

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

PROJECT DESCRIPTION

THIS PROJECT IS A DISTRICTWIDE SYSTEMATIC GUARDRAIL UPGRADE, REMOVING NON-CRASHWORTHY (A) END TERMINALS, AND UPGRADING GUARDRAIL RUNS TO THE NEW GUARDRAIL MGS STANDARDS.

PROJECT EARTH DISTURBED AREA: 0.00 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: N/A ACRES

LIMITED ACCESS

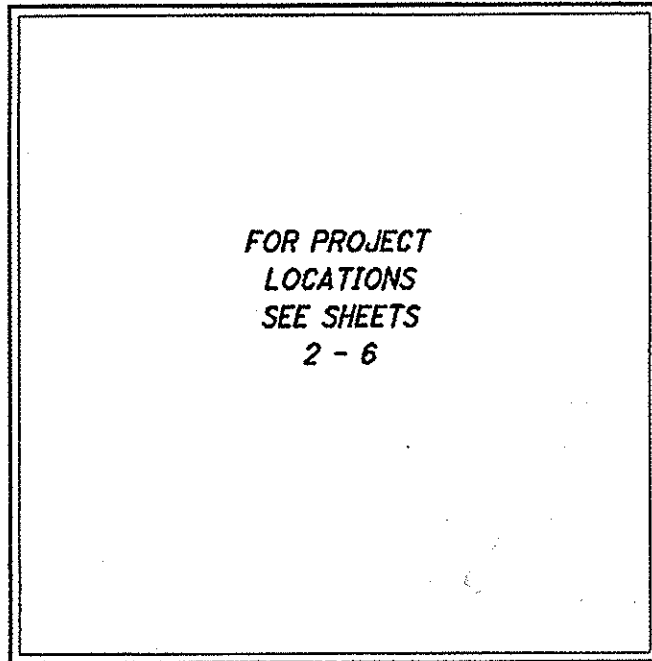
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2013 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

**D07 SYSTEMATIC GR-FY2013**  
Various Locations in the Following Counties  
**CLARK, LOGAN, MIAMI, MONTGOMERY, SHELBY**



LOCATION MAP

LATITUDE: 40° 17' 49" LONGITUDE: 84° 09' 40"

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SHEET 58 NOT USED

FEDERAL PROJECT NO.  
E120(496)

PID NO.  
93389

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT  
NONE

D07-SYST. GR-FY13

1/72

D07 - VA-SYSTEMATIC GR-FY2013  
130345 PID - 93389  
Dist 7 5/30/2013  
Contract Proposal Available @ www.contracts.dot.state.oh.us/home

**UNDERGROUND UTILITIES**  
CONTACT BOTH SERVICES  
CALL TWO WORKING DAYS  
BEFORE YOU DIG

CALL  
1-800-362-2764  
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS UNDERGROUND  
PROTECTION SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:  
OHIO DEPARTMENT OF TRANSPORTATION  
DISTRICT 7 - SIDNEY, OH  
PLANNING AND ENGINEERING

ENGINEERS SEAL:

SIGNED: *Sherry Susan Wampler*  
DATE: 2/25/13

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
DM-4.3	1/18/13	MT-95.30	7/20/12	TC-41.20	1/19/01	800	4/19/13
DM-4.4	7/20/12	MT-95.31	7/20/12	TC-42.20	1/21/11		
		MT-95.50	1/18/13	TC-52.10	1/18/13		
MGS-1.1	1/18/13			TC-52.20	1/18/13		
MGS-2.1	1/18/13	MT-97.10	7/20/12	TC-61.30	4/20/12		
MGS-2.3	1/18/13	MT-101	10/19/12				
MGS-3.1	1/18/13	MT-102.20	1/18/13				
MGS-4.2	1/18/13	MT-105.10	7/20/12				
MGS-4.3	1/18/13						
MGS-5.2	1/18/13						
MGS-5.3	1/18/13						
MGS-6.1	1/18/13						

APPROVED *Randy Chembley, P.E., P.S./P.E.*  
DATE 2-25-13 DISTRICT DEPUTY DIRECTOR

APPROVED *Termy Whaley*  
DATE 3-13-13 DIRECTOR, DEPARTMENT OF TRANSPORTATION

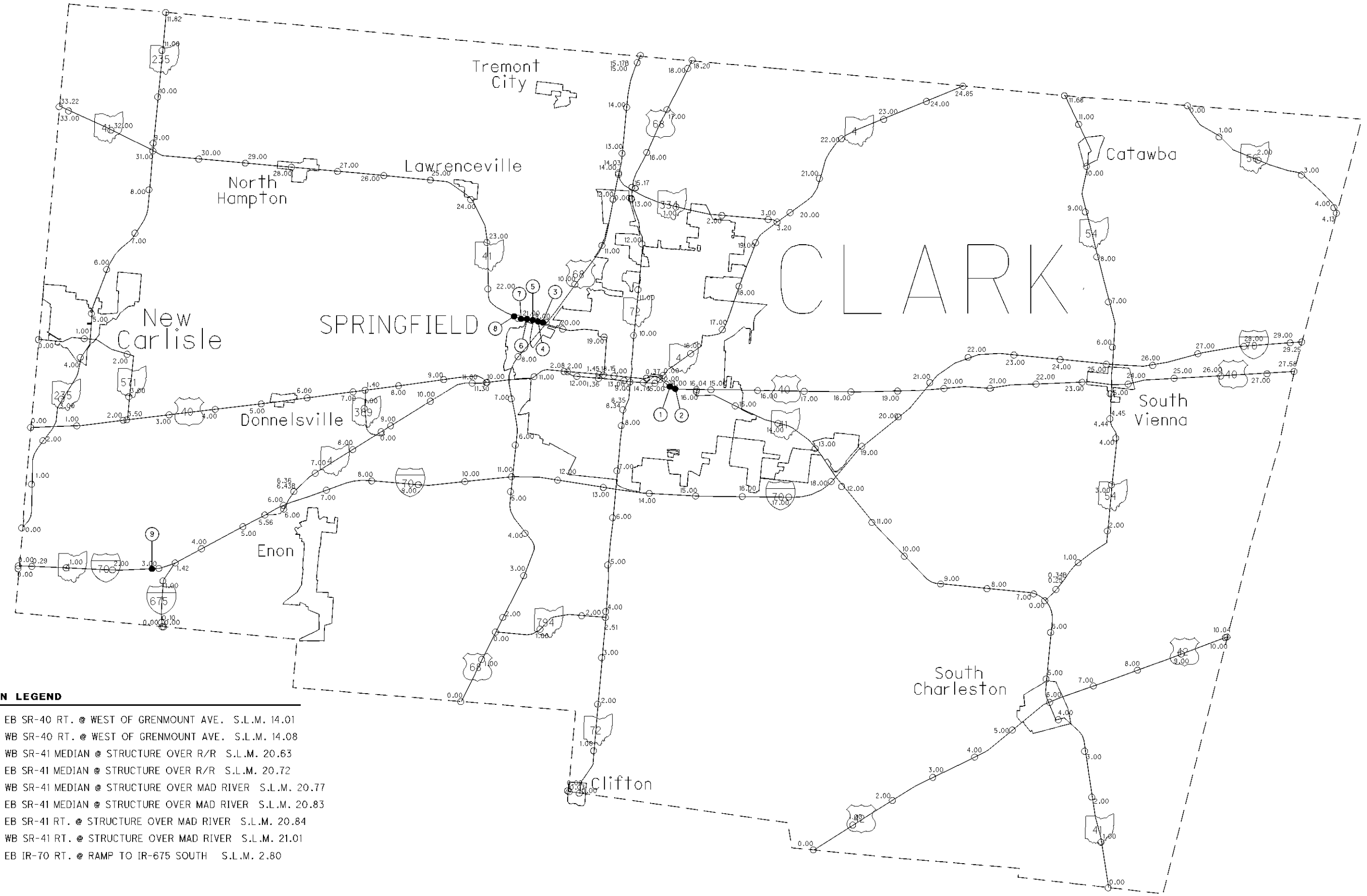


HORIZONTAL  
SCALE IN FEET

CALCULATED  
CHECKED

LOCATION MAP  
CLARK COUNTY

D07-SYST. GR-FY13



**RUN LEGEND**

- ① EB SR-40 RT. @ WEST OF GRENMOUNT AVE. S.L.M. 14.01
- ② WB SR-40 RT. @ WEST OF GRENMOUNT AVE. S.L.M. 14.08
- ③ WB SR-41 MEDIAN @ STRUCTURE OVER R/R S.L.M. 20.63
- ④ EB SR-41 MEDIAN @ STRUCTURE OVER R/R S.L.M. 20.72
- ⑤ WB SR-41 MEDIAN @ STRUCTURE OVER MAD RIVER S.L.M. 20.77
- ⑥ EB SR-41 MEDIAN @ STRUCTURE OVER MAD RIVER S.L.M. 20.83
- ⑦ EB SR-41 RT. @ STRUCTURE OVER MAD RIVER S.L.M. 20.84
- ⑧ WB SR-41 RT. @ STRUCTURE OVER MAD RIVER S.L.M. 21.01
- ⑨ EB IR-70 RT. @ RAMP TO IR-675 SOUTH S.L.M. 2.80

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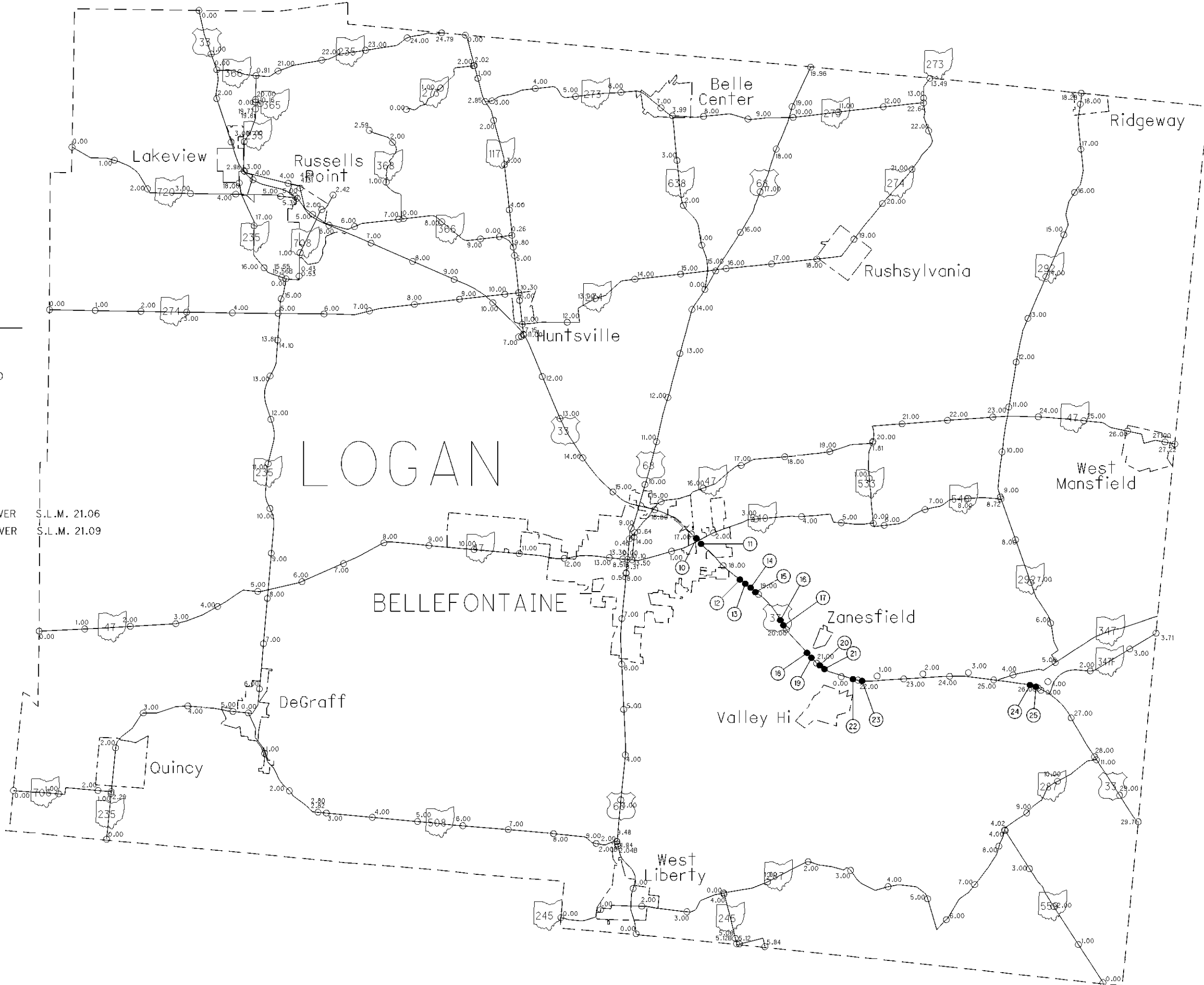


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LOCATION MAP  
LOGAN COUNTY

D07-SYST. GR-FY13



**RUN LEGEND**

- 10 EB US-33 MEDIAN @ SR-540 S.L.M. 17.26
- 11 WB US-33 MEDIAN @ SR-540 S.L.M. 17.76
- 12 EB US-33 MEDIAN @ TWP RD 55 S.L.M. 18.80
- 13 EB US-33 RT. @ TWP RD 55 S.L.M. 18.82
- 14 WB US-33 MEDIAN @ TWP RD 55 S.L.M. 18.85
- 15 WB US-33 RT. @ TWP RD 55 S.L.M. 18.88
- 16 EB US-33 MEDIAN @ CRI0 S.L.M. 19.84
- 17 WB US-33 MEDIAN @ CRI0 S.L.M. 19.96
- 18 EB US-33 MEDIAN @ CR5 S.L.M. 20.76
- 19 WB US-33 MEDIAN @ CR5 S.L.M. 20.91
- 20 EB US-33 MEDIAN @ STRUCTURE OVER MAD RIVER S.L.M. 21.06
- 21 WB US-33 MEDIAN @ STRUCTURE OVER MAD RIVER S.L.M. 21.09
- 22 EB US-33 MEDIAN @ SR-292 S.L.M. 21.91
- 23 WB US-33 MEDIAN @ SR-292 S.L.M. 22.02
- 24 EB US-33 MEDIAN @ SR-347 S.L.M. 25.91
- 25 WB US-33 MEDIAN @ SR-347 S.L.M. 26.00



HORIZONTAL SCALE IN FEET

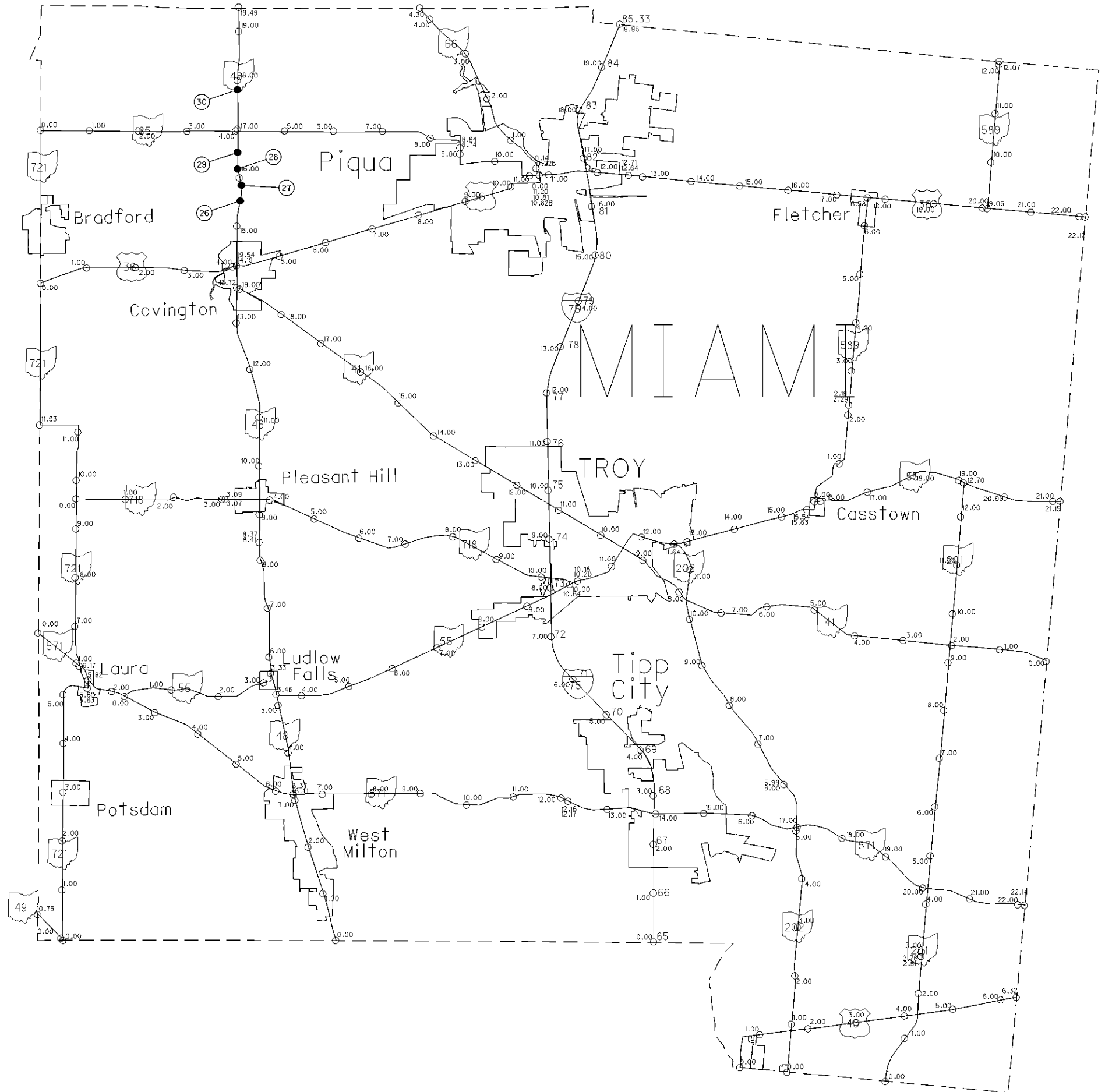
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LOCATION MAP  
MIAMI COUNTY

D07-SYST. GR-FY13

**RUN LEGEND**

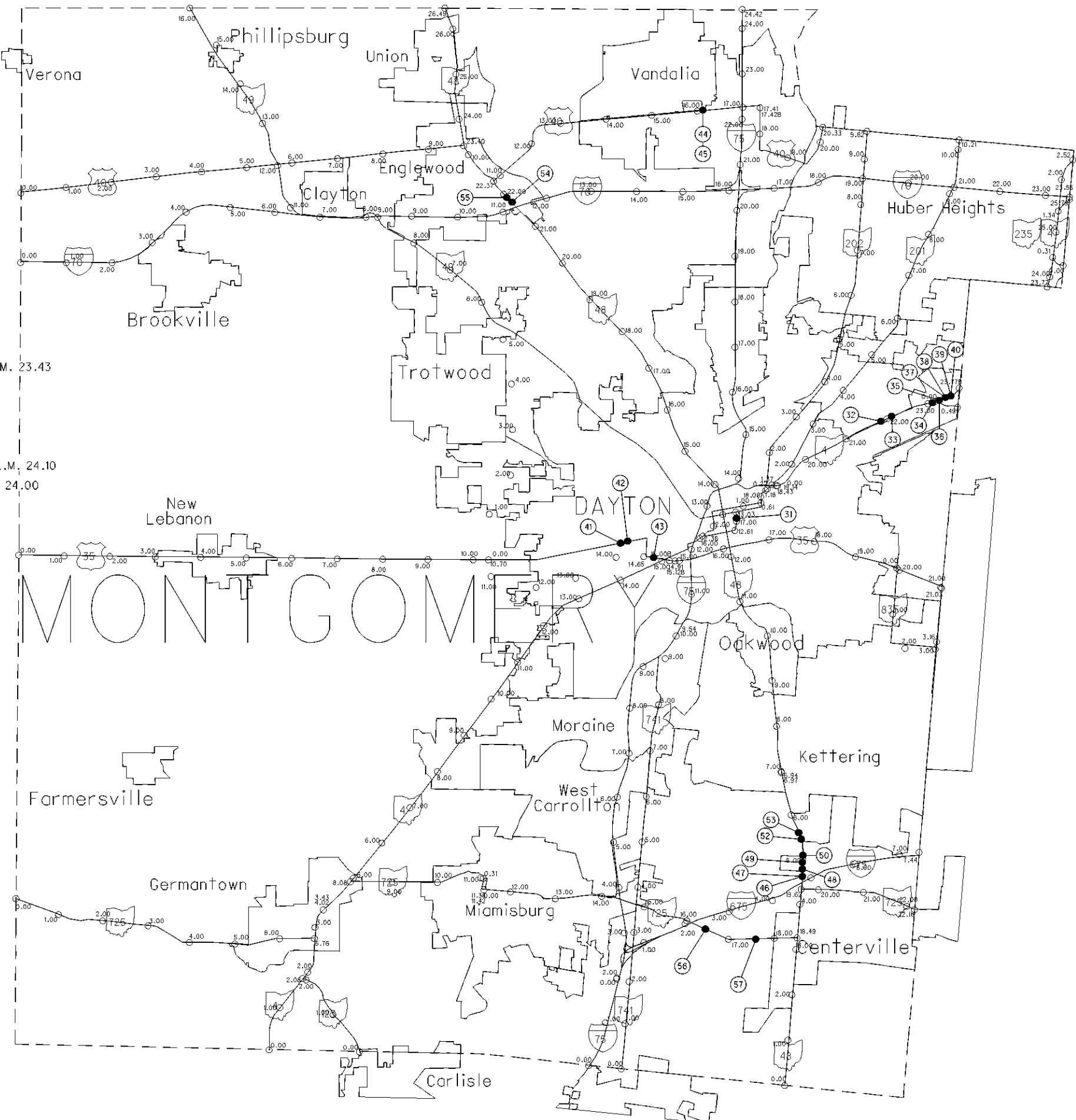
- ②6 NB/SB SR-48 SLOPE PROTECTION S.L.M. 15.63
- ②7 NB/SB SR-48 SLOPE PROTECTION S.L.M. 15.92
- ②8 NB/SB SR-48 SLOPE PROTECTION S.L.M. 16.08
- ②9 NB/SB SR-48 SLOPE PROTECTION S.L.M. 16.33
- ③0 NB/SB SR-48 SLOPE PROTECTION S.L.M. 17.74



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**RUN LEGEND**

- 31) NB US-4 RT @ OFF STRUCTURE OVER MAD RIVER - NORTH OF OTTAWA ST S.L.M. 17.31
- 32) NB US-4 MEDIAN @ SR-444 - PIER PROTECTION S.L.M. 21.98
- 33) SB US-4 MEDIAN @ SR-444 - PIER PROTECTION S.L.M. 22.01
- 34) SB US-4 LT. @ NEW CARLISLE PIKE/LOWER VALLEY PIKE INTERS. - DITCH PROTECTION S.L.M. 23.43
- 35) NB US-4 MEDIAN @ STRUCTURE OVER DRYLICK RUN - BRIDGE PROTECTION S.L.M. 23.95
- 36) NB US-4 RT. @ STRUCTURE OVER DRYLICK RUN - BRIDGE PROTECTION S.L.M. 23.96
- 37) SB US-4 MEDIAN @ STRUCTURE OVER DRYLICK RUN - BRIDGE PROTECTION S.L.M. 24.01
- 38) SB US-4 RT @ STRUCTURE OVER DRYLICK RUN - BRIDGE PROTECTION S.L.M. 24.02
- 39) NB US-4 MEDIAN @ STRUCTURE OVER DRYLICK RUN - BRIDGE/OVERHEAD SIGN PROTECTION S.L.M. 24.10
- 40) NB US-4 RT. @ STRUCTURE OVER DRYLICK RUN - BRIDGE/OVERHEAD SIGN PROTECTION S.L.M. 24.00
- 41) EB US-35 RT @ OVERHEAD SIGN PROTECTION - EAST OF JAMES H. MCGEE S.L.M. 14.53
- 42) WB US-35 RT @ OVERHEAD SIGN PROTECTION - RAMP TO JAMES H. MCGEE S.L.M. 14.58
- 43) WB US-35 RT @ OVERHEAD SIGN PROTECTION - EAST OF BROADWAY ST. S.L.M. 15.12
- 44) WB US-40 RT. @ WEST OF CR-25A S.L.M. 16.08
- 45) WB US-40 RT. @ WEST OF CR-25A S.L.M. 16.10
- 46) SB SR-48 RT @ RAMP TO SB I-675 S.L.M. 4.60
- 47) NB SR-48 RT. @ STRAIN POLE PROTECTION - NORTH OF LOOP RD S.L.M. 4.74
- 48) SB SR-48 RT @ STRAIN POLE PROTECTION - NORTH OF LOOP RD S.L.M. 4.79
- 49) NB SR-48 RT @ SLOPE PROTECTION - JUST SOUTH OF BETHANY VILLAGE DR S.L.M. 4.81
- 50) SB SR-48 RT @ INTERSECTION OF SHADYBROOK - REMOVAL ONLY S.L.M. 5.04
- 51) NB SR-48 RT @ NORTH VILLAGE DR S.L.M. 5.14
- 52) SB SR-48 RT @ JUST NORTH OF BOUNDBROOK DR. S.L.M. 5.18
- 53) SB SR-48 RT @ JUST NORTH OF BOUNDBROOK DR. S.L.M. 5.19
- 54) NOT USED
- 55) NOT USED
- 56) EB SR-725 RT @ SE CORNER - YANKEE ST INTERSECTION S.L.M. 16.56
- 57) WB SR-725 RT @ JUST WEST OF PARAGON RD. S.L.M. 17.44



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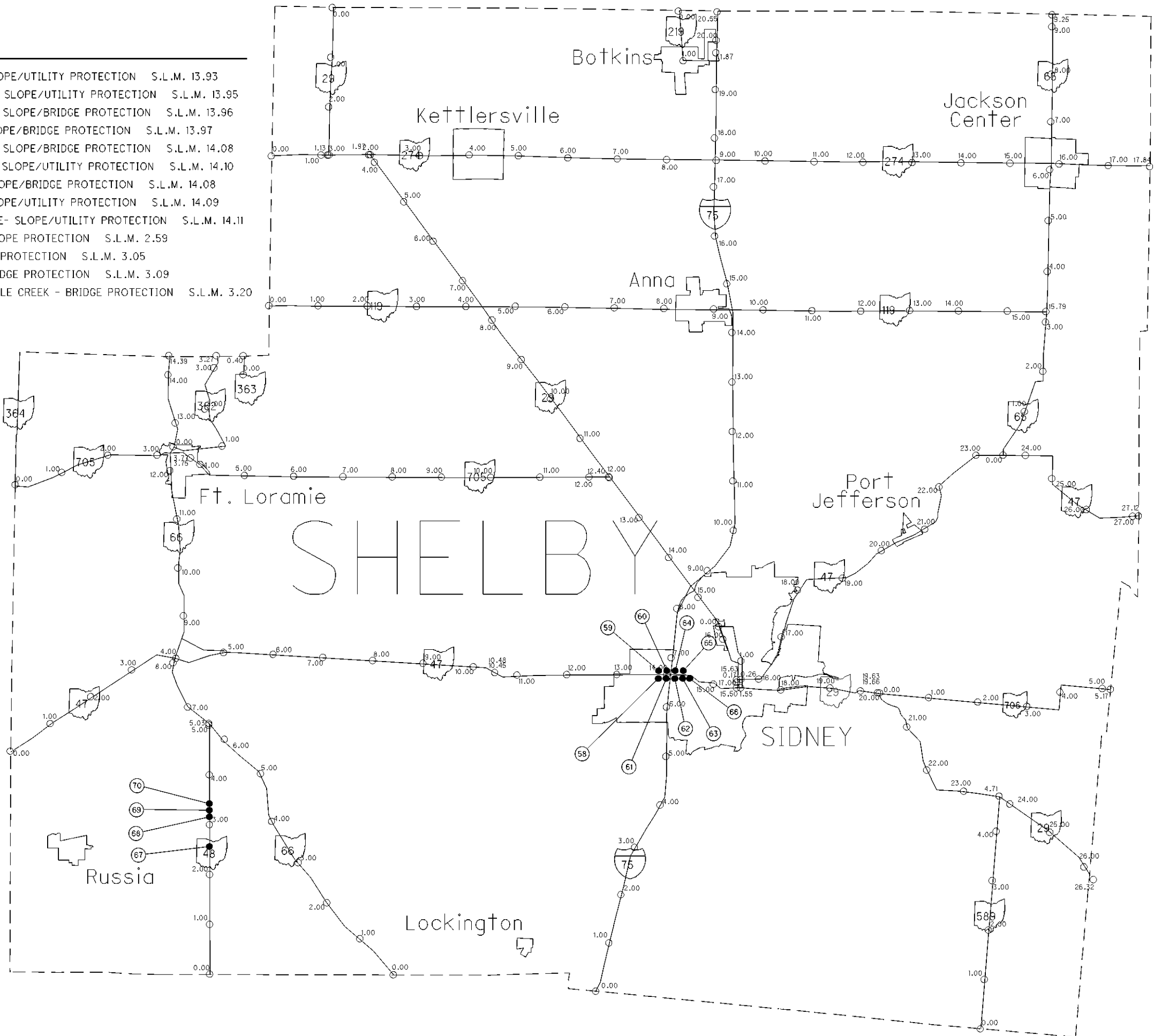
**LOCATION MAP**  
**MONTGOMERY COUNTY**

**D07-SYST. GR-FY13**

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**RUN LEGEND**

- 58 EB SR-47 RT @ SW CORNER OF ON RAMP TO SB IR-75 - SLOPE/UTILITY PROTECTION S.L.M. 13.93
- 59 WB SR-47 RT @ NW CORNER OF OFF RAMP FROM SB IR-75 - SLOPE/UTILITY PROTECTION S.L.M. 13.95
- 60 WB SR-47 RT @ NE CORNER OF OFF RAMP FROM SB IR-75 - SLOPE/BRIDGE PROTECTION S.L.M. 13.96
- 61 EB SR-47 RT @ SE CORNER OF ON RAMP TO SB IR-75 - SLOPE/BRIDGE PROTECTION S.L.M. 13.97
- 62 EB SR-47 RT @ SW CORNER OF OFF RAMP FROM NB IR-75 - SLOPE/BRIDGE PROTECTION S.L.M. 14.08
- 63 EB SR-47 RT @ SE CORNER OF OFF RAMP FROM NB IR-75 - SLOPE/UTILITY PROTECTION S.L.M. 14.10
- 64 WB SR-47 RT @ NW CORNER OF ON RAMP TO NB IR-75 - SLOPE/BRIDGE PROTECTION S.L.M. 14.08
- 65 WB SR-47 RT @ NE CORNER OF ON RAMP TO NB IR-75 - SLOPE/UTILITY PROTECTION S.L.M. 14.09
- 66 EB SR-47 RT BETWEEN FIELD DRIVE AND GAS STATION DRIVE- SLOPE/UTILITY PROTECTION S.L.M. 14.11
- 67 NB/SB SR-48 LT/RT @ STRUCTURE OVER KLAKE DITCH - SLOPE PROTECTION S.L.M. 2.59
- 68 NB SR-48 RT @ STRUCTURE OVER NINEMILE CREEK - SLOPE PROTECTION S.L.M. 3.05
- 69 NB/SB SR-48 RT @ STRUCTURE OVER NINEMILE CREEK - BRIDGE PROTECTION S.L.M. 3.09
- 70 NB/SB SR-48 LT/RT @ STRUCTURE OVER BRANCH OF NINEMILE CREEK - BRIDGE PROTECTION S.L.M. 3.20



HORIZONTAL SCALE IN FEET

CALCULATED  
CHECKED

LOCATION MAP  
SHELBY COUNTY

D07-SYST. GR-FY13

**UTILITIES**

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA. NOTIFICATION AND VERIFICATION IS REQUIRED AND SHALL BE COMPLETED BY CONTACTING UTILITIY PROTECTION SERVICES AS LISTED ON THE TITLE SHEET PRIOR TO CONSTRUCTION.

**EXISTING PLANS**

EXISTING PLANS MAY BE INSPECTED IN THE ODOT DISTRICT 7 OFFICE IN SIDNEY, OHIO.

**WORK LIMITS**

THERE ARE NO WORK LIMITS SHOWN ON THESE PLANS. HOWEVER ALL WORK/PHYSICAL CONSTRUCTION ARE LIMITED TO WITHIN THE EXISTING RIGHT OF WAY. THE CONTRACTOR SHALL PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL DEVICES AND WORK ZONE TRAFFIC CONTROL THAT IS REQUIRED FOR THESE PLANS.

**CLEARING AND GRUBBING**

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

**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 202 - GUARDRAIL REMOVED, FOR STORAGE, AS PER PLAN GUARDRAIL REMOVED FOR STORAGE, BARRIER DESIGN, AS PER PLAN ANCHOR ASSEMBLY REMOVED FOR STORAGE, TYPE A, AS PER PLAN ANCHOR ASSEMBLY REMOVED FOR STORAGE, BARRIER DESIGN TYPE A**

THIS ITEM CONSIST OF THE REMOVAL OF EXISTING GUARDRAIL, INCLUDING BARRIER DESIGN, AND ANCHOR ASSEMBLIES AS MARKED IN THESE PLANS FOR REMOVAL. ALL ITEMS MARKED FOR REMOVAL, SHALL BE REMOVED, FOR STORAGE, AS PER PLAN. WHEN REMOVING THE EXISTING TYPE "A" ANCHORS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING THE CONCRETE ANCHOR PAD COMPLETELY AND DISPOSING OF IT OFF SITE.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO STACK THE REMOVED GUARDRAIL, WITHIN THE RIGHT-OF-WAY AT LOCATIONS THAT ARE SAFE FROM THE TRAVELING PUBLIC. THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY MANAGERS A SCHEDULE FOR THE PICK UP OF STACKED GUARDRAIL.

CLARK COUNTY CONTACT RANDY ISON 937-497-6814  
LOGAN COUNTY CONTACT LARRY PLANK 937-497-6950  
MIAMI COUNTY CONTACT SHAWN ANVERSE 937-497-6826  
MONTGOMERY COUNTY CONTACT BOB LESNER 937-497-6889  
SHELBY COUNTY CONTACT TONY BROWN 937-497-6929

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR EACH GUARDRAIL RELATED 202 ITEM, AS SHOWN ON THE GENERAL SUMMARY SHEET, AND SHALL INCLUDE ALL LABOR, TOOLS, INCIDENTALS, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK.

**ITEM 606 - ANCHOR ASSEMBLY, TYPE B**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE B, 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 606 - ANCHOR ASSEMBLY, TYPE E**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

**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 606 - ANCHOR ASSEMBLY, TYPE E.....CONTINUED**

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E, 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.

**ITEM 606 - IMPACT ATTENUATOR, TYPE I (BIDIRECTIONAL)**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE I IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE I IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

NOTE TO CONTRACTOR, WHEN CONNECTING THE IMPACT ATTENUATOR, TYPE I (BIDIRECTIONAL) TO THE BARRIER DESIGN GUARDRAIL, TYPE MGS, IT WILL BE NECESSARY TO GRADUALLY REDUCE THE GUARDRAIL BLOCKOUTS IN THE LAST 25' TO MATCH UP WITH THE WIDTH OF THE IMPACT ATTENUATOR, TYPE I (BIDIRECTIONAL).

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE I [(UNIDIRECTIONAL OR BIDIRECTIONAL)], EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

**ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING THE EXISTING CONCRETE BARRIERS WHERE INDICATED IN THESE PLANS. THE CONTRACTOR SHALL ALSO RESTORE THE AREA ONCE BARRIER IS REMOVED TO MATCH THAT OF THE SURROUNDING GROUND. ALL WORK, LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE PAID FOR UNDER THE UNIT PRICE BID PER FOOT, FOR ITEM 202, CONCRETE BARRIER REMOVED, AS PER PLAN.

**ITEM 622 - CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN**

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL CONCRETE BARRIER END SECTIONS, TYPE D, WHERE INDICATED WITHIN THESE PLANS. INSTALLATION SHALL BE IN ACCORDANCE WITH THE 2013 CMS, AND ROADWAY STANDARDS, EXCEPT THAT THESE INSTALLATIONS SHALL BE AS OLD STANDARD RM-4.5M DATED 10/21/97, INCLUDED IN THIS PLAN ON SHEET 71.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID EACH FOR ITEM 622, CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, INCIDENTALS, AND MATERIALS NECESSARY TO COMPLETE THIS WORK.

**ITEM 659 - SEEDING AND MULCHING**

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER, FOR THE REPAIR TO THE ORIGINAL CONDITION OF AREAS DISTURBED BY THE WORK. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO CONFINE THE WORK IN ORDER TO MINIMIZE THE DAMAGED AREAS.

659, SEEDING AND MULCHING  
ESTIMATED QUANTITY FROM GUARDRAIL  
REMOVAL AND DITCH RESHAPING 21,979 SQ. YD.

659, REPAIR SEEDING AND MULCHING  
21,979 X (0.05) = 1,099 SQ. YD.

659, INTER SEEDING  
21,979 X (0.05) = 1,099 SQ. YD.

659, COMMERCIAL FERTILIZER  
(21,979 X 1 TON/7410 SQ YD) + (1,099 X 1 TON/11111 SQ YD) = 3 TON

659, LIME  
(21979 X 1 ACRE/4840 SQ YD) = 5 ACRES

659, WATER  
(21,979 X 2 APPL. X 2.7 GAL/SQ YD X M GAL/1000 GAL)  
+ (1,099 X 2.7 GAL/SQ YD X M GAL/1000 GAL) = 122 M. GAL

**EARTH WORK**

THIS ITEM OF WORK SHALL CONSIST OF THE RESHAPING OF EXISTING MEDIAN MOUNDS AND DRAINAGE DITCHES. AREAS FOR MEDIAN PIER PROTECTION HAVE BEEN MARKED WITHIN THESE PLANS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PERFORM THIS WORK IN ACCORDANCE WITH STANDARD DRAWING MGS-6.1 DATED 1/18/2013, AND TO WORK WITHIN THE LIMITS SHOWN PER LOCATION. AN ESTIMATED QUANTITY FOR BOTH EXCAVATION, AND EMBANKMENT HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

EXCAVATION 1540 CU. YD.  
EMBANKMENT 365 CU. YD.

**NOTIFICATION**

THE CONTRACTOR SHALL NOTIFY THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 7 CONSTRUCTION ENGINEER TWO (2) WEEKS PRIOR TO BEGINNING WORK. PHONE: 937-497-6722.

**ITEM 202 - WALK REMOVED, AS PER PLAN**

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REMOVE ONLY THE SECTION OF WALK INDICATED WITHIN THESE PLANS, WITH A SAW CUT TO PROTECT THE EXISTING WALK. THE CARE SHALL BE TAKEN TO RESTORE THE VOID TO MEET ALL EXISTING GROUND AND WALK ELEVATIONS. ALL WORK, LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID SQUARE FOOT FOR ITEM 202-WALK REMOVED, AS PER PLAN

**GENERAL REQUIREMENTS**

IT IS THE INTENTION TO PERFORM THE REQUIRED WORK WITHIN THESE PLANS WITH THE LEAST INCONVENIENCE TO AND THE MAXIMUM SAFETY OF THE CONTRACTOR AND THE TRAVELING PUBLIC. THE REQUIREMENTS FOR MAINTAINING TRAFFIC AS SPECIFIED IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS" (CURRENT EDITION, LATEST REVISIONS, PERTINENT PROVISIONS OF THE "OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS" (INCLUDING SUPPLEMENTAL SPECIFICATIONS) AND APPLICABLE STANDARD CONSTRUCTION DRAWINGS SHALL APPLY TO THIS PROJECT IN ADDITION TO THE FOLLOWING NOTES AND DETAILS.

**ITEM 614. MAINTAINING TRAFFIC**

THE FOLLOWING SHALL BE PERFORMED:

REMOVING AND INSTALLING GUARDRAIL AT VARIOUS LOCATIONS IN CLARK COUNTY ON IR-70 AND SR-41.

REMOVING AND INSTALLING GUARDRAIL AT VARIOUS LOCATIONS IN LOG COUNTY ON US-33.

REMOVING AND INSTALLING GUARDRAIL AT VARIOUS LOCATIONS IN MIAMI COUNTY ON SR-48.

REMOVING AND INSTALLING GUARDRAIL AT VARIOUS LOCATIONS IN MONTGOMERY COUNTY ON US-35, US-40, SR-41, SR-48, AND SR-725.

REMOVING AND INSTALLING GUARDRAIL AT VARIOUS LOCATIONS IN SHELBY COUNTY ON SR-47 @ IR-75, AND SR-48.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SAFE AND EFFECTIVE TRAFFIC CONTROL 24 HOURS A DAY FOR THE DURATION OF THIS PROJECT. THIS INCLUDES PROVIDING, PLACING, MAINTAINING, AND SUBSEQUENTLY REMOVING ALL NECESSARY TRAFFIC CONTROL MEASURES FOR ALL PROPOSED CONSTRUCTION OPERATIONS.

THE CONTRACTOR SHALL CONTACT THE ODOT DISTRICT 7 ROADWAY SERVICE OFFICE (937) 497-497-6890 A MINIMUM OF 14 CALENDAR DAYS PRIOR TO INTENDED LANE RESTRICTIONS/ROAD CLOSURES TO ALLOW SUFFICIENT TIME FOR THE NECESSARY COORDINATION.

BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAME(S) AND TELEPHONE NUMBER(S) OF PERSON(S) WHO CAN BE CONTACTED 24 HOURS A DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION, THE HIGHWAY PATROL, AND ALL OTHER INTERESTED POLICE AGENCIES.

THIS PERSON(S) SHALL BE RESPONSIBLE FOR REPAIRING AND OR REPLACING ALL TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN SAFETY FOR THE DURATION OF THIS PROJECT. THIS PERSON(S) SHALL HAVE AVAILABLE ALL MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED REPAIRS WITHIN A REASONABLE PERIOD OF TIME.

THE CONTRACTOR SHALL FURNISH AND INSTALL ADVANCE WARNING "ROAD WORK AHEAD" (W20-1-36), "RIGHT (LEFT) SHOULDER CLOSED" (W21-5a-36) AND "END ROAD WORK" (WG20-2-36) SIGNS ON US-33 AND US-35, AND AS DIRECTED BY THE ENGINEER IN OTHER LOCATIONS. THE SIGNS SHALL BE DUAL INSTALLATIONS AND THE ACTUAL LOCATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

ACCESS TO AND FROM ALL CROSS ROADS WITHIN THE LIMITS OF THIS PROJECT SHALL BE MAINTAINED AT ALL TIMES ON EITHER THE EXISTING OR PROPOSED PAVEMENTS, UNLESS OTHERWISE SHOWN IN THESE PLANS OR OTHERWISE DIRECTED BY THE ENGINEER.

TRAFFIC SHALL BE MAINTAINED IN A UNIFORM PATTERN THROUGHOUT THE ENTIRE SCOPE LIMITS OF THIS PROJECT AND SHALL NOT BE SUBJECTED TO CONSTANT LANE SHIFTS.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY INTENDED CHANGES TO ANY EXISTING OR TEMPORARY TRAFFIC CONTROL DEVICES AND SHALL OBTAIN THE ENGINEER'S APPROVAL PRIOR TO MAKING THE CHANGES. THE CONTRACTOR SHALL ALSO NOTIFY THE ENGINEER FORTY EIGHT (48) HOURS IN ADVANCE OF ANY INTENDED LANE CLOSURES OR LANE SHIFTS.

THE USE OF EXISTING SHOULDERS AREAS TO MAINTAIN TRAFFIC IS PROHIBITED, UNLESS OTHERWISE APPROVED BY THE ENGINEER. SHOULD ANY EXISTING OR NEW SHOULDER AREA USED TO MAINTAIN TRAFFIC BECOME DAMAGED OR DESTROYED DO TO THE NEGLIGENCE OR FAILURE TO PROVIDE ADEQUATE SIGNS OR OTHER APPROPRIATE TRAFFIC CONTROL DEVICES, THE RESTORATION OR REPLACEMENT OF THE SHOULDER AREA WILL BE AT THE CONTRACTORS EXPENSE.

THE CONTRACTOR SHALL MAINTAIN 2 LANES OF DIRECTIONAL TRAFFIC ON BOTH US-33 AND US-35 AT ALL TIMES.

**ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)**

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING
(OTHER HOLIDAY OR EVENT)	

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	12:00N WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY

SATURDAY 12:00N FRIDAY THROUGH (6:00 AM OR 12:00N) MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$50 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

**DRUM REQUIREMENTS**

IN ADDITION TO THE REQUIREMENTS OF THE PLANS, SPECIFICATION AND PROPOSAL, DRUMS FURNISHED BY THE CONTRACTOR SHALL BE NEW AND UNUSED AT THE TIME OF ARRIVAL ON THE PROJECT. ANY DRUMS BROUGHT ON THE PROJECT, WHICH HAVE PREVIOUSLY BEEN USED ELSEWHERE, WILL NOT BE ACCEPTED.

PAYMENT FOR DRUMS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

**ITEM 614, REPLACEMENT DRUM**

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 30 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

**ITEM 614, REPLACEMENT SIGN**

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 10 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

**PERMITTED LANE CLOSURE**

LANE CLOSURES SHALL ONLY BE IMPLEMENTED AT THE TIMES LISTED ON THE OHIO DEPARTMENT OF TRANSPORTATION'S PERMITTED LANE CLOSURE WEB SITE WHICH IS LOCATED AT:

<http://plcm.dot.state.oh.us/>

THE PERMITTED LANE CLOSURE TIMES LISTED ON THE WEBSITE, 14 CALENDAR DAYS PRIOR TO THE BID LETTING DATE, SHALL BE IN EFFECT FOR THIS PROJECT.

NO WORK WITHIN ACTIVE TRAVEL LANES OR WHICH WILL SLOW TRAFFIC IS PERMITTED AT ANY OTHER TIMES.

**INSTALLATION OF GUARDRAIL**

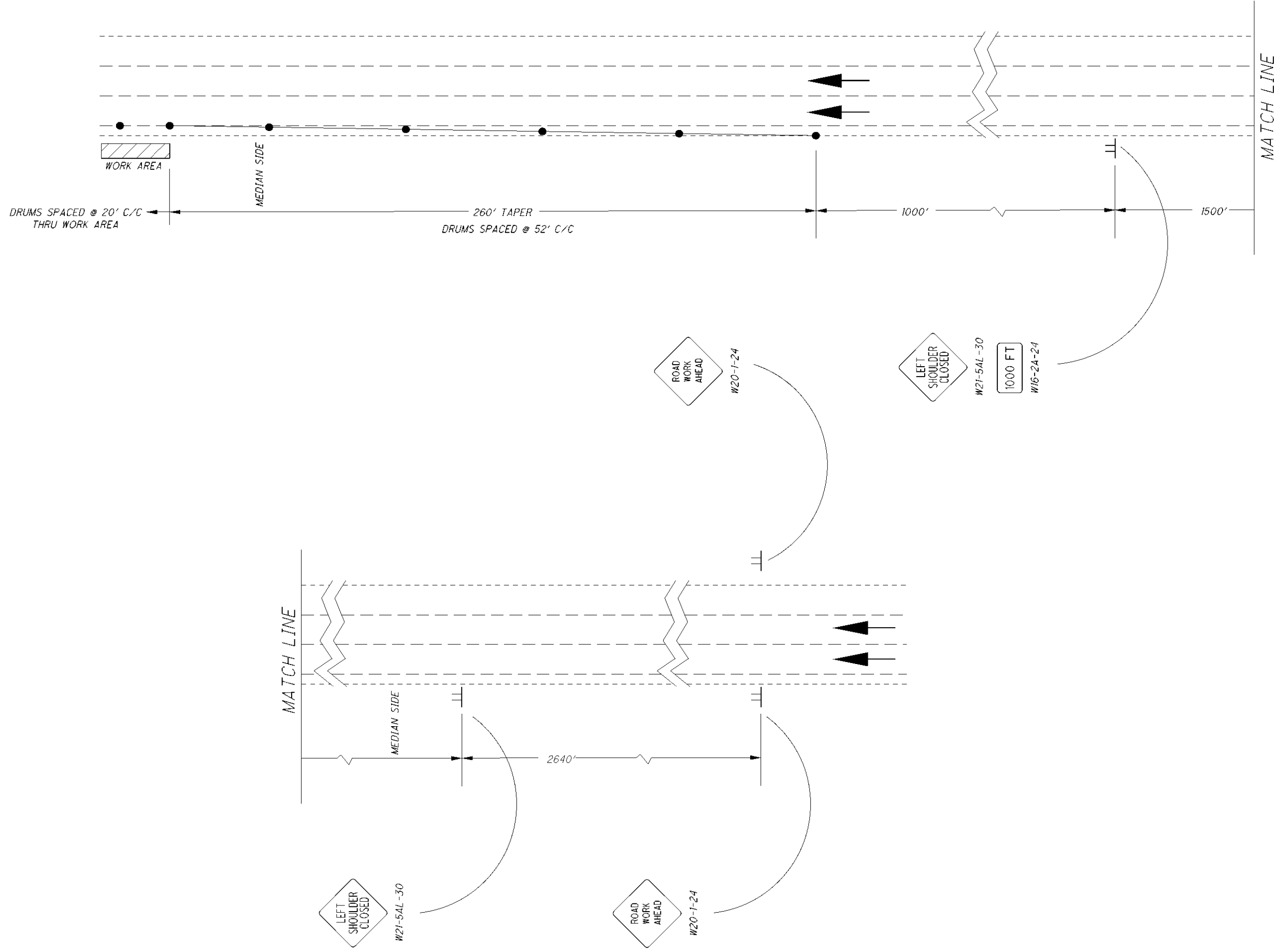
THE CONTRACTOR SHALL HAVE ON SITE, ALL THE MATERIALS NECESSARY TO COMPLETE THIS WORK. THE CONTRACTOR SHALL REMOVE ONLY THE AMOUNT OF EXISTING GUARDRAIL THAT CAN BE REPLACED PRIOR TO THE END OF THE DAY.

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CALCULATED  
REB  
CHECKED  
**MAINTENANCE OF TRAFFIC NOTES**  
**D07-SYST. GR-FY13**  
8  
72

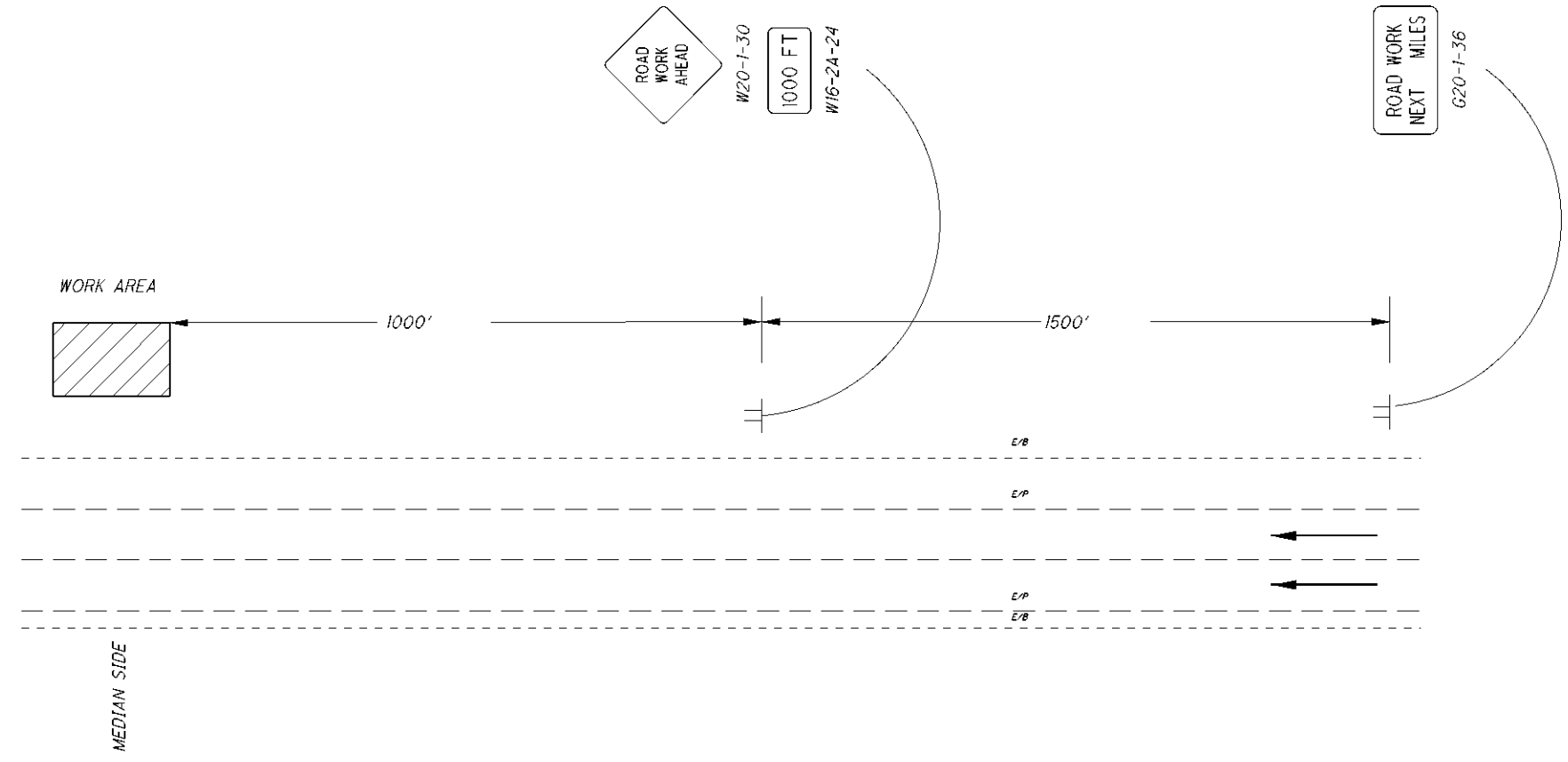


### MULTI-LANE DIVIDED HIGHWAY



CALCULATED
REB
CHECKED

### MULTI-LANE DIVIDED HIGHWAY



								PARTICIPATION				ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
			7	8	13			01/IMS/OT	02/NHS/OT	03/S>2/OT	04/S<2/OT							
															ROADWAY			
								LUMP	LUMP	LUMP	LUMP	201	11000	LUMP	CLEARING AND GRUBBING			
					30					30		202	30001	30	SQ FT	WALK REMOVED, AS PER PLAN	7	
					248				248			202	30701	248	FT	CONCRETE BARRIER REMOVED, AS PER PLAN	7	
					12				12			202	23000	12	SQ YD	PAVEMENT REMOVED		
					14935			150	4026	1427	9332	202	38101	14935	FT	GUARDRAIL REMOVED FOR STORAGE, AS PER PLAN	7	
					1453				1396		57	202	38401	1453	FT	GUARDRAIL REMOVED FOR STORAGE, BARRIER DESIGN, AS PER PLAN	7	
					21				13	3	5	202	42041	21	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T, AS PER PLAN	7	
					67			1	8	15	43	202	42301	67	EACH	ANCHOR ASSEMBLY REMOVED FOR STORAGE, TYPE A, AS PER PLAN	7	
					21				17		4	202	42310	21	EACH	ANCHOR ASSEMBLY REMOVED FOR STORAGE, BARRIER DESIGN, TYPE A		
					3			1			2	202	42812	3	EACH	ANCHOR ASSEMBLY REMOVED FOR STORAGE, TYPE E		
					1540				1412		128	203	10000	1540	CU YD	EXCAVATION		
					365				335		30	203	20000	365	CU YD	EMBANKMENT		
					13969			112.5	3044	1137.5	9675	606	15050	13969	FT	GUARDRAIL, TYPE MGS		
					393.75				231.25	37.5	125	606	15150	393.75	FT	GUARDRAIL, TYPE MGS, HALF POST SPACING		
					1506.25				1343.75		162.5	606	15550	1506.25	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS		
					22				18		4	606	20000	22	EACH	FLARED END SECTION		
					7						7	606	20050	7	EACH	ROUNDED END SECTION		
					10				1	5	4	606	26000	10	EACH	ANCHOR ASSEMBLY, TYPE B		
					46				7	4	34	606	26100	46	EACH	ANCHOR ASSEMBLY, TYPE E		
					47			1	18	6	22	606	26500	47	EACH	ANCHOR ASSEMBLY, TYPE T		
					3				2	1		606	35050	3	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE I		
					22				18		4	606	60012	22	EACH	IMPACT ATTENUATOR, TYPE I (BIDIRECTIONAL)		
					57				38	19		609	24000	57	FT	CURB, TYPE 4-A		
					35					35		622	10160	35	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D		
					1					1		622	25000	1	EACH	CONCRETE BARRIER END SECTION, TYPE D		
					2				2			622	25001	2	EACH	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN	7	
					422			4	115	39	264	626	00100	422	EACH	BARRIER REFLECTOR		
																EROSION CONTROL		
					21979				195	6386	1855	13543	659	10000	21979	SQ YD	SEEDING AND MULCHING	
					1099				10	319	93	677	659	14000	1099	SQ YD	REPAIR SEEDING AND MULCHING	
					1099				10	319	93	677	659	15000	1099	SQ YD	INTER-SEEDING	
					3				0.01	0.88	0.24	1.87	659	20000	3	TON	COMMERCIAL FERTILIZER	
					5				0.04	1.32	0.38	3.26	659	31000	5	ACRE	LIME	
					122				1.08	35.35	10.26	75.31	659	35000	122	M GAL	WATER	
																	MAINTENANCE OF TRAFFIC	
					10				1	4	2	3	614	12500	10	EACH	REPLACEMENT SIGN	
					30				1	13	6	10	614	12600	30	EACH	REPLACEMENT DRUM	
												614	11000		LUMP	MAINTAINING TRAFFIC		
												624	10000		LUMP	MOBILIZATION		

**GENERAL SUMMARY**

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RUN NO.	SHEET NO.	SITE	SIDE	202	202	202	202	202	202	202	202	202	606	606	606	606	606	606	606	606	606	609	622		622	622	626		
				WALK REMOVED, AS PER PLAN SQ FT	PAVEMENT REMOVED SQ YD	GUARDRAIL REMOVED FOR STORAGE, AS PER PLAN FT	GUARDRAIL REMOVED FOR STORAGE, BARRIER DESIGN, AS PER PLAN FT	CONCRETE BARRIER REMOVED, AS PER PLAN FT	ANCHOR ASSEMBLY REMOVED FOR STORAGE, TYPE A, AS PER PLAN EA	ANCHOR ASSEMBLY REMOVED FOR STORAGE, TYPE E EA	ANCHOR ASSEMBLY REMOVED, TYPE T, AS PER PLAN EA	ANCHOR ASSEMBLY REMOVED FOR STORAGE, BARRIER DESIGN, TYPE A EA	GUARDRAIL, TYPE MGS FT	GUARDRAIL, TYPE MGS, HALF POST SPACING FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS FT	ANCHOR ASSEMBLY, TYPE B EA	ANCHOR ASSEMBLY, TYPE E EA	ANCHOR ASSEMBLY, TYPE T EA	FLARED END SECTION EA	ROUNDED END SECTION EA	MGS BRIDGE TERMINAL ASSEMBLY, TYPE I EA	IMPACT ATTENUATOR, TYPE I (BIDIRECTIONAL) EA	CURB, TYPE 4-A FT	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN EA		CONCRETE BARRIER END SECTION, TYPE D EA	CONCRETE BARRIER, SINGLE SLOPE, TYPE D FT	BARRIER REFLECTOR EA	
1	14, 15	CLA-40-14.01	EB			550			1				612.5					1		1								13	
2	16, 17	CLA-40-14.08	WB			612.5			1				650			1				1								14	
3	18	CLA-41-20.63	WB			58	14					1	25		50				1			1						2	
4	18	CLA-41-20.72	EB			54	15					1	31.25		37.5				1			1						2	
5	19	CLA-41-20.77	WB			54	14					1	31.25		37.5				1			1						2	
6	20	CLA-41-20.83	EB-RT			139			1				37.5					1				1						2	
7	20	CLA-41-20.84	EB-MED			50	14						31.25		37.5				1			1						2	
8	20	CLA-41-21.01	WB			240			1				218.75					1										6	
9	21	CLA-70-2.81	EB			150			1	1			112.5					1	1									4	
10	22	LOG-33-17.26	EB-MED			500							87.5		87.5			1	1			1						4	
11	22, 23	LOG-33-17.76	WB-MED			500							87.5		87.5			1	1			1						4	
12	24	LOG-33-18.80	MED			240							25	37.5	75			1	1	1								3	
13	25	LOG-33-18.82	EB-RT					124					212.5					1				1	18.75	1				6	
14	24	LOG-33-18.85	MED			240							25	37.5	62.5			1	1			1						3	
15	26	LOG-33-18.88	WB-RT		12			124					337.5					1				1	18.75	1				8	
16	27	LOG-33-19.84	EB-MED			52	190				1	1	62.5		137.5			1	1			1						5	
17	27	LOG-33-19.96	WB-MED			52	190				1	1	62.5		125			1	1			1						4	
18	28	LOG-33-20.76	EB-MED			88	25						100		87.5				1			1						4	
19	28	LOG-33-20.91	WB-MED			87	27						100		87.5				1			1						4	
20	29	LOG-33-21.06	EB-MED			89	26						137.5		50				1			1						4	
21	29	LOG-33-21.09	WB-MED			87	27						100		50				1			1						3	
22	30	LOG-33-21.91	EB-MED			38	188				1	1	37.5		81.25			1	1			1						3	
23	30	LOG-33-22.02	WB-MED			38	190				1	1	37.5		75			1	1			1						3	
24	31	LOG-33-25.91	EB-MED			100	187.5				1	1	87.5		75			1	1			1						4	
25	31	LOG-33-26.00	WB-MED			100	187.5				1	1		87.5	100			1	1			1						4	
26L,R	32-34	MIA-48-15.63	NB/SB			1638			4				1600					4	2									37	
27L,R	35,36	MIA-48-15.92	NB/SB			888			4				825					4										21	
28L,R	37	MIA-48-16.08	NB/SB			512.5			4				562.5					4										16	
29L,R	38	MIA-48-16.33	NB/SB			288			4				275					4										10	
30L,R	39,40	MIA-48-17.74	NB/SB			400			4				387.5					4										12	
31	41	MOT-4-17.31	NB			60			1				62.5					1										3	
32	42,43	MOT-4-21.98	NB			144	53.5				1	1	125		87.5			1	1			1						5	
33	42,43	MOT-4-22.01	SB			154	52				1	1	125		50			1	1	1			1					4	
34	44	MOT-4-23.43	SB			53			2				143.75					1	1									5	
36	45	MOT-4-23.96	NB-RT			113			1				81.25					1										3	
35	46	MOT-4-23.95	NB-MED			129	52						93.75		12.5					1			1					3	
37	47	MOT-4-24.01	SB-MED			120			1				93.75		12.5				1			1						3	
38	47	MOT-4-24.02	SB-RT			114			1				93.75					1				1						3	
39	48	MOT-4-24.10	NB-MED			275					1		237.5	12.5					1									6	
40	48	MOT-4-24.00	NB-RT			300					1		275	12.5					1									6	
41	50	MOT-35-14.53	EB			135.5			1				50	25				1	1									3	
42	50	MOT-35-14.58	WB			140			1				87.5	18.75				1		1								4	
43	51	MOT-35-15.12	WB			137.5			1				137.5					1	1									4	
44	52	MOT-40-16.08	WB	21		37.5			1				50					1										2	
45	52	MOT-40-16.10	WB						1				25						1									1	
SUBTOTAL				21	12	9757.5	1452.5	248	36	1	13	21	8581.25	231.25	1506.25	5	29	23	22	1	2	22	37.5	2				264	
TOTALS CARRIED TO NEXT SHEET				30	12	9,757.5	1,452.5	248	36	1	13	21	8,581.25	231.25	1,506.25	5	29	23	22	1	2	22	38	2					264

ESTIMATED QUANTITIES

D07-SYST. GR-FY13

CALCULATED  
CHECKED

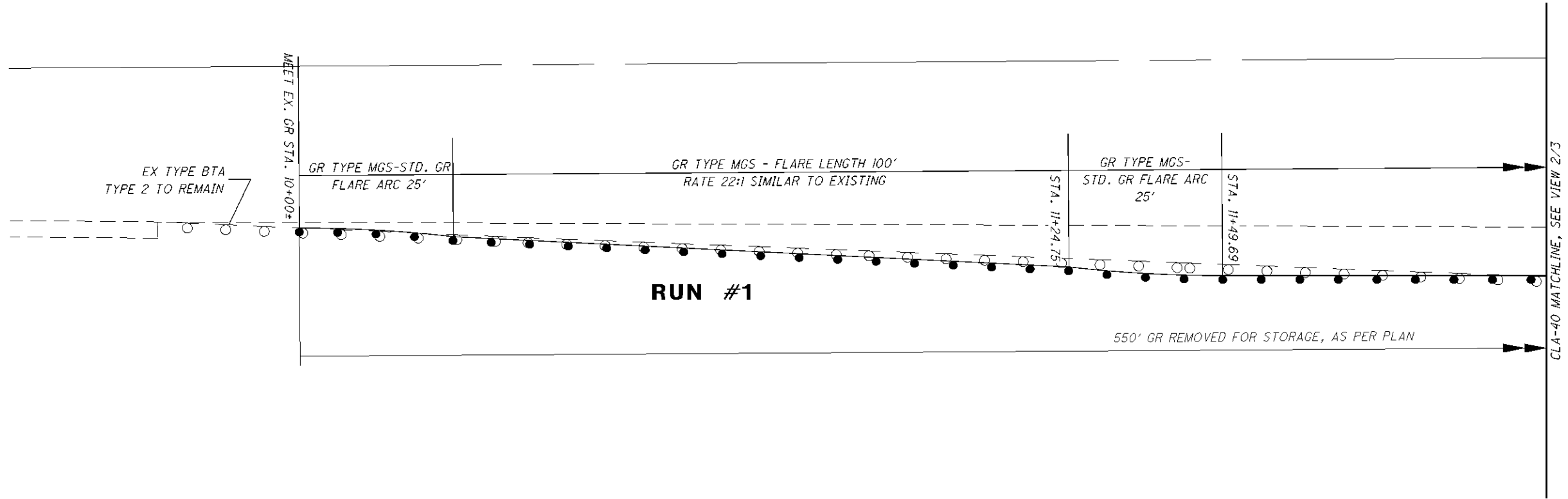
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72

RUN NO.	SHEET NO.	SITE	SIDE	202	202	202	202	202	202	202	202	202	202	606	606	606	606	606	606	606	606	606	609	622		622	622	626	
				WALK REMOVED, AS PER PLAN	PAVEMENT REMOVED	GUARDRAIL REMOVED FOR STORAGE, AS PER PLAN	GUARDRAIL REMOVED FOR STORAGE, BARRIER DESIGN, AS PER PLAN	CONCRETE BARRIER REMOVED, AS PER PLAN	ANCHOR ASSEMBLY REMOVED FOR STORAGE, TYPE A, AS PER PLAN	ANCHOR ASSEMBLY REMOVED FOR STORAGE, TYPE E	ANCHOR ASSEMBLY REMOVED, TYPE T, AS PER PLAN	ANCHOR ASSEMBLY REMOVED FOR STORAGE, BARRIER DESIGN, TYPE A		GUARDRAIL, TYPE MGS	GUARDRAIL, TYPE MGS, HALF POST SPACING	GUARDRAIL, BARRIER DESIGN, TYPE MGS	ANCHOR ASSEMBLY, TYPE B	ANCHOR ASSEMBLY, TYPE E	ANCHOR ASSEMBLY, TYPE T	FLARED END SECTION	ROUNDED END SECTION	MGS BRIDGE TERMINAL ASSEMBLY, TYPE I	IMPACT ATTENUATOR, TYPE I (BIDIRECTIONAL)	CURB, TYPE 4-A	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN		CONCRETE BARRIER END SECTION, TYPE D	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	BARRIER REFLECTOR
				SO FT	SO YD	FT	FT	FT	EA	EA	EA	EA		FT	FT	FT	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
46	53	MOT-48-4.60	SB			87.5			1		1			37.5												1	35	1	
47	54	MOT-48-4.74	NB			112.5			1		1			112.5	12.5			1	1							1		5	
48	54	MOT-48-4.79	SB			112.5			1		1			50	12.5			1	1									3	
49	55	MOT-48-4.81	NB			562.5			2					575					2									14	
50	56	MOT-48-5.04	SB			162.5			2																				
51	56	MOT-48-5.14	NB			62.5			1					25				1										2	
52	57	MOT-48-5.18	SB			31.25			1					25														1	
53	57	MOT-48-5.19	SB			70			1					50				1										2	
SHEET 58 NOT USED																													
56	59	MOT-725-16.56	EB			95			1					75	12.5				1									3	
57	59	MOT-725-17.44	WB			33			1					50				1										2	
58	60	SHE-47-13.93	EB			535			1		1			525				1	3									15	
59	61	SHE-47-13.95	WB			525			1	1				525				2	3									15	
60	62	SHE-47-13.96	WB			100			1					150			1											4	
61	63	SHE-47-13.97	EB			125			1					112.5	25				3									6	
62	64	SHE-47-14.08	EB			100			1					75	25				1									3	
63	65	SHE-47-14.10	EB			525.5				1	1			506.25	37.5			1	1			1						13	
64	64	SHE-47-14.08	WB			125			1					125					2									5	
65	66	SHE-47-14.09	WB			800			1		1			825	37.5				2			1						20	
66	65	SHE-47-14.11	EB			225					2			262.5					2			2						8	
67L&R	67,68	SHE-48-2.59	NB/SB			273			4					437.5				4										12	
68	69	SHE-48-3.05	NB			125.5			3					250				2	1			1						8	
69	69	SHE-48-3.09	NB/SB			138			2					212.5				1	1			1						6	
70L&R	70,71	SHE-48-3.20	NB/SB			251			3					381.25				3										10	
SUBTOTAL THIS SHEET				0	0	5177.25	0	0	31	2	8	0		5387.5	162.5	0	5	17	24	0	6	1	0	19	0		1	35	158
SUBTOTAL FROM SHEET 12				30	12	9757.50	1452.5	248	36	1	13	21		8581.25	231.25	1506.25	5	29	23	22	1	2	22	38	2		0	0	264
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>				30	12	14,935	1,452.5	248	67	3	21	21		13,969	393.75	1,506.25	10	46	47	22	7	3	22	57	2		1	35	422

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CLA-40 EB, WEST OF GRENMOUNT AVE. (VIEW 1/3)

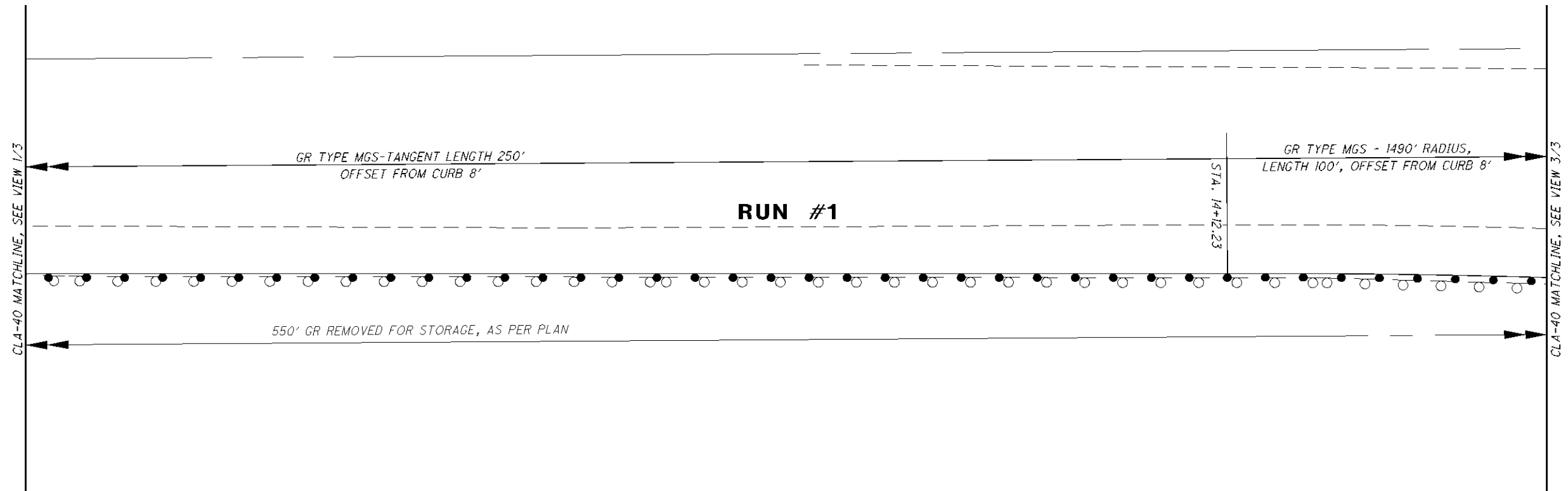
APPROX. SLM 14.01



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

CLA-40 EB, WEST OF GRENMOUNT AVE. (VIEW 2/3)

APPROX. SLM 14.01



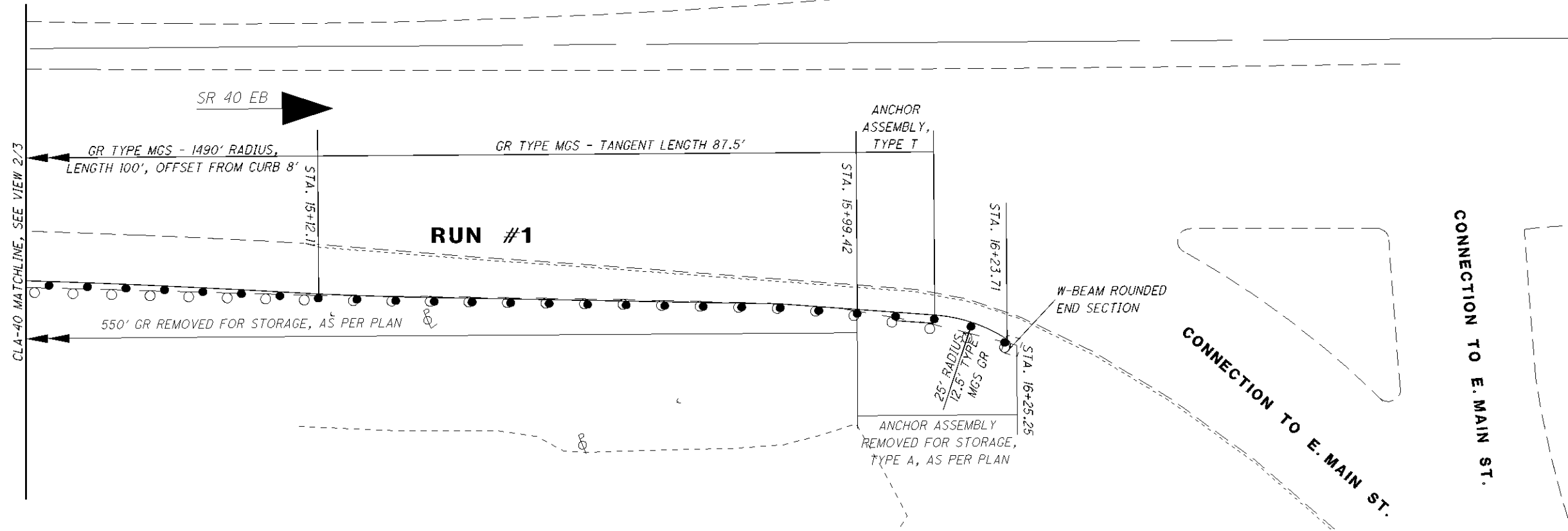
CALCULATED  
CHECKED

CLA-40 EB, WEST OF GRENMOUNT AVE.  
SLM 14.01-RUN #1

D07-SYST. GR-FY13

CLA-40 EB, WEST OF GRENMOUNT (VIEW 3/3)

APPROX. SLM 14.01



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

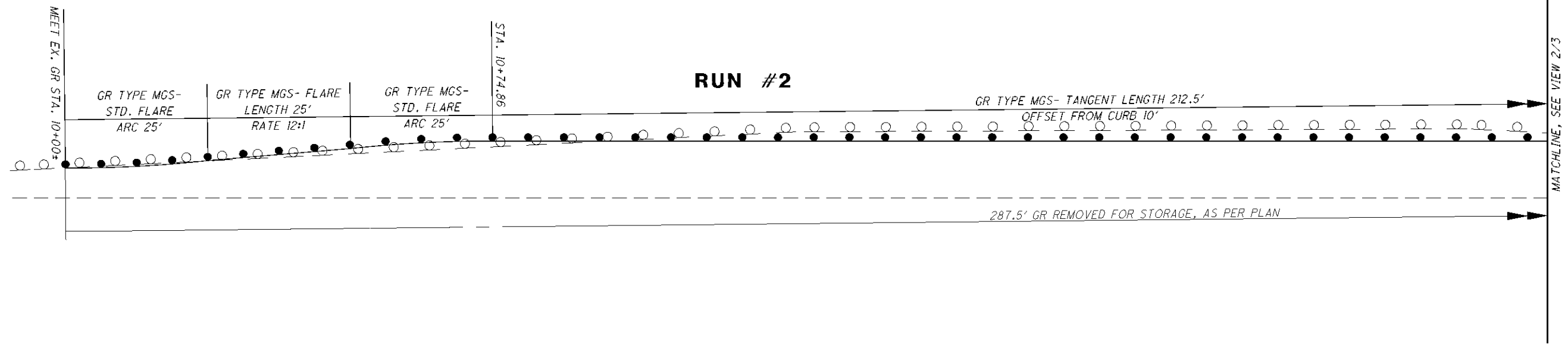
CLA-40 EB, WEST OF GRENMOUNT AVE.  
SLM 14.01- RUN #1

D07-SYST. GR-FY13

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CLA-40 WB, WEST OF GRENMOUNT AVE. (VIEW 1/3)

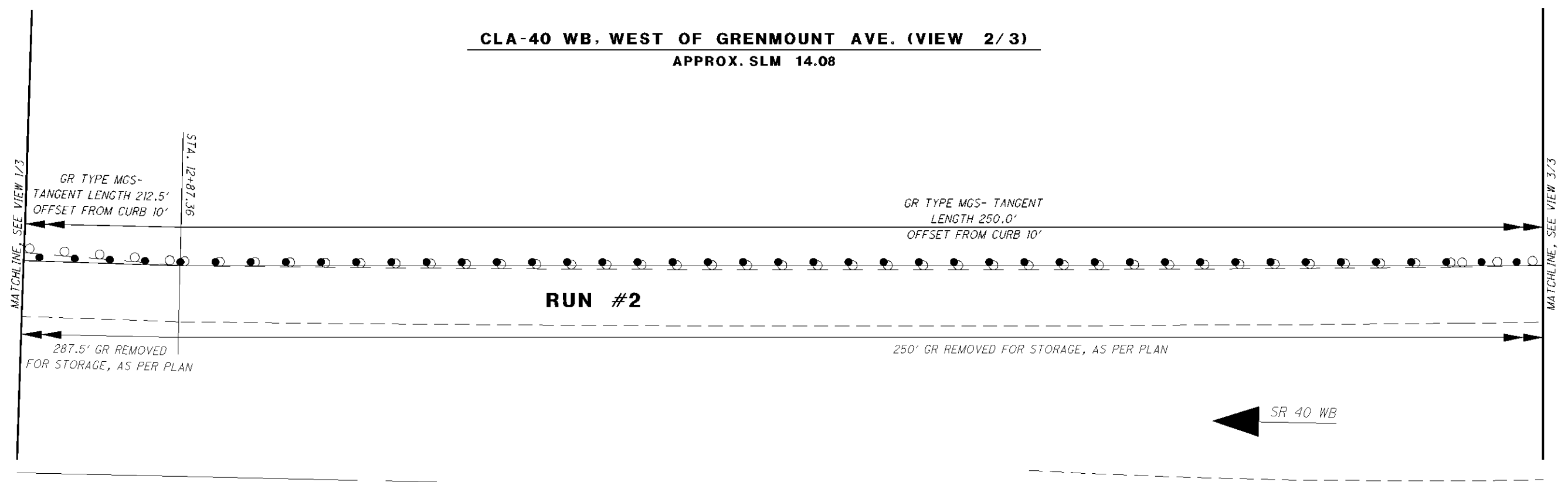
APPROX. SLM 14.08



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

CLA-40 WB, WEST OF GRENMOUNT AVE. (VIEW 2/3)

APPROX. SLM 14.08



CALCULATED  
CHECKED

CLA-40 WB, WEST OF GRENMOUNT AVE.  
SLM 14.08 - RUN #2

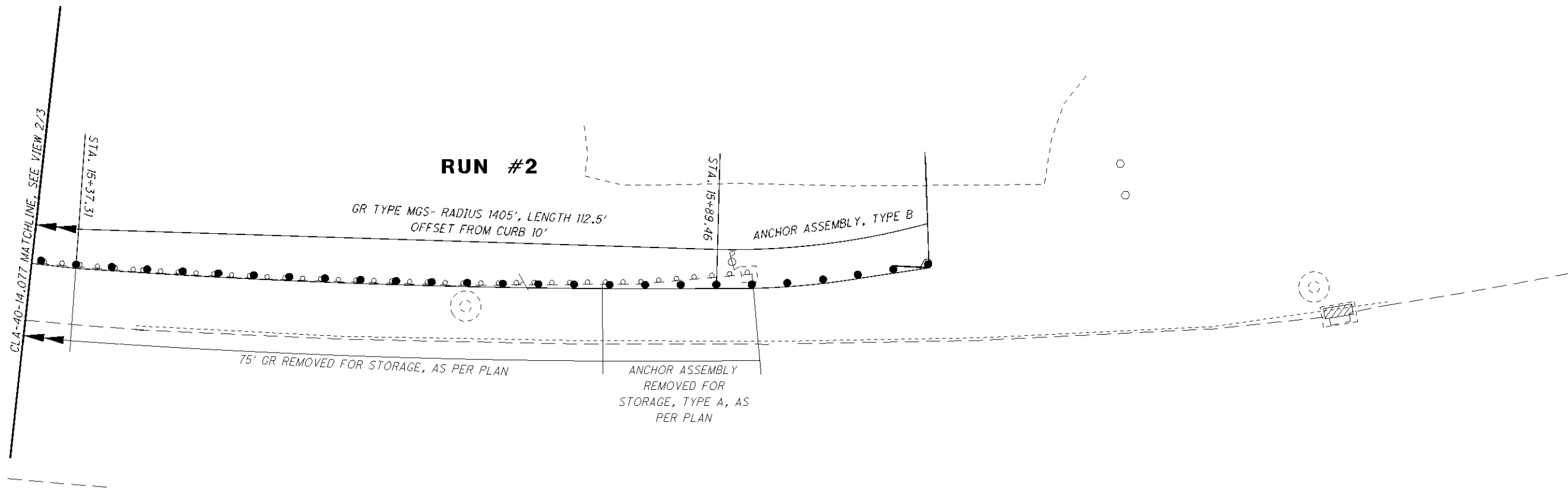
D07-SYST. GR-FY13

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CLA-40 WB, WEST OF GRENMOUNT AVE. (VIEW 3/3)

APPROX. SLM 14.08



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

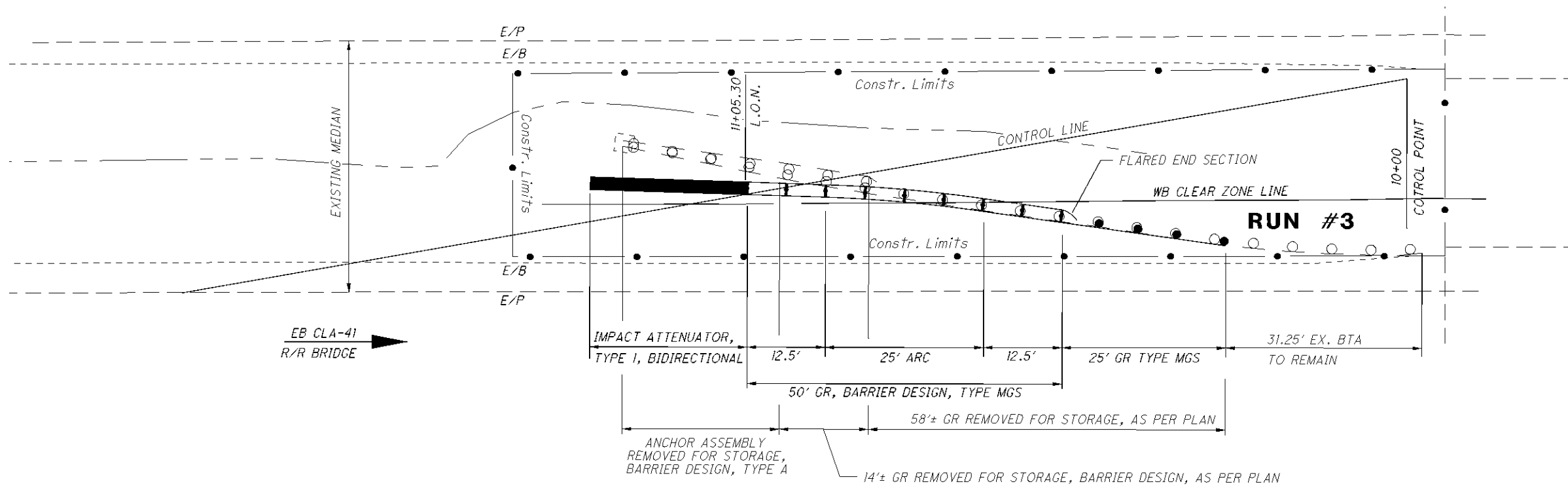
CLA-40 WB, WEST OF GRENMOUNT AVE.  
SLM 14.08 RUN #2

D07-SYST. GR-FY13

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**CLA-41 WB, MEDIAN \* STRUCTURE OVER R/R (VIEW 1/1)**

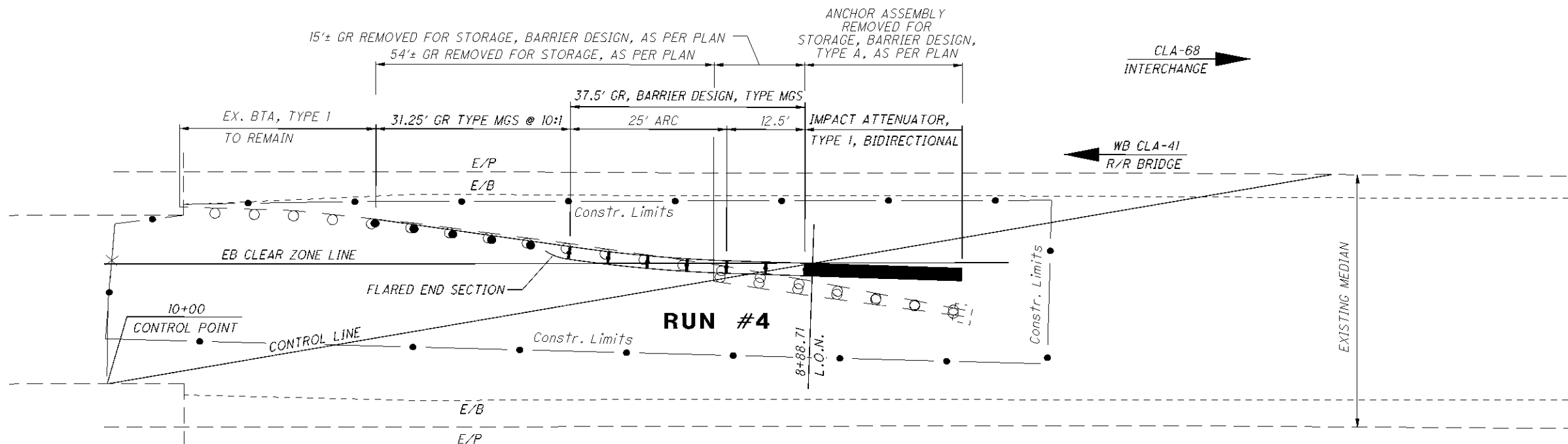
APPROX. SLM 20.63




FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

**CLA-41 EB, MEDIAN \* STRUCTURE OVER R/R (VIEW 1/1)**

APPROX. SLM 20.72

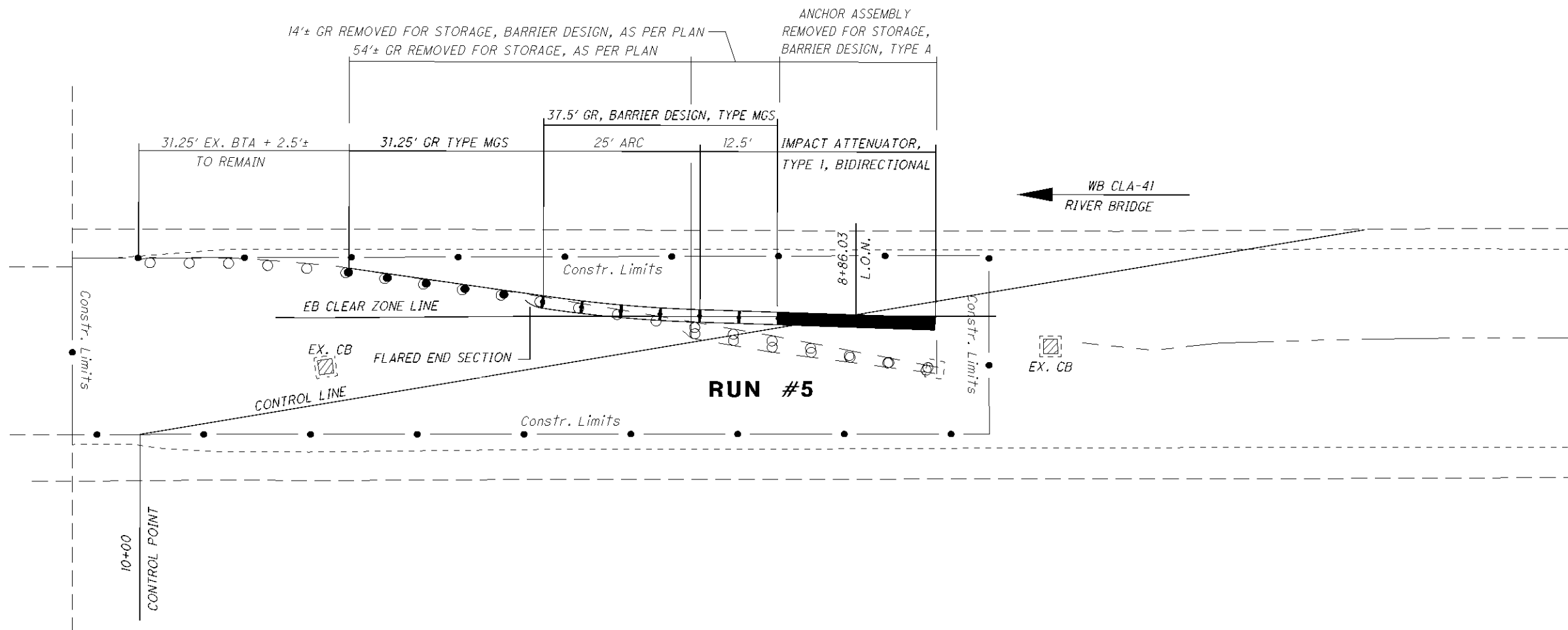


  
 CALCULATED  
 CHECKED  
**CLA-41 EB/WB, \* STRUCTURE OVER R/R BRIDGE**  
**SLM 20.63 - 20.72 RUN #3, #4**  
**D07-SYST. GR-FY13**  
 18  
 71

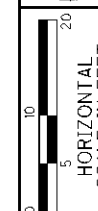
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CLA-41 WB, MEDIAN \* STRUCTURE OVER MAD RIVER (VIEW 1/1)

APPROX. SLM 20.75



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

CLA-41 WB MEDIAN - STR. OVER MAD RIVER  
SLM 20.75 RUN #5

D07-SYST. GR-FY13

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**CLA-41 WB, MEDIAN, LT & RT, \* STRUCTURE OVER R/R (VIEW 1/1)**  
**APPROX. SLM 20.83**

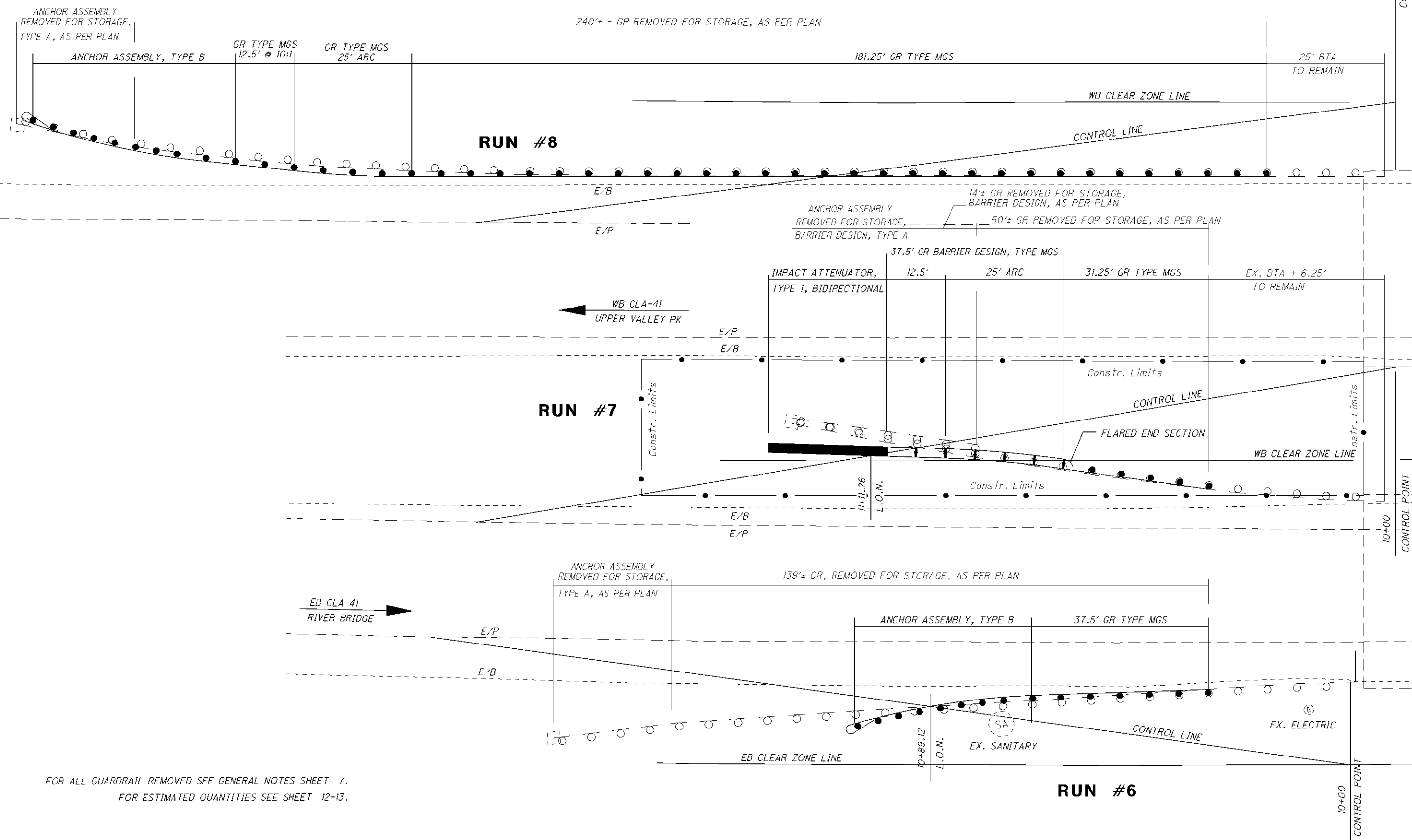


CALCULATED  
 CHECKED

**CLA-41, STR. OVER MAD RIVER (WEST SIDE)**  
**SLM 20.8 RUN #6, #7, #8**

**D07-SYST. GR-FY13**

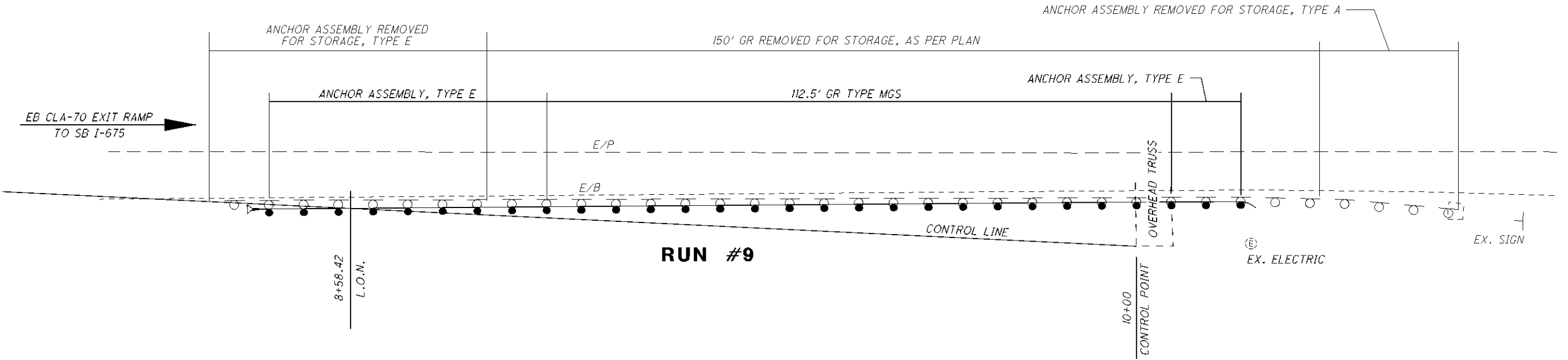
20  
 72



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
 FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

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**CLA-70 EB, RT \* SIGN TRUSS - RAMP TO SB I-675 (VIEW 1/1)**  
**APPROX. SLM 2.81**



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
 FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

  
  
 HORIZONTAL SCALE IN FEET

CALCULATED  
 CHECKED

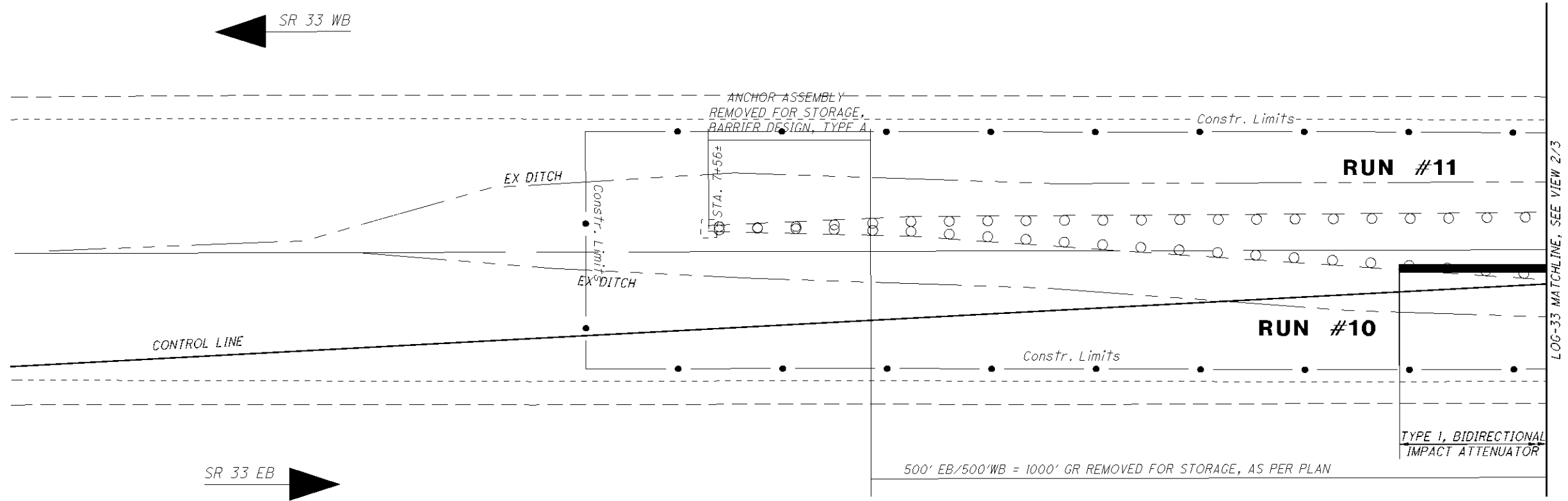
**CLA-70 EB RT \* RAMP TO IR-675 SOUTH**  
**SLM 2.80 RUN #9**

**D07-SYST. GR-FY13**

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LOG-33 EB/ WB \* SR540 (VIEW 1/ 3)

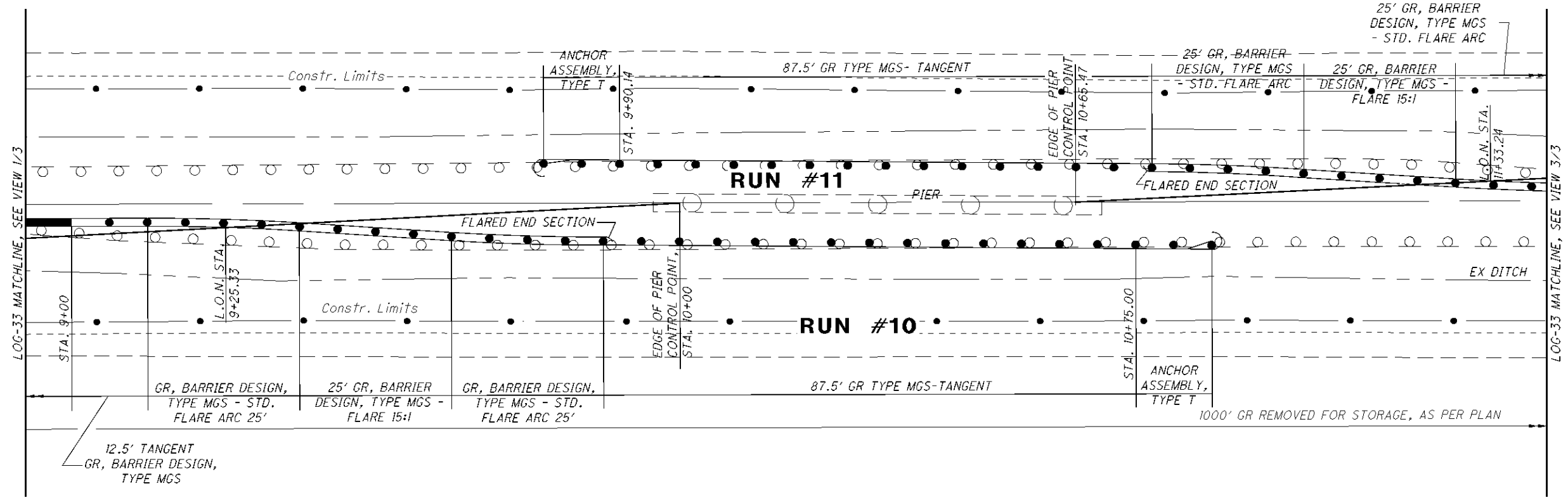
APPROX. SLM 17.20 - 17.22



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

LOG-33 EB/ WB \* SR540 (VIEW 2/ 3)

APPROX. SLM 17.20 - 17.22



CALCULATED  
CHECKED

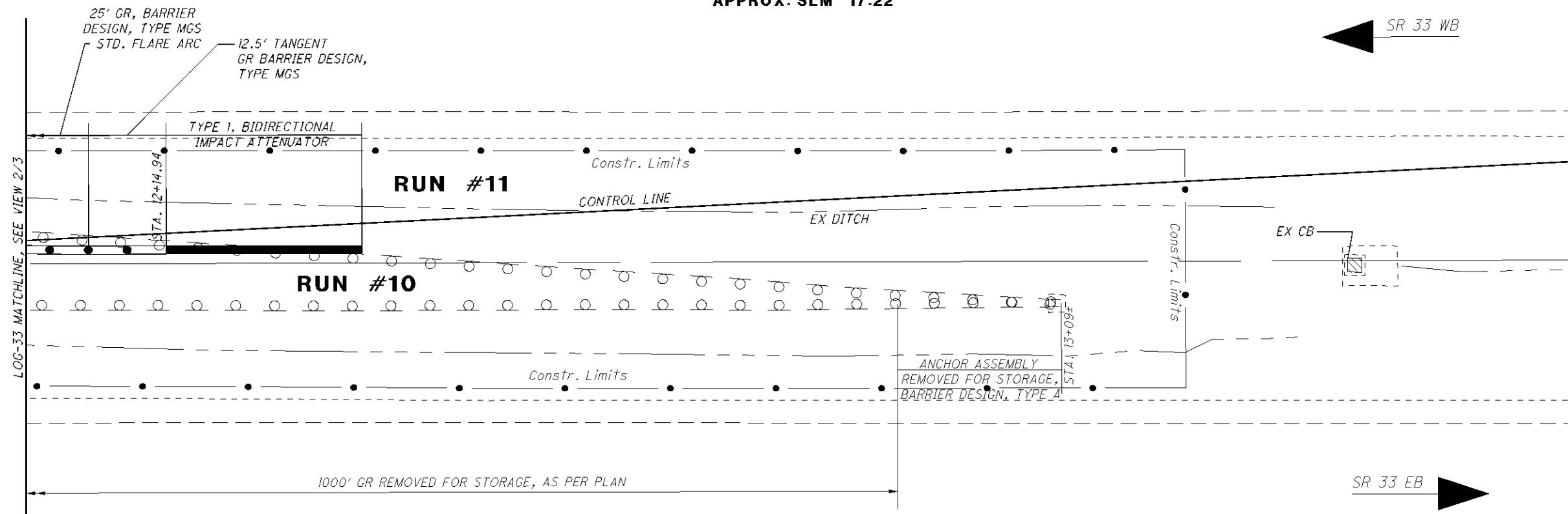
LOG-33 EB/ WB \* SR-540, PIER PROTECTION  
SLM 17.20 - 17.22 RUN #10, #11

D07-SYST. GR-FY13

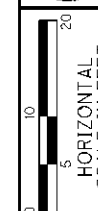
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LOG-33 UNDER SR540 (VIEW 3/3)

APPROX. SLM 17.22



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



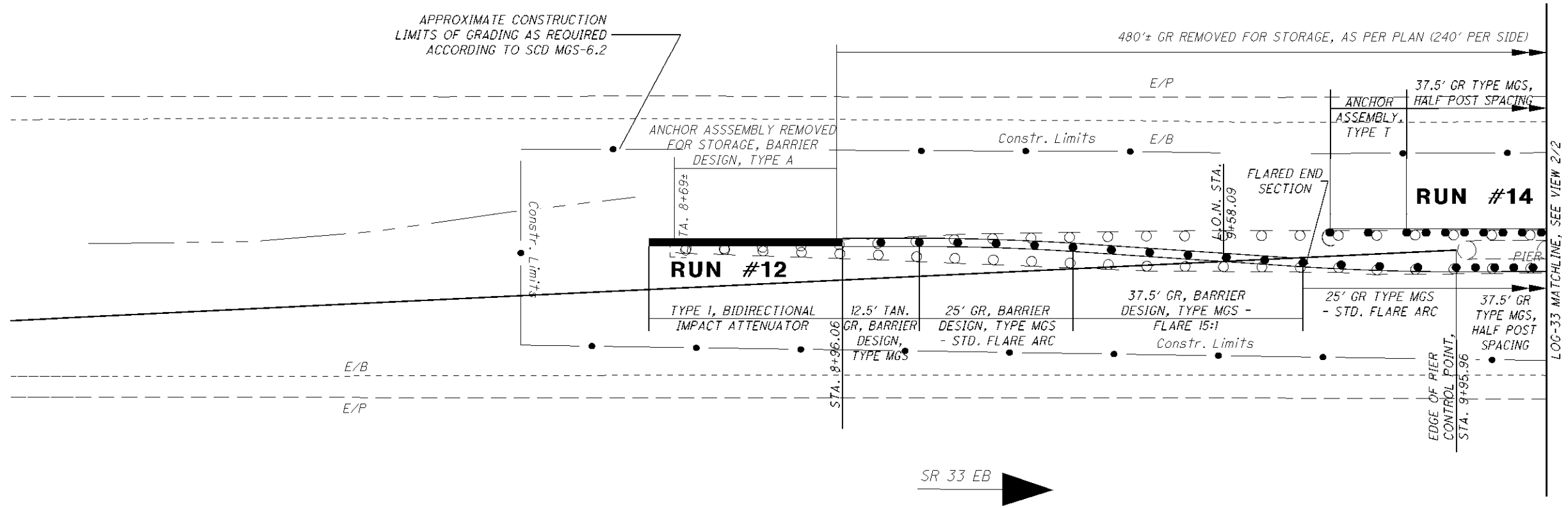
CALCULATED  
CHECKED

LOG-33 EB / WB \* SR-540, PIER PROTECTION  
SLM 17.20 - 17.22 RUN #10, #11

D07-SYST. GR-FY13

LOG-33 MEDIAN AT TWP RD 55 - PIER PROTECTION (VIEW 1/2)

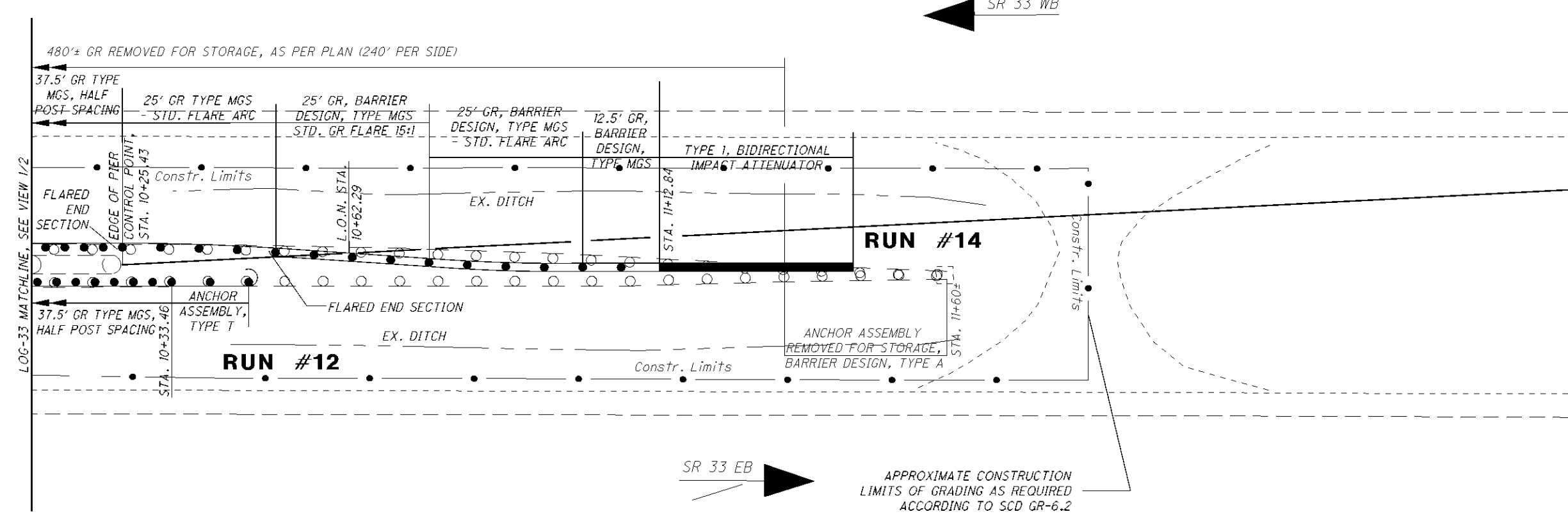
APPROX. SLM 18.80 - 18.85



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

LOG-33 MEDIAN AT TWP RD 55 - PIER PROTECTION (VIEW 2/2)

APPROX. SLM 18.80 - 18.85



APPROXIMATE CONSTRUCTION LIMITS OF GRADING AS REQUIRED ACCORDING TO SCD GR-6.2

LOG-33 EB/WB MEDIAN AT TWP RD-55  
SLM 18.80 - 18.85 RUN #12, #14

D07-SYST. GR-FY13

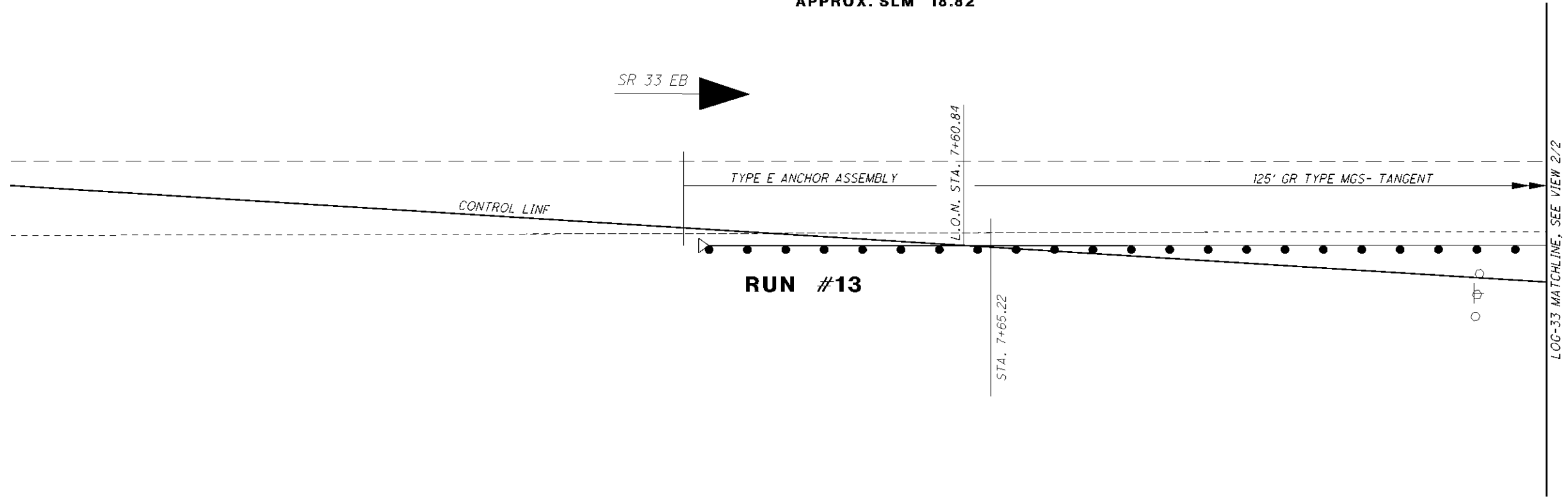
24  
72

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LOG-33 EB RT AT TWP RD 55 - PIER PROTECTION (VIEW 1/2)

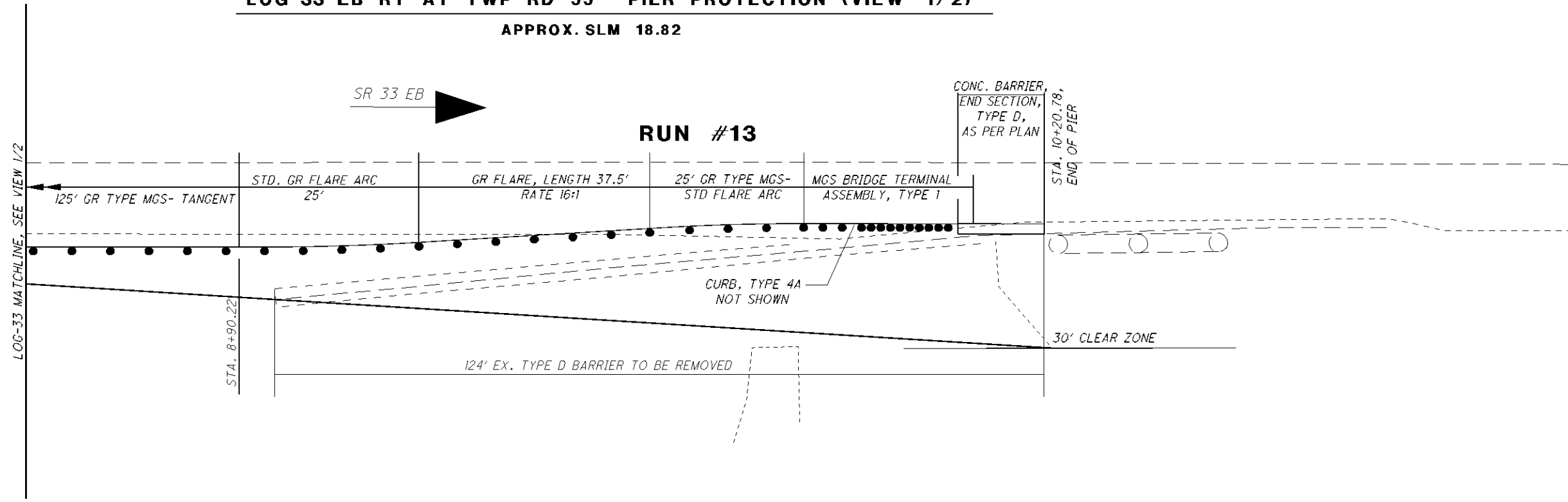
APPROX. SLM 18.82



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

LOG-33 EB RT AT TWP RD 55 - PIER PROTECTION (VIEW 1/2)

APPROX. SLM 18.82



CALCULATED  
CHECKED

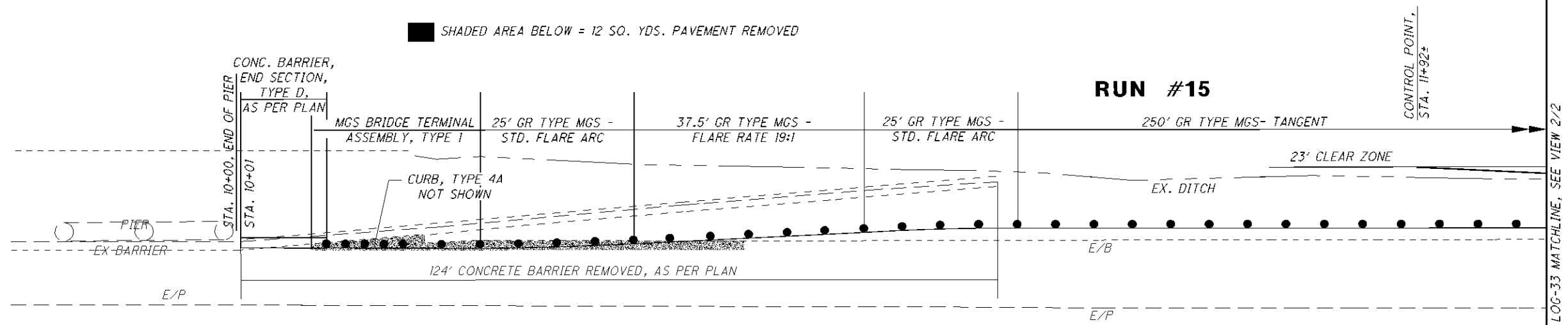
LOG-33 EB RT AT TWP RD-55 PIER PROTECT.  
SLM 18.82 RUN #13

D07-SYST. GR-FY13

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**LOG-33 WB RT AT TWP RD 55 - PIER PROTECTION (VIEW 1/2)**

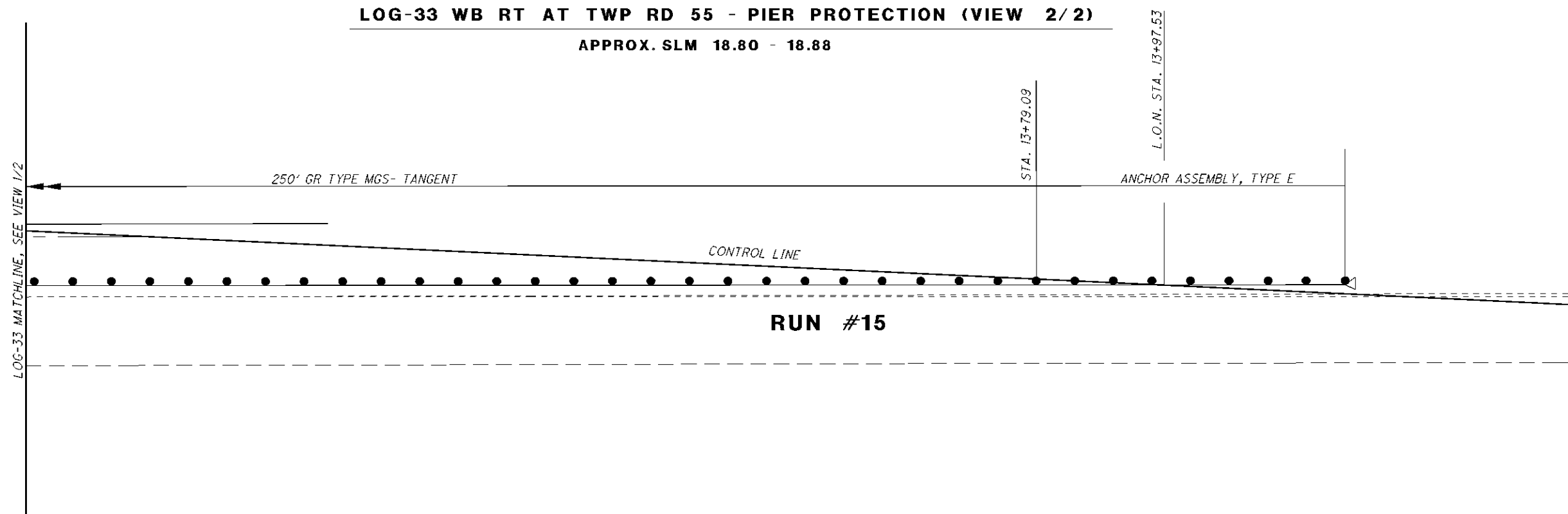
APPROX. SLM 18.80 - 18.88



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR B4FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

**LOG-33 WB RT AT TWP RD 55 - PIER PROTECTION (VIEW 2/2)**

APPROX. SLM 18.80 - 18.88



CALCULATED  
CHECKED

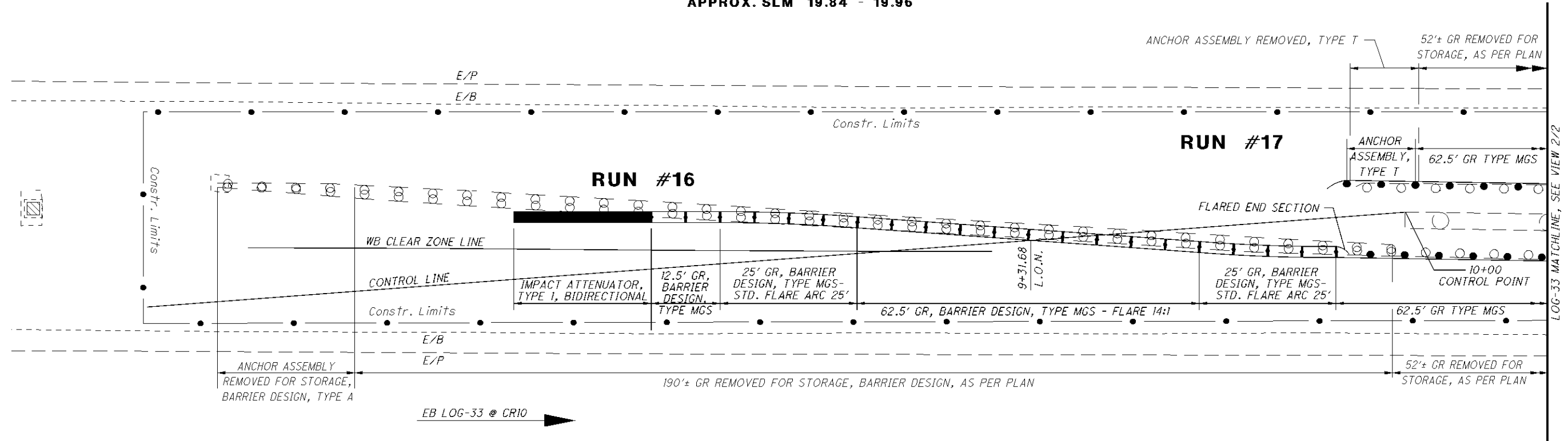
LOG-33 WB RT AT TWP RD55 - PIER PROTECT.  
SLM 18.88 RUN #15

D07-SYST. GR-FY13

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LOG-33 EB/WB MEDIAN AT CR10 - PIER PROTECTION (VIEW 1/2)

APPROX. SLM 19.84 - 19.96



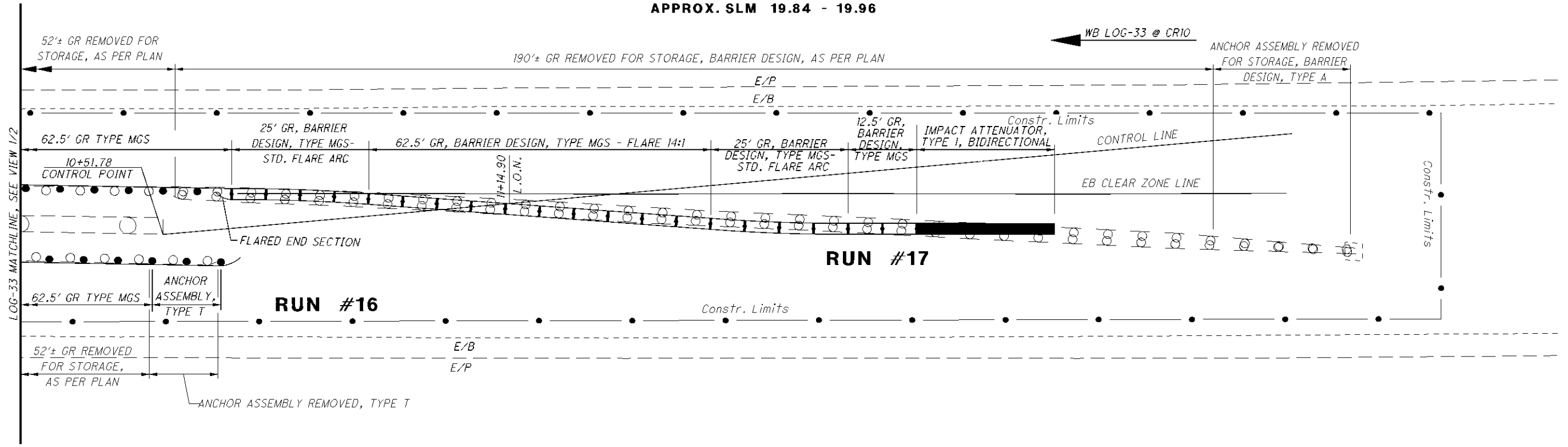
CALCULATED  
CHECKED

LOG-33 E/W MEDIAN/CR10 - PIER PROTECTION  
SLM 19.80-19.90 RUN #16 & #17

FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

LOG-33 EB/WB MEDIAN AT CR10 - PIER PROTECTION (VIEW 2/2)

APPROX. SLM 19.84 - 19.96

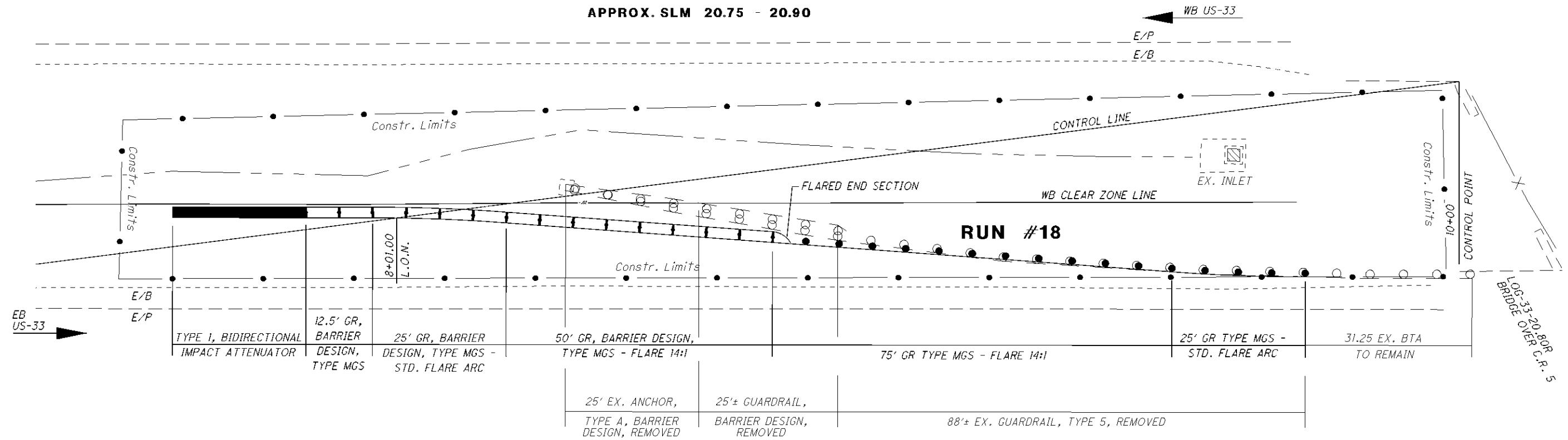


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D07-SYST. GR-FY13

**LOG-33 MEDIAN - OVER CR5 - BRIDGE PROTECTION (VIEW 1/2)**

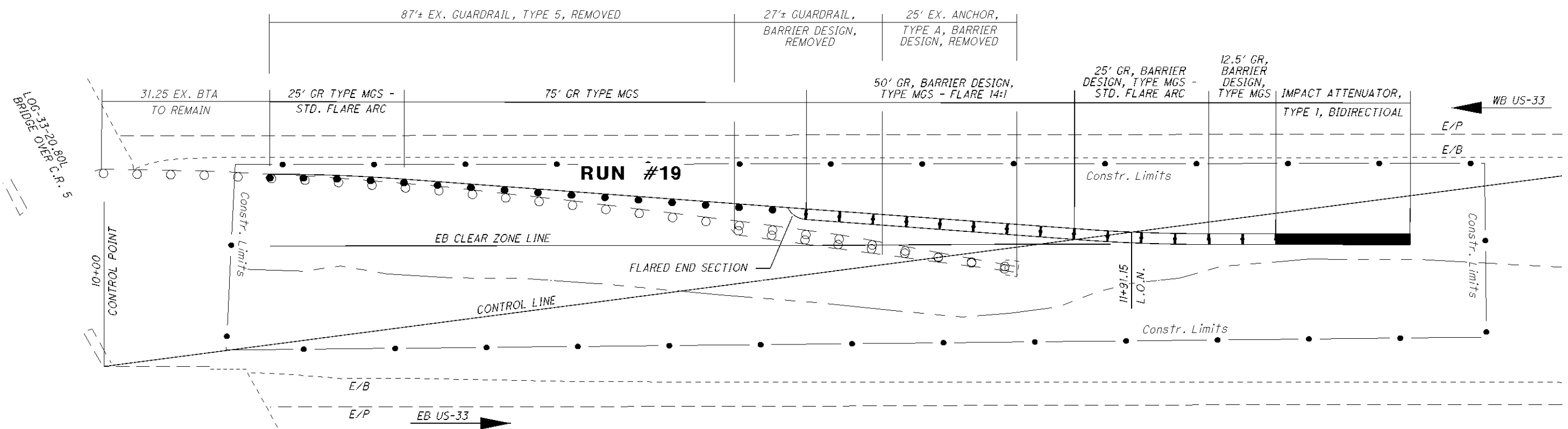
APPROX. SLM 20.75 - 20.90



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

**LOG-33 MEDIAN - OVER CR5 - BRIDGE PROTECTION (VIEW 2/2)**

APPROX. SLM 20.75 - 20.90



CALCULATED  
CHECKED

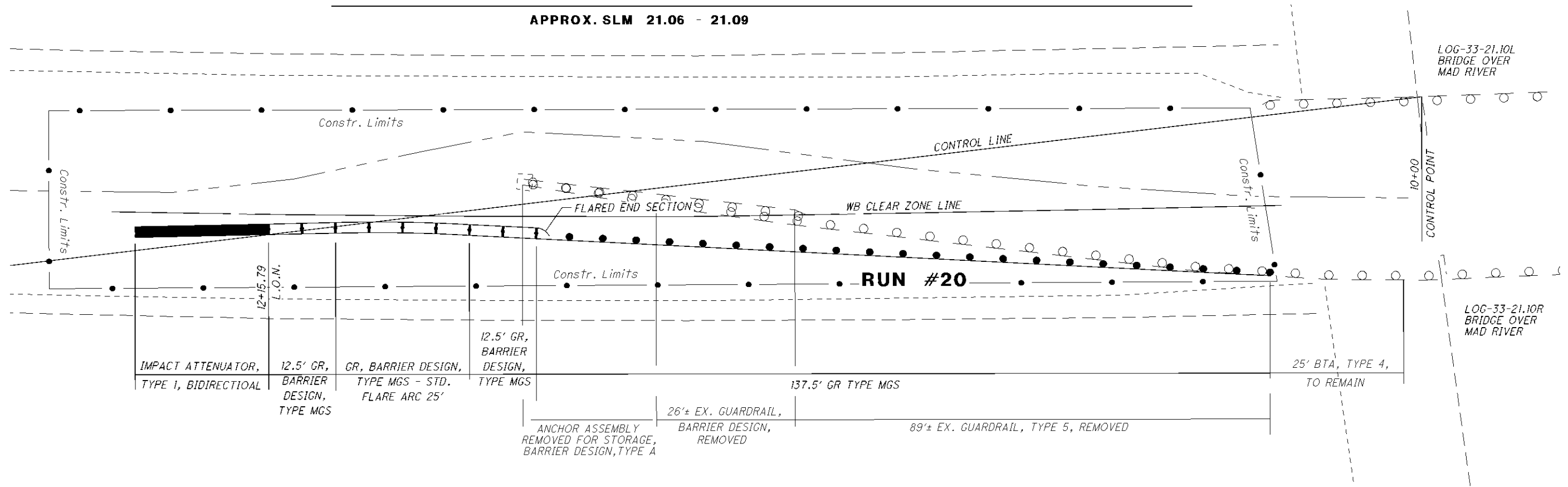
**LOG-33 AT CR-5 - MEDIAN BRIDGE PROTECTION**  
**SLM 20.75 - 20.90 RUN #18, #19**

**D07-SYST. GR-FY13**

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**LOG-33 EB/WB AT STRUCTURE OVER MAD RIVER - BRIDGE PROTECTION (VIEW 1/2)**

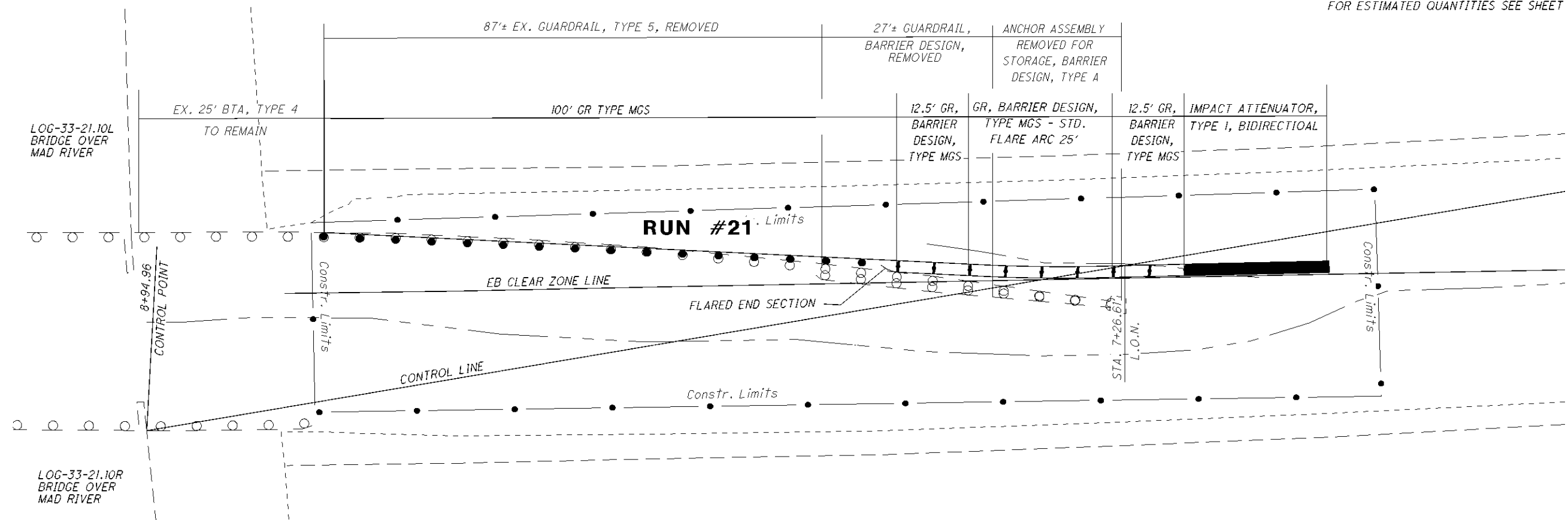
APPROX. SLM 21.06 - 21.09



**LOG-33 EB/WB AT STRUCTURE OVER MAD RIVER - BRIDGE PROTECTION (VIEW 1/2)**

APPROX. SLM 21.06 - 21.09

FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

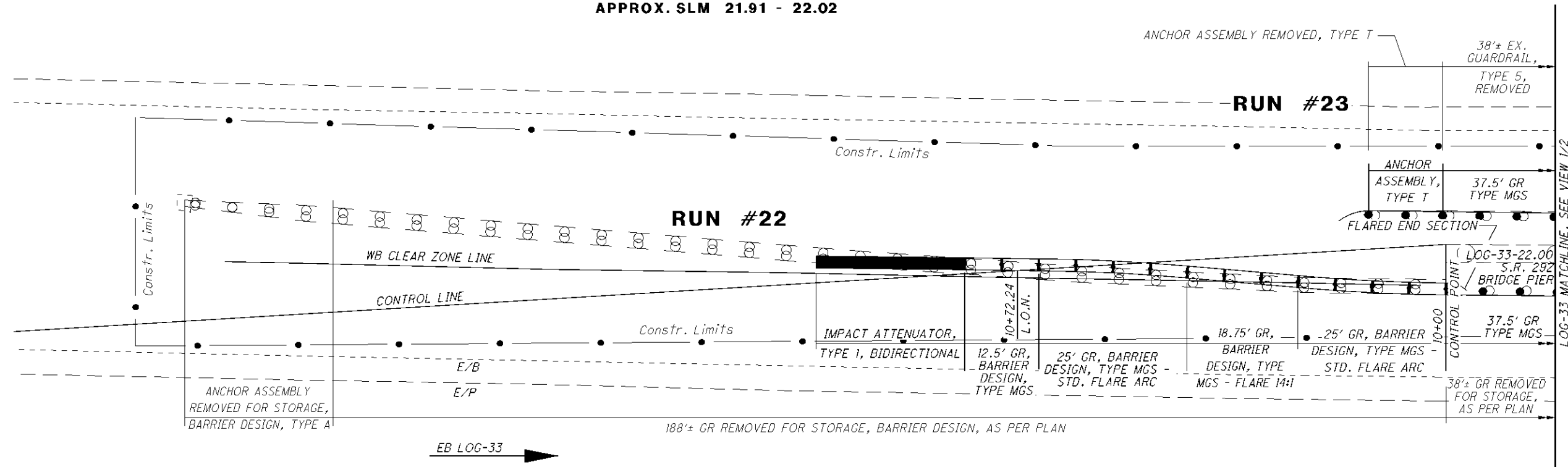
**LOG-33 AT MAD RIVER - BRIDGE PROTECTION**  
**SLM 21.06 - 21.09 RUN #20, #21**

**D07-SYST. GR-FY13**

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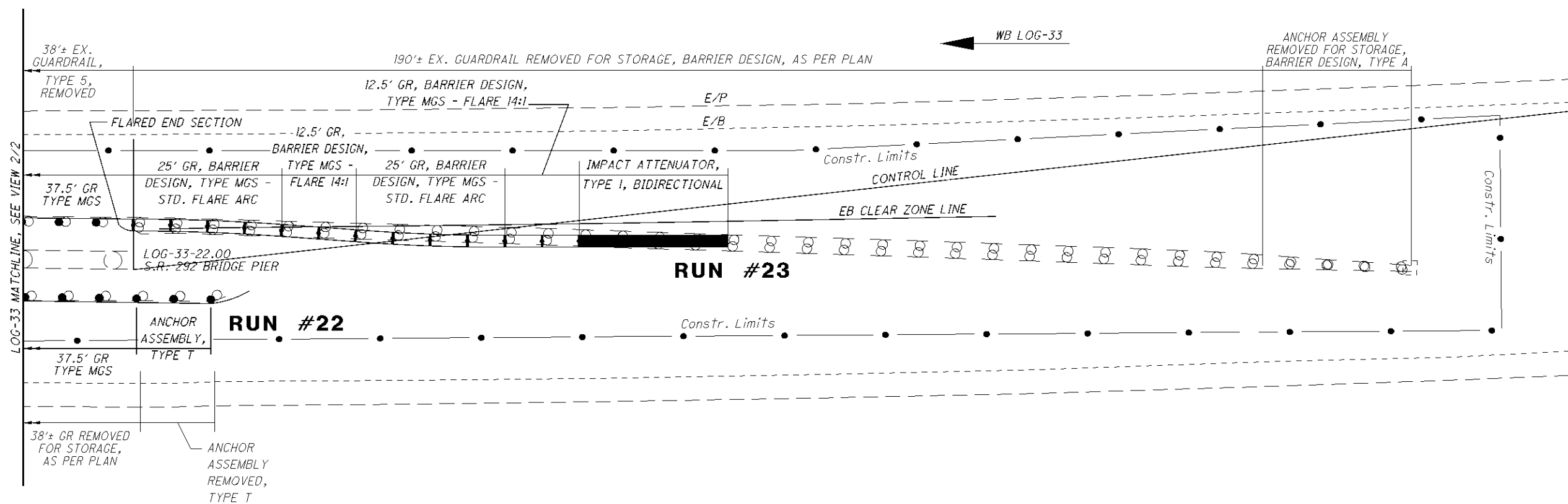
**LOG-33 EB/WB AT SR292 - MEDIAN BRIDGE PROTECTION (VIEW 1/2)**

APPROX. SLM 21.91 - 22.02



**LOG-33 EB/WB AT SR292 - MEDIAN BRIDGE PROTECTION (VIEW 1/2)**

APPROX. SLM 21.91 - 22.02



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

**LOG-33 EB/WB AT SR-292 - PIER PROTECTION**  
**SLM 21.91 - 22.02 RUN #22, #23**

**D07-SYST. GR-FY13**

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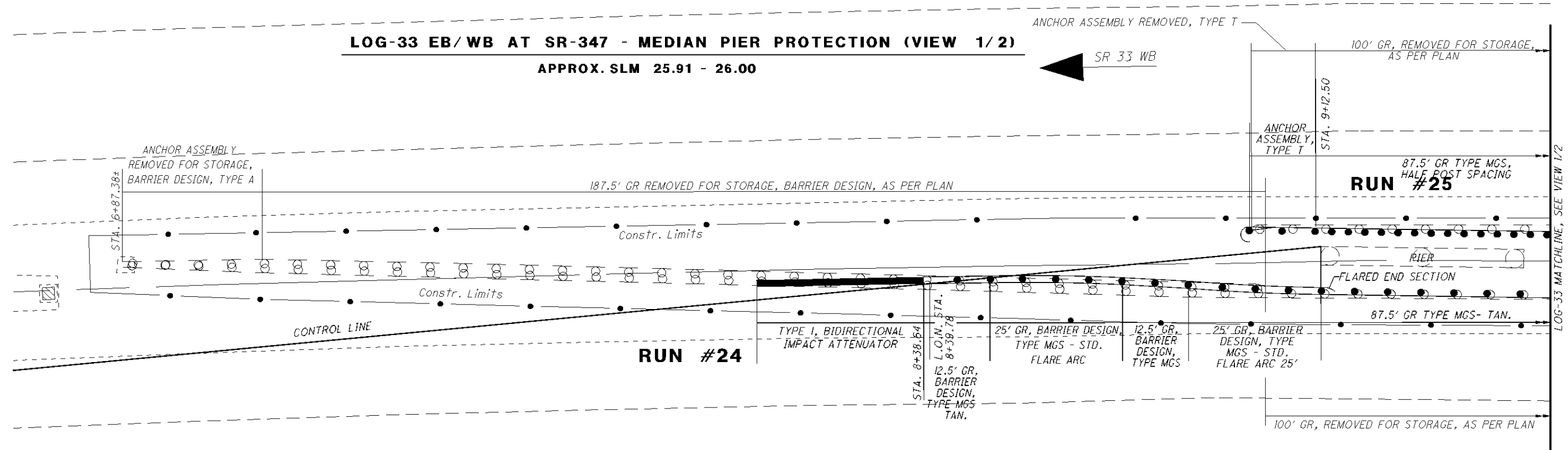
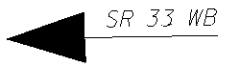
CALCULATED  
CHECKED

LOG-33 AT SR-347 - PIER PROTECTION  
SLM 25.91 - 26.00 RUN #24, #25

D07-SYST. GR-FY13

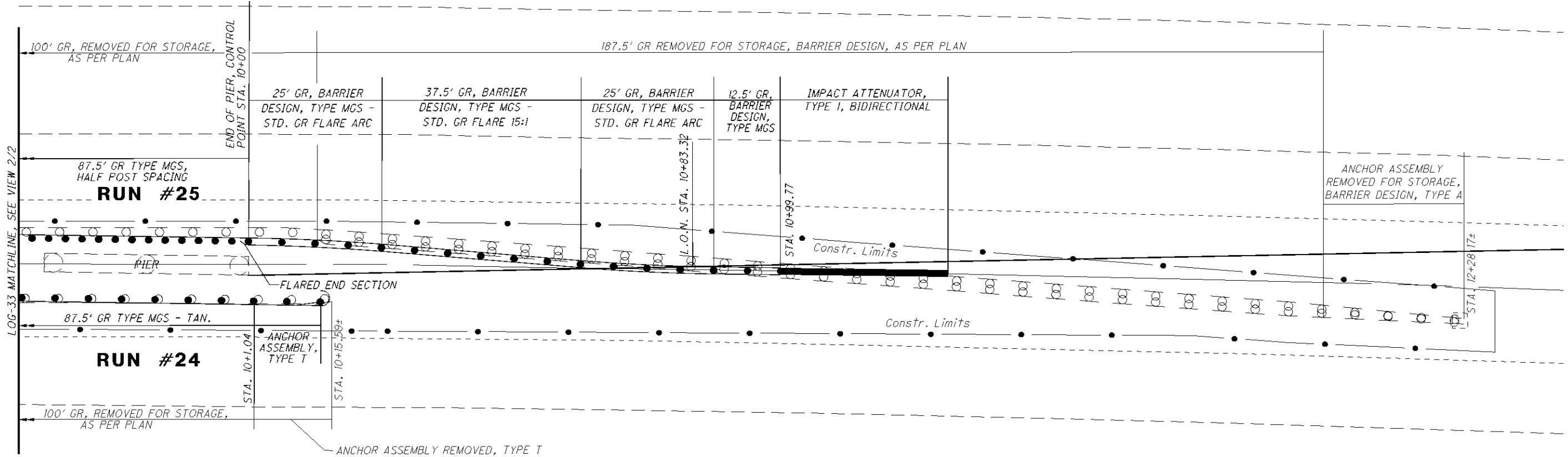
**LOG-33 EB/WB AT SR-347 - MEDIAN PIER PROTECTION (VIEW 1/2)**  
APPROX. SLM 25.91 - 26.00

ANCHOR ASSEMBLY REMOVED, TYPE T



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

**LOG-33 EB/WB AT SR-347 - MEDIAN PIER PROTECTION (VIEW 2/2)**  
APPROX. SLM 25.91 - 26.00



LOG-33 MATCHLINE - SEE VIEW 2/2

LOG-33 MATCHLINE, SEE VIEW 1/2

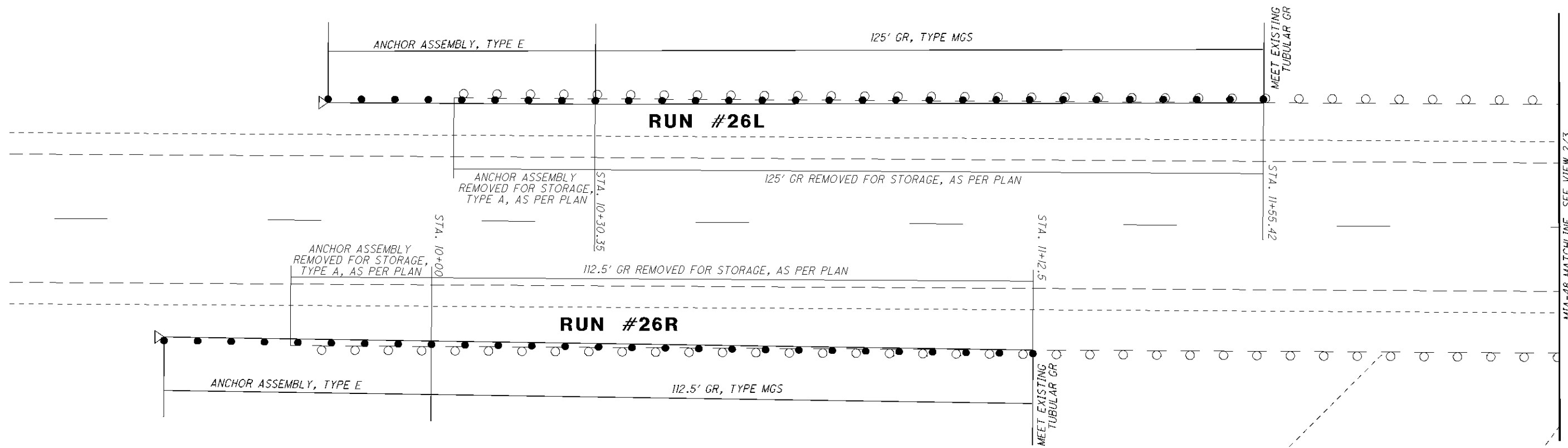
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**MIA-48 NB/SB AT W. PERRY RD - SLOPE/BRIDGE PROTECTION (VIEW 1/3)**

**APPROX. SLM 15.63**

CALCULATED  
CHECKED

HORIZONTAL SCALE IN FEET



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

**MIA-48 NB/SB AT W. PERRY-SLOPE/ BRIDGE**  
**SLM 15.63 RUN #26L&R**

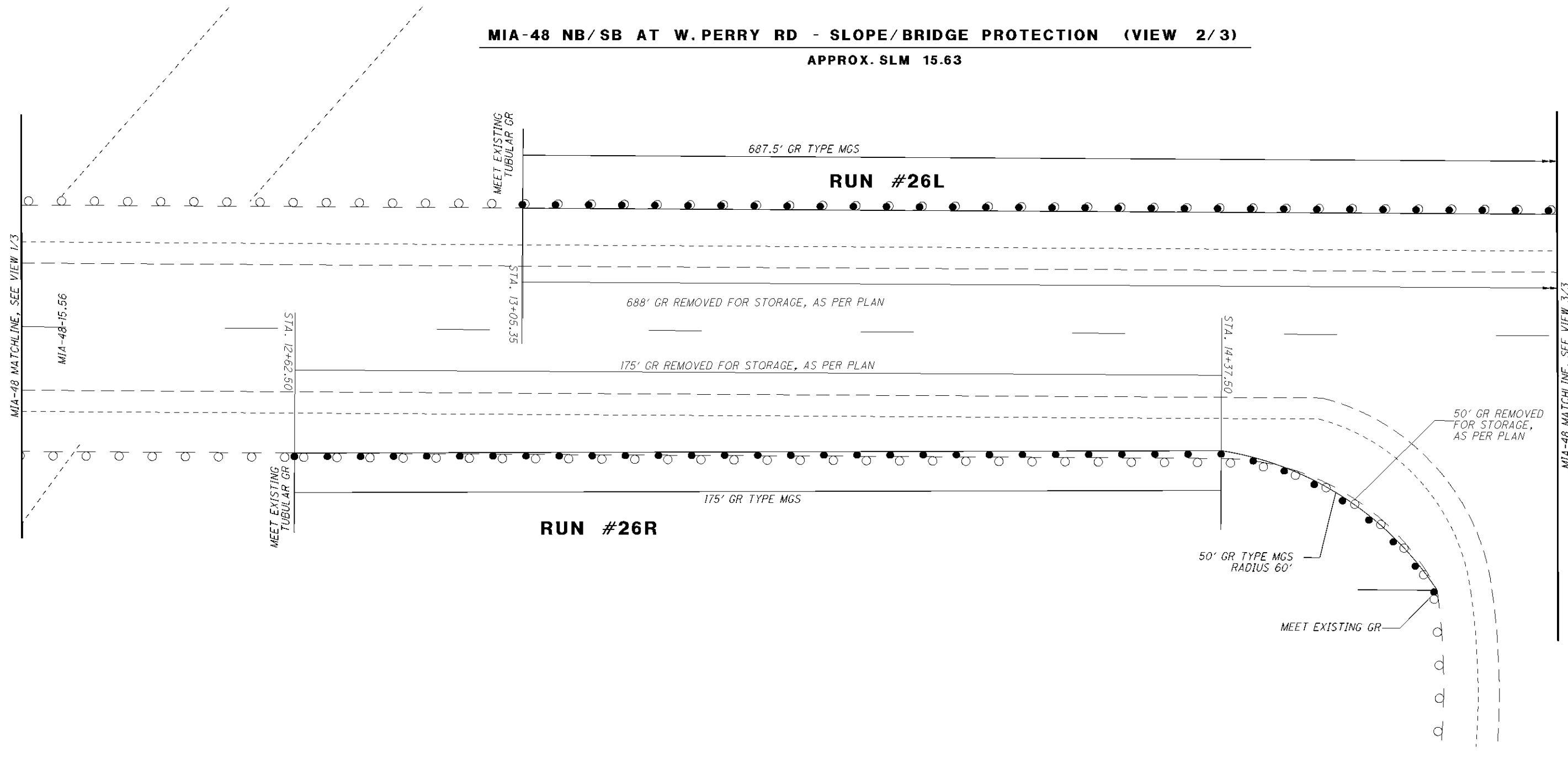
**D07-SYST. GR-FY13**



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**MIA-48 NB/SB AT W. PERRY RD - SLOPE/BRIDGE PROTECTION (VIEW 2/3)**

APPROX. SLM 15.63



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

**MIA-48 NB/SB AT W. PERRY-SLOPE/ BRIDGE**  
**SLM 15.63 RUN #26L&R**

**D07-SYST. GR-FY13**

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### MIA-48 NB/SB AT W. PERRY RD - SLOPE/BRIDGE PROTECTION (VIEW 3/3)

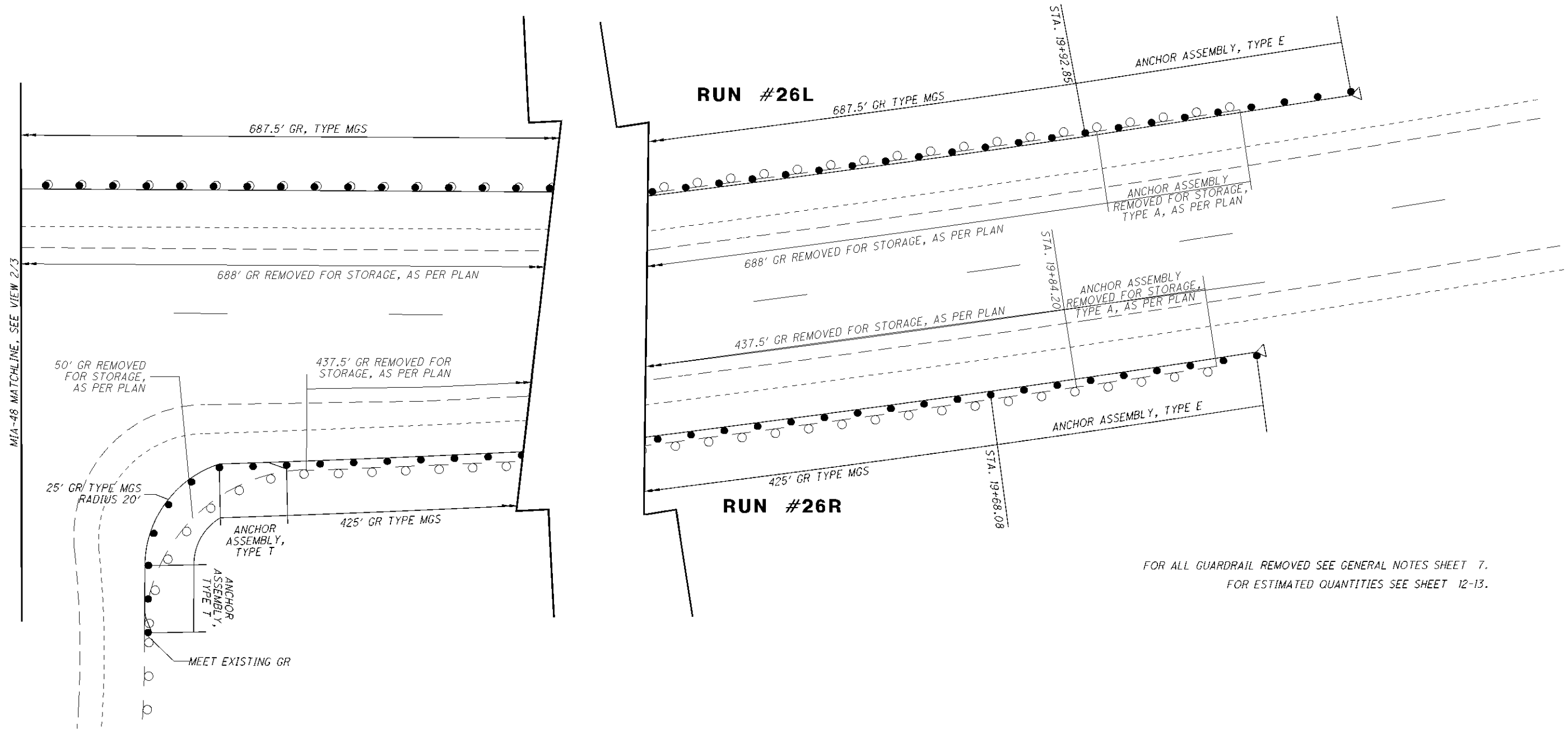
APPROX. SLM 15.63

CALCULATED  
CHECKED

0 5 10 20  
HORIZONTAL  
SCALE IN FEET

MIA-48 NB/SB AT W. PERRY-SLOPE/ BRIDGE  
SLM 15.63 RUN #26L&R

D07-SYST. GR-FY13

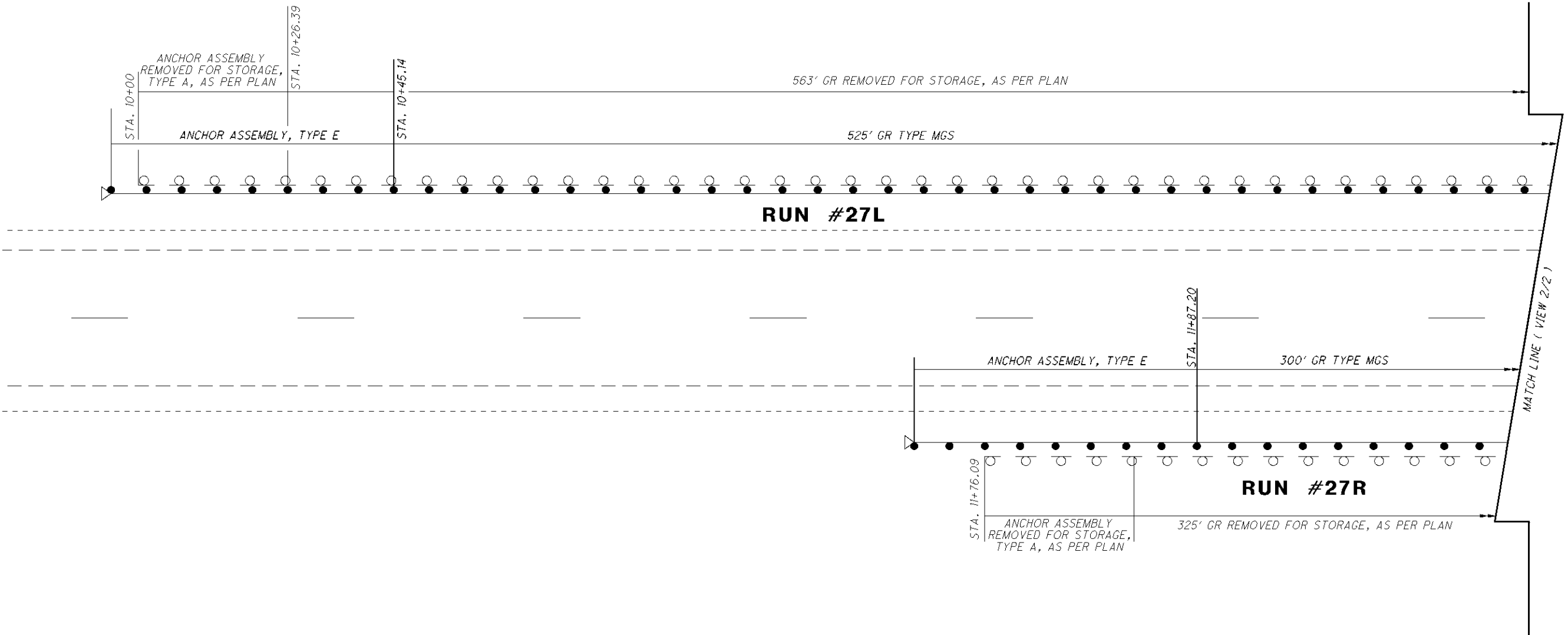


FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

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MIA-48 NB\SB NORTH OF W.PERRY RD - SLOPE PROTECTION (VIEW 1/2)

APPROX. SLM 15.92



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



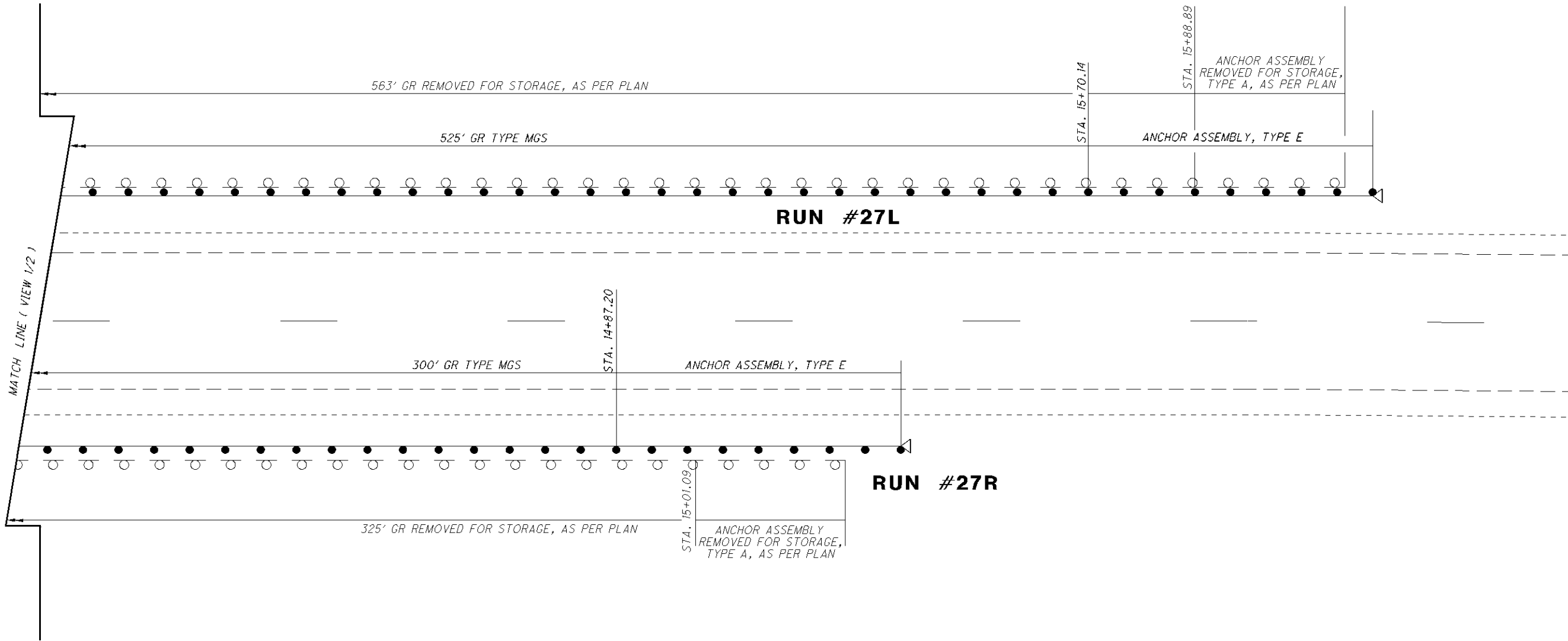
CALCULATED  
CHECKED

MIA-48 NB/SB - SLOPE PROTECTION  
SLM 15.92 RUN #27L&R

D07-SYST. GR-FY13

MIA-48 NB\SB NORTH OF W. PERRY RD - SLOPE PROTECTION (VIEW 2/2)

APPROX. SLM 15.92



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

MIA-48 NB/SB - SLOPE PROTECTION  
SLM 15.92 RUN #27L&R

D07-SYST. GR-FY13

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MIA-48 NB\SB AT CRESENT DRIVE - SLOPE PROTECTION (VIEW 1/1)

APPROX. SLM 16.08

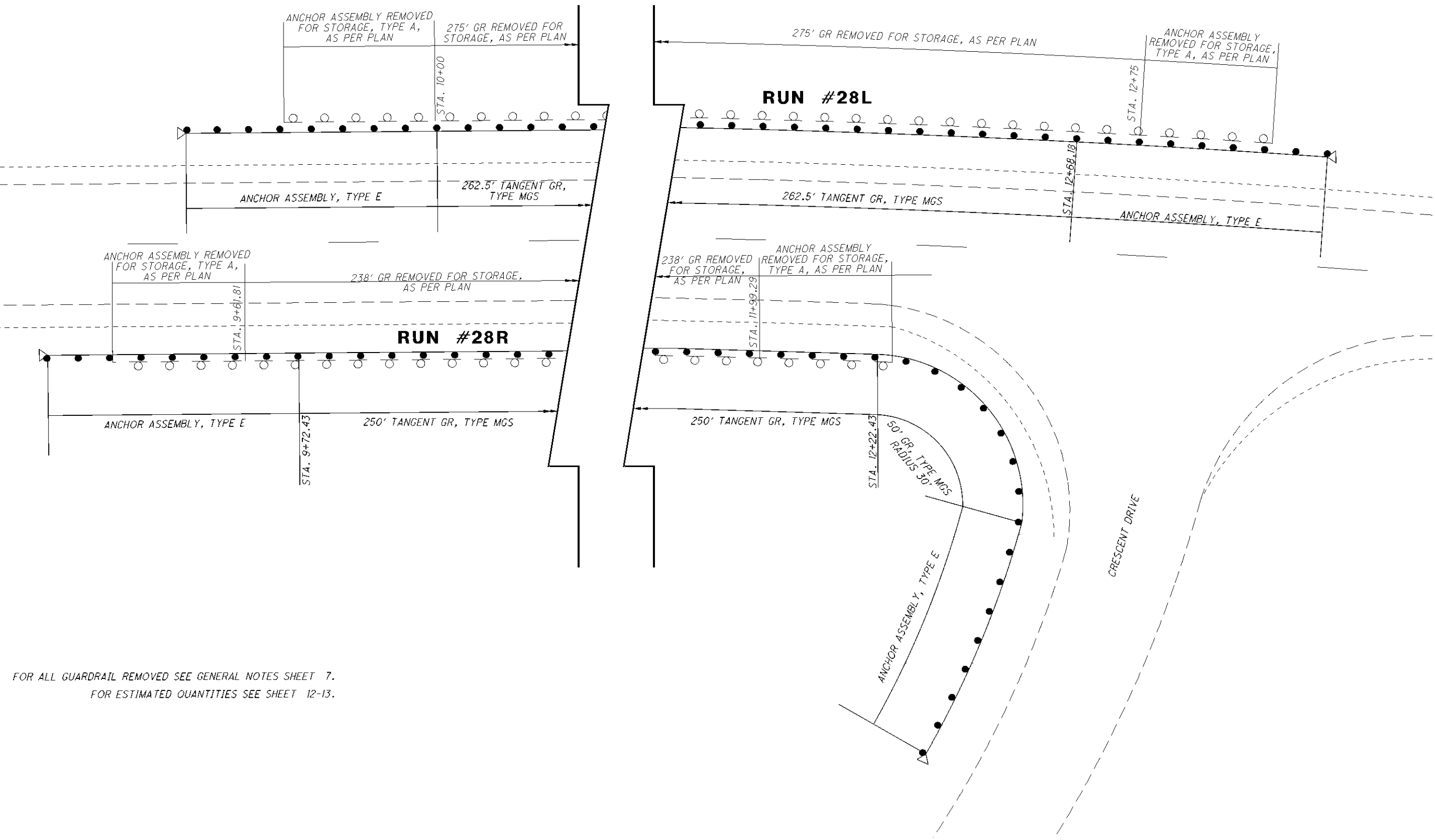


CALCULATED  
CHECKED

MIA-48 NB/SB AT CRESCENT DR.  
SLM 16.08 RUN #28L&R

D07-SYST. GR-FY13

37  
72



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

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MIA-48 NB\SB NORTH OF CRESENT DR. - SLOPE PROTECTION (VIEW 1/1)

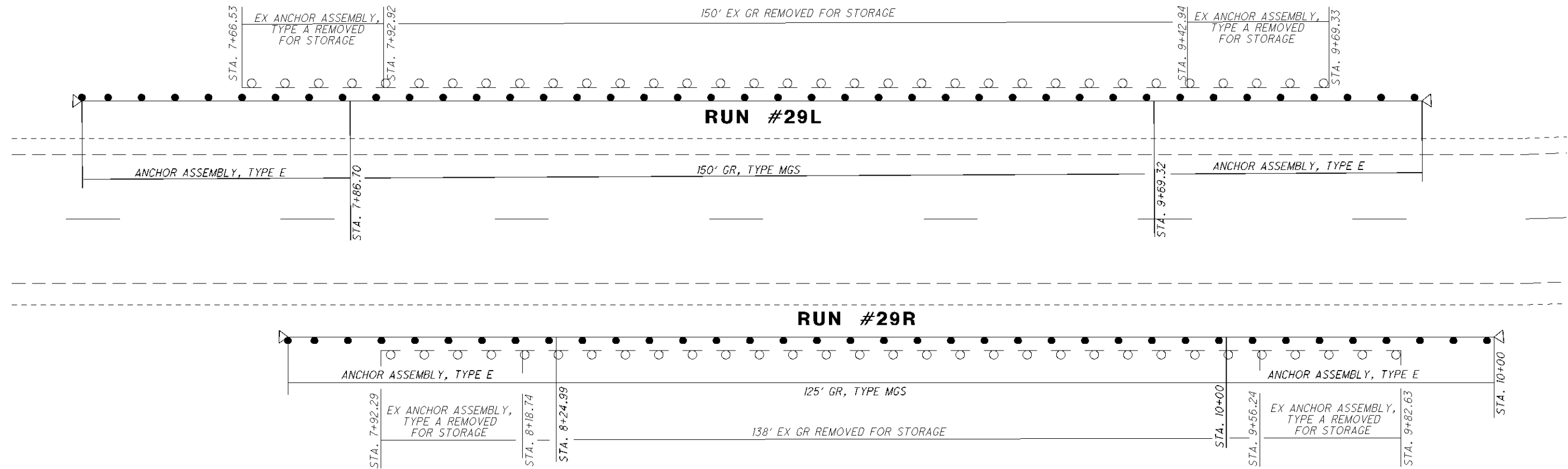
APPROX. SLM 16.33



CALCULATED  
CHECKED

MIA-48 NB/SB NORTH OF CRESCENT DR.  
SLM 16.33 RUN #29L&R

D07-SYST. GR-FY13



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

MIA-48 NB\SB AT STRUCTURE OVER TROTTERS CREEK - BRIDGE PROTECTION (VIEW 1/2)

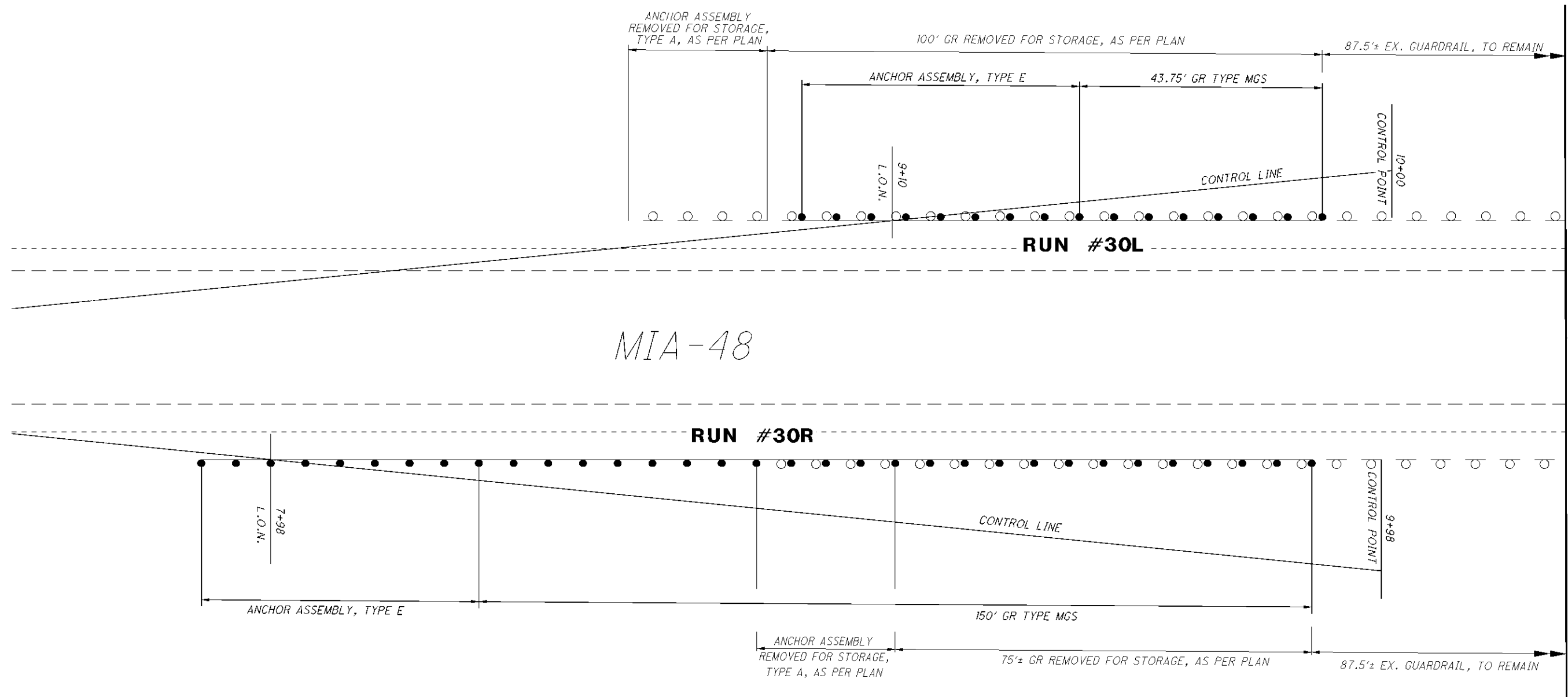
APPROX. SLM 17.74

CALCULATED  
CHECKED

0 5 10 20  
HORIZONTAL  
SCALE IN FEET

MIA-48 NB/SB OVER TROTTERS CREEK  
SLM 17.74 RUN #30

D07-SYST. GR-FY13



MIA-48

FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

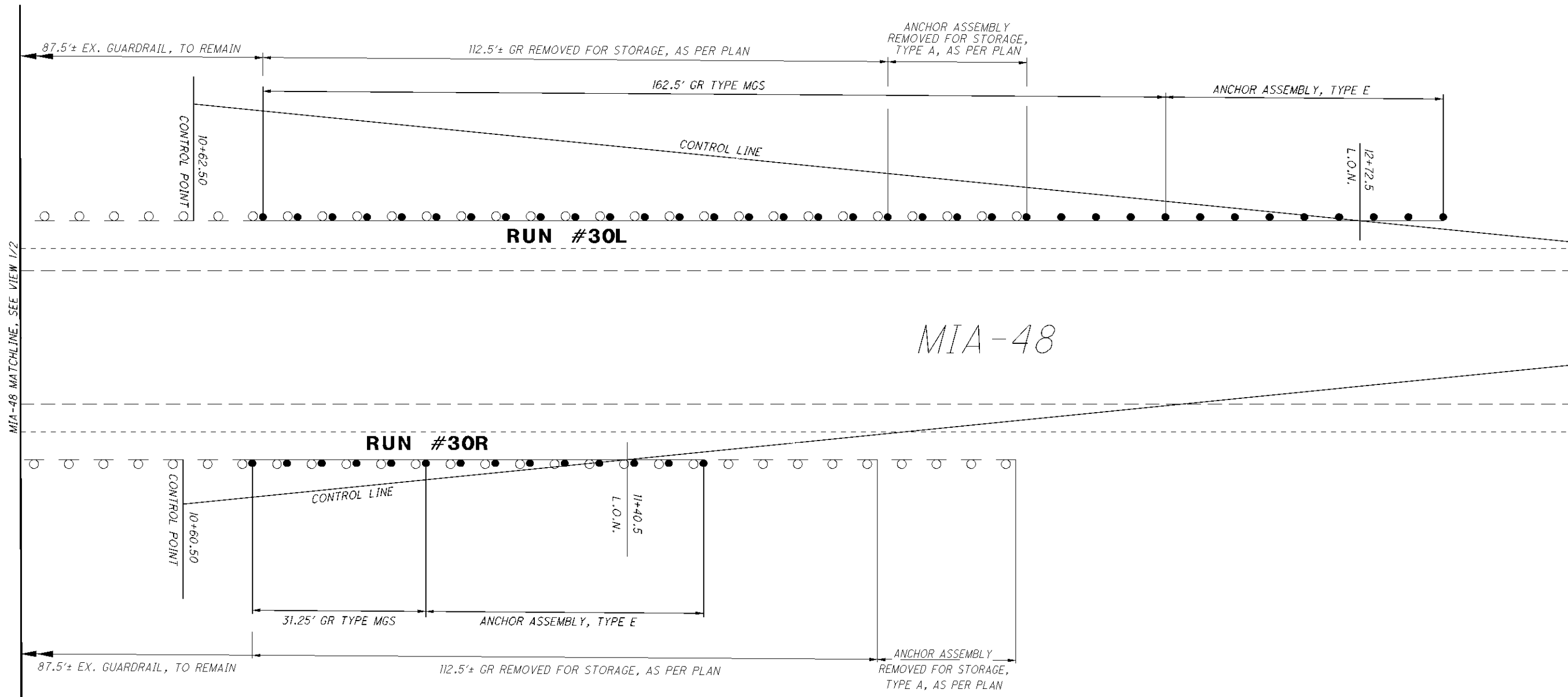
I:\PROJECTS\District Wide\D07-SYSTEMATIC GR-FY2013\93389\Design\sheets\93389P206\_1.dgn 25-FEB-2013 10:30AM rburns2

MIA-48 NB\SB AT STRUCTURE OVER TROTTERS CREEK - BRIDGE PROTECTION (VIEW 2/2)

APPROX. SLM 17.74

CALCULATED  
CHECKED

0 10 20  
HORIZONTAL  
SCALE IN FEET



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

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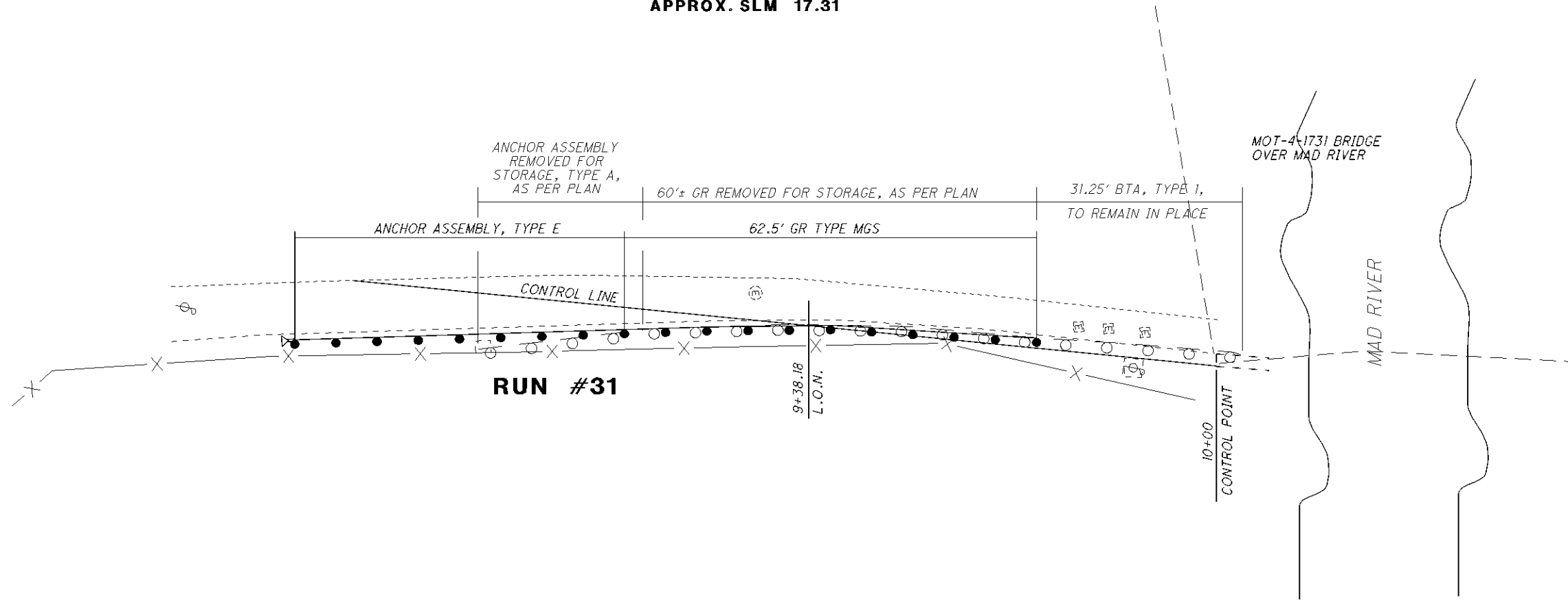
MIA-48 NB/SB OVER TROTTERS CREEK  
SLM 17.74 RUN #30L&R

D07-SYST. GR-FY13



**MOT-4 NB OVER MAD RIVER, SOUTH SIDE- PROTECTION OFF STRUCTURE (VIEW 1/1)**

APPROX. SLM 17.31



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

**MOT-4 NB OVER MAD RIVER- PROTECTION  
OFF STRUCTURE- SLM 17.31 -RUN #31**

**D07-SYST. GR-FY13**

41  
72

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**MOT-4 MEDIAN UNDER SR 444- PIER PROTECTION (VIEW 1/2)**

APPROX. SLM 22.01

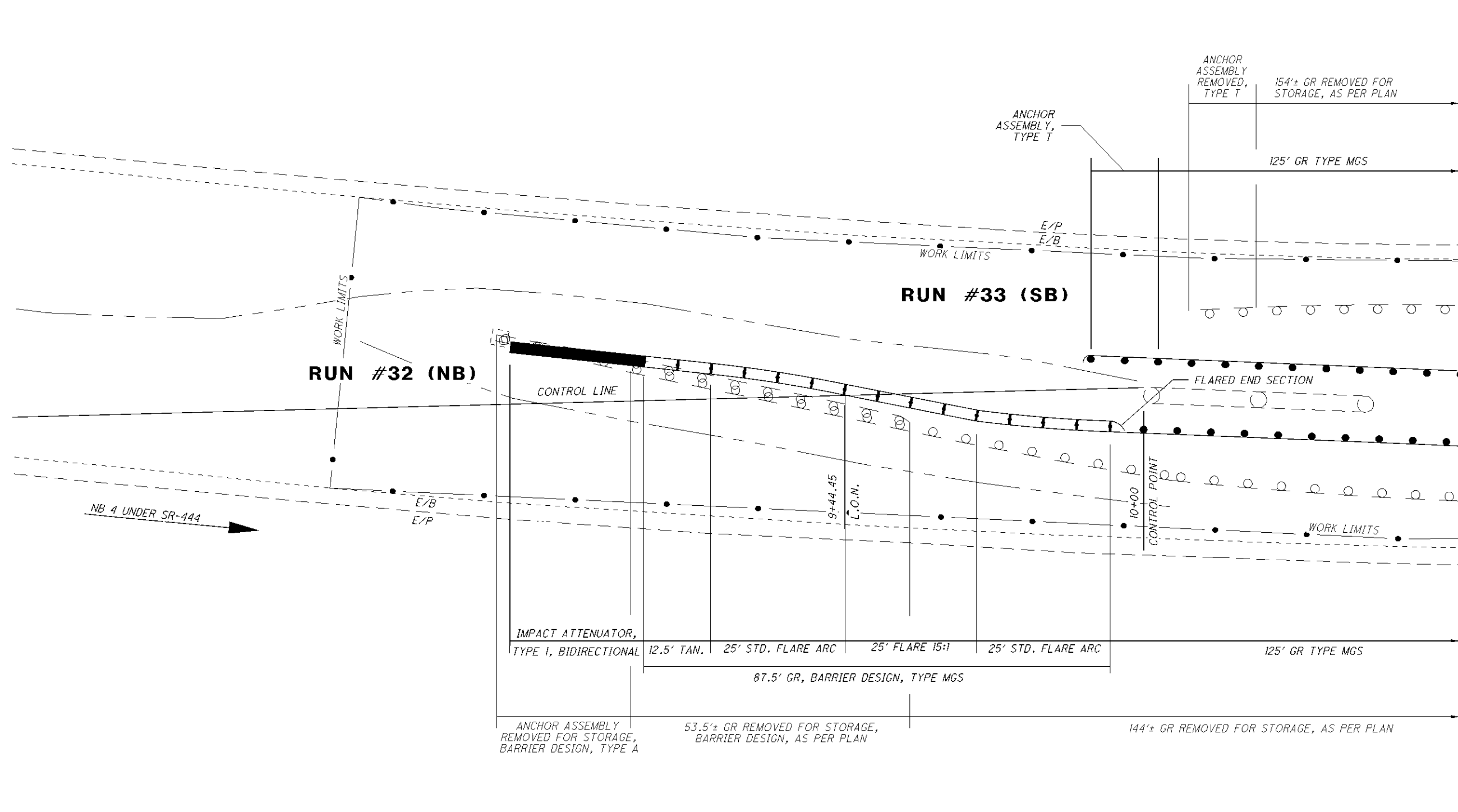
0 10 20  
HORIZONTAL  
SCALE IN FEET

CALCULATED  
CHECKED

**MOT-4 UNDERPASS S.R.444- MEDIAN PIER PROTECTION- SLM 21.98-22.01 -RUNS #32, 33**

**D07-SYST. GR-FY13**

42  
72



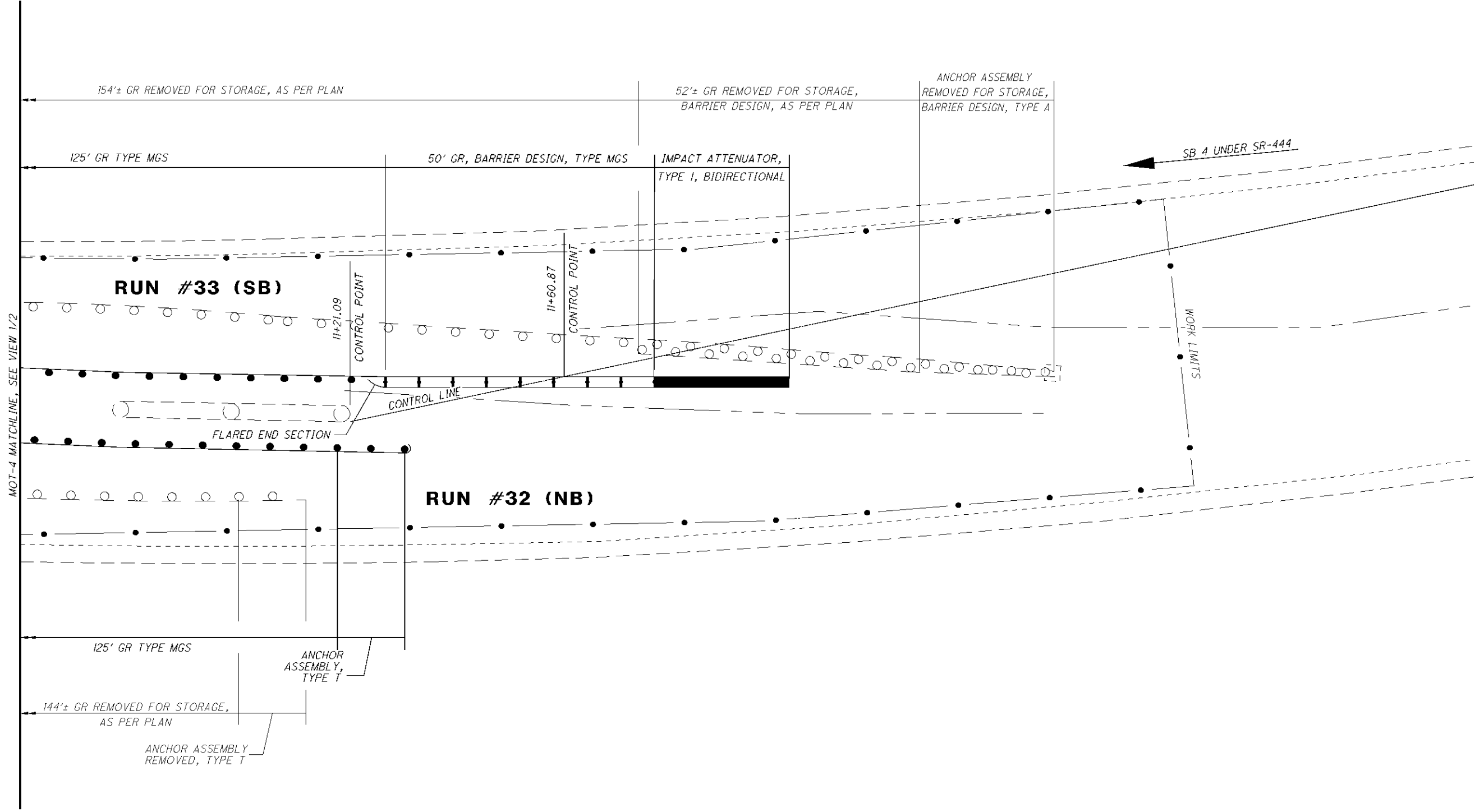
FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

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CALCULATED  
CHECKED

**MOT-4 MEDIAN UNDER SR 444- PIER PROTECTION (VIEW 2/2)**  
APPROX. SLM 22.01



MOT-4 MATCHLINE, SEE VIEW 1/2

FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

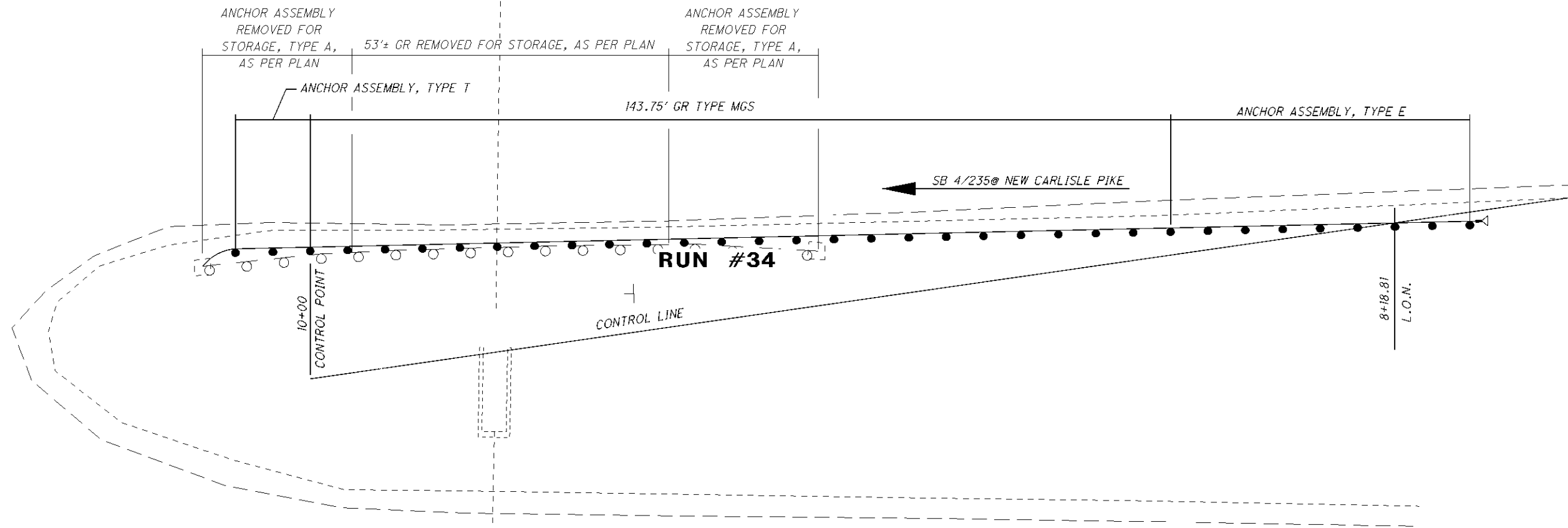
I:\PROJECTS\District Wide\07-SYSTEMATIC GR-FY2013\93389\Design\sheets\93389GP046\_2.dgn 25-FEB-2013 10:30AM rburns2

**MOT-4 UNDERPASS S.R.444- MEDIAN PIER PROTECTION -SLM 21.98-22.01 RUNS #32, 33**

**D07-SYST. GR-FY13**

**MOT-4 AT NEW CARLISLE PIKE/LOWER VALLEY PIKE- DITCH PROTECTION (VIEW 1/1)**

**APPROX. SLM 23.43**



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

  
  
 HORIZONTAL SCALE IN FEET  
 CALCULATED  
 CHECKED

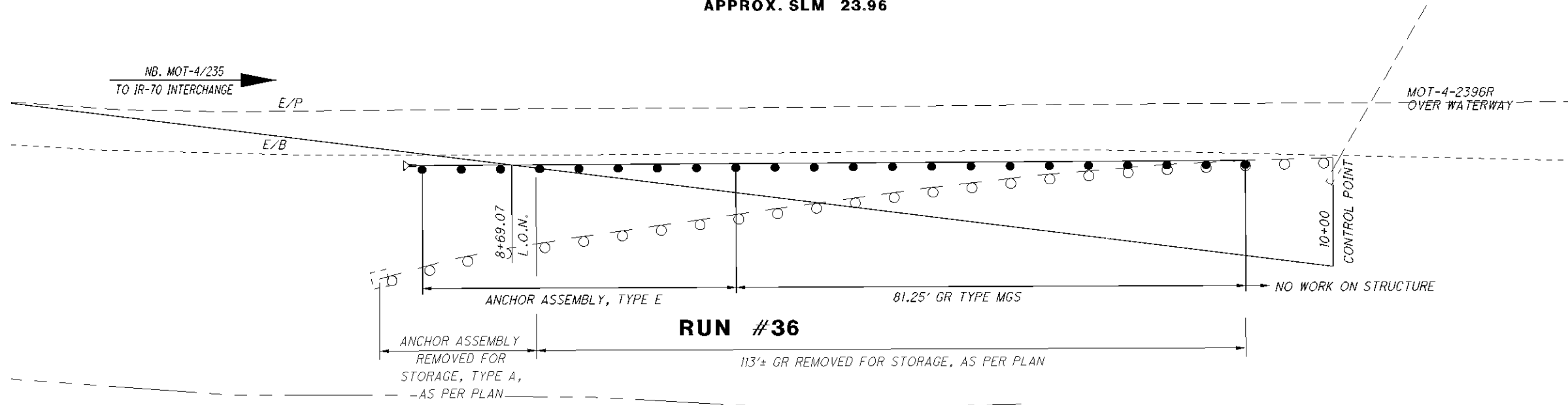
**MOT-4 SB AT LOWER VALLEY PIKE- DITCH**  
**PROT.- SLM 23.43 -RUN #34**

**D07-SYST. GR-FY13**

I:\PROJECTS\District Wide\D07-SYSTEMATIC GR-FY2013\93389\Design\sheets\93389\039\_1.dgn 25-FEB-2013 10:30AM rburns2

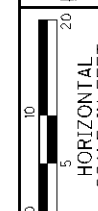
**MOT-4 NB- AT STRUCTURE OVER DRYLICK RUN - SLOPE/BRIDGE PROTECTION (VIEW 1/1)**

APPROX. SLM 23.96



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

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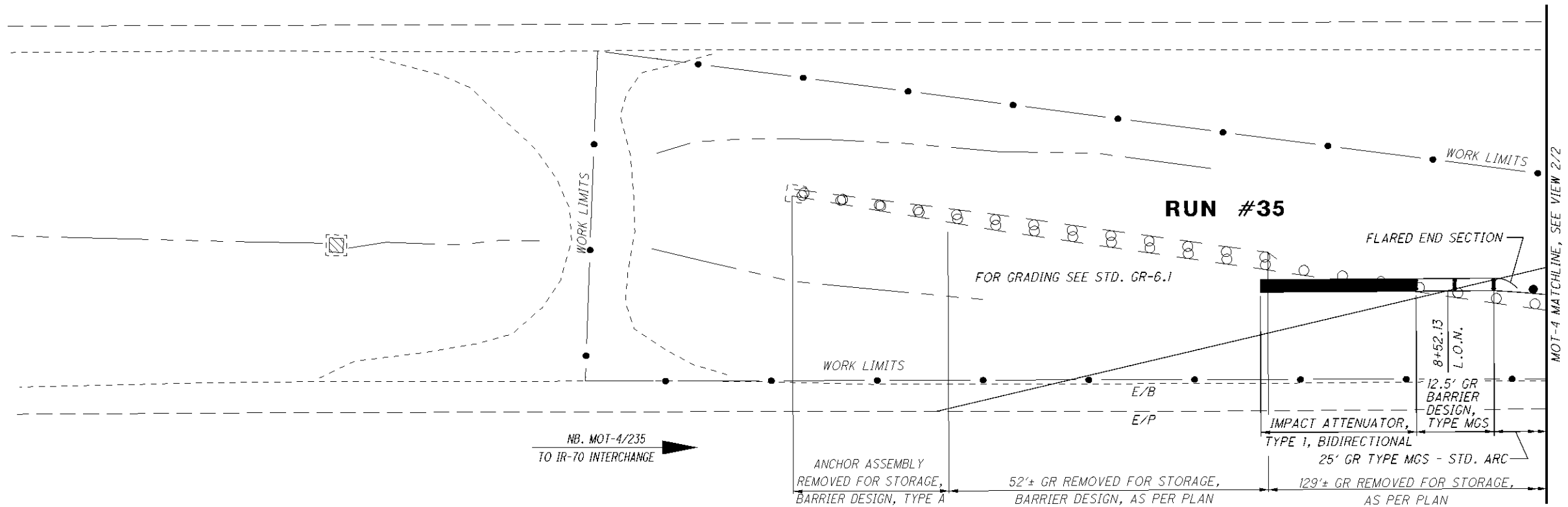
CALCULATED  
CHECKED

**MOT-4 NB OVER DRYLICK RUN**  
**BRIDGE PROTECTION - SLM 23.96 - RUN #36**

**D07-SYST. GR-FY13**

**MOT-4 OVER TRIBUTARY TO DRYLICK RUN- MEDIAN PROTECTION OFF STRUCTURE (VIEW 1/2)**

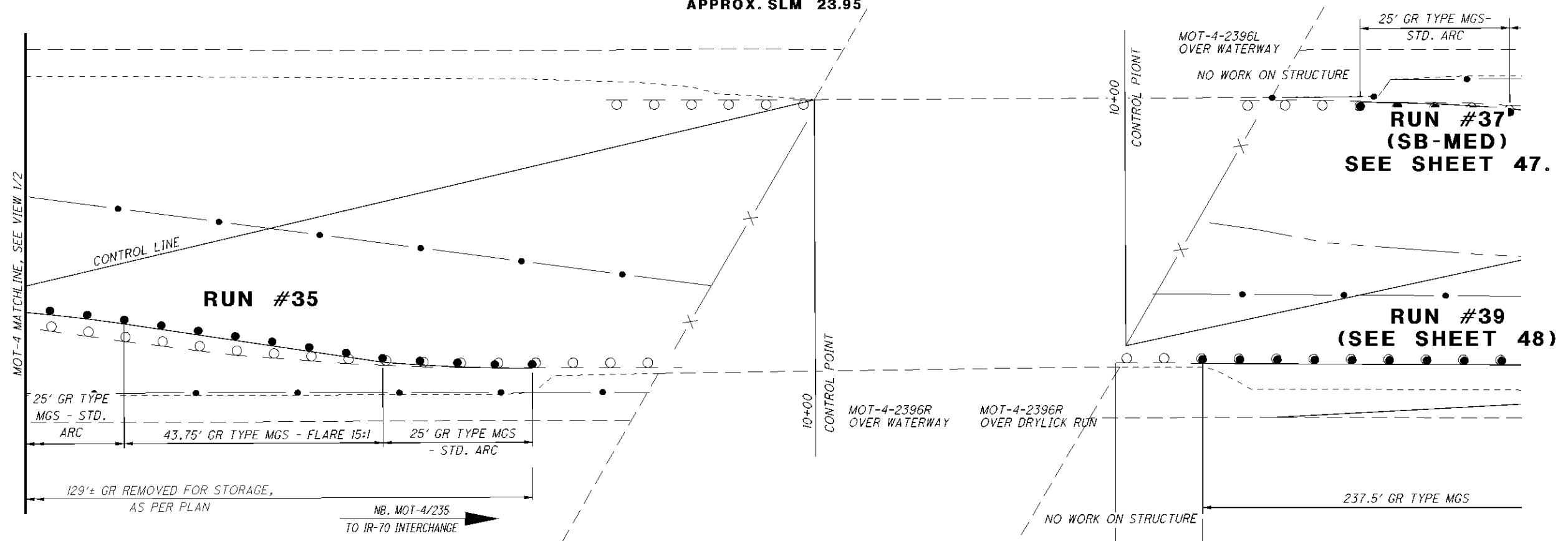
APPROX. SLM 23.95



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

**MOT-4 OVER TRIBUTARY TO DRYLICK RUN- MEDIAN PROTECTION OFF STRUCTURE (VIEW 2/2)**

APPROX. SLM 23.95



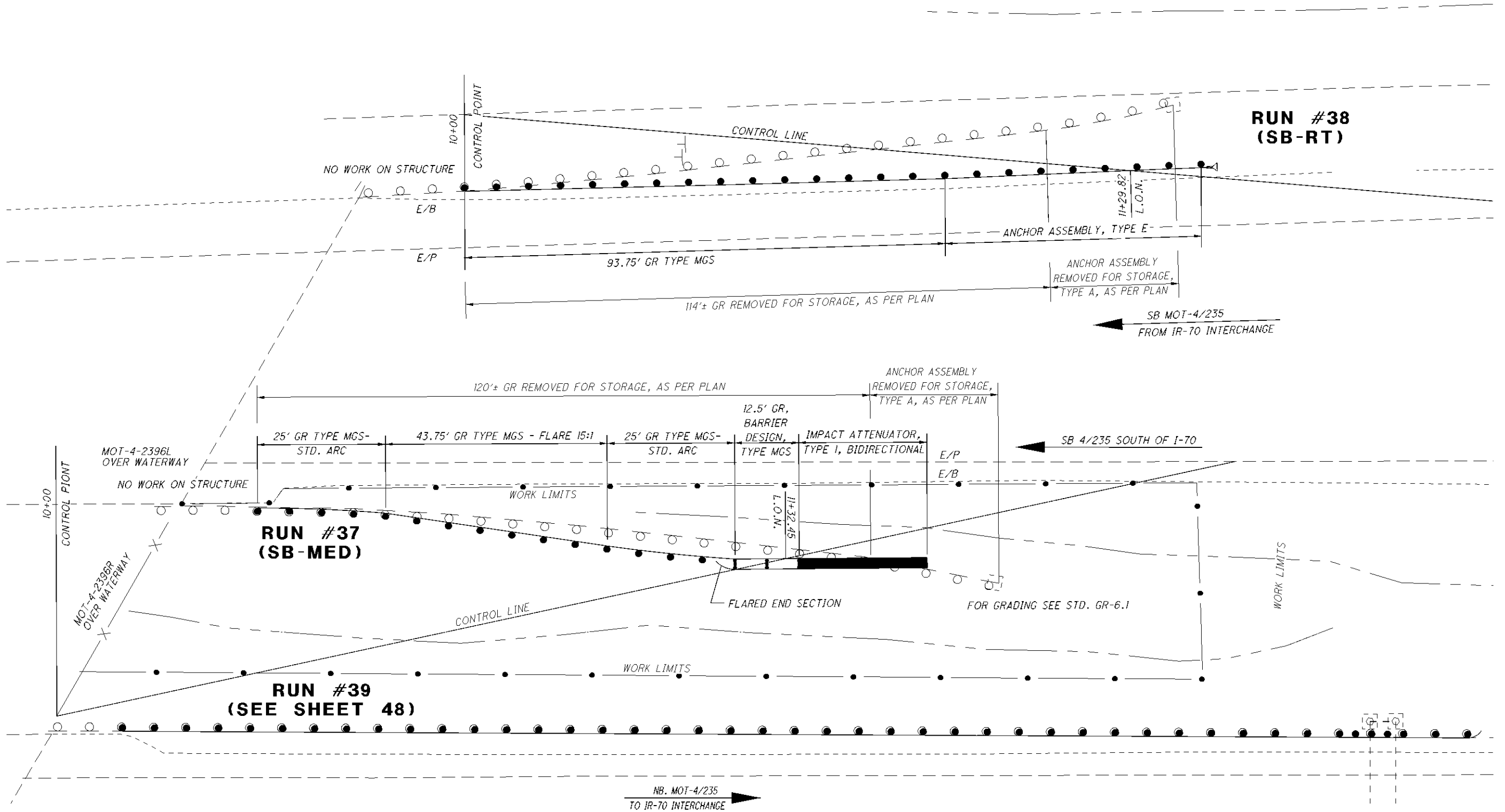
CALCULATED  
CHECKED

**MOT-4 NB-MEDIAN PROTECTION OFF STRUCTURE - SLM 23.95-24.10 - RUNS #35**

**D07-SYST. GR-FY13**

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**MOT-4 SB RIGHT OVER TRIBUTARY TO DRYLICK RUN- BRIDGE PROTECTION PROTECTION (VIEW 1/2)**  
**APPROX. SLM 24.01**



**MOT-4 SB LEFT OVER TRIBUTARY TO DRYLICK RUN- BRIDGE PROTECTION PROTECTION (VIEW 2/2)**  
**APPROX. SLM 24.01**

FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
 FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
 CHECKED

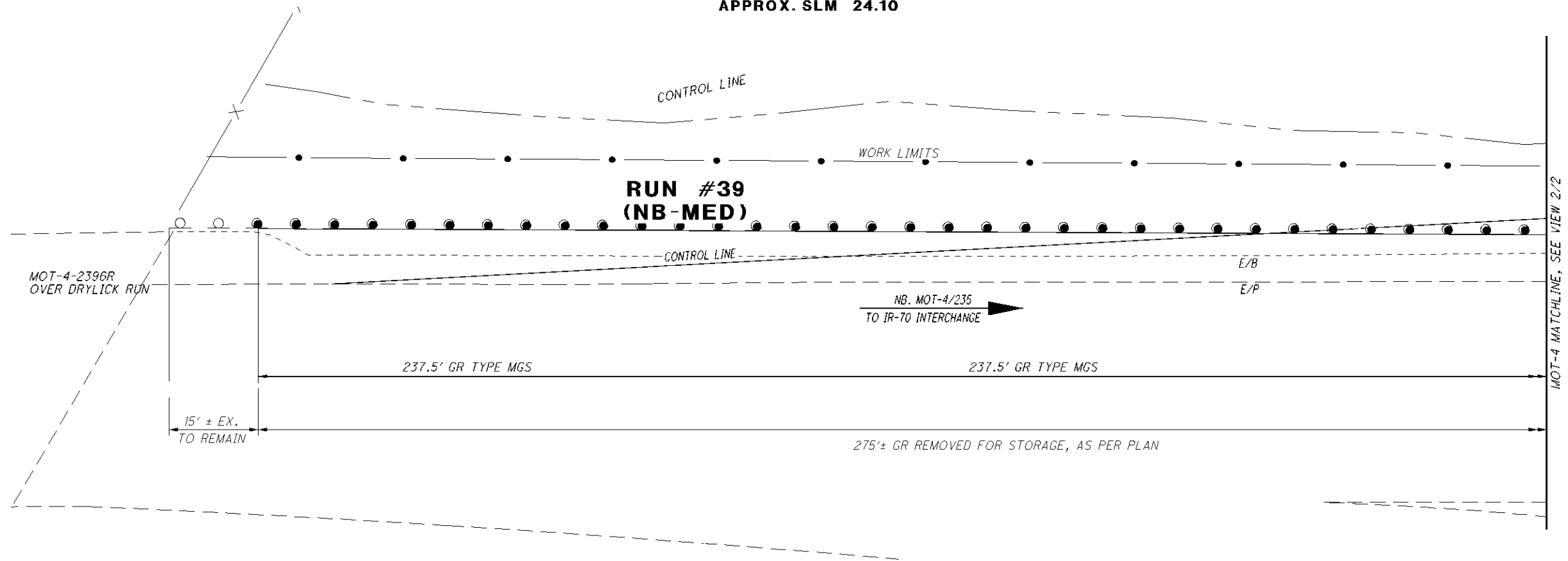
**MOT-4 NB/SB-MED PROTECTION OFF  
 STRUCTURE- SLM 24.01- RUNS #37, #38**

**D07-SYST. GR-FY13**

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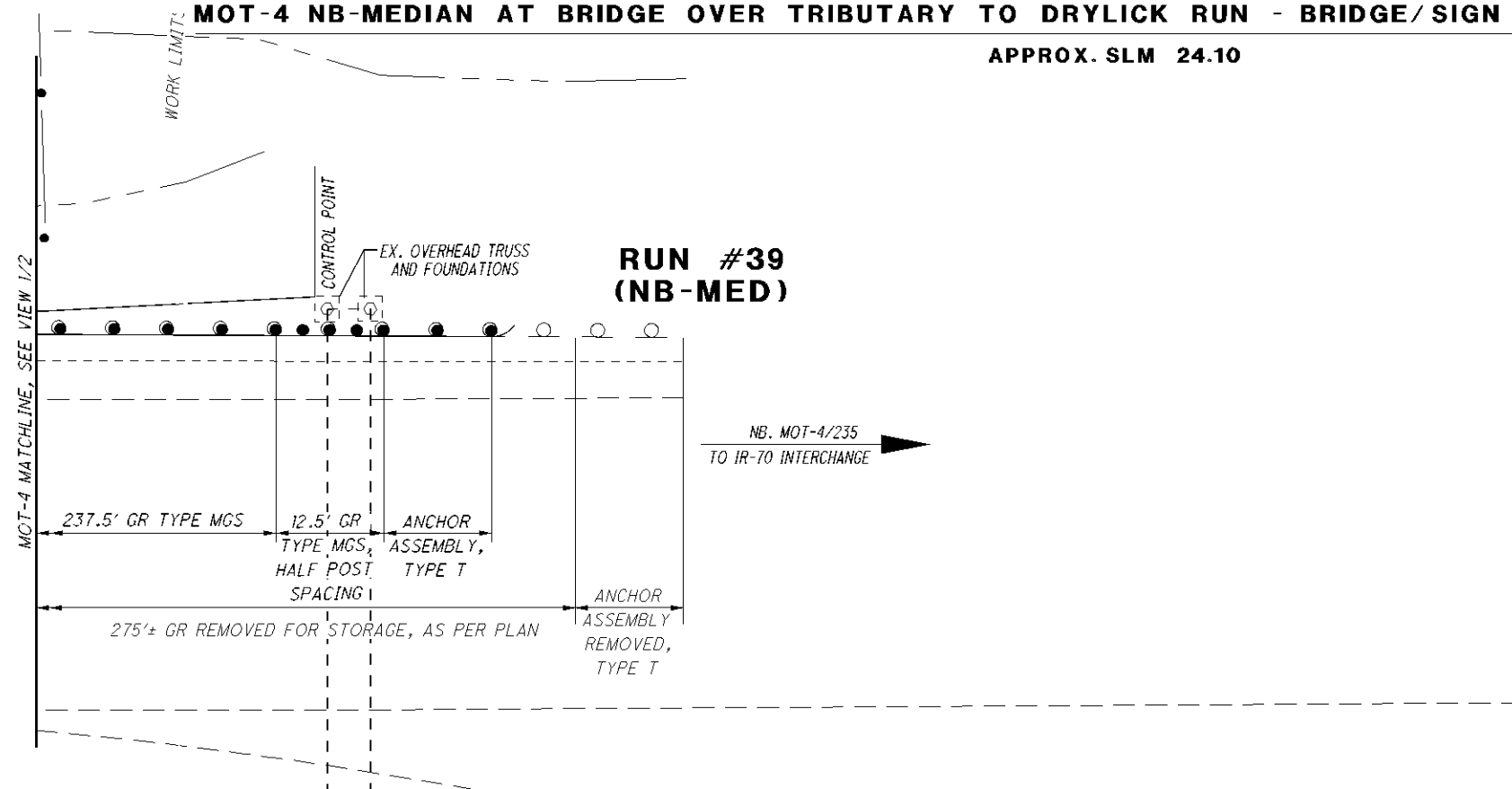
MOT-4 NB-MEDIAN AT BRIDGE OVER TRIBUTARY TO DRYLICK RUN - BRIDGE/SIGN TRUSS PROTECTION (VIEW 1/2)

APPROX. SLM 24.10



MOT-4 NB-MEDIAN AT BRIDGE OVER TRIBUTARY TO DRYLICK RUN - BRIDGE/SIGN TRUSS PROTECTION (VIEW 2/2)

APPROX. SLM 24.10



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

MOT-4 NB-MED BRIDGE/SIGN TRUSS AT  
DRYLICK RUN/SIGN TRUSS SLM 24.10 RUN #39

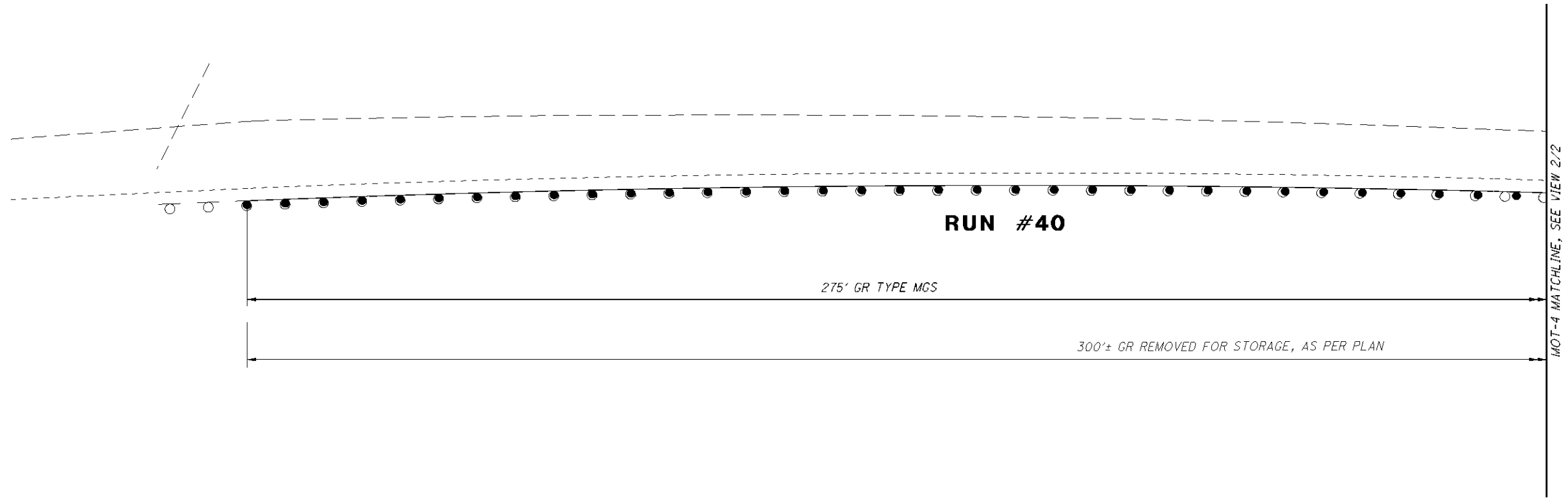
D07-SYST. GR-FY13

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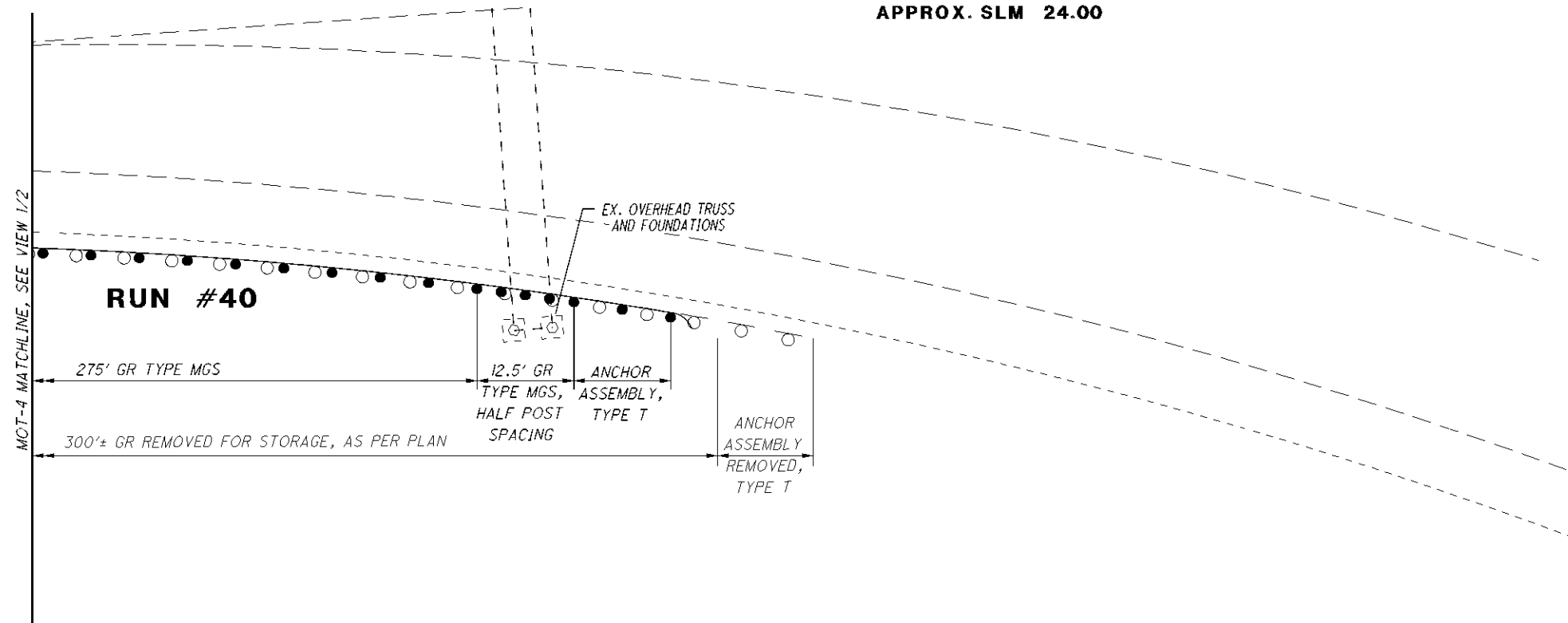
MOT-4 NB-RT AT BRIDGE OVER TRIBUTARY TO DRYLICK RUN - BRIDGE/SIGN TRUSS PROTECTION (VIEW 1/2)

APPROX. SLM 24.00



MOT-4 NB-RT AT BRIDGE OVER TRIBUTARY TO DRYLICK RUN - BRIDGE/SIGN TRUSS PROTECTION (VIEW 2/2)

APPROX. SLM 24.00



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

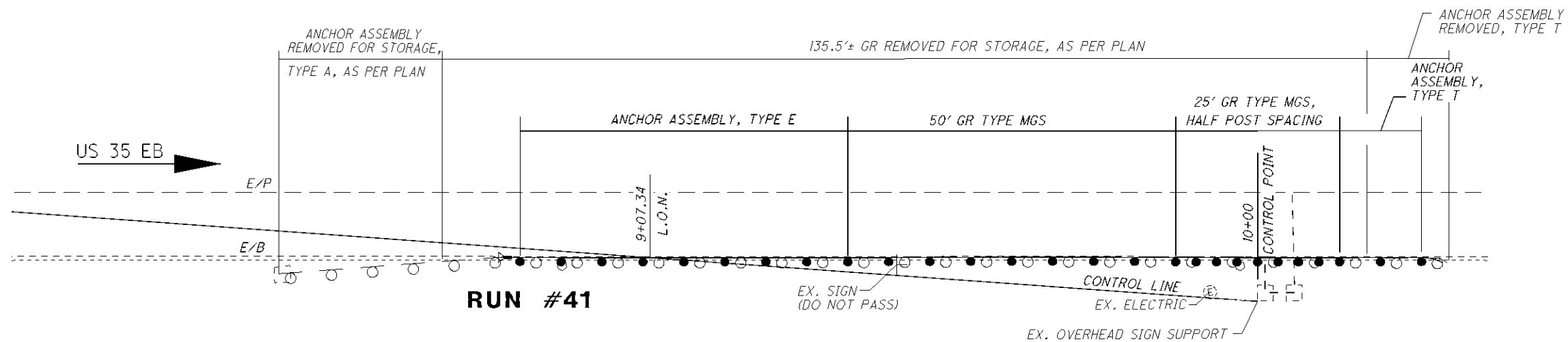
MOT-4 NB-RT OVER DRYLICK RUN TRIBUTARY /  
SIGN TRUSS - SLM 24.00 - RUN #40

D07-SYST. GR-FY13

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**MOT-35 EB AT OVERHEAD SIGN TRUSS- EAST OF JAMES H. MCGEE (VIEW 1/1)**

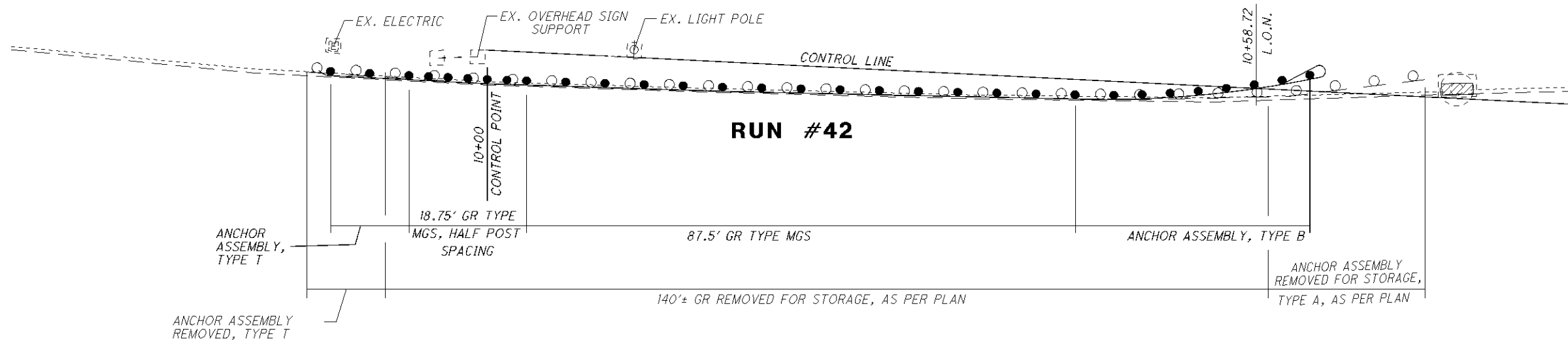
APPROX. SLM 14.53



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

**MOT-35 WB EXIT RAMP TO JAMES H. MCGEE BLVD. - OVERHEAD SIGN PROTECTION (VIEW 1/1)**

APPROX. SLM 14.58



N

0 5 10 20  
HORIZONTAL SCALE IN FEET

CALCULATED \_\_\_\_\_ CHECKED \_\_\_\_\_

**MOT-35 EB/ WB - E. OF AND RAMP TO JAMES H. MCGEE BLVD. - SLM 14.53-14.58 - RUNS #41,42**

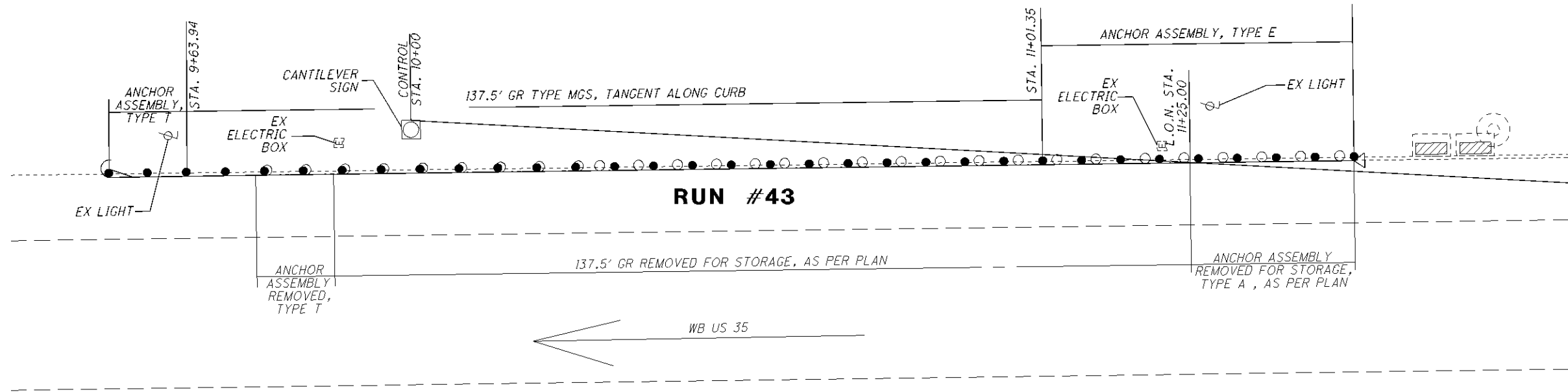
**D07-SYST. GR-FY13**

50  
72

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MOT-35 WB- EAST OF BROADWAY ST- OVERHEAD SIGN PROTECTION (VIEW 1/1)

APPROX. SLM 15.12



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

MOT-35 WB- EAST OF BROADWAY ST  
OVERHEAD SIGN PROT - SLM 15.12 - RUN #43

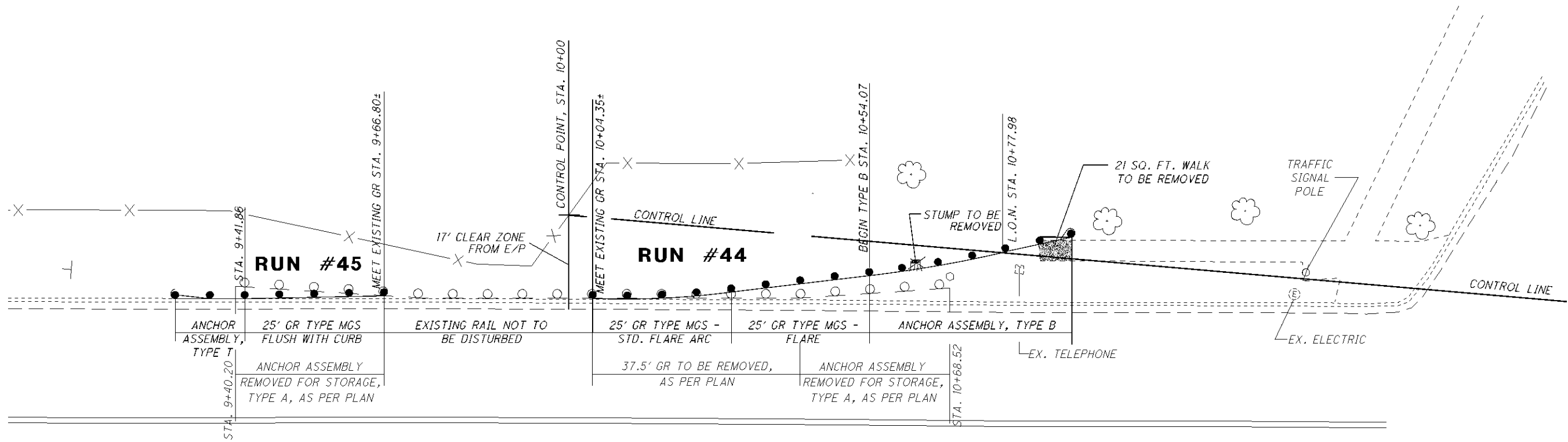
D07-SYST. GR-FY13

51  
72

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MOT-40 WB- WEST OF CR-25A- PROTECTION OFF STRUCTURE- (VIEW 1/1)

APPROX. SLM 16.10



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

MOT-40 WB- WEST OF CR-25A- PROT. OFF  
STRUCTURE -SLM 16.08-16.10- RUNS #44, 45

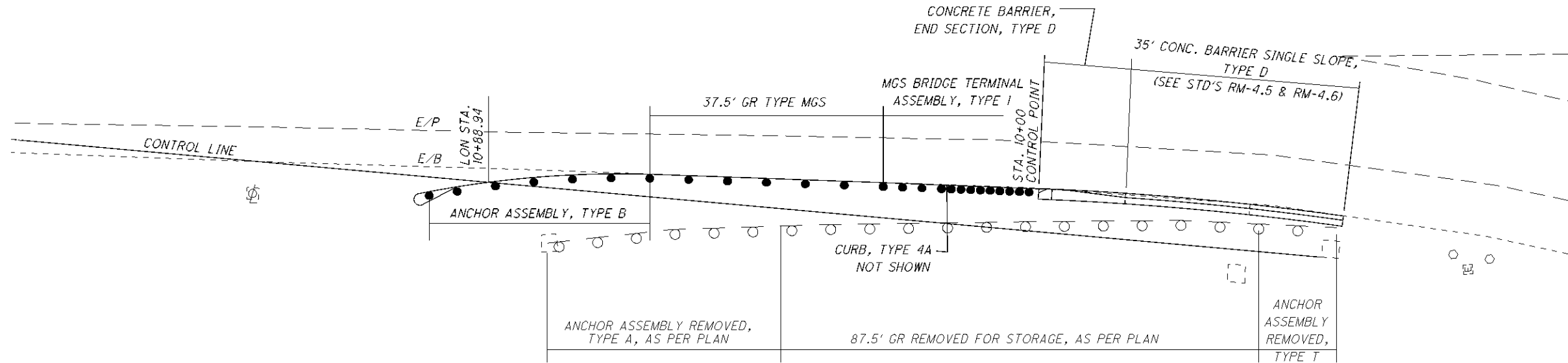
D07-SYST. GR-FY13

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**MOT-48 SB AT RAMP TO IR-675 SB - OVERHEAD SIGN PROTECTION (VIEW 1/1)**

**APPROX. SLM 4.60**

NOTE: THE CITY OF CENTERVILLE, MUST BE CONTACTED DIRECTLY FOR LOCATION OF FIBER OPTIC  
(DOUG SPITLER 1-937-428-4734)



**RUN #46**

FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

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0 5 10 20  
HORIZONTAL  
SCALE IN FEET

CALCULATED  
CHECKED

**MOT-48 SB AT RAMP TO IR-675 SB-OVERHEAD  
SIGN PROT. RT SIDE- SLM 4.60 -RUN #46**

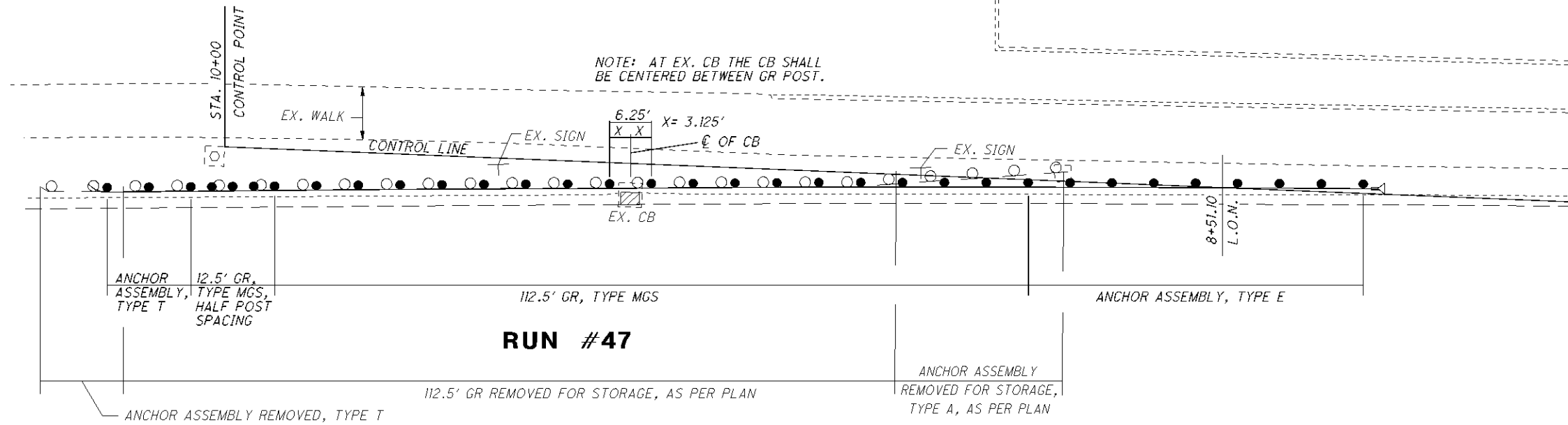
**D07-SYST. GR-FY13**

53  
72

**MOT-48 NORTH OF LOOP RD.- LT. SIDE STRAIN POLE PROTECTION (VIEW 1/1)**

APPROX. SLM 4.74

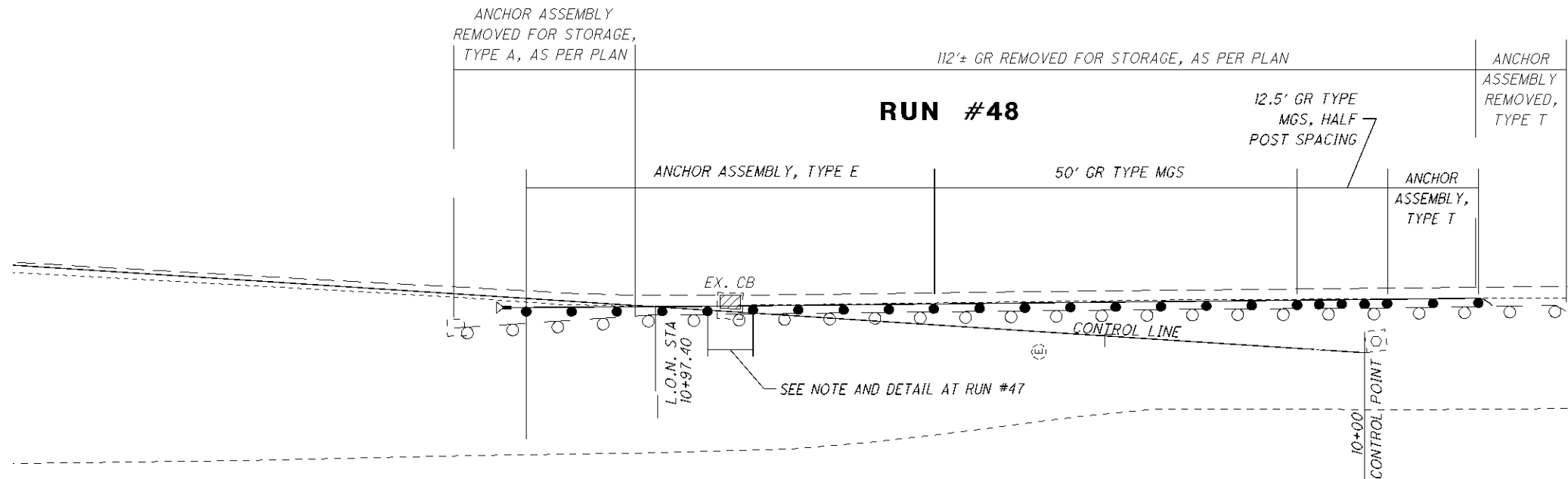
NOTE: THE CITY OF CENTERVILLE, MUST BE CONTACTED DIRECTLY FOR LOCATION OF FIBER OPTIC  
(DOUG SPITLER 1-937-428-4734)



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

**MOT-48 NORTH OF LOOP RD.- RT. SIDE STRAIN POLE PROTECTION (VIEW 1/1)**

APPROX. SLM 4.79



NOTE: THE CITY OF CENTERVILLE, MUST BE CONTACTED DIRECTLY FOR LOCATION OF FIBER OPTIC  
(DOUG SPITLER 1-937-428-4734)



CALCULATED  
CHECKED

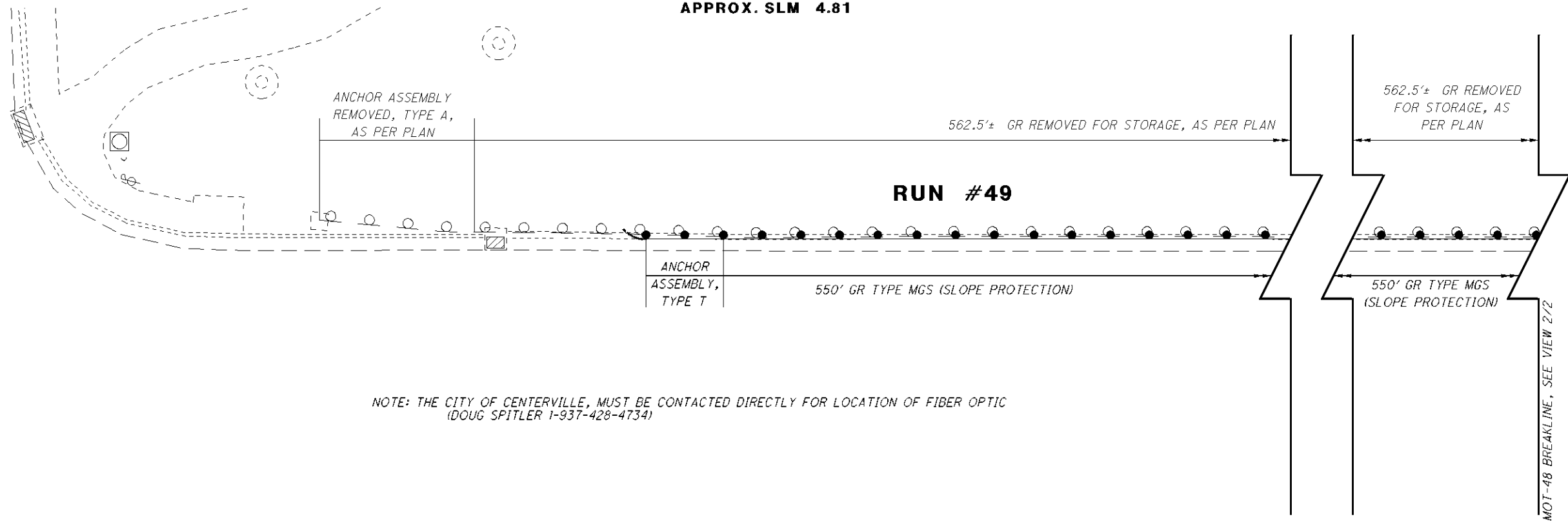
MOT-48 NORTH OF LOOP RD. - STRAIN POLE PROTECTION - SLM 4.74-4.79 - RUN #47 & #48

D07-SYST. GR-FY13

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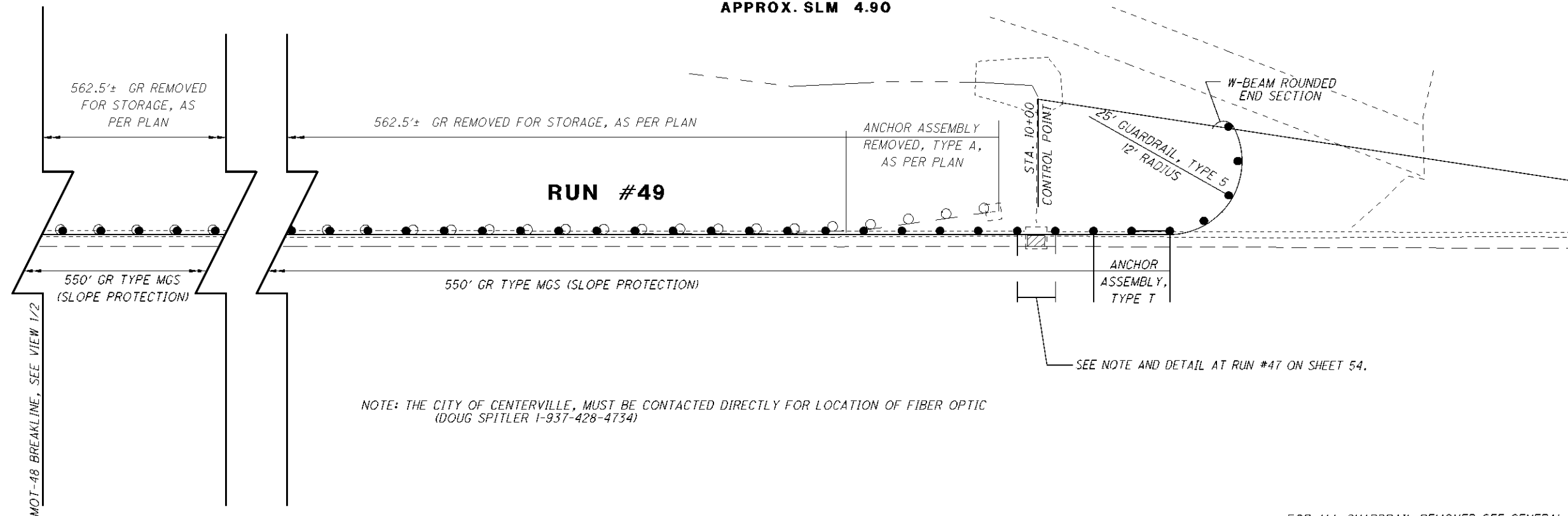
**MOT-48 NB- SOUTH OF FIRESIDE DR./BETHANY VILLAGE DR.- SLOPE PROTECTION (VIEW 1/2)**

APPROX. SLM 4.81



**MOT-48 NB- SOUTH OF FIRESIDE DR./BETHANY VILLAGE DR.- SLOPE PROTECTION (VIEW 2/2)**

APPROX. SLM 4.90



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

**MOT-48 NB- SOUTH OF FIRESIDE DR./ BETHANY VILLAGE DR.- SLM 4.81 -RUN #49**

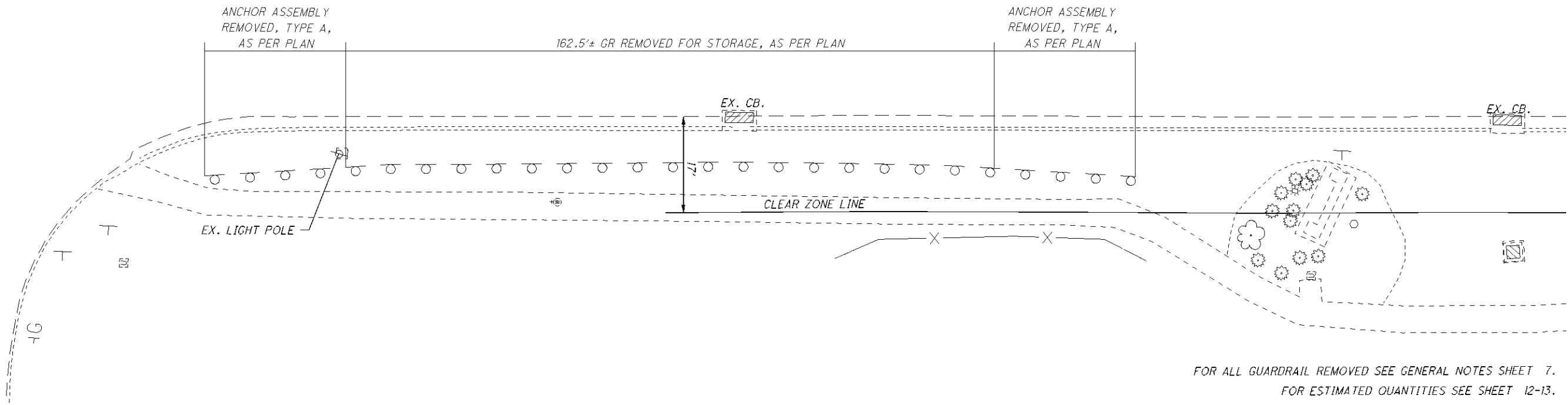
**D07-SYST. GR-FY13**

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**MOT-48 SB- SOUTH OF SHADYBROOK DR.- REMOVAL ONLY (VIEW 1/1)**

APPROX. SLM 5.04

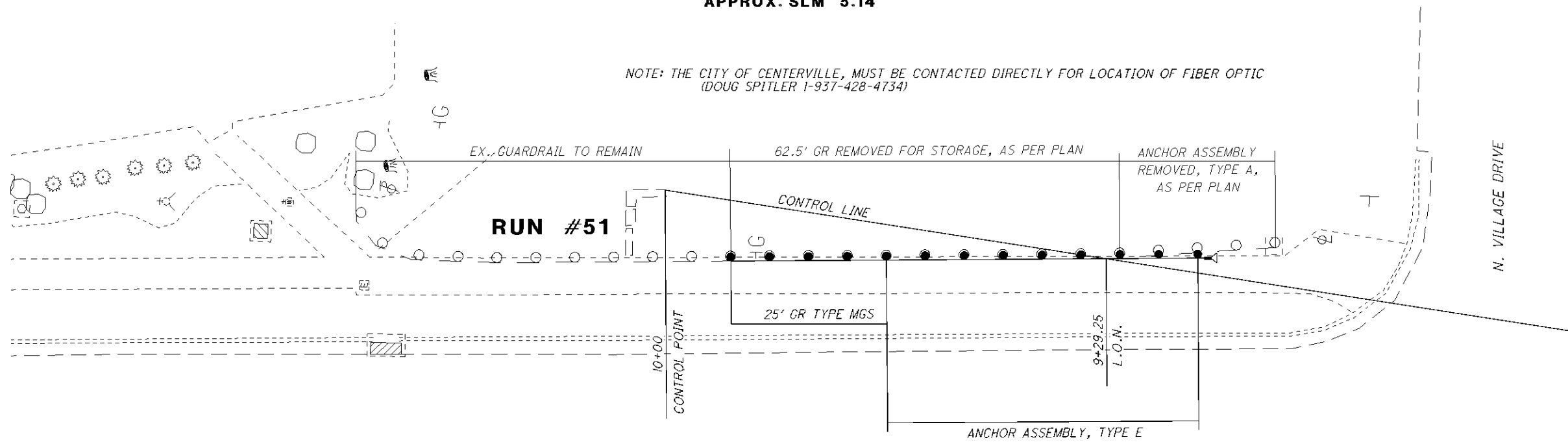
**RUN #50**



**MOT-48 NB- AT NORTH VILLAGE DR./ BOUNDBROOK DR.- PROTECTION AT STRUCTURE (VIEW 1/1)**

APPROX. SLM 5.14

**RUN #51**



CALCULATED  
CHECKED

**MOT-48 NB/SB AT SHADYBROOK DR. AND  
N. VILLAGE DR.- SLM 5.04-5.18- RUN #50, 51**

**D07-SYST. GR-FY13**

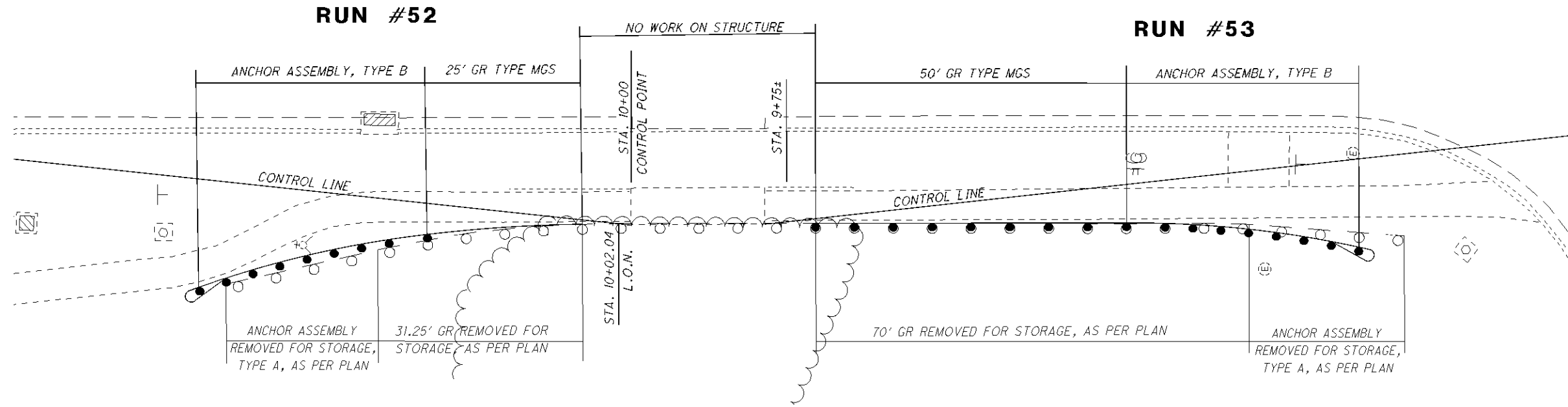
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MOT-48 SB- NORTH OF N. VILLAGE DR./BOUNDBROOK PROTECTION AT STRUCTURE (VIEW 1/1)

APPROX. SLM 5.18

NOTE: THE CITY OF CENTERVILLE, MUST BE CONTACTED DIRECTLY FOR LOCATION OF FIBER OPTIC  
(DOUG SPITLER 1-937-428-4734)



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

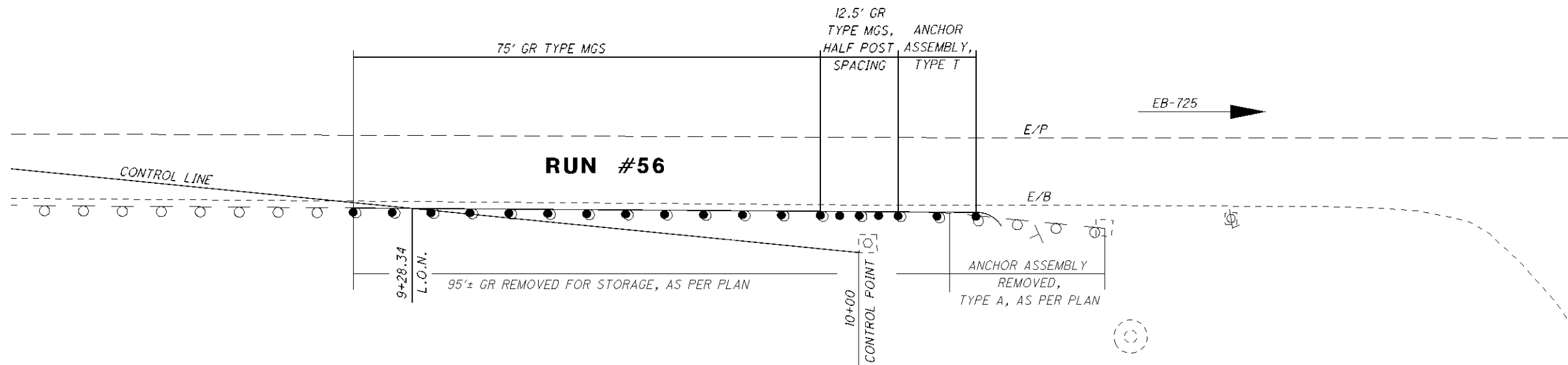
MOT-48 SB AT N. VILLAGE DR./BOUNDBROOK  
SLM 5.18- RUN #52, #53

D07-SYST. GR-FY13

57  
72

**MOT-725 EB AT YANKEE ST.- ANCHOR ASSEMBLY REPLACEMENT (VIEW 1/1)**

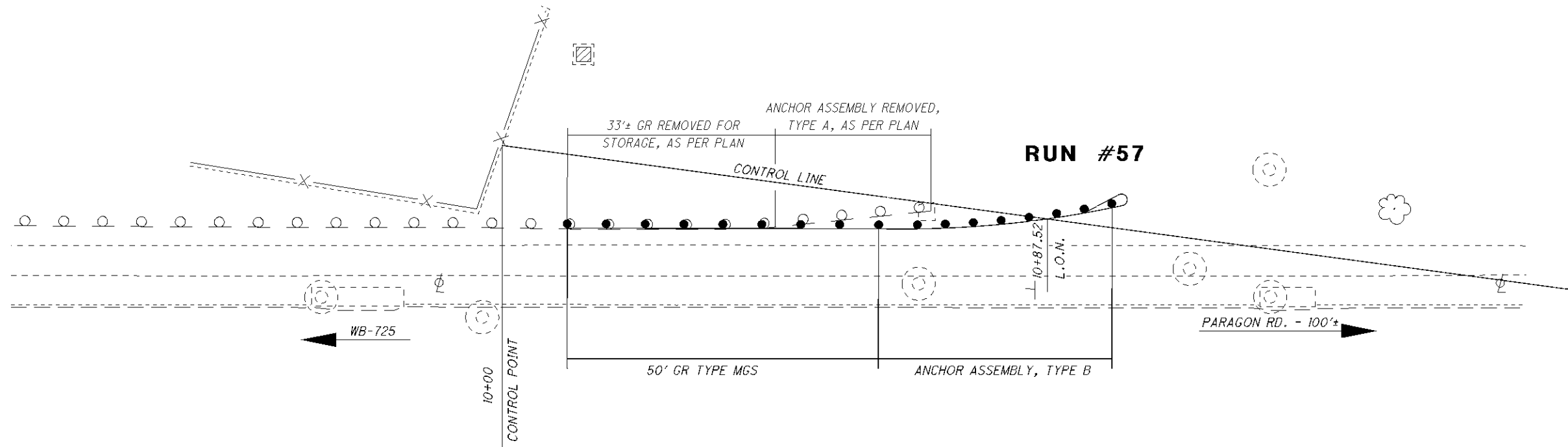
APPROX. SLM 16.56



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

**MOT-725 WB WEST OF PARAGON RD. - FENCE AND HEADWALL PROTECTION (VIEW 1/1)**

APPROX. SLM 17.44



CALCULATED  
CHECKED

MOT-725 EB/WB AT YANKEE ST. & W. OF PARAGON RD. - SLM 16.56 - 17.44 - RUN #56, 57

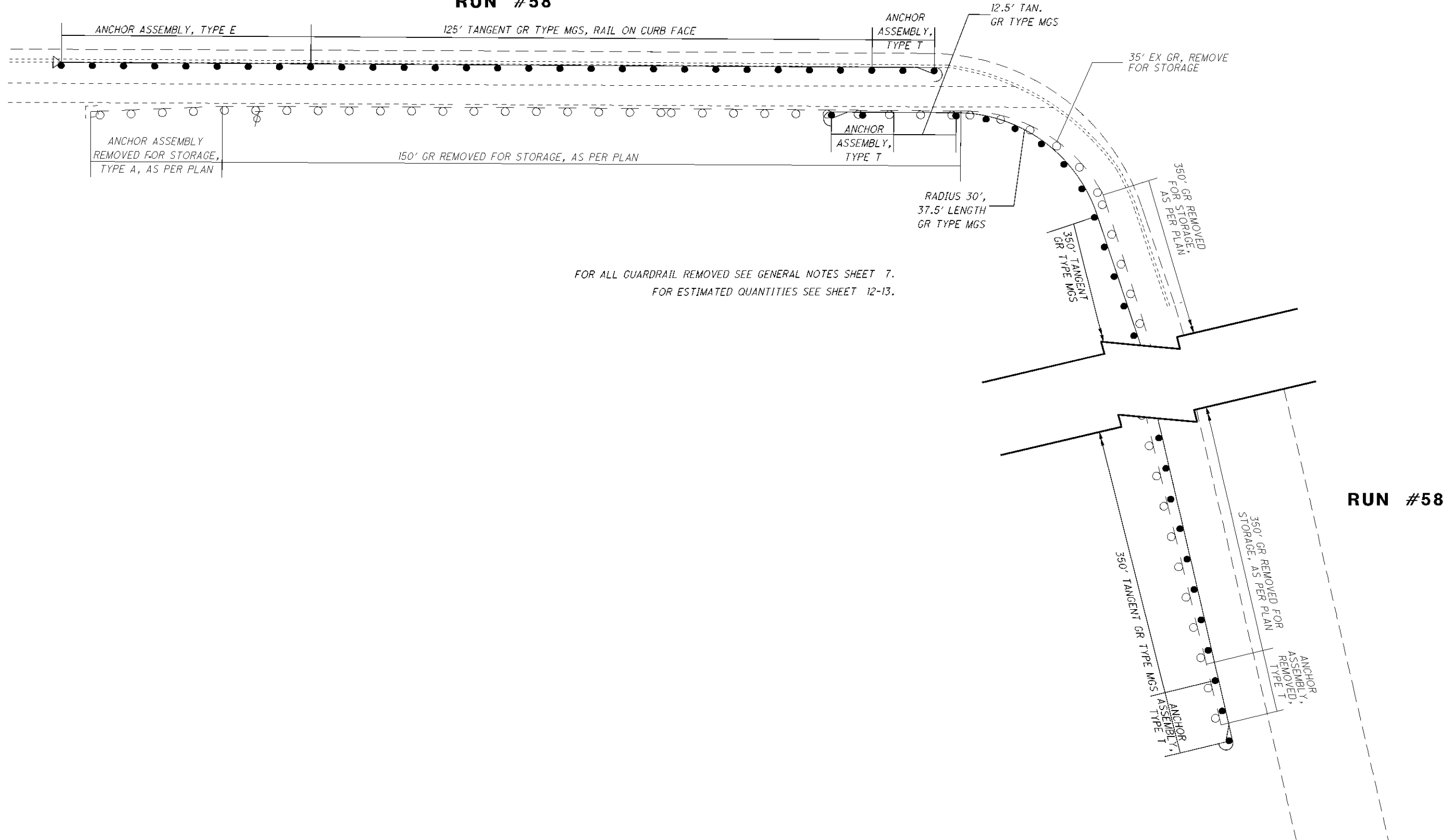
D07-SYST. GR-FY13

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SHE-47 EB AT SW CORNER OF ON RAMP TO SB IR-75 SLOPE PROTECTION (VIEW 1/1)

APPROX. SLM 13.93

**RUN #58**



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



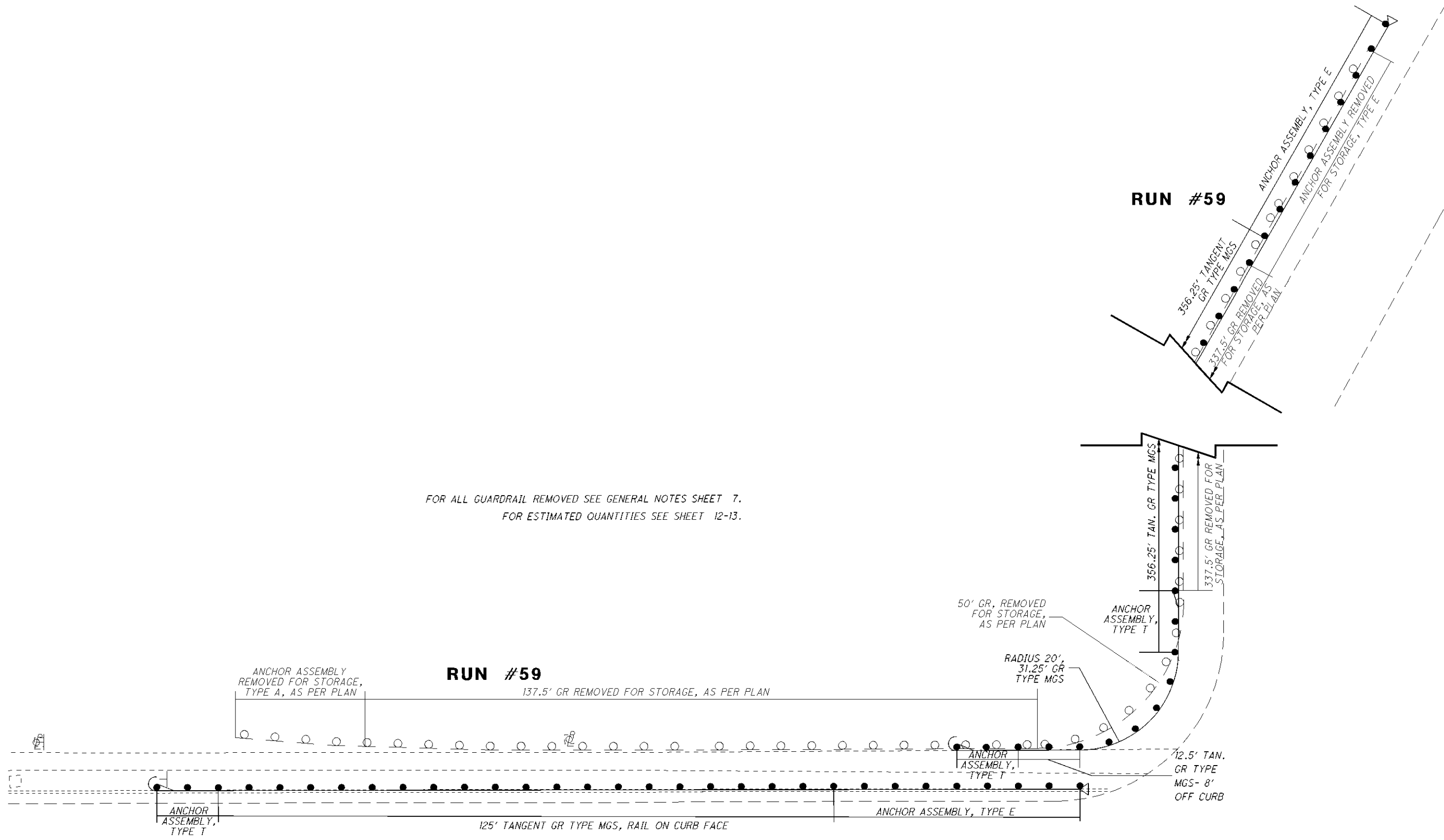
CALCULATED  
CHECKED

SHE-47EB SW CORNER OF ON RAMP TO I-75SB  
SLM 13.93 RUN #58

D07-SYST. GR-FY13

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**SHE-47 WB AT NW CORNER OF OFF RAMP FROM SB I-75 UTILITY/SLOPE PROTECTION (VIEW 1/1)**

APPROX. SLM 13.95



0 5 10 20  
HORIZONTAL  
SCALE IN FEET

CALCULATED  
CHECKED

**SHE-47 OFF RAMP FROM IR-75SB, NW CORNER**  
**SLM 13.95 RUN #59**

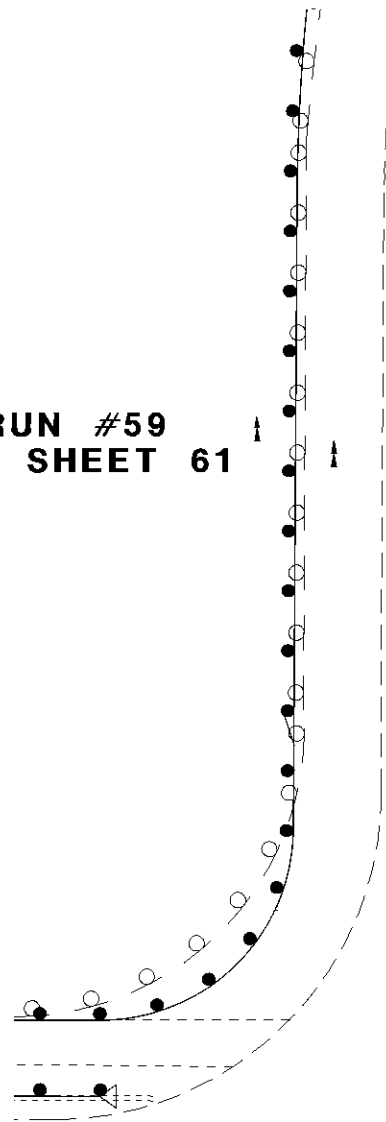
**D07-SYST. GR-FY13**

61  
72

**SHE-47 WB AT NE CORNER OFF RAMP FROM SB I-75 BRIDGE/SLOPE PROTECTION (VIEW 1/1)**

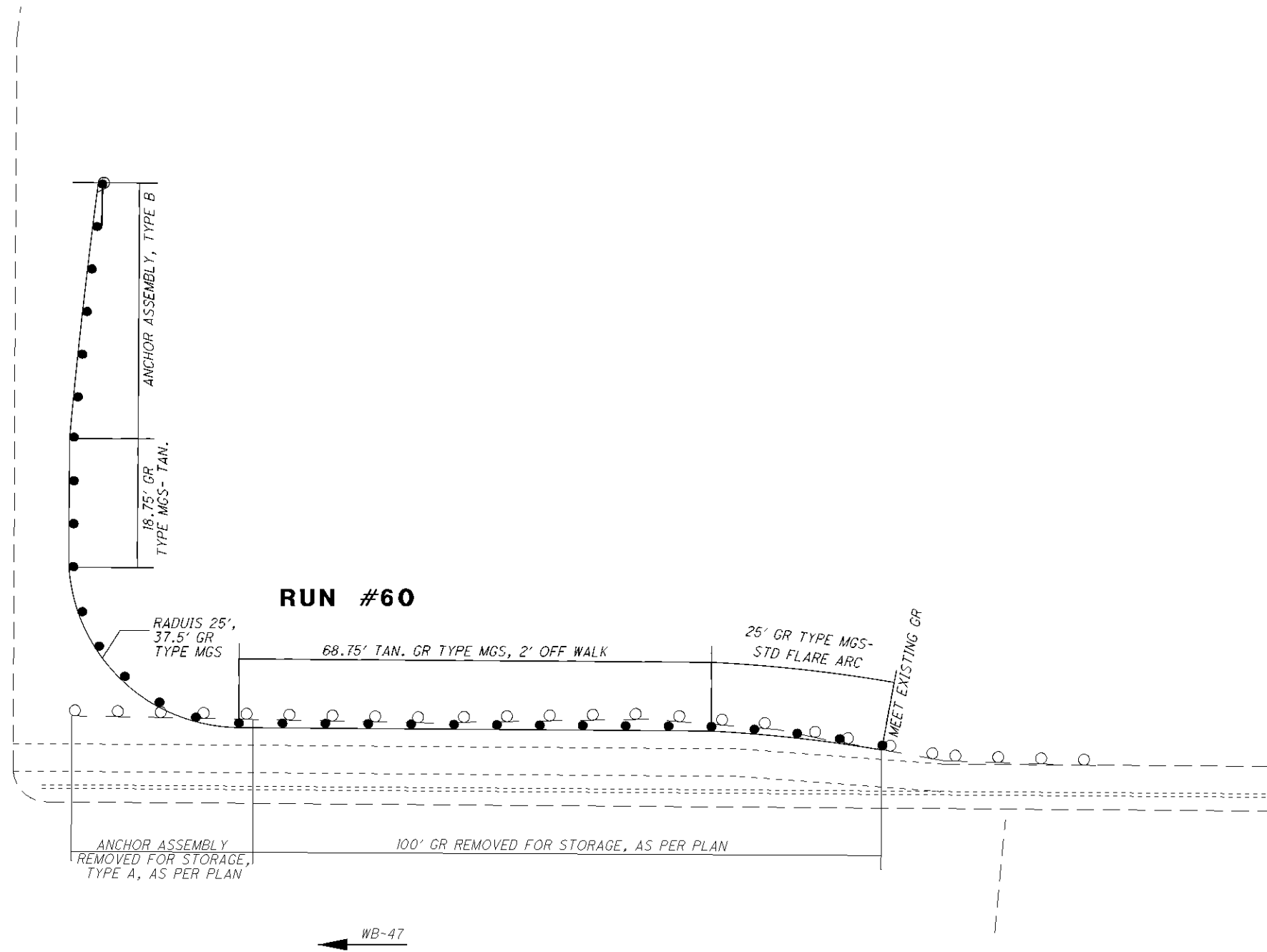
APPROX. SLM 13.96

**RUN #59  
SEE SHEET 61**



**RAMP**

**RUN #60**



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CALCULATED  
CHECKED

HORIZONTAL SCALE IN FEET

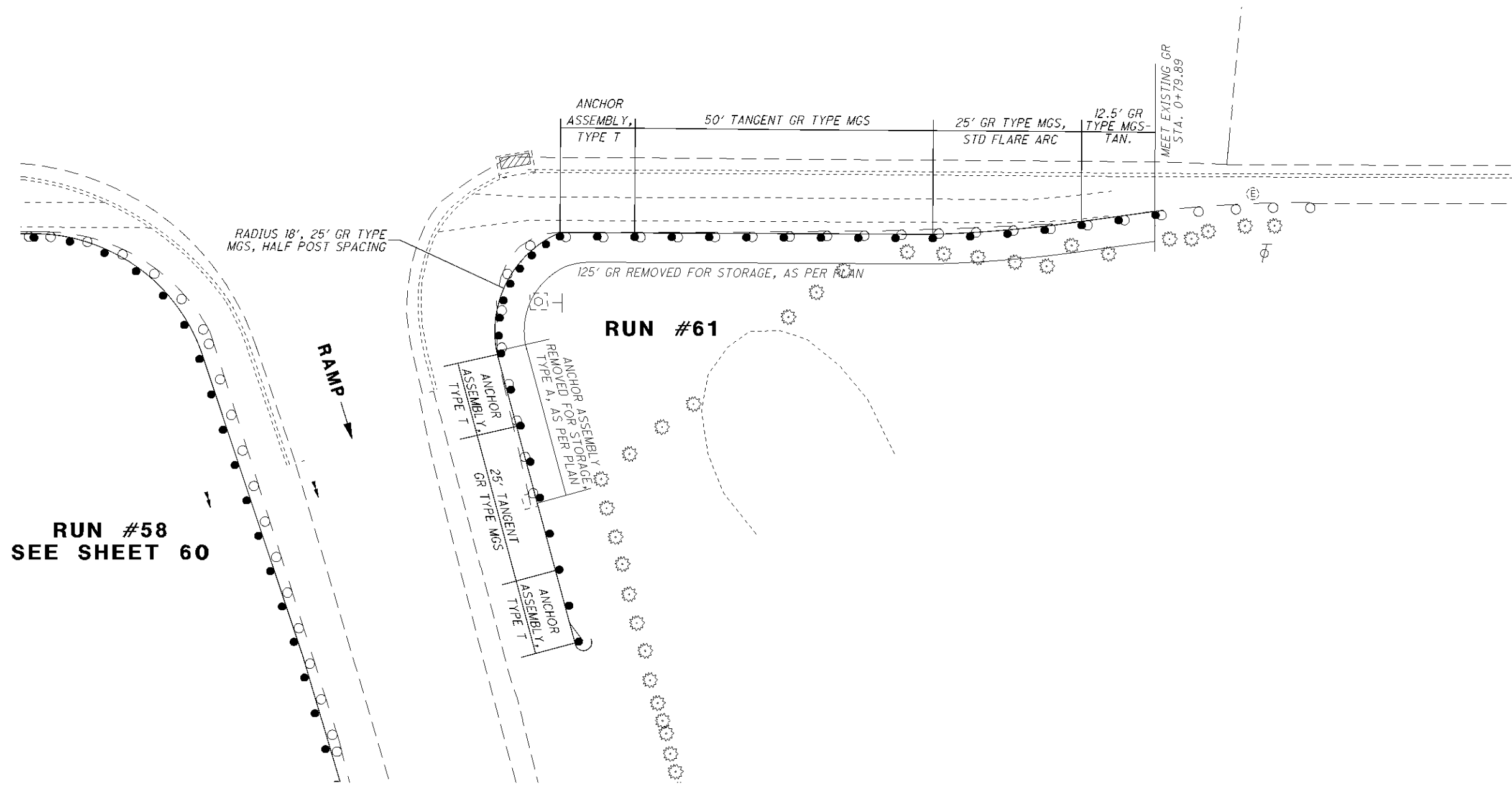
**SHE-47WB AT RAMP FROM IR-75SB, NE CORNER  
SLM 13.96 RUN #60**

**D07-SYST. GR-FY13**

FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

**SHE-47 EB AT SE CORNER OF ON RAMP TO I-75 SB BRIDGE/UTILITY PROTECTION (VIEW 1/1)**

APPROX. SLM 13.97



**RUN #58  
SEE SHEET 60**

**RUN #61**

**RAMP**

RADIUS 18', 25' GR TYPE MGS, HALF POST SPACING

ANCHOR ASSEMBLY, TYPE T

50' TANGENT GR TYPE MGS

25' GR TYPE MGS, STD FLARE ARC

12.5' GR TYPE MGS-TAN.

MEET EXISTING GR STA. 0+79.89

125' GR REMOVED FOR STORAGE, AS PER PLAN

ANCHOR ASSEMBLY, TYPE T

25' TANGENT GR TYPE MGS

ANCHOR ASSEMBLY, TYPE T

ANCHOR ASSEMBLY TYPE A, REMOVED FOR STORAGE AS PER PLAN



CALCULATED  
CHECKED

**SHE-47 EB AT RAMP TO IR-75SB  
SLM 13.97 RUN #61**

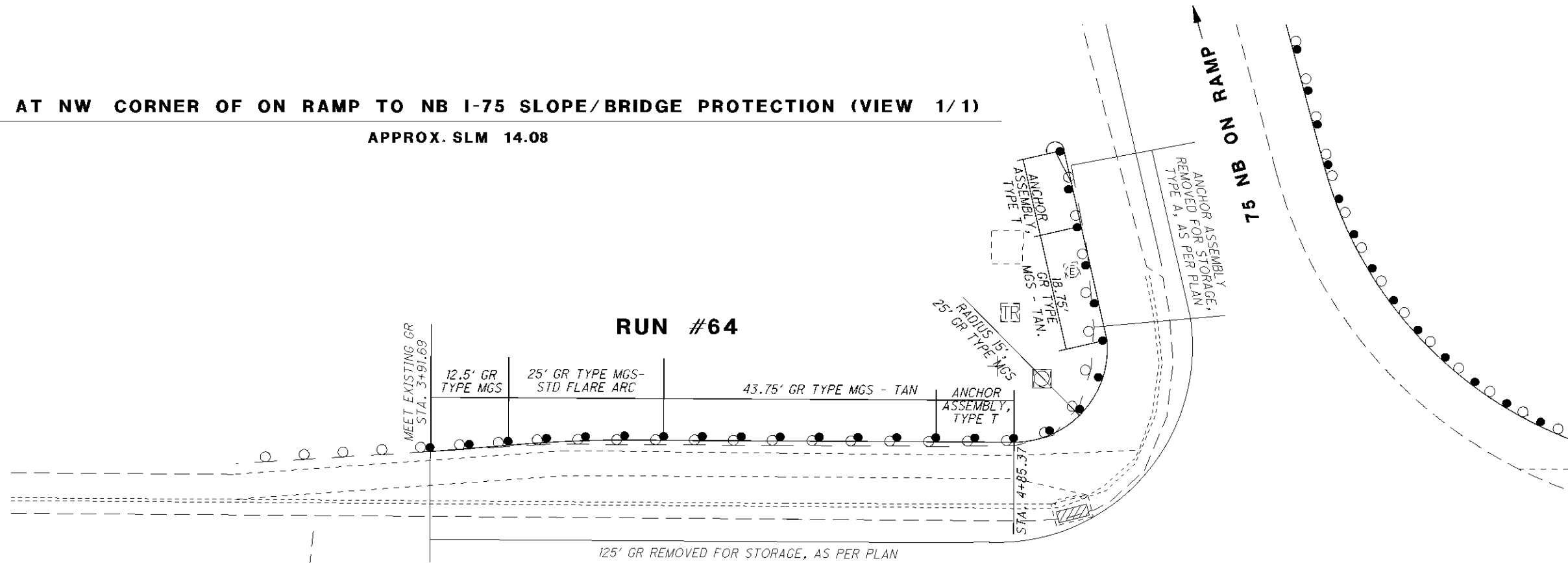
**D07-SYST. GR-FY13**

FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

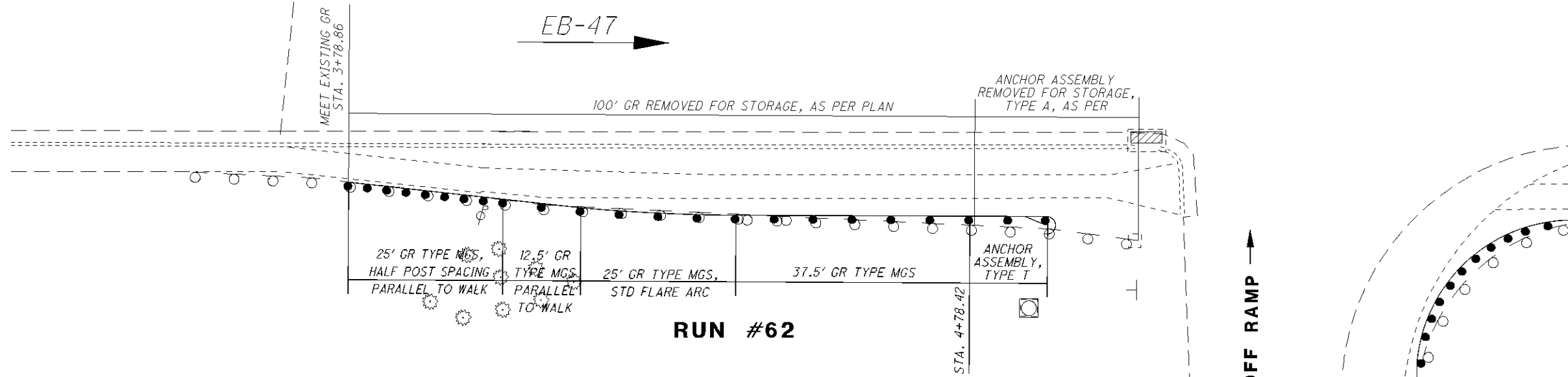
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**SHE-47 WB AT NW CORNER OF ON RAMP TO NB I-75 SLOPE/BRIDGE PROTECTION (VIEW 1/1)**

APPROX. SLM 14.08



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



**SHE-47 EB AT SW CORNER OF OFF RAMP FROM NB I-75 SLOPE/BRIDGE PROTECTION (VIEW 1/1)**

APPROX. SLM 14.08

CALCULATED  
CHECKED

0 5 10 20  
HORIZONTAL SCALE IN FEET

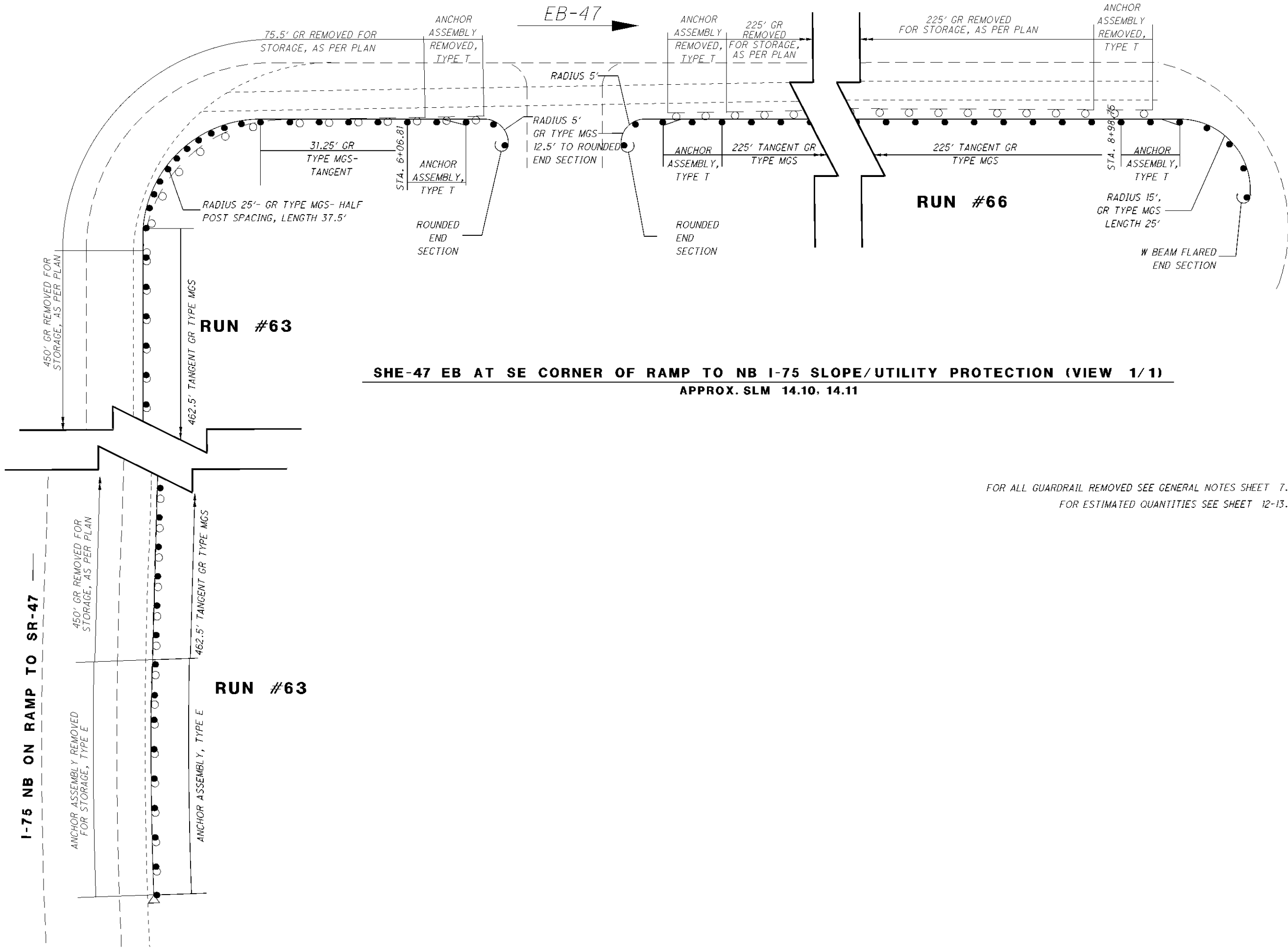
2

**SHE-47 EB/WB AT NB RAMPS OF IR-75**  
**SLM 14.08 RUN #62, #64**

**D07-SYST. GR-FY13**

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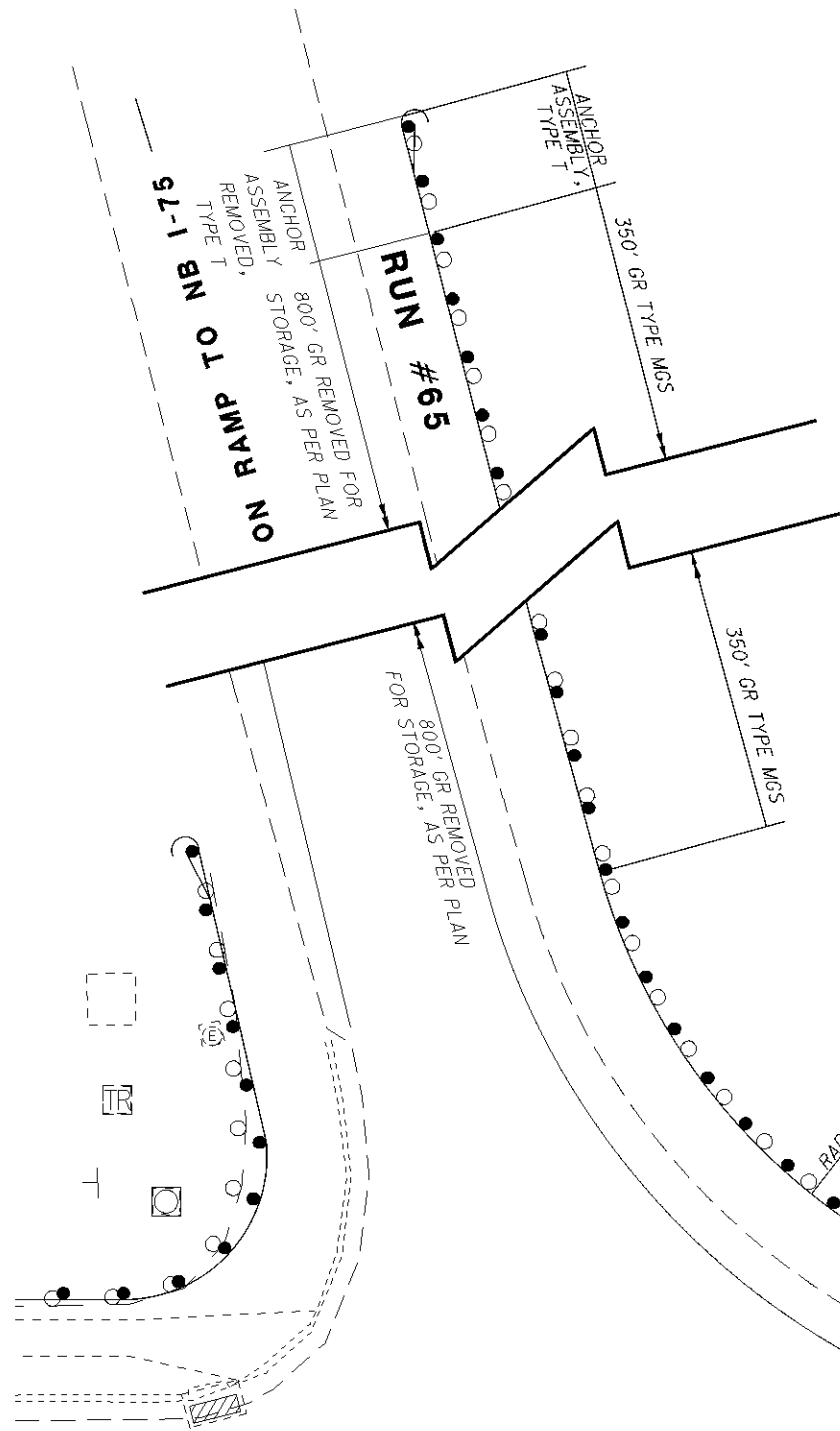
**SHE-47 EB AT SE CORNER OF RAMP TO NB I-75 SLOPE/UTILITY PROTECTION (VIEW 1/1)**  
**APPROX. SLM 14.10, 14.11**

FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
 FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

  HORIZONTAL SCALE IN FEET
CALCULATED _____ CHECKED _____
<b>SHE-47 EB AT ON RAMP TO IR-75 NB</b> <b>SLM 14.10-14.11- RUNS #63, 66</b>
<b>D07-SYST. GR-FY13</b>
65 72



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### SHE-47 WB AT NE CORNER OF RAMP TO NB I-75 UTILITY/SLOPE PROTECTION (VIEW 1/1)

APPROX. SLM 14.09

FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

FOR RUN #64  
SEE SHEET 64

RUN #65

350' TANGENT GR TYPE MGS 8' OFF CURB

STA. 6+00

350' TANGENT GR TYPE MGS 8' OFF CURB

37.5' TANGENT GR TYPE MGS, HALF POST SPACING 8' OFF CURB

ANCHOR ASSEMBLY, TYPE T

STA. 10+00

800' GR REMOVED FOR STORAGE, AS PER PLAN

ANCHOR ASSEMBLY REMOVED FOR STORAGE, TYPE A, AS PER PLAN

RUN #65

WB-47

W BEAR ROUNDED END SECTION

STA. 10+23.78

RADIUS 20' 37.5' GR TYPE MGS

CALCULATED

CHECKED

0 5 10 20

HORIZONTAL SCALE IN FEET

SHE-47 WB-AT ON RAMP TO NB I-75 NB  
SLM 14.09 RUN #65

D07-SYST. GR-FY13

**SHE-48 NB/SB OVER KLAKE DITCH - SLOPE/DITCH PROTECTION (VIEW 1/2)**  
 APPROX. SLM 2.59

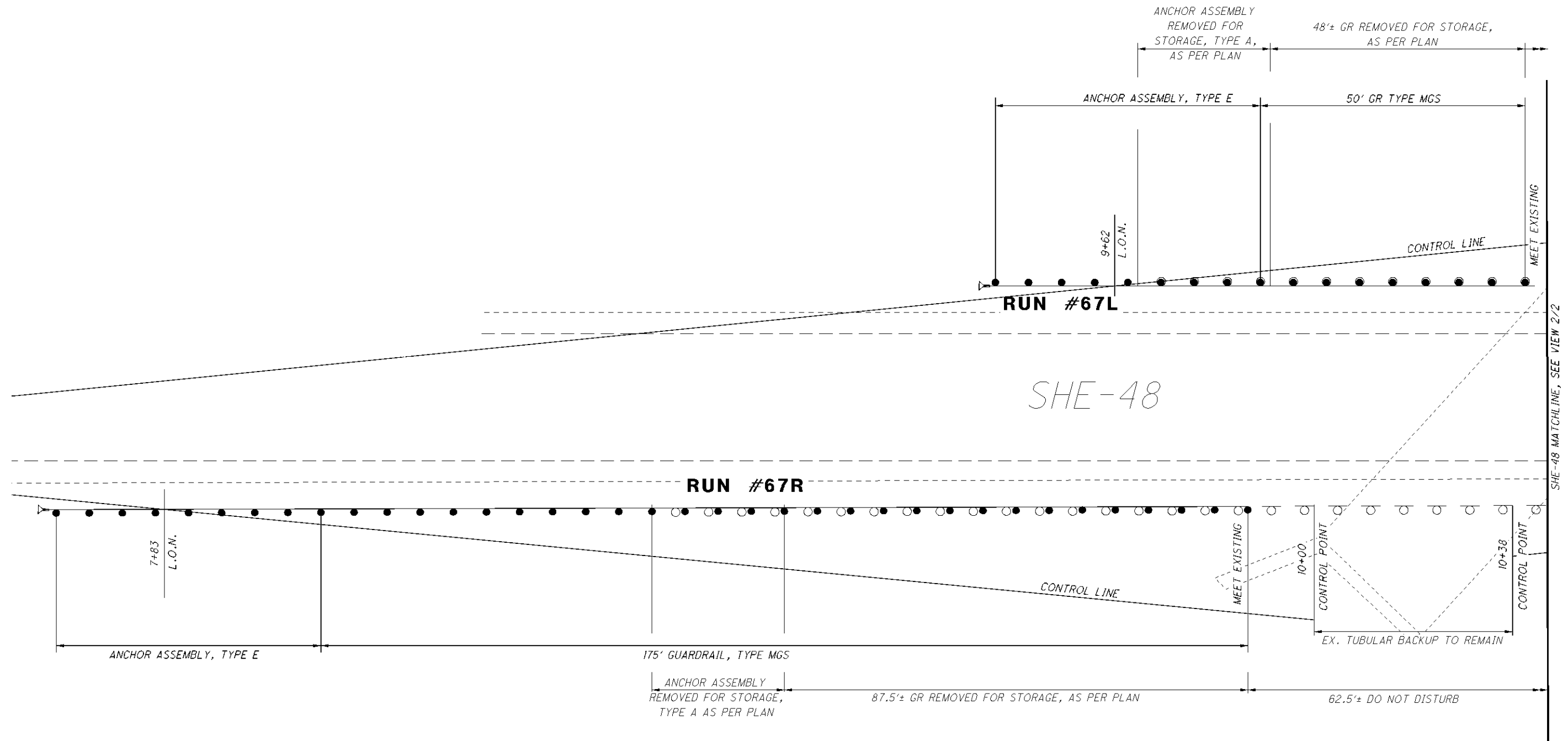


CALCULATED  
 CHECKED

**SHE-48 NB/SB OVER KLAKE DITCH**  
**SLM 2.59 RUN #67**

**D07-SYST. GR-FY13**

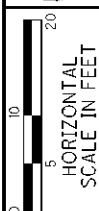
67  
 72



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
 FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

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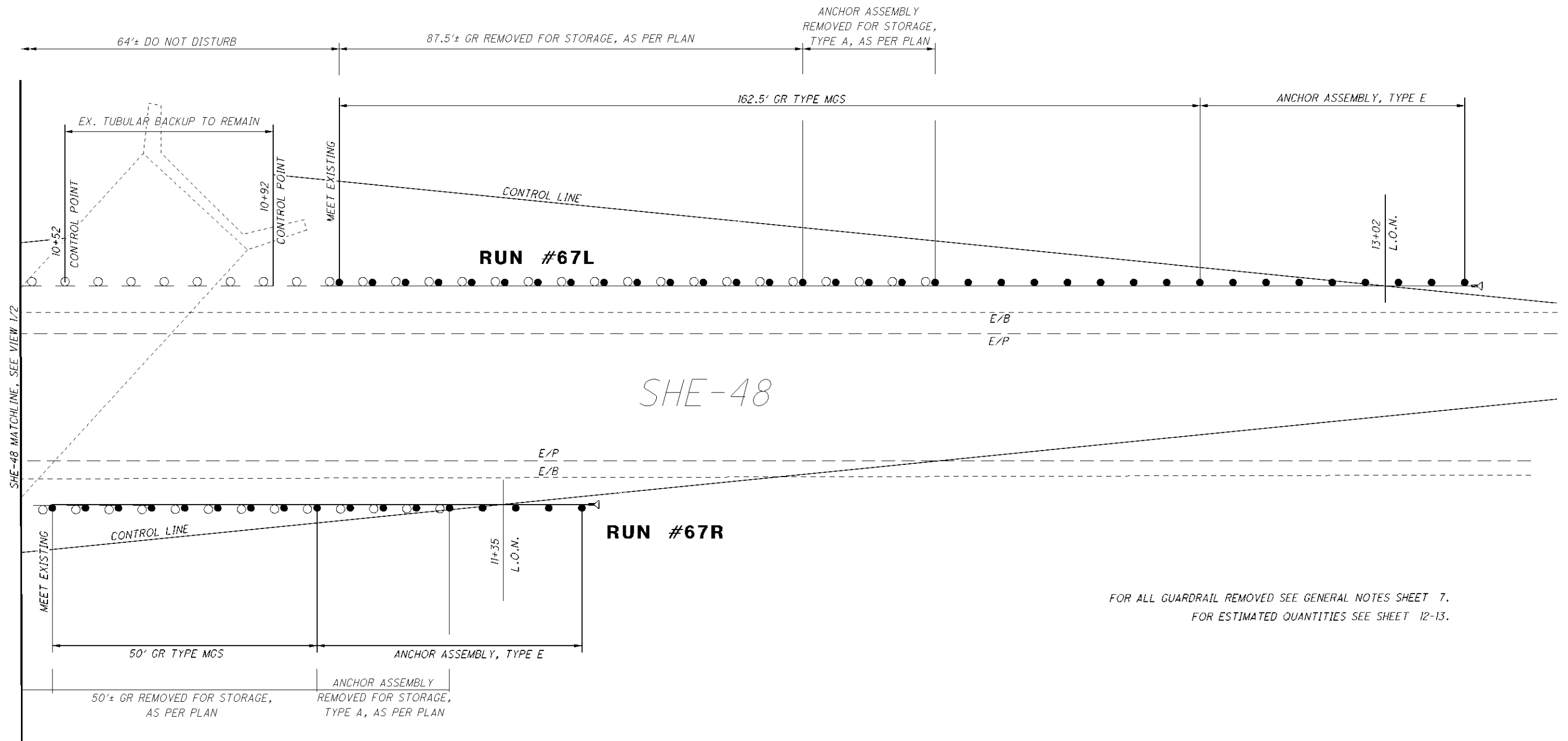
**SHE-48 NB/SB OVER KLAKE DITCH - SLOPE/DITCH PROTECTION (VIEW 2/2)**  
**APPROX. SLM 2.59**



CALCULATED  
 CHECKED

**SHE-48 NB/SB OVER KLAKE DITCH**  
**SLM 2.59 RUN #67**

**D07-SYST. GR-FY13**



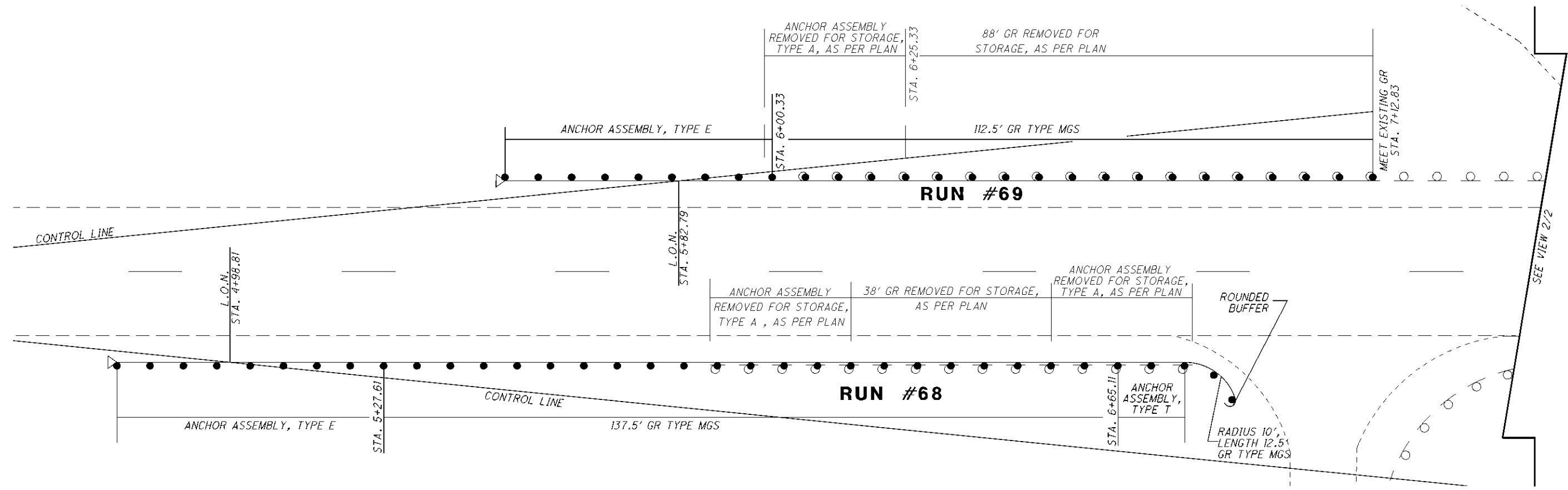
FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
 FOR ESTIMATED QUANTITIES SEE SHEET 12-13.

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SHE-48 MATCHLINE, SEE VIEW 1/2

SHE-48 NB/SB STRUCTURE OVER NINEMILE CREEK - BRIDGE/SLOPE PROTECTION (VIEW 1/2)

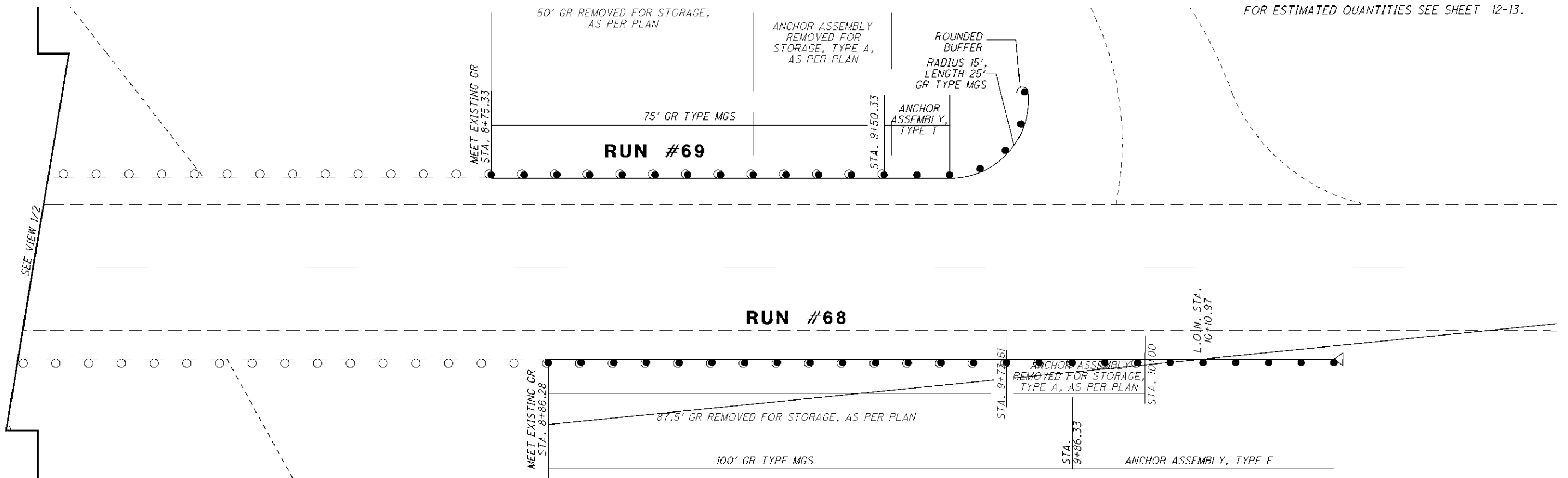
APPROX. SLM 3.09



SHE-48 NB/SB STRUCTURE OVER NINEMILE CREEK - BRIDGE/SLOPE PROTECTION (VIEW 2/2)

APPROX. SLM 3.09

FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
CHECKED

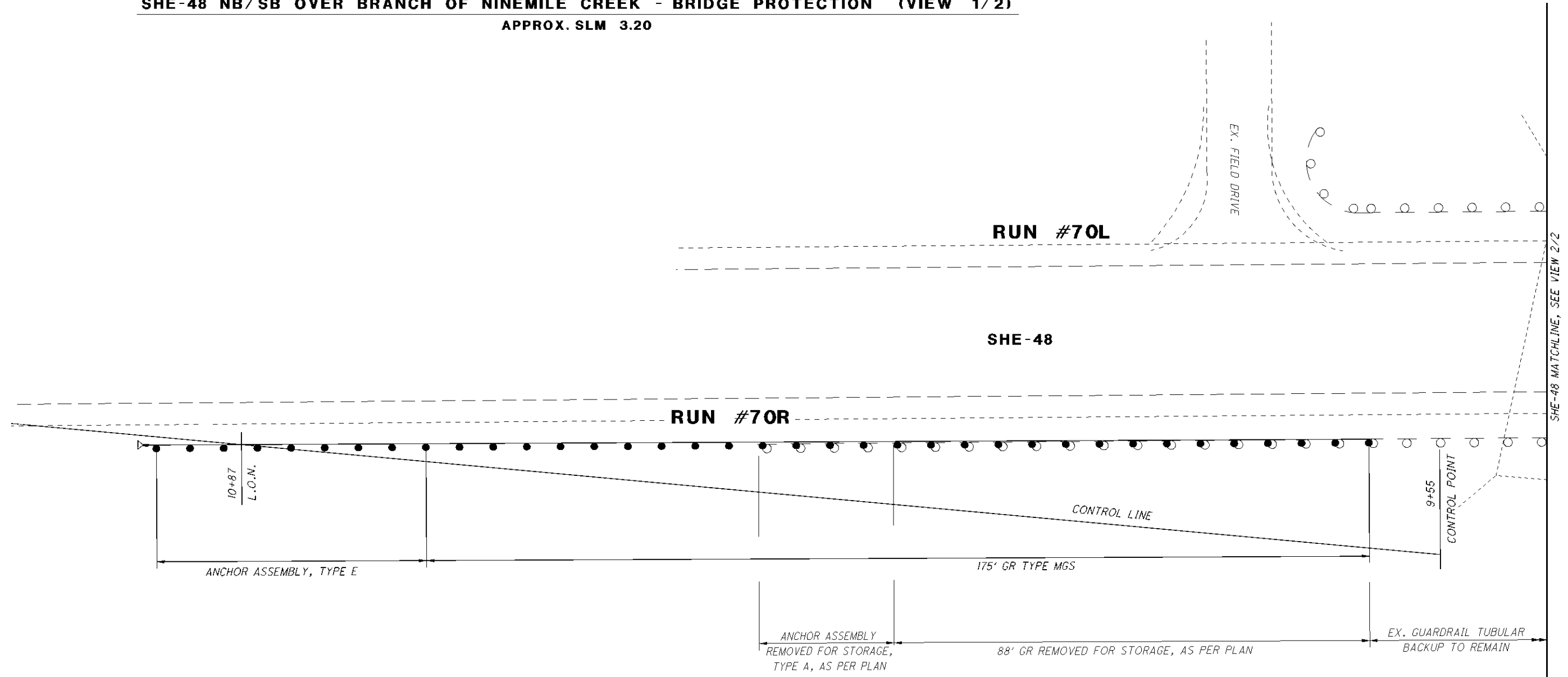
SHE-48 NB/SB OVER NINEMILE CREEK  
SLM 3.09 RUN #69

D07-SYST. GR-FY13

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**SHE-48 NB/SB OVER BRANCH OF NINEMILE CREEK - BRIDGE PROTECTION (VIEW 1/2)**  
**APPROX. SLM 3.20**



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



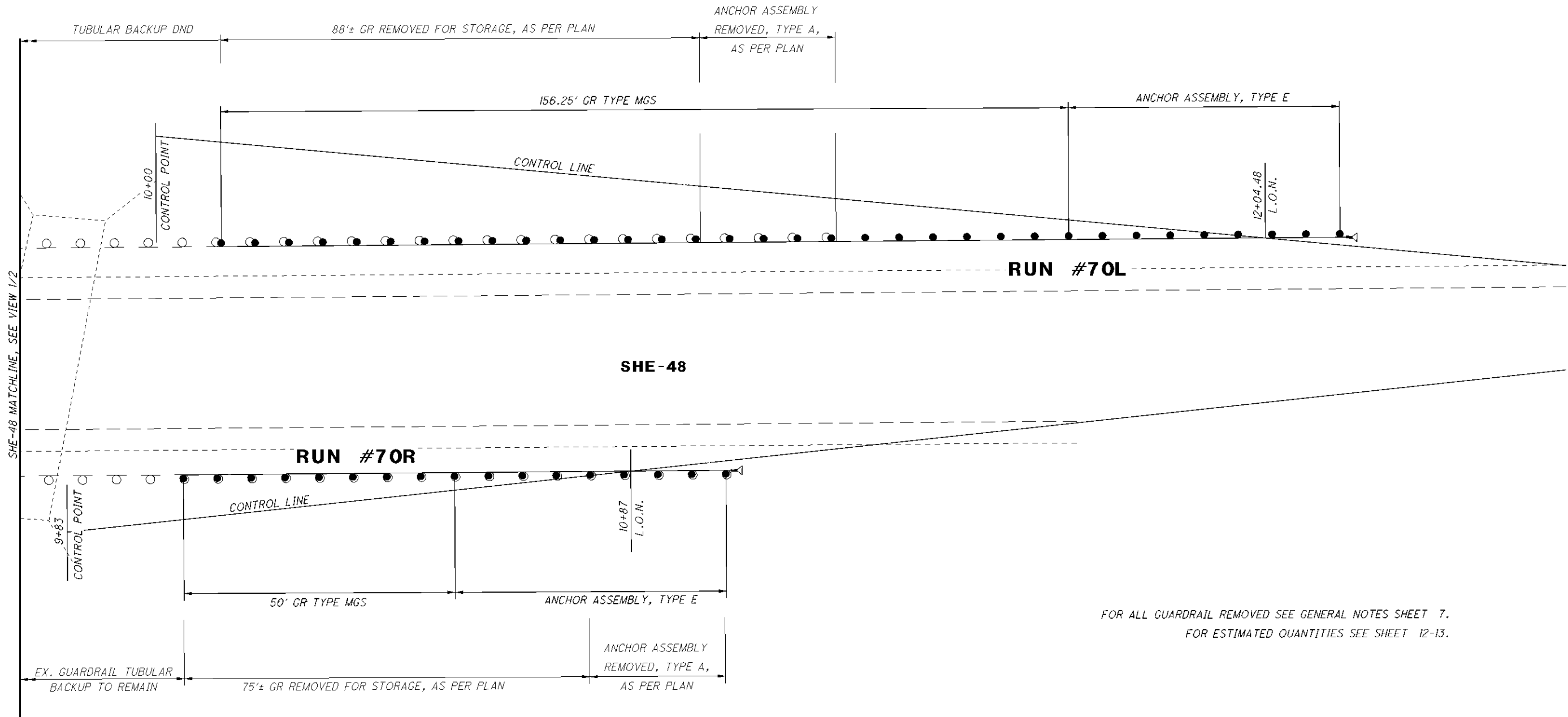
CALCULATED  
CHECKED

**SHE-48 NB/SB AT BRANCH OF NINEMILE CREEK**  
**SLM 3.20 RUN #70**

**D07-SYST. GR-FY13**

70  
72

**SHE-48 NB/SB OVER BRANCH OF NINEMILE CREEK (VIEW 2/2)**  
**APPROX. SLM 3.20**



FOR ALL GUARDRAIL REMOVED SEE GENERAL NOTES SHEET 7.  
 FOR ESTIMATED QUANTITIES SEE SHEET 12-13.



CALCULATED  
 CHECKED

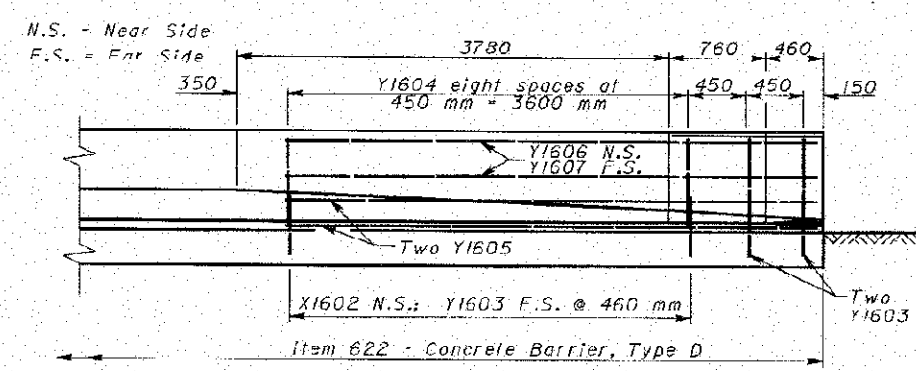
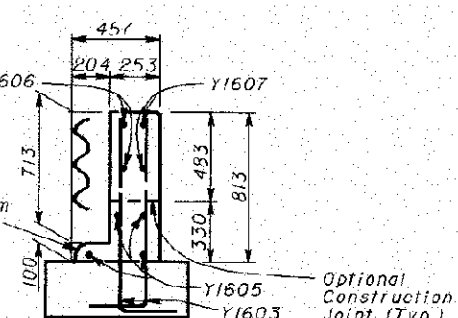
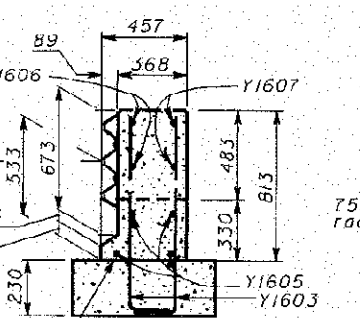
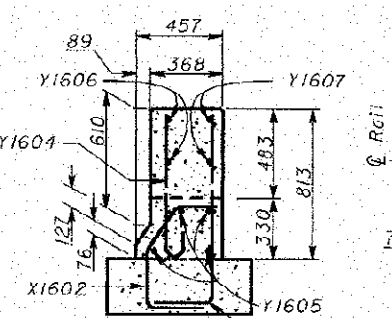
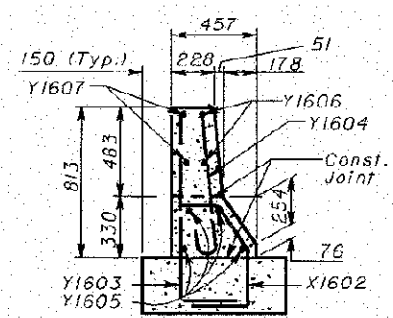
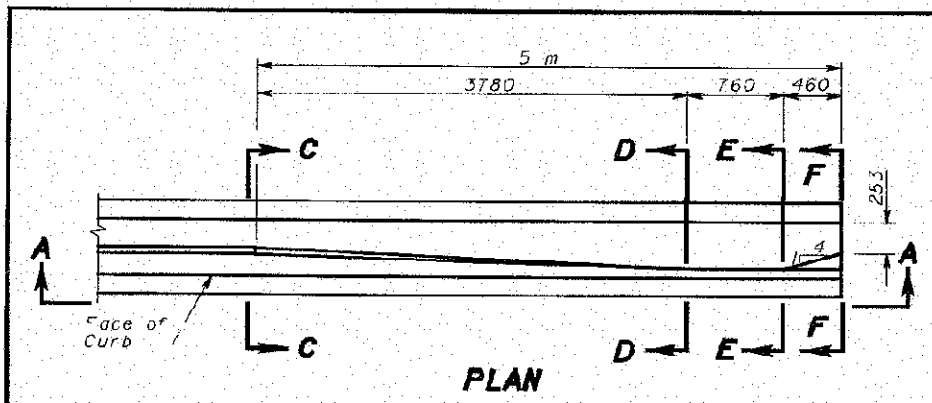
**SHE-48 NB/SB AT BRANCH OF NINEMILE CREEK**  
**SLM 3.20 RUN #70**

**D07-SYST. GR-FY13**

71  
 72

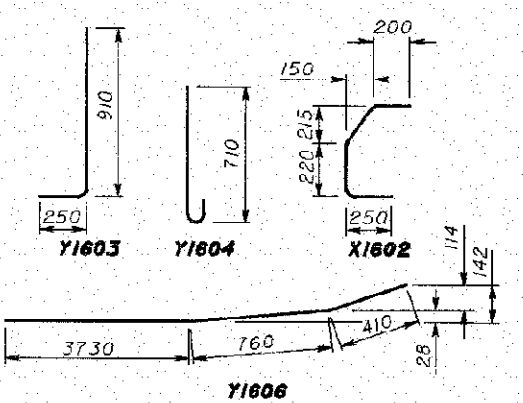
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SHE-48 MATCHLINE, SEE VIEW 1/2



**REINFORCING BAR LIST**

MARK	LENGTH (mm)	SHAPE	NO.	MASS (kg)
X1602	850	Bent	9	12
Y1603	1120	Bent	13	23
Y1604	880	Bent	9	13
Y1605	4900	Str.	4	31
Y1606	4900	Bent	2	15
Y1607	4900	Str.	2	15
<b>TOTAL MASS (For Info. only)</b>				<b>109</b>



**NOTES**

**LOCATION:** Concrete barrier at obstructions shall be constructed with the toe of the barrier slope at the normal guardrail offset from the roadway. Installations within continuous runs shall be constructed so that no approach or trailing guardrail tapers are required to connect to the barrier.

Installations that cannot be constructed at the normal guardrail offset and are to be connected to approach or trailing guardrail runs shall have a 25:1 guardrail taper to meet the existing or normal guardrail offset.

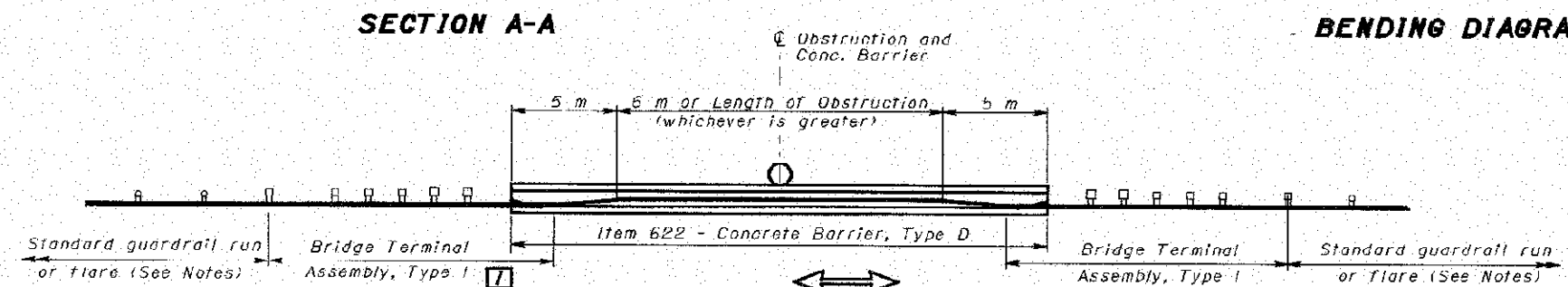
Installations that are not to be connected to approach or trailing guardrail runs shall include the standard guardrail flare as per SCD GR-5.1M.

**INCORPORATED INSTALLATIONS:** For barrier installations that cannot be constructed at the normal guardrail offset, the incorporated installations shown may be installed at vertical walls, piers or other similar obstructions. For pier-incorporated installations the contractor may use the optional treatment, forming the back face of the Type D Concrete Barrier to the location shown (between piers only), with any additional cost being included in the cost of Item 622.

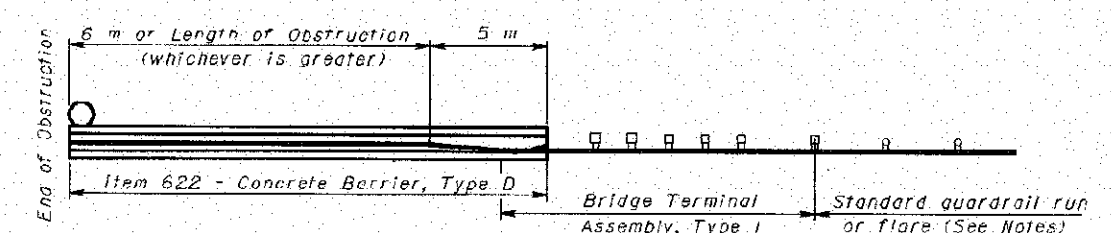
**REINFORCING:** All reinforcing bars shall be epoxy coated and shall meet the requirements of CMS 509.

**MISCELLANEOUS:** For Bridge Terminal Assembly, Type 1 and Type 2 details and connections, see SCD's GR-3.1M and GR-3.2M, respectively. For Type D Concrete Barrier details see SCD RM-4.3M.

**PAYMENT:** Payment for Item 622, Concrete Barrier, Type D shall include all materials, labor and reinforcing steel required to construct the barrier as shown.

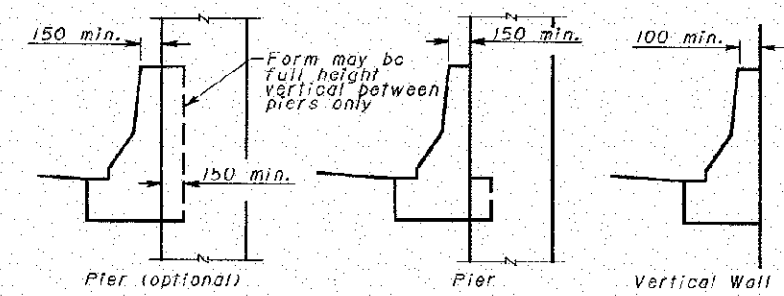


Bi-directional Travel or Directional Travel where trailing guardrail is used.



Directional Travel where no trailing guardrail is used.  
**TYPICAL INSTALLATIONS**

1 Bridge Terminal Assembly, Type 2 shall be used for directional roadways where trailing guardrail is used and is out of the clear zone of opposite direction traffic.



**INCORPORATED INSTALLATIONS**

All dimensions are in millimeters unless otherwise noted.



This Drawing Replaces GR-8J.

OHIO DEPARTMENT OF TRANSPORTATION	
<b>CONCRETE BARRIER AT OBSTRUCTIONS</b>	DATE 6-30-95 10-21-97
STANDARD CONSTRUCTION DRAWING <b>RM-4.5M</b>	APPROVED <i>[Signature]</i>