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UTILITIES

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED FROM SURVEYS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO IT'S ACCURACY AND THE LOCATION OF EXISTING UTILITIES.

ELECTRIC
CONSUMERS ENERGY CO.
2400 WEISS STREET
SAGINAW, MI 48602
CONTACT: GREG SQUANDA
TELEPHONE: 989-791-5353

TELEPHONE AND FIBER
AT&T
309 SOUTH WASHINGTON
SAGINAW, MI 48607
CONTACT: ROB AUGUSTINE
TELEPHONE: 989-771-5404

GAS TRANSMISSION
CONSUMERS ENERGY CO.
3201 EAST COURT STREET
FLINT, MI 48506
CONTACT: KEVIN COUTURIER
TELEPHONE: 989-574-7538

ROADS
MIDLAND COUNTY ROAD COMMISSION
2334 NORTH MERIDIAN RD.
SANFORD, MICHIGAN 48657
CONTACT: TERENCE PALMER, P.E.
TELEPHONE: 989-687-9060

GAS DISTRIBUTION
CONSUMERS ENERGY CO.
2400 WEISS STREET
SAGINAW, MI 48602
CONTACT: KYLE SKRABUT
TELEPHONE: 989-791-5885

WATER
CITY OF MIDLAND
333 W. ELLSWORTH ST.
MIDLAND, MI 48640
CONTACT: ANDREW PARROTT
TELEPHONE: 989-837-6958

COUNTY DRAIN
MIDLAND COUNTY DRAIN COMMISSION
220 W. ELLSWORTH STREET
MIDLAND, MI 48640
CONTACT: DOUG ENOS
TELEPHONE: 989-832-6770

CABLE
CHARTER COMMUNICATIONS
1480 SOUTH VALLEY CENTER DRIVE
BAY CITY, MI 48706
CONTACT: MARK KELLY
TELEPHONE: 989-233-9404

M.D.O.T. STANDARD PLANS

(* SPECIAL DETAILS WILL BE INCLUDED IN PROPOSAL)

PLAN NO.	TITLE
R-1-G *	DRAINAGE STRUCTURES
R-7-F	COVER B
R-11-E	MONUMENT BOXES
R-12-E	COVER G
R-29-I	DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALK
R-80-E	GRANULAR BLANKET, UNDERDRAINS, OUTLET ENDINGS FOR UNDERDRAINS, AND SEWER BULKHEADS
R-82-D	BEDDING AND FILLING AROUND PIPE CULVERTS
R-83-C	UTILITY TRENCHES
R-86-E	PRECAST CONCRETE END SECTION FOR PIPE CULVERT
R-88-D	STEEL END SECTION
R-95-F	CULVERT SLOPED END SECTION
R-96-E	SOIL EROSION & SEDIMENTATION CONTROL MEASURES
R-100-H	SEEDING AND TREE PLANTING
R-105-D	GRADING CROSS-SECTIONS
R-110-A	PAVEMENT SAFETY EDGE

TRAFFIC AND SAFETY STANDARD PLANS

(* SPECIAL DETAILS WILL BE INCLUDED IN PROPOSAL)

PLAN NO.	TITLE
SIGN-100-G *	STANDARD SIGN INSTALLATIONS
SIGN-120-E *	ROADSIDE SIGN LOCATIONS AND SUPPORT SPACING
SIGN-140-A	PLACEMENT OF D3-1 SIGNS ABOVE R1-1
SIGN-150-D	SIGN SUPPORT SELECTION CHARTS
SIGN-200-D	STEEL POSTS
WZD-100-A *	GROUND DRIVEN SIGN AND SUPPORTS FOR TEMP SIGNS
WZD-125-E *	TEMPORARY TRAFFIC CONTROL DEVICES

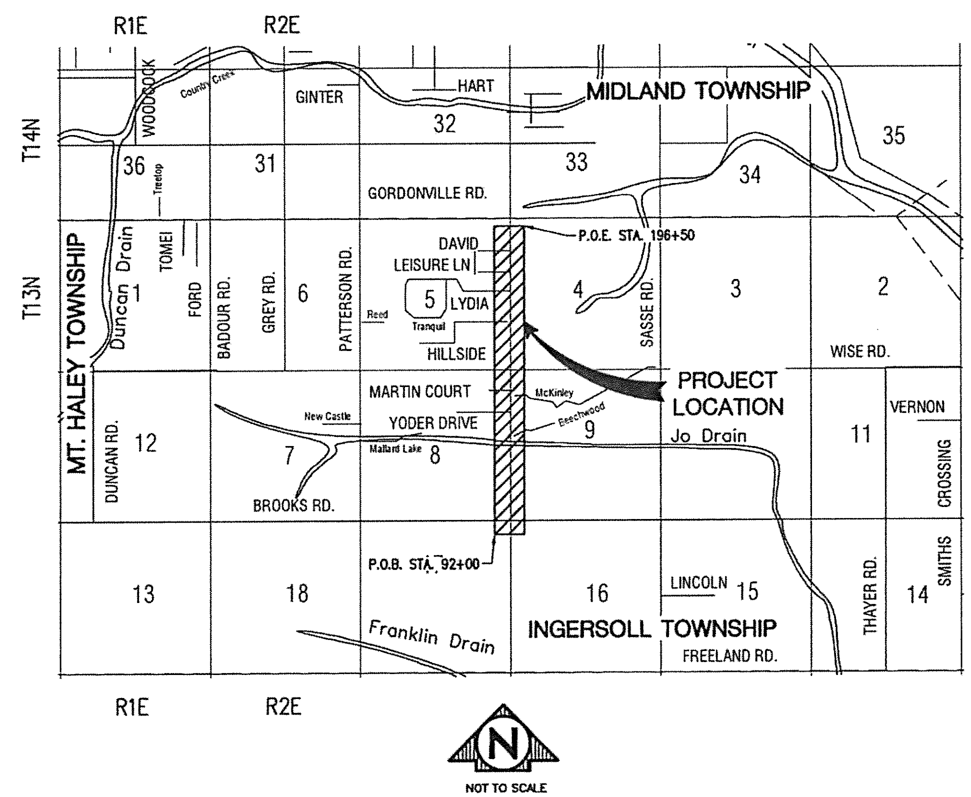
MIDLAND COUNTY ROAD COMMISSION

IN CO-OPERATION WITH
MICHIGAN DEPARTMENT OF TRANSPORTATION
&
FEDERAL HIGHWAY ADMINISTRATION
PLAN AND PROFILE OF PROPOSED

POSEYVILLE ROAD REHABILITATION

T13N - R2E, SECTIONS 4, 5, 8, 9, 16, 17
INGERSOLL TOWNSHIP, MIDLAND COUNTY

CONTROL SECTION	JOB NO.
HRRR 56000	200269A



COUNTY	ROAD	PROJ.	YEAR	SHEET	TOTAL
MIDLAND	POSEYVILLE	200269A	2018	1	45

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND SUPPLEMENTAL SPECIFICATIONS. THE LATEST MDOT STANDARD ROAD PLANS, SECTION C (3R) OF THE MDOT LOCAL AGENCY PROGRAMS GUIDELINES FOR GEOMETRICS, 2017 EDITION, AND SUPPLEMENTAL SPECIFICATIONS. THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH AASHTO: A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, 6TH EDITION, 2011.

THE PLACEMENT OF PAVEMENT MARKINGS AND SIGNAGE SHALL BE COMPLETED IN ACCORDANCE WITH THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2011 EDITION.

PROJECT LENGTH

JN 200269A P.O.B. = STA 92+00 P.O.E. = STA 196+50
JN 200269A = 1.98 MILE

TRAFFIC DATA

POSEYVILLE ROAD

PRESENT ADT (2018) = 3,535 VEHICLES/DAY
FUTURE ADT (2038) = 3,907 VEHICLES/DAY
% COMMERCIAL = 3.5%

P.O.B. TO 174+80
DESIGN SPEED = 60 MPH
POSTED SPEED = PRIMA FACIE

174+80 TO P.O.E.
DESIGN SPEED = 50 MPH
POSTED SPEED = 45 MPH

CONTRACT FOR:
1.98 MILES OF SHOULDER WIDENING, COLD MILLING HMA SURFACE, HMA PAVING, DRAINAGE IMPROVEMENTS, AND PERMANENT SIGNING.

MIDLAND COUNTY ROAD COMMISSION APPROVAL

7-17-18
TERENCE PALMER, P.E. – MANAGING DIRECTOR DATE

PREPARED UNDER SUPERVISION OF

MATTHEW J. SEITZ — 57041
REGISTERED PROFESSIONAL ENGINEER — REGISTRATION NO.

ROWE PROFESSIONAL SERVICES COMPANY
ORGANIZATION

127 S. MAIN ST. MT. PLEASANT, MI 48858
ADDRESS

STATE OF MICHIGAN
MATTHEW J. SEITZ
ENGINEER
No. 57041
LICENSED PROFESSIONAL ENGINEER

ROWE PROFESSIONAL SERVICES COMPANY

127 S. Main Street
Mt. Pleasant, MI 4885

O: (989) 772-213
F: (989) 773-775
www.rowepsc.com

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PLOTTED: 7/12/2018 10:34 AM R:\Projects\17M0068\Dwg\Construction Drawings\SH-17M0068-COV.dwg

STRUCTURE SYMBOLS

- EXISTING CATCH BASIN IN CURB LINE
- PROPOSED CATCH BASIN IN CURB LINE
- EXISTING CATCH BASIN IN GREEN SPACE
- PROPOSED CATCH BASIN IN GREEN SPACE
- EXISTING STORM MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED CULVERT END SECTION
- EXISTING HEADWALL
- PROPOSED HEADWALL
- EXISTING WATER SHUTOFF (SERVICE VALVE)
- EXISTING GATE VALVE AND BOX (STOP BOX)
- PROPOSED GATE VALVE AND BOX
- EXISTING GATE VALVE AND WELL
- PROPOSED GATE VALVE AND WELL
- EXISTING SPRINKLER HEAD
- EXISTING WATER WELL
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED WATER MAIN FITTINGS
- EXISTING CLEAN OUT
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING MONITORING WELL

EXISTING TOPOGRAPHICAL SYMBOLS

- SIGN
- STREET SIGN
- END OF PIPE
- SWAMP OR WETLAND
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE STUMP
- MAIL BOX
- SOIL BORING
- ROCK
- METAL POST
- BUMPER BLOCK

UTILITY SYMBOLS

- UTILITY POLE
- GUY ANCHOR CABLE
- LIGHT POLE / ORNAMENTAL LIGHT
- POWER LIGHT POLE
- TELEPHONE MANHOLE
- UNDERGROUND GAS LINE MARKER
- GAS RISER
- GAS VENT
- GAS VALVE
- RAILROAD SIGNAL
- METAL LIGHT POLE
- OUTLET
- CIRCUIT BREAKER PANEL
- ELECTRICAL TRANSFORMER PAD
- ELECTRICAL TRANSFORMER RISER
- ELECTRIC METER
- TELEPHONE PEDESTAL / RISER
- TRAFFIC SIGNAL ON POLE
- PHONE BOOTH / PAY PHONE

SURVEY SYMBOLS

- MONUMENT
- BENCHMARK
- TRAVERSE POINT
- SECTION CORNER
- FOUND SURVEY MONUMENTATION

MISCELLANEOUS SYMBOLS

- EX 1812 — EXISTING STORM SEWER STRUCTURE NUMBER
- EX 5236 — EXISTING SANITARY SEWER STRUCTURE NUMBER
- 1 — PROPOSED STORM SEWER STRUCTURE NUMBER
- A — PROPOSED SANITARY SEWER STRUCTURE NUMBER
- FLOW DIRECTION
- EXISTING RIP-RAP
- PROPOSED RIP-RAP

CAUTION SYMBOLS

- ••CAUTION•• HAZARDOUS FLAMMABLE MATERIAL UNDERGROUND — USED WITH UNDERGROUND GAS & ELECTRICAL LINES
- ••CAUTION•• FIBER OPTIC — USED WITH FIBER OPTICS LINES

PLAN VIEW LINE TYPES

- 12" STM — EXISTING STORM SEWER
- 12" CONC — EXISTING CULVERT
- PROPOSED STORM SEWER LESS THAN 24"
- PROPOSED STORM SEWER 24" AND GREATER
- 12" SAN — EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- 12" WM — EXISTING WATER MAIN
- PROPOSED WATER MAIN
- SECTION LINE
- 60' ROW — EXISTING RIGHT OF WAY
- 60' ROW — PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING CENTER LINE DITCH
- PROPOSED DITCH CENTERLINE
- EXISTING CENTER LINE ROADWAY
- PARCEL LINE / LOT LINE
- O/H — EXISTING OVERHEAD UTILITIES
- U/G ELEC — UNDERGROUND ELECTRICAL LINE
- 6" S-MP GAS — GAS LINE OR PETROLEUM PIPELINE
- U/G TEL — UNDERGROUND TELEPHONE LINE
- U/G CATV — UNDERGROUND CABLE TV LINE
- U/G FIBER OPTIC — UNDERGROUND FIBER OPTIC
- 11+00 — PROJECT CONTROL LINE
- TREE LINE
- BRUSH LINE
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARD RAIL
- PROPOSED SLOPE STAKE LINE
- PROPOSED SILT FENCE

TOPOGRAPHY

- 960 — EXISTING CONTOURS MAJOR
- 958 — EXISTING CONTOURS MINOR
- 960 — PROPOSED CONTOUR MAJOR
- 958 — PROPOSED CONTOURS MINOR

PARCEL INFORMATION

- 401-069 — PARCEL/TAX IDENTIFICATION NUMBER
- #5324 — ADDRESS/BUSINESS NAME

PAVEMENT IDENTIFICATION

- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER

HATCHING LEGEND

- REMOVE HMA
- REMOVE CONCRETE
- COLD MILLING EXISTING PAVEMENT
- REMOVE SIDEWALK
- REMOVE CURB AND GUTTER
- REMOVE AND REPLACE CURB AND GUTTER
- PROPOSED CONCRETE DRIVEWAY
- PROPOSED HMA APPROACH & DRIVEWAY

PROPOSED CALLOUTS

TOPO CALLOUTS	PLAN VIEW	
ADJ	ADJ	ADJUST STRUCTURE
ADJ-X	ADJ-X	ADJUST STRUCTURE W/ NEW COVER
ADJ-B/O	ADJ-B/O	ADJUST STRUCTURE BY OTHERS
REC	REC	RECONSTRUCT STRUCTURE
REL	REL	RELOCATE
REL-B/O	REL-B/O	RELOCATE BY OTHERS
REM	R	REMOVE
R&R	R&R	REMOVE AND REPLACE
SALV	SALV	SALVAGE
SAVE	S	SAVE
ABN	A	ABANDON
CLR	C	CLEARING
	B	BULKHEAD
	SR-F	SIDEWALK RAMP TYPE
	6	SOIL EROSION CONTROL MEASURE

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PLAN SUBMITTALS AND CHANGES

BIDDING DOCUMENTS

DATE	DESCRIPTION
6/22/18	ISSUED FOR BIDS

PLAN DATE: JUNE 2018
PROJECT MGR: MJS
REVIEWER: ENJ
SCALE: NO SCALE

ROWE PROFESSIONAL SERVICES COMPANY
O: (989) 772-2138
F: (989) 773-7757
www.rowepsc.com
127 S. Main Street
Mt. Pleasant, MI 48858

PREPARED FOR
MIDLAND COUNTY ROAD COMMISSION
POSEYVILLE RD SAFETY IMPROVEMENTS

LEGEND SHEET

REV:

GENERAL CONSTRUCTION NOTES

EMERGENCY CONTACTS
BEFORE BEGINNING WORK ON THE PROJECT, THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH THE NAMES AND TELEPHONE NUMBERS OF EMERGENCY CONTACTS. AT LEAST ONE PERSON REPRESENTING THE CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO EMERGENCIES THROUGHOUT THE LIFE OF THE PROJECT, 24 HOURS A DAY, 7 DAYS A WEEK.

UNDERGROUND UTILITY IDENTIFICATION AND LOCATION
THE CONTRACTOR SHALL CONTACT MISS DIG (1-800-482-7171, 811, OR WWW.MISSDIG.ORG) A MINIMUM OF THREE WORK DAYS IN ADVANCE OF BEGINNING EXCAVATION. THE CONTRACTOR IS RESPONSIBLE TO IDENTIFY AND NOTIFY UTILITY AGENCIES WITHIN THE PROJECT AREA WHICH DO NOT PARTICIPATE IN THE MISS DIG NOTIFICATION PROGRAM.

PUBLIC UTILITIES
EXISTING UTILITIES ARE SHOWN BASED UPON RECORDS AND LOCATIONS PROVIDED BY UTILITY AGENCIES. THE INFORMATION SHOWN IS CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR. UNLESS THE PLANS SPECIFICALLY SHOW THAT EXISTING UTILITIES ARE TO BE MOVED, THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN EXISTING UTILITIES.

VERIFICATION OF UNDERGROUND UTILITIES
THE CONTRACTOR SHALL EXCAVATE AND LOCATE ALL EXISTING UTILITIES IN THE PROJECT AREA IN ADVANCE OF CONSTRUCTION TO VERIFY THEIR ACTUAL LOCATION. POTENTIAL CONFLICTS SHALL BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL MAKE SUCH CHANGES TO GRADE AND ALIGNMENT OF PROPOSED WORK AS DIRECTED BY THE ENGINEER TO AVOID CONFLICTS, AT NO INCREASE IN COST TO THE OWNER.

UTILITY SERVICE
UNLESS SPECIFICALLY PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS, ALL EXISTING UTILITIES ARE TO REMAIN IN SERVICE DURING THE PROJECT.

MAILBOXES
MAILBOXES LOCATED WITHIN THE LIMITS OF EXCAVATION, GRADING, OR CONSTRUCTION SHALL BE REMOVED AND PROTECTED FROM DAMAGE BY THE CONTRACTOR. TEMPORARY MAILBOXES SHALL BE PROVIDED AND MAINTAINED DURING THE PROJECT. UPON COMPLETION OF GRADING OR CONSTRUCTION ACTIVITIES, THE ORIGINAL MAILBOX SHALL BE REINSTALLED.

MAILBOXES (AND/OR SUPPORTS) WHICH ARE DAMAGED AS A RESULT OF THE PROJECT SHALL BE REPLACED BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE. MAILBOXES SHALL BE REPLACED IN ACCORDANCE WITH THE STANDARDS OF THE U.S. POSTAL SERVICE AND THE REGULATIONS OF THE AGENCY HAVING JURISDICTION OVER THE ROADS AND STREETS IN THE PROJECT AREA.

PRIVATE IRRIGATION SYSTEMS
WHERE IRRIGATION SYSTEMS WITHIN THE PUBLIC RIGHT-OF-WAY WILL INTERFERE WITH THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS THAT IT IS THEIR RESPONSIBILITY TO REMOVE AND PROTECT THEIR IRRIGATION SYSTEM. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF THE NOTIFICATION.

WHERE THE OWNER HAS NOT REMOVED THEIR PRIVATE IRRIGATION SYSTEM, THE CONTRACTOR SHALL CUT AND PLUG THOSE SECTIONS OF PIPING WHICH INTERFERE WITH CONSTRUCTION. SPRINKLER HEADS, VALVES, AND PIPING WHICH INTERFERES WITH THE CONTRACTOR'S WORK, SHALL BE REMOVED AND STOCKPILED ON THE OWNER'S PROPERTY.

SOIL BORINGS / PAVEMENT CORES
LOGS OF SOIL BORINGS OR PAVEMENT CORES REPRESENT THE SUBSURFACE CONDITIONS ENCOUNTERED AT SPECIFIC POINTS. THE INFORMATION IS PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY.

MAINTAINING TRAFFIC
LOCAL AND EMERGENCY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES WITHIN THE PROJECT AREA.

WHEN EXCAVATION, FRESH CONCRETE, OR OTHER CONSTRUCTION WORK WILL RESULT IN THE CLOSURE OF A STREET OR DRIVEWAY FOR A PERIOD OF TIME, THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL AFFECTED RESIDENTS AND BUSINESSES IN ADVANCE.

THE CONTRACTOR SHALL NOTIFY EMERGENCY RESPONSE AGENCIES IN ADVANCE OF ROAD CLOSURES OR THE ESTABLISHMENT OF DETOURS.

MIDLAND COUNTY CENTRAL DISPATCH
TELEPHONE: 989-839-6464

MIDLAND COUNTY SHERIFF
TELEPHONE: 989-839-4600

BULLOCK CREEK SCHOOLS
TELEPHONE: 989-631-9022

MIDLAND PUBLIC SCHOOLS
TELEPHONE: 989-923-5041

SCHEDULE
THE CONTRACTOR SHALL COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP WORK ON THE PROJECT ONCE BEGUN.

ALIGNMENT
ALIGNMENT AND GRADES FOR CURB AND GUTTER (INCLUDING THROUGH RAMPS AND DRIVEWAY OPENINGS) SHOWN ON THE PLANS ARE FOR THE TOP, BACK OF CURB, UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE PLANS.

THE HORIZONTAL ALIGNMENT SHOWN ON THE DRAWINGS FOR DRAINAGE STRUCTURES LOCATED IN THE CURB LINE IS TO THE CENTER OF THE CASTING.

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR MANHOLE CASTINGS, THE ELEVATION PROVIDED IS FOR THE TOP OF THE CASTING.

WHERE RIM ELEVATIONS ARE PROVIDED FOR INLET TYPE CASTINGS, THE ELEVATIONS ARE PROVIDED AS FOLLOWS:
- CURB INLETS – THE ELEVATION OF THE TOP OF CURB
- ALL OTHER INLETS – THE ELEVATION OF THE FLOW LINE

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR INLETS OR MANHOLE CASTINGS, THE ELEVATIONS PROVIDED ARE CONSIDERED PRELIMINARY. THE CONTRACTOR SHALL MAKE THE FINAL ADJUSTMENT FOLLOWING THE ESTABLISHMENT OF ACTUAL GRADING AND PAVEMENT ELEVATIONS.

CONSTRUCTION STAKING
CONSTRUCTION STAKING IS TO BE PROVIDED BY THE ENGINEER OR OWNER, THE CONTRACTOR SHALL REQUEST STAKING AT LEAST THREE WORKING DAYS IN ADVANCE.

CONSTRUCTION STAKING IS TO BE PROVIDED BY THE ENGINEER OR OWNER, STAKING WILL BE PROVIDED ONE TIME. THE CONTRACTOR SHALL PROTECT AND PRESERVE SURVEY CONTROL AND STAKING. RE-STAKING WILL BE AT THE CONTRACTOR'S EXPENSE.

SURVEY CORNERS, BENCHMARKS, AND CONTROL POINTS
THE CONTRACTOR SHALL PRESERVE ALL GOVERNMENT CORNERS, PROPERTY CORNERS, BENCHMARKS, SURVEY CONTROL POINTS AND OTHER SURVEY POINTS WITHIN THE PROJECT AREA. WHERE CORNERS, BENCHMARKS, OR SURVEY POINTS ARE ENCOUNTERED WHICH WILL BE DISTURBED BY THE CONTRACTOR'S ACTIVITIES; A LICENSED SURVEYOR SHALL WITNESS THE POINT BEFORE DISTURBANCE AND SHALL RE-SET THE POINT FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PAY THE SURVEYOR TO WITNESS AND TO RE-SET THE POINTS.

PROTECTION OF TREES, SHRUBS, AND LANDSCAPING
ALL TREES, SHRUBS, AND LANDSCAPING WITHIN THE CONSTRUCTION AREA WHICH ARE NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED TREES, SHRUBS, AND LANDSCAPING SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

CONSTRUCTION SIGNING AND BARRICADING
THE CONTRACTOR SHALL PROTECT HAZARDOUS AREAS WITH BARRICADES. BARRICADES LEFT IN PLACE AFTER SUNSET SHALL BE LIGHTED.

THE CONTRACTOR SHALL PROVIDE SUITABLE SANDBAGS OR OTHER SUITABLE MEASURES FOR ANCHORING OF TEMPORARY SIGNS AND BARRICADES, TO PREVENT THEIR TIPPING OR DISPLACEMENT BY WIND OR AIR FLOW FROM VEHICLES.

THE CONTRACTOR SHALL PROVIDE SIGNING, BARRICADES, TRAFFIC REGULATORS, CONES, AND OTHER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER STREETS OR ROADS IN THE PROJECT AREA, THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL COVER OR REMOVE TEMPORARY SIGNS DURING PERIODS WHEN THEY ARE NOT APPROPRIATE.

TURF ESTABLISHMENT
ALL DISTURBED AREAS WHICH ARE NOT TO BE SURFACED WITH PAVEMENT, AGGREGATE OR OTHER APPROVED SURFACES SHALL BE ESTABLISHED WITH TURF.

TURF AREAS SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE.

DISTURBED AREAS SHALL BE SURFACED WITH FOUR INCHES OF SCREENED TOPSOIL.

THE CONTRACTOR IS RESPONSIBLE TO ESTABLISH TURF WHICH IS SUBSTANTIALLY FREE OF BARE SPOTS AND FREE OF WEEDS. THE GROUND SURFACE IN TURF AREAS SHALL BE SMOOTH AND PROVIDE A NATURAL TRANSITION TO ADJACENT, UNDISTURBED AREAS.

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE WATERING, WEEDING, RESEEDING, AND REWORKING AS NECESSARY TO ESTABLISH TURF AREAS TO THE REQUIRED STANDARD.

ADA COMPLIANCE
ALL PROPOSED CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AND APPLICABLE GUIDELINES OR STANDARDS. WHERE EXISTING CONDITIONS AND/OR THE REQUIREMENTS OF THE PLANS WILL RESULT IN FINISHED CONDITIONS THAT DO NOT MEET THE ADA REQUIREMENTS, GUIDELINES, OR STANDARDS; THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO REMOVE AND REPLACE WORK DETERMINED TO BE NOT IN ACCORDANCE WITH APPLICABLE REQUIREMENTS, GUIDELINES, OR STANDARDS.

EARTHWORK
THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF THE EARTHWORK QUANTITIES, AND BASE HIS BID ON HIS DETERMINATION OF THE QUANTITIES OF WORK REQUIRED.

IF ADDITIONAL FILL MATERIAL MUST BE PROVIDED TO ATTAIN THE FINISH GRADES SHOWN ON THE PLANS, THE CONTRACTOR SHALL PROVIDE THE REQUIRED FILL MATERIAL, UNLESS A SPECIFIC BORROW AREA IS IDENTIFIED ON THE PLANS.

EXCESS SOILS RESULTING FROM EXCAVATION AND EARTHWORK SHALL BECOME THE CONTRACTOR'S PROPERTY AND DISPOSED OF PROPERLY, UNLESS AN AREA(S) HAS BEEN DESIGNATED FOR STOCKPILING OR "BLENDING IN" THE EXCESS MATERIAL WITHIN THE PROJECT LIMITS.

BACKFILL AND EMBANKMENT
BACKFILL OF AN EXCAVATION UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE, SHALL BE SAND, MEETING THE REQUIREMENTS OF GRANULAR MATERIAL CLASS III AS DESCRIBED IN THE CURRENT MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE SAND BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

BACKFILL OF AN EXCAVATION WHICH IS NOT UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE MAY BE SUITABLE EXCAVATED MATERIAL OR OTHER SOIL, WHICH IS FREE OF ORGANIC MATTER, STONES AND ROCKS, ROOTS, BROKEN CONCRETE, FROZEN MATERIAL, OR DEBRIS. THE BACKFILL SHALL BE COMPACTED TO AT LEAST 90% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL INDICATE THE SOURCE OF SAND USED FOR BACKFILL TO THE ENGINEER, AND PROVIDE THE ENGINEER WITH THE RESULTS OF A GRADATION TEST PERFORMED ON A SAMPLE OF THE SAND. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN ADVANCE OF USING SAND FROM OTHER SOURCES.

EMBANKMENT USED TO BUILD THE SUBGRADE TO REQUIRED ELEVATION SHALL BE SUITABLE SOIL EXCAVATED FROM THE PROJECT SITE, OR FURNISHED BY THE CONTRACTOR FROM OTHER SOURCES. SUITABLE SOIL IS FREE FROM ORGANIC MATTER, ROCKS AND STONES, FROZEN MATERIAL, BROKEN CONCRETE, AND DEBRIS.

EMBANKMENT CONSTRUCTED OF GRANULAR SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

EMBANKMENT CONSTRUCTED OF COHESIVE SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

DENSITY TESTING
THE MAXIMUM UNIT WEIGHT OF SAND AND OTHER GRANULAR SOILS WILL BE DETERMINED BY THE ONE POINT CONE TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

THE MAXIMUM UNIT WEIGHT OF COHESIVE SOILS WILL BE DETERMINED BY THE ONE POINT PROCTOR TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

WORK HOURS
UNLESS PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS OR LIMITED BY LOCAL ORDINANCE, THE CONTRACTOR SHALL WORK WITHIN OF THE FOLLOWING TIMES, UNLESS OTHERWISE APPROVED BY THE OWNER:

MONDAY THROUGH FRIDAY	DAYLIGHT HOURS ONLY
SATURDAY	MUST BE APPROVED BY ENGINEER
SUNDAY	NO WORK WILL BE ALLOWED

THE CONTRACTOR SHALL NOT WORK ON HOLIDAYS UNLESS APPROVED BY THE OWNER.

LANDSCAPING
WHERE LANDSCAPING WITHIN THE PUBLIC RIGHT-OF-WAY WILL INTERFERE WITH THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS THAT IT IS THEIR RESPONSIBILITY TO REMOVE OR RELOCATE THEIR LANDSCAPING. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF THE NOTIFICATION.

WHERE THE OWNER HAS NOT REMOVED THEIR LANDSCAPING, THE CONTRACTOR SHALL CONTINUE WORK PER PLAN AS SCHEDULED. THE LANDSCAPING WILL BE REMOVED BY THE CONTRACTOR AND THE AREA WILL BE RESTORED PER PLANS AND SPECIFICATIONS.

DRAINAGE
THE CONTRACTOR SHALL MAINTAIN DRAINAGE OF THE PROJECT AREA AND ADJACENT AREAS. WHERE EXISTING DRAINAGE FACILITIES ARE DISTURBED OR BLOCKED BY CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY PROVISIONS FOR DRAINAGE.

WHERE CONSTRUCTION HAS DISTURBED EXISTING DITCHES, SWALES, OR OTHER DRAINAGE FACILITIES; THE CONTRACTOR SHALL RESTORE THEM TO THEIR GRADES AND DIMENSIONS WHICH EXISTED PRIOR TO THE BEGINNING OF CONSTRUCTION, UNLESS DIRECTED OTHERWISE.

DRAINAGE SHALL NOT BE REROUTED ONTO ADJACENT PROPERTIES NOR ALLOWED TO DRAIN ONTO ADJACENT PROPERTIES AT AN INCREASED RATE, AS A RESULT OF THE CONTRACTOR'S WORK.

ROAD PROJECTS

ADJUSTING STRUCTURES
WHERE CASTINGS FOR MANHOLES, CATCH BASINS, INLETS, VALVE BOXES, AND MONUMENT BOXES ARE TO BE ADJUSTED TO MEET A NEW PAVEMENT SURFACE ELEVATION, THE FINAL ADJUSTMENT SHALL NOT BE COMPLETED UNTIL ALL PAVEMENT COURSES HAVE BEEN PLACED EXCEPT THE FINAL COURSE. THE FINAL ADJUSTMENT SHALL BE COMPLETED JUST PRIOR TO PLACEMENT OF THE FINAL COURSE OF PAVEMENT.

THE MATERIALS AND PROCEDURES FOR ADJUSTING STRUCTURES SHALL MEET THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION OVER THE ROAD AND UTILITIES.

SUBGRADE PREPARATION
TOPSOIL, PEAT, AND ORGANIC MATERIAL SHALL BE EXCAVATED AND REMOVED.

SOFT AND YIELDING SOILS SHALL BE REMOVED OR DRIED IF THE RESULT OF EXCESSIVE MOISTURE CONTENT.

PRIOR TO CONSTRUCTING FILLS, SUBBASE, OR PAVEMENT ON A SUBGRADE; THE SUBGRADE SHALL BE PROOF-ROLLED TO DETERMINE THE SUITABILITY OF THE SUBGRADE. THE CONTRACTOR SHALL DRIVE A HEAVY PIECE OF WHEELED CONSTRUCTION EQUIPMENT OVER THE SUBGRADE WHILE THE ENGINEER IS OBSERVING. THE CONSTRUCTION OF FILLS, SUBBASE, OR PAVEMENTS SHALL NOT PROCEED UNTIL THE SUBGRADE HAS BEEN DEMONSTRATED TO BE FREE OF SOFT AREAS.

THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE MOISTURE CONTENT OF SUBGRADE SOILS WITHIN A SUITABLE RANGE TO ALLOW FOR COMPACTION TO THE REQUIRED DENSITY. WHEN THE SOIL IS TOO DRY, THE CONTRACTOR SHALL ADD WATER. WHEN THE SOIL IS TOO WET, THE CONTRACTOR SHALL PROVIDE DRAINAGE OR AERATE THE SOIL.

THE SURFACE OF THE SUBGRADE SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT, PRIOR TO CONSTRUCTING FILLS, SUBBASE, OR PAVEMENTS.

CURB AND GUTTERS
THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DIMENSIONS OF CURB OPENINGS FOR DRIVEWAYS, RAMPS, AND DRAINAGE STRUCTURES.

HOT MIX ASPHALT (HMA) PAVING
PAVEMENTS WHICH ARE TO BE OVERLAID WITH A NEW PAVEMENT COURSE SHALL BE SWEPT TO REMOVE ALL DIRT AND DEBRIS.

A BITUMINOUS BOND COAT SHALL BE APPLIED TO PAVEMENTS WHICH ARE TO BE OVERLAID WITH A NEW PAVEMENT COURSE AND ALLOWED TO CURE PRIOR TO CONSTRUCTING THE NEW PAVEMENT COURSE.

HMA PAVEMENT SHALL NOT BE PLACED WHEN THE SURFACE BEING OVERLAID IS WET, OR WHEN RAIN IS FORECAST OR THREATENING.

DRIVEWAY CONSTRUCTION
DRIVEWAY SLOPES SHALL NOT EXCEED 10%, EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE ON THE PLANS OR DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL PROVIDE PROPERTY OWNERS WITH SUITABLE NOTICE BEFORE REMOVING AND REPLACING AN EXISTING DRIVEWAY.

STORM SEWER CONSTRUCTION NOTES
DRAINAGE STRUCTURES SHALL BE CONSTRUCTED FROM PRECAST CONCRETE MANHOLE SECTIONS, MEETING ASTM C478.

SUMPS IN DRAINAGE STRUCTURES AND PIPELINES SHALL BE FREE OF SEDIMENT AND DEBRIS AT THE TIME OF ACCEPTANCE BY THE OWNER.

Sewer, Cl A, __ inch Tr Det __ SHALL BE PLASTIC PIPE MEETING ASTM 2881 OR AASHTO M330. SEWER SHALL BE MANDREL TESTED AND MDOT FORM 1975 SHALL BE COMPLETED.

CULVERT NOTES
PIPE MATERIAL SHALL BE PLASTIC PIPE MEETING ASTM F2881 OR AASHTO M330. CULVERTS SHALL BE MANDREL TESTED AND MDOT FORM 1975 SHALL BE COMPLETED.

PERMANENT PAVEMENT MARKINGS
ALL PERMANENT PAVEMENT MARKINGS WILL BE PLACED BY OTHERS FOLLOWING THE COMPLETION OF CONSTRUCTION.

MAINTAINING TRAFFIC
AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED DURING WORKING HOURS ON POSEYVILLE ROAD USING TRAFFIC REGULATOR CONTROL OR LANE SHIFTS WHILE WORK IS BEING PERFORMED IN ACCORDANCE WITH MDOT MAINTAINING TRAFFIC TYPICAL M0150A.

SHOULDER CLOSURES IN ACCORDANCE WITH MDOT MAINTAINING TRAFFIC TYPICAL M0120A SHALL BE USED DURING WORK ACTIVITIES THAT DO NOT REQUIRE A LANE CLOSURE.

AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE OPEN AT ALL TIMES WHILE NO WORK IS BEING PERFORMED.

MISCELLANEOUS QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Mobilization, Max 10%	LSUM	1
Ditch Cleanout	Sta	10
Embankment, CIP	Cyd	3440
Excavation, Earth	Cyd	10832
Non Haz Contaminated Material Handling and Disposal, LM	Cyd	50
Subgrade Undercutting, Type II	Cyd	100
Maintenance Gravel	Ton	100
Sump Pump Lead and Drain Tile Connection	Ft	50
Underdrain, Subbase, 6 inch	Ft	100
Channelizing Device, 42 inch, Furn	Ea	150
Channelizing Device, 42 inch, Oper	Ea	150
Lighted Arrow, Type C, Furn	Ea	2
Lighted Arrow, Type C, Oper	Ea	2
Minor Traf Devices	LSUM	1
Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp	Ft	828
Plastic Drum, High Intensity, Furn	Ea	50
Plastic Drum, High Intensity, Oper	Ea	50
Sign, Type B, Temp, Prismatic, Furn	Sft	432
Sign, Type B, Temp, Prismatic, Oper	Sft	432
Traf Regulator Control	LSUM	1
Turf Establishment, Performance	Syd	24053

Know what's **below.**
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PLAN SUBMITTALS AND CHANGES
BIDDING DOCUMENTS

DATE	DESCRIPTION
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PLAN DATE: JUNE 2018
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REVIEWER: ENJ
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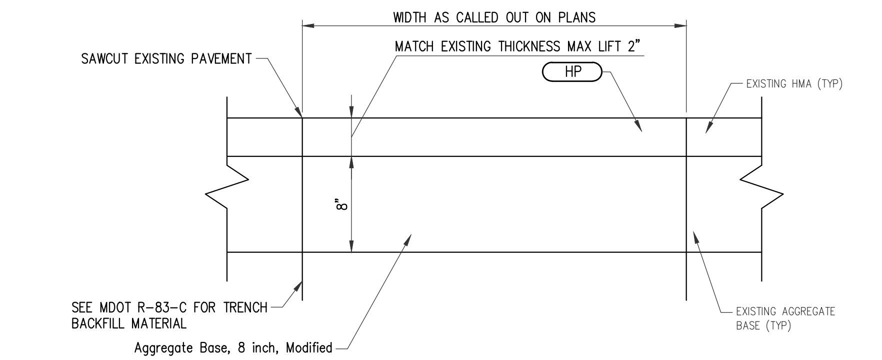
PREPARED FOR
MIDLAND COUNTY ROAD COMMISSION
POSEYVILLE RD SAFETY IMPROVEMENTS

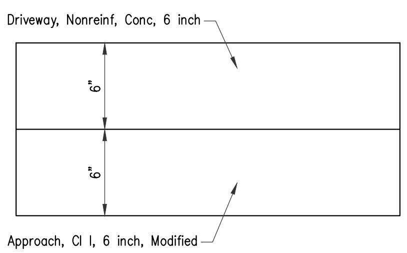
NOTE SHEET

REV:

JOB No: 17M0088



STORM SEWER TRENCH DETAIL
NO SCALE



CONCRETE DRIVEWAY SECTION
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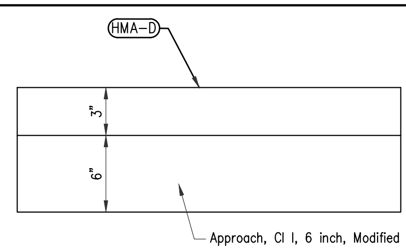

HMA DRIVEWAY SECTION
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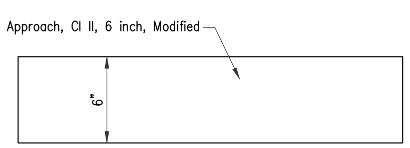
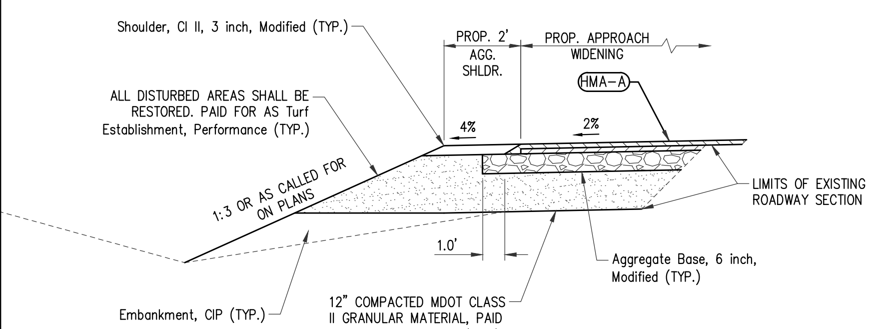
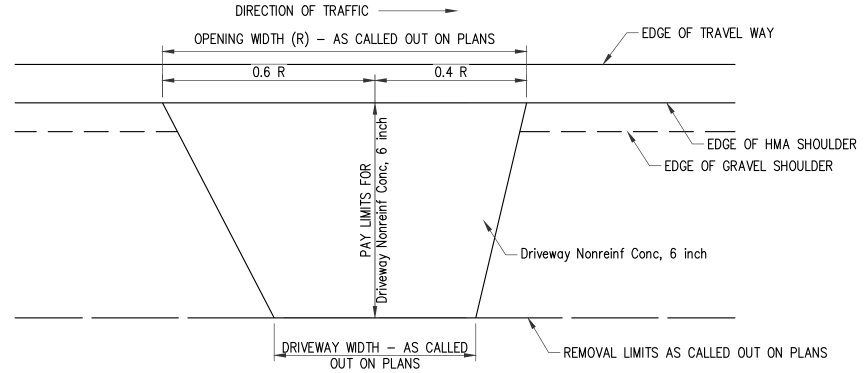


AGGREGATE DRIVEWAY SECTION
NO SCALE



APPROACH WIDENING
NO SCALE



CONCRETE DRIVEWAY DETAIL
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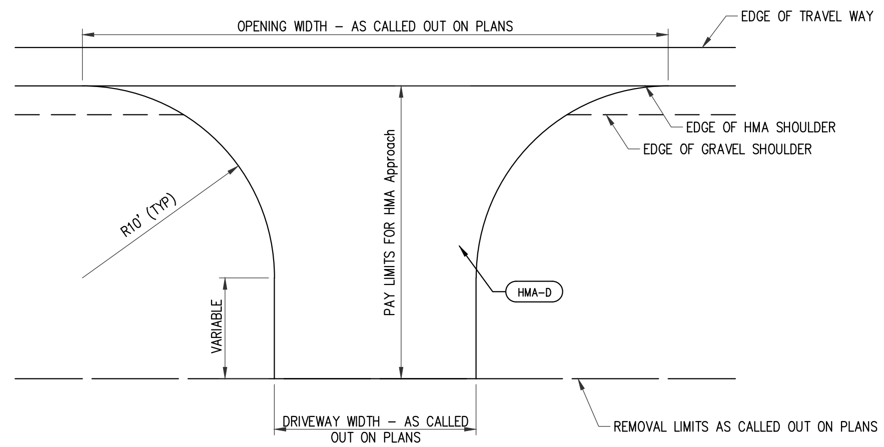
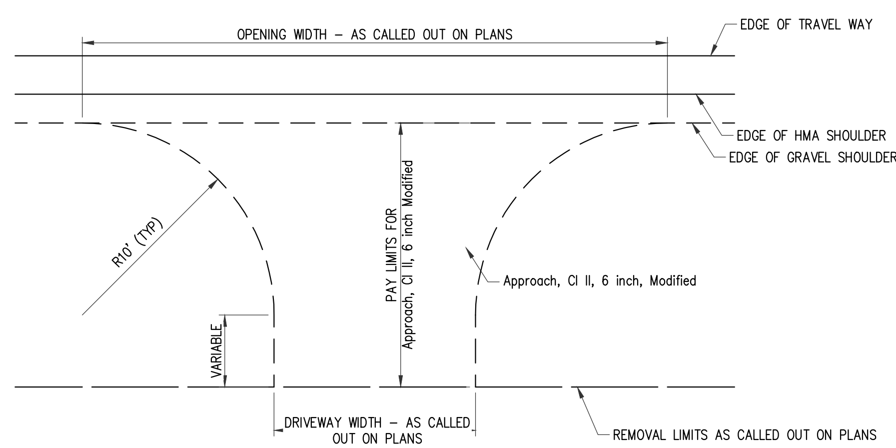
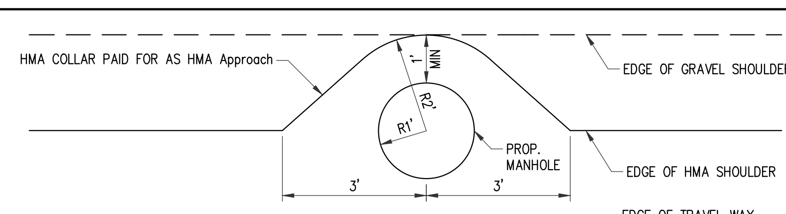


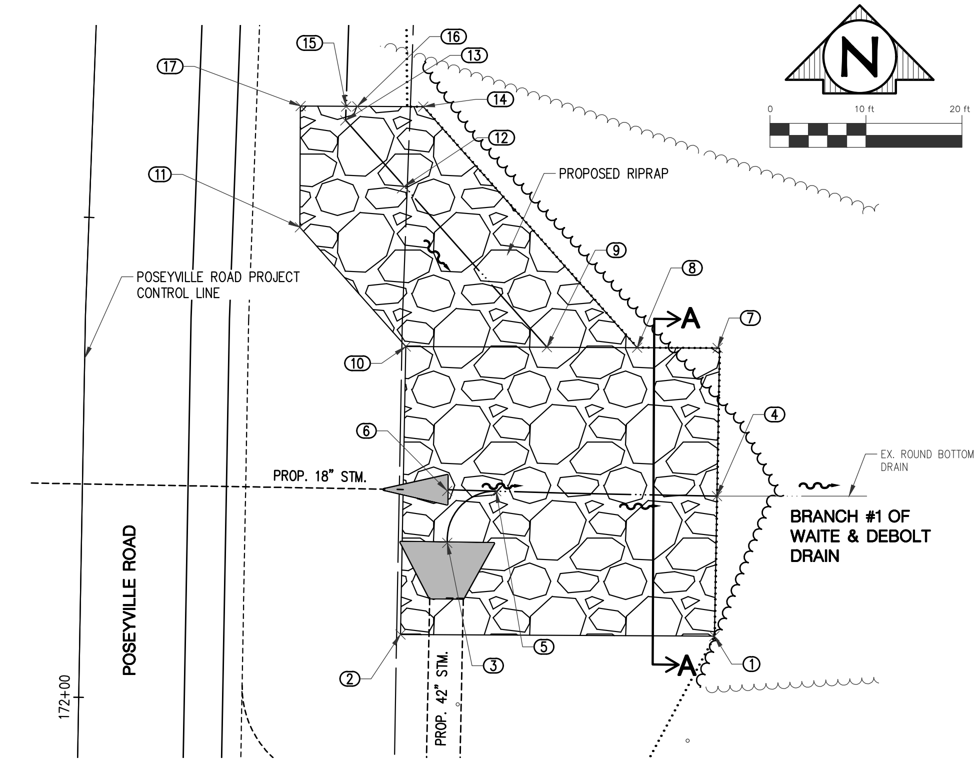
HMA DRIVEWAY DETAIL
NO SCALE



AGGREGATE DRIVEWAY DETAIL
NO SCALE



SHOULDER MANHOLE HMA COLLAR DETAIL
NO SCALE



POINT	DESCRIPTION	STATION	OFFSET	ELEVATION
1	T/RR	172+07.57	66.09, R	629.78
2	T/RR	172+07.14	33.40, R	629.84
3	T/RR	172+16.78	38.09, R	625.66
4	T/RR	172+22.14	66.09, R	624.61
5	T/RR	172+22.25	43.10, R	625.56
6	T/RR	172+22.19	37.99, R	626.17
7	T/RR	172+37.57	65.89, R	630.12
8	T/RR	172+37.46	57.51, R	630.30
9	T/RR	172+37.34	48.11, R	627.40
10	T/RR	172+37.14	33.40, R	629.00
11	T/RR	172+49.79	21.97, R	629.66
12	T/RR	172+54.43	32.68, R	627.65

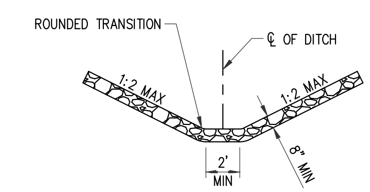
GRADING TABLE

POINT	DESCRIPTION	STATION	OFFSET	ELEVATION
13	T/RR	172+61.08	26.30, R	627.75
14	T/RR	172+62.82	34.34, R	630.47
15	T/RR	172+62.54	26.32, R	627.77
16	T/RR	172+62.60	27.48, R	627.77
17	T/RR	172+62.41	21.60, R	629.64

GRADING TABLE

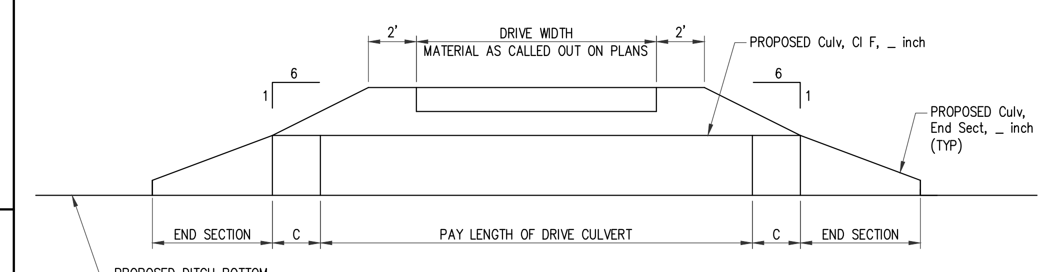
LEGEND

T/RR – TOP OF RIP RAP



SECTION A-A

STA 172+22 RT RIPRAP GRADING DETAIL
SCALE: 1"=10'



TYPICAL DRIVE CULVERT CROSS SECTION
NO SCALE

SEE STANDARD PLANS R-86-E AND R-88-D FOR C LENGTHS

811 Know what's **below.** **Call** before you dig.

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PREPARED FOR
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POSEYVILLE RD SAFETY IMPROVEMENTS

DETAIL SHEET

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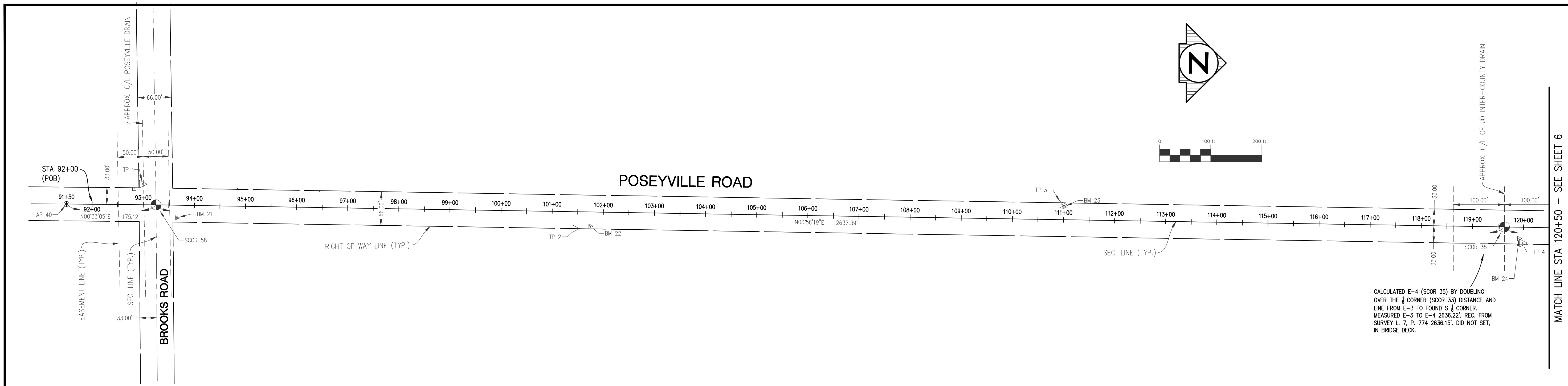
PLOTTED: 7/2/2018 8:30 AM

REV:

SHT# 4 OF 45

JOB No: 17M0088



CONTROL TABLE - POSEYVILLE ROAD PROJECT CONTROL LINE

BENCHMARK DATA TABLE

NUMBER	NORTHING	EASTING	ELEVATION	STATION	OFFSET	DESCRIPTION
BM 21	743345	13154584	640.38	93+66.17	24.87' RT	FND. R/R SPIKE IN W. SIDE OF P. POLE, NE QUAD BROOKS & POSEYVILLE ROADS
BM 22	744153	13154600	638.55	101+74.88	27.69' RT	SET R/R SPIKE IN W. SIDE OF P. POLE, E. SIDE OF POSEYVILLE ROAD, 900'± N. OF BROOKS ROAD
BM 23	745079	13154563	636.23	111+00.01	24.82' LT	TOP N. END OF 12" RCP CULVERT, W. DITCH OF POSEYVILLE ROAD, 1800'± N. OF BROOKS ROAD
BM 24	745970	13154624	637.75	119+91.31	22.01' RT	TOP NE CORNER OF NE WINGWALL OF BRIDGE OVER JO INTER-COUNTY DRAIN
BM 25	746858	13154649	646.57	128+79.85	31.38' RT	SET NAIL IN W. SIDE OF L. POLE, NE QUAD OF BEECHWOOD DRIVE AND POSEYVILLE ROAD
BM 26	747879	13154605	643.30	138+99.66	30.10' LT	SET R/R SPIKE IN E. SIDE OF P. POLE, W. SIDE OF POSEYVILLE ROAD, 85'± N. OF MCKINLEY ROAD
BM 27	749043	13154683	636.10	150+64.77	27.98' RT	SET NAIL IN W. SIDE OF P. POLE, E. SIDE OF POSEYVILLE ROAD, 27'± S. OF DRIVE TO HSE #1945
BM 28	750083	13154725	631.71	161+05.71	52.01' RT	TOP SW COR. OF CONC. BASE FOR POSEYVILLE UNITED METHODIST CHURCH
BM 29	751200	13154673	629.44	172+21.81	20.57' LT	TOP W. END OF 12" RCP, 25'± SW OF 1/4 COR. E-2
BM 30	752300	13154760	630.29	183+23.87	26.32' RT	SET R/R SPIKE W. SIDE OF P. POLE, E. SIDE OF POSEYVILLE ROAD, 30'± S. OF C/L DAVID STREET EXT.
BM 31	753153	13154741	629.23	191+75.57	24.07' LT	TOP OF 1/2" REROD IN MIDDLE OF HEADWALL, N. SIDE OF DRIVE TO HSE #1586
BM 32	753888	13154760	624.85	199+08.60	42.62' LT	TOP NE COR. OF PAD FOR PHONE RISER, SW QUAD OF POSEYVILLE & GORDONVILLE ROADS

TRAVERSE POINT DATA TABLE

NUMBER	NORTHING	EASTING	STATION	OFFSET	DESCRIPTION
TP 1	743277.2882	13154518.1116	92+97.84	40.28' LT	SET IRON W/ "ROWE TRAV" CAP, SW QUAD. BROOKS & POSEYVILLE ROADS, 25'± S. & 39'± W. OF C/L INT., 9'± WNW OF P. POLE
TP 2	744123.1824	13154605.1435	101+44.78	33.07' RT	FND. IRON W/ CAP #41105, E. R/W OF POSEYVILLE ROAD, NW PROP. COR. HOUSE #2425, 850'± N. OF BROOKS ROAD
TP 3	745075.5179	13154557.8584	110+96.21	29.81' LT	SET IRON W/ "ROWE TRAV" CAP, W. SIDE OF POSEYVILLE ROAD, 3' N. OF PINE TREE LINE, 6'± S. OF PHONE RISER
TP 4	745976.5277	13154633.2517	119+98.35	30.79' RT	SET IRON W/ "ROWE TRAV" CAP, NE QUAD OF POSEYVILLE ROAD AND JO INTER-COUNTY DRAIN, 6'± ESE OF END GUARDRAIL POST
TP 5	746822.1582	13154581.3238	128+42.98	35.42' LT	SET IRON W/ "ROWE TRAV" CAP, 11'± S. OF C/L OF BEECHWOOD DR., AT TOP OF BANK, W. SIDE OF POSEYVILLE ROAD
TP 6	747809.1502	13154666.5702	138+31.28	33.12' RT	FND. PIPE W/ CAP #16409, NE QUAD OF MCKINLEY & POSEYVILLE ROADS, 7'± ESE OF STOP SIGN
TP 7	748973.3141	13154676.0664	149+95.46	22.54' RT	SET IRON W/ "ROWE TRAV" CAP,11'± E. OF E. EDGE OF BIT FOR POSEYVILLE ROAD, AT C/L EXT. OF DRIVE TO HSE #1954
TP 8	750082.8202	13154693.9522	161+05.11	20.54' RT	SET IRON W/ "ROWE TRAV" CAP, 10.5'± E. OF E. EDGE OF BIT POSEYVILLE ROAD, W. OF UNITED METHODIST CHURCH SIGN
TP 9	751200.9891	13154663.4669	172+22.55	29.98' LT	SET IRON W/ "ROWE TRAV" CAP, 35'± SW OF 1/4 COR. E-2, 9'± W. OF 12" RCP
TP 10	752182.5718	13154755.8602	182+06.31	26.31' RT	SET IRON W/ "ROWE TRAV" CAP, E. SIDE OF POSEYVILLE ROAD, 135'± S. OF C/L DAVID STREET
TP 11	753074.2726	13154741.3016	190+96.86	21.29' LT	SET IRON W/ "ROWE TRAV" CAP, 9'± W. OF W. EDGE BIT FOR POSEYVILLE ROAD, 65'± S. OF DRIVEWAY TO HSE #1586, 12'± NE OF P. POLE
TP 12	753906.1090	13154765.5771	199+27.21	38.79' LT	SET IRON W/ "ROWE TRAV" CAP, 8.5'± W. OF S. END B/C SW QUAD OF POSEYVILLE & GORDONVILLE ROADS

ALIGNMENT POINT DATA TABLE

NUMBER	NORTHING	EASTING	STATION	OFFSET	DESCRIPTION
AP 40	743129.0625	13154556.9631	91+50.00	0.00' RT	POINT OF BEGINNING, POSEYVILLE ROAD CENTERLINE ALIGNMENT
AP 41	753481.3356	13154777.7027	195+04.99	0.00' RT	POINT OF CURVATURE, POSEYVILLE ROAD CENTERLINE ALIGNMENT
AP 42	753972.5742	13154810.7221	199+97.41	0.00' RT	POINT OF TANGENT, POSEYVILLE ROAD CENTERLINE ALIGNMENT
AP 43	754087.0112	13154821.8759	201+12.39	0.00' RT	POINT OF CURVATURE, POSEYVILLE ROAD CENTERLINE ALIGNMENT
AP 44	754906.7967	13154862.4991	209+33.49	0.00' RT	POINT OF TANGENT & ENDING, POSEYVILLE ROAD CENTERLINE ALIGNMENT

SECTION CORNER DATA TABLE

NUMBER	NORTHING	EASTING	STATION	OFFSET	DESCRIPTION
QCOR 50	756612.2181	13154865.6815	N/A	N/A	E-12, T14N-R2E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
SCOR 51	753975.8063	13154860.7618	200+05.48	49.49' RT	E-13, T14N-R2E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
SCOR 52	753975.2856	13154796.0225	199+98.69	14.89' LT	E-1, T13N-R2E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
QCOR 53	754000.8825	13157498.0812	202+45.11	2673.28' RT	F-13, T14N-R2E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
QCOR 54	754000.5117	13157425.4708	202+40.27	2600.94' RT	F-1, T13N-R2E, MIDLAND COUNTY, FND. 1/2" IRON IN MON. BOX
QCOR 55	753940.0792	13152156.2435	197+78.22	2642.68' LT	D-13, T14N-R2E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
QCOR 56	751217.7817	13154693.7514	172+39.88	0.00' RT	E-2, T13N-R2E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
SCOR 57	748577.0550	13154646.4239	145+98.73	0.00' RT	E-3, T13N-R2E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
SCOR 58	743304.1740	13154558.6486	93+25.12	0.00' RT	E-5, T13N-R2E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
QCOR 59	740666.3723	13154533.2585	N/A	N/A	E-6, T13N-R2E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
QCOR 60	743323.1879	13157197.4163	93+87.36	2638.10' RT	F-5, T13N-R2E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
QCOR 61	743264.9772	13151917.8888	92+60.51	2640.26' LT	D-5, T13N-R2E, MIDLAND COUNTY, FND. REMON. MON. IN MON. BOX
QQCOR 33	747259.1330	13154624.1410	132+80.62	0.00' RT	NORTH 1/8 COR. ON SEC. LINE COMMON TO SECTIONS 8 & 9, T13N-R2E, MIDLAND COUNTY, FND. 1/2" IRON IN MON. BOX
QCOR 35	745941.2110	13154601.8581	119+62.51	0.00' RT	E-4, T13N-R2E, MIDLAND COUNTY, CALCULATED POSITION BY DOUBLING OVER 1/8 COR. TO NORTH

SURVEY NOTES

1. HORIZONTAL DATUM: NAD83/CORS2011, MICHIGAN COORDINATE SYSTEM, SOUTH ZONE
2. VERTICAL DATUM: NAVD88, PER OPUS SOLUTION
3. GRID DISTANCES SHOWN, ACSF=0.99994981

LEGEND

BENCHMARK
ALIGNMENT POINT
TRAVERSE POINT
SECTION CORNER

Know what's **below.**
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POSEYVILLE RD SAFETY IMPROVEMENTS
STA 92+00 (P.O.B.) TO STA 120+50
ALIGNMENT & CONTROL SHEET

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F: (989) 773-7757
www.rowepsc.com

PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: JR
SCALE: 1" = 100'

REV:

JOB No: 17M0088

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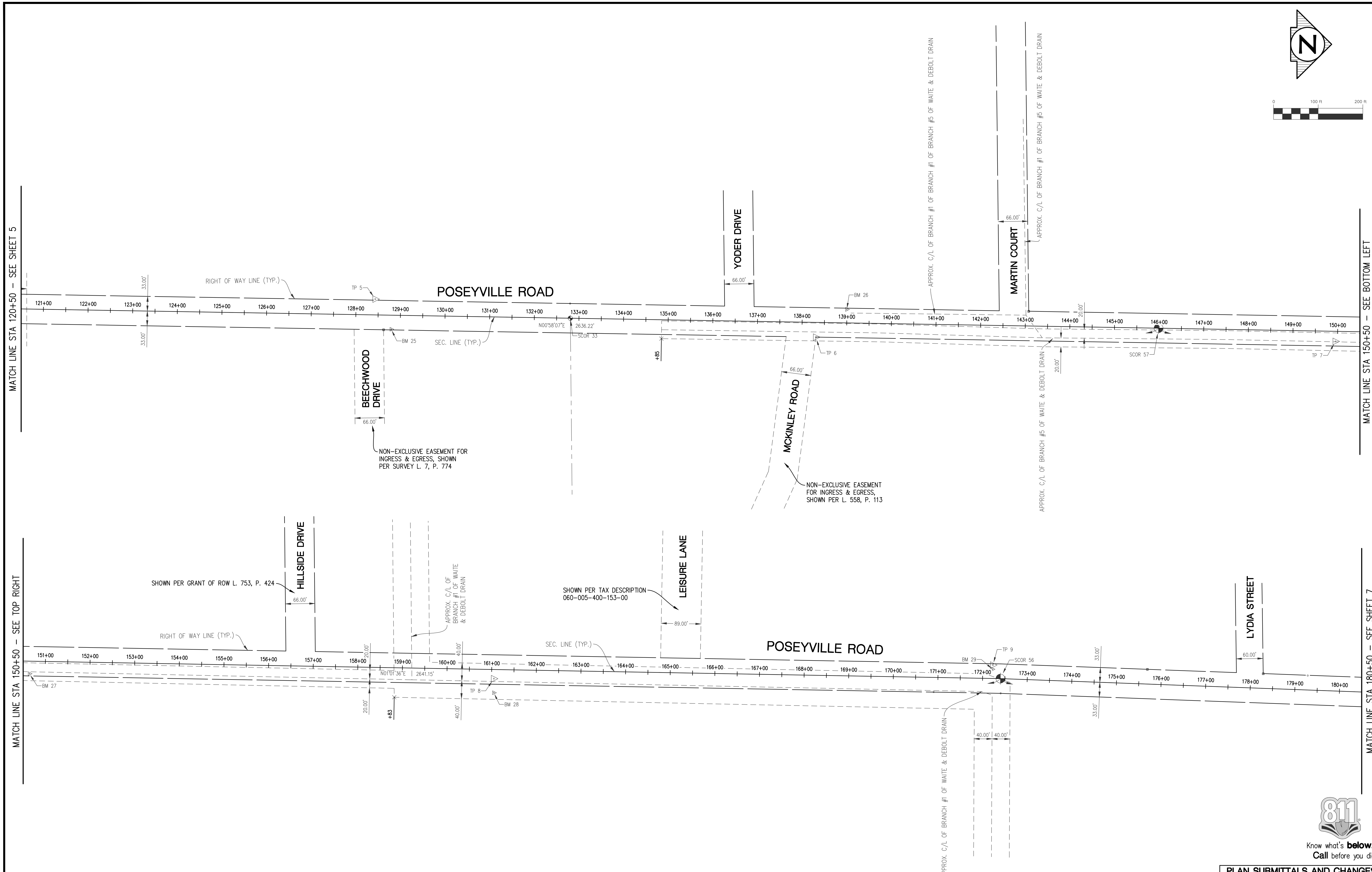

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STA 120+50 TO STA 180+50
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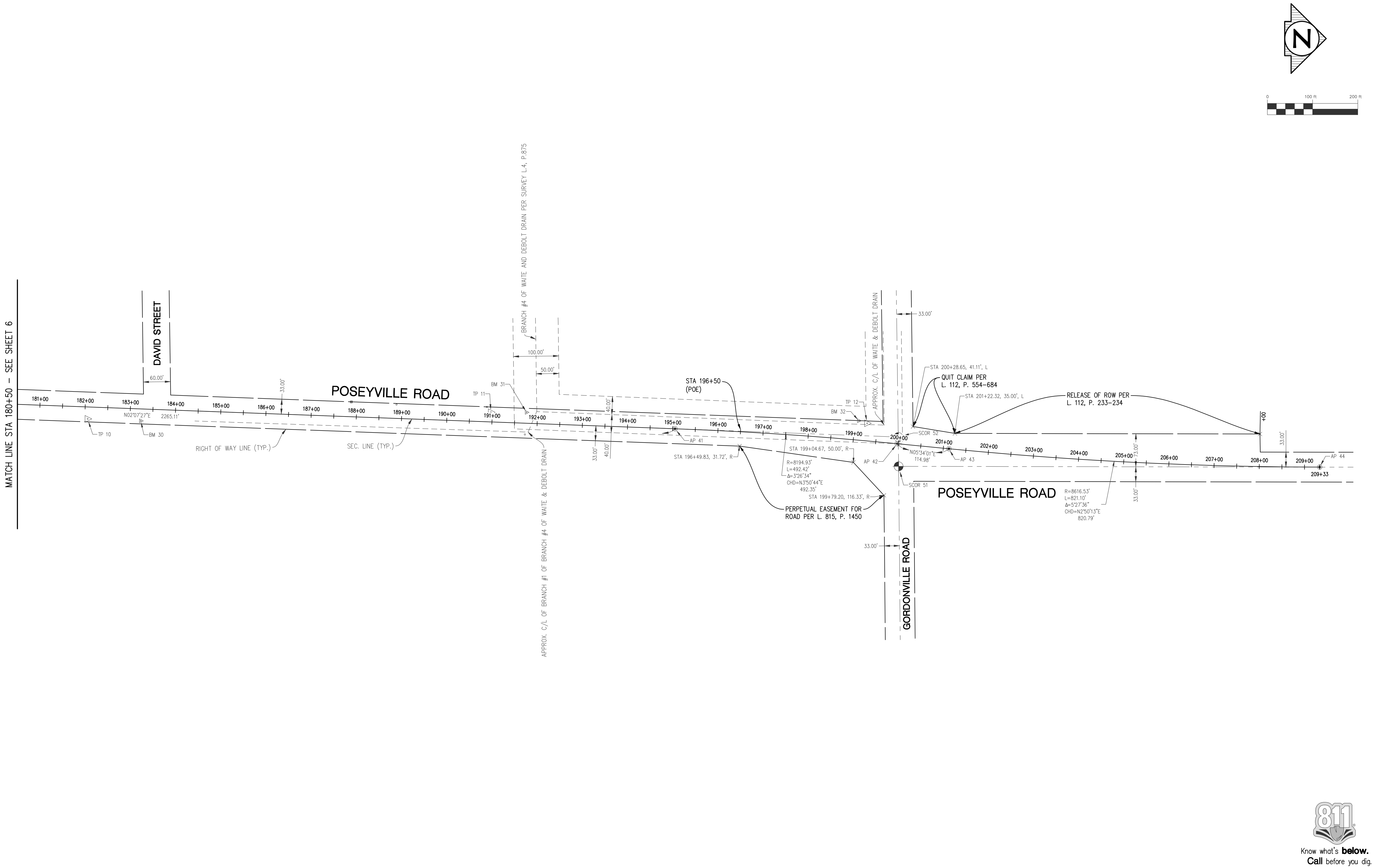
REV:

SHT# 6 OF 45
JOB No: 17M0088



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SCALE: 1" = 100'

ROWE PROFESSIONAL SERVICES COMPANY

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POSEYVILLE RD SAFETY IMPROVEMENTS
STA 180+50 TO STA 196+50 (P.O.E.)
ALIGNMENT & CONTROL SHEET

R:\Projects\17M0088\Dwg\Construction Drawings\SH-17M0088-CT.dwg

PLAN SUBMITTALS AND CHANGES

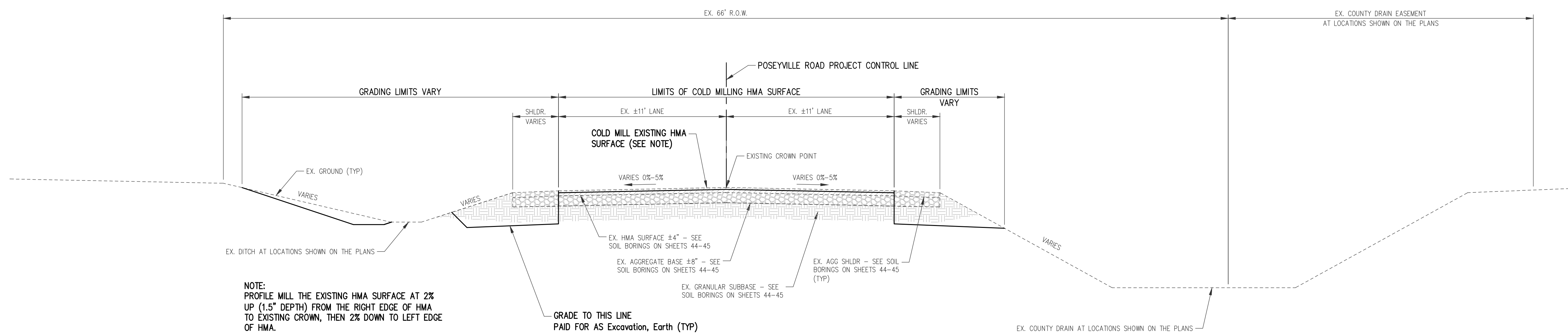
BIDDING DOCUMENTS

DATE	DESCRIPTION
6/22/18	ISSUED FOR BIDS

REV:

JOB No: 17M0088

PLOTTED: 7/2/2018 8:31 AM



EXISTING TYPICAL CROSS SECTION

APPLIES:
STA 92+00 (P.O.B.) TO STA. 118+50
STA 120+75 TO STA 196+50 (P.O.E.)

Know what's **below.**
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PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
6/22/18	ISSUED FOR BIDS

PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
SCALE: NO SCALE

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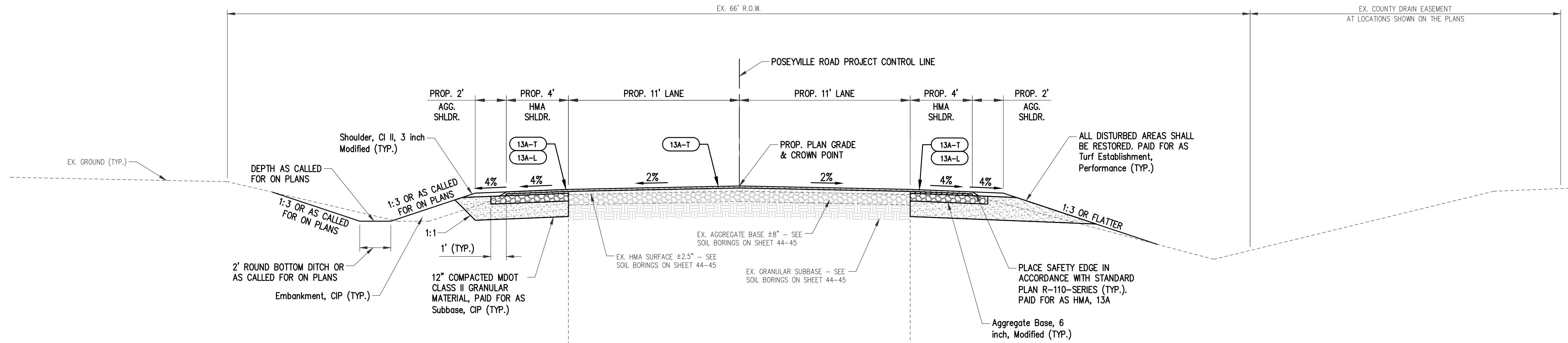
TYPICAL SHEET

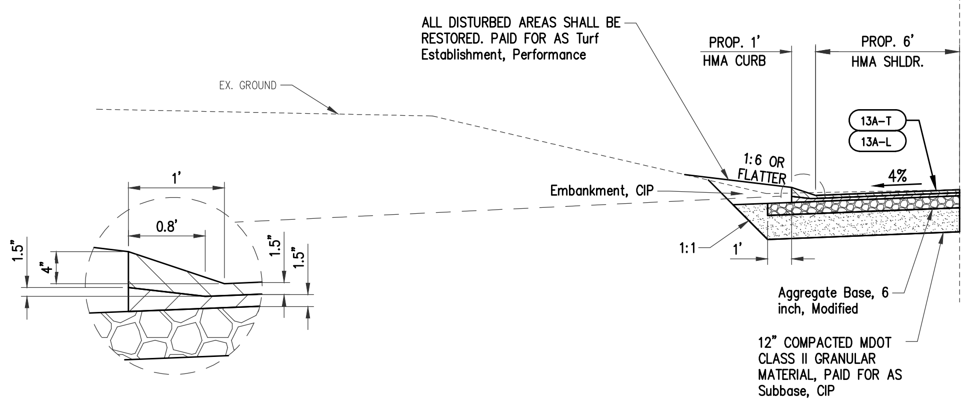
REV:

JOB No: 17M0088



PROPOSED TYPICAL CROSS SECTION

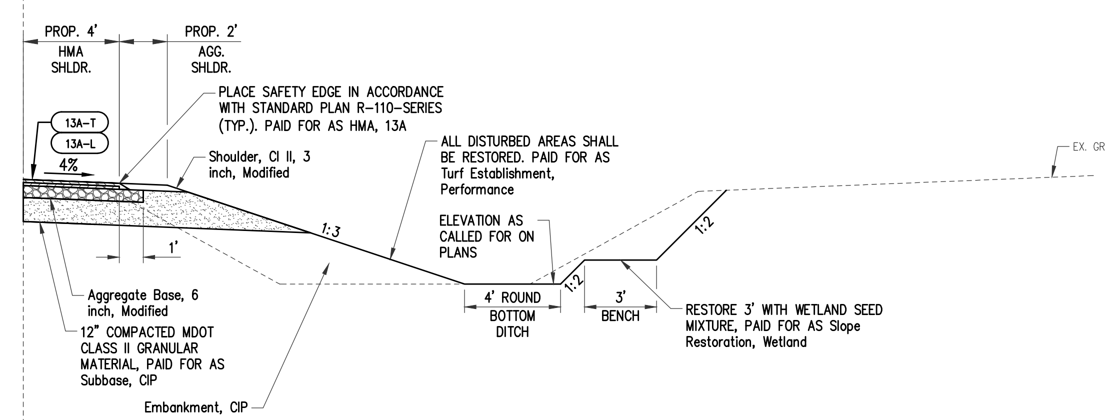
APPLIES:
STA 92+00 (P.O.B.) TO STA 118+50
STA 120+75 TO STA 196+50 (P.O.E.)



PROPOSED HMA CURB SECTION

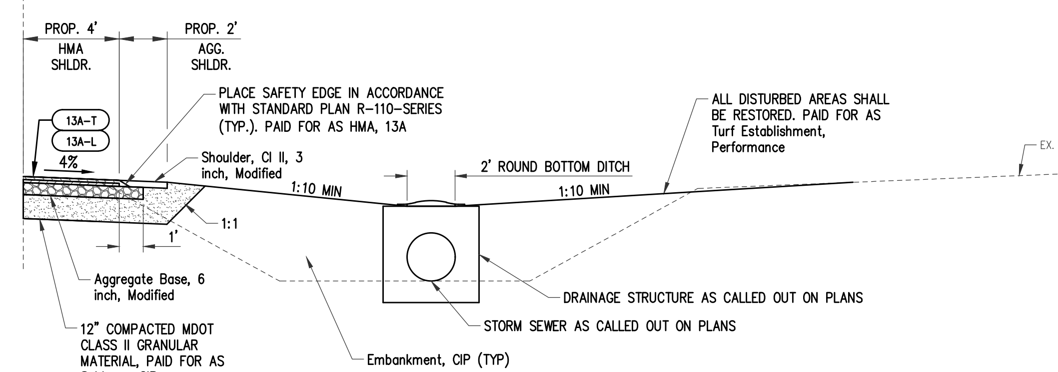
APPLIES:
STA 126+50 L TO STA 132+00 L
STA 192+12 R TO STA 196+23 R

NOTE: CONFIGURATION OF HMA CURB IN LEVELING COURSE MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER. PAID FOR AS Curb Sloped, HMA AND HMA, 13A



PROPOSED SLOPE FLATTENING SECTION

APPLIES:
STA 166+03 TO STA 171+33



PROPOSED DITCH ENCLOSURE SECTION

APPLIES:
STA 162+80 TO STA 164+62

HMA APPLICATION CHART

IDENT NO	ITEM	HMA PAVEMENT	RATE OF APPLICATION	ESTIMATED THICKNESS	PERFORMANCE GRADE	COMMENTS
13A-T	HMA, 13A	HMA, 13A	165#/SYD	1.5"	58-28	TOP COURSE (AWI=220 MINIMUM)
13A-L	HMA, 13A	HMA, 13A	165#/SYD	1.5"	58-28	LEVELING COURSE
HMA-A	HMA Approach	HMA, 13A	–	–	58-28	MATCH MAINLINE APPLICATION RATES FOR INTERSECTIONS
HMA-D	HMA Approach	HMA, 13A	330#/SYD	3.0"	58-28	HMA, 13A IN 2 LIFTS AT @ 165#/SYD FOR DRIVEWAYS
HP	Hand Patching	HMA, 13A	VARIES	VARIES	58-28	Hand Patching FOR STORM TRENCH REPAIRS (2" MAX LIFT, 2" MIN LIFT)
–	HMA BOND COAT	–	0.05-0.15 GAL	–	–	NOT A PAY ITEM; FOR INFORMATION ONLY

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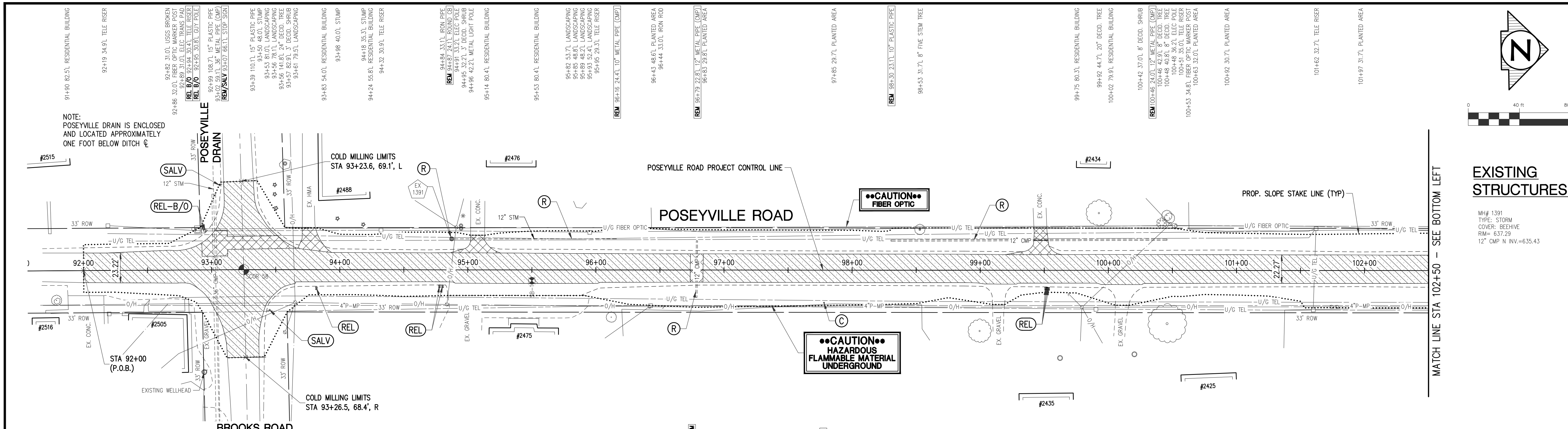

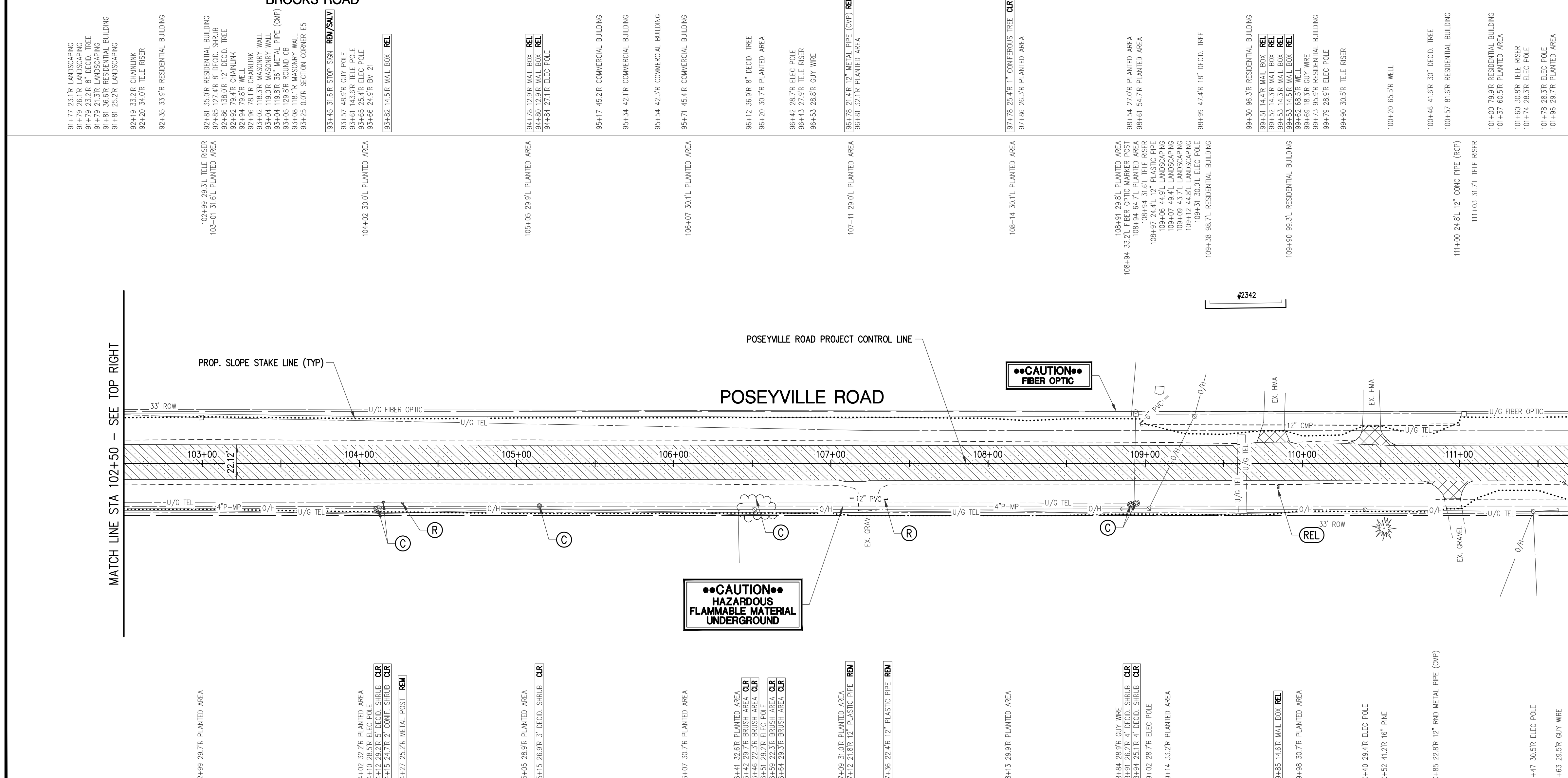

SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Clearing	Acre	0.01
Culv, Rem, Less than 24 inch	Ea	3
Dr Structure, Rem	Ea	1
Sewer, Rem, Less than 24 inch	Ft	129
Pavt, Rem	Syd	12
Cold Milling HMA Surface	Syd	5636
HMA Surface, Rem	Syd	271
Post, Mailbox	Ea	9
Sign, Type III, Rem	Ea	4

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PLAN SUBMITTALS AND CHANGES

BIDDING DOCUMENTS

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PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
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SCALE: 1" = 40'

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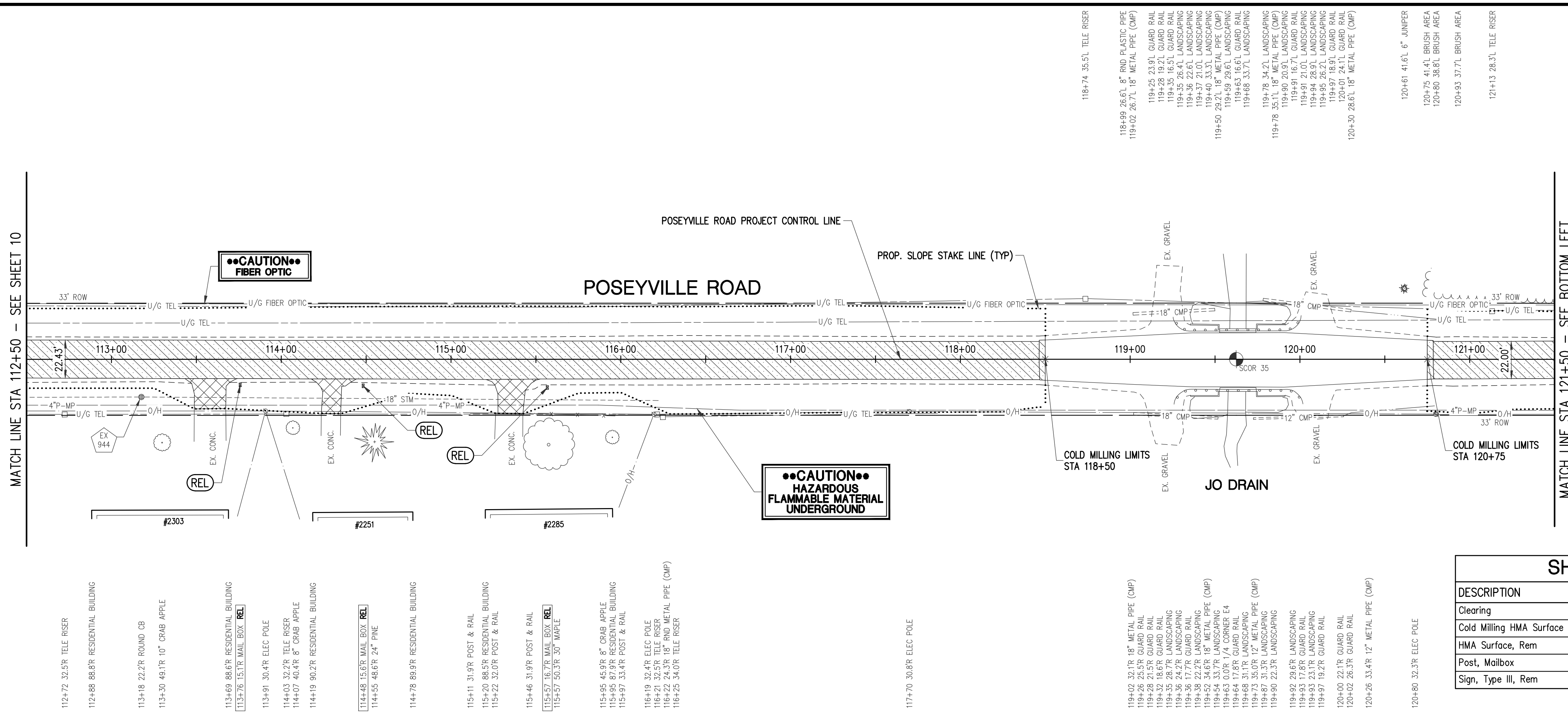
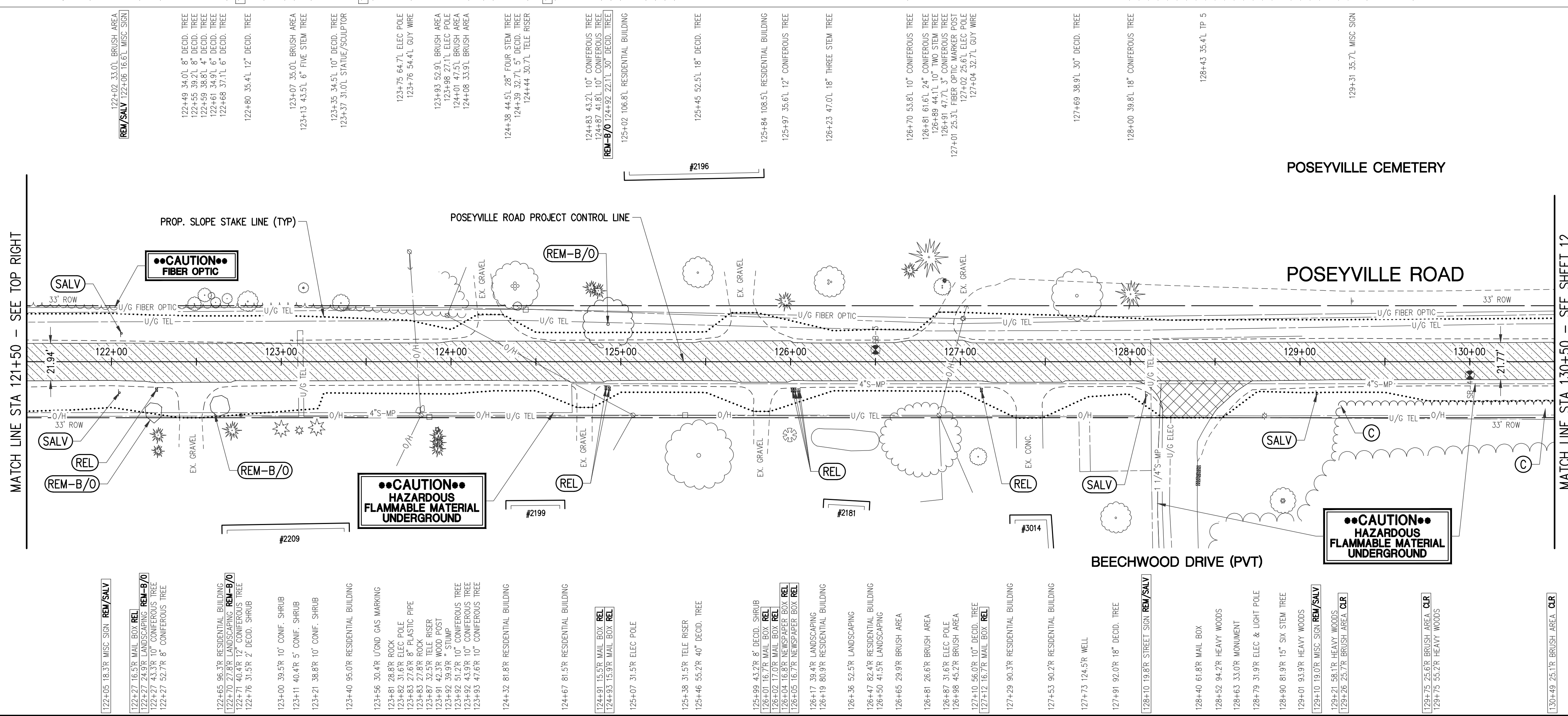
92+00 (P.O.B.) TO STA 112+50
REMOVAL SHEET

REV:

JOB No: 17M0088





EXISTING STRUCTURES

MH# 944
TYPE: STORM
COVER: SOLID
RIM= 636.67
6" SLC S INV.=634.17
6" SLC N INV.=634.17

SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Clearing	Acre	0.03
Cold Milling HMA Surface	Syd	3938
HMA Surface, Rem	Syd	212
Post, Mailbox	Ea	11
Sign, Type III, Rem	Ea	4

Know what's **below.**
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PLAN SUBMITTALS AND CHANGES

BIDDING DOCUMENTS

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REVIEWER: ENJ
SCALE: 1" = 40'

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STA 112+50 TO STA 130+50
REMOVAL SHEET

REV:

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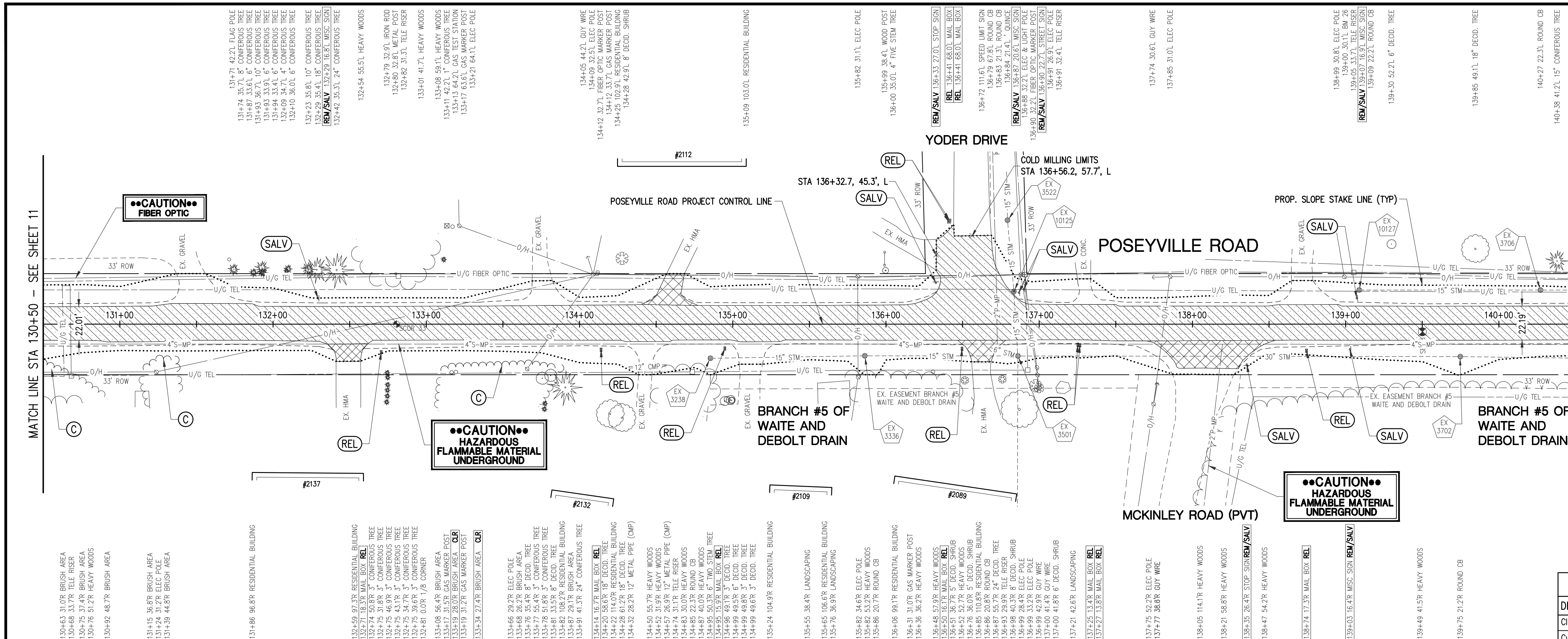

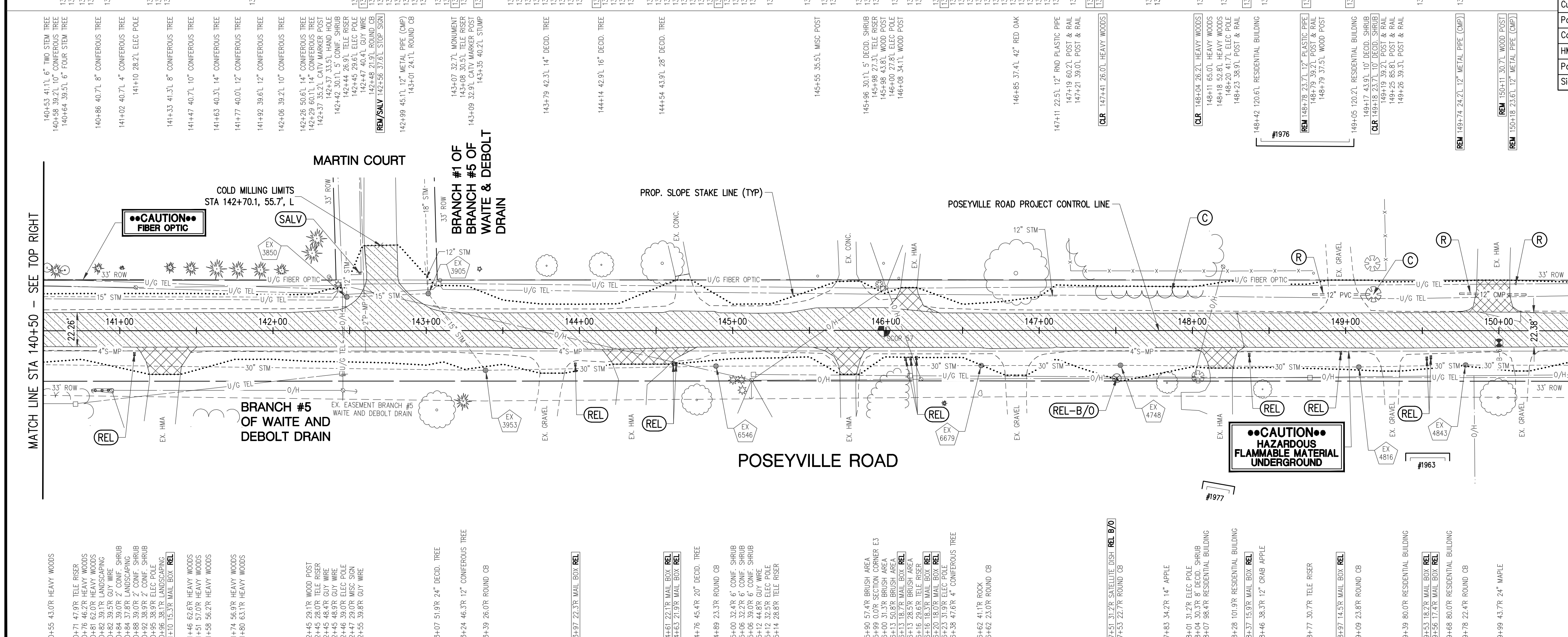

0 40 ft 80 ft

EXISTING STRUCTURES

MH# 3238
TYPE: STORM
COVER: BEEHIVE
RIM= 639.75
15" RCP N INV.=631.90

MH# 3336
TYPE: STORM
COVER: BEEHIVE
RIM= 641.06
15" RCP S INV.=631.66
15" RCP N INV.=631.66

MH# 3501
TYPE: STORM
COVER: BEEHIVE
RIM= 641.60
2" PVC S INV.=638.30
15" RCP W INV.=631.90
15" RCP E INV.=631.15
15" RCP S INV.=630.95
30" RCP N INV.=630.25

MH# 3522
TYPE: STORM
COVER: BEEHIVE
RIM= 640.40
15" RCP W INV.=632.40
15" RCP E INV.=632.30

MH# 3702
TYPE: STORM
COVER: BEEHIVE
RIM= 640.19
30" RCP S INV.=630.14
30" RCP N INV.=630.04

MH# 3706
TYPE: STORM
COVER: BEEHIVE
RIM= 639.52
15" RCP S INV.=633.42
15" RCP N INV.=633.37

MH# 10125
TYPE: STORM
COVER: BEEHIVE
RIM= 642.82
15" RCP E INV.=631.97
15" RCP W INV.=632.22

MH# 10127
TYPE: STORM
COVER: FLAT GRATE
RIM= 640.02
15" RCP N INV.=634.22

SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Clearing	Acre	0.03
Culv, Rem, Less than 24 inch	Ea	2
Pavt, Rem	Syd	81
Cold Milling HMA Surface	Syd	5436
HMA Surface, Rem	Syd	383
Post, Mailbox	Ea	20
Sign, Type III, Rem	Ea	10

EXISTING STRUCTURES

MH# 3850
TYPE: STORM
COVER: FLAT GRATE
RIM= 638.49
12" RCP W INV.=635.39
15" RCP S INV.=631.44
15" RCP N INV.=631.39

MH# 3905
TYPE: STORM
COVER: BEEHIVE
RIM= 638.69
18" SLC W INV.=630.49
15" RCP S INV.=630.49
15" RCP NE INV.=630.44
12" CMP W INV.=634.74

MH# 3953
TYPE: STORM
COVER: BEEHIVE
RIM= 639.16
30" RCP S INV.=629.41
15" RCP SW INV.=629.86
30" RCP N INV.=629.36

MH# 4748
TYPE: STORM
COVER: BEEHIVE
RIM= 635.45
30" RCP N INV.=628.45
30" RCP S INV.=628.45

MH# 4816
TYPE: STORM
COVER: BEEHIVE
RIM= 634.79
30" RCP S INV.=627.99
30" RCP N INV.=627.99

MH# 4843
TYPE: STORM
COVER: BEEHIVE
RIM= 635.43
30" RCP S INV.=628.03
30" RCP N INV.=628.03

MH# 6546
TYPE: STORM
COVER: BEEHIVE
RIM= 640.36

MH# 6679
TYPE: STORM
COVER: BEEHIVE
RIM= 638.90

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PLAN SUBMITTALS AND CHANGES

BIDDING DOCUMENTS

DATE	DESCRIPTION
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PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

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STA 130+50 TO STA 150+50
REMOVAL SHEET

REV:

JOB No: 17M0088

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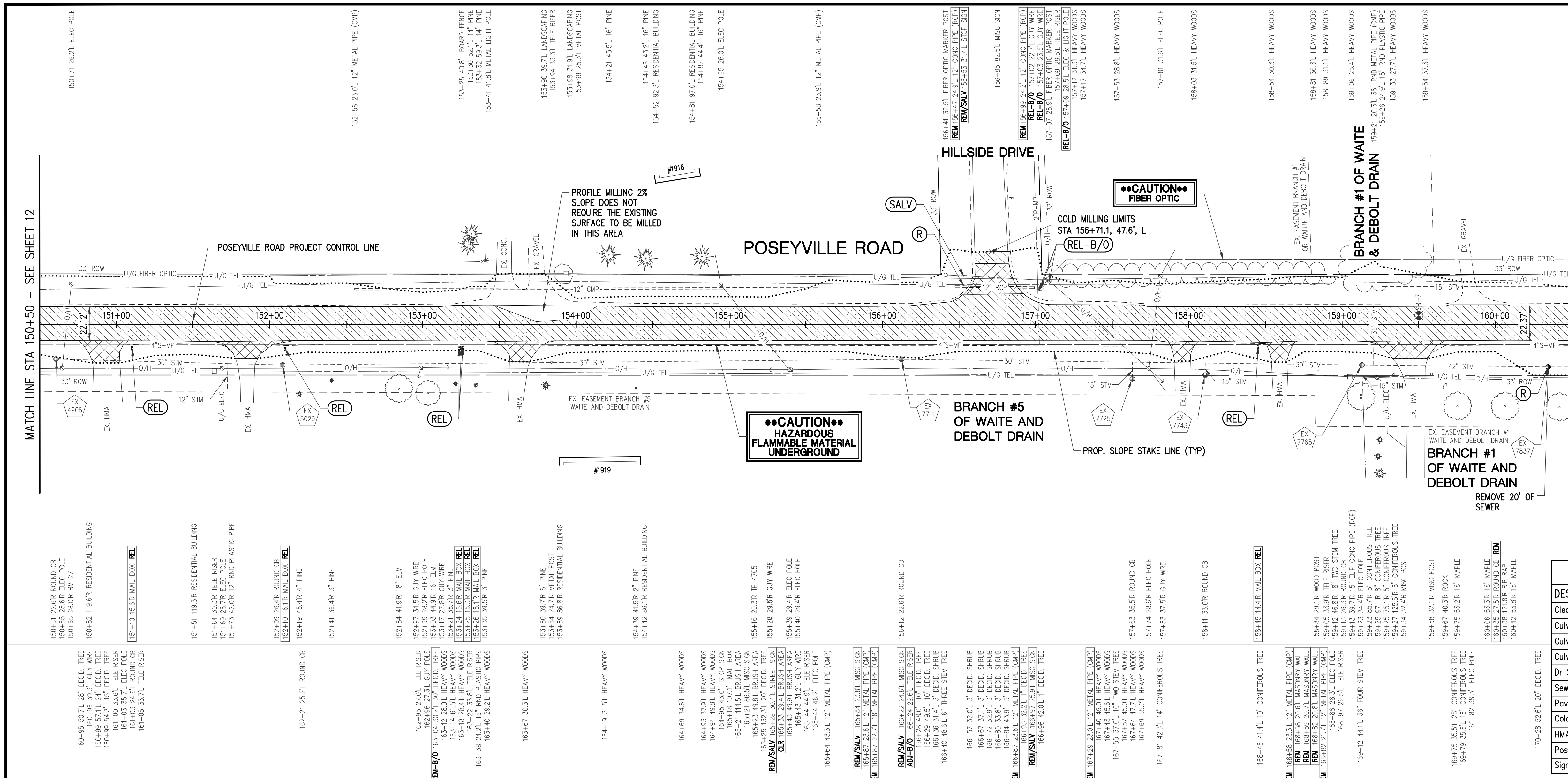

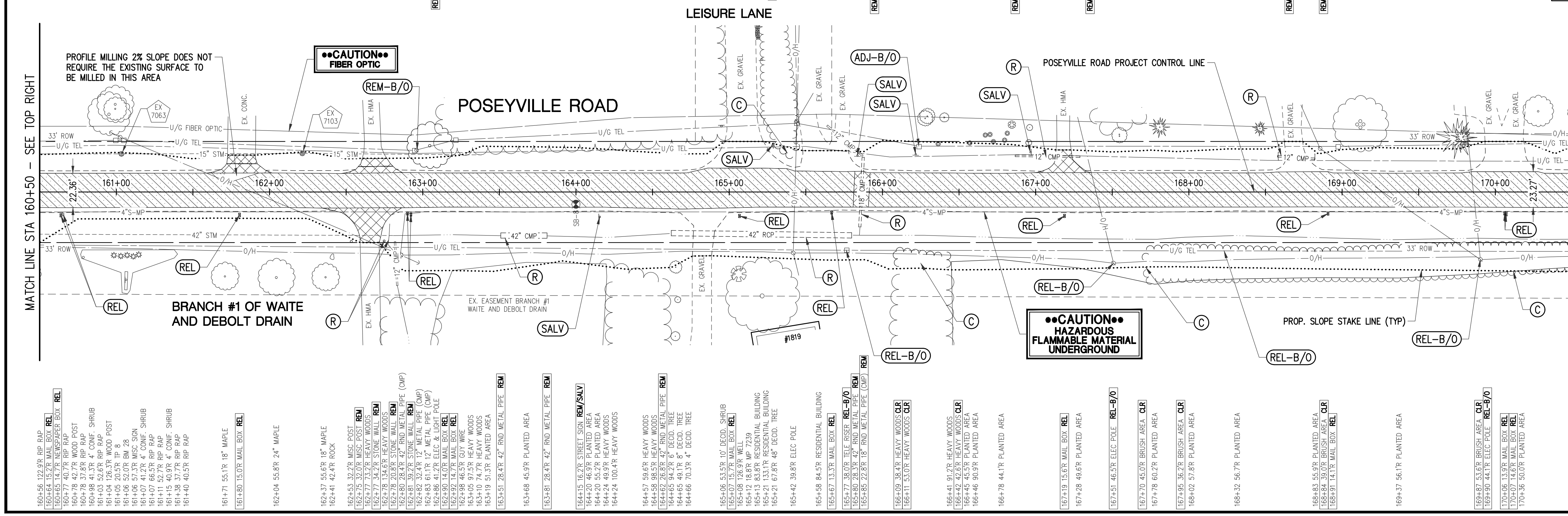

EXISTING STRUCTURES

MH# 4906
TYPE: STORM
COVER: BEEHIVE
RIM= 634.87
30" RCP S INV.=627.87
30" RCP N INV.=627.87

MH# 5029
TYPE: STORM
COVER: BEEHIVE
RIM= 634.34

MH# 7711
TYPE: STORM
COVER: BEEHIVE
RIM= 631.74
30" RCP S INV.=627.54
30" RCP N INV.=627.54

MH# 7725
TYPE: STORM
COVER: BEEHIVE
RIM= 630.37
15" RCP W INV.=627.62

MH# 7743
TYPE: STORM
COVER: BEEHIVE
RIM= 630.97

MH# 7765
TYPE: STORM
COVER: BEEHIVE
RIM= 631.49
30" RCP S INV.=626.19
42" CMP N INV.=625.89
15" RCP E INV.=627.49

MH# 7837
TYPE: STORM
COVER: SOLID
RIM= 631.40
42" CMP S INV.=625.90
42" CMP N INV.=625.90

SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Clearing	Acre	0.14
Culv, Rem, Less than 24 inch	Ea	4
Culv, Rem, 24 inch to 48 inch	Ea	2
Culv, End, Rem, 24 inch to 48 inch	Ea	1
Dr Structure, Rem	Ea	1
Sewer, Rem, 24 inch to 48 inch	Ft	20
Pavt, Rem	Syd	12
Cold Milling HMA Surface	Syd	5067
HMA Surface, Rem	Syd	393
Post, Mailbox	Ea	17
Sign, Type III, Rem	Ea	7

EXISTING STRUCTURES

MH# 7063
TYPE: STORM
COVER: FLAT GRATE
RIM= 629.65
15" SLC N INV.=627.65
15" SLC S INV.=627.65

MH# 7103
TYPE: STORM
COVER: FLAT GRATE
RIM= 629.59
15" SLC S INV.=627.99
15" SLC N INV.=627.99

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PLAN SUBMITTALS AND CHANGES

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STA 150+50 TO STA 170+50
REMOVAL SHEET

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PLAN DATE:	JUNE 2018
PROJECT MGR.:	MJS
REVIEWER:	ENJ
SCALE:	1" = 40'

REV:
SHT# 13 OF 45
JOB No: 17M0088

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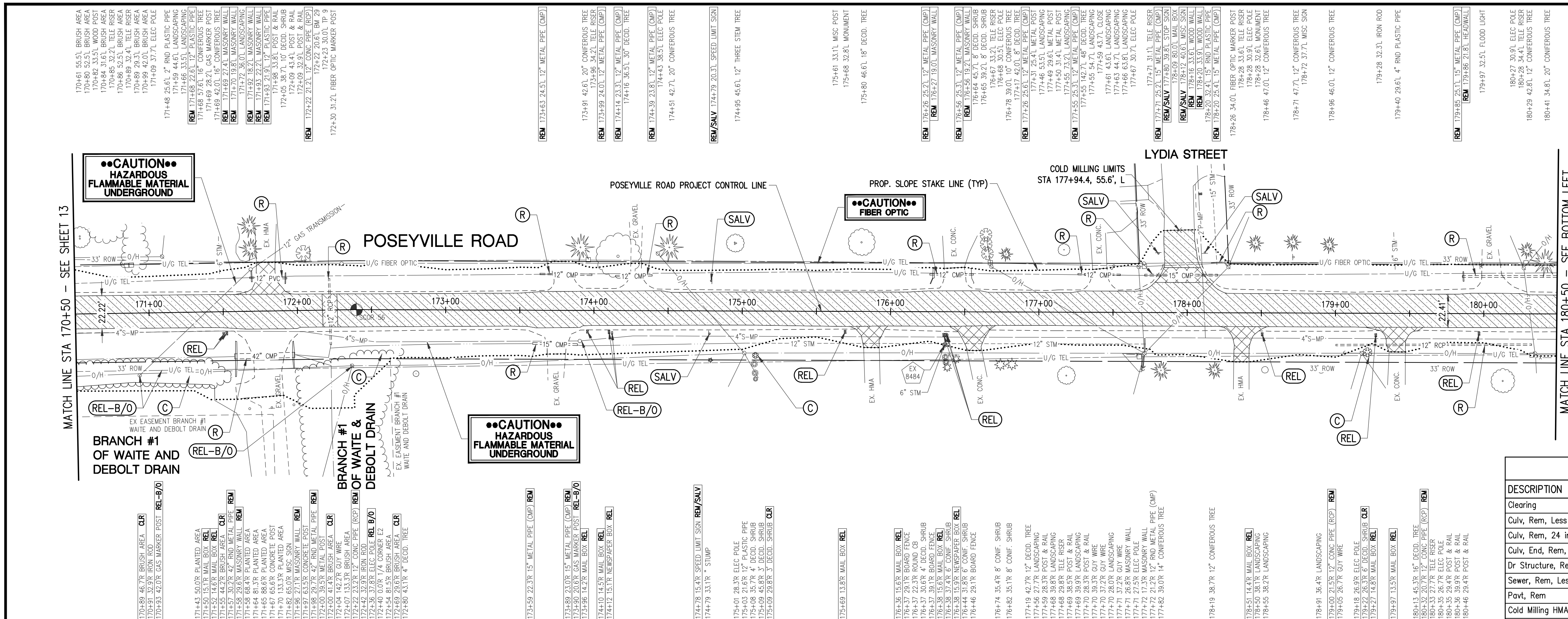

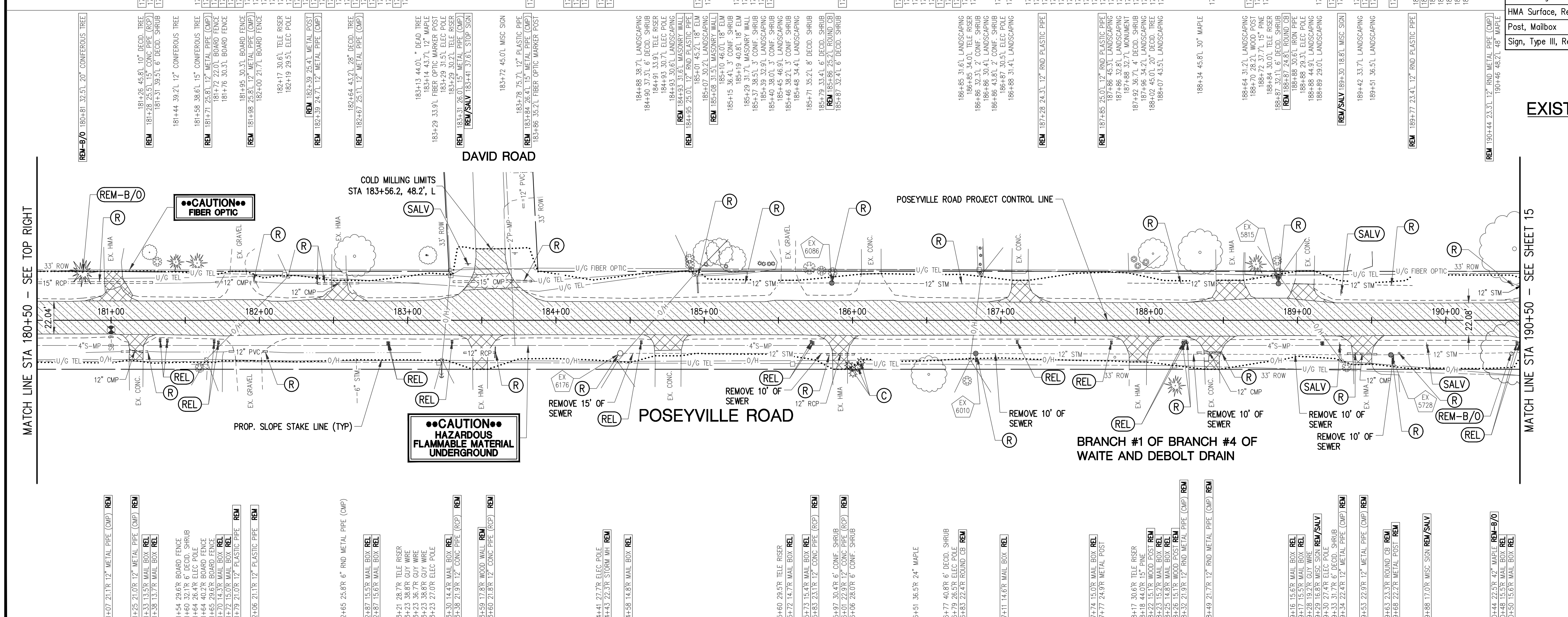

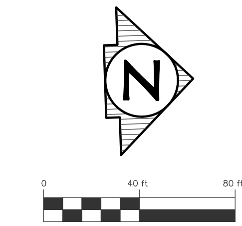

EXISTING STRUCTURES

MH# 8484
TYPE: STORM
COVER: FLAT GRATE
RIM= 631.11

SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Clearing	Acre	0.07
Culv, Rem, Less than 24 inch	Ea	19
Culv, Rem, 24 inch to 48 inch	Ea	1
Culv, End, Rem, Less than 24 inch	Ea	1
Dr Structure, Rem	Ea	5
Sewer, Rem, Less than 24 inch	Ft	491
Pavt, Rem	Syd	38
Cold Milling HMA Surface	Syd	5301
HMA Surface, Rem	Syd	580
Post, Mailbox	Ea	32
Sign, Type III, Rem	Ea	11

EXISTING STRUCTURES

MH# 5728
TYPE: STORM
COVER: BEEHIVE
RIM= 626.37
12" VCP N INV.=624.37
12" VCP S INV.=624.37

MH# 6086
TYPE: STORM
COVER: FLAT GRATE
RIM= 629.94
12" SLC N INV.=627.24
12" SLC S INV.=627.24

MH# 5815
TYPE: STORM
COVER: FLAT GRATE
RIM= 628.24
12" VCP S INV.=626.29
12" VCP N INV.=626.29

MH# 6176
TYPE: STORM
COVER: SOLID
RIM= 628.61
12" VCP N INV.=625.06

MH# 6010
TYPE: STORM
COVER: BEEHIVE
RIM= 627.63
12" RCP N INV.=624.63
12" RCP S INV.=624.73

811
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REMOVAL SHEET

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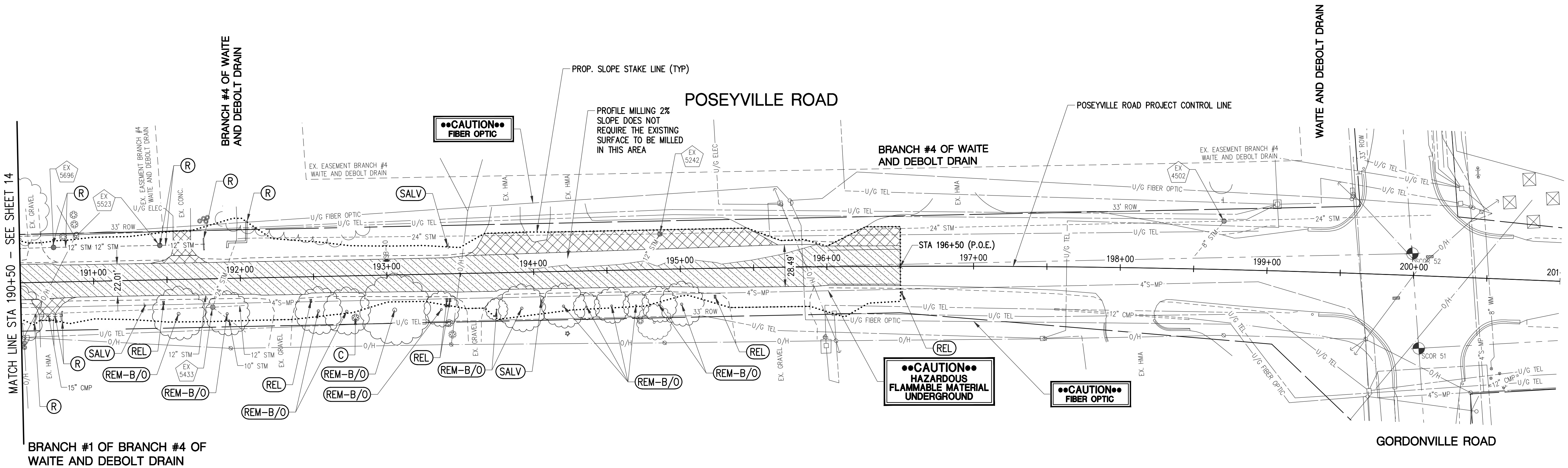
SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Culv, Rem, Less than 24 inch	Ea	1
Culv, End, Rem, 24 inch to 48 inch	Ea	2
Dr Structure, Rem	Ea	2
Sewer, Rem, Less than 24 inch	Ft	133
Pavt, Rem	Syd	24
Cold Milling HMA Surface	Syd	1426
HMA Surface, Rem	Syd	376
Post, Mailbox	Ea	6
Sign, Type III, Rem	Ea	3



EXISTING STRUCTURES

MH# 4502
TYPE: STORM
COVER: BEEHIVE
RIM= 623.66
24" RCP N INV.=618.66
8" SLC SE INV.=620.36
24" RCP S INV.=618.61

MH# 5242
TYPE: STORM
COVER: SOLID
RIM= 627.72
12" CMP SE INV.=622.22
24" RCP N INV.=621.82
24" CMP S INV.=621.72

MH# 5433
TYPE: STORM
COVER: FLAT GRATE
RIM= 628.63
10" VCP NE INV.=624.93
12" VCP SW INV.=624.93
12" VCP N INV.=623.73
24" CMP S INV.=622.93

MH# 5523
TYPE: STORM
COVER: FLAT GRATE
RIM= 628.78
12" CMP S INV.=625.78
12" CMP N INV.=625.78

MH# 5696
TYPE: STORM
COVER: FLAT GRATE
RIM= 628.28
12" CMP S INV.=626.28
12" CMP N INV.=626.28

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PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

JOB No: 17M0088

UTILITY ROAD REPAIR SCHEDULE

CROSSING STATION	AVERAGE WIDTH OF REPAIR (FT)	AVERAGE LENGTH OF REPAIR (FT)	Hand Patching (Ton)	Aggregate Base, 8 inch, Modified (Syd)
93+23	10	59	17	90
96+79	10	22	6	25

PROPOSED STORM SEWER END SECTION TABLE

STRUCT NO.	DIA.	PAY ITEM	END OF PIPE INVERT	END OF PIPE STATION	END OF PIPE OFFSET
3	15"	Culv End Sect, _ inch	15" 634.50	96+16.1	26.5 L

PROPOSED STORM SEWER PIPE TABLE

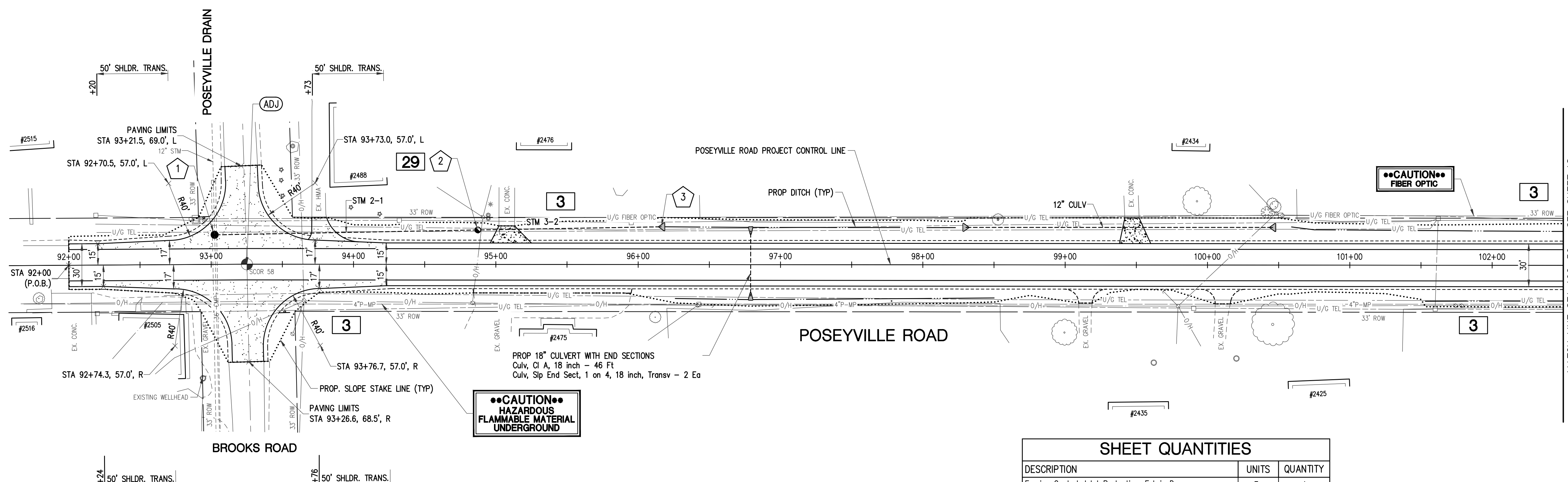
PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 2-1	15"	Sewer, Cl A, 15 inch Tr Det _	185'	0.45%	64'	121'
STM 3-2	15"	Sewer, Cl A, 15 inch Tr Det _	129'	0.36%	98'	31'

PROPOSED STORM SEWER STRUCTURE TABLE

STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	STATION	OFFSET
1 *	60"	B	RIM=638.21	15" 633.20 N (PR) 36" 633.20 W (EX) 36" 633.19 E (EX) 12" 631.28 E (EX) 12" 631.28 W (EX)	93+02.5	20.7 L
2	48"	G	RIM=637.50	15" 634.04 S (PR) 15" 634.04 N (PR)	94+87.3	24.1 L

* STRUCT NO. 1 SHALL BE CONSTRUCTED USING A SEPARATE CONCRETE BASE FOOTING, WITHOUT A SUMP, WITH A PRECAST 12" SLOT TO STRADDLE THE EX 12" STORM SEWER. THE EXISTING 12" STORM SEWER SHALL BE LEFT UNDISTURBED AND SHALL BE CONTINUOUS THROUGH STRUCTURE NO. 1

NOTE:
POSEYVILLE DRAIN IS ENCLOSED AND LOCATED APPROXIMATELY ONE FOOT BELOW DITCH ℄



SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Erosion Control, Inlet Protection, Fabric Drop	Ea	1
Subbase, CIP	Cyd	545
Aggregate Base, 6 inch, Modified	Syd	1356
Aggregate Base, 8 inch, Modified	Syd	115
Shoulder, Cl II, 3 inch, Modified	Syd	471
Approach, Cl I, 6 inch, Modified	Syd	90
Approach, Cl II, 6 inch, Modified	Syd	71
Culv End Sect, 12 inch	Ea	2
Culv End Sect, 15 inch	Ea	1
Culv, Cl A, 18 inch	Ft	46
Culv, Cl F, 12 inch	Ft	216
Culv, Slp End Sect, 1 on 4, 18 inch, Transv	Ea	2
Sewer, Cl A, 15 inch, Tr Det A	Ft	162
Sewer, Cl A, 15 inch, Tr Det B	Ft	152
Sewer Tap, 36 inch	Ea	1
Dr Structure Cover, Type B	Ea	1
Dr Structure Cover, Type G	Ea	1
Dr Structure, 48 inch dia	Ea	1
Dr Structure, 60 inch dia	Ea	1
Hand Patching	Ton	23
HMA Approach	Ton	72
HMA, 13A	Ton	337
Driveway, Nonreinf Conc, 6 inch	Syd	60
Monument Box Adjust	Ea	1

DRIVEWAY SCHEDULE

C/L DRIVEWAY STATION	EXIST. PVMT TYPE	DRIVEWAY OFFSET REMOVAL LIMITS (FT)	WIDTH AT REMOVAL LIMITS (FT)	WIDTH AT OPENING (FT)	LENGTH OF DRIVE RESTORATION (FT)	Approach, Cl I, 6 inch, Modified (Syd)	Approach, Cl II, 6 inch, Modified (Syd)	HMA Approach (Ton)	Driveway, Nonreinf Conc. 6 inch (Syd)	Culv, Cl F, 12 inch (Ft)	Culv End Sect, 12 inch (Ea)
93+76, LT	HMA	33.0	10.3	28.3	15.3	30		5			
95+07, LT	C	27.0	11.0	29.0	13.0	27			27		
95+39, RT	G	20.1	110.7	111.6	3.0		38				
99+14, RT	G	26.7	9.5	29.5	9.8		16				
99+47, LT	C	33.0	10.1	22.0	18.2	33			33	216	2
100+11, RT	G	27.3	10.5	30.7	10.3		17				

G = GRAVEL DRIVE, C = CONCRETE DRIVE, HMA = HMA DRIVE

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PLAN SUBMITTALS AND CHANGES

BIDDING DOCUMENTS

DATE	DESCRIPTION
6/22/18	ISSUED FOR BIDS

PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

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92+00 (P.O.B.) TO STA 102+50
PLAN SHEET

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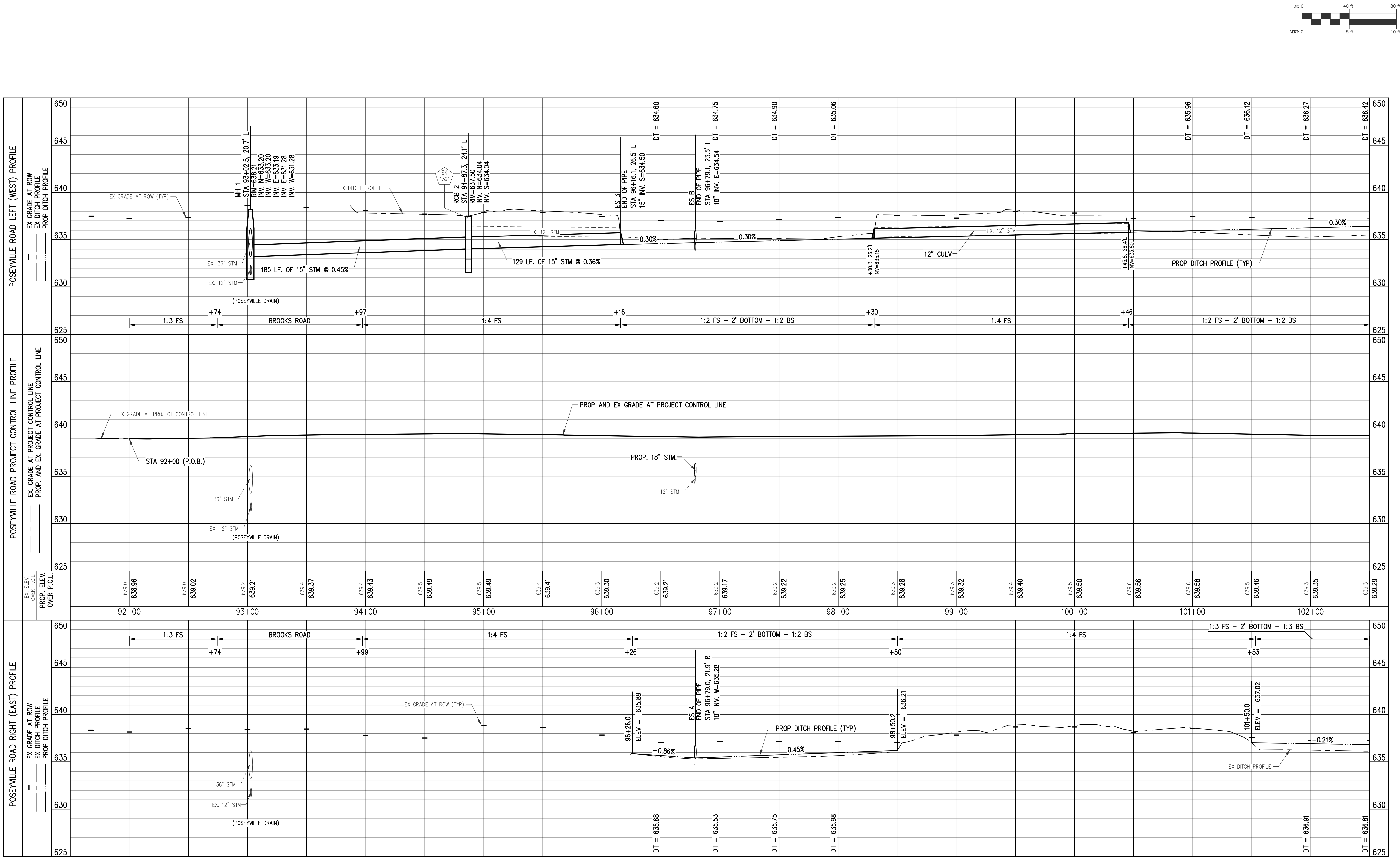

PLAN DATE: JUNE 2018
PROJECT MGR: MJS
REVIEWER: ENJ
SCALE: HORZ: 1"=40', VERT: 1"=5'

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PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
6/22/18	ISSUED FOR BIDS

REV:

SHT# 17 OF 45
JOB No: 17M0088

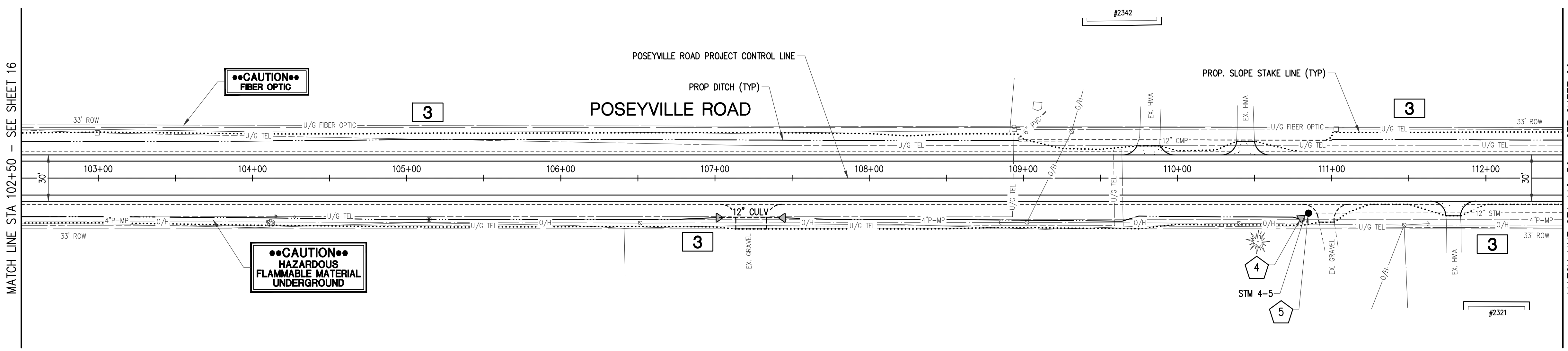
PROPOSED STORM SEWER END SECTION TABLE					
STRUCT NO.	DIA.	PAY ITEM	END OF PIPE INVERT	END OF PIPE STATION	END OF PIPE OFFSET
4	12"	Culv End Sect, _ inch	12" 635.09	110+80.6	25.6 R

PROPOSED STORM SEWER PIPE TABLE						
PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 4-5	12"	Sewer, Cl A, 12 inch Tr Det _	5'	0.20%	5'	0'

PROPOSED STORM SEWER STRUCTURE TABLE						
STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	STATION	OFFSET
5	48"	B	RIM=637.80	12" 635.08 N (EX) 12" 635.08 SE (PR)	110+84.9	22.8 R

N

0 40 ft 80 ft



SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Subbase, CIP	Cyd	519
Aggregate Base, 6 inch, Modified	Syd	1334
Shoulder, Cl II, 3 inch, Modified	Syd	432
Approach, Cl I, 6 inch, Modified	Syd	44
Approach, Cl II, 6 inch, Modified	Syd	63
Culv End Sect, 12 inch	Ea	3
Culv, Cl F, 12 inch	Ft	34
Sewer, Cl A, 12 inch, Tr Det A	Ft	5
Sewer Tap, 12 inch	Ea	1
Dr Structure Cover, Type B	Ea	1
Dr Structure, 48 inch dia	Ea	1
HMA Approach	Ton	9
HMA, 13A	Ton	349

DRIVEWAY SCHEDULE										
C/L DRIVEWAY STATION	EXIST. PVMT TYPE	DRIVEWAY OFFSET REMOVAL LIMITS (FT)	WIDTH AT REMOVAL LIMITS (FT)	WIDTH AT OPENING (FT)	LENGTH OF DRIVE RESTORATION (FT)	Approach, Cl I, 6 inch, Modified (Syd)	Approach, Cl II, 6 inch, Modified (Syd)	HMA Approach (Ton)	Culv, Cl F, 12 inch (Ft)	Culv End Sect, 12 inch (Ea)
107+24, RT	G	33.0	20.0	40.0	16.0		41		34	2
109+81, LT	HMA	20.9	15.5	34.5	5.9	13		3		
110+44, LT	HMA	23.8	11.6	31.5	8.8	16		3		
110+97, RT	G	22.4	9.8	30.5	14.6		22			
111+79, RT	HMA	24.5	9.5	29.6	9.5	15		3		

G = GRAVEL DRIVE, C = CONCRETE DRIVE, HMA = HMA DRIVE

NOTE: Culv, Cl F, _ inch VALUE INDICATES PAY LENGTH, PROFILE INDICATES ACTUAL LENGTH.

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PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
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PLAN DATE: JUNE 2018
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SCALE: 1" = 40'

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PLAN SHEET

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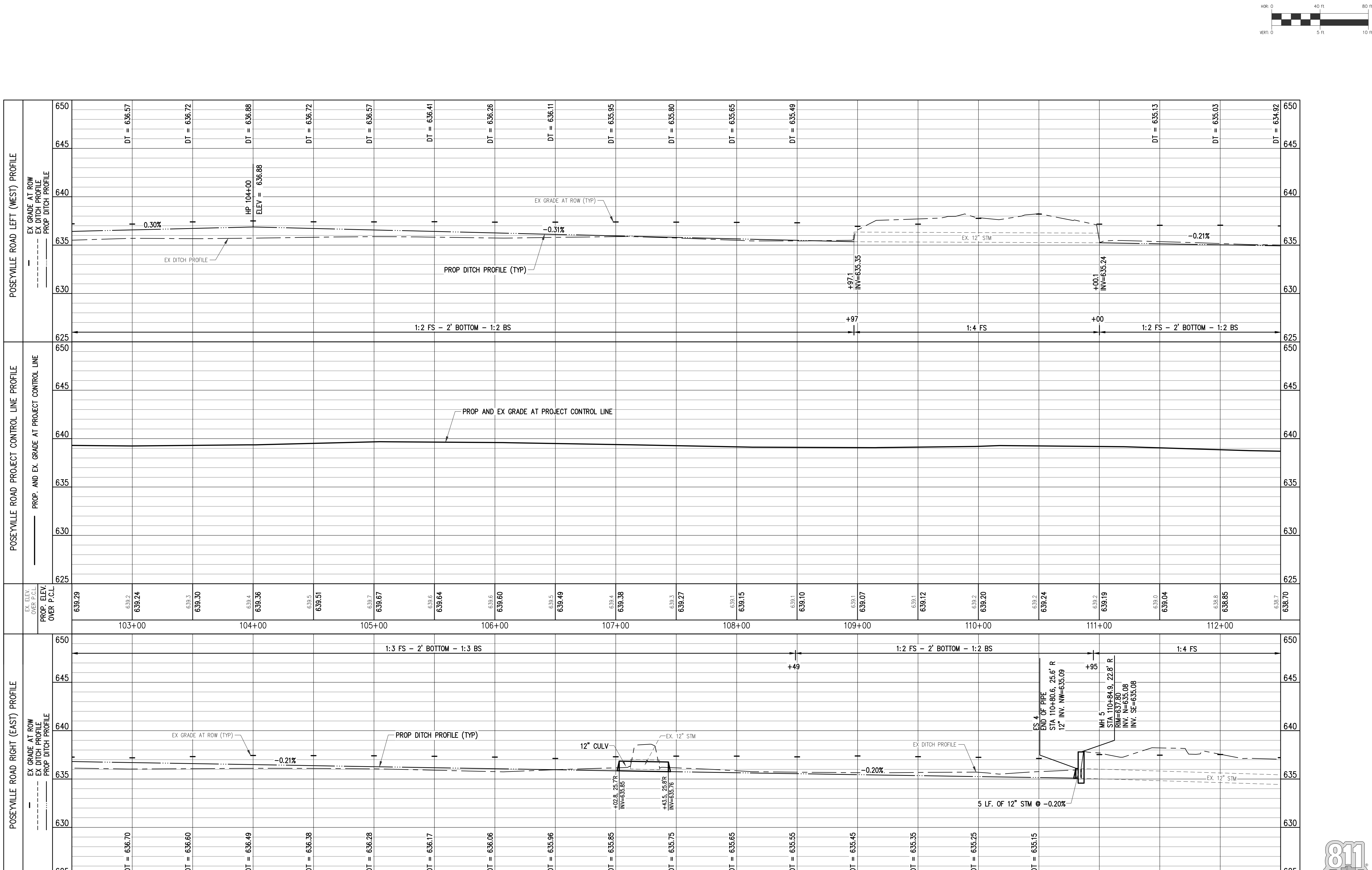

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PLAN SUBMITTALS AND CHANGES	
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DATE	DESCRIPTION
6/22/18	ISSUED FOR BIDS

PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
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JOB No: 17M0088

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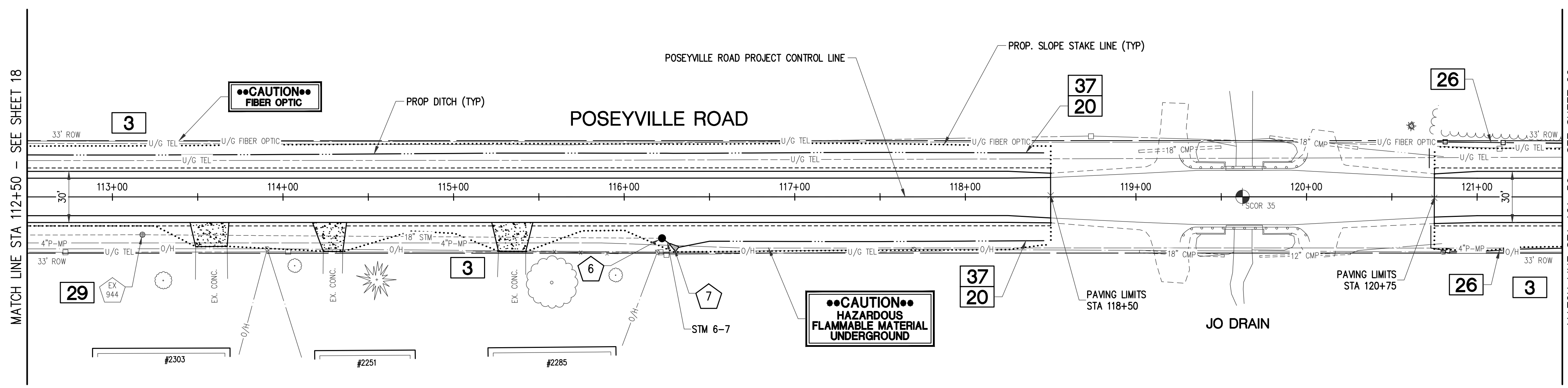
PROPOSED STORM SEWER END SECTION TABLE					
STRUCT NO.	DIA.	PAY ITEM	END OF PIPE INVERT	END OF PIPE STATION	END OF PIPE OFFSET
7	18"	Culv Slp End Sect, 1 on 4, _ inch, Longit	18" 633.41	116+28.7	28.9 R

PROPOSED STORM SEWER PIPE TABLE						
PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 6-7	18"	Sewer, Cl A, 18 inch Tr Det _	8'	0.15%	8'	0'

PROPOSED STORM SEWER STRUCTURE TABLE						
STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	STATION	OFFSET
6	48"	B	RIM=636.50	18" 633.42 S (EX) 18" 633.42 NE (PR)	116+22.1	24.3 R

0 40 ft 80 ft



SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Erosion Control, Check Dam, Stone	Ft	40
Erosion Control, Inlet Protection, Fabric Drop	Ea	1
Erosion Control, Sediment Trap	Ea	2
Erosion Control, Silt Fence	Ft	184
Subbase, CIP	Cyd	350
Aggregate Base, 6 inch, Modified	Syd	900
Shoulder, Cl II, 3 inch, Modified	Syd	288
Approach, Cl I, 6 inch, Modified	Syd	102
Culv, Slp End Sect, 1 on 4, 18 inch, Longit	Ea	1
Sewer, Cl A, 18 inch, Tr Det A	Ft	8
Sewer Tap, 18 inch	Ea	1
Dr Structure Cover, Type B	Ea	1
Dr Structure, 48 inch dia	Ea	1
HMA, 13A	Ton	236
Driveway, Nonreinf Conc, 6 inch	Syd	102

DRIVEWAY SCHEDULE							
C/L DRIVEWAY STATION	EXIST. PVMT TYPE	DRIVEWAY OFFSET REMOVAL LIMITS (FT)	WIDTH AT REMOVAL LIMITS (FT)	WIDTH AT OPENING (FT)	LENGTH OF DRIVE RESTORATION (FT)	Approach, Cl I, 6 inch, Modified (Syd)	Driveway, Nonreinf Conc. 6 inch (Syd)
113+58, RT	C	29.1	18.5	22.8	14.0	33	33
114+29, RT	C	32.0	11.4	20.1	17.1	30	30
115+34, RT	C	32.1	16.1	24.1	17.1	39	39

G = GRAVEL DRIVE, C = CONCRETE DRIVE, HMA = HMA DRIVE

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PLAN SUBMITTALS AND CHANGES	
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PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

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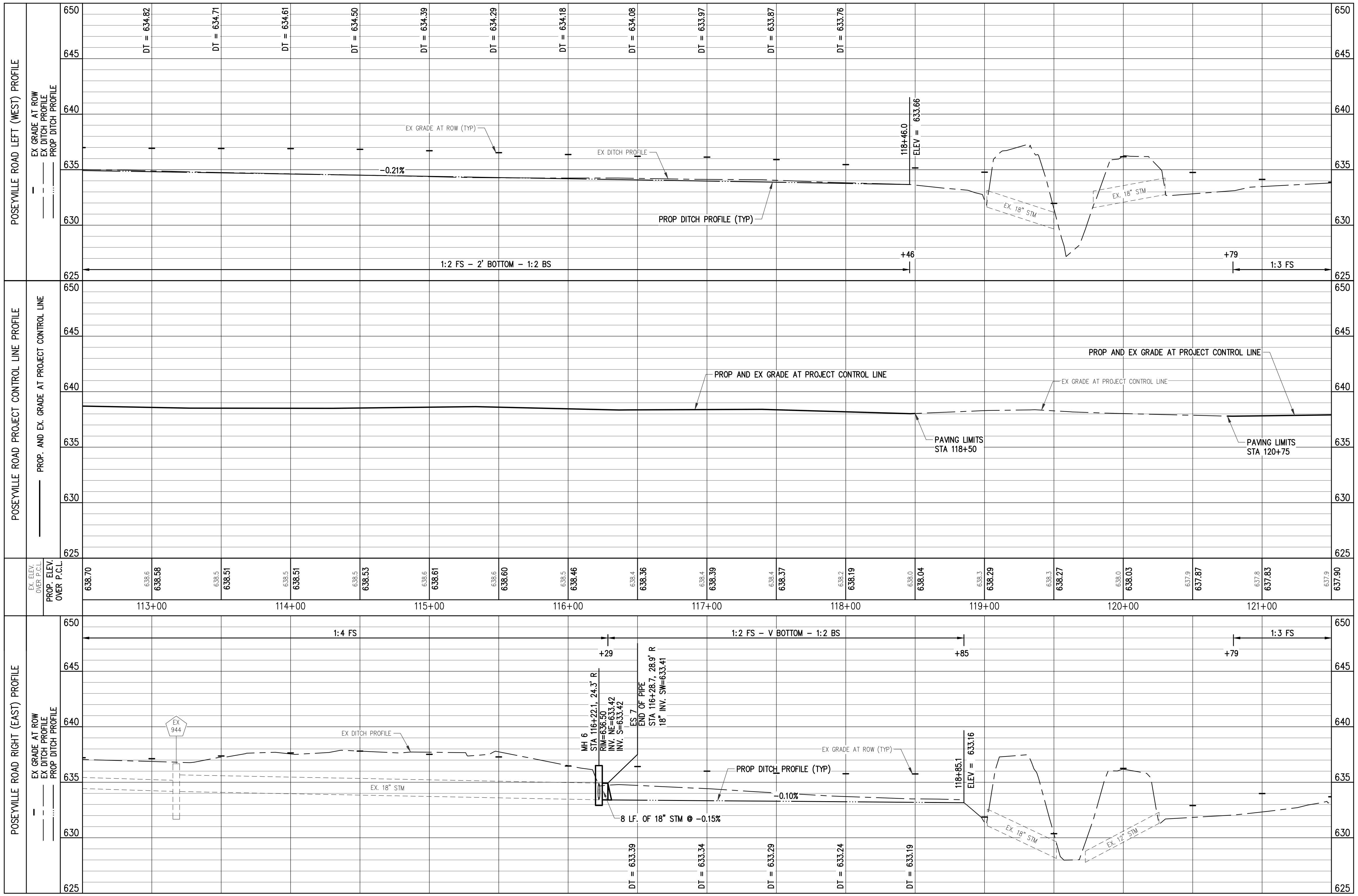

HOR: 0 40 ft 80 ft
VERT: 0 5 ft 10 ft

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PLAN SUBMITTALS AND CHANGES	
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DATE	DESCRIPTION
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JOB No: 17M0088

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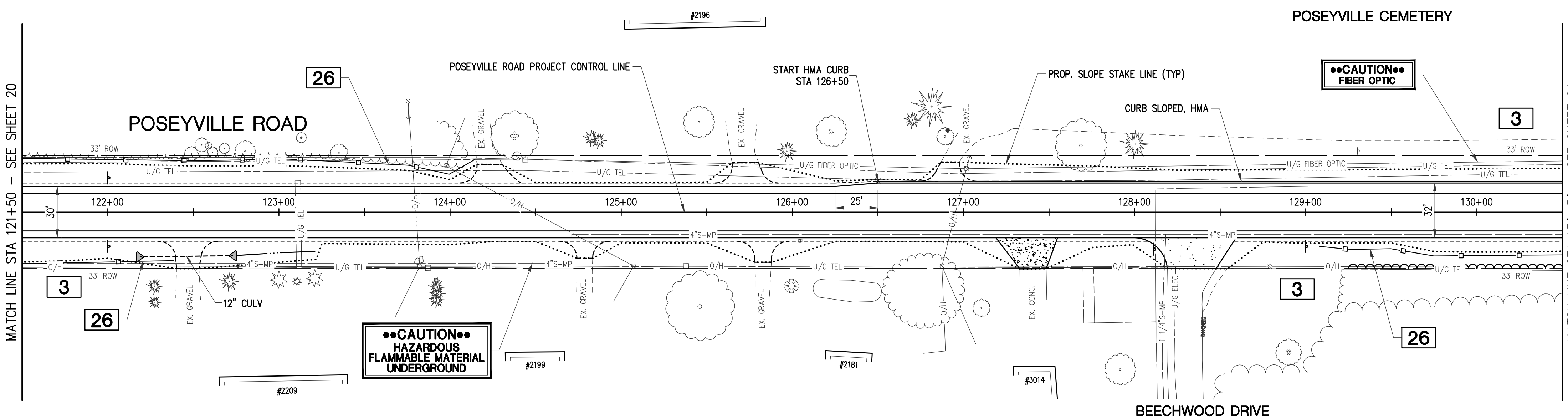

DRIVEWAY SCHEDULE											
C/L DRIVEWAY STATION	EXIST. PVMT TYPE	DRIVEWAY OFFSET REMOVAL LIMITS (FT)	WIDTH AT REMOVAL LIMITS (FT)	WIDTH AT OPENING (FT)	LENGTH OF DRIVE RESTORATION (FT)	Approach, Cl I, 6 inch, Modified (Syd)	Approach, Cl II, 6 inch, Modified (Syd)	HMA Approach (Ton)	Driveway, Nonreinf Conc. 6 inch (Syd)	Culv, Cl F, 12 inch (Ft)	Culv End Sect, 12 inch (Ea)
122+47, RT	G	33.0	13.1	34.8	16.0		31			46	2
124+23, LT	G	28.0	14.8	35.7	10.9		27				
124+79, RT	G	26.9	9.3	29.1	9.9		15				
125+73, LT	G	28.8	15.6	36.8	11.8		27				
125+83, RT	G	29.2	9.6	29.9	12.3		19				
126+92, LT	G	29.2	10.9	31.1	11.1		21				
127+41, RT	C	33.0	15.5	36.0	18.1	52			52		
128+33, RT	HMA	33.0	28.5	60.7	18.0	78		13			

G = GRAVEL DRIVE, C = CONCRETE DRIVE, HMA = HMA DRIVE

SHEET QUANTITIES		
DESCRIPTION	UNITS	QUANTITY
Erosion Control, Silt Fence	Ft	498
Subbase, CIP	Cyd	497
Aggregate Base, 6 inch, Modified	Syd	1289
Shoulder, Cl II, 3 inch, Modified	Syd	293
Approach, Cl I, 6 inch, Modified	Syd	130
Approach, Cl II, 6 inch, Modified	Syd	140
Culv End Sect, 12 inch	Ea	2
Culv, Cl F, 12 inch	Ft	46
HMA Approach	Ton	13
HMA, 13A	Ton	365
Driveway, Nonreinf Conc, 6 inch	Syd	52
Curb Sloped, HMA	Ft	400

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PLAN SUBMITTALS AND CHANGES

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REVIEWER: ENJ
SCALE: 1" = 40'

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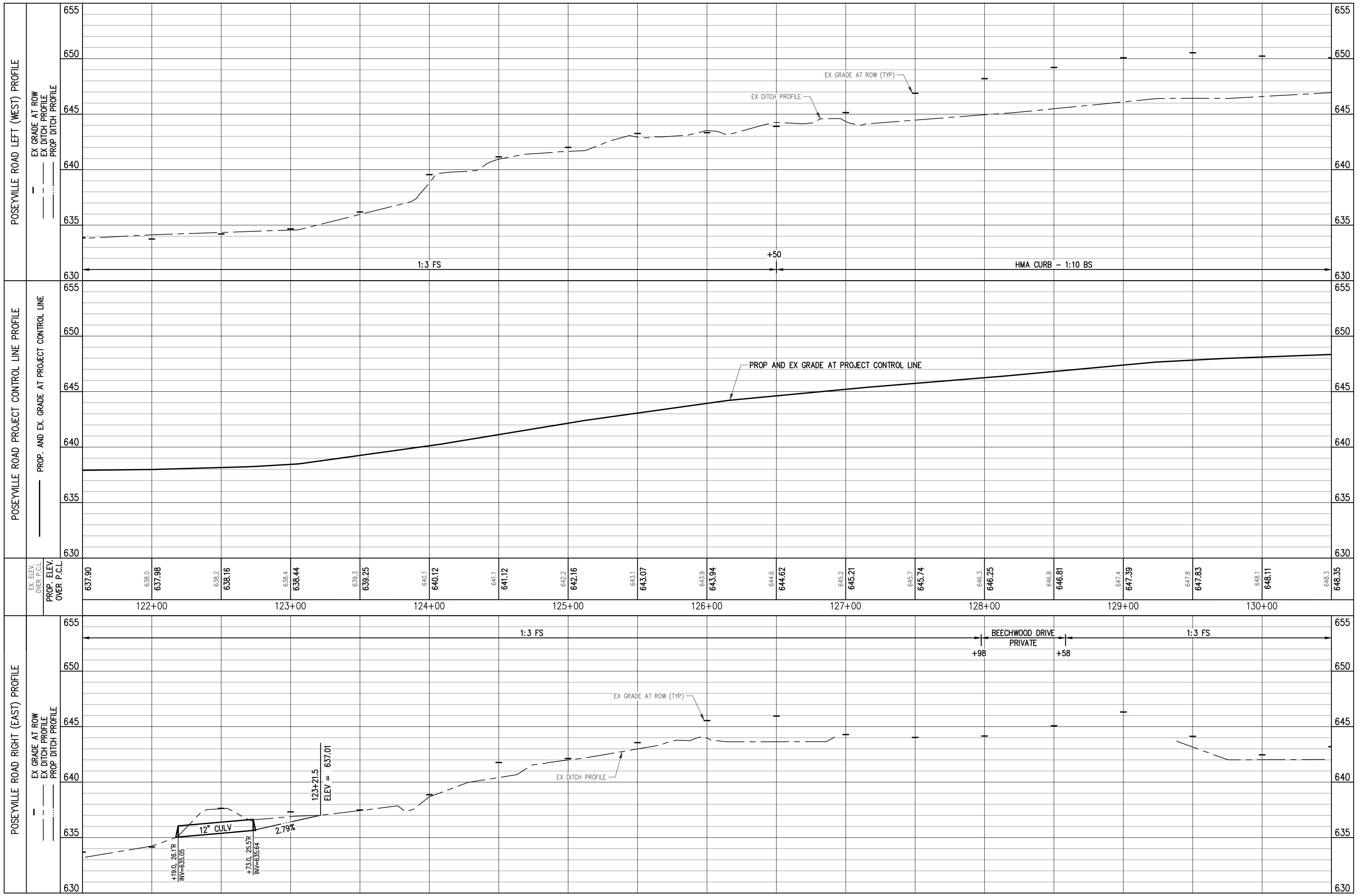

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BIDDING DOCUMENTS

DATE	DESCRIPTION
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REV:

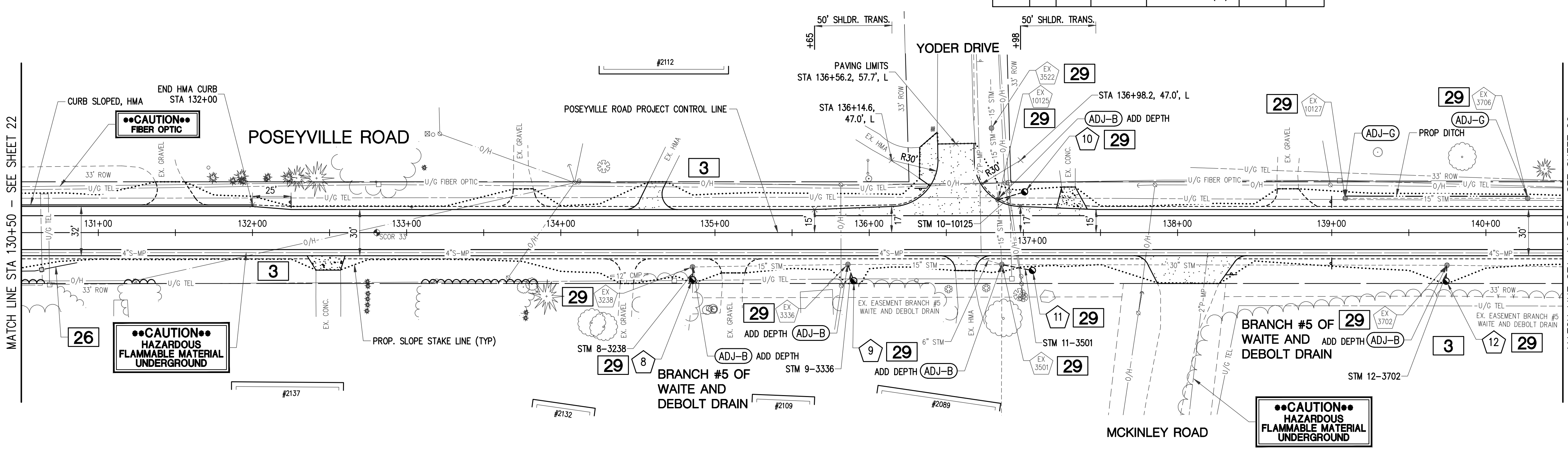
JOB No: 17M0088

PROPOSED STORM SEWER PIPE TABLE

PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 8-3238	12"	Sewer, Cl A, 12 inch Tr Det _	8'	1.23%	8'	0'
STM 9-3336	12"	Sewer, Cl A, 12 inch Tr Det _	11'	0.89%	11'	0'
STM 10-10125	12"	Sewer, Cl A, 12 inch Tr Det _	18'	2.50%	9'	9'
STM 11-3501	12"	Sewer, Cl A, 12 inch Tr Det _	20'	0.50%	20'	0'
STM 12-3702	12"	Sewer, Cl A, 12 inch Tr Det _	10'	0.97%	10'	0'

PROPOSED STORM SEWER STRUCTURE TABLE

STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	STATION	OFFSET
8	24"	G	RIM=639.75	12" 637.00 W (PR)	134+85.4	30.5 R
9	24"	G	RIM=641.06	12" 638.00 W (PR)	135+89.9	31.2 R
10	24"	G	RIM=642.82	12" 639.50 S (PR)	137+00.8	26.4 L
11	24"	G	RIM=641.60	12" 638.00 S (PR)	137+05.9	24.6 R
12	24"	G	RIM=640.19	12" 637.00 W (PR)	139+74.1	31.4 R
EX 3238	N/A	B	RIM=639.75	15" 631.90 N (EX) 12" 636.90 E (PR)	134+85.4	22.3 R
EX 3336	N/A	B	RIM=642.54	12" 637.90 E (PR) 15" 631.66 N (EX) 15" 631.66 S (EX)	135+86.2	20.7 R
EX 3501	N/A	B	RIM=641.60	15" 631.90 W (EX) 15" 631.15 E (EX) 15" 630.95 S (EX) 30" 630.25 N (EX) 12" 637.90 N (PR)	136+86.1	20.8 R
EX 3702	N/A	B	RIM=641.49	30" 630.04 N (EX) 30" 630.14 S (EX) 12" 636.90 E (PR)	139+74.8	21.2 R
EX 10125	N/A	B	RIM=643.90	12" 639.05 N (PR) 15" 632.22 W (EX) 15" 631.97 E (EX)	136+83.5	21.3 L



DRIVEWAY SCHEDULE

C/L DRIVEWAY STATION	EXIST. PVMT TYPE	DRIVEWAY OFFSET REMOVAL LIMITS (FT)	WIDTH AT REMOVAL LIMITS (FT)	WIDTH AT OPENING (FT)	LENGTH OF DRIVE RESTORATION (FT)	Approach, Cl I, 6 inch, Modified (Syd)	Approach, Cl II, 6 inch, Modified (Syd)	HMA Approach (Ton)	Driveway, Nonreinf Conc. 6 inch (Syd)
131+47, LT	G	33.0	18.9	42.9	15.1		41		
132+49, RT	C	24.3	16.0	24.7	9.3	21			21
133+76, LT	G	28.4	13.9	33.8	11.3		23		
134+44, RT	G	33.0	8.8	28.9	16.0		21		
134+63, LT	HMA	33.0	11.6	33.8	18.0	28		6	
135+12, RT	G	26.0	15.2	35.2	9.1		21		
136+43, LT	HMA	NA	20.1	35.2	10.8	35		7	
136+62, RT	HMA	24.6	12.9	33.5	9.6	19		4	
137+29, LT	C	28.6	8.7	20.0	13.5	23			23
138+07, RT	HMA	33.0	40.0	73.4	18.0	104		9	
138+72, LT	G	28.6	14.0	35.0	11.4		27		

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SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Erosion Control, Inlet Protection, Fabric Drop	Ea	13
Erosion Control, Silt Fence	Ft	37
Subbase, CIP	Cyd	530
Aggregate Base, 6 inch, Modified	Syd	1346
Shoulder, Cl II, 3 inch, Modified	Syd	380
Approach, Cl I, 6 inch, Modified	Syd	230
Approach, Cl II, 6 inch, Modified	Syd	133
Sewer, Cl A, 12 inch, Tr Det A	Ft	58
Sewer, Cl A, 12 inch, Tr Det B	Ft	9
Dr Structure Cover, Adj, Case 2	Ea	7
Dr Structure Cover, Type B	Ea	5
Dr Structure Cover, Type G	Ea	7
Dr Structure, 24 inch dia	Ea	5
Dr Structure, Adj, Add Depth	Ft	5
Dr Structure, Tap, 12 inch	Ea	5
HMA Approach	Ton	63
HMA, 13A	Ton	346
Driveway, Nonreinf Conc, 6 inch	Syd	44
Curb Sloped, HMA	Ft	150
Monument Box, Adjust	Ea	1

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PLAN SHEET

REV:

JOB No: 17M0088

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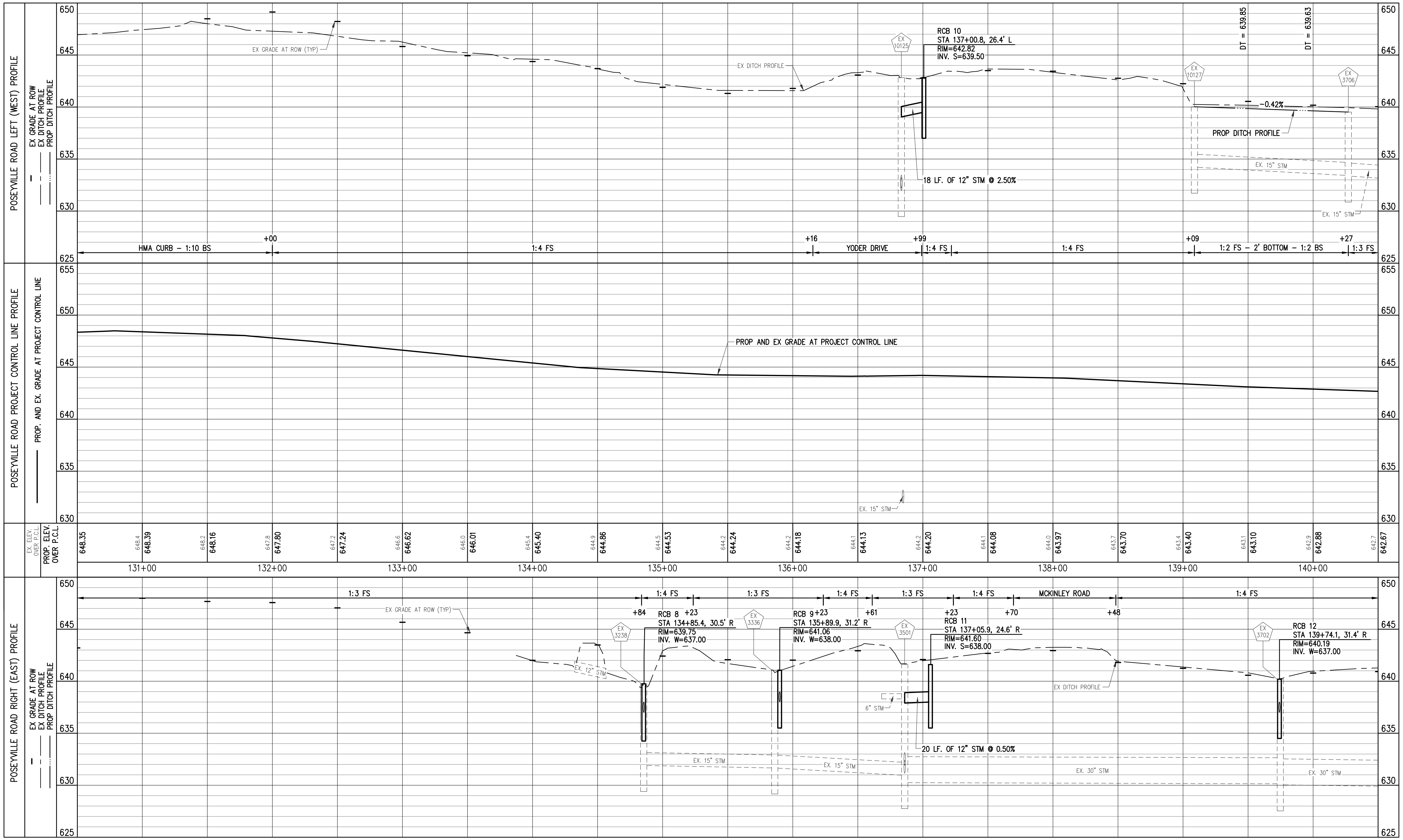

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Mt. Pleasant, MI 48858

PREPARED FOR

MIDLAND COUNTY ROAD COMMISSION
POSEYVILLE RD SAFETY IMPROVEMENTS

STA 130+50 TO STA 140+50
PROFILE SHEET

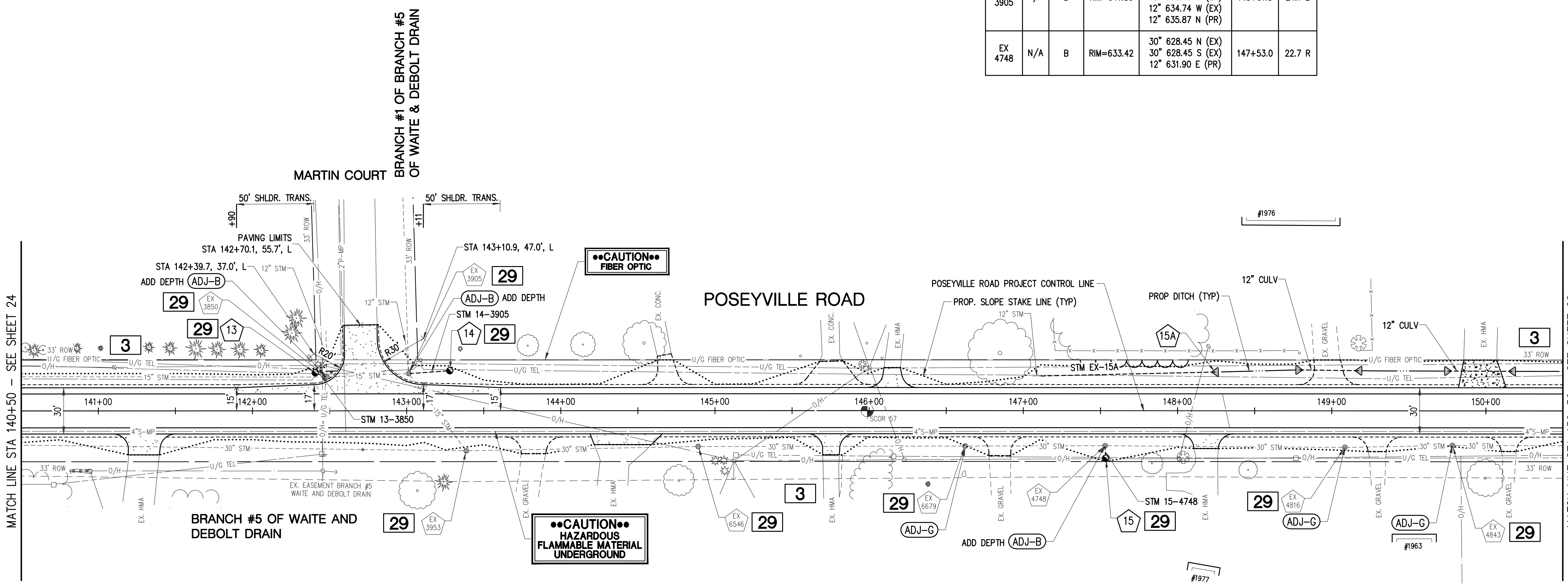
REV:

JOB No: 17M0088

PROPOSED STORM SEWER END SECTION TABLE					
STRUCT NO.	DIA.	PAY ITEM	END OF PIPE INVERT	END OF PIPE STATION	END OF PIPE OFFSET
15A	12"	Culv End Sect, Metal	12" 633.53	148+24.3	25.1 L

PROPOSED STORM SEWER PIPE TABLE						
PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 13-3850	12"	Sewer, Cl A, 12 inch Tr Det _	8'	2.50%	0'	8'
STM 14-3905	12"	Sewer, Cl A, 12 inch Tr Det _	27'	0.50%	10'	17'
STM 15-4748	12"	Sewer, Cl A, 12 inch Tr Det _	8'	1.24%	8'	0'
STM EX-15A	12"	Sewer, Cl A, 12 inch Tr Det _	113'	0.22%	113'	0'

PROPOSED STORM SEWER STRUCTURE TABLE						
STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	STATION	OFFSET
13	24"	G	RIM=638.49	12" 635.50 N (PR)	142+40.7	24.6 L
14	24"	G	RIM=638.69	12" 636.00 S (PR)	143+27.9	26.0 L
15	24"	G	RIM=635.45	12" 632.00 W (PR)	147+53.4	30.8 R
EX 3850	N/A	B	RIM=641.80	15" 631.39 N (EX) 15" 631.44 S (EX) 12" 635.39 W (EX) 12" 635.30 S (PR)	142+48.2	21.9 L
EX 3905	N/A	B	RIM=641.80	15" 630.49 S (EX) 15" 630.44 NE (EX) 18" 630.49 W (EX) 12" 634.74 W (EX) 12" 635.87 N (PR)	143+01.3	24.1 L
EX 4748	N/A	B	RIM=633.42	30" 628.45 N (EX) 30" 628.45 S (EX) 12" 631.90 E (PR)	147+53.0	22.7 R



SHEET QUANTITIES		
DESCRIPTION	UNITS	QUANTITY
Erosion Control, Inlet Protection, Fabric Drop	Ea	10
Subbase, CIP	Cyd	519
Aggregate Base, 6 inch, Modified	Syd	1316
Shoulder, Cl II, 3 inch, Modified	Syd	416
Approach, Cl I, 6 inch, Modified	Syd	187
Approach, Cl II, 6 inch, Modified	Syd	197
Culv End Sect, 12 inch	Ea	5
Culv, Cl F, 12 inch	Ft	66
Sewer, Cl A, 12 inch, Tr Det A	Ft	131
Sewer, Cl A, 12 inch, Tr Det B	Ft	25
Sewer Tap, 12 inch	Ea	1
Dr Structure Cover, Adj, Case 2	Ea	6
Dr Structure Cover, Type B	Ea	3
Dr Structure Cover, Type G	Ea	6
Dr Structure, 24 inch dia	Ea	3
Dr Structure, Adj, Add Depth	Ft	8
Dr Structure, Tap, 12 inch	Ea	3
HMA Approach	Ton	51
HMA, 13A	Ton	336
Driveway, Nonreinf Conc, 6 inch	Syd	53
Monument Box Adjust	Ea	1

DRIVEWAY SCHEDULE											
C/L DRIVEWAY STATION	EXIST. PVMT TYPE	DRIVEWAY OFFSET REMOVAL LIMITS (FT)	WIDTH AT REMOVAL LIMITS (FT)	WIDTH AT OPENING (FT)	LENGTH OF DRIVE RESTORATION (FT)	Approach, Cl I, 6 inch, Modified (Syd)	Approach, Cl II, 6 inch, Modified (Syd)	HMA Approach (Ton)	Driveway, Nonreinf Conc. 6 inch (Syd)	Culv, Cl F, 12 inch (Ft)	Culv End Sect, 12 inch (Ea)
141+30, RT	HMA	28.5	20.1	40.7	13.5	36		6			
143+82, RT	G	27.6	16.0	36.3	10.9		25				
144+42, RT	HMA	22.0	37.2	48.3	7.0	33		6			
144+70, LT	G	36.2	10.3	32.4	16.0		30				
145+75, RT	HMA	28.8	10.8	31.2	13.7	22		4			
145+76, LT	G	32.2	15.0	48.1	15.1		46				
146+15, LT	HMA	28.5	10.7	32.3	12.9	22		4			
146+85, RT	G	29.4	14.1	34.2	12.1		25				
148+19, RT	HMA	24.5	15.7	36.1	9.5	21		4			
148+97, LT	G	33.0	17.4	38.6	16.0		38			32	2
149+30, RT	G	26.3	11.7	31.8	9.4		18				
149+96, LT	C	33.0	21.5	30.9	18.0	53			53	34	2
150+15, RT	G	26.3	9.6	29.7	9.3		15				

G = GRAVEL DRIVE, C = CONCRETE DRIVE, HMA = HMA DRIVE

NOTE: Culv, Cl F, _ inch VALUE INDICATES PAY LENGTH, PROFILE INDICATES ACTUAL LENGTH.

Know what's **below.** **Call** before you dig.

PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
6/22/18	ISSUED FOR BIDS

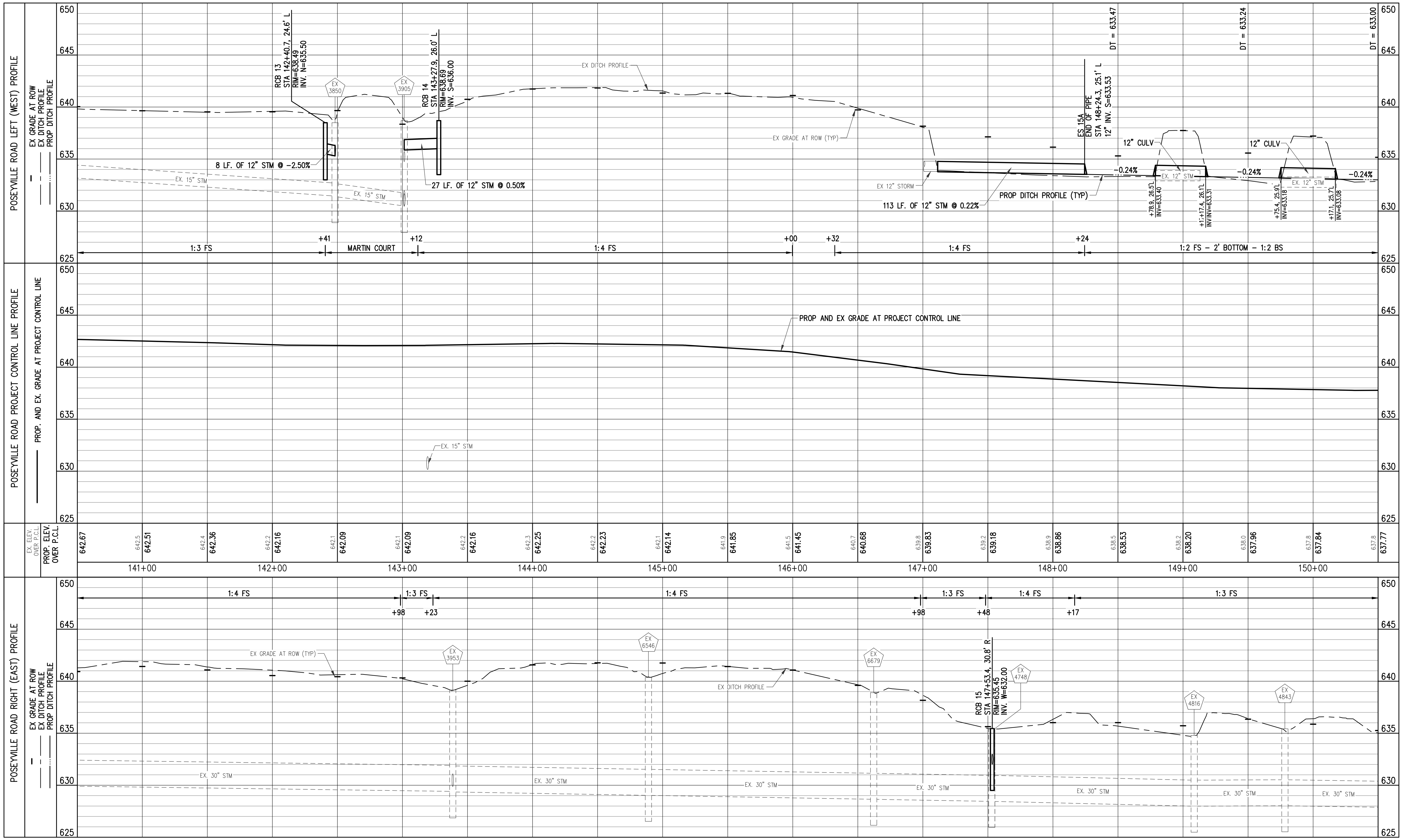
ROWE PROFESSIONAL SERVICES COMPANY
127 S. Main Street
Mt. Pleasant, MI 48858
O: (989) 772-2138
F: (989) 773-7757
www.rowepsc.com

PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

PREPARED FOR
MIDLAND COUNTY ROAD COMMISSION
POSEYVILLE RD SAFETY IMPROVEMENTS
STA 140+50 TO STA 150+50
PLAN SHEET

REV:

JOB No: 17M0088



HOR: 0 40 ft 80 ft
VERT: 0 5 ft 10 ft

PLAN DATE: JUNE 2018
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UTILITY ROAD REPAIR SCHEDULE

CROSSING STATION	AVERAGE WIDTH OF REPAIR (FT)	AVERAGE LENGTH OF REPAIR (FT)	Hand Patching (Ton)	Aggregate Base, 8 inch, Modified (Syd)
156+71 LT	20	39	15	60

PROPOSED STORM SEWER END SECTION TABLE

STRUCT NO.	DIA.	PAY ITEM	END OF PIPE INVERT	END OF PIPE STATION	END OF PIPE OFFSET
16	12"	Culv End Sect, _ inch	12" 632.58	152+30.0	25.2 L
19	12"	Culv End Sect, _ inch	12" 630.26	155+65.8	26.3 L
20	12"	Culv End Sect, _ inch	12" 630.00	156+30.3	25.0 L
21	12"	Culv End Sect, _ inch	12" 630.24	156+46.7	47.1 L
23	12"	Culv End Sect, _ inch	12" 630.46	156+98.6	48.3 L
24	12"	Culv End Sect, _ inch	12" 629.49	157+31.4	26.9 L
25	12"	Culv End Sect, _ inch	12" 628.11	158+75.0	27.4 L
26	36"	Culv, Slp End Sect, 1 on 4, 36 inch, Transv	36" 626.94	159+20.7	33.0 L

PROPOSED STORM SEWER PIPE TABLE

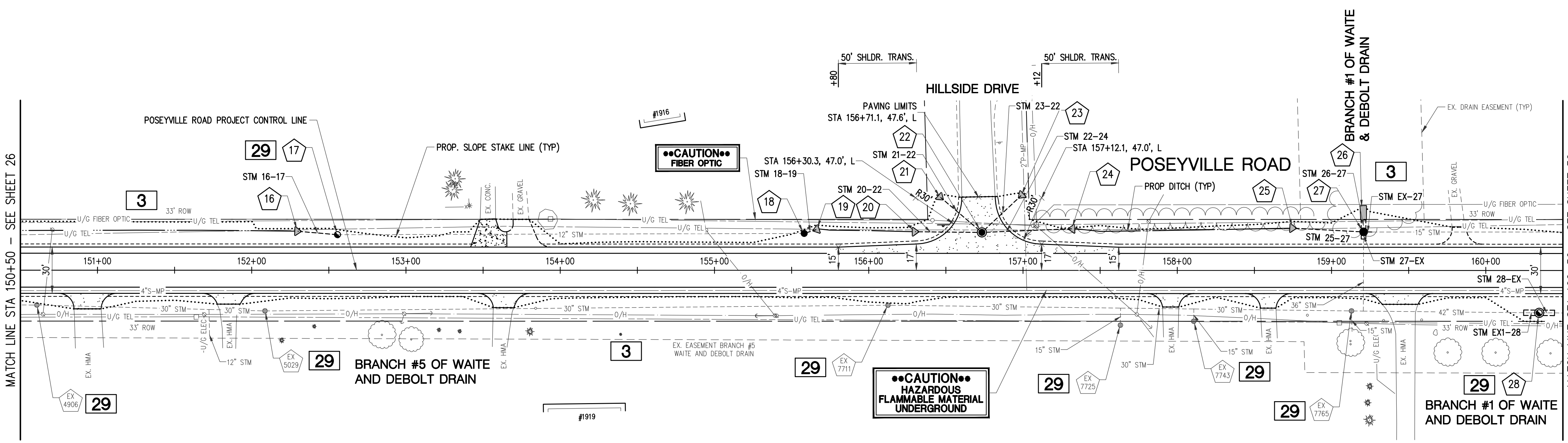
PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 16-17	12"	Sewer, Cl A, 12 inch Tr Det _	26'	2.50%	26'	0'
STM 18-19	12"	Sewer, Cl A, 12 inch Tr Det _	8'	1.50%	8'	0'
STM 20-22	12"	Sewer, Cl A, 12 inch Tr Det _	43'	0.50%	10'	33'
STM 21-22	12"	Sewer, Cl A, 12 inch Tr Det _	35'	1.04%	10'	25'
STM 22-24	12"	Sewer, Cl A, 12 inch Tr Det _	58'	0.50%	28'	30'
STM 23-22	12"	Sewer, Cl A, 12 inch Tr Det _	35'	1.67%	10'	25'
STM 25-27	12"	Sewer, Cl A, 12 inch, Tr Det _	46'	1.50%	46'	0'
STM 26-27	36"	Sewer, Cl A, 36 inch, Tr Det _	8'	0.50%	8'	0'
STM 27-EX	36"	Sewer, Cl A, 36 inch, Tr Det _	5'	EX	0'	5'
STM 28-EX	42"	Sewer, Cl A, 42 inch Tr Det _	10'	EX	0'	10'
STM EX-27	15"	Sewer, Cl A, 15 inch, Tr Det _	5'	EX	5'	0'
STM EX1-28	42"	Sewer, Cl A, 42 inch Tr Det _	10'	EX	0'	10'

PROPOSED STORM SEWER STRUCTURE TABLE

STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	STATION	OFFSET
17	48"	G	RIM=634.50	12" 631.94 S (PR) 12" 631.92 N (EX)	152+55.6	23.0 L
18	48"	B	RIM=633.50	12" 630.38 S (EX) 12" 630.38 N (PR)	155+58.1	23.9 L
22	72"	B	RIM=632.98	12" 629.88 NW (PR) 12" 629.78 S (PR) 12" 629.78 N (PR) 12" 629.88 SW (PR)	156+73.3	24.6 L
27	60"	B	RIM=631.90	36" 626.40 E (PR) 15" 627.48 N (PR) 12" 627.42 S (PR) 36" 626.90 W (PR)	159+20.8	24.9 L
28	72"	G	RIM=631.68	42" 625.90 N (PR) 42" 625.90 S (PR)	160+34.6	27.5 R

N

0 40 ft 80 ft



SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Erosion Control, Inlet Protection, Fabric Drop	Ea	8
Subbase, CIP	Cyd	519
Aggregate Base, 6 inch, Modified	Syd	1314
Aggregate Base, 8 inch, Modified	Syd	60
Shoulder, Cl II, 3 inch, Modified	Syd	407
Approach, Cl I, 6 inch, Modified	Syd	149
Approach, Cl II, 6 inch, Modified	Syd	54
Culv End Sect, 12 inch	Ea	7
Culv, Slp End Sect, 1 on 4, 36 inch, Transv	Ea	1
Sewer, Cl A, 12 inch, Tr Det A	Ft	138
Sewer, Cl A, 15 inch, Tr Det A	Ft	5
Sewer, Cl A, 36 inch, Tr Det A	Ft	8
Sewer, Cl A, 12 inch, Tr Det B	Ft	113
Sewer, Cl A, 36 inch, Tr Det B	Ft	5
Sewer, Cl A, 42 inch, Tr Det B	Ft	20
Sewer Tap, 12 inch	Ea	2
Sewer Tap, 15 inch	Ea	1
Sewer Tap, 36 inch	Ea	1
Sewer Tap, 42 inch	Ea	1
Dr Structure Cover, Type B	Ea	3
Dr Structure Cover, Type G	Ea	2
Dr Structure, 48 inch dia	Ea	2
Dr Structure, 60 inch dia	Ea	1
Dr Structure, 72 inch dia	Ea	2
Hand Patching	Ton	15
HMA Approach	Ton	49
HMA, 13A	Ton	336
Driveway, Nonreinf Conc, 6 inch	Syd	36

DRIVEWAY SCHEDULE

C/L DRIVEWAY STATION	EXIST. PVMT TYPE	DRIVEWAY OFFSET REMOVAL LIMITS (FT)	WIDTH AT REMOVAL LIMITS (FT)	WIDTH AT OPENING (FT)	LENGTH OF DRIVE RESTORATION (FT)	Approach, Cl I, 6 inch, Modified (Syd)	Approach, Cl II, 6 inch, Modified (Syd)	HMA Approach (Ton)	Driveway, Nonreinf Conc. 6 inch (Syd)
150+94, RT	HMA	25.1	17.6	37.6	10.1	25		5	
151+87, RT	HMA	22.0	14.7	35.1	7.0	16		3	
153+55, LT	C	33.0	10.0	23.5	18.1	36			36
153+75, LT	G	33.0	10.4	29.1	18.1	34		6	
153+65, RT	HMA	24.2	13.4	34.2	9.2	19		4	
153+76, LT	G	33.0	10.4	29.1	19.0		37		
157+97, RT	HMA	23.8	10.6	32.6	7.8	15		3	
158+61, RT	HMA	24.4	10.3	30.1	9.4	15		3	
159+46, RT	HMA	22.0	23.1	44.9	7.0	23		4	
159+84, LT	G	28.0	8.9	29.3	11.0		17		

G = GRAVEL DRIVE, C = CONCRETE DRIVE, HMA = HMA DRIVE

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PLAN SUBMITTALS AND CHANGES

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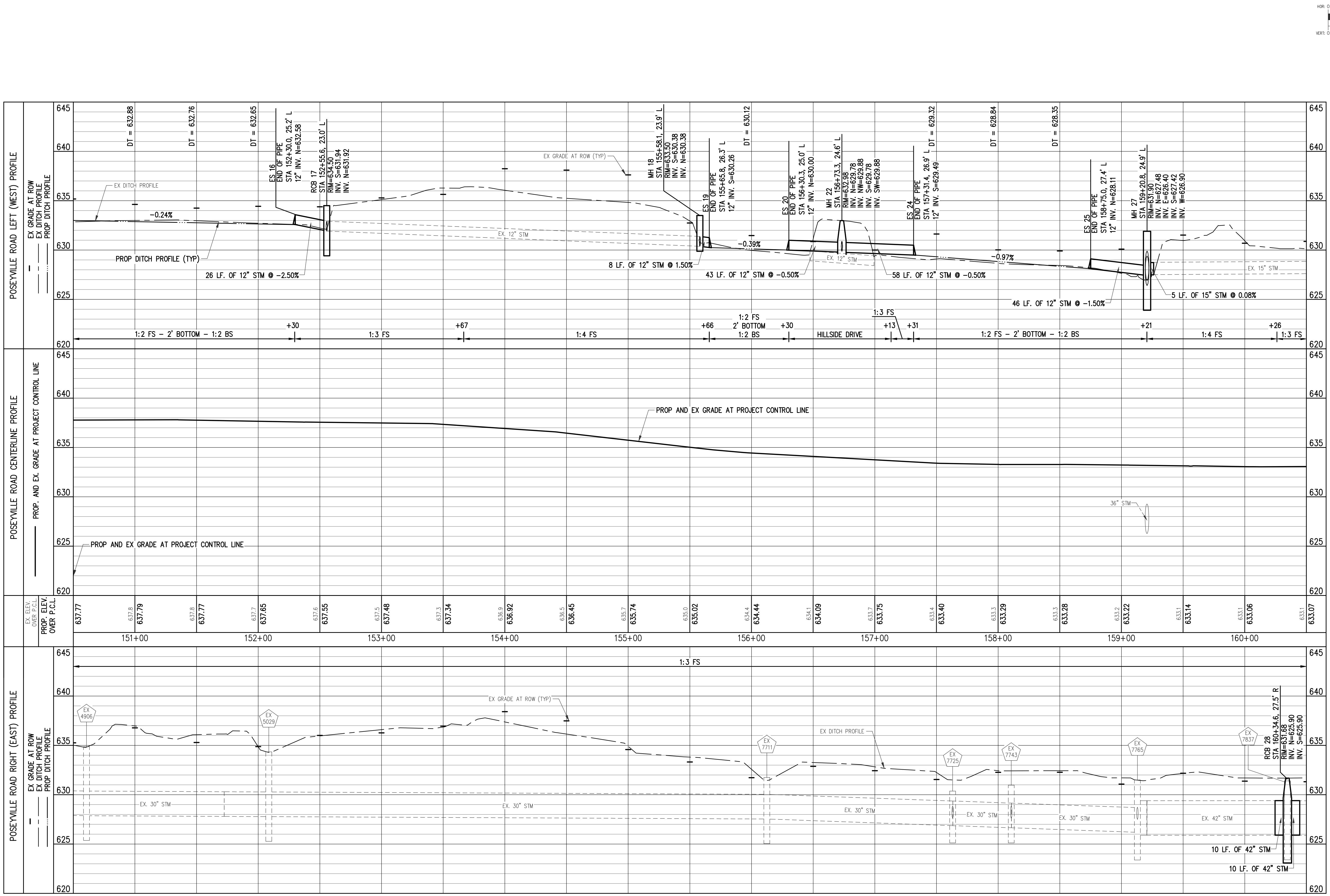

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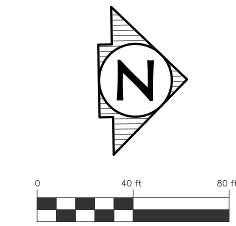
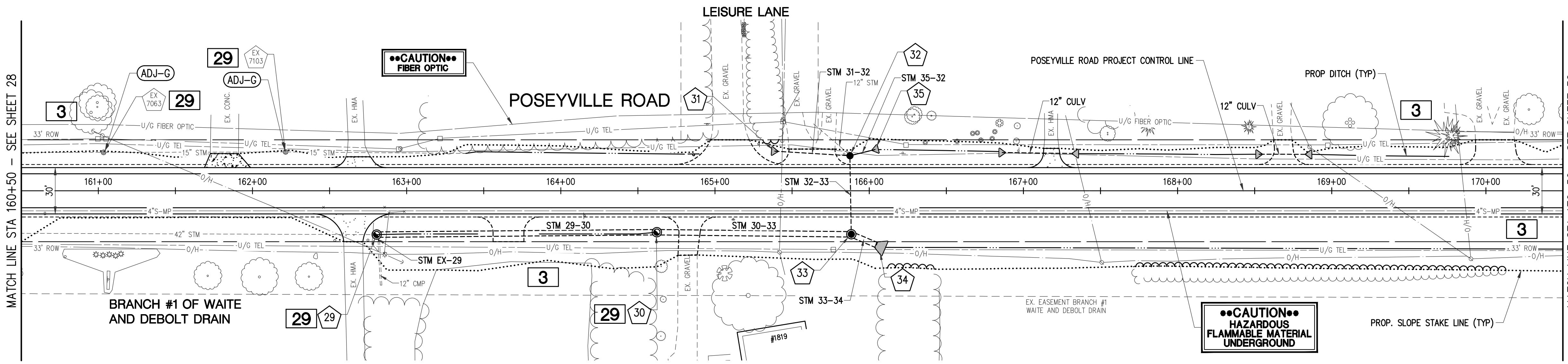
UTILITY ROAD REPAIR SCHEDULE				
CROSSING STATION	AVERAGE WIDTH OF REPAIR (FT)	AVERAGE LENGTH OF REPAIR (FT)	Hand Patching (Ton)	Aggregate Base, 8 inch, Modified (Syd)
165+86	10	23	5	26

PROPOSED STORM SEWER END SECTION TABLE					
STRUCT NO.	DIA.	PAY ITEM	END OF PIPE INVERT	END OF PIPE STATION	END OF PIPE OFFSET
31	12"	Culv End Sect, _ inch	12" 629.30	165+38.8	25.7 L
34	42"	Culv End Sect, Metal, _ inch	42" 625.21	166+04.7	35.1 R
35	12"	Culv End Sect, _ inch	12" 627.91	166+03.8	26.8 L

PROPOSED STORM SEWER PIPE TABLE						
PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 29-30	42"	Sewer, Cl A, 42 inch Tr Det _	182'	0.12%	0'	182'
STM 30-33	42"	Sewer, Cl A, 42 inch Tr Det _	126'	0.12%	0'	126'
STM 31-32	12"	Sewer, Cl A, 12 inch Tr Det _	49'	2.50%	0'	49'
STM 32-33	18"	Sewer, Cl E, 18 inch Tr Det _	51'	1.32%	0'	51'
STM 33-34	42"	Sewer, Cl A, 42 inch Tr Det _	18'	0.16%	18'	0'
STM 35-32	12"	Sewer, Cl A, 12 inch Tr Det _	17'	1.50%	17'	0'
STM EX-29	12"	Sewer, Cl A, 12 inch Tr Det _	4'	1.46%	4'	0'

PROPOSED STORM SEWER STRUCTURE TABLE						
STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	STATION	OFFSET
29	72"	G	RIM=631.11	12" 625.60 E (PR) 42" 625.61 S (EX) 42" 625.61 N (PR)	162+80.5	28.4 R
30	72"	G	RIM=630.89	42" 625.39 S (PR) 42" 625.39 N (PR)	164+62.2	26.8 R
32	48"	B	RIM=631.60	18" 627.55 E (PR) 12" 628.08 S (PR) 12" 627.90 SW (EX) 12" 627.66 N (PR)	165+87.5	22.7 L
33	72"	B	RIM=630.74	42" 625.24 S (PR) 18" 626.88 W (PR) 42" 625.24 NE (PR)	165+88.4	28.2 R





SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Erosion Control, Inlet Protection, Fabric Drop	Ea	4
Subbase, CIP	Cyd	519
Aggregate Base, 6 inch, Modified	Syd	1334
Aggregate Base, 8 inch, Modified	Syd	26
Shoulder, Cl II, 3 inch, Modified	Syd	422
Approach, Cl I, 6 inch, Modified	Syd	105
Approach, Cl II, 6 inch, Modified	Syd	267
Culv End Sect, 12 inch	Ea	6
Culv End Sect, Metal, 42 inch	Ea	1
Culv, Cl F, 12 inch	Ft	66
Sewer, Cl A, 12 inch, Tr Det A	Ft	21
Sewer, Cl A, 42 inch, Tr Det A	Ft	18
Sewer, Cl A, 12 inch, Tr Det B	Ft	49
Sewer, Cl A, 18 inch, Tr Det B	Ft	51
Sewer, Cl A, 42 inch, Tr Det B	Ft	308
Sewer Tap, 12 inch	Ea	2
Sewer Tap, 42 inch	Ea	1
Dr Structure Cover, Adj, Case 2	Ea	2
Dr Structure Cover, Type B	Ea	2
Dr Structure Cover, Type G	Ea	4
Dr Structure, 48 inch dia	Ea	1
Dr Structure, 72 inch dia	Ea	3
Hand Patching	Ton	5
HMA Approach	Ton	15
HMA, 13A	Ton	349
Driveway, Nonreinf Conc, 6 inch	Syd	25
Slope Restoration, Wetland	Syd	149

DRIVEWAY SCHEDULE											
C/L DRIVEWAY STATION	EXIST. PVMT TYPE	DRIVEWAY OFFSET REMOVAL LIMITS (FT)	WIDTH AT REMOVAL LIMITS (FT)	WIDTH AT OPENING (FT)	LENGTH OF DRIVE RESTORATION (FT)	Approach, Cl I, 6 inch, Modified (Syd)	Approach, Cl II, 6 inch, Modified (Syd)	HMA Approach (Ton)	Driveway, Nonreinf Conc. 6 inch (Syd)	Culv, Cl F, 12 inch (Ft)	Culv End Sect, 12 inch (Ea)
161+83, LT	C	24.1	18.3	29.9	9.1	25			25		
162+67, RT	HMA	33.0	12.4	51.5	18.0	44		8			
162+70, LT	HMA	21.9	16.1	36.5	7.0	17		3			
163+68, RT	G	32.9	20.0	40.0	16.0		41				
164+84, RT	G	41.6	12.5	33.8	24.7		42				
165+11, LT	G	33.2	25.4	67.3	16.3		68				
165+65, LT	G	22.1	29.8	46.2	10.0		38				
167+20, LT	HMA	27.5	9.9	30.8	12.5	19		4		40	2
168+70, LT	G	33.3	12.1	32.2	16.0		27			26	2
170+08, LT	G	33.1	25.4	46.1	16.0		51				

G = GRAVEL DRIVE, C = CONCRETE DRIVE, HMA = HMA DRIVE

NOTE: Culv, Cl F, _ inch VALUE INDICATES PAY LENGTH, PROFILE INDICATES ACTUAL LENGTH.

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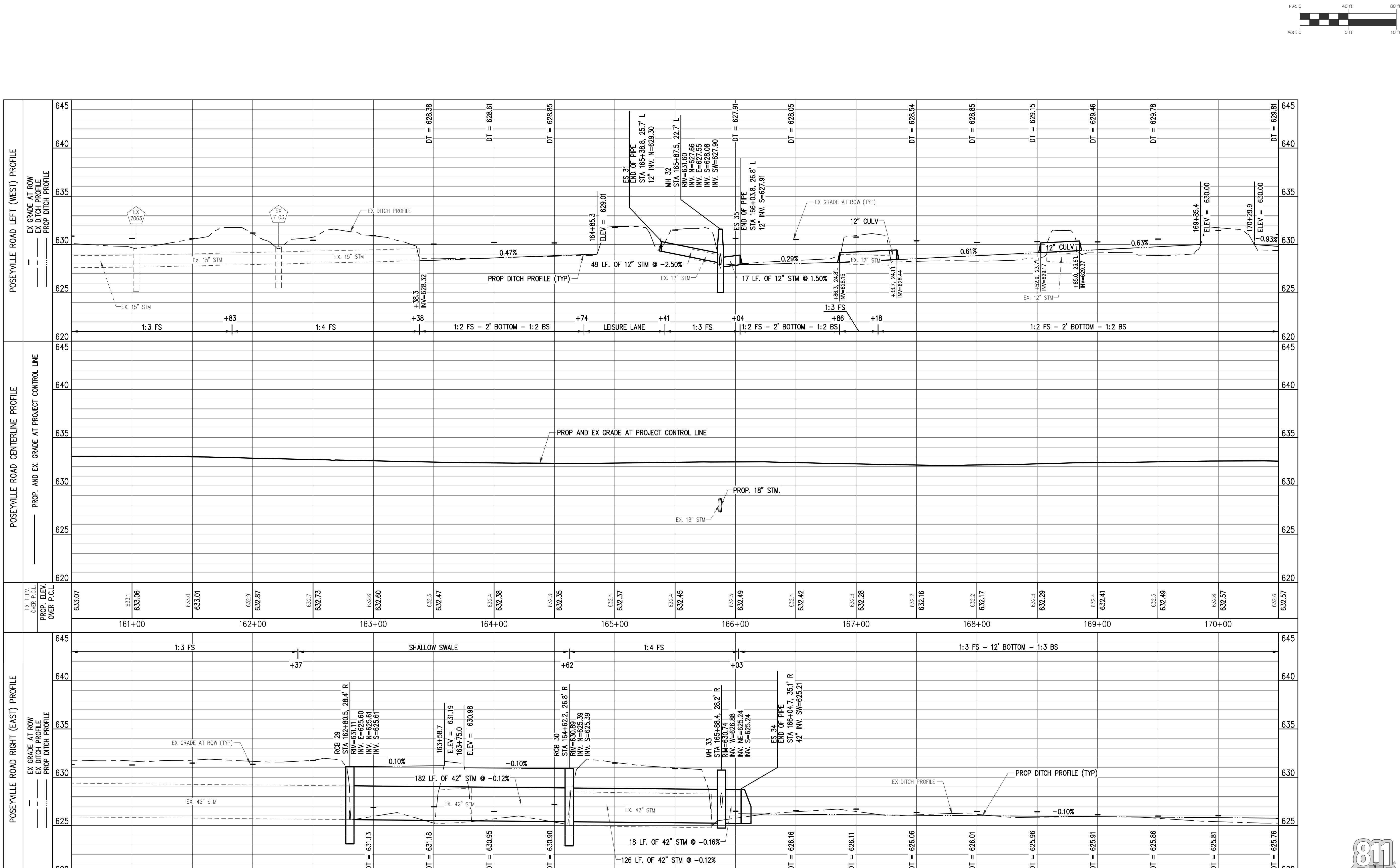

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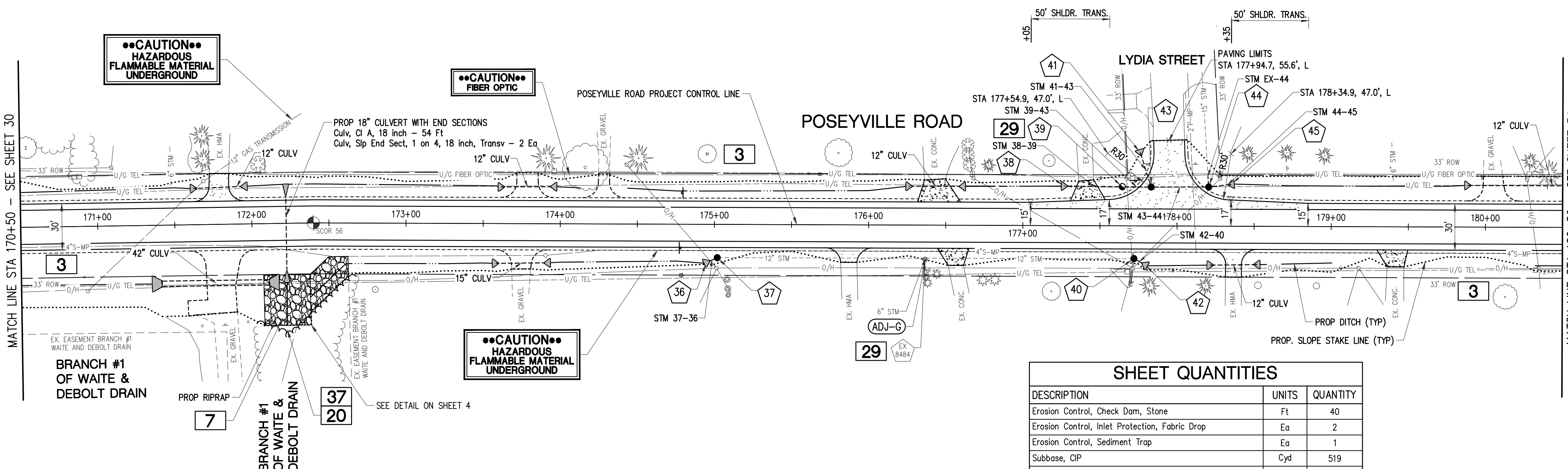
UTILITY ROAD REPAIR SCHEDULE				
CROSSING STATION	AVERAGE WIDTH OF REPAIR (FT)	AVERAGE LENGTH OF REPAIR (FT)	Hand Patching (Ton)	Aggregate Base, 8 inch, Modified (Syd)
172+22	10	22	5	25
177+94 LT	10	31	6	34

PROPOSED STORM SEWER END SECTION TABLE					
STRUCT NO.	DIA.	PAY ITEM	END OF PIPE INVERT	END OF PIPE STATION	END OF PIPE OFFSET
36	12"	Culv End Sect, _ inch	12" 629.13	174+95.3	24.5 R
38	12"	Culv End Sect, _ inch	12" 628.57	177+26.9	25.6 L
41	12"	Culv End Sect, _ inch	12" 630.36	177+76.0	47.4 L
42	12"	Culv End Sect, _ inch	12" 629.20	177+79.0	25.0 R
45	12"	Culv End Sect, _ inch	12" 628.06	178+34.9	27.2 L

PROPOSED STORM SEWER PIPE TABLE						
PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 37-36	12"	Sewer, Cl A, 12 inch Tr Det _	7'	0.20%	7'	0'
STM 38-39	12"	Sewer, Cl A, 12 inch Tr Det _	37'	0.44%	0'	37'
STM 39-43	12"	Sewer, Cl E, 12 inch Tr Det _	19'	0.44%	0'	19'
STM 41-43	12"	Sewer, Cl A, 12 inch Tr Det _	23'	4.63%	0'	23'
STM 42-40	12"	Sewer, Cl A, 12 inch Tr Det _	8'	0.50%	8'	0'
STM 43-44	12"	Sewer, Cl E, 12 inch Tr Det _	37'	0.44%	0'	37'
STM 44-45	12"	Sewer, Cl A, 12 inch Tr Det _	15'	0.44%	15'	0'
STM EX-44	15"	Sewer, Cl A, 15 inch Tr Det _	7'	EX	0'	7'

PROPOSED STORM SEWER STRUCTURE TABLE						
STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	STATION	OFFSET
37	48"	B	RIM=631.76	12" 629.14 S (PR) 12" 629.14 N (EX)	175+01.9	21.6 R
39	48"	G	RIM=631.00	12" 628.41 N (PR) 12" 628.41 S (PR)	177+64.4	25.3 L
40	48"	B	RIM=631.78	12" 629.16 NE (PR) 12" 629.16 S (EX)	177+72.1	21.2 R
43	48"	B	RIM=632.17	12" 628.28 N (PR) 12" 628.33 S (PR) 12" 629.28 W (PR)	177+83.1	25.2 L
44	48"	B	RIM=632.00	15" 628.12 W (PR) 12" 628.12 S (PR) 12" 628.12 N (PR)	178+20.4	25.4 L



SHEET QUANTITIES		
DESCRIPTION	UNITS	QUANTITY
Erosion Control, Check Dam, Stone	Ft	40
Erosion Control, Inlet Protection, Fabric Drop	Ea	2
Erosion Control, Sediment Trap	Ea	1
Subbase, CIP	Cyd	519
Aggregate Base, 6 inch, Modified	Syd	1314
Aggregate Base, 8 inch, Modified	Syd	59
Shoulder, Cl II, 3 inch, Modified	Syd	420
Approach, Cl I, 6 inch, Modified	Syd	167
Approach, Cl II, 6 inch, Modified	Syd	208
Culv End Sect, 12 inch	Ea	15
Culv End Sect, 15 inch	Ea	2
Culv End Sect, Metal, 42 inch	Ea	2
Culv, Cl A, 18 inch	Ft	54
Culv, Cl F, 12 inch	Ft	230
Culv, Cl F, 15 inch	Ft	26
Culv, Cl F, 42 inch	Ft	66
Culv, Slp End Sect, 1 on 4, 18 inch, Transv	Ea	2
Sewer, Cl A, 12 inch, Tr Det A	Ft	30
Sewer, Cl A, 12 inch, Tr Det B	Ft	60
Sewer, Cl A, 15 inch, Tr Det B	Ft	7
Sewer, Cl E, 12 inch, Tr Det B	Ft	56
Sewer Tap, 12 inch	Ea	3
Sewer Tap, 15 inch	Ea	1
Dr Structure Cover, Adj, Case 2	Ea	1
Dr Structure Cover, Type B	Ea	4
Dr Structure Cover, Type G	Ea	2
Dr Structure, 48 inch dia	Ea	5
Hand Patching	Ton	11
HMA Approach	Ton	41
HMA, 13A	Ton	336
Driveway, Nonreinf Conc, 6 inch	Syd	96
Riprap, Plain	Syd	168
Monument Box Adjust	Ea	1
Slope Restoration, Wetland	Syd	28

DRIVEWAY SCHEDULE															
C/L DRIVEWAY STATION	EXIST. PVMT TYPE	DRIVEWAY OFFSET REMOVAL LIMITS (FT)	WIDTH AT REMOVAL LIMITS (FT)	WIDTH AT OPENING (FT)	LENGTH OF DRIVE RESTORATION (FT)	Approach, Cl I, 6 inch, Modified (Syd)	Approach, Cl II, 6 inch, Modified (Syd)	HMA Approach (Ton)	Driveway, Nonreinf Conc. 6 inch (Syd)	Culv, Cl F, 12 inch (Ft)	Culv End Sect, 12 inch (Ea)	Culv, Cl F, 15 inch (Ft)	Culv End Sect, 15 inch (Ea)	Culv, Cl F, 42 inch (Ft)	Culv End Sect, Metal, 42 inch (Ea)
171+80, LT	HMA	33.0	12.6	32.7	17.9	30		5		26	2				
171+82, RT	G	57.3	31.6	41.0	41.7		108							66	2
173+77, RT	G	29.5	12.3	32.6	12.4		23					26	2		
173+80, LT	G	32.3	13.9	33.9	16.0		30			26	2				
174+30, LT	G	32.8	6.9	27.3	14.9		18								
175+89, RT	HMA	24.3	10.6	30.6	9.3	16		3							
176+45, LT	C	29.8	13.5	28.0	14.6	34			34	28	2				
176+58, RT	C	26.0	10.0	20.4	11.0	19			19						
177+42, LT	C	29.3	9.8	22.7	13.1	24			24						
178+38, RT	HMA	33.0	10.3	30.2	18.0	25		5		24	2				
179+43, RT	C	25.9	10.9	20.0	10.9	19			19						
180+07, LT	G	33.0	12.5	33.1	16.0		29			126	2*				

G = GRAVEL DRIVE, C = CONCRETE DRIVE, HMA = HMA DRIVE

* CULVERT AND END SECTIONS FOR ℄ DW STA. 180+07, LT, ACCOUNTS FOR CULVERT AND END SECTIONS AT ℄ DW STA. 181+03, LT ON SHEET 34

NOTE: Culv, Cl F, _ inch VALUE INDICATES PAY LENGTH, PROFILE INDICATES ACTUAL LENGTH.

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PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
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www.rowepsc.com

PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

PREPARED FOR
MIDLAND COUNTY ROAD COMMISSION
POSEYVILLE RD SAFETY IMPROVEMENTS
STA 170+50 TO STA 180+50
PLAN SHEET

REV:

JOB No: 17M0088

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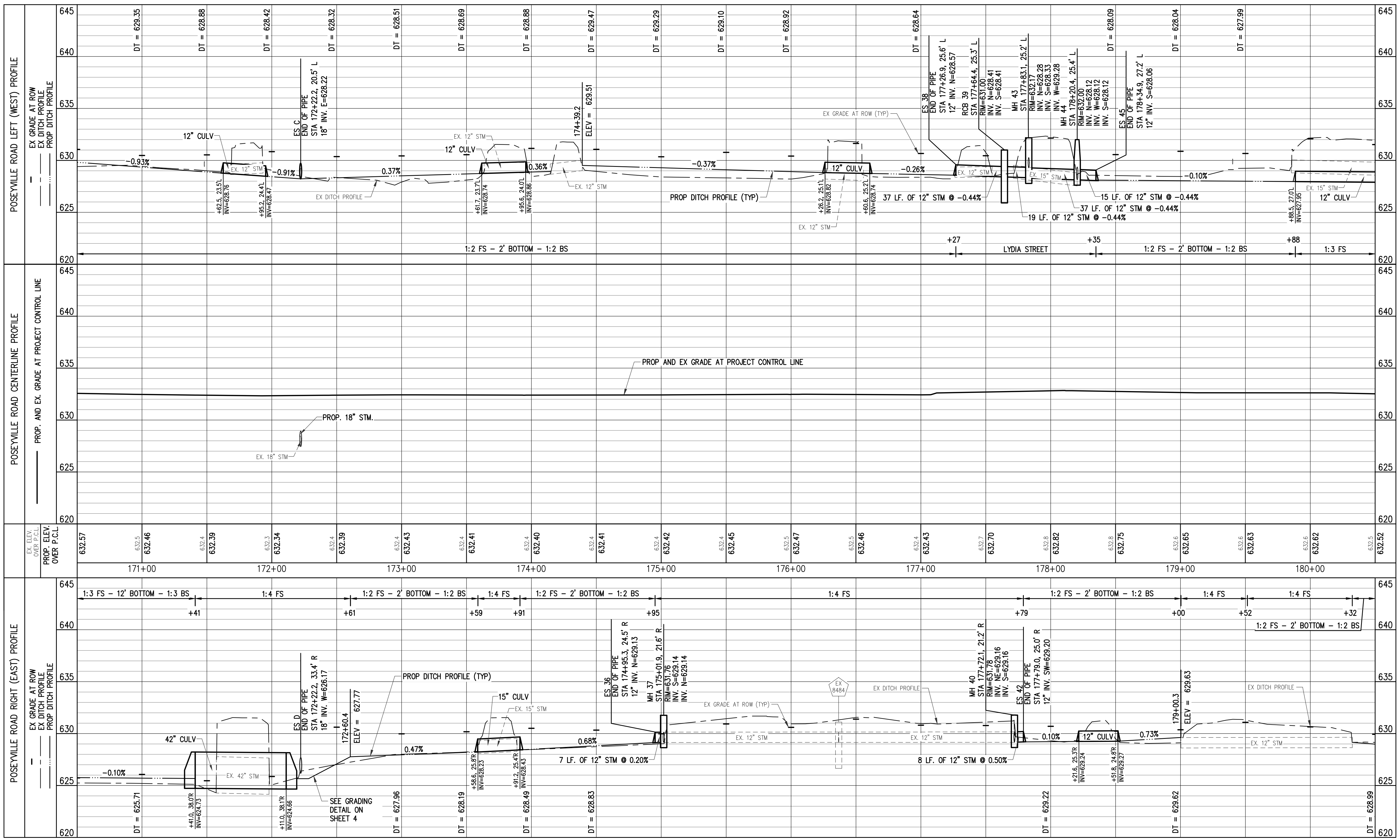

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PROFILE SHEET

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PLAN SUBMITTALS AND CHANGES

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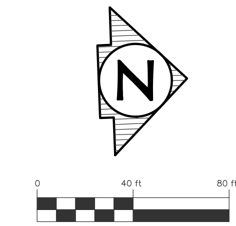
UTILITY ROAD REPAIR SCHEDULE				
CROSSING STATION	AVERAGE WIDTH OF REPAIR (FT)	AVERAGE LENGTH OF REPAIR (FT)	Hand Patching (Ton)	Aggregate Base, 8 inch, Modified (Syd)
183+56 LT	10	32	7	35

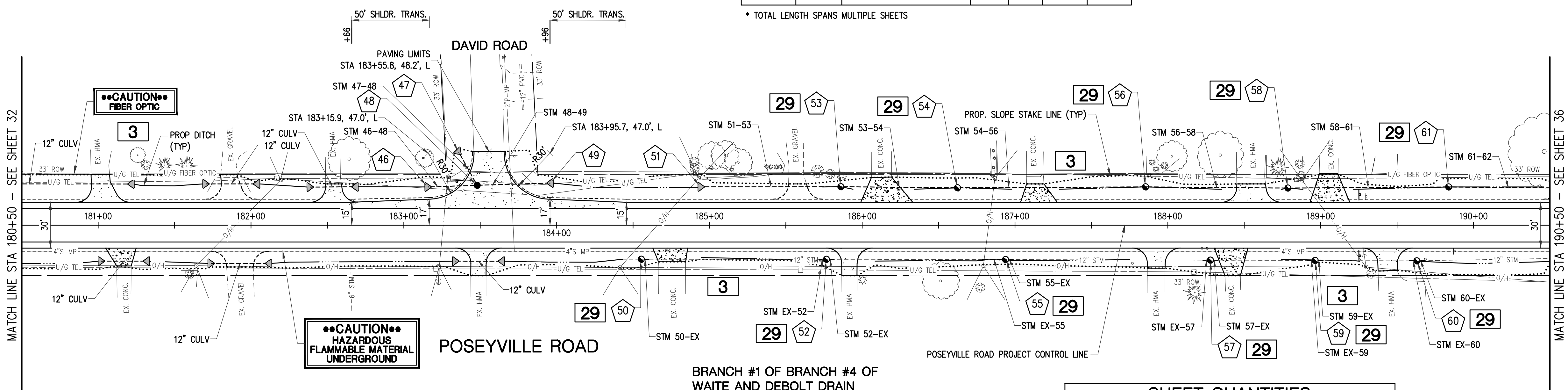
PROPOSED STORM SEWER END SECTION TABLE					
STRUCT NO.	DIA.	PAY ITEM	END OF PIPE INVERT	END OF PIPE STATION	END OF PIPE OFFSET
46	12"	Culv End Sect, _ inch	12" 627.53	183+15.9	25.0 L
47	12"	Culv End Sect, _ inch	12" 628.32	183+36.0	47.7 L
49	12"	Culv End Sect, _ inch	12" 627.24	183+95.7	27.6 L
51	12"	Culv End Sect, _ inch	12" 626.98	184+94.6	25.0 L

PROPOSED STORM SEWER PIPE TABLE						
PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 46-48	12"	Sewer, Cl A, 12 inch Tr Det _	32'	0.36%	10'	22'
STM 47-48	12"	Sewer, Cl A, 12 inch Tr Det _	25'	3.68%	5'	20'
STM 48-49	12"	Sewer, Cl A, 12 inch Tr Det _	48'	0.36%	15'	33'
STM 50-EX	12"	Sewer, Cl A, 12 inch Tr Det _	5'	EX	5'	0'
STM 51-53	12"	Sewer, Cl A, 12 inch Tr Det _	91'	0.48%	61'	30'
STM 52-EX	12"	Sewer, Cl A, 12 inch Tr Det _	5'	EX	5'	0'
STM 53-54	12"	Sewer, Cl A, 12 inch Tr Det _	76'	0.48%	0'	76'
STM 54-56	12"	Sewer, Cl A, 12 inch Tr Det _	123'	0.48%	0'	123'
STM 55-EX	12"	Sewer, Cl A, 12 inch Tr Det _	5'	EX	5'	0'
STM 56-58	12"	Sewer, Cl A, 12 inch Tr Det _	93'	0.48%	0'	93'
STM 57-EX	12"	Sewer, Cl A, 12 inch Tr Det _	5'	EX	5'	0'
STM 58-61	12"	Sewer, Cl A, 12 inch Tr Det _	105'	0.48%	0'	105'
STM 59-EX	12"	Sewer, Cl A, 12 inch Tr Det _	5'	EX	5'	0'
STM 60-EX	12"	Sewer, Cl A, 12 inch Tr Det _	5'	EX	5'	0'
STM 61-62	12"	Sewer, Cl A, 12 inch Tr Det _	95' *	0.48%	0'	95'
STM EX-52	12"	Sewer, Cl A, 12 inch Tr Det _	5'	EX	5'	0'
STM EX-55	12"	Sewer, Cl A, 12 inch Tr Det _	15'	EX	15'	0'
STM EX-57	12"	Sewer, Cl A, 12 inch Tr Det _	5'	EX	5'	0'
STM EX-59	12"	Sewer, Cl A, 12 inch Tr Det _	5'	EX	5'	0'
STM EX-60	12"	Sewer, Cl A, 12 inch Tr Det _	5'	EX	5'	0'

* TOTAL LENGTH SPANS MULTIPLE SHEETS

PROPOSED STORM SEWER STRUCTURE TABLE						
STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	STATION	OFFSET
48	48"	B	RIM=630.54	12" 627.41 S (PR) 12" 627.41 SW (PR) 12" 627.41 N (PR)	183+48.0	26.1 L
50	24"	G	RIM=627.69	12" 625.06 N (PR)	184+55.4	22.3 R
52	48"	G	RIM=628.66	12" 624.91 N (PR) 12" 624.91 S (PR)	185+76.6	22.3 R
53	48"	G	RIM=629.40	12" 626.54 S (PR) 12" 625.65 N (PR)	185+86.0	25.2 L
54	48"	G	RIM=628.80	12" 625.28 S (PR) 12" 625.28 N (PR)	186+62.3	24.4 L
55	48"	G	RIM=627.63	12" 624.72 S (PR) 12" 624.62 N (PR)	186+93.7	22.4 R
56	48"	G	RIM=628.50	12" 624.69 S (PR) 12" 624.69 N (PR)	187+85.4	25.0 L
57	48"	G	RIM=628.00	12" 624.50 N (PR) 12" 624.50 S (PR)	188+27.8	22.9 R
58	48"	G	RIM=628.18	12" 624.24 S (PR) 12" 624.24 N (PR)	188+78.5	24.3 L
59	48"	G	RIM=627.50	12" 624.43 N (PR) 12" 624.43 S (PR)	188+96.4	23.1 R
60	48"	G	RIM=627.50	12" 624.37 N (PR) 12" 624.37 S (PR)	189+62.9	23.3 R
61	48"	G	RIM=627.50	12" 623.73 S (PR) 12" 623.72 N (PR)	189+83.7	25.0 L





BRANCH #1 OF BRANCH #4 OF WAITE AND DEBOLT DRAIN

DRIVEWAY SCHEDULE											
C/L DRIVEWAY STATION	EXIST. PVMT TYPE	DRIVEWAY OFFSET ROMOVAL LIMITS (FT)	WIDTH AT REMOVAL LIMITS (FT)	WIDTH AT OPENING (FT)	LENGTH OF DRIVE RESTORATION (FT)	Approach, Cl I, 6 inch, Modified (Syd)	Approach, Cl II, 6 inch, Modified (Syd)	HMA Approach (Ton)	Driveway, Nonreinf Conc. 6 inch (Syd)	Culv, Cl F, 12 inch (Ft)	Culv End Sect, 12 inch (Ea)
181+03, LT	HMA	33.0	12.1	35.7	18.0	33		6		*	*
181+19, RT	C	26.6	9.3	20.0	11.6	20			20	22	2
181+87, LT	G	32.8	10.8	33.0	16.0		27			26	2
181+95, RT	G	27.8	17.5	37.5	10.3		25			30	2
182+56, LT	HMA	27.0	10.4	29.3	12.0	19		4		22	2
183+51, RT	HMA	33.0	10.0	30.0	18.0	25		5		22	2
184+77, RT	C	20.2	17.7	22.8	8.9	21			21		
185+59, LT	G	26.9	11.7	32.3	10.0		19				
185+93, RT	HMA	33.0	10.0	30.1	18.0	25		5			
186+14, LT	C	31.5	13.2	34.0	16.3	43			43		
187+15, LT	C	27.0	11.4	24.0	12.0	24			24		
187+94, RT	HMA	28.1	11.7	31.6	13.1	22		4			
188+44, RT	C	33.0	10.2	22.0	18.0	33			33		
188+56, LT	HMA	27.0	18.8	39.2	12.0	30		5			
189+07, LT	C	24.6	12.4	26.0	18.2	40			40		
189+46, RT	HMA	29.7	12.6	32.8	14.7	26		5			

G = GRAVEL DRIVE, C = CONCRETE DRIVE, HMA = HMA DRIVE

* CULVERT AND END SECTIONS ACCOUNTED FOR ON SHEET 32, ℄ DW STA. 180+07, LT

NOTE: Culv, Cl F, _ inch VALUE INDICATES PAY LENGTH, PROFILE INDICATES ACTUAL LENGTH.

SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Erosion Control, Inlet Protection, Fabric Drop	Ea	11
Subbase, CIP	Cyd	519
Aggregate Base, 6 inch, Modified	Syd	1313
Aggregate Base, 8 inch, Modified	Syd	35
Shoulder, Cl II, 3 inch, Modified	Syd	384
Approach, Cl I, 6 inch, Modified	Syd	361
Approach, Cl II, 6 inch, Modified	Syd	71
Culv End Sect, 12 inch	Ea	14
Culv, Cl F, 12 inch	Ft	122
Sewer, Cl A, 12 inch, Tr Det A	Ft	156
Sewer, Cl A, 12 inch, Tr Det B	Ft	597
Sewer Tap, 12 inch	Ea	6
Dr Structure Cover, Type B	Ea	1
Dr Structure Cover, Type G	Ea	11
Dr Structure, 24 inch dia	Ea	1
Dr Structure, 48 inch dia	Ea	11
Hand Patching	Ton	7
HMA Approach	Ton	61
HMA, 13A	Ton	343
Driveway, Nonreinf Conc, 6 inch	Syd	181

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PLAN SUBMITTALS AND CHANGES

BIDDING DOCUMENTS

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PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

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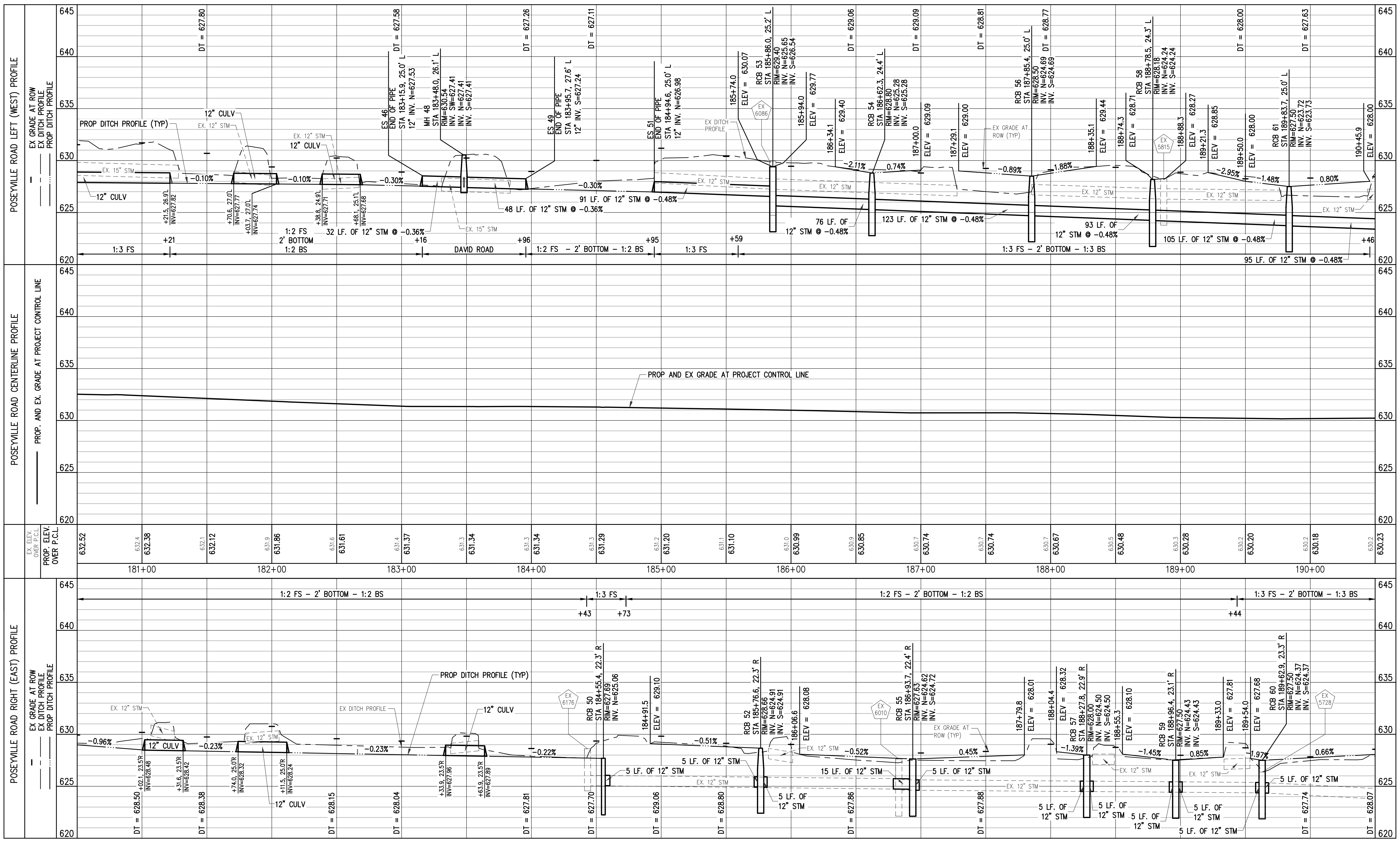
STA 180+50 TO STA 190+50
PLAN SHEET

REV:

JOB No: 17M0088



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BIDDING DOCUMENTS	
DATE	DESCRIPTION
6/22/18	ISSUED FOR BIDS

REV:

SHT# 35 OF 45

JOB No: 17M0088

PROPOSED STORM SEWER END SECTION TABLE

STRUCT NO.	DIA.	PAY ITEM	END OF PIPE INVERT	END OF PIPE STATION	END OF PIPE OFFSET
65	24"	Culv End Sect, _ inch	24" 622.30	191+98.6	37.4 L

PROPOSED STORM SEWER PIPE TABLE

PIPE NUMBER	DIAMETER	PAY ITEM	TOTAL LENGTH	SLOPE	TRENCH DETAIL A (T.D. A)	TRENCH DETAIL B (T.D. B)
STM 61-62	12"	Sewer, Cl A, 12 inch Tr Det _	95'	0.48%	0'	95'
STM 62-64	12"	Sewer, Cl A, 12 inch Tr Det _	119'	0.48%	0'	119'
STM 63-5433	12"	Sewer, Cl A, 12 inch Tr Det _	9'	2.81%	9'	0'
STM 64-EX	30"	Sewer, Cl A, 30 inch Tr Det _	5'	EX	0'	5'
STM 65-64	24"	Sewer, Cl A, 24 inch Tr Det _	10'	0.00%	0'	10'

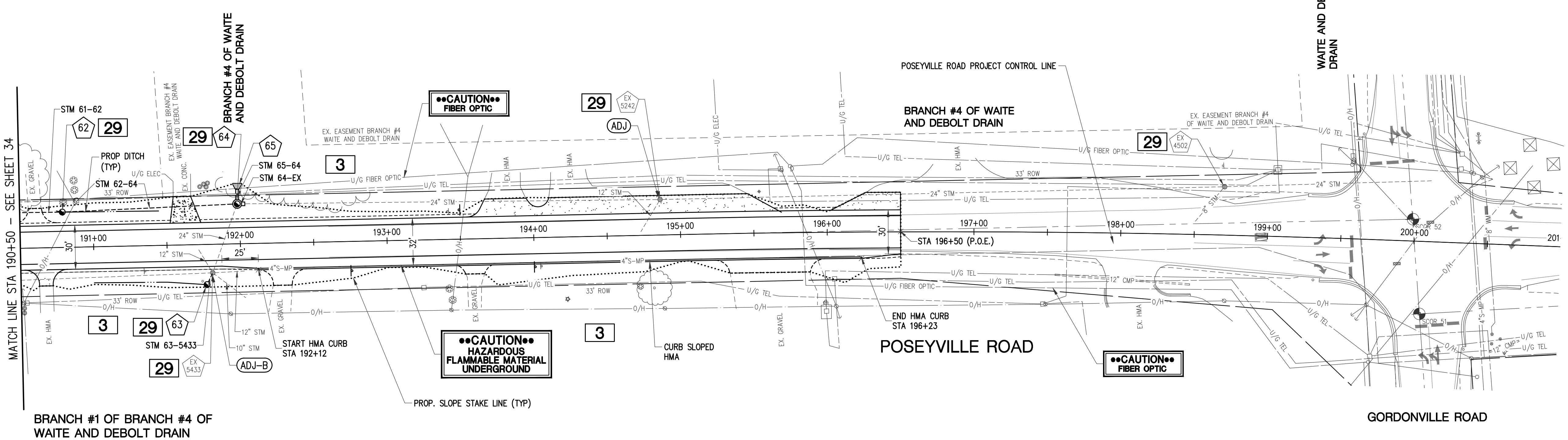
NOTE: PIPE LENGTH/QUANITY FOR PIPE STM 61-62 IS ACCOUNTED FOR ON SHEET 34

PROPOSED STORM SEWER STRUCTURE TABLE

STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	STATION	OFFSET
62	48"	G	RIM=628.11	12" 623.26 S (PR) 12" 623.26 N (PR)	190+79.1	24.1 L
63	24"	G	RIM=627.07	12" 624.00 NW (PR)	191+76.7	27.4 R
64	72"	G	RIM=628.02	24" 622.71 SE (EX) 30" 622.30 N (PR) 12" 622.69 S (PR) 24" 622.30 W (PR)	191+98.3	27.2 L
EX 5433	N/A	B	RIM=628.90	12" 623.75 SE (PR) 12" 623.73 N (EX) 12" 624.93 SW (EX) 10" 624.93 NE (EX) 24" 622.93 S (EX) 24" 622.93 NW (EX)	191+80.8	19.5 R

N

0 40 ft 80 ft



DRIVEWAY SCHEDULE

C/L DRIVEWAY STATION	EXIST. PVMT TYPE	DRIVEWAY OFFSET REMOVAL LIMITS (FT)	WIDTH AT REMOVAL LIMITS (FT)	WIDTH AT OPENING (FT)	LENGTH OF DRIVE RESTORATION (FT)	Approach, Cl I, 6 inch, Modified (Syd)	Approach, Cl II, 6 inch, Modified (Syd)	HMA Approach (Ton)	Driveway, Nonreinf Conc. 6 inch (Syd)
190+62, LT	G	27.1	8.9	29.2	10.0		15		
190+69, RT	HMA	26.0	9.3	29.4	11.0	16		3	
191+63, LT	C	32.9	11.9	21.0	18.0	33			33
192+30, RT	G	28.7	12.9	32.9	11.9		22		
193+61, RT	G	24.0	12.8	31.9	6.9		14		
193+83, LT	HMA	27.0	28.3	50.8	12.0	55		10	
194+31, LT	HMA	26.9	135.5	164.4	12.0	195		32	
195+63, RT	G	27.0	54.6	74.9	10.2		60		
196+39, LT	HMA	27.0	23.8	49.7	12.0	48		8	

G = GRAVEL DRIVE, C = CONCRETE DRIVE, HMA = HMA DRIVE

SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Erosion Control, Inlet Protection, Fabric Drop	Ea	6
Subbase, CIP	Cyd	342
Aggregate Base, 6 inch, Modified	Syd	888
Shoulder, Cl II, 3 inch, Modified	Syd	113
Approach, Cl I, 6 inch, Modified	Syd	347
Approach, Cl II, 6 inch, Modified	Syd	111
Culv End Sect, 24 inch	Ea	1
Sewer, Cl A, 12 inch, Tr Det A	Ft	9
Sewer, Cl A, 12 inch, Tr Det B	Ft	119
Sewer, Cl A, 24 inch, Tr Det B	Ft	10
Sewer, Cl A, 30 inch, Tr Det B	Ft	5
Sewer Tap, 24 inch	Ea	1
Sewer Tap, 30 inch	Ea	1
Dr Structure Cover, Adj, Case 1	Ea	1
Dr Structure Cover, Adj, Case 2	Ea	1
Dr Structure Cover, Type B	Ea	1
Dr Structure Cover, Type G	Ea	3
Dr Structure, 24 inch dia	Ea	1
Dr Structure, 48 inch dia	Ea	1
Dr Structure, 72 inch dia	Ea	1
Dr Structure, Tap, 12 inch	Ea	1
HMA Approach	Ton	53
HMA, 13A	Ton	254
Driveway, Nonreinf Conc, 6 inch	Syd	33
Curb Sloped, HMA	Ft	411

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STA 190+50 TO STA 196+50 (P.O.E.)
PLAN SHEET

REV:

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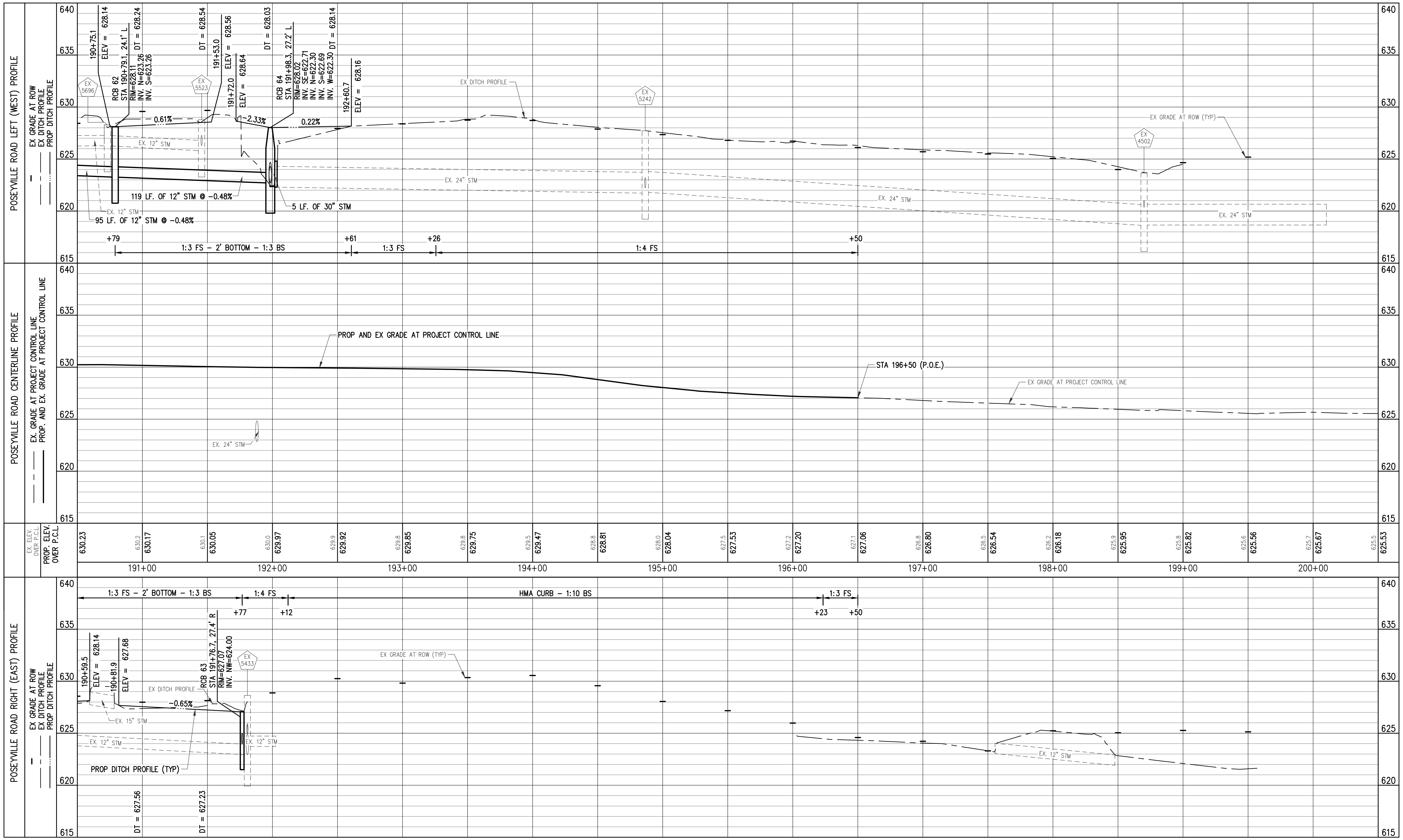

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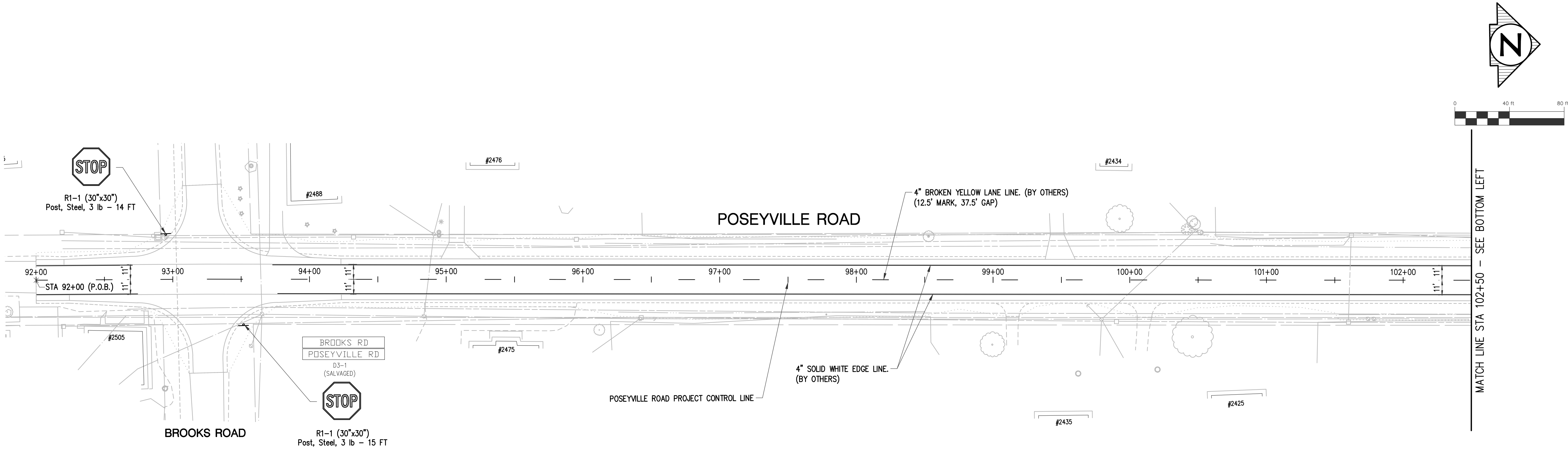
STA 190+50 TO STA 196+50 (P.O.E.)
PROFILE SHEET

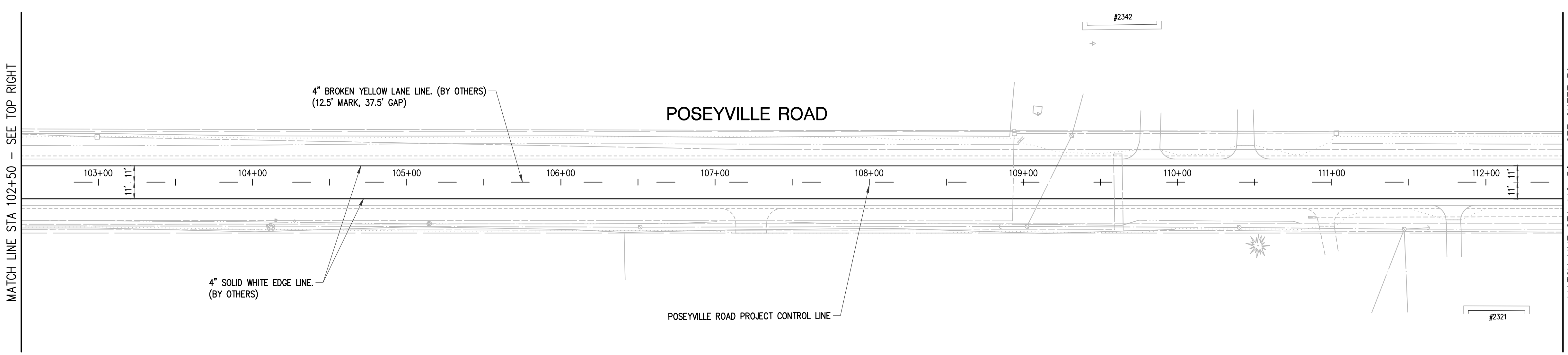
REV:

JOB No: 17M0088



SHEET QUANTITIES		
DESCRIPTION	UNITS	QUANTITY
Post, Steel, 3 lb	Ft	30
Sign, Type III, Erect, Salv	Ea	2
Sign, Type IIIA	Sft	13

NOTE:
ALL PERMANENT PAVEMENT MARKINGS WILL BE COMPLETED BY OTHERS.



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PLAN SUBMITTALS AND CHANGES	
BIDDING DOCUMENTS	
DATE	DESCRIPTION
6/22/18	ISSUED FOR BIDS

PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

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PAVEMENT MARKING AND SIGNING SHEET

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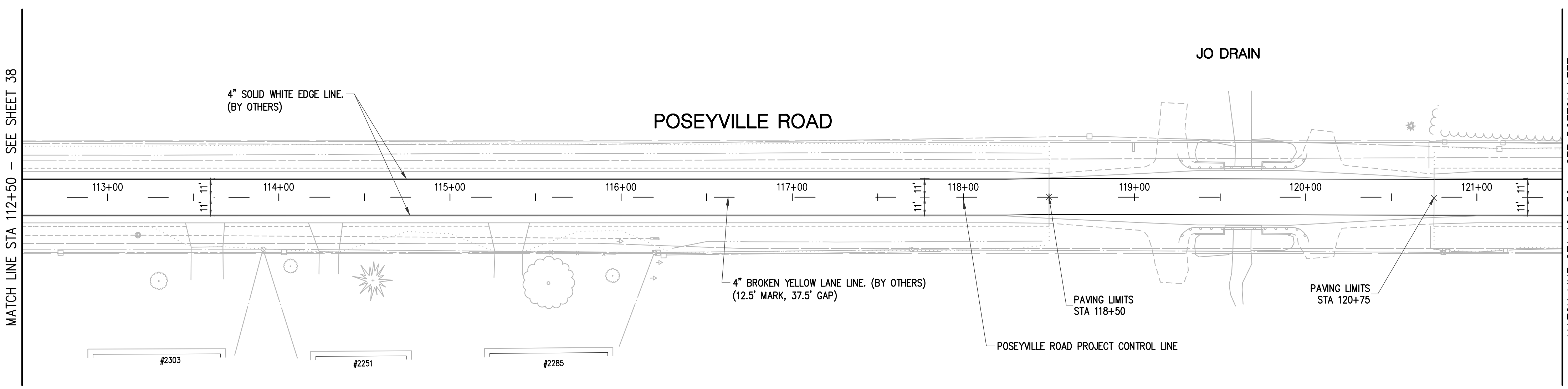
JOB No: 17M0088



NOTE:
ALL PERMANENT PAVEMENT MARKINGS
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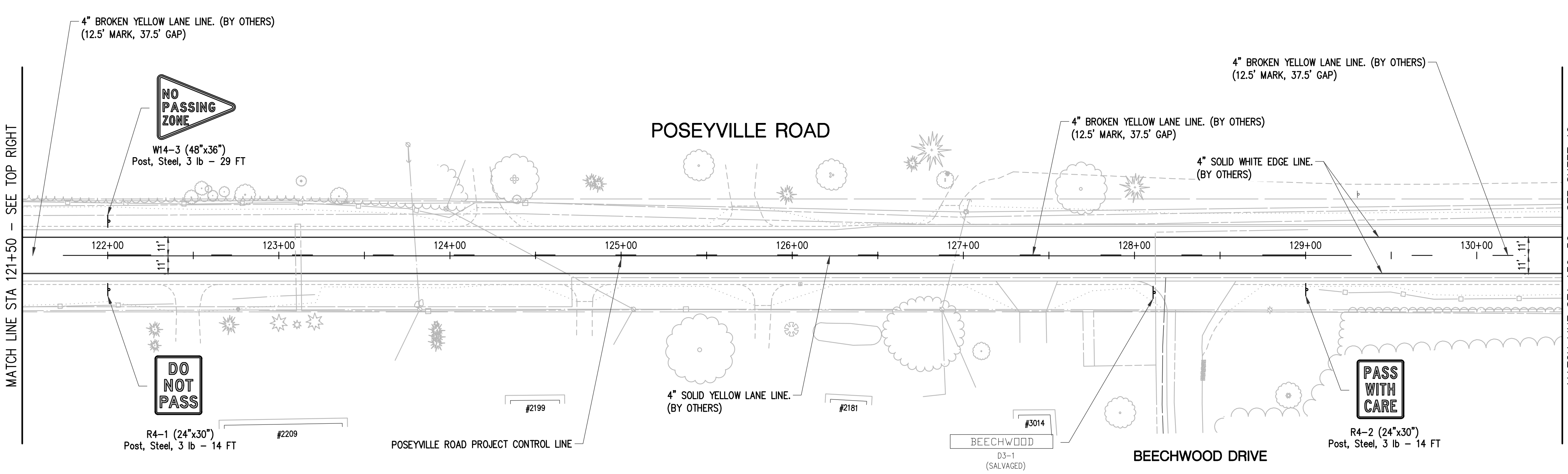
SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Post, Steel, 3 lb	Ft	71
Sign, Type III, Erect, Salv	Ea	1
Sign, Type IIIB	Sft	16
Sign, Type VB	Sft	6



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PLAN SUBMITTALS AND CHANGES

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PLAN DATE: JUNE 2018
PROJECT MGR: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

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STA 112+50 TO STA 130+50
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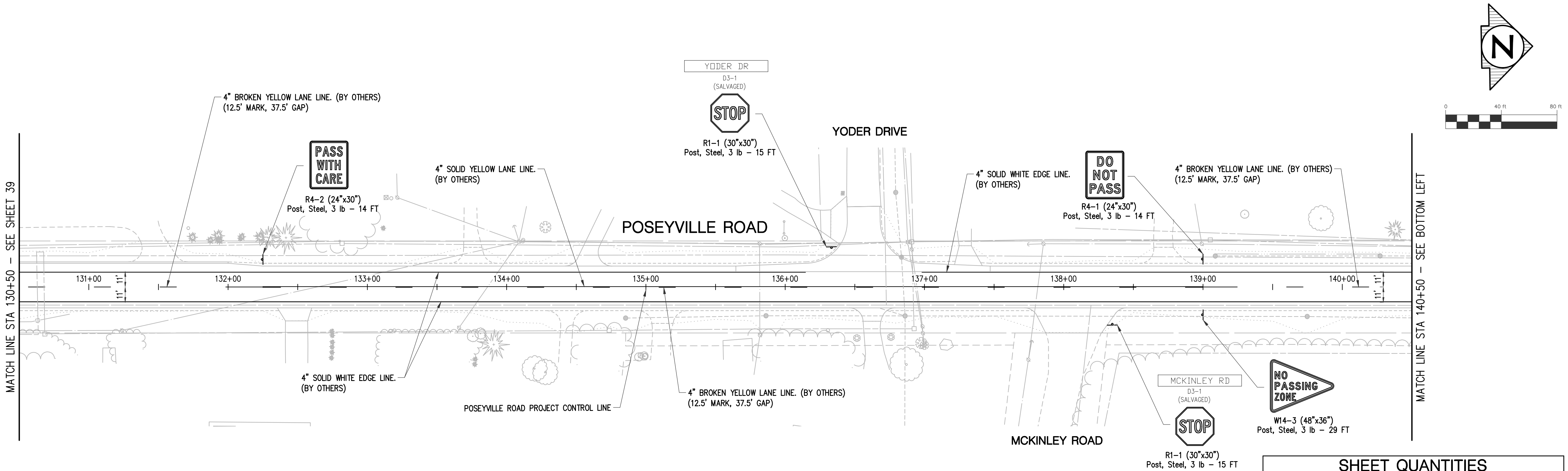
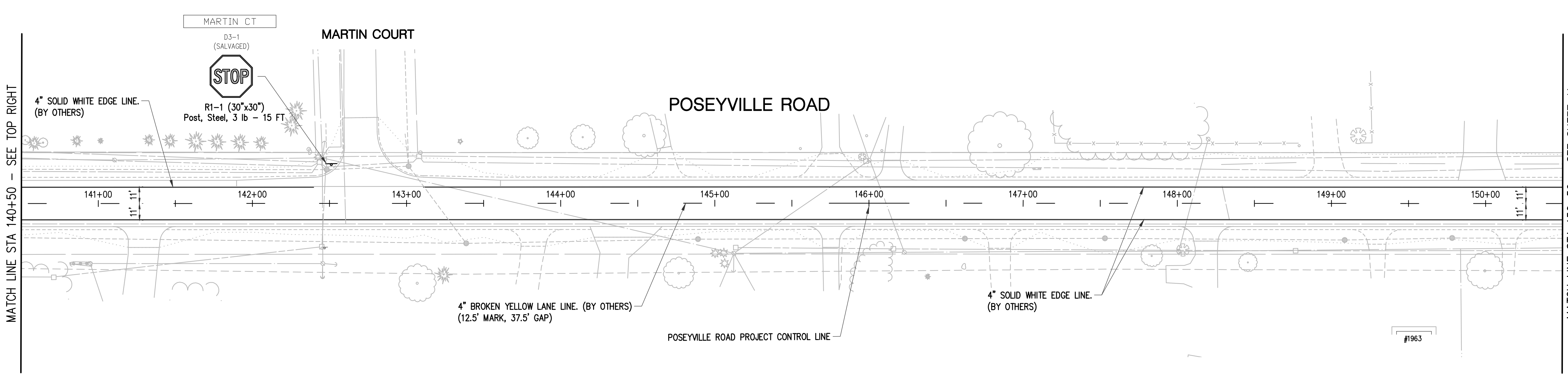


NOTE:
ALL PERMANENT PAVEMENT MARKINGS
WILL BE COMPLETED BY OTHERS.

SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Post, Steel, 3 lb	Ft	102
Sign, Type III, Erect, Salv	Ea	3
Sign, Type IIIA	Sft	19
Sign, Type IIIB	Sft	16
Sign, Type VB	Sft	6



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PLAN DATE: JUNE 2018
PROJECT MGR: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

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SHT# 40 OF 45
JOB No: 17M0088

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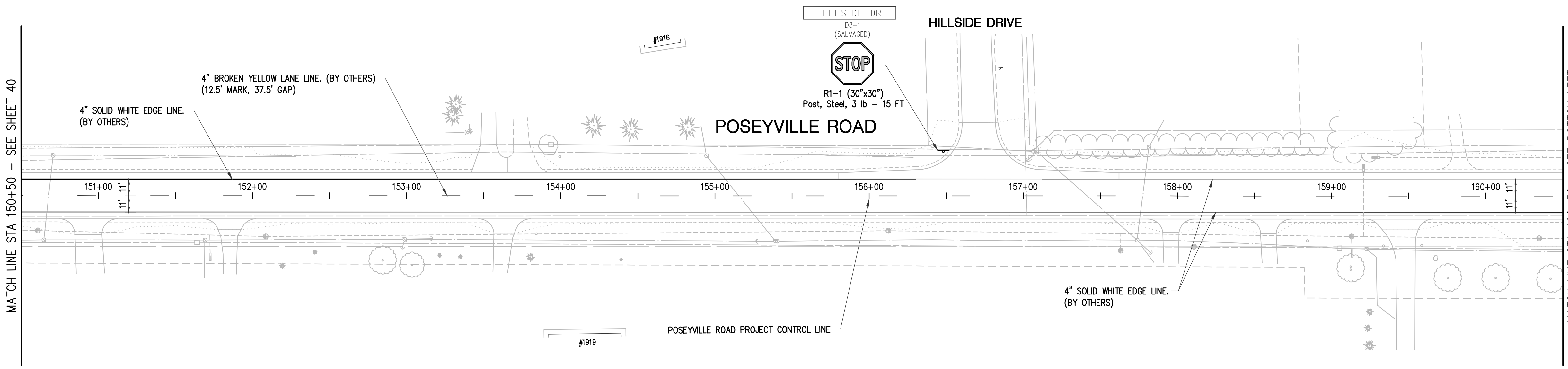
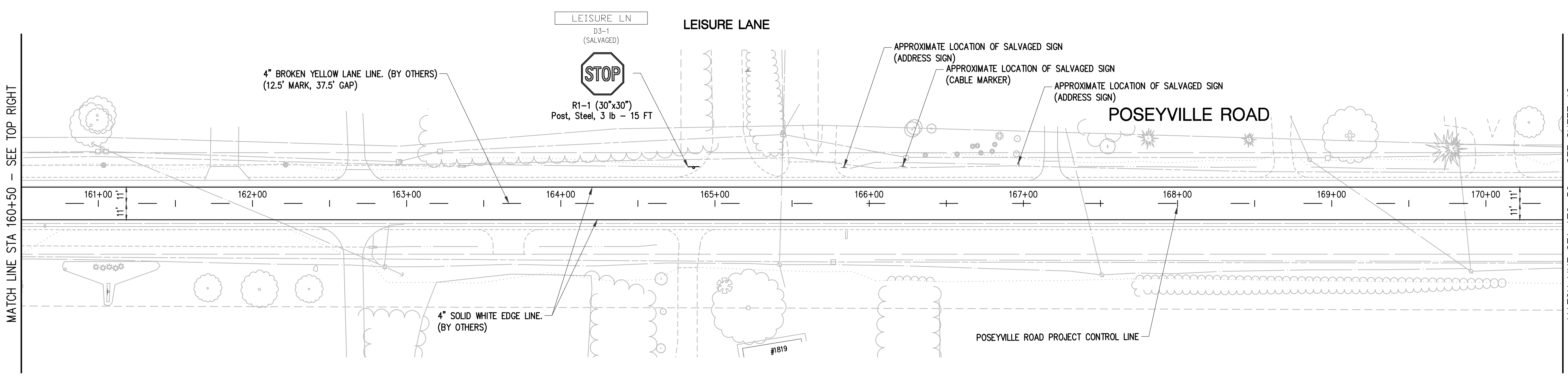


NOTE:
ALL PERMANENT PAVEMENT MARKINGS
WILL BE COMPLETED BY OTHERS.

SHEET QUANTITIES		
DESCRIPTION	UNITS	QUANTITY
Post, Steel, 3 lb	Ft	30
Sign, Type III, Erect, Salv	Ea	5
Sign, Type IIIA	Sft	13



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PLAN SUBMITTALS AND CHANGES	
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PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

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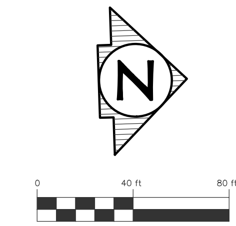

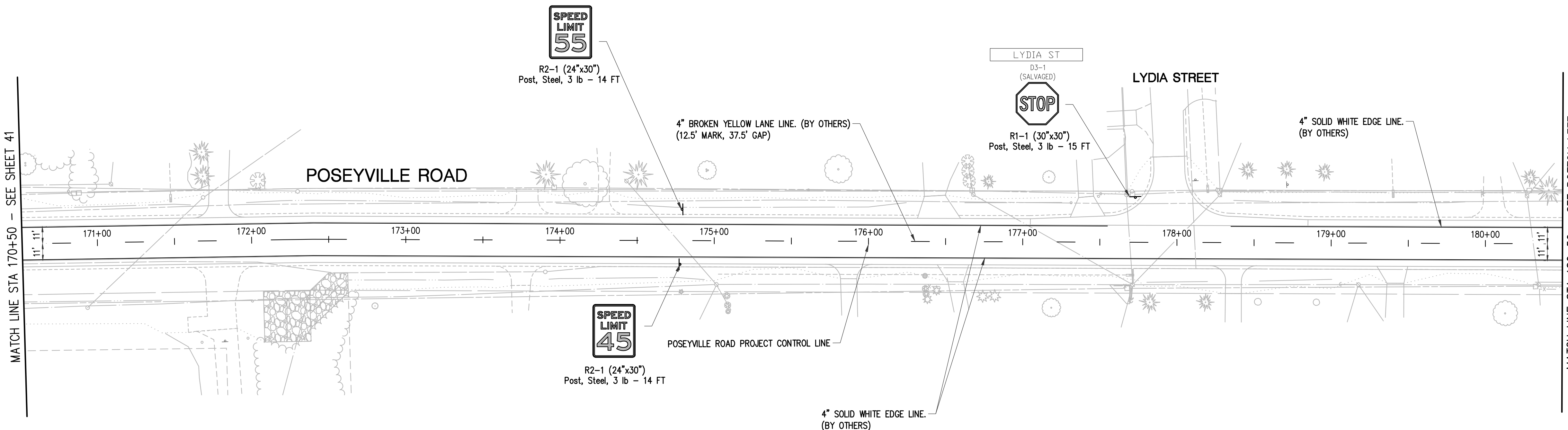

NOTE:
ALL PERMANENT PAVEMENT MARKINGS
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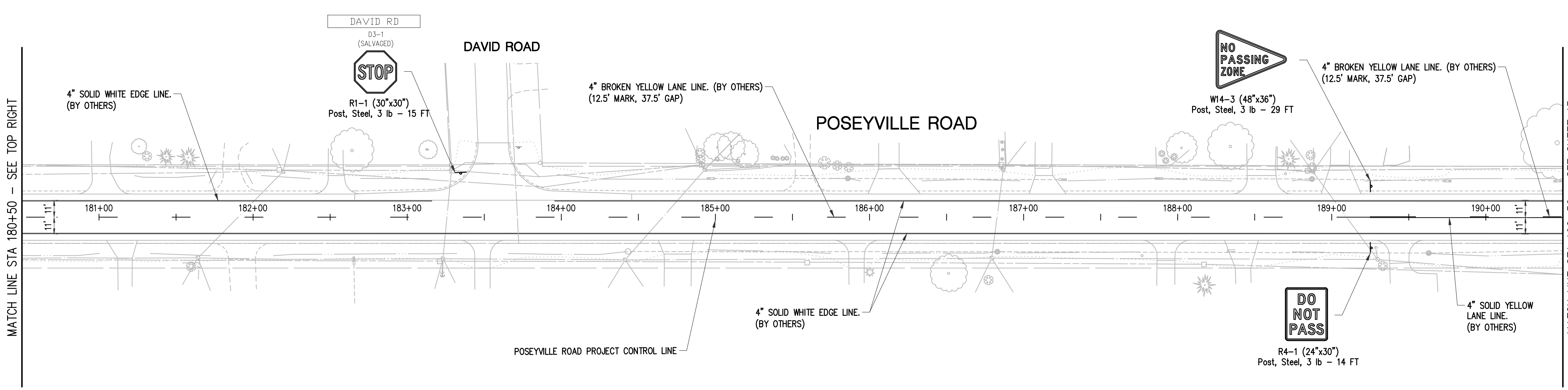
SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Post, Steel, 3 lb	Ft	101
Sign, Type III, Erect, Salv	Ea	2
Sign, Type IIIA	Sft	13
Sign, Type IIIB	Sft	21
Sign, Type VB	Sft	6



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PLAN DATE: JUNE 2018
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REVIEWER: ENJ
SCALE: 1" = 40'

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PAVEMENT MARKING AND SIGNING SHEET

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JOB No: 17M0088

NOTE:
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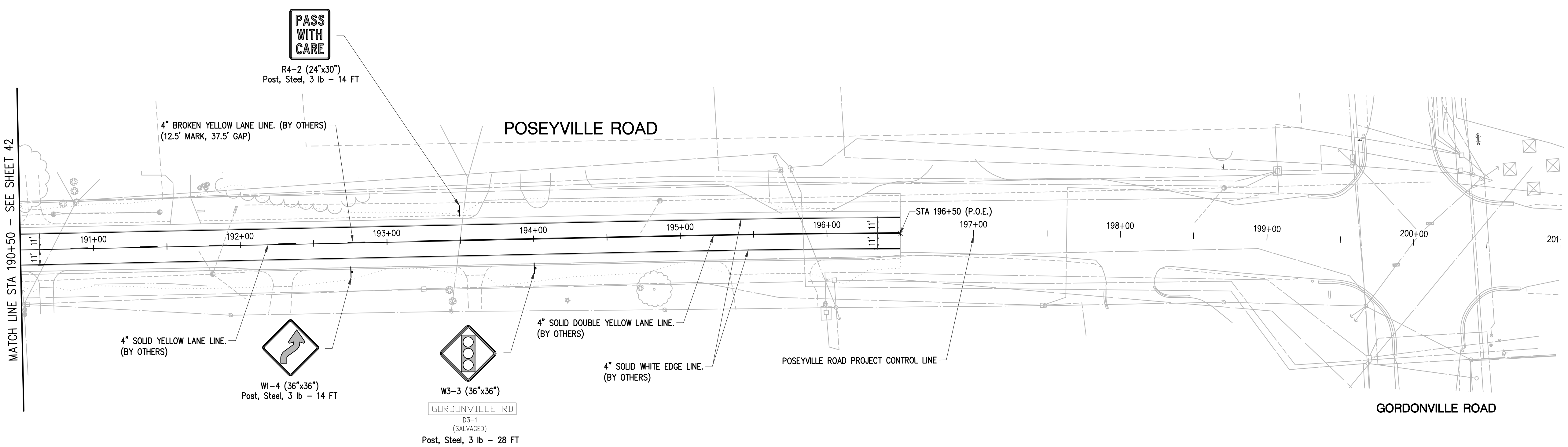
WILL BE COMPLETED BY OTHERS.

SHEET QUANTITIES

DESCRIPTION	UNITS	QUANTITY
Post, Steel, 3 lb	Ft	56
Sign, Type III, Erect, Salv	Ea	1
Sign, Type IIIB	Sft	23



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BIDDING DOCUMENTS

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PLAN DATE: JUNE 2018
PROJECT MGR.: MJS
REVIEWER: ENJ
SCALE: 1" = 40'

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JOB No: 17M0088

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LOG OF SOIL BORING NO. SB-1

PROJECT: Poseyville Road
JOB NO.: 18-63349
LOCATION: Poseyville Rd - 95+50
SURFACE ELEV.: Asphalt
DATE: 3/5/2018
8'6" Right of Center

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt, PCF	Dry Den Wt, PCF	Unc. Comp. Strength, PSF	Str. %
		0'5"	Asphalt						
			GRAVEL, p. fill						
		2'0"	Moist variegated Blue CLAY with occasional pebbles						
		5'0"	End of Boring						

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS:
- Used a 4" flight auger
- Boring was closed with auger cuttings and cold patch.

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT None FT. INS.
G.W. ENCOUNTERED AT FT. INS.
G.W. AFTER COMPLETION FT. INS.
G.W. AFTER HRS. FT. INS.
G.W. VOLUMES

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LOG OF SOIL BORING NO. SB-2

PROJECT: Poseyville Road
JOB NO.: 18-63349
LOCATION: Poseyville Rd - 112+00
SURFACE ELEV.: Road Shoulder
DATE: 3/5/2018
11'6" Left of Center

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt, PCF	Dry Den Wt, PCF	Unc. Comp. Strength, PSF	Str. %
			GRAVEL, p. fill						
		0'7"	Moist brown SAND with trace clay and occasional pebbles, p. fill						
		1'8"	Moist brown variegated CLAY with occasional pebbles						
		6'0"	Moist light brown fine SAND						
		10'0"	End of Boring						

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS:
- Used a 4" flight auger
- Boring was closed with auger cuttings and cold patch.

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT None FT. INS.
G.W. ENCOUNTERED AT FT. INS.
G.W. AFTER COMPLETION FT. INS.
G.W. AFTER HRS. FT. INS.
G.W. VOLUMES

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LOG OF SOIL BORING NO. SB-3

PROJECT: Poseyville Road
JOB NO.: 18-63349
LOCATION: Poseyville Rd - 126+50
SURFACE ELEV.: Asphalt
DATE: 3/5/2018
7'0" Left of Center

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt, PCF	Dry Den Wt, PCF	Unc. Comp. Strength, PSF	Str. %
		0'4"	Asphalt						
			GRAVEL, p. fill						
		1'8"	Moist light brown SAND, p. fill						
		5'0"	End of Boring						

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS:
- Used a 4" flight auger
- Boring was closed with auger cuttings and cold patch.

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT None FT. INS.
G.W. ENCOUNTERED AT FT. INS.
G.W. AFTER COMPLETION FT. INS.
G.W. AFTER HRS. FT. INS.
G.W. VOLUMES

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LOG OF SOIL BORING NO. SB-4

PROJECT: Poseyville Road
JOB NO.: 18-63349
LOCATION: Poseyville Rd - 130+00
SURFACE ELEV.: Road Shoulder
DATE: 3/5/2018
8'0" Right of Center

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt, PCF	Dry Den Wt, PCF	Unc. Comp. Strength, PSF	Str. %
		0'3"	Asphalt						
			GRAVEL, p. fill						
		1'8"	Moist brown variegated sandy CLAY with occasional pebbles, p. fill						
		2'0"	Moist yellow orange fine SAND, p. fill						
		9'0"	Wet yellow orange fine SAND, p. fill						
		10'0"	End of Boring						

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS:
- Used a 4" flight auger
- Boring was closed with auger cuttings and cold patch.

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT 9 FT. 0 INS.
G.W. ENCOUNTERED AT FT. INS.
G.W. AFTER COMPLETION 7 FT. 0 INS.
G.W. AFTER HRS. FT. INS.
G.W. VOLUMES Heavy

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LOG OF SOIL BORING NO. SB-5

PROJECT: Poseyville Road
JOB NO.: 18-63349
LOCATION: Poseyville Rd - 139+50
SURFACE ELEV.: Asphalt
DATE: 3/5/2018
5'0" Right of Center

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt, PCF	Dry Den Wt, PCF	Unc. Comp. Strength, PSF	Str. %
			Asphalt						
		0'5"	GRAVEL, p. fill						
		1'11"	Moist light brown SAND, p. fill						
		2'5"	Moist dark brown SAND with trace clay and occasional pebbles, p. fill						
		3'9"	Moist light brown variegated SAND with occasional pebbles, p. fill						
		5'0"	End of Boring						

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS:
- Used a 4" flight auger
- Boring was closed with auger cuttings and cold patch.

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT None FT. INS.
G.W. ENCOUNTERED AT FT. INS.
G.W. AFTER COMPLETION FT. INS.
G.W. AFTER HRS. FT. INS.
G.W. VOLUMES

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LOG OF SOIL BORING NO. SB-6

PROJECT: Poseyville Road
JOB NO.: 18-63349
LOCATION: Poseyville Rd - 150+00
SURFACE ELEV.: Asphalt
DATE: 3/5/2018
8'0" Right of Center

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt, PCF	Dry Den Wt, PCF	Unc. Comp. Strength, PSF	Str. %
		0'3"	Asphalt						
			GRAVEL, p. fill						
		1'6"	Moist brown variegated SAND with occasional pebbles, p. fill						
		6'6"	Moist brown silty SAND						
		8'6"	Moist brown CLAY with trace silt						
		10'0"	End of Boring						

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS:
- Used a 4" flight auger
- Boring was closed with auger cuttings and cold patch.

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT None FT. INS.
G.W. ENCOUNTERED AT FT. INS.
G.W. AFTER COMPLETION FT. INS.
G.W. AFTER HRS. FT. INS.
G.W. VOLUMES

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PLAN SUBMITTALS AND CHANGES
BIDDING DOCUMENTS

DATE	DESCRIPTION
6/22/18	ISSUED FOR BIDS

PLAN DATE: JUNE 2018
PROJECT MGR: MJS
REVIEWER: ENJ
SCALE: NO SCALE

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LOG OF SOIL BORING NO. SB-7
PROJECT Poseyville Road
JOB NO. 18-63349
LOCATION Poseyville Rd - 159+50, 6'0" Left of Center
SURFACE ELEV. Asphalt **DATE** 3/5/2018

Depth	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt, PCF	Dry Den Wt, PCF	Unc. Comp. Strength, PSF	Str. %
0'5"	Asphalt						
1'4"	GRAVEL, p. fill						
2'4"	Moist dark brown clayey SAND with occasional pebbles, p. fill						
5'0"	Moist dark brown sandy CLAY with occasional pebbles						
	End of Boring						

TYPE OF SAMPLE
- D. - DISTURBED
- U.L. - UNDIST. LINER
- S.T. - SHELBY TUBE
- S.S. - SPLIT SPOON
- R.C. - ROCK CORE
- ( ) - PENETROMETER

REMARKS:
- Used a 4" flight auger
- Boring was closed with auger cuttings and cold patch.

GROUND WATER OBSERVATIONS
- G.W. ENCOUNTERED AT None FT. INS.
- G.W. ENCOUNTERED AT FT. INS.
- G.W. AFTER COMPLETION FT. INS.
- G.W. AFTER HRS. FT. INS.
- G.W. VOLUMES

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LOG OF SOIL BORING NO. SB-8
PROJECT Poseyville Road
JOB NO. 18-63349
LOCATION Poseyville Rd - 164+00, 8'0" Right of Center
SURFACE ELEV. Asphalt **DATE** 3/5/2018

Depth	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt, PCF	Dry Den Wt, PCF	Unc. Comp. Strength, PSF	Str. %
0'5"	Asphalt						
1'5"	GRAVEL, p. fill						
5'6"	Moist brown variegated CLAY with occasional pebbles						
10'0"	Moist brown variegated sandy CLAY with occasional pebbles						
	End of Boring						

TYPE OF SAMPLE
- D. - DISTURBED
- U.L. - UNDIST. LINER
- S.T. - SHELBY TUBE
- S.S. - SPLIT SPOON
- R.C. - ROCK CORE
- ( ) - PENETROMETER

REMARKS:
- Used a 4" flight auger
- Boring was closed with auger cuttings and cold patch.

GROUND WATER OBSERVATIONS
- G.W. ENCOUNTERED AT None FT. INS.
- G.W. ENCOUNTERED AT FT. INS.
- G.W. AFTER COMPLETION FT. INS.
- G.W. AFTER HRS. FT. INS.
- G.W. VOLUMES

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LOG OF SOIL BORING NO. SB-9
PROJECT Poseyville Road
JOB NO. 18-63349
LOCATION Poseyville Rd - 181+00, 6'6" Right of Center
SURFACE ELEV. Asphalt **DATE** 3/5/2018

Depth	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt, PCF	Dry Den Wt, PCF	Unc. Comp. Strength, PSF	Str. %
0'5"	Asphalt						
1'6"	GRAVEL, p. fill						
2'4"	Moist brown variegated SAND with trace clay, p. fill						
3'0"	Moist dark brown SAND, p. fill						
4'0"	Moist light brown SAND, p. fill						
5'0"	Moist brown variegated sandy CLAY with occasional pebbles						
	End of Boring						

TYPE OF SAMPLE
- D. - DISTURBED
- U.L. - UNDIST. LINER
- S.T. - SHELBY TUBE
- S.S. - SPLIT SPOON
- R.C. - ROCK CORE
- ( ) - PENETROMETER

REMARKS:
- Used a 4" flight auger
- Boring was closed with auger cuttings and cold patch.

GROUND WATER OBSERVATIONS
- G.W. ENCOUNTERED AT None FT. INS.
- G.W. ENCOUNTERED AT FT. INS.
- G.W. AFTER COMPLETION FT. INS.
- G.W. AFTER HRS. FT. INS.
- G.W. VOLUMES

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LOG OF SOIL BORING NO. SB-10
PROJECT Poseyville Road
JOB NO. 18-63349
LOCATION Poseyville Rd - 193+00, 8'0" Left of Center
SURFACE ELEV. Asphalt **DATE** 3/5/2018

Depth	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt, PCF	Dry Den Wt, PCF	Unc. Comp. Strength, PSF	Str. %
0'4"	Asphalt						
1'4"	GRAVEL, p. fill						
3'0"	Moist dark brown SAND with occasional pebbles, p. fill						
5'6"	Moist light brown fine SAND, p. fill						
10'0"	Moist brown Silty CLAY						
	End of Boring						

TYPE OF SAMPLE
- D. - DISTURBED
- U.L. - UNDIST. LINER
- S.T. - SHELBY TUBE
- S.S. - SPLIT SPOON
- R.C. - ROCK CORE
- ( ) - PENETROMETER

REMARKS:
- Used a 4" flight auger
- Boring was closed with auger cuttings and cold patch.

GROUND WATER OBSERVATIONS
- G.W. ENCOUNTERED AT None FT. INS.
- G.W. ENCOUNTERED AT FT. INS.
- G.W. AFTER COMPLETION FT. INS.
- G.W. AFTER HRS. FT. INS.
- G.W. VOLUMES

Know what's **below.**
Call before you dig.

PLAN SUBMITTALS AND CHANGES

BIDDING DOCUMENTS	
DATE	DESCRIPTION
6/22/18	ISSUED FOR BIDS

PLAN DATE: JUNE 2018
PROJECT MGR: MJS
REVIEWER: ENJ
SCALE: NO SCALE

ROWE PROFESSIONAL SERVICES COMPANY
O: (989) 772-2138
F: (989) 773-7757
www.rowepsc.com
127 S. Main Street
Mt. Pleasant, MI 48858

PREPARED FOR
MIDLAND COUNTY ROAD COMMISSION
POSEYVILLE RD SAFETY IMPROVEMENTS

SOIL BORING SHEET

REV:

JOB No: 17M0088

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PLOTTED: 7/2/2018 8:44 AM