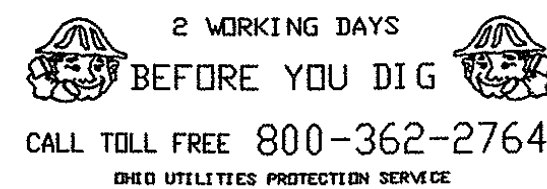


**DESIGN DESIGNATION**

CURRENT YEAR ADT (2001)	= 6250
DESIGN YEAR ADT (2021)	= 7627
DESIGN HOURLY VOLUME (2021)	= 763
DIRECTIONAL DISTRIBUTION	= 53%/47%
TRUCKS (24 HOUR B&C)	= 10%
DESIGN SPEED	= 25 MPH
LEGAL SPEED	= 25 MPH
DESIGN FUNCTIONAL CLASSIFICATION	= URBAN COLLECTOR

**DESIGN EXCEPTIONS**

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBERS
NONE		



COUNTY OF STARK  
BRIDGE NO. PE-6-17 LAKE AVENUE  
BRIDGE REPLACEMENT PROJECT  
STARK COUNTY  
CITY OF MASSILLON

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**O.D.O.T. STANDARD CONSTRUCTION DRAWINGS**

BP-1.1	7-28-00	MH-1.2M	9-6-95
BP-2.1	7-28-00	DM-1.1M	10-21-97
BP-2.2	7-28-00	DM-1.2M	10-21-97
BP-4.1	7-28-00	DM-4.3	4-29-99
BP-5.1	7-28-00	DM-4.4	4-29-99
BP-7.1	7-28-00		
F-1.1	7-28-00		
GR-1.1M	10-21-97	TC-41.20M	7-1-94
GR-1.2M	1-3-96	TC-41.40M	3-31-94
GR-1.3M	11-30-94	TC-42.20M	3-31-94
GR-2.1M	4-14-98	TC-52.10M	7-29-94
GR-3.1M	10-21-97	TC-52.20M	7-29-94
GR-3.2M	10-21-97	TC-61.10M	3-31-94
GR-4.2M	10-21-97	TC-71.10M	9-1-93
GR-4.3M	10-21-97	TC-82.10M	11-24-93
RM-1.1	4-29-99	HL-30.11M	3-31-95
RM-4.3M	10-21-97	MT-99.10M	1-30-95
CB-1.1M	7-12-95	MT-101.60M	4-25-94
CB-2.1M	7-12-95	MT-105.10M	4-25-94
CB-2.2M	7-12-95	MT-105.11M	4-25-94
CB-2.3M	7-12-95	AS-1-81	9-15-94
HW-2.1M	7-12-95	BR-2-98	12-29-98
HW-2.2M	7-12-95	EXJ-4-87	2-14-97
		GSD-1-96	2-12-97

O.D.O.T. SUPPLEMENTAL SPECIFICATIONS			O.D.O.T. SPECIAL PROVISIONS
806	9-9-97		WATERWAY PERMIT
830	10-21-98		
842	1-6-99		
863	10-12-99		
870	8-10-99		
877	4-13-99		
899	10-21-98		
905	4-1-98		
906	5-5-98		
907	10-21-98		
908	3-28-00		

**PROJECT DESCRIPTION**

WIDENING AND FULL DEPTH RECONSTRUCTION INCLUDING  
BRIDGE REPLACEMENT ALONG 0.17 MI. OF LAKE AVENUE  
WITH GRADING AND DRAINAGE IMPROVEMENTS.

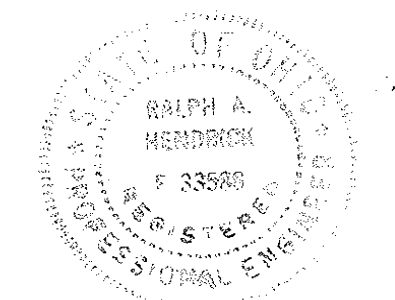
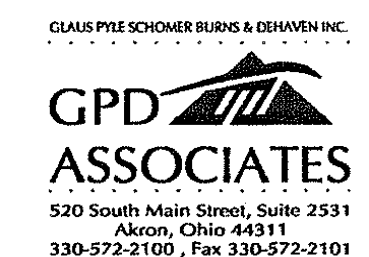
**1997 SPECIFICATIONS**

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

I HEREBY APPROVE THESE PLANS AND  
DECLARE THAT THE MAKING OF THIS IMPROVEMENT  
WILL REQUIRE THE CLOSING TO TRAFFIC OF THE  
HIGHWAY AND THAT DETOURS WILL BE PROVIDED  
AS INDICATED ON PLANS.

*Francis V. Fischer*  
FRANCIS V. FISCHER P.E., P.S.  
REG. P.E. NO. E-29778  
STARK COUNTY ENGINEER

FRANCIS H. CICCHINELLI  
MAYOR-CITY OF MASSILLON



*Ralph A. Hendrick*  
RALPH A. HENDRICK E-33588

FEDERAL PROJECT NO.

PID NO.

CONSTRUCTION PROJECT NO.

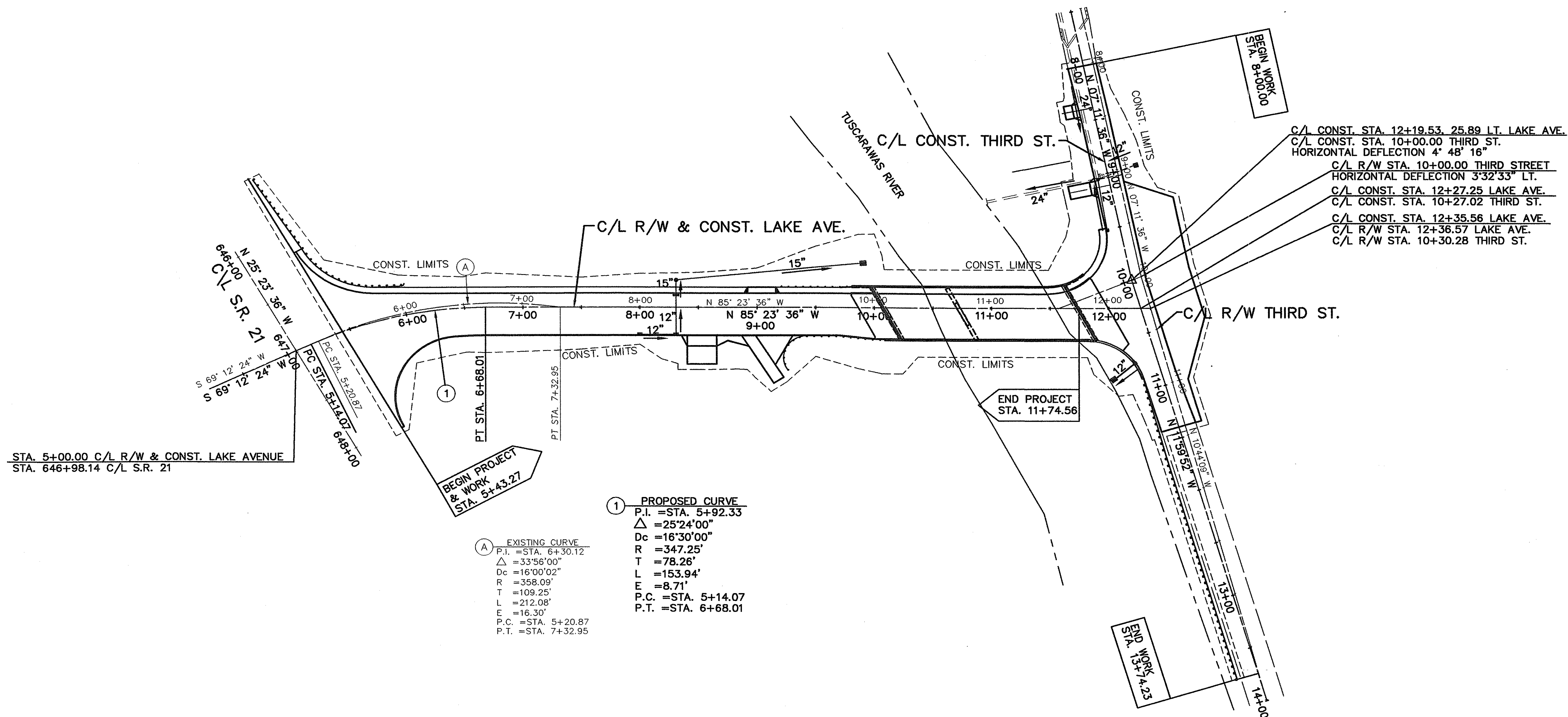
RAILROAD INVOLVEMENT

NONE

LAKE AVENUE

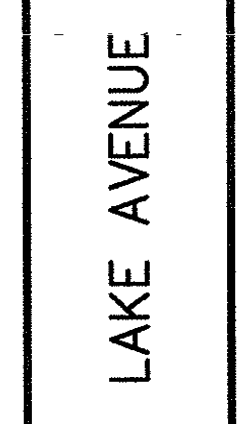
1  
64

PE-6-17



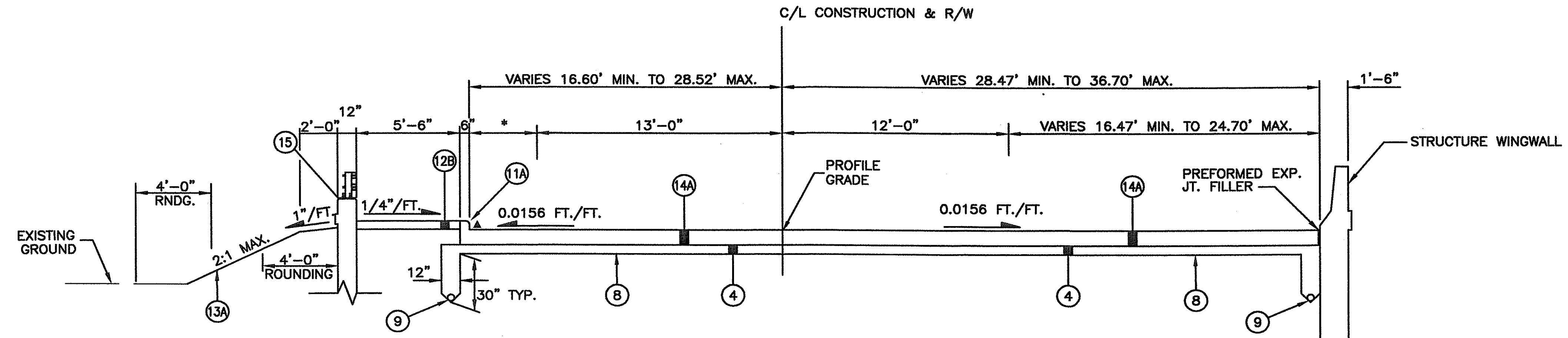
CALCULATED M.V.J.	CHECKED R.A.H.
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- ## TYPICAL SECTIONS



Cad File: H:\99029\99029\DWG\99029GYA.DWG  
Date: 07-10-00 Time: 9:58 AM TW = 0d0'0.00"



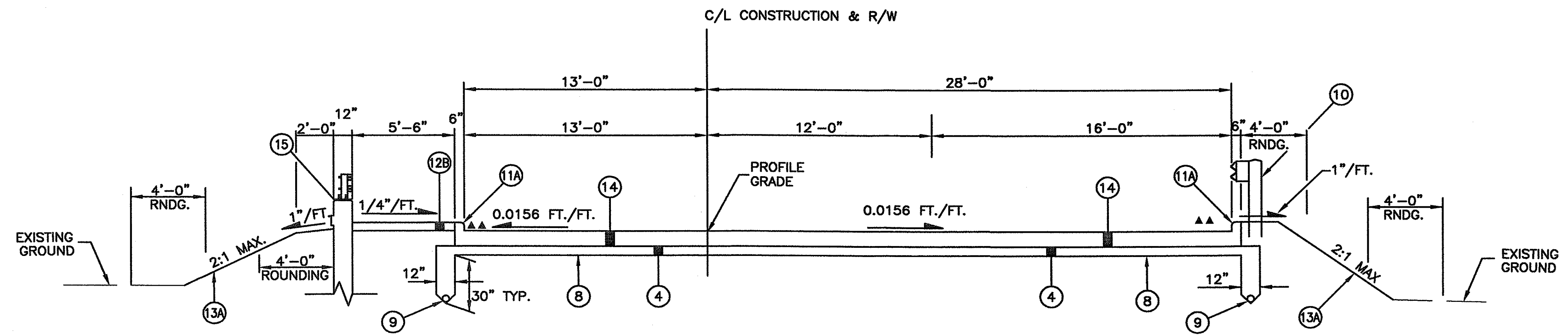


\* WIDTH VARIES 3.60' MIN. TO 15.52' MAX.

▲ CURB HEIGHT TRANSITION FROM 10" MAX. AT BEGINNING OF SLAB TO 6" MIN. AT END OF SLAB.

### FORWARD APPROACH SLAB TYPICAL SECTION

LIMITING STATIONS  
STA. 11+74.56 TO STA. 11+99.56 = 25.00 L.F.



▲▲ CURB HEIGHT TRANSITION FROM 6" MIN. AT BEGINNING OF SLAB TO 10" MAX. AT END OF SLAB.

### REAR APPROACH SLAB TYPICAL SECTION

LIMITING STATIONS  
STA. 9+86.44 TO STA. 10+06.44 = 20.00 L.F.

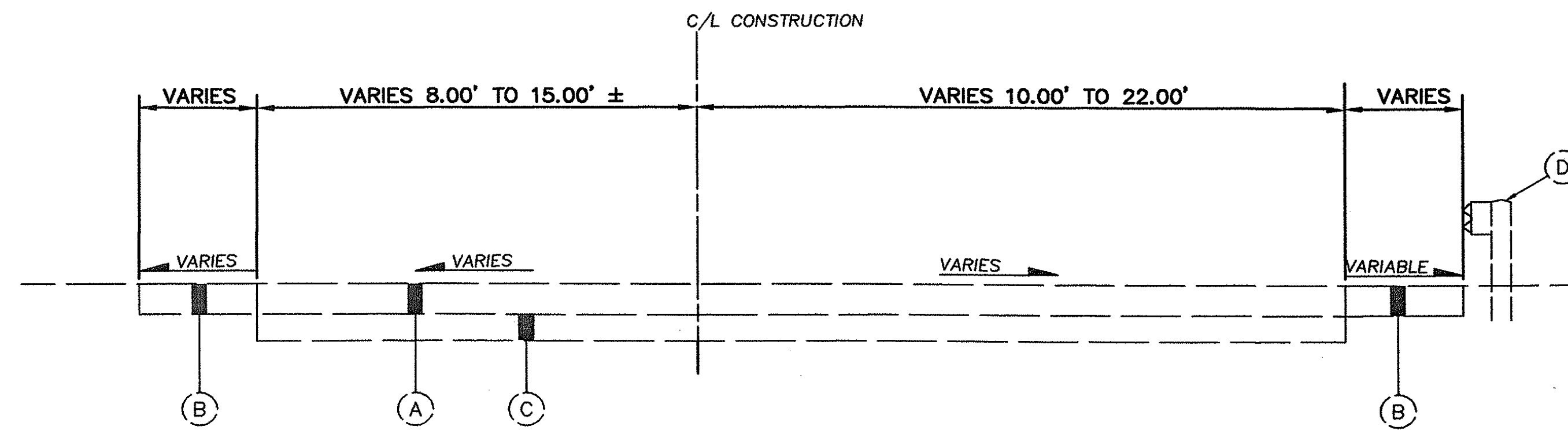
FOR APPROACH SLAB DETAILS,  
SEE SHEET NO. 35.

FOR PROPOSED LEGEND, SEE SHEET NO. 3.



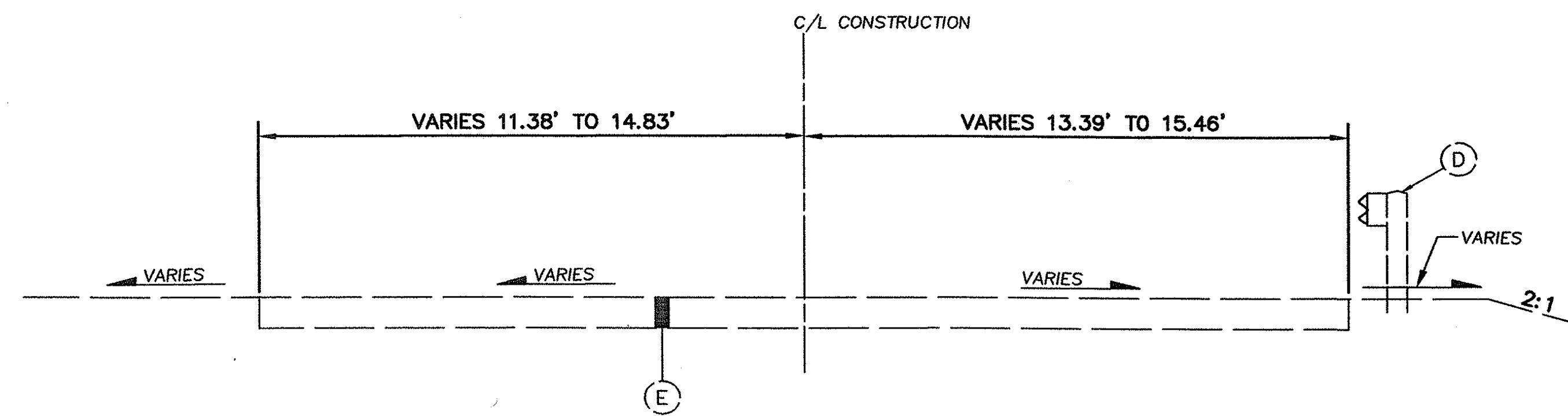
EXISTING LEGEND

- (A) 9" ± FLEXIBLE PAVEMENT
- (B) GRANULAR SHOULDER
- (C) 10" ± GRANULAR BASE
- (D) GUARDRAIL
- (E) FLEXIBLE PAVEMENT



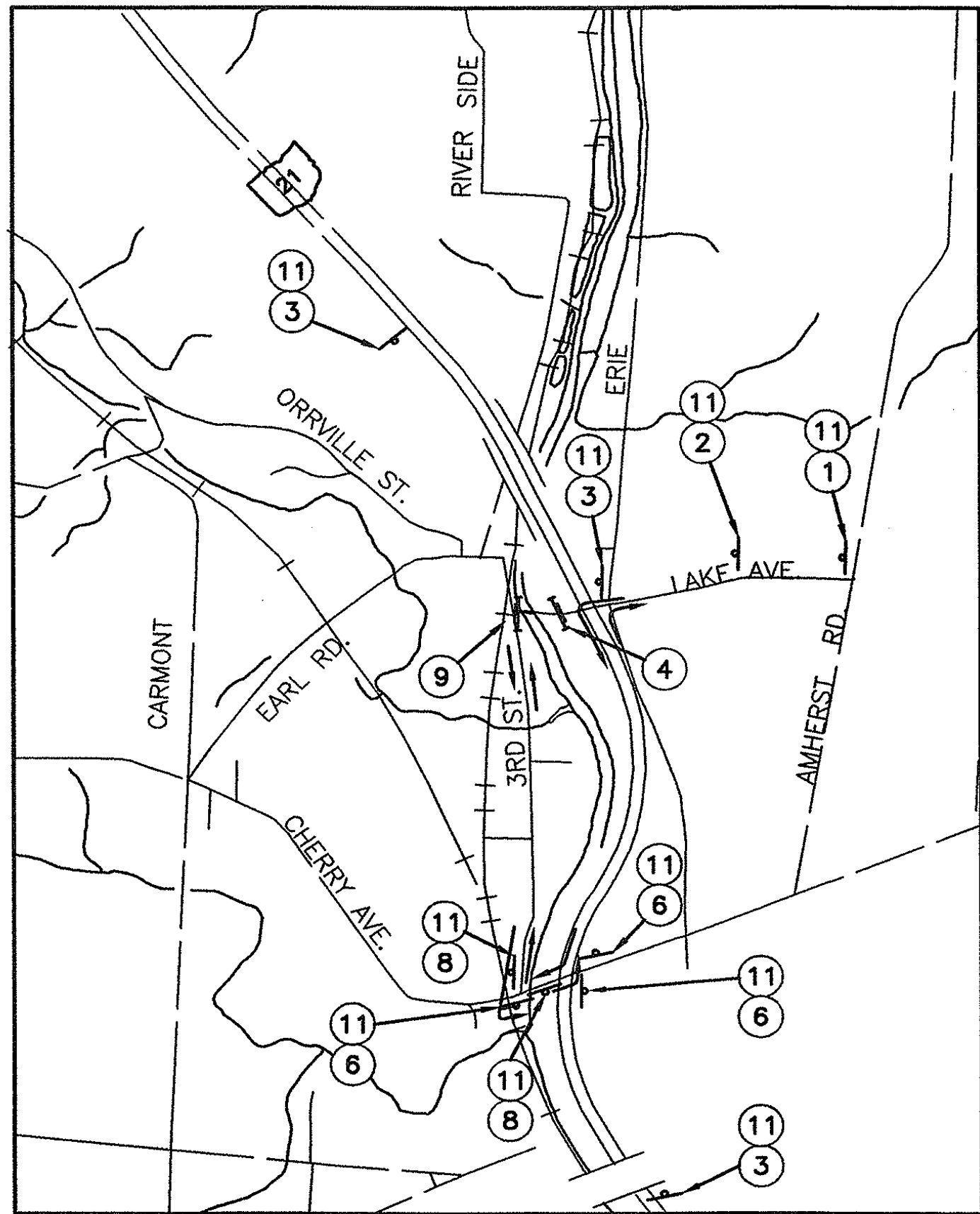
EXISTING LAKE AVENUE TYPICAL SECTION

LIMITING STATIONS  
STA. 5+43.27 TO STA. 12+27.25

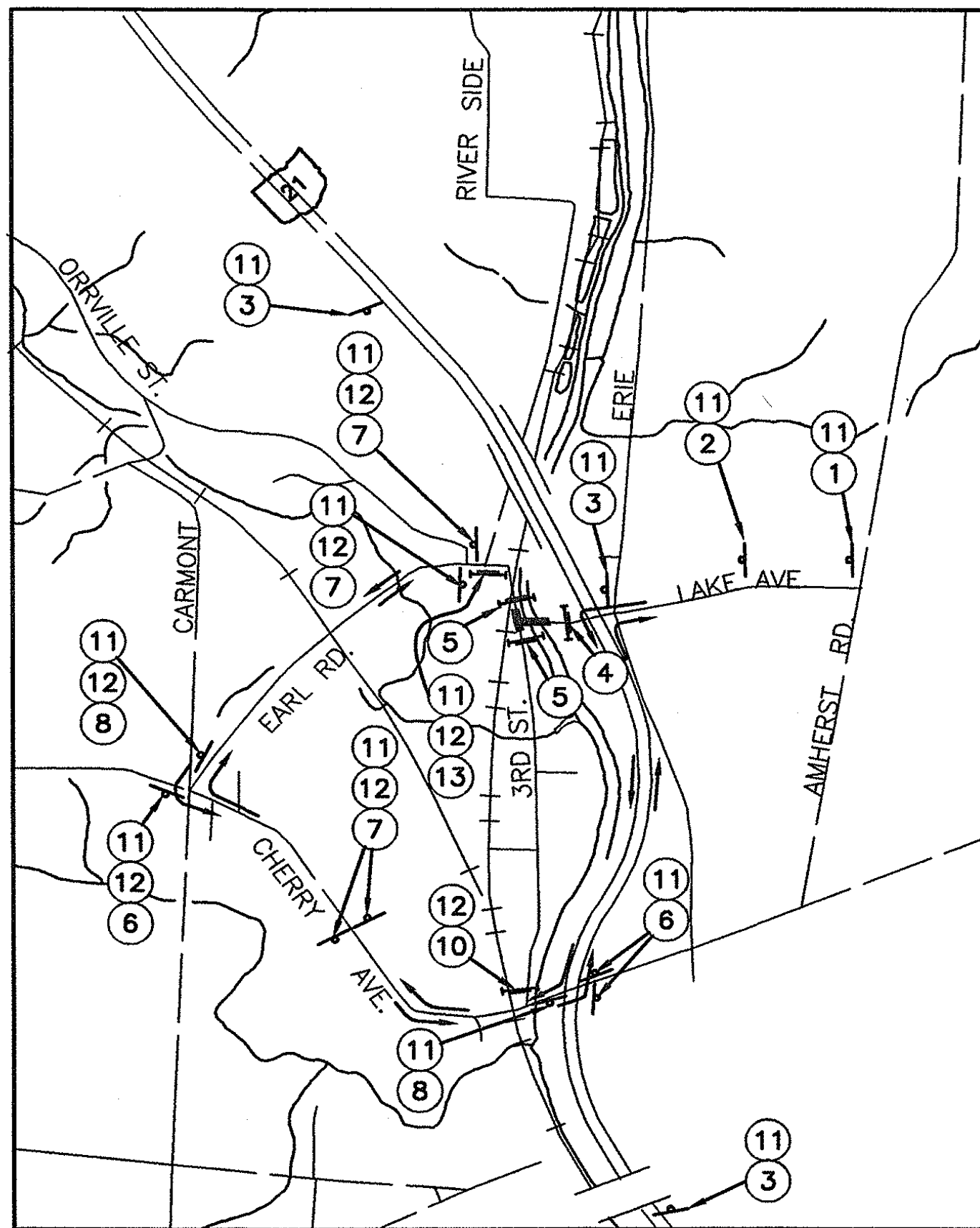


EXISTING THIRD STREET TYPICAL SECTION

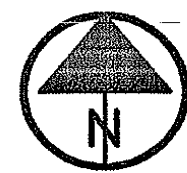
LIMITING STATIONS  
STA. 8+00.00 TO STA. 11+40.00



PHASE I DETOUR MAP



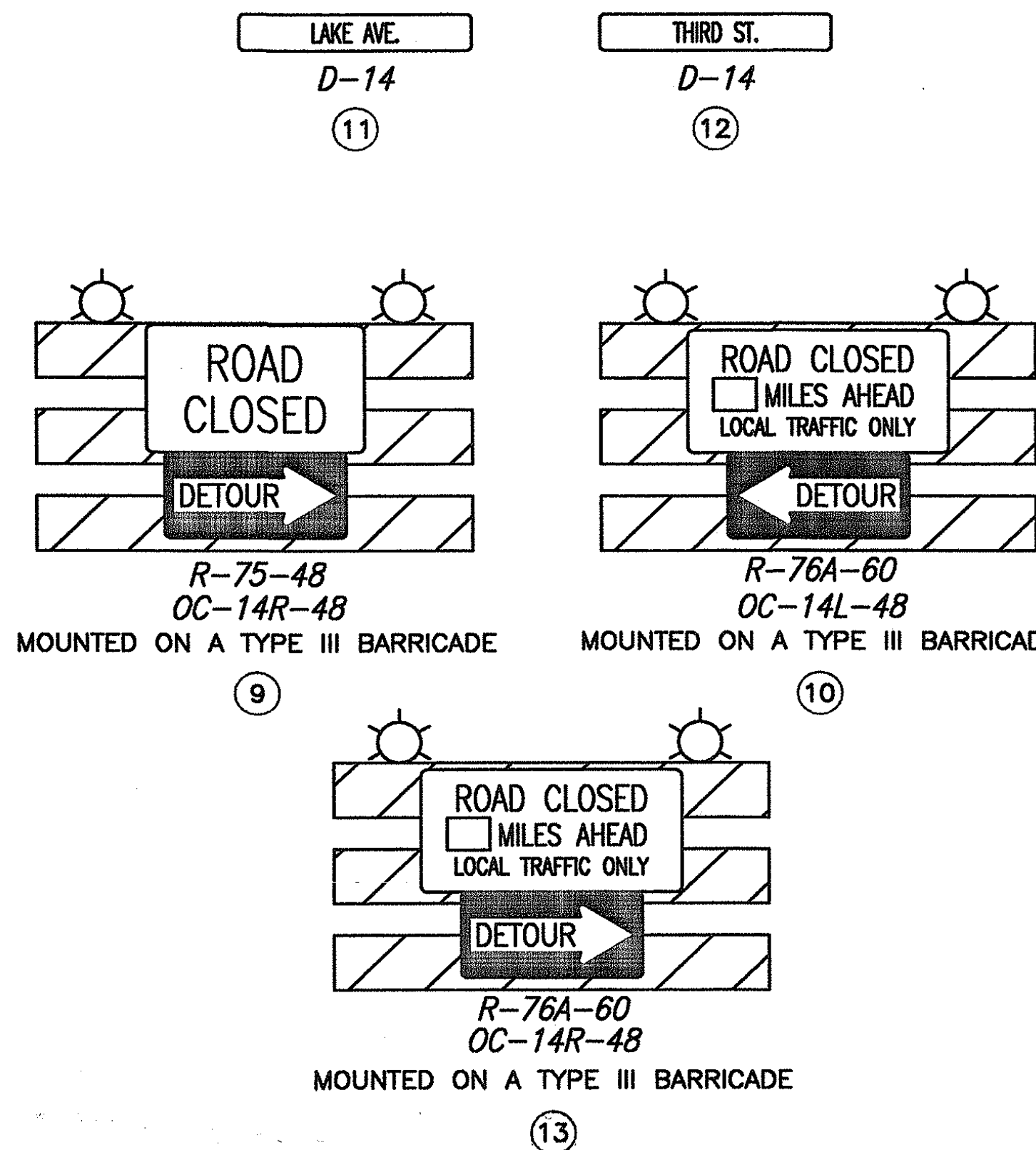
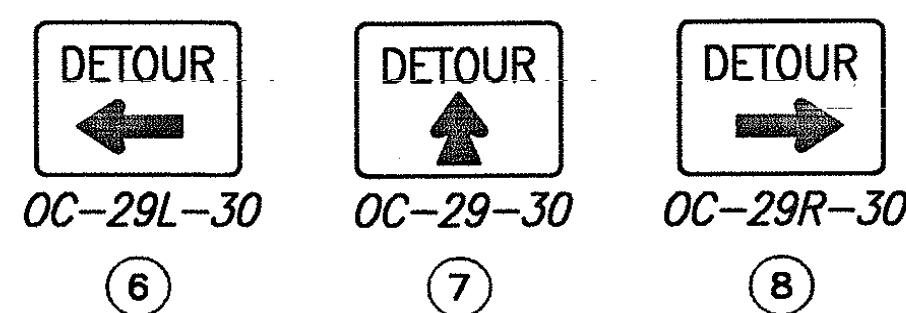
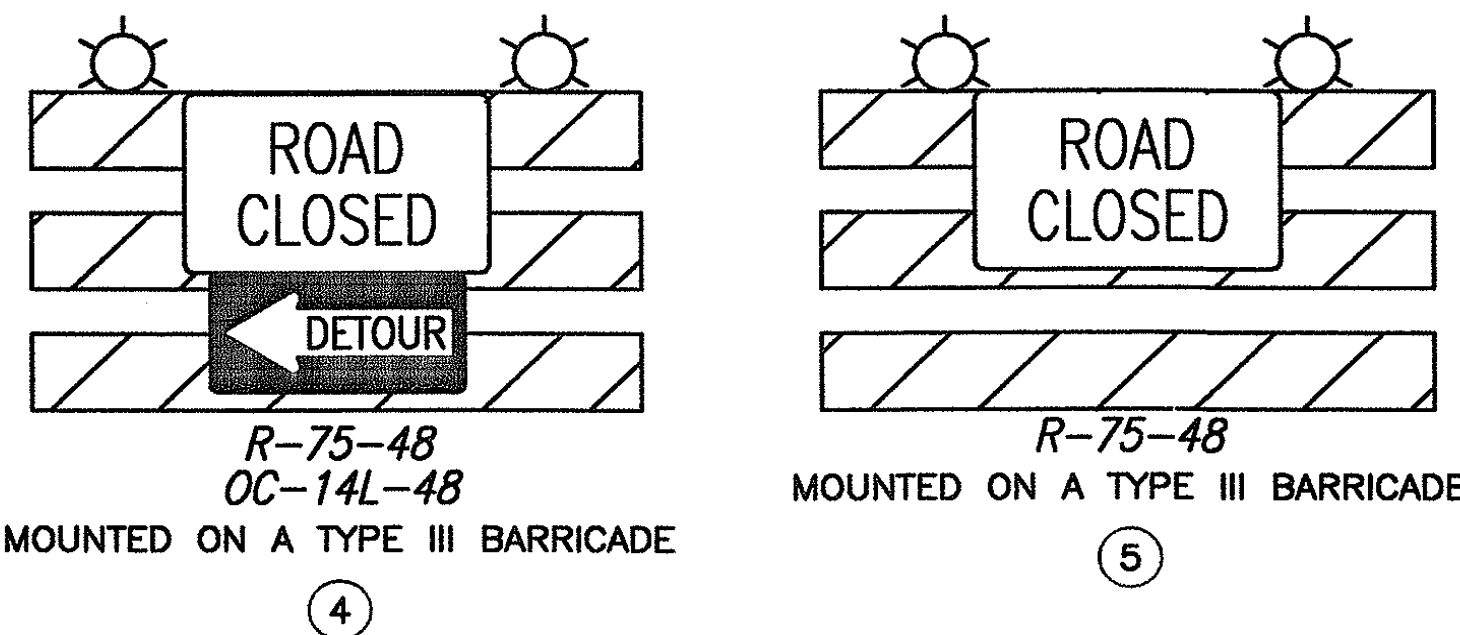
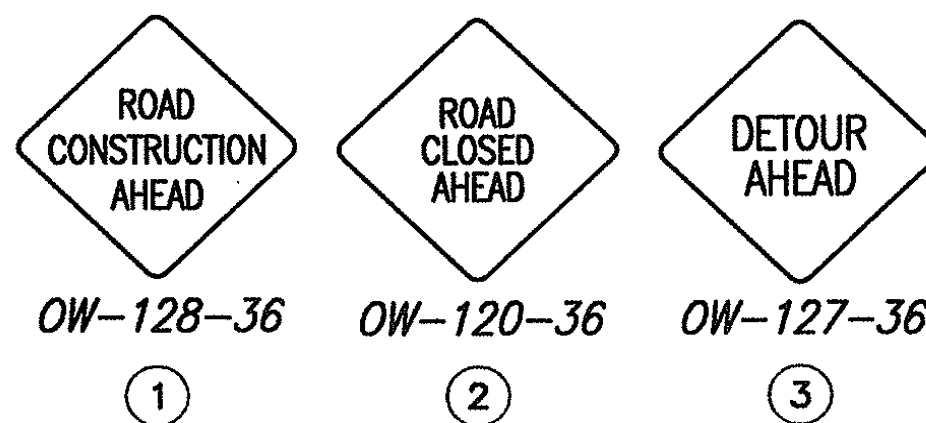
PHASE II DETOUR MAP



LEGEND

- WORK AREA
- SIGN
- TYPE III BARRICADE
- DETOUR ROUTE

\* NOTE: MAPS, BARRICADES AND SIGNS SHOWN ARE NOT DRAWN TO SCALE.



ITEM 614 - MAINTAINING TRAFFIC

- THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR PROVIDING AND MAINTAINING LIGHTS, SIGNS AND BARRICADES FOR THE MAINTENANCE OF TRAFFIC AND SAFETY OF HIS WORK AT ALL THE LOCATIONS SHOWN ON THESE PLANS AND AS MAY BE REQUIRED BY ITEM 614 - MAINTAINING TRAFFIC. ALL SUCH DEVICES SHALL BE UTILIZED IN CONFORMANCE WITH THE STATE OF OHIO "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD)," CURRENT EDITION, LATEST REVISION AND/OR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL GIVE THE STARK COUNTY TRAFFIC ENGINEERING DEPARTMENT: KENNETH MACE, 5165 SOUTHWAY STREET, CANTON, OHIO 44706, (330) 477-6781, A MINIMUM OF 10 WORKING DAYS NOTICE PRIOR TO BEGINNING ANY CONSTRUCTION-RELATED ACTIVITIES ON THIS PROJECT WHICH REQUIRE THE DETOURING OF TRAFFIC.
- THE CONTRACTOR SHALL COMPLETELY COVER ALL SIGNS INSTALLED PRIOR TO THE CLOSING OF THE ROAD(S). SHOULD THE CONTRACTOR FAIL TO DO SO, THE SIGNS WILL BE COVERED OR REMOVED BY THE COUNTY AT A COST TO THE CONTRACTOR FOR TIME ACTUALLY INCURRED BY THE COUNTY TO DO SUCH WORK.
- THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL, OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC CONTROL DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL SHALL ALSO BE AVAILABLE ON AN AROUND-THE-CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. A 24-HOUR EMERGENCY PHONE NUMBER SHALL BE PROVIDED BY THE CONTRACTOR FOR EMERGENCY SITUATIONS OF THIS NATURE. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.
- ALTHOUGH LAKE AVENUE AND THIRD ST. WILL BE CLOSED TO THROUGH TRAFFIC AT TIMES DURING CONSTRUCTION OF THIS PROJECT, THE CONTRACTOR SHALL PURSUE THE PROJECT IN SUCH A MANNER AS TO MINIMIZE BOTH THE EXTENT AND DURATION OF THE DISRUPTION OF LOCAL TRAFFIC AND SHALL PROVIDE SAFE VEHICULAR AND PEDESTRIAN INGRESS AND EGRESS FOR ALL PROPERTIES ADJACENT TO THE IMPROVEMENTS AS PER ITEM 614. FOR ADDITIONAL REQUIREMENTS, SEE ITEM 104.04.
- ALL TYPE III BARRICADES SHALL BE IN ACCORDANCE WITH THE OMUTCD; WITH A 7' MINIMUM HEIGHT AND YELLOW FLASHING LIGHTS.
- THE CONTRACTOR SHALL BE PREPARED TO ADDRESS ALL MAINTENANCE OF TRAFFIC REQUIREMENTS NOT SHOWN ON THIS PLAN AS WORK PROGRESSES.
- ANY EQUIPMENT, MACHINERY, MATERIALS AND SUPPLIES ASSOCIATED WITH THE WORK BEING PERFORMED (STOCK) THAT CANNOT BE CONTAINED WITHIN THE CONSTRUCTION LIMITS SHALL CONFORM TO THE FOLLOWING:
  - NO MATERIALS OR SUPPLIES SHALL BE PLACED BETWEEN THE DITCH-LINE AND THE PAVEMENT OR WITHIN 10 FEET OF THE PAVEMENT IF LITTLE OR NO DITCH EXISTS UNLESS THE MATERIAL/SUPPLIES ARE TO BE USED AT THAT MOMENT. ALL EXCESS MATERIALS/SUPPLIES ARE TO BE MOVED TO SATISFY THIS OFFSET CRITERIA IMMEDIATELY UPON SUSPENSION OF WORK.
  - AT THE END OF EACH DAY, ALL "STOCK" WITHIN 20 FEET OF THE PAVEMENT EDGE SHALL BE CLEARLY DELINEATED WITH DRUMS/BARRICADES SPACED AT A MAXIMUM OF 50 FEET INTERVALS (2 DRUM/BARRICADE MINIMUM).
- IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OMUTCD AND SUCH FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR VEHICULAR OR PEDESTRIAN TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.
- AT ALL TIMES, THE CONTRACTOR MUST MAINTAIN LOCAL ACCESS TO AND FROM ALL EXISTING DRIVEWAYS WITHIN THE CONSTRUCTION LIMITS. THE CONTRACTOR, WITH THE USE OF BARRELS, FENCE, BARRICADES, ETC., SHALL ALSO ENSURE THE SAFETY OF ALL LOCAL VEHICULAR AND PEDESTRIAN TRAFFIC WITHIN THE CONSTRUCTION LIMITS THROUGHOUT CONSTRUCTION.
- THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL FLAGS, FLAGGERS WATCHMEN, BARRICADES, SIGNS, SIGN SUPPORTS AND INCIDENTALS RELATED THERETO. THE ABOVE ITEMS SHALL BE UTILIZED IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), CURRENT EDITION, LATEST REVISION.
- THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN A MANNER SUCH THAT VEHICULAR INGRESS AND EGRESS SHALL BE PROVIDED AT ALL TIMES FOR PROPERTIES ADJACENT TO THE WORK. FOR ADDITIONAL REQUIREMENTS, SEE ITEM 104.04.
- UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL IMMEDIATELY REMOVE ALL CONSTRUCTION SIGNS AND BARRICADES. SHOULD THE CONTRACTOR FAIL TO REMOVE THESE DEVICES WITHIN A 24 HOUR PERIOD, THE COUNTY WILL REMOVE THE DEVICES AT A COST TO THE CONTRACTOR FOR ACTUAL TIME INCURRED BY THE COUNTY TO DO SUCH WORK.
- AS SHOWN ON THE DETOUR MAPS, CONSTRUCTION OF THIS PROJECT WILL OCCUR IN TWO (2) PHASES. PHASE I SHALL CONSIST OF THE CLOSURE OF LAKE AVENUE ONLY; WITH ALL BRIDGE WORK AND LAKE AVENUE ROADWAY WORK COMPLETED AT THIS TIME. PHASE I SHALL BE COMPLETED WITHIN 210 CALENDAR DAYS. PHASE II SHALL CONSIST OF THE CLOSURE OF THE LAKE AVENUE/THIRD ST. INTERSECTION; WITH ALL THIRD STREET ROADWAY WORK AND INTERSECTION WORK COMPLETED AT THIS TIME. PHASE II SHALL BE COMPLETED WITHIN 150 CALENDAR DAYS. AS SHOWN ON THE DETOUR MAP, PHASE I CONSTRUCTION WORK WILL REQUIRE THE DETOURING OF ALL LAKE AVENUE TRAFFIC TO ADJACENT ROADWAYS; THIRD STREET SHALL REMAIN OPEN TO ALL TRAFFIC. DURING PHASE II CONSTRUCTION WORK, THE DETOURING OF LAKE AVENUE TRAFFIC WILL CONTINUE; AS WELL AS THE IMPLEMENTATION OF A DETOUR ROUTE FOR THIRD STREET TRAFFIC.

THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH SECTION 108.7 FOR EACH CALENDAR DAY, BEYOND THE MAXIMUM PERMITTED, THAT ALL LANES OF TRAFFIC ARE NOT OPEN AND AVAILABLE TO TRAFFIC.
- THE CONTRACTOR SHALL MAINTAIN ACCESS FOR EMERGENCY VEHICLES ONLY (POLICE DEPARTMENT, FIRE DEPARTMENT, EMS, AND AMBULANCES) AT ALL TIMES DURING CONSTRUCTION, EXCEPT DURING BRIDGE ERECTION & PAVING OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ACCESS WITH THE FOLLOWING AGENCIES:

STARK COUNTY SHERIFF (330) 430-3800  
CITY OF MASSILON POLICE DEPT. (330) 832-9811  
CITY OF MASSILON FIRE DEPT. (330) 833-1051
- IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE STARK COUNTY ENGINEER.
- PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE FOLLOWING QUANTITY, ITEM 614 - MAINTAINING TRAFFIC, LUMP SUM.

CALCULATED  
B.J.T.  
CHECKED  
M.V.J.

MAINTENANCE OF TRAFFIC PLAN AND NOTES

LAKE AVENUE

6  
64



SCOPE OF WORK

WIDENING AND FULL DEPTH RECONSTRUCTION INCLUDING BRIDGE REPLACEMENT ALONG 0.17 MI. OF LAKE AVENUE WITH GRADING AND DRAINAGE IMPROVEMENTS.

SITE RESTORATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES, BUILDINGS, ROADWAYS, STRUCTURES, AND OTHER SITE CONDITIONS RESULTING FROM HIS WORK. ALL DAMAGED OR DISTURBED ITEMS SHALL BE RESTORED TO PRECONSTRUCTION CONDITIONS TO THE ENGINEERS SATISFACTION AT THE CONTRACTOR'S EXPENSE.

ALL MONUMENTS AND PROPERTY PINS DISTURBED BY THE CONTRACTOR SHALL BE RESET BY THE CONTRACTOR TO THERE ORIGINAL LOCATIONS. THE LOCATION OF THE MONUMENTS AND PINS ARE TO ESTABLISHED BY A PROFESSIONAL SURVEYOR REGISTERED IN THE STATE OF OHIO. PAYMENT FOR THE ABOVE WORK SHALL BE PAID FOR UNDER ITEM 623 CONSTRUCTION STAKING.

EXISTING TYPICAL SECTIONS

EXISTING TYPICAL SECTIONS HAVE BEEN DEVELOPED FROM PAVEMENT CORES AND/OR RECORD PLANS AND ARE BELIEVED TO REPRESENT THE WIDTH AND COMPOSITION OF THE EXISTING PAVEMENT, BUT STARK COUNTY DOES NOT GUARANTEE THE ACCURACY OF SAME.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ROUNDING OF CORNERS

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

ELEVATION DATUM

ELEVATIONS SHOWN ARE BASED ON UNITED STATES GEOLOGICAL SURVEY NGVD 29 AND STARK COUNTY BENCHMARK FROM BRIDGE BOOK NO. 45 PAGE 91. MONUMENTS ARE DESCRIBED ON THE PLANS.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES WILL BE STAKED AND DEPTHS GIVEN BY AFFECTED OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY, AND THE STARK COUNTY ENGINEERS OFFICE DOES NOT GUARANTEE THE SAID LOCATIONS.

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

CITY OF MASSILLON— ENGINEERING DEPT. (SANITARY & STORM) 1 JAMES DUNCAN PLAZA MASSILLON, OHIO 44646 (330)830-1722	EAST OHIO GAS COMPANY (DISTRIBUTION) 4725 SOUTHWAY ST., S.W. CANTON, OHIO 44706-1936 (330)478-3135
AMERITECH 50 WEST BOWERY STREET 4TH FLOOR AKRON, OHIO 44308 (330)384-8057	EAST OHIO GAS COMPANY (TRANSMISSION) 7015 FREEDOM AVENUE N.W. NORTH CANTON, OHIO 44720 (330)497-5136
CONSUMERS OHIO WATER COMPANY 123 THIRD STREET S.E. MASSILLON, OHIO 44646 (330)833-4156	OHIO EDISON COMPANY 1910 WEST MARKET STREET BUILDING #1 AKRON, OHIO 44313 (330)384-4653
MASSILLON CABLE TV INC. P.O. BOX 1000 MASSILLON, OHIO 44648 (330)833-4134	
MB OPERATING COMPANY INC. (GAS) 125 STATE ROUTE 43 HARTVILLE, OHIO 44632-0950 (330)877-6747	

CALL OHIO UTILITIES PROTECTION SERVICE  
TWO (2) WORKING DAYS BEFORE YOU DIG  
TOLL FREE NO. 1-800-362-2764  
(NON-MEMBERS MUST BE CALLED DIRECTLY)

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.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE COUNTY, REPRESENTATIVES OF THE COUNTY 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 COUNTY.

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 COUNTY.

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

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ITEM 201—CLEARING AND GRUBBING, AS PER PLAN

ALL TREES AND STUMPS HAVING DIAMETERS OF TWELVE INCHES OR LESS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 - CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

THE COUNTY OF STARK RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS WITH DIAMETERS LESS THAN TWELVE INCHES OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN.

TREES OR STUMPS REMOVED

ALL TREES AND STUMPS SPECIFICALLY MARKED ON THE PLAN AND PROFILE SHEETS FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT HAVING A DIAMETER GREATER THAN TWELVE INCHES SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO REMOVED:

SIZES	NO. TREES	NO. STUMPS	TOTAL
> 12"	2	0	2

ITEM 870—SEEDING AND MULCHING/ITEM 660 - SODDING, UNSTAKED

SEEDING AND MULCHING OR SODDING 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 ITEM 870, SEEDING AND MULCHING OR ITEM 660, SODDING, UNSTAKED, ARE BASED ON THESE LIMITS.

ALL LAWN AND LAWN-LIKE AREAS IN FRONT AND OR ADJACENT TO RESIDENCES OR BUSINESSES SHALL BE SODDED AS PER ITEM 660. THE LAWN AND OR LAWN-LIKE AREAS SHALL BE AS DETERMINED BY THE ENGINEER. ALL OTHER AREAS SHALL BE SEEDED AND MULCHED AS PER ITEM 870

AT THE DIRECTION OF THE ENGINEER THE FOLLOWING AREAS ARE ESTIMATED FOR ITEM 660 SODDING, UNSTAKED

STA. 8+00 TO STA 12+25 RT. THIRD STREET.

WATERING PERMANENT SEEDED/SODDED AREAS

THE FOLLOWING ESTIMATED QUANTITY IS TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR THE PERMANENT SEEDED AREAS, AS PER 870.18:

ITEM 870 - WATER 15 M. GAL.

ITEM 877— TEMPORARY PERIMETER FILTER FABRIC FENCE

MATERIALS

FILTER FABRIC SHALL MEET THE REQUIREMENTS OF ITEM 877.02

CONSTRUCTION, MAINTENANCE AND REMOVAL SHALL BE PER STANDARD CONSTRUCTION DRAWING DM - 4.4. PAYMENT SHALL BE COVERED UNDER ITEM 877 (LIN. FT.) TEMPORARY PERIMETER FILTER FABRIC FENCE.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES.

ITEM 601 - ROCK CHANNEL PROTECTION, TYPE C, WITHOUT FILTER	24	CU. YD.
ITEM 870 - COMMERCIAL FERTILIZER	0.11	TONS
ITEM 870 - REPAIR SEEDING AND MULCHING	150	SQ. YD.
ITEM 870 - WATER	5	M. GAL.
ITEM 877 - TEMPORARY SEEDING AND MULCHING	500	SQ. YD.
ITEM 877 - TEMPORARY PERIMETER FILTER FABRIC FENCE	200	LIN. FT.
ITEM 877 - TEMPORARY DITCH CHECK FILTER FABRIC FENCE	200	LIN. FT.
ITEM 877 - TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	100	LIN. FT.
ITEM 877 - TEMPORARY SEDIMENT BASINS AND DAMS	120	CU. YD.
ITEM 877 - SEDIMENT REMOVAL	50	CU. YD.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL PURPOSES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR DUST CONTROL PURPOSES:

ITEM 616 - WATER	10	M. GAL.
ITEM 616 - CALCIUM CHLORIDE	2	TONS

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON ODOT STANDARD CONSTRUCTION DWG. RM-1.1M IN THESE PLANS AND AT THE LOCATIONS SHOWN ON THE SHEET 56.

THE FOLLOWING QUANTITY HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 604-MONUMENT ASSEMBLY 5 EACH

EXCAVATION, INCLUDING EMBANKMENT CONSTRUCTION

IF UNSUITABLE FOUNDATION SOILS ARE ENCOUNTERED IN THE AREAS OF THE PROPOSED ROADBED, THEY SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL MEETING THE REQUIREMENTS OF 203.08. THE LOCATIONS AND DIMENSIONS WILL BE AS DETERMINED BY THE ENGINEER.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM	203	EMBANKMENT	50	CU. YD.
ITEM	203	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	50	CU. YD.

WATER WORK CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR THE ITEMS DESIGNATED BY THE PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK, LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THE PROJECT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY (SHEET 13) TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 638	16" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS	100	LIN. FT.
ITEM 638	20" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, BOLTLESS -RESTRAINED JOINTS AND FITTINGS	50	LIN. FT.
ITEM 638	3/4" COPPER SERVICE BRANCH	100	LIN. FT.
ITEM 638	VALVE BOX ADJUSTED TO GRADE	2	EACH
ITEM 638	SERVICE BOX ADJUSTED TO GRADE	2	EACH
ITEM 638	METER AND CHAMBER REMOVED AND RESET	2	EACH

CALCULATED  
M.V.J.  
CHECKED  
R.A.H.

GENERAL NOTES

LAKE AVENUE



Cad File: H:\98029\98029\DWG\98029ONE.DWG  
Date: 10-16-00 Time: 12:59 PM TW = 000.00"

Technician: KOVATCH

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 7:00 P.M. AND 7:00 A.M. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

TEMPORARY STREAM CROSSING FORDS

WHERE STREAM CROSSING FORDS ARE REQUIRED FOR EQUIPMENT CROSSING, THE CROSSING SHALL CONSIST OF CLEAN NON-TOXIC GRANULAR OR ROCK MATERIAL, PROPERLY MAINTAINED TO PREVENT EROSION, WITH PROVISIONS FOR CONVEYANCE OF ANTICIPATED HIGH FLOWS, AND SHALL NOT IMPEDE THE MOVEMENT OF AQUATIC LIFE. ROCK OR GRANULAR MATERIAL SHALL BE ROCK AS PER 203.02 OR DUMP ROCK FILL TYPE A, B, C OR D AS PER 601.07, EXCEPT ALL MATERIALS SHALL BE RETAINED ON THE 1/2 INCH SIEVE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH PART 330, APPENDIX A, SPECIFIC CATEGORIES OF DISCHARGES-NATIONALLY PERMITTED, PARAGRAPH (A14), MINOR ROAD CROSSING FILLS - THE FEDERAL REGISTER -CORPS OF ENGINEERS FINAL REGULATIONS, CURRENT EDITION.

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, FOUNDATION PIER OR ABUTMENT EXCAVATION, CHANNEL CLEANOUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

INSTREAM WORK

INSTREAM WORK WILL BE LIMITED WHERE PRACTICABLE AND ONLY CLEAN NON-ERODIBLE MATERIAL WILL BE USED FOR FORDS AND COFFERDAMS. THIS TEMPORARY PLACED MATERIAL WILL BE REMOVED AND THE STREAM BOTTOM RESTORED TO NEAR NATURAL CONDITIONS WHEN THE WORK IS COMPLETED.

CONVERSION OF STANDARD CONSTRUCTION DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE 1997 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

ITEM 203 - PROOF ROLLING

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 607 - FENCE MISC.: FENCE, TYPE CL, WITH TOP WIRES

FENCE SHALL BE CONSTRUCTED PER ITEM 607 OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ODOT STANDARD CONSTRUCTION DRAWING F - 1.1. THE EXCEPTION IS THAT THE CHAIN LINK FENCE FABRIC SHALL BE 72 INCH WITH TOP RAIL AND THREE (3) STRANDS OF BARBED WIRE PLACED PARALLEL TO AND EVENLY SPACED 6" APART, ABOVE THE TOP FENCE RAIL.

ALL LABOR, FITTINGS, BARBED WIRE AND ADDITIONAL FENCE POST LENGTH NECESSARY TO PROPERLY INSTALL THE TOP WIRE STRANDS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR ITEM 607 - FENCE MISC.: FENCE, TYPE CL, WITH TOP WIRES.

ITEM 607 - GATE, TYPE CL, AS PER PLAN

GATES SHALL BE CONSTRUCTED PER ITEM 607 OF ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ODOT STANDARD CONSTRUCTION DRAWING F - 1.1. THE EXCEPTION IS THAT THE CHAIN LINK FENCE FABRIC SHALL BE 72 INCH, GATE WIDTH DIMENSIONS SHALL MATCH EXISTING GATE WIDTHS AND GATE SHALL BE TOPPED WITH THREE (3) STRANDS OF BARBED WIRE PLACED PARALLEL TO AND EVENLY SPACED 6" APART, ABOVE THE TOP GATE RAIL.

ITEM 202 - REMOVAL MISC.: REMOVAL AND RE-ERECTION OF PRIVATE SIGN

THIS ITEM SHALL CONSIST OF CAREFUL REMOVAL AND SUBSEQUENT RE-ERECTION OF THE EXISTING "CONSUMERS OHIO WATER CO." SIGN IN ITS PRESENT LOCATION.

ANY DAMAGE TO THE SIGN OR SUPPORT DUE TO THE NEGLIGENCE OF THE CONTRACTOR DURING REMOVAL, STORAGE AND/OR RE-ERECTION SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE EXPENSE OF THE CONTRACTOR.

ALL EQUIPMENT, MATERIALS OR LABOR NECESSARY FOR REMOVAL, STORAGE AND/OR RE-ERECTION OF THE SIGN AT THE APPROPRIATE TIME SHALL BE PAID FOR UNDER THE LUMP SUM PRICE BID FOR ITEM 202 - REMOVAL MISC.: REMOVAL AND RE-ERECTION OF PRIVATE SIGN.

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., 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 107.12. 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, SINGLE

ITEM 623 CONSTRUCTION LAYOUT STAKES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING. PAYMENT FOR THE ABOVE WORK SHALL BE MADE UNDER ITEM 623 - CONSTRUCTION LAYOUT STAKES.

GRANULAR BACKFILL FOR ITEM 603 - CONDUITS

GRANULAR MATERIAL FURNISHED FOR BACKFILL OPERATIONS SHALL BE LIMITED TO AIR-COOLED BLAST FURNACE SLAG, GRANULATED SLAG, OR CRUSHED STONE. THE METHOD OF BACKFILLING SHALL BE PER 603.08.

EROSION CONTROL

ITEMS 601 AND 660 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS AND TURF OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE 660. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THESE ITEMS SHALL MEET THE REQUIREMENTS OF 108.04.

SEPTIC SYSTEMS

IN THE EVENT THAT EXCAVATION IMPACTS AN EXISTING SEPTIC SYSTEM WITHIN THE PROJECT CONSTRUCTION LIMITS, THE CONTRACTOR SHALL REPLACE THAT PORTION OF THE SEPTIC SYSTEM WHICH IS DISTURBED BY THE PROJECT EXCAVATION.

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

ITEM 603 - 6" CONDUIT, TYPE C, 706.08 (E.S.) OR 50 LIN. FT.  
707.19 (P.S. 45 MIN.)

NECESSARY BENDS, BRANCHES, COLLARS, FITTINGS, ETC. SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEM.

NONE OF THE ABOVE MATERIALS SHALL BE ORDERED BY THE CONTRACTOR UNTIL REQUESTED BY THE ENGINEER.

HOUSE CONNECTIONS

EXISTING ROOF DRAINS, FOOTER DRAINS OR YARD DRAINS, DISTURBED BY THE PROPOSED WORK, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS BY CONNECTING TO A STORM SEWER, MANHOLE, CATCH BASIN OR DITCH.

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

ITEM 603 - 6" CONDUIT, TYPE C, 706.08 (E.S.) OR 50 LIN. FT.  
707.19 (P.S. 45 MIN.)

NECESSARY BENDS, BRANCHES, COLLARS, FITTINGS, ETC. SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEM.

NONE OF THE ABOVE MATERIALS SHALL BE ORDERED BY THE CONTRACTOR UNTIL REQUESTED BY THE ENGINEER.

ITEM 611 - REINFORCED CONCRETE APPROACH SLAB (T= ), AS PER PLAN

THE REINFORCING STEEL FOR THE APPROACH SLABS OF THE LAKE AVENUE BRIDGE SHALL BE EPOXY COATED IN CONFORMANCE WITH 509.

TWO SEPARATE THICKNESSES OF CLEAR OR OPAQUE POLYETHYLENE FILM, 705.06, SHALL BE PLACED ON THE PREPARED SUBBASE AND WHERE THE APPROACH SLAB IS TO BE CONSTRUCTED. THE POLYETHYLENE FILMS SHALL COMPLETELY COVER THE FULL LENGTH AND WIDTH OF THE SUBBASE BETWEEN THE SIDEWALL FORMS FOR THE APPROACH SLABS.

THE SLABS WILL BE CONSTRUCTED WITH INTEGRAL TYPE 2A CURB AS SHOWN IN THE PLANS.

MATERIALS, LABOR, AND INSTALLATION OF POLYETHYLENE FILM AND TYPE 2A CURB SHALL BE INCLUDED WITH THE APPROACH SLABS FOR PAYMENT.

CURBING ON APPROACH SLABS

THE SHAPE OF THE CURBING ON THE APPROACH SLABS SHALL BE TRANSITIONED, FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE, WITHIN THE LIMITS OF THE APPROACH SLAB.

ITEM 202 - REMOVAL MISC.: MAILBOX REMOVED FOR REUSE

THIS ITEM SHALL CONSIST OF THE REMOVAL OF MAILBOX AND SUPPORT PER ITEM 202. THE SUPPORT SHALL BE DISPOSED OF UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE MAILBOX SHALL BE STORED FOR REUSE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POSTMASTER REGARDING THE TIMING OF REMOVAL AND/OR RELOCATION OF ANY MAILBOX.

PAYMENT FOR THE REMOVAL, STORAGE OR TEMPORARY RELOCATION OF ANY MAILBOX SHALL BE PAID FOR UNDER PERTINENT ITEM 202.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG.#	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG.#	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18"x18"

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

GENERAL NOTES

LAKE AVENUE



ITEM 606 - ANCHOR ASSEMBLY, TYPE B-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

- 1.) SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373)

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37.50 FT. INCLUSIVE OF THREE 12.50 FT. LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS.

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APP. DATE
SS425M	SLOTTED RAIL TERMINAL SRT-350 POST LAYOUT AND ERECTION DETAILS (12.5, 9 POST)	6/21/97	3/6/98

- 2.) THE FLEAT - 350, GUARDRAIL END TERMINAL AS MANUFACTURED BY ROAD SYSTEMS INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE FLEAT - 350 SYSTEM IS CONSIDERED TO BE 37.50 FT., INCLUSIVE OF THREE 12.50 FT. LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS.

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APP. DATE
FLT-M	FLARED ENERGY ABSORBING TERMINAL (FLEAT-350) ASSEMBLY	4/16/98	7/31/98

GRADING SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING GR-4.3M.

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 36" W x 12" H FOR THE SRT-350 AND 14" W x 20" H FOR THE FLEAT-350.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE B-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 625 - PULL BOX, MISC.: PULL BOX ADJUSTED TO GRADE

COMPLETION OF THIS ITEM SHALL MEET THE SPECIFICATIONS OF ITEM 625. THIS ITEM CONSISTS OF ADJUSTMENT OF THE EXISTING TRAFFIC SIGNAL PULL BOX TO PROPOSED GRADE ELEVATION AND LATERAL ADJUSTMENT OF PULL BOX OUTSIDE PROPOSED WALK LOCATION. BOTH PROPOSED VERTICAL AND HORIZONTAL ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMPLETION.

PAYMENT FOR EQUIPMENT, LABOR AND MATERIALS NECESSARY TO COMPLETE THIS ITEM SHALL BE COVERED UNDER ITEM 625-PULL BOX, MISC.: PULL BOX ADJUSTED TO GRADE.

ITEM 633 - CONTROLLER, MISC.: TRAFFIC SIGNAL CONTROLLER ADJUSTED TO GRADE

COMPLETION OF THIS ITEM SHALL MEET THE SPECIFICATIONS OF ITEM 633. THIS ITEM CONSISTS OF ADJUSTMENT OF THE EXISTING TRAFFIC SIGNAL CONTROLLER AND ASSOCIATED WORK PAD TO PROPOSED GRADE ELEVATION AND LATERAL ADJUSTMENT OF TRAFFIC SIGNAL CONTROLLER CABINET OUTSIDE PROPOSED WALK LOCATION. BOTH PROPOSED VERTICAL AND HORIZONTAL ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMPLETION.

PAYMENT FOR EQUIPMENT, LABOR AND MATERIALS NECESSARY TO COMPLETE THIS ITEM SHALL BE COVERED UNDER ITEM 633-CONTROLLER, MISC.: TRAFFIC SIGNAL CONTROLLER ADJUSTED TO GRADE.

ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN

THIS ITEM SHALL CONSIST OF PAVING UNDER GUARDRAIL AS SPECIFIED IN THE PLANS AND IN ACCORDANCE WITH THE FOLLOWING: PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 448 TO DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

- METHOD A  
1) SET GUARDRAIL POSTS  
2) PLACE ITEM 448

- METHOD B  
1) PLACE ITEM 448  
2) BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)  
3) SET GUARDRAIL POSTS  
4) PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE A BITUMINOUS CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALTERNATE METHODS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER. ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER THIS ITEM.

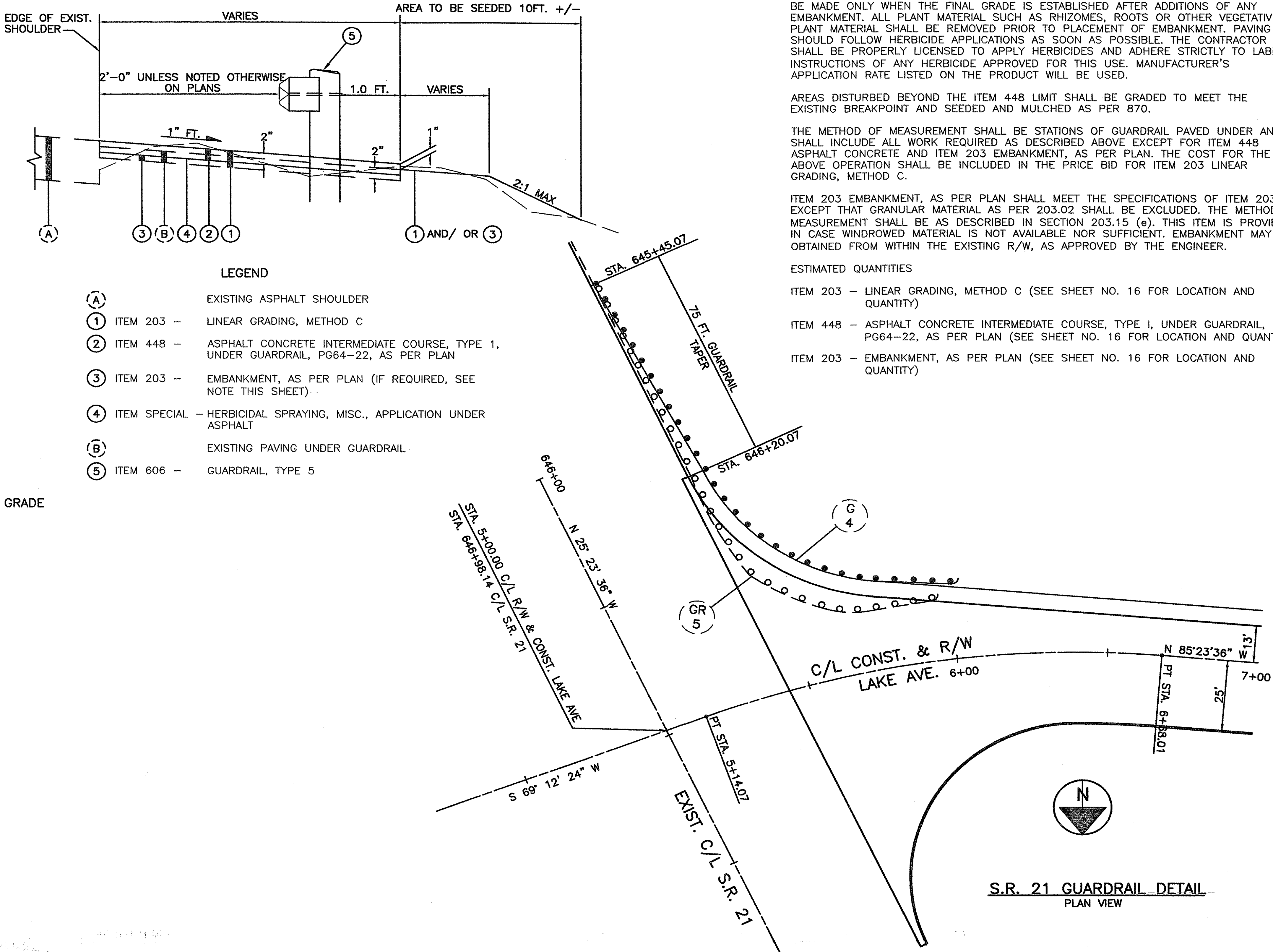
GUARDRAIL INSTALLATION ADJACENT TO EXISTING UTILITIES

WHEN GUARDRAIL POSTS ARE INSTALLED ADJACENT TO EXISTING UTILITIES (IE. TRAFFIC SIGNAL CONDUITS, GAS, LIGHTING CONDUITS, ETC.) THE POST HOLES MUST BE MANUALLY EXCAVATED IN LIEU OF DRIVEN POSTS TO INSURE THE INTEGRITY OF THE EXISTING UTILITIES. ANY DAMAGE TO THE UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

WHEN THE GUARDRAIL POST LOCATION CONFLICTS WITH THE LOCATION OF THE EXISTING UTILITIES EITHER AN ADDITIONAL SPACER BLOCK SHALL BE PLACED BETWEEN THE GUARDRAIL POST AND THE GUARDRAIL ELEMENT OR GUARDRAIL POST SHALL BE ADJUSTED LATERALLY TO ALLOW THE GUARDRAIL POST TO CLEAR THE UTILITY IN QUESTION. ALL ADJUSTMENTS TO GUARDRAIL POST LOCATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMPLETION.

PAYMENT FOR THIS WORK SHALL BE COVERED UNDER THE PERTINENT 606 ITEM.

LINEAR GRADING, METHOD C



ITEM 203 - LINEAR GRADING, METHOD C

THIS WORK SHALL CONSIST OF GRADING THE EXISTING OUTSIDE SHOULDER BETWEEN THE EDGE OF THE SHOULDER AND THE LIMITS SHOWN IN AREAS WHERE PAVING UNDER GUARDRAIL EXISTS. IT SHALL ALSO CONSIST OF REMOVING THE EXISTING PAVING UNDER THE GUARDRAIL AND RESHAPING THE AREA TO PROVIDE A SUITABLE COMPACTED EMBANKMENT FOR THE 2 INCH THICK COURSE OF ITEM 448 AS SHOWN IN THE DETAIL ON THIS SHEET.

THE EXISTING PAVING SHALL BE REMOVED IN SUCH A MANNER AS TO LEAVE A STRAIGHT VERTICAL EDGE AND NOT DAMAGE THE EXISTING SHOULDER. ANY DAMAGE TO THE EXISTING SHOULDER SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AS DIRECTED BY THE ENGINEER.

ITEM 203 EMBANKMENT, AS PER PLAN HAS BEEN PROVIDED TO BE USED WHERE ADDITIONAL MATERIAL IS NECESSARY TO COMPLETE THE ABOVE DESCRIBED WORK. COMPACTION OF THE EMBANKMENT SHALL BE AS PER ITEM 203.

THE APPLICATION OF A HERBICIDE SUCH AS TREFLAN E.C. OR APPROVED EQUAL SHALL BE MADE ONLY WHEN THE FINAL GRADE IS ESTABLISHED AFTER ADDITIONS OF ANY EMBANKMENT. ALL PLANT MATERIAL SUCH AS RHIZOMES, ROOTS OR OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED PRIOR TO PLACEMENT OF EMBANKMENT. PAVING SHOULD FOLLOW HERBICIDE APPLICATIONS AS SOON AS POSSIBLE. THE CONTRACTOR SHALL BE PROPERLY LICENSED TO APPLY HERBICIDES AND ADHERE STRICTLY TO LABEL INSTRUCTIONS OF ANY HERBICIDE APPROVED FOR THIS USE. MANUFACTURER'S APPLICATION RATE LISTED ON THE PRODUCT WILL BE USED.

AREAS DISTURBED BEYOND THE ITEM 448 LIMIT SHALL BE GRADED TO MEET THE EXISTING BREAKPOINT AND SEEDED AND MULCHED AS PER 870.

THE METHOD OF MEASUREMENT SHALL BE STATIONS OF GUARDRAIL PAVED UNDER AND SHALL INCLUDE ALL WORK REQUIRED AS DESCRIBED ABOVE EXCEPT FOR ITEM 448 ASPHALT CONCRETE AND ITEM 203 EMBANKMENT, AS PER PLAN. THE COST FOR THE ABOVE OPERATION SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 203 LINEAR GRADING, METHOD C.

ITEM 203 EMBANKMENT, AS PER PLAN SHALL MEET THE SPECIFICATIONS OF ITEM 203 EXCEPT THAT GRANULAR MATERIAL AS PER 203.02 SHALL BE EXCLUDED. THE METHOD OF MEASUREMENT SHALL BE AS DESCRIBED IN SECTION 203.15 (e). THIS ITEM IS PROVIDED IN CASE WINDROWED MATERIAL IS NOT AVAILABLE NOR SUFFICIENT. EMBANKMENT MAY BE OBTAINED FROM WITHIN THE EXISTING R/W, AS APPROVED BY THE ENGINEER.

ESTIMATED QUANTITIES

- ITEM 203 - LINEAR GRADING, METHOD C (SEE SHEET NO. 16 FOR LOCATION AND QUANTITY)
- ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN (SEE SHEET NO. 16 FOR LOCATION AND QUANTITY)
- ITEM 203 - EMBANKMENT, AS PER PLAN (SEE SHEET NO. 16 FOR LOCATION AND QUANTITY)

PAVEMENT AREAS

LAKE AVENUE

STA. 5+43.27 TO STA. 5+45.27 (2.00)(183.53)	=	367.06	S.F.
STA. 5+45.27 TO STA. 6+68.01 (AREA BY PLANIMETER)	=	7,345.00	S.F.
STA. 6+68.01 TO STA. 9+70.56 (13.00+25.00)(302.55)	=	11,496.90	S.F.
STA. 9+70.56 TO STA. 9+86.44 (AREA BY PLANIMETER)	=	725.00	S.F.
STA. 9+86.44 TO STA. 10+06.44 (APP. SLAB) (20.00)(13.50+28.50)	=	840.00	S.F.
STA. 11+74.56 TO STA. 11+99.56 (APP. SLAB) (AREA BY PLANIMETER)	=	1,400.00	S.F.
LAKE AVE. TOTAL	=	22,173.96	S.F.

THIRD STREET

STA. 8+00.00 TO STA. 8+50.00 ( $\frac{1}{2}$ )(11.38+13.39+12.00+12.00)(50.00)	=	1,219.25	S.F.
STA. 8+50.00 TO STA. 9+49.13 (12.00+12.00)(99.13)	=	2,379.12	S.F.
STA. 9+49.13 TO STA. 10+88.73 (AREA BY PLANIMETER)	=	4,687.00	S.F.
STA. 10+88.73 TO STA. 11+40.00 ( $\frac{1}{2}$ )(16.00+12.00+15.46+14.83)(51.27)	=	1,494.26	S.F.
THIRD ST. TOTAL	=	9,779.63	S.F.

ITEM 203 - SUBGRADE COMPACTION

LAKE AVENUE

STA. 5+43.27 TO STA. 11+99.56 (22,173.96)(1/9)	=	2,463.77	S.Y.
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THIRD STREET

STA. 8+00.00 TO STA. 11+40.00 (9,779.63)(1/9)	=	1,086.63	S.Y.
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TOTAL	=	3,550	S.Y.
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ITEM 203 - PROOF ROLLING

LAKE AVENUE

STA. 5+43.27 TO STA. 11+99.56 (22,173.96)(1/9)(1/3000)	=	0.82	HRS.
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THIRD STREET

STA. 8+00.00 TO STA. 11+40.00 (9,779.63)(1/9)(1/3000)	=	0.36	HRS.
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TOTAL	=	1	HRS.
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ITEM 301 - BITUMINOUS AGGREGATE BASE, PG 64-22

LAKE AVENUE

STA. 5+43.27 TO STA. 9+86.44 (367.06+7,345.00+11,496.90+725.00)(6/12)(1/27)	=	369.15	C.Y.
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THIRD STREET

STA. 8+00.00 TO STA. 9+49.13 (1,219.25+2,379.12)(6/12)(1/27)	=	66.64	C.Y.
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TOTAL	=	436	C.Y.
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ITEM 304 - AGGREGATE BASE

LAKE AVENUE

STA. 5+43.27 TO STA. 11+99.56 (22,173.96)(6/12)(1/27)	=	410.63	C.Y.
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THIRD STREET

STA. 8+00.00 TO STA. 11+40.00 (9,779.63)(6/12)(1/27)	=	181.10	C.Y.
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TOTAL	=	592	C.Y.
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ITEM 407 - TACK COAT

LAKE AVENUE

STA. 5+43.27 TO STA. 9+86.44 (367.06+7,345.00+11,496.90+725.00)(1/9)(0.10)	=	221.49	GAL.
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THIRD STREET

STA. 8+00.00 TO STA. 9+49.13 (1,219.25+2,379.12)(1/9)(0.10)	=	39.98	GAL.
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TOTAL	=	261	GAL.
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ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

LAKE AVENUE

STA. 5+43.27 TO STA. 9+86.44 (367.06+7,345.00+11,496.90+725.00)(1/9)(0.05)	=	110.74	GAL.
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THIRD STREET

STA. 8+00.00 TO STA. 9+49.13 (1,219.25+2,379.12)(1/9)(0.05)	=	19.99	GAL.
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TOTAL	=	131	GAL.
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ITEM 408 - BITUMINOUS PRIME COAT

LAKE AVENUE

STA. 5+43.27 TO STA. 9+86.44 (367.06+7,345.00+11,496.90+725.00)(1/9)(0.40)	=	885.95	GAL.
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THIRD STREET

STA. 8+00.00 TO STA. 9+49.13 (1,219.25+2,379.12)(1/9)(0.40)	=	159.93	GAL.
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TOTAL	=	1,046	GAL.
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ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22

LAKE AVENUE

STA. 5+43.27 TO STA. 9+86.44 (367.06+7,345.00+11,496.90+725.00)(1.75/12)(1/27)	=	107.67	C.Y.
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THIRD STREET

STA. 8+00.00 TO STA. 9+49.13 (1,219.25+2,379.12)(1.75/12)(1/27)	=	19.44	C.Y.
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TOTAL	=	127	C.Y.
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ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22

LAKE AVENUE

STA. 5+43.27 TO STA. 9+86.44 (367.06+7,345.00+11,496.90+725.00)(1.25/12)(1/27)	=	76.91	C.Y.
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THIRD STREET

STA. 8+00.00 TO STA. 9+49.13 (1,219.25+2,379.12)(1.25/12)(1/27)	=	13.88	C.Y.
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TOTAL	=	91	C.Y.
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ITEM 451 - 8" REINFORCED CONCRETE PAVEMENT

THIRD STREET

STA. 9+49.13 TO STA. 11+40.00 (4,687.00+1,494.26)(1/9)	=	686.81	S.Y.
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ITEM 611 - REINFORCED CONCRETE APPROACH SLAB (T= 13"), AS PER PLAN

STA. 9+86.44 TO STA. 10+06.44 (840.00)(1/9)	=	93.33	S.Y.
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ITEM 611 - REINFORCED CONCRETE APPROACH SLAB (T= 15"), AS PER PLAN

STA. 11+74.56 TO STA. 11+99.56 (1400.00)(1/9)	=	155.56	S.Y.
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ITEM 830 - CURB, TYPE 6

LAKE AVENUE

STA. 648+03.60(S.R. 21) TO STA. 10+00.56 (LAKE AVE.) RT. (110.59+361.59)	=	472.18	LIN. FT.
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THIRD STREET

STA. 9+29.13 TO STA. 9+49.13 (20.00)	=	20.00	LIN. FT.
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TOTAL	=	492	LIN. FT.
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ITEM 608 - 4" CONCRETE WALK, AS PER PLAN

STA. 646+20.07 (S.R. 21) TO STA. 8+00.00 (LAKE AVE.) LT. (78.54+98.50+131.99)(5.50)	=	1699.67	S.F.
STA. 8+00.00 TO STA. 8+90.00 LT. (5.50)(90.00)	=	495.00	S.F.
STA. 9+20.00 TO STA. 9+71.05 LT. (5.50)(51.05)	=	280.78	S.F.
STA. 9+71.05 TO STA. 9+81.05 LT. 0.5(5.50+6.00)(10.00)	=	57.50	S.F.
STA. 11+81.50 LT. (LAKE AVE.) TO STA. 9+49.13 RT. (THIRD ST.) (5.50)(46.00)	=	253.00	S.F.

TOTAL	=	2786	S.F.
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ITEM 608 - 4" CONCRETE WALK

STA. 9+81.05 TO STA. 9+97.05 LT. (5.00)(16.00)	=	80.00	S.F.
STA. 11+64.00 TO STA. 11+81.50 LT. (5.00)(21.00)	=	105.00	S.F.

TOTAL	=	185	S.F.
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ITEM 608 - 6" CONCRETE WALK, AS PER PLAN

STA. 8+90.00 TO STA. 9+20.00 LT. (30.00)(5.50)	=	165	S.F.
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ITEM 608 - CURB RAMP, TYPE 1

STA. 5+50 LT.	=	1	EACH
STA. 9+59 RT. (THIRD ST.)	=	1	EACH
STA. 9+60 LT.	=	1	EACH
TOTAL	=	3	EACH

ITEM 608 - CURB RAMP, TYPE 1

STA. 9+60 RT.	=	50	S.F.
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CALCULATIONS

LAKE AVENUE

CALCULATED  
M.V.J.  
CHECKED  
R.A.H.



## EARTHWORK QUANTITIES

SHEET NO.	LOCATION	203	203	870	660
		EXCAVATION NOT INCLUDING EMB. CONSTRUCTION	EMBANKMENT	SEEDING AND MULCHING	SODDING, UNSTAKED
		CU. YD.	CU. YD.	SQ. YD.	SQ. YD.
	LAKE AVENUE				
15	STA. 5+43.27 TO STA. 9+00.00	859	930	1118	
17	STA. 9+00.00 TO STA. 12+36.57	168	1211	793	
	THIRD STREET				
24	STA. 7+50.00 TO STA. 12+50.00	698	1092	349	373
	TOTAL	1725	3233	2260	373

## ITEM 870 - COMMERCIAL FERTILIZER

$$\begin{aligned} \text{SEEDING AND SODDING AREAS} &= 2260 \text{ S.Y.} + 373 \text{ S.Y.} \\ (2633.00)(9)(20/1000)(1/2000) &= 0.24 \text{ TON} \end{aligned}$$

## ITEM 870 - AGRICULTURAL LIME

$$\begin{aligned} \text{SEEDING AND SODDING AREAS} &= 2260 \text{ S.Y.} + 373 \text{ S.Y.} \\ (2633.00)(9)(92/1000)(1/2000) &= 1.09 \text{ TON} \end{aligned}$$

ITEM 870 - WATER\*

SEEDING AND SODDING AREAS = 2260 S.Y. + 373 S.Y.  
 (2)(2633.00)(9)(300/1000)(1/1000) = 14.22 M. GAL.  
 USE 15 M. GAL.

\*QUANTITY CARRIED TO THE GENERAL NOTES

## DRIVEWAY QUANTITIES

SHEET NO.	CODE	LOCATION	SIDE	AREA	301	304		408		448	448
				SQ. FT.	BITUMINOUS AGGREGATE BASE, PG 64-22	AGGREGATE BASE				ASPH. CONC. SURF. COURSE, TYPE 1, PG 64-22 (DRIVEWAYS)	ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG 64-22 (DRIVEWAYS)
					CU. YD.	CU. YD.		GALLON		CU. YD.	CU. YD.
		LAKE AVENUE									
30	DW-1	8+77	RT.	994		24.5		44.2		3.8	5.4
30	DW-2	8+53 (APRON)	RT.	328		8.1		14.6		1.3	1.8
30	DW-2	8+53	RT.	413		10.2					
30	DW-6	9+05	LT.	996		24.6**		44.3**		3.8**	5.4**
		THIRD STREET									
31	DW-3	8+39 (APRON)	RT.	75	0.9					0.3	
31	DW-3	8+39	RT.	84		2.1					
31	DW-4	9+11 (APRON)	RT.	75	0.9					0.3	
31	DW-4	9+11	RT.	222		5.5					
31	DW-5	9+22 TO 11+40	LT.	6280		155.1		279.1		24.2	33.9
		TOTAL			2	230		382		34	47

\*\* CONTINGENCY QUANTITIES

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[illegible]



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LOCATION	SIDE	877	877	877
		TEMPORARY PERIMETER FILTER FABRIC FENCE	TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	TEMPORARY DITCH CHECK FILTER FABRIC FENCE
FROM	TO	LIN. FT.	LIN. FT.	LIN. FT.
AT ALL INLETS			100	
BALE DIKES (SEE NOTE)				350
9+25 TO 10+30	RT.	125		
9+50 TO 10+15	LT.	95		
11+70 TO 11+40 (THIRD ST.)	RT.	120		
11+40 TO 9+25 (THIRD ST.)	LT.	90		
TOTALS		430	100	350

NOTE  
BALE DIKES TO BE PLACED AS DIRECTED  
BY THE ENGINEER TO PROTECT EXISTING  
PARKING LOTS AND DRIVES FROM SEDIMENTATION.

STA. 5+00.00 C/L R/W & CONST. LAKE AVENUE  
STA. 646+98.14 C/L S.R. 21

USGS QUADRANT NO. N4045-W8130/7.5  
MASSILLON, OHIO

LATITUDE: 40°48'42" N  
LONGITUDE: 81°31'48" W

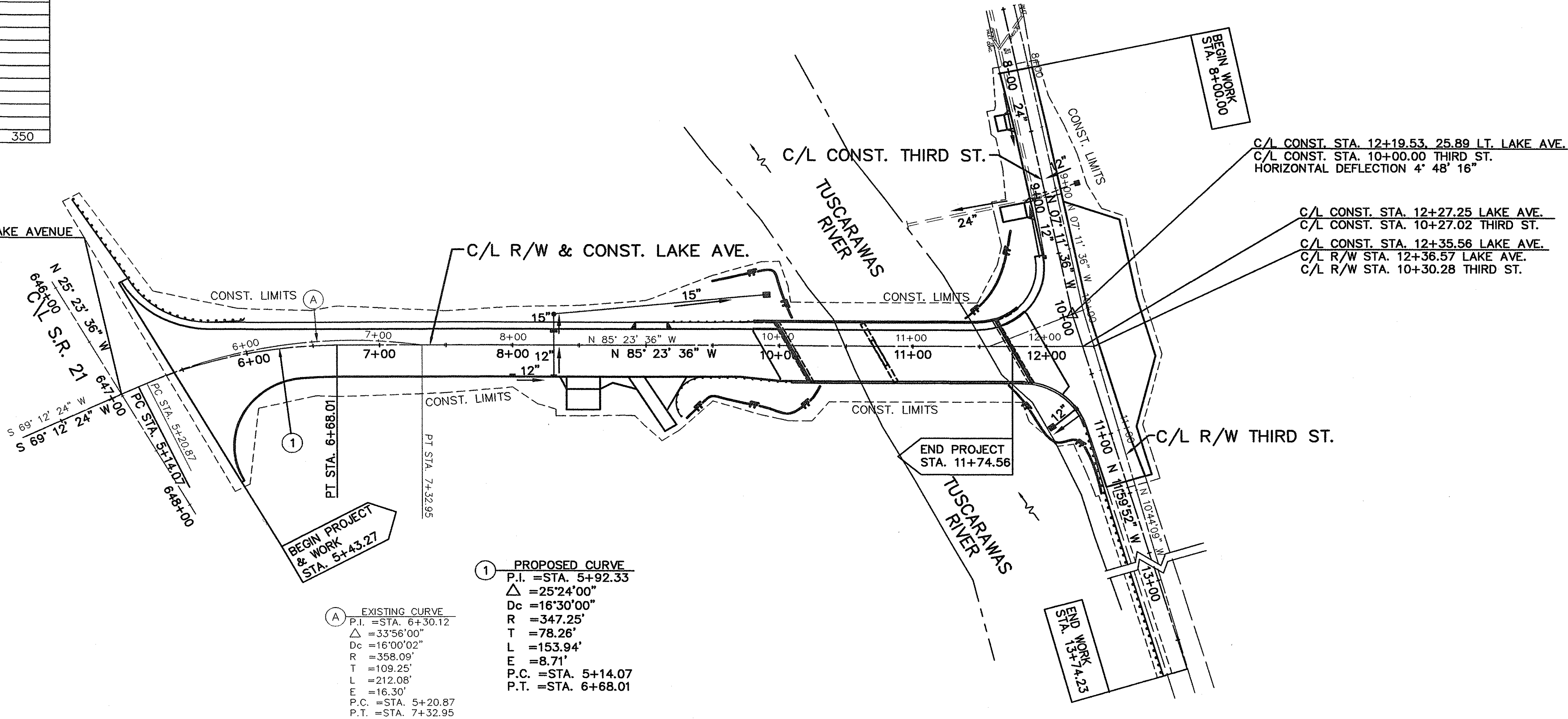
LONGITUDE AND LATITUDE TO APPROXIMATE  
CENTER OF PROJECT

LEGEND	
■	CATCH BASIN (20 LIN. FT. EACH)
—	TEMPORARY PERIMETER FILTER FABRIC FENCE
●	MANHOLE
▨	ROCK CHANNEL PROTECTION

PROJECT DATA	
TOTAL AREA (RIGHT-OF-WAY)	1.8 ACRES
AREA TO UNDERGO EXCAVATION, FILLING OR GRADING	1.8 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.3 - 0.9
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.3 - 0.9
SOIL DATA	SEE SOIL PROFILE
IMMEDIATE RECEIVING WATERS	TUSCARAWAS RIVER
SUBSEQUENT RECEIVING WATERS	MUSKINGUM RIVER

## PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF ROADWAY AND DRAINAGE IMPROVEMENTS ON LAKE AVENUE AND THIRD STREET WITHIN THE CITY OF MASSILLON, OHIO. THE PORTION ON LAKE AVENUE CONSISTS OF THE CONSTRUCTION OF 684 FT. OF THREE LANE URBAN COLLECTOR, INCLUDING A NEW STRUCTURE OVER THE TUSCARAWAS RIVER ON AN ADJUSTED VERTICAL ALIGNMENT. THE HIGHWAY HAS AN EAST-WEST ORIENTATION WITH CONSTRUCTION BEGINNING AT THE INTERSECTION WITH STATE ROUTE 21 AND ENDING AT THIRD STREET. THE PORTION ON THIRD STREET CONSISTS OF CONSTRUCTION OF 340 FT. OF TWO LANE ROADWAY ON AN ADJUSTED VERTICAL ALIGNMENT. THE HIGHWAY HAS A NORTH-SOUTH ORIENTATION WITH CONSTRUCTION BEGINNING APPROXIMATELY 200 FT. SOUTH OF THE INTERSECTION WITH LAKE AVENUE AND ENDING APPROXIMATELY 140 FT. NORTH OF THE SAME INTERSECTION. CONSTRUCTION ON BOTH ROADWAYS IS ON EXISTING HORIZONTAL ALIGNMENT.



## STORM WATER POLLUTION PREVENTION PLAN

THE CONDITIONS OF THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT (SEE PROPOSAL) SHALL BE MET DURING ALL STAGES OF CONSTRUCTION. THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACTS ON RECEIVING WATERS. IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE STABILIZED.

INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE CONCURRENT WITH CLEARING AND GRUBBING AND/OR GRADING OPERATIONS.

ALL REASONABLE ATTEMPS SHOULD BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND.

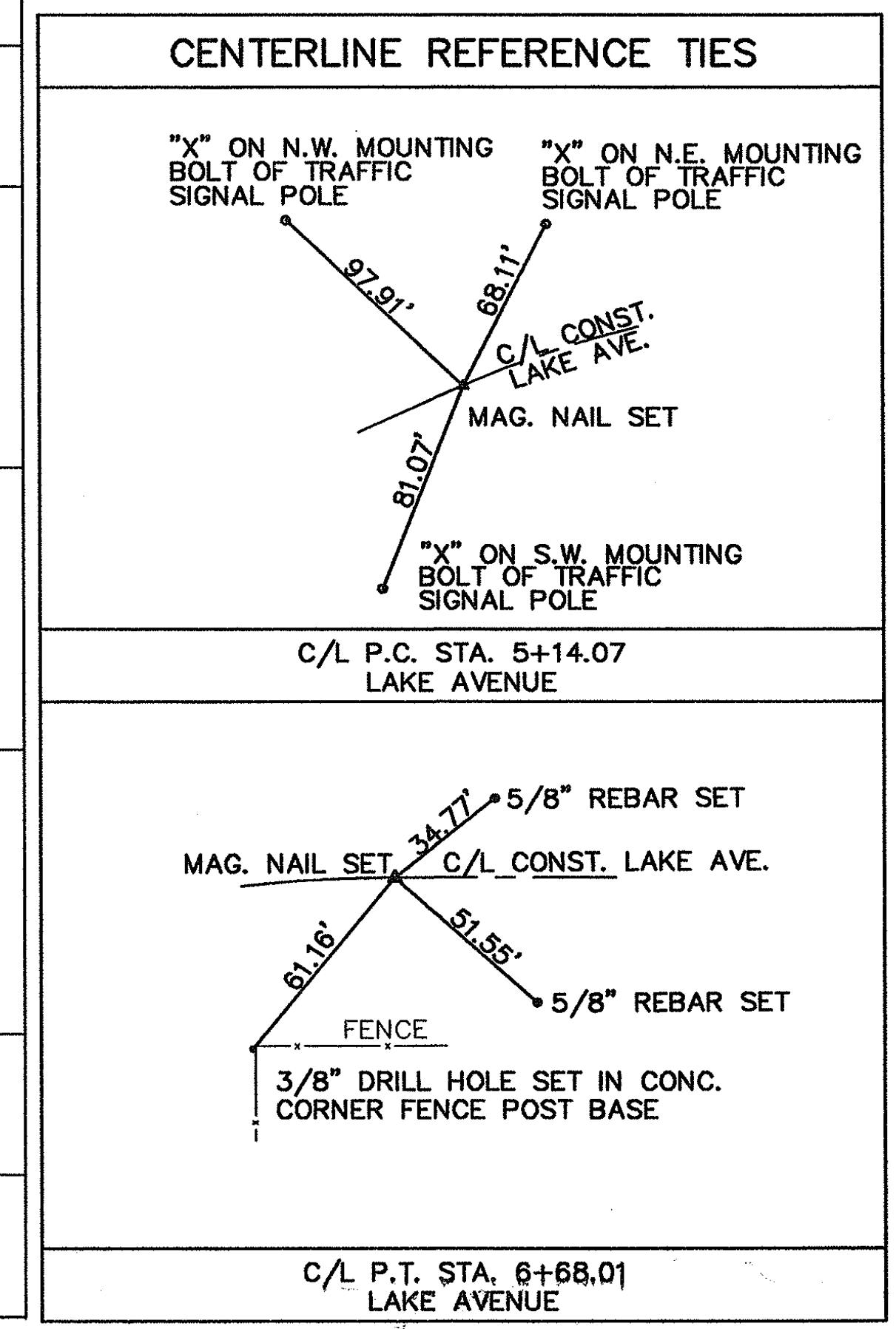
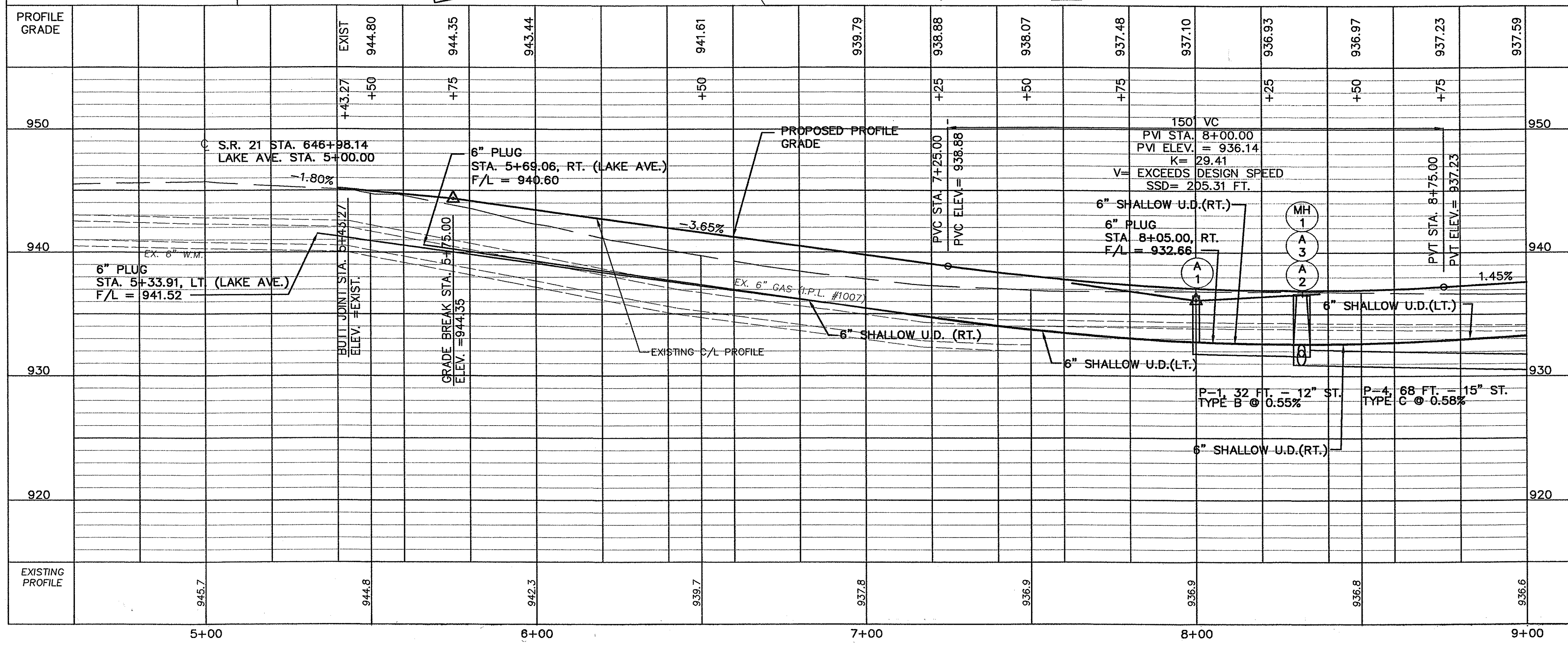
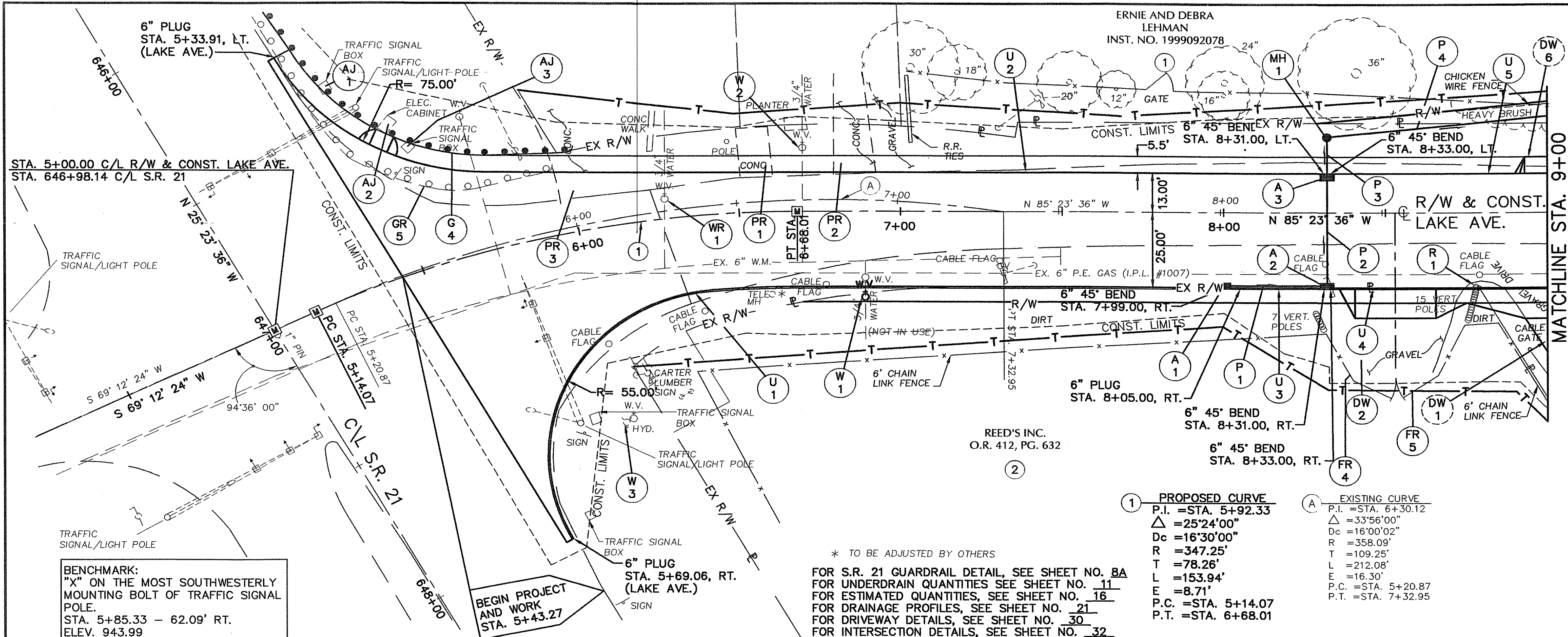
AREAS TO REMAIN DORMANT FOR MORE THAN 45 DAYS SHOULD BE IMMEDIATELY STABILIZED WITH TEMPORARY SEEDING AND MULCHING, EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES.

ADDITIONAL QUANTITIES OF TEMPORARY SOIL EROSION AND SEDIMENT CONTROL ITEMS ARE GIVEN IN THE GENERAL NOTES.



Cad File: H:\98029\DWG\98029P.A.DWG  
Date: 10-20-00 Time: 2:34 PM TW = 184658'35.00"

Technician: SIPE



- A-1**  
STA. 8+00.00, 25.0' RT.  
CATCH BASIN, NO. 3A  
GRATE ELEV. = 936.54  
INV. 6\"/>
- A-2**  
STA. 8+32.00, 25.0' RT.  
CATCH BASIN, NO. 3  
GRATE ELEV. = 936.36  
INV. 6\"/>
- A-3**  
STA. 8+32.00, 13.0' LT.  
CATCH BASIN, NO. 3  
GRATE ELEV. = 936.55  
INV. 6\"/>
- MH-1**  
STA. 8+32.00, 25.0' LT.  
MANHOLE, NO. 3  
T/C ELEV. = 936.65  
INV. 15\"/>

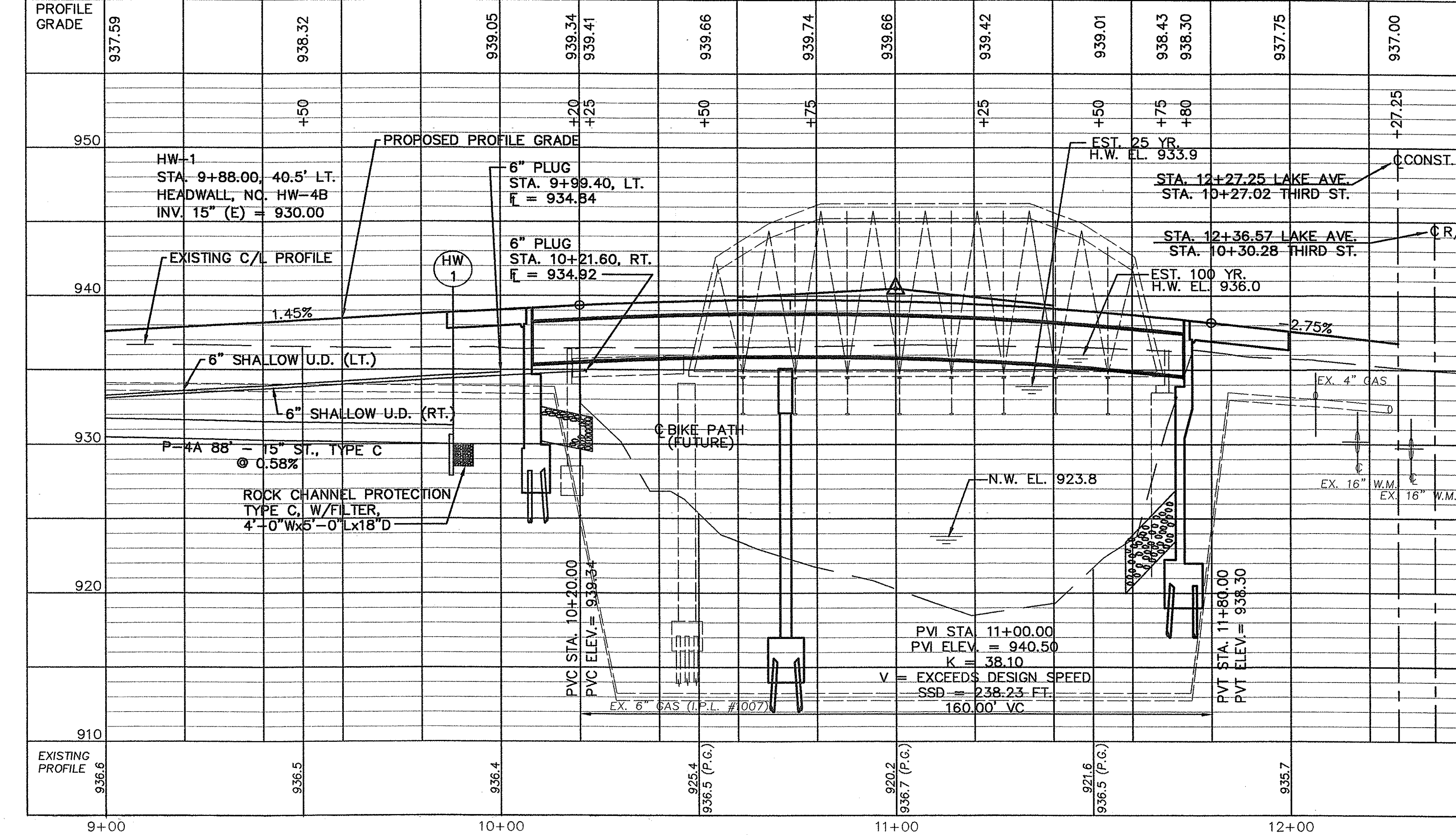
LAKE AVE - PLAN AND PROFILE  
BEGIN TO STA. 9+00

LAKE AVENUE



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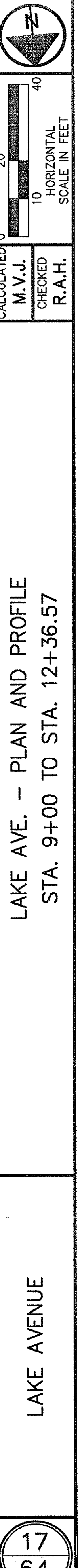


EXISTING STRUCTURE (TO BE REMOVED)

TYPE:	STEEL THROUGH TRUSS WITH STEEL FLOOR BEAMS AND JOISTS (WEST SPAN) AND STEEL BEAMS (EAST SPAN), CORRUGATED STEEL PLATE FLOORING, REINFORCED CONCRETE EAST ABUTMENT AND PIER, AND STONE MASONRY FRWD. ABUTMENT.
SPANS:	28'-0 1/2"±, 119'-0"± C/C BRGS.
ROADWAY:	30'-5"± F/F GUARDRAILS WITH 5'-0"± SIDEWALK (SOUTH SIDE)
LOADING:	S 20-46
SKEW:	25°00'00"± RF
ALIGNMENT:	TANGENT
SUPERELEVATION:	NONE
WEARING SURFACE:	BITUMINOUS CONCRETE
APPROACH SLABS:	NONE
DATE BUILT:	1959
STRUCTURE FILE NO.:	7631936

### PROPOSED STRUCTURE

TYPE:	CONTINUOUS COMPOSITE STEEL BEAM WITH REINFORCED CONCRETE DECK SLAB AND SUBSTRUCTURE (ASTM A572 STEEL)
SPANS:	63'-0", 100'-0" C/C BRGS.
ROADWAY:	41'-0" F/F CURBS WITH 6'-0" SIDEWALK (SOUTH SIDE) AND DEFLECTOR PARAPET (NORTH SIDE)
LOADING:	HS 25-44 (CASE II) AND ALTERNATE MILITARY LOADING
SKEW:	28°30'00" RF
ALIGNMENT:	TANGENT
CROWN:	.0156"/FT
WEARING SURFACE:	MONOLITHIC CONCRETE
APPROACH SLABS:	20' REAR ABUT., 25' FRWD. ABUT. (AS-1-81)
TRAFFIC DATA:	ADT (2000) 6250 ADTT (2000) 625 ADT (2020) 7627 ADTT (2020) 763
STRUCTURE COORDINATES:	LAT. N 40° 48' 42" LONG. W 81° 31' 48"



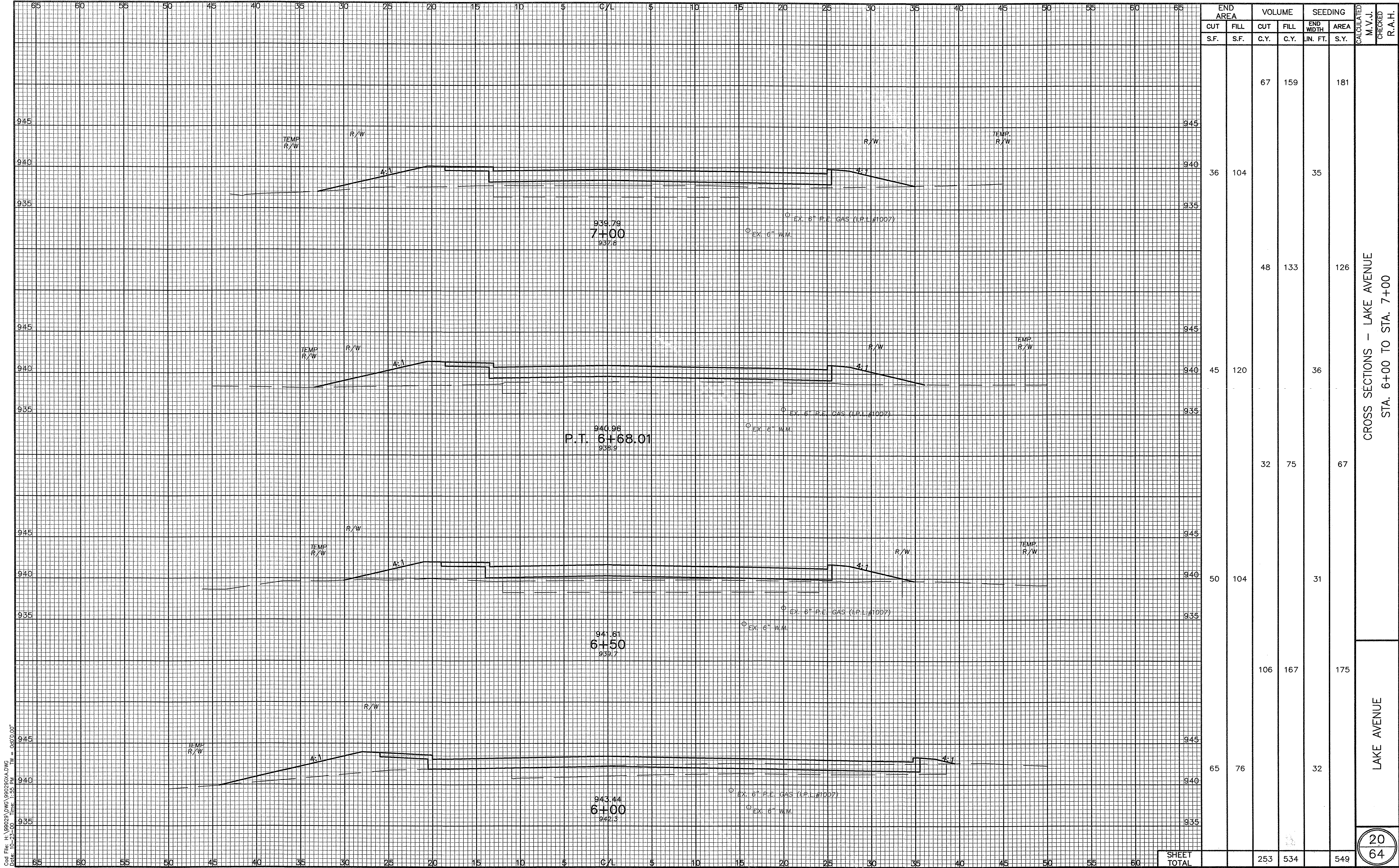


ESTIMATED QUANTITIES - LAKE AVENUE  
STA. 9+00 TO STA. 12+36.57









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Date: 10-23-00 Time: 1:55 PM  
Technician: SIPE

END AREA	VOLUME		SEEDING		CALCULATED M.V.J.	CHECKED R.A.H.
	CUT	FILL	CUT	FILL		
	S.F.	S.F.	C.Y.	C.Y.	END WIDTH IN. FT.	AREA S.Y.
36	104		67	159	35	181
48			48	133	126	
45	120				36	
			32	75	67	
50	104				31	
			106	167	175	
65	76				32	
SHEET TOTAL			253	534	549	

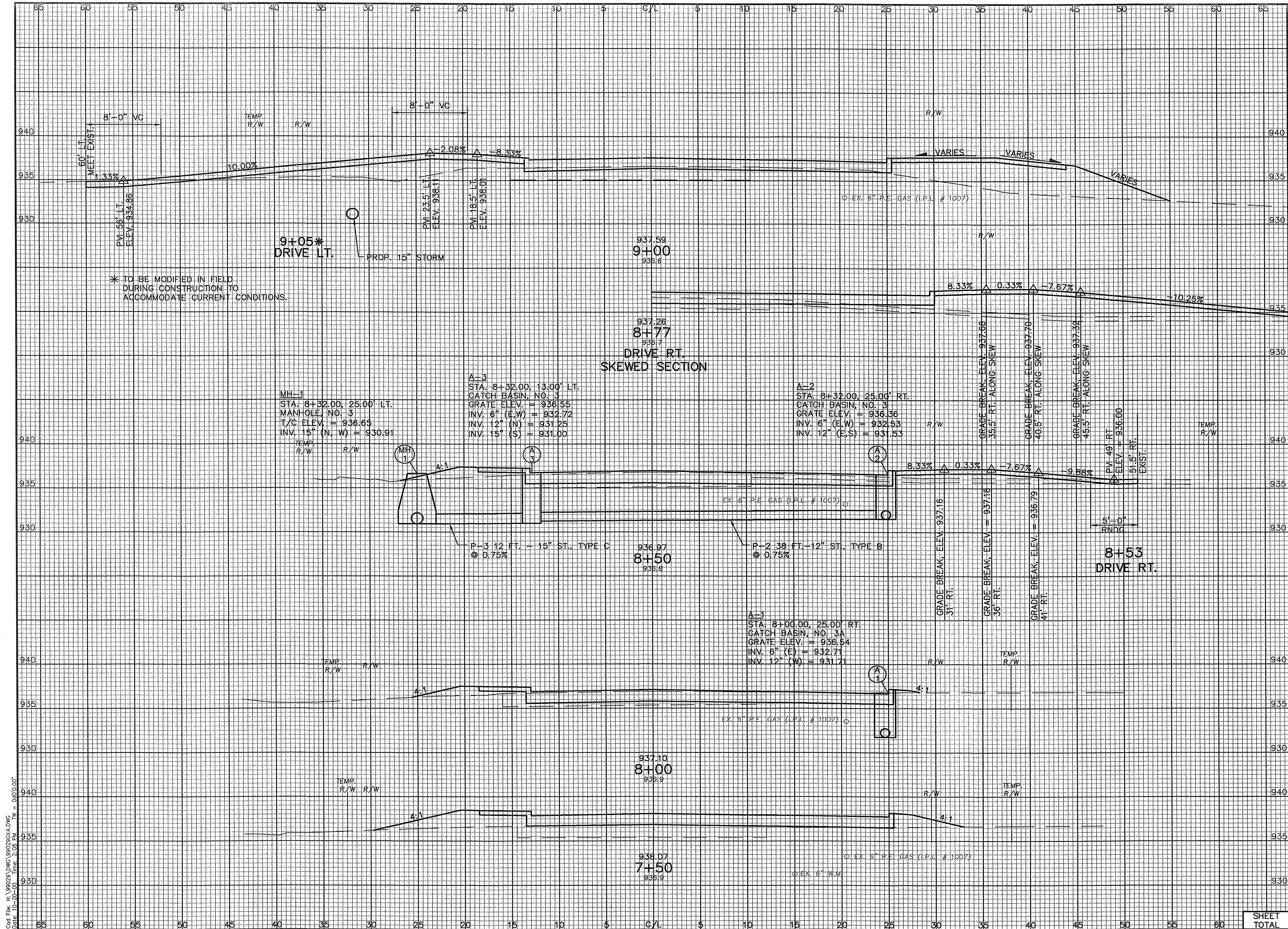
CROSS SECTIONS - LAKE AVENUE  
STA. 6+00 TO STA. 7+00

LAKE AVENUE



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Technician: SIPE



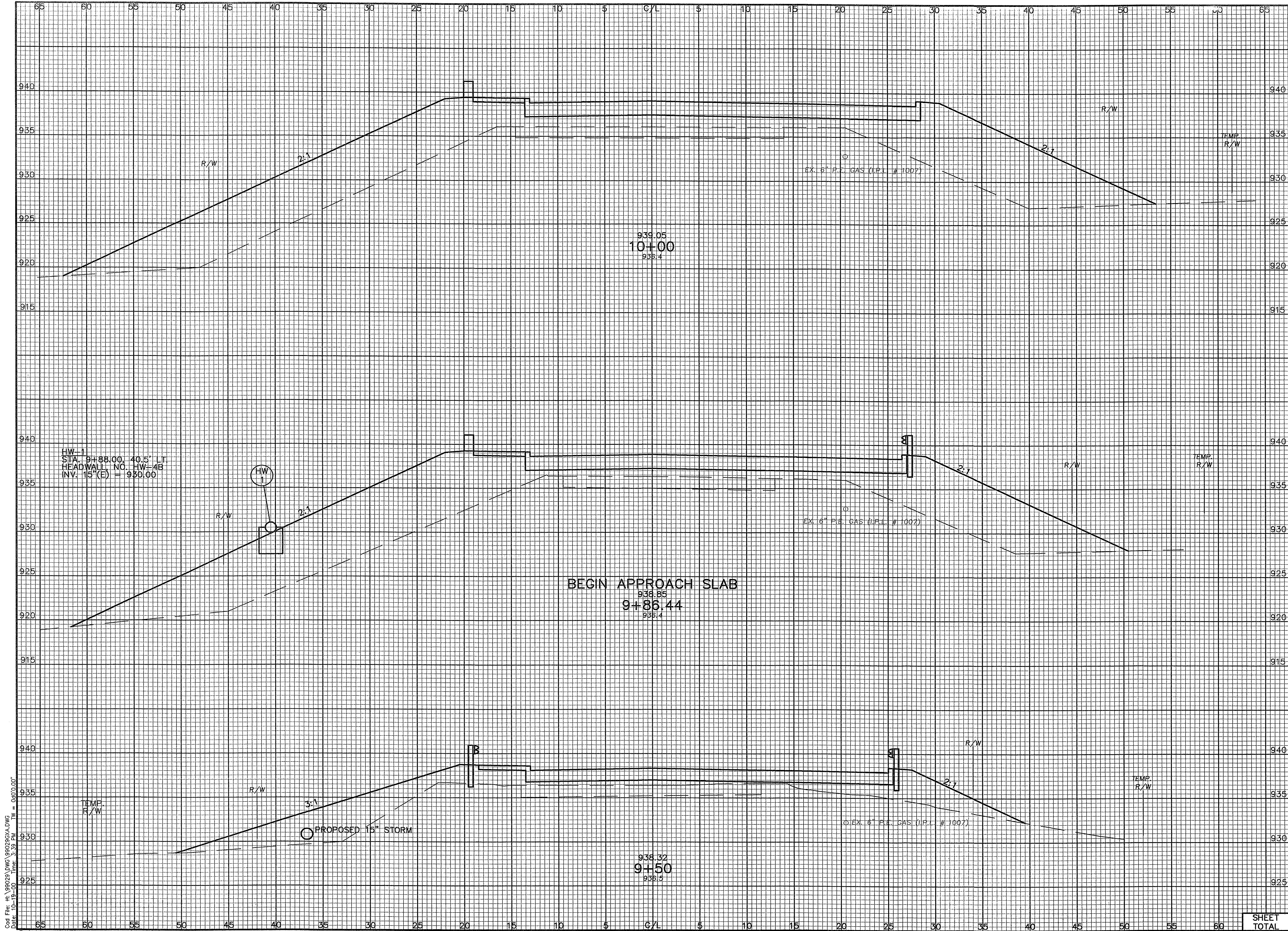
END AREA	VOLUME		SEEDING		CALCULATED M.V.J.	CHECKED R.A.H.
	CUT	FILL	CUT	FILL		
	S.F.	S.F.	C.Y.	C.Y.		
47	150		76	308	35	153
10'-0" RNDG.			113	175		
PVI ELEV. 934.50 75' RT. ALONG SKEW						
MEET EXIST. 78' RT. ALONG SKEW						
75	39		125	57	20	117
60	23		89	84	22	144
36	68				30	
SHEET TOTAL			403	624	678	

CROSS SECTIONS - LAKE AVENUE  
STA. 7+50 TO STA. 9+00

LAKE AVENUE

21  
64

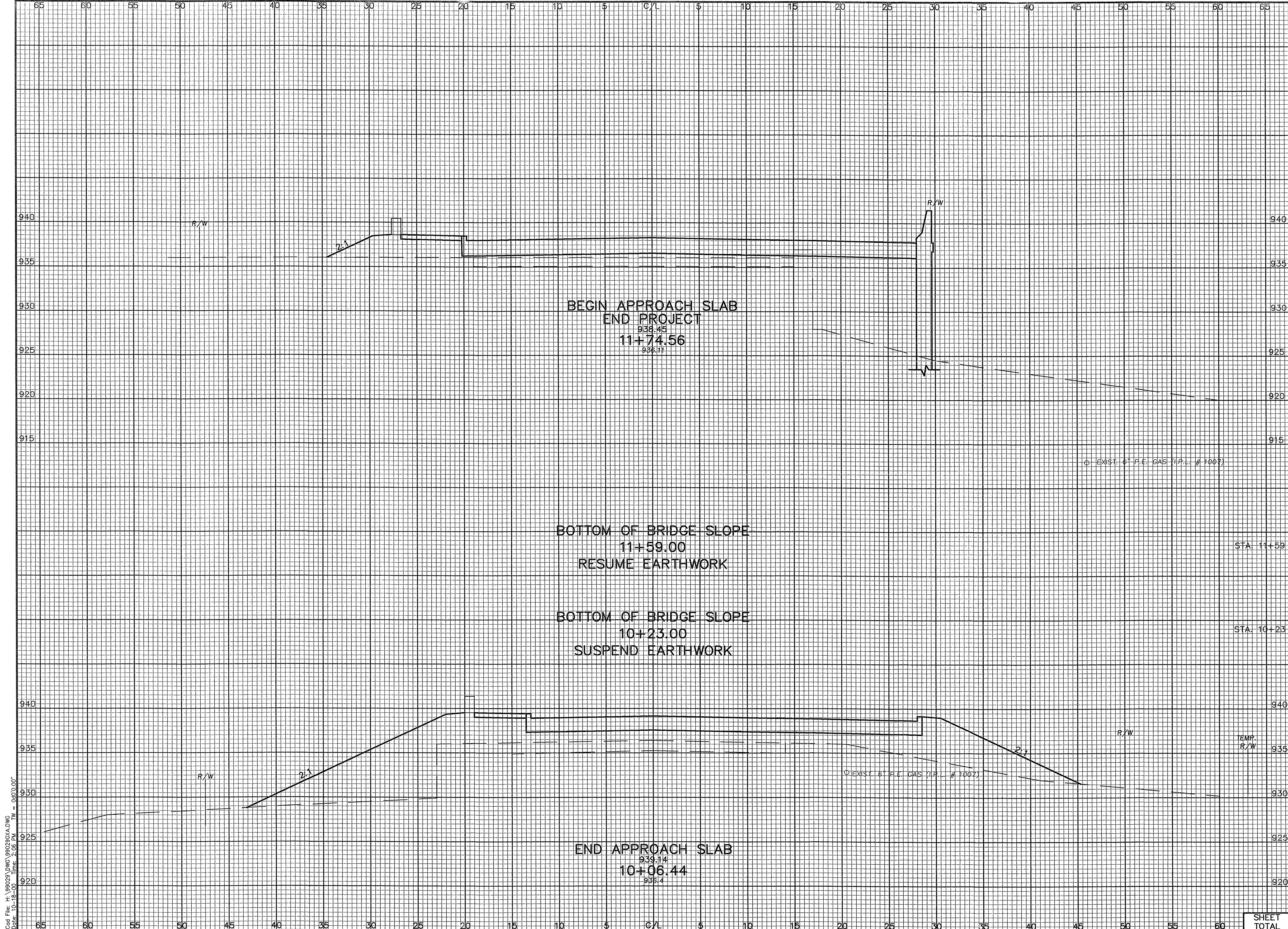




END AREA		VOLUME		SEEDING		CALCULATED M.V.J. CHECKED R.A.H.
CUT	FILL	CUT	FILL	END WIDTH	AREA	
S.F.	S.F.	C.Y.	C.Y.	IN. FT.	S.Y.	
38	475	9	89	85	50	CROSS SECTIONS - LAKE AVENUE STA. 9+50 TO STA. 10+00
		17	237	127		
29	470	43	441	289		
		35	183	60		LAKE AVENUE
SHEET TOTAL						22 64

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User: KVA  
Technician: KOVATCH





END AREA		VOLUME		SEEDING		CALCULATED M.V.J.	CHECKED R.A.H.
CUT	FILL	CUT	FILL	END WIDTH	AREA		
S.F.	S.F.	C.Y.	C.Y.	IN. FT.	S.Y.		
43	189			14			
		12	54		12		
0	0			0			
0	0			0			
		11	82		51		
35	268			55			
SHEET TOTAL		23	136		63		

CROSS SECTIONS - LAKE AVENUE  
STA. 10+06.44 TO STA. 11+74.56

LAKE AVENUE



FOR DRAINAGE PROFILE, SEE SHEET 27.  
FOR INTERSECTION DETAILS, SEE SHEET 32.  
FOR DRIVEWAY DETAILS, SEE SHEET 31.  
FOR ESTIMATED QUANTITIES, SEE SHEET 25.  
FOR UNDERDRAIN QUANTITIES, SEE SHEET 11.

CARTER JONES  
LUMBER COMPANY  
VOL. 3507, PG. 180

STA. 9+49.13 SUSPEND ASPHALT PAVT.  
STA. 9+49.13 BEGIN CONCRETE PAVT.

TIMOTHY E. AND  
DEBRA K. BOWERS  
INST. NO. 96042723

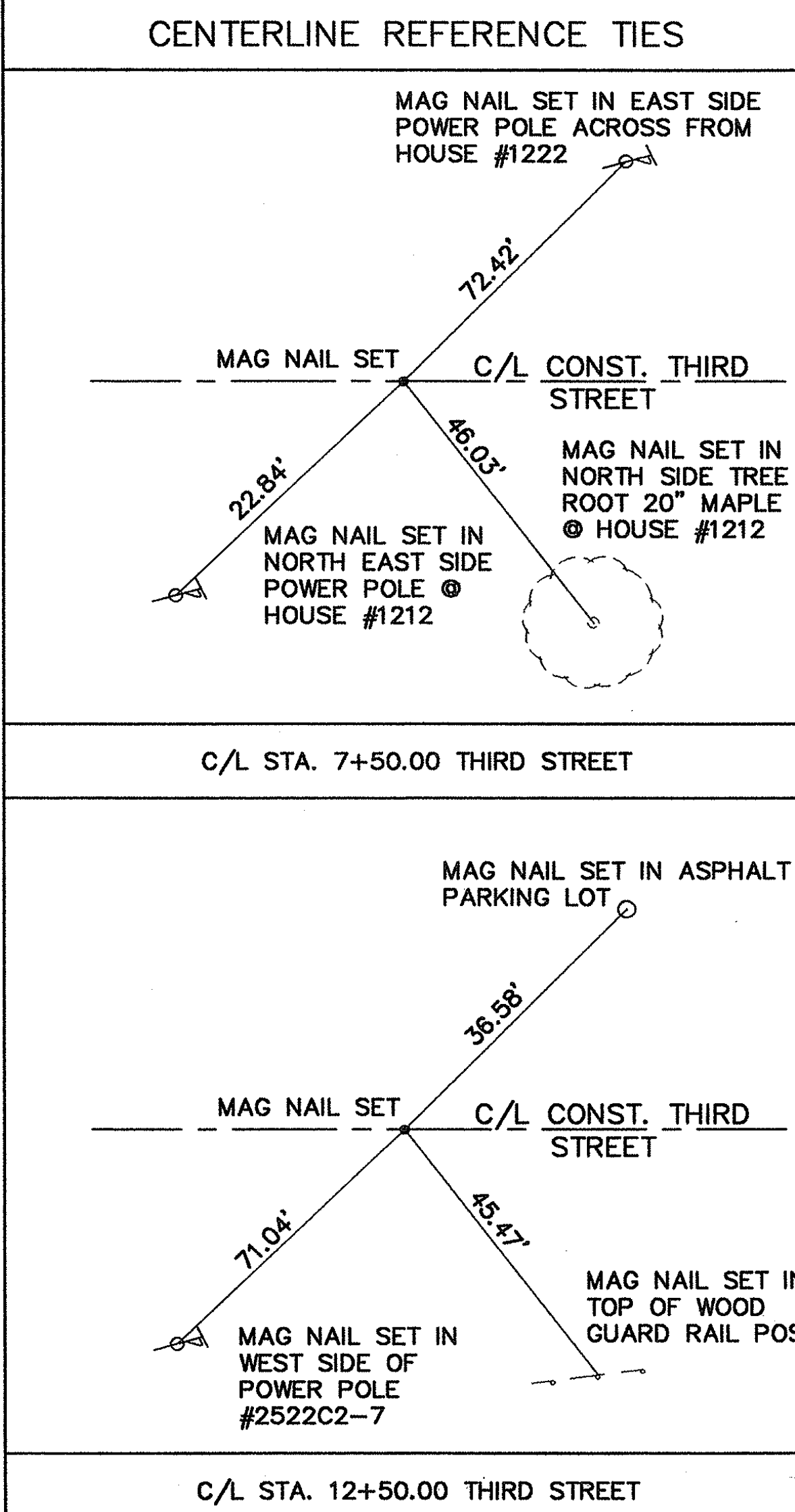
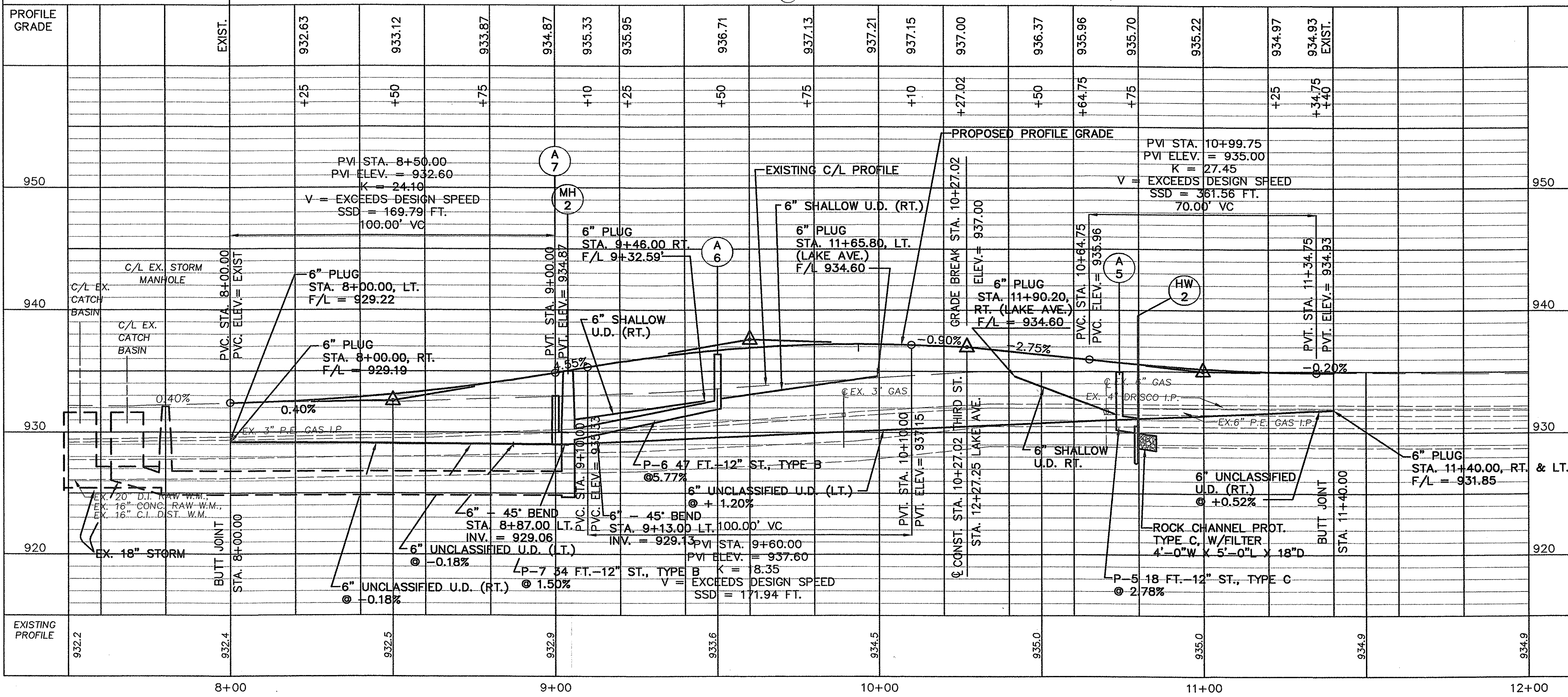
C/L R/W STA. 10+00.00 THIRD STREET  
HORIZONTAL DEFLECTION 3' 32" 33" LT.  
C/L CONST. STA. 12+19.53, 25.89 LT. LAKE AVE.  
C/L CONST. STA. 10+00.00 THIRD ST.  
HORIZONTAL DEFLECTION: 4' 48" 16"  
C/L R/W STA. 12+35.56 LAKE AVE.  
C/L R/W STA. 12+36.57 LAKE AVE.  
C/L R/W STA. 10+30.28 THIRD ST.  
C/L CONST. STA. 12+27.25 LAKE AVE.  
C/L CONST. STA. 10+27.02 THIRD ST.

- 1 6" PLUG STA. 11+65.80, LT. (LAKE AVE.)
- 2 6" 45' BEND STA. 9+50.00, RT. (THIRD ST.)
- 3 6" PLUG STA. 9+46.00, RT.
- 4 6" 45' BEND STA. 9+07.75, RT.
- 5 6" 45' BEND STA. 9+00.00, RT.
- 6 6" PLUG STA. 11+90.20, RT. (LAKE AVE.)
- 7 6" 45' BEND STA. 10+72.00, RT. (THIRD ST.)
- 8 6" 45' BEND STA. 10+74.00, RT. (THIRD ST.)

MH-2  
STA. 9+03.92, 9.18' RT.  
MANHOLE RECONSTRUCTED TO GRADE  
T/C ELEV. = 934.91  
INV. 6" (N) = 931.08  
INV. 12" (SW) = 928.49  
INV. 12" (N) = 929.00  
EXIST. INV. 24" (S) = 924.82  
EXIST. INV. 24" (E) = 924.47  
A-5  
STA. 10+73.00, 19.00' RT.  
CATCH BASIN, NO. 6  
GRATE ELEV. = 934.78  
INV. 6" (E,N) = 931.50  
INV. 12" (NE) = 930.50  
A-6  
STA. 9+51.00, 12.00' RT.  
CATCH BASIN, NO. 3A  
GRATE ELEV. = 936.38  
INV. 6" (N) = 932.71  
INV. 12" (S) = 931.71  
A-7  
STA. 9+00.00, 25.00' LT.  
CATCH BASIN, NO. 2-2B  
GRATE ELEV. = 933.00  
INV. 6" (SE & NE) = 929.00  
INV. 12" (NE) = 929.00  
HW-2  
STA. 10+79.00, 36.00' RT.  
HEADWALL NO. HW-4B  
INV. 12" (SW) = 930.00

BENCHMARK:  
THE MOST SOUTHWESTERLY TOP  
FLANGE BOLT OF FIRE HYDRANT  
STA. 12+17.83 - 48.96 RT.  
ELEV. 936.89

\* TAPER CURB HEIGHT FROM 0" TO 6" IN 10 FT.



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Title: 262445-35.85

Technician: SIPE

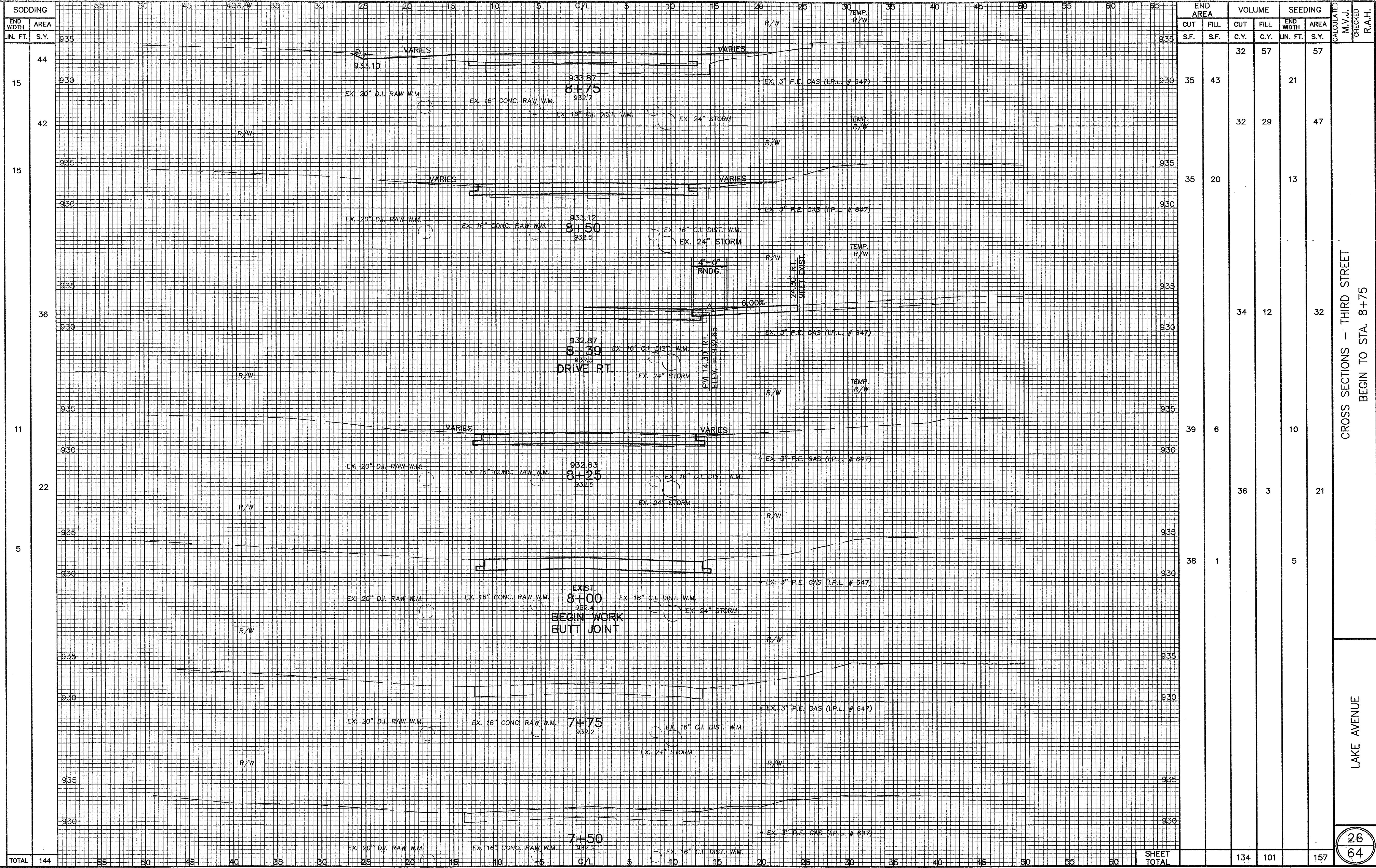


REF. NO.	STATION		SIDE	202	202	202	202	SPECIAL	601	602	603	603	604	604	604	604	606	606	606	606	607	607	622	626	638	638
				GUARDRAIL REMOVED	REMOVAL MISC.: MAILBOX REMOVED FOR REUSE	FENCE REMOVED	GATE REMOVED	MAILBOX SUPPORT SINGLE	ROCK CHANNEL PROTECTION, TYPE C, WITH FILTER	CONCRETE MASONRY	12" CONDUIT, TYPE B, 706.02	12" CONDUIT, TYPE C, 706.02	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 6	CATCH BASIN, NO. 2-2B	MANHOLE RECONSTRUCTED TO GRADE	ANCHOR ASSEMBLY, TYPE E-98	GUARDRAIL, TYPE 5	BRIDGE TERMINAL ASSEMBLY, TYPE 2	GUARDRAIL POST, 9 FT.	FENCE MISC.: FENCE, TYPE CL, WITH TOP WIRES	GATE, TYPE CL, AS PER PLAN	CONCRETE BARRIER, TYPE D, (50' RADIUS)	BARRIER REFLECTOR, TYPE A	SERVICE BOX ADJUSTED TO GRADE	FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE
	FROM	TO		LIN. FT.	EACH	LIN. FT.	EACH	EACH	CU.YD	CU. YD	LIN. FT.	LIN. FT.	EACH	EACH	EACH	EACH	EACH	LIN. FT.	EACH	EACH	LIN. FT.	EACH	LIN. FT.	EACH	EACH	EACH
GR-3	10+79.31	13+70	RT.	287.5																						
GR-4	10+26	10+38.50	LT.	12.5																						
G-2	10+86.73	13+74.23	RT.														1	237.50	1	46			4			
A-5	10+64 - 23' RT.													1												
A-6	9+51 - 12' RT.												1													
MH-2	9+03.92 - 9.18' RT.														1											
A-7	9+00 - 25' LT.																									
P-5	A-5	HW-2	RT.									18														
P-6	A-6	MH-2	RT.								47															
P-7	A-7	MH-2	L-R								34															
HW-2	10+76 - 40' RT.									0.2																
RCP-2	10+76 - 40' RT.								1																	
BW-1	10+71.91	10+88.73	RT.																			19				
MB-1	8+69 - 16.25' RT.				1			1																		
MB-2	9+50 - 18' RT.				1			1																		
MB-3	10+40 - 18' LT.				1			1																		
W-4	10+73 - 23' RT.																								1	
W-5	8+58 - 18' RT.																							1		
FR-3	8+50	9+28	LT.			75	2													75	2					



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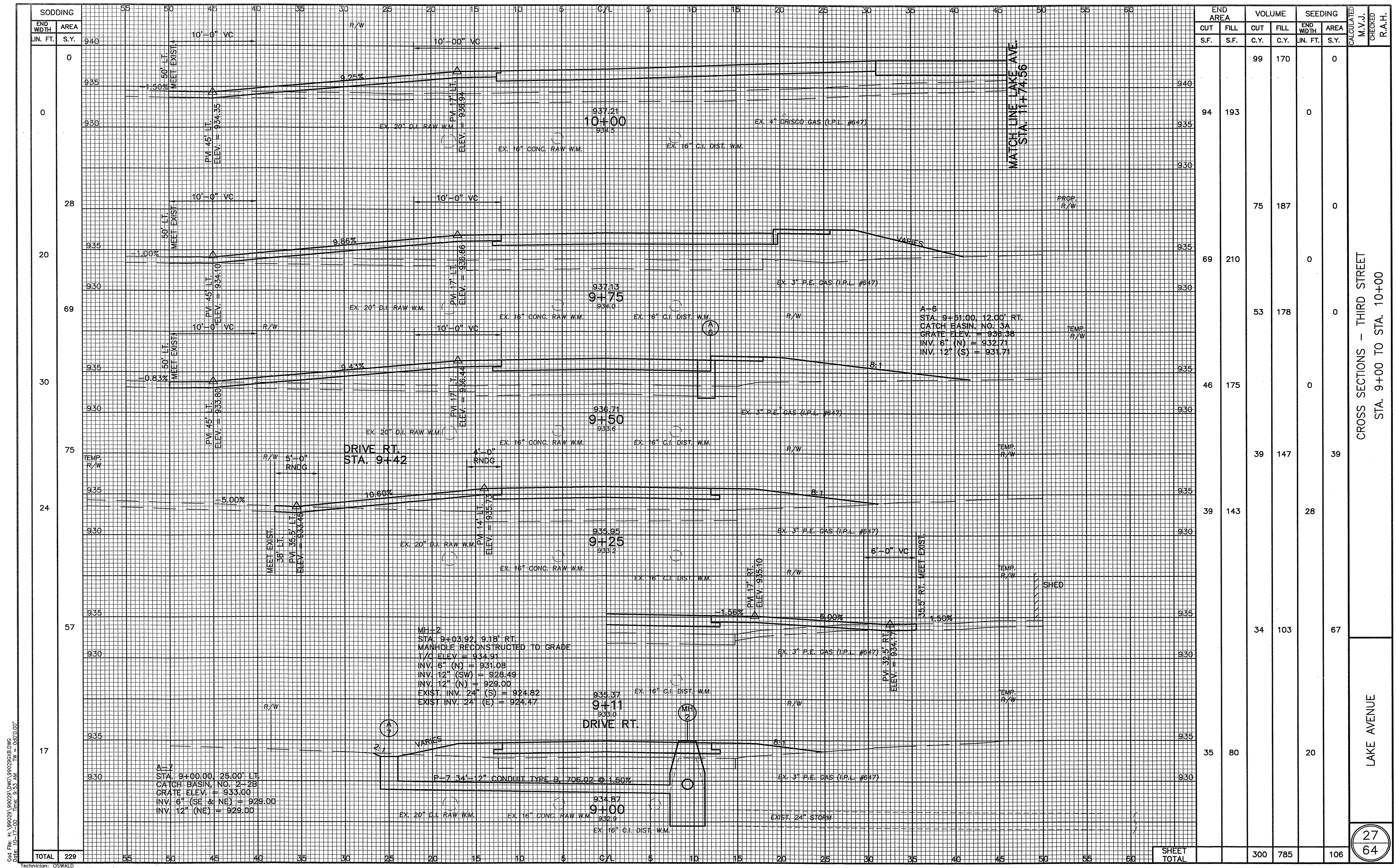
Technician: OSWALD



CROSS SECTIONS - THIRD STREET  
BEGIN TO STA. 8+75

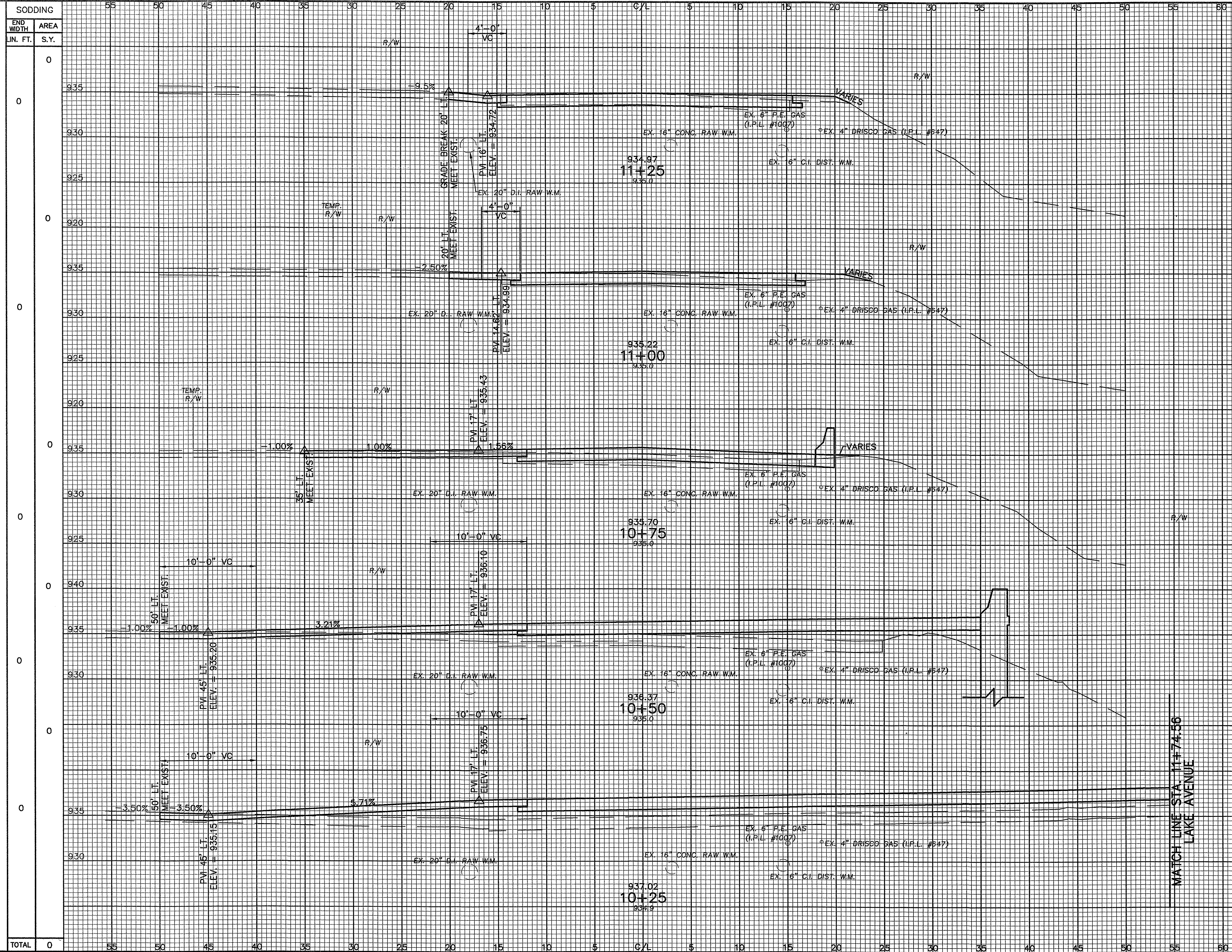
LAKE AVENUE





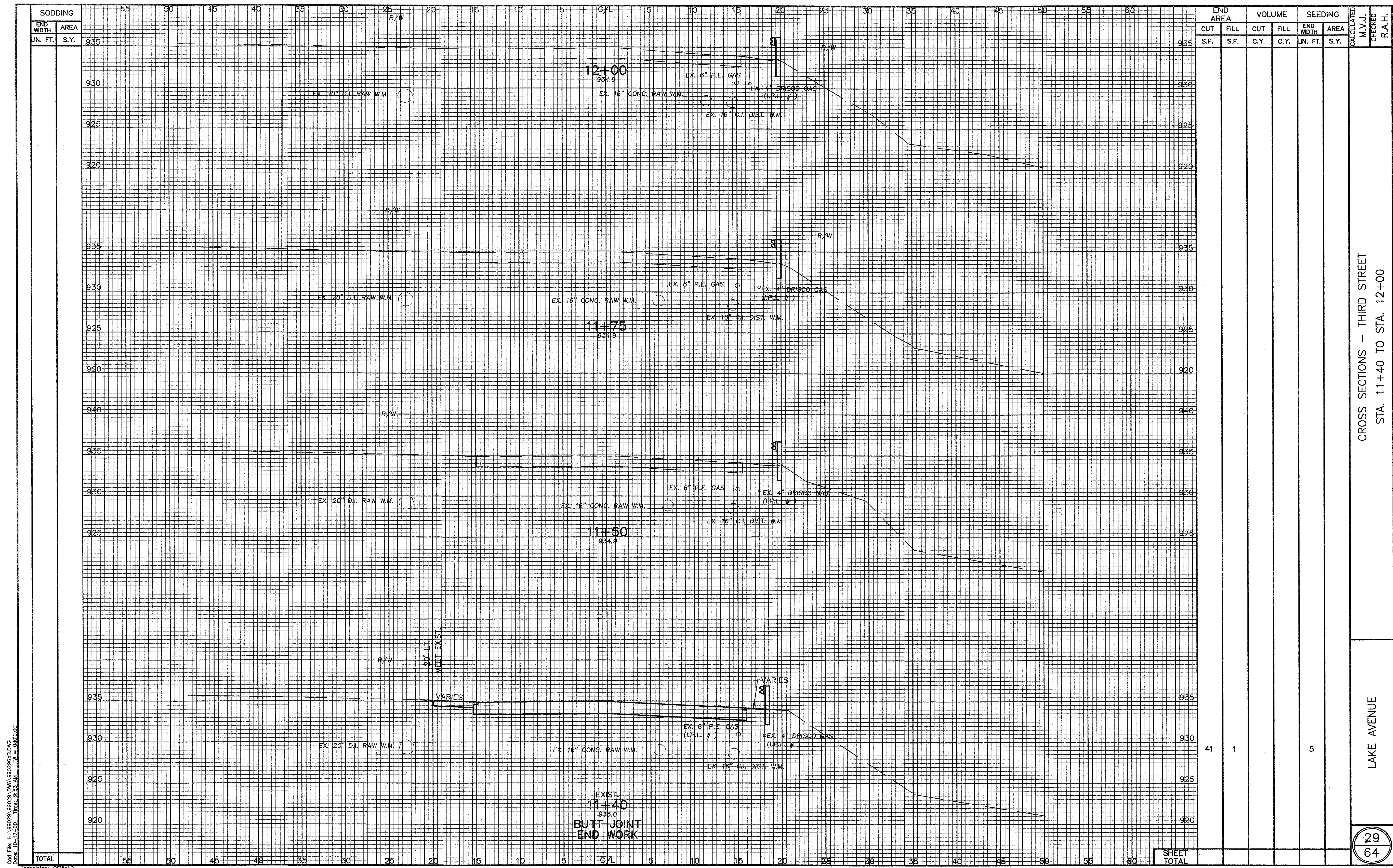


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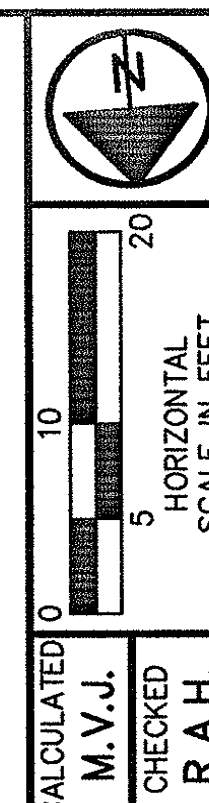


END AREA		VOLUME		SEEDING		CALCULATED	M.V.J.	CHECKED	R.A.H.
CUT	FILL	CUT	FILL	END WIDTH	AREA				
S.F.	S.F.	C.Y.	C.Y.	IN. FT.	S.Y.				
45	6	24	2	11	13				
		41	10	33					
44	15			13					
		46	18	29					
56	24			8					
		62	53	11					
78	91			0					
		91	123	0					
119	175			0					
SHEET TOTAL		264	206	86					









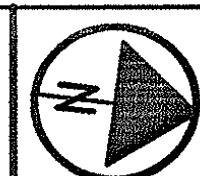
## LAKE AVENUE

30  
64

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Technician: KOVATCH





CALCULATED  
M.V.J.  
CHECKED  
R.A.H.

0 5 10 20  
HORIZONTAL  
SCALE IN FEET

DRIVE DETAILS - THIRD STREET

LAKE AVENUE

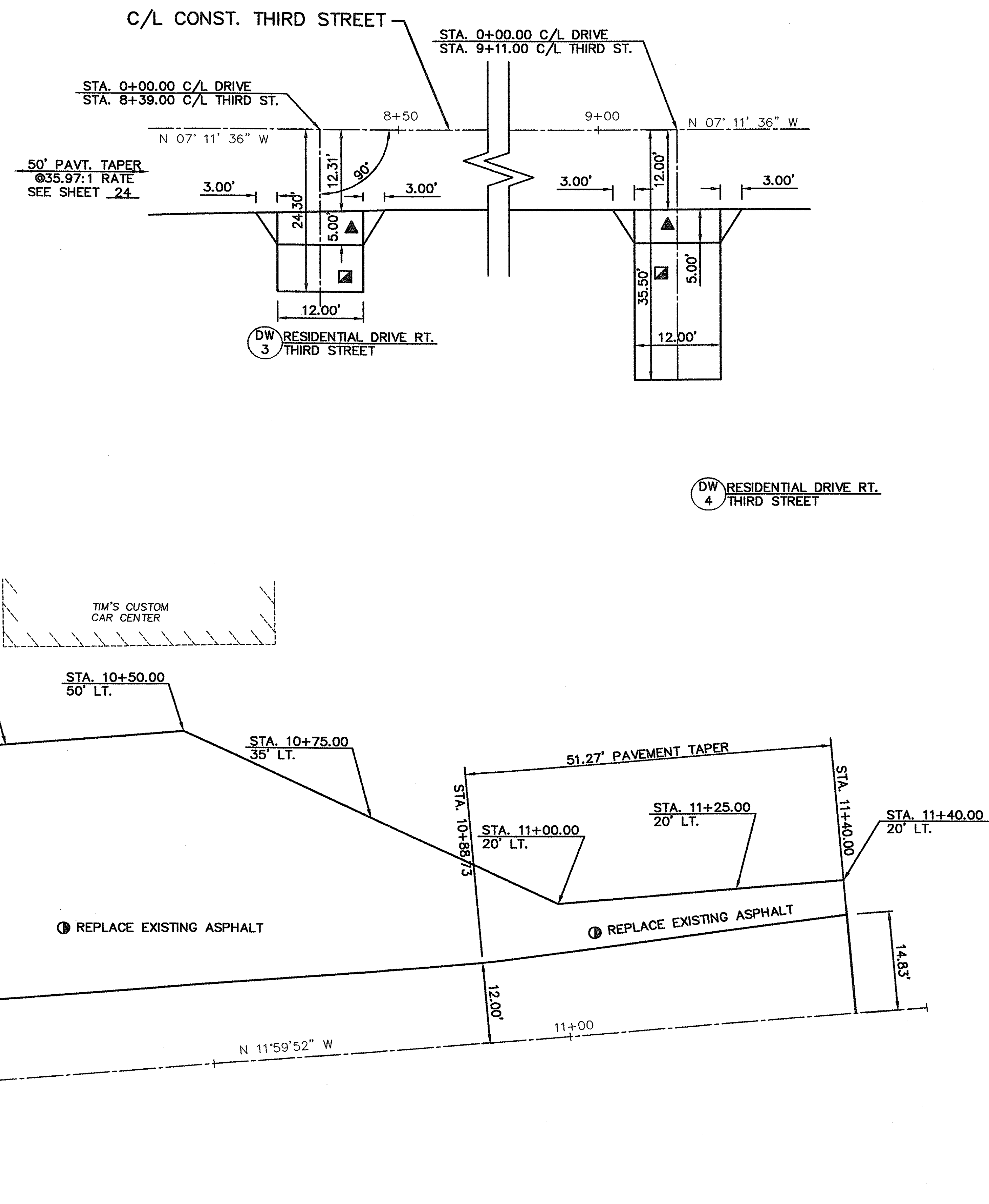
31  
64

# LEGEND

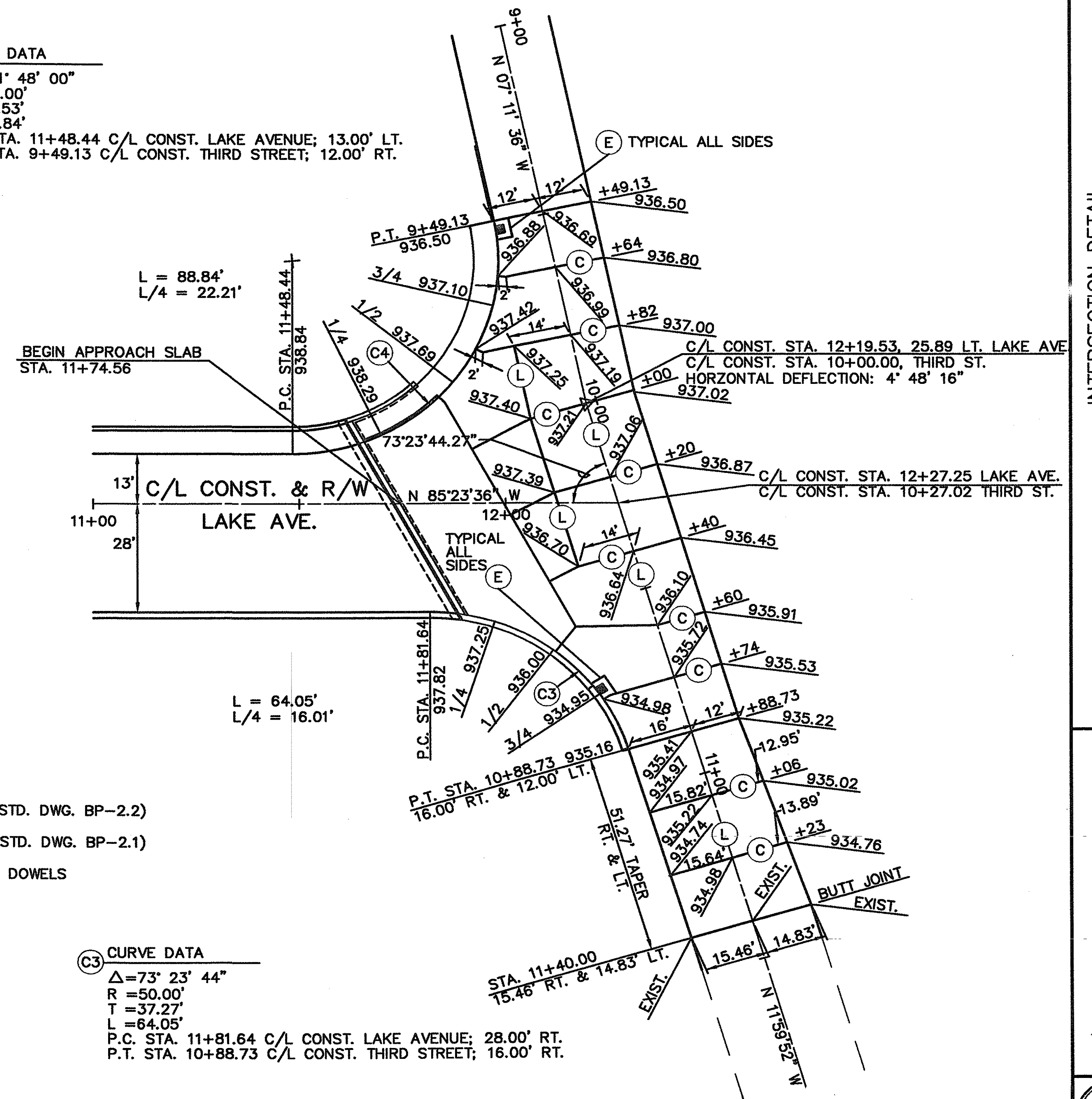
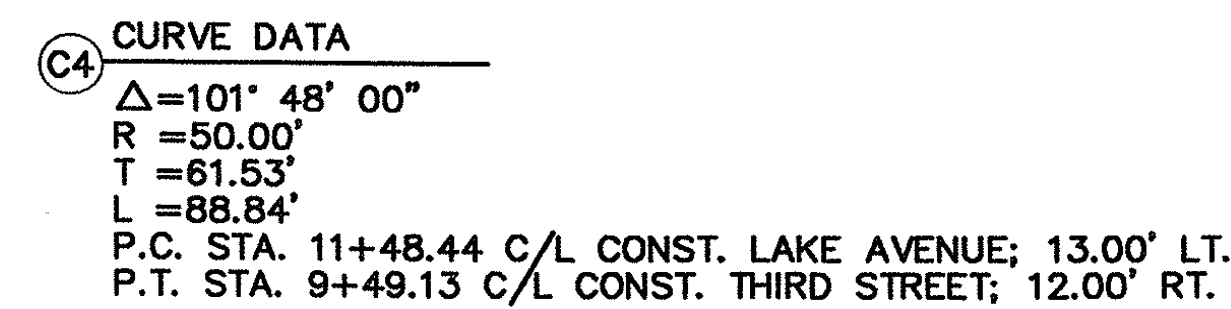
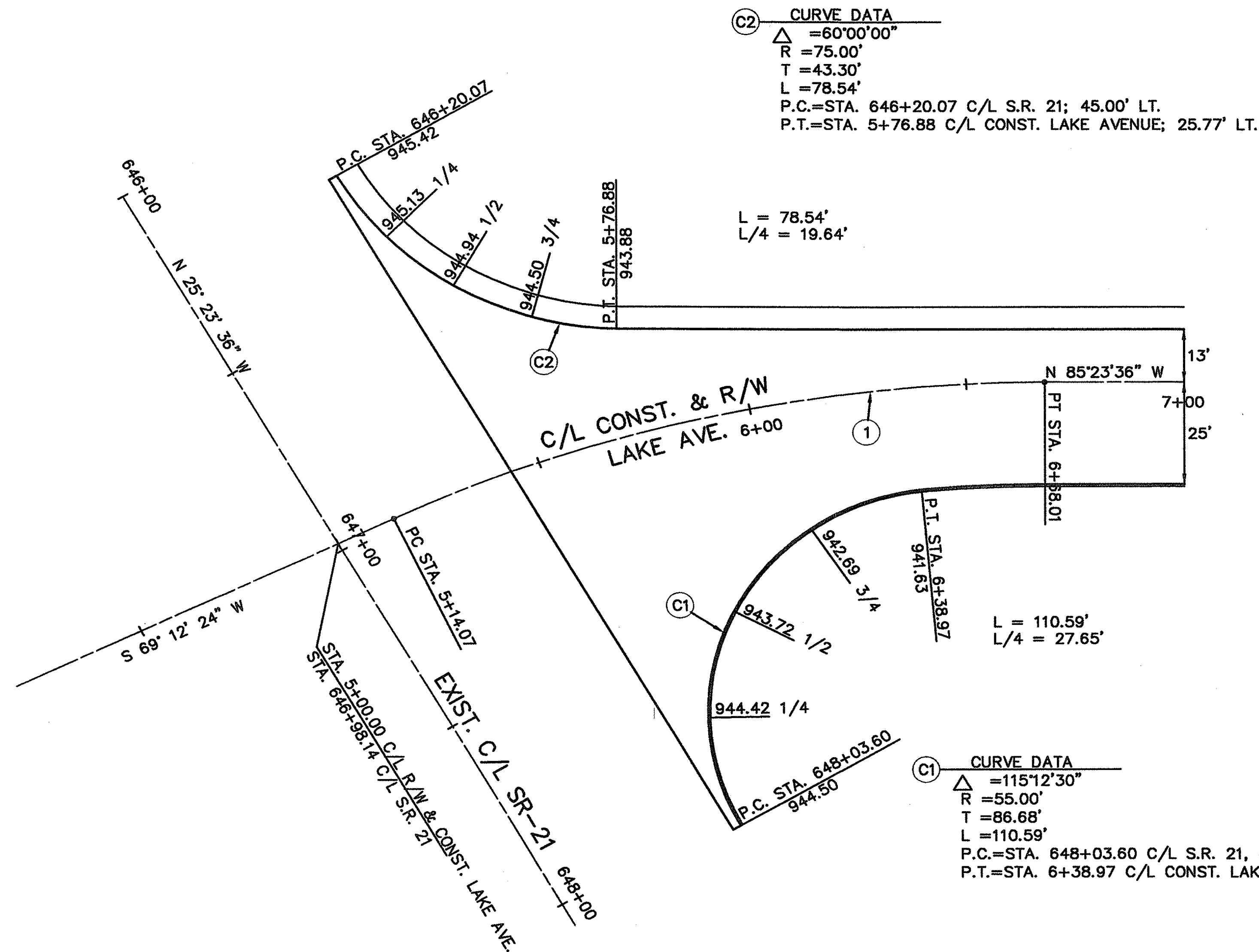
- ① ASPHALT COMMERCIAL DRIVE
  - 1 1/4" - 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS)
  - 1 3/4" - 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22 (DRIVEWAYS)
  - 408 BITUMINOUS PRIME COAT, APPLIED AT 0.40 GAL./S.Y.
  - 8" - 304 AGGREGATE BASE
- ▲ ASPHALT RESIDENTIAL DRIVE
  - 1 1/4" - 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS)
  - 3 3/4" - 301 BITUMINOUS AGGREGATE BASE, PG 64-22
- AGGREGATE RESIDENTIAL DRIVE
  - 8" - 304 AGGREGATE BASE

# NOTES

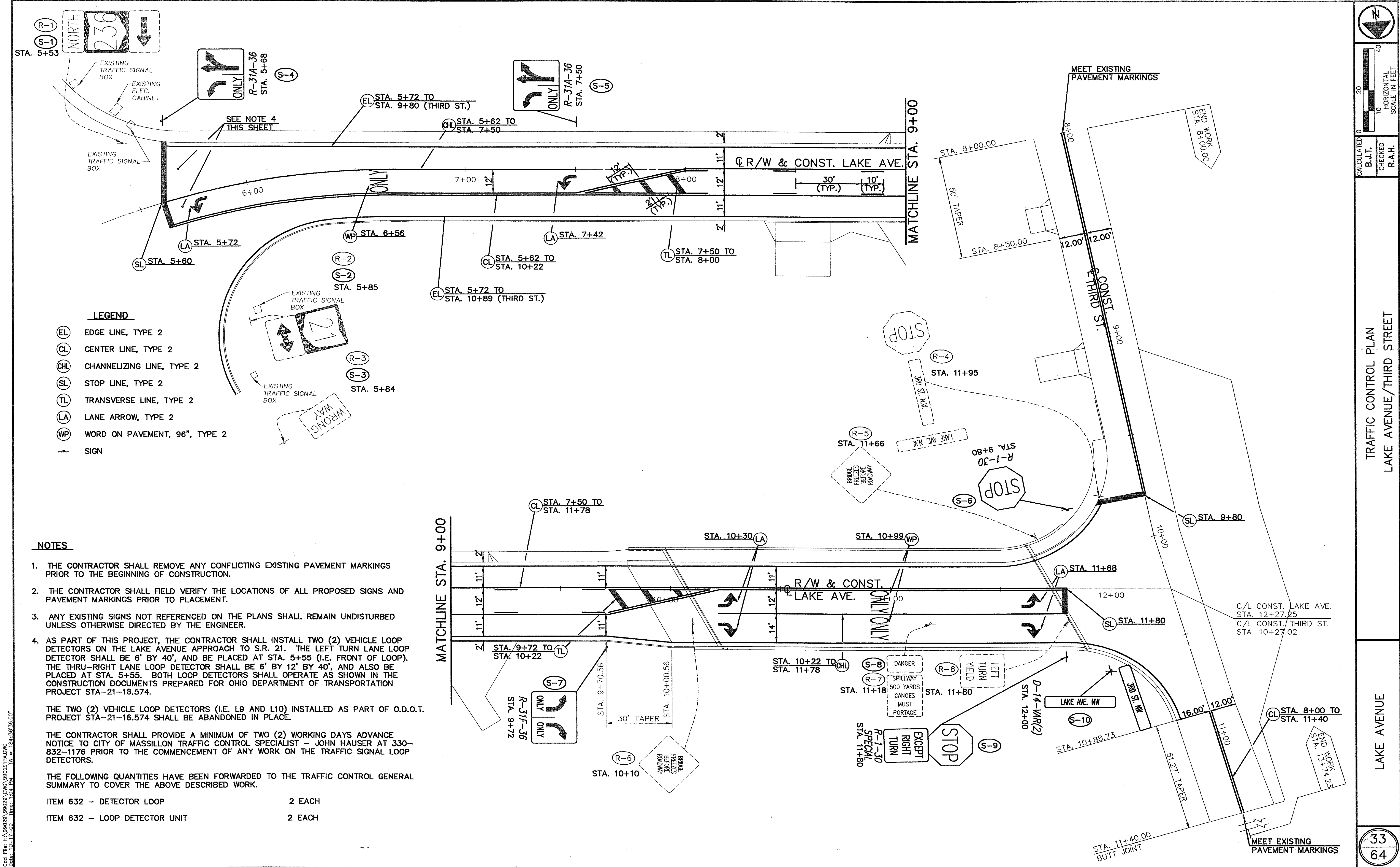
1. REFER TO CROSS SECTION SHEETS 26-29 FOR DRIVE PROFILES.
2. DRIVES ARE SYMMETRICAL ABOUT DRIVE C/L UNLESS NOTED OTHERWISE.
3. FOR DRIVEWAY QUANTITIES, SEE SHEET 10.











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Date: 10-17-00 Time: 1:04 PM User: 184436\36.00"

Technician: OSWALD



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[illegible]

## SIGNING SUB-SUMMARY

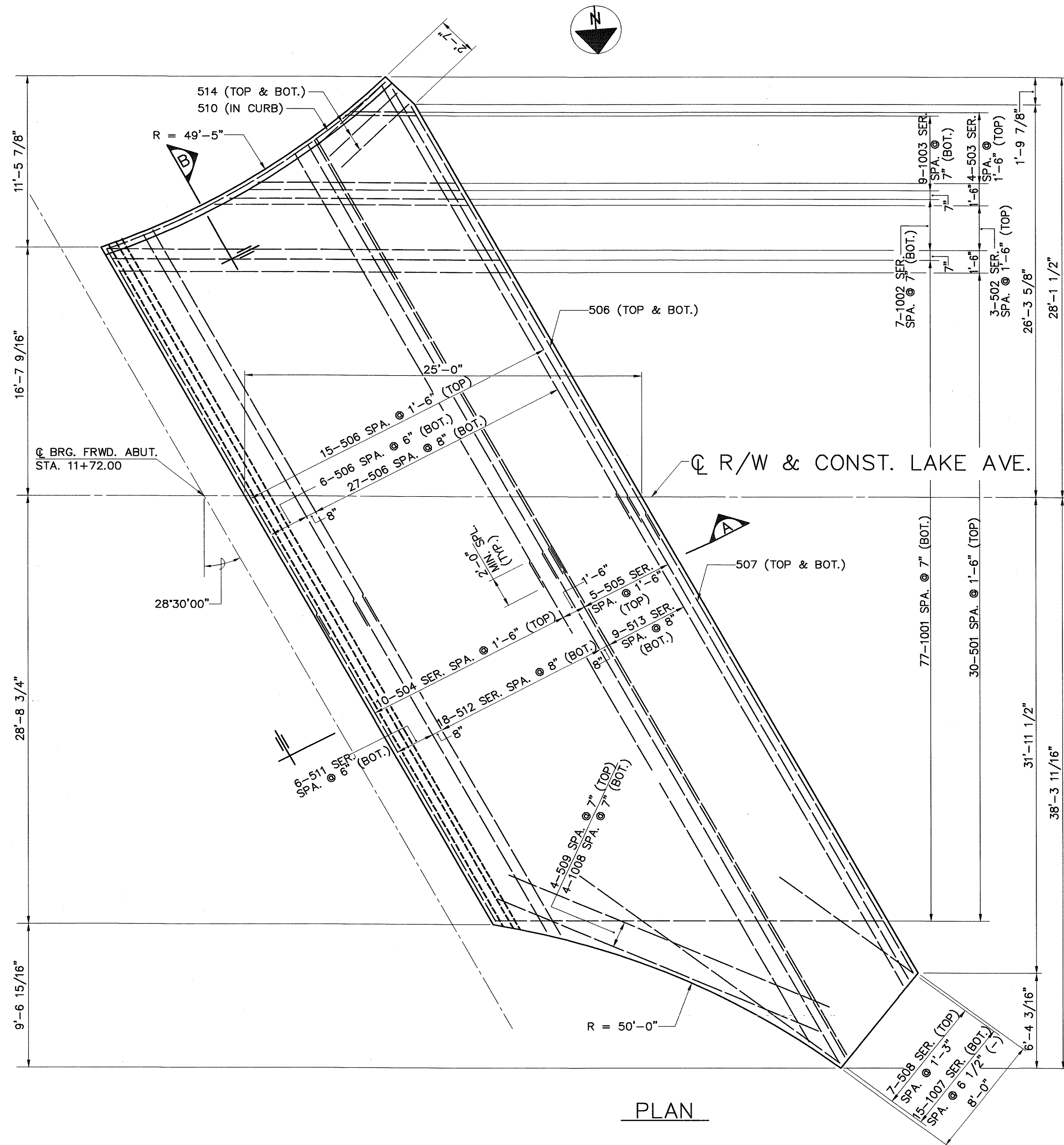
REFERENCE NUMBER	STREET	STATIONING	SIGN CODE	SIGN SIZE	ITEM 630								
						GROUND MOUNTED SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT	SIGN, FLAT SHEET	SIGN, FLAT SHEET, TYPE G	SIGN, DOUBLE FACED, STREET NAME	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE, AS PER PLAN	REMOVAL OF GROUND MOUNTED SIGN AND RE-ERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
				INCHES	LIN. FT.	EACH	SQ. FT.	SQ. FT.	EACH	EACH	EACH	EACH	
R-1/S-1	LAKE AVE.	5+53 LT.	EXIST.	EXIST.	15.00						3	1	
R-2/S-2	LAKE AVE.	5+85 RT.	EXIST.	EXIST.	13.75						2	1	
R-3/S-3	LAKE AVE.	5+84 RT.	EXIST.	EXIST.	23.50						1	2	
S-4	LAKE AVE.	5+68 LT.	R-31A-36	36 x 30	22.50		7.50						
S-5	LAKE AVE.	7+50 LT.	R-31A-36	36 X 30	22.50		7.50						
S-6	THIRD ST.	9+80 RT.	R-1-30	30 X 30	11.25			6.25					
S-7	LAKE AVE.	9+72 RT.	R-31F-36	36 X 30	22.50		7.50						
R-4	THIRD ST.	11+95-45'LT.	-	-						3		1	
R-5	LAKE AVE.	11+66-25'LT.	-	-						1		1	
R-6	LAKE AVE.	10+10-17'RT.	-	-						1		1	
R-7/S-8	LAKE AVE.	11+18 RT.	EXIST.	EXIST.							2		
R-8	LAKE AVE.	11+80-16'RT.	-	-						1		1	
S-9	LAKE AVE.	11+80 RT.	R-1-30/ SPECIAL	30 x 30/ 24 x 30	13.75		5.00	6.25					
S-10	LAKE AVE.	12+00 RT.	D-14-VAR(2)	VAR		1			2				
TOTALS CARRIED TO GENERAL SUMMARY						144.8	1	27.5	12.5	2	6	8	8

ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND STORAGE, AS PER PLAN

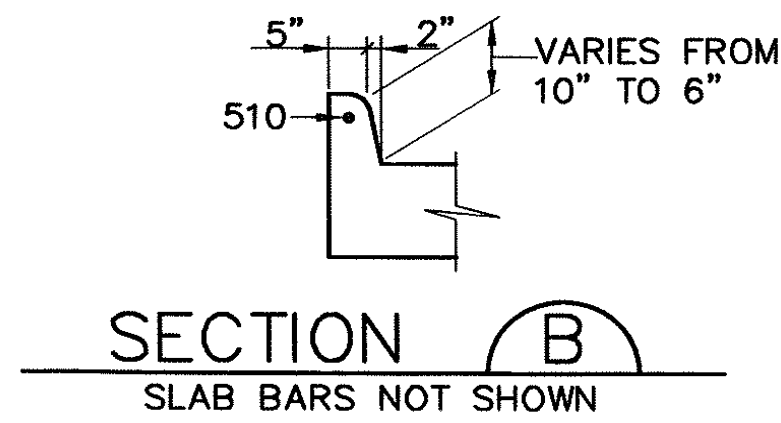
THIS ITEM SHALL FOLLOW THE PROVISIONS AS OUTLINED IN 630.12 EXCEPT THAT ALL SIGNS DESIGNATED FOR REMOVAL AND STORAGE SHALL BE STORED ON-SITE FOR PICK-UP BY THE STARK COUNTY ENGINEERING DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE COUNTY TRAFFIC ENGINEERING DEPARTMENT WHEN ALL SUCH SIGNS ARE AVAILABLE FOR PICK-UP.



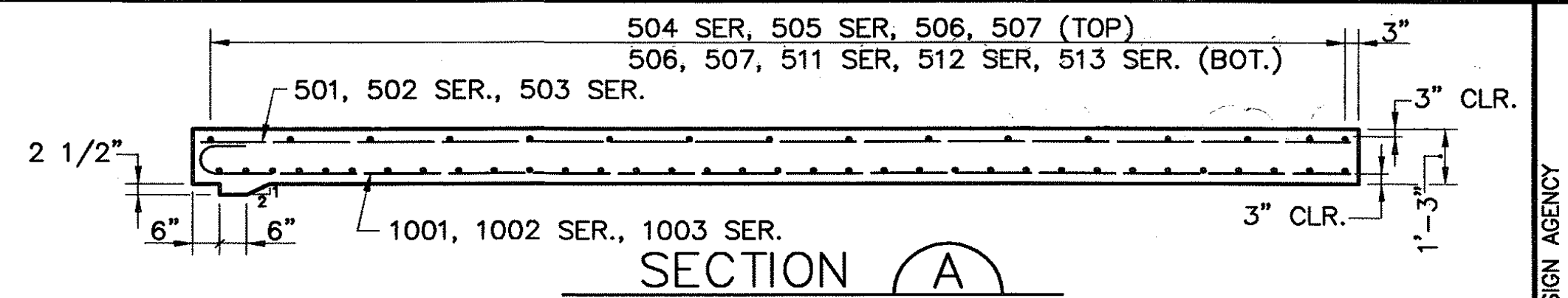
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PLAN



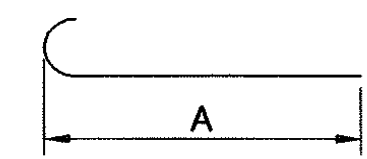
SECTION B  
SLAB BARS NOT SHOWN



SECTION A

FRWD. APPROACH SLAB REINFORCING

MARK	NUMBER	LENGTH	WEIGHT (LB)	TYPE	DIMENSIONS		SERIES INC.
					A	B	
AP501	30	24'-6"	767	ST.			
AP502S	1 SER OF 3	15'-11" TO 24'-6"	63	ST.			4'-3 1/2"
AP503S	1 SER OF 4	3'-11" TO 12'-5"	34	ST.			2'-10"
AP504S	1 SER OF 10	21'-6" TO 38'-0"	310	ST.			1'-10"
AP505S	1 SER OF 5	38'-6" TO 39'-10"	204	ST.			0'-4"
AP506	50	32'-0"	1669	ST.			
AP507	2	36'-5"	76	ST.			
AP508S	1 SER OF 7	8'-0" TO 18'-0"	95	ST.			1'-8"
AP509	4	22'-0"	92	ST.			
AP510	1	21'-0"	22	ST.			
AP511S	1 SER OF 6	21'-6" TO 23'-3"	140	ST.			0'-4 3/16"
AP512S	1 SER OF 18	23'-9" TO 40'-0"	598	ST.			0'-11 1/2"
AP513S	1 SER OF 9	39'-0" TO 40'-0"	371	ST.			0'-1 1/2"
AP514	6	6'-0"	38	ST.			
AP1001	77	25'-11"	8,587	101	24'-6"		
AP1002S	1 SER OF 7	14'-9" TO 24'-6"	591	ST.			1'-7 1/2"
AP1003S	1 SER OF 9	4'-5" TO 13'-3"	342	ST.			1'-1 1/4"
AP1007S	1 SER OF 15	11'-0" TO 21'-0"	1,033	ST.			0'-8 9/16"
AP1008	4	22'-0"	379	ST.			
TOTAL			15,411				



101  
STANDARD BAR TYPE

NOTES:

1. PREFIX "AP" WILL BE ADDED TO ALL REBAR MARKS SHOWN FOR FRWD. APPROACH SLAB.

2. FOR DETAILS NOT SHOWN, SEE STD. DWG. NO. AS-1-81.

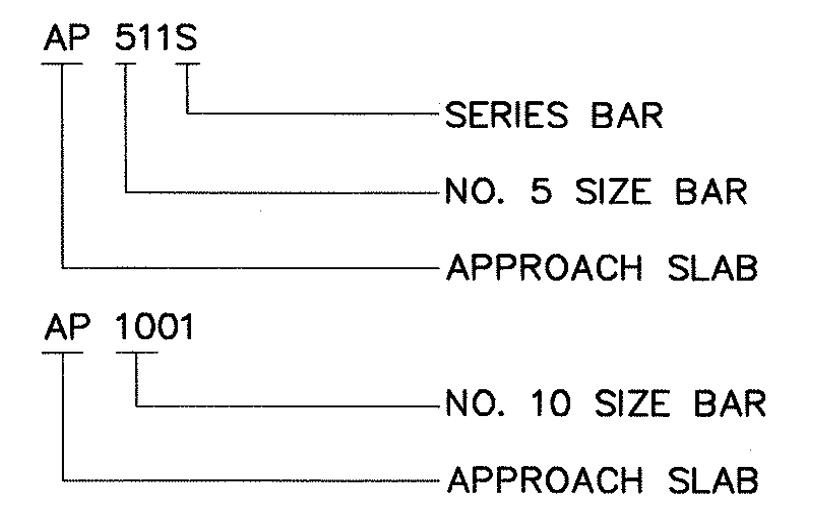
3. FOR TYPICAL SECTION, SEE SHT. NO.  $\frac{4}{64}$ .

REINFORCING STEEL NOTES:

BAR DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE. WHEN NO BAR LEG DIMENSIONS ARE SHOWN, IT INDICATES STANDARD BEND. ALL BARS ARE EPOXY COATED.

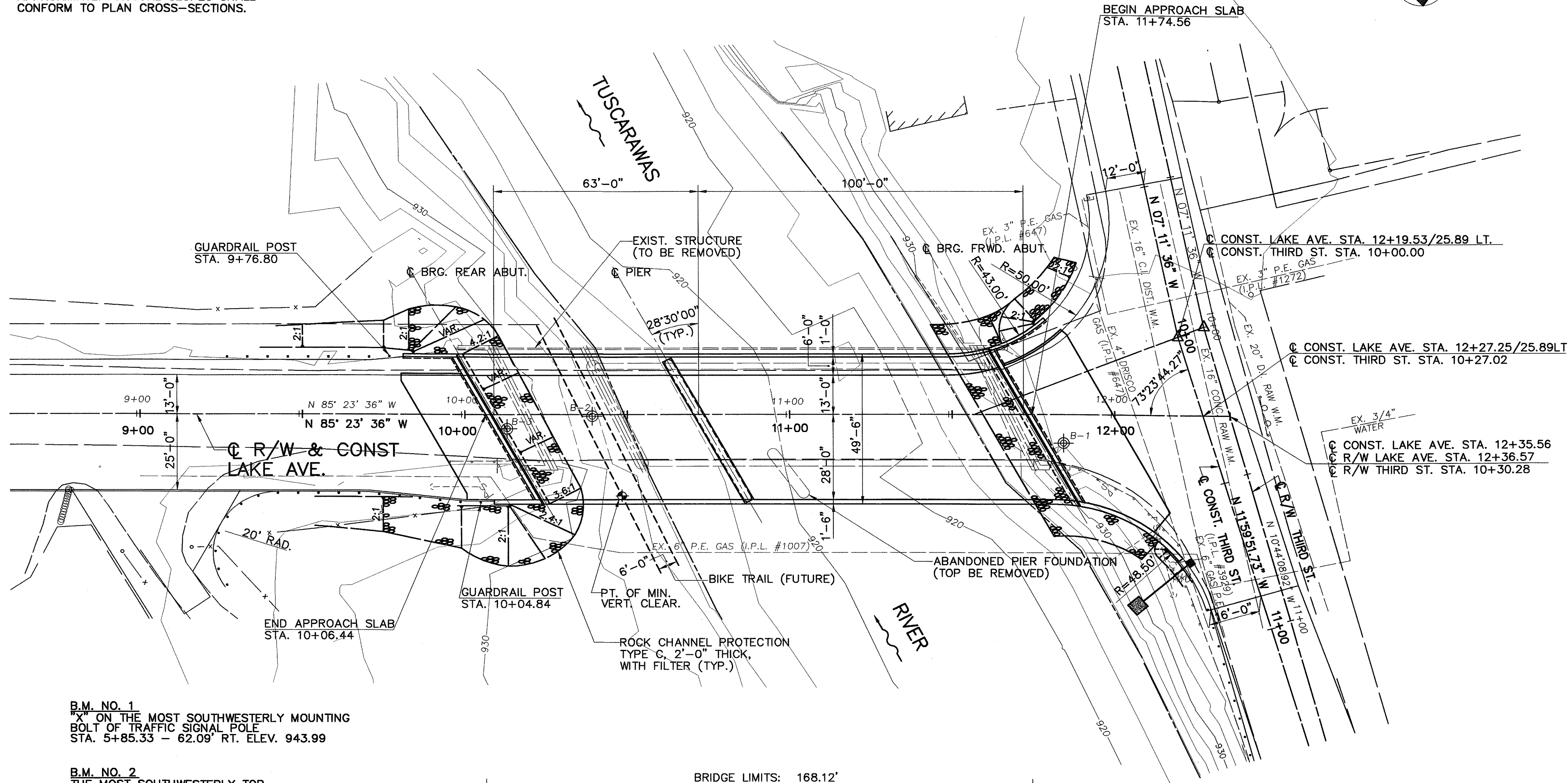
BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK. THE FIRST TWO ALPHABETICAL LETTERS INDICATE LOCATION. THE FIRST DIGIT OF THE THREE DIGIT SERIES AND THE FIRST TWO DIGITS OF THE FOUR DIGIT SERIES INDICATES BAR SIZE NUMBER.

EXAMPLES:



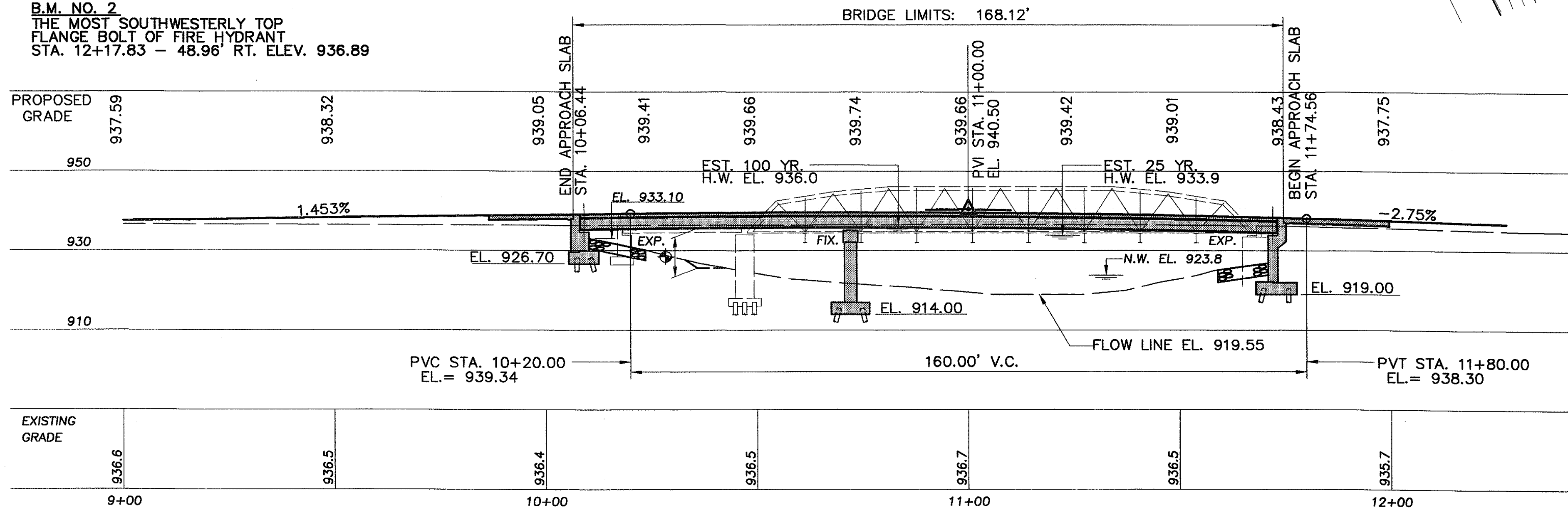


EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS-SECTIONS.



B.M. NO. 1  
ON THE MOST SOUTHWESTERLY MOUNTING  
BOLT OF TRAFFIC SIGNAL POLE  
STA. 5+85.33 - 62.09' RT. ELEV. 943.99

B.M. NO. 2  
THE MOST SOUTHWESTERLY TOP  
FLANGE BOLT OF FIRE HYDRANT  
STA. 12+17.83 - 48.96' RT. ELEV. 936.89



EST. AVERAGE PAY LENGTH  
AND PILE DESIGN LOADS  
OF C.I.P. REINF. CONC. PILES

REAR ABUT.	12" DIA. PILES	65'	48T
PIER	16" DIA. PILES	60'	86T
FRWD ABUT.	16" DIA. PILES	70'	89T

VERTICAL CLEARANCE  
8.00'

### HYDRAULIC DATA

DRAINAGE AREA	= 452.0 SQ. MI.
Q <sub>100</sub>	= 10,300 CFS
V <sub>100</sub>	= 7.9 FPS
EST. 100 YR. H.W. EL.	= 936.0
Q <sub>25</sub>	= 8,250 CFS
V <sub>25</sub>	= 6.8 FPS
EST. 25 YR. H.W. EL.	= 933.9

### EXISTING STRUCTURE (TO BE REMOVED)

TYPE: STEEL THROUGH TRUSS WITH STEEL FLOOR BEAMS AND JOISTS (WEST SPAN) AND STEEL BEAMS (EAST SPAN), CORRUGATED STEEL PLATE FLOORING, REINFORCED CONCRETE EAST ABUTMENT AND PIER, AND STONE MASONRY FRWD. ABUTMENT.

SPANS: 28'-0" 1/2"±, 119'-0"± C/C BRGS.

ROADWAY: 30'-5"± F/F GUARDRAILS WITH 5'-0"± SIDEWALK (SOUTH SIDE)

LOADING: S 20-46

SKEW: 25°00'00"± RF

ALIGNMENT: TANGENT

SUPERELEVATION: NONE

WEARING SURFACE: BITUMINOUS CONCRETE

APPROACH SLABS: NONE

DATE BUILT: 1959

STRUCTURE FILE NO.: 7631936

### PROPOSED STRUCTURE

TYPE: CONTINUOUS COMPOSITE STEEL BEAMS WITH REINFORCED CONCRETE DECK SLAB AND SUBSTRUCTURE (ASTM A572 STEEL)

SPANS: 63'-0", 100'-0" C/C BRGS.

ROADWAY: 41'-0" F/F CURBS WITH 6'-0" SIDEWALK (SOUTH SIDE) AND DEFLECTOR PARAPET (NORTH SIDE)

LOADING: HS 25-44 (CASE II) AND ALTERNATE MILITARY LOADING

SKEW: 28°30'00" RF

ALIGNMENT: TANGENT

CROWN: .0156'/FT

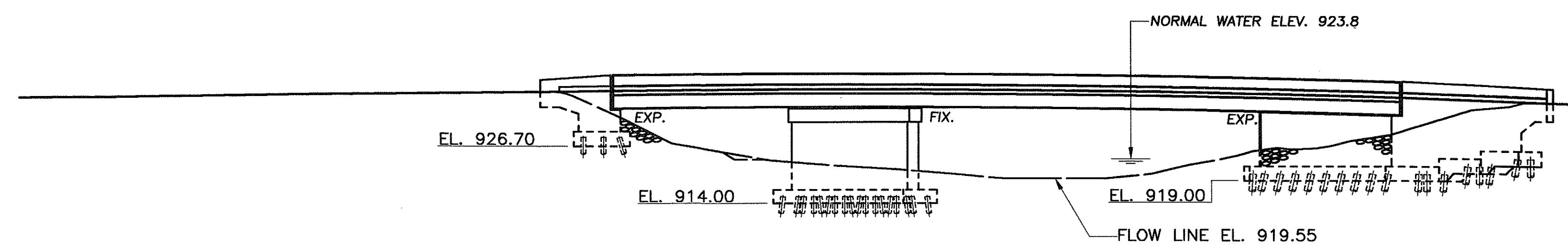
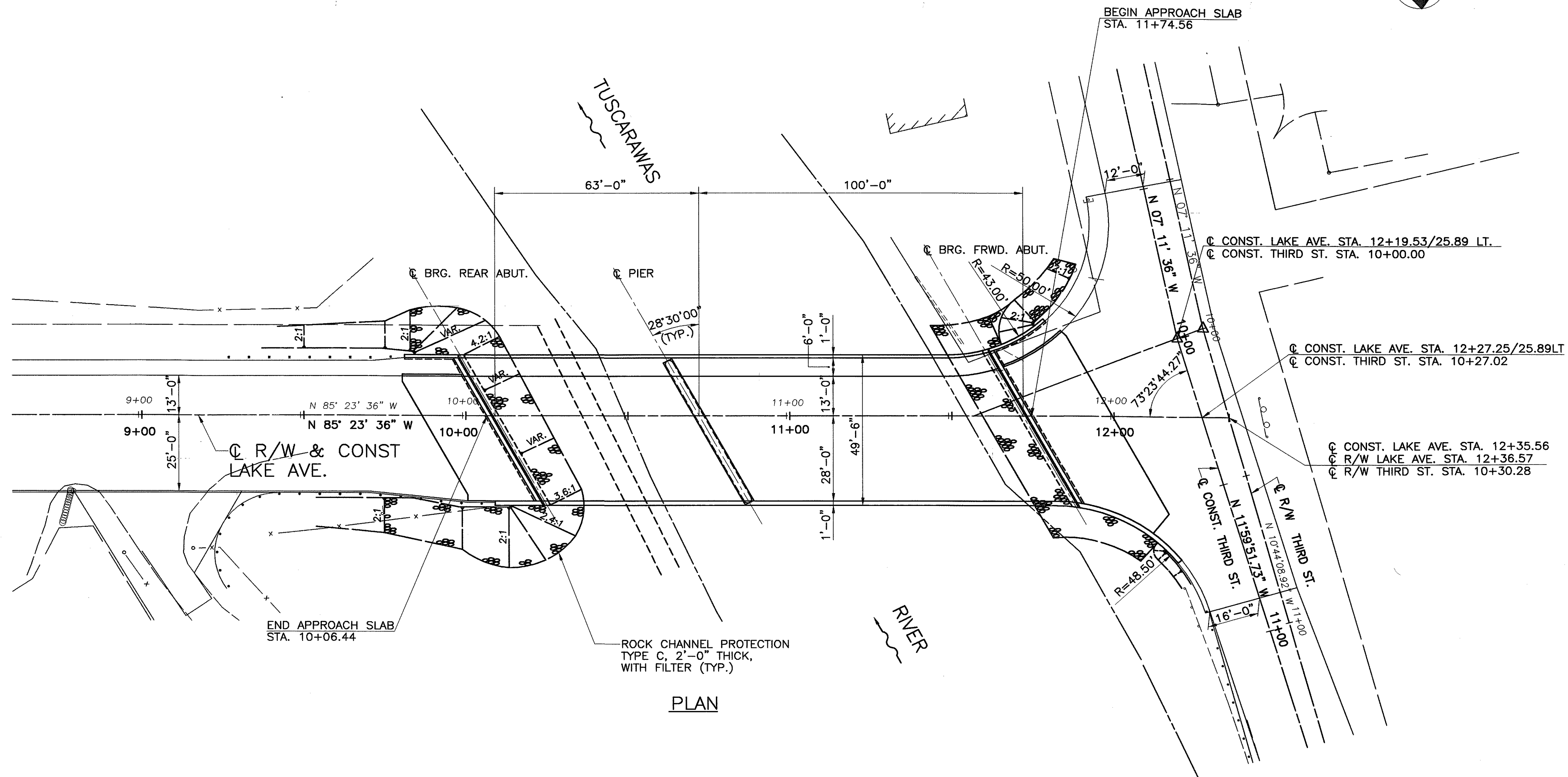
WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: 20' REAR ABUT., 25' FRWD. ABUT. (AS-1-81)

TRAFFIC DATA: ADT (2000) 6250, ADTT (2000) 625, ADT (2020) 7627, ADTT (2020) 763

STRUCTURE COORDINATES: LAT. N 40° 48' 42", LONG. W 81° 31' 48"





NOTES:

1. FOR STRUCTURAL GENERAL NOTES, SEE SHT. NO. 3/20.
2. FOR ESTIMATED QUANTITIES, SEE SHT. NO. 6/20.



DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICALS, 1996, INCLUDING THE 1997 & 1998 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL

DESIGN DATA

DESIGN LOADING:	HS 25-44 (CASE II) AND THE ALTERNATE MILITARY LOADING
CONCRETE CLASS S:	COMPRESSIVE STRENGTH 4500 PSI FOR SUPERSTRUCTURE
CONCRETE CLASS C:	COMPRESSIVE STRENGTH 4000 PSI FOR SUBSTRUCTURE
REINFORCING STEEL:	ASTM A615, A616 OF A617 - GRADE 60, MINIMUM YIELD STRENGTH, 60,000 PSI
STRUCTURAL STEEL:	ASTM A572/A709 GRADE 50 YIELD STRENGTH 50,000 PSI
DECK PROTECTION METHOD:	EPOXY COATED REINFORCING STEEL, 2-1/2" CONCRETE COVER, SEALING OF CONCRETE SURFACES
MONOLITHIC WEARING SURFACE:	MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK

REFERENCES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

- NO. AS-1-81 REVISED 9-15-94
- NO. EXJ-4-87 REVISED 2-14-97
- NO. GSD-1-96 DATED 2-12-97
- NO. BR-2-98 DATED 12-29-98

AND TO SUPPLEMENTAL SPECIFICATIONS:

- 842 DATED 01-06-99
- 863 DATED 10-12-99
- 899 DATED 10-21-98

EXISTING STRUCTURE PLANS

THE EXISTING STRUCTURE PLANS ARE ON FILE AND MAY BE REVIEWED IN THE OFFICE OF THE STARK COUNTY ENGINEER'S OFFICE, 5165 SOUTHWAY ST., CANTON, OH 44708.

ITEM 503 UNCLASSIFIED EXCAVATION

STRUCTURE EXCAVATION IN ADDITION TO THAT NECESSARY TO REMOVE PORTIONS OF THE EXISTING STRUCTURE, AND ALL NECESSARY BACKFILL, IS INCLUDED IN THE LUMP SUM BID FOR ITEM, "UNCLASSIFIED EXCAVATION," FOR PAYMENT.

CONCRETE PARAPETS

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 1 1/4 INCH DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE SIDEWALK. THE SAWCUTS SHALL BE PLACED AT THE SPACINGS SHOWN IN THE PLANS. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E TO A MINIMUM DEPTH OF 1 INCH. THE BOTTOM 1/2" OF THE INSIDE AND OUTSIDE FACE SHALL BE LEFT UNSEALED TO ALLOW WATER TO ESCAPE. PAYMENT SHALL BE INCLUDED WITH ITEM 842, CLASS S CONCRETE, SUPERSTRUCTURE FOR PAYMENT.

UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITIES. THE CONTRACTOR AND UTILITIES ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE COUNTY OF STARK DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

REMOVAL OF EXISTING STRUCTURE

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER.

SIDEWALK & PARAPET PROTECTION

IPANEX (INORGANIC COPOLYMER LIQUID ADMIXTURE FOR CONCRETE) AS MANUFACTURED BY IPA SYSTEMS, INC., 2745 NORTH AMBER ST., PHILADELPHIA, PA, 19134, SHALL BE ADDED TO CLASS S CONCRETE, SUPERSTRUCTURE TO BE USED IN BRIDGE SIDEWALK, PARAPET, AND DEFLECTOR PARAPET CONSTRUCTION. APPLICATION RATES, MATERIAL REQUIREMENTS, AND APPLICATION PROCEDURES SHALL BE IN ACCORDANCE WITH MANUFACTURES REQUIREMENTS. PAYMENT FOR THIS CONCRETE ADDITIVE SHALL BE INCLUDED WITH ITEM 842, CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE)

THE ULTIMATE BEARING VALUE IS 96 TONS PER PILE FOR THE REAR ABUTMENT PILES AND 178 TONS FOR THE FORWARD ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 172 TONS PER PILE FOR THE PIER PILES.

REAR ABUTMENT PILES:

17 PILES 65 FEET LONG, ESTIMATED LENGTH

PIER PILES:

18 PILES 60 FEET LONG, ESTIMATED LENGTH

FRWD. ABUTMENT PILES:

26 PILES 70 FEET LONG, ESTIMATED LENGTH

ITEM 202-STRUCTURE REMOVED. AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVAL OF THE EXISTING STRUCTURE AS PER ITEM 202 AND SHALL ALSO INCLUDE THE FOLLOWING ADDITIONAL ITEMS OF WORK:

1. THE EXISTING STRUCTURE TRUSSES SHALL BE SALVAGED AND DELIVERED TO THE STARK COUNTY ENGINEER'S OFFICE LOCATED AT: 5165 SOUTHWAY STREET CANTON, OHIO 44708. THE CONTRACTOR SHALL PROVIDE THE STARK COUNTY ENGINEER'S OFFICE AT LEAST TWO (2) WORKING DAYS ADVANCED NOTICE PRIOR TO DELIVERY OF THE SALVAGED TRUSSES.
2. ALL SANDSTONE FROM BOTH THE WEST ABUTMENT OF THE EXISTING STRUCTURE AND THE ABONDONED PIER IN THE RIVER BED LOCATED AT THE NORTH FASCIA OF THE STRUCTURE SHALL BE SALVAGED AND DELIVERED TO THE STARK COUNTY ENGINEER'S OFFICE LOCATED AT: 5165 SOUTHWAY STREET CANTON, OHIO 44708. THE CONTRACTOR SHALL PROVIDE THE STARK COUNTY ENGINEER'S OFFICE AT LEAST TWO (2) WORKING DAYS ADVANCED NOTICE PRIOR TO DELIVERY OF THE SALVAGED SANDSTONE.

PAYMENT FOR THE DELIVERY AND UNLOADING OF THESE SALVAGED ITEMS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 202, STRUCTURE REMOVED, AS PER PLAN.

ABBREVIATIONS

B.S.	BOTH SIDES	EA.	EACH
N.S.	NEAR SIDE	O.D.	OUTSIDE DIAMETER
F.S.	FAR SIDE	I.D.	INSIDE DIAMETER
SER.	SERIES	INV.	INVERT
TYP.	TYPICAL	PERF.	PERFORATED
EQ.	EQUAL	P.E.J.F.	PERFORMED EXPANSION JOINT FILLER
DIM.	DIMENSION	MIN.	MINIMUM
SPA.	SPACES	EXIST.	EXISTING
U.N.	UNLESS NOTED	EX.	EXISTING
C.P.P.	CORRUGATED PLASTIC PIPE	ADDIT.	ADDITIONAL
SPL.	SPLICE	CONTR. JT.	CONTRACTION JOINT
CLR.	CLEAR	OPNG.	OPENING

REQUIRED MINIMUM BAR LAP LENGTHS

BAR SIZE	LAP LENGTH
4	22"
5	29"
6	34"
7	43"
8	57"
9	72"
10	92"
11	113"



DESIGNED B.J.M.	DRAWN R.P.R.	REVIEWED K.S.J.	DATE 6-29-00
CHECKED P.J.W.	REVISED	STRUCTURE FILE NUMBER	

STRUCTURE GENERAL NOTES  
BRIDGE NO. PE - 6 - 17  
LAKE AVE. OVER TUSCARAWAS RIVER

STA-LAKE AVE.



GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGES

DESCRIPTION

IN ADDITION TO THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 863, THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO CLEAN AND GALVANIZE ALL STRUCTURAL STEEL SURFACES, AS SPECIFIED HEREIN. THE GALVANIZED COATING SYSTEM MAY BE APPLIED BY A GALVANIZER NOT QUALIFIED AS A FABRICATION SHOP UNDER SUPPLEMENTAL SPECIFICATION 863 (SS 863), BUT THE APPROVED FABRICATOR OF THE STRUCTURAL STEEL SHALL BE RESPONSIBLE FOR THE QUALITY OF THE APPLIED GALVANIZED COATING SYSTEM AND ANY REPAIRS, RE-FABRICATING, ADDITIONAL LAYDOWNS. REQUIRED TO ASSURE THE FABRICATED STEEL MEETS ALL REQUIREMENTS OF THIS SPECIFICATION. SECTIONS 863.29 AND 863.30 SHALL NOT APPLY.

THIS ITEM SHALL ALSO INCLUDE GALVANIZING, PER 711.02, OF ALL NUTS, WASHERS, BOLTS, ANCHOR BOLTS.

ANY SHEAR STUDS, SECTION 863.24, SHALL BE INSTALLED IN THE FABRICATOR'S SHOP BEFORE GALVANIZING.

PRE-FABRICATION MEETING

IN ADDITION TO THE PRE-FABRICATION MEETING REQUIREMENTS UNDER SS 863.081, BOTH THE FABRICATOR'S QUALITY CONTROL SPECIALIST, (QCPS) AND GALVANIZED COATING APPLICATOR SHALL BE PRESENT AND DISCUSS METHODS OF OPERATION, QUALITY CONTROL, INCLUDING REPAIRS, TRANSPORTATION, ERECTION METHODS TO ACCOMPLISH ALL PHASES OF THE PREPARATION AND COATING WORK REQUIRED BY THIS SPECIFICATION.

QUALITY CONTROL

QUALITY CONTROL SPECIALIST  
THE QCPS (QUALITY CONTROL PAINT SPECIALIST) REQUIRED UNDER SS863, IS RESPONSIBLE FOR ALL QUALITY CONTROL REQUIREMENTS OF THIS SPECIFICATION. THE QCPS SHALL HAVE THE TESTING EQUIPMENT SPECIFIED IN SS863.29.

QUALITY CONTROL POINTS (QCP)

QUALITY CONTROL POINTS (QCP) ARE POINTS IN TIME WHEN ONE PHASE OF THE WORK IS COMPLETE AND READY FOR INSPECTION BY THE FABRICATOR'S QCPS AND THE DEPARTMENT'S QA REPRESENTATIVE. THE NEXT OPERATIONAL STEP MUST NOT PROCEED UNLESS THE QCP HAS BEEN ACCEPTED OR QA INSPECTION WAIVED BY THE DEPARTMENT'S QA REPRESENTATIVE. AT THESE POINTS THE FABRICATOR MUST AFFORD ACCESS TO INSPECT ALL AFFECTED SURFACES. IF INSPECTION INDICATES A DEFICIENCY, THAT PHASE OF THE WORK MUST BE CORRECTED IN ACCORDANCE WITH THESE SPECIFICATIONS PRIOR TO BEGINNING THE NEXT PHASE OF WORK. DISCOVERY OF DEFECTIVE WORK OR MATERIAL AFTER A QUALITY CONTROL POINT IS PAST OR FAILURE OF THE FINAL PRODUCT BEFORE FINAL ACCEPTANCE, MUST NOT IN ANY WAY PREVENT REJECTION OR OBLIGATE THE DEPARTMENT TO FINAL ACCEPTANCE.

QUALITY CONTROL POINTS	
QUALITY CONTROL POINTS (QCP)	PURPOSE
1.) SOLVENT CLEANING	REMOVE ASPHALTIC CEMENT, OIL, GREASE, SALT, DIRT, ETC.
2.) GRINDING EDGES	REMOVE SHARP CORNERS PER AWS.
3.) ABRASIVE BLASTING	BLAST SURFACES, INCLUDING REPAIR FINS, TEARS, SLIVERS OR SHARP EDGES.
4.) GALVANIZING	CHECK COATING THICKNESS
5.) FAYING SURFACE CLEANING	CHECK FAYING SURFACE ROUGHNESS. CHECK BOLT HOLE CLEARANCE. CHECK FOR OTHER FIELD CONNECTIONS UNIFORM COATING THICKNESS.
6.) SECOND LAY DOWN	CHECK SWEEP AND CAMBER TOLERANCES OF EACH STRUCTURAL MEMBER.
7.) FIELD REPAIR OF DAMAGE AREAS	CHECK FOR DAMAGE AREAS AFTER ERECTION OF STRUCTURE. PERFORM DAMAGE REPAIRS.
8.) FINAL REVIEW	CLEAN STRUCTURE AS PER QCP#1. VISUALLY INSPECT SYSTEM FOR ACCEPTANCE.

SOLVENT CLEANING (QCP #1)

THE STEEL MUST BE SOLVENT CLEANED WHERE NECESSARY TO REMOVE ALL TRACES OF ASPHALTIC CEMENT, OIL, GREASE, DIESEL FUEL DEPOSITS, AND OTHER SOLUBLE CONTAMINANTS PER SSPC-SP 1 SOLVENT CLEANING. UNDER NO CIRCUMSTANCES MUST ANY ABRASIVE BLASTING BE DONE TO AREAS WITH ASPHALTIC CEMENT, OIL, GREASE, OR DIESEL FUEL DEPOSITS. STEEL MUST BE ALLOWED TO DRY BEFORE BLAST CLEANING BEGINS. THE QCPS SHALL INSPECT AND DOCUMENT THAT THE CLEANING CONFORMS TO SSPC-SP1 AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

GRINDING EDGES (QCP #2)

ALL CORNERS OF THERMALLY CUT OR SHEARED EDGES MUST HAVE A 1/16 INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE. THERMALLY CUT MATERIAL THICKER THAN 1-1/2 INCH MUST HAVE THE SIDES GROUND TO REMOVE THE HEAT EFFECTED ZONE, AS NECESSARY TO ACHIEVE THE SPECIFIED SURFACE CLEANING. THE QCPS MUST VISUALLY INSPECT AND DOCUMENT THAT THE GRINDING CONFORMS TO THIS SPECIFICATION AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

ABRASIVE BLASTING (QCP #3)

BEAMS MUST BE PREPARED BY THE FABRICATOR TO STEEL STRUCTURES PAINTING COUNCIL (SSPC) GRADE SIX(6) COMMERCIAL BLAST CLEANING PRIOR TO GALVANIZING. ALL MATERIAL MUST BE FREE OF PAINT MARKS. SECONDARY ANGLE, PLATES, BARS AND SHAPES NEED NOT BE BLAST CLEANED.

ABRASIVES MUST ALSO BE CHECKED FOR OIL CONTAMINATION BEFORE USE. A SMALL SAMPLE OF ABRASIVES MUST BE ADDED TO ORDINARY TAP WATER. ANY DETECTION OF A OIL FILM ON THE SURFACE OF THE WATER MUST BE CAUSE FOR REJECTION. THE QCPS MUST PERFORM AND RECORD THIS TEST AT THE START OF EACH SHIFT.

ALL FINS, TEARS, SLIVERS AND BURRED OR SHARP EDGES THAT ARE PRESENT ON ANY STEEL MEMBER OR THAT APPEAR AFTER THE BLASTING OPERATION MUST BE CONDITIONED PER ASTM A6. WELDING REPAIRS MUST ONLY BE PERFORMED BY THE SS863 FABRICATOR.

THE QCPS MUST VISUALLY INSPECT AND DOCUMENT THAT THE BLAST CONFORMS TO SSPC-SP6, THAT ALL CONDITIONING IS PERFORMED PER ASTM A6 , AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

GALVANIZING (QCP #4)

GALVANIZED PER 711.02 AND THIS SPECIFICATION. COATING THICKNESS MUST BE A MINIMUM OF 4 MILS MEASURED AS SPECIFIED.

MATERIAL MUST BE FREE OF IMPERFECTIONS OR DEPRESSIONS CAUSED BY MATERIAL HANDLING. THE FABRICATOR, GALVANIZER AND ERECTOR MUST USE LIFTING CLAMPS OR SOFTENERS FOR HANDLING. PRIOR TO GALVANIZING, SURFACE IMPERFECTIONS MAY BE REPAIRED BY THE FABRICATOR IN CONFORMANCE WITH ASTM A6. IMPERFECTIONS GREATER THAN THE LIMITS ALLOWED BY ASTM A6 MUST BE DOCUMENTED. REPAIR OR REPLACEMENT OF THIS MEMBER WILL BE AT THE DISCRETION OF THE DEPARTMENT.

ALL DAMAGED GALVANIZING MUST BE REPAIRED IN ACCORDANCE WITH ASTM A780, METHOD A1 OR A3.

DOCUMENTATION OF COATING THICKNESS MUST BE PERFORMED BY THE QCPS. THE QCPS MUST RECORD THE GAGE READINGS AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

FAYING SURFACE CLEANING (QCP #5)

AREAS OF FIELD CONNECTIONS MUST HAVE A UNIFORM GALVANIZED COATING THICKNESS FREE OF LOCAL EXCESSIVE ROUGHNESS WHICH WOULD PREVENT SPlice PLATES, BEARINGS OR OTHER FIELD CONNECTIONS FROM MAKING INTIMATE CONTACT. FAYING SURFACES OF THE BOLTED SPLICES MUST BE ROUGHENED IN THE SHOP AFTER GALVANIZING BY HAND WIRE BRUSHING. POWER WIRE BRUSHING IS NOT PERMITTED. ALL FIELD SPlice BOLT HOLES MUST BE FREE OF ZINC BUILD UP. AFTER GALVANIZING, EACH HOLE MUST BE CHECKED IN THE SHOP BY USING A DRIFT PIN WITH A DIAMETER 1/16 INCH GREATER THAN THE DIAMETER OF THE BOLT TO BE USED IN THAT HOLE. CONSIDERATION WILL BE GIVEN TO OTHER METHODS OF TREATING THE FAYING SURFACES IF A WRITTEN REQUEST IS SUBMITTED TO THE STARK COUNTY ENGINEER IN ACCORDANCE WITH CMS 108.05.

INSPECTION OF THE ROUGHENING OF THE FAYING SURFACES AND CHECKING OF HOLES WITH DRIFT PINS MUST BE PERFORMED BY THE QCPS. ACCEPTANCE OF THE FAYING SURFACES AND HOLES SHALL BE DOCUMENTED BY THE QCPS.

SECOND LAY DOWN (QCP # 6)

AFTER GALVANIZING, MATERIALS MUST BE PLACED IN A SECOND SHOP ASSEMBLY PER CMS SECTION 863.26 TO CHECK ALIGNMENT OF HOLES, SWEEP AND CAMBER AGAINST THE FABRICATORS ORIGINAL RECORDED LAY DOWN DIMENSIONS. THIS SHOP ASSEMBLY MAY BE PERFORMED AT THE GALVANIZERS FACILITY, BY THE FABRICATORS PERSONNEL, IF APPROVED BY THE STARK COUNTY ENGINEER. THE SECOND LAY DOWN MAY BE WAIVED BY THE STARK COUNTY ENGINEER IF THE FABRICATOR RECORDS INDIVIDUAL BEAM CAMBERS AND SWEEPS DURING THE FIRST LAY DOWN, AND THE NEW INDIVIDUAL BEAM CAMBERS AND SWEEPS, AFTER GALVANIZING, COMPARED TO THE FIRST LAY DOWN ARE WITHIN THE FOLLOWING TOLERANCES:

BEARING POINTS AFTER GALVANIZING, MUST BE WITHIN +/- 1/8 INCH OF THE APPROVED SHOP DRAWING LAY DOWN.

CAMBER POINTS AFTER GALVANIZING MUST BE + 1/4 INCH OR - 0 INCH FROM THE FIRST LAY DOWN.

SWEEP POINTS AFTER GALVANIZING MUST BE +/- 3/8 INCH FROM THE FIRST LAY DOWN.

INDIVIDUAL BEAMS THAT EXCEED THE LISTED TOLERANCES MUST BE PLACED WITH AT LEAST TWO ADJACENT BEAMS IN LAY DOWN FOR CHECKING AGAINST THE RECORDED SHOP ASSEMBLY RECORDS PER 863.07. DOCUMENTATION OF THE SECOND LAY DOWN OR INDIVIDUAL MEMBER CAMBERS MUST BE RECORDED BY THE QCPS PER 863.26.

FIELD REPAIR OF DAMAGED AREAS (QCP #7)

MATERIAL MUST BE FREE OF IMPERFECTIONS OR DEPRESSIONS CAUSED BY MATERIAL HANDLING. THE CONTRACTOR MUST USE LIFTING CLAMPS OR SOFTENERS FOR HANDLING. IMPERFECTIONS MAY BE REPAIRED BY GRINDING AS ALLOWED BY ASTM A6 BY THE CONTRACTOR. IMPERFECTIONS THAT ARE GREATER THAN THE GRINDING LIMITS ALLOWED BY ASTM A6, MUST BE DOCUMENTED. REPAIR OR REPLACEMENT OF THIS MEMBER WILL BE AT THE DISCRETION OF THE STARK COUNTY ENGINEER.

ALL DAMAGED GALVANIZING MUST BE REPAIRED IN ACCORDANCE WITH ASTM A780, METHOD A1 OR A3.

DAMAGED GALVANIZING WHICH WILL BE INACCESSIBLE FOR REPAIR AFTER ERECTION MUST BE REPAIRED PRIOR TO ERECTION.

IN ORDER TO MINIMIZE DAMAGE TO THE GALVANIZED STEEL, CONCRETE SPLATTER AND FORM LEAKAGE MUST BE WASHED FROM THE SURFACE OF THE STEEL SHORTLY AFTER THE CONCRETE IS PLACED AND BEFORE IT IS DRY. IF THE CONCRETE DRIES, IT MUST BE REMOVED.

TEMPORARY ATTACHMENTS, SUPPORTS FOR SCAFFOLDING AND FINISHING MACHINE OR FORMS MUST NOT DAMAGE THE COATING SYSTEM. IN PARTICULAR, SUFFICIENT SIZE SUPPORT PADS MUST BE USED ON THE FASCIAS WHERE BRACING IS USED.

DOCUMENTATION OF GALVANIZING REPAIRS MUST BE PERFORMED BY THE QCPS BY A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

FINAL REVIEW ( QCP # 8)

AFTER THE ERECTION WORK HAS BEEN COMPLETED, INCLUDING ALL CONNECTIONS AND THE APPROVED REPAIR OF ANY DAMAGED BEAMS, GIRDERS OR OTHER STEEL MEMBERS, AND THE DECK HAS BEEN PLACED, THE CONTRACTOR AND ENGINEER MUST INSPECT THE STRUCTURE FOR DAMAGED COATING. (QCP #8). DAMAGED AREAS MUST BE REPAIRED BY QCPS #7. AT THE COMPLETION OF CONSTRUCTION, THE GALVANIZING MUST BE UNDAMAGED AND THE SURFACES FREE FROM GREASE, OIL, CHALK MARKS, PAINT, CONCRETE SPLATTER OR OTHER SILAGE. SUCH SILAGE WILL BE REMOVED BY SOLVENT CLEANING PER SSPC-SP1(QCP #1)

DOCUMENTATION OF FINAL REVIEW MUST BE PERFORMED BY THE QCPS BY A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

TESTING EQUIPMENT

THE FABRICATOR MUST PROVIDE THE QCPS INSPECTOR THE FOLLOWING TESTING EQUIPMENT IN GOOD WORKING ORDER FOR THE DURATION OF THE PROJECT.

ONE (POSITECTOR 2000 OR 6000, QUANIX 2200, OR ELCOMETER A345FB11) AND THE CALIBRATION PLATES, 1.5 -8 MILS AND 10-25 MILS AS PER THE NBS CALIBRATION STANDARDS IN ACCORDANCE WITH ASTM D-1186.

COATING THICKNESS

GALVANIZED THICKNESS MUST BE DETERMINED BY USE OF TYPE 2 MAGNETIC GAGE IN ACCORDANCE WITH THE FOLLOWING:

FIVE SEPARATE SPOT MEASUREMENTS MUST BE MADE, SPACED EVENLY OVER ONE(1) RANDOMLY SELECTED, 100 SQUARE FEET OF SURFACE AREA ON EACH STRUCTURAL MEMBER. THREE GAGE READINGS MUST BE MADE FOR EACH SPOT MEASUREMENT. THE PROBE MUST BE MOVED A DISTANCE OF 1 TO 3 INCHES FOR EACH NEW GAGE READING. ANY UNUSUALLY HIGH OR LOW GAGE READING THAT CANNOT BE REPEATED CONSISTENTLY MUST BE DISCARDED. THE AVERAGE (MEAN) OF THE 3 GAGE READINGS MUST BE USED AS THE SPOT MEASUREMENT. THE AVERAGE OF FIVE SPOT MEASUREMENTS FOR EACH SUCH 100 SQUARE FOOT AREA MUST NOT BE LESS THAT THE SPECIFIED THICKNESS. NO SINGLE SPOT MEASUREMENT IN ANY 100 SQUARE FOOT AREA MUST BE LESS THAN 80% OF THE SPECIFIED MINIMUM THICKNESS. ANY ONE OF 3 READINGS WHICH ARE AVERAGED TO PRODUCE EACH SPOT MEASUREMENT, MAY UNDER-RUN OR OVER-RUN BY A GREATER AMOUNT. THE 5 SPOT MEASUREMENTS MUST BE MADE FOR ONE(1) RANDOMLY SELECTED, 100 SQUARE FEET OF AREA ON EACH STRUCTURAL MEMBER. ALL SPlice MATERIAL AND SECONDARY MEMBERS MUST HAVE AT LEAST ONE SPOT MEASURED ON EACH PIECE. THE PROBE MUST BE MOVED SO THAT ONE READING IS TAKEN AT EACH END AND MIDDLE OF THE PIECE FOR A TOTAL OF THREE READINGS.

THE QCPS MUST INSPECT AND PROVIDE DOCUMENTATION OF ACTUAL DATA, THE GALVANIZED THICKNESS CHECKS WERE PERFORMED PER SPECIFICATION, AND THE COATING THICKNESS MEETS SPECIFICATION REQUIREMENTS.

HANDLING AND SHIPPING

REASONABLE CARE MUST BE EXERCISED IN HANDLING THE GALVANIZED STEEL DURING SHIPPING, ERECTION, AND SUBSEQUENT CONSTRUCTION OF THE BRIDGE. THE STEEL MUST BE INSULATED FROM THE BINDING CHAINS BY SOFTENERS. HOOKS AND SLINGS USED TO HOIST STEEL MUST BE PADDED. DIAPHRAGMS AND SIMILAR PIECES MUST BE SPACED IN SUCH A WAY THAT NO RUBBING WILL OCCUR DURING SHIPMENT THAT MAY DAMAGE THE GALVANIZING. THE STEEL MUST BE STORED ON PALLETS AT THE JOB SITE, OR BY OTHER MEANS, SO THAT IT DOES NOT REST ON THE GROUND OR SO THAT COMPONENTS DO NOT FALL OR REST ON EACH OTHER.

SAFETY REQUIREMENTS AND PRECAUTIONS

THE CONTRACTOR MUST MEET THE SAFETY REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), IN ADDITION TO THE SCAFFOLDING REQUIREMENTS BELOW.

(CONTD. ON SHT. NO. 5/20 )



GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL BRIDGES  
(CONTD. FROM SHT. NO. 4/20)

SCAFFOLDING

RUBBER ROLLERS, OR OTHER PROTECTIVE DEVICES MEETING THE APPROVAL OF THE ENGINEER, MUST BE USED ON SCAFFOLD FASTENINGS. METAL ROLLERS OR CLAMPS AND OTHER TYPES OF FASTENINGS WHICH WILL MAR OR DAMAGE COATED SURFACES MUST NOT BE USED.

INSPECTION ACCESS FOR FIELD REPAIR

IN ADDITION TO THE REQUIREMENT OF 105.11, THE CONTRACTOR MUST FURNISH, ERECT, AND MOVE SCAFFOLDING AND OTHER APPROPRIATE EQUIPMENT, TO PERMIT THE INSPECTOR THE OPPORTUNITY TO INSPECT AND CLOSELY OBSERVE, ALL AFFECTED SURFACES. THIS OPPORTUNITY MUST BE PROVIDED TO THE INSPECTOR DURING ALL PHASES OF THE WORK AND CONTINUE FOR A PERIOD OF AT LEAST TEN (10) WORKING DAYS AFTER THE TOUCH-UP WORK HAS BEEN COMPLETED. WHEN SCAFFOLDING IS USED, IT MUST BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS. WHEN SCAFFOLDING, OR THE HANGERS ATTACHED TO THE SCAFFOLDING ARE SUPPORTED BY HORIZONTAL WIRE ROPES, OR WHEN SCAFFOLDING IS PLACED DIRECTLY UNDER THE SURFACE TO BE PAINTED, THE FOLLOWING REQUIREMENTS MUST BE COMPLIED WITH:

WHEN SCAFFOLDING IS SUSPENDED 43" OR MORE BELOW THE COATED SURFACE TO BE REPAIRED, TWO ROWS OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF THE SCAFFOLDING. ONE ROW OF GUARDRAIL MUST BE PLACED AT 42" ABOVE THE SCAFFOLDING AND THE OTHER ROW AT 20" ABOVE THE SCAFFOLDING.

WHEN THE SCAFFOLDING IS SUSPENDED AT LEAST 21", BUT LESS THAN 43" BELOW THE COATED SURFACE TO BE REPAIRED, A ROW OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF THE SCAFFOLDING AT 20" ABOVE THE SCAFFOLDING.

TWO ROWS OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF SCAFFOLDING NOT PREVIOUSLY MENTIONED. THE ROWS OF GUARDRAIL MUST BE PLACED AT 42" AND 20" ABOVE SCAFFOLDING, AS PREVIOUSLY MENTIONED.

ALL SCAFFOLDING MUST BE AT LEAST 24" WIDE WHEN GUARDRAIL IS USED AND 28" WIDE WHEN THE SCAFFOLDING IS SUSPENDED LESS THAN 21" BELOW THE COATED SURFACE TO BE REPAIRED AND GUARDRAIL IS NOT USED. IF TWO OR MORE SCAFFOLDING ARE LAID PARALLEL TO ACHIEVE THE PROPER WIDTH, THEY MUST BE RIGIDLY ATTACHED TO EACH OTHER TO PRECLUDE ANY DIFFERENTIAL MOVEMENT.

ALL GUARDRAIL MUST BE CONSTRUCTED AS A SUBSTANTIAL BARRIER WHICH IS SECURELY FASTENED IN PLACE AND IS FREE FROM PROTRUDING OBJECTS SUCH AS NAILS, SCREWS AND BOLTS. THERE MUST BE AN OPENING IN THE GUARDRAIL, PROPERLY LOCATED, TO ALLOW THE INSPECTOR ACCESS ONTO THE SCAFFOLDING.

THE RAILS AND UPRIGHTS MUST BE EITHER METAL OR WOOD. IF PIPE RAILING IS USED, THE RAILING MUST HAVE A NOMINAL DIAMETER OF NO LESS THAN ONE AND ONE HALF INCHES. IF STRUCTURAL STEEL RAILING IS USE, THE RAILS MUST BE 2 X 2 X 3/8 INCH STEEL ANGLES OR OTHER METAL SHAPES OF EQUAL OR GREATER STRENGTH. IF WOOD RAILING IS USED, THE RAILING MUST BE 2 X 4 INCH (NOMINAL) STOCK. ALL UPRIGHTS MUST BE SPACED AT NO MORE THAN 8 FEET ON CENTER. IF WOOD UPRIGHTS ARE USED, THE UPRIGHTS MUST BE 2 X 4 INCHES (NOMINAL) STOCK.

WHEN THE SURFACE TO BE INSPECTED IS MORE THAN 15 FEET ABOVE THE GROUND OR WATER, AND THE SCAFFOLDING IS SUPPORTED FROM THE STRUCTURE BEING PAINTED, THE CONTRACTOR MUST PROVIDE THE INSPECTOR WITH A SAFETY BELT AND LIFELINE. THE LIFELINE MUST NOT ALLOW A FALL GREATER THAN 6 FEET. THE CONTRACTOR MUST PROVIDE A METHOD OF ATTACHING THE LIFELINE TO THE STRUCTURE INDEPENDENT OF THE SCAFFOLDING, CABLES, OR BRACKETS SUPPORTING THE SCAFFOLDING.

WHEN SCAFFOLDING IS MORE THAN TWO AND ONE HALF FEET ABOVE THE GROUND, THE CONTRACTOR MUST PROVIDE A LADDER FOR ACCESS ONTO THE SCAFFOLDING. THE LADDER AND ANY EQUIPMENT USED TO ATTACH THE LADDER TO THE STRUCTURE MUST BE CAPABLE OF SUPPORTING 250 POUNDS WITH A SAFETY FACTOR OF AT LEAST FOUR (4). ALL RUNGS, STEPS, CLEATS, OR TREADS MUST HAVE UNIFORM SPACING AND MUST NOT EXCEED 12" ON CENTER. AT LEAST ONE SIDE RAIL MUST EXTEND AT LEAST 36" ABOVE THE LANDING NEAR THE TOP OF THE LADDER.

AN ADDITIONAL LANDING MUST BE REQUIRED WHEN THE DISTANCE FROM THE LADDER TO THE POINT WHERE THE SCAFFOLDING MAY BE ACCESSED, EXCEEDS 12". THE LANDING MUST BE A MINIMUM OF AT LEAST 24" WIDE AND 24" LONG. IT MUST ALSO BE OF ADEQUATE SIZE AND SHAPE SO THAT THE DISTANCE FROM THE LANDING TO THE POINT WHERE THE SCAFFOLDING IS ACCESSED DOES NOT EXCEED 12". THE LANDING MUST BE RIGID AND FIRMLY ATTACHED TO THE LADDER; HOWEVER, IT MUST NOT BE SUPPORTED BY THE LADDER. THE SCAFFOLDING MUST BE CAPABLE OF SUPPORTING A MINIMUM OF 1000 LBS.

IN ADDITION TO THE AFOREMENTIONED REQUIREMENTS, THE CONTRACTOR IS STILL RESPONSIBLE TO OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, REGULATIONS, ORDERS AND DECREES. THE CONTRACTOR MUST FURNISH ALL NECESSARY TRAFFIC CONTROL TO PERMIT INSPECTION DURING AND AFTER ALL PHASES OF THE PROJECT.

PROTECTION OF PERSONS AND PROPERTY

THE CONTRACTOR MUST INSTALL AND MAINTAIN SUITABLE SHIELDS OR ENCLOSURES TO PREVENT DAMAGE TO ADJACENT BUILDINGS, PARKED CARS, TRUCKS, BOATS, OR VEHICLES TRAVELING ON, OVER, OR UNDER STRUCTURES HAVING GALVANIZED REPAIRS. THEY MUST BE SUITABLY ANCHORED AND REINFORCED TO PREVENT INTERFERING WITH NORMAL TRAFFIC OPERATIONS IN THE OPEN LANES. PAYMENT FOR THE SHIELDS MUST BE INCLUDED AS INCIDENTAL TO THE APPLICABLE FIELD COATING OPERATION. WORK MUST BE SUSPENDED WHEN DAMAGE TO ADJACENT BUILDINGS, MOTOR VEHICLES, BOATS, OR OTHER PROPERTY IS OCCURRING.

WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY IS DONE TO PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR MUST RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY, TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE.

POLLUTION CONTROL

THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO COMPLY WITH POLLUTION CONTROL LAWS, RULES OR REGULATIONS OF FEDERAL, STATE OR LOCAL AGENCIES.

METHOD OF MEASUREMENT

THE COST OF ALL LABOR, MATERIALS, EQUIPMENT NECESSARY TO GALVANIZE AND TO FABRICATE THE STRUCTURAL STEEL IN ACCORDANCE WITH SS863 AND PERFORM ANY NECESSARY FIELD REPAIR SHALL BE INCLUDED IN THIS SS 863, AS PER PLAN ITEM.

BASIS OF PAYMENT

PAYMENT WILL BE MADE AT CONTRACT PRICES FOR THE APPLICABLE 863 AS PER PLAN ITEM.

DESIGN AGENCY  
CPD ASSOCIATES  
330 S. 17th Street, Suite 2301, Akron, Ohio 44311  
330.572.2100 / Fax 330.572.2101

DATE  
6-29-00

REVIEWED  
K.S.J.

DRAWN  
R.P.R.

DESIGNED  
B.J.M.

CHECKED  
P.J.W.

REVISION  
FILE NUMBER

STRUCTURE GENERAL NOTES  
BRIDGE NO. PE - 6 - 17  
LAKE AVE. OVER TUSCARAWAS RIVER

STA - LAKE AVE.

5 / 20

40  
64



ESTIMATED QUANTITIES

CALCULATED: M.D.P. DATE: 5/25/00  
CHECKED: B.J.M. DATE: 6/26/00

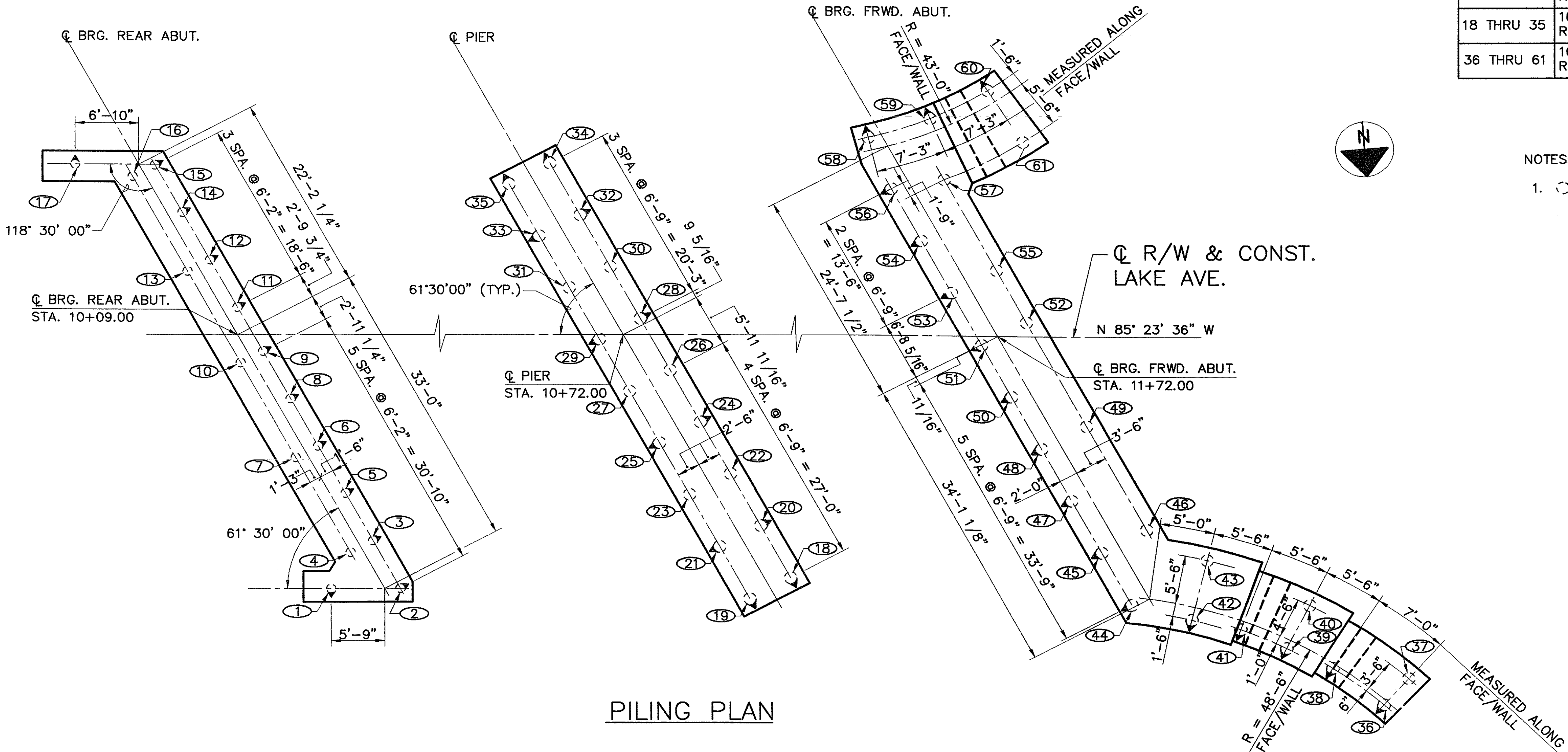
ITEM	EXT	TOTAL	UNITS	DESCRIPTION	ABUT	PIER	SUPER	GENERAL	A.P.P. REF. SHT. NO.
202	11003	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	3
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING				LUMP	
503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN				LUMP	3
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00500	1,105	LIN FT	12" CAST-IN-PLACE, REINFORCED CONCRETE PILES	1,105				
507	00700	2,900	LIN FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES	1,820	1,080			
SPECIAL	51267502	679	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)	220		459		
516	11210	112	LIN FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			112		
516	44001	6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (8"x 12"x 1.92"THICK), AS PER PLAN			6		12
516	44101	6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13"x 22"x 2.23"THICK), AS PER PLAN			6		12
516	44101	6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (9 1/2"x 16"x 2.87"THICK), AS PER PLAN			6		12
517	73200	216	LIN FT	RAILING (DEFLECTOR PARAPET TYPE)	51		165		
517	75120	200	LIN FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING)	36		164		
518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC	LUMP				
518	40000	154	LIN FT	6" PERFORATED CORRUGATED PLASTIC PIPE	154				
518	40010	69	LIN FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	69				

ITEM	EXT	TOTAL	UNITS	DESCRIPTION	ABUT	PIER	SUPER	GENERAL	A.P.P. REF. SHT. NO.
842	31510	278	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN			278		3
842	40500	92	CU YD	CLASS C CONCRETE, PIER ABOVE FOOTINGS		92			
842	44100	183	CU YD	CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING	183				
842	46500	204	CU YD	CLASS C CONCRETE, FOOTING	153	51			
863	10041	248,800	LB.	STRUCTURAL STEEL MEMBERS, LEVEL TWO (2), AS PER PLAN			248,800		4
863	20001	2,610	EA.	WELDED STUD SHEAR CONNECTORS, AS PER PLAN			2,610		4

PILING TABLE

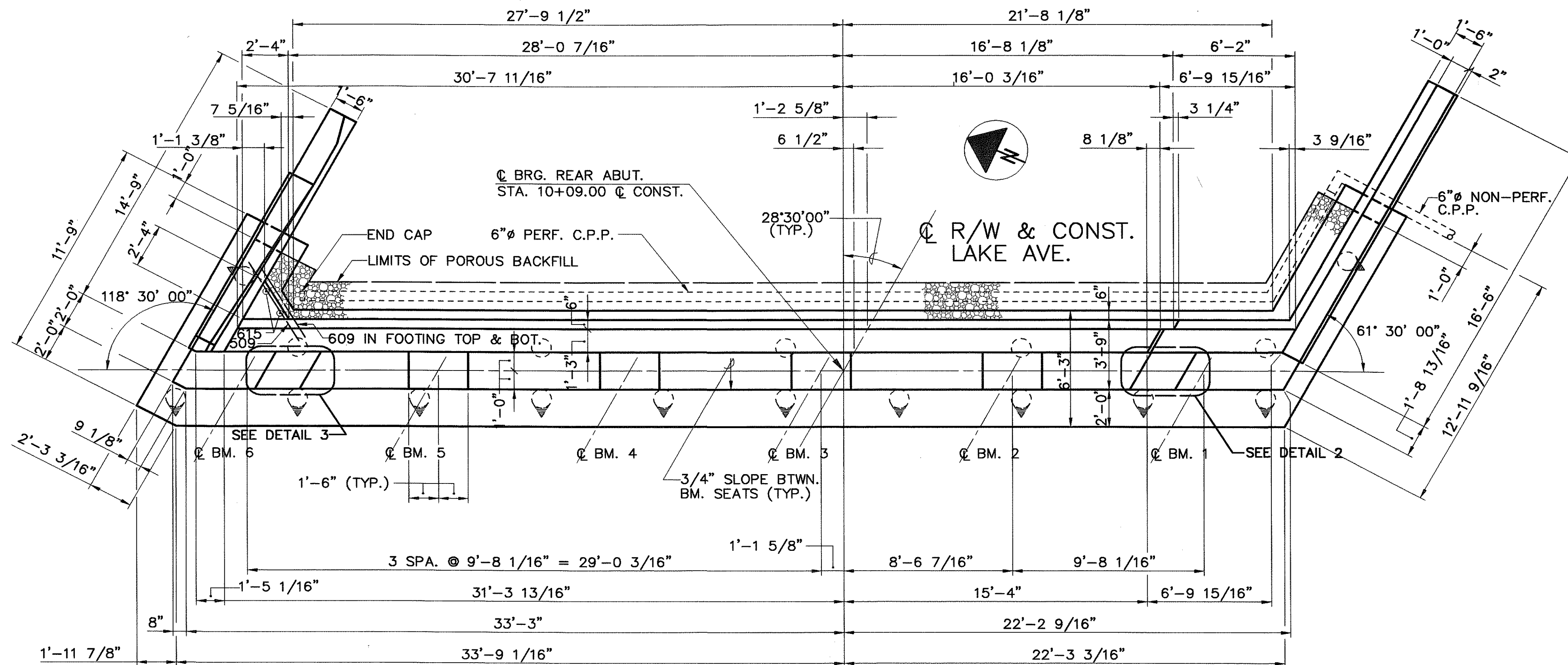
PILE NO.	SIZE	PILE CUT-OFF ELEV.
1 THRU 17	12" DIA. C.I.P. REINF. CONC.	928.70
18 THRU 35	16" DIA. C.I.P. REINF. CONC.	915.50
36 THRU 61	16" DIA. C.I.P. REINF. CONC.	920.50

- NOTES:
- INDICATES BATTER PILE AND DIRECTION OF BATTER. REQUIRED BATTER 1:4

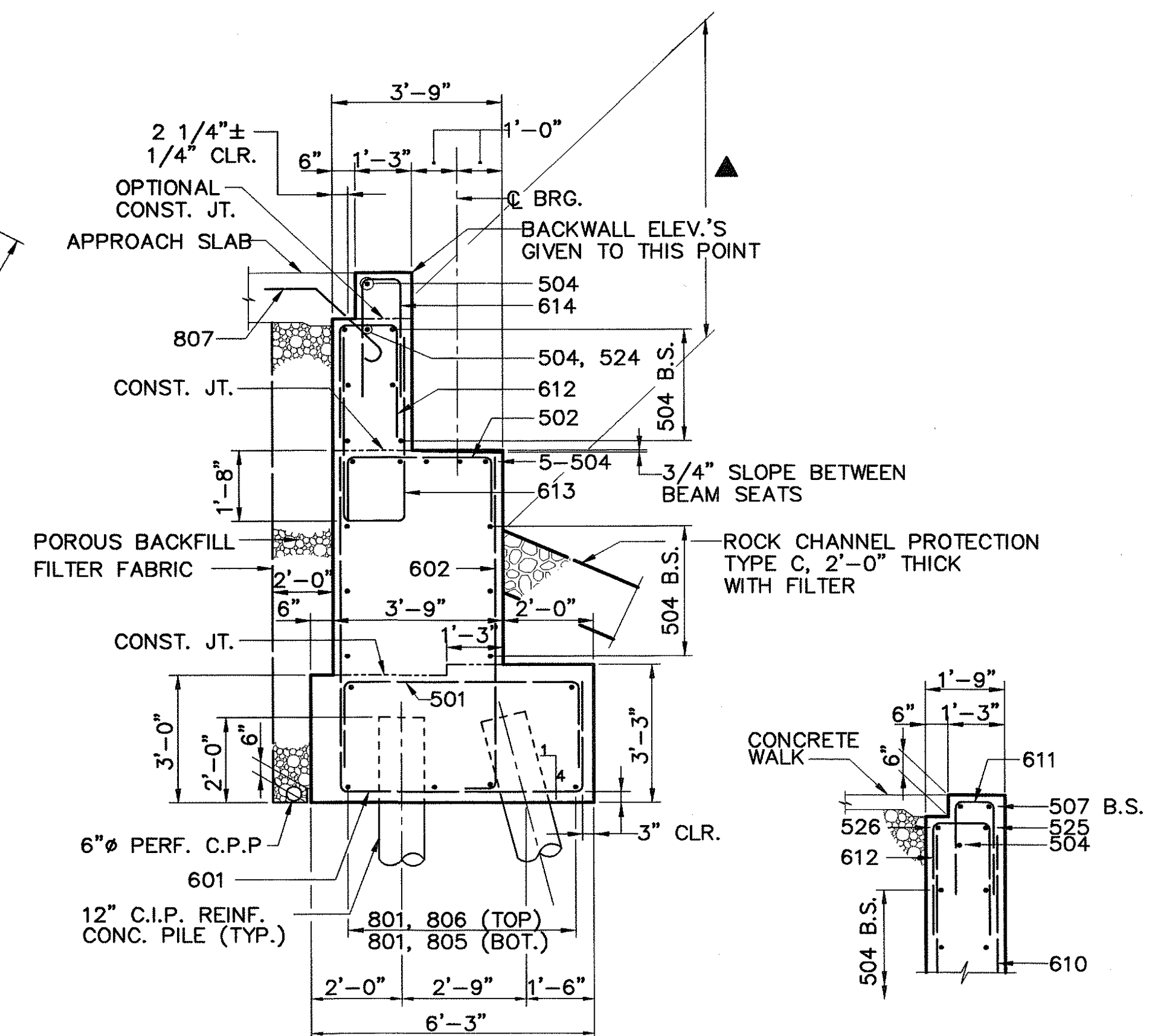


PILING PLAN



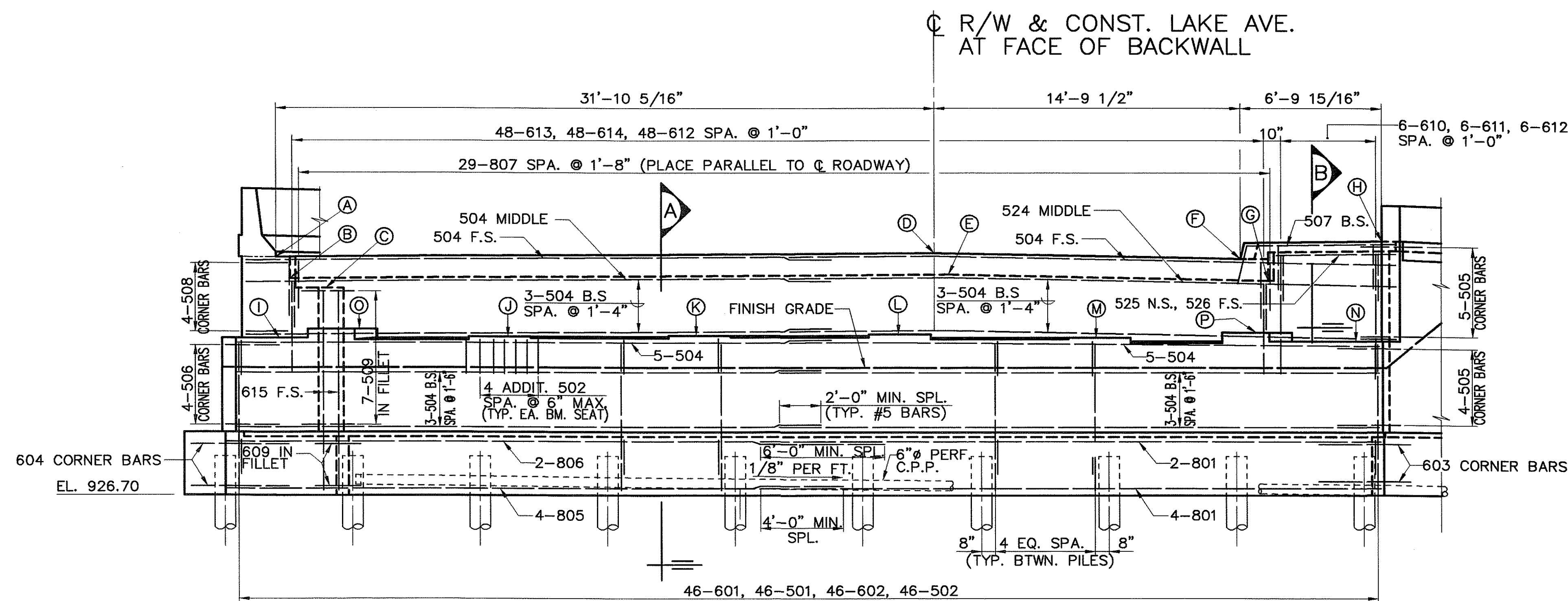


PLAN



SECTION A

SECTION B



ELEVATION

ELEVATIONS							
A	B	C	D	E	F	G	H
938.95	937.84	937.34	939.16	938.06	938.86	937.74	939.77
I	J	K	L	M	N	O	P
934.78	934.85	934.91	934.98	934.81	934.62	935.24	935.08

NOTES:

- PREFIX "A" SHALL BE ADDED TO ALL REBAR MARKS SHOWN FOR THE ABUTMENTS. SEE REINFORCING SCHEDULE.
- MINIMUM CLEARANCE TO REBARS SHALL BE 2" UNLESS NOTED OTHERWISE.
- ALL REINFORCING SHALL BE EPOXY COATED.
- FOR DETAILS 2 & 3, SEE SHT. NO. [10/20].
- DEFLECTOR PARAPET CONCRETE AND REINFORCING STEEL ARE INCLUDED WITH ITEM 517, RAILING (DEFLECTOR PARAPET TYPE) FOR PAYMENT.
- RAILING CONCRETE AND REINFORCING STEEL ARE INCLUDED WITH ITEM 517, RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING) FOR PAYMENT.
- FOR PILING PLAN, SEE SHT. NO. [6/20].
- FOR S.E. & N.E. WINGWALL DETAILS, SEE SHT. NO. [8/20].
- FOR ADDITIONAL RAILING DETAILS, SEE STD. DWG. NO. BR-2-98.
- FOR TERMINATION DETAIL OF C.P.P., SEE DETAIL 1, SHT. [8/20].

▲ SEAL ENTIRE AREA WITH EPOXY SEALER





- NOTES:
1. FOR ADDITIONAL NOTES SEE SHT. NO. 7/20

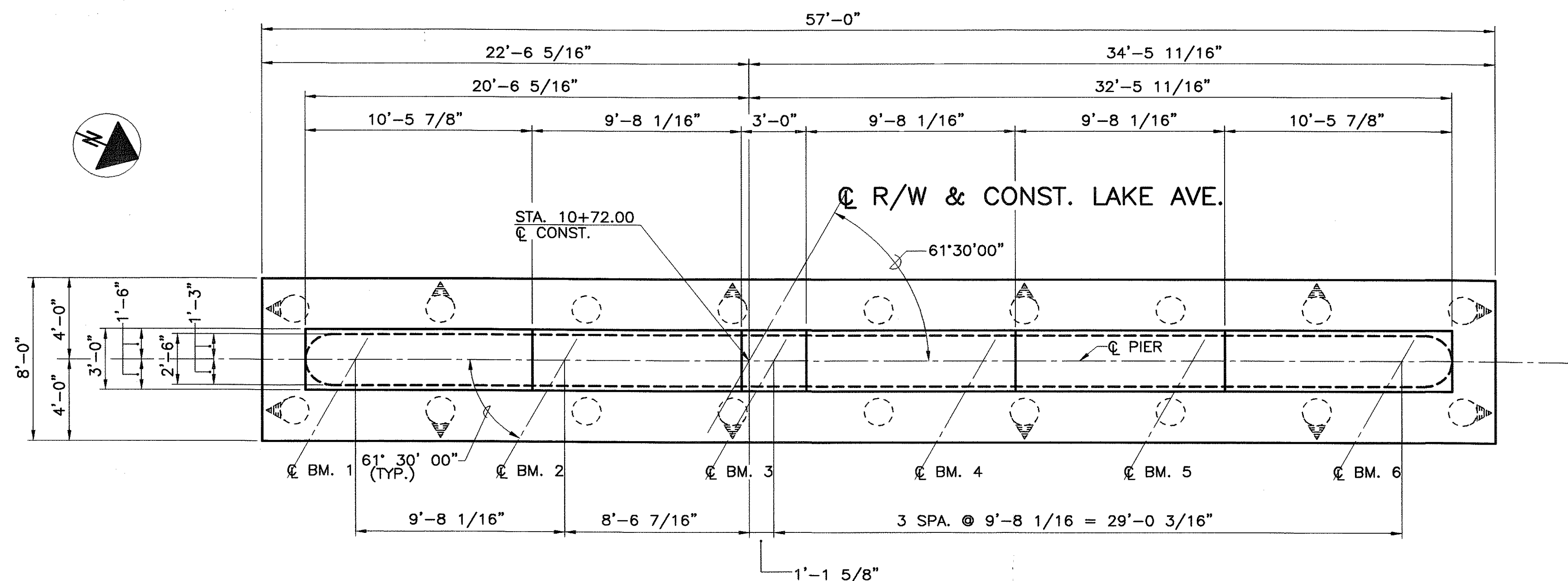




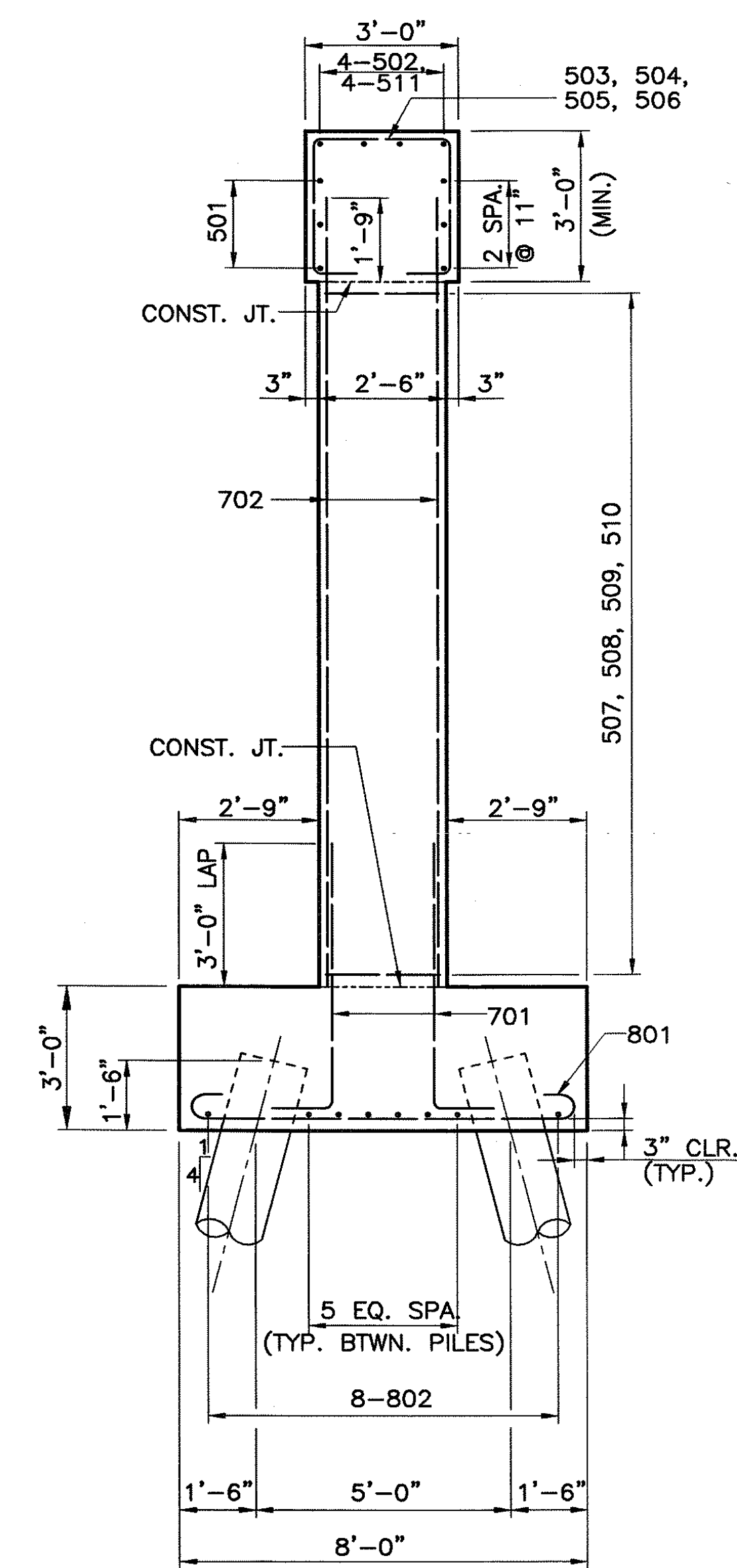
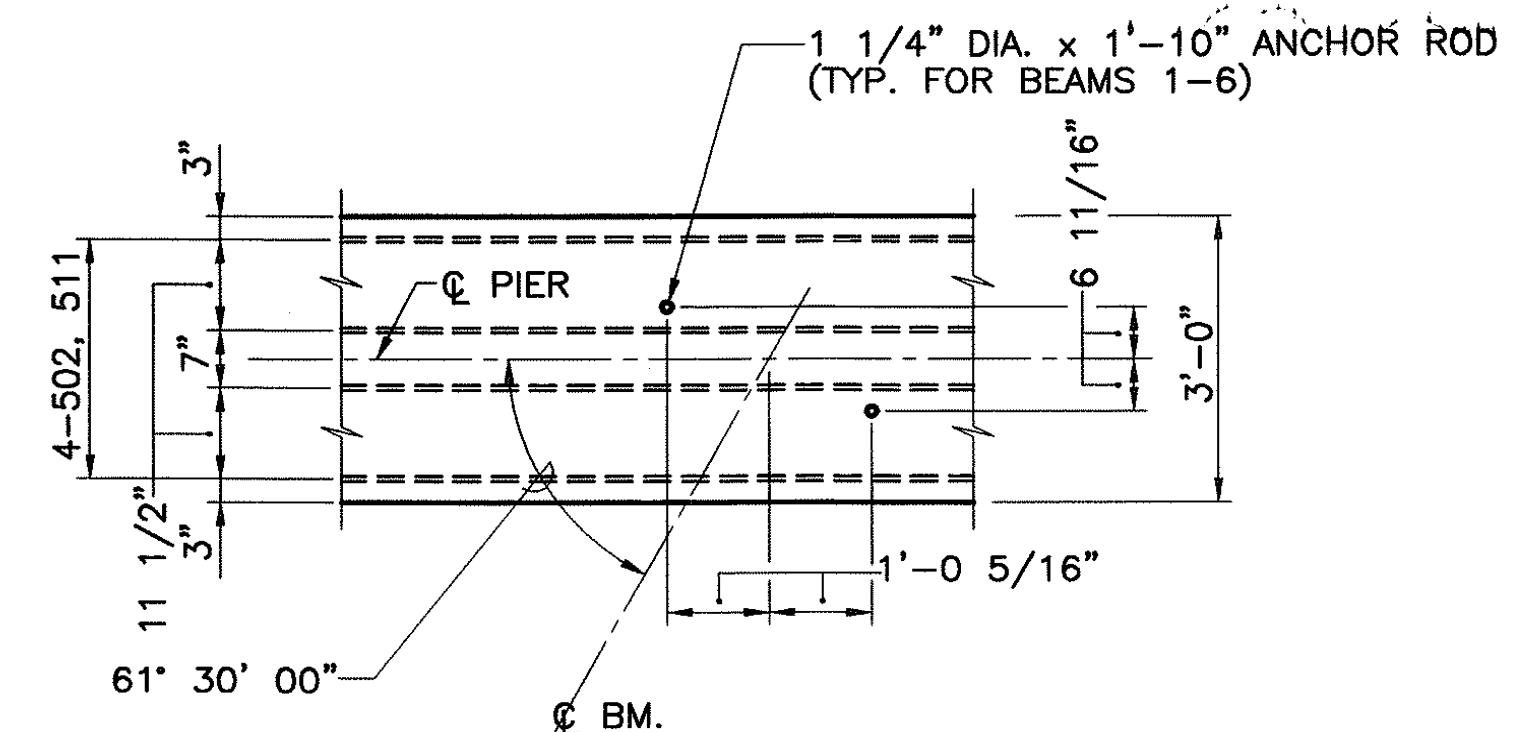
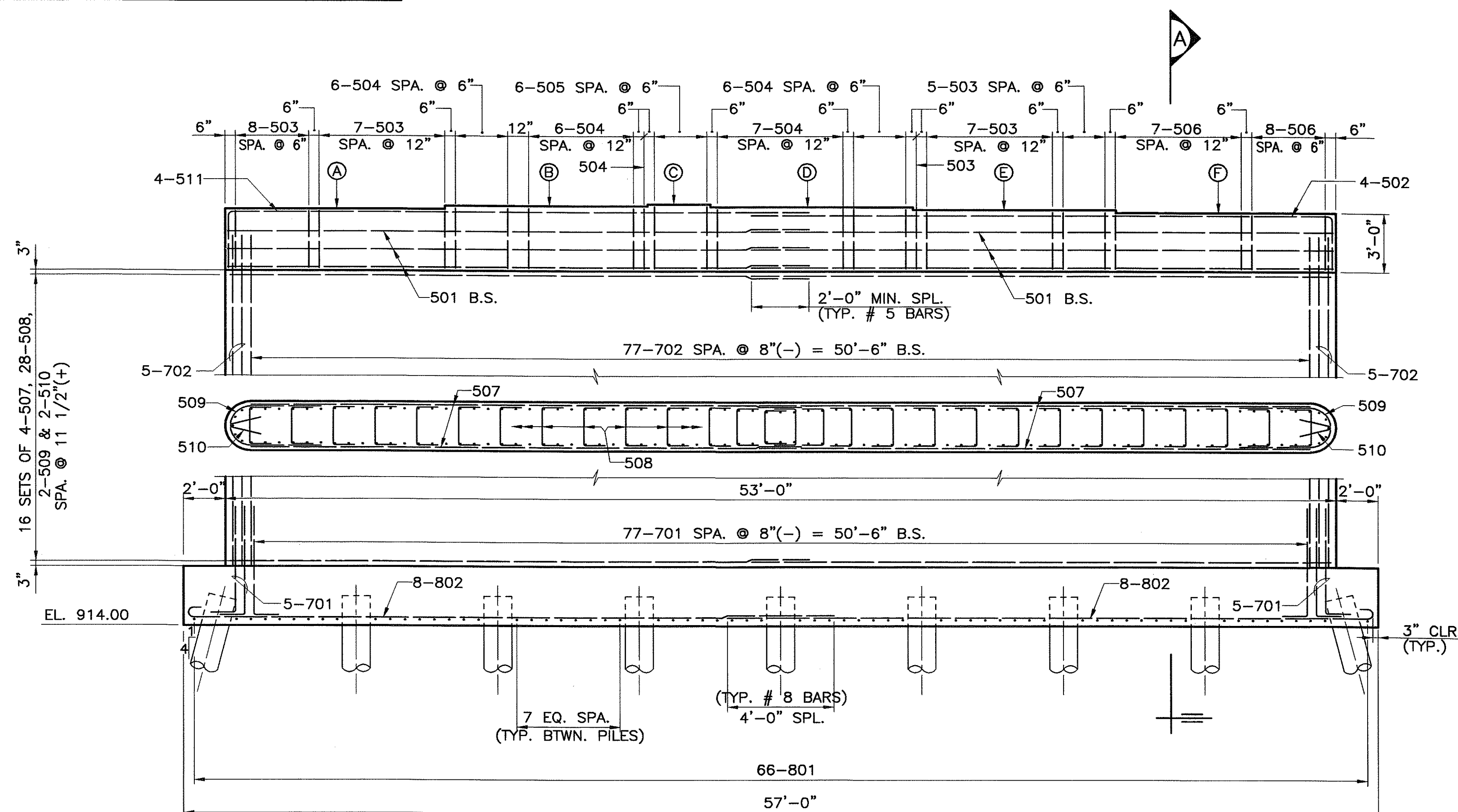








ELEVATIONS					
(A)	(B)	(C)	(D)	(E)	(F)
935.18	935.33	935.43	935.30	935.16	935.02

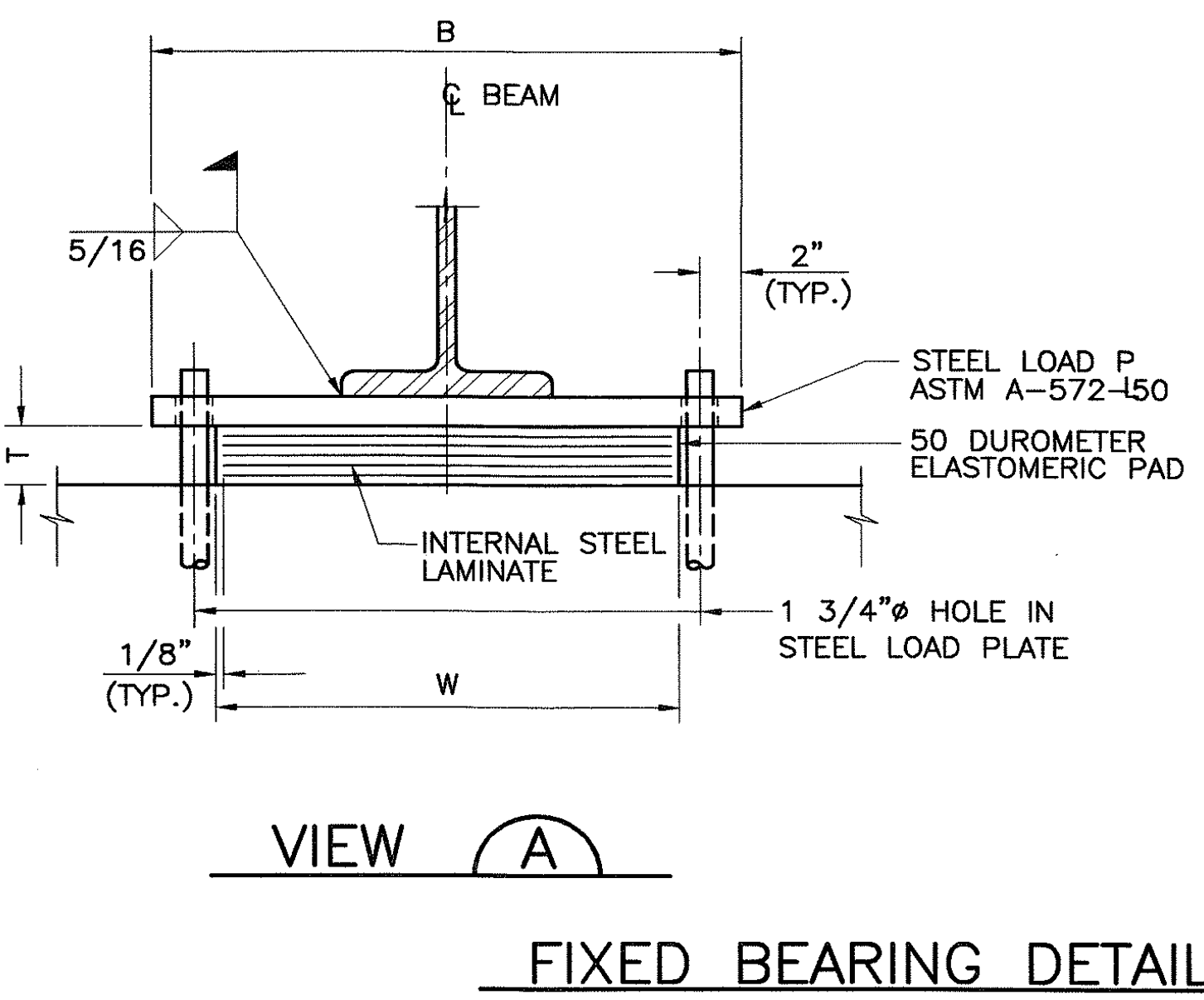
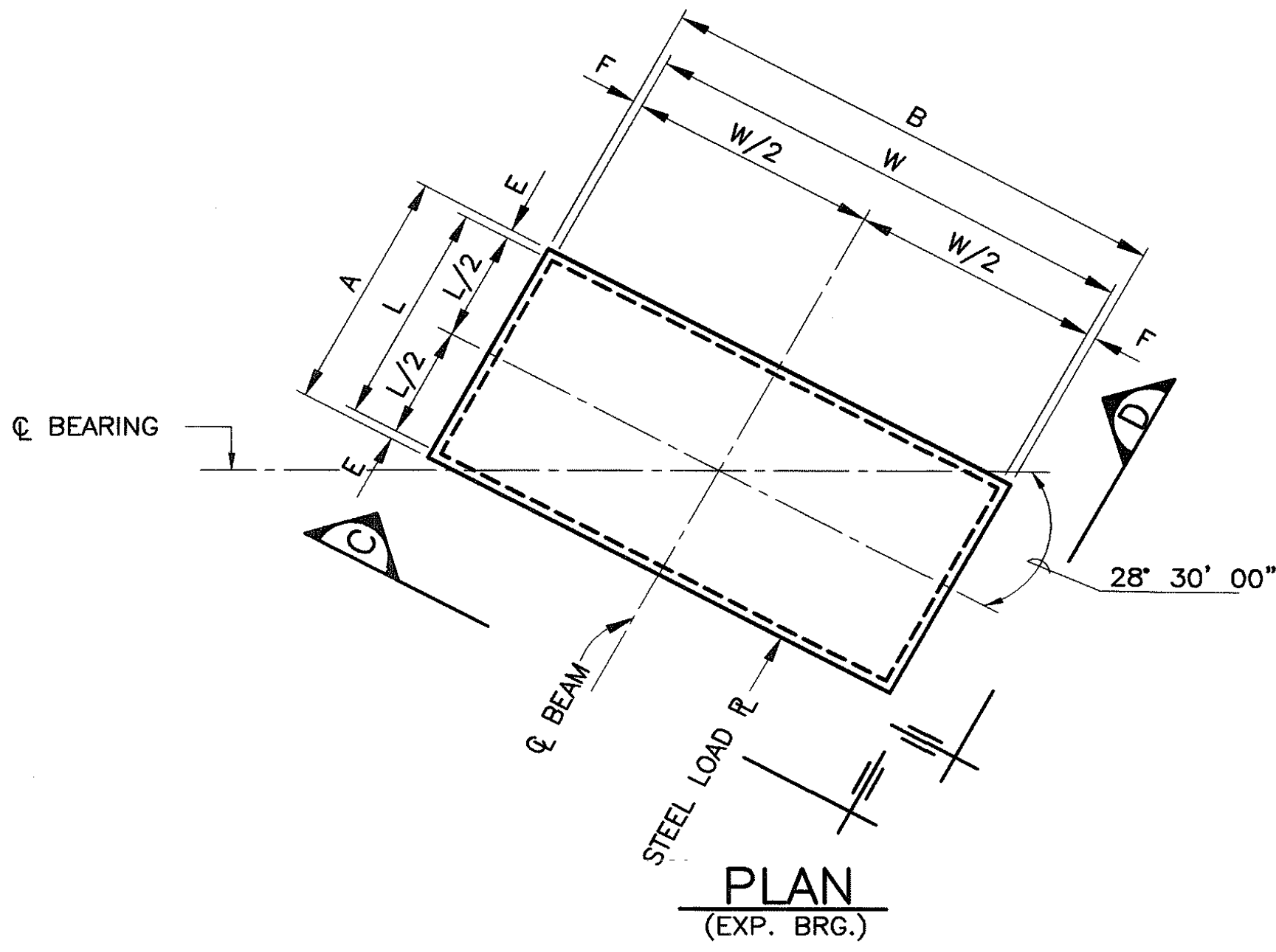
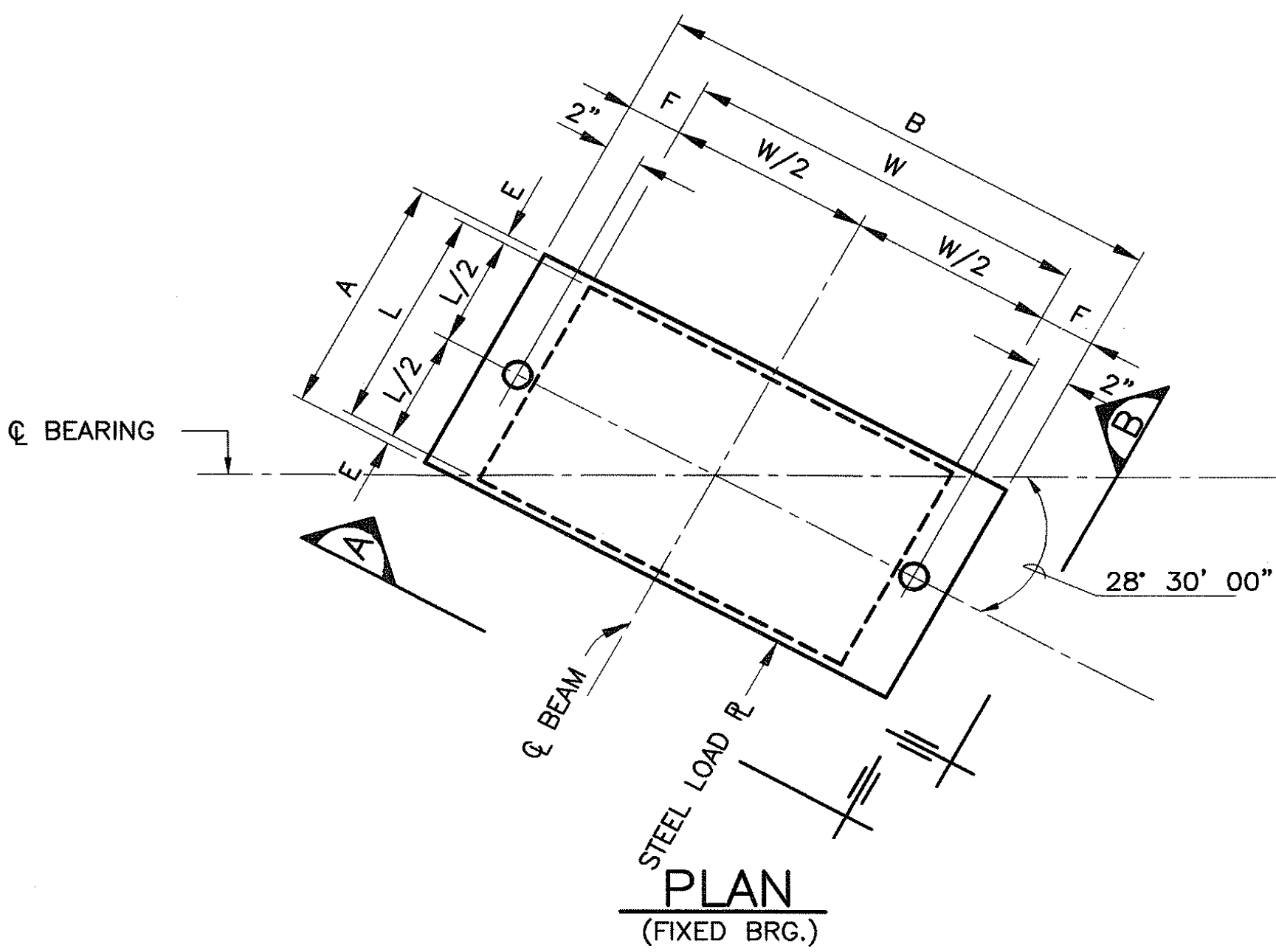


- NOTES:

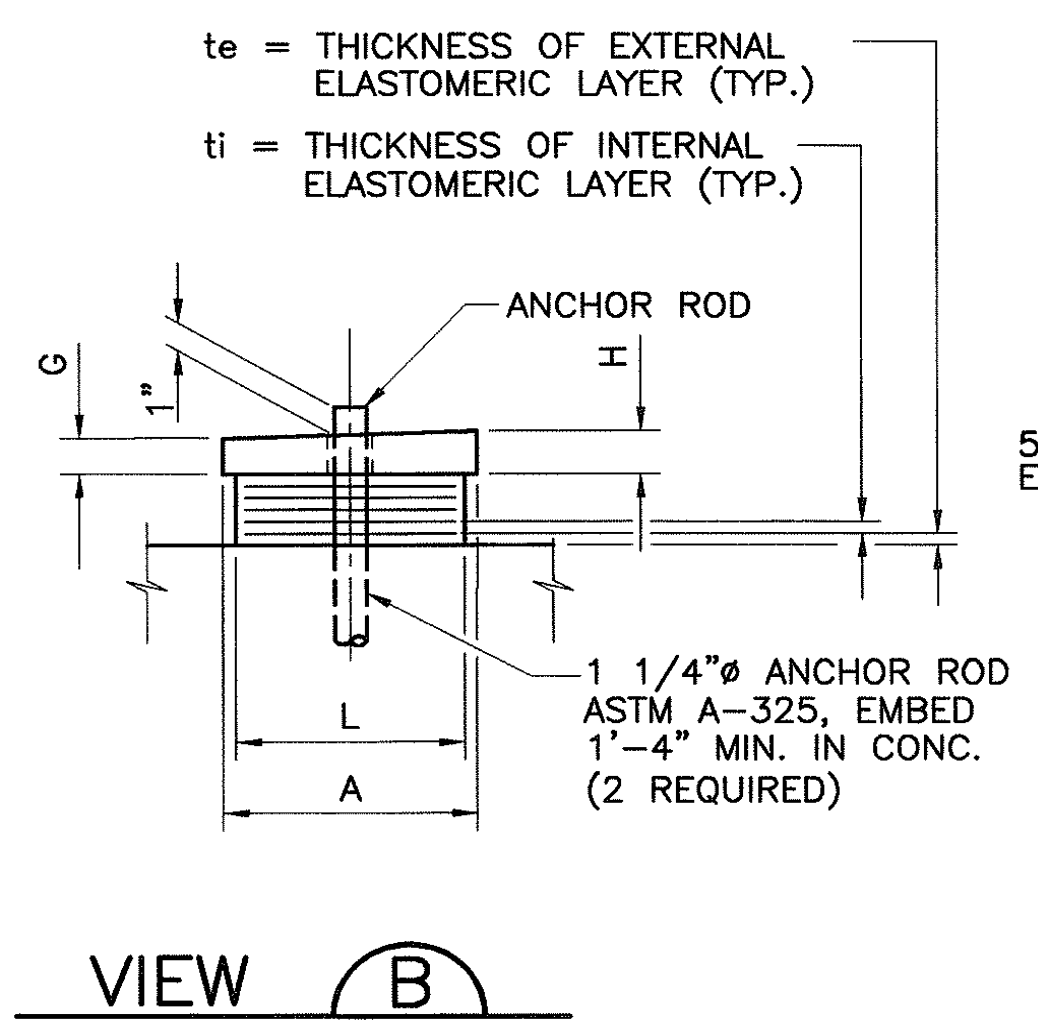
1. PREFIX "P" SHALL BE ADDED TO ALL REBAR MARKS SHOWN FOR THE PIERS. SEE REINFORCING SCHEDULE.
2. MINIMUM CLEARANCE TO REBARS SHALL BE 2" UNLESS NOTED OTHERWISE.
3. BEARING SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES.
4. SURFACE UNDER BEARINGS: SPECIAL CARE SHALL BE TAKEN TO FINISH THE CONCRETE UNDER BEARINGS TO A FLAT, LEVEL SURFACE. THE CONCRETE SURFACE SHALL BE STEEL TROWEL FINISHED WITHOUT BRUSHING AND THE FLATNESS OF THE FINISHED SURFACE SHALL NOT VARY FROM A STRAIGHT EDGE LAID ON THE SURFACE IN ANY DIRECTION WITHIN THE LIMITS OF THE BEARING FOOT PRINT BY MORE THAN 1/16 INCH. SURFACES WHICH FAIL TO CONFORM TO THE REQUIRED FLATNESS SHALL BE GROUND UNTIL ACCEPTABLE.
5. FOR BEARING DETAILS, SEE SHT. NO. 1720.



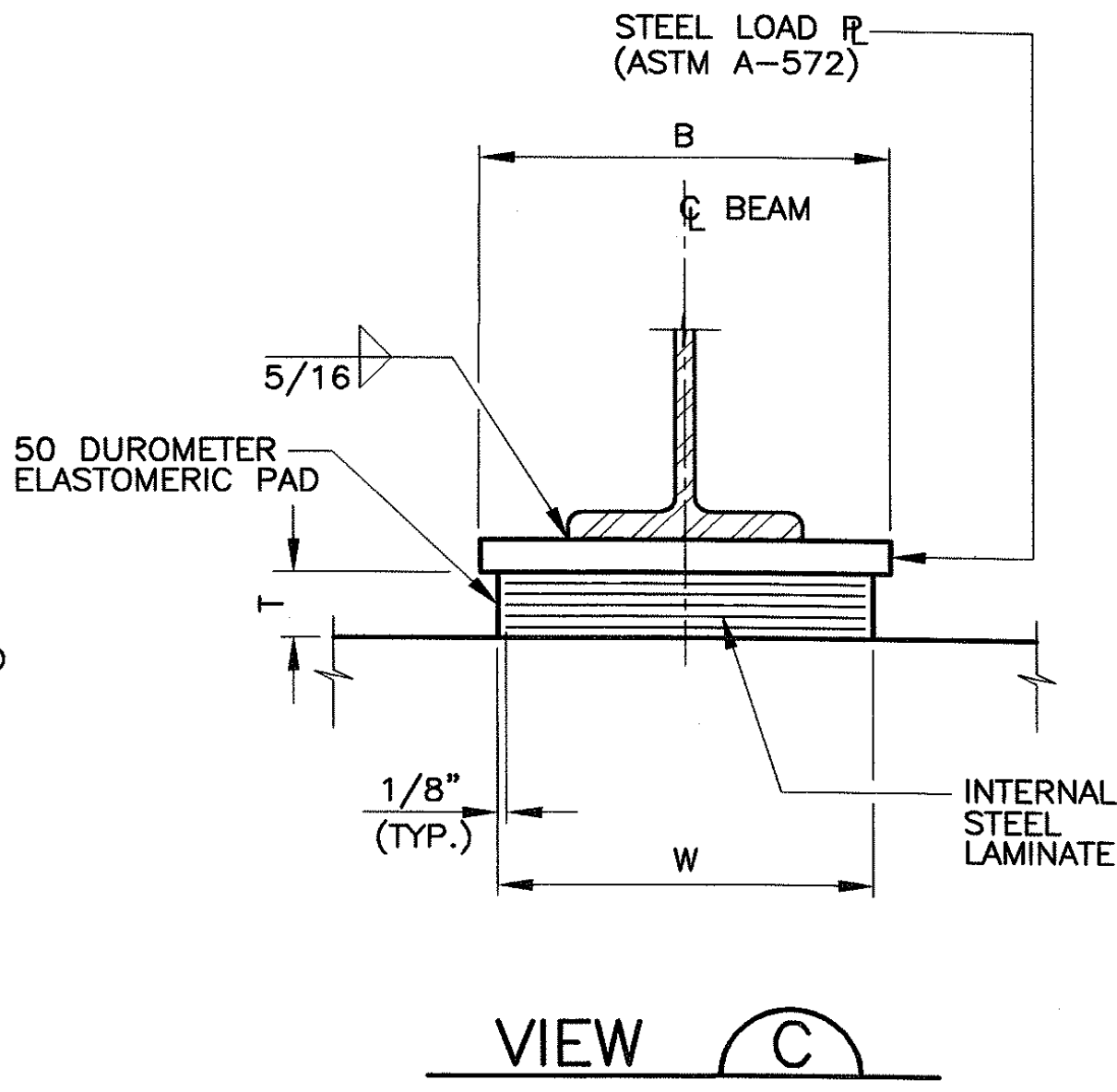
Table with 18 columns: SUB-STRUCTURE, STEEL LOAD PLATE (A, B, E, F, G, H), ELASTOMERIC PAD (L, W, T, NO. OF INTER. LAYERS, ti, te), STEEL LAMINATES (NO., THICK.), TYPE, MIN. DEAD LOAD (K), MAX. DEAD LOAD (K), LIVE \* LOAD (K), TOTAL LOAD (K). Rows include REAR ABUT., PIER, and FRWD. ABUT. with various dimensions and load values.



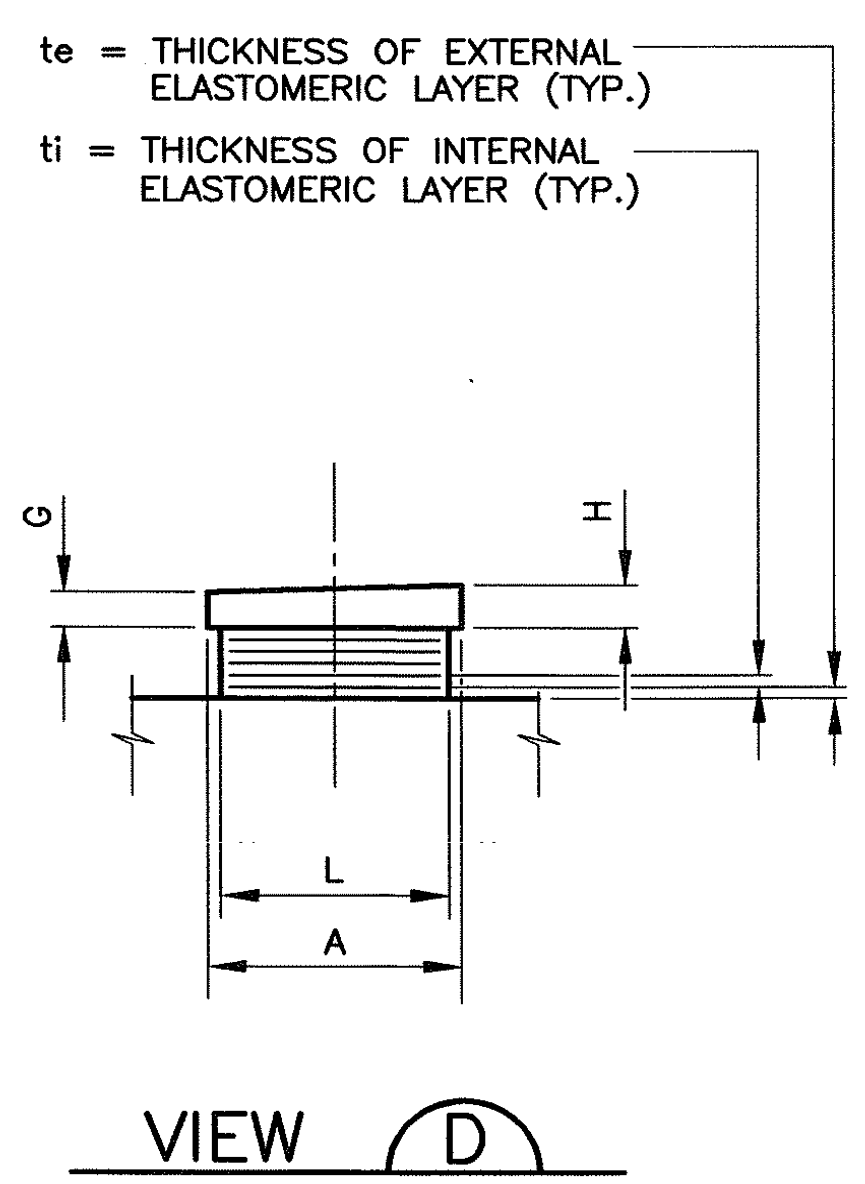
FIXED BEARING DETAIL



VIEW B



VIEW C



VIEW D

EXPANSION BEARING DETAIL

- NOTES:
- 1. ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION, ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMETER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.6 OF SECTION 14, BEARINGS, DIVISION I, DESIGN. TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS, EACH.
  - 2. A COPY OF THE ABOVE REFERENCED SPECIFICATIONS WILL BE FURNISHED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
  - 3. WELDING SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
  - 4. BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60' (±) 10' F, THE BEAMS OR GIRDERS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60° F (±) 10' F.
  - 5. THE STEEL LOAD PLATE SHALL BE ASTM A572 GRADE 50 STEEL, GALVANIZED.
  - 6. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
  - 7. ANCHOR RODS SHALL BE GALVANIZED AS PER O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATION 711.02. ANCHOR RODS SHALL EXTEND 1 INCH ABOVE THE LOAD PLATE (PIER BEARINGS).

Cad File: H:\99029\B\DWG\99029BRG.DWG Date: 11-21-00 Time: 2:24 PM TW = 0.000,00"

Technician: FUE

Design Agency: GPD ASSOCIATES, INC. 330572-2100, Tel: 813-975-2100

DATE: 6-29-00

REVIEWED: K.S.J.

DRAWN: R.P.R.

DESIGNED: B.J.M.

CHECKED: P.J.W.

BRIDGE NO. PE - 6 - 17

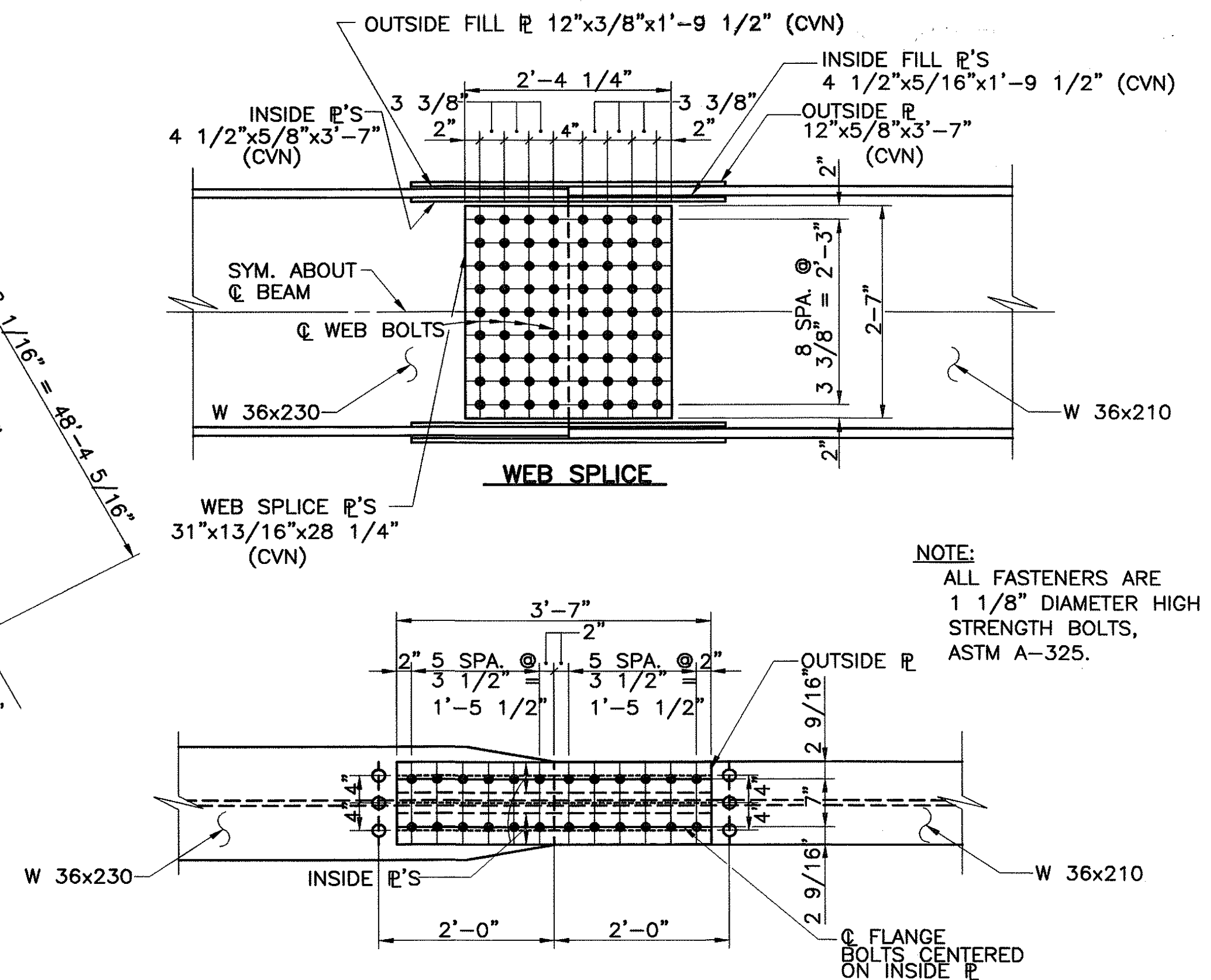
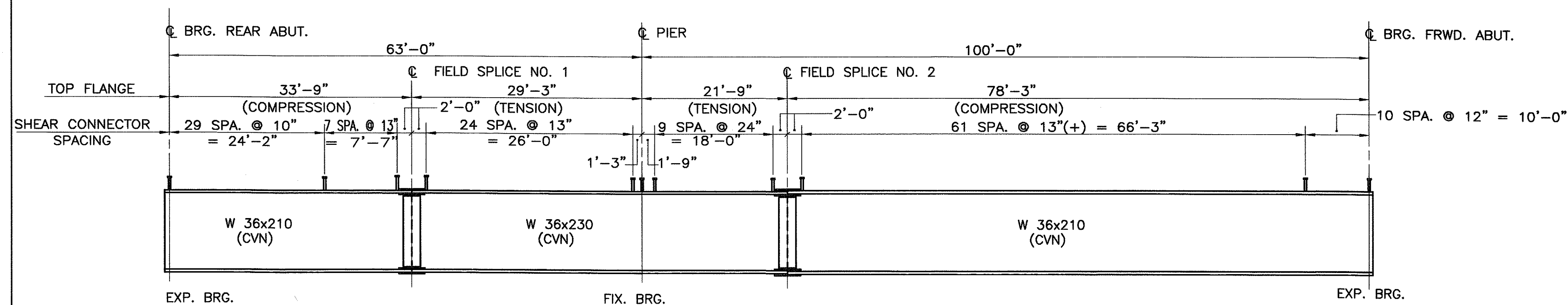
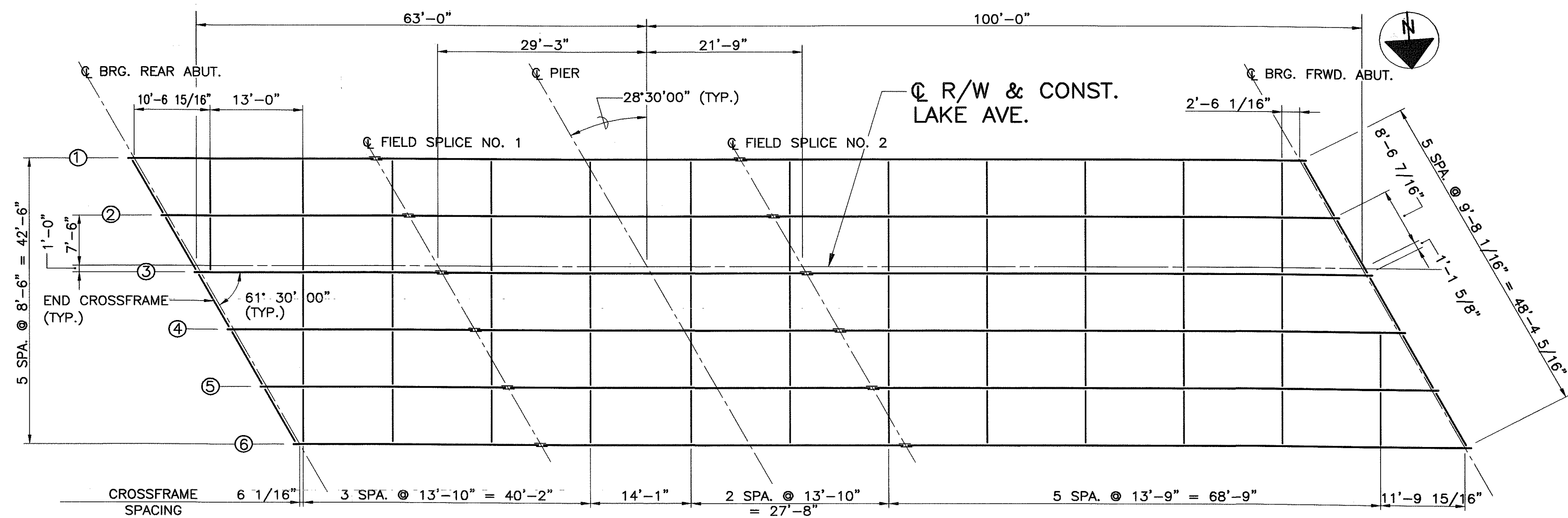
LAKE AVE. OVER TUSCARAWAS RIVER

STA-LAKE AVE.

12 / 20

47 / 64





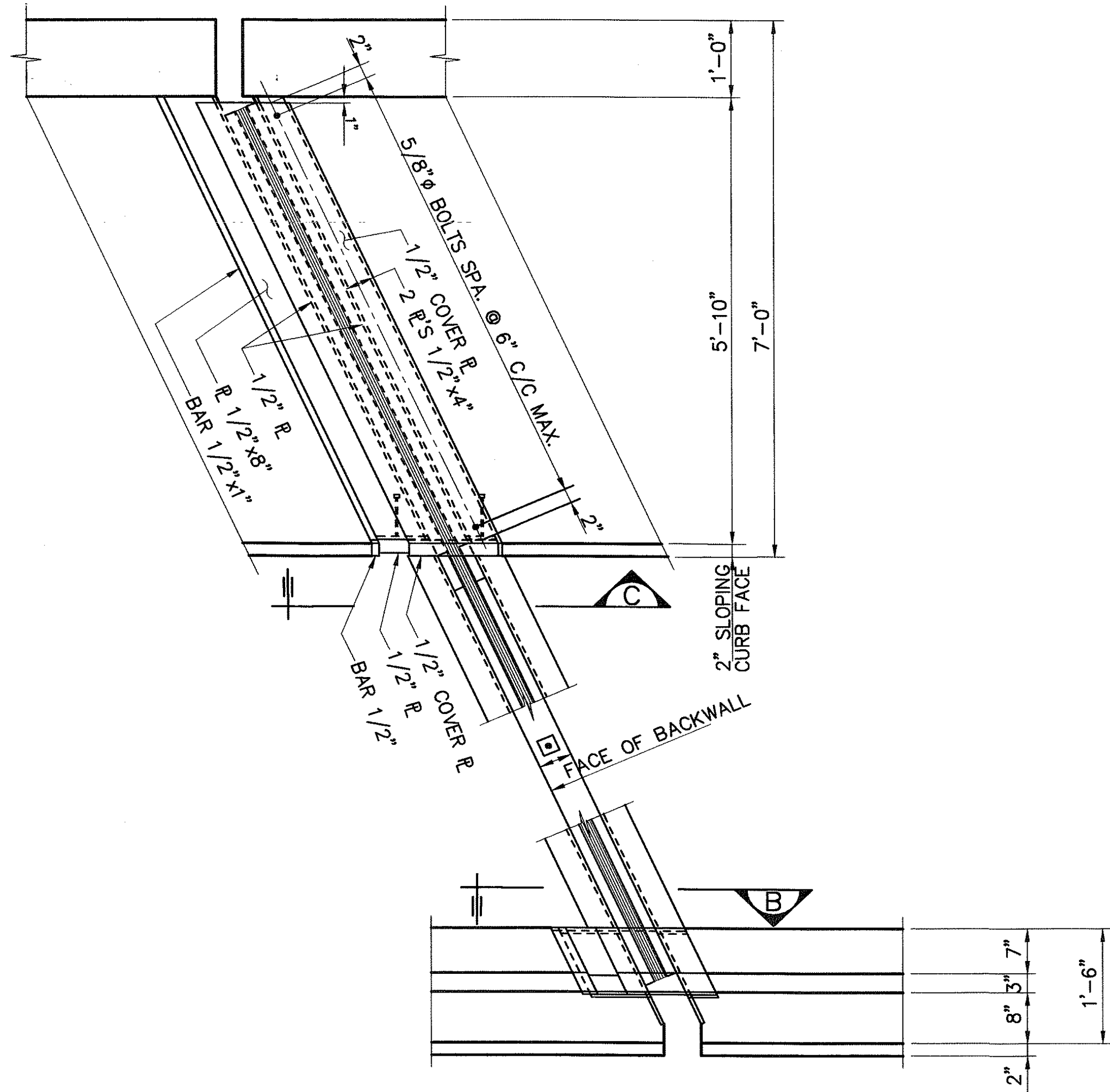
TOP & BOTTOM FLANGE SPLICE  
SPLICE DETAILS

F.S. NO. 2 SHOWN.  
F.S. NO. 1 SIMILAR BUT OPPOSITE HAND

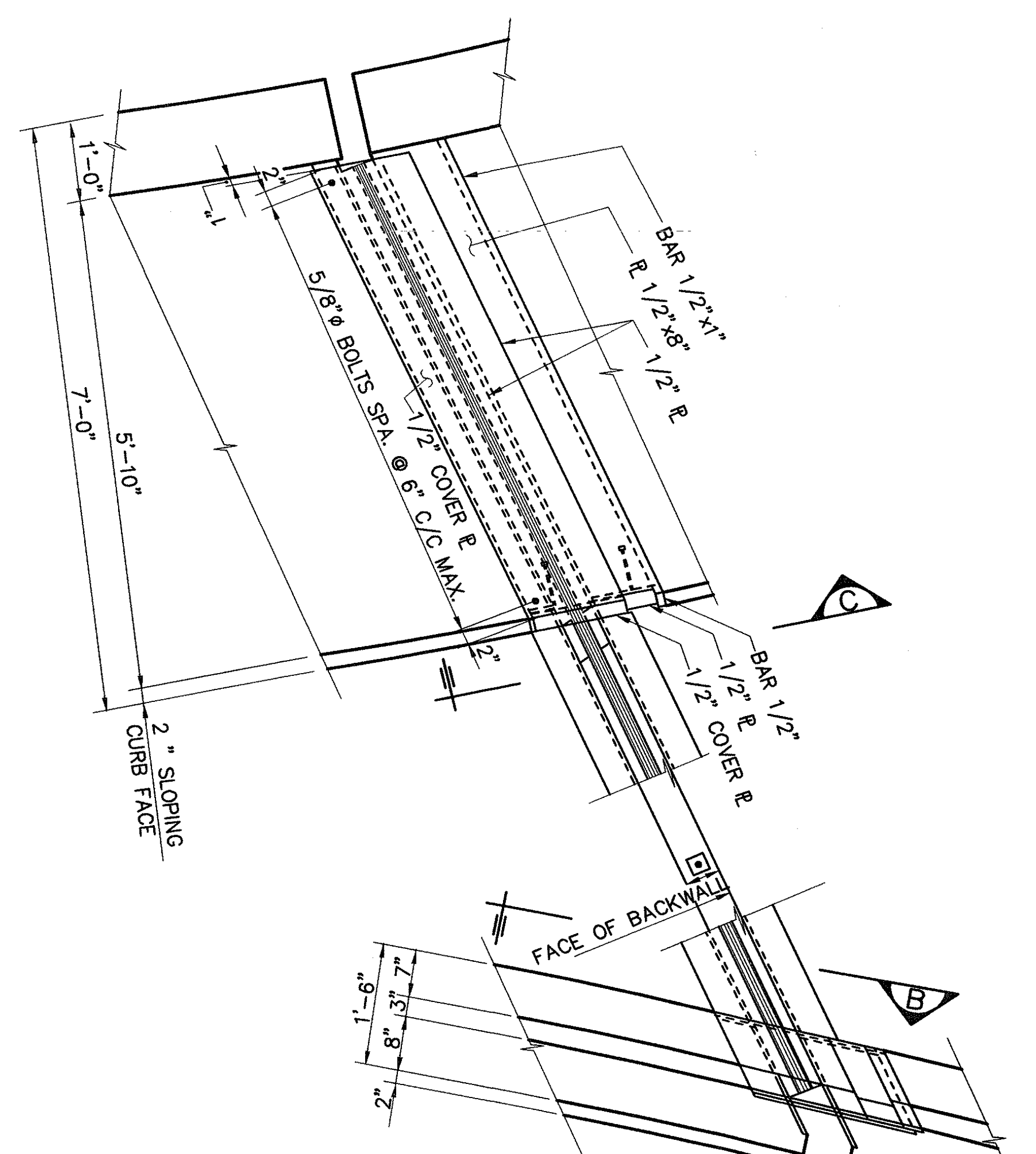
- NOTES:

1. ALL STRUCTURAL STEEL SHALL BE ASTM A572, GRADE 50, UNLESS NOTED OTHERWISE.
2. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 OF CMS.
3. FOR DEFLECTION AND CAMBER, SEE SHEET NO. 15/20.
4. HIGH STRENGTH BOLTS SHALL BE 1 1/8" DIAMETER, ASTM A325, GALVANIZED, UNLESS NOTED OTHERWISE.
5. FOR SHEAR CONNECTOR DETAIL, SEE SHT. NO. 17/20.
6. FOR END CROSS-FRAMES AND EXPANSION JOINT DETAILS SEE SHEET NO. 14/20.
7. FOR BEARING DETAILS, SEE SHEET NO. 12/20.
8. ABBREVIATION:  
  
SPA. = SPACINGS
9. INSTALLATION OF SEAL: DURING INSTALLATION OF THE SUPPORT/ARMOR FOR THE SUPERSTRUCTURE SIDE OF THE EXPANSION JOINT SEAL, THE SEATING OF BEAMS ON BEARINGS SHALL BE CAREFULLY OBSERVED TO ASSURE THAT POSITIVE BEARING IS MAINTAINED. PROPER ELEVATION OF THE SUPPORT/ARMOR SHALL BE ACHIEVED BY ADJUSTING THE CONNECTION ANGLES AND BOLTS BETWEEN BEAM AND EXPANSION JOINT.

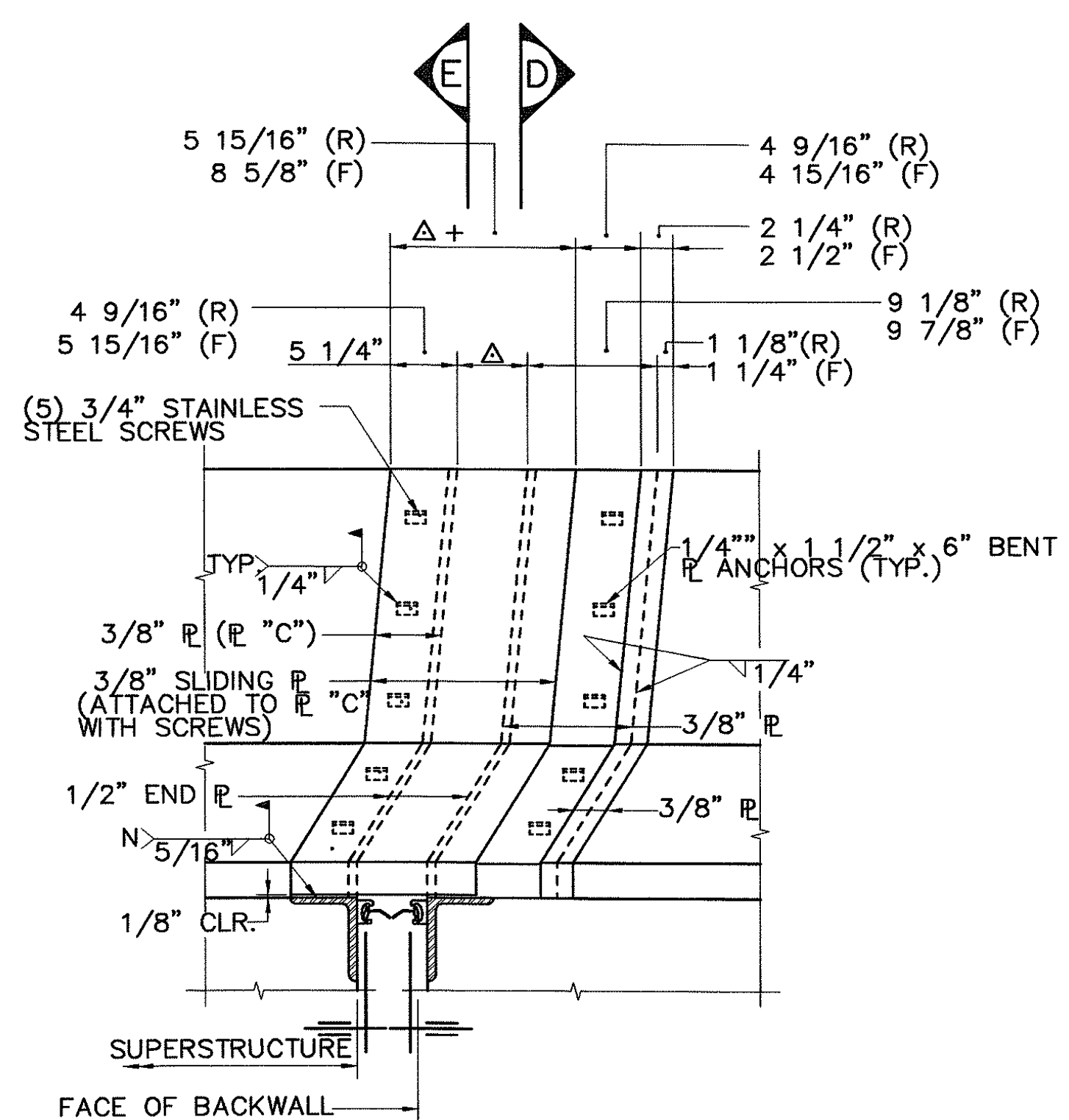




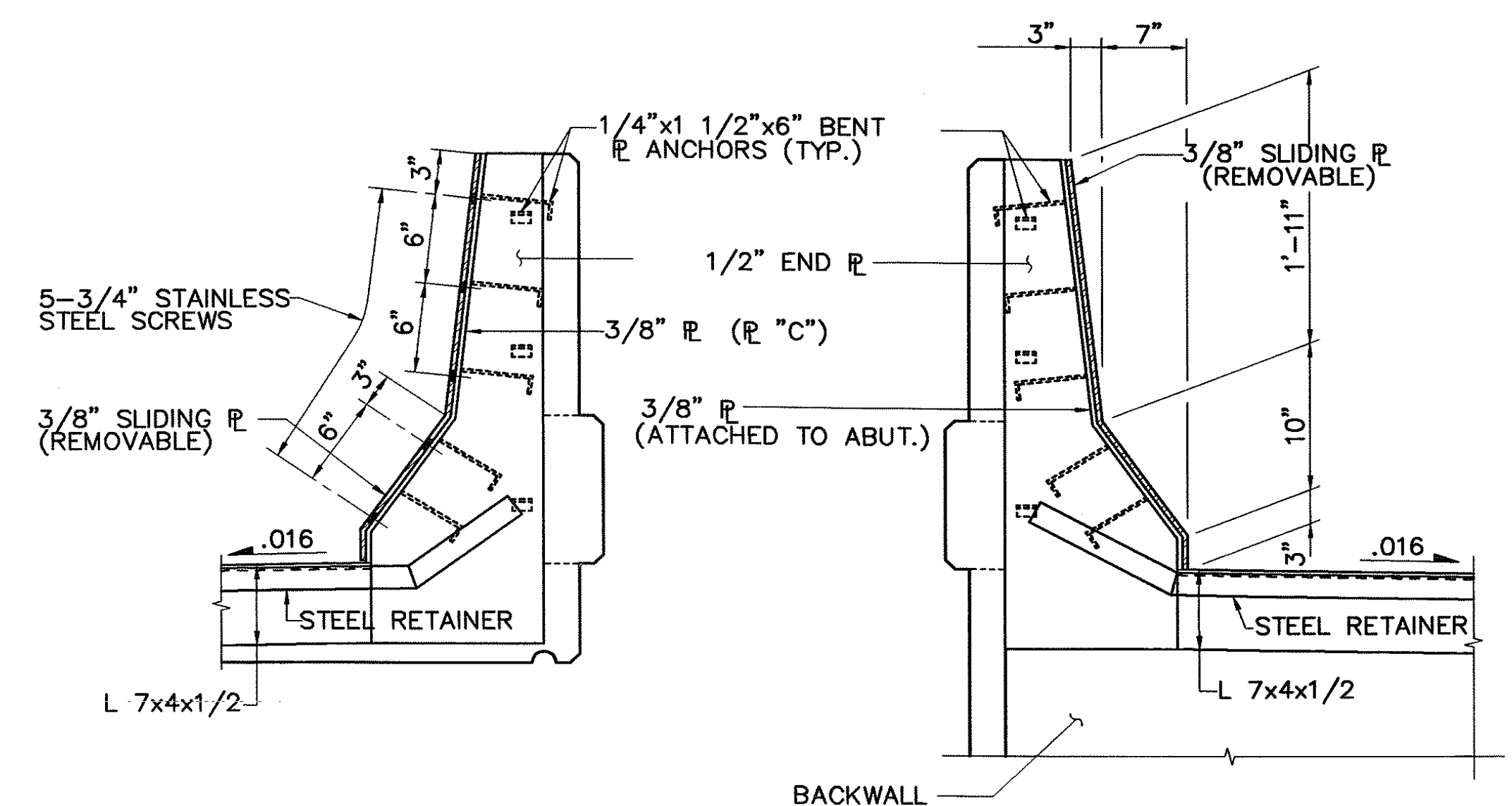
REAR ABUT.



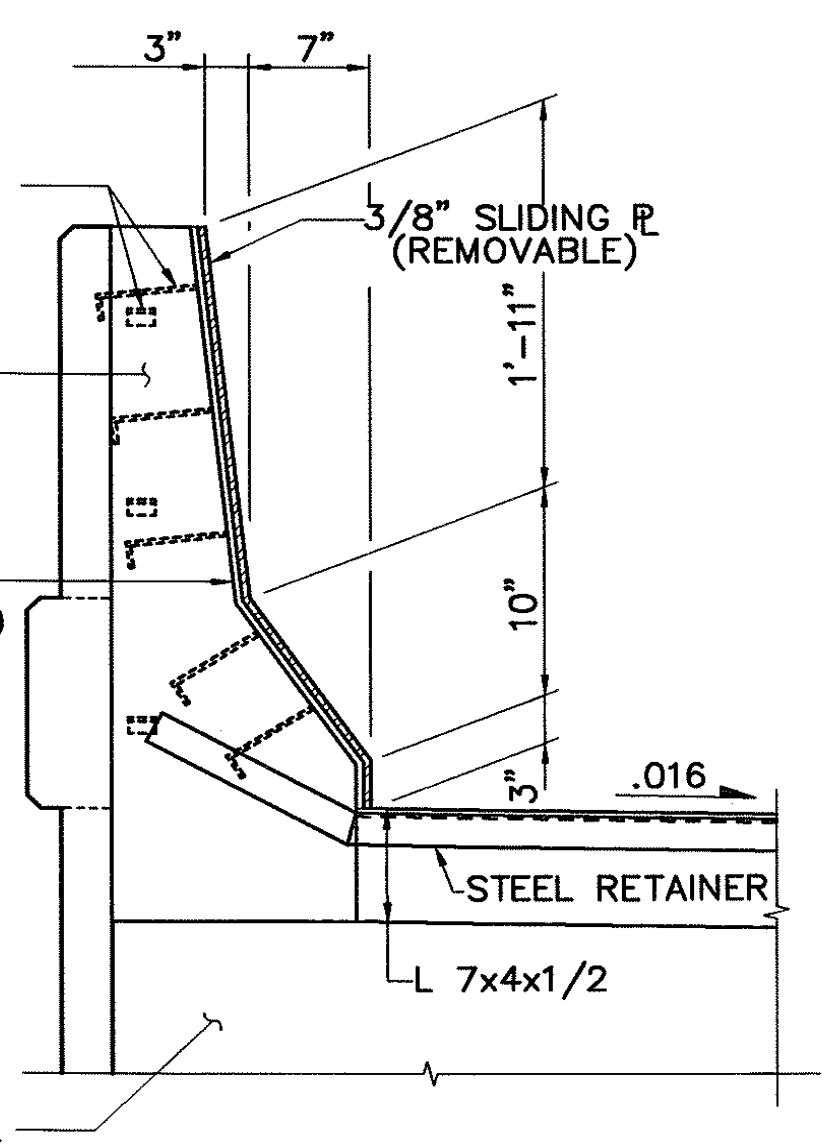
FRWD. ABUT.



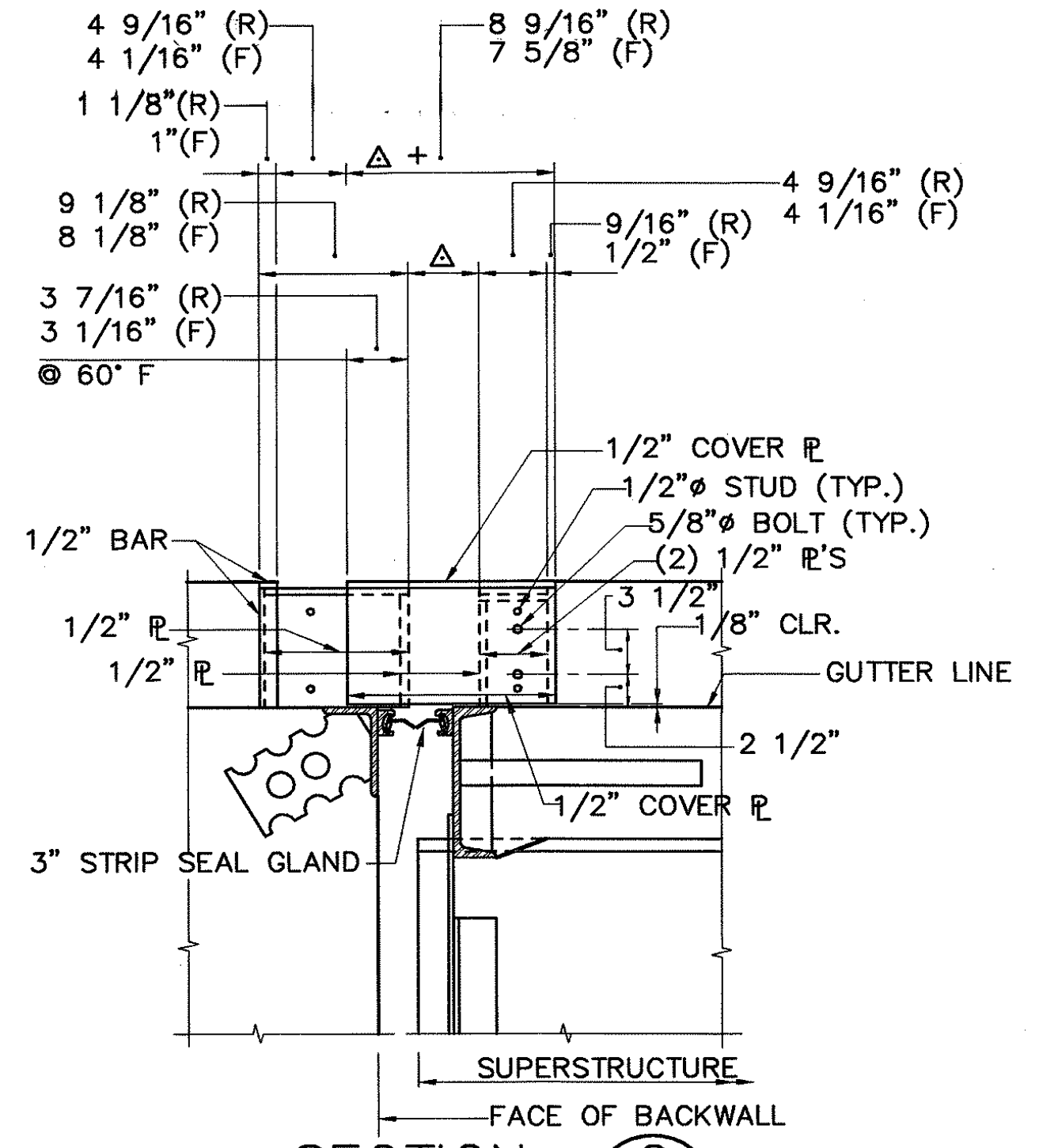
SECTION B  
(REAR ABUT. SHOWN)  
(FRWD. ABUT. OPPOSITE HAND)



SECTION E



SECTION D



SECTION C  
(REAR ABUT. SHOWN)  
(FRWD. ABUT. OPPOSITE HAND)

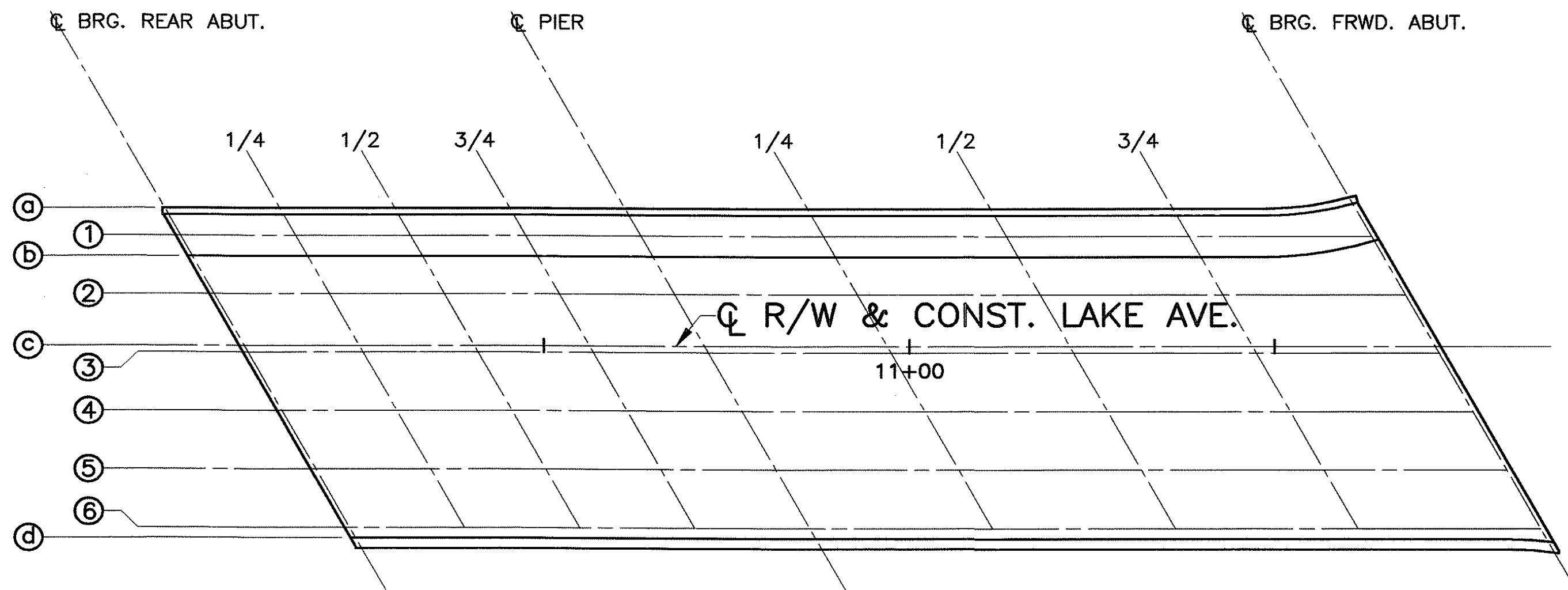
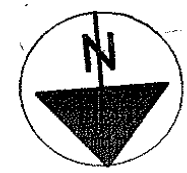
JOINT INSTALLATION TABLE		
AMBIENT TEMPERATURE AT JOINT INSTALLATION (F)	DIMENSION "A"	
	REAR ABUT.	FRWD. ABUT.
90°	1 5/8"	1 9/16"
80°	1 11/16"	1 5/8"
70°	1 11/16"	1 11/16"
60°	1 3/4"	1 3/4"
50°	1 13/16"	1 13/16"
40°	1 13/16"	1 7/8"
30°	1 7/8"	1 15/16"

- LEGEND**
- - THIS DIMENSION IS THE SUM OF (2xSTEEL RETAINER WIDTH) AND (DIM."A")
  - Δ - THIS DIMENSION IS  $\frac{\square}{\cos. 28.5^\circ}$  (REAR ABUT.)  
 $\frac{\square}{\cos. 11.8^\circ}$  (FRWD. ABUT.)

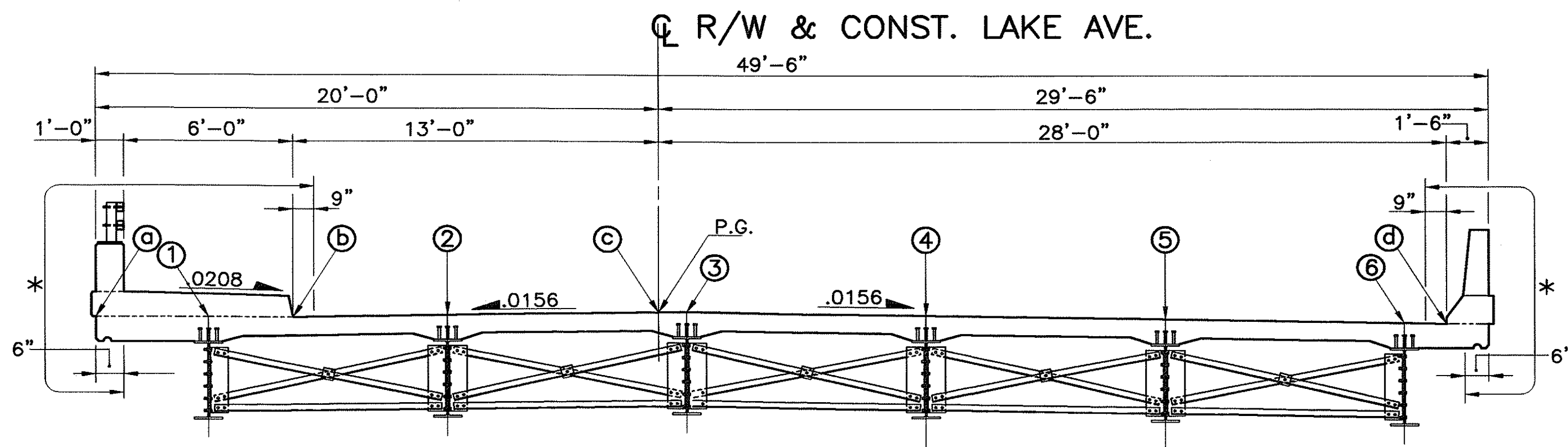
**NOTES:**  
1. FOR ADDITIONAL EXPANSION JOINT DETAILS, SEE STD. DWG. NO. EXJ - 4 - 87.

Code: H:\99029\B\DWG\99029EXP.DWG  
Date: 11-21-00 Time: 2:30 PM User: JWB  
Technician: FUE





SCREED ELEVATIONS

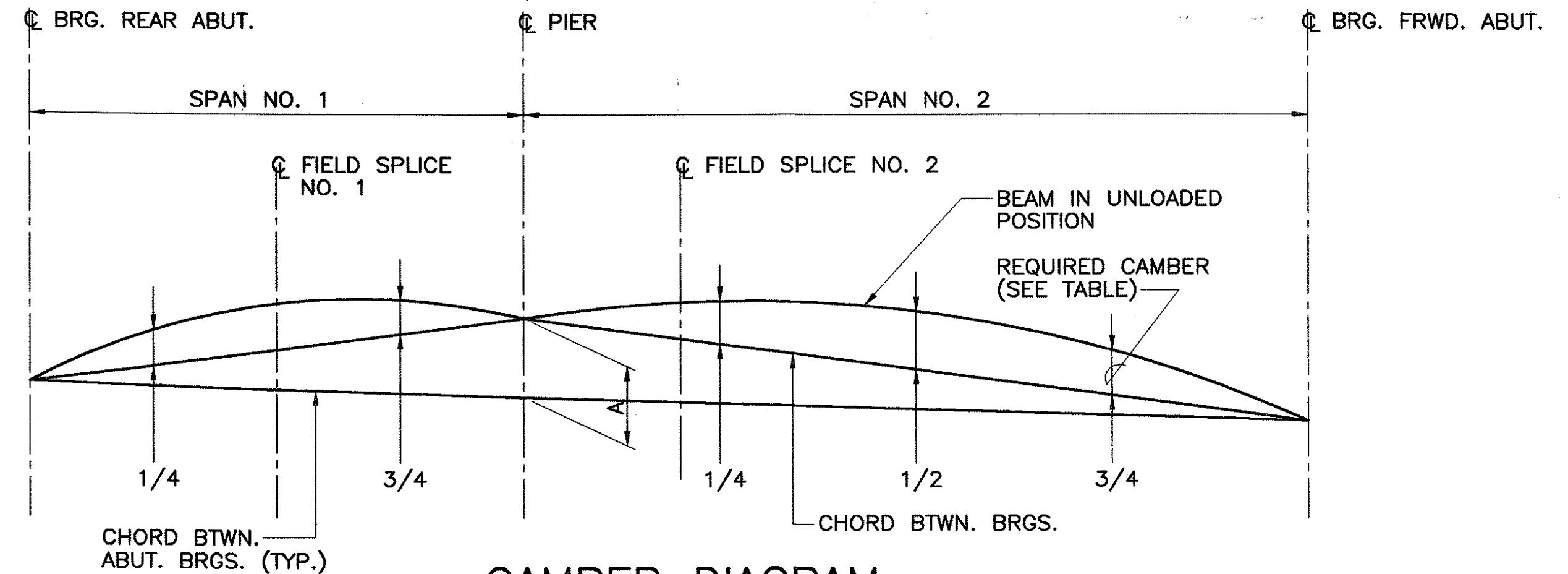


TRANSVERSE SECTION

DECK SCREED ELEVATION TABLE											
LOCATION	SPAN No. 1						SPAN No. 2				
	REAR ABUT.	1/4	SPLICE	1/2	3/4	CL PIER	SPLICE	1/4	1/2	3/4	FRWD. ABUT.
Ⓐ	938.82	939.04	—	939.24	939.39	939.51	—	939.71	939.69	939.31	939.52
Ⓑ	938.85	939.07	939.27	939.27	939.41	939.52	939.67	939.70	939.67	939.27	939.48
Ⓒ	938.87	939.10	—	939.29	939.42	939.52	—	939.69	939.66	939.25	938.47
Ⓓ	939.00	939.23	939.41	939.41	939.52	939.62	939.73	939.75	939.67	939.25	938.50
Ⓔ	939.18	939.40	—	939.56	939.66	939.74	—	939.84	939.74	939.29	938.51
Ⓕ	939.17	939.39	939.55	939.55	939.65	939.72	939.81	939.82	939.72	939.27	938.48
Ⓖ	939.10	939.32	939.46	939.46	939.54	939.59	939.66	939.66	939.53	939.05	938.23
Ⓗ	939.04	939.24	939.36	939.36	939.42	939.45	939.49	939.49	939.33	938.82	937.97
Ⓘ	938.97	939.15	939.25	939.26	939.30	939.31	939.32	939.31	939.11	938.57	937.71
Ⓚ	938.96	939.14	—	939.24	939.28	939.28	—	939.28	939.07	938.53	937.65

NOTE:

SCREED ELEVATIONS SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR ANTICIPATED CALCULATED DEAD LOAD DEFLECTIONS.



CAMBER DIAGRAM

VERTICAL OFFSET TABLE

LOCATION	"A"
B-1	9 3/4"
B-2	9 11/16"
B-3	9 13/16"
B-4	9 7/8"
B-5,6	9 15/16"

DEFLECTION AND CAMBER TABLE

BM. B-1	SPAN NO.1			SPAN NO.2		
	1/4	SPLICE	3/4	SPLICE	1/4	3/4
LOCATION OF POINTS	1/4	SPLICE	3/4	SPLICE	1/4	3/4
DEFLECTION DUE TO WEIGHT OF STEEL	0"	0"	-1/16"	5/16"	3/8"	9/16"
DEFLECTION DUE TO REMAINING DEAD LOAD	-1/16"	-1/4"	-5/16"	1 3/4"	2 1/4"	3 1/8"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	3/4"	1 1/4"	1"	2 5/8"	3 1/16"	3 1/4"
REQUIRED SHOP CAMBER	11/16"	1"	10/16"	4 11/16"	5 11/16"	6 15/16"

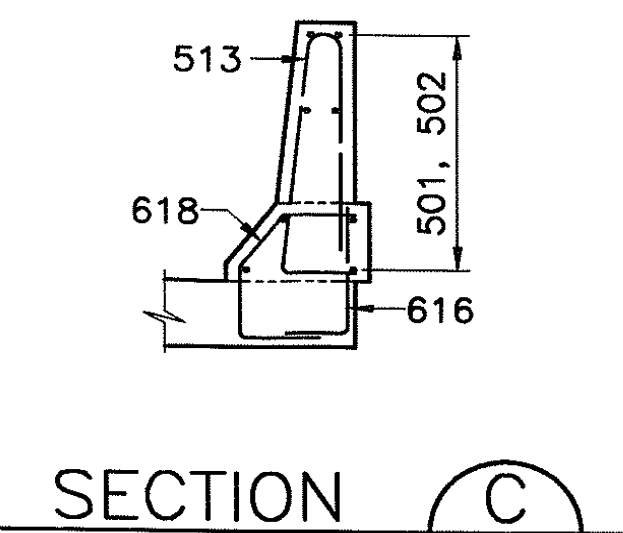
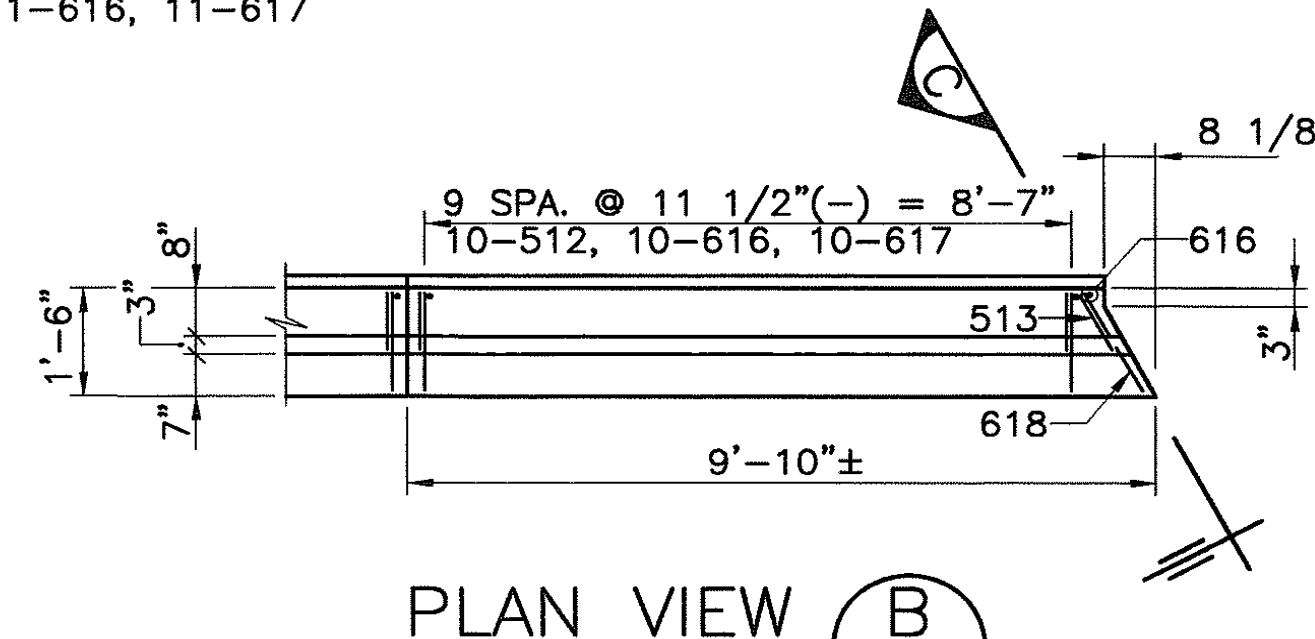
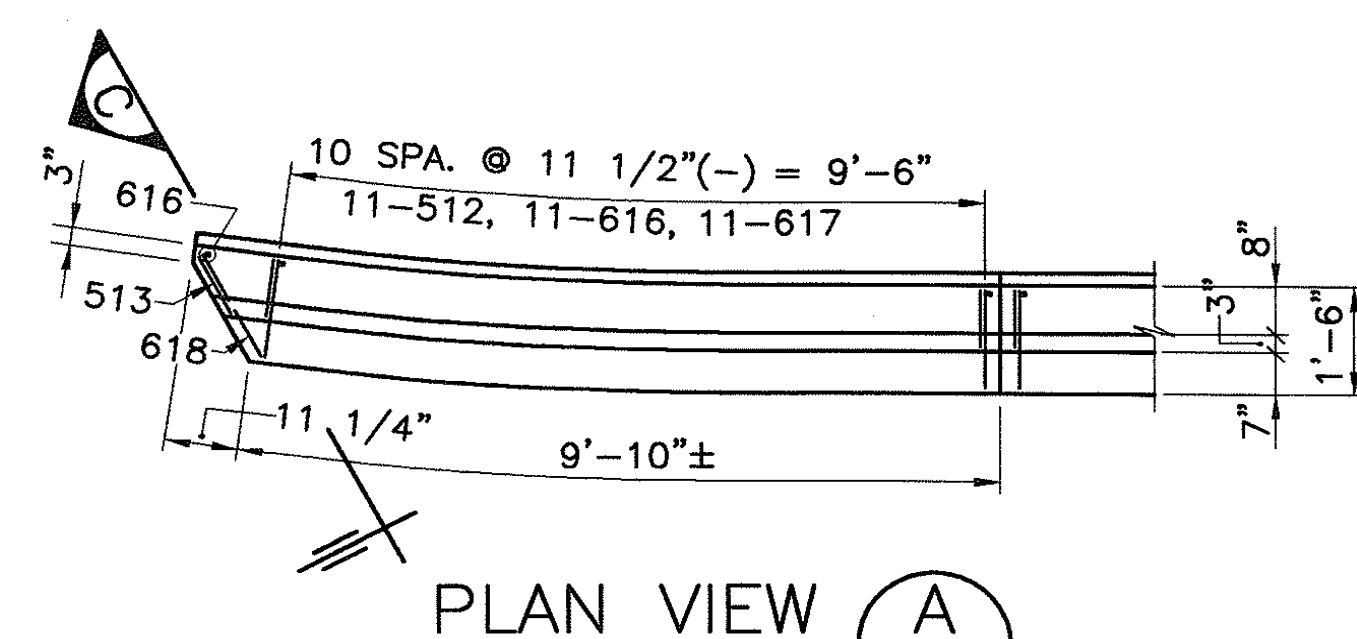
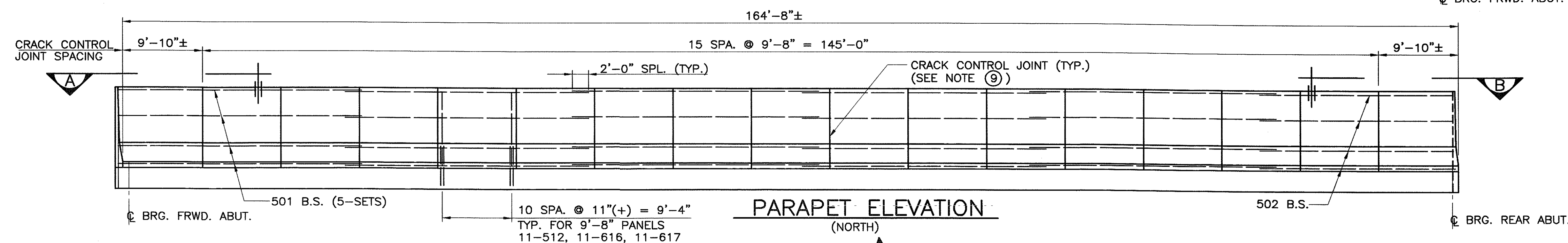
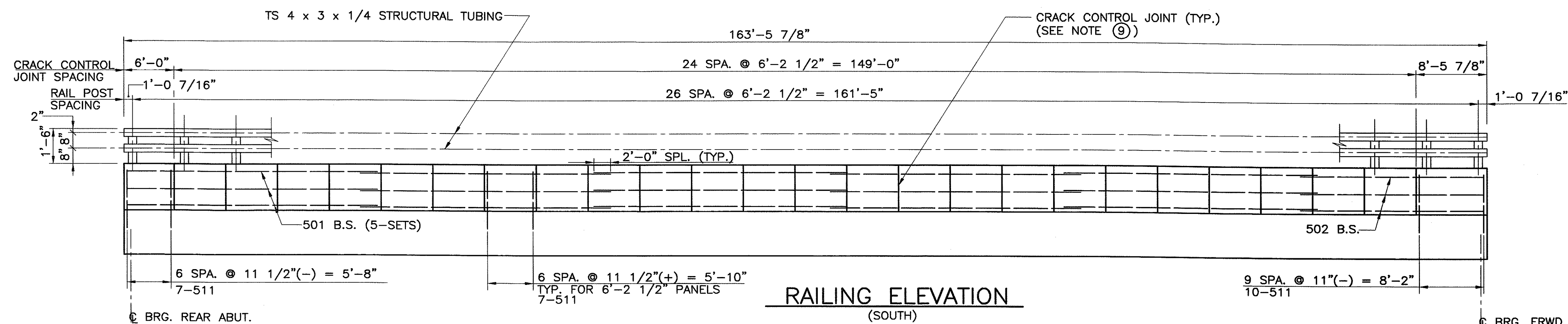
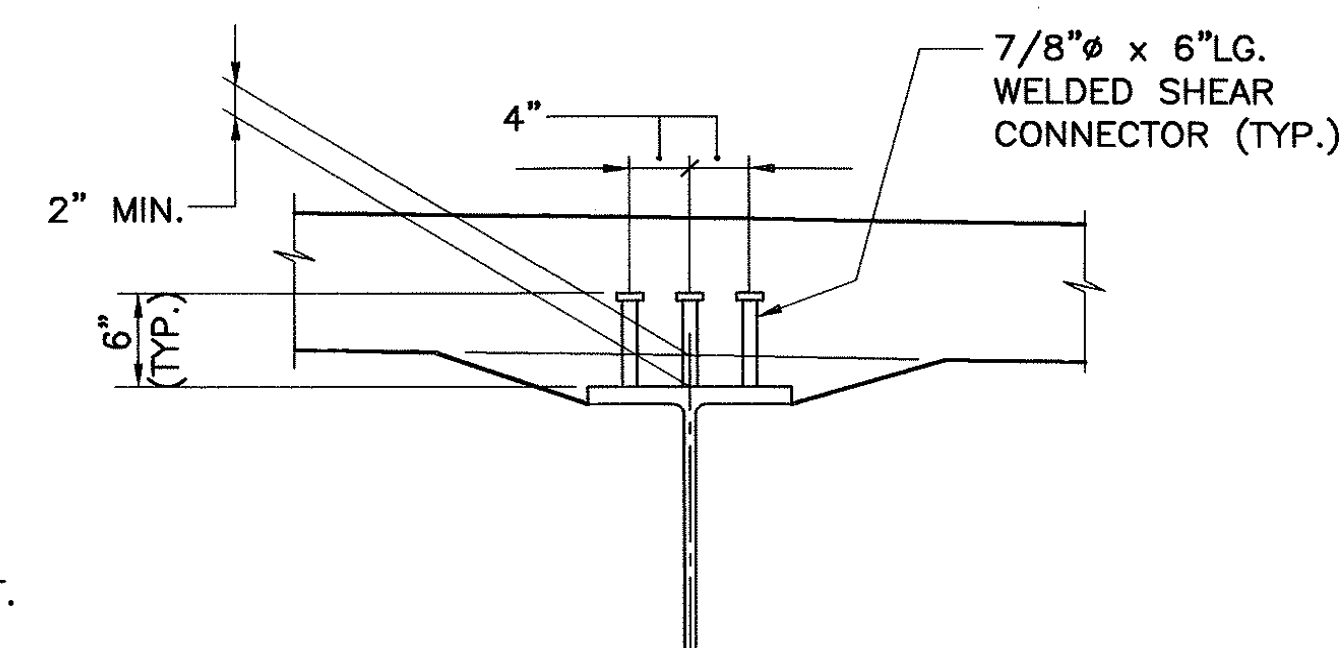
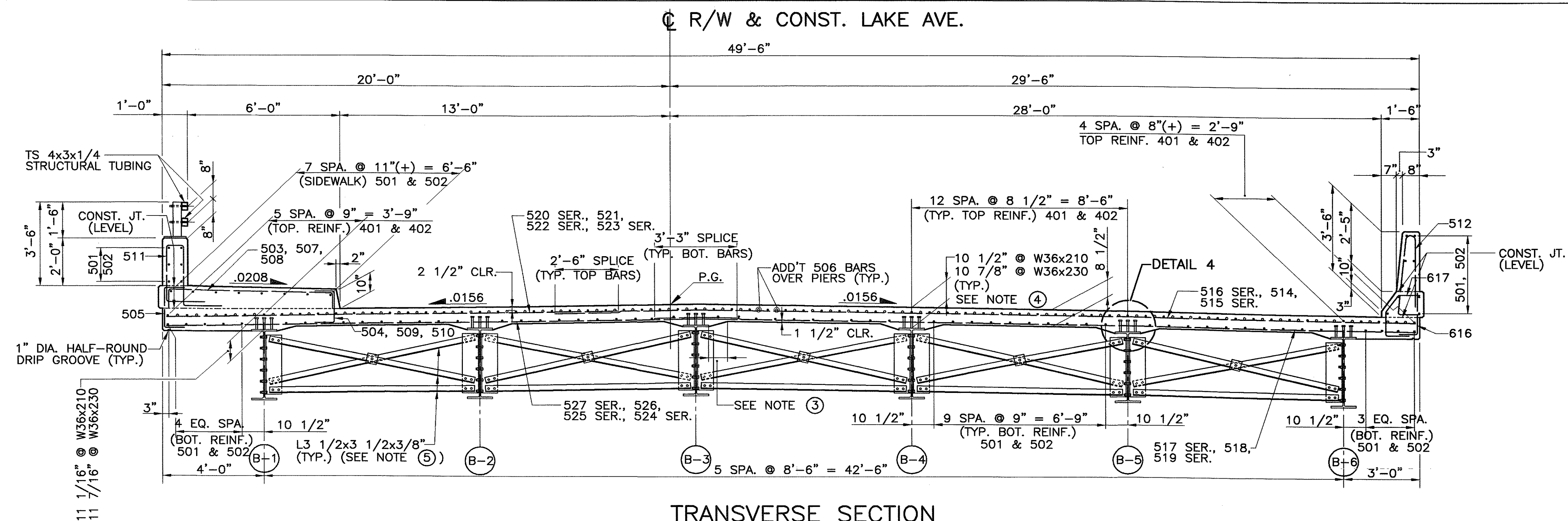
BM. B-2, B-3, B-4, B-5	SPAN NO.1			SPAN NO.2			
LOCATION OF POINTS	1/4	SPLICE	3/4	SPLICE	1/4	1/2	3/4
DEFLECTION DUE TO WEIGHT OF STEEL	0"	0"	-1/16"	5/16"	3/8"	11/16"	9/16"
DEFLECTION DUE TO REMAINING DEAD LOAD	-1/16"	-1/4"	-5/16"	1 9/16"	2"	3 1/2"	2 3/4"
ADJUSTMENT REQUIRED FOR VERTICAL CURVE	1 1/16"	1 1/2"	1 1/8"	2 1/2"	2 15/16"	3 15/16"	2 15/16"
REQUIRED SHOP CAMBER	1"	1 1/4"	3/4"	4 3/8"	5 5/16"	8 1/8"	6 1/4"

BM. B-6	SPAN NO.1			SPAN NO.2				
	1/4	SPLICE	3/4	SPLICE	1/4	1/2	3/4	
	DEFLECTION DUE TO WEIGHT OF STEEL	0"	0"	-1/16"	5/16"	3/8"	11/16"	9/16"
	DEFLECTION DUE TO REMAINING DEAD LOAD	-1/16"	-3/16"	-5/16"	1 7/16"	1 7/8"	3 1/4"	2 9/16"
	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	1 3/16"	1 9/16"	1 3/16"	2 1/2"	2 15/16"	3 15/16"	2 15/16"
	REQUIRED SHOP CAMBER	1 1/8"	1 3/8"	13/16"	4 1/4"	5 3/16"	7 7/8"	6 1/16"



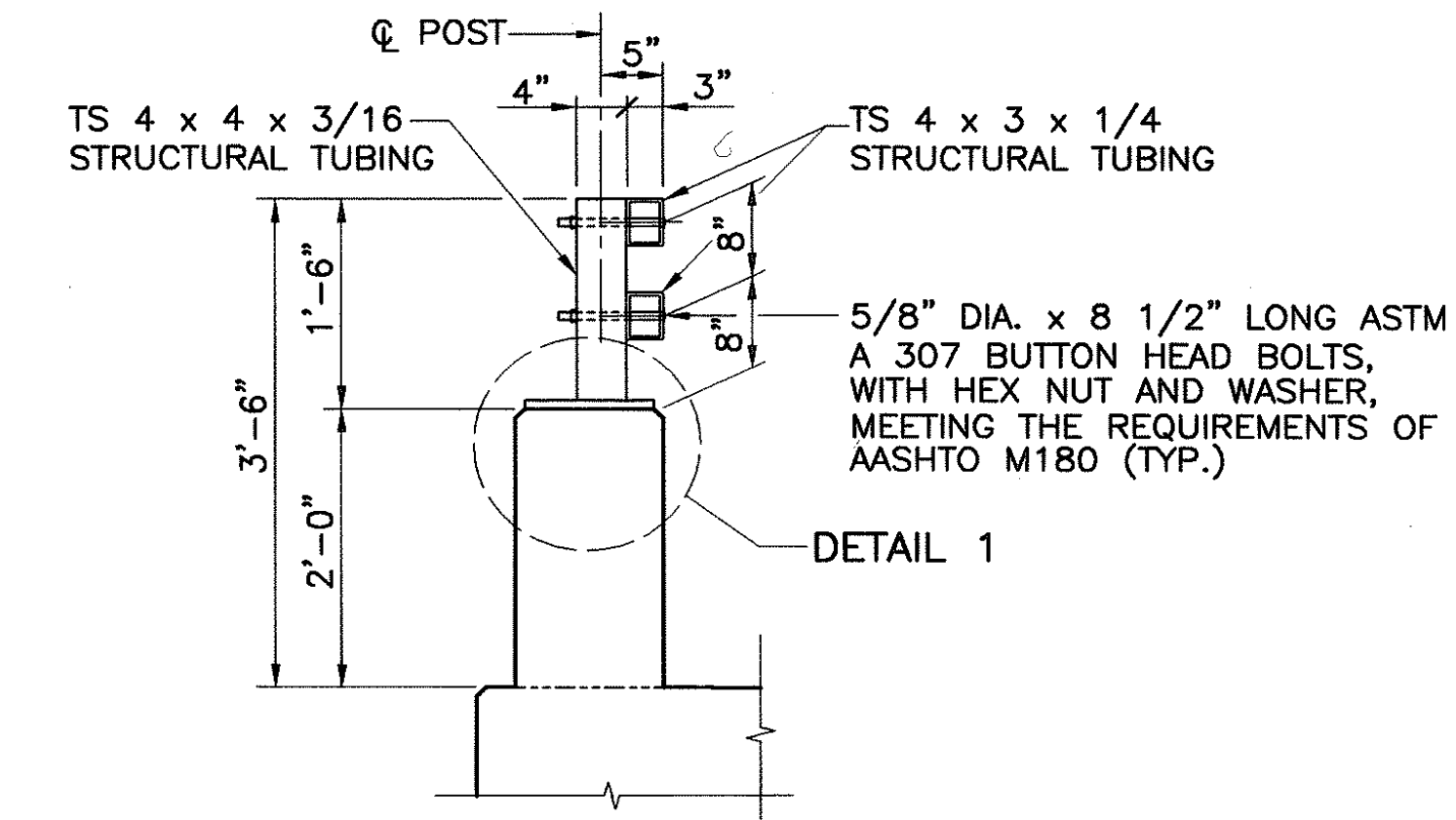




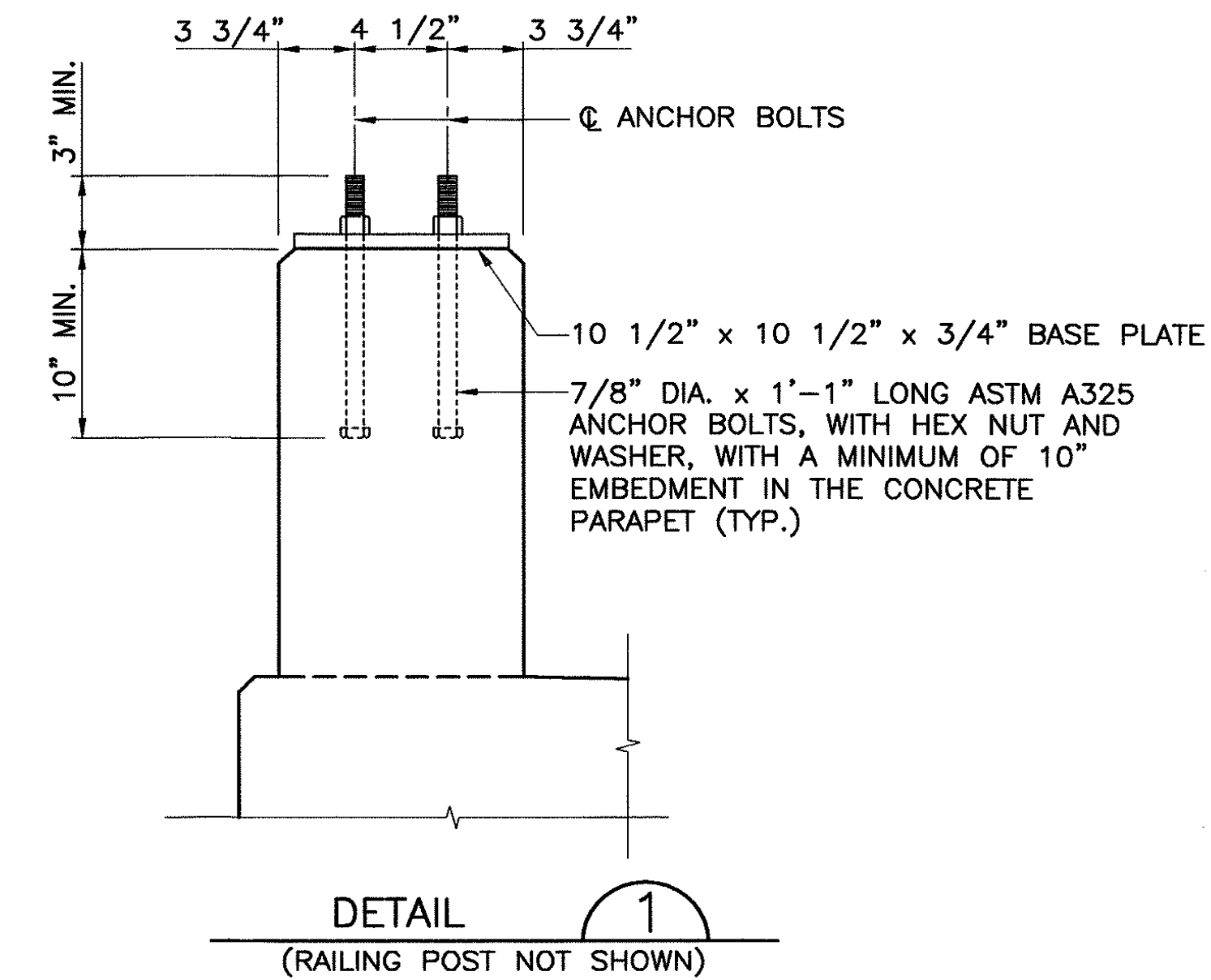


- NOTES:**
1. PREFIX "S" WILL BE ADDED TO ALL REBAR MARKS SHOWN FOR DECK SLAB, PARAPET, AND RAILING. SEE REINFORCING SCHEDULE.
  2. ALL REINFORCING STEEL FOR DECK SLAB, PARAPET, AND RAILING SHALL BE EPOXY COATED.
  3. A HAUNCH WIDTH OF 9 INCHES SHALL BE USED. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6 INCHES AND 12 INCHES.
  4. DECK SLAB DEPTH FOR CONCRETE QUANTITY: THE DIMENSION SHOWN FROM THE TOP OF THE CONCRETE DECK TO THE TOP OF THE FLANGE, MINUS THE DESIGN HAUNCH THICKNESS OF 2 INCHES, HAS BEEN USED FOR COMPUTING THE DECK CONCRETE QUANTITIES. CONCRETE REQUIRED TO FILL THE HAUNCHES, INCLUDING ADDITIONAL OR LESS MATERIAL REQUIRED DUE TO HAUNCH CONSTRUCTION TOLERANCES, SHALL BE CONSIDERED AS INCIDENTAL AND WILL NOT BE INCLUDED IN THE QUANTITY CALCULATIONS FOR PAYMENT.
  5. FOR ADDITIONAL CROSSFRAME DETAILS, SEE STD. DRWG. NO. GSD-1-96.
  6. FOR SCREED ELEVATIONS, SEE SHT. NO. 15/20 .
  7. QUANTITIES OF CONCRETE AND REINFORCING FOR PARAPET ARE INCLUDED WITH ITEM 517, RAILING (DEFLECTOR PARAPET TYPE) FOR PAYMENT.
  8. QUANTITIES OF CONCRETE AND REINFORCING FOR RAILING ARE INCLUDED WITH ITEM 517, RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING) FOR PAYMENT.
  9. FOR "CONCRETE PARAPET" NOTE, SEE SHT. NO. 13/20 .
  10. FOR RAILING DETAILS, SEE SHT. NO. 18/20 .





TYPICAL SECTION  
RAILING



NOTES

1. FOR SUPERSTRUCTURE RAILING ELEVATION, SEE SHT. NO. [17/20] .
2. FOR WINGWALL RAILING ELEVATIONS, SEE SHT. NOS. [8/20] & [10/20].
3. FOR ADDITIONAL RAILING DETAILS, SEE STD. DRWG. NO. BR-2-98.

DESIGN AGENCY CLAUS PYLE SCHOMER BURNS & DEHAVEN, INC. 300 S. 72nd St., Suite 440 Milwaukee, WI 53210 Tel: 414/383-7210 Fax: 414/383-7210	DATE 6-29-00	STRUCTURE FILE NUMBER
DRAWN R.P.R.	REVIEWED K.S.J.	DESIGNED B.J.M.
CHECKED P.J.W.	REVISED	
STA-LAKE AVE.		
RAILING DETAILS BRIDGE NO. PE - 6 - 17 LAKE AVE. OVER TUSCARAWAS RIVER		
18 / 20		
53 64		



SLAB

MARK	NO.	LENGTH	WEIGHT (LB)	TYPE	DIMENSIONS			SERIES INC.
					A	B	C	
S401	350	30' 0"	7,014	ST				
S402	70	22' 0"	1,029	ST				
S403	1	4' 11"	3	ST				
S404	1	1' 3"	1	ST				
S501	405	30' 0"	12,672	ST				
S502	81	24' 1"	2,035	ST				
S503	114	7' 9"	921	103	6' 8"	0' 8"		
S504	114	2' 7"	307	103	1' 2"	0' 10"		
S505	116	3' 1"	373	103	1' 8"	0' 10"		
S506	69	40' 0"	2,879	ST				
S507	1	5' 9"	6	103	4' 8"	0' 8"		
S508	1	3' 1"	3	103	2' 0"	0' 8"		
S509	1	2' 9"	3	103	1' 4"	0' 10"		
S510	1	2' 11"	3	103	1' 6"	0' 10"		
S511	185	8' 2"	1,576	143				
S512	186	7' 1"	1,374	132				
S513	2	7' 2"	15	133				
S514	350	33' 10"	12,351	ST				
S515S	1 SER OF 40	3' 9" TO 33' 8"	781	ST				0' 9 1/4"
S516S	1 SER OF 39	3' 9" TO 33' 0"	747	ST				0' 9 1/4"
S517S	1 SER OF 33	4' 6" TO 29' 1"	578	ST				0' 9 1/4"
S518	355	30' 0"	11,108	ST				
S519S	1 SER OF 35	3' 9" TO 29' 10"	613	ST				0' 9 1/4"
S520S	1 SER OF 24	0' 9" TO 18' 4"	239	ST				0' 9 1/8"
S521	343	17' 10"	6,380	ST				
S522S	1 SER OF 25	17' 11" TO 19' 9"	491	ST				0' 7/8"
S523S	1 SER OF 21	3' 2" TO 18' 6"	237	ST				0' 9 1/4"
S524S	1 SER OF 26	3' 11" TO 23' 1"	366	ST				0' 9 1/4"
S525S	1 SER OF 25	22' 6" TO 24' 4"	611	ST				0' 7/8"
S526	337	22' 6"	7,909	ST				
S527S	1 SER OF 30	0' 9" TO 23' 0"	372	ST				0' 9 1/4"
S528	10	3' 3"	34	ST				
S529	1	4' 11"	5	ST				
S530	1	1' 3"	1	ST				
S616	188	2' 6"	706	102	1' 9"	0' 11"		
S617	186	3' 2"	885	112	1' 0"	0' 6"	0' 9"	
S618	2	3' 3"	10	112	1' 0"	0' 7"	0' 9"	

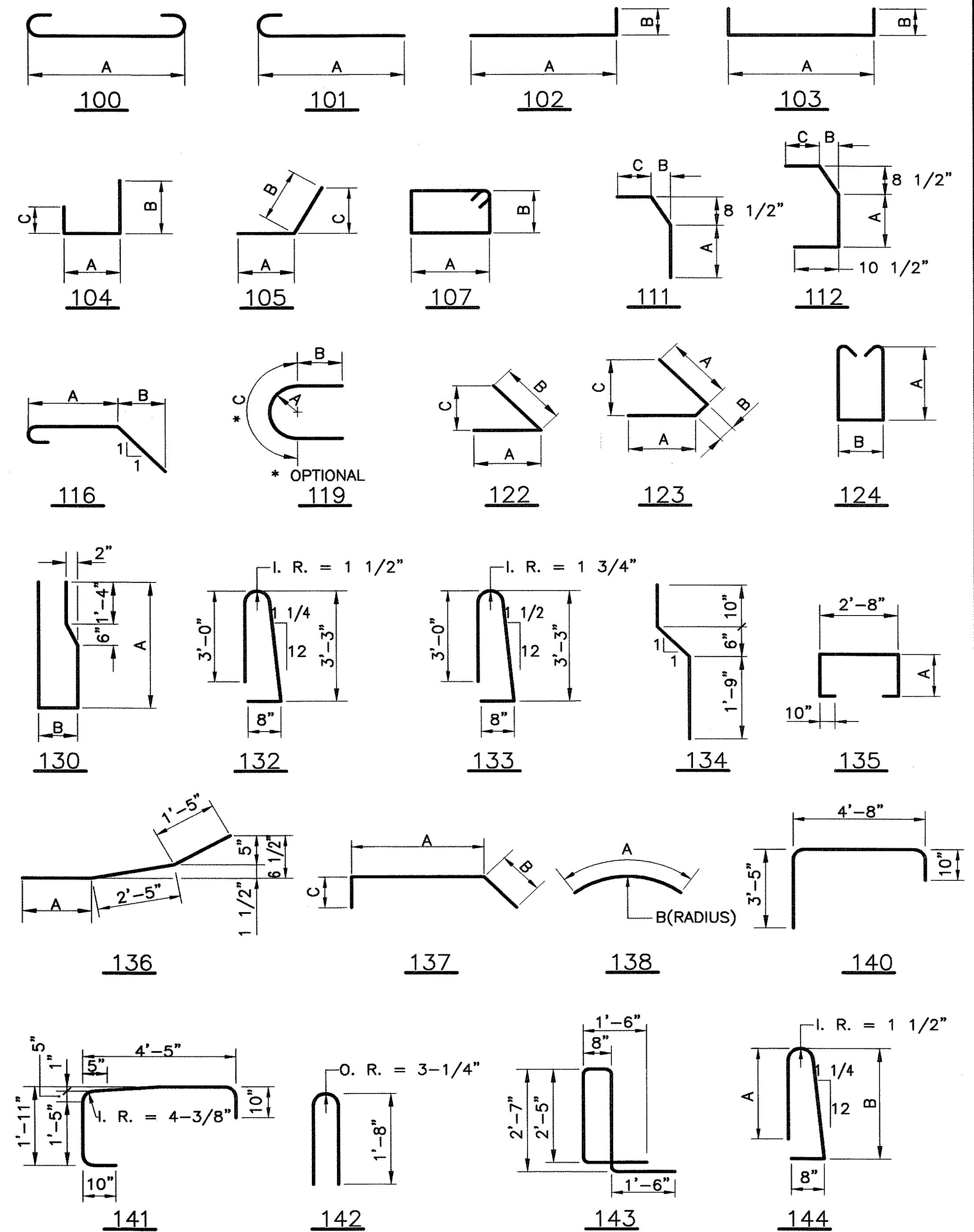
PIER

MARK	NO.	LENGTH	WEIGHT (LB)	TYPE	DIMENSIONS			SERIES INC.
					A	B	C	
P501	12	27' 9"	347	ST				
P502	4	30' 2"	126	102	27' 9"	2' 7"		
P503	28	9' 5"	275	135	2' 9 1/2"			
P504	26	9' 9"	264	135	2' 11 1/2"			
P505	6	9' 11"	62	135	3' 0 1/2"			
P506	15	9' 2"	143	135	2' 8"			
P507	64	26' 3"	1,752	ST				
P508	448	3' 9"	1,752	103	2' 2"	0' 11"		
P509	32	7' 5"	248	119	1' 1"	2' 0"	3' 4 7/8"	
P510	32	2' 9"	92	122	1' 6"	1' 6"	0' 10"	
P511	4	30' 4"	127	102	27' 9"	2' 8 1/2"		
P701	164	6' 9"	2,263	102	5' 9"	1' 2"		
P702	164	16' 10"	5,642	ST				
P801	66	9' 4"	1,645	100	7' 6"			
P802	16	31' 2"	1,332	101	30' 3"			

SUMMARY AND GRAND TOTAL OF BAR WEIGHTS

ABUTMENTS	37,509
PIER	16,070
SLAB	74,638
GRAND TOTAL	128,217

STANDARD BAR TYPES

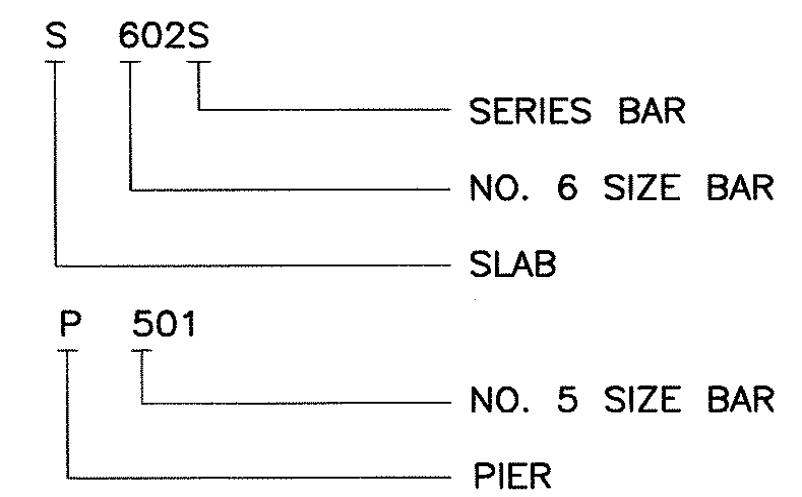


REINFORCING STEEL NOTES:

BAR DIMENSIONS ARE OUT TO OUT UNLESS NOTED OTHERWISE.  
WHEN NO BAR LEG DIMENSIONS ARE SHOWN, IT INDICATES  
STANDARD BEND.  
ALL BARS ARE EPOXY COATED.  
I.R. DENOTES INSIDE RADIUS

BAR SIZE AND LOCATION ARE INDICATED IN THE BAR MARK.  
THE FIRST ALPHABETICAL LETTER INDICATES LOCATION.  
THE NEXT DIGIT OF THE THREE DIGIT SERIES INDICATES  
BAR SIZE NUMBER.

EXAMPLES:





Cad File: H:\99029\B\DWG\99029REBAR2.DWG  
Date: 11-21-00 Time: 3:01 PM TW = 0d0'0.00"

Technician: FUE

ABUTMENTS

MARK	NUMBER			LENGTH	WEIGHT (LB)	TYPE	DIMENSIONS			SERIES INC.
	REAR	FRWD	TOTAL				A	B	C	
A501	46		46	8' 7"	412	103	5' 4"	1' 9"		
A502	70		70	8' 0"	584	103	3' 5"	2' 5"		
A503	7		7	11' 8"	85	107	3' 0"	2' 7"		
A504	37	22	59	29' 0"	1,785	ST				
A505	14		14	3' 11"	57	105	2' 0"	2' 0"	1' 9"	
A506	4		4	4' 4"	18	123	2' 0"	0' 6"	2' 0"	
A507	2		2	9' 3"	19	105	7' 4"	2' 0"	1' 11"	
A508	4		4	4' 0"	17	123	2' 0"	0' 2"	1' 9"	
A509	7		7	5' 0"	37	ST				
A513	10		10	16' 2"	169	ST				
A515	4		4	17' 10"	74	ST				
A516	4		4	18' 6"	77	ST				
A517	4		4	16' 2"	67	ST				
A518	4		4	16' 5"	69	ST				
A519	4		4	15' 11"	66	ST				
A522	4		4	14' 5"	60	ST				
A523	4		4	13' 9"	57	ST				
A524	1		1	23' 5"	24	ST				
A525	1		1	7' 4"	8	ST				
A526	1		1	6' 11"	7	ST				
A527	8		8	11' 8"	97	107	3' 0"	2' 7"		
A528		70	70	6' 1"	444	104	3' 5"	1' 7"	1' 4"	
A530	2		2	13' 8"	29	ST				
A531	4		4	10' 5"	44	ST				
A532S	1 SER OF 12		SER TO OF 12	3' 0" 10' 10"	43	101	2' 5" TO 3' 3"			0' 0 7/8"
A533	1	1	2	7' 2"	15	133				
A534	2		2	14' 5"	30	ST				
A535	2		2	5' 8"	12	136	1' 10"			
A536	2		2	5' 8"	12	ST				
A537		10	10	10' 11"	114	ST				
A538		6	6	11' 2"	70	ST				
A539		7	7	11' 5"	83	ST				
A540		19	19	11' 8"	231	ST				
A541		8	8	31' 0"	259	ST				
A542		14	14	32' 0"	467	ST				
A543		8	8	6' 5"	54	ST				
A544		13	13	4' 0"	54	105	2' 0"	2' 0"	1' 7"	
A545		8	8	5' 0"	42	ST				
A546		14	14	4' 7"	67	123	2' 0"	0' 9"	2' 2"	
A547		1	1	7' 8"	8	105	5' 9"	2' 0"	1' 11"	
A548		1	1	8' 6"	9	105	6' 7"	2' 0"	1' 11"	
A549		1	1	5' 9"	6	ST				
A550		1	1	6' 1"	6	ST				
A551		8	8	30' 0"	250	ST				
A552		3	3	30' 2"	94	ST				
A553		4	4	31' 11"	133	ST				
A554		1	1	28' 6"	30	ST				
A555		2	2	11' 7"	24	ST				
A556S	1 SER OF 6	1 SER OF 6		14' 5" TO 14' 9"	91	ST				0' 0 3/4"
A557S	1 SER OF 4	1 SER OF 4		16' 9" TO 17' 0"	70	ST				0' 1"
A558		4	4	7' 0"	29	ST				
A559		14	14	14' 3"	208	ST				
A560		2	2	8' 7"	18	ST				
A561		7	7	19' 3"	141	ST				
A562		4	4	19' 8"	82	ST				
A563		3	3	19' 6"	61	ST				
A567S	1 SER OF 7	1 SER OF 7		14' 9" TO 15' 1"	109	ST				0' 0 5/8"
A568S	1 SER OF 7	1 SER OF 7		12' 6" TO 12' 11"	93	ST				0' 0 7/8"
A569S	1 SER OF 6	1 SER OF 6		10' 4" TO 10' 11"	66	ST				0' 1 3/8"
A570		4	4	11' 1"	46	ST				
A571		2	2	21' 1"	44	ST				

ABUTMENTS

MARK	NUMBER			LENGTH	WEIGHT (LB)	TYPE	DIMENSIONS			SERIES INC.
	REAR	FRWD	TOTAL				A	B	C	
A572		12	12	37' 11"	475	ST				
A575		9	9	35' 9"	336	ST				
A576		4	4	37' 5"	156	ST				
A577		2	2	27' 0"	56	ST				
A578		1	1	36' 7"	38	ST				
A580		2	2	12' 0"	25	ST				
A581	2		2	7' 6"	16	141				
A582	2		2	8' 8"	18	140				
A583	5		5	3' 7"	19	142				
A584		2	2	19' 0"	40	ST				
A585		30	30	7' 1"	222	132				
A586S	1 SER OF 6	1 SER OF 6		5' 2" TO 6' 6"	37	144	2' 2" TO 2' 10"	2' 5" TO 3' 1"		0' 1 5/8"
A601	46		46	15' 3"	1,054	104	5' 4"	7' 6"	2' 9"	
A602	48		48	8' 4"	601	102	7' 6"	1' 0"		
A603	2		2	6' 0"	18	105	3' 0"	3' 0"	2' 8"	
A604	2		2	7' 9"	23	123	3' 0"	1' 11"	3' 6"	
A605	7		7	25' 5"	267	104	1' 2"	12' 6"	12' 0"	
A606	6		6	24' 6"	221	103	1' 2"	11' 10"		
A607	1		1	12' 8"	19	102	11' 10"	1' 0"		
A608	2		2	8' 6"	26	102	7' 8"	1' 0"		
A609	2		2	4' 4"	13	ST				
A610	6		6	13' 5"	121	103	1' 5"	6' 2"		
A611	6		6	5' 1"	46	103	0' 11"	2' 3"		
A612	54		54	5' 11"	480	103	1' 5"	2' 5"		
A613	48		48	10' 5"	751	103	1' 5"	4' 8"		
A614	48		48	6' 5"	463	103	0' 11"	2' 11"		
A615	2		2	11' 0"	33	102	10' 2"	1' 0"		
A616	12	20	32	7' 0"	336	124	2' 8"	0' 8"		
A617	17	20	37	3' 3"	181	134				
A620	6		6	19' 5"	175	104	1' 2"	9' 6"	9' 0"	
A623	6		6	18' 4"	165	103	1' 2"	8' 9"		
A624		86	86	11' 0"	1,421	ST				
A625		51	51	9' 7"	734	104	0' 11"	6' 0"	3' 0"	
A626S	1 SER OF 33	1 SER OF 33		9' 4" TO 10' 3"	485	137	4' 2" TO 5' 1"	4' 0"	1' 5"	0' 0 3/8"
A627	18		18	10' 3"	277	137	5' 1"	4' 0"	1' 5"	
A628	5		5	9' 8"	73	104	0' 11"	6' 11"	2' 2"	
A629	5		5	11' 10"	89	137	6' 8"	4' 0"	1' 5"	
A630	1	37	38	2' 10"	162	ST				
A631	18		18	4' 6"	122	ST				
A632	13	1	14	3' 8"	77	111	2' 3"	0' 6"	0' 8"	
A633		2	2	9' 11"	30	123	3' 0"	4' 1"	6' 11"	
A634		2	2	4' 6"	14	ST				
A635		86	86	6' 8"	861	102	5' 10"	1' 0"		
A636		2	2	6' 0"	18	105	3' 0"	3' 0"	2' 6"	
A637		1	1	10' 0"	15	104	1' 2"	4' 10"	4' 4"	
A638		1	1	8' 6"	13	104	1' 2"	4' 1"	3' 7"	
A639		3	3	7' 6"	34	104	1' 2"	3' 7"	3' 1"	
A640S	1 SER OF 6	1 SER OF 6		19' 10" TO 20' 4"	181	103	1' 2"	9' 6" TO 9' 9"		0' 0 5/8"
A643		29	29	6' 8"	290	102	5' 10"	1' 0"		
A644S	1 SER OF 15	1 SER OF 15		12' 7" TO 13' 3"	291	ST				0' 0 5/8"
A645S	1 SER OF 14	1 SER OF 14		10' 3" TO 10' 10"	222	ST				0' 0 1/2"
A647	6	6	12	6' 3"	113	103	1' 11"	2' 4"		
A648	12	12	24	3' 11"	141	102	1' 9"	2' 4"		
A649	5		5	8' 8"	65	124	3' 6"	0' 8"		
A701		27	27	7' 8"	423	102	6' 8"	1' 2"		
A702S	1 SER OF 12	1 SER OF 12		14' 2" TO 14' 6"	352	ST				0' 0 3/8"
A703S	1 SER OF 4	1 SER OF 4		16' 6" TO 16' 8"	136	ST				0' 0 5/8"
A704S	1 SER OF 11	1 SER OF 11		15' 0" TO 15' 4"	341	ST				0' 0 3/8"
A801	6		6	30' 0"	481	ST				

ABUTMENTS

MARK	NUMBER			LENGTH	WEIGHT (LB)	TYPE	DIMENSIONS			SERIES INC.
	REAR	FRWD	TOTAL				A	B	C	
A802	2		2	12' 6"	67	ST				
A803	2		2	12' 3"	65	ST				
A804	2		2	12' 0"	65	ST				
A805	4		4	30' 0"	321	ST				
A806	2		2	32' 0"	171	ST				
A807	29		29	4' 11"	381	116	2' 8"	1' 0"		
A808		18	18	35' 0"	1,682	ST				
A809S		1 SER OF 9	1 SER OF 9	34' 1" TO 39' 2"	880	ST				0' 7 5/8"
A810S		1 SER OF 9	1 SER OF 9	32' 7" TO 37' 8"	844	ST				0' 7 5/8"
A811		1	1	16' 6"	44	138	16' 6"	40' 3"		
A812S		1 SER OF 9	1 SER OF 9	12' 9" TO 13' 9"	318	138	12' 9" TO 13' 9"	41' 4" TO 49' 9"		0' 1 1/2"
A813		10	10	10' 11"	291	105	5' 6"	5' 6"	4' 0"	
A814S		1 SER OF 10	1 SER OF 10	7' 1" TO 8' 11"	214	138	7' 1" TO 8' 11"	40' 3" TO 49' 9"		0' 2 1/2"
A815		1	1	9' 10"	26	138	9' 10"	40' 3"		
A816	3		3	11' 3"	90	ST				
A817	3		3	10' 6"	84	ST				
A818S		1 SER OF 6	1 SER OF 6	9' 1" TO 10' 5"	156	138	9' 1" TO 10' 5"	46' 9" TO 53' 3"		0' 3 1/4"
A819S		1 SER OF 6	1 SER OF 6	11' 9" TO 13' 1"	199	138	11' 9" TO 13' 1"	46' 9" TO 53' 3"		0' 3 1/4"
A820S		1 SER OF 8	1 SER OF 8	9' 0" TO 10' 8"	210	138	9' 0" TO 10' 8"	46' 3" TO 54' 3"		0' 2 7/8"
A821		14	14	9' 6"	355	105	4' 0"	5' 6"	4' 0"	
A822		1	1	11' 8"	31	138	11' 8"	46' 3"		
A823		1	1	13' 3"	35	138	13' 3"	54' 3"		
A824S		1 SER OF 6	1 SER OF 6	13' 7" TO 14' 6"	225	138	13' 7" TO 14' 6"	48' 5" TO 52' 1"		0' 2 1/4"
A825		2	2	11' 2"	60	138	11' 2"	45' 9"		
A826S		1 SER OF 9	1 SER OF 9	7' 5" TO 14' 4"	261	138	7' 5" TO 14' 4"	47' 11" TO 55' 3"		0' 10 3/8"
A827		1	1	14' 4"	38	138	14' 4"	55' 3"		
A828S		1 SER OF 8	1 SER OF 8	9' 0" TO 14' 0"	246	138	9' 0" TO 14' 0"	47' 11" TO 53' 1"		0' 8 5/8"
A829		32	32	5' 2"	441	116	2' 11"	1' 0"		
A901		138	138	10' 6"	4,927	100	8' 0"			
A902		40	40	12' 0"	1,632	100	9' 6"			
A903		20	20	10' 6"	714	100	8' 0"			
A904		21	21	9' 0"	643	100	6' 6"			
A905	4	4	8	3' 10"	104	ST				
A906	12	12	24	3' 11"	320	102	1' 10"	2' 4"		



NOTE:  
THE EXISTING R/W WIDTH AND LOCATION WERE  
DETERMINED USING DOCUMENTATION ON FILE  
FROM STARK COUNTY AUDITOR'S OFFICE, OHIO.

TAX MAPS  
DEEDS

SURVEYS —

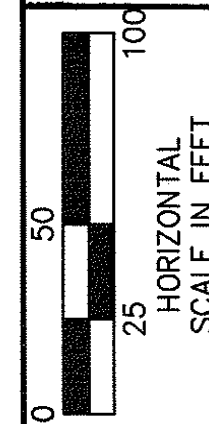
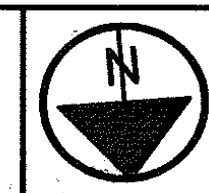
PART OF O.L. 80, O.L. 163, O.L. 164  
IN THE S.E. QTR. OF SECTION 6  
T 10 N, R 9 W  
CITY OF MASSILLON  
STARK COUNTY

**MONUMENT LEGEND**

- IRON PIN FOUND AS NOTED  
◻ MONUMENT BOX TO BE SET  
◻ MONUMENT BOX FOUND

**BASIS OF BEARINGS**

N 25° 23' 36" W ON THE CENTERLINE OF  
S.R. 21 AS RECORDED IN PLAT BOOK 32,  
PAGE 68.



P.L.D. NO.

R/W DESIGNER  
JEK

R/W REVIEWER  
FK

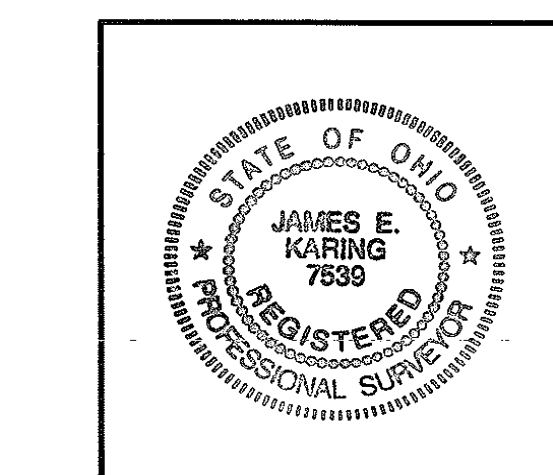
CENTERLINE PLAT

LAKE AVENUE

1 / 9

56  
64

REV. DATE DESCRIPTION  
PLAN COMPLETION DATE:

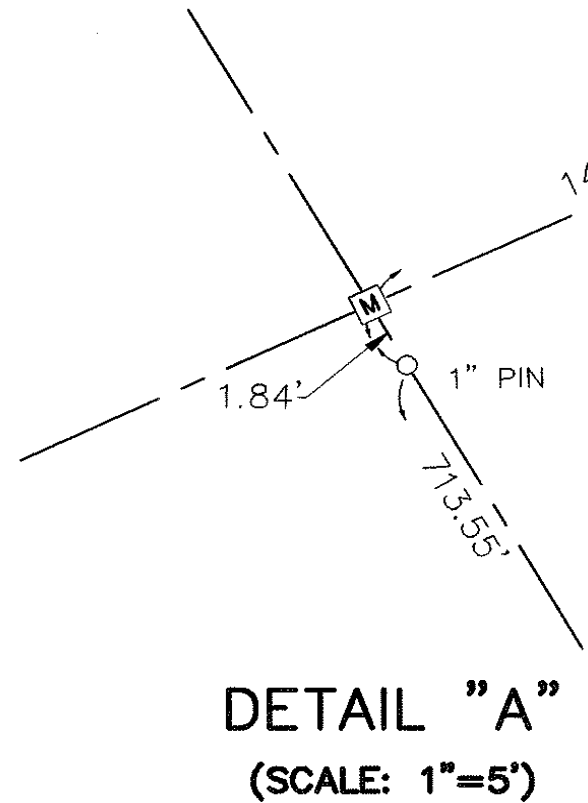
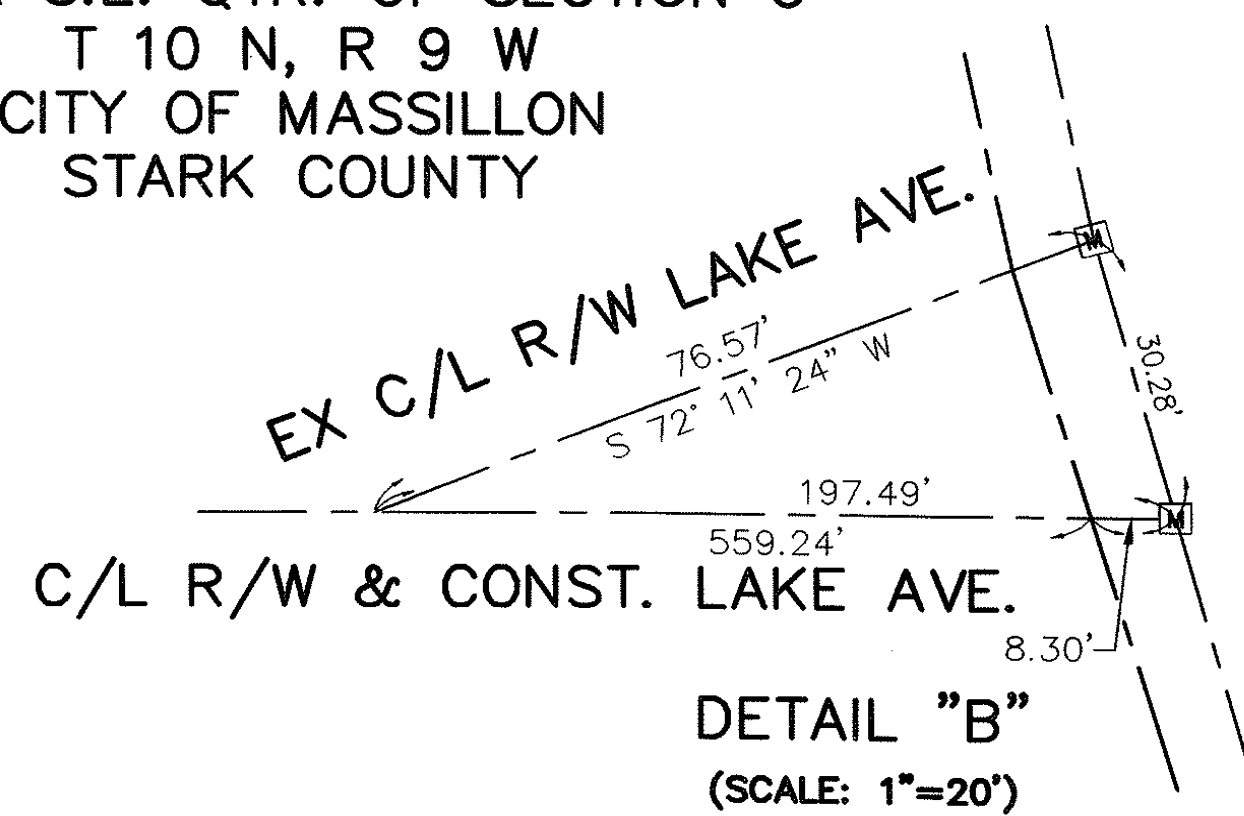


I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF  
A SURVEY MADE FOR THE COUNTY OF STARK IN 2000 BY  
GLAUS, PYLE SCHOMER, BURNS AND DEHAVEN INC.

THE ESTABLISHMENT OF THE PROPERTY LINES AND EXISTING  
RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE  
WAS PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

*James E. Karing*  
JAMES E. KARING REGISTERED SURVEYOR NO. 7539

DATE 11/22/2000



1 PROPOSED CURVE	2 EXISTING CURVE
P.I. = STA. 5+92.33	P.I. = STA. 6+30.12
Δ = 25°24'00"	Δ = 33°56'00"
Dc = 16°30'00"	Dc = 16°00'02"
R = 347.25'	R = 358.09'
T = 78.26'	T = 109.25'
L = 153.94'	L = 212.08'
E = 8.71'	E = 16.30'
P.C. = STA. 5+14.07	P.C. = STA. 5+20.87
P.T. = STA. 6+68.01	P.T. = STA. 7+32.95

\* QUANTITY CARRIED TO GENERAL NOTES

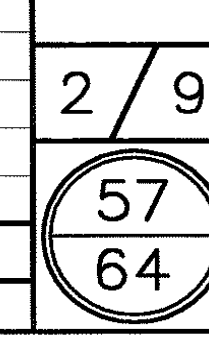
**MONUMENTS TO BE SET DURING CONSTRUCTION**

STATION	DIST. FROM C/L OF R/W		ADJUSTABLE C/L MONUMENT	RIGHT OF WAY MONUMENT (SET AT P.I.)
	LEFT	RIGHT		
P.I. 5+00.00			1	
P.T. 5+14.07			1	
P.T. 6+68.01			1	
P.I. 12+35.56			1	
P.I. 10+00.00			1	
TOTAL			5*	

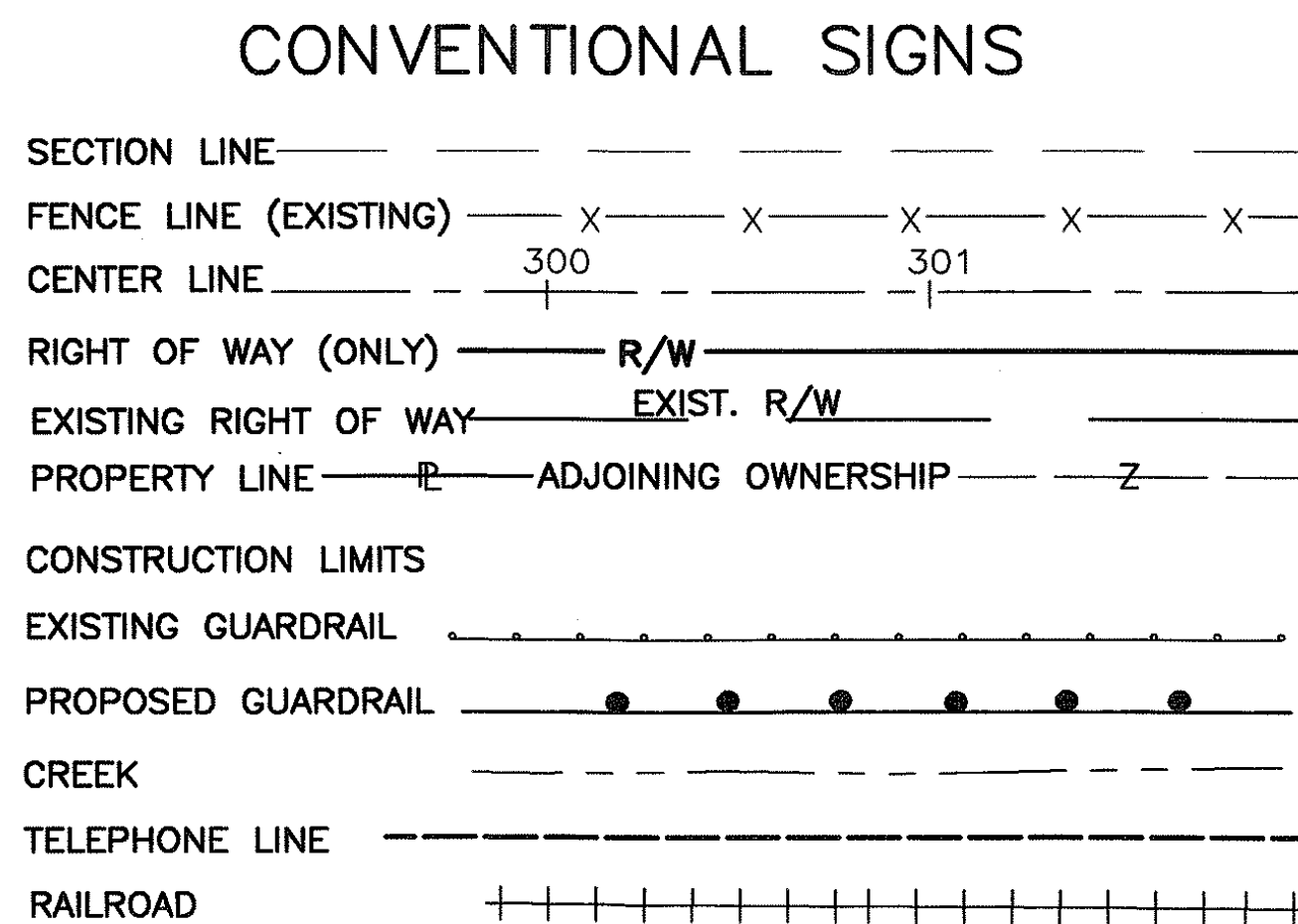
RECEIVED \_\_\_\_\_  
RECORDED \_\_\_\_\_  
BOOK \_\_\_\_\_, PAGE \_\_\_\_\_  
\_\_\_\_\_  
COUNTY RECORDER

Cad File: H:\99029\DWG\99029RCD.DWG  
Date: 11-22-00 Time: 3:53 PM  
Technician: FUE





REV.	DATE	DESCRIPTION
PLAN COMPLETION DATE:		



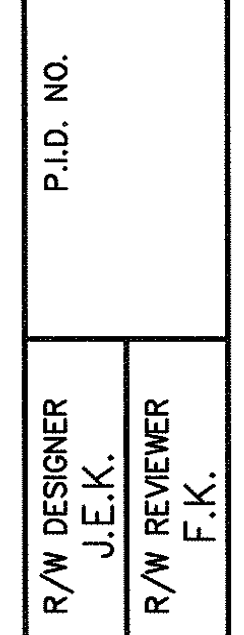
Technician: EJR



## SUMMARY OF ADDITIONAL RIGHT OF WAY

Cad File: H:\99029\DWG\99029R01.DWG  
Date: 11-21-00 Time: 3:54 PM





LAKE AVENUE

 $\frac{4}{9}$ 

59  
64

[illegible]

Cad File: H:\99029\DWG\99029RPA.DWG  
Date: 11-21-00 Time: 3:31 PM TW = 184d36'36.00"


Technician: FUE



THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE EXISTING CENTERLINE OF RIGHT OF WAY. MATCHLINE STATIONING IS REFERENCING THE PROPOSED CENTERLINE OF CONSTRUCTION.

R/W DESIGNER	J.E.K.
R/W REVIEWER	F.K.

LAKE AVENUE

 $\frac{5}{9}$ 

REV.	DATE	DESCRIPTION
PLAN COMPLETION DATE:		

(B)  $\Delta = 30^\circ 53' 25''$   
 $R = 57.00'$   
 $T = 15.49'$   
 $L = 30.73'$   
 $C = 30.36'$   
 $S \ 64^\circ 10' 43'' \ W$

(C)  $\Delta = 04^\circ 53' 25''$   
 $R = 320.79'$   
 $T = 13.70'$   
 $L = 27.38'$   
 $C = 27.37'$   
 $N \ 81^\circ 54' 06'' \ E$

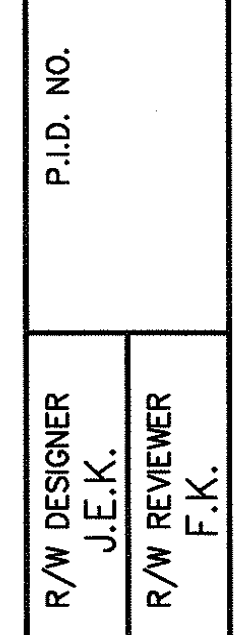
(D)  $\Delta = 11^\circ 53' 14''$   
 $R = 320.79'$   
 $T = 33.40'$   
 $L = 66.56'$   
 $C = 66.44'$   
 $N \ 89^\circ 42' 34'' \ W$

(E)  $\Delta = 21^\circ 22' 45''$   
 $R = 383.09'$   
 $T = 72.31'$   
 $L = 142.94'$   
 $C = 142.12'$   
 $N \ 87^\circ 33' 40'' \ W$

Cad File: H:\99029\DWG\99029RPB.DWG  
Date: 11-21-00 Time: 3:32 PM TW = 184036'36.00"

Technician: FUE

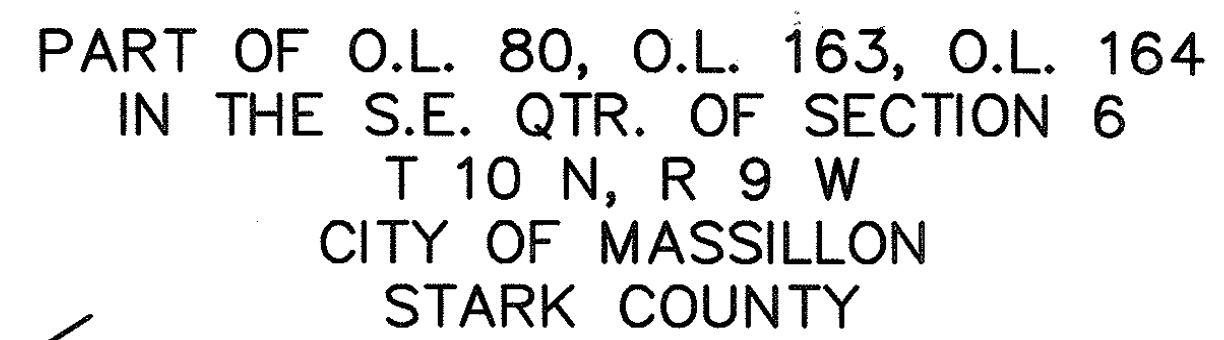




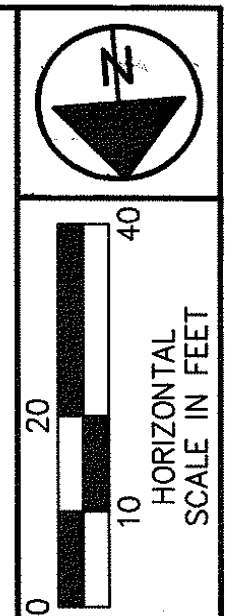
LAKE AVENUE

	6 / 9
	<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;">             61  <hr style="border: 0; border-top: 1px solid black;"/>             64           </div>





THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE  
DETERMINED USING: TAX MAPS, DEEDS, PLAT, CITY OF  
MASSILLON FIELD NOTES:



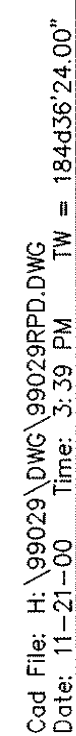
R/W DESIGNER	R/W REVIEWER
J.E.K.	F.K.

LAKE AVENUE

7	/	9
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62  
64

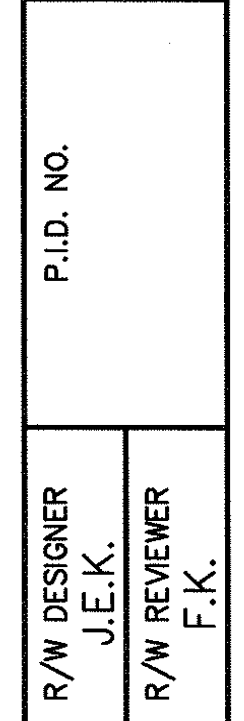
REV.	DATE	DESCRIPTION
PLAN COMPLETION DATE:		



Technician: FUE



A horizontal scale bar with alternating black and white segments, marked with 0, 20, and 40. Below the scale bar is the text "HORIZONTAL SCALE IN FEET". To the right of the scale bar is a circular north arrow pointing to the right, with a stylized 'N' inside.



LAKE AVENUE



THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE EXISTING CENTERLINE OF RIGHT OF WAY. MATCHLINE STATIONING IS REFERENCING THE PROPOSED CENTERLINE OF CONSTRUCTION.

THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE  
DETERMINED USING: TAX MAPS, DEEDS, PLAT, CITY OF  
MASSILLON FIELD NOTES:




BID NO

R/W DESIGNER  
J.F.K.

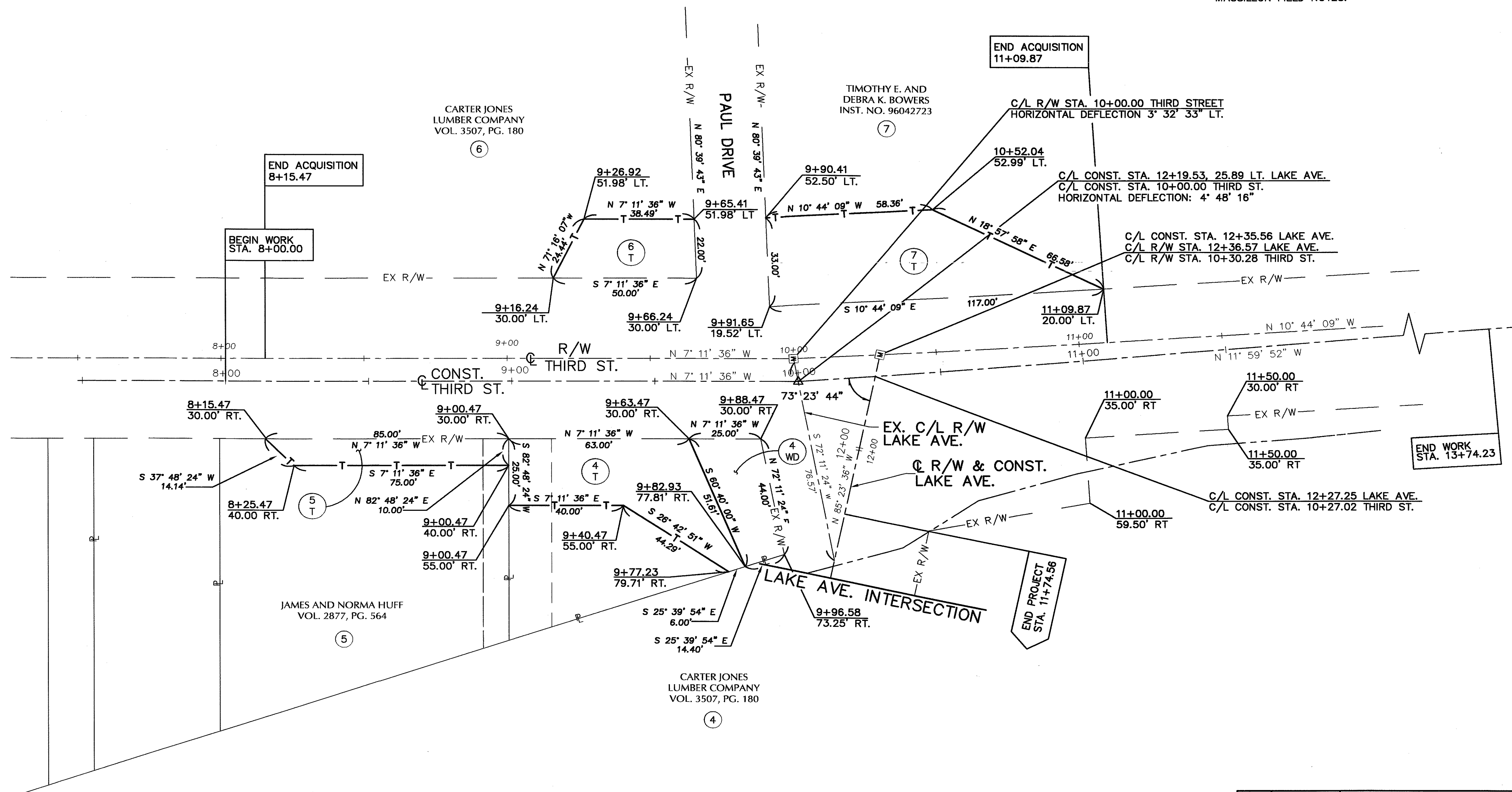
RIGHT OF WAY DETAIL SHEET  
THIRD ST. STA. 7+50 TO STA. 12+00

LAKE AVENUE

9	/	9
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[illegible]

PLAN COMPLETION DATE:	
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Cad File: H:\99029\DWG\99029RPF.DWG  
Date: 11-21-00 Time: 3:51 PM TW = 262d48'35.88"

Technician: FUE