



CITY OF ANN ARBOR ENGINEERING

RESEARCH PARK DRIVE

BID No. 23-10, FILE No. 2022-035

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MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE MDOT STANDARD PLANS GIVEN BELOW.

ROAD STANDARD PLANS

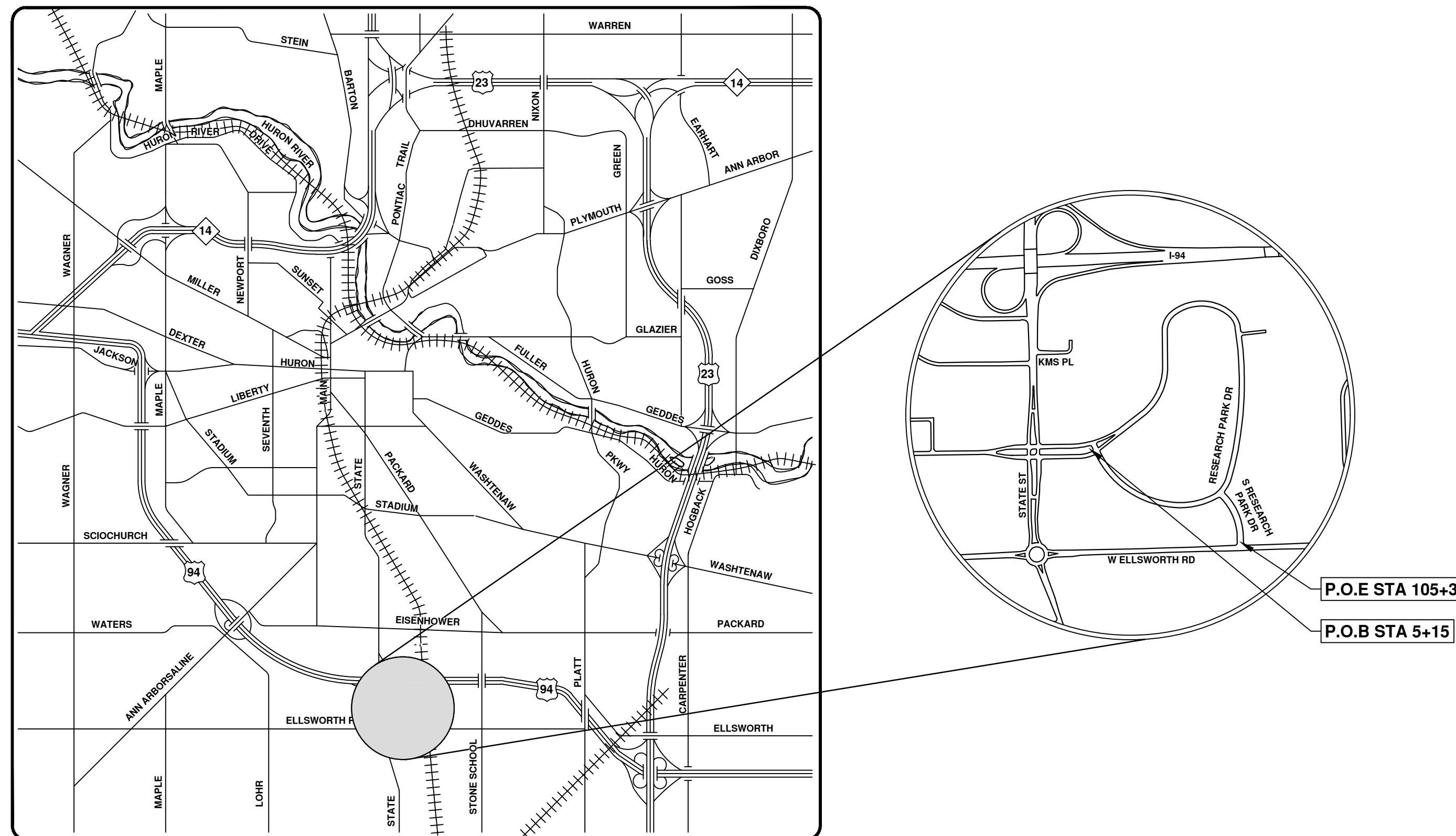
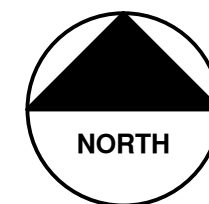
R-100-1 SEEDING AND TREE PLANTING *

TRAFFIC AND SAFETY STANDARD PLANS

WZD-100-A GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS *

WZD-125-E TEMPORARY TRAFFIC CONTROL DEVICES *

* = SPECIAL DETAILS



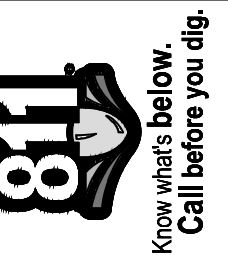
VICINITY MAP

NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO AASHTO, THE 2020 EDITION OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, ITS DETAILS, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESURFACING AND RECONSTRUCTION OF RESEARCH PARK DRIVE AND
S RESEARCH PARK DRIVE

PREPARED UNDER THE SUPERVISION OF

JEREMY J. SCHROT
ENGINEER
No. 59414

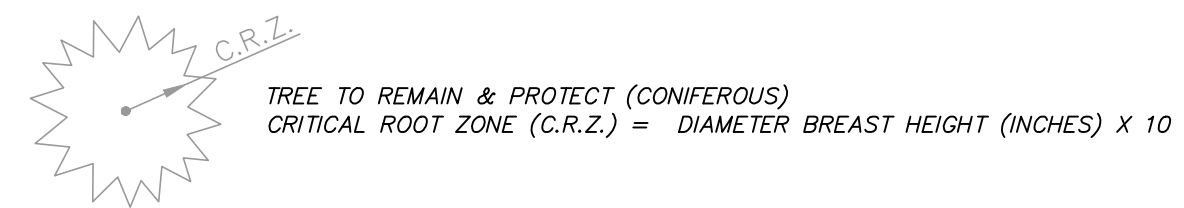
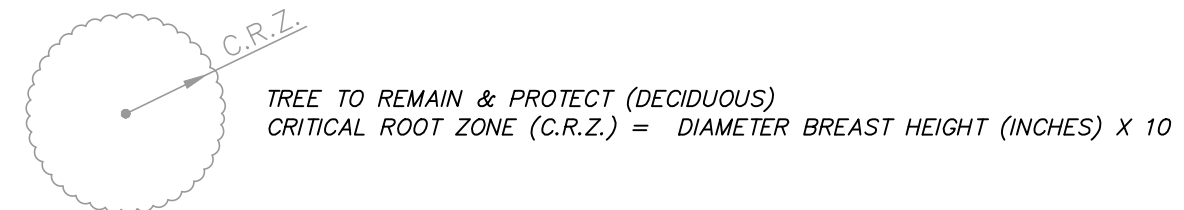
JEREMY SCHROT, P.E.
PROJECT MANAGER

02 / 21 / 2023
DATE

SCALE
DRAWING No.
2022-035-1
SHEET No.
1 OF 41

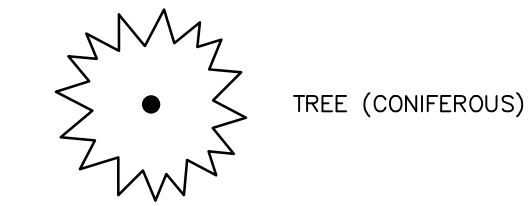
EXISTING LEGEND

EX = EXISTING		
FIRE HYDRANT	WATER MAIN	
GATE VALVE IN BOX	WATER MAIN ABANDONED	
GATE VALVE IN WELL	STORM SEWER	
STOP BOX	STORM SEWER ABANDONED	
WATER VAULT	SANITARY SEWER	
WELL	SANITARY SEWER ABANDONED	
CATCH BASIN (SQ)	GAS MAIN	
CATCH BASIN (RD)	GAS MAIN (DEAD)	
STORM MANHOLE	ELECTRICAL OVER HEAD	
NON-CURB CATCH BASIN (SQ)	ELECTRICAL UNDER GROUND	
END SECTION	ELECTRICAL DUCT BANK	
SANITARY MANHOLE	TELEPHONE OVER HEAD	
CLEAN-OUT	TELEPHONE UNDER GROUND	
POST	TELEPHONE DUCT BANK	
PEDESTRIAN SIGNAL	CABLE TV OVER HEAD	
SIGN	CABLE TV UNDER GROUND	
HAND HOLE	FIBER OPTIC	
ORNAMENTAL LIGHT	FIBER OPTIC DUCT BANK	
FLOOD LIGHT	BOUNDARY	
UNKNOWN MANHOLE	BUILDING	
TELEPHONE MANHOLE	CENTERLINE OF DITCH	
TELEPHONE RISER	CENTERLINE/CROWN OF ROAD	
GAS VALVE	CONTOUR MAJOR	
GAS VENT	CONTOUR MINOR	
GAS BOX	EDGE OF WATER	
ELECTRICAL RISER	FLOODPLAIN	
TRANSFORMER	FENCE	
UTILITY POLE	GRAVEL	
LAMP POLE	GUARDRAIL	
GUY ANCHOR	STONE WALL	
GUY POLE	R.O.W.	
MONITORING WELL	TREELINE	
MAILBOX	WETLAND	
SOIL BORING	EDGE OF BRUSH	
TRAVERSE POINT	HEDGE	
BENCH MARK		
IRON PIPE		
MON BOX		



PROPOSED LEGEND

PROP = PROPOSED		
HYDRANT (PLAN)	WATER MAIN	
WATER GATE WELL	STORM SEWER	
REDUCER	SANITARY SEWER	
WATER GATE VALVE	FIBER OPTIC	
WATER STOP BOX	ELECTRICAL	
WATER VAULT	CENTERLINE OF DITCH	
INLET	CENTERLINE OF ROAD	
DOUBLE INLET	FENCE	
INLET JUNCTION CHAMBER	GRAVEL	
ROUND CATCH BASIN	SILT FENCE	
STORM MANHOLE	PROTECTIVE FENCE	
DRAIN ARROW	GUARDRAIL	
FLARED END SECTION	LOT/JUNIT	
SANITARY MANHOLE	CURB	
CLEAN-OUT	TEMPORARY GRADING PERMIT	
BARREL	CONTOUR MAJOR	
SIGN	CONTOUR MINOR	
PUSH BUTTON	WATER EASEMENT	
HAND HOLE	STORM EASEMENT	
	SANITARY EASEMENT	
	R.O.W.	
	LIMITS OF CONSTRUCTION	
	LIMIT OF GRADING	
	STONE WALL	



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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT
LEGEND

SCALE: NTS
DRAWING No. 2022-035-2

J:\AA\Design\AA22005-Research Park Drive\DWG\AA22005_Cov.dwg - _a2_standard bw.stb - Plot Date: 2/21/2023 1:27:18 PM

CONSTRUCTION NOTES:

1. Driveways and entrances to buildings, real estate property, and the like shall not be blocked except for short durations and only when approved by the Engineer. Vehicular and pedestrian access shall be maintained at all times. It shall be the Contractor's responsibility to coordinate all necessary driveway closures with the property owner(s) and resident(s) in the areas of construction.
2. The location and depth of all existing utilities and service leads are to be field verified by the Contractor prior to construction.
3. Location and depth of utilities as depicted on the plans is approximate and shown according to the best information available. It is the Contractor's responsibility to excavate ahead and adjust depth of conflict utilities accordingly. Any damage to utilities is the Contractor's responsibility to avoid and/or repair as necessary.
4. The Contractor is to take special care to protect the existing water main and be responsible for maintaining consistent water service.
5. During non-working hours no trench shall remain open; any open trench shall be properly secured with protective fencing. This work will not be paid for separately, but shall be included in "General Conditions, Max \$ _".
6. Trenches for new water services shall be excavated to MIOSHA and City of Ann Arbor Public Works requirements.
7. City of Ann Arbor Public Works will install the corporation and copper service lead(s) to transfer the connection(s). If an existing water service is found to be failing or is not copper, the lead will be replaced to the curb box by Public Works.
8. For the installation of corporations, or any other related activities, the Contractor shall not receive additional compensation for delays due to the scheduling of or coordination with the City of Ann Arbor Public Works.
9. "No Parking" signs shall be installed by the Contractor at locations as approved or directed by the Engineer. All signs shall be installed in accordance with the detailed specifications.
10. Postal delivery and refuse pickup service shall be maintained at all times by the Contractor.
11. Where street curbs are undermined due to construction activities, they shall be removed and replaced as directed by the Engineer.
12. The Contractor shall be responsible for the continuous maintenance of the temporary road surface and soil erosion control measures within the construction area until the full completion of the project. This work will not be paid for separately, but shall be included in "General Conditions, Max \$ _".
13. All curb, sidewalk, driveway approach removals shall be approved by Engineer before the work is done.
14. Sowed sewer pipe connections shall be coupled with a Fernco flexible coupling and a stainless steel shear ring.
15. The location of material stock piles and on-site staging areas to be approved by the Engineer.
16. For mainline paving, the width of the mat for each pass of the paver shall be not less than 10.5' or greater than 15', as directed by the Engineer. The Engineer will direct the layout of the longitudinal joints during construction.
17. All structures shall receive new castings as directed by the Engineer, as specified on the standard casting schedule. The existing castings are the property of the City of Ann Arbor. The Contractor shall deliver to City of Ann Arbor Public Works Facility at the W.R. Wheeler Service Center located at 4251 Stone School Road.
18. Payment for drainage structure sumps, where specified, shall be included in the payment for the various drainage structure sizes and or types.
19. Where sewer and water main are to be removed & replaced or added, all pipe shall be installed using Trench Detail detailed in the specifications or shown on Plans. Backfill for sewer and water construction shall be MDOT Granular Material, Class II, Modified.
20. Existing street name, guide, and regulatory signs, and mailboxes which conflict with the proposed construction shall be removed prior to construction, stored in a manner which will prevent damage, and re-set in locations as directed by the Engineer. This work will not be paid for separately, but shall be included in "Machine Grading, Modified"
21. In areas where edge drain cannot be installed in accordance with City of Ann Arbor Detail SD-TD-11, the edge drain shall be installed at the depth as indicated on the plans, or as directed by Engineer. In no case shall the edge drain be installed at a grade less than 0.50% or at a depth of less than 2" below top of proposed pavement.
22. Maintenance gravel in driveway openings can be substituted with HMA millings compacted and free of any items that could cause damage to vehicles. This work will not be paid for separately, but shall be included in "General Conditions, Max \$ _".

PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
LANE CLOSURE PERMIT*	CITY OF ANN ARBOR ENGINEERING
"NO PARKING" SIGNS PERMIT*	CITY OF ANN ARBOR ENGINEERING
GRADING/SOIL EROSION & SEDIMENTATION CONTROL PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
RIGHT-OF-WAY PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
* NO COST TO CONTRACTOR	

PERMITS REQUIRED TO BE OBTAINED BY THE CITY OF ANN ARBOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY

CONTACT INFORMATION

PUBLIC UTILITIES	OWNER	CONTACT
WATER	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	(734) 794-6350
SANITARY		
STORM		
FORESTRY		
SIGNS SIGNALS STREET LIGHTS		
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY	RUSSELL THORNTON 1(800) 338-0178
CABLE	COMCAST	CAMILLA DEAN (419) 874-9262
PHONE	AT&T	ARTHUR MADISON (586)214-7753
FIBER	WESTERN TELECOM	HEATHER SHAWL (616) 393-0138
FIBER OPTIC	ACD NET	JACOB LAPE (517) 999-3276
PHONE	VERIZON	RONALD KOCIENSKI RONALD.KOCIENSKI@VERIZON.COM



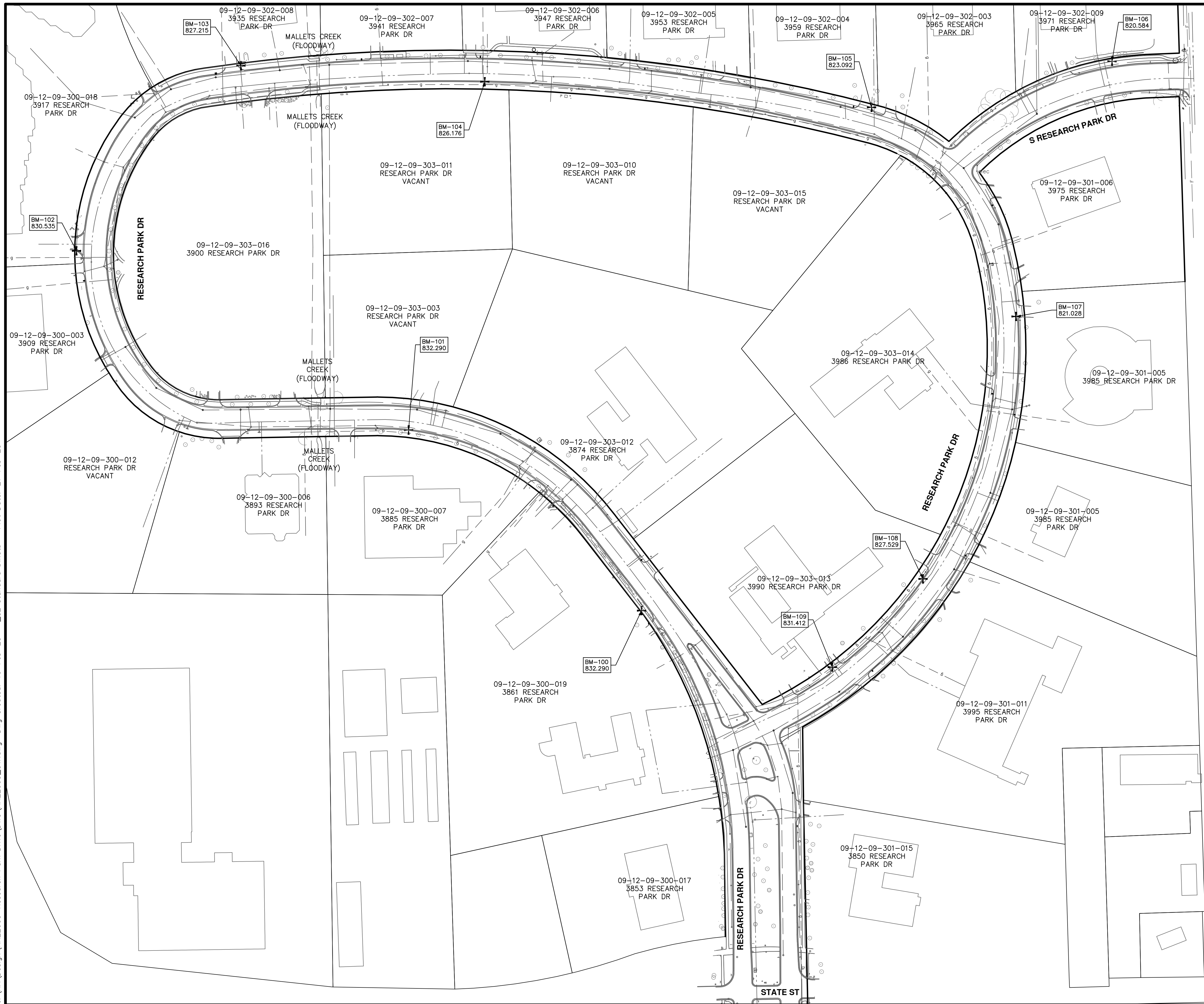
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT
NOTES

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W ELLSWORTH RD



RESEARCH PARK DRIVE BENCHMARKS		
BM#	ELEV	DESCRIPTION
100	832.290	SET SCRIBED X IN SIDEWALK. LOCATED ON NORTH SIDE OF RESEARCH PARK DRIVE IN FRONT OF BUILDING #3869, ±30' NORTHEAST OF THE EDGE WESTERLY DRIVEWAY
101	832.542	SET SCRIBED X IN TOP OF CURB. LOCATED ON THE WEST SIDE OF RESEARCH PARK DRIVE IN FRONT OF BUILDING #3885, ±135' SOUTH OF THE CENTERLINE OF THE NORTH DRIVEWAY
102	830.535	SET CHISELED X IN TOP NW CORNER OF SQUARE CATCH BASIN STRUCTURE. LOCATED IN THE WEST CURB OF DRIVEWAY TO BUILDING #3915
103	827.215	SET CHISELED X IN EAST RIM OF WATER SHUT OFF. LOCATED ON THE EAST SIDE OF RESEARCH PARK DRIVE, BETWEEN SIDEWALK AND CURB NEAR THE SOUTH SIDE OF DRIVEWAY TO BUILDING #3941
104	826.176	SET MAG NAIL IN TOP OF CURB. LOCATED ON THE WEST SIDE OF RESEARCH PARK DRIVE, ±35' SOUTH OF THE CENTERLINE OF DRIVEWAY FOR BUILDING #3948
105	823.092	SET MAG NAIL IN TOP OF CURB. LOCATED ON THE EAST SIDE RESEARCH PARK DRIVE IN THE SOUTH CURB OF DRIVEWAY APRON TO BUILDING #3965
106	820.584	SET SCRIBED X IN SIDEWALK. LOCATED ON THE EAST SIDE OF RESEARCH PARK DRIVE, ±95' SOUTH OF THE BACK OF CURB OF DRIVEWAY TO BUILDING #3971
107	821.028	SET CHISELED X IN THE SOUTH RIM OF SEWER MANHOLE. LOCATED ON SOUTH SIDE OF RESEARCH PARK DRIVE, IN EAST DRIVEWAY TO BUILDING #3985
108	827.529	SET MAG NAIL IN TOP OF CURB. LOCATED ON THE NORTH SIDE OF RESEARCH PARK DRIVE, NEAR THE WEST SIDE OF EAST DRIVEWAY FOR BUILDING #3990
109	831.412	SET CHISELED X IN THE NORTHEAST RIM OF WATER SHUT OFF. LOCATED IN THE SOUTHERLY LOOP DRIVEWAY APRON NEAR WEST SIDE OF BUILDING #3990

811
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RESEARCH PARK DRIVE IMPROVEMENTS PROJECT

SCALE: 1" = 100'

DRAWING No. 2022-035-4

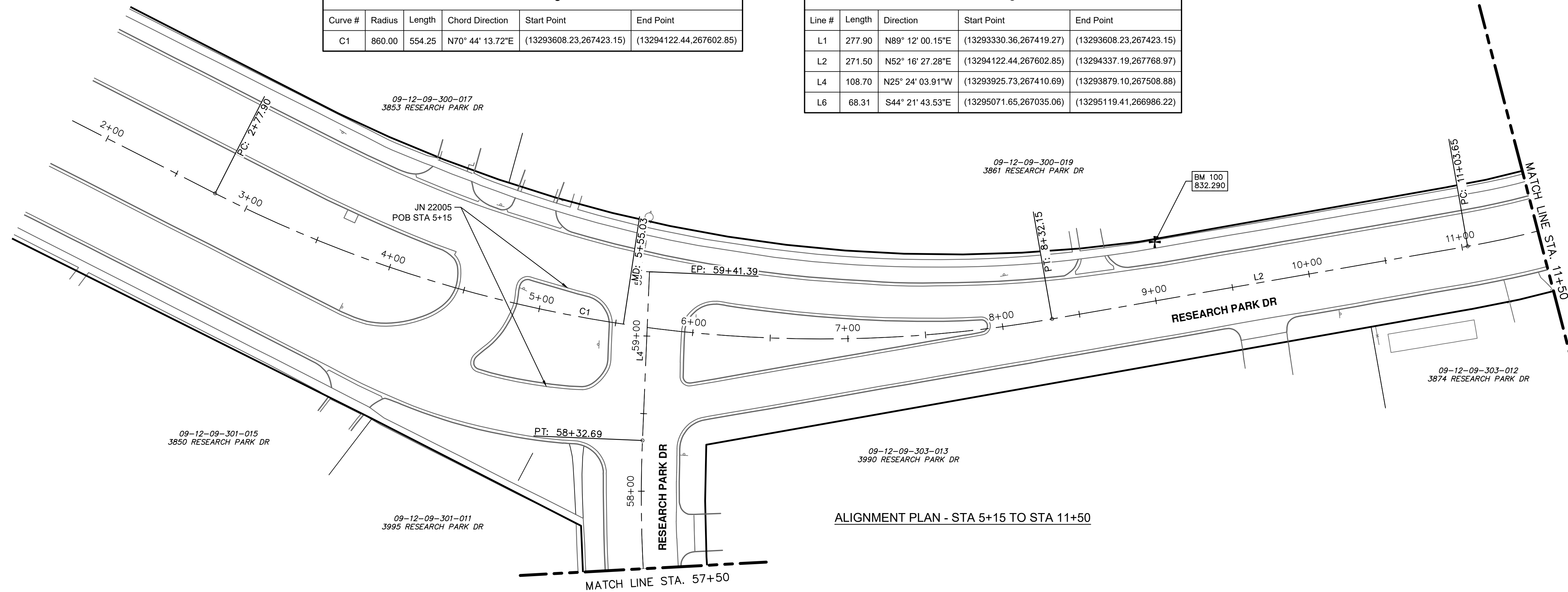
SHEET No. 4 OF 41

OVERALL PLAN

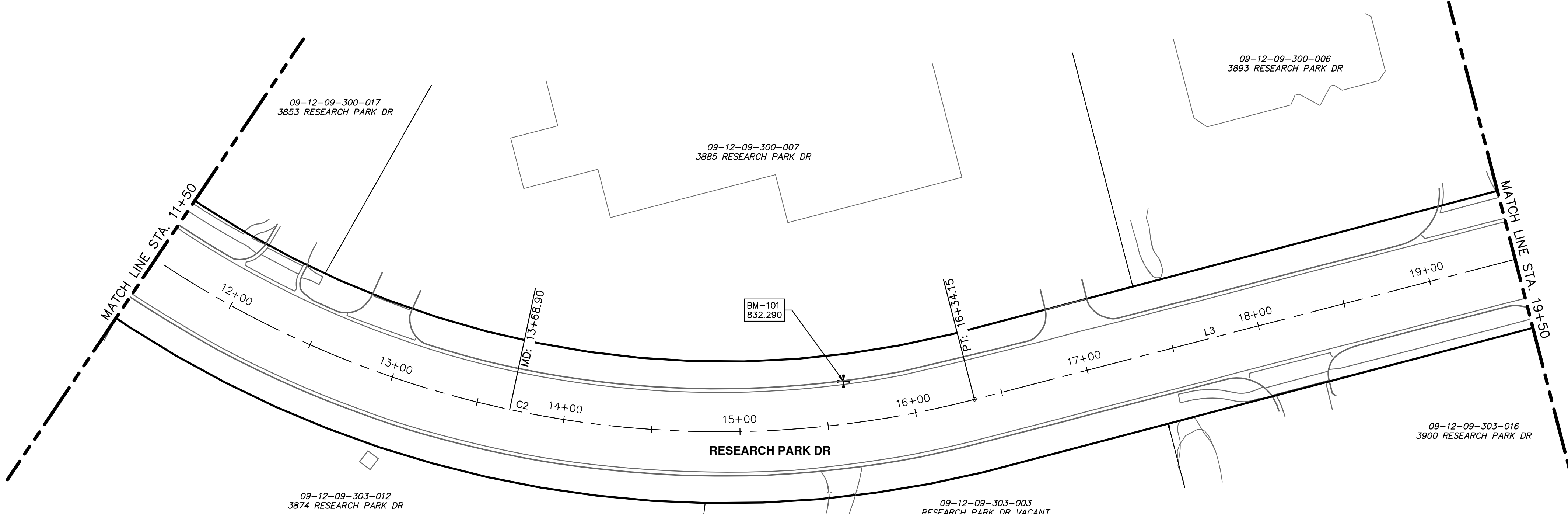
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Curve Table: Alignments					
Curve #	Radius	Length	Chord Direction	Start Point	End Point
C1	860.00	554.25	N70° 44' 13.72"E	(13293608.23,267423.15)	(13294122.44,267602.85)

Line Table: Alignments					
Line #	Length	Direction	Start Point	End Point	
L1	277.90	N89° 12' 00.15"E	(13293330.36,267419.27)	(13293608.23,267423.15)	
L2	271.50	N52° 16' 27.28"E	(13294122.44,267602.85)	(13294337.19,267768.97)	
L4	108.70	N25° 24' 03.91"W	(13293925.73,267410.69)	(13293879.10,267508.88)	
L6	68.31	S44° 21' 43.53"E	(13295071.65,267035.06)	(13295119.41,266986.22)	



ALIGNMENT PLAN - STA 5+15 TO STA 11+50



ALIGNMENT PLAN - STA 11+50 TO STA 19+50

Line Table: Alignments					
Line #	Length	Direction	Start Point	End Point	
L3	321.40	N0° 46' 35.32"W	(13294559.51,268229.91)	(13294555.15,268551.28)	

Curve Table: Alignments					
Curve #	Radius	Length	Chord Direction	Start Point	End Point
C2	572.95	530.50	N25° 44' 55.98"E	(13294337.19,267768.97)	(13294559.51,268229.91)

RESEARCH PARK DRIVE BENCHMARKS		
BM#	ELEV	DESCRIPTION
100	832.290	SET SCRIBED X IN SIDEWALK. LOCATED ON NORTH SIDE OF RESEARCH PARK DRIVE IN FRONT OF BUILDING #3869, ±30' NORTHEAST OF THE EDGE WESTERLY DRIVEWAY
101	832.542	SET SCRIBED X IN TOP OF CURB. LOCATED ON THE WEST SIDE OF RESEARCH PARK DRIVE IN FRONT OF BUILDING #3885, ±135' SOUTH OF THE CENTERLINE OF THE NORTH DRIVEWAY



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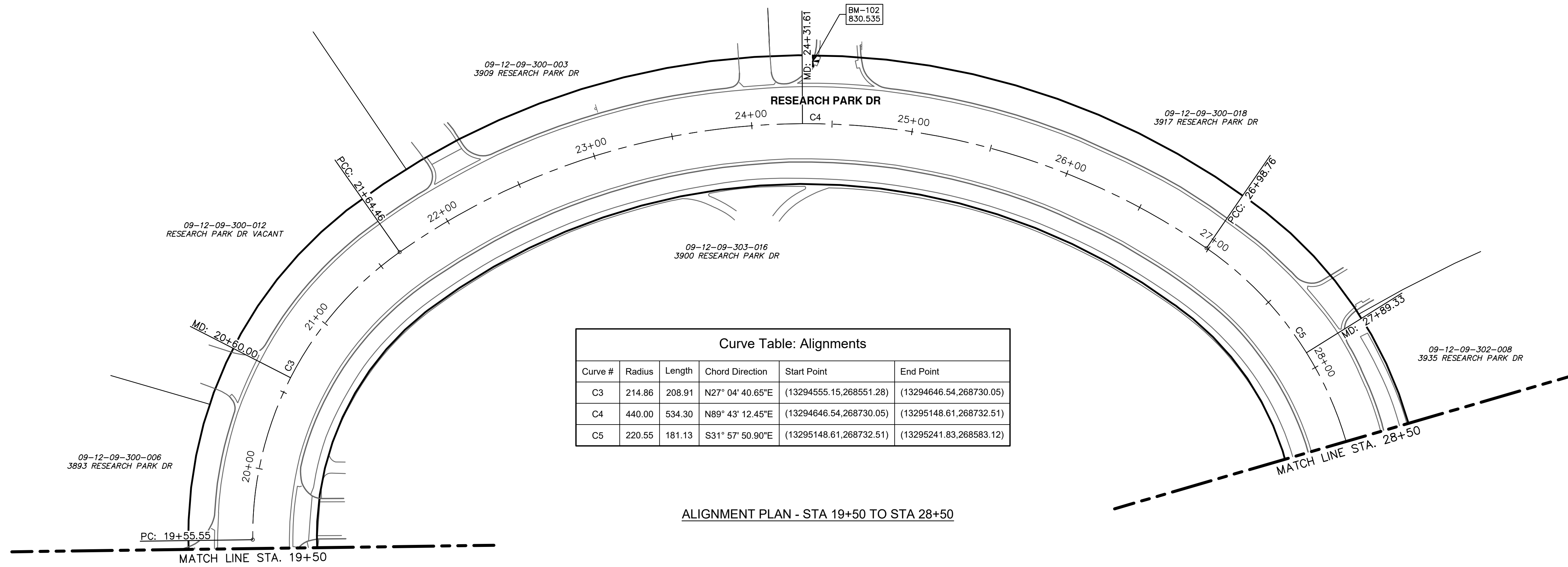


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RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT
ALIGNMENT PLAN - POB TO STA 19+50

SCALE: 1" = 40'
DRAWING No. 2022-035-5
SHEET No. 5 OF 41

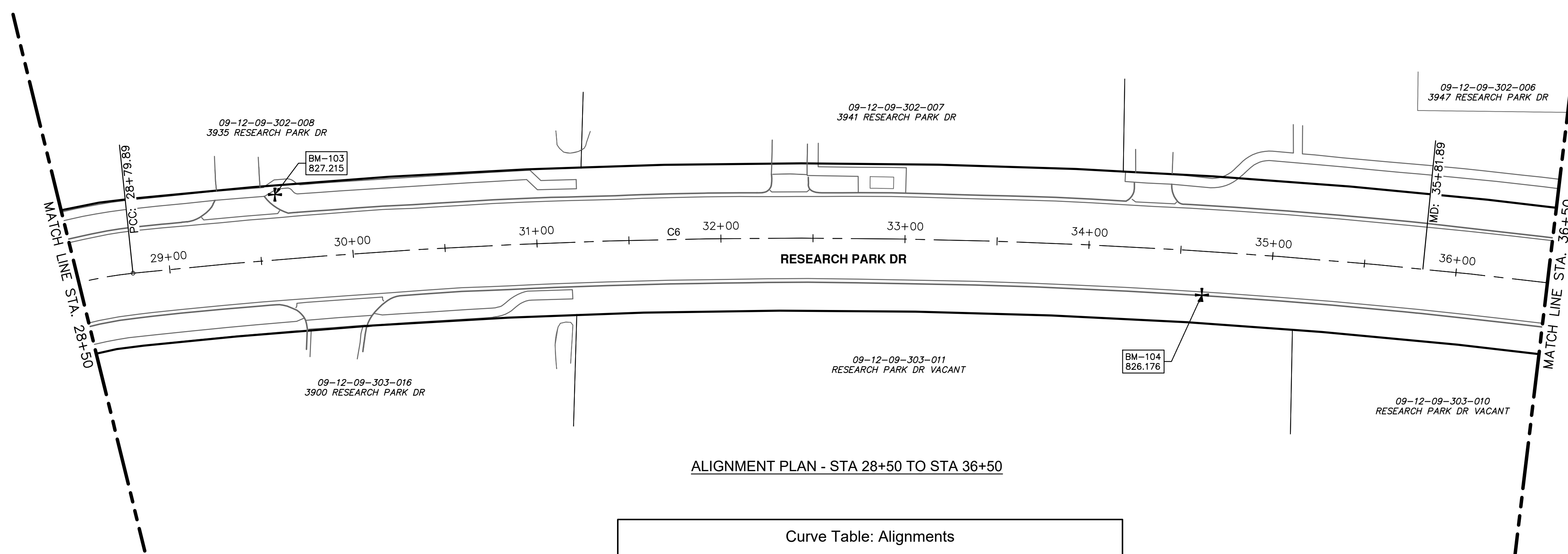
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Curve #	Radius	Length	Chord Direction	Start Point	End Point
C3	214.86	208.91	N27° 04' 40.65"E	(13294555.15,268551.28)	(13294646.54,268730.05)
C4	440.00	534.30	N89° 43' 12.45"E	(13294646.54,268730.05)	(13295148.61,268732.51)
C5	220.55	181.13	S31° 57' 50.90"E	(13295148.61,268732.51)	(13295241.83,268583.12)

ALIGNMENT PLAN - STA 19+50 TO STA 28+50



Curve #	Radius	Length	Chord Direction	Start Point	End Point
C6	3437.72	1404.00	S3° 15' 50.57"W	(13295241.83,268583.12)	(13295162.44,267191.12)

ALIGNMENT PLAN - STA 28+50 TO STA 36+50

BM#	ELEV	DESCRIPTION
102	830.535	SET CHISELED X IN TOP NW CORNER OF SQUARE CATCH BASIN STRUCTURE. LOCATED IN THE WEST CURB OF DRIVEWAY TO BUILDING #3915
103	827.215	SET CHISELED X IN EAST RIM OF WATER SHUT OFF. LOCATED ON THE EAST SIDE OF RESEARCH PARK DRIVE, BETWEEN SIDEWALK AND CURB NEAR THE SOUTH SIDE OF DRIVEWAY TO BUILDING #3941
104	826.176	SET MAG NAIL IN TOP OF CURB. LOCATED ON THE WEST SIDE OF RESEARCH PARK DRIVE, ±35' SOUTH OF THE CENTERLINE OF DRIVEWAY FOR BUILDING #3948



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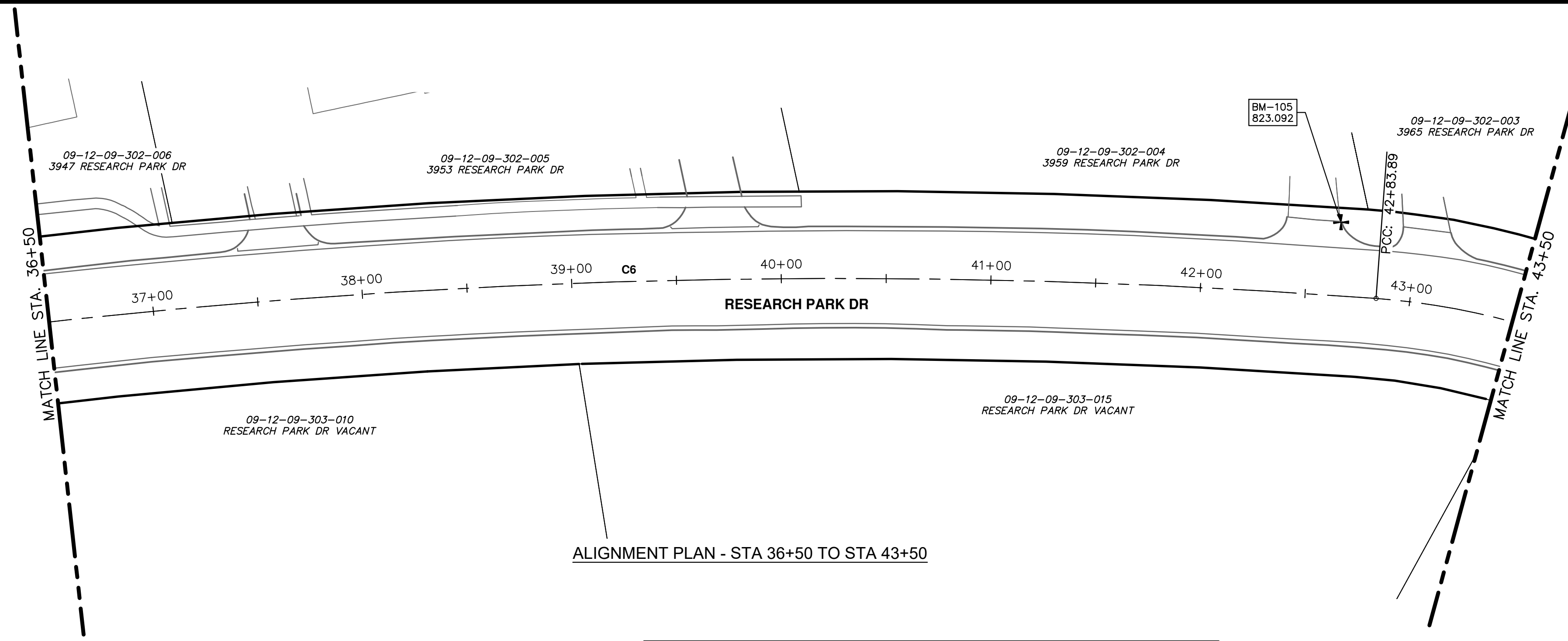


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RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT
ALIGNMENT PLAN - STA 19+50 TO STA 36+50

SCALE: 1" = 40'
DRAWING No. 2022-035-6
SHEET No. 6 OF 41

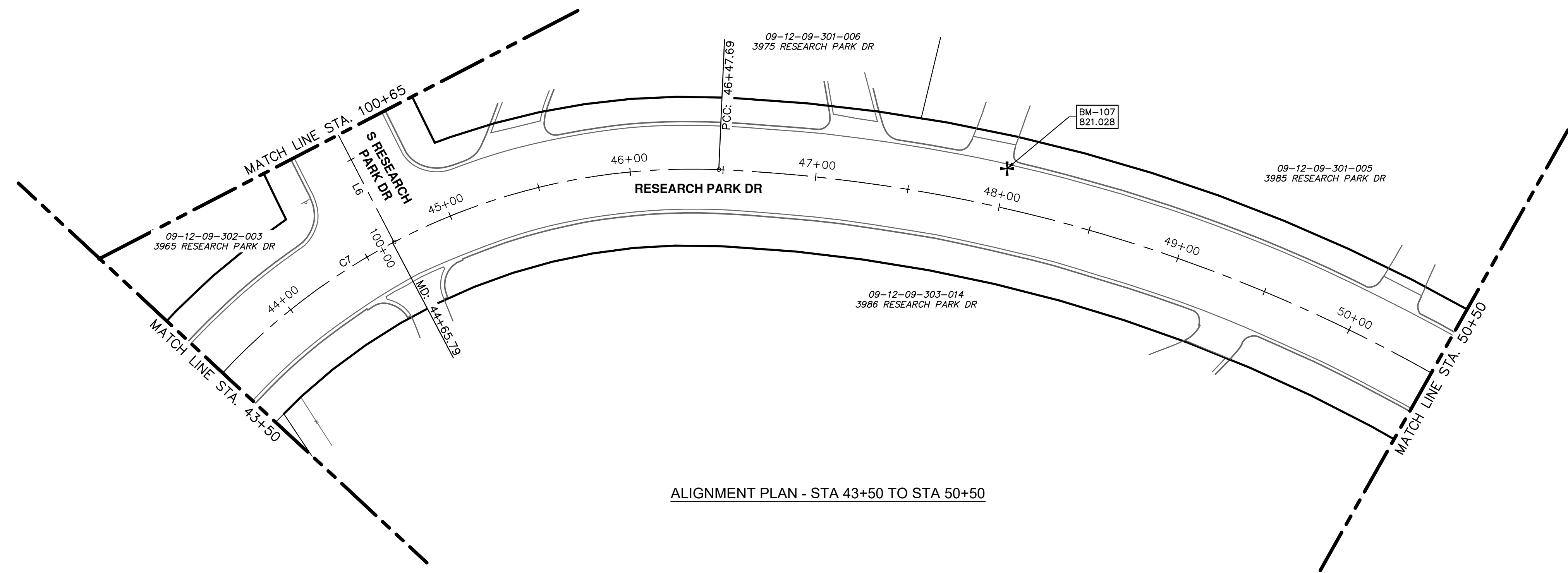
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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ALIGNMENT PLAN - STA 36+50 TO STA 43+50

Curve Table: Alignments					
Curve #	Radius	Length	Chord Direction	Start Point	End Point
C6	3437.72	1404.00	S3° 15' 50.57"W	(13295241.83,268583.12)	(13295162.44,267191.12)



ALIGNMENT PLAN - STA 43+50 TO STA 50+50

Line Table: Alignments				
Line #	Length	Direction	Start Point	End Point
L6	68.31	S44° 21' 43.53"E	(13295071.65,267035.06)	(13295119.41,266986.22)

Curve Table: Alignments					
Curve #	Radius	Length	Chord Direction	Start Point	End Point
C7	343.77	363.80	S45° 16' 52.39"W	(13295162.44,267191.12)	(13294915.83,266946.92)

RESEARCH PARK DRIVE BENCHMARKS		
BM#	ELEV	DESCRIPTION
105	823.092	SET MAG NAIL IN TOP OF CURB. LOCATED ON THE EAST SIDE RESEARCH PARK DRIVE IN THE SOUTH CURB OF DRIVEWAY APRON TO BUILDING #3965
107	821.028	SET CHISELED X IN THE SOUTH RIM OF SEWER MANHOLE. LOCATED ON SOUTH SIDE OF RESEARCH PARK DRIVE, IN EAST DRIVEWAY TO BUILDING #3985



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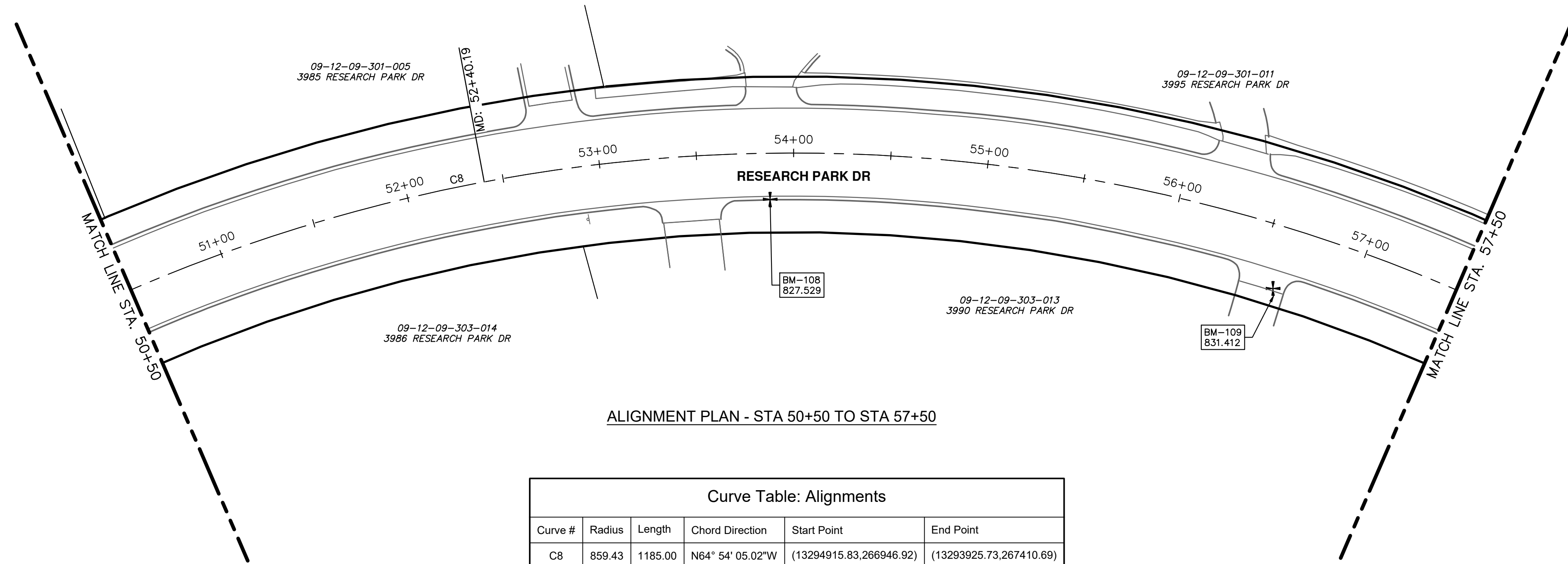


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RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT
ALIGNMENT PLAN - STA 36+50 TO STA 50+50

SCALE: 1" = 40'
DRAWING No. 2022-035-7
SHEET No. 7 OF 41

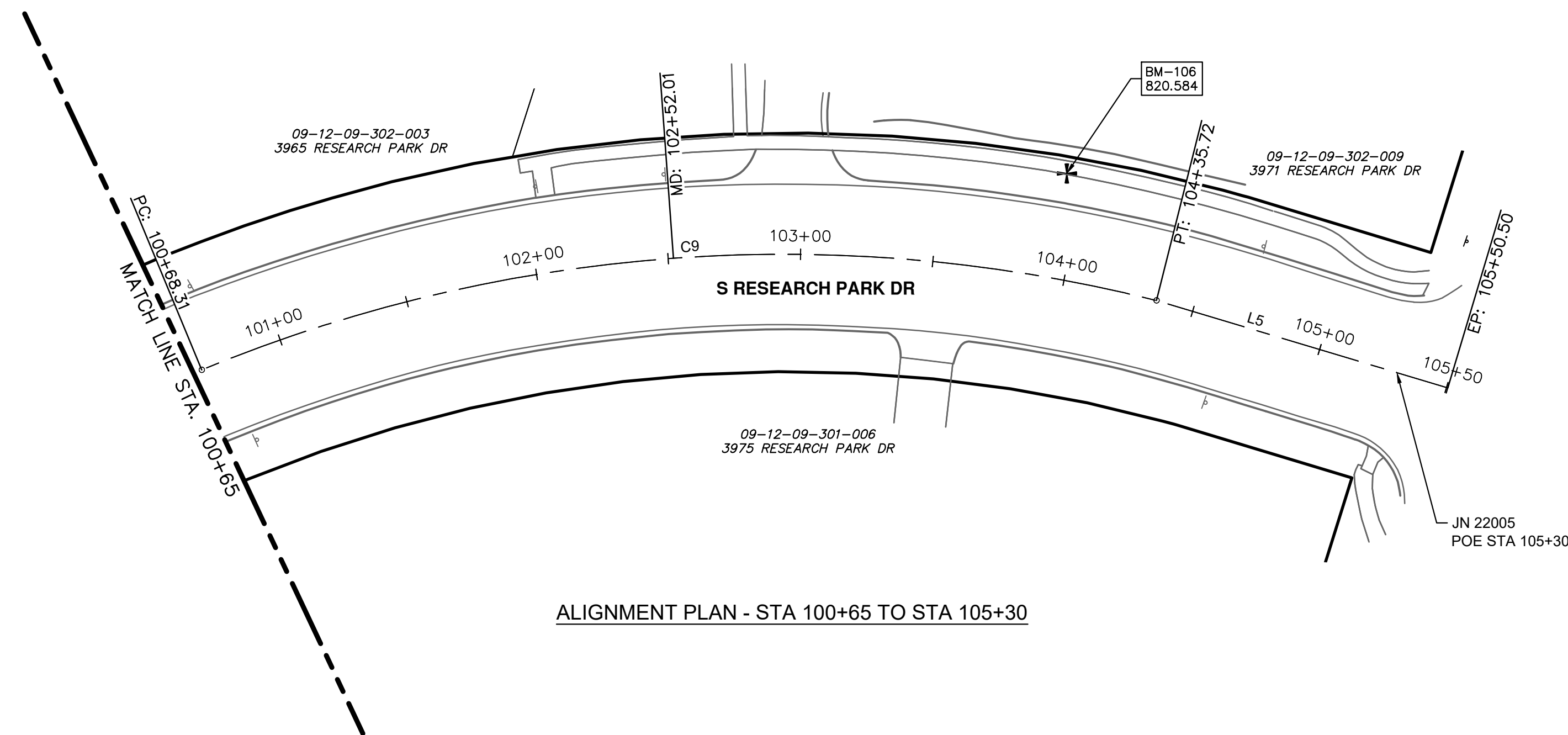
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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ALIGNMENT PLAN - STA 50+50 TO STA 57+50

Curve Table: Alignments					
Curve #	Radius	Length	Chord Direction	Start Point	End Point
C8	859.43	1185.00	N64° 54' 05.02"W	(13294915.83,266946.92)	(13293925.73,267410.69)



ALIGNMENT PLAN - STA 100+65 TO STA 105+30

Line Table: Alignments				
Line #	Length	Direction	Start Point	End Point
L5	114.78	S2° 29' 53.29"E	(13295262.51,266654.58)	(13295267.51,266539.92)

RESEARCH PARK DRIVE BENCHMARKS		
BM#	ELEV	DESCRIPTION
106	820.584	SET SCRIBED X IN SIDEWALK. LOCATED ON THE EAST SIDE OF RESEARCH PARK DRIVE, ±95' SOUTH OF THE BACK OF CURB OF DRIVEWAY TO BUILDING #3971
108	827.529	SET MAG NAIL IN TOP OF CURB. LOCATED ON THE NORTH SIDE OF RESEARCH PARK DRIVE, NEAR THE WEST SIDE OF EAST DRIVEWAY FOR BUILDING #3990
109	831.412	SET CHISELED X IN THE NORTHEAST RIM OF WATER SHUT OFF. LOCATED IN THE SOUTHERLY LOOP DRIVEWAY APRON NEAR WEST SIDE OF BUILDING #3990



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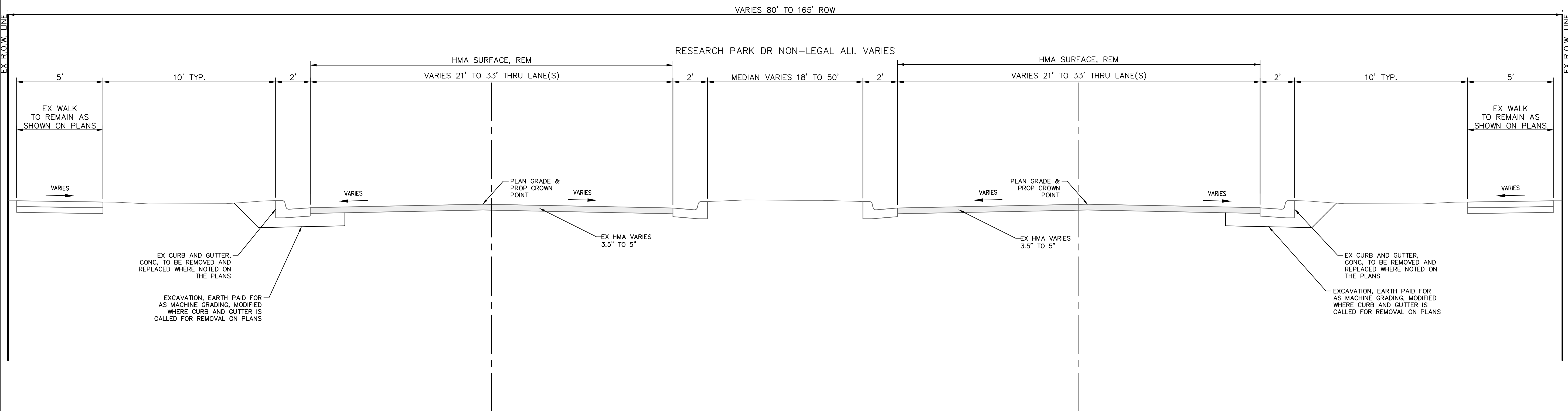


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT
ALIGNMENT PLAN - STA 50+50 TO POE

SCALE: 1" = 40'
DRAWING No. 2022-035-6

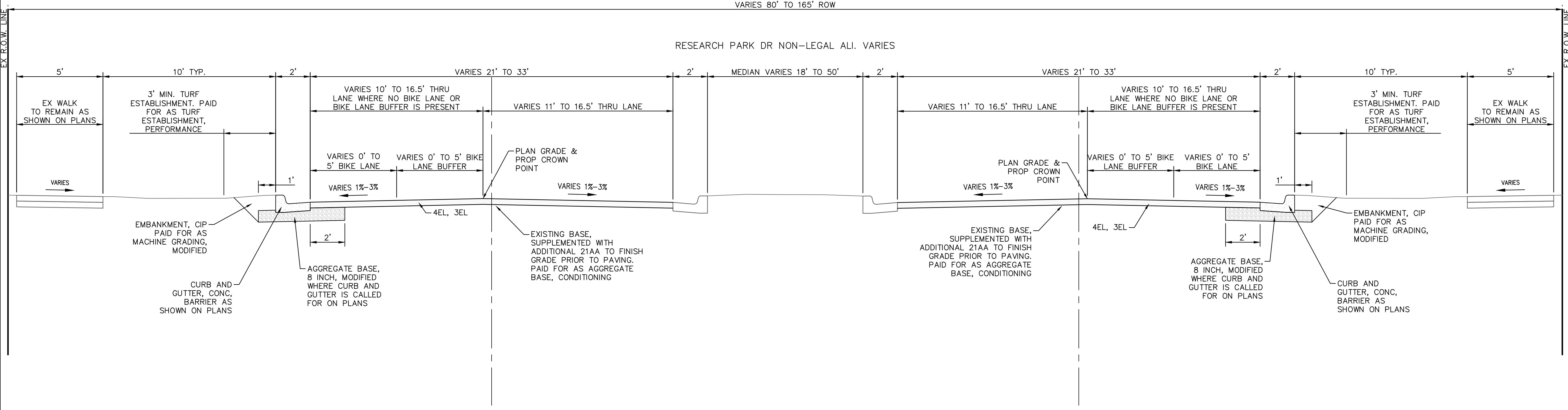
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J:\AA\Design\AA22005-Research Park Drive\DWG\AA22005_Det.dwg Dwg Created: 27-Jan-23 - o2 standard bw.stb - Plot Date: 21-Feb-23



EXISTING RESEARCH PARK DR TYPICAL SECTION

SECTION APPLIES TO:
STA 5+15 (POB) TO STA 7+25



PROPOSED RESEARCH PARK DR TYPICAL SECTION

SECTION APPLIES TO:
STA 5+15 (POB) TO STA 7+25

HMA APPLICATION ESTIMATE				
IDENT NO.	ITEM	RATE LBS PER SYD	PERFORMANCE GRADE	REMARKS
4EL	HMA, 4EL	220	58-28	MAINLINE TOP COURSE - AWI 260
3EL	HMA, 3EL	330	58-28	MAINLINE LEVELING COURSE
	* BOND COAT	0.05-0.15 GAL		

City of Ann Arbor - Public Services - Engineering
Research Park Drive
Improvements Project

City of Ann Arbor
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Scale: 1" = 3'

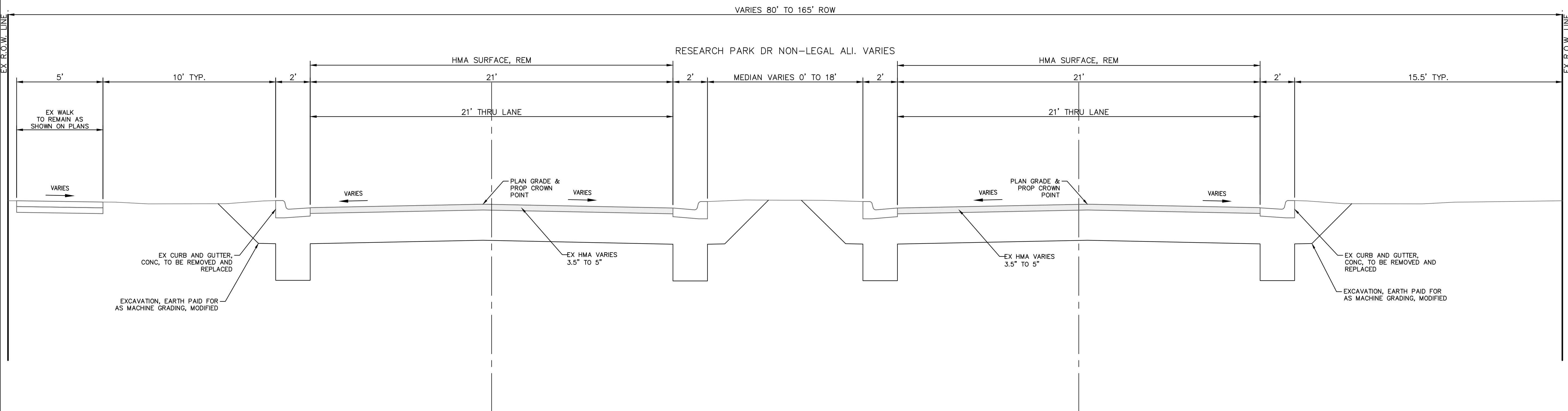
Drawing No. 2022-035-9

SHEET No. 9 OF 41

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

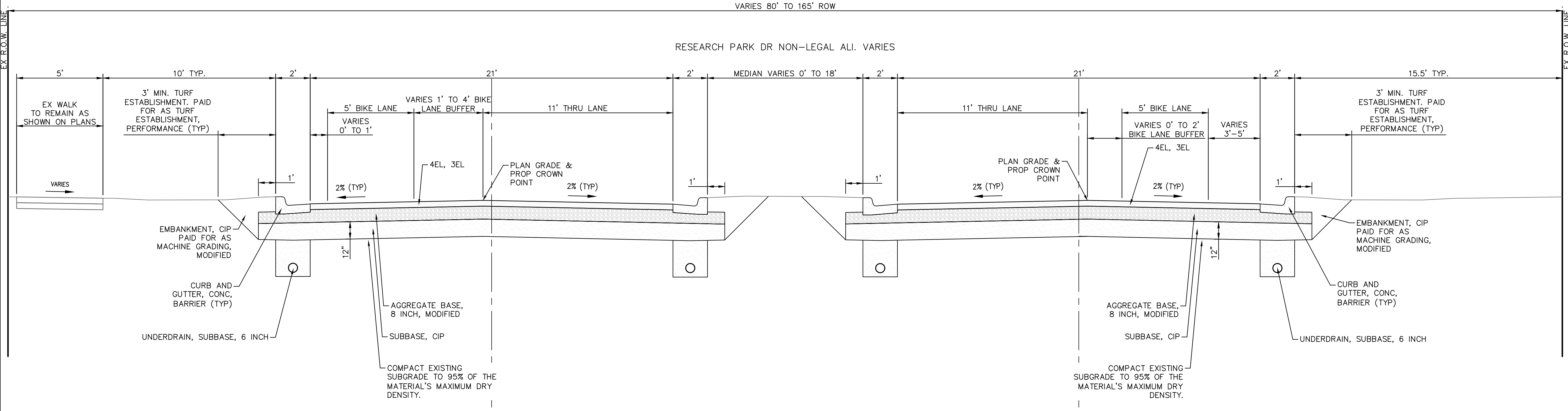
REV. DESCRIPTION DATE DRAWN CHECKED

J:\AA\Design\AA22005-Research Park Drive\DWG\AA22005_Det.dwg Dwg Created: 27-Jan-23 - _o2 standard bw.stb - Plot Date: 21-Feb-23



EXISTING RESEARCH PARK DR TYPICAL SECTION

SECTION APPLIES TO:
STA 7+25 TO STA 7+92



PROPOSED RESEARCH PARK DR TYPICAL SECTION

SECTION APPLIES TO:
STA 7+25 TO STA 7+92

811
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT

TYPICAL SECTIONS

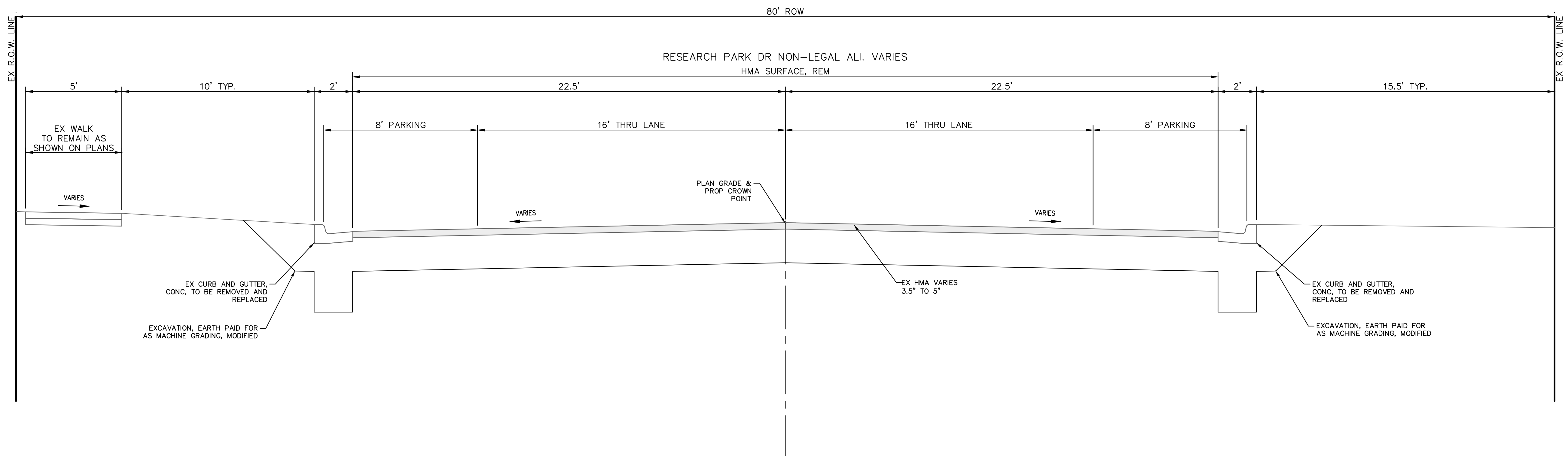
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DRAWING No. 2022-035-10

SHEET No. 10 OF 41

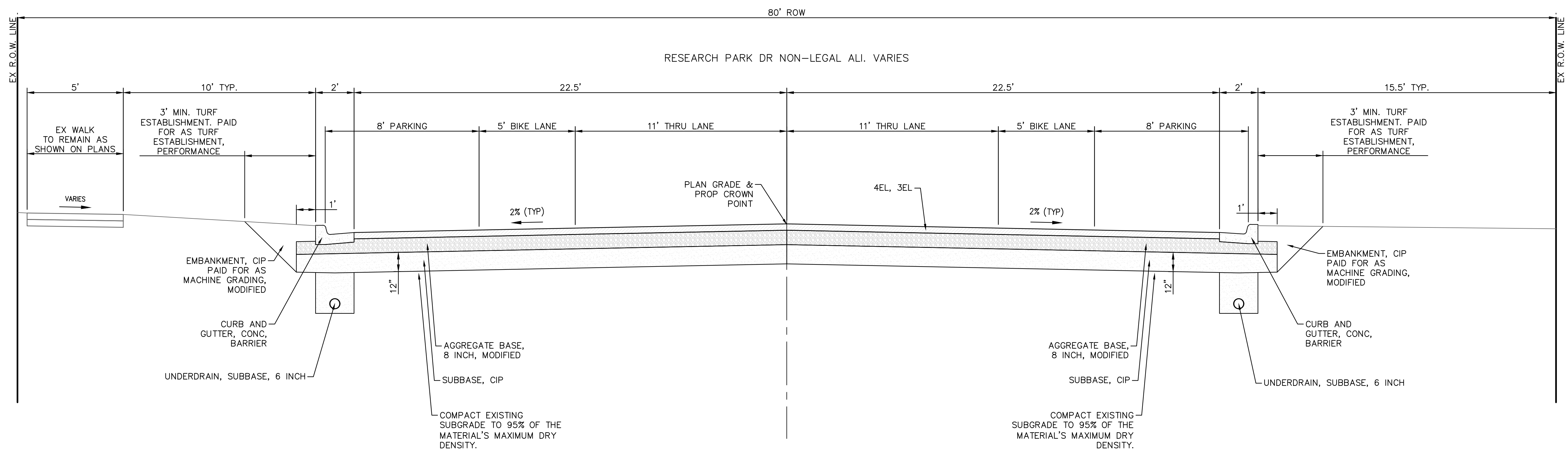
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J:\AA\Design\AA22005-Research Park Drive\DWG\AA22005_Det.dwg Dwg Created: 27-Jan-23 - _o2 standard bw.stb - Plot Date: 21-Feb-23



EXISTING RESEARCH PARK DR TYPICAL SECTION

SECTION APPLIES TO:
 STA 7+92 TO STA 17+25
 STA 39+42 TO STA 49+18



PROPOSED RESEARCH PARK DR TYPICAL SECTION

SECTION APPLIES TO:
 STA 7+92 TO STA 17+25
 STA 39+42 TO STA 49+18



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

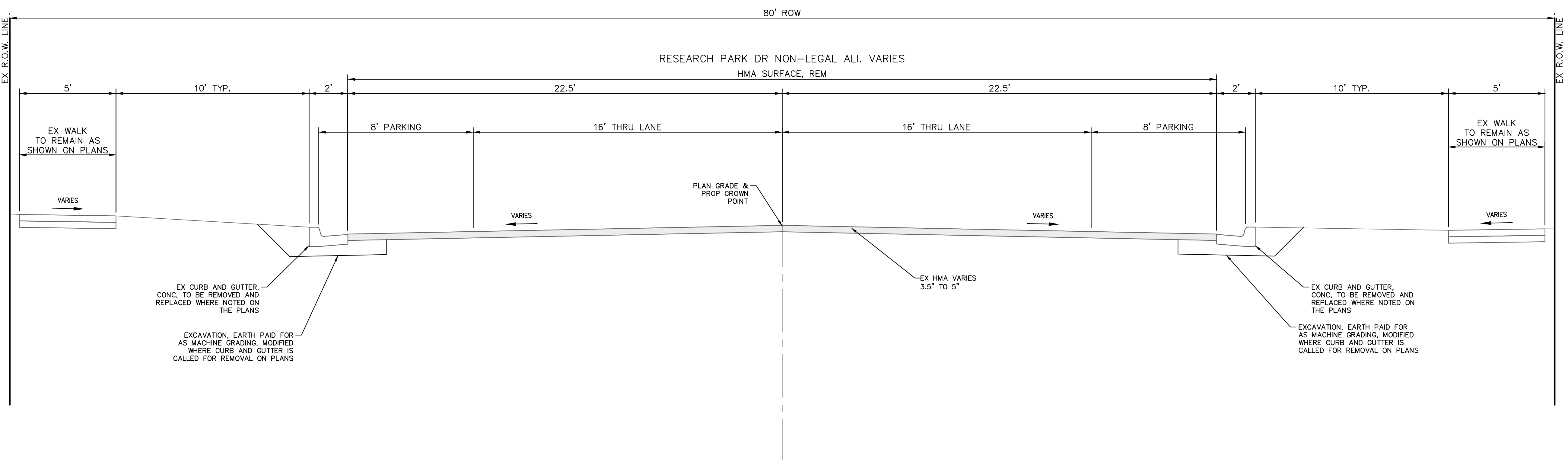
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 734.794.4410
 www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
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 IMPROVEMENTS PROJECT
 TYPICAL SECTIONS

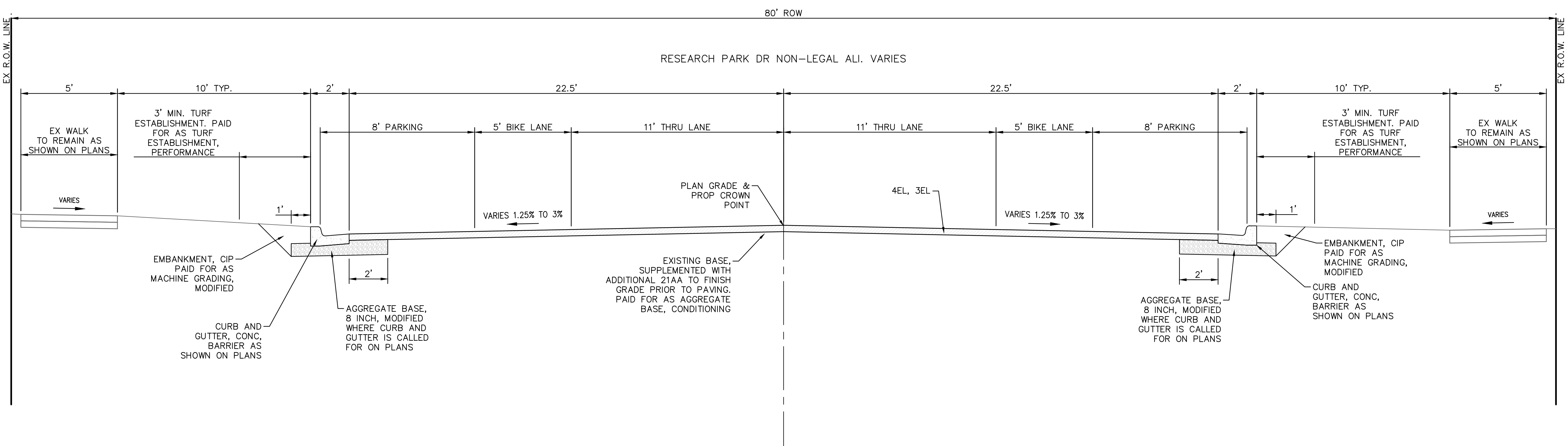
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 DRAWING No. 2022-035-11

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EXISTING RESEARCH PARK DR TYPICAL SECTION

SECTION APPLIES TO:
 STA 17+25 TO STA 39+42
 STA 49+18 TO STA 57+50



PROPOSED RESEARCH PARK DR TYPICAL SECTION

SECTION APPLIES TO:
 STA 17+25 TO STA 39+42
 STA 49+18 TO STA 57+50



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

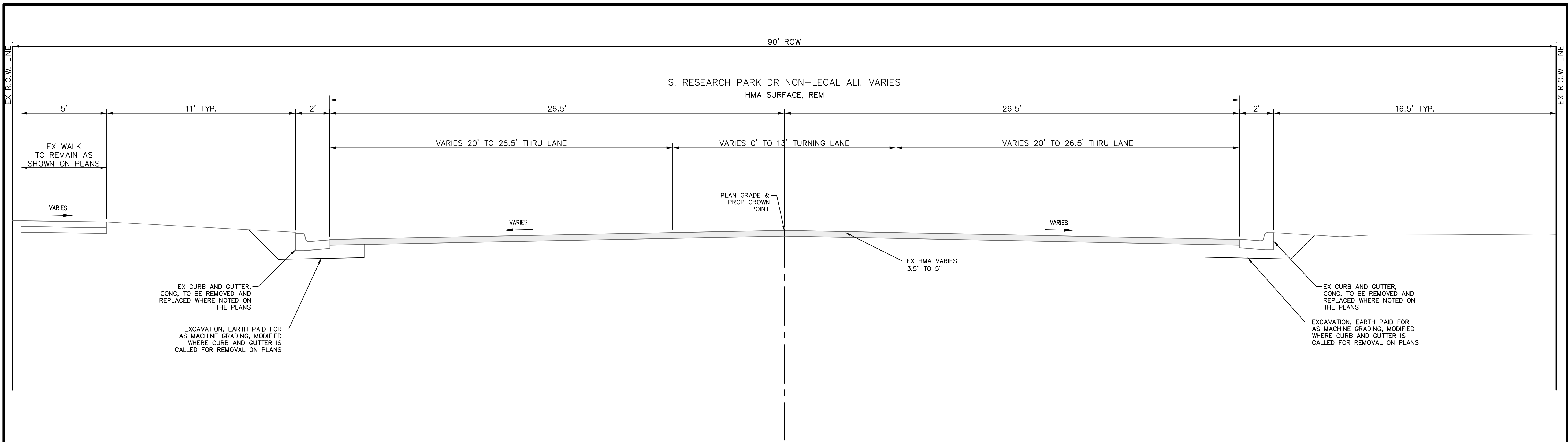
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE
 IMPROVEMENTS PROJECT
 TYPICAL SECTIONS

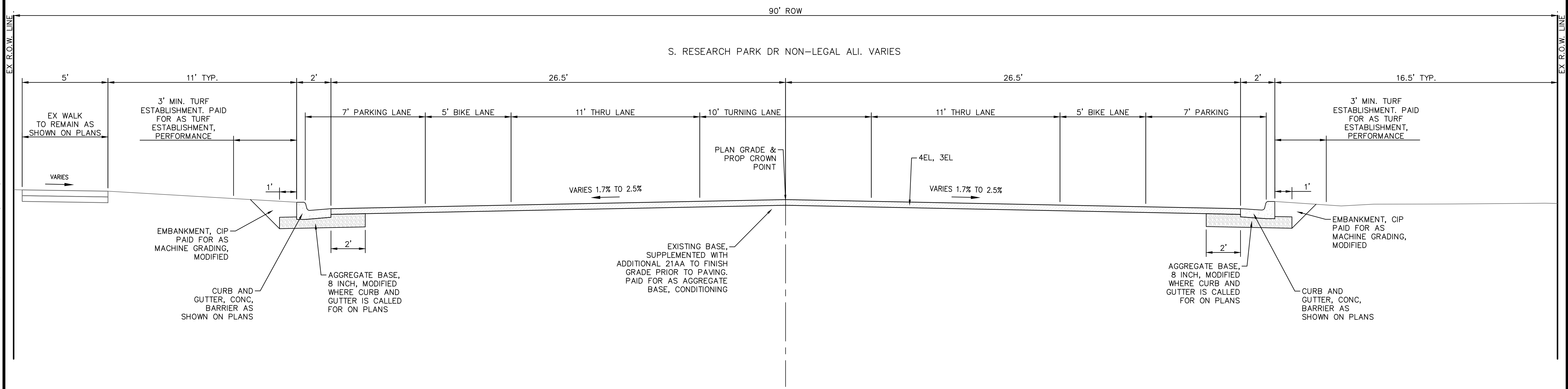
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J:\AA\Design\AA22005-Research Park Drive\DWG\AA22005_Det.dwg Dwg Created: 27-Jan-23 - _o2 standard bw.stb - Plot Date: 21-Feb-23



EXISTING S. RESEARCH PARK DR TYPICAL SECTION

SECTION APPLIES TO:
STA 100+00 TO STA 105+30 (POE)



PROPOSED S. RESEARCH PARK DR TYPICAL SECTION

SECTION APPLIES TO:
STA 100+00 TO STA 105+30 (POE)

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT

SCALE: 1" = 3'

DRAWING No. 2022-035-13

SHEET No.

TYPICAL SECTIONS

13 OF 41

GENERAL
 NOTIFY THE CITY OF ANN ARBOR SOIL EROSION CONTROL OFFICE 48 HOURS PRIOR TO BEGINNING WORK ON THE PROJECT. PHONE: 734-794-6265.

1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER.
2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
3. DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY, AND WITHOUT ADDITIONAL COST TO THE CITY OF ANN ARBOR.
4. EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, ROADWAYS OR WATERWAYS.
5. ALL MUD/SOIL TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER, AT NO ADDITIONAL COST TO THE CITY OF ANN ARBOR.
6. RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF FINAL GRADE.
7. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
8. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
9. PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF

- WATER TRUCKS AND/OR OTHER METHODS APPROVED BY THE ENGINEER.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME MEASURES UPON AUTHORIZED COMPLETION OF THE PROJECT. FINAL COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
 11. THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT AND PROTECTIVE FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THE ADJACENT PROPERTIES.
 12. TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

SEQUENCE OF EROSION CONTROL MEASURES:

1. THE CONTRACTOR IS TO SUBMIT TO THE ENGINEER, A SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION CONTROL MEASURES FOR REVIEW, COMMENT AND APPROVAL. THIS SCHEDULE IS TO INCLUDE INSPECTION AND REPAIR OF ALL TEMPORARY EROSION CONTROL MEASURES DAILY AND WITHIN 24 HOURS OF A STORM EVENT.

SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS:

- 1.1. INSTALL SILT FENCE, TREE PROTECTION FENCING, MUD MATS, INLET FILTERS ON EXISTING DRAINAGE FEATURES, AND ALL OTHER TEMPORARY SOIL EROSION CONTROLS, PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.
- 1.2. STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.
- 1.3. INSTALL WATER MAINS, STORM AND SANITARY SEWERS, AND OTHER ENCLOSED DRAINAGE FEATURES. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS.
- 1.4. PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).
- 1.5. CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
- 1.6. COMPLETE ALL FINE GRADING.

- 1.7. TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.
- 1.8. REFER TO LANDSCAPE PLANTING PLANS FOR PERMANENT SITE STABILIZATION.
- 1.9. CLEAN OUT STORM SEWER SYSTEMS.
- 1.10. REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.
- 1.11. ALL TEMP. SOIL EROSION CONTROL MEASURES MUST BE REMOVED, WITH ENGINEERS APPROVAL, PRIOR TO FINAL INSPECTION

NOTE: THIS SEQUENCE IS FOR INFORMATION ONLY. IT IS INTENDED TO SHOW THE SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE ENGINEER FOR REVIEW, COMMENT, AND APPROVAL.

TEMPORARY SEEDING:

1. SEED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.
2. ANY DISTURBED AREA NOT PAVED, SEEDED, MULCHED, SODDED OR BUILT UPON BY NOVEMBER 15TH OR JUNE 30TH IS TO BE TEMPORARILY STABILIZED PER SPECIFICATIONS.

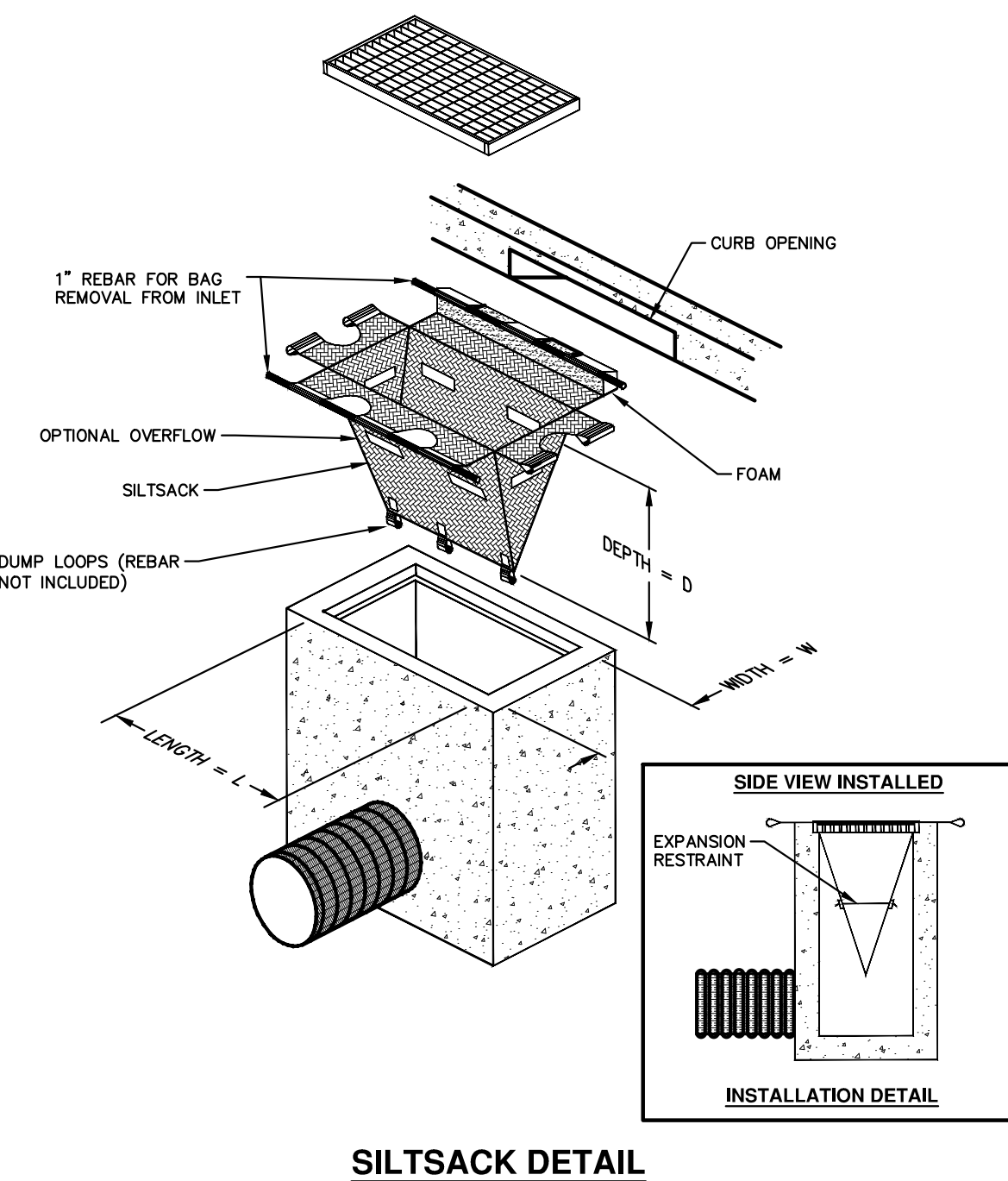
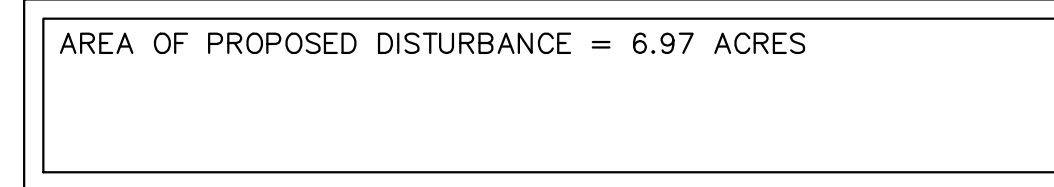
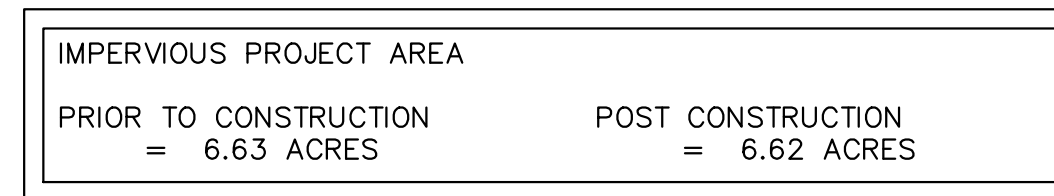
THE ESTIMATED COST OF SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, TOPSOIL, SEEDING, AND MULCH = \$52,200.

ESTIMATE OF EXCAVATION AND FILL FROM EXISTING TO FINAL GRADE:

- EXCAVATION = 9,660 CY, FILL = 90 CY

ON SITE SOILS PER THE USDA SOIL SURVEY OF WASHTENAW COUNTY, MICHIGAN:

- BbB - BLOUNT LOAM - 2% TO 6% SLOPES.
- CpA - CONOVER BROOKSTON LOAMS - 0% TO 2% SLOPES
- Pe - PEWAMO CLAY LOAM - 0% TO 2% SLOPES
- S1B - ST. CLAIR CLAY LOAM, 2% TO 6% SLOPES
- W6a - WAWASEE LAOM, 2% TO 6% SLOPES



NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC-1

HI-FLOW SILTSACK

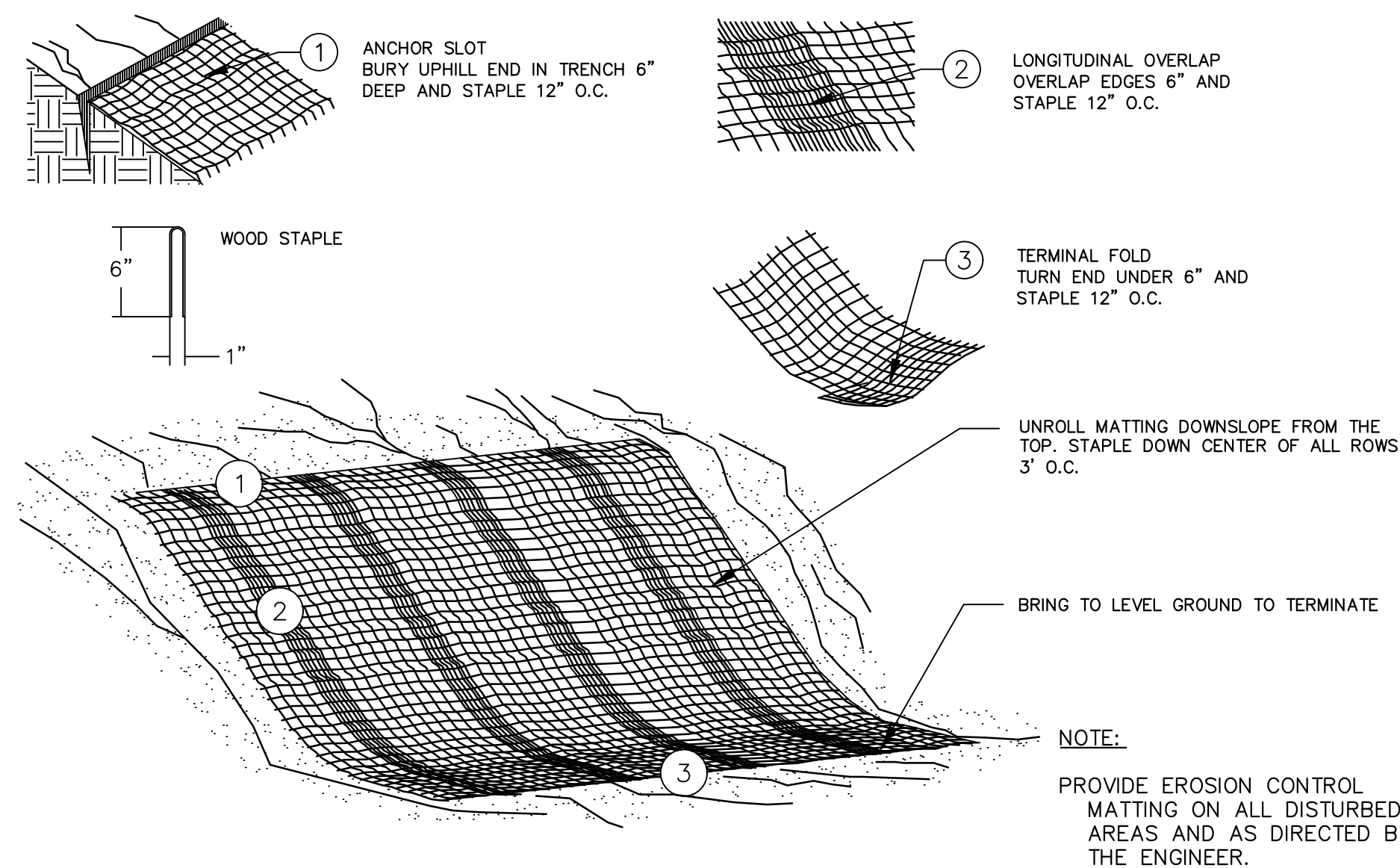
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	REQUIRED VALUE	TEST METHOD
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC-1

OIL-ABSORBANT SILTSACK

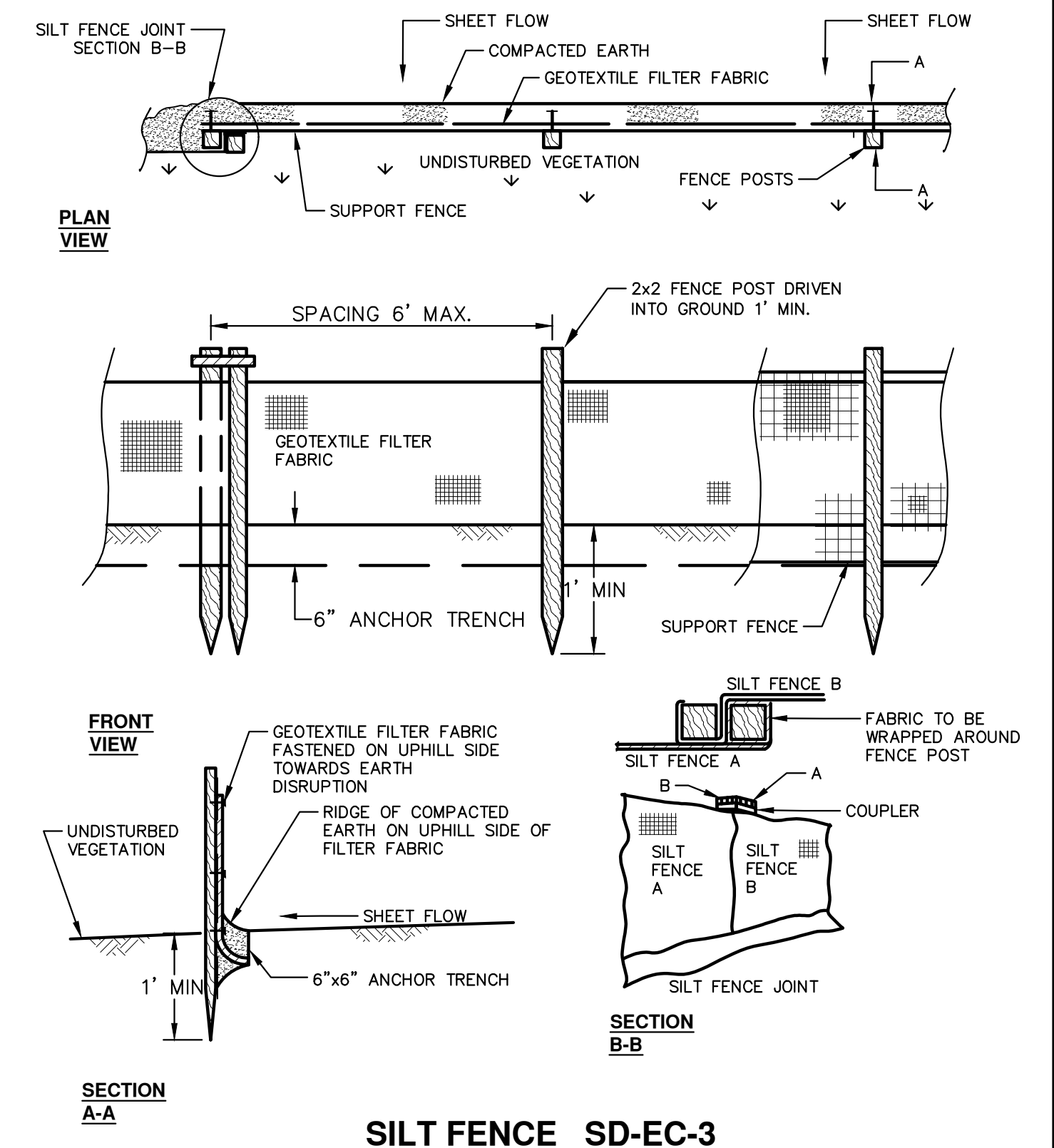
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS THAT THE CONTRACTOR INSTALL THE REBAR AS SHOWN IN THIS DETAIL TO PROVIDE A FULLY FUNCTIONING UNIT. ALL COSTS ASSOCIATED WITH FURNISHING, CLEANING AS MANY TIMES AS REQUIRED, DISPOSAL OF SEDIMENT, AND REMOVING THE INLET FILTER WHEN NO LONGER NEEDED IS INCLUDED IN THE ITEM OF WORK AND WILL NOT BE PAID FOR SEPARATELY.

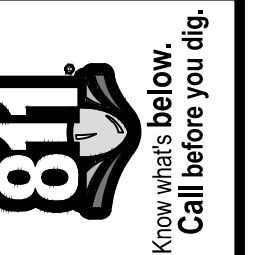


MULCH BLANKET DETAIL

APPLIES TO ALL AREAS TO BE PERMANENTLY RESTORED WITH GRASS. SEE LANDSCAPE PLANS FOR MORE DETAILS.



SILT FENCE SD-EC-3



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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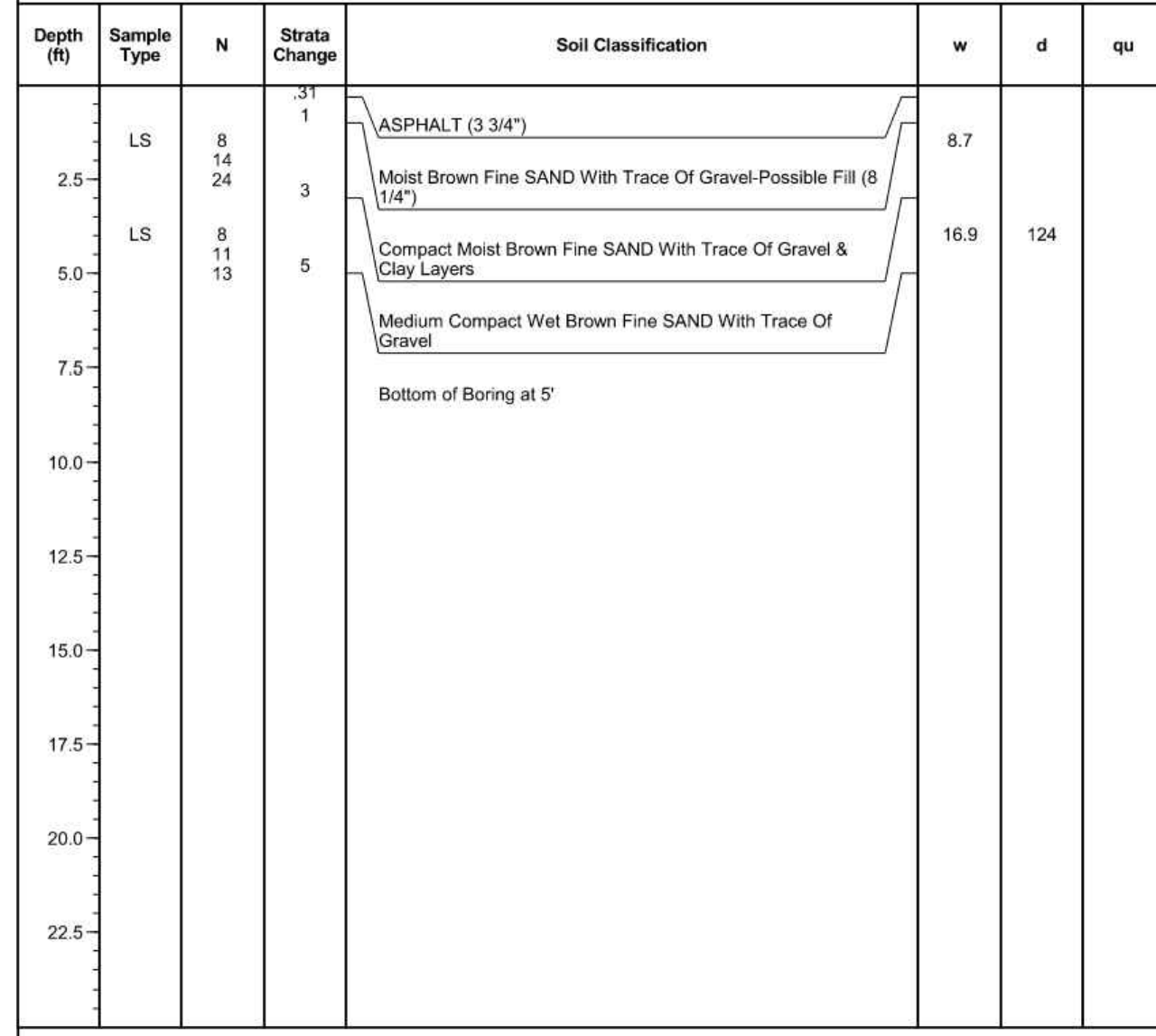


CITY OF ANN ARBOR - ENGINEERING
 RESEARCH PARK DRIVE
 IMPROVEMENTS PROJECT
 SOIL EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS
 SCALE: NTS
 DRAWING No. 2022-035-14
 SHEET No.



Testing Engineers & Consultants, Inc.
1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249
(248) 588-6200 or (313) T-E-S-T-I-N-G
Fax (248) 588-6232

Boring No.: RP-1 **Job No.:** 62011 **Project:** Research Park Drive, Northwest of Ellsworth & East of S. State Street
Client: City of Ann Arbor **Location:** Ann Arbor, Michigan
Type of Rig: Truck **Drilled By:** R. Favor
Drilling Method: Solid Stem Augers **Started:** 8/30/2021
Ground Surface Elevation: **Completed:** 8/30/2021

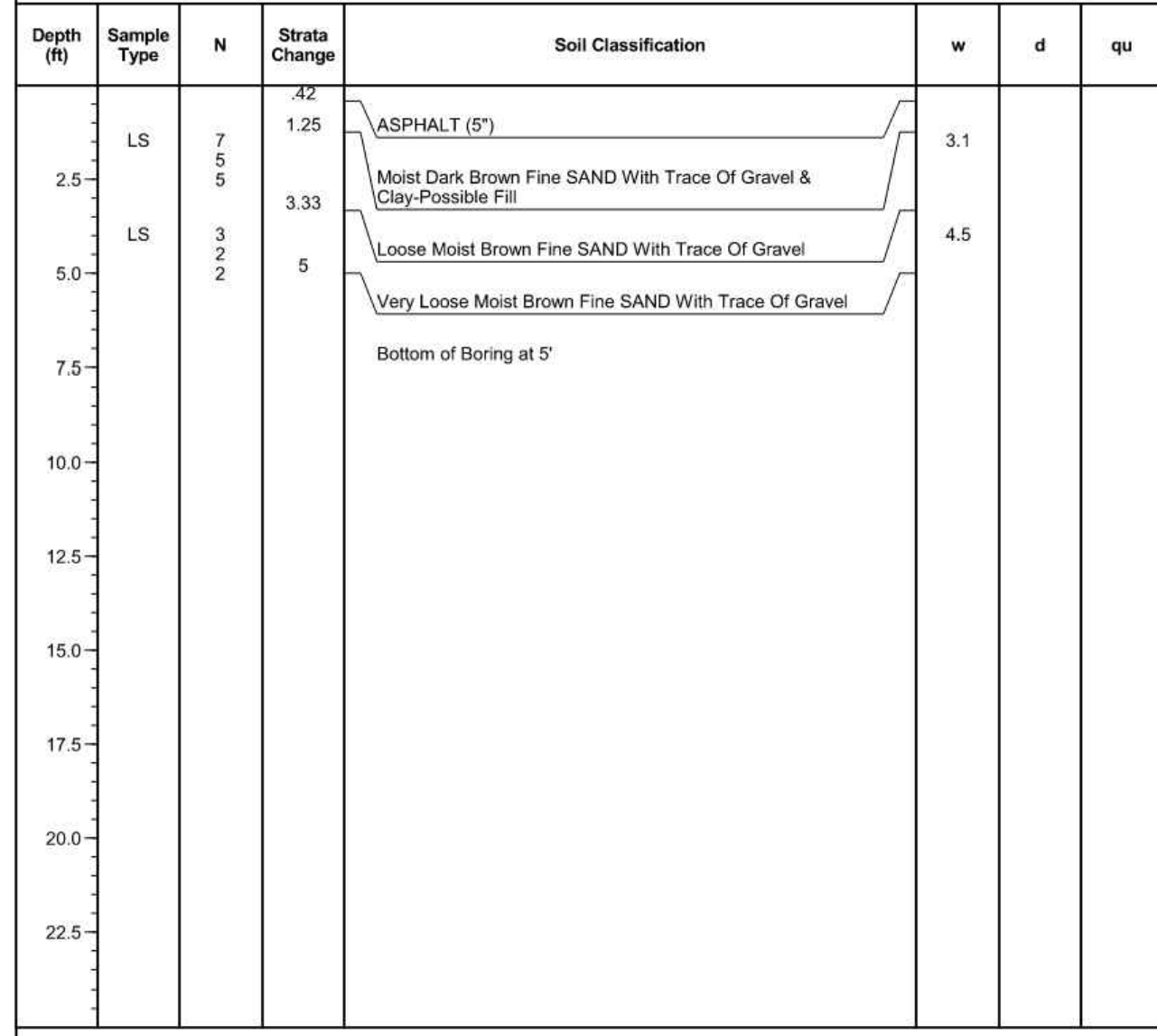


Water Encountered: 3'0"
At Completion: Caved In 3'2"
Boring No.: RP-1



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Boring No.: RP-2 **Job No.:** 62011 **Project:** Research Park Drive, Northwest of Ellsworth & East of S. State Street
Client: City of Ann Arbor **Location:** Ann Arbor, Michigan
Type of Rig: Truck **Drilled By:** R. Favor
Drilling Method: Solid Stem Augers **Started:** 8/30/2021
Ground Surface Elevation: **Completed:** 8/30/2021

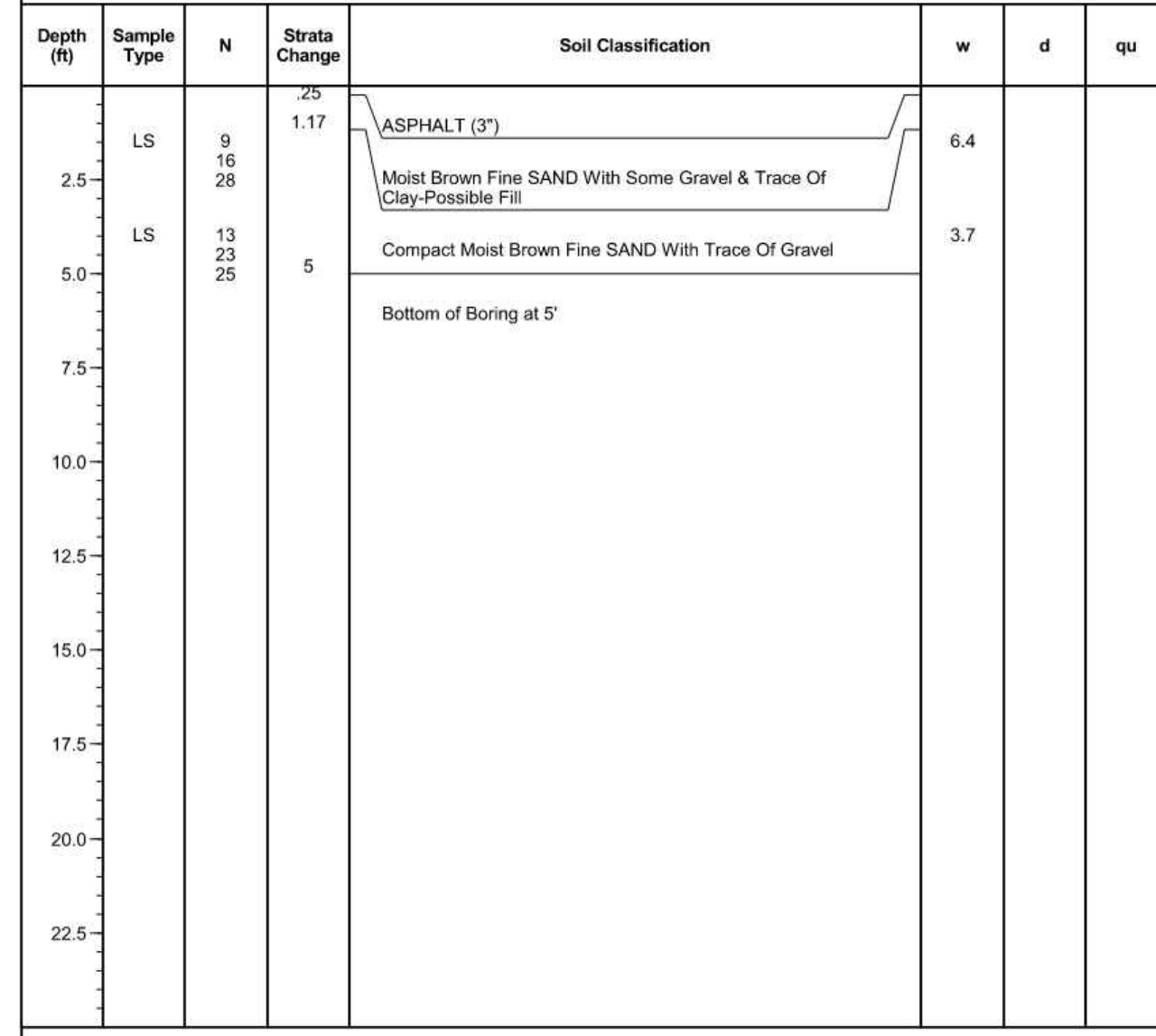


Water Encountered: None
At Completion: None
Boring No.: RP-2



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(248) 588-6200 or (313) T-E-S-T-I-N-G
Fax (248) 588-6232

Boring No.: RP-3 **Job No.:** 62011 **Project:** Research Park Drive, Northwest of Ellsworth & East of S. State Street
Client: City of Ann Arbor **Location:** Ann Arbor, Michigan
Type of Rig: Truck **Drilled By:** R. Favor
Drilling Method: Solid Stem Augers **Started:** 8/30/2021
Ground Surface Elevation: **Completed:** 8/30/2021

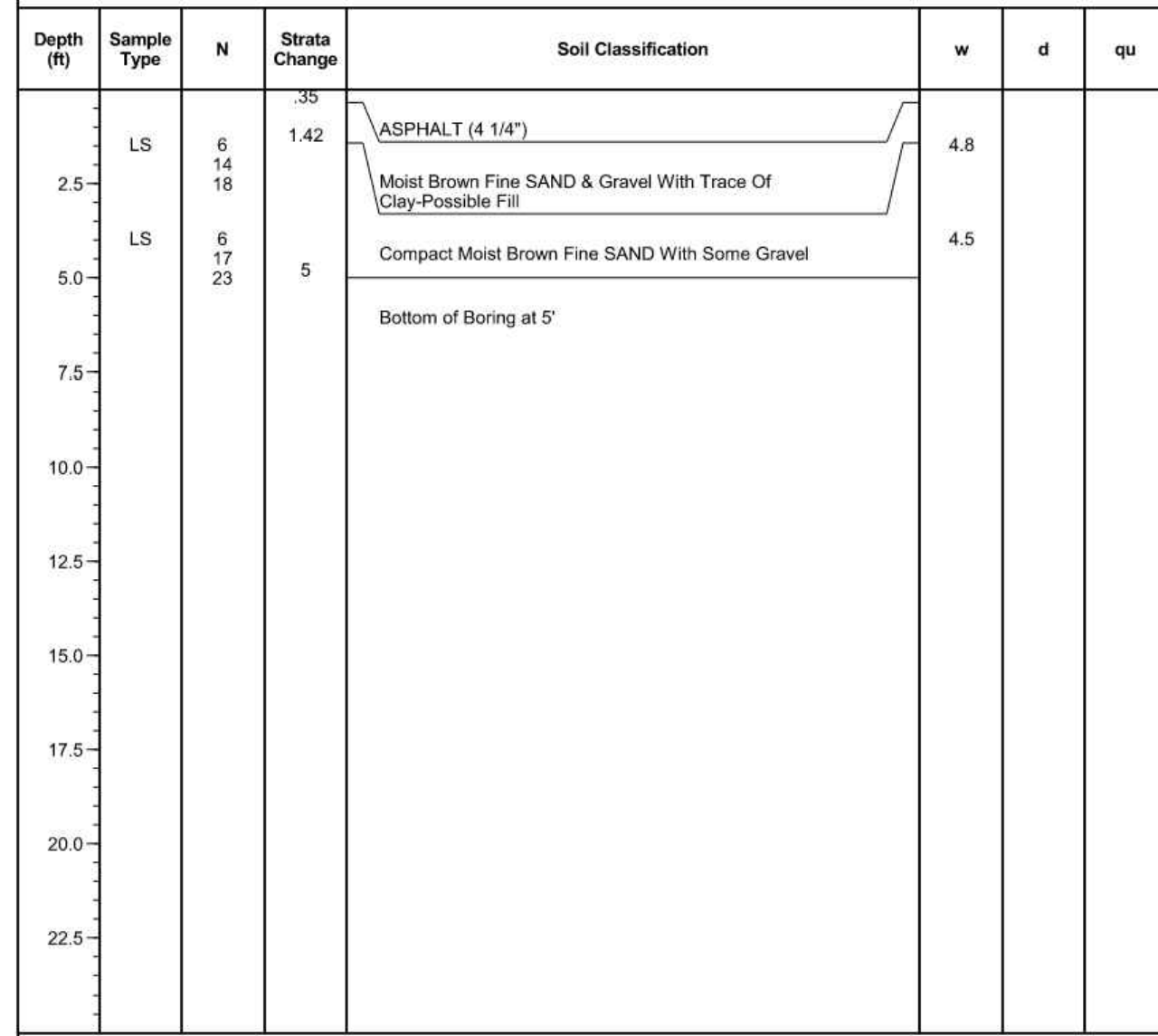


Water Encountered: None
At Completion: None
Boring No.: RP-3



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(248) 588-6200 or (313) T-E-S-T-I-N-G
Fax (248) 588-6232

Boring No.: RP-4 **Job No.:** 62011 **Project:** Research Park Drive, Northwest of Ellsworth & East of S. State Street
Client: City of Ann Arbor **Location:** Ann Arbor, Michigan
Type of Rig: Truck **Drilled By:** R. Favor
Drilling Method: Solid Stem Augers **Started:** 8/30/2021
Ground Surface Elevation: **Completed:** 8/30/2021

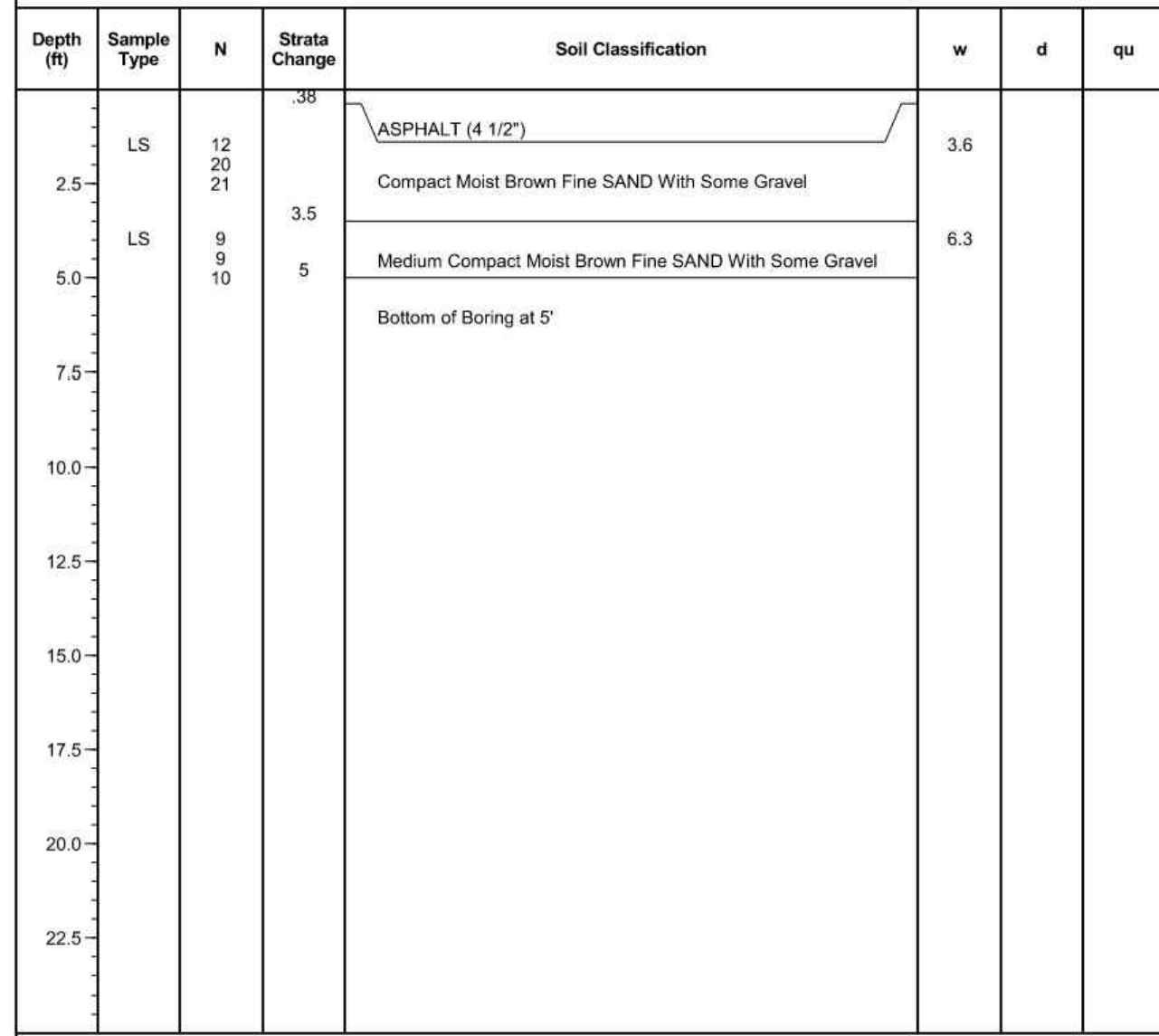


Water Encountered: None
At Completion: None
Boring No.: RP-4



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Fax (248) 588-6232

Boring No.: RP-5 **Job No.:** 62011 **Project:** Research Park Drive, Northwest of Ellsworth & East of S. State Street
Client: City of Ann Arbor **Location:** Ann Arbor, Michigan
Type of Rig: Truck **Drilled By:** R. Favor
Drilling Method: Solid Stem Augers **Started:** 8/30/2021
Ground Surface Elevation: **Completed:** 8/30/2021



Water Encountered: None
At Completion: None
Boring No.: RP-5



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		DRAWN

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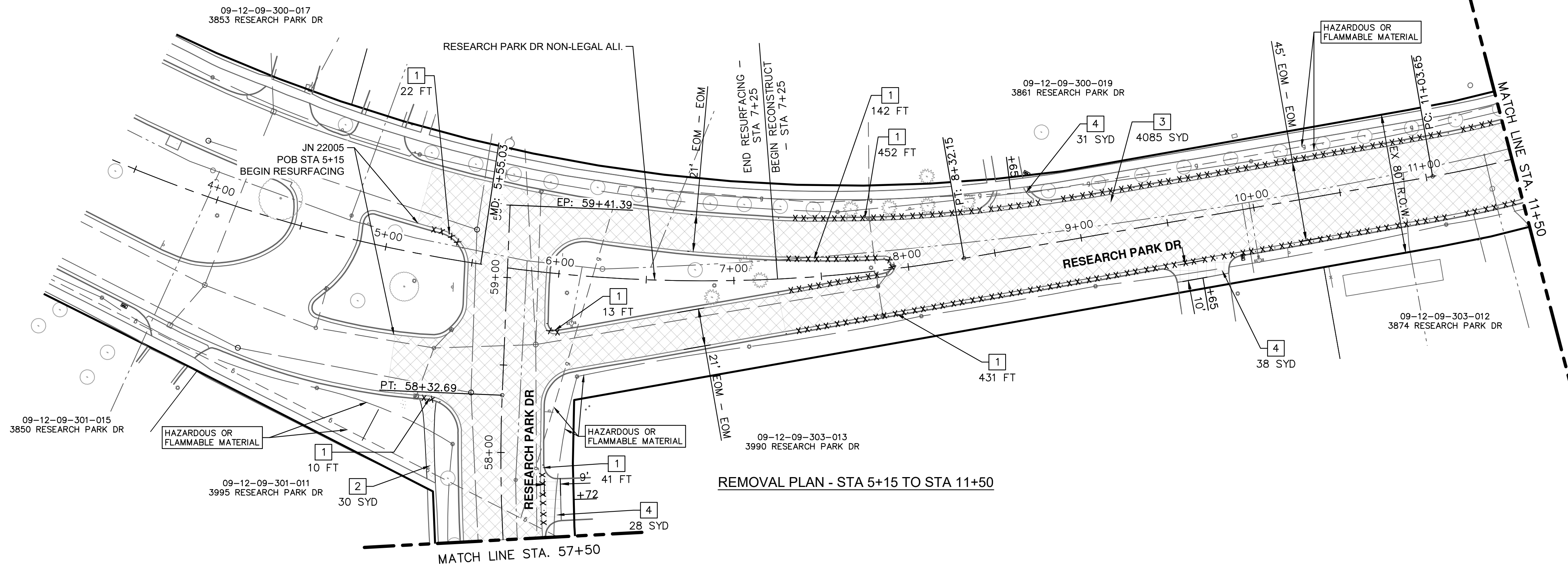


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT
PAVEMENT CORES LOGS

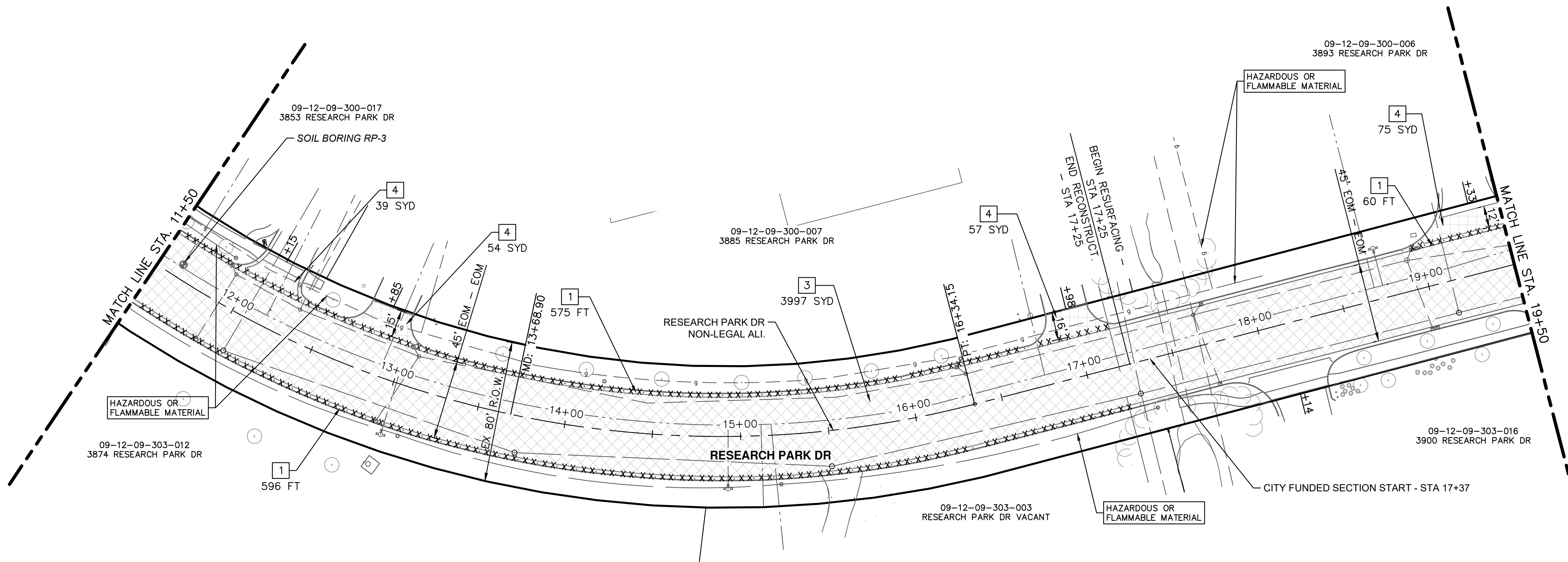
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DRAWING No. 2022-035-15

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J:\AA\Design\AA22005-Research Park Drive\DWG\AA22005_Rem1.dwg Dwg Created: 21-Dec-22 - _a2_standard.bw.stb - Plot Date: 21-Feb-23



REMOVAL PLAN - STA 5+15 TO STA 11+50



REMOVAL PLAN - STA 11+50 TO STA 19+50

REMOVAL HATCH KEY	
	HMA SURFACE, REM
	DRIVEWAY, REM
	SIDEWALK, REM
	CURB AND GUTTER, REM

REMOVAL KEY	
KEY	DESCRIPTION
1	CURB AND GUTTER, REM
2	SIDEWALK, REM
3	HMA SURFACE, REM
4	DRIVEWAY, REM



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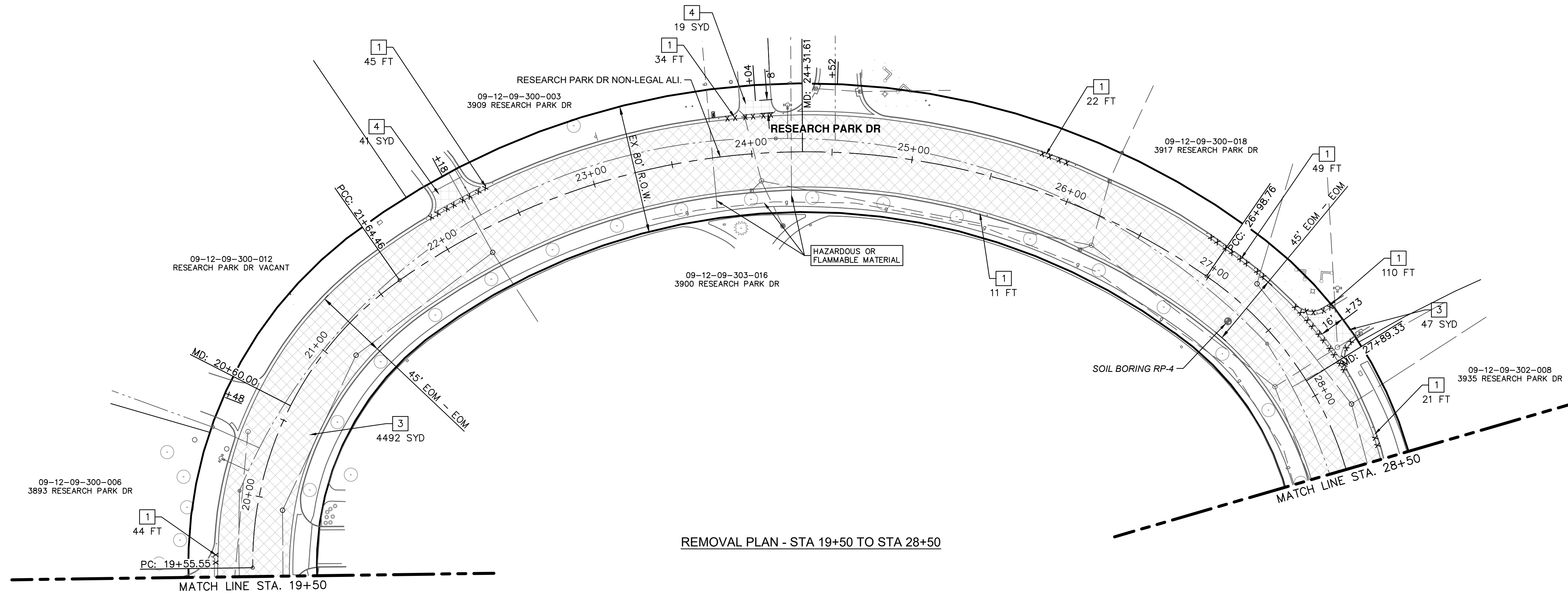


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT
REMOVALS - POB TO STA 19+50

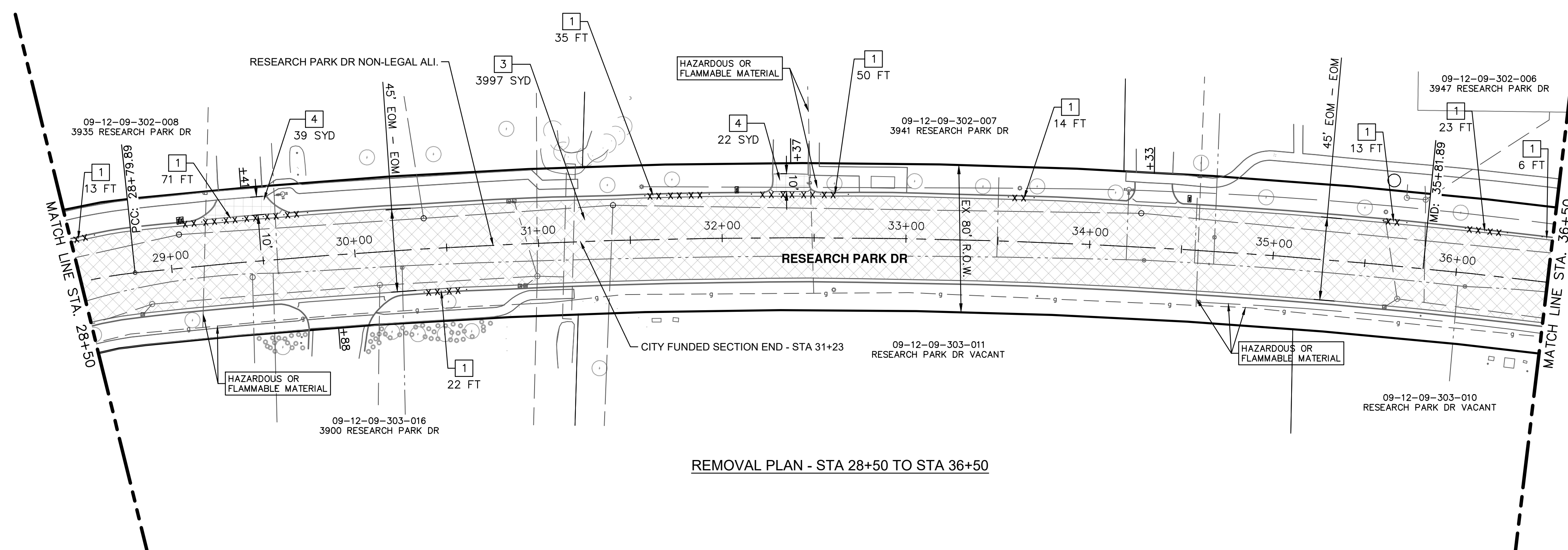
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DRAWING No. 2022-035-16
SHEET No. 16 OF 41

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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REMOVAL PLAN - STA 19+50 TO STA 28+50



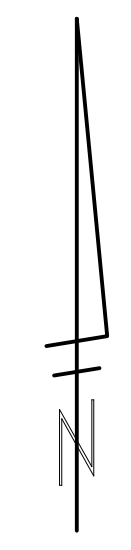
REMOVAL PLAN - STA 28+50 TO STA 36+50

REMOVAL HATCH KEY

	HMA SURFACE, REM
	DRIVEWAY, REM
	CURB AND GUTTER, REM

REMOVAL KEY

KEY	DESCRIPTION
1	CURB AND GUTTER, REM
2	SIDEWALK, REM
3	HMA SURFACE, REM
4	DRIVEWAY, REM



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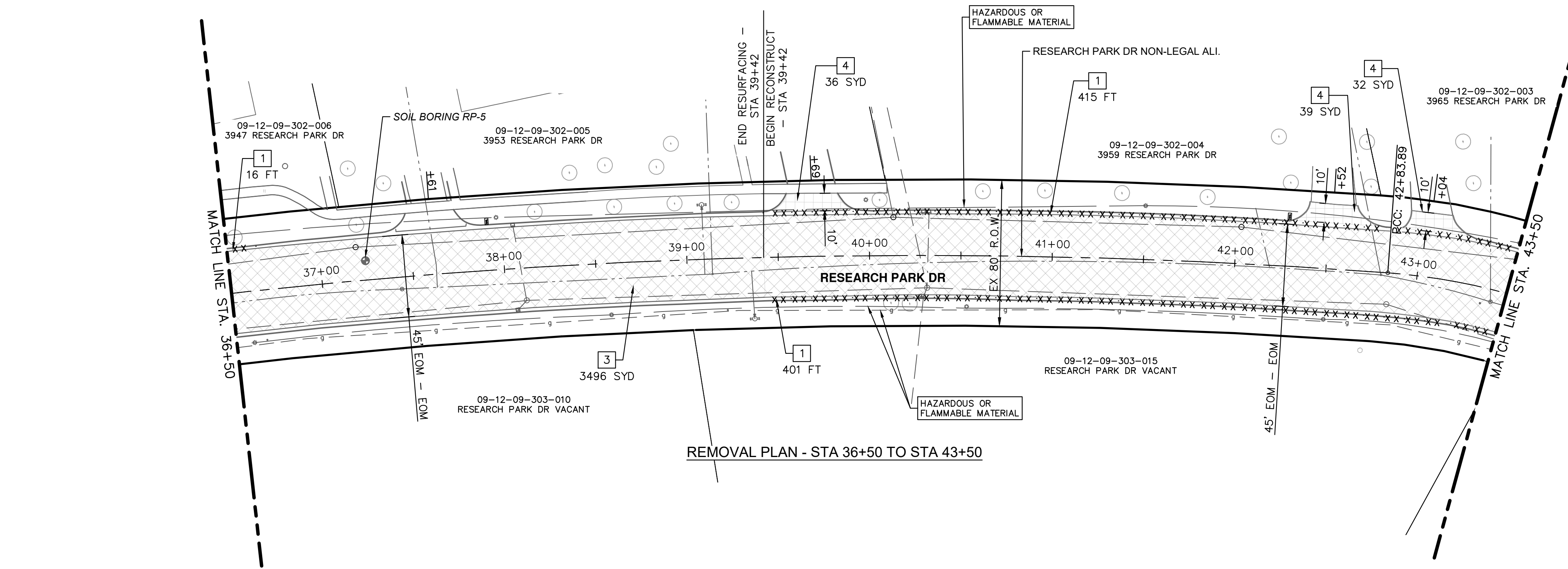


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IMPROVEMENTS PROJECT
REMOVALS - STA 19+50 TO STA 36+50

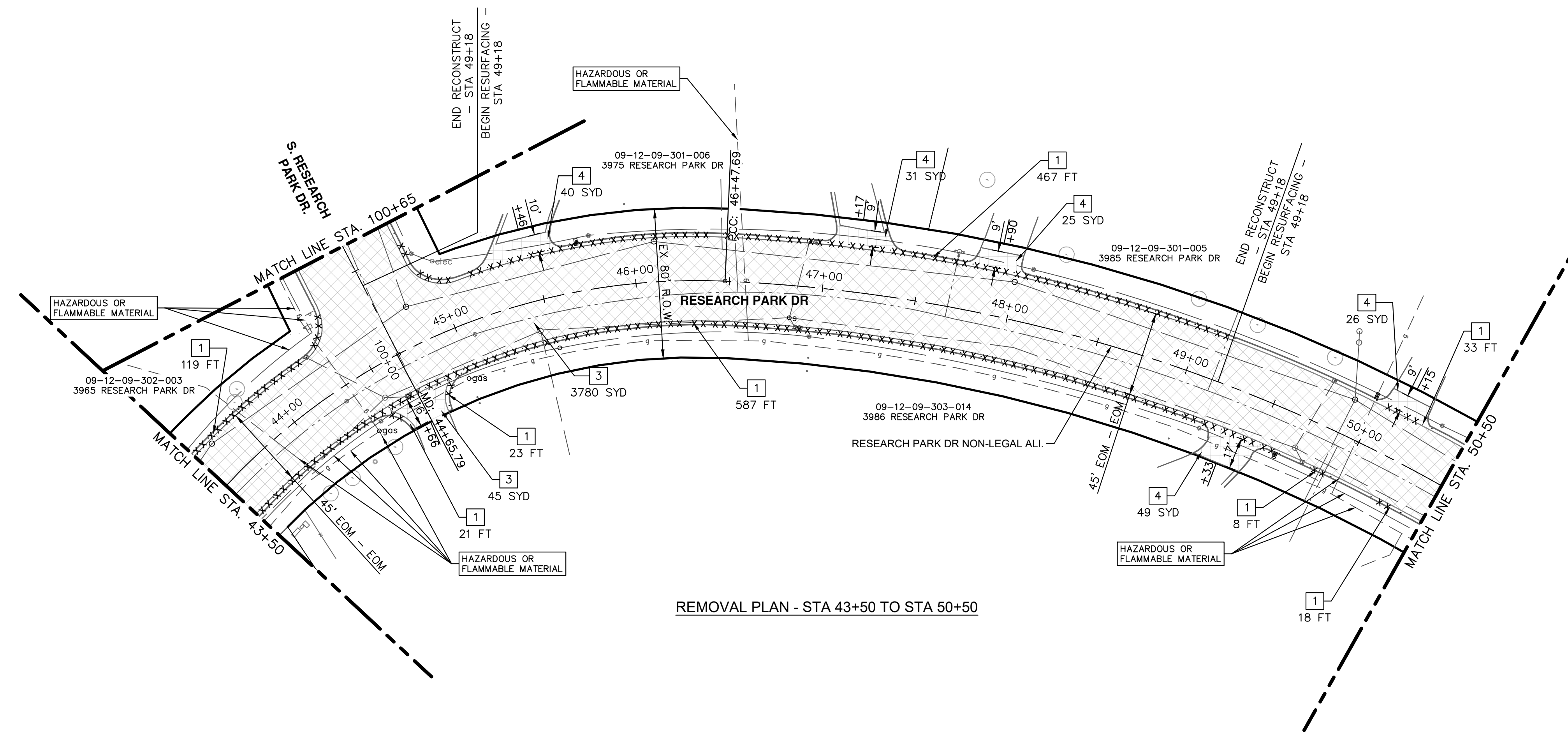
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REMOVAL PLAN - STA 36+50 TO STA 43+50



REMOVAL PLAN - STA 43+50 TO STA 50+50

REMOVAL HATCH KEY

	HMA SURFACE, REM
	DRIVEWAY, REM
	CURB AND GUTTER, REM

REMOVAL KEY

KEY	DESCRIPTION
1	CURB AND GUTTER, REM
2	SIDEWALK, REM
3	HMA SURFACE, REM
4	DRIVEWAY, REM



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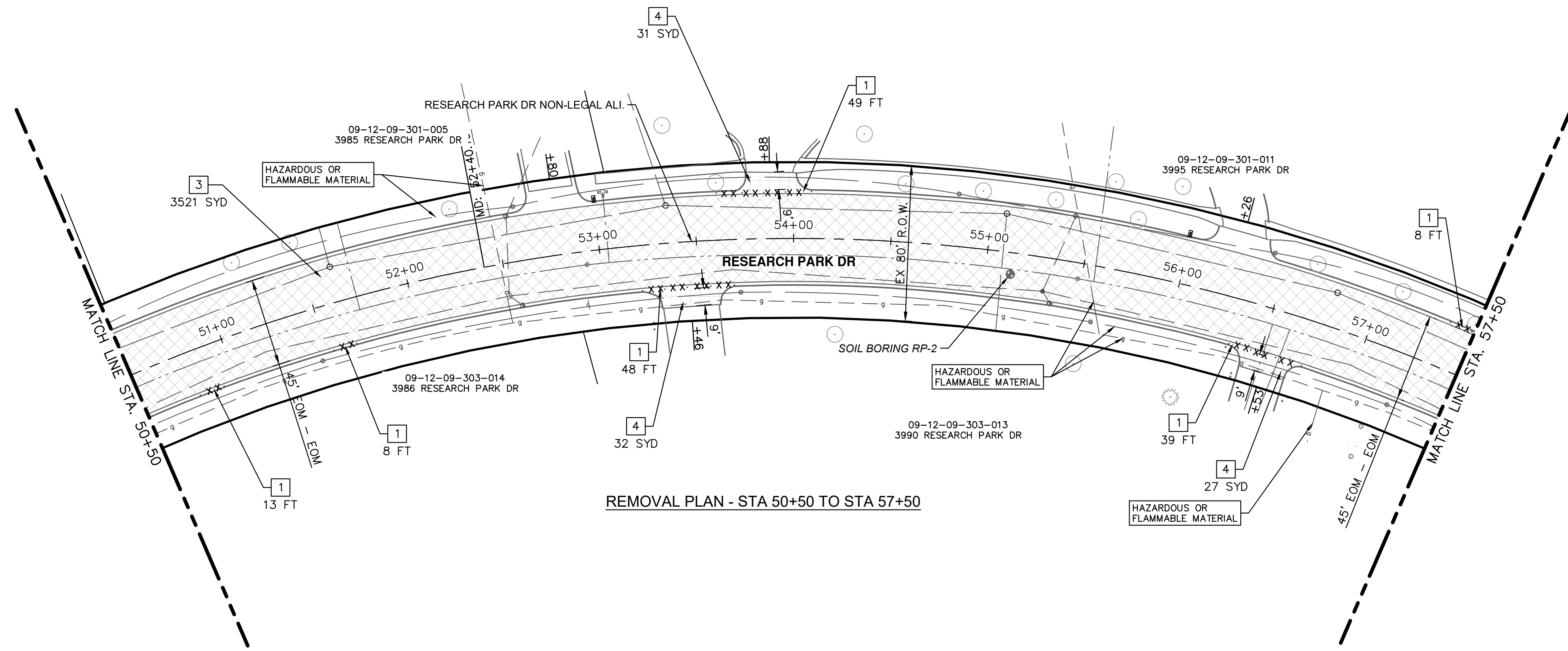


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REMOVALS - STA 36+50 TO STA 50+50

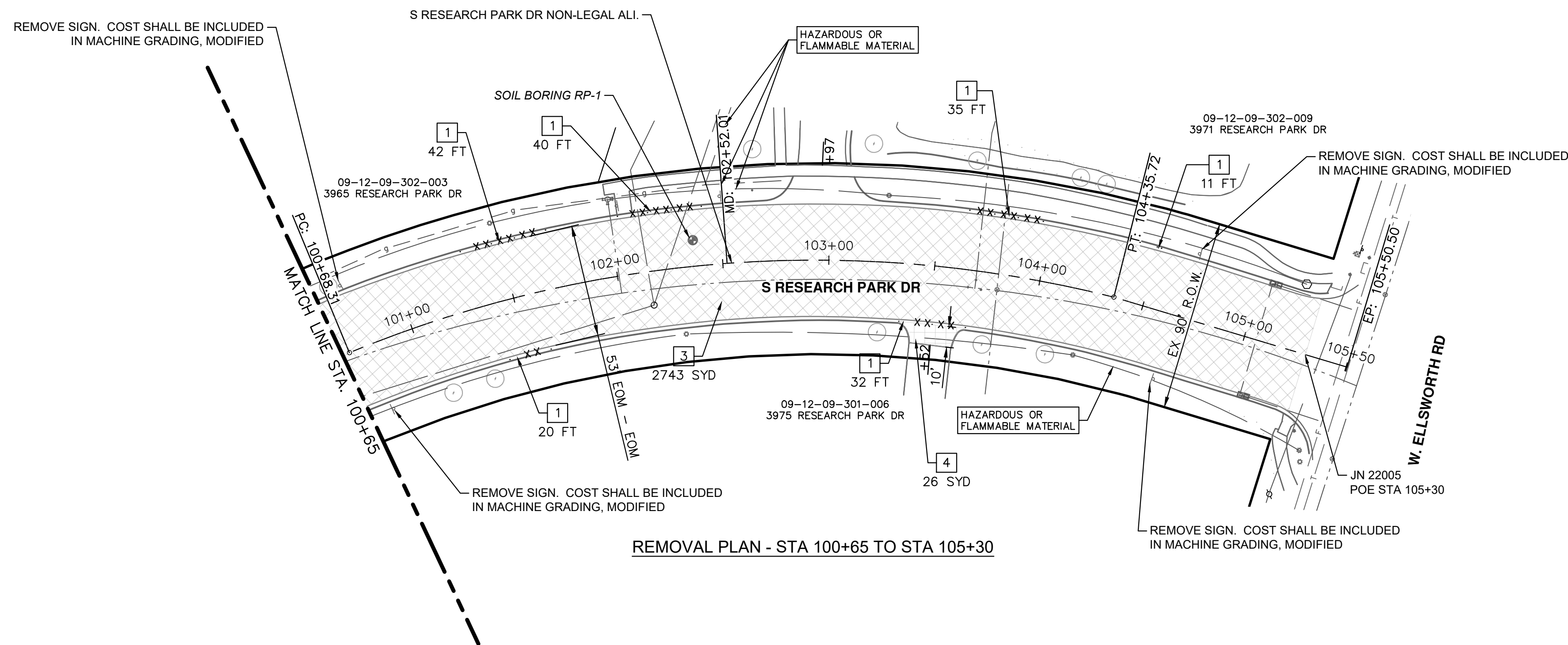
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REMOVAL PLAN - STA 50+50 TO STA 57+50



REMOVAL PLAN - STA 100+65 TO STA 105+30

REMOVAL HATCH KEY

	HMA SURFACE, REM
	DRIVEWAY, REM
	CURB AND GUTTER, REM

REMOVAL KEY

KEY	DESCRIPTION
1	CURB AND GUTTER, REM
2	SIDEWALK, REM
3	HMA SURFACE, REM
4	DRIVEWAY, REM



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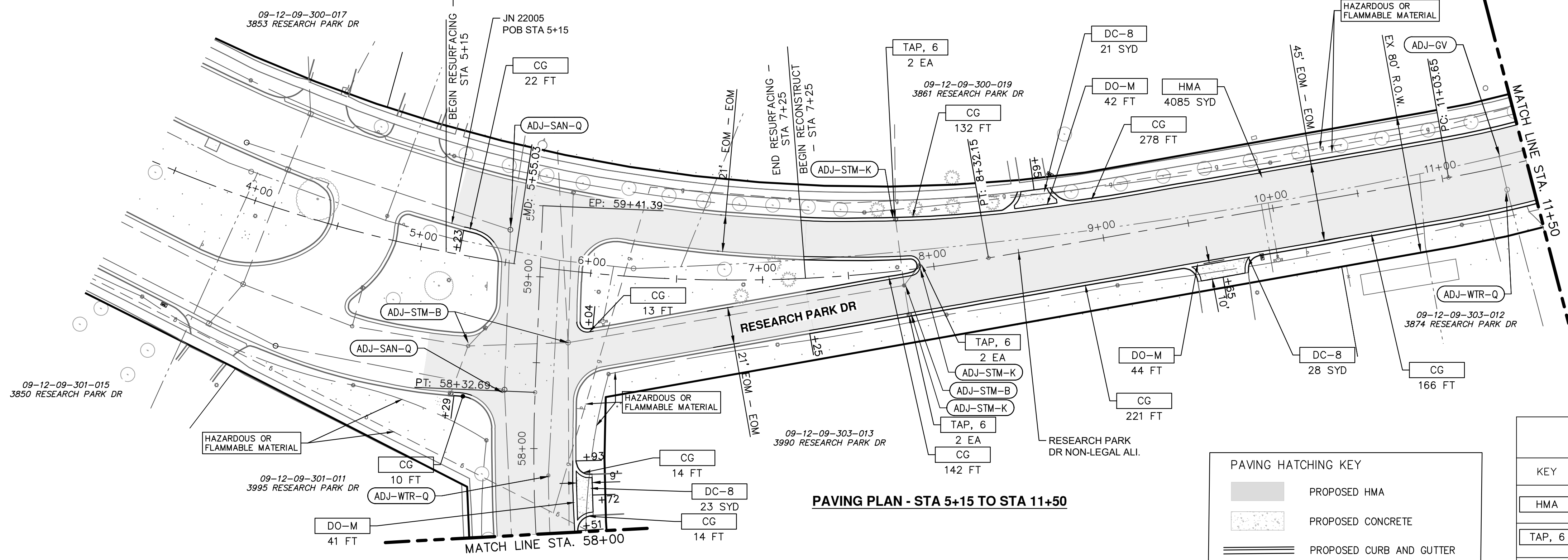


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IMPROVEMENTS PROJECT
REMOVALS - STA 50+50 TO POE

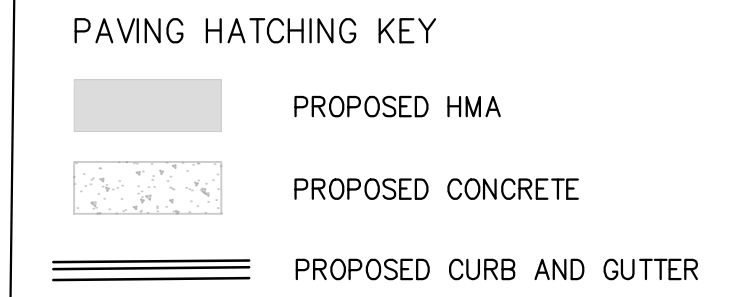
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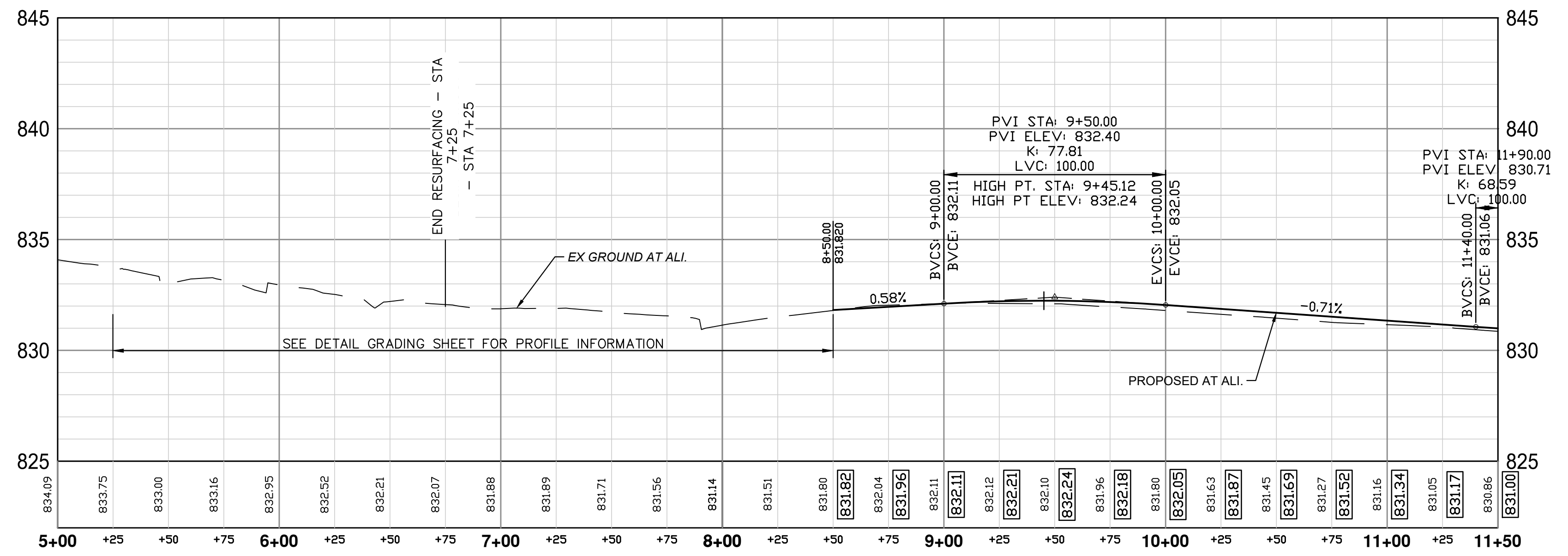
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PAVING PLAN - STA 5+15 TO STA 11+50



CONSTRUCTION KEY	
KEY	DESCRIPTION
HMA	PLACE HMA, EL. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER
TAP, 6	CORE DRAINAGE STRUCTURE TAP, 6 INCH
CG	PLACE CURB AND GUTTER, CONC, BARRIER
DO-M	PLACE DRIVEWAY OPENING, CONC, DET M
DC-8	PLACE DRIVEWAY, NONREINF CONC, 8 INCH, PLACE AND COMPACT 6 INCH SUBBASE, CIP.
ABO	ADJUST BY OTHERS
ADJ-XXX	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
ADJ-SXX	ADJUST STRUCTURE COVER



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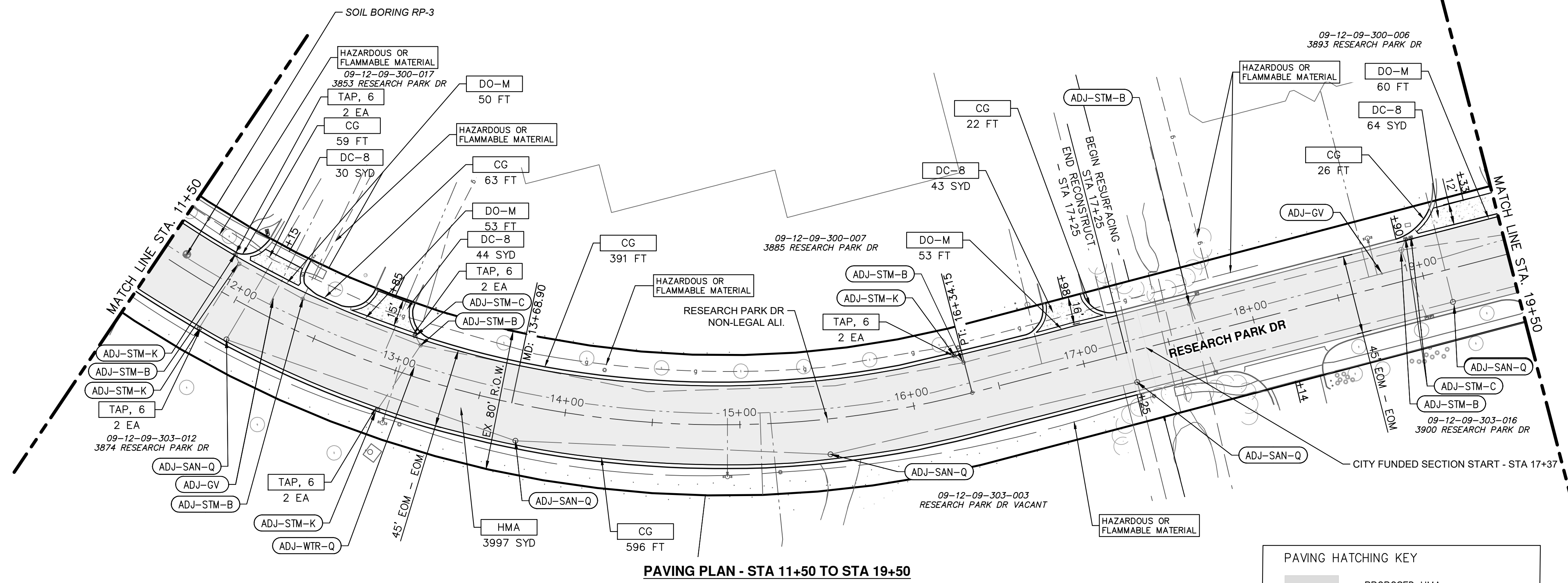
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ROAD PLAN AND PROFILE - POB TO STA 11+50

SCALE PLAN: 1" = 40' PROFILE: 1" = 40' HORIZ
1" = 5' VERT

DRAWING No. **2022-035-20**

SHEET No. **20 OF 41**



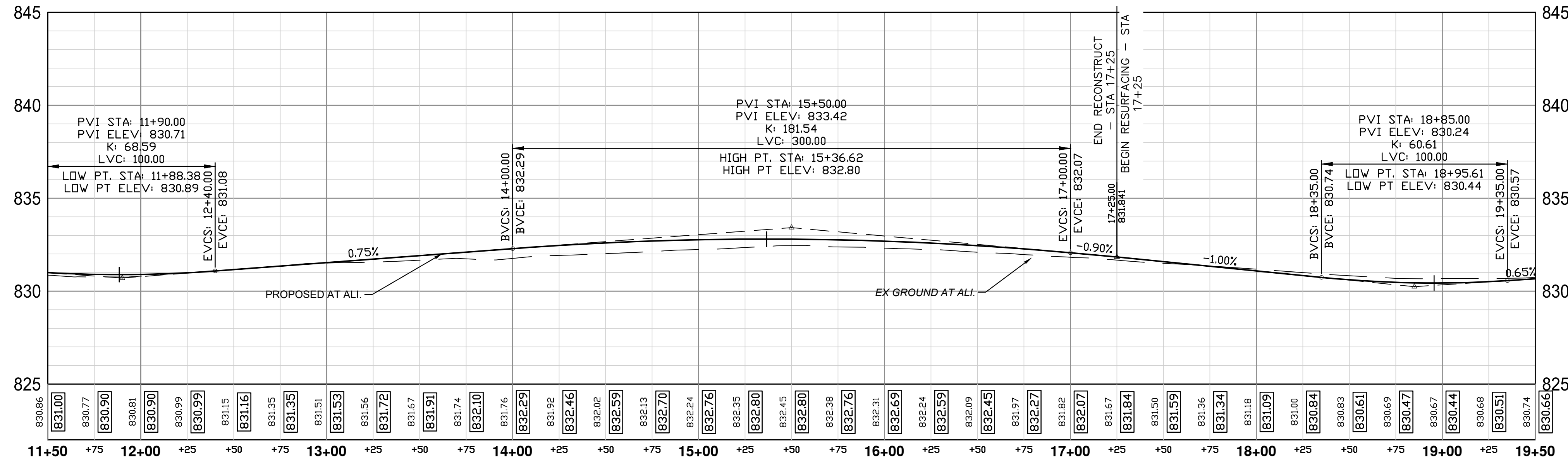
PAVING PLAN - STA 11+50 TO STA 19+50

PAVING HATCHING KEY

	PROPOSED HMA
	PROPOSED CONCRETE
	PROPOSED CURB AND GUTTER

CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, EL. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER
TAP, 6	CORE DRAINAGE STRUCTURE TAP, 6 INCH
CG	PLACE CURB AND GUTTER, CONC, BARRIER
DO-M	PLACE DRIVEWAY OPENING, CONC, DET M
DC-8	PLACE DRIVEWAY, NONREINF CONC, 8 INCH, PLACE AND COMPACT 6 INCH SUBBASE, CIP
ABO	ADJUST BY OTHERS
ADJ-XXX	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
ADJ-SXX	ADJUST STRUCTURE COVER



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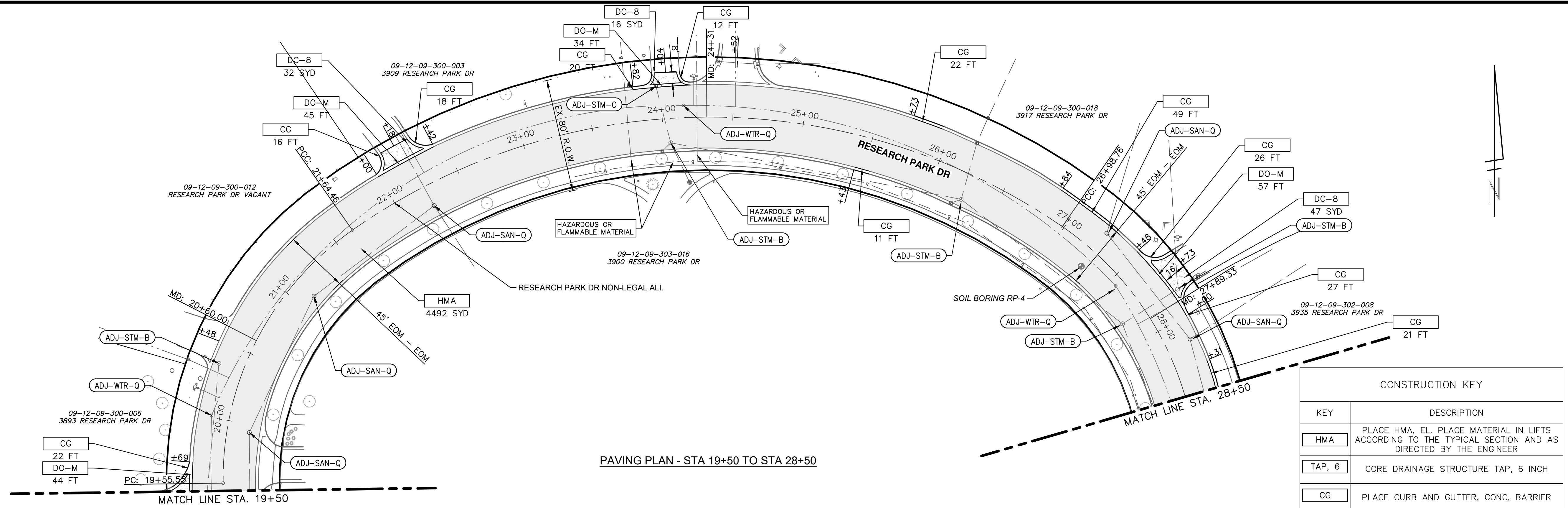
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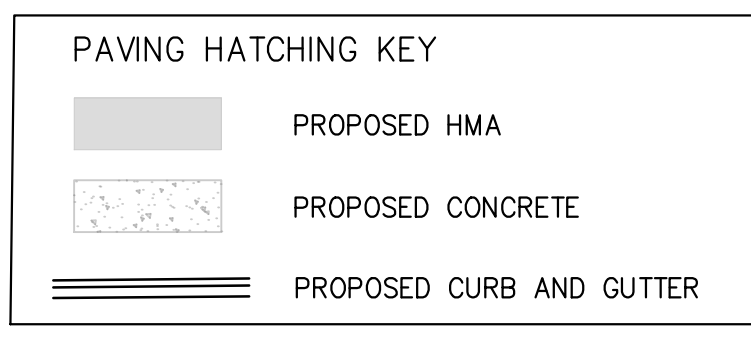
ROAD PLAN AND PROFILE - STA 11+50 TO STA 19+50

SCALE PLAN: 1" = 40' HORIZ
1" = 5' VERT

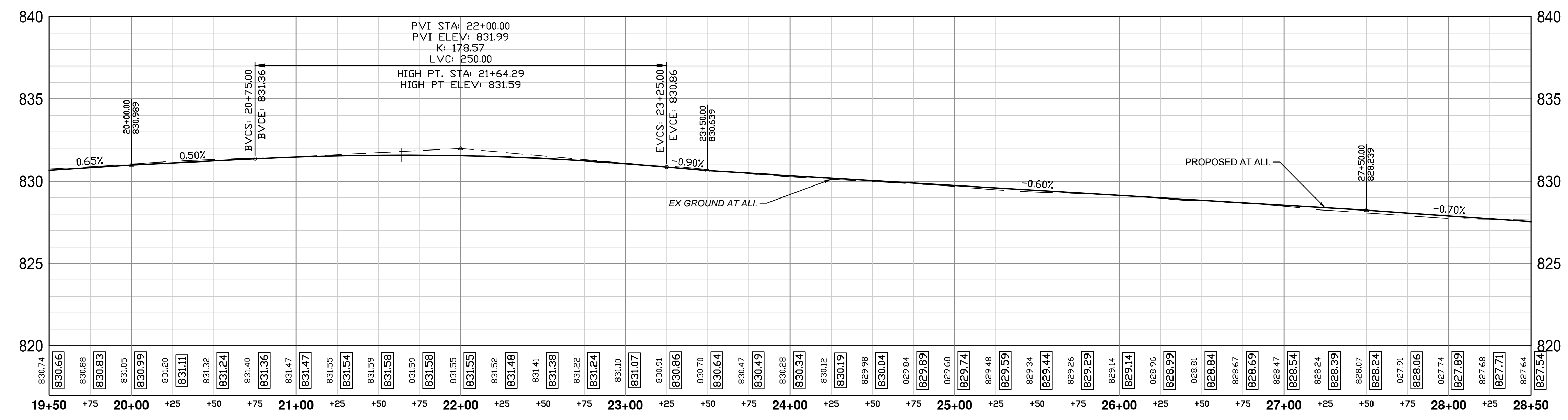
DRAWING No. 2022-035-21
SHEET No. 21 OF 41



PAVING PLAN - STA 19+50 TO STA 28+50



CONSTRUCTION KEY	
KEY	DESCRIPTION
HMA	PLACE HMA, EL. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER
TAP, 6	CORE DRAINAGE STRUCTURE TAP, 6 INCH
CG	PLACE CURB AND GUTTER, CONC, BARRIER
DO-M	PLACE DRIVEWAY OPENING, CONC, DET M
DC-8	PLACE DRIVEWAY, NONREINF CONC, 8 INCH, PLACE AND COMPACT 6 INCH SUBBASE, CIP
ABO	ADJUST BY OTHERS
ADJ-XXX	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
ADJ-SXX	ADJUST STRUCTURE COVER

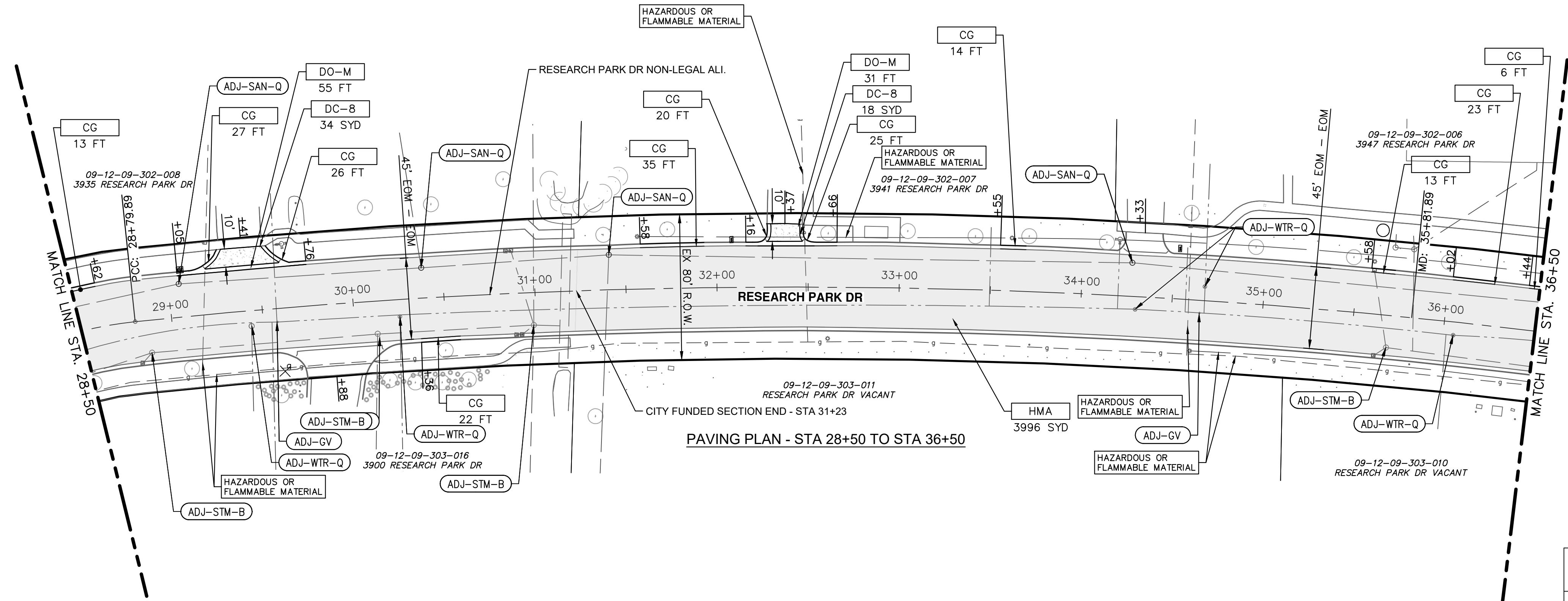


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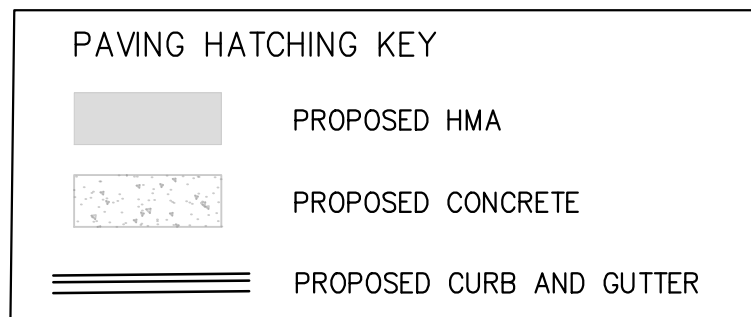
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 ROAD PLAN AND PROFILE - STA 19+50 TO STA 28+50

SCALE PLAN: 1" = 40' HORIZ
 1" = 5' VERT
 DRAWING No. 2022-035-22
 SHEET No. 22 OF 41

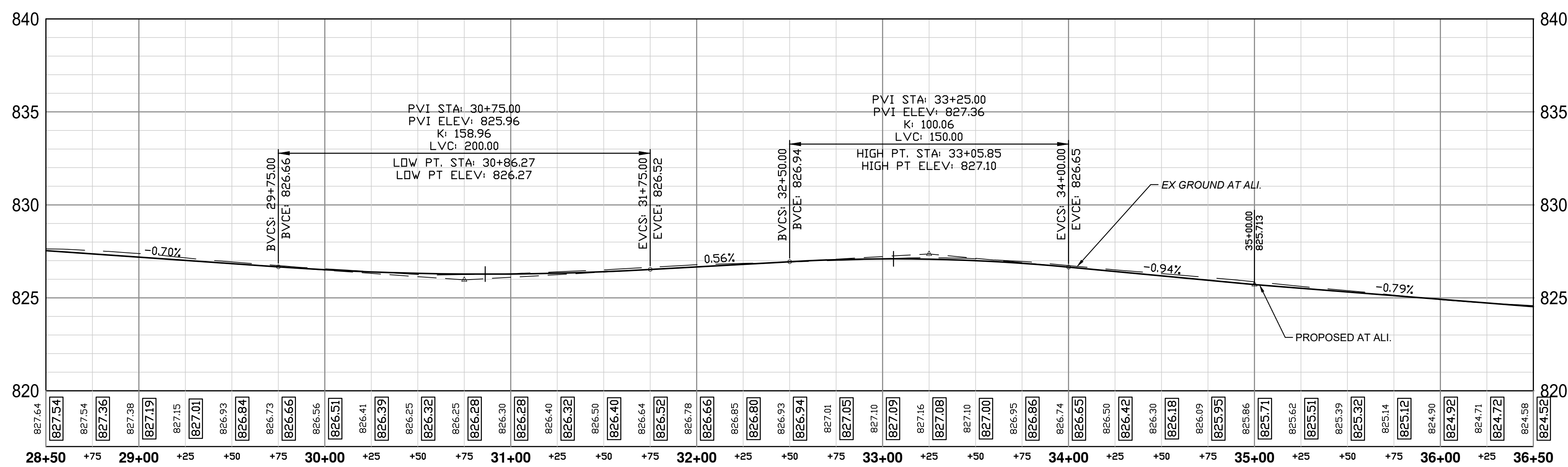
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PAVING PLAN - STA 28+50 TO STA 36+50



CONSTRUCTION KEY	
KEY	DESCRIPTION
HMA	PLACE HMA, EL. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER
TAP, 6	CORE DRAINAGE STRUCTURE TAP, 6 INCH
CG	PLACE CURB AND GUTTER, CONC, BARRIER
DO-M	PLACE DRIVEWAY OPENING, CONC, DET M
DC-8	PLACE DRIVEWAY, NONREINF CONC, 8 INCH, PLACE AND COMPACT 6 INCH SUBBASE, CIP
ABO	ADJUST BY OTHERS
ADJ-XXX	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
ADJ-SXX	ADJUST STRUCTURE COVER



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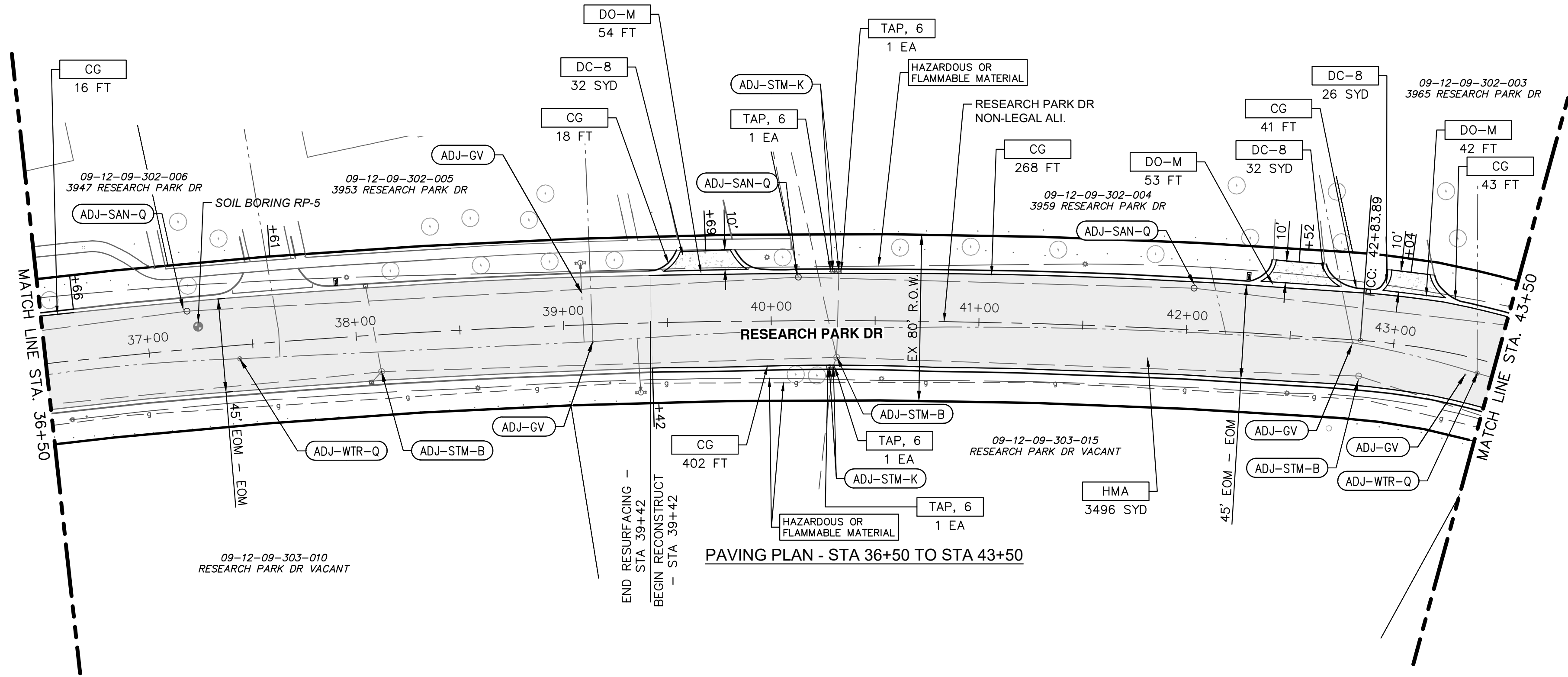
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ROAD PLAN AND PROFILE - STA 28+50 TO STA 36+50

SHEET No. **23 OF 41**

DRAWING No. **2022-035-23**



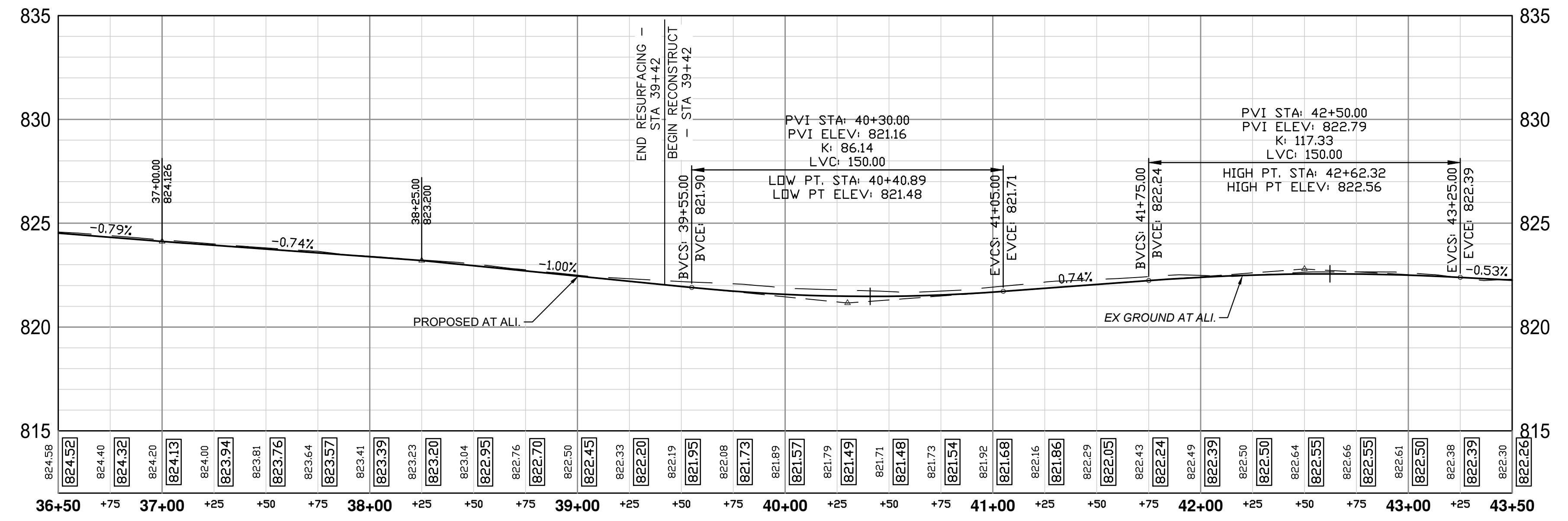
PAVING PLAN - STA 36+50 TO STA 43+50

PAVING HATCHING KEY

	PROPOSED HMA
	PROPOSED CONCRETE
	PROPOSED CURB AND GUTTER

CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, EL. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER
TAP, 6	CORE DRAINAGE STRUCTURE TAP, 6 INCH
CG	PLACE CURB AND GUTTER, CONC, BARRIER
DO-M	PLACE DRIVEWAY OPENING, CONC, DET M
DC-8	PLACE DRIVEWAY, NONREINF CONC, 8 INCH, PLACE AND COMPACT 6 INCH SUBBASE, CIP
ABO	ADJUST BY OTHERS
ADJ-XXX	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
ADJ-SXX	ADJUST STRUCTURE COVER



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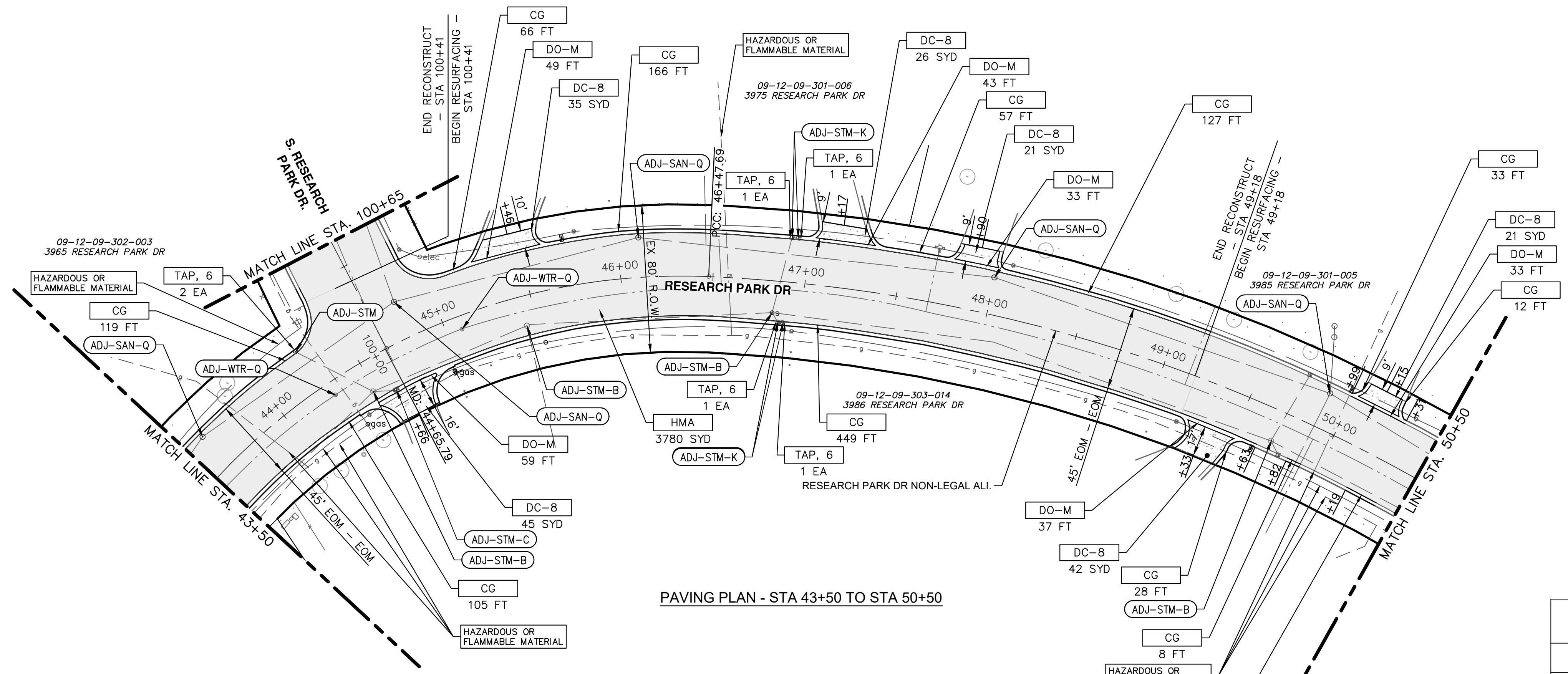
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ROAD PLAN AND PROFILE - STA 36+50 TO STA 43+50

SHEET No. **24 OF 41**

DRAWING No. **2022-035-24**



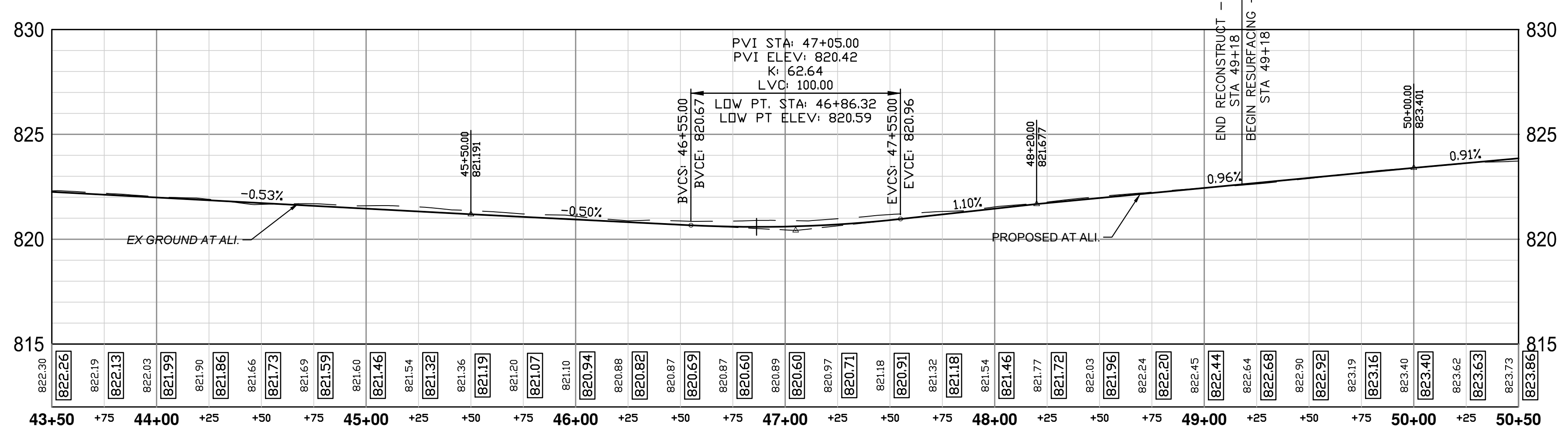
PAVING PLAN - STA 43+50 TO STA 50+50

PAVING HATCHING KEY

	PROPOSED HMA
	PROPOSED CONCRETE
	PROPOSED CURB AND GUTTER

CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, EL. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER
TAP, 6	CORE DRAINAGE STRUCTURE TAP, 6 INCH
CG	PLACE CURB AND GUTTER, CONC, BARRIER
DO-M	PLACE DRIVEWAY OPENING, CONC, DET M
DC-8	PLACE DRIVEWAY, NONREINF CONC, 8 INCH, PLACE AND COMPACT 6 INCH SUBBASE, CIP
ABO	ADJUST BY OTHERS
ADJ-XXX	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
ADJ-SXX	ADJUST STRUCTURE COVER



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ROAD PLAN AND PROFILE - STA 43+50 TO STA 50+50

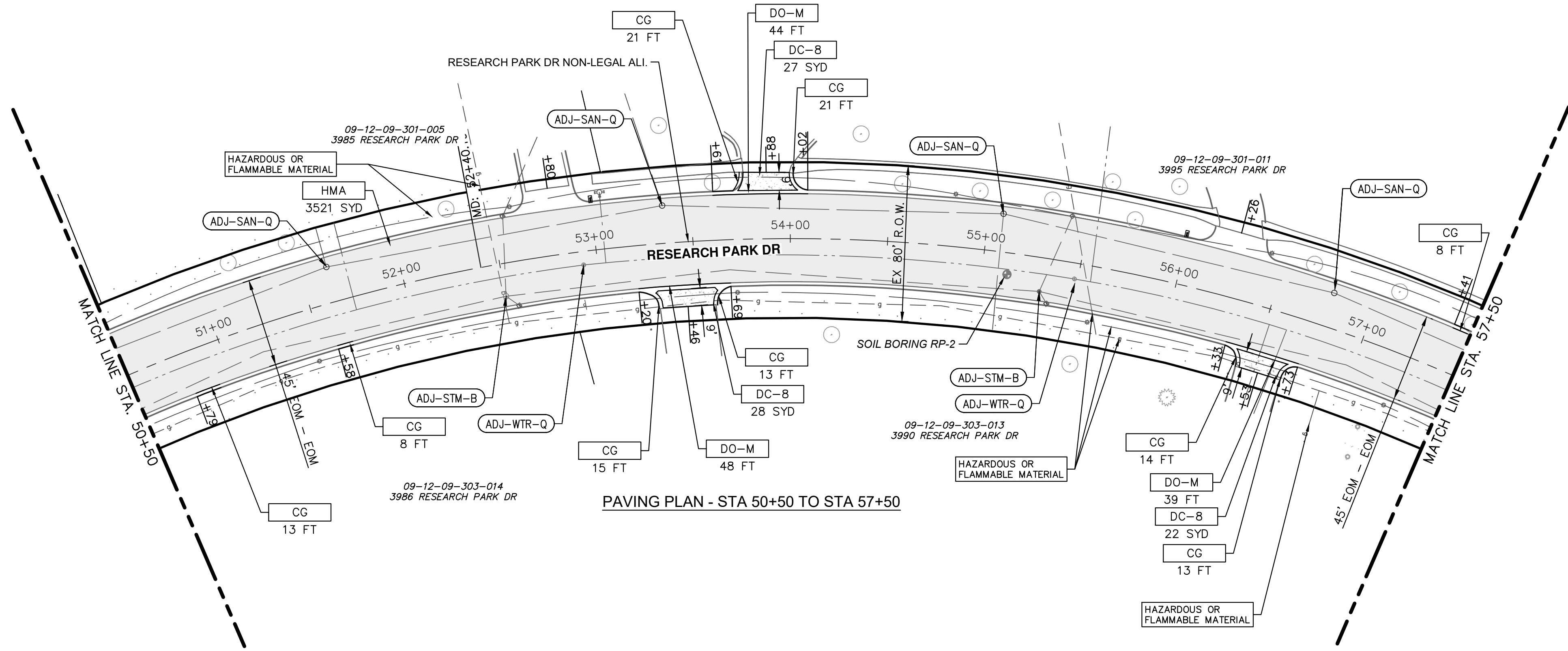
SHEET No. 25 OF 41

DRAWING No. 2022-035-25

SCALE PLAN: 1" = 40' HORIZ
1" = 5' VERT

PROFILE: 1" = 40' HORIZ
1" = 5' VERT

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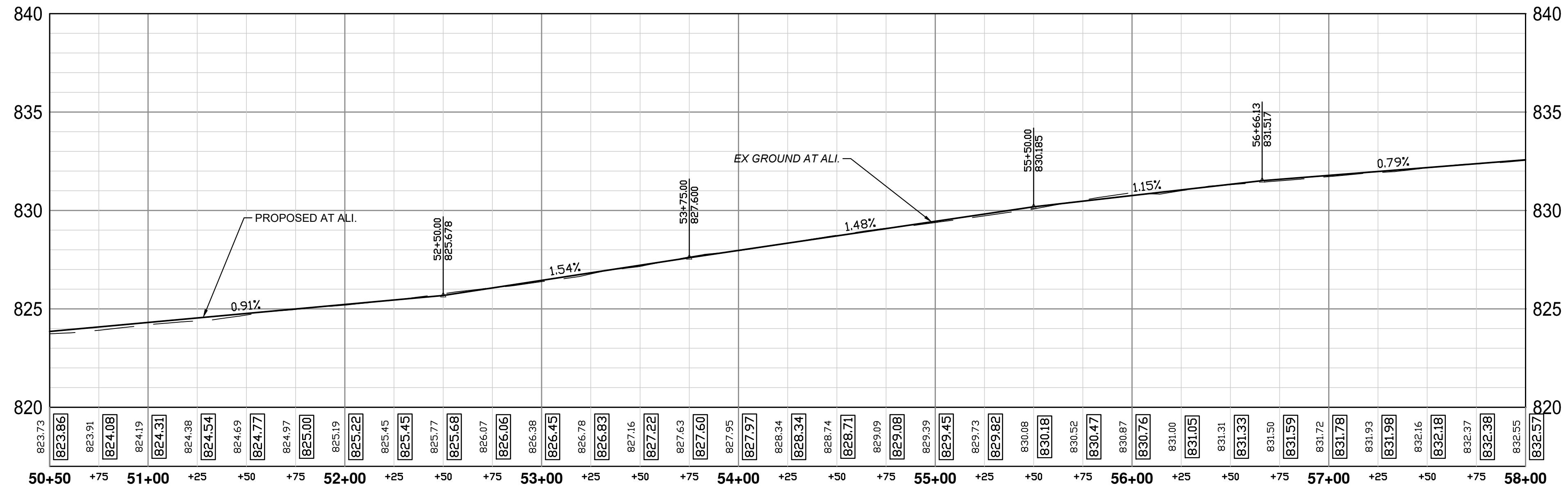
PAVING PLAN - STA 50+50 TO STA 57+50

PAVING HATCHING KEY

	PROPOSED HMA
	PROPOSED CONCRETE
	PROPOSED CURB AND GUTTER

CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, EL. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER
TAP, 6	CORE DRAINAGE STRUCTURE TAP, 6 INCH
CG	PLACE CURB AND GUTTER, CONC, BARRIER
DO-M	PLACE DRIVEWAY OPENING, CONC, DET M
DC-8	PLACE DRIVEWAY, NONREINF CONC, 8 INCH, PLACE AND COMPACT 6 INCH SUBBASE, CIP
ABO	ADJUST BY OTHERS
ADJ-XXX	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
ADJ-SXX	ADJUST STRUCTURE COVER



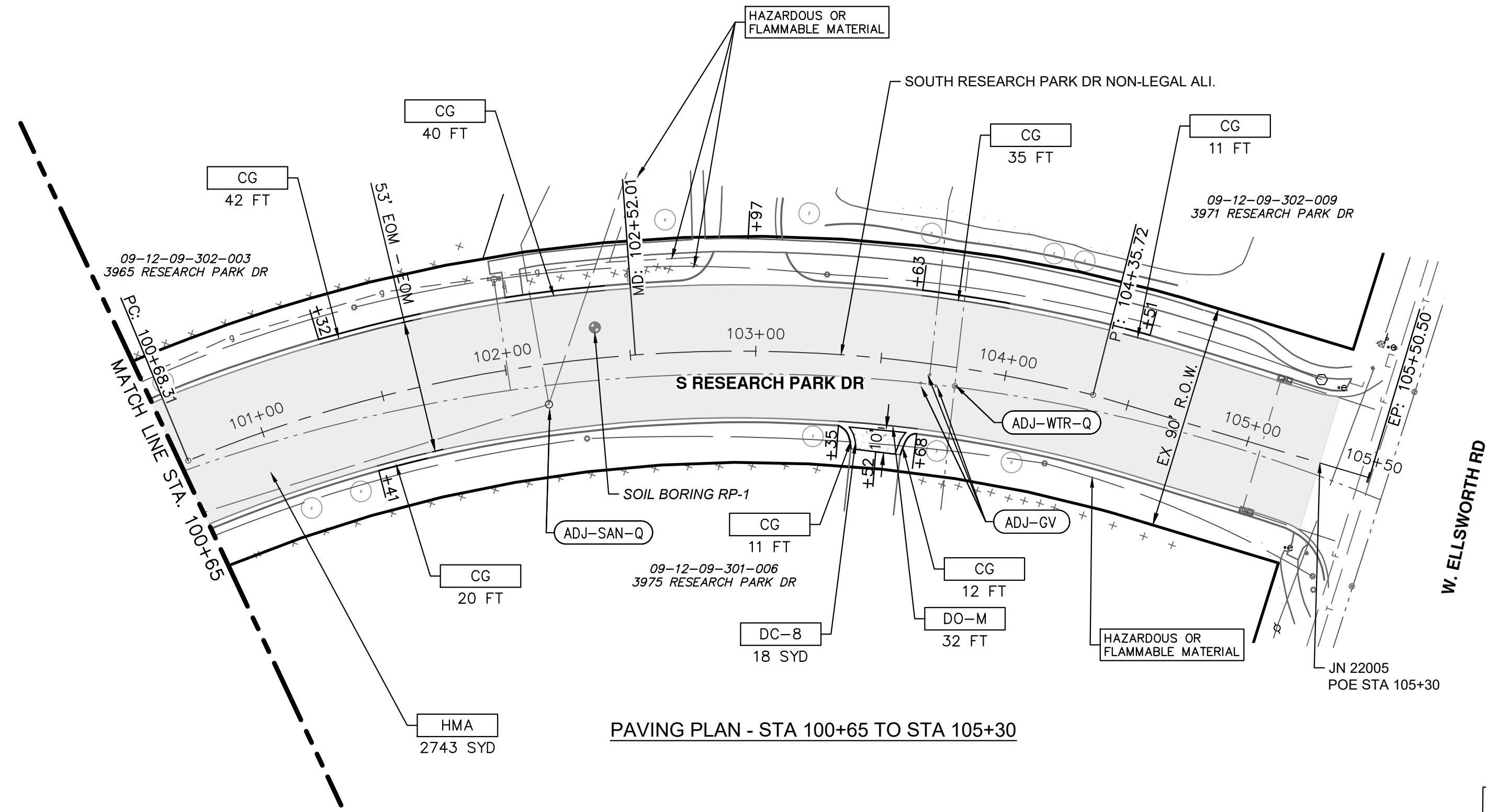
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 ROAD PLAN AND PROFILE - STA 50+50 TO STA 58+00

SCALE PLAN: 1" = 40' HORIZ
 1" = 5' VERT
 DRAWING No. 2022-035-26
 SHEET No. 26 OF 41



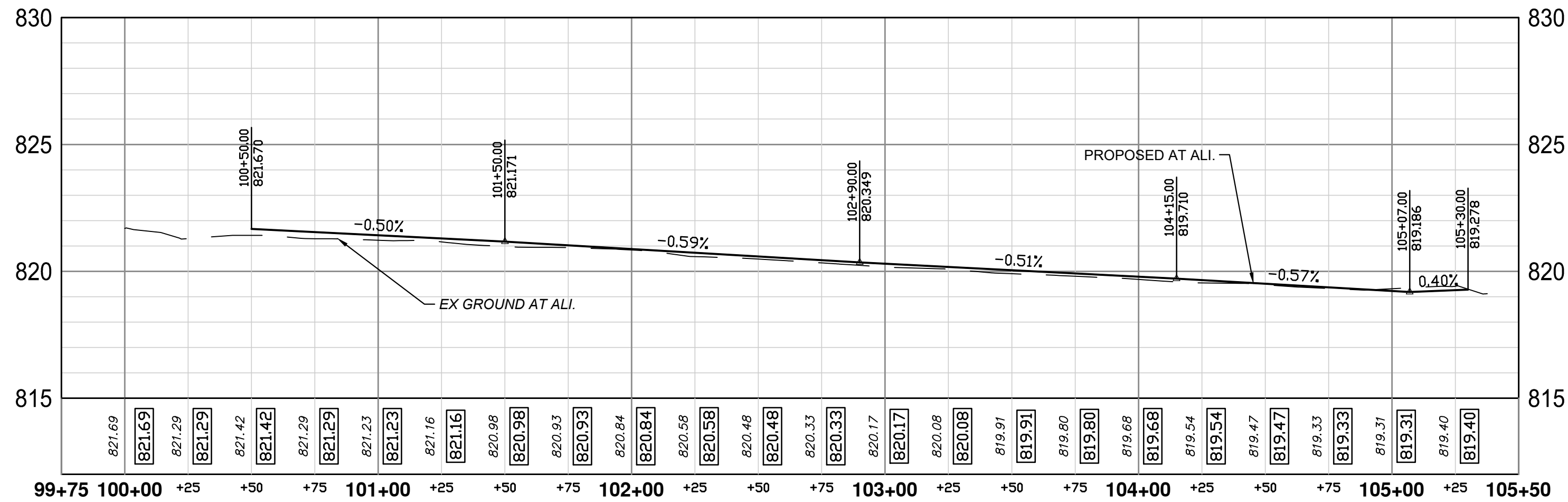
PAVING PLAN - STA 100+65 TO STA 105+30

PAVING HATCHING KEY

	PROPOSED HMA
	PROPOSED CONCRETE
	PROPOSED CURB AND GUTTER

CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, EL. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER
TAP, 6	CORE DRAINAGE STRUCTURE TAP, 6 INCH
CG	PLACE CURB AND GUTTER, CONC, BARRIER
DO-M	PLACE DRIVEWAY OPENING, CONC, DET M
DC-8	PLACE DRIVEWAY, NONREINF CONC, 8 INCH, PLACE AND COMPACT 6 INCH SUBBASE, CIP
ABO	ADJUST BY OTHERS
ADJ-XXX	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
ADJ-SXX	ADJUST STRUCTURE COVER



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ROAD PLAN AND PROFILE - STA 100+65 TO POE STA 105+30

SCALE PLAN: 1" = 40' PROFILE: 1" = 5' VERT
 1" = 5' VERT

DRAWING No. 2022-035-27

SHEET No. 27 OF 41

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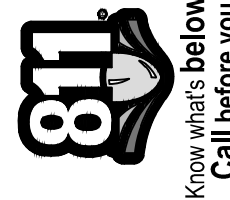
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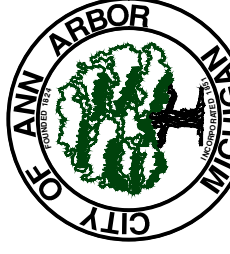


DETAIL GRADES - BOULEVARD



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

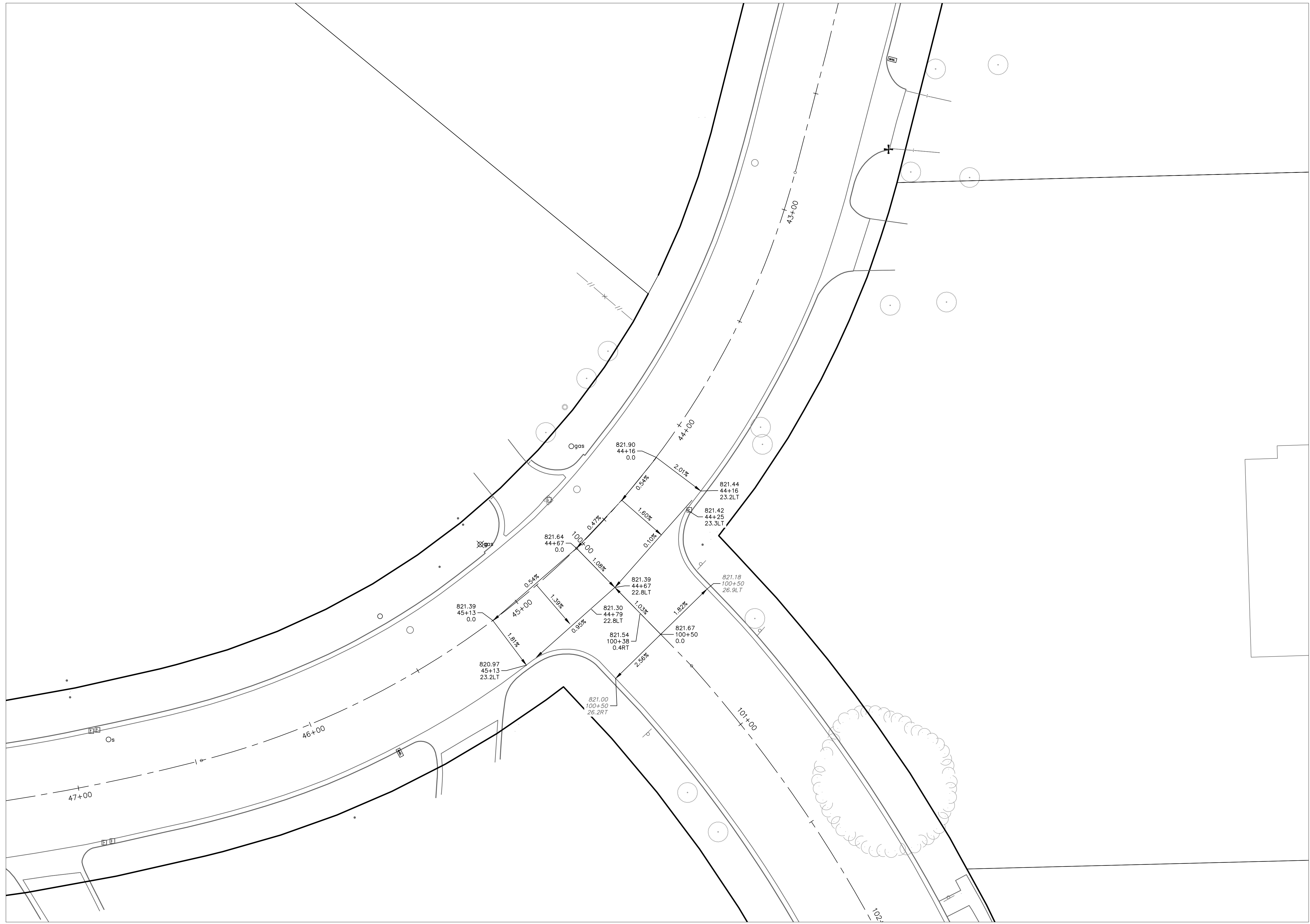
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DETAIL GRADING PLAN

SCALE: 1" = 20'
DRAWING No. 2022-035-28

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DETAIL GRADES - S RESEARCH PARK DRIVE INTERSECTION



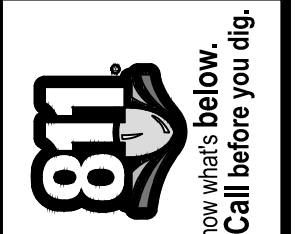
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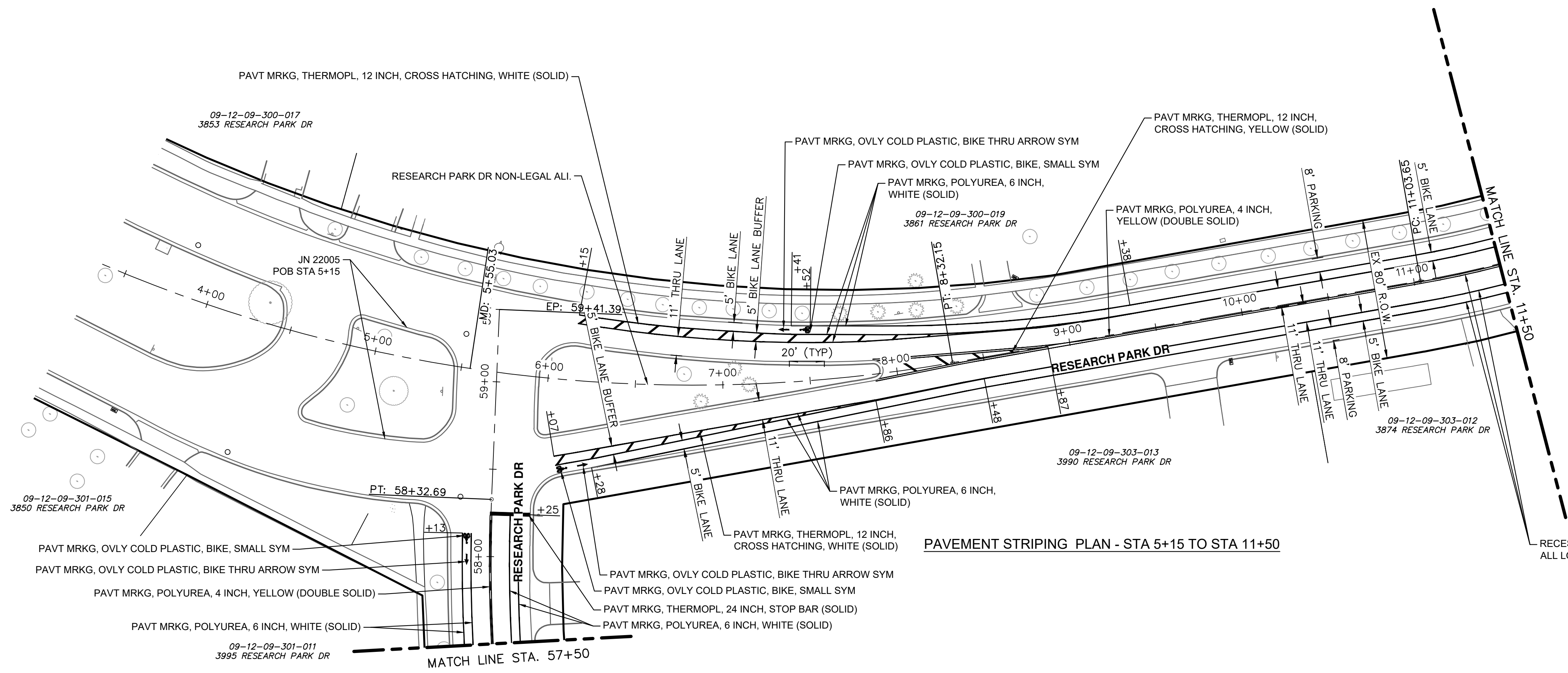
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IMPROVEMENTS PROJECT
DETAIL GRADING PLAN

SCALE: 1" = 20'
DRAWING No. 2022-035-29

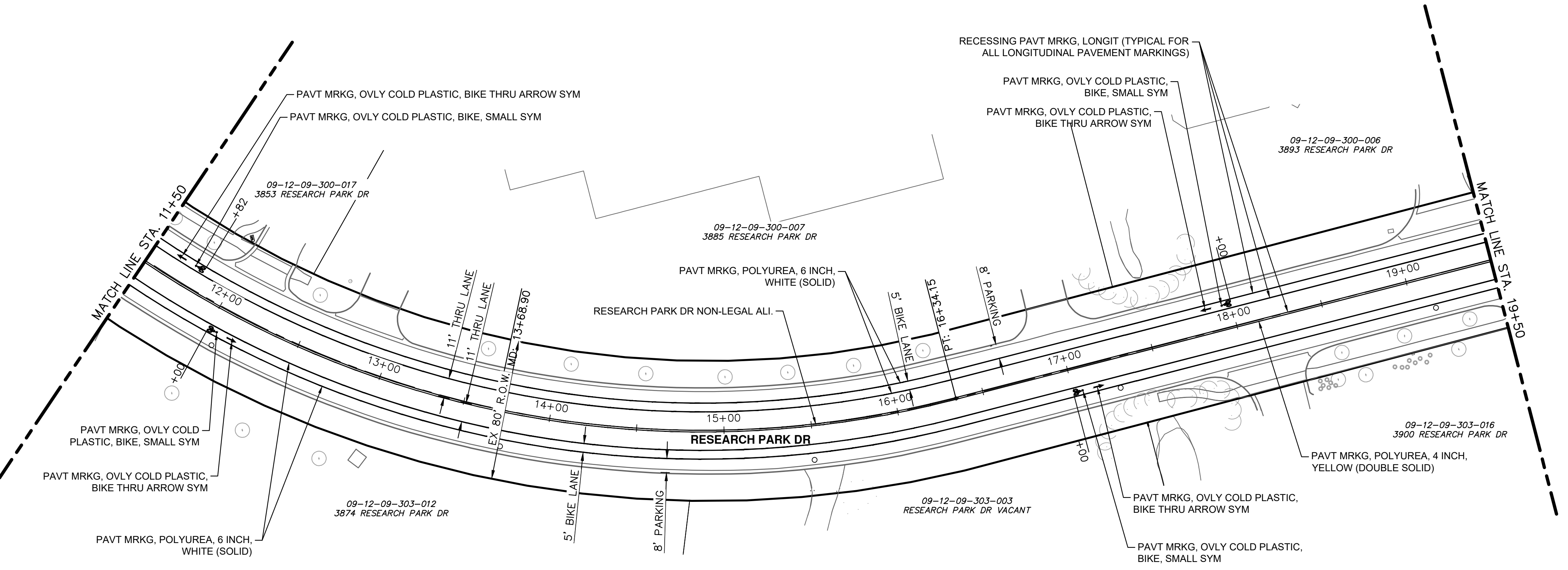
REV.	DESCRIPTION	DATE	DRAWN	CHECKED



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PAVEMENT STRIPING PLAN - STA 5+15 TO STA 11+50



PAVEMENT STRIPING PLAN - STA 11+50 TO STA 19+50



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REV.	DESCRIPTION	DATE	DRAWN	CHECKED

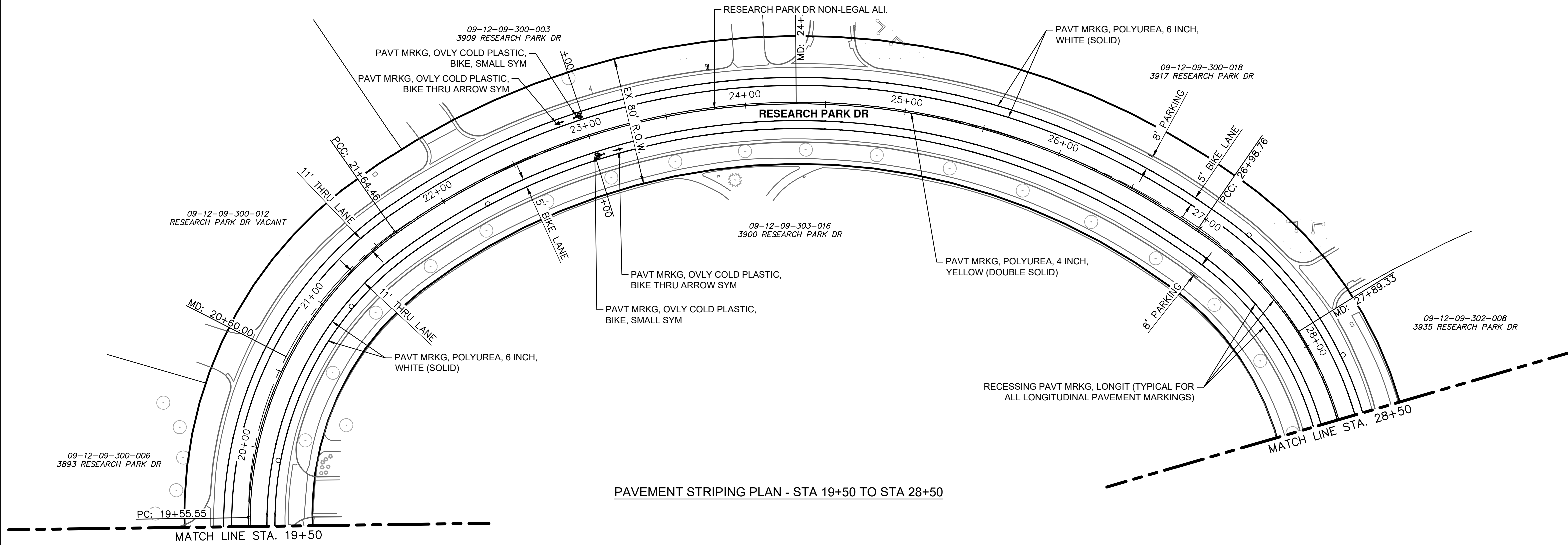
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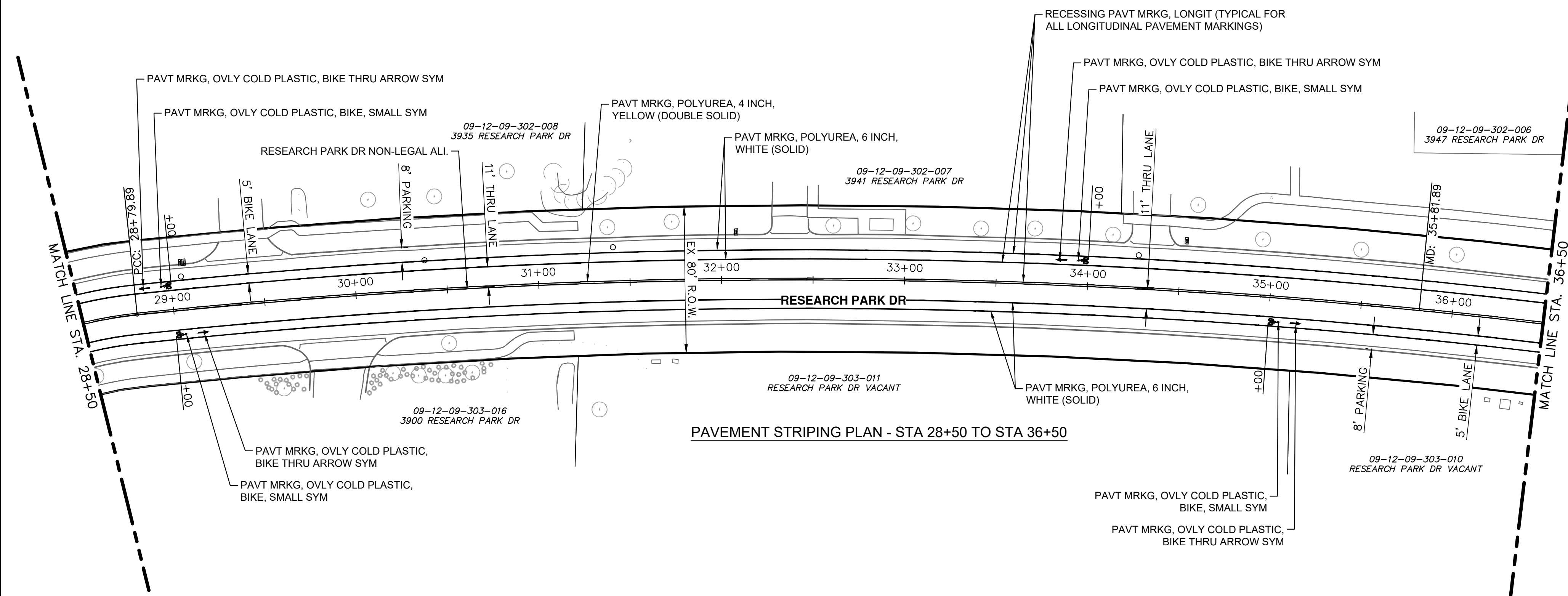
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PAVEMENT MARKING PLAN - POB TO STA 19+50

SCALE: 1" = 40'
DRAWING No. 2022-035-30

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PAVEMENT STRIPING PLAN - STA 19+50 TO STA 28+50



PAVEMENT STRIPING PLAN - STA 28+50 TO STA 36+50



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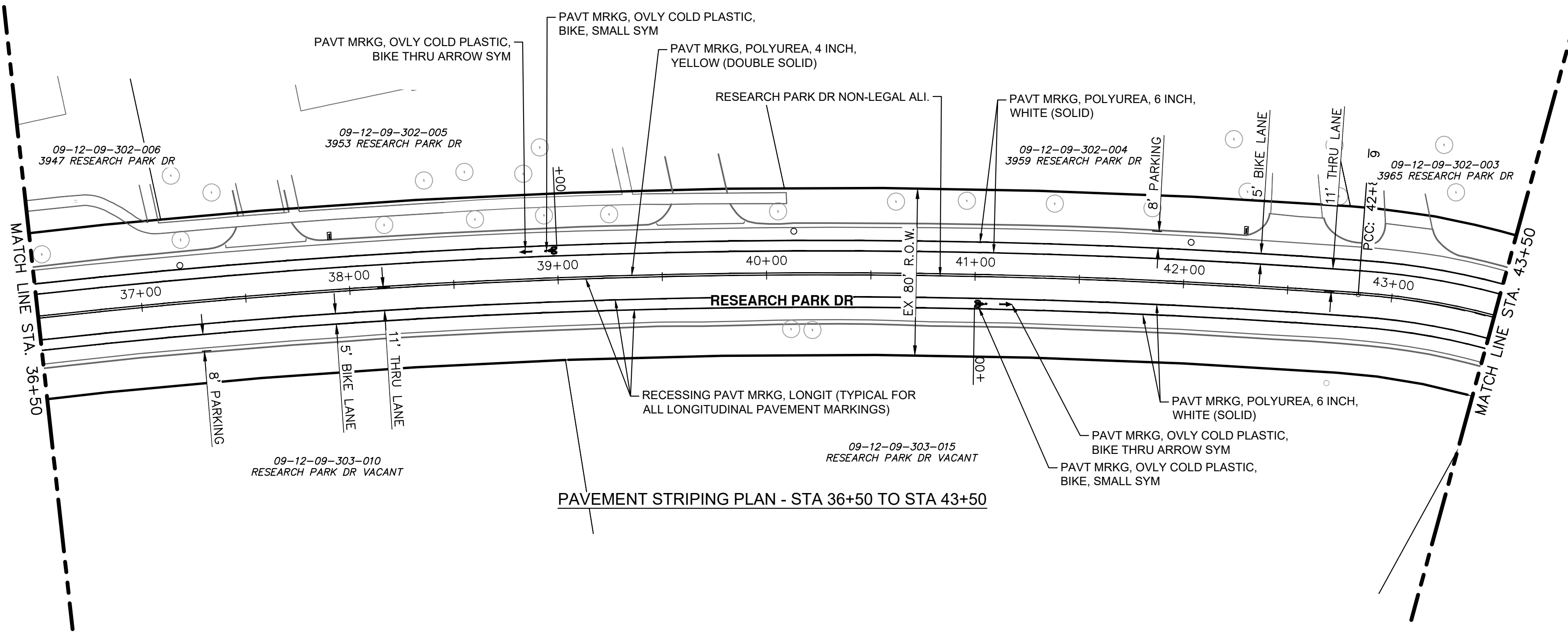
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
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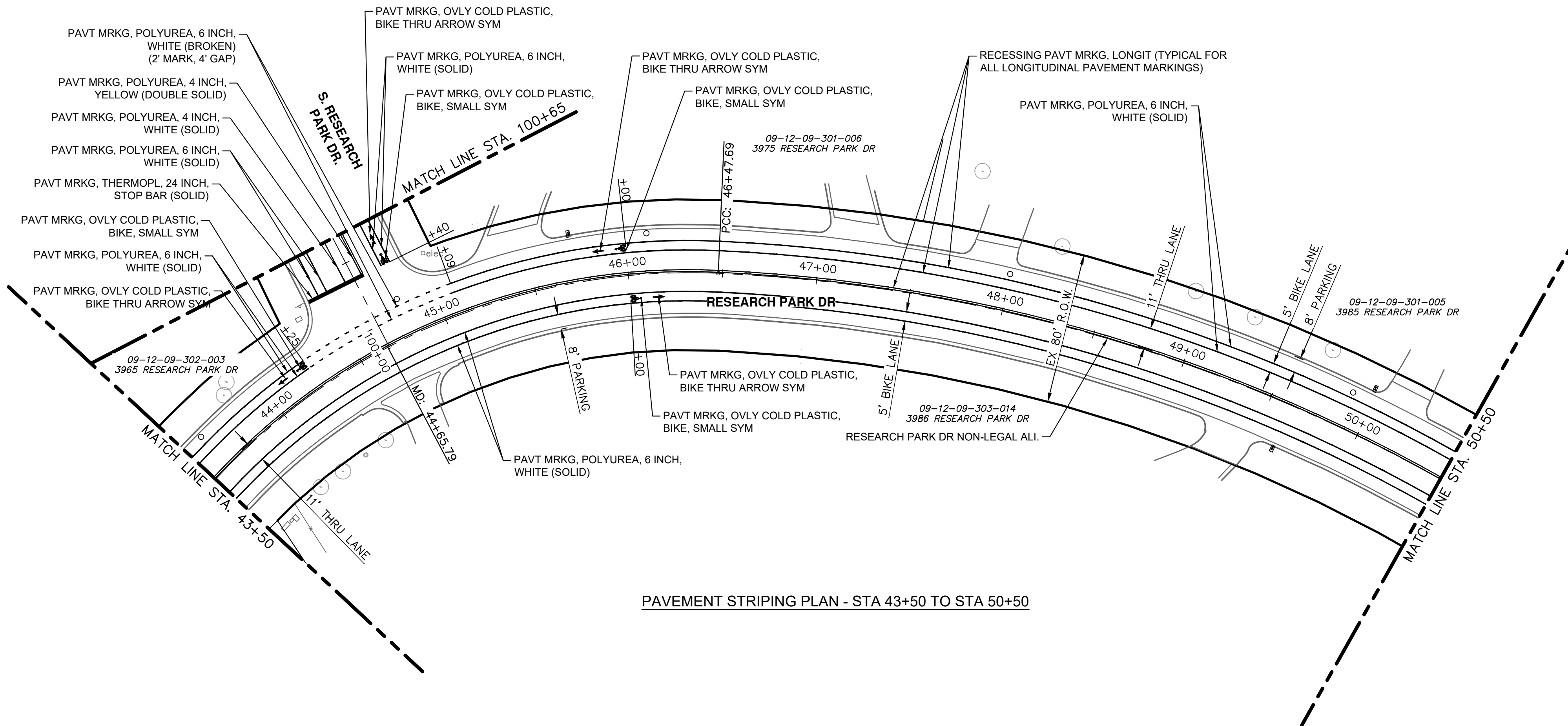
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE IMPROVEMENTS PROJECT
PAVEMENT MARKING PLAN - STA 19+50 TO STA 36+50

SCALE: 1" = 40'
DRAWING No. 2022-035-31
SHEET No. 31 OF 41

J:\AA\Design\AA22005-Research Park Drive\DWG\AA22005_P_Smrk1.dwg Dwg Created: 2-Feb-23 - _g2 standard bw.stb - Plot Date: 21-Feb-23



PAVEMENT STRIPING PLAN - STA 36+50 TO STA 43+50



PAVEMENT STRIPING PLAN - STA 43+50 TO STA 50+50



Know what's below. Call Before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

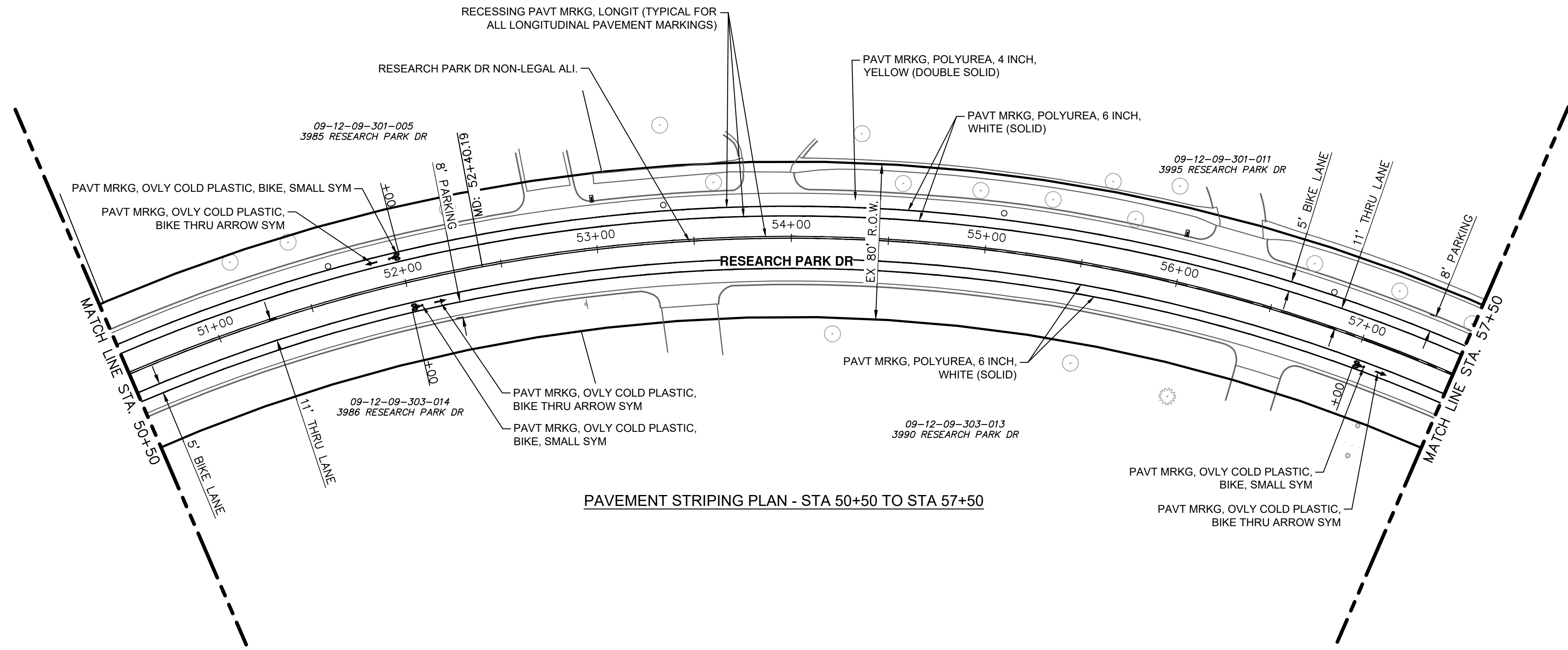
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR MI 48107-8647
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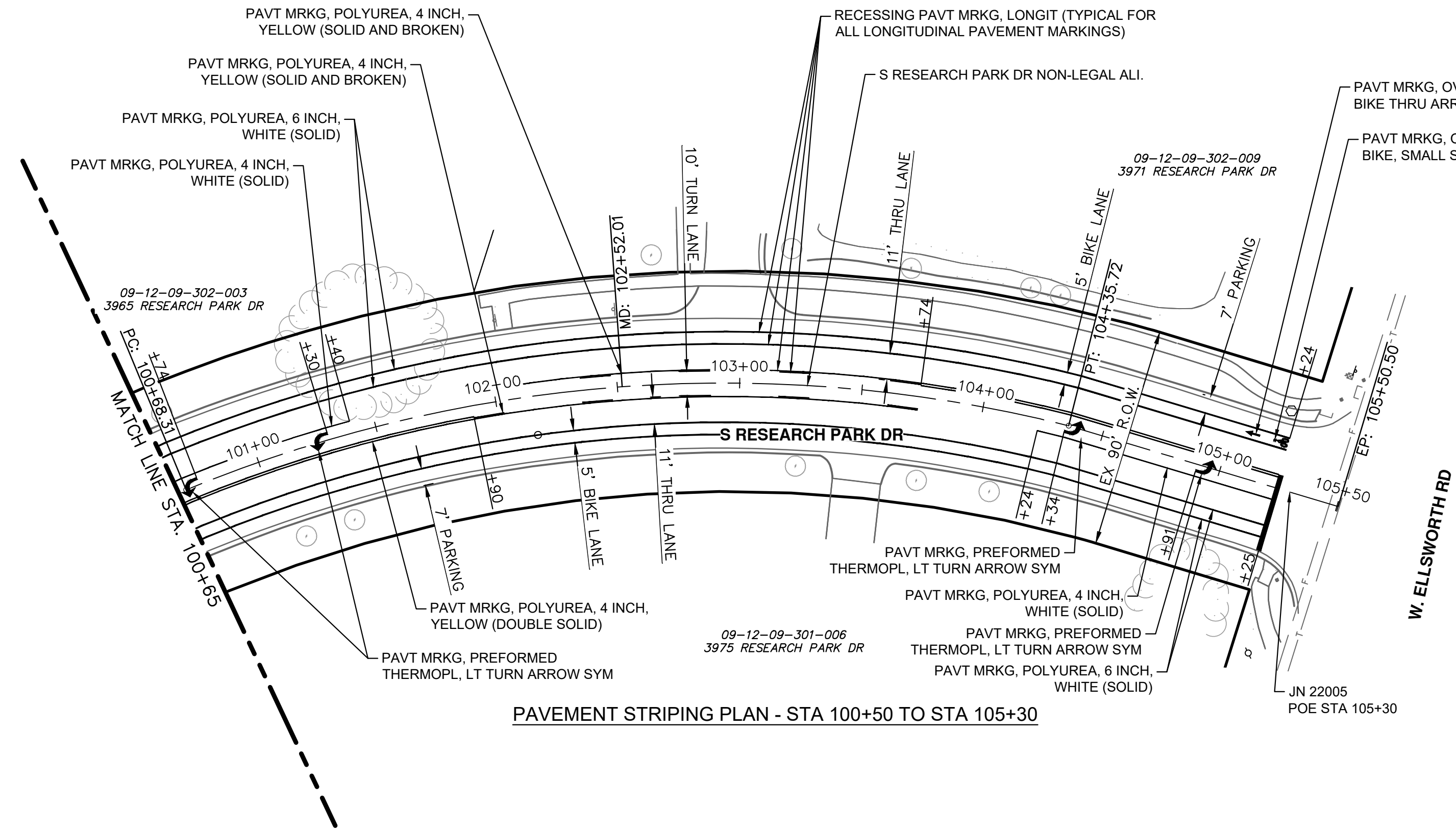
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT
PAVEMENT MARKING PLAN - STA 36+50 TO STA 50+50

SCALE: 1" = 40'
DRAWING No. 2022-035-32

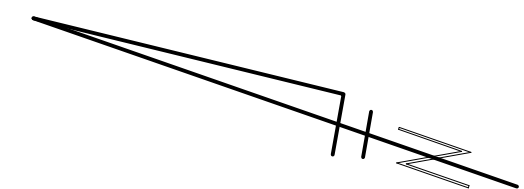
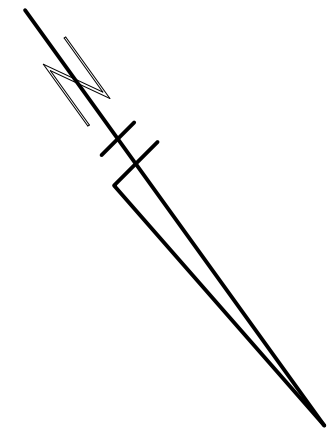
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PAVEMENT STRIPING PLAN - STA 50+50 TO STA 57+50



PAVEMENT STRIPING PLAN - STA 100+50 TO STA 105+30



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

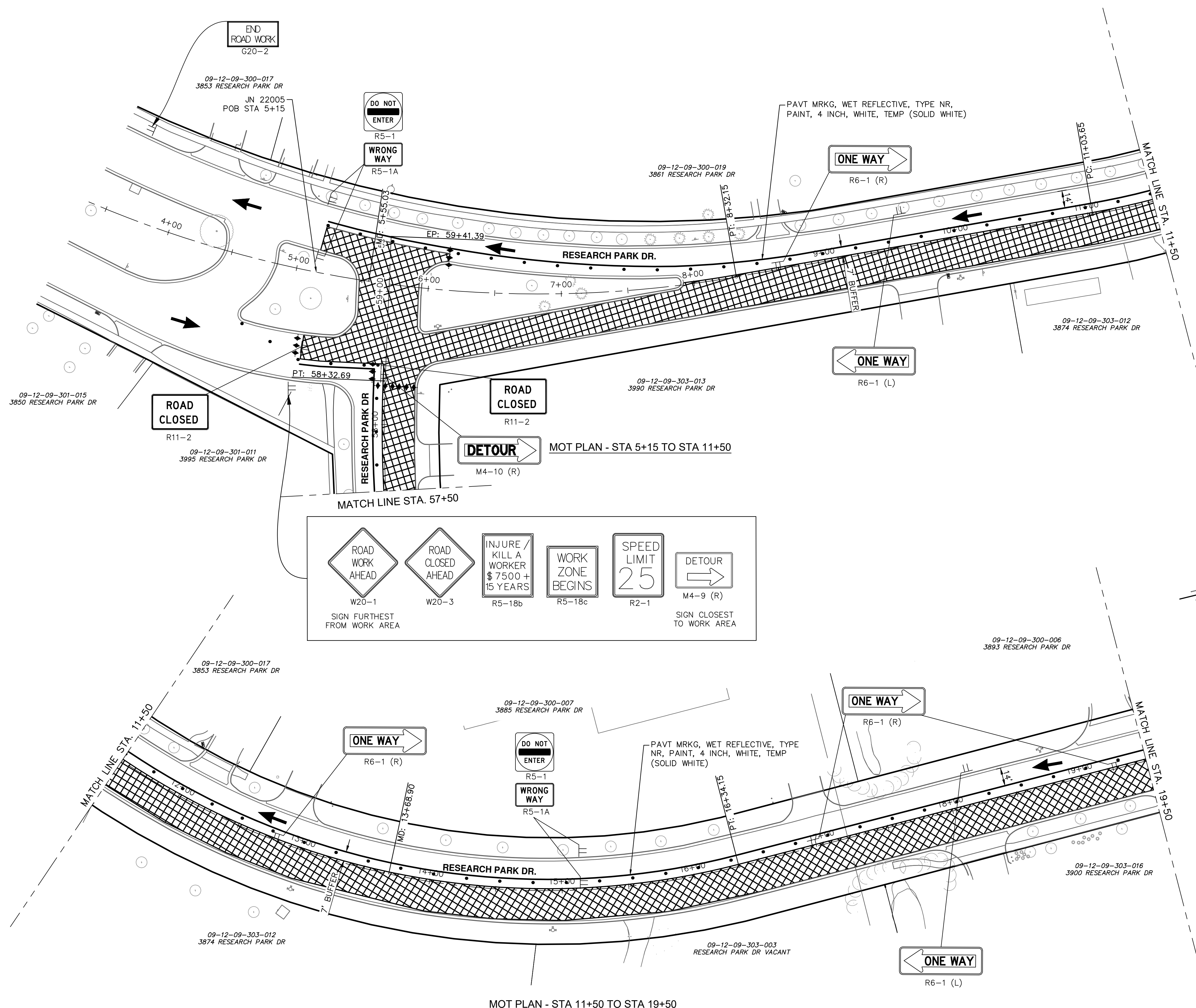
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PUBLIC SERVICES
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RESEARCH PARK DRIVE
IMPROVEMENTS PROJECT
PAVEMENT MARKING PLAN - STA 50+50 TO POE

SCALE: 1" = 40'
DRAWING No. 2022-035-33

J:\AA\Design\AA22005-Research Park Drive\DWG\AA22005_Mtrf1.dwg Dwg Created: 7-Feb-23 - _g2 standard bw.stb - Plot Date: 21-Feb-23



TRAFFIC CONTROL LEGEND

- ◆◆◆ BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
- ⊥ TEMPORARY SIGN
- CHANNELIZING DEVICE @ 50' SPACING UNLESS NOTED OTHERWISE
- ➔ TRAFFIC FLOW ARROW
- ▨ WORK AREA STAGE 1
- ▩ WORK AREA STAGE 1A


NOTES: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES AS DIRECTED BY THE ENGINEER.
 SIGNS PLACED AT 100' SPACING. ADJUST AS NECESSARY TO FIT FIELD CONDITIONS.

SIGN FURTHEST FROM WORK AREA

- ROAD WORK AHEAD (W20-1)
- ROAD CLOSED AHEAD (W20-3)
- INJURE KILL A WORKER \$7500 + 15 YEARS (R5-18b)
- WORK ZONE BEGINS (R5-18c)
- SPEED LIMIT 25 (R2-1)


SIGN CLOSEST TO WORK AREA

- DETOUR (M4-9 (R))



Know what's below.
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REV.	DESCRIPTION	DATE	DRAWN	CHECKED

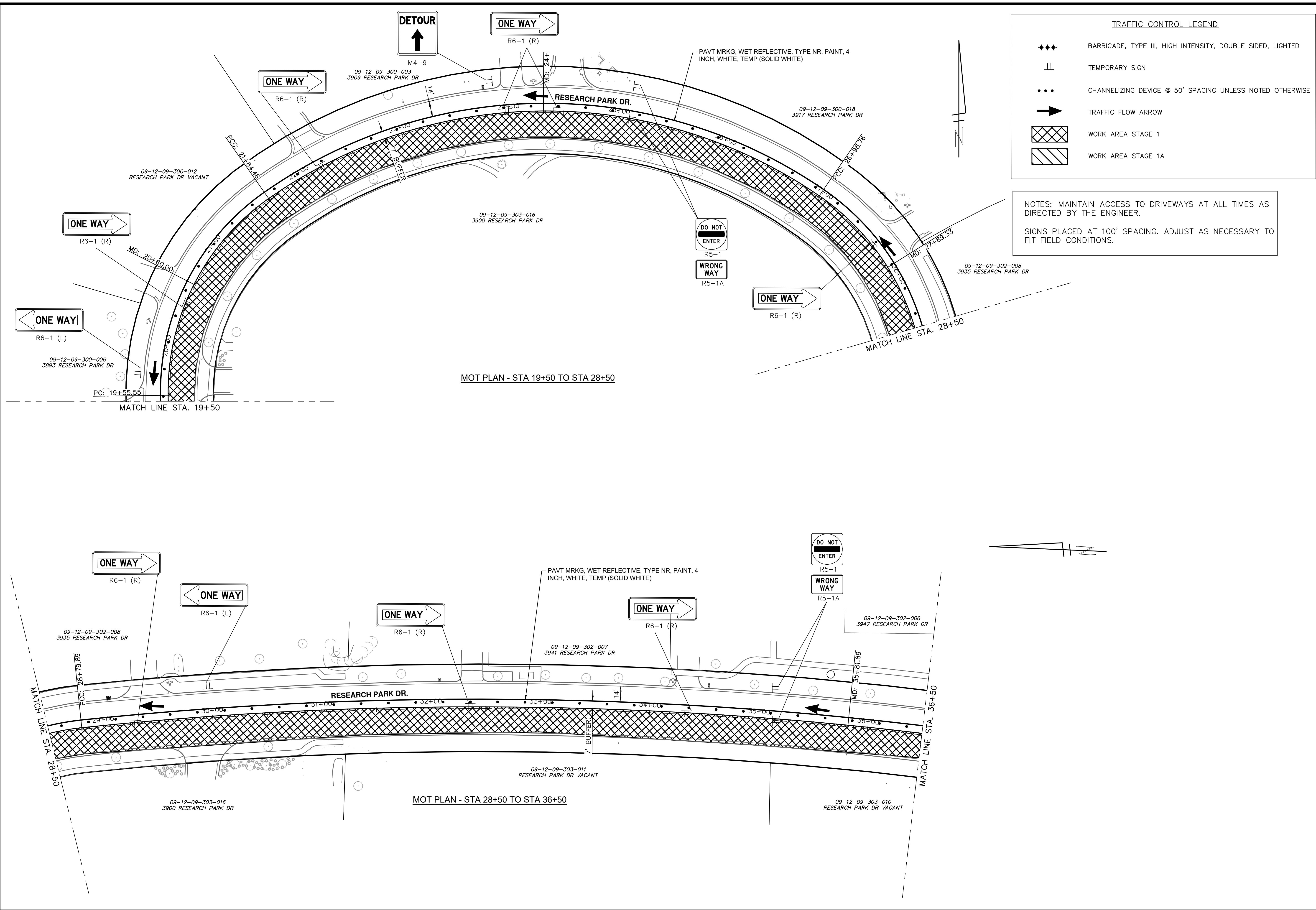


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE IMPROVEMENTS PROJECT
 MAINTENANCE OF TRAFFIC ST-1-1

SCALE: #####
 DRAWING No. 2022-035-34

SHEET No. **34 OF 41**

J:\AA\Design\AA22005-Research Park Drive\AA22005_Mtrf1.dwg Dwg Created: 7-Feb-23 - _02 standard bw.stb - Plot Date: 21-Feb-23



TRAFFIC CONTROL LEGEND

- ◆◆◆ BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
- || TEMPORARY SIGN
- ... CHANNELIZING DEVICE @ 50' SPACING UNLESS NOTED OTHERWISE
- ➔ TRAFFIC FLOW ARROW
- [Cross-hatched] WORK AREA STAGE 1
- [Diagonal-hatched] WORK AREA STAGE 1A

NOTES: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES AS DIRECTED BY THE ENGINEER.
 SIGNS PLACED AT 100' SPACING. ADJUST AS NECESSARY TO FIT FIELD CONDITIONS.

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REV.	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR
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DESCRIPTION

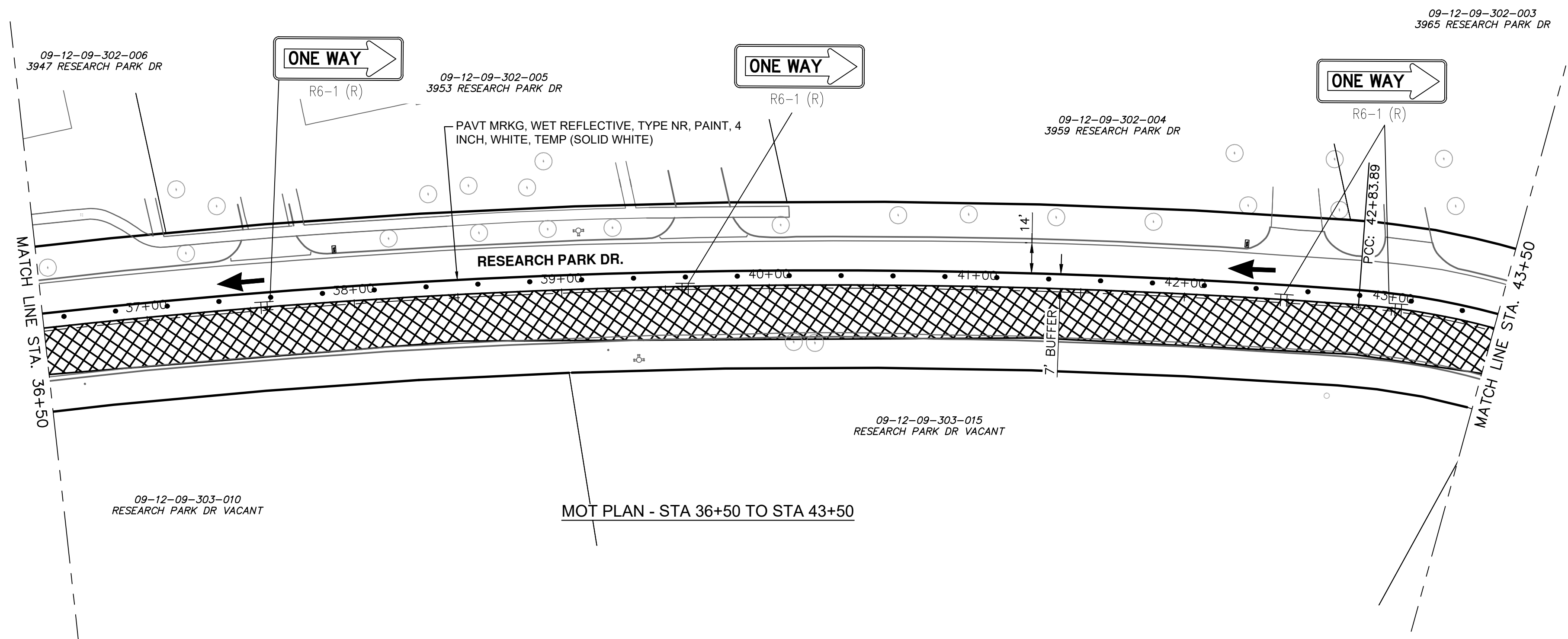
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE
 IMPROVEMENTS PROJECT
 MAINTENANCE OF TRAFFIC ST-1-2

SCALE: #####
 DRAWING No. 2022-035-35

SHEET No.

35 OF 41

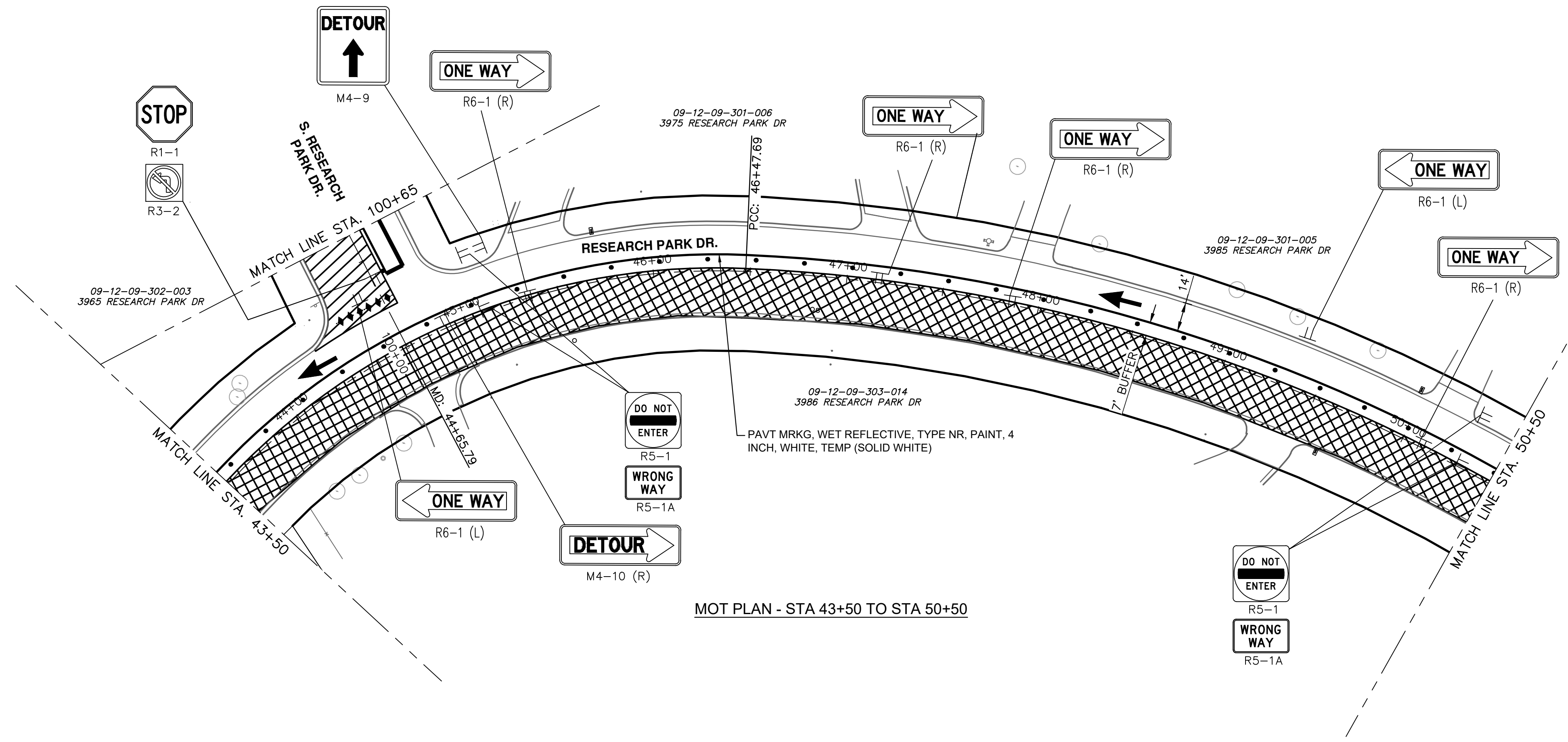
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TRAFFIC CONTROL LEGEND

- ◆◆◆ BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
- ⊥ TEMPORARY SIGN
- CHANNELIZING DEVICE @ 50' SPACING UNLESS NOTED OTHERWISE
- ➔ TRAFFIC FLOW ARROW
- ▨ WORK AREA STAGE 1
- ▩ WORK AREA STAGE 1A

NOTES: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES AS DIRECTED BY THE ENGINEER.
 SIGNS PLACED AT 100' SPACING. ADJUST AS NECESSARY TO FIT FIELD CONDITIONS.



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

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

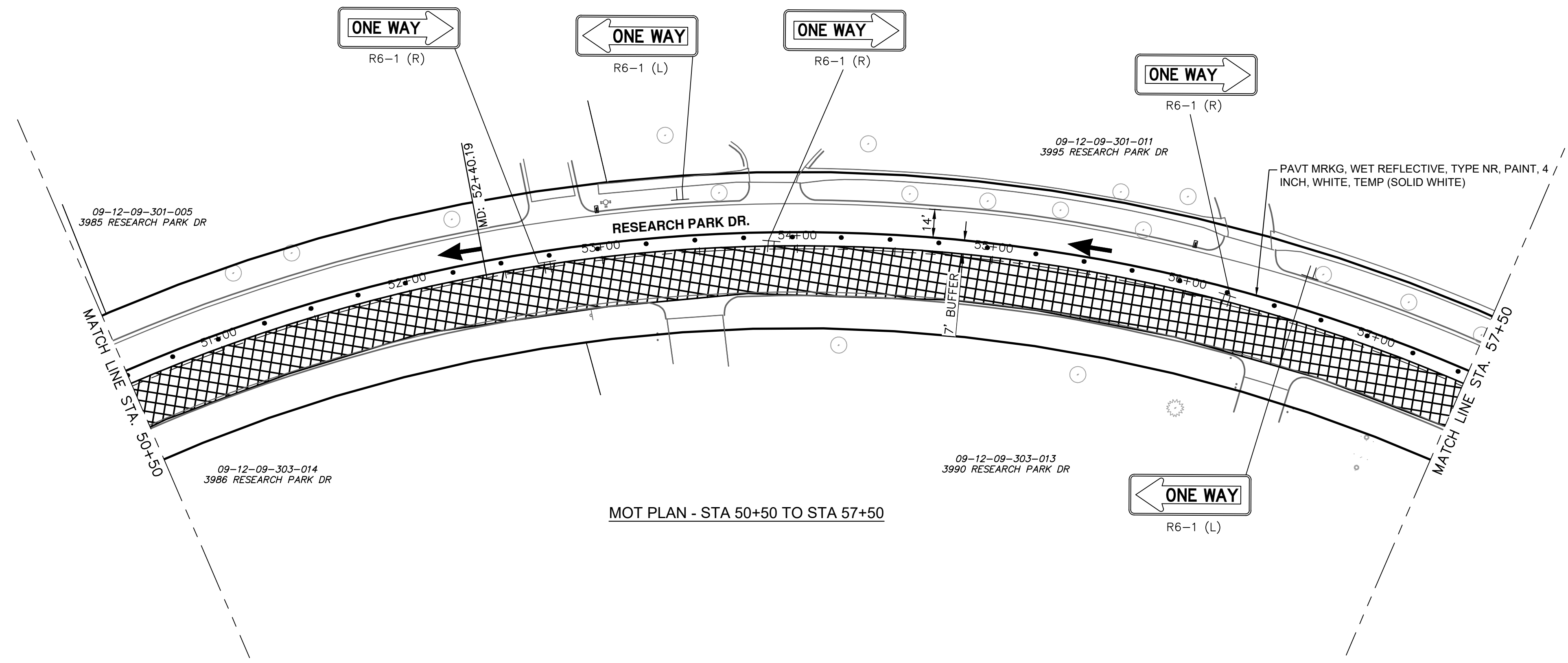
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE IMPROVEMENTS PROJECT
 MAINTENANCE OF TRAFFIC ST1-3

SCALE: #####

DRAWING No. 2022-035-36

SHEET No. 36 OF 41

J:\AA\Design\AA22005-Research Park Drive\DWG\AA22005_Mtrf1.dwg Dwg Created: 7-Feb-23 - _g2 standard bw.stb - Plot Date: 21-Feb-23



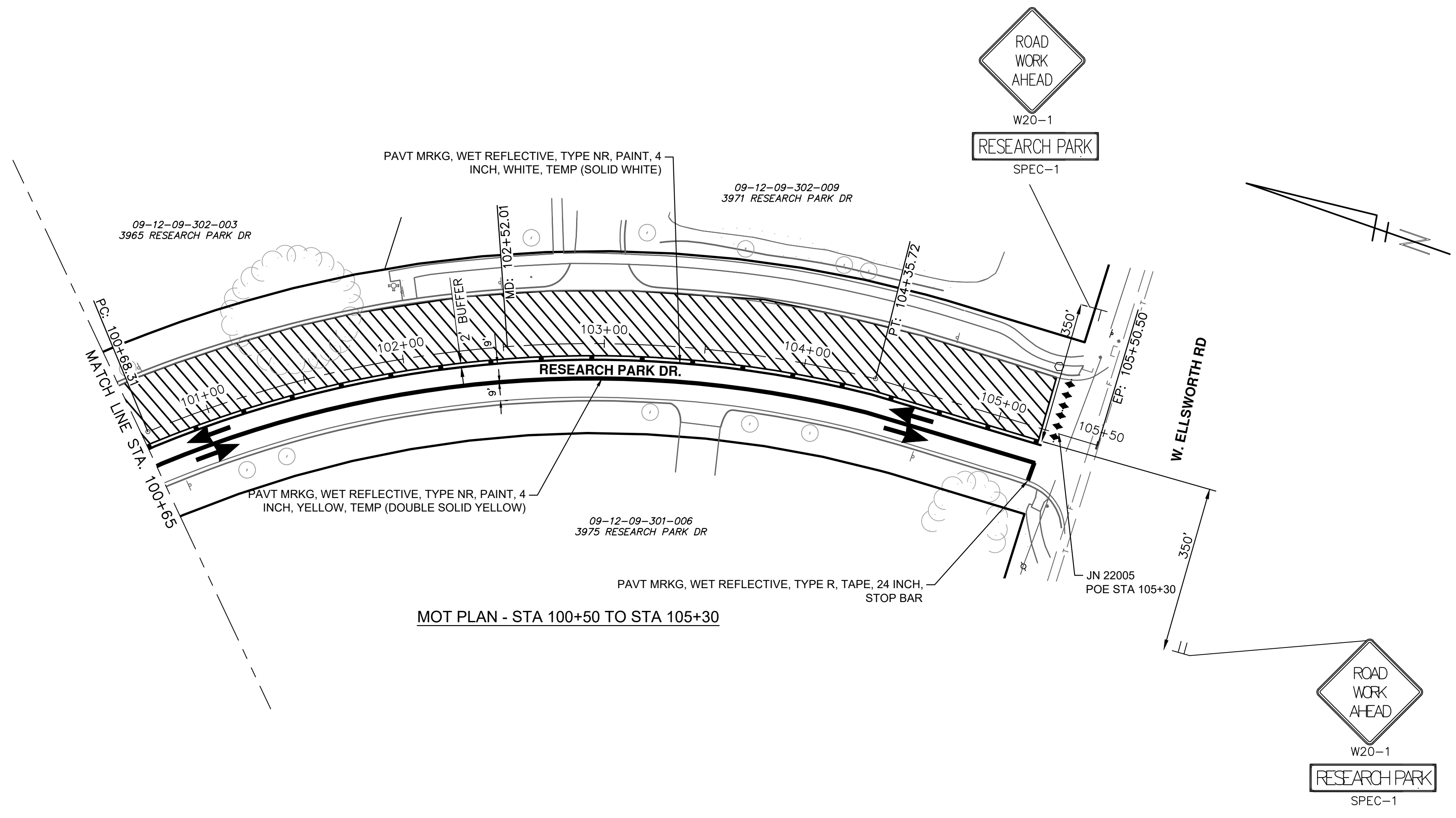
TRAFFIC CONTROL LEGEND

- ◆◆◆ BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
- ||| TEMPORARY SIGN
- ... CHANNELIZING DEVICE @ 50' SPACING UNLESS NOTED OTHERWISE
- ➔ TRAFFIC FLOW ARROW
- ▨ WORK AREA STAGE 1
- ▩ WORK AREA STAGE 1A

NOTES: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES AS DIRECTED BY THE ENGINEER.
 SIGNS PLACED AT 100' SPACING. ADJUST AS NECESSARY TO FIT FIELD CONDITIONS.



SPEC-1:
 1.50" Radius, 0.50" Border, Black on Orange;
 RESEARCH PARK, C;



TEMPORARY TRAFFIC CONTROL SIGNS

Sign Code	Size	Area (Sft)	Total					
			Stages 1 & 1A		Stages 2 & 2A			
			Quantity	Area (Sft)	Quantity	Area (Sft)	Quantity	Area (Sft)
*D3-1	42 x 10	2.92	2	5.83	2	5.83	2	5.83
G20-2	36 x 18	4.50	1	4.50	1	4.50	1	4.50
M4-10(L)	48 x 18	6.00	0	0.00	1	6.00	1	6.00
M4-10(R)	48 x 18	6.00	2	12.00	0	0.00	2	12.00
M4-9(L)	30 x 24	5.00	0	0.00	0	0.00	0	0.00
M4-9(R)	30 x 24	5.00	1	5.00	0	0.00	1	5.00
M4-9(S)	30 x 24	5.00	2	10.00	3	20.00	3	15.00
R1-1	30 x 30	6.25	1	6.25	0	0.00	1	6.25
R2-1	24 x 30	5.00	1	5.00	1	5.00	1	5.00
R3-1	24 x 24	4.00	0	0.00	2	8.00	2	8.00
R3-2	24 x 24	4.00	1	4.00	0	0.00	1	4.00
R3-5R	30 x 36	7.50	0	0.00	0	0.00	0	0.00
R5-1	30 x 30	6.25	12	75.00	12	75.00	12	75.00
R5-1A	36 x 24	6.00	12	72.00	12	72.00	12	72.00
R5-18b	48 x 60	20.00	1	20.00	1	20.00	1	20.00
R5-18c	48 x 48	16.00	1	16.00	1	16.00	1	16.00
R6-1(L)	36 x 12	3.00	8	24.00	23	69.00	23	69.00
R6-1(R)	36 x 12	3.00	23	69.00	8	24.00	23	69.00
R11-2	48 x 30	10.00	2	20.00	2	20.00	2	20.00
W20-1	36 x 36	9.00	3	27.00	3	27.00	3	27.00
W20-3	36 x 36	9.00	1	9.00	1	9.00	1	9.00
Total			378.75		375.50		442.75	

*Sign, Type B, Temp, Prismatic, Spec

811
 Know what's below. Call Before you dig.

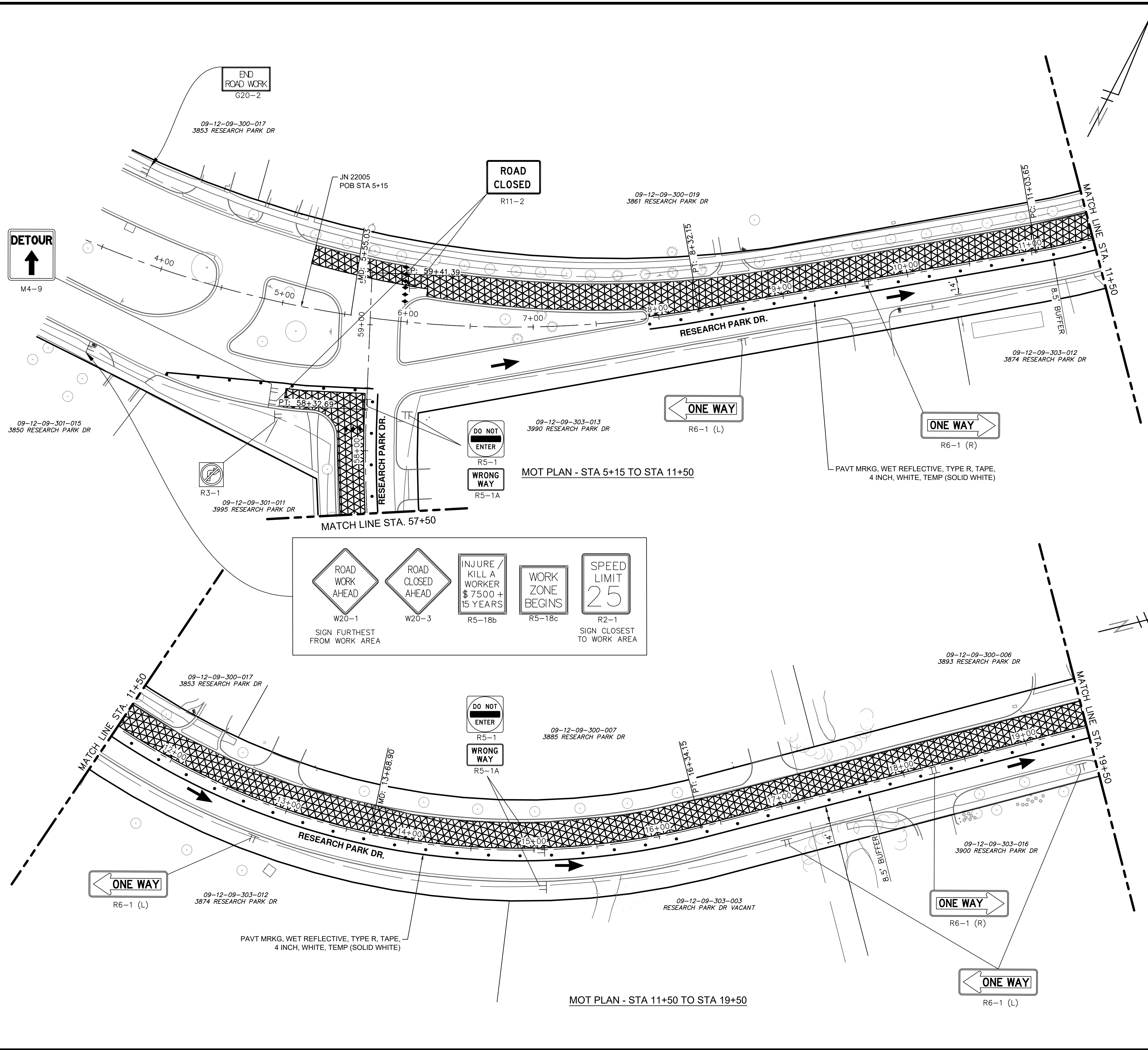
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE IMPROVEMENTS PROJECT
 MAINTENANCE OF TRAFFIC ST11-4

SCALE: #####
 DRAWING No. 2022-035-37
 SHEET No. 37 OF 41

J:\AA\Design\AA22005-Research Park Drive\AA22005_Mtrf2.dwg Dwg Created: 7-Feb-23 - _g2 standard bw.stb - Plot Date: 21-Feb-23



TRAFFIC CONTROL LEGEND

- ◆◆◆ BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
- ⊥ TEMPORARY SIGN
- ... CHANNELIZING DEVICE @ 50' SPACING UNLESS NOTED OTHERWISE
- ➔ TRAFFIC FLOW ARROW
- [Hatched Box] WORK AREA STAGE 2
- [Cross-hatched Box] WORK AREA STAGE 2A

NOTES: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES AS DIRECTED BY THE ENGINEER.

SIGNS PLACED AT 100' SPACING. ADJUST AS NECESSARY TO FIT FIELD CONDITIONS.

SIGN LEGEND

W20-1
SIGN FURTHEST FROM WORK AREA

W20-3

R5-18b

R5-18c

R2-1
SIGN CLOSEST TO WORK AREA

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Know what's below. Call Before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

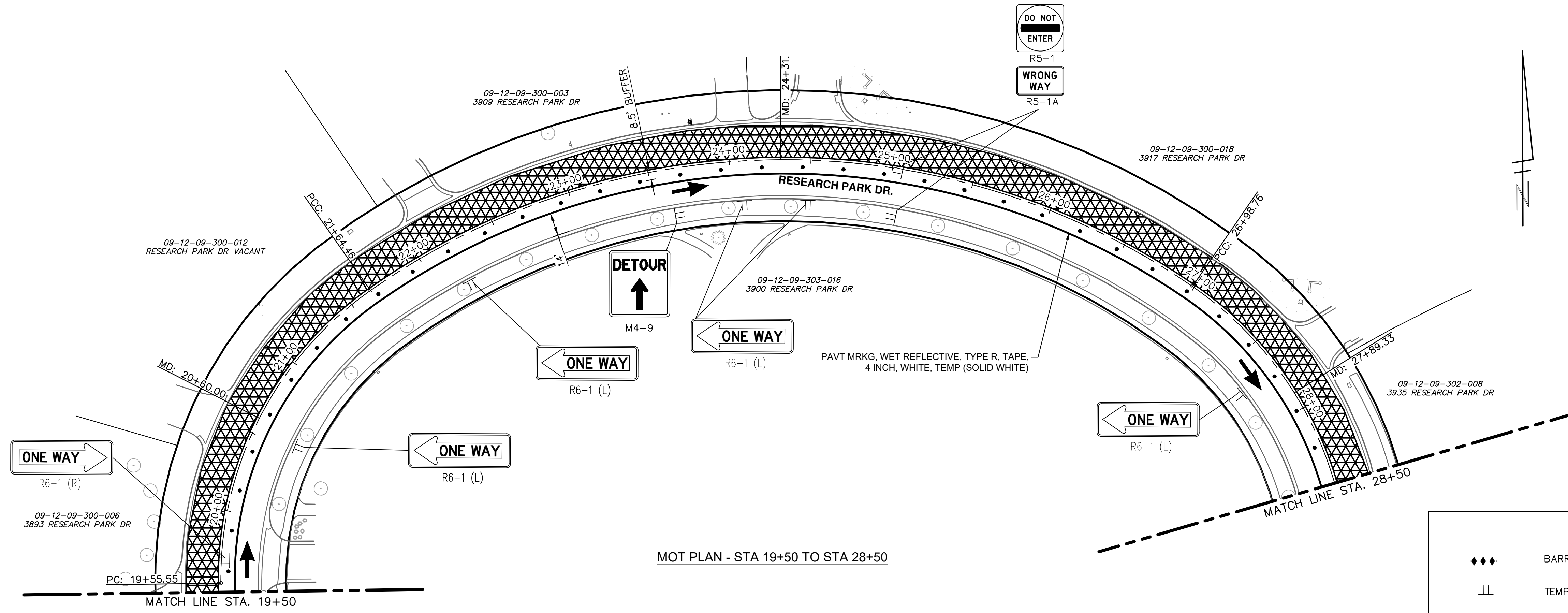
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
RESEARCH PARK DRIVE IMPROVEMENTS PROJECT
MAINTENANCE OF TRAFFIC ST2-1

SCALE: 1" = 40'

DRAWING No. 2022-035-38

SHEET No. 38 OF 41

J:\AA\Design\AA22005-Research Park Drive\AA22005_Mtrf2.dwg Dwg Created: 7-Feb-23 - _g2 standard bw.stb - Plot Date: 21-Feb-23

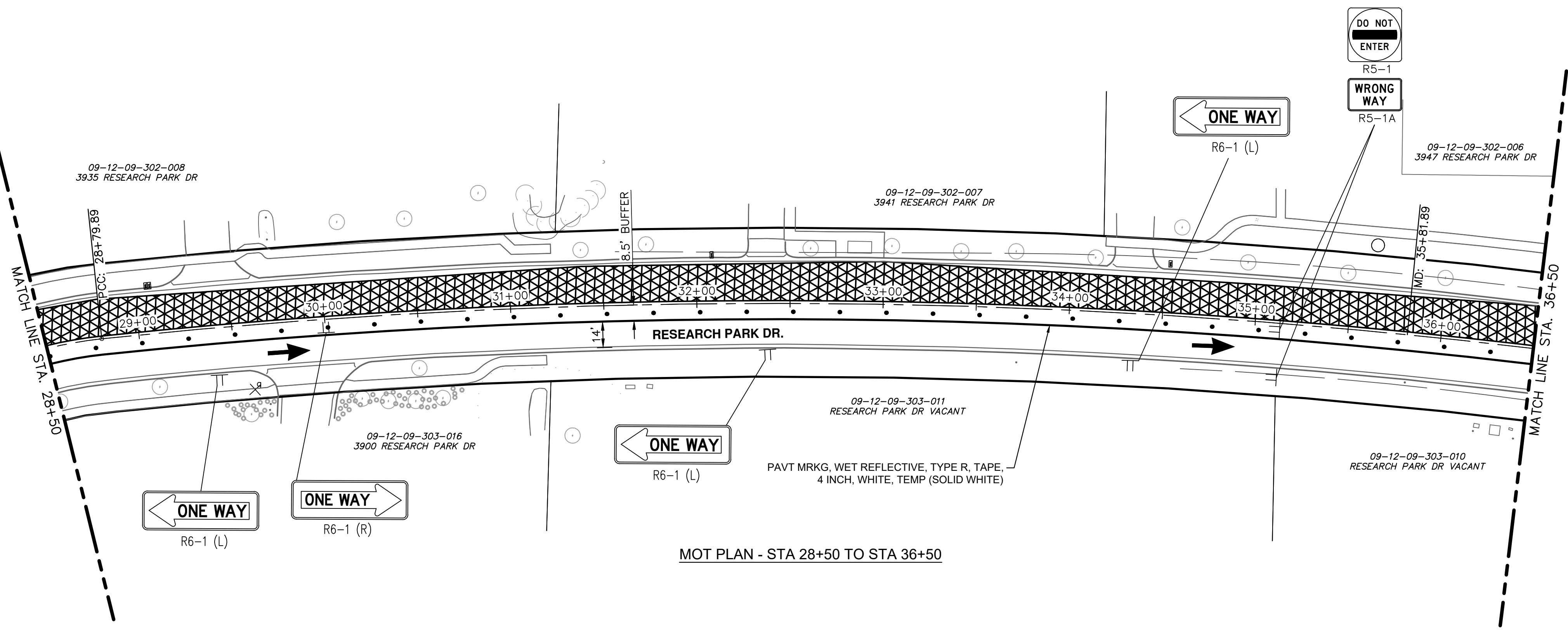


MOT PLAN - STA 19+50 TO STA 28+50

TRAFFIC CONTROL LEGEND

- ◆◆◆ BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
- ⊥ TEMPORARY SIGN
- CHANNELIZING DEVICE @ 50' SPACING UNLESS NOTED OTHERWISE
- ➔ TRAFFIC FLOW ARROW
- [Hatched Box] WORK AREA STAGE 2
- [Cross-hatched Box] WORK AREA STAGE 2A

NOTES: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES AS DIRECTED BY THE ENGINEER.
 SIGNS PLACED AT 100' SPACING. ADJUST AS NECESSARY TO FIT FIELD CONDITIONS.



MOT PLAN - STA 28+50 TO STA 36+50



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

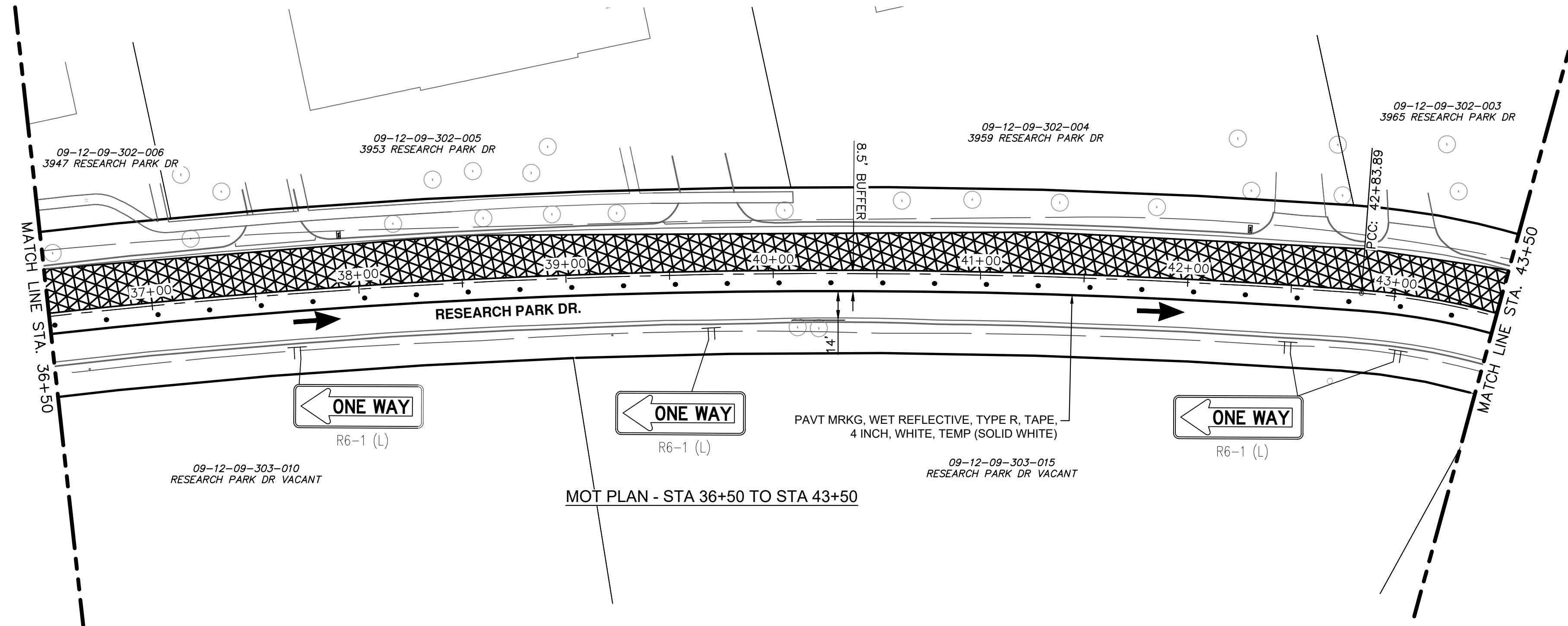
CITY OF ANN ARBOR
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CITY OF ANN ARBOR - ENGINEERING
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 IMPROVEMENTS PROJECT
 MAINTENANCE OF TRAFFIC ST2-2

SCALE: 1" = 40'
 DRAWING No. 2022-035-39

J:\AA\Design\AA22005-Research Park Drive\DWG\AA22005_Mtr12.dwg Dwg Created: 7-Feb-23 - _g2 standard bw.stb - Plot Date: 21-Feb-23

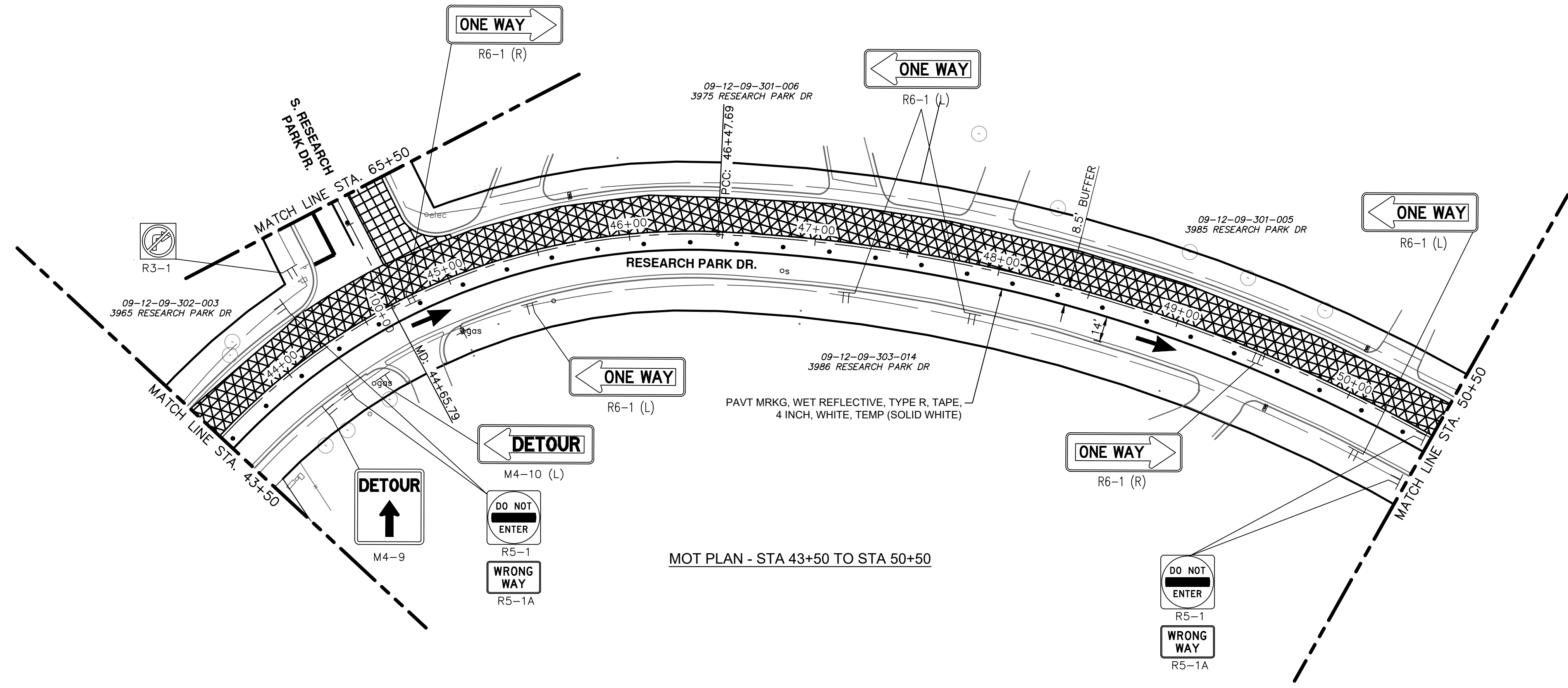


TRAFFIC CONTROL LEGEND

- ◆◆◆ BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
- ⊥ TEMPORARY SIGN
- ... CHANNELIZING DEVICE @ 50' SPACING UNLESS NOTED OTHERWISE
- ➔ TRAFFIC FLOW ARROW
- [Cross-hatch pattern] WORK AREA STAGE 2
- [Diagonal-hatch pattern] WORK AREA STAGE 2A

NOTES: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES AS DIRECTED BY THE ENGINEER.

SIGNS PLACED AT 100' SPACING. ADJUST AS NECESSARY TO FIT FIELD CONDITIONS.



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IMPROVEMENTS PROJECT
MAINTENANCE OF TRAFFIC ST2-3

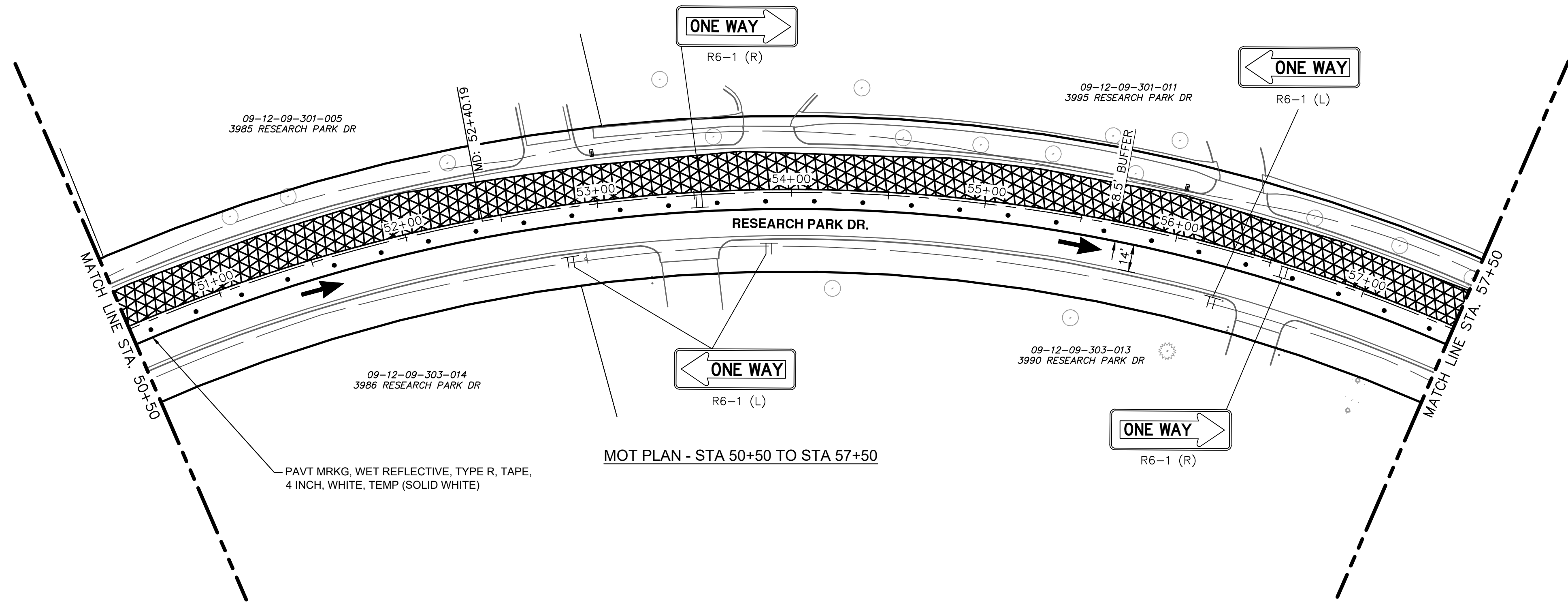
SCALE: 1" = 40'

DRAWING No. 2022-035-40

SHEET No. 40 OF 41

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MOT PLAN - STA 50+50 TO STA 57+50

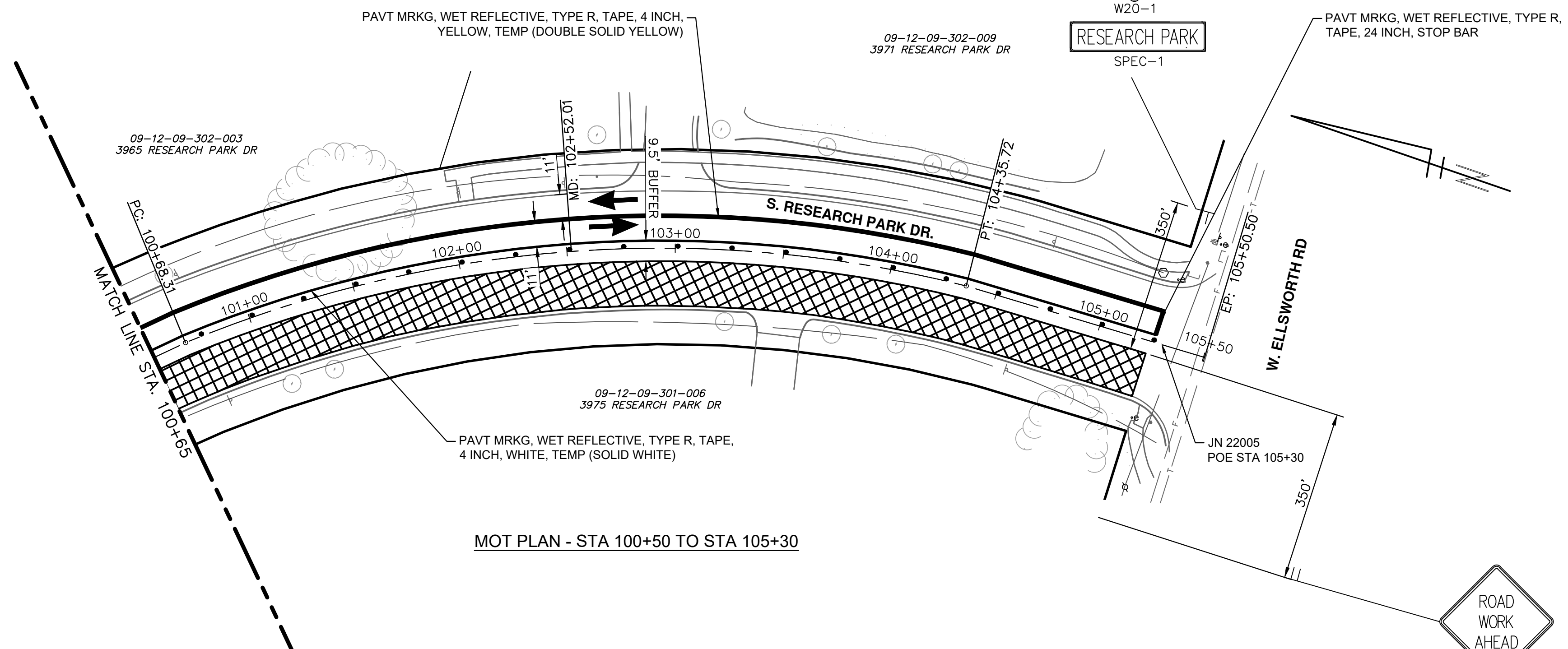
TRAFFIC CONTROL LEGEND

- ◆◆◆ BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED
- || TEMPORARY SIGN
- ... CHANNELIZING DEVICE @ 50' SPACING UNLESS NOTED OTHERWISE
- ➔ TRAFFIC FLOW ARROW
- [Cross-hatched] WORK AREA STAGE 2
- [Diagonal-hatched] WORK AREA STAGE 2A

NOTES: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES AS DIRECTED BY THE ENGINEER.
SIGNS PLACED AT 100' SPACING. ADJUST AS NECESSARY TO FIT FIELD CONDITIONS.



SPEC-1:
1.50" Radius, 0.50" Border, Black on Orange;
"RESEARCH PARK", C;



MOT PLAN - STA 100+50 TO STA 105+30

Sign Code	Size	Area (Sft)	Total					
			Stages 1 & 1A		Stages 2 & 2A		Project	
			Quantity	Area (Sft)	Quantity	Area (Sft)	Quantity	Area (Sft)
*D3-1	42 x 10	2.92	2	5.83	2	5.83	2	5.83
G20-2	36 x 18	4.50	1	4.50	1	4.50	1	4.50
M4-10(L)	48 x 18	6.00	0	0.00	1	6.00	1	6.00
M4-10(R)	48 x 18	6.00	2	12.00	0	0.00	2	12.00
M4-9(L)	30 x 24	5.00	0	0.00	0	0.00	0	0.00
M4-9(R)	30 x 24	5.00	1	5.00	0	0.00	1	5.00
M4-9(S)	30 x 24	5.00	2	10.00	3	20.00	3	15.00
R1-1	30 x 30	6.25	1	6.25	0	0.00	1	6.25
R2-1	24 x 30	5.00	1	5.00	1	5.00	1	5.00
R3-1	24 x 24	4.00	0	0.00	2	8.00	2	8.00
R3-2	24 x 24	4.00	1	4.00	0	0.00	1	4.00
R3-5R	30 x 36	7.50	0	0.00	0	0.00	0	0.00
R5-1	30 x 30	6.25	12	75.00	12	75.00	12	75.00
R5-1A	36 x 24	6.00	12	72.00	12	72.00	12	72.00
R5-18b	48 x 60	20.00	1	20.00	1	20.00	1	20.00
R5-18c	48 x 48	16.00	1	16.00	1	16.00	1	16.00
R6-1(L)	36 x 12	3.00	8	24.00	23	69.00	23	69.00
R6-1(R)	36 x 12	3.00	23	69.00	8	24.00	23	69.00
R11-2	48 x 30	10.00	2	20.00	2	20.00	2	20.00
W20-1	36 x 36	9.00	3	27.00	3	27.00	3	27.00
W20-3	36 x 36	9.00	1	9.00	1	9.00	1	9.00
Total				378.75		375.50		442.75

*Sign, Type B, Temp, Prismatic, Spec

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Call Before you dig.

REV.	DATE	DRAWN	CHECKED

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

RESEARCH PARK DRIVE IMPROVEMENTS PROJECT

MAINTENANCE OF TRAFFIC ST2-4

SHEET No. **41 OF 41**

DRAWING No. **2022-035-41**