April 4, 2019

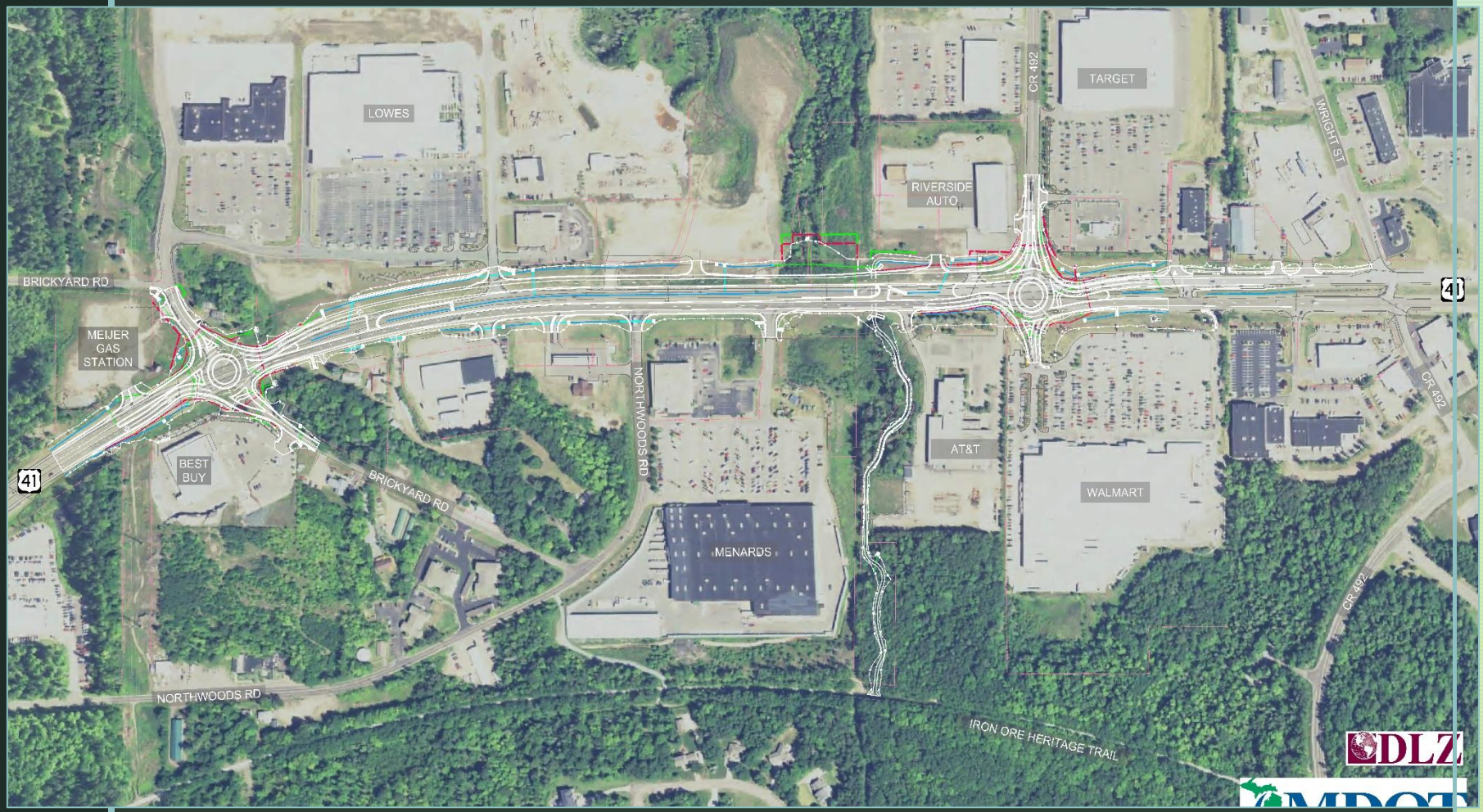
US-41 Reconstruction Marquette Township

US-41 Reconstruction

- **Project Profile**
  - Route: US-41/M-28
  - Location: Extend divided Boulevard from east of County Road 492 North/Wal-Mart Drive to west of Brickyard Road
  - Construct Roundabouts at Brickyard Road & CR-492 North/Walmart Drive
  - Construct Multi-use Tunnel & Trail
- **Construction Schedule**
  - April 2019- June 2020
- **Total Estimated Construction Cost**
  - $ 10.9 million
- Contractor- Hebert Construction, Inc.
- Non-Trunkline Work
  - Non-motorized shared use path
  - Roadway lighting
  - Watermain, Sanitary Sewer and Storm Sewer

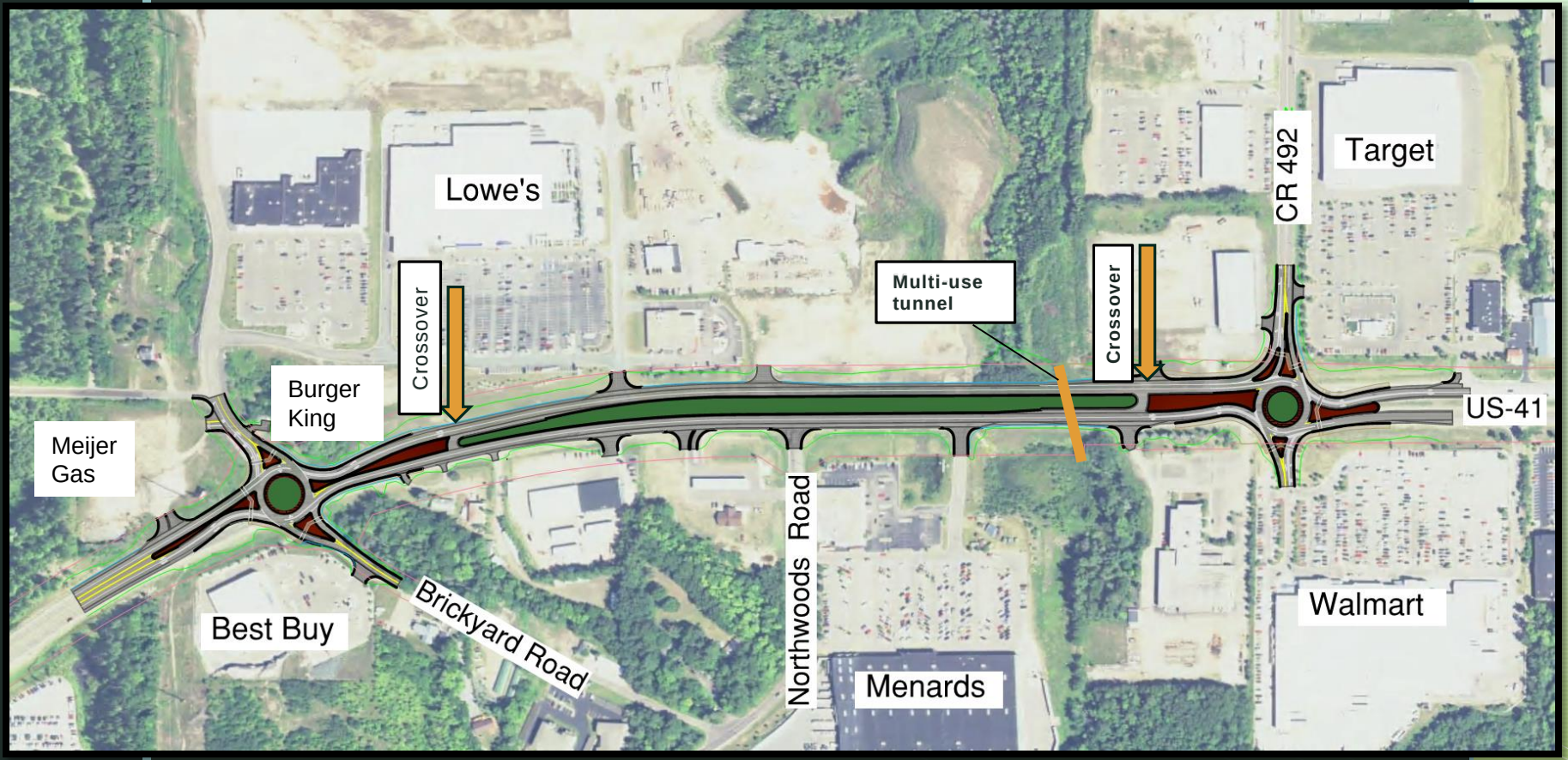
Construction Cost Breakdown

- **Road Construction $8.5 million**
  - MDOT Road Preservation/Safety Funds
    - $8.20 million
  - Marquette Township
    - $300,000 (roundabout lighting)
- **Multi-use Trail & Tunnel - $2.4 million**
  - Federal Transportation Alternatives Program
    - 60% - $1,440,000
  - State Matching Funds
    - 20% - $480,000
  - Township Matching Funds (MDNR & Donations)
    - 20% - $480,000

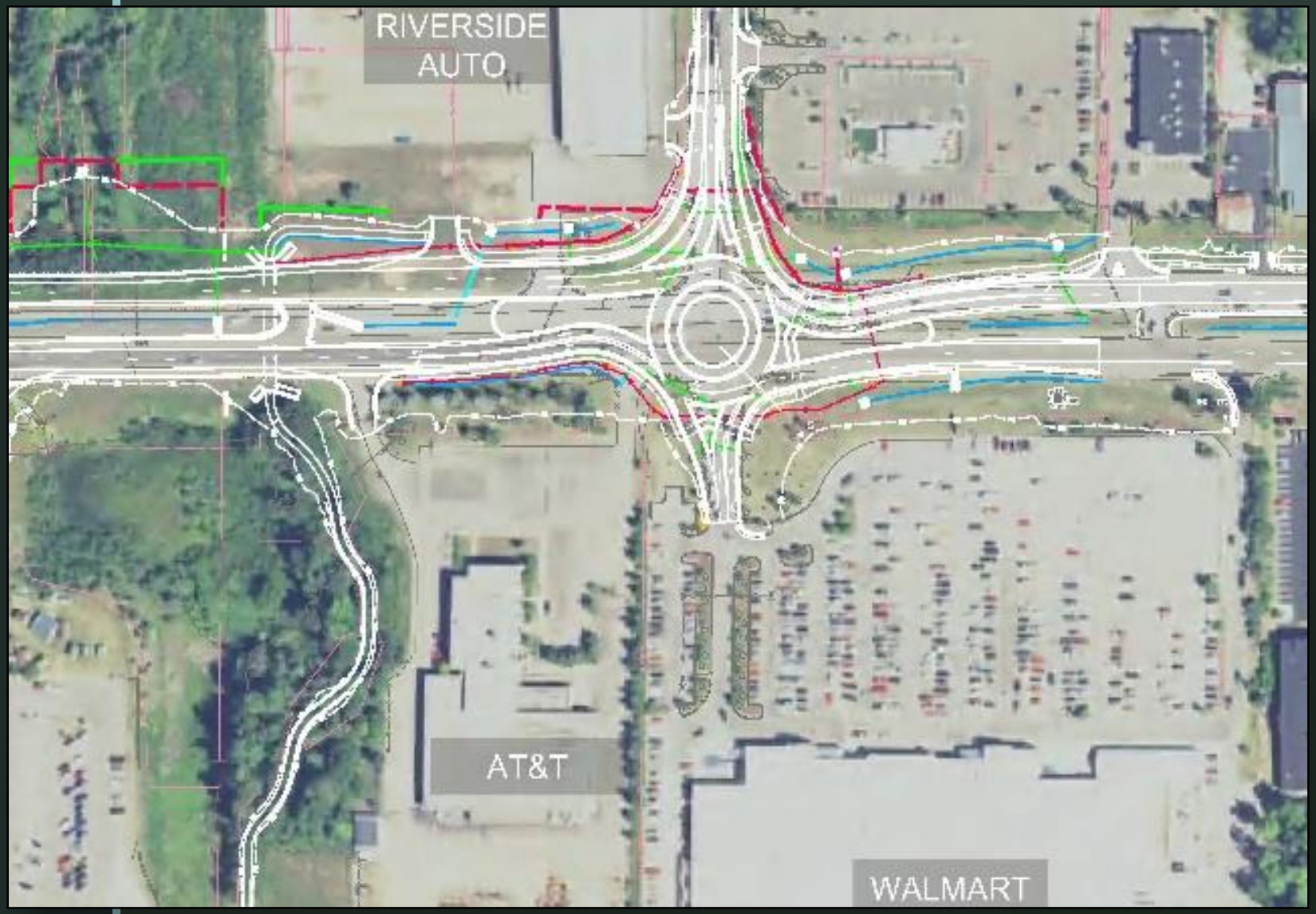


Project Overview

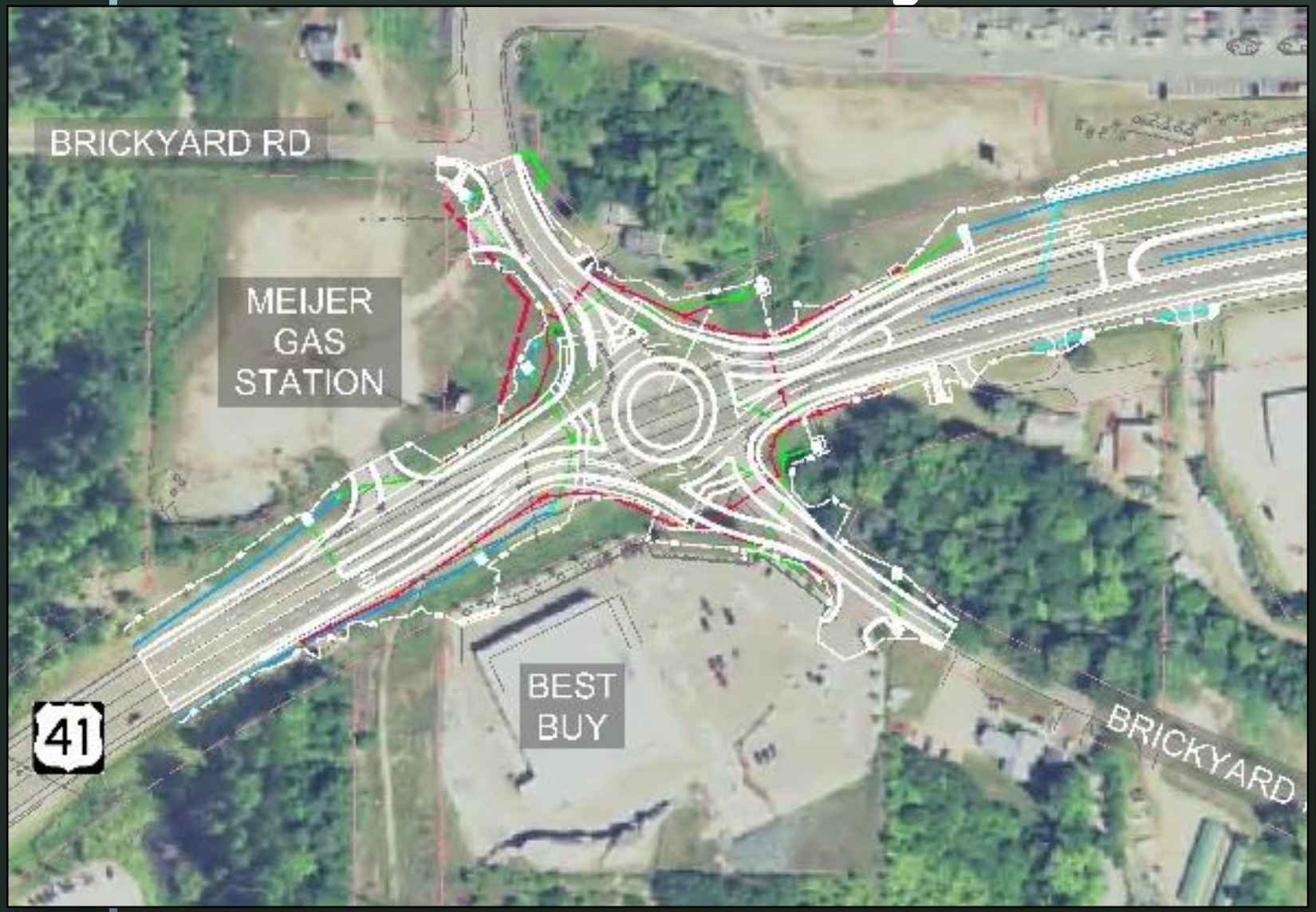
Design Concept Overview



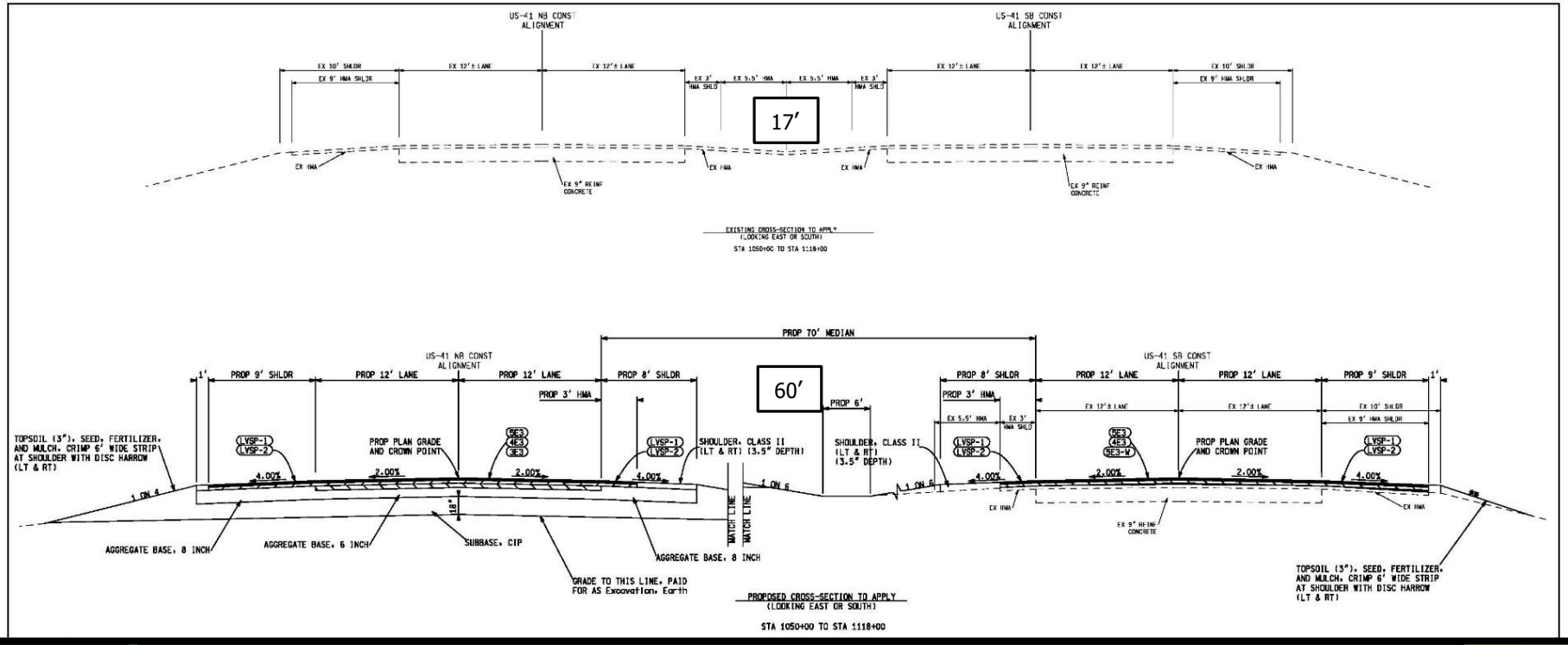
Roundabout Configuration -US-41 & CR 492

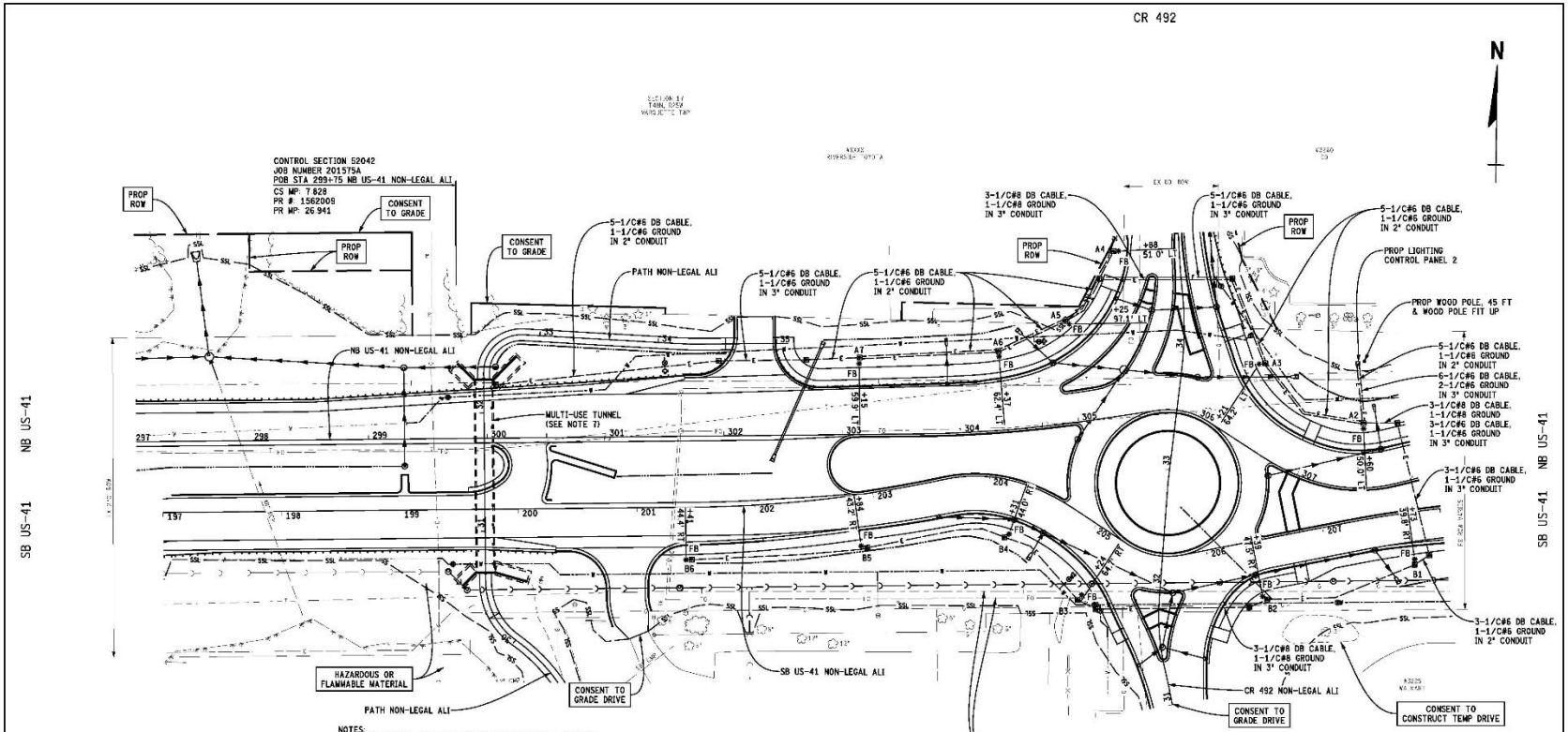


Roundabout Configuration -Brickyard Road



Cross Section





NOTES:

1. CONDUIT SHALL BE 2 INCH EXCEPT WHERE OTHERWISE NOTED.
2. ALL LIGHTING CABLE GROUPS TO BE 3-1/C#8 DB CABLES & 1-1/C#8 GROUND WIRE IN CONDUIT EXCEPT WHERE OTHERWISE NOTED.
3. STATION AND OFFSET LABELS ARE TO CENTER OF THE LIGHT STANDARD FOUNDATION.
4. HANDHOLE COVERS SHALL BE HEAVY DUTY.
5. STREET LIGHTS SHALL BE CONNECTED TO THE DESIGNATED CIRCUIT, A OR B, AS SHOWN ON THIS PLAN. WITHIN EACH CIRCUIT THE STREET LIGHTS SHALL BE CONNECTED TO THE HOT CONDUCTORS IN AN ALTERNATING FASHION TO BALANCE THE LOAD. ODD NUMBERED POLES SHALL BE CONNECTED TO ONE OF THE CIRCUIT'S HOT CONDUCTORS (E.G., BLACK) AND THE NEUTRAL WIRE WHILE EVEN NUMBERED POLES SHALL BE CONNECTED TO THE CIRCUIT'S OTHER HOT CONDUCTOR (E.G., RED) AND THE NEUTRAL WIRE.
6. LOCATE PROPOSED AND EXISTING UNDERGROUND PIPES AND UTILITIES AND PROPOSED GUARDRAIL POSTS PRIOR TO INSTALLING LIGHTING. FIELD ADJUSTMENTS MAY BE NECESSARY AS DIRECTED BY THE ENGINEER.
7. FOR MULTI-USE TUNNEL LIGHTING, SEE DRAWING U541 LTG 004A.

LIGHTING LEGEND

- LED, ROADWAY, TYPE III, 40' MOUNTING HEIGHT, 15' ARM
- PROP LIGHTING CONTROL PANEL
- LIGHTING HANDHOLE
- FB FRANGIBLE BASE

JN 202666 CAT 0005	JN 201575 CAT 0003		QUANTITIES THIS SHEET
965	691	Ft	Conduit, Schedule 80 PVC, 2 Inch
558	187	Ft	Conduit, Schedule 80 PVC, 3 Inch
783	4390	Ft	DB Cable, In Conduit, 600V, 1/C#6
4026	--	Ft	DB Cable, In Conduit, 600V, 1/C#8
261	878	Ft	Cable, Equipment Grounding Wire, 1/C#6
1342	--	Ft	Cable, Equipment Grounding Wire, 1/C#8
8	7	Ea	Hh, Heavy Duty Cover
6	--	Ea	Hh, Round, 3 foot dia
12	--	Ea	Light Std Arm, 15 foot
12	--	Ea	Light Std Fdn
12	--	Ea	Light Std, Frangible Transformer Base
12	--	Ea	Light Std Shaft, 31 foot to 40 foot
1	--	Ea	Wood Pole, Fit Up, Elec Serv Pole, Photo Control
12	--	Ea	Luminaire, Roadway
1	--	Ea	Lighting Control Panel
--	10	Ea	Tunnel LED Light Fixture
--	2	Ea	Flood Light, LED
--	1	LSUM	Tunnel Wiring System
5000	--	Dir	Utility, Electric

FINAL ROW PLAN REVISIONS (SUBSTANTIAL DATES)

NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

DLZ

MDOT Michigan Department of Transportation

SCALE: 1" = 50'

FILE: 119937_US41_LTG_003.dgn

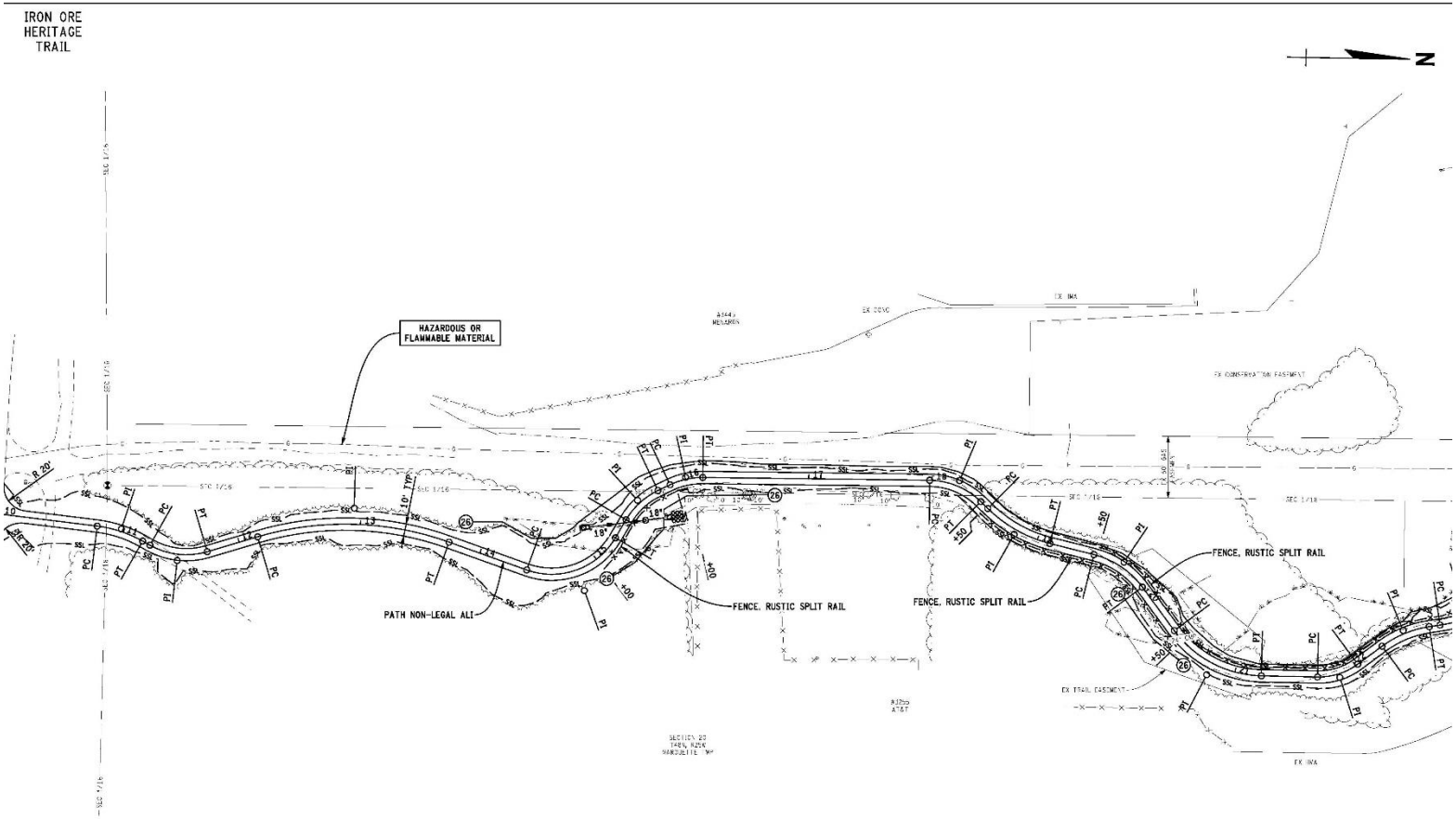
DATE: 10/10/2016
DESIGN UNIT: KAUFFMAN
TSC: JS-PENING

CS: 52000, 52042
JN: 119937A, 194489A, 201575A
202666A, 202666A

LIGHTING SHEET

NB US-41 STA 297+00 TO STA 308+00
SB US-41 STA 197+00 TO STA 208+00

DRAWING: U541 LTG 003
SHEET: 217



JN 201575
CAT 0003 QUANTITIES THIS SHEET

1103	Cyd	Embankment, CIP
1230	Ft	Erosion Control, Silt Fence
1550	Syd	Aggregate Base, 6 Inch
2	Ea	Culv End Sect, 18 inch
58	Ft	Sewer, Cl A, 18 inch, Tr Det B
1	Ea	Dr Structure Cover, Type B
1	Ea	Dr Structure, 48 inch dia
233	Ton	Shared Use Path, HMA Snowmobile Wearing Cse - Special
650	Ft	Fence, Rustic Split Rail
20	Syd	Riprap, Plain
2467	Syd	Slope Restoration, Type C

PLAN REVISIONS	SUBMITTAL DATE:				DLZ	MDOT Michigan Department of Transportation	0 HORZ. (FT) 80	FILE: 119937_US41_CON_008.dgn	DATE: 10/10/2018 DESIGN UNIT: KAUPPILA TSC: ISHPEMING	CS: 52042 JN: 119937A,124488A,201575A 202665A,202666A	CONSTRUCTION SHEET PATH STA 10+00 TO STA 22+50
DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION							

Traffic Accommodations

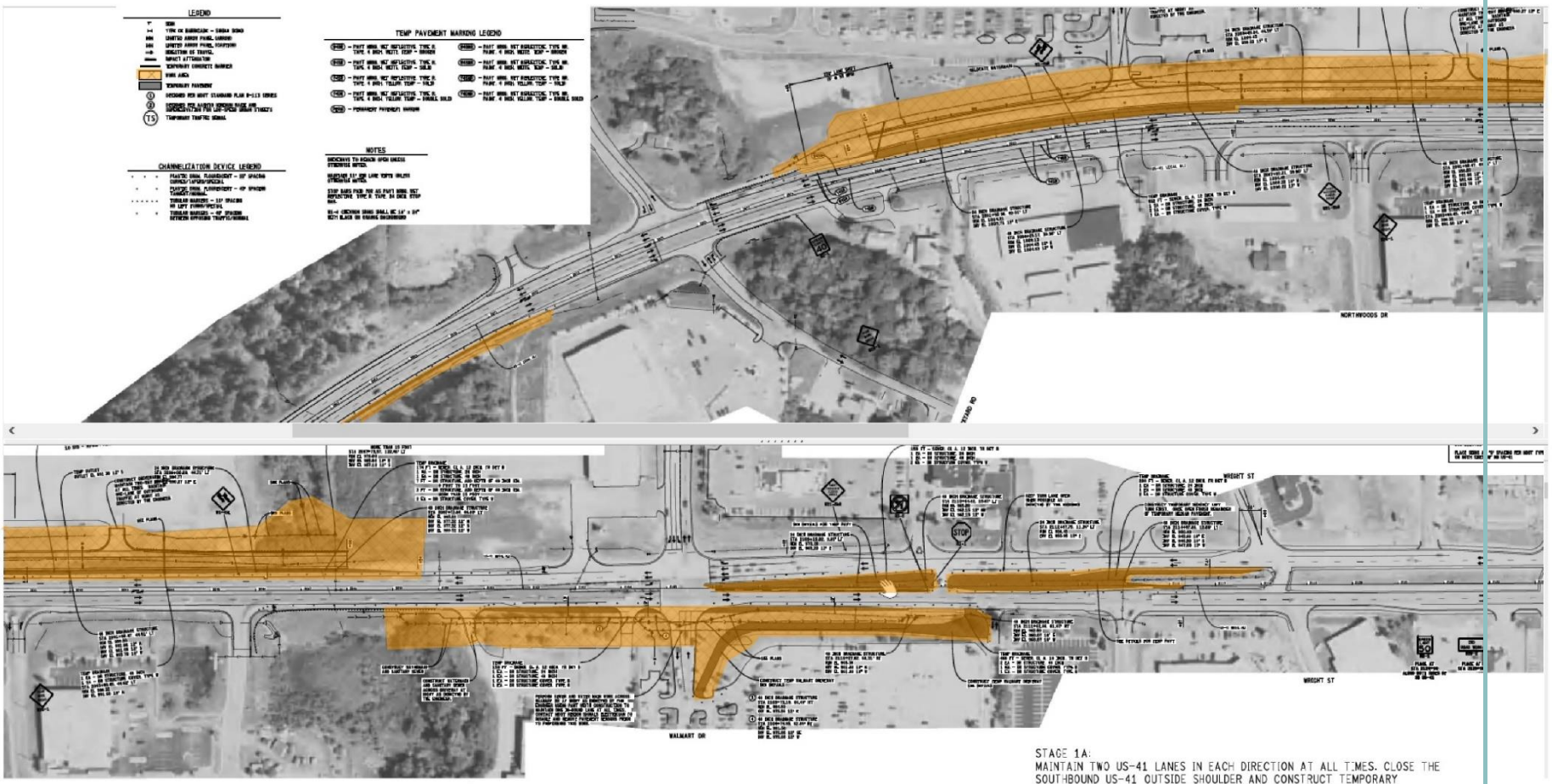
- Temporary Traffic Signals
- Temporary Cross overs
- Temporary Pavement
- Stage Construction

Mobility And Access Accommodations

- Temporary Traffic Signals
- Temporary Cross overs
- Temporary Drives (Walmart and Best Buy)
- Detours for access during closures of side roads
- Maintaining partial access from side roads (either in or out)
- Part Width construction at drives

Construction Schedule

- Start April 15, 2019
- Complete Roundabouts and permanent roadway pavements – Late October 2019
- Winter Shutdown November 1 2019- April 15 2020
- Complete median islands and median ditches June 2020
- Project Completion – Late June 2020



STAGE 1A:
MAINTAIN TWO US-41 LANES IN EACH DIRECTION AT ALL TIMES. CLOSE THE SOUTHBOUND US-41 OUTSIDE SHOULDER AND CONSTRUCT TEMPORARY PAVEMENT WIDENING AND THE WALMART TEMPORARY DRIVEWAY.

CLOSE THE NORTHBOUND US-41 OUTSIDE SHOULDER AND SHIFT TRAFFIC TO CONSTRUCT PROPOSED NORTHBOUND LANES. CONSTRUCT TEMPORARY

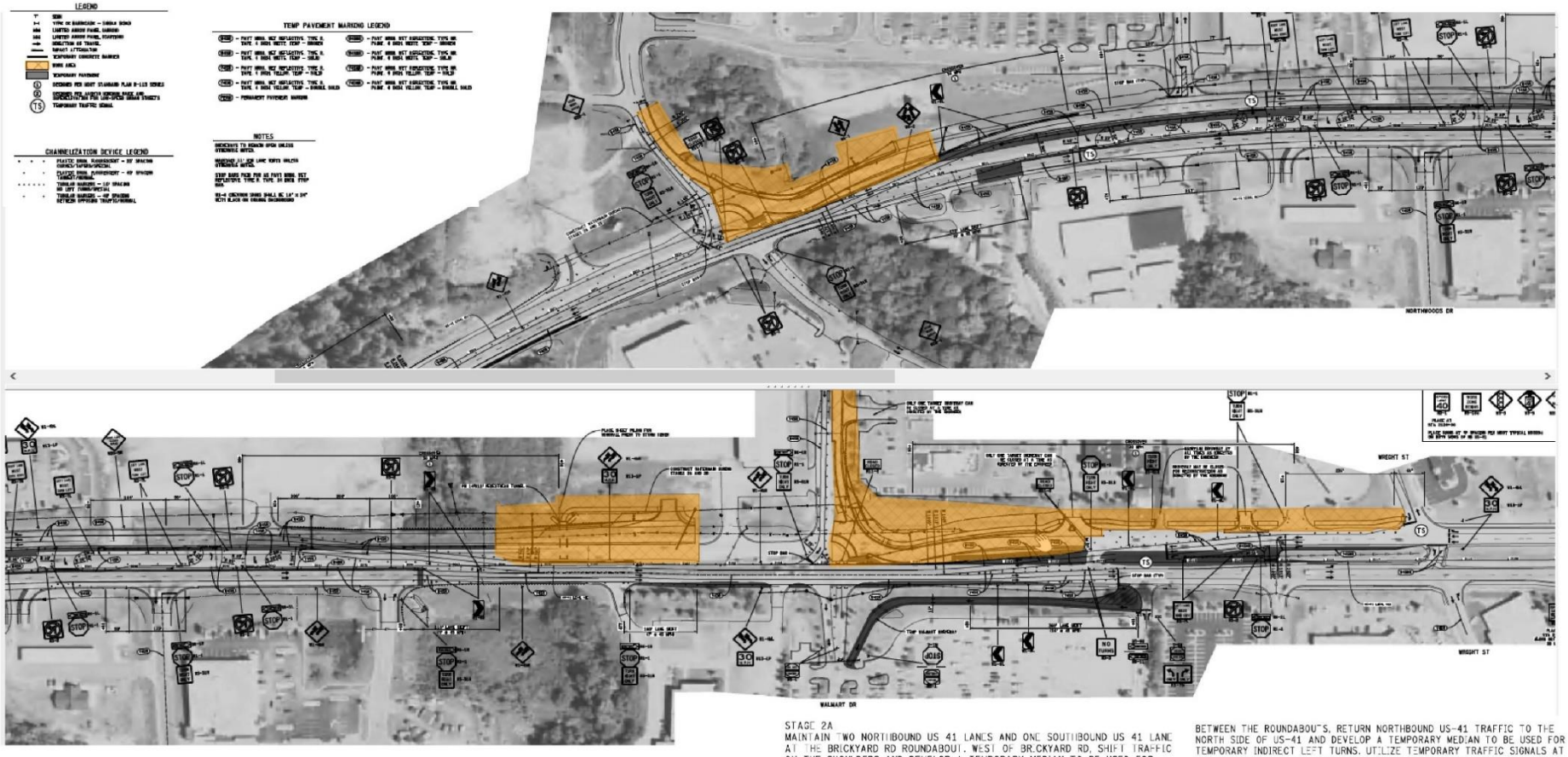
Construction Staging

STAGE 1B:
MAINTAIN TWO NORTHBOUND US-41 AND TWO SOUTHBOUND US-41 LANES AT ALL TIMES. SHIFT NORTHBOUND US-41 TO NEWLY CONSTRUCTED NORTHBOUND US-41 TRAVEL LANES, SHIFT SOUTHBOUND US-41 TO THE EXISTING NORTHBOUND US-41 SHOULDER AND TEMPORARY PAVEMENT. MAINTAIN A CENTER LEFT TURN LANE BETWEEN BRICKYARD RD AND CR 492. RECONSTRUCT SOUTHBOUND US-41 BETWEEN BRICKYARD RD AND CR 492.

RECONSTRUCT NORTHWOODS DR AND ADJACENT US-41 FIRST MAINTAINING ONE LANE OF TRAFFIC SOUTHBOUND FROM US-41 TO NORTHWOODS DR. ONCE NORTHWOODS DR AND ADJACENT US-41 CONSTRUCTION IS COMPLETED, RECONSTRUCT THE REMAINDER OF SB US-41 AS SHOWN. ACCESS TO ALL BUSINESSES TO AND FROM US-41 SHALL BE MAINTAINED UTILIZING DRIVEWAYS ALONG US-41 AND NORTHWOODS DR.

GAP TRAFFIC CONTROL DEVICES AND PLACE TYPE III BARRICADES AS DIRECTED BY THE ENGINEER TO MAINTAIN DRIVEWAY AND NORTHWOODS DR TRAFFIC DURING CONSTRUCTION.

Construction Staging



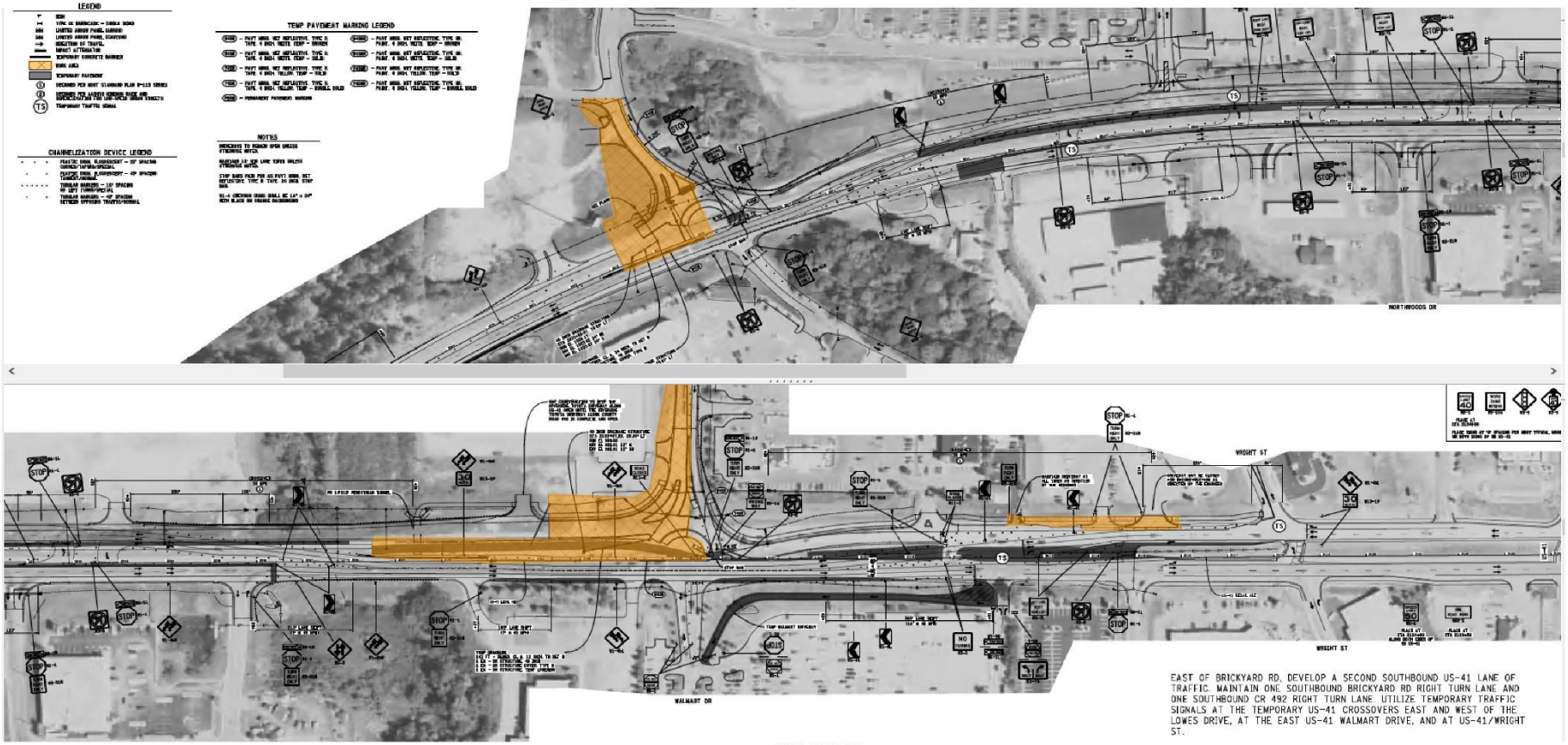
STAGE 2A
MAINTAIN TWO NORTHBOUND US 41 LANES AND ONE SOUTHBOUND US 41 LANE AT THE BRICKYARD RD ROUNDABOUT. WEST OF BRICKYARD RD, SHIFT TRAFFIC ON THE SHOULDERS AND DEVELOP A TEMPORARY MEDIAN TO BE USED FOR INDIRECT LEFT TURNS. EAST OF BRICKYARD RD, DEVELOP A SECOND SOUTHBOUND US-41 LANE OF TRAFFIC. MAINTAIN ONE SOUTHBOUND BRICKYARD RD RIGHT TURN LANE AND ONE SOUTHBOUND CR 492 RIGHT TURN LANE.

EAST OF THE LOWES DRIVEWAY, MAINTAIN TWO NORTHBOUND US-41 LANES AND TWO SOUTHBOUND US-41 LANES AT ALL TIMES. CROSS NORTHBOUND US-41 TRAFFIC OVER TO THE SOUTH SIDE OF US-41 AND SHIFT SOUTHBOUND US-41 TRAFFIC ONTO THE SOUTHERN SHOULDER IN THE VICINITY OF THE ROUNDABOUTS.

BETWEEN THE ROUNDABOUTS, RETURN NORTHBOUND US-41 TRAFFIC TO THE NORTH SIDE OF US-41 AND DEVELOP A TEMPORARY MEDIAN TO BE USED FOR TEMPORARY INDIRECT LEFT TURNS. UTILIZE TEMPORARY TRAFFIC SIGNALS AT THE TEMPORARY US-41 CROSSOVERS EAST AND WEST OF THE LOWES DRIVE, AT THE EAST US-41 WALMART DRIVE, AND AT US-41/WRIGHT ST. MAINTAIN ONE WAY WALMART DRIVE TRAFFIC USING THE TEMPORARY WALMART DRIVEWAY.

CONSTRUCT THE NORTHEAST QUADRANTS OF THE BRICKYARD RD AND CR 492 ROUNDABOUTS AND THE NORTH HALF OF THE TUNNEL.

Construction Staging



STAGE 2B AND 2C:
MAINTAIN TWO NORTHBOUND US-41 LANES AND ONE SOUTHBOUND US-41 LANE AT THE BRICKYARD RD ROUNDABOUT. WEST OF BRICKYARD RD, SHIFT TRAFFIC ON THE SHOULDERS AND DEVELOP A TEMPORARY MEDIAN TO BE USED FOR INDIRECT LEFT TURNS. EAST OF THE LOWES DRIVEWAY, MAINTAIN TWO NORTHBOUND US-41 LANES AND TWO SOUTHBOUND US-41 LANES AT ALL TIMES.

CROSS NORTHBOUND US-41 TRAFFIC OVER TO THE SOUTH SIDE OF US-41 AND SHIFT SOUTHBOUND US-41 TRAFFIC ONTO THE SOUTHERN SHOULDER IN THE VICINITY OF THE ROUNDABOUTS. BETWEEN THE ROUNDABOUTS, RETURN NORTHBOUND US-41 TRAFFIC TO THE NORTH SIDE OF US-41 AND DEVELOP A TEMPORARY MEDIAN TO BE USED FOR TEMPORARY INDIRECT LEFT TURNS.

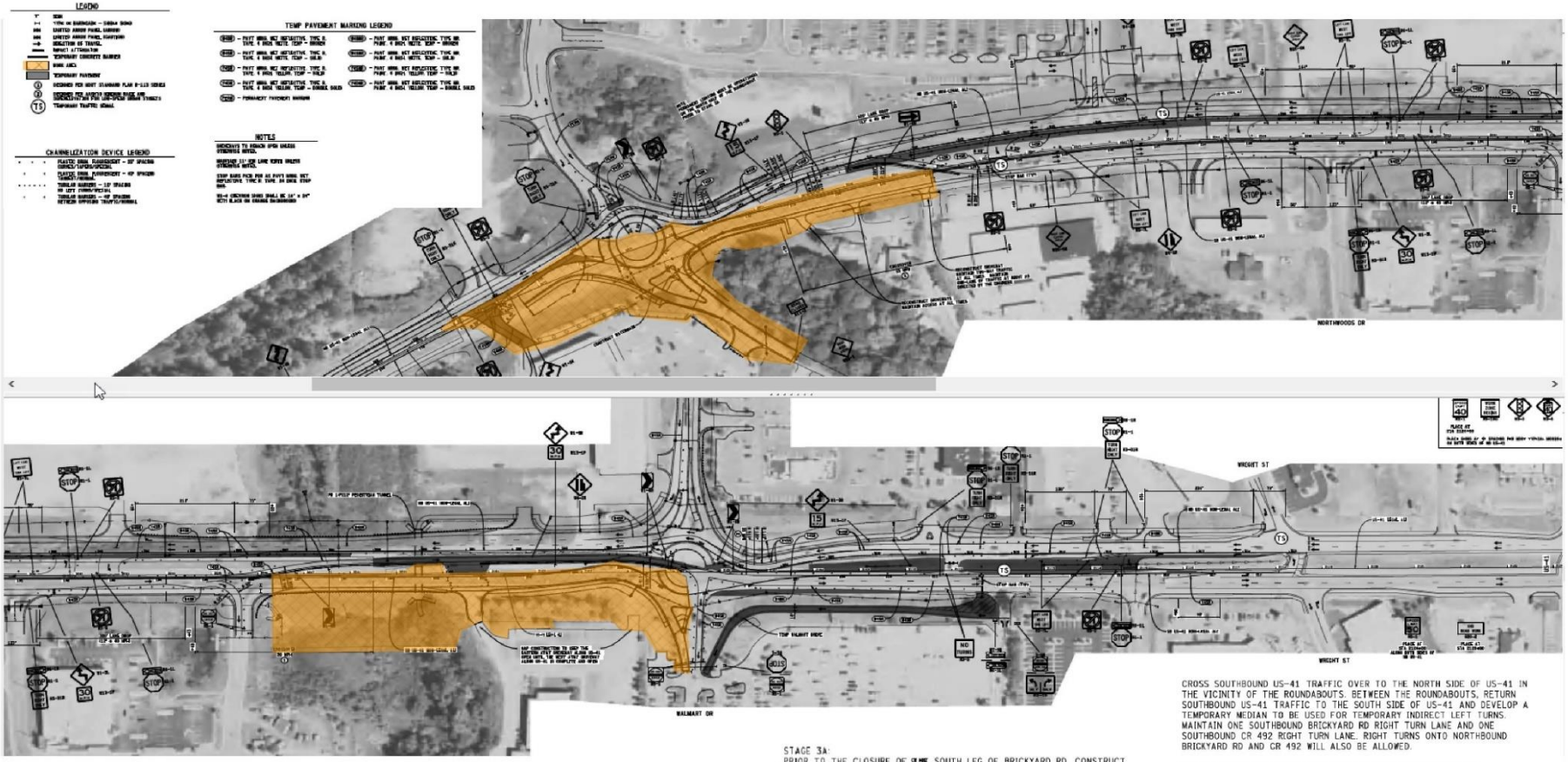
EAST OF BRICKYARD RD, DEVELOP A SECOND SOUTHBOUND US-41 LANE OF TRAFFIC. MAINTAIN ONE SOUTHBOUND BRICKYARD RD RIGHT TURN LANE AND ONE SOUTHBOUND CR 492 RIGHT TURN LANE. UTILIZE TEMPORARY TRAFFIC SIGNALS AT THE TEMPORARY US-41 CROSSOVERS EAST AND WEST OF THE LOWES DRIVE, AT THE EAST US-41 WALMART DRIVE, AND AT US-41/WRIGHT ST.

MAINTAIN ONE-WAY WALMART TRAFFIC USING THE TEMPORARY WALMART DRIVEWAY. CONSTRUCT THE NORTHWEST QUADRANTS OF BOTH ROUNDABOUTS AND THE NORTH HALF OF THE TUNNEL.

KEEP THE MEIJER GAS STATION DRIVEWAY ALONG US-41 OPEN UNTIL THE MEIJER GAS STATION DRIVEWAY ALONG BRICKYARD RD IS COMPLETE AND OPEN. GAP CONSTRUCTION TO KEEP THE RIVERSIDE TOYOTA DRIVEWAY ALONG US-41 OPEN UNTIL THE RIVERSIDE TOYOTA DRIVEWAY ALONG CR 492 IS COMPLETE AND OPEN.

CONSTRUCT THE NORTHWEST QUADRANTS OF THE BRICKYARD RD AND CR 492 ROUNDABOUTS. COMPLETE CONSTRUCTION OF THE NORTH HALF OF THE TUNNEL.

Construction Staging



STAGE 3A:
PRIOR TO THE CLOSURE OF THE SOUTH LEG OF BRICKYARD RD, CONSTRUCT THE TEMPORARY BEST BUY DRIVEWAY.

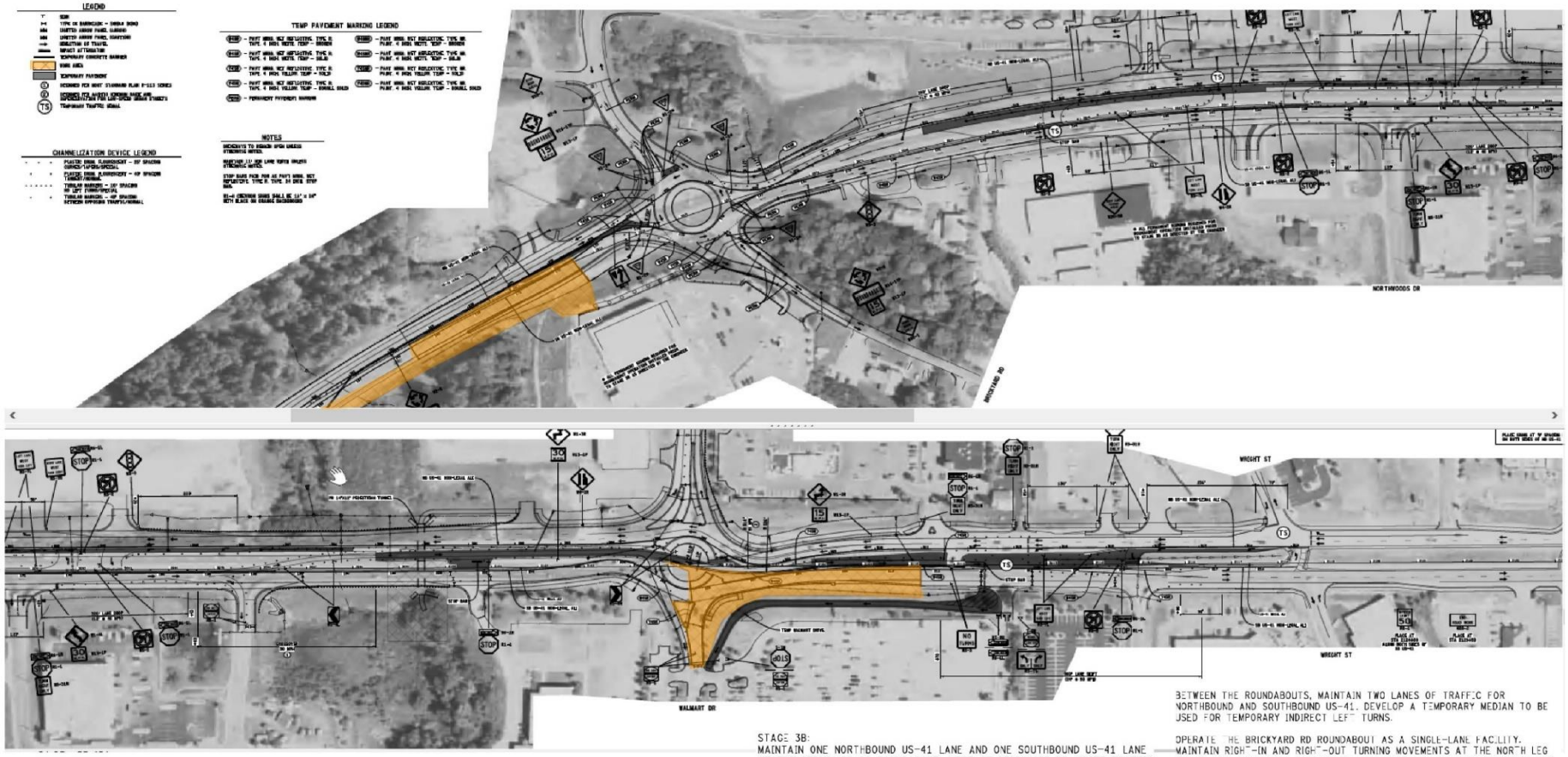
MAINTAIN ONE NORTHBOUND US-41 LANE AND ONE SOUTHBOUND US-41 LANE AT THE BRICKYARD RD ROUNDABOUT. WEST OF BRICKYARD RD, SHIFT TRAFFIC ON THE SHOULDERS AND DEVELOP A TEMPORARY MEDIAN TO BE USED FOR INDIRECT LEFT TURNS. BETWEEN THE ROUNDABOUTS, MAINTAIN TWO SOUTHBOUND US-41 AND TWO NORTHBOUND US-41 AT ALL TIMES. AT THE CR 492 ROUNDABOUT MAINTAIN ONE SOUTHBOUND US-41 LANE AT ALL TIMES.

CROSS SOUTHBOUND US-41 TRAFFIC OVER TO THE NORTH SIDE OF US-41 IN THE VICINITY OF THE ROUNDABOUTS. BETWEEN THE ROUNDABOUTS, RETURN SOUTHBOUND US-41 TRAFFIC TO THE SOUTH SIDE OF US-41 AND DEVELOP A TEMPORARY MEDIAN TO BE USED FOR TEMPORARY INDIRECT LEFT TURNS. MAINTAIN ONE SOUTHBOUND BRICKYARD RD RIGHT TURN LANE AND ONE SOUTHBOUND CR 492 RIGHT TURN LANE. RIGHT TURNS ONTO NORTHBOUND BRICKYARD RD AND CR 492 WILL ALSO BE ALLOWED.

UTILIZE TEMPORARY TRAFFIC SIGNALS AT THE TEMPORARY US-41 CROSSOVERS EAST AND WEST OF THE LOWES DRIVE, AT THE EAST US-41 WALMART DRIVE, AND AT US-41/WRIGHT ST. DETOUR TRAFFIC FOR THE SOUTH LEG OF BRICKYARD RD TO NORTHWOODS ROAD. MAINTAIN RIGHT IN/OUT ACCESS TO BEST BUY USING THE TEMPORARY BEST BUY DRIVEWAY. MAINTAIN ONE-WAY WALMART TRAFFIC USING THE TEMPORARY WALMART DRIVEWAY. GAP CONSTRUCTION TO KEEP THE EASTERN AT&T DRIVEWAY ALONG US-41 OPEN UNTIL THE WEST AT&T DRIVEWAY ALONG US-41 IS COMPLETE AND OPEN.

CONSTRUCT THE SOUTH HALF OF THE BRICKYARD RD ROUNDABOUT. CONSTRUCT THE SOUTHWEST QUADRANT OF THE CR 492 ROUNDABOUT. THE SOUTH HALF OF THE TUNNEL AND THE SOUTHERN PORTION OF THE TRAIL.

Construction Staging



STAGE 3B:
MAINTAIN ONE NORTHBOUND US-41 LANE AND ONE SOUTHBOUND US-41 LANE AT THE BRICKYARD RD ROUNDABOUT. WEST OF BRICKYARD RD, SHIFT TRAFFIC ON THE SHOULDERS AND DEVELOP A TEMPORARY MEDIAN TO BE USED FOR INDIRECT LEFT TURNS. EAST OF BRICKYARD RD, MAINTAIN TWO NORTHBOUND US-41 LANES AT ALL TIMES. BETWEEN THE ROUNDABOUTS, MAINTAIN TWO SOUTHBOUND US-41 LANES AT ALL TIMES. AT THE CR 492 ROUNDABOUT MAINTAIN TWO NORTHBOUND US-41 LANES AND ONE SOUTHBOUND US-41 LANE AT ALL TIMES. CROSS SOUTHBOUND US-41 TRAFFIC OVER TO THE NORTH SIDE OF US-41 WEST OF THE BRICKYARD RD ROUNDABOUT. RECONSTRUCT THE SOUTHBOUND LANES OF US-41 WEST OF THE BRICKYARD RD ROUNDABOUT. CROSS SOUTHBOUND US 41 TRAFFIC BACK TO THE NORMAL SOUTHBOUND US-41 TRAVEL LANES WEST OF THE BRICKYARD RD ROUNDABOUT.

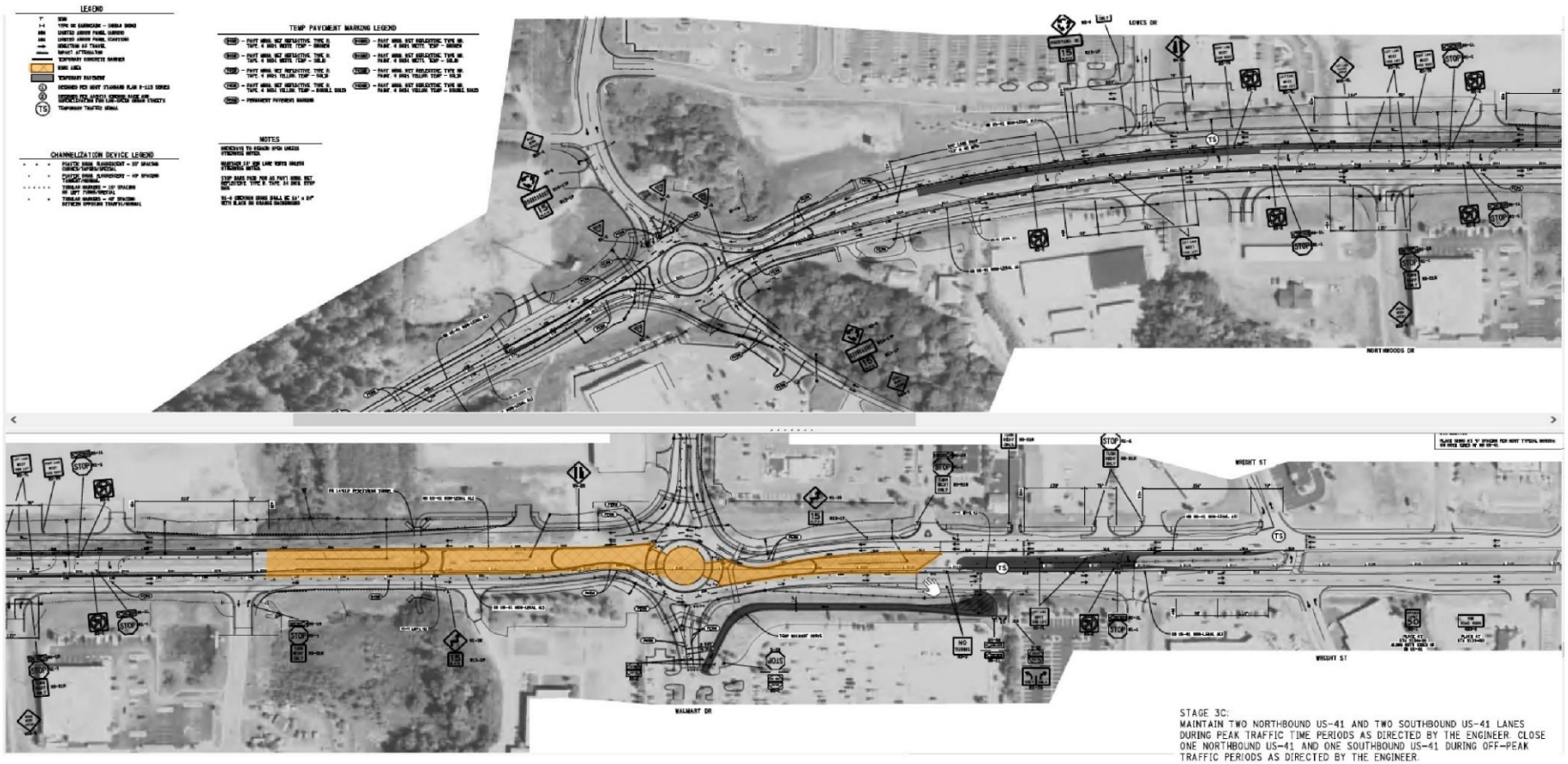
BETWEEN THE ROUNDABOUTS, MAINTAIN TWO LANES OF TRAFFIC FOR NORTHBOUND AND SOUTHBOUND US-41. DEVELOP A TEMPORARY MEDIAN TO BE USED FOR TEMPORARY INDIRECT LEFT TURNS.

OPERATE THE BRICKYARD RD ROUNDABOUT AS A SINGLE-LANE FACILITY. MAINTAIN RIGHT-IN AND RIGHT-OUT TURNING MOVEMENTS AT THE NORTH LEG OF CR 492. MAINTAIN A RIGHT-TURN LANE INTO THE WALMART DRIVEWAY FOR SOUTHBOUND US-41. MAINTAIN ACCESS TO WALMART FROM NORTHBOUND US 41 VIA THE TEMPORARY WALMART DRIVEWAY.

UTILIZE TEMPORARY TRAFFIC SIGNALS AT THE TEMPORARY US-41 CROSSOVERS EAST AND WEST OF THE LOWES DRIVE, AT THE EAST US-41 WALMART DRIVE, AND AT US-41/WRIGHT ST.

CONSTRUCT THE REMAINDER OF THE WEST LEG OF THE BRICKYARD RD ROUNDABOUT. CONSTRUCT THE SOUTHEAST QUADRANT OF THE CR 492 ROUNDABOUT. COMPLETE CONSTRUCTION OF THE SOUTH HALF OF THE TUNNEL AND SOUTHERN PORTION OF THE TRAIL.

Construction Staging

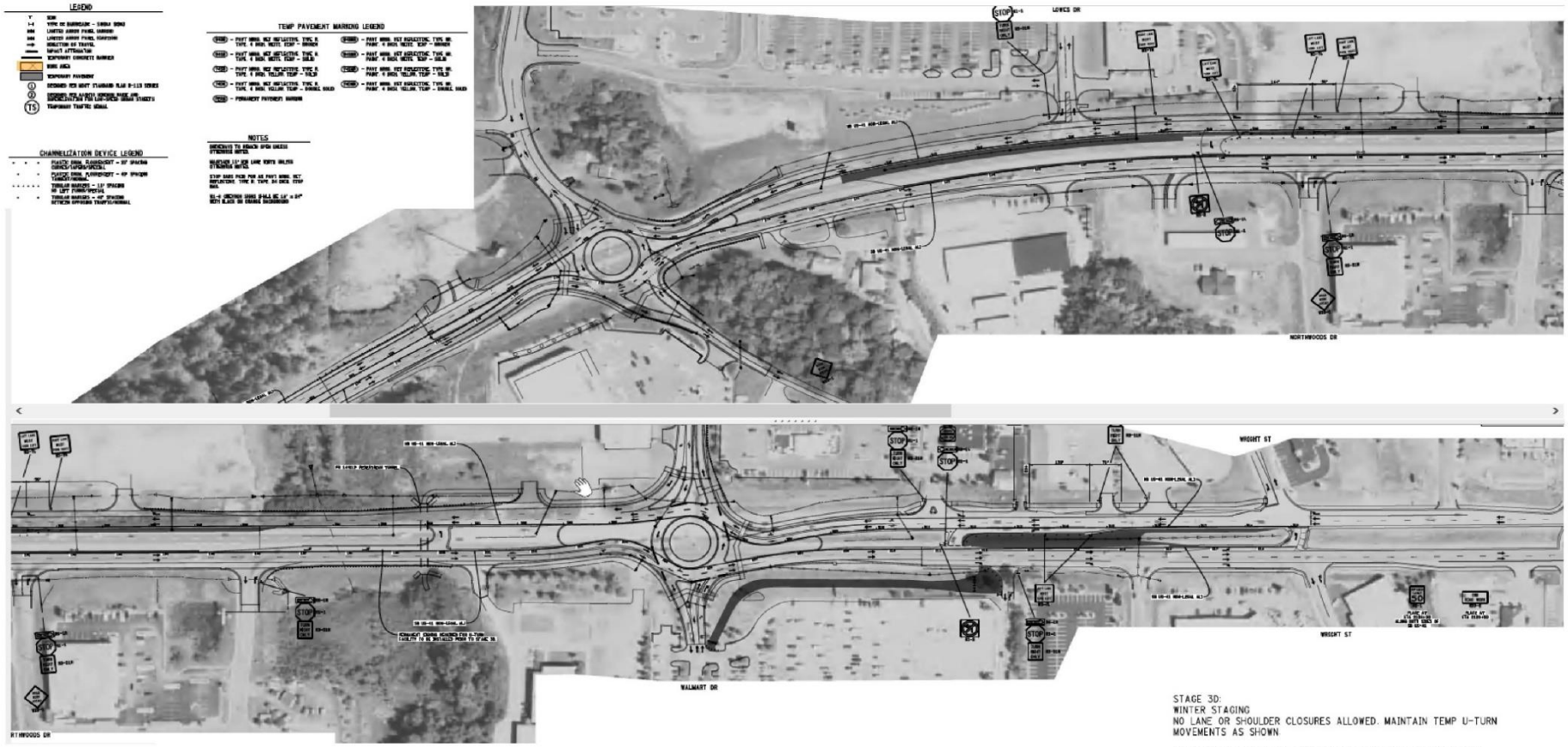


STAGE 3C:
MAINTAIN TWO NORTHBOUND US-41 AND TWO SOUTHBOUND US-41 LANES DURING PEAK TRAFFIC TIME PERIODS AS DIRECTED BY THE ENGINEER. CLOSE ONE NORTHBOUND US-41 AND ONE SOUTHBOUND US-41 DURING OFF-PEAK TRAFFIC PERIODS AS DIRECTED BY THE ENGINEER.

COMPLETE CONSTRUCTION OF SPLITTER ISLANDS AT THE BRICKYARD RD ROUNDABOUT. COMPLETE CONSTRUCTION OF THE SPLITTER AND CENTRAL ISLANDS AT THE CR 492 ROUNDABOUT. CONSTRUCT THE EASTERN PERMANENT INDIRECT LEFT TURN FACILITY.

PLACEMENT OF DECORATIVE CONCRETE WITHIN SPLITTER ISLANDS MAY BE DELAYED TO STAGE 4 AS DIRECTED BY THE ENGINEER.

Construction Staging



STAGE 3D:
WINTER STAGING
NO LANE OR SHOULDER CLOSURES ALLOWED. MAINTAIN TEMP U-TURN MOVEMENTS AS SHOWN.

ALL PERMANENT SIGNING AND PAVEMENT MARKINGS REQUIRED FOR ROUNDABOUTS SHALL BE INSTALLED PRIOR TO STAGE 3D AS DIRECTED BY THE ENGINEER.

TRAFFIC DRUMS TO BE REMOVED FROM ROADWAY FOR SNOW STORAGE AND REMOVAL AS DIRECTED BY THE ENGINEER.

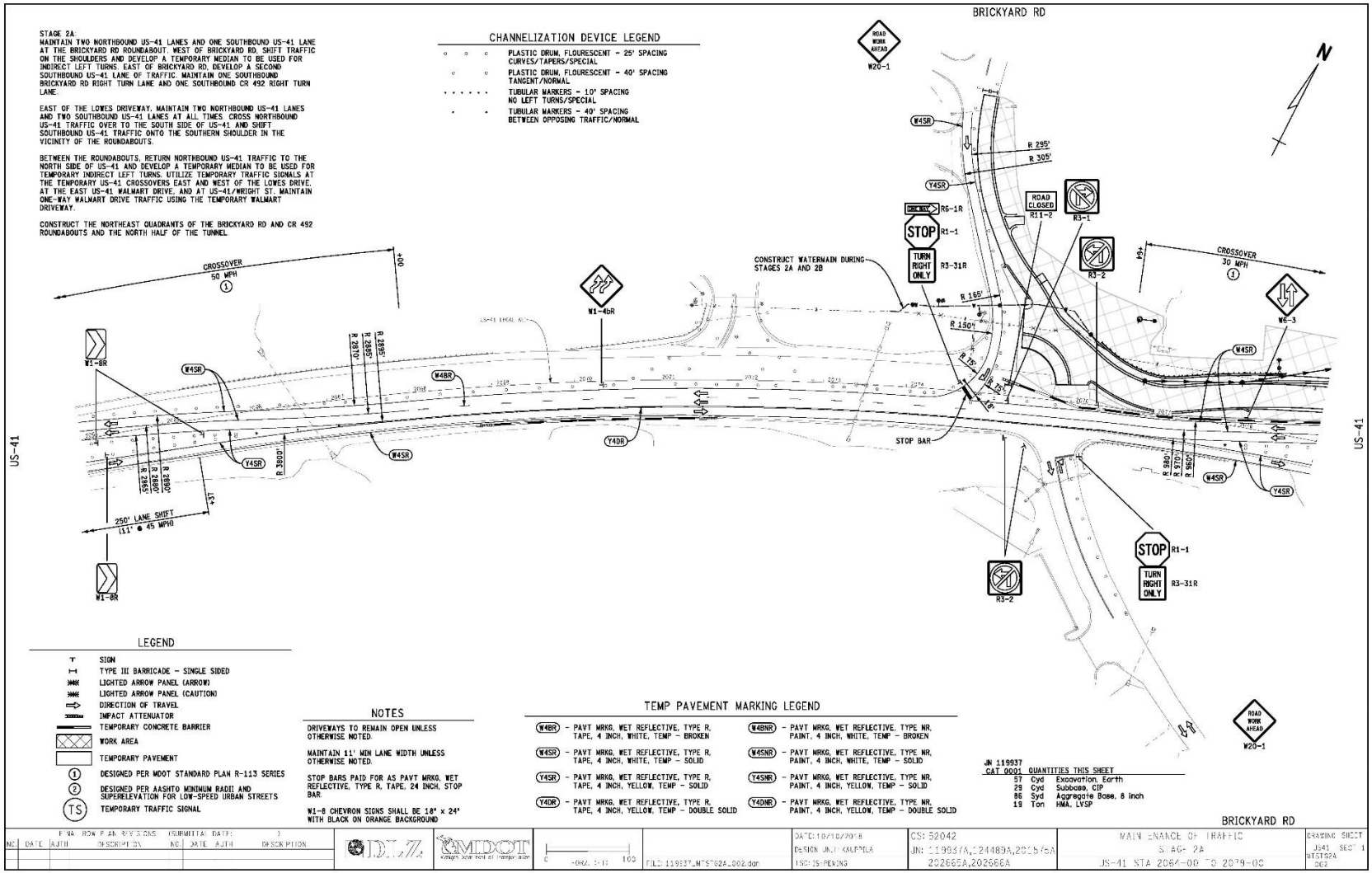
Construction Staging

STAGE 4:
MAINTAIN TWO NORTHBOUND US-41 AND TWO SOUTHBOUND US-41 LANES THROUGH THE ROUNDABOUTS AT ALL TIMES. CLOSE ONE NORTHBOUND US-41 LANE AND/OR ONE SOUTHBOUND US-41 LANE DURING OFF-PEAK TRAFFIC PERIODS AS DIRECTED BY THE ENGINEER. MAINTAIN ONE U-TURN FACILITY FOR BOTH NORTHBOUND AND SOUTHBOUND US-41 BETWEEN BRICKYARD RD AND CR 492 AT ALL TIMES.

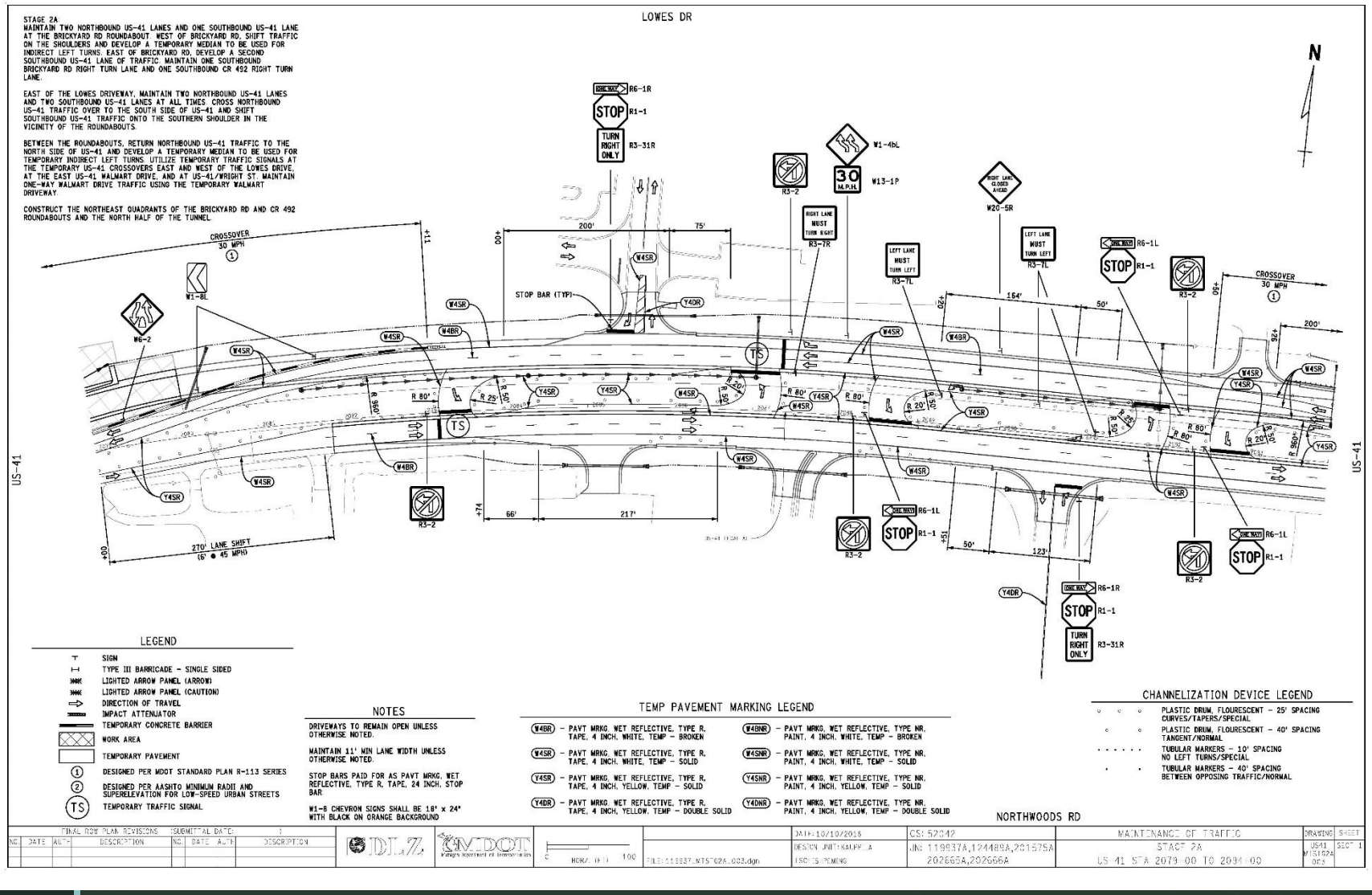
RECONSTRUCT THE MEDIAN OF US-41. RECONSTRUCT THE INDIRECT LEFT-TURN FACILITY EAST OF CR 492. REMOVE THE TEMPORARY DRIVEWAY TO WALMART. COMPLETE INSTALLATION OF DRAINAGE AND PERFORM SITE RESTORATION WORK.

WORK ZONES TO BOTH SIDES OF TRAVEL LANES, IN THE SAME DIRECTION, WILL NOT BE ALLOWED AT ANY TIME UNLESS APPROVED BY THE ENGINEER.

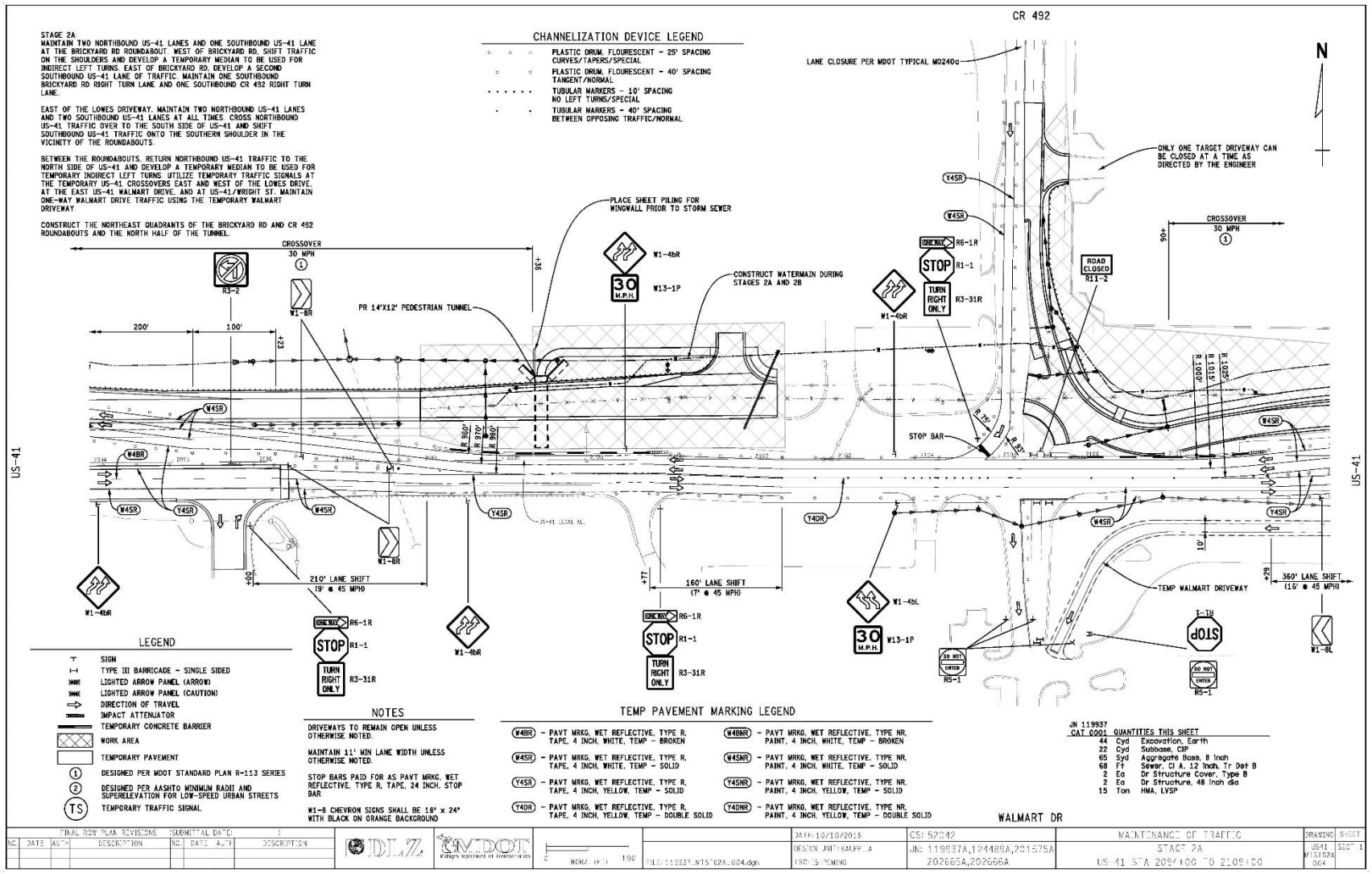
Construction Staging



Construction Staging



Construction Staging



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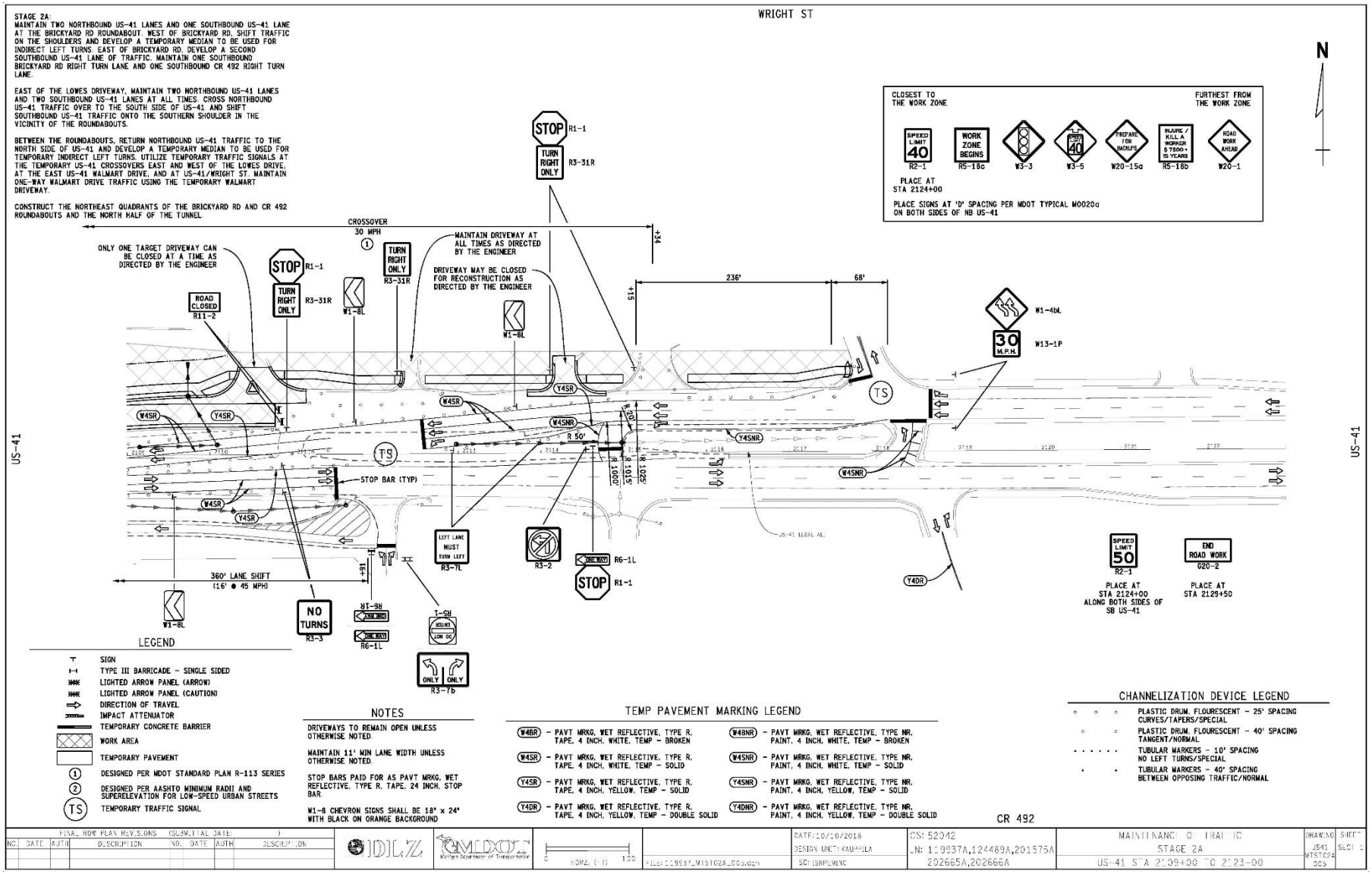

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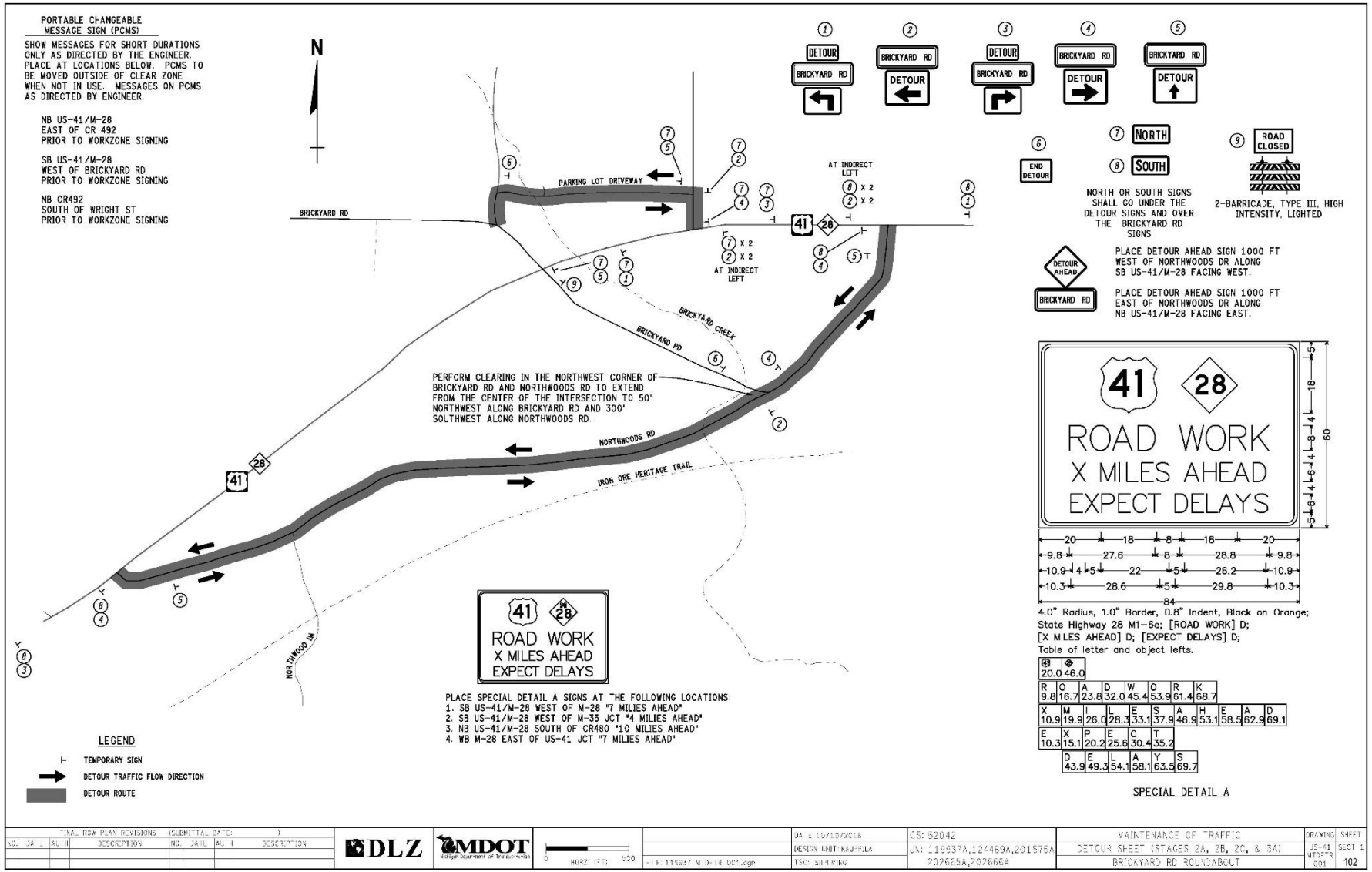
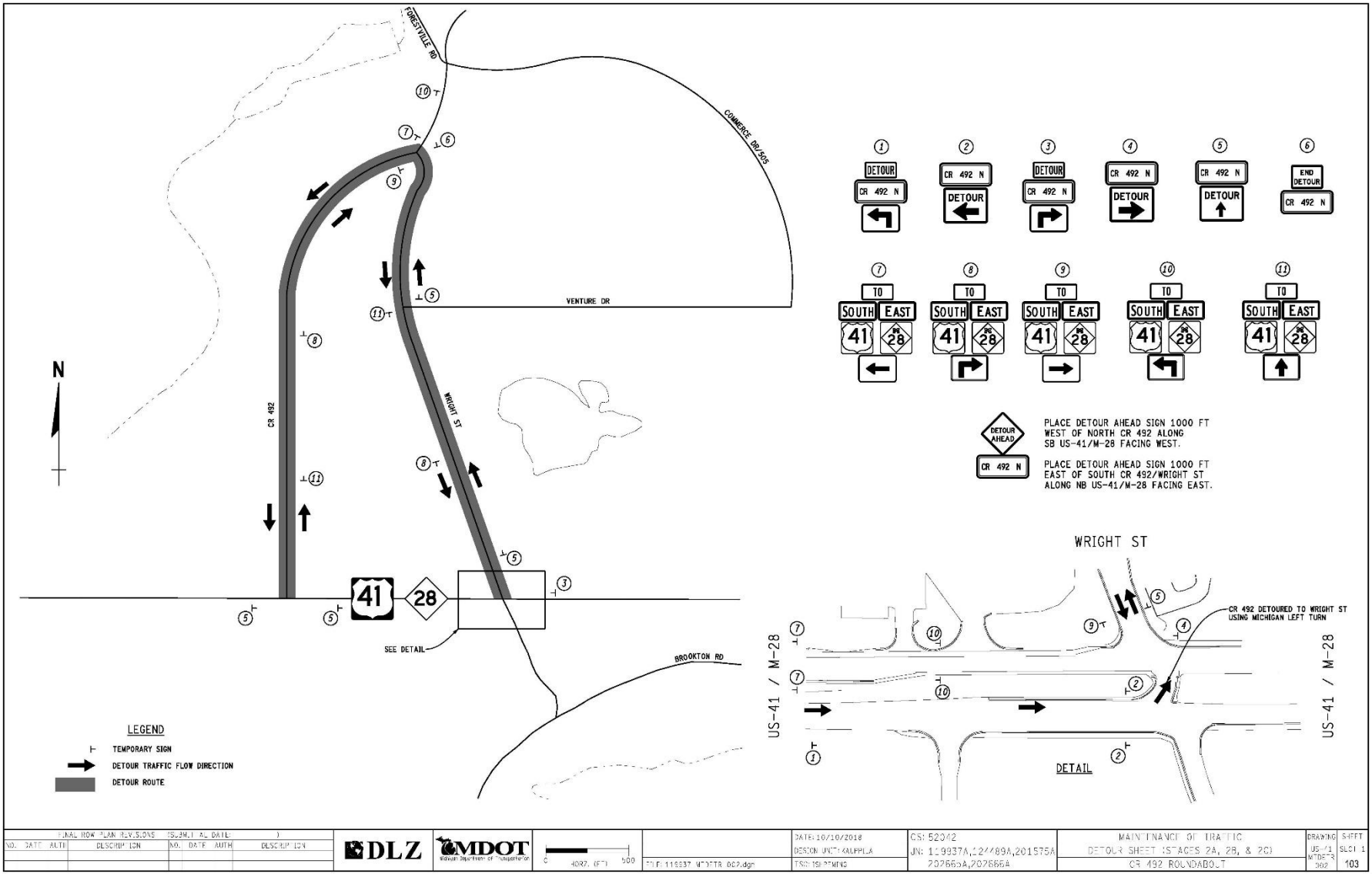


Construction Staging



Construction Staging

Methods of getting information out

Public meetings

Email list- notifications

Progress meetings

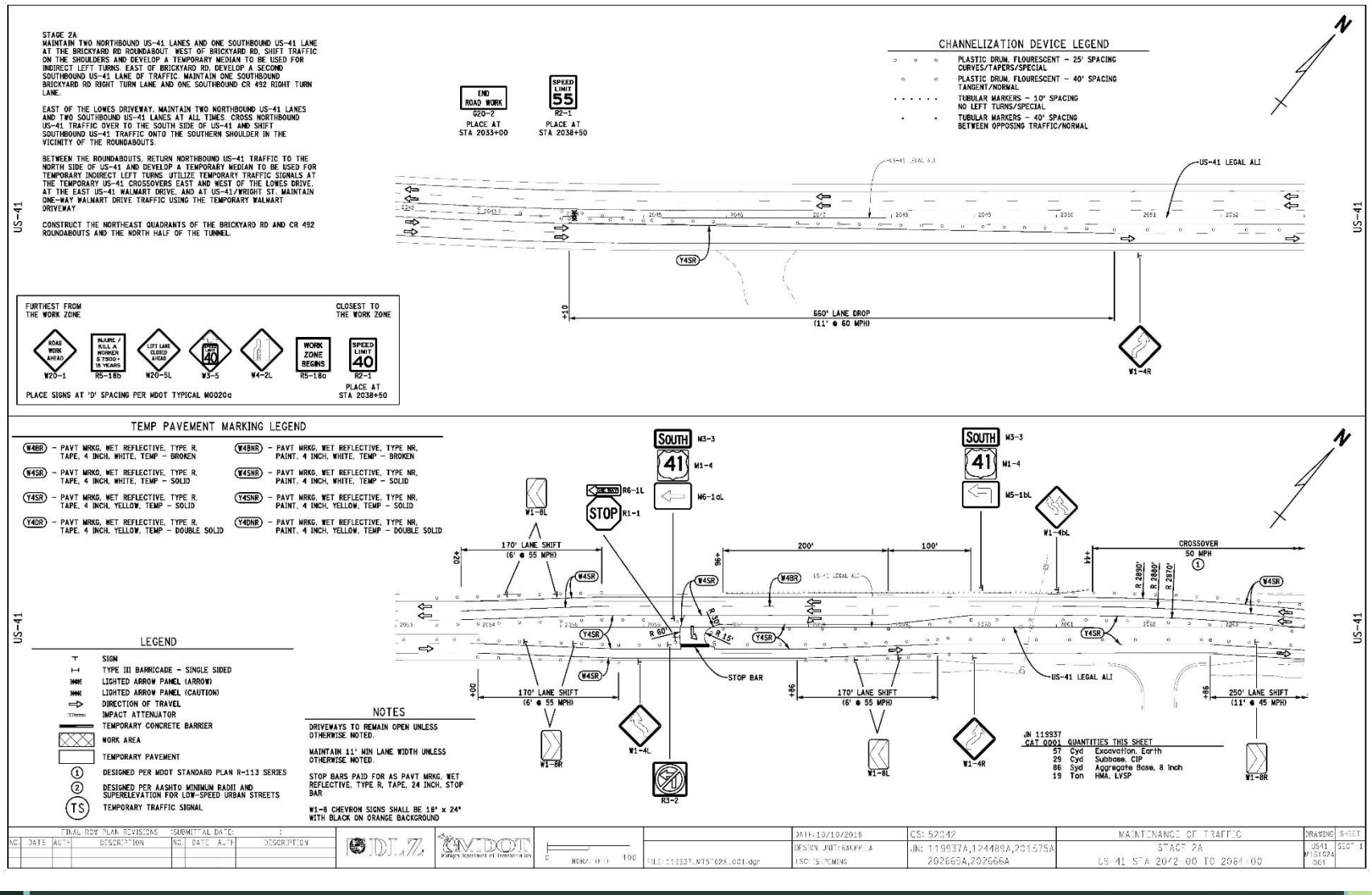
MI Drive

Social Media:
www.twitter.com: @MDOT_UP
www.facebook.com: MichiganDOT

Questions

- Ishpeming Transportation Service Center:

  (906)485-4270



Construction Staging