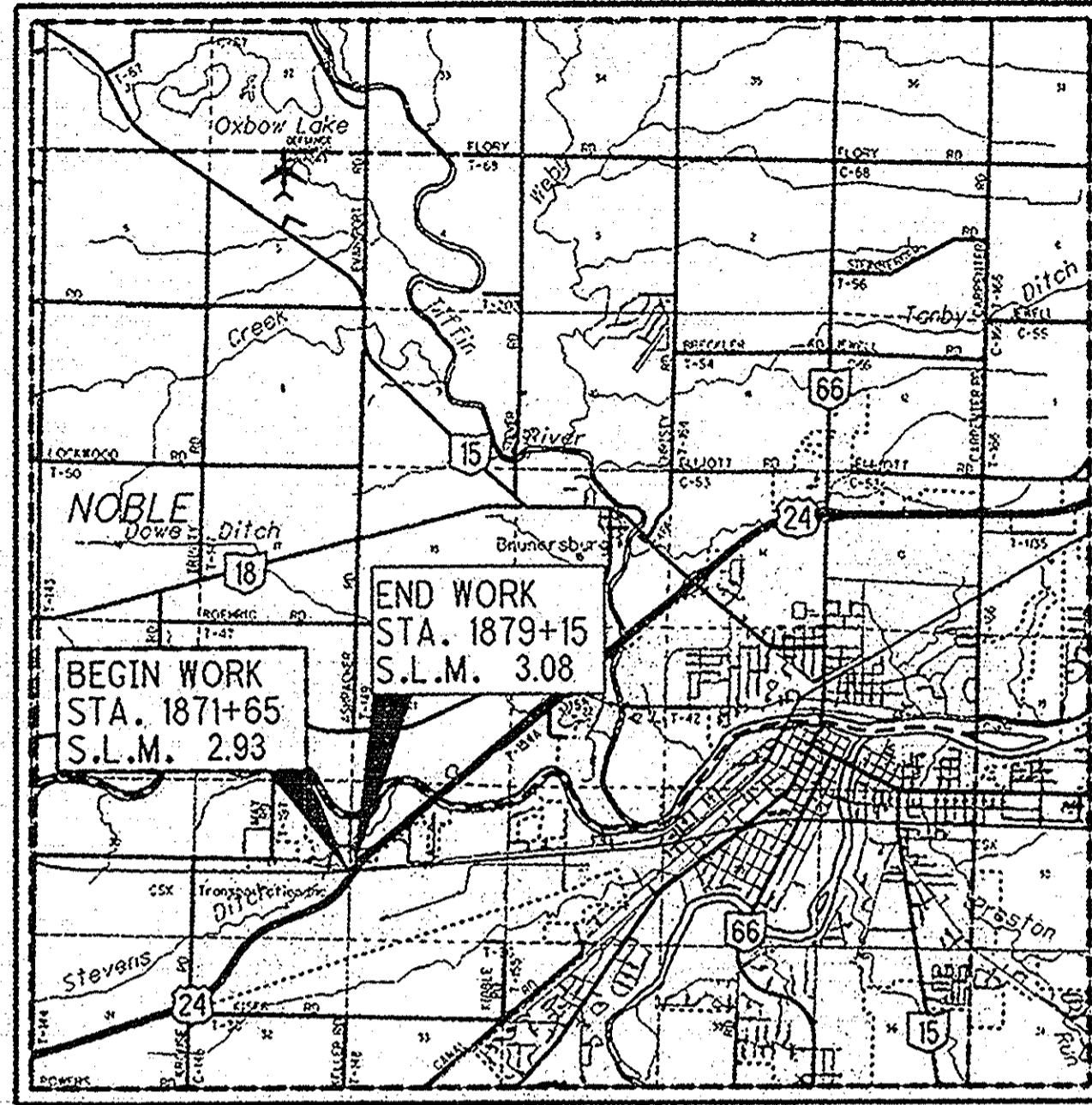


STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

DEF-24-3.06

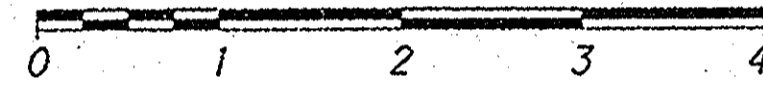
**NOBLE TOWNSHIP
DEFIANCE COUNTY**



LOCATION MAP

LATITUDE: 41°16'25" LONGITUDE: 84°25'10"

SCALE IN MILES



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

DESIGN DESIGNATION

CURRENT ADT (2012)	8530
DESIGN YEAR ADT (2037)	11000
DESIGN HOURLY VOLUME (2037)	990
DIRECTIONAL DISTRIBUTION	0.53
TRUCKS (24 HOUR B&C)	0.32
DESIGN SPEED	65
LEGAL SPEED	65
DESIGN FUNCTIONAL CLASSIFICATION:	
03 PRINCIPAL ARTERIAL (RURAL)	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

Call Before You Dig
1-800-362-2764

(Non-members must be called directly)

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

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
PLANNING AND ENGINEERING
DISTRICT ONE

ENGINEERS SEAL:

SIGNED: *Glenn Danner*
DATE: 8-3-16

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-5.1	7/19/13	MGS-1.1	7/19/13	HL-10.12	1/15/16	800	7/15/16
		MGS-2.1	7/19/13	HL-10.13	1/15/16	832	1/17/14
CB-2.2	1/15/16	MGS-3.2	1/18/13	HL-20.11	1/16/15		
		MGS-4.2	7/19/13	HL-20.14	1/16/15		
HW-2.2	1/15/16	MGS-4.3	1/18/13	HL-30.21	1/17/14		4/25/16
				HL-30.31	1/17/14		
DM-1.1	1/15/16	RM-4.2	4/18/14	HL-30.32	1/17/14		
DM-1.2	1/18/13			HL-30.33	1/17/14		
DM-4.1	1/15/16			HL-30.41	7/18/14		
DM-4.2	7/20/12			HL-60.11	1/15/16		
				HL-60.12	7/15/16		
				MT-101.70	1/17/14		
				MT-101.90	7/17/15		

PROJECT DESCRIPTION (BENCH)

REPAIR SLOPE IN THE SW QUADRANT OF THE US 24 OVERPASS WITH BALTIMORE STREET BY ONE OF TWO METHODS:

- 1) REMOVING THE GUARDRAIL AND EXCAVATING THE SLOPE AREA TO THE FAILURE PLANE (BENCH)
- 2) INSTALL PLATE PILES IN THE DESIGNATED FAILURE AREA (PLATE PILES)

BOTH OPTIONS WILL THEN RE-INSTALL GUARDRAIL AND FIX WASHOUTS BY EXTENDING THE CURB AND PLACING BLOCK MAT TO CATCH RUN-OFF. RECONSTRUCT THE CRACKED AREA OF THE CONCRETE SHOULDER BEHIND THE APPROACH SLAB.

BENCHING

PROJECT EARTH DISTURBED AREA:	1.75 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.13 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.9 ACRES

PLATE PILES

PROJECT EARTH DISTURBED AREA:	1.63 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.13 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.9 ACRES

LIMITED ACCESS

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

2016 SPECIFICATIONS

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

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

APPROVED: *Kil Shih*
DATE: 8/2/16 DISTRICT DEPUTY DIRECTOR

APPROVED: *James Ziegler*
DATE: 8-12-16 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.
E 140 (656)

PID NO.
97593

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

DEF-24-3.06

DEF - US 24-03.06
160565 PID - 97593
Dist 1 11/3/2016

Contract Proposal Available @ www.ohio.gov

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PROPOSED LEGEND

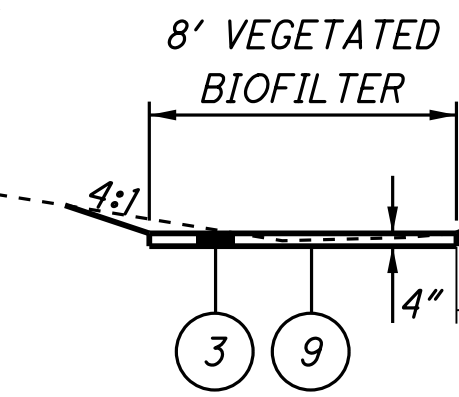
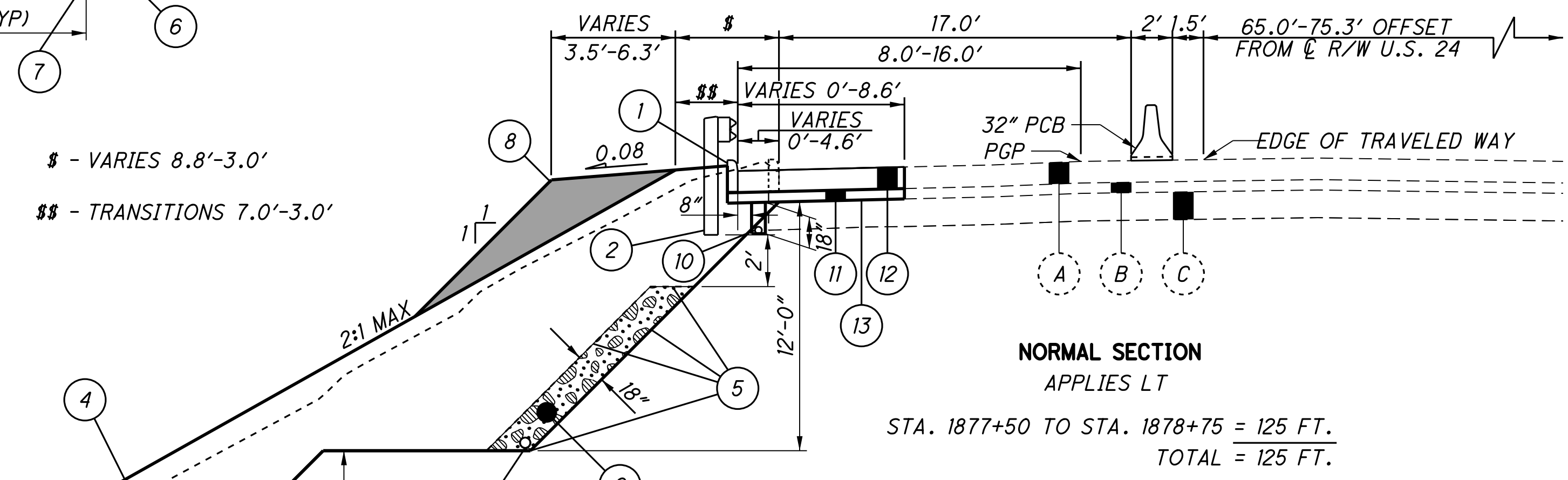
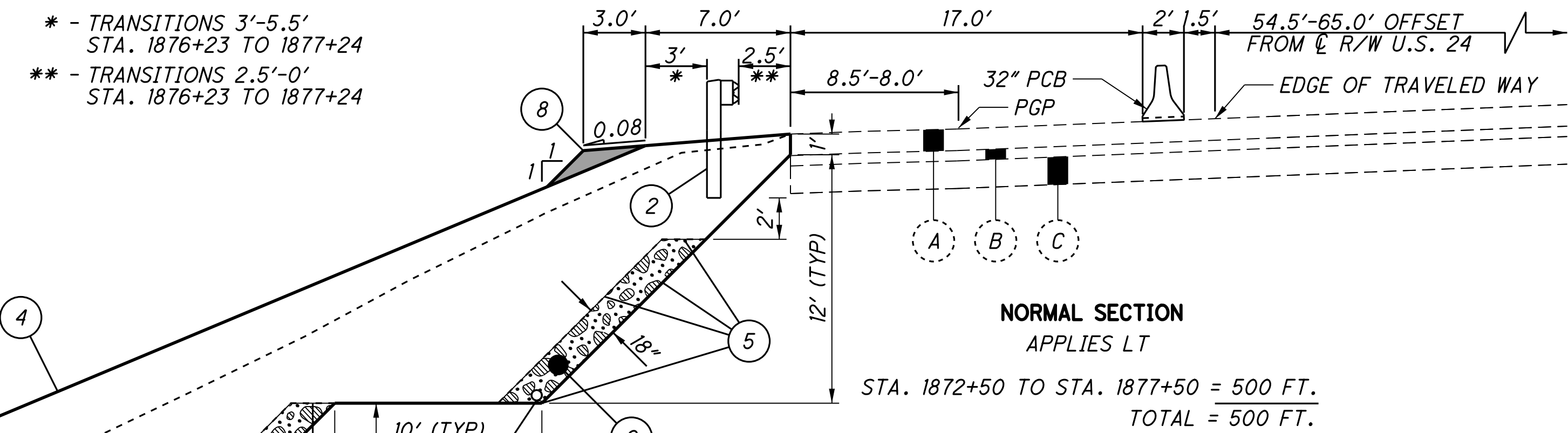
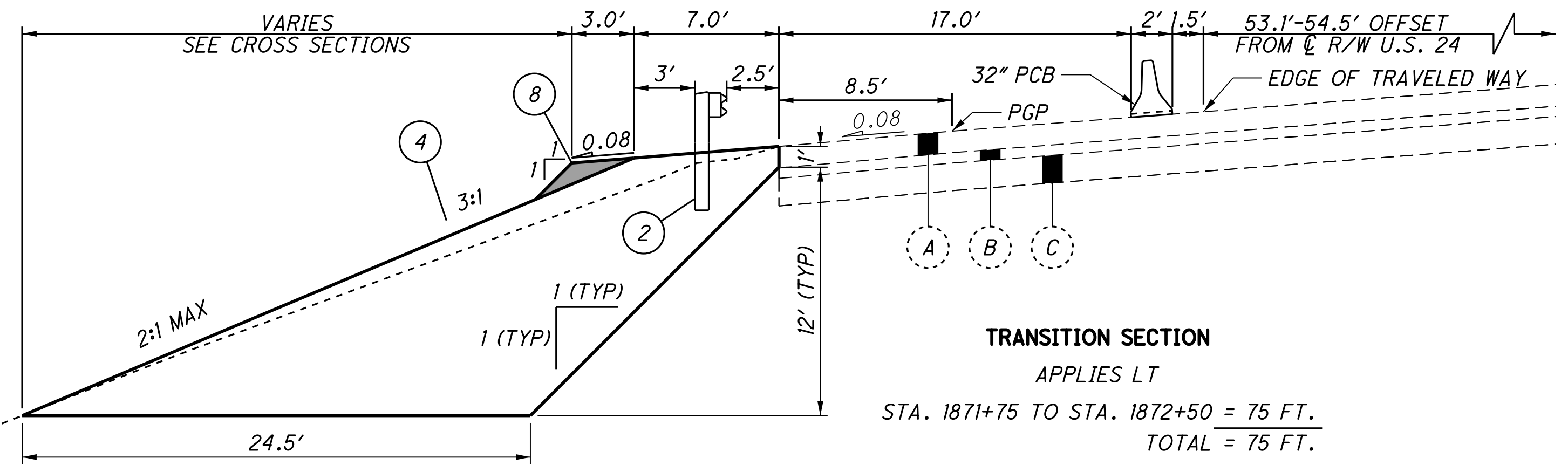
- | | |
|---|---|
| ① ITEM 609 - CURB TYPE 4-C | ⑦ ITEM 611 - 6" CONDUIT, TYPE E, AS PER PLAN |
| ② ITEM 606 - GUARDRAIL, TYPE MGS | ⑧ TEMPORARY FILL, AS PER GEOTECHNICAL BULLETIN 2 |
| ③ ITEM 659 - TOPSOIL | ⑨ ITEM 670 - DITCH EROSION PROTECTION |
| ④ ITEM 659 - SEEDING AND MULCHING | ⑩ ITEM 605 - 4" BASE PIPE UNDERDRAINS |
| ⑤ ITEM 690 - GEOTEXTILE FABRIC, 712.09 TYPE A | ⑪ ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN |
| ⑥ ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN (NO. 8 AGGREGATE) | ⑫ ITEM 452 - 12.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1, AS PER PLAN |
| | ⑬ ITEM 204 - SUBGRADE COMPACTION |

EXISTING LEGEND

- Ⓐ 12½" PORTLAND CEMENT CONCRETE PAVEMENT
- Ⓑ 6" AGGREGATE BASE
- Ⓒ 16" LIME STABILIZATION SUBGRADE

- - TEMPORARY FILL, AS PER G.B. 2
- ▨ - GRANULAR EMBANKMENT, APP (NO. 8 AGGREGATE)
- # - REFERENCE CROSS SECTIONS FOR BENCHING DIMENSIONS

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EX SH

EX LA-R/W

TYPICAL SECTIONS

DEF - 24 - 3.06

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

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.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER COVERING COMPLETION OF THIS PROJECT.

MAINTAIN EXISTING PAVEMENT SLOPES

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL EXISTING PAVEMENT SLOPES, UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.

EXISTING PLANS

EXISTING PLANS ENTITLED PAU/DEF-24-12.30/0.00 MAY BE INSPECTED IN THE ODOT DISTRICT ONE OFFICE IN LIMA OHIO.

ROUNDING

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

PIPE UNDERDRAINS

ANY PIPE UNDERDRAINS BROKEN OR DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE STATE.

SEEDING AND MULCHING

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 SHOWN ON SHEETS 10 AND 11 FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT NO COST TO THE STATE.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05.

SURVEYING PARAMETERS

BASIS FOR CL R/W & CONSTRUCTION:

THE EXISTING R/W WIDTH AND LOCATION DETERMINED USING THE FOLLOWING PLANS:
PAU/DEF-24-12.30/0.00

BASIS OF BEARING:

BEARINGS ARE BASED ON A "TRIMBLE" SITE CALIBRATION, GPS WAS USED ON LOCAL SITE CALIBRATION BASED ON OHIO NORTH, NAD83, 2011 ADJUSTMENT, FOR MORE DETAIL FOR THE "CALIBRATION POINTS AND PARAMETERS" CONTACT THE DISTRICT ONE SURVEY DEPARTMENT.

BASIS OF ELEVATION:

ELEVATIONS ARE BASED ON NAVD88, GEOID 2012A AND ESTABLISHED BY GPS (VRS)

ENVIRONMENTAL COMMITMENTS

ALL WORK AND STAGING OF EQUIPMENT AND MATERIALS WILL OCCUR ONLY WITHIN THE EXISTING ROADWAY RIGHT-OF-WAY. NO WORK OR STAGING OF EQUIPMENT AND MATERIALS WILL OCCUR WITHIN A STREAM, DITCH, OR WETLAND.

PRIOR TO CONSTRUCTION, SILT FENCE MUST BE PLACED ALONG THE WETLAND BOUNDARY SHOWN IN THE PLANS. IN ADDITION, SILT FENCE MUST ALSO BE PLACED ALONG THE EXISTING LA-R/W FENCE, BETWEEN THE FENCE AND THE ROADWAY. IT IS VERY IMPORTANT THAT DIRT AND OTHER MATERIALS DO NOT ENTER THE WETLANDS OR ODOT MITIGATION SITE. SEE PLAN SHEETS 8 AND 9 FOR LOCATION CALLOUTS. COST FOR THIS ITEM IS TO BE INCLUDED IN THE QUANTITY FOR ITEM 832 EROSION CONTROL.

BECAUSE OVER 1 ACRE OF GROUND DISTURBANCE WILL OCCUR AS A RESULT OF THIS PROJECT, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER GENERAL PERMIT WILL BE REQUIRED FROM THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA). THE NOTICE OF INTENT (NOI), PREPARED BY ODOT, AND THE OEPA NPDES CONSTRUCTION STORM WATER GENERAL PERMIT SHALL BE PROVIDED TO THE CONTRACTOR BY ODOT PERSONNEL AT THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING THE CO-PERMITTEE NOTICE OF INTENT FOR COVERAGE UNDER THE OEPA STORMWATER CONSTRUCTION GENERAL PERMIT AND SUBMITTING TO THE OEPA FOR THEIR APPROVAL, ALONG WITH THE DEVELOPMENT OF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP), BEFORE CONSTRUCTION ACTIVITY CAN TAKE PLACE. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS OF THE PERMIT.

A PROPER CONCRETE WASHOUT AREA MUST BE PROVIDED BY THE CONTRACTOR.

ODOT WILL ACQUIRE THE NECESSARY WATERWAY PERMITS PRIOR TO BEGINNING IN-STREAM WORK. NO WORK WITHIN WATERWAYS WILL OCCUR UNTIL ALL THE NECESSARY PERMITS HAVE BEEN OBTAINED. TERMS AND CONDITIONS OF THE WATERWAY PERMIT WILL BE PROVIDED TO THE CONTRACTOR AS SPECIAL PROVISIONS. THE WATERWAY PERMIT WILL BE PROVIDED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING. THE SPECIAL PROVISIONS MUST BE FOLLOWED THROUGHOUT CONSTRUCTION.

A PORTION OF THIS PROJECT IS LOCATED WITHIN THE DRINKING WATER CORRIDOR MANAGEMENT ZONE FOR THE CITY OF DEFIANCE. IN ORDER TO MINIMIZE THE POTENTIAL FOR A SPILL IN THIS SENSITIVE AREA, PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL NOT BE CONDUCTED FROM STA 1875+00 TO STA 1879+15. THE CONTRACTOR SHALL UTILIZE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS. FUELS, TOXIC/HAZARDOUS MATERIALS, AND CHEMICALS SHALL NOT BE STORED NEAR ANY DRAINAGE WAYS, DITCHES, OR STREAMS. A SPILL KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. ANY SUCH SPILL OR EVENT SHALL BE REPORTED IMMEDIATELY TO ADAM MCDOWELL AT THE CITY OF DEFIANCE WATER TREATMENT PLANT AT (419) 782-1886.

CALCULATED
DTS
CHECKED
JLG

GENERAL NOTES

DEF - 24 - 3.06

3
45

ALTERNATE BID ITEMS FOR SLOPE REPAIR

LISTED BELOW ARE TWO ALTERNATE METHODS FOR REPAIRING THE SLOPES AS DELINEATED IN THE PLANS.

BENCHING METHOD (GENERIC ALTERNATE): THIS METHOD REPAIRS THE SLOPES UTILIZING THE TRADITIONAL BENCHING METHOD OF EXCAVATING THE EXISTING SLOPE AND REBUILDING THE SLOPE BY PLACEMENT OF EMBANKMENT IN BENCHES. PLEASE REFER TO THE PLANS FOR DETAILS ON THE LIMITS OF THE BENCHING WORK.

PLATE PILES METHOD: THIS METHOD REPAIRS THE SLOPES UTILIZING THE PLACEMENT OF PLATE PILES TO SECURE THE SLOPE. PLEASE REFER TO THE PLANS FOR DETAILS ON THE LIMITS OF THE PLATE PILES WORK.

THERE ARE ALTERNATIVES FOR PERFORMING ADDITIONAL ITEMS OF WORK AND EACH IS ASSOCIATED WITH ONE OF THE TWO ALTERNATES FOR REPAIRING THE SLOPES AS DELINEATED IN THE PLANS. BID ALL THE FOLLOWING ALTERNATE BID ITEMS.

CLEARING AND GRUBBING, AS PER PLAN

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, LUMP SUM QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, FOR EACH OF THE SLOPE REPAIR METHODS. 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, AS PER PLAN.

ITEM 201, CLEARING AND GRUBBING, AS PER PLAN (BENCH) IS FOR CLEARING AND GRUBBING WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

ITEM 201, CLEARING AND GRUBBING, AS PER PLAN (PLATE PILES) IS FOR CLEARING AND GRUBBING WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT ITEM 201 ITEMS.

HEADWALL REMOVED, AS PER PLAN

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202, HEADWALL REMOVED, AS PER PLAN.

ITEM 202, HEADWALL REMOVED, AS PER PLAN (BENCH) IS FOR HEADWALL REMOVAL WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

ITEM 202, HEADWALL REMOVED, AS PER PLAN (PLATE PILES) IS FOR HEADWALL REMOVAL WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT 202 ITEMS.

CURB REMOVED, AS PER PLAN

QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY FOR ITEM 202, CURB REMOVED, AS PER PLAN, FOR EACH OF THE SLOPE REPAIR METHODS. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202, CURB REMOVED, AS PER PLAN.

ITEM 202, CURB REMOVED, AS PER PLAN (BENCH) IS FOR CURB REMOVAL WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

ITEM 202, CURB REMOVED, AS PER PLAN (PLATE PILES) IS FOR CURB REMOVAL WORK ASSOCIATED WITH THE PLATE PILE METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT ITEM 202 ITEMS.

PIPE REMOVED, OVER 24", AS PER PLAN

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202, PIPE REMOVED, OVER 24", AS PER PLAN.

ITEM 202, PIPE REMOVED, OVER 24", AS PER PLAN (BENCH) IS FOR PIPE REMOVAL, OVER 24" WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

ITEM 202, PIPE REMOVED, OVER 24", AS PER PLAN (PLATE PILES) IS FOR PIPE REMOVAL, OVER 24" WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT 202 ITEMS.

GUARDRAIL REMOVED, AS PER PLAN

QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY FOR ITEM 202, GUARDRAIL REMOVED, AS PER PLAN, FOR EACH OF THE SLOPE REPAIR METHODS. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202, GUARDRAIL REMOVED, AS PER PLAN.

ITEM 202, GUARDRAIL REMOVED, AS PER PLAN (BENCH) IS FOR GUARDRAIL REMOVAL WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

ITEM 202, GUARDRAIL REMOVED, AS PER PLAN (PLATE PILES) IS FOR GUARDRAIL REMOVAL WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT ITEM 202 ITEMS.

CURB, TYPE 4-C, AS PER PLAN

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE UNIT PRICE BID FOR ITEM 609, CURB, TYPE 4-C, AS PER PLAN.

ITEM 609, CURB, TYPE 4-C, AS PER PLAN (BENCH) IS FOR THE CURB WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

ITEM 609, CURB, TYPE 4-C, AS PER PLAN (PLATE PILES) IS FOR THE CURB WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT ITEM 609 ITEMS.

CONDUIT, AS PER PLAN

ALL DRAINAGE ITEMS, WHICH ARE ENCOUNTERED DURING BENCHING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY FOR THE PROMOTION OF GROWTH AND CARE OF PERMANENT SEEDED AREAS. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THE FOLLOWING ITEMS ARE INCLUDED IN THEIR UNIT PRICE BIDS:

- ITEM 605, 4" BASE PIPE UNDERDRAINS, AS PER PLAN (BENCH)
- ITEM 611, 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS, AS PER PLAN (BENCH)
- ITEM 611, 6" CONDUIT, TYPE E, AS PER PLAN (BENCH)
- ITEM 611, 48" CONDUIT, TYPE A, AS PER PLAN (BENCH)
- ITEM 611, PRECAST REINFORCED CONCRETE OUTLET, AS PER PLAN (BENCH)

THE ABOVE ITEMS ARE FOR THE CONDUIT WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THESE ITEMS OF WORK WILL NOT APPLY.

- ITEM 605, 4" BASE PIPE UNDERDRAINS, AS PER PLAN (PLATE PILES)
- ITEM 611, 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS, AS PER PLAN (PLATE PILES)
- ITEM 611, 6" CONDUIT, TYPE E, AS PER PLAN (PLATE PILES)
- ITEM 611, 48" CONDUIT, TYPE A, AS PER PLAN (PLATE PILES)
- ITEM 611, PRECAST REINFORCED CONCRETE OUTLET, AS PER PLAN (PLATE PILES)

THE ABOVE ITEMS ARE FOR THE CONDUIT WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THESE ITEMS OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT 605 AND 611 ITEMS.

GUARDRAIL, TYPE MGS, AS PER PLAN

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE UNIT PRICE BID FOR ITEM 606, GUARDRAIL, TYPE MGS, AS PER PLAN.

ITEM 606, GUARDRAIL, TYPE MGS, AS PER PLAN (BENCH) IS FOR GUARDRAIL, TYPE MGS WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

ITEM 606, GUARDRAIL, TYPE MGS, AS PER PLAN (PLATE PILES) IS FOR GUARDRAIL, TYPE MGS WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT ITEM 606 ITEMS.

**PAVEMENT REMOVED, AS PER PLAN
SUBGRADE COMPACTION, AS PER PLAN
AGGREGATE BASE, AS PER PLAN
12.5" NON-REINFORCED CONCRETE PAVEMENT,
CLASS QCI, AS PER PLAN**

QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY FOR THE REMOVAL OF THE EXISTING PAVEMENT AND PLACEMENT OF PROPOSED PAVEMENT. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THESE ITEMS ARE INCLUDED IN THE UNIT PRICE BID FOR THE FOLLOWING ITEMS:

- ITEM 202, PAVEMENT REMOVED, AS PER PLAN (BENCH)
- ITEM 304, AGGREGATE BASE, AS PER PLAN (BENCH)
- ITEM 452, 12.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QCI, AS PER PLAN (BENCH)

THE ABOVE ITEMS ARE FOR THE PAVEMENT REMOVAL, SUBGRADE COMPACTION, CONCRETE PAVEMENT, AND AGGREGATE BASE WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THESE ITEMS OF WORK WILL NOT APPLY.

- ITEM 202, PAVEMENT REMOVED, AS PER PLAN (PLATE PILES)
- ITEM 304, AGGREGATE BASE, AS PER PLAN (PLATE PILES)
- ITEM 452, 12.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QCI, AS PER PLAN (PLATE PILES)

THE ABOVE ITEMS ARE FOR THE PAVEMENT REMOVAL, SUBGRADE COMPACTION, CONCRETE PAVEMENT, AND AGGREGATE BASE WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THESE ITEMS OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT 202, 204, 304, AND 452 ITEMS.

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EXCAVATION, AS PER PLAN

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EXCAVATION, AS PER PLAN.

ITEM 203, EXCAVATION, AS PER PLAN (BENCH) IS FOR EXCAVATION WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

ITEM 203, EXCAVATION, AS PER PLAN (PLATE PILES) IS FOR EXCAVATION WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. WORK TO BE COMPLETED TO A DEPTH OF 3 FT AND WITHIN THE SLIDE AREAS DESIGNATED IN THE PLAN SHEETS. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT ITEM 203 ITEMS.

EMBANKMENT, AS PER PLAN

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EMBANKMENT, AS PER PLAN.

ITEM 203, EMBANKMENT, AS PER PLAN (BENCH) IS FOR EMBANKMENT WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

ITEM 203, EMBANKMENT, AS PER PLAN (PLATE PILES) IS FOR EMBANKMENT WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT ITEM 203 ITEMS.

GRANULAR EMBANKMENT, AS PER PLAN (NO. 8 AGGREGATE) (BENCH)

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, GRANULAR EMBANKMENT, AS PER PLAN.

ITEM 203, GRANULAR EMBANKMENT, AS PER PLAN (BENCH) IS FOR SLOPE EMBANKMENT WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT ITEM 203 ITEMS.

TIED CONCRETE BLOCK MAT, TYPE 1, AS PER PLAN

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE UNIT PRICE BID FOR ITEM 601, TIED CONCRETE BLOCK MAT, TYPE 1, AS PER PLAN.

ITEM 601, TIED CONCRETE BLOCK MAT, TYPE 1, AS PER PLAN (BENCH) IS FOR TIED CONCRETE BLOCK MAT, TYPE 1 WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

ITEM 601, TIED CONCRETE BLOCK MAT, TYPE 1, AS PER PLAN (PLATE PILES) IS FOR TIED CONCRETE BLOCK MAT, TYPE 1 WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT ITEM 601 ITEMS.

ROCK CHANNEL PROTECTION, TYPE B WITH FILTER, AS PER PLAN

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE UNIT PRICE BID FOR ITEM 601, ROCK CHANNEL PROTECTION, TYPE B WITH FILTER, AS PER PLAN.

ITEM 601, ROCK CHANNEL PROTECTION, TYPE B WITH FILTER, AS PER PLAN (BENCH) IS FOR ROCK CHANNEL PROTECTION WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

ITEM 601, ROCK CHANNEL PROTECTION, TYPE B WITH FILTER, AS PER PLAN (PLATE PILES) IS FOR ROCK CHANNEL PROTECTION WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THE ABOVE ITEM OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT 601 ITEMS.

**WATER, AS PER PLAN
SEEDING AND MULCHING, AS PER PLAN
COMMERCIAL FERTILIZER, AS PER PLAN**

QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY FOR THE PROMOTION OF GROWTH AND CARE OF PERMANENT SEEDING AREAS. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THE FOLLOWING ITEMS ARE INCLUDED IN THEIR UNIT PRICE BIDS:

ITEM 616, WATER, AS PER PLAN (BENCH)
ITEM 659, SEEDING AND MULCHING, AS PER PLAN (BENCH)
ITEM 659, COMMERCIAL FERTILIZER (BENCH)

THE ABOVE ITEMS ARE FOR THE WATER, SEEDING AND MULCHING, AND COMMERCIAL FERTILIZER WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THESE ITEMS OF WORK WILL NOT APPLY.

ITEM 616, WATER, AS PER PLAN (PLATE PILES)
ITEM 659, SEEDING AND MULCHING, AS PER PLAN (PLATE PILES)
ITEM 659, COMMERCIAL FERTILIZER (PLATE PILES)

THE ABOVE ITEMS ARE FOR THE WATER, SEEDING AND MULCHING, AND COMMERCIAL FERTILIZER WORK ASSOCIATED WITH THE PLATE PILES METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THESE ITEMS OF WORK WILL NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE FOR THE PERTINENT 616 AND 659 ITEMS.

LIGHTING (BENCH)

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THE FOLLOWING ITEMS ARE INCLUDED IN THE UNIT PRICE BID FOR THE ASSOCIATED 625 ITEMS.

DISCONNECT CIRCUIT, AS PER PLAN (BENCH)

DISCONNECT EXISTING CIRCUIT AT THE STRUCTURE JUNCTION BOX LOCATED APPROXIMATELY STA. 1879+40, 97' LT (FORMALLY CALLED C1-JP1), DESIGNATED L-3 IN THESE PLANS. DISCONNECT THE PORTION OF THE LIGHTING CIRCUIT TO BE REMOVED OR ABANDONED FROM THE PORTION OF THE CIRCUIT TO REMAIN IN SERVICE AT THE DESIGNATED NODE POINT. REMOVE THE CABLE FROM THE LINK NO LONGER TO REMAIN IN SERVICE FROM THE NODE POINT ENCLOSURE. REMOVE THE CONDUIT OR DUCT FOR THE LINK NO LONGER IN SERVICE FROM THE NODE POINT ENCLOSURE AND PROPERLY CLOSE THE RESULTANT OPENINGS IN THE ENCLOSURE UNLESS THE CONDUIT OR DUCT IS TO BE LEFT IN PLACE TO ALLOW ANOTHER CIRCUIT LINK TO ENTER THE NODE ENCLOSURE.

ITEM 625, DISCONNECT EXISTING CIRCUIT, AS PER PLAN (BENCH) IS FOR DISCONNECTING THE EXISTING CIRCUIT WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN (BENCH)

THIS ITEM OF WORK SHALL CONSIST OF CAREFULLY DISMANTLING/LOWERING THE LIGHT POLES INDICATED FOR REMOVAL AND SUBSEQUENTLY STORING THE LIGHT POLES ON THE PROJECT IN A MANNER TO AVOID DAMAGING THE POLES AND/OR LUMINAIRES. ALSO INCLUDED, IN THIS ITEM OF WORK, THE REERECTION OF THESE EXISTING LIGHT POLES AT STA.1874+45, 96' LT. & STA.1877+93, 104' LT. AFTER THE SLOPE REPAIRS HAVE BEEN COMPLETED.

THE LIGHT POLE SHALL BE CLEANED AND REPAIRS NEEDED FOR THE POLE TO BE IN GOOD SERVICEABLE CONDITION MADE. THE EXISTING POLE NUMBER DECAL SHALL BE REMOVED IF IT IS IN POOR CONDITION OR THE POLE NUMBER HAS CHANGED. A POLE NUMBER DECAL SHALL BE SUPPLIED AND APPLIED IF THE EXISTING DECAL IS REMOVED OR MISSING.

NEW ANCHOR BOLTS SHALL BE FURNISHED AS PART OF THIS ITEM. PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER ITEM 625, REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN FOR EACH POLE INSTALLED AND SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM IN A WORKMANLIKE MANNER.

ITEM 625, REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN (BENCH) IS FOR REMOVING THE EXISTING LIGHT POLE AND THE REERECTION WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

LIGHT POLE FOUNDATION REMOVED, AS PER PLAN (BENCH)

REMOVE THE LUMINAIRE SUPPORT FOUNDATION A MINIMUM OF ONE FOOT (0.3 M) BELOW FINISHED GRADE OR CLEAR OF PROPOSED CONSTRUCTION, BACKFILL THE RESULTANT DEPRESSION WITH COMPACTED SOIL AND RESTORE THE DISTURBED AREA.

IT IS ODOT'S INTENTION THAT THE CONTRACTOR REMOVE AS MUCH OF EXISTING FOUNDATION AS NEEDED TO FACILITATE SLOPE REPAIR.

ITEM 625, LIGHT POLE FOUNDATION REMOVED, AS PER PLAN (BENCH) IS FOR THE LIGHT POLE FOUNDATION REMOVAL WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

LIGHT POLE FOUNDATION, AS PER PLAN (BENCH)

THIS ITEM OF WORK SHALL CONSIST OF EXCAVATING A 2'X15' FOUNDATION AND AFTERWARDS FORMING A FOUNDATION AS PER CMS 625.10 AND SCD HL-20.11 WITH THE EXCEPTION THE DEPTH SHALL BE 15' TO ALLOW FOR FOUNDATION TO GO BEYOND THE SLOPE REPAIR (BENCHING) INTO UNDISTURBED SOIL. SCD HL-20.11 NOTE 2 SHOULD BE MODIFIED TO INCLUDE 8 NO. 4 TIE BARS FOR THE 15' DEPTH. THE NEW FOUNDATIONS SHALL BE LOCATED AT:

STA.1874+45, 96' LT.
STA.1877+93, 104' LT.

ITEM 625, LIGHT POLE FOUNDATION, AS PER PLAN (BENCH) IS FOR THE LIGHT POLE FOUNDATION WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

TRENCH, 24" DEEP, AS PER PLAN (BENCH)

ITEM 625, TRENCH, 24" DEEP, AS PER PLAN (BENCH) IS FOR TRENCHING WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

1-1/2" DUCT CABLE W/ THREE NO. 4 AWG 2400 VOLT CABLES, AS PER PLAN (BENCH)

ITEM 625, 1-1/2" DUCT CABLE W/ THREE NO. 4 AWG 2400 VOLT CABLES, AS PER PLAN (BENCH) IS FOR DUCT CABLE WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

CONNECTOR, FUSED PULL APART, AS PER PLAN (BENCH)

ITEM 625, CONNECTOR, FUSED PULL APART, AS PER PLAN (BENCH) IS FOR CONNECTOR WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

CONNECTION, UNFUSED PERMANENT, AS PER PLAN (BENCH)

ITEM 625, CONNECTION, UNFUSED PERMANENT, AS PER PLAN (BENCH) IS FOR CONNECTION WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

GROUND ROD, AS PER PLAN (BENCH)

ITEM 625, GROUND ROD, AS PER PLAN (BENCH) IS FOR GROUND ROD WORK ASSOCIATED WITH THE BENCHING METHOD OF SLOPE REPAIR. IF THIS METHOD IS NOT CHOSEN BY ODOT, THIS ITEM OF WORK WILL NOT APPLY.

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ITEM SPECIAL, MISC.: PLATE PILES

DESCRIPTION OF WORK

THIS ITEM OF WORK PROVIDES SLOPE STABILIZATION BY USING A PROPRIETARY AND PATENTED SLOPE REINFORCEMENT TECHNOLOGY (METHOD). THE PATENTED GEOPIER SRT SYSTEM (PLATE PILE METHOD) USES AN ARRAY OF STEEL PILES DRIVEN INTO THE SLOPE IN STAGGERED AND UNIFORMLY SPACED ROWS. A PRELIMINARY PLATE PILE DESIGN AND LAYOUT IS SUMMARIZED IN TABLE 1 AND ADDITIONAL DETAILS ARE PROVIDED IN FIGURES 1 AND 2. THE CONTRACTOR SHALL CONTACT THE BELOW COMPANY TO COORDINATE THE FINAL SLOPE STABILIZATION WORK:

GEOPIER FOUNDATION COMPANY
 GEOPIER SRT SYSTEM
 335 WELLINGTON WAY
 SPRINGBORO, OH 45066
 CONTACT: MARK SALVETER
 OFFICE: 937-790-1084
 CELL: 513-516-1251

THE GEOPIER SRT SYSTEM (PLATE PILE METHOD) IS A DESIGN/BUILD PRODUCT AND SHALL BE PER THE RECOMMENDATIONS OF THE GEOPIER FOUNDATION COMPANY. GEOPIER WILL FINALIZE THE DESIGN AND ARRANGE FOR THE INSTALLATION OF THE PLATE PILES WITH ONE OF THEIR LICENSED INSTALLERS.

IN ADDITION TO THE SLOPE STABILIZATION WORK, THE CONTRACTOR WILL REGRADE THE SLOPE TO PROVIDE A UNIFORM SURFACE PRIOR TO THE INSTALLATION OF THE PLATE PILES. THIS SHALL BE PER THE RECOMMENDATIONS OF GEOPIER AND TO THE SATISFACTION OF THE PROJECT ENGINEER. QUANTITIES FOR ITEM 203, EXCAVATION, AS PER PLAN, AND ITEM 203 EMBANKMENT, AS PER PLAN, HAVE BEEN INCLUDED IN THE PLANS FOR THIS WORK.

PER THE PROVIDED CONCEPTUAL DETAILS, THE PLATE PILES WILL BE INSTALLED 4-FEET ON-CENTER IN THE HORIZONTAL DIRECTION (I.E. PARALLEL TO THE ROADWAY) AND AS INDICATED BELOW IN THE VERTICAL DIRECTION (I.E. PERPENDICULAR TO THE ROADWAY). PLATE PILE ROWS SHOULD BE STAGGERED TO ALIGN EACH PLATE BETWEEN THE PLATES OF THE UPPER ROW. THE FIRST ROW OF PLATE PILES SHOULD BE INSTALLED NEAR THE HEAD OF THE SLOPE AND SUBSEQUENT ROWS DOWNSLOPE SHOULD BE SPACED AS INDICATED.

FOLLOWING THE INSTALLATION OF THE PLATE PILES, THE CONTRACTOR WILL REGRADE ANY AREAS DISTURBED DURING PLATE PILE INSTALLATION PRIOR TO INSTALLING EROSION CONTROL MEASURES. THIS EMBANKMENT AND REGRADING WORK SHALL BE PER THE RECOMMENDATIONS OF GEOPIER AND TO THE SATISFACTION OF THE PROJECT ENGINEER. QUANTITIES FOR ITEM 203, EXCAVATION, AS PER PLAN, AND ITEM 203 EMBANKMENT, AS PER PLAN, HAVE BEEN INCLUDED IN THE PLANS FOR THIS WORK.

FOLLOWING THE INSTALLATION OF THE PLATE PILES AND THE REGRADING OF THE STABILIZED SLOPE, EROSION CONTROL AND VEGETATIVE PLANTING MUST BE PROVIDED BY THE CONTRACTOR TO ENSURE A FULLY FUNCTIONING SLOPE STABILIZATION SYSTEM. EROSION CONTROL MATTING PER STANDARD CONSTRUCTION DRAWING DM-4.2 AND SEEDING AND MULCHING SHALL BE PROVIDED. QUANTITIES FOR ITEM 670, SLOPE EROSION PROTECTION MAT, AS PER PLAN, AND SEVERAL 659 ITEMS HAVE BEEN INCLUDED IN THE PLANS TO PROVIDE EROSION CONTROL AND ESTABLISH VEGETATION ALONG AND BEYOND THE STABILIZED AND REGRADED SLOPES.

MATERIALS

PLATE PILES SHALL BE CONSTRUCTED OF STEEL S3x5.7 S-SHAPES. PLATES SHALL BE A MINIMUM OF 0.25 IN. THICK.

METHOD OF MEASUREMENT

THE DEPARTMENT WILL MEASURE THE QUANTITY OF AREA REPAIRED UTILIZING THE PLATE PILES AS TOTAL SQUARE YARDS MEASURED IN THE FIELD BASED ON THE AREAS DESIGNATED IN THE PLANS. THE REPAIRED AREA IS TO BE MEASURED ALONG A HORIZONTAL PLANE, NOT ALONG THE SLOPE.

BASIS OF PAYMENT

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

ITEM SPECIAL, MISC.: PLATE PILES 4,200 SY

IF THE PLATE PILES SLOPE REPAIR IS NOT CHOSEN BY ODOT, THEN THIS ITEM DOES NOT APPLY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE, UNLESS NOTED OTHERWISE, SHALL BE INCLUDED IN THE UNIT PRICE FOR THE PERTINENT 690 ITEMS.

TABLE 1

SLIDE AREAS STATIONING		PILE LENGTH	UPSLOPE SPACING	PLATE DIMENSION	ESTIMATED PILE COUNT
FROM	TO	FT	FT	IN x IN x IN	EACH
1872+50	1878+50	11	6	60 x 12 x 1/4	1760

SLIDE AREA LIMITS DEPICTED IN PLAN SHEETS

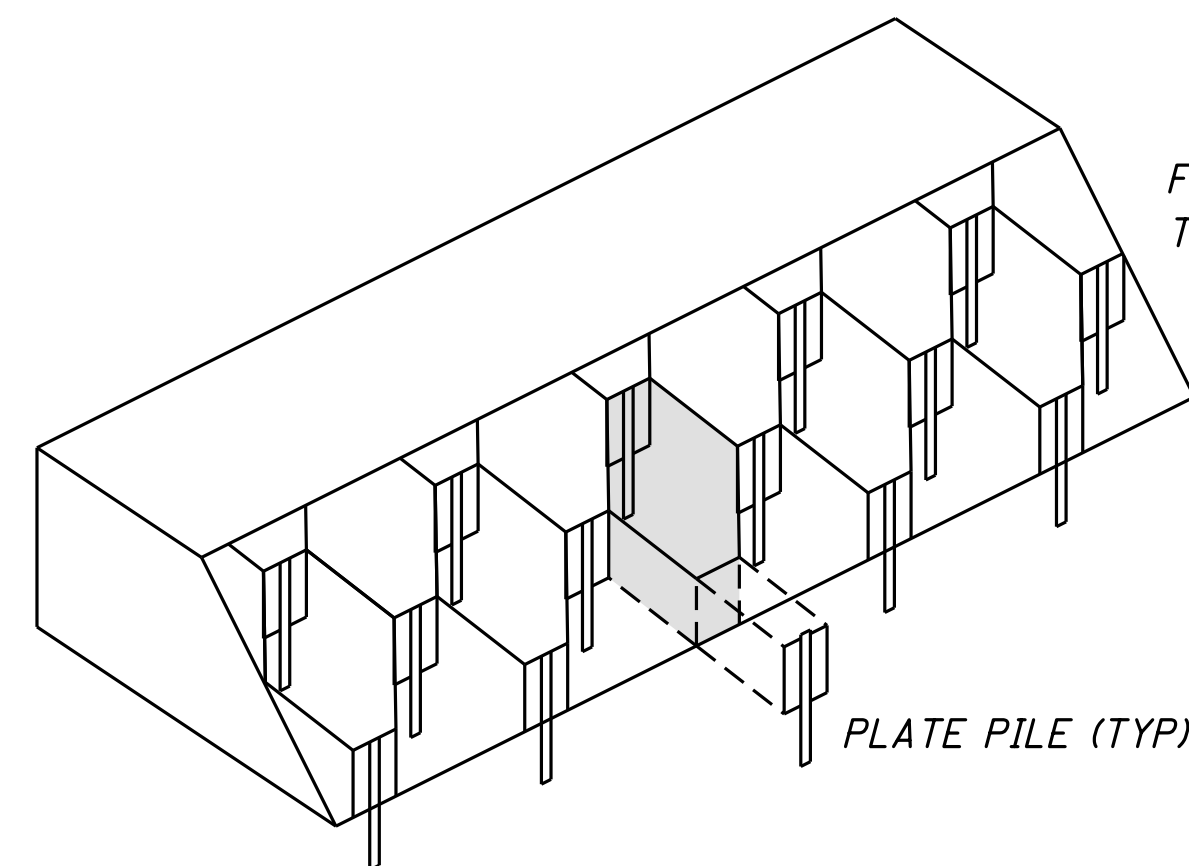


FIGURE 1
TYPICAL PLATE PILE CONFIGURATION

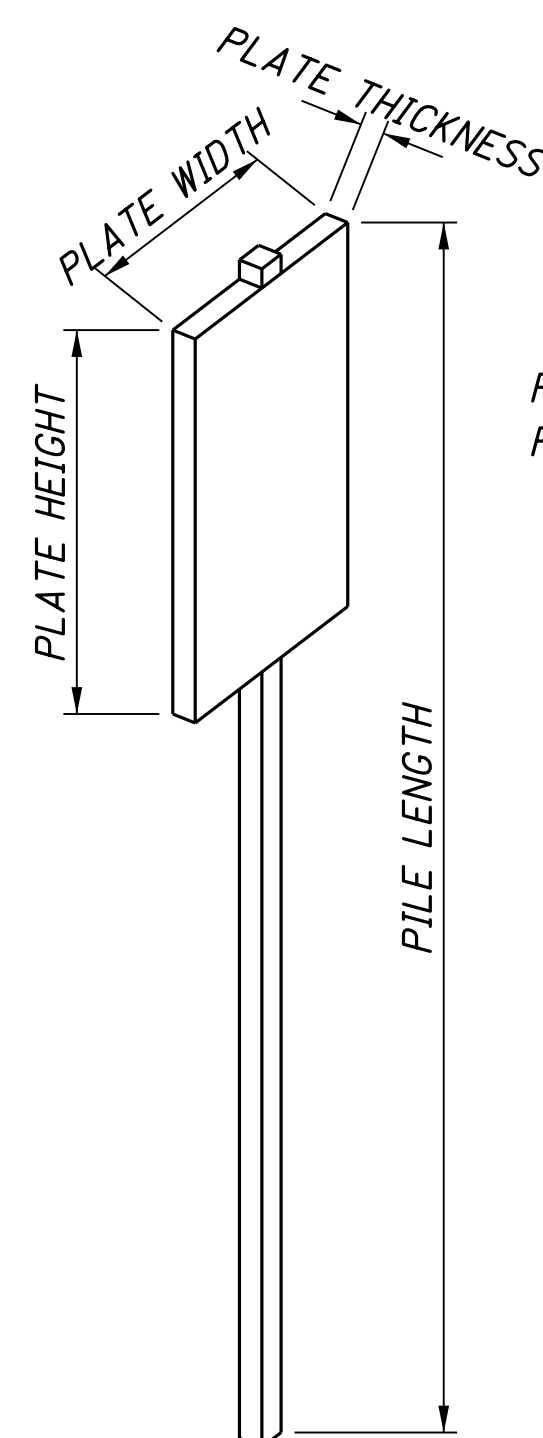


FIGURE 2
PLATE PILE DETAIL

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GENERAL NOTES - PLATE PILES

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ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN

A MINIMUM OF 2 LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND THE COMPLETED PAVEMENT.

NOTICE OF CONSTRUCTION

THE CONTRACTOR SHALL ADVISE THE PROJECT ENGINEER A MINIMUM OF FIFTEEN (15) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE PROJECT ENGINEER WILL NOTIFY THE PROPER EMERGENCY SERVICES, SCHOOLS AND ANY IMPACTED LOCAL PUBLIC AGENCY. THE PROJECT ENGINEER WILL ALSO FORWARD THIS INFORMATION TO THE DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY EMAIL. WHO WILL, IN TURN, DISSEMINATE THE INFORMATION TO THE PUBLIC VIA THE LOCAL MEDIA OUTLETS.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS UNIDIRECTIONAL

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 WEB PAGE FOR ROADWAY STANDARDS APPROVED PRODUCTS.

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 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.

ITEM 614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) 1 EACH

ITEM 614, REPLACEMENT DRUM

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

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

DUE TO CONCRETE BARRIER REACHING INTO THE TRAVELED LANE, REPLACEMENT DRUMS SHALL BE PLACED TO DELINEATE TRAVELED WAY TO ALLOW FOR A TEMPORARY 11' LANE.

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

ITEM 614 REPLACEMENT DRUM 10 EACH

ITEM 622, PORTABLE BARRIER, 32"

THIS WORK SHALL CONSIST OF FURNISHING, MAINTAINING, AND SUBSEQUENTLY REMOVING A 32-INCH PORTABLE BARRIER AT THE LOCATIONS SHOWN ON THE PLANS. FOR DETAILS, SEE SCD RM-4.2.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR ITEM 622, PORTABLE BARRIER, 32"

ITEM 622 PORTABLE BARRIER, 32" 790 FT

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.

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

ITEM 614 BARRIER REFLECTOR, TYPE B 16 EACH
ITEM 614 OBJECT MARKER, ONE WAY 16 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.

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 OMTUCD INTENDS THAT FLAGGERS BE USED.

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

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH 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.

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.

ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. 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 WHICH 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 W/ PATROL CAR FOR ASSISTANCE 40 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 AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

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 10 MGAL

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MAINTENANCE OF TRAFFIC
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45

DRAINAGE				602	605	611			
SHEET	REFERENCE	STATION		CONCRETE MASONRY, AS PER PLAN	4" BASE PIPE UNDERDRAINS, AS PER PLAN	6" CONDUIT, TYPE F 707.05 TYPE C OR 707.21, AS PER PLAN	48" CONDUIT, TYPE A, AS PER PLAN	CATCH BASIN, NO. 3A, AS PER PLAN	PRECAST REINFORCED CONCRETE OUTLET, AS PER PLAN
NO.	NO.	FROM	TO	CY	FT	FT	FT	EACH	EACH
31	D-7	1872+50							
31	D-8	1873+44		1.1			16		
31	D-9	1876+50				91		1	1
31	UD-2	1877+75	1878+69		95				
TOTALS TO GEN SUM				1.1	95	91	16	1	1

EROSION CONTROL				601	
SHEET	REFERENCE	STATION		TIED CONCRETE BLOCK MAT, TYPE 1, AS PER PLAN	ROCK CHANNEL PROTECTION, TYPE B W/ FILTER, 30" THICK, AS PER PLAN
NO.	NO.	FROM	TO	SY	CY
31	EC-4	1872+50		102	
31	EC-5	1873+44			22.2
31	EC-6	1876+50		10	
TOTALS TO GEN SUM				112	22

EARTHWORK		203		659
SHEET	LOCATION	EXCAVATION, AS PER PLAN	EMBANKMENT, AS PER PLAN	SEEDING AND MULCHING, AS PER PLAN
NO.	ROUTE	CY	CY	SY
	U.S. 24			
32		0	0	0
33		42	42	485
34		68	68	664
35		107	107	654
36		95	95	671
37		72	72	687
38		68	68	690
39		57	57	694
40		59	59	696
41		60	60	645
42		47	47	660
43		45	45	623
44		59	59	405
45		37	37	216
TOTALS TO GEN SUM		816	816	7790

ROADWAY				202				606	
SHEET	REFERENCE	STATION		HEADWALL REMOVED, AS PER PLAN	PAVEMENT REMOVED, AS PER PLAN	CURB REMOVED, AS PER PLAN	PIPE REMOVED, OVER 24", AS PER PLAN	GUARDRAIL REMOVED, AS PER PLAN	GUARDRAIL, TYPE MGS, AS PER PLAN
NO.	NO.	FROM	TO	EACH	SY	FT	SY	FT	FT
31	GR-2	1871+22	1878+73					737.5	737.5
31	R-4	1873+44		1			8		
31	R-5	1876+51	1878+69			115			
31	R-6	1877+75	1878+75		33.3				
TOTALS TO GEN SUM				1	33	115	8	737.5	737.5

PAVEMENT				204	304	452	609
SHEET	REFERENCE	STATION		SUBGRADE COMPACTION	AGGREGATE BASE (T=6"), AS PER PLAN	12.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS OC1, AS PER PLAN	CURB, TYPE 4-C, AS PER PLAN
NO.	NO.	FROM	TO	SY	CY	SY	FT
31	P-3	1872+54	1876+49				385
31	P-4	1876+51	1878+69				218
31	P-5	1877+75	1878+75	60.9	10.1	60.7	
TOTALS TO GEN SUM				61	10	61	603

CALCULATIONS		
659 SEEDING AND MULCHING, AS PER PLAN	=	7790 SY
659 COMMERCIAL FERTILIZER, AS PER PLAN (7790)(9)(1/1000)(30)(1/2000)	=	1.05 TON
659 WATER, AS PER PLAN (2)(7790)(9)(1/1000)(300)(1/1000)	=	42 M GAL
TOTALS CARRIED TO GENERAL SUMMARY		

PROJECT DATA			
TOTAL AREA OF PROJECT (RIGHT OF WAY)	= 1.90 Acres	IMPERVIOUS AREA FOR PRE-CONSTRUCTION SITE	= 1.07 Ac.
PROJECT EARTH DISTURBED AREA	= 1.75 Acres	IMPERVIOUS AREA FOR POST CONSTRUCTION SITE	= 1.07 Ac.
CONTRACTOR EARTH DISTURBED AREA	= 0.125 Acres	USGS 7.5 MINUTE QUADRANGLE MAP -	DEFIANCE WEST
NOTICE OF INTENT EARTH DISTURBED AREA	= 4.9 Acres	IMMEDIATE RECEIVING WATER -	45 15 S/84 30 W
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	= 0.9	SUBSEQUENT RECEIVING WATER -	STEVENS DITCH
RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE	= 0.9	APPROX. LATITUDE OF CENTER OF PROJECT -	MAUMEE RIVER
		APPROX. LONGITUDE OF CENTER OF PROJECT -	N41°16'24"
			W84°25'11"

EROSION CONTROL			
ITEM	TOTAL	UNIT	DESCRIPTION
659	46	CY	TOPSOIL
670	410	SY	DITCH EROSION PROTECTION
832	LS		STORM WATER POLLUTION PREVENTION PLAN
832	19,000	EACH	EROSION CONTROL

QUANTITIES CARRIED TO GENERAL SUMMARY

POST CONSTRUCTION BMP LOCATIONS									
BEGIN	END	SIDE	START LAT. & LONG.	END LAT. & LONG.	TYPE	WIDTH	AREA TREATED	R.O.W. TREATED	AREA REQUIRED
1872+50	1873+36	LT	41.2729° -84.4203°	41.2729° -84.4201°	VEGETATED BIOFILTER	8'	0.20	0.20	
1873+52	1877+50	LT	41.2730° -84.4201°	41.2739° -84.4193°	VEGETATED BIOFILTER	8'	1.02	1.02	
TOTAL							1.22	1.22	0.35

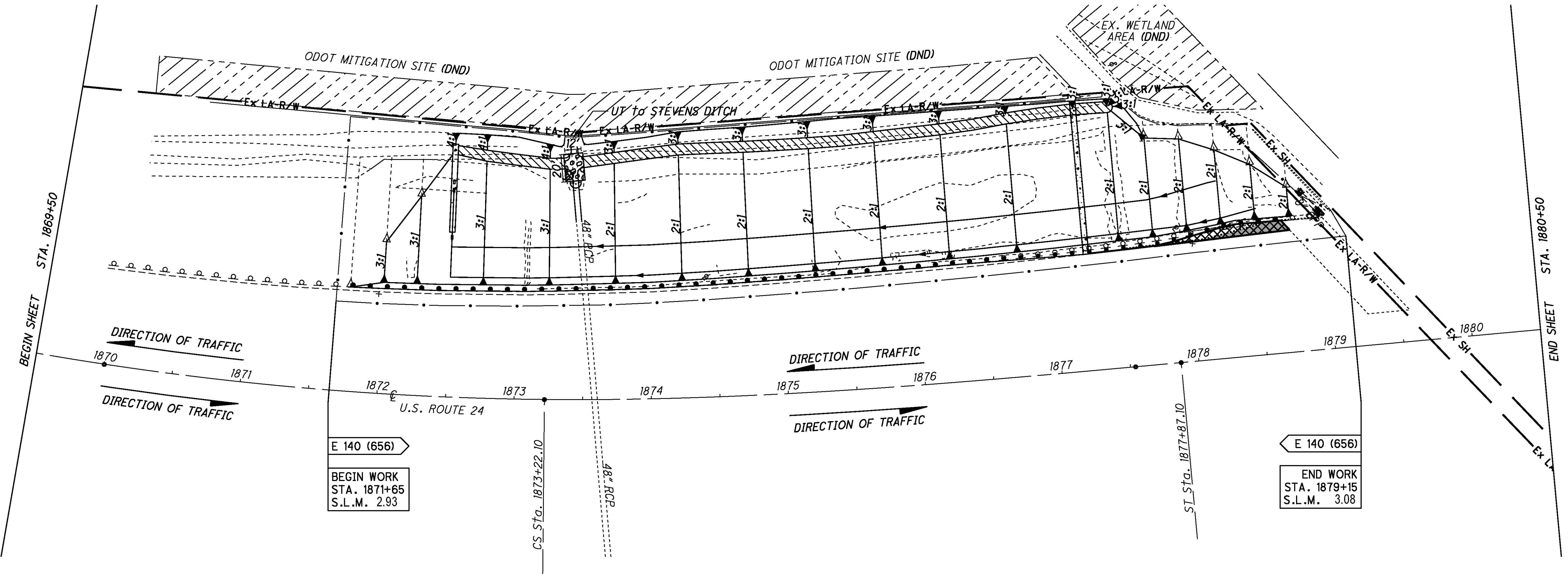
- PAVEMENT REMOVED (202)
- 12.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1, AS PER PLAN
- ROCK CHANNEL PROTECTION TYPE B WITH FILTER, T=30"
- TIED CONCRETE BLOCK MAT, TYPE 1
- ITEM 670, DITCH EROSION PROTECTION, VEGETATED BIOFILTER (BMP) FROM STA. 1872+50 TO STA. 1877+50
- EX. WETLAND AREA (DND)
- OHWM (ELEV. 693.82)

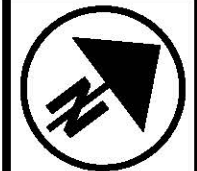
PROJECT DESCRIPTION

REPAIR SLOPE IN THE SW QUADRANT OF THE US 24 OVERPASS WITH BALTIMORE STREET BY ONE OF TWO METHODS:

- 1) REMOVING THE GUARDRAIL AND EXCAVATING THE SLOPE AREA TO THE FAILURE PLANE (BENCH)
- 2) INSTALL PLATE PILES IN THE DESIGNATED FAILURE AREA (PLATE PILES)

BOTH OPTIONS WILL THEN RE-INSTALL GUARDRAIL AND FIX WASHOUTS BY EXTENDING THE CURB AND PLACING BLOCK MAT TO CATCH RUN-OFF. RECONSTRUCT THE CRACKED AREA OF THE CONCRETE SHOULDER BEHIND THE APPROACH SLAB.





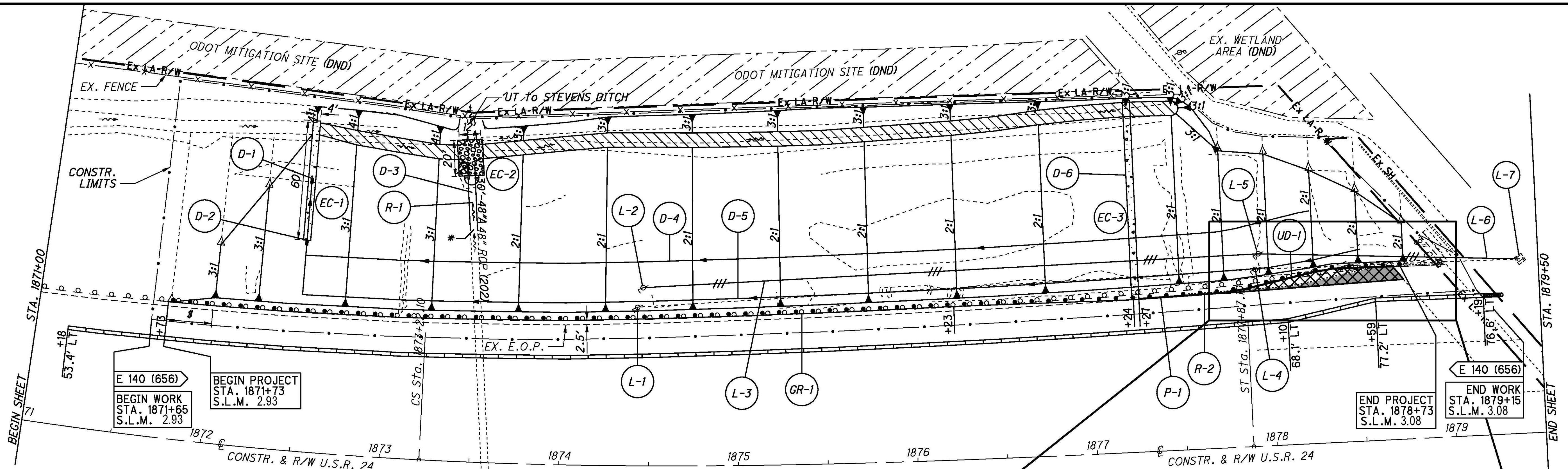
CALCULATED
DTS
CHECKED
JLG

0 15 30 60
HORIZONTAL
SCALE IN FEET

PLAN AND PROFILE - BENCH
STA. 1871+00 TO STA. 1879+50

DEF-24-3.06

13
45



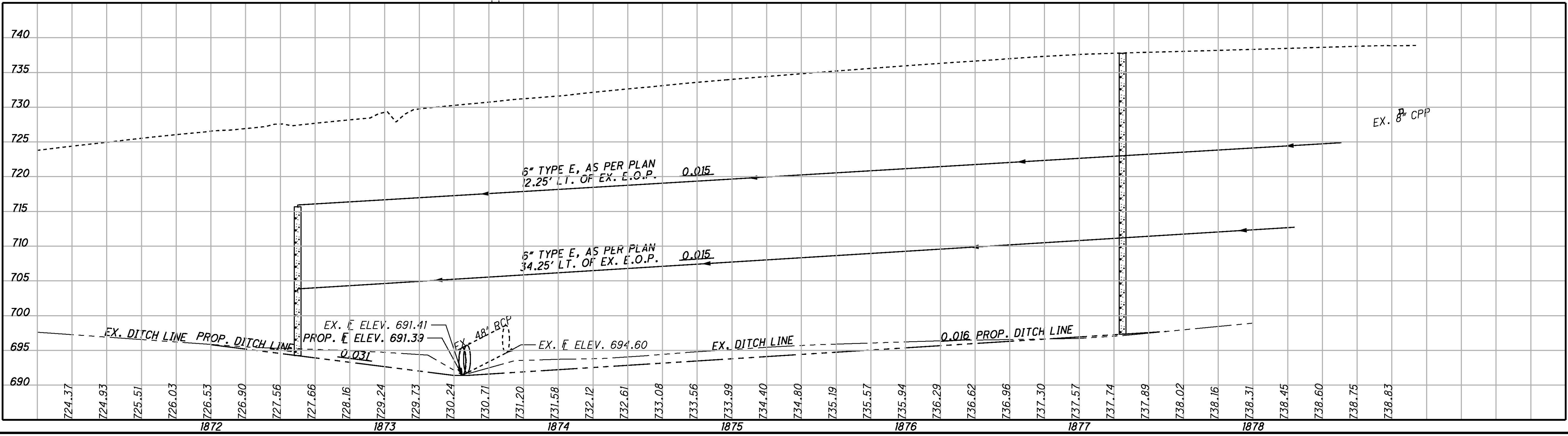
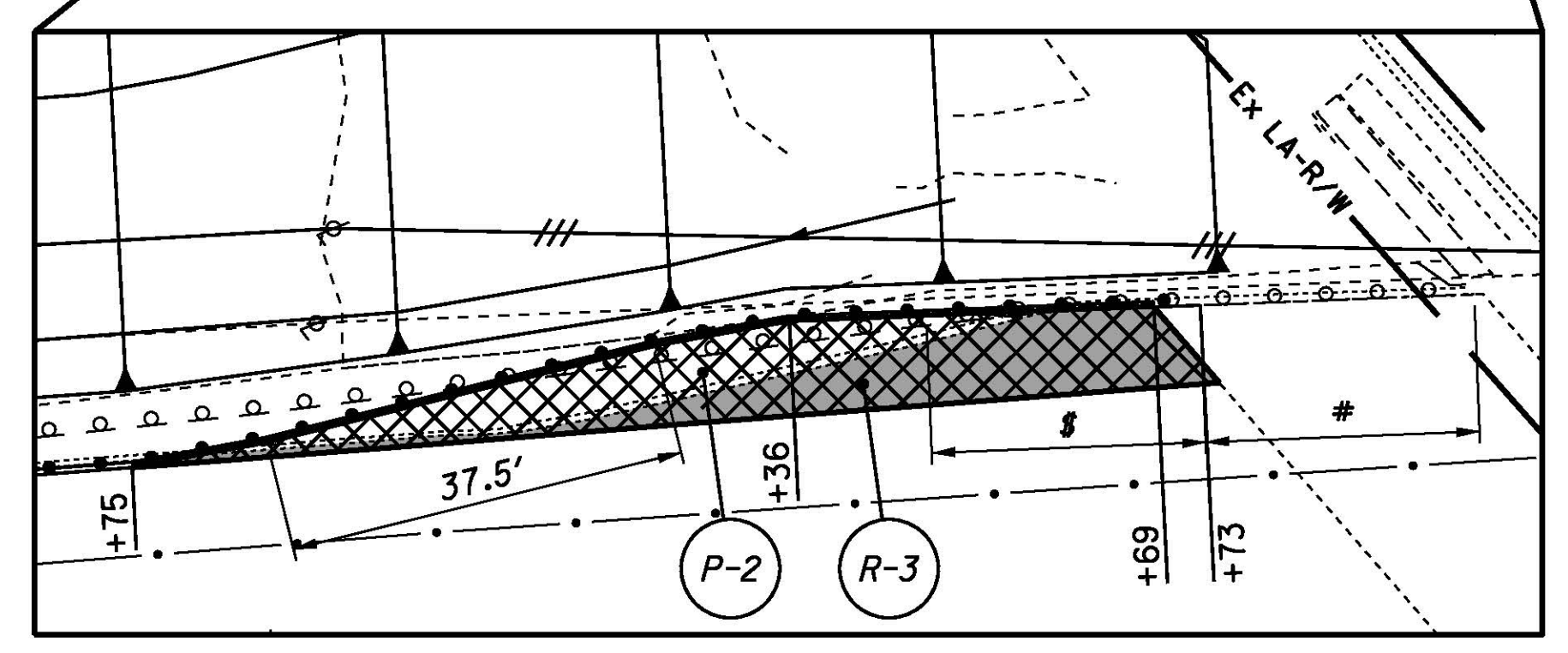
- BM #1 STAMPED "+" IN CONC. BERM
STA. 1871+97, 72' LT., ELEV. 728.27
- BM #2 STAMPED "+" IN CONC. BERM
STA. 1878+03, 85.5' LT., ELEV. 738.15
- BM #3 CHISELED "□" IN SW WINGWALL OF BRIDGE
STA. 1878+96, 98' LT., ELEV. 738.88

EX. CURVE DATA
 PI = Sta. 1868+60.75
 $\Delta = 23^\circ 23' 53.11''$ LT
 $Dc = 2^\circ 00' 00''$
 $R = 2,291.8'$
 $Lc = 935.92'$
 $E = 48.62'$
 $C = 929.43'$
 $C.B.1 = N 63^\circ 15' 28'' E$
 $C.B.2 = N 39^\circ 51' 35'' E$
 $C.B.2 = N 51^\circ 33' 31'' E$

- PAVEMENT REMOVED, APP (202)
- 12.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1, AS PER PLAN
- ROCK CHANNEL PROTECTION TYPE B WITH FILTER, T=30"
- TIED CONCRETE BLOCK MAT, TYPE 1
- ITEM 670, DITCH EROSION PROTECTION, VEGETATED BIOFILTER (BMP)

- \$ - 25'-0" GUARDRAIL TRANSITION (TYPE 5 TO TYPE MGS)
- # - EX. BRIDGE TERMINAL ASSEMBLY (DND)
- % - MASONRY COLLAR

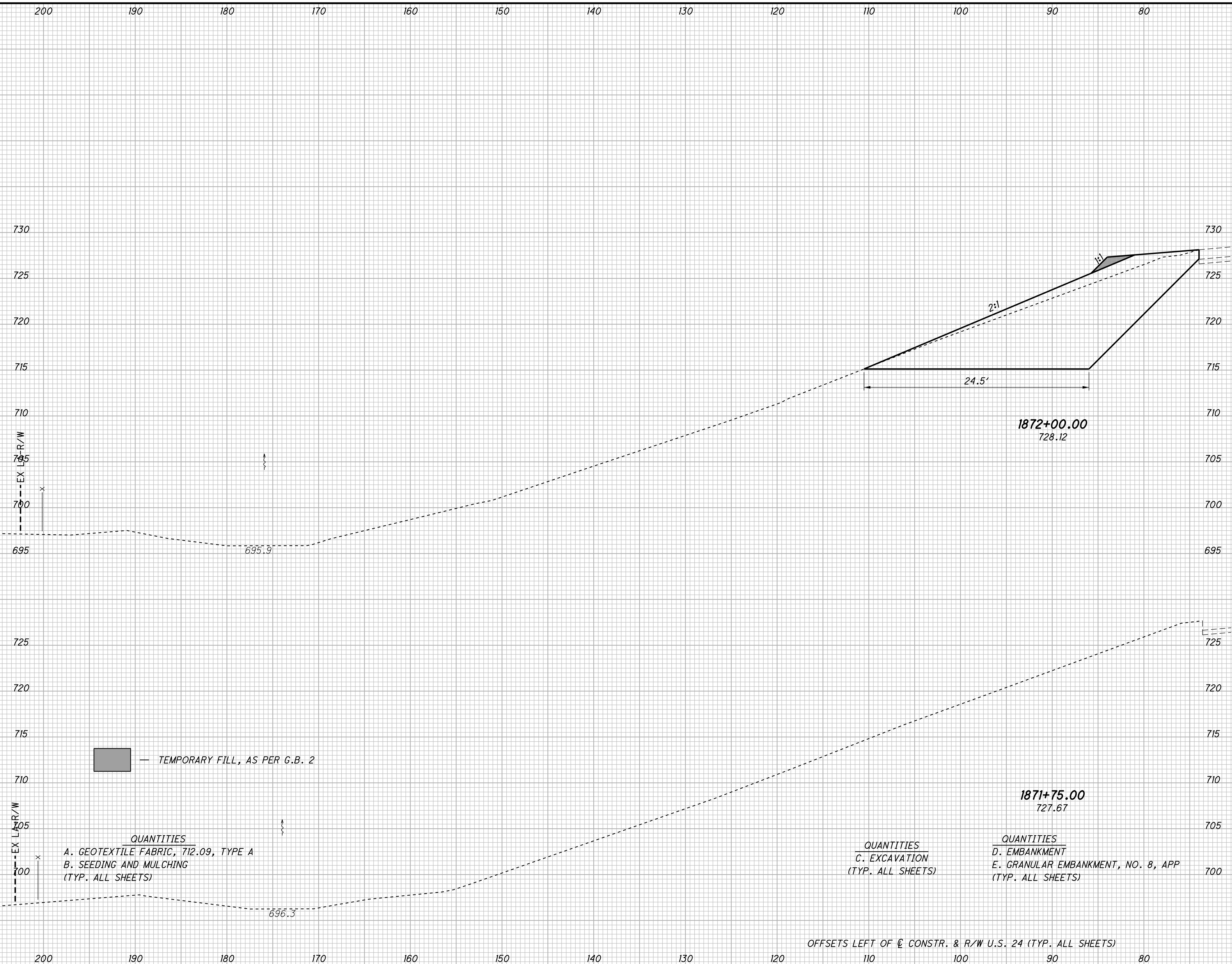
- OHWM (ELEV. 693.82)



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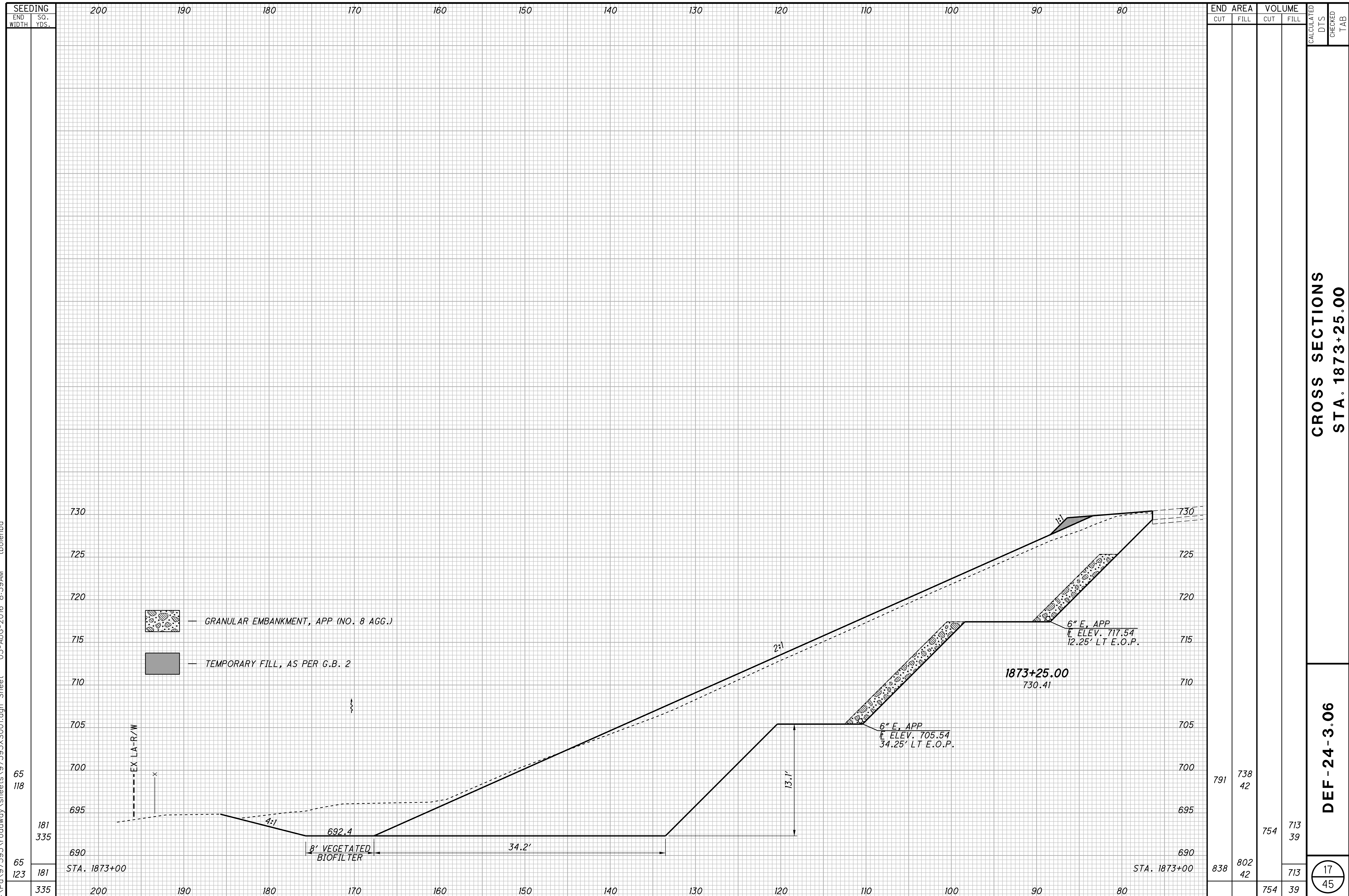
SEEDING	END AREA		VOLUME		CALCULATED	DTS	CHECKED	TAB
	END WIDTH	SO. YDS.	CUT	FILL				
0	103		178	203				
0	143		82	94				
0	0		0	0				
0	0		0	0				
0	143		82	0				



CROSS SECTIONS
 STA. 1871+75.00 TO STA. 1872+00.00

DEF-24-3.06

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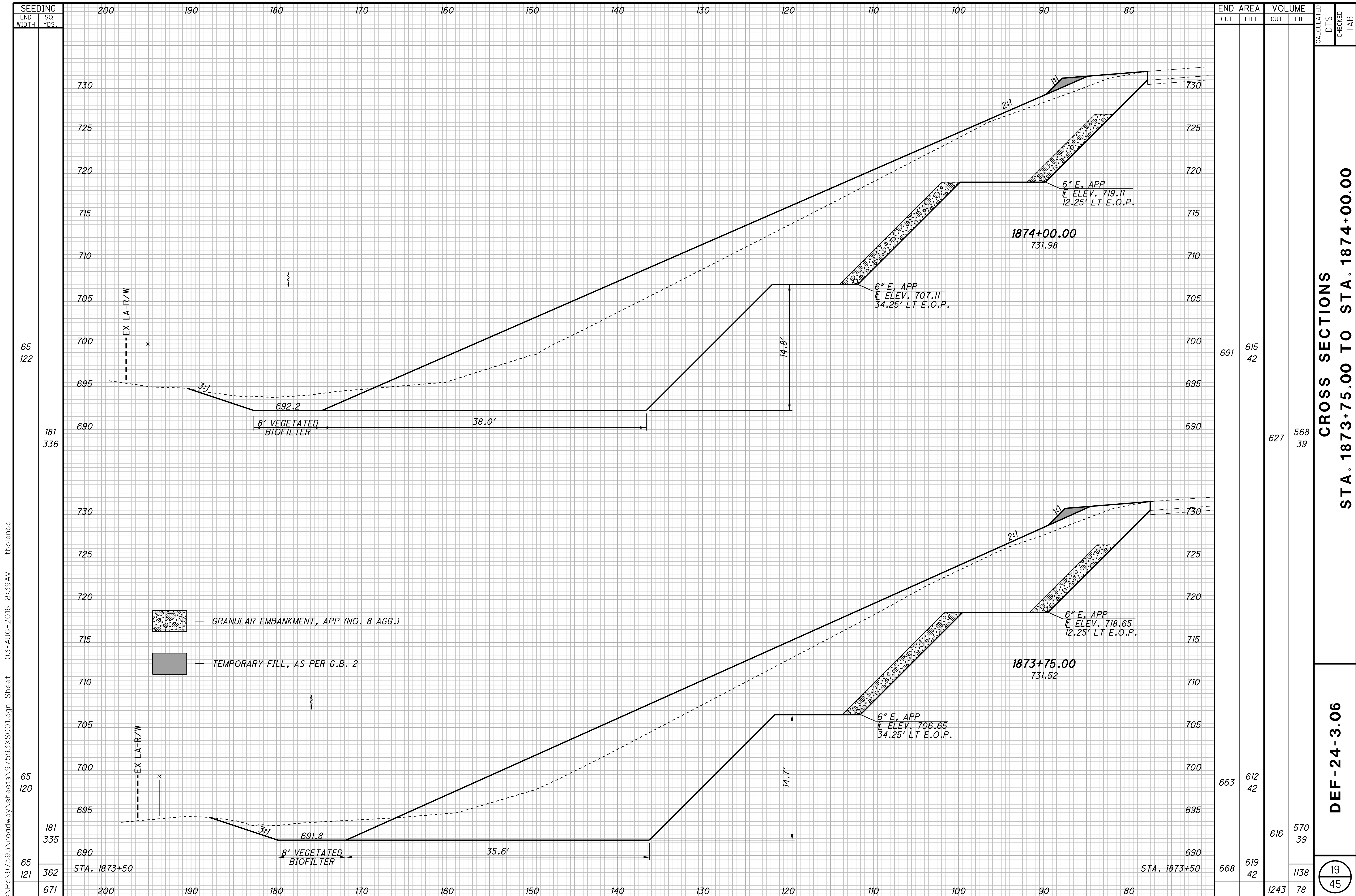
SEEDING		200	190	180	170	160	150	140	130	120	110	100	90	80
END WIDTH	SO. YDS.													
65	118													
181	335													
65	123													
181	335													

END AREA		VOLUME		CALCULATED	DTS	CHECKED	TAB
CUT	FILL	CUT	FILL				
791	738	754	713				
	42		39				
		802	713				
	42		39				
		754	39				

CROSS SECTIONS
STA. 1873+25.00

DEF - 24 - 3.06

17
45

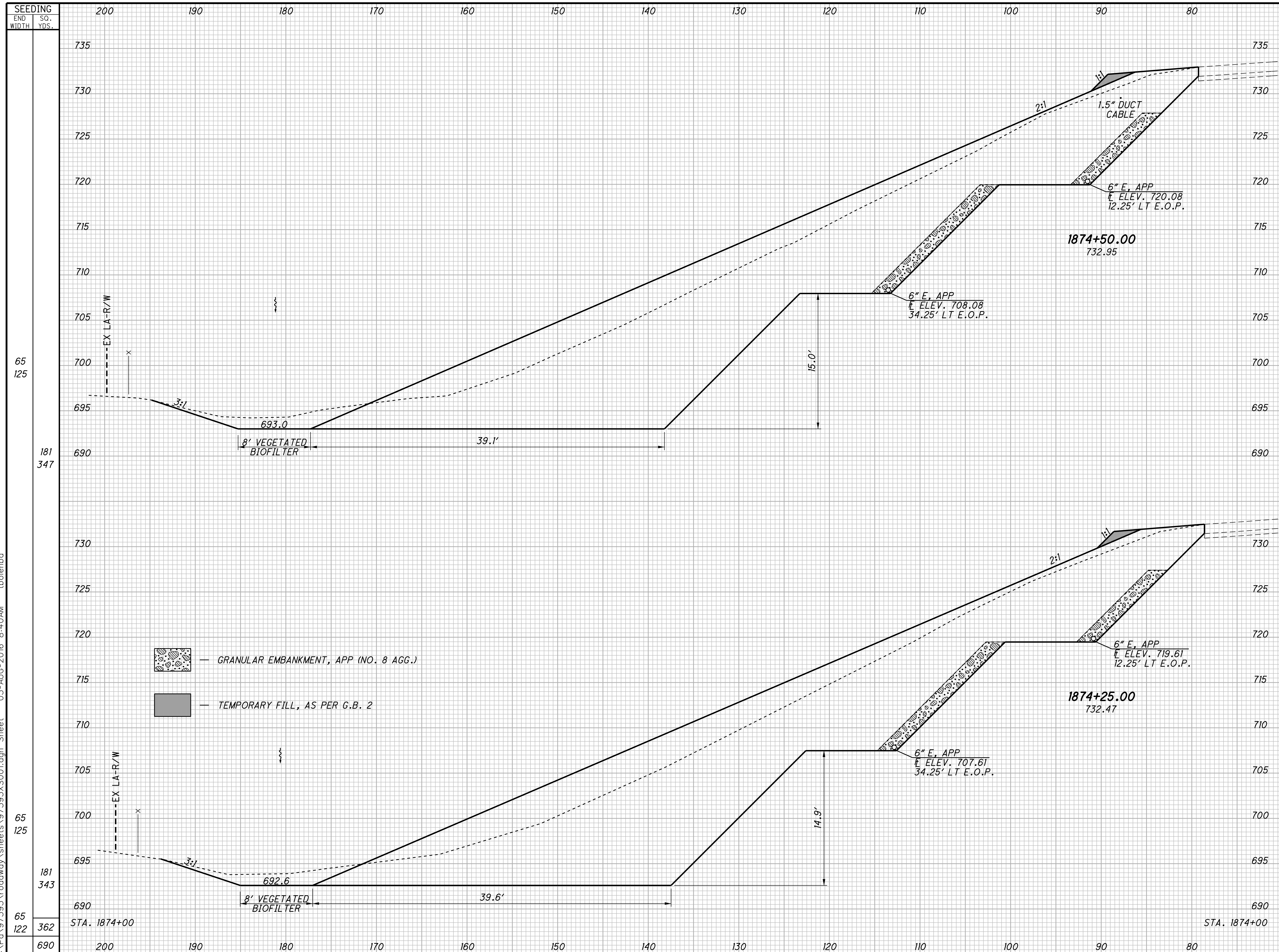


SEEDING		200	190	180	170	160	150	140	130	120	110	100	90	80
END WIDTH	SO. YDS.													
65	122													
181	336													
65	120													
181	335													
65	121													
671														

END AREA		VOLUME		CALCULATED	DTS	CHECKED	TAB		
CUT	FILL	CUT	FILL						
691	615	627	568						
	42		39						
663	612	616	570						
	42		39						
668	619	1138							
	42		78						
DEF - 24 - 3.06 CROSS SECTIONS STA. 1873+75.00 TO STA. 1874+00.00									
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19									
45									

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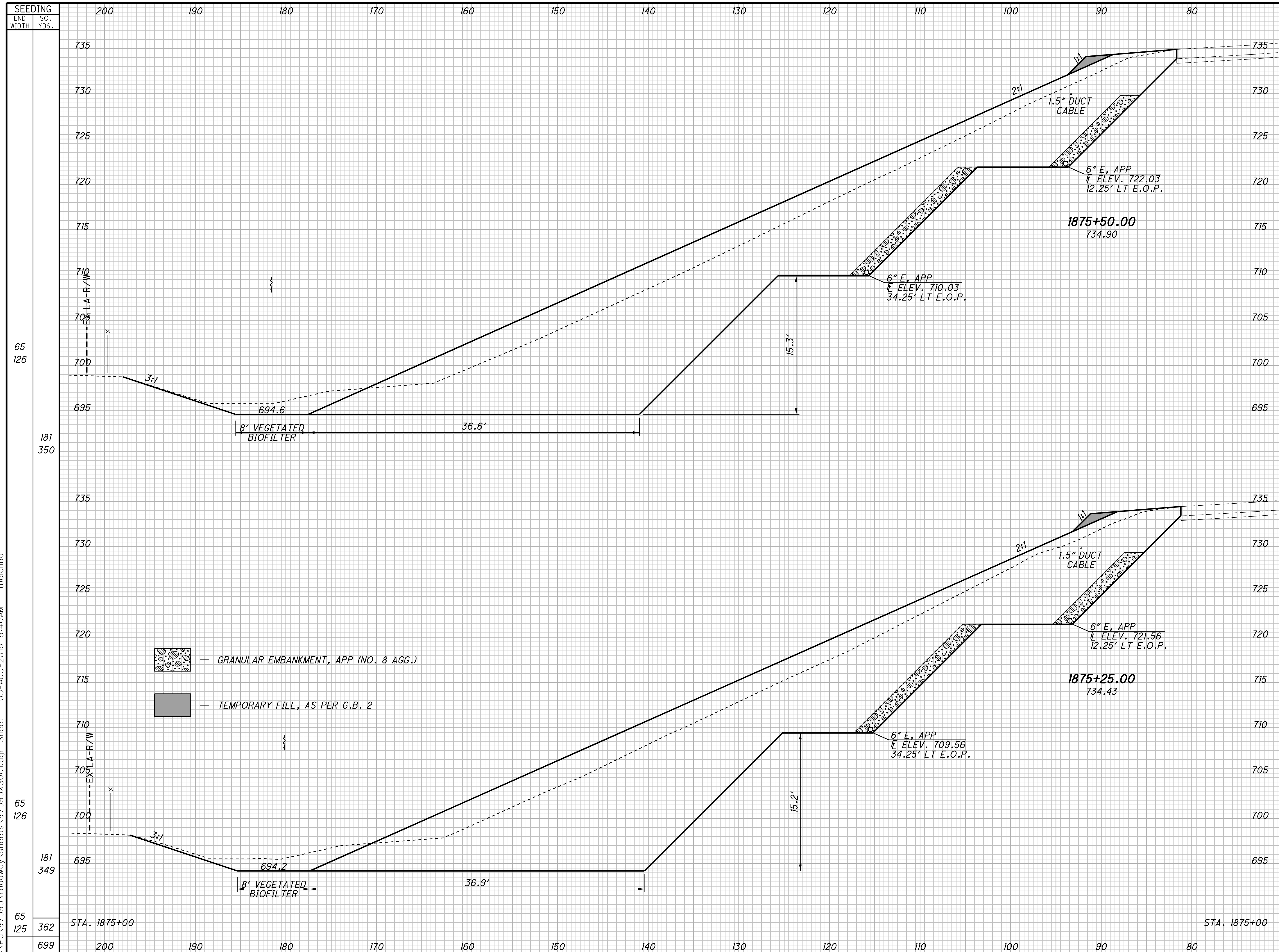
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- TEMPORARY FILL, AS PER G.B. 2

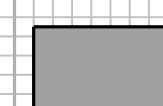
SEEDING END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED DTS	CHECKED TAB
		CUT	FILL	CUT	FILL		
65	125	717	629	42			
181	347		660	580	39		
65	125	709	625	42			
181	343		648	574	39		
65	122	691	615	42	1154		20
690			1308	78			45

**CROSS SECTIONS
STA. 1874+25.00 TO STA. 1874+50.00**

DEF - 24 - 3.06

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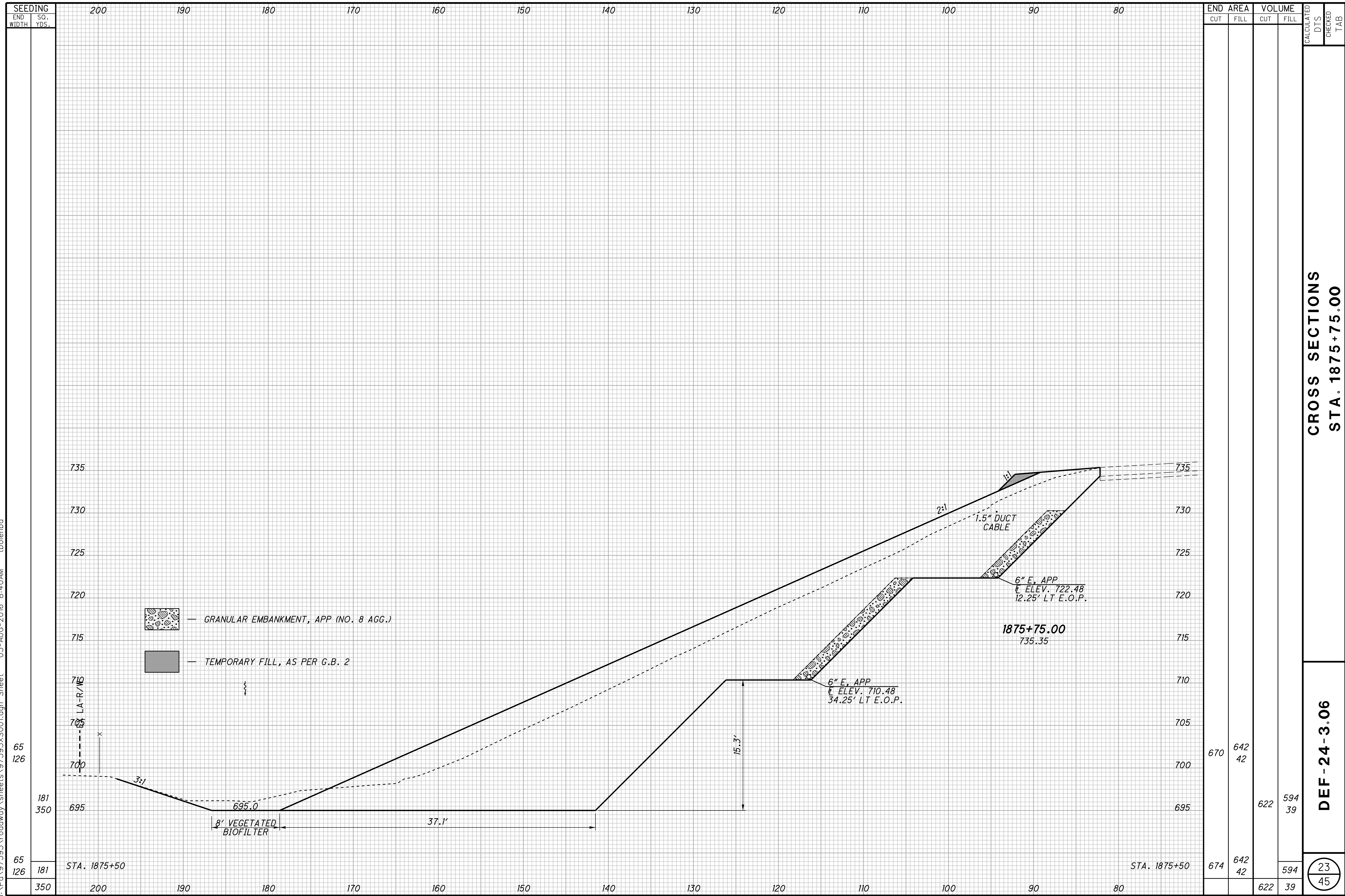
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-  TEMPORARY FILL, AS PER G.B. 2

SEEDING END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED DTS	CHECKED TAB
		CUT	FILL	CUT	FILL		
65	126	674	642	42			
181	350		634	592	39		
65	126	695	637	42			
181	349		649	588	39		
65	125	706	634	42	1180	22	45
699			1283	78			

CROSS SECTIONS
STA. 1875+25.00 TO STA. 1875+50.00

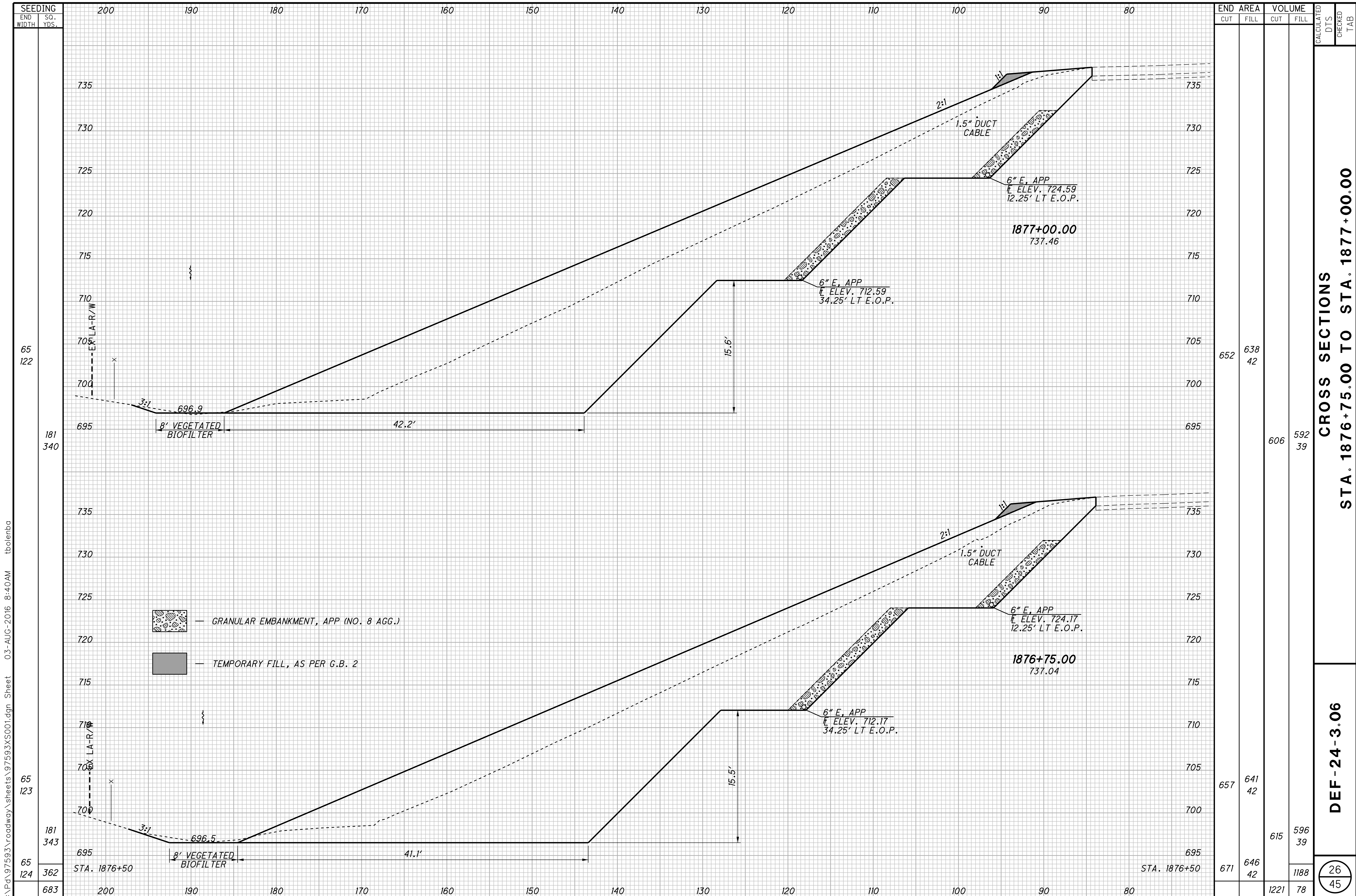
DEF-24-3.06

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CROSS SECTIONS
STA. 1875+75.00

DEF-24-3.06



END AREA	VOLUME	CALCULATED	CHECKED		
				CUT	FILL
652	638				
	42				
	606				
	592				
	39				
657	641				
	42				
	615				
	596				
	39				
671	646				
	42				
	1188				
	26				
	45				

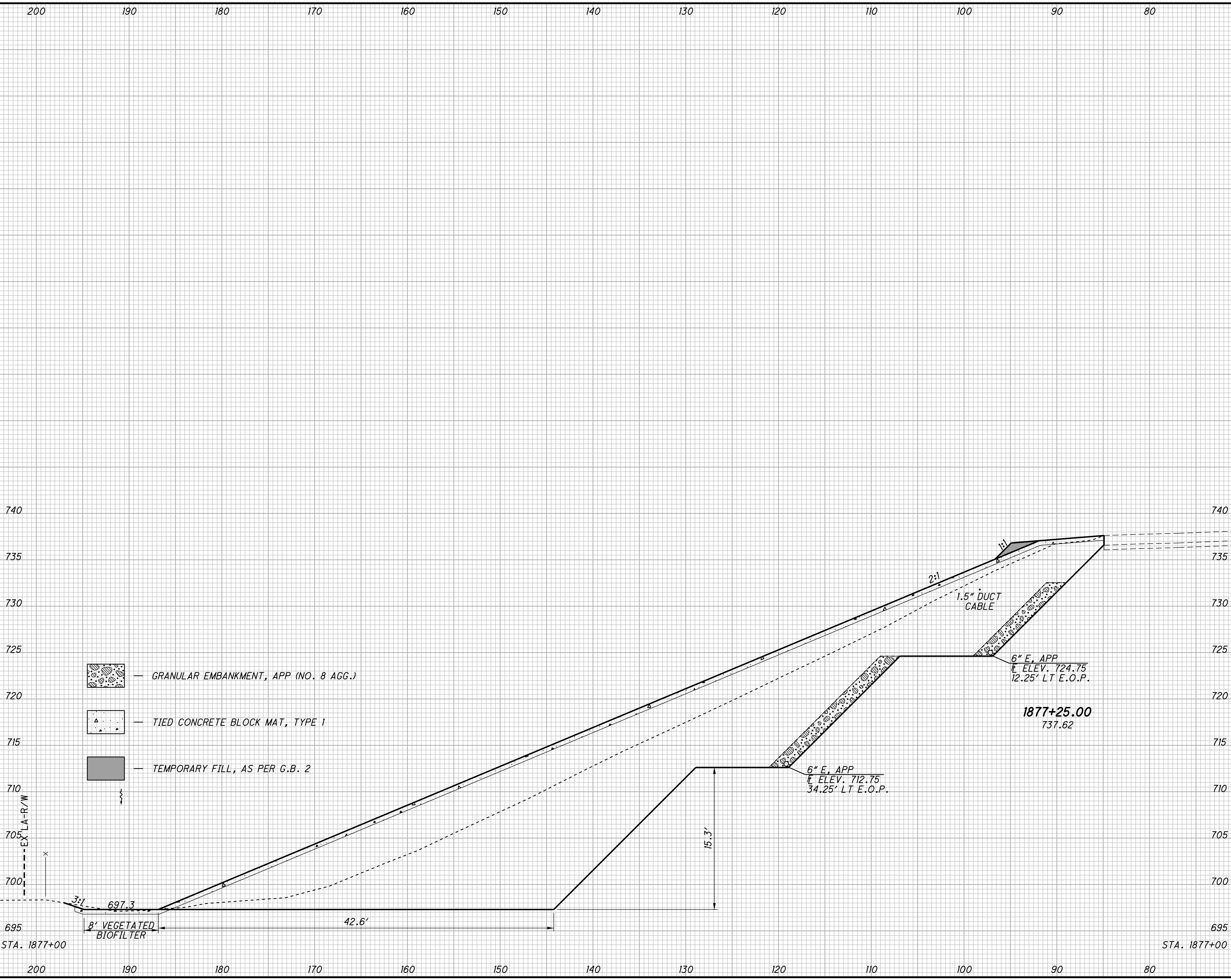
CROSS SECTIONS
STA. 1876+75.00 TO STA. 1877+00.00

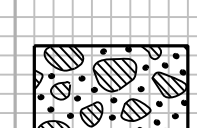
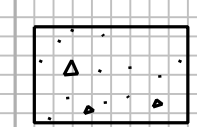
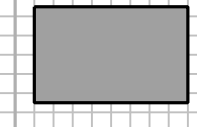
DEF-24-3.06

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SEEDING	
END WIDTH	SO. YDS.
181	339
65	122
181	339
65	122



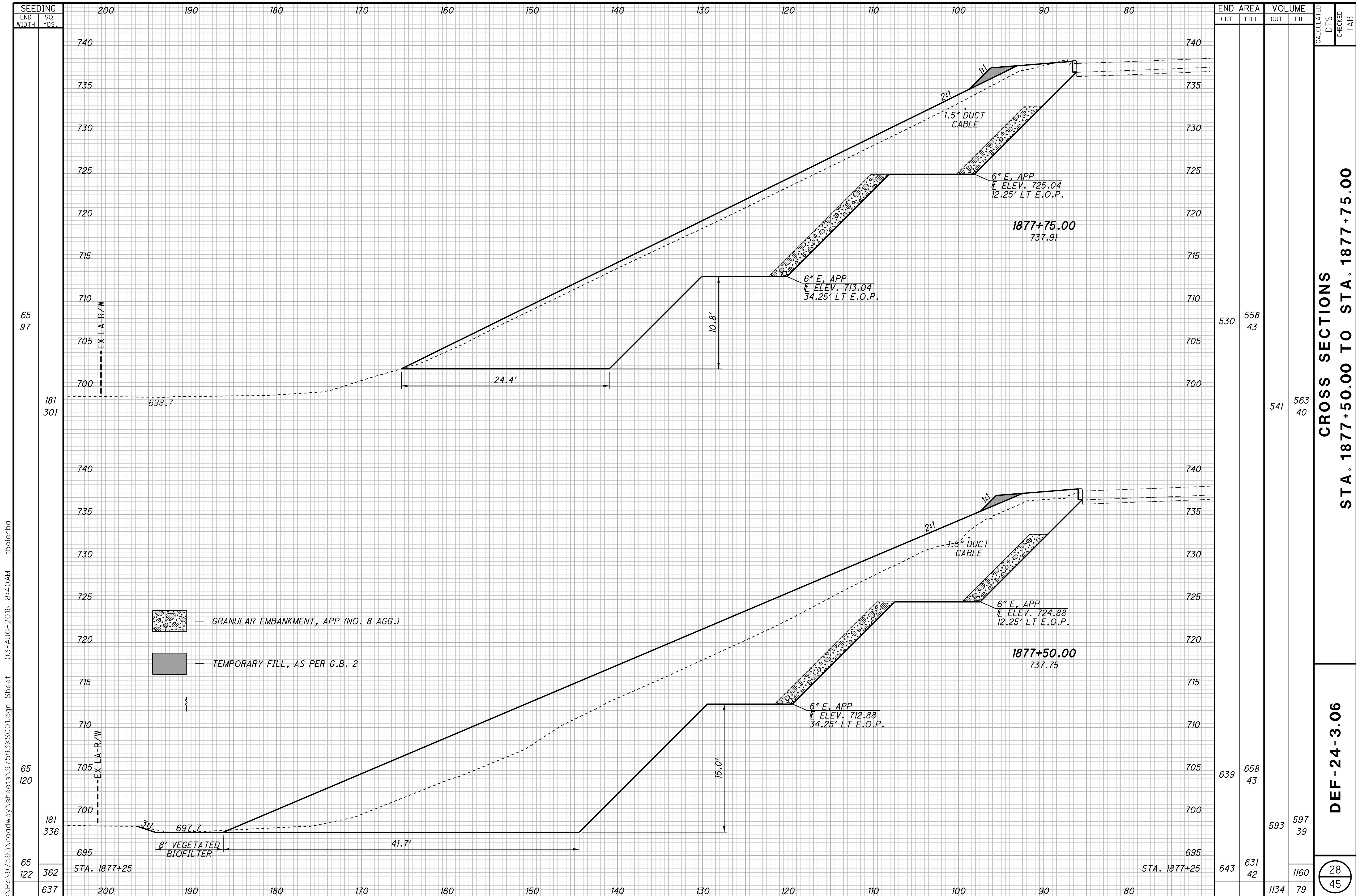
-  GRANULAR EMBANKMENT, APP (NO. 8 AGG.)
-  TIED CONCRETE BLOCK MAT, TYPE 1
-  TEMPORARY FILL, AS PER G.B. 2

END AREA		VOLUME		CALCULATED DTS	CHECKED TAB
CUT	FILL	CUT	FILL		
643	631	599	587		
	42		39		
652	638	587			
	42				
		599	39		

CROSS SECTIONS
STA. 1877 +25.00

DEF - 24 - 3.06

27
45

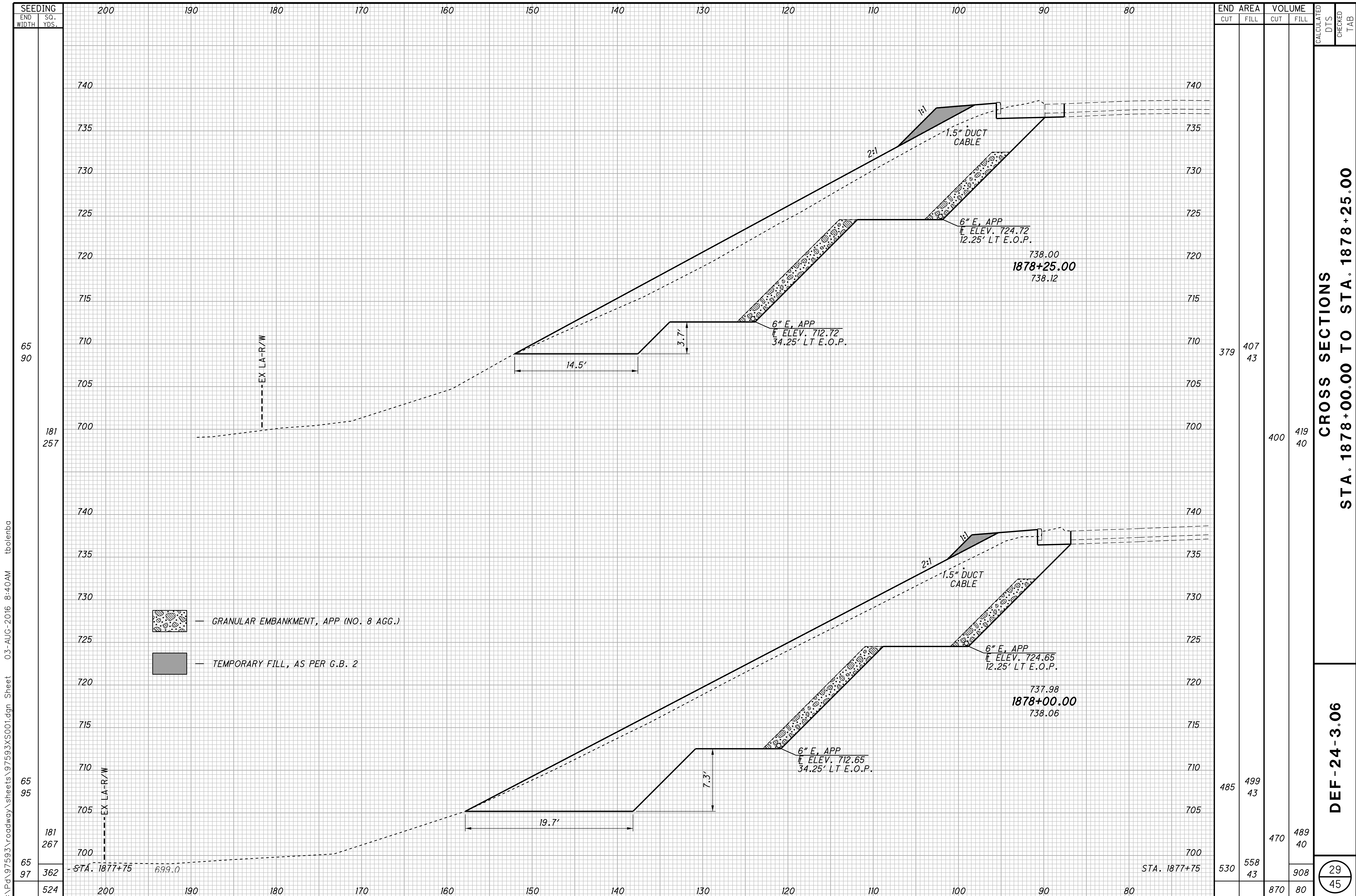


CROSS SECTIONS
STA. 1877+50.00 TO STA. 1877+75.00

DEF - 24 - 3.06

28
45

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SEEDING		200	190	180	170	160	150	140	130	120	110	100	90	80
END WIDTH	SO. YDS.													
65	90													
181	257													
65	95													
181	267													
65	97													
524														

END AREA		VOLUME		CALCULATED DTS	CHECKED TAB
CUT	FILL	CUT	FILL		
379	407	400	419		
485	499	470	489		
530	558	908	80		
		870	80		

CROSS SECTIONS
STA. 1878+00.00 TO STA. 1878+25.00

DEF - 24 - 3.06

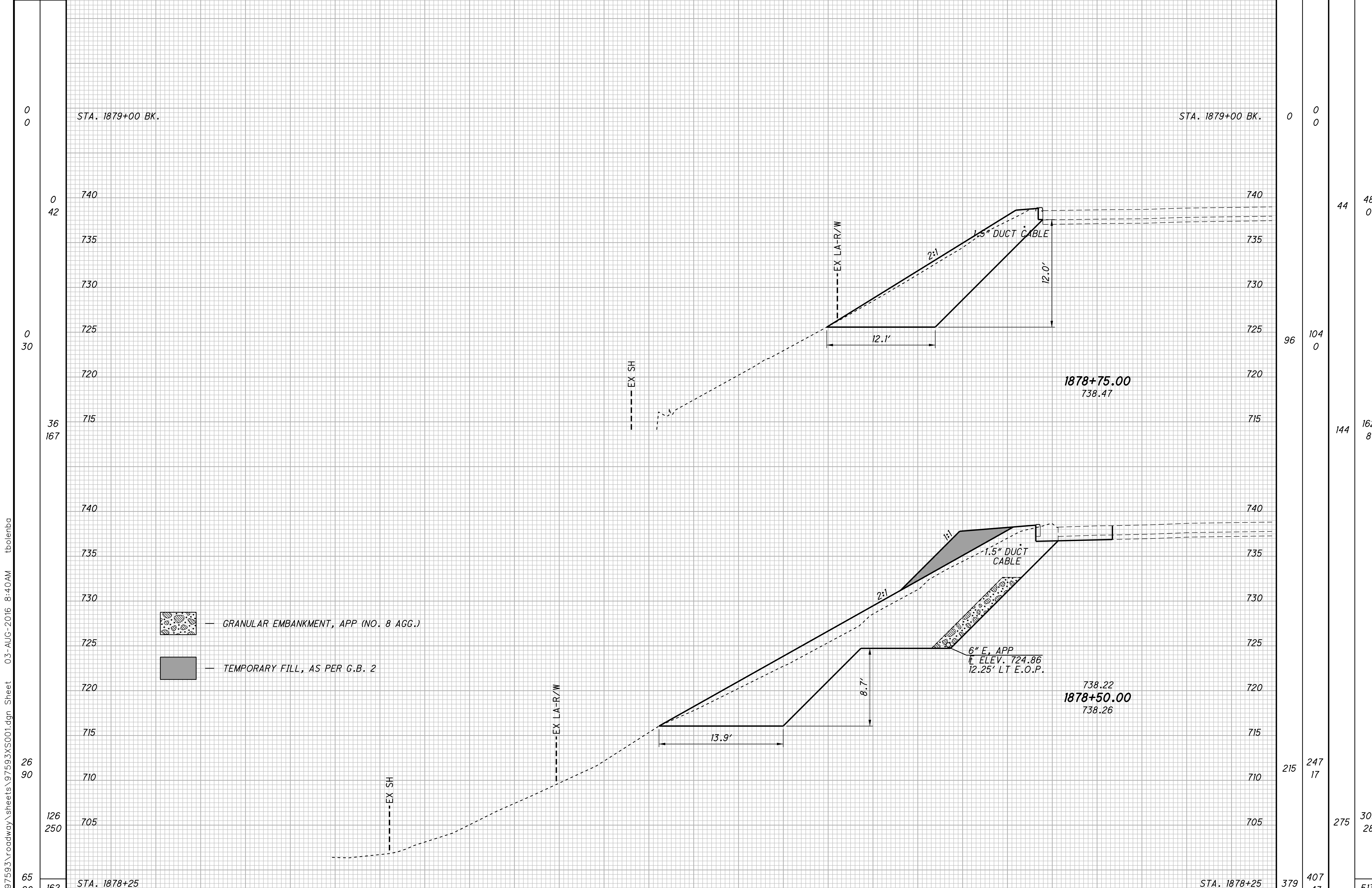
29
45

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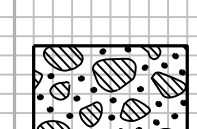
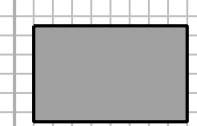
STA. 1877+75 699.0

STA. 1877+75

- GRANULAR EMBANKMENT, APP (NO. 8 AGG.)
- TEMPORARY FILL, AS PER G.B. 2



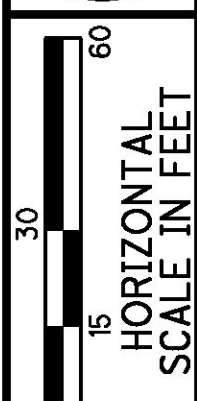
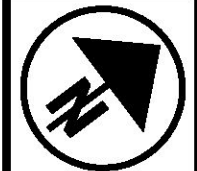
SEEDING		200	190	180	170	160	150	140	130	120	110	100	90	80
END WIDTH	SO. YDS.													
0	0	STA. 1879+00 BK.												
0	42	740												740
0	30	735												735
0	30	730												730
0	30	725												725
0	30	720												720
36	167	715												715
26	90	710												710
126	250	705												705
65	90	650												650
459	162	STA. 1878+25												
459	162	200	190	180	170	160	150	140	130	120	110	100	90	80

-  GRANULAR EMBANKMENT, APP (NO. 8 AGG.)
-  TEMPORARY FILL, AS PER G.B. 2

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	DTS	CHECKED
0	0	0	0		
96	104	44	48		
215	247	275	303		
379	407	513	36		
379	407	463	36	30	45

CROSS SECTIONS
STA. 1878+50.00 TO STA. 1878+75.00
DEF - 24 - 3.06

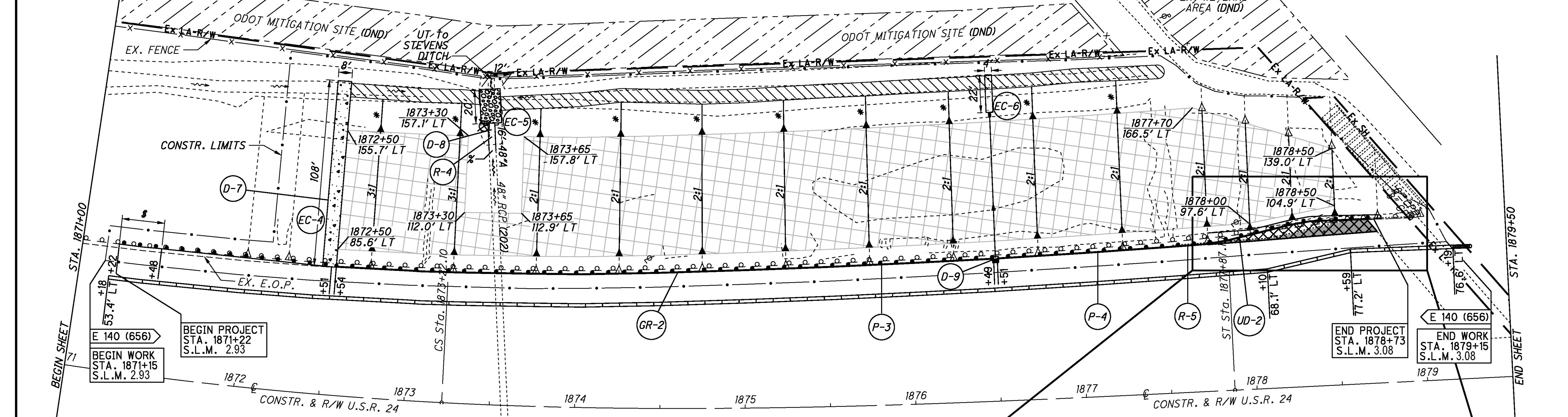
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CALCULATED
DTS
CHECKED
JLG

PLAN SHEET - PLATE PILES
FROM STA. 1871+00 TO STA. 1879+50

DEF - 24 - 3.06

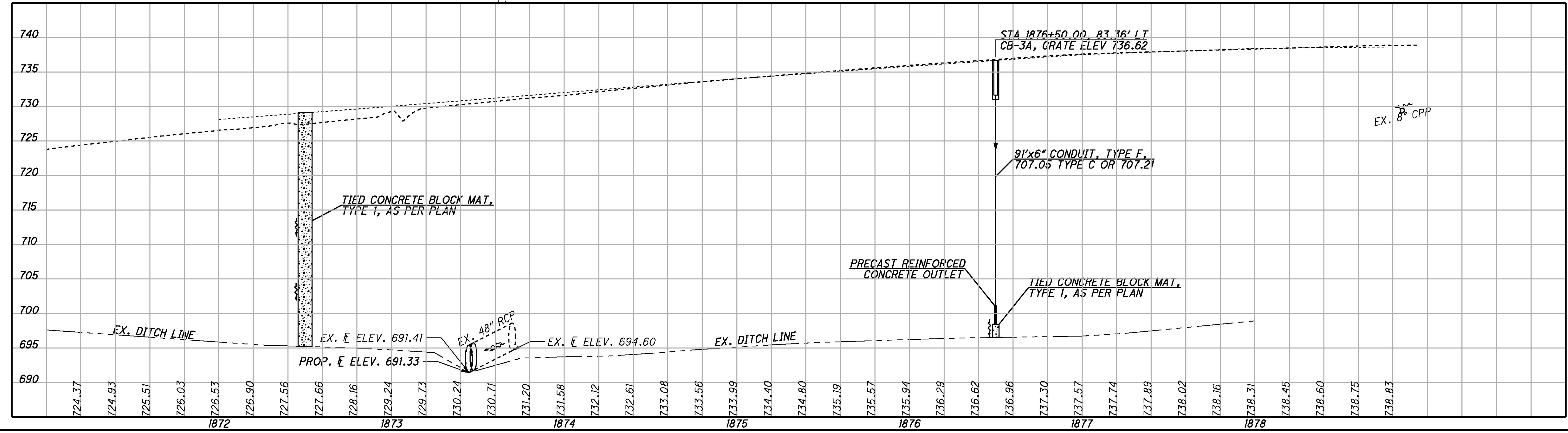
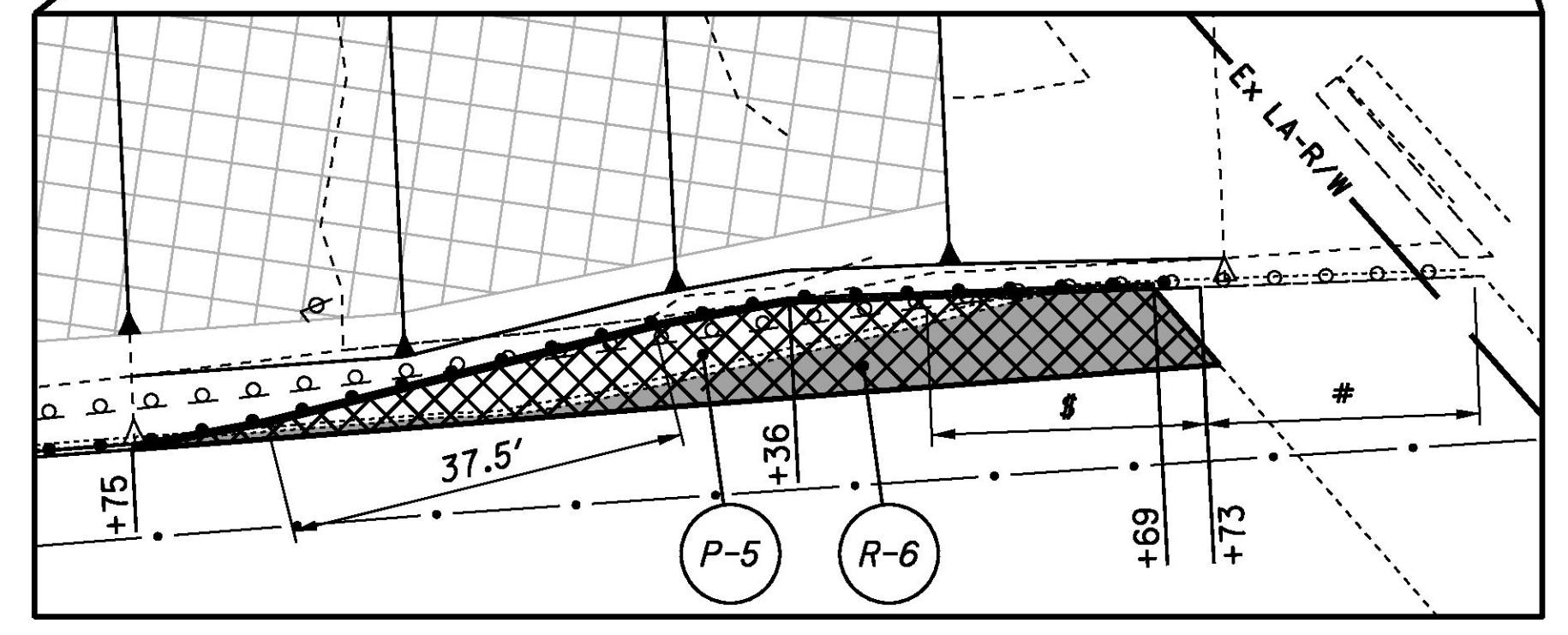


- BM #1 STAMPED "+" IN CONC. BERM
STA. 1871+97, 72' LT., ELEV. 728.27
- BM #2 STAMPED "+" IN CONC. BERM
STA. 1878+03, 85.5' LT., ELEV. 738.15
- BM #3 CHISELED "□" IN SW WINGWALL OF BRIDGE
STA. 1878+96, 98' LT., ELEV. 738.88

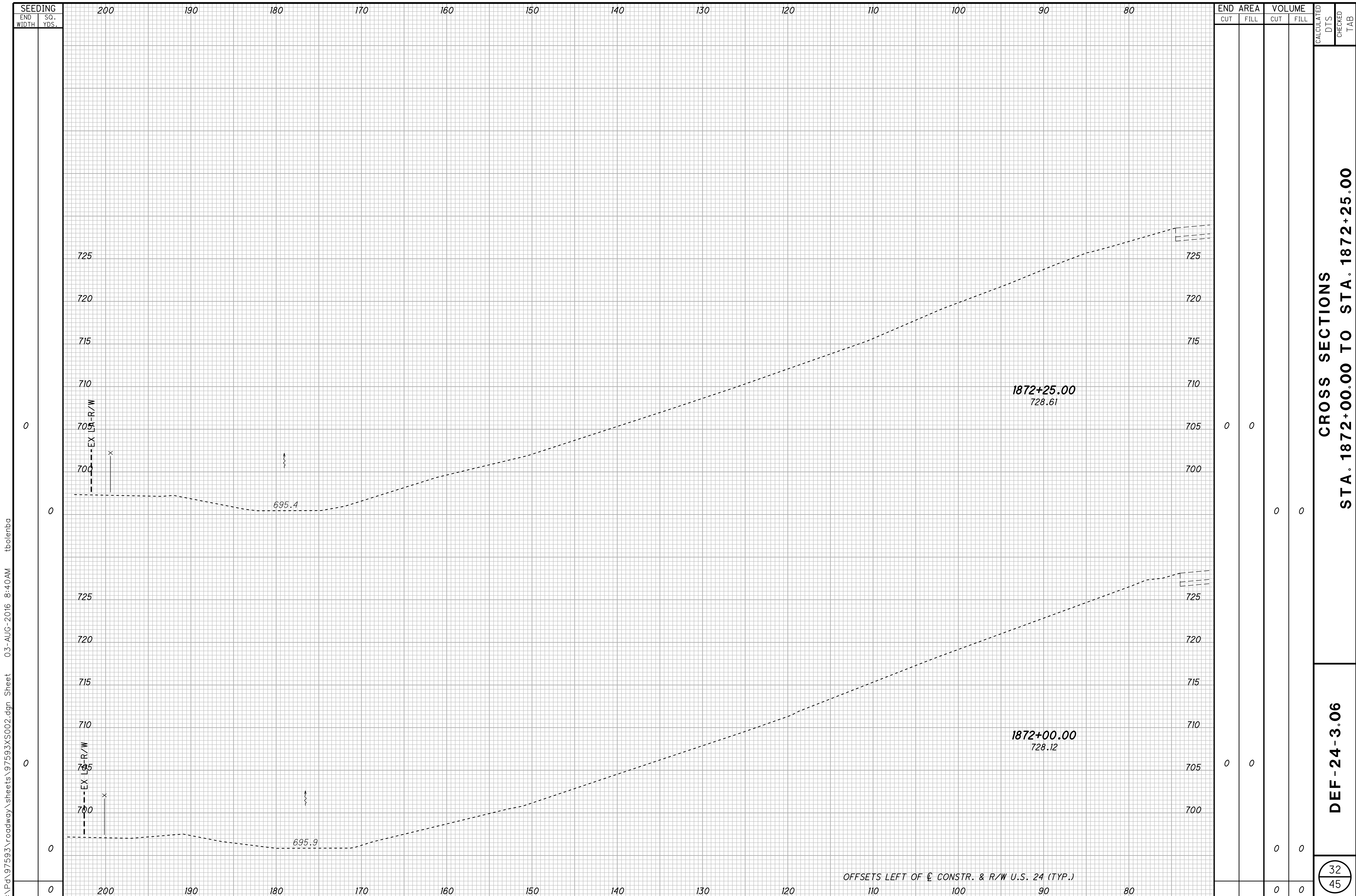
EX. CURVE DATA
 PI = Sta. 1868+60.75
 $\Delta = 23^\circ 23' 53.11''$ LT
 $D_c = 2^\circ 00' 00''$
 $R = 2,291.8'$
 $L_c = 935.92'$
 $E = 48.62'$
 $C = 929.43'$
 $C.B.1 = N 63^\circ 15' 28'' E$
 $C.B.2 = N 39^\circ 51' 35'' E$
 $C.B.2 = N 51^\circ 33' 31'' E$

- § - 25'-0" GUARDRAIL TRANSITION (TYPE 5 TO TYPE MGS)
- # - EX. BRIDGE TERMINAL ASSEMBLY (DND)
- % - MASONRY COLLAR
- * - MATCH EXISTING SLOPE
- ⊗ - OHWM (ELEV. 693.82)

- - PAVEMENT REMOVED (202)
- ▨ - 12.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1, AS PER PLAN
- ▩ - ROCK CHANNEL PROTECTION TYPE B WITH FILTER, T=30"
- ▧ - TIED CONCRETE BLOCK MAT, TYPE 1
- ▦ - ITEM 670, DITCH EROSION PROTECTION, VEGETATED BIOFILTER (BMP)
- ▤ - PLATE PILE REPAIR AREA



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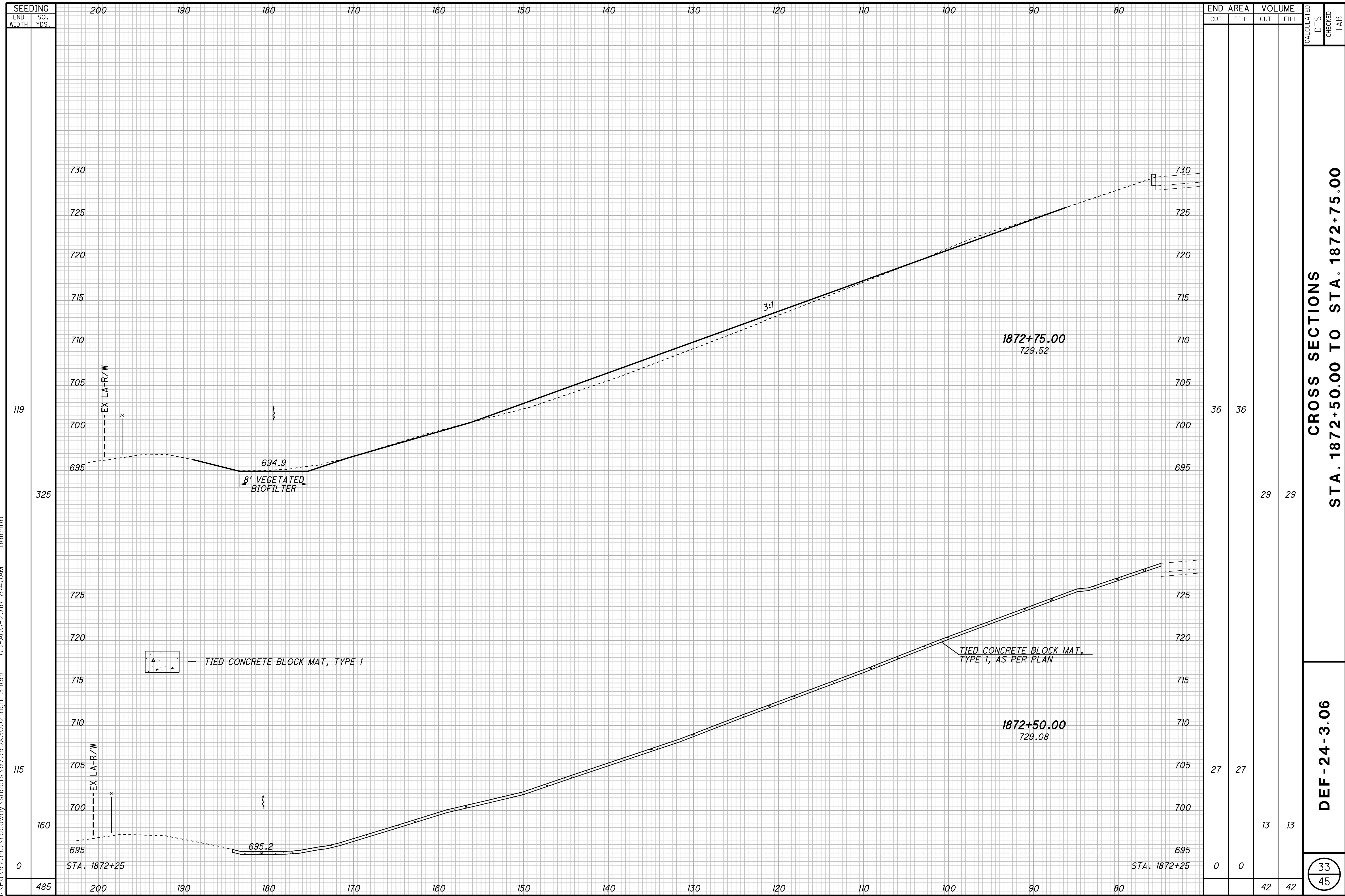
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END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	DTS	CHECKED
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0	0	0	0	0	0		
0	0	0	0	0	0		
0	0	0	0	0	0		

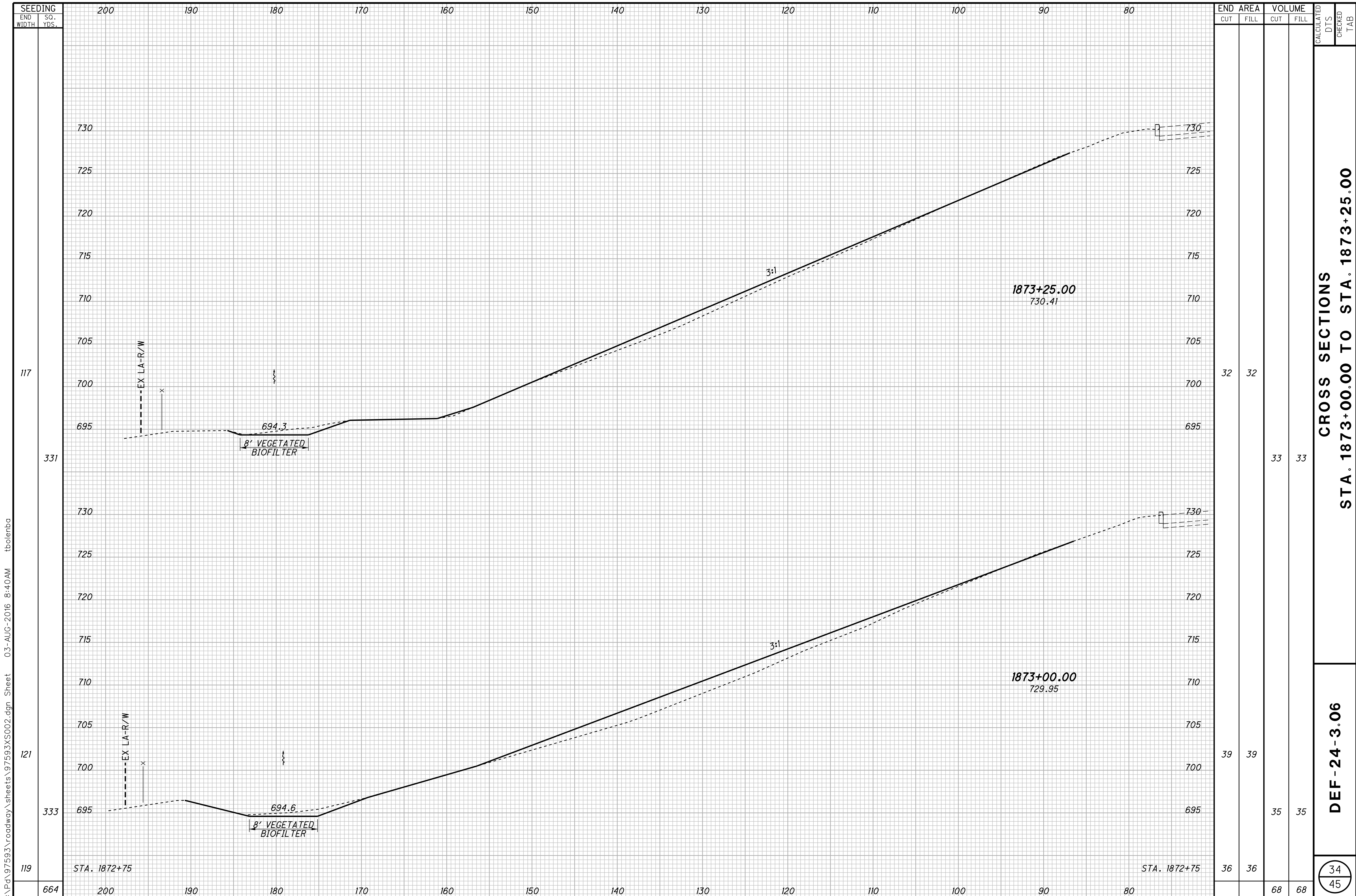
CROSS SECTIONS
STA. 1872+00.00 TO STA. 1872+25.00

DEF - 24 - 3.06

32
45

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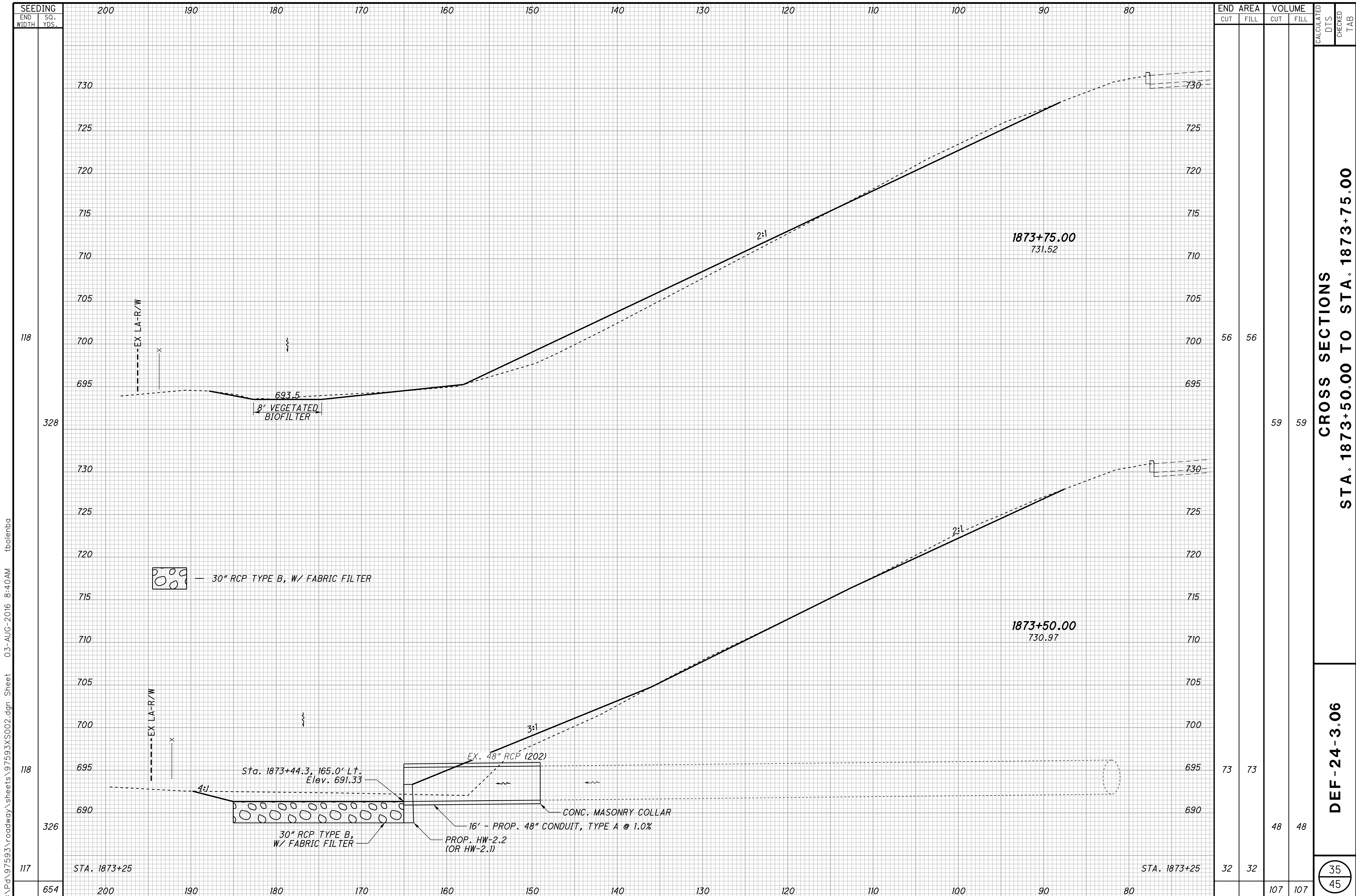


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CROSS SECTIONS
STA. 1873+00.00 TO STA. 1873+25.00

DEF - 24 - 3.06

34
45



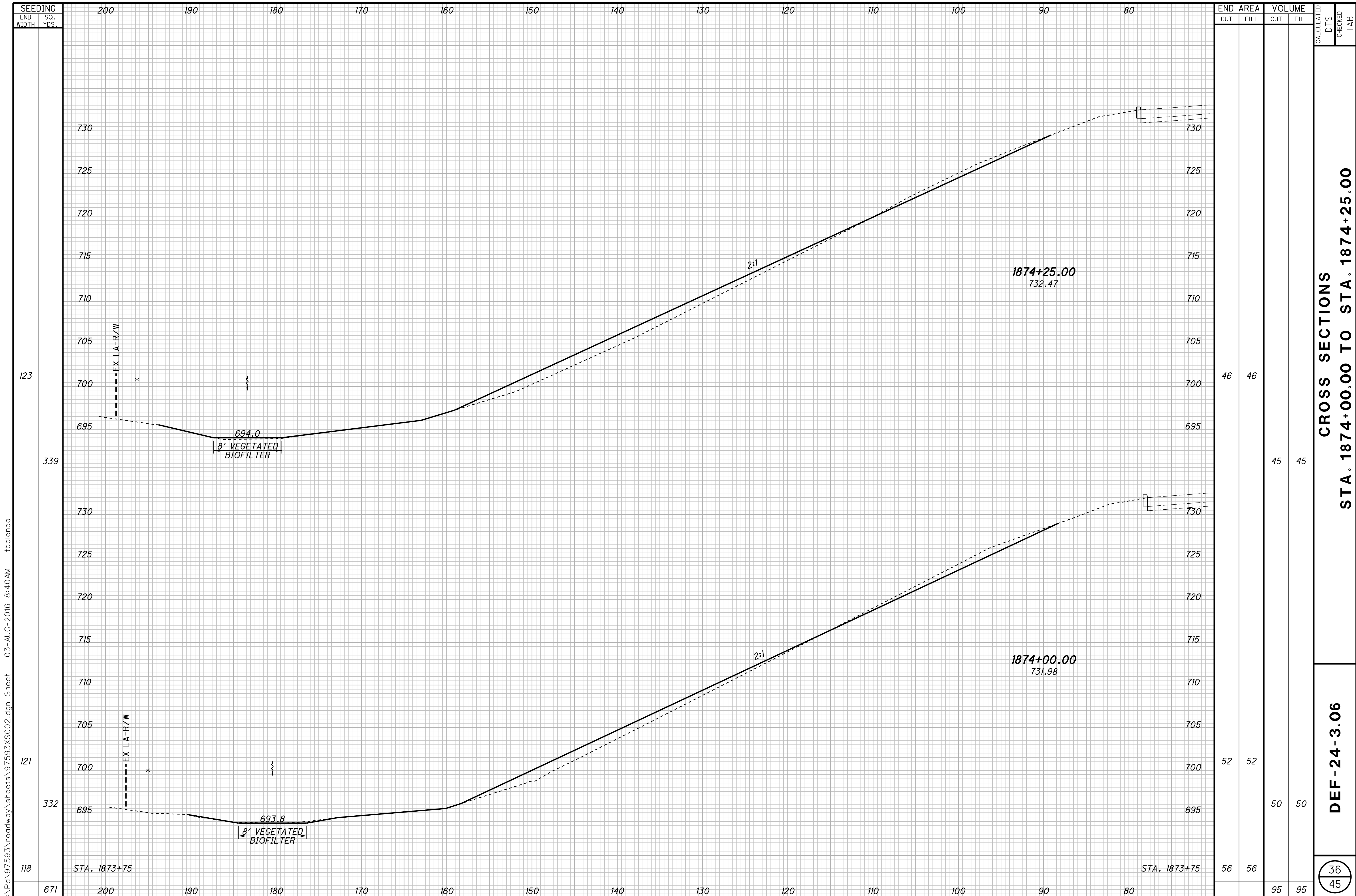
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SEEDING	END AREA		VOLUME		CALCULATED	DTS	CHECKED	TAB
	END WIDTH	SO. YDS.	CUT	FILL				
118	200	190	56	56				
328	200	190	59	59				
118	200	190	73	73				
326	200	190	48	48				
117	200	190	32	32				
654	200	190	107	107				

CROSS SECTIONS
STA. 1873+50.00 TO STA. 1873+75.00

DEF-24-3.06

35
45

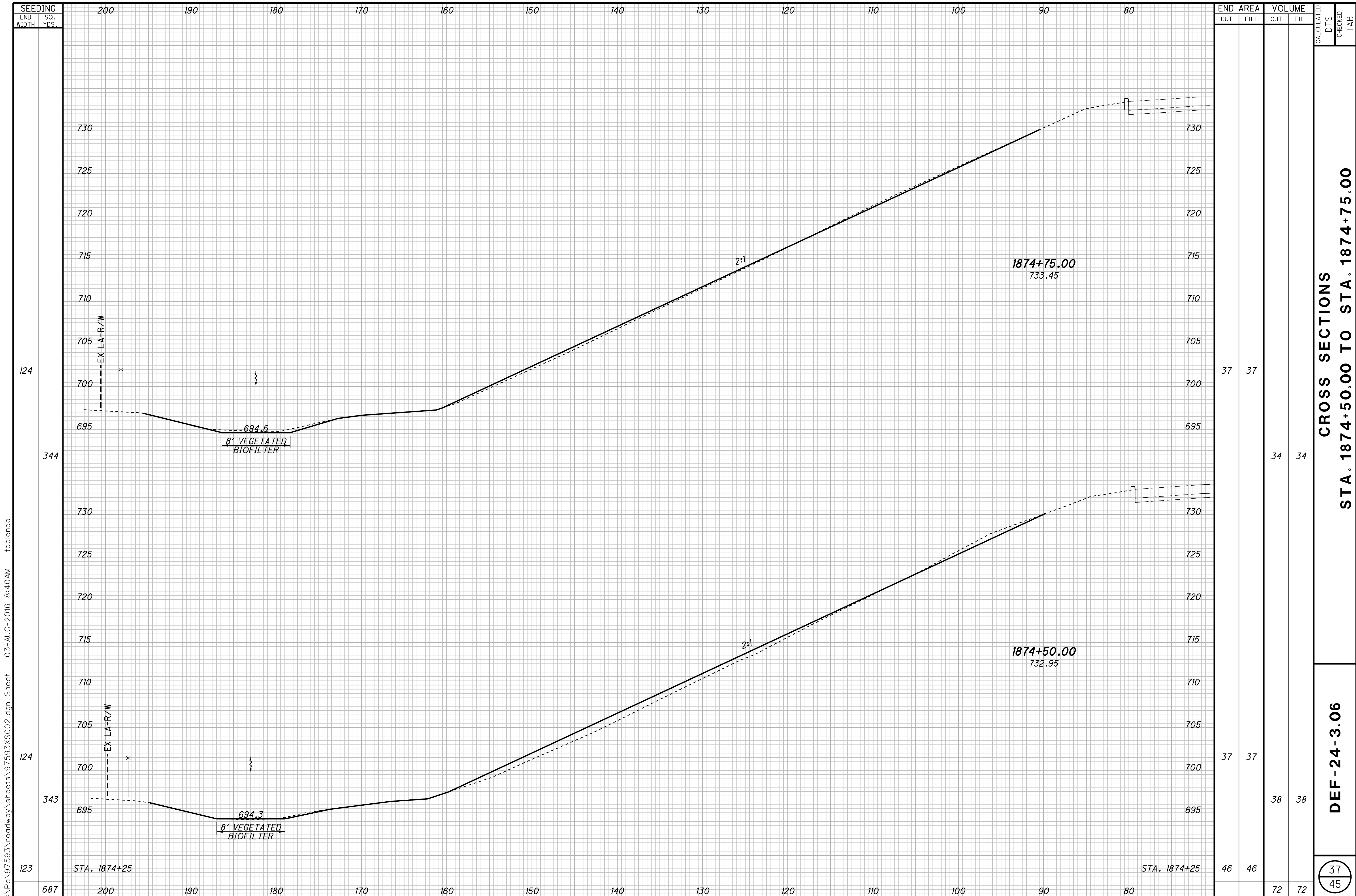


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CROSS SECTIONS
STA. 1874+00.00 TO STA. 1874+25.00

DEF - 24 - 3.06

36
45



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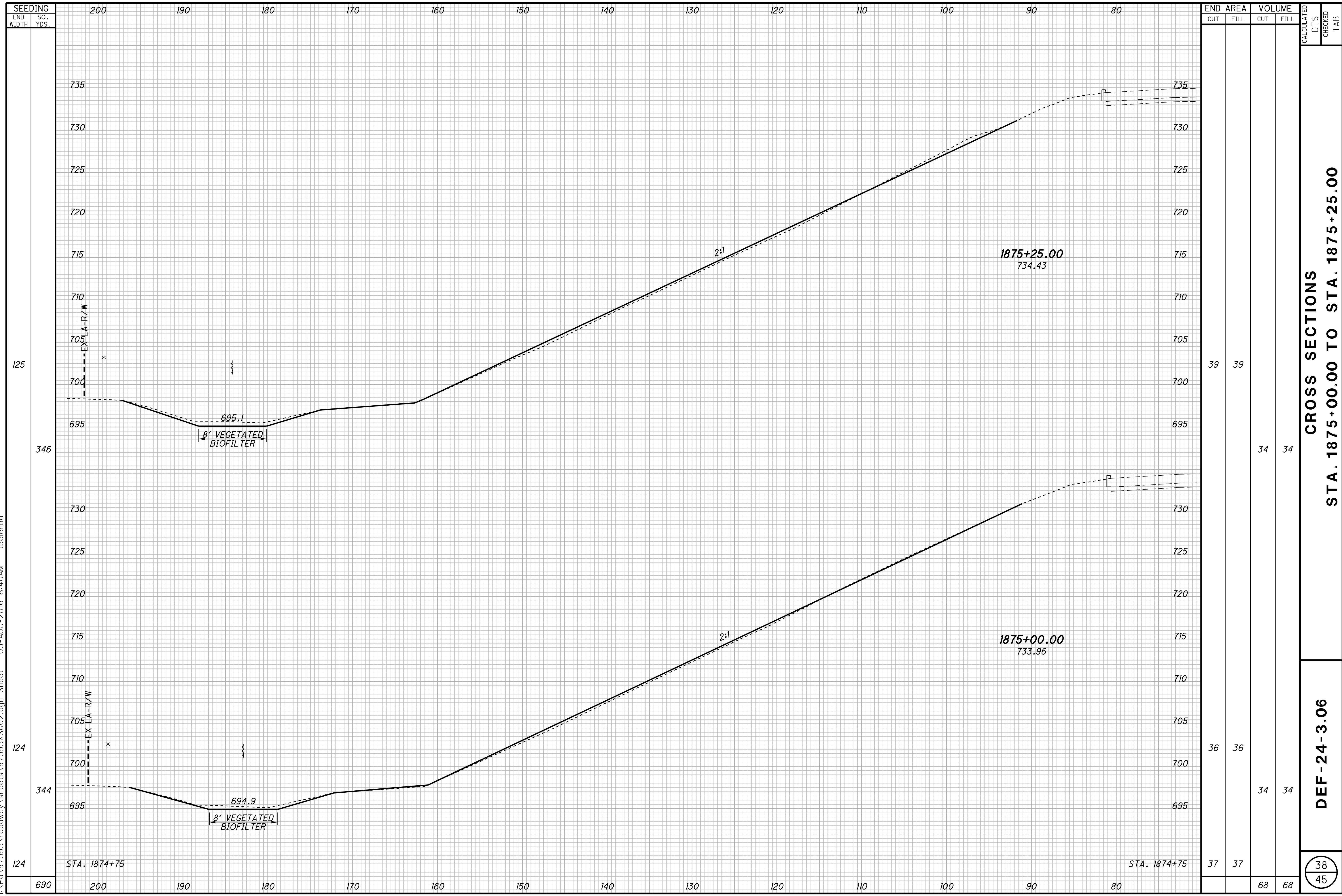
CROSS SECTIONS
STA. 1874+50.00 TO STA. 1874+75.00

DEF - 24 - 3.06

37
45

END AREA	VOLUME	CALCULATED		DTS	CHECKED	TAB
		CUT	FILL			
37	37					
37	37					
46	46					
72	72					

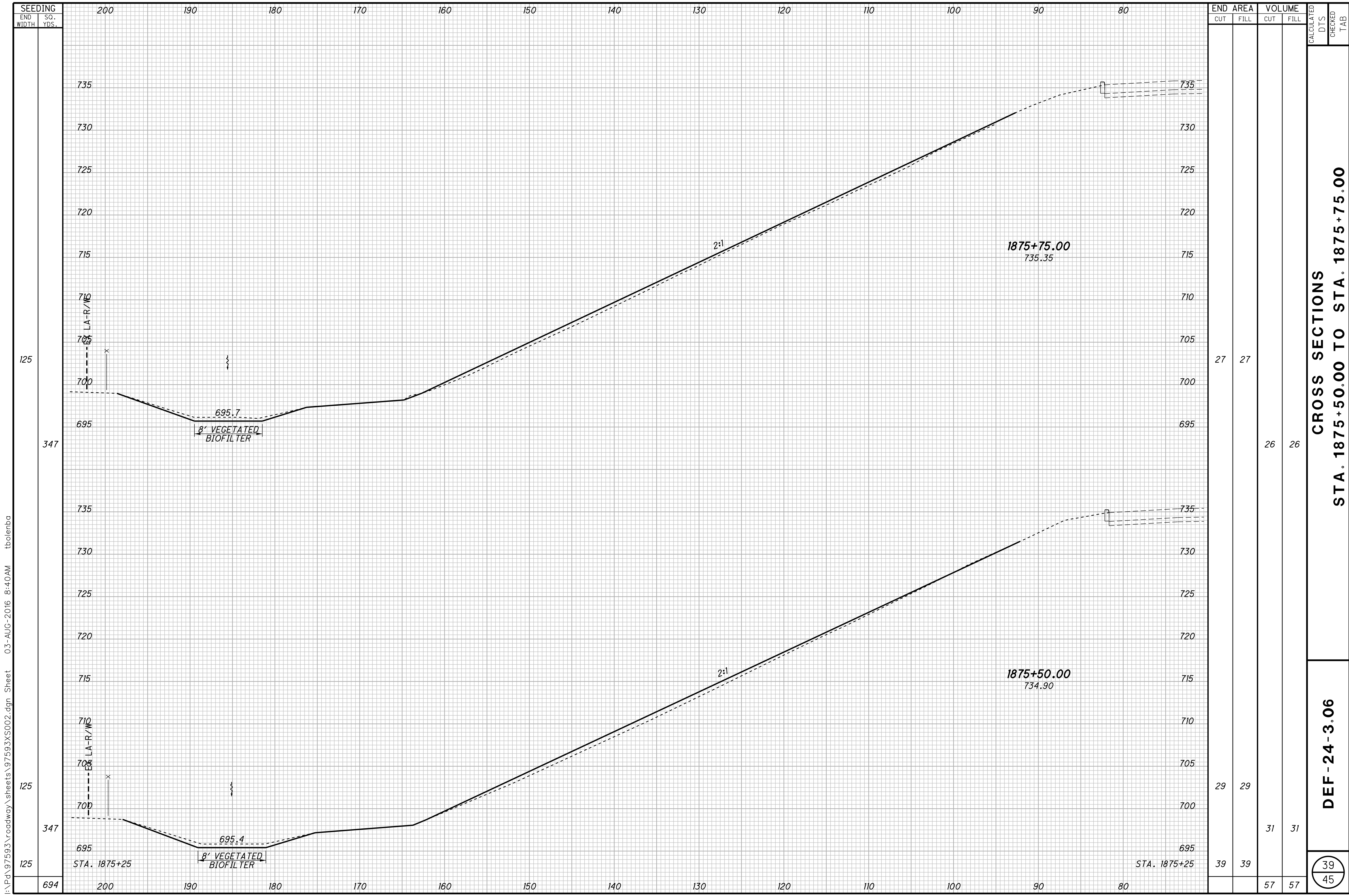
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CROSS SECTIONS
STA. 1875+00.00 TO STA. 1875+25.00

DEF - 24 - 3.06

38
45



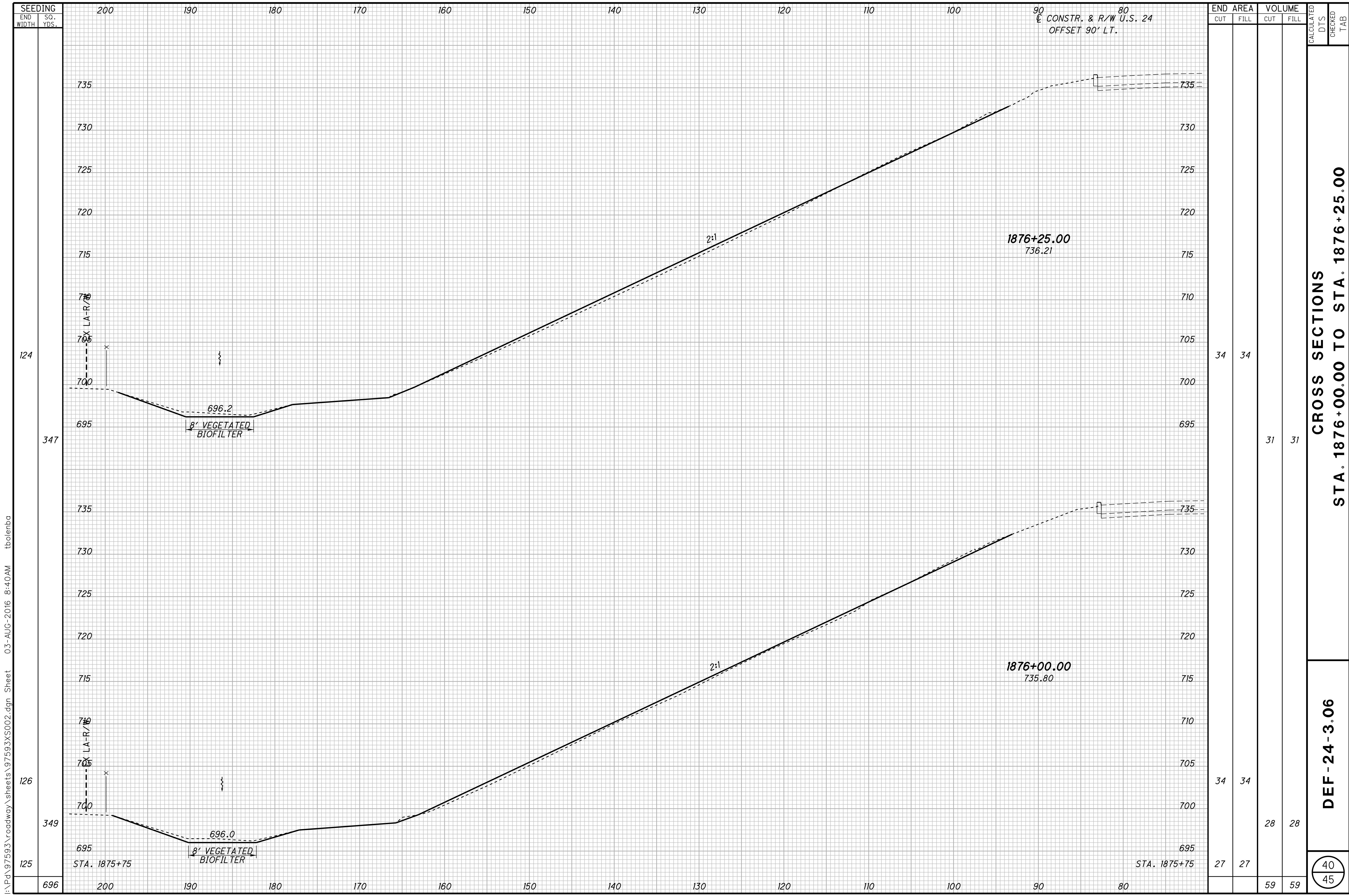
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END STA.	AREA		VOLUME		CALCULATED	DTS	CHECKED	TAB
	CUT	FILL	CUT	FILL				
27	27							
26			26	26				
29	29							
31			31	31				
39	39							
57			57	57				

CROSS SECTIONS
STA. 1875+50.00 TO STA. 1875+75.00

DEF - 24 - 3.06

39
45



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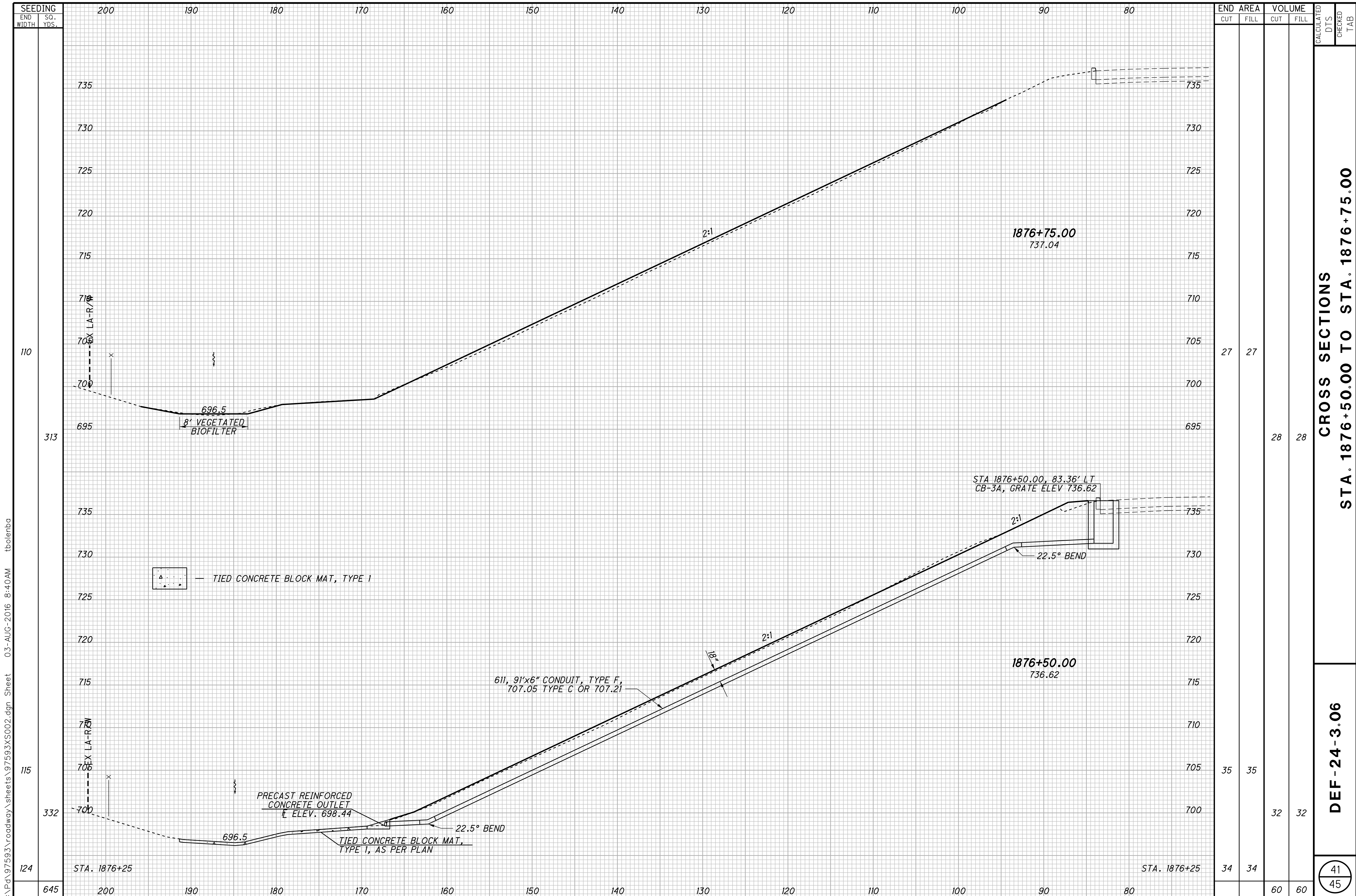
90
CONSTR. & R/W U.S. 24
80
OFFSET 90' LT.

SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	DTS	CHECKED TAB
124		34	34				
347				31	31		
126		34	34				
349				28	28		
125		27	27				
696				59	59		

CROSS SECTIONS
STA. 1876+00.00 TO STA. 1876+25.00

DEF - 24 - 3.06

40
45

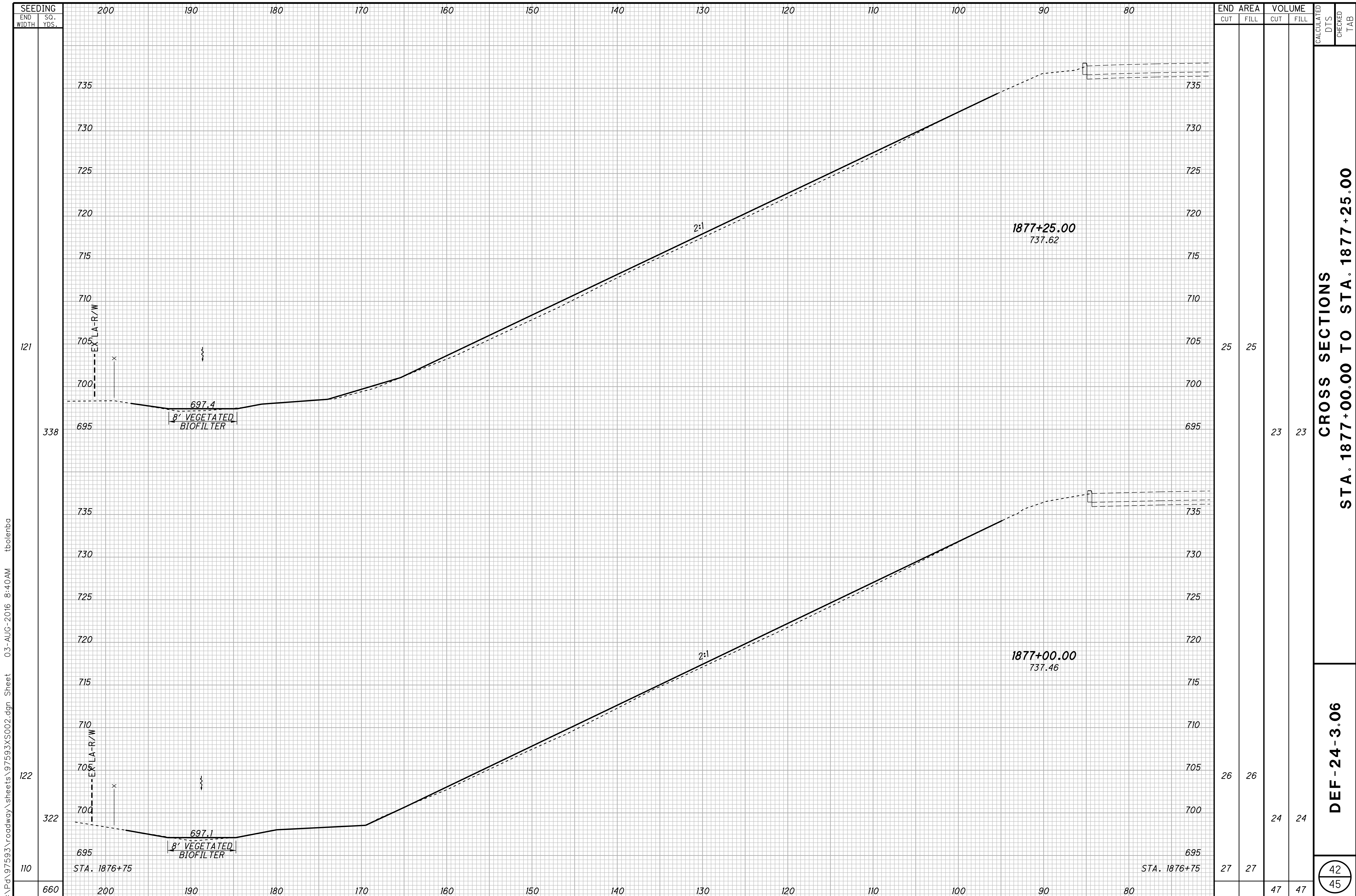


CROSS SECTIONS
STA. 1876+50.00 TO STA. 1876+75.00

DEF-24-3.06

41
 45

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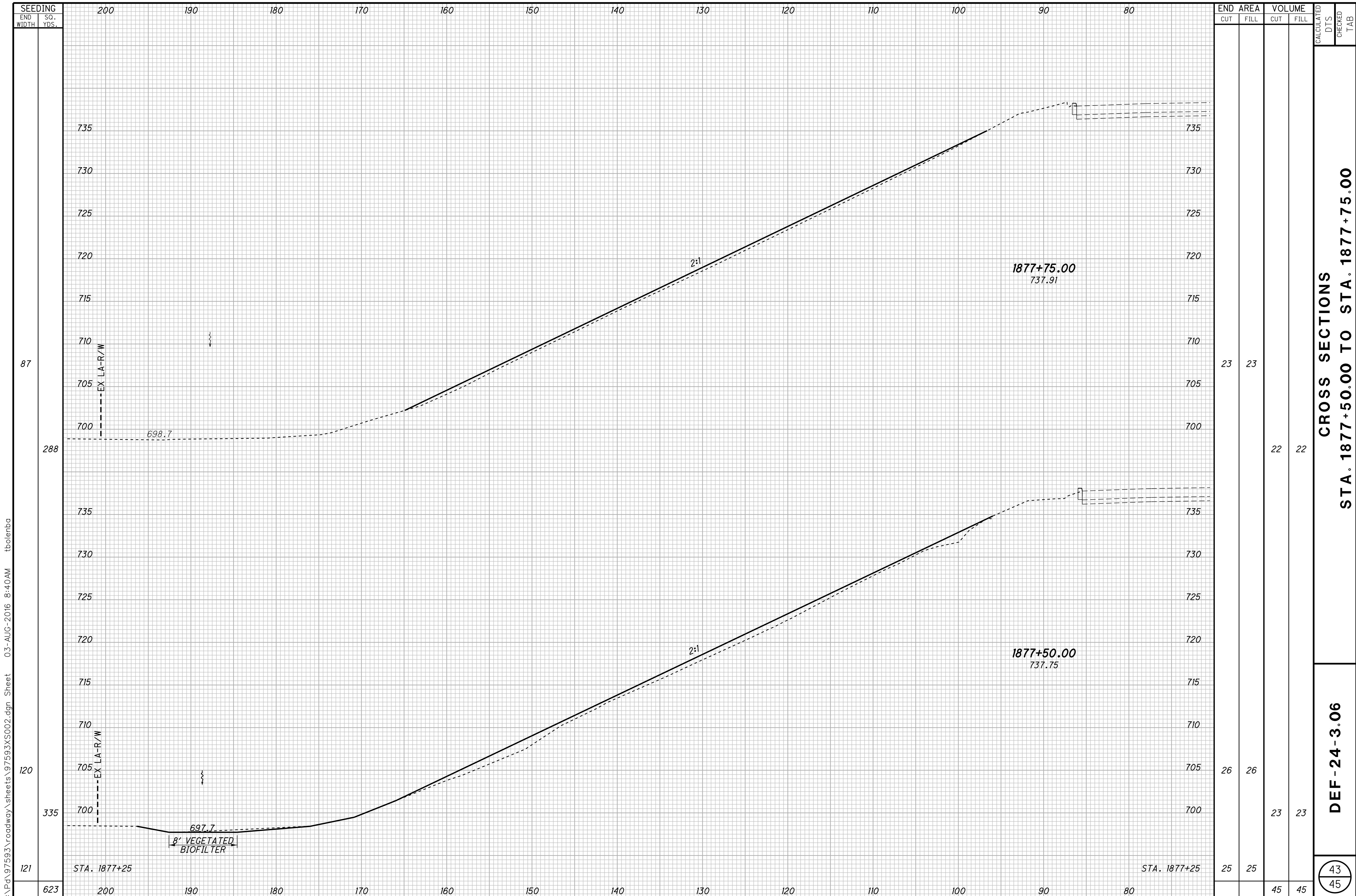
SEEDING	END WIDTH		SO. YDS.
	END WIDTH	SO. YDS.	
121	200	190	180
338	200	190	180
122	200	190	180
322	200	190	180
110	200	190	180
660	200	190	180

END AREA	VOLUME		CALCULATED	DTS	CHECKED	TAB
	CUT	FILL				
25	25	23	23			
26	26	24	24			
27	27	47	47			

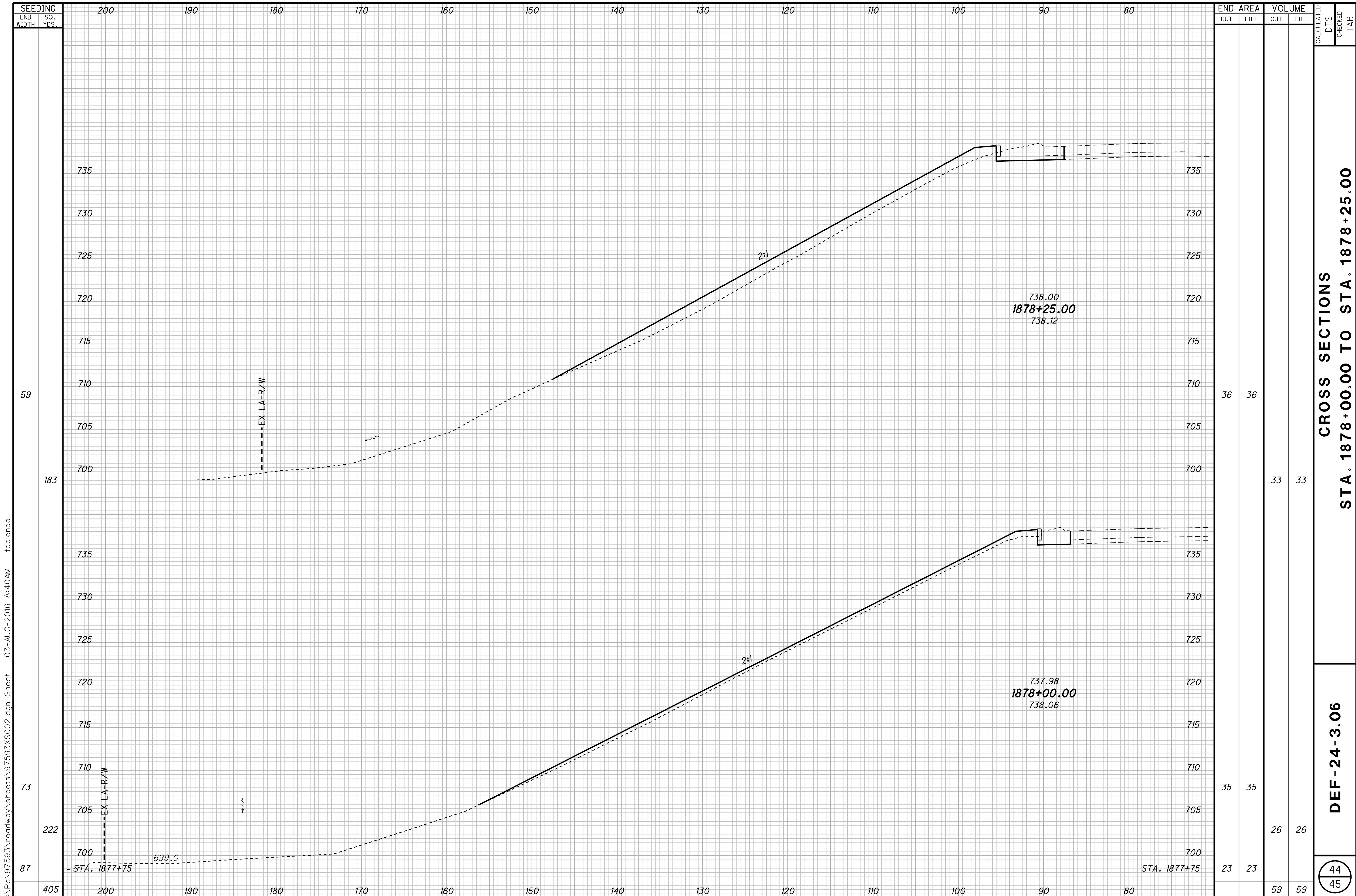
CROSS SECTIONS
STA. 1877+00.00 TO STA. 1877+25.00

DEF - 24 - 3.06

42
45



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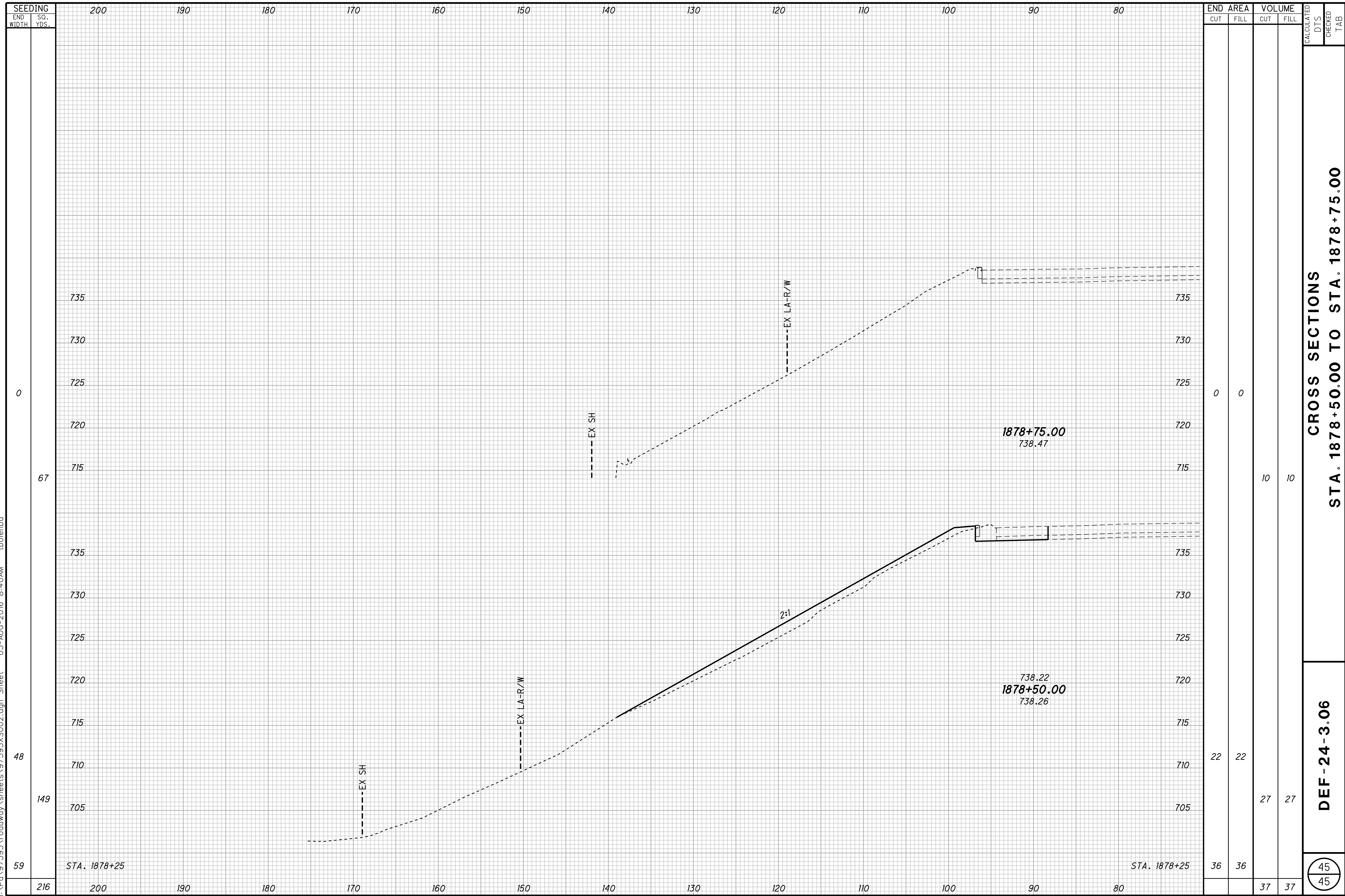
CROSS SECTIONS
STA. 1878+00.00 TO STA. 1878+25.00

DEF - 24 - 3.06

44
45

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CROSS SECTIONS
STA. 1878 + 50.00 TO STA. 1878 + 75.00

DEF - 24 - 3.06

45
45

PROJECT DESCRIPTION

REPAIR SLOPE IN THE SW QUADRANT OF THE US 24 OVERPASS WITH BALTIMORE STREET BY ONE OF TWO METHODS:

- 1) REMOVING THE GUARDRAIL AND EXCAVATING THE SLOPE AREA TO THE FAILURE PLANE (BENCH)
- 2) INSTALL PLATE PILES IN THE DESIGNATED FAILURE AREA (PLATE PILES)

BOTH OPTIONS WILL THEN RE-INSTALL GUARDRAIL AND FIX WASHOUTS BY EXTENDING THE CURB AND PLACING BLOCK MAT TO CATCH RUN-OFF. RECONSTRUCT THE CRACKED AREA OF THE CONCRETE SHOULDER BEHIND THE APPROACH SLAB.

HISTORIC RECORDS

HISTORIC RECORDS WERE FOUND FOR THIS PROJECT RELATIVE TO THE PAU/DEF-24-12.30/0.00 PROJECT. THIS PROJECT WAS FOR THE CONSTRUCTION OF THE NEW ALIGNMENT OF US 24 WHICH REPRESENTS THE EXISTING ALIGNMENT FOR THE CURRENT PROJECT. THIS INFORMATION WAS EVALUATED BUT NOT INCLUDED SINCE THE INFORMATION DOES NOT PERTAIN TO THE CONSTRUCTED EMBANKMENT.

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE PAULDING CLAY BASIN OF THE GLACIATED HURON-ERIE LAKE PLAIN WHICH IS CHARACTERIZED BY VERY CLAYEY SOILS WITH NEARLY FLAT, EXTREMELY LOW RELIEF LACUSTRINE PLAIN WHICH CONTAIN HIGHLY MEANDERING STREAMS. THE THICK OVERBURDEN SOILS ARE UNDERLAIN BY DEVONIAN-AGE ANTRIM SHALE.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS COMPLETED BY PERSONNEL FROM ODOT OFFICE OF GEOTECHNICAL ENGINEERING ON FEBRUARY 25, 2016. THE EXISTING CONCRETE PAVEMENT WAS NOTED AS BEING CRACKED AND THE WESTERN EMBANKMENT WAS NOTED AS HAVING A SEVER EROSIONAL CHANNEL AND SLIGHTLY HUMMOCKY APPEARANCE. THE SURROUNDING AREA WAS NOTED AS BEING A PREDOMINANTLY AGRICULTURAL LAND TO THE EAST AND WOODED TO THE WEST WITH A STRUCTURE CROSSING RAILROAD TRACKS IMMEDIATELY NORTHEAST OF THE PROJECT.

SUBSURFACE EXPLORATION

THREE (3) BORINGS B-001-0-16, B-001-1-16 AND B-00-2-16 WERE DRILLED WITH A TRACK MOUNTED ROTARY DRILL RIG BETWEEN MARCH 7 AND 9, 2016. ALL BORINGS WERE DRILLED USING 3-1/4 INCH I.D. HOLLOW STEM AUGER TO ADVANCE THE BORINGS. DISTURBED SAMPLES WERE TYPICALLY COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT CONTINUOUS OR 2.5 FOOT INTERVALS. THE HAMMER SYSTEM WAS CALIBRATED ON MAY 5, 2014 WITH AN ENERGY RATIO (ER) OF 87%.

EXPLORATION FINDINGS

SUBSURFACE CONDITIONS REVEALED BY THE BORINGS INDICATED THAT THE EMBANKMENT MATERIAL IS COMPOSED PREDOMINATELY OF COHESIVE SOILS CONSISTING OF SANDY SILT (A-4a), SILT AND CLAY (A-6a), SILTY CLAY (A-6b) AND CLAY (A-7-6). THESE MATERIALS WERE FOUND IN MEDIUM STIFF TO VERY STIFF CONSISTENCY AND DAMP OR MOIST CONDITION. GYPSUM CRYSTALS WERE NOTED WITH SOME OF THE SAMPLES COLLECTED. THE FOUNDATION SOILS SAMPLED WERE ALSO PREDOMINATELY COHESIVE SOILS CONSISTING OF SANDY SILT (A-4a), SILT AND CLAY (A-6a), AND CLAY (A-7-6). THESE MATERIALS WERE FOUND IN MEDIUM STIFF TO VERY STIFF CONSISTENCY AND DAMP OR MOIST CONDITION AND CONTAINED OCCASIONAL GYPSUM CRYSTALS. BORINGS B-001-0 AND B-001-1 ENCOUNTERED ORGANIC SOILS AT OR NEAR THE EMBANKMENT NATURAL SOIL INTERFACE. ALL BORINGS WERE DRY AT COMPLETION OF THE SAMPLING.

AN INCLINOMETER PIPE WAS INSTALLED IN B-001-1 AT COMPLETION OF THE SAMPLING.

BEDROCK WAS NOT ENCOUNTERED WITHIN ANY OF THE BORINGS.

HORIZONTAL POSITIONING

THE LATITUDE AND LONGITUDE COORDINATE VALUES SHOWN ON THE BORING LOGS ARE TRUE GRID VALUES. SEE THE PROJECT CONSTRUCTION PLANS FOR PROJECT SPECIFIC HORIZONTAL POSITIONING PARAMETERS.

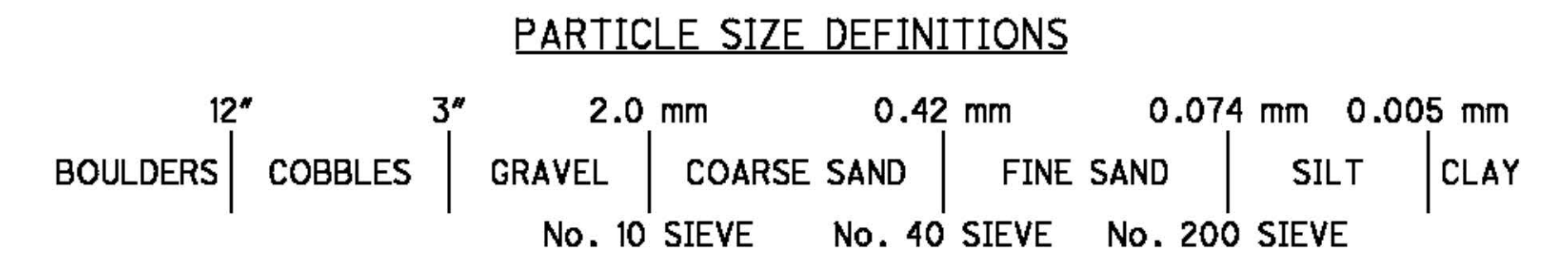
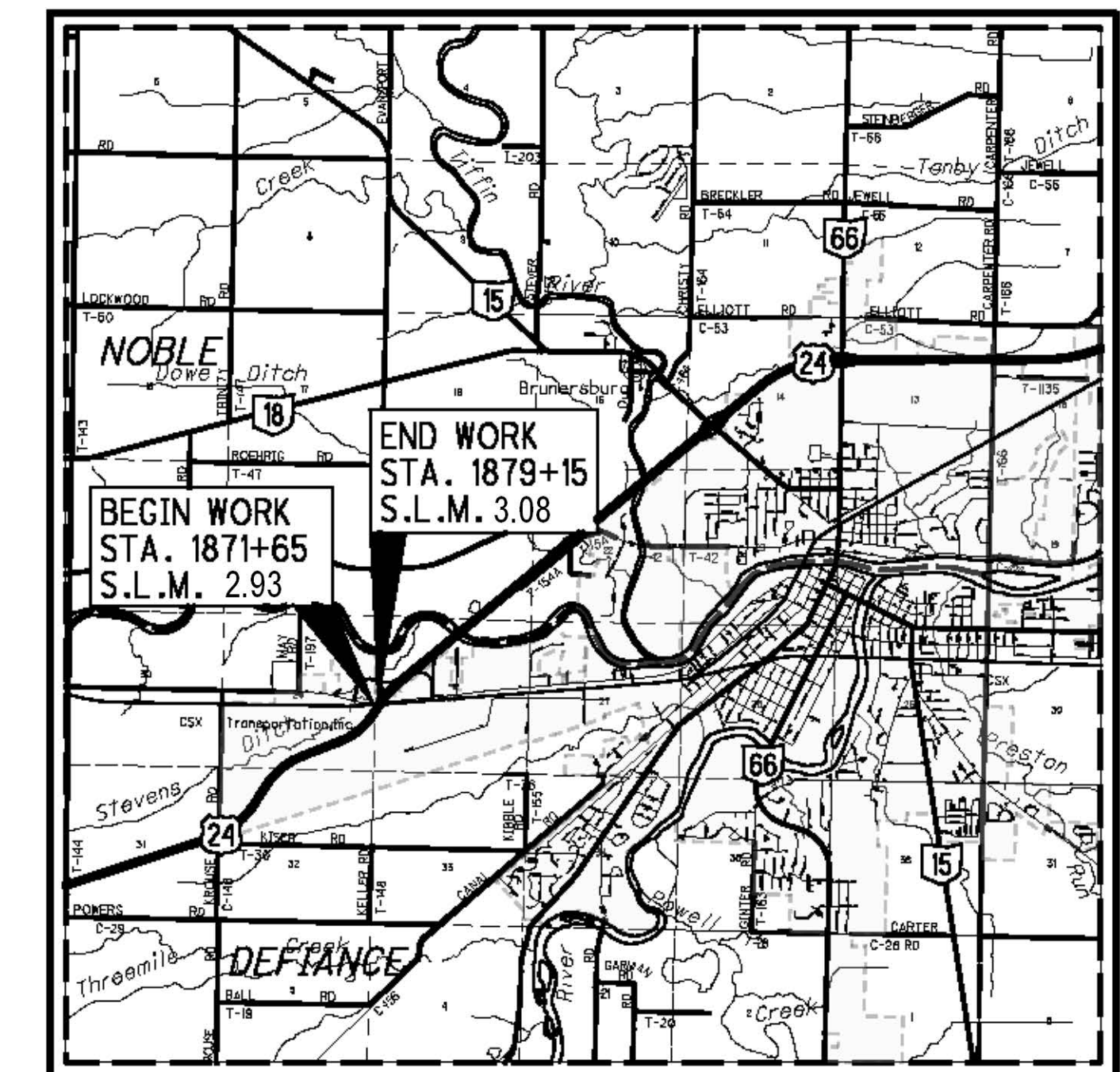
SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 15, 2016.

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE GEOTECHNICAL EXPLORATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE OR THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1980 WEST BROAD STREET.

LEGEND		ODOT CLASS	CLASSIFIED MECH./VISUAL	
DESCRIPTION				
	SANDY SILT	A-4a	3	-
	SILT AND CLAY	A-6a	4	10
	SILTY CLAY	A-6b	3	6
	CLAY	A-7-6	5	11
		TOTAL	15	27
	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		
	SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	VISUAL		
	BORING LOCATION - PLAN VIEW.			
	INSTRUMENTED BORING LOCATION - PLAN VIEW.			
	DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
WC	INDICATES WATER CONTENT IN PERCENT.			
N ₆₀	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.			
SS	INDICATES A SPLIT SPOON SAMPLE.			



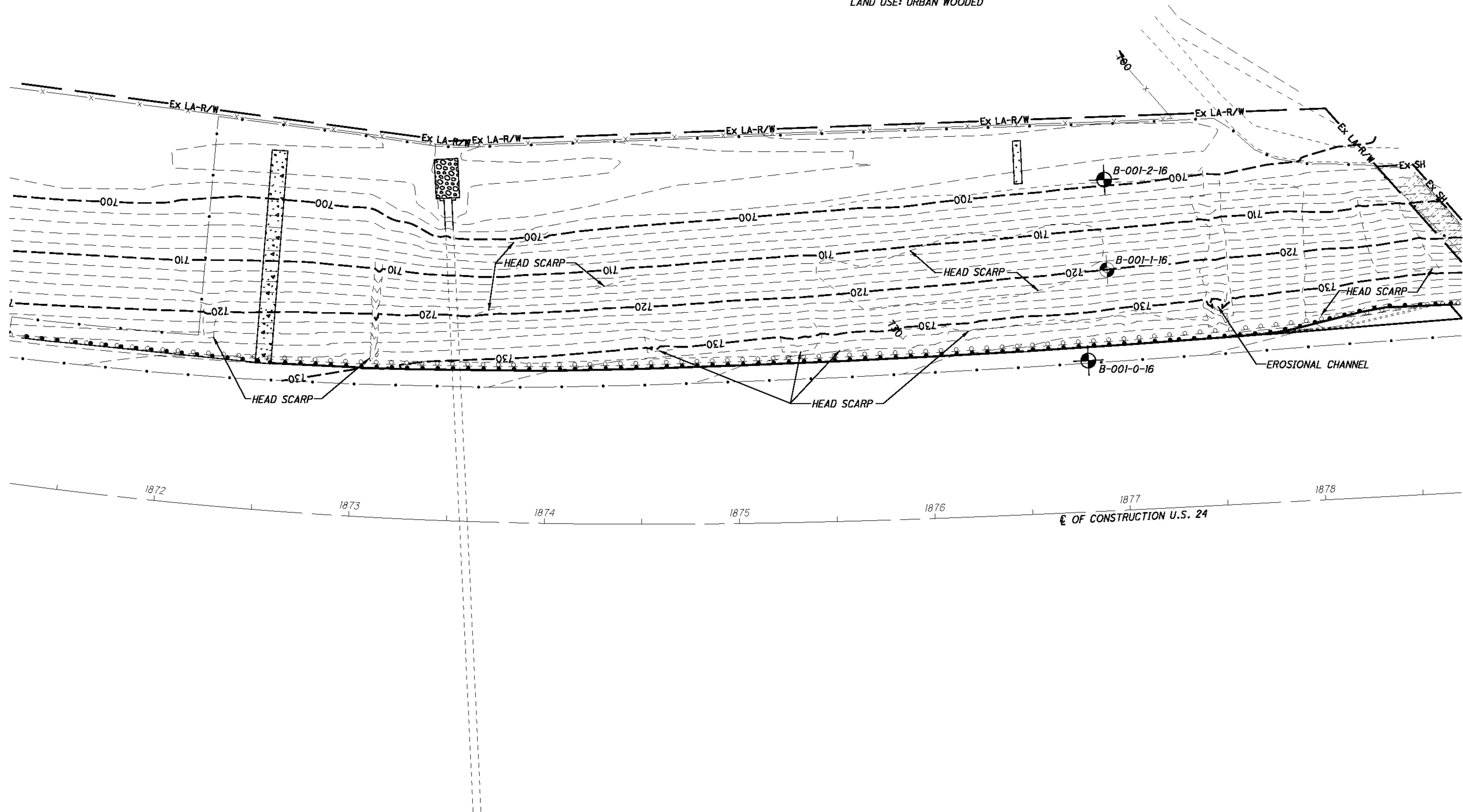
RECON. - AMJ 02/25/16
 DRILLING - JC 03/7/16 - 03/9/16
 DRAWN - GLM 08/2016
 REVIEWED - SAT 08/2016

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LAND USE: URBAN WOODED

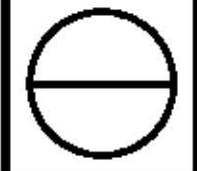


DRAWN	GLM
CHECKED	SAT

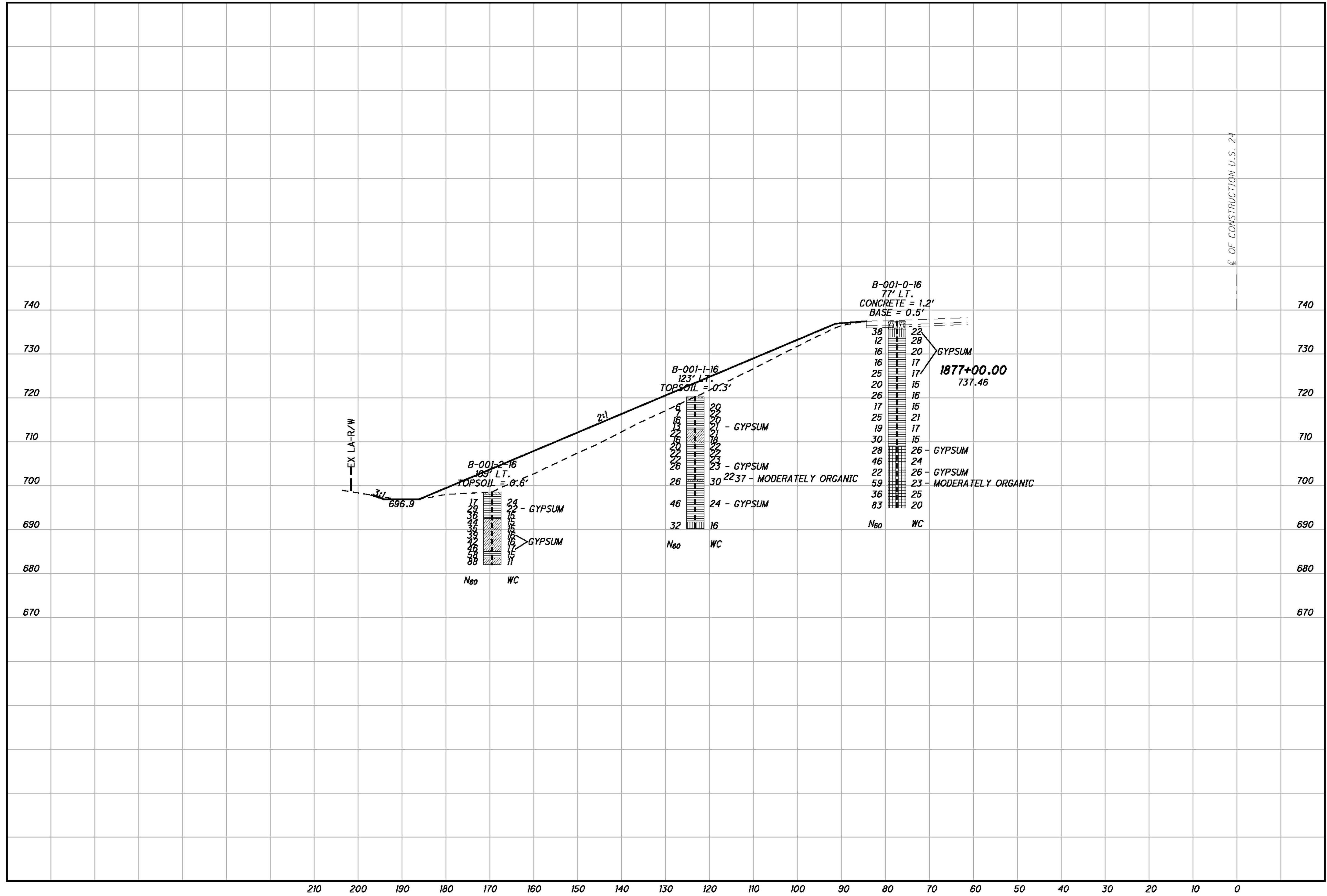
**LANDSLIDE EXPLORATION
STA. 1871+50 TO STA. 1878+50**

DEF-24-3.06

2 / 5



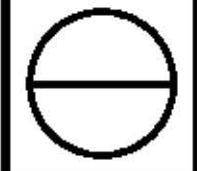
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0 5 10 20
 HORIZONTAL SCALE IN FEET
 DRAWN GLM
 CHECKED SAT

**LANDSLIDE EXPLORATION
 CROSS SECTION STA. 1877+00**

DEF-24-3.06



PROJECT: DEF-24-03.06 LANDSLIDE
 TYPE: LANDSLIDE
 PID: 97593 SFN: N/A
 START: 3/9/16 END: 3/9/16

DRILLING FIRM / OPERATOR: ODOT / CAREY
 SAMPLING FIRM / LOGGER: ODOT / MCLEISH
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: ACKER XLS TRACK
 HAMMER: ACKER AUTOMATIC
 CALIBRATION DATE: 5/5/14
 ENERGY RATIO (%): 87

STATION / OFFSET: 1876+82.77 LT.
 ALIGNMENT: C.L. U.S.R. 24
 ELEVATION: 737.4 (MSL) EOB: 42.5 ft.
 LAT / LONG: 41.273627, -84.419116

EXPLORATION ID: B-001-0-16
 PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)								ODOT CLASS (GI)	BACK FILL		
								GR	CS	FS	SI	CL	LL	PL	PI			WC	
CONCRETE (14") & BASE (6")	737.4	1																	
VERY STIFF, BROWN, SANDY SILT, SOME CLAY, LITTLE STONE FRAGMENTS, WITH GYPSUM, (FILL), DAMP	735.7	2	12	38	89	SS-1A	3.00	18	9	19	27	27	39	30	9	22	A-4a (4)		
		3	16																
		10																	
STIFF, BROWN, SILTY CLAY, LITTLE SAND, TRACE STONE FRAGMENTS, TRACE GYPSUM, (FILL), MOIST	733.9	4	3	12	100	SS-2A	2.00	6	4	8	25	57	38	19	19	28	A-6b (12)		
		5	4																
		4																	
@8.5'; BROWN AND DARK GRAY MOTTLED	723.9	6	3	4	16	78	SS-3A	1.50	-	-	-	-	-	-	-	20	A-6b (V)		
		7	4																
		7	7																
@11.0'; VERY STIFF	716.4	9	3	5	16	100	SS-4A	2.00	-	-	-	-	-	-	-	17	A-6b (V)		
		10	6																
		6																	
VERY STIFF, BROWN AND DARK GRAY MOTTLED, SILT AND CLAY, SOME SAND, TRACE STONE FRAGMENTS, (FILL), DAMP	716.4	11	5	6	25	100	SS-5A	3.50	-	-	-	-	-	-	-	17	A-6b (V)		
		12	11																
		11																	
VERY STIFF, BROWN AND GRAY MOTTLED, SILTY CLAY, LITTLE SAND, TRACE STONE FRAGMENTS, (FILL), MOIST TO DAMP	708.9	14	5	6	20	100	SS-6A	4.00	4	7	14	29	46	30	16	14	15	A-6a (10)	
		15	8																
		8																	
@16.0'; BROWN, WITH HIGH ANGLE FRACTURE AND GYPSUM	708.9	16	5	9	26	100	SS-7A	4.00	-	-	-	-	-	-	-	16	A-6a (V)		
		17	9																
		9																	
VERY STIFF, BROWN AND GRAY MOTTLED, CLAY, SOME SILT; TRACE SAND; MOIST	708.9	19	4	5	17	100	SS-8A	4.00	-	-	-	-	-	-	-	15	A-6a (V)		
		20	7																
		7																	
VERY STIFF, BROWN AND GRAY MOTTLED, CLAY, SOME SILT; TRACE SAND; MOIST	708.9	21	4	8	25	100	SS-9A	4.00	2	3	9	26	60	37	19	18	21	A-6b (11)	
		22	9																
		9																	
@26.0'; WITH TRACE GYPSUM	708.9	24	5	6	19	100	SS-10A	3.00	-	-	-	-	-	-	-	17	A-6b (V)		
		25	7																
		7																	
VERY STIFF, BROWN AND GRAY MOTTLED, CLAY, SOME SILT; TRACE SAND; MOIST	708.9	26	8	10	30	100	SS-11A	3.50	-	-	-	-	-	-	-	15	A-6b (V)		
		27	11																
		11																	
VERY STIFF, BROWN AND GRAY MOTTLED, CLAY, SOME SILT; TRACE SAND; MOIST	708.9	29	4	7	28	100	SS-12A	3.00	0	1	1	24	74	47	22	25	26	A-7-6 (15)	
		30	12																
		12																	
@33.5'; SLIGHTLY ORGANIC WITH WOOD FRAGMENTS	708.9	31	7	18	46	100	SS-13A	3.00	-	-	-	-	-	-	-	24	A-7-6 (V)		
		32	14																
		14																	
@36.0'; LITTLE STONE FRAGMENTS; MODERATELY ORGANIC (LOI = 4.6%) WITH WOOD AND GRASS	708.9	34	3	6	22	100	SS-14A	4.00	-	-	-	-	-	-	-	26	A-7-6 (V)		
		35	9																
		9																	
VERY STIFF, BROWN AND GRAY MOTTLED, CLAY, SOME SILT; TRACE SAND; MOIST	708.9	36	10	16	59	100	SS-15A	3.50	18	1	2	22	57	55	22	33	23	A-7-6 (19)	
		37	25																
		25																	
VERY STIFF, BROWN AND GRAY MOTTLED, CLAY, SOME SILT; TRACE SAND; MOIST	708.9	39	4	8	36	100	SS-16A	2.50	-	-	-	-	-	-	-	25	A-7-6 (V)		
		40	17																
		17																	
VERY STIFF, BROWN AND GRAY MOTTLED, CLAY, SOME SILT; TRACE SAND; MOIST	708.9	41	17	24	83	100	SS-17A	4.00	-	-	-	-	-	-	-	20	A-7-6 (V)		
		42	33																
		33																	

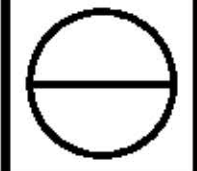
NOTES: LAT/LONG FROM OGE HANDHELD GPS UNIT. ELEV FROM DISTRICT SURVEY. HOLE DRY UPON COMPLETION.
 ABANDONMENT METHODS: MATERIALS QUANTITIES: AUGER CUTTINGS MIXED WITH 100 LB. BENTONITE CHIPS

PROJECT:	DEF-24-03.06	DRILLING FIRM / OPERATOR:	ODOT / CAREY	STATION / OFFSET:	1876+94, 123' LT.	EXPLORATION ID	B-001-1-16
TYPE:	LANDSLIDE	SAMPLING FIRM / LOGGER:	ODOT / ANDREW J.	ALIGNMENT:	C.L. U.S.R. 24	PAGE	1 OF 1
PID:	97593	DRILLING METHOD:	3.75" HSA	ELEVATION:	720.1 (MSL) EOB: 30.0 ft.	1 OF 1	
START:	3/8/16	SAMPLING METHOD:	SPT	LAT / LONG:	41.273722, -84.419232		
MATERIAL DESCRIPTION AND NOTES							
TOPSOIL (4")		ELEV.	720.1	DEPTH			
MEDIUM STIFF TO STIFF, BROWN AND GRAY MOTTLED, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, (FILL), MOIST		719.9					
@6.0'; WITH TRACE GYPSUM		712.6					
VERY STIFF, BROWN AND DARK GRAY MOTTLED, SILTY CLAY, LITTLE SAND, TRACE GRAVEL, (FILL), MOIST		709.6					
@9.0'; STIFF							
VERY STIFF, BROWN AND DARK GRAY MOTTLED, CLAY, SOME SILT, TRACE SAND, TRACE GRAVEL, (FILL), MOIST							
@13.5'; WITH GYPSUM							
@15.0'; SLIGHTLY ORGANIC, WITH GYPSUM							
VERY STIFF, BLACK AND DARK GRAY, SILT AND CLAY, LITTLE SAND, MODERATELY ORGANIC WITH LEAF AND WOOD FRAGMENTS, POSSIBLE NATIVE SOIL, DAMP		701.3					
VERY STIFF, BROWN AND LIGHT GRAY MOTTLED, CLAY, SOME SILT, TRACE SAND, MOIST		700.8					
@23.5'; WITH GYPSUM							
HARD, BROWN, SANDY SILT, 'AND' CLAY, TRACE GRAVEL, DAMP		691.6					
NOTES: LAT/LONG FROM OGE HANDHELD GPS UNIT. ELEV FROM DISTRICT SURVEY. HOLE DRY UPON COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: INCLINOMETER INSTALLED WITH 12 BAGS SAND		690.1					

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 8/4/16 12:37 - X:\GINT\PROJECTS\60207_4.GPJ

PROJECT:	DEF-24-03.06	DRILLING FIRM / OPERATOR:	ODOT / CAREY	STATION / OFFSET:	1876+95, 169' LT.	EXPLORATION ID	B-001-2-16
TYPE:	LANDSLIDE	SAMPLING FIRM / LOGGER:	ODOT / LEWIS	ALIGNMENT:	C.L. U.S.R. 24	PAGE	1 OF 1
PID:	97593	DRILLING METHOD:	3.75" HSA	ELEVATION:	698.5 (MSL) EOB: 16.5 ft.	1 OF 1	
START:	3/7/16	SAMPLING METHOD:	SPT	LAT / LONG:	41.273793, -84.419372		
MATERIAL DESCRIPTION AND NOTES							
TOPSOIL (7")		ELEV.	698.5	DEPTH			
HARD, BROWN AND GRAY MOTTLED, CLAY, SOME SILT, TRACE SAND, MOIST		697.9					
@3.0'; WITH GYPSUM							
@4.5'; DAMP, WITH SLICKENSIDES							
HARD, BROWN AND GRAY MOTTLED, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL, DAMP		692.5					
@7.5'; BROWN							
@9.0'; BROWN AND GRAY MOTTLED, WITH GYPSUM							
@10.5'; BROWN, HIGH ANGLE FRACTURE WITH IRON STAINING AND GYPSUM							
@12.0'; VERTICAL FRACTURE AND GYPSUM							
HARD, BROWN AND GRAY, SANDY SILT, SOME CLAY, LITTLE GRAVEL, DAMP		683.5					
		682.0					

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 8/3/16 12:42 - X:\GINT\PROJECTS\60207_4.GPJ



DEF - 24 - 3.06

LANDSLIDE EXPLORATION
BORING LOGS B-001-1-16 & B-001-2-16

DRAWN
GLM
CHECKED
SAT

NOTES: LAT/LONG FROM OGE HANDHELD GPS UNIT. ELEV FROM DISTRICT SURVEY. HOLE DRY UPON COMPLETION. ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 7s LB. BENTONITE CHIPS

SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: DEF-US 24-3.06

PID: 97593

Date: 04/25/2016

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by ODOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 11, 2015, and executed by FHWA and ODOT.

1. Waterway Permit Time Restrictions:

Regional General Permit (RGP) Section A (Linear Transportation) is authorized for DEF-24-3.06 PID 97593. A copy of the RGP shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: April 25, 2016. The permit expires: October 24, 2019.

For permitted work in aquatic resources (including, but not limited to: streams, wetlands, jurisdictional ditches, captured streams, lakes, ponds), the Department will consider the Contractor's submission of a reauthorization to the waterway permit end date based on project constraints. In order to be considered, the Contractor must submit a justification to the Engineer at least 90 days prior to the waterway permit end date. The Engineer will submit the request for a time extension to ODOT-OES-WPU for consideration and coordination with the U.S. Army Corps of Engineers (USACE), Ohio Environmental Protection Agency (OEPA), U.S. Coast Guard (USCG), U.S. Fish and Wildlife Service (USFWS), and Ohio Department of Natural Resources (ODNR).

2. Deviations From Permitted Construction Activities

No deviation from the requirements for work in aquatic resources depicted in the plans, Special Provisions, and/or working drawings may be made unless a modification has been submitted to ODOT-OES-WPU and approved by the appropriate agencies (i.e., USACE, OEPA, USCG, ODNR, and USFWS).

For emergency situations resulting in unanticipated impacts to aquatic resources, provide notification (verbal or written) to the Engineer as soon as possible following discovery of the situation. Written notification to the Engineer and notification to the ODOT-OES-WPU (614-466-7100) must be made within 24 hours.

For non-emergency situations, notify the Engineer in writing for submission to the ODOT-OES-WPU (614-466-7100) for consideration and coordination with the appropriate agencies. Notification must be made at least 90 days prior to planned, non-permitted activities. Consideration of the requested deviation is at the discretion of the Director and must be coordinated with the appropriate regulatory agencies.

3. In-Stream Work Restrictions

Work in the following aquatic resources is further restricted as follows:

Stream Name /Description	Location	Work restriction dates (No in-stream work permitted)
UNT to Stevens Ditch	STA 1873+50.5	No Restrictions

UNT = unnamed tributary stream

In-stream work has been defined as the placement and/or removal of fill materials (temporary or permanent) below ordinary high water of a stream. Examples of "fill" include, but are not limited to: bridge piers, abutments, culverts, rock channel protection, scour protection and temporary work pads**.

Fills placed within a stream identified in the above table (outside of the work restriction dates) can

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continue to be worked from during the work restriction dates, but cannot be expanded, removed, or otherwise modified (below ordinary high water) until once again outside of the work restriction dates.

4. Materials:

Materials utilized in or adjacent to aquatic resources on this project for temporary or permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Broken asphalt is specifically excluded. Chromated Copper Arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in aquatic resources.

5. Cultural Resources

If archeological sites or human remains are discovered, cease all work in the immediate area and notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-Cultural Resource Section at 614-466-7100. In the event of human remains are identified by OES-Cultural Resources Section the Engineer shall also contact the Defiance County Sheriff's Office at (419) 784-1155.

6. Aquatic Resource Demarcation:

All aquatic resources indicated on the plans shall be demarcated in the field as per SS 832 prior to site disturbance. Specifically, only 58 feet (includes 28 feet of temporary and 58 feet of permanent) of UNT to Stevens Ditch can be impacted.

The remainder of the aquatic resources must be demarcated as to ensure avoidance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

An ODOT wetland mitigation site exists adjacent to the project area (see plan sheets 12-13 and 31). Under no circumstances is the wetland to be temporarily or permanently impacted.

7. Spill containment:

Provide and Maintain an Oil Spill Kit with a minimum capacity of 65 gallons. The Spill Kit shall contain:

- 6 - 3 in. X 8 ft. Oil only socks
- 4 - 18 in. X 18 in. Oil only pillows
- 2 - 5 in. X 10ft. Booms
- 50 - 16in. X 20 in. Oil only pads
- 10- Disposable Bags
- 1- 65 Gallon drum with lid
- 25 pounds of Granular Oil Absorbent

The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream or wetland. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours. All costs associated with furnishing and maintaining the above referenced spill containment kit is incidental to work.

8. Blasting:

State law requires notification to the Ohio Department of Natural Resources should blasting be required within or near stream channels (See ORC 1533.58 & CMS 107.09). Notify Engineer, in writing, for

submission to ODOT-OES-WPU (614-466-7100) for coordination with ODNR.

9. Bridge Inspection:

Prior to the removal of bridge structures, the underside must be carefully examined for the presence of birds and bats. Should any birds or bats be found roosting on the underside of the bridge, the Contractor is required to notify the Engineer for coordination with ODOT-OES-WPU (614-466-7100).

10. Project Inspection:

Inspection of Work may include inspection by representatives of other government agencies or railroad corporations that pay a portion of the cost of the Work or regulate the Work through State and Federal law. Comments from the representatives of these agencies shall be directed to the Engineer. Please forward a copy to ODOT-OES-WPU (614-466-7100).

11. Temporary Access Fills (Stream and River Crossings and Fills)

Special Provisions Notes:

Regional General Permit (RGP) for the State of Ohio Department of Transportation

Definitions:

Hydraulic Opening

The cross sectional area allowing an unimpeded discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM)*.

Standard Temporary Discharge

The hydraulic opening providing a capacity for a discharge equal to twice the *highest monthly flow* without producing a rise in the backwater above the OHWM shall be known as the Standard Temporary Discharge. The U.S. Geologic Service publication "Techniques for estimating Selected Streamflow Characteristics of Rural Unregulated Streams in Ohio" provides equations that estimate monthly flow for Ohio Waterways. These flows are also available in a web application by USGS StreamStats, (<http://water.usgs.gov/osw/streamstat/ohi.html>).

Average Monthly Flow

The average monthly flow represents the estimated "normal" flow.

Temporary Access Fills (TAFs)

In Streams and Rivers may include, but are not limited to, causeways, cofferdams (as described by other items of work), access pads, temporary bridges, etc. The Contractor will make every attempt minimize disturbance to water bodies, stream banks, stream beds, and approach sections during the construction, maintenance, and removal of the TAFs. Fording of streams and rivers is prohibited. Construct TAFs in such a manner that will maintain flows, minimize upstream flooding, and avoid overtopping the TAF on a regular basis. **TAFs shall be designed and constructed so that the hydraulic opening provides capacity for a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM)*.**

Requirements

21 calendar days prior to the initiation of any in-stream work, provide the Engineer with working drawings that include:

- Plan view drawing (200 scale or less) showing the location of all jurisdictional temporary fill proposed for use on the project.

- Scaled Cross section and profile drawing showing the OHWM and the proposed compliant hydraulic opening.
- A description of the installation and staging of all temporary jurisdictional fill over the life of the contract.
- A description of the removal of all jurisdictional temporary fill and restoration of the channel and all areas impacted by the jurisdictional temporary fill.
- A schedule outlining the timing of the placement and removal of all TAF.
- Have an Ohio Registered Engineer prepare, sign, seal, and date the working drawings. Have a second Ohio Registered Engineer check, sign, and seal and date the working drawings. The preparer and checker are two different Engineers. Include the following statement on the working drawings:
"These working drawings were prepared in compliance with the terms of the Regional General Permit and all contract documents."
- Include supporting hydraulic calculations developed by the engineer(s) who sealed the working drawings.
- Do not begin in-stream work until the Engineer has accepted the working drawings.

If the OHWM is not shown on the plans, the Department will establish the OHWM based on the definition of OHWM (as defined in SS 832) or the peak discharge from the 2 year event, using the method described in the most current version of the Department's Location and Design Manual Volume II.

If the Contractor proposes a TAF which does not provide for the Standard Temporary Discharge (discharge equal to twice the highest monthly flow without producing a rise in the backwater), the Contractor is required to coordinate the request for the contractor's proposed TAF with the Engineer and the ODOT Office of Environmental Services (OES). The Department makes no guarantee to grant the request. The contractor's proposed TAF request will be coordinated by OES with the USACE and the OEPA, as appropriate.

In addition to the requirements described in SS 832, supply the Engineer/OES with the following:

1. A plan and profile showing the temporary access fill(s) with the OHWM.
2. Cross section showing the hydraulic opening and the anticipated discharge flow.
3. A restoration plan for the area affected by the temporary access fill(s).
4. A schedule outlining the timing of the placement and removal of the temporary access fill(s).

The time frame allowed for the coordination of the contractor's proposed TAF will be a minimum of 60 days. Installation of any jurisdictional fill without a 404 Permit authorized by the USACE is strictly prohibited. All direct coordination with the USACE and/or OEPA will be performed through OES.

TAFs Construction and Payment

Begin planning and installing causeways and access fills as early in construction as possible to avoid conflicts with 404/401 permits or other environmental commitments that have been included in the construction plans.

TAFs in Streams and Rivers may include, but are not limited to, causeways, cofferdams, access pads, temporary bridges, etc. Make every attempt minimize disturbance to water bodies, stream banks, stream beds, and approach sections during the construction, maintenance, and removal of the TAFs. Make every attempt to minimize disturbance to water bodies during construction, maintenance, and removal of the causeway and access fills. Construct the causeway and access fills as narrow as practical. Install in-stream conduits parallel to the stream banks. Make the causeway and access fills in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, bed, and approach sections. Construct the causeway and access fills as to not erode stream banks or allow sediment deposits in the channel.

Prior to the initiation of any in-stream work, establish a monument upstream of proposed temporary crossing or temporary construction access fill to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the

monument that identifies the elevation 1 foot above the OHWM. If the OHWM is not shown on the plans, the Department will establish the OHWM based on the definition of OHWM (SS 832.02) or the peak discharge from the 2 year event, using the method described in the most current version of the Department's Location and Design Manual Volume II.

Ensure that the monument can be read from the bank of the waterway. Have this elevation set and certified by an Ohio Registered Surveyor.

TAFs placed by the contractor above the OHWM are not subject to the 404/401 permit constraints. All costs associated with furnishing and maintaining the above referenced monument is incidental to the work.

Should the water elevation of the waterway, exceed the elevation 1 foot above OHWM, the Department will compensate the Contractor for repair of any resulting damage to the permitted temporary access fill up to the elevation of 1 foot above the OHWM, except as noted. Follow the requirements in Item 502 for Structures for Maintaining Traffic and in Item 503 for Cofferdams and any modifications to these items as shown in the plans. The Department will not pay for repair and maintenance of temporary access structures that are related to the construction access fill.

Should the water elevation of the waterway exceed the elevation shown on the monument, the Department will recognize this event as an excusable, non-compensable delay in accordance with Section 108.06 of the Construction & Materials Specifications.

Construct the causeway and fills, not including cofferdams and temporary bridges, to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third the width of the stream is filled, then use culvert pipes to allow the movement of aquatic life. Ensure that any ponding of water behind the causeway and access fills will not damage property or threaten human health and safety.

The following minimum requirements apply to TAFs where culverts are used.

- A. Furnish culverts on the existing stream bottom.
- B. Avoid a drop in water elevation at the downstream end of the culvert.
- C. Furnish a sufficient number of culverts in addition to stream openings to providing a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.
- D. Furnish culverts with a minimum diameter of 18 inches (0.5 m).

For all fill and surface material placed in the channel, around the culverts, or on the surface of the causeway and access fills furnish clean, non-erodible, nontoxic dumped rock fill, Type B, C, or D, as specified in C&MS 703.19.B. Extend rock fill up the slope from original stream bank for 50 feet (10 m) to catch and remove erodible material from equipment.

When the work requiring the TAFs is complete all portions of the TAF (including all rock and culverts) will be removed in its entirety. The material will not be disposed in other waters of the US or isolated wetland. The stream bottom affected by the causeway and access fills will be restored to its pre-construction elevations. The TAF will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

Unless specific TAFs compensation is included in the plans, all environmental protection and control associated with the 404/401 permit activities, including but not limited to TAFs, are incidental to the work within the boundaries of the 404/401 permit or as otherwise identified in the 404/401 permit application.

12. Excavation Activities:

Excavated material will be placed at the upland site and disposed of in such a manner that sediment and

runoff to streams and other waters is controlled and minimized. If any changes to the proposed work are deemed necessary, you must notify and coordinate with the ODOT-OES-WPU (614-466-7100).