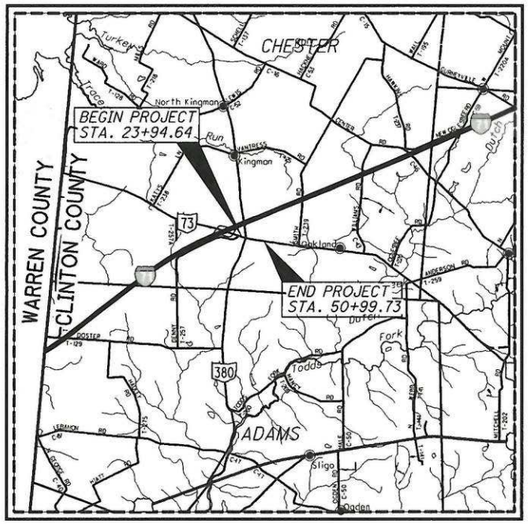
CLI - SR 73-02.66
220598 PID - 109350
Dist 8 11/17/2022

Contract Proposal available @
www.contracts.dot.state.oh.us



LOCATION MAP

LATITUDE: N 39°29'04" LONGITUDE: W 83°56'12"

SCALE IN MILES

0 1 2 3 4

N

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

DESIGN DESIGNATION

	SR-73	SR-380
CURRENT ADT (2023)	10,000	2,800
DESIGN YEAR ADT (2043)	12,000	3,100
DESIGN HOURLY VOLUME (2043)	1,400	300
DIRECTIONAL DISTRIBUTION	0.70	0.64
TRUCKS (24 HOUR B&C)	0.11	0.08
DESIGN SPEED	50 mph	55 mph
LEGAL SPEED	50 MPH	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
04 minor arterial (rural); 05 major collector (rural)
NHS PROJECT NO

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBERS
SHOULDER	8/9/22	3-5, 24-29

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

PLAN PREPARED BY:
THE OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 8 ENGINEERING
505 S. SR 741
LEBANON, OH 45036

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CLI-73-2.66

CHESTER TOWNSHIP
CLINTON COUNTY

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PROJECT DESCRIPTION

WIDENING OF SR 73 AT THE INTERSECTION WITH SR 380 FOR THE ADDITION OF LEFT TURN LANES ON SR 73 AND CONSTRUCTION OF A NEW SIGNAL WITH MAST ARMS AND BACKPLATES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	1.9 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	1.6 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	3.5 ACRES

2019 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE SIDE ROADS AS DESCRIBED ON SHEETS 7-17 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

ENGINEERS SEAL:

STATE OF OHIO
STEPHANIE OTTEN
E-60259
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Stephanie Otten
DATE: 8-11-22

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
BP-3.1	1/21/22	HL-30.11	1/15/21	TC-42.10	10/18/13			800-2019	7/15/22	
		HL-30.22	1/15/21	TC-42.20	10/18/13			809	7/15/22	
DM-1.1	7/17/20			TC-52.10	10/18/13			832	10/19/18	
DM-4.3	1/15/16	MT-95.61	4/19/19	TC-52.20	1/15/21			878	1/21/22	
DM-4.4	1/15/16	MT-97.10	4/19/19	TC-61.30	7/19/19			909	7/15/22	
		MT-97.12	1/20/17	TC-65.10	1/17/14					
BP-4.1	7/19/13	MT-101.60	1/17/20	TC-65.11	7/15/22					
		MT-101.70	1/17/20	TC-71.10	7/15/22					
MGS-1.1	7/16/21	MT-101.75	1/17/20	TC-81.22	7/15/22					
MGS-2.1	1/19/18	MT-101.90	7/17/20	TC-83.10	1/17/20					
MGS-4.3	1/18/13	MT-105.10	1/17/20	TC-85.10	4/17/20					
MGS-5.3	7/15/16	MT-120.00	7/15/22	TC-85.20	7/20/18					
RM-1.1	1/15/21	TC-12.31	4/15/22	ITS-12.50	7/16/21					
RM-4.2	4/17/20	TC-21.21	7/15/22							
		TC-41.20	10/18/13							

APPROVED Tamy K Campbell
DATE 8-11-2022 DISTRICT DEPUTY DIRECTOR

APPROVED Jack Marchbanks
DATE 1-28-22 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E190 (557)
PID NO. 109350
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
CLI-73-2.66

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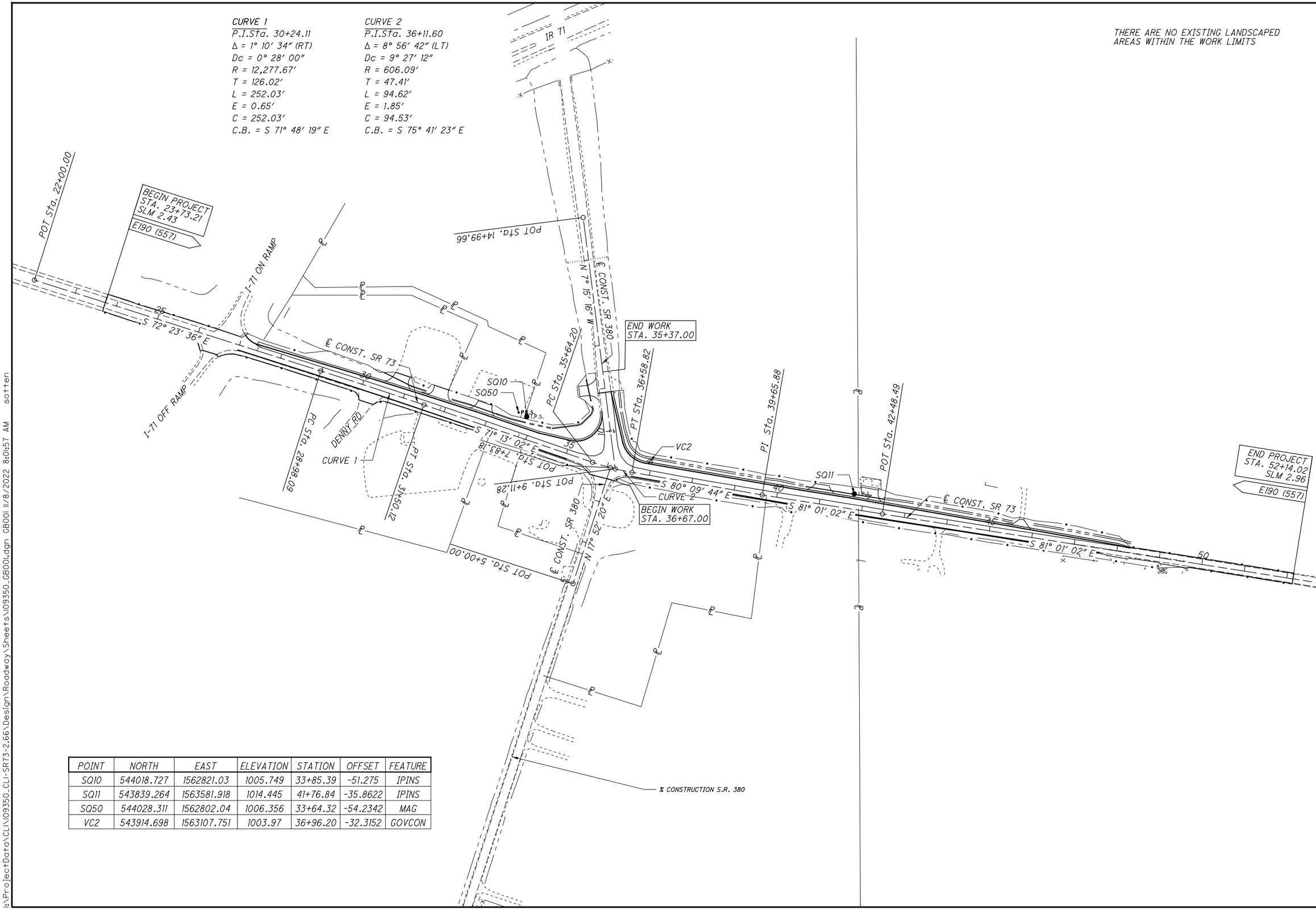
CURVE 1
P.I.Sta. 30+24.11
Δ = 1° 10′ 34″ (RT)
Dc = 0° 28′ 00″
R = 12,277.67′
T = 126.02′
L = 252.03′
E = 0.65′
C = 252.03′
C.B. = S 71° 48′ 19″ E

CURVE 2
P.I.Sta. 36+11.60
Δ = 8° 56′ 42″ (LT)
Dc = 9° 27′ 12″
R = 606.09′
T = 47.41′
L = 94.62′
E = 1.85′
C = 94.53′
C.B. = S 75° 41′ 23″ E

THERE ARE NO EXISTING LANDSCAPED AREAS WITHIN THE WORK LIMITS



POINT	NORTH	EAST	ELEVATION	STATION	OFFSET	FEATURE
SQ10	544018.727	1562821.03	1005.749	33+85.39	-51.275	IPINS
SQ11	543839.264	1563581.918	1014.445	41+76.84	-35.8622	IPINS
SQ50	544028.311	1562802.04	1006.356	33+64.32	-54.2342	MAG
VC2	543914.698	1563107.751	1003.97	36+96.20	-32.3152	GOVCON

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED SRO
CHECKED JDO

SCHEMATIC PLAN

CLI-73-2.66

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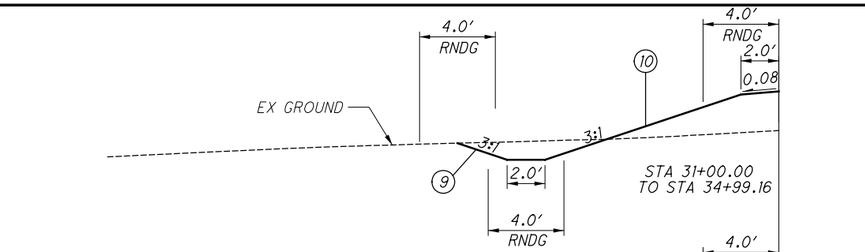
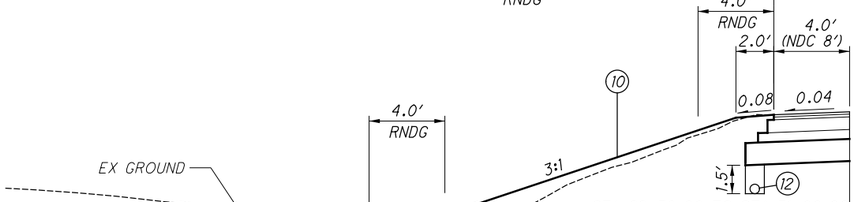
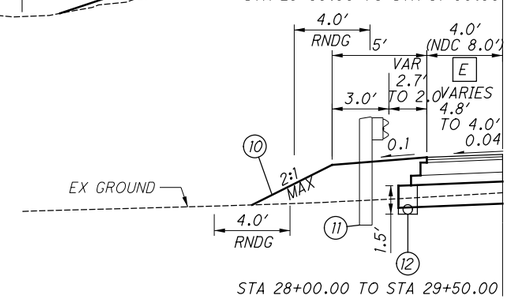






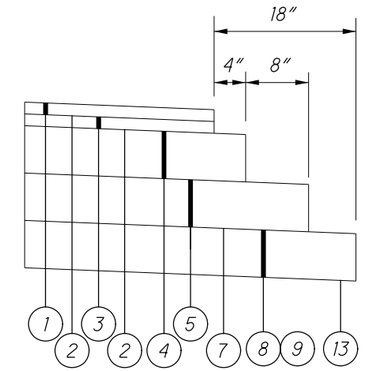
PROPOSED LEGEND

1. ITEM 442 - 1½″ ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448) PG76-22M
2. ITEM 407 - NON-TRACKING TACK COAT
3. ITEM 442 - 2¼″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)
4. ITEM 301 - 8″ ASPHALT CONCRETE BASE, PG64-22, (2 LIFTS AT 4″ EACH)
5. ITEM 304 - 6″ AGGREGATE BASE
6. ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3.75″ DEPTH)
7. ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
8. ITEM 204 - EXCAVATION OF SUBGRADE, 14″ DEEP
9. ITEM 204 - GRANULAR MATERIAL, TYPE C
10. ITEM 659 - SEEDING AND MULCHING
11. ITEM 606 - GUARDRAIL, TYPE MGS
12. ITEM 605 - 6″ BASE PIPE UNDERDRAIN
13. ITEM 204 - GEOTEXTILE FABRIC

** - THE EXISTING PAVEMENT EDGES SHALL BE SAW CUT TO LOCATE A SOUND PAVEMENT EDGE. FOR ESTIMATING PURPOSES, PAVEMENT CALCULATIONS INCLUDED IN THE PLAN INDICATE AN AVERAGE WIDTH OF 1′ OF EXISTING PAVEMENT BEING REPLACED.

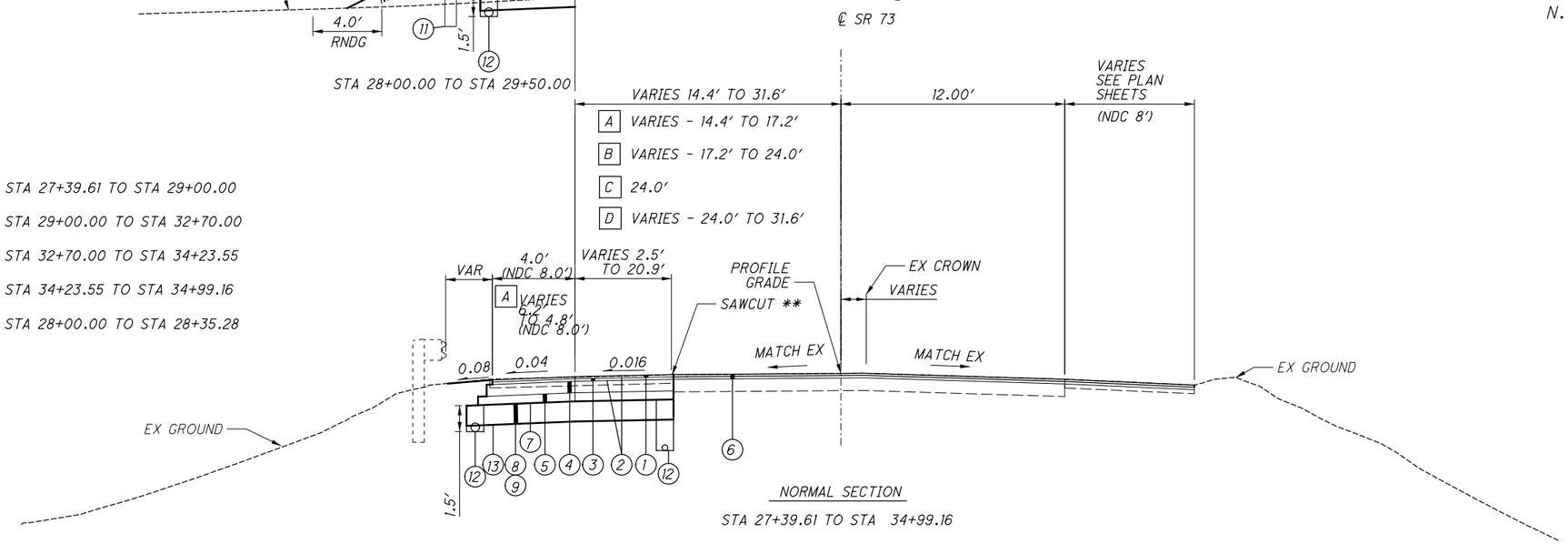
EXISTING LEGEND

AA EXISTING ASPHALT PAVEMENT

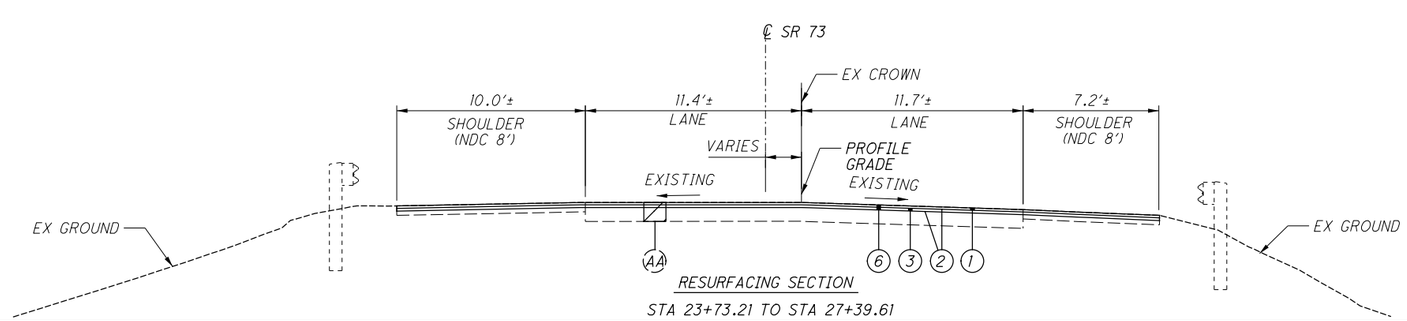


PAVEMENT STEP DETAIL
N.T.S.

A STA 27+39.61 TO STA 29+00.00
B STA 29+00.00 TO STA 32+70.00
C STA 32+70.00 TO STA 34+23.55
D STA 34+23.55 TO STA 34+99.16
E STA 28+00.00 TO STA 28+35.28



NORMAL SECTION
STA 27+39.61 TO STA 34+99.16



RESURFACING SECTION
STA 23+73.21 TO STA 27+39.61

TYPICAL SECTIONS - SR 73

CLI-73-2.66

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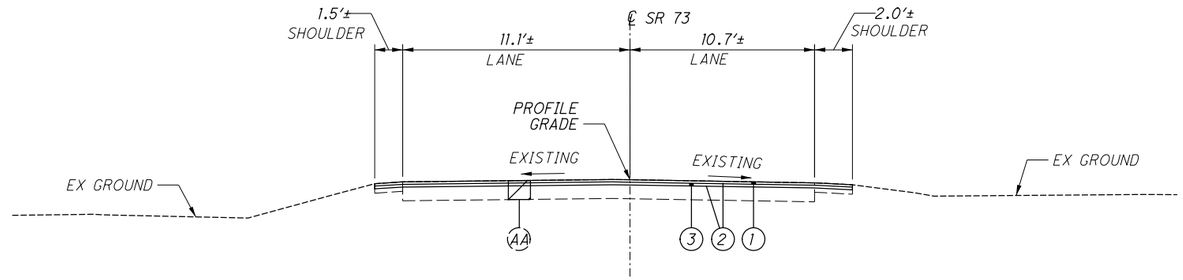
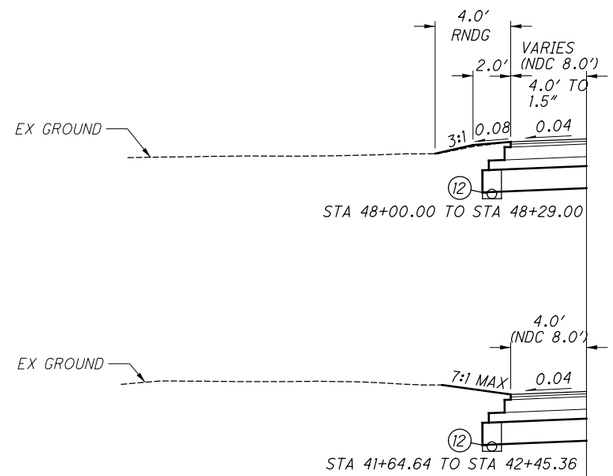
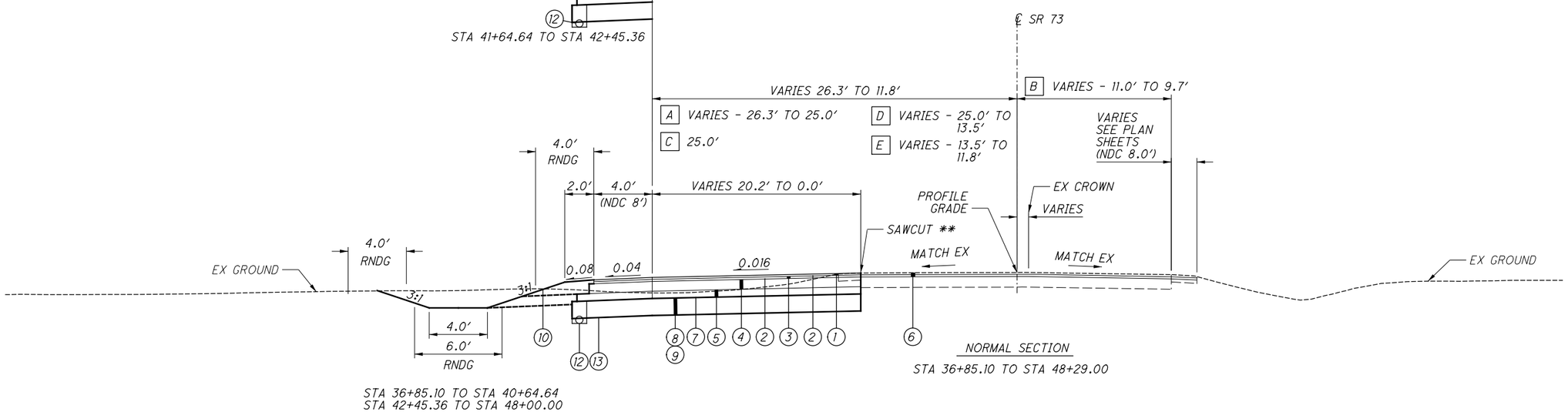


RESURFACING SECTION

STA 48+50.00 TO STA 52+14.02



A	STA 36+85.10 TO STA 40+50.00
B	STA 36+85.10 TO STA 48+29.00
C	STA 40+50.00 TO STA 41+69.00
D	STA 41+69.00 TO STA 48+00.00
E	STA 48+00.00 TO STA 48+29.00



NORMAL SECTION

STA 36+85.10 TO STA 48+29.00

INTERSECTION SR 73 & SR 380 N

STA 34+99.16 TO STA 36+85.10

(STA 36+18.93 SR 73 =
STA 9+11.28 SR 380 N)

FOR LEGEND, SEE SHEET 3.

TYPICAL SECTIONS - SR 73

CLI-73-2.66

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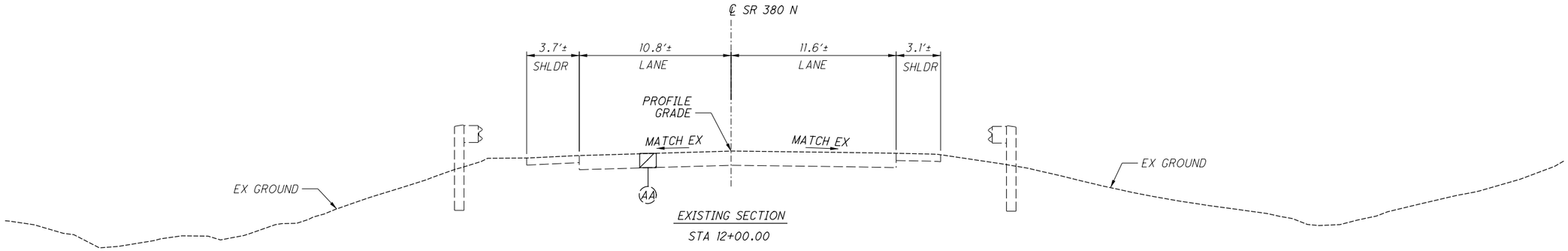
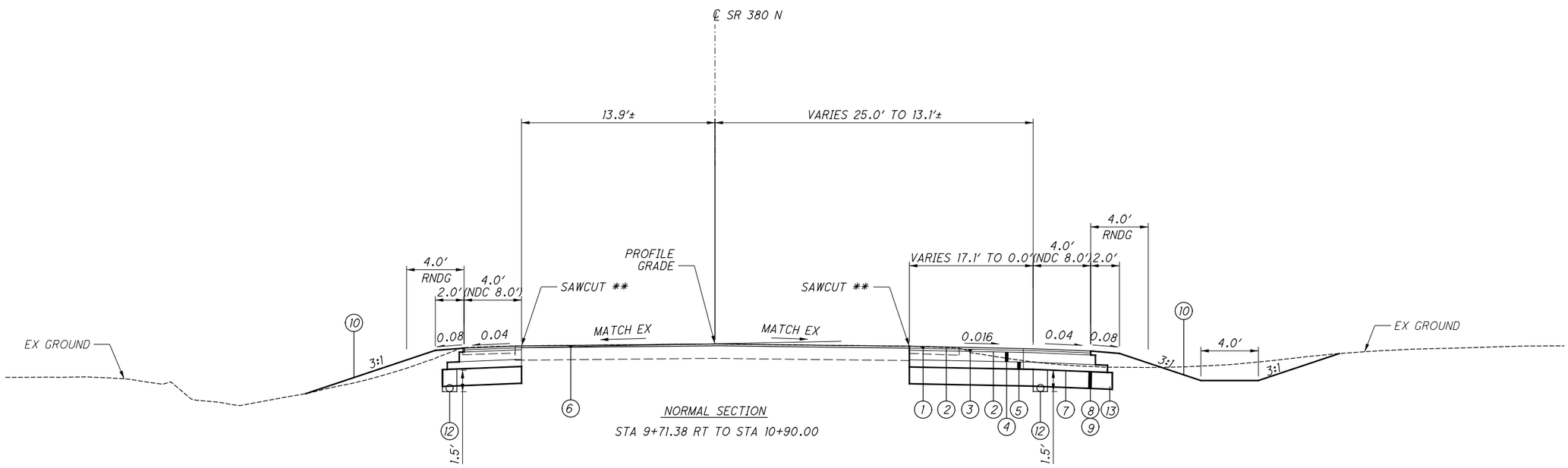


EXISTING SECTION

STA 12+00.00



NORMAL SECTION

STA 9+71.38 RT TO STA 10+90.00

INTERSECTION SR 380 & SR 73

STA 9+11.28 TO STA 9+71.38

(STA 9+11.28 SR 380 N = STA 36+18.93 SR 73)

FOR LEGEND, SEE SHEET 3.

TYPICAL SECTIONS - SR 380 N

CLI-73-2.66

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ROUNDING

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

UTILITIES

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

CLINTON COUNTY (OH) ENGINEER'S OFFICE
1326 FIFE AVE.
WILMINGTON, OH 45177
(937) 382-2078
ADAM J. FRICKE, PE, PS - DEPUTY ENGINEER
AFRICKE@CLINTONCOUNTYENGINEER.ORG

AES OHIO
1900 DRYDEN RD.
DAYTON, OH 45439
(937) 544-9063
WILLIAM WARD
WILLIAM.WARD@AES.COM

FRONTIER COMMUNICATIONS
241 SOUTH NELSON AVE.
WILMINGTON, OH 45177
(937) 283-5735
DAVID LONGWORTH
DAVID.M.LONGWORTH@FTR.COM

INDEPENDENT FIBER NEWTORK/COMNET
13888 COUNTY ROAD 25A
WAPAKONETA, OH 45895
(419) 739-3116
NATHAN ZEHRINGER
NZEHRINGER@CNITEAM.COM

MCI/VERIZON
120 RAVINE ST.
AKRON, OH 44303
(330) 253-8267
AL GUEST
ALLAN.GUEST@VERIZON.BUSINESS.COM

CITY OF WILMINGTON - PUBLIC SERVICES
69 N. SOUTH ST.
WILMINGTON, OH 45177
(937) 382-6509 (BRIAN SHIDAKER)
WATER - JERRY ROWLANDS
JROWLANDS@CI.WILMINGTON.OH.US
SEWER - HARRY MCVEY
HJMCVEY@CINCI.RR.COM
DIRECTOR OF PUBLIC WORKS - RICK SCHAFFER
RSCHAFFER@WILMINGTONOH.ORG

WESTERN WATER COMPANY
KURT MEEKER
1775 S.R. 28
GOSHEN, OH 45122
(513) 899-3211
DISTRIBUTE@WESTERN.H2O.COM

ODOT DISTRICT 8 TRAFFIC
505 SOUTH SR741
LEBANON, OHIO 45036
(513) 933-6602
JIM JUDD
JIM.JUDD@DOT.OHIO.GOV

WORK LIMITS

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

CLEARING AND GRUBBING

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

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 83.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 148 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING FAA FORM 7460-1.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAN BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

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

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

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

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

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	216 CU. YD.
659, SEEDING AND MULCHING	3,749 SQ. YD.
659, REPAIR SEEDING AND MULCHING	187 SQ. YD.
659, INTER-SEEDING	187 SQ. YD.
659, COMMERCIAL FERTILIZER	0.5 TON
659, LIME	0.77 ACRES
659, WATER	20 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

ITEM SPECIAL - MAILBOX SUPPORT

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

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

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

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

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

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

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

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

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

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

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

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SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2__ OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: MISCELLANEOUS

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 18

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011)
ELLIPSOID: GRS 80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE SOUTH ZONE 3402
COMBINED SCALE FACTOR: 1.0000000
ORIGIN OF COORDINATE SYSTEM: NORTH 0.0000 EAST 0.0000

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

UNITS ARE IN U.S. SURVEY FEET.

ITEM 605 - AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT 50 FOOT INTERVALS ON THE WIDENED PORTION OF SR 73 FROM STA. 35+52TO STA 48+29.

FARM DRAINS

PROVIDE UNOBSTRUCTED OUTLETS TO ALL FARM DRAINS ENCOUNTERED DURING CONSTRUCTION. REPLACE EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY WITHIN THE (RIGHT OF WAY)(CONSTRUCTION) LIMITS WITH ITEM 611, CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

OUTLET EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES INTO THE ROADWAY.

DITCH USING ITEM 611, TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION IS ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. INTERCEPT LATERAL FIELD TILES WHICH CROSS THE ROADWAY WITH ITEM 611, TYPE E CONDUIT, AND CARRY IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS IS DETERMINED BY THE ENGINEER AND PAYMENT MADE ON FINAL MEASUREMENTS.

PROVIDE EROSION CONTROL PADS AT THE OUTLET END OF ALL FARM DRAINS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE.

PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES IS INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

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

611 4" CONDUIT, TYPE E 20 FT.
601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER 1 CU. YD.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

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

ITEM 601, TIED CONCRETE BLOCK MAT, TYPE 1, 2 SQ. YD.

ITEM 611, 6" CONDUIT, TYPE F 20 FT.
ITEM 611, PRECAST REINFORCED CONCRETE OUTLET 1 EACH
ITEM 605, 6" UNCLASSIFIED PIPE UNDERDRAINS 20 FT.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED BIOFILTER

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SPECIFIED IN THE PLANS.

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 83.

CALCULATED SRO
CHECKED JDO

GENERAL NOTES

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ITEM 614, MAINTAINING TRAFFIC

ON SR 73, A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, ITEM 615 ROADS FOR MAINTAINING TRAFFIC, AND TEMPORARY SURFACES USING ITEMS 410 AND 614. ONE LANE OF TWO-WAY TRAFFIC MAY BE MAINTAINED USING FLAGGERS IN ACCORDANCE WITH THE LANE VALUE CONTRACT TABLE.

ON SR 380, A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 21 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 10 . A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $3,500 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. ONE LANE OF TWO-WAY TRAFFIC MAY BE MAINTAINED USING FLAGGERS DURING WORKING HOURS.

ROAD CLOSURES ON SR 380 SHALL OCCUR DURING THE TIME PERIOD FROM MAY 15 TO AUGUST 31.

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

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

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

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

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

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

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE

ITEM 614, MAINTAINING TRAFFIC (CONTINUED)

USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.

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

NOTICE OF CLOSURE SIGN TIME TABLE

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

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER. 513-933-6600

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

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

DUST CONTROL

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

ITEM 616, WATER 6.6 M. GAL.

DESIGNATED LOCAL DETOUR ROUTE

IN ADDITION TO THE OFFICIAL, SIGNED DETOUR ROUTE, A LOCAL ROUTE HAS BEEN DETERMINED TO BE THE SECONDARY, UNSIGNED DETOUR ROUTE OR "DESIGNATED LOCAL DETOUR ROUTE." THIS ROUTE IS SHOWN ON SHEET NO. 10_. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DETERMINED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE DESIGNATED LOCAL DETOUR ROUTE.

ITEM 301, ASPHALT CONCRETE BASE, PG 64-22	137 CU. YD.
ITEM 304, AGGREGATE BASE	137 CU. YD.
ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22	46 CU. YD.
ITEM 407, TACK COAT	45 GAL.
ITEM 408, PRIME COAT	45 GAL.
ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	137 CU. YD.
ITEM 616, WATER	1 M. GAL.
ITEM 642, CENTER LINE	0.1 MILE
ITEM 642, EDGE LINE	0.1 MILE

ITEM 614, DETOUR SIGNING

THE CONTRACTOR SHALL PROVIDE, MAINTAIN, AND SUBSEQUENTLY REMOVE ALL DETOUR SIGNING AND SUPPORTS AS SHOWN ON SHEET 10 AND ON STANDARD CONSTRUCTION DRAWING MT-101.60. ALL WORK SHALL BE PAID FOR UNDER ITEM 614, DETOUR SIGNING.

PERMITTED LANE CLOSURE TIMES

SHORT TERM LANE CLOSURES ARE THOSE WHICH ARE PERMITTED BY THE PERMITTED LANE CLOSURE NOTE. THESE TIMES SHALL NOT BE REVISED WITHOUT PRIOR APPROVAL FROM THE DISTRICT 8 WORK ZONE TRAFFIC CONTROL MANAGER. SHORT TERM LANE CLOSURES SHALL ONLY BE IMPLEMENTED WHEN WORK IS BEING CONTINUOUSLY PERFORMED IN THE LANE. THE CLOSURE SHALL BE REMOVED AS SOON AS POSSIBLE AFTER WORK HAS STOPPED. PERMITTED LANE CLOSURES SHALL ONLY BE ALLOWED DURING THE TIMES SPECIFIED IN THE LANE VALUE CONTRACT TABLE INCLUDED IN THESE PLANS. NO LANE OR SHOULDER CLOSURE SHALL BE IN PLACE WHEN NO WORK IS BEING PERFORMED.

LANE VALUE CONTRACT TABLE

DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE $ PER TIME UNIT
SR 73: ALL LANES OPEN TO TRAFFIC	6 AM TO 8:30 AM AND 4 PM TO 6 PM	1 MINUTE PERIOD	$100
SR 380: COMPLETE CLOSURE	21 DAYS	1 DAY	$3,500

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY.

EXCAVATION FOR MAINTAINING TRAFFIC	400 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC	153 CU. YD.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

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

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

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

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

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

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

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

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

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

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

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

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

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

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

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

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

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

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

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

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

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

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

NOTIFICATION OF TRAFFIC RESTRICTIONS

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

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

NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE

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

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

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

[INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.]

[THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.]

[DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.]

[TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.]

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1, ONE-WAY 33 EACH

ITEM 614, OBJECT MARKER, TWO-WAY 33 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

[ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.]

ACCESS TO DRIVES AND OTHER FACILITIES

THE CONTRACTOR SHALL PROVIDE AND SAFELY MAINTAIN DRIVES, STRUCTURES, AND OTHER FACILITIES FOR BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.

1. RESIDENTIAL DRIVEWAY(S)

MAINTAIN ACCESS TO ALL DRIVEWAYS. ADJUST WORK ON DRIVES BY CONSTRUCTING PART-WIDTH OR PROVIDING TEMPORARY ACCESS. FOR RESIDENCE WITH TWO (2) OR MORE DRIVES, CONSTRUCT ONE DRIVE AT A TIME, ALLOWING THE ALTERNATIVE DRIVE(S) TO BE USED FOR ACCESS. IF NOT FEASIBLE, ACCESS MAY BE DENIED FOR TWO (2) HOURS WITH 48 HOURS ADVANCE NOTICE OF CLOSURE. PROJECT ENGINEER MUST APPROVE CLOSURE PRIOR TO NOTIFICATION.

2. COMMERCIAL/BUSINESS DRIVEWAY(S):

MAINTAIN ACCESS TO ALL DRIVEWAYS. ADJUST WORK ON DRIVES BY CONSTRUCTING PART-WIDTH OR PROVIDING TEMPORARY ACCESS. FOR RESIDENCE WITH TWO (2) OR MORE DRIVES, CONSTRUCT ONE DRIVE AT A TIME, ALLOWING THE ALTERNATIVE DRIVE(S) TO BE USED FOR ACCESS. IF NOT FEASIBLE, ACCESS MAY BE DENIED FOR TWO (2) HOURS WITH 48 HOURS ADVANCE NOTICE OF CLOSURE. PROJECT ENGINEER MUST APPROVE CLOSURE PRIOR TO NOTIFICATION.

SEQUENCE OF CONSTRUCTION

PHASE 1

CONSTRUCT TEMPORARY PAVEMENT ON THE SOUTH SIDE OF SR 73.

PHASE 2A

SHIFT TRAFFIC ONTO TEMPORARY PAVEMENT ON SR 73. MAINTAIN TWO LANES OF TRAFFIC ON SR 380.

PHASE 2

SHIFT TRAFFIC ONTO TEMPORARY PAVEMENT ON SR 73. DETOUR THE NORTH LEG OF SR 350.

TEMPORARY TRAFFIC SIGNAL

CONTRACTOR SHALL INSTALL A TEMPORARY 32' WOOD POLE, CLASS 3 AT STA. 35+25, 54' LT TO MAINTAIN THE EXISTING TRAFFIC SIGNAL AT SR 73 AND SR 380 DURING WIDENING WORK. THE EXISTING UTILITY POLE AT STA. 36+53, 29' RT WITH THE EXISTING SPAN WIRE ATTACHMENT WILL REMAIN FOR TEMPORARY SIGNAL.

CONTRACTOR SHALL RELOCATE ALL SIGNAL HEADS, MESSENGER WIRE, WIRING, ETC. TO NEW POLE TO MAKE SIGNAL FULLY OPERATIONAL AND PROVIDE POWER IN ACCORDANCE WITH C&MS 614.10. ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE IN ACCORDANCE WITH SPECIFICATIONS IN C&MS 632, 633, 732, AND 733. WOOD POLE SHALL BE REMOVED AT COMPLETION OF FINAL TRAFFIC SIGNAL.

ALL WORK SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

DUST CONTROL

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

ITEM 616, WATER 4 M. GAL.

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ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN

A PORTION OF THE TEMPORARY PAVEMENT WILL REMAIN IN PLACE. THEREFORE, 6"OF AGGREGATE SHALL BE PLACED AND SHALL NOT BE SUBSTITUTED WITH ASPHALT. SCHEDULE THE WORK TO PLACE ITEM 304 AGGREGATE WITHIN THE SAME SHIFT AND IMMEDIATELY FOLLOWING PAVEMENT REMOVAL. PLACE ITEM 302 ASPHALT WITHIN 24 HRS OF PLACING ITEM 304 AGGREGATE.

THE CONTRACTOR SHALL SAWCUT AND REMOVE A PORTION OF THE TEMPORARY PAVEMENT. 2.5 FT OF THE TEMPORARY PAVEMENT, MEASURED FROM THE PROPOSED WHITE EDGE LINE, SHALL REMAIN. TEMPORARY GRADING SHALL BE RESTORED TO THE ORIGINAL DITCH LINE.

REF NO.	SHEET NO.	STATION TO STATION					614 WORK ZONE EDGE LINE, CLASS I, 6", WHITE	614 WORK ZONE CENTER LINE, CLASS I, DOUBLE YELLOW	614 WORK ZONE STOP LINE, CLASS I, WHITE	622 PORTABLE BARRIER, UNANCHORED	622 PORTABLE BARRIER, ANCHORED	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN
							MILE	MILE	FT	FT	FT	EACH	SY
ELW-1	14	23+73	LT/RT	TO	26+33	LT/RT	0.05						
ELW-2	14	26+57	RT	TO	35+55	RT	0.17						
ELW-3	14	27+09	LT	TO	52+14	LT	0.47						
ELW-4	15	36+29	RT	TO	52+14	RT	0.3						
CL-1	14	23+73		TO	25+93			0.01					
CL-2	14	27+09		TO	34+77			0.15					
CL-3	15	37+15		TO	52+14			0.28					
SL-1	14	25+93							11				
SL-2	14	27+09							11				
SL-3	15	34+77							11				
SL-4	15	37+15							11				
PCB-1	14	27+30	LT	TO	30+00	LT					270		
PCB-2	15	33+00	LT	TO	41+82	LT				106	776		
PCB-3	15	42+48	LT	TO	45+24	LT					276		
PCB-4	16	46+14	LT	TO	48+09	LT					195		
IA-1	14	27+30										1	
IA-2	15	30+00										1	
IA-3	15	33+00										1	
IA-4	15	41+82										1	
IA-5	15	42+48										1	
IA-6	16	45+24										1	
IA-7	16	46+14										1	
IA-8	16	48+09										1	
IA-9	17	35+10										1	
IA-10	17	37+00										1	
P-1	12	33+09	RT	TO	35+47	RT							156
P-2	12	36+35	RT	TO	52+14	RT							1177
TOTALS CARRIED TO GENERAL SUMMARY							0.99	0.44	44	106	1517	10	1333

CALCULATED XXX
CHECKED XXX

MAINTENANCE OF TRAFFIC SUBSUMMARY

CLI-73-2.66

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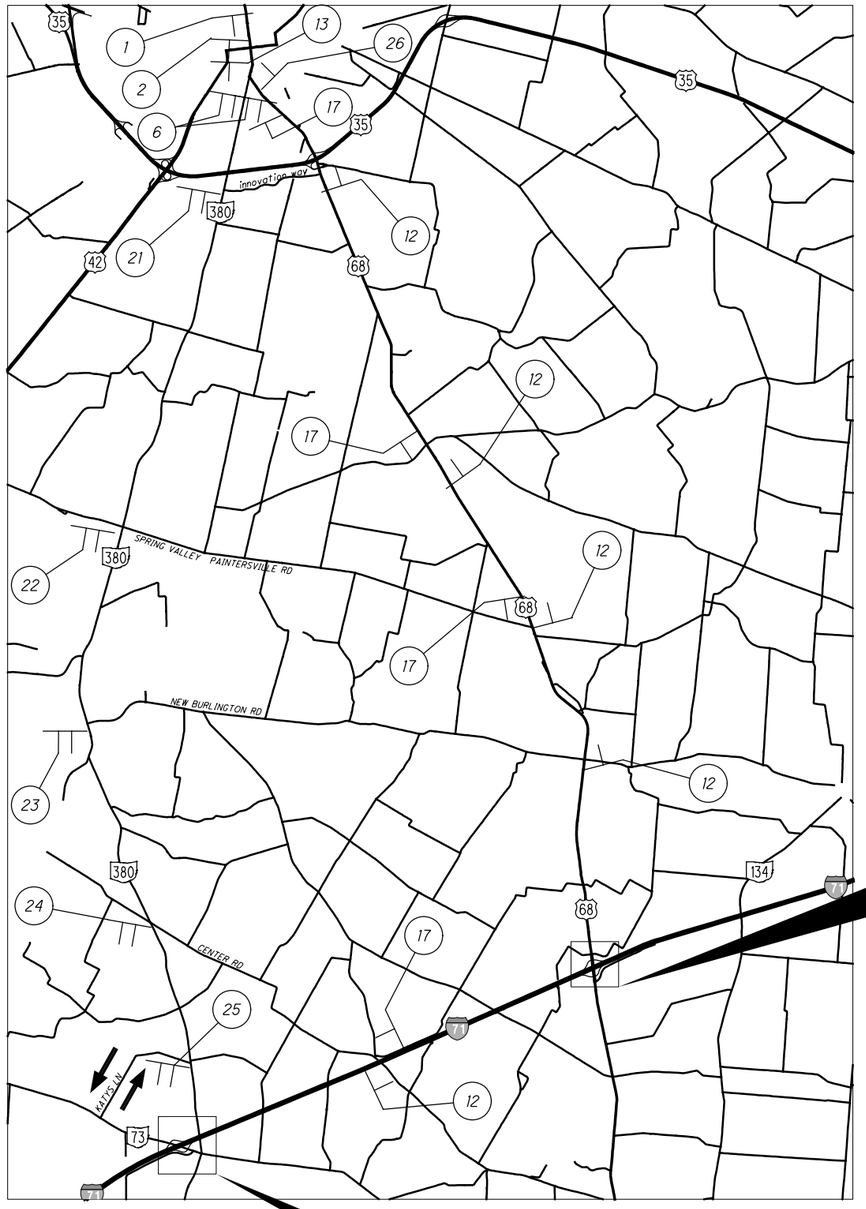

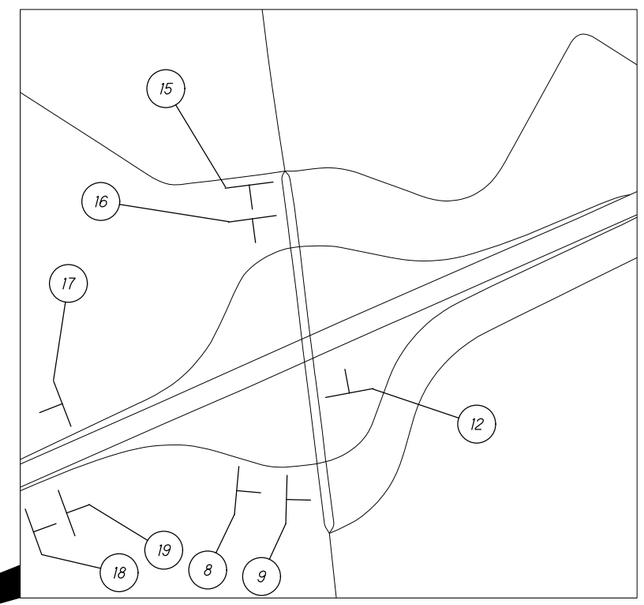

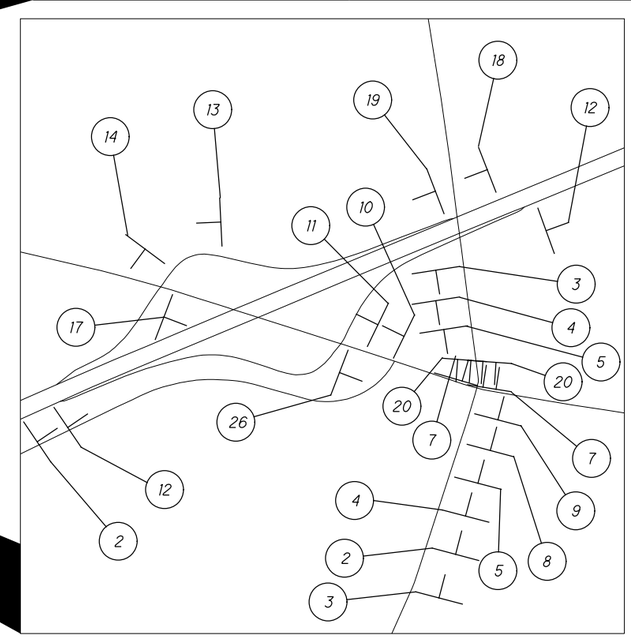

1 — ROAD CLOSED AHEAD — W20-3-48

2 — DETOUR 1500 ft — W20-2-48

3 — ROAD WORK AHEAD — W20-1-48

4 — ROAD CLOSED 1000 ft — W20-3-36

5 — ROAD CLOSED 500 ft — W20-3-48

6 — ROAD CLOSED 14 MILES AHEAD LOCAL TRAFFIC ONLY / DETOUR — R11-3a-60, M4-10L-48

7 — ROAD CLOSED / DETOUR — R11-2-48, M4-10L-48

8 — DETOUR NORTH 380 — M4-8-24, M3-1-24, M1-5-24-3, M5-1-21

9 — DETOUR NORTH 380 — M4-8-24, M3-1-24, M1-5-24-3, M6-1-21

10 — DETOUR NORTH 380 — M4-8-24, M3-3-24, M1-5-24-3, M5-1-21

11 — DETOUR NORTH 380 — M4-8-24, M3-3-24, M1-5-24-3, M6-1-21

12 — DETOUR NORTH 380 — M4-8-24, M3-1-24, M1-5-24-3, M6-3-21

13 — DETOUR SOUTH 380 — M4-8-24, M3-3-24, M1-5-24-3, M5-1-21

14 — DETOUR SOUTH 380 — M4-8-24, M3-3-24, M1-5-24-3, M6-1-21

15 — DETOUR SOUTH 380 — M4-8-24, M3-3-24, M1-5-24-3, M5-1-21

16 — DETOUR SOUTH 380 — M4-8-24, M3-3-24, M1-5-24-3, M6-1-21

17 — DETOUR SOUTH 380 — M4-8-24, M3-3-24, M1-5-24-3, M6-3-21

18 — DETOUR 380 — M4-8-24, M1-5-24-3, M5-2-21

19 — DETOUR 380 — M4-8-24, M1-5-24-3, M6-2-21

26 — END DETOUR — M4-8a-12

20 — ROAD CLOSED — R11-2-48

21-25 — ROAD CLOSED X X/X MILES AHEAD LOCAL TRAFFIC ONLY — R11-3a-60

SIGN #	MILES AHEAD
21	12 3/4
22	8 1/4
23	5 3/4
24	3
25	1

LEGEND

	PROPOSED SIGN
	BARRICADE
6	SIGN NUMBER
380	STATE ROUTE
	WORK AREA
22	US ROUTE
	LOCAL DETOUR ROUTE

HORIZONTAL SCALE IN FEET 0

CALCULATED DLC
CHECKED PMM

MAINTENANCE OF TRAFFIC DETOUR PLAN - PHASE 2

CLI-73-2.66

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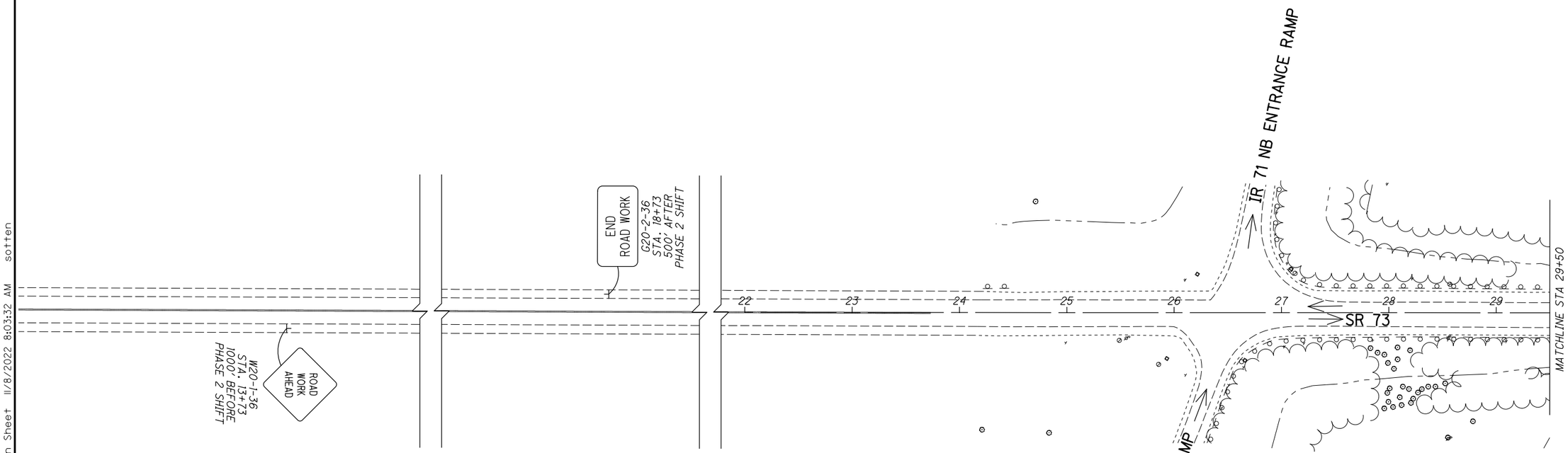

MAINTENANCE OF TRAFFIC LEGEND

- DRUM — DRUMS (5' SPACING UNLESS NOTED)
- ELW — ITEM 614, WORK ZONE EDGE LINE, WHITE
- CL — ITEM 614, WORK ZONE CENTER LINE, DOUBLE YELLOW
- SL — ITEM 614, WORK ZONE STOP LINE, WHITE
- PCB — ITEM 622, PORTABLE BARRIER, UNANCHORED
- IA — IMPACT ATTENUATOR
- DIRECTION OF TRAVEL
- WORK AREA
- TEMPORARY PAVEMENT PLACED IN PHASE 1
- TYPE III BARRICADE (10')

SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED

N

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED GAT
CHECKED XXX

MAINTENANCE OF TRAFFIC - PHASE 1
BEGIN PROJECT TO STA 29+50 SR 73

CLI-73-2.66

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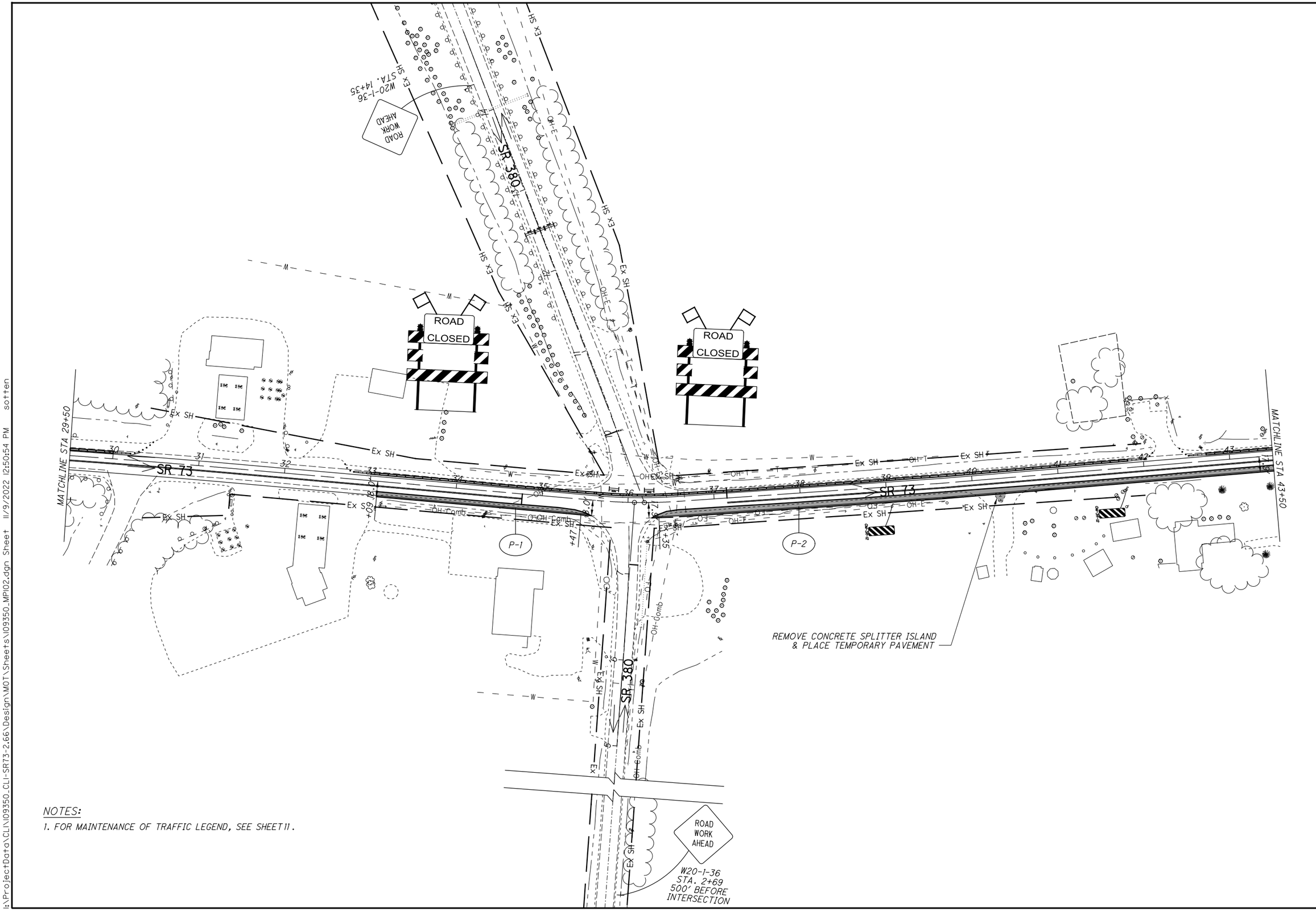

NOTES:

1. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 11.

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED XXX
CHECKED XXX

MAINTENANCE OF TRAFFIC - PHASE 1
STA 29+50 TO STA 43+50 SR 73

CLI-73-2.66

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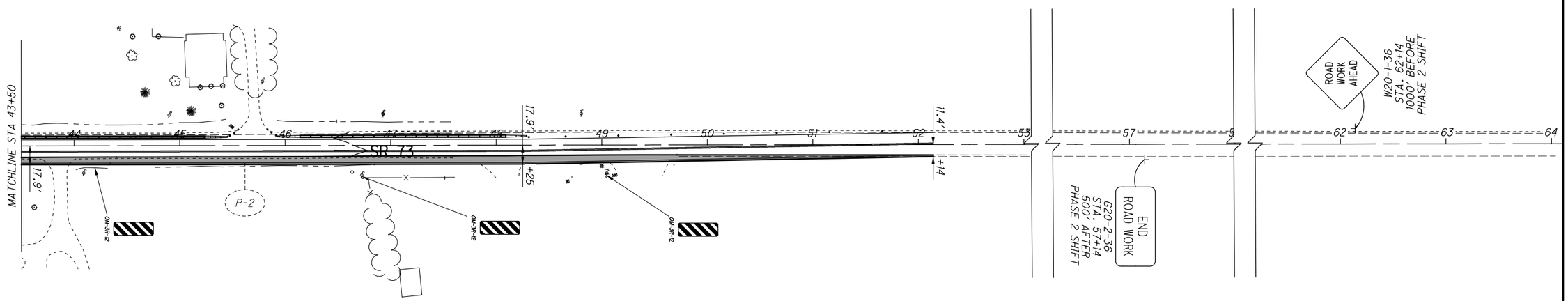

NOTES:

1. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 11.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED XXX
CHECKED XXX

MAINTENANCE OF TRAFFIC - PHASE 1
STA 43+50 TO END PROJECT SR 73

CLI-73-2.66

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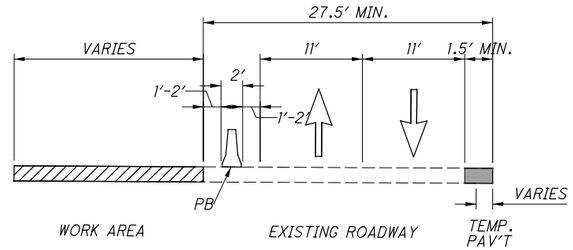
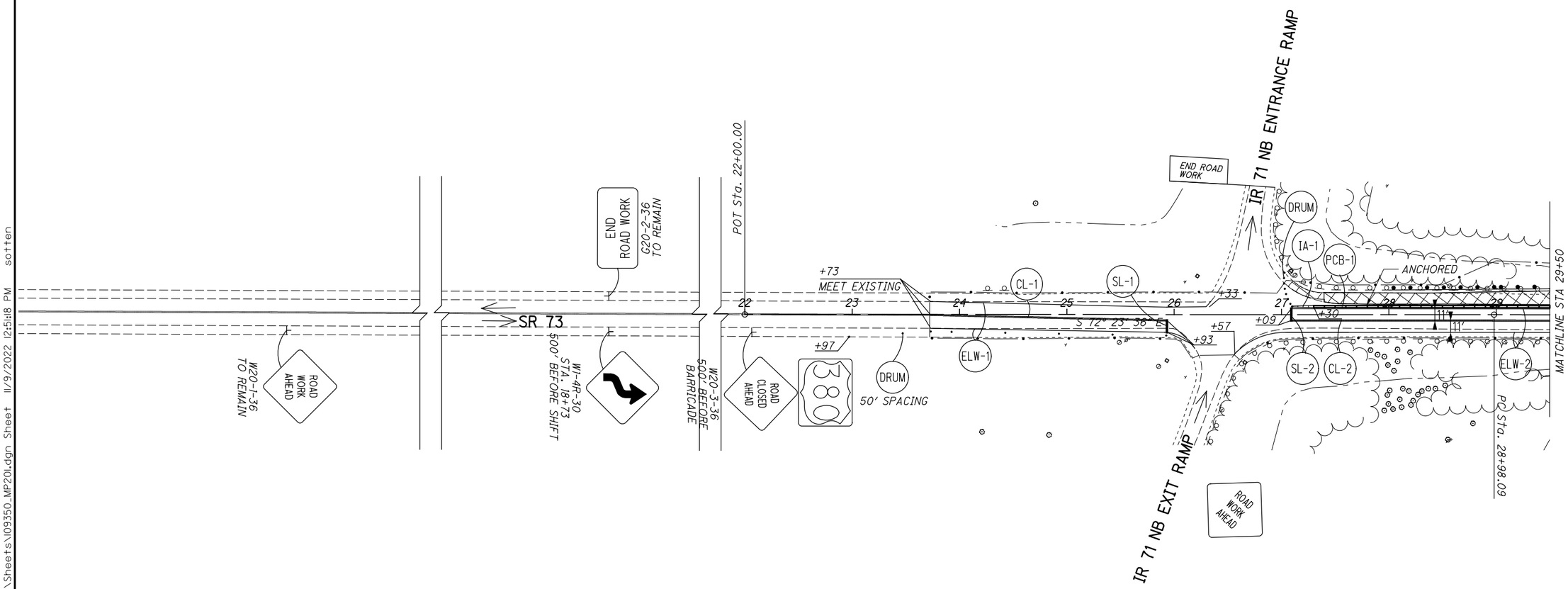


PHASE 2 TYPICAL SECTION
NOT TO SCALE



NOTES:

1. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 11
2. THE CONTRACTOR SHALL ADJUST SIGNAL HEADS AS REQUIRED. THE SIGNAL SHALL NOT GO OUT OF SERVICE DURING ANY ADJUSTMENTS.
3. REMOVE CONFLICTING PAVEMENT MARKINGS PER ODOT C&MS 614.11 G.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED XXX
CHECKED XXX

MAINTENANCE OF TRAFFIC - PHASE 2
BEGIN PROJECT TO STA 29+50 SR 73

CLI-73-2.66

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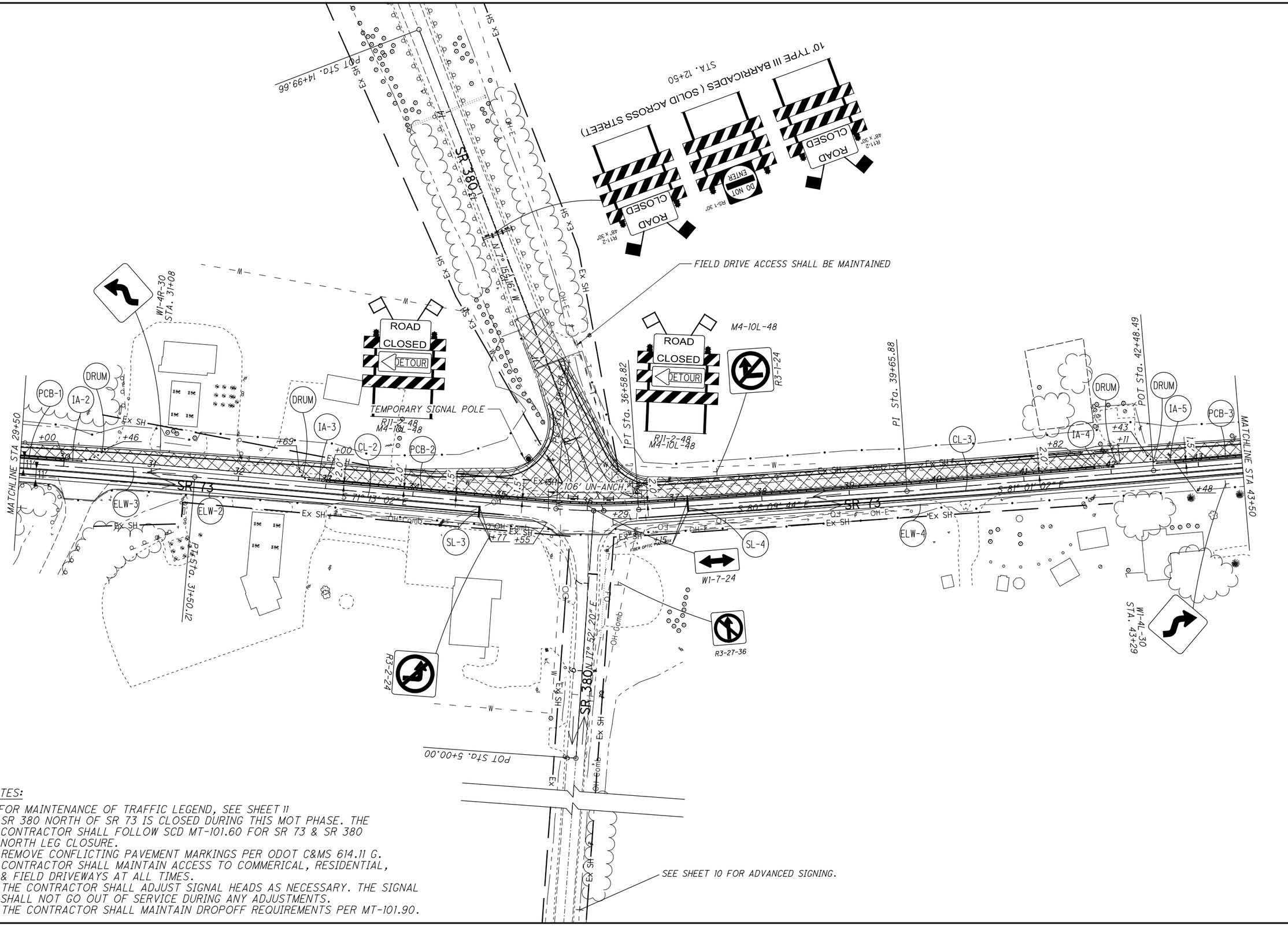

NOTES:

1. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 11
2. SR 380 NORTH OF SR 73 IS CLOSED DURING THIS MOT PHASE. THE CONTRACTOR SHALL FOLLOW SCD MT-101.60 FOR SR 73 & SR 380 NORTH LEG CLOSURE.
3. REMOVE CONFLICTING PAVEMENT MARKINGS PER ODOT C&MS 614.11 G.
4. CONTRACTOR SHALL MAINTAIN ACCESS TO COMMERICAL, RESIDENTIAL, & FIELD DRIVEWAYS AT ALL TIMES.
5. THE CONTRACTOR SHALL ADJUST SIGNAL HEADS AS NECESSARY. THE SIGNAL SHALL NOT GO OUT OF SERVICE DURING ANY ADJUSTMENTS.
6. THE CONTRACTOR SHALL MAINTAIN DROPOFF REQUIREMENTS PER MT-101.90.

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED XXX
CHECKED XXX

MAINTENANCE OF TRAFFIC - PHASE 2
STA 29+50 TO STA 43+50 SR 73

CLI-73-2.66

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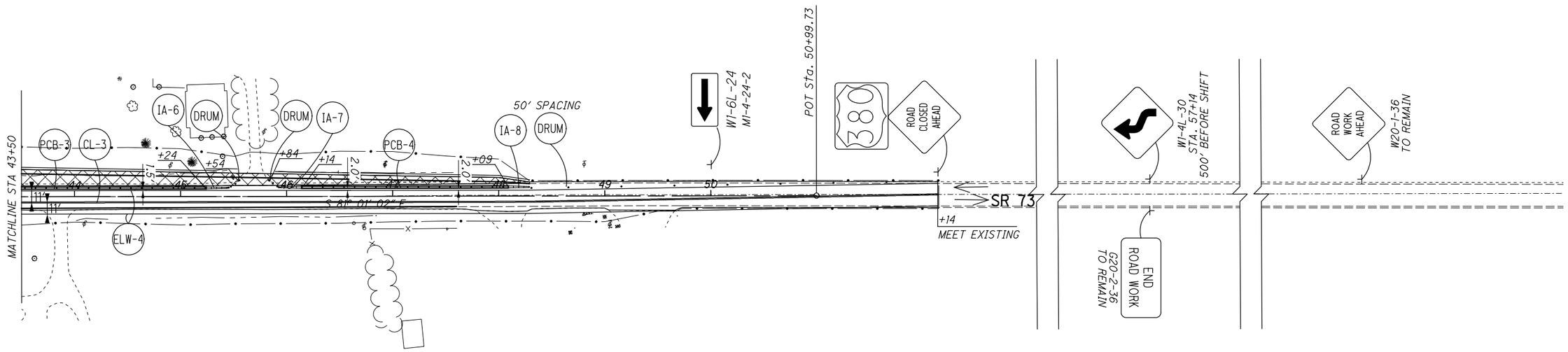

NOTES:

1. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 11
2. REMOVE CONFLICTING PAVEMENT MARKINGS PER ODOT C&MS 614.11 G.
3. CONTRACTOR SHALL MAINTAIN ACCESS TO COMMERICAL, RESIDENTIAL, & FIELD DRIVEWAYS AT ALL TIMES.
4. THE CONTRACTOR SHALL MAINTAIN DROPOFF REQUIREMENTS PER MT-101.90.

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED XXX
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MAINTENANCE OF TRAFFIC - PHASE 2
STA 43+50 TO END PROJECT SR 73

CLI-73-2.66

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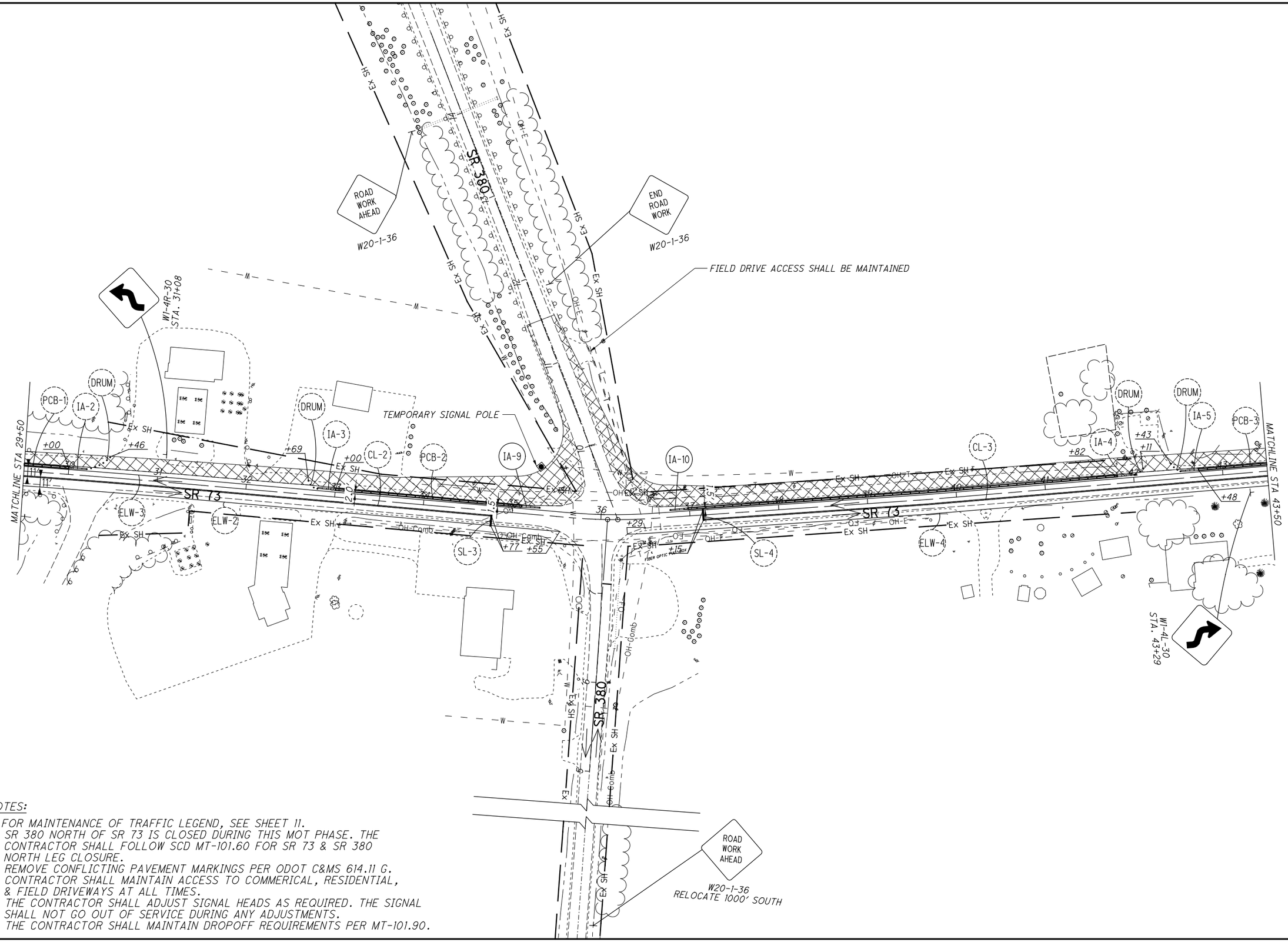

NOTES:

1. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 11.
2. SR 380 NORTH OF SR 73 IS CLOSED DURING THIS MOT PHASE. THE CONTRACTOR SHALL FOLLOW SCD MT-101.60 FOR SR 73 & SR 380 NORTH LEG CLOSURE.
3. REMOVE CONFLICTING PAVEMENT MARKINGS PER ODOT C&MS 614.11 G.
4. CONTRACTOR SHALL MAINTAIN ACCESS TO COMMERICAL, RESIDENTIAL, & FIELD DRIVEWAYS AT ALL TIMES.
5. THE CONTRACTOR SHALL ADJUST SIGNAL HEADS AS REQUIRED. THE SIGNAL SHALL NOT GO OUT OF SERVICE DURING ANY ADJUSTMENTS.
6. THE CONTRACTOR SHALL MAINTAIN DROPOFF REQUIREMENTS PER MT-101.90.

HORIZONTAL SCALE IN FEET
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CALCULATED XXX
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MAINTENANCE OF TRAFFIC - PHASE 2A
STA 29+50 TO STA 43+50 SR 73

CLI-73-2.66

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SHEET NUM.													PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	6A	7	8	9	20	21	22	53	56	61	70	81	01/SAF/OT	02/SAF/OT/WIL						
																			ROADWAY	
													LS		201	11000	LS		CLEARING AND GRUBBING	
					11								11		202	30800	11	SY	TRAFFIC ISLAND REMOVED	
					110					2,771			1,058	1,823	202	35100	2,881	FT	PIPE REMOVED, 24" AND UNDER	
					125								125		202	38000	125	FT	GUARDRAIL REMOVED	
					1								1		202	38700	1	EACH	GUARDRAIL POST REMOVED	
					1								1		202	42010	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
					2								2		202	53100	2	EACH	MAILBOX REMOVED	
					27								27		202	75000	27	FT	FENCE REMOVED	
								2,061	86				2,147		203	10000	2,147	CY	EXCAVATION	
								132	7				139		203	20000	139	CY	EMBANKMENT	
						1,673							1,673		203	35120	1,673	CY	GRANULAR MATERIAL, TYPE C	
						4,300							4,300		204	10000	4,300	SY	SUBGRADE COMPACTION	
						1,673							1,673		204	13000	1,673	CY	EXCAVATION OF SUBGRADE	
						1							1		204	45000	1	HOUR	PROOF ROLLING	
						4,300							4,300		204	50000	4,300	SY	GEOTEXTILE FABRIC	
					100								100		606	15050	100	FT	GUARDRAIL, TYPE MGS	
					1								1		606	26150	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E (NCHRP 350 OR MASH 2016)	
													11		623	38500	11	EACH	MONUMENT ASSEMBLY, TYPE C	
												17	17		625	25408	17	FT	CONDUIT, 2", 725.051	
												44	44		625	25604	44	FT	CONDUIT, 4", 725.051	
												222	222		625	25908	222	FT	CONDUIT, JACKED OR DRILLED, 725.052	
												44	44		625	29000	44	FT	TRENCH	
												4	4		625	30706	4	EACH	PULL BOX, 725.08, 24"	
												4	4		625	32000	4	EACH	GROUND ROD	
					2								2		SPECIAL	69050100	2	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	6
													LS		878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	
																			EROSION CONTROL	
	2						4						6		601	21050	6	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
		7.6											7.6		616	10000	7.6	MGAL	WATER	
	2												2		659	00100	2	EACH	SOIL ANALYSIS TEST	
	216												216		659	00300	216	CY	TOPSOIL	
	3,571												3,571		659	10000	3,571	SY	SEEDING AND MULCHING	
	187												187		659	14000	187	SY	REPAIR SEEDING AND MULCHING	
	187												187		659	15000	187	SY	INTER-SEEDING	
	0.5												0.5		659	20000	0.5	TON	COMMERCIAL FERTILIZER	
	0.77												0.77		659	31000	0.77	ACRE	LIME	
	20												20		659	35000	20	MGAL	WATER	
	LS												LS		832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
	LS												LS		832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
	LS												LS		832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
													30,000		832	30000	30,000	EACH	EROSION CONTROL	
																			DRAINAGE	
	1												1		601	32200	1	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
							2						2		602	20000	2	CY	CONCRETE MASONRY	
							3,940						3,940		605	14000	3,940	FT	6" BASE PIPE UNDERDRAINS	
	20						333						353		605	13300	353	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
	20												20		611	00400	20	FT	4" CONDUIT, TYPE E	
	20						14						34		611	00510	34	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
							285						285		611	04900	285	FT	12" CONDUIT, TYPE D	
							50						50		611	06400	50	FT	15" CONDUIT, TYPE D	
	1						2						3		611	99710	3	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																			PAVEMENT	
						9,624							9,624		254	01000	9,624	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 3.75"	
		137				893							1,030		301	56000	1,030	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
		137				831							968		304	20000	968	CY	AGGREGATE BASE	
		45											45		407	10000	45	GAL	TACK COAT	
						2,020							2,020		407	20000	2,020	GAL	NON-TRACKING TACK COAT	

CALCULATED SRO
CHECKED JDO

GENERAL SUMMARY

CLI-73-2.66

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SHEET NUM.													PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
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		45											45		408	10000	45	GAL	PRIME COAT	
		46											46		441	50000	46	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
						21							21		441	70500	21	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)	
						16							16		441	70700	16	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449), (DRIVEWAYS)	
						565							565		442	20000	565	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)	
						848							848		442	20200	848	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	
					11								11		609	50000	11	SY	4" CONCRETE TRAFFIC ISLAND	
																			WATER WORK	
										205			205		SPECIAL	63820418	205	FT	6" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, C900 (HDD) (WESTERN WATER	61
										787			787		SPECIAL	63820418	787	FT	6" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, C900 (NOT UNDER PAVEMENT) (WESTERN WATER	61
										50			50		SPECIAL	63820452	50	FT	16" STEEL PIPE ENCASEMENT, BORED OR JACKED (WESTERN WATER)	61
										130				130	SPECIAL	63820476	130	FT	42" STEEL PIPE ENCASEMENT, BORED OR JACKED (WILMINGTON)	61
										2			2		SPECIAL	63820538	2	EACH	6" GATE VALVE WITH VALVE BOX (WESTERN WATER)	61
										1			1		SPECIAL	63820548	1	EACH	6" CUTTING IN SLEEVE (WESTERN WATER)	61
										4				4	SPECIAL	63820682	4	EACH	24" BUTTERFLY VALVE WITH VALVE BOX (WILMINGTON)	61
										2				2	SPECIAL	63820742	2	EACH	1" AIR RELEASE VALVE WITH VALVE BOX (WILMINGTON)	61
										2			2		SPECIAL	63820814	2	FT	INSTALL 3/4" POLYETHYLENE WATER SERVICE CONNECTION (WESTERN WATER)	61
										250				250	638	98600	250	FT	WATER WORK, MISC.:24-INCH POLYVINYL CHLORIDE PIPE AND FITTINGS (HDD)(WILMINGTON)	61
										185				185	638	98600	185	FT	WATER WORK, MISC.:24-INCH POLYVINYL CHLORIDE PIPE AND FITTINGS (IN PAVEMENT) (WILMINGTON)	61
										1,256				1,256	638	98600	1,256	FT	WATER WORK, MISC.:24-INCH POLYVINYL CHLORIDE PIPE AND FITTINGS (OUTSIDE PAVEMENT) (WILMINGTON)	61
																			TRAFFIC CONTROL	
					1								1		626	00110	1	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
												108	108		630	03100	108	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
	2												2		630	79100	2	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
	15											62	77		630	80100	77	SF	SIGN, FLAT SHEET	
												13	13		630	84900	13	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
												6	6		630	86002	6	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
		0.1											0.1		642	00100	0.1	MILE	EDGE LINE, 4", TYPE 1	
		0.1											0.1		642	00300	0.1	MILE	CENTER LINE, TYPE 1	
											1.1		1.1		644	00104	1.1	MILE	EDGE LINE, 6"	
											0.75		0.75		644	00300	0.75	MILE	CENTER LINE	
											530		530		644	00400	530	FT	CHANNELIZING LINE, 8"	
											167		167		644	00500	167	FT	STOP LINE	
											8		8		644	01300	8	EACH	LANE ARROW	
											180		180		644	01510	180	FT	DOTTED LINE, 6"	
																			TRAFFIC SIGNALS	
	11												11		632	05006	11	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE	
	11												11		632	25000	11	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
	2,334												2,334		632	40700	2,334	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
	3												3		632	64010	3	EACH	SIGNAL SUPPORT FOUNDATION	
	47												47		632	68300	47	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
	83												83		632	69800	83	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
	1												1		632	70001	1	EACH	POWER SERVICE, AS PER PLAN	75
	1												1		632	71240	1	EACH	SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 6 POLE, WITH MAST ARMS TC-81.22 DESIGN 12 AND DESIGN 2	
	1												1		632	72130	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12	
	1												1		632	72150	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 14	
	1												1		632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
	1												1		633	65521	1	EACH	CABINET, TYPE 332, AS PER PLAN	75
	1												1		633	67100	1	EACH	CABINET FOUNDATION	
	1												1		633	67200	1	EACH	CONTROLLER WORK PAD	
	1												1		633	75001	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	76
	1												1		809	60000	1	EACH	CCTV IP-CAMERA SYSTEM, DOME-TYPE	
	2												2		809	69000	2	EACH	ADVANCE RADAR DETECTION	
	2												2		809	69100	2	EACH	STOP LINE RADAR DETECTION	
	1												1		809	69123	1	EACH	ATC CONTROLLER, AS PER PLAN	75
																			MAINTENANCE OF TRAFFIC	
		120											120		614	11110	120	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
				10									10		614	12384	10	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	
													LS		614	12420	LS		DETOUR SIGNING	

CALCULATED SRO
CHECKED JDO

GENERAL SUMMARY

CLI-73-2.66

I:\Project Data\CLI\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_GG001.dgn Sheet 11/15/2022 2:18:56 PM sotten

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	81	7	8	9	20	21	22	53	56	61	70	01/SAF/OT	02/SAF/OT/WIL						
		137										137		614	13000	137	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
			33									33		614	13310	33	EACH	BARRIER REFLECTOR, TYPE 1BI-DIRECTIONAL	
			33									33		614	13360	33	EACH	OBJECT MARKER, TWO WAY	
				0.44								0.44		614	21000	0.44	MILE	WORK ZONE CENTER LINE, CLASS I, DOUBLE YELLOW	
				0.99								0.99		614	22010	0.99	MILE	WORK ZONE EDGE LINE, CLASS I, 6", WHITE	
				44								44		614	26000	44	FT	WORK ZONE STOP LINE, CLASS I, WHITE	
												LS		615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
				1,333								1,333		615	25001	1,333	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN	6A
			4									4		616	10000	4	MGAL	WATER	
				106								106		622	41100	106	FT	PORTABLE BARRIER, UNANCHORED	
				1,517								1,517		622	41110	1,517	FT	PORTABLE BARRIER, ANCHORED	
																		INCIDENTALS	
												LS	LS	614	11000	LS		MAINTAINING TRAFFIC	
												LS	LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
												LS	LS	624	10000	LS		MOBILIZATION	

CALCULATED SRO
CHECKED JDO

GENERAL SUMMARY

CLI-73-2.66

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REF NO.	SHEET NO.	STATION TO STATION	202 PIPE REMOVED, 24" AND UNDER	202 GUARDRAIL REMOVED	202 ANCHOR ASSEMBLY REMOVED, TYPE E	606 GUARDRAIL, TYPE MGS	606 ANCHOR ASSEMBLY, MGS TYPE E	202 GUARDRAIL POST REMOVED	202 MAILBOX REMOVED	SPECIAL MAILBOX SUPPORT SYSTEM, SINGLE		202 FENCE REMOVED		202 TRAFFIC ISLAND REMOVED	609 4" CONCRETE TRAFFIC ISLAND		626 BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL						
			FT	FT	EACH	FT	EACH	EACH	EACH	EACH		FT		SY	SY		EACH						
GR-1	24	28+00.00 LT TO 29+50.00 LT		100.00	1.00	100.00	1										1						
R-1	25	30+60.00 LT						1															
R-2	25	31+96.00 LT		25																			
R-3	25	32+00.00 LT							1														
R-4	27	42+42.00 LT										27											
R-5		36+20 LT TO 36+51 LT	50																				
R-6		42+11 LT TO 42+71 LT	60																				
MB-1	25	31+48.00 LT								1													
MB-2	28	45+47.76 LT							1	1													
TI-1	27	40+29.95 RT												11	11								
TOTALS CARRIED TO GENERAL SUMMARY			110	125	1	100	1	1	2	2		27		11	11		1						

CALCULATED SRO
CHECKED JDO

ROADWAY SUBSUMMARY

CLI-73-2.66

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STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), PG76-22	407 NON-TRACKING TACK COAT	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	301 ASPHALT CONCRETE BASE, PG64-22, (449)	304 AGGREGATE BASE	254 PAVEMENT PLANING, ASPHALT CONCRETE, 3.75"		204 PROOF ROLLING	204 SUBGRADE COMPACTION	204 EXCAVATION OF SUBGRADE	203 GRANULAR MATERIAL, TYPE C	204 GEOTEXTILE FABRIC		441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)	441 ASPHALT CONCRETE INTERMEDIATE COURSE, 2, (449), (DRIVEWAYS)		
					FT	FT	SY	SY	CY	GAL	CY	CY	CY	SY		HOUR	SY	CY	CY	SY		CY	CY	CY		
SR 73 - FULL DEPTH																1										
23+73.21	TO	35+91.57		LT	1218.36			1697	71	187	106															
23+73.21	TO	35+91.57		LT	1218.36			1730		95		384														
23+73.21	TO	35+91.57		LT	1218.36			1793					299													
23+73.21	TO	35+91.57		LT	1218.36			1842									1842	716	716	1842						
36+09.10	TO	48+29.17		LT	1220.07			2237	93	246	140															
36+09.10	TO	48+29.17		LT	1220.07			2287		126		508														
36+09.10	TO	48+29.17		LT	1220.07			2382					397													
36+09.10	TO	48+29.17		LT	1220.07			2458									2458	956	956	2458						
SR 73 - RESURFACING																										
23+73.21	TO	52+14.02		LTRT	2840.81			9021	376	1263	564			9021												
SR 380 - RESURFACING																										
9+34.45	TO	10+90.00		LTRT	155.55			603	25	84	38			603												
Driveways																										
30+78.33								123		7			27										7	6		
31+77.25								109		6			24										6	5		
32+83.75								104		6			23										6	5		
41+00.00								82					14													
42+19.20								93					16													
45+70.44								49					8									2				
11+00.00								136					23													
SUBTOTALS									565	2019	847	893	831	9624		1	4300	1672	1672	4300		2	19	16		
TOTALS CARRIED TO GENERAL SUMMARY									565	2020	848	893	831	9624		1	4300	1673	1673	4300		2	19	16		

CALCULATED XXX
CHECKED XXX

PAVEMENT SUBSUMMARY

CLI-73-2.66

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REF NO.	SHEET NO.	STATION TO STATION	601 TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	602 CONCRETE MASONRY	605 6" BASE PIPE UNDERDRAINS		605 6" UNCLASSIFIED PIPE UNDERDRAINS	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET	611 12" CONDUIT, TYPE D	611 15" CONDUIT, TYPE D								BENDS AND BRANCHES FOR INFORMATION ONLY				
																			6" X 45∢ BEND	6" X 90∢ BEND	6"X6" TEE	6" X6" WYE	6" X 6" CROSS
			SY	CY	FT		FT	FT	EACH	FT	FT								EACH	EACH	EACH	EACH	EACH
D-1	25	30+41 LT TO 31+10 LT		0.42						70													
D-2	25	32+54 LT TO 33+17 LT		0.42						34													
D-3	27	40+64 LT TO 40+64 LT		0.42						181													
D-4	29	10+75 LT TO 11+25		0.54							50												
U-1	24	27+40 LT TO 35+46 LT	2		865			10	1											1			
U-2	24	29+04 LT TO 35+79 LT			936															1			
U-3	26	35+01 LT TO 35+70 LT			93																	1	
U-4	26	36+41 LT TO 45+49 LT			911																	1	
U-5	26	36+41 LT TO 45+49 LT			927														1				
U-6	28	45+51 LT TO 46+00 LT			49																		
U-7	28	45+51 LT TO 47+07 LT			159														1			1	
U-8	28	46+00 LT TO 48+00 LT	2				200	4	1														
U-9	29	8+34 RT TO 9+56 RT					133													1			
TOTALS CARRIED TO GENERAL SUMMARY			4	2	3940		333	14	2	285	50								2	3	0	3	0

CALCULATED XXX
CHECKED XXX

DRAINAGE SUBSUMMARY

CLI-73-2.66

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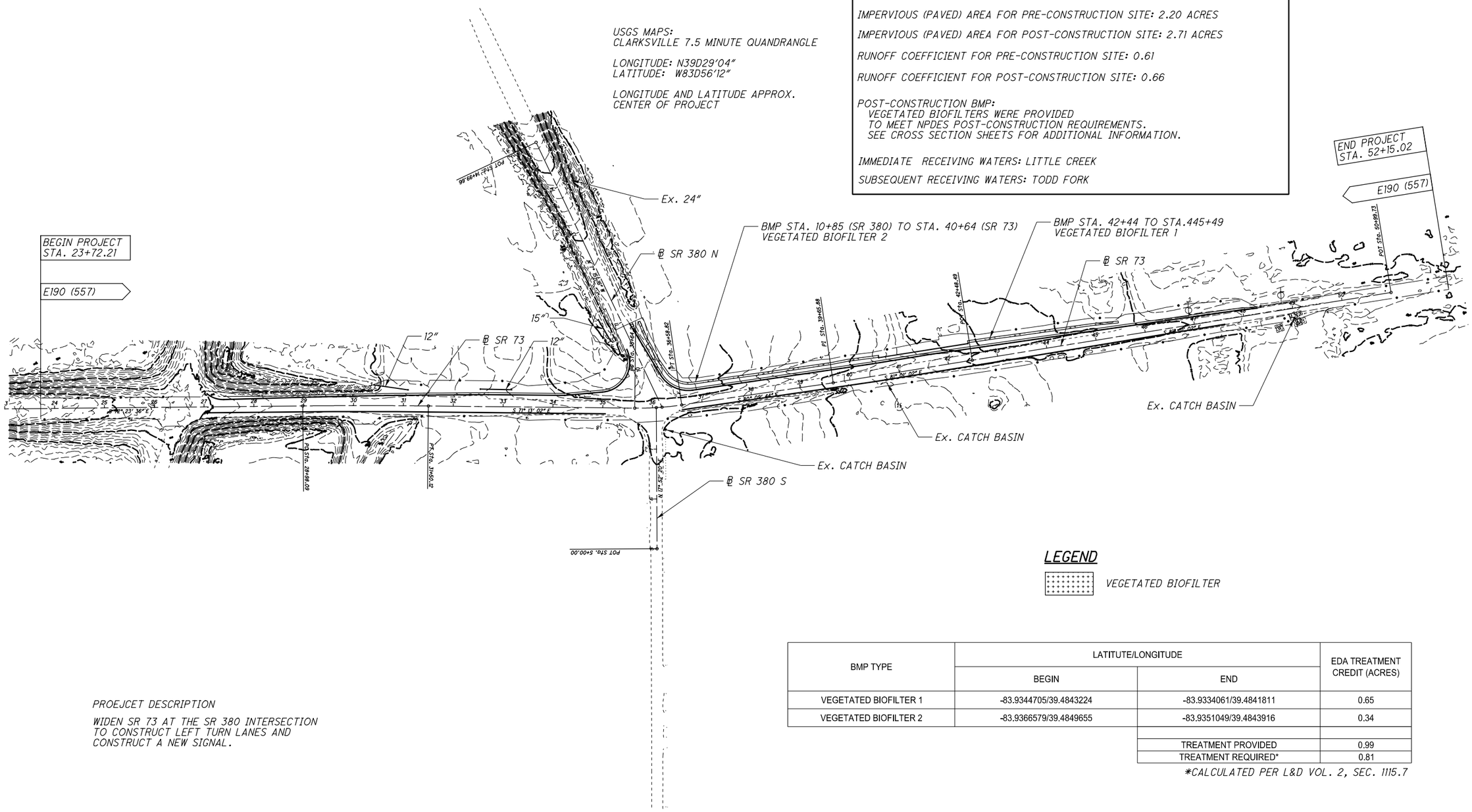
PROJECT DATA
TOTAL AREA (RIGHT OF WAY): 7.82 ACRES
PROJECT EARTH DISTURBED AREA: 1.87 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.1 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 1.97 ACRES
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE: 2.20 ACRES
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE: 2.71 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE: 0.61
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE: 0.66
POST-CONSTRUCTION BMP: VEGETATED BIOFILTERS WERE PROVIDED TO MEET NPDES POST-CONSTRUCTION REQUIREMENTS. SEE CROSS SECTION SHEETS FOR ADDITIONAL INFORMATION.
IMMEDIATE RECEIVING WATERS: LITTLE CREEK
SUBSEQUENT RECEIVING WATERS: TODD FORK

USGS MAPS:
CLARKSVILLE 7.5 MINUTE QUANDRANGLE

LONGITUDE: N39D29'04"
LATITUDE: W83D56'12"

LONGITUDE AND LATITUDE APPROX.
CENTER OF PROJECT



LEGEND

VEGETATED BIOFILTER

PROEJCET DESCRIPTION

WIDEN SR 73 AT THE SR 380 INTERSECTION
TO CONSTRUCT LEFT TURN LANES AND
CONSTRUCT A NEW SIGNAL.

BMP TYPE	LATITUTE/LONGITUDE		EDA TREATMENT CREDIT (ACRES)
	BEGIN	END	
VEGETATED BIOFILTER 1	-83.9344705/39.4843224	-83.9334061/39.4841811	0.65
VEGETATED BIOFILTER 2	-83.9366579/39.4849655	-83.9351049/39.4843916	0.34
		TREATMENT PROVIDED	0.99
		TREATMENT REQUIRED*	0.81

*CALCULATED PER L&D VOL. 2, SEC. 1115.7

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED GAT
CHECKED XXX

PROJECT SITE PLAN

CLI-73-2.66

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LEGEND

- FULL DEPTH PAVEMENT WIDENING
- PLANE AND RESURFACING
- COMMERICAL DRIVE
- RESIDENTIAL DRIVE
- FIELD DRIVE
- PAVEMENT REMOVED

BEGIN PROJECT
STA 23+73.21

E190 (557)

ENTRANCE RAMP
IR 71 N

CONSTR LIMITS

℄ SR 73

S 72° 23′ 36″ E

23 24 25 26 27 28

9.7′ 18.9′ 12.0′

26.30′ LT 50.0′ R

PC+06.24

+39.61

BEGIN PVMT WIDENING LT
BEGIN PVMT TAPER LT

U-1 U-2 GR-1

+00, 22.94′ LT
MEET EX GUARDRAIL

+35.28, 20.10′ LT

4.8′ 4.00′
5.8′ 6.3′
6.2′
2.5′
11.9′

SAWCUT

9.8′ 12.0′

MATCHLINE STA 28+50

Ex LA-R/W

CONSTR LIMITS

+00,
BEGIN PLANING &
RESURFACING LT & RT

EXIT RAMP
IR 71

R REMOVAL

GR GUARDRAIL, TYPE MGS

EX PROFILE ℄ SR 73

1020 1015 1010 1005 1000 995 990 985 980

1009.84 1009.36 1008.94 1008.52 1008.14 1007.84

23+00 24+00 25+00 26+00 27+00 28+00 +50

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED SRR
CHECKED JDO

PLAN AND PROFILE - SR 73
BEGIN TO STA. 28+50

CLI-73-2.66

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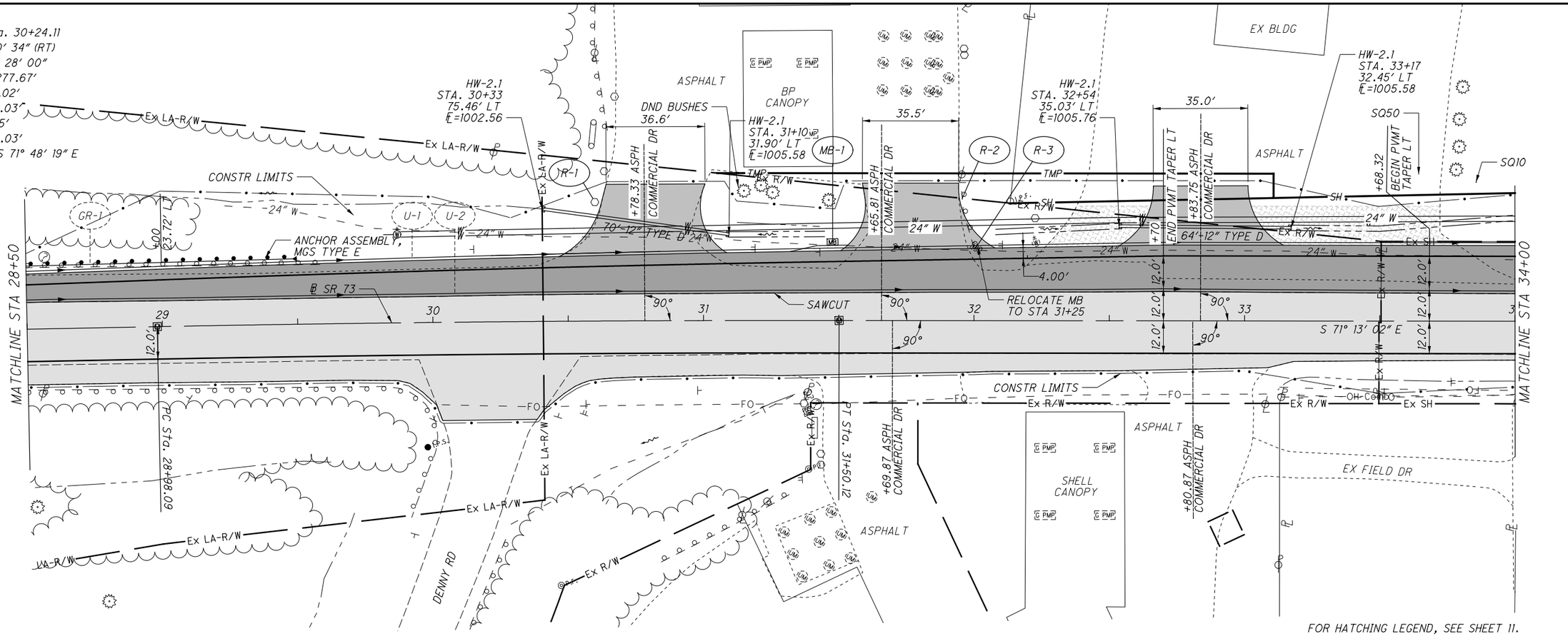
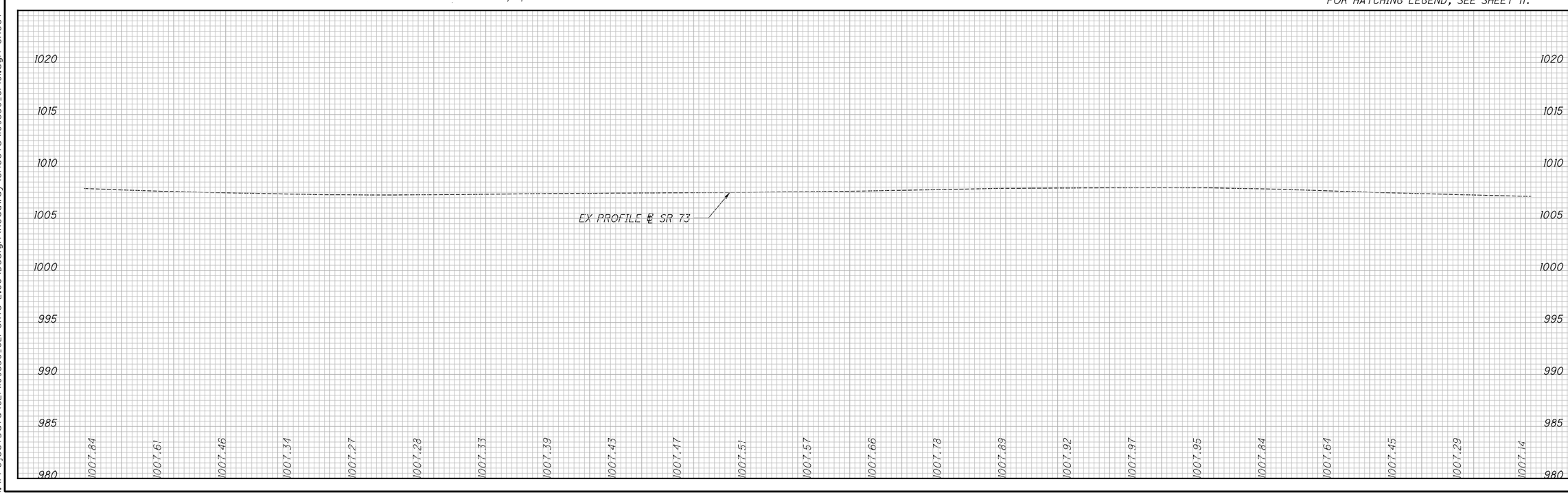
P.I. Sta. 30+24.11
Δ = 1° 10′ 34″ (RT)
Dc = 0° 28′ 00″
R = 12,277.67′
T = 126.02′
L = 252.03′
E = 0.65′
C = 252.03′
C.B. = S 71° 48′ 19″ E





N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED XXX
CHECKED XXX

PLAN AND PROFILE - SR 73
STA. 28+50 TO STA. 34+00

CLI-73-2.66

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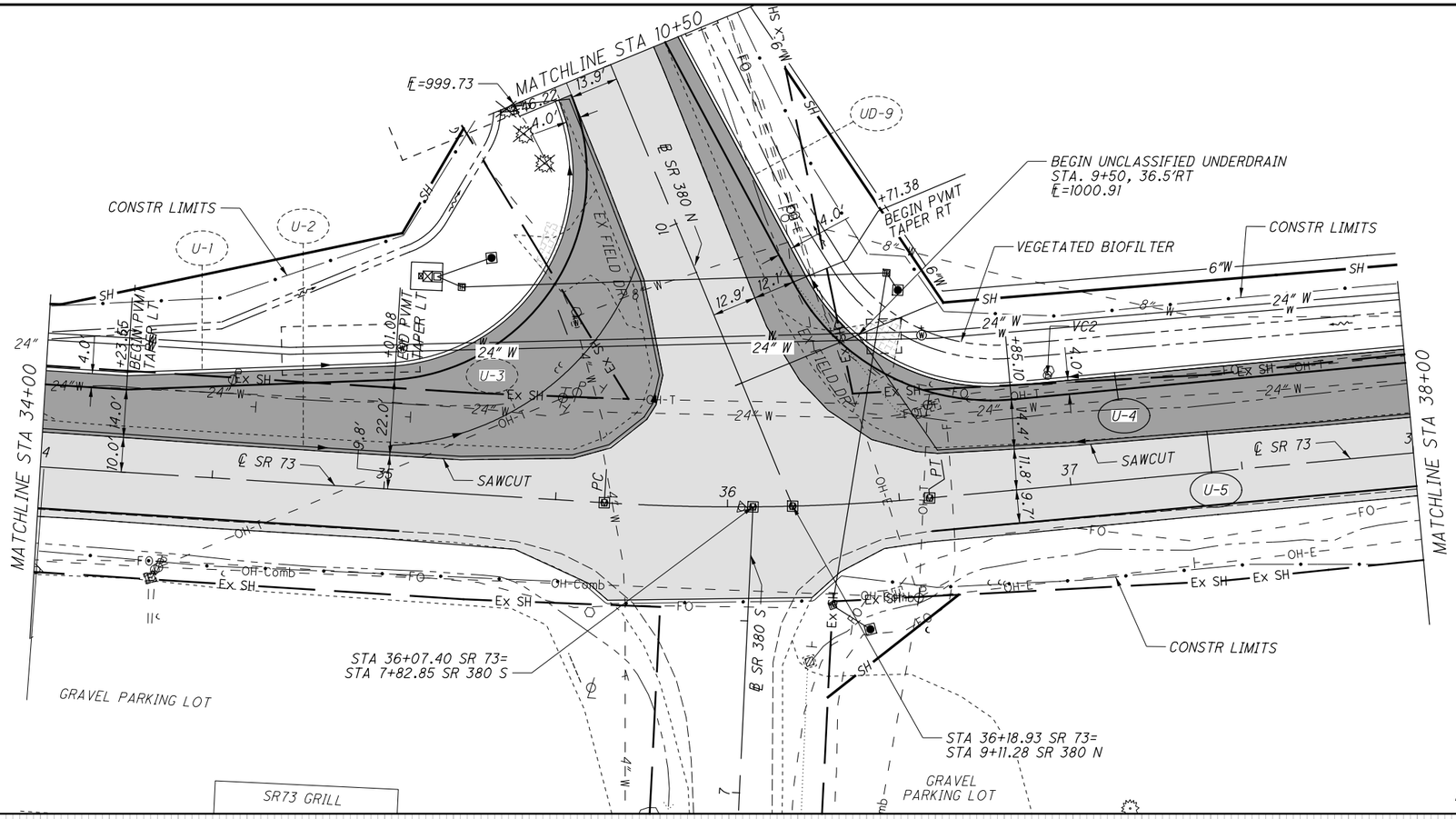
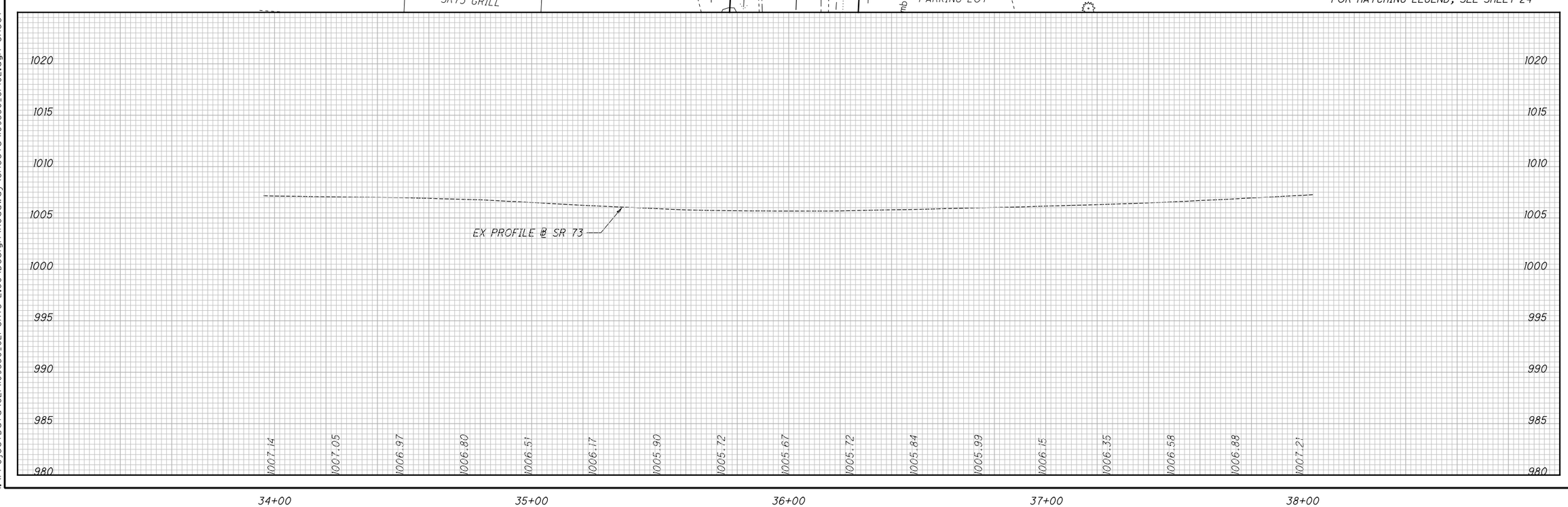
P.I. Sta. 36+11.60
Δ = 8° 56′ 42″ (LT)
Dc = 9° 27′ 12″
R = 606.09′
T = 47.41′
L = 94.62′
E = 1.85′
C = 94.53′
C.B. = S 75° 41′ 23″ E
PC Sta. 35+64.20
PT Sta. 36+58.82





HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED XXX
CHECKED XXX

PLAN AND PROFILE - SR 73
STA. 34+00 TO STA. 38+00

CLI-73-2.66

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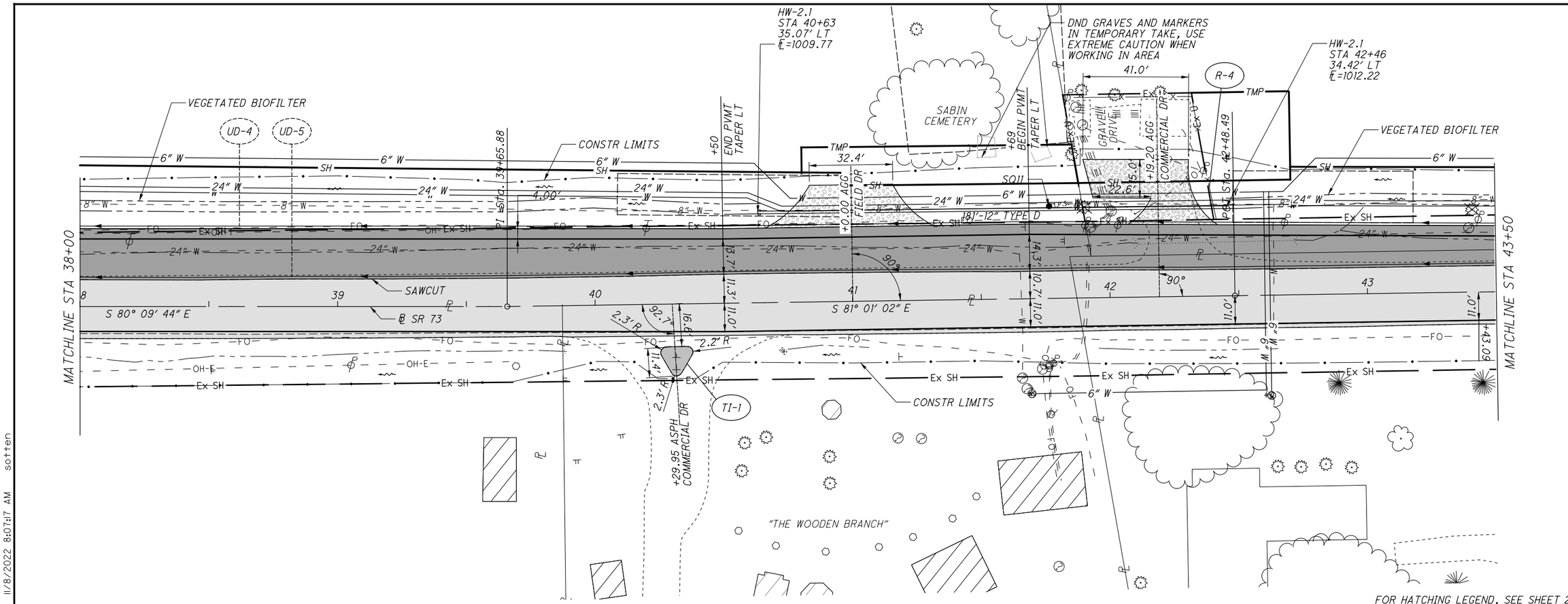

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED XXX
CHECKED XXX

PLAN AND PROFILE - SR 73
STA. 38+00 TO STA. 43+50

CLI-73-2.66

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END PROJECT
END WORK
STA 54+14.02

E190 (557)

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED XXX
CHECKED XXX

VEGETATED BIOFILTER

UD-4 UD-5 MB-2 UD-6 UD-8 UD-7

GRAVEL DRIVE

+70.44 ASPH. RESID DR.

9.8'

BEGIN UNCLASSIFIED UNDERDRAIN
STA. 46+00, 22.4' LT
℄=1011.97

VEGETATED BIOFILTER

CONSTR LIMITS

END UNCLASSIFIED UNDERDRAIN
STA. 48+00, 18.8' LT
℄=1011.48

℄=1011.48

+00 BEGIN TAPER LT

+29 END TAPER LT

6" W
8" W
24" W
SH
Ex SH
FO
4.00'
1.5'
11.8'
13.5'
9.7'
90°
SAWCUT
℄ SR 73
S 81° 01' 02" E
CONSTR LIMITS
M.N.S.

MATCHLINE STA 43+50

44 45 46 47 48 49

FOR HATCHING LEGEND, SEE SHEET 25

EX PROFILE @ ℄ SR 73

Vertical Profile Sight Line Report

Eye Height:	3.50 ft
Vertical Exaggeration:	1.0:1
Object Height:	1.50 ft
Stopping Sight Distance:	100.00 ft
Interval Distance:	10.00 ft

1020 1015 1010 1005 1000 995 990 985 980

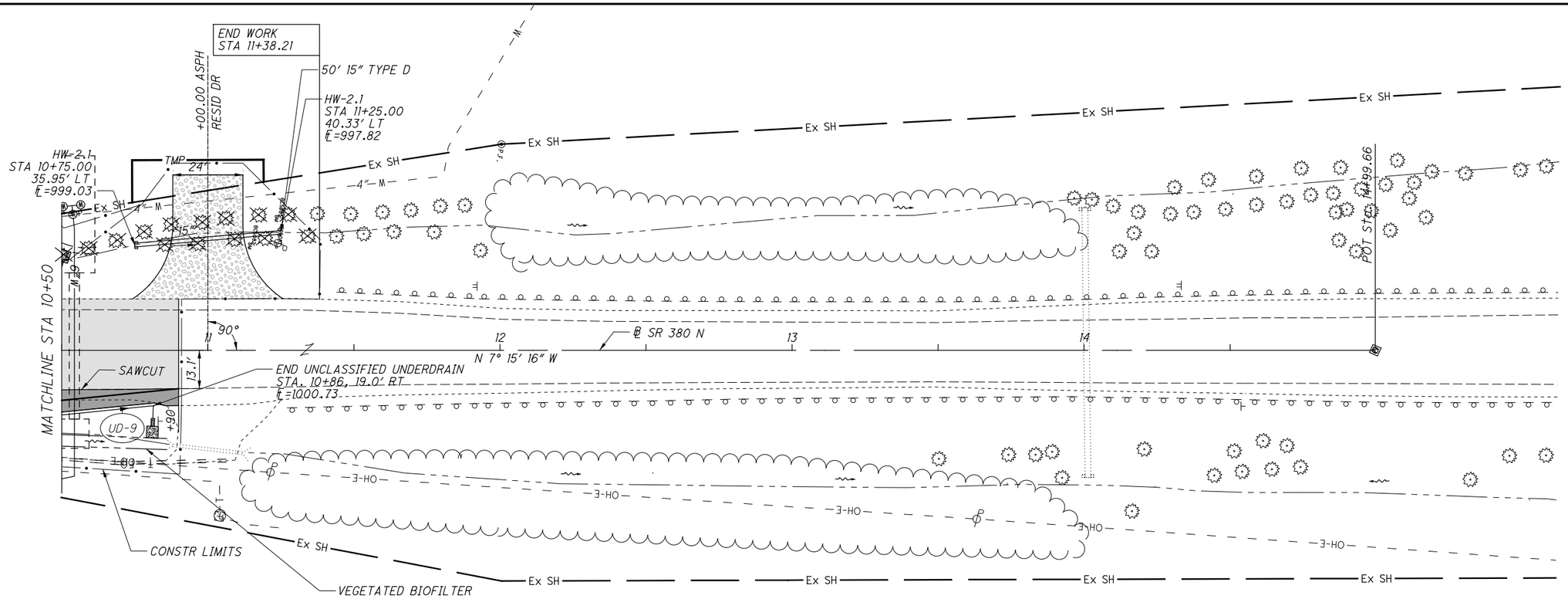
1015.34 1015.47 1015.58 1015.66 1015.71 1015.72 1015.70 1015.66 1015.57 1015.46 1015.34 1015.23 1015.16 1015.05 1014.89 1014.76 1014.51 1014.25 1013.98 1013.69 1013.49 1013.30 1013.11

+50 44+00 45+00 46+00 47+00 48+00 49+00

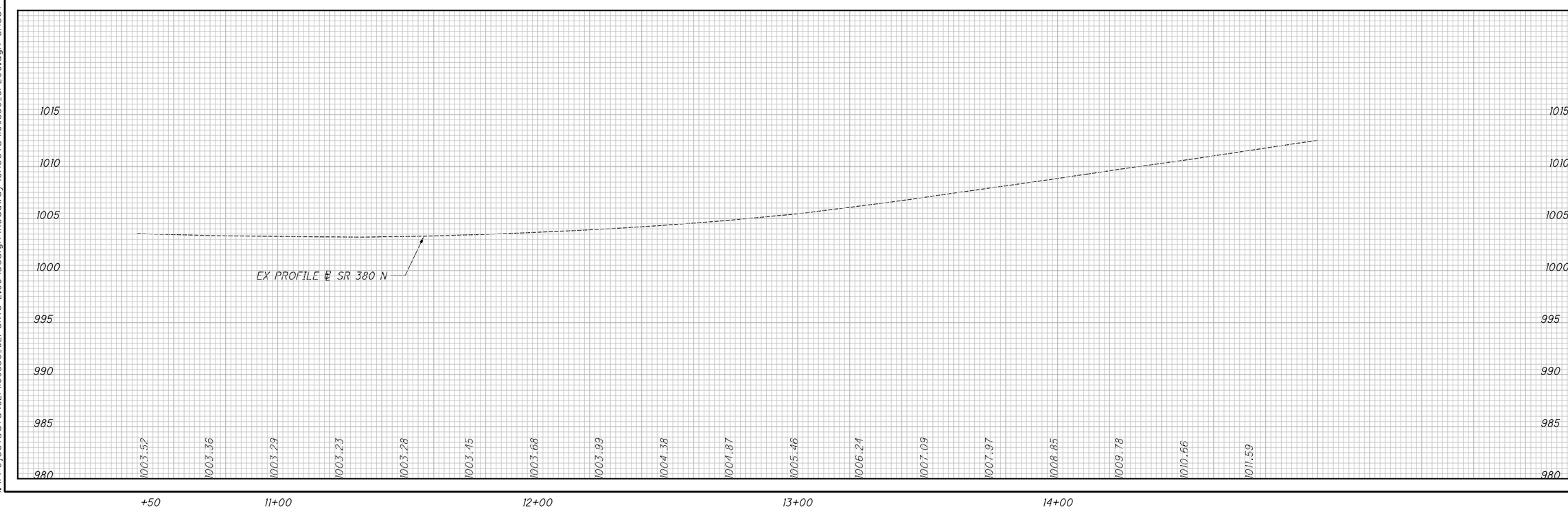
PLAN AND PROFILE - SR 73
STA. 43+50 TO STA. 52+14

CLI-73-2.66

I:\ProjectData\CLI\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_GPI04.dgn Sheet 11/8/2022 8:07:41 AM sotten



FOR HATCHING LEGEND, SEE SHEET 29



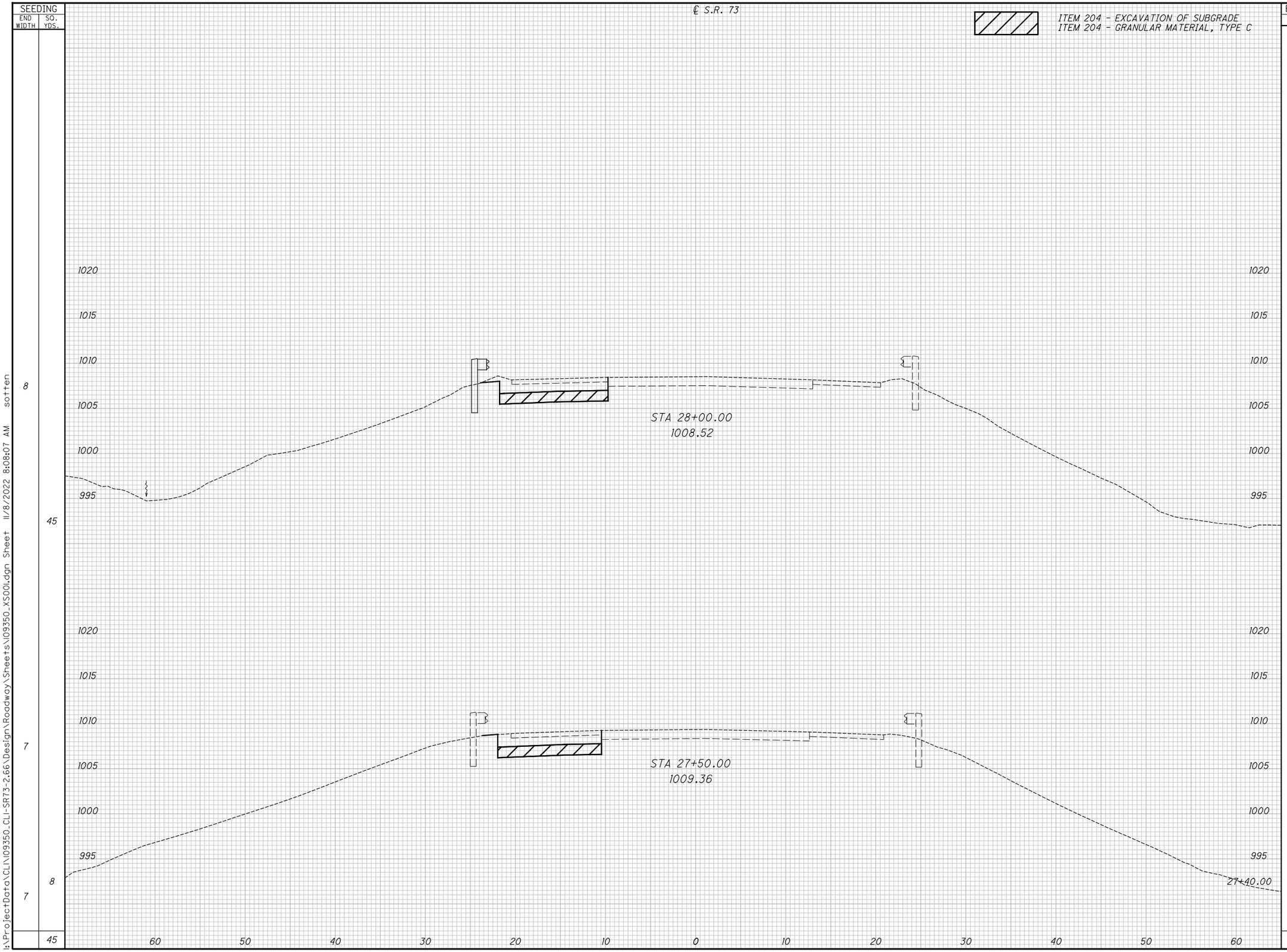
HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED XXX
CHECKED XXX

PLAN AND PROFILE - SR 380 NORTH
STA. 10+50 TO END

CLI-73-2.66

I:\ProjectData\CLI\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_GP200.dgn Sheet 11/8/2022 8:07:58 AM sotten

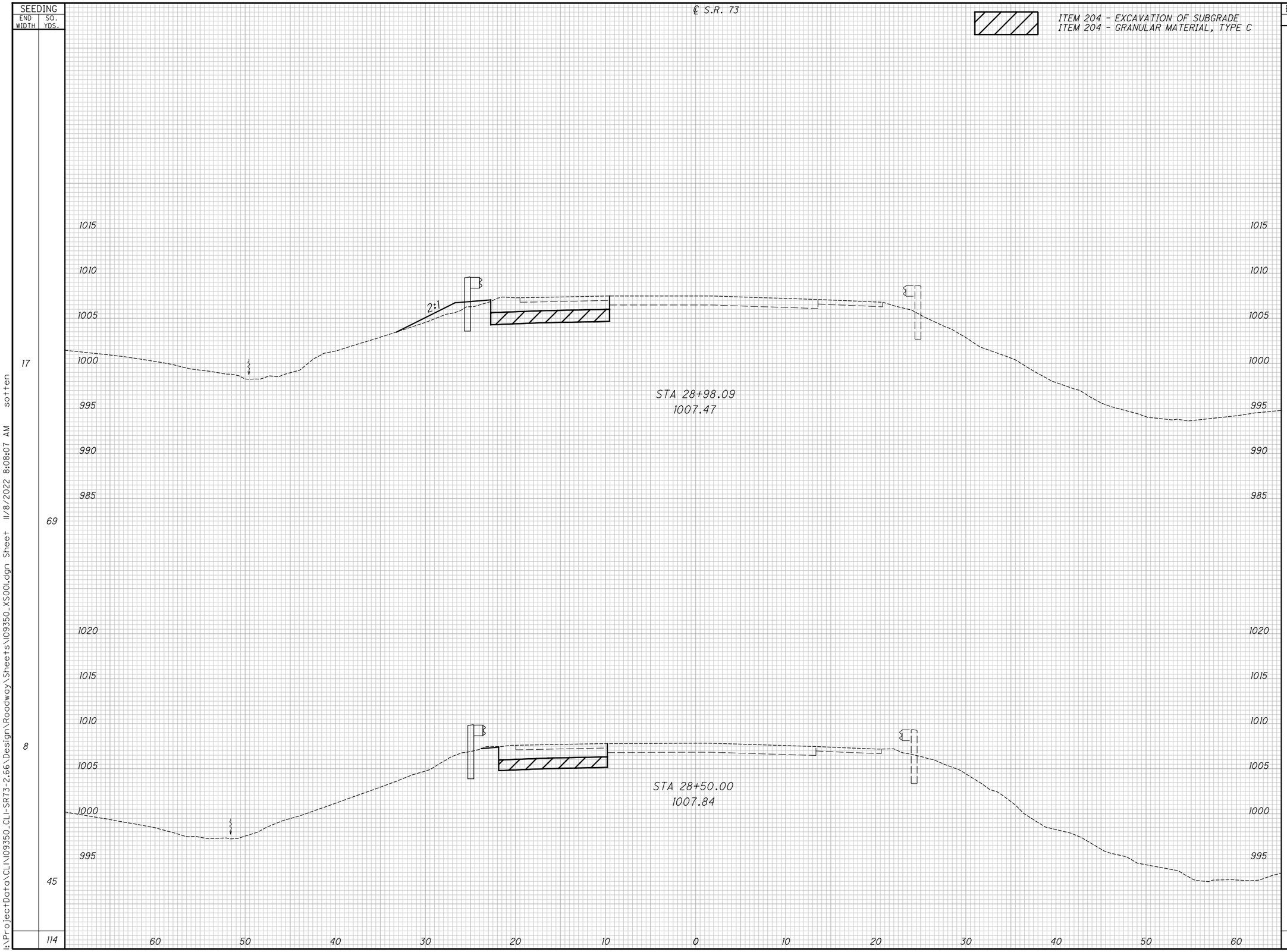


CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 27+50.00 TO STA. 28+00.00

CLI-73-2.66

I:\ProjectData\CLN\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_XS001.dgn Sheet 11/8/2022 8:08:07 AM sotten



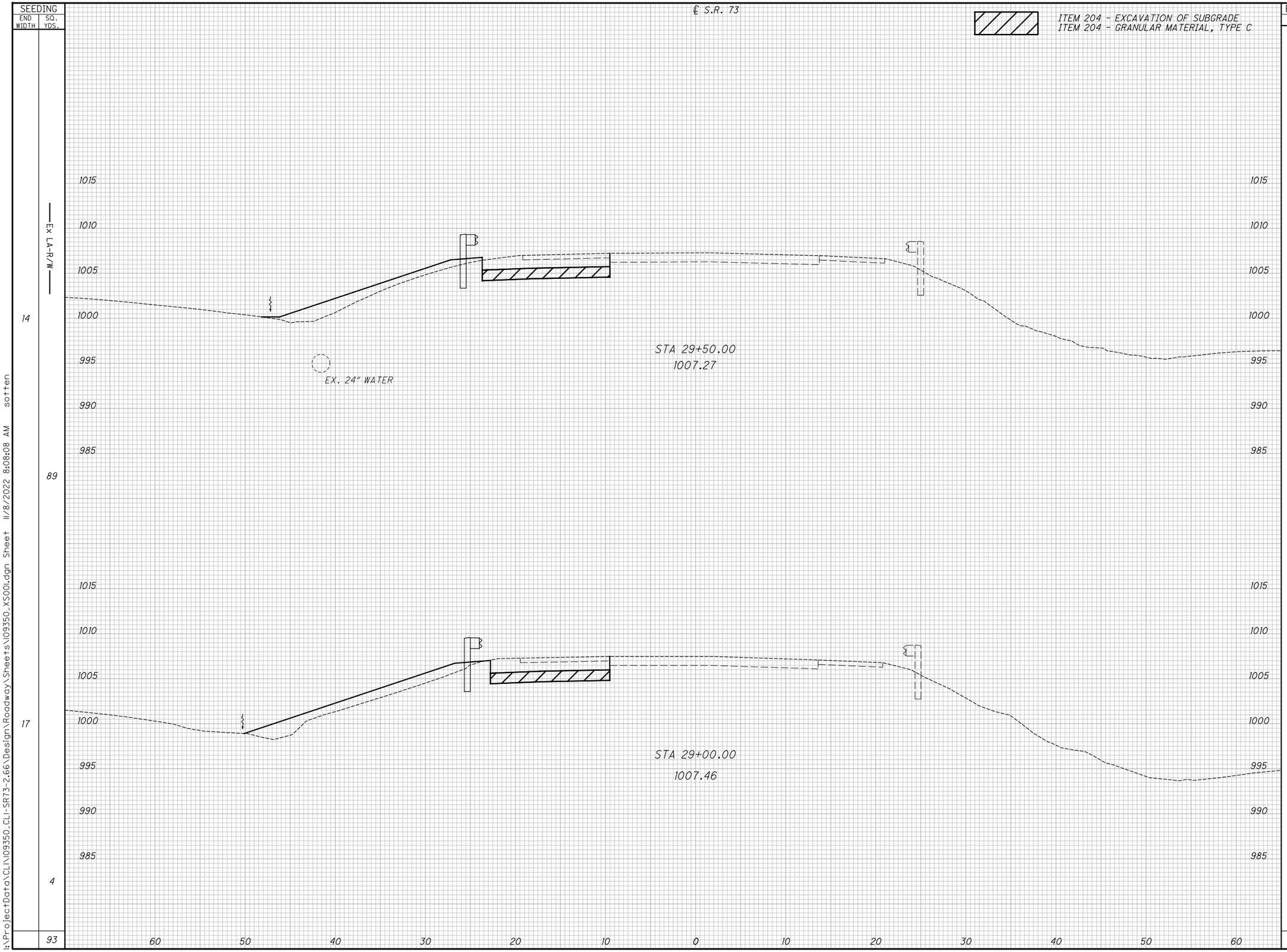
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
17		20	6		
	69			34	5
8		18	0		
	45			34	0
114				68	5

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 28+50.00 TO STA. 28+98.09

CLI-73-2.66

I:\ProjectData\CLN\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_XS001.dgn Sheet 11/8/2022 8:08:07 AM sotten



CALCULATED XXX
CHECKED XXX

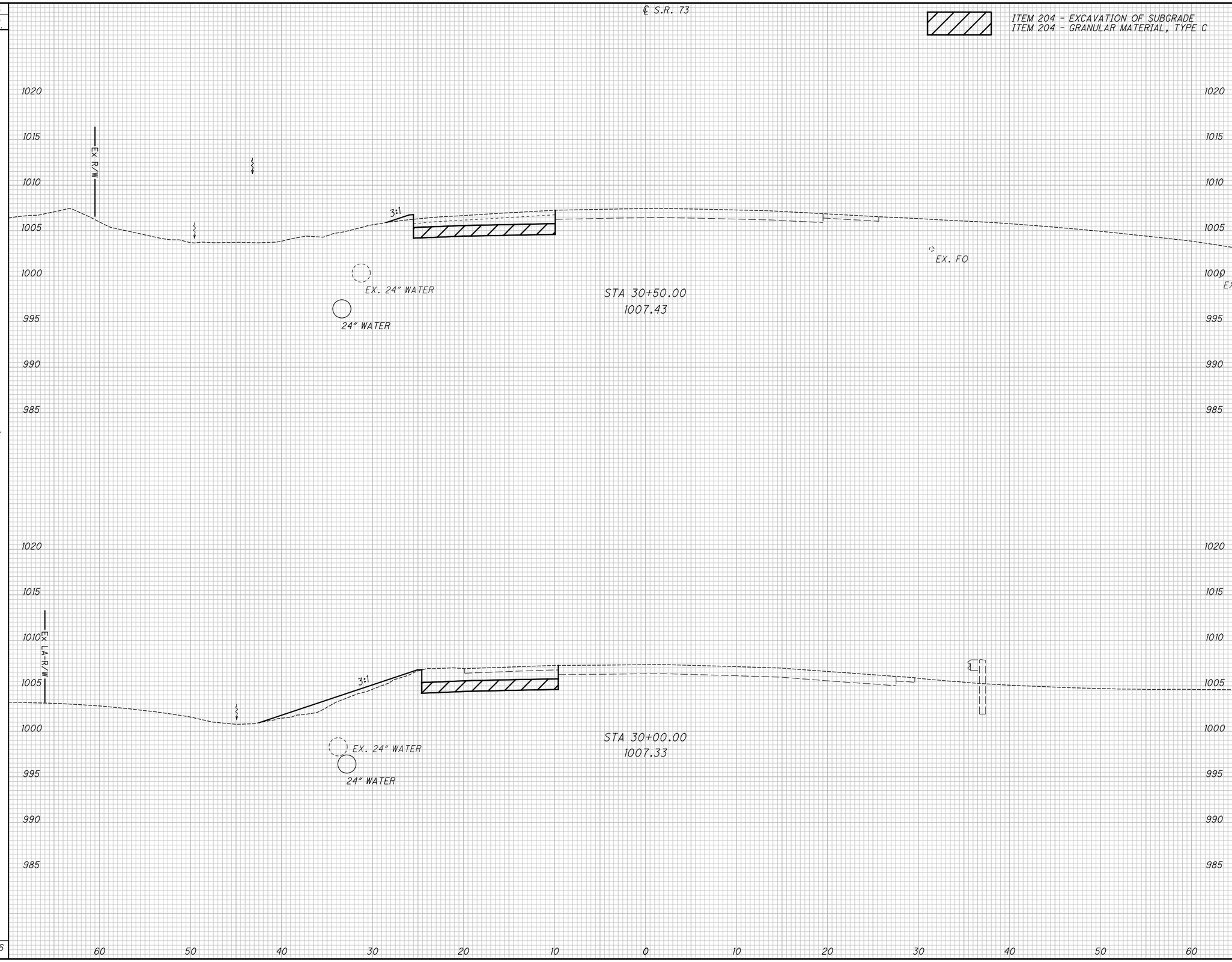
CROSS SECTIONS S.R. 73
STA. 29+00.00 TO STA. 29+50.00

CLI-73-2.66

32
96

I:\ProjectData\CLN\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_XS001.dgn Sheet 11/8/2022 8:08:08 AM sotten

SEEDING	
END WIDTH	SQ. YDS.
9	95
25	111
	206



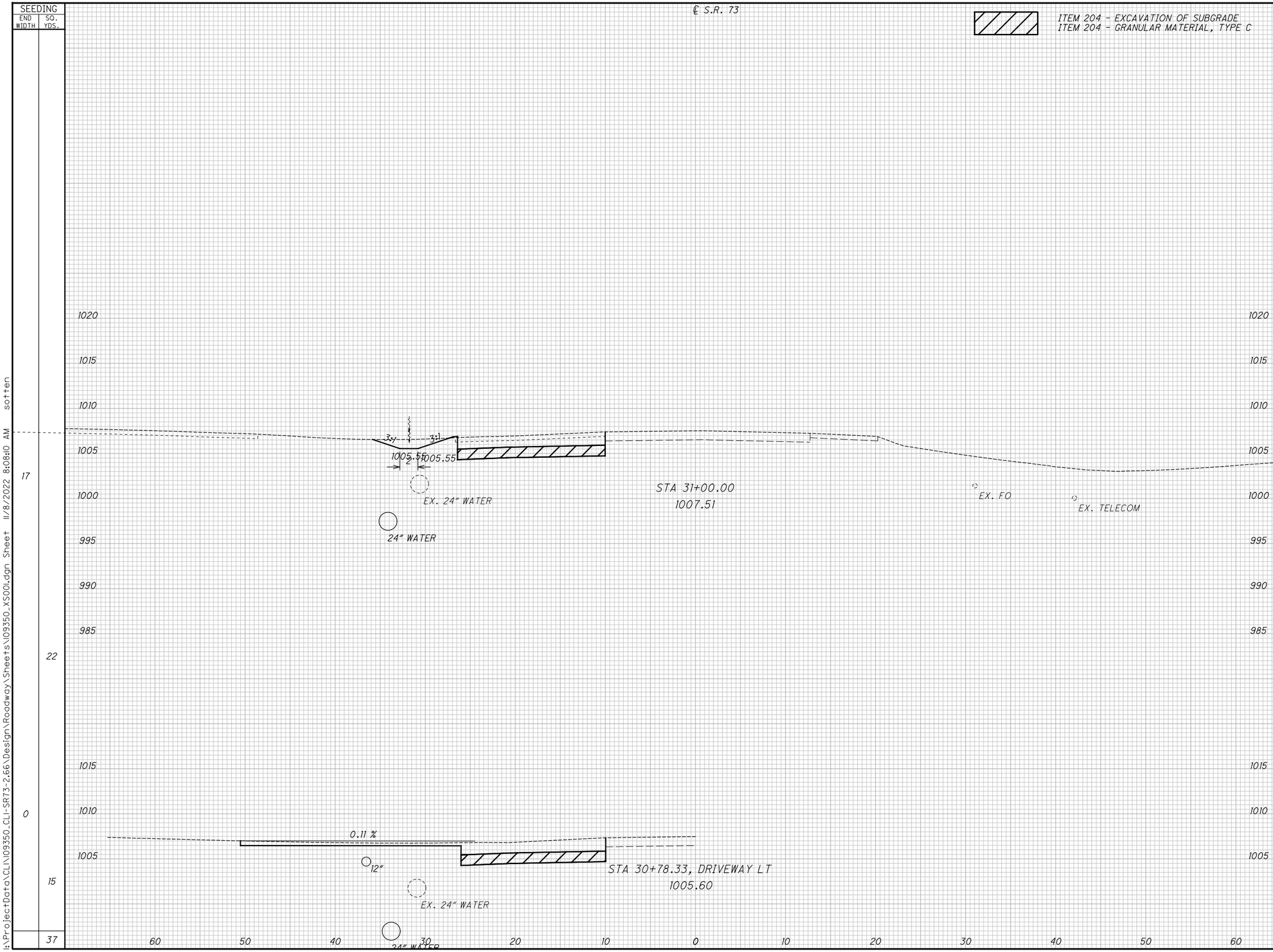
END AREA		VOLUME	
CUT	FILL	CUT	FILL
19	1		
21	8	37	8
		38	11
		75	19

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 30+00.00 TO STA. 30+50.00

CLI-73-2.66

I:\ProjectData\CLI\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_XS001.dgn Sheet 11/8/2022 8:08:09 AM sotten



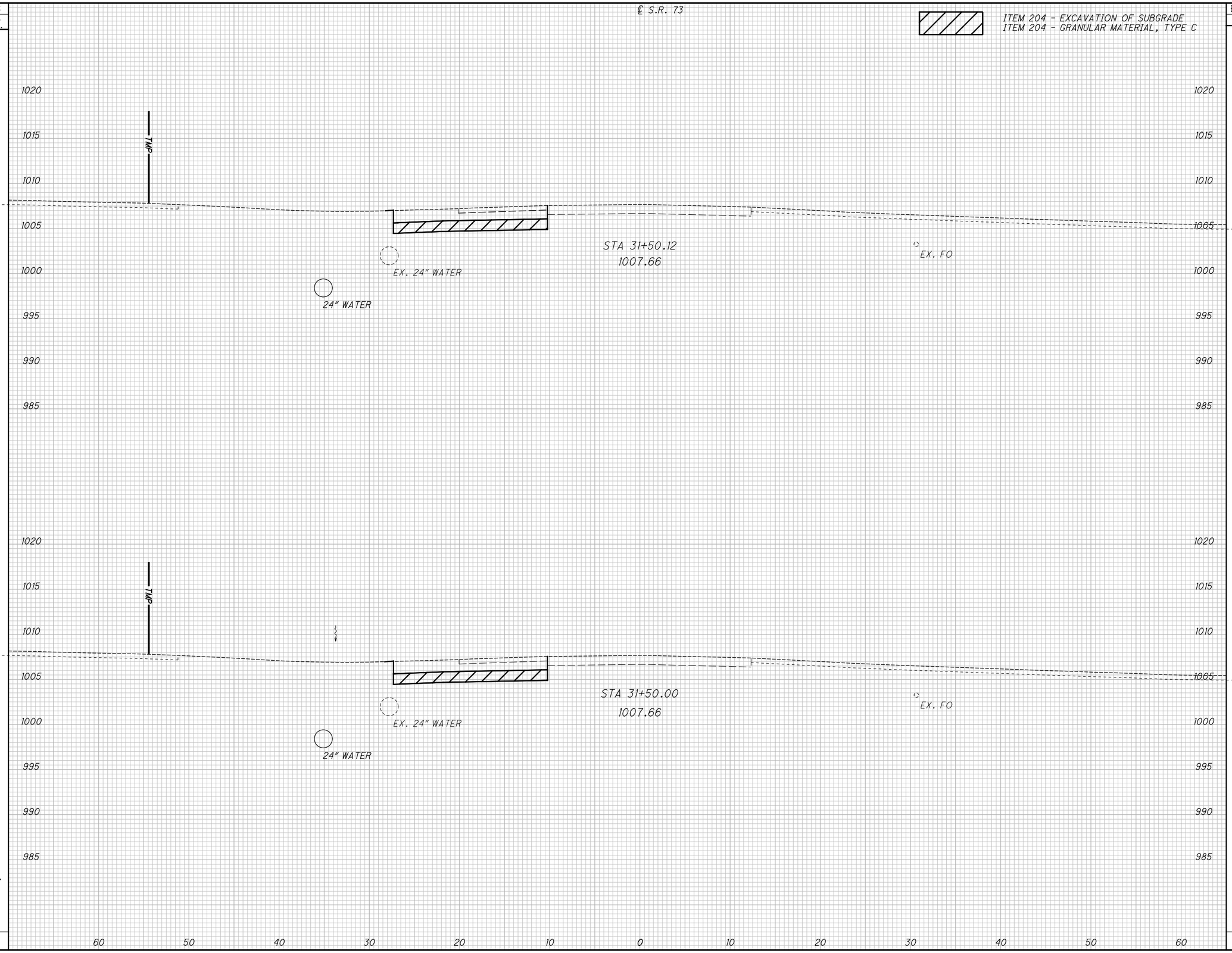
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
17		27	0		
	22			23	0
0		30	0		
	15			25	0
	37			48	0

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 30+78.33 TO STA. 31+00.00

CLI-73-2.66

I:\ProjectData\CLI\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/8/2022 8:08:10 AM sotten



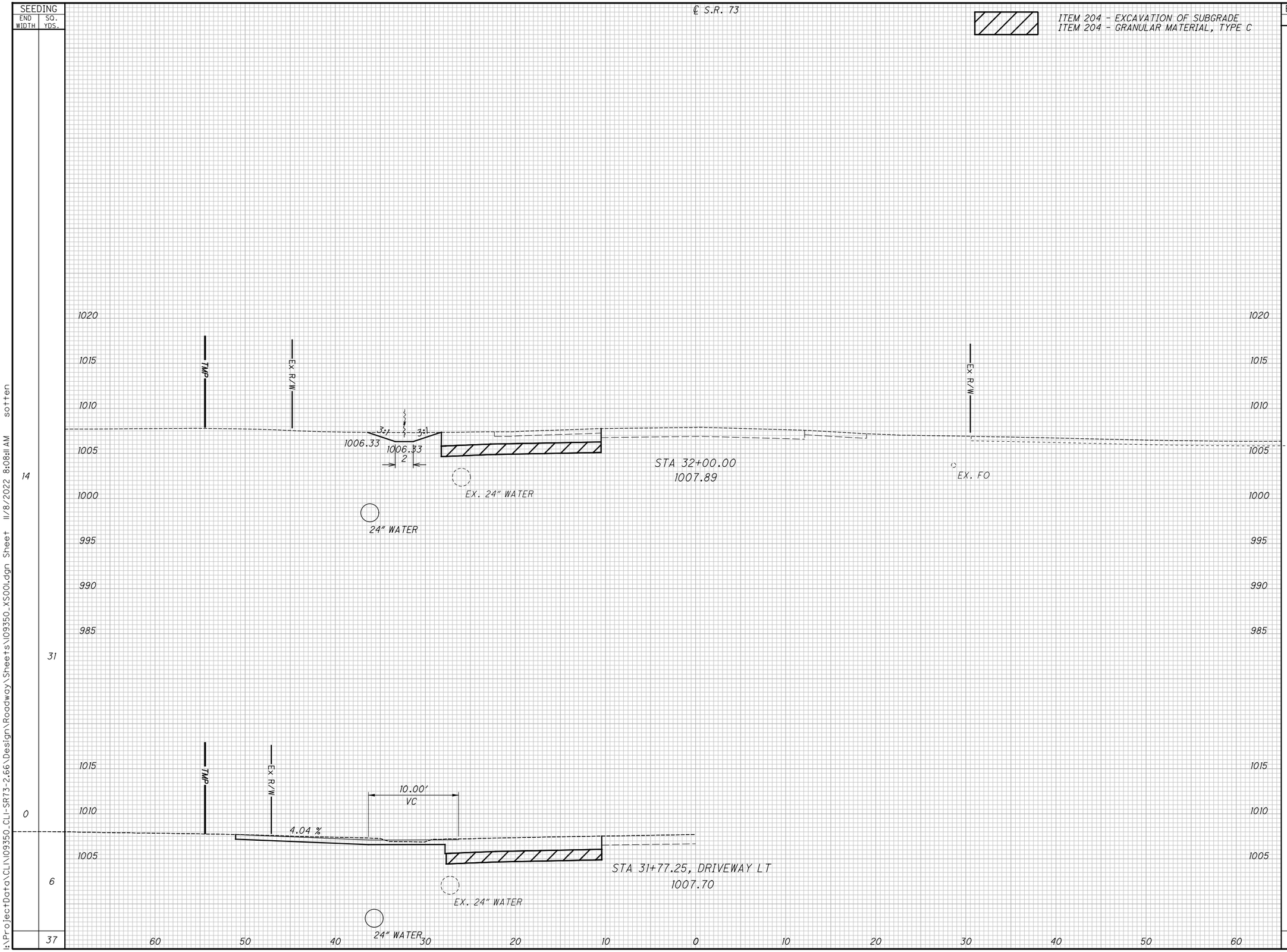
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7	0	24	0	0	0
7	67	24	0	47	0
67				47	0

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 31+50.00 TO STA. 31+50.12

CLI-73-2.66

I:\ProjectData\CLN\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/8/2022 8:08:10 AM sotten



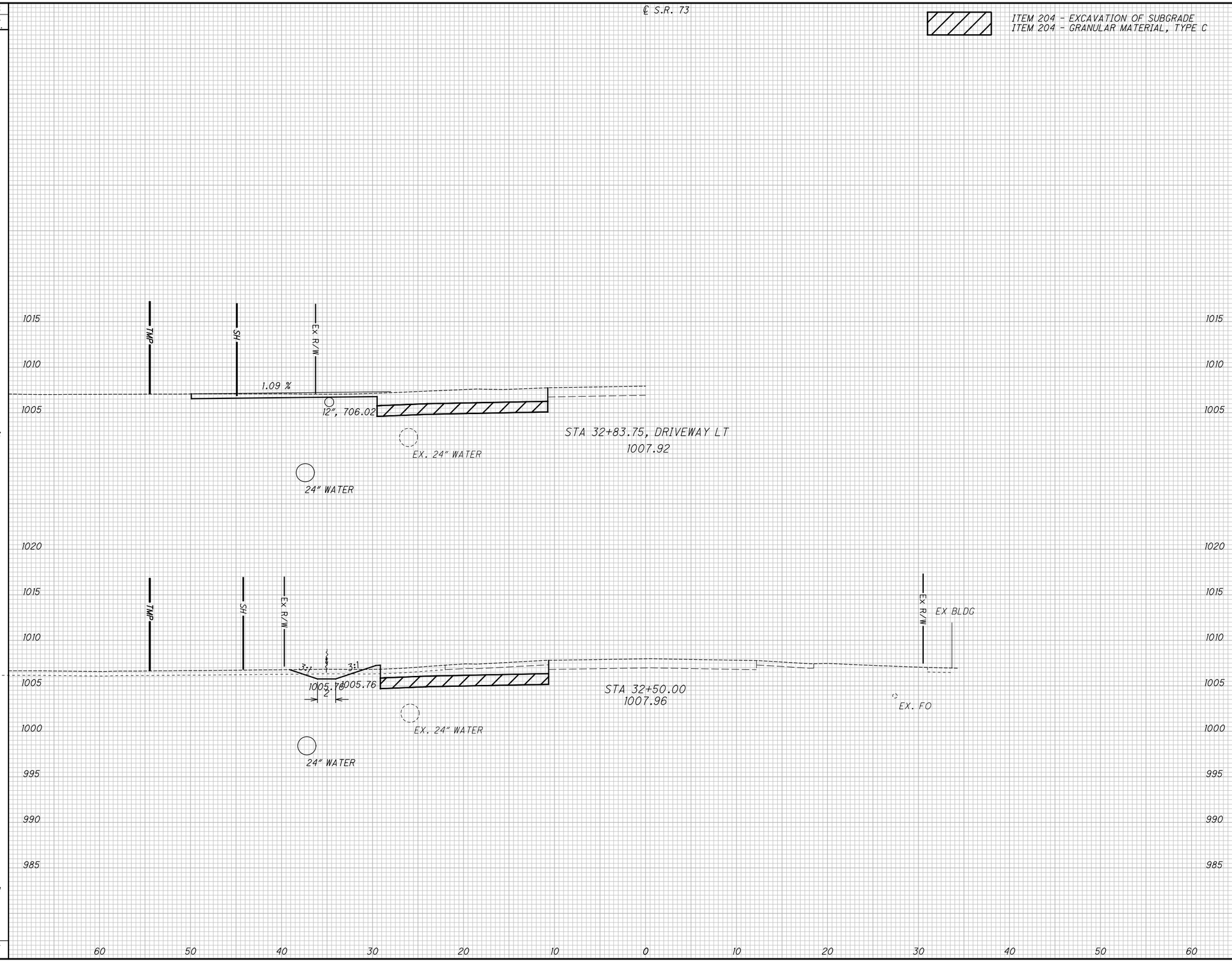
CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 31+65.81 TO STA. 32+00.00

CLI-73-2.66

I:\ProjectData\CLI\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/8/2022 8:08:11 AM sotten

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
0		35	0		
	33			39	0
16		28	1		
	84			53	0
	117			92	0

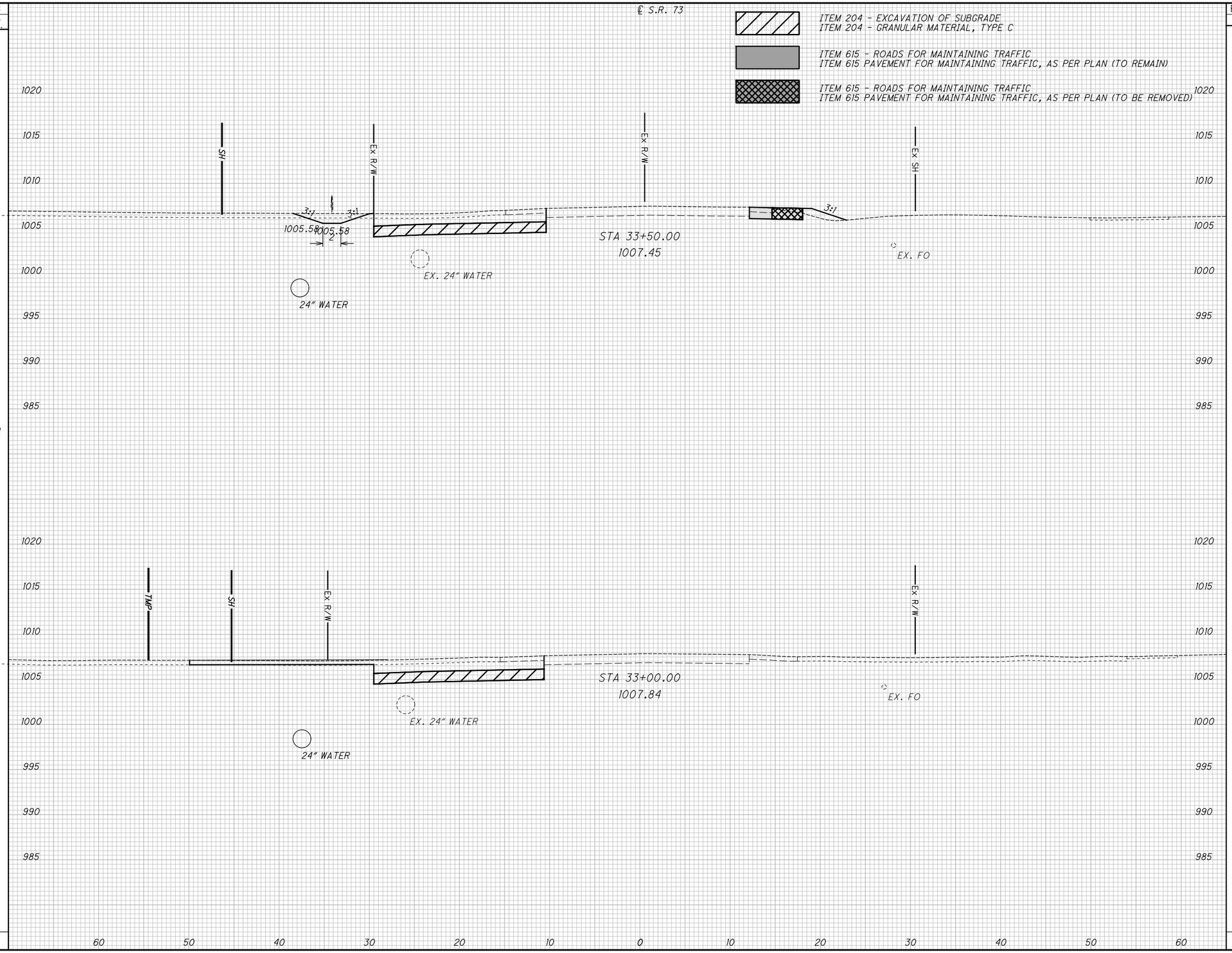


CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 32+50.00 TO STA. 32+83.75

CLI-73-2.66

I:\ProjectData\CLI\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/8/2022 8:08:12 AM sotten



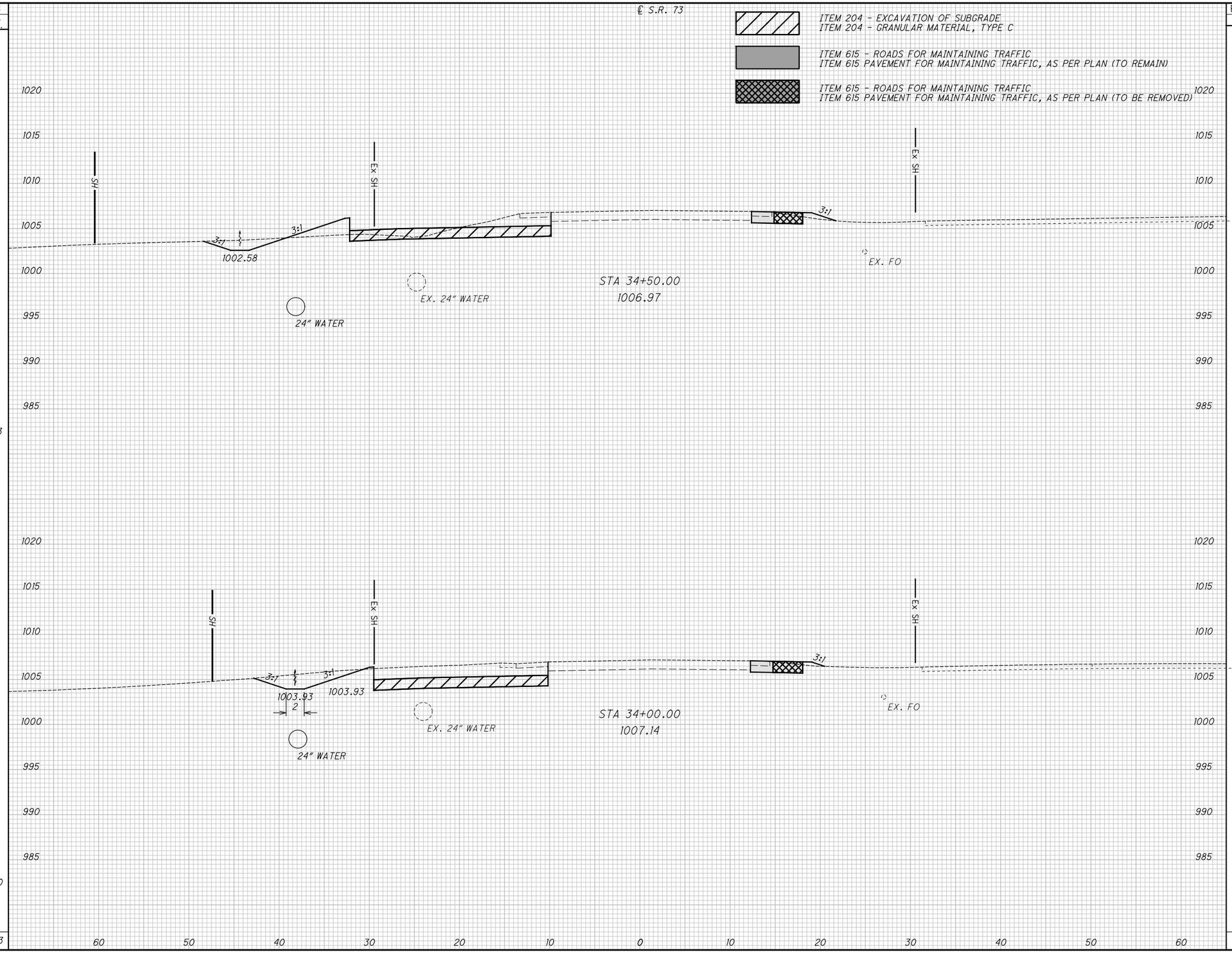
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
15	44	30	0	61	0
0	0	36	0	21	0
	44			82	0

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 33+00.00 TO STA. 33+50.00

CLI-73-2.66

I:\ProjectData\CLN\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_XS001.dgn Sheet 11/9/2022 11:28:27 AM sotten



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23		16	14		
	123			49	13
20		37	0		
	100			63	0
	223			112	13

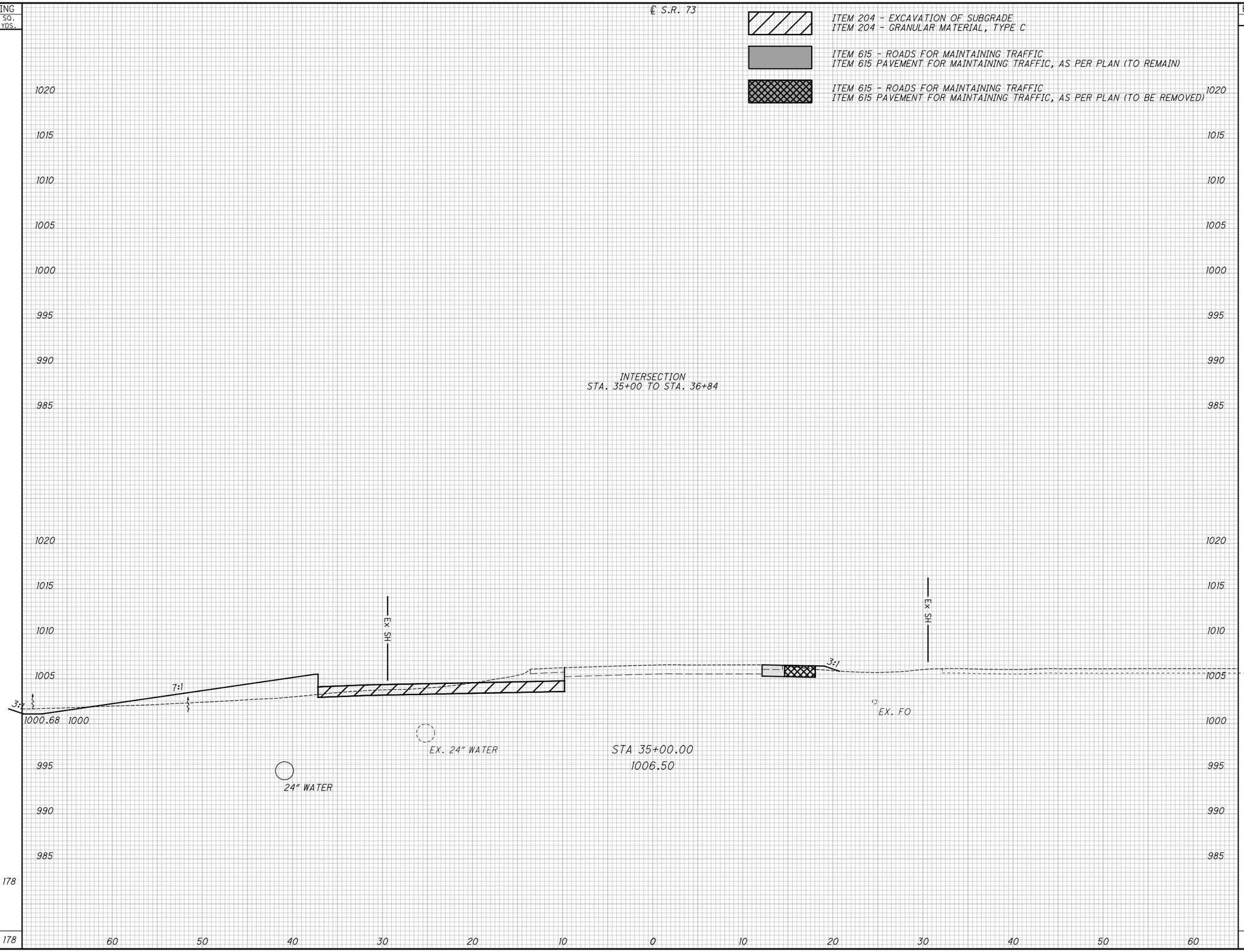
CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 34+00.00 TO STA. 34+50.00

CLI-73-2.66

I:\ProjectData\CLN\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/9/2022 11:28:28 AM sotten

SEEDING	
END WIDTH	SQ. YDS.
178	178



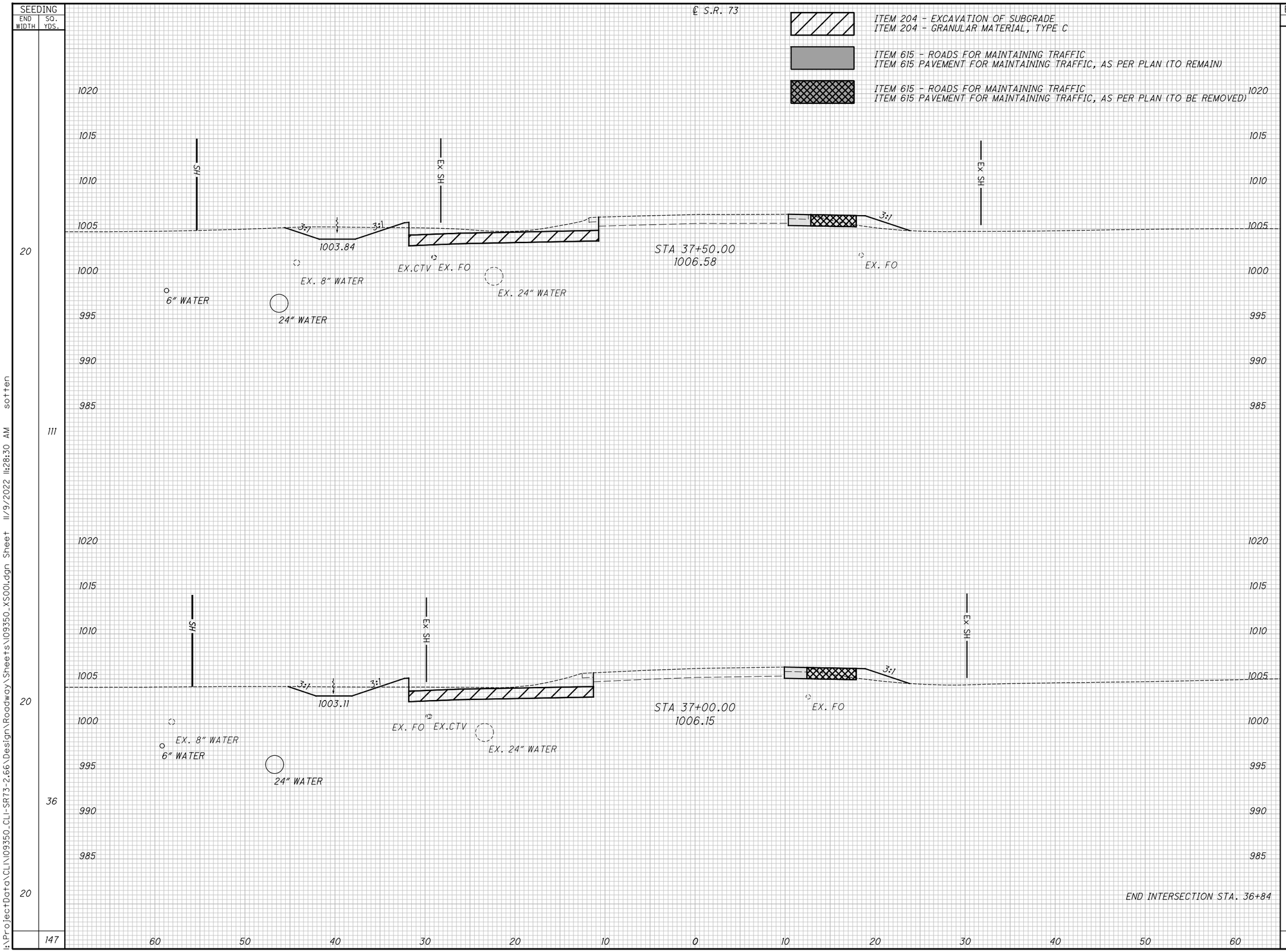
END AREA		VOLUME	
CUT	FILL	CUT	FILL
12	41	25	51
		25	51

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 35+00.00 TO STA. 35+50.00

CLI-73-2.66

I:\ProjectData\CLN\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_XS001.dgn Sheet 11/9/2022 11:28:29 AM sotten



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20		22	1		
	111			35	2
20		17	2		
	36			10	1
20		17	2		
	147			45	3

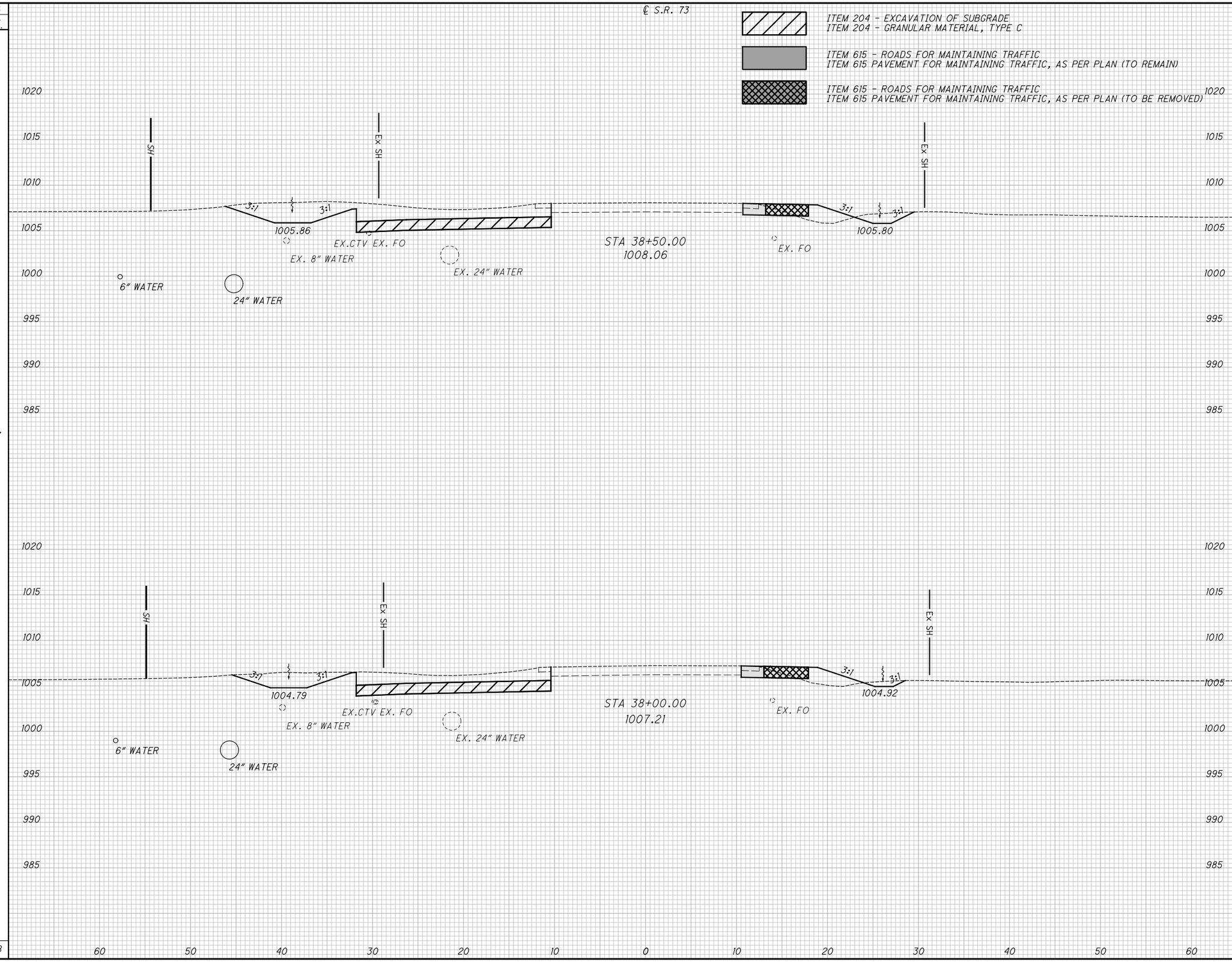
CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 37+00.00 TO STA. 37+50.00

CLI-73-2.66

I:\ProjectData\CLN\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_XS001.dgn Sheet 11/9/2022 11:28:30 AM sotten

SEEDING END WIDTH	SEEDING SQ. YDS.
21	117
20	111
	228



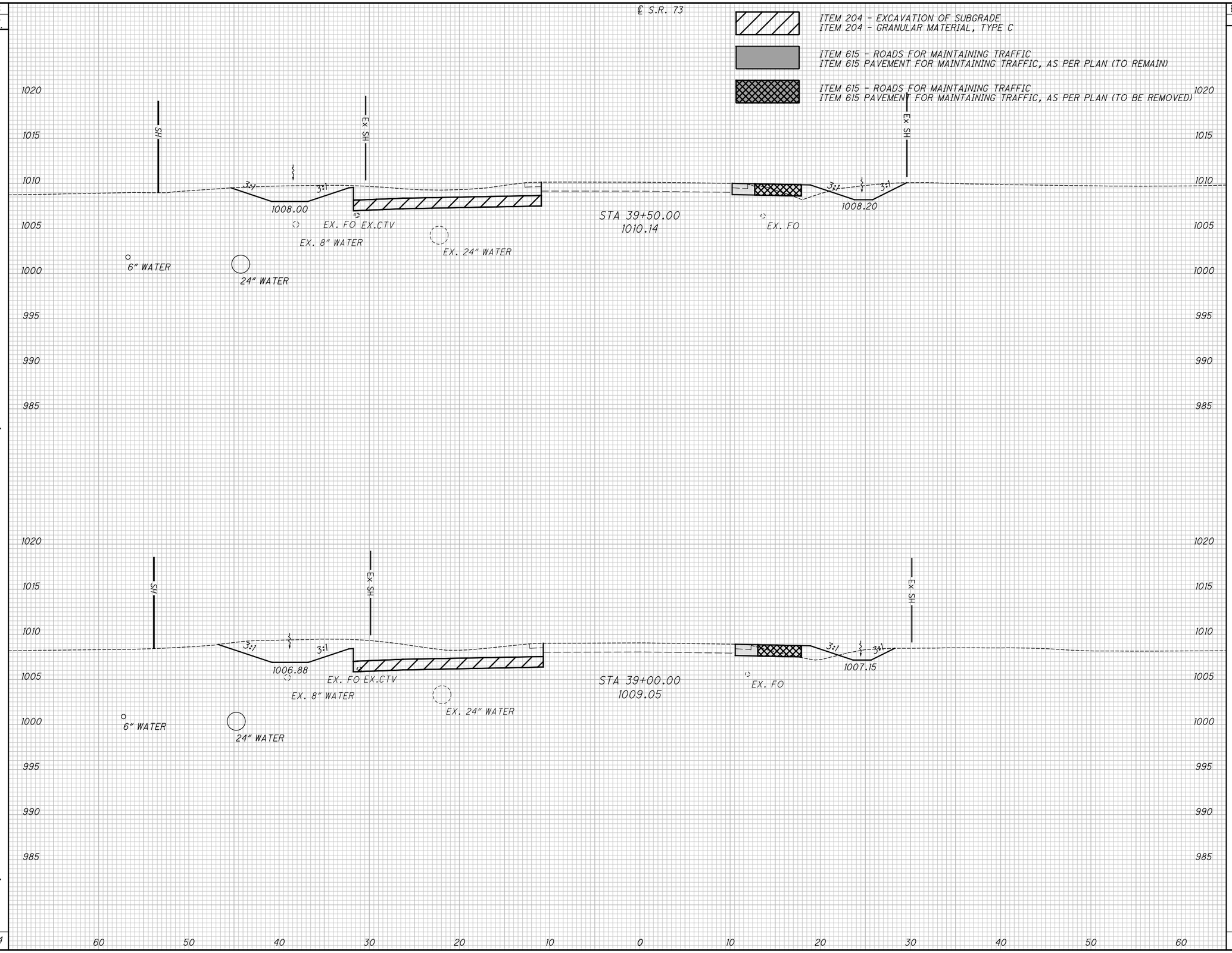
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
51	0		
		81	0
37	0		
		54	1
		135	1

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 38+00.00 TO STA. 38+50.00

CLI-73-2.66

I:\ProjectData\CLI\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/9/2022 11:28:31 AM sotten



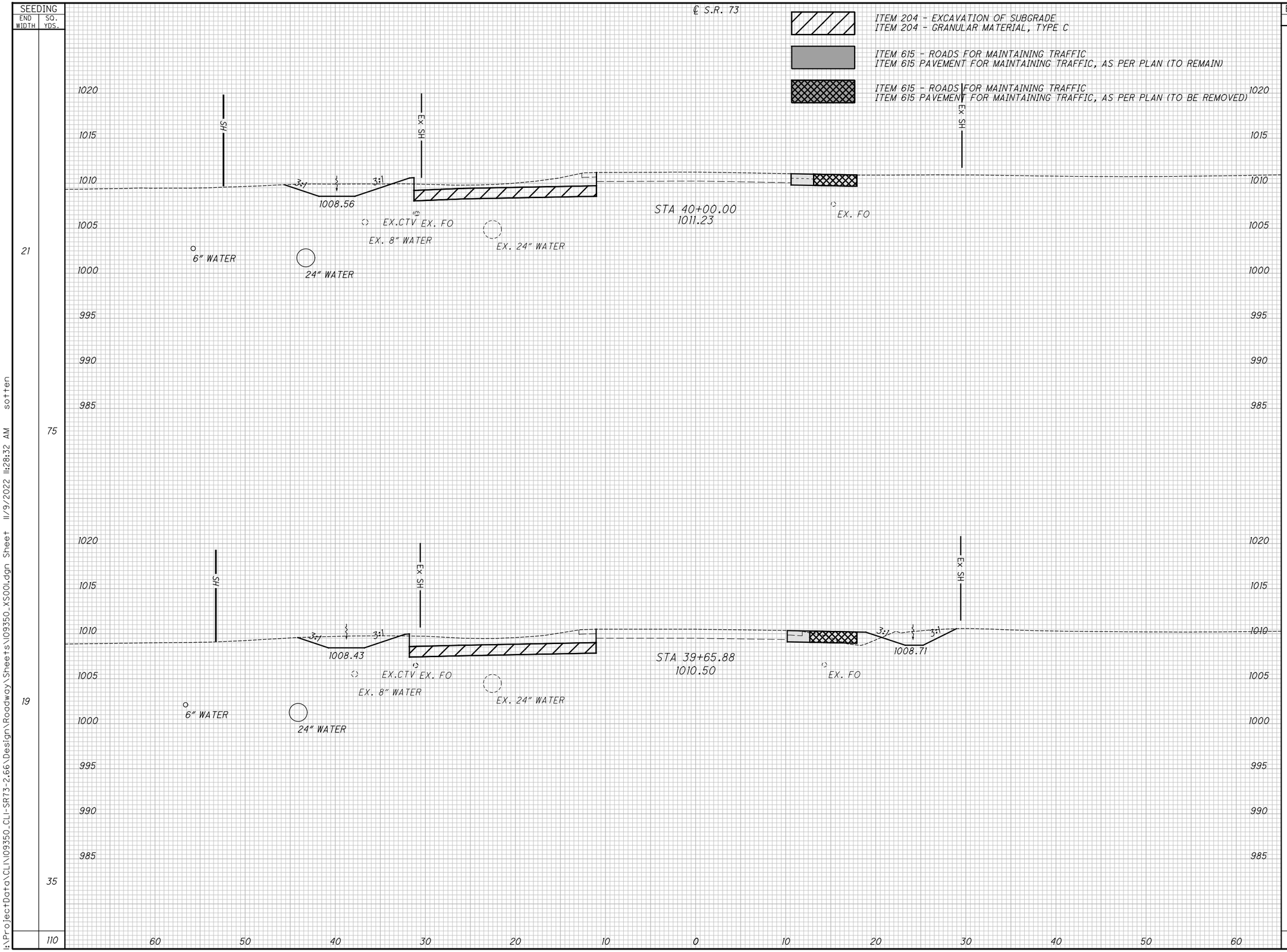
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20	117	39	0	88	0
21	117	56	0	99	0
	234			187	0

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 39+00.00 TO STA. 39+50.00

CLI-73-2.66

I:\ProjectData\CLI\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/9/2022 11:28:31 AM sotten



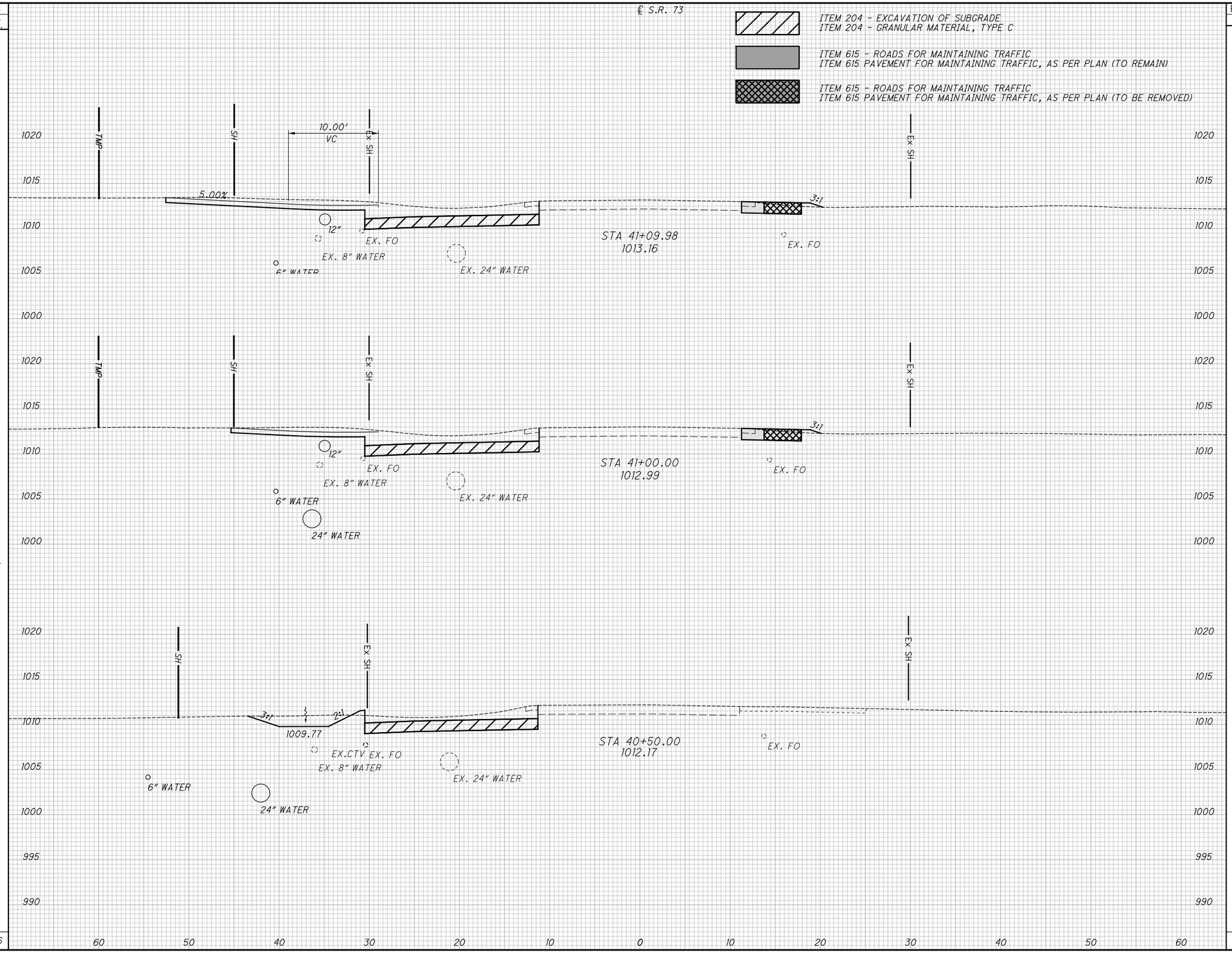
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
21	75	25	1	34	1
19	35	30	0	20	0
110				54	1

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 39+65.88 TO STA. 40+00.00

CLI-73-2.66

I:\ProjectData\CLN\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_XS001.dgn Sheet 11/9/2022 11:28:32 AM sotten



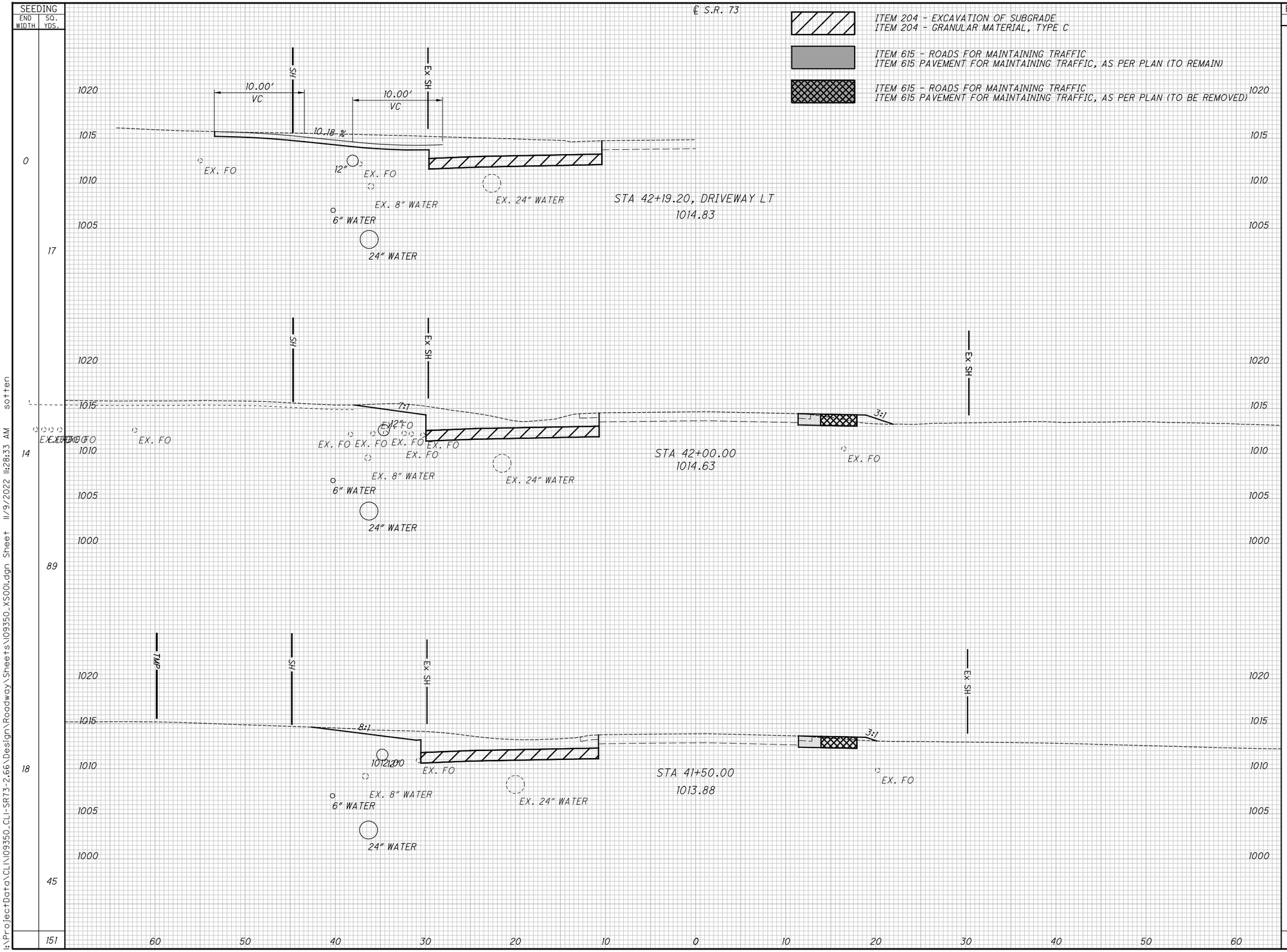
SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0	43	0	14	0
0	55	35	0	53	0
19	111	23	1	44	1
	166			111	1

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 40+50.00 TO STA. 41+00.00

CLI-73-2.66

I:\ProjectData\CLI\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/9/2022 11:28:33 AM sotten



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0					
	17	61	0		
				33	0
14					
	89	32	0		
				62	0
18					
	45	35	0		
				58	0
151				153	0

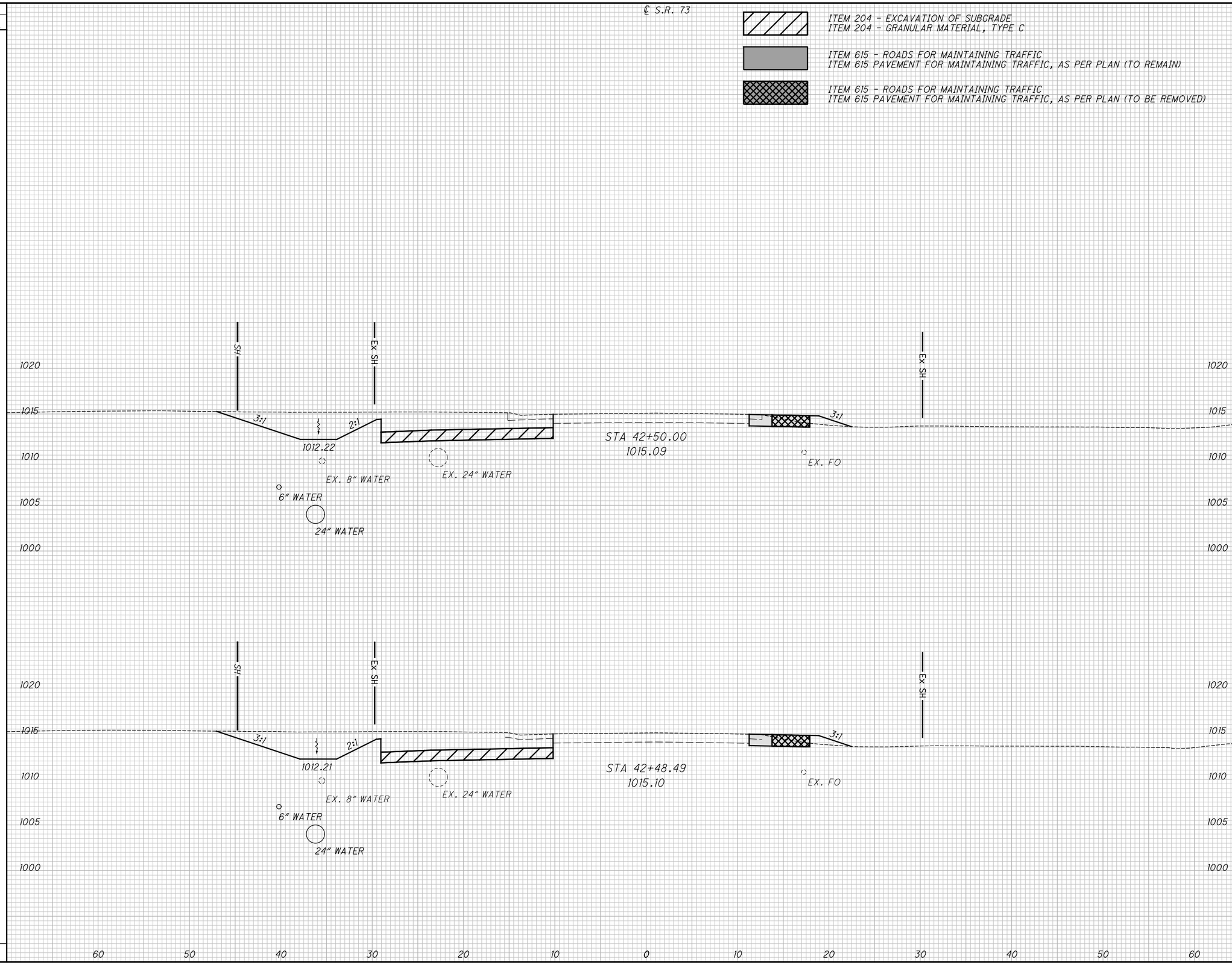
CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 41+50.00 TO STA. 42+19.20

CLI-73-2.66

I:\ProjectData\CLI\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/9/2022 11:28:33 AM sotten

SEEDING END WIDTH	SEEDING SQ. YDS.
25	
5	
25	
43	
48	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
69	0		
		4	0
EX BLDG			
70	0		
		71	0
		75	0

CALCULATED XXX
CHECKED XXX

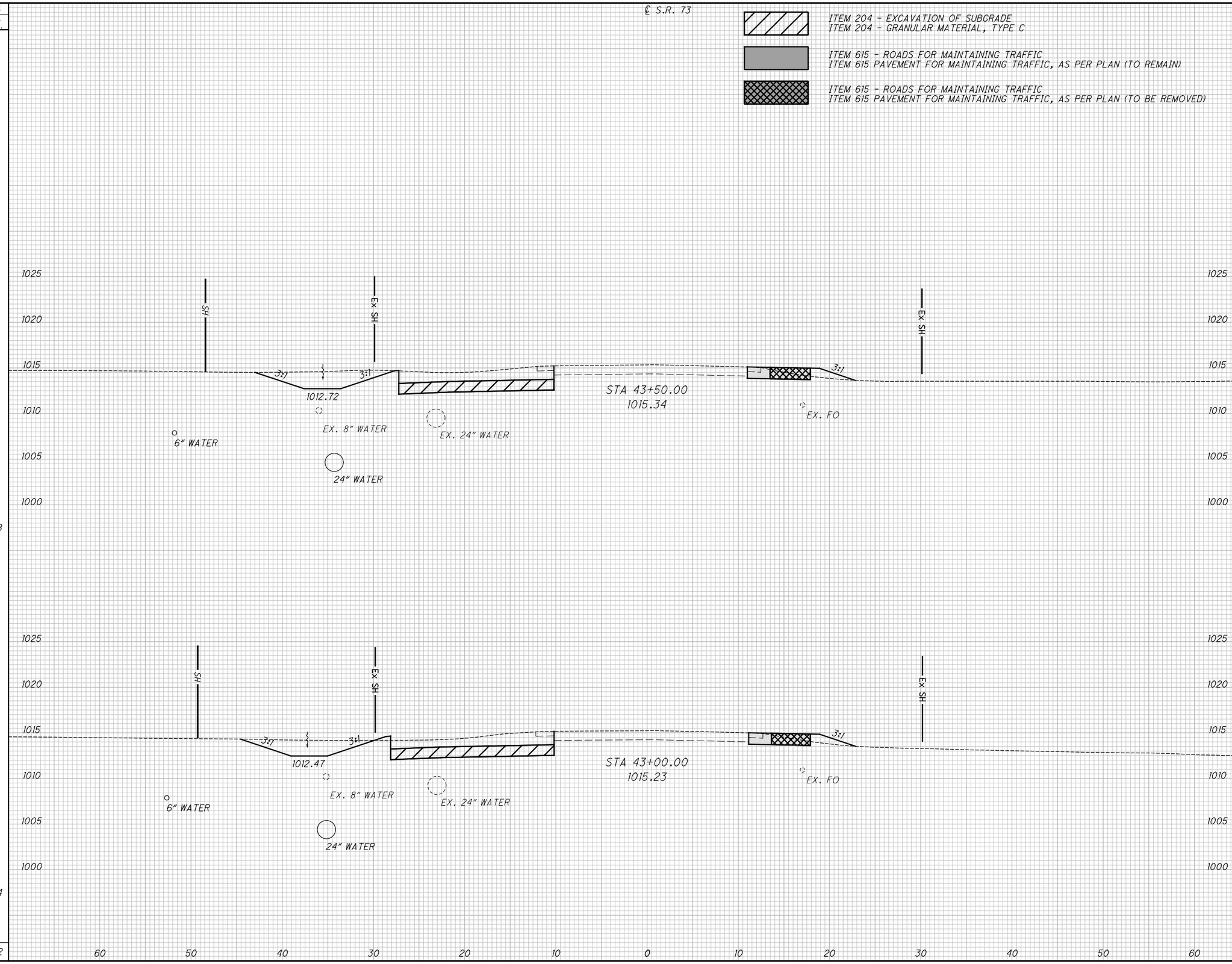
CROSS SECTIONS S.R. 73
STA. 42+48.49 TO STA. 42+50.00

CLI-73-2.66

I:\ProjectData\CLN\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_XS001.dgn Sheet 11/9/2022 11:28:34 AM sotten

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
22	128	39	0	69	0
23	134	36	1	96	0
	262			165	0

CALCULATED XXX
CHECKED XXX



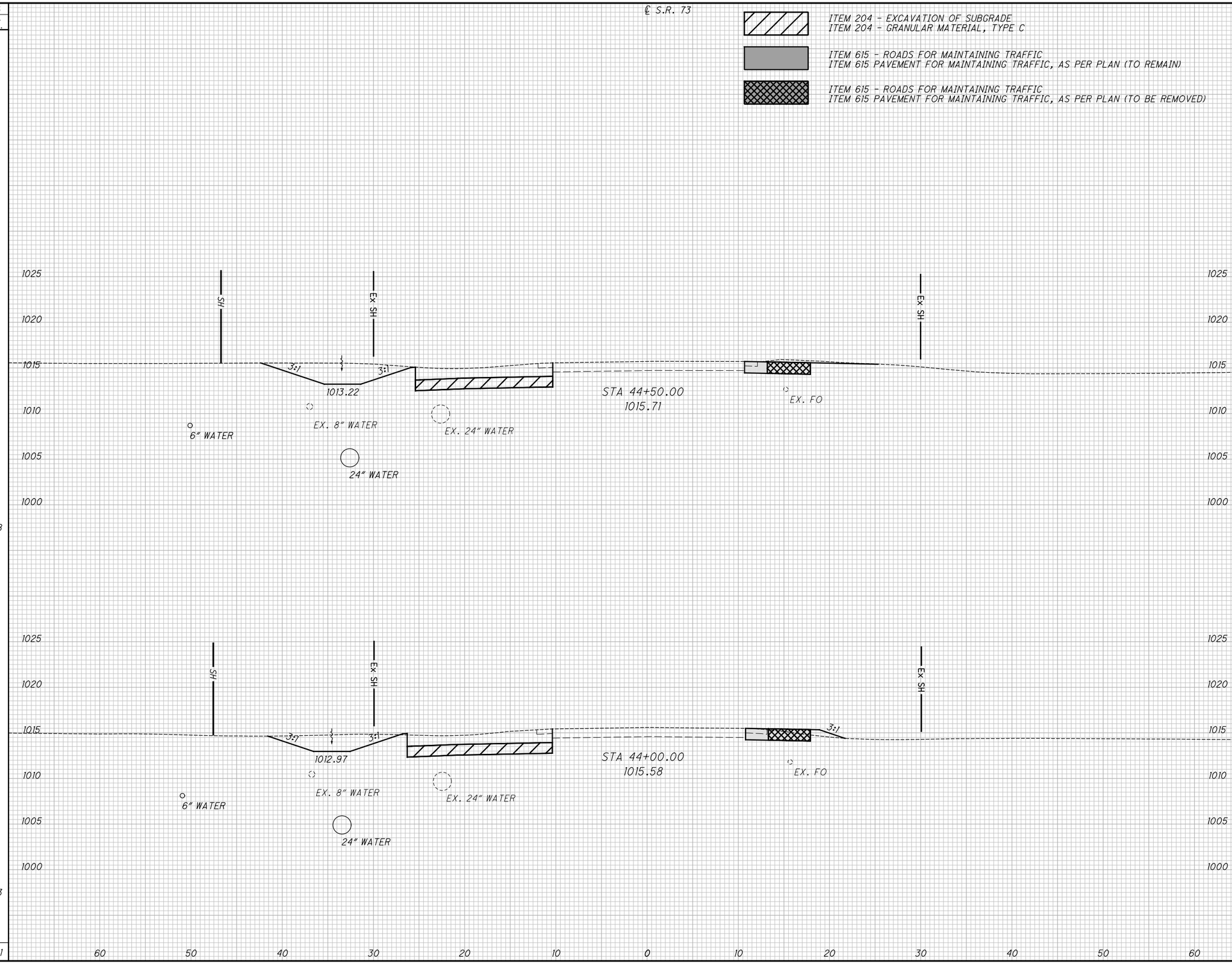
CROSS SECTIONS S.R. 73
STA. 43+00.00 TO STA. 43+50.00

CLI-73-2.66

I:\ProjectData\CLI\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/9/2022 11:28:35 AM sotten

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
23	128	43	0	72	0
22	123	36	0	69	0
	251			141	0

CALCULATED XXX
CHECKED XXX

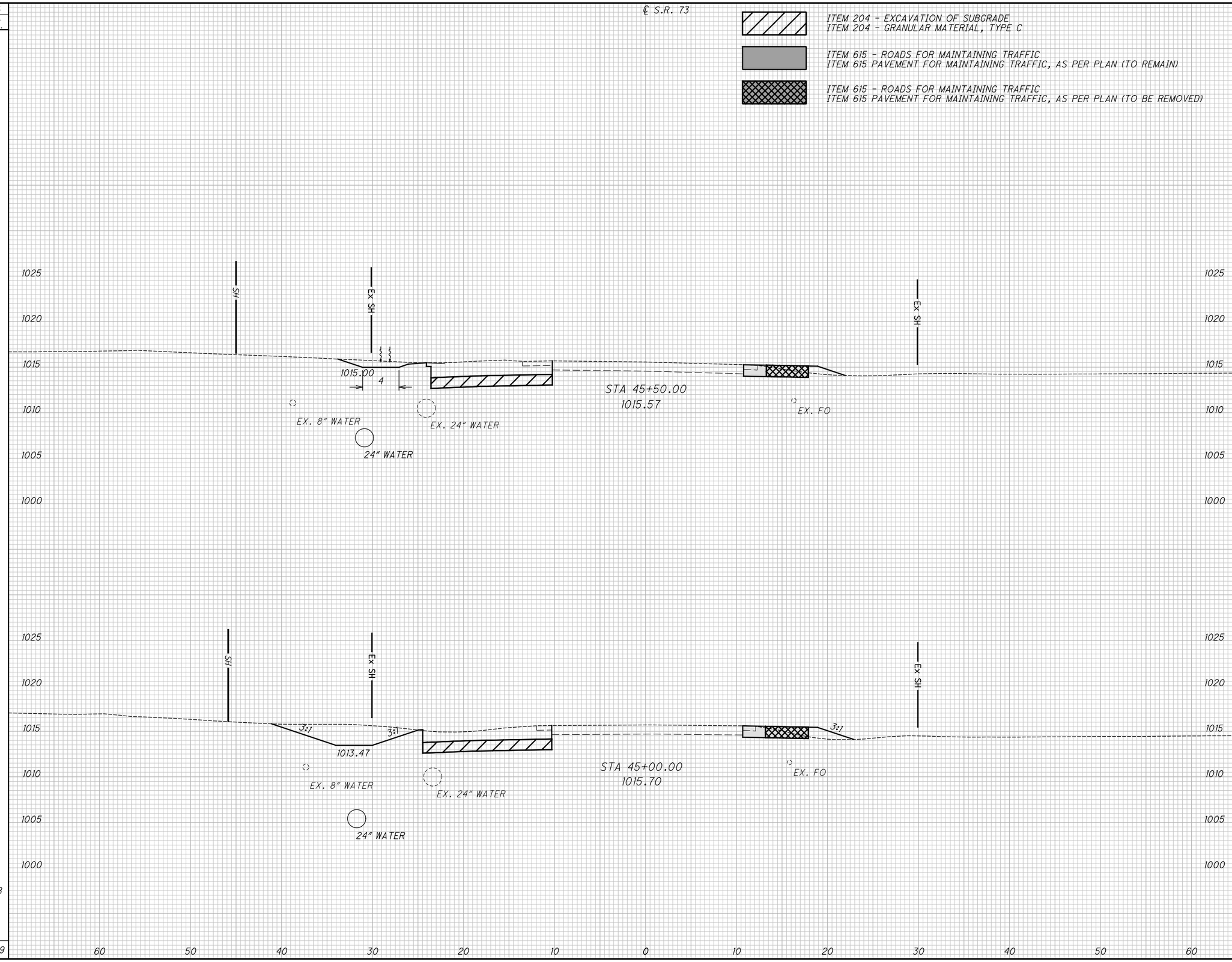


CROSS SECTIONS S.R. 73
STA. 44+00.00 TO STA. 44+50.00

CLI-73-2.66

I:\ProjectData\CLN\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_XS001.dgn Sheet 11/9/2022 11:28:36 AM sotten

SEEDING	
END WIDTH	SQ. YDS.
16	
	111
23	
	128
	239



END AREA		VOLUME	
CUT	FILL	CUT	FILL
26	0		
		61	0
40	0		
		76	0
		137	0

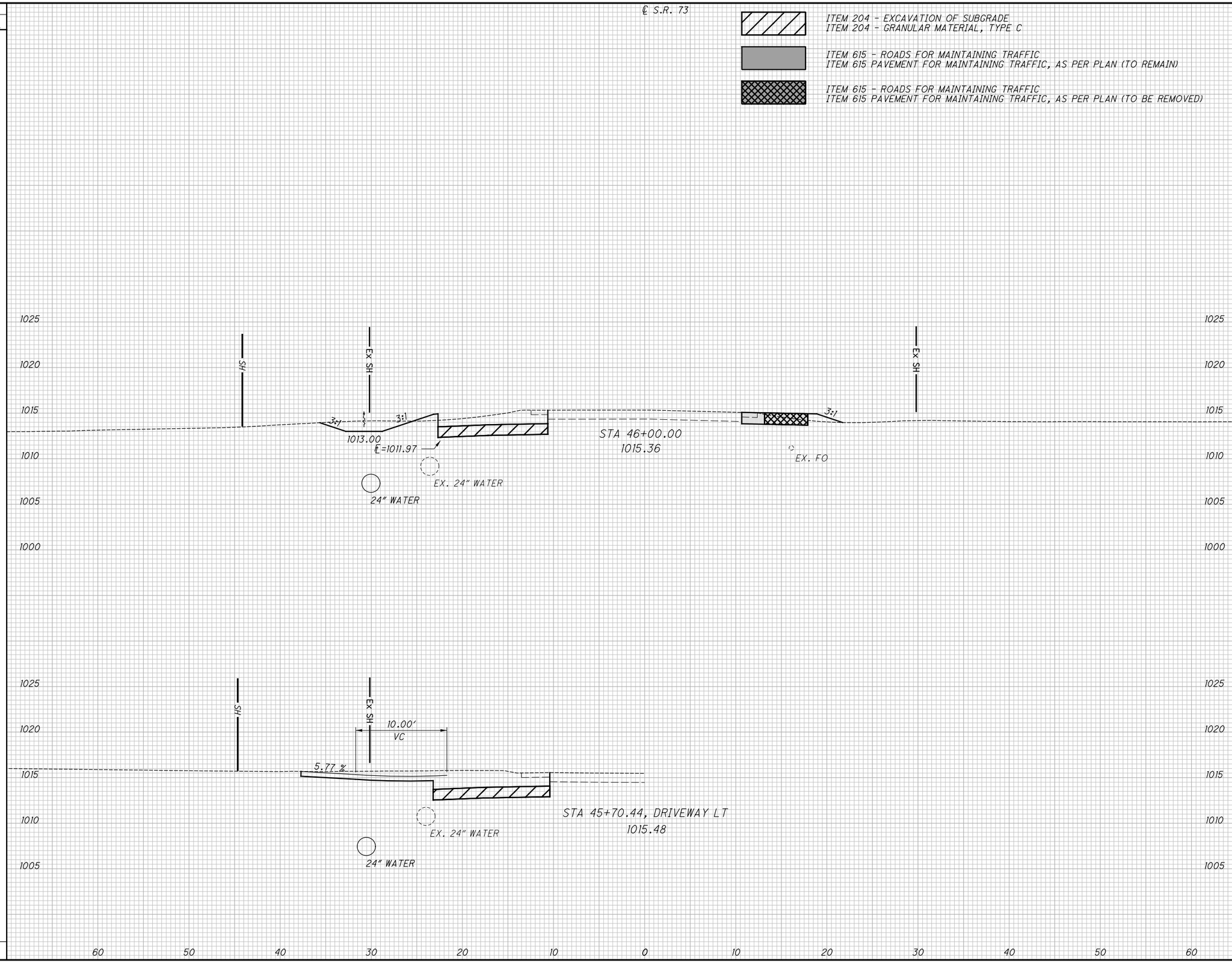
CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 45+00.00 TO STA. 45+50.00

CLI-73-2.66

I:\ProjectData\CLN\09350_CLI-SR73-2.66\Design\Roadway\Sheets\09350_XS001.dgn Sheet 11/9/2022 11:28:36 AM sotten

SEEDING	
END WIDTH	SQ. YDS.
19	33
0	21
54	



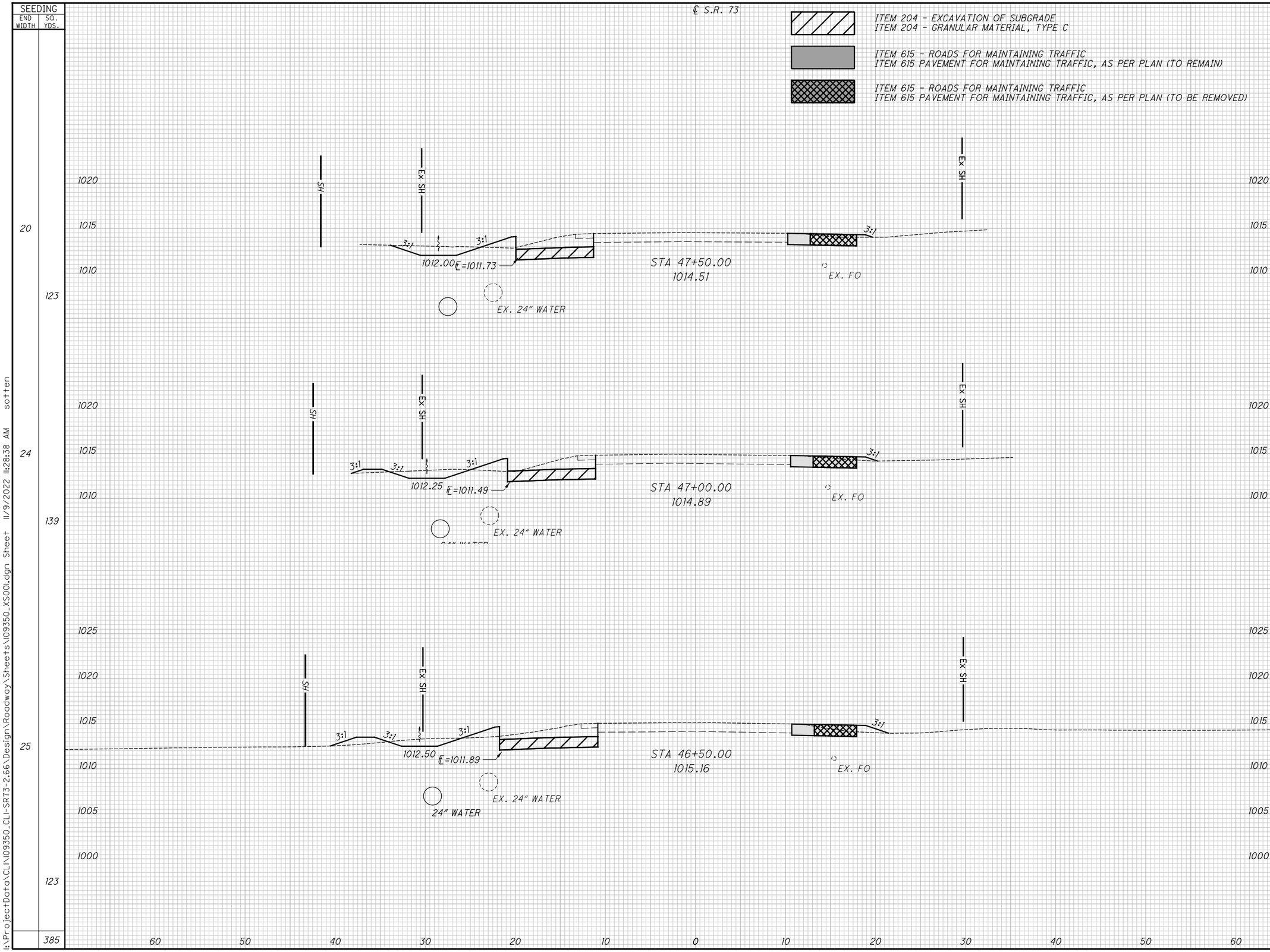
END AREA		VOLUME	
CUT	FILL	CUT	FILL
21	1		
36	0	31	1
		23	0
		54	1

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 45+70.44 TO STA. 46+00.00

CLI-73-2.66

I:\ProjectData\CLI\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/9/2022 11:28:37 AM sotten



CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 46+50.00 TO STA. 47+50.00

CLI-73-2.66

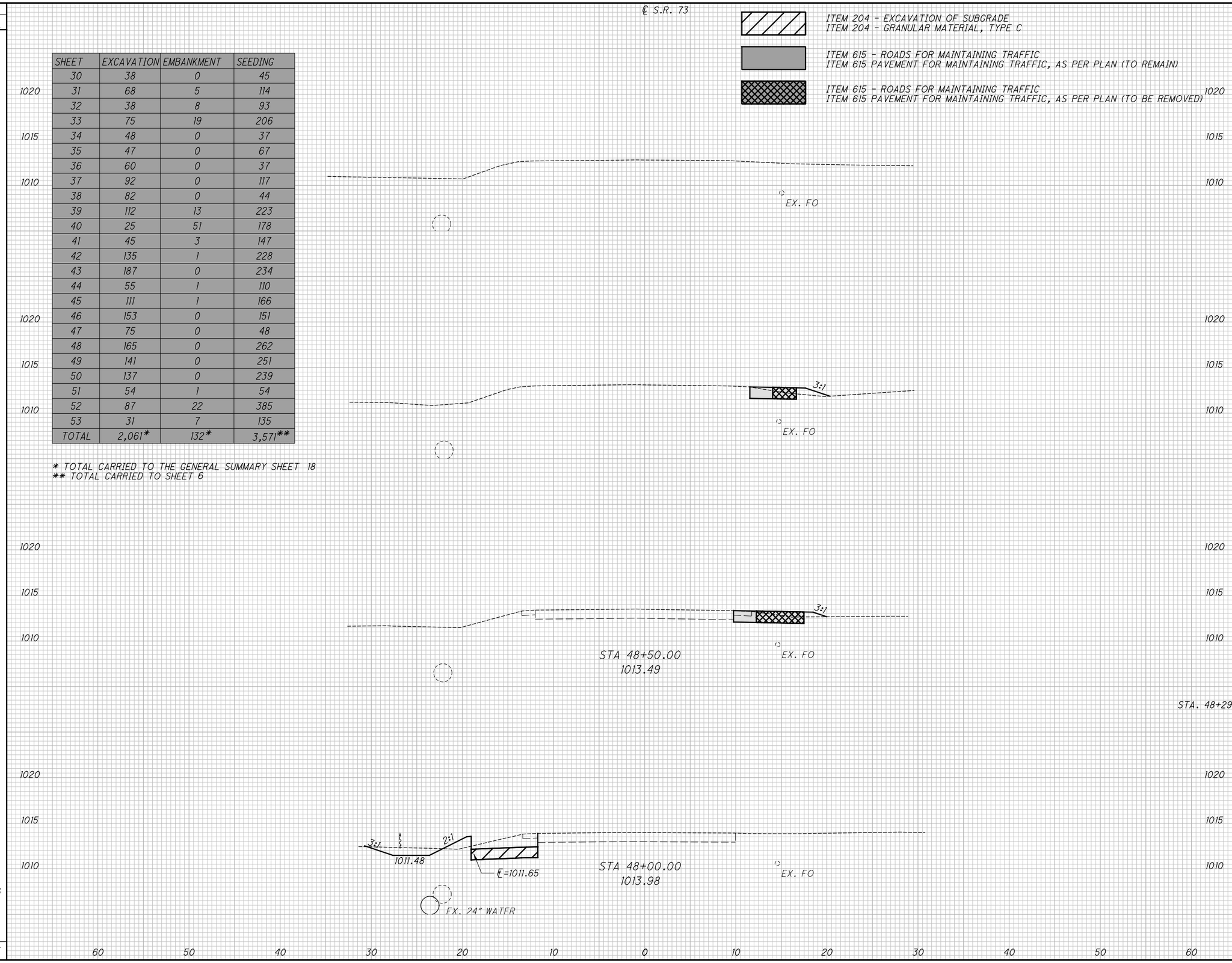
52
96

I:\ProjectData\CLIN\109350_CLI-SR73-2.66\Design\Roadway\Sheets\109350_XS001.dgn Sheet 11/9/2022 11:28:38 AM sotten

SEEDING	
END WIDTH	SQ. YDS.
0	
	29
18	
	106
	135

SHEET	EXCAVATION	EMBANKMENT	SEEDING
30	38	0	45
31	68	5	114
32	38	8	93
33	75	19	206
34	48	0	37
35	47	0	67
36	60	0	37
37	92	0	117
38	82	0	44
39	112	13	223
40	25	51	178
41	45	3	147
42	135	1	228
43	187	0	234
44	55	1	110
45	111	1	166
46	153	0	151
47	75	0	48
48	165	0	262
49	141	0	251
50	137	0	239
51	54	1	54
52	87	22	385
53	31	7	135
TOTAL	2,061*	132*	3,571**

* TOTAL CARRIED TO THE GENERAL SUMMARY SHEET 18
** TOTAL CARRIED TO SHEET 6



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
11	3	6	2
		25	5
		31	7

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S.R. 73
STA. 48+00.00 TO STA. 49+50.00

CLI-73-2.66

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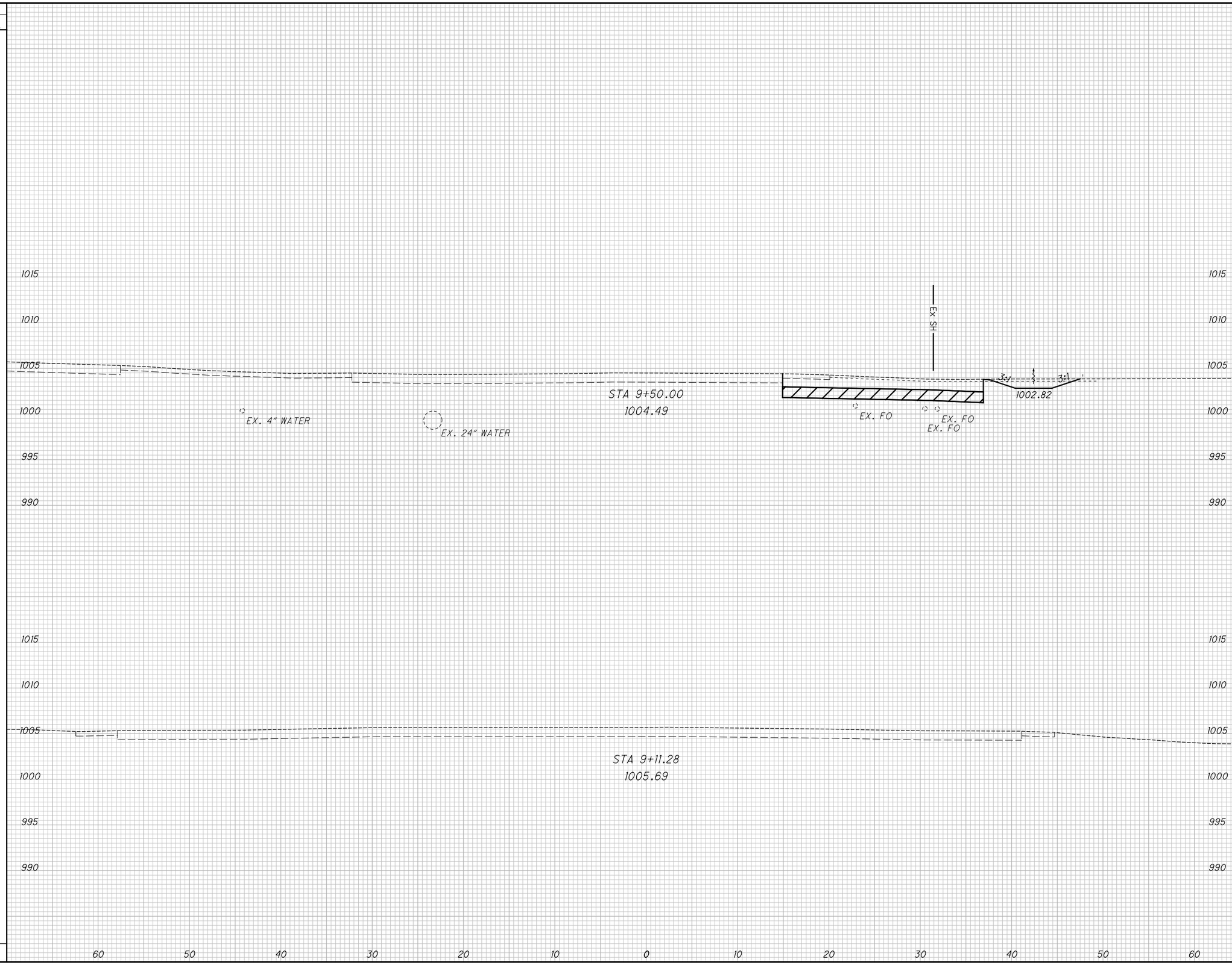
SEEDING	
END WIDTH	SQ. YDS.
17	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
36	0		

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S. R. 380
STA. 9+11.28 TO STA. 9+50.00

CLI-73-2.66

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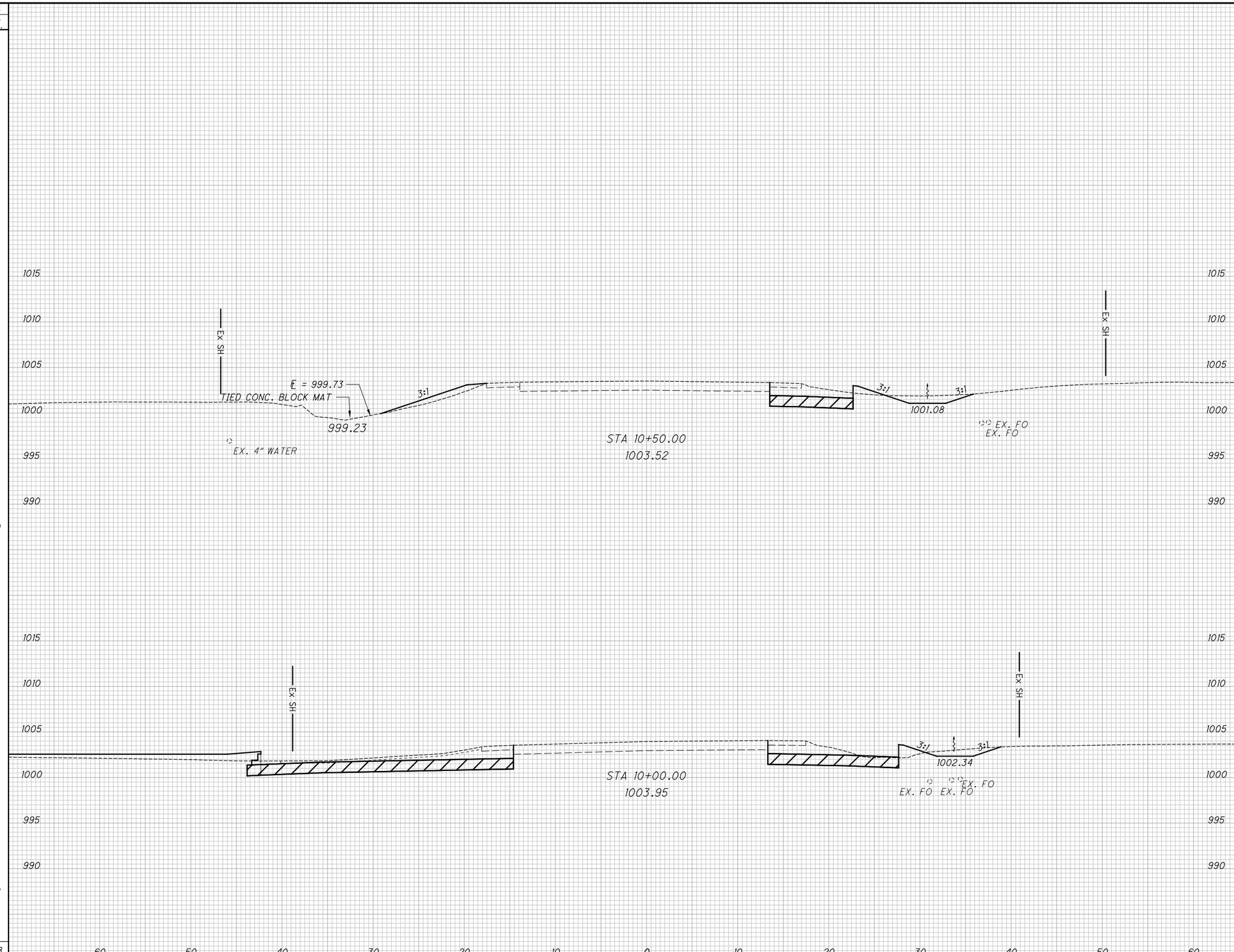

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14		16	2		
	70			28	4
12		15	3		
	78			47	2
	148			75	6

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S. R. 380
STA. 10+00.00 TO STA. 10+50.00

CLI-73-2.66

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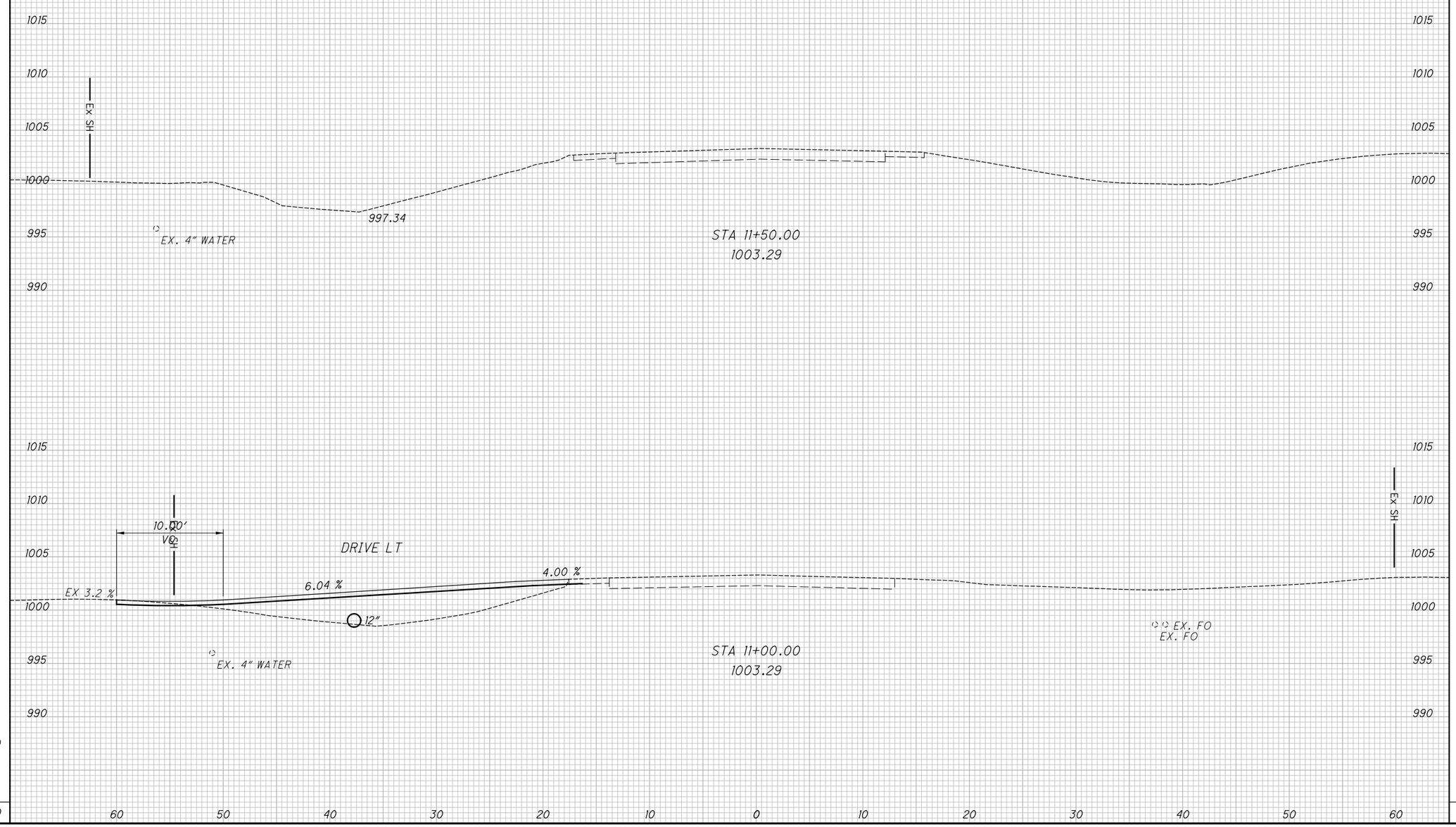
SEEDING	
END WIDTH	SQ. YDS.

SHEET	EXCAVATION	EMBANKMENT	SEEDING
55	75	6	148
56	11	1	30
TOTAL	86	7	178

*TOTAL CARRIED TO THE GENERAL SUMMARY SHEET 18
**TOTAL CARRIED TO SHEET 6



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		11	1
		11	1

CALCULATED XXX
CHECKED XXX

CROSS SECTIONS S. R. 380
STA. 11+00.00 TO STA. 11+50.00

CLI-73-2.66

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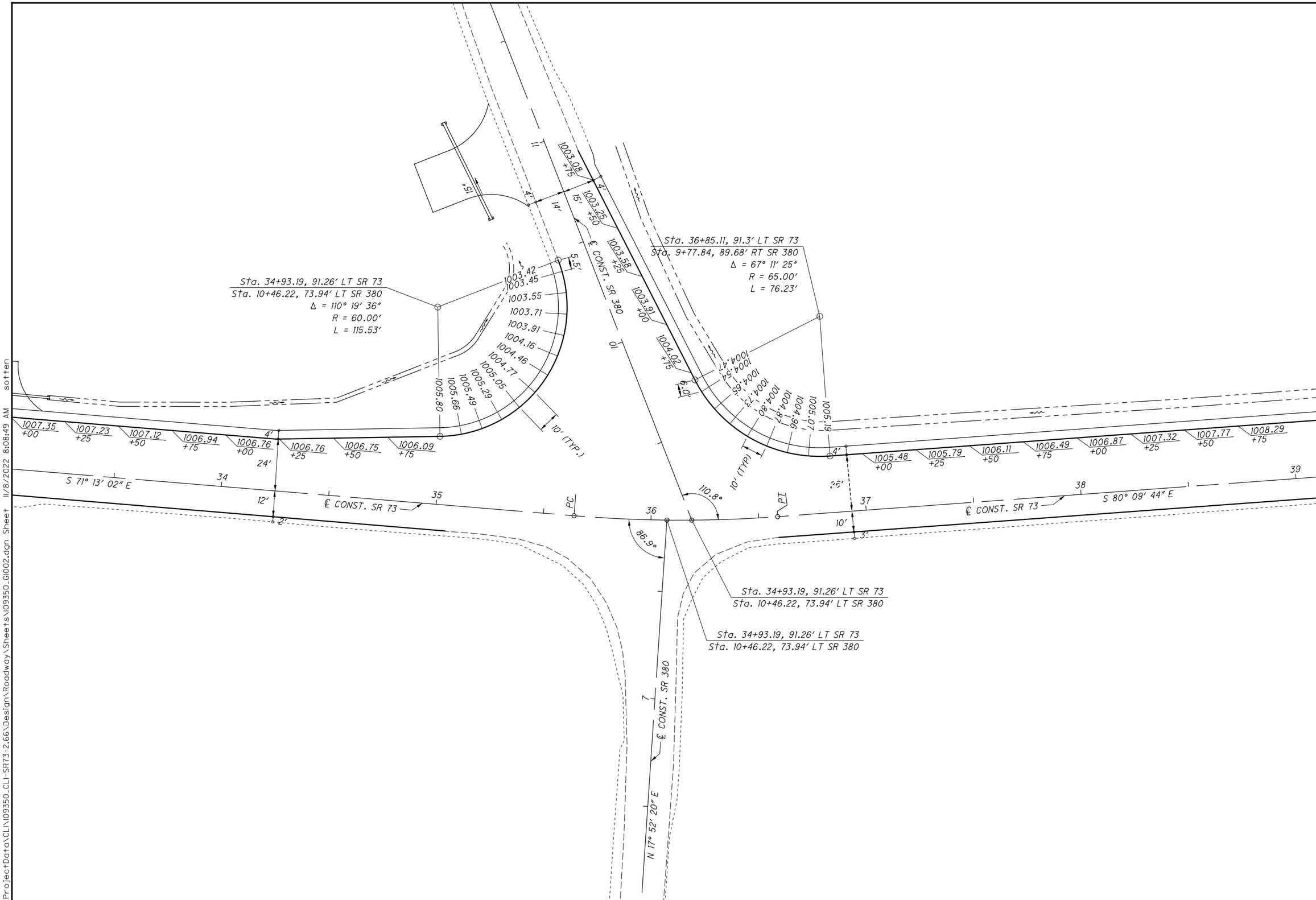

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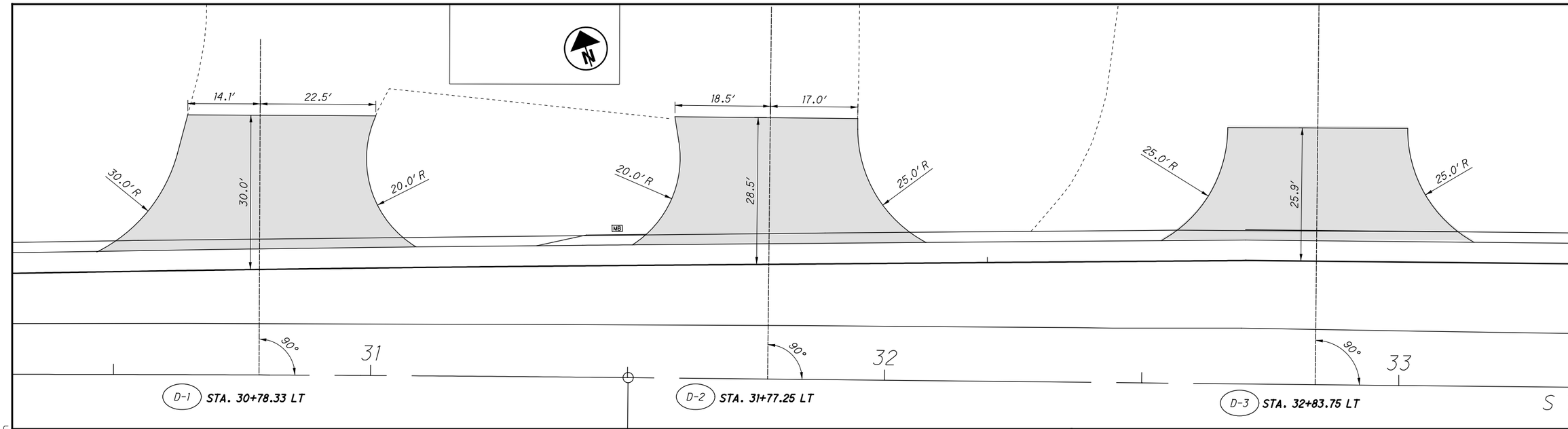
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SRO
CHECKED JDO

INTERSECTION DETAIL
SR 73 & SR 380

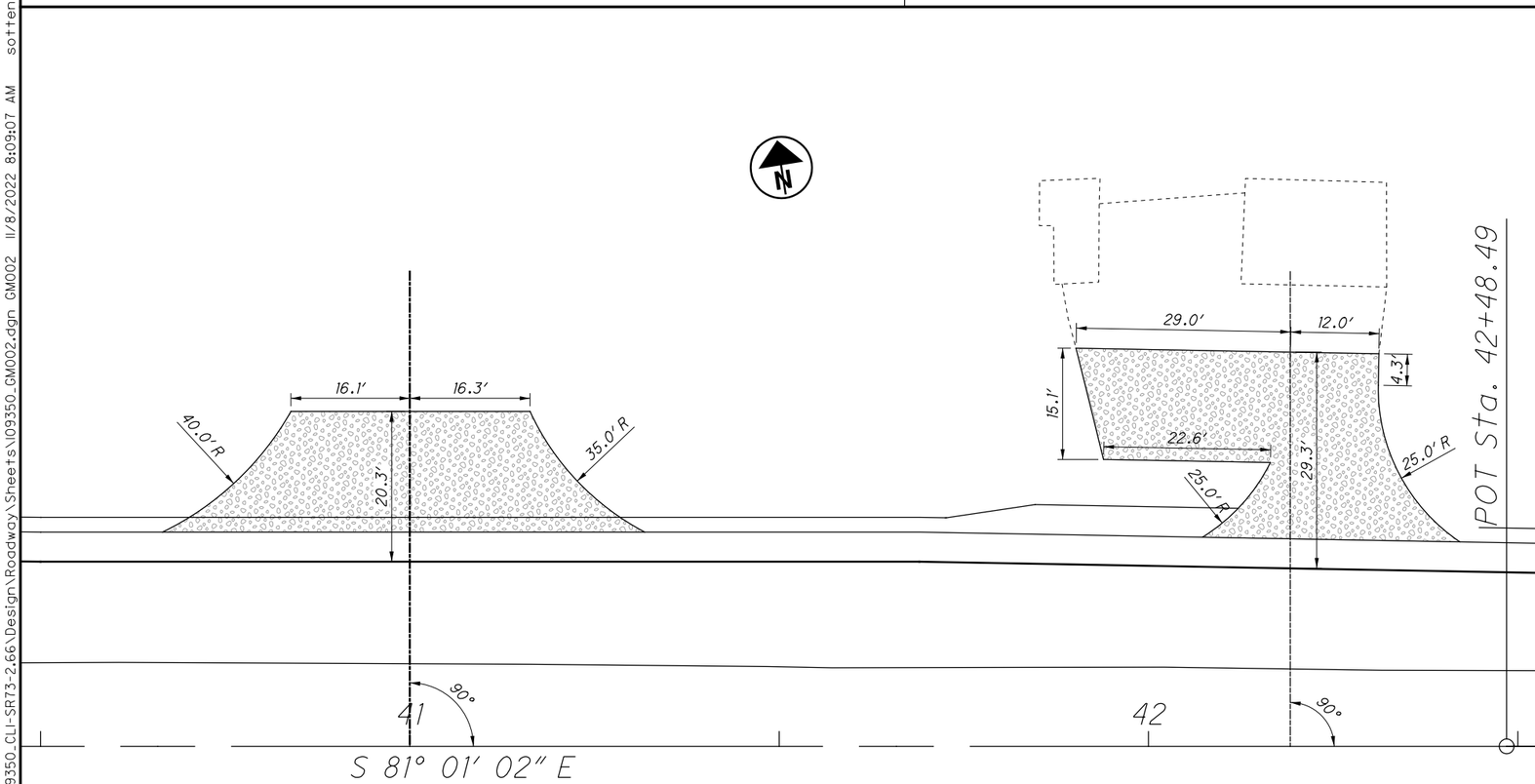
CLI-73-2.66



D-1 STA. 30+78.33 LT

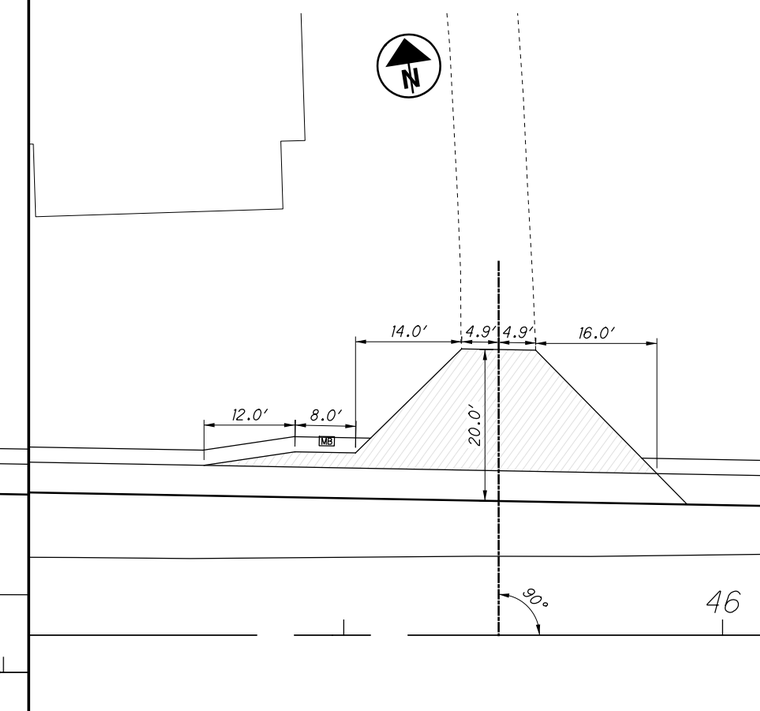
D-2 STA. 31+77.25 LT

D-3 STA. 32+83.75 LT



D-4 STA. 41+00.00 LT

D-5 STA. 42+19.20 LT



D-6 STA. 45+70.44 LT

LEGEND

SEE SHEET 59

HORIZONTAL SCALE IN FEET 0 5 10 20

CALCULATED SRO
CHECKED JDO

DRIVE DETAILS

CLI-73-2.66

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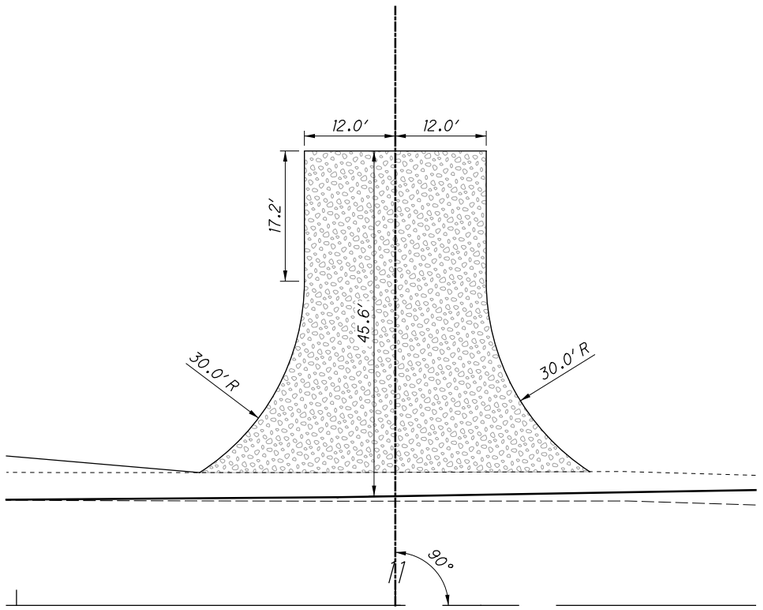

D-7 **STA. 11+00.00 LT**

LEGEND

FIELD DRIVE
ITEM 304 - 6" AGGREGATE BASE

RESIDENTIAL DRIVE
ITEM 441 - 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, 449, (DRIVEWAYS)
ITEM 304 - 6" AGGREGATE BASE

COMMERCIAL DRIVE
ITEM 441 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, 449, (DRIVEWAYS)
ITEM 407 - TACK COAT
ITEM 441 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, 449, (DRIVEWAYS)
ITEM 304 - 8" AGGREGATE BASE

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED SRO
CHECKED JDO

DRIVE DETAILS

CLI-73-2.66

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GENERAL NOTES

ITEM 638 - WATER WORK SPECIAL OR MISC.- CITY OF WILMINGTON. ALL ITEM 638 SPECIAL OR WATER WORK, MISC. DESIGNATED AS WILMINGTON IN PARENTHESIS SHALL BE DONE IN ACCORDANCE WITH THE 2019 CITY OF WILMINGTON WATER DISTRIBUTION SPECIFICATIONS AND SHALL INCLUDE ALL WORK TO FURNISH AND INSTALL THOSE ITEMS, OF THE SIZE SPECIFIED, COMPLETE IN-PLACE. THIS INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, EXCAVATION, BEDDING, PIPE, FITTINGS, BLOCKING AND/OR RESTRAINT, TRACER WIRE, BACKFILL, CHLORINATION AND TESTING. SURFACE RESTORATION SHALL BE PAID SEPARATELY UNDER THE APPLICABLE SPECIFICATIONS. ODOT 638 REQUIREMENTS SHALL APPLY WHERE NOT IN CONFLICT WITH THOSE OF THE CITY OF WILMINGTON WATER DISTRIBUTION SPECIFICATIONS EXCEPT THAT ODOT PARAGRAPH 638.08 BACKFILLIING SHALL APPLY FOR THE TRENCH BACKFILL FROM A POINT 1-FOOT ABOVE THE TOP OF THE PIPE TO THE SURFACE WHERE OUTSIDE OF PAVEMENT AND TO THE SUBBASE WHEN UNDER PAVEMENT. BACKFILL FROM THE TOP OF THE 6-INCHES OF SAND BEDDING TO A POINT 1-FOOT ABOVE THE PIPE SHALL BE #8 OR #9 STONE AND NOT #57 STONE PER THE WILMINGTON WATER DISTRIBUTION SPECIFICATIONS.

ITEM 638 - WATER WORK SPECIAL - WESTERN WATER. ALL 638 SPECIAL ITEMS DESIGNATED AS WESTERN WATER IN PARENTHESIS SHALL BE DONE IN ACCORDANCE WITH THE WESTERN WATER COMPANY MARCH 1, 2021 CONSTRUCTION SPECIFICATIONS FOR WATER LINE FACILITIES AND SHALL INCLUDE ALL WORK TO FURNISH AND INSTALL THOSE ITEMS, OF THE SIZE SPECIFIED, COMPLETE IN-PLACE. THIS INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, EXCAVATION, BEDDING, PIPE, FITTINGS, BLOCKING AND/OR RESTRAINT, TRACER WIRE, BACKFILL, CHLORINATION AND TESTING. SURFACE RESTORATION SHALL BE PAID SEPARATELY UNDER THE APPLICABLE SPECIFICATIONS. NOTE THAT WESTERN WATER REQUIRES THE USE OF DUCTILE IRON FITTINGS. ODOT 638 REQUIREMENTS SHALL APPLY WHERE NOT IN CONFLICT WITH THOSE OF THE WESTERN WATER COMPANY CONSTRUCTION SPECIFICATIONS FOR WATER LINE FACILITIES EXCEPT THAT ODOT PARAGRAPH 638.08 BACKFILLIING SHALL APPLY FOR THE TRENCH BACKFILL (SEE WATER LINE EMBEDMENT DETAIL FROM WESTERN WATER ON SHEET 62).

ITEM 638 - SPECIAL - INSTALL 3/4" POLYETHYLENE WATER SERVICE CONNECTION (WESTERN WATER). THIS ITEM SHALL INCLUDE FURNISHING AND ALL WORK NECESSARY TO INSTALL THE SERVICE LINE FROM THE PROPOSED MAIN TO THE SERVICE SIDE OF THE METER. THIS SHALL INCLUDE EXCAVATION, TUBING, CORP STOP, CURB STOP, COUPLINGS, METER, BEDDING AND BACKFILL. SURFACE RESTORATION SHALL BE PAID SEPARATELY UNDER THE APPLICABLE SPECIFICATIONS. WATER SERVICE CONNECTIONS SHALL BE PUSHED UNDER THE ROADWAY. ODOT 638 REQUIREMENTS SHALL APPLY WHERE NOT IN CONFLICT WITH THOSE OF THE WESTERN WATER COMPANY CONSTRUCTION SPECIFICATIONS FOR WATER LINE FACILITIES.

ITEM 638 STEEL ENCASEMENT, BORED OR JACKED. THESE ITEMS SHALL INCLUDE ALL WORK REQUIRED TO PROVIDE A CARRIER PIPE INSTALLED INSIDE A CASING PIPE WITH THE APPROPRIATE WILMINGTON OR WESTERN WATER SPECIFICATIONS. THIS INCLUDES FURNISHING AND INSTALLING THE CASING PIE, CARRIER PIPE, SPACERS, BULKHEADS AND PIPE FILL OR GROUTING AS REQUIRED.

24-INCH BUTTERFLY VALVE (WILMINGTON). THE 24-INCH BUTTERFLY VALVES FOR THE CITY OF WILMINGTON SHALL BE PRATT OR DEZURIK.

AIR RELEASE VALVE (WILMINGTON). THE 2-INCH AIR RELEASE VALVE FOR WILMINGTON SHALL BE CRISPIN MODEL UL20.

WESTERN WATER GENERAL NOTES

A. GENERAL NOTES AS MODIFIED BY WESTERN WATER CO AND SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS SHALL SUPERCEDE THE REQUIREMENTS OF THIS SPECIFICATION WHEREVER A CONFLICT MAY OCCUR.

B. STANDARD GENERAL NOTES:

1. WATER LINE MATERIALS AND INSTALLATION METHODS SHALL CONFORM TO THE WESTERN WATER CO CONSTRUCTION SPECIFICATIONS FOR WATER LINE FACILITIES, LATEST REVISION. CONTRACTOR SHALL OBTAIN A COPY AND HAVE IN HIS POSSESSION DURING CONSTRUCTION. COORDINATE WORK WITH WESTERN WATER CO (513) 899-3211.

2. WATER MAINS SHALL BECOME THE OWNERSHIP OF WESTERN WATER CO UPON FINAL ACCEPTANCE.

3. WATER LINE CONSTRUCTION

A. FOR PIPE 6-INCH AND LARGER: USE PVC SDR 21 CLASS 200 PIPE AND MECHANICAL JOINT FITTINGS.

B. FOR 2-INCH PIPE: USE PVC SDR 21 CLASS 200 PIPE WITH MECHANICAL JOINT OR PUSH-ON GASKET FITTINGS.

C. MAINTAIN A MINIMUM 10-FOOT HORIZONTAL AND 1.5-FOOT VERTICAL SEPARATION DISTANCE BETWEEN WATER LINES AND SANITARY AND STORM SEWERS.

D. WATER LINES SHALL BE NSF 61 APPROVED.

E. PROVIDE CONCRETE THRUST BLOCKING FOR ALL FITTINGS, VALVES AND ANCHOR TEES.

F. MINIMUM DEPTH OF COVER SHALL BE 60 INCHES TO THE TOP OF PIPE, EXCEPT WHERE OTHERWISE REQUIRED OR APPROVED BY WESTERN WATER CO.

G. PLACE A 5-FOOT STEEL FENCE POST OR 2"x4" WOOD POST AT CURB-STOPS, WATER MAIN VALVES AND THE ENDS OF LINES.

H. ALL MECHANICAL JOINT FITTINGS REQUIRE RESTRAINTS, PLUS 40 FEET UP AND DOWN STREAM OF SAID FITTINGS.

I. TRACER WIRE FOR PURPOSE OF LOCATING TO BE INSTALLED (NOTE: TRACER TAPE NOT ACCEPTABLE).

4. WATER SERVICE CONSTRUCTION

A. FOR METERS 1-INCH AND SMALLER, USE 1-INCH IRON PIPE SIZE (IPS) POLYETHYLENE SDR 7 CLASS 200 PIPE MANUFACTURED BY PHILLIPS DRISCO PIPE CO.

B. CONNECTIONS TO PVC PIPE SHALL BE POWER SEAL SADDLE TYPE 3401 OR WESTERN WATER CO APPROVED EQUAL.

C. PROVIDE A CURB STOP AND BOX AT THE END OF THE SERVICE LINE. LOCATE END OF SERVICE LINE AT ROW, BUT A MINIMUM OF FIVE FEET FROM THE "CURB SIDE" EDGE OF SIDEWALK. NO CURB STOPS OR BOXES IN ROADWAY OR SIDEWALKS.

D. DEPTH OF COVER SHALL BE 34 INCHES.

E. PLACE A 5-FOOT STEEL FENCE POSTS OR 2"x4" WOOD POST AT THE CURB-STOP. THE ENDS OF ALL 1" POLY SERVICE LINE PIGTAILS TO EXTEND ABOVE GRADE 3 FEET.

F. CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIAL BACKFILL MATERIAL FOR ALL LINES, INCLUDING THOSE INSTALLED BY WESTERN WATER CO, WHERE REQUIRED BY THE COUNTY OR CITY ENGINEER.

5. HYDRANTS

A. HYDRANTS SHALL CONFORM TO AWWA C502 FOR DRY BARREL HYDRANTS.

B. MAIN VALVE: 5.25-INCH COMPRESSION

C. NOZZLES

I. THREADING: CONFORM TO NFPA NATIONAL STANDARD FIRE HOSE THREADS.

II. ONE 4.5-INCH STEAMER

III. TWO 2.5-INCH HOSE

D. INLET CONNECTION: 6-INCH MECHANICAL JOINT

E. OPERATING NUT: 1.5-INCH PENTAGON, TURN COUNTERCLOCKWISE TO OPEN.

F. EXTENSIONS AND PARTS: SHALL BE MANUFACTURED BY THE ORIGINAL EQUIPMENT MANUFACTURER.

G. APPROVED MANUFACTURERS: M&H, MUELLER OR AMERICAN DARLING.

H. PAINTING: REPAINT ALL HYDRANTS AFTER INSTALLATION.WHITE BARREL, RED CAPS AND DOME.

6. MISCELLANEOUS

A. OBTAIN WRITTEN APPROVAL OF MATERIAL AND MANUFACTURERS LIST FROM WESTERN WATER CO PRIOR TO BEGINNING CONSTRUCTION.

B. PROVIDE CASING PIPE FOR ALL COUNTY ROAD CROSSINGS. CASING PIPE SHALL BE STEEL PIPE WITH 0.375-INCH WALL THICKNESS OR SDR 21 CLASS 200. CASINGS LARGER THAN 12-INCH MAY BE AWWA C905 DR 25.

C. EASEMENTS SHALL BE PROVIDED TO WESTERN WATER BEFORE PERMISSION WILL BE GIVEN TO MAKE NEW SERVICE LINE CONNECTIONS.

D. CONNECTIONS TO EXISTING WATER LINES WILL BE MADE BY WESTERN WATER CO AT THE CONTRACTOR'S EXPENSE, OR PERFORMED BY CONTRACTORS WHO ARE APPROVED FOR MAKING CONNECTIONS.

E. BOOSTER PUMPS ARE NOT ALLOWED ON INDIVIDUAL SERVICES.

F. DEAD END MAINS 6" OR LARGER REQUIRE A 6" HYDRANT AND WATCH VALVE.

G. DEAD END MAINS 6" OR LESS REQUIRE A 2" FLUSH HYDRANT AND WATCH VALVE.

CALCULATED | CHECKED

WATER WORK - NOTES

CLI-73-2.66

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24" RAW WATER MAIN – CITY OF WILMINGTON					
℄ STA.	DESCRIPTION	NORTHING	EASTING	NORTHING	EASTING
1+00.00	CONNECT TO EX. 24" W.M.	544131.09	1562435.61		
1+05.00	24" VALVE WITH STD. VALVE BOX	544129.58	1562440.38		
1+65.66	VERT. BEND BY DEFL.	544111.27	1562498.21		
2+52.15	VERT. BEND BY DEFL.	544085.17	1562580.67		
3+50.00	AIR RELEASE	544055.64	1562673.95		
3+69.19	24" – HORIZ. BEND BY DEFL.	544049.85	1562692.25		
4+76.31	VERT. BEND BY DEFL.	544015.82	1562793.82		
5+27.58	VERT. BEND BY DEFL.	543999.53	1562842.43		
5+88.58	24" – HORIZ. BEND BY DEFL.	543980.15	1562900.28		
6+21.24	24" VALVE WITH STD. VALVE BOX	543972.41	1562932.00		
7+72.16	24" VALVE WITH STD. VALVE BOX	543936.61	1563078.61		
7+76.16	24" – HORIZ. BEND BY DEFL.	543935.66	1563082.50		
10+00.78	VERT. BEND BY DEFL.	543895.11	1563303.43		
11+50.00	24" – BEGIN HORIZ. DIRECTIONAL DRILLING	543868.18	1563450.20		
11+70.52	24" – 22 1/2° HORIZ. BEND (21°10'17")	543864.48	1563470.39		
11+84.61	24" – 22 1/2° HORIZ. BEND (22°30'00")	543857.10	1563482.39		
13+79.54	24" – HORIZ. BEND BY DEFL.	543826.48	1563674.90		
13+89.54	24" – HORIZ. BEND BY DEFL.	543824.27	1563684.65		
14+00.00	24" – END HORIZ. DIRECTIONAL DRILLING	543822.46	1563694.95		
16+14.79	VERT. BEND BY DEFL.	543785.31	1563906.51		
16+60.00	VERT. BEND BY DEFL.	543777.49	1563951.04		
16+65.00	AIR RELEASE	543776.63	1563955.96		
16+83.76	VERT. BEND BY DEFL.	543773.39	1563974.44		
19+04.53	24" – 22 1/2° HORIZ. BEND (22°30'00")	543735.20	1564191.88		
19+14.86	24" VALVE WITH STD. VALVE BOX	543729.66	1564200.60		
19+19.86	CONNECT TO EX. 24" W.M. WITH 24" – 22 1/2° HORIZ. BEND (23°26'28")	543726.98	1564204.82		

6" WATER MAIN – WESTERN WATER CO.					
℄ STA.	DESCRIPTION	NORTHING	EASTING	NORTHING	EASTING
N/A	CONNECT TO EX. W.M. WITH 6" VALVE WITH STD. VALVE BOX	544036.18	1562961.77		
1+00.00	6" x 6" ANCH. TEE AND 6" VALVE WITH STD. BOX	544033.26	1562962.46		
N/A	CONNECT TO EX. W.M. WITH 6" VALVE WITH STD. VALVE BOX	544030.34	1562963.15		
1+05.26	6" – 45° VERT. BEND, VERT. BEND BY DEFL.	544034.46	1562967.57		
1+08.00	6" – 11 1/4° HORIZ. BEND (5°59'39"), ROTATE TO GRADE	544035.09	1562970.25		
1+78.01	6" VALVE WITH H.D. VALVE BOX	544043.93	1563039.69		
1+92.61	6" – 90° HORIZ. BEND (90°00'00"), 6" – 11 1/4° HORIZ. BEND (11°38'20"), ROTATE TO GRADE	544045.77	1563054.17		
2+96.60	6" – 45° HORIZ. BEND (45°00'00"), 6" – 11 1/4° HORIZ. BEND (15°42'29"), ROTATE TO GRADE	543947.38	1563087.85		
3+86.10	VERT. BEND BY DEFL.	543931.23	1563175.88		
6+24.57	VERT. BEND BY DEFL.	543888.19	1563410.43		
6+90.23	6" – 45° HORIZ. BEND (43°40'17"), ROTATE TO GRADE	543876.34	1563475.02		
7+05.00	6" – BEGIN HORIZ. DIRECTIONAL DRILLING	543864.38	1563483.68		
7+09.79	6" – 45° HORIZ. BEND (45°00'00")	543860.50	1563486.49		
7+64.69	VERT. BEND BY DEFL.	543851.87	1563540.71		
8+93.62	CORP. STOP	543831.62	1563668.04		
8+95.62	CORP. STOP	543831.30	1563670.02		
9+01.20	6" – 45° HORIZ. BEND (45°00'00"), ROTATE TO GRADE	543830.43	1563675.53		
9+10.00	6" – END HORIZ. DIRECTIONAL DRILLING	543835.59	1563682.65		
9+19.32	6" – 45° HORIZ. BEND (45°53'22"), ROTATE TO GRADE	543841.06	1563690.20		
10+14.49	VERT. BEND BY DEFL.	543824.60	1563783.93		
11+22.54	6" – 45° HORIZ. BEND (45°00'00"), ROTATE TO GRADE	543805.92	1563890.36		
11+36.68	6" VALVE WITH STD. VALVE BOX	543794.35	1563898.47		
11+41.68	CONNECT TO EX. 6" W.M. WITH 6" – 45° HORIZ. BEND (47°37'40")	543790.25	1563901.34		

ESTIMATE OF QUANTITIES (CITY OF WILMINGTON, 02/SAF/OT/WIL)

SHEET NUM.				PART.		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
64	65	66	67	01/SAF/OT	02/SAF/OT/WIL					
450	453	450	469		1823	202	202E35100	1823	FT	PIPE REMOVED, 24" AND UNDER
154	0	0	31		185	638	638E98600	185	FT	WATER WORK, MISC.: 24-INCH POLYVINYL CHLORIDE PIPE AND FITTINGS (IN PAVEMENT) (WILMINGTON)
296	320	200	439		1256	638	638E98600	1256	FT	WATER WORK, MISC.: 24-INCH POLYVINYL CHLORIDE PIPE AND FITTINGS (OUTSIDE PAVEMENT) (WILMINGTON)
0	0	250	0		250	638	638E98600	250	FT	WATER WORK, MISC.: 24-INCH POLYVINYL CHLORIDE PIPE AND FITTINGS (HDD)(WILMINGTON)
1	2	0	1		4	638	638E20682	4	EACH	SPECIAL - 24-INCH BUTTERFLY VALVE WITH VALVE BOX (WILMINGTON)
1	0	0	1		2	638	638E20746	2	EACH	SPECIAL - 2" AIR RELEASE VALVE WITH VALVE BOX (WILMINGTON)
0	130	0	0		130	638	638E20476	130	FT	SPECIAL - 42" STEEL PIPE ENCASEMENT, BORED OR JACKED (WILMINGTON)

ESTIMATE OF QUANTITIES (WESTERN WATER, 01/SAF/OT)

SHEET NUM.		PART.		ITEM	ITEM EXT.	TOTAL QUANTITY	UNIT	DESCRIPTION
68	69	01/SAF/OT	02/SAF/OT/WIL					
447	501	948		202	202E35100	948	FT	PIPE REMOVED, 24" AND UNDER
475	312	787		638	638E20418	787	FT	SPECIAL - 6-INCH POLYVINYL CHLORIDE PIPE AND FITTINGS (NOT UNDER PAVEMENT) (WESTERN WATER)
0	205	205		638	638E20418	205	FT	SPECIAL - 6-INCH POLYVINYL CHLORIDE PIPE AND FITTINGS (HDD) (WESTERN WATER)
1	0	1		638	638E20548	1	EACH	SPECIAL - 6" CUTTING IN SLEEVE (WESTERN WATER)
1	1	2		638	638E20538	2	EACH	SPECIAL - 6" GATE VALVE WITH VALVE BOX (WESTERN WATER)
0	2	2		638	638E20814	2	EACH	SPECIAL - INSTALL 3/4" POLYETHYLENE WATER SERVICE CONNECTION (WESTERN WATER)
50	0	50		638	638E20452	50	FT	SPECIAL - 16" STEEL PIPE ENCASEMENT, BORED OR JACKED (WESTERN WATER)

CALCULATED WHW
CHECKED JWS

WATER WORK - COORDINATES AND ESTIMATE OF QUANTITIES

CLI-73-2.66

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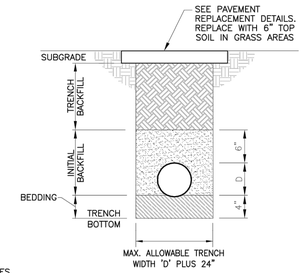


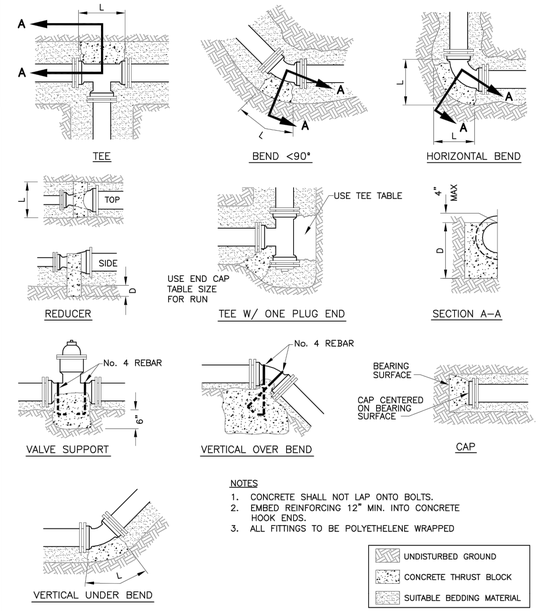
NOTES

1. SUITABLE BEDDING AND INITIAL BACKFILL MATERIAL SHALL CONSIST OF NATURALLY OCCURRING SAND OR CLAY FREE FROM TRASH, ROOTS, DEBRIS, EXCESSIVE MOISTURE AND OBJECTS LARGER THAN ¾".
2. PIPE TRENCH WALL SHALL BE VERTICAL TO THE TOP OF THE INITIAL BACKFILL.
3. PROVIDE SELECT FILL No. 8 OR No. 57 STONE FOR BEDDING MATERIAL TO THE DEPTH REQUIRED BY THE WATER UTILITY WHEN UNSTABLE TRENCH BOTTOMS ARE ENCOUNTERED, AS DETERMINED BY THE WATER UTILITY.
4. MANUALLY COMPACT EMBEDMENT MATERIAL FILLING ALL VOIDS AROUND PIPE.
5. TRENCH BACKFILL TYPE SHALL BE PER GENERAL NOTES AND SPECIFICATIONS.

Western Water COMPANY

WATER LINE EMBEDMENT

REVISED	SCALE	PAGE 1 OF 1	1
01 DEC 04	NTS		



NOTES

1. CONCRETE SHALL NOT LAP ONTO BOLTS.
2. EMBED REINFORCING 12" MIN. INTO CONCRETE HOOK ENDS.
3. ALL FITTINGS TO BE POLYETHELENE WRAPPED

Western Water COMPANY

CONCRETE THRUST BLOCKING

REVISED	SCALE	PAGE 1 OF 2	4
01 DEC 04	NTS		

END CAP BLOCKING

SIZE	2"	4"	6"	8"	12"	16"
BLOCKING AREA	6"x6"	9"x9"	13"x13"	17"x17"	24"x24"	33"x33"

BLOCKING FOR TEES

RUN	BRANCH 4"			6"			8"			12"			16"		
	L"	D"	Vc.f.	L"	D"	Vc.f.	L"	D"	Vc.f.	L"	D"	Vc.f.	L"	D"	Vc.f.
4"	11	8	0.8												
6"	11	8	0.8	18	12	1.9									
8"	10	9	0.7	18	12	1.9	23	16	3.5						
12"	8	12	0.8	18	12	1.9	23	16	3.5	38	22	8.7			
16"	6	16	0.8	14	16	2.0	20	18	3.5	38	23	8.7	49	30	13.6

SIZE OF CONCRETE BLOCKING FOR VERTICAL OVERBEND

PIPE SIZE	SIZE OF BLOCK	VOLUME Cu. Yd.
4"	1.5'x1.5'x1.5	0.13
6"	2.5'x2.5'x2.5'	0.5
8"	3'x3'x3'	1
12"	3.5'x3.5'x3.5'	1.5
16"	4.5'x4.5'x4.5'	3.5

BLOCKING FOR REDUCERS

	4"		6"		8"		12"		16"	
	D"	L"	D"	L"	D"	L"	D"	L"	D"	L"
2"	12	6	12	12						
4"			12	12						
6"					12	12				
8"							24	18		
12"									24	24

BLOCKING FOR HORIZONTAL BENDS AND VERTICAL UNDERBENDS

PIPE SIZE	DEGREE OF BEND 11.25°			22.5°			45°			90°		
	L"	D"	Vc.f.	L"	D"	Vc.f.	L"	D"	Vc.f.	L"	D"	Vc.f.
4"	5	4	0.2	9	5	0.4	14	5	0.6	14	5	0.6
6"	8	6	0.5	12	7	0.7	20	8	1.4		9	1.7
8"	9	8	0.7	16	9	1.4	24	12	2.7	25	11	4
12"	14	12	1.8	24	14	3.6	36	18	6.8	32	18	10.7
16"	18	16	3.4	32	18	6.7	36	32	13.4	41	26	25.6

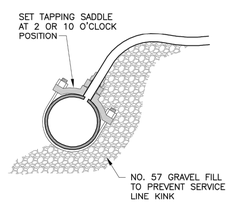
VALVE SUPPORTS

VALVE SIZE	WIDTH	Vc.f.
4"	16"	0.3
6"	17"	0.4
8"	20"	0.4
12"	24"	0.5
16"	30"	0.5

Western Water COMPANY

CONCRETE THRUST BLOCKING

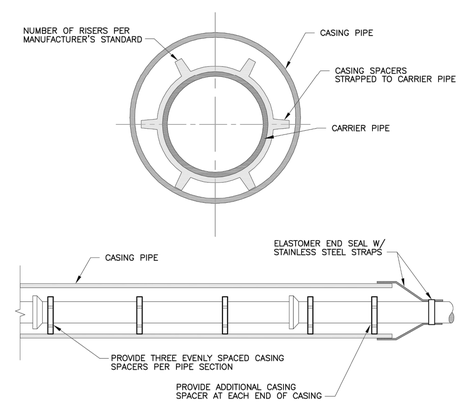
REVISED	SCALE	PAGE 2 OF 2	4
01 DEC 04	NTS		



Western Water COMPANY

TAP SETTING

REVISED	SCALE	PAGE 1 OF 1	5
01 DEC 04	NTS		



Western Water COMPANY

CASING SPACER & END SEAL

REVISED	SCALE	PAGE 1 OF 1	6
01 DEC 04	NTS		

CALCULATED WHW
CHECKED JWS

WATER WORK - DETAILS

CLI-73-2.66

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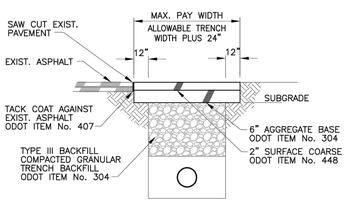
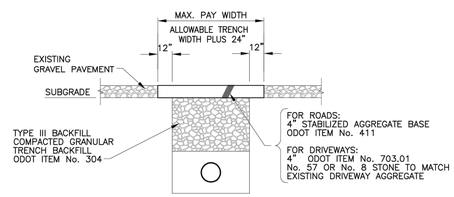


Western Water COMPANY

ASPHALT DRIVEWAY PAVEMENT REPLACEMENT

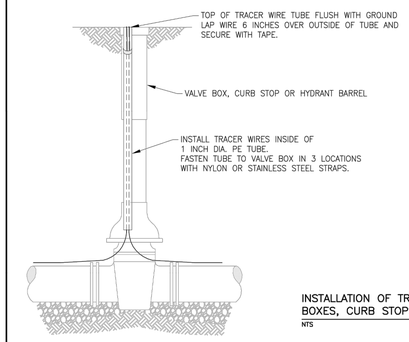
REVISED	SCALE	PAGE 1 OF 1	13
01 DEC 04	NTS		



Western Water COMPANY

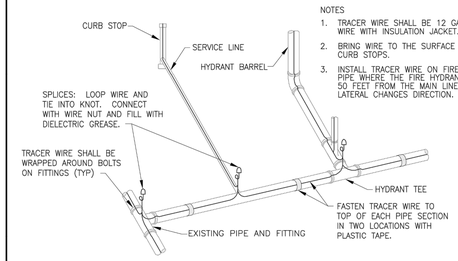
GRAVEL ROADWAY AND DRIVEWAY PAVEMENT REPLACEMENT

REVISED	SCALE	PAGE 1 OF 1	14
01 DEC 04	NTS		



INSTALLATION OF TRACER WIRE AT VALVE BOXES, CURB STOPS & FIRE HYDRANTS
NTS

NOTES
1. TRACER WIRE SHALL BE 12 GAUGE SOLID COPPER WIRE WITH INSULATION JACKET.
2. BRING WIRE TO THE SURFACE AT ALL VALVES AND CURB STOPS.
3. INSTALL TRACER WIRE ON FIRE HYDRANT LATERAL PIPE WHERE THE FIRE HYDRANT IS MORE THAN 50 FEET FROM THE MAIN LINE, OR WHEN THE LATERAL CHANGES DIRECTION.



TRACER WIRE DETAIL
NTS

Western Water COMPANY

TRACER WIRE DETAIL

REVISED	SCALE	PAGE 1 OF 1	18
11-10-05	NTS		

CALCULATED WHW
CHECKED JWS

WATER WORK - DETAILS 1

CLI-73-2.66

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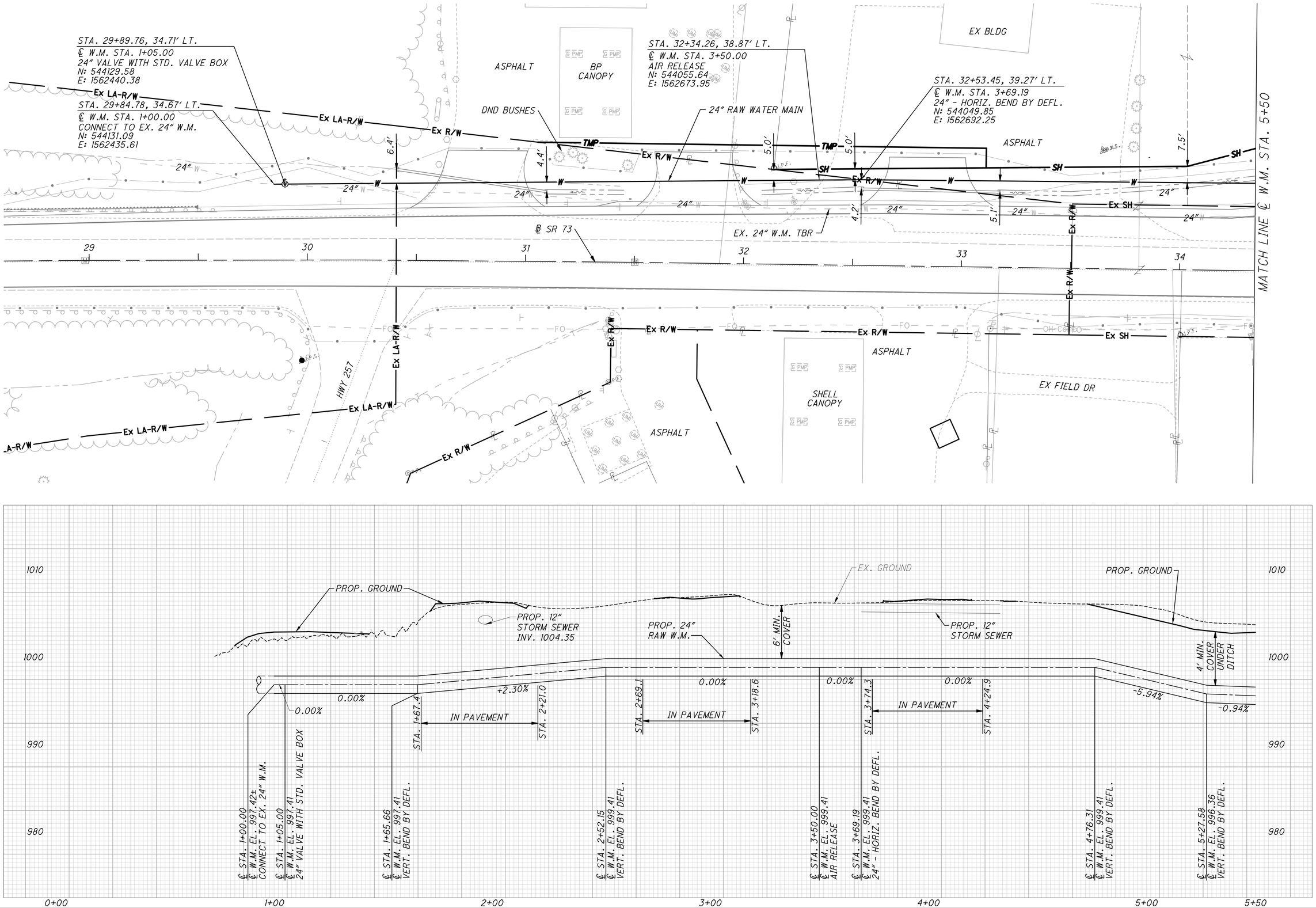

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WHW
CHECKED JWS

WATER WORK PLAN & PROFILE - SR 73
24" RAW W.M. (STA. 1+00 TO STA. 5+50)

CLI-73-2.66

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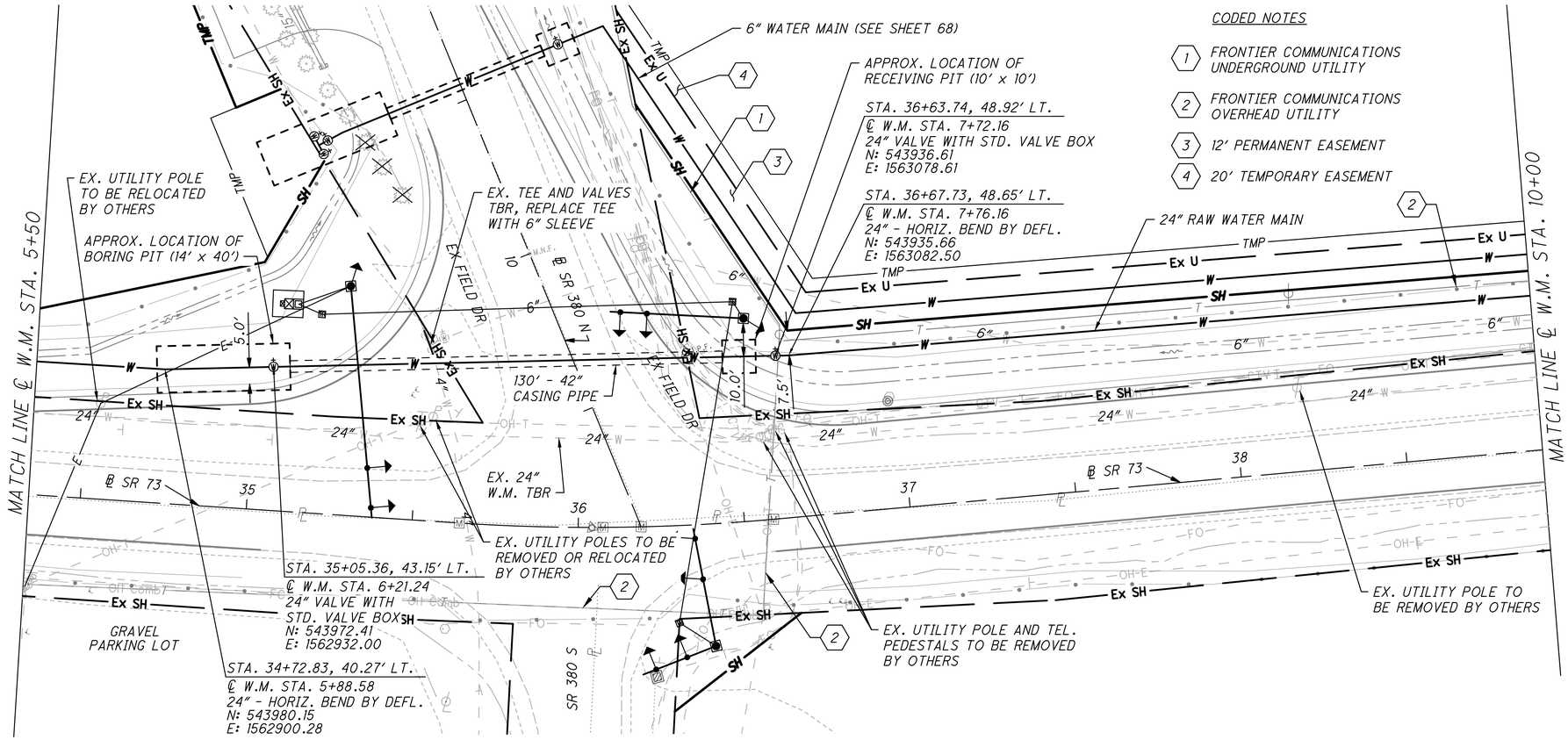

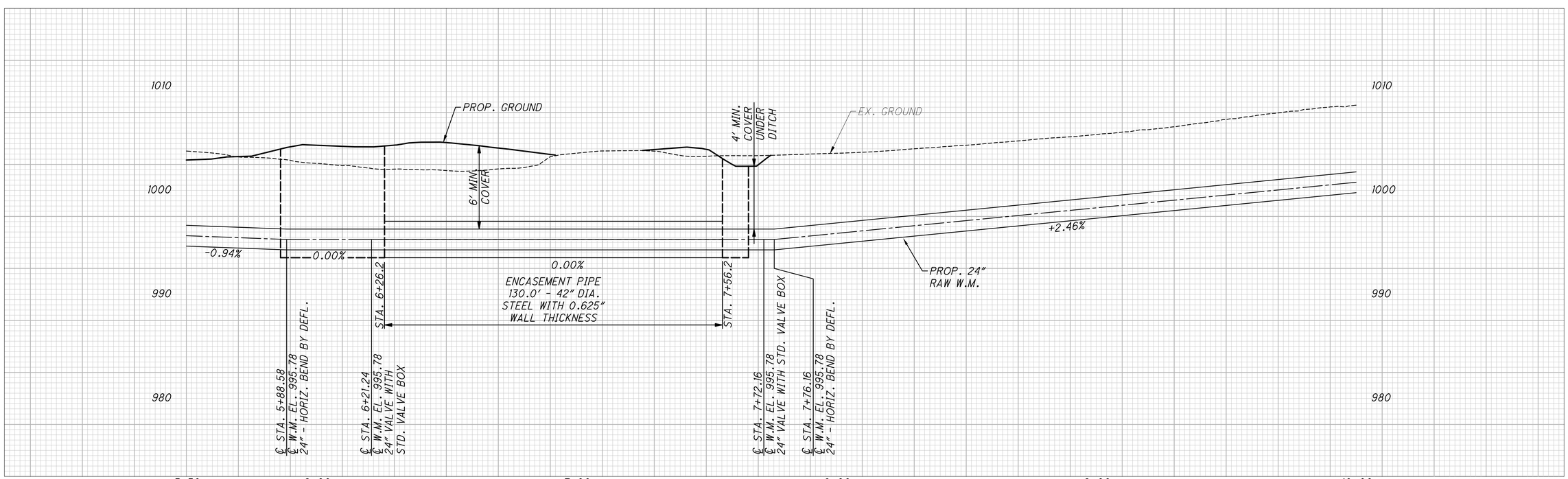

WATER WORK PLAN & PROFILE - SR 73
24" RAW W.M. (STA. 5+50 TO STA. 10+00)

CALCULATED WHW
CHECKED JWS

CLI-73-2.66

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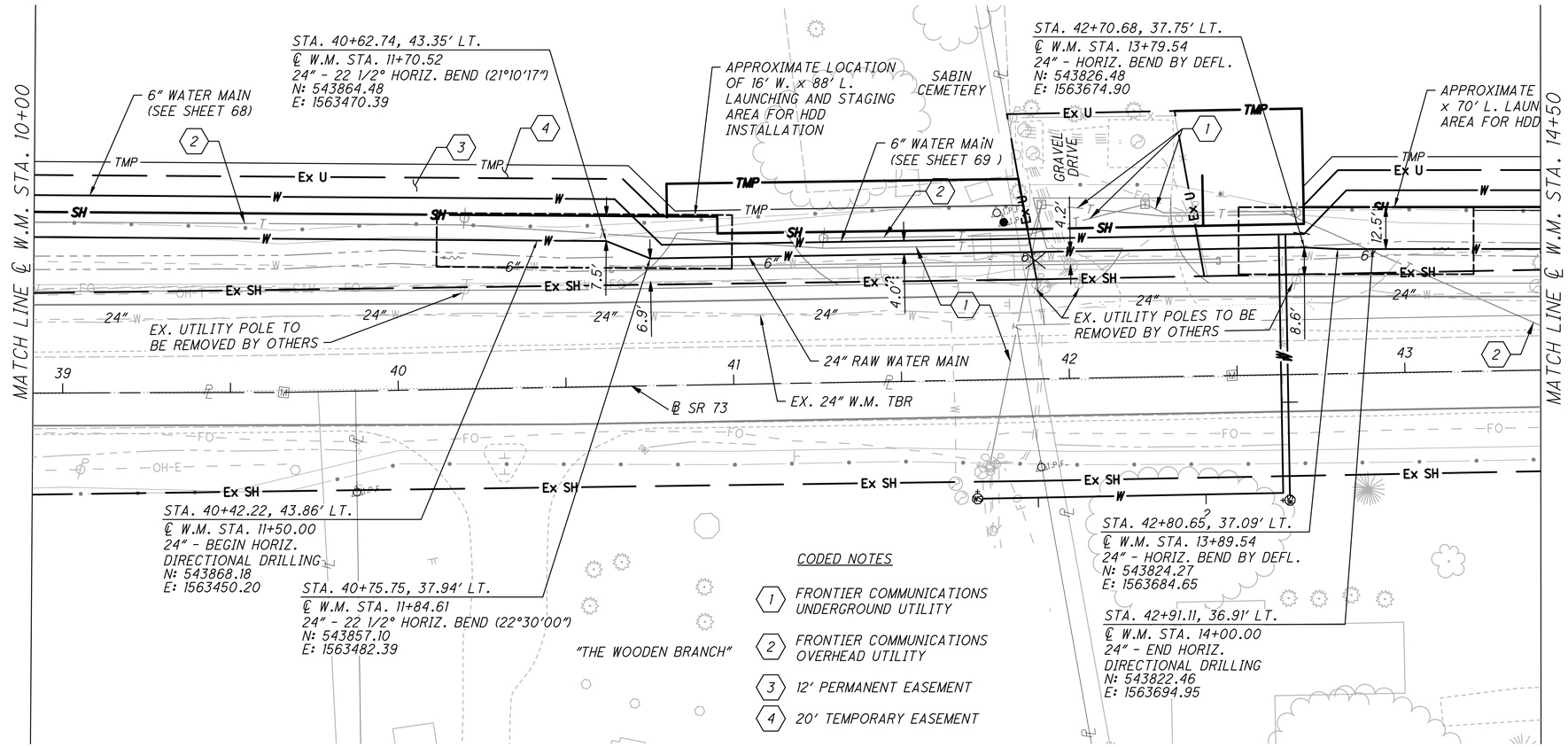

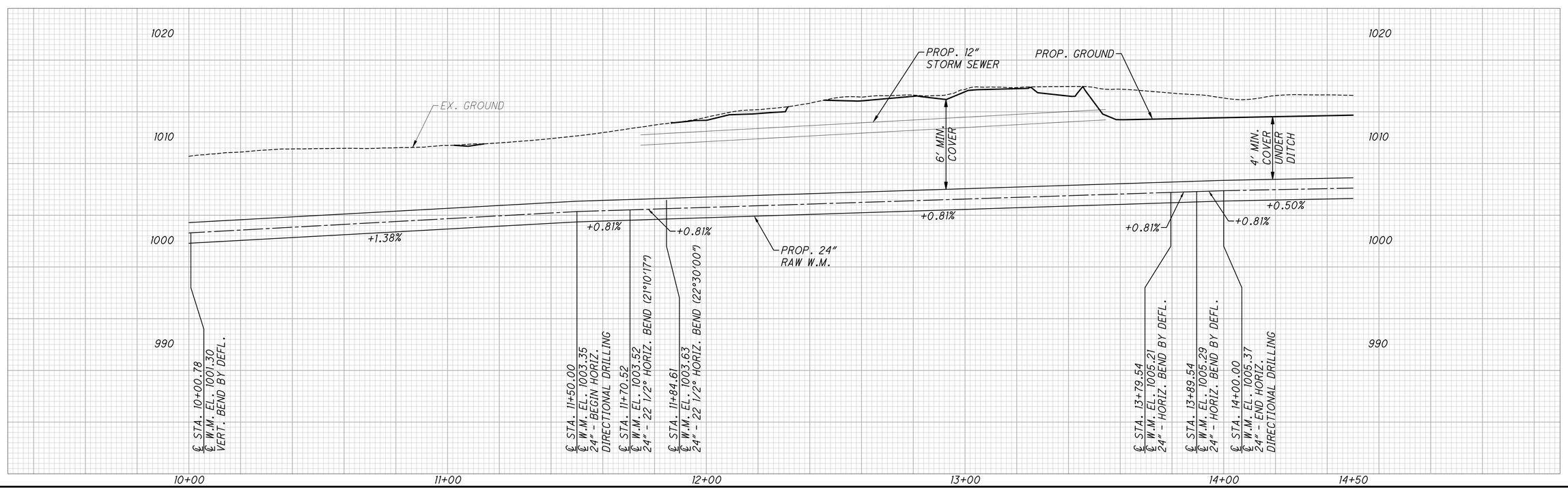

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED WHW
CHECKED JWS

WATER WORK PLAN & PROFILE - SR 73
24" RAW W.M. (STA. 10+00 TO STA. 14+50)

CLI-73-2.66

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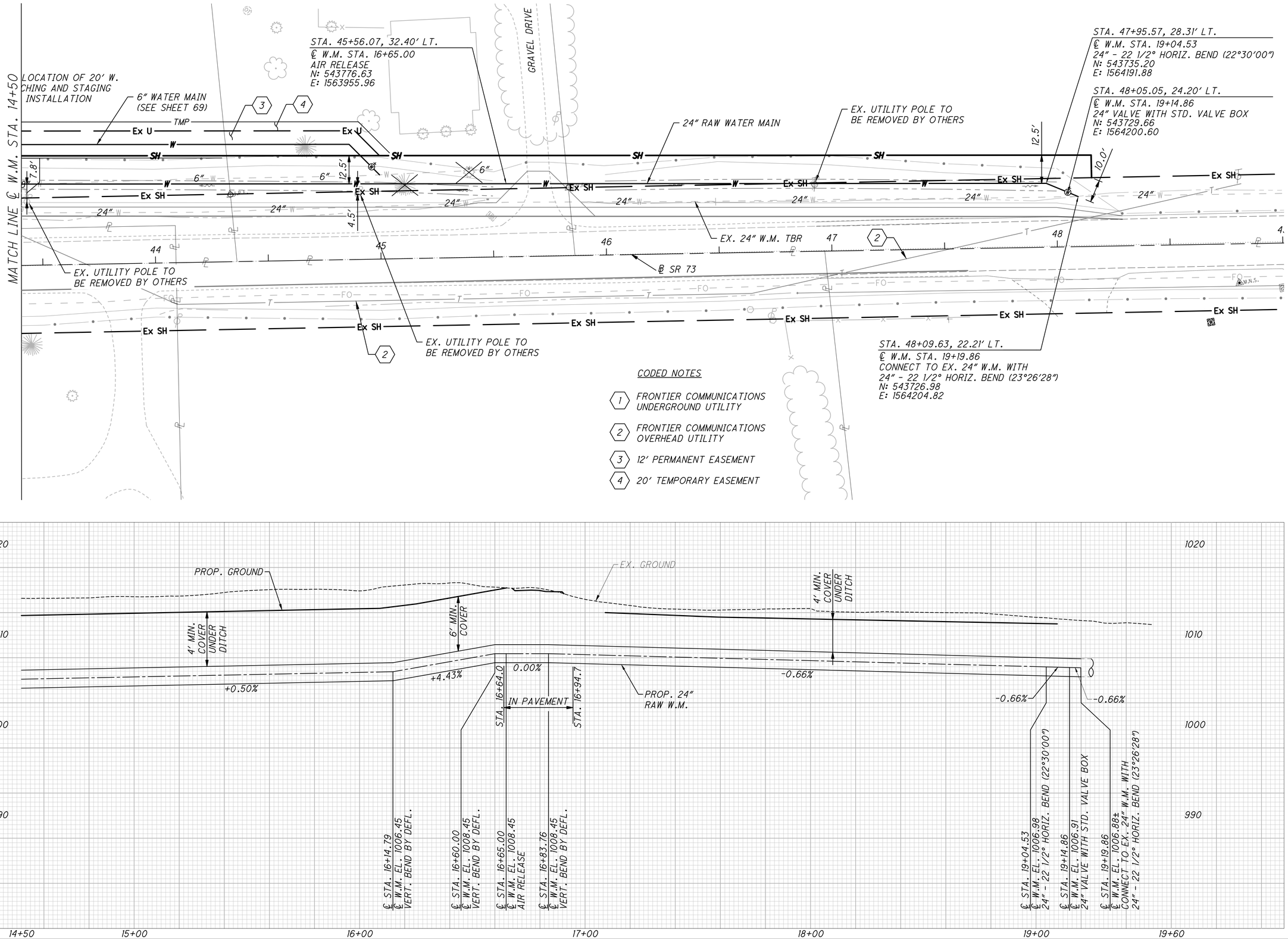

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED WHW CHECKED JWS

WATER WORK PLAN & PROFILE - SR 73
24" RAW W.M. (STA. 14+50 TO STA. 19+20)

CLI-73-2.66

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STA. 10+54.71, 40.99' LT.
℄ W.M. STA. 1+05.26
6" - 45° VERT. BEND,
VERT. BEND BY DEFL.
N: 544034.46
E: 1562967.57

STA. 10+57.15, 46.53' LT.
CONNECT TO EX. W.M. WITH
6" VALVE WITH STD. VALVE BOX
N: 544036.18
E: 1562961.77

APPROX. LOCATION OF
BORING PIT (14' x 40')

STA. 10+54.16, 46.22' LT.
℄ W.M. STA. 1+00.00
6" x 6" ANCH. TEE AND
6" VALVE WITH STD. BOX
N: 544033.26
E: 1562962.46

STA. 10+51.18, 45.91' LT.
CONNECT TO EX. W.M. WITH
6" VALVE WITH STD. VALVE BOX
N: 544030.34
E: 1562963.15

STA. 10+55.00, 38.26' LT.
℄ W.M. STA. 1+08.00
6" - 11 1/4° HORIZ. BEND (5°59'39"),
ROTATE TO GRADE
N: 544035.09
E: 1562970.25

50' - 16"
CASING PIPE

APPROX. LOCATION OF
RECEIVING PIT (10' x 10')

EX. TEE AND VALVES
TBR, REPLACE TEE
WITH 6" SLEEVE

STA. 10+55.00, 31.74' RT.
℄ W.M. STA. 1+78.01
6" VALVE WITH
H.D. VALVE BOX
N: 544043.93
E: 1563039.69

STA. 10+55.00, 46.34' RT.
℄ W.M. STA. 1+92.61
6" - 90° HORIZ. BEND (90°00'00"),
6" - 11 1/4° HORIZ. BEND (11°38'20"),
ROTATE TO GRADE
N: 544045.77
E: 1563054.17

STA. 36+71.00, 61.12' LT.
℄ W.M. STA. 2+96.60
6" - 45° HORIZ. BEND (45°00'00"),
6" - 11 1/4° HORIZ. BEND (15°42'29"),
ROTATE TO GRADE
N: 543947.38
E: 1563087.85

EX. 6" W.M.
TBR

CODED NOTES

1. FRONTIER COMMUNICATIONS UNDERGROUND UTILITY
2. FRONTIER COMMUNICATIONS OVERHEAD UTILITY
3. 12' PERMANENT EASEMENT
4. 20' TEMPORARY EASEMENT

6" WATER MAIN

EX. 6" W.M. TBR

24" RAW WATER MAIN
(SEE SHEET 65)

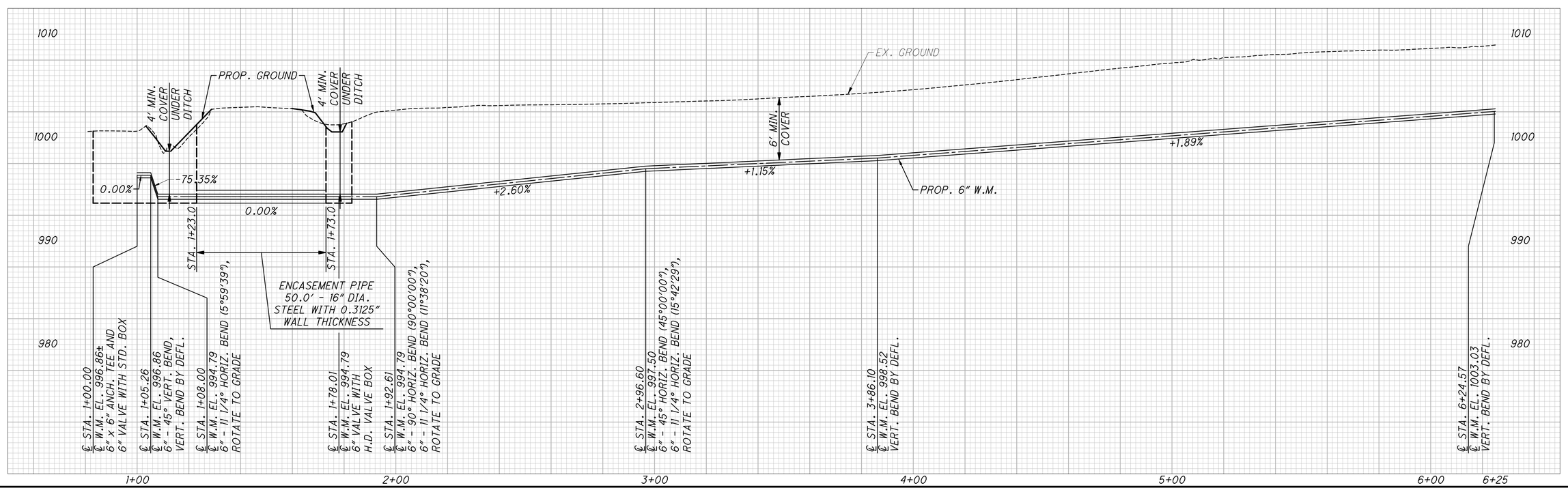
MATCH LINE ℄ W.M. STA. 6+50

GRAVEL
PARKING LOT

℄ SR 73

℄ SR 380 N

EX FIELD DR



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WHW
CHECKED JWS

WATER WORK PLAN & PROFILE - SR 73
6" W.M. (STA. 1+00 TO STA. 6+50)

CLI-73-2.66

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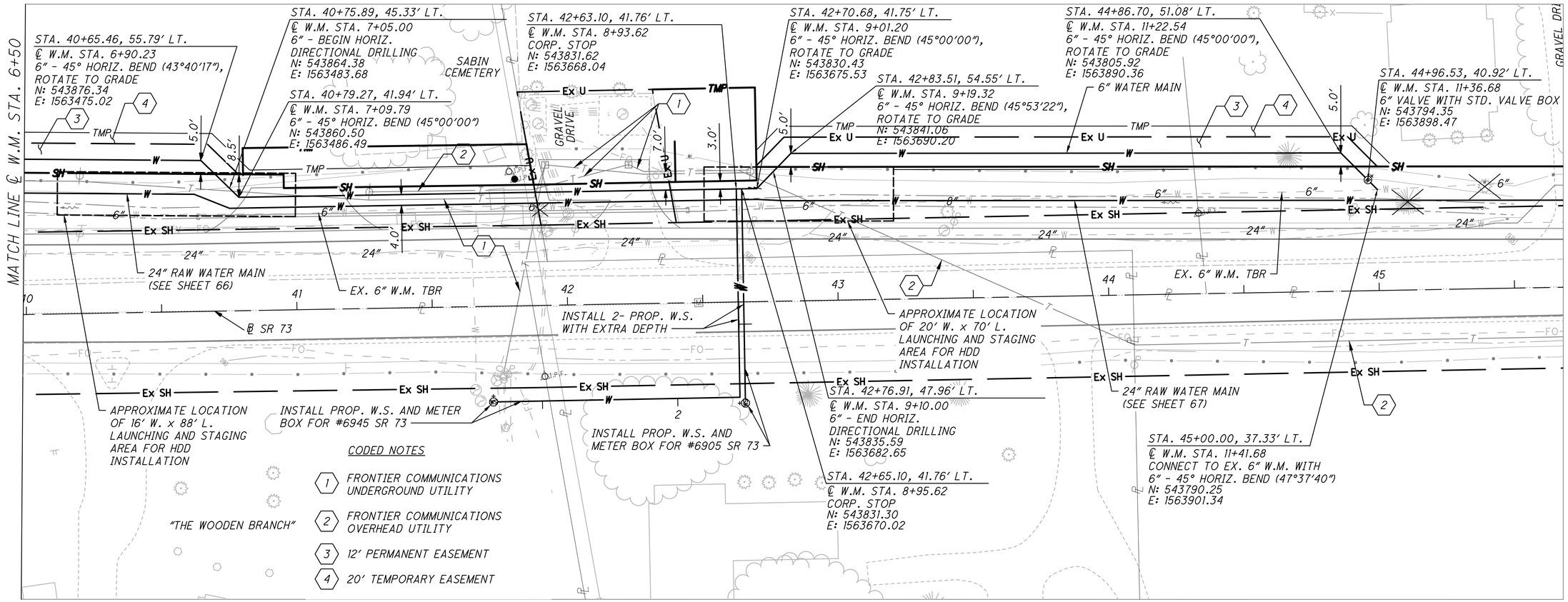

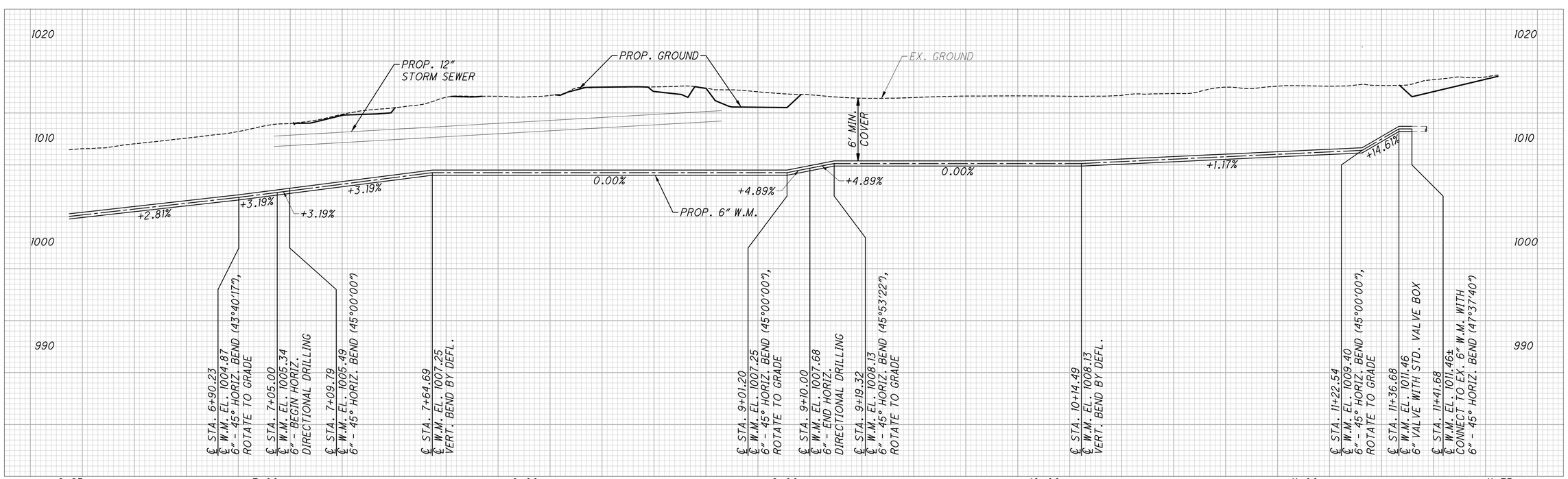

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED WHW
CHECKED JWS

WATER WORK PLAN & PROFILE - SR 73
6" W.M. (STA. 6+25 TO STA. 11+25)

CLI-73-2.66

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REF NO.	SHEET NO.	STATION TO STATION					644 EDGE LINE, 6"	644 STOP LINE	644 CENTER LINE	644 LANE ARROW	644 CHANNELIZING LINE, 8"	644 DOTTED LINE, 6"
							MILE	FT	MILE	EACH	FT	FT
EL-1	72	23+73.21	LT	TO	26+33.93	LT	0.05					
EL-2	72	23+73.21	RT	TO	25+97.10	RT	0.04					
EL-3	72	27+06.21	LT	TO	35+52.98	LT	0.17					
EL-4	72	26+56.50	RT	TO	35+63.51	RT	0.18					
EL-5	73	37+06.04	LT	TO	52+91.60	LT	0.34					
EL-6	73	36+50.55	RT	TO	52+91.60	RT	0.32					
SL-1	72	25+97.10	RT					12				
SL-2	72	26+35.00	RT	TO	26+85.43	RT		50				
SL-3	72	27+05.55	LT					24				
SL-4	72	30+22.77	RT	TO	30+38.77	RT		16				
SL-5	73	35+05.05	RT/LT					24				
SL-6	73	10+24.99	LT					16				
SL-7	73	37+06.04	LT					12				
SL-8	73	37+18.53	LT					12				
CL-1	72	23+73.21	CT	TO	25+97.10	CT			0.04			
CL-2	72	27+05.55	LT	TO	35+05.00	LT			0.15			
CL-3	72	27+05.55	CT	TO	32+70.30	LT			0.11			
CL-4	73	10+24.99	CT	TO	10+90.01	CT			0.01			
CL-5	73	37+18.53	LT	TO	52+91.60	LT			0.30			
CL-6	73	40+70.61	LT	TO	48+29.18	LT			0.14			
LA-1	72	33+13.00	LT							1		
LA-2	72	33+68.00	LT							1		
LA-3	73	34+20.02	LT							1		
LA-4	73	34+75.08	LT							1		
LA-5	73	37+48.47	LT							1		
LA-6	73	38+16.50	LT							1		
LA-7	73	38+82.47	LT							1		
LA-8	74	39+87.48	LT							1		
CH-1	72	32+90.00	CT	TO	35+05.00	CT					215	
CH-2	74	37+06.04	LT	TO	40+20.51	LT					314	
DL-1	73	36+00.00	LT/RT									180
TOTALS CARRIED TO GENERAL SUMMARY							1.10	167	0.75	8	530	180

CALCULATED GAT
CHECKED XXX

PAVEMENT MARKING SUBSUMMARY

CLI-73-2.66

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPOORT, NO. 3 POST FT	630 SIGN FLAT SHEET SF	630 REMOVAL OF GROUND MOUNTED SIGN EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH
72	S-1	SR-73	33+12.74	RT	R3-H8bh-36	36 X 30	12	7.5	1	
73	S-2	SR-73	34+61.01	LT	M3-4-24	24 X 12	12	2	1	1
					M1-5-24-2	24 X 24		4	1	
73	S-3	SR-73	35+03.75	LT	M2-1-21	21 X 15	12	2.25	1	1
					M1-1-24-2	24 X 24		4	1	
73	S-4	SR-73	35+27.08	LT	M1-5-30-3	30 X 24	12	5	1	1
					M6-4-21	21 X 15		2.25	1	
74	S-5	SR-73	40+13.23	LT	R3-H8bh-36	36 X 30	12	7.5	1	
74	S-6	SR-73	41+69.47	LT	M2-1-21	21 X 15	12	2.25	1	2
					M1-5-30-3	30 X 24		5	1	
74	S-7	SR-73	41+69.47	LT	D1-H1a-72	72 X 12	24	6	1	
					D7-H1a-72	72 X 12		6	1	
74	S-8	SR-73	46+48.65	LT	W3-3-30	30 X 30	12	6.25	1	1
					W16-8P-30	30 X 8		1.75		
TOTALS CARRIED TO GENERAL SUMMARY							108	61.75	13	6

CALCULATED GAT
CHECKED XXX

SIGNING SUBSUMMARY

CLI-73-2.66

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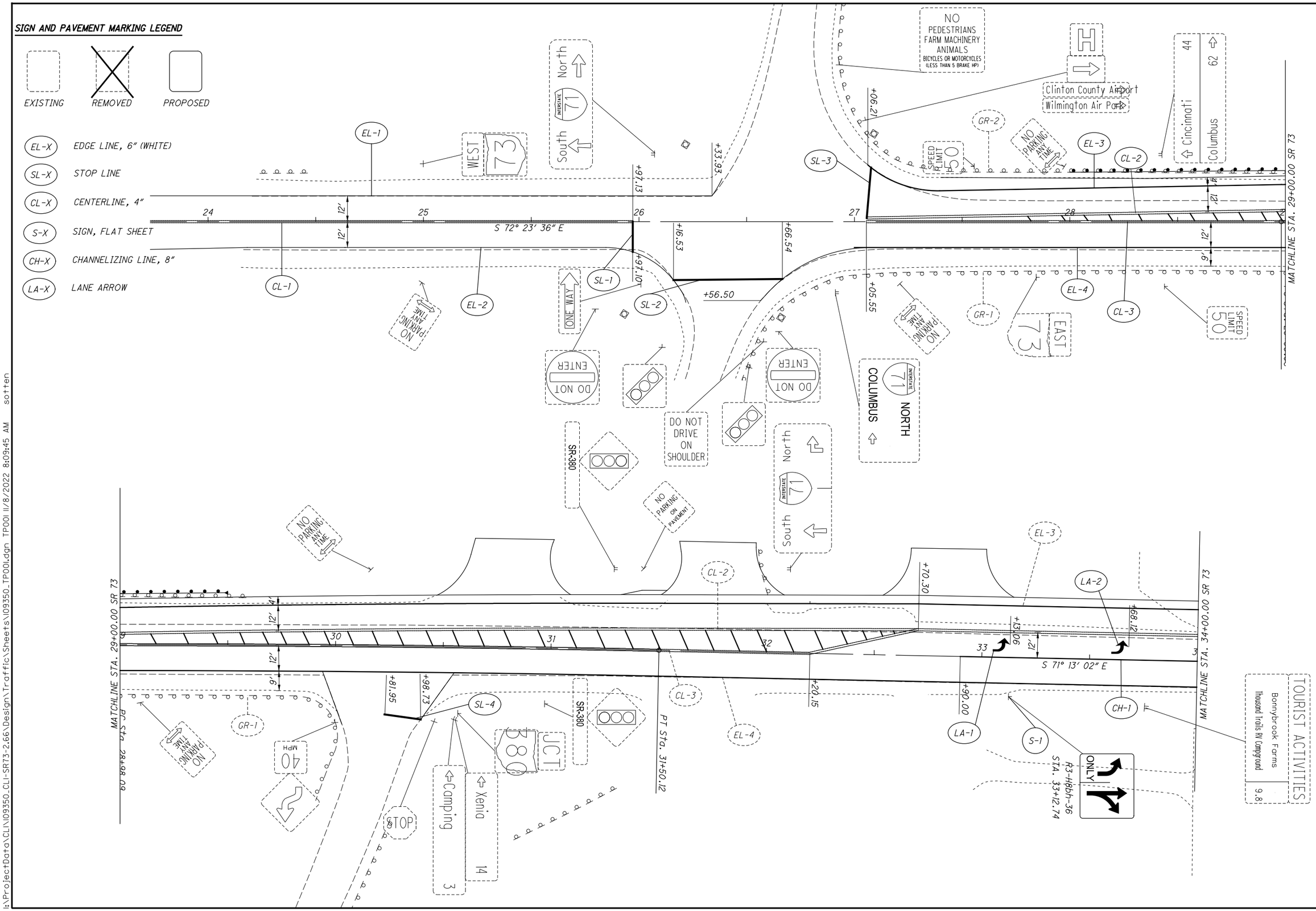

TRAFFIC CONTROL
STA. 24+00 TO STA. 34+00

CLI-73-2.66

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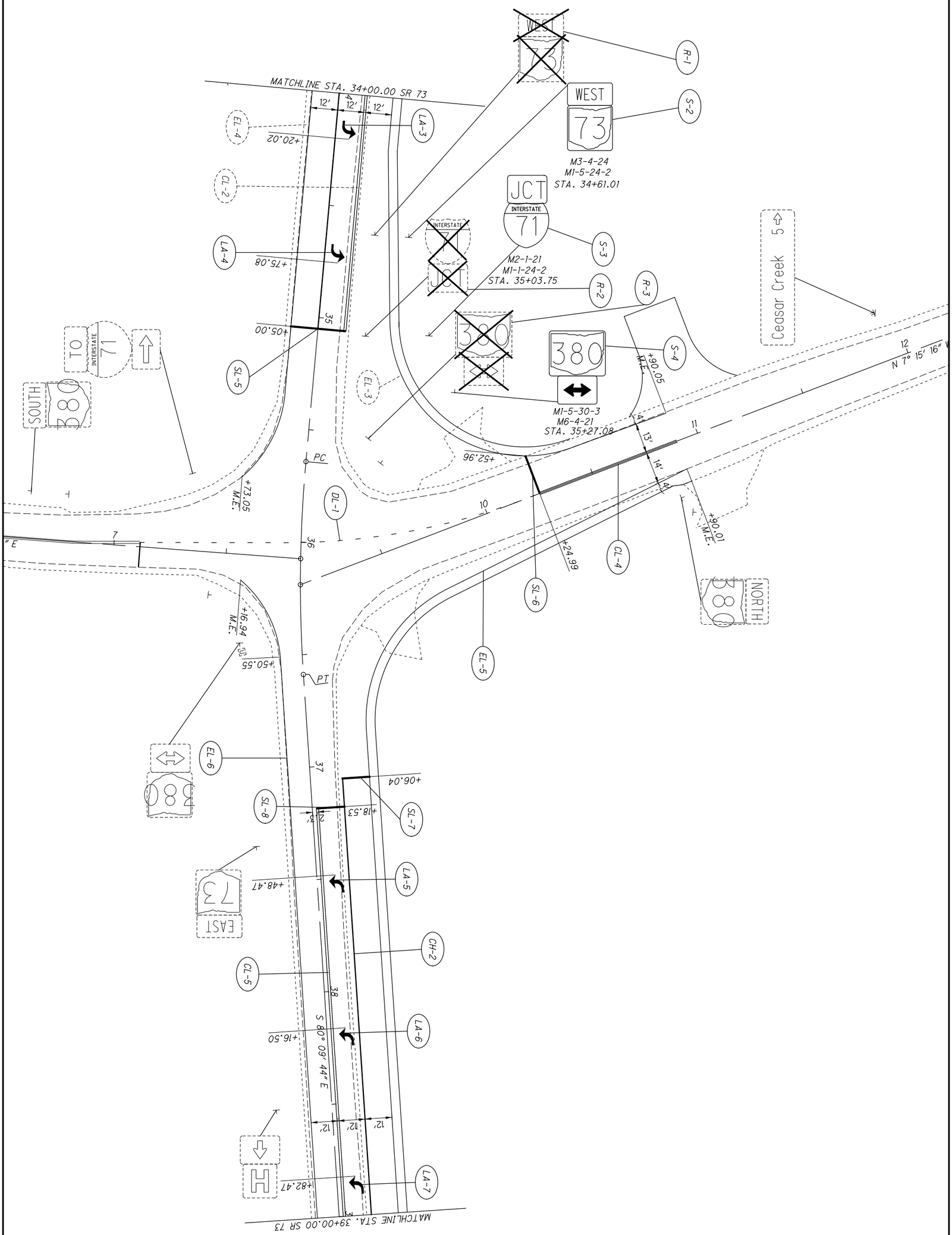
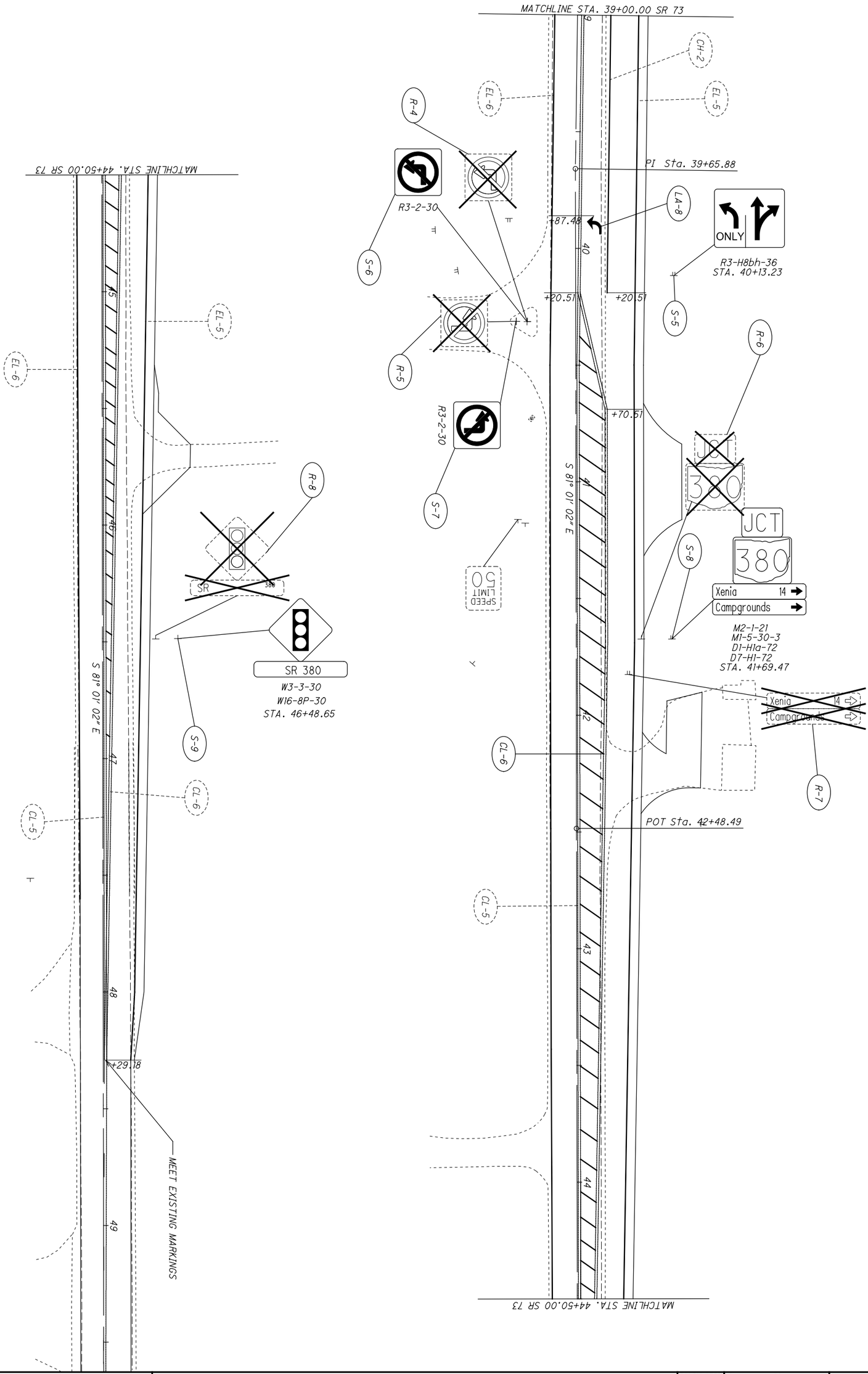


73/96	CLI-73-2.66	TRAFFIC CONTROL STA. 24+00 TO STA. 34+00	CALCULATED GAT CHECKED XXX 0 10 20 40 HORIZONTAL SCALE IN FEET



74 / 96	CLI-73-2.66	TRAFFIC CONTROL STA. 24+00 TO STA. 34+00	CALCULATED GAT CHECKED XXX 0 10 20 40 HORIZONTAL SCALE IN FEET

ITEM 632 - POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER SPECIFICATION 632 AND STANDARD CONSTRUCTION DRAWING TC-83.10 WITH THE FOLLOWING EXCEPTIONS:

1. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN FIVE (5) FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND.
2. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES.
3. ALL POWER SERVICES SHALL BE METERED. THE METER SHALL HAVE A LEVER OPERATED BYPASS.
4. THE POWER SERVICE BLIND HALF COUPLING SHALL BE TWENTY-SEVEN (27) INCHES ABOVE THE BOTTOM OF THE STRAIN POLE BASE PLATE AND SHALL BE WELDED TO THE STRAIN POLE.
5. CONDUIT FROM THE BOTTOM OF THE DISCONNECT SWITCH ENCLOSURE INTO THE BOTTOM OF THE CONTROLLER CABINET WILL NOT BE PERMITTED. POWER SERVICE WIRES FROM THE DISCONNECT SWITCH ENCLOSURE TO THE CONTROLLER CABINET SHALL BE ROUTED THROUGH THE STRAIN POLE.
6. IF INTERSECTION LIGHTING IS SPECIFIED, SEPARATE DISCONNECT SWITCHES SHALL BE INSTALLED AND LABELED " LIGHTING"AND "TRAFFIC SIGNAL" WITH A WEATHER PROOF STICKER. MARKER ON THE OUTSIDE OF THE ENCLOSURE IS NOT ACCEPTABLE.

DISCONNECT SWITCH ENCLOSURES FURNISHED SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER.

THE CONTRACTOR SHALL CONTACT THE METER SECTION OF THE POWER COMPANY FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL CONTACT ODOT DISTRICT 8 TRAFFIC OPERATIONS TO ACQUIRE THE ADDRESS TO BE USED ON THE INSPECTION FORMS. ONCE THE SERVICE HAS PASSED INSPECTION, THE CONTRACTOR SHALL ONCE AGAIN NOTIFY ODOT DISTRICT 8 TRAFFIC OPERATIONS WHO WILL THEN MAKE APPLICATION FOR POWER WITH THE UTILITY COMPANY. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120/240 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES.

THE CONTRACTOR SHALL FURNISH AND INSTALL AN ADDRESS STICKER WITH 4-INCH LETTERING TO THE CABINET. ADDRESS MUST BE VISIBLE FROM THE STREET. THE ENGINEER WILL PROVIDE THE ADDRESS TO THE CONTRACTOR FOR EACH INSTALLATION.

THE DEPARTMENT WILL MEASURE ITEM 632, POWER SERVICE, AS PER PLAN, BY THE NUMBER OF COMPLETE UNITS AND WILL INCLUDE: WEATHERHEAD, CONDUIT, FITTINGS, CLAMPS, AND OTHER NECESSARY HARDWARE, INSTALLATION OF METER BASE, GROUND WIRE CONNECTIONS, DISCONNECT SWITCH WITH ENCLOSURE, AND COORDINATION WORK WITH UTILITIES.

SIGNAL ACTIVATION

PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP-AND-GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, ETC). IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER. THE DISTRICT TRAFFIC ENGINEER WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION.

SIGNAL ACTIVATION CONT.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL DESIGNATED DISTRICT TRAFFIC PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT EFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY DISTRICT TRAFFIC PERSONNEL PRIOR TO FINAL ACCEPTANCE. ODOT FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 120 DAYS AFTER THE FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL AND COMPLETION OF ALL PUNCH LIST ITEMS. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC SIGNAL INSTALLATION: CONTROLLER, CABINET, UNINTERRUPTABLE POWER SUPPLY, VEHICLE DETECTION EQUIPMENT, LED LAMP UNITS, NETWORK AND COMMUNICATION /INTERCONNECT EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

DETECTION MAINTENANCE

LOCATIONS WHERE NON-INTRUSIVE DETECTION IS PROPOSED AND THE EXISTING VEHICLE DETECTION IS TO BE ABANDONED, THE NON-INTRUSIVE VEHICLE DETECTION SHALL BE INSTALLED, CONFIGURED AND MADE FULLY FUNCTIONAL PRIOR TO THE EXISTING DETECTION BEING DISABLED. THE CONTRACTOR SHALL CONTINUE TO MAINTAIN AND MODIFY THE DETECTION UNTIL FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL. THIS IS TO ENSURE VEHICLE DETECTION REMAINS FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION.

IF THE LOSS OF VEHICLE DETECTION IS KNOWN PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE DISCUSSED AT THE PRECONSTRUCTION MEETING. AT SUCH TIME, THE DISTRICT TRAFFIC ENGINEER SHALL ADVISE THE PROJECT ENGINEER AND CONTRACTOR ON THE APPROPRIATE ACTION TO RECTIFY ANY LOSS OF VEHICLE DETECTION. THIS MAY INCLUDE PLACING THE TRAFFIC SIGNAL ON MINIMUM OR MAXIMUM RECALL, MODIFYING THE MINIMUM GREEN TIMES, AND REMOVING THE MALFUNCTIONING DETECTION FROM SERVICE. WHERE NON-INTRUSIVE DETECTION (I.E. VIDEO, RADAR) ALREADY EXISTS, THE CONTRACTOR SHALL INSURE THAT DETECTION IS OPERATING AND MAINTAINED BY RECONFIGURING THE DETECTION UNITS ACCORDINGLY DURING ALL CONSTRUCTION PHASES. THIS IS TO AVOID THE SIGNAL FROM MAXING OUT THE EFFECTED SIGNAL PHASE AND CREATING UNNECESSARY DELAYS.

IF VEHICLE DETECTION BECOMES UNEXPECTEDLY DISABLED, REQUIRES MODIFICATION, OR IS SCHEDULED TO BE TEMPORARILY REMOVED DURING THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER.

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER WITH 72 HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, STRAIN POLES, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 AND AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE REUSED AS PART OF A NEW INSTALLATION ON THE PROJECT OR STORED ON THE PROJECT FOR SALVAGE BY ODOT IN ACCORDANCE WITH THE LISTING GIVEN HEREIN.

ITEMS TO BE STORED FOR SALVAGE:
CABINET, CONTROLLER, RADARS

REMOVED ITEMS SHALL BE DELIVERED TO THE NEAREST ODOT FACILITY WHOSE ADDRESS IS LISTED BELOW:

ODOT DISTRICT 8, ATTN: JIM JUDD
513-933-6692
505 SOUTH SR 741
LEBANON, OH 45036

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE BY ODOT ARE NOT REMOVED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

ITEM 809 ATC CONTROLLER, AS PER PLAN (PROGRAM AND INSTALL ONLY)

ALL REQUIREMENTS OF SS 89 SHALL BE FOLLOWED ALONG WITH THE ADDITIONAL DESCRIPTION AS STATED BELOW. THE ATC CONTROLLER WILL BE PROVIDED BY THE DISTRICT WITHOUT PROGRAMMING. IN THE CASE OF A 332 OR 336 CABINET TYPE, THE CONTROLLER WILL BE PROVIDED BY THE POWER CARD.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE CONTROLLER TO THE PROPOSED CONDITIONS ACCORDING TO THE PLANS. ODOT WILL NOT BE RESPONSIBLE FOR THE PROGRAMMING.

THE CONTROLLER SHALL BE LISTED ON THE TAP AND BE AN ECONOLITE COBALT RACKMOUNT AND COMPATIBLE WITH THE CABINET TYPE BEING INSTALLED.

PAYMENT SHALL BE MADE ONCE THE CONTROLLER IS PROGRAMMED, INSTALLED, TESTED, FUNCTIONING ACCORDING TO THE PLANS, AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS TO COMPLETE THE WORK

633 CABINET, TYPE 332, AS PER PLAN

THE CABINET SHALL BE FURNISHED AND INSTALLED ACCORDING TO CMS 633 AND 733 AND BE LISTED ON THE TRAFFIC AUTHORIZED PRODUCTS LIST (TAP).

THE CABNIET SHALL BE FURNISHED WITH AN EDI MONITOR AS ALLOWED ON THE TAP/APPROVED PRODUCTS LIST.

THE CONTRACTOR SHALL NOT REASSIGN THE CABINET DETECTOR INPUTS IN ORDER TO REDUCE THE NUMBER OF 2-CHANNEL DETECTOR UNITS SUPPLIED AND SHALL USE THE STANDARD CALTRANS INPUT FILE DESIGNATIONS FOLLOWING PLAN INSERT SHEET 203324.

PAYMENT FOR ITEM 633 CABINET, TYPE 332, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

UNDERDRAINS FOR PULLBOXES

REFERENCE IS MADE TO THE STANDARD CONSTRUCTION DRAWING FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULLBOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED 20 FEET. THE FOLLOWING ESTIMATED QUANTITY IS CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 611 - 4" CONDUIT, TYPE E 50 FT.

ITEM 632 - SIGNAL SUPPORT FOUNDATION

PRIOR TO ORDERING THE SIGNAL SUPPORTS THE CONTRACTOR SHALL CONTACT OUPS TO HAVE ALL THE UTILITIES LOCATED IN THE FIELD. THEN THE CONTRACTOR SHALL MEET THE PROJECT ENGINEER TO LOCATE THE PROPOSED SUPPORT LOCATIONS TO INSURE THERE ARE NO CONFLICTS WITH UTILITIES. IF THERE ARE ISSUES, THE PROJECT ENGINEER SHALL PROVIDE GUIDANCE AS TO THE RELOCATION OF THE SUPPORTS.

DUE TO THE FURTHER POSSIBILITY OF CONFLICT WITH EXISTING OR PROPOSED UNDERGROUND OBSTRUCTIONS (INCLUDING THE POSSIBILITY OF UNRECORDED OBSTRUCTIONS) WHICH COULD AFFECT THE LOCATION OF THE FOUNDATION FOR THIS ITEM AND CONSEQUENTLY, THE DESIGN OF THE SUPPORT AND/OR ARMS, THE CONTRACTOR SHALL NOT PLACE FINAL ORDERS FOR THE ITEM UNTIL THE FOUNDATIONS HAVE BEEN INSTALLED, AT FINAL GRADE, AND THE CONTRACTOR HAS RECEIVED, FROM ENGINEER, WRITTEN NOTICE TO PROCEED WITH THE ORDERS FOR THE ITEM.

IF ANY FOUNDATIONS LOCATIONS MUST BE ADJUSTED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND MAINTAINING AGENCY, WHO WILL DETERMINE THE REVISED LOCATION AND IF NEEDED, THE SUPPORT DESIGN. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR DETERMINING THE REVISED DESIGN. THE ENGINEER WILL INFORM THE CONTRACTOR OF ANY CHANGES NECESSARY AND AUTHORIZE THE CONTRACTOR TO ORDER THE SUPPORT.

THE CONTRACTOR SHALL, WHEN DEVELOPING THE PROGRESS SCHEDULE, AND THOSE OF THE SUBCONTRACTORS, ENSURE THAT THE FOUNDATIONS ARE INSTALLED AT THE EARLIEST TIME AS IS FEASIBLE AND PRACTICAL, AND SHALL INCLUDE SUFFICIENT TIME IN THE PROGRESS SCHEDULE FOR ORDERING, MANUFACTURING, DELIVERY, AND INSTALLATION OF THE SUPPORT ITEMS AFTER THE FOUNDATIONS ARE IN PLACE.

NO PAYMENTS FOR DELIVERED MATERIALS FOR THE FOUNDATION OR SUPPORT ITEMS SHALL BE MADE UNTIL THE FOUNDATIONS ARE IN PLACE, AND IF CHANGES IN THE DESIGN OF THIS ITEM ARE REQUIRED, NO PAYMENT SHALL BE MADE FOR THE ITEMS MANUFACTURED TO THE ORIGINAL DESIGN.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR EACH SUPPORT FURNISHED, IN PLACE, COMPLETE AND ACCEPTED.

CALCULATED PMM
CHECKED TCS

TRAFFIC SIGNAL NOTES

CLI-73-2.66

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GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.

   A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.

   B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.

   C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.

   D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.

   E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.

   F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS

   A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.

   B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.

   C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

   D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING

   A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:

      I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.

      II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

      III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

      IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.

   B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD

   A. A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.

   B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/BLACK STRIPE	YELLOW ARROW	NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH

   A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.

   B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.

      I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.

      II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

633 UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 633 AND 733, POLE ATTACHMENT HARDWARE WILL BE INCLUDED FOR POLE-MOUNTED CABINETS, AND A CABINET RISER (8-INCH MINIMUM) AND ANCHOR BOLTS WILL BE PROVIDED FOR BASE-MOUNTED CABINETS. BEFORE PERFORMING THE WORK, THE CONTRACTOR, THE DISTRICT TRAFFIC ENGINEER AND THE PROJECT ENGINEER WILL PERFORM A SITE INSPECTION TO ESTABLISH THE LOCATION OF THE UPS CABINET AND FOUNDATION.

THE UPS CABINET SHALL INCLUDE A GENERATOR POWER PANEL WITH A HEAVY-DUTY POWER RELAY VERSUS THE LINE VOLTAGE GENERATOR SWITCH. THE GENERATOR INLET SHALL BE A RECESSED PANEL WITH A DOOR THAT IS FLUSH WITH THE EXTERNAL SIDE OF THE UPS CABINET. IT SHALL INCLUDE A RECESSED PLUG, AUTOMATIC TRANSFER SWITCH AND A DOOR THAT SECURELY CLOSES OVER THE POWER CORD.

THE CABINET SHALL HAVE A DOOR STOP MECHANISM AND THERMOSTATICALLY CONTROLLED FAN.

THE CABINET SHALL INCLUDE A BATTERY BALANCING DEVICE, ALPHAGUARD BY ALPHA TECHNOLOGIES, THAT REGULATES THE BATTERIES AND OPTIMIZES PERFORMANCE.

AFTER FOUR (4) HOURS OF BATTERY RUNTIME, THE SYSTEM SHALL BE PROGRAMMED TO SWITCH THE INTERSECTION FROM FULL OPERATION TO CONTROLLER AUTOMATIC FLASH OPERATION THROUGH THE MONITOR. THE CONTROLLER SHALL BE PROGRAMMED SO THAT FLASH OPERATION SHALL BEGIN ONCE THE INTERSECTION RUNS MINOR STREET GREEN (TYP. PH. 4 &8), ALL-RED CLEARANCE, AND THEN FLASH OPERATION.

THE UPS OUTPUT NOTIFICATIONS FOR ON BATTERY, BATTERY 2-HOUR TIMER, AND LOW BATTERY SHALL BE WIRED INTO THE TRAFFIC SIGNAL CABINET BACK PANEL OR THROUGH THE CONTROLLER WITH A C11 TO PROVIDE SPECIAL STATUS ALARMS FOR EACH OUTPUT INTO THE SIGNAL CONTROLLER.

THIS ITEM SHALL INCLUDE A RED LED STATUS INDICATOR LAMP TO ALLOW MAINTENANCE PERSONNEL AND LAW ENFORCEMENT TO QUICKLY ASSESS WHETHER A TRAFFIC SIGNAL CABINET IS BEING POWERED BY A UPS. THE LED HOUSING SHALL BE NEMA 4X, IP65 OR IP66, RATED FOR OUTDOOR USE AND BE TAMPER/SHATTER RESISTANT. IT SHALL BE A DOMED ENCLOSURE CONTAINING A RED LENS WITH LED THAT IS VISIBLE FROM 100 FOOT MINIMUM. THE ENCLOSURE AND LED MODULE SHOULD BE PLACED ON THE SIDE OF THE UPS CABINET FACING TOWARDS THE MAINLINE ROADWAY AND SEALED FROM WATER INTRUSION. IT SHOULD BE WIRED USING MINIMUM 20GA STRANDED, INSULATED HOOKUP WIRE TO THE STATUS RELAY OUTPUTS OF THE UPS. THE WIRES SHALL BE TERMINATED BY LUGS AT THE DISPLAY END AND PERMANENTLY LABELED "BACKUP POWER STATUS DISPLAY," WITH WIRE POLARITY INDICATED. THE RED LED SHALL ONLY ILLUMINATE TO INDICATE THE CABINET IS OPERATING UNDER UPS BACKUP POWER (THE "BACKUP" OPERATING CONDITION). THIS ITEM INCLUDES PROGRAMMING THE UPS STATUS RELAY OUTPUTS TO PRODUCE THE LAMP STATUS DISPLAYS. THESE STATUS DISPLAYS WILL BE SOLID 100% DUTY CYCLE (NOT FLASHING) DISPLAYS. THE OPERATING VOLTAGE OF THE LED LAMP SHALL BE 120V AC UNLESS OTHERWISE INDICATED.

809 STOP-LINE RADAR DETECTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR MATRIX DETECTION UNIT. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.
2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.
3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.
4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.
5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.
6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).
7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.
8. THE CONTRACTOR SHALL INSTALL THE RADAR DETECTION PRIOR TO MILLING/DISABLING EXISTING LOOPS.
9. THE INSTALLATION SHALL INCLUDE ALL CONTROLLER PROGRAMMING FOR COMPLETE INSTALLATION, WHICH INCLUDES MODIFICATIONS FOR REMOVAL OF EXISTING DETECTION.

PAYMENT FOR ITEM 809 STOP-LINE RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT AND CONNECTIONS TESTED AND ACCEPTED.

809 ADVANCE RADAR DETECTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR ADVANCE DETECTION UNIT (MODEL SS-200E). THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.
2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.
3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.
4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.
5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.
6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).
7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.
8. THE CONTRACTOR SHALL INSTALL THE RADAR DETECTION PRIOR TO MILLING/DISABLING EXISTING LOOPS.
9. THE INSTALLATION SHALL INCLUDE ALL CONTROLLER PROGRAMMING FOR COMPLETE INSTALLATION, WHICH INCLUDES MODIFICATIONS FOR REMOVAL OF EXISTING DETECTION. PAYMENT FOR ITEM 809 ADVANCE RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT, CONNECTIONS TESTED AND ACCEPTED, AND ANY OTHER NECESSARY HARDWARE TO ESTABLISH A FULLY FUNCTIONAL DETECTION SYSTEM.

PAYMENT FOR ITEM 809 ADVANCE RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT, CONNECTIONS TESTED AND ACCEPTED, AND ANY OTHER NECESSARY HARDWARE TO ESTABLISH A FULLY FUNCTIONAL DETECTION SYSTEM.

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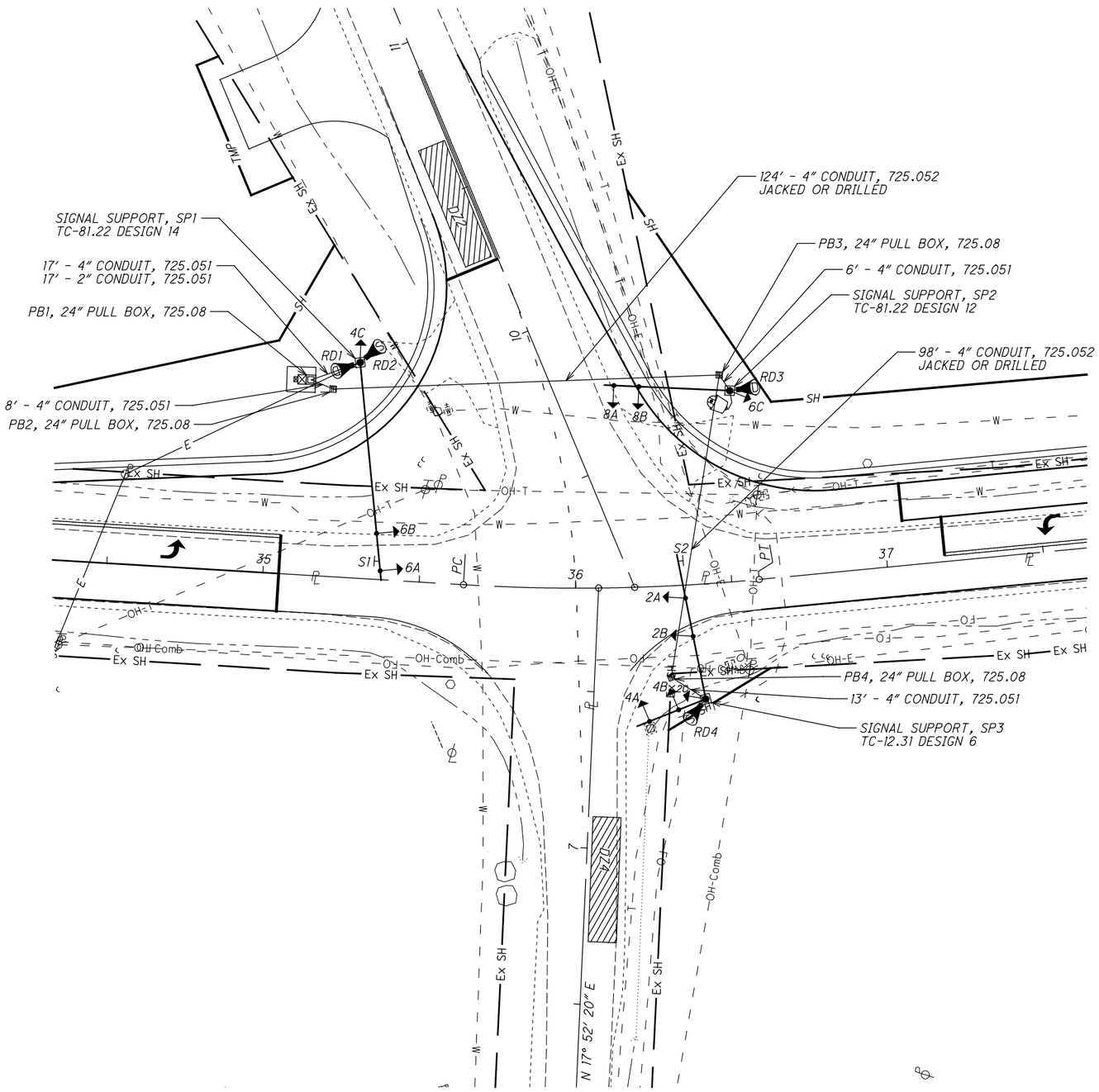
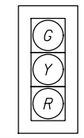


SIGNAL HEADS



2A, 2B, 2C, 4A, 4B, 4C
6A, 6B, 6C, 8A, 8B

SIGNS

R3-5L-30
S1, S2

PULL BOX TABLE

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
CONTROLLER CABINET AND WORK PAD (332)		
TRAFFIC PULL BOX	TR	TR
DILEMMA ZONE RADAR DETECTION UNIT	D	D
STOP BAR RADAR DETECTION UNIT	S	S
PTZ CAMERA		
DETECTION ZONE		

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED PMM
CHECKED TCS

TRAFFIC SIGNAL PLAN
SR 73 AND SR 380

CLI-73-2.66

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SIGNAL TIMING CHART

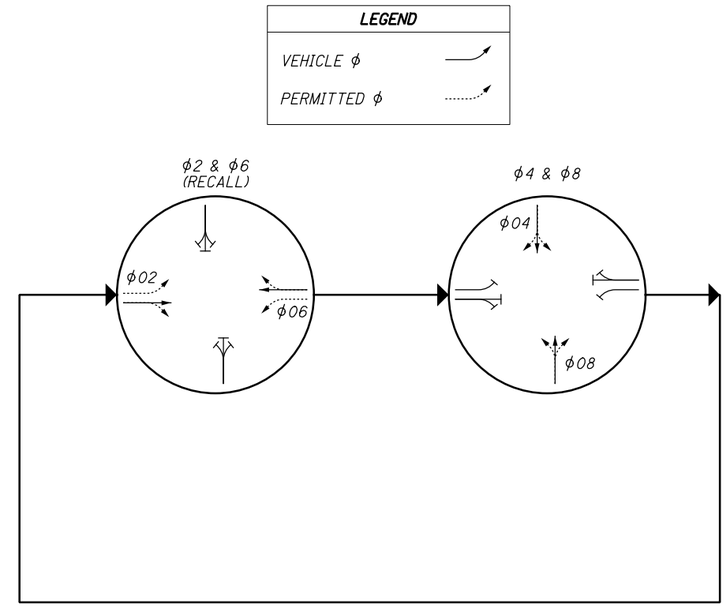
INTERSECTION: SR 73 @ SR 380
MAINTAINING AGENCY: ODOT

START UP								
START IN: ALL RED	DUAL ENTRY: YES		PHASES:		2+6, 4+8			
TIME FOR FLASH OR ALL RED: 6 SEC	REST IN RED:		RING 1	-		RING 2	-	
FIRST PHASE(S): 2 + 6	OVERLAP			A	B	C	D	
COLOR DISPLAYED: GREEN	PHASES			-	-	-	-	

INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		-	EB	-	SB	-	WB	-	NB
MINIMUM GREEN (INITIAL)	(SEC.)	-	20	-	10	-	20	-	10
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	-	1	-	4	-	1	-	4
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	-	80	-	40	-	80	-	40
MAXIMUM GREEN II	(SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE	(SEC.)	-	5	-	5	-	5	-	5
ALL RED CLEARANCE	(SEC.)	-	2	-	1.5	-	2	-	1.5
WALK	(SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE	(SEC.)	-	-	-	-	-	-	-	-
RECALL — MAXIMUM	(ON/OFF)	-	-	-	-	-	-	-	-
RECALL — MINIMUM	(ON/OFF)	-	ON	-	-	-	ON	-	-
RECALL — PEDESTRIAN	(ON/OFF)	-	-	-	-	-	-	-	-
MEMORY	(ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

PHASING DIAGRAM



COORDINATION TIMING CHART

DAY(S) OF WEEK	PLAN NAME	HOURS	PLAN NO.	CYCLE LENGTH (SEC)
M-F	FREE	0:00-6:30	100	-
M-F	1	6:30-9:00	2	90
M-F	2	9:00-15:00	1	80
M-F	3	15:00-19:00	3	100
M-F	FREE	19:00-0:00	100	-
S-S	FREE	0:00-7:00	100	-
S-S	4	7:00-19:00	4	100
S-S	FREE	19:00-0:00	100	-

PHASE	1	2	3	4	5	6	7	8	OFFSET 1 (SEC)	OFFSET 2 (SEC)
DIRECTION	-	EB	-	SB	-	WB	-	NB		
PLAN NO.	SPLITS (G+Y+AR) IN SECONDS									
1	-	47	-	33	-	47	-	33	0	-
2	-	58	-	32	-	58	-	32	0	-
3	-	71	-	29	-	71	-	29	0	-
4	-	70	-	30	-	70	-	30	0	-

NOTES:

- RADAR DETECTION UNITS FOR DILEMMA ZONE DETECTION SHALL PLACE A CONSTANT CALL TO THE CONTROLLER WHEN VEHICLES TRAVEL TIMES TO THE STOP BAR ARE BETWEEN 2.5 AND 6 SECONDS. SPEED TRIGGER SHALL BE SET FOR VEHICLES TRAVELING 35 MPH AND GREATER.
- RADAR SHALL HAVE QUEUE DETECTION CONFIGURED AND A ZONE PLACED AT 100-200 FEET FROM STOP BAR FOR SLOW MOVING VEHICLE EXTENSIONS. SPEED TRIGGER SHALL BE SET AT 1-35 MPH.
- ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.

RADAR DETECTION CHART

RADAR DETECTOR NUMBER	DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY PROGRAMMED IN CONTROLLER (SEC)	EXTENSION PROGRAMMED IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
RD1	DZ1	EB THRU	PRESENCE	2	-	-	-	DILEMMA ZONE	-
RD2	DZ2	SB THRU	PRESENCE	4	-	-	-	CALL/EXTEND PHASE 4	40'
RD3	DZ3	WB THRU	PRESENCE	6	-	-	-	DILEMMA ZONE	-
RD4	DZ4	NB THRU	PRESENCE	8	-	-	-	CALL/EXTEND PHASE 8	40'

NOTE: DILEMMA ZONE SPEED THRESHOLD >30 MPH

CALCULATED PMM
CHECKED TCS

TRAFFIC SIGNAL PLAN DETAILS
SR 73 & SR 380

CLI-73-2.66

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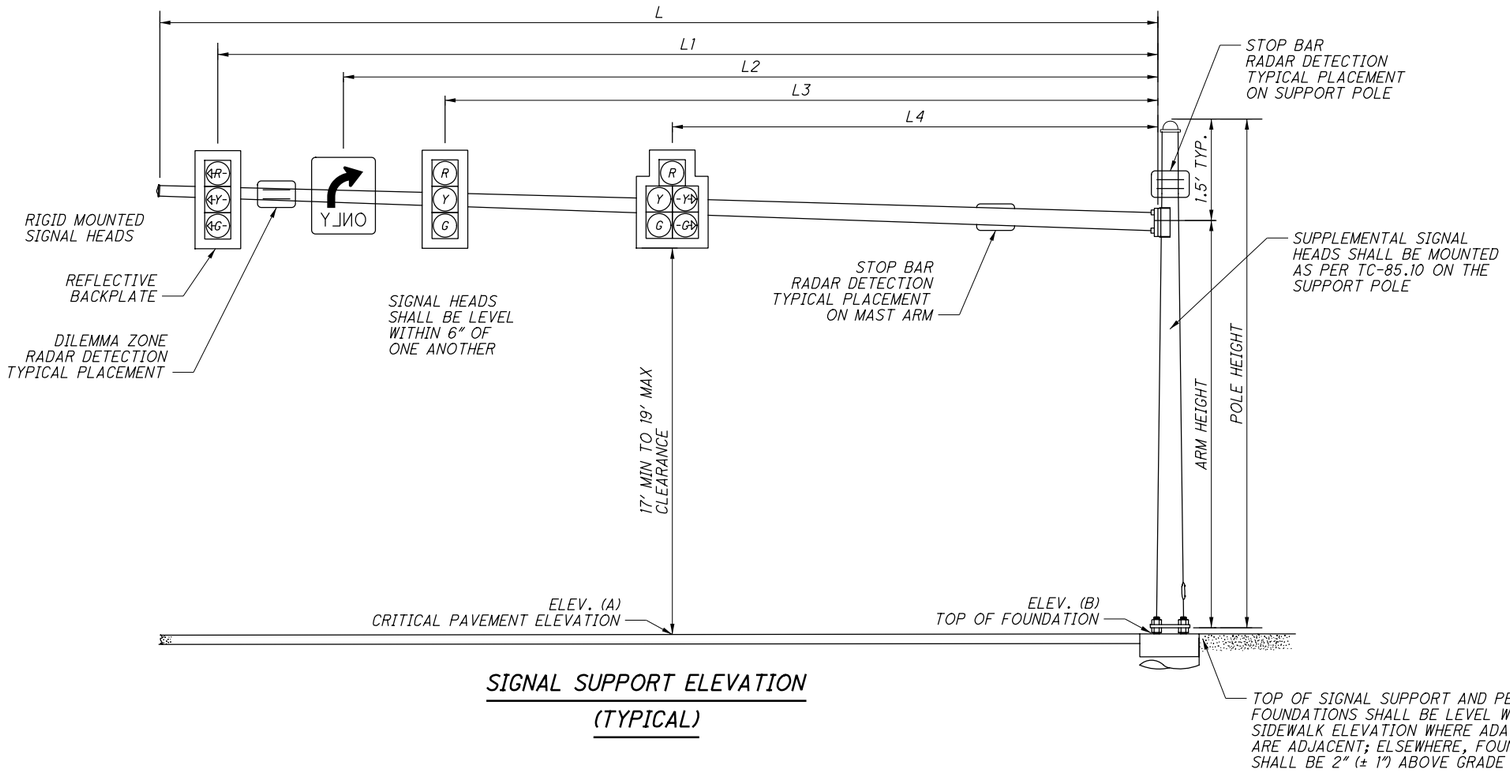
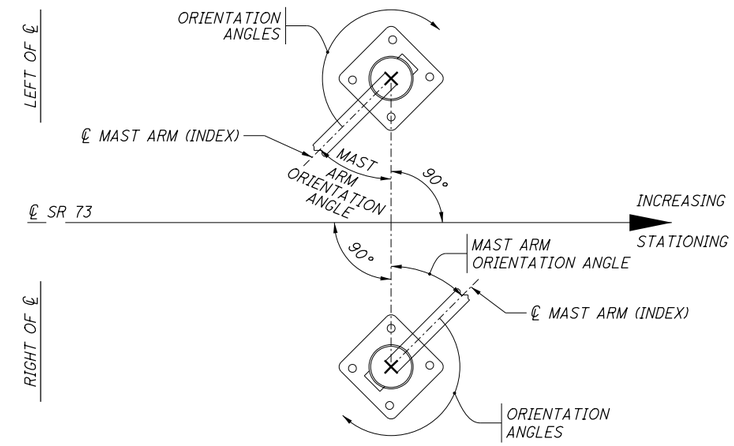


SIGNAL SUPPORT ELEVATION (TYPICAL)



POLE ORIENTATION

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS											ORIENTATION ANGLES FROM MAST ARM								
			A	B	DESIGN TYPE	MAST ARM DESIGN NO.	POLE DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	L3	L4	L5	L6	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	SUPPLEMENTAL SIGNAL HEAD	BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP
								FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG	DEG
SP1	35+27.0	68.9	1005.92	1002.27	TC-81.22	14	14	27	23.5	70	67	64	55	-	-	-	351	-	-	-	70	190	-	180	-
SP2	36+54.8	61.0	1004.18	1003.97	TC-81.22	12	12	25.5	20.5	40	37	29	-	-	-	-	97	-	-	-	-	190	-	180	-
SP3	36+39.3	36.7	1005.77	1004.67	TC-12.31	12	6	23	21.5	47	45	33	21	-	-	-	353	260	-	-	-	291	-	180	-
SP3	36+39.3	36.7	1004.89	1004.67	TC-12.31	2	6	-	20	23.5	19	9	-	-	-	-	-	-	-	-	-	-	-	-	-

CALCULATED PMM
CHECKED TCS

TRAFFIC SIGNAL PLAN DETAILS
SR 73 & SR 380

CLI-73-2.66

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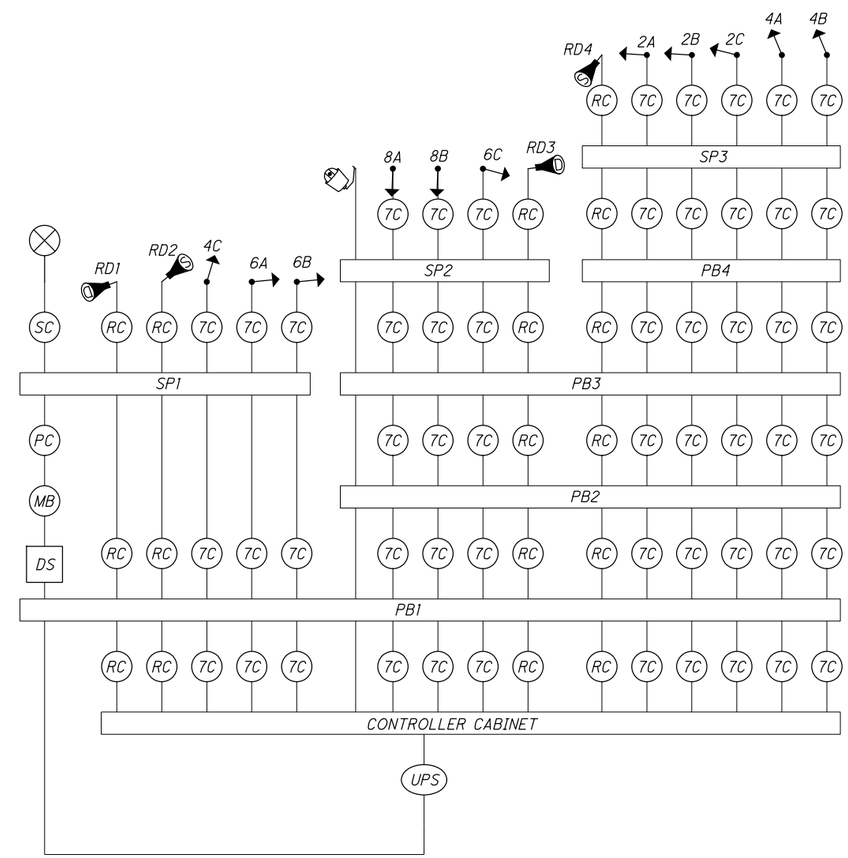
FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A, 2B, 2C (EB)	R	ϕ2 RED	R	-	-	-	-
	Y	ϕ2 YEL			-	-	
	G	ϕ2 GRN			-	-	
	-	-		-	-	-	
	-	-			-	-	
4A, 4B, 4C (SB)	R	ϕ4 RED	R	-	-	-	-
	Y	ϕ4 YEL			-	-	
	G	ϕ4 GRN		-	-	-	
	-	-		-	-	-	-
	-	-			-	-	
6A, 6B, 6C (WB)	R	ϕ6 RED	R		-	-	
	Y	ϕ6 YEL		-	-	-	
	G	ϕ6 GRN			-	-	
	-	-		PEDESTRIAN MOVEMENTS			
	-	-		-	-	-	-
8A, 8B (NB)	R	ϕ8 RED	R	-	-	-	
	Y	ϕ8 YEL		-	-	-	-
	G	ϕ8 GRN			-	-	
	-	-		-	-	-	-
	-	-		-	-	-	
-	-	-	-	-	-	-	-
	-	-		-	-	-	
-	-	-		OVERLAPS			
-	-	-	-	-	-	-	-
	-	-			-	-	
-	-	-		-	-	-	-
LS = LOAD SWITCH					-	-	

WIRING DIAGRAM



LEGEND

	TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		POWER SOURCE
	DILEMMA ZONE RADAR DETECTION UNIT	SC	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG
	STOP LINE RADAR DETECTION UNIT	PC	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG
	PTZ CAMERA	SP 1	SIGNAL SUPPORT POLE NO. __
7C	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	MB	METER BASE
RC	RADAR DETECTION CABLE	DS	DUAL LIGHTING/SIGNAL DISCONNECT SWITCH
		UPS	UNINTERRUPTIBLE POWER SUPPLY CABLE

CALCULATED PMM
CHECKED TCS

TRAFFIC SIGNAL PLAN DETAILS
SR 73 & SR 380

CLI-73-2.66

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SUB-SUMMARY

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
625	25408	17	FT	CONDUIT, 2", 725.051
625	25604	44	FT	CONDUIT, 4", 725.051
625	25908	222	FT	CONDUIT, JACKED OR DRILLED,725.052, 4"
625	29000	44	FT	TRENCH
625	30706	4	EACH	PULL BOX, 725.08, 24"
625	32000	4	EACH	GROUND ROD
630	79100	2	EA	SIGN HANGER ASSEMBLY, MAST ARM
630	80100	15	SF	SIGN, FLAT SHEET
632	05006	11	EACH	VEHICULAR SIGNAL HEAD, (LED), BLACK, 3-SECTION, 12" LENS, 1-WAY,
				POLYCARBONATE, WITH BACKPLATE
632	25000	11	EACH	COVERING OF VEHICULAR SIGNAL HEAD
632	40700	2334	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
632	64010	3	EACH	SIGNAL SUPPORT FOUNDATION
632	68300	47	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
632	69800	83	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG
632	70001	1	EACH	POWER SERVICE, AS PER PLAN
632	71240	1	EACH	SIGNAL SUPPORT, TYPE TC-12.31, DESIGN 6 POLE,
				WITH MAST ARMS TC-81.22 DESIGN 12 AND DESIGN 2
632	72130	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12
632	72150	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 14
632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION
633	65521	1	EACH	CABINET, TYPE 332, AS PER PLAN
633	67100	1	EACH	CABINET FOUNDATION
633	67200	1	EACH	CONTROLLER WORK PAD
633	75001	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN
809	60000	1	EACH	CCTV IP-CAMERA SYSTEM, DOME-TYPE
809	69000	2	EACH	ADVANCE RADAR DETECTION
809	69100	2	EACH	STOP LINE RADAR DETECTION
809	69123	1	EACH	ATC CONTROLLER, AS PER PLAN

CALCULATED PMM
CHECKED TCS

TRAFFIC SIGNAL SUB-SUMMARY
SR 73 & SR 380

CLI-73-2.66

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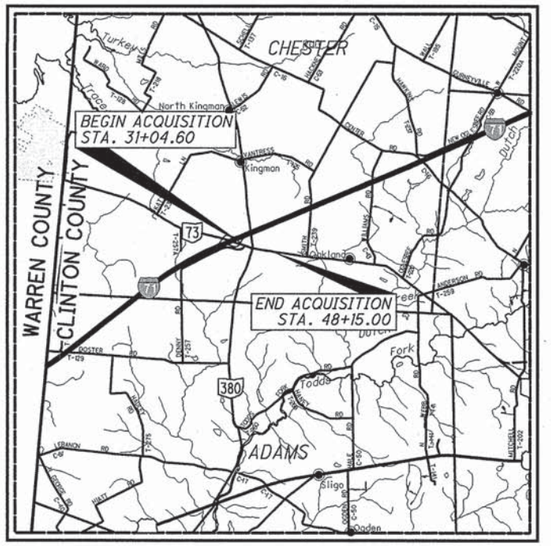
RIGHT OF WAY LEGEND SHEET
CLI-73-2.66

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994



SCALE IN MILES
0 1 2 3 4

LOCATION MAP

LATITUDE: N 39° 29′ 04″ LONGITUDE: 83° 56′ 12″

UTILITY OWNERS			
WATER	WESTERN WATER COMPANY ATTN: KURT MEEKER 1775 S.R. 28 GOSHEN, OHIO 45122 (513)-899-3211, EXT. 22 EMAIL: KMEEKER@WESTERN-H2O.COM	TELEPHONE	MCI/ VERIZON ATTN: AL GUEST 120 RAVINE STREET AKRON, OHIO 44303 PHONE: (330)-253-8267 EMAIL: ALLAN.GUEST@VERIZONBUSINESS.COM
ELECTRIC	DAYTON POWER AND LIGHT COMPANY ATTN: WILLIAM GOURLEY 1900 DRYDEN ROAD DAYTON, OHIO 45439 PHONE: (937)-331-4521 EMAIL: WILLIAM.GOURLEY@AES.COM	WATER	CITY OF WILMINGTON ATTN: BRIAN SHIDAKER 69 N. SOUTH STREET WILMINGTON, OHIO 45177 PHONE: (937)-383-5543 EMAIL: BSHIDAKER@WILMINGTONOH.ORG
TELEPHONE/ INTERNET/ CABLE	FRONTIER COMMUNICATIONS ATTN: DAVID LONGWORTH 241 SOUTH NELSON AVENUE WILMINGTON, OHIO 45177 PHONE: (937)-382-0055 EMAIL: DAVID.M.LONGWORTH@FTR.COM	COUNTY ENGINEER	CLINTON COUNTY ENGINEERS OFFICE ATTN: JEFFREY LINKOUS 1326 FIFE AVENUE WILMINGTON, OHIO 45177 PHONE: (937)-382-2078 EMAIL: JLINKOUS@CLINTONCOUNTYENGINEER.ORG
TELEPHONE/ INTERNET/ CABLE	INDEPENDENTS FIBER NETWORK/ COM NET ATTN: KATIE RUCK 13888 S. DIXIE DRIVE WAPAKONETA, OHIO 45895 PHONE: (419)-739-3124 EMAIL: KRUCK@CNITEAM.COM		

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

INDEX OF SHEETS:

LEGEND SHEET	1
CENTERLINE PLAT	2
PROPERTY MAP	3
SUMMARY OF ADDITIONAL R/W	4-5
R/W TOPOGRAPHIC SHEETS	6-14 (EVEN SHEETS)
R/W BOUNDARY SHEETS	7-15 (ODD SHEETS)

CONVENTIONAL SYMBOLS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (Ex) (Pr)
Center Line
Right of Way (Ex) Ex R/W
Right of Way (Pr) R/W
Standard Highway Ease.(Ex) Ex SH
Standard Highway Ease.(Pr) SH
Temporary Right of Way TMP
Channel Ease. (Pr) CH
Utility Ease. (Ex) Ex U
Railroad or
Guardrail (Ex) (Pr)
Construction Limits
Edge of Pavement (Ex)
Edge of Pavement (Pr)
Edge of Shoulder (Ex)
Edge of Shoulder (Pr)
Ditch / Creek (Ex)
Ditch / Creek (Pr)
Tree Line (Ex)
Ownership Hook Symbol , Example
Property Line Symbol , Example
Break Line Symbol , Example
Tree (Pr) , Tree (Ex) , Shrub (Ex)
Tree (Remove) , Shrub (Remove)
Evergreen (Ex) , Stump
Evergreen (Remove) , Stump (Remove)
Wetland (Pr) , Grass (Pr) , Aerial Target
Post (Ex) , Mailbox (Ex) , Mailbox (Pr)
Light (Ex) , Telephone Marker (Ex)
Fire Hydrant (Ex) , Water Meter (Ex)
Water Valve (Ex) , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex)

PROJECT DESCRIPTION

INTERSECTION IMPROVEMENT SR 73 AND SR 380 WIDENING OF INTERSECTION FOR ADDITION OF EASTBOUND AND WESTBOUND LEFT TURN LANES ON SR 73 AND UPGRADE THE SIGNAL WITH MAST ARMS AND BACKPLATES.

PLANS PREPARED BY:

FIRM NAME: IBI GROUP
R/W DESIGNER: JENNIFER KELLEY, P.E.
BENJAMIN BROWN, P.E.
R/W REVIEWER: RYAN HUTSON, P.E., P.S.
FIELD REVIEWER: RYAN HUTSON, P.E., P.S.
PRELIMINARY FIELD REVIEW DATE: 6/15/20
TRACINGS FIELD REVIEW DATE: 7/24/20
OWNERSHIP VERIFIED BY: JENNIFER KELLEY, P.E.
DATE COMPLETED: 7/27/20
PLAN COMPLETION DATE: 7/31/20

STRUCTURE KEY

RESIDENTIAL
COMMERCIAL
OUT-BUILDING

LEGEND:
WD = WARRANTY DEED
SH = STANDARD HIGHWAY EASEMENT
T = TEMPORARY EASEMENT

I, RYAN M. HUTSON, P. S. have reviewed and field verified a survey of the existing conditions performed by the Ohio Department of Transportation in 2020. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinate System, SOUTH Zone on NAD 83 (2011) datum. The Project Coordinates (US Survey feet) are relative to State Plane Grid Coordinates (US Survey feet) by a Project Adjustment Factor multiplier of 1.00000. As a part of this project I have reestablished the locations of the existing property lines and centerline of existing Right of Way for property takes contained herein based on field survey information provided by the Ohio Department of Transportation. As part of this project I have established the proposed property lines, calculated the Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels shown herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

RYAN M. HUTSON, Professional Land Surveyor No. 8586,

Date: 7-31-20

SURVEYORS SEAL

STATE OF OHIO
RYAN M. HUTSON
8586
REGISTERED
PROFESSIONAL SURVEYOR

FEDERAL PROJECT NO. E190(557)
PID NO. 109350
CALCULATED JMK/BSB
CHECKED RMH

RIGHT OF WAY LEGEND SHEET

CLI-73-2.66

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CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994

BASIS OF EXISTING ℄ OF R/W AND R/W WIDTH:

CENTERLINE I-71, S.R. 73 AND S.R. 380 ESTABLISHED FROM MONUMENT FOUND AT CENTERLINE STATIONS 511+73.53, 520+00 AND 525+00 AS REFERENCED ON ODOT R/W PLAN WAR-1-20.84/CLI-1-0.00 AND MONUMENTATION FOUND ON VARIOUS ADJOINING PROPERTIES.

℄ SR-73 CURVE DATA

CURVE 1	CURVE 2
P.I.Sta. 30+24.11	P.I.Sta. 36+11.60
Δ = 1° 10′ 34″ (RT)	Δ = 8° 56′ 42″ (LT)
Dc = 0° 28′ 00″	Dc = 9° 27′ 12″
R = 12,277.67′	R = 606.09′
T = 126.02′	T = 47.41′
L = 252.03′	L = 94.62′
E = 0.65′	E = 1.85′
C = 252.03′	C = 94.53′
C.B. = S 71° 48′ 19″ E	C.B. = S 75° 41′ 23″ E

℄ EX. R/W SR-73 CURVE DATA

CURVE 3
P.I.Sta. 30+24.11
Δ = 1° 10′ 34″ (RT)
Dc = 0° 28′ 00″
R = 12,277.67′
T = 126.02′
L = 252.02′
E = 0.65′
C = 252.02′
C.B. = S 71° 47′ 27″ E

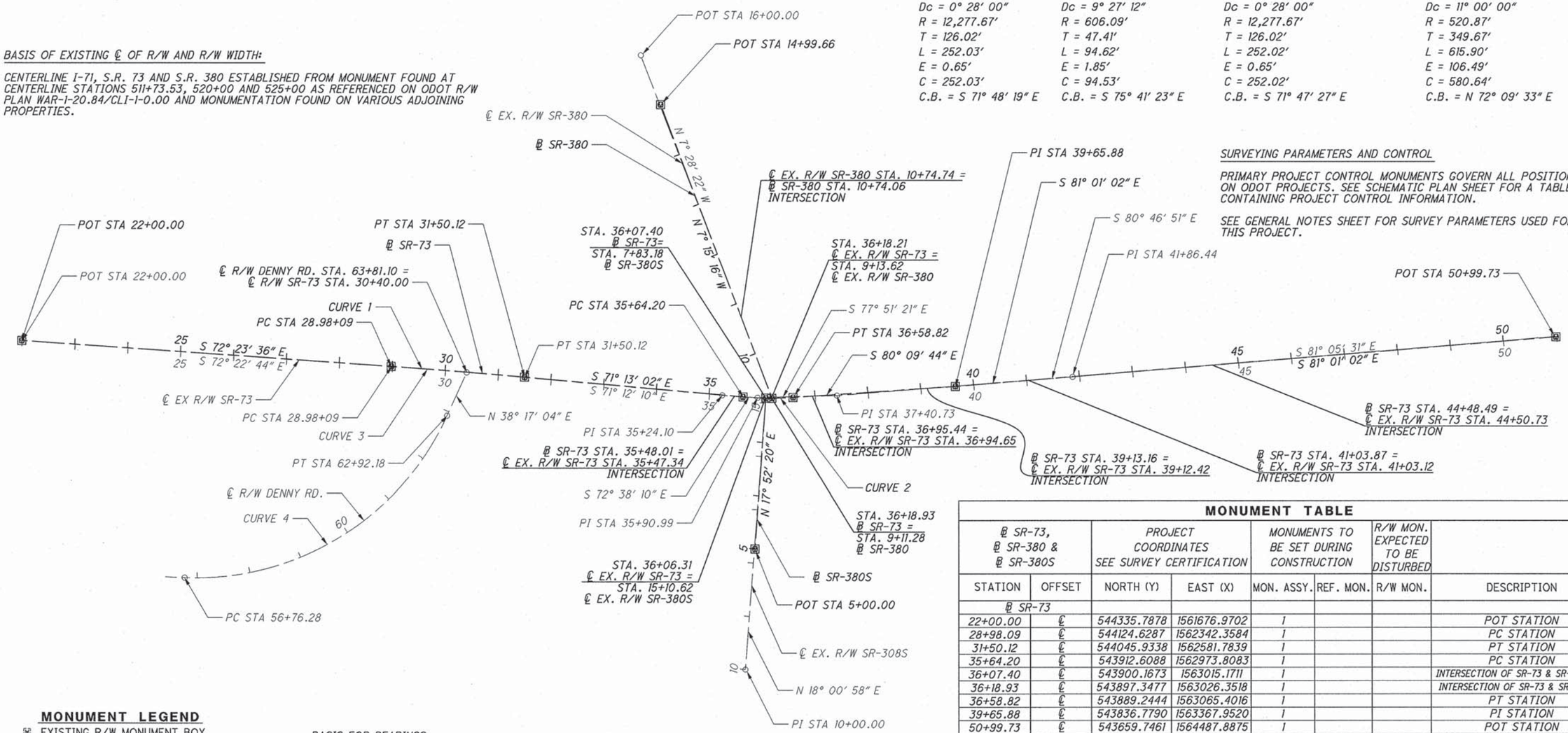
℄ EX. R/W DENNY RD. CURVE DATA

CURVE 4
P.I.Sta. 60+25.95
Δ = 67° 44′ 57″ (LT)
Dc = 11° 00′ 00″
R = 520.87′
T = 349.67′
L = 615.90′
E = 106.49′
C = 580.64′
C.B. = N 72° 09′ 33″ E

SURVEYING PARAMETERS AND CONTROL

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SCHEMATIC PLAN SHEET FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

SEE GENERAL NOTES SHEET FOR SURVEY PARAMETERS USED FOR THIS PROJECT.



MONUMENT TABLE

℄ SR-73, ℄ SR-380 & ℄ SR-380S		PROJECT COORDINATES SEE SURVEY CERTIFICATION		MONUMENTS TO BE SET DURING CONSTRUCTION		R/W MON. EXPECTED TO BE DISTURBED	
STATION	OFFSET	NORTH (Y)	EAST (X)	MON. ASSY.	REF. MON.	R/W MON.	DESCRIPTION
℄ SR-73							
22+00.00	℄	544335.7878	1561676.9702	1			POT STATION
28+98.09	℄	544124.6287	1562342.3584	1			PC STATION
31+50.12	℄	544045.9338	1562581.7839	1			PT STATION
35+64.20	℄	543912.6088	1562973.8083	1			PC STATION
36+07.40	℄	543900.1673	1563015.1711	1			INTERSECTION OF SR-73 & SR-380S
36+18.93	℄	543897.3477	1563026.3518	1			INTERSECTION OF SR-73 & SR-380
36+58.82	℄	543889.2444	1563065.4016	1			PT STATION
39+65.88	℄	543836.7790	1563367.9520	1			PI STATION
50+99.73	℄	543659.7461	1564487.8875	1			POT STATION
℄ SR-380							
14+99.66	℄	544481.0250	1562952.0530	1			POT STATION
℄ SR-380S							
5+00.00	℄	543630.6570	1562928.2660	1			POT STATION
TOTAL CARRIED TO GENERAL SUMMARY SHEET				11			

MONUMENT LEGEND

- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. IRON PIN SET W/ ID CAP
- R.F. IRON PIPE FOUND
- R.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

BASIS FOR BEARINGS:

ALL BEARINGS SHOWN ARE FOR PROJECT USE ONLY.
ALL BEARINGS SHOWN ARE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE 3402.

STATIONING OF THESE PLANS IS BASED ON THE CENTERLINE OF EXISTING SR-73, SR-380, AND SR-380S RIGHT OF WAY

SETTING OF ALL MONUMENTS SHALL BE PERFORMED BY A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE MONUMENT ASSEMBLIES AND REFERENCE MONUMENTS WILL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE IRON PIN AND CAP (WHEN REQUIRED) ARE TO BE INSTALLED BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN IN THIS TABLE, REQUIRE PRIOR APPROVAL FROM THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. IN THE EVENT THAT CHANGES OR ALTERATIONS ARE APPROVED, A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR MONUMENT ASSEMBLIES, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1.

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
COUNTY RECORDER

I, RYAN M. HUTSON, P. S. have reviewed and field verified a survey of the existing conditions performed by the Ohio Department of Transportation in 2020. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinate System, SOUTH Zone on NAD 83 (2011) datum. The Project Coordinates (US Survey feet) are relative to State Plane Grid Coordinates (US Survey feet) by a Project Adjustment Factor multiplier of 1.00000. As a part of this project I have reestablished the locations of the existing property lines and centerline of existing Right of Way for property takes contained herein based on field survey information provided by the Ohio Department of Transportation. As part of this project I have established the proposed property lines, calculated the Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels shown herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

Ryan M. Hutson
RYAN M. HUTSON, Professional Land Surveyor No. 8586,
Date: 7-31-20

SURVEYORS SEAL

STATE OF OHIO
RYAN M. HUTSON
8586
REGISTERED
PROFESSIONAL SURVEYOR

HORIZONTAL SCALE IN FEET 0 50 100 200

PID NO. 109350

R/W DESIGNER JMK/BSB
R/W REVIEWER RMH

CENTERLINE PLAT

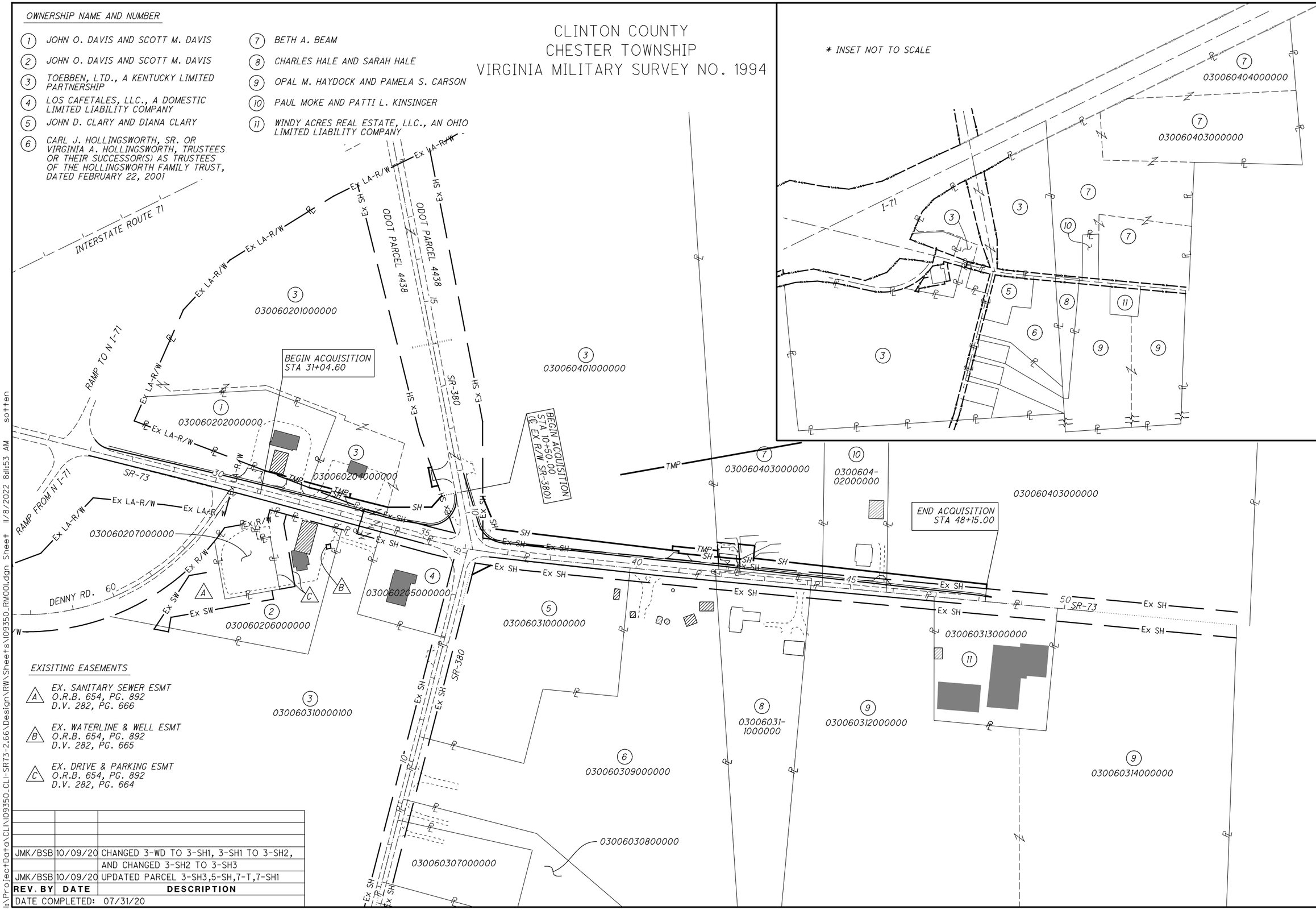
CLI-73-2.66

\\10.120.108.5\IBIShare\124626_BN_D8\7.0_Production\7.03_Design\04_Civil\109350_CLI-73-2.66\Design\RW\Sheets\109350_RC001.dgn Sheet 2020-07-31 11:52:30 AM Ben.Brown

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994

OWNERSHIP NAME AND NUMBER

1. JOHN O. DAVIS AND SCOTT M. DAVIS
2. JOHN O. DAVIS AND SCOTT M. DAVIS
3. TOEBBEN, LTD., A KENTUCKY LIMITED PARTNERSHIP
4. LOS CAFETALES, LLC., A DOMESTIC LIMITED LIABILITY COMPANY
5. JOHN D. CLARY AND DIANA CLARY
6. CARL J. HOLLINGSWORTH, SR. OR VIRGINIA A. HOLLINGSWORTH, TRUSTEES OR THEIR SUCCESSOR(S) AS TRUSTEES OF THE HOLLINGSWORTH FAMILY TRUST, DATED FEBRUARY 22, 2001
7. BETH A. BEAM
8. CHARLES HALE AND SARAH HALE
9. OPAL M. HAYDOCK AND PAMELA S. CARSON
10. PAUL MOKE AND PATTI L. KINSINGER
11. WINDY ACRES REAL ESTATE, LLC., AN OHIO LIMITED LIABILITY COMPANY



REV. BY	DATE	DESCRIPTION
JMK/BSB	10/09/20	CHANGED 3-WD TO 3-SH1, 3-SH1 TO 3-SH2,
		AND CHANGED 3-SH2 TO 3-SH3
JMK/BSB	10/09/20	UPDATED PARCEL 3-SH3,5-SH,7-T,7-SH1

DATE COMPLETED: 07/31/20

HORIZONTAL SCALE IN FEET 0 50 100 200

PID NO. 109350

R/W DESIGNER JMK/BSB
R/W REVIEWER RMH

PROPERTY MAP

CLI-73-2.66

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TOTAL NUMBER OF :

5 OWNERSHIPS 0 TOTAL TAKES

11 PARCELS 0 OWNERSHIPS W/ STRUCTURES INVOLVED

NET TAKE = GROSS TAKE - PRO IN TAKE

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

ALL AREAS IN ACRES

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
1-T	JOHN O. DAVIS AND SCOTT M. DAVIS		691	110	030060202000000	1.400	0.000	0.014	0.000	0.014				STATE	TO GRADE AND SEED AND CONSTRUCT DRIVEWAY		
															19.31 LF GUARDRAIL TO BE REMOVED		
2	JOHN O. DAVIS AND SCOTT M. DAVIS		691	126	030060206000000	2.443	0.000								NO TAKE		
3-SH1	TOEBBEN, LTD., A		573	72	030060204000000	1.100	0.000	0.048	0.000	0.048		1.052					
	KENTUCKY LIMITED PARTNERSHIP				030060201000000	6.657	1.666 (c)	0.000	0.000	0.000		4.852					
					030060401000000	15.962	1.878 (c)	0.000	0.000	0.000							
			719	86	030060310000100	49.440	0.735 (c)	0.000	0.000	0.000							
					TOTAL	73.159	4.279	0.048	0.000	0.048							
3-SH2	TOEBBEN, LTD., A		573	72	030060204000000	1.100	0.000	0.000	0.000	0.000							
	KENTUCKY LIMITED PARTNERSHIP				030060201000000	6.657	1.666 (c)	0.139	0.000	0.139							
					030060401000000	15.962	1.878 (c)	0.000	0.000	0.000							
			719	86	030060310000100	49.440	0.735 (c)	0.000	0.000	0.000							
					TOTAL	73.159	4.279	0.139	0.000	0.139							
3-SH3	TOEBBEN, LTD., A		573	72	030060204000000	1.100	0.000	0.000	0.000	0.000							
	KENTUCKY LIMITED PARTNERSHIP				030060201000000	6.657	1.666 (c)	0.000	0.000	0.000							
					030060401000000	15.962	1.878 (c)	0.311	0.000	0.311		13.773					
			719	86	030060310000100	49.440	0.735 (c)	0.000	0.000	0.000							
					TOTAL	73.159	4.279	0.311	0.000	0.311							
3-T1	TOEBBEN, LTD., A		573	72	030060204000000	1.100	0.000	0.022	0.000	0.022					TO GRADE AND SEED AND CONSTRUCT DRIVEWAY		
	KENTUCKY LIMITED PARTNERSHIP				030060201000000	6.657	1.666 (c)	0.000	0.000	0.000							
					030060401000000	15.962	1.878 (c)	0.000	0.000	0.000							
			719	86	030060310000100	49.440	0.735 (c)	0.000	0.000	0.000							
					TOTAL	73.159	4.279	0.022	0.000	0.022							
3-T2	TOEBBEN, LTD., A		573	72	030060204000000	1.100	0.000	0.000	0.000	0.000							
	KENTUCKY LIMITED PARTNERSHIP				030060201000000	6.657	1.666 (c)	0.011	0.000	0.011					TO GRADE AND SEED AND CONSTRUCT DRIVEWAY		
					030060401000000	15.962	1.878 (c)	0.000	0.000	0.000							
			719	86	030060310000100	49.440	0.735 (c)	0.000	0.000	0.000							
					TOTAL	73.159	4.279	0.011	0.000	0.011							
3-T3	TOEBBEN, LTD., A		573	72	030060204000000	1.100	0.000	0.000	0.000	0.000							
	KENTUCKY LIMITED PARTNERSHIP				030060201000000	6.657	1.666 (c)	0.000	0.000	0.000					TO EXCAVATE, GRADE AND SEED		
					030060401000000	15.962	1.878 (c)	0.035	0.000	0.035							
			719	86	030060310000100	49.440	0.735 (c)	0.000	0.000	0.000							
					TOTAL	73.159	4.279	0.035	0.000	0.035							
4	LOS CAFETALES, LLC,		1026	409	030060205000000	0.990	0.246 (c)							STATE	NO TAKE		
	A DOMESTIC LIMITED LIABILITY COMPANY																

TYPES OF TITLE LEGEND:
WD = WARRANTY DEED
SH = STANDARD HIGHWAY EASEMENT
T = TEMPORARY EASEMENT

(c) = CALCULATED AREA

* DENOTES RIGHT OF WAY ENCROACHMENT

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

REV. BY	DATE	DESCRIPTION
DME	03/05/21	ADDED PAR 3T3
JMK/BSB	10/09/20	CHANGED 3-WD TO 3-SH1, 3-SH1 TO 3-SH2, AND CHANGED 3-SH2 TO 3-SH3
JMK/BSB	10/09/20	UPDATED PARCEL 3-SH3

FIELD REVIEW BY RYAN HUTSON DATE: 07/24/20

OWNERSHIP VERIFIED BY JENNIFER KELLEY DATE: 07/27/20

DATE COMPLETED: 07/31/20

FEDERAL PROJECT NO. E190(557)

PID NO. 109350

STATE JOB NO. 489022

R/W DESIGNER JMK/BSB

R/W REVIEWER RMH

SUMMARY OF ADDITIONAL RIGHT OF WAY

CLI-73-2.66

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NET TAKE = GROSS TAKE - PRO IN TAKE
NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

ALL AREAS IN ACRES

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
5-SH	JOHN D. CLARY AND DIANA CLARY		1055	863	030060310000000	3.706	0.505 (c)	0.012	0.000	0.012		3.189		STATE			
6	CARL J. HOLLINGSWORTH, SR. OR VIRGINIA A. HOLLINGSWORTH, TRUSTEES OR THEIR SUCCESSOR(S) AS TRUSTEES OF THE HOLLINGSWORTH FAMILY TRUST, DATED FEBRUARY 22, 2001		364	889	030060309000000	8.000	0.139 (c)								NO TAKE		
7-SH1	BETH A. BEAM		932	578	030060403000000	62.260	0.650 (c)	0.097	0.000	0.097		61.448			45 LF WIRE FENCE TO BE REMOVED		
					030060404000000	11.787	0.000 (c)	0.000	0.000	0.000					A JOINT LIFE ESTATE FOR THE BENEFIT OF THOMAS A.		
					TOTAL	74.047		0.097	0.000	0.097					COLLETT AND KAREN R. COLLETT		
															BS PARCEL REQUIRED FOR THE FOLLOWING BILLBOARD;		
															BILLBOARD ADC PERMIT No. 41565, 41589, 44298, 44299		
7-SH2	BETH A. BEAM		932	578	030060403000000	62.260	0.088 (c)	0.065	0.000	0.065					A JOINT LIFE ESTATE FOR THE BENEFIT OF THOMAS A.		
					030060404000000	11.787	0.563 (c)	0.000	0.000	0.000					COLLETT AND KAREN R. COLLETT		
					TOTAL	74.047		0.065	0.000	0.065							
7-T	BETH A. BEAM		932	578	030060403000000	62.260	0.650 (c)	0.018	0.000	0.018					TO GRADE AND SEED AND CONSTRUCT DRIVEWAY		
7-T1								0.026	0.000	0.026					A JOINT LIFE ESTATE FOR THE BENEFIT OF THOMAS A.		
					030060404000000	11.787	0.000 (c)	0.000	0.000	0.000					COLLETT AND KAREN R. COLLETT		
					TOTAL	74.047		0.044	0.000	0.044							
8	CHARLES HALE AND SARAH HALE		716	716	030060311000000	3.500	0.236 (c)								NO TAKE		
9	OPAL M. HAYDOCK AND PAMELA S. CARSON		810	180	030060312000000	27.500	0.199 (c)								NO TAKE		
					030060314000000	47.430	0.289 (c)										
					TOTAL	74.930	0.488										
10-SH	PAUL MOKE AND PATTI L. KINSINGER		69	157	030060402000000	1.495	0.103 (c)	0.054	0.000	0.054		1.338					
11	WINDY ACRES REAL ESTATE, LLC, AN OHIO LIMITED LIABILITY COMPANY		841	256	030060313000000	1.803	0.197 (c)							STATE	NO TAKE		

TYPES OF TITLE LEGEND:
WD = WARRANTY DEED
SH = STANDARD HIGHWAY EASEMENT
T = TEMPORARY EASEMENT

(c) = CALCULATED AREA

* DENOTES RIGHT OF WAY ENCROACHMENT

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

REV. BY	DATE	DESCRIPTION
BCF	8/12/21	ADD PARCEL 7-71
JMK/BSB	10/09/20	REVISED REMARKS FOR PARCEL 7-SH1
JMK/BSB	10/09/20	UPDATED PARCEL 5-SH,7-T,7-SH1

FIELD REVIEW BY RYAN HUTSON DATE: 07/24/20
OWNERSHIP VERIFIED BY JENNIFER KELLEY DATE: 07/27/20
DATE COMPLETED: 07/31/20

FEDERAL PROJECT NO. E190(557)
PID NO. 109350
STATE JOB NO. 489022
R/W DESIGNER JMK/BSB
R/W REVIEWER RMH

SUMMARY OF ADDITIONAL RIGHT OF WAY

CLI-73-2.66

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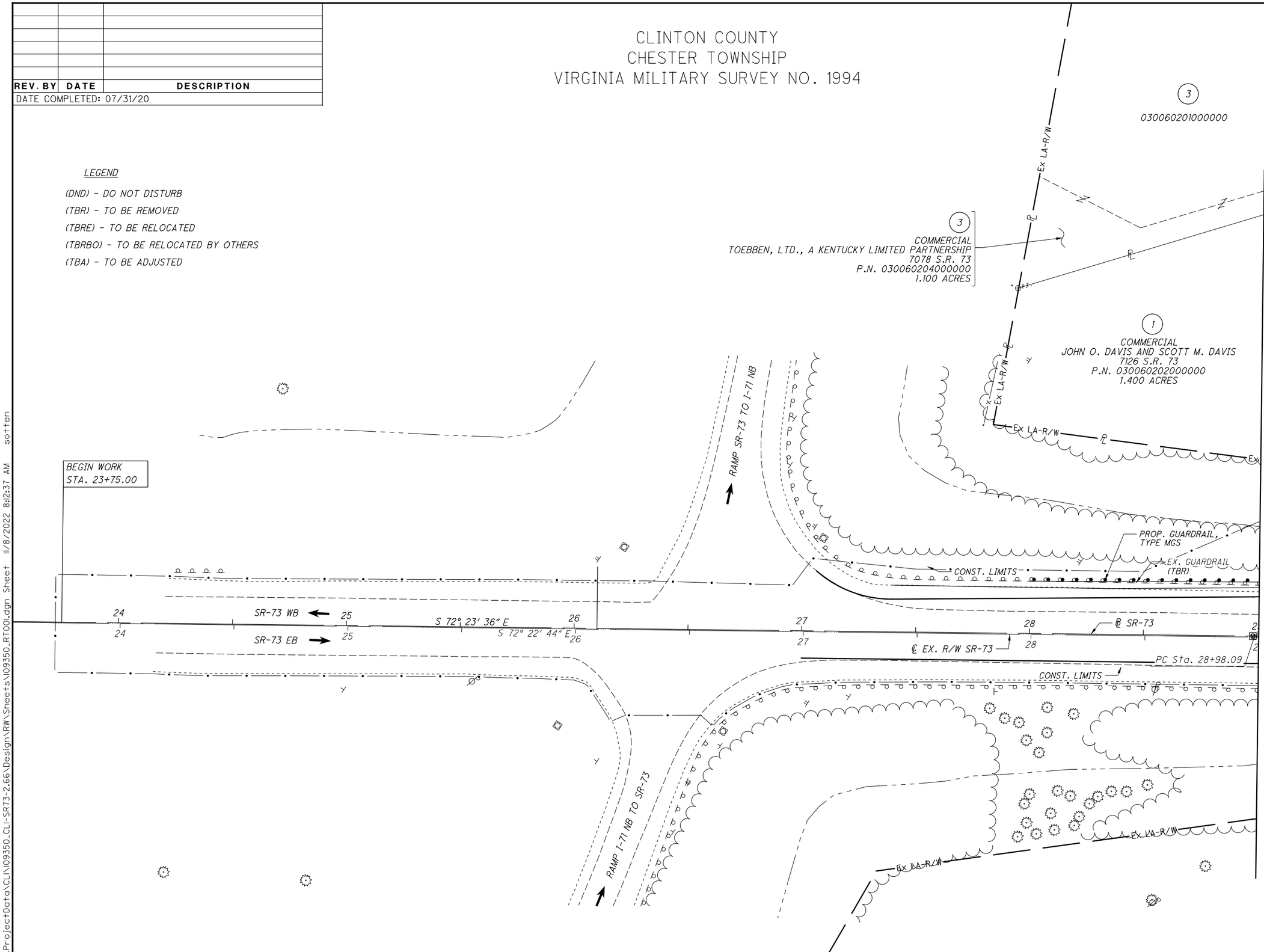
REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 07/31/20

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994



HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 109350

R/W DESIGNER JMK/BSB
R/W REVIEWER RMH

RIGHT OF WAY TOPO SHEET
STA. 24+00.00 TO 29+00.00

CLI-73-2.66

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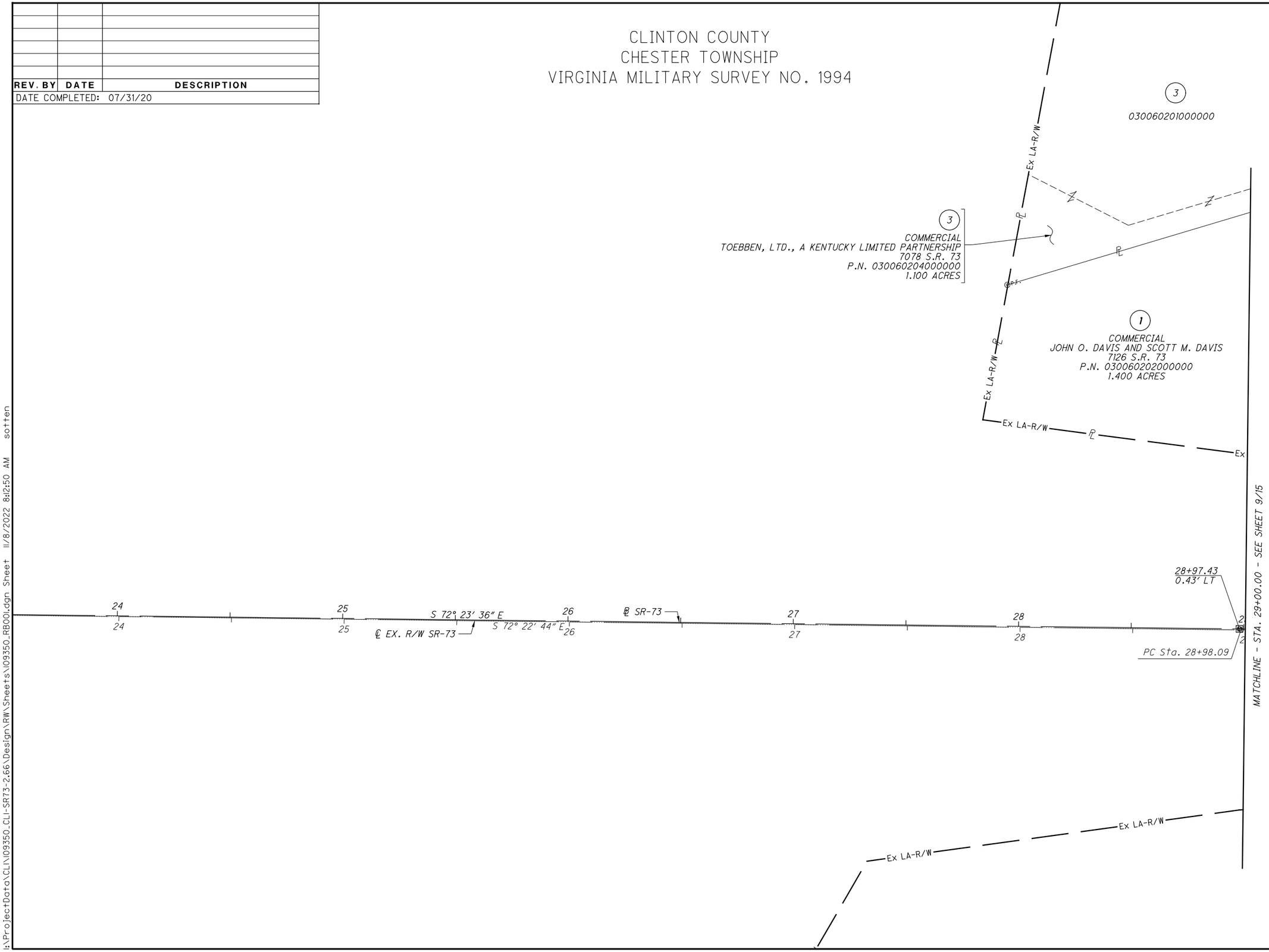
REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 07/31/20

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994



HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 109350

R/W DESIGNER JMK/BSB
R/W REVIEWER RMH

RIGHT OF WAY BOUNDARY SHEET
STA. 24+00.00 TO 29+00.00

CLI-73-2.66

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REV. BY	DATE	DESCRIPTION
JMK/BSB	10/09/20	CHANGED 3-WD TO 3-SH1

DATE COMPLETED: 07/31/20

LEGEND

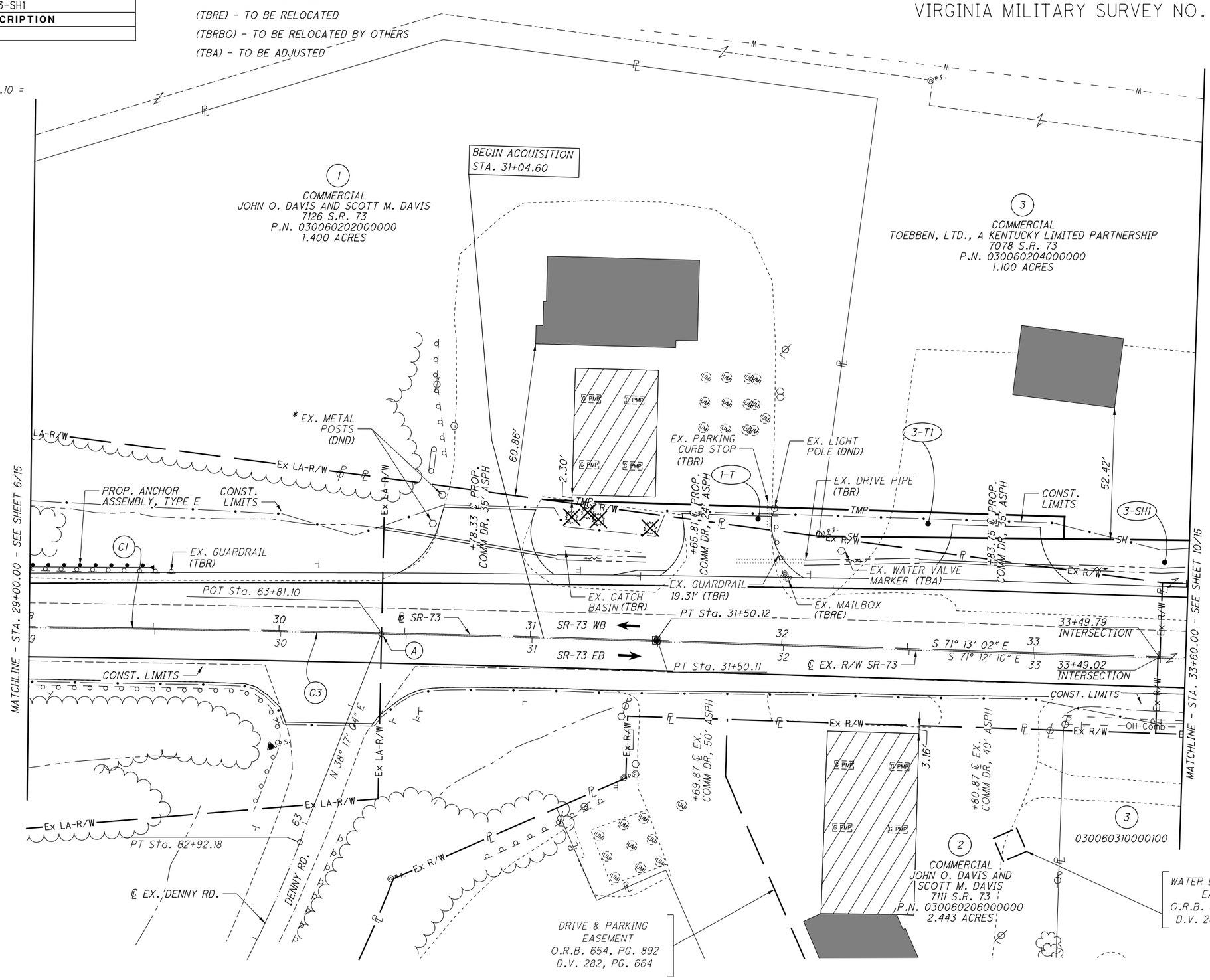
(DND) - DO NOT DISTURB
(TBR) - TO BE REMOVED
(TBRE) - TO BE RELOCATED
(TBRBO) - TO BE RELOCATED BY OTHERS
(TBA) - TO BE ADJUSTED

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994

(A) ℄ R/W DENNY RD. STA. 63+81.10 = ℄ R/W SR-73 STA. 30+40.00

(C1)
℄ SR-73
P.I.Sta. 30+24.11
Δ = 1° 10′ 34″ (RT)
Dc = 0° 28′ 00″
R = 12,277.67′
T = 126.02′
L = 252.03′
E = 0.65′
C = 252.03′
C.B. = S 71° 48′ 19″ E

(C3)
℄ EX. R/W SR-73
P.I. Sta. 30+24.11
Δ = 1° 10′ 34″ (RT)
Dc = 0° 28′ 00″
R = 12,277.67′
T = 126.02′
L = 252.02′
E = 0.65′
C = 252.02′
C.B. = S 71° 47′ 27″ E



HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 109350

R/W DESIGNER JMK/BSB
R/W REVIEWER RMH

RIGHT OF WAY TOPO SHEET
STA. 29+00.00 TO 33+60.00

CLI-73-2.66

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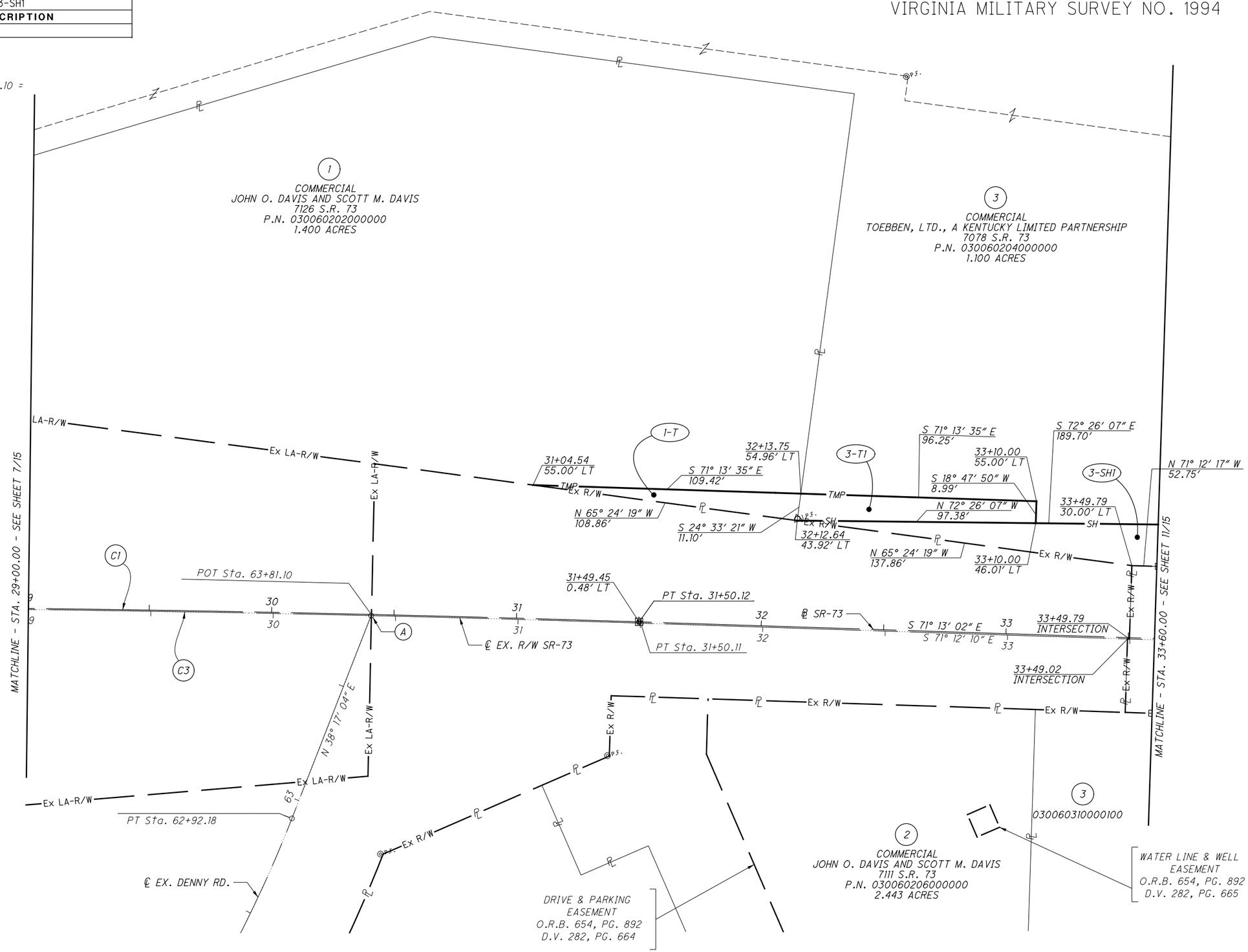
REV. BY	DATE	DESCRIPTION
JMK/BSB	10/09/20	CHANGED 3-WD TO 3-SH1

DATE COMPLETED: 07/31/20

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994



HORIZONTAL SCALE IN FEET: 0 10 20 40

PID NO. 109350

R/W DESIGNER JMK/BSB
R/W REVIEWER RMH

RIGHT OF WAY BOUNDARY SHEET
STA. 29+00.00 TO 33+60.00

CLI-73-2.66

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REV. BY	DATE	DESCRIPTION
JMK/BSB	10/09/20	CHANGED 3-WD TO 3-SH1, 3-SH1 TO 3-SH2, AND CHANGED 3-SH2 TO 3-SH3
JMK/BSB	10/09/20	UPDATED PARCEL 3-SH2,5-SH

DATE COMPLETED: 07/31/20

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994

LEGEND

(DND) - DO NOT DISTURB
(TBR) - TO BE REMOVED
(TBRE) - TO BE RELOCATED
(TBRBO) - TO BE RELOCATED BY OTHERS
(TBA) - TO BE ADJUSTED

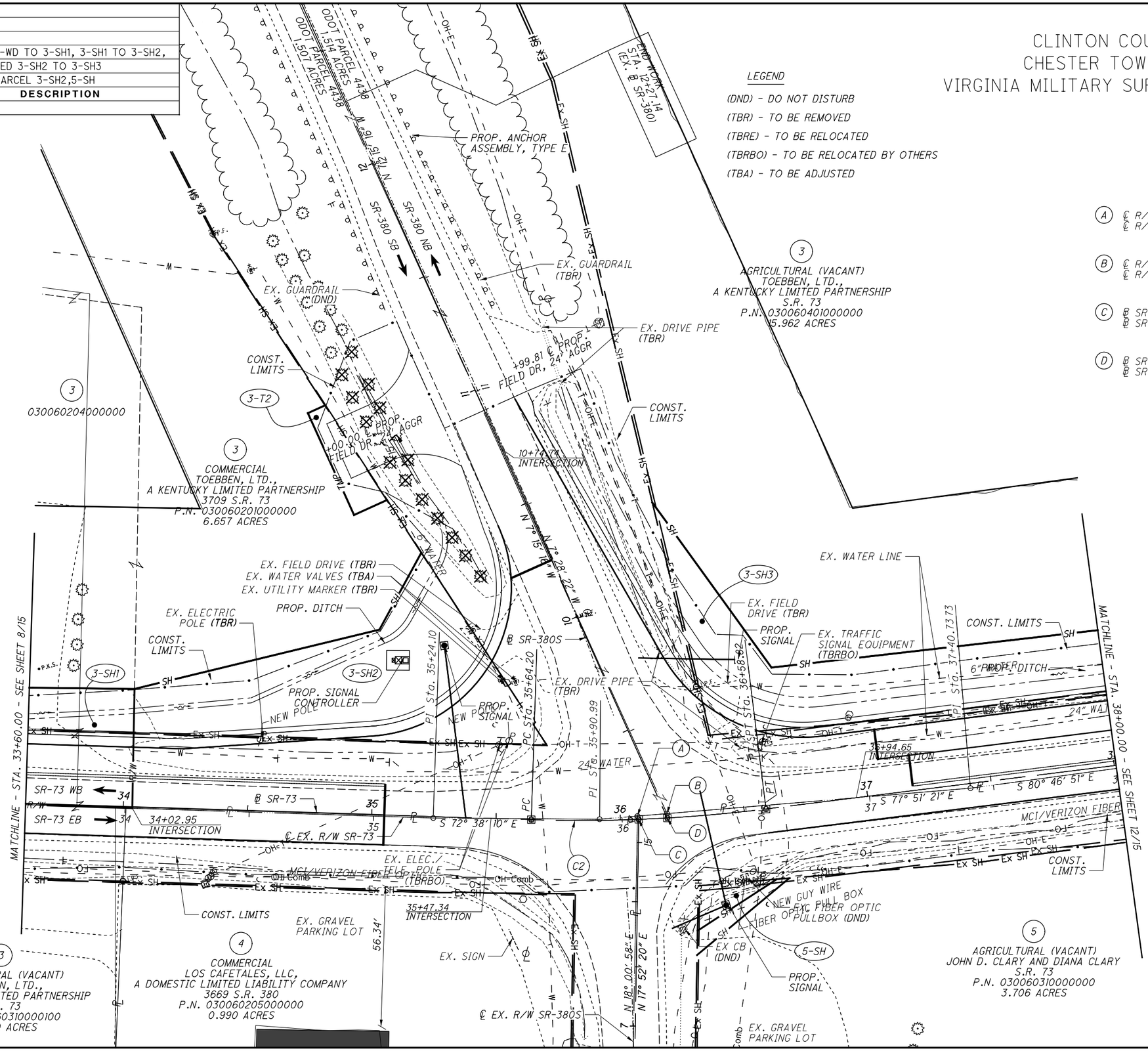
(A) ℄ R/W SR-380S POT STA. 15+10.62 = ℄ R/W SR-73 STA. 36+06.31

(B) ℄ R/W SR-380 POT STA. 9+13.62 = ℄ R/W SR-73 STA. 36+18.21

(C) ℄ SR-380S POT STA. 7+83.18 = ℄ SR-73 STA. 36+07.40

(D) ℄ SR-380 POT STA. 9+11.28 = ℄ SR-73 STA. 36+18.93

(C2)
℄ SR-73
P.I.Sta. 36+11.60
Δ = 8° 56′ 42″ (LT)
Dc = 9° 27′ 12″
R = 606.09′
T = 47.41′
L = 94.62′
E = 1.85′
C = 94.53′
C.B. = S 75° 41′ 23″ E



HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 109350

R/W DESIGNER JMK/BSB
R/W REVIEWER RMH

RIGHT OF WAY TOPO SHEET
STA. 33+60.00 TO 38+00.00

CLI-73-2.66

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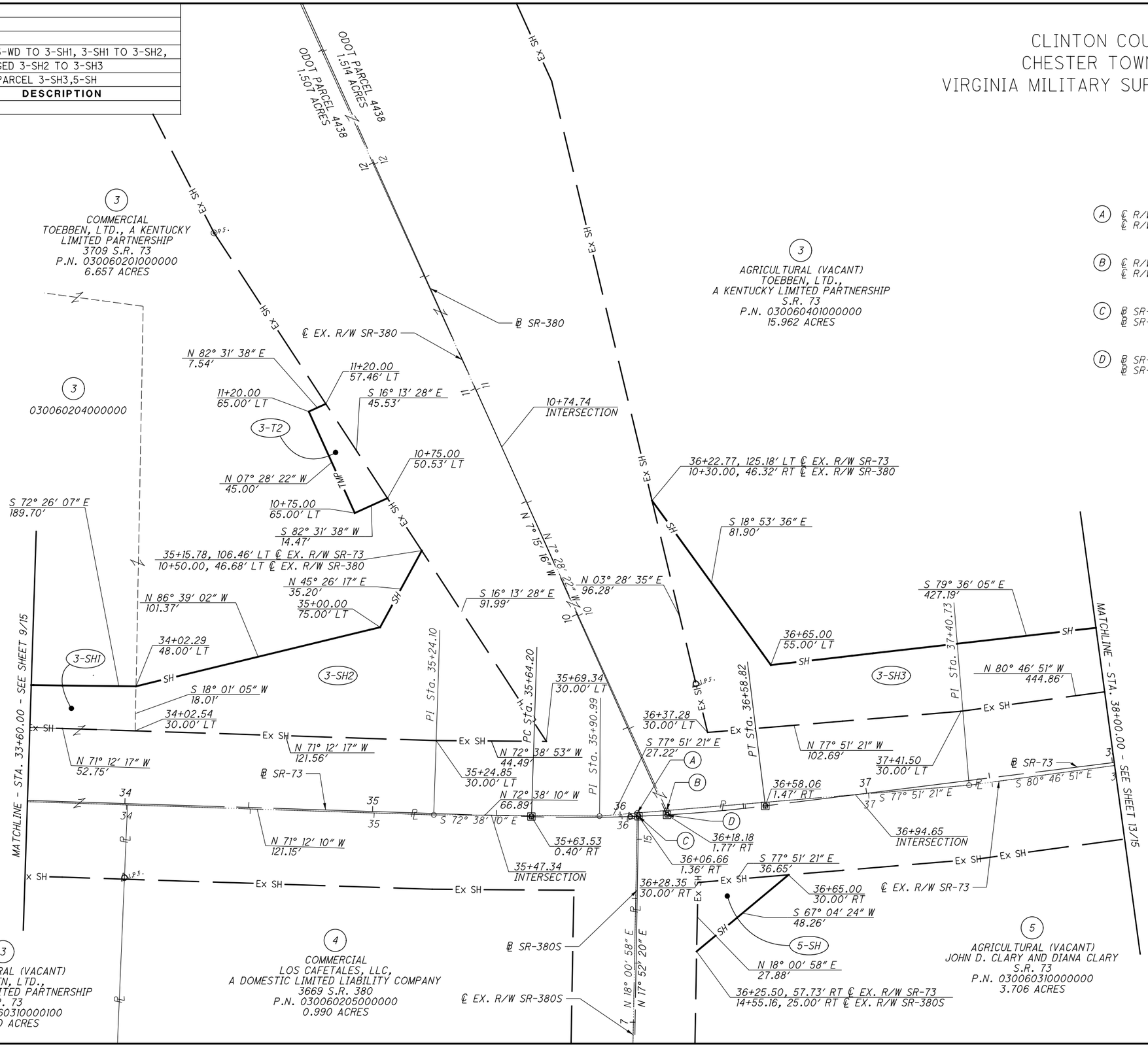
REV. BY	DATE	DESCRIPTION
JMK/BSB	10/09/20	CHANGED 3-WD TO 3-SH1, 3-SH1 TO 3-SH2, AND CHANGED 3-SH2 TO 3-SH3
JMK/BSB	10/09/20	UPDATED PARCEL 3-SH3,5-SH

DATE COMPLETED: 07/31/20

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994



(A) ℄ R/W SR-380S POT STA. 15+10.62 = ℄ R/W SR-73 STA. 36+06.31

(B) ℄ R/W SR-380 POT STA. 9+13.62 = ℄ R/W SR-73 STA. 36+18.21

(C) ℄ SR-380S POT STA. 7+83.18 = ℄ SR-73 STA. 36+07.40

(D) ℄ SR-380 POT STA. 9+11.28 = ℄ SR-73 STA. 36+18.93

HORIZONTAL SCALE IN FEET 0 10 20 40

PID NO. 109350

R/W DESIGNER JMK/BSB
R/W REVIEWER RMH

RIGHT OF WAY BOUNDARY SHEET
STA. 33+60.00 TO 38+00.00

CLI-73-2.66

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REV. BY	DATE	DESCRIPTION
BCF	8/12/21	ADDED PARCEL 7T-1
DME	03/05/21	ADDED PAR 3T3
JMK/BSB	10/09/20	CHANGED 3-SH2 TO 3-SH3
JMK/BSB	10/09/20	UPDATED PARCEL 3-SH3,7-T,7-SH1

DATE COMPLETED: 07/31/20

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994

LEGEND

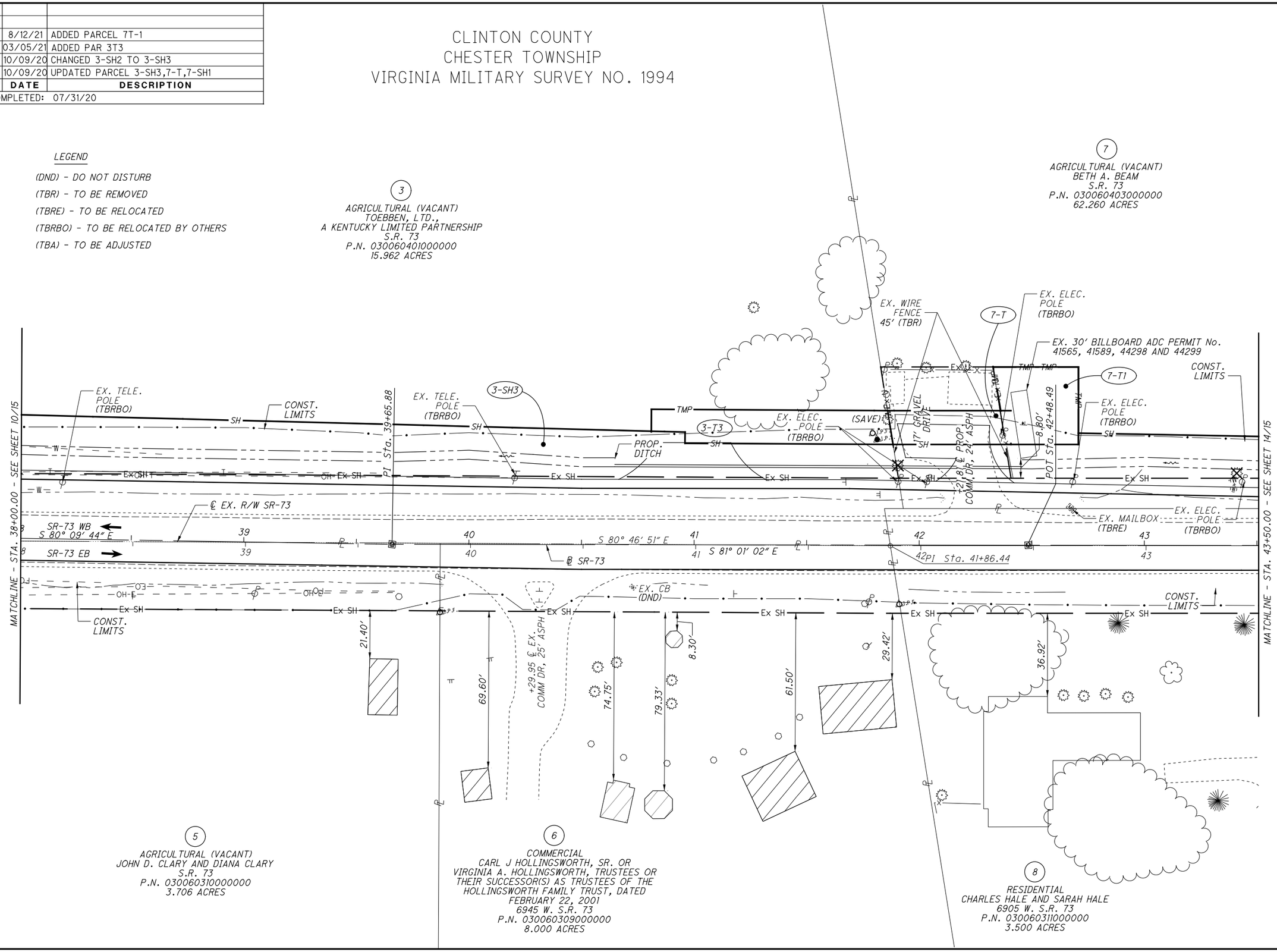
(DND) - DO NOT DISTURB

(TBR) - TO BE REMOVED

(TBRE) - TO BE RELOCATED

(TBRBO) - TO BE RELOCATED BY OTHERS

(TBA) - TO BE ADJUSTED



0 10 20 40 HORIZONTAL SCALE IN FEET

PID NO. 109350

R/W DESIGNER JMK/BSB

R/W REVIEWER RMH

RIGHT OF WAY TOPO SHEET
STA. 38+00.00 TO 43+50.00

CLI-73-2.66

12 / 15

93 / 96

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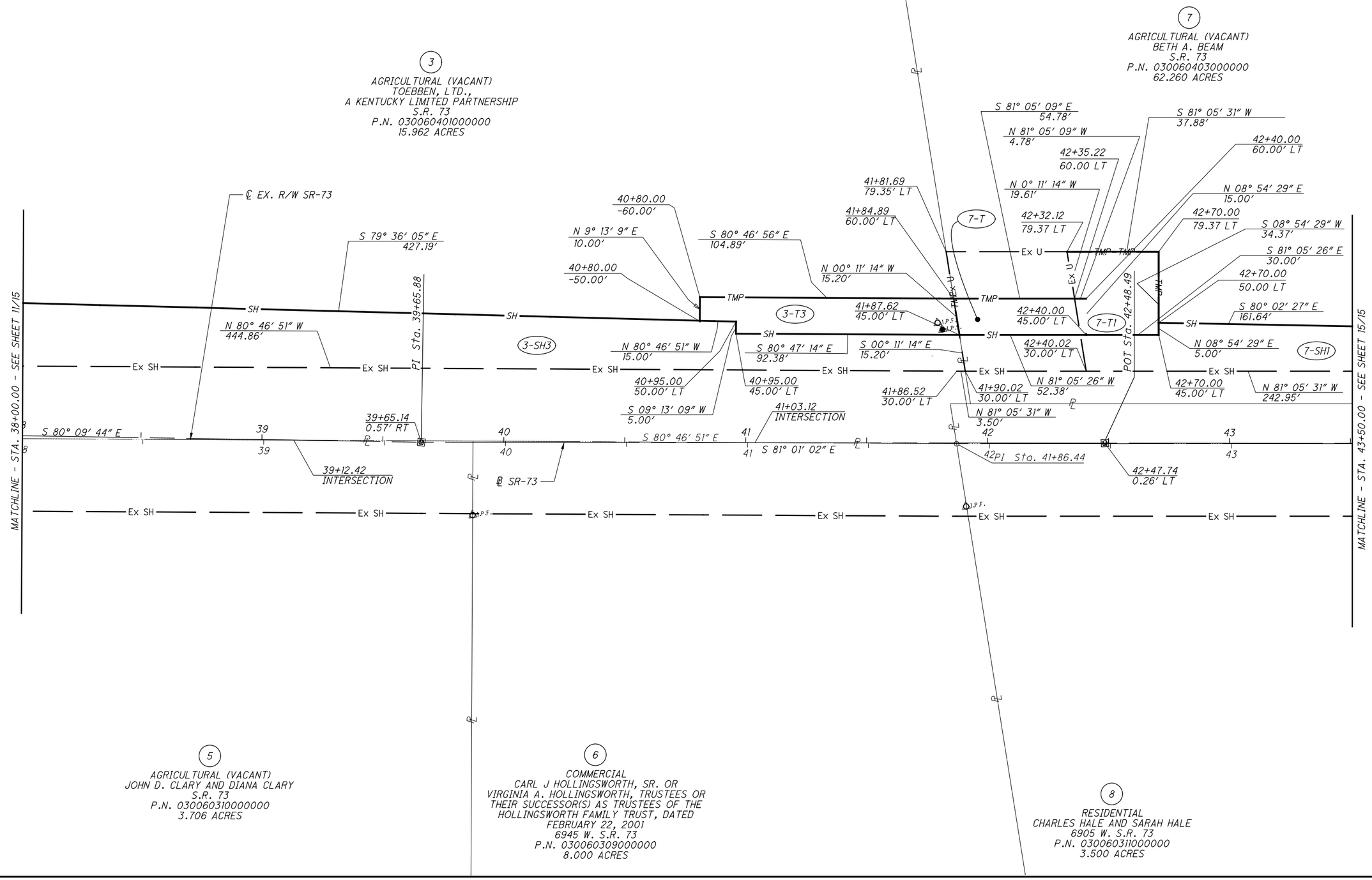
REV. BY	DATE	DESCRIPTION
BCF	8/12/21	ADDED PARCEL 7T-1
DME	03/05/21	ADDED PAR 3T3
JMK/BSB	10/09/20	CHANGED 3-SH2 TO 3-SH3
JMK/BSB	10/09/20	UPDATED PARCEL 3-SH3,7-T,7-SH1

DATE COMPLETED: 07/31/20

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994



HORIZONTAL SCALE IN FEET	0 10 20 40
PID NO.	109350
R/W DESIGNER	JMK/BSB
R/W REVIEWER	RMH

RIGHT OF WAY BOUNDARY SHEET
STA. 38+00.00 TO 43+50.00

CLI-73-2.66

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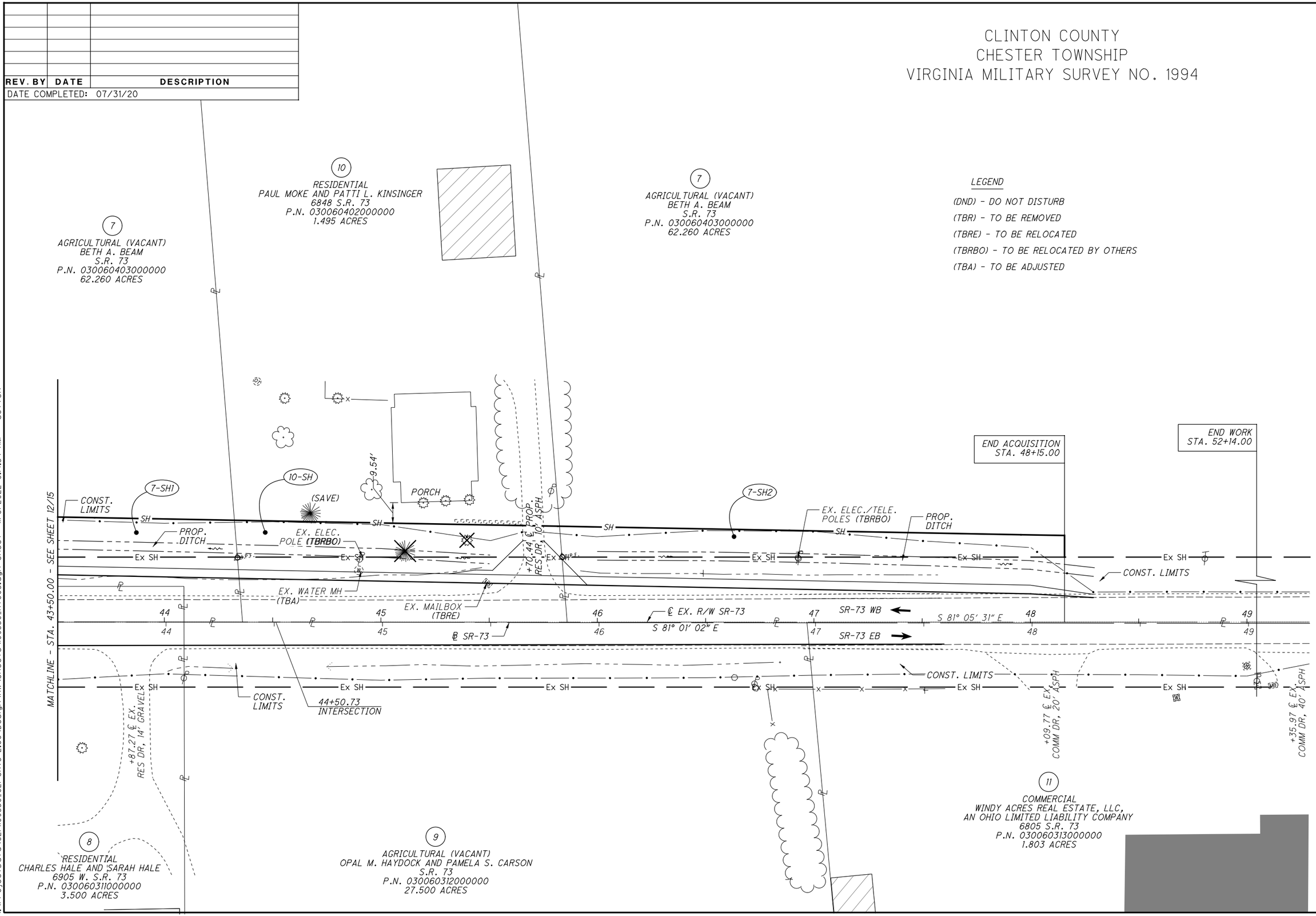
REV. BY	DATE	DESCRIPTION

DATE COMPLETED: 07/31/20

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994



PID NO. 109350

R/W DESIGNER JMK/BSB
R/W REVIEWER RMH

RIGHT OF WAY TOPO SHEET
STA. 43+50.00 TO 49+00.00

CLI-73-2.66

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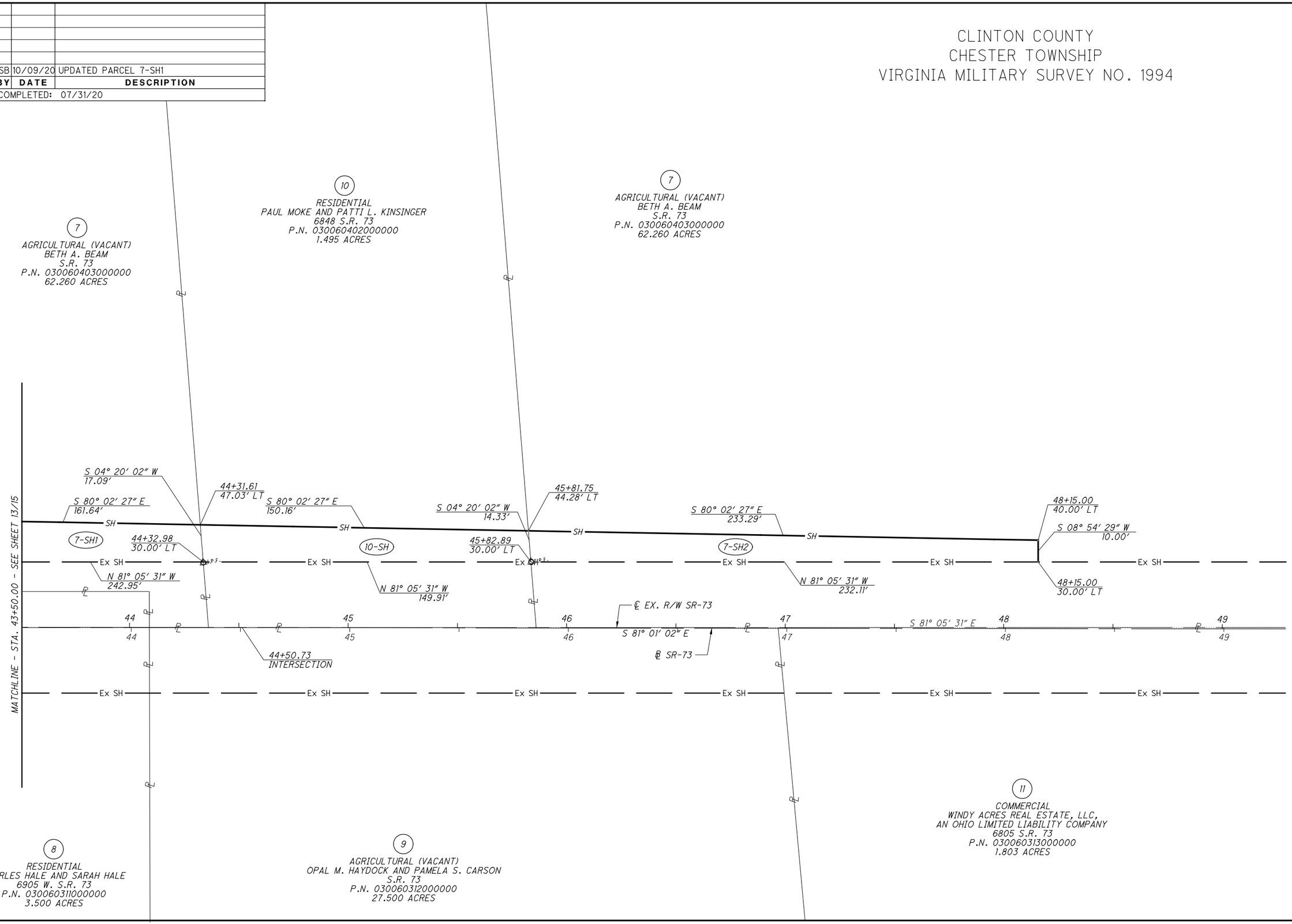
REV. BY	DATE	DESCRIPTION
JMK/BSB	10/09/20	UPDATED PARCEL 7-SH1

DATE COMPLETED: 07/31/20

CLINTON COUNTY
CHESTER TOWNSHIP
VIRGINIA MILITARY SURVEY NO. 1994



HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 109350

R/W DESIGNER JMK/BSB
R/W REVIEWER RMH

RIGHT OF WAY BOUNDARY SHEET
STA. 43+50.00 TO 49+00.00

CLI-73-2.66

15 / 15

96 / 96

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GENERAL INFORMATION

INTRODUCTION

The project consists of the proposed construction of 4.8 miles of SR 1 (IR 71), as well as associated roadways, beginning approximately 3.5 miles south of Harveysburg, 1100 feet southwest of Sherrod Road, extending northeastward, terminating 1000 feet northeast of SR 300.

The proposed grades indicate the following:

Mainline - cut, maximum 13 feet in depth; fill embankment, maximum 8 feet in height.

Harveysburg Pike - fill embankment, maximum 25 feet in height.

Doster Road - fill embankment, maximum 18 feet in height.

SR 73 - fill embankment, maximum 21 feet in height.

SR 300 - fill embankment, maximum 21 feet in height.

GEOLOGY OF THE PROJECT

The alignment is situated within the glaciated Upland Till Plain region, where morainal deposits are reportedly in excess of forty feet in thickness. Local bedrock consists of shales and limestones, Silurian in age.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical earth auger and hand auger (in areas of difficult access), between January 4 and 30, 1962.

INVESTIGATIONAL DISCLOSURES

Mainline

Immediately below grade, soils consist predominantly of silts and silt clays, in the A-4 and A-6a classifications. Wet silts and silt clays were found within eight feet below ground surface, between stations 379+00 and 393+00, at stations 409+00, 100'Lt, 450+00, 450+50, 458+00, 475+00 and 483+00. Frost susceptible silts were encountered within three feet below grade at stations 308+00, 310+00, 345+00, 350+00, 355+00, between stations 375+00 and 383+00, at stations 390+00, 401+00, 413+00, 421+50, 454+00, 458+00, 472+00, between stations 482+00 and 497+00, and at station 512+00.

In the embankment foundation, materials are comprised predominantly of silt clay and clay, in the A-6 and A-7-6 classifications. Wet soils, generally less than five feet in thickness, were encountered throughout the project, but most predominant between stations 320+00 and 375+00.

Harveysburg Pike

Materials immediately below grade and in the embankment foundation consist predominantly of silt, in the A-4 classification. Frost susceptible silt was encountered within three feet below grade at stations 3+00 and 33+00.

Doster Road

Immediately below grade, soil consists of silt clay, in the A-6a classification.

In the embankment foundation, materials consist of sandy silt, silty clay and clay, in the A-4a, A-6b and A-7-6 classifications.

SR 73

Immediately below grade, soil consists of silt clay, in the A-6a classification.

In the embankment foundation, soils are comprised of sandy silt and silt clay, in the A-4a and A-6a classifications.

SR 300

Immediately below grade, soils are comprised of frost susceptible sandy silt and clay, in the A-4a and A-7-6 classifications.

In the embankment foundation areas, materials are comprised of sandy silt, silt clay and clay, in the A-4a, A-6 and A-7-6 classifications.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 307 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel	A-1-a(0)	A-1-a	60	27	8	- 5 -		NP	NP	13	1
Sandy silt	A-4(5)	A-4a	11	10	18	32	29	22	6	15	117
Silt	A-4(8)	A-4b	2	3	7	56	32	26	5	22	29
Silt and clay	A-6(9)	A-6a	4	5	13	38	40	31	12	23	99
Silty clay	A-6(11)	A-6b	1	3	11	43	42	37	18	24	18
Elastic clay	A-7-5(16)	A-7-5	1	1	2	42	55	63	23	30	2
Clay	A-7-6(13)	A-7-6	0	2	5	46	47	45	21	28	41

Sod and/or Topsoil=X'=Approximate depth.

Various Other Materials

VISUAL CLASSIFICATION

Berm material.

Auger boring - plan view.

Auger boring plotted to vertical scale only.

Water content nearly equal to or greater than liquid limit.

Indicates a non-plastic material with high water content.

w Free water.

NOTE: Figures beside borings indicate water content in percent, e.g. *15*

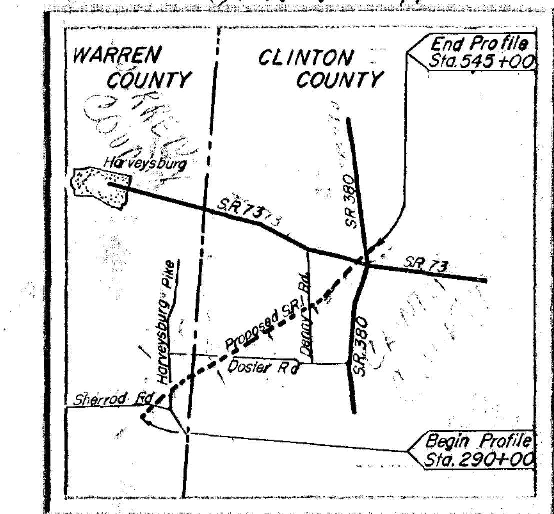
SOIL PROFILE
WARREN-CLINTON COUNTIES
WAR-1-21.00
CLI-1-0.00

1/15

OHIO STATE HIGHWAY TESTING LABORATORY
COLUMBUS, OHIO

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

Fed. No. I-71-1(12)



LOCATION MAP

Recon.- N.P.L.- 12-29-61
Drilling- L.M.D., B.D.L., F.D.C., 1-4-62 to 1-30-62
Drafting- D.H.A.- 2-16-62

SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION	OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% M.C.	SOIL CLASS.
				Harveysburg Pike							
3+00	12'Lt	0.0-4.0	0	1	4	59	36	30	9	36	A-4b*
		4.0-7.0	13	7	17	38	25	22	5	19	A-4a
		7.0-10.0	12	7	15	39	27	24	8	17	A-4a
8+00	12'Rt	0.0-4.0	16	6	16	34	28	25	7	15	A-4a
		4.0-8.0	11	6	17	46	20	24	6	15	A-4a
		8.0-10.0	11	8	17	33	31	21	7	14	A-4a
12+00	12'Lt	0.5-3.0	Brown Silty Sand & Gravel								Visual
		3.0-8.0	0	2	13	49	36	39	17	23	A-6b
		8.0-11.0	17	11	19	27	26	33	14	23	A-6a
		11.0-15.0	15	6	16	35	28	24	7	15	A-4a
16+00	12'Rt	0.5-5.0	7	7	18	42	26	23	7	16	A-4a
		5.0-8.0	6	6	18	37	33	27	11	17	A-6a
		8.0-12.0	7	6	15	54	18	21	5	17	A-4b
		12.0-15.0	8	7	17	37	31	20	4	14	A-4a
25+00	12'Rt	0.5-2.0	34	5	8	39	14	31	9	17	A-4a
		2.0-6.0	2	2	10	51	35	37	16	23	A-6b
		6.0-8.0	7	5	20	35	33	26	5	27	A-4a
		8.0-12.0	12	7	16	29	36	23	11	15	A-6a
		12.0-15.0	8	4	16	35	37	29	11	17	A-6a
29+00	12'Lt	0.5-3.0	0	0	3	68	29	31	8	28	A-4b
		3.0-7.0	13	8	19	33	27	19	1	15	A-4a
		7.0-10.0	9	7	15	35	34	23	11	13	A-6a
33+00	12'Rt	0.5-6.0	4	5	16	42	33	23	5	19	A-4a*
		6.0-10.0	18	3	10	47	22	20	1	18	A-4a
				Doster Road							
10+00	12'Lt	0.5-5.0	8	4	14	42	32	28	11	24	A-6a*
		5.0-10.0	5	10	21	32	32	24	6	19	A-4a

STATION	OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% M.C.	SOIL CLASS.
				Doster Road (Cont'd)							
15+00	12'Rt	0.5-5.0	1	3	5	51	40	30	7	25	A-4b
		5.0-10.0	2	7	27	39	25	26	6	22	A-4a
		10.0-15.0	11	11	18	28	32	22	7	14	A-4a
20+00	12'Lt	0.5-5.0	0	0	1	57	42	43	17	30	A-7-6*
		5.0-10.0	15	12	19	27	27	23	5	15	A-4a*
		10.0-15.0	20	7	16	27	30	24	11	15	A-6a
25+00	12'Rt	0.3-5.0	8	7	17	40	28	24	6	15	A-4a
		5.0-10.0	3	1	2	54	40	41	15	30	A-7-6
		10.0-13.0	11	8	18	31	32	24	6	16	A-4a
					SR 73						
8+00	14'Rt	0.0-5.0	14	1	4	42	39	50	23	27	A-7-6*
		5.0-10.0	1	4	32	42	21	NP	NP	17	A-4a
13+00	14'Rt	0.3-3.0	0	1	2	48	49	37	11	30	A-6a
		3.0-8.0	0	3	9	46	42	35	11	27	A-6a
		8.0-12.0	17	10	17	30	26	19	4	20	A-4a
17+00	14'Rt	0.3-5.0	12	9	16	29	34	24	7	23	A-4a
		5.0-10.0	13	10	18	31	28	20	7	12	A-4a
		10.0-15.0	20	10	16	32	22	21	6	12	A-4a
20+00	14'Rt	0.3-5.0	4	2	11	47	36	40	18	24	A-6b
		5.0-10.0	13	10	17	29	31	22	6	14	A-4a
		10.0-15.0	25	8	16	27	24	20	4	15	A-4a
24+00	14'Rt	0.5-5.0	12	9	13	31	35	27	11	16	A-6a
		5.0-10.0	19	8	11	27	35	25	11	16	A-6a
		10.0-15.0	30	7	10	26	27	27	11	16	A-6a
28+00	14'Lt	0.0-5.0	3	2	6	53	36	37	13	25	A-6a
		5.0-9.0	10	10	18	32	30	24	7	15	A-4a
		9.0-12.0	9	7	16	34	34	26	7	21	A-4a

STATION	OFFSET	DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% M.C.	SOIL CLASS.
				SR 73 (Cont'd)							
32+00	14'Rt	0.3-5.0	11	8	12	35	34	33	13	24	A-6a*
		5.0-8.0	14	10	17	30	29	22	6	14	A-4a
		8.0-10.0	20	10	17	26	27	21	7	11	A-4a
				SR 300							
10+00	12'Rt	0.0-5.0	0	2	4	45	49	43	21	27	A-7-6
		5.0-10.0	17	10	16	30	27	23	7	14	A-4a
		10.0-15.0	10	12	17	33	28	20	4	13	A-4a
14+00	12'Lt	0.3-5.0	0	1	4	62	33	46	23	29	A-7-6
		5.0-10.0	5	5	11	43	36	30	11	28	A-6a
		10.0-15.0	15	10	14	31	30	22	5	15	A-4a
17+00	12'Rt	0.0-5.0	0	1	3	45	51	37	15	26	A-6a
		5.0-10.0	14	11	16	28	31	24	9	14	A-4a
		10.0-15.0	6	12	19	46	17	21	6	13	A-4a
20+00	12'Lt	0.0-5.0	3	4	9	43	41	39	15	22	A-6a
		5.0-10.0	13	9	18	30	30	21	4	17	A-4a
		10.0-15.0	18	10	17	28	27	19	5	14	A-4a
24+00	12'Rt	0.3-5.0	11	2	8	52	27	40	17	27	A-6b
		5.0-10.0	0	1	5	41	53	28	11	39	A-6a
		10.0-15.0	26	7	15	31	21	18	3	11	A-4a
27+00	12'Lt	0.0-5.0	20	9	16	36	19	25	8	15	A-4a
		5.0-10.0	9	10	17	35	29	23	6	14	A-4a
		10.0-15.0	19	9	16	29	27	21	6	11	A-4a
31+00	12'Rt	0.0-5.0	0	8	19	45	28	28	8	20	A-4a*
		5.0-10.0	12	9	17	39	23	20	6	17	A-4a
		10.0-15.0	7	11	18	35	29	19	5	11	A-4a

Clean up sheets

1E548
1500-10-60

SOIL PROFILE
WARREN-CLINTON COUNTIES
WAR-1-21.00
CLI-1-0.00

OHIO STATE HIGHWAY TESTING LABORATORY
COLUMBUS, OHIO

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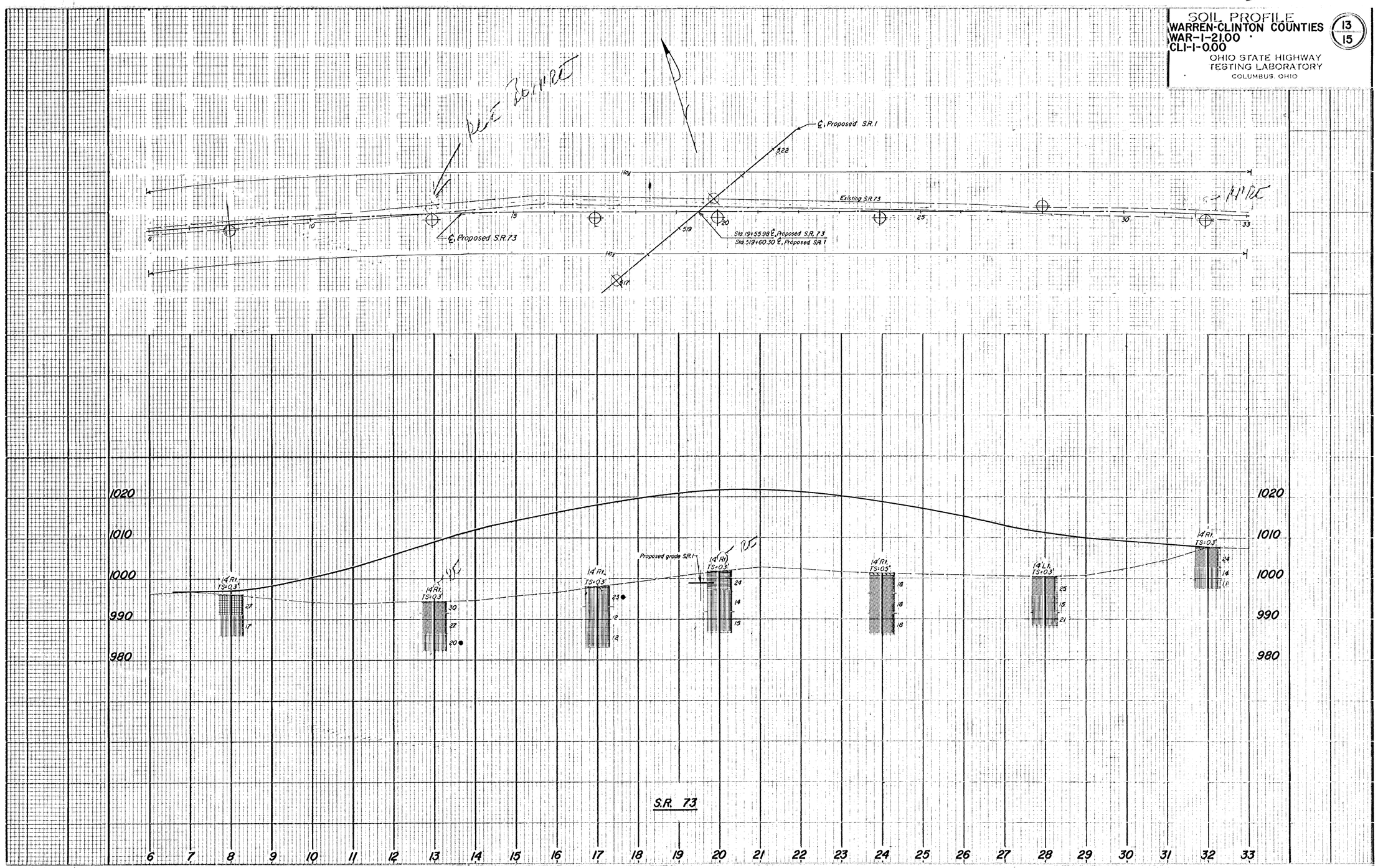

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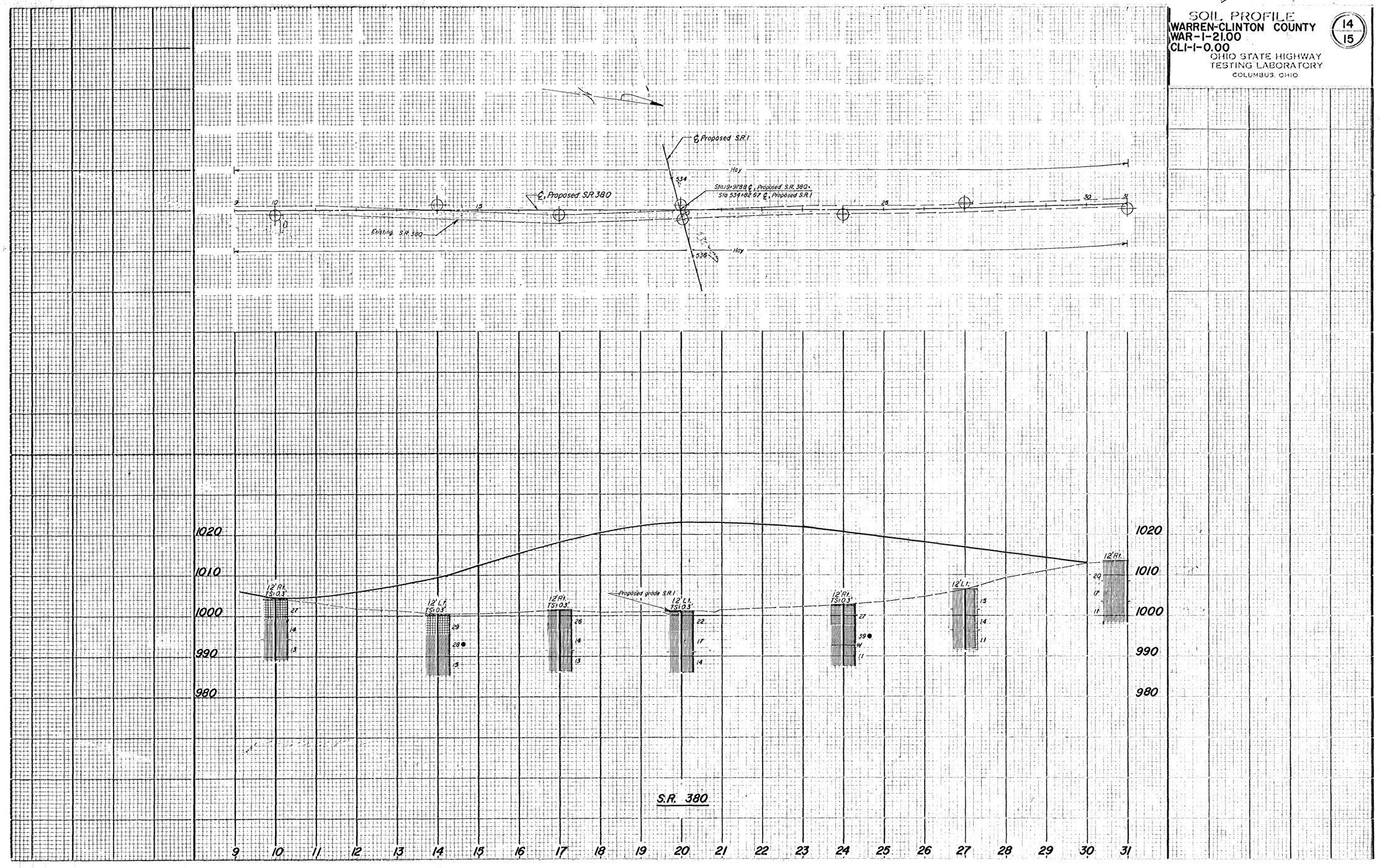
SOIL PROFILE
WARREN-CLINTON COUNTY
WAR-1-21.00
CLI-1-0.00

OHIO STATE HIGHWAY
TESTING LABORATORY
COLUMBUS, OHIO

14
15



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