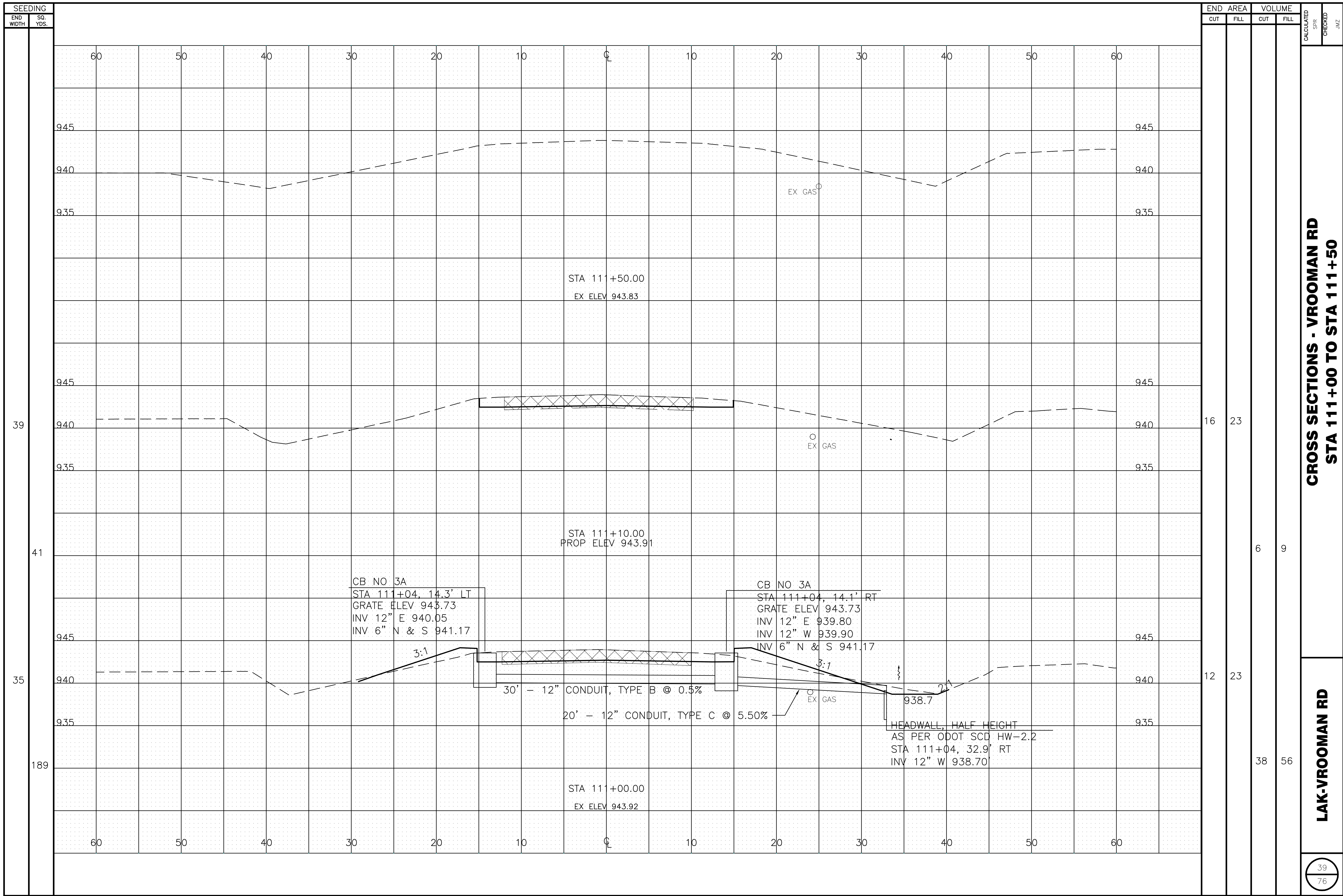
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**CROSS SECTIONS - VROOMAN RD  
STA 109+50 TO STA 110+50**

**LAK-VROOMAN RD**

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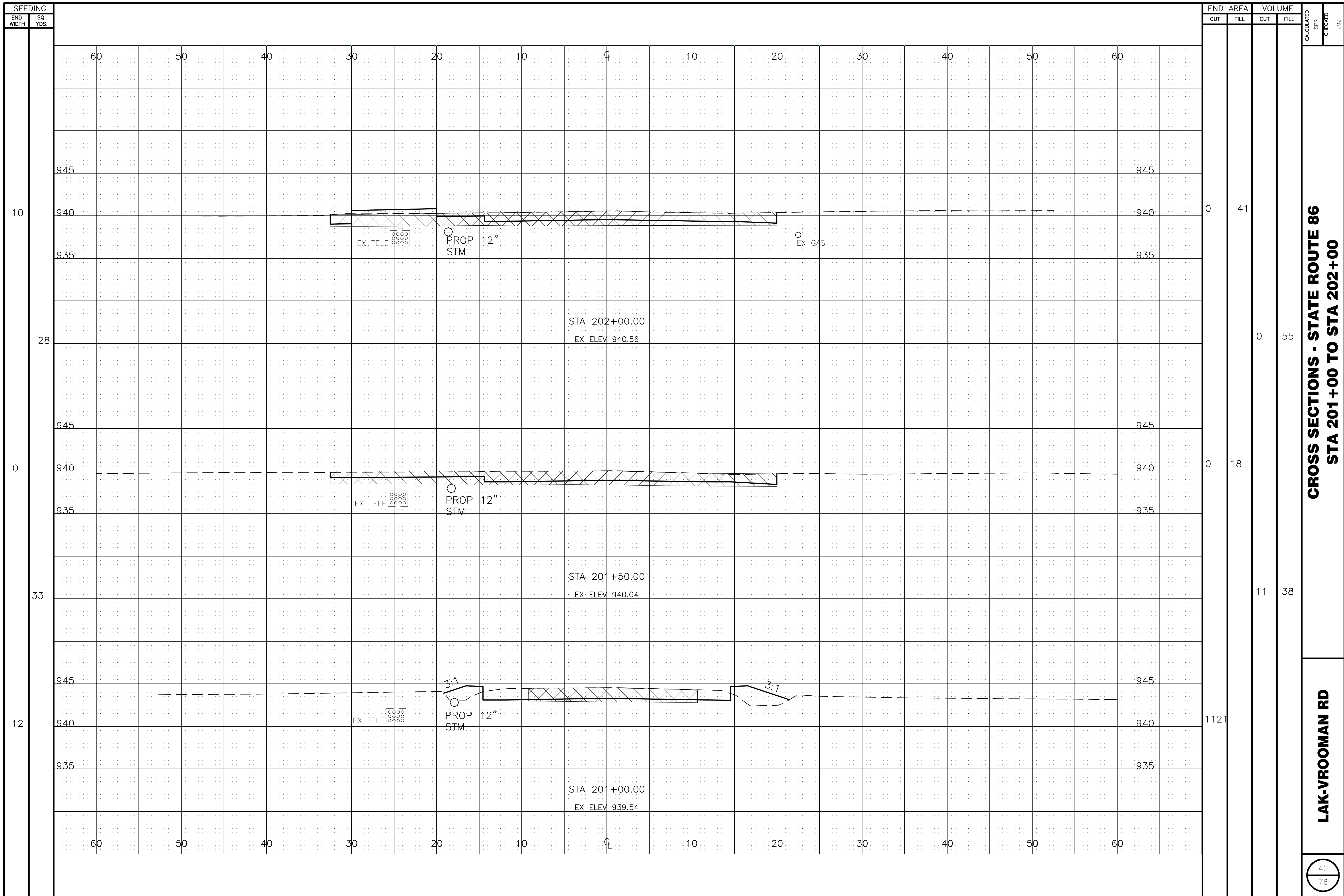


**CROSS SECTIONS - VROOMAN RD  
STA 111+00 TO STA 111+50**

**LAK-VROOMAN RD**

SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL		
39		16	23				
41			6		9		
35		12	23				
189			38		56		

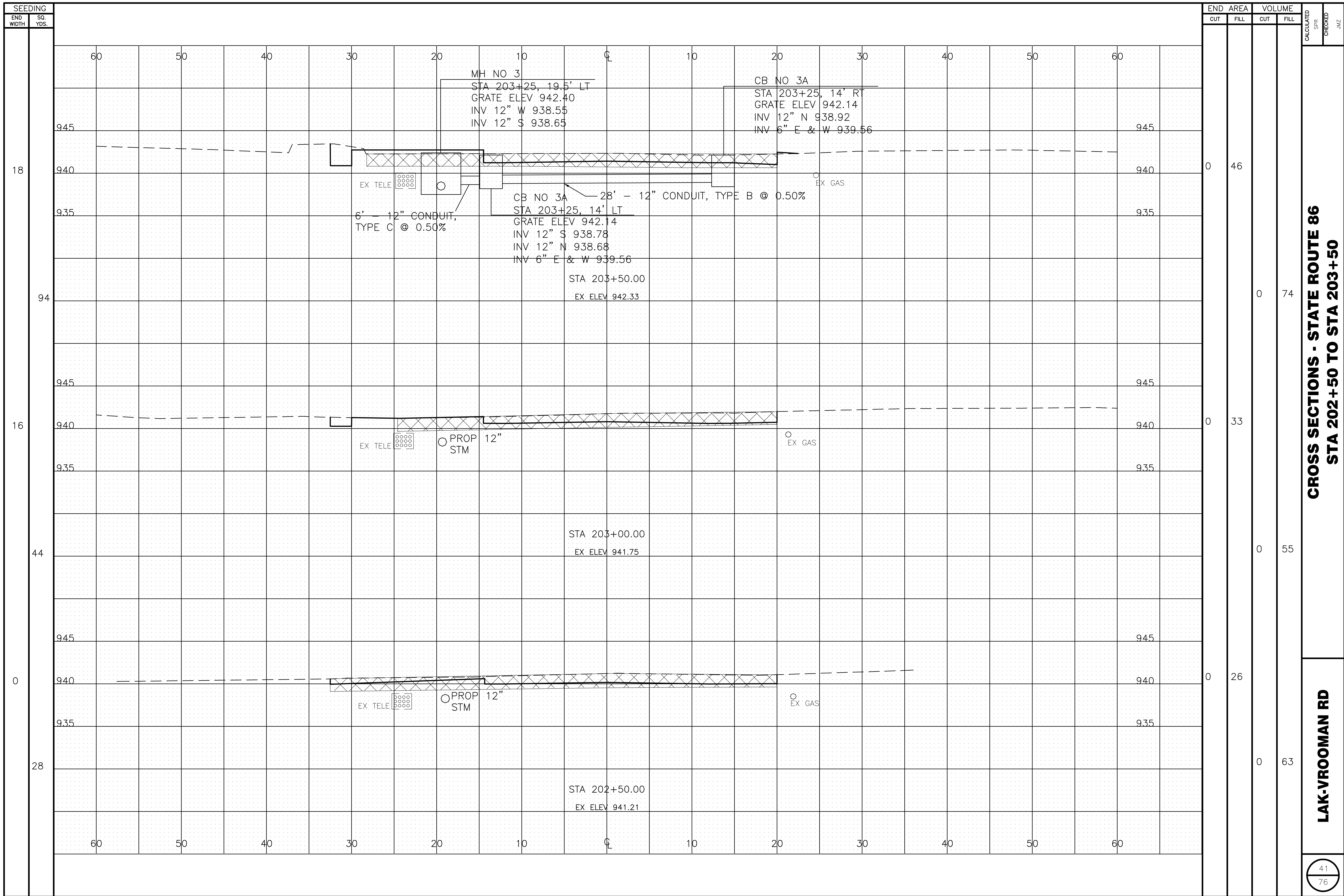
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**CROSS SECTIONS - STATE ROUTE 86  
STA 201+00 TO STA 202+00**

**LAK-VROOMAN RD**

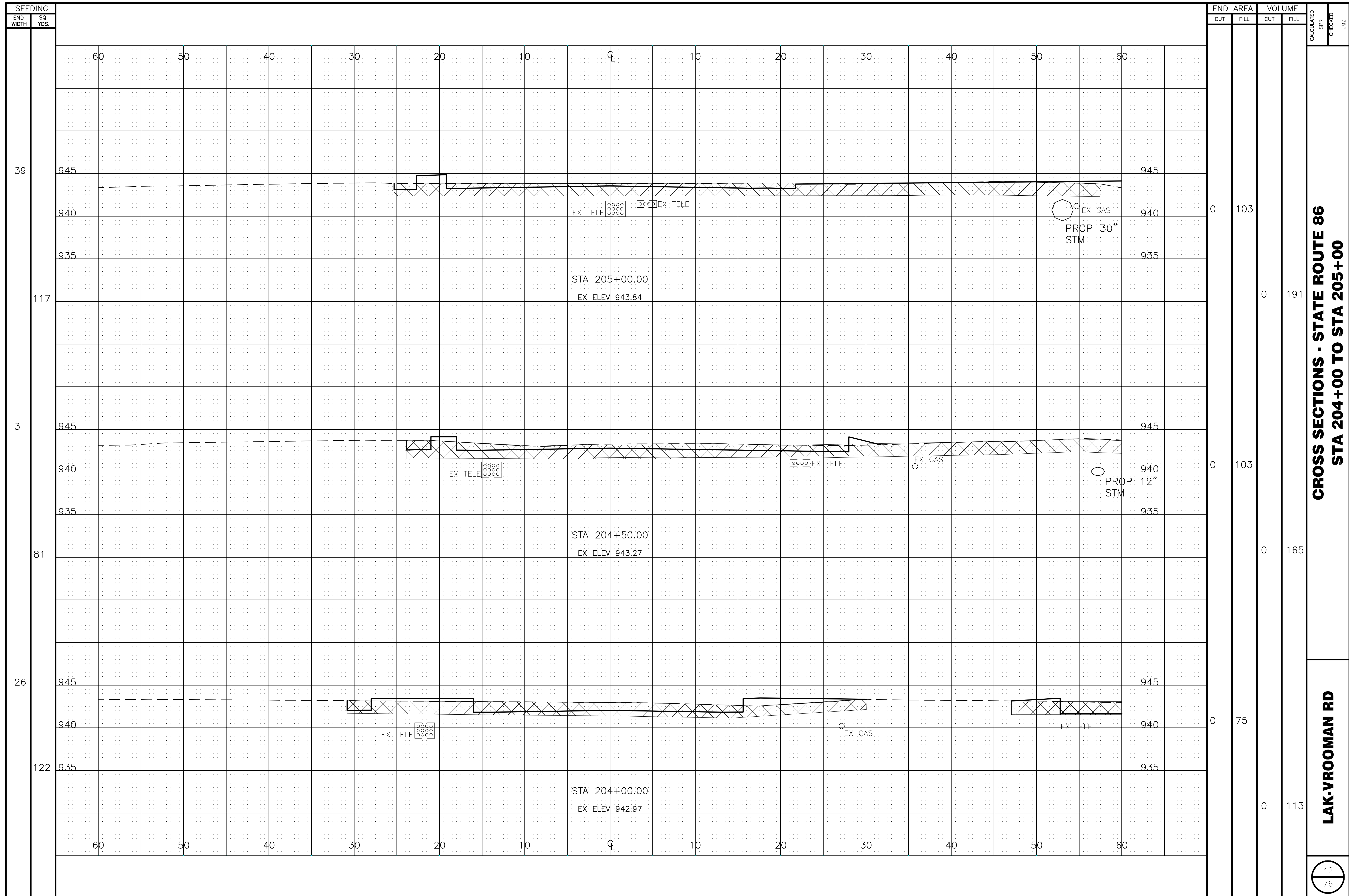
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**CROSS SECTIONS - STATE ROUTE 86  
STA 202+50 TO STA 203+50**

**LAK-VROOMAN RD**

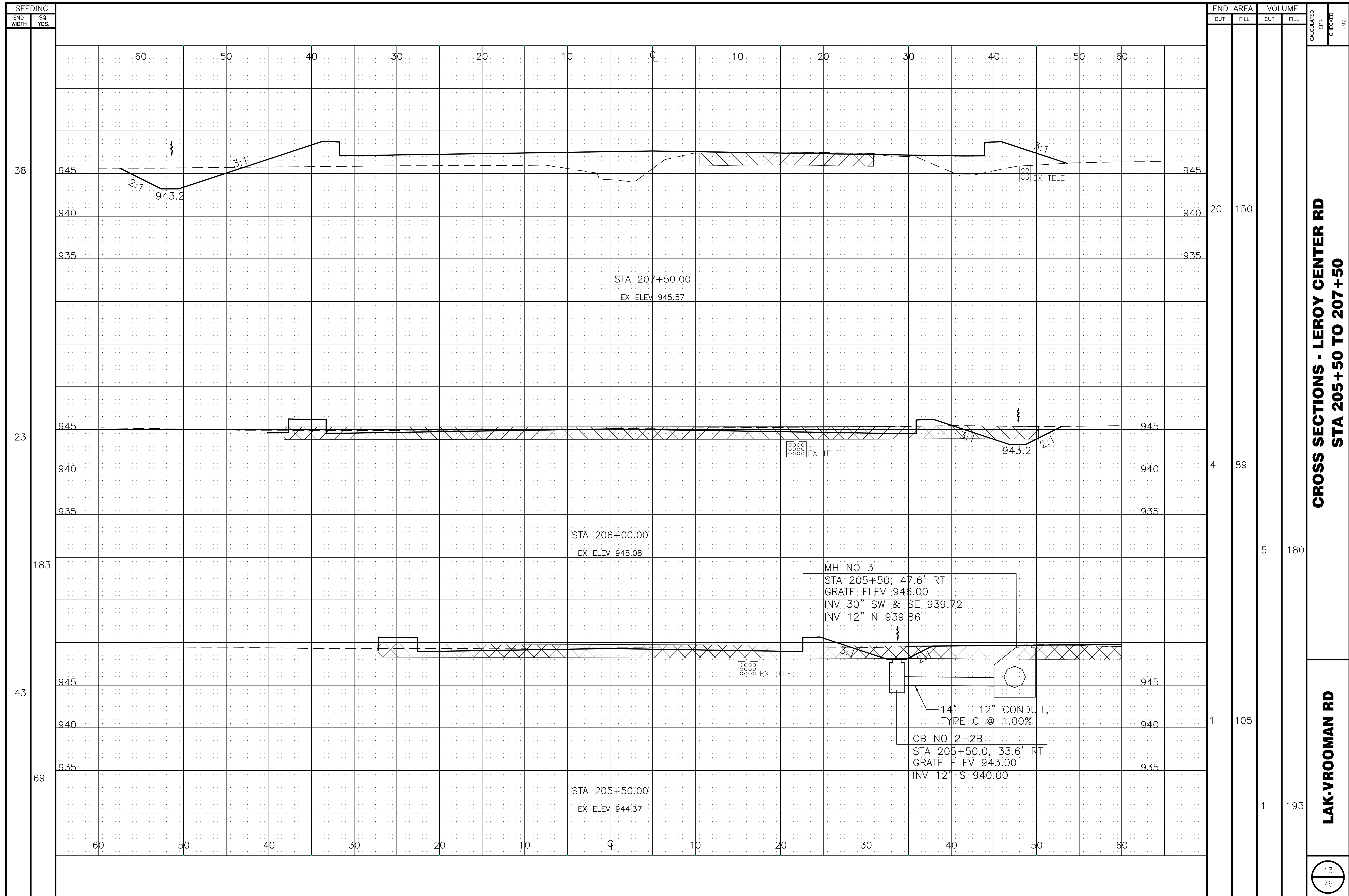
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**CROSS SECTIONS - STATE ROUTE 86  
STA 204+00 TO STA 205+00**

**LAK-VROOMAN RD**

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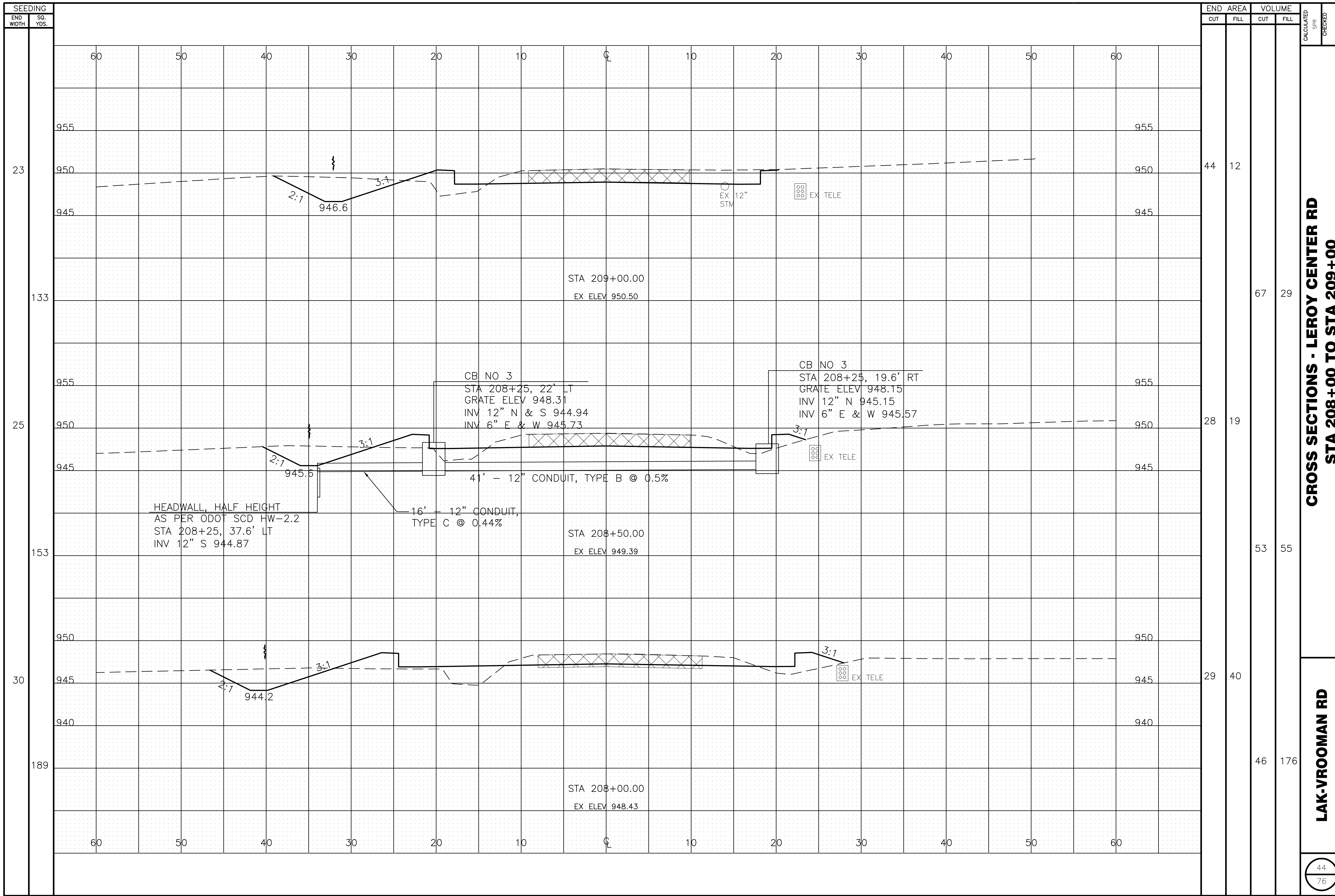


**CROSS SECTIONS - LEROY CENTER RD  
STA 205+50 TO 207+50**

**LAK-VROOMAN RD**



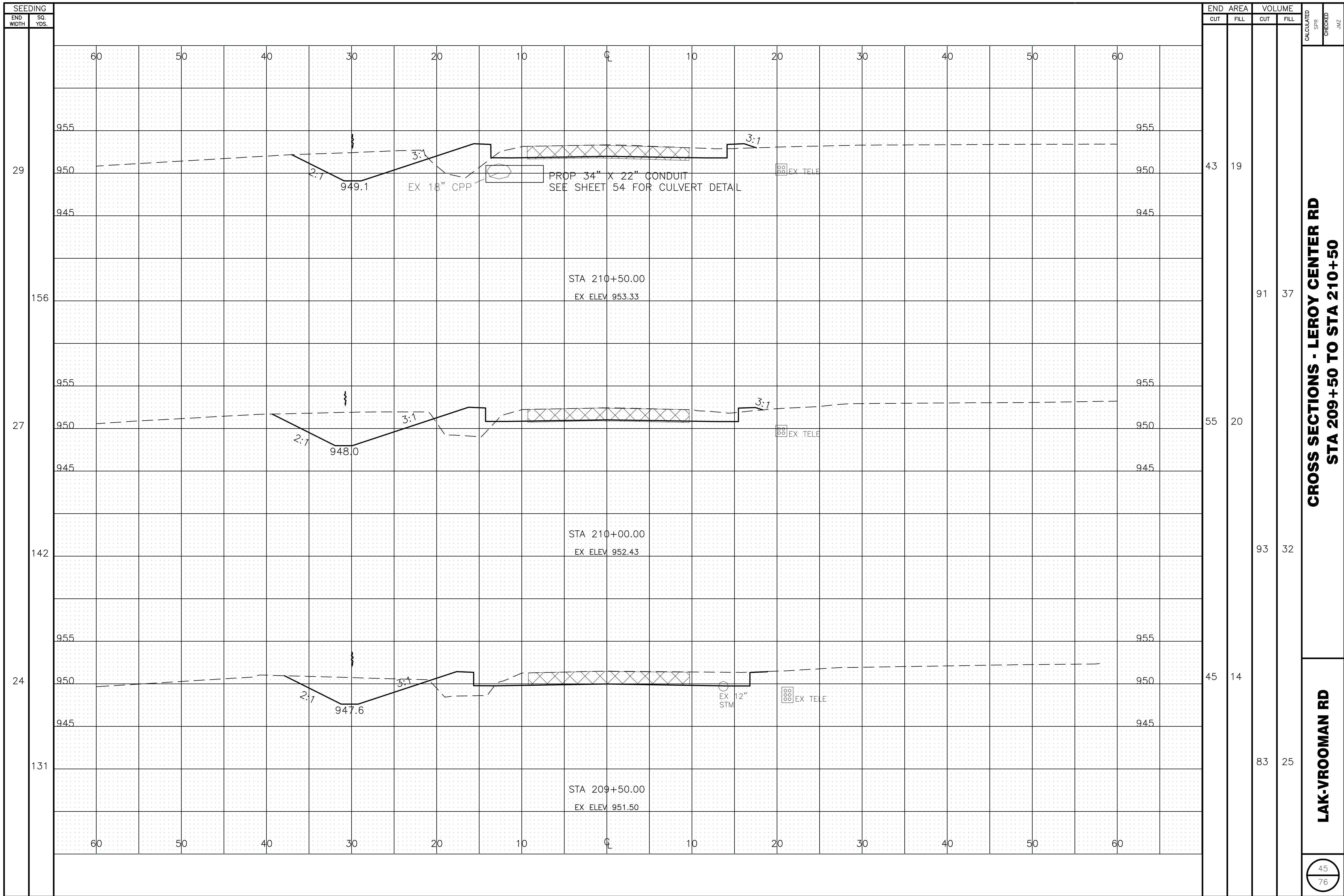
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**CROSS SECTIONS - LEROY CENTER RD  
STA 208+00 TO STA 209+00**

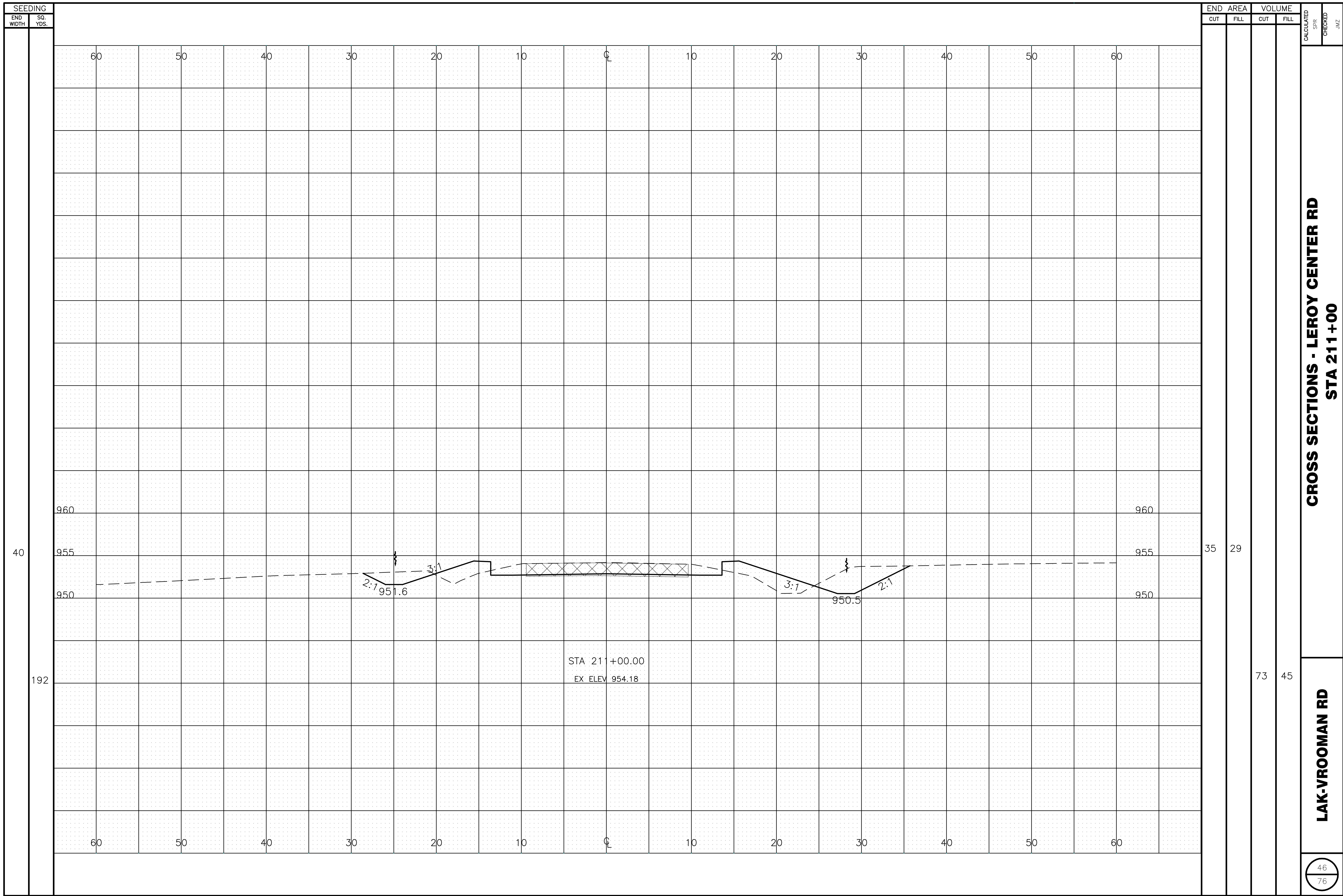
**LAK-VROOMAN RD**

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**CROSS SECTIONS - LEROY CENTER RD  
STA 209+50 TO STA 210+50**

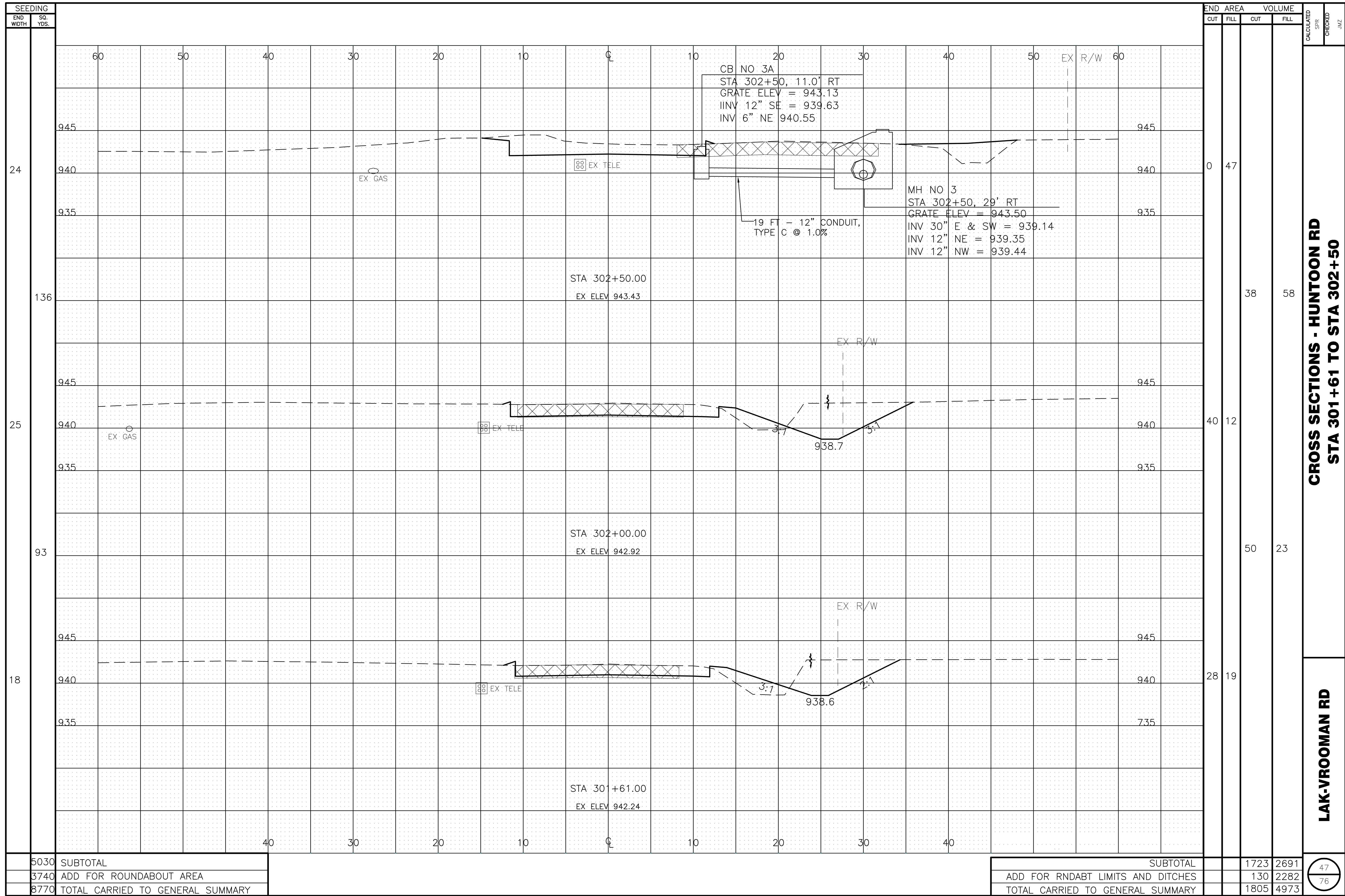
**LAK-VROOMAN RD**



**CROSS SECTIONS - LEROY CENTER RD  
STA 211+00**

**LAK-VROOMAN RD**

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**CROSS SECTIONS - HUNTOON RD  
STA 301+61 TO STA 302+50**

**LAK-VROOMAN RD**

CALCULATED SPR  
CHECKED JMJ

47  
76

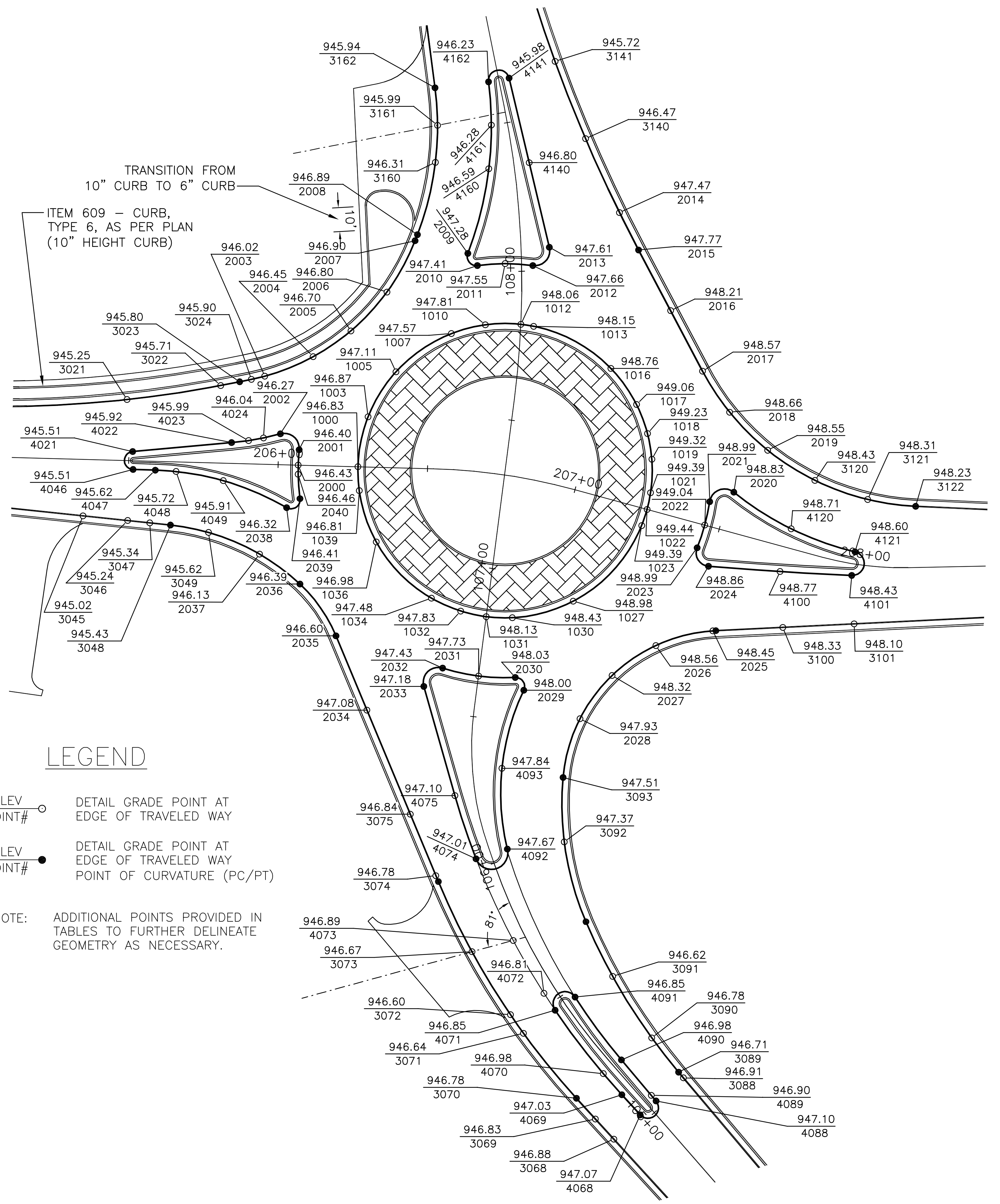
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CIRCULATING	2001	946.40	738826.5555	2330220.8578
LANE	2002	946.27	738831.8854	2330214.5738
	2003	946.02	738851.1873	2330209.3360
	2004	946.45	738857.6928	2330225.5445
	2005	946.70	738866.3320	2330238.1592
	2006	946.80	738879.3374	2330250.2624
	2007	946.90	738896.4810	2330259.6313
	2008	946.89	738898.5291	2330260.4246
	2009	947.28	738892.2497	2330277.2952
	2010	947.41	738888.1987	2330280.4960
	2011	947.55	738888.8205	2330289.7664
	2012	947.66	738888.1956	2330299.0366
	2013	947.61	738894.3087	2330304.5708
	2014	947.47	738905.8855	2330328.0496
	2015	947.77	738893.4050	2330334.4224
	2016	948.21	738873.1287	2330345.1368
	2017	948.57	738852.8524	2330355.8511
	2018	948.66	738839.1455	2330364.8872
	2019	948.55	738826.4060	2330377.6366
	2020	948.83	738812.3604	2330366.3066
	2021	948.99	738809.2146	2330358.2259
	2022	949.04	738801.3668	2330356.5692
	2023	948.99	738793.7631	2330354.0161
	2024	948.86	738787.6020	2330357.8147
	2025	948.45	738765.9871	2330359.2847
	2026	948.56	738761.0860	2330340.2000
	2027	948.32	738751.0549	2330325.5400
	2028	947.93	738736.5725	2330314.8067
	2029	948.00	738746.1210	2330296.0142
	2030	948.03	738750.4041	2330293.1568
	2031	947.73	738750.8921	2330280.8755
	2032	947.43	738753.5435	2330268.8739
	2033	947.18	738747.4048	2330262.5580
	2034	947.08	738739.4727	2330243.5253
	2035	946.60	738764.3068	2330233.1754
	2036	946.39	738781.6286	2330221.1352
	2037	946.13	738791.6561	2330207.6224
	2038	946.32	738807.2230	2330216.6597
	2039	946.41	738810.2224	2330221.1385
	2040	946.46	738818.3807	2330220.5148

	ID	ELEV	NORTHING	EASTING
CENTRAL	1000	946.83	738820.8970	2330240.5225
ISLAND	1001	946.80	738824.5382	2330240.7558
	1002	946.81	738827.5317	2330241.1523
	1003	946.87	738837.5906	2330243.9197
	1004	946.96	738844.7133	2330247.4061
	1005	947.11	738852.6440	2330253.2621
	1006	947.25	738860.6604	2330262.6036
	1007	947.57	738865.4285	2330271.7935
	1008	947.59	738865.7382	2330272.6051
	1009	947.77	738868.0985	2330281.3526
	1010	947.81	738868.3783	2330283.1699
	1011	947.95	738868.8205	2330289.7630
	1012	948.06	738868.5353	2330295.0472
	1013	948.15	738867.8803	2330299.3316
	1014	948.38	738864.5887	2330309.7276
	1015	948.51	738861.7093	2330315.2474
	1016	948.76	738853.8076	2330325.1577
	1017	949.06	738841.7201	2330333.7428
	1018	949.23	738831.9875	2330337.4138
	1019	949.32	738823.3896	2330338.8563
	1020	949.38	738814.9523	2330338.7876
	1021	949.39	738812.2054	2330338.4508
	1022	949.44	738806.6241	2330337.2726
	1023	949.39	738801.2165	2330335.4569
	1024	949.38	738798.6320	2330334.3320
	1025	949.30	738789.5074	2330328.7646
	1026	949.18	738782.2768	2330321.9220
	1027	948.98	738775.9161	2330312.5551
	1028	948.79	738772.4215	2330303.9861
	1029	948.49	738770.4983	2330293.9367
	1030	948.43	738770.3799	2330292.1742
	1031	948.13	738770.7270	2330283.4398
	1032	947.83	738772.6127	2330274.9044
	1033	947.74	738773.4846	2330272.3865
	1034	947.60	738776.9152	2330265.1356
	1035	947.19	738785.1575	2330254.5224
	1036	946.98	738795.7390	2330246.6544
	1037	946.88	738803.7221	2330243.1242
	1038	946.82	738811.3672	2330240.9554
	1039	946.81	738812.9222	2330240.9554
	1040	946.86	738818.7243	2330240.5119

	ID	ELEV	NORTHING	EASTING
WEST LEG	3021	945.25	738843.3746	2330163.2536
	3022	945.71	738848.0539	2330194.6158
	3023	945.80	738849.3127	2330200.9612
	3024	945.90	738850.1237	2330204.8829
	3045	945.02	738804.4582	2330148.5098
	3046	945.24	738802.8854	2330163.4950
	3047	945.34	738802.1107	2330170.8761
	3048	945.43	738801.0107	2330177.7958
	3049	945.62	738798.9179	2330190.5381
	4021	945.51	738825.9644	2330165.1493
	4022	945.92	738828.9552	2330198.2444
	4023	945.99	738829.6446	2330203.9455
	4024	946.04	738830.5381	2330208.9333
	4046	945.51	738819.9741	2330165.2886
	4047	945.62	738819.7532	2330172.7278
	4048	945.72	738819.2861	2330179.6748

	ID	ELEV	NORTHING	EASTING
SOUTH LEG	3068	946.88	738595.9717	2330326.1350
	3069	946.83	738602.6913	2330319.9936
	3070	946.78	738609.6285	2330313.6533
	3071	946.64	738631.3687	2330295.9169
	3072	946.60	738637.5847	2330291.5447
	3073	946.67	738658.6465	2330278.6780
	3074	946.78	738684.0941	2330266.6049
	3075	946.84	738704.6499	2330258.0380
	3088	946.91	738616.4430	2330349.4493
	3089	946.71	738618.3576	2330347.8344
	3090	946.78	738629.8300	2330338.8521
	3091	946.62	738650.4229	2330325.7466
	3092	947.37	738695.3875	2330309.5625
	3093	947.51	738717.0319	2330308.5704
	4068	947.07	738604.0673	2330334.9929
	4069	947.03	738610.7869	2330328.8514
	4070	946.98	738617.8434	2330322.6416
	4071	946.85	738639.0703	2330306.5203
	4072	946.81	738644.7252	2330302.7939
	4073	946.89	738662.4206	2330292.4704
	4074	947.01	738689.6990	2330280.0536
	4075	947.10	738710.8758	2330272.9767
	4088	947.10	738608.7060	2330340.2766
	4089	946.90	738610.6206	2330338.6616
	4090	946.98	738622.4500	2330328.6839
	4091	946.85	738643.4679	2330313.1862
	4092	947.67	738692.9687	2330290.5323
	4093	947.84	738720.0161	2330288.7043

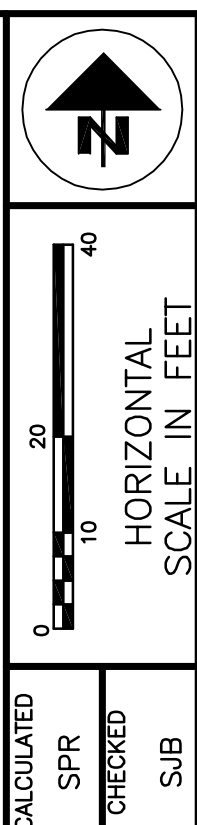
	ID	ELEV	NORTHING	EASTING
EAST LEG	3100	948.30	738767.1534	2330382.6909
	3101	948.10	738768.3329	2330406.5524
	3120	948.43	738816.3128	2330393.4444
	3121	948.31	738809.9314	2330411.0837
	4100	948.77	738765.8276	2330381.7678
	4101	948.43	738784.5331	2330405.7516
	4120	948.71	738800.1377	2330385.4770
	4121	948.60	738792.4185	2330406.8618



**LEGEND**

- ELEV POINT# ○ DETAIL GRADE POINT AT EDGE OF TRAVELED WAY
- ELEV POINT# ● DETAIL GRADE POINT AT EDGE OF TRAVELED WAY POINT OF CURVATURE (PC/PT)

NOTE: ADDITIONAL POINTS PROVIDED IN TABLES TO FURTHER DELINEATE GEOMETRY AS NECESSARY.



CALCULATED

SPR

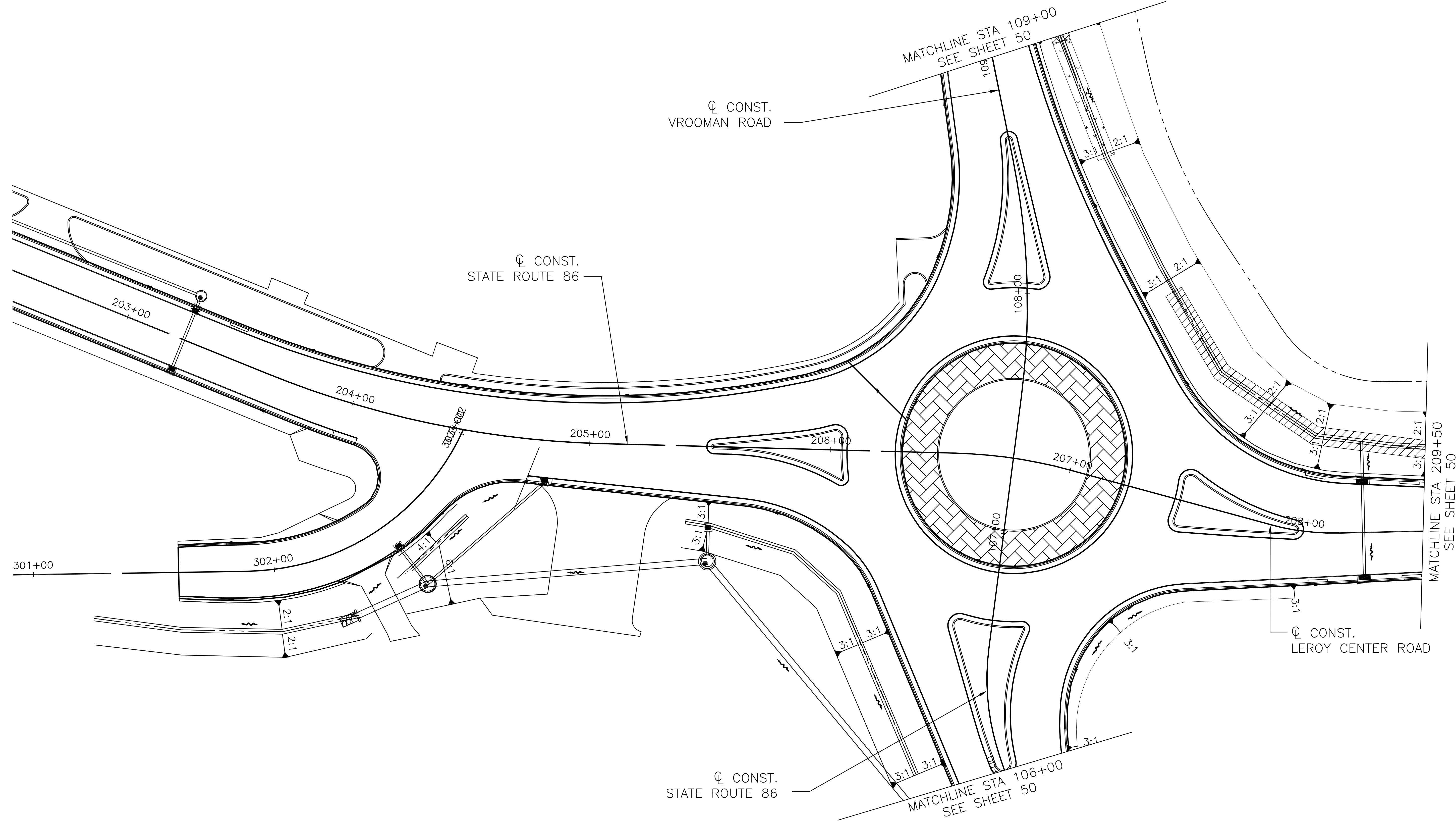
CHECKED

SUB

**ROUNDABOUT DETAILS  
GRADING DETAIL - ROUNDABOUT**

**LAK-VROOMAN RD**

M:\Proj\0622\_1005\roadway\sheet\Intersection\_Details\G1002.dwg, 2/22/2013 11:02:16 AM, PDF995



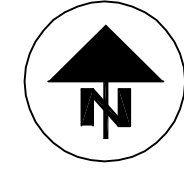
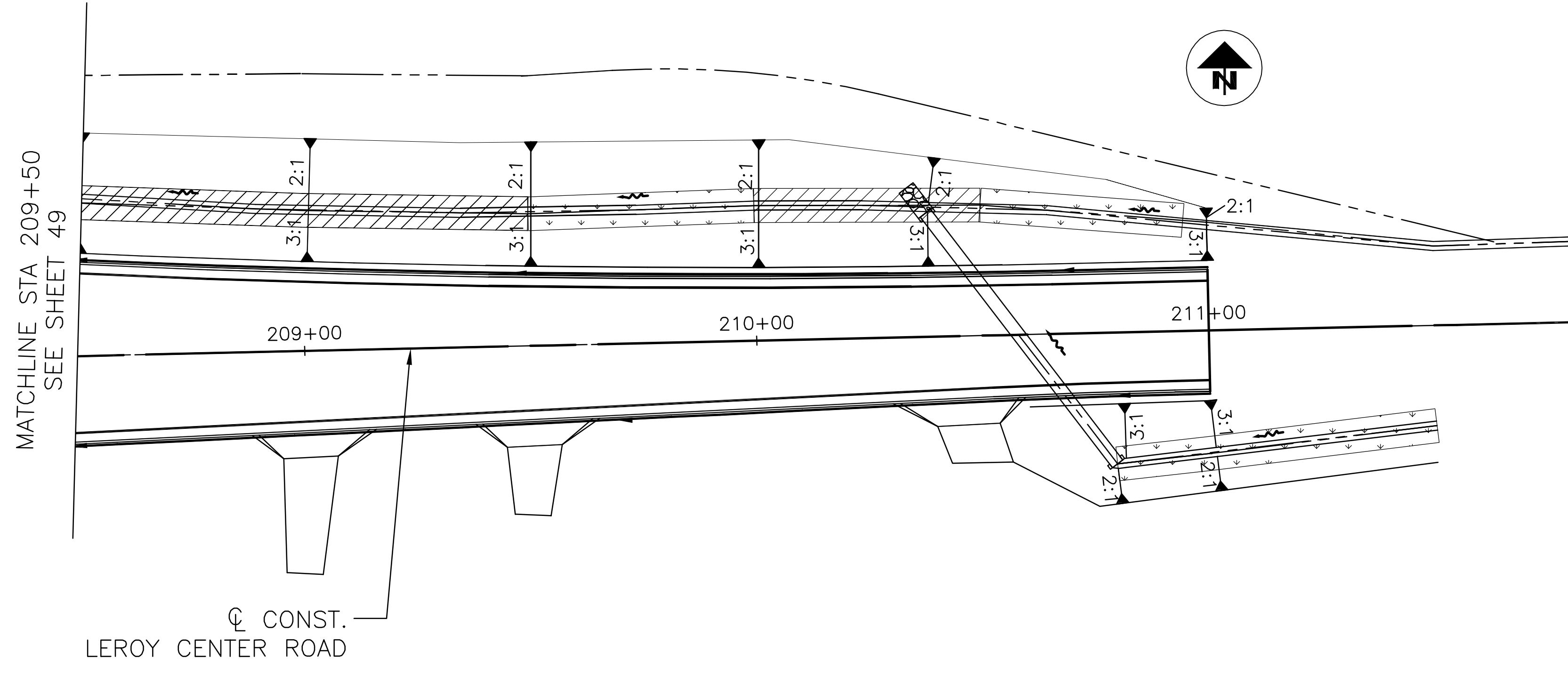
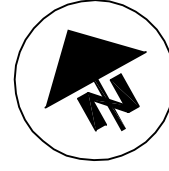
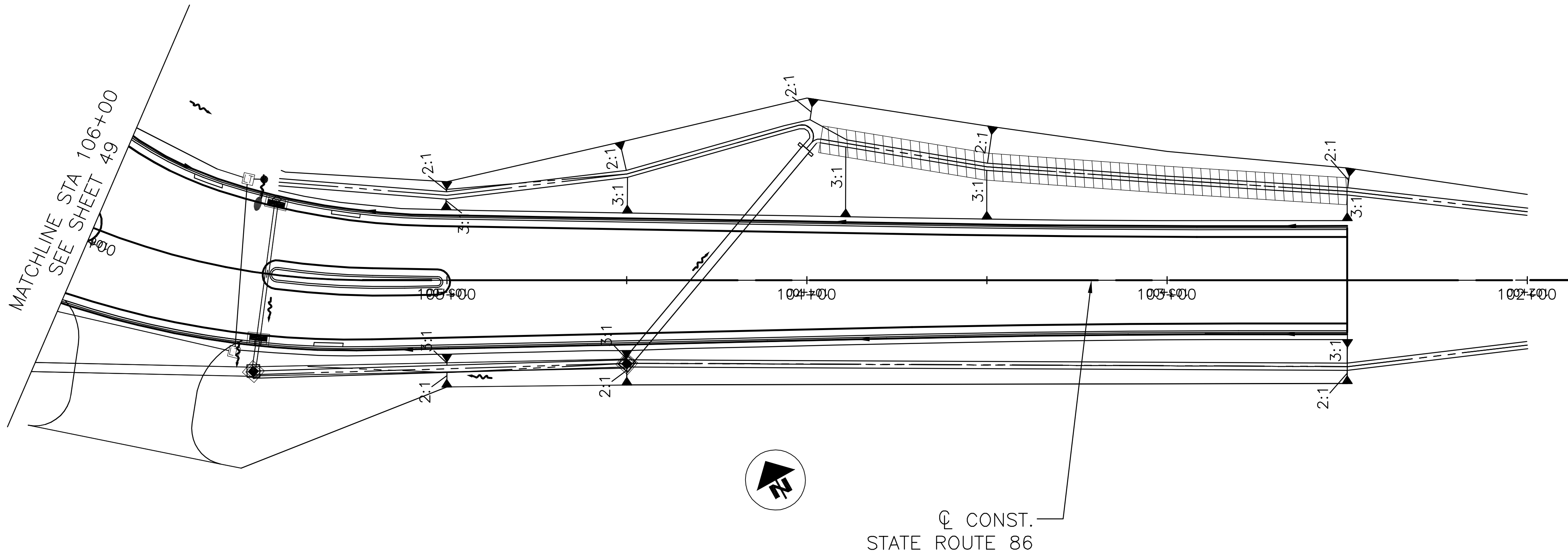
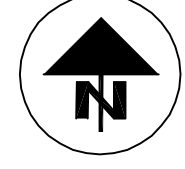
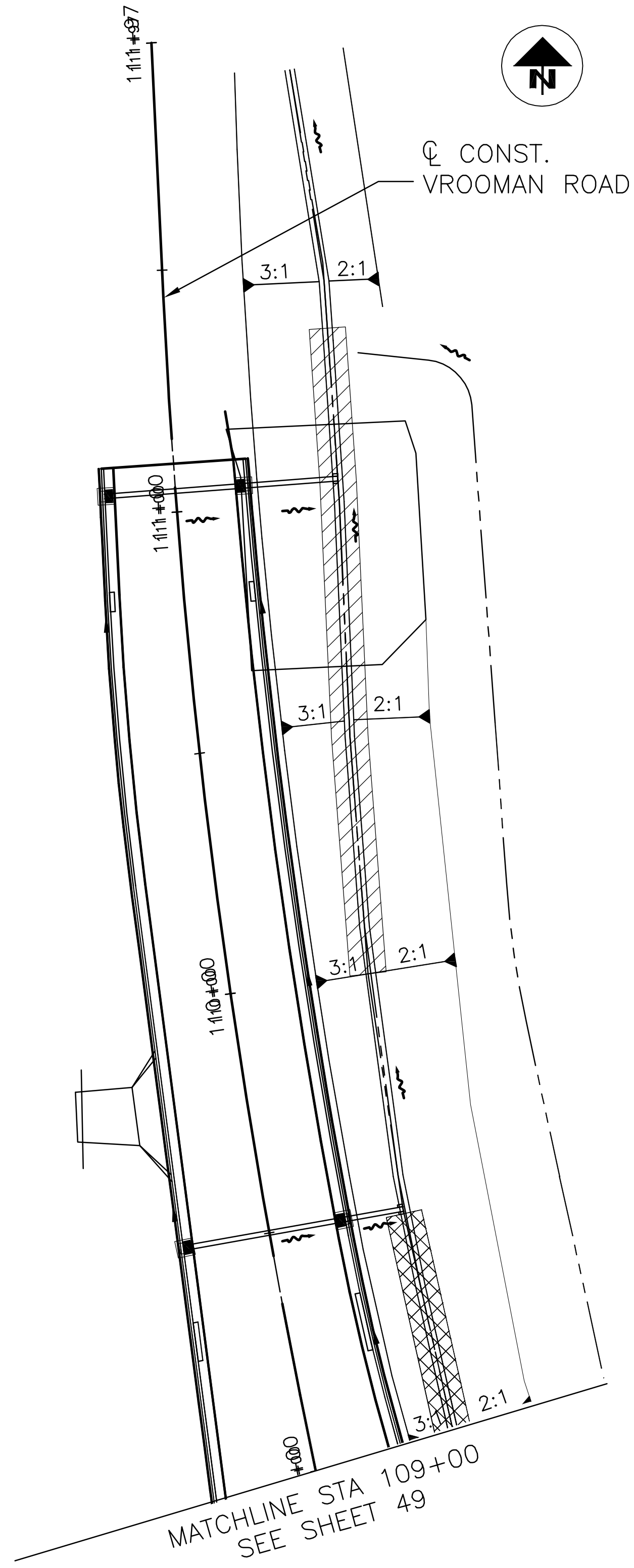
CALCULATED  
RDC  
CHECKED  
JMZ

0  
5  
20  
40  
HORIZONTAL  
SCALE IN FEET

**ROUNDABOUT GRADING DETAILS**

**LAK-VROOMAN RD**

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50  
76

**LAK-VROOMAN RD**

**ROUNDABOUT GRADING DETAILS**

CALCULATED	SPR	CHECKED	JMZ
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ⓐ

PI STA = 204+34.36  
Δ = 20°33'04"  
Dc = 14'19'26"  
R = 400.00  
T = 72.52  
L = 143.47  
E = 6.52  
C = 142.71  
CB = S 78°10'52" E

ⓑ

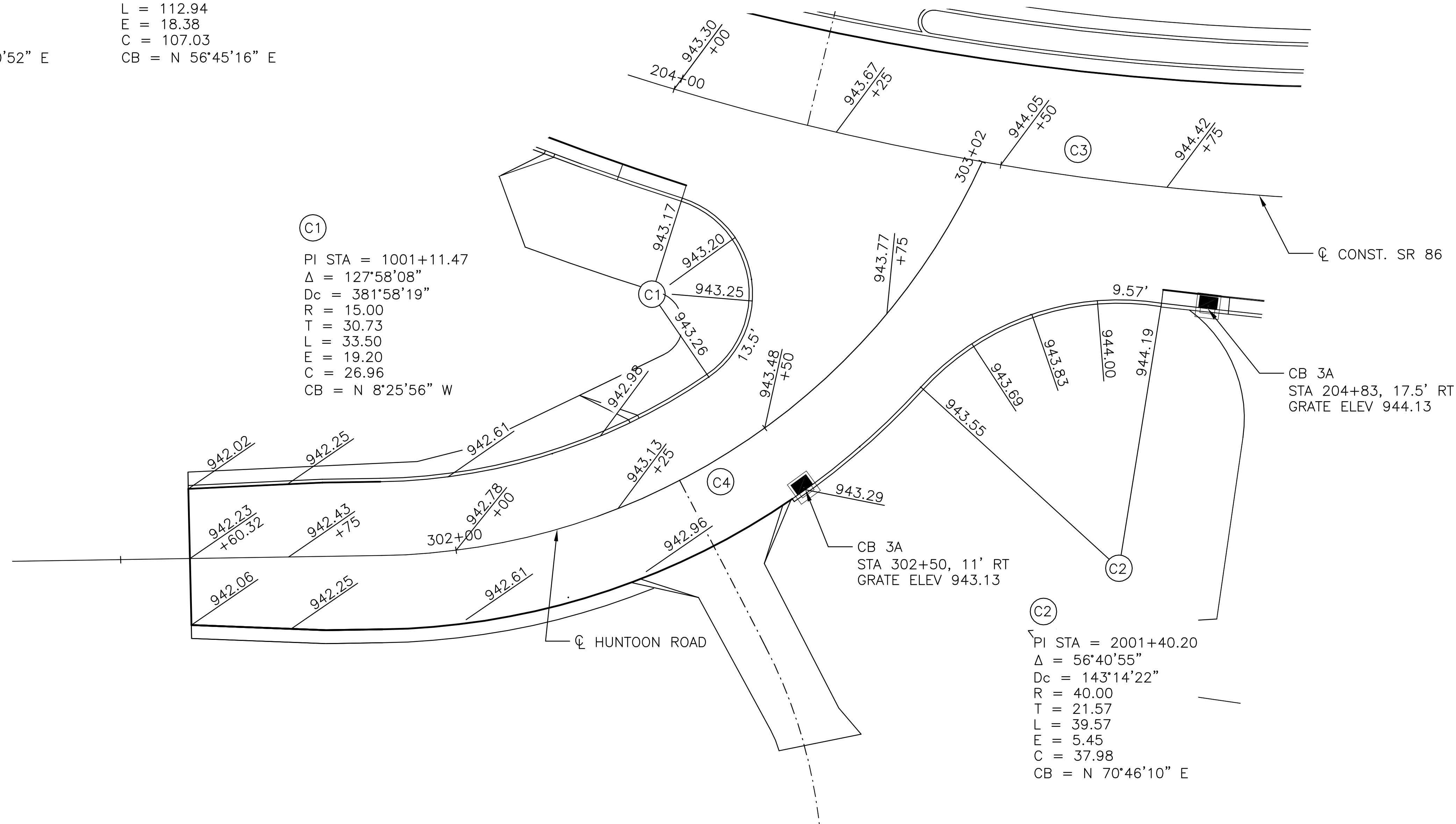
PI STA = 302+52.19  
Δ = 64°42'40"  
Dc = 57°17'45"  
R = 100.00  
T = 63.35  
L = 112.94  
E = 18.38  
C = 107.03  
CB = N 56°45'16" E

ⓒ

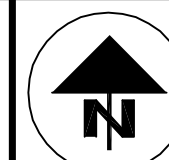
PI STA = 1001+11.47  
Δ = 127°58'08"  
Dc = 381°58'19"  
R = 15.00  
T = 30.73  
L = 33.50  
E = 19.20  
C = 26.96  
CB = N 8°25'56" W

ⓓ

PI STA = 2001+40.20  
Δ = 56°40'55"  
Dc = 143°14'22"  
R = 40.00  
T = 21.57  
L = 39.57  
E = 5.45  
C = 37.98  
CB = N 70°46'10" E



NOTE: ELEVATIONS ALONG RADIUS RETURNS ARE SHOWN AT TEN FOOT INTERVALS UNLESS OTHERWISE SHOWN.



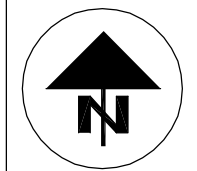
0 5 10 20  
HORIZONTAL SCALE IN FEET

CALCULATED  
SPR  
CHECKED  
RDC

INTERSECTION DETAILS  
HUNTOON ROAD

LAK-VROOMAN RD





CALCULATED  
SPR  
CHECKED  
SUB

**MISCELLANEOUS DETAILS  
SPLITTER ISLAND AND DRIVE DETAIL**

**LAK-VROOMAN RD**

RESIDENTIAL DRIVE COMPOSITION

RESIDENTIAL ASPHALT DRIVE:

ITEM 448 - 1 1/4" ASPHALT CONCRETE  
SURFACE COURSE, TYPE 1, PG  
64-22 (DRIVEWAYS)

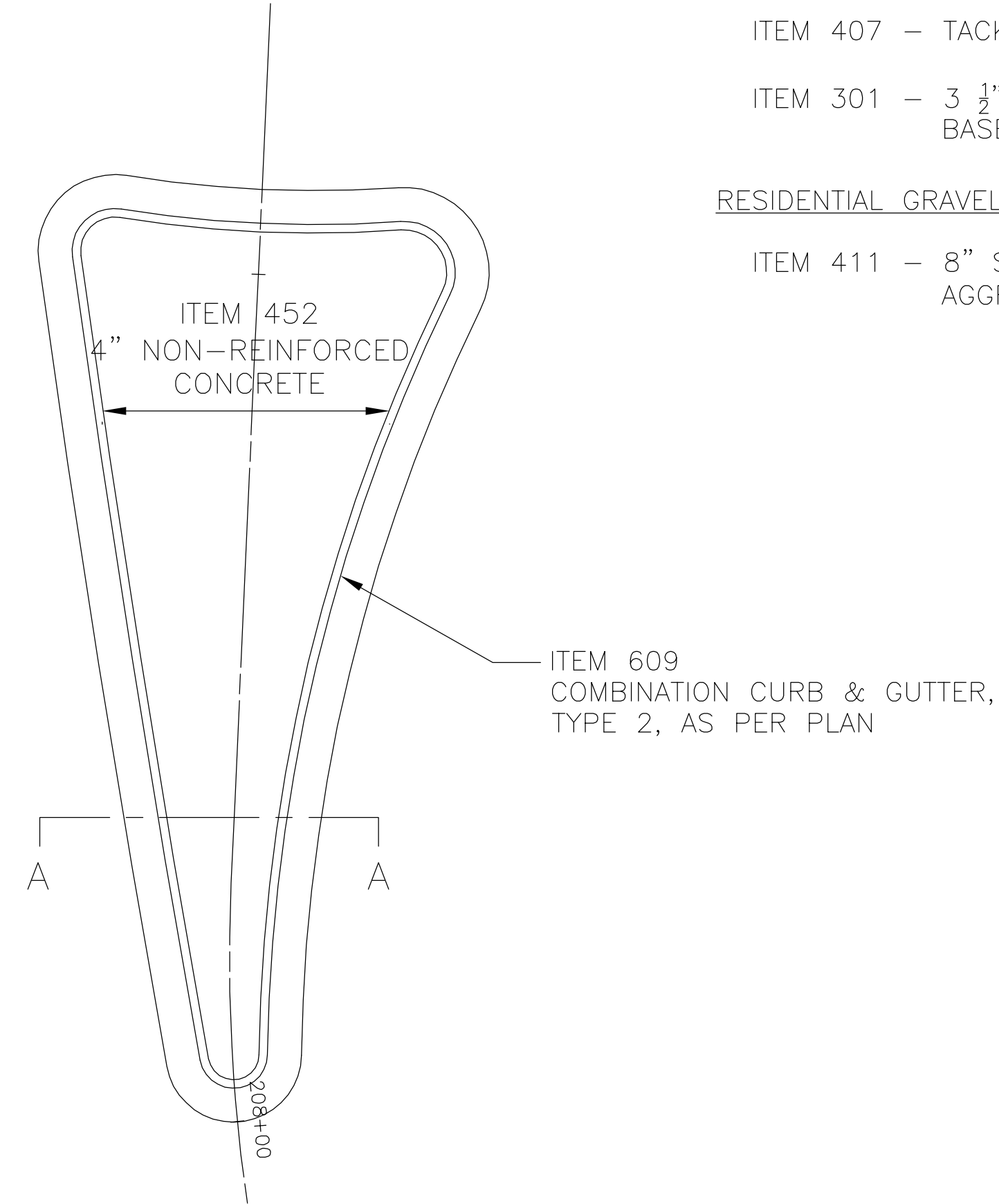
ITEM 407 - TACK COAT

ITEM 301 - 3 1/2" ASPHALT CONCRETE  
BASE, PG 64-22

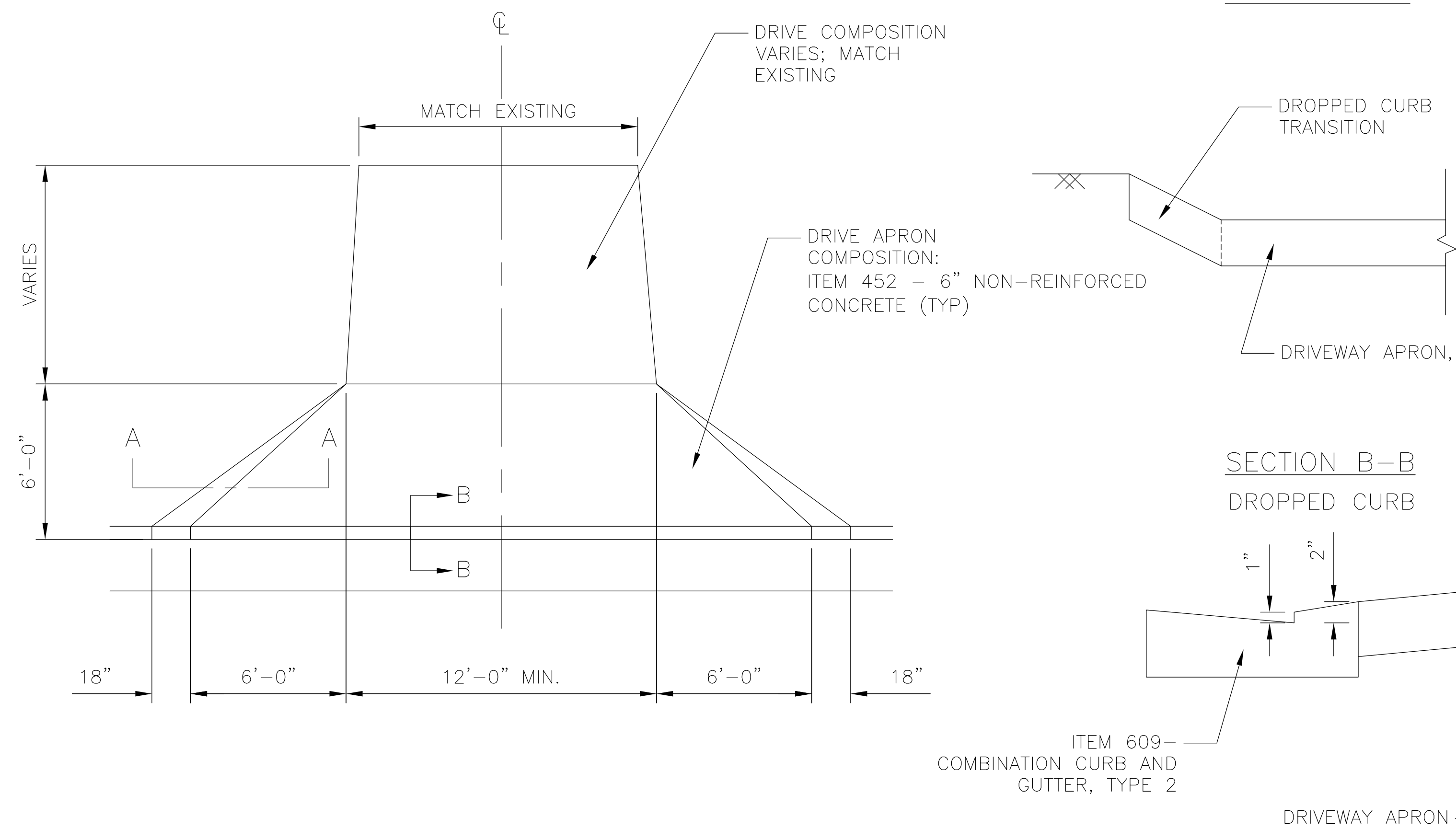
RESIDENTIAL GRAVEL DRIVE:

ITEM 411 - 8" STABILIZED CRUSHED  
AGGREGATE

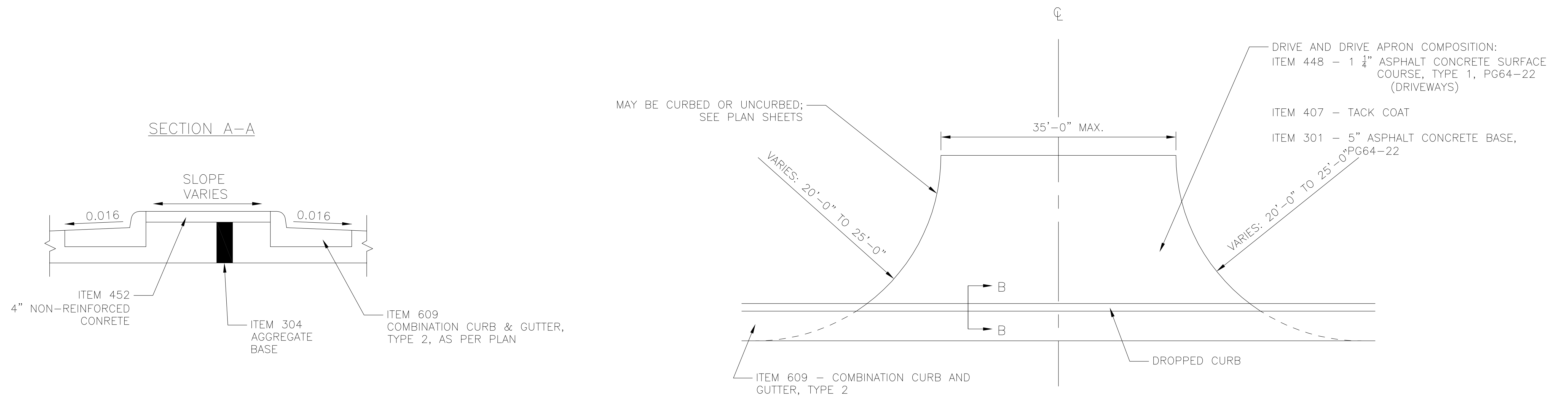
SPLITTER ISLAND DETAIL



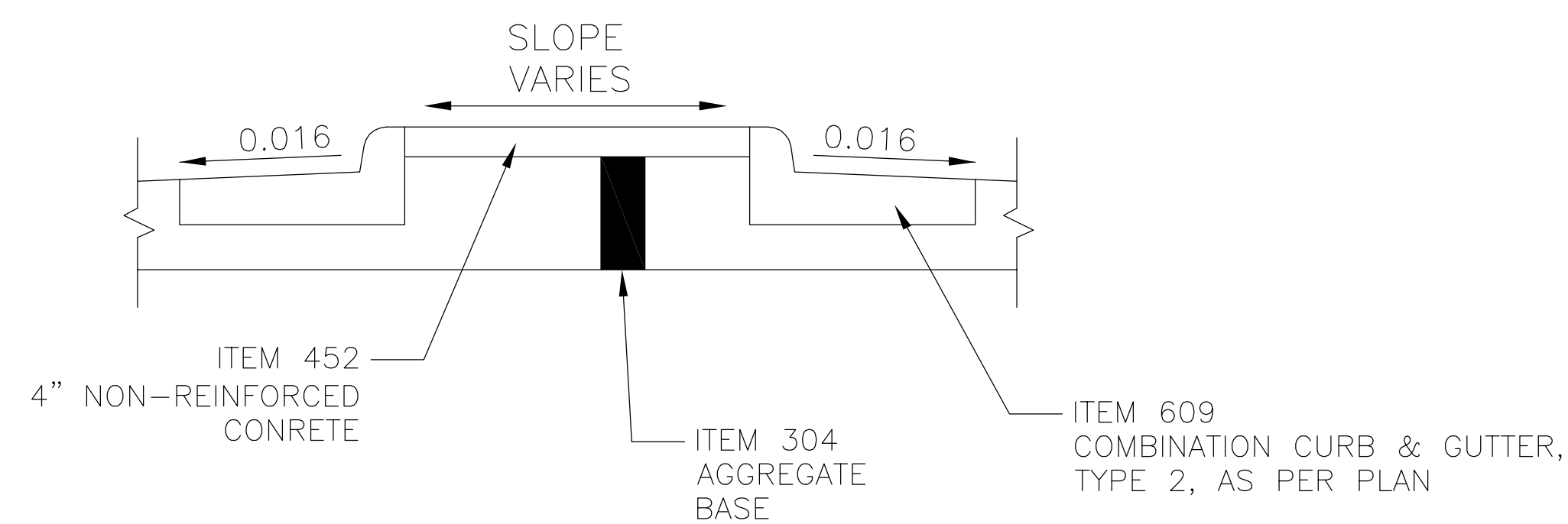
RESIDENTIAL DRIVE DETAIL

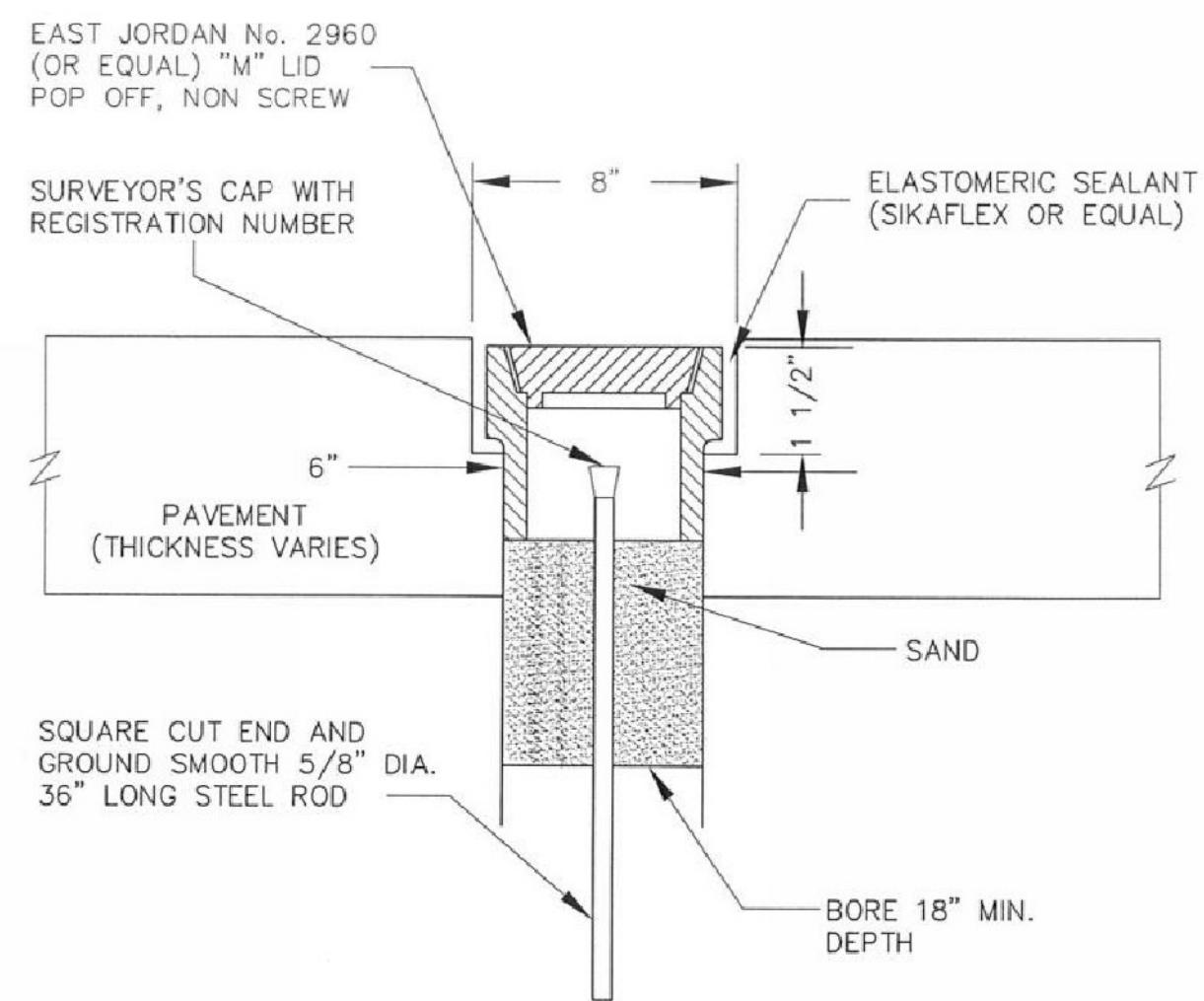


COMMERCIAL DRIVE DETAIL



SECTION A-A





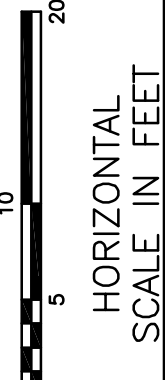
INSTALLATION INSTRUCTIONS

1. PAVEMENT CORE DRILLED WITH 6" DIAMETER CORE DRILLED THRU PAVEMENT THICKNESS (AT A MIN. OF 18").
2. 8" CORE, 1 1/2" DEEP TO SEAT 1/4" BELOW PAVEMENT.
3. USE ELASTOMERIC SEALANT (SIKAFLEX OR EQUAL) TO FILL JOINT BETWEEN BOX AND PAVEMENT.

CORED ROADWAY  
MONUMENT ASSEMBLY

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J:\LIBRARY\Roadway\PDF Standards\Roadway Monument Assembly.pdf

LAKE COUNTY MONUMENT ASSEMBLY DETAIL



CALCULATED  
CHECKED

**MISCELLANEOUS DETAILS  
MONUMENT ASSEMBLY DETAIL**

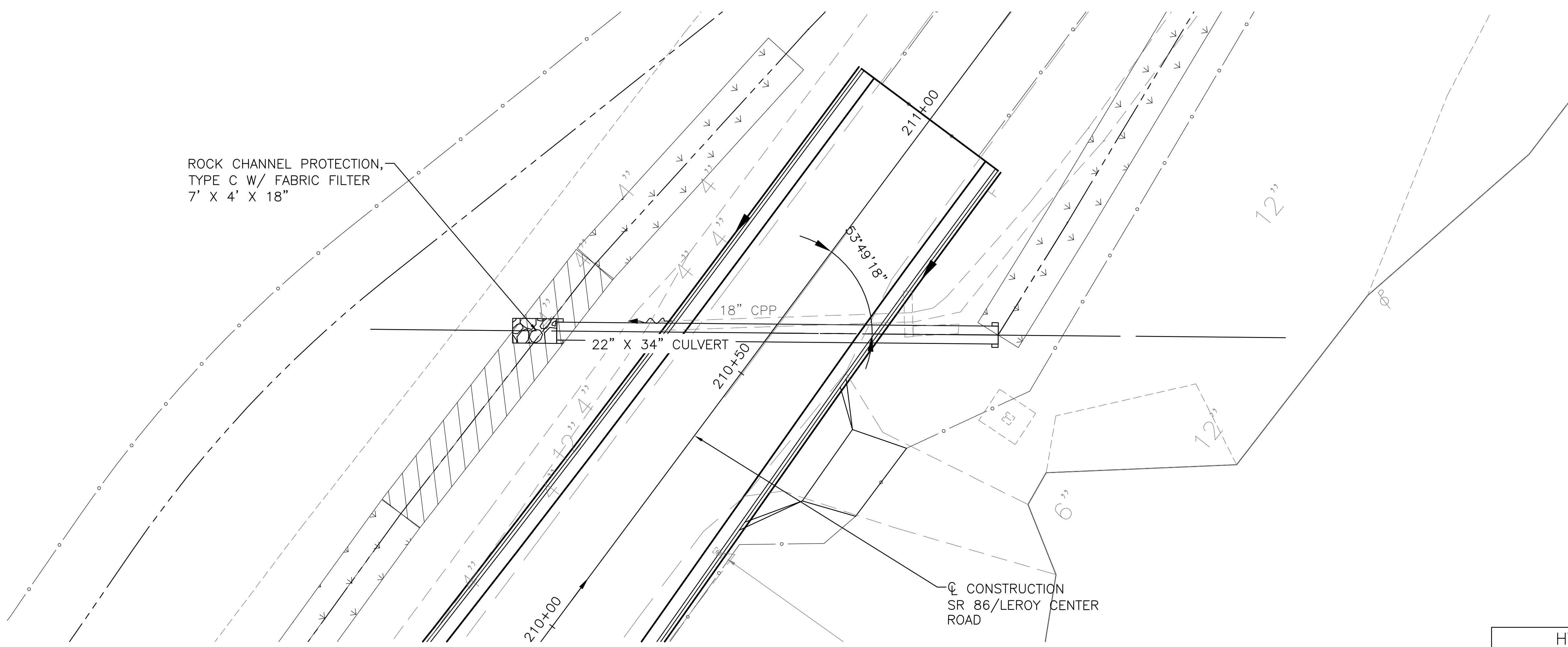
**LAK-VROOMAN RD**

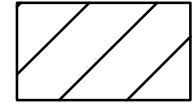
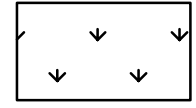


CALCULATED SPR CHECKED RDC

**CULVERT DETAIL  
LEROY CENTER ROAD - STA 210+57.90**

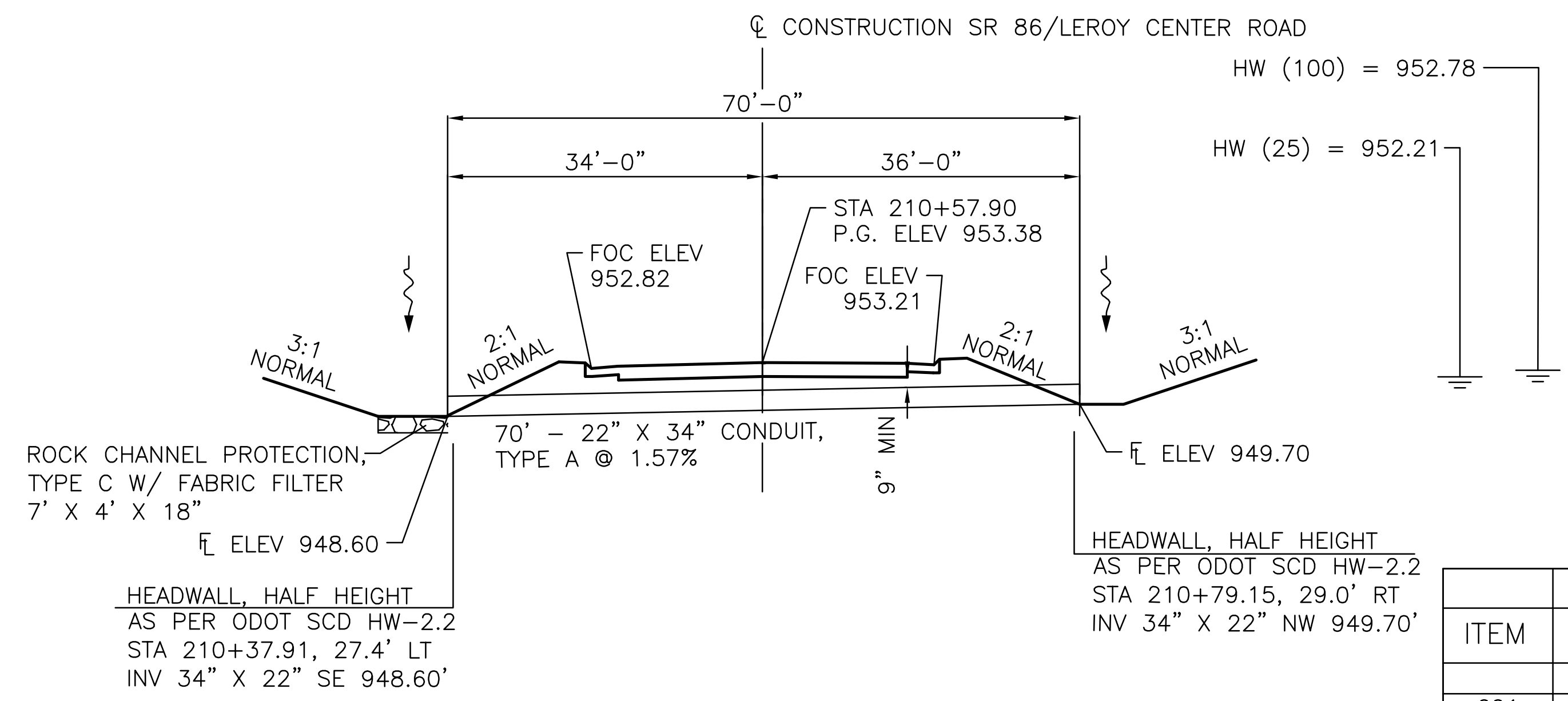
**LAK-VROOMAN RD**



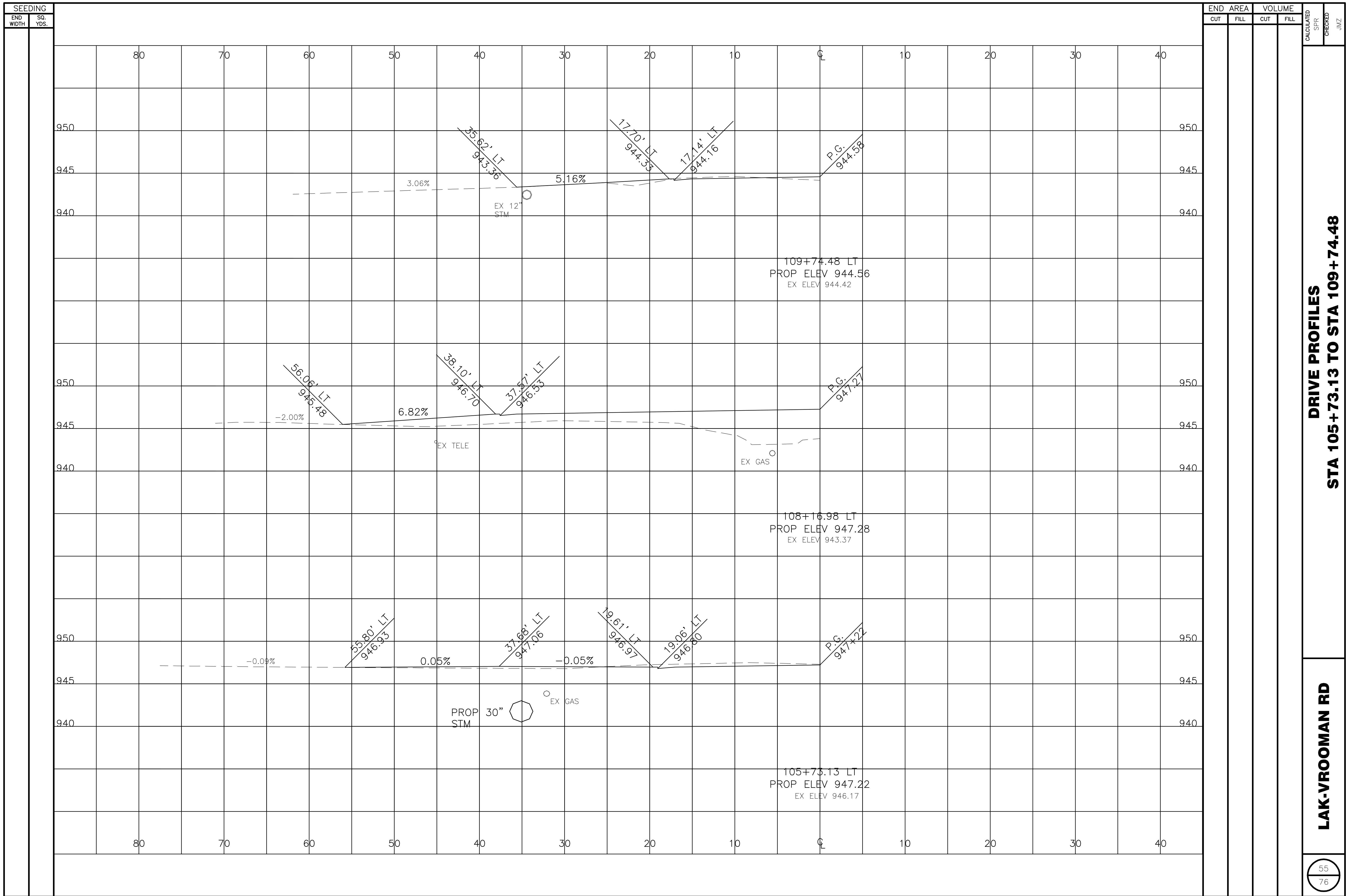
-  ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1
-  ITEM 670 - DITCH EROSION PROTECTION

HYDRAULIC DESIGN DATA	
DRAINAGE AREA	= 29.5 Ac
Q25	= 26.6 CFS
Q100	= 32.3 CFS
HW25	= 952.54
HW100	= 953.40
V25	= 11.86 FPS
V100	= 12.51 FPS

EXISTING STRUCTURE  
 TYPE: CPP  
 SIZE: 18"  
 SKEW: 57° RT  
 CONDITION: GOOD



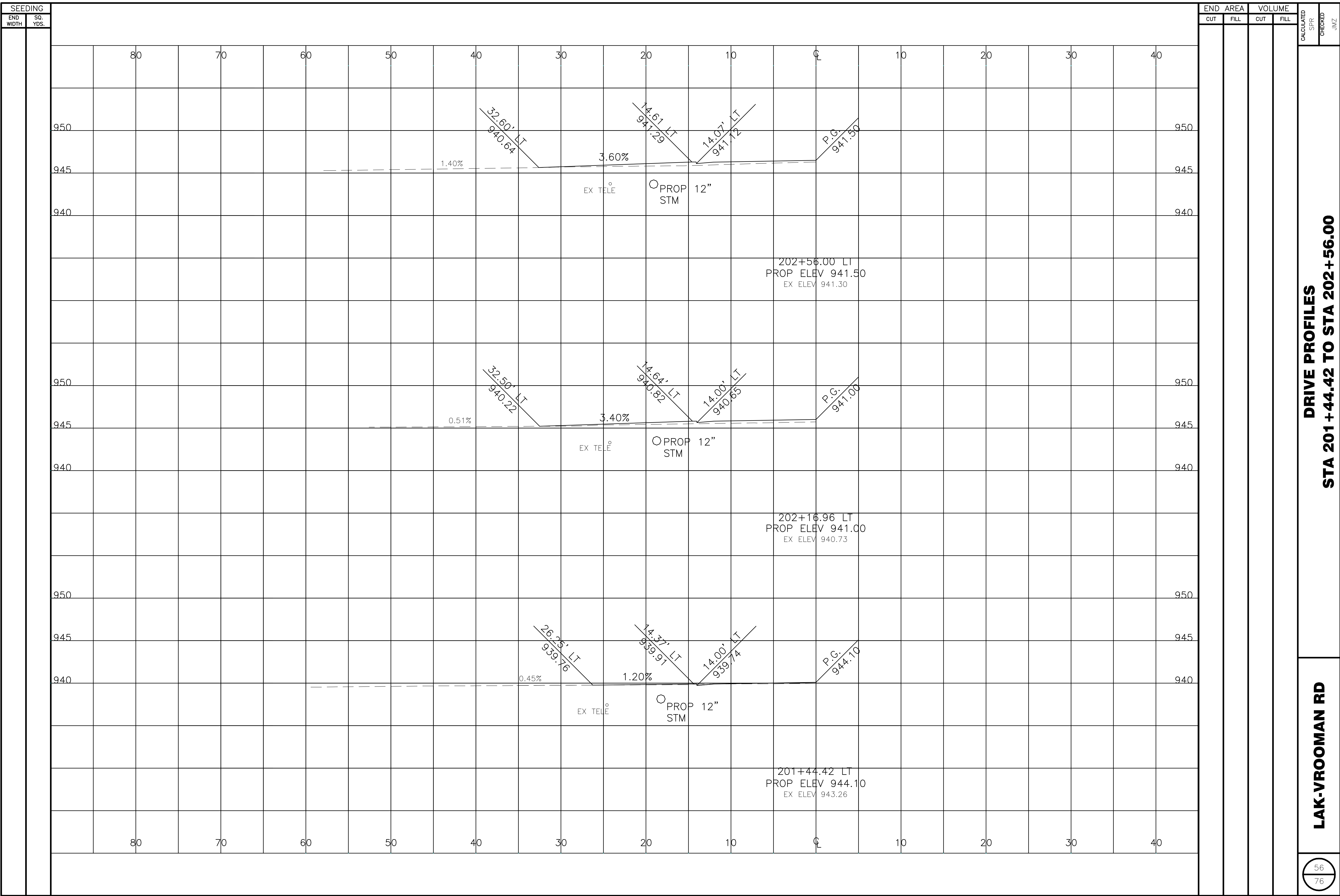
ESTIMATED QUANTITIES			
ITEM	QUAN	UNIT	DESCRIPTION
601	2	CU.YD.	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
602	0.8	CU.YD.	CONCRETE MASONRY
603	70	FT.	22" X 34" CONDUIT, TYPE A, 706.04



**DRIVE PROFILES**  
**STA 105+73.13 TO STA 109+74.48**

**LAK-VROOMAN RD**

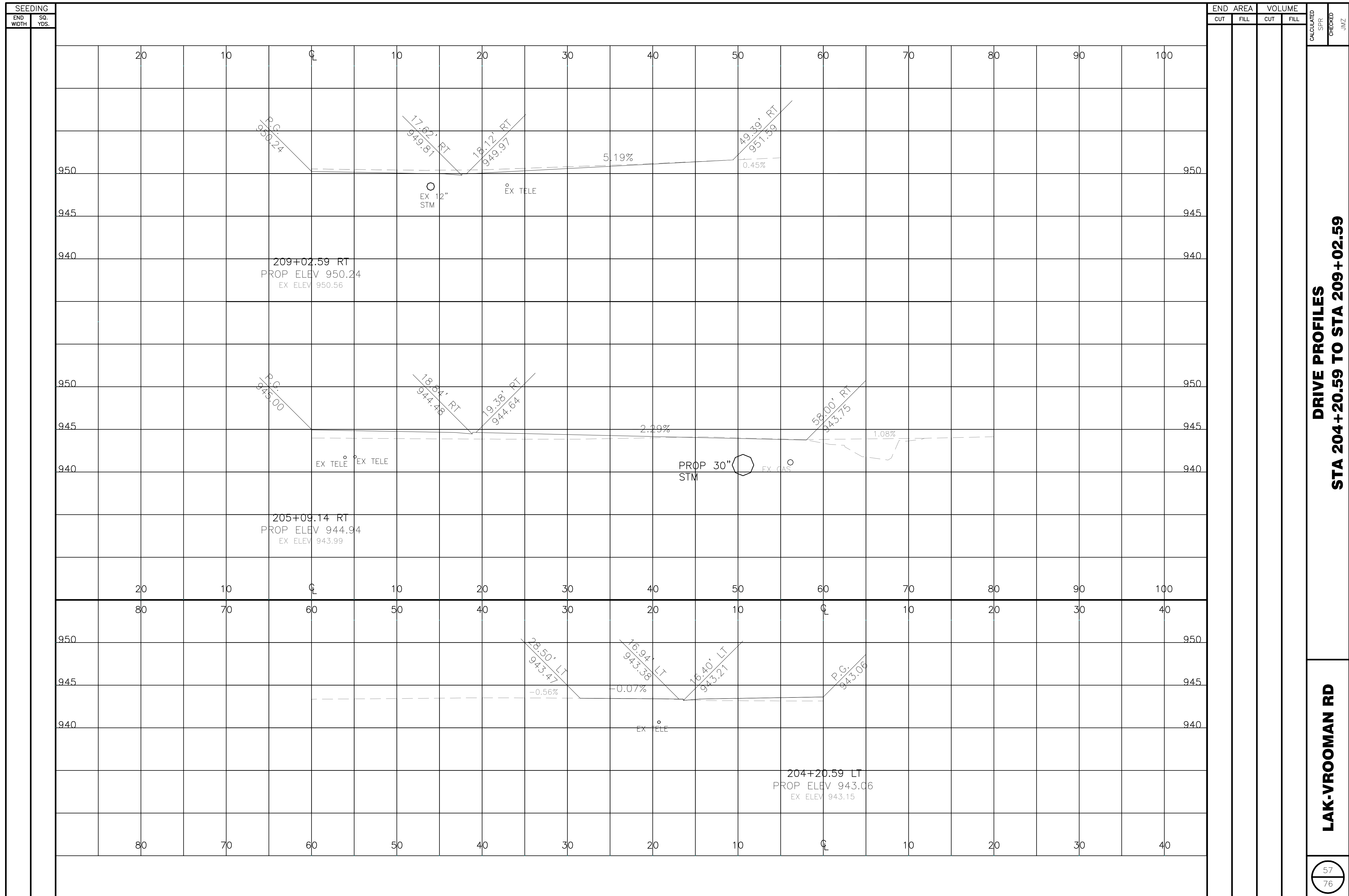
\\proj\0822\1005\roadway\sheet\Drives\XD002.dwg, 2/22/2013 11:04:32 AM, PDF995



**DRIVE PROFILES**  
**STA 201 + 44.42 TO STA 202 + 56.00**

**LAK-VROOMAN RD**

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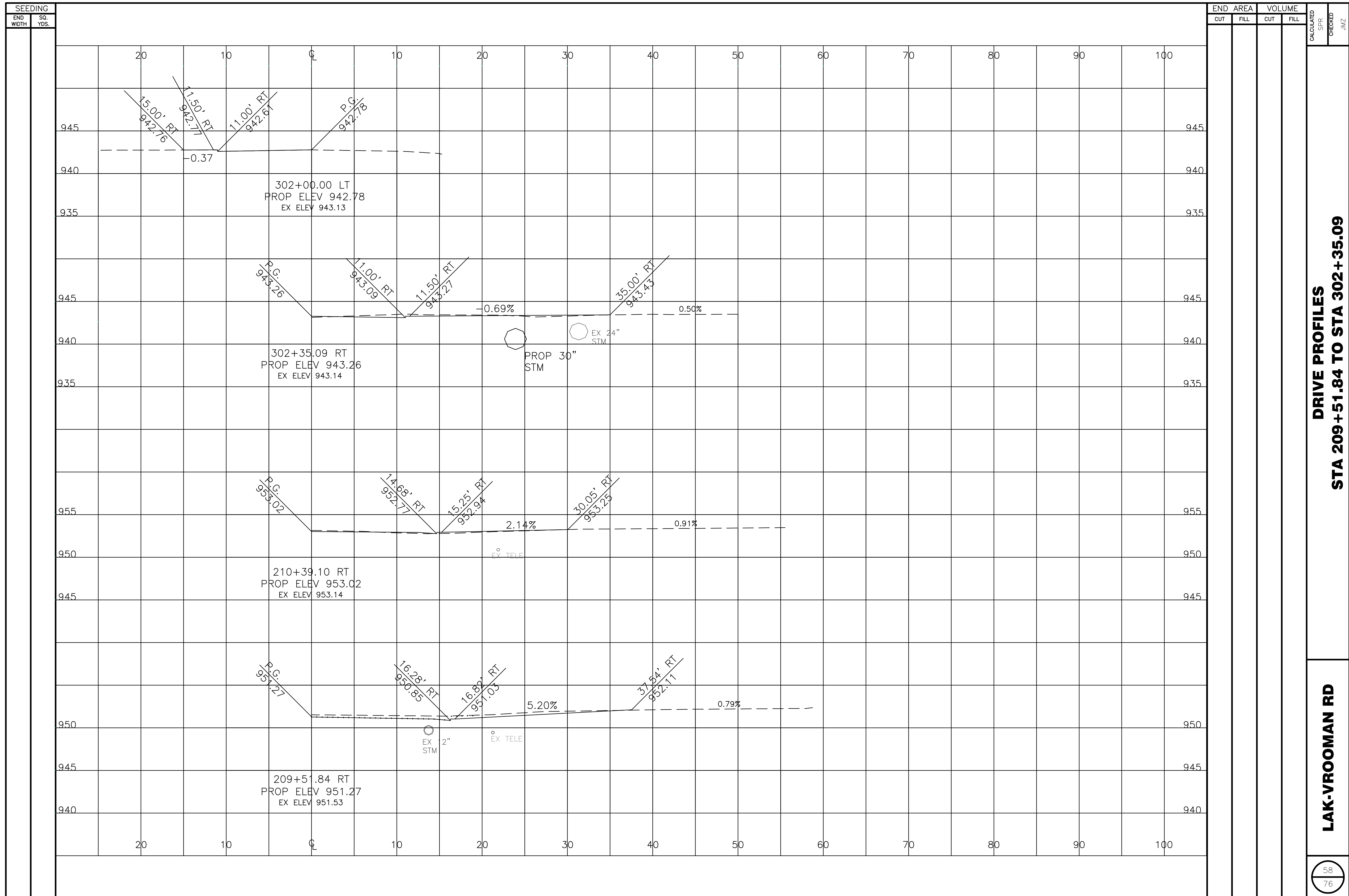


SEEDING		END AREA		VOLUME	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL

**DRIVE PROFILES**  
**STA 204+20.59 TO STA 209+02.59**

**LAK-VROOMAN RD**

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STATION	SIDE	DESCRIPTION	CODE	SIZE	630	630	630	630	630	630	630	STATION	SIDE	DESCRIPTION	630	630	630	630	630	
					GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10x12	GROUND MOUNTED STRUCTURAL BEAM FOUNDATION	BREAKAWAY STRUCTURAL BEAM CONNECTION	GROUND MOUNTED SUPPORT, NO. 2 POST	GROUND MOUNTED SUPPORT, NO. 3 POST	SIGN ERECTED, FLAT SHEET	SIGN ERECTED, EXTRUSHEET				SIGN POST REFLECTOR	GROUND MOUNTED SUPPORT, NO. 3 POST	REMOVAL OF GROUND MOUNTED SIGN & DISPOSAL	REMOVAL OF GROUND MOUNTED SIGN & REERECTION	REMOVAL OF POST SUPPORT AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN & DISPOSAL
					FT	EA	EA	FT	FT	SQ FT	SQ FT				EA	FT	EA	EA	EA	EA
94+80	RT	RAB WARNING	W2-6	48 X 48					24	16.00		-	RT	CURVE AHEAD		1			1	
		SPEED ADVISORY PLAQUE	W13-1	24 X 24						4.00		-	RT	SPEED ADVISORY		1				
98+00	LT	STATE ROUTE SIGN	M1-5-2	24 X 24				12		4.00	1	100+66	RT	ROUTE MARKER		1			1	
		"SOUTH"	M3-3	24 X 12						2.00			RT	"TO"		1				
98+80	RT	GUIDE SIGN	D3-2	102 X 60	26	2	2				42.50		RT	ARROW		1				
102+00	RT	YIELD AHEAD	W3-2	48 X 48					24	16.00		104+37	LT	INTERSECTION WARNING	12		1		1	
106+02	CL	KEEP RIGHT	R4-7	24 X 30				12		5.00	1		LT	ADVANCED STREET NAME			1			
106+57	RT	YIELD	R1-2	48 X 48					24	16.00	2	105+85	RT	ROUTE MARKER					1	
106+59	RT	YIELD	R1-2	48 X 48					24	16.00	2	106+53	RT	STOP		1			1	
106+60	LT	ROUTE MARKER	M1-5	24 X 24				12		4.00			RT	"TRAFFIC FROM LEFT..."		1				
		"NORTH"	M3-3	24 X 12						2.00		106+60	RT	STREET NAME		1			1	
		ARROW	M6-2R	21 X 15						2.19			RT	STREET NAME		1				
107+08	RT	RAB DIRECTIONAL ARROW	R6-4b	60 X 24					22	10.00	2	106+94	RT	STOP		1			1	
		ONE WAY	R6-1R	54 X 18						6.75			RT	3-WAY		1				
107+60	LT	RAB DIRECTIONAL ARROW	R6-4b	60 X 24					22	10.00	2	107+35	LT	STOP		1			1	
		ONE WAY	R6-1R	54 X 18						6.75			LT	"TRAFFIC FROM RIGHT..."		1				
108+06	LT	YIELD	R1-2	48 X 48					24	16.00	2	107+56	RT	ROUTE MARKER		1			1	
108+07	LT	YIELD	R1-2	48 X 48					24	16.00	2		RT	"TO"		1				
108+07	RT	STREET NAME	D1-1d	60 X 18					24	7.50			RT	ARROW		1				
		ROUTE MARKER	M1-1	24 X 24				6		4.00		108+12	RT	"NO ENGINE BRAKE"	12		1		1	
		"TO"	M4-5	24 X 12						2.00		108+31	LT	FOOD SERVICE SIGN	16		1		1	
		ARROW	M6-2R	21 X 15						2.19		108+99	RT	NO TRUCKS	12		1		1	
108+65	CL	KEEP RIGHT	R4-7	24 X 30				12		5.00	1		RT	"VROOMAN RD..."			1			
110+68	LT	YIELD AHEAD	W3-2	48 X 48					24	16.00	2	112+40	LT	STOP AHEAD		1			1	
120+00	RT	"TO"	M4-5	24 X 12					12	2.00	1	-	RT	INTERSECTION WARNING		1			1	
		INTERSTATE ROUTE SIGN	M1-1	30 X 24						5.00		205+20	LT	ROUTE MARKER					1	
		ARROW	M6-3	21 X 15						2.19			LT	"NORTH"					1	
113+00	LT	GUIDE SIGN	D3-2	102 X 60	31	2	2				42.50	206+11	LT	STOP		1			1	
115+85	LT	RAB WARNING	W2-6	48 X 48					24	16.00	2	206+51	RT	ROUTE MARKER		1			1	
		SPEED ADVISORY PLAQUE	W13-1	24 X 24						4.00			RT	"TO"		1				
195+20	RT	RAB WARNING	W2-6	48 X 48					24	16.00	2		RT	ARROW		1				
		SPEED ADVISORY PLAQUE	W13-1	24 X 24						4.00			RT	WARNING ARROW		1				
199+20	RT	GUIDE SIGN	D3-2	102 X 60	29	2	2				42.50	206+54	RT	STOP		1			1	
202+61	RT	YIELD AHEAD	W3-2	48 X 48						16.00	1	212+10	LT	STOP AHEAD		1			1	
203+00	LT	STATE ROUTE SIGN	M1-5-2	24 X 24				12		4.00	1									
		"NORTH"	M3-3	24 X 12						2.00										
205+48	CL	KEEP RIGHT	R4-7	24 X 30				12		5.00	1	302+55	RT	STOP		1			1	
206+00	RT	YIELD	R1-2	48 X 48					24	16.00	2	302+58	LT	STREET NAME					1	
206+02	RT	YIELD	R1-2	48 X 48					24	16.00	2									
206+02	LT	ROUTE MARKER	M1-5	24 X 24				12		4.00										
		"NORTH"	M3-3	24 X 12						2.00										
		ARROW	M6-2R	21 X 15						2.19										
206+52	RT	RAB DIRECTIONAL ARROW	R6-4b	60 X 24					22	10.00	2									
		ONE WAY	R6-1R	54 X 18						6.75										
207+04	LT	RAB DIRECTIONAL ARROW	R6-4b	60 X 24					22	10.00	2									
		ONE WAY	R6-1R	54 X 18						6.75										
207+50	LT	YIELD	R1-2	48 X 48					24	16.00	2									
207+50	RT	STREET NAME	D1-1d	78 X 18					24	9.75										
207+55	LT	YIELD	R1-2	48 X 48					24	16.00	2									
207+97	CL	KEEP RIGHT	R4-7	24 X 30				12		5.00	1									
211+20	LT	YIELD AHEAD	W3-2	48 X 48					24	16.00	2									
213+85	LT	GUIDE SIGN	D3-2	102 X 60	28	2	2				42.50									
217+15	LT	RAB WARNING	W2-6	48 X 48					24	16.00	2									
		SPEED ADVISORY PLAQUE	W13-1	24 X 24						4.00										
299+25	RT	STOP AHEAD	W3-1	48 X 48					24	16.00	2									
302+85	RT	STOP	R1-1	36 X 36				12		9.00	1									
TOTALS CARRIED TO GENERAL SUMMARY					114	8	8	114	532	447	170	TOTALS CARRIED TO GENERAL SUMMARY			52	26	6	18	4	

**SIGNING SUBSUMMARY**

**LAK-VROOMAN RD**

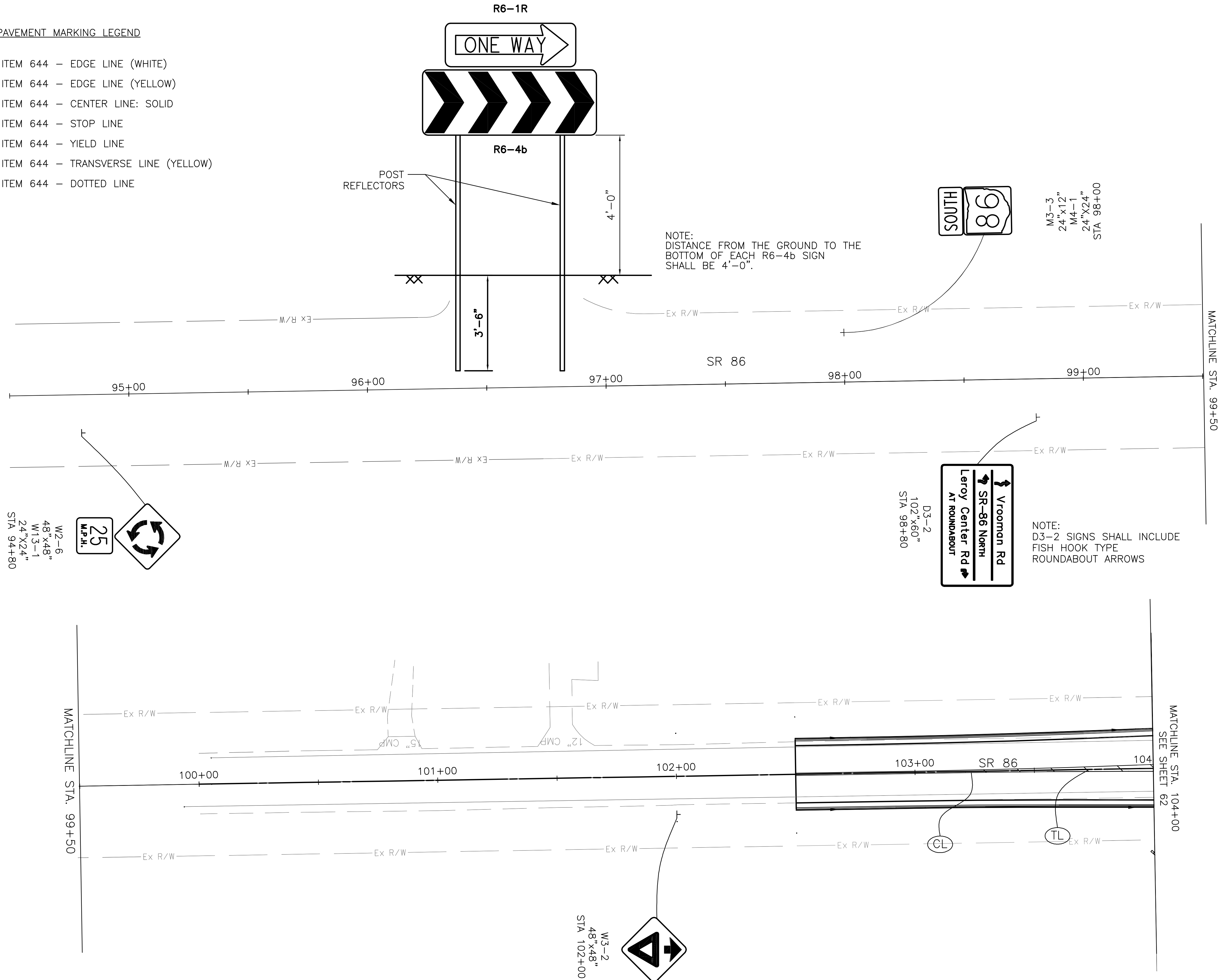


SHEET	STATION		SIDE	644	644	644	644	644	644	644															
				EDGE LINE, WHITE	EDGE LINE, YELLOW	CENTER LINE, SOLID	STOP LINE	DOTTED LINE, 8"	TRANSVERSE LINE, YELLOW	YIELD LINE															
				FT	FT	FT	FT	FT	FT	FT															
	102+50	104+00	CL			300																			
	103+50	104+00	CL							5															
	104+00	105+50	LT/RT		300																				
	105+50	105+60	LT/RT									18													
	106+00	106+68	LT/RT		136																				
	106+70	106+80	LT	24																					
	106+70	106+80	RT	22																					
	106+70	106+80	RT					42																	
	*AROUND TRUCK APRON			333																					
	107+80	108+00	LT					43																	
	108+00	108+00	LT									18													
	108+00	108+05	LT	22																					
	108+00	108+05	RT	24																					
	108+00	108+70	LT/RT		140																				
	108+70	109+00	CL			60																			
	108+70	109+00	CL							22															
	109+00	111+90	CL			580																			
	109+00	111+90	CL							48															
	201+00	205+00	CL			800																			
	201+00	205+00	CL							9															
	205+00	205+50	CL			100																			
	205+00	205+50	CL							22															
	205+50	206+05	LT/RT		110																				
	206+00	206+10	LT/RT									18													
	206+10	206+15	LT	17																					
	206+10	206+15	RT	22																					
	206+05	206+10	RT					32																	
	207+35	207+45	LT					36																	
	207+45	207+55	LT/RT									18													
	207+45	208+00	LT/RT		110																				
	208+00	209+00	CL			200																			
	208+00	209+00	CL							68															
	209+00	211+00	CL			400																			
	209+00	211+00	CL							44															
	301+60	302+23	RT	63																					
	301+60	302+80	CL			240																			
	302+80	302+80	RT				18																		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>				<b>527</b>	<b>796</b>	<b>2680</b>																			
				<b>0.25</b>	<b>0.51</b>	<b>18</b>	<b>153</b>	<b>218</b>	<b>72</b>																

<b>PAVEMENT MARKING SUBSUMMARY</b>	<b>LAK-VROOMAN RD</b>								
<table border="1" style="margin: auto;"> <tr> <td style="padding: 2px;">CALCULATED</td> <td style="padding: 2px;">60</td> </tr> <tr> <td style="padding: 2px;">SPR</td> <td style="padding: 2px;">76</td> </tr> <tr> <td style="padding: 2px;">CHECKED</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">SUB</td> <td style="padding: 2px;"></td> </tr> </table>	CALCULATED	60	SPR	76	CHECKED		SUB		
CALCULATED	60								
SPR	76								
CHECKED									
SUB									


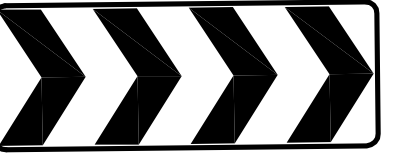
PAVEMENT MARKING LEGEND

- (ELW) ITEM 644 - EDGE LINE (WHITE)
- (ELY) ITEM 644 - EDGE LINE (YELLOW)
- (CL) ITEM 644 - CENTER LINE: SOLID
- (SL) ITEM 644 - STOP LINE
- (YL) ITEM 644 - YIELD LINE
- (TL) ITEM 644 - TRANSVERSE LINE (YELLOW)
- (DL) ITEM 644 - DOTTED LINE

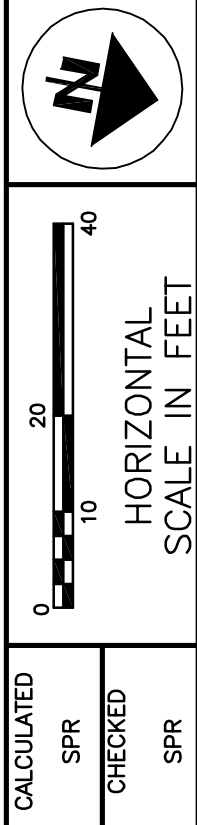
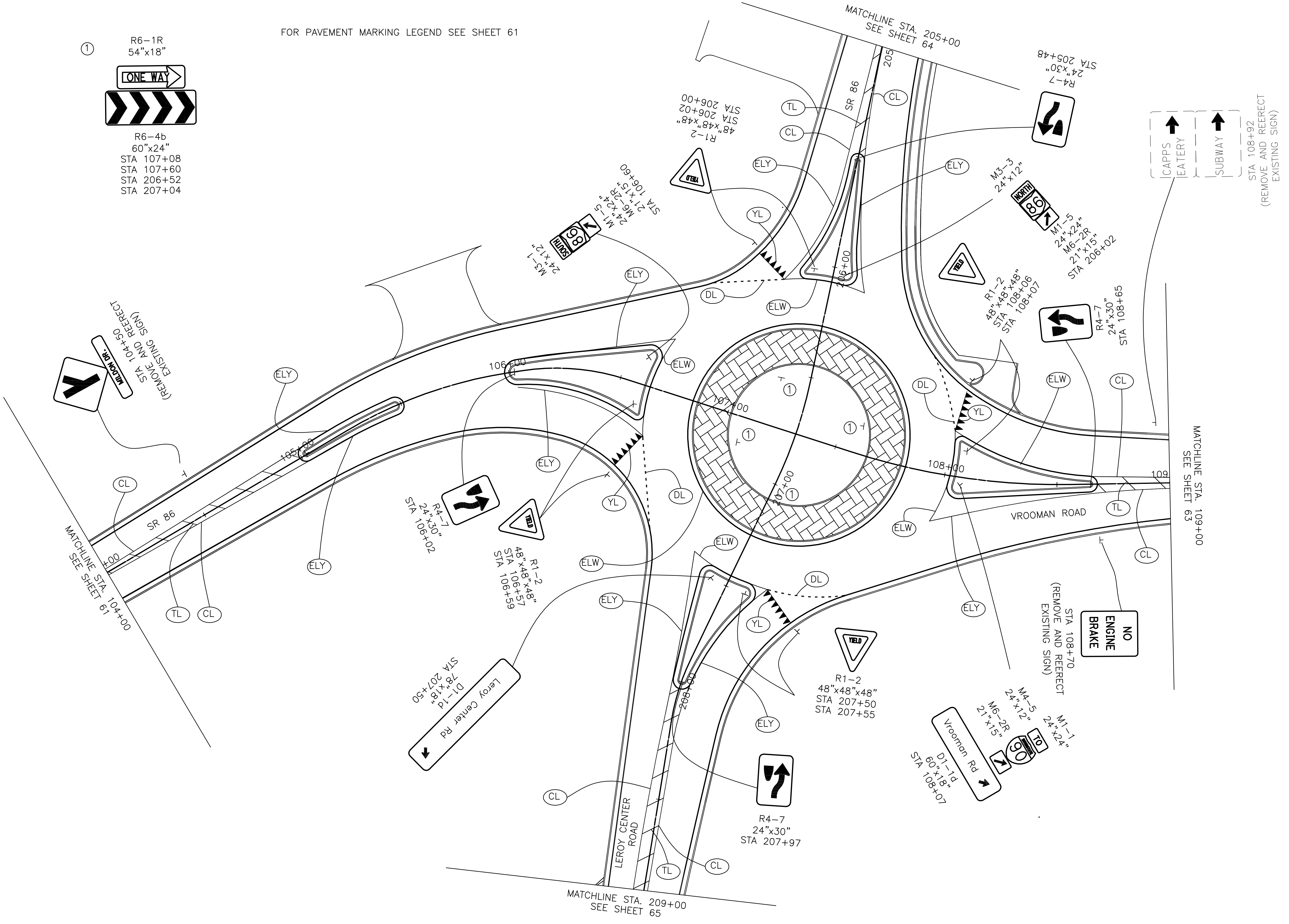


**PROPOSED SIGNING & PAVEMENT MARKING  
STA 94+50 TO STA 104+00**

**LAK-VROOMAN RD**

① R6-1R  
54"x18"  
  
  
R6-4b  
60"x24"  
STA 107+08  
STA 107+60  
STA 206+52  
STA 207+04

FOR PAVEMENT MARKING LEGEND SEE SHEET 61



CALCULATED	SPR
CHECKED	SPR

### PROPOSED SIGNING & PAVEMENT MARKING ROUNDABOUT

### LAK-VROOMAN RD

↑ CAPPS  
↑ EATERY  
↑ SUBWAY  
STA 108+92  
(REMOVE AND RERECT EXISTING SIGN)

NO ENGINE BRAKE  
STA 108+70  
(REMOVE AND RERECT EXISTING SIGN)

R1-2  
48"x48"x48"  
STA 207+50  
STA 207+55

Vrooman Rd  
D1-1d  
60"x18"  
STA 108+07  
M4-5  
24"x12"  
M6-2R  
21"x15"  
M1-1  
24"x24"

R4-7  
24"x30"  
STA 207+97

Leroy Center Rd  
D1-1d  
78"x18"  
STA 207+50

R1-2  
48"x48"x48"  
STA 106+57  
STA 106+59

R4-7  
24"x30"  
STA 106+20

R1-2  
48"x48"x48"  
STA 206+02  
STA 206+04  
M5-1  
24"x12"  
M3-3  
24"x12"  
M1-5  
24"x24"  
M6-2R  
21"x15"  
STA 206+02

R4-7  
24"x30"  
STA 205+48

R1-2  
48"x48"x48"  
STA 108+06  
STA 108+07  
M3-3  
24"x12"  
M1-5  
24"x24"  
M6-2R  
21"x15"  
STA 206+02

R4-7  
24"x30"  
STA 108+65

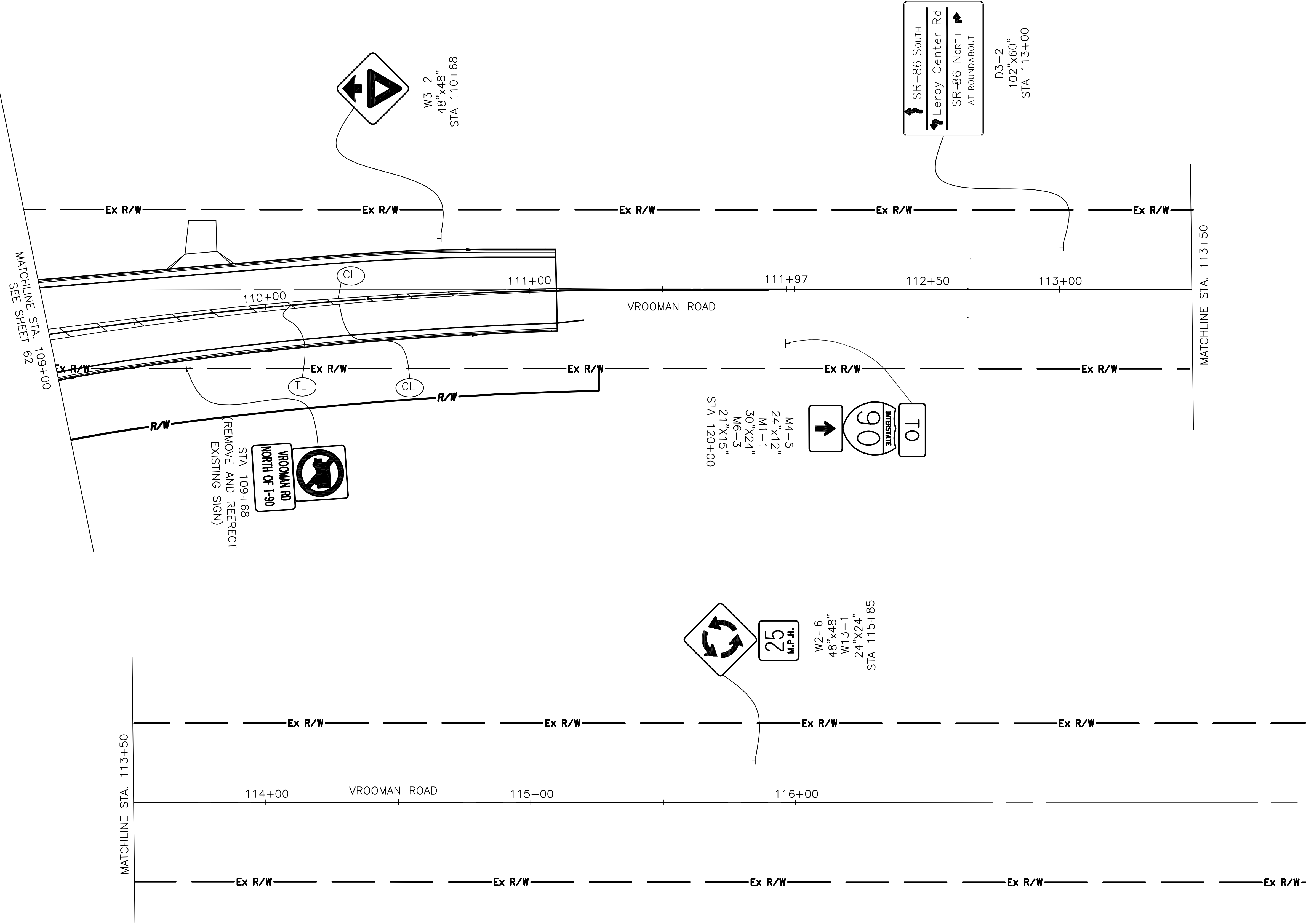
MATCHLINE STA. 109+00  
SEE SHEET 63

MATCHLINE STA. 205+00  
SEE SHEET 64

MATCHLINE STA. 209+00  
SEE SHEET 65

MATCHLINE STA. 104+00  
SEE SHEET 61

FOR PAVEMENT MARKING LEGEND SEE SHEET 61



W3-2  
48"x48"  
STA 110+68

SR-86 South  
Leroy Center Rd  
SR-86 North  
AT ROUNDABOUT  
D3-2  
102"x60"  
STA 113+00

VRROOMAN RD  
NORTH OF I-90  
STA 109+68  
(REMOVE AND REERECT  
EXISTING SIGN)

M4-5  
24"x12"  
M1-1  
30"x24"  
M6-3  
21"x15"  
STA 120+00

W2-6  
48"x48"  
W13-1  
24"x24"  
STA 115+85

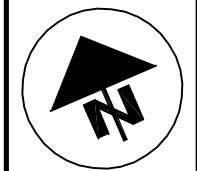
25  
M.P.H.



CALCULATED	SPR
CHECKED	SPR

**PROPOSED SIGNING & PAVEMENT MARKING  
STA 109+00 TO STA 116+00**

**LAK-VRROOMAN RD**

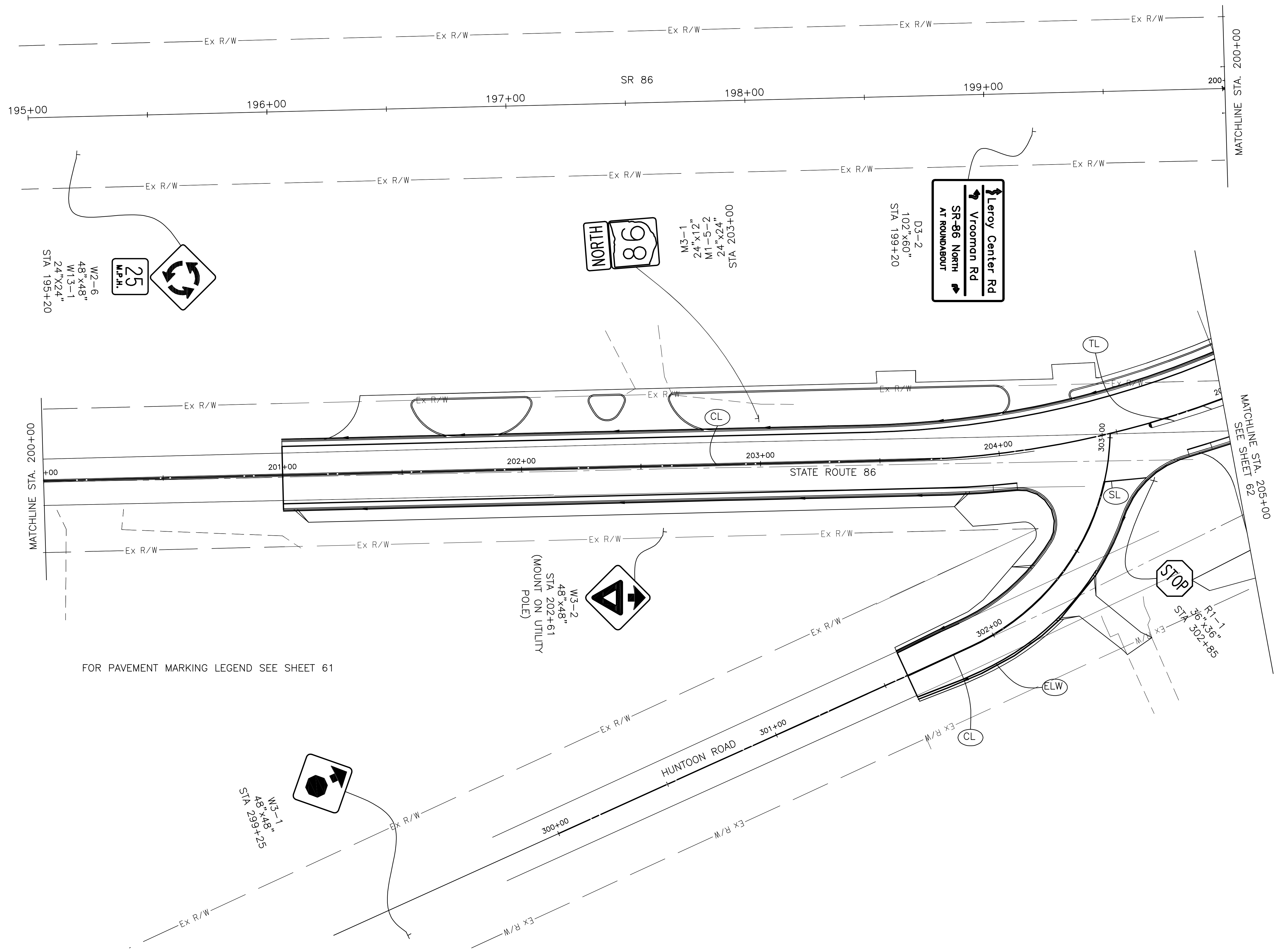


CALCULATED  
SPR  
CHECKED  
SPR

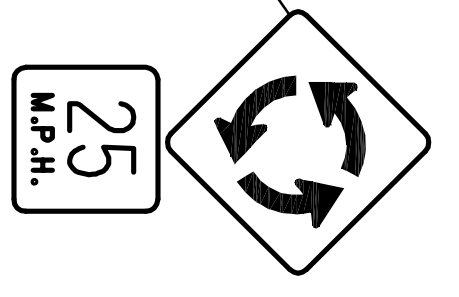
# PROPOSED SIGNING & PAVEMENT MARKING STA 195+00 TO STA 205+00

## LAK-VROOMAN RD

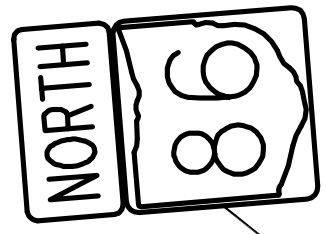
64  
76



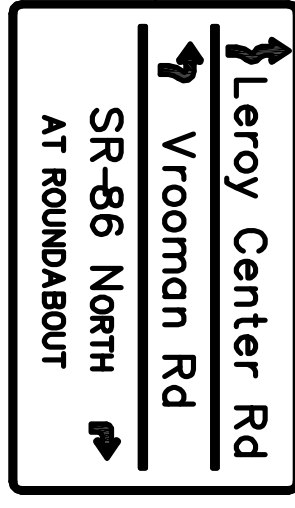
W2-6  
48"x48"  
W13-1  
24"x24"  
STA 195+20



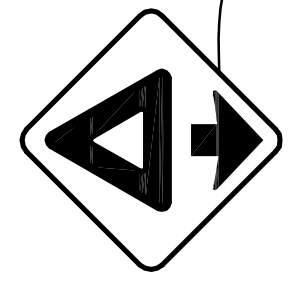
M3-1  
24"x12"  
M1-5-2  
24"x24"  
STA 203+00



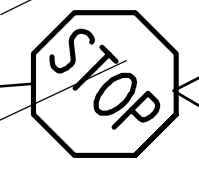
D3-2  
102"x60"  
STA 199+20



W3-2  
48"x48"  
STA 202+61  
(MOUNT ON UTILITY  
POLE)

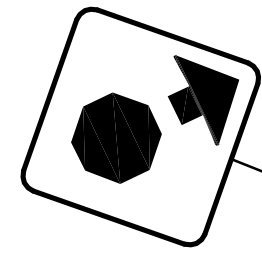


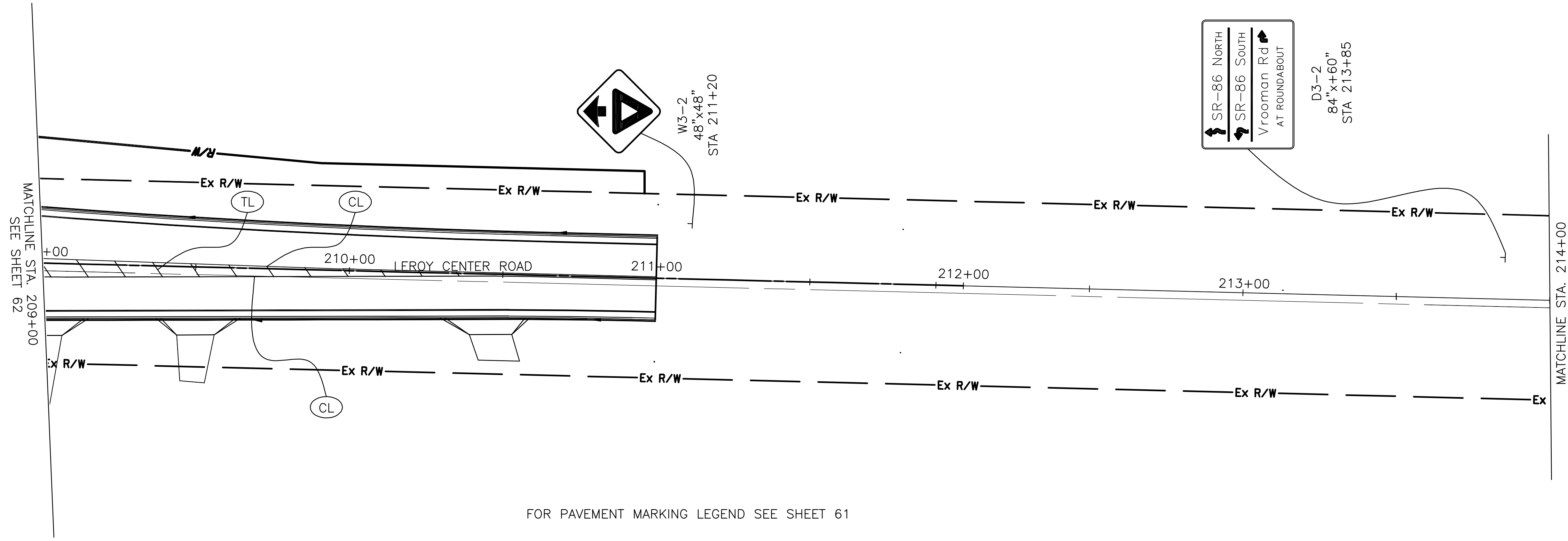
R1-1  
36"x36"  
STA 302+85



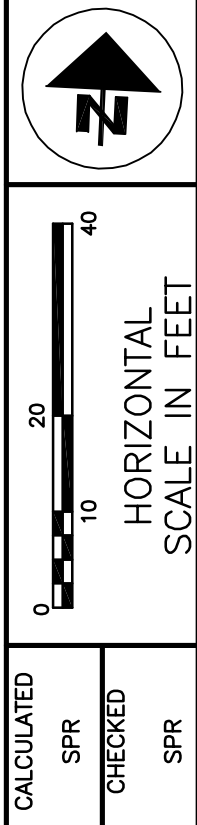
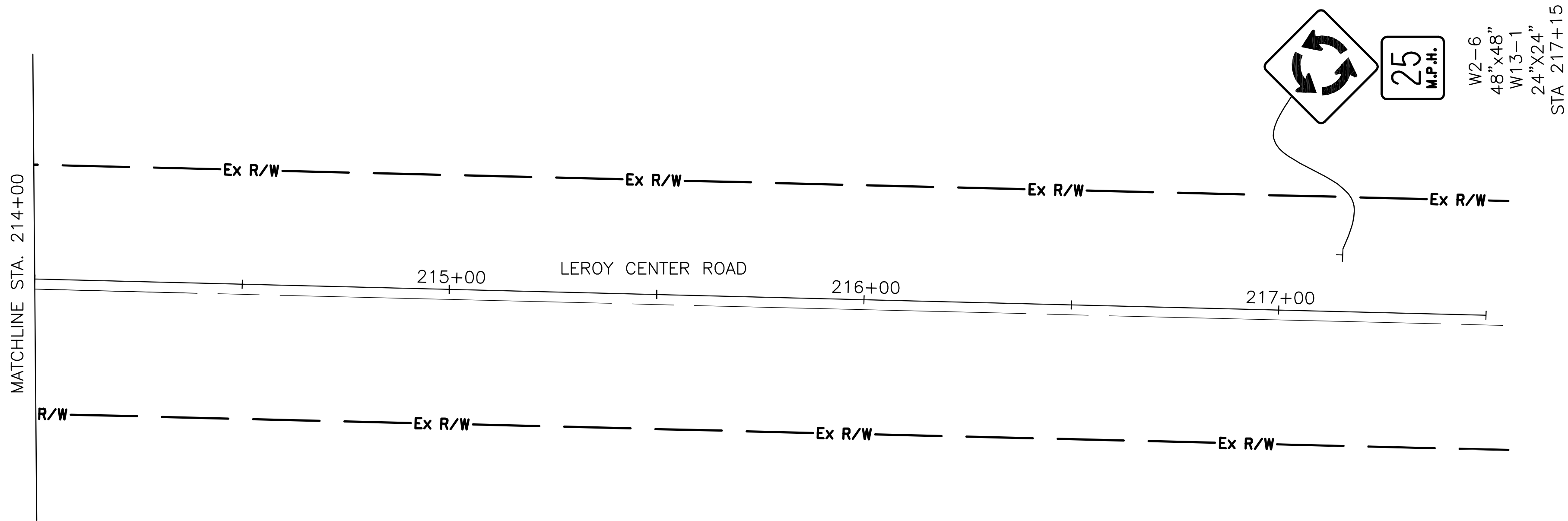
FOR PAVEMENT MARKING LEGEND SEE SHEET 61

W3-1  
48"x48"  
STA 299+25

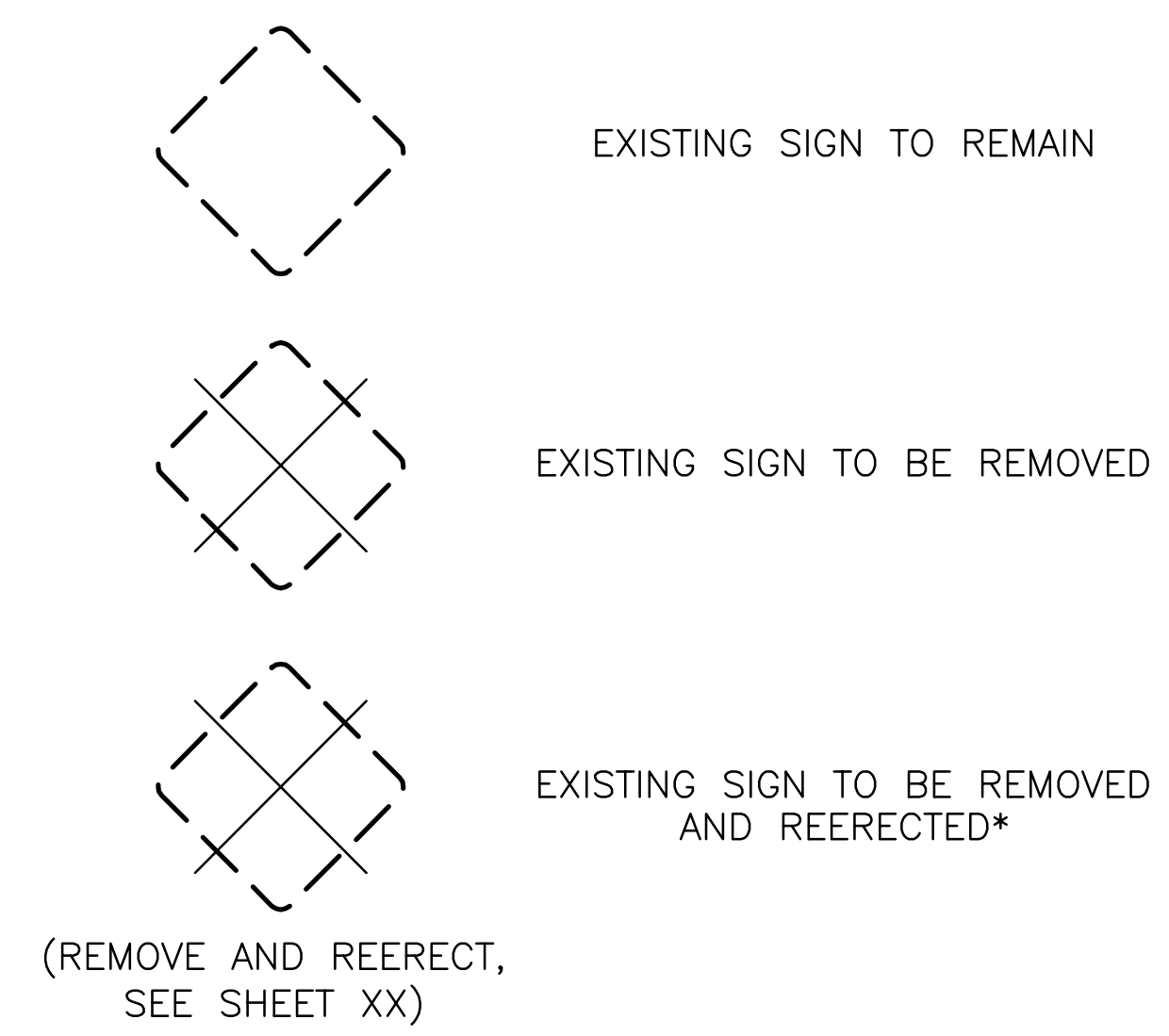
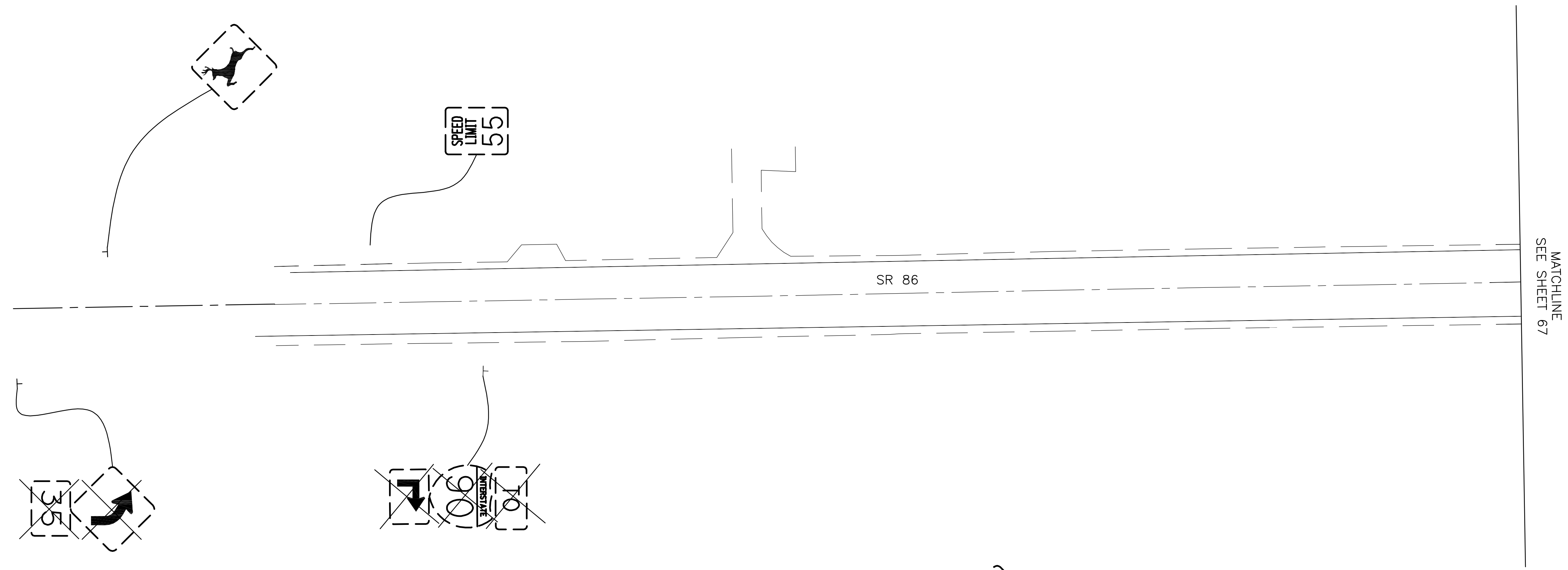




FOR PAVEMENT MARKING LEGEND SEE SHEET 61



**PROPOSED SIGNING & PAVEMENT MARKING  
STA 209+00 TO STA 217+50**



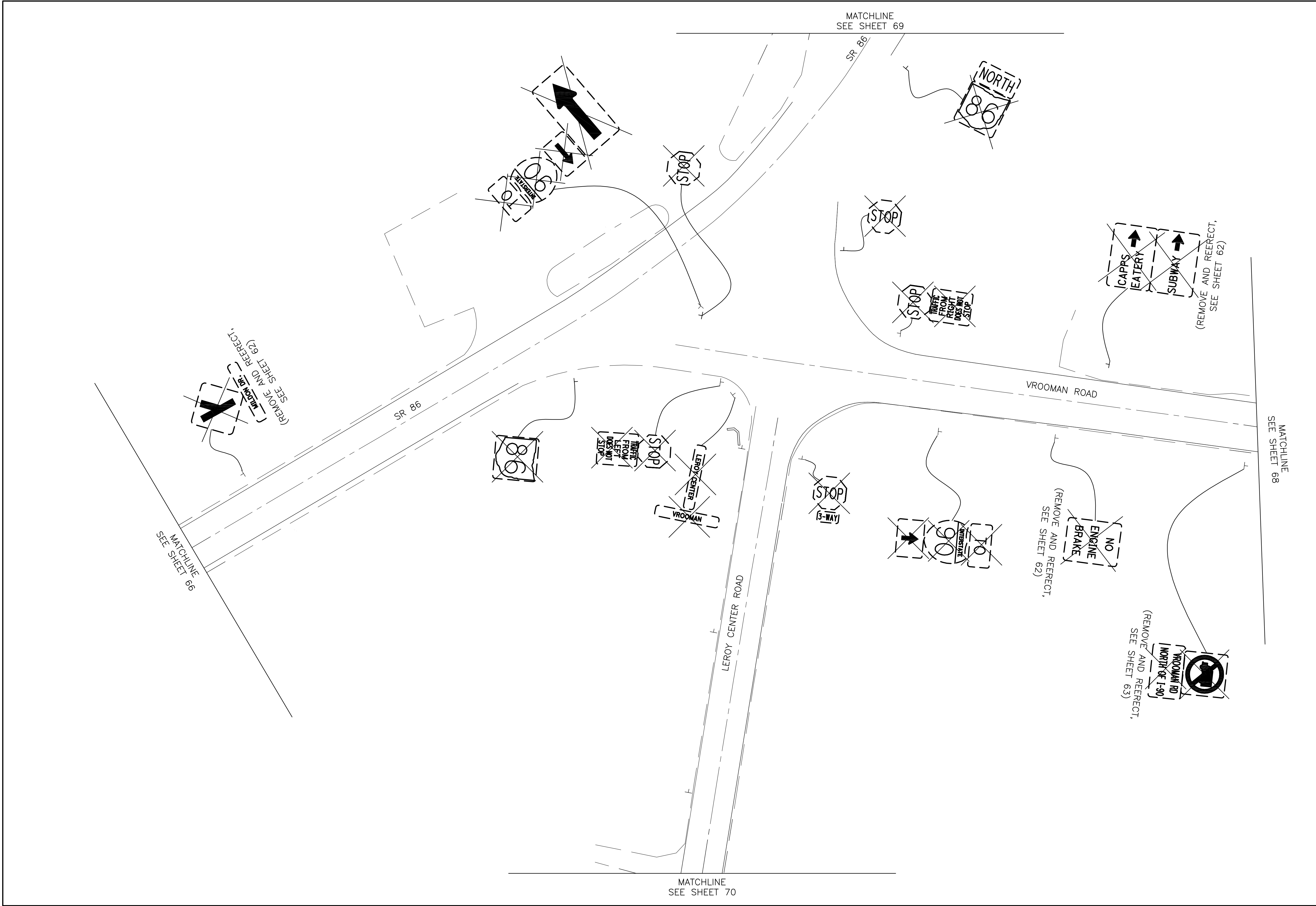
\* ALL SIGNS REMOVED AND REERECTED WILL HAVE NEW SIGN POSTS INSTALLED.  
 THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:  
 ITEM 630 - GROUND MOUNTED SUPPORT, NO. 3 POST 60 FEET



CALCULATED	CHECKED
SPR	SPR

**EXISTING SIGNING & PAVEMENT MARKING**  
**SR 86**

**LAK-VROOMAN RD**



CALCULATED  
SPR  
CHECKED  
SPR

0 10 20 40  
HORIZONTAL  
SCALE IN FEET

**EXISTING SIGNING & PAVEMENT MARKING  
VROOMAN ROAD SR 86 INTERSECTION**

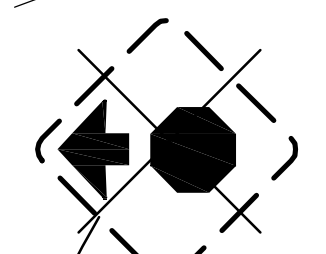
**LAK-VROOMAN RD**

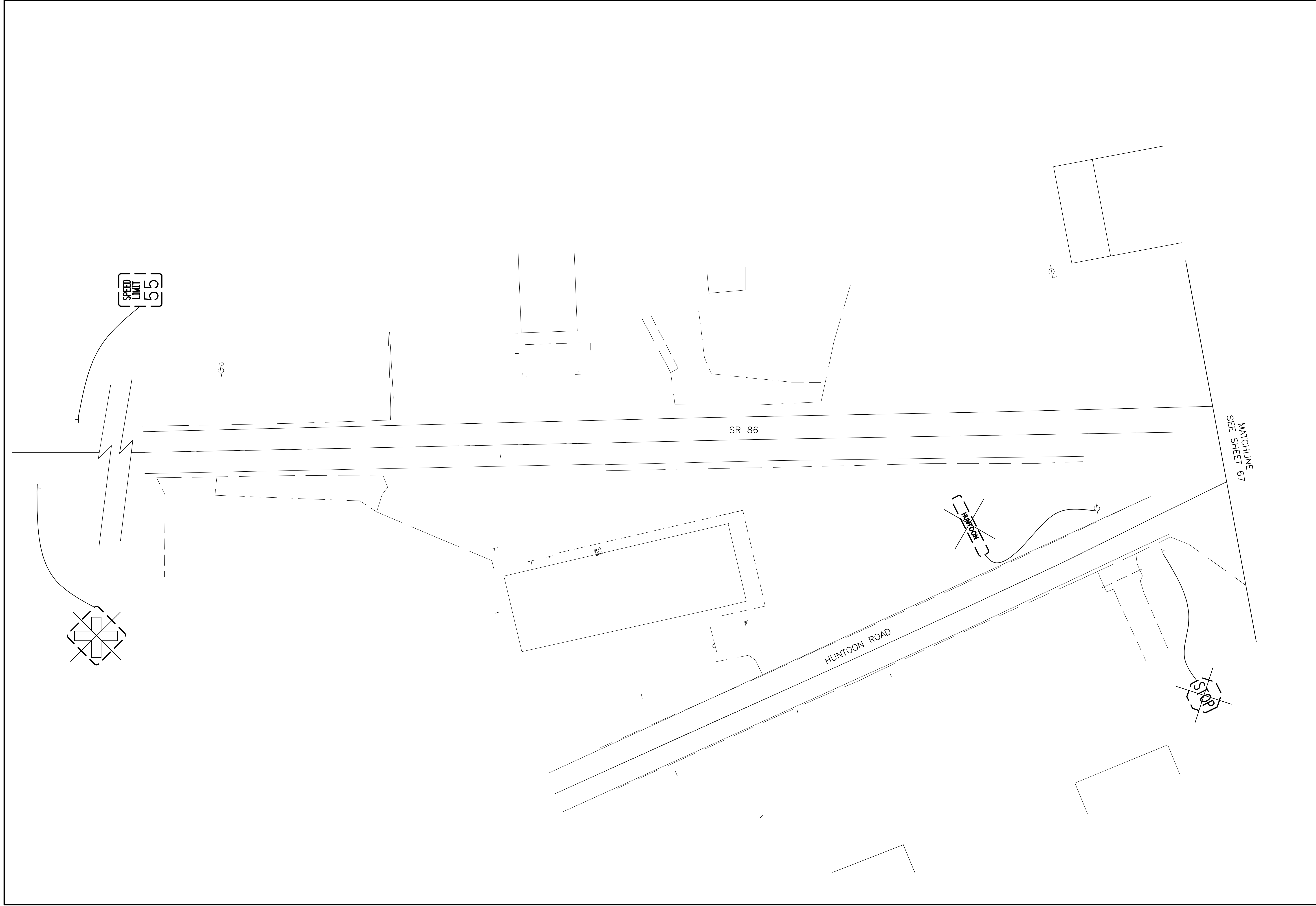


MATCHLINE  
SEE SHEET 67

VROOMAN ROAD

SPEED  
LIMIT  
40

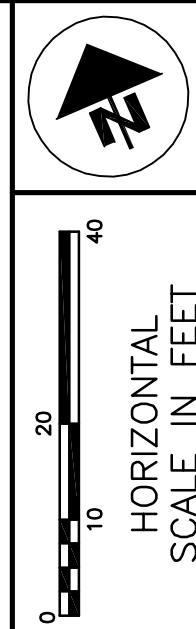


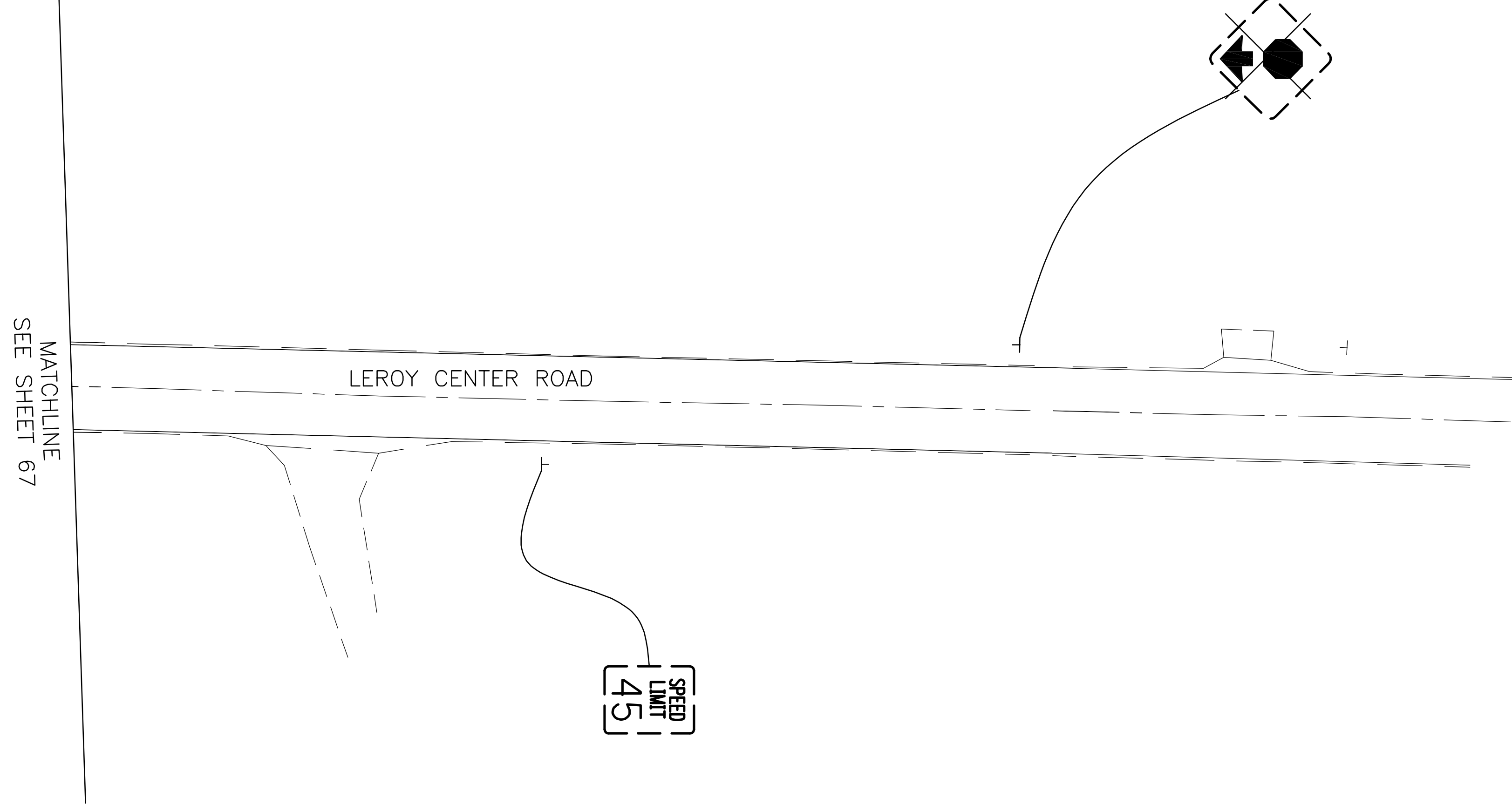


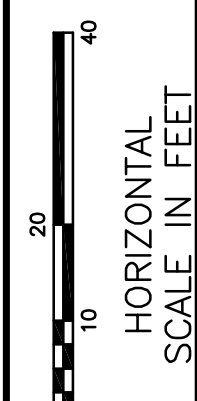
CALCULATED	CHECKED
SPR	SPR

**EXISTING SIGNING & PAVEMENT MARKING  
SR-86 & HUNTOON ROAD**

**LAK-VROOMAN RD**







CALCULATED  
JMJZ  
CHECKED  
EWP

**ROUNDABOUT LIGHTING PLAN  
GENERAL NOTES**

**LAK-VROOMAN RD**

**202, LUMINAIRE REMOVED**

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LUMINAIRE. THE LUMINAIRE SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF OF THE PROJECT SITE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 202, "LUMINAIRE REMOVED" FOR EACH LUMINAIRE REMOVED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

**202, DISCONNECT CIRCUIT, AS PER PLAN**

THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER. THIS ITEM OF WORK SHALL CONSIST OF THE DISCONNECTION OF AN EXISTING LIGHT CIRCUIT AT A PULL BOX OR TRANSFORMER BASE.

DISCONNECTION AT A PULL BOX SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL SPLICE KITS. ANY CABLE THAT IS TO BE ABANDONED SHALL BE TERMINATED FROM THE PULL BOX SO THAT NO CABLE IS LEFT IN THE BOX.

DISCONNECTION AT A TRANSFORMER BASE SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL CONNECTOR KITS. ALL DUCT-CABLE NOT TO BE REUSED SHALL BE REMOVED FROM THE TRANSFORMER BASE AND THE EXISTING CONDUIT IN THE FOUNDATION SHALL BE CLEANED OF ALL CABLE AND DEBRIS SO THAT THE NEW DUCT-CABLE CAN BE INSTALLED. ALL EXISTING CABLE TO REMAIN ACTIVE SHALL BE CUT IN A MANNER SO THAT THERE IS SUFFICIENT CABLE LEFT FOR RE-CONNECTION.

THOSE WIRES THAT ARE TO REMAIN ON ACTIVE CIRCUITS SHALL HAVE A WATER-RESISTANT SEAL AT THE CUT END. THE WATER-RESISTANT SEAL SHALL BE ACCOMPLISHED BY PLUGGING THE DEACTIVATED PORT OF AN EXISTING CONNECTOR KIT OR BY INSTALLING A CABLE SPLICE KIT ON THE CUT END OF THE CABLE.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE UNDER CMS ITEM 202, "DISCONNECT EXISTING CIRCUIT, AS PER PLAN" AT EACH LOCATION WHERE DISCONNECTION IS REQUIRED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

**LAMPS**

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX," OSRAM SYLVANIA "LUMALUX," PHILIPS "CERAMALUX," OR EQUAL APPROVED BY THE ENGINEER.

**UNDERDRAINS FOR PULL BOXES**

REFERENCE IS MADE TO THE STANDARD DRAWINGS FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET. AN ANIMAL GUARD SHALL BE INCLUDED AT THE OUTLET END OF THE DRAIN. AN ESTIMATED QUANTITY OF CMS ITEM 603, "4" CONDUIT, TYPE E" IS INCLUDED AT EACH PULL BOX FOR THIS PURPOSE.

**LIGHTING, MISC.: WEATHERPROOF RECEPTACLE**

RECEPTACLE SHALL BE INSTALLED AS SHOWN IN THE RECEPTACLE DETAIL ON SHEET 73. RECEPTACLE SHALL BE A GFCI WEATHERPROOF OUTLET IN A WATER TIGHT WHILE IN OPERATION COVER.

THE EACH BID PRICE FOR "LIGHTING, MISC.: WEATHERPROOF RECEPTACLE" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY INCLUDING BUT NOT LIMITED TO THE RECEPTACLE, HOUSING, CONCRETE BASE AND CONDUIT REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

**625, POWER SERVICE, AS PER PLAN**

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING IS ADDED.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

THE ILLUMINATING COMPANY  
6896 MILLER ROAD  
BRECKSVILLE, OHIO 44141  
440-717-6845  
MARK ROBINSON

THE ENGINEER SHALL ENSURE THAT EACH POWER SERVICE ELEC-TRICAL ENERGY ACCOUNT IS IN THE NAME OF AND THAT THE BILLING ADDRESS IS TO THE MAINTAINING AGENCY NOTED IN THE PLANS. THIS SHALL BE DONE NOT ONLY FOR EACH NEW POWER SERVICE ESTABLISHED BY THIS PROJECT BUT ALSO FOR EACH EXISTING POWER SERVICE, SINCE THERE MAY BE A RE-ASSIGNMENT OF THE RESPONSIBILITY FOR AN EXISTING SERVICE AS A RESULT OF THE WORK PERFORMED BY THIS PROJECT.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, "POWER SERVICE, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

**PADLOCKS AND KEYS**

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH CMS 631.06. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

**625, LUMINAIRE, CONVENTIONAL, AS PER PLAN**

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE AS FOLLOWS:

LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE 250 WATT METAL HALIDE, TYPE III IES DISTRIBUTION, FOR MOUNTING ON ROUND POLE AND SHALL BE COOPER LIGHTING AVM25P-3S-2-MA1053 (WITH HOUSE SIDE SHIELD WHERE INDICATED ON PLANS), OR EQUAL AS APPROVED BY THE ENGINEER. COLOR OF LUMINAIRE AND POLE SHALL BE DETERMINED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, "LUMINAIRE, CONVENTIONAL, AS PER PLAN, 250W MH, TYPE III" FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

**SPECIAL, MAINTAIN EXISTING LIGHTING**

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWNED UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RE-CONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

REFERENCE NO.	ROADWAY	SIDE	STATION TO STATION		603	625			625	625	625	625	625	625	625	625	625	625	625	625	625	625	625			
					4" CONDUIT, YYPE E	CONNECTION, FUSED PULL APART			LIGHT POLE, CONVENTIONAL, A10B30	LIGHT POLE FOUNDATION, 24" X 8'	POWER SERVICE, AS PER PLAN	NO. 8 AWG 600 VOLT DISTRIBUTION CABLE	NO. 10 AWG POLE AND BRACKET CABLE	CONDUIT, 2" , 725.05	CONDUIT, 3" , 725.04	LUMINAIRE, CONVENTIONAL, TYPE III, 250W MH, 240 VOLT	GLARE SHIELD	TRENCH	PLASTIC CAUTION TAPE	PULL BOX, 725.08, 18"	LIGHTING, MISC.: WEATHERPROOF RECEPTACLE	GROUND ROD	LUMINARIE REMOVED	DISCONNECT CIRCUIT, AS PER PLAN		
					FT	EA			EA	EA	EA	FT	FT	FT		FT	EA	EA	FT	FT	EA		EA	EA	EA	EA
L-1	SR 86/VROOMAN	LT	206+17.96	108+84.17		2			1	1		345	90	105		1			105	105			1			
L-2	VROOMAN	LT	108+84.17	108+88.93	20	2			1	1		45	90	10		1	1		10	10	1			1		
L-3	NOT USED																									
L-4	VROOMAN	LT/RT	108+84.17	108+90.51								195				55			55	55						
L-5	VROOMAN/SR 86	RT	108+90.51	207+18.31	20							573		181					181	181	1					
L-6	SR 86	LT	207+18.31	207+28.31		2			1	1		60	90	15				1	15	15				1		
L-7	SR 86	LT	206+93.87	207+28.31	20							195				55			55	55	1					
L-8	SR 86/LEROY CENTER	LT	207+28.31	208+42.43	20							762		117					117	117	1		1			
L-9	LEROY CENTER	LT	208+42.83	208+42.43							1	270		20					20	20						
L-10	LEROY CENTER	LT/RT	208+42.43	208+41.61	20							513				47			47	47	1					
L-11	SR 86	RT	204+07.89	204+12.96		2			1	1		48	90	6				1	6	6				1		
L-12	SR 86	RT	204+12.96	204+62.45	20							189		53					53	53	1					
L-13	SR 86	RT	204+62.45	205+37.09	20							261		77					77	77	1					
L-14	SR 86	RT	205+37.09	206+14.34		2			1	1		267	90	88				1	88	88				1		
L-15	SR 86	RT	206+14.34	105+55.59		2			1	1		456	90	142				1	142	142				1		
L-16	NOT USED																									
L-17	SR 86/VROOMAN	RT/LT	105+55.59	105+58.17	20							174				48			48	48	1					
L-18	SR 86/VROOMAN	LT	105+58.17	105+70.26	20							63		11				1	11	11	1					
L-19	SR 86/LEROY CENTER	LT	105+70.26	207+47.46		2			1	1		330	90	100				1	1	100	100			1		
L-20	LEROY CENTER	RT	207+47.46	208+41.62		2			1	1		297	90	89				1	1	89	89			1		
L-21	LEROY CENTER	LT	208+41.62	208+45.86	20	2			1	1		45	90	5				1	1	5	5	1		1		
L-22	NOT USED											399		123					123	123						
L-23	SR 86	LT	203+15.35																						1	1
L-24	SR 86	RT	205+39.14																					1	1	
L-25	LEROY CENTER	RT	207+45.70																					1	1	
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					<b>200</b>	<b>18</b>			<b>9</b>	<b>9</b>	<b>1</b>	<b>5487</b>	<b>810</b>	<b>1142</b>		<b>205</b>	<b>9</b>	<b>5</b>	<b>1347</b>	<b>1347</b>	<b>10</b>		<b>1</b>	<b>9</b>	<b>3</b>	<b>3</b>

**LIGHTING PLAN SUBSUMMARY**

CALCULATED  
JWZ  
CHECKED  
EWP

**LAK-VROOMAN RD**

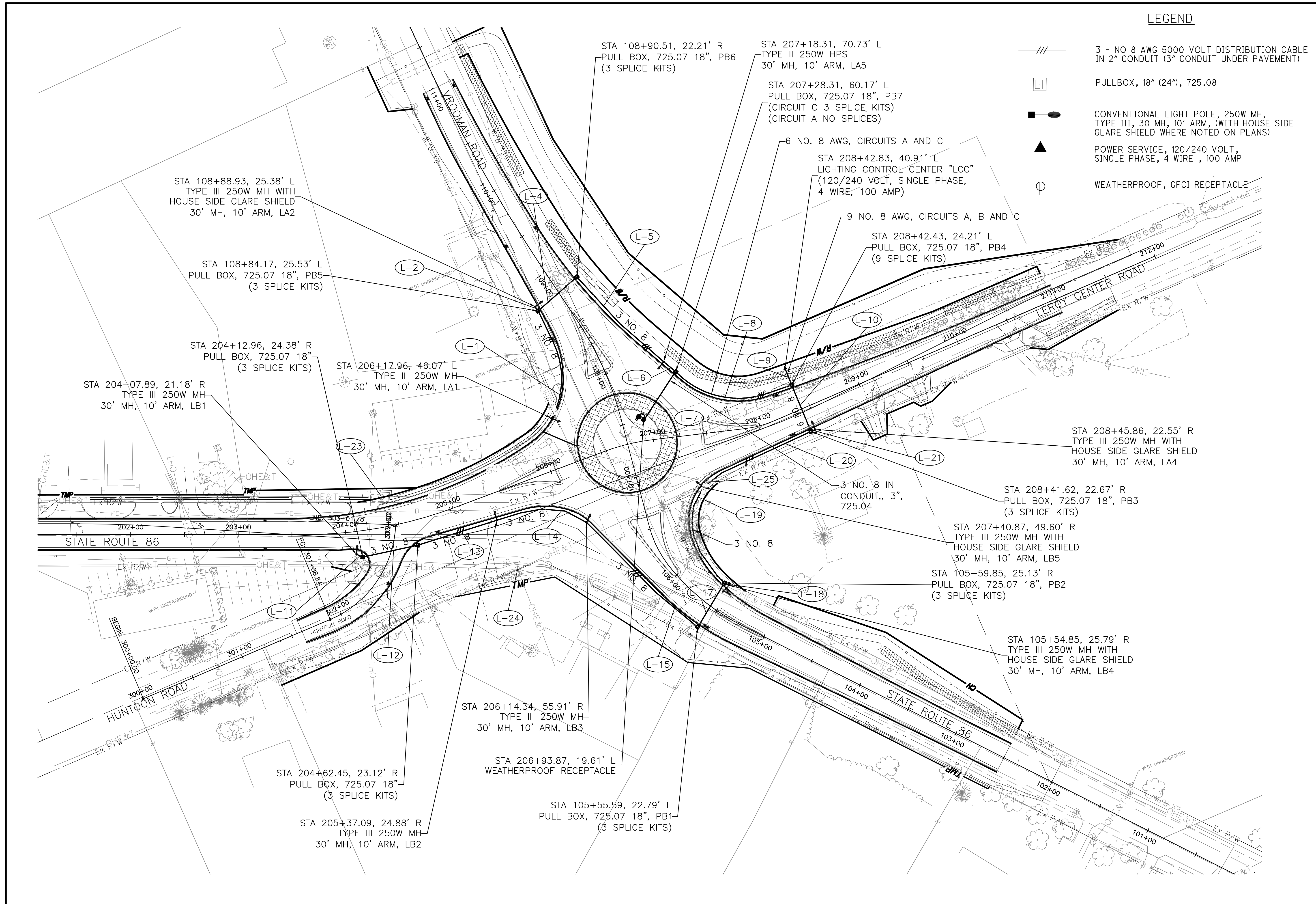
LEGEND

- 3 - NO 8 AWG 5000 VOLT DISTRIBUTION CABLE IN 2" CONDUIT (3" CONDUIT UNDER PAVEMENT)
- PULLBOX, 18" (24"), 725.08
- CONVENTIONAL LIGHT POLE, 250W MH, TYPE III, 30 MH, 10' ARM, (WITH HOUSE SIDE GLARE SHIELD WHERE NOTED ON PLANS)
- POWER SERVICE, 120/240 VOLT, SINGLE PHASE, 4 WIRE, 100 AMP
- WEATHERPROOF, GFCI RECEPTACLE



ROUNDABOUT LIGHTING PLAN

LAK-VROOMAN RD



STA 108+88.93, 25.38' L  
TYPE III 250W MH WITH  
HOUSE SIDE GLARE SHIELD  
30' MH, 10' ARM, LA2

STA 108+84.17, 25.53' L  
PULL BOX, 725.07 18", PB5  
(3 SPLICE KITS)

STA 204+12.96, 24.38' R  
PULL BOX, 725.07 18"  
(3 SPLICE KITS)

STA 204+07.89, 21.18' R  
TYPE III 250W MH  
30' MH, 10' ARM, LB1

STA 206+17.96, 46.07' L  
TYPE III 250W MH  
30' MH, 10' ARM, LA1

STA 108+90.51, 22.21' R  
PULL BOX, 725.07 18", PB6  
(3 SPLICE KITS)

STA 207+18.31, 70.73' L  
TYPE II 250W HPS  
30' MH, 10' ARM, LA5  
  
STA 207+28.31, 60.17' L  
PULL BOX, 725.07 18", PB7  
(CIRCUIT C 3 SPLICE KITS)  
(CIRCUIT A NO SPLICES)

6 NO. 8 AWG, CIRCUITS A AND C  
STA 208+42.83, 40.91' L  
LIGHTING CONTROL CENTER "LCC"  
(120/240 VOLT, SINGLE PHASE,  
4 WIRE, 100 AMP)

9 NO. 8 AWG, CIRCUITS A, B AND C  
STA 208+42.43, 24.21' L  
PULL BOX, 725.07 18", PB4  
(9 SPLICE KITS)

STA 208+45.86, 22.55' R  
TYPE III 250W MH WITH  
HOUSE SIDE GLARE SHIELD  
30' MH, 10' ARM, LA4

STA 208+41.62, 22.67' R  
PULL BOX, 725.07 18", PB3  
(3 SPLICE KITS)

STA 207+40.87, 49.60' R  
TYPE III 250W MH WITH  
HOUSE SIDE GLARE SHIELD  
30' MH, 10' ARM, LB5

STA 105+59.85, 25.13' R  
PULL BOX, 725.07 18", PB2  
(3 SPLICE KITS)

STA 105+54.85, 25.79' R  
TYPE III 250W MH WITH  
HOUSE SIDE GLARE SHIELD  
30' MH, 10' ARM, LB4

STA 206+14.34, 55.91' R  
TYPE III 250W MH  
30' MH, 10' ARM, LB3

STA 206+93.87, 19.61' L  
WEATHERPROOF RECEPTACLE

STA 105+55.59, 22.79' L  
PULL BOX, 725.07 18", PB1  
(3 SPLICE KITS)

STA 204+62.45, 23.12' R  
PULL BOX, 725.07 18"  
(3 SPLICE KITS)

STA 205+37.09, 24.88' R  
TYPE III 250W MH  
30' MH, 10' ARM, LB2

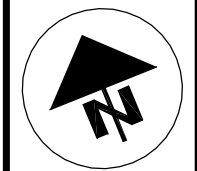
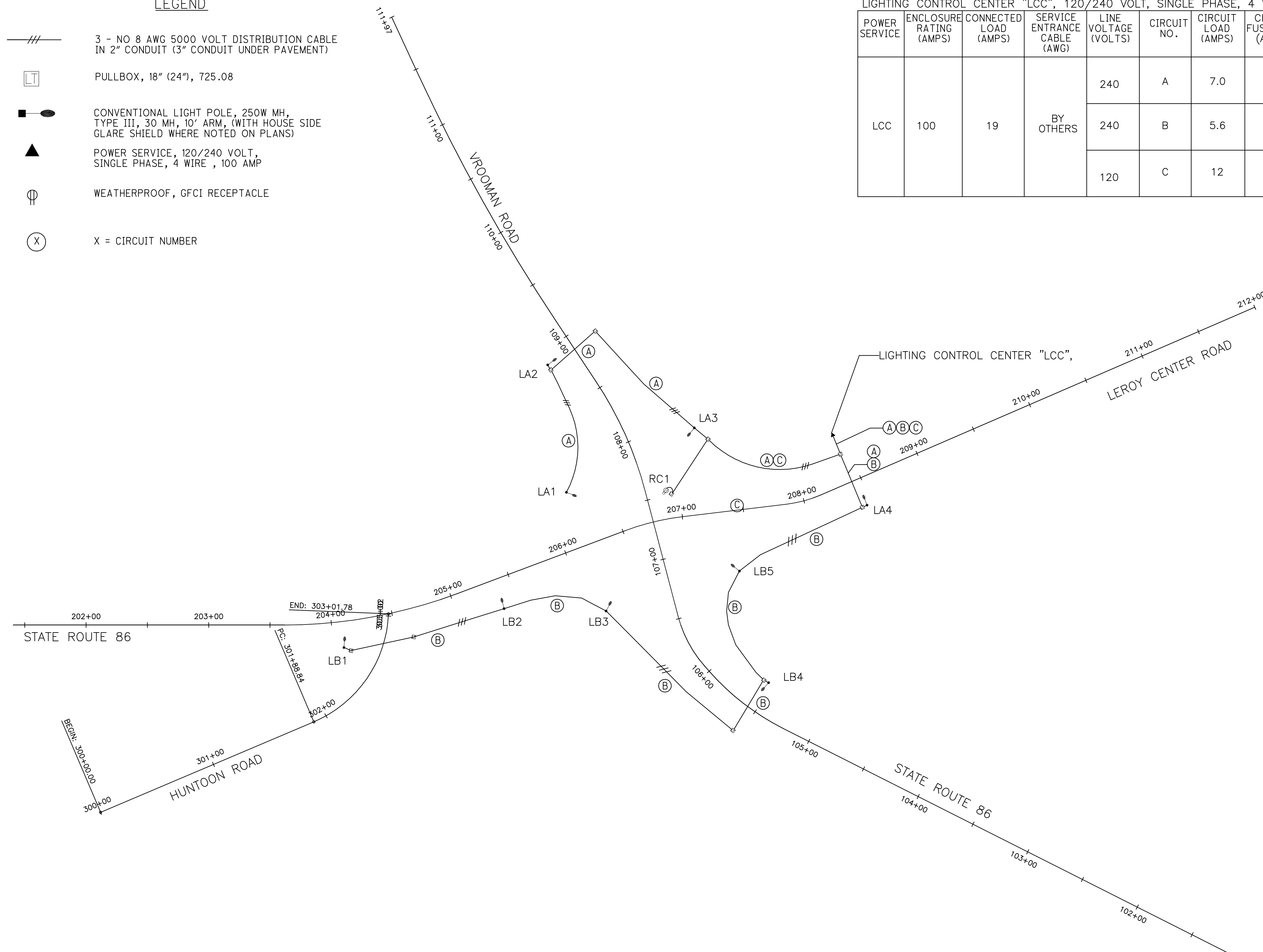
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**LEGEND**

- /// 3 - NO 8 AWG 5000 VOLT DISTRIBUTION CABLE IN 2" CONDUIT (3" CONDUIT UNDER PAVEMENT)
- LT PULLBOX, 18" (24"), 725.08
- CONVENTIONAL LIGHT POLE, 250W MH, TYPE III, 30 MH, 10' ARM, (WITH HOUSE SIDE GLARE SHIELD WHERE NOTED ON PLANS)
- ▲ POWER SERVICE, 120/240 VOLT, SINGLE PHASE, 4 WIRE, 100 AMP
- ⊕ WEATHERPROOF, GFCI RECEPTACLE
- (X) X = CIRCUIT NUMBER

LIGHTING CONTROL CENTER "LCC", 120/240 VOLT, SINGLE PHASE, 4 WIRE, 100 AMP

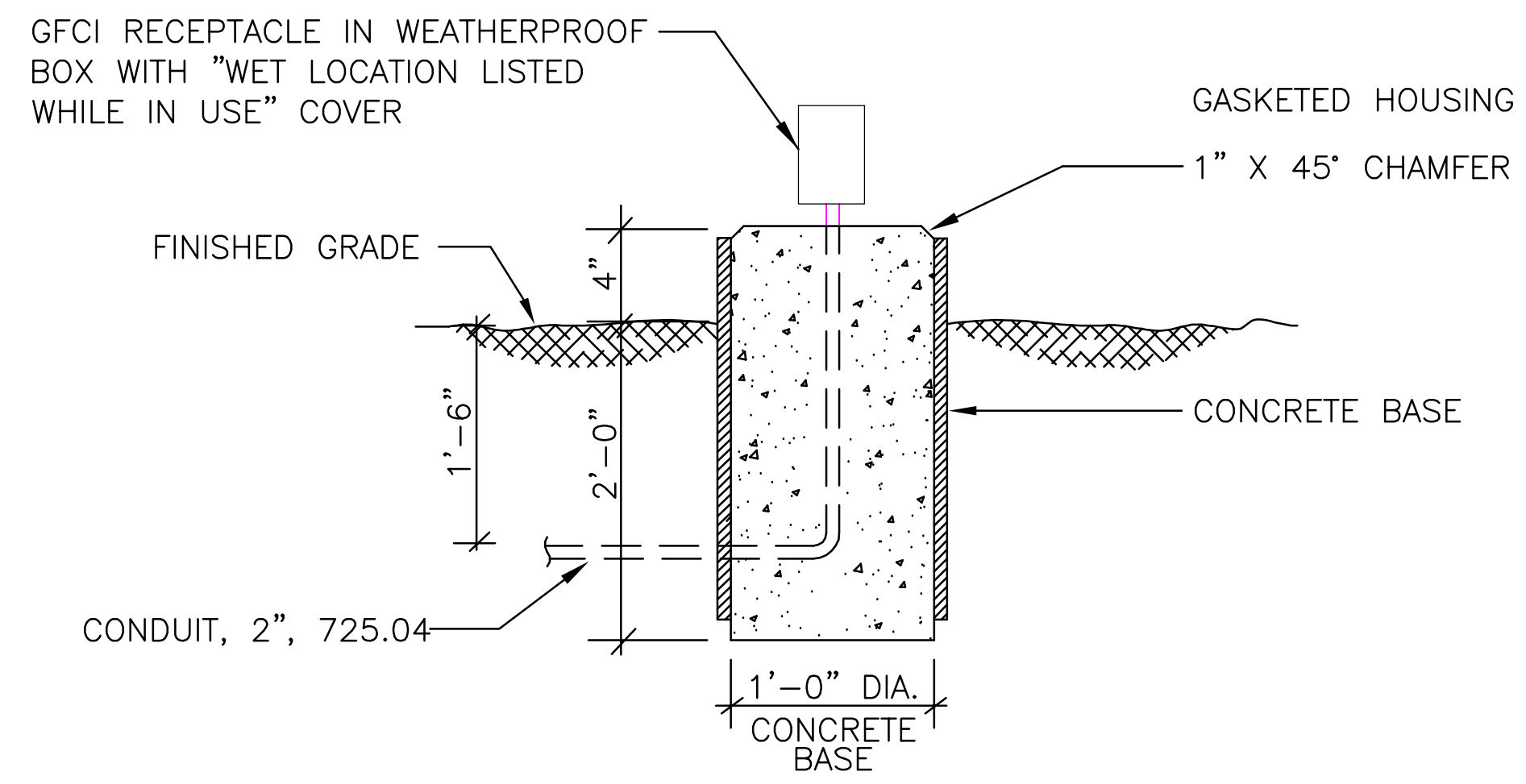
POWER SERVICE	ENCLOSURE RATING (AMPS)	CONNECTED LOAD (AMPS)	SERVICE ENTRANCE CABLE (AWG)	LINE VOLTAGE (VOLTS)	CIRCUIT NO.	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AMPS)	MAINTAINING AGENCY
LCC	100	19	BY OTHERS	240	A	7.0	20	8	LAKE COUNTY
				240	B	5.6	20	8	
				120	C	12	20	8	



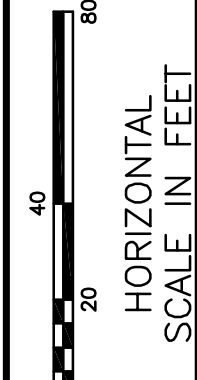
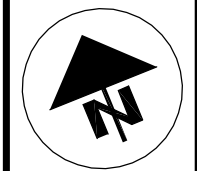
CALCULATED: JIMZ  
 CHECKED: EWP

**LIGHTING CIRCUIT DIAGRAM**

**LAK-VROOMAN RD**



**RECEPTACLE DETAIL**  
SCALE: NONE



CALCULATED	JMZ	CHECKED	EWP
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**LIGHTING DETAILS**

**LAK-VROOMAN RD**



**BASIS OF BEARINGS**

BEARINGS ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, OHIO NORTH ZONE, NAD 83(CORS)

**BASIS OF EX. C/L OF R/W & R/W WIDTH**

THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED FROM COUNTY R/W PLANS VROOMAN ROAD F.B. 189, PG. 73, 1927 SURVEY OF GRIDLEY LAND (C.C. HADDEN), 1928 SURVEY FOR GEO POTTS (C.C. HADDEN), 1933 SURVEY FOR NORMAN GRIDLEY (L.B. SOUTH) COUNTY SURVEY FIELD BOOK 217, PG. 13, AND DEEDS AS LISTED IN THE SUMMARY, TAX MAPS, PLATS, AND EXISTING MONUMENTATION.

**LAK-VROOMAN ROAD**  
TOWNSHIP OF LEROY, COUNTY OF LAKE AND STATE OF OHIO  
BEING PART OF LOTS 19, 20, 45, AND 46, TOWNSHIP 10 NORTH, RANGE 7 WEST OF THE CONNECTICUT WESTERN RESERVE

**CENTERLINE MONUMENTS**

PLACEMENT OF ALL MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE CENTERLINE MONUMENT ASSEMBLY BOX(S) AND REFERENCE MONUMENTS WILL BE INSTALLED BY THE HIGHWAY CONTRACTOR AT THE TIME OF CONSTRUCTION. THE IRON PIN AND CAP (WHEN REQUIRED) ARE TO BE INSTALLED BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN ON THIS PLAT REQUIRES PRIOR APPROVAL OF THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR CENTERLINE MONUMENTS, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1 OF THE OHIO DEPARTMENT OF TRANSPORTATION.

THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF PROPOSED RIGHT OF WAY.

CL SURVEY MONUMENTS TO BE SET DURING CONSTRUCTION VROOMAN ROAD AND PAINESVILLE-WARREN RD (S.R. 86)	
STATION	DESIGNATION
100+00.00	P.O.T.
105+23.45	PC
105+99.90	PT
106+05.80	PC
107+57.38	PC
108+55.93	PT
109+15.93	PC
111+41.31	PT
111+96.95	P.O.T.
TOTAL:	10

CL SURVEY MONUMENTS TO BE SET DURING CONSTRUCTION PAINESVILLE-WARREN RD (S.R. 86) AND LEROY CENTER RD	
STATION	DESIGNATION
200+00.00	P.O.T.
203+61.85	PC
204+47.16	Q INTERSECTION
205+05.32	PT
206+51.96	PC
206+75.89	Q INTERSECTION
206+99.77	PT
207+85.91	PC
208+14.78	PT
212+00.00	P.O.T.
TOTAL:	10

CL SURVEY MONUMENTS TO BE SET DURING CONSTRUCTION HUNTOON ROAD	
STATION	DESIGNATION
300+00.00	P.O.T.
301+88.84	PC
TOTAL:	2

**MONUMENT LEGEND**

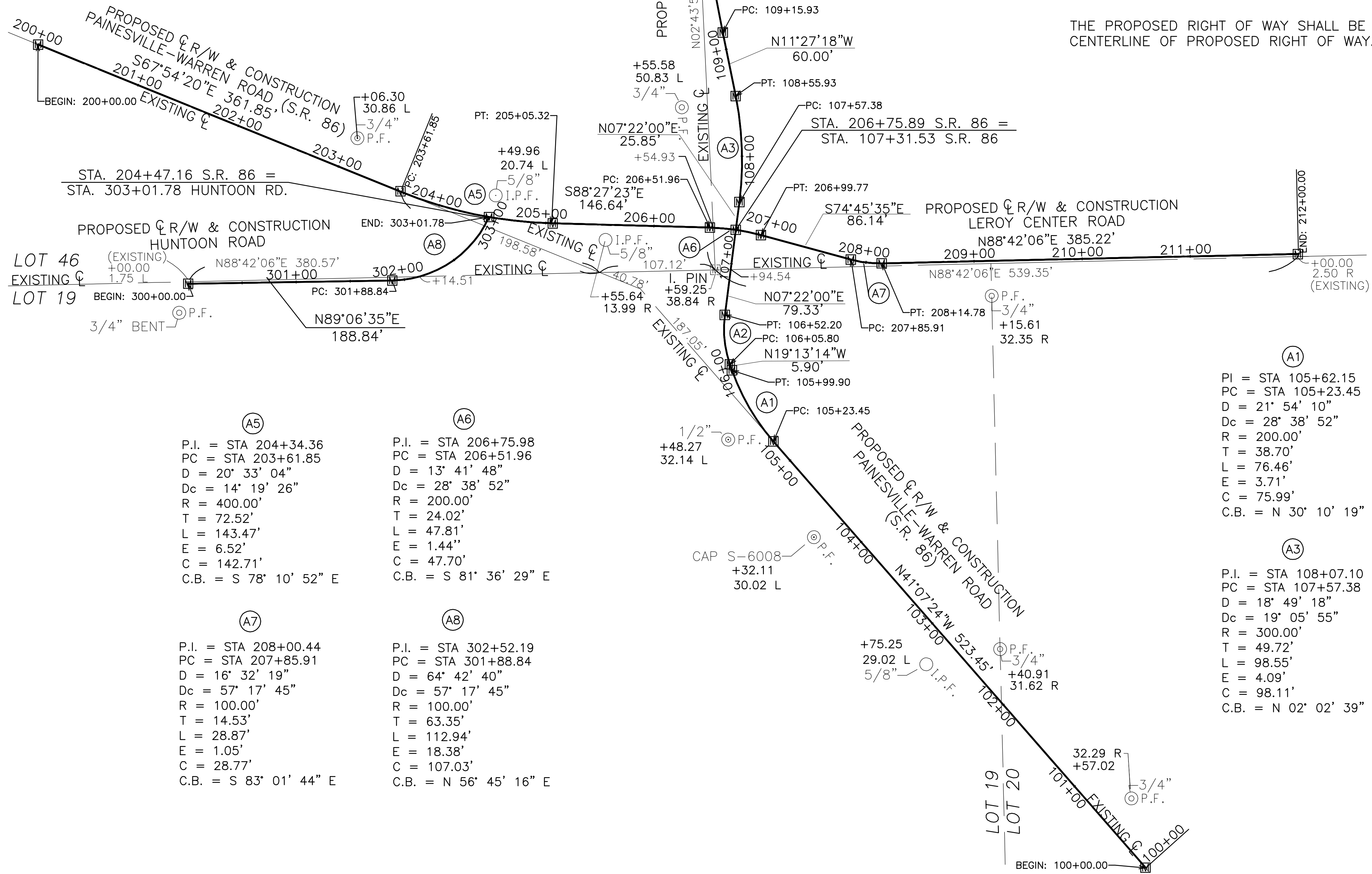
- I.P.F. IRON PIN FOUND
- ⊙ P.F. IRON PIPE FOUND
- MONUMENT FOUND
- I.P.S. 3/4" IRON PIN WITH I.D. CAP SET
- ⊞ STONE FND.
- ⊞ PROPOSED MONUMENT BOX
- ⊞ EXISTING MONUMENT BOX

RECEIVED \_\_\_\_\_, 20\_\_\_\_  
RECORDED \_\_\_\_\_, 20\_\_\_\_  
BOOK \_\_\_\_\_ PAGE \_\_\_\_\_  
COUNTY RECORDER

I, Charles H. Murphy, have conducted a survey of the existing conditions for the Lake County Engineers Office October 2008. The results of that survey are contained herein. Underground utility locations are shown for informational purposes only. Though they are believed to be accurate, their location is as marked on the ground by the utility company per OUPS Confirmation Number A827600702, A827600671, A827600724, and A827600737 and those markings subsequently being surveyed as a part of this project. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates System, North Zone by ties to the established Lake County Control provided by the Lake County Engineers Survey Department. I have reestablished the locations of the existing property lines and centerline of existing Right of way for property takes contained herein. I have established the proposed property lines, calculated the Gross Take, present road occupied (PRO), Net Take and Net Residue, and have; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein. I have set monuments at the proposed property corners and other points shown herein. The iron pins and caps will be set in the "Adjustable Centerline Monument Assembly Box" installed by the construction contractor, after completion of construction, by the Contractor's Surveyor. This work will be done in accordance with OAC 4733-37 as cited below. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Minimum Standards for Boundary Surveys in the State of Ohio" unless so noted. The words I and my as used herein are to mean that either myself or someone working under my direct supervision.

Charles H. Murphy, Ohio Lic# 6950

SURVEYOR'S SEAL  
SIGNED: \_\_\_\_\_  
DATE: \_\_\_\_\_



(A1) P.I. = STA 105+62.15 PC = STA 105+23.45 D = 21' 54' 10" Dc = 28' 38' 52" R = 200.00' T = 38.70' L = 76.46' E = 3.71' C = 75.99' C.B. = N 30' 10' 19" W	(A2) P.I. = STA 106+29.43 PC = STA 106+05.80 D = 26' 35' 14" Dc = 57' 17' 45" R = 100.00' T = 23.63' L = 46.40' E = 2.75' C = 45.99' C.B. = N 05' 55' 37" W
(A3) P.I. = STA 108+07.10 PC = STA 107+57.38 D = 18' 49' 18" Dc = 19' 05' 55" R = 300.00' T = 49.72' L = 98.55' E = 4.09' C = 98.11' C.B. = N 02' 02' 39" W	(A4) P.I. = STA 110+30.34 PC = STA 109+15.93 D = 08' 43' 24" Dc = 03' 49' 11" R = 1500.00' T = 114.41' L = 228.38' E = 4.36' C = 228.16' C.B. = N 07' 05' 36" W



CALCULATED  
MBR  
CHECKED  
CHM

**CENTERLINE PLAT**

**LAK-VROOMAN RD**

76  
76

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