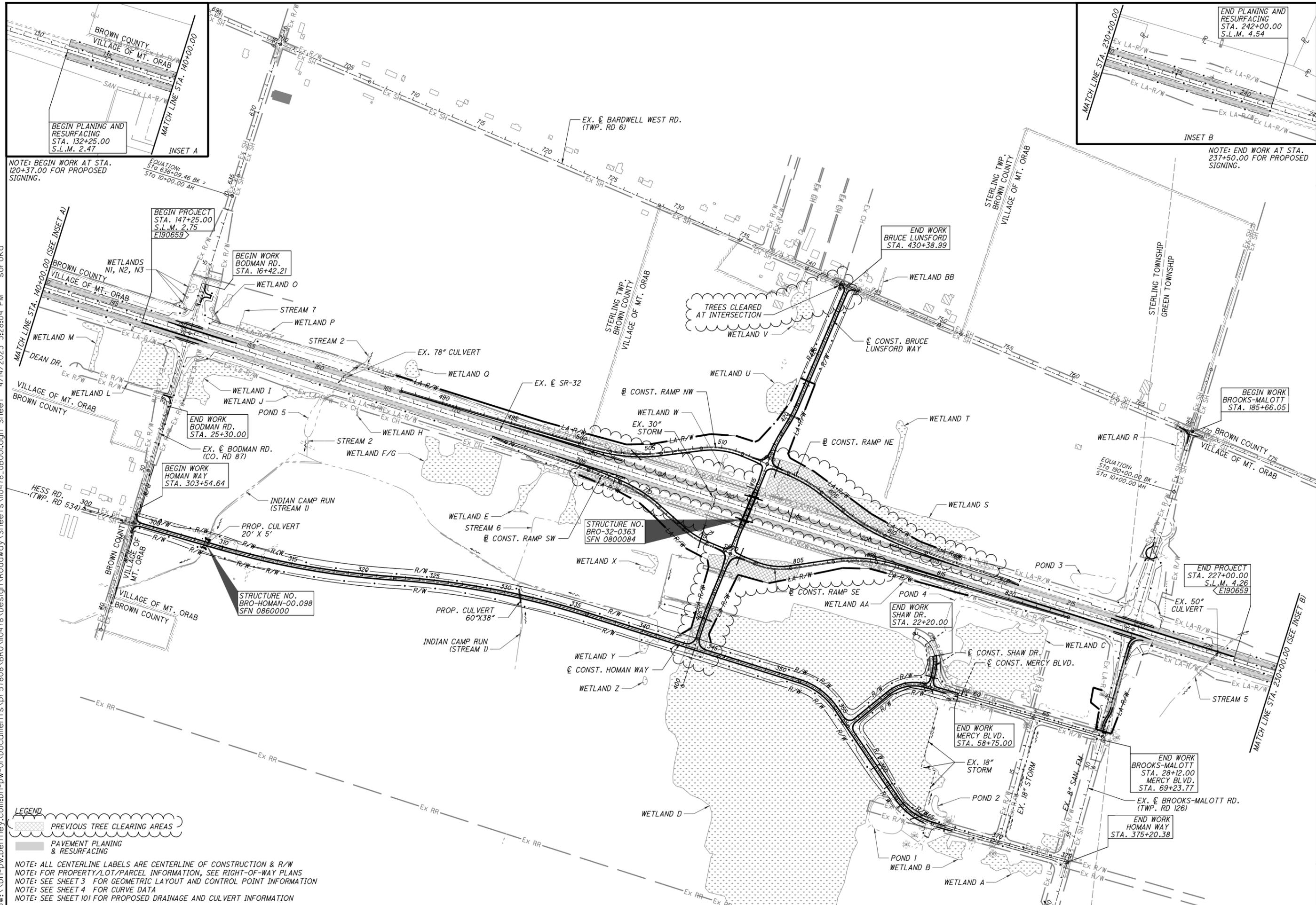


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BEGIN PLANING AND RESURFACING STA. 132+25.00 S.L.M. 2.47

NOTE: BEGIN WORK AT STA. 120+37.00 FOR PROPOSED SIGNING.
EQUATION: STA 636+09.46 BK = STA 10+00.00 AH

BEGIN PROJECT STA. 147+25.00 S.L.M. 2.75 E190659

BEGIN WORK BODMAN RD. STA. 16+42.21

END WORK BODMAN RD. STA. 25+30.00

BEGIN WORK HOMAN WAY STA. 303+54.64

STRUCTURE NO. BRO-HOMAN-00.098 SFN 0860000

STRUCTURE NO. BRO-32-0363 SFN 0800084

END WORK BRUCE LUNSFORD STA. 430+38.99

END PROJECT STA. 227+00.00 S.L.M. 4.28 E190659

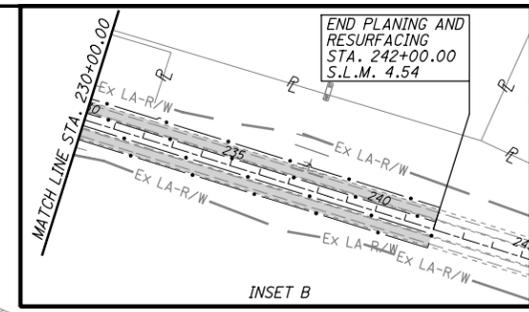
END WORK BROOKS-MALOTT STA. 28+12.00 MERCY BLVD. STA. 69+23.77

END WORK HOMAN WAY STA. 375+20.38

NOTE: END WORK AT STA. 237+50.00 FOR PROPOSED SIGNING.

LEGEND
PREVIOUS TREE CLEARING AREAS
PAVEMENT PLANING & RESURFACING

NOTE: ALL CENTERLINE LABELS ARE CENTERLINE OF CONSTRUCTION & R/W
NOTE: FOR PROPERTY/LOT/PARCEL INFORMATION, SEE RIGHT-OF-WAY PLANS
NOTE: SEE SHEET 3 FOR GEOMETRIC LAYOUT AND CONTROL POINT INFORMATION
NOTE: SEE SHEET 4 FOR CURVE DATA
NOTE: SEE SHEET 101 FOR PROPOSED DRAINAGE AND CULVERT INFORMATION



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SCHEMATIC PLAN

BRO-32-4.16

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PLAN ABBREVIATIONS

THE FOLLOWING LIST OF ABBREVIATION DEFINITIONS IS USED FOR THIS PLAN SET:

ABBREVIATION	DESCRIPTION
ATG	ADJUSTED TO GRADE
AA	ANCHOR ASSEMBLY
APP	AS PER PLAN
ASPH.	ASPHALT
AVE.	AVENUE
Ⓟ	BASELINE
BM	BENCH MARK
BLVD.	BOULEVARD
BTA	BRIDGE TERMINAL ASSEMBLY
CB	CATCH BASIN
Ⓞ	CENTERLINE
COMM.	COMMERCIAL
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT'D	CONTINUED
CORP.	CORPORATION
CMP	CORRUGATED METAL PIPE
CU YD	CUBIC YARD
CI	CURB INLET
CS	COMBINED SEWER
DIST.	DISTANCE
DND	DO NOT DISTURB
DR.	DRIVE/DRIVEWAY
EA.	EACH
EDA	EARTH DISTURBED AREA
EB	EASTBOUND
EL	EDGE LINE
EOI	END OF INFORMATION
EORI	END OF RECORDED INFORMATION
EOP	EDGE OF PAVEMENT
EOS	EDGE OF SHOULDER
ELEC.	ELECTRIC
ELEV.	ELEVATION
EST.	ESTIMATE/ESTIMATED
EXC.	EXCAVATION
EX.	EXISTING
FT.	FEET
FH	FIRE HYDRANT
Ⓡ	FLOW LINE
FM	FORCE MAIN
FSAN	FORCE MAIN SANITARY
GR	GUARDRAIL
HW	HEADWALL
HWY.	HIGHWAY
IN.	INCHES
INT.	INTERSECTION
INV.	INVERT
IR	INTERSTATE ROUTE
ITS	INTELLIGENT TRANSPORTATION SYSTEMS
LON	LENGTH OF NEED
LIN.	LINEAR
MOT	MAINTENANCE OF TRAFFIC
MH	MANHOLE
MAX.	MAXIMUM
MGS	MIDWEST GUARDRAIL SYSTEM
MI.	MILE(S)
MIN.	MINIMUM
MO.	MONTH(S)
N	NORTH
NB	NORTHBOUND
NE	NORTHEAST
NW	NORTHWEST
NO.	NUMBER
N.T.S.	NOT TO SCALE
OVHD.	OVERHEAD
PVMT	PAVEMENT
PL.	PLACE

PLAN ABBREVIATIONS (CONT'D)

ABBREVIATION	DESCRIPTION
PCB	PORTABLE CONCRETE BARRIER
PG	PROFILE GRADE
PGL	PROFILE GRADE LINE
Ⓡ	PROPERTY LINE
PROP.	PROPOSED
QL	(SUE) QUALITY LEVEL
RAD.	RADIUS
REF.	REFERENCE
REINF.	REINFORCED
RMVD.	REMOVED
RES.	RESIDENTIAL
RD.	ROAD
RCP	ROCK CHANNEL PROTECTION
RNDG.	ROUNDING
RTG	RECONSTRUCTED TO GRADE
SAN.	SANITARY
SEC.	SECTION
SHT.	SHEET
SHLDR.	SHOULDER
S	SOUTH
SB	SOUTHBOUND
SE	SOUTHEAST
SR	STATE ROUTE
SW	SOUTHWEST
SQ FT	SQUARE FEET
SQ YD	SQUARE YARD
STD.	STANDARD
STA.	STATION
ST.	STREET
STM	STORM
STRUCT.	STRUCTURE
TELE.	TELEPHONE
TEMP.	TEMPORARY
TBR	TO BE REMOVED
TBRR	TO BE REMOVED AND RELOCATED
TOT.	TOTAL
TWP.	TOWNSHIP
TYP.	TYPICAL
US	UNITED STATES ROUTE
VAR.	VARIABLE/VARIES
VC	VERTICAL CURVE
V.C.	VERTICAL CLEARANCE
Vdes	DESIGN SPEED
WM	WATER MAIN
WV	WATER VALVE
WB	WESTBOUND

REFERENCE BALLOONS

- C#** HORIZONTAL CURVE (Ⓟ OR Ⓞ)
- S#** HORIZONTAL SPIRAL (Ⓟ OR Ⓞ)
- B#** PROPOSED BARRIER ITEM
- C#** PROPOSED CURB OR CURB & GUTTER ITEM
- GR#** PROPOSED GUARDRAIL ITEM
- R#** PROPOSED REMOVAL ITEM (ROADWAY RELATED)
- PV#** PROPOSED PAVEMENT ITEM
- D#** PROPOSED DRAINAGE ITEM
- RD#** PROPOSED REMOVAL ITEM (DRAINAGE RELATED)
- E#** EROSION CONTROL
- UD#** PROPOSED UNDERDRAIN ITEM
- W#** PROPOSED WATER ITEM
- SS#** PROPOSED SANITARY ITEM
- SC#** PROPOSED SAWCUT ITEM

UTILITIES

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

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

ELECTRIC
SOUTH CENTRAL POWER
2780 COONPATH RD NE
LANCASTER, OHIO 43130
ATTN: KEVIN CARO
(740) 785-6110

TELECOMMUNICATIONS
CHARTER COMMUNICATIONS
10920 KENWOOD ROAD
CINCINNATI, OHIO 45242
ATTN: JOSEPH ANGEL
(513) 233-5705

ELECTRIC
DUKE ENERGY ELECTRIC
2010 DANA AVE
CINCINNATI, OHIO 45207
ATTN: SHANE ERHART
(513) 508-9609

TELECOMMUNICATIONS
FRONTIER COMMUNICATIONS
241 S. NELSON AVE
WILMINGTON, OHIO 45177
ATTN: DAVID LONGWORTH
(937) 283-5735

SEWER & WATER
VILLAGE OF MT. ORAB
P.O. BOX 466
MT. ORAB, OHIO 45154
ATTN: ERIC STEPHAN
(937) 444-2657

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: STATIC GNSS

MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88

GEOID: GEOID 18

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011) (EPOCH:2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE, SOUTH ZONE
COMBINED SCALE FACTOR: 0.999913057559645
ORIGIN OF COORDINATE SYSTEM: 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 STANDARD CONSTRUCTION DRAWING RM-1.1 AND AT THE LOCATIONS SHOWN IN THE R/W PLANS.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION TYPE DEVICES BETWEEN THE HOURS OF 8AM AND 10PM, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

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.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PRIVATE USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT, AT A MAXIMUM OPERATING HEIGHT, SHALL EXCEED A HEIGHT OF 100 FT FOR WORK NEAR THE BRIDGE OR 50 FT ELSEWHERE. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT REQUIREMENT, COORDINATION WITH THE AIRPORT OWNER AND THE ODOT OFFICE OF AVIATION WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. FOR PRIVATE USE AIRPORTS OR HELIPORTS, COORDINATE WITH THE AIRPORT OWNER AND THE ODOT OFFICE OF AVIATION. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL COORDINATION IS MET AND DOCUMENTATION HAS BEEN FURNISHED TO THE PROJECT ENGINEER. IF COORDINATION IS NOT OBTAINED, THEN THE PROJECT ENGINEER WILL HAVE THE AUTHORITY TO PROVIDE RESTRICTIONS AS REQUIRED.

MERCY MT. ORAB HOSPITAL
ROBERT FRANCIS
154 HEALTH PARTNERS CIR
MOUNT ORAB, OH, 45154-8611
(513) 585-5036

OHIO DEPARTMENT OF
TRANSPORTATION
OFFICE OF AVIATION
2829 W. DUBLIN-GRANVILLE RD.
COLUMBUS, OH 43235
(614) 387-2356

THE FOLLOWING AERONAUTICAL STUDIES HAVE BEEN FILED WITH THE FAA.

- 2023-AGL-29-OE
- 2023-AGL-30-OE
- 2023-AGL-31-OE
- 2023-AGL-32-OE
- 2023-AGL-1155-OE
- 2023-AGL-1315-OE

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GENERAL NOTES

BRO-32-4.16

ROADWAY NOTES

ROUNDING

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

EXISTING UTILITIES AND SUBGRADE TREATMENT

THE CONTRACTOR SHALL VERIFY THE DEPTH OF ALL EXISTING UNDERGROUND UTILITIES AND SEWERS WITHIN THE PROPOSED PAVEMENT LIMITS TO ENSURE NO UTILITIES OR SEWERS ARE IMPACTED OR DAMAGED DURING CEMENT STABILIZATION AND/OR UNDERCUT ACTIVITIES. THE CONTRACTOR SHALL LOCATE AND TAKE CARE TO FLAG ALL EXISTING UTILITIES WITHIN THE PROPOSED PAVEMENT LIMITS PRIOR TO PERFORMING CEMENT STABILIZATION OR UNDERCUT, AS DESIGNATED IN THE PLANS. SHOULD THE CONTRACTOR ENCOUNTER A POTENTIAL UTILITY CONFLICT, THE CONTRACTOR SHALL NOTIFY PROJECT ENGINEER AND STOP CEMENT STABILIZATION/UNDERCUT ACTIVITIES AT THE CONFLICT LOCATION IMMEDIATELY.

CLEARING AND GRUBBING

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED, HOWEVER THERE MAY BE ADDITIONAL TREES OF THESE SIZES WITHIN HEAVILY WOODED AREAS. UNLESS SPECIFICALLY MARKED IN THE PLANS AS DO NOT DISTURB OR TO REMAIN, ALL VEGETATION AND TREES WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED AND PAID FOR UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING.

SIZES	NO. TREES
18"	15
30"	12

SOME TREES HAVE BEEN CUT ALREADY WITHIN THE PROJECT AREA. AN OUTLINE OF THE AREA WITHIN THE PROJECT WHERE THE TREES HAVE BEEN CUT IS SHOWN ON SHEET 2. FOR THE TREES THAT HAVE BEEN CUT, ONLY THE TOPS WERE CUT. BOTH THE REMAINING TOPS AND STUMPS SHALL BE REMOVED AND PAID FOR UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING.

UNSUITABLE SUBGRADES

ALTHOUGH GLOBAL LIME STABILIZATION IS PROPOSED FOR THE PROJECT, THERE ARE LOCATIONS THAT MAY FAIL THE PROOF ROLL DUE TO THE LIME NOT BEING COMPATIBLE WITH A-4b (SILT) SOIL, AND THEREFORE NOT PROVIDE ADEQUATE STABILIZATION. THE FOLLOWING AREAS HAVE BEEN IDENTIFIED AS HAVING A HIGHER PROBABILITY OF THIS OCCURRING:

RAMP NE - STA. 612+00 TO STA. 615+00
RAMP SE - STA. 811+00 TO STA. 814+00
HOMAN WAY - STA. 331+00 TO 337+00

IF THE PROOF ROLL DOES FAIL, THE LIMITS OF THE FAILED PROOF ROLL SHALL BE UNDERCUT TO A DEPTH OF 36 INCHES WITH ITEM 204 GEOTEXTILE FABRIC PLACED AT THE BASE OF THE EXCAVATION AND BACK FILLED WITH ITEM 204 GRANULAR MATERIAL TYPE B OR C. THE FAILED PROOF ROLL AND FINAL LIMITS OF UNDERCUT SHALL BE APPROVED BY THE ENGINEER. THE FOLLOWING QUANTITIES ARE PROVIDED AS A CONTINGENCY SHOULD THIS OCCUR:

ITEM 204 - EXCAVATION OF SUBGRADE	2,500 CY
ITEM 204 - GRANULAR EMBANKMENT, AS PER PLAN	2,500 CY
ITEM 204 - GEOTEXTILE FABRIC	3,500 SY

ITEM 203 EMBANKMENT, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS SECTION 203, EMBANKMENT AT BRIDGE APPROACHES SHALL BE PLACED AND COMPACTED IN 6" LIFTS. THIS REQUIREMENT PERTAINS TO THE FOLLOWING LIMITS:

BRUCE LUNSFORD WAY STA. 411+95.43 TO STA. 412+33.53
BRUCE LUNSFORD WAY STA. 414+32.00 TO STA. 415+01.93

PAYMENT FOR PLACING THE EMBANKMENT AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR ITEM 203- EMBANKMENT, AS PER PLAN

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

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.

ITEM 617 - COMPACTED AGGREGATE

THE FOLLOWING ESTIMATED QUANTITY OF ITEM 617 - COMPACTED AGGREGATE HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE TO FILL ANY LOW BERM AREAS AS DESIGNATED BY THE ENGINEER.

ITEM 617 - COMPACTED AGGREGATE	150 CY
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ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING	21 HOURS
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SHEETING & BRACING

ANY SHEETING AND BRACING USED BY THE CONTRACTOR AND NOT OTHERWISE CALLED FOR IN THE PLANS SHALL BE FURNISHED, INSTALLED, AND MAINTAINED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. NO SEPARATE PAYMENT SHALL BE MADE FOR SHEETING AND BRACING. AT ALL TIMES THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE IN A MANNER THAT IS SAFE TO ALL WORKERS AND THE GENERAL TRAVELING PUBLIC. ALL OSHA REQUIREMENTS SHALL BE UPHOLD AND SOUND SAFETY PRACTICES SHALL BE EXERCISED AT ALL TIMES. REMOVAL OF SHEETING AND BRACING ITEMS UPON COMPLETION OF WORK WILL BE REQUIRED AS DIRECTED BY ODOT REPRESENTATIVES.

EXISTING STRUCTURE REMOVED

THE EXISTING STRUCTURE TO BE REMOVED ALONG HOMAN WAY NEAR THE PROPOSED 20x4 BOX CULVERT (STA. 308+90 LT) IS A 15-FOOT SPAN x 10-FOOT WIDE CONCRETE SLAB WITH ABUTMENTS. ENTIRE STRUCTURE SHALL BE REMOVED AND DISPOSED OF UNDER THE LUMP SUM BID PRICE OF ITEM 202 - STRUCTURE REMOVED AND INCLUDE ALL MATERIALS, LABOR, AND EQUIPMENT REQUIRED.

ITEM SPECIAL - MAILBOX SUPPORT

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

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

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

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

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

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

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

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

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

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

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, (SINGLE) (DOUBLE).

BILLBOARDS

FOUR BILLBOARDS EXIST ON THE NORTH SIDE OF SR 32 FROM APPROXIMATELY STATION 193+00 LT TO STATION 202+00 LT. THE EXISTING BILLBOARD OWNERS WILL BE REMOVING THESE BILLBOARDS AND ALL ACCESSORIES BY MAY 15, 2023. THE FOUNDATIONS WILL BE REMOVED TO THREE FEET BELOW GRADE. ALL WORK TO BE PERFORMED BY OTHERS.

THE CONSTRUCTION PLANS AND ITEMS HAVE BEEN UPDATED TO REFLECT THIS. THE FINAL RIGHT OF WAY PLANS STILL HAVE THE BILLBOARD IN THE SUMMARY OF ADDITIONAL RIGHT OF WAY TABLE AND CALL THEM OUT IN THE PLAN SHEETS AS TO BE REMOVED.

ITEM 202 - REMOVAL MISC.: PRIVATE SIGN REMOVED

THIS ITEM SHALL CONSIST OF THE REMOVAL AND DISPOSAL OF EXISTING PRIVATE SIGNS, ALONG WITH ANY ASSOCIATED ELECTRICAL FACILITIES AND FOUNDATIONS WITHIN THE CONSTRUCTION LIMITS TO A MINIMUM OF 3 FEET BELOW THE EXISTING GROUND.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH ITEM 202 REMOVAL MISC.: PRIVATE SIGN REMOVED AND SHALL INCLUDE ALL LABOR, MATERIAL AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM AS NOTED.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS DO NOT INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05

PAVEMENT NOTES

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, PROVIDE CONTRACTION JOINTS IN THE NEW CONCRETE TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE. THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE ARE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2, IF NECESSARY, ADDITIONAL JOINTS MAY BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

BUTT JOINTS

AT THE START OR END OF ALL FULL-DEPTH PAVEMENT SECTIONS SHOWN IN THE PLANS, CONTRACTOR SHALL PROVIDE A BUTT JOINT PER SCD BP-3.1.

UNDERDRAIN CONNECTIONS AT SAWCUTS

AT THE START, END OR WIDENING OF ALL FULL-DEPTH PAVEMENT SECTIONS SHOWN IN THE PLANS, CONTRACTOR SHALL CONNECT PROPOSED UNDERDRAINS TO EXISTING AND ENSURE POSITIVE DRAINAGE IS MAINTAINED.

ITEM 442 - ANTI-SEGREGATION EQUIPMENT

PROVIDE ANTI-SEGREGATION EQUIPMENT FOR ALL COURSES OF UNIFORM THICKNESS IN ACCORDANCE WITH CMS 401.12. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 441 - ANTI-SEGREGATION EQUIPMENT	1,117 CY
ITEM 442 - ANTI-SEGREGATION EQUIPMENT	3,196 CY

ITEM 897 - PATCHING PLANED SURFACE

THE FOLLOWING ESTIMATED QUANTITY OF 20% OF THE PLANED SURFACE HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR PATCHING PLANED SURFACE AS DESIGNATED BY THE ENGINEER.

ITEM 254 - PATCHING PLANED SURFACE	15,000SY
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PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

ITEM 302 - ASPHALT CONCRETE BASE, PG64-22	8 CY
ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	1 CY
ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447)	5 CY

THE ABOVE QUANTITIES ARE BASED ON A 302 THICKNESS OF 6 INCHES FOR LOCAL ROADS AND 9 INCHES FOR SR-32; MATCH THE EXISTING WEARING COURSE DEPTH. PAVEMENT RESTORATION WIDTH SHALL INCLUDE THE MINIMUM REQUIRED TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

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GENERAL NOTES

BRO -32-4.16

ITEM 614 - MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON SR32 AND A MINIMUM OF 1 LANE TWO-WAY VIA TEMPORARY TRAFFIC SIGNAL SHALL BE MAINTAINED ON BROOKS-MALOTT ROAD, BARDWELL WEST ROAD AND BODMAN ROAD AT ALL TIMES BY USE OF THE EXISTING PAVEMENT OR THE COMPLETED PAVEMENT EXCEPT AS NOTED BELOW.

A MINIMUM OF 1 LANE SHALL BE MAINTAINED ON BROOKS-MALOTT ROAD, EXCEPT WHEN IT IS CLOSED IN MOT PHASE 1 AND DETOURED AS SHOWN ON SHEET 26 .

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.

THERE SHALL BE AN INTERIM COMPLETION DATE OF 10/31/2024 THAT INCLUDES THE COMPLETION OF ALL CONSTRUCTION WORK EXCEPT FOR THE FINAL SURFACE COURSE ON ALL ROADWAYS AND THE MILLING AND RESURFACING ON SR-32.

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.

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 EXCEPT SR32 MAY STILL BE 1 LANE IN EACH DIRECTION:

- HOLIDAYS
CHRISTMAS
FOURTH OF JULY
NEW YEAR'S EVE
LABOR DAY
MEMORIAL DAY
THANKSGIVING

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

Table with 2 columns: DAY OF HOLIDAY OR EVENT, TIME ALL LANES MUST BE OPEN TO TRAFFIC. Rows include SUNDAY, MONDAY, TUESDAY, WEDNESDAY, THURSDAY, THURSDAY (THANKSGIVING ONLY), FRIDAY, SATURDAY.

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.

NOTICE OF CLOSURE SIGN

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.

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.

NOTIFICATION TIME FRAME TABLE. Table with 3 columns: ITEM, DURATION OF CLOSURE, NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE. Rows include ROAD AND RAMP CLOSURES and LANE CLOSURES/RESTRICTIONS.

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MM-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.

DUST CONTROL

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

ITEM 616 - WATER 1,000 M. GAL.

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 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 50 EACH HAS BEEN CARRIED TO 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 100 EACH HAS BEEN CARRIED TO THE GENERAL SUMMARY.

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:

Table with 3 columns: WZSZ REVISION NUMBER(S), COUNTY-ROUTE-SECTIONS, DIRECTIONS. Row 1: WZ-, BRO-32-2.52-4.48, EB/WB.

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.

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

WORK ZONE SPEED ZONES (WZSZS) CONT'D

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 with 5 columns: ORIGINAL POSTED SPEED LIMIT, WITH POSITIVE PROTECTION WORKERS PRESENT, WITH POSITIVE PROTECTION WORKERS NOT PRESENT, WITHOUT POSITIVE PROTECTION WORKERS PRESENT, WITHOUT POSITIVE PROTECTION WORKERS NOT PRESENT. Rows show speed limit changes from 70, 65, 60, 55 to 60, 55, 50, 45.

THE FOLLOWING ESIMATED QUANTITY'S HAVE BEEN CARRIED TO THE SUBSUMMARY.

ITEM 808, DIGITAL SPEEL LIMIT (DSL) SIGN ASSEMBLY 52 SNMT ASSUMING 4 DSL SIGN ASSEMBLIES FOR 13 MONTHS

ITEM 614. WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

BRIDGE BEAM PLACEMENT

FOLLOW SCD MT-99.60 FOR MAINTENANCE OF TRAFFIC TO INSTALL THE BRIDGE BEAMS OVER SR32.

PAYMENT FOR THIS WORK INCLUDING THE LEOs AND PCMSs SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

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SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	DSS	CHECKED	BDT
16	17	18	88	89	91	93	100	101	169	516		01/SAF/OT		EXT	TOTAL							
LS												LS	201	11000	LS		CLEARING AND GRUBBING					
			LS									LS	202	11000	LS		STRUCTURE REMOVED				16	
			16,797									16,797	202	23000	16,797	SY	PAVEMENT REMOVED					
			1,142									1,142	202	23001	1,142	SY	PAVEMENT REMOVED, AS PER PLAN				138	
				284								284	202	35100	284	FT	PIPE REMOVED, 24" AND UNDER					
				18								18	202	35200	18	FT	PIPE REMOVED, OVER 24"					
			1									1	202	53100	1	EACH	MAILBOX REMOVED					
				2								2	202	58100	2	EACH	CATCH BASIN REMOVED					
				1								1	202	58500	1	EACH	CATCH BASIN ABANDONED					
	50											50	SPECIAL	20270110	50	FT	PIPE CLEANOUT, 24" AND UNDER				17	
	50											50	SPECIAL	20270120	50	FT	PIPE CLEANOUT, 27" TO 48"				17	
			7,775									7,775	202	75000	7,775	FT	FENCE REMOVED					
		8										8	202	98100	8	EACH	REMOVAL MISC.: INSPECTION WELL				18	
			1									1	202	98100	1	EACH	REMOVAL MISC.: PRIVATE SIGN REMOVED				16	
		500										500	202	98200	500	FT	REMOVAL MISC.: CONDUIT				18	
									36,581			36,581	203	10000	36,581	CY	EXCAVATION					
					4,565							4,565	203	10001	4,565	CY	EXCAVATION, AS PER PLAN				402	
									217,437			217,437	203	20000	217,437	CY	EMBANKMENT					
		40										40	203	20001	40	CY	EMBANKMENT, AS PER PLAN, FOR DRAINAGE				18	
							955					955	204	10000	955	SY	SUBGRADE COMPACTION					
2,500												2,500	204	13000	2,500	CY	EXCAVATION OF SUBGRADE					
2,500												2,500	204	21001	2,500	CY	GRANULAR EMBANKMENT, AS PER PLAN				16	
21												21	204	45000	21	HR	PROOF ROLLING					
3,500												3,500	204	50000	3,500	SY	GEOTEXTILE FABRIC					
							60,795					60,795	206	10020	60,795	SY	LIME STABILIZED SUBGRADE, 14 INCHES DEEP					
							1,836					1,836	206	10300	1,836	TON	LIME					
							60,795					60,795	206	11000	60,795	SY	CURING COAT					
							LS					LS	206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS					
			5,175									5,175	606	15050	5,175	FT	GUARDRAIL, TYPE MGS					
			10									10	606	26150	10	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)					
			8									8	606	26550	8	EACH	ANCHOR ASSEMBLY, MGS TYPE T					
			2									2	606	35002	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1					
			2									2	606	35102	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2					
			10,188									10,188	607	15000	10,188	FT	FENCE, TYPE 47					
		6,500										6,500	607	98000	6,500	FT	FENCE, MISC.: TEMPORARY CONSTRUCTION FENCE				18	
			1							6		6	623	38500	6	EACH	MONUMENT ASSEMBLY					
												1	SPECIAL	69050100	1	EACH	MAILBOX SUPPORT SYSTEM, SINGLE				16	
				47								47	601	11000	47	SY	RIPRAP, TYPE D					
		50										50	601	21050	50	SY	TIED CONCRETE BLOCK MAT, TYPE 1					
					92	32						124	601	21060	124	SY	TIED CONCRETE BLOCK MAT, TYPE 2					
		20		59								79	601	32200	79	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER					
					4,565							4,565	601	45050	4,565	CY	BIORETENTION CELL					
		3										3	659	00100	3	EACH	SOIL ANALYSIS TEST					
	21,300											21,300	659	00300	21,300	CY	TOPSOIL					
					3,222							195,113	659	10000	195,113	SY	SEEDING AND MULCHING					
		9,595										9,595	659	14000	9,595	SY	REPAIR SEEDING AND MULCHING					
		9,595										9,595	659	15000	9,595	SY	INTER-SEEDING					
		25.91										25.91	659	20000	25.91	TON	COMMERCIAL FERTILIZER					
		39.64										39.64	659	31000	39.64	ACRE	LIME					
		1,036										1,036	659	35000	1,036	MGAL	WATER					
		432										432	659	40000	432	MSF	MOWING					
				125								125	670	00710	125	SY	DITCH EROSION PROTECTION MAT, TYPE B					
					3,222							3,222	671	15000	3,222	SY	EROSION CONTROL MAT, TYPE A					
								LS				LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN					
								LS				LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS					
								LS				LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE					
								160,000				160,000	832	30000	160,000	EACH	EROSION CONTROL					

GENERAL SUMMARY

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REF NO.	SHEET NO.	STATION TO STATION						FUNDING SPLIT #	ROADWAY SUBSUMMARY																		
		LS	SY	SY	EACH	FT	202		202	202	202	202	202	606	606	606	606	606	607	609	611	638	SPECIAL				
SR 32 EB/WB																											
R1	103	147+53.69	25.00' RT	TO	153+78.57	25.00' LT	01/SAF/OT																				
F1	103	149+00.00	159.38' LT	TO	152+49.47	128.72' LT	01/SAF/OT		847.1																		
F2	103	149+13.97	129.53' RT	TO	152+50.53	128.13' RT	01/SAF/OT																				
F3	104	165+24.92	146.64' LT	TO	182+05.16	168.95' LT	01/SAF/OT																				
RF1	104	165+24.92	146.64' LT	TO	209+06.24	135.56' LT	01/SAF/OT																				
																						4,587					
R2	104	165+95.00	53.00' LT	TO	182+10.00	53.00' LT	01/SAF/OT																				
R3	105	173+00.00	53.00' RT	TO	182+65.00	53.00' RT	01/SAF/OT		1682.4																		
F4	105	179+48.20	127.65' RT	TO	184+14.78	187.02' RT	01/SAF/OT																				
RF2	105	179+48.20	127.65' RT	TO	208+11.66	116.56' RT	01/SAF/OT																				
GR1	106	189+72.00	10.00' RT	TO	191+87.50	10.00' RT	01/SAF/OT																				
GR2	106	191+22.50	10.00' LT	TO	193+50.50	10.00' LT	01/SAF/OT																				
F5	107	200+83.67	144.43' RT	TO	208+11.66	116.56' RT	01/SAF/OT																				
R7	107	200+45.00	53.50' RT	TO	215+10.00	54.50' RT	01/SAF/OT		1385.4																		
R8	107	201+17.00	53.25' LT	TO	211+00.00	52.25' LT	01/SAF/OT		957.1																		
F6	107	203+63.39	137.32' LT	TO	209+06.24	135.56' LT	01/SAF/OT																				
R10	108	211+24.02	25.00' RT	TO	226+82.71	24.5' LT	01/SAF/OT		3776.3																		
F7	108	218+11.98	144.38'	TO	221+18.05	148.02' LT	01/SAF/OT																				
BRUCE LUNSFORD WAY																											
F8	126	403+43.63	115.43' LT	TO	408+39.10	103.07' LT	01/SAF/OT																				
F9	126	403+43.96	96.39' RT	TO	408+65.81	103.11' RT	01/SAF/OT																				
GR4	126	407+57.50	19.00' LT	TO	409+31.41	29.25' LT	01/SAF/OT																				
GR5	126	405+82.00	19.00' RT	TO	409+20.29	24.97' RT	01/SAF/OT																				
GR6	128	410+23.20	27.04' RT	TO	411+97.77	15.00' RT	01/SAF/OT																				
GR7	128	410+30.76	26.92' LT	TO	411+95.15	15.00' LT	01/SAF/OT																				
C1	128	411+70.00	15.00' LT	TO	411+95.15	15.00' LT	01/SAF/OT																				
C2	128	411+70.00	15.00' RT	TO	411+97.77	15.00' RT	01/SAF/OT																				
C3	130	414+37.68	15.00' LT	TO	414+65.00	15.00' LT	01/SAF/OT																				
C4	130	414+40.30	15.00' RT	TO	414+65.00	15.00' RT	01/SAF/OT																				
GR8	130	414+37.68	15.00' LT	TO	416+11.80	27.01' LT	01/SAF/OT																				
GR9	130	414+40.31	15.00' RT	TO	416+04.25	26.92' RT	01/SAF/OT																				
GR10	130	417+14.09	24.94' LT	TO	421+03.00	19.00' LT	01/SAF/OT																				
GR11	130	417+03.44	29.30' RT	TO	419+03.10	19.00' RT	01/SAF/OT																				
F10	130	417+53.49	203.63' LT	TO	423+00.00	53.00' LT	01/SAF/OT																				
F11	130	417+56.15	128.84' RT	TO	422+99.94	53.00' RT	01/SAF/OT																				
RAMP NW																											
R21	112	500+72.75	44.11' LT				01/SAF/OT																				
F12	112	503+24.93	62.98' LT	TO	511+37.90	102.98' LT	01/SAF/OT																				
GR12	113	508+93.15	8.00' LT	TO	513+13.64	59.09' LT	01/SAF/OT																				
GR13	114	510+54.00	22.00' RT	TO	513+11.58	43.20' RT	01/SAF/OT																				
RAMP NE																											
GR14	115	600+29.30	48.44' LT	TO	605+53.00	8.00' LT	01/SAF/OT																				
GR15	115	600+26.92	57.75' RT	TO	604+67.00	22.00' LT	01/SAF/OT																				
F13	115	601+29.07	98.09' LT	TO	612+08.63	55.98' LT	01/SAF/OT																				
TOTALS CARRIED TO SHEET		88							0	9,648.7	0	0	7,450.8		1	3,487.5	6	6	2	2	8,574	104.9	0	0	0		

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REF NO.	SHEET NO.	STATION TO STATION					FUNDING SPLIT #	202	202	202	202	202	REMOVAL MISC.: PRIVATE SIGN REMOVED	606	606	606	606	606	607	609	611	638	SPECIAL	
								STRUCTURE REMOVED	PAVEMENT REMOVED	PAVEMENT REMOVED, AS PER PLAN	MAILBOX REMOVED	FENCE REMOVED		LS	SY	SY	EACH	FT	EACH	FT	EACH	EACH	EACH	EACH
RAMP SW																								
GR16	120	711+94.50	8.00' RT	TO	717+02.72	48.59' RT	01/SAF/OT						475.0	1										
F14	120	710+00.28	55.21' RT	TO	716+28.91	140.90' RT	01/SAF/OT											676						
GR17	121	712+39.00	22.00' LT	TO	717+05.06	50.76' LT	01/SAF/OT						425.0	1										
RF3	121	715+71.17	147.28' RT	TO	801+60.65	107.46' RT	01/SAF/OT				324													
RAMP SE																								
GR18	122	800+24.97	59.71' RT	TO	804+35.50	8.00' RT	01/SAF/OT						425.0		1									
GR19	122	800+27.04	43.20' LT	TO	802+97.93	22.00' LT	01/SAF/OT						262.5		1									
F15	122	801+03.11	114.19' RT	TO	810+00.04	47.99' RT	01/SAF/OT											938						
HOMAN WAY																								
R16	138	303+66.86	60.00' LT	TO	313+15.20	60.00' LT	01/SAF/OT																	
RD15	139	308+82.20	60.00' LT	TO	308+99.12	60.00' LT	01/SAF/OT	LS																
R17	145	330+84.65	32.00' LT	TO	331+17.16	38.00' LT	01/SAF/OT																	
GR3	156	362+58.00	19.00' RT	TO	364+59.00	19.00' RT	01/SAF/OT						100	2										
W1	138	303+82.67	28.54' RT				01/SAF/OT													1				
SS1	156	364+85.70	23.22' RT				01/SAF/OT														1			
MB1	156	365+65.00	17.00' RT	TO	365+67.00	15.70' RT	01/SAF/OT				1											1		
MERCY BLVD																								
R22	160	57+16.78	+83.05		57+75.57	35.25' LT	01/SAF/OT																	
BODMAN RD																								
R11	103	20+65.00	0.00' RT	TO	24+62.01	0.00' RT	01/SAF/OT																	
R12	103	17+91.00	0.00' RT	TO	19+35.00	0.00' RT	01/SAF/OT						1257.1											
													620.9											
BROOKS-MALOTT RD																								
R13	109	14+70.78	0.00' RT	TO	19+66.00	0.00' RT	01/SAF/OT						3508.4											
R14	109	20+65.00	0.00' RT	TO	25+30.99	5.00' RT	01/SAF/OT						1405.0											
R15	109	25+98.13	13.48' LT	TO	27+46.81	6.00' RT	01/SAF/OT						246.8											
TOTALS FROM THIS SHEET								LS	7,148	1,142	1	324		0	1,687.5	4	2	0	0	1,614	0	1	1	
TOTALS FROM PREVIOUS SHEET									0	9,649	0	0	7,451		1	3,487.5	6	6	2	2	8,574	105	0	0
TOTALS CARRIED TO GENERAL SUMMARY								LS	16,797	1,142	1	7,775		1	5,175	10	8	2	2	10,188	105	1	1	1

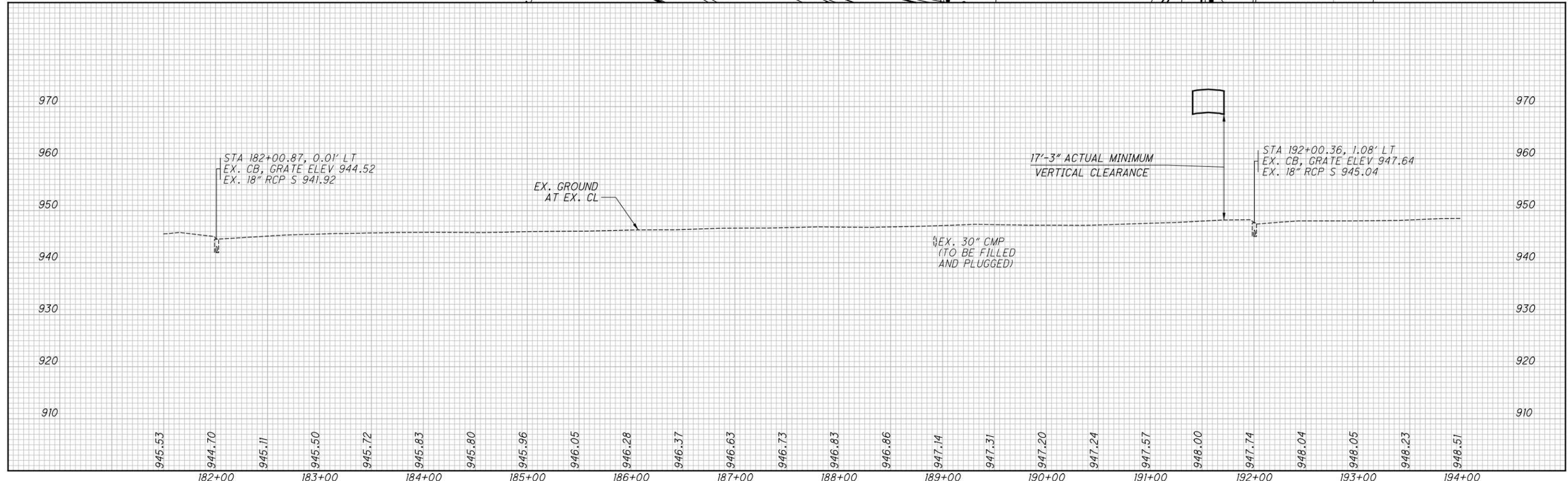
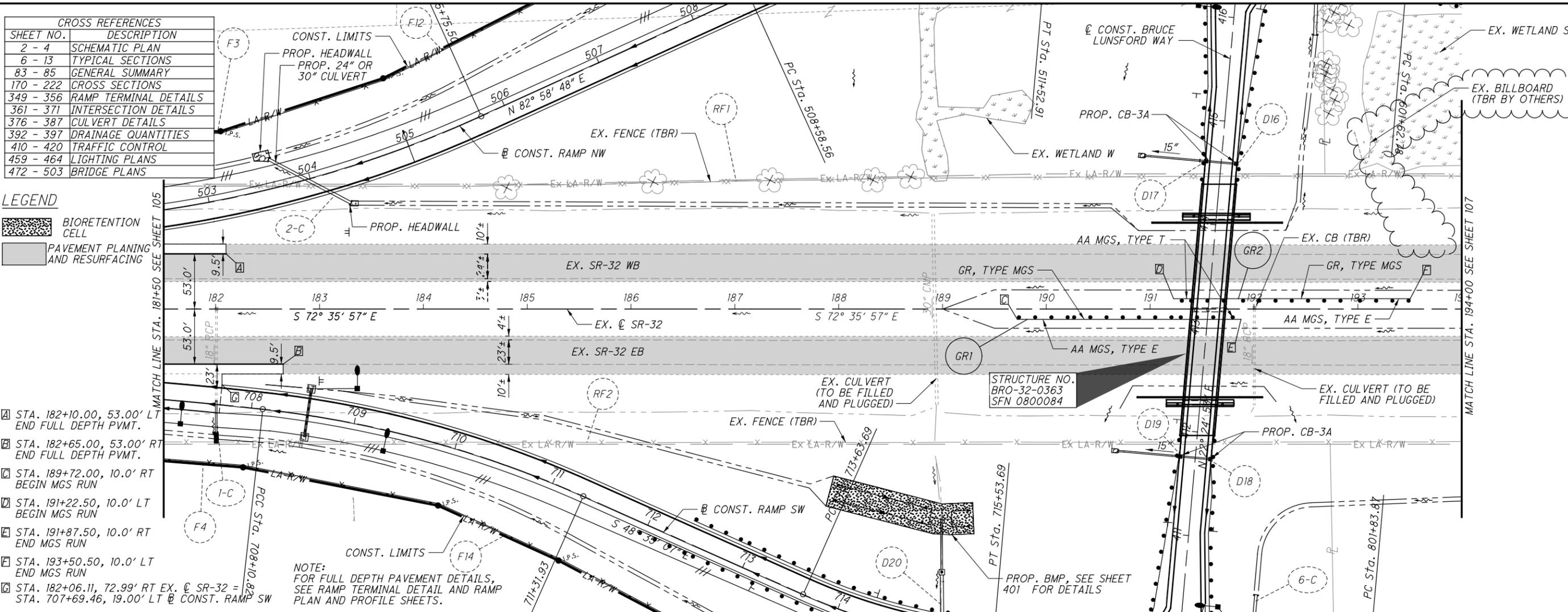
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2 - 4	SCHEMATIC PLAN
6 - 13	TYPICAL SECTIONS
83 - 85	GENERAL SUMMARY
170 - 222	CROSS SECTIONS
349 - 356	RAMP TERMINAL DETAILS
361 - 371	INTERSECTION DETAILS
376 - 387	CULVERT DETAILS
392 - 397	DRAINAGE QUANTITIES
410 - 420	TRAFFIC CONTROL
459 - 464	LIGHTING PLANS
472 - 503	BRIDGE PLANS

LEGEND

-  BIORETENTION CELL
-  PAVEMENT PLANING AND RESURFACING

- ☐ STA. 182+10.00, 53.00' LT END FULL DEPTH PVMT.
- ☐ STA. 182+65.00, 53.00' RT END FULL DEPTH PVMT.
- ☐ STA. 189+72.00, 10.0' RT BEGIN MGS RUN
- ☐ STA. 191+22.50, 10.0' LT BEGIN MGS RUN
- ☐ STA. 191+87.50, 10.0' RT END MGS RUN
- ☐ STA. 193+50.50, 10.0' LT END MGS RUN
- ☐ STA. 182+06.11, 72.99' RT EX. CL SR-32 = STA. 707+69.46, 19.00' LT CONST. RAMP SW

NOTE:
FOR FULL DEPTH PAVEMENT DETAILS,
SEE RAMP TERMINAL DETAIL AND RAMP
PLAN AND PROFILE SHEETS.







 HORIZONTAL SCALE IN FEET

CALCULATED: DSS
 CHECKED: MAH

PLAN AND PROFILE - SR 32
STA. 181+50.00 TO STA. 194+00.00

BRO-32-4.16

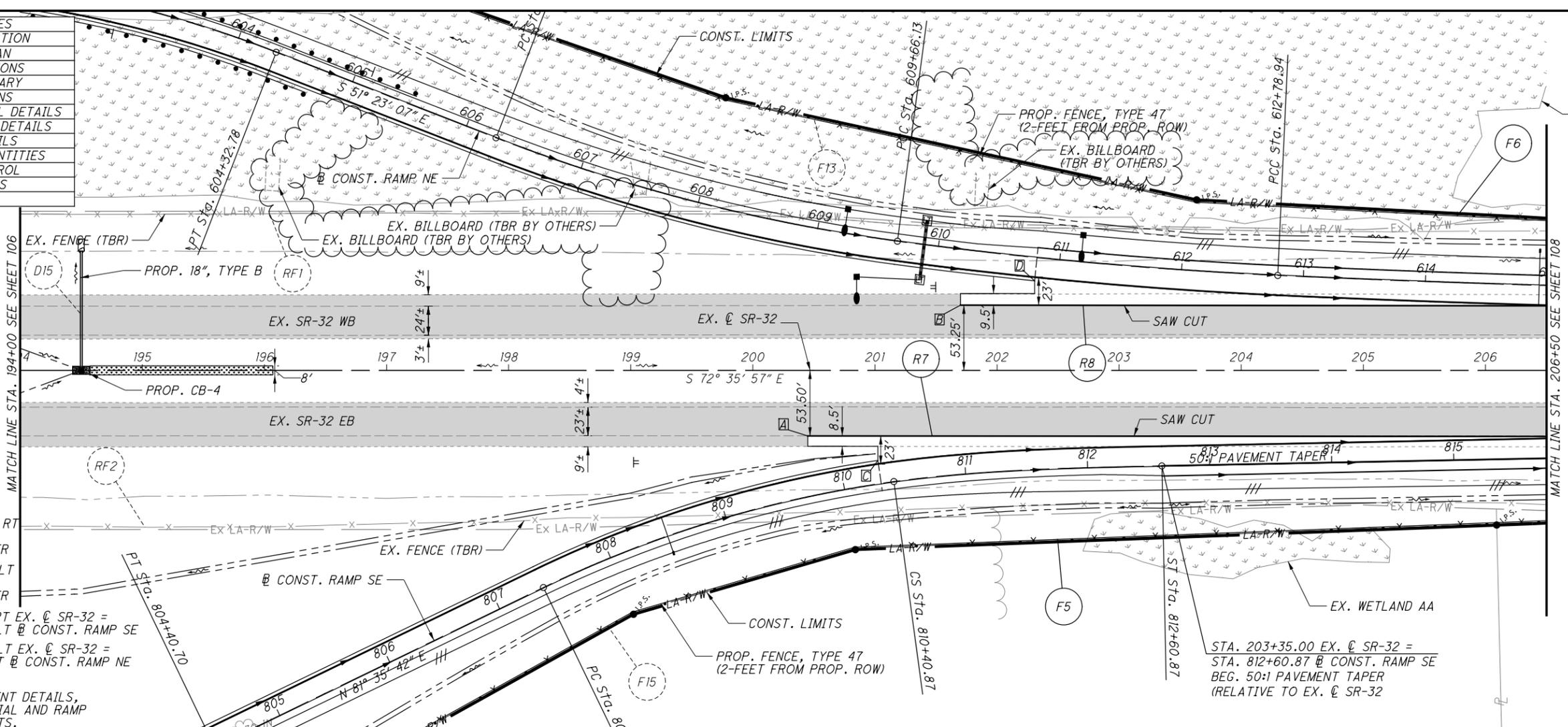
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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2 - 4	SCHEMATIC PLAN
6 - 13	TYPICAL SECTIONS
83 - 85	GENERAL SUMMARY
170 - 222	CROSS SECTIONS
349 - 356	RAMP TERMINAL DETAILS
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459 - 464	LIGHTING PLANS
472 - 503	BRIDGE PLANS



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- DITCH EROSION PROTECTION MAT, TYPE B
- PAVEMENT PLANING AND RESURFACING

- A STA. 200+45.00, 53.50' RT BEGIN FULL DEPTH PVMT BEGIN SAWCUT/EOP TAPER
- B STA. 201+70.00, 53.25' LT BEGIN FULL DEPTH PVMT BEGIN SAWCUT/EOP TAPER
- C STA. 201+02.35, 73.51' RT EX. CL SR-32 = STA. 810+30.37, 19.00' LT @ CONST. RAMP SE
- D STA. 202+30.77, 73.17' LT EX. CL SR-32 = STA. 610+81.17, 19.00' RT @ CONST. RAMP NE

NOTE:
FOR FULL DEPTH PAVEMENT DETAILS,
SEE RAMP TERMINAL DETAIL AND RAMP
PLAN AND PROFILE SHEETS.



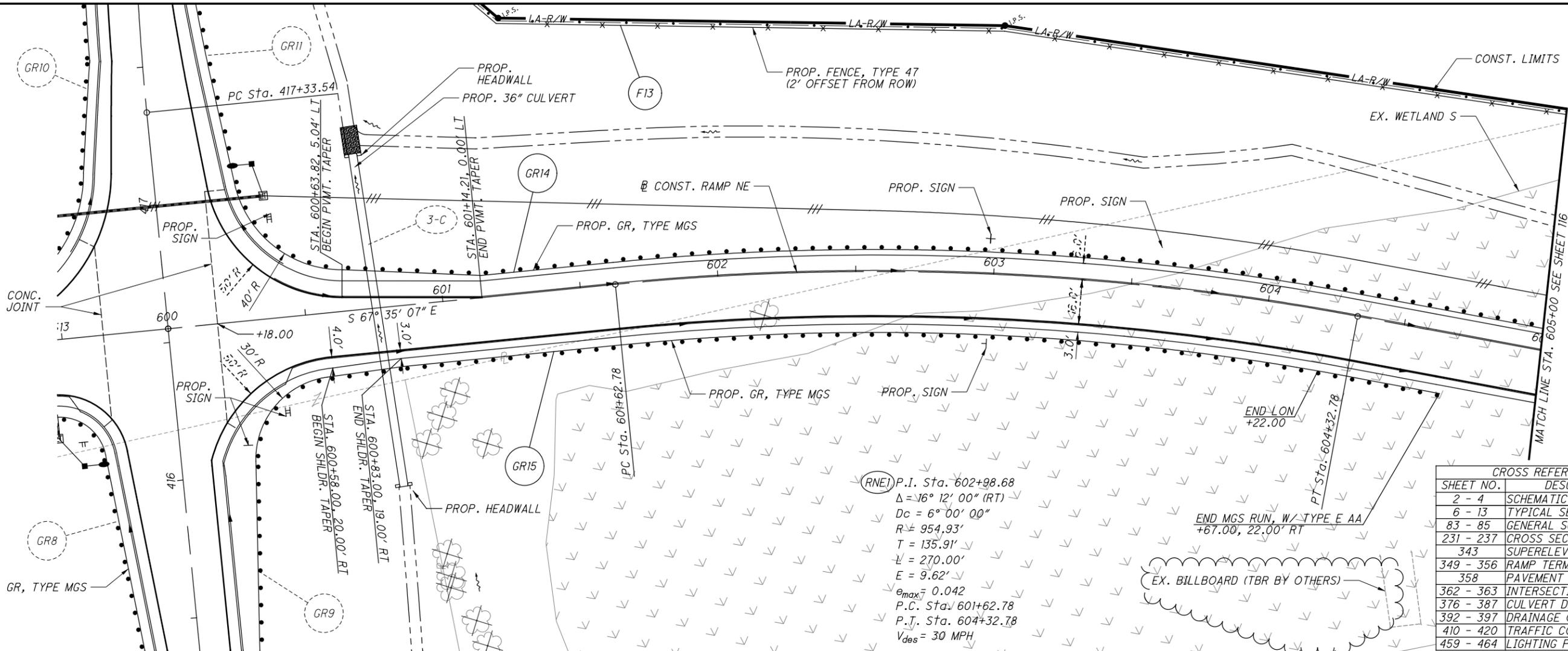
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STA. 194+00.00 TO STA. 206+50.00

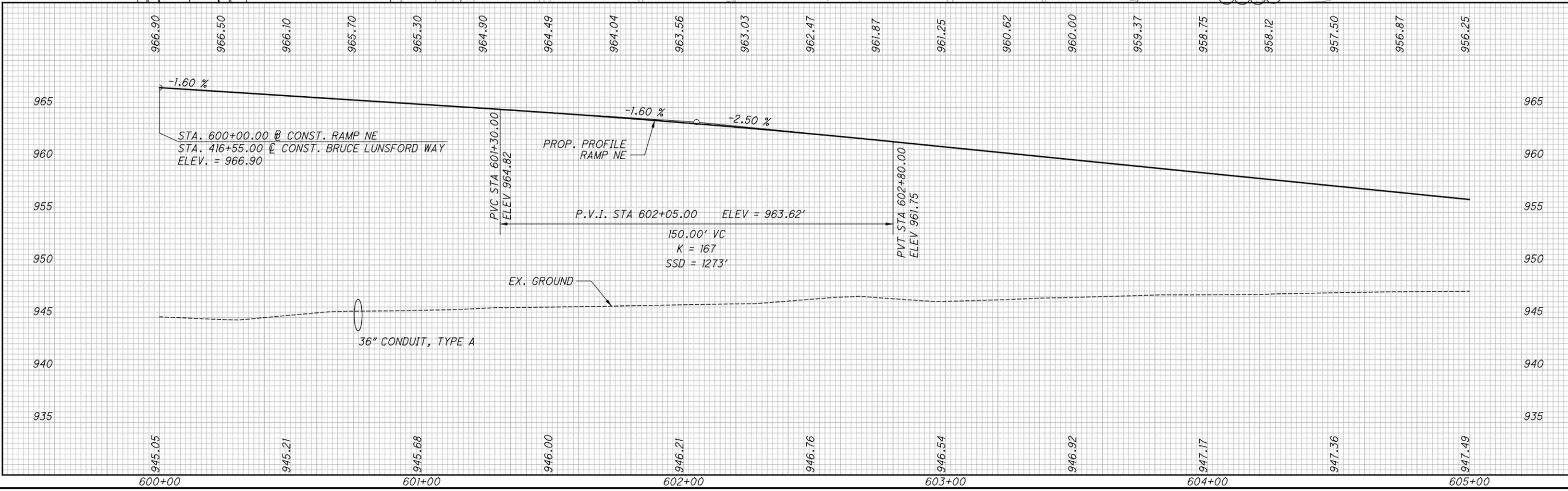
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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2 - 4	SCHEMATIC PLAN
6 - 13	TYPICAL SECTIONS
83 - 85	GENERAL SUMMARY
231 - 237	CROSS SECTIONS
343	SUPERELEVATION TABLES
349 - 356	RAMP TERMINAL DETAILS
358	PAVEMENT JOINT DETAILS
362 - 363	INTERSECTION DETAILS
376 - 387	CULVERT DETAILS
392 - 397	DRAINAGE QUANTITIES
410 - 420	TRAFFIC CONTROL
459 - 464	LIGHTING PLANS



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HORIZONTAL SCALE IN FEET

CALCULATED

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CHECKED

MAH

PLAN AND PROFILE - RAMP NE

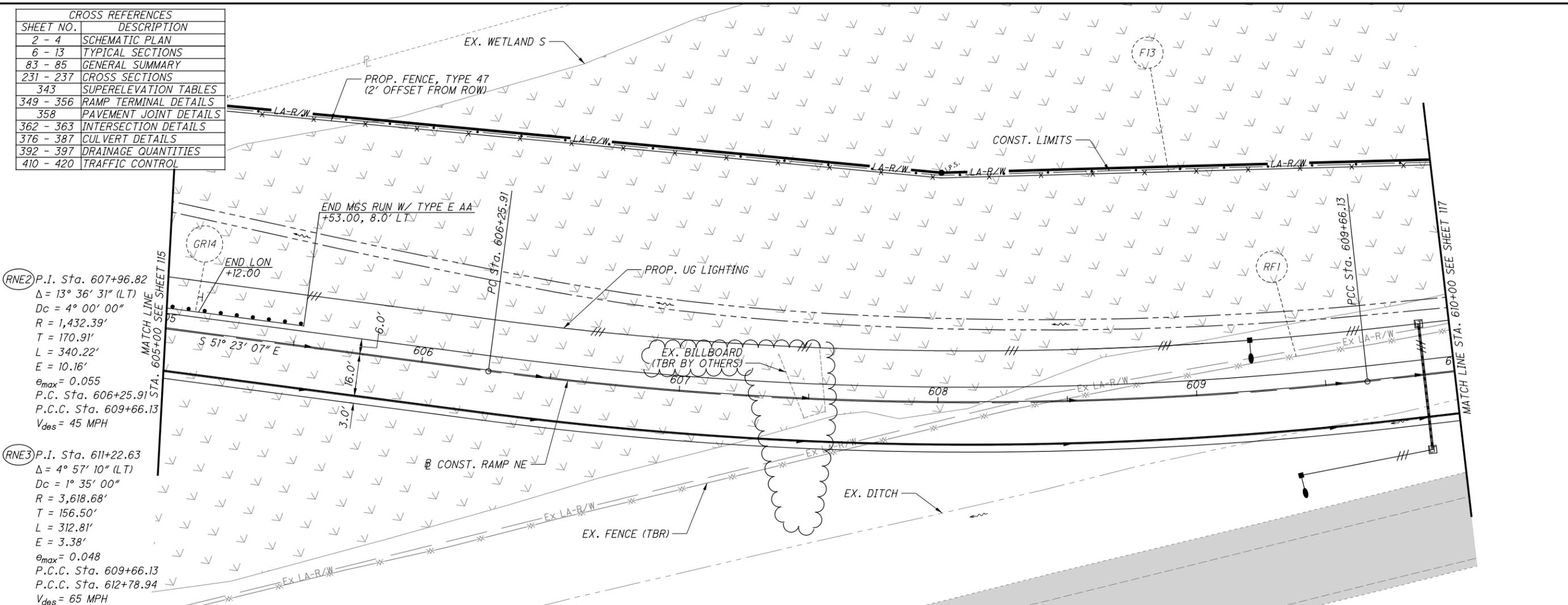
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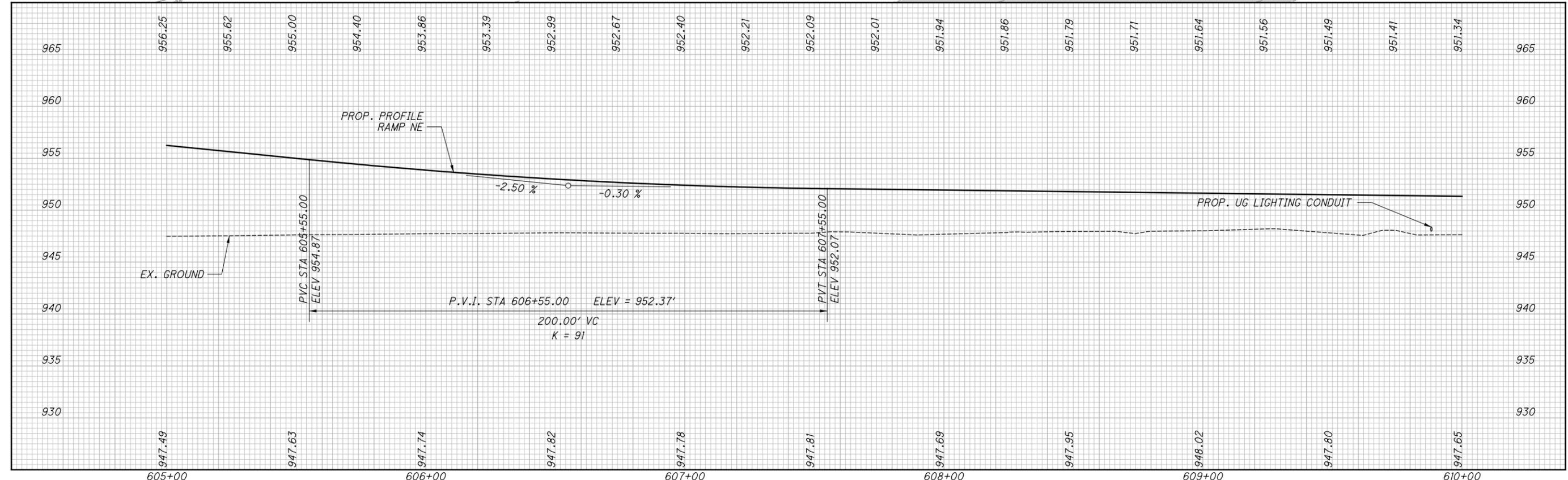
CROSS REFERENCES	
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358	PAVEMENT JOINT DETAILS
362 - 363	INTERSECTION DETAILS
376 - 387	CULVERT DETAILS
392 - 397	DRAINAGE QUANTITIES
410 - 420	TRAFFIC CONTROL

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(RNE2) P.I. Sta. 607+96.82
 $\Delta = 13^\circ 36' 31''$ (LT)
 $D_c = 4^\circ 00' 00''$
 $R = 1,432.39'$
 $T = 170.91'$
 $L = 340.22'$
 $E = 10.16'$
 $e_{max} = 0.055$
 P.C. Sta. 606+25.91
 P.C.C. Sta. 609+66.13
 $V_{des} = 45$ MPH

(RNE3) P.I. Sta. 611+22.63
 $\Delta = 4^\circ 57' 10''$ (LT)
 $D_c = 1^\circ 35' 00''$
 $R = 3,618.68'$
 $T = 156.50'$
 $L = 312.81'$
 $E = 3.38'$
 $e_{max} = 0.048$
 P.C. Sta. 609+66.13
 P.C.C. Sta. 612+78.94
 $V_{des} = 65$ MPH



PLAN AND PROFILE - RAMP NE
STA. 605+00.00 TO STA. 610+00.00

BRO -32-4.16

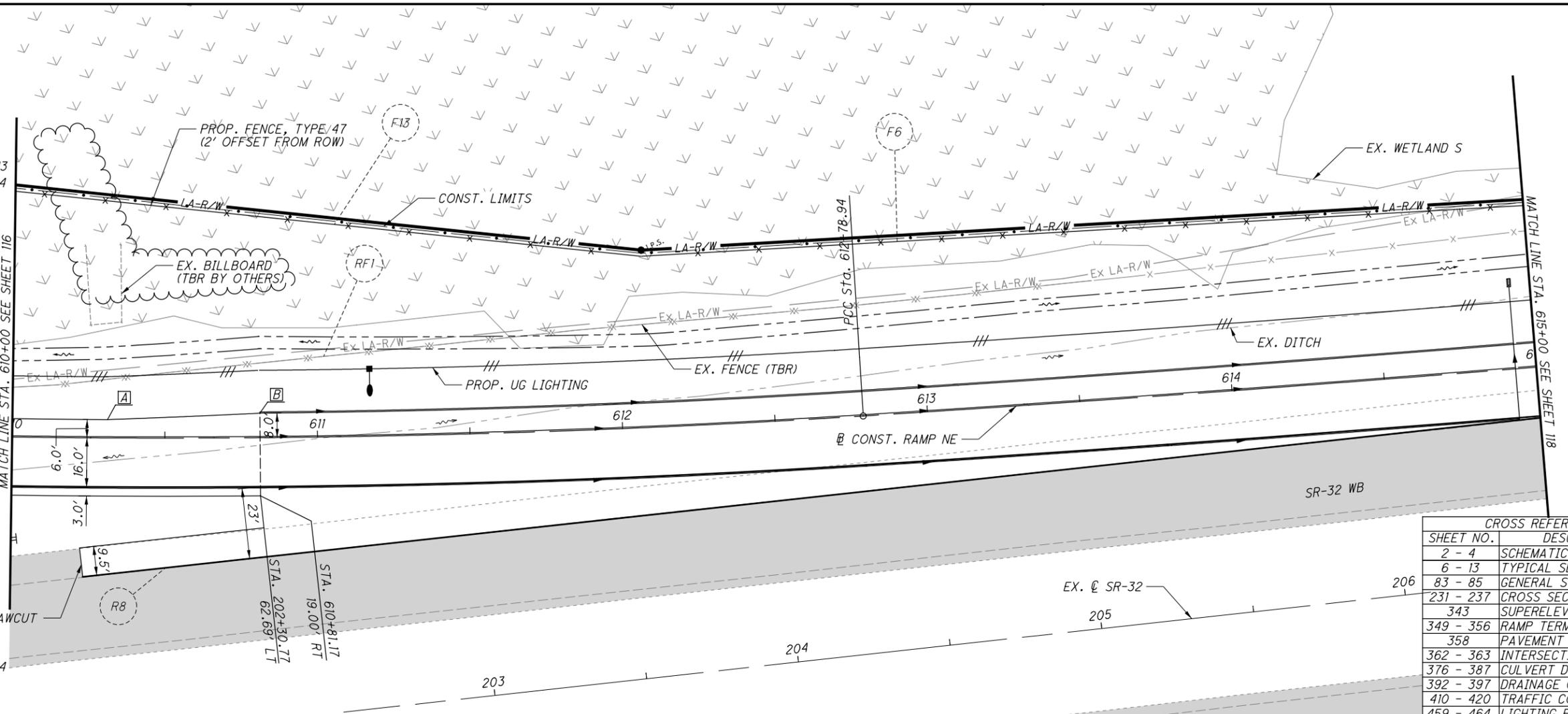
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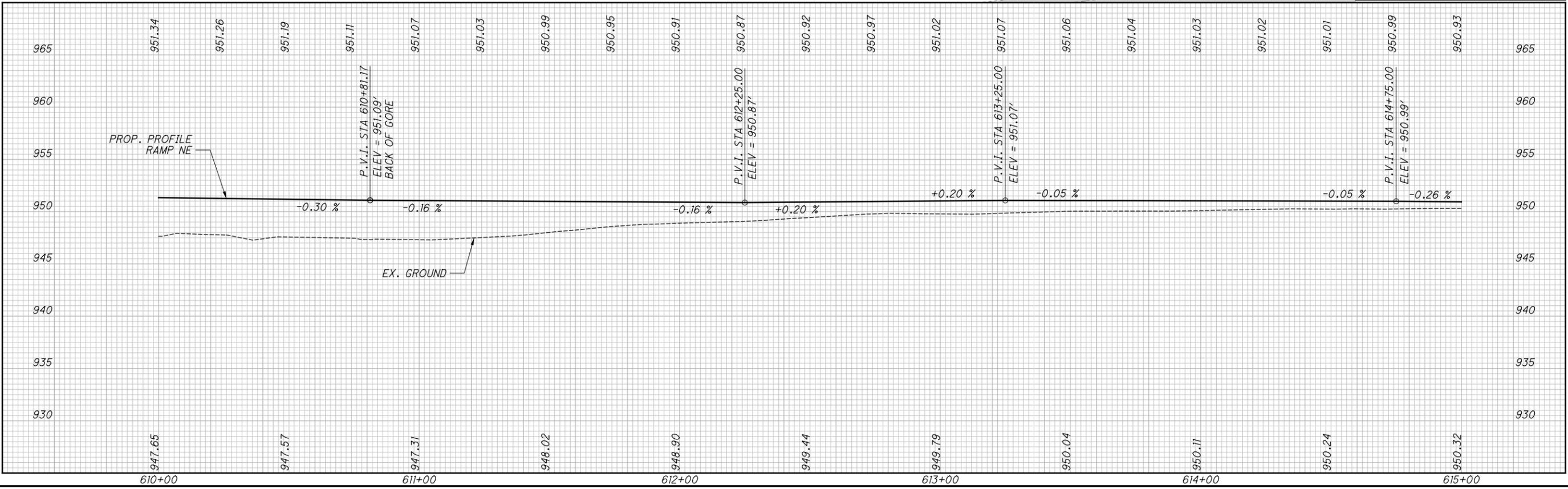
RNE3 P.I. Sta. 611+22.63
 $\Delta = 4^\circ 57' 10''$ (LT)
 $D_c = 1^\circ 35' 00''$
 $R = 3,618.68'$
 $T = 156.50'$
 $L = 312.81'$
 $E = 3.38'$
 $e_{max} = 0.048$
 P.C.C. Sta. 609+66.13
 P.C.C. Sta. 612+78.94
 $V_{des} = 65$ MPH

A BEG. SHLDR. TAPER
 STA. 610+31.17, 6.0' LT
B END SHLDR. TAPER
 STA. 610+81.17, 8.0' LT

RNE4 P.I. Sta. 615+56.64
 $\Delta = 2^\circ 35' 29''$ (LT)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 277.70'$
 $L = 555.31'$
 $E = 3.14'$
 $e_{max} = NC$
 P.C.C. Sta. 612+78.94
 P.T. Sta. 618+34.24
 $V_{des} = 65$ MPH



CROSS REFERENCES	
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2 - 4	SCHEMATIC PLAN
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376 - 387	CULVERT DETAILS
392 - 397	DRAINAGE QUANTITIES
410 - 420	TRAFFIC CONTROL
459 - 464	LIGHTING PLANS



PLAN AND PROFILE - RAMP NE
STA. 610+00.00 TO STA. 615+00.00

BRO-32-4.16

GENERAL NOTES:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

- AS-1-15 REVISED 07-17-15
- AS-2-15 REVISED 01-18-19
- PSID-1-13 REVISED 07-20-18
- SBR-1-20 REVISED 07-17-20
- SICD-2-14 DATED 07-18-14
- VPF-1-90 REVISED 7-20-18

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

- 840 DATED 1-17-20
- 846 DATED 4-17-15

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HL-93
FUTURE WEARING SURFACE (FWS) OF 60 PSF

DESIGN DATA:

CONCRETE CLASS QC2 WITH QC/QA - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE INCLUDING ABUTMENT, INTERMEDIATE AND PIER DIAPHRAGMS, AND APPROACH SLAB)
CONCRETE CLASS QC1 WITH QC/QA- COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - GRADE 60, MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI (BEARING HP SECTION AND LOAD PLATE)

CONCRETE FOR PRESTRESSED I-BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 9 KSI
COMPRESSIVE STRENGTH (RELEASE) - 7 KSI
CONCRETE INTERMEDIATE DIAPHRAGMS SHALL BE USED

WELDED WIRE FABRIC:
YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
ASTM A416 GRADE 270
ULTIMATE STRENGTH = 270 KSI
STRAND AREA = .217 SQ. IN.
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2 1/2 IN CONCRETE COVER

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

ITEM 203 - EMBANKMENT, AS PER PLAN

SEE ROADWAY GENERAL NOTES FOR DETAILS

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 267 KIPS PER PILE FOR THE REAR AND FORWARD ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 343 KIPS PER PILE FOR THE PIER PILES.

REAR ABUTMENT PILES: (16)-PILES, 12" φ C.I.P., 50 FT LONG (ORDER LENGTH)

FORWARD ABUTMENT PILES: (16)-PILES, 12" φ C.I.P., 55 FT LONG (ORDER LENGTH)

PIER PILES: (12)-PILES, 14" φ C.I.P., 40 FT LONG (ORDER LENGTH)

3 DYNAMIC LOAD TESTING ITEMS (2 FOR 12" φ C.I.P. & 1 FOR 14" φ C.I.P.)

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING ABUTMENT PILES TO THE ULTIMATE BEARING VALUE (UBV), CONSTRUCT THE MSE WALL AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENT UP TO THE BOTTOM OF THE FOOTING FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. THE CONTRACTOR MAY PRE-DRIVE ABUTMENT PILES BEFORE CONSTRUCTING MSE WALLS. PRE-DRIVING CONSISTS OF INSTALLING THE ABUTMENT PILES IN TO THE SOIL ONLY AS FAR AS NECESSARY SO THAT THE PILE WILL REMAIN VERTICAL DURING MSE WALL CONSTRUCTION. IF PRE-DRIVING PILES, INSTALL PILE SLEEVES AROUND PILES BEFORE CONSTRUCTING THE MSE WALL. AT LEAST THREE FEET OF PILE MUST EXTEND ABOVE THE TOP OF THE PILE SLEEVE TO MEET THE REQUIREMENTS OF CMS 507.09 REGARDING SPLICES. DO NOT DRIVE ABUTMENT PILES TO THE EOID UNTIL AFTER THE ABOVE REQUIRED MSE WALL AND EMBANKMENT HAVE BEEN CONSTRUCTED AND A 90 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE ABUTMENT PILES TO THE EOID. IN ORDER TO REMOVE ANY NEGATIVE SKIN FRICTION THAT HAS DEVELOPED DURING THE WAITING PERIOD, DRIVE EACH ABUTMENT PILE A DISTANCE OF AT LEAST 0.5 INCH.

PILE DRIVING CONSTRAINTS CONTINUED:

IF NOT PRE-DRIVING ABUTMENT PILES, INSTALL THE ABUTMENT PILES THROUGH PILE SLEEVES AFTER THE ABOVE REQUIRED MSE WALL AND EMBANKMENT HAVE BEEN CONSTRUCTED AND THE SPECIFIED WAITING PERIOD HAS ELAPSED.

PILES DRIVEN TO INITIAL DRIVE RESISTANCE WITH PILE/SOIL SETUP:

THE ULTIMATE BEARING VALUE (UBV) IS 267 KIPS PER PILE FOR THE 12" φ C.I.P. REAR AND FORWARD ABUTMENT PILES. THE UBV IS 343 KIPS PER PILE FOR THE 14" φ C.I.P. PIER PILES. PART OF THE UBV WILL BE ACHIEVED THROUGH PILE/SOIL SETUP, WHICH IS A TIME DEPENDENT INCREASE IN RESISTANCE THAT OCCURS IN SOME SOILS.

NOTIFY THE ENGINEER AT LEAST 5 DAYS BEFORE DRIVING PILES SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING.

DRIVE THE FIRST TWO PILES IN EACH ABUTMENT TO AN END OF INITIAL DRIVE RESISTANCE (EOID) OF 193 KIPS. DRIVE THE FIRST TWO PILES IN THE PIER TO AN EOID OF 244 KIPS. PERFORM DYNAMIC LOAD TESTING ON BOTH PILES WHILE DRIVING. AFTER THE INITIAL DRIVE, CEASE ALL DRIVING OPERATIONS AT THE SUBSTRUCTURE FOR A PERIOD OF 7 DAYS. INCLUDE THE WAITING PERIOD AS A SEPARATE ACTIVITY IN THE PROGRESS SCHEDULE. AFTER THE WAITING PERIOD, PERFORM PILE RESTRIKES ON BOTH PILES IN EACH SUBSTRUCTURE (ONE RESTRIKE AS PER PLAN PAY ITEM PER SUBSTRUCTURE).

SUBMIT ALL TEST RESULTS TO THE ENGINEER. IF THE RESTRIKE TEST RESULTS INDICATE THAT BOTH PILES ACHIEVED THE REQUIRED UBV, USE THE INITIAL DRIVE DYNAMIC LOAD TESTING AND EOID TO ESTABLISH DRIVING CRITERIA FOR INSTALLATION OF THE REMAINING PILES IN THE SUBSTRUCTURE ACCORDING TO C&MS 507.05 AND 523.04.

IF THE RESTRIKE TEST RESULTS INDICATE THAT EITHER OF THE TWO PILES DID NOT ACHIEVE THE REQUIRED UBV, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING. THE ENGINEER WILL REVIEW THE TEST RESULTS AND ESTABLISH DRIVING CRITERIA FOR THE PILING IN THE SUBSTRUCTURE WITH THE ASSISTANCE OF THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING.

DRIVE ALL PILES IN THE SUBSTRUCTURE TO THE ESTABLISHED DRIVING CRITERIA. THE DEPARTMENT WILL PAY FOR SPLICING OF THE PILES BEYOND THE ESTIMATED LENGTH PROVIDED IN THE PLANS UNDER C&MS 109.05 WITH A NEGOTIATED PRICE PER SPLICE.

THIS PLAN NOTE INCLUDES A QUANTITY OF ONE EACH ITEM 523 DYNAMIC LOAD TESTING, AS PER PLAN AND A QUANTITY OF ONE EACH ITEM 523 RESTRIKE, AS PER PLAN PER EACH SUBSTRUCTURE UNIT.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

- 1) AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.3 KIPS.
- 2) A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 IN.
- 3) A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.
- 4) A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 IN.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK:

THIS ITEM SHALL INCLUDE THE BRIDGE DECK, REAR AND FORWARD ABUTMENT DIAPHRAGMS, PIER DIAPHRAGM, AND THE EXPANDED POLYSTYRENE FILLER USED TO FORM THE BOTTOM OF THE DIAPHRAGMS.

ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY):

BRIDGE ABUTMENTS, WINGWALLS, AND PARAPET SURFACES AS SHOWN IN THE PLANS AND ALL EXPOSED CONCRETE SURFACES OF THE PIER EXCEPT FOR THE TOP OF PIER CAP SHALL BE SEALED WITH NON-EPOXY SEALER PER ITEM 512.

ITEM 507 - 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN:

THE STEEL FOR THE CAST-IN-PLACE PILE SHALL HAVE A WALL THICKNESS OF 0.312 INCHES FOR ASTM A 252 GRADE 3 STEEL.

ITEM 507 - 14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN:

THE STEEL FOR THE CAST-IN-PLACE PILE SHALL HAVE A WALL THICKNESS OF 0.400 INCHES FOR ASTM A 252 GRADE 3 STEEL.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 43.24 FOOT-KIPS. ENSURE THAT THE STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45 KIPS PER SQUARE INCH.

EXPLANATION OF THE ALTERNATES:

PYLON ALTERNATE 1 IS FOR ABUTMENT WINGWALLS INCLUDING THE AESTHETIC PYLONS. PYLON ALTERNATE 2 IS FOR ABUTMENT WINGWALLS WITHOUT THE AESTHETIC PYLONS.

VANDAL PROTECTION FENCE ALTERNATE 1 IS FOR VANDAL PROTECTION FENCE INCLUDING THE AESTHETIC LETTERS.
VANDAL PROTECTION FENCE ALTERNATE 2 IS FOR VANDAL PROTECTION FENCE WITHOUT THE AESTHETIC LETTERS.

PROPRIETARY RETAINING WALL DATA:

THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF A MECHANICALLY STABILIZED EARTH (MSE) WALL IN ACCORDANCE WITH SS840 TO SUPPORT THE ABUTMENT. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE A NOMINAL (I.E. UNFACTORED) HORIZONTAL STRIP LOAD DUE TO FRICTION (FR) FROM THE SUPERSTRUCTURE OF 1.97 K/FT APPLIED PERPENDICULAR TO THE FACE OF WALL AT THE BASE OF THE CONCRETE FOOTING. THIS STRIP LOAD DOES NOT INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL. HOWEVER, THE PROPRIETARY WALL SUPPLIER SHALL INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL IN THE DESIGN CALCULATIONS.

ITEM 607, FENCE, VANDAL PROTECTION FENCE, 6' STRAIGHT COATED FABRIC, AS PER PLAN

A STEEL FENCE SHALL BE CONSTRUCTED ACROSS THE STRUCTURE AS SHOWN ON THE PLANS. ALL PARTS OF THE FENCE (WITH THE EXCEPTION OF THE COATED FABRIC) SHALL BE GALVANIZED PER CMS 711.02, EXCEPT THAT FENCE ELEMENTS SHALL NOT BE POST TREATED WITH WATER QUENCHING OR CHROMATE CONVERSION COATED.

PRIOR TO GALVANIZING, ALL CORNERS OF THERMALLY CUT OR SHEARED EDGES SHALL HAVE A 1/16 INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE. VENT HOLES WHERE REQUIRED FOR GALVANIZING SHALL BE DETAILED BY THE FABRICATOR AND PLACED IN THE UNDERSIDE OF THE MEMBERS.

AFTER GALVANIZATION, ZINC HIGH SPOTS SUCH AS METAL DRIP LINE AND OTHERS THAT WOULD DETRACT FROM THE PAINT APPEARANCE SHALL BE MADE FLUSH WITH THE SURROUNDING SURFACE BY SSPC SP2 OR SP3. CARE SHALL BE TAKEN THAT THE BASE GALVANIZED COATING IS NOT REMOVED. REPAIRED AREAS SHALL BE CHECKED FOR REQUIRED COATING THICKNESS.

GALVANIZED COATINGS DAMAGED IN THE SHOP SHALL BE REPAIRED PER ASTM A780 METHOD A3. GALVANIZED COATINGS DAMAGED IN THE FIELD SHALL BE REPAIRED PER ASTM A780 METHOD A1.

AFTER REMOVING HIGH SPOTS THE GALVANIZED COATING SHALL BE CLEANED PER SSPC SP-1. THE CLEANING SOLUTION SHALL BE AN ALKALINE SOLUTION WITH A PH RANGING FROM A MINIMUM OF 11 TO A MAXIMUM OF 12. THIS SOLUTION CAN BE APPLIED BY IMMERSION, SPRAY OR SOFT NYLON BRUSH. FOLLOW CLEANING WITH A HOT WATER OR HOT PRESSURE WASHER RINSE, INDIVIDUAL PIECES SHALL BE SEPERATED AND POSITIONED TO FACILITATE DRAINAGE AND DRYING. THE PIECES SHALL BE COMPLETELY DRY BEFORE PROCEEDING.

AFTER CLEANING, THE PIECES SHALL BE ABRASIVE BLASTED PER SSPC-SP7 BRUSH-OFF BLAST CLEANING. THE BLASTING OPERATION SHALL ROUGHEN THE GALVANIZED SURFACE TO AN ANGULAR SURFACE PROFILE OF 0.25 TO 0.50 MILS. THE BLASTING EQUIPMENT, TECHNIQUE AND ABRASIVE MATERIAL SHALL BE SELECTED TO PROVIDE FOR THE SPECIFIED SURFACE PROFILE WITHOUT REMOVAL OF ZINC LAYERS. THE FINAL ZINC MILLAGE SHALL NOT BE LESS THAN 3.0 MILS. ALL ABRASIVE RESIDUE SHALL BE REMOVED WITH CLEAN COMPRESSED AIR OR OTHER METHODS ACCEPTABLE TO THE DEPARTMENT. FIELD CONNECTION AREAS SHALL HAVE A UNIFORM GALVANIZED COATING FREE OF LOCAL EXCESSIVE ROUGHNESS WHICH WOULD PREVENT THE FIELD CONNECTIONS FROM MAKING INTIMATE CONTACT.

ALL PARTS OF THE FENCE (EXCLUDING THE COATED FABRIC) SHALL BE SHOP PAINTED AFTER GALVANIZING. AFTER OBTAINING AN ACCEPTABLE SURFACE PROFILE, SHOP APPLY A TWO COAT PAINT SYSTEM CONSISTING OF EPOXY INTERMEDIATE COAT AND A URETHANE FINISH COAT. THE FINISH COAT OF ALL FENCE COMPONENTS SHALL MATCH FEDERAL COLOR STANDARD NO. 595B-27040 (BLACK). EXCEPT THAT THE AESTHETIC LETTERS, IF BEING PROVIDED, OUTSIDE FACE OF LETTERS (THAT SIDE WHICH IS VIEWED FROM SR 32) SHALL MATCH SHERWIN WILLIAMS COLOR CODE SW 6757 (TAME TEAL). THE OPPOSITE FACE OF THE LETTERS SHALL MATCH THE COLOR OF THE FENCE; FEDERAL COLOR STANDARD NO. 595B-27040 (BLACK).

THE EPOXY INTERMEDIATE COATING SHALL BE APPLIED WITHIN 24 HOURS OF THE BRUSH-OFF BLASTING.

THE FENCE FABRIC SHALL BE 1" DIAMOND MESH FABRIC, AND SHALL BE GALVANIZED AND COATED AS DESCRIBED IN STANDARD DRAWING VPF-1-90. EXCEPT THAT THE PVC COATING SHALL CLOSELY APPROACH FEDERAL COLOR STANDARD NO. 595B-27040 (BLACK).

EXPOSED SURFACES OF ALL NUTS, BOLTS, AND ANCHOR BOLTS USED TO ASSEMBLE THE FENCE SHALL BE GALVANIZED AND FIELD PAINTED TO MATCH FENCE COMPONENTS.

ALL LABOR, EQUIPMENT AND MATERIALS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED WITH ITEM 607, VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN (WITH AESTHETIC LETTERS) (ALTERNATE 1) OR ITEM 607, VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC (WITHOUT AESTHETIC LETTERS) (ALTERNATE 2).

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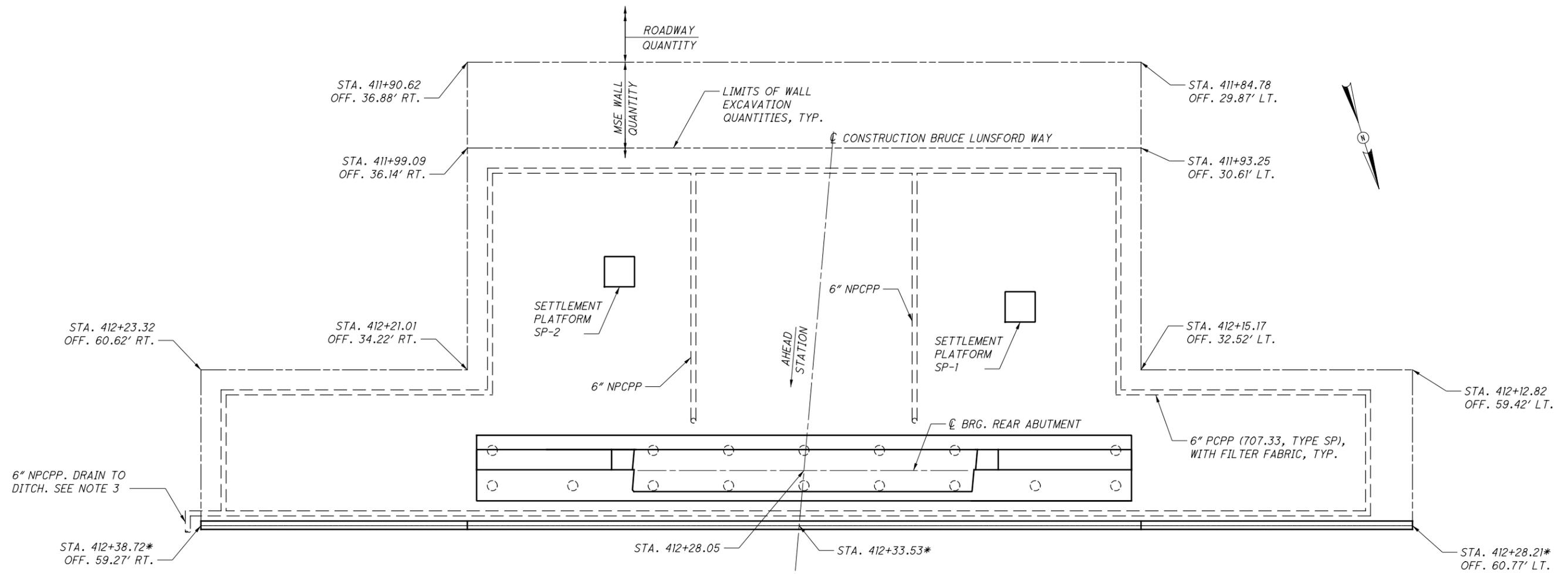
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ESTIMATED QUANTITIES						CALC.	DATE	CHK'D	DATE		
ALT (X)	ITEM	ITEM EXT.	UNIT	DESCRIPTION	ABUTMENTS	PIER	SUPERSTR.	GENERAL	01/SAF/OT	04/NFP/OT	SHT. REF.
							ODW/JFM	10/15/2020	KK		10/15/2020
	503	11100	LS	COFFERDAMS AND EXCAVATION BRACING		1			1		
	503	21300	LS	UNCLASSIFIED EXCAVATION		1			1		
	505	11100	LS	PILE DRIVING EQUIPMENT MOBILIZATION				1			
	507	00500	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1520				1520		
	507	00551	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN	1680				1680		2
	507	00600	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		420			420		
	507	00651	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN		480			480		2
	509	10000	POUND	EPOXY COATED REINFORCING STEEL		11094		74513	85607		
	509	30020	FT	NO. 4 GFRP DEFORMED BARS				7345	7345		
	511	33501	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	2				2		5
	511	34446	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK				235	235		
	511	34449	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN				74	74		24
	511	41012	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		30			30		
	511	46512	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	116				116		
	512	10050	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	142	90	905		1137		
	515	15080	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE WF42-49 (90'-3 1/8" BEAM LENGTH)			8		8		
	515	20000	EACH	INTERMEDIATE DIAPHRAGMS			18		18		
	516	13600	SF	1" PREFORMED EXPANSION JOINT FILLER			17		17		
	516	13900	SF	2" PREFORMED EXPANSION JOINT FILLER	28				28		
	516	14020	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL			74		74		
	516	44101	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) AS PER PLAN (BEARING: 16 1/2" x 11" x 2.198")		8			8		17
	516	44101	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 17 1/2" x 15 x 2.654")	8				8		16
	518	21200	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	39				39		
	518	40000	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	112				112		
	518	40010	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	12				12		
	523	20001	EACH	DYNAMIC LOAD TESTING, AS PER PLAN	2	1			3		2
	523	20501	EACH	RESTRIKE, AS PER PLAN	1	1			2		2
	526	30010	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				223	223		
	526	90011	FT	TYPE A INSTALLATION, AS PER PLAN				67	67		25
	530	13000	SF	SPECIAL - FORM LINER			730		730		23 , 24
	846	00110	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM				28	28		
				STRUCTURE OVER 20 FOOT SPAN (BRO-32-0363 - PYLON) ALTERNATES							
X	509	10000	LB	EPOXY COATED REINFORCING STEEL (WITH PYLON) (ALTERNATE 1)	11320			1377		12697	
X	511	44113	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING AS PER PLAN (WITH PYLON) (ALTERNATE 1)	50					50	8
X	509	10000	LB	EPOXY COATED REINFORCING STEEL (WITHOUT PYLON) (ALTERNATE 2)	11418					11418	
X	511	44112	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING (WITHOUT PYLON) (ALTERNATE 2)	39					39	
				STRUCTURE OVER 20 FOOT SPAN (BRO-32-0363 - VANDAL PROTECTION FENCE) ALTERNATES							
X	607	39901	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN (WITH AESTHETIC LETTERS) (ALTERNATE 1)				366		366	23 , 24
X	607	39900	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC (WITHOUT AESTHETIC LETTERS) (ALTERNATE 2)				366		366	

STANDARD ABBREVIATIONS LIST:

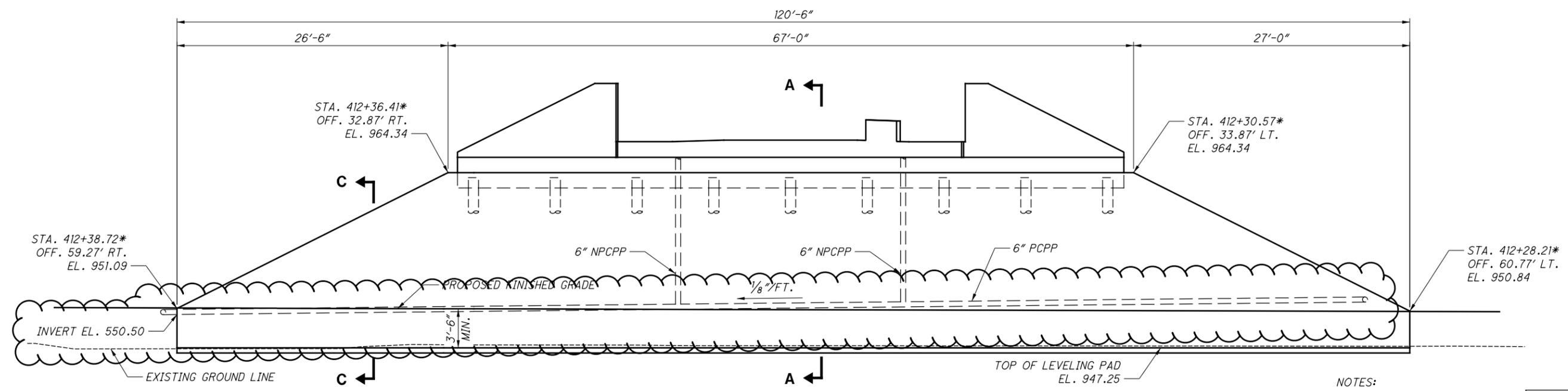
- APPROX. = APPROXIMATE
- A.S. = APPROACH SLAB
- BOT. = BOTTOM
- BRG. = BEARINGS
- BRGS. = BEARINGS
- B.S. = BOTH SIDES
- BTWN. = BETWEEN
- c/c = CENTER-TO-CENTER
- C.J. = CONSTRUCTION JOINT
- CIP = CAST-IN-PLACE
- CLR. = CLEAR
- CMS OR C&MS = CONSTRUCTION AND MATERIALS SPECIFICATIONS
- CONSTR. = CONSTRUCTION
- DIA. = DIAMETER
- EB = EAST BOUND
- E.F. = EACH FACE
- EL. OR ELEV. = ELEVATION
- EMBED. = EMBEDMENT
- EQ. = EQUAL
- EST. = ESTIMATE
- EXIST. = EXISTING
- EXP. = EXPANSION
- F.A. = FORWARD ABUTMENT
- F.F. = FAR FACE
- FWD = FORWARD
- LT. = LEFT
- MAX. = MAXIMUM
- MIN. = MINIMUM
- N.F. = NEAR FACE
- NPCPP = NON-PERFORATED CORRUGATED PLASTIC PIPE
- o/o = OUT-TO-OUT
- PCPP = PERFORATED CORRUGATED PLASTIC PIPE
- PEJF = PREFORMED EXPANSION JOINT FILLER
- P.G. = PROFILE GRADE
- P.S. = PRESTRESSED
- P.V.I. = POINT OF VERTICAL INTERSECTION
- R.A. = REAR ABUTMENT
- RT. = RIGHT
- SHLD. = SHOULDER
- SHT. = SHEET
- SI OR SQ. IN. = SQUARE INCHES
- S.O. = SERIES OF
- SPA. = SPACES
- SR = STATE ROUTE
- STA. = STATION
- STD. DWG. = STANDARD DRAWING
- SYMM. = SYMMETRICAL
- TYP. = TYPICAL
- T&B = TOP AND BOTTOM
- T/R = TOP OF ROCK
- t/t = TOE-TO-TOE
- UBV = ULTIMATE BEARING VALUE
- U.N.O. = UNLESS NOTED OTHERWISE
- VAR. = VARIES
- WB = WEST BOUND
- WWR = WELDED WIRE REINFORCEMENT

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PLAN

* MEASURED TO FRONT FACE OF MSE WALL FACING PANELS.

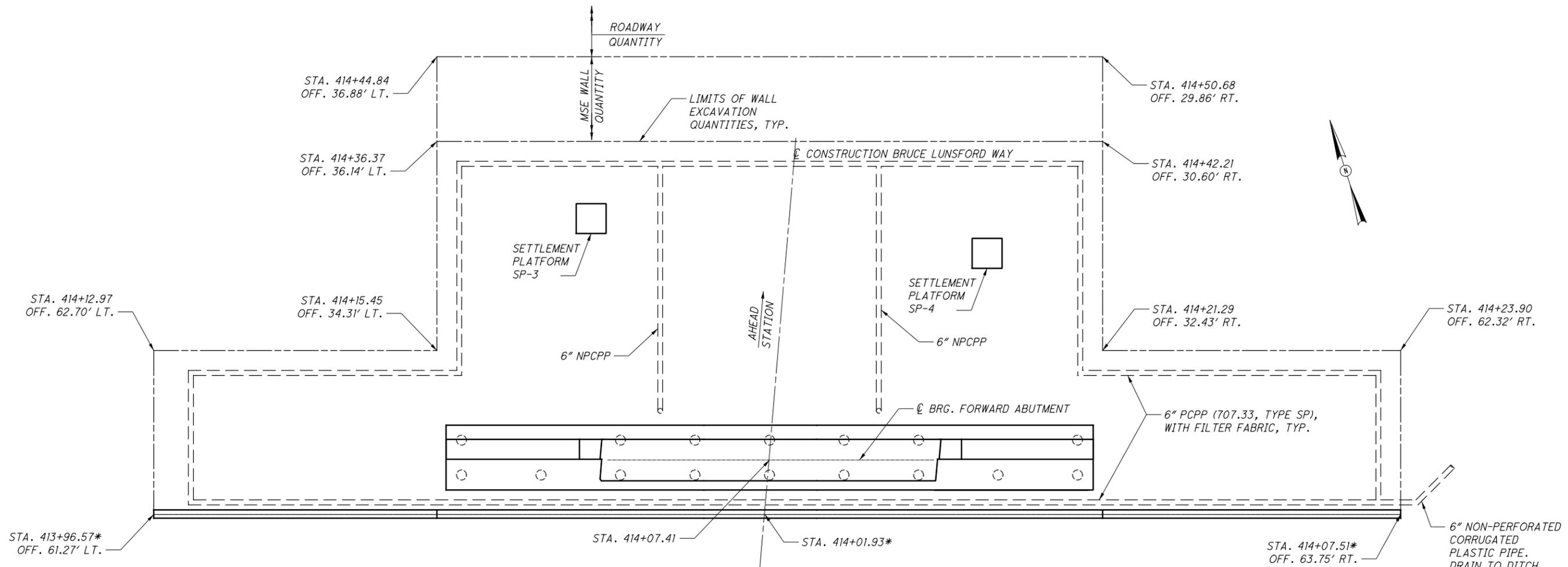


ELEVATION

- NOTES:
- FOR SECTION A-A, SEE SHEET 30/32.
 - FOR SECTION C-C, SEE SHEET 32/32.
 - DRAIN PIPES IN BACKFILL SHALL BE PLACED AT LOWEST ELEVATION WHICH WILL PROVIDE POSITIVE DRAINAGE TO DITCH.

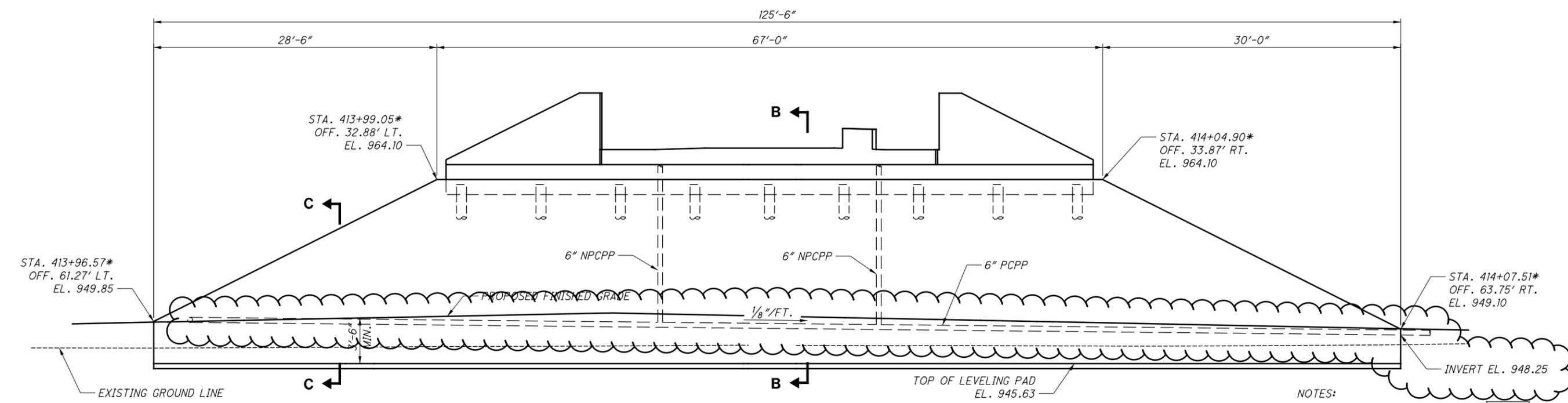
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REVIEWED	BSM
DRAWN	ALH
DESIGNED	MRS
CHECKED	EDA
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REVISED	XXX
WALL 1 PLAN & ELEVATION BRO-32-0363 BRUCE LUNS福德 WAY OVER STATE ROUTE 32	
BRO-32-4.16	PID No. 110478
28 / 32	<div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> 499 610 </div>

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PLAN

* MEASURED TO FRONT FACE OF MSE WALL FACING PANELS.



ELEVATION

- NOTES:
- FOR SECTION B-B, SEE SHEET 30/32.
 - FOR SECTION C-C, SEE SHEET 32/32.
 - DRAIN PIPES IN BACKFILL SHALL BE PLACED AT LOWEST ELEVATION WHICH WILL PROVIDE POSITIVE DRAINAGE TO DITCH.



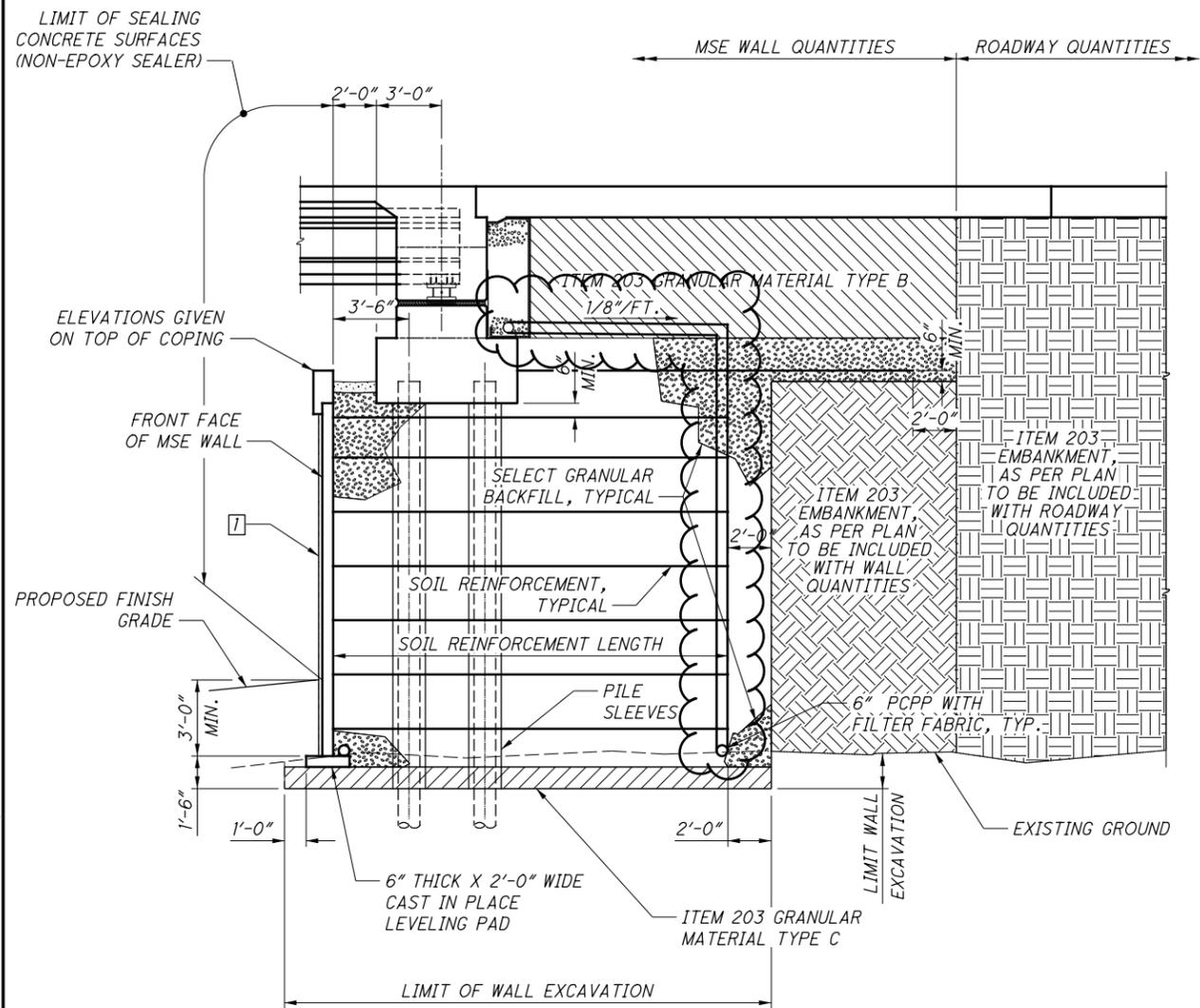
DESIGNED	MRS	CHECKED	EDA
DRAWN	ALH	REVISED	XXX
REVIEWED	BSM	DATE	03/05/21
STRUCTURE FILE NUMBER	0800084		

WALL 2 PLAN & ELEVATION
 BRO-32-0363
 BRUCE LUNS福德 WAY OVER STATE ROUTE 32

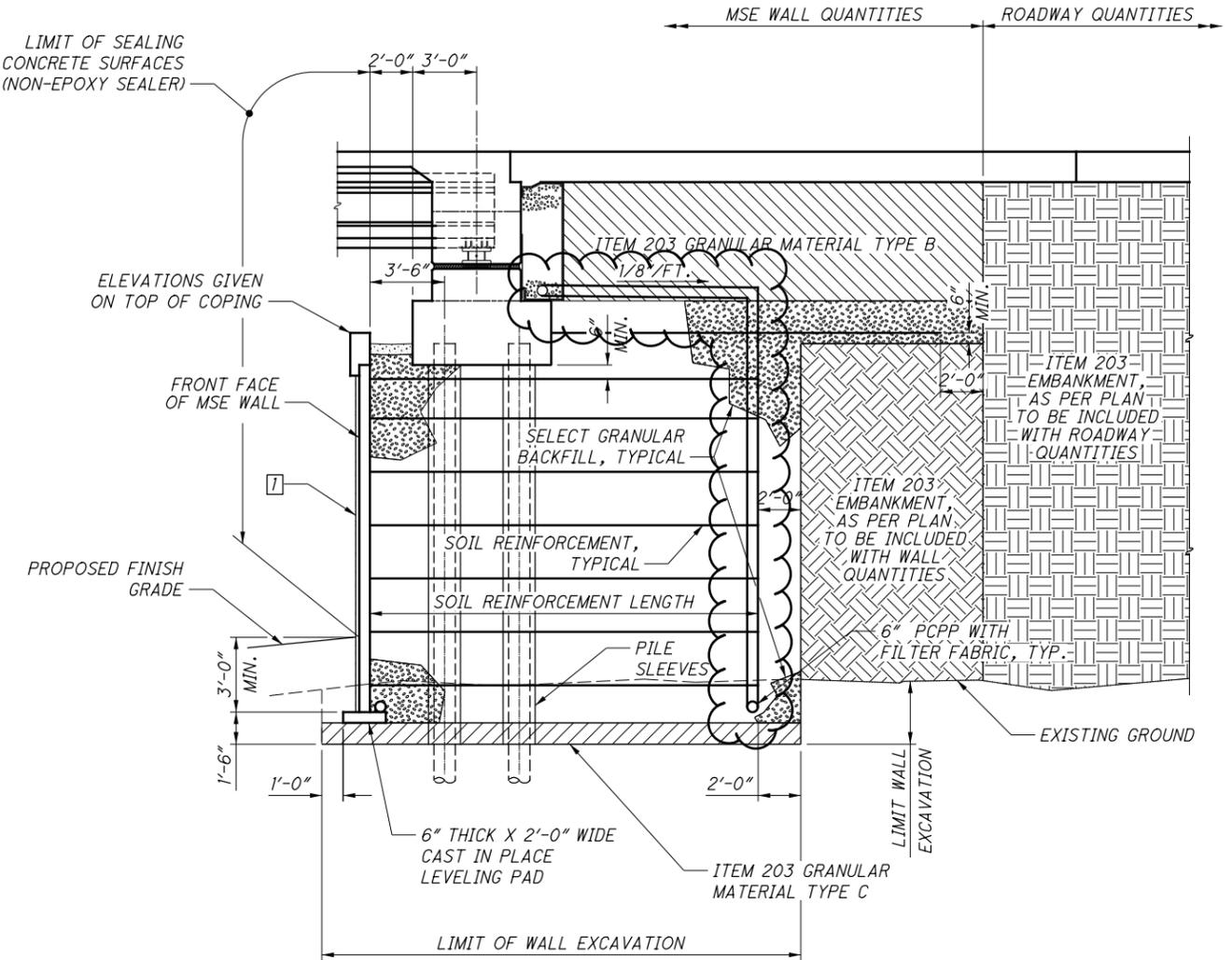
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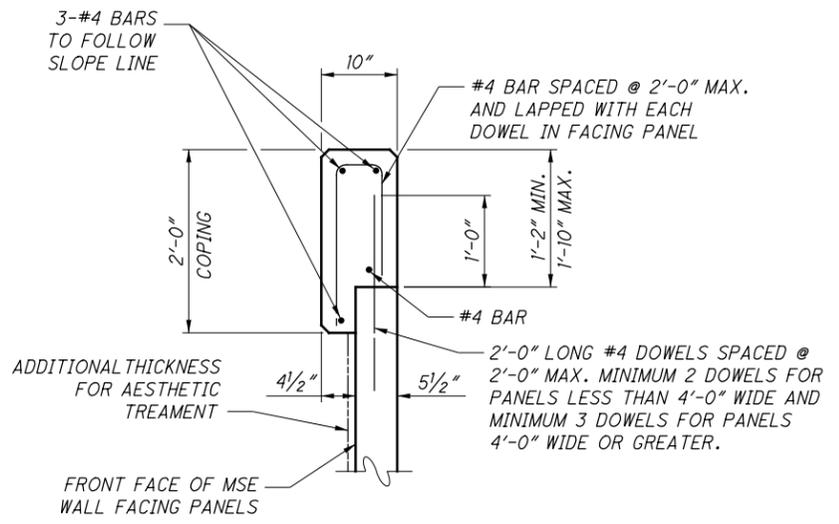
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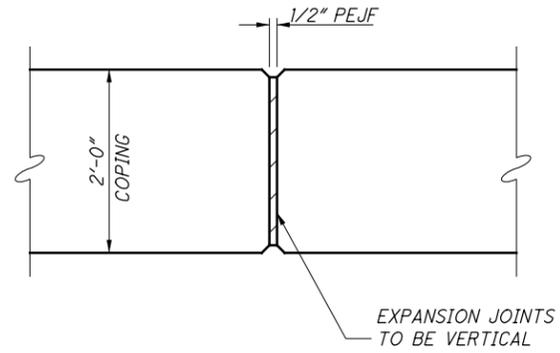
SECTION A-A
(WALL 1)



SECTION B-B
(WALL 2)



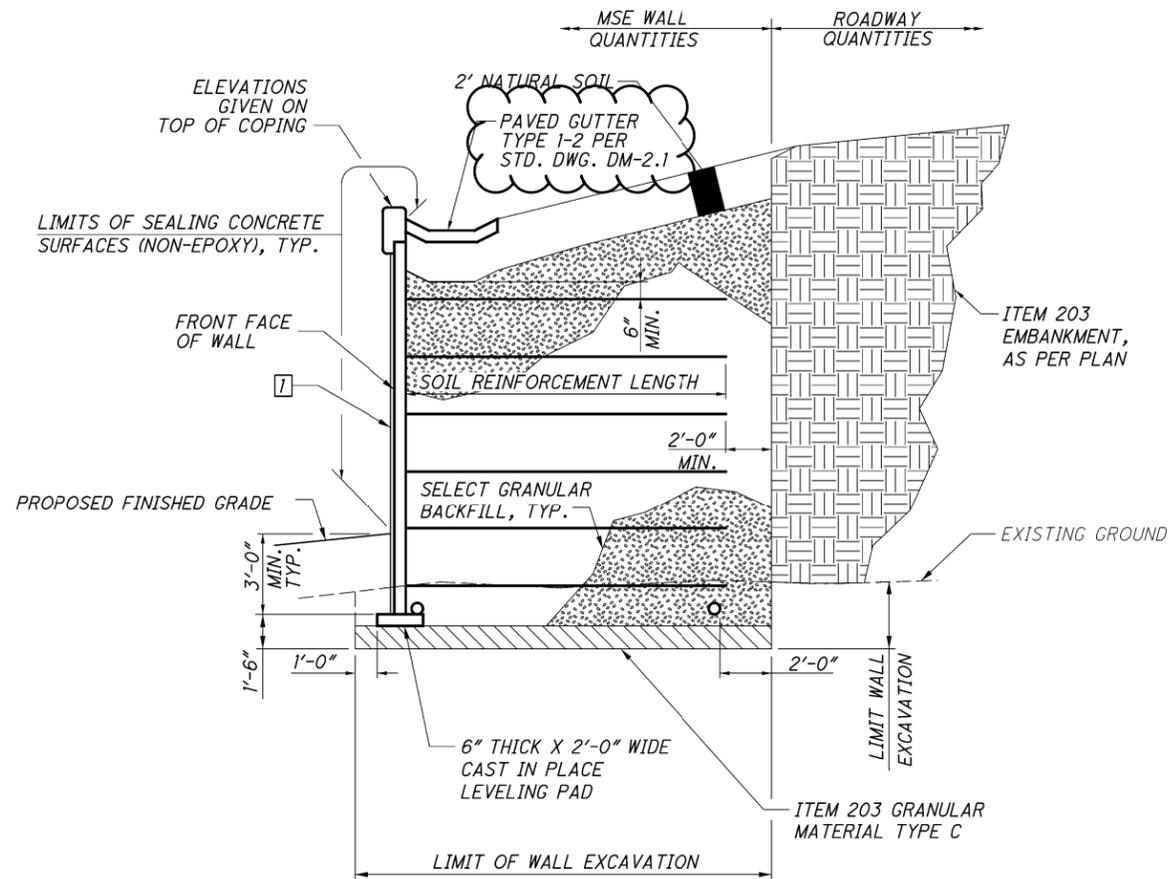
MSE WALL COPING
ALL REINFORCING STEEL TO BE EPOXY COATED



COPING EXPANSION JOINTS

[1] MINIMUM 5 1/2" FACING PANEL THICKNESS, CENTERED ON LEVELING PAD. PROVIDE ADDITIONAL THICKNESS AS REQUIRED FOR AESTHETIC SURFACE TREATMENT.
 FACING PANEL AESTHETIC SURFACE TREATMENT SHALL BE SPLIT FACED RUNNING BLOCK, PATTERN 16971 FROM FITZGERALD FORMLINERS OR APPROVED EQUAL.

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SECTION C-C

1 MINIMUM 5 1/2" FACING PANEL THICKNESS, CENTERED ON LEVELING PAD. PROVIDE ADDITIONAL THICKNESS AS REQUIRED FOR AESTHETIC SURFACE TREATMENT.

FACING PANEL AESTHETIC SURFACE TREATMENT SHALL BE SPLIT FACED RUNNING BLOCK, PATTERN 16971 FROM FITZGERALD FORMLINERS OR APPROVED EQUAL.

ESTIMATED QUANTITIES - WALL 1					
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	SHEET #
203	20001	387	CY	EMBANKMENT, AS PER PLAN	32
203	35110	194	CY	GRANULAR MATERIAL, TYPE B	
203	65000	2	EA	SPECIAL - SETTLEMENT PLATFORM	31
503	11100	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING	
512	10050	164	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
601	37500	60	FT	PAVED GUTTER, TYPE 1-2	
840	20000	1702	SF	MECHANICALLY STABILIZED EARTH WALL	
840	21000	164	CY	WALL EXCAVATION	
840	22000	394	SY	FOUNDATION PREPARATION	
840	23000	1938	CY	SELECT GRANULAR BACKFILL	
840	23050	135	CY	NATURAL SOIL	
840	25010	309	FT	6" DRAINAGE PIPE, PERFORATED	
840	25020	125	FT	6" DRAINAGE PIPE, NON-PERFORATED	
840	26000	127	FT	CONCRETE COPING	
840	26050	1702	SF	AESTHETIC SURFACE TREATMENT	
840	27000	2.5	DAY	ON-SITE ASSISTANCE	
840	28000	LUMP	LS	SGB INSPECTION AND COMPACTION TESTING	

ESTIMATED QUANTITIES - WALL 2					
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	SHEET #
203	20001	382	CY	EMBANKMENT, AS PER PLAN	32
203	35110	194	CY	GRANULAR MATERIAL, TYPE B	
203	65000	2	EA	SPECIAL - SETTLEMENT PLATFORM	31
503	11100	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING	
512	10050	182	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
601	37500	66	FT	PAVED GUTTER, TYPE 1-2	
840	20000	1890	SF	MECHANICALLY STABILIZED EARTH WALL	
840	21000	393	CY	WALL EXCAVATION	
840	22000	411	SY	FOUNDATION PREPARATION	
840	23000	2031	CY	SELECT GRANULAR BACKFILL	
840	23050	164	CY	NATURAL SOIL	
840	25010	312	FT	6" DRAINAGE PIPE, PERFORATED	
840	25020	128	FT	6" DRAINAGE PIPE, NON-PERFORATED	
840	26000	132	FT	CONCRETE COPING	
840	26050	1890	SF	AESTHETIC SURFACE TREATMENT	
840	27000	2.5	DAY	ON-SITE ASSISTANCE	
840	28000	LUMP	LS	SGB INSPECTION AND COMPACTION TESTING	

MSE WALL NOTES:

- MSE WALLS SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 840.
- CONCRETE FACING PANELS SHALL NOT BE INSTALLED UNTIL BACKFILL MATERIAL HAS UNDERGONE THE SPECIFIED WAITING PERIOD TO ACCOMMODATE ANTICIPATED SETTLEMENT (SEE SETTLEMENT PLATFORM NOTES, SHEET 31/610).
- FOR ITEM 203 - EMBANKMENT, AS PER PLAN, SEE ROADWAY GENERAL NOTES FOR DETAILS.