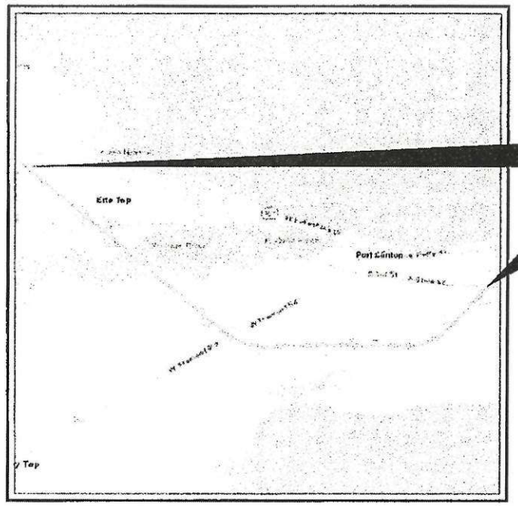
OTT - SR 2-16.37 Resurf
220106 PID - 107959
Dist 2 2/17/2022

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

OTT-2-16.37

OTTAWA COUNTY
ERIE, BAY AND PORTAGE TOWNSHIPS



LOCATION MAP

LATITUDE: 41°30'47" LONGITUDE: 82°56'28"

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

DESIGN DESIGNATION

	OTT-2:16.37-17.66	OTT-2:17.66-19.70	OTT-2:19.70-23.29
CURRENT ADT (2022)	8100	11000	14000
DESIGN YEAR ADT (2034)	8900	11500	15000
DESIGN HOURLY VOLUME (2034)	900	1000	1500
DIRECTIONAL DISTRIBUTION	52%	51%	53%
TRUCKS (24 HOUR B&C)	16%	13%	12%
DESIGN SPEED	60 MPH/70 MPH	70 MPH	70 MPH
LEGAL SPEED	55 MPH/65 MPH	65 MPH	65 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	RURAL PRINCIPAL ARTERIAL	RURAL FREEWAY	RURAL FREEWAY
NHS PROJECT	YES		

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION - DISTRICT 2

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FEDERAL PROJECT NUMBER

E191107

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

RESURFACE SR-2 IN OTTAWA COUNTY;
PERFORM NECESSARY RELATED WORK.

EARTH DISTURBED AREAS

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

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.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES 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.

ENGINEER'S SEAL:
STATE OF OHIO JULIE M. FAHY E-63302 REGISTERED PROFESSIONAL ENGINEER
SIGNED: Julie M Fahy
DATE: 11-9-2021

ENGINEER'S SEAL:
STATE OF OHIO DAVID J. GECKLE E-72729 REGISTERED PROFESSIONAL ENGINEER
SIGNED: David J. Geckle
DATE: 11-9-2021

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	1/17/20	DM-4.1	7/17/20	MT-95.30	7/19/19				
BP-3.2	1/18/19	DM-4.3	1/15/16	MT-95.31	7/19/19				
BP-5.1	7/16/21	DM-4.4	1/15/16	MT-95.32	4/19/19				
BP-8.1	7/19/13			MT-95.45	1/17/20				
BP-9.1	1/18/19			MT-95.60	4/19/19				
				MT-98.10	1/17/20				
MGS-1.1	7/16/21			MT-98.11	1/17/20				
MGS-2.1	1/19/18			MT-98.20	4/19/19				
MGS-3.1	1/19/18			MT-98.22	1/17/20				
MGS-3.2	1/18/13			MT-99.20	4/19/19				
MGS-4.2	7/19/13			MT-101.90	7/17/20				
MGS-5.2	7/15/16			MT-102.20	4/19/19				
MGS-6.1	1/19/18								
MGS-6.2	7/19/19			TC-65.10	1/17/14				
				TC-65.11	7/21/17				
RM-1.1	1/15/21			TC-72.20	7/20/18				

SUPPLEMENTAL SPECIFICATIONS	
800	10/15/21
832	10/19/18
875	1/18/19

SPECIAL PROVISIONS

APPROVED Pat McColley, PE
DATE 11/19/21 DISTRICT DEPUTY DIRECTOR

APPROVED Jack Marchbanks
DATE 1-3-2022 DIRECTOR, DEPARTMENT OF TRANSPORTATION

TITLE SHEET

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 1 TOTAL 40

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 11/9/2021 TIME: 2:27:15 PM USER: alfeist
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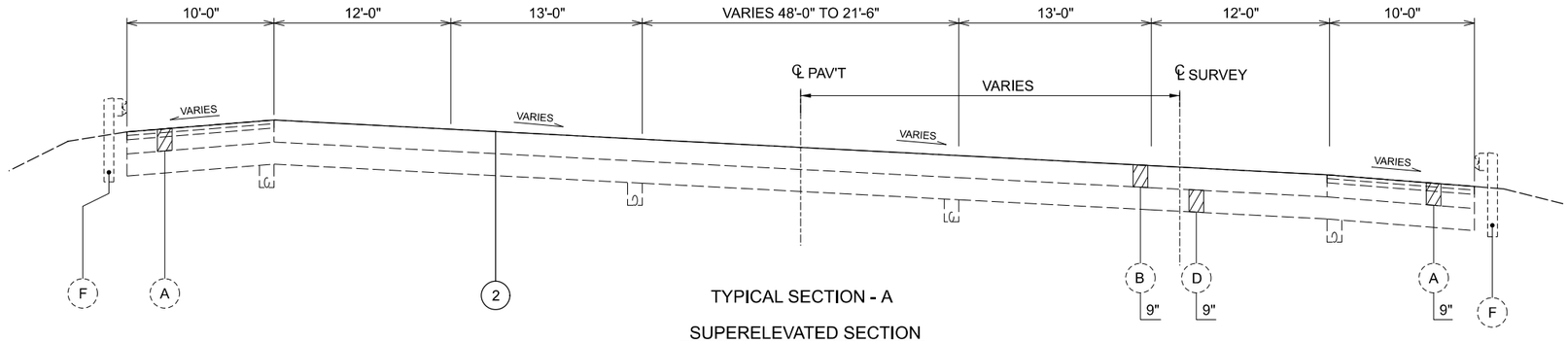
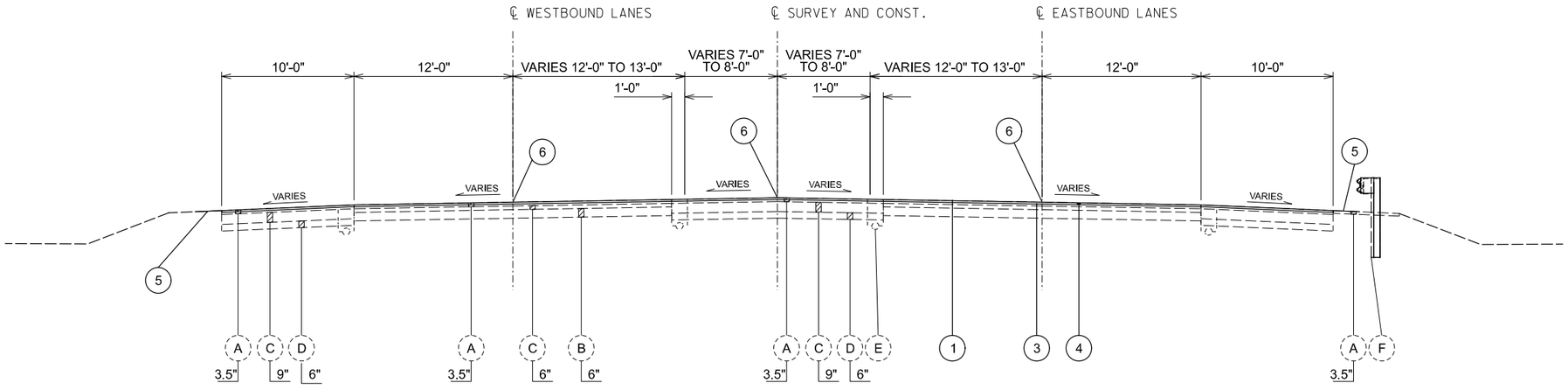


TYPICAL SECTION - A

SUPERELEVATED SECTION

TYPICAL SECTION APPIES FROM: STA. 865+16 TO STA. 872+61



TYPICAL SECTION - B

NORMAL SECTION

TYPICAL SECTION APPLIES FROM: STA. 873+53.00 TO STA. 907+90.00

PROPOSED PAVEMENT LEGEND

1. ITEM 254 - PAVEMENT PLANING, 1 3/4"
2. ITEM 257 - DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT
3. ITEM 407 - NON TRACKING TACK COAT
4. ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446), 1 3/4"
5. ITEM 617 - COMPACTED AGGREGATE & ITEM 209 LINEAR GRADING
6. ITEM 875 - LONGITUDINAL JOINT ADHESIVE @ COLD JOINTS

EXISTING PAVEMENT LEGEND

- A ASPHALT CONCRETE (THICKNESS AS SHOWN)
- B REINFORCED CONCRETE PAVEMENT (THICKNESS AS SHOWN)
- C BITUMINOUS AGGREGATE BASE (THICKNESS AS SHOWN)
- D AGGREGATE BASE (THICKNESS AS SHOWN)
- E 4" SHALLOW UNDERDRAIN
- F GUARDRAIL
- G CONCRETE MEDIAN BARRIER
- G CONCRETE MEDIAN CURB

TYPICAL SECTIONS-SR 2

DESIGN AGENCY

DESIGNER ALF

REVIEWER JMF

PROJECT ID 107959

SHEET 2 TOTAL 40

OTT-2-16.37

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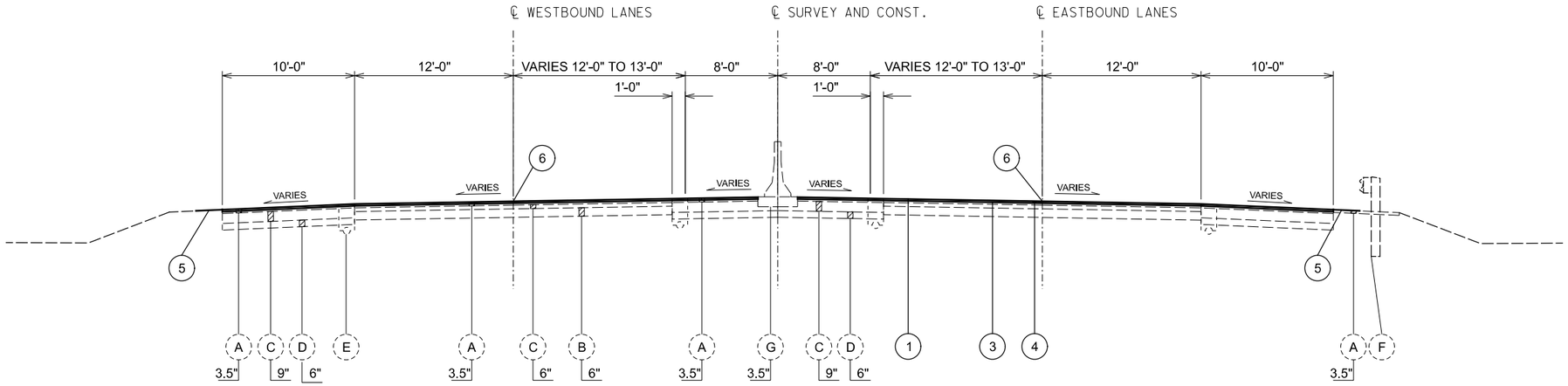
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 02\Ottawa\107959\400-Engineering\Roadway\Sheets\107959_GY001.dgn

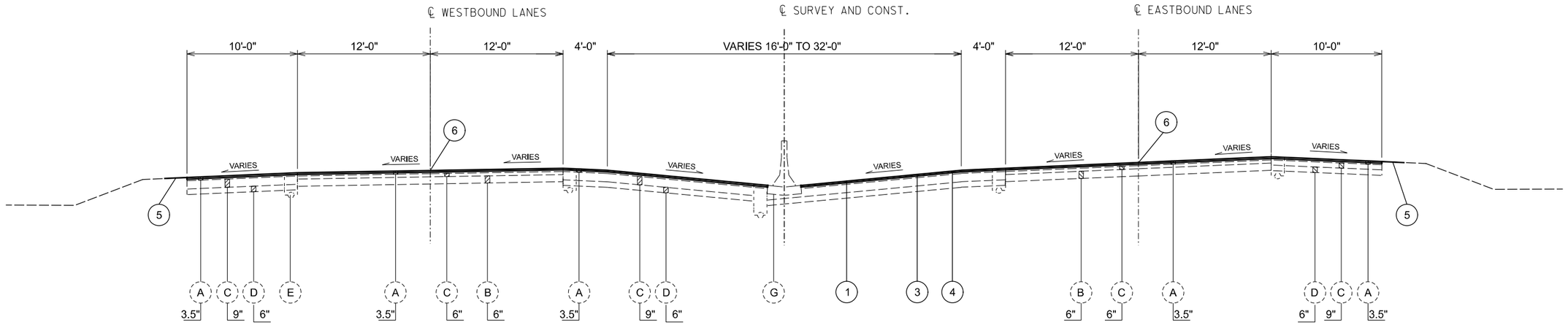
TYPICAL SECTION - C



NORMAL SECTION

TYPICAL SECTION APPLIES FROM: STA. 907+90.00 TO STA. 927+09.48
STA. 929+87.77 TO STA. 932+15.59
STA. 934+67.92 TO STA. 955+12.09
STA. 955+34.16 TO STA. 965+33.82
STA. 970+92.07 TO STA. 1035+65.51

TYPICAL SECTION - D



SUPERELEVATED SECTION

TYPICAL SECTION APPLIES FROM: STA. 1035+65.51 TO STA. 1043+83.00

NOTE: For Pavement Legend see sheet No. 2.

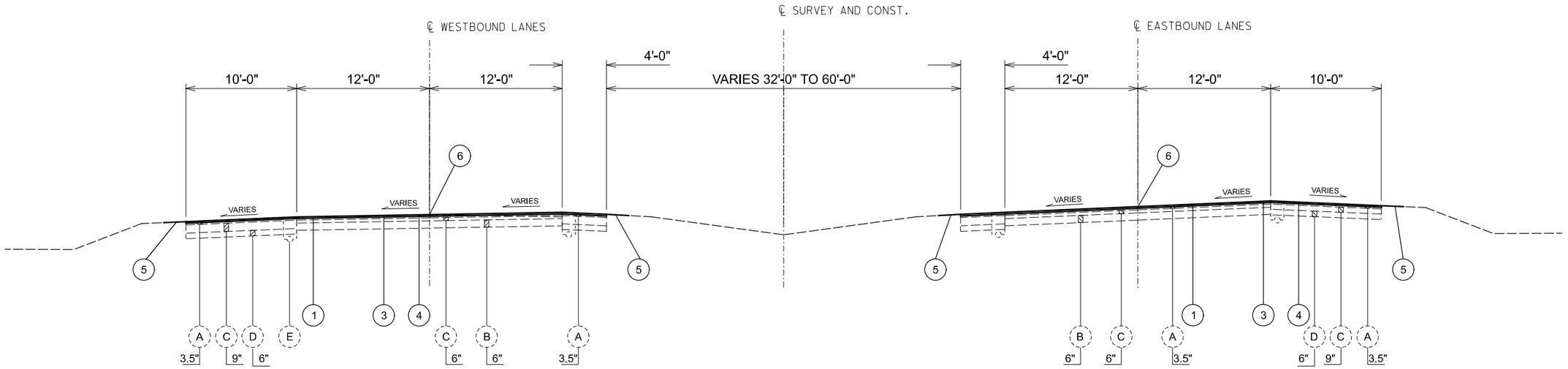
TYPICAL SECTIONS-SR 2

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 3 TOTAL 40

OTT-2-16.37

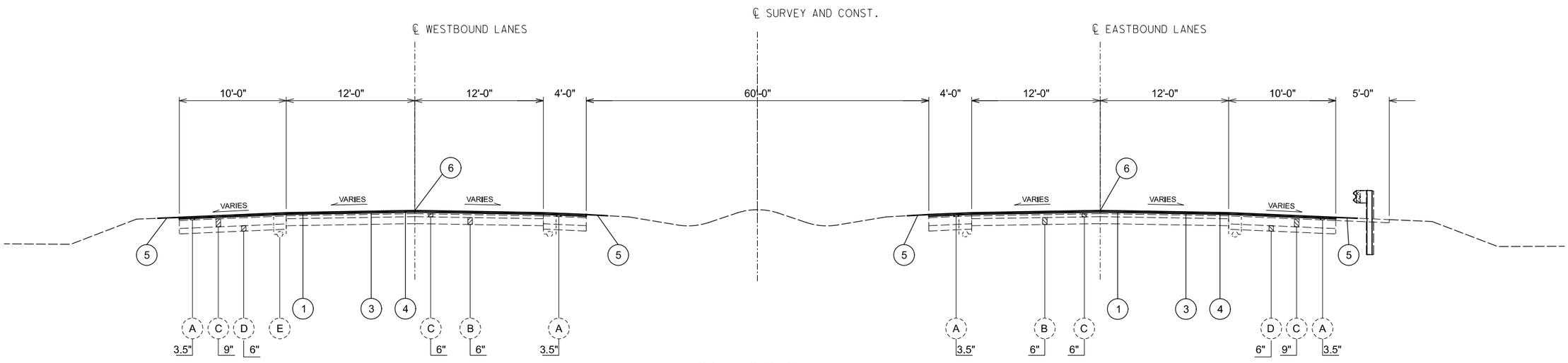
TYPICAL SECTION - E



SUPERELEVATED SECTION

TYPICAL SECTION APPLIES FROM: STA. 1043+83.00 TO STA. 1063+37.00
STA. 1150+87.00 TO STA. 1183+79.31
STA, 1225+15.88 TO STA. 1231+00.00

TYPICAL SECTION - F



NORMAL SECTION

TYPICAL SECTION APPLIES FROM: STA. 1063+37.00 TO STA. 1150+87.00
STA. 1183+79.31 TO STA. 1215+34.99
STA. 1221+26.45 TO STA. 1225+15.58

NOTE: For Pavement Legend See Sheet No. 2.

TYPICAL SECTIONS-SR 2

DESIGN AGENCY

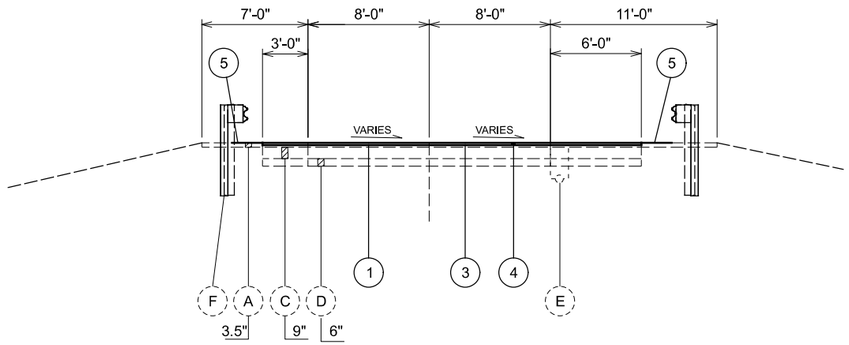
DESIGNER ALF

REVIEWER JMF

PROJECT ID 107959

SHEET 4 TOTAL 40

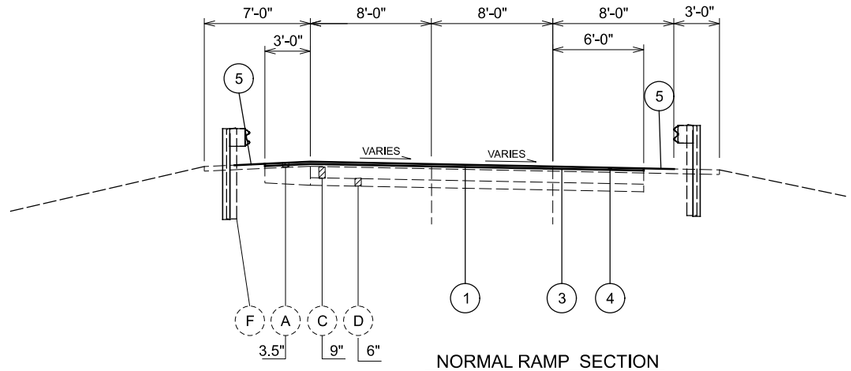
OTT-2-16.37



SUPERELEVATED RAMP SECTION

TYPICAL SECTION APPLIES FROM: SR 163 INTERCHANGE:
RAMP A: STA. 0+30.00 TO STA. 9+91.66
RAMP B: STA. 0+39.00 TO STA. 9+72.40

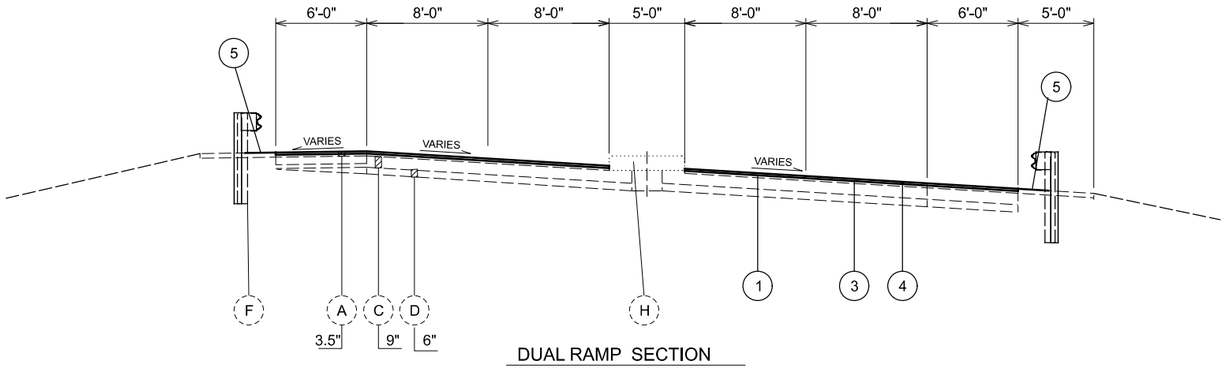
SR 53 INTERCHANGE:
RAMP A: STA. 0+00.00 TO STA. 0+91.23
RAMP B: STA. 4+76.41 TO STA. 13+00.00
RAMP C: STA. 6+92.39 TO STA. 13+00.00
RAMP D: STA. 3+50.00 TO STA. 7+78.76



NORMAL RAMP SECTION

TYPICAL SECTION APPLIES FROM: SR 163 INTERCHANGE
RAMP B: STA. 9+72.40 TO STA. 14+31.61

SR 53 INTERCHANGE:
RAMP A: STA. 0+91.23 TO STA. 7+29.00
RAMP B: STA. 0+00.00 TO STA. 4+76.41
RAMP C: STA. 0+00.00 TO STA. 6+92.39
RAMP D: STA. 7+78.76 TO STA. 13+87.09



DUAL RAMP SECTION

TYPICAL SECTION APPLIES FROM: SR 53 INTERCHANGE:
RAMP B: STA. 13+00.00 TO STA. 18+59.00
RAMP C: STA. 13+00.00 TO STA. 19+37.00

NOTE: For Pavement Legend See Sheet No. 2.

TYPICAL SECTIONS-RAMPS

DESIGN AGENCY

DESIGNER ALF

REVIEWER JMF

PROJECT ID 107959

SHEET 5 TOTAL 40

OTT-2-16.37

ROUNDING

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

UTILITIES

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

OHIO EDISON
2508 W. PERKINS AVE.
SANDUSKY, OHIO 44870
PH. 419.627.6887

FRONTIER
300 W. GYPSY LANE RD.
BOWLING GREEN, OHIO 43402
PH. 419.354.9452

OTTAWA COUNTY WATER DIVISION
315 MADISON AVE.
PORT CLINTON, OHIO 43452
PH. 419.734.6710

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS.
USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: TYPE B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS80
MAP PROJECTION: MAP PROJECTION
COORDINATE SYSTEM: OHIO STATE PLAN NORTH
COMBINED SCALE FACTOR: 1.000000 (GRID)
ORIGIN OF COORDINATE
SYSTEM: 0, 0, 0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE FOLLOWING LOCATIONS:

STA. 869+24
STA. 872+78.53
STA. 882+13
STA. 892+13
STA. 902+13

WORK LIMITS

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

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT.

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, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL 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.

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

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.

PLANED SURFACES

NO PLANED SURFACES SHALL BE OPEN TO THE PUBLIC FOR MORE THAN 7 DAYS. IF THE PLANED SURFACE IS OPEN FOR MORE THAN 7 DAYS, THEN IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPAIR THE PAVEMENT FAILURES THAT OCCURRED AFTER THE 7 DAYS.

SPEED MEASUREMENT MARKINGS

PLACE A SERIES OF SPEED MEASUREMENT MARKINGS ON THE ROADWAY TO ASSIST IN THE ENFORCEMENT OF SPEED REGULATIONS. EACH SPEED MEASUREMENT MARKING SHALL CONSIST OF ONE WHITE TRANSVERSE 24-INCH LINE MEASURED IN THE DIRECTION OF TRAVEL AND 4 FEET IN LENGTH. THE MARKINGS SHALL BE PLACED AT ONE-QUARTER MILE INTERVALS FOR A MINIMUM OF 1 MILE ALONG THE ROADWAY, AT LOCATIONS AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. SPEED MEASUREMENT MARKINGS SHOULD AVOID BEING LOCATED IN THE VICINITY OF A TAPER, ENTRANCE RAMP OR EXIT RAMP.

ON MULTILANE HIGHWAYS WITH SHOULDER WIDTHS OF AT LEAST 6 FEET, CENTER THE SPEED MEASUREMENT MARKING ENTIRELY ON THE SHOULDER. IF THE SHOULDER WIDTH IS LESS THAN 6 FEET, CENTER THE MARKING ON THE EDGE LINE SUCH THAT IT EXTENDS 2 FEET ON EITHER SIDE. TO ASSURE VISIBILITY OF THE MARKINGS AND REDUCE PARALLAX ERRORS, FOR EACH DIRECTION UTILIZING AN AIR SPEED CHECK ZONE, A SET OF TWO MARKINGS (LEFT AND RIGHT SIDE) SHALL BE USED AT EACH ONE-QUARTER MILE INTERVAL.

ON TWO-LANE ROADWAYS, ONE MARKING SHOULD BE USED AT EACH ONE-QUARTER MILE INTERVAL AND INSTALLED ACROSS THE CENTER LINE SUCH THAT IT EXTENDS 2 FEET ON EITHER SIDE.

THE MARKINGS SHALL BE LAID OUT BY A CERTIFIED PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF OHIO
ON SECTIONS WITH CURVES, THE MARKINGS ON THE INSIDE OF THE CURVE SHALL MEET THE REQUIRED ONE-QUARTER MILE INTERVALS. MARKINGS ON THE OUTSIDE OF THE CURVE SHALL BE DIRECTLY ACROSS FROM THE MARKINGS ON THE INSIDE OF THE CURVE, NOT STAGGERED. A RECORD IS TO BE KEPT AND ONE ORIGINAL SIGNED AND SEALED DOCUMENT IS TO BE SENT TO THE DISTRICT TRAFFIC ENGINEER AND ONE COPY IS TO BE SENT TO THE DISTRICT CONSTRUCTION ENGINEER.

MATERIALS, EQUIPMENT AND APPLICATION SHALL BE ACCORDING TO THE TYPE OF PAVEMENT MARKING MATERIAL USED.

PAYMENT WILL BE FOR EACH 24-INCH-WIDE BY 4 FEET LONG MARKING AND SHALL INCLUDE THE PAVEMENT MARKING MATERIAL USED AND THE SURVEYING WORK.

MEASUREMENT MARKINGS ARE LOCATED AT THE FOLLOWING LOCATIONS:
STA. 1074+60
STA. 1087+80
STA. 1101+00
STA. 1114+18
STA. 1127+38
ITEM - SPECIAL - SPEED MEASUREMENT MARKING 20 EACH
QUANTITIES CARRIED TO THE GENERAL SUMMARY.

ITEM 255 - FULL DEPTH PAVEMENT REPAIR AND RIGID REPLACEMENT, CLASS MS

ITEM 255 - FULL DEPTH PAVEMENT REPAIR AND RIGID REPLACEMENT, CLASS MS

220 (6' X 12') JOINTS = 1760 SQ. YD.

ITEM 255 - FULL DEPTH PAVEMENT SAWING = 7920 FT
ITEMS CARRIED TO THE GENERAL SUMMARY.

ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN

AFTER COMPLETION OF ALL WORK, BUT PRIOR TO THE FINAL ACCEPTANCE OF THE PROJECT, A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF OHIO SHALL DETERMINE THE MINIMUM VERTICAL CLEARANCES OF ALL EXISTING AND NEW BRIDGES WITHIN THE PROJECT LIMITS. AT A MINIMUM, MEASUREMENTS SHALL BE TAKEN ALONG EACH FACIA BEAM AT THE EDGE OF SHOULDERS, EDGE LINES, LANE LINES, AND CROWN OF THE ROADWAY BELOW. THE ODOT DISTRICT 2 VERTICAL CLEARANCE SURVEY FORM SHALL BE USED, WHERE APPLICABLE, TO DOCUMENT THE MEASUREMENTS. WHERE THE ODOT DISTRICT 2 VERTICAL CLEARANCE FORM IS NOT APPLICABLE, THE MEASUREMENTS SHALL BE DOCUMENTED ON A CONTRACTOR-DEVELOPED FORM THAT CLOSELY RESEMBLES THE ODOT DISTRICT 2 VERTICAL CLEARANCE SURVEY FORM AND SHALL BEAR THE STAMP OR SEAL OF THE OHIO PROFESSIONAL SURVEYOR WHO HAS TAKEN THE MEASUREMENTS AND SHALL BE SUBMITTED O THE PROJECT ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

THE ODOT DISTRICT 2 VERTICAL CLEARANCE SURVEY FORM CAN BE DOWNLOADED FROM THE FOLLOWING WEBSITE:

http://www.dot.state.oh.us/districts/D02/Pages/Permits.aspx

ITEMS ADJUSTED TO GRADE

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED FOR ADJUSTMENTS REQUIRED FOR THE FOLLOWING ITEMS, AS DIRECTED BY THE ENGINEER.

ITEM 611 - CATCH BASIN ADJUSTED TO GRADE

LOCATION	ROUTE	PLAN SPLIT CODE	EACH
OTT	2	01/NHS/PV	2
TOTAL CARRIED TO GENERAL SUMMARY			2

ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE

LOCATION	ROUTE	PLAN SPLIT CODE	EACH
OTT	2	01/NHS/PV	5
TOTAL CARRIED TO GENERAL SUMMARY			5

ITEM 611-INLET ADJUSTED TO GRADE

LOCATION	ROUTE	PLAN SPLIT CODE	EACH
OTT	2	01/NHS/PV	2
TOTAL CARRIED TO GENERAL SUMMARY			2

PROTECTION OF TRAFFIC MONITORING EQUIPMENT

PRIOR TO BEGINNING ANY PAVEMENT ACTIVITIES OR ANY EXCAVATION ACTIVITIES BETWEEN STA. 898+18 AND 898+75 (EB) AND STA. 898+80 AND 899+50 (WB) THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE FROM THE OWNER WILL COORDINATE A TIME FOR THE OWNER/MAINTAINING AGENCY TO DISCONNECT THE EQUIPMENT. FOLLOWING THE DISCONNECTION BY THE OWNER, THE CONTRACTOR WILL BE ALLOWED TO PERFORM THEIR PAVEMENT ACTIVITIES, INCLUDING PAVEMENT REMOVAL. THE REMOVE LOOPS AND SENSORS BECOME THE PROPERTY OF THE CONTRACTOR.

TRAFFIC MONITORING SECTION ODOT, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43223

ED NEWMEYER (DISTRICT 2, 3, 12) 614-204-0914
DAREN DALTON (DISTRICT 5, 6, 9, 10) 614-204-0291 OR 614-275-1382
DAN DIDDLE (DISTRICT 4, 11) 614-560-9541
BRYAN STANIFER (DISTRICT 1, 7, 8) 614-204-0971
SANDRA MAPEL (FIELD OPERATIONS) 614-644-0391

GENERAL NOTES

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 6 TOTAL 40

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 11/15/2021 TIME: 10:30:41 AM USER: alfintel
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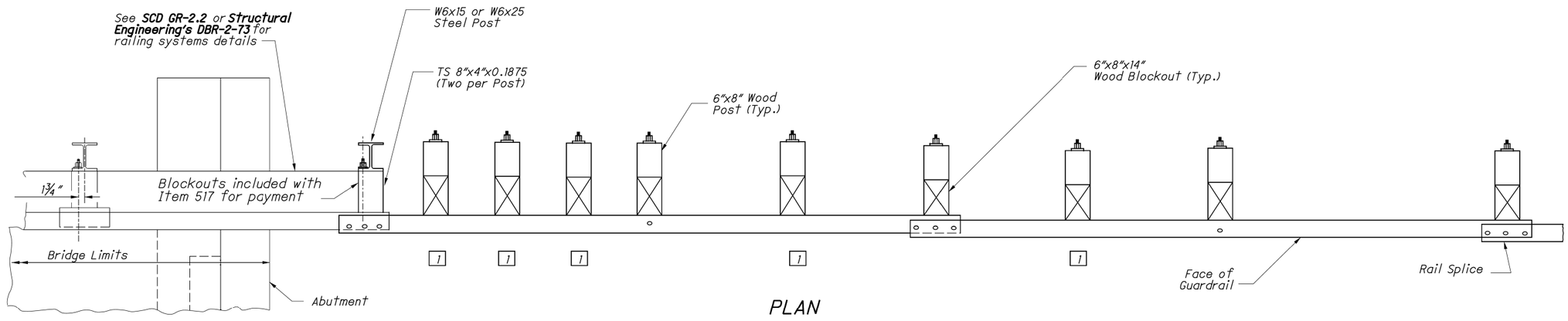

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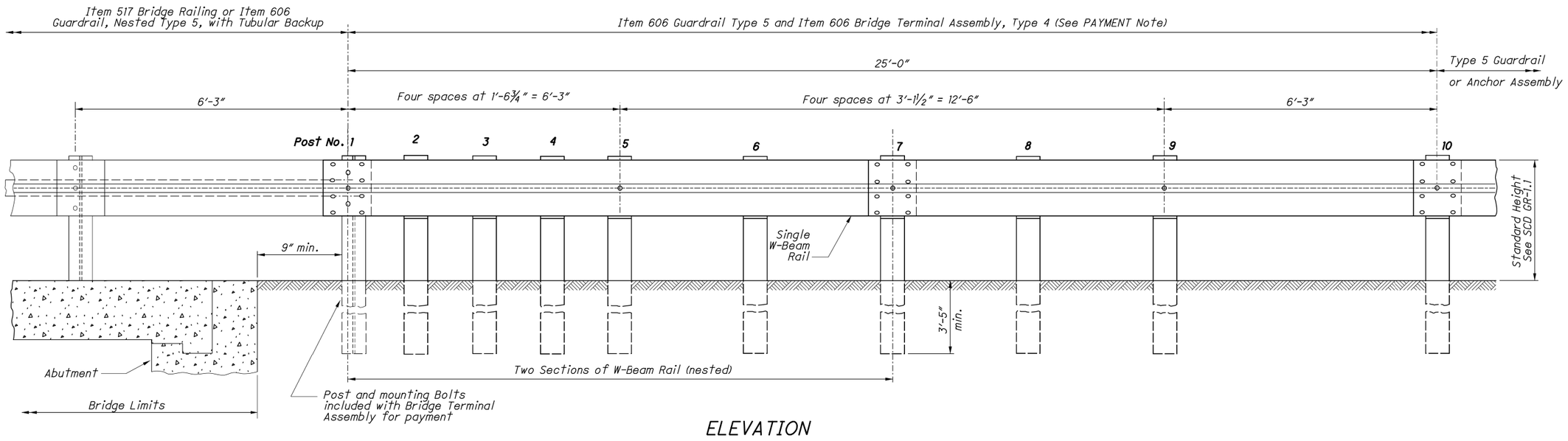

ELEVATION

NOTES

GENERAL: *For additional details, see* ***SCD GR-1.1.***

APPLICATION: *The Type 4 Bridge Terminal Assembly shall connect Type 5 Guardrail runs to Type 5 Guardrail with Tubular Backup or to Deep Beam Bridge Guardrail (as shown on* ***Structural Engineering SCD DBR-2-73****).*

DETAIL INFORMATION: *The first post off the bridge shall be steel (W6x15 or W6x25). All holes in the off-structure end of the approach panel rail section spanning the abutment are slotted ¾"x2½". Tighten the bolts as specified for expansion joints in Item 606.05.*

POSTS: *Posts may be set in drilled holes or driven to grade. See* ***SCD GR-1.1*** *for additional Post embedment details. Guardrail is not attached to certian posts (see LEGEND).*

WOOD POSTS - Use square sawed pressure treated wood as specified in CMS 710.14 and fabricated with square ends. Bore bolt holes and trim the tops of posts, if required after the posts are set.

STEEL POSTS - are allowed as an alternate. Use W6x9 or W6x8.5 in lieu of the 6"x8" wood post. Use same post material through-out assembly.

BLOCKOUTS: *Approved alternate blockouts can be found on the Office of Roadway Engineering website. Steel blockouts are not permitted.*

FLARED GUARDRAIL: *Start Standard Guardrail Flares as shown on* ***SCD GR-5.1*** *at or beyond Post No. 10; however, the flare may begin at Post No. 7.*

PAYMENT: Item 606 - Bridge Terminal Assembly, Type 4, Each, *includes the cost of extra components in excess of normal guardrail, such as additional posts and other hardware. The TS 8"x4" spacers and tubular backup rail extending to the first post off the bridge is included with* ***Item 517 - Railing,*** *or* ***Item 606 - Guardrail, Nested Type 5 with Tubular Backup,*** *for payment.*

LEGEND

[1] *Guardrail is not attached to posts at Posts 2, 3, 4, 6, and 8. Blockout is fastened to post with standard Post Bolt.*

OFFICE OF ROADWAY ENGINEERING

DESIGNED XXX | REVIEWED XXX

REVISION DATE 7/20/2018 | CHECKED CHECKED

PLAN INSERT SHEET

BRIDGE TERMINAL ASSEMBLY, TYPE 4

PIS GR-3.4

1 / 1

0 / 0

PLAN INSERT SHEET
BRIDGE TERMINAL ASSEMBLY, TYPE 4

DESIGN AGENCY

DESIGNER ALF

REVIEWER JMF

PROJECT ID 107959

SHEET 6A | TOTAL 40

CTY-RTE-SECTION

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ITEM 614, MAINTAINING TRAFFIC

NO WORK SHALL BE PERFORMED AND A MINIMUM OF 2 LANES OF TRAFFIC IN EACH DIRECTION, INCLUDING ALL INTERCHANGES AND INTERSECTIONS SHALL BE OPEN DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS FOURTH OF JULY
NEW YEAR'S LABOR DAY
MEMORIAL DAY THANKSGIVING
EASTER

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 6:00AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00AM WEDNESDAY THROUGH 6:00AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

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

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

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON SR-2 AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, MILLED SURFACE, OR THE COMPLETED PAVEMENT. THE WORK ZONE LENGTH AND CLOSURE OF ONE LANE SHALL BE LIMITED TO 4 MILES AT ANY ONE TIME .

RAMPS MAY BE CLOSED PER LANE VALUE CONTRACT TABLE. A MAXIMUM OF 2 RAMPS PER INTERCHANGE MAY BE CLOSED AT THE SAME TIME PROVIDED THEY DO NOT CONFLICT WITH DETOURS FROM ANY OTHER RAMP/INTERSECTION DETOUR ROUTES.

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.]

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF CLOSURE SIGN TIME TABLE

ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
ROAD	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
CLOSURES	<= 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

RAMP DETOURS:

RAMP	DETOUR
SR-163 EB TO SR-2 EB	SR-358 TO SR-2 EB
SR-2 WB TO SR-163 WB	SR-2 WB TO SR-358
SR-2 EB TO SR-53 SB	SR-2 EB TO SR-53 N TO SR-163 W TO SR-2 W
SR-53 NB TO SR-2 EB	SR-2 WB TP SR-163 TP SR-2 EB
SR-2 WB TO SR-53 SB	SR-2 WB TO SR-163 TO SR-2 EB
SR-53 TO SR-2 WB	SR-2 EB TO SR-53 N TO SR-163 W TO SR-2 WB

LANE VALUE CONTRACT TABLE

DESRIPTION OF LANE/RAMP TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE $ PER TIME PERIOD
2 LANES OPEN EB AND WB INCLUDING ALL RAMPS AND INTERSECTIONS	HOLIDAYS PER HOLIDAY PLAN NOTE ON SH.7	EACH MINUTE	$80
RAMPS AND INTERSECTIONS PRIOR TO 5/27/22	OPEN 24/7 EXCEPT FOR 5 CONSECUTIVE DAYS PER RAMP WHEN RAMP MAY BE CLOSED FOR CONSTRUCTION*	EACH DAY	$2,500
RAMPS AND INTERSECTION FROM 5/27/22 TO COMPLETION OF PROJECT	OPEN 24/7 EXCEPT FOR 2 DAYS PER RAMP WHEN RAMP MAY BE CLOSED BETWEEN 12:01AM MONDAY AND 6:00AM FRIDAY FOR CONSTRUCTION**	EACH MINUTE	$25

*CONTRACTOR TO COMPLETE PAVEMENT REPAIRS, MILL AND FILL PAVING OPERATIONS AND GUARDRAIL WORK ON ALL RAMPS PRIOR TO 5/27/22.

**CONTRACTOR MAY CLOSE RAMPS AFTER 5/27/22 PER ABOVE TABLE TO COMPLETE RIGHT LANE /ACCELERATION/DECELERATION LANE MILL AND FILL PAVING OPERATIONS AT JUNCTURE OF MAINLINE AND RAMP PAVEMENTS. ANY PAVEMENT REPAIRS IN THE RIGHT LANE ADJACENT TO THE ACCELERATION/DECELERATION LANES SHALL BE SCHEDULED/ COORDINATED/CONSTRUCTED AS TO ALLOW TRAFFIC CONTINUOUS ACCESS TO RAMPS.

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 5 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

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 15 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF C&MS 614.04 AND 614.11.

ITEM 614 - WORK ZONE MARKING SIGN	22 EACH
ITEM 614 - WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	28 MILE
ITEM 614 - WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	58 MILE
ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	16342 FT
ITEM 614 - WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	8464 FT
ITEM 614 - WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	14 MILE
ITEM 614 - WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	29 MILE
ITEM 614 - WORK ZONE ARROW, CLASS III, 642 PAINT	14 EACH

MAINTENANCE OF TRAFFIC NOTES

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 7 TOTAL 40

CTY-RTE-SECTION

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WORK ZONE SPEED ZONES (WZSZS)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER(S) COUNTY-ROUTE-SECTION(S) DIRECTION(S)
WZ-15524

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

[WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.]

[WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS SHALL BE IN ACCORDANCE WITH THIS NOTE AND SCD MT-104.10. ADDITIONALLY PAYMENT MAY BE REMOVED, OR A DISINCENTIVE APPLIED, FOR WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS THE SAME AS DESCRIBED IN THE MOST RECENT PUBLICATION OF SS 808 IN REGARDS TO WZSZS USING DSL SIGN ASSEMBLIES (SEE SS 808.06 PARAGRAPHS 4 THROUGH 7, INCLUDING TABLE 1).]

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMUTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH)
FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
ORGINAL POSTED SPEED LIMIT	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
65	55	60	50	60
55	50	55	45	55

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
51 SIGN MNTH
[ASSUMING 17 DSL SIGN ASSEMBLY(IES) FOR 3 MONTH(S)]

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 4 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 8 SIGN MONTH
(ASSUMING 2 PCMS SIGNS(S) FOR 4 MONTH(S)

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	4 CALENDAR DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

MAINTENANCE OF TRAFFIC NOTES

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 0
SHEET 8 TOTAL 40

CTY-RTE-SECTION

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)

R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE SIGNS ON THE MAINLINE SHALL BE DUAL MOUNTED UNLESS NOT PHYSICALLY POSSIBLE. THE FIRST SIGN SHALL BE PLACED BETWEEN THE ROAD WORK AHEAD (W20-1) SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY 2 MILES THROUGH THE CONSTRUCTION WORK LIMITS. SIGNS ON THE MAINLINE SHALL BE R11-H5A-48. SIGNS USED ON THE RAMPS SHALL BE R11-H5A-24.

THE R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF C&MS 730.19.

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN 20 EACH

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

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

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

- *DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.*
- *DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).*

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

- *FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).*

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:

- *ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND*
- *AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND,*
- *AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)*

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:

- *THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR*
- *THE ACTIVE WORK AREA LATERALLY CLOSEST TO THE OPEN TRAVELED LANE; OR*
- *OTHER LOCATION AS APPROVED BY THE ENGINEER.*

THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

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

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

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

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 120 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

MAINTENANCE OF TRAFFIC NOTES

DESIGN AGENCY

DESIGNER ALF

REVIEWER JMF

PROJECT ID 0

SHEET 9 TOTAL 40

CTY-RTE-SECTION

SHEET NUM.										PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7	8	9	12	13	14	15	16		01/NHS/PV						
															ROADWAY	
										LUMP	201	11000	LS		CLEARING AND GRUBBING	
							4,639			4,639	202	23000	4,639	SY	PAVEMENT REMOVED	
						2,890				2,890	202	32000	2,890	FT	CURB REMOVED	
						647				647	202	32500	647	FT	CURB AND GUTTER REMOVED	
							14,050			14,050	202	38000	14,050	FT	GUARDRAIL REMOVED	
							8			8	202	42010	8	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
							5			5	202	42040	5	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
							6			6	202	42050	6	EACH	ANCHOR ASSEMBLY REMOVED, TYPE B	
							25			25	202	47000	25	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
							139			139	209	15000	139	STA	RESHAPING UNDER GUARDRAIL	
				18.27	2.5					20.77	209	60500	20.77	MILE	LINEAR GRADING	
							12,950			12,950	606	15050	12,950	FT	GUARDRAIL, TYPE MGS	
							2			2	606	26050	2	EACH	ANCHOR ASSEMBLY, MGS TYPE B	
							11			11	606	26150	11	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	6
							7			7	606	26550	7	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
							14			14	606	35002	14	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
							8			8	606	35102	8	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
							4			4	606	35140	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
						2,890				2,890	609	10000	2,890	FT	ASPHALT CONCRETE CURB, TYPE 1	
						647				647	609	12000	647	FT	COMBINATION CURB AND GUTTER, TYPE 2	
5										5	623	39500	5	EACH	MONUMENT BOX ADJUSTED TO GRADE	
															EROSION CONTROL	
							2,904			2,904	659	10000	2,904	SY	SEEDING AND MULCHING	
							0.39			0.39	659	20000	0.39	TON	COMMERCIAL FERTILIZER	
							16			16	659	35000	16	MGAL	WATER	
										1,000	832	30000	1,000	EACH	EROSION CONTROL	
															DRAINAGE	
2										2	611	98630	2	EACH	CATCH BASIN ADJUSTED TO GRADE	
2										2	611	99150	2	EACH	INLET ADJUSTED TO GRADE	
															PAVEMENT	
				297,806	29,237					327,043	254	01000	327,043	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1 ¾"	
1,760										1,760	255	10161	1,760	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC MS, AS PER PLAN	6
7,920										7,920	255	20000	7,920	FT	FULL DEPTH PAVEMENT SAWING	
				6,836						6,836	257	10000	6,836	SY	DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT	
				25,314	2,485					27,799	407	20000	27,799	GAL	NON-TRACKING TACK COAT	
				14,477	1,421					15,898	442	10000	15,898	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
				888	141					1,029	617	10100	1,029	CY	COMPACTED AGGREGATE	
							606			606	617	10101	606	CY	COMPACTED AGGREGATE, AS PER PLAN	6
				136,258						136,258	618	40100	136,258	FT	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
				23,862						23,862	875	10000	23,862	LB	LONGITUDINAL JOINT ADHESIVE	
															TRAFFIC CONTROL	
								1,171		1,171	621	00100	1,171	EACH	RPM	
								1,171		1,171	621	54000	1,171	EACH	RAISED PAVEMENT MARKER REMOVED	
							278			278	626	00116	278	EACH	BARRIER REFLECTOR, TYPE 5,UNIDIRECTIONAL	
								42		42	630	03100	42	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
								16.76		16.76	630	80100	16.76	SF	SIGN, FLAT SHEET	
								6		6	630	84900	6	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
								6		6	630	86002	6	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
								28.96		28.96	642	00104	28.96	MILE	EDGE LINE, 6", TYPE 1	
								13.86		13.86	642	00204	13.86	MILE	LANE LINE, 6", TYPE 1	
								0.83		0.83	642	00300	0.83	MILE	CENTER LINE, TYPE 1	

GENERAL SUMMARY

DESIGN AGENCY

DESIGNER ALF

REVIEWER JMF

PROJECT ID 107959

SHEET 10 TOTAL 40

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 11/15/2021 TIME: 10:31:35 AM USER: afintel
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SHEET NUM.										PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7	8	9	12	13	14	15	16		01/NHS/PV						
															(TRAFFIC CONTROL CONT.)	
								9,321		9,321	642	00404	9,321	FT	CHANNELIZING LINE, 12", TYPE 1	
								4,332		4,332	642	01510	4,332	FT	DOTTED LINE, 6", TYPE 1	
20										20	642	40000	20	EACH	SPEED MEASUREMENT MARKING	
								484		484	644	00700	484	FT	TRANSVERSE/DIAGONAL LINE	
								462		462	644	00720	462	FT	CHEVRON MARKING	
								294		294	644	00900	294	SF	ISLAND MARKING	
								17		17	644	01300	17	EACH	LANE ARROW	
								3		3	644	01360	3	EACH	WRONG WAY ARROW	
															STRUCTURE OVER 20 FOOT SPAN (OTT-2-1770)	
															SEE SHEET NO. 39 FOR QUANTITIES.	
															STRUCTURE OVER 20 FOOT SPAN (OTT-2-2306 L & R)	
															SEE SHEET NO. 40 FOR QUANTITIES.	
															MAINTENANCE OF TRAFFIC	
			120							120	614	11110	120	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	22									22	614	12460	22	EACH	WORK ZONE MARKING SIGN	
			20							20	614	12484	20	EACH	WORK ZONE INCREASED PENALTIES SIGN	
	5									5	614	12500	5	EACH	REPLACEMENT SIGN	
	15									15	614	12600	15	EACH	REPLACEMENT DRUM	
		8								8	614	18600	8	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN	
	14									14	614	20056	14	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
	28									28	614	20110	28	MILE	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	
	29									29	614	22056	29	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
	58									58	614	22110	58	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
	16,342									16,342	614	23210	16,342	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	
	8,464									8,464	614	24202	8,464	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	
	14									14	614	30650	14	EACH	WORK ZONE ARROW, CLASS III, 642 PAINT	
		51								51	808	18700	51	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
															INCIDENTALS	
										LUMP	108	30000	LS		CPM PROGRESS SCHEDULE SHORT DURATION PROJECTS	
										LUMP	614	11000	LS		MAINTAINING TRAFFIC	
										LUMP	623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	6
										LUMP	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY

DESIGNER ALF

REVIEWER JMF

PROJECT ID 107959

SHEET 11 TOTAL 40

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 11/15/2021 TIME: 10:31:42 AM USER: afintel
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STATION RANGE			SIDE		DISTANCE (D)	AVERAGE LANE WIDTH (W)	AVERAGE SHOULDER WIDTH (S)	CADD GENERATED AREA		209		254	257	407				442			617	618	875			
										LINEAR GRADING		PAVEMENT PLANING, ASPHALT CONCRETE, 1 ¾"	DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT	NON-TRACKING TACK COAT				ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)			COMPACTED AGGREGATE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	LONGITUDINAL JOINT ADHESIVE			
					FT	FT	FT	SY		MILE		SY	SY	GAL				CY			CY	FT	LB			
865+16	TO	865+78	EB/WB		62	111		765		0.02			765								1						
865+78	TO	872+61	EB/WB		683	80		6071		0.26			6071								13						
873+33	TO	907+90	EB/WB		3457	65.00	20.00	32649		1.31		32649		2775				1587			64	13828	3457			
907+90	TO	927+09.48	EB		1919	24.00	16.00	8531		0.36		8531		725				415			18	3839	640			
927+09.48	TO	929+87.77	EB		278			0																			
929+87.77	TO	932+15.59	EB		228	24.00	16.00	1013				1013		86				49				456	76			
932+15.59	TO	934+67.92	EB		252			0																			
934+67.92	TO	938+92	EB		424	24.00	16.00	1885		0.08		1885		160				92			4	848	141			
938+92	TO	946+75.38	EB		783	24.00	6.00	2611				2611		222				127				1567	261			
946+75.38	TO	954+13	EB		738	34.50	16.00	4139		0.14		4139		352				201			7	1475	246			
954+13	TO	955+12.09	EB		99	24.00	16.00	440				440		37				21				198	33			
955+12.09	TO	955+34.16	EB		22																						
955+34.16	TO	965+33.82	EB		1000	24.00	16.00	4443				4443		378				216				1999	333			
965+33.82	TO	970+92.07	EB		558																						
970+92.07	TO	1024+08	EB		5316	24.00	16.00	23626		1.01		23626		2008				1149			49	10632	1772			
1024+08	TO	1025+15	EB		107	30.00	16.00	547		0.02		547		46				27			1	214	36			
1025+15	TO	1032+08.9	EB		694	50.00	14.00	4934		0.13		4934		419				240			6	1388	231			
1032+08.9	TO	1032+52	EB		43	24.00	6.00	144		0.01		144		12				7			0	86	14			
1032+52	TO	1044+14	EB		1162	24.00	16.00	5164		0.22		5164		439				251			11	2324	387			
1044+14	TO	1045+92	EB		178	24.00	13.00	732		0.08		732		62				36			3	356	59			
1045+92	TO	1050+25.17	EB		433	24.00	3.00	1300		0.16		1300		110				63			3	866	144			
1050+25.17	TO	1060+20	EB		995	34.50	13.00	5250		0.38		5250		446				255			18	1990	332			
1060+20	TO	1215+34.99	EB		15515	24.00	13.50	64646		5.88		64646		5495				3143			287	31030	5172			
1215+34.99	TO	1221+26.45	EB		591																						
1221+26.45	TO	1231+00	EB		974	24.00	13.50	4056		0.37		4056		345				197			18	1947	325			
907+90	TO	927+09.48	WB		1919	24.00	16.00	8531				8531		725				415				3839	640			
927+09.48	TO	929+87.77	WB		278																						
929+87.77	TO	932+15.59	WB		228	24.00	16.00	1013				1013		86				49				456	76			
932+15.59	TO	934+67.92	WB		252																						
934+67.92	TO	942+52	WB		784	24.00	16.00	3485				3485		296				169				1568	261			
942+52	TO	950+15	WB		763	24.00	6.00	2543				2543		216				124				1526	254			
950+15	TO	950+88	WB		73	24.00	16.00	324		0.01		324		28				16			1	146	24			
950+88	TO	955+12.09	WB		424	24.00	16.00	1885				1885		160				92				848	141			
955+12.09	TO	955+34.16	WB		22																						
955+34.16	TO	965+33.82	WB		1000	24.00	16.00	4443				4443		378				216				1999	333			
965+33.82	TO	970+92.07	WB		558																						
970+92.07	TO	1013+62	WB		4270	24.00	16.00	18977		0.81		18977		1613				923			40	8540	1423			
1013+62	TO	1025+48	WB		1186	36.00	16.00	6852		0.22		6852		582				333			11	2372	395			
1025+48	TO	1029+92	WB		444	24.00	6.00	1480		0.08		1480		126				72			4	888	148			
1029+92	TO	1039+52	WB		960	24.00	16.00	4267		0.18		4267		363				207			9	1920	320			
1039+52	TO	1044+14	WB		462	24.00	6.00	1540				1540		131				75				924	154			
1044+14	TO	1046+45	WB		231	24.00	3.00	693		0.04		693		59				34			3	462	77			
1046+45	TO	1046+82	WB		37	34.00	13.00	193		0.01		193		16				9			1	74	12			
1046+82	TO	1047+92	WB		110	29.00	13.00	513		0.04		513		44				25			2	220	37			
1047+92	TO	1215+34.99	WB		16743	24.00	13.50	69762		6.34		69762		5930				3391			310	33486	5581			
1215+34.99	TO	1221+26.45	WB		591																						
1221+26.45	TO	1231+00	WB		974	35.00	13.00	5192		0.37		5192		441				252			18	1947	325			
01/NHS/PV TOTALS CARRIED TO GENERAL SUMMARY										18.27		297806	6836	25314				14477			888	136258	23862			

PAVEMENT CALCULATIONS

DESIGN AGENCY

DESIGNER ALF

REVIEWER JMF

PROJECT ID 107959

SHEET 12 TOTAL 40

OTT-2-16.37

STATION RANGE			RAMP	TYPICAL SECTION	DISTANCE (D)	AVERAGE LANE WIDTH (W)	AVERAGE SHOULDER WIDTH (S)	CADD GENERATED AREA		209		254		407				442			617					
										LINEAR GRADING		PAVEMENT PLANING, ASPHALT CONCRETE, 1 ¾"		NON-TRACKING TACK COAT				ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)			COMPACTED AGGREGATE					
					FT	FT	FT	SY		MILE		SY		GAL				CY			CY					
RAMPS AT SR 163																										
+30	TO	1+45	RAMP A		115	16.0	8.00	307		0.04		307		26				15			2					
1+30	TO	1+66	SLIP		36	16.0	8.00	96		0.01		96		8				5			1					
1+45	TO	8+10	RAMP A		665	16.0	8.00	1773		0.25		1773		151				86			14					
8+10	TO	15+92.77	RAMP A		783	31.0	8.00	3392		0.15		3392		288				165			18					
+37	TO	1+03.94	RAMP B		67	40.50	8.00	361		0.03		361		31				18			1					
1+03.94	TO	6+62.68	RAMP B		559	16.00	8.00	1490		0.21		1490		127				72			12					
6+62.68	TO	9+72.4	RAMP B		310	30.50	8.00	1325		0.12		1325		113				64			3					
9+72.4	TO	14+31.61	RAMP B		459	16.00	10.00	1327		0.09		1327		113				64			4					
RAMPS AT SR 53																										
0+00.00	TO	+45	RAMP A		45	42.50	6.50	245		0.01		245		21				12			1					
+45	TO	7+29	RAMP A		684	16.00	10.00	1976		0.26		1976		168				96			13					
0+00.00	TO	4+50	RAMP B		450	45.50	6.50	2600		0.09		2600		221				126			4					
4+50	TO	12+30	RAMP B		780	16.00	8.00	2080		0.30		2080		177				101			17					
12+30	TO	13+00	RAMP B		70	16.00	8.00	187		0.01		187		16				9			1					
13+00	TO	18+59	RAMP B		559	16.00	7.00	1429		0.11		1429		121				69			5					
0+00.00	TO	6+92.39	RAMP C		692	30.50	10.00	3116		0.13		3116		265				151			6					
6+92.39	TO	12+30	RAMP C		538	16.00	6.00	1314		0.20		1314		112				64			12					
12+30	TO	13+00	RAMP C		70	16.00	6.00	171		0.01		171		15				8			1					
13+00	TO	16+38.41	RAMP C		338	16.00	6.00	827		0.06		827		70				40			3					
16+38.41	TO	17+31	RAMP C		93	16.0	6.00	226		0.02		226		19				11			1					
17+31	TO	19+37	SLIP		206	16.00	8.00	549		0.04		549		47				27			4					
17+31	TO	18+59	RAMP C		128	16.00	6.00	313		0.05		313		27				15			1					
3+50	TO	9+50	RAMP D		600	16.00	6.00	1467		0.23		1467		125				71			11					
9+50	TO	13+87.09	RAMP D		437	30.50	9.00	1918		0.08		1918		163				93			4					
TURN AROUND																										
								381				381		32				19			1					
1087+64	TO	1092+13						368				368		31				18			1					
1187+60	TO	1192+88																								
01/NHS/PV TOTALS CARRIED TO GENERAL SUMMARY										2.50		29237		2485				1421			141					

PAVEMENT CALCULATIONS-RAMPS

DESIGN AGENCY

DESIGNER ALF

REVIEWER JMF

PROJECT ID 107959

SHEET 13 TOTAL 40

OTT-2-16.37

STATION RANGE			SIDE	DISTANCE (D)		202 CURB REMOVED	202 CURB AND GUTTER REMOVED		609 ASPHALT CONCRETE CURB, TYPE 1	609 COMBINATION CURB AND GUTTER, TYPE 2			
				FT		FT	FT		FT	FT			
915+31	TO	924+98	WB-LT	967		967			967				
924+56	TO	926+58	EB-RT	202			202			202			
924+98	TO	927+90	WB-LT	292			292			292			
970+65	TO	972+18	EB-RT	153			153			153			
1203+58	TO	1213+03	WB-LT	945		945			945				
1221+22	TO	1231+00	WB-LT	978		978			978				
01/NHS/PV TOTALS CARRIED TO NEXT SHEET						2890.00	647		2890	647			

CURB SUBSUMMARY

DESIGN AGENCY

DESIGNER ALF

REVIEWER JMF

PROJECT ID 107959

SHEET 14 TOTAL 40

OTT-2-16.37

REF. NO.	STATION	ROUTE	SIDE	202						209	606							617	626
				GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE E	ANCHOR ASSEMBLY REMOVED, TYPE B	ANCHOR ASSEMBLY REMOVED, TYPE T, AS PER PLAN	BRIDGE TERMINAL ASSEMBLY REMOVED	PAVEMENT REMOVED (UNDER GUARDRAIL)	RESHAPING UNDER GUARDRAIL	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	ANCHOR ASSEMBLY, MGS TYPE T	MGS, BRIDGE TERMINAL ASSEMBLY, TYPE 1	MGS, BRIDGE TERMINAL ASSEMBLY, TYPE 2	MGS, BRIDGE TERMINAL ASSEMBLY, TYPE 4	COMPACTED AGGREGATE, AS PER PLAN, 4" THICK	BARRIER REFLECTOR, TYPE 5, UNIDIRECTIONAL
				FEET	EACH	EACH	EACH	EACH	SY	STA	FEET	EACH	EACH	EACH	EACH	EACH	EACH	CY	EACH
GR-1	911+66	SR-2 WB	LT	1625.0			1	1	542	16	1600.0			1		1		60	32
GR-2	912+54	SR-2 EB	RT	1425.0	1			1	475	14	1350.0		1		1			53	28
GR-3	929+07	SR-2 EB	RT	275.0				2	92	3	275.0				1	1		10	6
GR-4	930+14	SR-2 WB	LT	275.0				2	92	3	275.0				1	1		10	6
GR-5	934+10	SR-2 EB	RT	350.0				1	117	4	325.0			1		1		13	7
GR-6	935+04	SR-2 WB	LT	600.0	1			1	200	6	587.5		1		1			22	13
GR-7	951+00	SR-2 WB	LT	412.5			1		138	4	387.5			1			1	15	8
GR-8	951+97	SR-2 EB	RT	312.5	1			1	104	3	250.0		1				1	12	6
GR-9	955+34.16	SR-2 WB	RT	1025.0				2	342	10	975.0				1		1	38	20
GR-10	955+34.16	SR-2 EB	LT	1025.0				2	342	10	975.0					1	1	38	20
GR-11	970+67.07	SR-2 EB	RT	925.0			1	1	208	9	887.5			1		1		34	18
GR-12	970+67.07	SR-2 WB	LT	962.5	1			1	321	9	887.5		1		1			36	19
GR-13	1028+45	SR-2 EB	RT	175.0		1	1		58	2	125.0		1	1				7	3
GR-14	1038+62	SR-2 EB	RT	125.0		1		1	42	1	12.5		1		1			5	2
GR-15	1041+70	SR-2 WB	LT	87.5		1		1	33	1	12.5		1		1			4	2
GR-16	1141+30	SR-2 EB	RT	25.0	1			1	33	1	25.0		1		1			4	2
GR-17	1142+83	SR-2 WB	LT	25.0	1			1	33	1	25.0		1		1			4	2
GR-18	1203+59	SR-2 WB	LT	1137.5			1	1	279	10	987.5			1		1		42	20
GR-19	1203+76	SR-2 EB	RT	1225.0	1			1	408	12	1150.0		1		1			45	24
GR-20	1214+40	SR-2 EB	LT	125.0		1		1	42	1	87.5	1			1			5	2
GR-21	1220+56	SR-2 WB	LT	1050.0	1			1	350	10	975.0		1		1			117	21
GR-22	1221+00	SR-2 WB	RT	112.5		1		1	38	1	62.5	1			1			4	2
GR-23	1221+59	SR-2 EB	RT	750.0		1		1	350	8	712.5			1		1		28	15
TOTALS CARRIED TO GENERAL SUMMARY				**14050.0**	**8**	**6**	**5**	**25**	**4639**	**139**	**12950.0**	**2**	**11**	**7**	**14**	**8**	**4**	**606**	**278**

NOTE: CONTRACTOR MUST CALL OUPS TO LOCATE UTILITIES IN VICINITY OF ANY GUARDRAIL RUN

NOTE: Caution shall be used when placing proposed Guardrail, as to avoid damaging any existing drainage (pipes, culverts, etc.) within the work area of Any Run of Guardrail.

The Contractor Shall Exercise Caution When Working in the Proximity of any Underground Utilities. All Existing Underground Utilities Shall Remain Active and In Place During Construction of Any Guardrail Run, Unless Otherwise Noted in the Plan.

Caution Must be Used When Removing and Replacing Guardrail As to Maintain the Existing Shoulders and Embankment.

The Following Items are to be used As Directed by the Engineer. The Estimated Quantities will be Carried to the General Summary and are to be Used for Proposed Guardrail Runs:

Item 659 2904 SQ YD Seeding and Mulching
Item 659 0.39 TON Commercial Fertilizer
Item 659 16 MGALWater

GUARDRAIL SUBSUMMARY

DESIGN AGENCY

DESIGNER ALF

REVIEWER JMF

PROJECT ID 107959

SHEET 15 TOTAL 40

OTT-2-16.37

SHEET NO.	LOCATION	STATION TO STATION			621 RAISED PAVEMENT MARKER REMOVED	621 RPM, WHITE	621 RPM, WHITE-RED	621 RPM, YELLOW-RED	621 RPM, YELLOW-YELLOW	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	630 GROUND MOUNTED SUPPORT, NO. 3 POST	630 SIGN, FLAT SHEET		642 EDGE LINE, 6", TYPE 1, WHITE	642 EDGE LINE, 6", TYPE 1, YELLOW	642 LANE LINE, 6", TYPE 1	642 CENTER LINE, TYPE 1, DOUBLE-YELLOW	642 DOTTED LINE, 6", TYPE 1, WHITE	642 CHANNELIZING LINE, 12", TYPE 1	644 ISLAND MARKING	644 TRANSVERSE/DIAGONAL LINE, WHITE	644 TRANSVERSE/DIAGONAL LINE, YELLOW	644 CHEVRON MARKING	644 LANE ARROW	644 WRONG WAY ARROW
					EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	SF		MILE	MILE	MILE	MILE	FT	FT	SF	FT	FT	FT	EACH	EACH
17	SR 2 EB RT	865+16	TO	873+50			18		10						0.16		0.16	0.16	50	344	294				4	
17	SR 2 EB RT	865+16	TO	873+50			23		10						0.16		0.16	0.16	50	545		50	434		4	
18-21	SR 2 EB RT	873+50	TO	938+92			7		14						1.24											
21-25	SR 2 EB RT	946+75.38	TO	1032+08.9						1	1	7	2.25		1.62				1274	1357				142		
25-26	SR 2 EB RT	1032+52	TO	1045+92			7			2	2	14	6.13		0.25											
26-35	SR 2 EB RT	1050+25.17	TO	1231+00						1	1	7	2.25		3.42				789	845						
18	SR 2 WB LT	873+53	TO	888+79					19						0.29											
18-21	SR 2 WB LT	889+94	TO	950+15											1.14				1002	304						
21-25	SR 2 WB LT	950+15	TO	1025+48						2	2	14	6.13		1.43					1280						
25-26	SR 2 WB LT	1030+92	TO	1039+52			12								0.16				1167	274						
26-35	SR 2 WB LT	1046+45	TO	1231+00											3.50					696				144		
19-35	SR 2 EB/WB MED	890+00	TO	1231+00		808	86									12.92										
18-35	SR 2 EB/WB	873+53	TO	1231+00	1171												13.54									
18	SR 2 EB	873+53	TO	885+36														0.22		294					9	
18	SR 2 WB	873+53	TO	888+80														0.29								
21	SR 2 EB	938+92	TO	946+75.38																783						
21	SR 2 WB	942+52	TO	945+56																304				176		
21 1/36	SR 163 RAMP A	0+30	TO	15+92.77			19	9							0.30	0.14				783						
21 1/36	SR 163 RAMP B	0+37	TO	14+31.61			12	18							0.26	0.12				310						
25 1/37	SR 53 RAMP A	0+00	TO	7+29			7	8							0.14	0.14				45						1
25 1/37	SR 53 RAMP B	0+00	TO	18+59			19	17							0.35	0.27				445						
26 1/37	SR 53 RAMP C	0+00	TO	19+37			8	16							0.39	0.25				274						2
26 1/37	SR 53 RAMP D	3+50	TO	13+87.09			16	8							0.20	0.11				438						
SUB TOTALS					1171	808	234	76	53	6	6	42	16.76		15.01	13.95	13.86	0.83	4332	9321	294	50	434	462	17	3
01/NHS/PV TOTALS CARRIED TO GENERAL SUMMARY					1171	1171				6	6	42	16.76		28.96		13.86	0.83	4332	9321	294	484		462	17	3

TRAFFIC CONTROL SUBSUMMARY

DESIGN AGENCY

DESIGNER ALF

REVIEWER JMF

PROJECT ID 107959

SHEET 16 TOTAL 40

OTT-2-16.37

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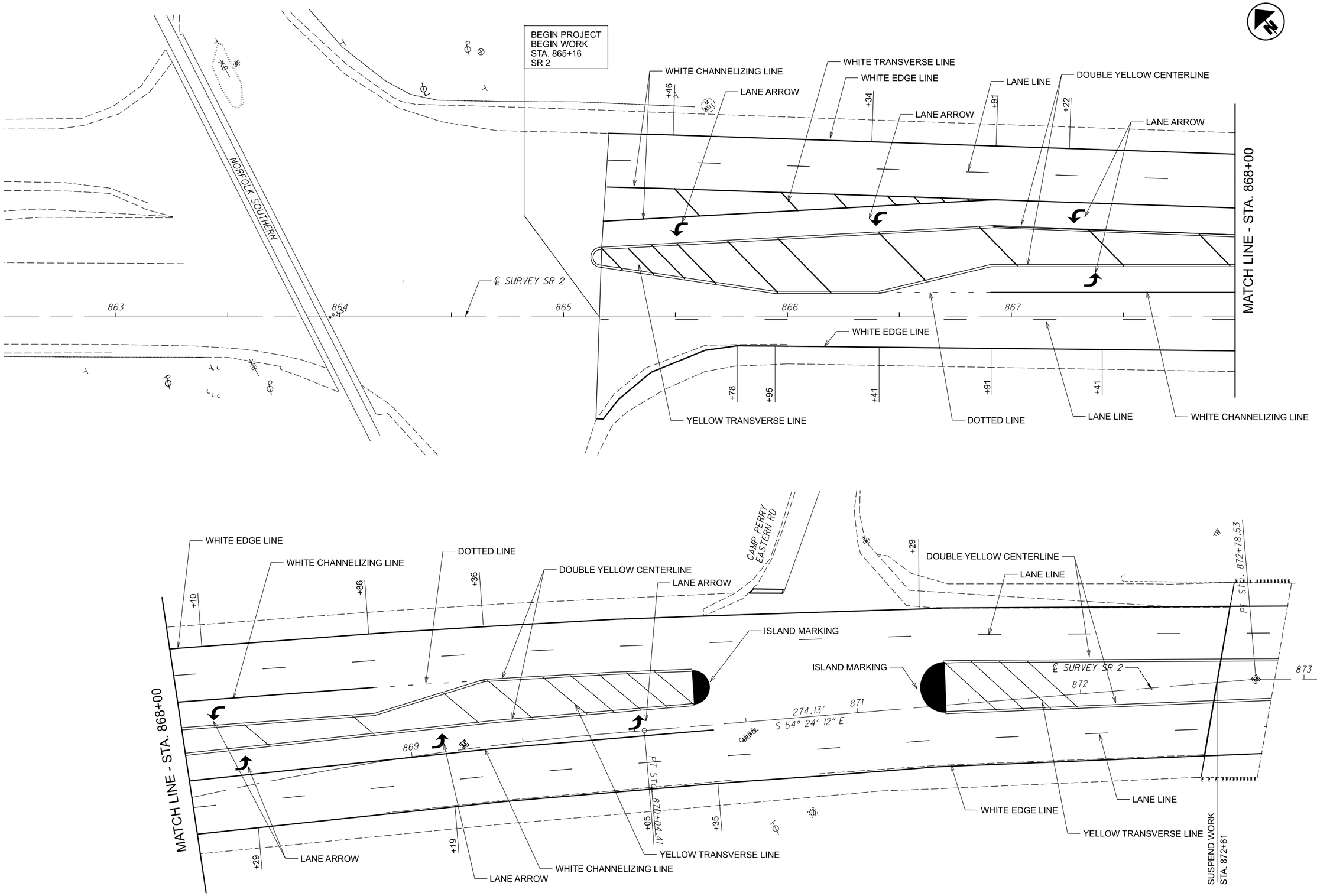

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PLAN SHEET

SR 2 - STA. 865+16 TO STA. 873+50

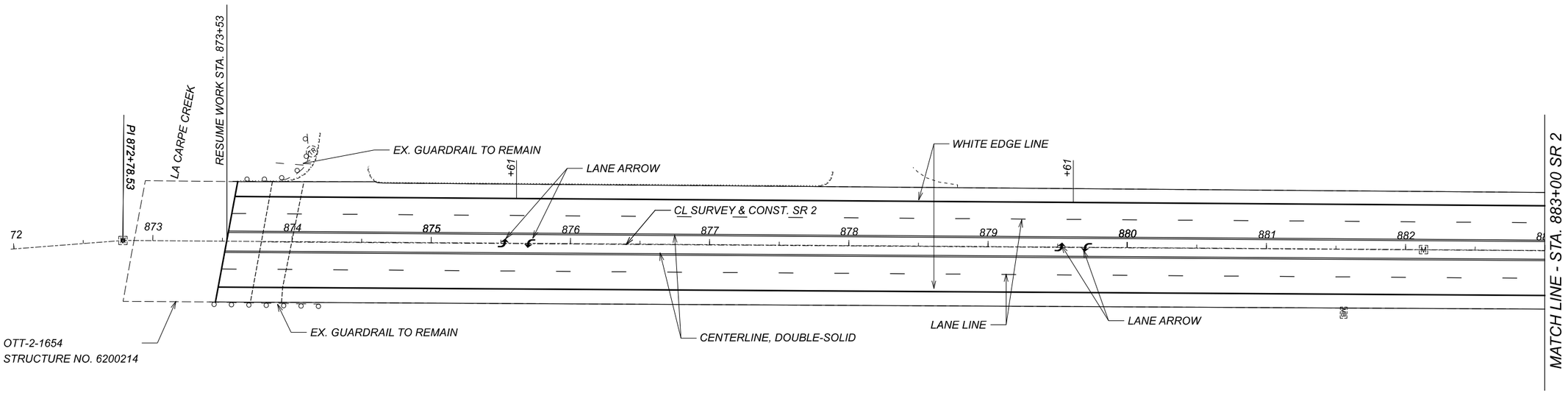
DESIGN AGENCY

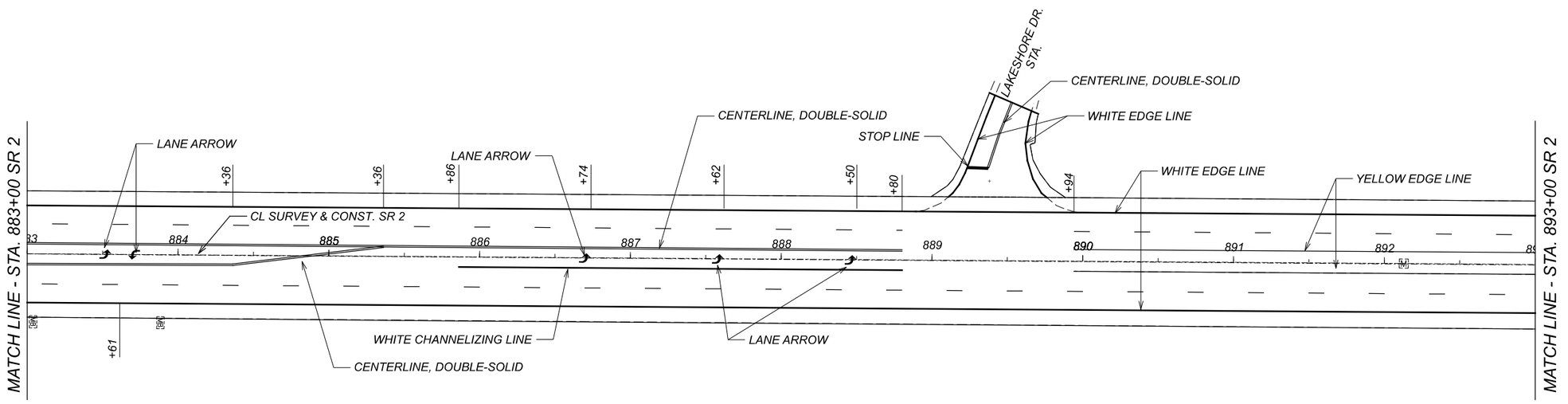
DESIGNER
ALF

REVIEWER
JMF

PROJECT ID
107959

SHEET 17 | TOTAL 40





HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 873+53 TO STA. 893+00

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 18 TOTAL 40

OTT-2-16.37

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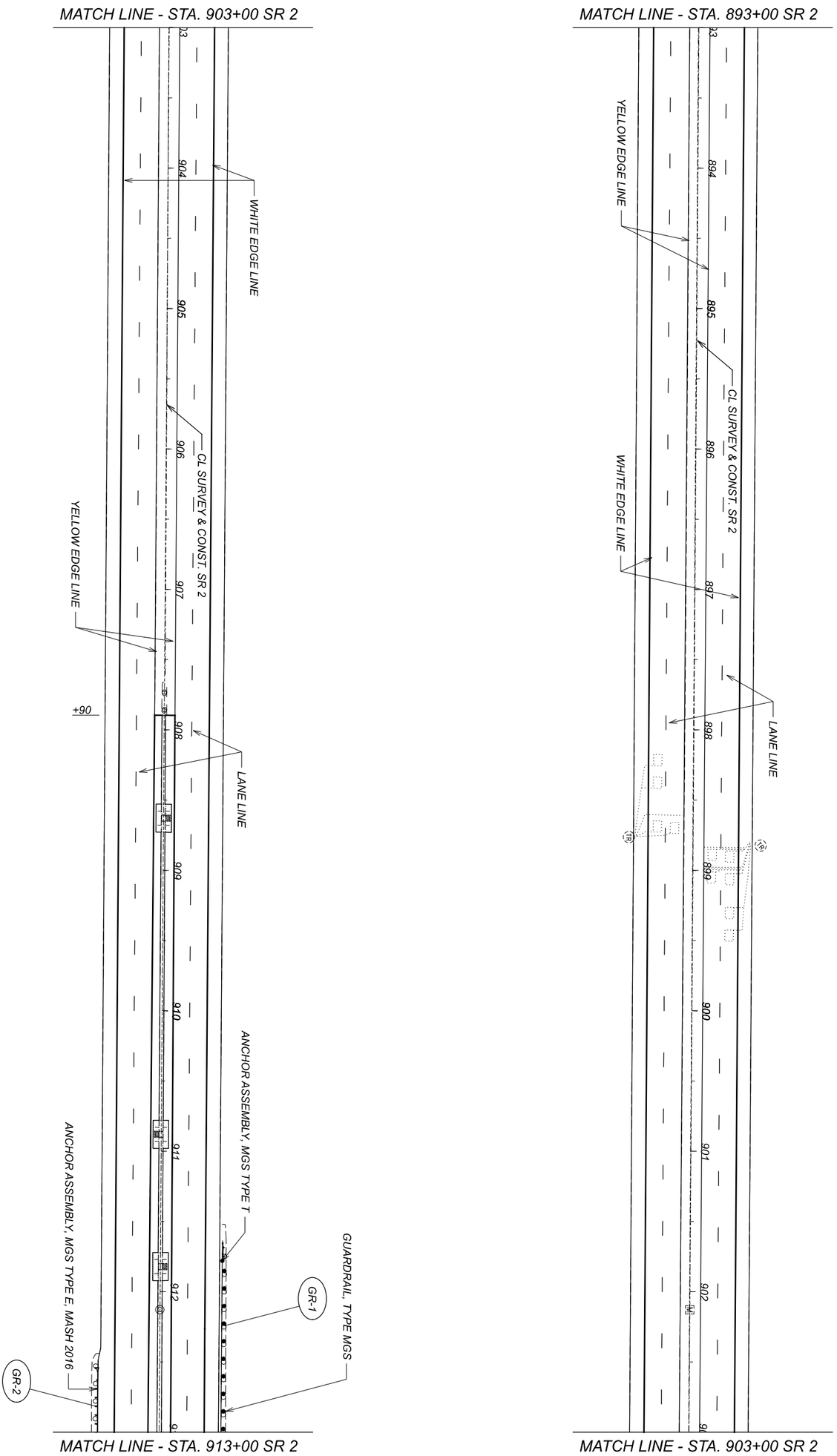
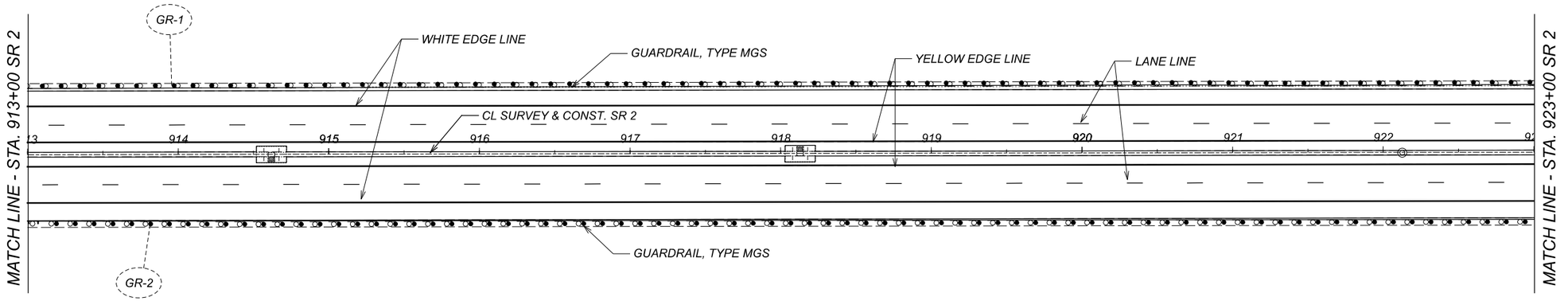


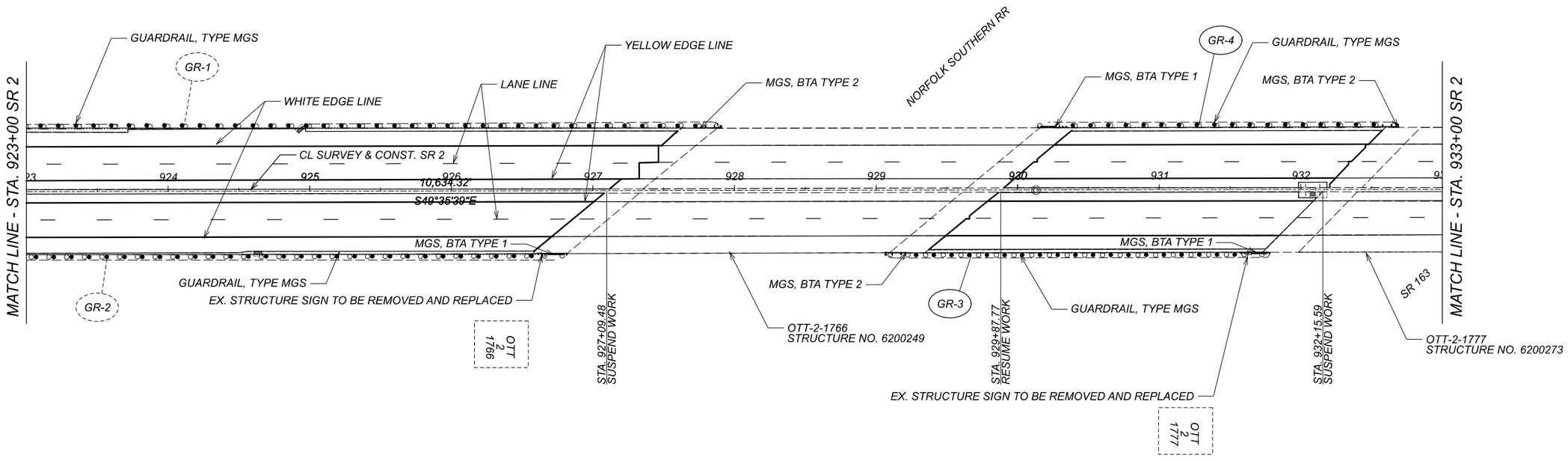
PLAN SHEET
SR 2 - STA. 893+00 TO STA. 913+00

HORIZONTAL SCALE IN FEET
0 40
20 80

DESIGNER	REVIEWER	PROJECT ID	SHEET	TOTAL
ALF	JMF	107959	19	40

DESIGN AGENCY





HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 913+00 TO STA. 933+00

DESIGN AGENCY

DESIGNER	ALF
REVIEWER	JMF
PROJECT ID	107959
SHEET	20
TOTAL	40

OTT-2-16.37

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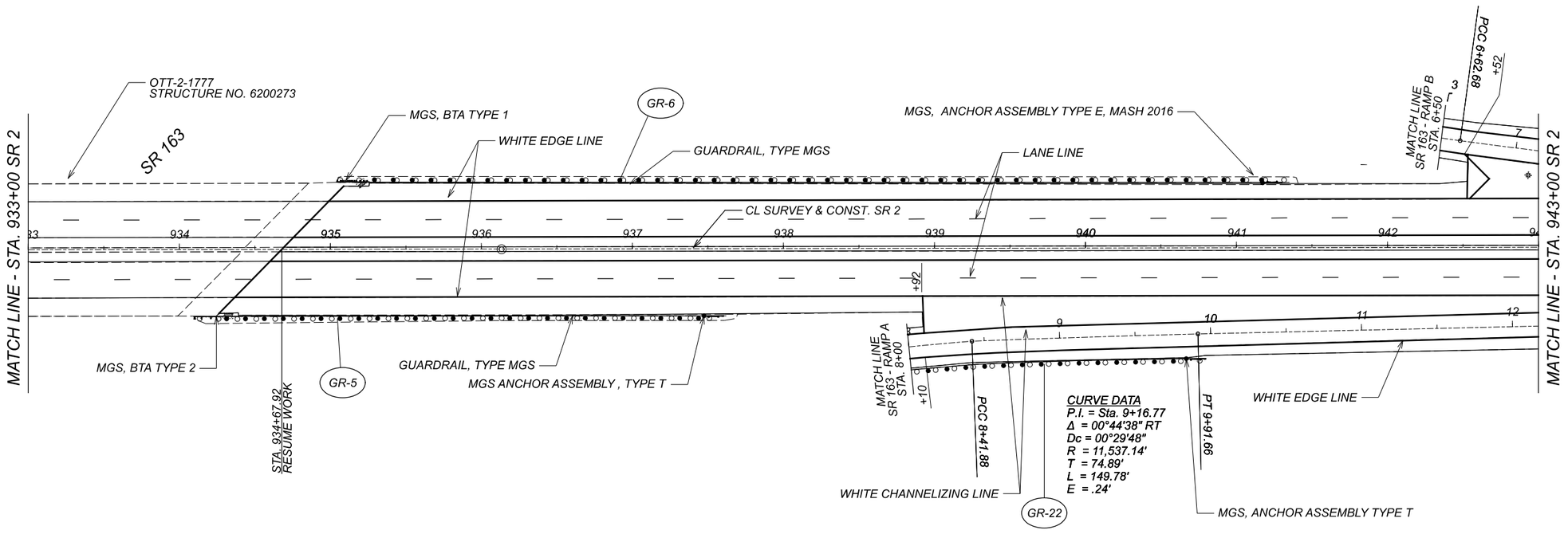

HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 933+00 TO STA. 953+00

OTT-2-16.37

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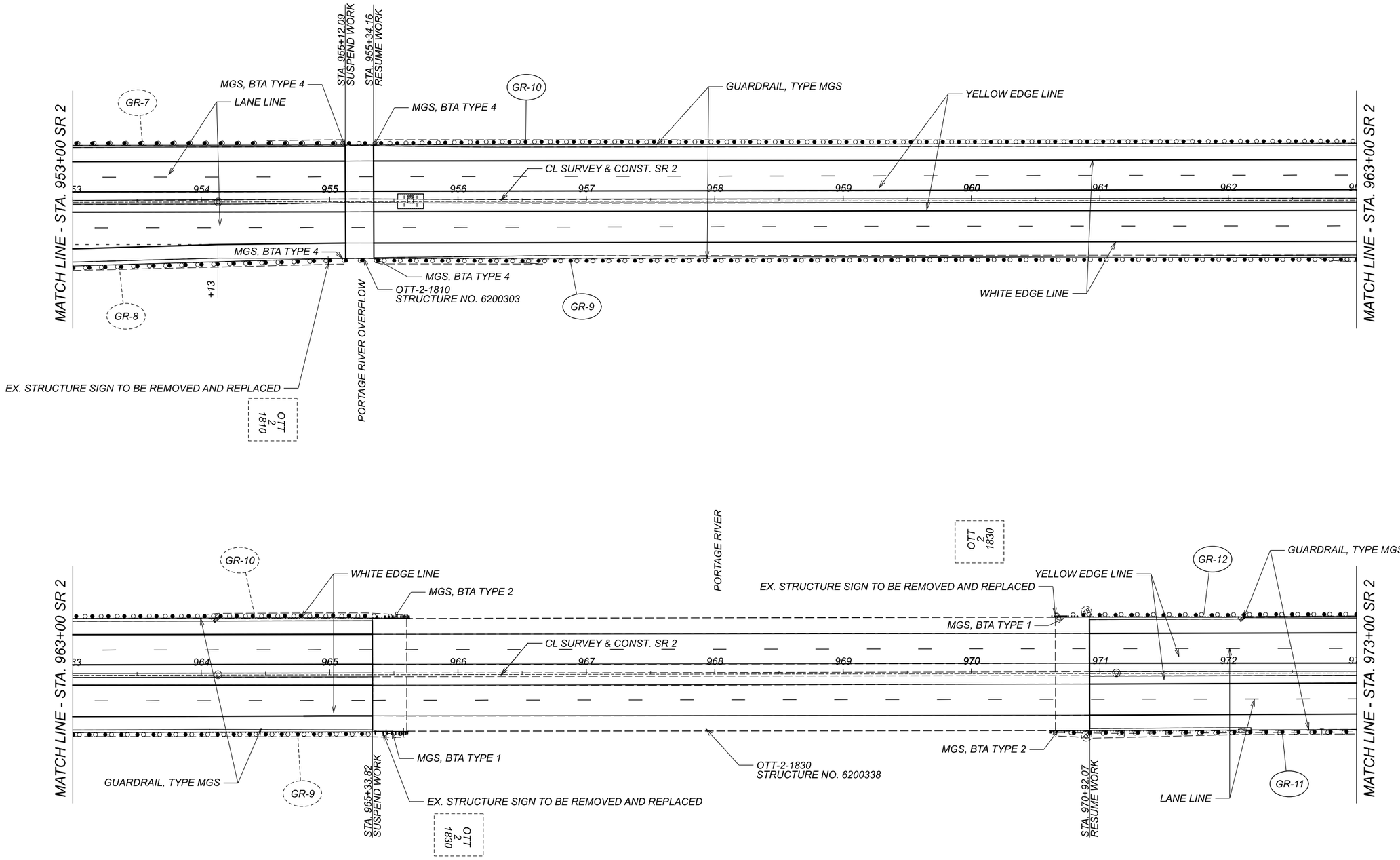
DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 21 TOTAL 40



HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 953+00 TO STA. 973+00

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 22 TOTAL 40

OTT-2-16.37

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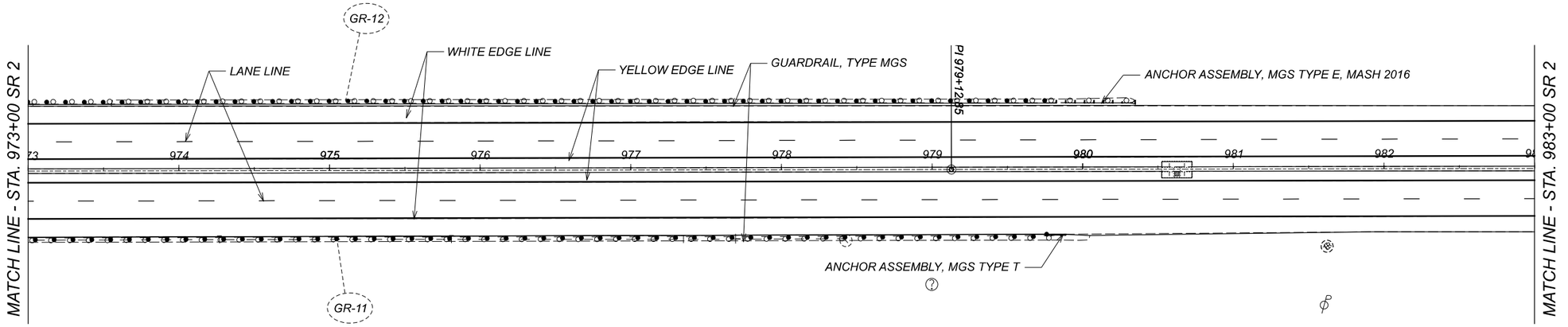

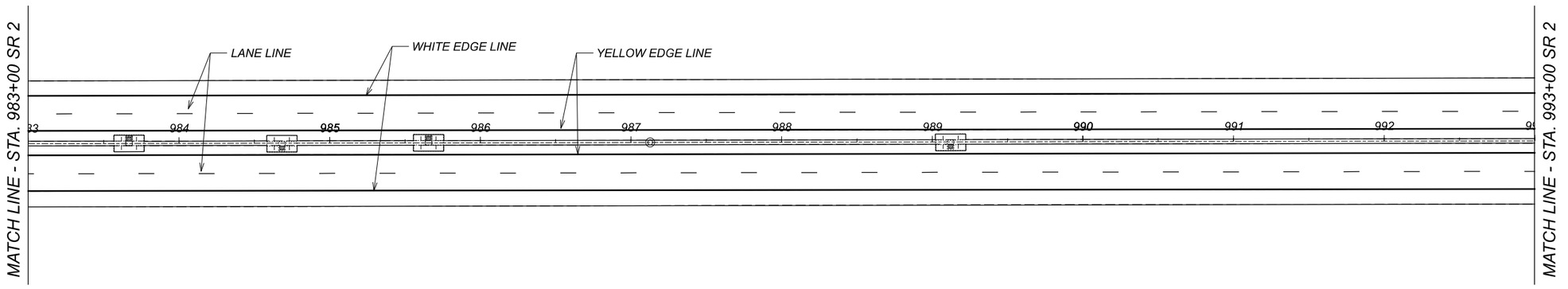

HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 973+00 TO STA. 993+00

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 23 TOTAL 40

OTT-2-16.37

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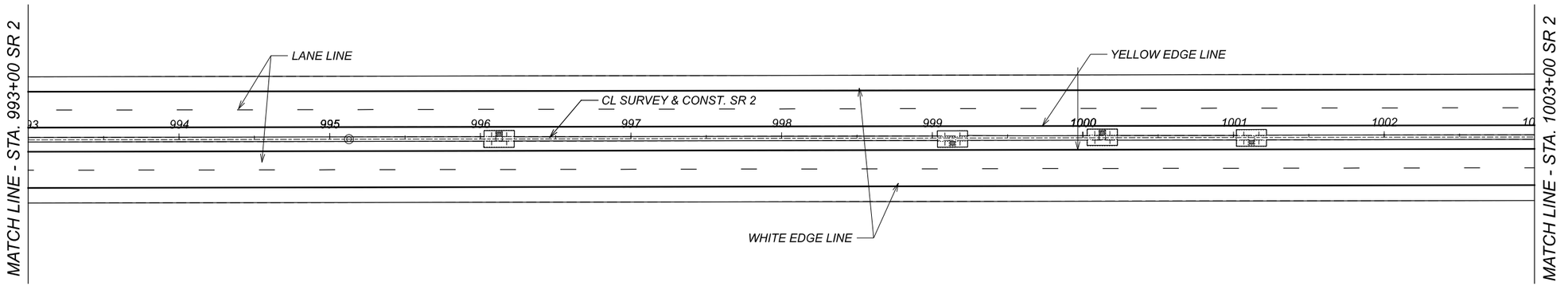

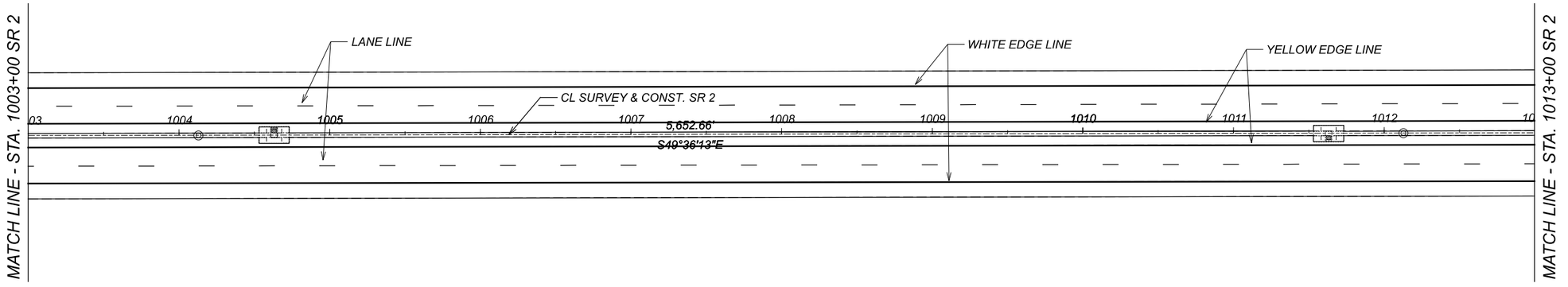

HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 993+00 TO STA. 1013+00

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 24 TOTAL 40

OTT-2-16.37

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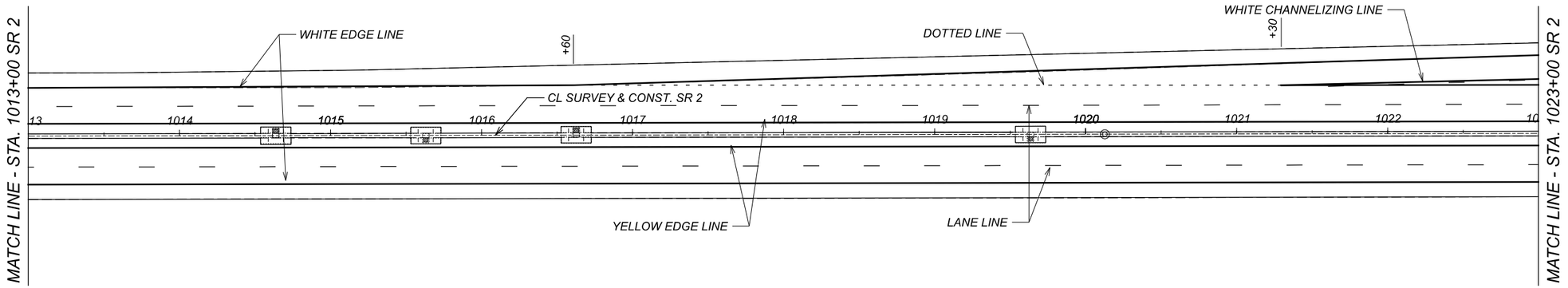
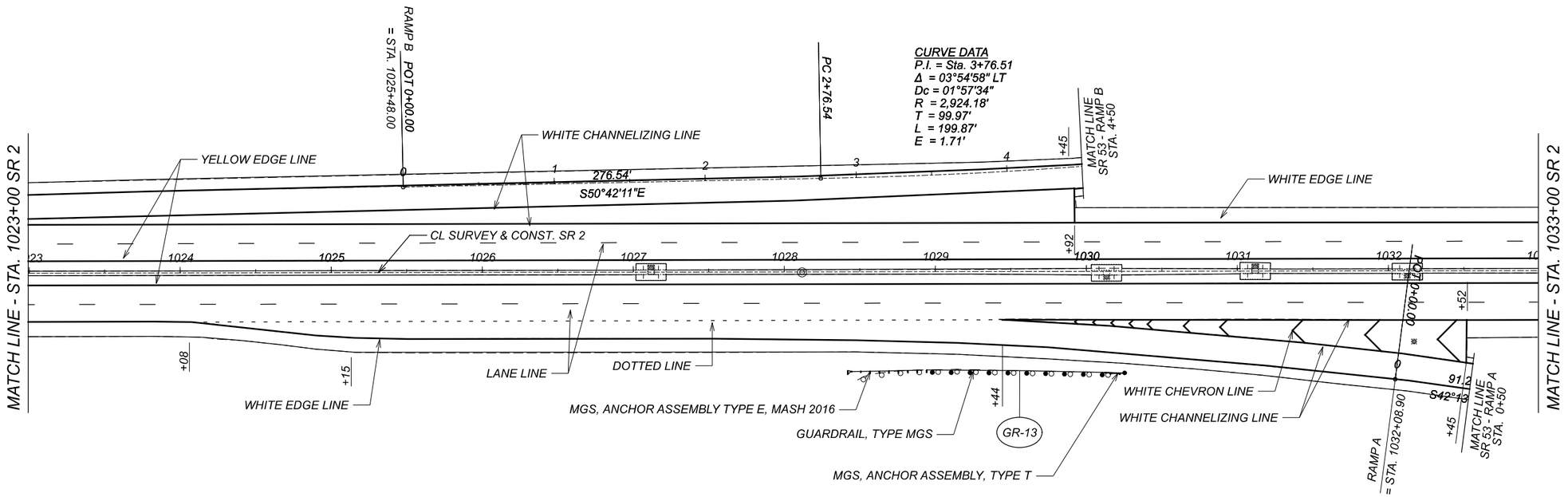




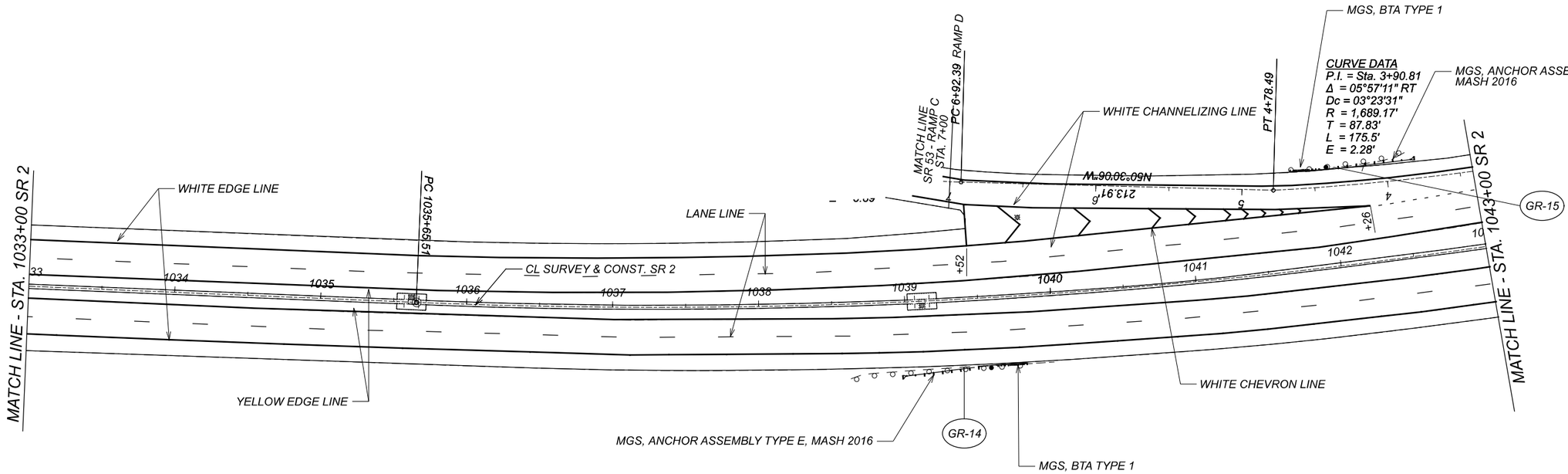
HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 1013+00 TO STA. 1033+00

OTT-2-16.37

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 25 TOTAL 40



HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 1033+00 TO STA. 1053+00

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 26 TOTAL 40

OTT-2-16.37

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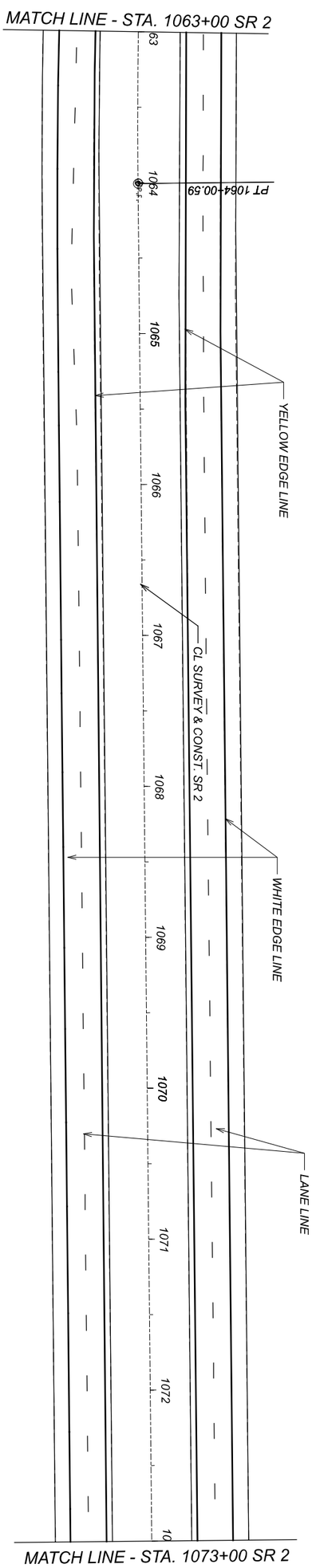

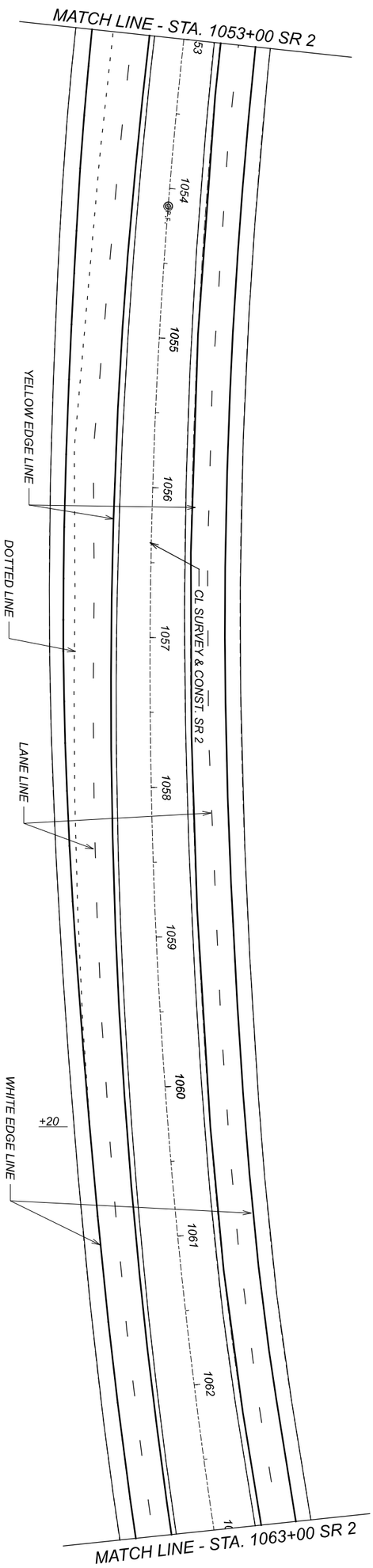

PLAN SHEET
SR 2 - STA. 1053+00 TO STA. 1073+00

HORIZONTAL SCALE IN FEET
0 40
20 80

SHEET	TOTAL
27	40

PROJECT ID: 107959
REVIEWER: JMF
DESIGNER: ALF
DESIGN AGENCY

MODEL: Sheet PAPERSIZE: 17x11(In.) DATE: 11/15/2021 TIME: 10:33:38 AM USER: afintel
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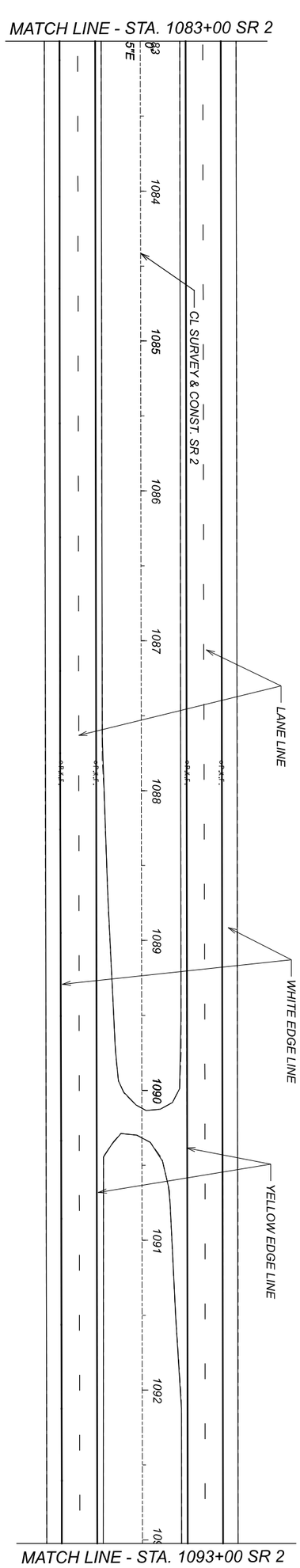
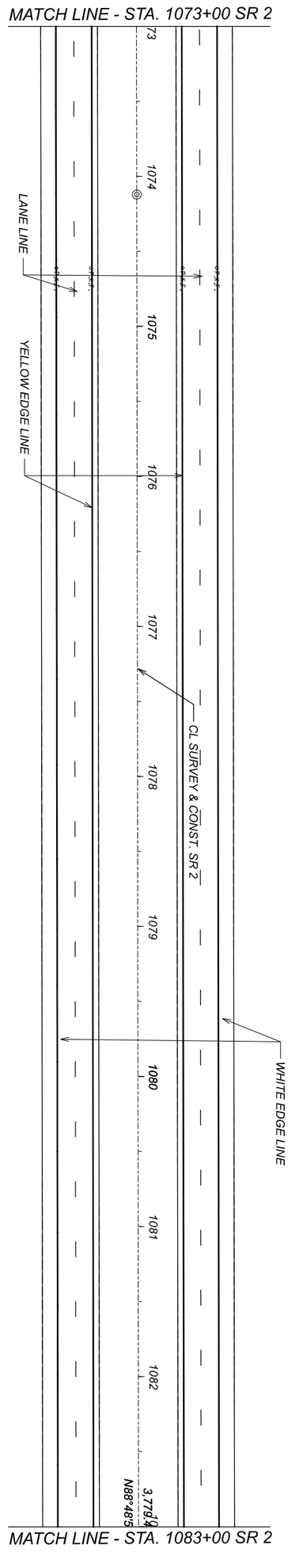


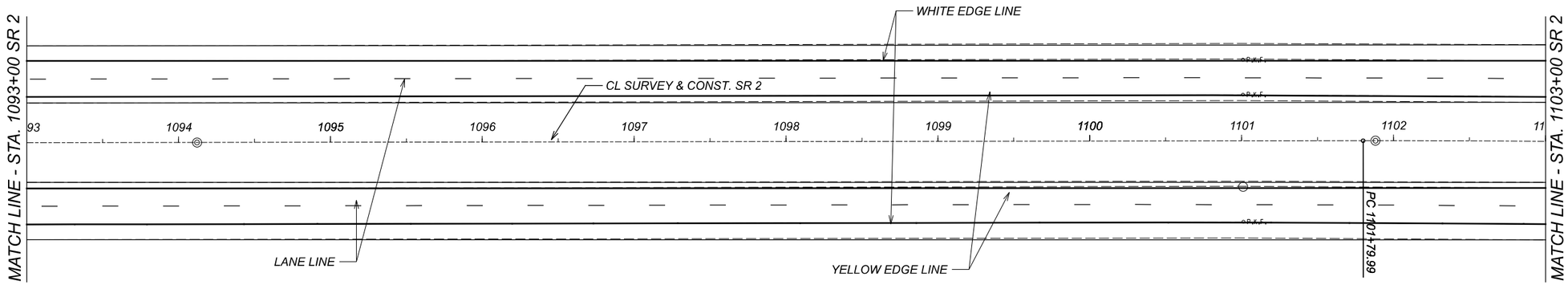


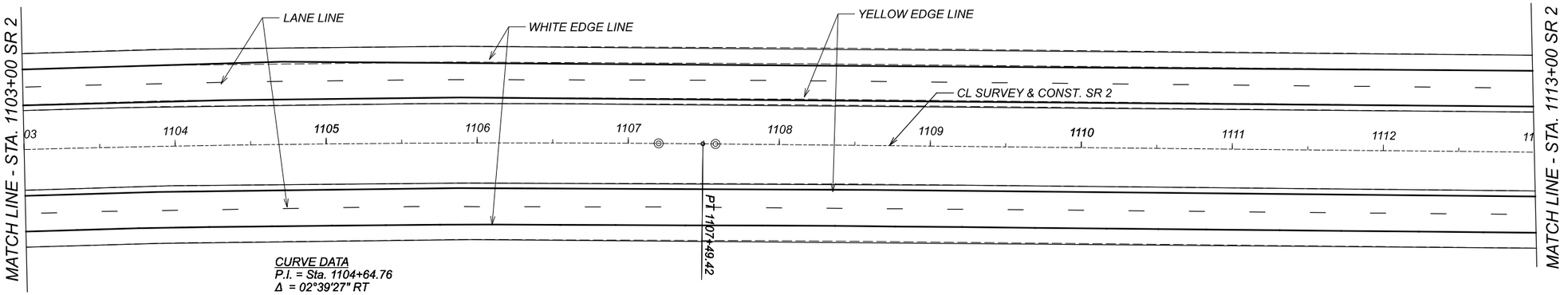
PLAN SHEET
SR 2 - STA. 1073+00 TO STA. 1093+00

HORIZONTAL SCALE IN FEET
0 40
20 80

DESIGNER	REVIEWER	PROJECT ID	SHEET	TOTAL
ALF	JMF	107959	28	40

DESIGN AGENCY





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Dc = 00°28'00"
R = 12,277.67'
T = 284.77'
L = 569.44'
E = 3.3'

HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 1093+00 TO STA. 1113+00

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 29 TOTAL 40

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 11/15/2021 TIME: 10:33:45 AM USER: ofintel
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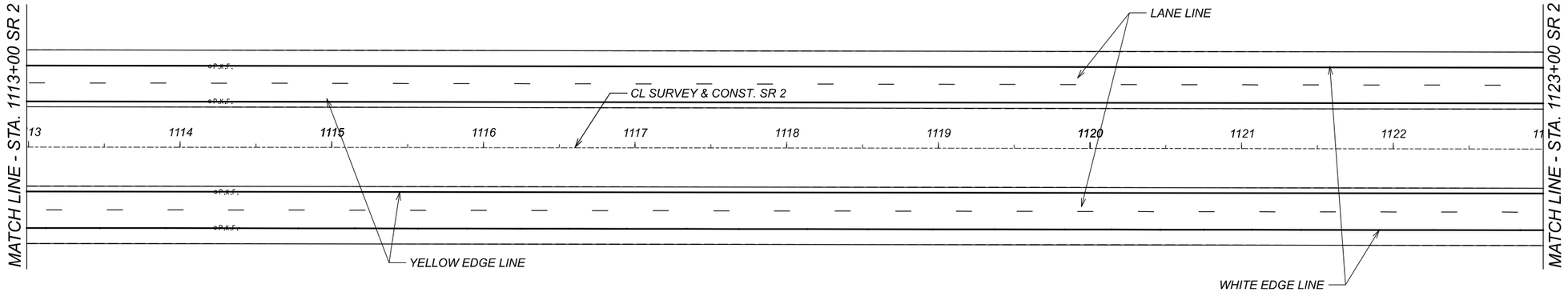

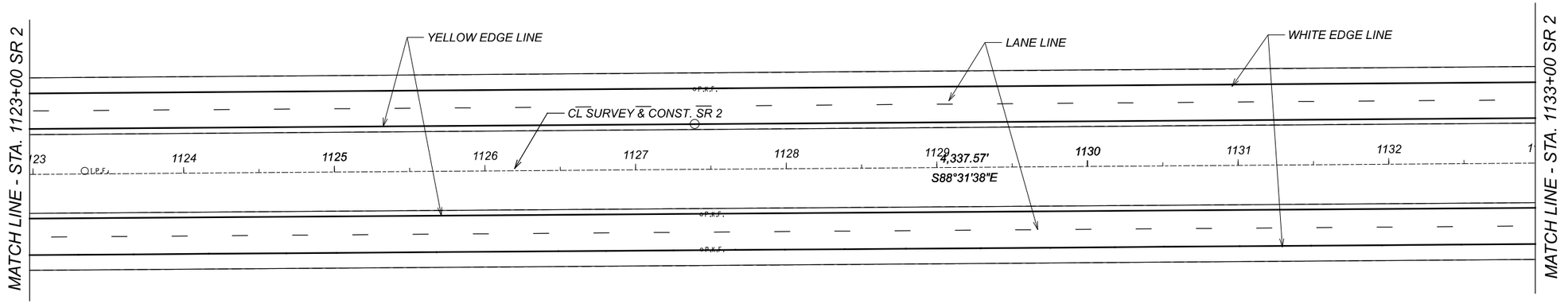

HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 1113+00 TO STA. 1133+00

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 30 TOTAL 40

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11in) DATE: 11/15/2021 TIME: 10:33:52 AM USER: ofintel
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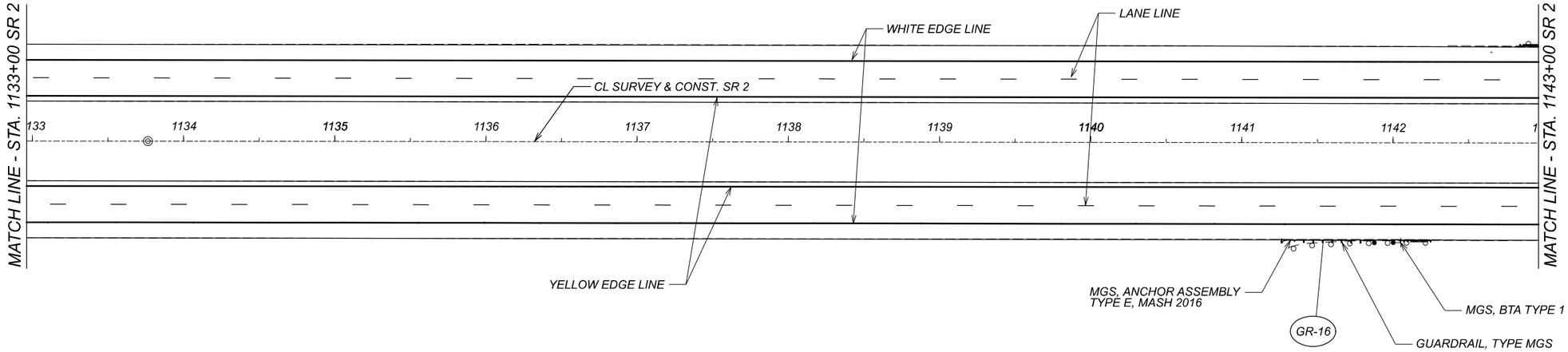

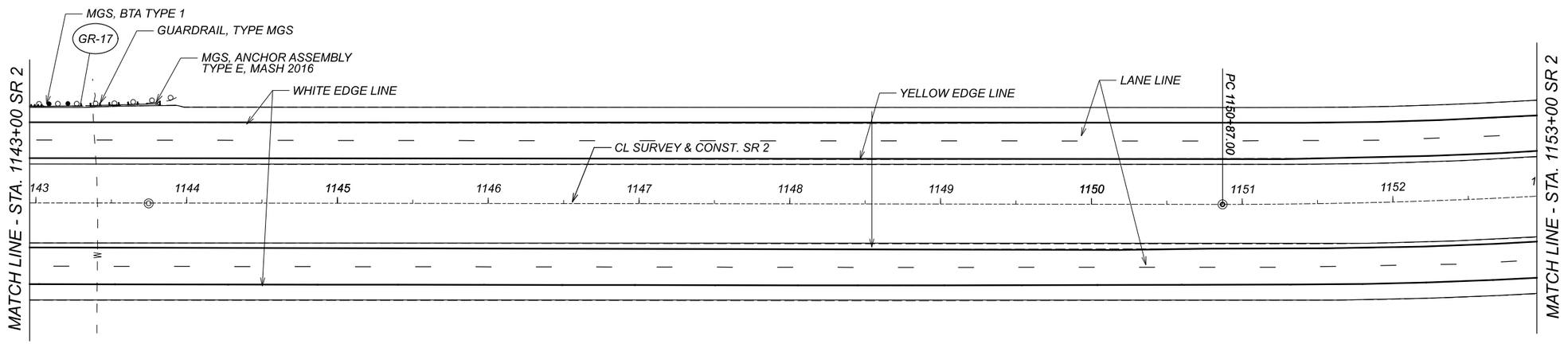

HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 1133+00 TO STA. 1153+00

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 11/15/2021 TIME: 10:34:00 AM USER: afintel
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DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 31 TOTAL 40

MODEL: Sheet PAPERSIZE: 17x11(In.) DATE: 11/15/2021 TIME: 10:34:07 AM USER: afintel
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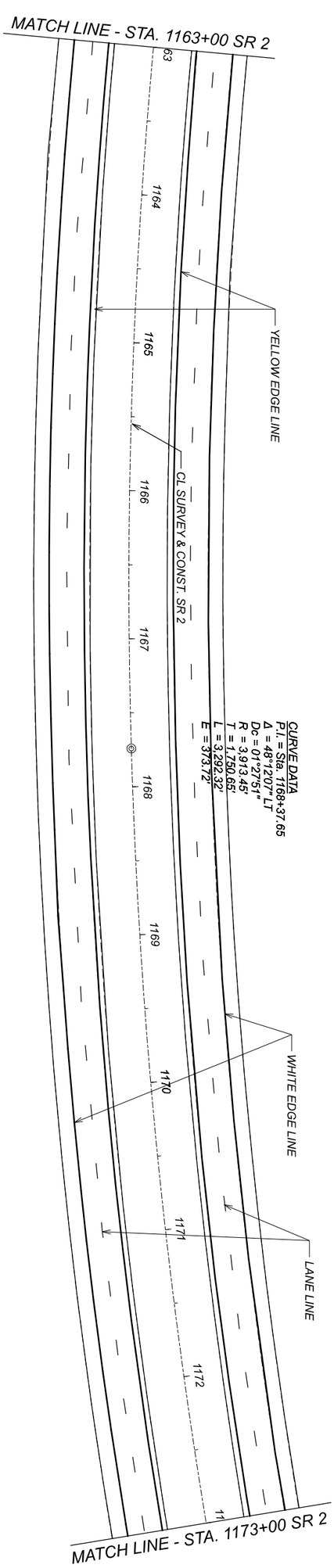

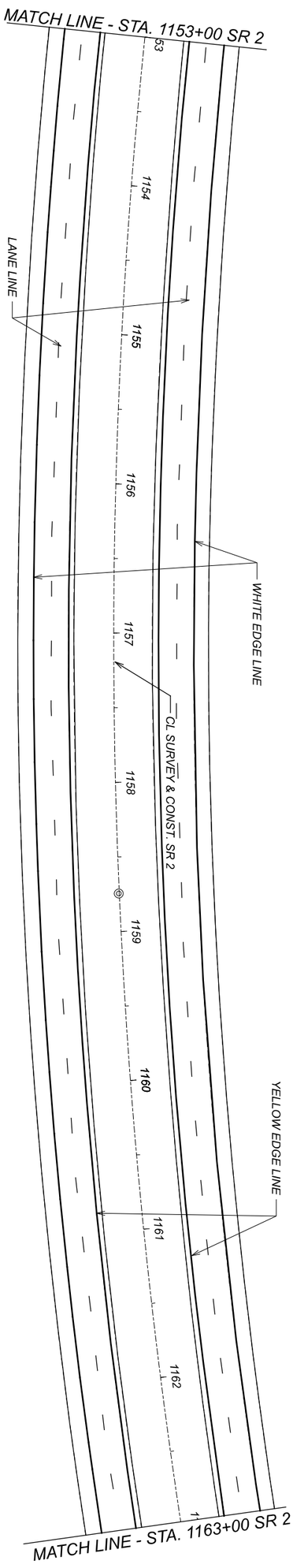

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 32 TOTAL 40
DESIGN AGENCY

PLAN SHEET
SR 2 - STA. 1153+00 TO STA. 1173+00

HORIZONTAL SCALE IN FEET
0 40
20 80

MODEL: Sheet PAPERSIZE: 17x11(In.) DATE: 11/15/2021 TIME: 10:34:15 AM USER: afintel
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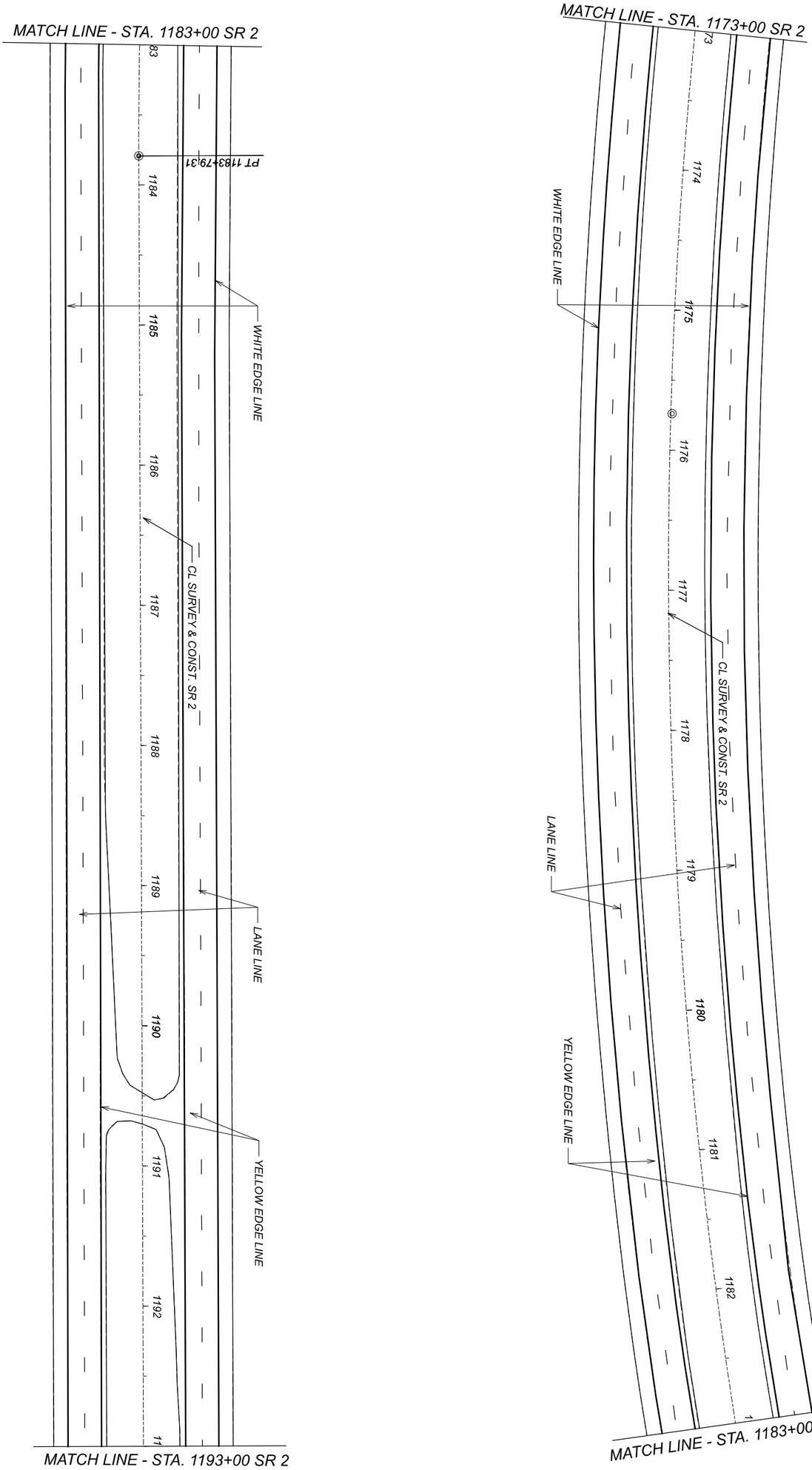
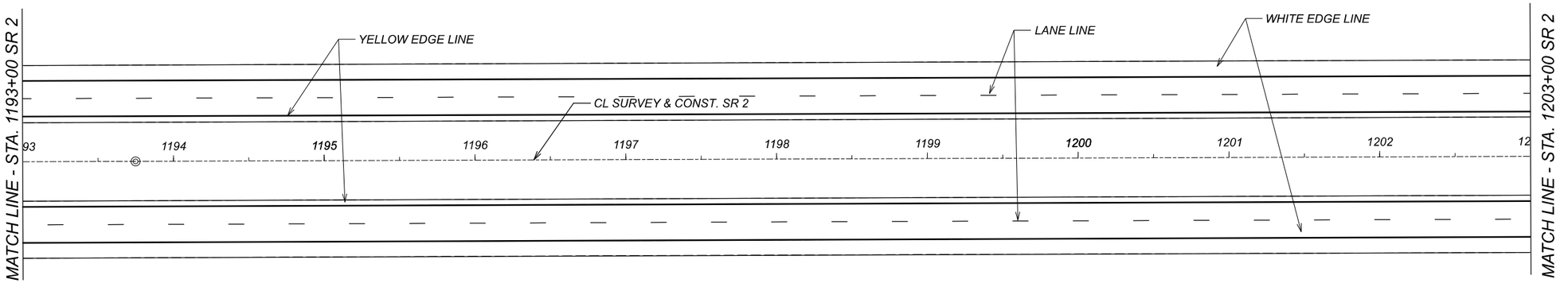


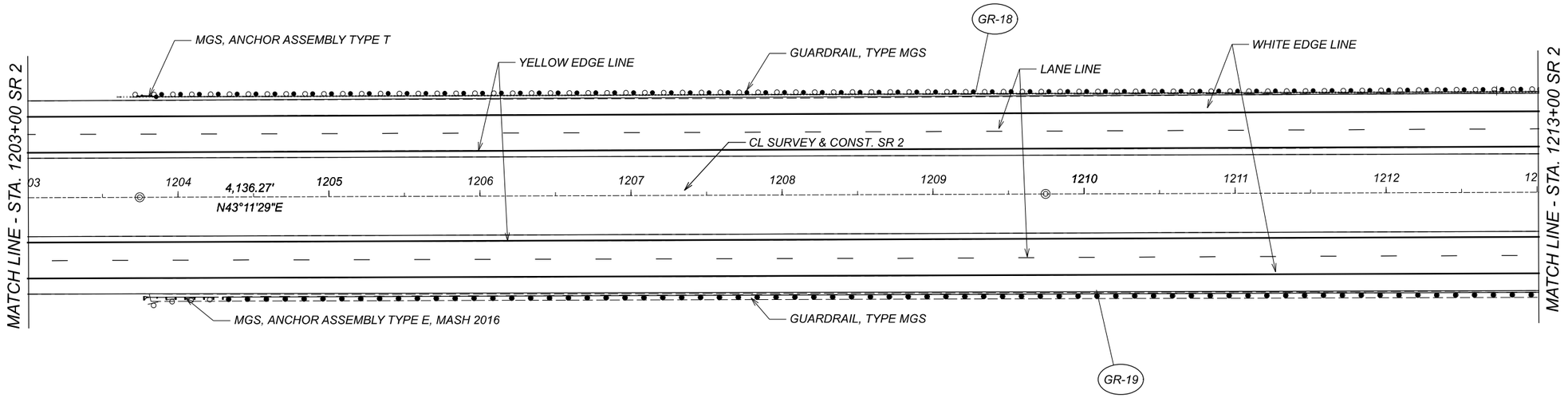
PLAN SHEET
SR 2 - STA. 1173+00 TO STA. 1193+00

HORIZONTAL SCALE IN FEET
0 40
20 80

DESIGNER	REVIEWER	PROJECT ID	SHEET	TOTAL
ALF	JMF	107959	33	40

DESIGN AGENCY





HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 1193+00 TO STA. 1213+00

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 34 TOTAL 40

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 11/15/2021 TIME: 10:34:22 AM USER: ofintel
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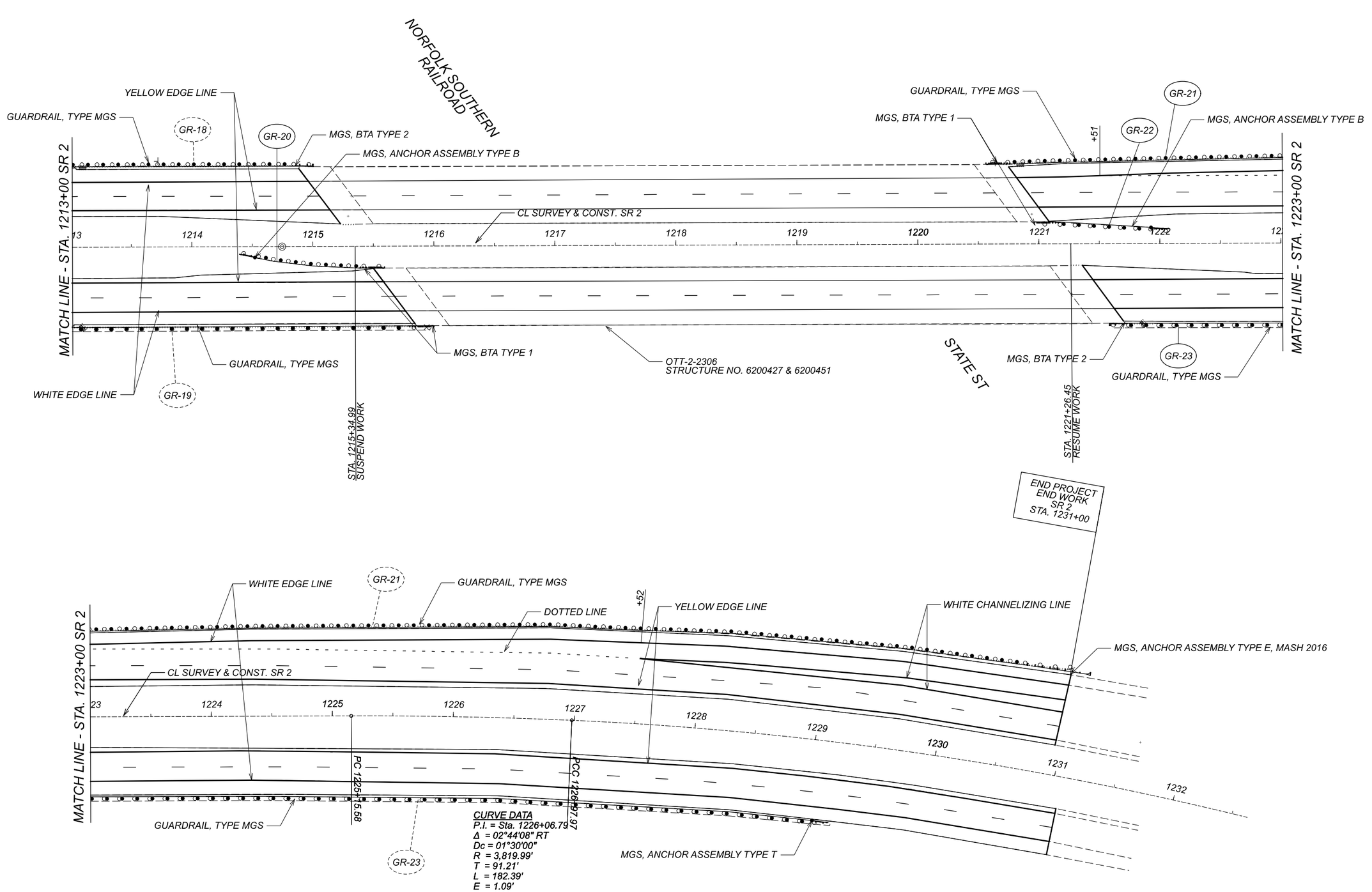

HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 2 - STA. 1213+00 TO STA. 1231+00

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 35 TOTAL 40

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 11/5/2021 TIME: 10:34:30 AM USER: afintel
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HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 163 - RAMP A & B

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 36 TOTAL 40

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 11/15/2021 TIME: 10:34:37 AM USER: afintel
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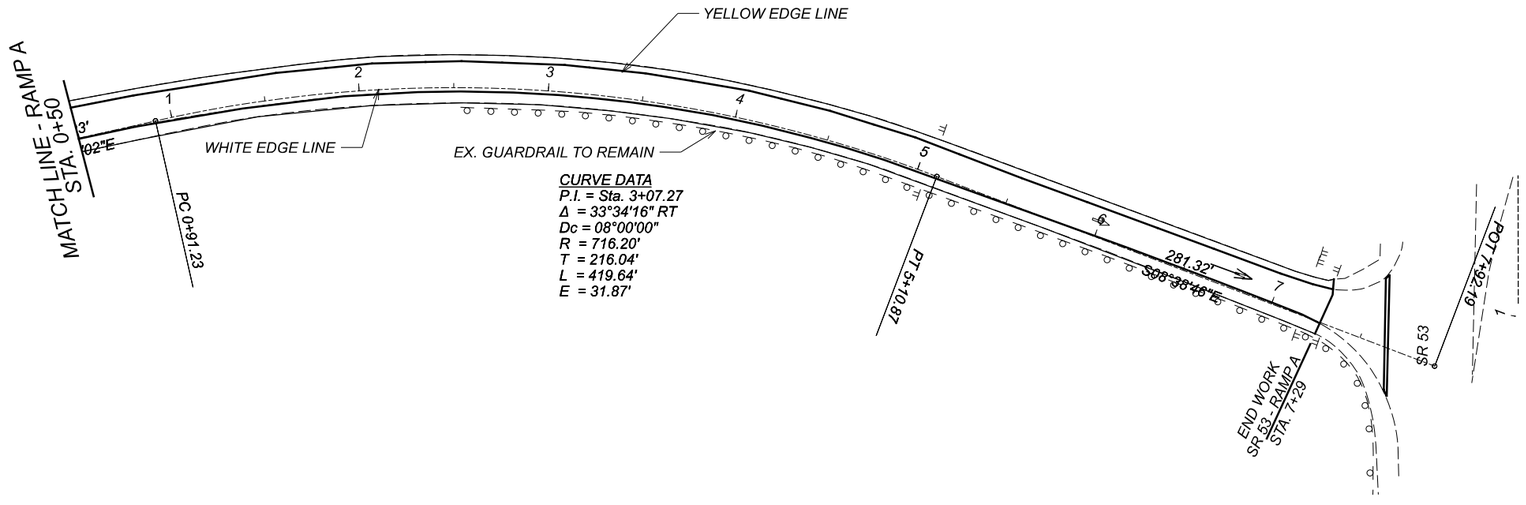

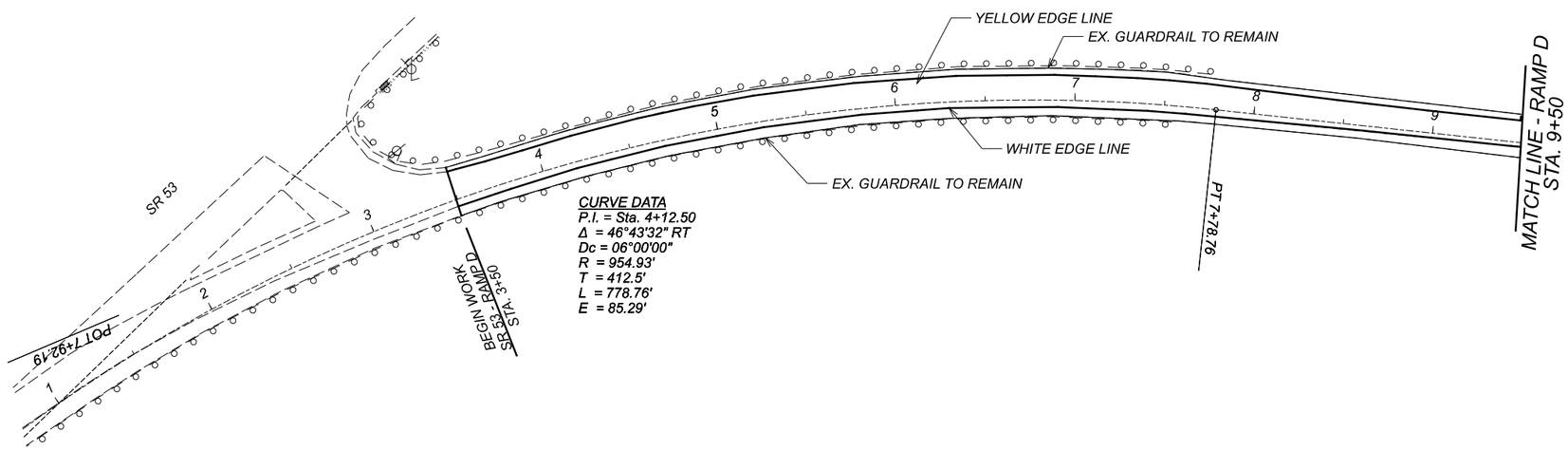

HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 53 - RAMP A & D

DESIGN AGENCY

DESIGNER ALF
REVIEWER JMF
PROJECT ID 107959
SHEET 37 TOTAL 40

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 11/15/2021 TIME: 10:34:45 AM USER: afintel
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HORIZONTAL SCALE IN FEET
0 20 40 80

PLAN SHEET
SR 53 - RAMP B & C

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 1/15/2021 TIME: 10:34:52 AM USER: afintel
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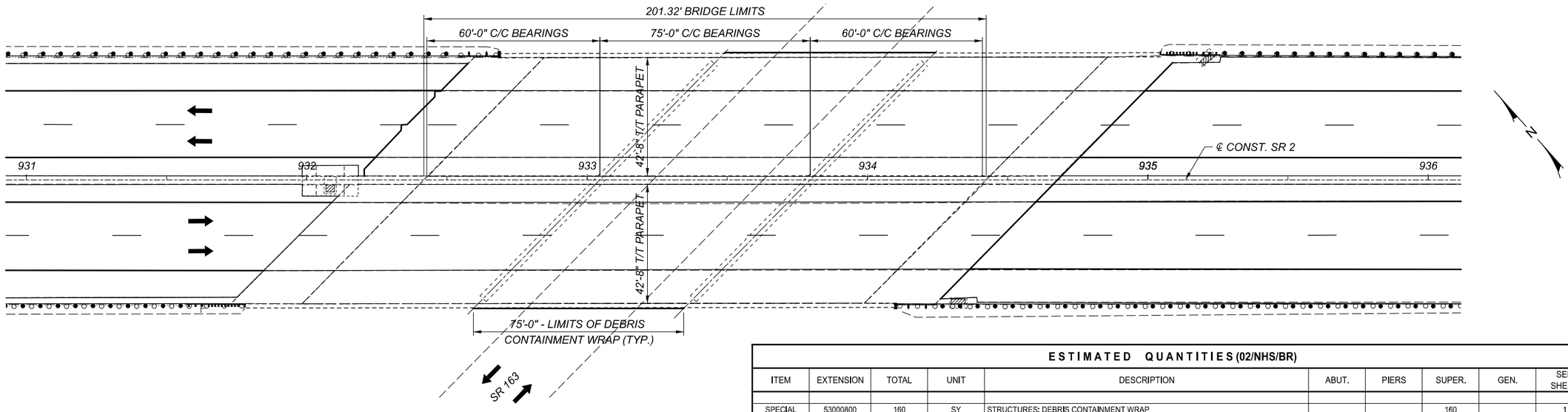
DESIGN AGENCY

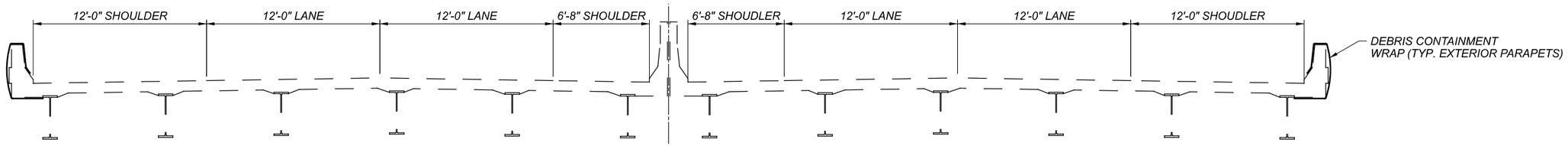
DESIGNER: ALF
REVIEWER: JMF
PROJECT ID: 107959
SHEET: 38 TOTAL: 40



PLAN

ESTIMATED QUANTITIES (02/NHS/BR)

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET
SPECIAL	53000800	160	SY	STRUCTURES: DEBRIS CONTAINMENT WRAP			160		1



TRANSVERSE SECTION

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXIST- ING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS, SECTIONS 102.05 AND 105.02. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAIN- TIES DESCRIBED ABOVE AND UPON A PREBID EXAMI- NATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 530, SPECIAL - STRUCTURES, MISC.: DEBRIS CONTAINMENT WRAP

DESCRIPTION:
THIS WORK SHALL CONSIST OF INSTALLATION OF A STRUCTURE DEBRIS CONTAINMENT NETTING SYSTEM AROUND THE EXTERIOR PARAPETS OF STRUCTURES TO PROTECT TRAFFIC BELOW FROM SPALLING CONCRETE. THIS NETTING IS INTENDED TO BE IN PLACE FOR A TIME PERIOD IN EXCESS OF 5 YEARS AND SHALL BE INSTALLED AND ANCHORED FOR LONG TERM SERVICE.

DESIGN:
THE FOLLOWING BRIDGE DEBRIS CONTAINMENT, OR APPROVED EQUAL, SHALL BE USED:

INCORD ROC-BLOC BRIDGE SAFETY N-820H (GRAY) STRUCTURAL NETTING WITH DNR850 GRAY LINER.

ITEM 530, SPECIAL - STRUCTURES, MISC.: DEBRIS CONTAINMENT WRAP (CONTINUED)

NETTING SPECIFICATIONS ARE AS FOLLOWS:

STYLE	RASCHEL KNOTLESS NETTING
CORD DIAMETER	3/16 INCH
MESH SIZE	2.5 INCH SQUARE OPENING
LOAD TEST	6000 LB (+/- 500 LB)
MELTING POINT	320° F
UV	EXTRA UV STABILIZERS ADDED
NETTING COLOR	GRAY
LINER	3/8" KNITTED POLYESTER
LINER COLOR	GRAY
ANCHOR SYSTEM	REDUNDANT SYSTEM CAPABLE OF MEETING SPECIAL INSTALLATION REQUIREMENTS

INCORD
226 UPTON ROAD
COLCHESTER, CT 06415
860-537-1414
http://www.incord.com

INSTALLATION REQUIREMENTS:
THE NETTING SHALL BE INSTALLED PER THE MANUFACTURER'S REQUIREMENTS WITH THE FOLLOWING EXCEPTION:

NETTING SHALL BE ANCHORED WITH A REDUNDANT ANCHORING SYSTEM. THIS ANCHORING SYSTEM SHALL CONSIST OF THE COMBINATION OF AN ANCHOR CABLE AS WELL AS INDIVIDUAL ANCHOR CONNECTIONS WITH CLIPS ALONG THE LENGTH OF THE NETTING. EACH ANCHOR POINT OF THE NETTING SHALL BE CONNECTED TO EACH

ITEM 530, SPECIAL - STRUCTURES, MISC.: DEBRIS CONTAINMENT WRAP (CONTINUED)

POINT OF THE NETTING SHALL BE CONNECTED TO EACH INDEPENDENT ANCHORING SYSTEM. THE INTENT OF THE REDUNDANT ANCHORING SYSTEM IS TO MINIMIZE RISK OF VANDALISM DAMAGE TO NETTING, AND IN THE EVENT OF VANDALISM, KEEP THE NETTING FROM DROPPING DOWN ONTO TRAFFIC BELOW.

ALL NETTING SHALL BE INSTALLED TO PROVIDE A MINIMUM OF 12" CLEARANCE ABOVE THE ADJACENT BOTTOM OF BEAMS.

MEASUREMENT AND PAYMENT:
THIS ITEM WILL BE PAID FOR BY SQUARE YARD INSTALLED AND ACCEPTED PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS, AS AMENDED ABOVE. BID PRICE SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PROVIDE AND INSTALL A STRUCTURAL NETTING DEBRIS CONTAINMENT SYSTEM.

ITEM 530, SPECIAL - STRUCTURES: DEBRIS CONTAINMENT WRAP

160 SQUARE YARDS

PROPOSED WORK

INSTALL STRUCTURE DEBRIS CONTAINMENT WRAP AROUND THE EXTERIOR PARAPETS.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK ON REINFORCED CONCRETE PIER BENTS AND STUB ABUTMENTS

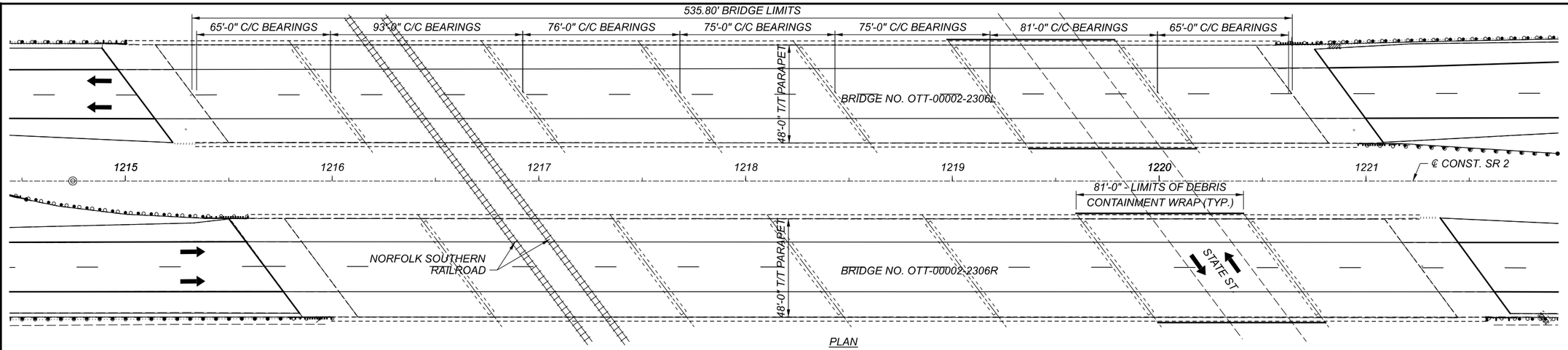
SPANS: 60'-0", 75'-0", 60'-0" C/C BEARINGS
ROADWAY: 42'-8" T/T PARAPETS
LOADING: HS20-44 CASE II AND ALT. MILITARY LOADING
SKEW: 44°-36' L.F.
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: 25'-0" (AS-1-81)
ALIGNMENT: TANGENT
CROWN: $\frac{3}{16}$" PER FT.
STRUCTURE FILE NUMBER: 6200273
DATE BUILT: 1968
DISPOSITION: GOOD

HORIZONTAL SCALE IN FEET
0 10 20 40

SITE PLAN
BRIDGE NO. OTT-00002-1770
OVER SR 163

SFN 6200273
DESIGN AGENCY
DESIGNER DJG | CHECKER
REVIEWER
PROJECT ID 107959
SUBSET 1 | TOTAL 1
SHEET 39 | TOTAL 40

OTT-2-16.37



PLAN

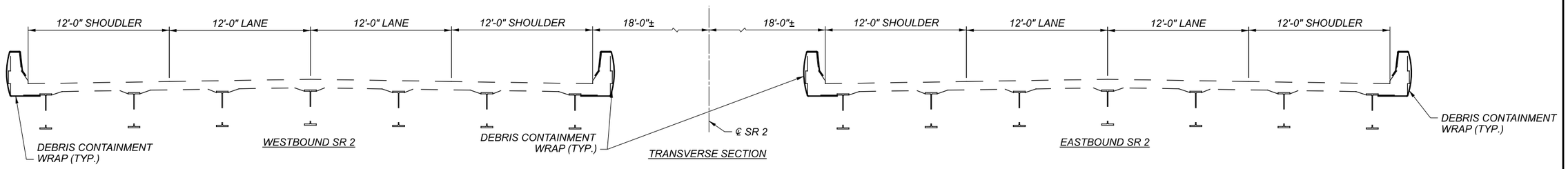
HORIZONTAL SCALE IN FEET
0 10 20 40

ESTIMATED QUANTITIES (02/NHS/BR) OTT-00002-2306L

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET
SPECIAL	53000800	175	SY	STRUCTURES: DEBRIS CONTAINMENT WRAP			175		1

ESTIMATED QUANTITIES (02/NHS/BR) OTT-00002-2306R

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET
SPECIAL	53000800	175	SY	STRUCTURES: DEBRIS CONTAINMENT WRAP			175		1



TRANSVERSE SECTION

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXIST- ING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS, SECTIONS 102.05 AND 105.02. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAIN- TIES DESCRIBED ABOVE AND UPON A PREBID EXAMI- NATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 530, SPECIAL - STRUCTURES, MISC.: DEBRIS CONTAINMENT WRAP

DESCRIPTION:
THIS WORK SHALL CONSIST OF INSTALLATION OF A STRUCTURE DEBRIS CONTAINMENT NETTING SYSTEM AROUND THE EXTERIOR PARAPETS OF STRUCTURES TO PROTECT TRAFFIC BELOW FROM SPALLING CONCRETE. THIS NETTING IS INTENDED TO BE IN PLACE FOR A TIME PERIOD IN EXCESS OF 5 YEARS AND SHALL BE INSTALLED AND ANCHORED FOR LONG TERM SERVICE.

DESIGN:
THE FOLLOWING BRIDGE DEBRIS CONTAINMENT, OR APPROVED EQUAL, SHALL BE USED:

INCORD ROC-BLOC BRIDGE SAFETY N-820H (GRAY) STRUCTURAL NETTING WITH DNR850 GRAY LINER.

ITEM 530, SPECIAL - STRUCTURES, MISC.: DEBRIS CONTAINMENT WRAP (CONTINUED)

NETTING SPECIFICATIONS ARE AS FOLLOWS:

STYLE	RASCHEL KNOTLESS NETTING
CORD DIAMETER	3/16 INCH
MESH SIZE	2.5 INCH SQUARE OPENING
LOAD TEST	6000 LB (+/- 500 LB)
MELTING POINT	320° F
UV	EXTRA UV STABILIZERS ADDED
NETTING COLOR	GRAY
LINER	3/8" KNITTED POLYESTER
LINER COLOR	GRAY
ANCHOR SYSTEM	REDUNDANT SYSTEM CAPABLE OF MEETING SPECIAL INSTALLATION REQUIREMENTS

INCORD
226 UPTON ROAD
COLCHESTER, CT 06415
860-537-1414
http://www.incord.com

INSTALLATION REQUIREMENTS:
THE NETTING SHALL BE INSTALLED PER THE MANUFACTURER'S REQUIREMENTS WITH THE FOLLOWING EXCEPTION:

NETTING SHALL BE ANCHORED WITH A REDUNDANT ANCHORING SYSTEM. THIS ANCHORING SYSTEM SHALL CONSIST OF THE COMBINATION OF AN ANCHOR CABLE AS WELL AS INDIVIDUAL ANCHOR CONNECTIONS WITH CLIPS ALONG THE LENGTH OF THE NETTING. EACH ANCHOR POINT OF THE NETTING SHALL BE CONNECTED TO EACH

ITEM 530, SPECIAL - STRUCTURES, MISC.: DEBRIS CONTAINMENT WRAP (CONTINUED)

POINT OF THE NETTING SHALL BE CONNECTED TO EACH INDEPENDENT ANCHORING SYSTEM. THE INTENT OF THE REDUNDANT ANCHORING SYSTEM IS TO MINIMIZE RISK OF VANDALISM DAMAGE TO NETTING, AND IN THE EVENT OF VANDALISM, KEEP THE NETTING FROM DROPPING DOWN ONTO TRAFFIC BELOW.

ALL NETTING SHALL BE INSTALLED TO PROVIDE A MINIMUM OF 12" CLEARANCE ABOVE THE ADJACENT BOTTOM OF BEAMS.

MEASUREMENT AND PAYMENT:
THIS ITEM WILL BE PAID FOR BY SQUARE YARD INSTALLED AND ACCEPTED PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS, AS AMENDED ABOVE. BID PRICE SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PROVIDE AND INSTALL A STRUCTURAL NETTING DEBRIS CONTAINMENT SYSTEM.

ITEM 530, SPECIAL - STRUCTURES: DEBRIS CONTAINMENT WRAP

160 SQUARE YARDS

PROPOSED WORK

INSTALL STRUCTURE DEBRIS CONTAINMENT WRAP AROUND THE EXTERIOR PARAPETS.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK ON REINFORCED CONCRETE PIERS AND STUB ABUTMENTS

SPANS: 65'-0", 93'-0", 76'-0", 75'-0", 75'-0", 81'-0", 65'-0" C/C BEARINGS
ROADWAY: 48'-0" T/T PARAPETS
LOADING: HS20-44 CASE II AND ALT. MILITARY LOADING
SKEW: 36°-33' R.F.
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: 25'-0" (AS-1-81)
ALIGNMENT: TANGENT
CROWN: 3/16" PER FT.
STRUCTURE FILE NUMBER: 6200427 & 6200451
DATE BUILT: 1968
DISPOSITION: GOOD

SITE PLAN
BRIDGE NO. OTT-00002-2306L&R OVER NS RAILROAD AND STATE ST.

SFN 6200427
6200451

DESIGN AGENCY

DESIGNER DJG | CHECKER
REVIEWER

PROJECT ID 107959

SUBSET 1 | TOTAL 1

SHEET 40 | TOTAL 40

OTT-2-16.37

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 11/15/2021 TIME: 10:35:17 AM USER: afinfel
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