

CITY OF TALLMADGE

EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT

PROJECT DESCRIPTION

WIDENING AND RESURFACING OF EAST AVENUE AND WASHBURN ROAD TO ADD A LEFT TURN LANE AND TRAFFIC SIGNAL. PROJECT INCLUDES A NEW TRAFFIC SIGNAL, CURBING, SIDEWALK, DRAINAGE, AND PAVEMENT MARKINGS.

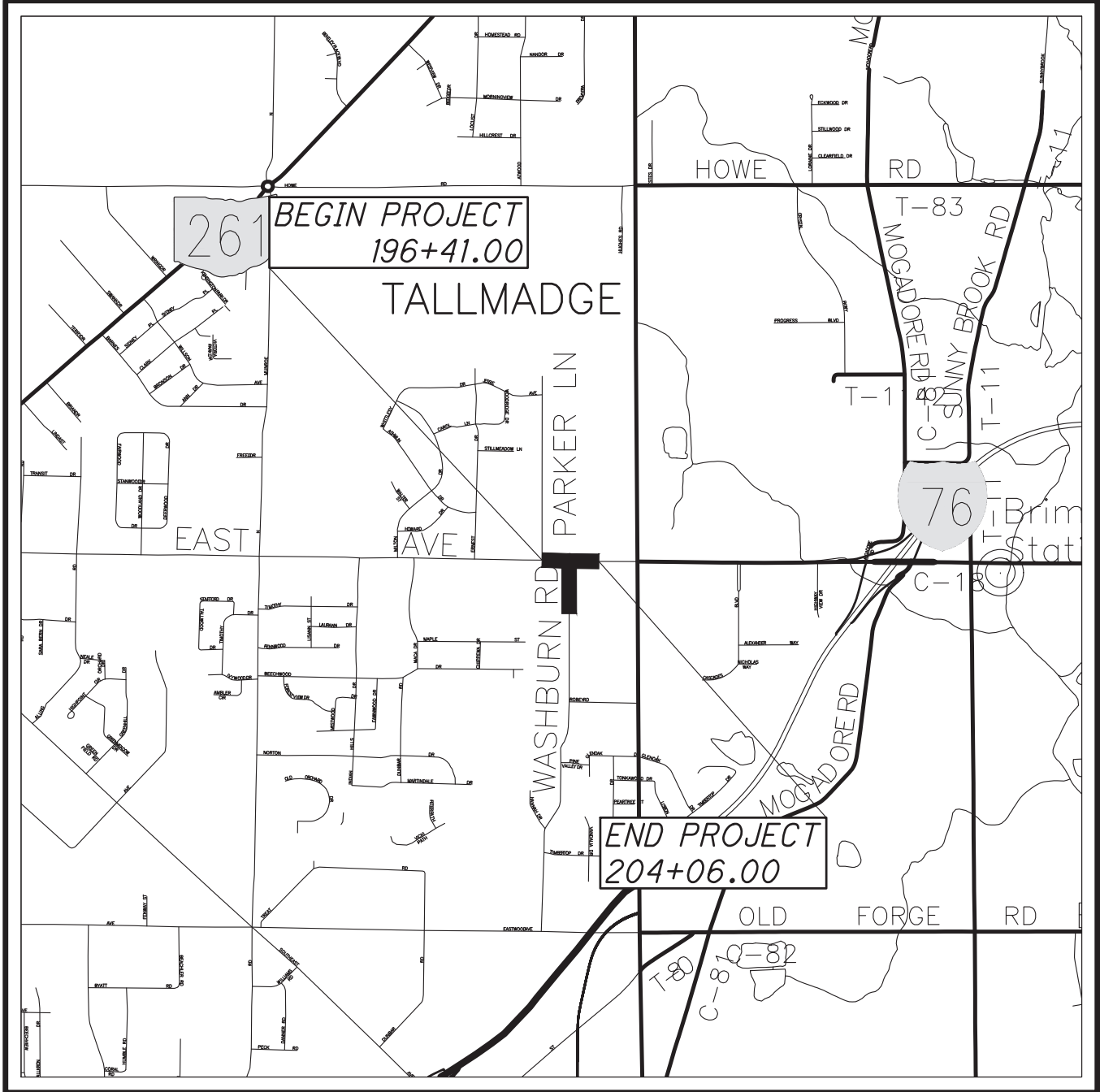
PROJECT EARTH DISTURBED AREA: 1.53 ACRES
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.14 ACRES
 NOTICE OF INTENT EARTH DISTURBED AREA: 4.90 ACRES

2019 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 _____
 DATE _____ MAYOR, CITY OF TALLMADGE



LOCATION MAP

LATITUDE: 41°06'02" N LONGITUDE: 81°23'49" W



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

DESIGN DESIGNATION

CURRENT ADT (2021)	14,550
DESIGN YEAR ADT (2041)	17,490
DESIGN HOURLY VOLUME (2041)	1,570
DIRECTIONAL DISTRIBUTION	0.56
TRUCKS (24 HOUR B&C)	4%
DESIGN SPEED	35 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN MINOR ARTERIAL	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

CONTACT TWO WORKING DAYS BEFORE YOU DIG

Before You Dig

OHIO811, 8-1-1, 1-800-362-2764
 (Non-members must be called directly)

PLAN PREPARED BY:

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ENGINEERS SEAL:

SIGNED: *Joshua J. Slaga*
 DATE: 04/21/22

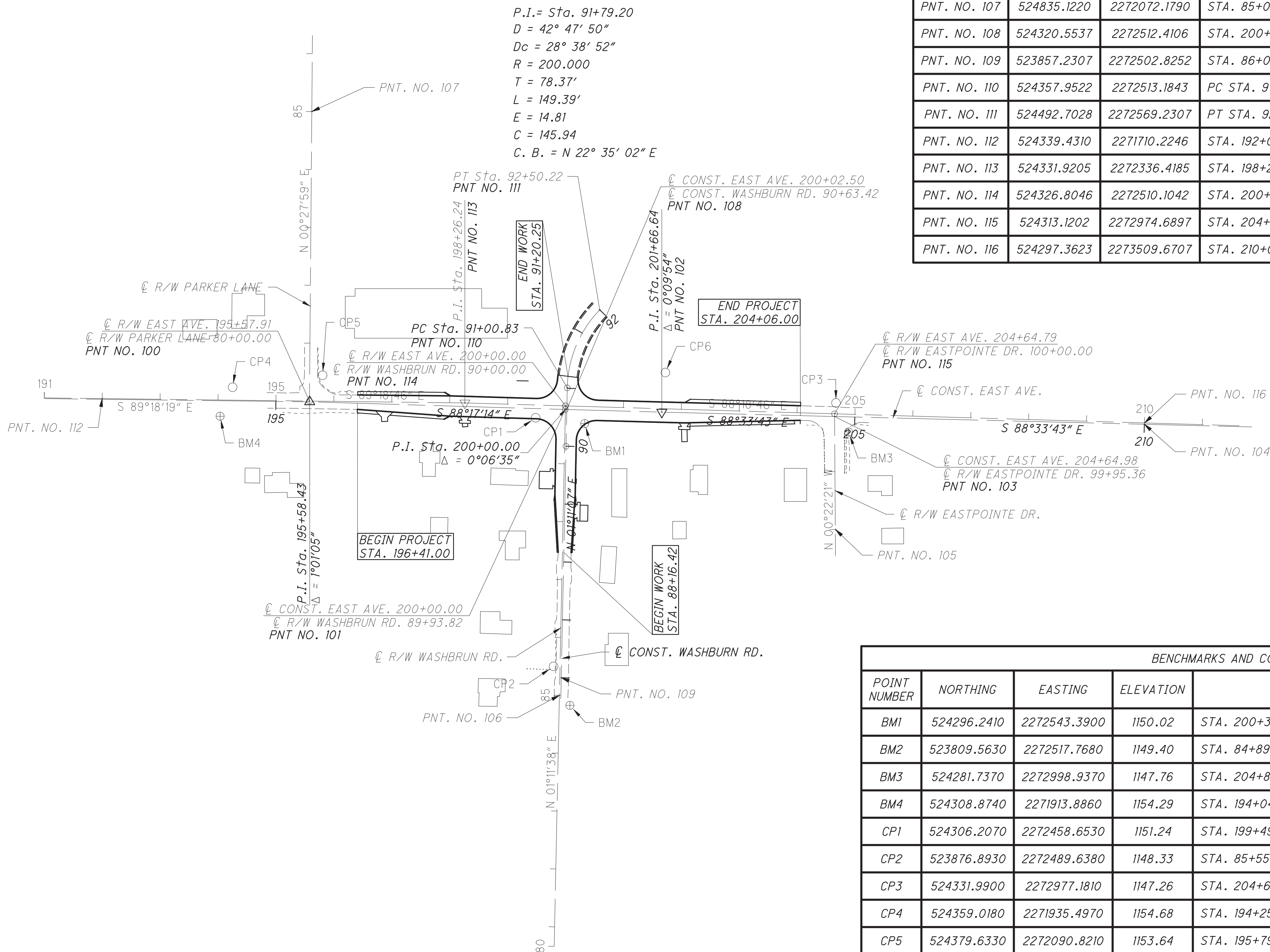
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STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/17/20	HL-10.11	1/15/21	800	1/15/21
BP-3.2	1/18/19	HL-30.11	1/15/21	805	7/16/20
BP-4.1	7/19/13	HL-30.22	1/15/21	809	1/15/21
BP-5.1	1/18/19	HL-60.11	7/21/17	813	10/19/18
BP-7.1	7/17/20			832	10/19/18
		MT-97.10	4/19/19	875	1/18/19
CB-1.1	7/19/19	MT-97.11	1/20/17	903	7/20/12
CB-2.1	7/20/18	MT-99.20	4/19/19	909	1/15/21
CB-2.2	7/20/18	MT-101.90	7/17/20	913	4/21/17
CB-4.1	1/18/13	MT-102.20	4/19/19	916	10/16/20
		MT-105.10	1/17/20		
MH-1.2	1/15/16	MT-110.10	7/19/13		
		MT-120.00	1/19/18		
DM-1.1	7/17/20				
DM-1.2	1/18/13				

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FEDERAL PROJECT NO. _____
 PID NO. _____
 CONSTRUCTION PROJECT NO. _____
 RAILROAD INVOLVEMENT: **NONE**
EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT
 1/88



POINT NUMBER	NORTHING	EASTING	DESCRIPTION
PNT. NO. 100	524335.1386	2272068.1100	STA. 195+57.91 @ R/W EAST AVE.; 80+00.00 @ R/W PARKER LANE
PNT. NO. 101	524320.6219	2272509.9754	STA. 200+00.00 @ CONST. EAST AVE.; STA. 89+93.82 @ R/W WASHBURN RD.
PNT. NO. 102	524315.9625	2272676.4846	PI STA. 201+66.64 @ C/L CONST. EAST AVE.
PNT. NO. 103	524308.4757	2272974.7319	STA. 204+64.98 @ CONST. EAST AVE.; STA. 99+95.36 @ R/W EASTPOINTE DR.
PNT. NO. 104	524295.0496	2273509.5838	STA. 210+00.00 @ CONST. EAST AVE.
PNT. NO. 105	524113.1284	2272976.5055	STA. 98+00.00 @ R/W EASTPOINTE DR.
PNT. NO. 106	523826.9132	2272499.6859	STA. 85+00.00 @ R/W WASHBURN RD.
PNT. NO. 107	524835.1220	2272072.1790	STA. 85+00.00 @ R/W PARKER LANE
PNT. NO. 108	524320.5537	2272512.4106	STA. 200+02.50 @ CONST. EAST AVE.; STA. 90+63.42 @ CONST. WASHBURN RD.
PNT. NO. 109	523857.2307	2272502.8252	STA. 86+00.00 @ CONST. WASHBURN RD.
PNT. NO. 110	524357.9522	2272513.1843	PC STA. 91+00.83 @ CONST. WASHBURN RD.
PNT. NO. 111	524492.7028	2272569.2307	PT STA. 92+50.22 @ CONST. WASHBURN RD.
PNT. NO. 112	524339.4310	2271710.2246	STA. 192+00 @ R/W EAST AVE.
PNT. NO. 113	524331.9205	2272336.4185	STA. 198+26.24 @ R/W EAST AVE.
PNT. NO. 114	524326.8046	2272510.1042	STA. 200+00.00 @ R/W EAST AVE.; STA. 90+00.00 @ R/W WASHBURN RD.
PNT. NO. 115	524313.1202	2272974.6897	STA. 204+64.79 @ R/W EAST AVE.; STA. 100+00.00 @ R/W EASTPOINTE DR.
PNT. NO. 116	524297.3623	2273509.6707	STA. 210+00.00 @ R/W EAST AVE.

BENCHMARKS AND CONTROL POINTS TABLE				
POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM1	524296.2410	2272543.3900	1150.02	STA. 200+34.15, OFF. 23.44' RT @ R/W EAST AVE. SPIKE IN POLE TA 1082
BM2	523809.5630	2272517.7680	1149.40	STA. 84+89.21, OFF. 18.43' RT @ R/W WASHBURN RD. SPIKE IN POLE TA 2345
BM3	524281.7370	2272998.9370	1147.76	STA. 204+89.85, OFF. 26.12' RT @ R/W EAST AVE. SPIKE IN POLE 62BE4B 1
BM4	524308.8740	2271913.8860	1154.29	STA. 194+04.09, OFF. 26.82' RT @ R/W EAST AVE. SPIKE IN POLE 227191 D52431
CP1	524306.2070	2272458.6530	1151.24	STA. 199+49.20, OFF. 15.94' RT @ R/W EAST AVE. 5/8 X 30 REBAR GPD CAP
CP2	523876.8930	2272489.6380	1148.33	STA. 85+55.94, OFF. 11.09' LT @ R/W WASHBURN RD. 5/8 X 30 REBAR GPD CAP
CP3	524331.9900	2272977.1810	1147.26	STA. 204+66.84, OFF. 23.57 LT @ R/W EAST AVE. 5/8 X 30 REBAR GPD CAP
CP4	524359.0180	2271935.4970	1154.68	STA. 194+25.09, OFF. 23.58' LT @ R/W EAST AVE. 5/8 X 30 REBAR GPD CAP
CP5	524379.6330	2272090.8210	1153.64	STA. 195+79.33, OFF. 46.46' LT @ R/W EAST AVE. 8IN MAGS
CP6	524384.3630	2272682.6310	1146.97	STA. 201+71.07, OFF. 68.53' LT @ R/W EAST AVE. 8IN MAGS

HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

SCHEMATIC PLAN

EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT

2

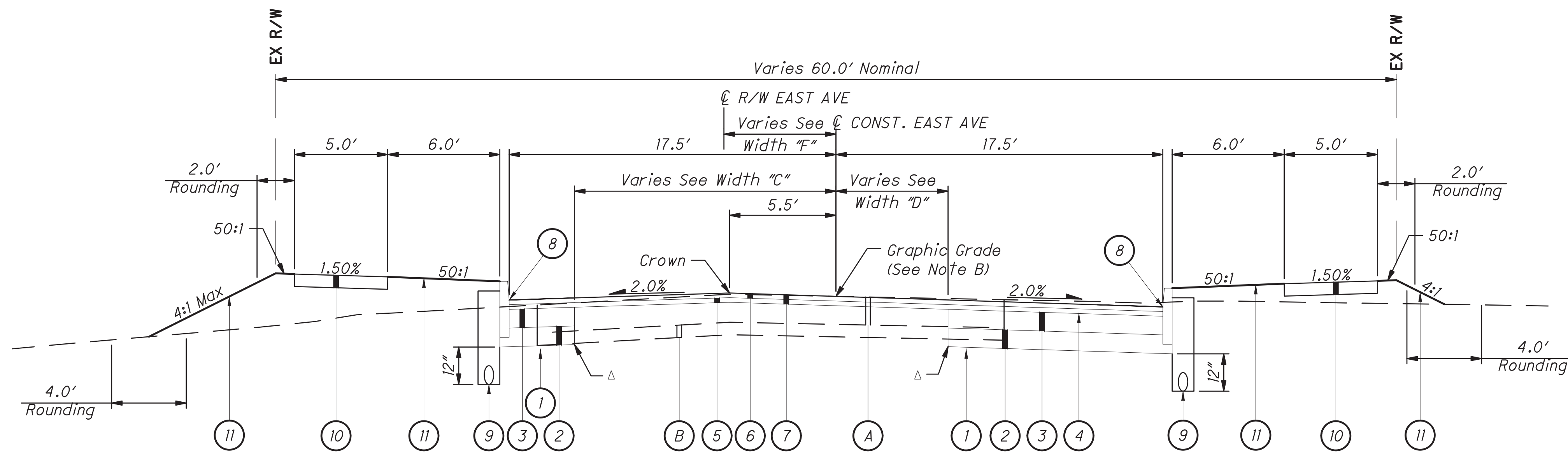
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EXISTING LEGEND

- (A) ASPHALT CONCRETE
- (B) GRANULAR BASE

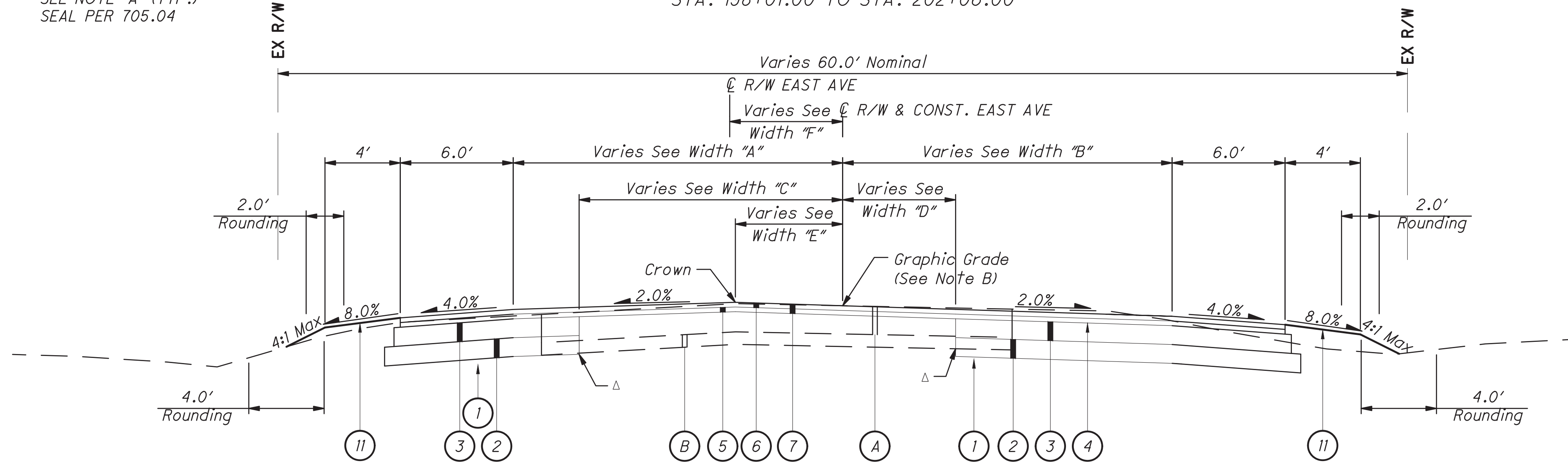
PROPOSED LEGEND

- (1) ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
- (2) ITEM 304 - 6" AGGREGATE BASE, AS PER PLAN
- (3) ITEM 301 - 6" ASPHALT CONCRETE BASE, PG70-22M
- (4) ITEM 407 - TACK COAT (0.08 GAL./S.Y.)
- (5) ITEM 441 - 1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, (448), TYPE 2, PG70-22M
- (6) ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, (448), TYPE 1, PG70-22M
- (7) ITEM 254 - PAVEMENT PLANNING, ASPHALT CONCRETE, (DEPTH VARIES, 3" NOMINAL)
- (8) ITEM 609 - CURB, TYPE 6
- (9) ITEM 605 - 6" BASE PIPE UNDERDRAINS
- (10) ITEM 608 - 4" CONCRETE WALK
- (11) ITEM 659 - SEEDING AND MULCHING



EAST AVE NORMAL SECTION
STA. 198+01.00 TO STA. 202+06.00

△ FULL DEPTH SAWCUT
SEE NOTE "A" (TYP.)
SEAL PER 705.04



EAST AVE NORMAL SECTION
STA. 196+41.00 TO STA. 198+01.00
STA. 202+06.00 TO STA. 204+06.00

NOTE "A"
THE EXISTING PAVEMENT EDGES SHALL BE SAWCUT TO LOCATE A SOUND PAVEMENT EDGE PER SEC. 203.04(F) OF THE CMS. FOR ESTIMATING PURPOSES, THE PAVEMENT REMOVED IN THE PLAN IS BASED ON THE SAW-CUT SHOWN ON THE PLAN AND PROFILES. COST FOR THE SAW-CUT AND PAVEMENT REMOVED TO BE INCLUDED IN ITEM 202 PAVEMENT REMOVED, ASPHALT

NOTE "B"
PROFILE GRADE SHALL BE SAME AS EXISTING GRADE AT THE CENTERLINE OF RIGHT OF WAY. THE CROWN OF THE ROAD SHALL BE LOCATED PER WIDTH TABLE "E"

Width "A"		
From	To	Width
196+41.00	198+01.00	14.3' to 17.5'
202+06.00	204+06.00	17.5' to 17.13'

Width "B"		
From	To	Width
196+41.00	198+01.00	10.62' to 17.5'
202+06.00	204+06.00	17.5' to 8.03'

Width "C"		
From	To	Width
196+41.00	198+01.00	11.0' to 14.5'
198+01.00	202+06.00	14.5'
202+06.00	204+06.00	14.5' to 14.13'

Width "D"		
From	To	Width
196+41.00	198+00.00	8.62' to 6.0'
198+00.00	199+65.39	6.0'
200+38.24	202+50.00	5.37' to 5.0'
202+50.00	204+06.00	5.0' to 6.0'

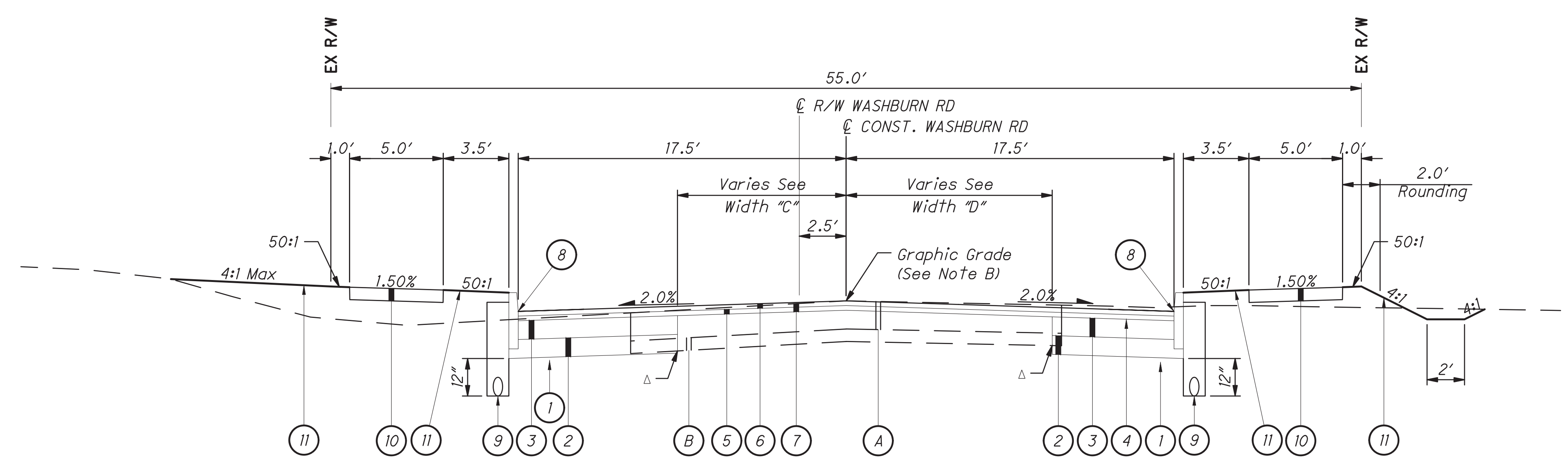
Width "E"		
From	To	Width
196+41.00	198+01.00	1.91' to 5.5'
198+01.00	202+06.00	5.5'
202+06.00	204+06.00	5.5' to 4.68'

Width "F"		
From	To	Width
196+41.00	198+26.25	2.8' to 6.1'
198+26.25	200+00.00	6.1' to 6.2'
200+00.00	201+66.64	6.2' to 5.9'
201+66.64	204+06.00	5.9' to 4.9'

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NOTE "A"
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NOTE "B"
PROFILE GRADE SHALL BE SAME AS EXISTING GRADE AT THE CENTERLINE OF RIGHT OF WAY.



WASHBURN RD NORMAL SECTION
STA. 89+16.42 TO STA. 91+20.25

Width "A"		
From	To	Width
88+16.42	89+16.42	9.74' to 17.5'
89+16.42	90+46.40	17.5'
90+81.36	91+20.25	13.0'

Width "B"		
From	To	Width
88+16.42	89+16.42	12.56' to 17.5'
89+16.42	90+46.40	17.5'
90+81.36	91+20.25	13.0'

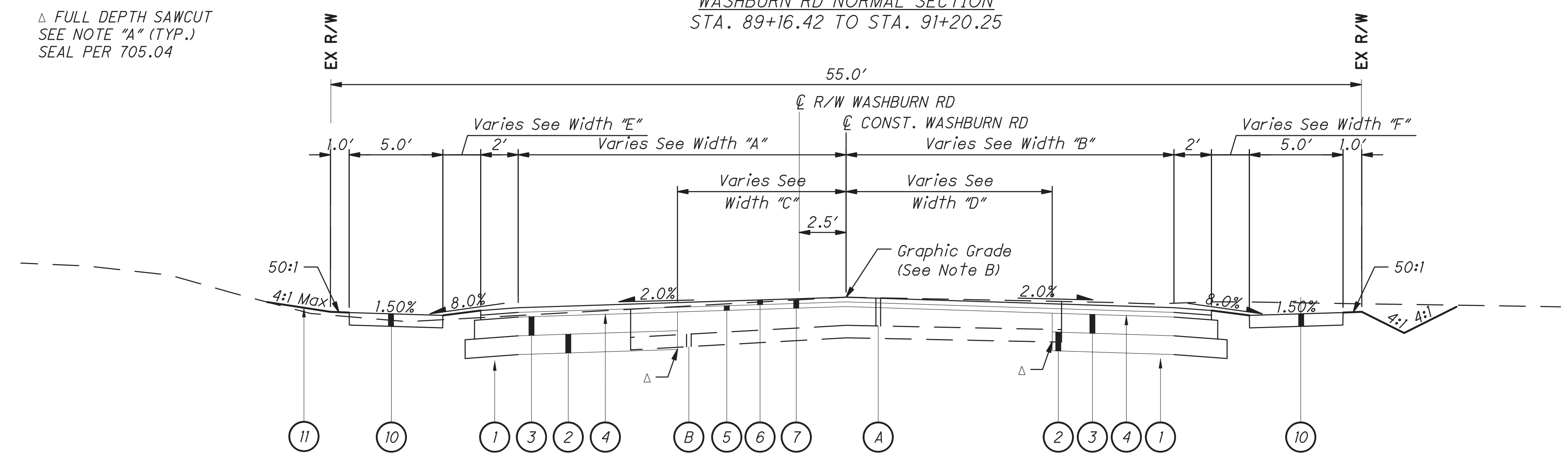
Width "C"		
From	To	Width
88+16.42	89+06.42	7.74' to 9.0'
89+06.42	90+23.57	9.0'

Width "D"		
From	To	Width
88+16.42	89+06.42	10.56' to 11.0'
89+06.42	90+31.79	11.0'

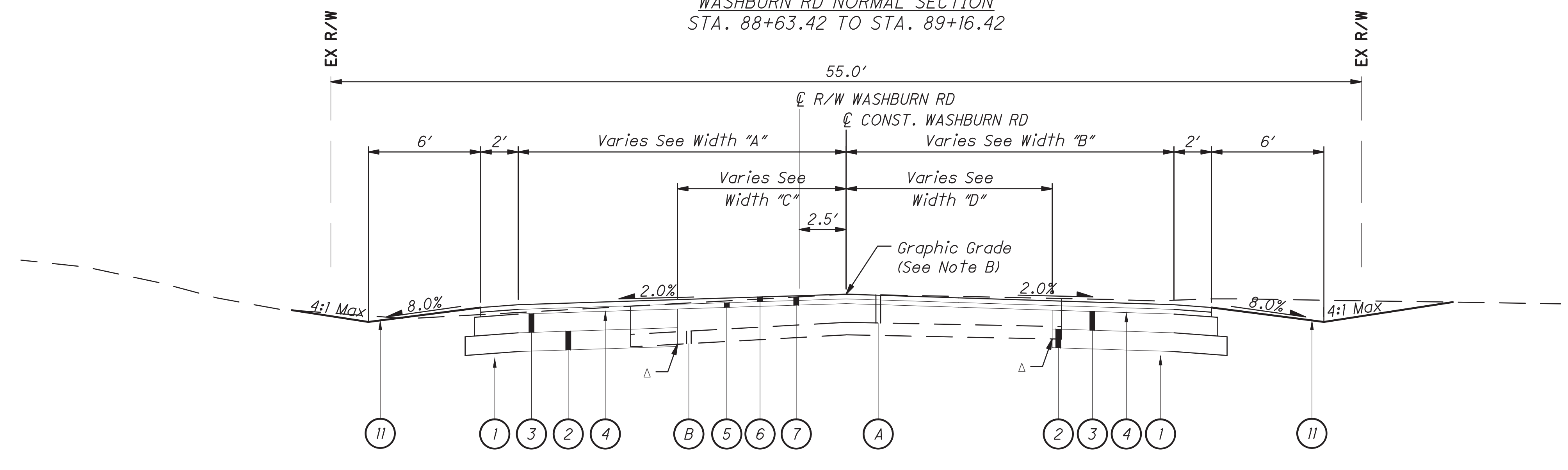
Width "E"		
From	To	Width
88+63.42	89+06.42	6.1' to 2.0'

Width "F"		
From	To	Width
88+63.42	89+06.42	4.61' to 2.0'

△ FULL DEPTH SAWCUT
SEE NOTE "A" (TYP.)
SEAL PER 705.04



WASHBURN RD NORMAL SECTION
STA. 88+63.42 TO STA. 89+16.42



WASHBURN RD NORMAL SECTION
STA. 88+16.42 TO STA. 88+63.42

FOR LEGEND, SEE SHEET 3

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GENERAL

ROUNDING

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

UTILITIES

LISTED BELOW ARE UTILITY FACILITY OWNERS AS REPORTED TO US BY A THIRD PARTY UTILITY LOCATOR AND OHIO811 COORDINATION AS HAVING FACILITIES LOCATED WITHIN PROJECT LIMITS.

AS A RESULT OF OHIO811 COORDINATION AS DESCRIBED IN O.R.C. 153.62 AND OUR THIRD PARTY UTILITY LOCATOR, THE SUBSURFACE UTILITY LINES ARE SHOWN HEREON WITH THE APPROPRIATE ODOT QUALITY LEVELS ASSIGNED AS A RESULT OF DESIGNATION AND FIELD SURVEY DATED AUGUST 15, 2019. OHIO811 TICKET NUMBERS FOR PROJECT LIMITS: A922101074, A922101163, A922101197, A922101227, A922101241, A922101246, A922101259, A922101272, B921400809, B921401004, B921401035, B921401047.

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THE OHIO BELL TELEPHONE COMPANY
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6TH FLOOR
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(330) 384-3055
SH1513@ATT.COM

OHIO EDISON
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(330) 633-0851
HGRIMM@TALLMADGEOHIO.ORG

COORDINATION WITH OTHER CONTRACTORS

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO DETOURS, HAUL ROUTES, AND SITE ACCESS WITH THE "BY OTHERS" CONTRACTOR PERFORMING THE WORK ON THE NORTH SIDE OF THE EAST AVE / WASHBURN RD INTERSECTION.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 8 AM AND 7 PM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

SURVEYING PARAMETERS

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

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

PRIMARY PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: 3/4"x36" REBAR WITH 3" ALUMINUM DISK

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GOID: 12B

HORIZONTAL POSITIONING:

REFERENCE FRAME: NAD83 (2011)

ELLIPSOID: GRS80

MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE, NORTH ZONE, 3401
COMBINED SCALE FACTOR: 1.0000000000
METHOD OF OBTAINING SCALE FACTOR: N/A
ORIGIN OF COORDINATE SYSTEM: 0,0

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

UNITS ARE IN U.S. SURVEY FEET.

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 PLAN WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED

SIZE	NO. OF TREES	NO. STUMPS
TOTAL	5	1
18"	4	0
30"	1	1

ROADWAY

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

- SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
- EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05. IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.
- COMPACT THE SUBGRADE ACCORDING O 204.03.
- APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS. PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.
- EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.
- PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.
- FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

ITEM SPECIAL - MAILBOX SUPPORT

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

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

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

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

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

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

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

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

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

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

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

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

SPECIAL MAILBOX SUPPORT SYSTEM, SINGLE 5 EACH

ITEM 204 - GRANULAR MATERIAL, TYPE B, AS PER PLAN
THIS INVOLVES THE PLACEMENT OF GRANULAR MATERIAL TYPE B, AS PER PLAN FOR THE LOCATIONS OF UNSUITABLE MATERIALS AS VERIFIED AND DELINEATED BY THE ENGINEER. GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 204 AND 703.16.C OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL BE APPLICABLE FOR GRANULAR MATERIAL, TYPE B, AS PER PLAN.

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GENERAL NOTES

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

EROSION CONTROL

SEEDING AND MULCHING

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

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	325 CU. YD.
659, SEEDING AND MULCHING	2927 SQ. YD.
659, REPAIR SEEDING AND MULCHING	147 SQ. YD.
659, COMMERCIAL FERTILIZER	0.4 TON
659, LIME	0.6 ACRES
659, WATER	8 M. GAL.

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

DRAINAGE

CROSSING AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

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

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY CITY FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS. PAYMENT FOR THE TEMPORARY DRAINAGE ITEMS ARE ITEMIZED AND CARRIED TO THE GENERAL SUMMARY.

WATER WORK

ITEM 638, SPECIAL REMOVE WATER SERVICE CONNECTION THIS ITEM SHALL CONSIST OF ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO DISCONNECT EXISTING WATER SERVICE CONNECTIONS AND THE REMOVAL OF THE CURB BOX AND/OR METER PIT.

THE CORPORATION (CORP) SHALL BE REMOVED AND A BRASS PLUG INSTALLED ALONG WITH A SADDLE PER AWWA C800, SECTION 4.3.

THE CURB BOX AND CURB METER PIT (IF UNDERGROUND) SHALL BE REMOVED BY THE CONTRACTOR. THE EXISTING WATER SERVICE MAY BE ABANDONED IN PLACE.

REF.	SHEET	STATION		203	203	659
		FROM	TO	EXCAVATION CY	EMBANKMENT CY	SEEDING AND MULCHING SY
		EAST AVE				
	43	195+50.00	196+41.00	0	0	0
	44	196+50.00	197+00.00	24	3	52
	45	197+50.00	198+00.00	44	4	205
	46	198+01.00	198+50.00	25	14	109
	47	199+00.00	199+50.00	47	77	371
	48	200+00.00	201+00.00	45	250	470
	49	201+50.00	202+04.48	35	244	459
	50	202+06.00	202+50.00	24	12	88
	51	203+00.00	203+50.00	46	5	297
	52	204+00.00	204+07.72	33	0	124
		WASHBURN RD				
	55	88+00.00	88+50.00	12	3	47
	56	88+87.91	89+06.42	37	9	99
	57	89+16.42	89+50.00	26	18	82
	58	90+00.00	91+00.00	172	164	354
	59	91+00.83	91+50.00	49	55	158
TOTALS CARRIED TO GENERAL SUMMARY				619	858	2915

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GENERAL NOTES

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

PAVEMENT

ITEM 304 - AGGREGATE BASE, AS PER PLAN

LIMESTONE IS ONLY PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

ITEM 304 - AGGREGATE BASE, AS PER PLAN (FOR PAVEMENT REPAIR)

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR).

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

304, AGGREGATE BASE, AS PER PLAN 25 CU YD

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

PAVEMENT PLANING/PAVEMENT MILLING JOINT

WHEN A ROUNDED EDGE IS PRODUCED AT THE BEGINNING OR ENDING OF PLANING/MILLING OPERATIONS, A SAWCUT SHALL BE PERFORMED TO MANUFACTURE A PERPENDICULAR EDGE TO THE EXISTING PAVEMENT. METHOD FOR REMOVING THE REMAINING ASPHALT IS LEFT TO THE DISCRETION OF THE ENGINEER. USE OF THIS SHALL BE AS DIRECTED BY THE ENGINEER. COST FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE UNIT COST OF ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE.

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

ITEM 301, ASPHALT CONCRETE BASE 85 CY
ITEM 304, AGGREGATE BASE, AS PER PLAN 85 CY

THE ABOVE QUANTITY IS BASED ON A 304 THICKNESS OF 6 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

ALL TRENCHES ARE TO BE CONSTRUCTED PER ODOT ITEM 611. ALL TRENCHES WITHIN THE PAVEMENT ZONE OF INFLUENCE SHALL BE BACKFILLED WITH LOW STRENGTH MORTAR, TYPE 1, PER ODOT ITEM 613.

ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M

ALL REQUIREMENTS OF ITEM 441 SHALL APPLY EXCEPT IN NO CASE SHALL THE MINIMUM ASPHALT BINDER CONTENT BE LESS THAN 5.5% NOR SHALL THE F/A RATIO EXCEED 1.2.

ITEM 441 - 1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441)

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF PLANING AND RESURFACING PAVEMENT ADJACENT OR JUST OUTSIDE OF THE PROJECT LIMITS. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIRED TO THE LIMITS DESIGNATED BY THE ENGINEER.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY

251, PARTIAL DEPTH PAVEMENT REPAIR (441) 125 SQ YD

ITEM 253 - PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND 6" AGGREGATE BASE THEN PLACING MATERIAL PER DETAIL BELOW (DEPTH TO MATCH EXISTING PAVEMENT IF DEEPER THAN 6").

THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING.

IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER.

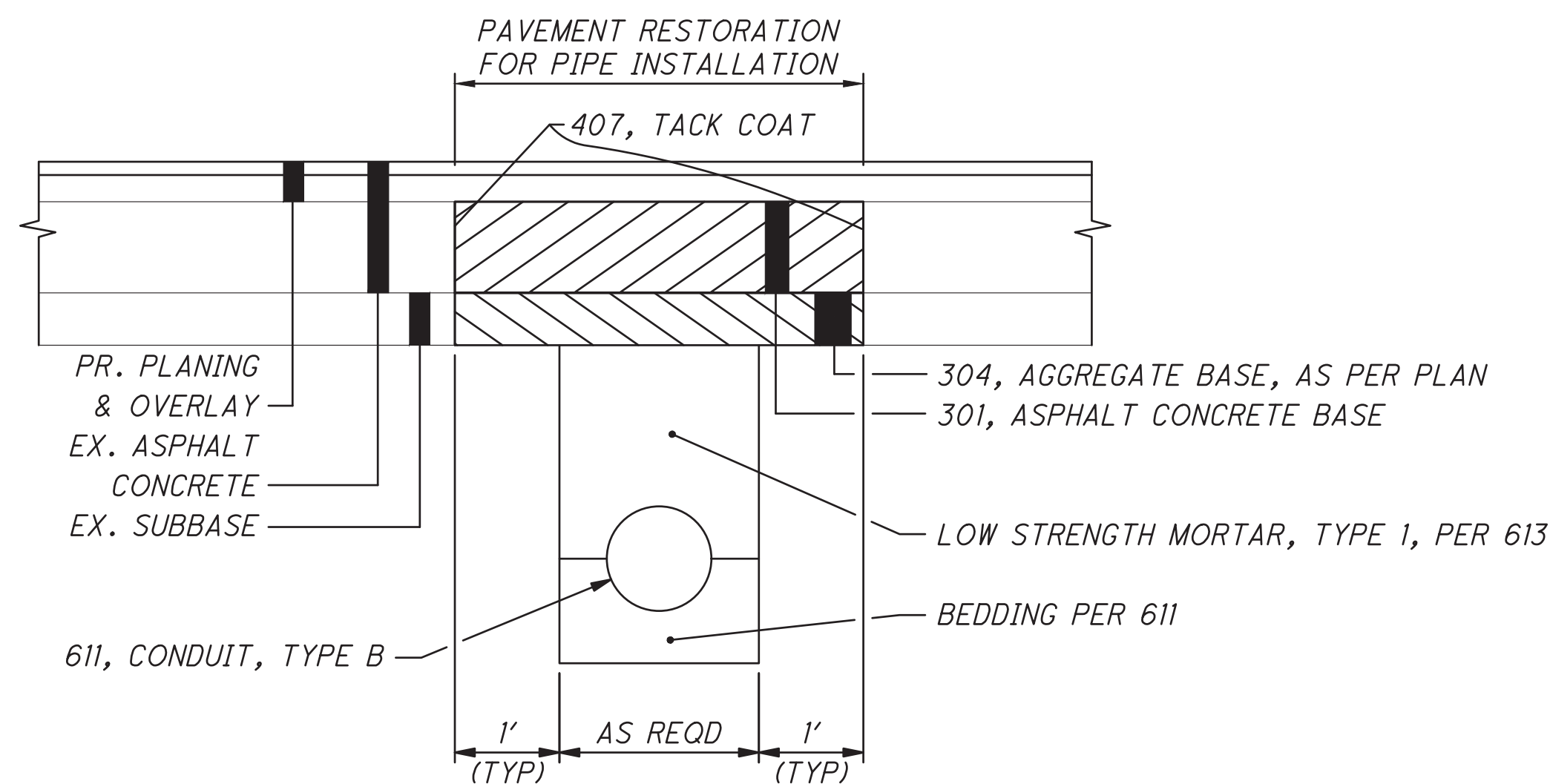
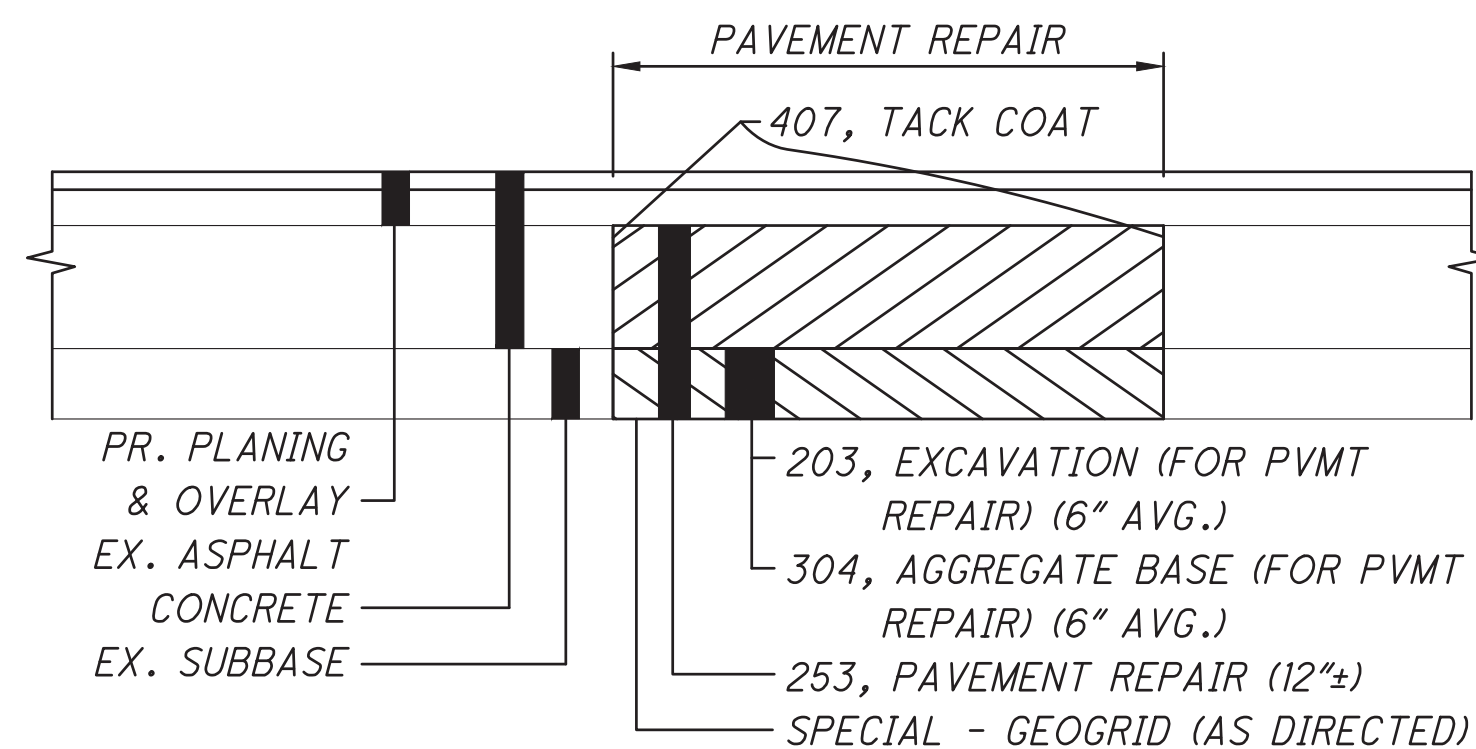
THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY

253, PAVEMENT REPAIR 125 SQ YD

ITEM 254 - PATCHING PLANED SURFACE

THE FOLLOWING QUANTITY HAS BEEN INCLUDED TO BE USED AS DIRECTED.

254, PATCHING PLANED SURFACE 50 SQ YD



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GENERAL NOTES

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

NOTIFICATIONS AND CONTACTS

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING ENTITIES IN WRITING AND VIA TELEPHONE AT LEAST FOURTEEN (14) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION ACTIVITIES.

1. CITY OF TALLMADGE STREET DEPARTMENT
210 OSCEOLA
TALLMADGE, OHIO 44278
(330) 633-5130
2. CITY OF TALLMADGE FIRE DEPARTMENT
85 WEST OVERDALE DRIVE
TALLMADGE, OHIO 44278
(330) 633-0970
3. CITY OF TALLMADGE POLICE DEPARTMENT
53 NORTHEAST AVENUE
TALLMADGE, OHIO 44278
(330) 633-2181
4. CITY OF TALLMADGE PUBLIC SERVICE DEPARTMENT
46 NORTH AVENUE
TALLMADGE, OHIO 44278
(330) 633-0854
5. TALLMADGE CITY SCHOOLS
486 EAST AVE
TALLMADGE, OHIO 44278
(330) 633-3291

SEQUENCE OF CONSTRUCTION

PRE-PHASE 1 (NOT SHOWN)

THE CONTRACTOR SHALL INSTALL ALL THE PROPOSED STORM SEWER ALONG EAST AVE. EXCEPT THE PROPOSED CATCH BASINS, WHICH SHALL BE INSTALLED WITH THE PROPOSED CURB DURING THE RESPECTIVE PHASES. ADDITIONALLY THE CONTRACTOR SHALL INSTALL P-13 AS DETAILED IN THE PLAN AND PROFILE SHEETS ALONG WASHBURN RD. THIS WORK SHALL BE COMPLETED UNDER FLAGGER CONTROL PER MT-97.10

THE CONTRACTOR SHALL INSTALL THE TEMPORARY PAVEMENT ALONG THE NORTH SIDE OF EAST AVE. (C.R. 18) AND ALONG THE WEST SIDE OF WASHBURN RD. AS DETAILED IN THE PHASE 1 MAINTENANCE OF TRAFFIC PLANS. THIS WORK SHALL BE COMPLETED UNDER FLAGGER CONTROL PER MT-97.10.

PHASE 1

TRAFFIC SHALL BE SHIFTED TO THE NORTH SIDE OF EAST AVE. (C.R. 18). THE CONTRACTOR SHALL CONSTRUCT ALL ROADWAY WIDENING UP TO AND INCLUDING THE ASPHALT INTERMEDIATE COURSE AND UTILITY IMPROVEMENTS TO THE SOUTH SIDE OF EAST AVE. (C.R. 18).

TRAFFIC SHALL BE SHIFTED TO THE WEST SIDE OF WASHBURN RD. THE CONTRACTOR SHALL CONSTRUCT ALL ROADWAY WIDENING UP TO AND INCLUDING THE ASPHALT INTERMEDIATE COURSE AND UTILITY IMPROVEMENTS TO THE EAST SIDE OF WASHBURN RD.

THE CONTRACTOR SHALL POUR THE FOUNDATIONS FOR THE SIGNAL SUPPORTS FOR THE TRAFFIC SIGNAL AT THE EAST AVE. / WASHBURN RD. INTERSECTION.

SEQUENCE OF CONSTRUCTION (CONTINUED)

PRE-PHASE 2

THE CONTRACTOR SHALL MILL THE REMAINING EXISTING PAVEMENT AND LAY THE ASPHALT INTERMEDIATE COURSE WHILE MAINTAINING TWO-WAY, ONE-LANE TRAFFIC UNDER FLAGGER CONTROL IN ACCORDANCE WITH MT-97.11.

THE CONTRACTOR SHALL INSTALL TEMPORARY PAVEMENT ALONG THE SOUTH SIDE OF EAST AVE. (C.R. 18) AND ALONG THE EAST SIDE OF WASHBURN RD. AS DETAILED IN THE PHASE 2 MAINTENANCE OF TRAFFIC PLANS. THIS WORK SHALL BE COMPLETED UNDER FLAGGER CONTROL PER MT-97.10

PHASE 2

TRAFFIC SHALL BE SHIFTED TO THE SOUTH SIDE OF EAST AVE. (C.R. 18). THE CONTRACTOR SHALL CONSTRUCT ALL ROADWAY WIDENING UP TO AND INCLUDING THE ASPHALT INTERMEDIATE COURSE AND UTILITY IMPROVEMENTS TO THE NORTH SIDE SIDE OF EAST AVE. (C.R. 18).

TRAFFIC SHALL BE SHIFTED TO THE EAST SIDE OF WASHBURN RD. THE CONTRACTOR SHALL CONSTRUCT ALL ROADWAY WIDENING UP TO AND INCLUDING THE ASPHALT INTERMEDIATE COURSE AND UTILITY IMPROVEMENTS TO THE EAST SIDE OF WASHBURN RD.

THE CONTRACTOR SHALL COMPLETE THE INSTALLATION OF THE TRAFFIC SIGNAL AT THE EAST AVE. / WASHBURN RD. INTERSECTION.

PHASE 3 (NOT SHOWN)

THE CONTRACTOR SHALL THOROUGHLY CLEAN THE ASPHALT INTERMEDIATE COURSE AND PLACE THE FINAL ASPHALT SURFACE COURSE AND THE FINAL PAVEMENT MARKINGS THROUGHOUT THE PROJECT LIMITS. DURING PLACEMENT OF THE ASPHALT SURFACE COURSE, TRAFFIC SHALL BE MAINTAINED UNDER FLAGGER CONTROL IN ACCORDANCE WITH MT-97.11. DURING FINAL PAVEMENT MARKING OPERATIONS, TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH MT-99.20.

WORK HOUR DESCRIPTION

OFF-PEAK HOURS ARE DEFINED AS ANY PERIOD OTHER THAN 6:00-8:00AM AND 3:00-6:00PM (MONDAY THRU FRIDAY) AND LEGAL HOLIDAYS.

NIGHTTIME HOURS ARE DEFINED AS BETWEEN 8:00PM AND 6:00AM.

RESTRICTIONS FOR MAINTENANCE OF TRAFFIC PLANS

THE CONTRACTORS PROPOSED MAINTENANCE OF TRAFFIC PLAN SHALL CONFORM TO THE FOLLOWING RESTRICTIONS:

1. NO NIGHTTIME WORK SHALL BE PERMITTED UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE ENGINEER.
2. NO LANE OF TRAFFIC SHALL BE CLOSED IF NO WORK IS BEING PERFORMED.
3. THE CONTRACTOR SHALL PROVIDE ADEQUATE ACCESS TO THE SCHOOL, RESIDENCES, AND LOCAL TRAFFIC AT ALL TIMES.

ITEM 614 - MAINTAINING OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE ELEVEN FOOT LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 ROADS FOR MAINTAINING TRAFFIC, AND TEMPORARY SURFACES USING ITEMS 410 AND 614.
2. TRUCK MOUNTED ATTENUATORS (TMAs) SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.
3. ONLY DURING OFF-PEAK HOURS SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET OR REMOVE ALL TRAFFIC CONTROL NECESSARY FOR EACH WORK ZONE.
4. SIGNS FURNISHED SHALL BE IN NEW OR LIKE NEW CONDITIONS. LIKE NEW SIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE PROJECT ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR PROVIDING AND MAINTAINING LIGHTS, SIGNS, AND BARRICADES FOR THE MAINTENANCE OF TRAFFIC AND SAFETY OF HIS/HER WORK AT THE LOCATIONS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER.
5. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. UNEVEN LONGITUDINAL JOINTS SHALL BE TREATED IN ACCORDANCE WITH ODOT SCD MT-101.60. AT UNEVEN TRANSVERSE JOINTS, THE CONTRACTOR SHALL PROVIDE TEMPORARY ASPHALT RAMPING TO ENSURE A SMOOTH TRANSITION FOR THE TRAVELING PUBLIC. THE MINIMUM TAPER RATE FOR TEMPORARY RAMPING AT UNEVEN TRANSVERSE JOINTS IS 120:1. PRIOR TO PLACING THE SURFACE COURSE, ALL TEMPORARY RAMPING AND WEDGE MATERIAL SHALL BE REMOVED.
6. LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC DURING THE CONSTRUCTION IF THIS PROJECT. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL COMMENSURATE WITH THE WORK IN PROGRESS.
7. IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS AND PROVISIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

ITEM 614 - MAINTAINING OF TRAFFIC (CONTINUED)

8. THE TEMPORARY TRAFFIC CONTROLS SHALL BE MAINTAINED THROUGHOUT THIS PROJECT BY THE CONTRACTOR. PERMANENT TRAFFIC CONTROLS MAY BE TEMPORARILY RELOCATED AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED, AND IMPROPERLY PLACED SIGNS. ANY WORK DONE BY THE CITY, INCLUDING INSTALLATION, MODIFICATION, REMOVAL AND/OR REPLACEMENT OF PERMANENT TRAFFIC CONTROL DEVICES, AS A RESULT OF WORK DONE BY THE CONTRACTOR SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

9. IF IT IS NECESSARY TO STOP ALL TRAFFIC FOR THE ERECTION OF SIGNAL SUPPORTS, THE WORK SHALL BE SO ARRANGED THAT THE STOPPAGE IS LESS THAN (10) MINUTES IN ANY ONE (1) THIRTY MINUTE PERIOD. THIS WORK SHALL BE PERFORMED DURING OFF-PEAK HOURS. NO STOPPAGE OF TRAFFIC SHALL OCCUR FOR THE ERECTION OF SIGNAL SUPPORTS, CUTTING AND INSTALLING LOOP DETECTOR WIRE, OR HANGING SPAN WIRE AND SIGNAL HEADS, WITHOUT A LAW ENFORCEMENT OFFICE WITH A PATROL CAR AT THE SITE FOR ASSISTANCE IN CONTROLLING TRAFFIC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TE SERVICES AND SCHEDULING OF SAID LAW ENFORCEMENT OFFICER WITH PATROL CAR.

THE STOPPAGE OF TRAFFIC CAN ONLY OCCUR DURING THE FOLLOWING TIME PERIODS AS APPROVED BY THE ENGINEER:

- 12:00 MIDNIGHT - 6:00 AM
- 9:00 AM - 11:00 AM
- 1:00 PM - 3:00 PM
- 8:00 PM - 12:00 MIDNIGHT

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

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIMES CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

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MAINTENANCE OF TRAFFIC NOTES

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

NOTIFICATION OF TRAFFIC RESTRICTIONS

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

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

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

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

EARTHWORK FOR MAINTAINING TRAFFIC

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

EXCAVATION FOR MAINTAINING TRAFFIC 226 CY
 EMBANKMENT FOR MAINTAINING TRAFFIC 6 CY

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

TRENCH FOR WIDENING

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

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 1.25 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

DUST CONTROL

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

ITEM 616 - WATER 7 MGAL

ACCESS TO PROPERTIES

ACCESS SHALL BE MAINTAINED TO ALL RESIDENTIAL AND COMMERCIAL PROPERTIES EXCEPT WHEN A DRIVEWAY MUST BE CLOSED FOR CONSTRUCTION. ALL PROPERTY OWNERS SHALL BE PROVIDED WRITTEN NOTIFICATION BY THE CONTRACTOR A MINIMUM OF 48 HOURS PRIOR TO THE CLOSURE. THE NOTICE SHALL LIST THE TIME THE CLOSURE WILL BE IN EFFECT AND SHALL LIST 24-HOUR EMERGENCY PHONE NUMBERS OF THE CONTRACTOR RESPONSIBLE FOR THE CLOSURE. THE TIME OF THE CLOSURES SHALL BE COORDINATED WITH EACH PROPERTY OWNER. DRIVE CLOSURES SHALL BE KEPT TO A MINIMUM TIME NEEDED TO COMPLETE CONSTRUCTION ACTIVITIES. ACCESS MAY BE MAINTAINED WITH THE USE OF AGGREGATE OR STEEL PLATES.

THE COST FOR ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS REQUIRED TO COMPLETE THE ABOVE DESCRIBED WORK SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 615 - ROADS FOR MAINTAINING TRAFFIC

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 615, THIS ITEM SHALL INCLUDE TEMPORARY DRAINAGE AND RESTORATION OF ALL SURFACES, AND SIGNS DISTURBED BY THE PLACEMENT OF PAVEMENT FOR MAINTAINING TRAFFIC OUTSIDE OF THE PROJECT LIMITS.

THE FOLLOWING QUANTITY SHALL BE CARRIED TO THE GENERAL SUMMARY:

ITEM 615 - ROADS FOR MAINTAINING TRAFFIC LS

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION ACTIVITIES

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 ODOT INTENDS THAT FLAGGERS BE USED.

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

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

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

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

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

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

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

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

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION ACTIVITIES

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

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CARE FOR ASSISTANCE 40 HOUR

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

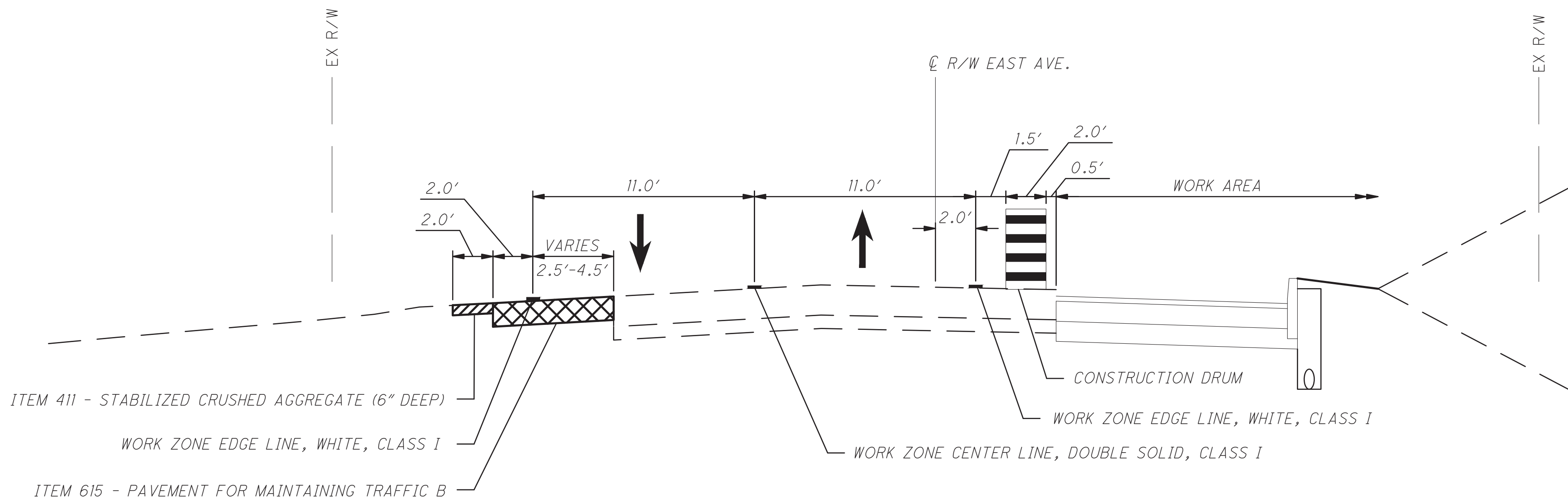
ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

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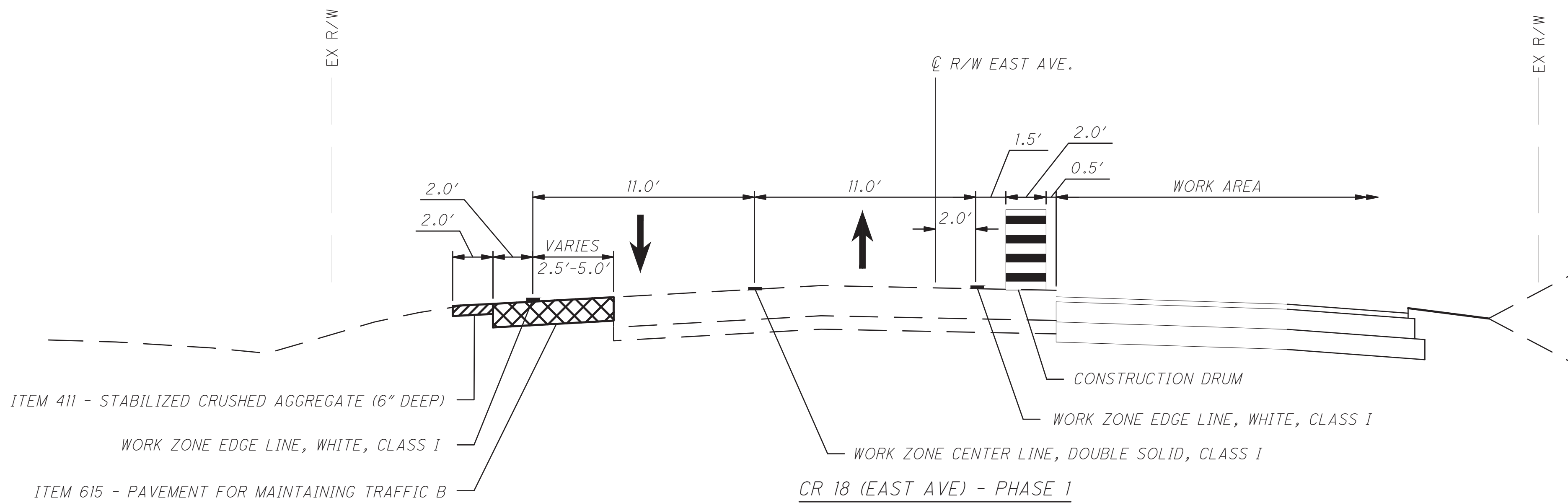
SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	411	614	614	614	614	615																		
			STABILIZED CRUSHED AGGREGATE	WORK ZONE CENTER LINE, CLASS I (DOUBLE SOLID)		WORK ZONE EDGE LINE, CLASS I, 4" (WHITE)	WORK ZONE DOTTED LINE, CLASS I (YELLOW)	WORK ZONE STOP LINE, CLASS I	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	CY	FT	FT	FT	FT	SY														
			FROM	TO																									
PHASE 1																													
14	CDS	EAST AVE.	195+91	199+00	LT		309																						
14	EW	EAST AVE.	195+91	199+00	LT			309																					
14	EW	EAST AVE.	195+91	199+00	RT			309																					
14		EAST AVE.	196+05	199+00	LT	11					224																		
15	CDS	EAST AVE.	199+00	204+00	LT		500																						
15	EW	EAST AVE.	199+00	204+00	LT			500																					
15	EW	EAST AVE. / WASHBURN RD.	199+00	89+00	RT/LT			237																					
15	EW	WASHBURN RD. / EAST AVE.	89+00	204+00	RT/RT			541																					
15	CDS	WASHBURN RD.	89+00	90+55	LT		155																						
15	SL	WASHBURN RD.	90+57		LT/RT				24																				
15		EAST AVE.	199+00	204+00	LT	19					266																		
15		WASHBURN RD.	89+00	90+24	LT	5					91																		
16	CDS	EAST AVE.	204+00	204+26	LT		26																						
16	EW	EAST AVE.	204+00	205+05	LT			105																					
16	EW	EAST AVE.	204+00	205+47	RT			63																					
16	DY	EAST AVE.	204+26	205+05	LT				79																				
16		EAST AVE.	204+00	205+05	LT	4					61																		
17	CDS	WASHBURN RD.	87+41	89+00	LT		159																						
17	EW	WASHBURN RD.	87+41	89+00	LT			159																					
17	EW	WASHBURN RD.	87+41	89+00	RT			159																					
17		WASHBURN RD.	87+41	89+00	LT	6					104																		
PHASE 2																													
18	CDS	EAST AVE.	195+91	199+00	RT		309																						
18	EW	PARKER LN. / EAST AVE.	80+37	199+00	RT/LT			346																					
18	EW	EAST AVE.	195+34	197+01	RT			167																					
18		EAST AVE.	195+34	196+41	RT	4					67																		
19	CDS	EAST AVE.	199+00	204+00	RT		500																						
19	EW	EAST AVE.	199+00	204+00	LT			500																					
19	EW	EAST AVE.	202+06	204+00	RT			194																					
19	EW	EAST AVE. / WASHBURN RD.	199+50	89+00	RT/LT			186																					
19	CDS	WASHBURN RD.	89+00	90+34	RT		134																						
19	EW	WASHBURN RD.	89+00	89+16	RT			16																					
19	SL	WASHBURN RD.	90+36						20																				
19		WASHBURN RD.	89+00	89+06	RT	1					1																		
20	CDS	EAST AVE.	204+00	204+30	RT/LT		30																						
20	EW	EAST AVE.	204+00	205+05	LT			105																					
20	EW	EAST AVE.	204+00	204+30	RT			30																					
20		EAST AVE.	204+06	204+30	RT	1					15																		
21	CDS	WASHBURN RD.	87+04	89+00	RT		196																						
21	EW	WASHBURN RD.	87+04	89+00	LT			196																					
21	EW	WASHBURN RD.	87+04	89+00	RT			196																					
21		WASHBURN RD.	87+04	89+00	RT	8					73																		
TOTALS						59	2318	4318	79	44	902																		
TOTALS CARRIED TO GENERAL SUMMARY						59	0.44	0.82	79	44	902																		

CALCULATED BEB CHECKED AKF	MAINTENANCE OF TRAFFIC SUBSUMMARY	EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT
10 88		

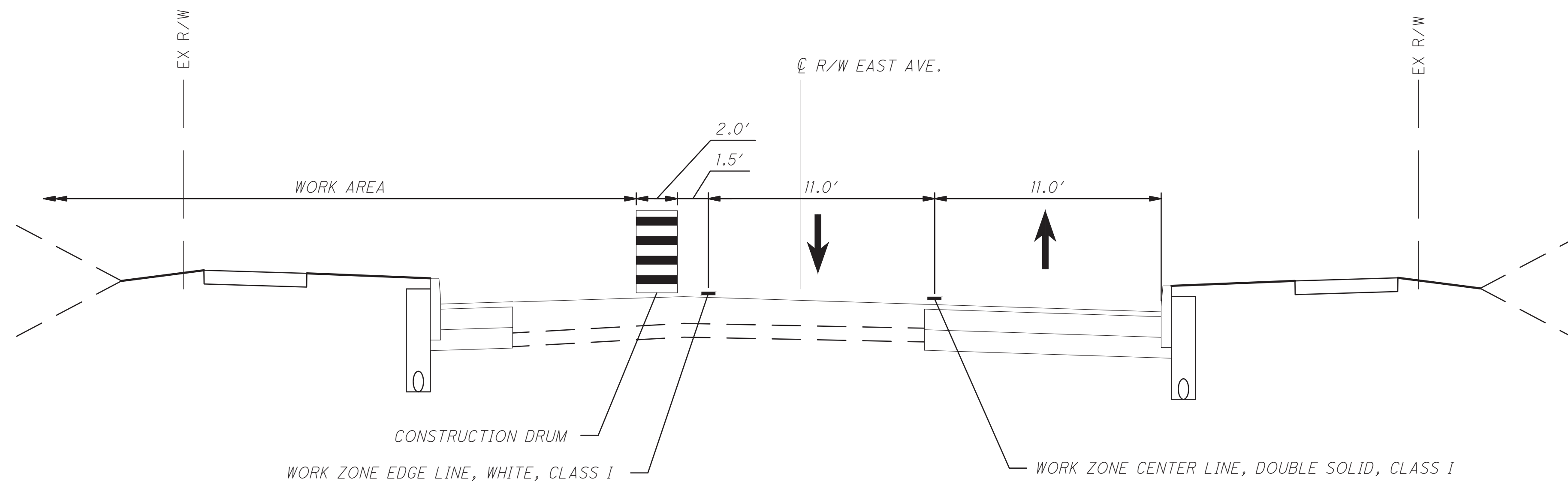
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CR 18 (EAST AVE) - PHASE 1
STA. 198+01 TO STA. 202+06



CR 18 (EAST AVE) - PHASE 1
STA. 197+00 TO STA. 198+01
STA. 202+06 TO STA. 204+00



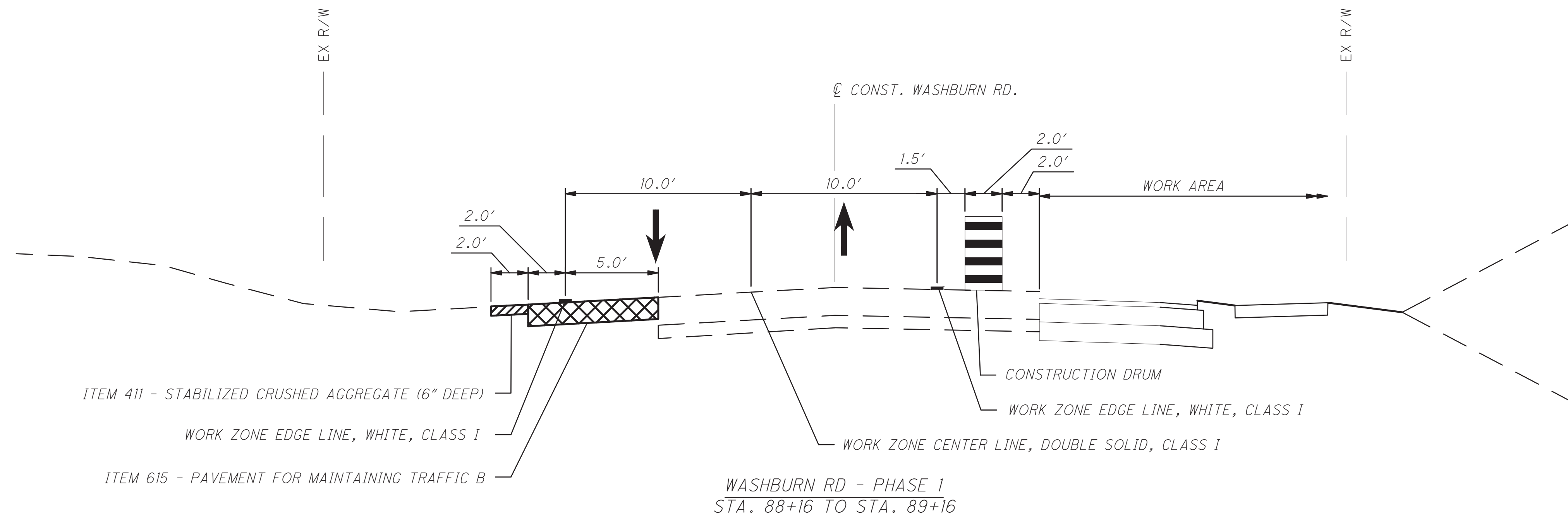
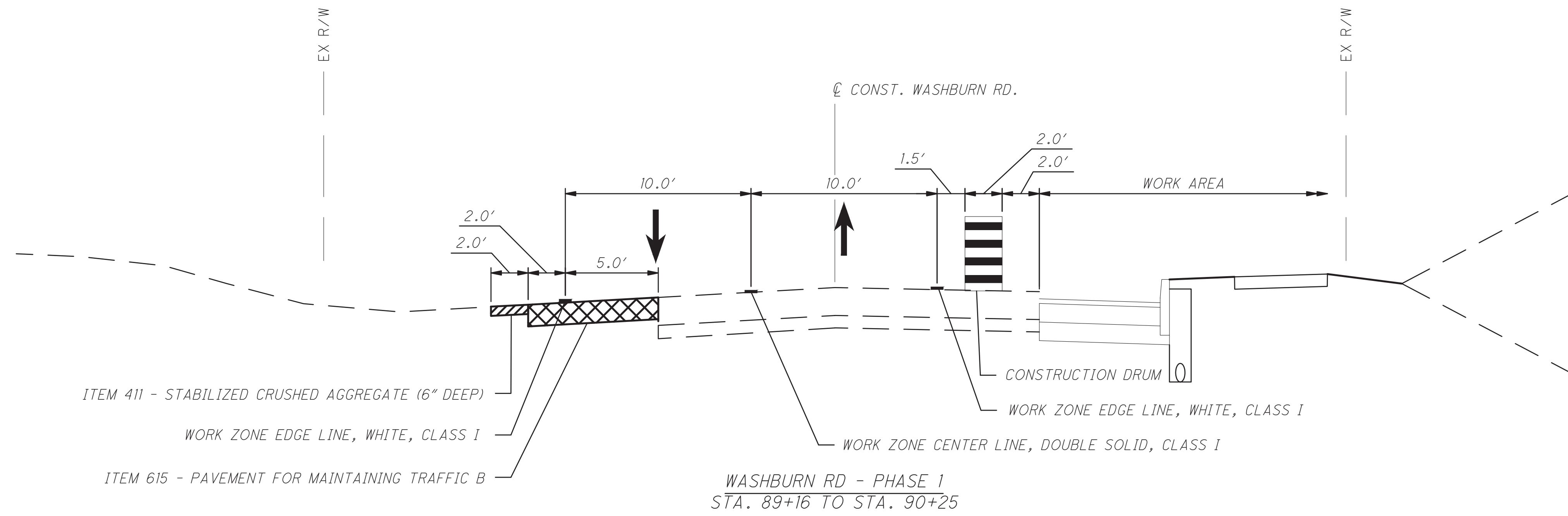
CR 18 (EAST AVE) - PHASE 2
STA. 198+01 TO STA. 202+06

CALCULATED
BEB
CHECKED
AKF

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

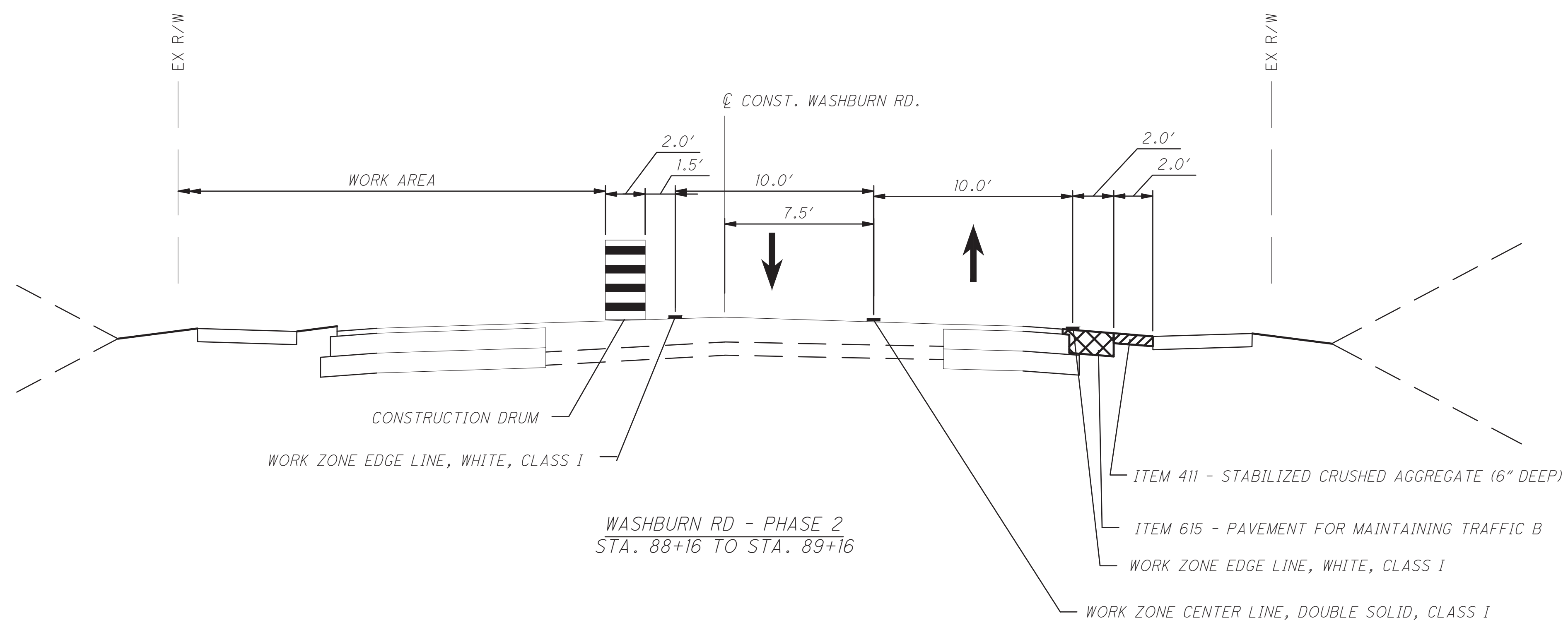
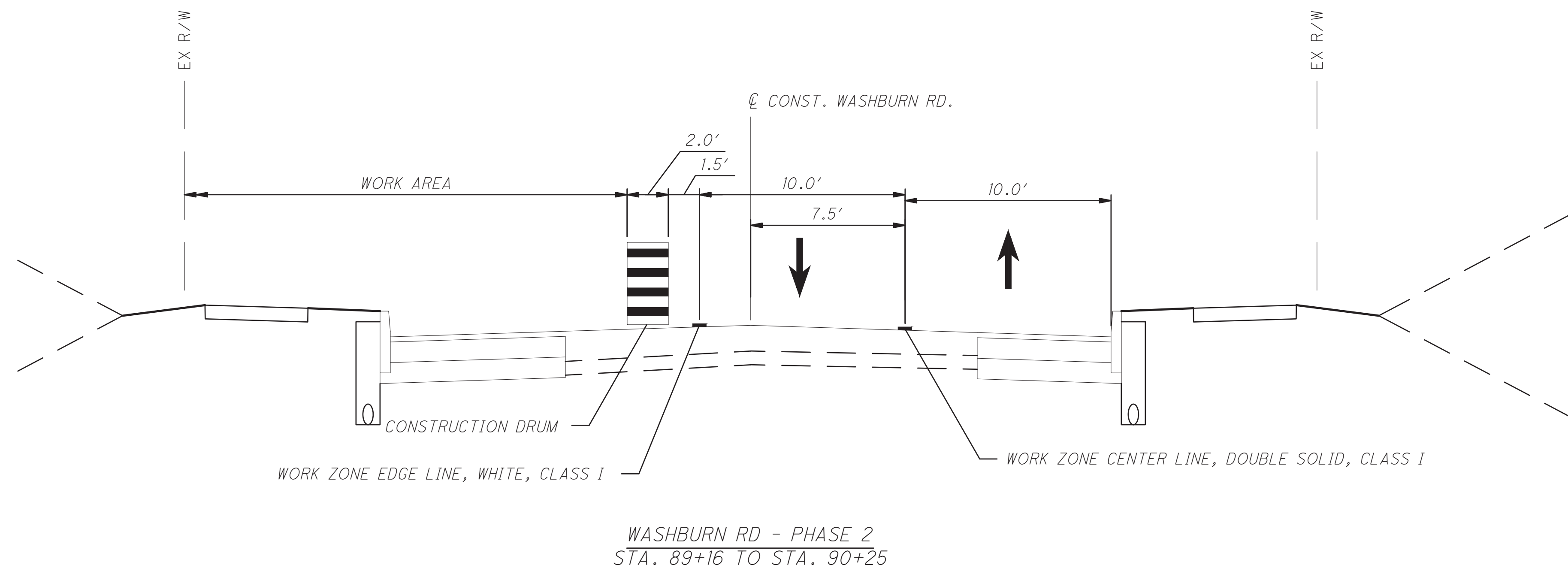
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CALCULATED
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MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**



MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

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NOTES:

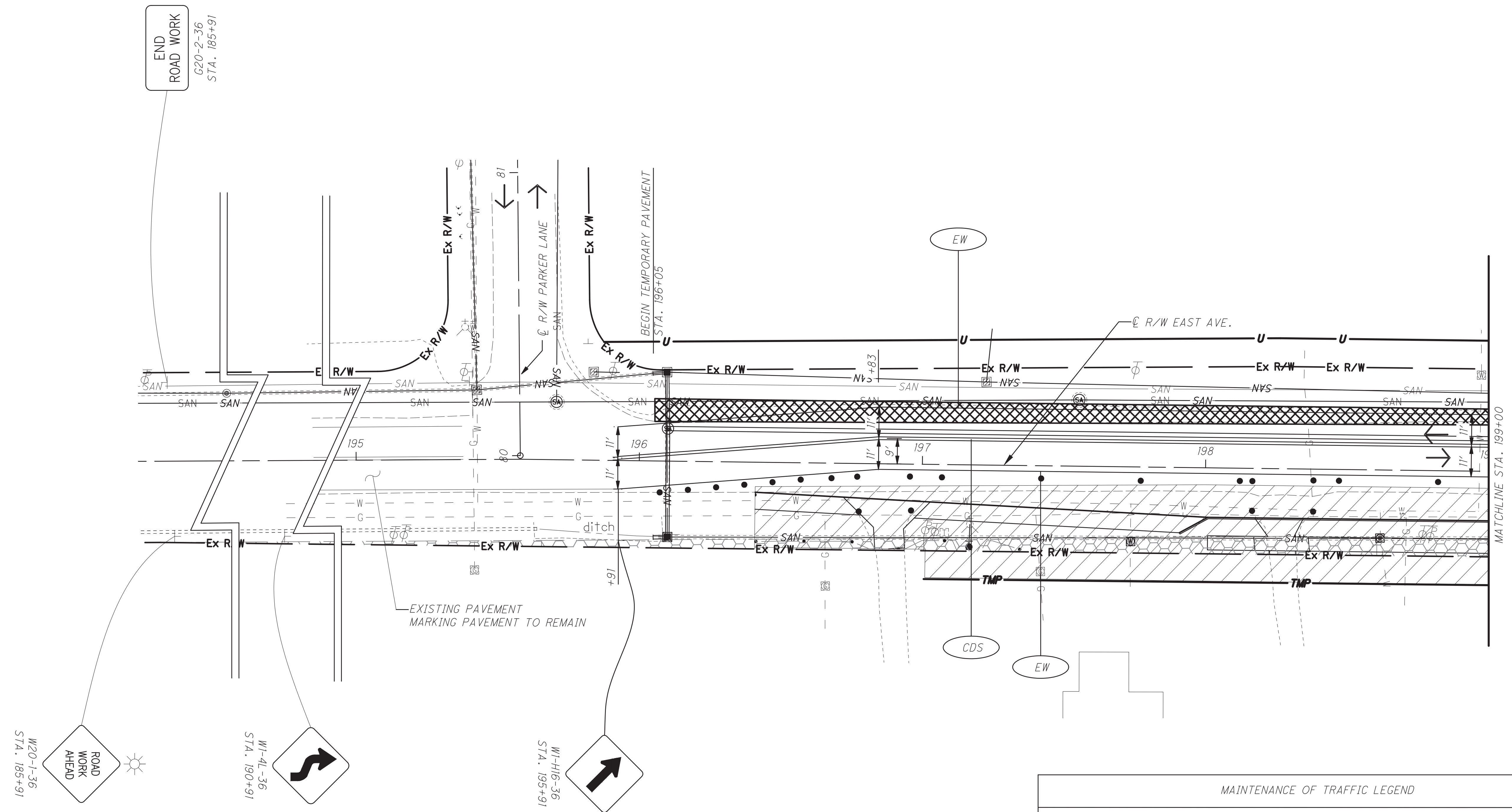
1. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.

CALCULATED
BEB
CHECKED
AKF

0 20 40
HORIZONTAL
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
BEGIN TO STA. 199+00**

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**



MAINTENANCE OF TRAFFIC LEGEND

	WORK AREA		WORK ZONE CENTER LINE, DOUBLE SOLID
	PAVEMENT FOR MAINTENANCE TRAFFIC		WORK ZONE EDGE LINE, WHITE
	TRAFFIC FLOW		WORK ZONE STOP LINE
	MAINTENANCE OF TRAFFIC SIGN		WORK ZONE DOTTED LINE, YELLOW
	CONSTRUCTION DRUM SPACED AT 35' C/C UNLESS NOTED OTHERWISE (10' ON TAPERS AND INTERSECTIONS)		

W20-1-36
STA. 185+91

ROAD WORK AHEAD

W1-4L-36
STA. 190+91

ROAD WORK

W1-H16-36
STA. 195+91

RIGHT TURN

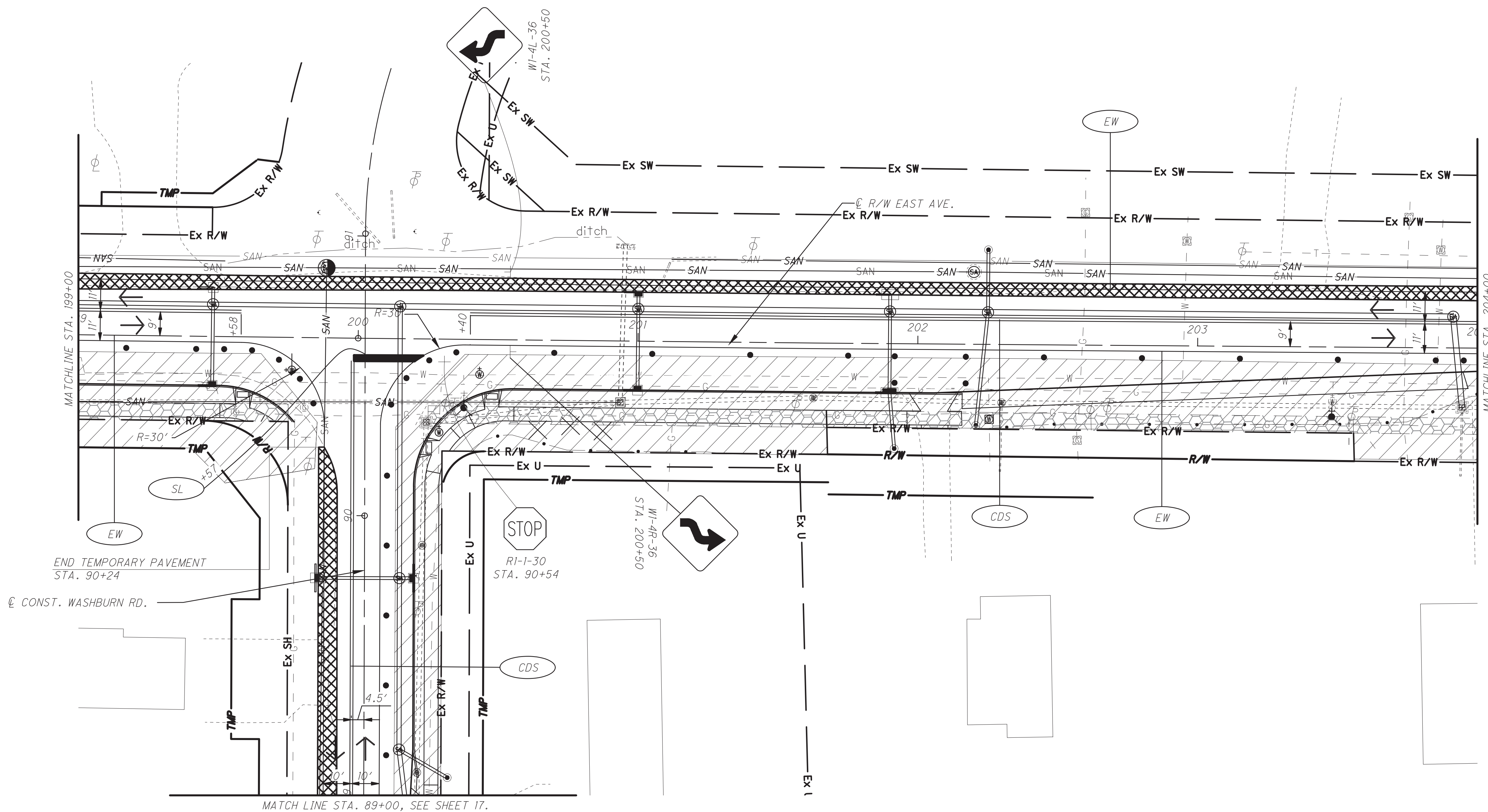
END ROAD WORK
G20-2-36
STA. 185+91

EXISTING PAVEMENT MARKING PAVEMENT TO REMAIN

BEGIN TEMPORARY PAVEMENT
STA. 196+05

MATCHLINE STA. 199+00

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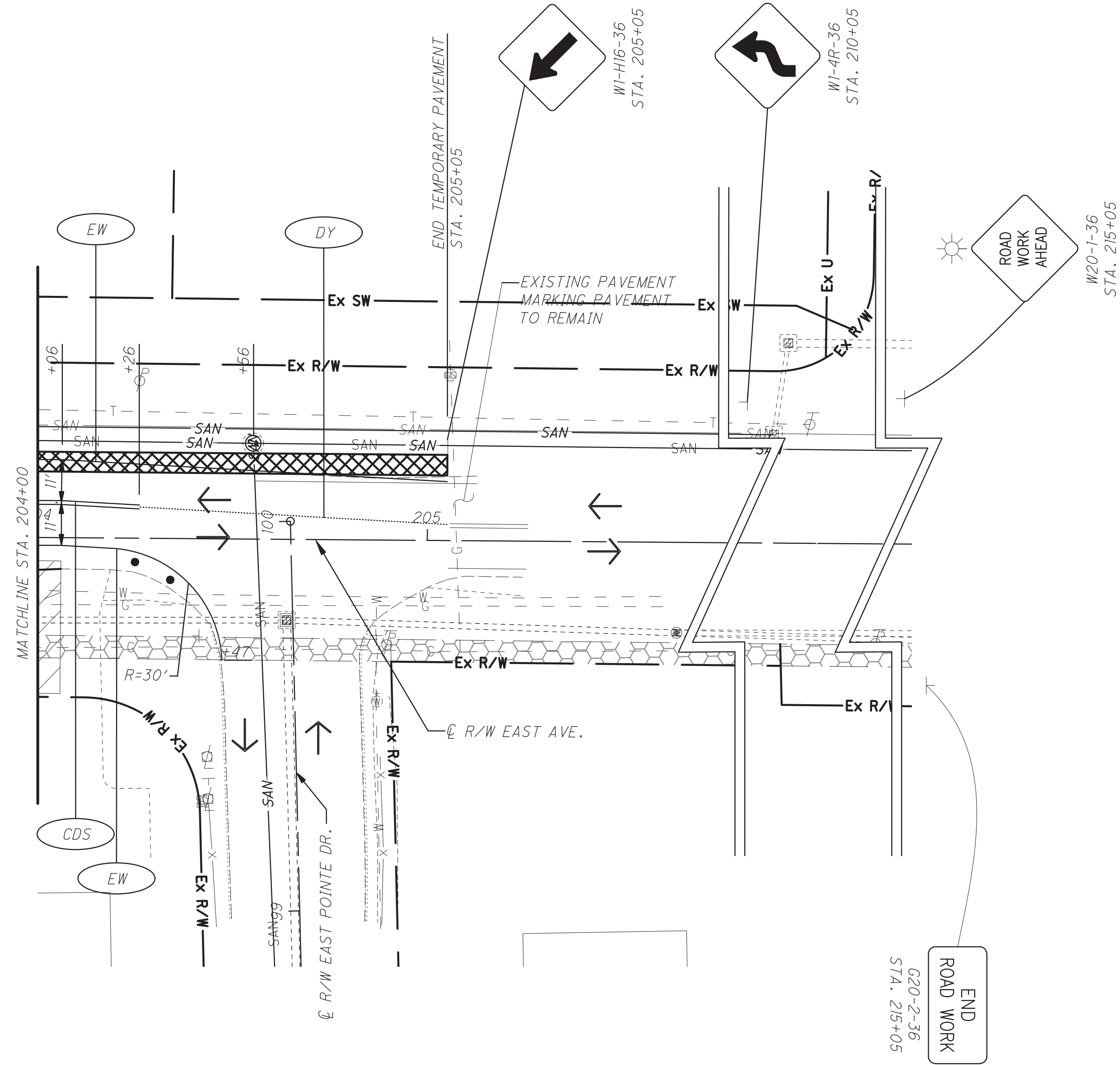
CALCULATED
BEB
CHECKED
AKF

0 10 20 40
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 199+00 TO STA. 204+00

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

- NOTES:
1. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
 2. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 14.



NOTES:

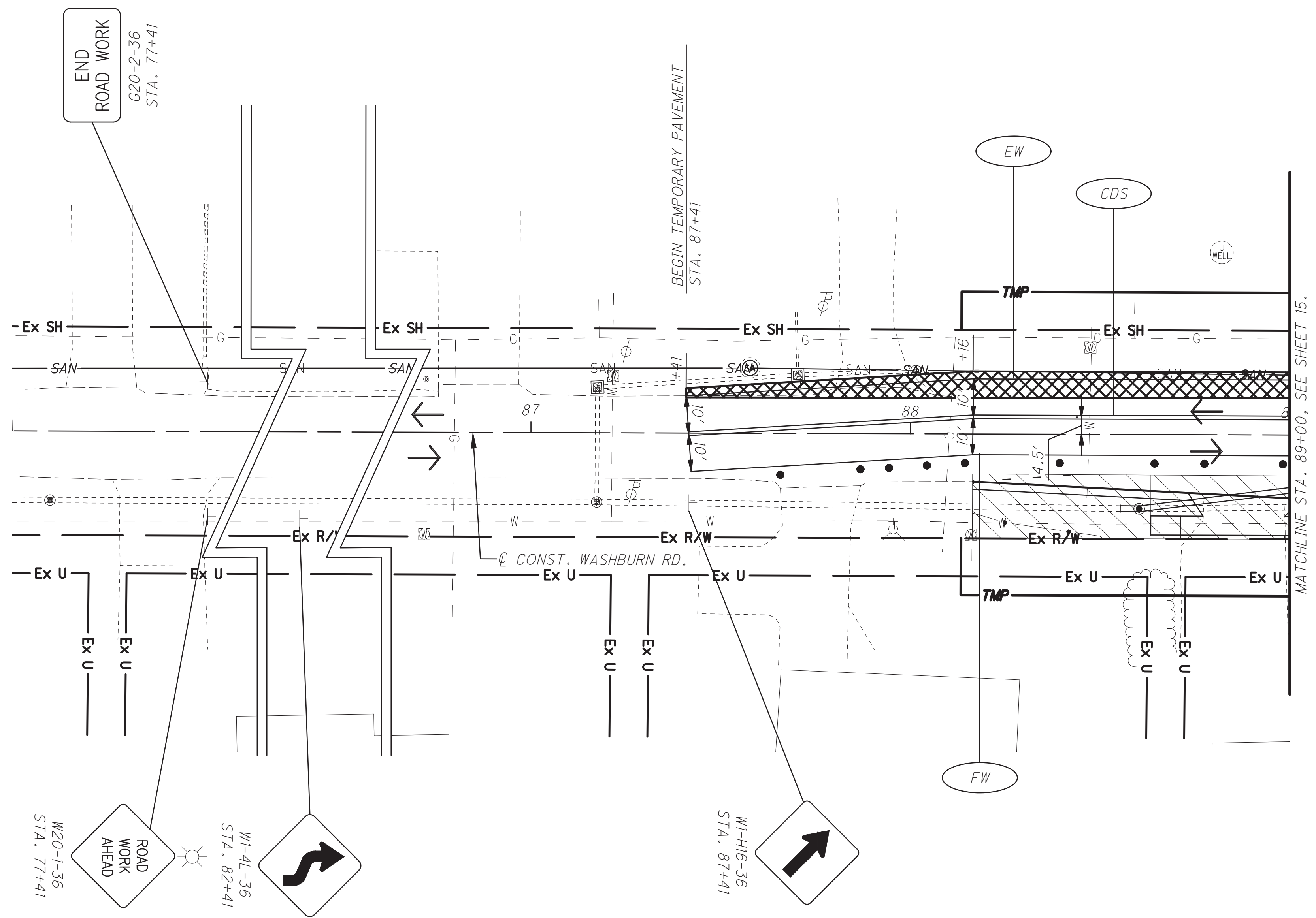
1. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
2. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 14.

CALCULATED	AKF
BEEN	AKF
CHECKED	AKF

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 204+00 TO END

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT





NOTES:

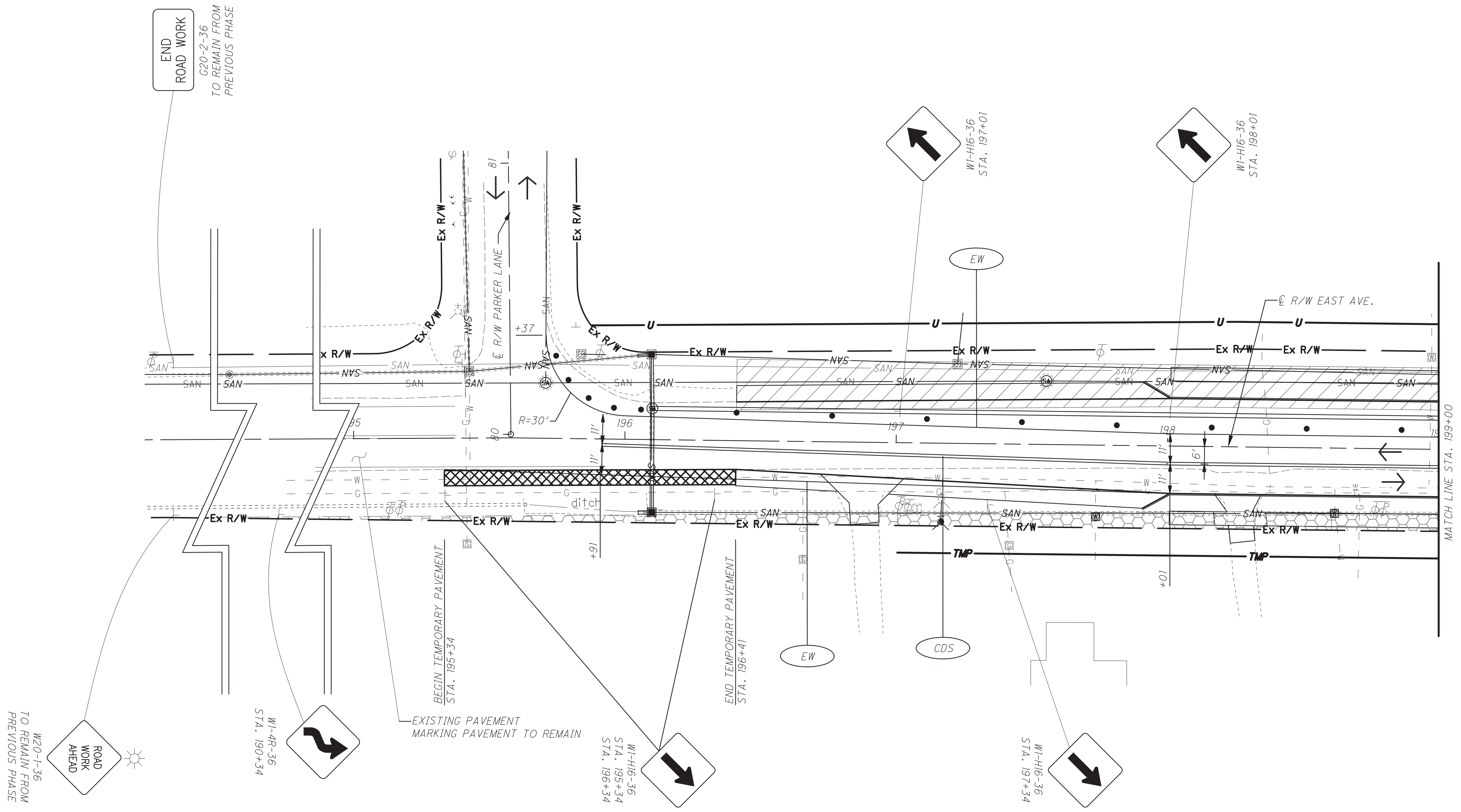
1. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
2. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 14.

CALCULATED
BEB
CHECKED
AKF

0 20 40
HORIZONTAL
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
BEGIN TO STA. 89+00**

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**



- NOTES:
1. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
 2. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 14.

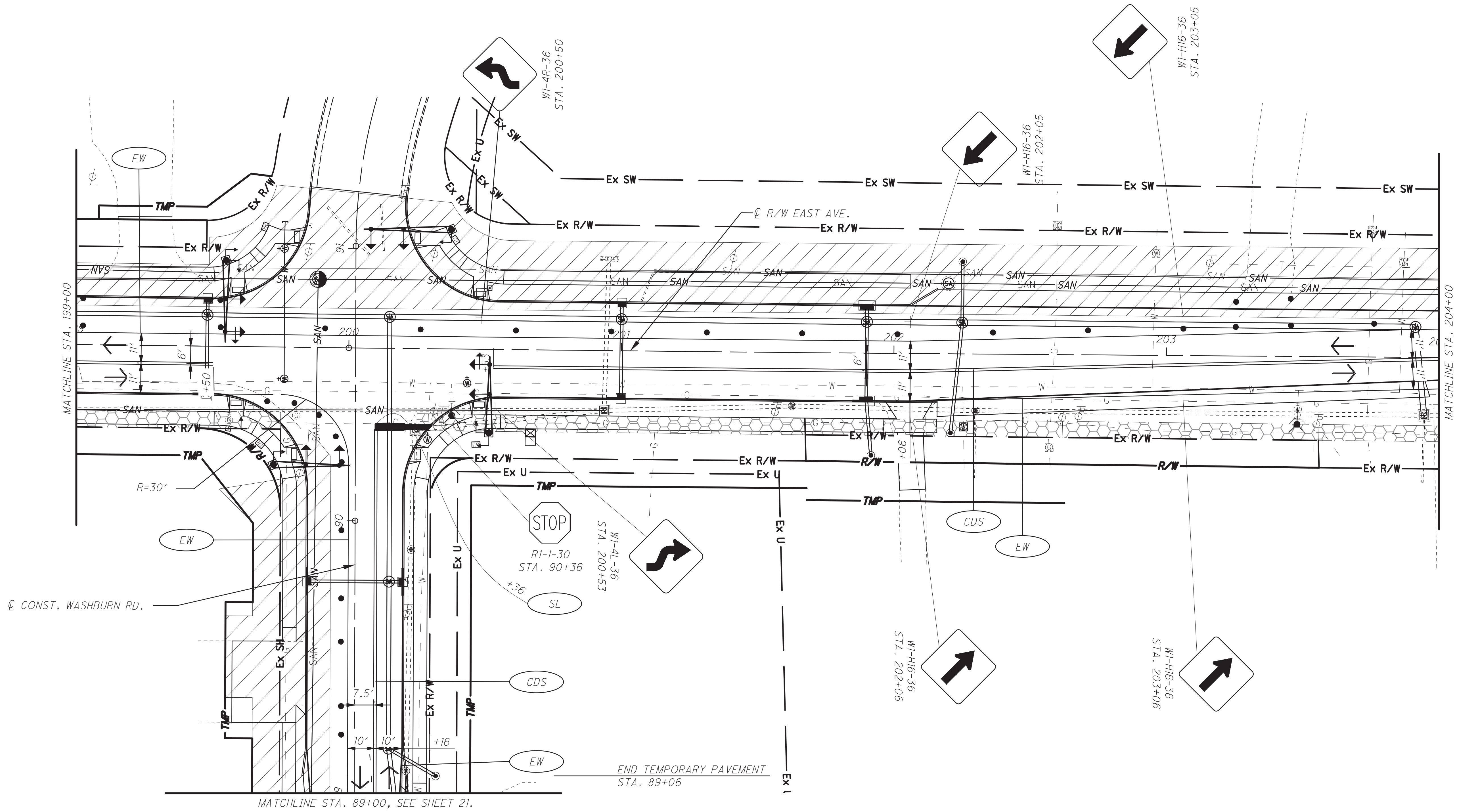
CALCULATED
BEB
CHECKED
AKF

0 10 20 40
HORIZONTAL
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
BEGIN TO STA. 199+00**

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

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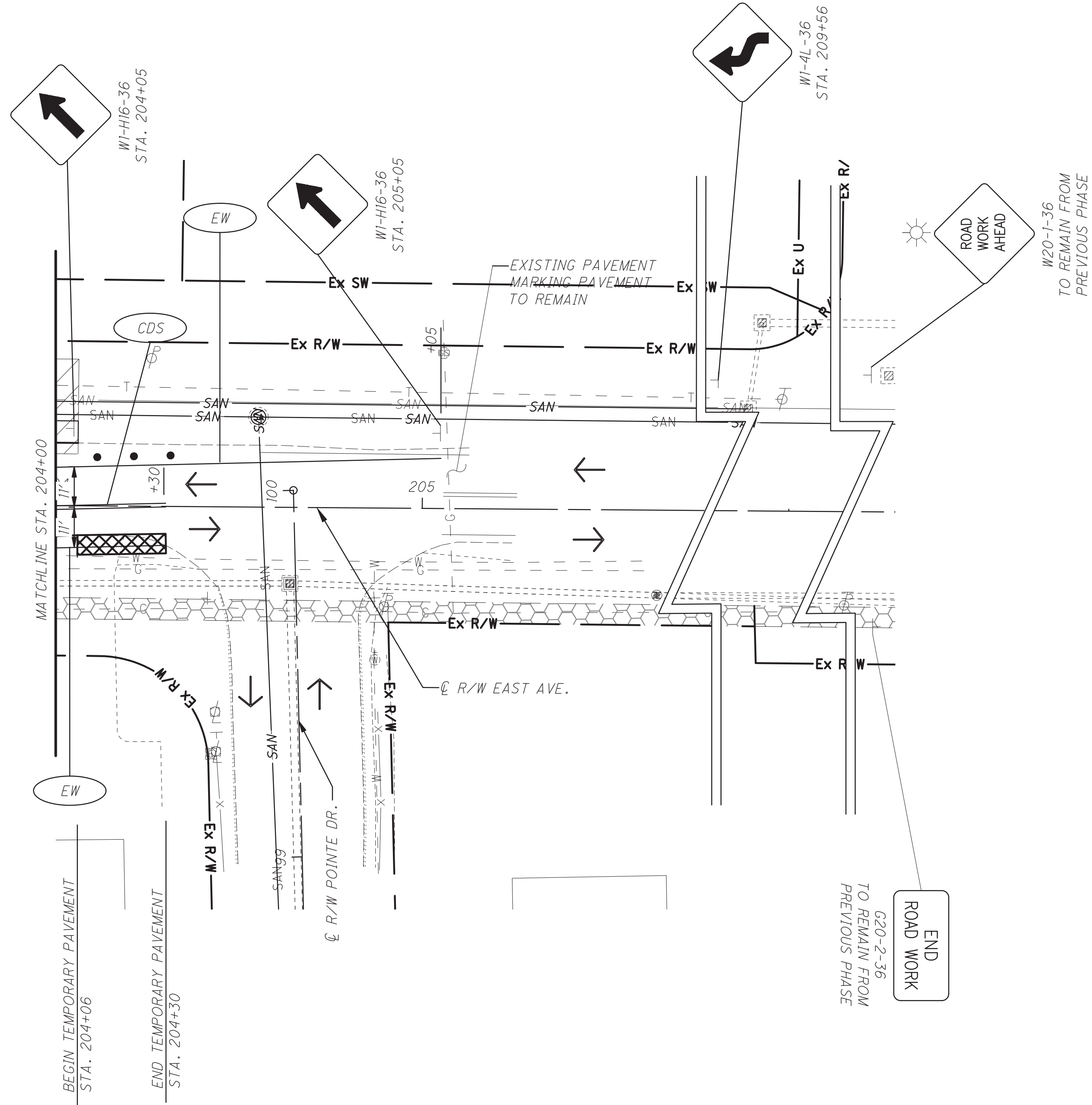
CALCULATED
BEB
CHECKED
AKF

0 10 20 40
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
STA. 199+00 TO STA. 204+00

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

- NOTES:
1. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
 2. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 14.



NOTES:

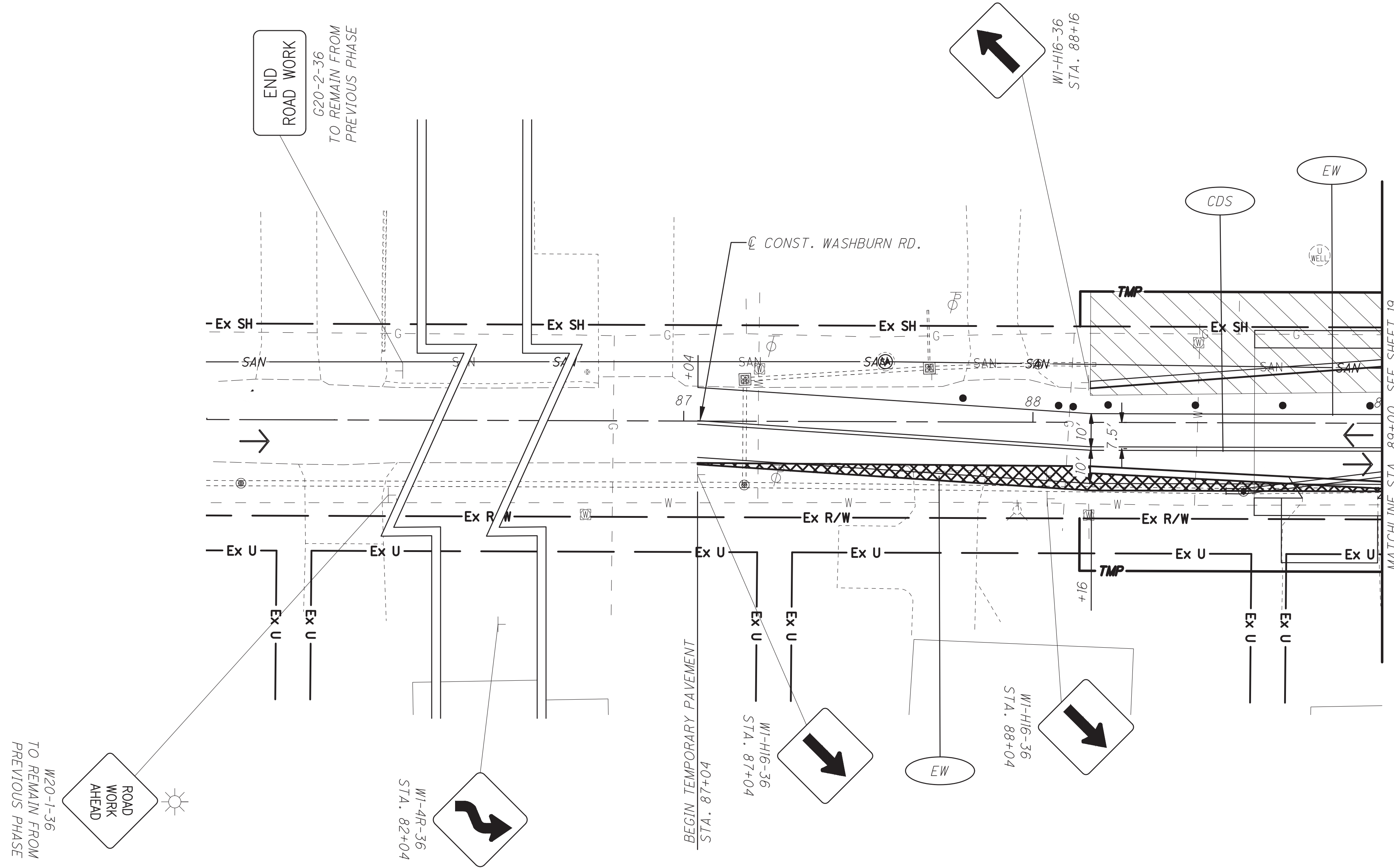
1. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
2. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 14.

CALCULATED	AKF
BEEN	AKF
CHECKED	AKF

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
STA. 204+00 TO END

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT





NOTES:

1. THE CONTRACTOR SHALL COVER CONFLICTING SIGNING AND COVER OR REMOVE CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
2. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 14.

CALCULATED
BEB
CHECKED
AKF

0 20 40
HORIZONTAL
SCALE IN FEET

↑
N

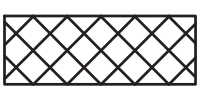
**MAINTENANCE OF TRAFFIC PLAN - PHASE 2
BEGIN TO STA. 89+00**

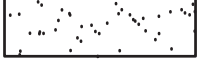
**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

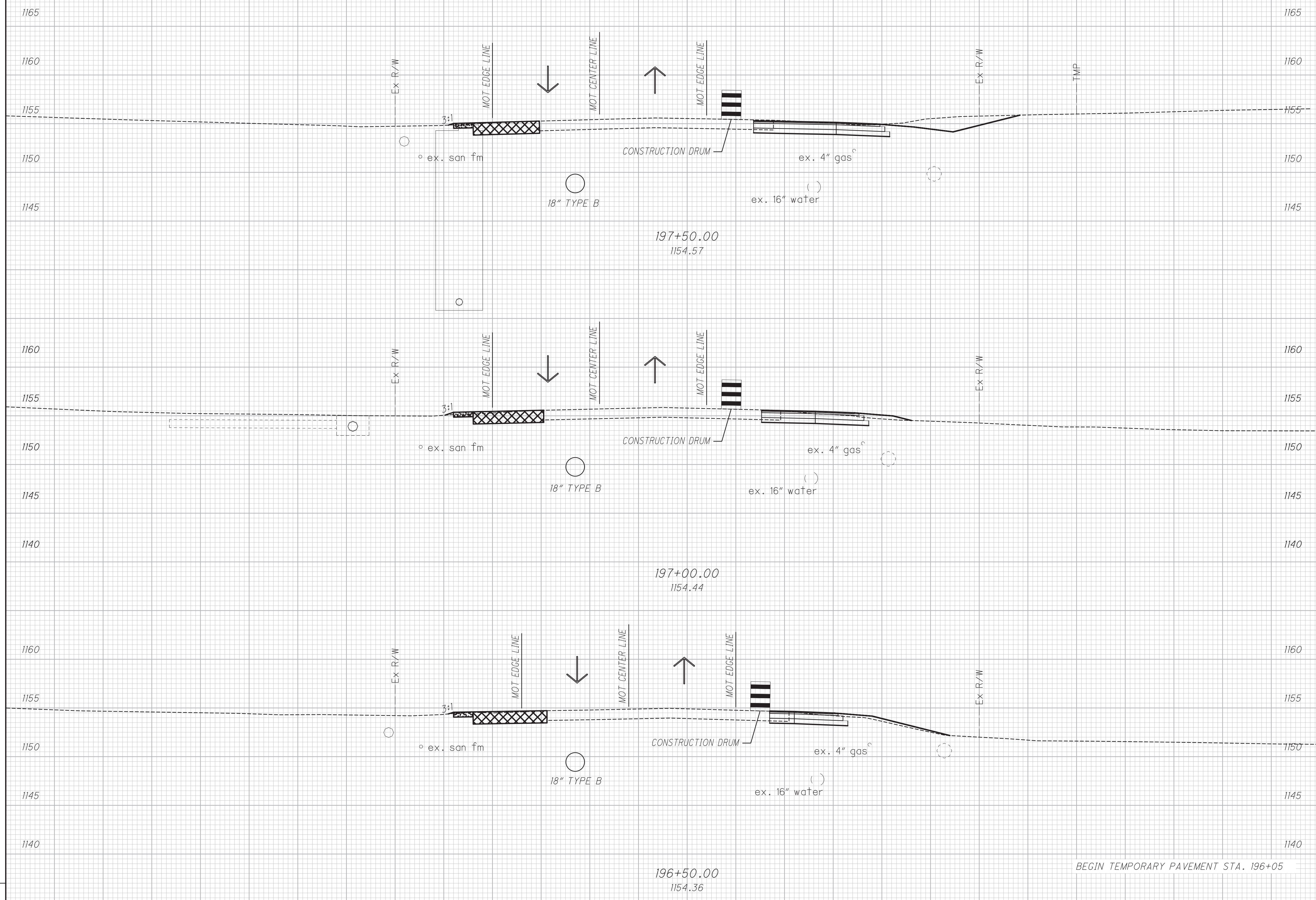
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SEEDING	
END WIDTH	SO. YDS.

LEGEND

 ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B

 ITEM 411 - STABILIZED CRUSHED AGGREGATE



END AREA	VOLUME	CALCULATED BEB	CHECKED AKF
1.3	0.1		
3.2	0.2		
2.1	0.1		
5.5	0.2		
3.8	0.1		
3.2	0.1		
0.0	0.0		
11.9	0.5		

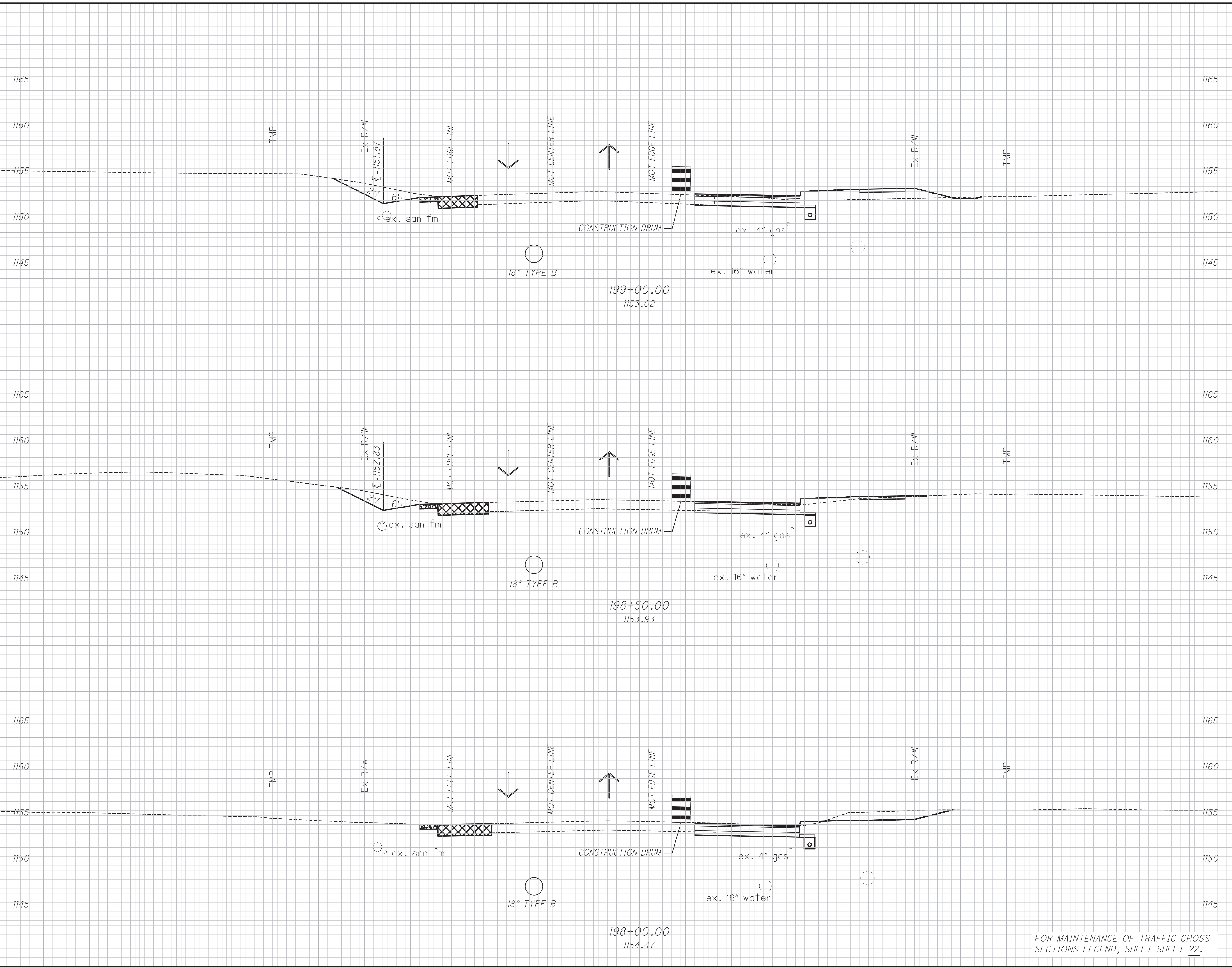
MAINTENANCE OF TRAFFIC CROSS SECTIONS - PHASE 1
STA. 196+50.00 TO STA. 197+50.00 - EAST AVE.

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

BEGIN TEMPORARY PAVEMENT STA. 196+05

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SEEDING	
END WIDTH	SO. YDS.



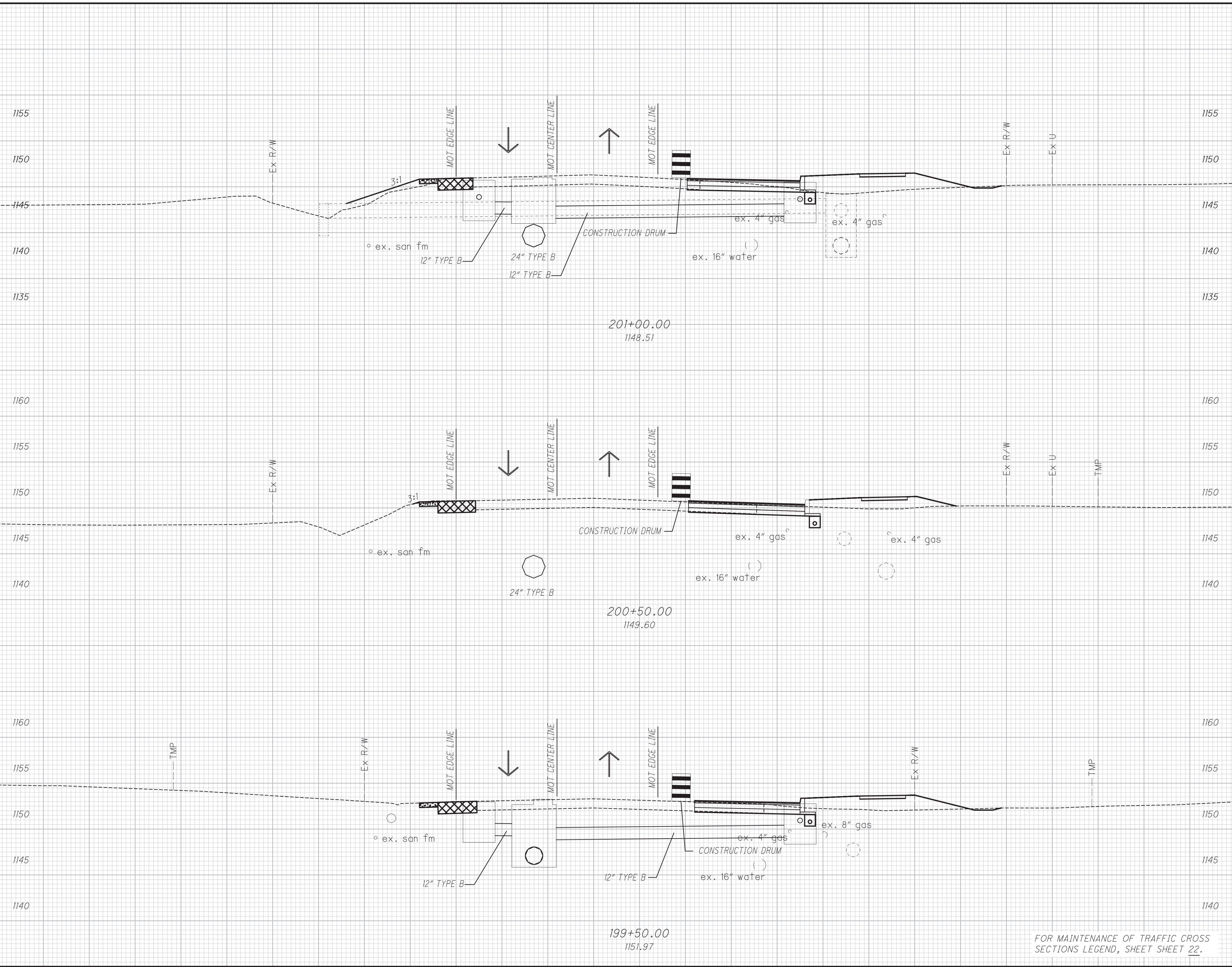
END AREA	VOLUME	CUT		FILL	
13.9	0.0				
24.8	0.0				
12.9	0.0				
17.0	0.0				
5.4	0.0				
6.2	0.1				
48.0	0.1				

EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT
MAINTENANCE OF TRAFFIC CROSS SECTIONS - PHASE 1
STA. 198+00.00 TO STA. 199+00.00 - EAST AVE.

FOR MAINTENANCE OF TRAFFIC CROSS SECTIONS LEGEND, SHEET SHEET 22.

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SEEDING	
END WIDTH	SO. YDS.



END AREA	VOLUME	CALCULATED BEB	CHECKED AKF
4.5	0.0		
9.6	0.0		
5.4	0.0		
10.4	0.0		
5.8	0.0		
18.3	0.0		
38.3	0.0		

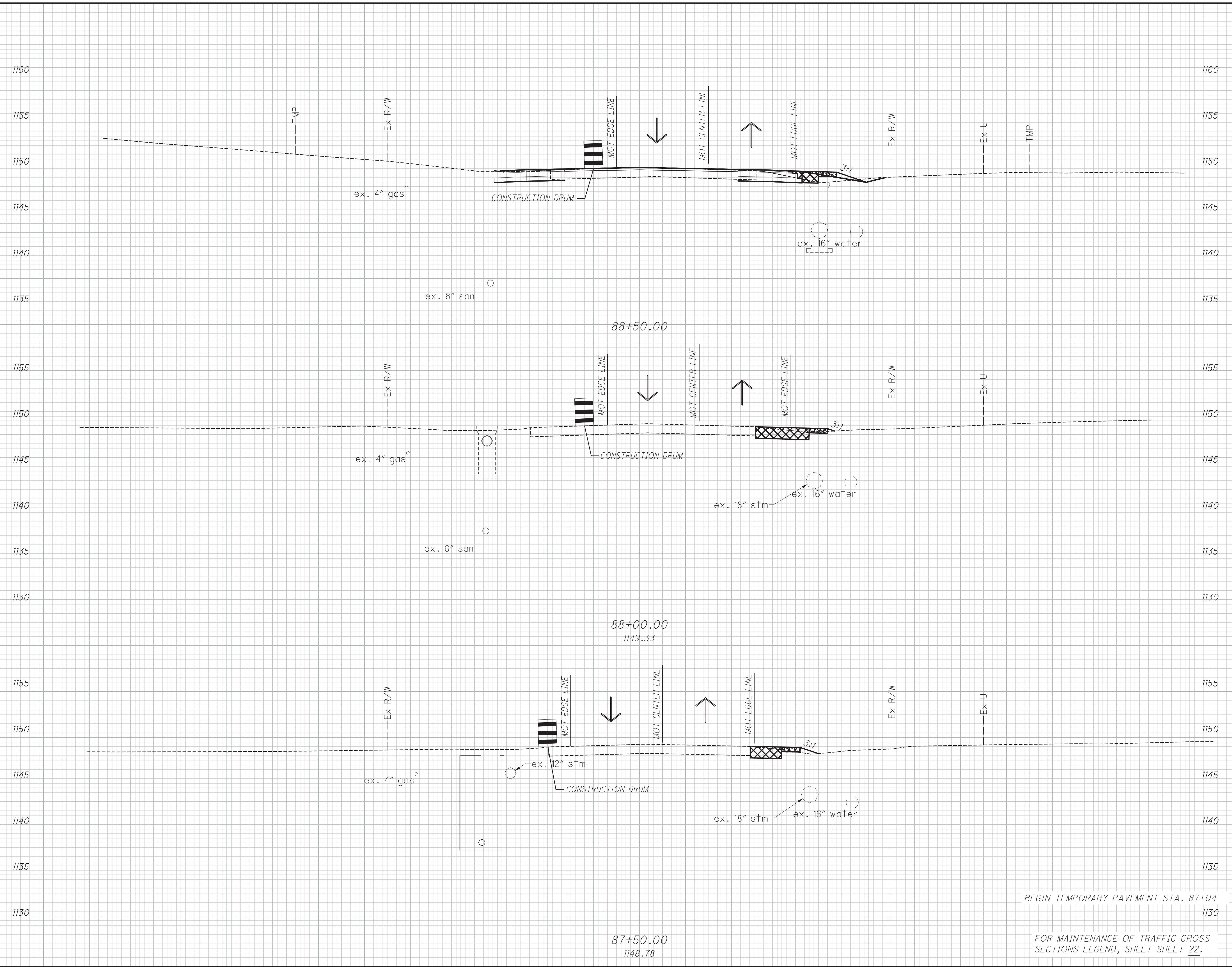
MAINTENANCE OF TRAFFIC CROSS SECTIONS - PHASE 1
STA. 199+50.00 TO STA. 201+00.00 - EAST AVE.

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

FOR MAINTENANCE OF TRAFFIC CROSS SECTIONS LEGEND, SHEET SHEET 22.

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SEEDING	
END WIDTH	SO. YDS.



END STA.	AREA		VOLUME		CALCULATED BEB	CHECKED AKF
	CUT	FILL	CUT	FILL		
1160	0.4	0.8				
1155			6.0	0.8		
1150	6.1	0.1				
1145			9.4	0.8		
1140	4.0	0.7				
1135			3.4	0.6		
1130	0.0	0.0				
			18.8	2.2		

BEGIN TEMPORARY PAVEMENT STA. 87+04

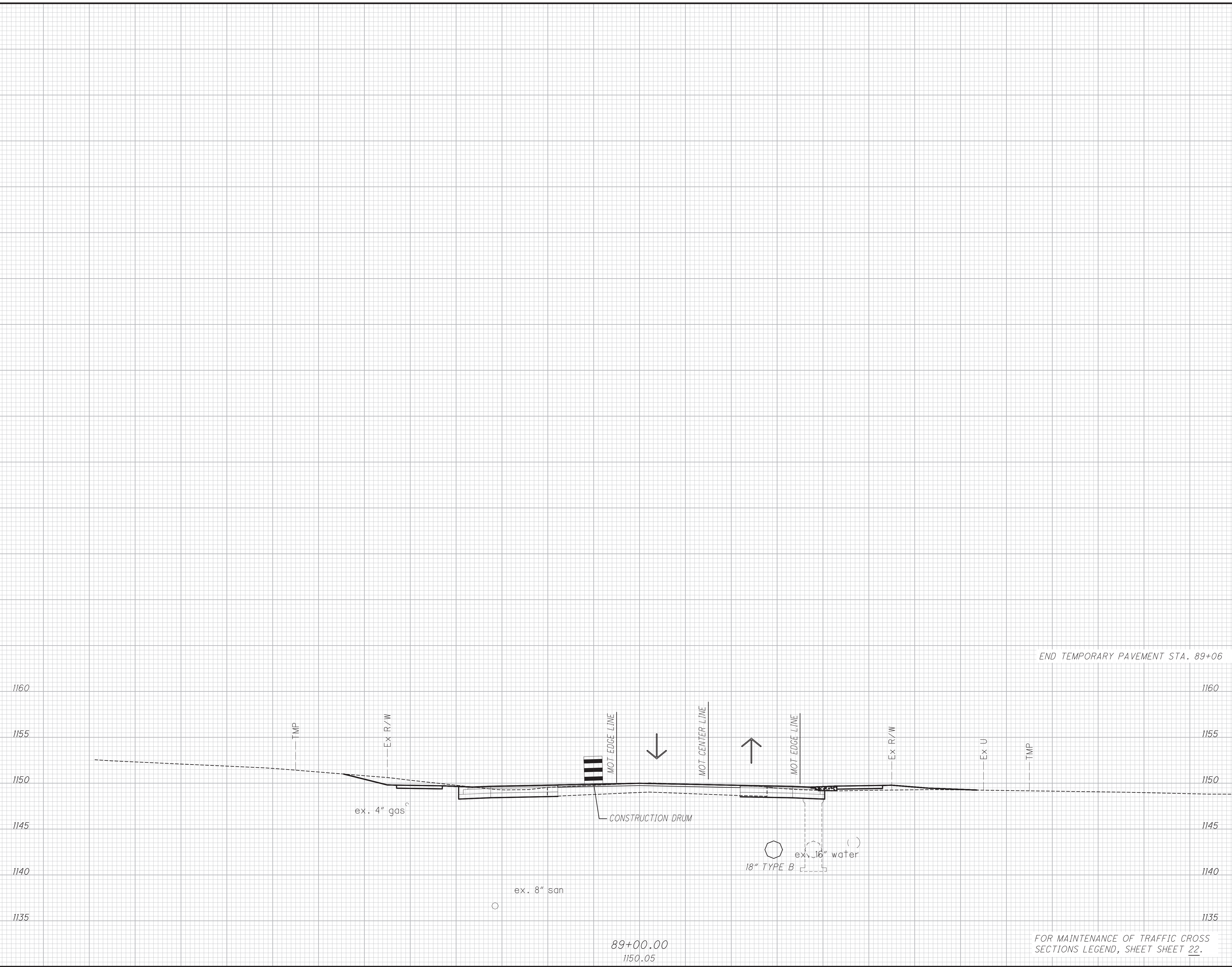
FOR MAINTENANCE OF TRAFFIC CROSS SECTIONS LEGEND, SHEET SHEET 22.

**MAINTENANCE OF TRAFFIC CROSS SECTIONS - PHASE 2
STA. 87+50.00 TO STA. 88+50.00 - WASHBURN RD.**

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

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SEEDING	
END WIDTH	SO. YDS.
15	
47	
10	
0	
47	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.0	0.0		
		0.0	0.0
		0.0	0.0
		0.4	0.8
		0.4	0.8

MAINTENANCE OF TRAFFIC CROSS SECTIONS - PHASE 2
STA. 89+00.00 - WASHBURN RD.

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

30
88

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REF.	SHEET	STATION		SIDE	202	202	202	202	202	202	608	608	608	609				638	638	638	SPECIAL
		FROM	TO		HEADWALL REMOVED EA	PAVEMENT REMOVED, ASPHALT SY	PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	SPECIAL - FILL AND PLUG EXISTING CONDUIT FT	REMOVAL MISC.: ROCK EACH	4" CONCRETE WALK SF	CURB RAMP, TYPE C2 SF	DETECTABLE WARNING SF	CURB, TYPE 6 FT	FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE EACH	VALVE BOX ADJUSTED TO GRADE EACH	METER AND CHAMBER REMOVED AND RESET EACH	REMOVE WATER SERVICE CONNECTION FT			
		EAST AVE																			
C-1	40	197+91.00	89+06.42	RT										321							
C-2	40	197+91.00	91+20.25	LT										222							
PR-7	40	196+10.21	200+93.87	RT			484														
PR-8	40	197+22.27	199+52.06	LT			230														
PR-9	40	199+85.54	200+07.23	LT			33														
PR-15	40	196+07.10	196+10.21	RT			3														
DR-7	40	196+10.21		LT					1												
DR-8	40	196+09.44		RT					1												
R-1	40	196+58.49		RT						1											
R-2	40	199+26.24		LT			94														
R-3	40	196+41.00	199+93.87	RT			137														
R-4	40	196+41.00	200+00.00	LT			97														
SW-1	40	198+01.00	198+17.83	RT							83										
SW-2	40	198+01.00	91+07.34	LT							762	222	16								
SW-3	40	198+37.08	89+60.76	RT							879	217	16								
W-1	40	197+16.78		RT													1				
W-2	40	197+73.73		RT																	
W-3	40	198+61.87		LT																	1
C-3	41	89+06.42	202+16.00	RT										321							
C-4	41	91+20.25	202+16.00	LT										221							
PR-1	41	200+93.87	201+62.85	RT			69														
PR-2	41	201+62.85	202+30.06	RT			67														
PR-3	41	200+24.62	200+93.87	RT			70														
PR-4	41	202+30.06	203+94.66	RT			165														
PR-10	41	200+12.43		LT			21														
PR-11	41	201+11.18		LT			11														
PR-12	41	201+11.80	204+00.00	LT			289		5												
PR-13	41	200+94.37		LT&RT			57														
DR-1	41	200+93.87		RT					1												
DR-2	41	201+62.85		RT					1												
DR-3	41	200+24.62		RT					1												
DR-4	41	202+30.06		RT					1												
R-5	41	200+13.77	204+06.00	RT			126														
R-6	41	200+00.00	204+06.00	LT			158														
HWR-1	41	200+95.16		LT		1															
TOTALS CARRIED TO GENERAL SUMMARY					1	612	1499	6	5	1	1724	439	32	1085				1	0	2	0

ROADWAY SUBSUMMARY

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

CALCULATED
JES
CHECKED
DEN

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REF.	SHEET	STATION		SIDE	202	202	202	202	202	202	608	608	608	609				638	638	638	SPECIAL
		FROM	TO		HEADWALL REMOVED EA	PAVEMENT REMOVED, ASPHALT SY	PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	SPECIAL - FILL AND PLUG EXISTING CONDUIT FT	REMOVAL MISC.: ROCK EACH	4" CONCRETE WALK SF	CURB RAMP, TYPE C2 SF	DETECTABLE WARNING SF	CURB, TYPE 6 FT	FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE EACH	VALVE BOX ADJUSTED TO GRADE EACH	METER AND CHAMBER REMOVED AND RESET EACH	REMOVE WATER SERVICE CONNECTION FT			
EAST AVE (CONTINUED)																					
SW-4	41	89+03.80	201+96.45	RT							1516	218	16								
SW-5	41	200+35.22	202+06.00	LT							990	220	16								
W-5	41	200+29.24		RT															1		
W-6	41	200+38.01		RT																1	
W-7	41	200+43.53		RT																	1
W-8	41	202+25.71		RT																	
W-9	41	203+48.06		RT															1		
W-10	41	202+94.75		LT&RT																	50
W-11	41	203+85.92		LT&RT																	48
WASHBURN RD																					
PR-5	42	89+08.30	89+89.50	RT			82														
PR-6	42	89+89.50	200+24.60	RT			44														
PR-14	42	88+60.40	89+08.30	RT			48														
DR-5	42	89+08.30		RT				1													
DR-6	42	89+89.50		RT				1													
DR-9	42	88+60.37		RT				1													
R-7	42	88+16.42	90+23.57	RT					47												
R-8	42	88+16.42	90+23.57	LT					42												
SW-6	42	88+63.42	88+71.24	RT							39										
SW-7	42	88+63.42	89+12.85	LT							313										
TOTALS CARRIED TO GENERAL SUMMARY					0	89	174	3	0	0	2858	438	32	0				2	2	1	98

ROADWAY SUBSUMMARY

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

CALCULATED
JES
CHECKED
DEN

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REF.	SHEET	STATION		SIDE	605	611	611	611	611	611	611	611	611	611	611	611	611	611	611	
		FROM	TO		6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	10" CONDUIT, TYPE C	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	15" CONDUIT, TYPE B	15" CONDUIT, TYPE C	18" CONDUIT, TYPE B	24" CONDUIT, TYPE B	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 7	CATCH BASIN, NO. 2-2A	CATCH BASIN, NO. 2-2B	MANHOLE, NO.3	MANHOLE ADJUSTED TO GRADE, SANITARY
					FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
SJ-4	40	199+88.40	EAST AVE	LT																1
D-1	40	196+10.00		LT																1
D-2	40	199+48.00		LT																1
D-3	40	199+48.00		LT																
D-4	40	199+48.00		RT																
D-19	40	196+10.21		RT																
D-20	40	196+09.44		LT																
P-1	40	196+10.00	199+48.00	LT																
P-2	40	199+48.00	200+14.92	LT																
P-3	40	199+48.00	199+48.00	LT																
P-4	40	199+48.00	199+48.00	LT/RT																
P-19	40	196+10.21	196+10.00	RT																
P-19A	40	196+05.21	196+10.21	RT																
P-20	40	196+09.44	196+10.00	LT																
P-20A	40	196+04.44	196+09.44	LT																
P-20B	40	196+09.44	196+14.44	LT																
U-1	40	198+01.00	199+48.00	RT	137	10														
U-2	40	198+01.00	199+48.00	LT	137	10														
U-3	40	199+53.00	89+77.71	RT	74	10														
D-5	41	200+14.92		LT																
D-6	41	201+90.00		LT																
D-7	41	201+90.00		LT																
D-8	41	202+25.00		LT																
D-9	41	201+90.00		RT																
D-10	41	201+91.83		RT																
D-11	41	202+20.96		RT																
D-12	41	203+91.28		LT																
D-22	41	202+25.00		LT																
P-5	41	200+14.92	201+90.00	LT																
P-6	41	201+90.00	202+25.00	LT																
P-7	41	201+90.00	201+90.00	LT																
P-8	41	202+25.00	202+25.00	LT																
P-9	41	202+20.96	202+25.00	LT/RT																
P-10	41	201+91.83	201+90.00	RT																
P-11	41	202+20.96	202+25.00	LT/RT																
P-12	41	203+91.28	203+94.70	LT/RT																
P-22	41	202+25.00	203+91.28	LT/RT																
U-4	41	200+32.04	201+90.00	LT	150	10														
U-5	41	200+25.01	201+90.00	RT	162	10														
TOTALS CARRIED TO GENERAL SUMMARY					660	50	5	133	25	38	25	405	409	2	2	3	1	1	6	1

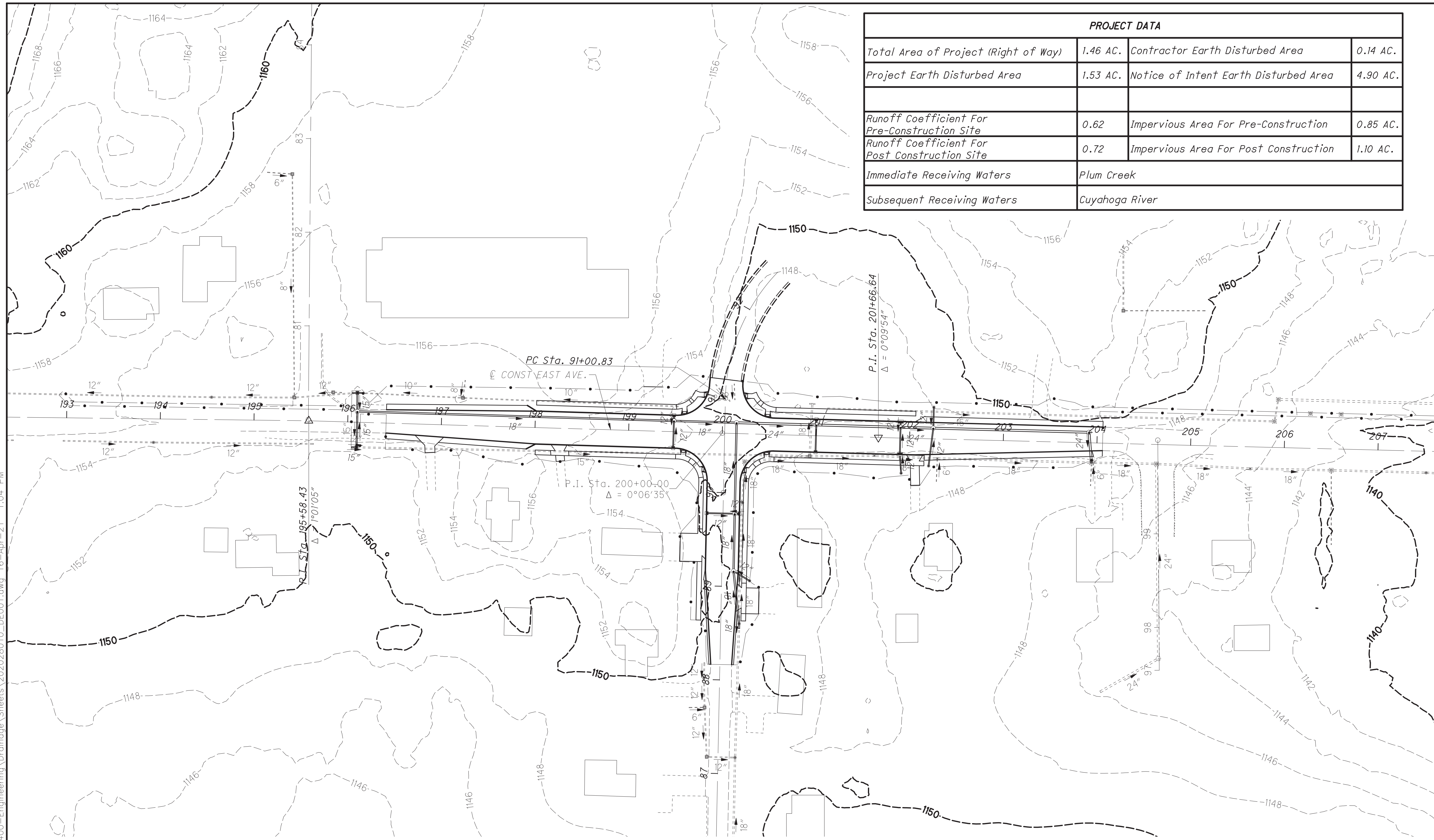
DRAINAGE SUBSUMMARY	EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT
CALCULATED JES CHECKED DEN	36 88

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REF.	SHEET	STATION		SIDE	605	611	611	611	611	611	611	611	611	611	611	611	611	611	611	
		FROM	TO		6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	10" CONDUIT, TYPE C	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	15" CONDUIT, TYPE B	15" CONDUIT, TYPE C	18" CONDUIT, TYPE B	24" CONDUIT, TYPE B	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 7	CATCH BASIN, NO. 2-2A	CATCH BASIN, NO. 2-2B	MANHOLE, NO.3	MANHOLE ADJUSTED TO GRADE, SANITARY
					FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
WASHBURN RD																				
D-13	42	89+77.71		RT															1	
D-14	42	89+77.71		LT																
D-15	42	89+77.71		RT																
D-16	42	89+16.40		RT															1	
D-17	42	89+06.42		RT																
D-18	42	88+60.37		RT																
P-13	42	89+77.71	200+14.92	RT								97								
P-14	42	89+77.71	89+77.71	LT/RT				30												
P-15	42	89+77.71	89+77.71	RT				5												
P-16	42	89+16.40	89+77.71	RT								61								
P-17	42	89+06.42	89+16.40	RT				20												
P-18	42	88+60.37	89+16.40	RT								56								
P-18A	42	88+55.37	88+60.37	RT								5								
U-6	42	89+16.42	89+77.71	LT	51	10														
U-7	42	89+16.42	89+77.71	RT	51	10														
U-8	42	90+21.23	89+77.71	RT	34	10														
U-9	42	90+82.59	90+20.80	LT	47	10														
U-10	42	90+94.79	90+20.80	RT	16	10														
TOTALS CARRIED TO GENERAL SUMMARY					199	50		55				219			2	2			2	

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">CALCULATED</td> <td style="text-align: center;">JES</td> <td style="text-align: center;">CHECKED</td> <td style="text-align: center;">DEN</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table>	CALCULATED	JES	CHECKED	DEN					DRAINAGE SUBSUMMARY	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT</td> </tr> <tr> <td style="text-align: center;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">37</td> </tr> <tr> <td style="text-align: center;">88</td> </tr> </table> </td> </tr> </table>	EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">37</td> </tr> <tr> <td style="text-align: center;">88</td> </tr> </table>	37	88
CALCULATED	JES	CHECKED	DEN											
EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">37</td> </tr> <tr> <td style="text-align: center;">88</td> </tr> </table>	37	88												
37														
88														

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PROJECT DATA			
Total Area of Project (Right of Way)	1.46 AC.	Contractor Earth Disturbed Area	0.14 AC.
Project Earth Disturbed Area	1.53 AC.	Notice of Intent Earth Disturbed Area	4.90 AC.
Runoff Coefficient For Pre-Construction Site	0.62	Impervious Area For Pre-Construction	0.85 AC.
Runoff Coefficient For Post Construction Site	0.72	Impervious Area For Post Construction	1.10 AC.
Immediate Receiving Waters	Plum Creek		
Subsequent Receiving Waters	Cuyahoga River		



PROJECT SITE PLAN

EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT

- LEGEND**
- Catch Basin, CB-2-2B
 - Catch Basin, CB-3A
 - Catch Basin, CB-3
 - Catch Basin, CB-7
 - Manhole
 - Manufactured System

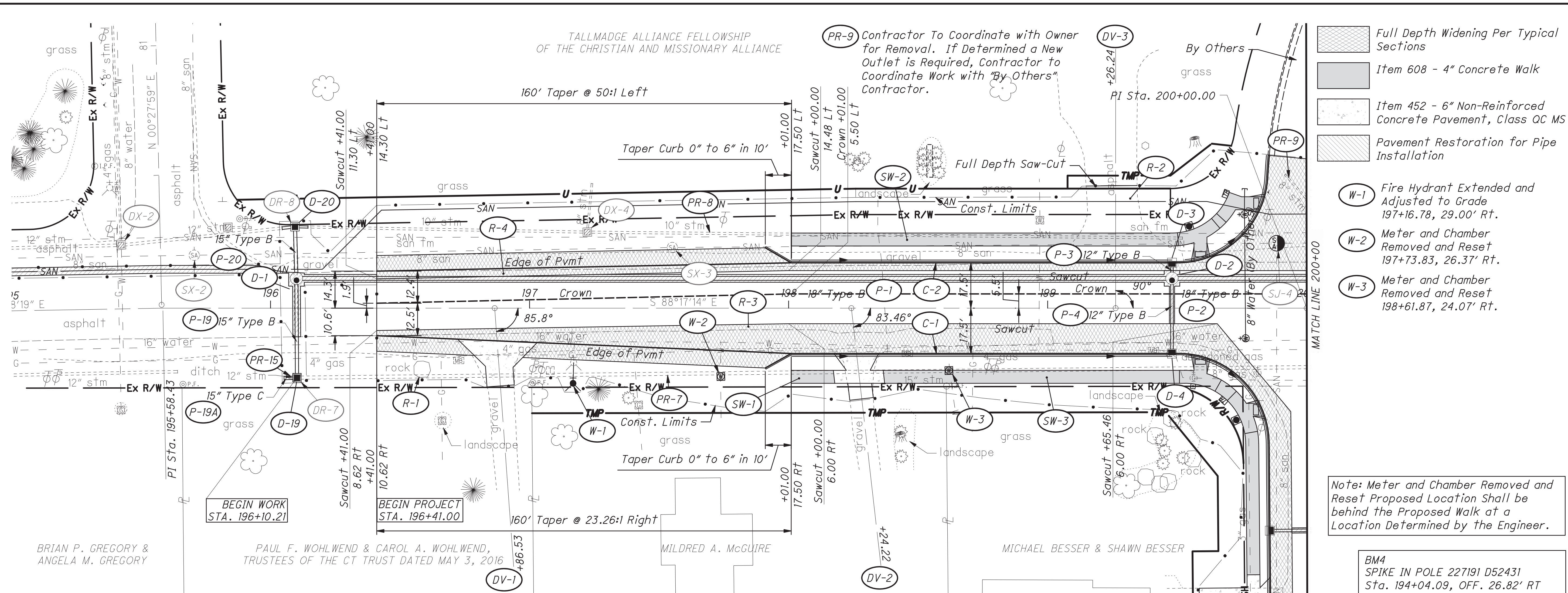
USGS Map: Hudson Quadrangle
Akron East, Ohio
Longitude: W 81°23'49"*
Latitude: N 41°06'02"*
* Longitude and Latitude to Approx.
Center of Project

This project is part of SUM-East Ave (Tallmadge), PID: 112869. Post construction BMP will be provided for entire project limits inclusive of this project with SUM-East Ave (Tallmadge), PID: 112869

PROJECT DESCRIPTION

The project consists of widening and resurfacing of East Avenue and Washburn Road to add a left turn lane and traffic signal. The project includes a new traffic signal, curbing, sidewalk, drainage, and pavement markings.

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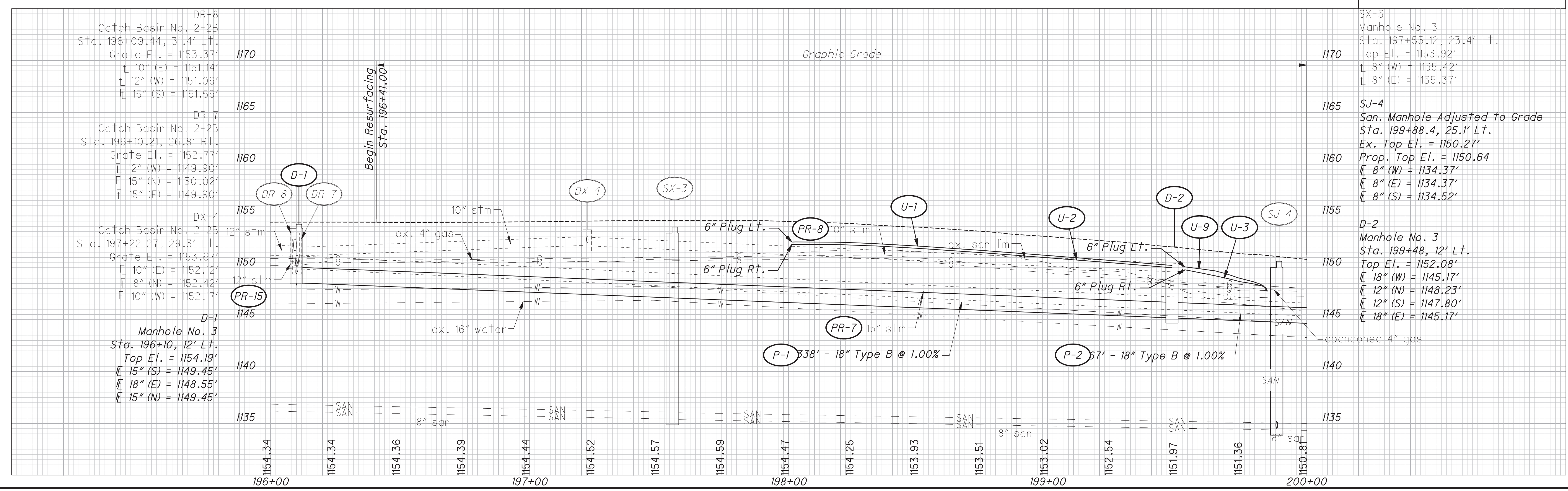


- Full Depth Widening Per Typical Sections
- Item 608 - 4" Concrete Walk
- Item 452 - 6" Non-Reinforced Concrete Pavement, Class QC MS
- Pavement Restoration for Pipe Installation

- W-1 Fire Hydrant Extended and Adjusted to Grade 197+16.78, 29.00' Rt.
- W-2 Meter and Chamber Removed and Reset 197+73.83, 26.37' Rt.
- W-3 Meter and Chamber Removed and Reset 198+61.87, 24.07' Rt.

Note: Meter and Chamber Removed and Reset Proposed Location Shall be behind the Proposed Walk at a Location Determined by the Engineer.

BM4
SPIKE IN POLE 227191 D52431
Sta. 194+04.09, OFF. 26.82' RT
Elev. 1154.29



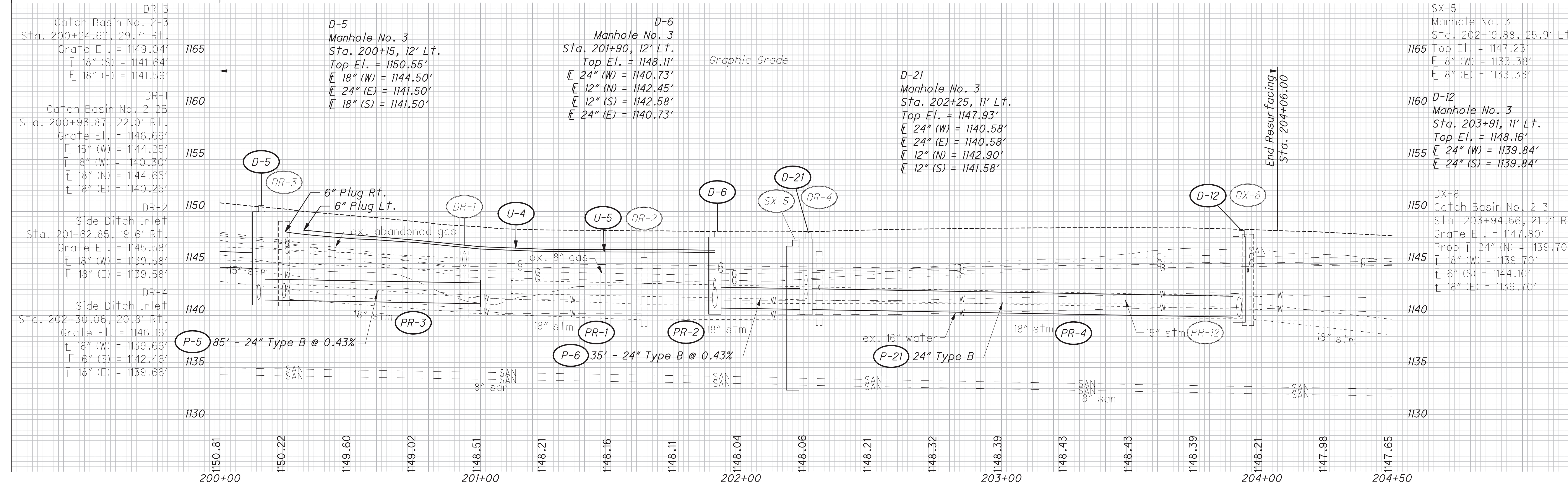
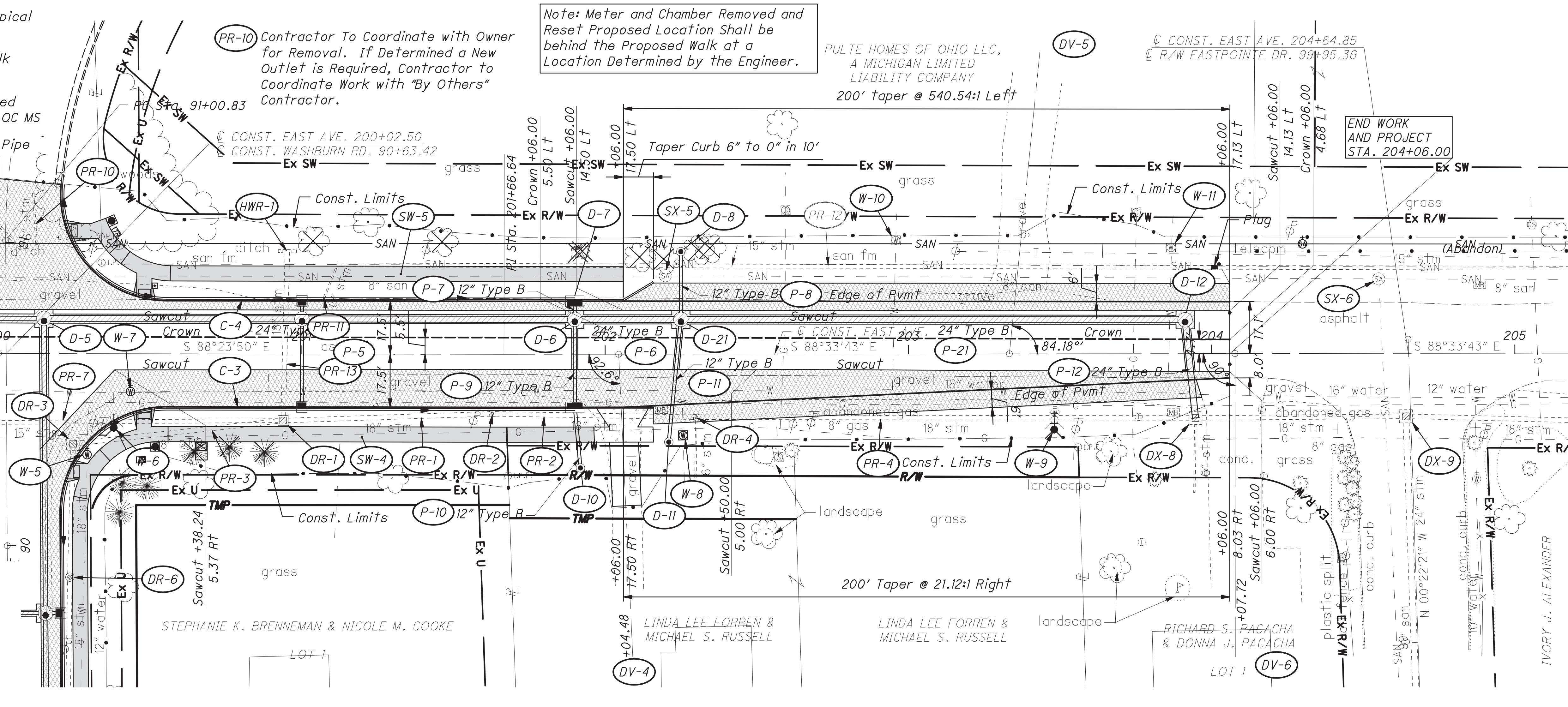
HORIZONTAL SCALE IN FEET
PLAN AND PROFILES - EAST AVE.
BEGIN PROJECT TO STA. 200+00.00
EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

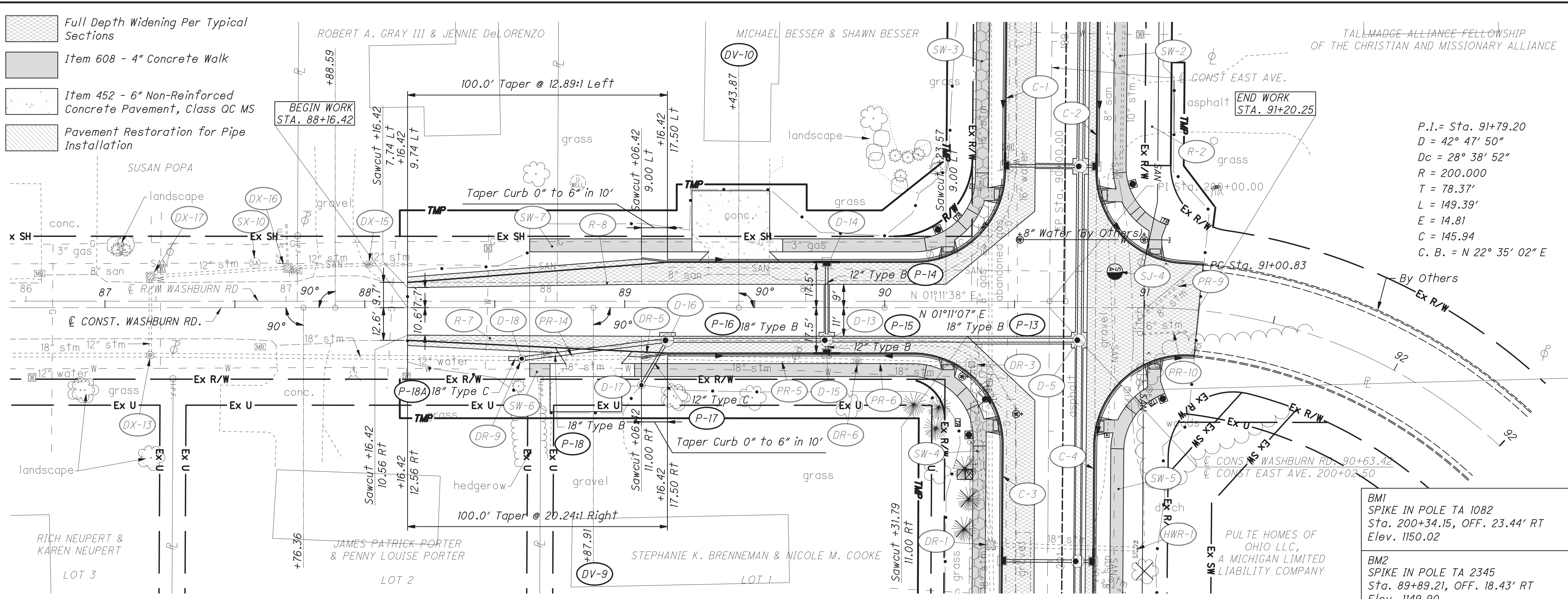
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- Full Depth Widening Per Typical Sections
 - Item 608 - 4" Concrete Walk
 - Item 452 - 6" Non-Reinforced Concrete Pavement, Class QC MS
 - Pavement Restoration for Pipe Installation
- W-5** Valve Box Adjusted to Grade 200+29.24, 33.34' Rt.
 - W-6** Fire Hydrant Extended and Adjusted to Grade 200+38.01, 24.45' Rt.
 - W-7** Valve Box Adjusted to Grade 200+43.53, 12.50' Rt.
 - W-8** Meter and Chamber Removed and Reset 202+25.71, 26.78' Rt.
 - W-9** Fire Hydrant Extended and Adjusted to Grade 203+48.06, 25.00' Rt.
 - W-10** Special - Remove Water Service Connection 202+95.02, 0.00' t.
 - W-11** Special - Remove Water Service Connection 203+85.92, 0.00' t.

BMI
SPIKE IN POLE TA 1082
Sta. 200+34.15, OFF. 23.44' RT
Elev. 1150.02

BM3
SPIKE IN POLE 62BE4B 1
Sta. 204+89.84, OFF. 26.12' RT
Elev. 1147.76



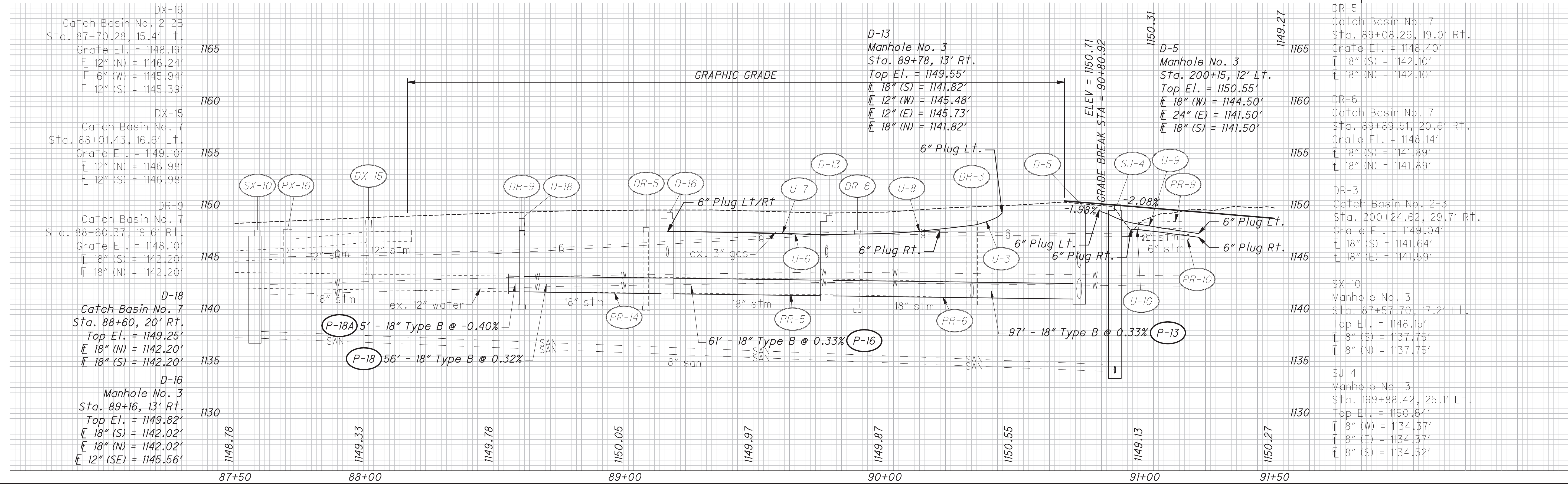


TALLMADGE ALLIANCE FELLOWSHIP
OF THE CHRISTIAN AND MISSIONARY ALLIANCE

P.I. = Sta. 91+79.20
D = 42° 47' 50"
R = 200.000
T = 78.37'
L = 149.39'
E = 14.81
C = 145.94
C. B. = N 22° 35' 02" E

BM1
SPIKE IN POLE TA 1082
Sta. 200+34.15, OFF. 23.44' RT
Elev. 1150.02

BM2
SPIKE IN POLE TA 2345
Sta. 89+89.21, OFF. 18.43' RT
Elev. 1149.90



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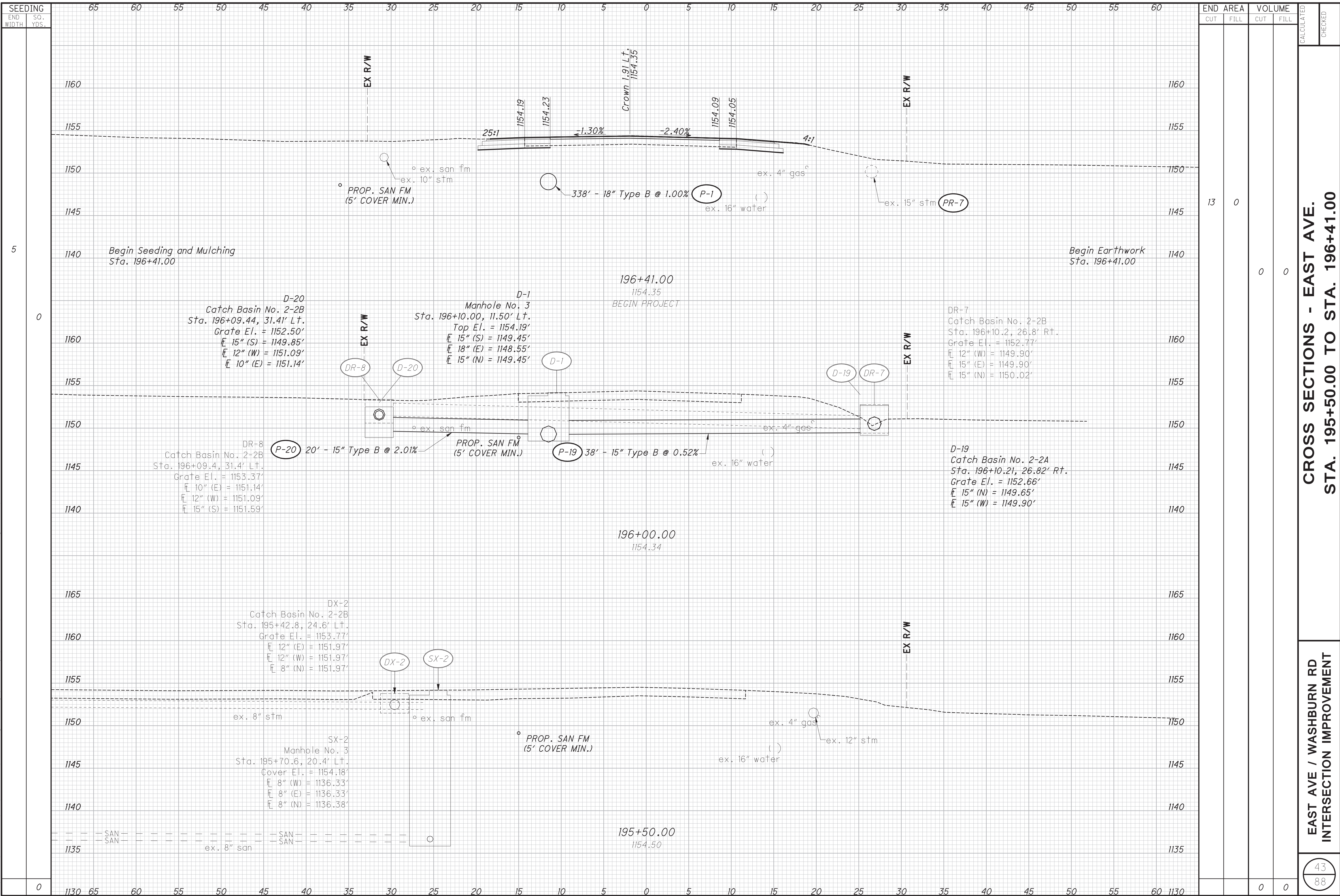


CALCULATED
CHECKED

PLAN AND PROFILES - WASHBURN RD.

EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT

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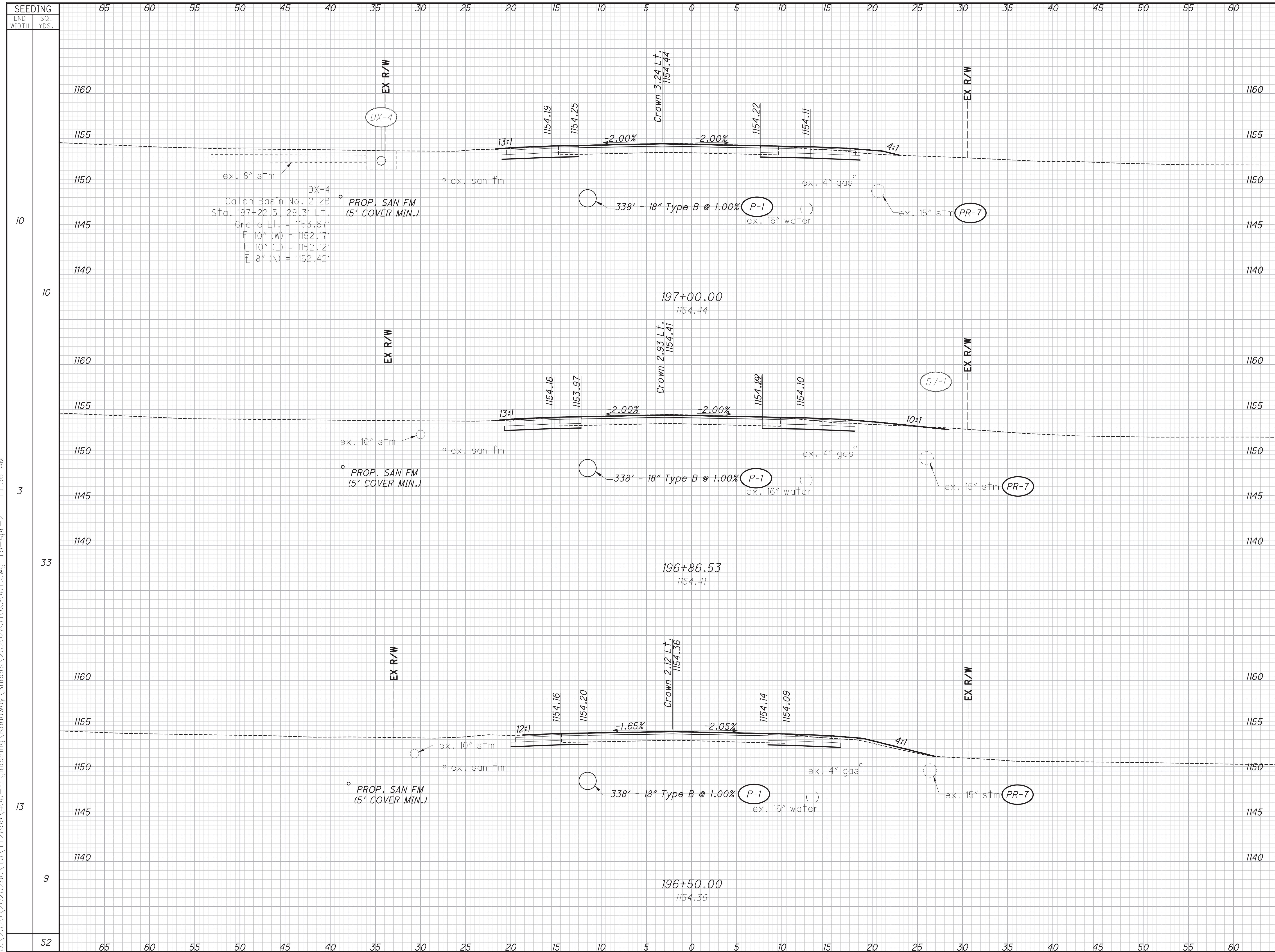


**CROSS SECTIONS - EAST AVE.
 STA. 195+50.00 TO STA. 196+41.00**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

43
 88

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DX-4
Catch Basin No. 2-2B
Sta. 197+22.3, 29.3' Lt.
Grate El. = 1153.67'
E 10" (W) = 1152.17'
E 10" (E) = 1152.12'
E 8" (N) = 1152.42'

PROP. SAN FM
(5' COVER MIN.)

PROP. SAN FM
(5' COVER MIN.)

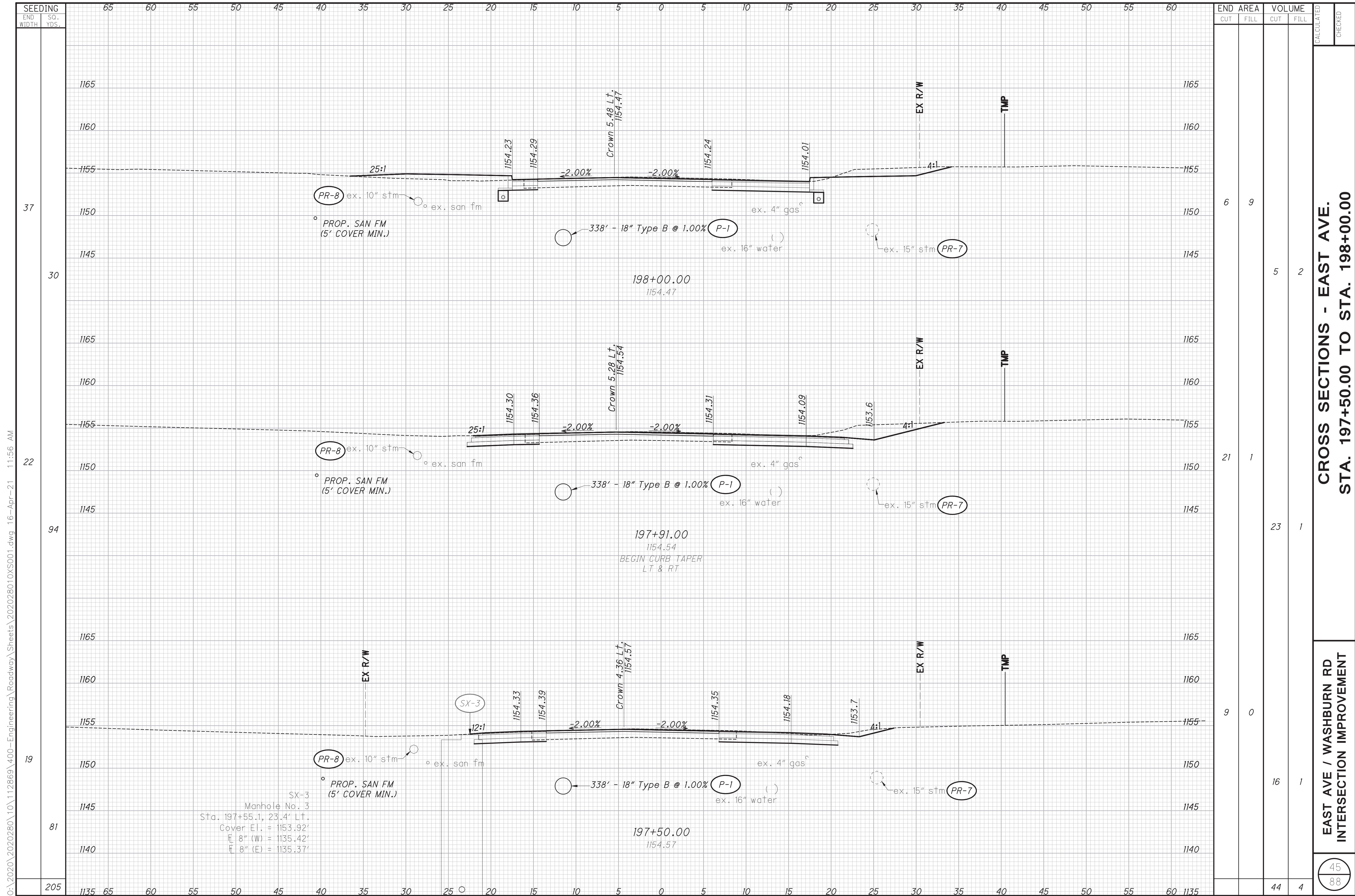
PROP. SAN FM
(5' COVER MIN.)

END STA.	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
197+00.00	9	1	6	1		
196+86.53	17	1	16	2		
196+50.00	7	2	2	0		
TOTAL	33	4	24	3		

**CROSS SECTIONS - EAST AVE.
STA. 196+50.00 TO STA. 197+00.00**

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

44
88



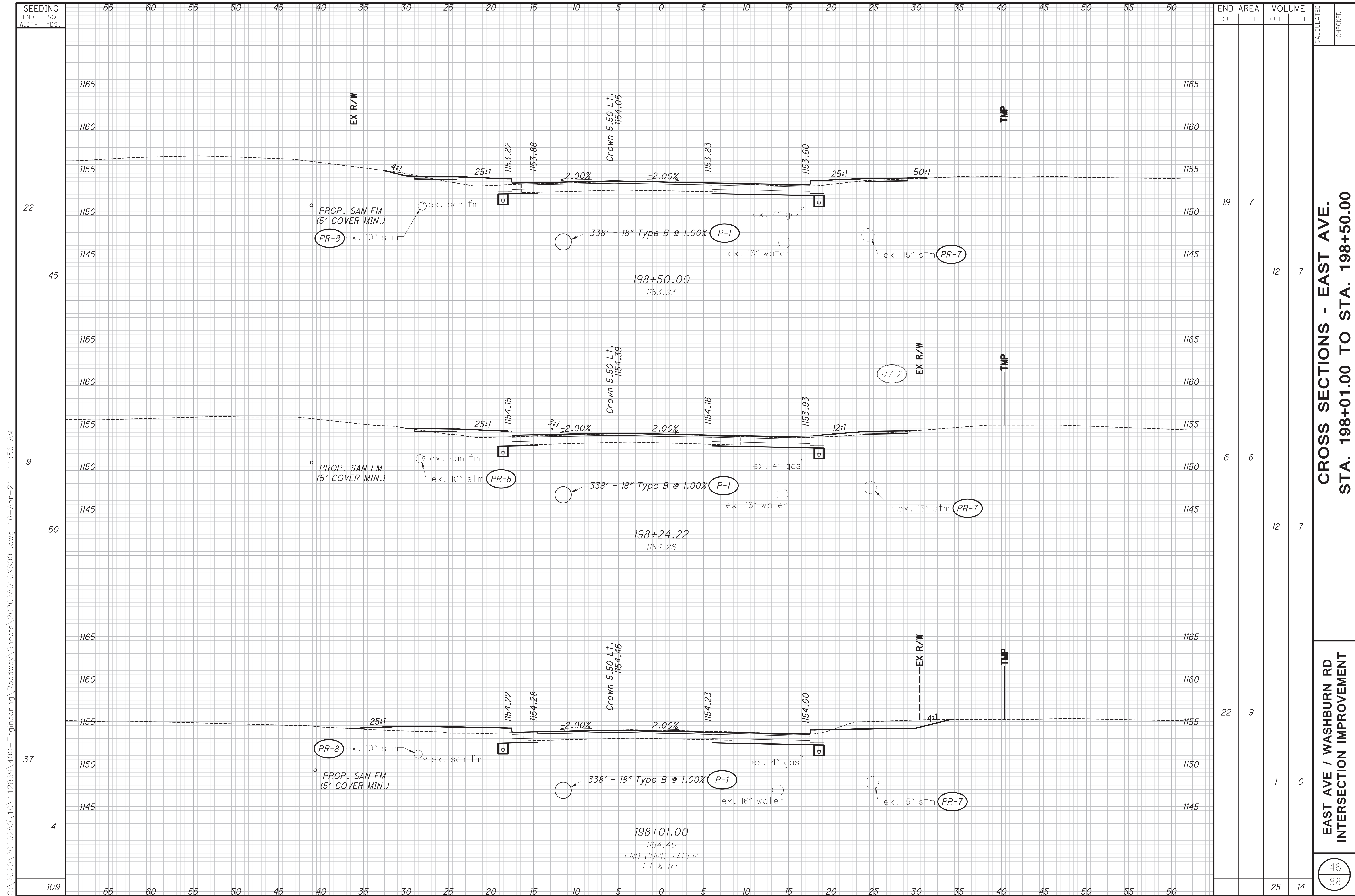
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SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
37	6	9	5	2		
30	21	1	23	1		
22	9	0	16	1		
94			44	4		
19						
81						
205						

**CROSS SECTIONS - EAST AVE.
 STA. 197+50.00 TO STA. 198+00.00**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

45
 88



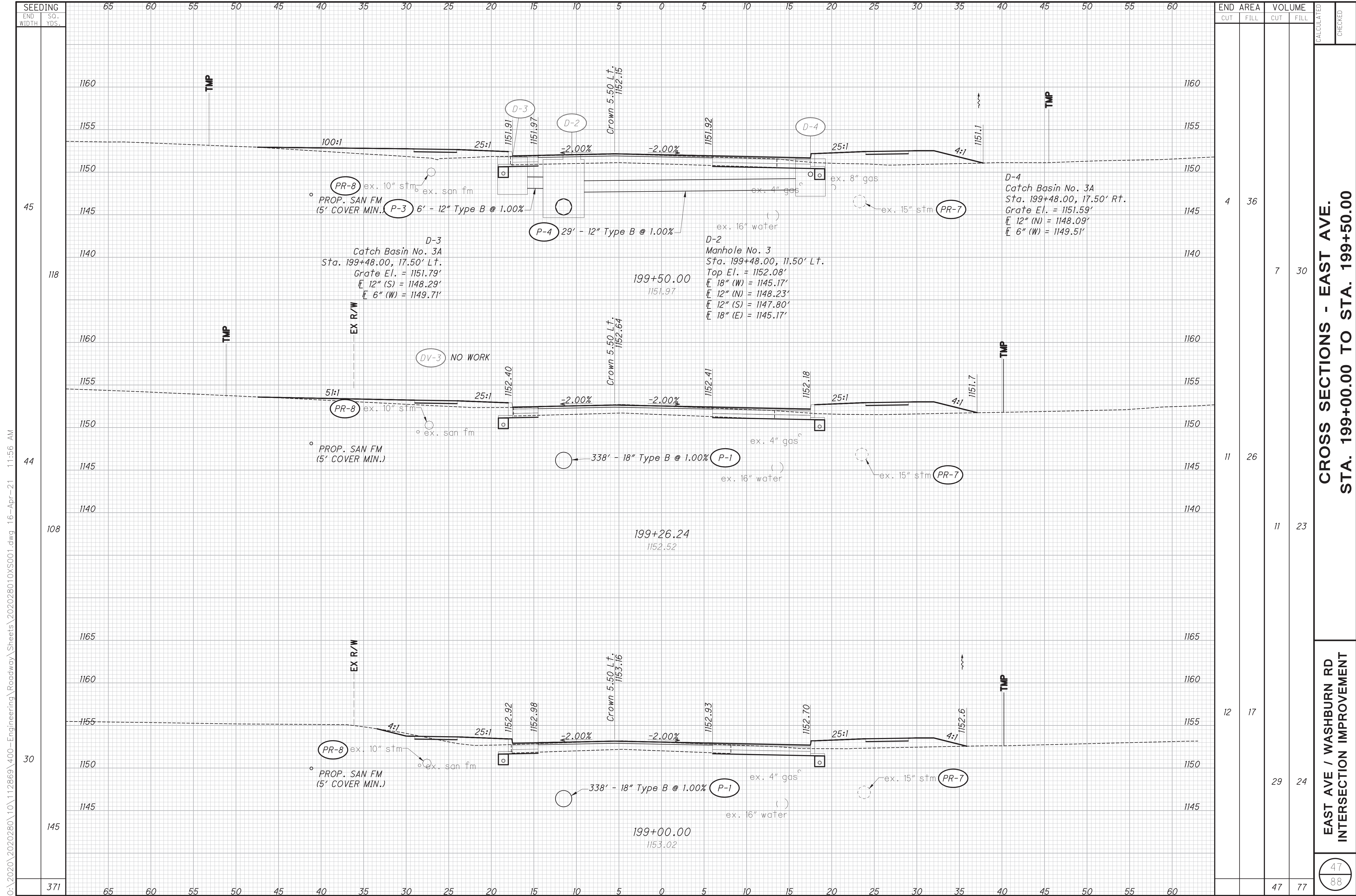
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SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
22	19	7	12	7		
45	6	6	12	7		
60	22	9	1	0		
109			25	14		

**CROSS SECTIONS - EAST AVE.
 STA. 198+01.00 TO STA. 198+50.00**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

46
 88



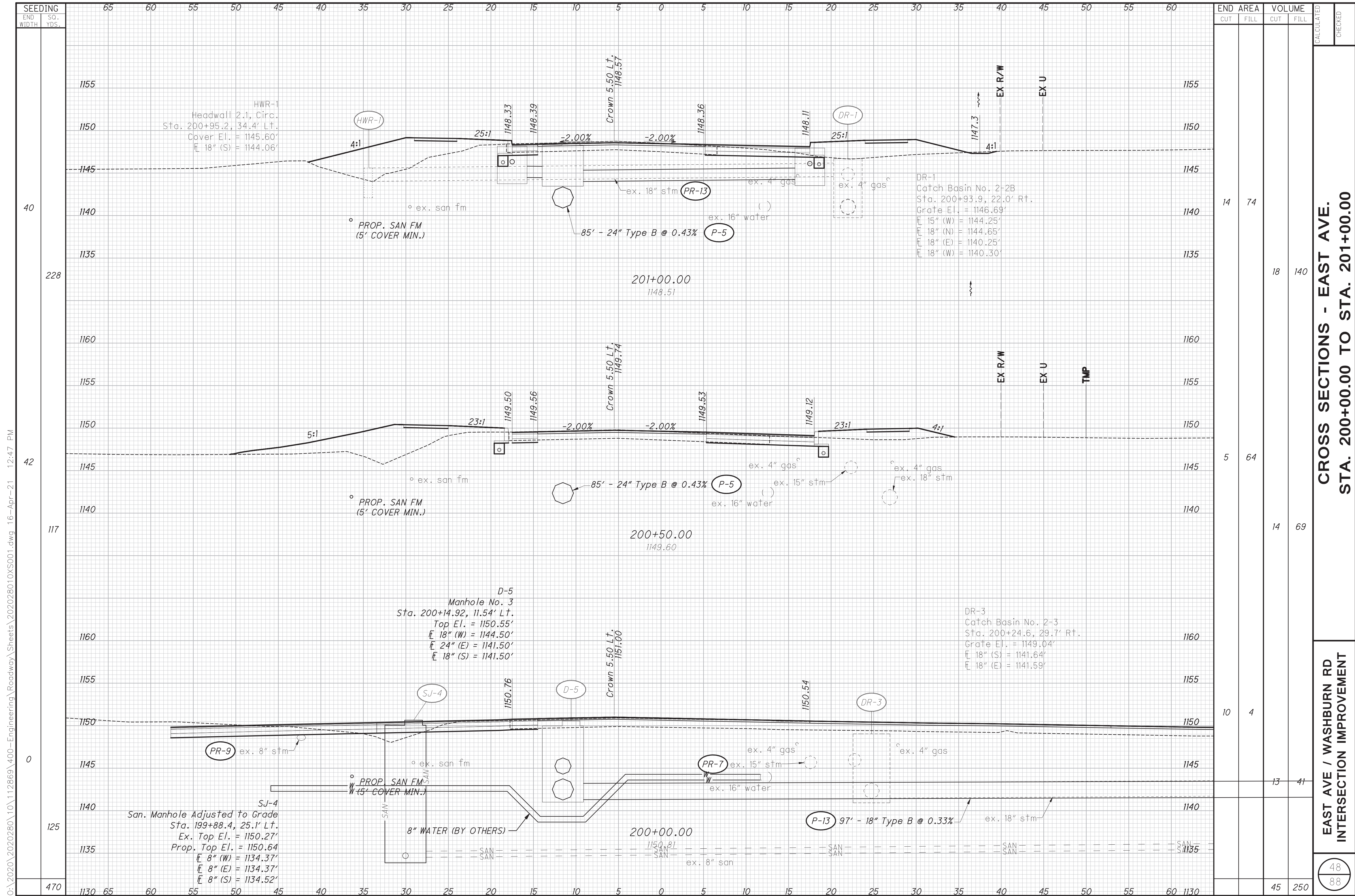
END STA.	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
199+50.00	4	36	7	30		
199+26.24	11	26	11	23		
199+00.00	12	17	29	24		
371			47	77		

**CROSS SECTIONS - EAST AVE.
STA. 199+00.00 TO STA. 199+50.00**

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

47
88

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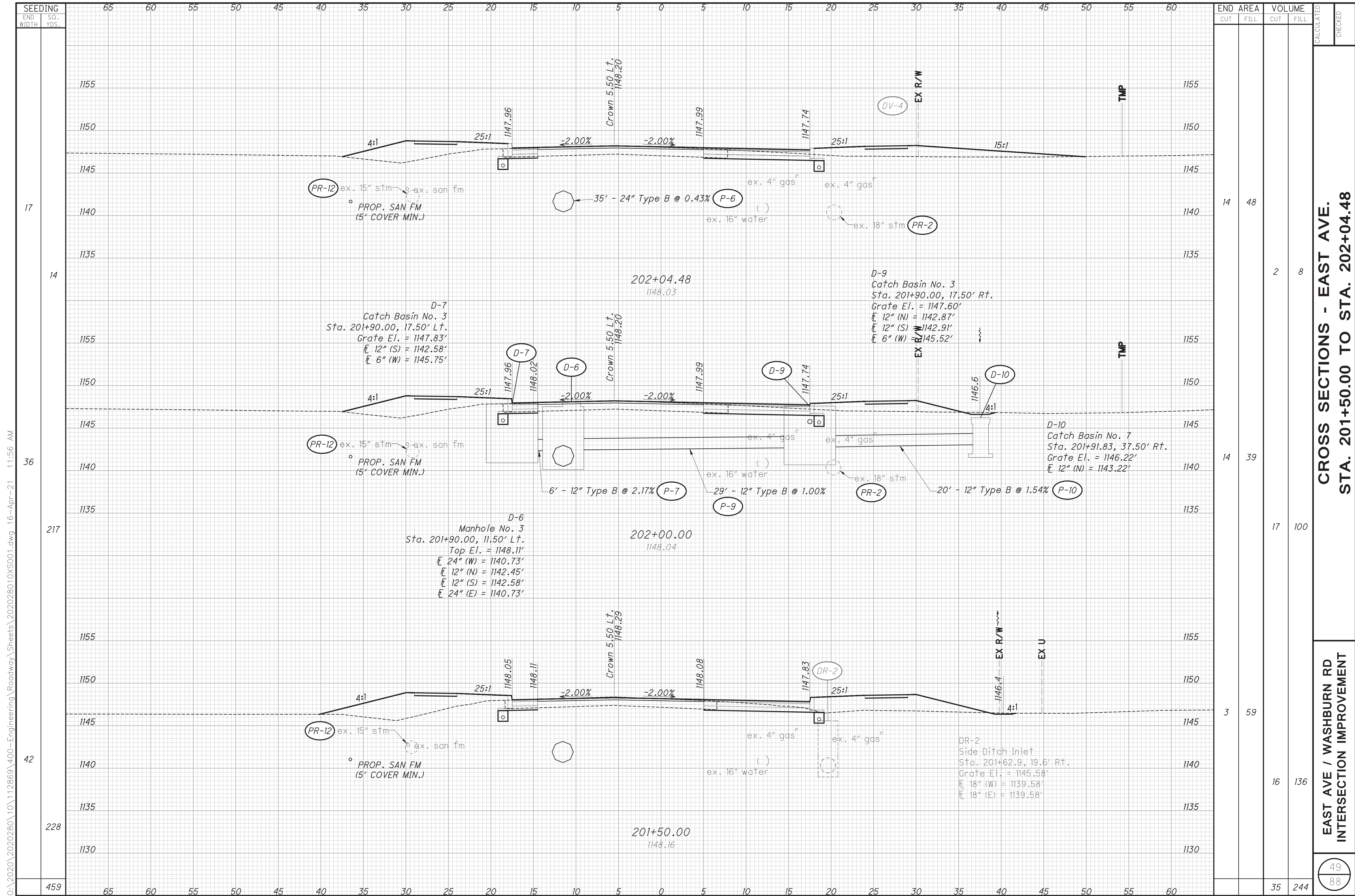
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END STA.	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
1155						
1150						
1145						
1140	14	74				
1135			18	140		
1160						
1155						
1150						
1145	5	64				
1140			14	69		
1160						
1155						
1150	10	4				
1145						
1140						
1135						
1130						
470			45	250		

**CROSS SECTIONS - EAST AVE.
 STA. 200+00.00 TO STA. 201+00.00**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

48
 88



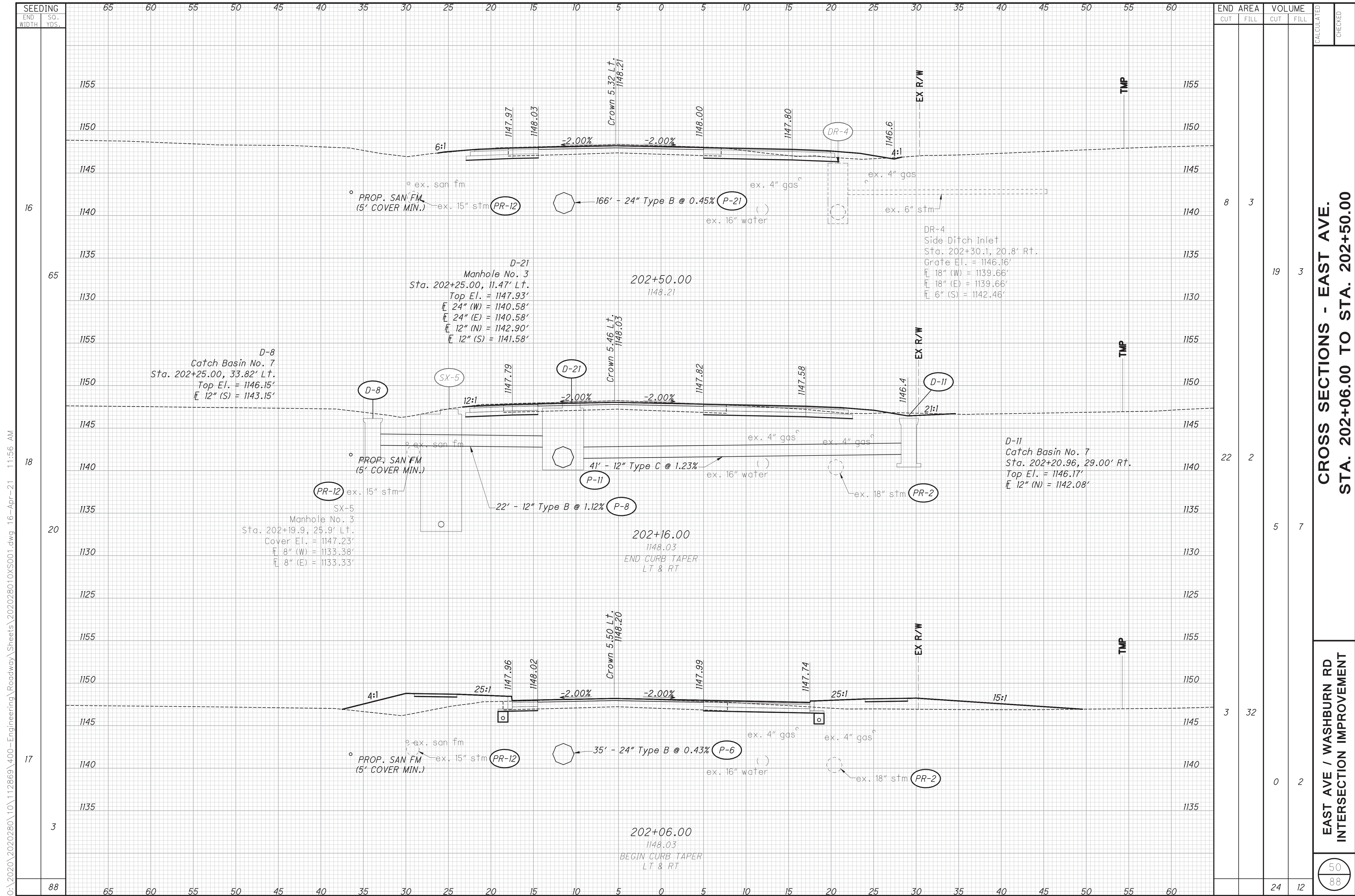
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 459
 228
 42
 217
 36
 14
 17

END STA.	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
201+50.00						
202+04.48	14	48	2	8		
202+00.00	14	39	17	100		
201+62.9	3	59	16	136		
TOTAL	35	244				

**CROSS SECTIONS - EAST AVE.
 STA. 201+50.00 TO STA. 202+04.48**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

49
 88



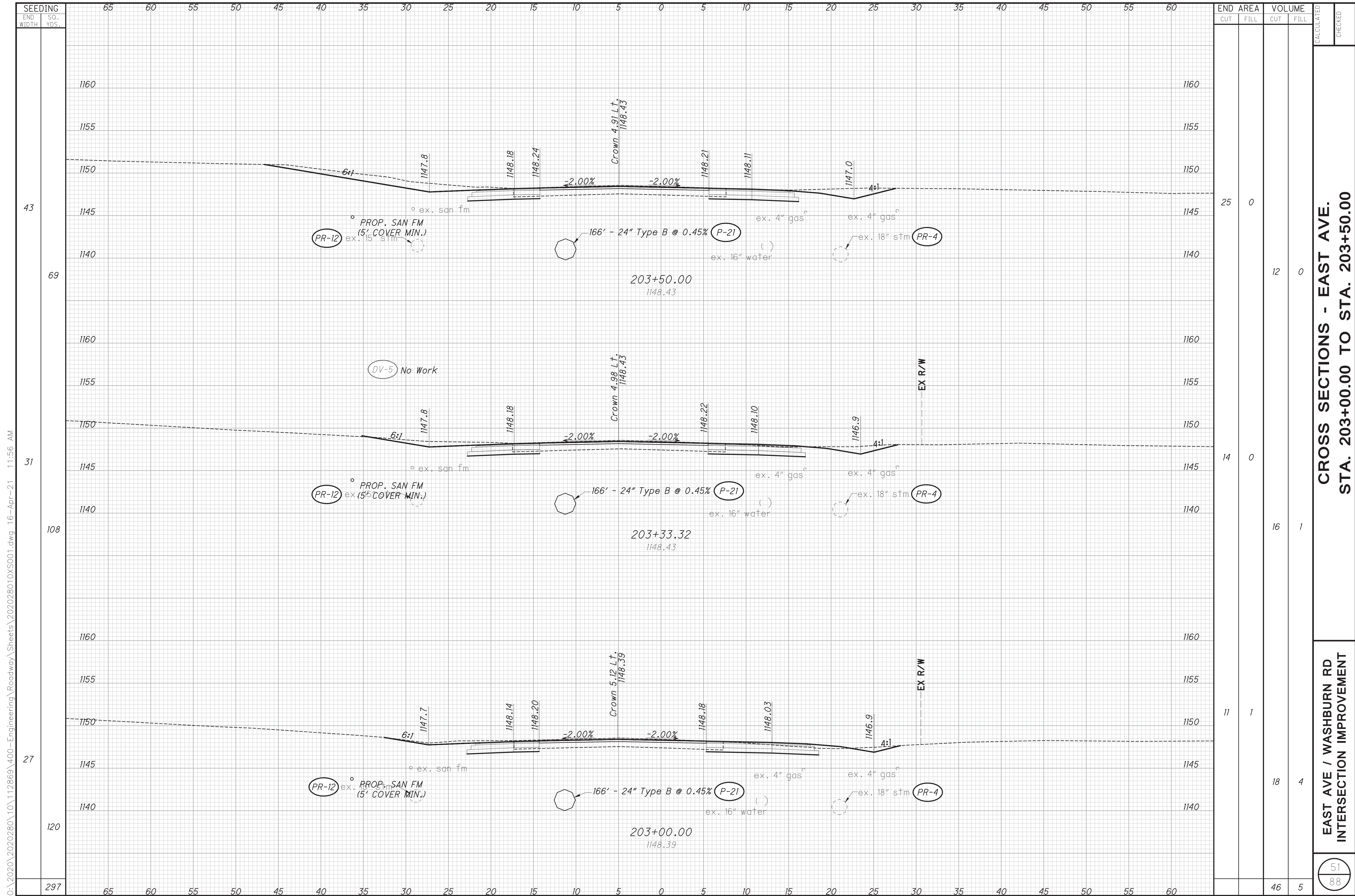
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SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
16	8	3				
65			19	3		
18	22	2				
20			5	7		
17	3	32				
3			0	2		
88			24	12		

**CROSS SECTIONS - EAST AVE.
 STA. 202+06.00 TO STA. 202+50.00**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

50
 88



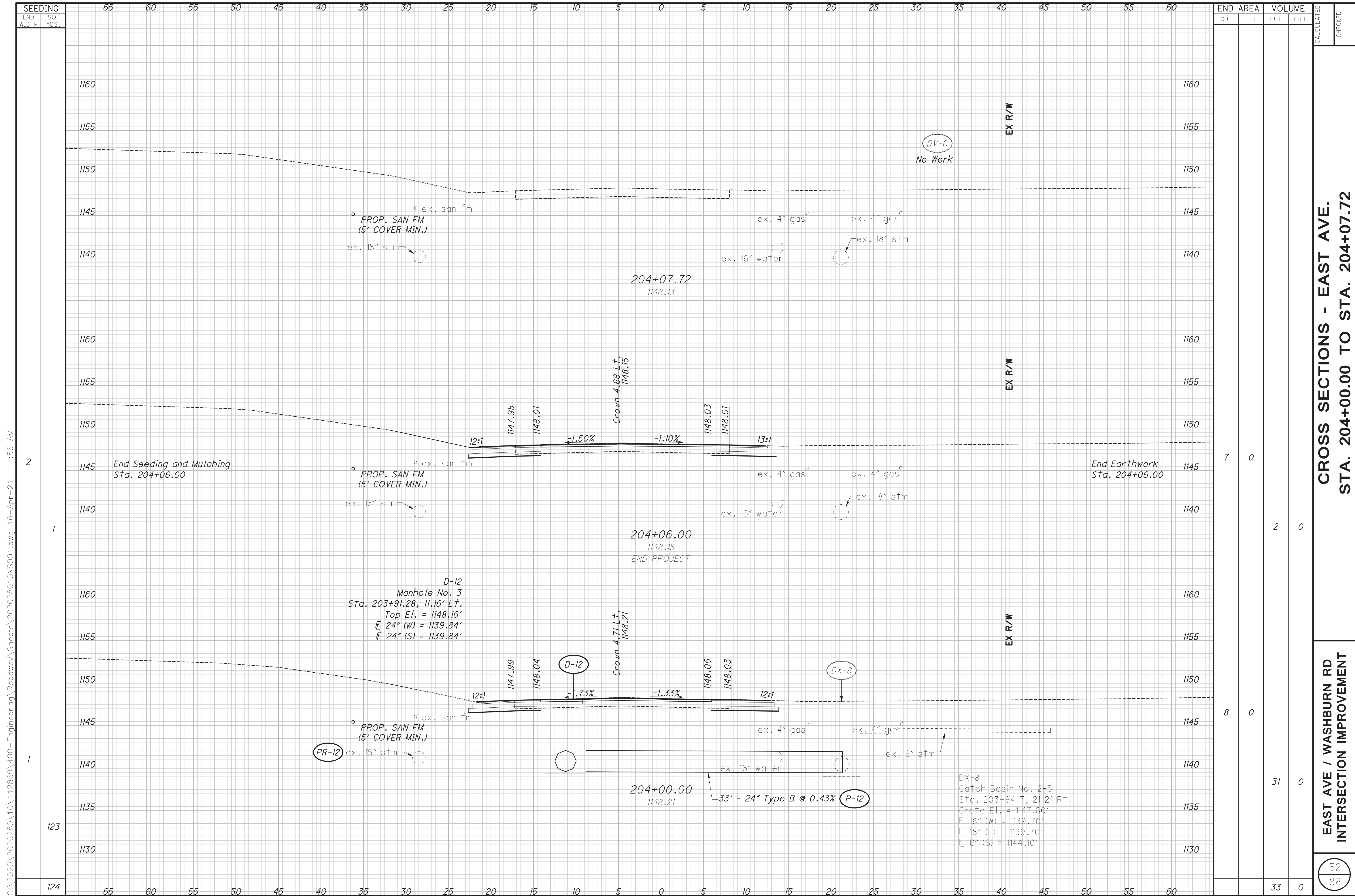
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SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
43	25	0	12	0		
69	14	0	16	1		
108	11	1	18	4		
27						
120						
297			46	5		

**CROSS SECTIONS - EAST AVE.
 STA. 203+00.00 TO STA. 203+50.00**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

51
 88



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2
1
1
123
124

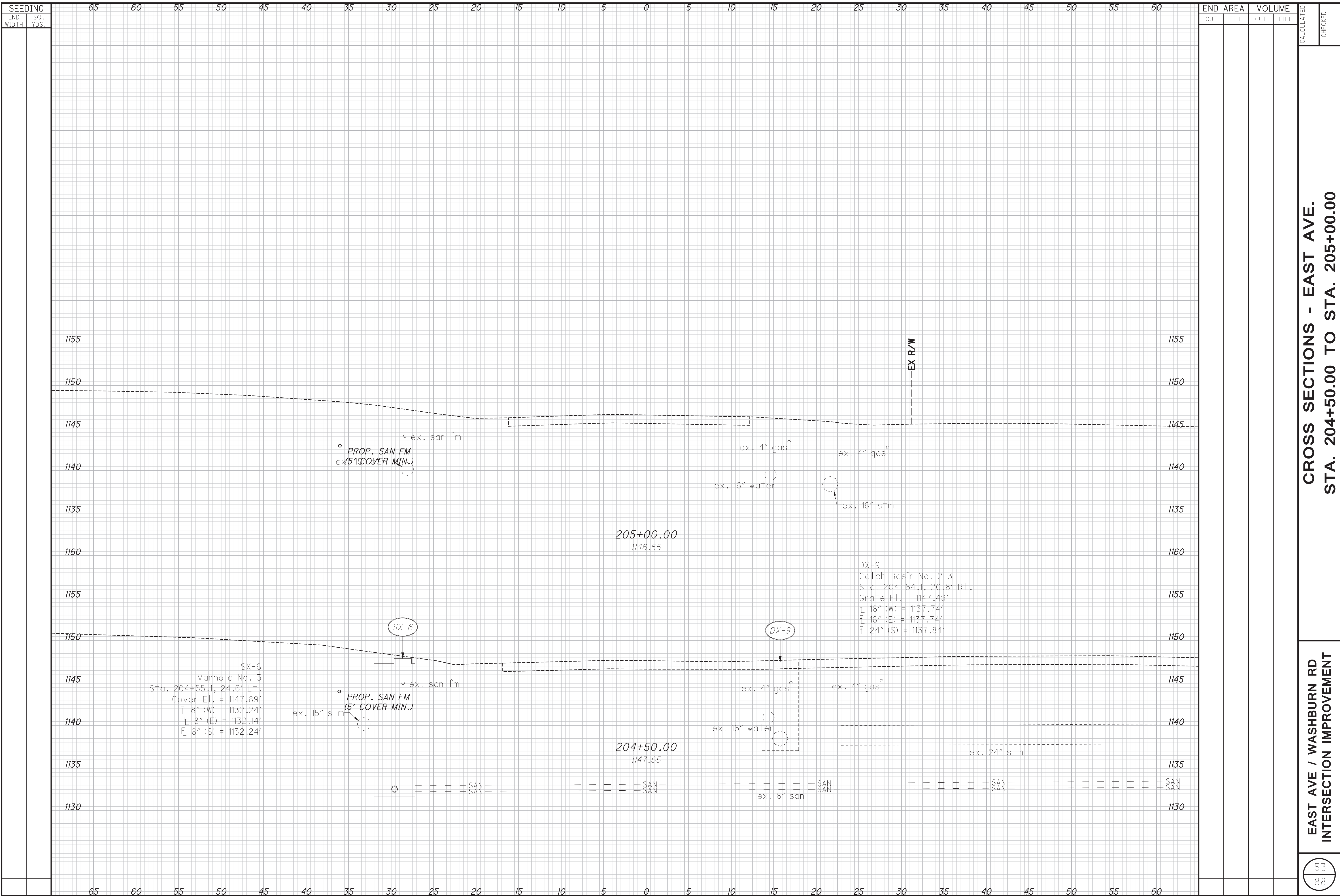
END STA.	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
204+00.00	7	0	2	0		
204+06.00	8	0	31	0		
204+07.72			33	0		

**CROSS SECTIONS - EAST AVE.
 STA. 204+00.00 TO STA. 204+07.72**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

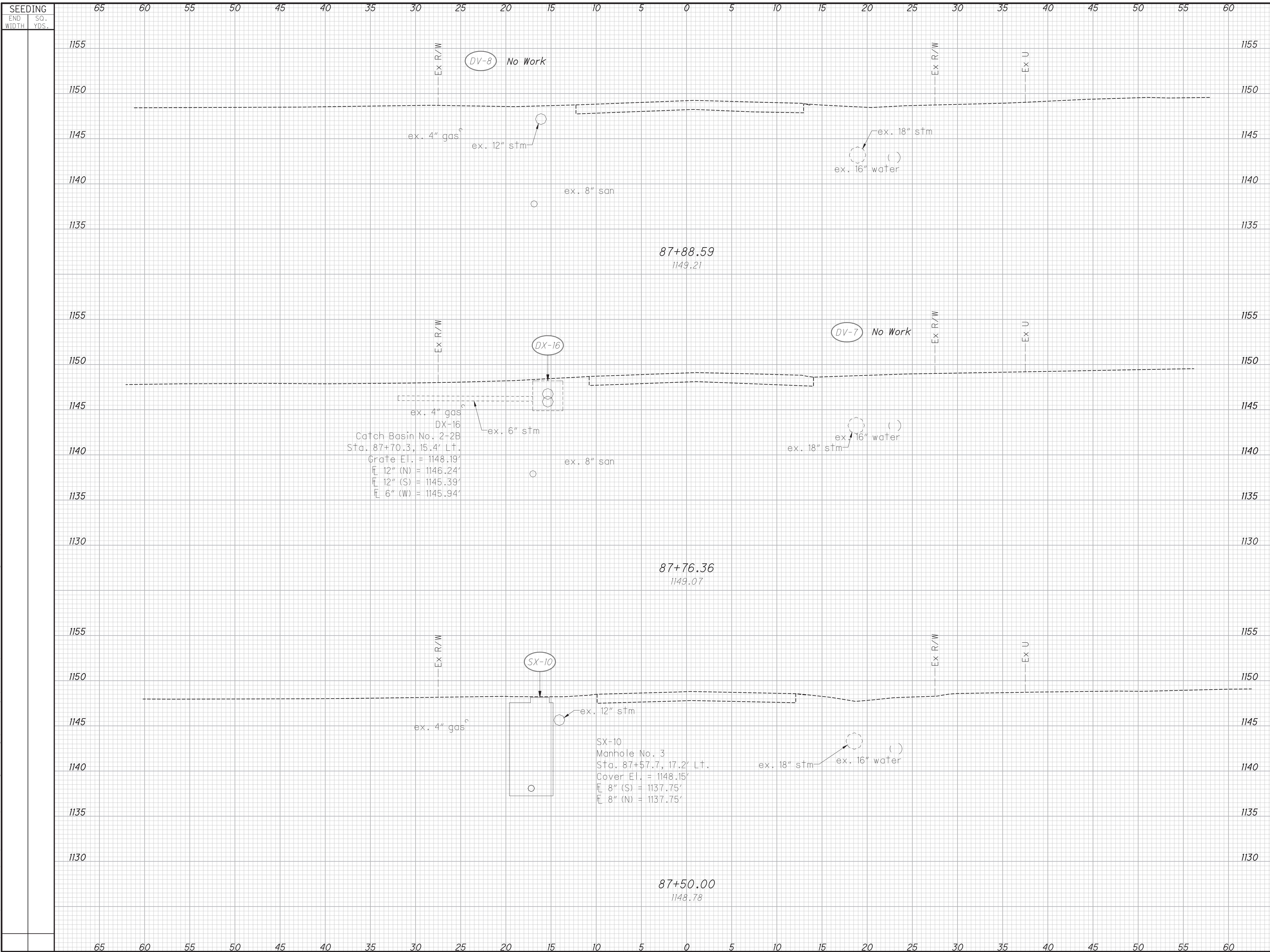
52
 88

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STATION	ELEVATION	DESCRIPTION
205+00.00	1146.55	Proposed Sanitary Manhole (SAN FM) with 5' cover minimum.
204+50.00	1147.65	Proposed Sanitary Manhole (SAN FM) with 5' cover minimum.
204+55.1	1147.89	Manhole No. 3 (SX-6) with 24.6' length.
204+64.1	1147.49	Catch Basin No. 2-3 (DX-9) with 20.8' length.

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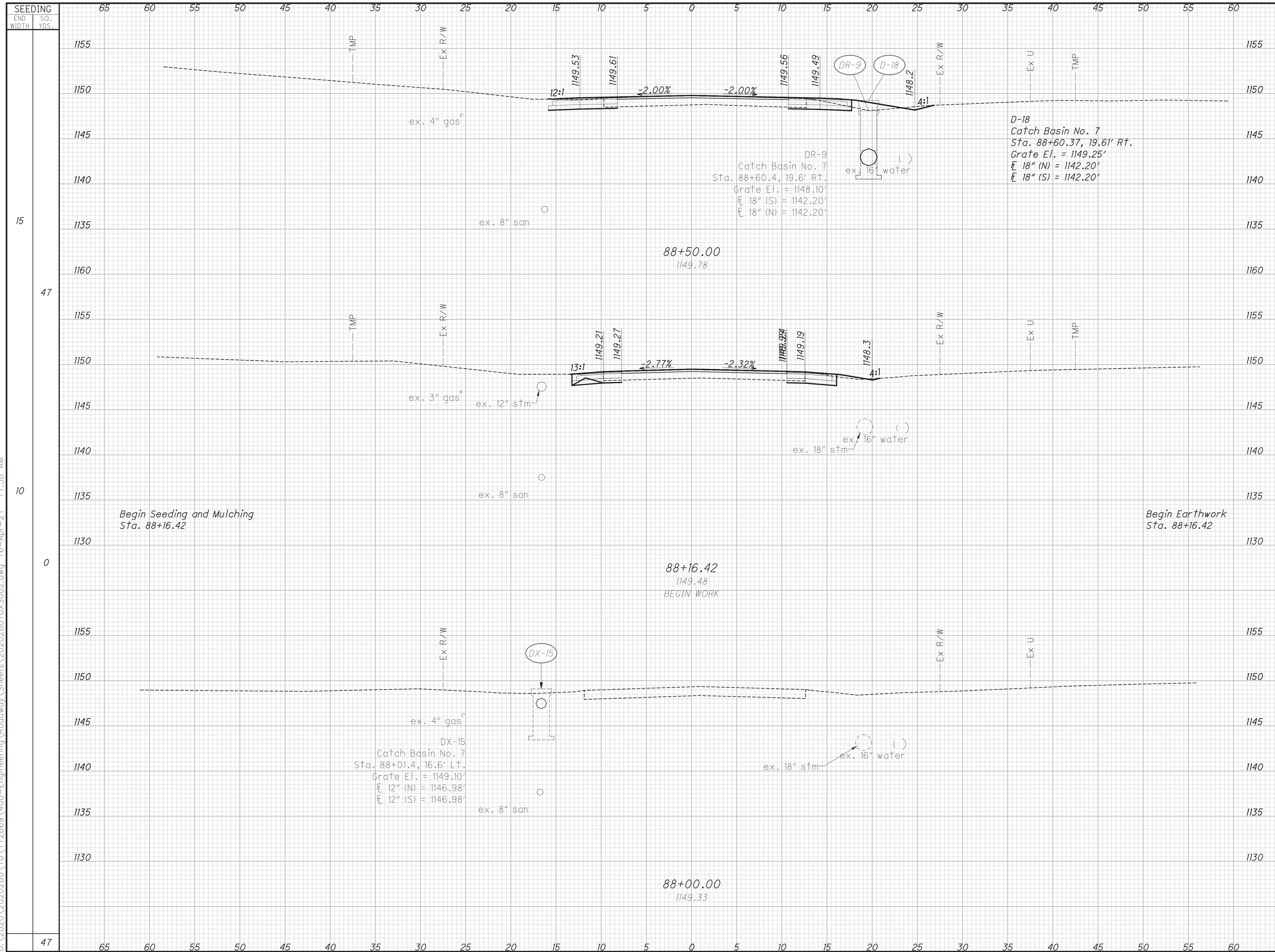


END	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		

**CROSS SECTIONS - WASHBURN RD.
 STA. 87+50.00 TO STA. 87+88.59**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

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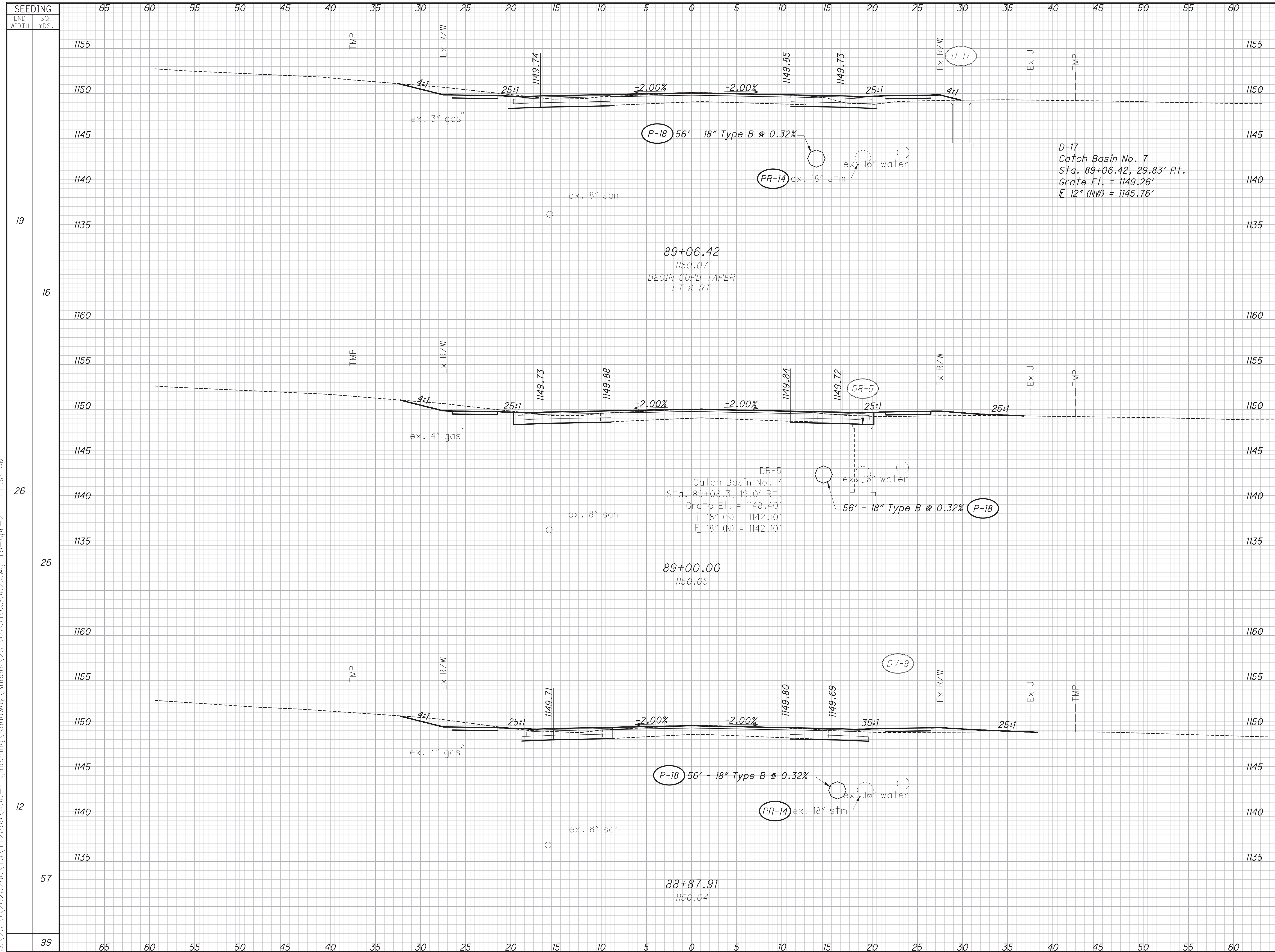
SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
15	11	3	10	3		
47	4	1	1	0		
10						
0						
47			12	3		

**CROSS SECTIONS - WASHBURN RD.
STA. 88+00.00 TO STA. 88+50.00**

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

55
88

O:\2020\2020280\10\112869\400-Engineering\Roadway\Sheets\2020280\10XS002.dwg 16-Apr-21 11:58 AM

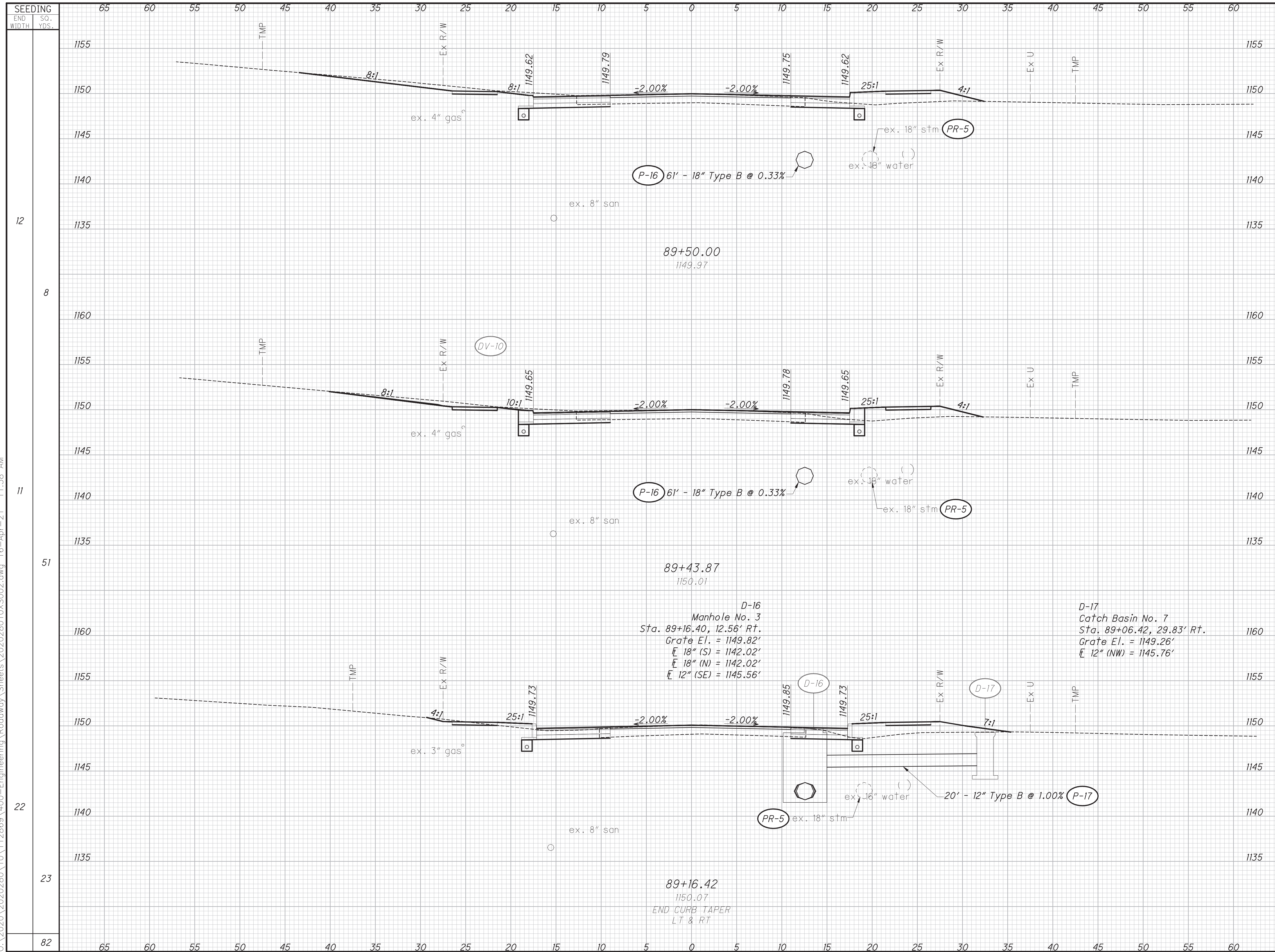


SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
19	16	5	5	1		
16	23	4	10	2		
26	20	4	22	6		
57			37	9		

CROSS SECTIONS - WASHBURN RD.
EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT
STA. 88+87.91 TO STA. 89+06.42

56
88

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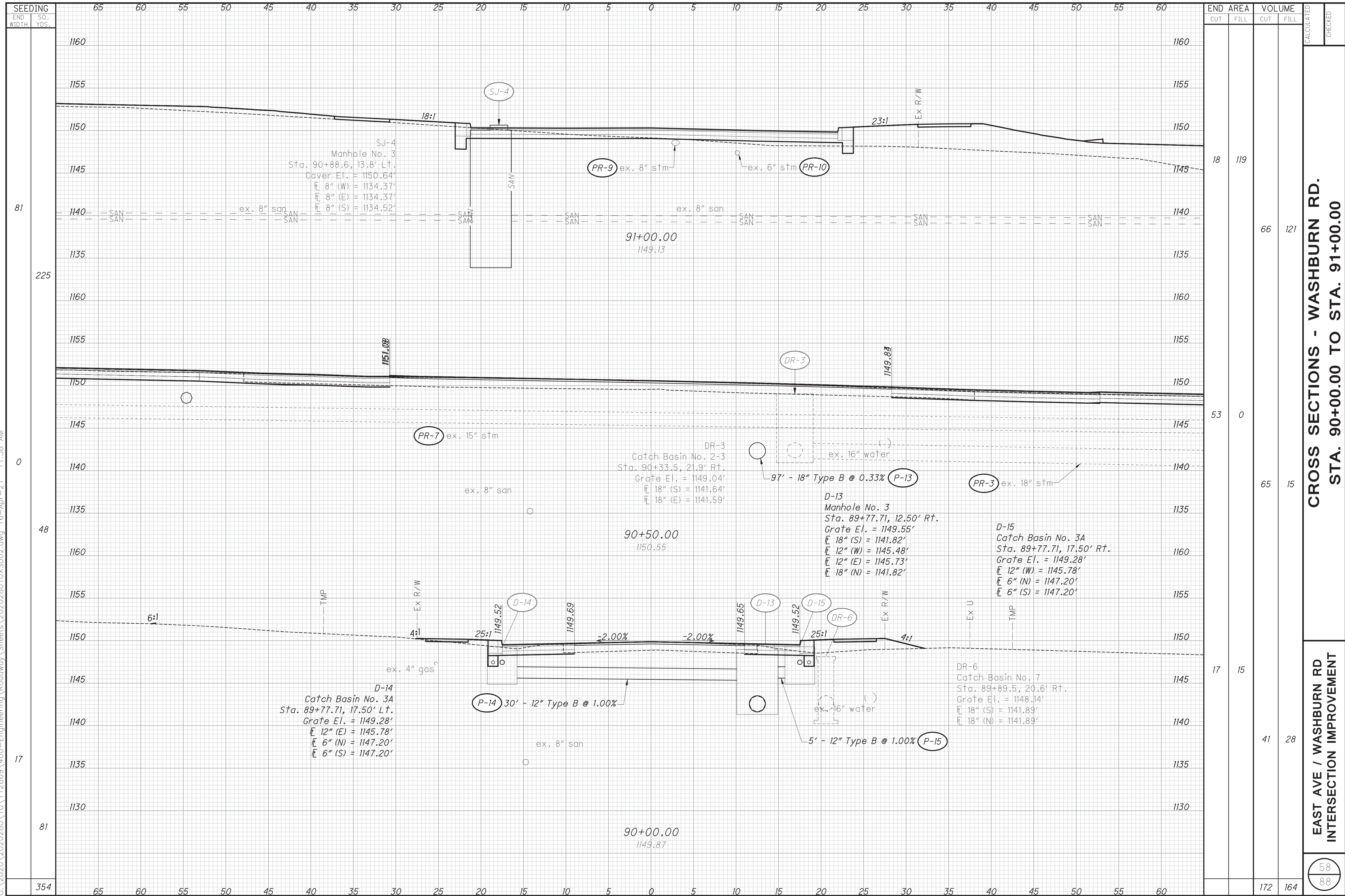
STATION	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
89+50.00	27	13	5	3		
89+43.87	20	12	16	12		
89+16.42	11	9	5	3		
TOTAL	58	34	26	18		

CROSS SECTIONS - WASHBURN RD.
STA. 89+16.42 TO STA. 89+50.00

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

57
88

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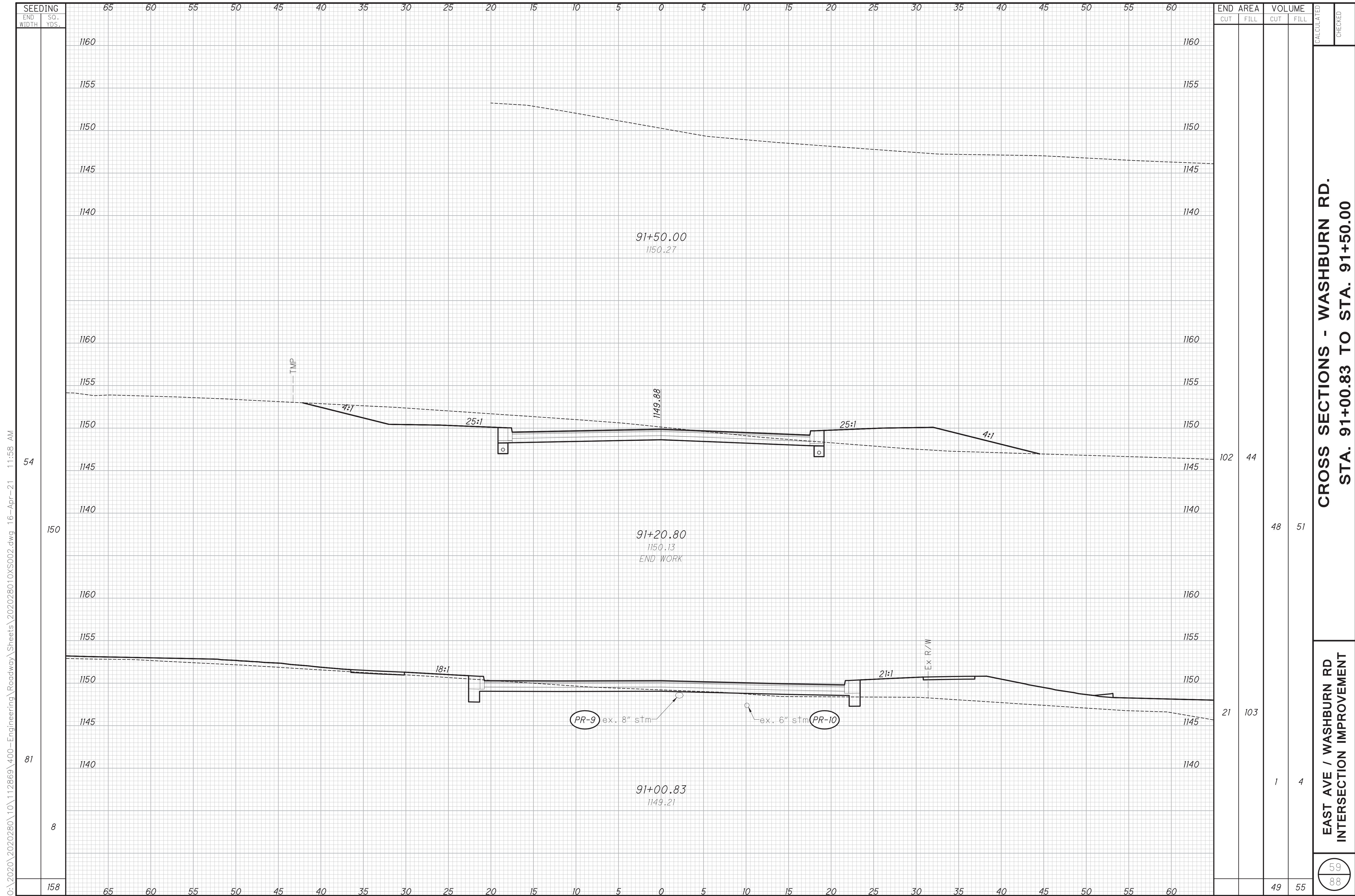


END STA.	AREA	VOLUME		CALCULATED	CHECKED
		CUT	FILL		
81	18	119	66	121	
225	53	0	65	15	
0	17	15	41	28	
17	172	164	88	58	

**CROSS SECTIONS - WASHBURN RD.
STA. 90+00.00 TO STA. 91+00.00**

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

58
88



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**CROSS SECTIONS - WASHBURN RD.
 STA. 91+00.83 TO STA. 91+50.00**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

59
 88

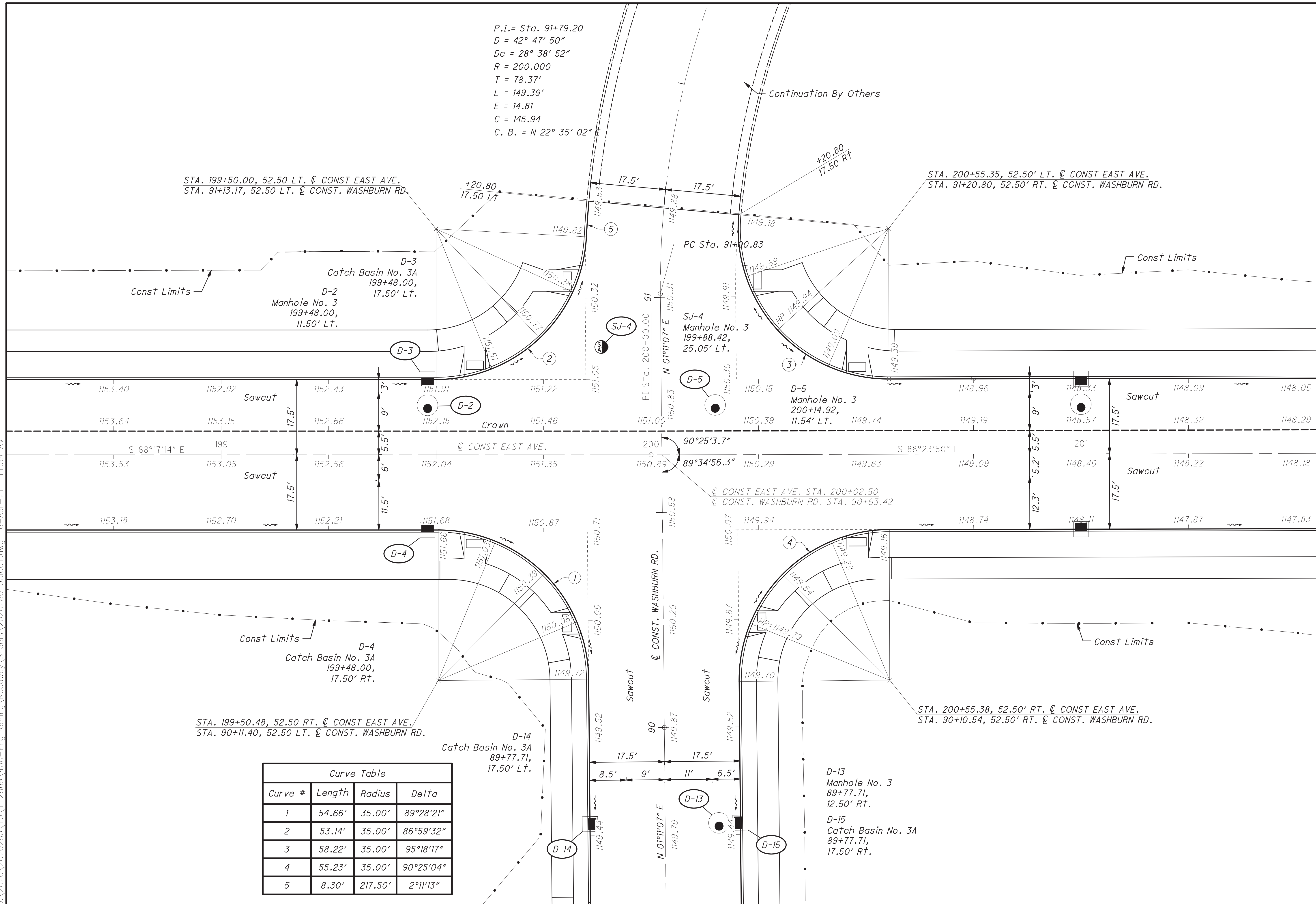
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P.I. = Sta. 91+79.20
 D = 42° 47' 50"
 Dc = 28° 38' 52"
 R = 200.000
 T = 78.37'
 L = 149.39'
 E = 14.81
 C = 145.94
 C. B. = N 22° 35' 02" E

CALCULATED 0 10 20
 CHECKED
 HORIZONTAL SCALE IN FEET

STA. 199+50.00, 52.50 LT. @ CONST EAST AVE.
 STA. 91+13.17, 52.50 LT. @ CONST. WASHBURN RD.

STA. 200+55.35, 52.50' LT. @ CONST EAST AVE.
 STA. 91+20.80, 52.50' RT. @ CONST. WASHBURN RD.

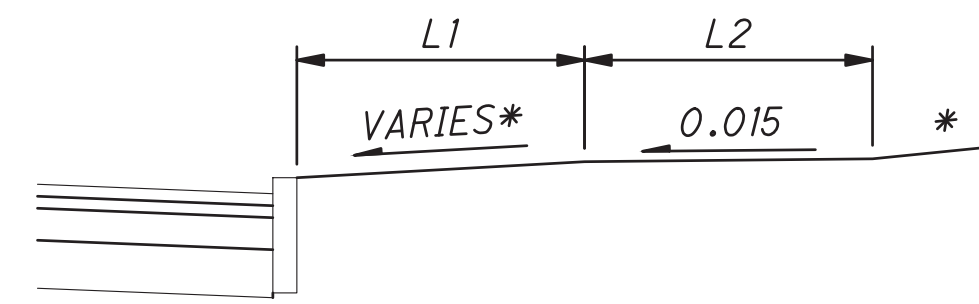
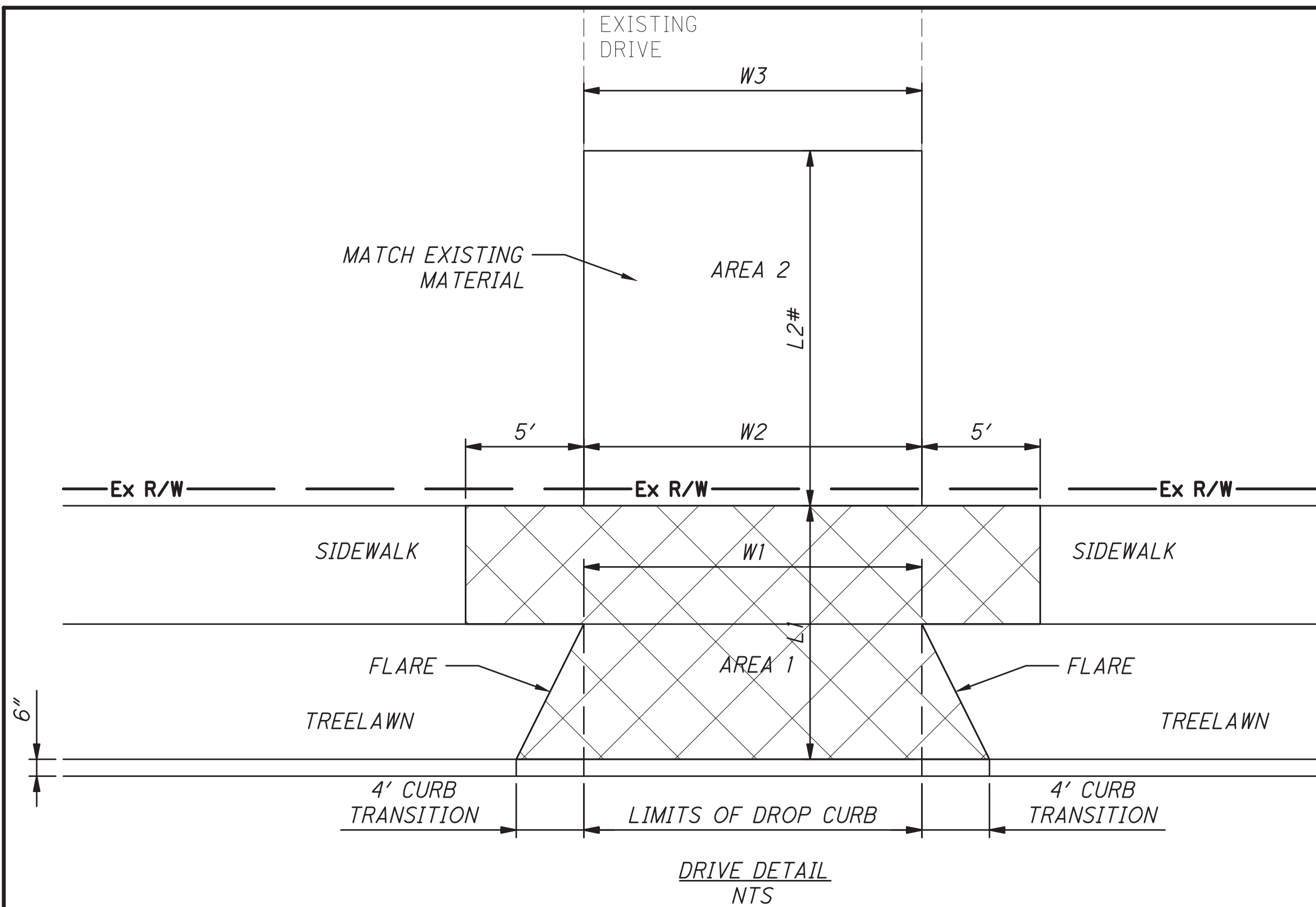


Curve Table			
Curve #	Length	Radius	Delta
1	54.66'	35.00'	89°28'21"
2	53.14'	35.00'	86°59'32"
3	58.22'	35.00'	95°18'17"
4	55.23'	35.00'	90°25'04"
5	8.30'	217.50'	2°11'13"

**INTERSECTION DETAILS
 EAST AVE. AND WASHBURN RD.**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

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* FOR DRIVE PROFILES, SEE SHEETS 62-63

EXISTING MATERIALS	USAGE	INSIDE LIMITS OF APRON (AREA 1 AND 2)	OUTSIDE LIMITS OF APRON (AREA 3)
CONCRETE#	RESIDENTIAL	ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS ITEM 304 - 4" AGGREGATE BASE (NO SLAG ALLOWED) ITEM 204 - SUBGRADE COMPACTION	ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS ITEM 304 - 4" AGGREGATE BASE (NO SLAG ALLOWED) ITEM 204 - SUBGRADE COMPACTION
GRAVEL			ITEM 411 - 8" STABILIZED CRUSHED AGGREGATE

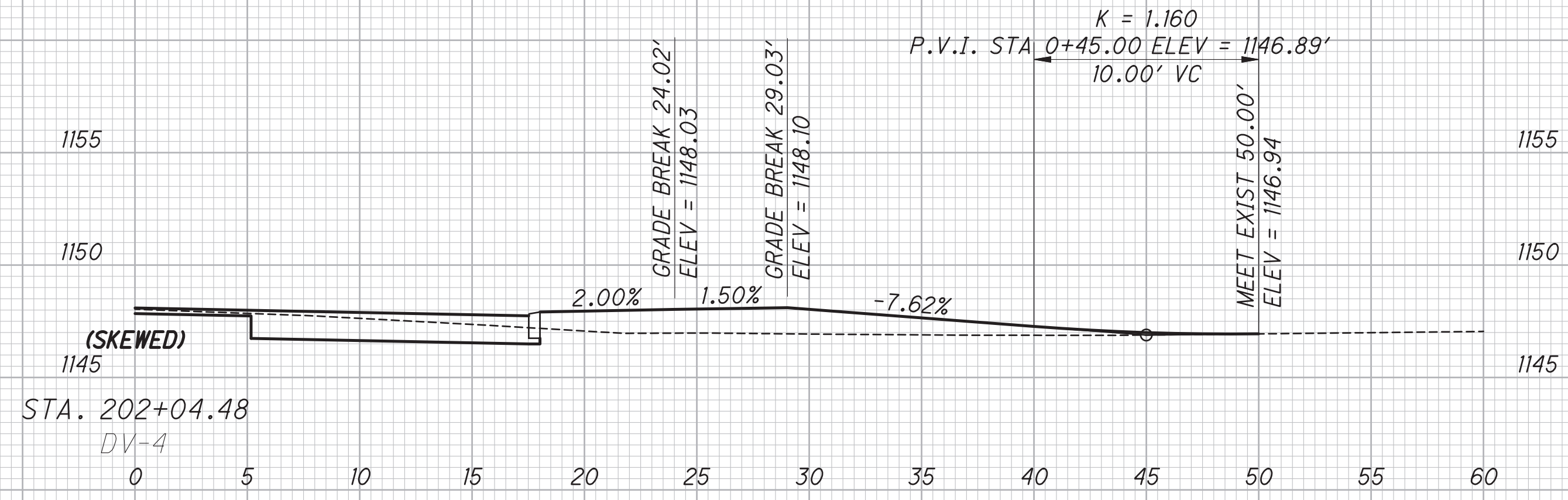
CONCRETE DRIVE RECONSTRUCTION SHALL EXTEND TO THE NEAREST JOINT FOUND BEYOND THE PROPOSED TIE DOWN POINT IF FOUND TO BE DIFFERENT THAN SHOWN ON THE PLANS.

SHEET	REFERENCE	STATION	ALIGNMENT	SIDE	EXISTING MATERIAL	APRON LENGTH "L1"	DRIVEWAY LENGTH "L2"	WIDTH "W1"	WIDTH "W2"	WIDTH "W3"	AREA 1	AREA 2	204	304	411	452			
													SUBGRADE COMPACTION	AGGREGATE BASE (NO SLAG ALLOWED)	STABILIZED CRUSHED AGGREGATE	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS			
													SY	CY	CY	SY			
40	DV-1	196+86.53	EAST AVE	RT	GRAVEL	4.03	7.36	18.69	10.63	10.56	58.63	77.65	16		4	7			
40	DV-2	198+24.22	EAST AVE	RT	GRAVEL	11.07	6.04	16.62	9.19	9.13	173.71	55.23	26		6	20			
40	DV-3	199+26.24	EAST AVE	LT	ASPHALT	REMOVE (COORDINATE WITH "BY OTHERS" CONTRACTOR)													
41	DV-4	201+04.48	EAST AVE	RT	GRAVEL	11.01	21.02	16.93	9.52	9.52	177.06	199.80	42		10	20			
41	DV-5	203+33.32	EAST AVE	LT	GRAVEL	REMOVE (COORDINATE WITH "BY OTHERS" CONTRACTOR)													
41	DV-6	204+07.72	EAST AVE	RT	CONCRETE	NO WORK													
42	DV-7	87+76.36	WASHBURN RD	RT	CONCRETE	NO WORK													
42	DV-8	87+88.59	WASHBURN RD	LT	GRAVEL	NO WORK													
42	DV-9	88+87.91	WASHBURN RD	RT	GRAVEL	8.41	13.50	26.60	27.56	27.56	244.75	372.09	69		16	28			
42	DV-10	89+43.87	WASHBURN RD	LT	CONCRETE	8.50	18.50	30.43	29.90	29.90	268.78	553.21	92	11		92			
TOTALS CARRIED TO GENERAL SUMMARY													245	11	36	167			

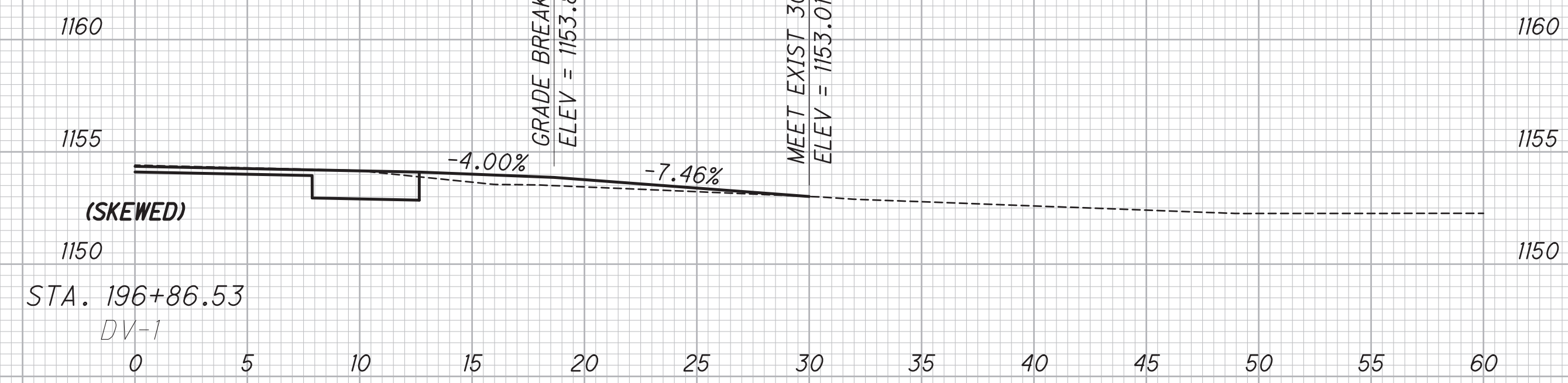
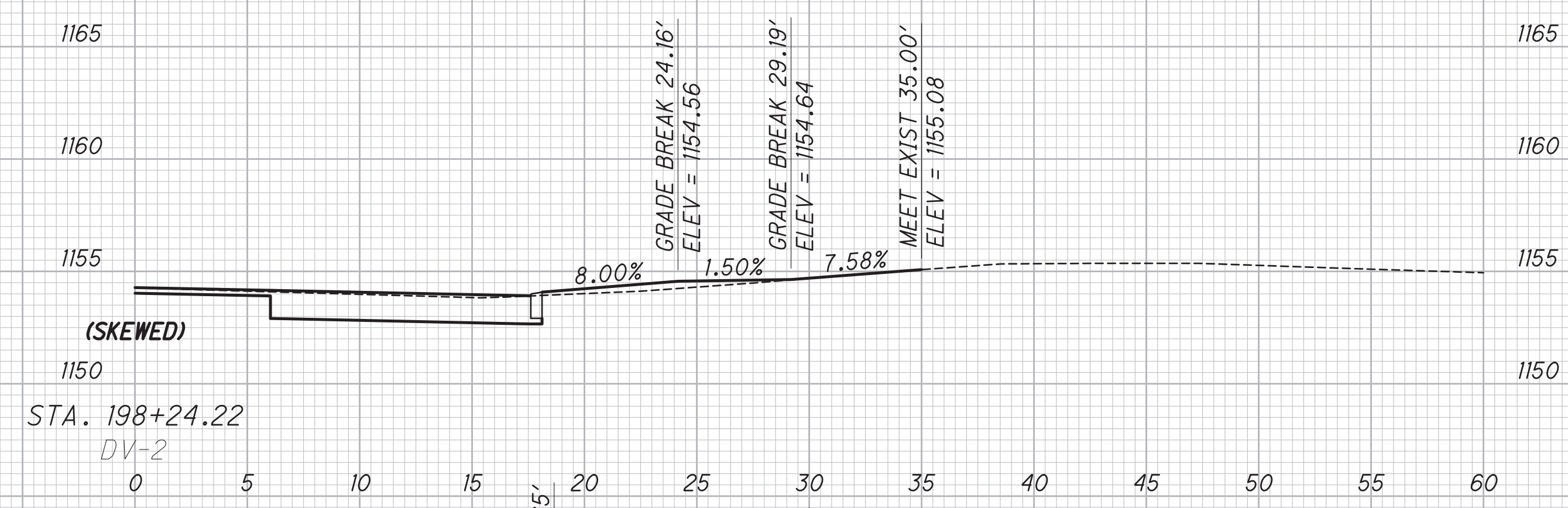
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SEEDING
END SQ.
WIDTH YDS.

END AREA VOLUME
CUT FILL CUT FILL
CALCULATED CHECKED



DV-3
REMOVE (COORDINATE WITH
"BY OTHERS" CONTRACTOR)



DRIVE PROFILES
EAST AVE.

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

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SEEDING

END WIDTH	SQ. YDS.

END AREA

CUT	FILL

VOLUME

CUT	FILL

CALCULATED

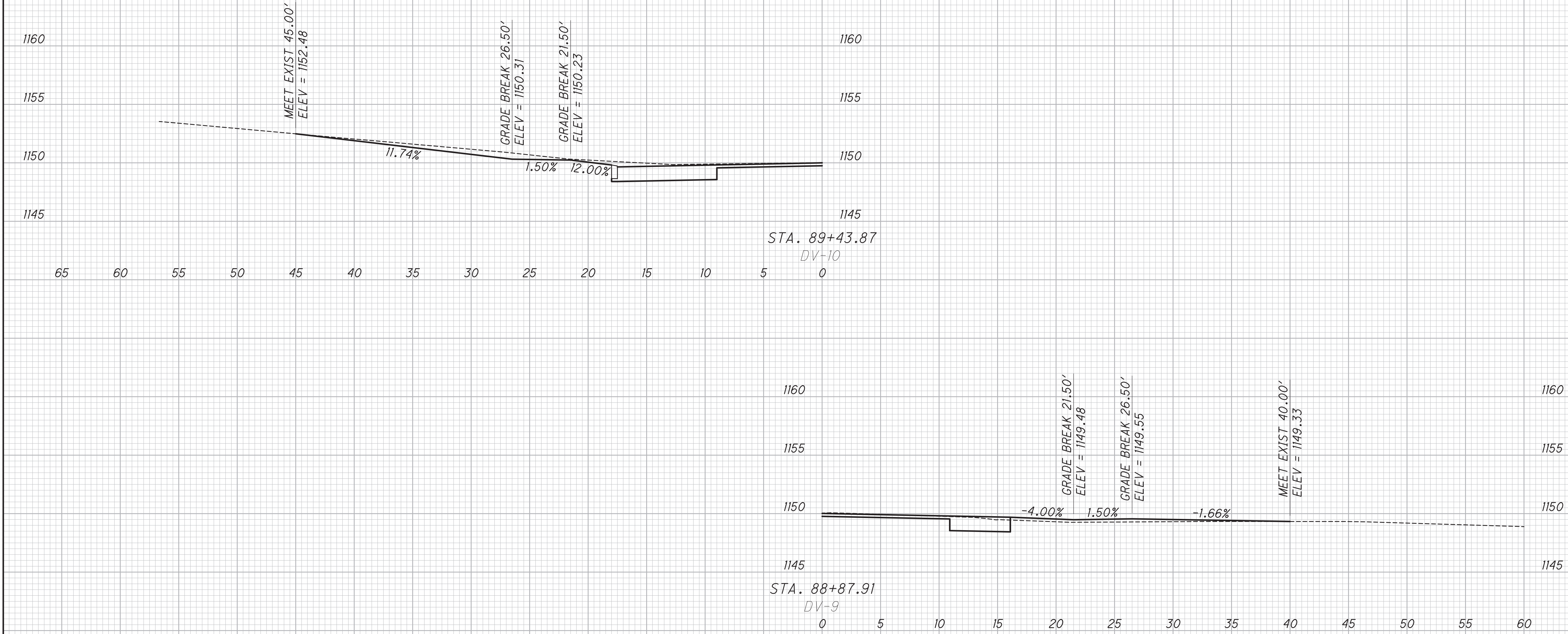
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CHECKED

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









DRIVE PROFILES
WASHBURN RD

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT



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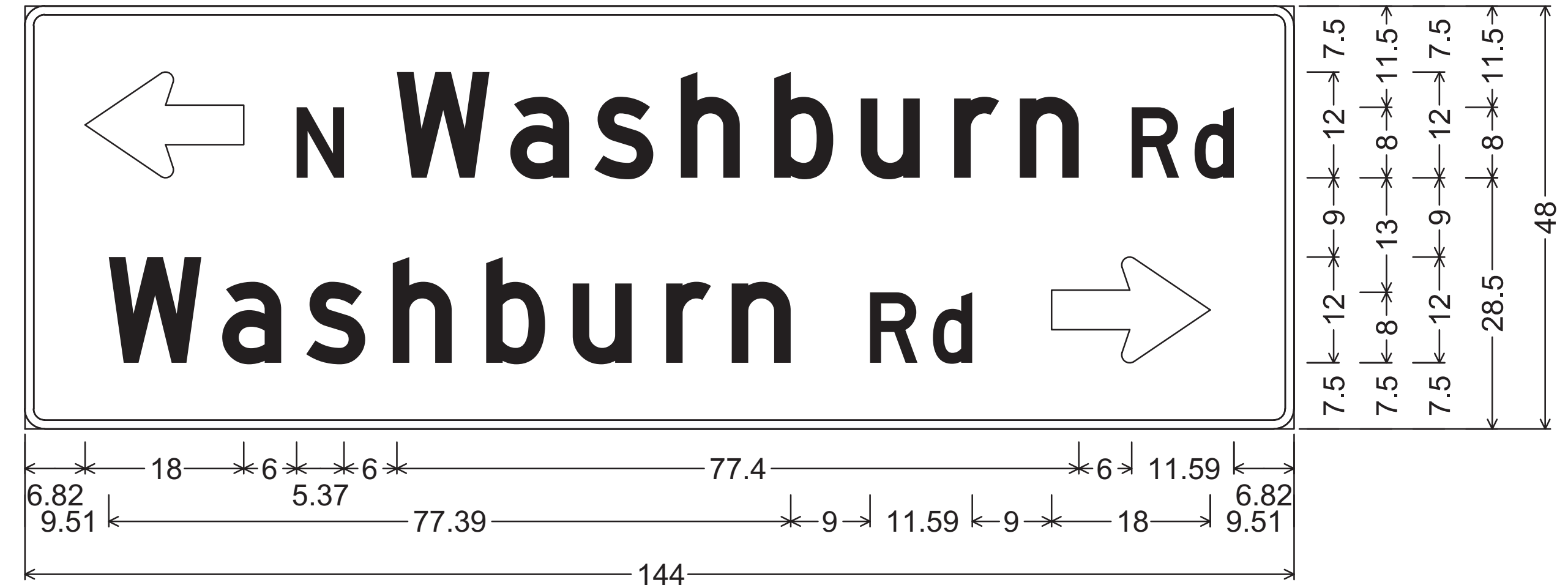
TRAFFIC CONTROL LEGEND

-  PROPOSED SIGN
-  EXISTING SIGN TO BE REMOVED
-  SIGN SUPPORT
-  EXISTING SIGN TO BE REMOVED
-  PROPOSED SIGN
-  EDGE LINE, WHITE
-  CENTER LINE, DOUBLE SOLID
-  CHANNELIZING LINE
-  STOP LINE
-  CROSSWALK LINE
-  TRANSVERSE/DIAGONAL LINE, YELLOW
-  LANE ARROW
-  DOTTED LINE, WHITE

ITEM 630 - SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN

FLAT SHEET SIGNS SHALL BE RIGIDLY ATTACHED TO TRAFFIC SIGNAL MAST ARMS WITH THE SIGN CENTERED VERTICALLY WITH THE ARM, USING THE SIGN BRACKET DETAIL ON STANDARD CONSTRUCTION DRAWING TC-16.22, OR ANOTHER METHOD OF RIGID ATTACHMENT AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ENSURE THAT THE SIGN FACE IS MOUNTED PERPENDICULAR (90 DEGREES) TO THE DIRECTION OF TRAFFIC. ALL HARDWARE SHALL BE PAINTED BLACK.

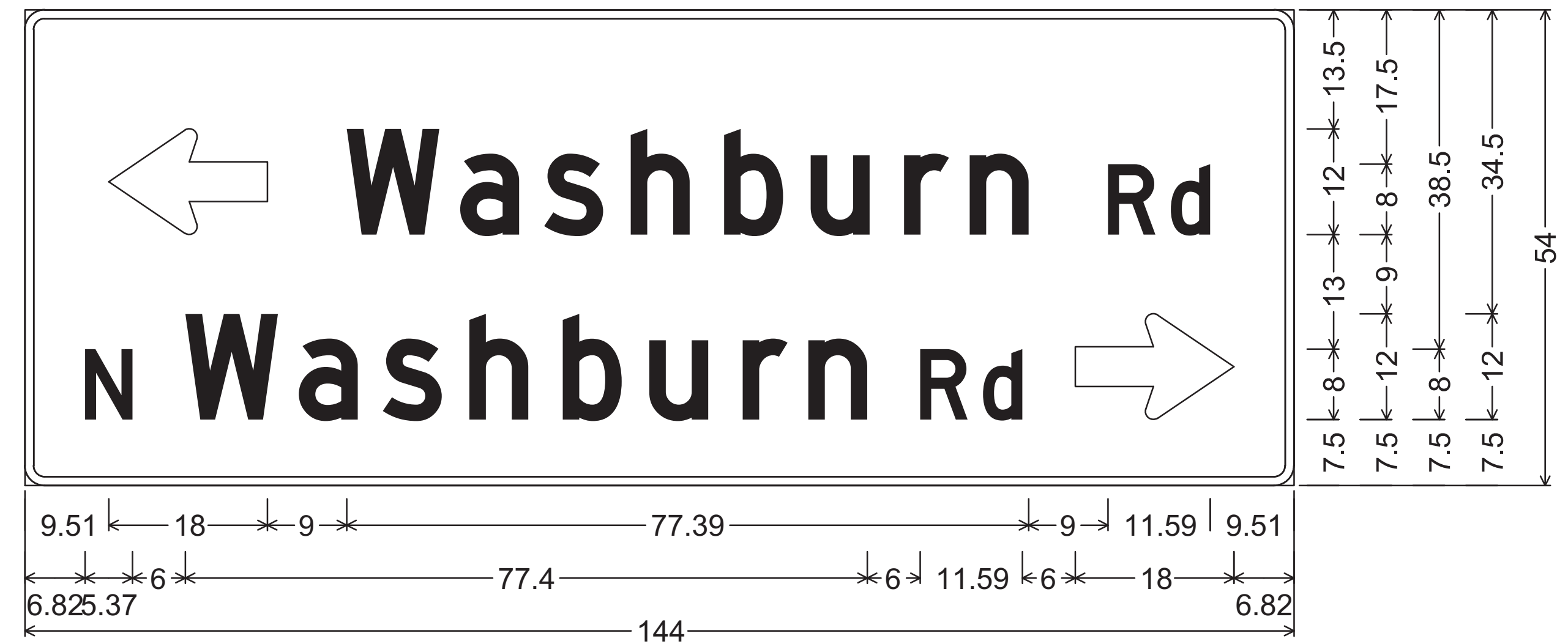
PAYMENT FOR ITEM 630 - SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND ALL PARTS NECESSARY TO ATTACH ONE SIGN.



SPECIAL;
 2.25" Radius, 1.00" Border, Black on White;
 Standard Arrow Custom 18.00" X 12.00" 180°; "N", D; "Washburn", D; "Rd", D;
 "Washburn", D; "Rd", D; Standard Arrow Custom 18.00" X 12.00" 0°;
 Table of letter and object lefts

←	N	W	a	s	h	b	u	r	n	R	d
6.82	30.82	42.19	55.06	64.61	74.43	85.03	94.84	105.44	112.90	125.59	132.72
W	a	s	h	b	u	r	n	R	d	→	
9.51	22.38	31.93	41.74	52.34	62.16	72.76	80.21	95.90	103.03	116.49	

ALL DIMENSIONS ARE IN INCHES.



SPECIAL;
 2.25" Radius, 1.00" Border, Black on White;
 Standard Arrow Custom 18.00" X 12.00" 180°; "Washburn", D; "Rd", D; "N", D;
 "Washburn", D; "Rd", D; Standard Arrow Custom 18.00" X 12.00" 0°;
 Table of letter and object lefts

←	W	a	s	h	b	u	r	n	R	d	
9.51	36.51	49.38	58.93	68.74	79.34	89.16	99.76	107.21	122.90	130.03	
N	W	a	s	h	b	u	r	n	R	d	→
6.82	18.19	31.06	40.61	50.43	61.03	70.84	81.44	88.90	101.59	108.72	119.18

ALL DIMENSIONS ARE IN INCHES.

SIGNCAD DETAILS
 N.T.S.

TRAFFIC CONTROL NOTES & LEGEND

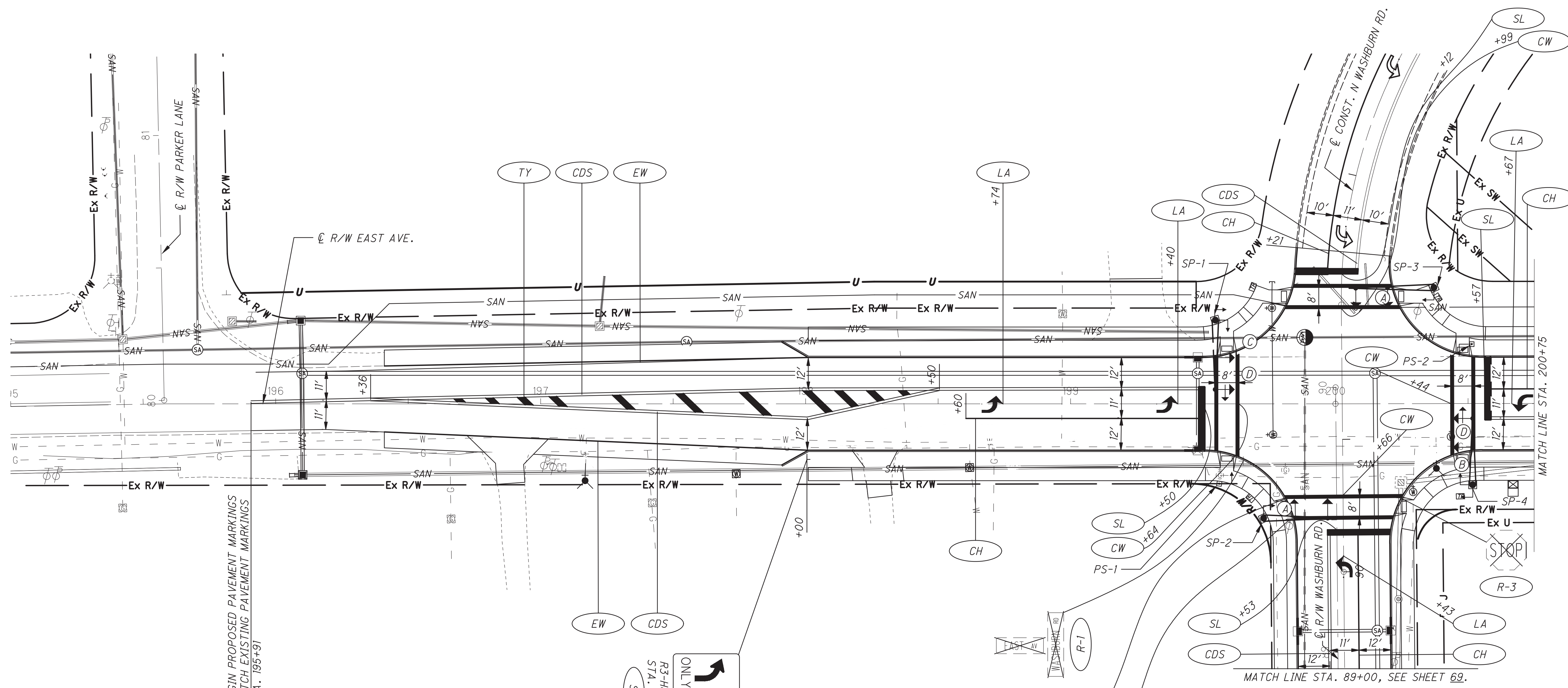
EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT

CALCULATED
 DLS
 CHECKED
 AKF

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630	630	630	630	630										
							GROUND MOUNTED SUPPORT, NO. 2 POST	GROUND MOUNTED SUPPORT, NO. 3 POST	SIGN, HANGER ASSEMBLY, MAST ARM, AS PER PLAN	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL									
							FT	FT	EACH	SF	EACH	EACH									
67	R-1	EAST AVE.		RT	D3-1						1	1									
67	R-2	WASHBURN RD.		LT	D3-1						1										
67	R-3	WASHBURN RD.		RT	R5-2						1	1									
					R1-1						1	1									
67	S-1	SP-3			D3-1-84	84 X 24				1	14.0										
67	S-2	SP-2			D3-1-84	84 X 24				1	14.0										
67	S-3	SP-1			SPECIAL	144 X 48				1	48.0										
67	S-4	SP-4			SPECIAL	144 X 48				1	48.0										
67	S-5	SP-1			R10-12-30	30 X 36				1	7.5										
67	S-6	SP-4			R10-12-30	30 X 36				1	7.5										
67	S-7	EAST AVE.	199+00	RT	R3-H8bh-36	36 X 30		13.0			7.5										
67	S-8	WASHBURN RD.	89+57	LT	R5-2-24	24 X 24	12.5				4.0										
68	S-9	EAST AVE.	202+07	LT	R3-H8bh-36	36 X 30		13.0			7.5										
69	S-10	WASHBURN RD.	88+53	RT	R3-H8bh-36	36 X 30		13.0			7.5										
TOTALS CARRIED TO GENERAL SUMMARY							12.5	39.0	6	165.5	4	3									

SIGNING SUBSUMMARY	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">CALCULATED</td> <td style="width: 50%; text-align: center;">DLS</td> </tr> <tr> <td style="width: 50%; text-align: center;">CHECKED</td> <td style="width: 50%; text-align: center;">AKF</td> </tr> </table>	CALCULATED	DLS	CHECKED	AKF
CALCULATED	DLS				
CHECKED	AKF				
EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">66</td> <td style="width: 50%; text-align: center;">88</td> </tr> </table>		66	88		
66	88				



BEGIN PROPOSED PAVEMENT MARKINGS
MATCH EXISTING PAVEMENT MARKINGS
STA. 195+91

R3-H8bH-36
STA. 199+00
S-7

MATCH LINE STA. 89+00, SEE SHEET 69.

MATCH LINE STA. 200+75

MAST ARM SIGNS

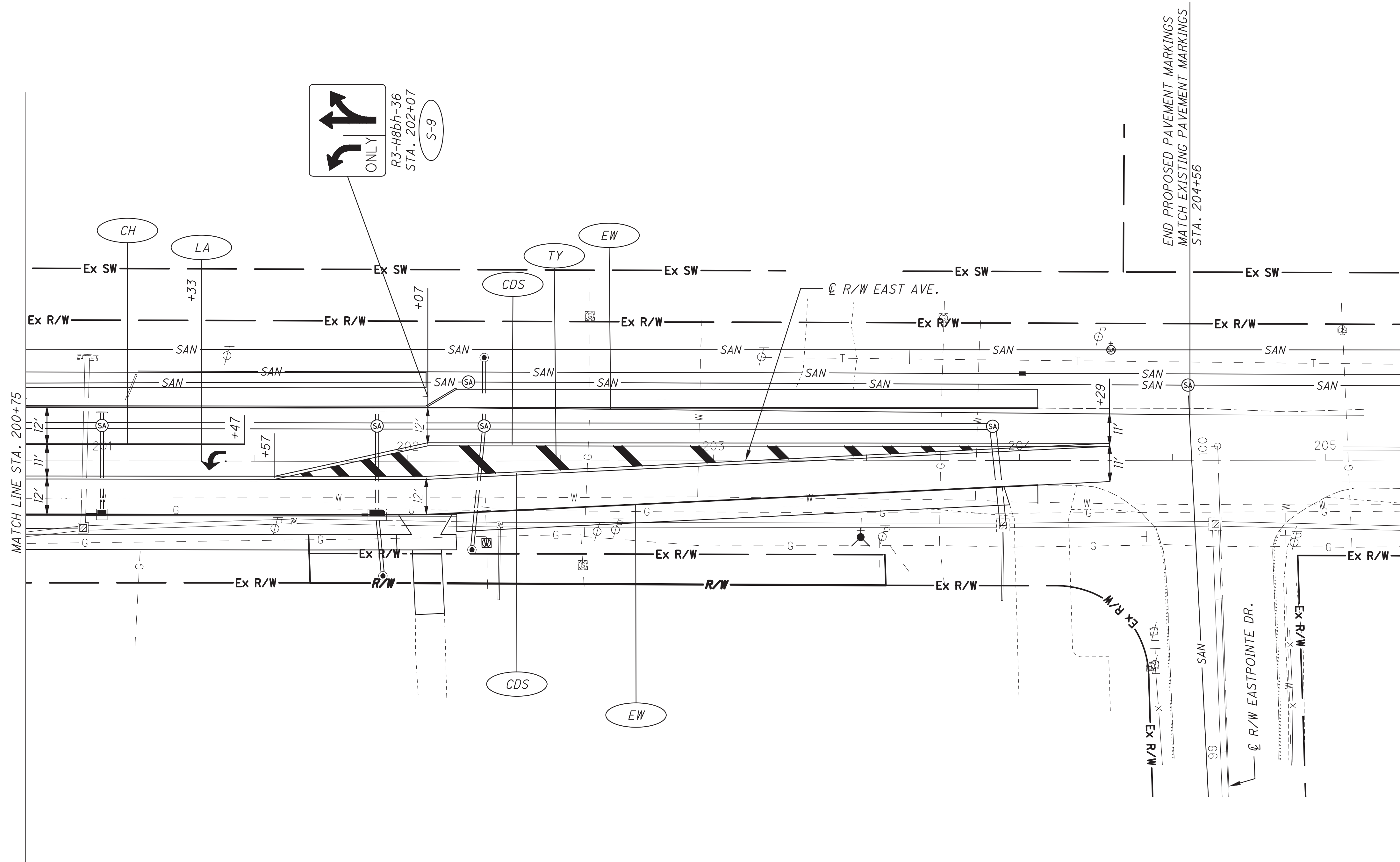
<p>East Ave D3-1-84 S-1 S-2</p>	<p>← N Washburn Rd Washburn Rd → SPECIAL S-3</p>	<p>← Washburn Rd ← N Washburn Rd → SPECIAL S-4</p>	<p>LEFT TURN YIELD ON GREEN R10-12-30 S-5 S-6</p>
--	--	--	--

R5-2-24
STA. 89+57
S-8

R-2

R-1

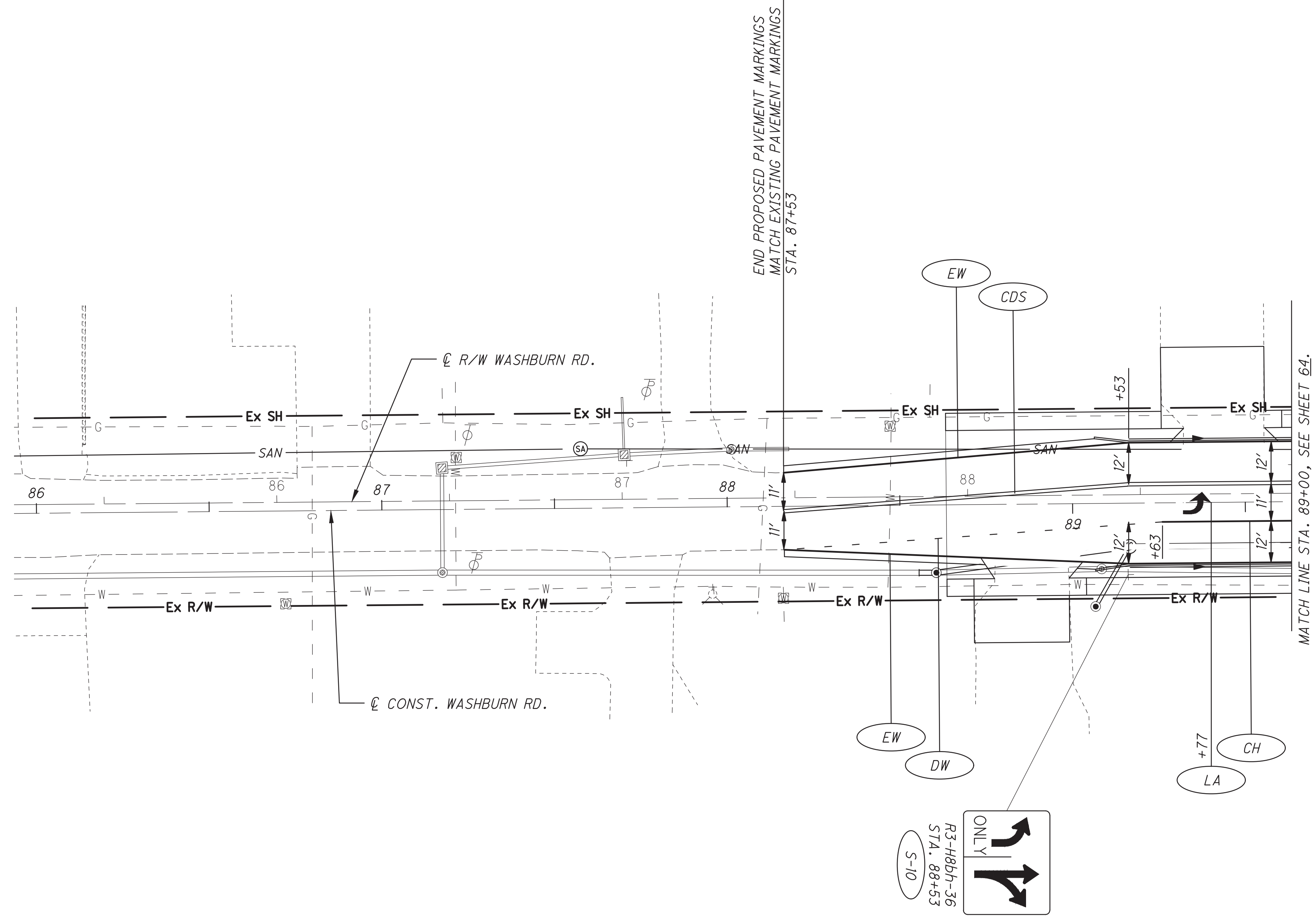
NOTES:
1. FOR TRAFFIC CONTROL LEGEND, SEE SHEET 64.
2. ALL EXISTING SIGNS NOT SHOWN SHALL REMAIN.



TRAFFIC CONTROL PLAN - EAST AVE.
STA. 200+75 TO END

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

- NOTES:
1. FOR TRAFFIC CONTROL LEGEND, SEE SHEET 64.
 2. ALL EXISTING SIGNS NOT SHOWN SHALL REMAIN.



NOTES:
 1. FOR TRAFFIC CONTROL LEGEND, SEE SHEET 64.
 2. ALL EXISTING SIGNS NOT SHOWN SHALL REMAIN.

CALCULATED	DLS
CHECKED	AKF

0 10 20 40
 HORIZONTAL SCALE IN FEET

**TRAFFIC CONTROL PLAN - WASHBURN RD.
 BEGIN TO STA. 89+00**

**EAST AVE / WASHBURN RD
 INTERSECTION IMPROVEMENT**

NOTIFICATION

THE CONTRACTOR SHALL GIVE THE PROJECT ENGINEER AND THE CITY OF TALLMADGE, (330) 633-0854, 10 WORKING DAYS PRIOR TO THE NEW SIGNAL BEING PLACED INTO OPERATION.

THE SIGNAL INSTALLATION SHALL BE INSPECTED BY CITY OF TALLMADGE PERSONNEL. ALL DEFICIENCIES SHALL BE CORRECTED BY THE CONTRACTOR AND APPROVED BY CITY OF TALLMADGE PERSONNEL.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 120 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST AND FINAL PROJECT ACCEPTANCE BY THE CITY OF TALLMADGE. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY.

EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLER, CABINET, VEHICLE DETECTION EQUIPMENT AND LED LAMP UNITS.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE CITY OF TALLMADGE FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

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

SIGNAL ACTIVATION

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

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

WORK INSPECTION

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

GROUNDING AND BONDING

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

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

- A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
- B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
- C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
- D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
- E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.
- F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.

- A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
- B. THE 725.05 (SCH.80 HDPE) CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
- C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
- D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

GROUNDING AND BONDING (CONT.)

3. WIRE FOR GROUNDING AND BONDING.

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

- I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
- II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
- III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
- IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.

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

4. GROUND ROD.

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

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

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

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

6. POWER SERVICE AND DISCONNECT SWITCH.

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

GROUNDING AND BONDING (CONT.)

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

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

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

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

TEST HOLE PERFORMED

IT IS ANTICIPATED THAT THE CONTRACTOR WILL ENCOUNTER UNDERGROUND UTILITIES WHILE EXCAVATING FOR SIGNAL SUPPORT FOUNDATIONS OR SIMILAR FOUNDATIONS. AFTER ACCURATELY IDENTIFYING THE PROPOSED LOCATION OF THE FOUNDATION, AS SHOWN IN THE PLANS AND AFTER MODIFYING THAT LOCATION, IF NECESSARY, BASED ON THE FIELD MARKING OF UNDERGROUND UTILITY LOCATION, THE CONTRACTOR DISCOVERS A UTILITY CONFLICT DURING THE EXCAVATION OPERATION, THE CONTRACTOR WILL BE COMPENSATED FOR EACH PARTIAL FOUNDATION EXCAVATION ACCORDING TO THE BID PRICE.

BEFORE THE CONTRACTOR BEGINS THE EXCAVATION AT THE MODIFIED LOCATION, THE CONTRACTOR SHALL VERIFY THAT THERE WILL BE NO OVERHEAD UTILITY CONFLICTS RESULTING FROM THE NEW SIGNAL SUPPORT LOCATION. NEW SUPPORT LOCATIONS ARE TO BE APPROVED BY THE ENGINEER.

THE WORK WILL INCLUDE BACKFILLING, COMPACTING, AND RESTORATION OF THE EXCAVATION TO THE SITE'S ORIGINAL CONDITION.

EXCAVATIONS SHALL NOT BE LEFT OPEN OVERNIGHT.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID PER EACH ITEM 632 - TEST HOLE PERFORMED TO BE USED AT THE DIRECTION OF THE ENGINEER. A QUANTITY OF 1 HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 632 - SIGNAL SUPPORT FOUNDATION

THE CONTRACTOR SHALL CONTACT OHIO 811 TO HAVE ALL THE UTILITIES LOCATED IN THE FIELD THEN MEET WITH THE PROJECT ENGINEER TO LOCATE THE PROPOSED SUPPORT LOCATIONS TO ENSURE THERE ARE NO CONFLICTS WITH UTILITIES. IF THERE ARE ISSUES, THE PROJECT ENGINEER SHALL PROVIDE GUIDANCE AS TO THE RELOCATION OF THE SUPPORT POLES.

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

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TRAFFIC SIGNAL NOTES

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

ITEM 632 - POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER C&MS ITEM 632.24 AND SCD TC-83.10 WITH THE FOLLOWING EXCEPTIONS:

1. ALL POWER SERVICES SHALL BE METERED. THE METER SHALL HAVE A LEVER OPERATED BYPASS.
2. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES.
3. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN 5 FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND.
4. THE METER BASE AND DISCONNECT SWITCHES SHALL BE MOUNTED ON THE CONTROLLER CABINET AS DETAILED ON SHEET 77. FIELD ADJUSTMENTS MAY BE MADE IN MOUNTING THE METER BASE AND DISCONNECT SWITCHES WITH THE APPROVAL OF THE ENGINEER.
5. THE METER BASE AND DISCONNECT SWITCHES SHALL BE PAINTED BLACK IN COLOR TO MATCH THE FINISH OF THE CONTROLLER CABINET.

THE CONTRACTOR SHALL OBTAIN A METER PROVIDED BY THE POWER COMPANY. DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH CMS 632.24 SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER.

THE CONTRACTOR SHALL CONTACT THE METER SECTION OF OHIO EDISON FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS OHIO EDISON MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT OHIO EDISON FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO OHIO EDISON'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE CITY OF TALLMADGE.

ALL ITEMS ASSOCIATED WITH THE POWER SERVICE THAT ARE NECESSARY TO PROVIDE COMPLETE ELECTRICAL SERVICE TO EACH TRAFFIC SIGNAL INSTALLATION, INCLUDING, BUT NOT LIMITED TO CONDUIT RISERS, CONDUIT, TRENCHING, PULL BOXES AND POWER SERVICE CABLE, SHALL BE INCIDENTAL TO AND INCLUDED UNDER ITEM 632 - POWER SERVICE, AS PER PLAN, AS PER C&MS 632.24.

THE COST FOR ALL NECESSARY ITEMS AND ASSOCIATED LABOR SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR ITEM 632 - POWER SERVICE, AS PER PLAN.

ITEM 632 - PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732 THE FOLLOWING SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
4. THE PEDESTRIAN SIGNAL HEAD SHALL BE OF THE LED COUNTDOWN TYPE.
5. NEW ATTACHMENT HARDWARE AND FITTINGS SHALL BE USED AND SHALL BE BLACK IN COLOR.
6. THE LIGHT EMITTING DIODE (LED) MODULES SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C. THE CONTRACTOR SHALL PROVIDE THE CITY OF TALLMADGE, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

PAYMENT FOR ITEM 632 - PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

ITEM 632 - PEDESTRIAN PUSHBUTTON, AS PER PLAN

IN ORDER TO CONFORM TO THE AMERICANS WITH DISABILITIES ACT (ADA), THE REQUIREMENTS OF CMS ITEMS 632.09 AND 732.06 ARE MODIFIED AS FOLLOWS:

1. THE PUSHBUTTON SHALL BE RAISED AND SHALL BE A MINIMUM OF 2 INCHES (50 MILLIMETERS) AT ITS SMALLEST DIMENSION.
2. THE PUSHBUTTON SHALL BE EQUIPPED TO EMIT AN AUDIBLE CHIRP AS THE BUTTON IS PUSHED TO CONFIRM THAT THE PEDESTRIAN CALL HAS BEEN PLACED.
3. THE PUSHBUTTON SHALL BE EQUIPPED WITH A RED INDICATOR LIGHT.
4. PUSHBUTTON HOUSINGS SHALL BE BLACK IN COLOR, TO MATCH FEDERAL SPECIFICATION 595B, COLOR NO. 27038.
5. SEAL THE PUSHBUTTON HOUSING TO THE SIGNAL SUPPORT/PEDESTAL WITH BLACK SILICONE.

THIS ITEM SHALL INCLUDE ALL LABOR AND MATERIAL COSTS ASSOCIATED WITH THE PROVISION AND INSTALLATION OF THE PUSHBUTTON AS OUTLINED ABOVE. PAYMENT FOR THIS WORK SHALL BE AT THE CONTRACT UNIT PRICE FOR ITEM 632 - PEDESTRIAN PUSHBUTTON, AS PER PLAN AND WILL BE MEASURED BY THE NUMBER OF COMPLETE UNITS FURNISHED, INSTALLED AND ACCEPTED.

ITEM 632 - SIGNAL SUPPORT, TYPE TC-81.22, (BY DESIGN), AS PER PLAN (INSTALLATION ONLY)

ITEM 632 - COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, (BY DESIGN), AS PER PLAN (INSTALLATION ONLY)

ITEM 632 - PEDESTAL, (8'), TRANSFORMER BASE, AS PER PLAN (INSTALLATION ONLY)

ITEM 625 - BRACKET ARM, AS PER PLAN (INSTALLATION ONLY)

ALL SIGNAL SUPPORTS, PEDESTALS AND BRACKET ARMS TO BE ERECTED FOR THIS PROJECT SHALL BE OBTAINED FROM THE CITY OF TALLMADGE. THE CONTRACTOR SHALL CONTACT MICHAEL RORAR, DIRECTOR OF PUBLIC SERVICE, (330)-633-0854 TO COORDINATE A TIME AND PLACE TO PICK-UP THE REQUIRED MATERIALS, INCLUDING THE ANCHOR BOLTS FROM THE CITY OF TALLMADGE.

PAYMENT FOR EACH SHALL BE MADE AT THE CONTRACT BID PRICE PER EACH AND SHALL INCLUDE ALL COORDINATION, MOVEMENT, LABOR, MATERIALS AND THE INSTALLATION OF THE PROPOSED SIGNAL SUPPORTS, PEDESTALS AND BRACKET ARMS COMPLETE AND IN PLACE.

ITEM 633 - CABINET, TYPE TS-2, AS PER PLAN

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

THE GROUND-MOUNTED CABINET SHALL BE A NEMA TS2, TYPE 1, CABINET SIZE 6 WITH 16 LOAD SWITCH BAYS, LED UNDER-SHELF LIGHTING, POWER HARNESSSES FOR BOTH TS2 TYPE 1 AND TYPE 2 CONTROLLERS AND SHALL HAVE A MINIMUM OF TWO SHELVES.

EACH CABINET SHALL COME EQUIPPED WITH TWO 16-CHANNEL CABINET DETECTOR RACKS (CDR) INCLUDING BUS INTERFACE UNITS (BIU). THE LOOP DETECTOR TERMINATION PANEL FOR THE SECOND DETECTOR RACK SHALL BE OMITTED.

THE CABINET SHALL BE FURNISHED WITH AN MMU AS ALLOWED ON THE TAP/APPROVED PRODUCTS LIST.

THE CONTROLLER CABINET SHALL HAVE A SEMI-GLOSS BLACK (FEDERAL COLOR 27038) EXTERIOR AND WHITE INTERIOR.

PAYMENT FOR ITEM 633 - CABINET, TYPE TS-2, AS PER PLAN WILL BE AT THE CONTRACT BID PER EACH, COMPLETE AND IN PLACE, INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 809 - ATC V6.24 CONTROLLER, AS PER PLAN

THE CONTROLLER UNIT SHALL BE FURNISHED AND INSTALLED PER SS 809 AND BE LISTED ON THE TRAFFIC AUTHORIZED PRODUCTS (TAP) LIST.

PAYMENT FOR ITEM 809 - ATC V6.24 CONTROLLER, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACE, INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 625 - PULL BOX, 725.06, SIZE 18, AS PER PLAN

THIS ITEM SHALL CONFORM TO ODOT C&MS ITEMS 625.11 AND 725.06, EXCEPT THAT THE POLYMER CONCRETE PULL BOXES SHALL HAVE A 22K RATING.

PAYMENT SHALL BE AT THE CONTRACT UNIT BID PRICE AND SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS AND EQUIPMENT NECESSARY TO FURNISH AND INSTALL THE PULL BOXES.

ITEM 809 - STOP-LINE RADAR DETECTION

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

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

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

ITEM 625 - CONDUIT, (BY SIZE), 725.052, AS PER PLAN

ITEM 625 - CONDUIT, JACKED OR DRILLED, 725.052, 3", AS PER PLAN

THIS ITEM SHALL CONFORM TO ODOT C&MS ITEMS 625.12 AND 725.052, EXCEPT THAT THE SDR SHALL BE 13.5.

IN ADDITION, THE CONDUIT SHALL ENTER THE PULL BOXES WITH LARGE SWEEP 90 DEGREE ELLS.

PAYMENT SHALL BE AT THE CONTRACT UNIT BID PRICE AND SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS AND EQUIPMENT NECESSARY TO FURNISH AND INSTALL THE CONDUIT.

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TRAFFIC SIGNAL NOTES

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

SHEET	LOCATION	625	625	625	625	625	625	625	625	625	632	632	632	632	632	632	632	632	632	632	632	632	632	
		BRACKET ARM, 15', AS PER PLAN (INSTALLATION ONLY)	BRACKET ARM, 20', AS PER PLAN (INSTALLATION ONLY)	CONDUIT, 2", 725.04	CONDUIT, 2", 725.052, AS PER PLAN	CONDUIT, 3", 725.04	CONDUIT, 3", 725.052, AS PER PLAN	CONDUIT, 4", 725.04	CONDUIT, JACKED OR DRILLED, 725.04, 4"	CONDUIT, JACKED OR DRILLED, 725.052, 3", AS PER PLAN	TRENCH	PULL BOX, 725.06, SIZE 18, AS PER PLAN	GROUND ROD	UNDERGROUND WARNING/MARKING TAPE	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	COVERING OF VEHICULAR SIGNAL HEAD	COVERING OF PEDESTRIAN SIGNAL HEAD	PEDESTRIAN PUSHBUTTON, AS PER PLAN	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	SIGNAL SUPPORT FOUNDATION	PEDESTAL FOUNDATION
		EACH	EACH	FT	FT	FT		FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	EACH	EACH
73	EAST AVE. / WASHBURN RD.	2	1	127		40		112	155		258	4	8	258	6	2	8	8	8	4	1136	749	4	2
78	INTERCONNECT				1196			204						708	8									
TOTALS CARRIED TO GENERAL SUMMARY		2	1	127	1196	40		204	112	155	312	966	12	8	966	6	2	8	8	4	1136	749	4	2

SHEET	LOCATION	632	632	632	632	632	632	632	633	633	633	633	809	809										
		LOOP DETECTOR LEAD-IN CABLE	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG	POWER SERVICE, AS PER PLAN	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4, AS PER PLAN (INSTALLATION ONLY)	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 2, AS PER PLAN (INSTALLATION ONLY)	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4, AS PER PLAN (INSTALLATION ONLY)	PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN (INSTALLATION ONLY)	GPS (GLOBAL POSITIONING SYSTEM) CLOCK ASSEMBLY	CABINET, TYPE TS-2, AS PER PLAN	CABINET FOUNDATION	CONTROLLER WORK PAD	STOP LINE RADAR DETECTION	ATC V6.24 CONTROLLER, AS PER PLAN										
		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH												
73	EAST AVE. / WASHBURN RD.	563	146	1	1	2	1	2	1	1	1	1	4	1										
78	INTERCONNECT																							
TOTALS CARRIED GENERAL SUMMARY		563	146	1	1	2	1	2	1	1	1	1	4	1										

TRAFFIC SIGNAL SUBSUMMARY	CALCULATED	
	BEB	
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	KMG	

EAST AVE / WASHBURN RD INTERSECTION IMPROVEMENT	72 88
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HORIZONTAL SCALE IN FEET

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TRAFFIC SIGNAL PLAN
EAST AVE. / WASHBURN RD.

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

NOTES:

1. THE CONTRACTOR SHALL ENSURE THAT ALL SIGNAL FACES ARE CLEARLY VISIBLE TO ALL ONCOMING VEHICLES; CLEAR OF ANY OBSTRUCTION ONCE MOUNTED TO THE ARMS.
2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO EXCAVATION.
3. FOR REFERENCE TO SIGNS (A), (B), (C), (D) SEE SHEET 67.

(1)-4" CONDUIT WITH (1)-7C, (2)-5C, (1)-2C LEAD-IN AND (1)-RADAR IN TRENCH = 70'

PB-1

(1)-3" CONDUIT WITH (1)-7C, (2)-5C, (1)-2C LEAD-IN AND (1)-RADAR IN TRENCH = 19'

SP-1, TYPE TC-81.22 DESIGN 4 WITH A 30' MAST ARM, 15' BRACKET ARM, (2)-PEDESTRIAN SIGNAL HEADS AND (1)-PUSHBUTTON 'P4A'
STA. 199+54.6, 31.6' LT.

SP-3, TYPE TC-81.22 DESIGN 2 WITH A 32' MAST ARM, 20' BRACKET ARM AND (1)-PEDESTRIAN SIGNAL HEAD
STA. 200+37.2, 43.8' LT.

(1)-3" CONDUIT WITH (1)-7C, (1)-5C AND (1)-RADAR IN TRENCH = 4'

PB-3

(1)-4" CONDUIT WITH (2)-7C, (4)-5C, (2)-2C LEAD-IN AND (2)-RADAR JACKED OR DRILLED = 76'

(1)-2" CONDUIT WITH (1)-5C AND (1)-2C LEAD-IN IN TRENCH = 22'

PS-2 WITH (1)-PEDESTRIAN SIGNAL HEAD AND (1)-PUSHBUTTON 'P8B'
STA. 200+51.4, 22.4' LT.

PS-1 WITH (1)-PEDESTRIAN SIGNAL HEAD AND (1)-PUSHBUTTON 'P4B'
STA. 199+56.1, 30.1' RT.

(1)-2" CONDUIT WITH (1)-5C AND (1)-2C LEAD-IN IN TRENCH = 14'

PB-2

(1)-4" CONDUIT WITH (1)-7C, (2)-5C, (1)-2C LEAD-IN AND (1)-RADAR JACKED OR DRILLED = 79'

(1)-3" CONDUIT WITH (1)-7C, (1)-5C AND (1)-RADAR IN TRENCH = 10'

SP-2, TYPE TC-81.22 DESIGN 2 WITH A 28' MAST ARM, 15' BRACKET ARM AND (1)-PEDESTRIAN SIGNAL HEAD
STA. 199+72.8, 43.2' RT.

PROPOSED GROUND MOUNTED CONTROLLER WITH WORK PAD
STA. 200+66.9, 30.5' RT.

(2)-4" CONDUITS WITH (4)-7C, (8)-5C, (4)-2C LEAD-IN AND (4)-RADAR IN TRENCH = 21'

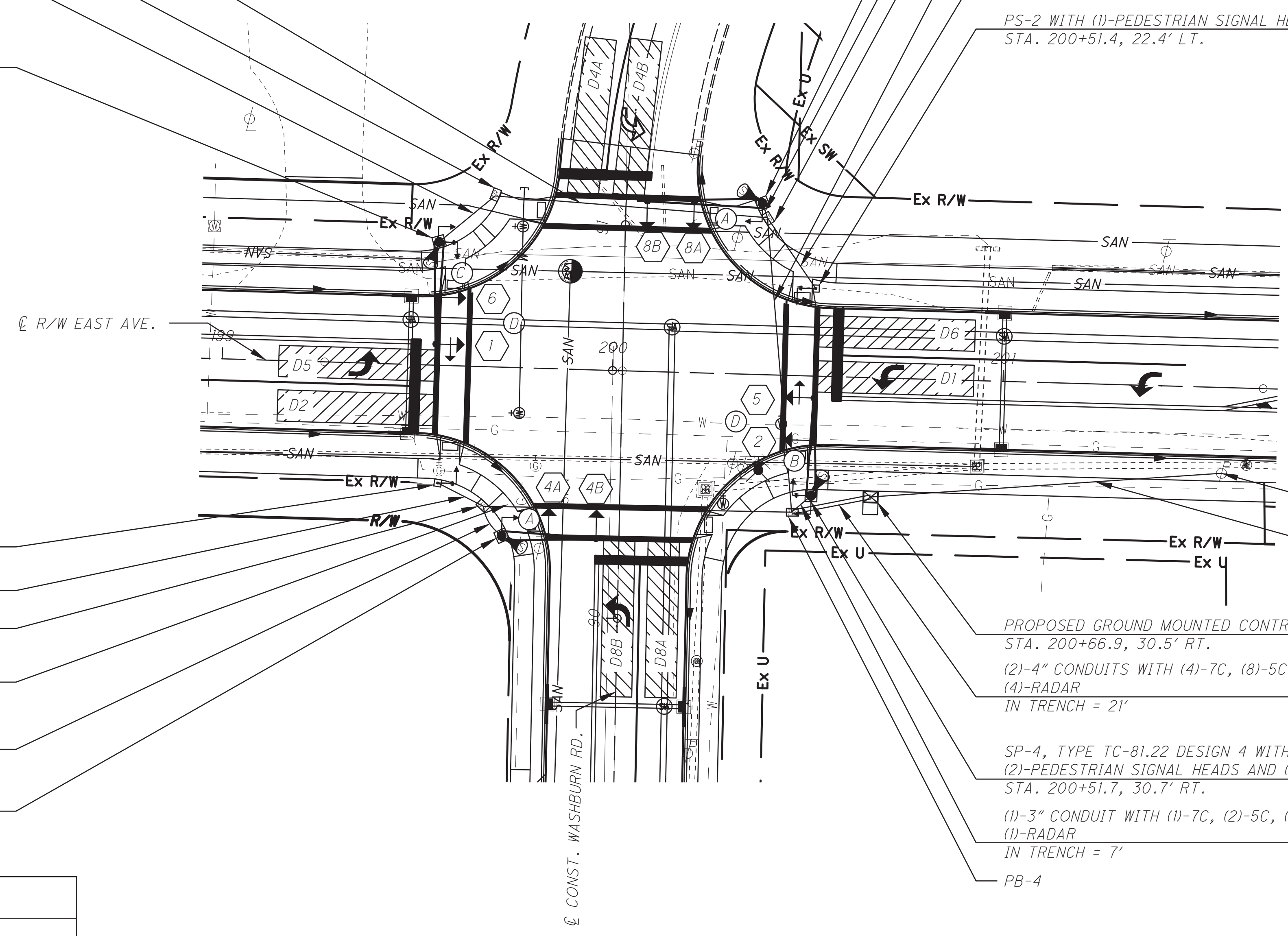
SP-4, TYPE TC-81.22 DESIGN 4 WITH A 28' MAST ARM, (2)-PEDESTRIAN SIGNAL HEADS AND (1)-PUSHBUTTON 'P8A'
STA. 200+51.7, 30.7' RT.

(1)-3" CONDUIT WITH (1)-7C, (2)-5C, (1)-2C LEAD-IN AND (1)-RADAR IN TRENCH = 7'

PB-4

PROPOSED POWER SOURCE EXISTING UTILITY POLE WITH (1)-CONDUIT RISER FOR POWER SERVICE
STA. 201+56.6, 22.0' RT.

(1)-2" CONDUIT WITH (1)-POWER CABLE IN TRENCH = 91'



LEGEND	
	PROP
	TRAFFIC SIGNAL, 3 UNIT HEAD, 12"
	TRAFFIC SIGNAL, 5 UNIT HEAD, 12"
	SIGNAL SUPPORT POLE
	PEDESTRIAN SIGNAL
	PEDESTRIAN PUSHBUTTON
	PEDESTAL SUPPORT
	CONTROLLER CABINET AND WORK PAD (TS-2)
	TRAFFIC PULL BOX
	DETECTION ZONE
	LUMINAIRE, LED
	STOP LINE RADAR DETECTION UNIT

SIGNAL TYPES

PEDESTRIAN HEADS (LED, COUNTDOWN, TYPE D2)

1. ALL SIGNAL HEADS SHALL HAVE 12" LED LENSES.
2. ALL SIGNAL HEADS SHALL BE BLACK IN COLOR AND HAVE BACKPLATES.
3. ALL SIGNAL HEAD VISORS SHALL BE CUTAWAY TYPE.

PEDESTRIAN SIGNS

R10-3E-9
2 - RIGHT ARROWS (PS-1, PS-2)
2 - LEFT ARROWS (SP-1, SP-4)

PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE
PB-1	199+68.6	LT.	44.1'	18
PB-2	199+68.0	RT.	35.7'	18
PB-3	200+38.5	LT.	40.2'	18
PB-4	200+46.8	RT.	35.0'	18

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SIGNAL TIMING CHART

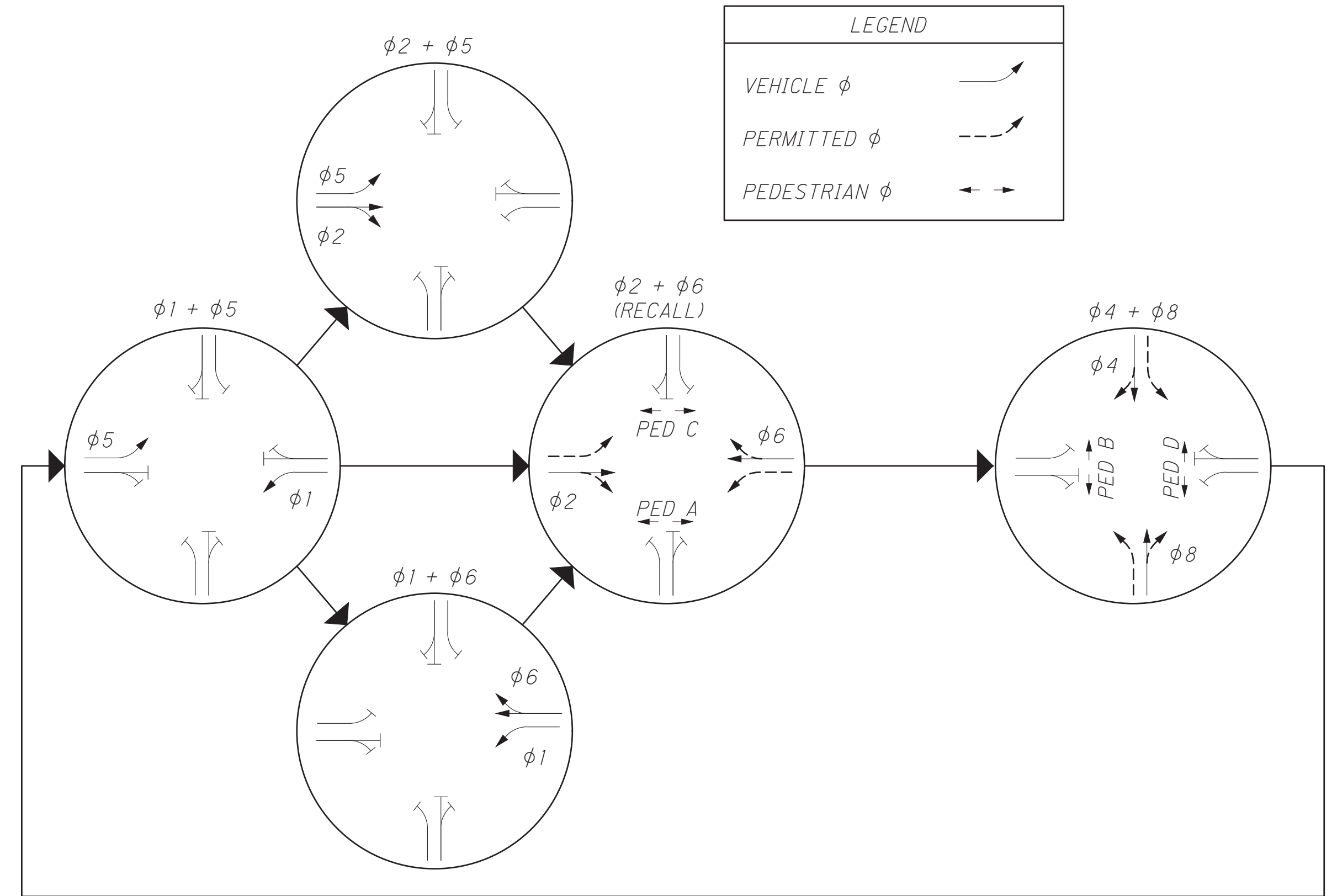
INTERSECTION: EAST AVE. / WASHBURN RD. MAINTAINING AGENCY: CITY OF TALLMADGE								
START UP	DUAL ENTRY: YES		PHASES: 2,4,6,8					
	REST IN RED:		RING 1 -		RING 2 -			
START IN: ALL-RED FLASH	OVERLAP		A	B	C	D		
TIME FOR: FLASH, ALL RED (SEC.): 9, 6	PHASES							
FIRST PHASE(S): $\phi 2 + \phi 6$								
COLOR DISPLAYED: GREEN								
INTERVAL OR FEATURE	CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)	1	2	3	4	5	6	7	8
DIRECTION	WBL	EB	-	SB	EBL	WB	-	NB
MINIMUM GREEN (INITIAL) (SEC.)	7	20	-	10	7	20	-	10
ADDED INITIAL *(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL (SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)	3.0	4.0	-	3.0	3.0	4.0	-	3.0
TIME BEFORE REDUCTION *(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)	15	60	-	30	15	60	-	30
MAXIMUM GREEN II (SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)	3.3	4.2	-	3.6	3.3	4.2	-	3.6
ALL RED CLEARANCE (SEC.)	1.4	1.0	-	1.0	1.4	1.0	-	1.0
DELAYED GREEN (LPI) # (SEC.)	-	-	-	-	-	-	-	-
FLASHING YELLOW ARROW DELAY (SEC.)	-	-	-	-	-	-	-	-
WALK (SEC.)	-	7	-	11	-	7	-	11
PEDESTRIAN CLEARANCE (SEC.)	-	9	-	8	-	9	-	8
RECALL	MAXIMUM (ON/OFF)	-	-	-	-	-	-	-
	MINIMUM (ON/OFF)	-	ON	-	-	-	ON	-
	PEDESTRIAN (ON/OFF)	-	ON	-	-	-	ON	-
MEMORY (ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

NOTES:

- FOR PROTECTED/PERMISSIVE PHASES, IMPLEMENT CALL OMITTS TO AVOID YELLOW BALL TRAP.
- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.
- ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.
- PEDESTRIAN INDICATIONS FOR PHASES 2 & 6 TO REST IN WALK.

PHASING DIAGRAM



RADAR DETECTION CHART

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY PROGRAMMED IN CONTROLLER (SEC.)	PURPOSE	DETECTION ZONE LENGTH (FT)
D1	WB LT	PRESENCE	$\phi 1$	5	CALL/EXTEND PHASE 1	40
D2	EB	PRESENCE	$\phi 2$	-	CALL/EXTEND PHASE 2	40
D4A	SB	PRESENCE	$\phi 4$	5	CALL/EXTEND PHASE 4	40
D4B	SB	PRESENCE	$\phi 4$	-	CALL/EXTEND PHASE 4	40
D5	EB LT	PRESENCE	$\phi 5$	5	CALL/EXTEND PHASE 5	40
D6	WB	PRESENCE	$\phi 6$	-	CALL/EXTEND PHASE 6	40
D8A	NB	PRESENCE	$\phi 8$	5	CALL/EXTEND PHASE 8	40
D8B	NB	PRESENCE	$\phi 8$	-	CALL/EXTEND PHASE 8	40

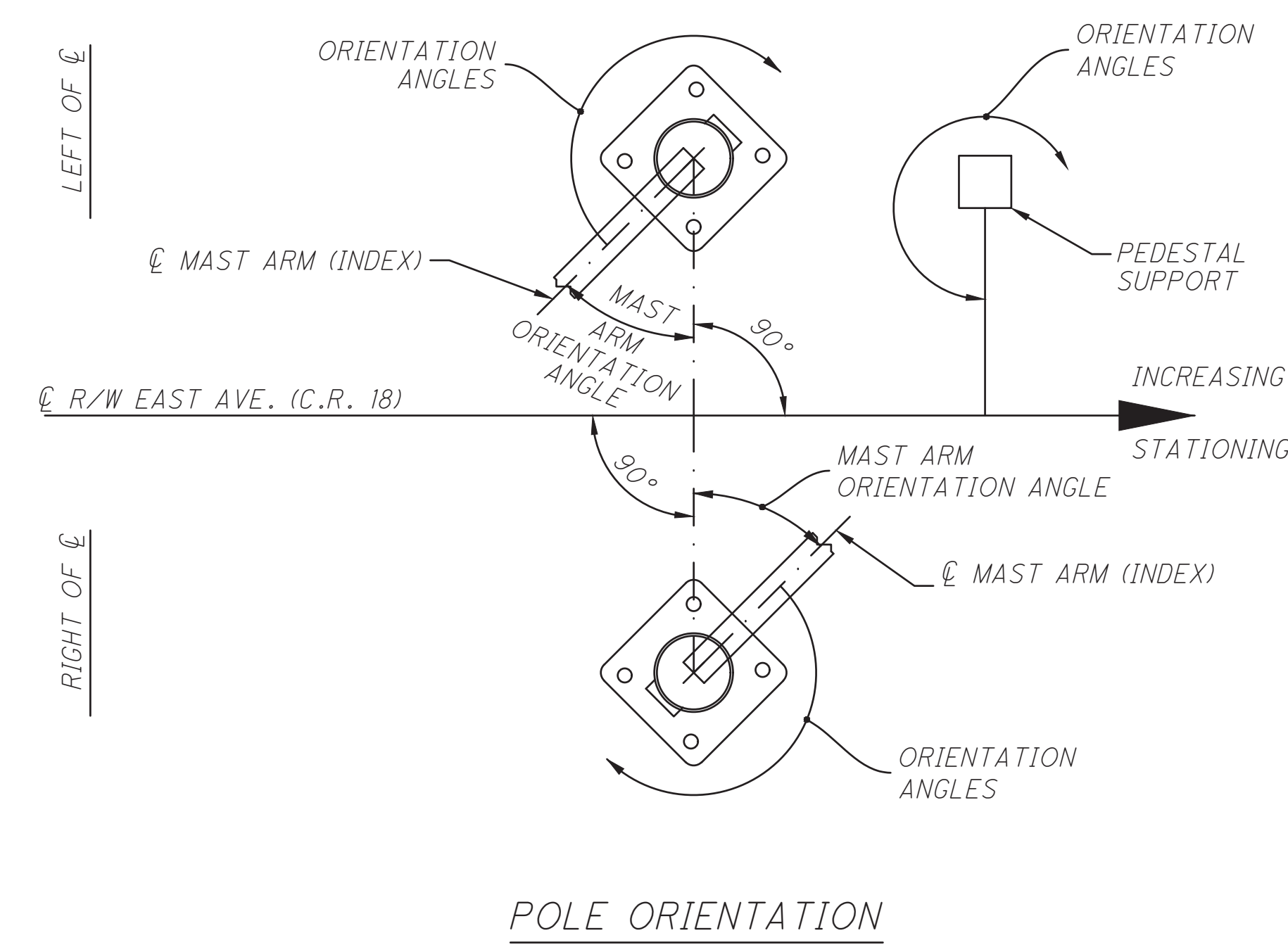
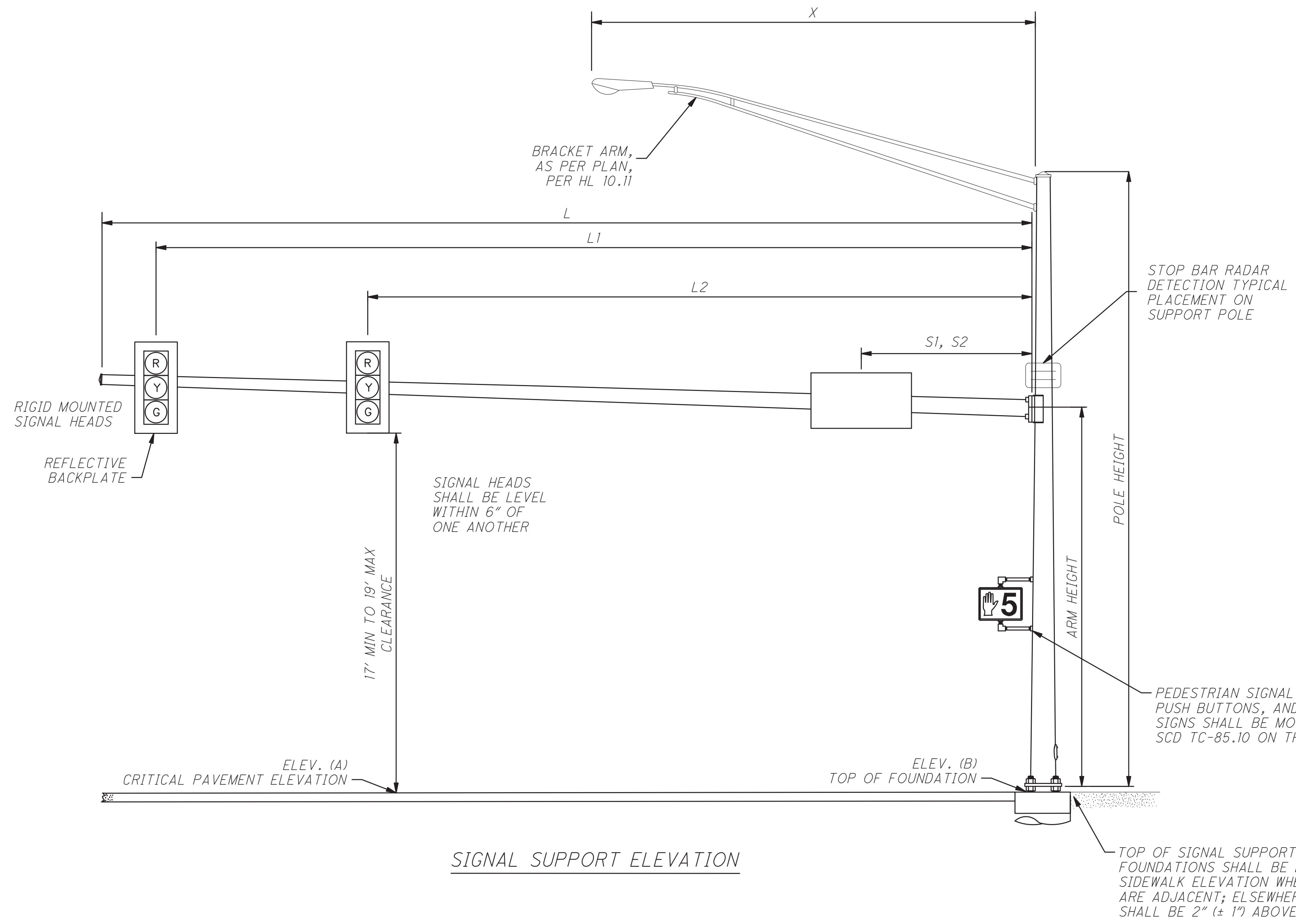
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BMF
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**TRAFFIC SIGNAL DETAIL
EAST AVE. / WASHBURN RD.**

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**

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MAST ARM TABLE

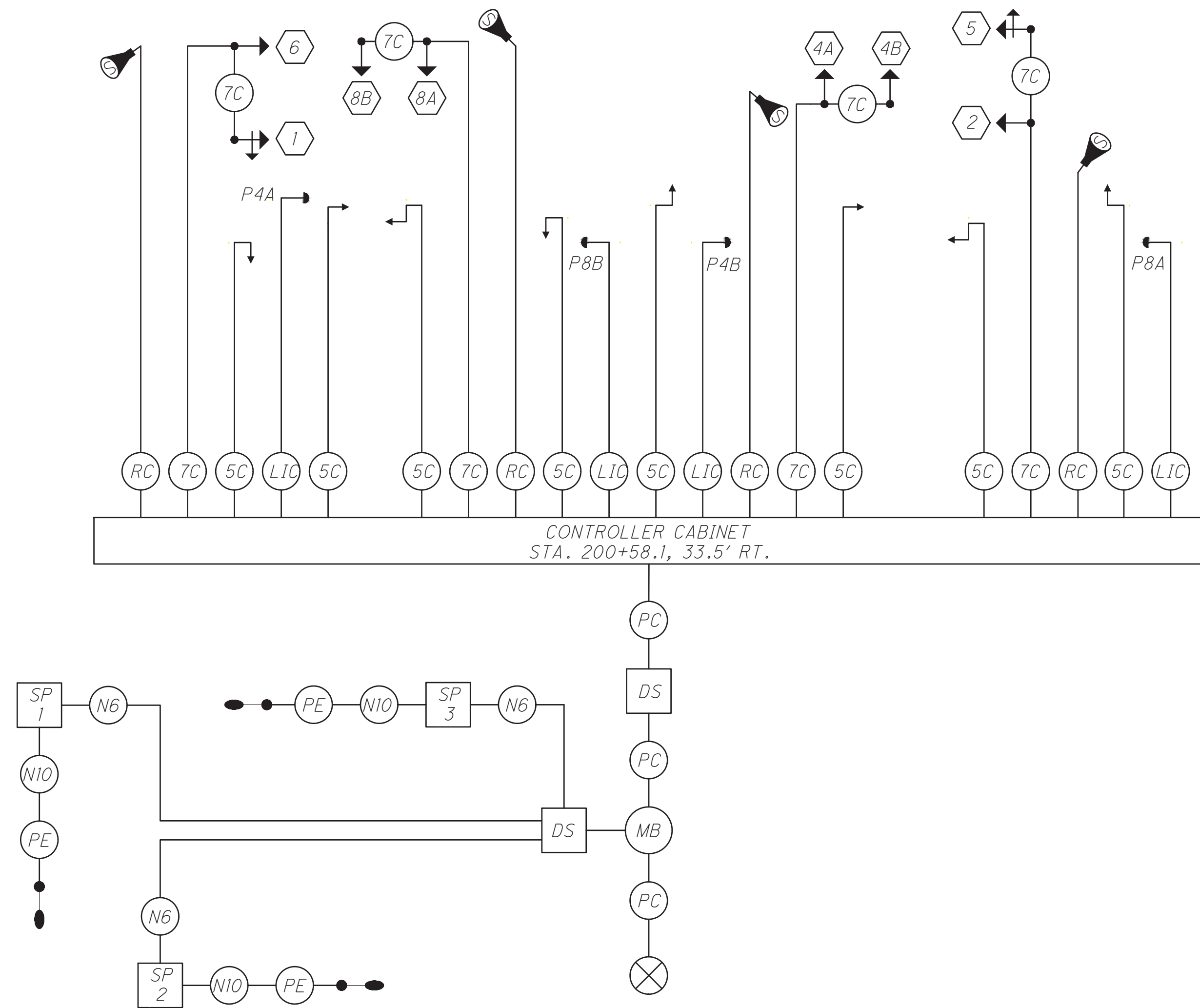
SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS											MAST ARM 'A' ANGLE	ORIENTATION ANGLES FROM MAST ARM 'A' / INDEX LINE			
			A (PAVEMENT ELEVATION)	B (TOP OF FOUNDATION)	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	SI	S2	X	PEDESTRIAN SIGNAL		PEDESTRIAN PUSHBUTTON	BRACKET ARM	HANDHOLE	
																				FT
SP-1	199+54.6	31.6' LT.	1152.02	1152.74	TC-81.22	4	28	19.5	30	26	14	22.5	6	15	0	180/270	270	0	180	
SP-2	199+72.8	43.2' RT.	1150.12	1150.75	TC-81.22	2	28	19.5	28	24	12	6	-	15	90	270	-	0	180	
SP-3	200+37.2	43.8' LT.	1149.94	1150.66	TC-81.22	2	28	19.5	32	29.5	17.5	8.5	-	20	90	270	-	0	180	
SP-4	200+51.7	30.7' RT.	1149.49	1149.88	TC-81.22	4	22	20.5	28	25	14	21.5	6	-	0	180/270	270	-	180	
PS-1	199+56.1	30.1' RT.	-	-	-	-	8	-	-	-	-	-	-	-	-	90	90	-	180	
PS-2	200+51.4	22.4' LT.	-	-	-	-	8	-	-	-	-	-	-	-	-	90	90	-	180	

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TRAFFIC SIGNAL DETAIL
EAST AVE. / WASHBURN RD.

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1	R	φ6	Y	(NB)	R	φ8	R
	Y	φ6			Y	φ8	
	G	φ6			G	φ8	
	<--Y-->	φ1			PEDESTRIAN MOVEMENTS		
(WB LT)	<--G-->	φ1					
2	R	φ2	Y	PED A	W	φ2 PED / LS 9 G	OUT
	Y	φ2		PED B	W	φ4 PED / LS 10 G	OUT
	G	φ2		DW	φ4 PED / LS 10 R	OUT	
4A, 4B	R	φ4	R	PED C	W	φ6 PED / LS 11 G	OUT
	Y	φ4		DW	φ6 PED / LS 11 R	OUT	
	G	φ4		PED D	W	φ8 PED / LS 12 G	OUT
(SB)	<--Y-->	φ5					
5	R	φ2	Y		DW	φ8 PED / LS 12 R	OUT
	Y	φ2		LS = LOAD SWITCH			
	G	φ2					
	<--Y-->	φ5					
(EB LT)	<--G-->	φ5					
6	R	φ6	Y				
	Y	φ6					
	G	φ6					
(WB)							

LEGEND

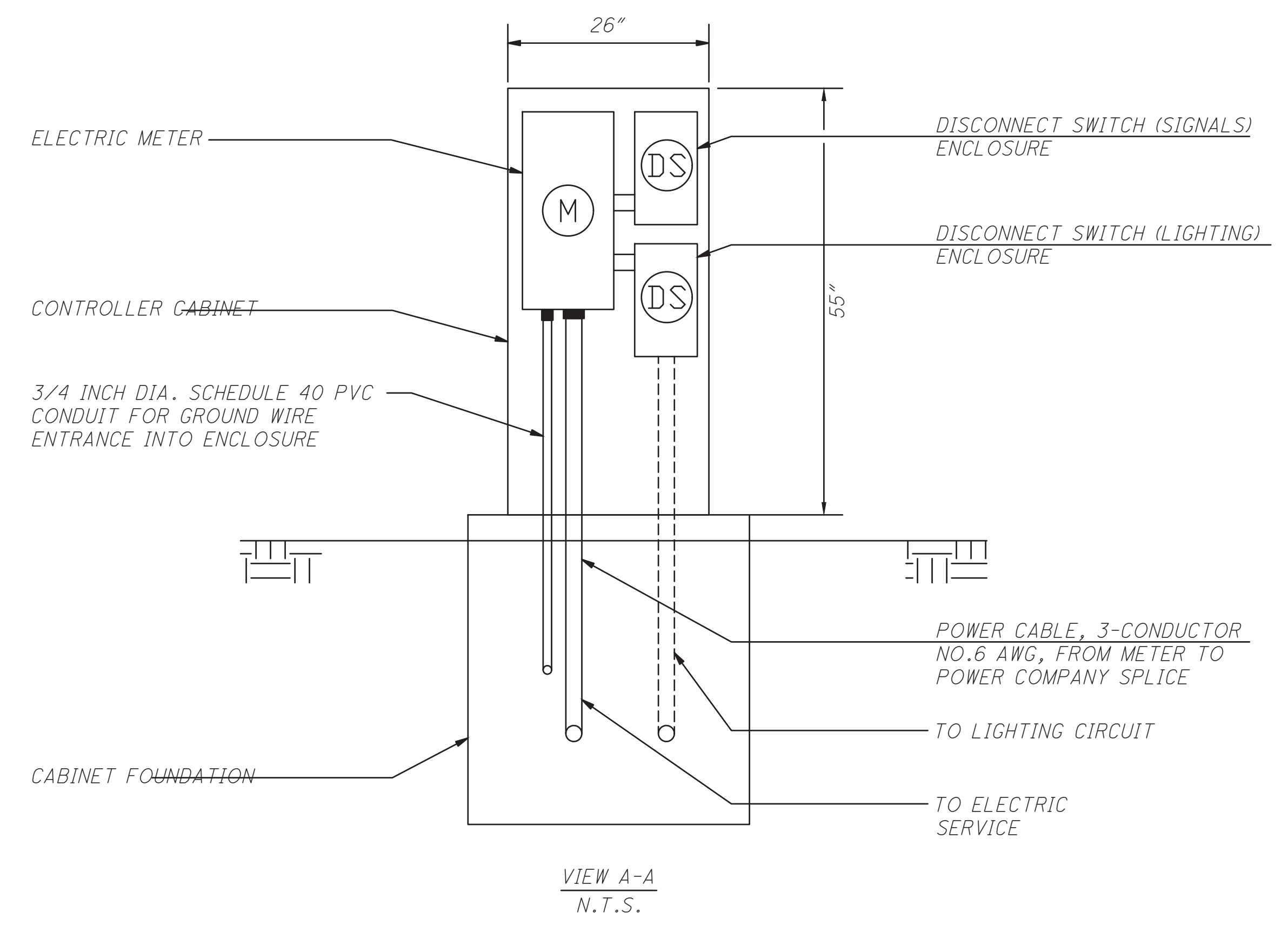
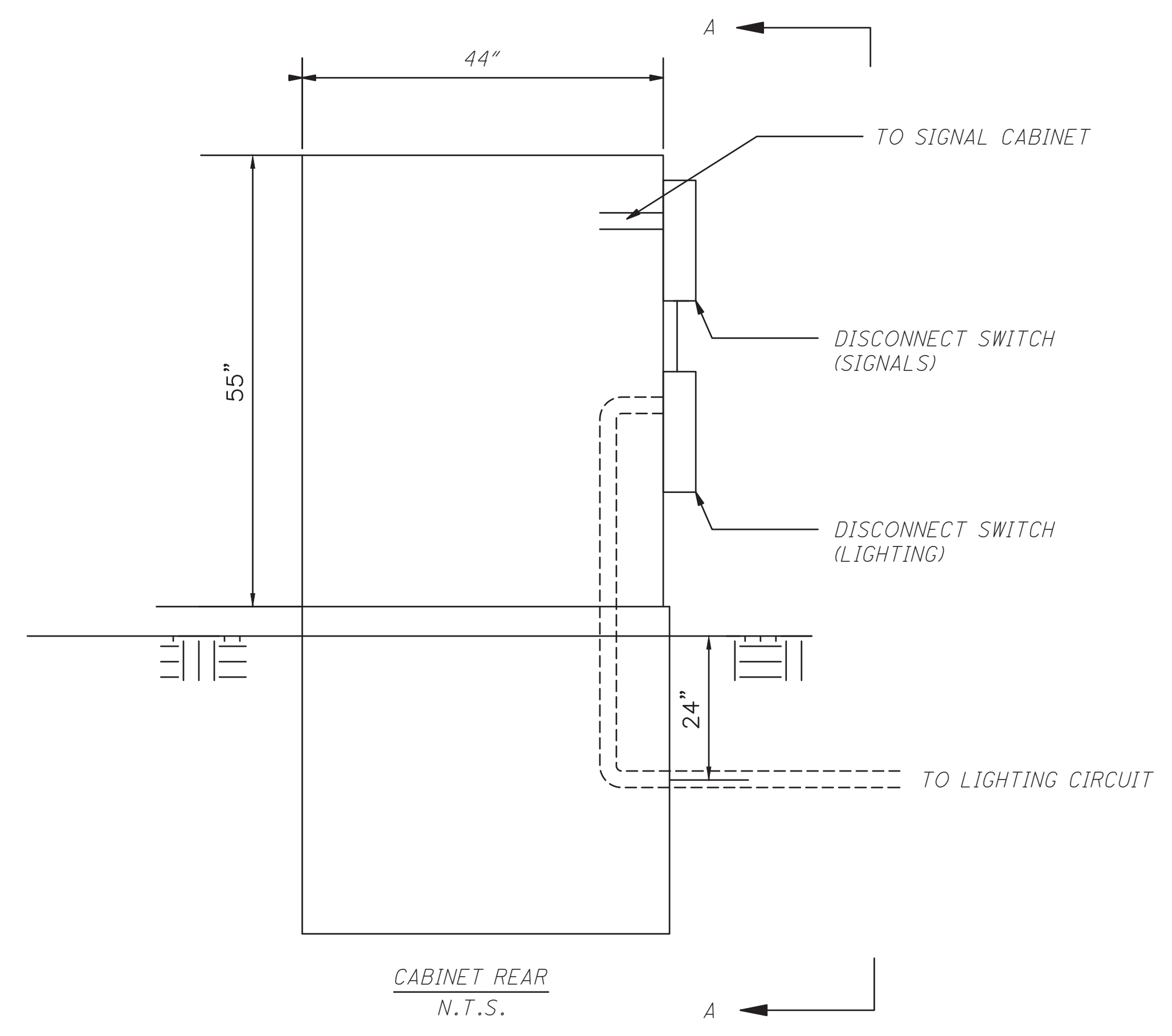
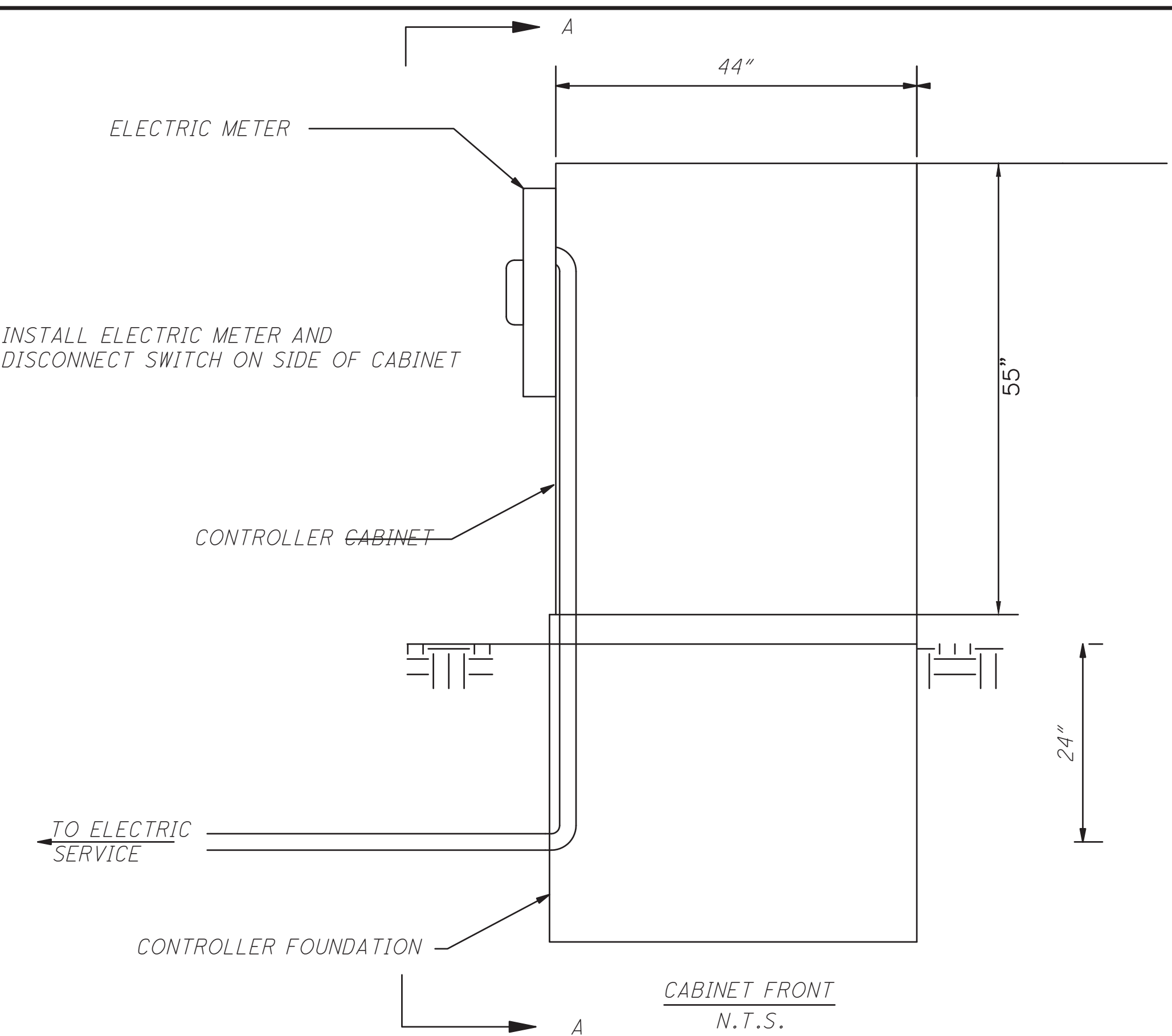
	5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		2/C NO. 14 AWG (LEAD-IN CABLE)
	3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		VEHICLE LOOP DETECTOR
	PEDESTRIAN SIGNAL HEAD		SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
	PEDESTRIAN PUSHBUTTON		SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
	STOP LINE RADAR DETECTION UNIT		RADAR DETECTION CABLE
	POWER SOURCE		POWER CABLE, 3 CONDUCTOR, NO. 4 AWG
	DISCONNECT SWITCH		METER BASE
	SIGNAL SUPPORT POLE NO. ...		NO. 6 AWG DISTRIBUTION CABLE
	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED)		NO. 10 AWG POLE & BRACKET CABLE
			PHOTOELECTRIC CELL

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TRAFFIC SIGNAL DETAIL
EAST AVE. / WASHBURN RD.

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT



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TRAFFIC SIGNAL DETAIL

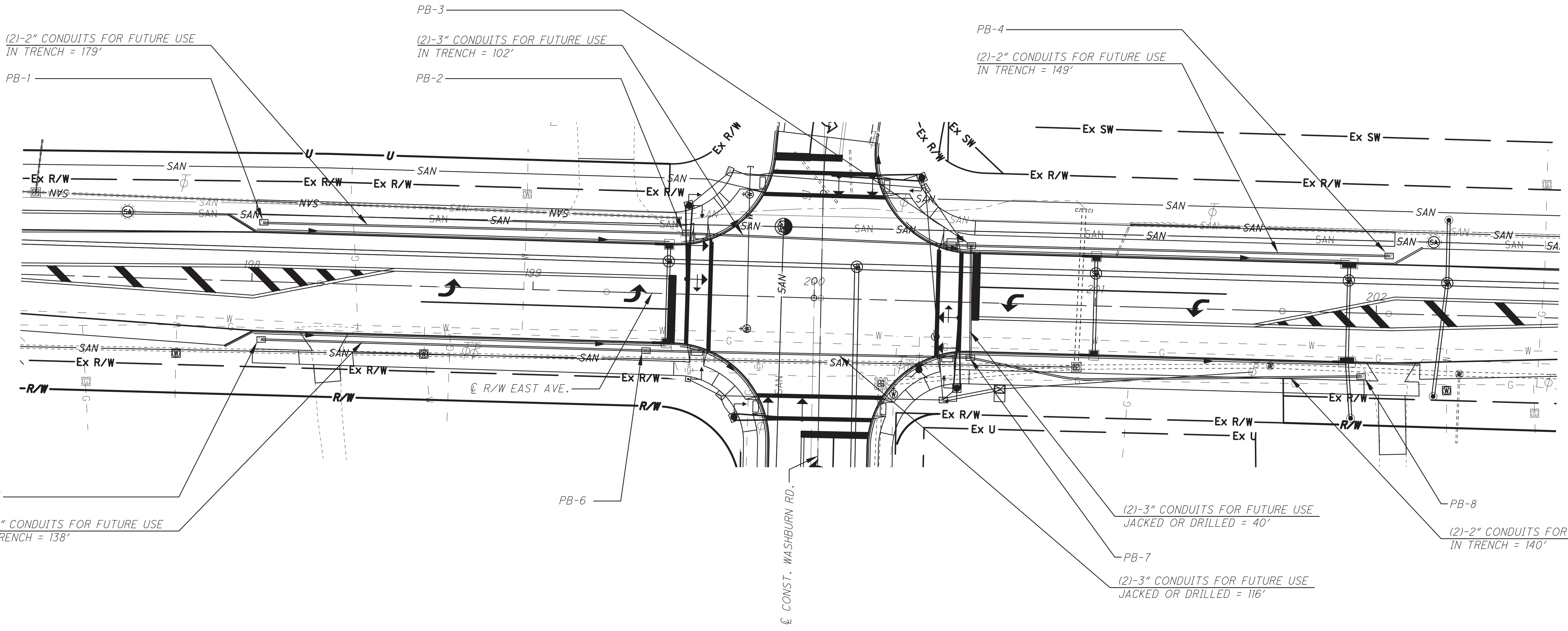
**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**



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**INTERCONNECT PLAN
EAST AVE.**

**EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT**



PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE
PB-1	198+03.5	LT	21.0'	18
PB-2	199+53.8	LT	21.9'	18
PB-3	200+55.3	LT	20.2'	18
PB-4	202+04.2	LT	20.5'	18
PB-5	198+04.0	RT	20.6'	18
PB-6	199+41.1	RT	20.5'	18
PB-7	200+56.2	RT	19.6'	18
PB-8	201+95.3	RT	22.5'	18

FOR LEGEND, SEE SHEET 73.

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ITEM 625 - LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, IES-III-M, 17,000 - 19,000 LUMENS

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION SPECIFICATIONS, LUMINAIRES FOR CONVENTIONAL LIGHTING SHALL BE LED, TYPE III, MVOLT, HAVE AN OUTPUT BETWEEN 17,000 - 19,000 LUMENS AND SHALL BE ON THE ODOT APPROVED LIST. THE LUMINAIRE HOUSING AND ATTACHMENT HARDWARE SHALL BE BLACK IN COLOR TO MATCH THE BRACKET ARM AND SIGNAL POLE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625 - LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, IES-III-M, 17,000 - 19,000 LUMENS FOR EACH LUMINAIRE INSTALLED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO PERFORM THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CALCULATED
BEB
CHECKED
KMG

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

79
88

LIGHTING NOTES

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REF. NO.	SHEET NO.	STATION		SIDE	625		625	625	625	625	625	625	625	625	625						
		FROM	TO		CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PULL APART	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	NO. 10 AWG POLE AND BRACKET CABLE	CONDUIT, 2", 725.04	CONDUIT, 3", 725.05	CONDUIT, JACKED OR DRILLED, 725.04, 3"	LUMINAIRE, CONVENTIONAL, SOLID-STATE (LED), AS PER PLAN, IES-III-M, 17,000 - 19,000 LUMENS	TRENCH	PULL BOX, 725.08, 18"	PULL BOX, 725.08, 24"	UNDERGROUND WARNING/MARKING TAPE					
					EACH	EACH	FT	FT	FT	FT	FT	EACH	FT	EACH	EACH	FT					
1	81	199+68.2	200+36.5	LT			207			69			69			69					
2	81		199+68.2	LT										1							
3	81	199+54.6	199+68.2	LT			79.5		14				14			14					
4	81		199+54.6	LT	1	1		129			1										
5	81	199+82.1	200+35.5	RT			165				55										
6	81		199+72.8	RT	1	1		129													
7	81	199+72.8	199+82.1	RT			76.5		13				13			13					
8	81		199+82.1	RT										1							
9	81		200+37.2	LT	1	1		144													
10	81	200+36.5	200+37.2	LT			153		13				13			13					
11	81		200+36.5	LT											1						
12	81	200+35.5	200+36.5	LT/RT			213				71										
13	81	200+35.5	200+66.9	RT			249		34				34			34					
14	81		200+35.5	RT											1						

TOTALS CARRIED TO GENERAL SUMMARY					3	3	1143	402	74	69	126	3	143	2	2	143						
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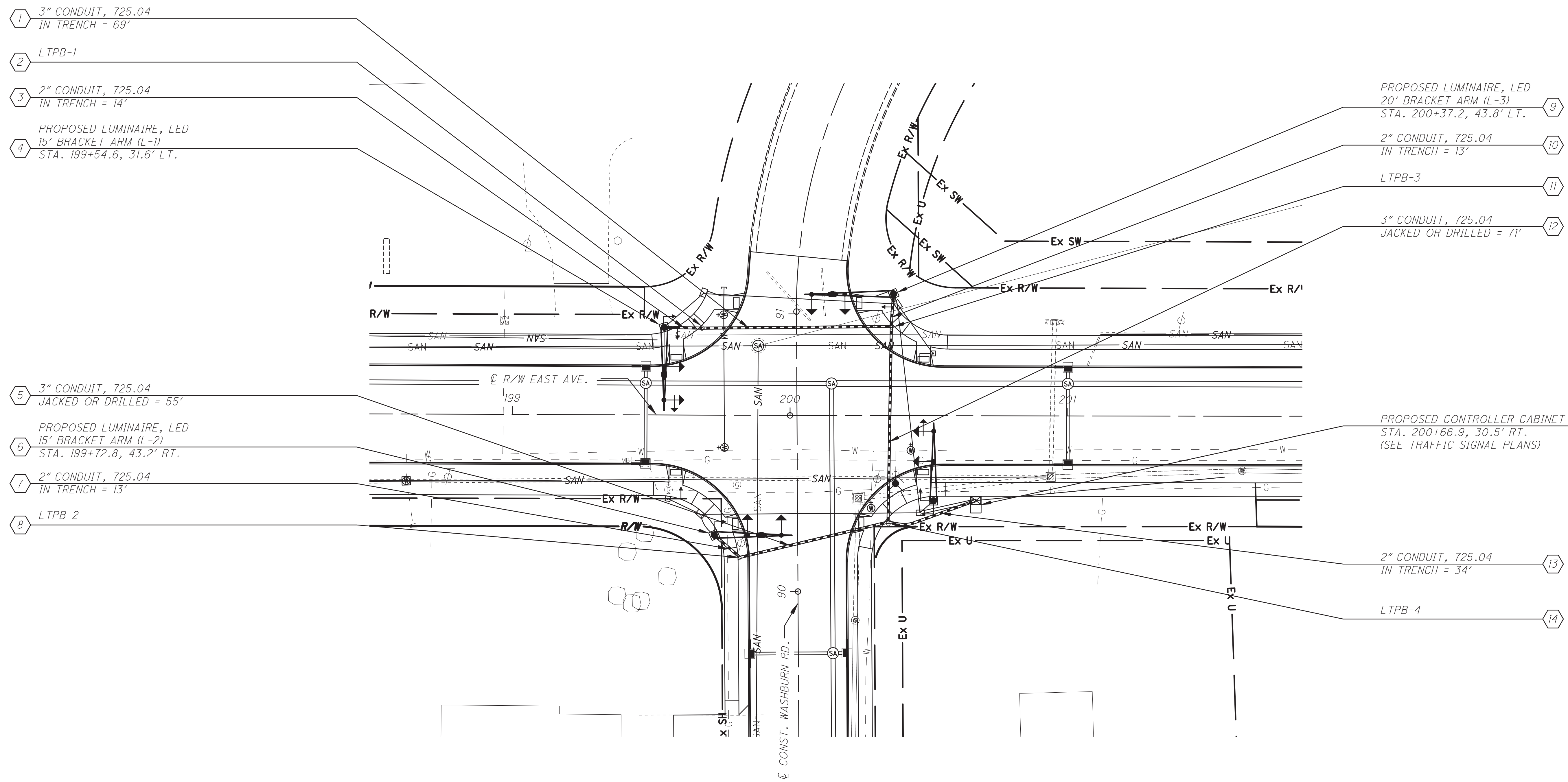
LIGHTING SUBSUMMARY	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">CALCULATED</td> <td style="font-size: small;">BEB</td> </tr> <tr> <td style="font-size: small;">CHECKED</td> <td style="font-size: small;">KMG</td> </tr> </table>	CALCULATED	BEB	CHECKED	KMG
CALCULATED	BEB				
CHECKED	KMG				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">EAST AVE / WASHBURN RD</td> <td style="width: 50%; text-align: center;">INTERSECTION IMPROVEMENT</td> </tr> </table>	EAST AVE / WASHBURN RD	INTERSECTION IMPROVEMENT	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">80</td> <td style="width: 50%; text-align: center;">88</td> </tr> </table>	80	88
EAST AVE / WASHBURN RD	INTERSECTION IMPROVEMENT				
80	88				



CALCULATED
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KMG

NOTES:

1. ALL LUMINAIRES SHALL BE FED FROM THE TRAFFIC CABINET.
2. REFER TO TRAFFIC SIGNAL PLANS FOR COORDINATION AND COMBINATION SIGNAL SUPPORT DETAILS.



1 3" CONDUIT, 725.04
IN TRENCH = 69'

2 LTPB-1

3 2" CONDUIT, 725.04
IN TRENCH = 14'

4 PROPOSED LUMINAIRE, LED
15' BRACKET ARM (L-1)
STA. 199+54.6, 31.6' LT.

5 3" CONDUIT, 725.04
JACKED OR DRILLED = 55'

6 PROPOSED LUMINAIRE, LED
15' BRACKET ARM (L-2)
STA. 199+72.8, 43.2' RT.

7 2" CONDUIT, 725.04
IN TRENCH = 13'

8 LTPB-2

9 PROPOSED LUMINAIRE, LED
20' BRACKET ARM (L-3)
STA. 200+37.2, 43.8' LT.

10 2" CONDUIT, 725.04
IN TRENCH = 13'

11 LTPB-3

12 3" CONDUIT, 725.04
JACKED OR DRILLED = 71'

PROPOSED CONTROLLER CABINET
STA. 200+66.9, 30.5' RT.
(SEE TRAFFIC SIGNAL PLANS)

13 2" CONDUIT, 725.04
IN TRENCH = 34'

14 LTPB-4

PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
LTPB-1	199+68.2	LT	31.3'	18
LTPB-2	199+82.1	RT	51.1'	18
LTPB-3	200+36.5	LT	32.1'	24
LTPB-4	200+35.5	RT	38.5'	24

LEGEND

- SUB-SUMMARY REFERENCE NUMBER
- LIGHTING CONDUIT WITH (3) #6, 2400V DISTRIBUTION CABLE
- PROPOSED PULL BOX (725.08)
- PROPOSED LED LUMINAIRE, BRACKET ARM ON COMBINATION SIGNAL SUPPORT

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LIGHTING PLAN
EAST AVE. / WASHBURN RD.

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

SANITARY SEWER NOTES

ALL SANITARY SEWERS, FORCE MAINS AND APPURTENANCES SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH CURRENT STANDARDS AND SPECIFICATIONS OF THE COUNTY OF SUMMIT, DEPARTMENT OF SANITARY SEWERS SERVICES (D.S.S.S.).

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED. (ORDINANCE NO. 85-656 APPROVED 10-8-85)

APPROVAL BY D.S.S.S. AND/OR THEIR REPRESENTATIVE CONSTITUTES NEITHER EXPRESSED NOR IMPLIED WARRANTIES AS TO THE FITNESS, ACCURACY, OR SUFFICIENCY OF PLANS, DESIGNS OR SPECIFICATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING SEWAGE SYSTEM RESULTING FROM NONCONFORMANCE WITH D.S.S.S. STANDARDS AND/OR GENERAL NEGLIGENCE.

ADJUSTMENT OF THE FINISHED ELEVATIONS OF MANHOLES SHALL BE DONE WITH INFRA-RISER RUBBER GRADE RINGS, AS MANUFACTURED BY EAST JORDAN CO. (FORMALLY KNOWN AS EAST JORDAN IRON WORKS). MAXIMUM ADJUSTMENT MAY NOT EXCEED 12". A MINIMUM OF ONE GRADE RING IS REQUIRED ON ALL MANHOLES.

INTERNAL CHIMNEY SEALS SHALL BE INSTALLED IN ALL MANHOLES.

MANHOLE COVER INSERTS SHALL BE PROVIDED FOR ALL MANHOLES, REGARDLESS OF THE TYPE OF COVER REQUIRED.

WHERE INLET AND OUTLET PIPES CONNECT TO MANHOLES, A FLEXIBLE WATERTIGHT JOINT AS APPROVED BY THE D.S.S.S. IS REQUIRED.

ALL SANITARY SEWERS, MANHOLES, AND APPURTENANCES CONTAINED HEREIN ARE TO BE PUBLICLY OWNED AND MAINTAINED.

ALL WORK COMPLETED UNDER THIS CONTRACT SHALL COMPLY WITH THE U.S. DEPARTMENT OF LABOR AND OCCUPATION SAFETY AND HEALTH ACT.

EXCAVATION OUTSIDE NORMAL PAY LIMITS SHALL NOT BE COMMENCED WITHOUT APPROVAL OF D.S.S.S.

ALL AREAS DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO PRECONSTRUCTION CONDITIONS BEFORE FINAL ACCEPTANCE OF THE WORK BY D.S.S.S.

THE PRICE BID FOR ALL PIPE AND STRUCTURES SHALL BE FOR COMPLETE IN PLACE INSTALLATION INCLUDING BACKFILL REGARDLESS OF SOIL, GROUNDWATER, OR ROCK CONDITIONS.

ANY ADAPTERS REQUIRED TO FIT THE NEW FORCEMAIN TO EXISTING PIPE OR STRUCTURES SHALL BE INCLUDED IN THE BID PRICE OF THE FORCEMAIN NO EXTRA PAYMENT SHALL BE MADE FOR MISCELLANEOUS ADAPTERS, CONNECTIONS, PIPE SEALS, ETC.

THE SANITARY FLOW SHALL NOT BE INTERRUPTED DURING CONSTRUCTION. IF REQUIRED, BY-PASS PUMPING EQUIPMENT SIZED FOR WET WEATHER FLOW OR OTHER METHODS SHALL BE USED AND THE COST INCLUDED IN THE BID PRICE FOR "TEMPORARY SEWAGE PUMPING".

NOTIFY THE D.S.S.S. SEVENTY-TWO (72) HOURS PRIOR TO STARTING CONSTRUCTION (330-926-2501, CHIEF INSPECTOR).

TOP ELEVATIONS OF MANHOLES AS INDICATED ON THE PLAN AND PROFILE ARE APPROXIMATE AND SHOULD BE USED FOR BIDDING PURPOSES ONLY. ACTUAL TOP ELEVATIONS SHALL BE MEASURED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE CONTRACTOR SHOULD NOTE THAT NO EXTRAS WILL BE AWARDED NOR SHALL ANY DEDUCTION BE MADE FOR MANHOLES WHOSE AS-BUILT DEPTHS MAY VARY FROM THOSE SHOWN ON PLANS.

ALL ELEVATIONS AND DISTANCES ARE BELIEVED TO BE ACCURATE. HOWEVER, THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL INFORMATION SHOWN ON THE DRAWINGS.

THE CONTRACTOR SHALL STAKE AND ESTABLISH CONTROL FOR SANITARY SEWER LOCATIONS AND SHALL INCLUDE THESE COSTS IN THE BID PRICE FOR MOBILIZATION/BONDING.

ALL PVC SEWERS SHALL BE SUBJECTED TO A PIPE DEFLECTION TEST. THE TEST SHALL BE WITNESSED BY A REPRESENTATIVE OF D.S.S.S. AND SHALL NOT OCCUR UNTIL AT LEAST 60 DAYS AFTER THE SOIL/PIPE SYSTEM HAS BEEN INSTALLED. THE TEST SHALL CONSIST OF HAND PULLING A MANDREL DEVICE THROUGH THE SEWER. THE MANDREL SHALL BE EITHER A FULL CIRCLE OR 9-ARM TYPE WHICH HAS OUTSIDE DIMENSIONS WHICH ARE 95% OF THE I.D. OF THE PIPE BEING TESTED. PIPE FAILING THE MANDREL TEST SHALL BE REPLACED AT NO COST TO THE OWNER OR ENGINEER (INCLUDING EXCAVATION, SITE RESTORATION, RE-TESTING ETC.).

ALL UNDERGROUND LINES ENCOUNTERED BY CONSTRUCTION OF THE SANITARY SYSTEM ARE TO BE COMPLETELY RESTORED AT THE EXPENSE OF THE CONTRACTOR.

FOR ALL PROPOSED TRENCHES LOCATED UNDER AN EXISTING OR PROPOSED DRIVEWAY OR PAVEMENT AREA AND WHEN THE NEAREST EDGE OF THE PROPOSED TRENCH IS WITHIN 3 FEET OF THE PAVEMENT, THE TRENCH SHALL BE BACKFILLED WITH COMPACTED ITEM 304 LIMESTONE WITHIN THE DRIVEWAY OR PAVEMENT AREA. EACH LAYER SHALL BE TAMPED OR ROLLED MECHANICALLY BY A METHOD APPROVED BY THE COUNTY. TO A STANDARD PROCTOR DENSITY OF 95 PERCENT. ANY DENSITY TESTS REQUIRED BY THE COUNTY SHALL BE PAID FOR AT THE CONTRACTOR'S EXPENSE. THE COST OF THIS BACKFILL SHALL BE INCLUDED IN THE BID PRICE OF THE PIPE.

WHEN THE NEAREST EDGE OF THE PROPOSED TRENCH IS LOCATED FARTHER THAN 3 FEET FROM THE PAVEMENT, THE TRENCH SHALL BE BACKFILLED WITH ODOT ITEM 304 LIMESTONE, APPROVED BY D.S.S.S. TO AT LEAST THE 1:1 SLOPE LINE AS MEASURED FROM THE EDGE OF PAVEMENT. THE METHOD OF BACKFILLING SHALL BE IN 6-INCH LAYERS, LOOSE MEASUREMENT. EACH LAYER SHALL BE TAMPED OR ROLLED MECHANICALLY BY A METHOD APPROVED BY THE COUNTY TO A STANDARD PROCTOR DENSITY OF 99 PERCENT. ANY DENSITY TESTS REQUIRED BY THE COUNTY TOWNSHIP SHALL BE PAID FOR AT THE CONTRACTOR'S EXPENSE. IN ALL CASES, BACKFILL MATERIAL EXTENDING MORE THAN SIX (6) INCHES ABOVE THE LEVEL OF THE SIDES OF THE TRENCH, MUST BE REMOVED FROM THE JOB SITE. ANY PAVEMENT CUT, DAMAGED OR UNDERMINED BY EXCAVATION, SHALL BE REMOVED AND REPLACED TO THE SATISFACTION OF THE COUNTY. TEMPORARY PAVEMENT REPLACEMENTS SHALL BE MAINTAINED IN GOOD CONDITION BY THE CONTRACTOR. PERMANENT REPLACEMENT MUST BE COMPLETED AS SOON AS PRACTICAL.

ALL DISTURBED AND/OR DAMAGED STORM SEWER PIPES, STORM SEWER APPURTENANCES, PAVEMENT, BERMS AND DITCHES SHALL BE REPAIRED AS DIRECTED BY D.S.S.S.

ALL PROPOSED SEWERS AND FORCE MAINS THAT CROSS ANY EXISTING STREAMS SHALL BE CONSTRUCTED WITH A MINIMUM OF 3'-0" COVER.

SILT-FREE DEWATERING FLOWS WILL BE DISCHARGED DIRECTLY TO STABILIZED SITES SUCH AS THE CREEK OR STORM SEWERS, NOT ONTO EXPOSED SOILS OR ANY OTHER SITE WHERE FLOWS COULD CAUSE EROSION.

INLET FILTERS WILL BE INSTALLED AROUND ALL STORM SEWER CATCH BASINS, TO PREVENT SILTATION.

NO MORE THAN 50 FEET OF SEWER TRENCH SHALL REMAIN OPEN AT ONE TIME. MATERIALS EXCAVATED DURING TRENCHING SHALL BE PILED ON THE UPHILL SIDE OF THE TRENCH.

CONCRETE-LADEN WATER WILL NOT BE PERMITTED TO ENTER THE STORM SEWERS, DITCHES OR STREAMS.

THE CONTRACTOR MUST MAINTAIN AN 18-INCH MINIMUM VERTICAL CLEARANCE FROM THE EDGE OF ALL WATER MAINS AND/OR SERVICES TO THE OUTSIDE EDGE OF ALL SANITARY SEWER PIPES WHERE THEY CROSS.

FORCEMANS SHALL BE PRESSURE CLASS 235 (DRI8) DIPS C-900 PVC PIPE WITH JOINTS PER ASTM D-3139 AND ASTM D-2321.

TRACER WIRE- ALL FORCEMAIN SHALL BE INSTALLED WITH AN EXTRA HIGH-STRENGTH, COPPER CLAD STEEL TRACER WIRE INCLUDING 45 MIL HDPE JACKET THAT HAS A MINIMUM AVERAGE BREAK LOAD OF AT LEAST 1150 LBS. THE JACKET SHALL BE COLORED GREEN FOR SEWER. TRACER WIRE GAUGE SHALL BE 10 AWG. THIS WIRE SHALL BE PLACED ONE (1) FOOT ABOVE THE TOP OF PIPE, SHALL BE CONTINUOUS AND BROUGHT UP IN THE MANHOLES AT THE ENDS OF EACH LINE SEGMENT WITH SPLICES MADE ONLY BY METHODS PER THE EQUIPMENT MANUFACTURER'S RECOMMENDATION. ALL MISCELLANEOUS SPLICING COMPONENTS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

FORCEMANS SHALL BE SUBJECTED TO A HYDROSTATIC LEAKAGE TEST AT 100 PSI. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BULKHEADING AND SECURING ALL FITTINGS AND PIPE. EACH SECTION TESTED SHALL BE SLOWLY FILLED TO EXPEL ALL AIR. LEAKAGE IS THE AMOUNT OF WATER THAT MUST BE SUPPLIED TO MAINTAIN THE TEST PRESSURE. NO ALLOWANCE WILL BE MADE FOR LEAKAGE AT VALVES & BULKHEADS. THE FORCE MAIN SHALL BE FILLED AND ALLOWED TO EQUILIBRATE FOR 24 HOURS PRIOR TO THE 2 HOUR LEAKAGE TEST, ALLOWABLE LEAKAGE IS:

$$L = \frac{ND \times P}{7,400}$$

L = ALLOWABLE LEAKAGE (GAL/HR)
N = NUMBER OF JOINTS
D = DIAMETER (INCHES)
P = TEST PRESSURE (PSI)

ITEM SPECIAL - 6" PVC FORCEMAIN
THIS ITEM SHALL INCLUDE ALL NECESSARY UNCLASSIFIED EXCAVATION, EMBANKMENTS, DEWATERING, UTILITY COORDINATION/PROTECTION/RELOCATION/REPLACEMENT, SHEETING AND SHORING, PIPE & PIPE FITTINGS, TRACING TAPE OR WIRE, COUPLINGS, SPACERS, JOINT MATERIAL, CONNECTION TO PROPOSED MANHOLES, BLOCKING PER UNIBELL STANDARDS, DISPOSAL OF WASTE SOIL/MATERIAL, PRESSURE TESTING, CLEANING AND FLUSHING OF THE FORCEMAIN FOR ACCEPTANCE BY THE SUMMIT COUNTY D.S.S.S.; AND ALL OTHER EXPENSES WHETHER SPECIFICALLY MENTIONED OR NOT.

FORCEMANS SHALL BE INSTALLED AT CONTINUOUS GRADES TO ENSURE THAT HIGHPOINTS OCCUR AT PLANNED AIR-RELEASE VALVES OR HIGH POINTS ARE ELIMINATED ENTIRELY.

INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARDS FOUND IN THE PLANS, DETAILS AND THE TECHNICAL SPECIFICATIONS.

PAYMENT WILL BE BASED ON THE INSTALLED, OPERATIONAL LENGTH OF FORCEMAIN AND WILL BE MADE ON A LINEAR FOOT BASIS (MEASURED HORIZONTALLY ALONG THE SURFACE). WASTE MATERIAL WILL NOT BE INCLUDED IN THE MEASUREMENT FOR PAY LENGTH. THE CONTRACTOR WILL NOT BE PAID FOR EXCESS FORCEMAIN MATERIAL INSTALLED AND REMOVED/ABANDONED DUE TO THE CONTRACTOR'S INSTALLATION MEANS AND METHODS.

ITEM SPECIAL - AIR RELEASE VALVE, COMPLETE
THIS PAY ITEM INCLUDES FURNISHING AND INSTALLING AIR RELEASE VALVES (ARV'S) AND THE ASSOCIATED VAULT OR MANHOLE AND ALL INTERNAL ARV COMPONENTS INDICATED IN THE DETAILS. THIS PAY ITEM INCLUDES TRANSITION PIPING, TAPPING SADDLE, ISOLATION VALVES, PIPE SUPPORT, COUPLERS AND ADAPTERS WHETHER INSIDE OR OUTSIDE OF THE VAULT/STRUCTURE. PAYMENT WILL BE MADE FOR EACH ARV VAULT INSTALLED INCLUDING FITTINGS, ANCHORS, EXCAVATION, BEDDING, BACKFILL, EXCAVATION SUPPORT, DEWATERING, UTILITY SUPPORT, AND INCIDENTAL PIPING TO ALLOW THE VALVE VAULT AND COMPONENTS TO BE INSTALLED. PAYMENT WILL BE BASED ON EACH ARV VAULT INSTALLED PER THE DETAILS AND ACCEPTED BY THE OWNER.

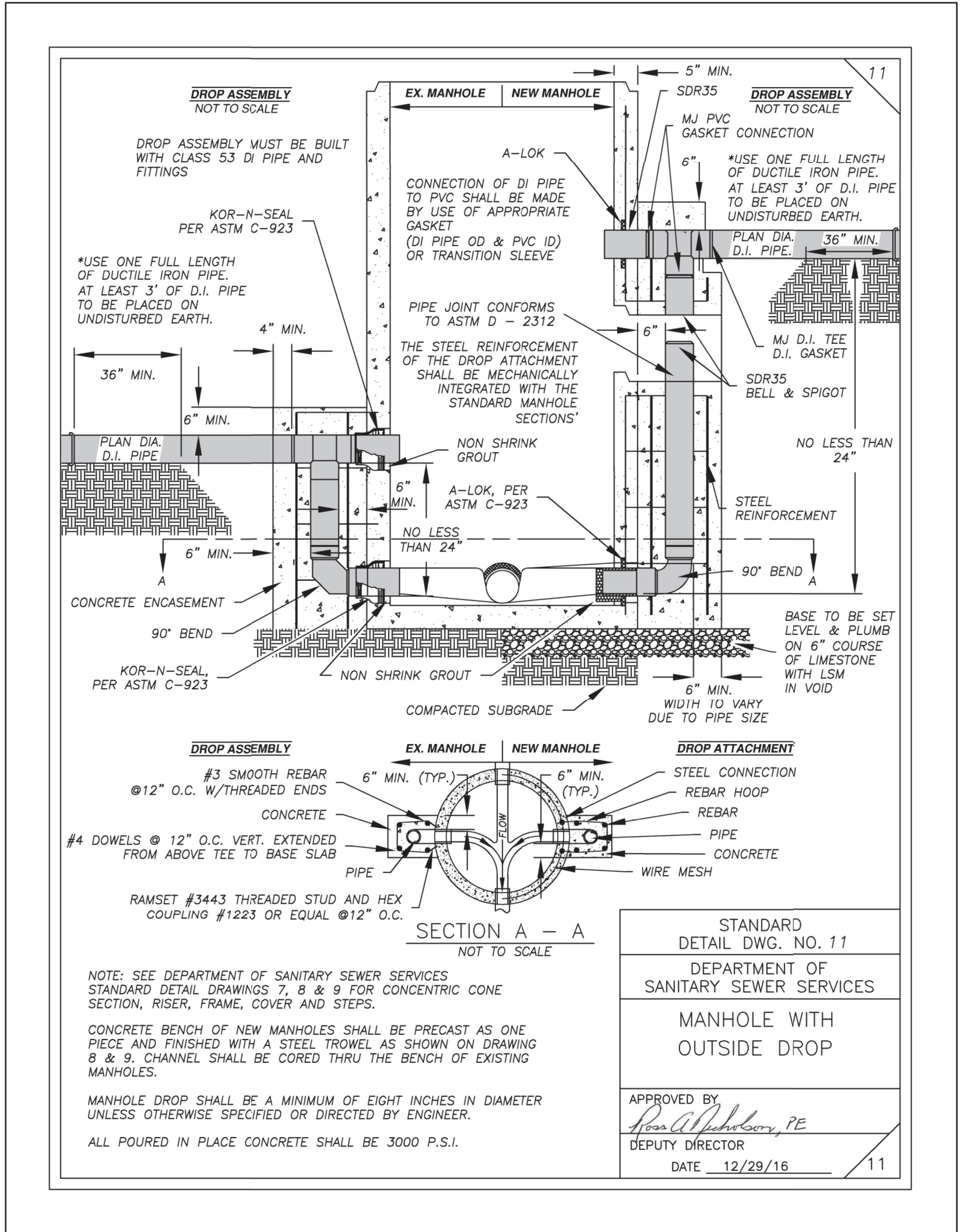
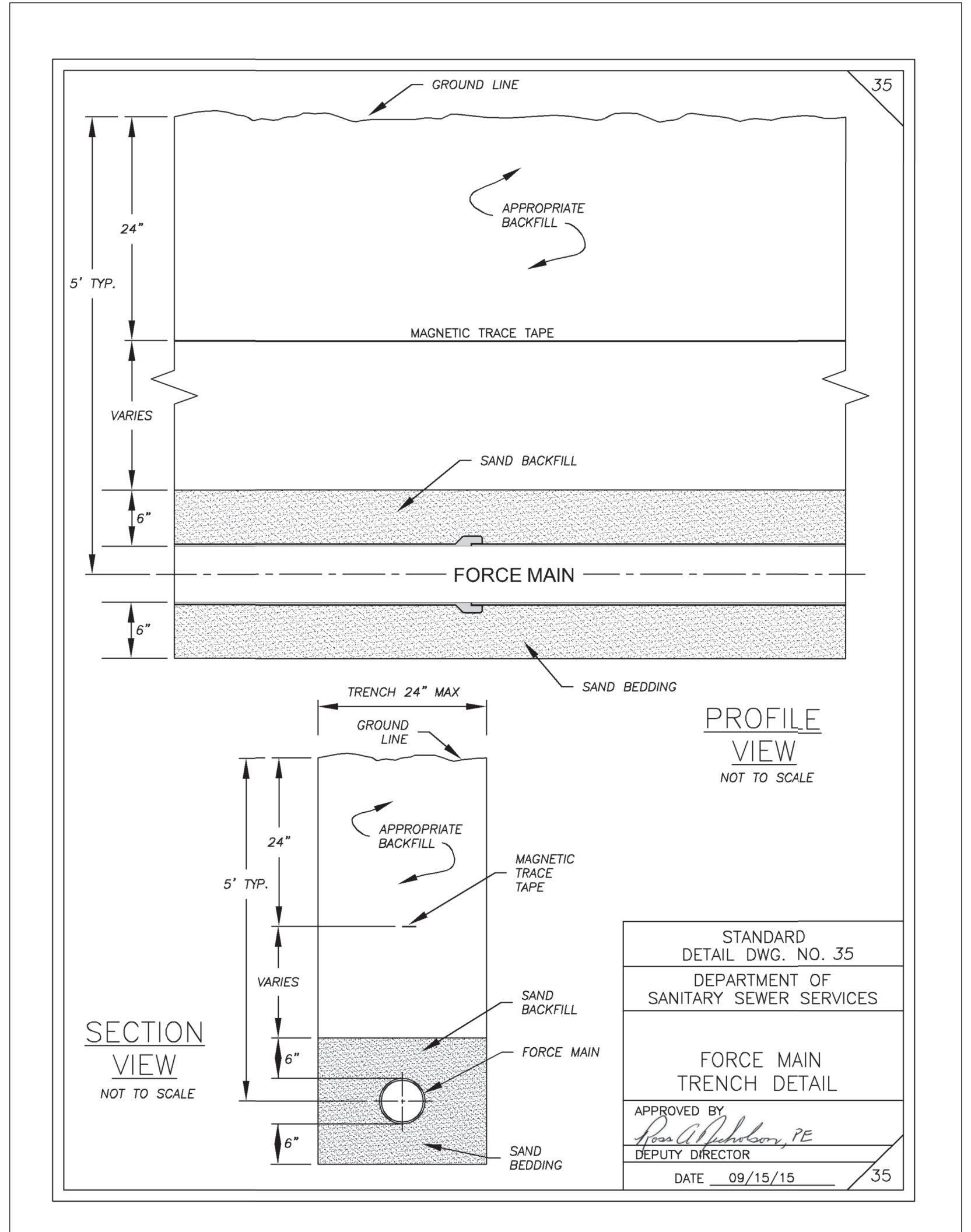
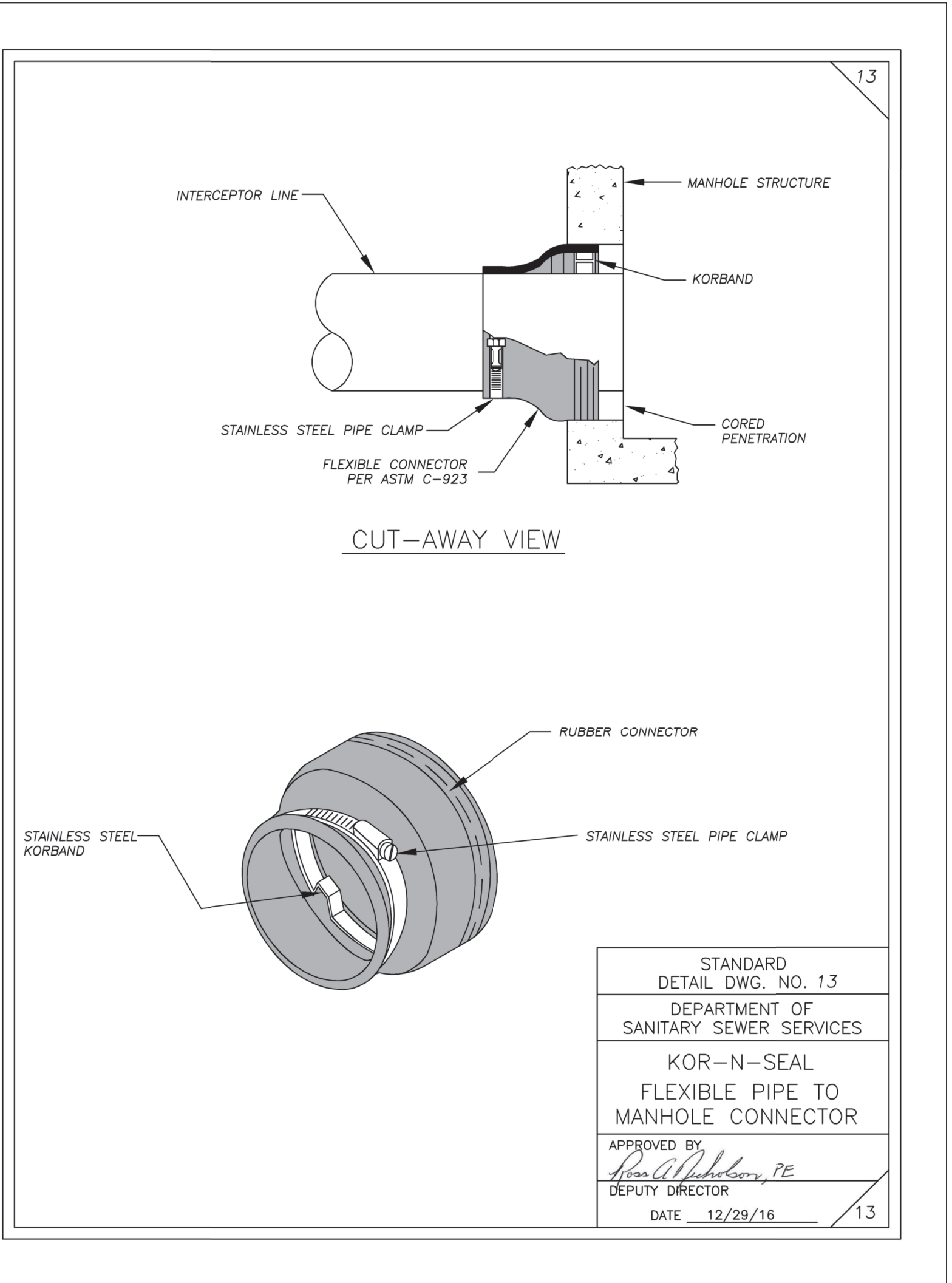
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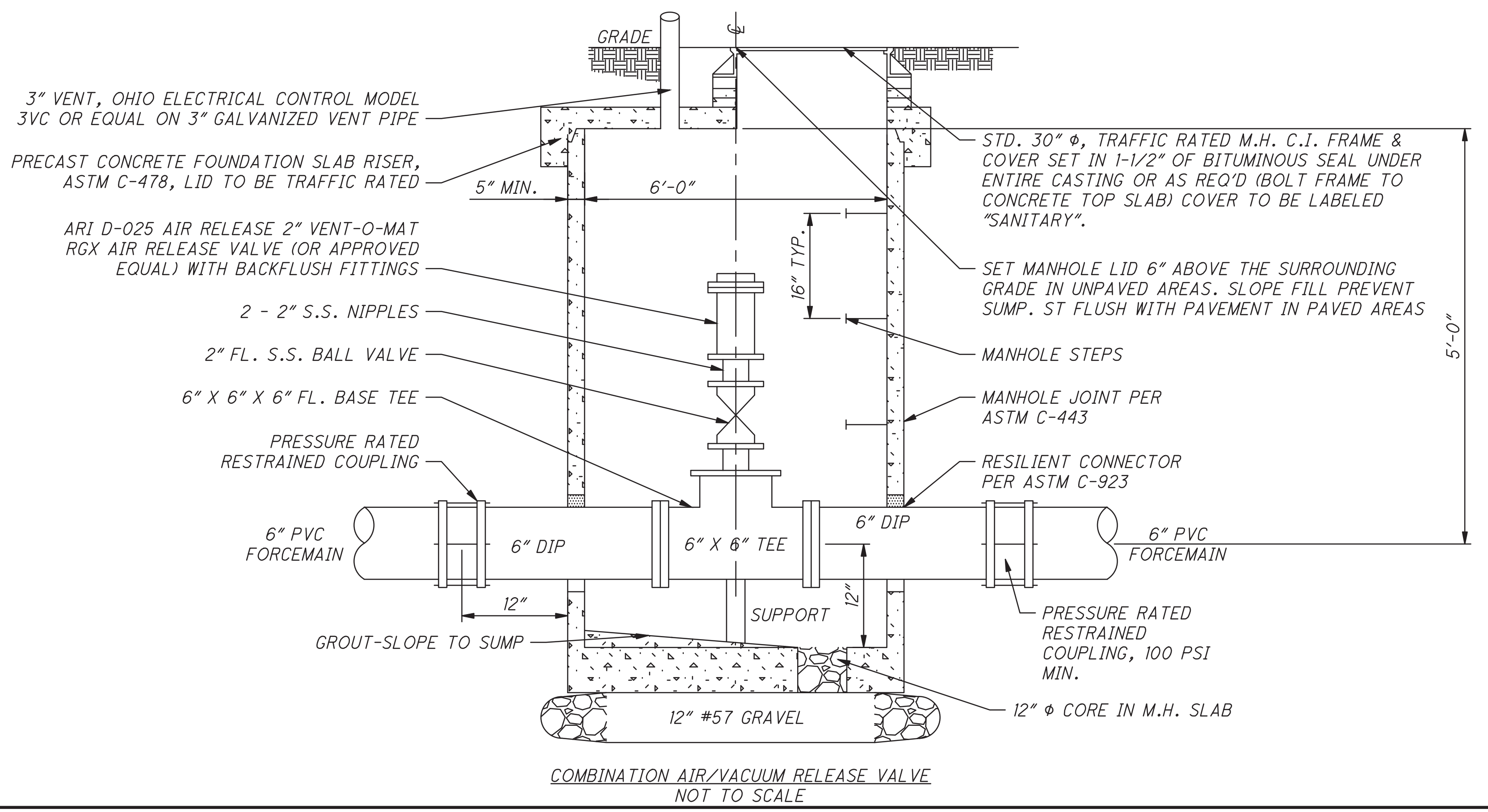
FORCEMAIN NOTES

EAST AVE / WASHBURN RD
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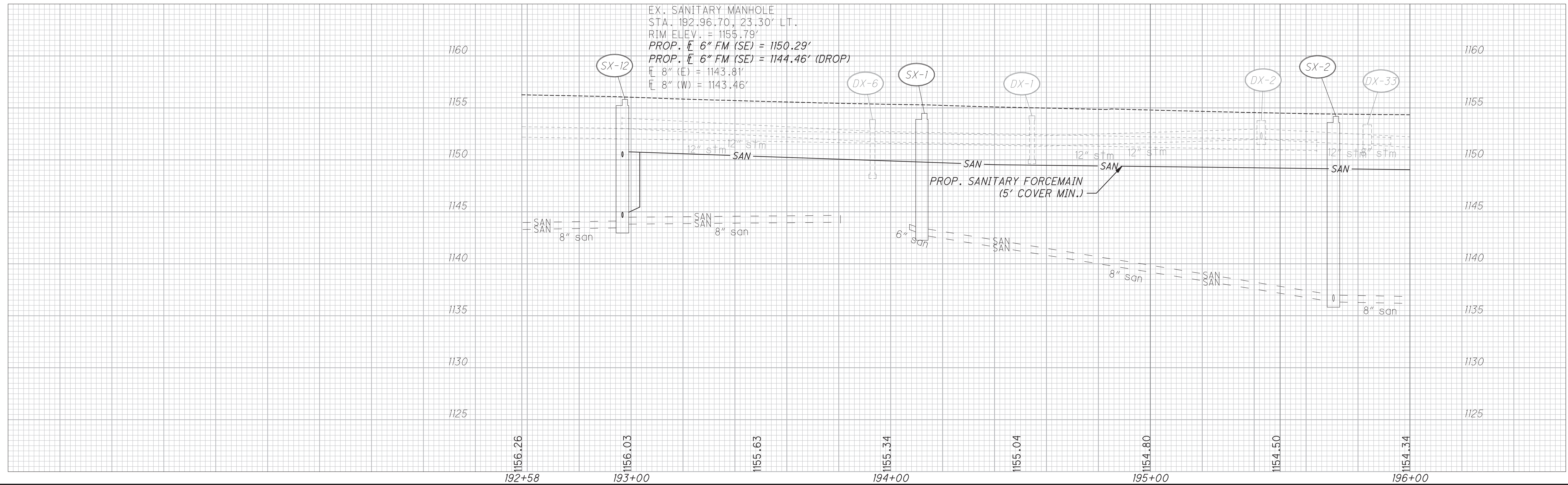
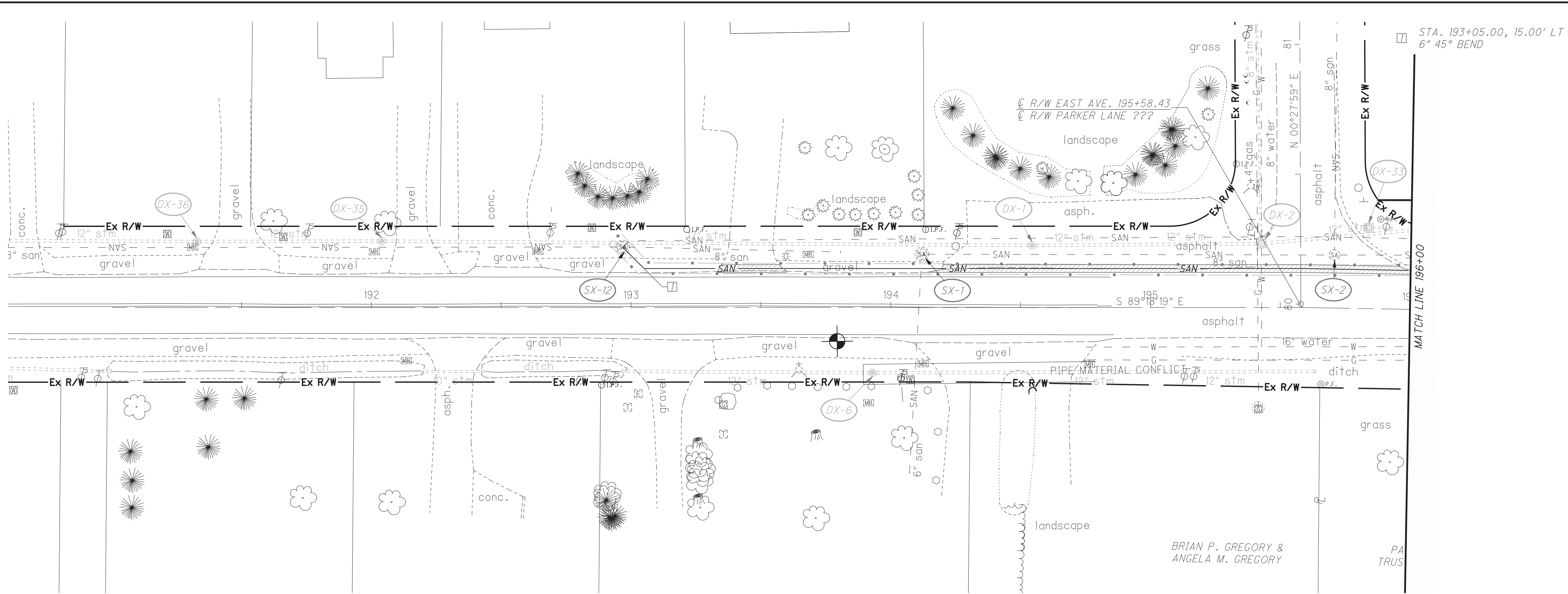
STRUCTURE NOTES:

- JOINT SEAL BETWEEN PRECAST CONCRETE SECTIONS SHALL BE RESILIENT AND FLEXIBLE GASKET JOINTS PER ASTM C443 OR LATEST EDITION.
- PRECAST MANHOLES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C478 AND SHALL BE CLASS III. MANHOLE STEPS TO CONSIST OF A 1/2" φ, A615, GR66 STEEL BAR WITH INJECTED COPOLYMER POLYPROPYLENE TREAD. STEPS TO MEET ASTM C478, AASHTO M-199 AND OSHA SPECIFICATIONS. PIPE PENETRATIONS TO MEET ASTM A-923.
- ALL HARDWARE BRACKETS, SUPPORTS, VAULT ARE TO BE STAINLESS STEEL.
- CONTRACTOR IS RESPONSIBLE FOR SHEETING AND ENSURING THAT FLOTATION OF THE PROPOSED STRUCTURES WILL NOT OCCUR DURING CONSTRUCTION. PRESSURE RELIEF VALVES, SUMP PUMPS, TEMPORARY BALLAST, AND OTHER MEANS OF PREVENTING FLOTATION MAY BE REQUIRED UNTIL THE VAULT EXCAVATION IS COMPLETELY BACKFILLED AND COMPACTED.
- ALL CONCRETE SHALL INCLUDE A CORROSION INHIBITOR ADMIXTURE THAT MEETS ASTM C49, TYPE C ADMIXTURE REQUIREMENTS.



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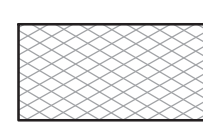

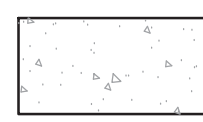
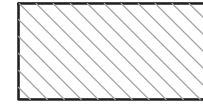


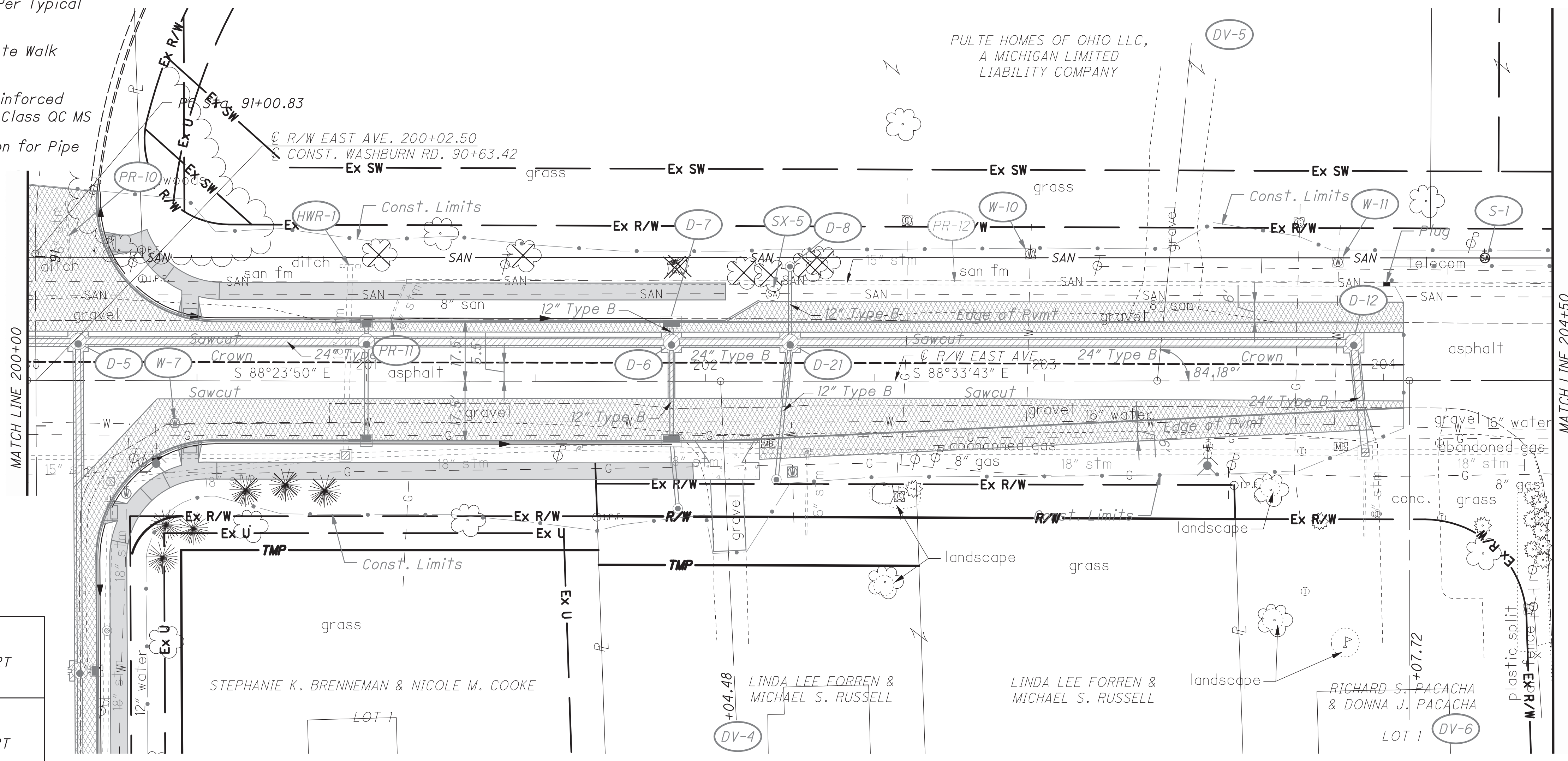
SANITARY FORCEMAIN PLAN AND PROFILE
STATION 192+00 TO STA. 196+00

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

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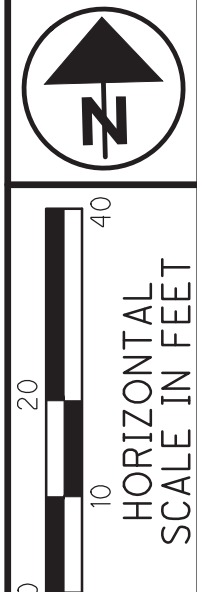
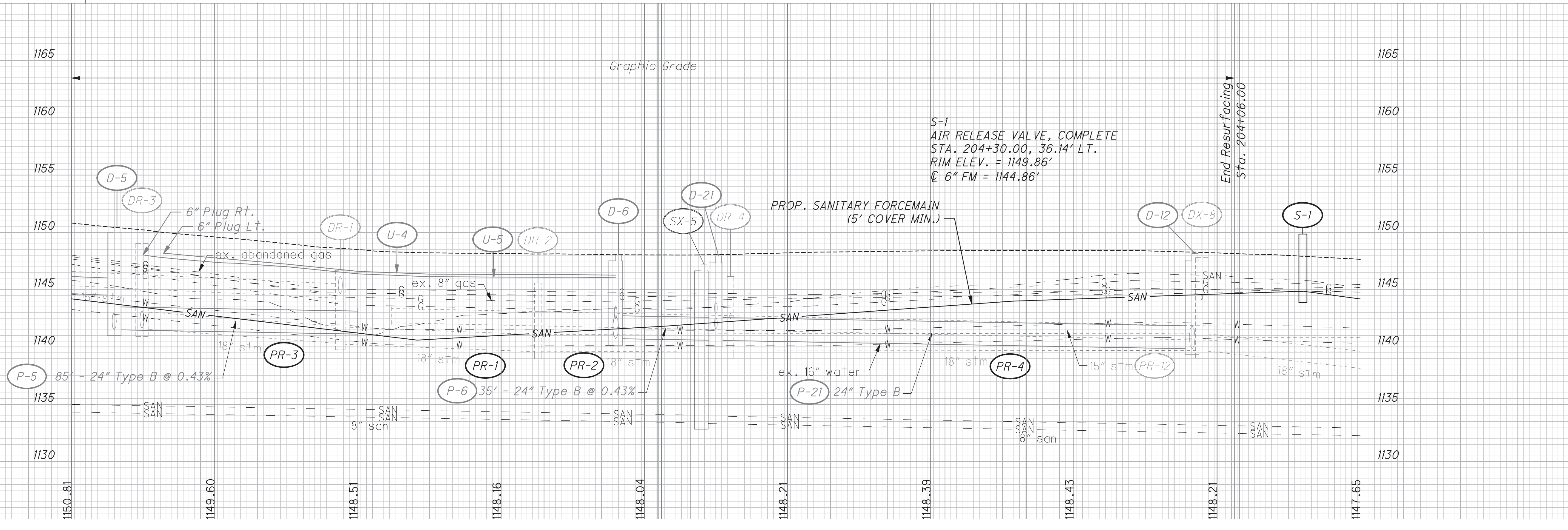
84
88

-  Full Depth Widening Per Typical Sections
-  Item 608 - 4" Concrete Walk
-  Item 452 - 6" Non-Reinforced Concrete Pavement, Class QC MS
-  Pavement Restoration for Pipe Installation



BM1
 SPIKE IN POLE TA 1082
 Sta. 200+34.15, OFF. 23.44' RT
 Elev. 1150.02

BM3
 SPIKE IN POLE 62BE4B 1
 Sta. 204+89.84, OFF. 26.12' RT
 Elev. 1147.76

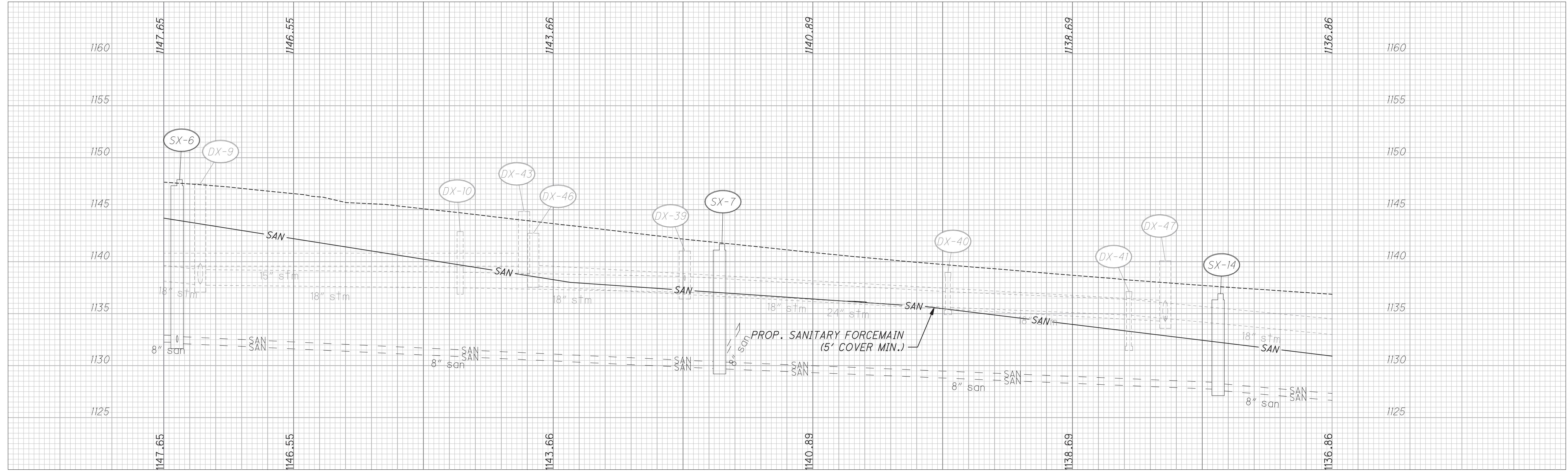
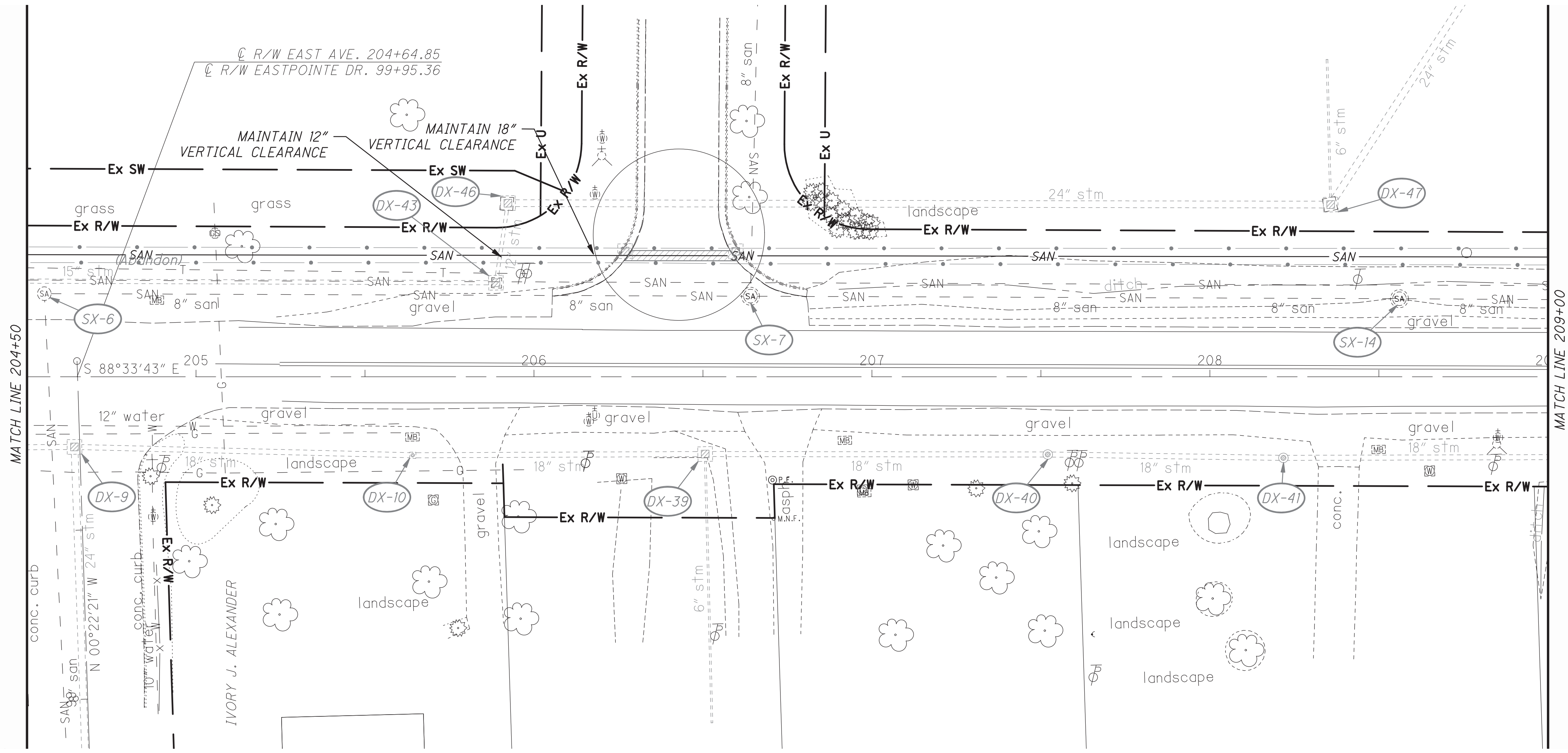


SANITARY FORCEMAIN PLAN AND PROFILE
STA. 200+00 TO STA. 204+50

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

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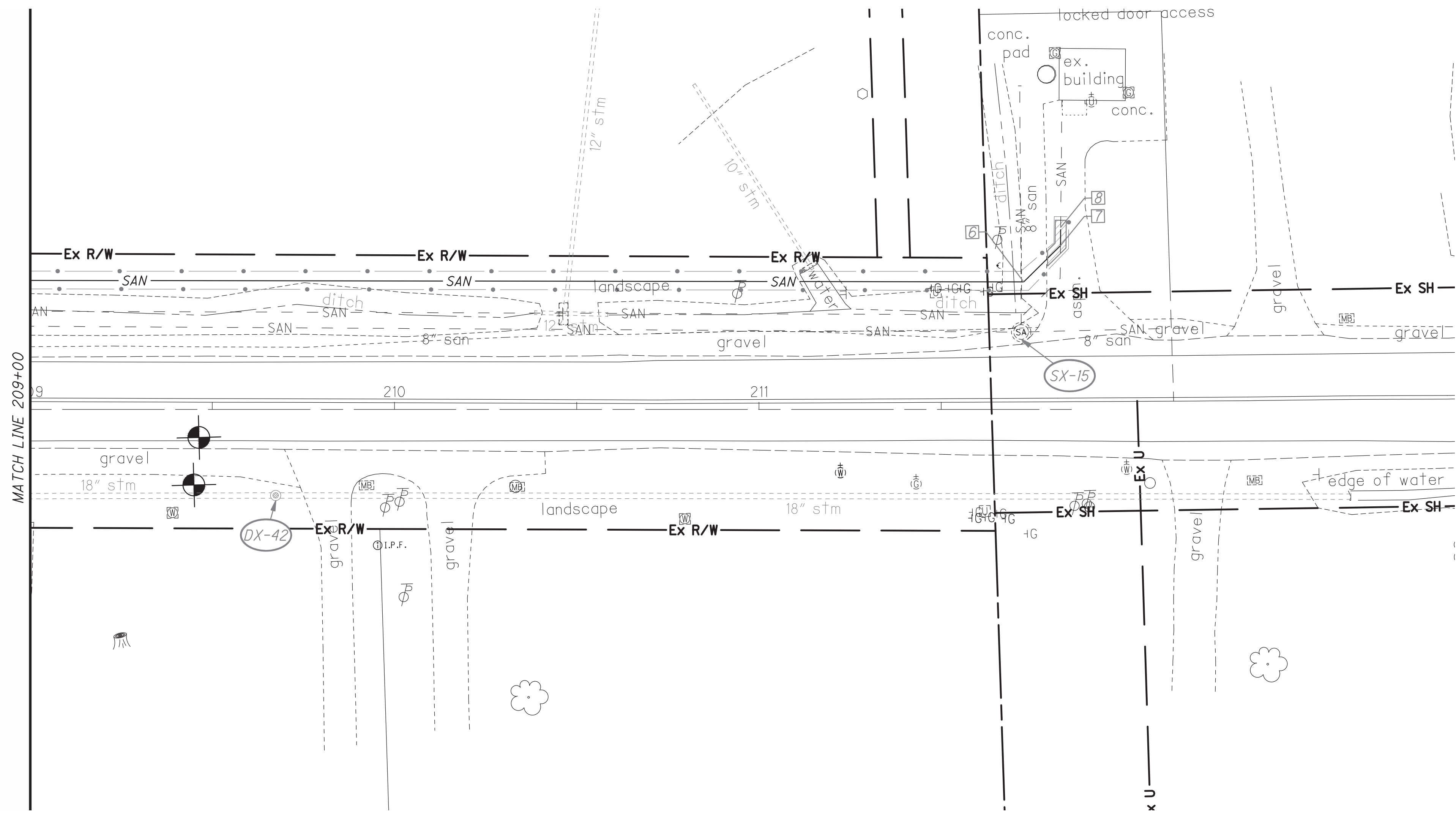
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SANITARY FORCE MAIN PLAN AND PROFILE
STA. 204+50 TO STA. 209+00

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

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- 6 STA. 211+72.63, 34.99' LT
6" 45° BEND
- 7 STA. 211+82.72, 44.97' LT
6" 45° BEND
- 8 STA. 211+82.77, 49.97' LT
CONNECT TO EXISTING
F.M. WITH STAINLESS
STEEL ROMAC INDUSTRIES
ARMOR SEAL OR
APPROVED EQUAL



SANITARY FORCEMAIN PLAN AND PROFILE
STA. 209+00 TO STA. 213+00

EAST AVE / WASHBURN RD
INTERSECTION IMPROVEMENT

