

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

- 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.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CITY ORDINANCE CHAPTER 63, CITY OF ANN ARBOR STANDARDS DIVISION VII, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- 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.
- 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.
- 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, WITHIN FOUR (4) HOURS OF BEING SO ORDERED.
- 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.
- 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.

- SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
- PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLATIVE AS REQUIRED.
- 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.
- 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.
- TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

SEQUENCE OF EROSION CONTROL MEASURES:

- 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:

- 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.
- STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.

- 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.
- PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).
- COMPLETE WORK OPERATIONS IN ACCORDANCE WITH CONSTRUCTION SEQUENCE CONTAINED WITHIN THE SPECIAL PROVISION ENTITLED "MAINTAINING TRAFFIC AND CONSTRUCTION METHOD AND SEQUENCING" CONTAINED IN THE CONTRACT PROPOSAL.
- CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
- COMPLETE ALL BIORETENTION GRADING AND FINE GRADING.
- TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.
- REFER TO LANDSCAPE PLANTING PLANS FOR PERMANENT SITE STABILIZATION.
- CLEAN OUT STORM SEWER SYSTEMS.
- REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.
- 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:

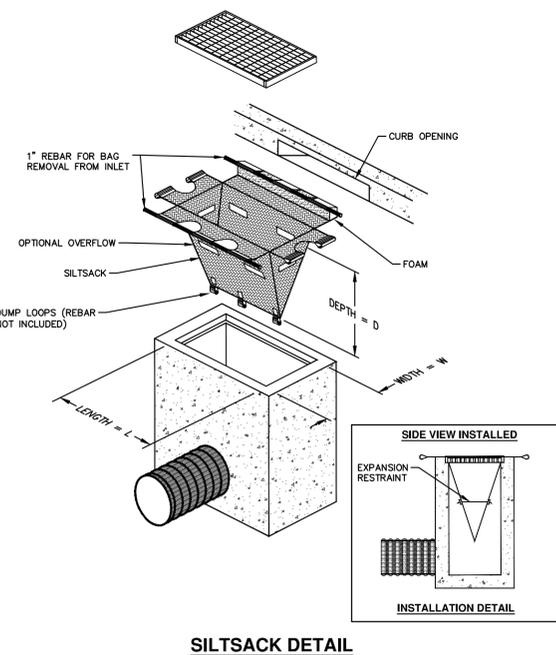
- SEED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.
- ANY DISTURBED AREA NOT PAVED, SEEDED, MULCHED, SODDED OR BUILT UPON BY NOVEMBER 15TH OR JUNE 30TH IS TO BE TEMPORARILY STABILIZED PER SPECIFICATIONS.

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

ESTIMATE OF EXCAVATION AND FILL FROM EXISTING TO FINAL GRADE:
EXCAVATION = 6240 CY, FILL = 6799 CY

- ON SITE SOILS PER THE USDA SOIL SURVEY OF WASHTENAW COUNTY, MICHIGAN:
- FoB - FOX SANDY LOAM, 2% TO 6% SLOPES - IN UPLAND AREAS AND ON OUT WASH PLAINS, KAMES, VALLEY TRAINS, TERRACES, AND MORAINES. SLOPES ARE UNIFORM OR SHORT AND COMPLEX.
 - FoB - FOX SANDY LOAM, 6% TO 12% SLOPES - ON OUT WASH PLAINS, KAMES, VALLEY TRAINS, TERRACES, AND MORAINES. SLOPES ARE UNIFORM OR SHORT AND COMPLEX.
 - MdA - MATHERTON SANDY LOAM - IN DEPRESSION AREAS, BROAD LOW-LYING AREAS, AND ALONG DRAINAGEWAYS, OUTWASH PLAINS, VALLEY TRAINS, AND TERRACES. NEARLY LEVEL TO GENTLY SLOPING.

TOTAL AREA OF PROPOSED DISTURBANCE = 1.54 AC
IMPERVIOUS ROAD AREA:
57,634 ft² - PRE = 1.33 AC
47,302 ft² - POST = 1.08 AC



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

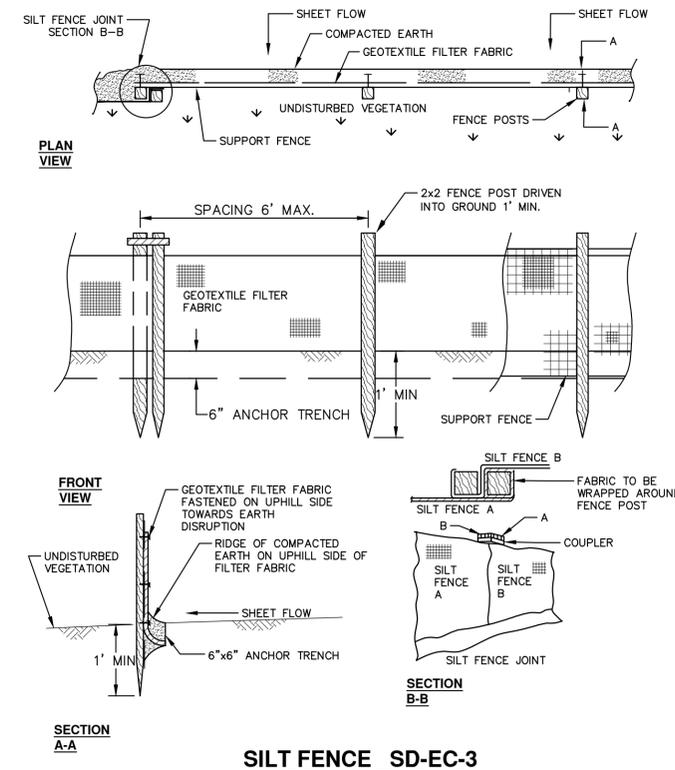
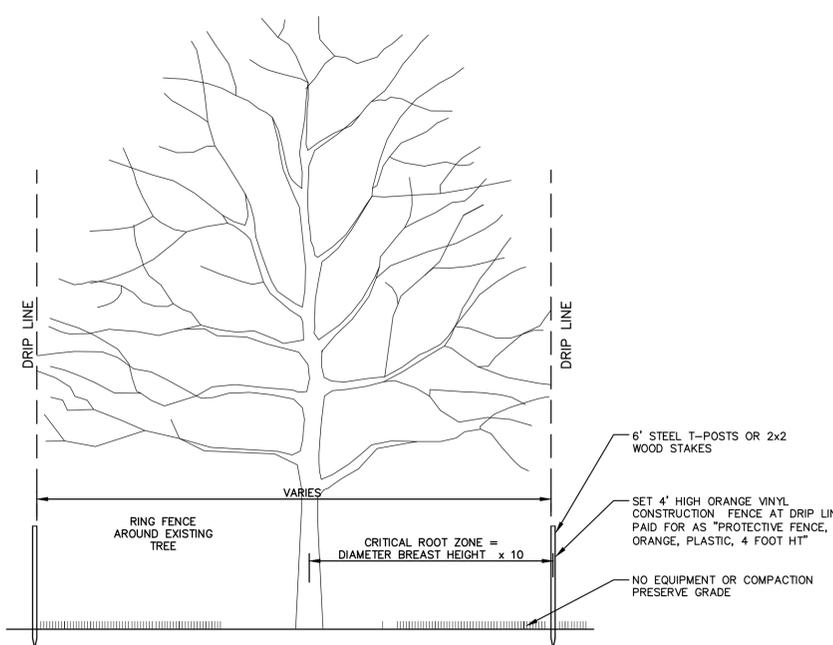
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

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.



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

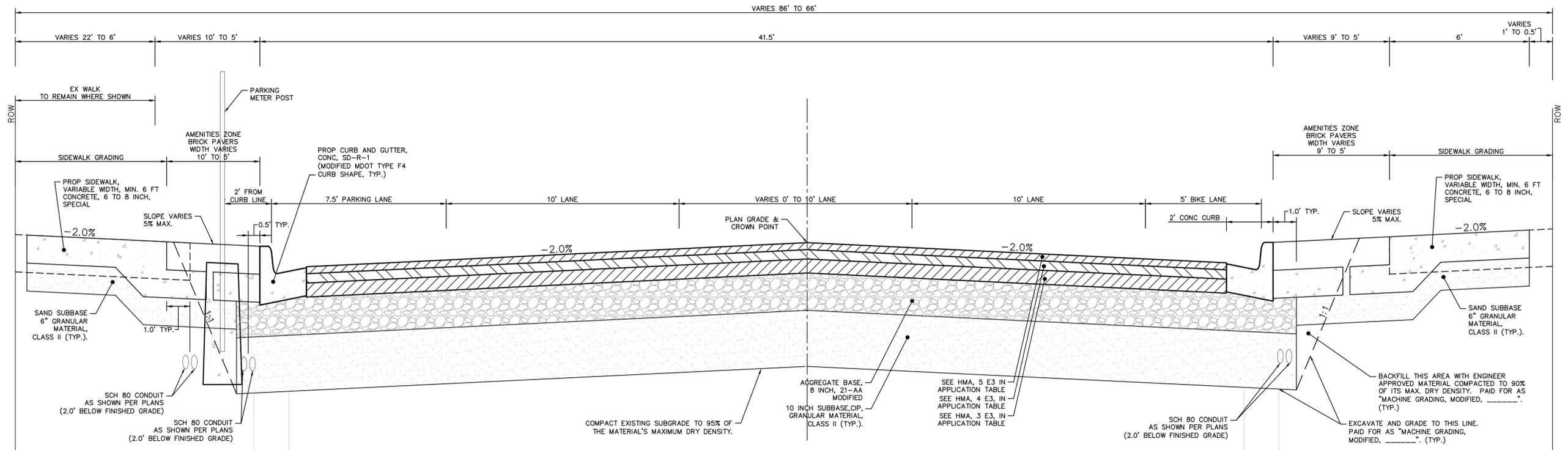
03/07/17 DATE
00 ADD REVISION NAME HERE DESCRIPTION
REV.

CITY OF ANN ARBOR PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-0647
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.

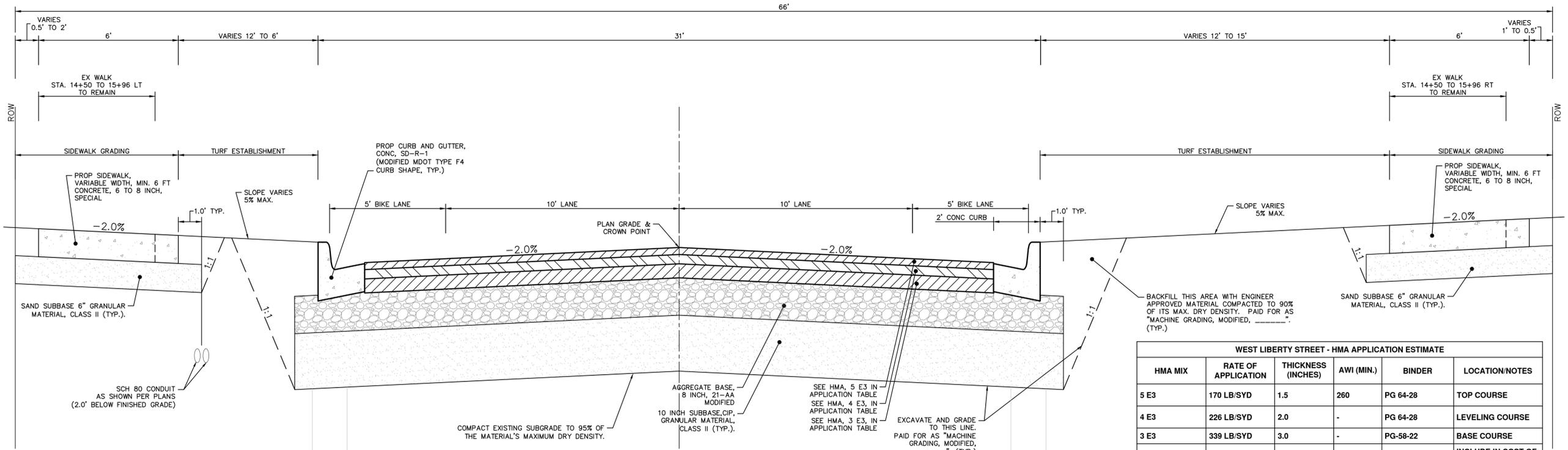
SESC NOTES AND DETAILS
DRAWING No. 2015034-3
SHEET No. 3 OF 63

R:\2015034 Liberty - First to Main\Plan Production\2015034DET.dwg Dwg Created: 4-Apr-17 - _a2 standard bw.stb - Plot Date: 13-Apr-17



WEST LIBERTY STREET
TYPICAL SECTION
STA. 17+51.6 TO STA. 19+75.4
N.T.S.

NOTE:
SIDEWALK CONSTRUCTION MAY REQUIRE UNDERCUTTING SUBGRADE. BACKFILL WITH MDOT, CL II GRANULAR MATERIAL COMPACTED TO 95% MAXIMUM DRY DENSITY. THIS WORK SHALL BE INCLUDED IN COST OF SIDEWALK, IF REQUIRED, AND WILL NOT BE PAID FOR SEPARATELY.



WEST LIBERTY STREET
TYPICAL SECTION
STA. 14+50 TO STA. 16+48.6
N.T.S.

WEST LIBERTY STREET - HMA APPLICATION ESTIMATE					
HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
5 E3	170 LB/SYD	1.5	260	PG 64-28	TOP COURSE
4 E3	226 LB/SYD	2.0	-	PG 64-28	LEVELING COURSE
3 E3	339 LB/SYD	3.0	-	PG-58-22	BASE COURSE
Bond Coat SS-1h	0.10 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM
ALLEYS & COMMERCIAL DRIVES - HMA APPLICATION ESTIMATE					
HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
LVSP	452 LB/SYD	4.0	260 (TOP)	PG 58-28	TWO LIFTS
Bond Coat SS-1h	0.10 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM



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03		CHECKED

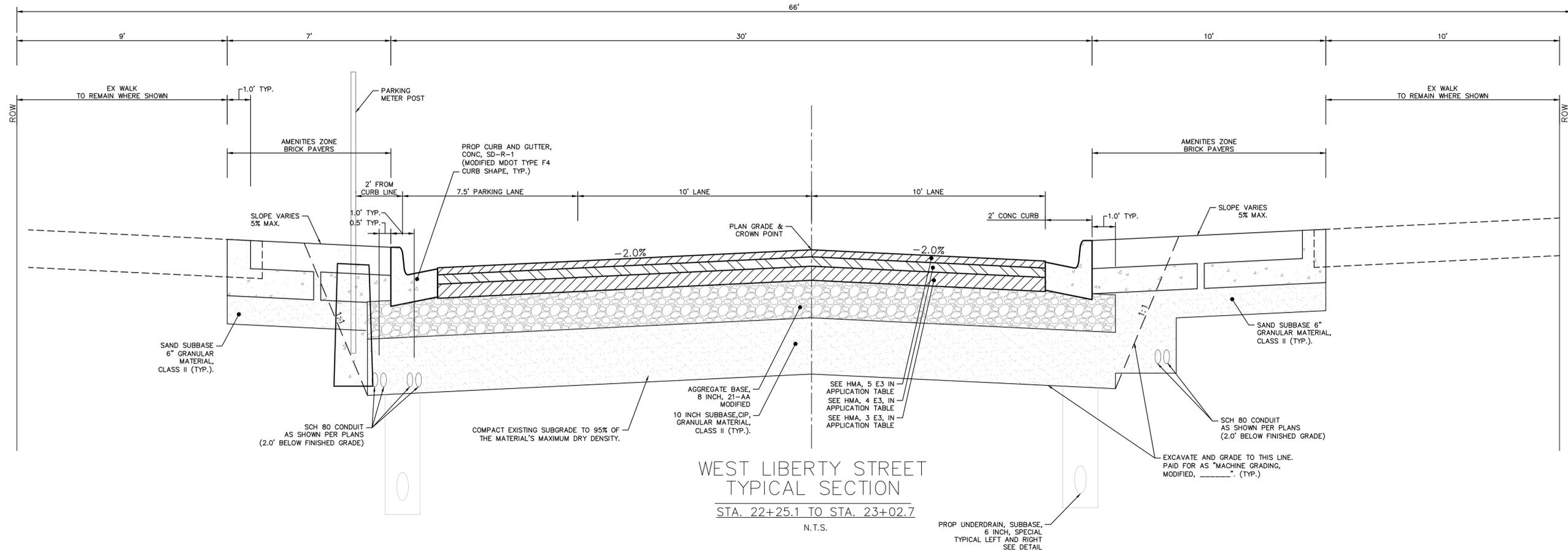
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WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
TYPICAL PROPOSED ROAD SECTION

SCALE: N/A
DRAWING No. 2015034-4
SHEET No. 4 OF 63

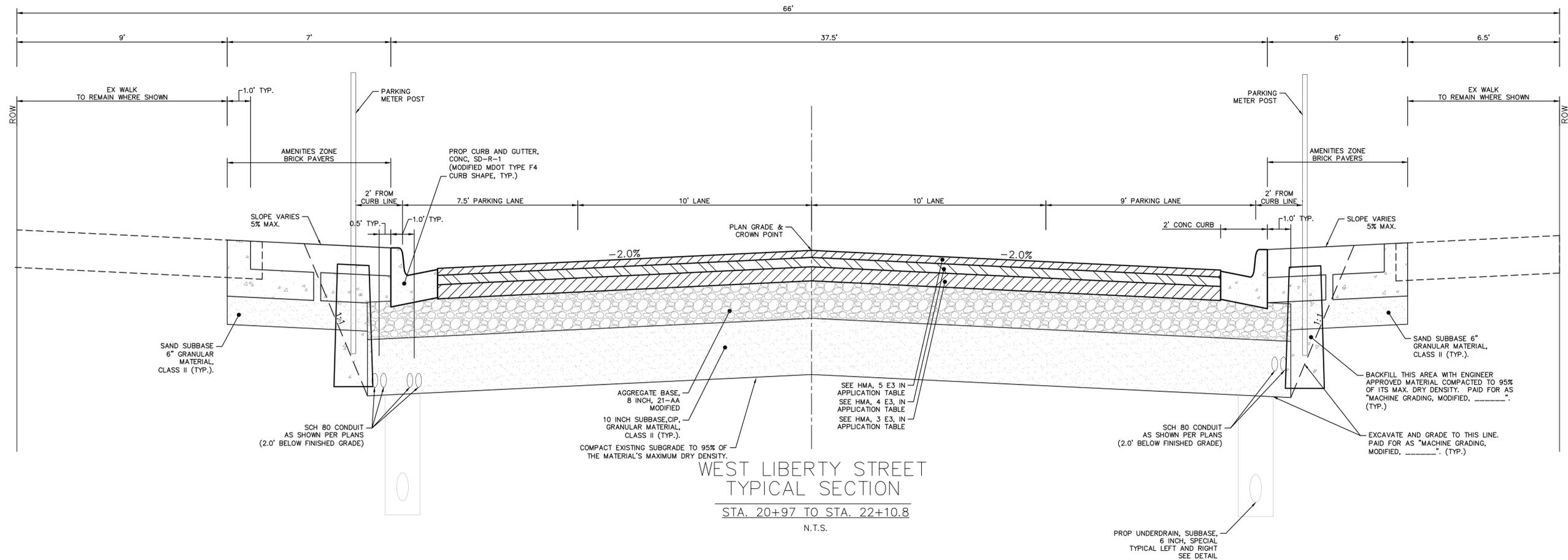
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WEST LIBERTY STREET
TYPICAL SECTION

STA. 22+25.1 TO STA. 23+02.7

N.T.S.



WEST LIBERTY STREET
TYPICAL SECTION

STA. 20+97 TO STA. 22+10.8

N.T.S.



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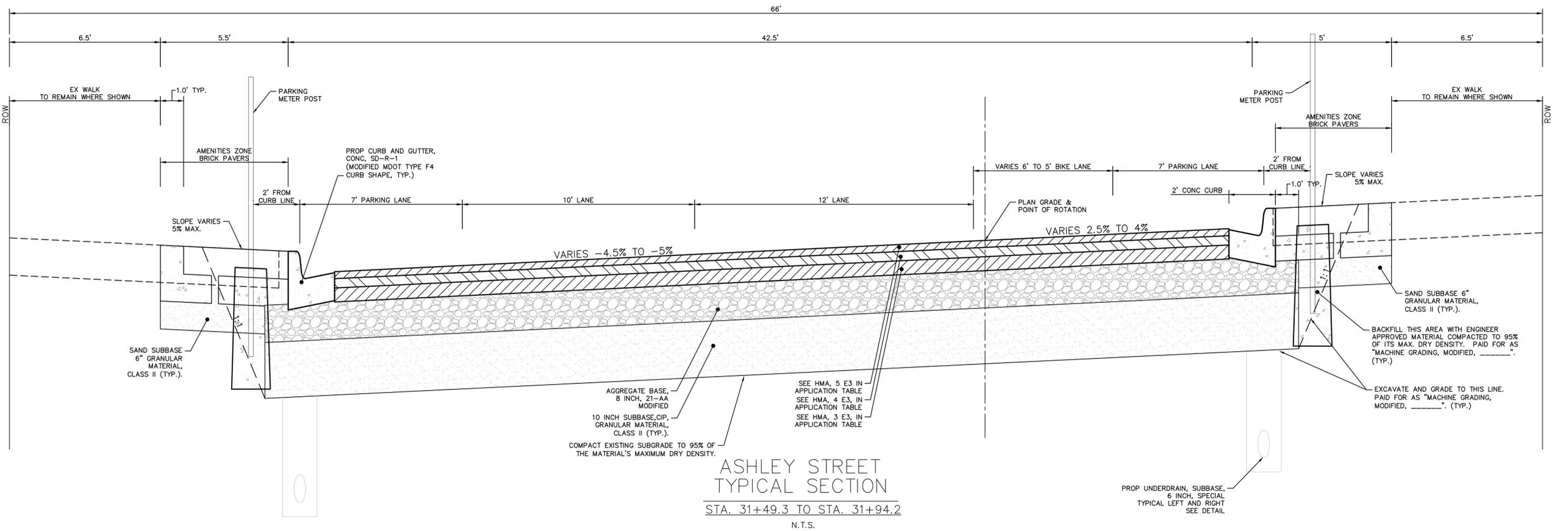
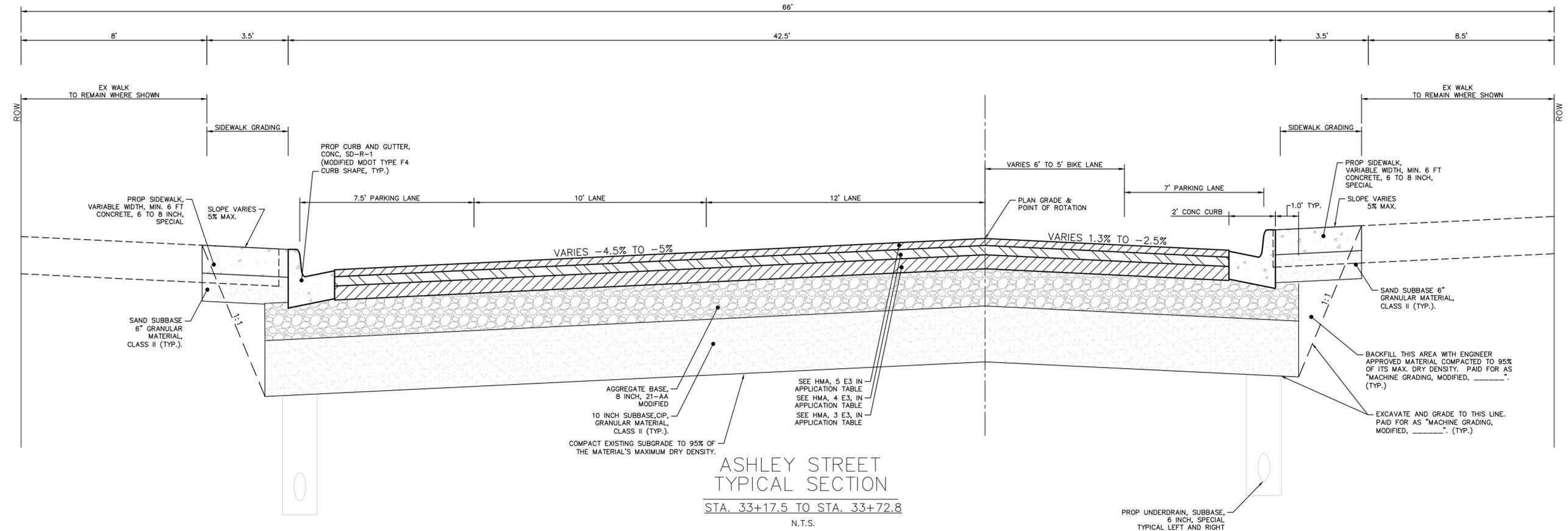
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
TYPICAL PROPOSED ROAD SECTION

SCALE: N/A
DRAWING No. 2015034-5

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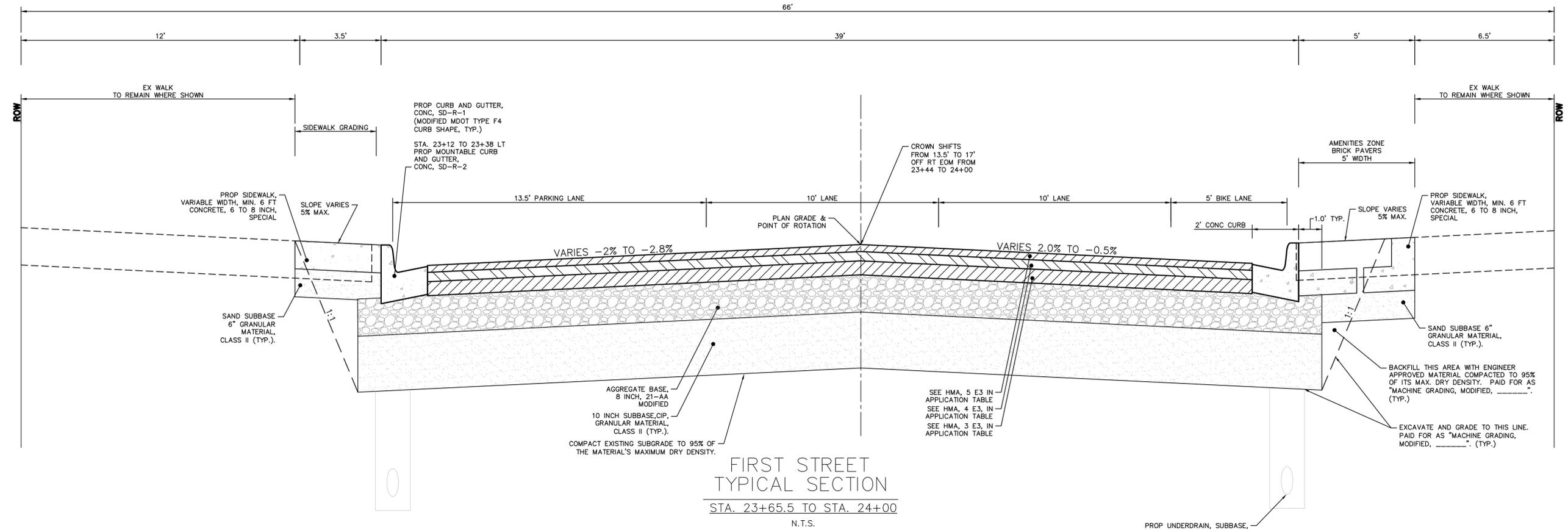
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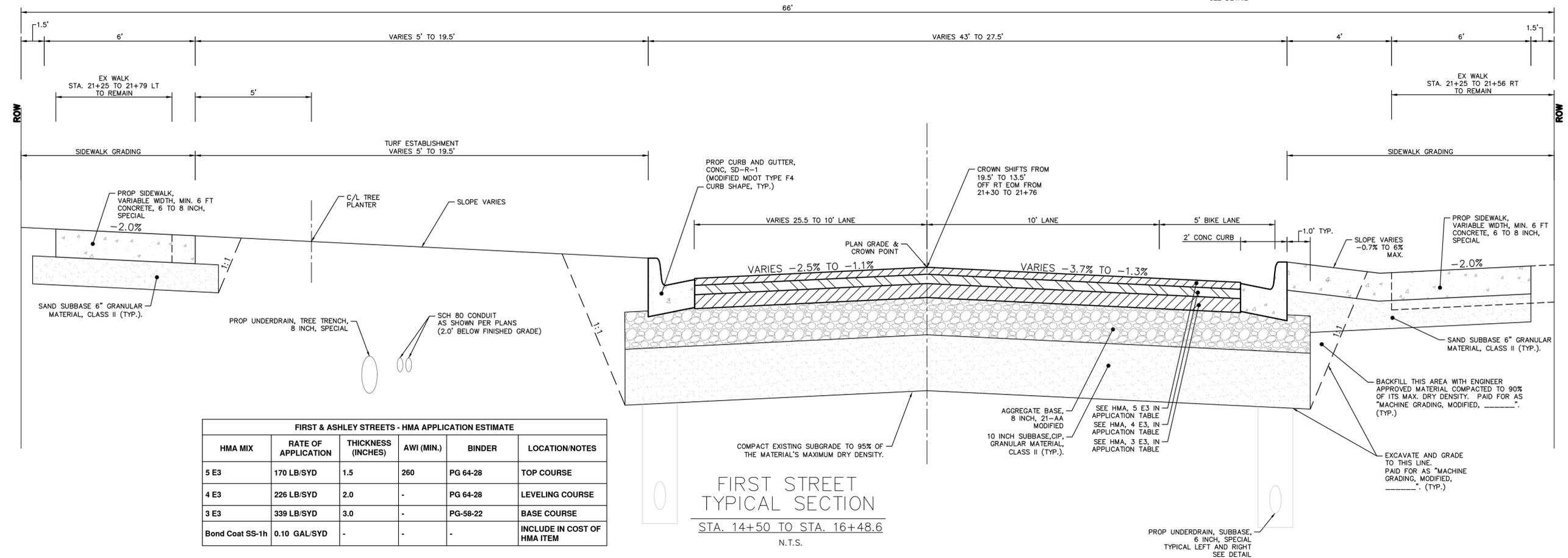
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
TYPICAL PROPOSED ROAD SECTION

SCALE: N/A
DRAWING No. 2015034-6

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FIRST STREET
TYPICAL SECTION
STA. 23+65.5 TO STA. 24+00
N.T.S.



FIRST STREET
TYPICAL SECTION
STA. 14+50 TO STA. 16+48.6
N.T.S.

FIRST & ASHLEY STREETS - HMA APPLICATION ESTIMATE					
HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
5 E3	170 LB/SYD	1.5	260	PG 64-28	TOP COURSE
4 E3	226 LB/SYD	2.0	-	PG 64-28	LEVELING COURSE
3 E3	339 LB/SYD	3.0	-	PG-58-22	BASE COURSE
Bond Coat SS-1h	0.10 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM



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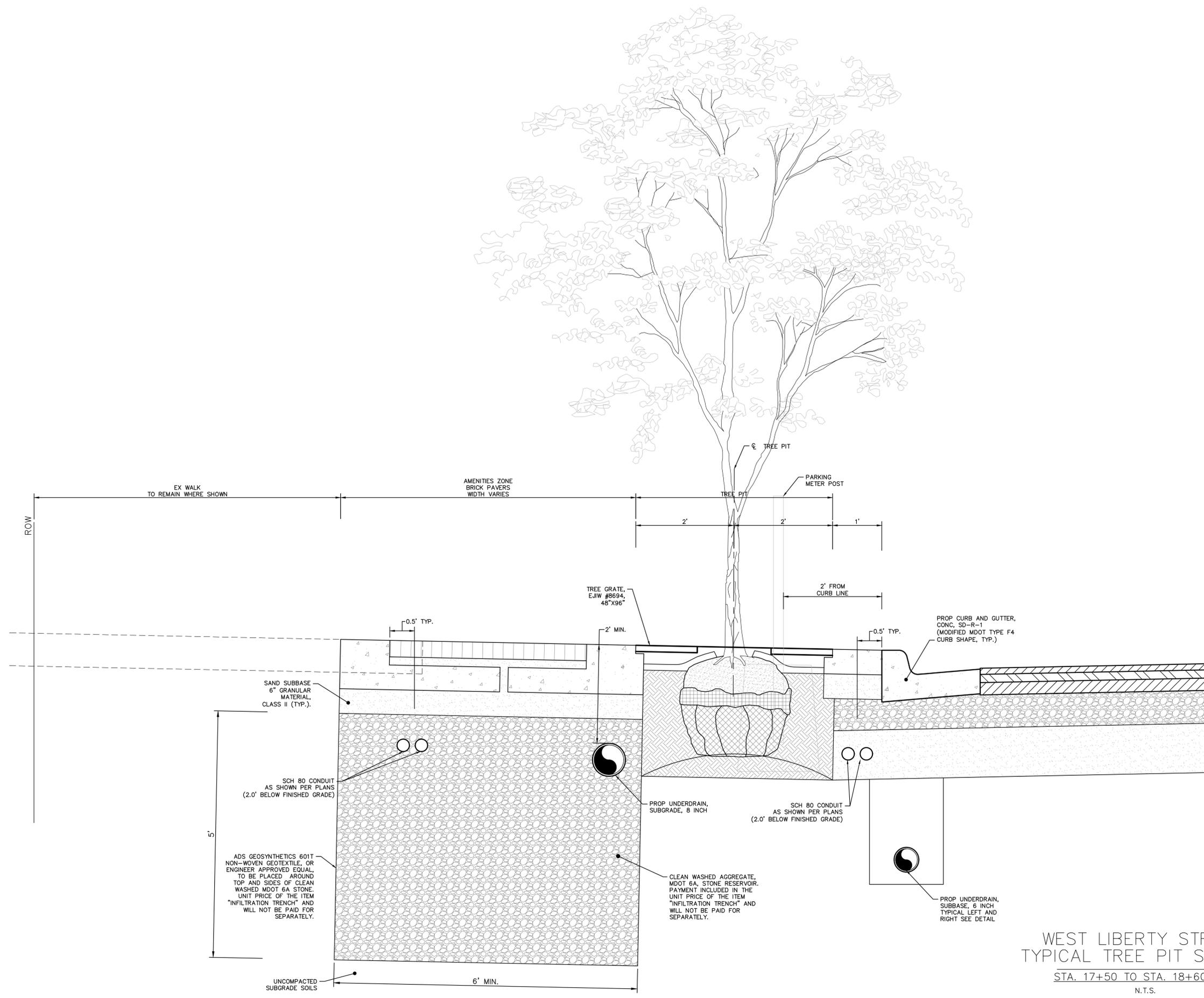
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WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
TYPICAL PROPOSED ROAD SECTION

SCALE: N/A
DRAWING No. 2015034-7
SHEET No.

R:\2015034 Liberty - First to Main\Plan Production\2015034DET1.dwg Dwg Created: 5-Apr-17 - _g2 standard bw.stb - Plot Date: 13-Apr-17

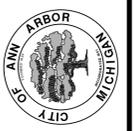


WEST LIBERTY STREET
TYPICAL TREE PIT SECTION
STA. 17+50 TO STA. 18+60 LEFT
N.T.S.



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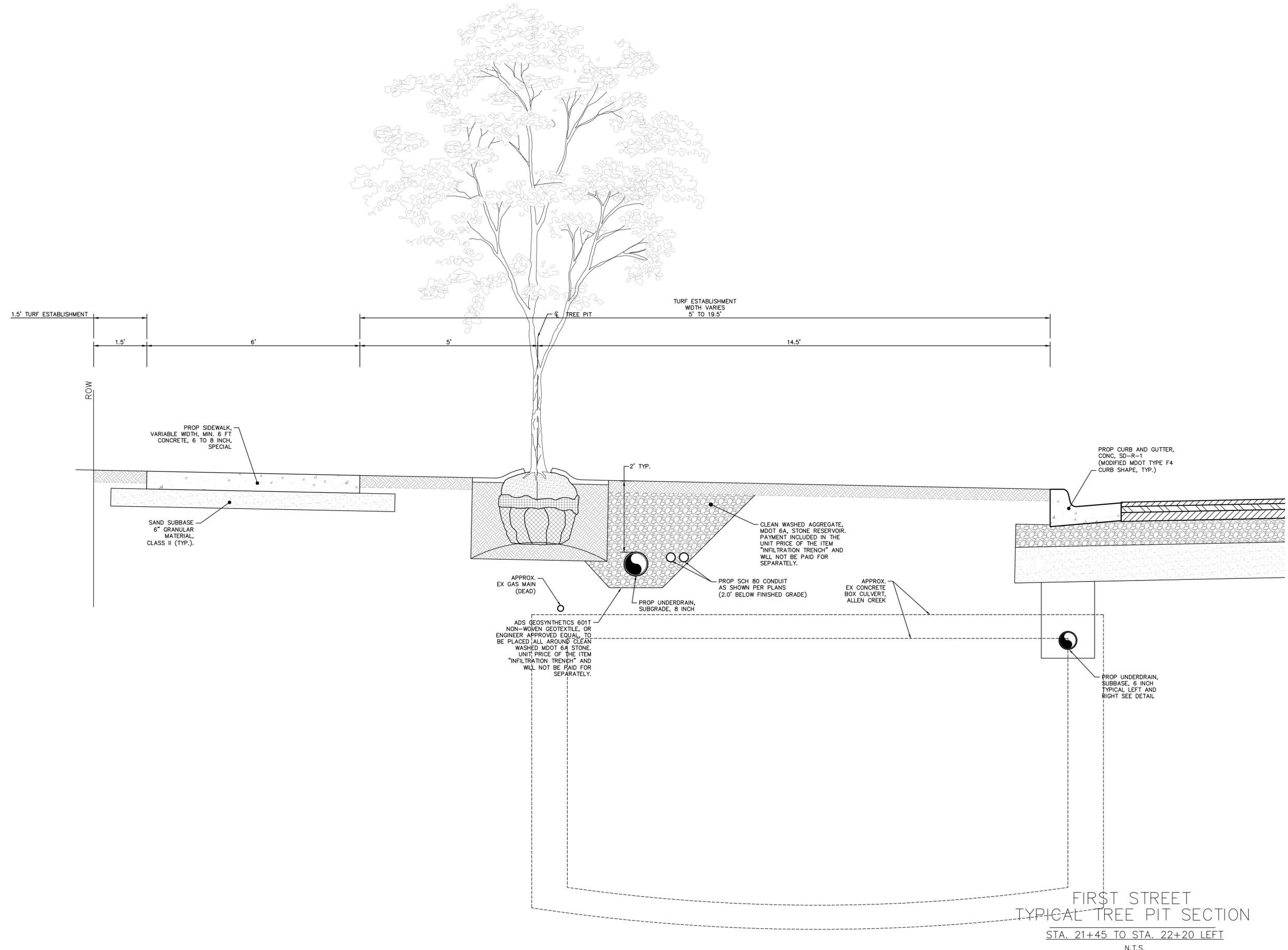
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
STORMWATER TREE TRENCH DETAIL

SCALE: N/A
DRAWING No. 2015034-8

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FIRST STREET
TYPICAL TREE PIT SECTION
STA. 21+45 TO STA. 22+20 LEFT
N.T.S.



REV.	DATE	DESCRIPTION	DRAWN	CHECKED
00	03/07/17	ADD REVISION NAME HERE	DPF	CEC

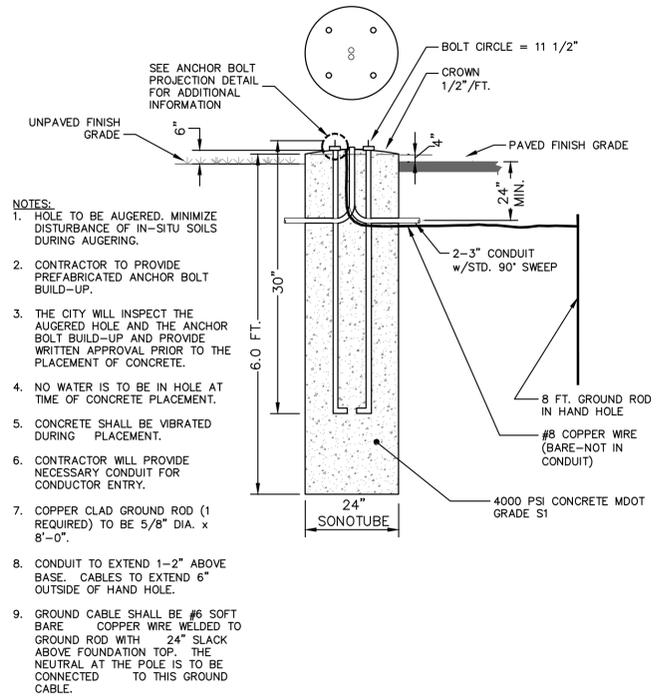
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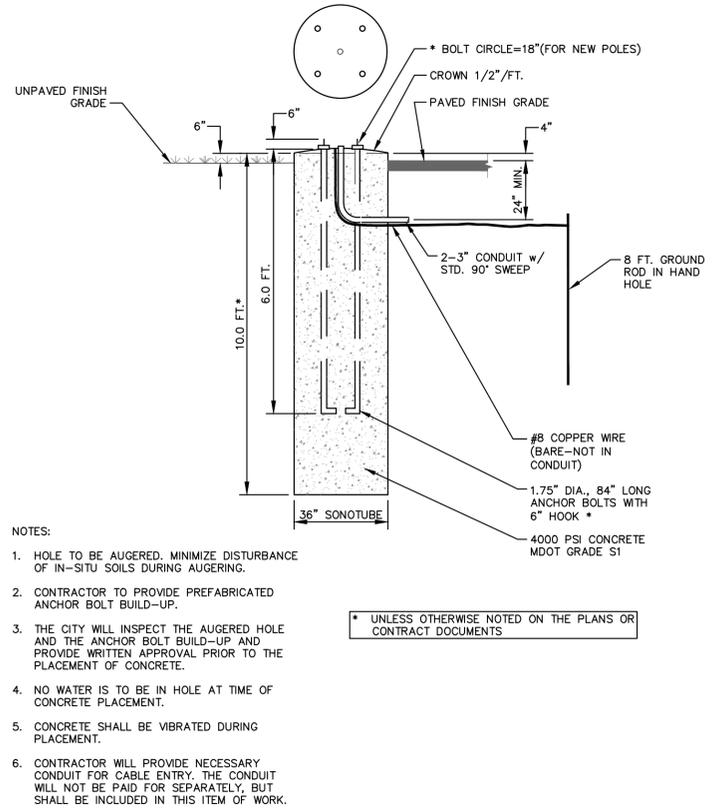
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
STORMWATER TREE TRENCH DETAIL

SCALE: N/A
DRAWING No. 2015034-9

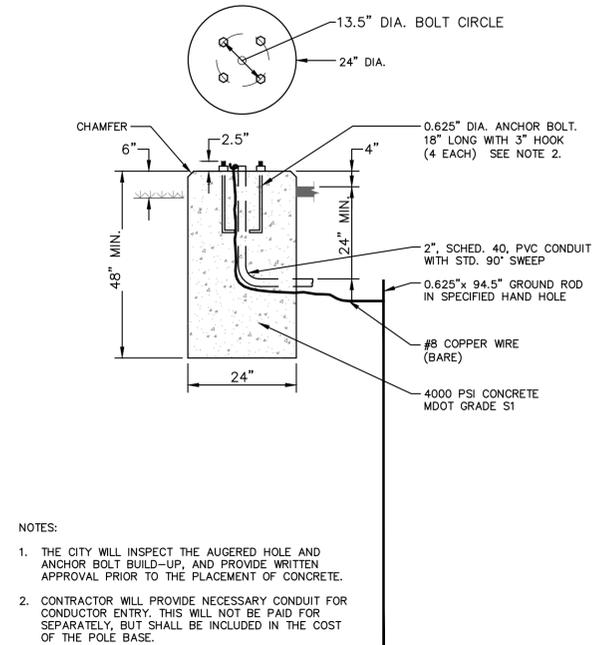
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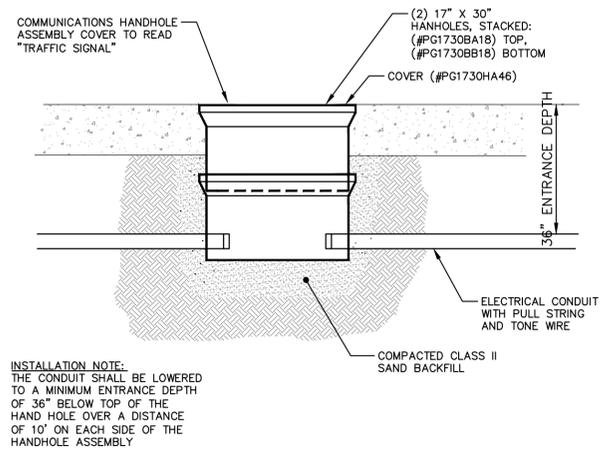
STREETLIGHT FOUNDATION SD-SL-1



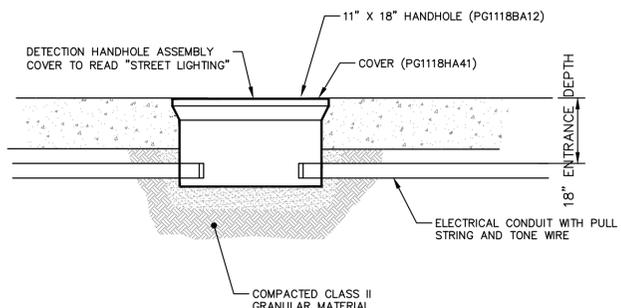
TRAFFIC SIGNAL POLE FOUNDATION SD-SL-2



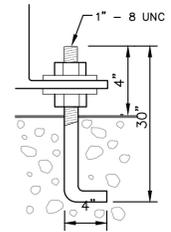
PEDESTRIAN SIGNAL POLE FOUNDATION SD-SL-3



COMMUNICATIONS HANDHOLE ASSEMBLY

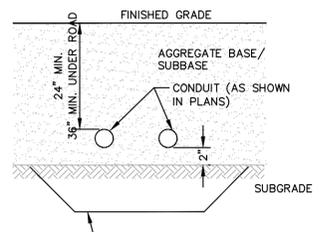


ELECTRICAL HANDHOLE ASSEMBLY



ALSO PROVIDE SHAKESPEARE OPAB-2035 ANCHOR BOLT KIT FOR EACH LIGHT POLE. ANCHOR BOLTS TO BE HOT-DIPPED GALVANIZED, 30" LONG, WITH 4" HOOK, AND A 4" PROJECTION ABOVE FOUNDATION.

ANCHOR BOLT PROJECTION DETAIL



MAY REQUIRE UNDERCUTTING SUBGRADE TO MAINTAIN MINIMUM DEPTH AND 2" BEDDING. BACKFILL WITH MDOT, CL II GRANULAR MATERIAL COMPACTED TO 95% MAXIMUM DRY DENSITY. THIS WORK SHALL BE INCLUDED IN COST OF CONDUIT IF REQUIRED AND WILL NOT BE PAID FOR SEPARATELY.

CONDUIT PLACEMENT DETAIL



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PUBLIC SERVICES
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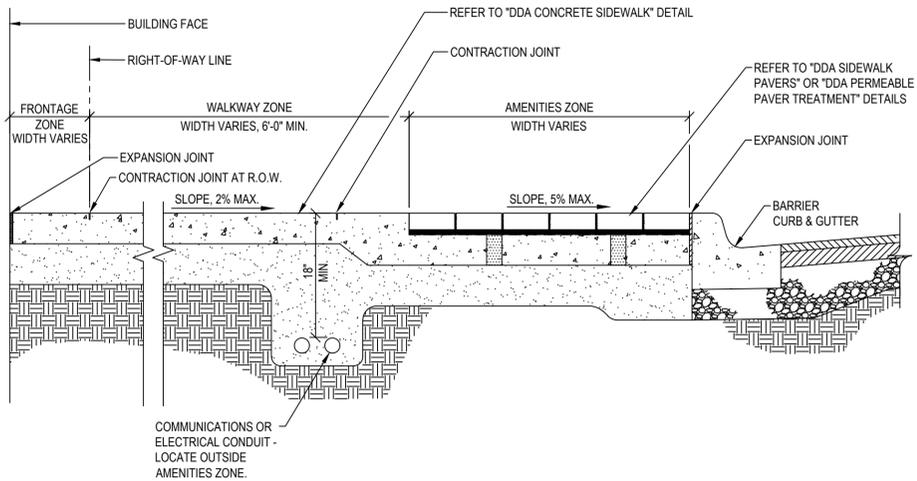


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
TRAFFIC CONTROL STREET LIGHT AND ELECTRICAL DETAILS

SCALE: N/A
DRAWING No. 2015034-13

NOTES:

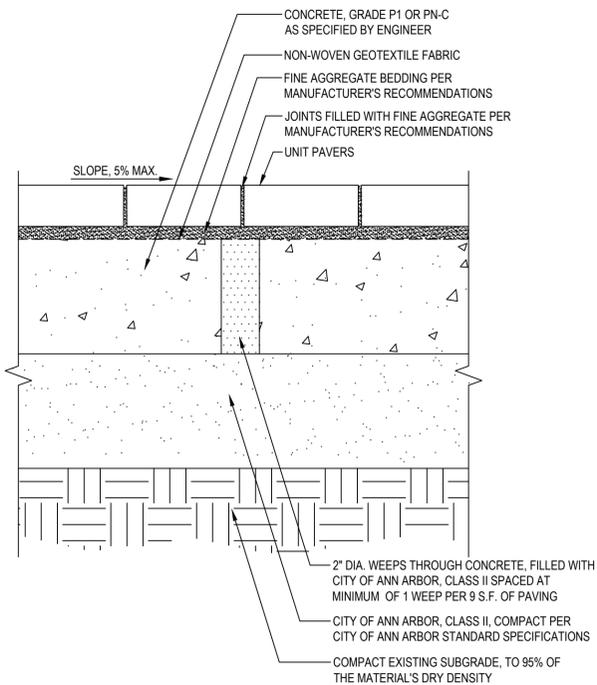
1. REFER TO SITE PLAN FOR PROJECT SPECIFIC TYPES & LIMITS OF SURFACE MATERIALS.
2. CROSS SLOPES IN AMENITIES ZONE SHALL NOT EXCEED 5% WITHOUT APPROVAL OF ENGINEER.



**DDA SIDEWALK CROSS SECTION
SD-DDA-1A**

NOTES:

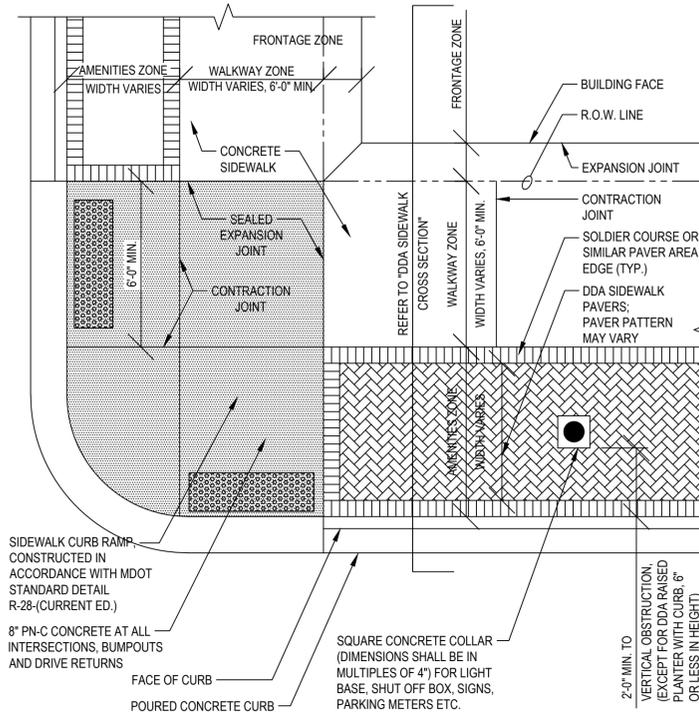
1. DRY LAID PAVERS MUST BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS
2. A MOCK-UP OF PAVERS SHALL BE BUILT TO ESTABLISH THE ACTUAL WIDTH OF PAVER BAND TO AVOID SLIVERS OF PAVERS; APPROVAL BY DDA
3. ALL PAVERS SHALL BE RATED FOR HEAVY VEHICULAR TRAFFIC



**DDA SIDEWALK PAVERS
SD-DDA-3**

NOTES:

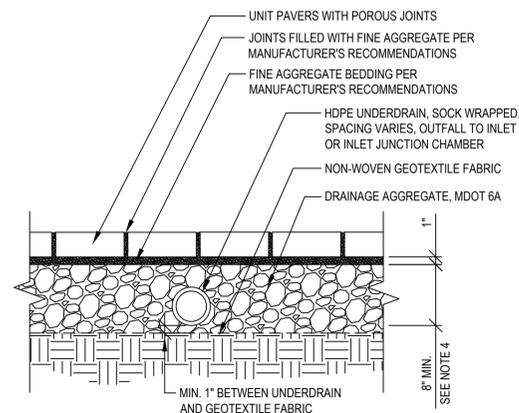
1. DRY LAID PAVERS MUST BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS
2. A MOCK-UP OF PAVERS SHALL BE BUILT TO ESTABLISH THE ACTUAL WIDTH OF PAVER BAND TO AVOID SLIVERS OF PAVERS; APPROVAL BY ENGINEER OR DDA, AS APPROPRIATE.
3. ALL PAVERS SHALL BE RATED FOR HEAVY VEHICULAR TRAFFIC



**DDA SIDEWALK WITH UNIT PAVES IN AMENITY ZONE
SD-DDA-1B**

NOTES:

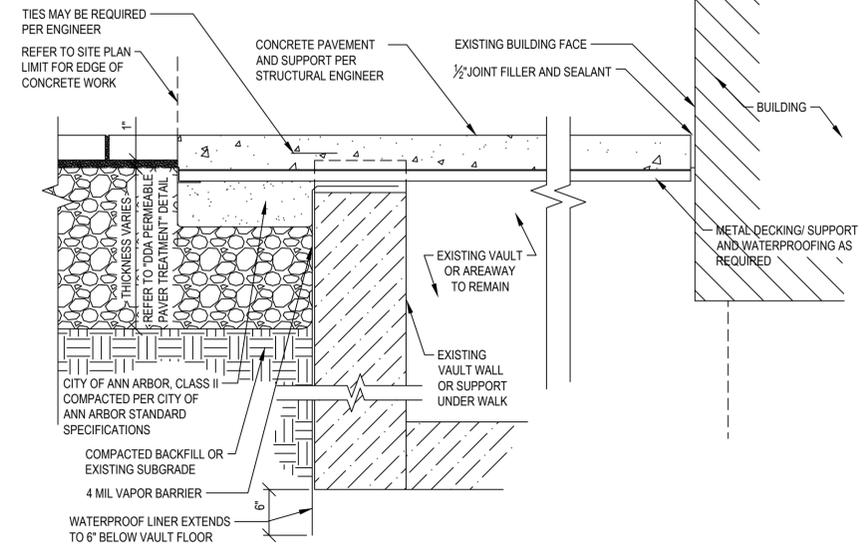
1. DRY LAID PAVERS MUST BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS
2. A MOCK-UP OF PAVERS SHALL BE BUILT TO ESTABLISH THE ACTUAL WIDTH OF PAVER BAND TO AVOID SLIVERS OF PAVERS; APPROVAL BY ENGINEER
3. ALL PAVERS SHALL BE RATED FOR HEAVY VEHICULAR TRAFFIC
4. DRAINAGE AGGREGATE LAYER MAY BE THICKER TO ACCOMMODATE ADDITIONAL STORM WATER STORAGE OR VEHICULAR DESIGN LOADS



**DDA PERMEABLE PAVES TREATMENT
SD-DDA-4**

NOTES:

1. THIS DETAIL IS INTENDED AS A DESIGN GUIDELINE ONLY. FINAL DESIGN TO BE DETERMINED BASED ON FIELD CONDITIONS AND APPROVED BY ENGINEER.

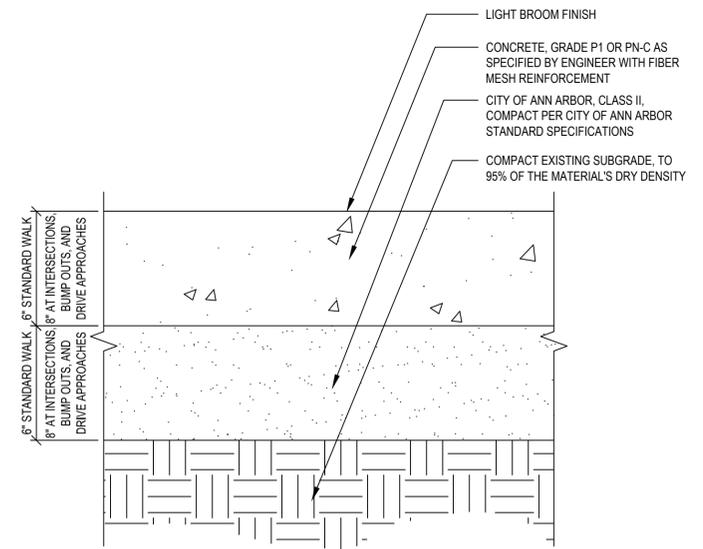


**DDA PERMEABLE PAVES TREATMENT @ VAULTS OR AREAWAY
SD-DDA-5**

NOTES:

1. CONTRACTOR TO CONSTRUCT ALL SIDEWALKS, SIDEWALK RAMPS, CURBS, AND ALL OTHER CONCRETE ITEMS WITHIN A.D.A.G. COMPLIANCE.
2. ALL SIDEWALK CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MDOT STANDARD DETAIL R-28-1.

**DDA CONCRETE SIDEWALK
SD-DDA-2**



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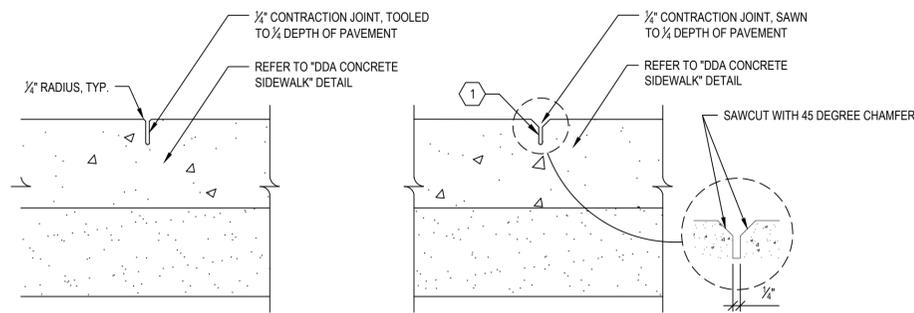


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WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
DDA DETAILS

SCALE: N/A
DRAWING No. 2015034-14
SHEET No.

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- GENERAL NOTES:**
- DESIGN MAY UTILIZE TOOLED OR SAW-CUT CONTRACTION JOINT. PLANS MUST INDICATE SELECTION OF JOINT TYPE. PROJECT MUST HAVE EITHER JOINT TYPE, BUT NOT BOTH.
 - CONTRACTOR TO PROVIDE MOCK UP OF PAVING FINISH, COLOR AND JOINTING FOR CITY APPROVAL, PRIOR TO INSTALLING SIDEWALKS



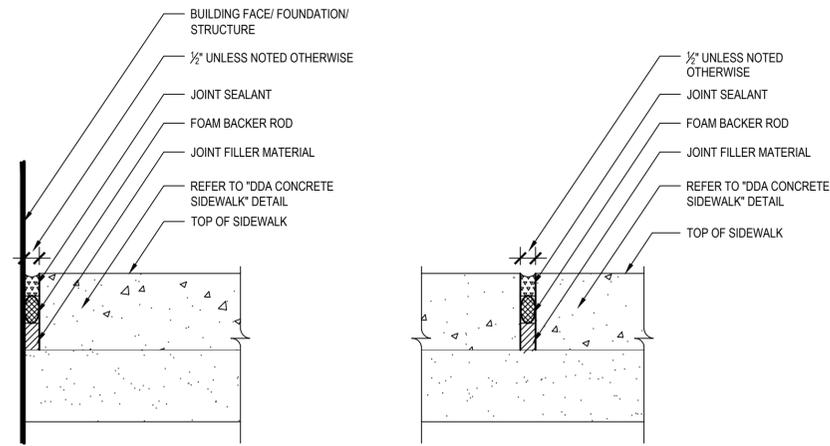
- NOTE:**
- TOOLED CONTRACTION TO HAVE 1/4" RADIUS AT SURFACE OF JOINT

- NOTE:**
- CHAMFERED CONTRACTION JOINT MAY BE SAWCUT AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT RAVELING OF THE CONCRETE AT THE EDGES.
 - A FORM OR GUIDE IS REQUIRED TO BE USED ON ALL CHAMFERED CONTRACTION JOINTS THAT ARE ARCS. ARC JOINTS ARE TO BE SAWCUT TO A TRUE EVEN CONTINUOUS RADIUS WITHOUT IRREGULARITIES.

TOOLED CONTRACTION JOINT

SAW-CUT CONTRACTION JOINT

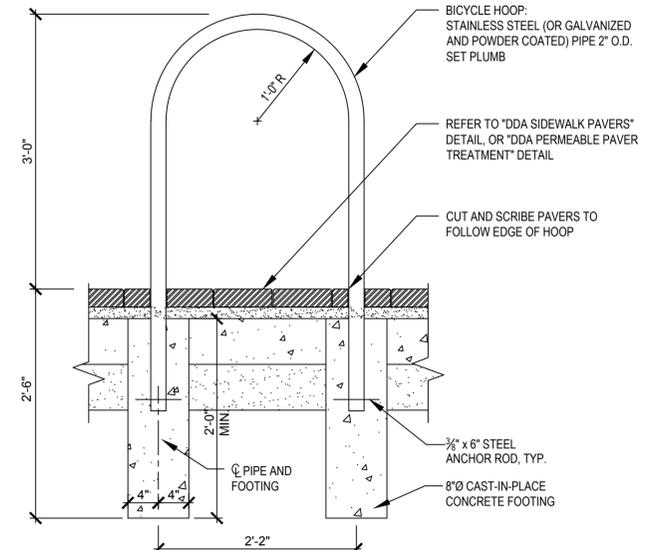
DDA SIDEWALK - CONTRACTION JOINT
SD-DDA-6



- NOTE:**
- ALL EXPANSION JOINTS TO BE SEALED IN DDA DISTRICT
 - DOWELED SEALED EXPANSION JOINTS INCLUDING BARS AND SLEEVES ARE INCIDENTAL TO PAVEMENT PAY ITEMS.

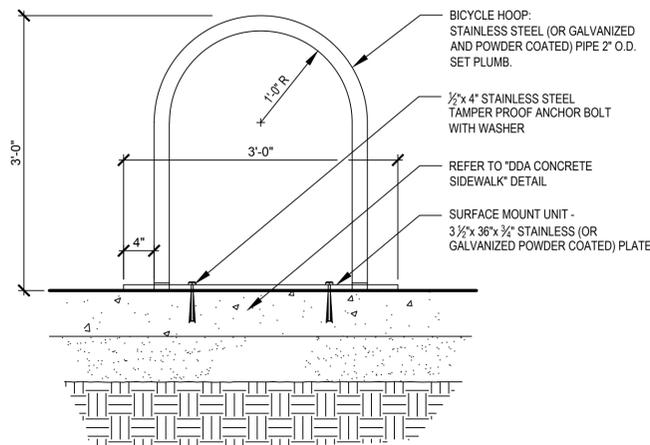
DDA SIDEWALK - SEALED EXPANSION JOINT
SD-DDA-7

- BICYCLE HOOP NOTES:**
- TO BE USED ONLY FOR DDA SIDEWALK PAVERS OR DDA PERMEABLE PAVEMENT TREATMENTS
 - LOCATE AND GROUP BICYCLE HOOPS IN THE AMENITY ZONE.
 - BIKE HOOPS TO BE A MINIMUM OF 2'-10" FROM BACK OF CURB WHEN PERPENDICULAR TO CURB, AND 2'-0" WHEN PARALLEL.
 - REFER TO ANN ARBOR DOWNTOWN STREET DESIGN MANUAL FOR ADDITIONAL LAYOUT GUIDELINES.



DDA BIKE HOOP - EMBEDDED
SD-DDA-8

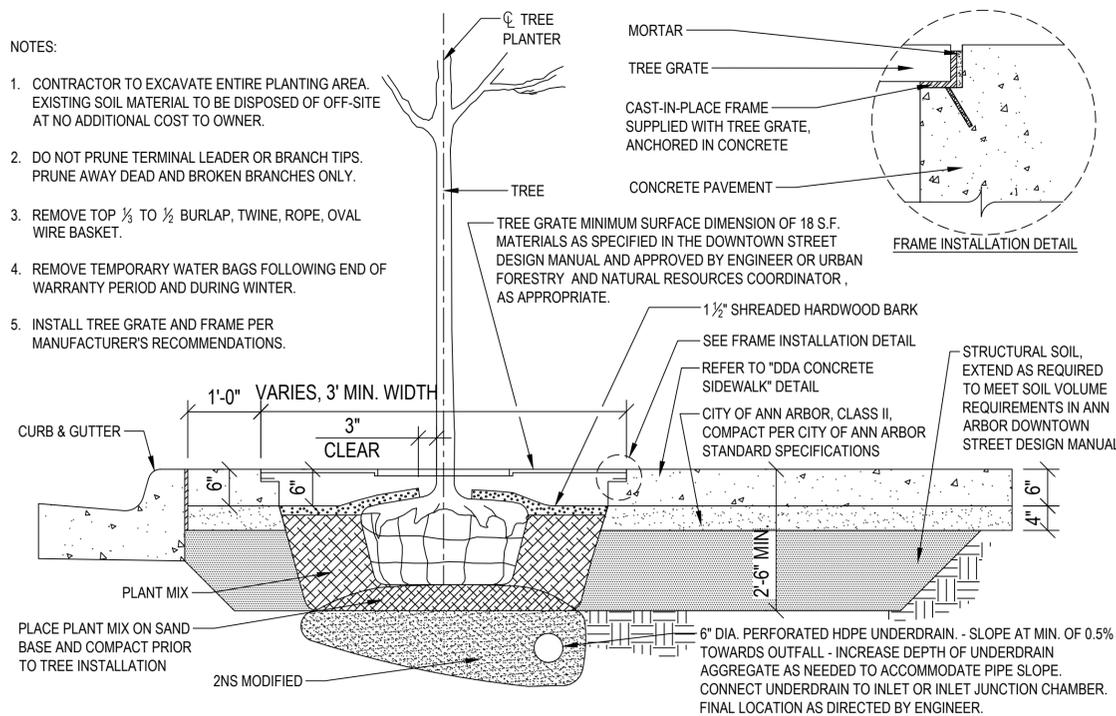
- BICYCLE HOOP NOTES:**
- TO BE USED ONLY FOR DDA CONCRETE SIDEWALK SURFACES
 - LOCATE AND GROUP BICYCLE HOOPS IN THE AMENITY ZONE.
 - BIKE HOOPS TO BE MINIMUM OF 2'-10" FROM BACK OF CURB WHEN PERPENDICULAR TO CURB, AND 2'-0" WHEN PARALLEL.
 - REFER TO ANN ARBOR DOWNTOWN STREET DESIGN MANUAL FOR ADDITIONAL LAYOUT GUIDELINES.



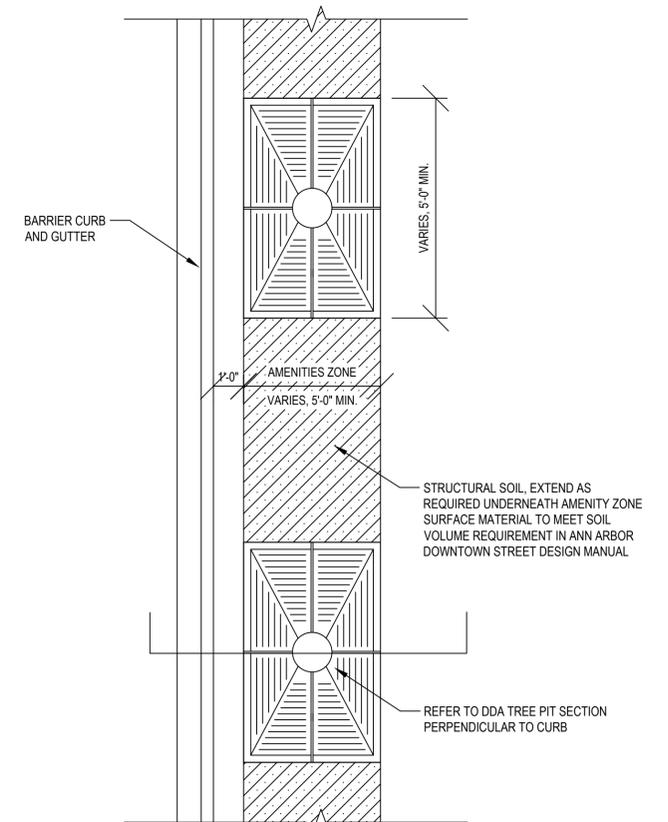
DDA BIKE HOOP - SURFACE MOUNTED
SD-DDA-9

NOTES:

- CONTRACTOR TO EXCAVATE ENTIRE PLANTING AREA. EXISTING SOIL MATERIAL TO BE DISPOSED OF OFF-SITE AT NO ADDITIONAL COST TO OWNER.
- DO NOT PRUNE TERMINAL LEADER OR BRANCH TIPS. PRUNE AWAY DEAD AND BROKEN BRANCHES ONLY.
- REMOVE TOP 1/3 TO 1/2 BURLAP, TWINE, ROPE, OVAL WIRE BASKET.
- REMOVE TEMPORARY WATER BAGS FOLLOWING END OF WARRANTY PERIOD AND DURING WINTER.
- INSTALL TREE GRATE AND FRAME PER MANUFACTURER'S RECOMMENDATIONS.



DDA TREE PIT SECTION PERPENDICULAR TO CURB
SD-DDA-11A



DDA TREE PIT PLAN
SD-DDA-11B

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

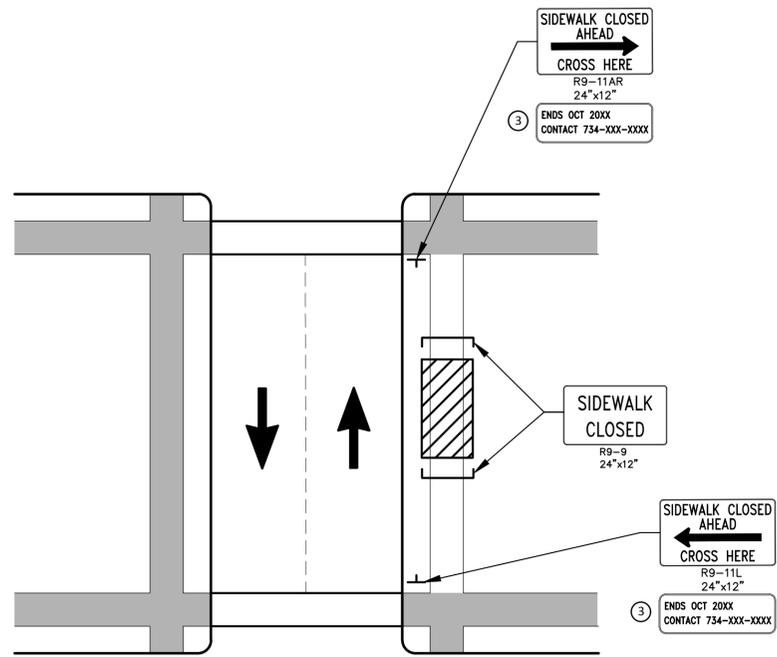
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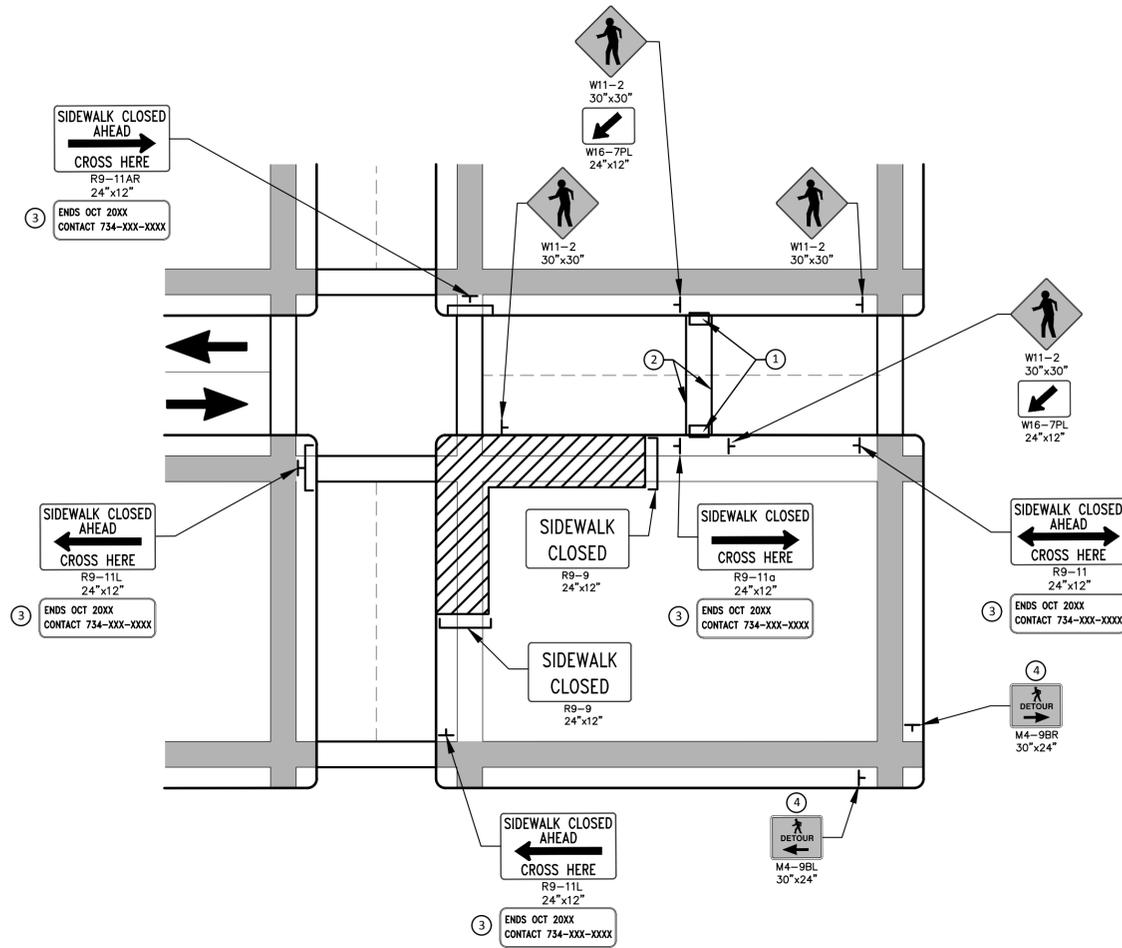
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WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.

SCALE: N/A
DRAWING No. 2015034-15
SHEET No. 15 OF 63

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OTHER SIDE OF STREET DETOUR
(FOR MID-BLOCK CLOSURE)



OTHER SIDE OF STREET DETOUR OR DETOUR WITH TRAILBLAZING SIGNS
(FOR CORNER SIDEWALK CLOSURE WITH OPTIONAL TEMPORARY CROSSWALK)

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE AN ALTERNATE PEDESTRIAN ROUTE (APR) AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

PROVIDE A SMOOTH, CONTINUOUS, HARD SURFACE THROUGH THE LENGTH OF THE APR. PROVIDE A FIRM, STABLE, AND SLIP RESISTANT TEMPORARY WALKWAY SURFACE TO COVER SHORT SEGMENTS OF ROUGH, SOFT, OR UNEVEN GROUND.

THE PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

WHEN A SIGN OR BARRICADE IS ORIENTED SUCH THAT VISIBILITY TO TRAFFIC (BIKES, PEDESTRIANS) IS REDUCED ENOUGH TO CAUSE HAZARD, DELINEATE THE SIGN/BARRICADE WITH APPROPRIATE DEVICES.

MINIMIZE DISRUPTION TO PEDESTRIANS TO THE MAXIMUM EXTENT FEASIBLE BY PROVIDING AN APR IN THE FOLLOWING ORDER OF PREFERENCE:

1. PROVIDE THE APR ON THE SAME SIDE OF THE STREET AS THE DISRUPTED ROUTE UTILIZING BYPASSES.
2. WHERE IT IS NOT FEASIBLE TO PROVIDE A SAME SIDE APR, PROVIDE A DETOUR ON THE OTHER SIDE OF THE STREET.
3. WHERE IT IS NOT FEASIBLE TO PROVIDE AN APR ON THE OTHER SIDE OF THE ROADWAY, PROVIDE AN APR DETOUR WITH TRAILBLAZING SIGNS.

SPECIFIC NOTES

1. TEMPORARY CURB RAMPS WITH DETECTABLE WARNINGS.
2. TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
3. TYPICAL SIGN MESSAGE FOR A TEMPORARY PEDESTRIAN DETOUR SHOULD INCLUDE INFORMATION SUCH AS THE DURATION OF THE WALKWAY RESTRICTIONS (BEGINNING AND/OR END DATES) AND A PROJECT CONTACT NUMBER FOR 24 / 7 QUESTIONS OR REPORTING HAZARDS.
4. PEDESTRIAN DETOUR TRAILBLAZING SIGNS SHOULD BE USED IF THE PEDESTRIAN DETOUR IS LOCATED SOMEPLACE OTHER THAN ACROSS THE STREET FROM THE SIDEWALK CLOSURE.

PEDESTRIAN TEMPORARY TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN THROUGH MOVEMENTS FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, ON AT LEAST ONE SIDE OF THE STREET DURING CONSTRUCTION. ANY SIDEWALK CLOSURES SHALL MEET THE REQUIREMENTS OF THE MMUTCD, PART 6.
2. PEDESTRIAN ACCESS SHALL BE PROVIDED TO ALL ADJACENT PROPERTIES, BUILDINGS, RESIDENCES AND COMMERCIAL PROPERTIES AT ALL TIMES. THIS MAY INCLUDE TEMPORARY WALKWAYS SPANNING THE CONSTRUCTION AREA.
3. IF SIDEWALKS ARE CLOSED, A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) SHALL BE PROVIDED ON THE SAME SIDE OF THE ROAD AS THE CLOSED SIDEWALK, IF POSSIBLE. SIGNS AND BARRICADES SHALL BE USED TO PROVIDE ADVANCE NOTICE OF THE CLOSURE AND THE ROUTE OF ANY PEDESTRIAN DETOURS. THE TPAR SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4 FEET. IF THE TPAR IS LESS THAN 5 FEET IN WIDTH, A 5 FOOT BY 5 FOOT PASSING SPACE SHOULD BE PROVIDED AT LEAST EVERY 200 FEET. THE SURFACE OF THE TPAR SHALL BE SMOOTH AND CONTINUOUS FOR THE LENGTH OF THE TPAR. THE TPAR SHALL MAINTAIN THE SAME LEVEL OF ACCESSIBILITY AND DETECTABILITY AS THE FACILITY THAT IS BEING CLOSED. THE TPAR SHALL NOT LEAD PEDESTRIANS INTO CONFLICTS WITH VEHICLES, EQUIPMENT, OR CONSTRUCTION OPERATIONS.
4. IF THE TPAR IS ADJACENT TO MOVING TRAFFIC, CONSTRUCTION OPERATIONS/EQUIPMENT, OR DROP-OFFS, THEN CRASH WORTHY CHANNELIZING DEVICES THAT MEET THE REQUIREMENTS OF THE MMUTCD SHALL BE USED.
5. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.
6. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS EXCEPT WHERE PROPER PROTECTION AND A TPAR HAVE BEEN PROVIDED.
7. THE CONTRACTOR SHALL PROVIDE A TEMPORARY PEDESTRIAN TRAFFIC CONTROL PLAN FOR REVIEW AND WRITTEN APPROVAL BY THE ENGINEER A MINIMUM OF THREE WEEKS BEFORE SUCH PLAN IS IMPLEMENTED. THIS PLAN SHALL DETAIL THE CONSTRUCTION PHASING AND SCHEDULE AND THE SPECIFIC METHODS OF MAINTAINING SAFE PEDESTRIAN ACCESS THROUGHOUT THE CONSTRUCTION AREA. THIS PLAN SHALL PROVIDE THE LOCATION AND DETAILS OF TEMPORARY CONSTRUCTION SIGNING, MARKINGS, BARRICADES, CHANNELIZING DEVICES, TPARS AND METHODS TO MAINTAIN ACCESS TO ADJACENT PROPERTIES, BUSINESSES, RESIDENCES, ETC.
8. PROVISION OF THE TPAR AND ALL OF ITS ELEMENTS, INCLUDING BUT NOT LIMITED TO SIGNS, CHANNELIZING DEVICES, BARRICADES, TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES IS TO BE PAID FOR INCIDENTAL TO TRAFFIC CONTROL.

LEGEND

- SIGN
- EXISTING PEDESTRIAN SURFACE
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- BARRIER
- SIDEWALK BARRICADE
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DEVICE



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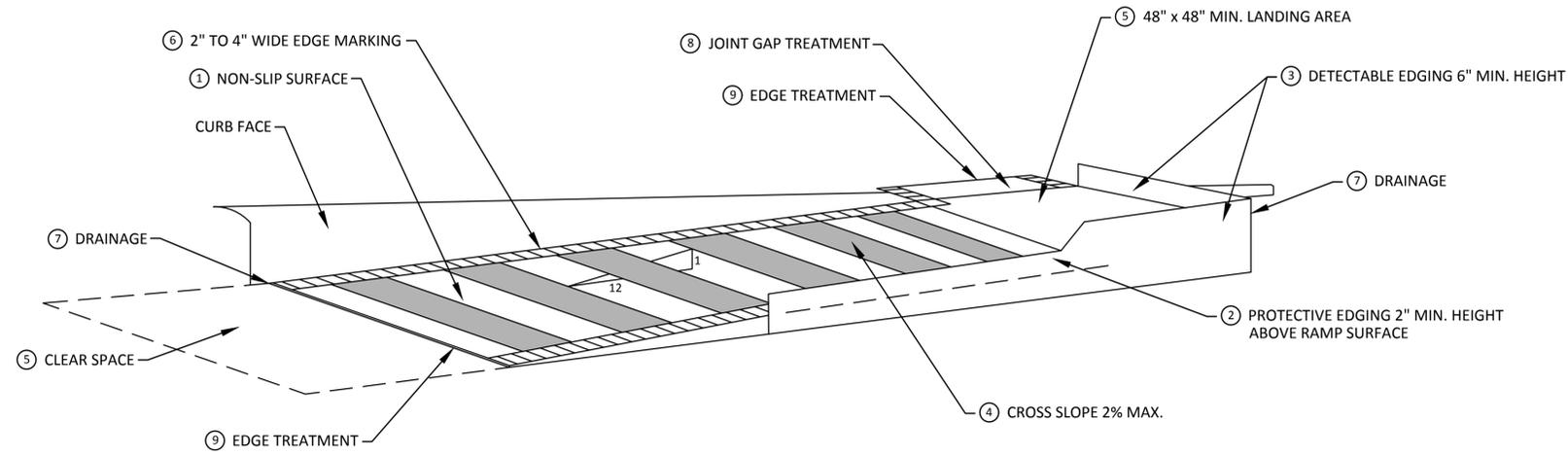
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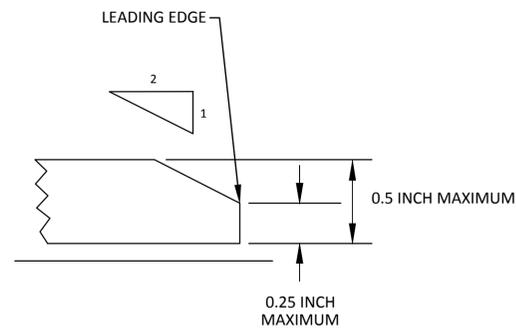
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
ALTERNATE PEDESTRIAN ROUTE (APR) DETOUR

SCALE: N.T.S.
DRAWING No. 2015034-16
SHEET No.

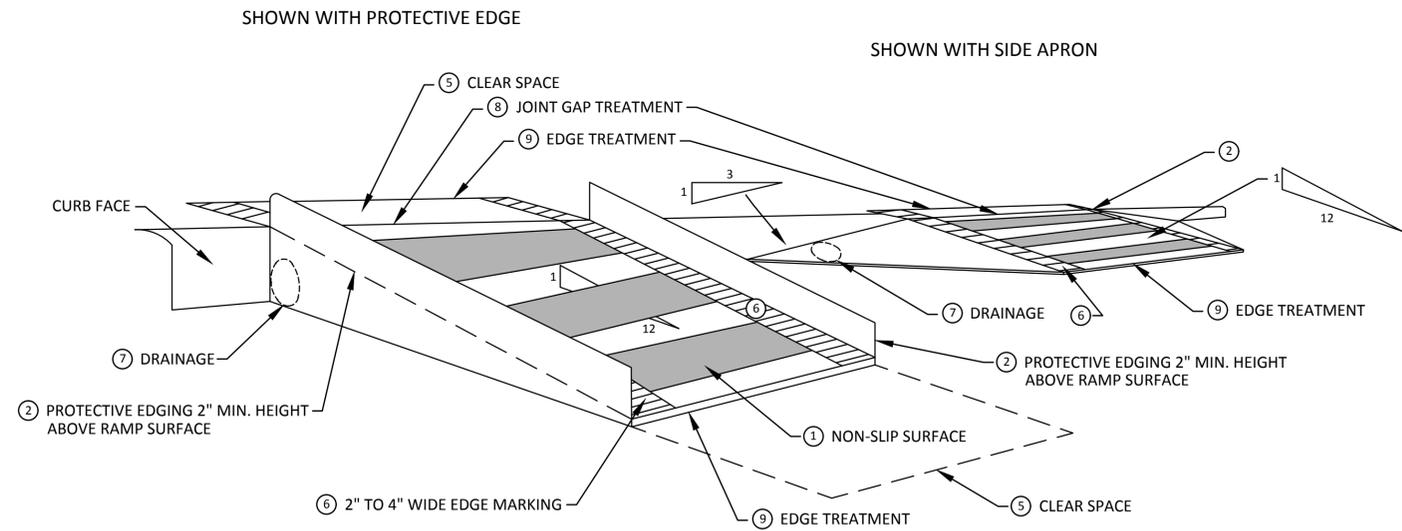
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**TEMPORARY CURB RAMP
PARALLEL TO CURB**



EDGE TREATMENT



**TEMPORARY CURB RAMP
PERPENDICULAR TO CURB**

SPECIFIC NOTES

- 1 CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.
- 2 PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE PLACED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3. PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- 3 DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE PLACED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- 4 CURB RAMPS AND LANDINGS SHALL HAVE A 2% MAX. CROSS SLOPE.
- 5 CLEAR SPACE OF 48" x 48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- 6 THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A CONTRASTING COLOR, 2" TO 4" WIDE MARKING. THE MARKING IS OPTIONAL WHERE COLOR CONTRASTING EDGING IS USED.
- 7 WATER FLOW IN THE GUTTER SYSTEM SHALL NOT BE IMPEDED.
- 8 LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- 9 CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHOULD BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2" HEIGHT.



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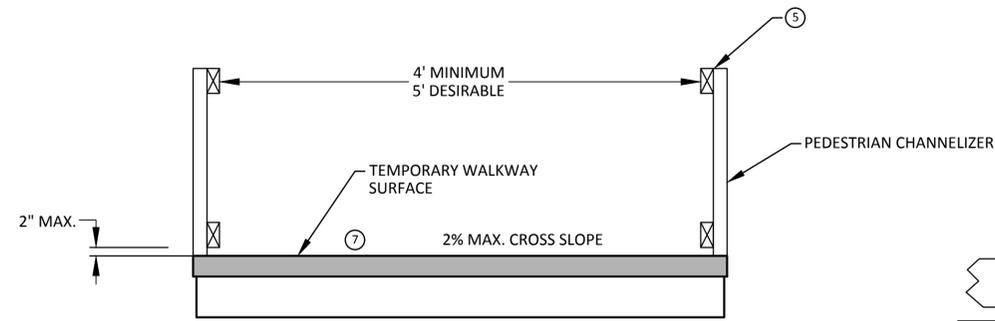
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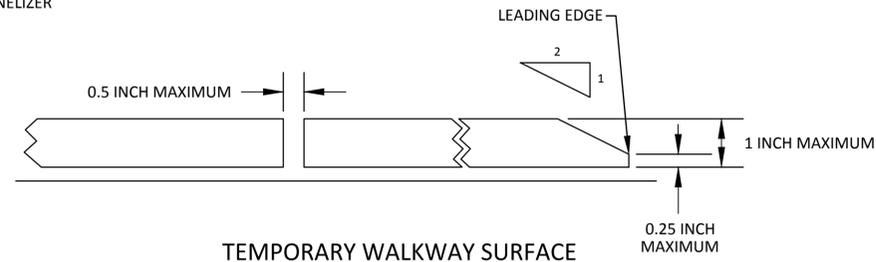
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WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
TPAR RAMPS

SCALE: N.T.S.
DRAWING No. 2015034-18

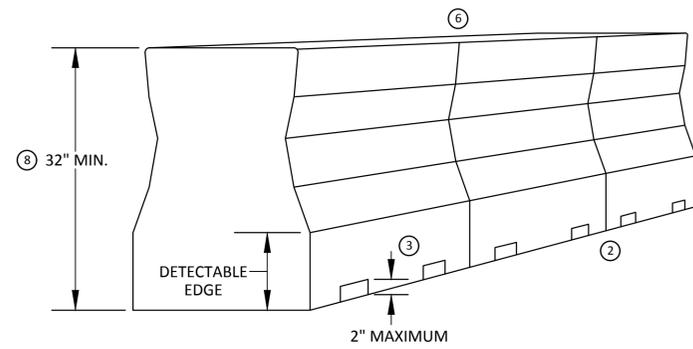
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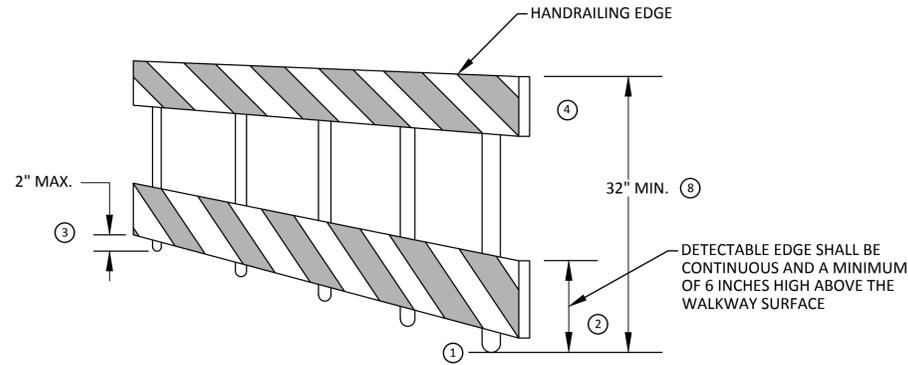
TEMPORARY PEDESTRIAN ACCESS



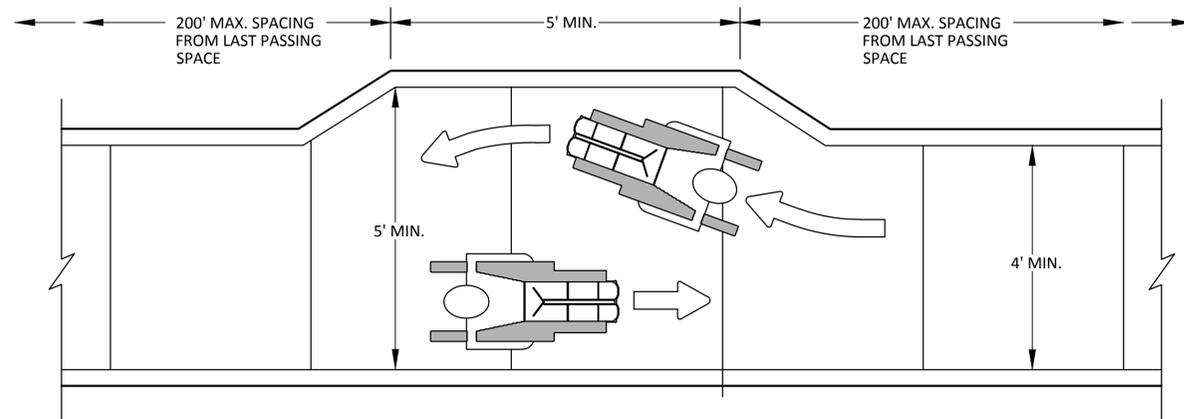
TEMPORARY WALKWAY SURFACE



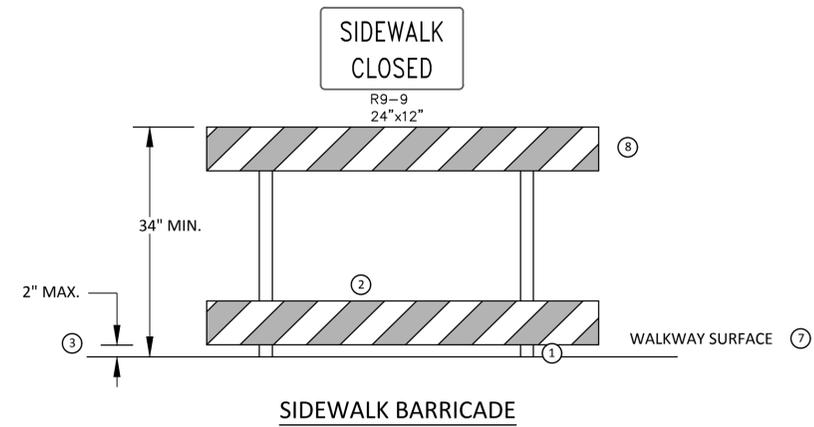
PEDESTRIAN CHANNELIZER USING A BARRIER
(MINIMUM REQUIREMENTS)



PEDESTRIAN CHANNELIZER
(MINIMUM REQUIREMENTS)



NARROW TEMPORARY PEDESTRIAN ACCESS ROUTE PASSING DETAIL



SIDEWALK BARRICADE

GENERAL NOTES

RAILINGS OR OTHER OBJECTS MAY PROTRUDE A MAXIMUM OF 4 INCHES INTO THE WALKWAY CLEAR SPACE WHEN LOCATED A MINIMUM OF 27 INCHES ABOVE THE WALKWAY SURFACE.
 ANY PEDESTRIAN DEVICES USED TO PROVIDE POSITIVE PROTECTION FOR PEDESTRIANS OR WORKERS SHALL MEET CRASHWORTHY REQUIREMENTS APPROPRIATE FOR THE BARRIERS APPLICATION.
 BARRICADES SHALL BE PLACED ACROSS THE ENTIRE WIDTH OF THE WALKWAY SURFACE.

SPECIFIC NOTES

- ① ANY TRIPPING HAZARD IN THE WALKWAY NEEDS A DETECTABLE EDGE. BALLAST SHALL BE LOCATED BEHIND OR INTERNAL TO THE DEVICE. ANY SUPPORT ON THE FRONT OF THE DEVICE SHALL NOT EXTEND INTO THE 48 INCH MINIMUM WALKWAY CLEAR SPACE AND SHALL NOT EXCEED 0.5 INCHES IN HEIGHT ABOVE THE WALKWAY SURFACE.
- ② DETECTABLE EDGES SHALL BE CONTINUOUS AND 6 INCHES MIN. HIGH ABOVE WALKWAY SURFACE AND HAVE COLOR MARKINGS CONTRASTING WITH THE WALKWAY SURFACE.
- ③ DEVICES SHALL NOT BLOCK WATER DRAINAGE FROM THE WALKWAY. A GAP HEIGHT OR OPENING FROM THE WALKWAY SURFACE UP TO A MAXIMUM OF 2 INCHES IS ALLOWED FOR DRAINAGE PURPOSES.
- ④ WHEN HAND GUIDANCE IS REQUIRED, THE TOP RAIL OR TOP SURFACE SHALL:
 - BE IN A VERTICAL PLANE PERPENDICULAR TO THE WALKWAY ABOVE THE DETECTABLE EDGE.
 - BE CONTINUOUS AT A HEIGHT OF 34 TO 38 INCHES ABOVE THE WALKWAY SURFACE, AND
 - BE SUPPORTED WITH MINIMAL INTERFERENCE TO THE PEDESTRIAN'S HANDS OR FINGERS.
- ⑤ ALL DEVICES SHALL BE FREE OF SHARP OR ROUGH EDGES, AND FASTENERS (BOLTS) SHALL BE ROUNDED TO PREVENT HARM TO HANDS, ARMS OR CLOTHING OF PEDESTRIANS.
- ⑥ ALL DEVICES USED TO CHANNELIZE PEDESTRIAN FLOW SHOULD INTERLOCK SUCH THAT GAPS DO NOT ALLOW PEDESTRIANS TO STRAY FROM THE CHANNELIZED PATH.
- ⑦ A WALKWAY SURFACE SHALL BE FIRM, STABLE, AND SLIP RESISTANT.
- ⑧ LONGITUDINAL CHANNELIZING DEVICES FOR PEDESTRIANS SHALL BE 32 INCHES HIGH OR GREATER.



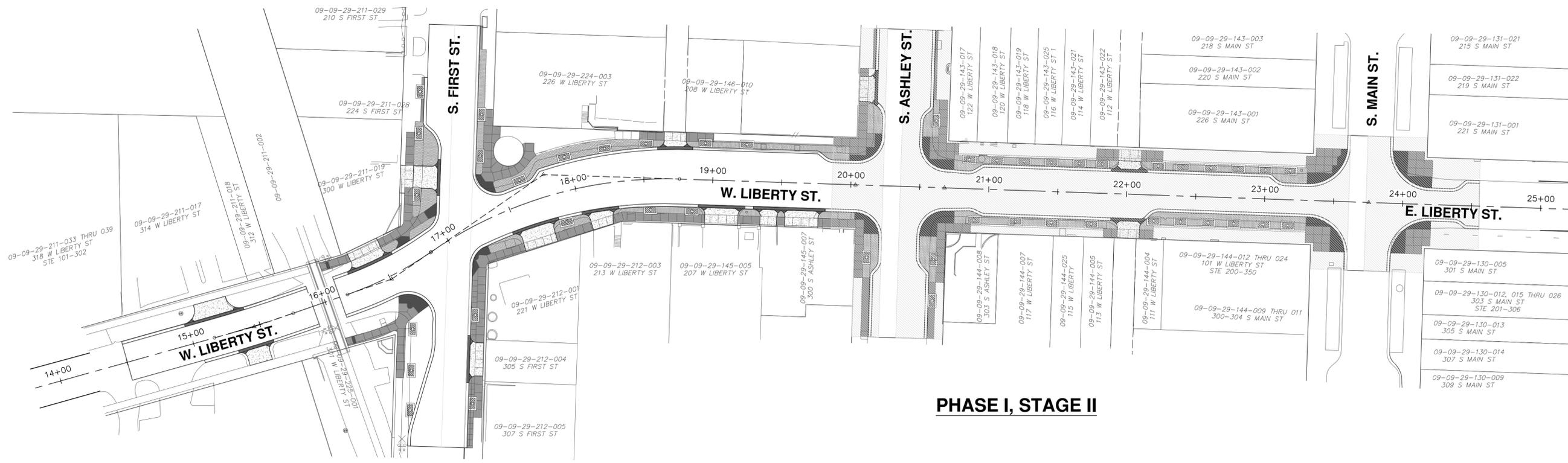
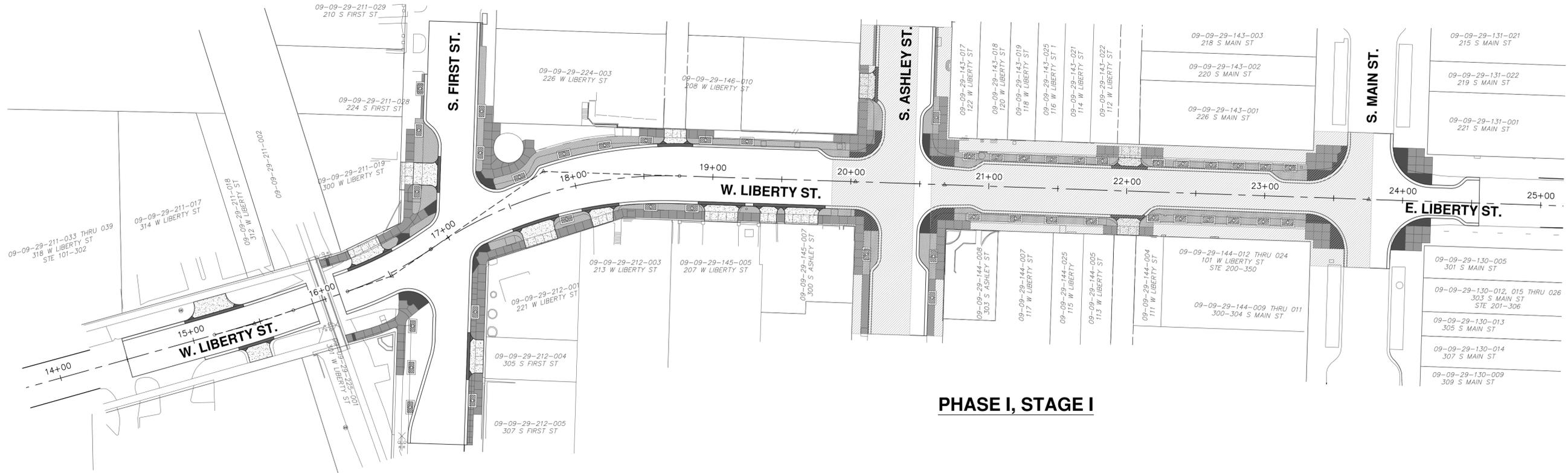
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 TPAR WALKWAY DEVICES

SCALE: N.T.S.
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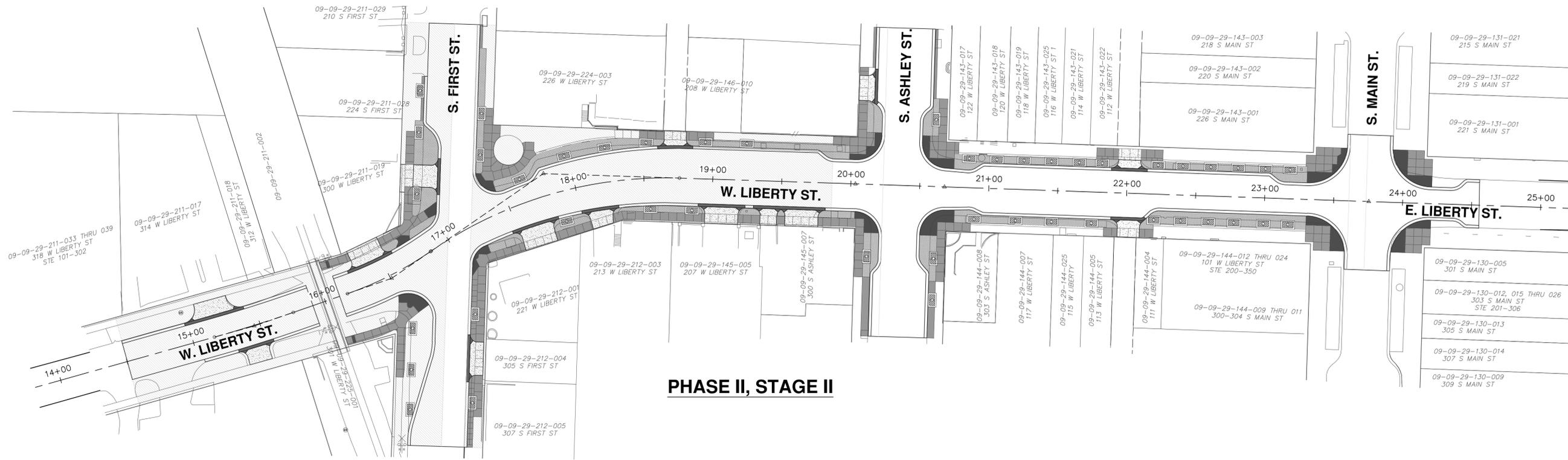
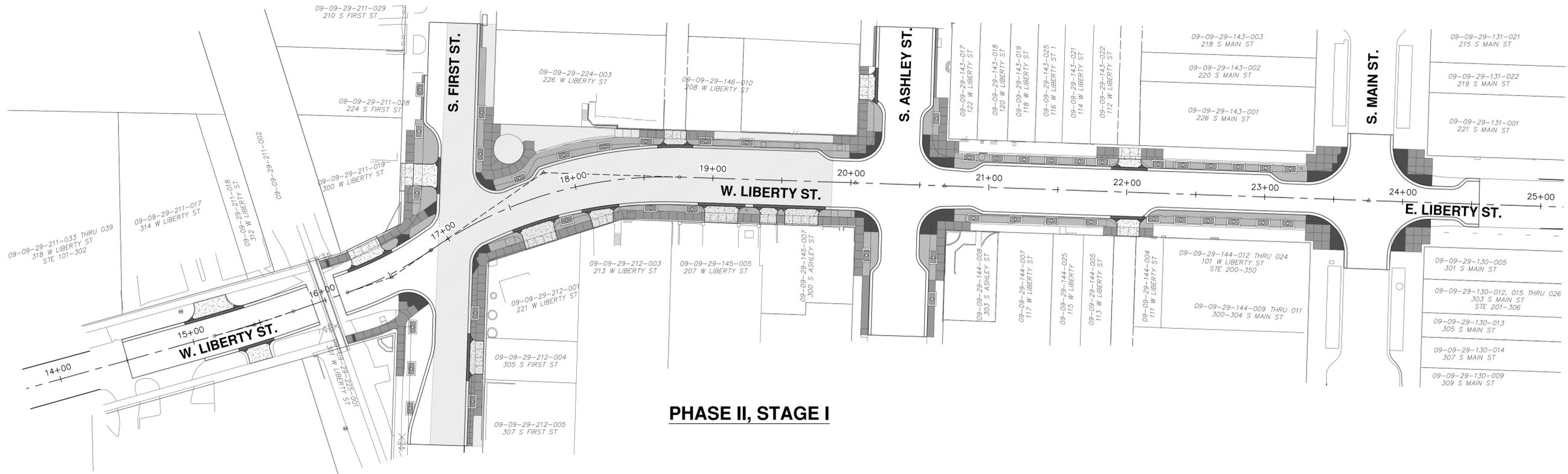
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WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
CONSTRUCTION PHASING
PHASE I, STAGE I AND STAGE II

SCALE PLAN: 1" = 40'
DRAWING No. 2015034-20
SHEET No. 20 OF 63

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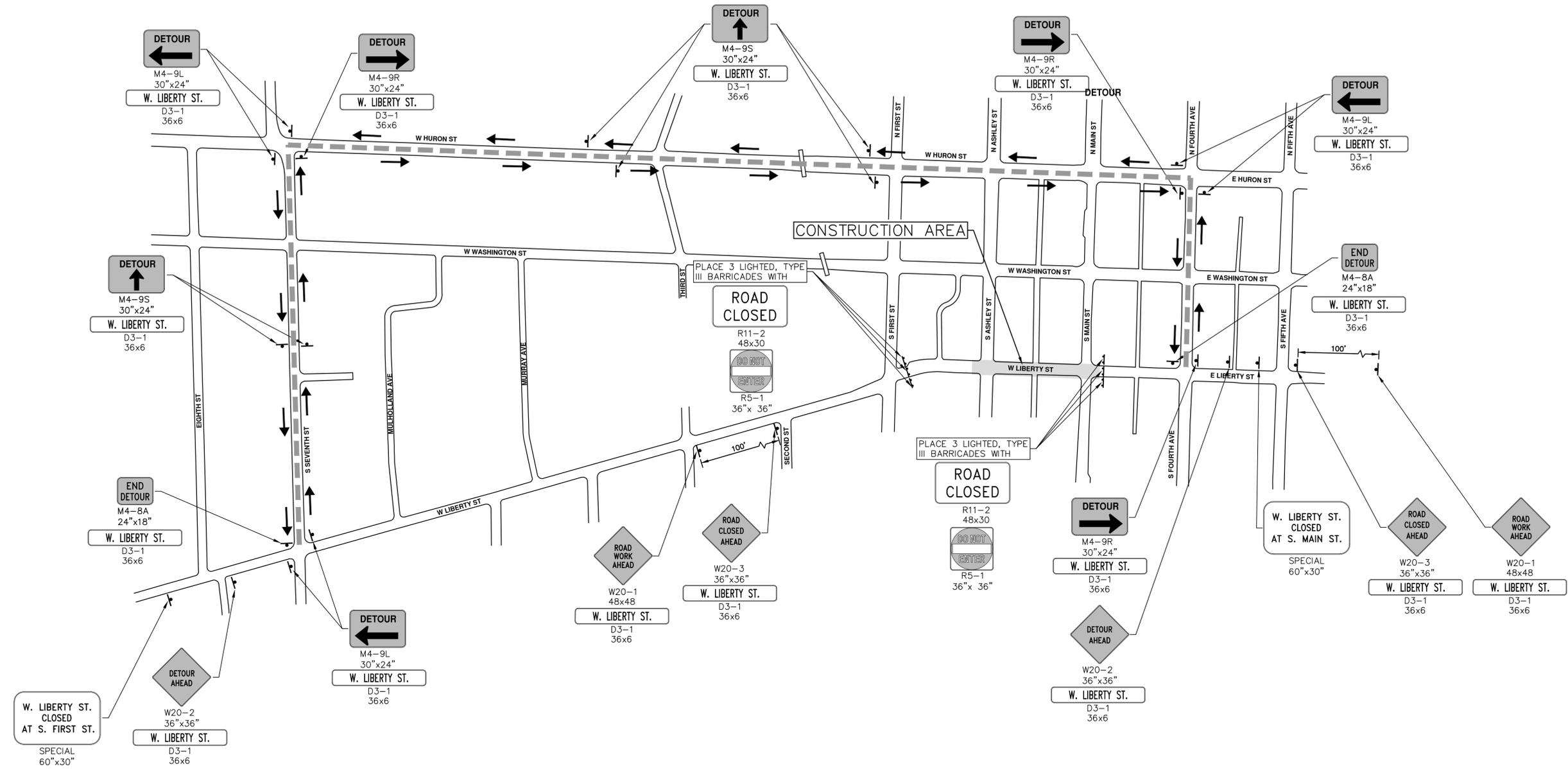
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 WEST LIBERTY STREET RECONSTRUCTION
 S. FIRST ST. - N. MAIN ST.
 CONSTRUCTION PHASING
 PHASE II, STAGE I AND STAGE II**

SCALE PLAN: 1" = 40'
 DRAWING No. **2015034-21**



DETOUR CONSTRUCTION NOTES:

1. DEPENDING ON THE DETOUR ROUTES THAT ARE PUT IN PLACE, CONFLICTING SIGNS MAY BE PRESENT. PRIOR TO THE ORDERING OR PLACEMENT OF ANY SIGNS, MEET WITH THE ENGINEER TO VERIFY THE EXACT NUMBER AND LOCATION OF THE SIGNS TO BE PLACED. THE ENGINEER AND THE CONTRACTOR SHALL WORK TOGETHER TO ELIMINATE ALL CONFLICTS.
2. THE CITY RESERVES THE RIGHT TO ORDER ADDITIONAL SIGNS AND PLACE THEM INTO SERVICE IN ORDER TO SAFELY MAINTAIN TRAFFIC. ADJUSTMENTS IN THE UNIT PRICE FOR THESE ITEMS OF WORK SHALL NOT BE ALLOWED FOR THESE OCCURRENCES.
3. THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS WITH THOSE OF THE CITY OF ANN ARBOR'S SIGNS AND SIGNALS UNIT DURING THE COURSE OF THE DETOUR ROUTE ESTABLISHMENT TO EFFECTIVELY AND SAFELY MAINTAIN TRAFFIC. DO NOT ERECT ANY SIGNS UNTIL ITS LOCATION AND PROPOSED DATE OF INSTALLATION IS APPROVED BY THE ENGINEER.
4. THESE DETOURS ARE TO BE IN PLACE DURING W. LIBERTY ST. RECONSTRUCTION. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR WILL CLOSE AND DETOUR WEST AND EAST BOUND W. LIBERTY ST. TRAFFIC. SEE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR DETAILS ON CONSTRUCTION STAGING, SEQUENCING, CLOSURE AND DETOUR LIMITATIONS, AND OTHER DETAILS.
5. REFERENCE THE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR ADDITIONAL PROJECT REQUIREMENTS. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO THE SECTION OF SAME SPECIAL PROVISION REGARDING COORDINATION WITH THE CITY SIGNS AND SIGNALS UNIT FOR THE SEVERAL DETOUR ROUTE MODIFICATIONS AND THE MODIFICATIONS TO TRAFFIC SIGNALS FOR THE DETOUR.
6. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN SIGNS AS SHOWN ON THE PLANS OR OTHERWISE DIRECTED BY THE ENGINEER.
7. CONSTRUCTION WARNING SIGNS SHALL HAVE AN ORANGE, HIGH-INTENSITY, REFLECTORIZED BACKGROUND.
8. SIGNS SHALL CONFORM TO THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
9. THE CONTRACTOR SHALL DRIVE ALL SIGNS INTO EXPOSED GROUND OR INSERT INTO A BORED HOLE IN PAVEMENT AS NECESSARY TO PERMANENTLY SECURE. ALL HOLES IN PAVEMENT SHALL BE FILLED WITH ENGINEER-APPROVED MORTAR WHEN THE SIGN IS REMOVED AND NO LONGER NEEDED. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "SIGN, TYPE B, TEMP, PRISMATIC, FURN" OR "SIGN, TYPE B, TEMP, PRISMATIC, FURN, SPECIAL".
10. ADVANCE WARNING SIGNS SHALL BE PROVIDED WITH TWO (2) TYPE A FLASHING LIGHTS AND ONE (1) DAY-GLOW ORANGE FLAG.

PCMS MESSAGE PHASING	
PRIOR TO CONSTRUCTION	DURING CONSTRUCTION
W. LIBERTY STREET CONSTRUCTION	EAST BOUND W. LIBERTY STREET CLOSED
MONTH DATE *	AT SOUTH FIRST STREET
DETOUR ROUTE ADVISED	FOLLOW POSTED DETOUR

NOTE: PCMS LOCATIONS AND MESSAGES WILL BE AS DIRECTED BY THE ENGINEER.

*THE CONTRACTOR SHALL PLACE THE APPROPRIATE DATE AS APPROVED BY THE ENGINEER.



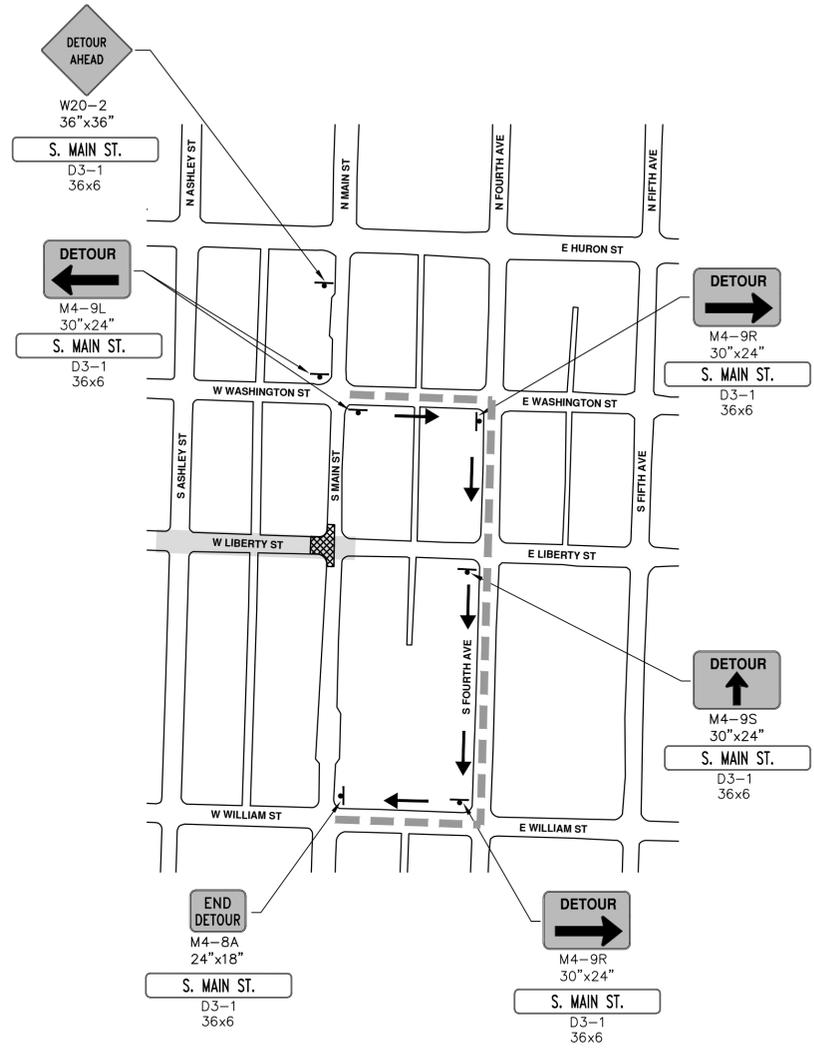
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
 DETOUR PLAN
 PHASE 1 - OVERALL

SCALE PLAN: 1" = 200'
 DRAWING No. 2015034-22

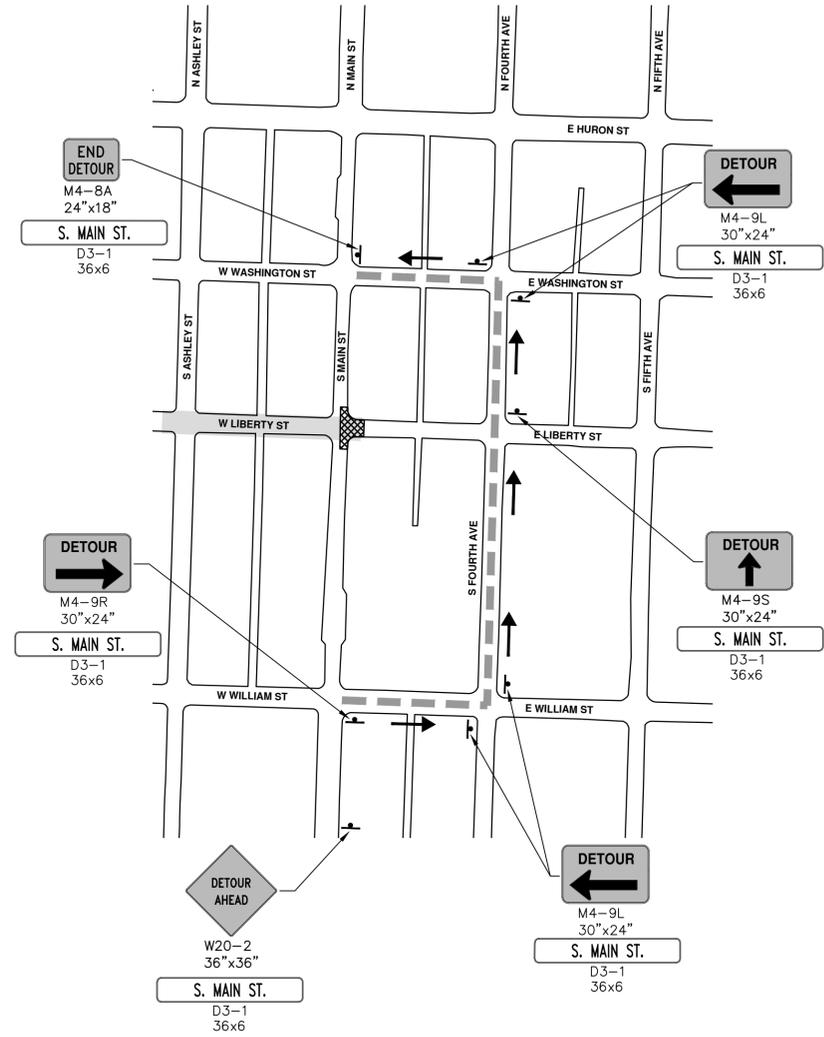


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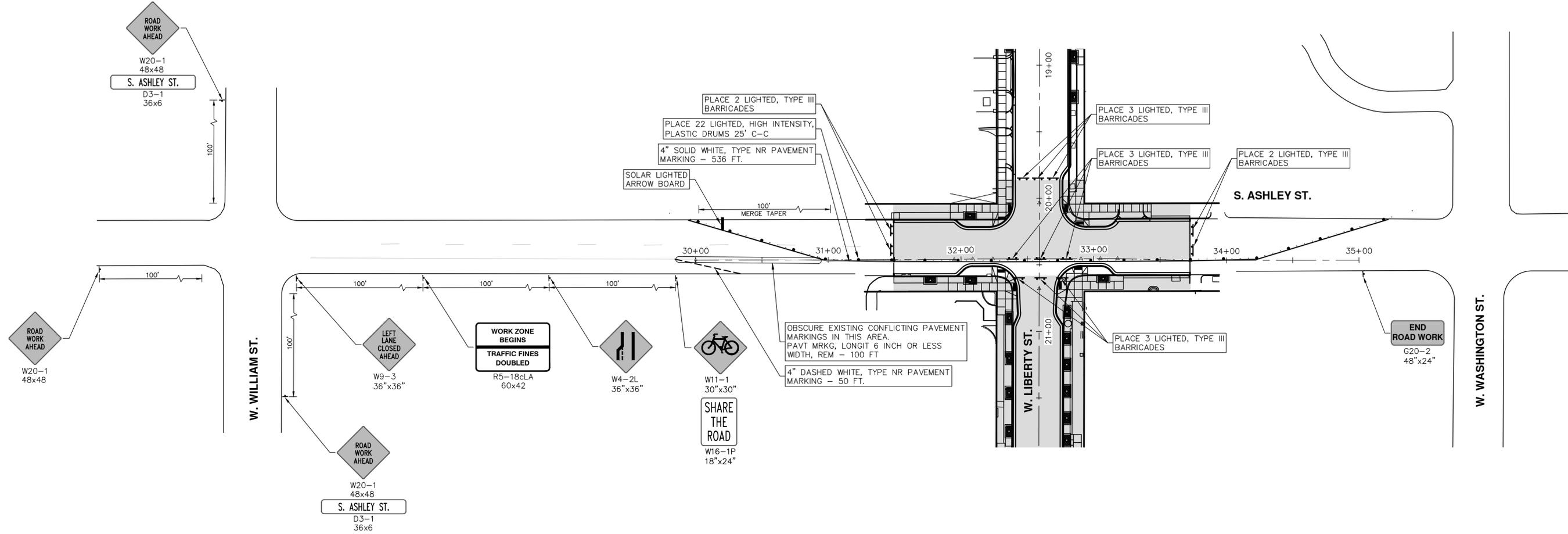


**SOUTHBOUND S. MAIN ST. DETOUR
PHASE I, STAGE I**



**NORTHBOUND S. MAIN ST. DETOUR
PHASE I, STAGE II**



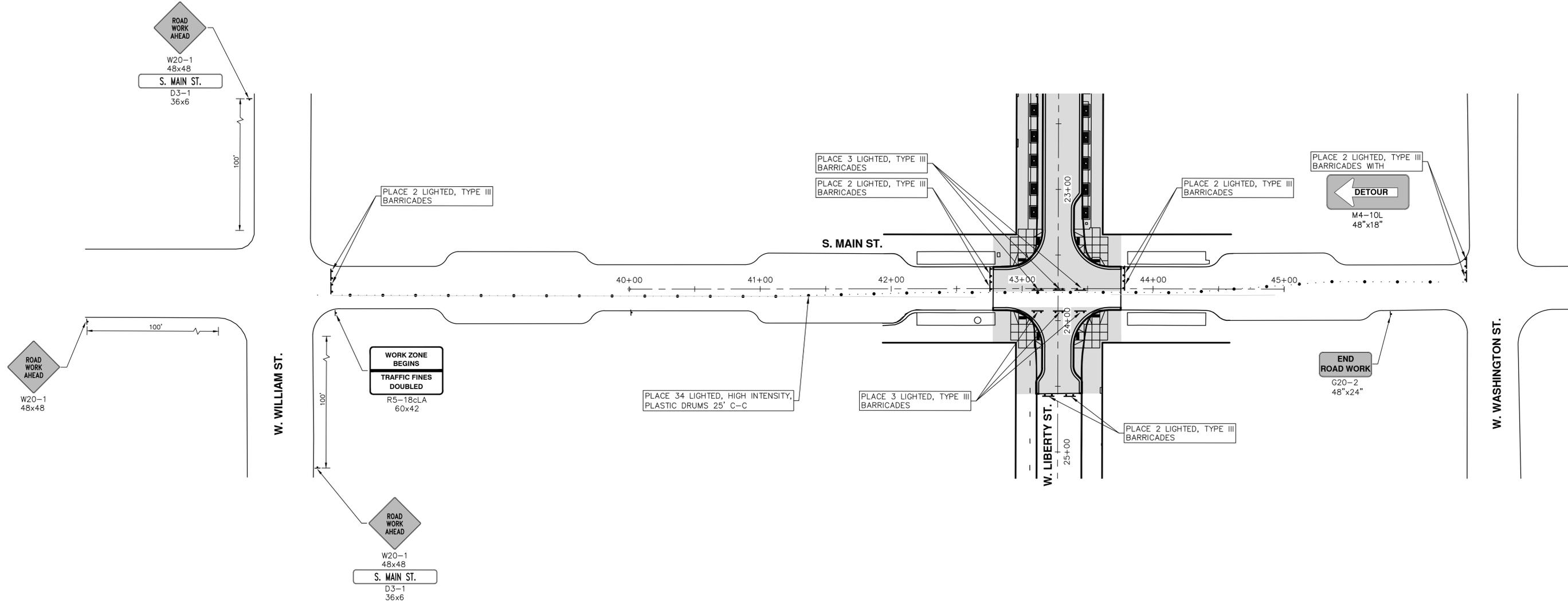


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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
 MAINTENANCE OF TRAFFIC - PHASE I
 STAGE I - S. ASHLEY STREET

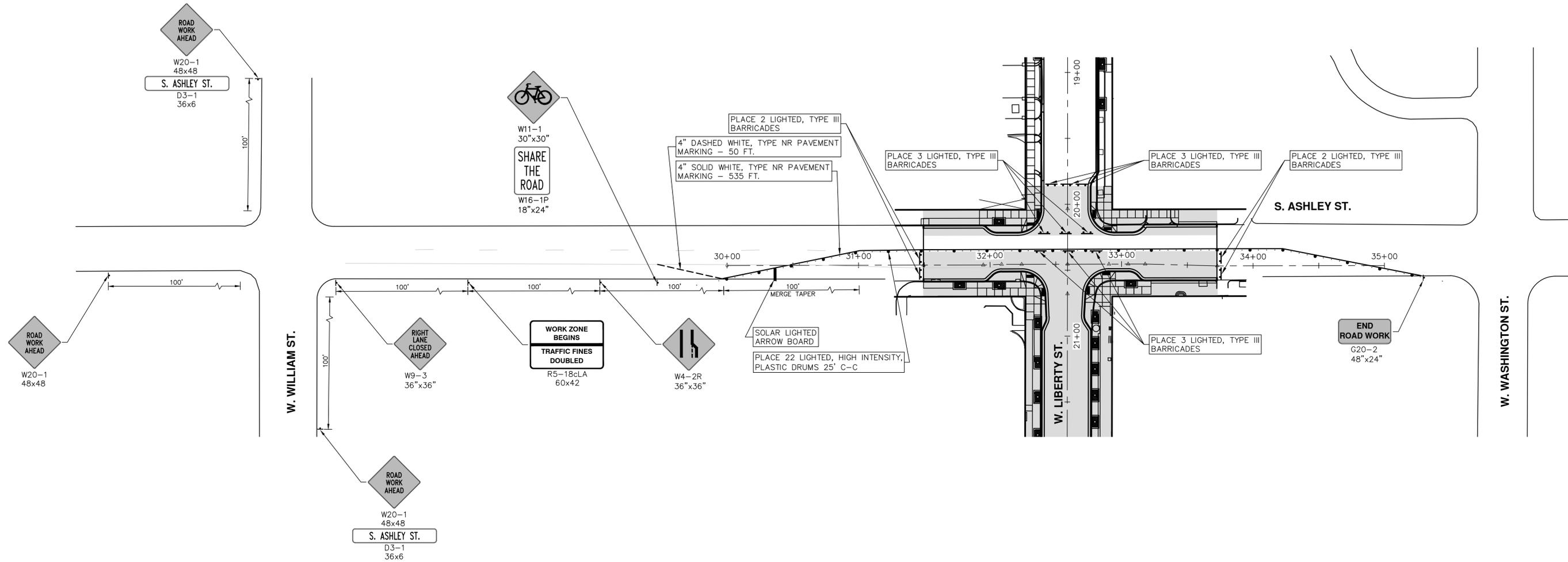
SCALE PLAN: 1" = 40'
 DRAWING No.
2015034-25



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WEST LIBERTY STREET RECONSTRUCTION
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 MAINTENANCE OF TRAFFIC - PHASE I
 STAGE II - S. ASHLEY STREET

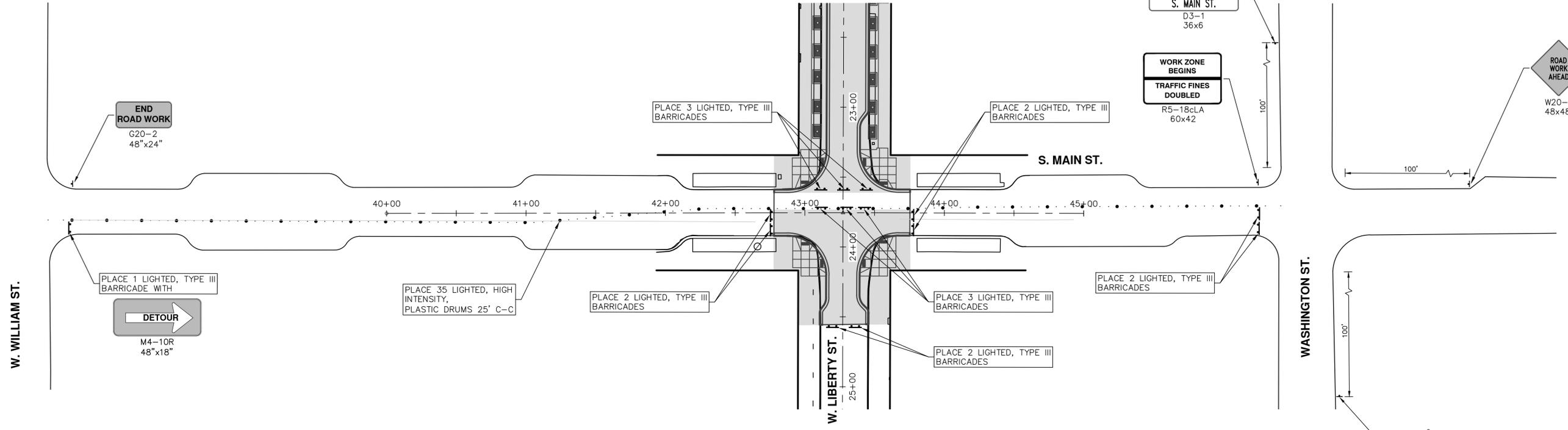
SCALE PLAN: 1" = 40'
 DRAWING No. 2015034-27

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W. WILLIAM ST.

END ROAD WORK
G20-2
48"x24"

PLACE 1 LIGHTED, TYPE III BARRICADE WITH
DETOUR
M4-10R
48"x18"

PLACE 35 LIGHTED, HIGH INTENSITY, PLASTIC DRUMS 25' C-C

PLACE 2 LIGHTED, TYPE III BARRICADES

PLACE 3 LIGHTED, TYPE III BARRICADES

PLACE 2 LIGHTED, TYPE III BARRICADES

PLACE 3 LIGHTED, TYPE III BARRICADES

PLACE 2 LIGHTED, TYPE III BARRICADES

PLACE 2 LIGHTED, TYPE III BARRICADES

WORK ZONE BEGINS
TRAFFIC FINES DOUBLED
R5-18cLA
60x42

S. MAIN ST.
D3-1
36x6

ROAD WORK AHEAD
W20-1
48x48

ROAD WORK AHEAD
W20-1
48x48
S. MAIN ST.
D3-1
36x6

ROAD WORK AHEAD
W20-1
48x48



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
 MAINTENANCE OF TRAFFIC - PHASE I
 STAGE II - S. MAIN STREET

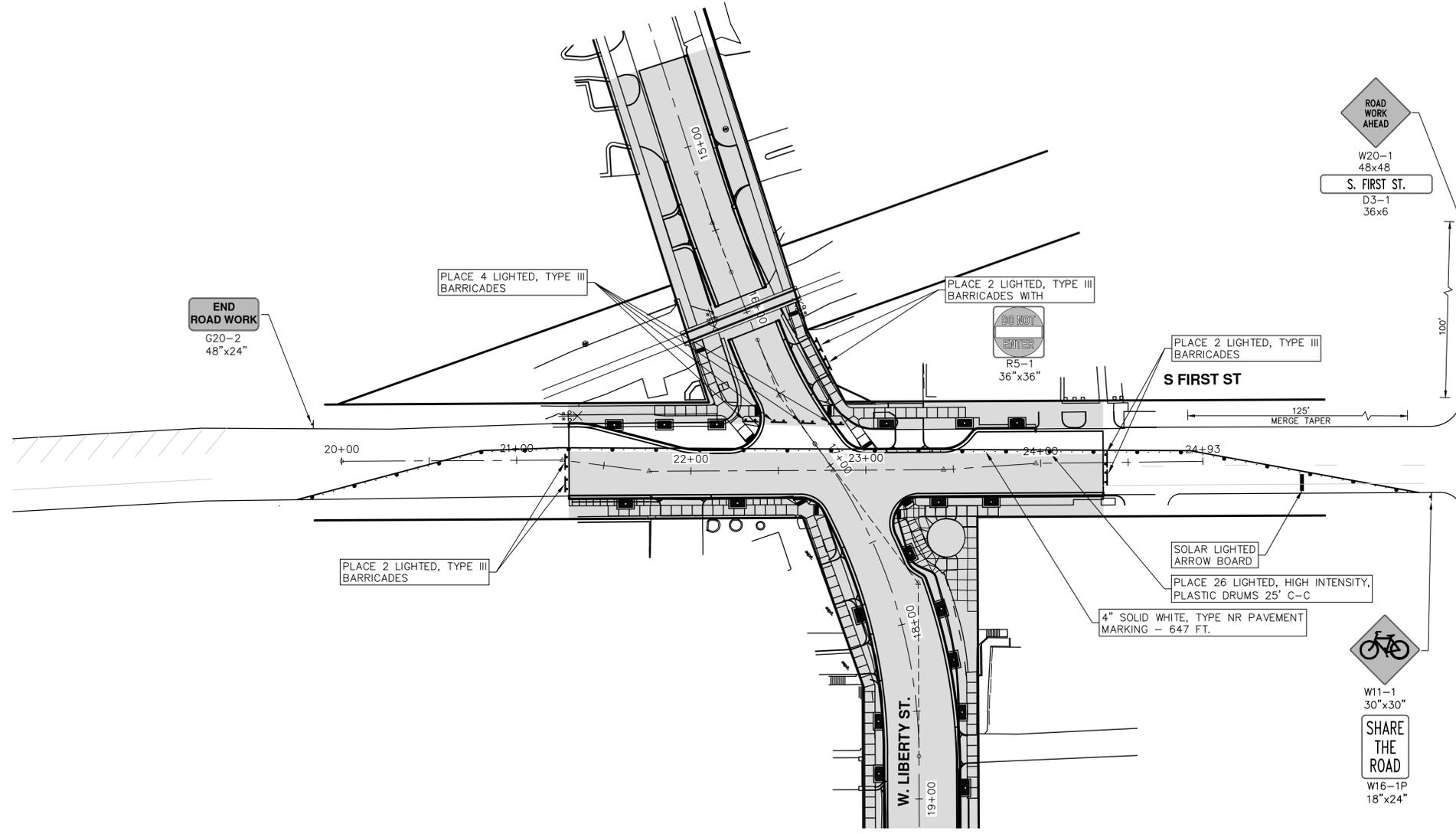
SCALE PLAN: 1" = 40'
 DRAWING No. 2015034-28

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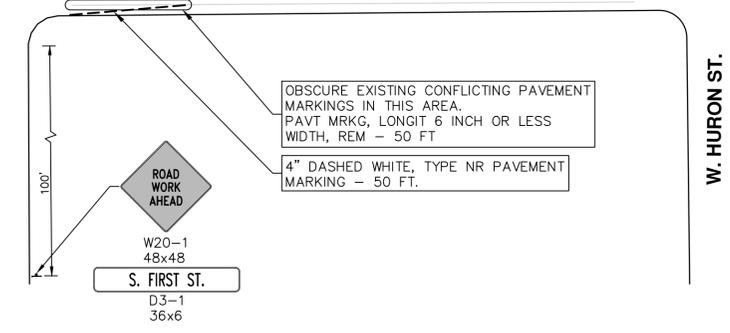
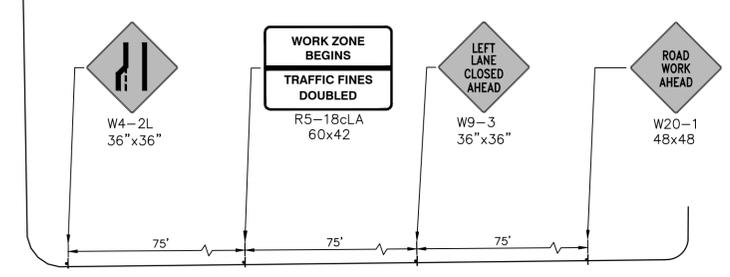
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W. WASHINGTON ST.



W. HURON ST.



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
 MAINTENANCE OF TRAFFIC - PHASE II
 STAGE I - S. FIRST STREET

SCALE PLAN: 1" = 40'
 DRAWING No. 2015034-29

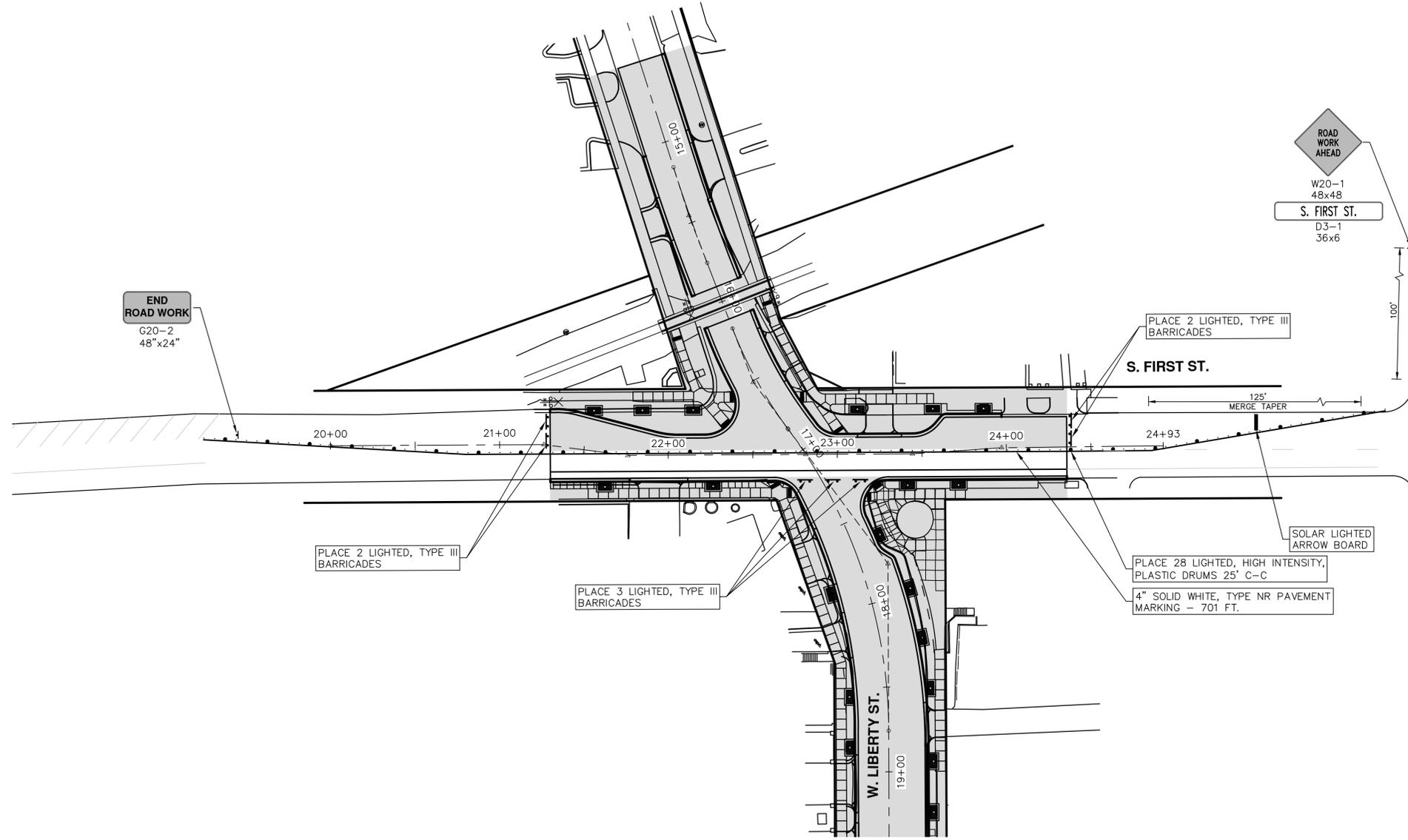
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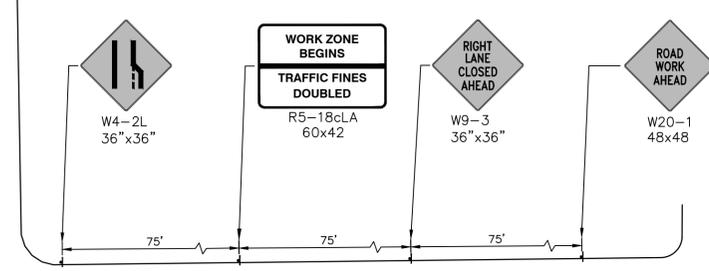
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CITY OF ANN ARBOR
 MICHIGAN

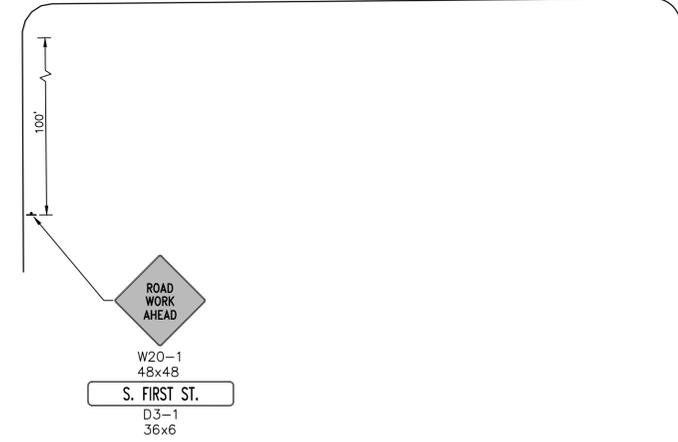
SHEET No. 29 OF 63



W. WASHINGTON ST.



W. HURON ST.



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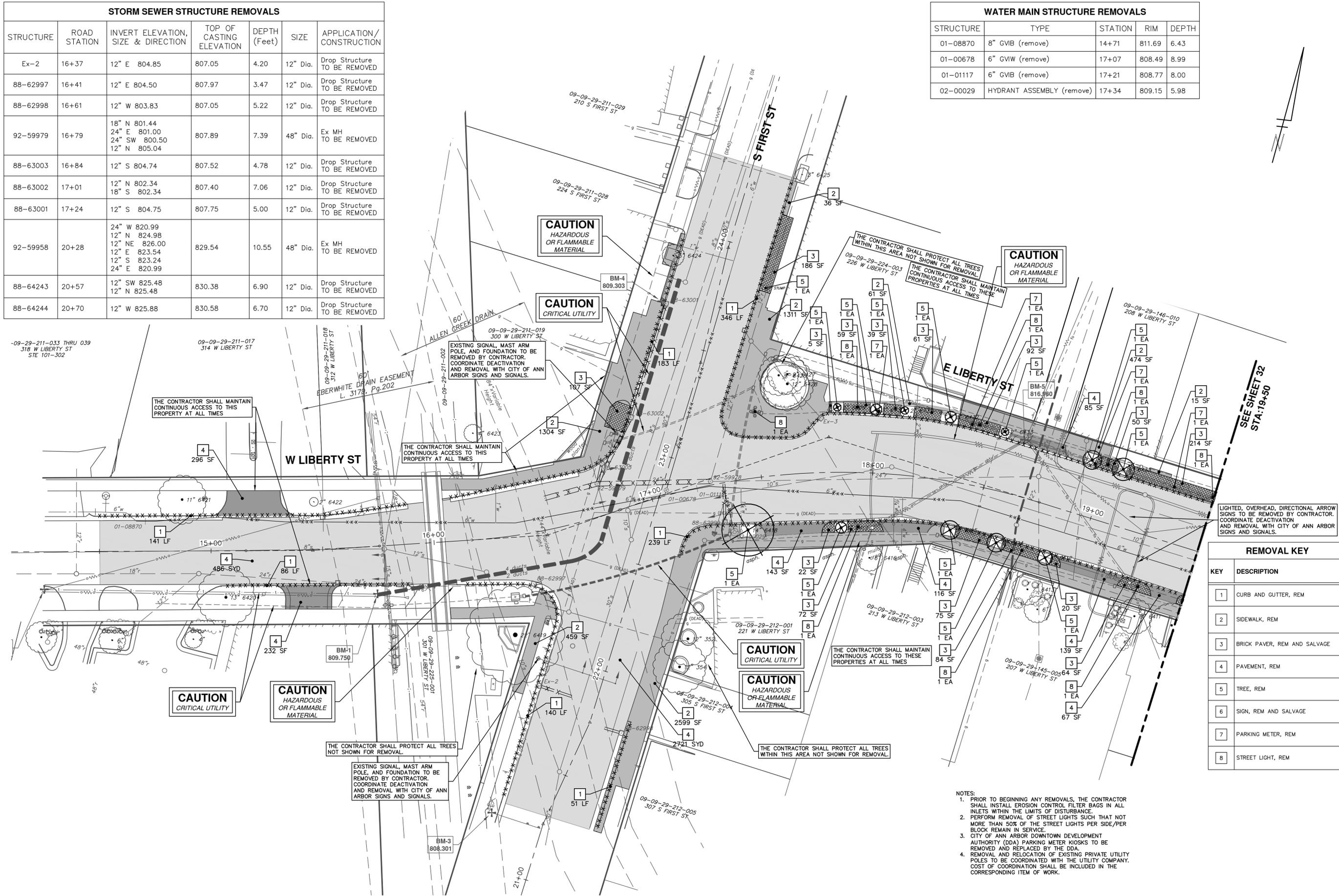


STORM SEWER STRUCTURE REMOVALS

STRUCTURE	ROAD STATION	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION/CONSTRUCTION
Ex-2	16+37	12" E 804.85	807.05	4.20	12" Dia.	Drop Structure TO BE REMOVED
88-62997	16+41	12" E 804.50	807.97	3.47	12" Dia.	Drop Structure TO BE REMOVED
88-62998	16+61	12" W 803.83	807.05	5.22	12" Dia.	Drop Structure TO BE REMOVED
92-59979	16+79	18" N 801.44 24" E 801.00 24" SW 800.50 12" N 805.04	807.89	7.39	48" Dia.	Ex MH TO BE REMOVED
88-63003	16+84	12" S 804.74	807.52	4.78	12" Dia.	Drop Structure TO BE REMOVED
88-63002	17+01	12" N 802.34 18" S 802.34	807.40	7.06	12" Dia.	Drop Structure TO BE REMOVED
88-63001	17+24	12" S 804.75	807.75	5.00	12" Dia.	Drop Structure TO BE REMOVED
92-59958	20+28	24" W 820.99 12" N 824.98 12" NE 826.00 12" S 823.54 12" E 823.24 24" E 820.99	829.54	10.55	48" Dia.	Ex MH TO BE REMOVED
88-64243	20+57	12" SW 825.48 12" N 825.48	830.38	6.90	12" Dia.	Drop Structure TO BE REMOVED
88-64244	20+70	12" W 825.88	830.58	6.70	12" Dia.	Drop Structure TO BE REMOVED

WATER MAIN STRUCTURE REMOVALS

STRUCTURE	TYPE	STATION	RIM	DEPTH
01-08870	8" GVIB (remove)	14+71	811.69	6.43
01-00678	6" GVW (remove)	17+07	808.49	8.99
01-01117	6" GVIB (remove)	17+21	808.77	8.00
02-00029	HYDRANT ASSEMBLY (remove)	17+34	809.15	5.98



REMOVAL KEY	
KEY	DESCRIPTION
1	CURB AND GUTTER, REM
2	SIDEWALK, REM
3	BRICK PAVER, REM AND SALVAGE
4	PAVEMENT, REM
5	TREE, REM
6	SIGN, REM AND SALVAGE
7	PARKING METER, REM
8	STREET LIGHT, REM

- NOTES:
- PRIOR TO BEGINNING ANY REMOVALS, THE CONTRACTOR SHALL INSTALL EROSION CONTROL FILTER BAGS IN ALL INLETS WITHIN THE LIMITS OF DISTURBANCE.
 - PERFORM REMOVAL OF STREET LIGHTS SUCH THAT NOT MORE THAN 50% OF THE STREET LIGHTS PER SIDE/PER BLOCK REMAIN IN SERVICE.
 - CITY OF ANN ARBOR DOWNTOWN DEVELOPMENT AUTHORITY (DDA) PARKING METER KIOSKS TO BE REMOVED AND REPLACED BY THE DDA.
 - REMOVAL AND RELOCATION OF EXISTING PRIVATE UTILITY POLES TO BE COORDINATED WITH THE UTILITY COMPANY. COST OF COORDINATION SHALL BE INCLUDED IN THE CORRESPONDING ITEM OF WORK.

R:\2015034 Liberty - First to Main\Plan Production\2015034REM.dwg Dwg Created: 10-Apr-17 - a2 standard bw.stb - Plot Date: 13-Apr-17



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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION S.
FIRST ST. - N. MAIN ST.
 REMOVALS
 STA. 14+40 TO STA. 19+50

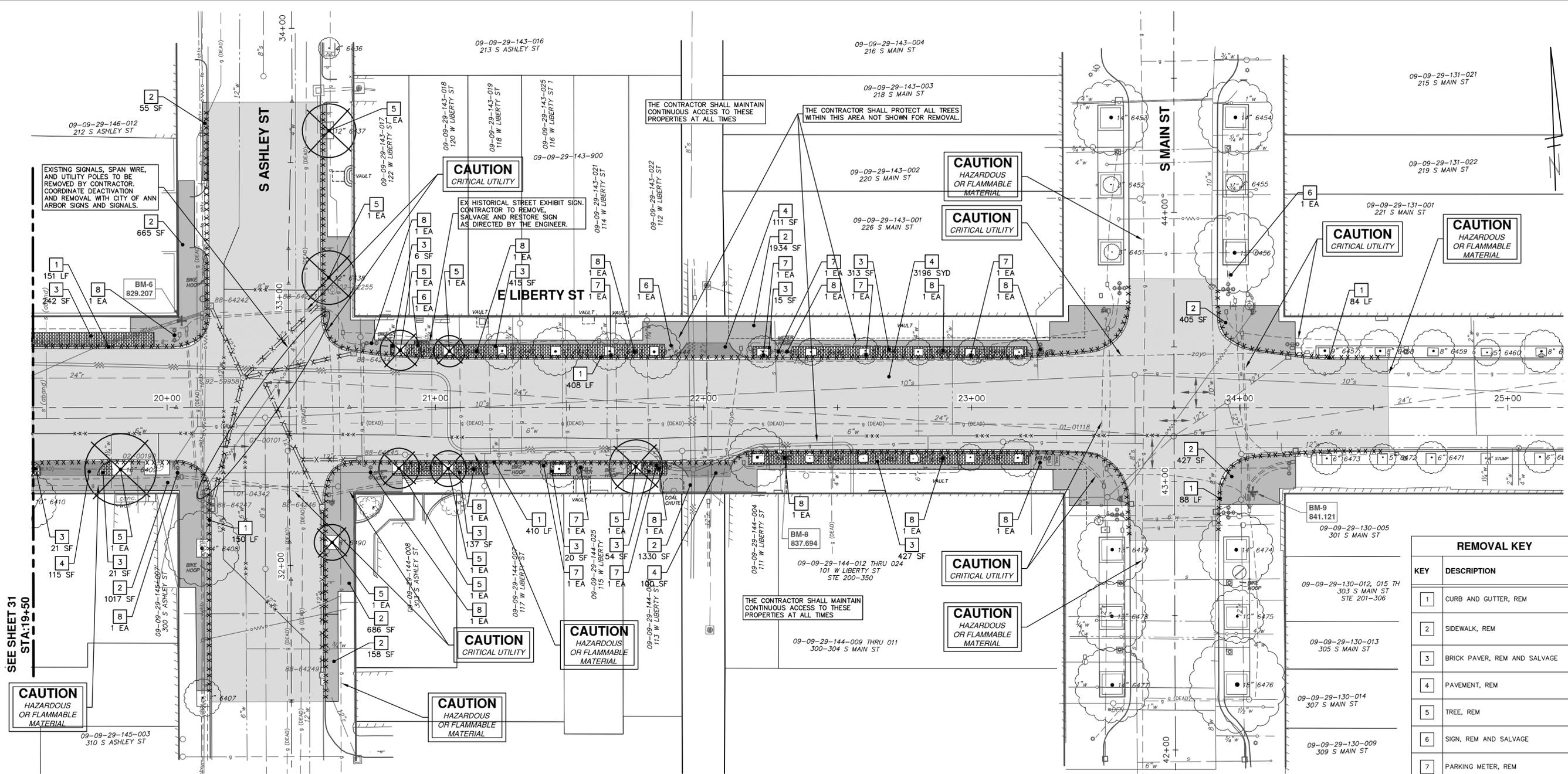
SHEET No. 31 OF 63

SCALE PLAN: 1" = 20'

DRAWING No. 2015034-31

CITY OF ANN ARBOR
 PUBLIC SERVICES
 301 EAST HURON STREET
 P.O. BOX 8640
 ANN ARBOR, MI 48108-8647
 WWW.A2GOV.GOV

SEE SHEET 31
STA: 19+50



STORM SEWER STRUCTURE REMOVALS						
STRUCTURE	ROAD STATION	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION/CONSTRUCTION
88-64242	20+16	12" S 824.86	828.36	5.50	12" Dia.	Drop Structure TO BE REMOVED
88-64247	20+17	12" N 824.86	828.32	5.46	???" Dia.	DOUBLE INLET TO BE REMOVED
92-59958	20+28	24" W 820.99 12" N 824.98 12" NE 826.00 12" E 823.54 12" S 823.24 24" E 820.99	829.54	10.55	48" Dia.	Ex MH TO BE REMOVED
88-64243	20+57	12" SW 825.48 12" N 825.48	830.38	6.90	12" Dia.	Drop Structure TO BE REMOVED
88-64246	20+58	12" NW 826.19 12" S 826.54	829.99	5.80	24" Dia.	Drop Structure TO BE REMOVED
88-64249	20+58	12" N 827.83 12" S 828.03	830.53	4.70	24" Dia.	Ex CB TO BE REMOVED
88-64244	20+70	12" W 825.88	830.58	6.70	12" Dia.	Drop Structure TO BE REMOVED
88-64245	20+72	12" W 826.53	830.48	5.95	12" Dia.	Drop Structure TO BE REMOVED

WATER MAIN STRUCTURE REMOVALS				
STRUCTURE	TYPE	STATION	RIM	DEPTH
02-00190	HYDRANT ASSEMBLY (remove)	19+97	827.24	6.00
01-04342	6" GVIB (remove)	20+25	829.21	4.94
01-00101	6" GVIB (remove)	20+29	829.54	6.11
02-02255	HYDRANT ASSEMBLY (remove)	20+62	831.24	5.96
01-01118	6" GVIB (remove)	23+32	839.54	8.00

REMOVAL KEY	
KEY	DESCRIPTION
1	CURB AND GUTTER, REM
2	SIDEWALK, REM
3	BRICK PAVER, REM AND SALVAGE
4	PAVEMENT, REM
5	TREE, REM
6	SIGN, REM AND SALVAGE
7	PARKING METER, REM
8	STREET LIGHT, REM

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
 REMOVALS
 STA. 19+50 TO P.O.E.

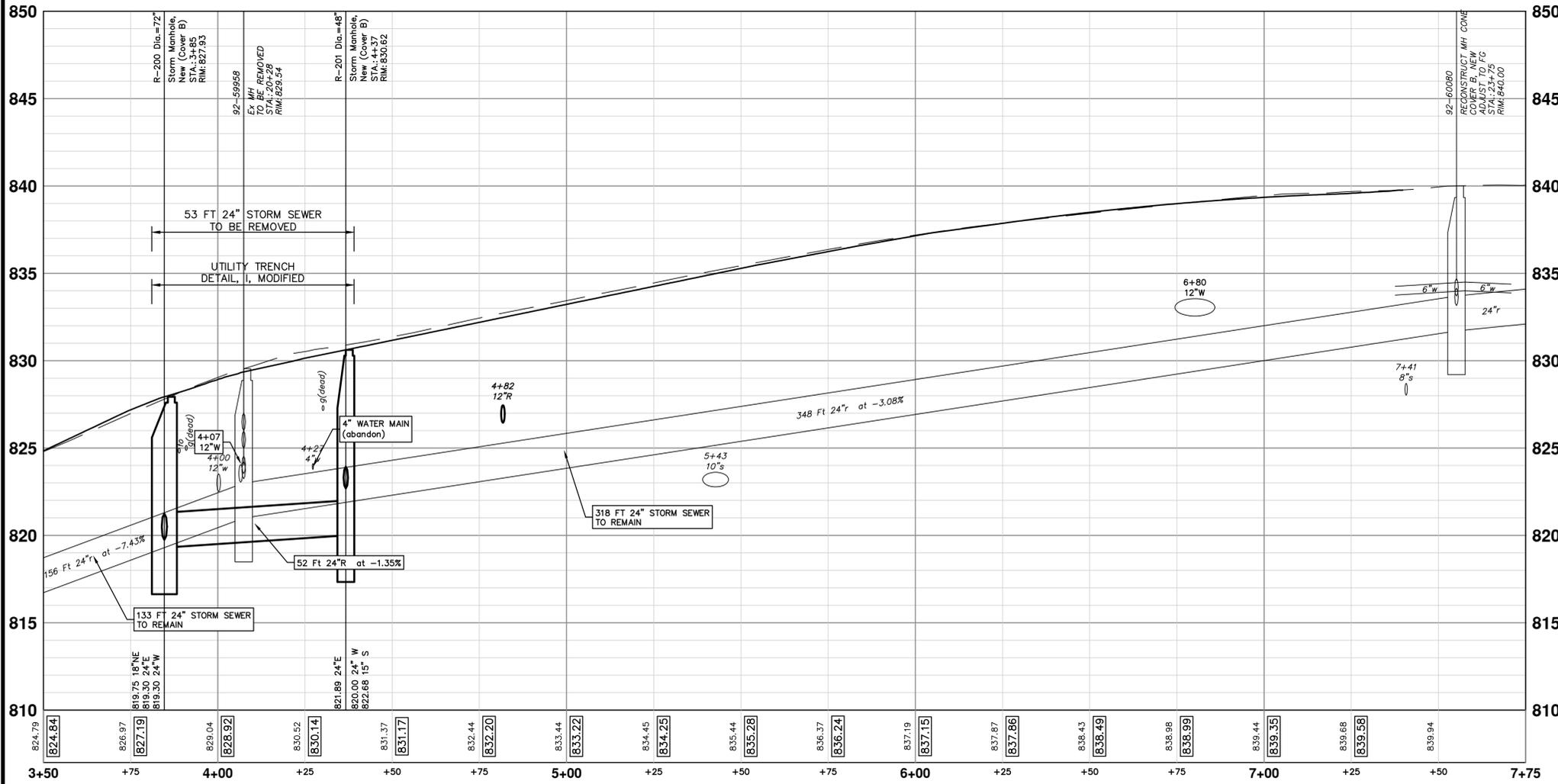
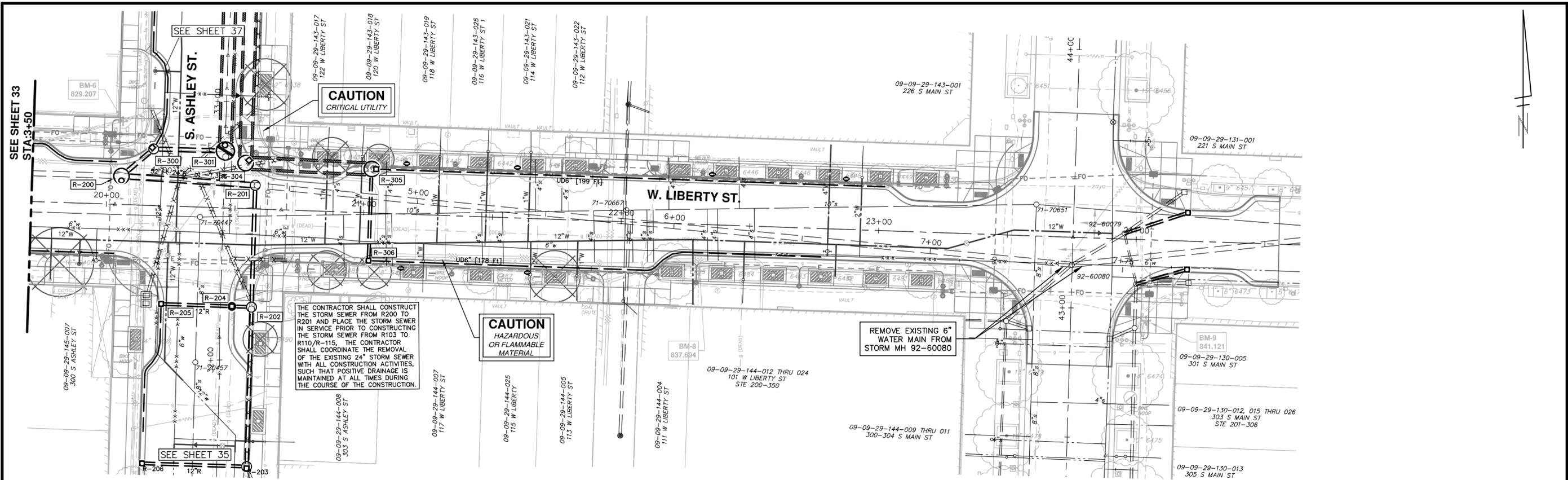
SCALE PLAN: 1" = 20'
 DRAWING NO. 2015034-32
 SHEET NO. 32 OF 63

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STORM SEWER STRUCTURE TABLE					
STRUCTURE	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION / CONSTRUCTION
92-60080	24" W 831.70 24" E 831.70 12" SW 833.70 12" NE 833.15	840.00	10.30	48" Dia.	RECONSTRUCT MH CONE COVER B, NEW ADJUST TO FG
R-200	18" NE 819.75 24" E 819.30 24" W 819.30	827.93	10.63	72" Dia.	Storm Manhole, New (Cover B)
R-201	24" W 820.00 15" S 822.68 24" E 821.89	830.62	12.62	48" Dia.	Storm Manhole, New (Cover B)



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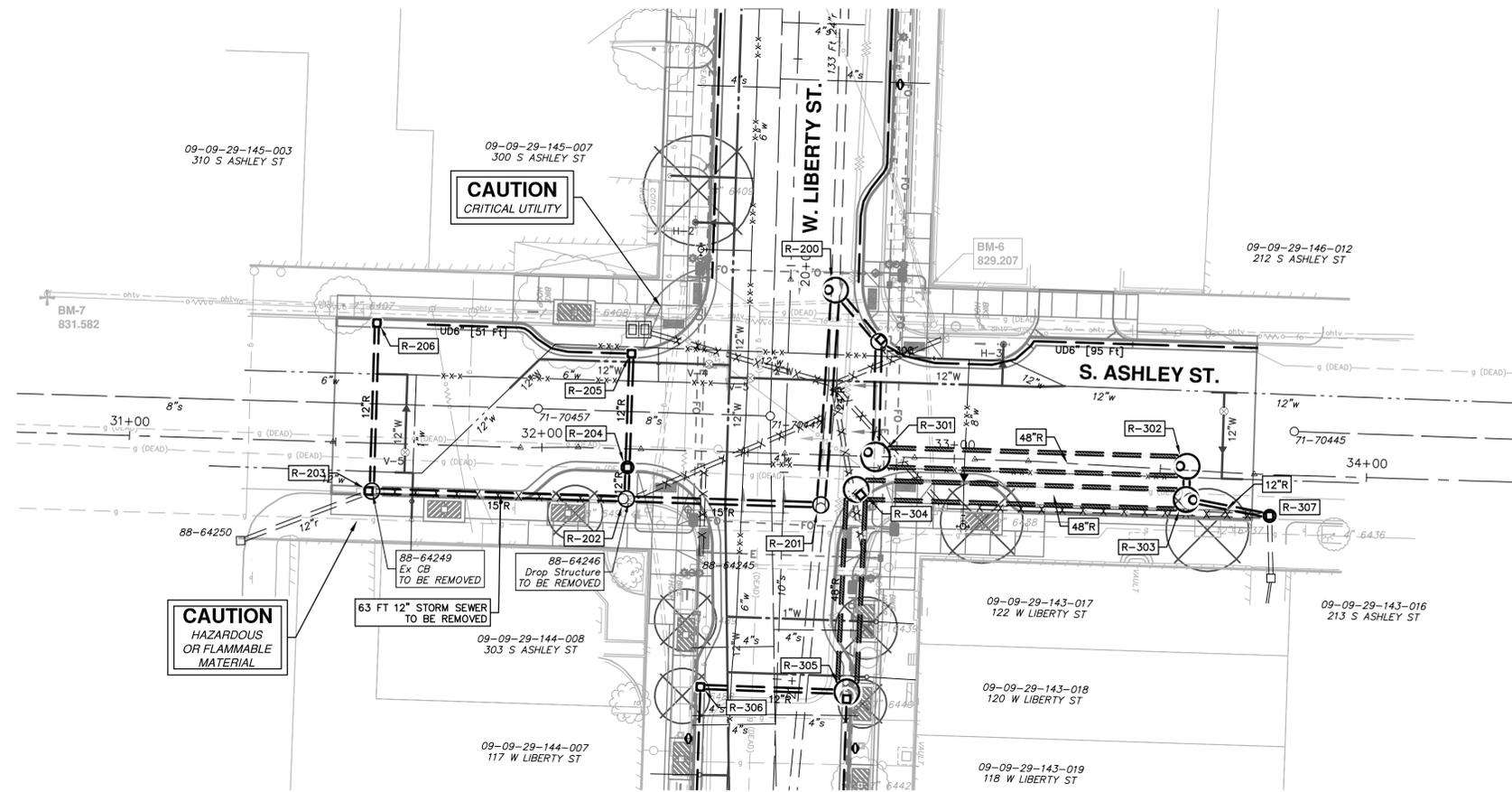


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
STORM SEWER PLAN AND PROFILE
W LIBERTY STORM - STA. 3+50 - STA. 8+00

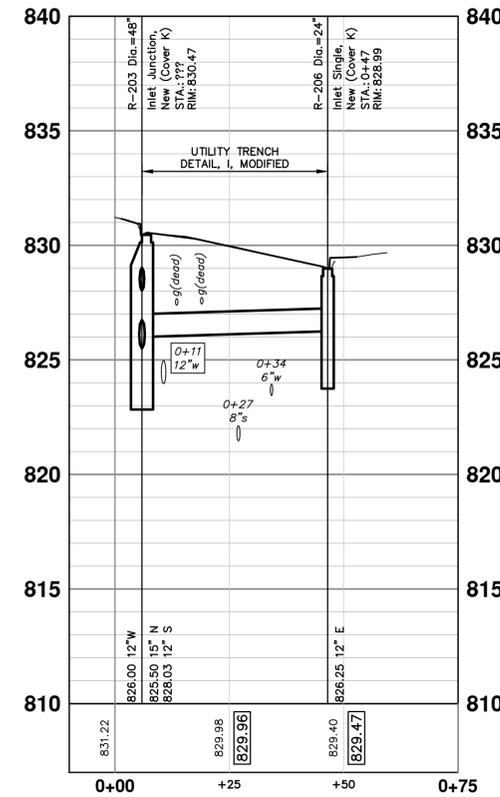
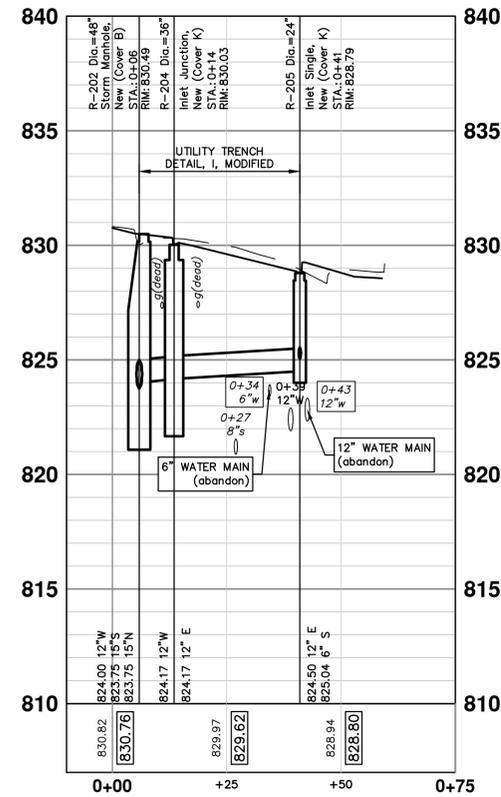
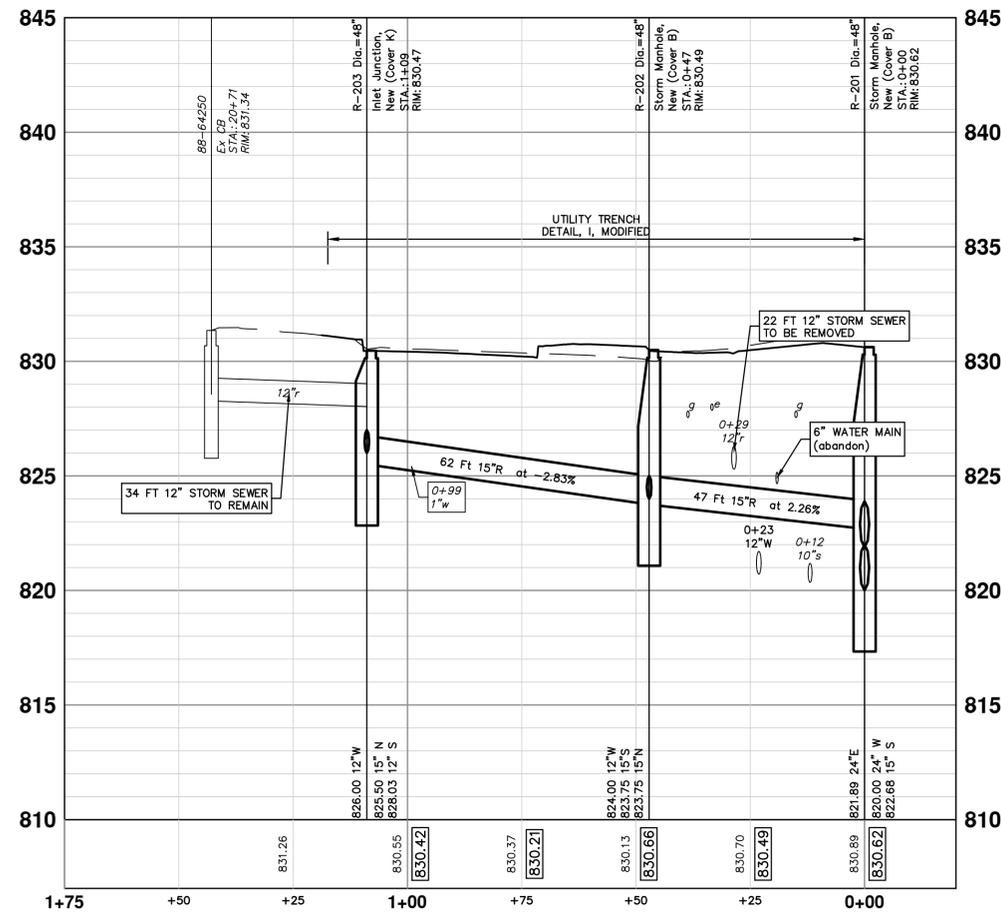
SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'
DRAWING No.
2015034-34

SHEET No.
34 OF 63

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STORM SEWER STRUCTURE TABLE					
STRUCTURE	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION/CONSTRUCTION
88-64250	12" N 828.27	831.34	5.07	24" Dia.	Ex CB
R-201	24" W 820.00 15" S 822.68 24" E 821.89	830.62	12.62	48" Dia.	Storm Manhole, New (Cover B)
R-202	12" W 824.00 15" S 823.75 15" N 823.75	830.49	8.74	48" Dia.	Storm Manhole, New (Cover B)
R-203	15" N 825.50 12" S 828.03 12" W 826.00	830.47	6.97	48" Dia.	Inlet Junction, New (Cover K)
R-204	12" E 824.17 12" W 824.17	830.03	7.86	36" Dia.	Inlet Junction, New (Cover K)
R-205	12" E 824.50 6" S 825.04	828.79	4.29	24" Dia.	Inlet Single, New (Cover K)
R-206	12" E 826.25	828.99	4.74	24" Dia.	Inlet Single, New (Cover K)



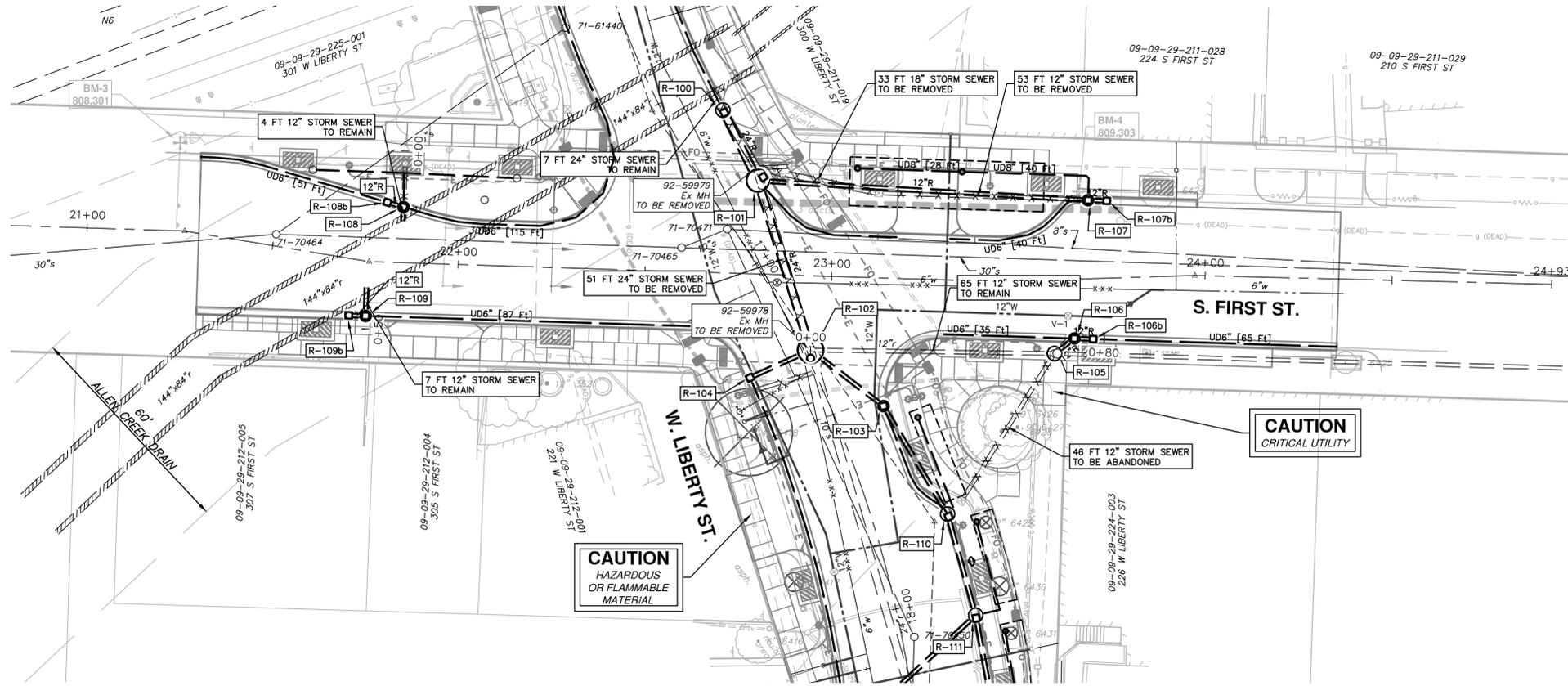
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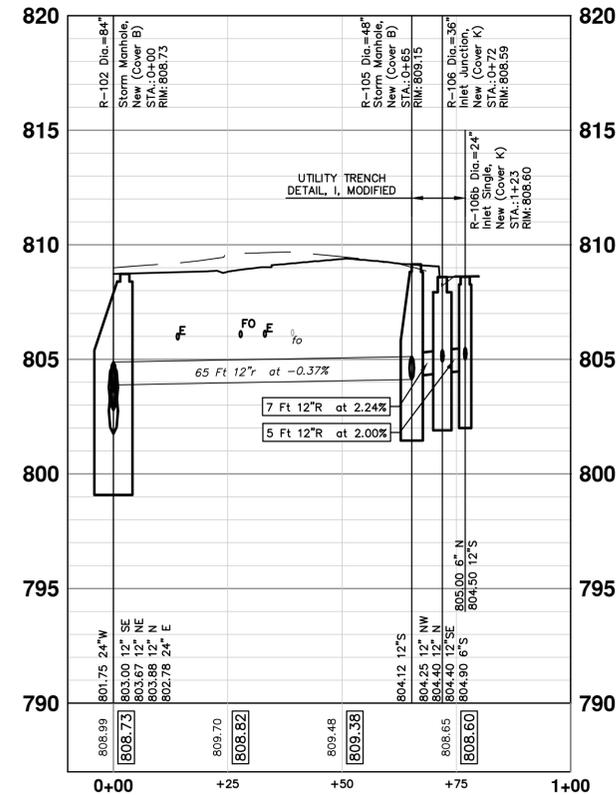
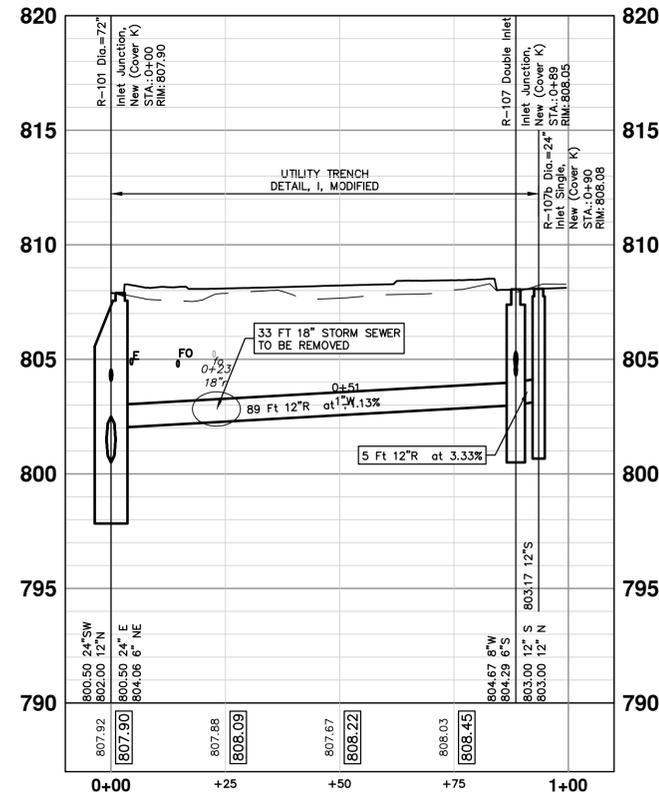
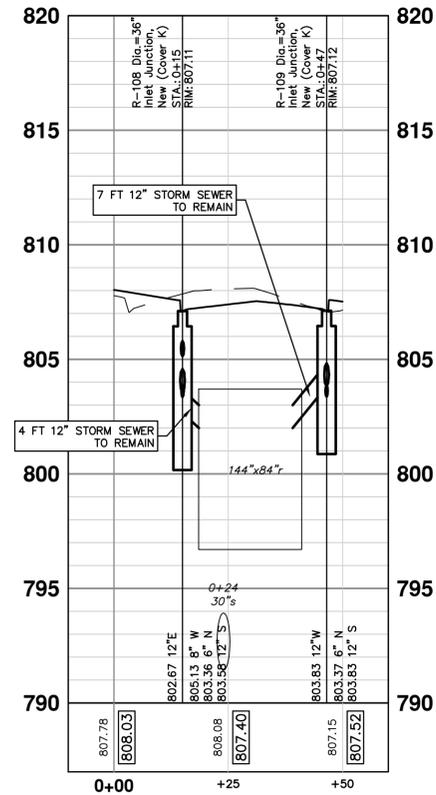
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION S.
FIRST ST. - N. MAIN ST.
STORM SEWER PLAN AND PROFILE
S ASHLEY ST - STORM SOUTH

SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'

DRAWING No.
2015034-35



STORM SEWER STRUCTURE TABLE					
STRUCTURE	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION/CONSTRUCTION
R-101	24" E 800.50 6" NE 804.06 24" SW 800.50 12" N 802.00	807.90	9.40	72" Dia.	Inlet Junction, New (Cover K)
R-105	12" NW 804.25 12" S 804.12	809.15	7.03	48" Dia.	Storm Manhole, New (Cover B)
R-106	12" N 804.40 12" SE 804.40 6" S 804.90	808.59	6.19	36" Dia.	Inlet Junction, New (Cover K)
R-106b	6" N 805.00 12" S 804.50	808.60	6.10	24" Dia.	Inlet Single, New (Cover K)
R-107	12" S 803.00 12" N 803.00 8" W 804.67 6" S 804.29	808.05	7.05	36" Dia.	Inlet Junction, New (Cover K)
R-107b	12" S 803.17	808.08	6.92	24" Dia.	Inlet Single, New (Cover K)
R-108	8" W 805.13 6" N 803.36 12" S 803.58 12" E 802.67	807.11	6.44	36" Dia.	Inlet Junction, New (Cover K)
R-108b	12" N 802.00 6" S 802.50	807.13	7.13	24" Dia.	Inlet Single, New (Cover K)
R-109	6" N 803.37 12" S 803.83 12" W 803.83	807.12	5.75	36" Dia.	Inlet Junction, New (Cover K)
R-109b	12" N 804.00	807.14	5.14	24" Dia.	Inlet Single, New (Cover K)





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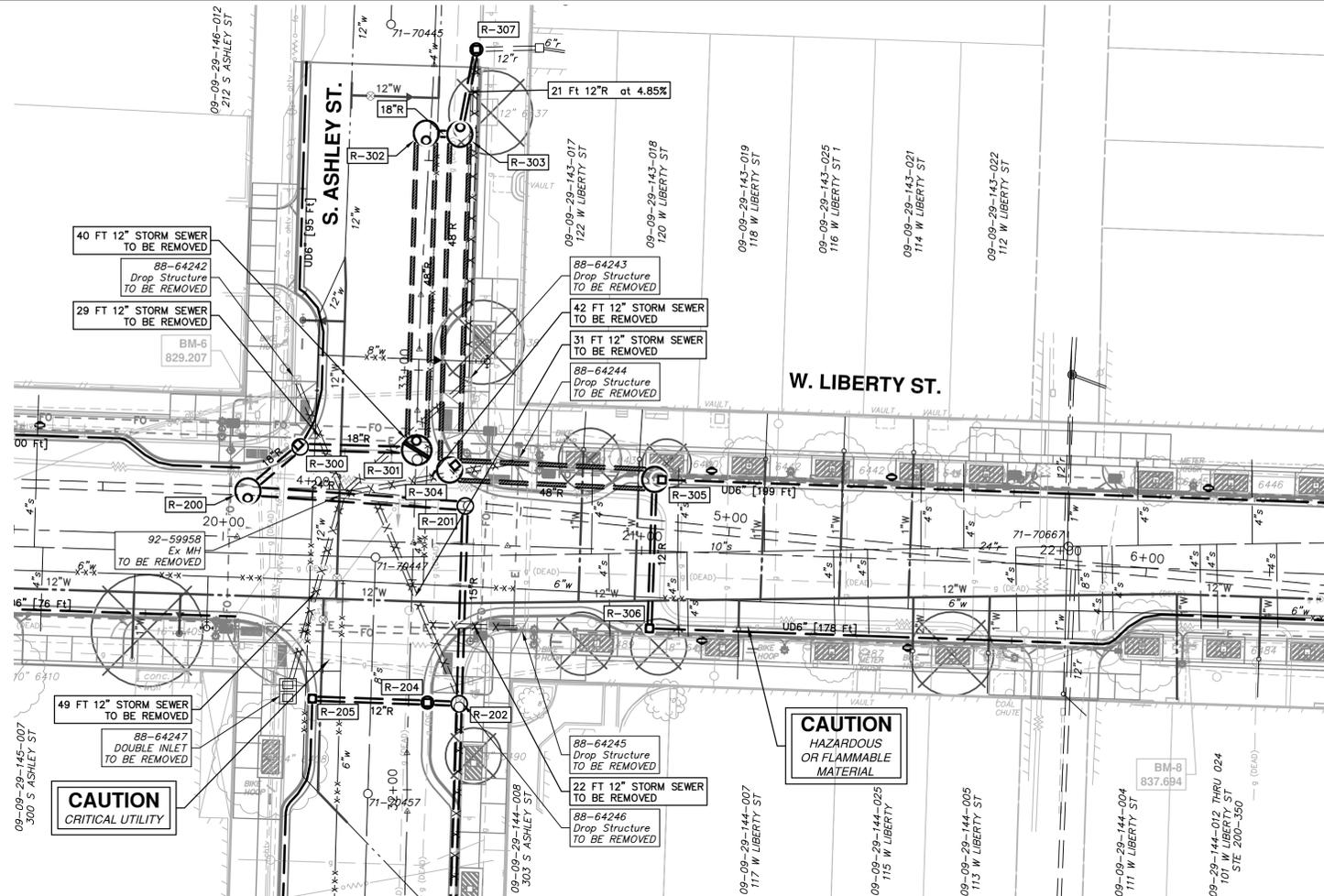
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION S.
FIRST ST. - N. MAIN ST.
 STORM SEWER PLAN AND PROFILE

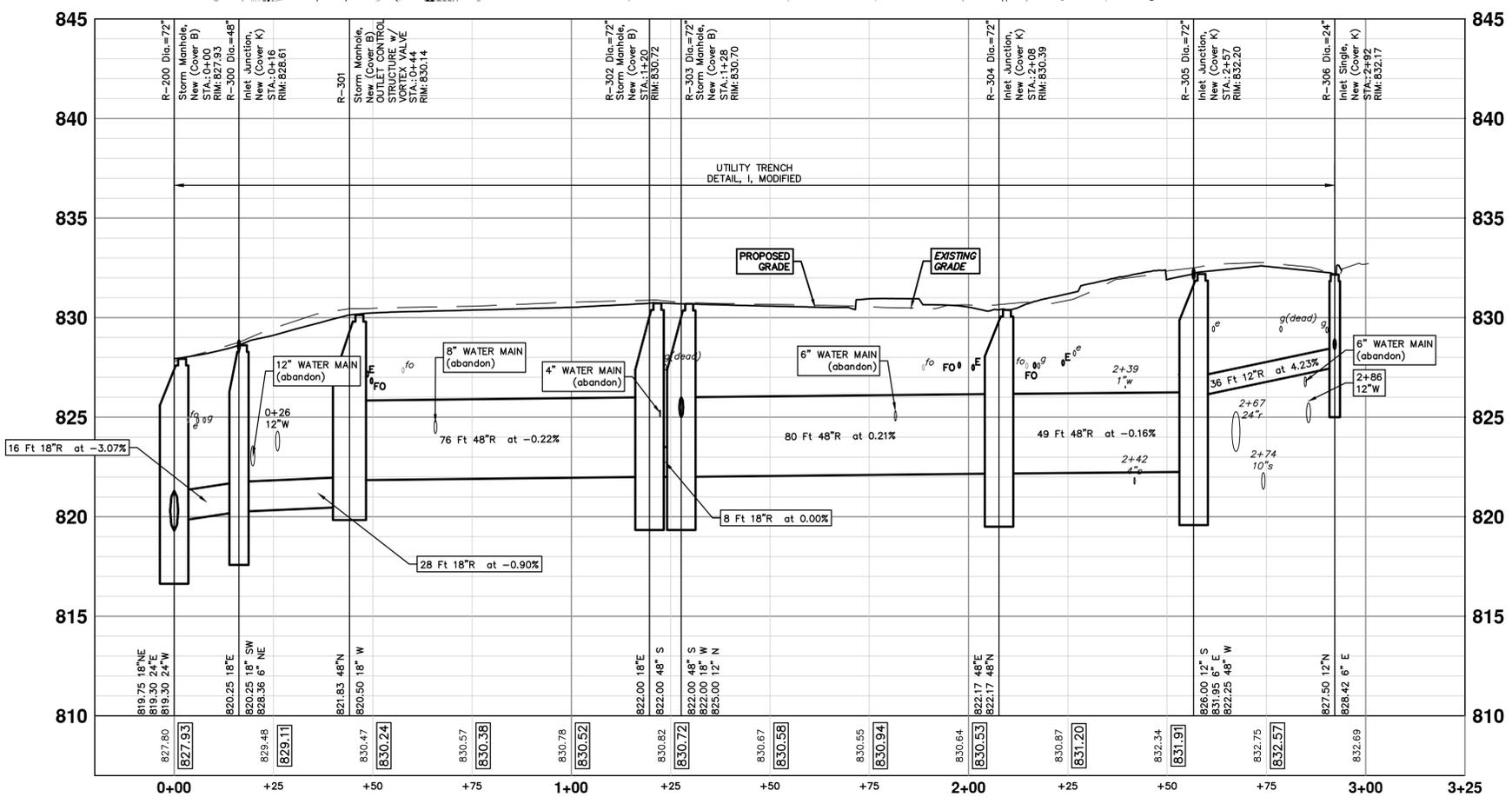
SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'

DRAWING No.
2015034-36

SHEET No.
36 OF 63



STORM SEWER STRUCTURE TABLE					
STRUCTURE	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION / CONSTRUCTION
R-200	18" NE 819.75 24" W 819.30	827.93	10.63	72" Dia.	Storm Manhole, New (Cover B)
R-300	18" SW 820.25 6" NE 828.36 18" E 820.25	828.61	10.36	48" Dia.	Inlet Junction, New (Cover K)
R-301	18" W 820.50 48" N 821.83	830.14	9.64	84" Dia.	Storm Manhole, New (Cover B) OUTLET CONTROL STRUCTURE w/ VORTEX VALVE
R-302	48" S 822.00 18" E 822.00	830.72	10.72	72" Dia.	Storm Manhole, New (Cover B)
R-303	48" S 822.00 18" W 822.00 12" N 825.00	830.70	10.70	72" Dia.	Storm Manhole, New (Cover B)
R-304	48" E 822.17 48" N 822.17	830.39	10.22	72" Dia.	Inlet Junction, New (Cover K)
R-305	12" S 826.00 6" E 831.95 48" W 822.25	832.20	11.95	72" Dia.	Inlet Junction, New (Cover K)
R-306	6" E 828.42 12" N 827.50	832.17	6.67	24" Dia.	Inlet Single, New (Cover K)
R-307	12" E 827.45 12" S 826.00	830.75	6.75	36" Dia.	Inlet Junction, New (Cover K)



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PUBLIC SERVICES - WEST LIBERTY STREET RECONSTRUCTION S.
FIRST ST. - N. MAIN ST.
 STORM SEWER PLAN AND PROFILE
 S ASHLEY ST - STORM NORTH

SCALE PLAN: 1" = 20'
 PROFILE: 1" = 2'

DRAWING NO.
2015034-37

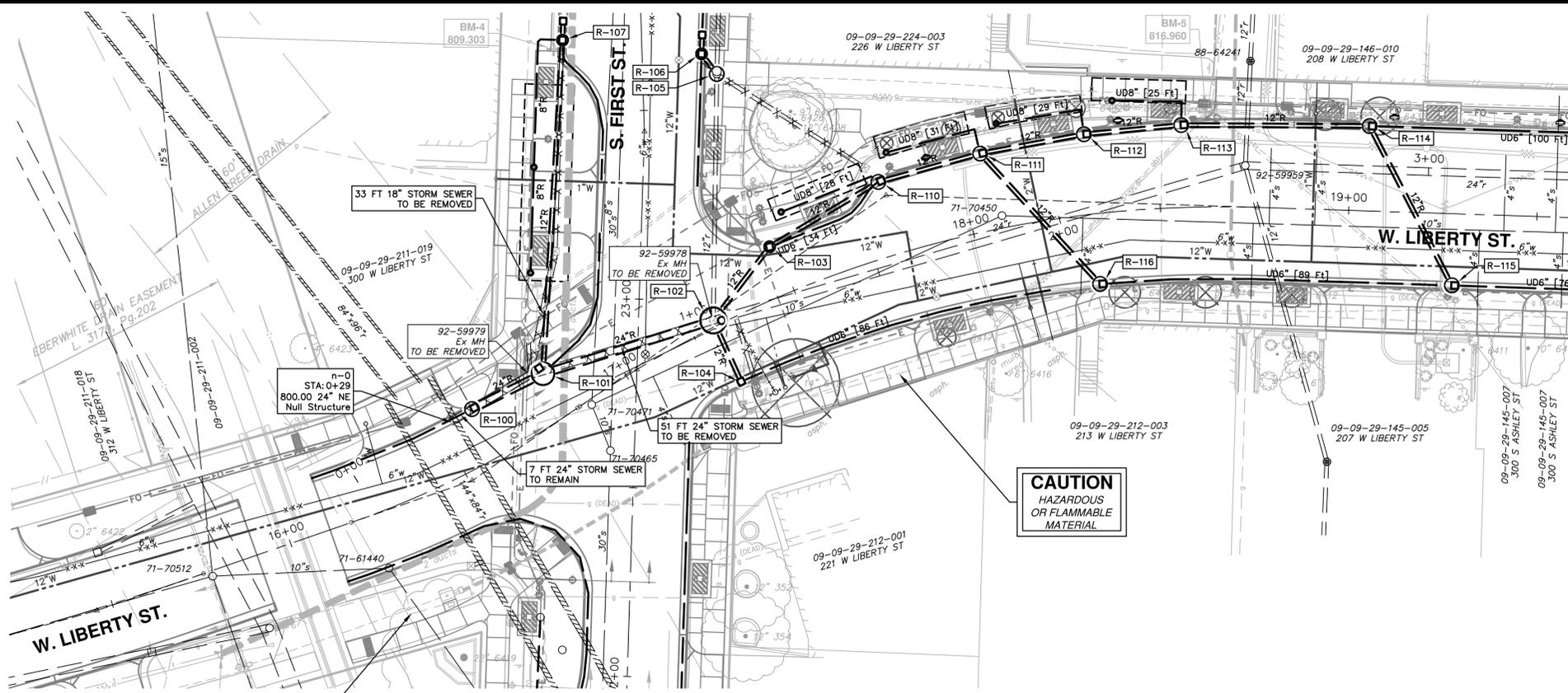
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 ANN ARBOR, MI 48108-6647
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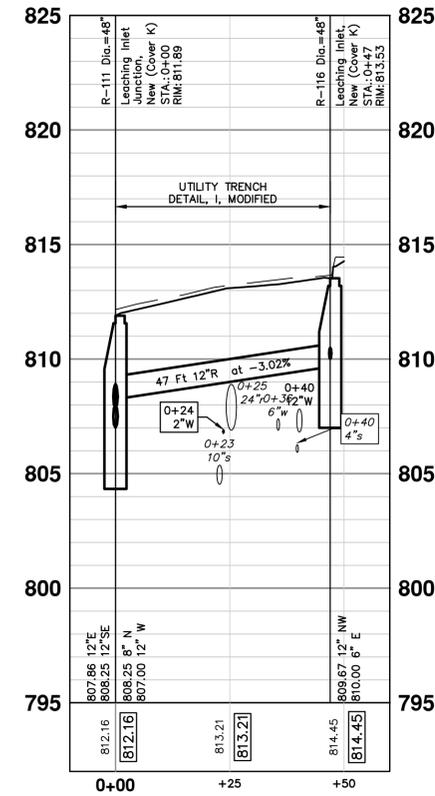
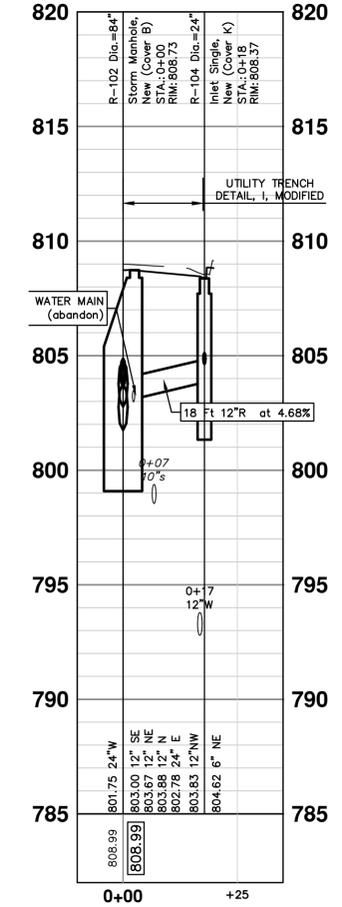
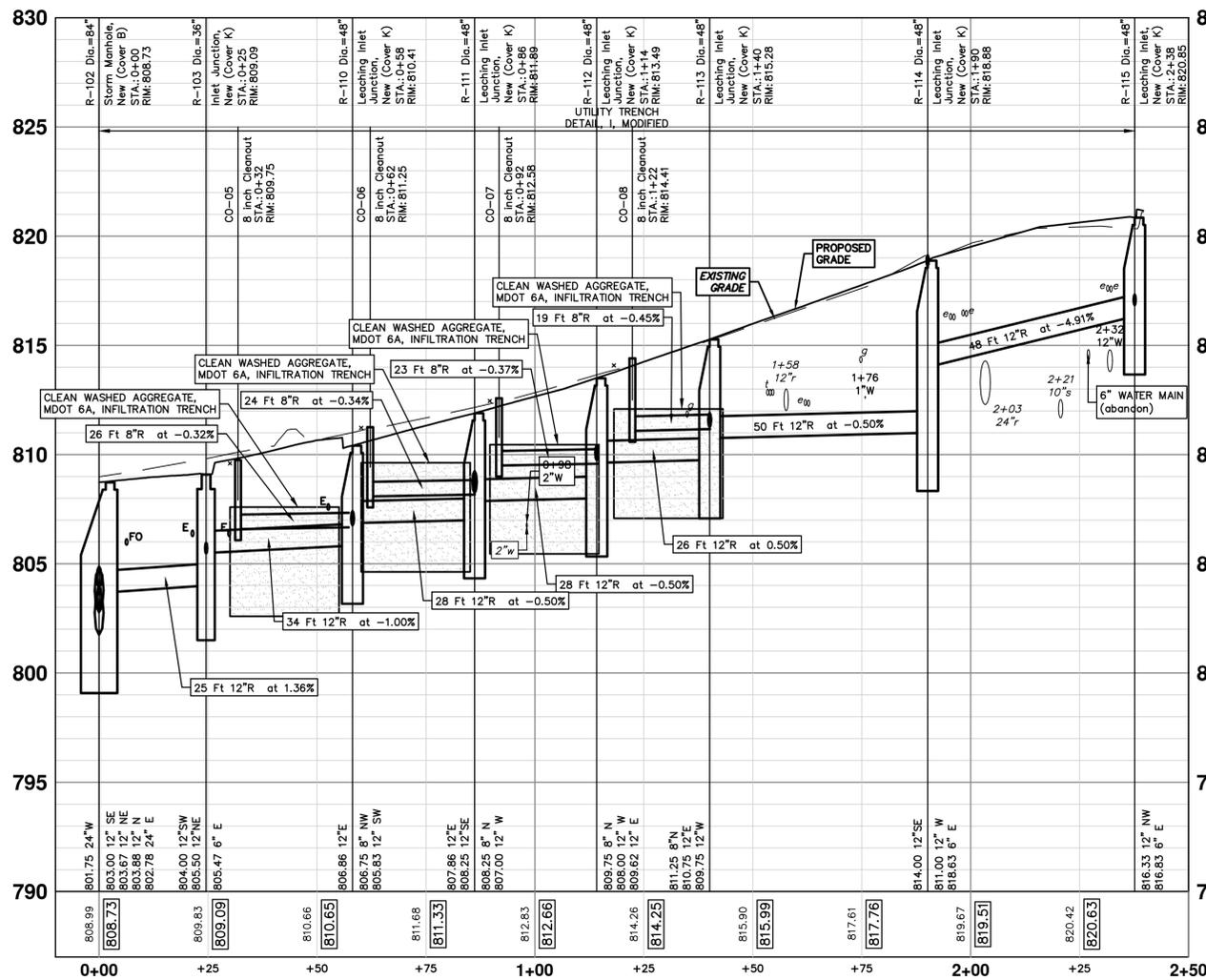
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37 OF 63



STORM SEWER STRUCTURE TABLE					
STRUCTURE	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION / CONSTRUCTION
R-102	12" SE 803.00 12" NE 803.67 12" N 803.88 24" E 802.78 24" W 801.75	808.73	8.98	84" Dia.	Storm Manhole, New (Cover B)
R-103	6" E 805.47 12" SW 804.00 12" NE 805.50	809.09	7.09	36" Dia.	Inlet Junction, New (Cover K)
R-104	6" NE 804.62 12" NW 803.83	808.37	6.54	24" Dia.	Inlet Single, New (Cover K)
R-110	8" NW 806.75 12" SW 805.83 12" E 806.86	810.41	6.58	48" Dia.	Leaching Inlet Junction, New (Cover K)
R-111	8" N 808.25 12" W 807.00 12" E 807.86 12" SE 808.25	811.89	6.89	48" Dia.	Leaching Inlet Junction, New (Cover K)
R-112	8" N 809.75 12" W 808.00 12" E 809.62	813.49	7.49	48" Dia.	Leaching Inlet Junction, New (Cover K)
R-113	8" N 811.25 12" E 810.75 12" W 809.75	815.28	7.53	48" Dia.	Leaching Inlet Junction, New (Cover K)
R-114	12" W 811.00 6" E 818.63 12" SE 814.00	818.88	9.88	48" Dia.	Leaching Inlet Junction, New (Cover K)
R-115	12" NW 816.33 6" E 816.83	820.85	6.51	48" Dia.	Leaching Inlet, New (Cover K)
R-116	12" NW 809.67 6" E 810.00	813.53	5.86	48" Dia.	Leaching Inlet, New (Cover K)

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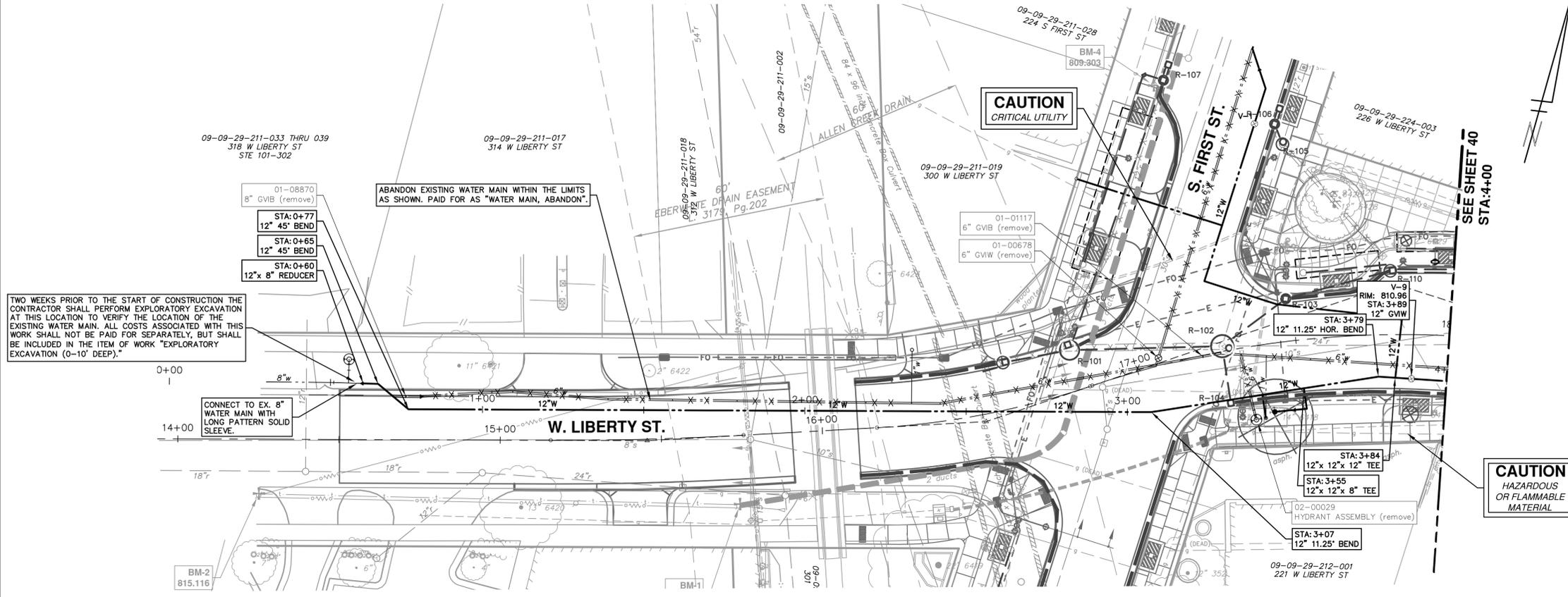
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WEST LIBERTY STREET RECONSTRUCTION S.
FIRST ST. - N. MAIN ST.
STORM SEWER PLAN AND PROFILE
W LIBERTY STORM - TREE PIT

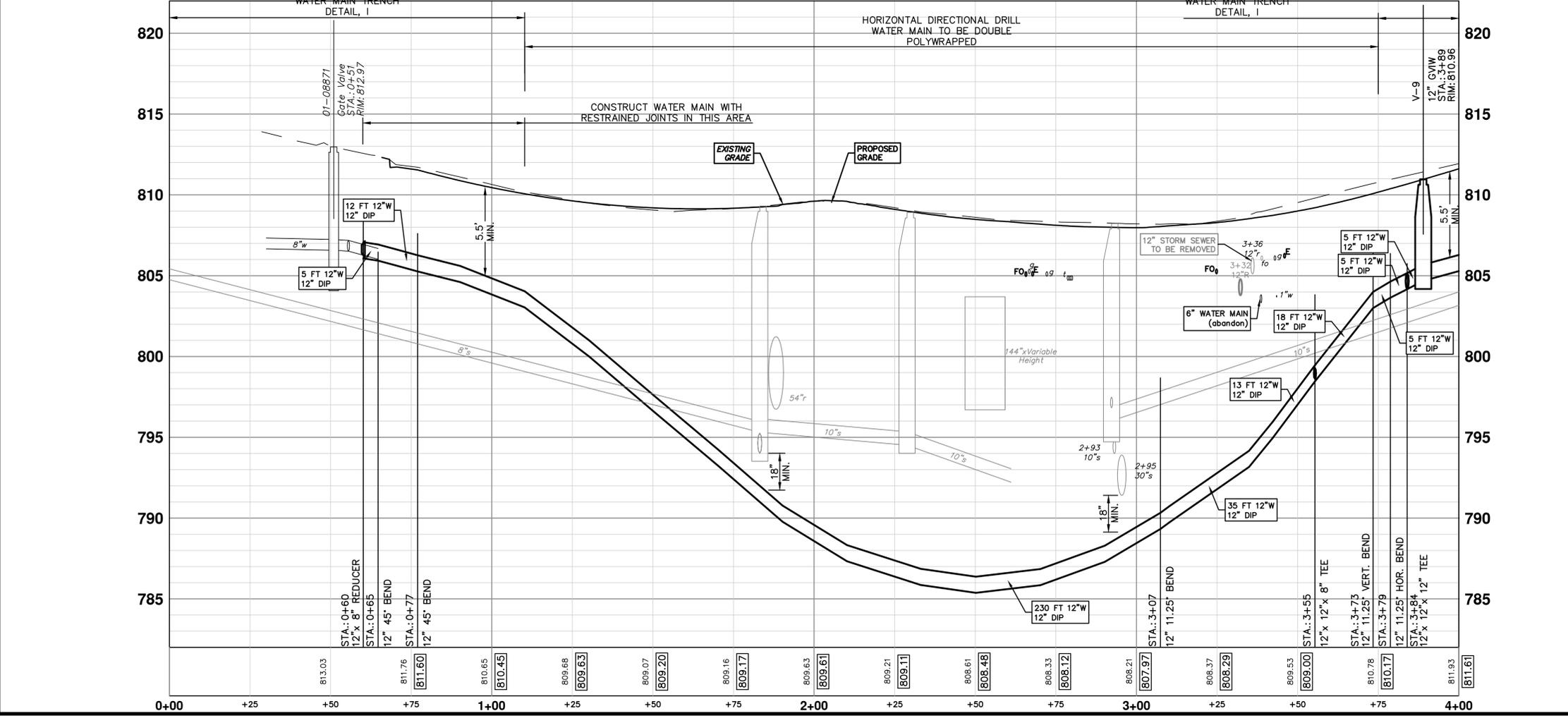
SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'

DRAWING NO. **2015034-38**

SHEET NO. **38 OF 63**



- WATER MAIN CONSTRUCTION NOTES:**
- FOR EROSION CONTROL ITEMS SEE EROSION CONTROL SHEETS.
 - ALL WATER MAIN WORK SHALL BE STAGED IN ACCORDANCE WITH THE CONSTRUCTION STAGING SHEETS AND SPECIFIC PROVISIONS AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK, CONSTRUCTION METHODS, AND EQUIPMENT TO COMPLY WITH THE CONTRACT REQUIREMENTS.
 - THE CONTRACTOR SHALL CAREFULLY PROTECT FROM DAMAGE OR INJURY DURING CONSTRUCTION OPERATIONS ALL UTILITIES NOT DESIGNATED FOR REMOVAL OR ABANDONMENT. PAYMENT FOR PROTECTION OF UTILITIES INCLUDED IN "MACHINE GRADING, MODIFIED, W LIBERTY STREET", EXISTING FACILITIES NOT DESIGNATED FOR REMOVAL OR ABANDONMENT BUT WHICH ARE DAMAGED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS SOLE EXPENSE, IN A MANNER THAT IS APPROVED BY THE ENGINEER.
 - THE EXISTING UTILITIES SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED THROUGH SURVEYS AND/OR EXISTING PLANS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO ITS ACCURACY AND/OR THE LOCATION OF EXISTING UTILITIES. IF STORM, SANITARY, OR WATER MAINS CROSS WITH LESS THAN 18" CLEARANCE, THEY SHALL BE SADDLED (SEE UTD DETAIL #3). IF STORM, SANITARY, OR WATER MAINS CROSS OTHER UTILITIES, CONTACT THEIR RESPECTIVE OWNERS FOR INFORMATION ON HOW TO PROCEED. PAYMENT FOR THE COORDINATION EFFORTS, CONCRETE SADDLES, AND ANY OTHER ASSOCIATED ITEMS SHALL BE INCLUDED IN THE RELATED STORM, SANITARY, OR WATER MAIN ITEMS AND SHALL NOT BE PAID FOR SEPARATELY.
 - THE CONTRACTOR WILL ONLY BE ALLOWED TO SHUT DOWN THE EXISTING WATER MAIN FOR A MAXIMUM DURATION OF 8 HOURS IN ANY ONE SHUTDOWN, IN ANY GIVEN 24 HOUR PERIOD. SHUTDOWN OF THE EXISTING WATERMAIN MUST BE SCHEDULED WITH THE ENGINEER A MINIMUM OF 3 WORKING DAYS IN ADVANCE OF THE INTENDED SHUTDOWN. THE SHUTDOWN OF THE WATER MAIN WILL NOT BE ALLOWED TO TAKE PLACE ON A SATURDAY OR A SUNDAY.
 - PLEASE SEE THE SPECIAL PROVISION ENTITLED "WATER MAIN AND APPURTENANCES" FOR CONDITIONS AND ADDITIONAL REQUIREMENTS REGARDING THE DIP WATER MAIN, ITS INSTALLATION, AND TESTING.
 - THE CONTRACTOR SHALL PROPOSE A METHOD(S) AND EQUIPMENT FOR THE REVIEW AND APPROVAL OF THE ENGINEER TO BE USED FOR THE FLUSHING OF CHLORINATED WATER FROM PROPOSED WATER MAIN INTO EXISTING SANITARY SEWERS. CHLORINATED WATER SHALL NOT BE ALLOWED IN STORM SEWERS. ANY AND ALL MEASURES NECESSARY TO COMPLY WITH THIS REQUIREMENT SHALL BE INCLUDED IN THE COST OF THE WATER MAIN INSTALLATION AND WILL NOT BE PAID FOR SEPARATELY.
 - UPON COMPLETION OF THE 12" WATER MAIN CONSTRUCTION AND HYDROSTATIC AND BACTERIOLOGICAL TESTING, THE CONTRACTOR SHALL REMOVE THE TEMPORARY WATER MAIN TESTING AND CONNECTION ASSEMBLY AND CONSTRUCT THE PERMANENT WATER MAIN AS SHOWN ON THE PLAN SHEET. ALL WORK ASSOCIATED WITH REMOVING THE TEMPORARY TESTING CONNECTION AND CONSTRUCTING THE FINAL PERMANENT CONNECTION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE RELATED ITEMS OF WORK.



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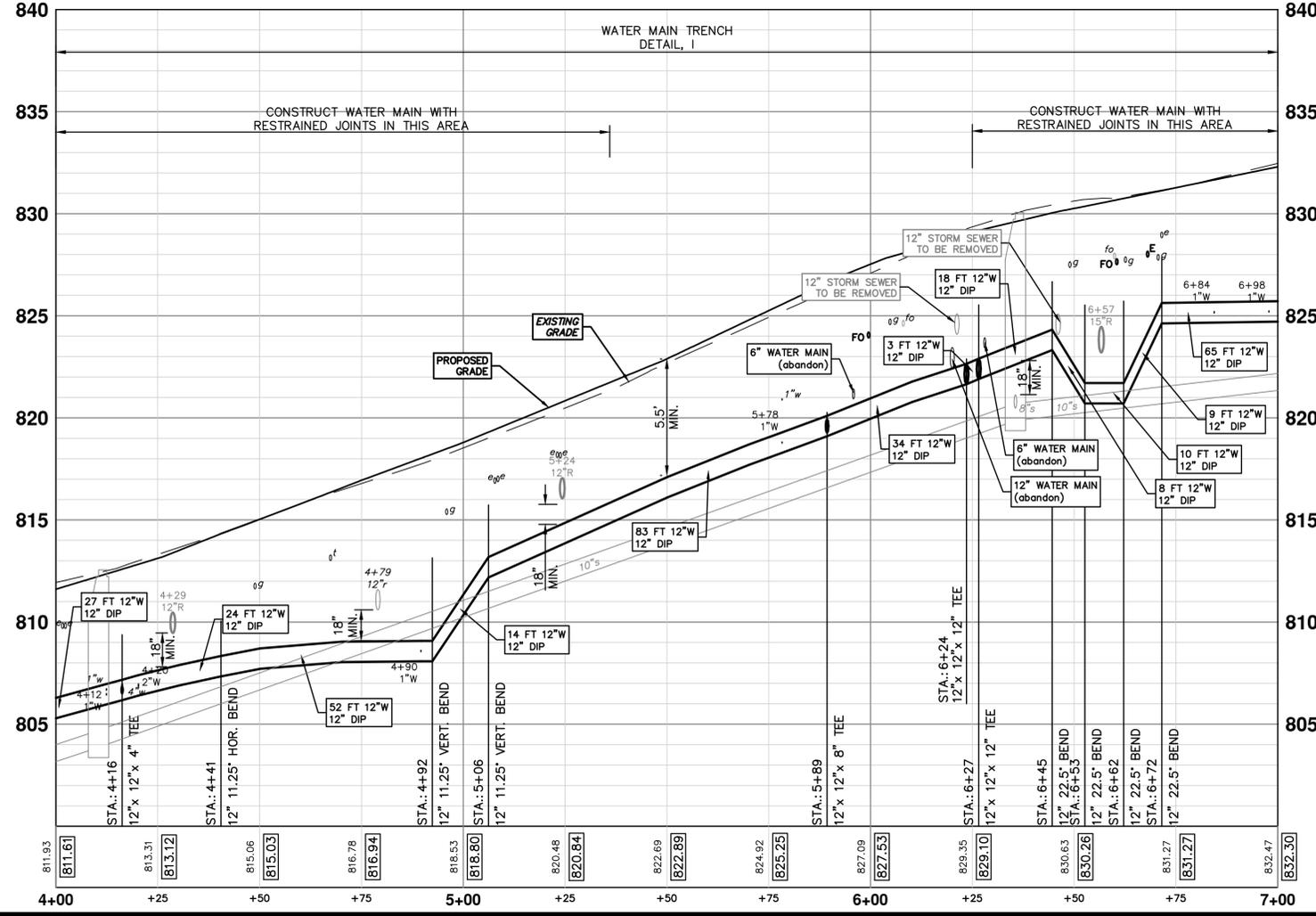
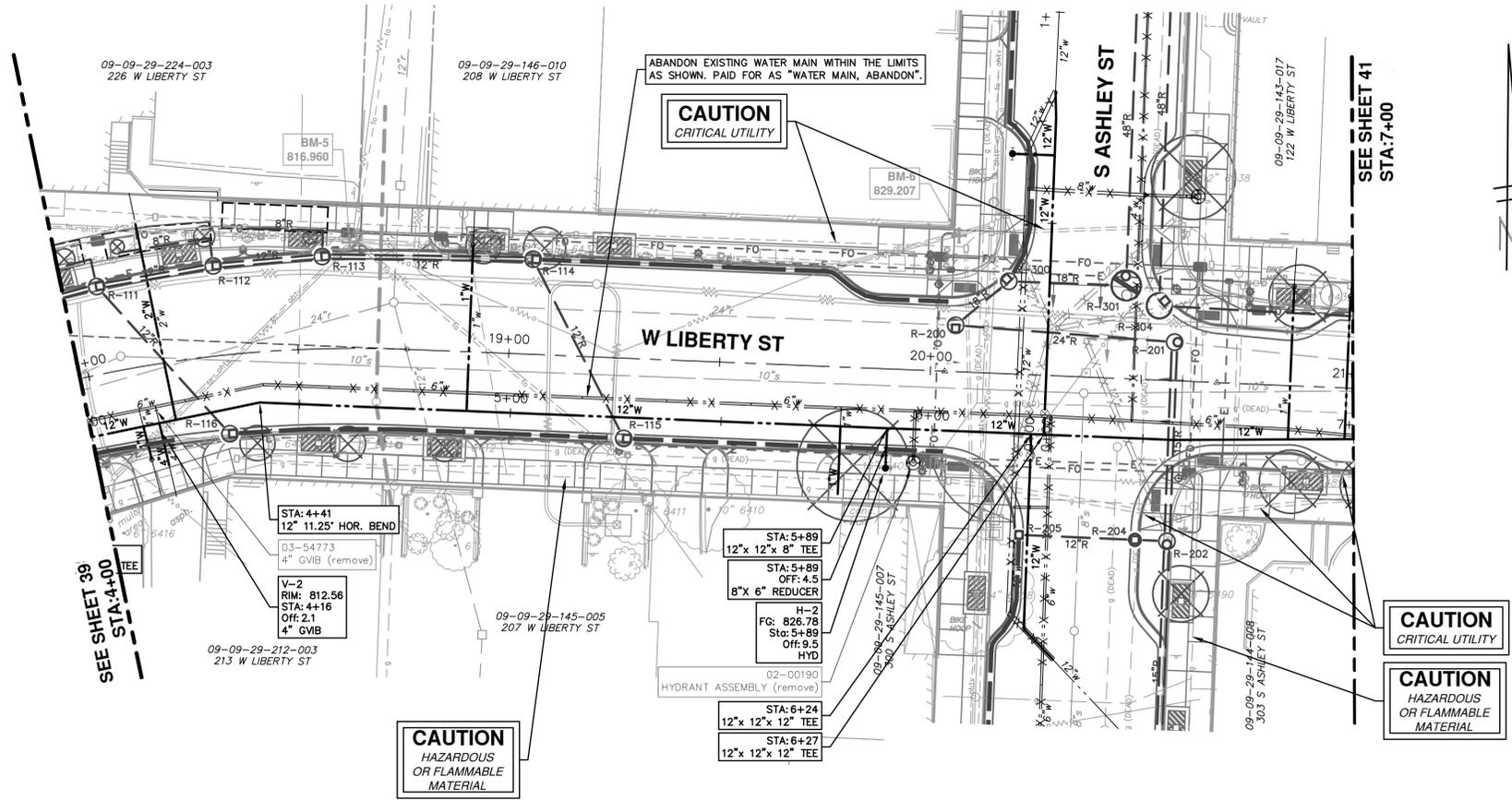
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WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
LIBERTY ST. WATER MAIN PLAN AND PROFILE
STA. 0+60 TO STA. 4+00

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

DRAWING NO. 2015034-39

SHEET NO. 39 OF 63





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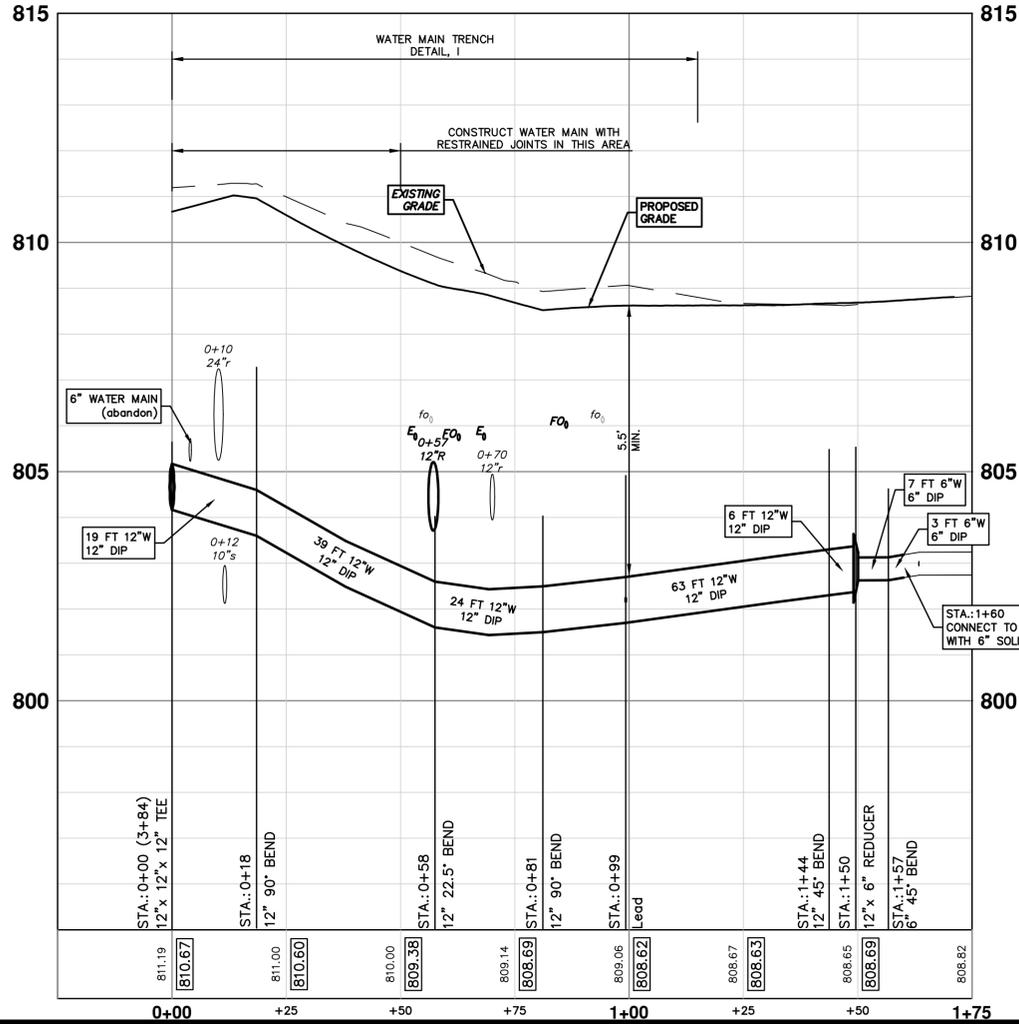
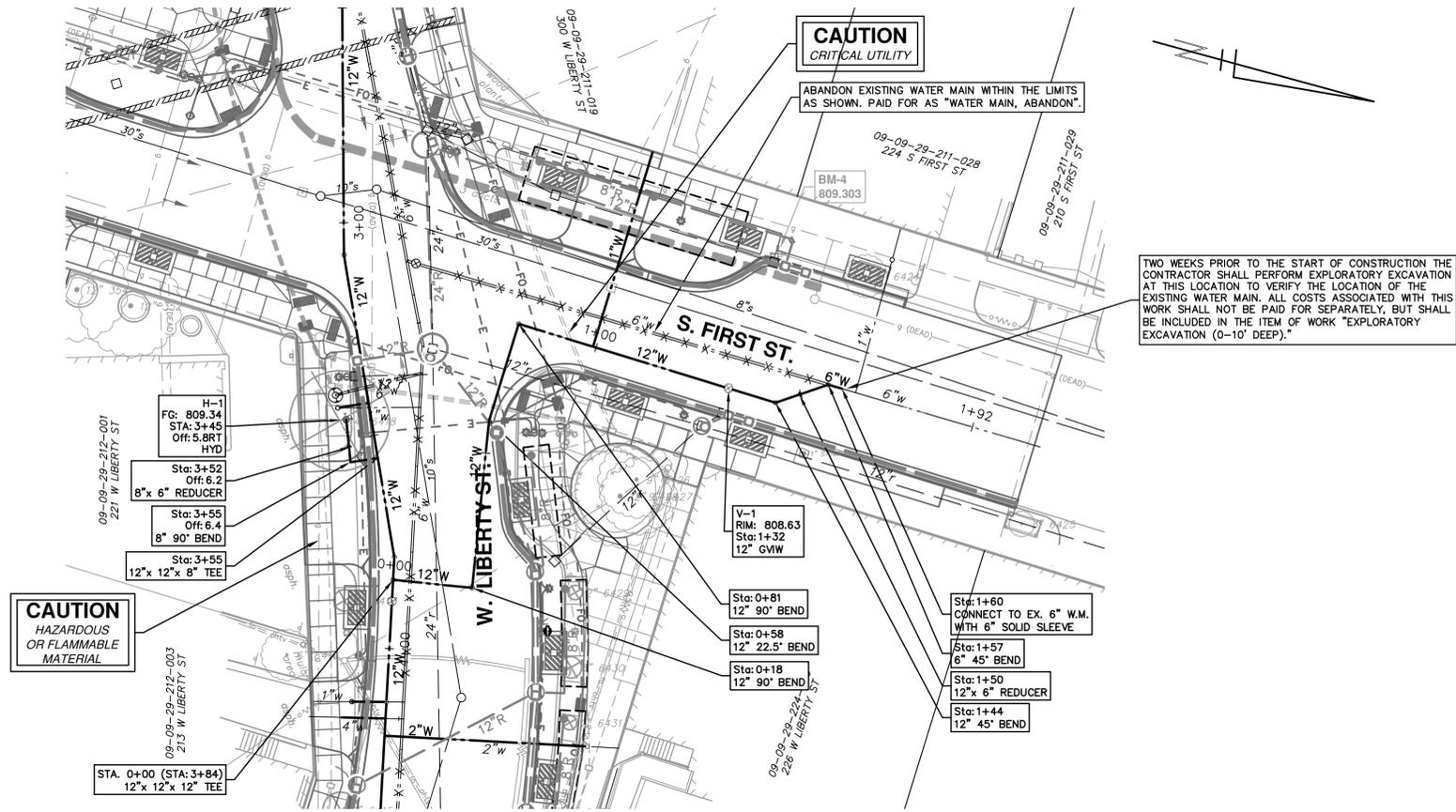
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LIBERTY ST. WATER MAIN PLAN AND PROFILE
STA. 4+00 TO STA. 7+00

SHEET No. **40 OF 63**

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

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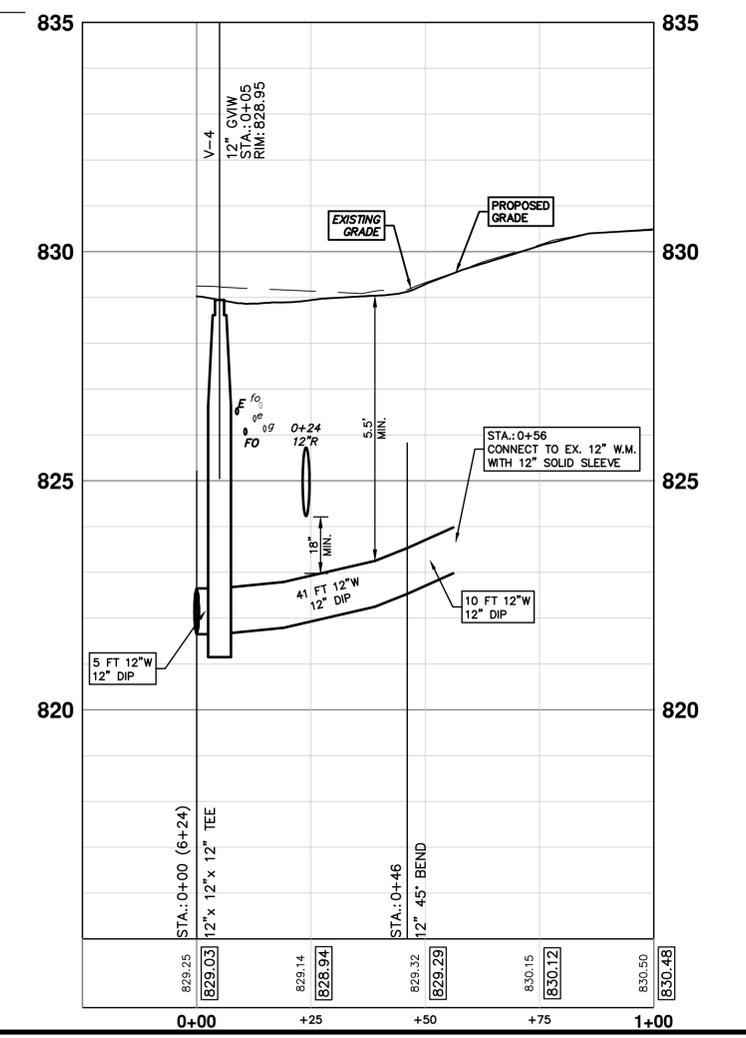
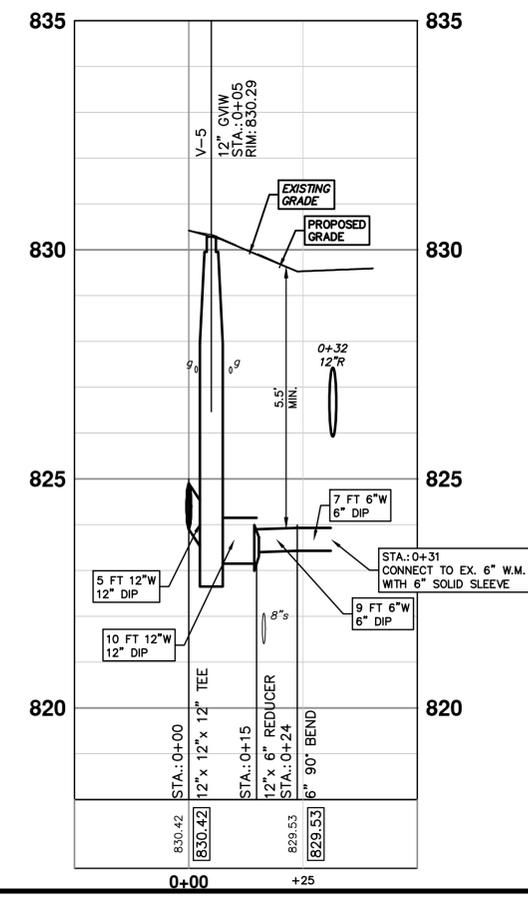
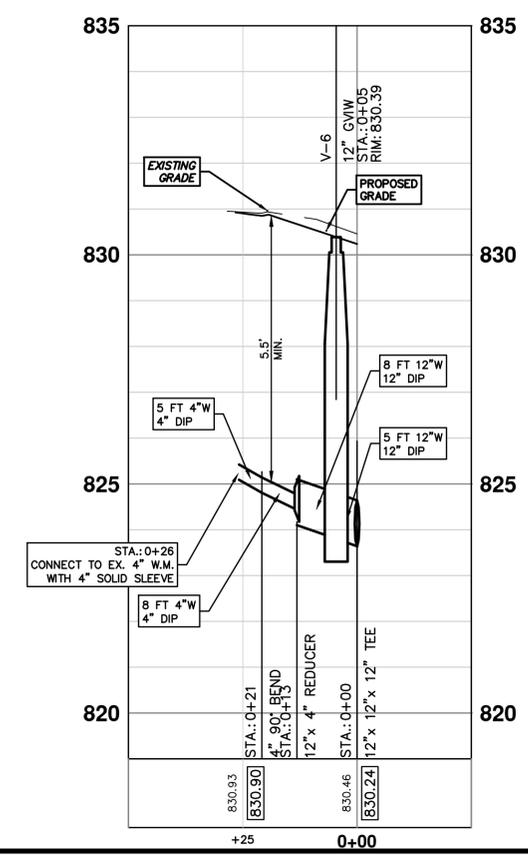
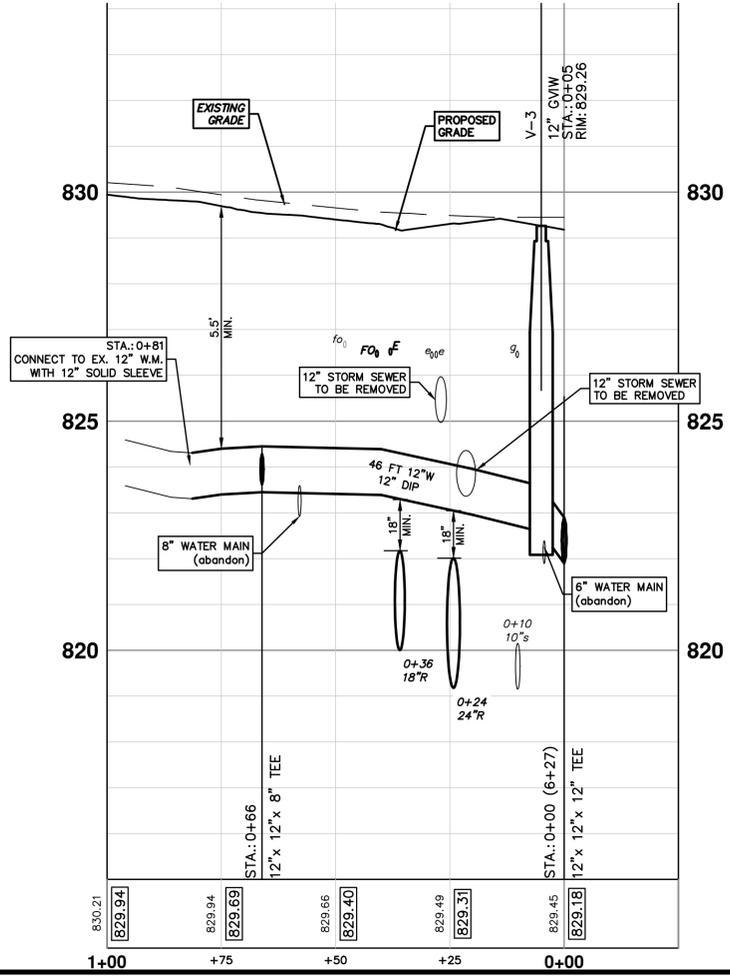
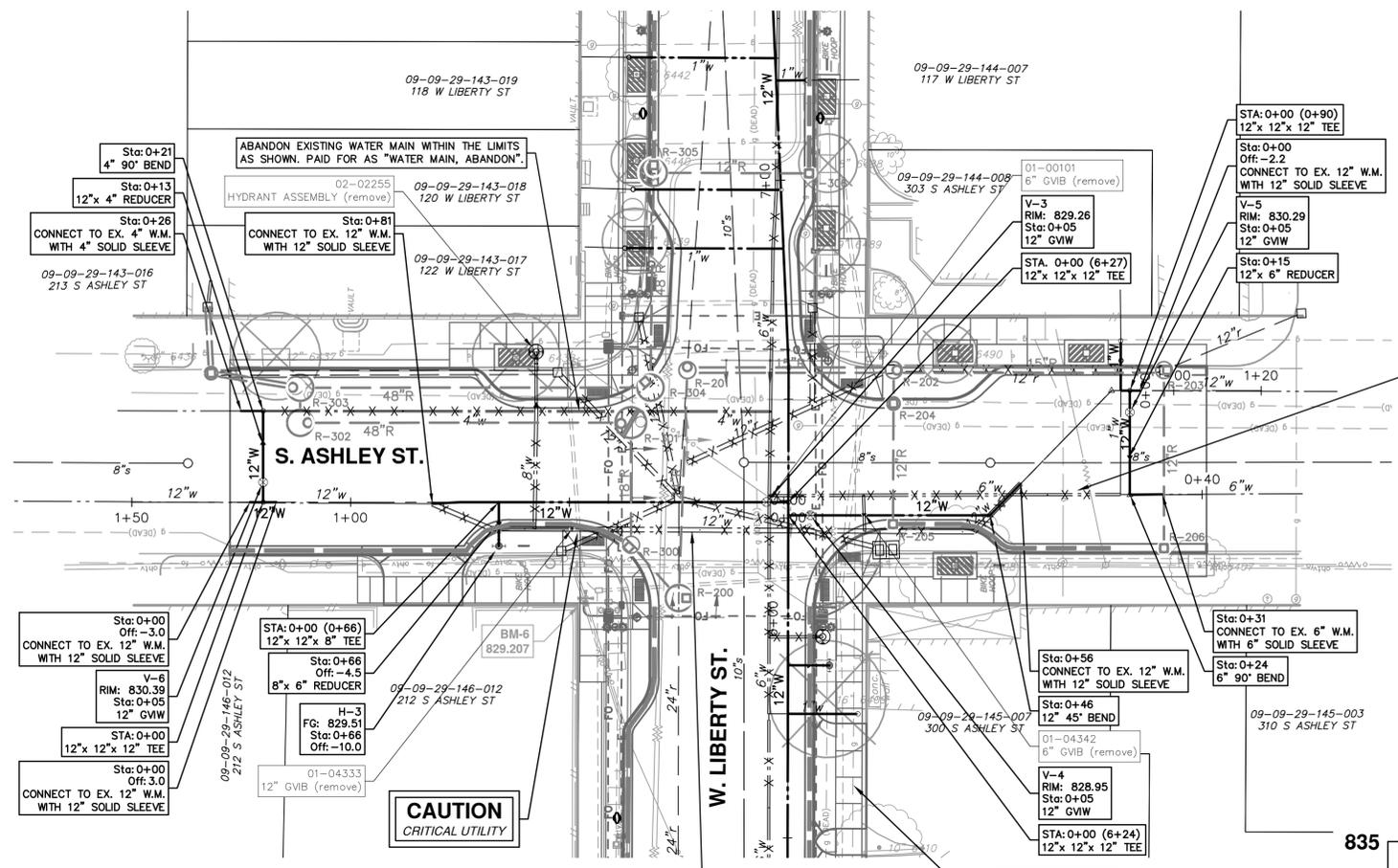
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WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
FIRST ST.
WATER MAIN PLAN AND PROFILE

SCALE PLAN: 1" = 20'
PROFILE: 1" = 2'

DRAWING No.
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WEST LIBERTY STREET RECONSTRUCTION
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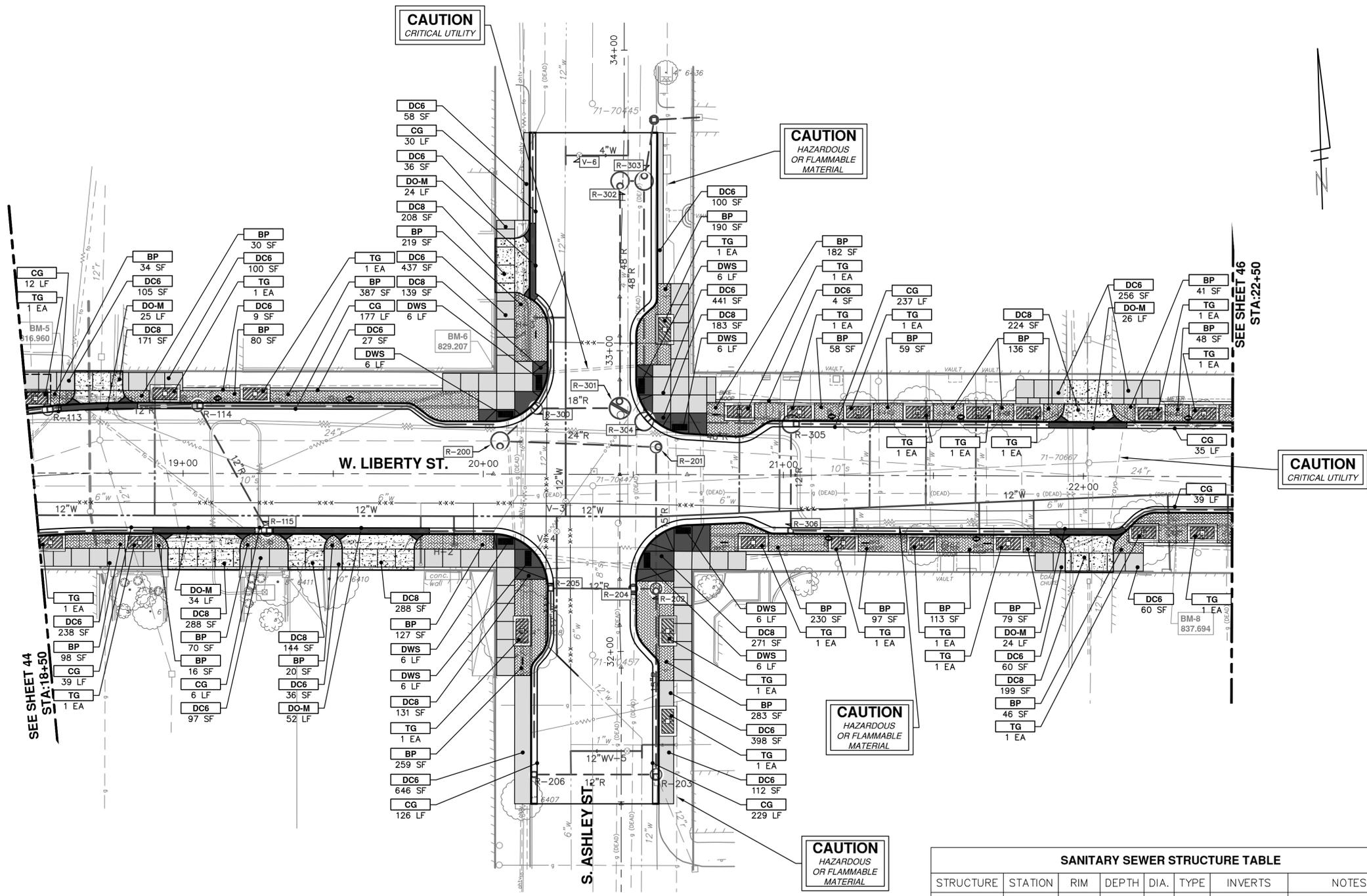
SCALE PLAN: 1" = 20'
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SHEET No.
43 OF 63

WATER MAIN PLAN AND PROFILE
S. ASHLEY ST.



CONSTRUCTION KEY	
KEY	DESCRIPTION
CG	PLACE CURB AND GUTTER, CONCRETE, MODIFIED
DO-M	DRIVE OPENING, CONCRETE, DET M, MODIFIED HIGH EARLY WITH FIBER MESH REINFORCE
DC6	PLACE SIDEWALK, CONCRETE, 6 INCH HIGH EARLY WITH FIBER MESH REINFORCE
DC8	PLACE SIDEWALK, RAMP, OR DRIVE, CONCRETE, 8 INCH HIGH EARLY WITH FIBER MESH REINFORCE
DWS	DETECTABLE WARNING SURFACE, MODIFIED, DIP
BP	PLACE BRICK XXXXXXXX
TG	PLACE TREE GRATE
ABO	ADJUST BY OTHERS
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
2	REMOVE AND REPLACE MDOT TYPE B CASTING, MODIFIED
3	REMOVE AND REPLACE MDOT TYPE K CASTING, MODIFIED
4	POINT STRUCTURE.
5	ADJUST MDOT TYPE B CASTING TO FINISH GRADE
6	ADJUST MDOT TYPE K CASTING TO FINISH GRADE
7	ADDITIONAL DEPTH DRAINAGE STRUCTURE ADJUST/REPAIR. PERFORM DEPTH OF ADJUST/REPAIR AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER

SANITARY SEWER STRUCTURE TABLE							
STRUCTURE	STATION	RIM	DEPTH	DIA.	TYPE	INVERTS	NOTES
71-70447	20+36.52	830.07	10.20	48	4' MH	10" W 819.87 10" E 819.87 8" S 820.47	RECONSTRUCT MH CONE COVER B, NEW ADJUST TO FG
71-70457	20+36.60	829.78	8.63	48	4' MH	8" N 821.15 8" S 821.15	RECONSTRUCT MH CONE COVER B, NEW ADJUST TO FG
71-70667	22+01.79	836.62	12.96	48	4' MH	10" W 823.66 10" E 823.66	RECONSTRUCT MH CONE COVER B, NEW ADJUST TO FG

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
 S. FIRST ST. - N. MAIN ST.
 ROAD PLAN
 STA. 18+50 - STA. 22+50

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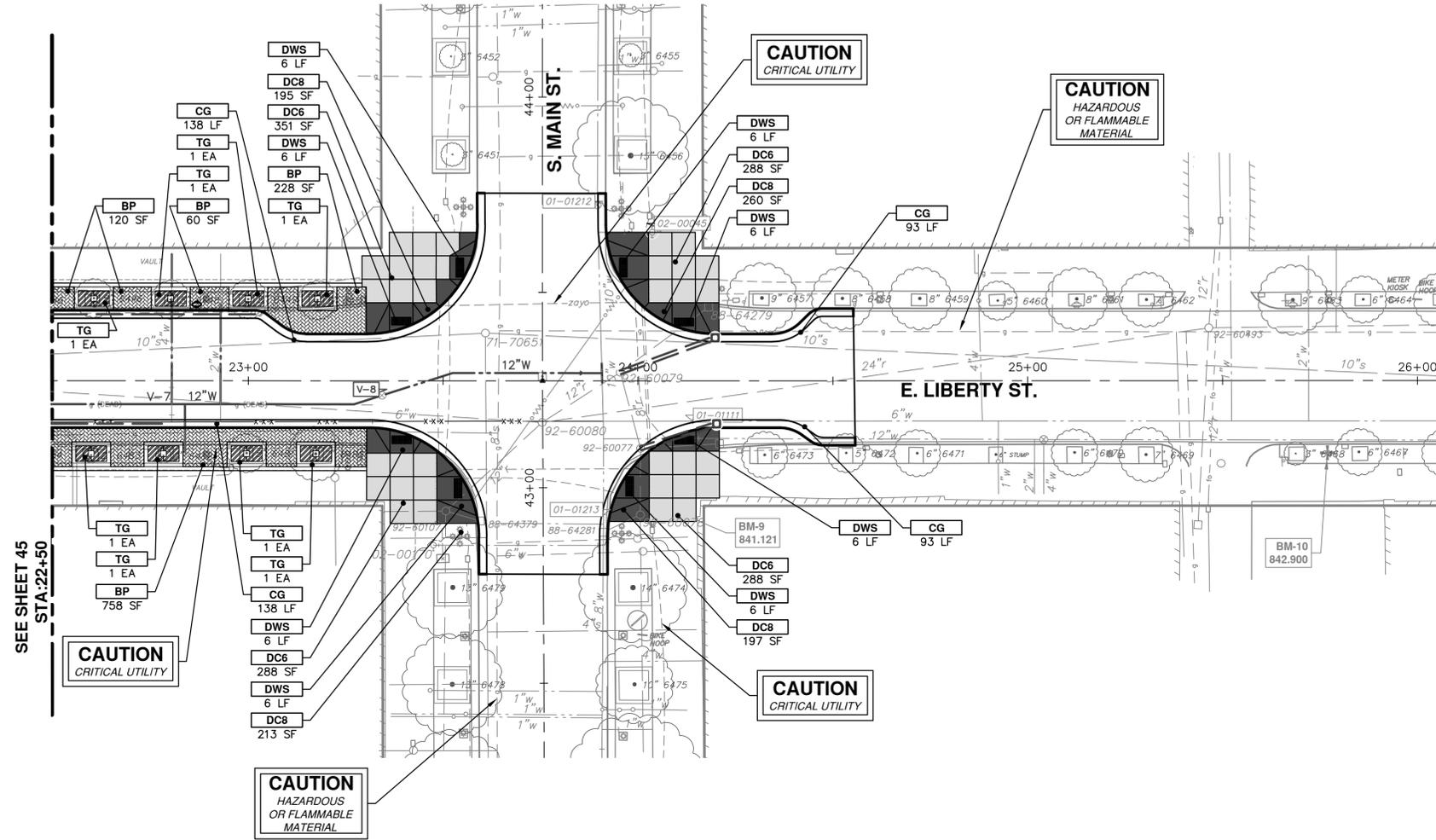
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DRAWING No.
2015034-45

SHEET No.
45 OF 63



SEE SHEET 45
STA. 22+50

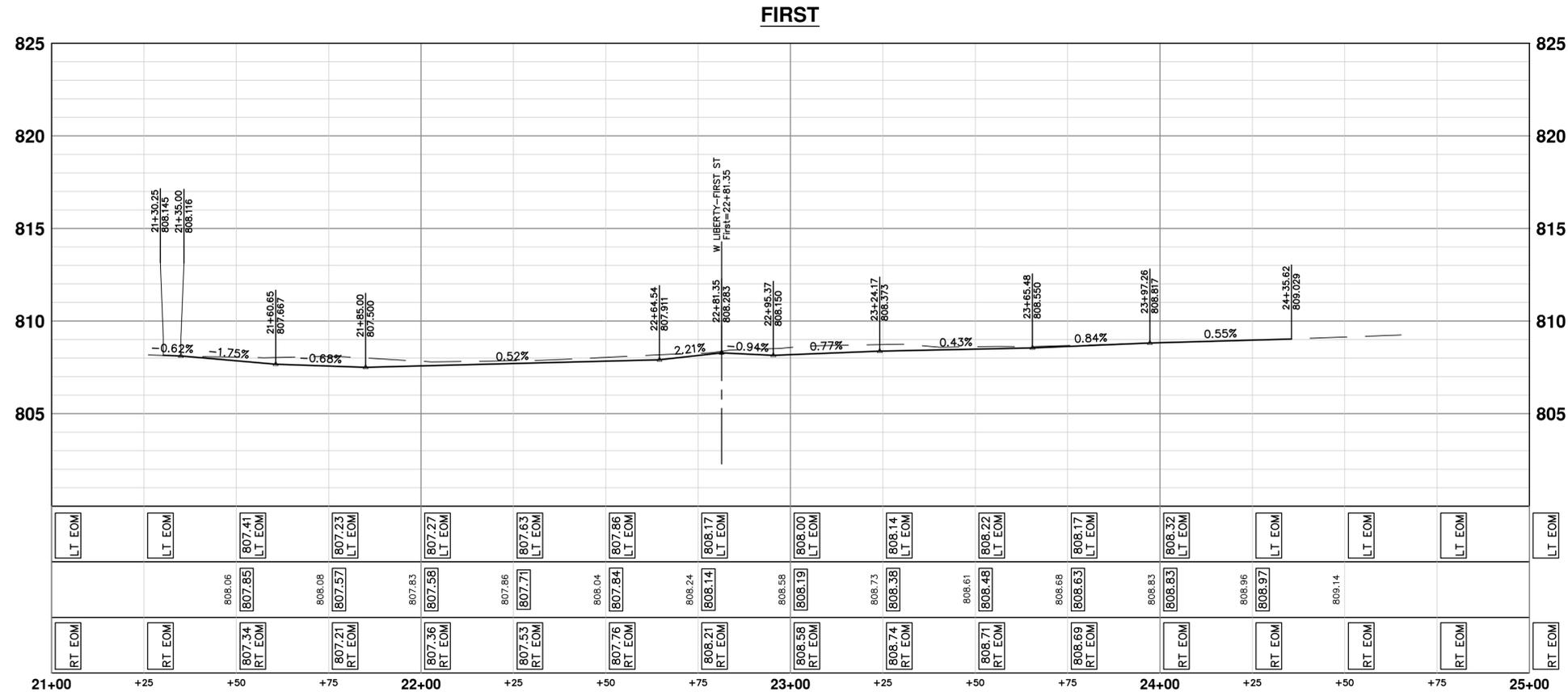
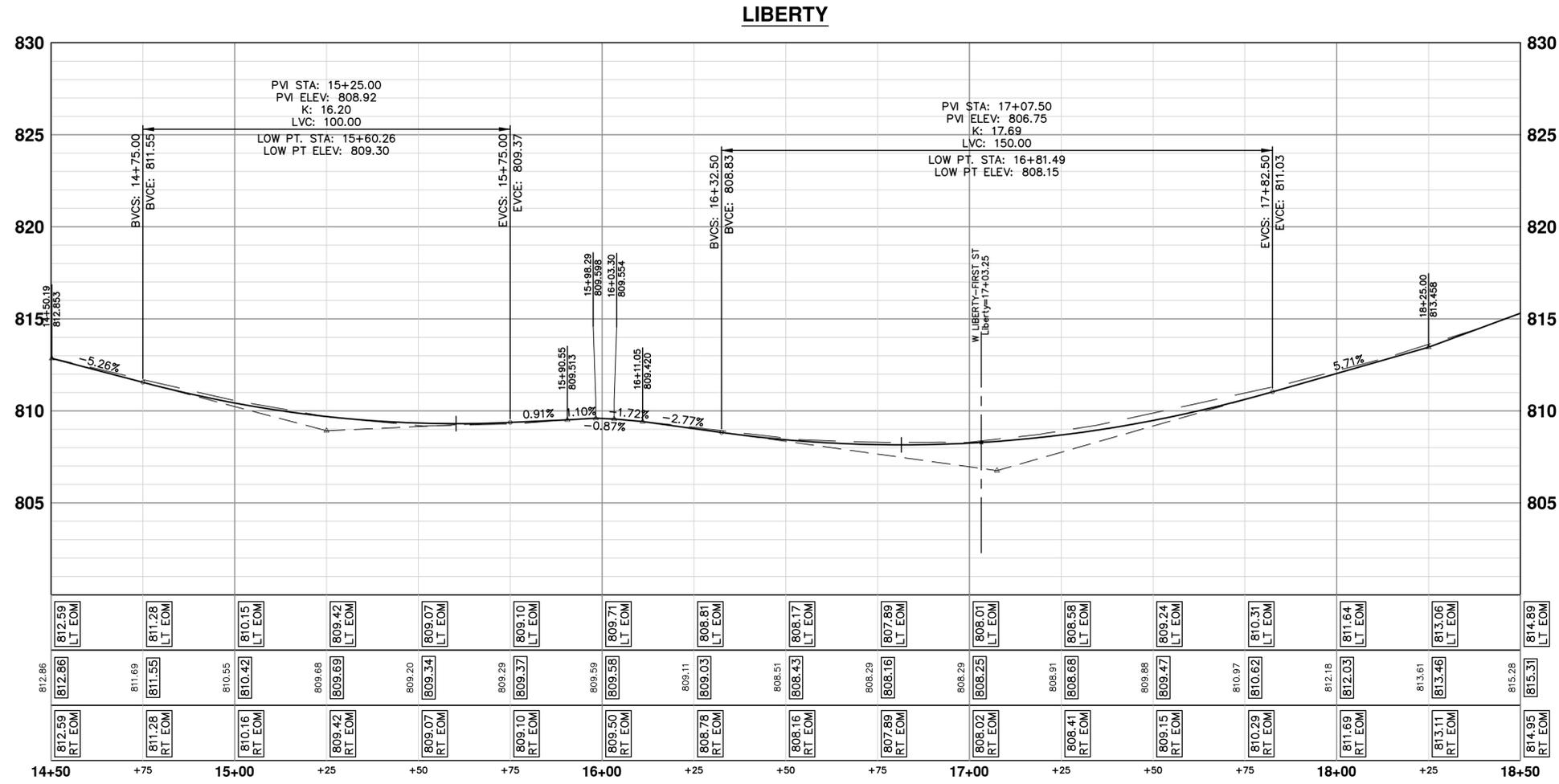
CONSTRUCTION KEY	
KEY	DESCRIPTION
CG	PLACE CURB AND GUTTER, CONCRETE, MODIFIED
DO-M	DRIVE OPENING, CONCRETE, DET M, MODIFIED HIGH EARLY WITH FIBER MESH REINFORCE
DC6	PLACE SIDEWALK, CONCRETE, 6 INCH HIGH EARLY WITH FIBER MESH REINFORCE
DC8	PLACE SIDEWALK, RAMP, OR DRIVE, CONCRETE, 8 INCH HIGH EARLY WITH FIBER MESH REINFORCE
DWS	DETECTABLE WARNING SURFACE, MODIFIED, DIP
BP	PLACE BRICK XXXXXXXXX
TG	PLACE TREE GRATE
ABO	ADJUST BY OTHERS
1	ADJUST GATE VALVE BOX, MONUMENT BOX, OR GAS BOX.
2	REMOVE AND REPLACE MDOT TYPE B CASTING, MODIFIED
3	REMOVE AND REPLACE MDOT TYPE K CASTING, MODIFIED
4	POINT STRUCTURE.
5	ADJUST MDOT TYPE B CASTING TO FINISH GRADE
6	ADJUST MDOT TYPE K CASTING TO FINISH GRADE
7-	ADDITIONAL DEPTH DRAINAGE STRUCTURE ADJUST/REPAIR. PERFORM DEPTH OF ADJUST/REPAIR AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER



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WEST LIBERTY STREET RECONSTRUCTION S.
FIRST ST. - N. MAIN ST.
 ROAD PROFILES
 LIBERTY STREET & S. FIRST STREET

SCALE: 1" = 20'
 PROFILE: 1" = 2'

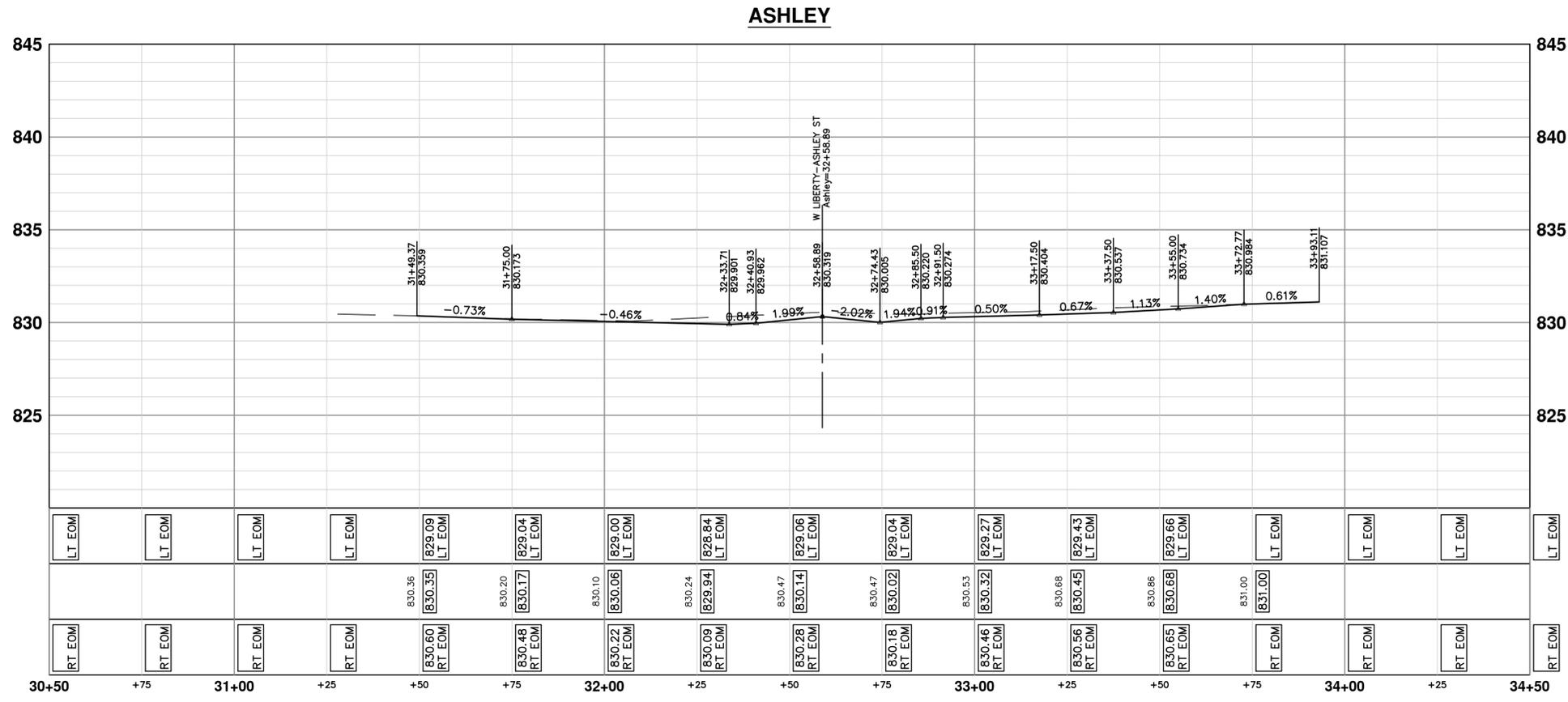
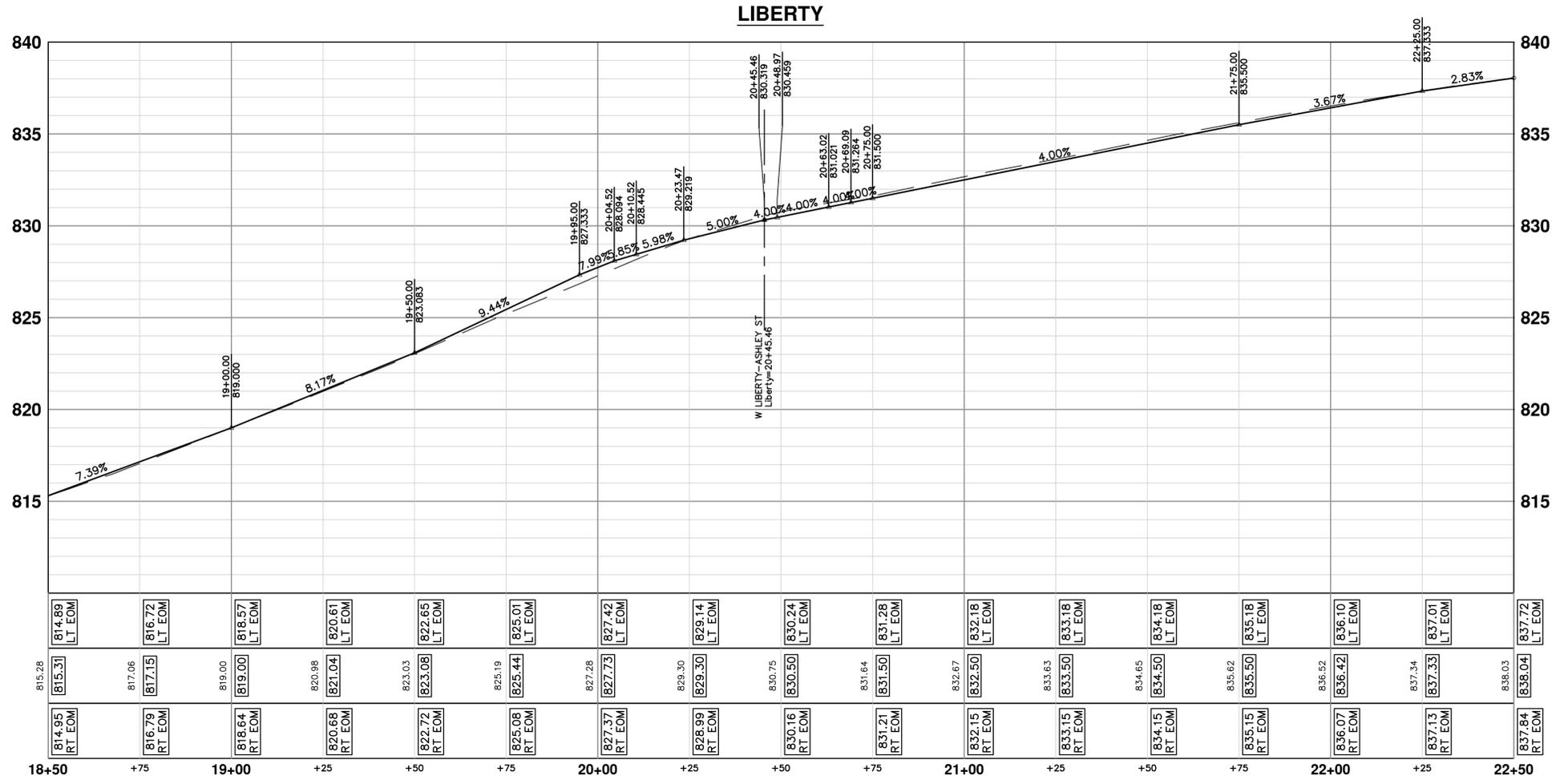
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PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
 ROAD PROFILES
 LIBERTY STREET & S. ASHLEY STREET

SCALE: 1" = 20'
 PROFILE: 1" = 2'

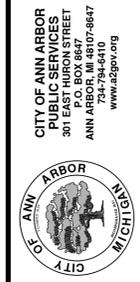
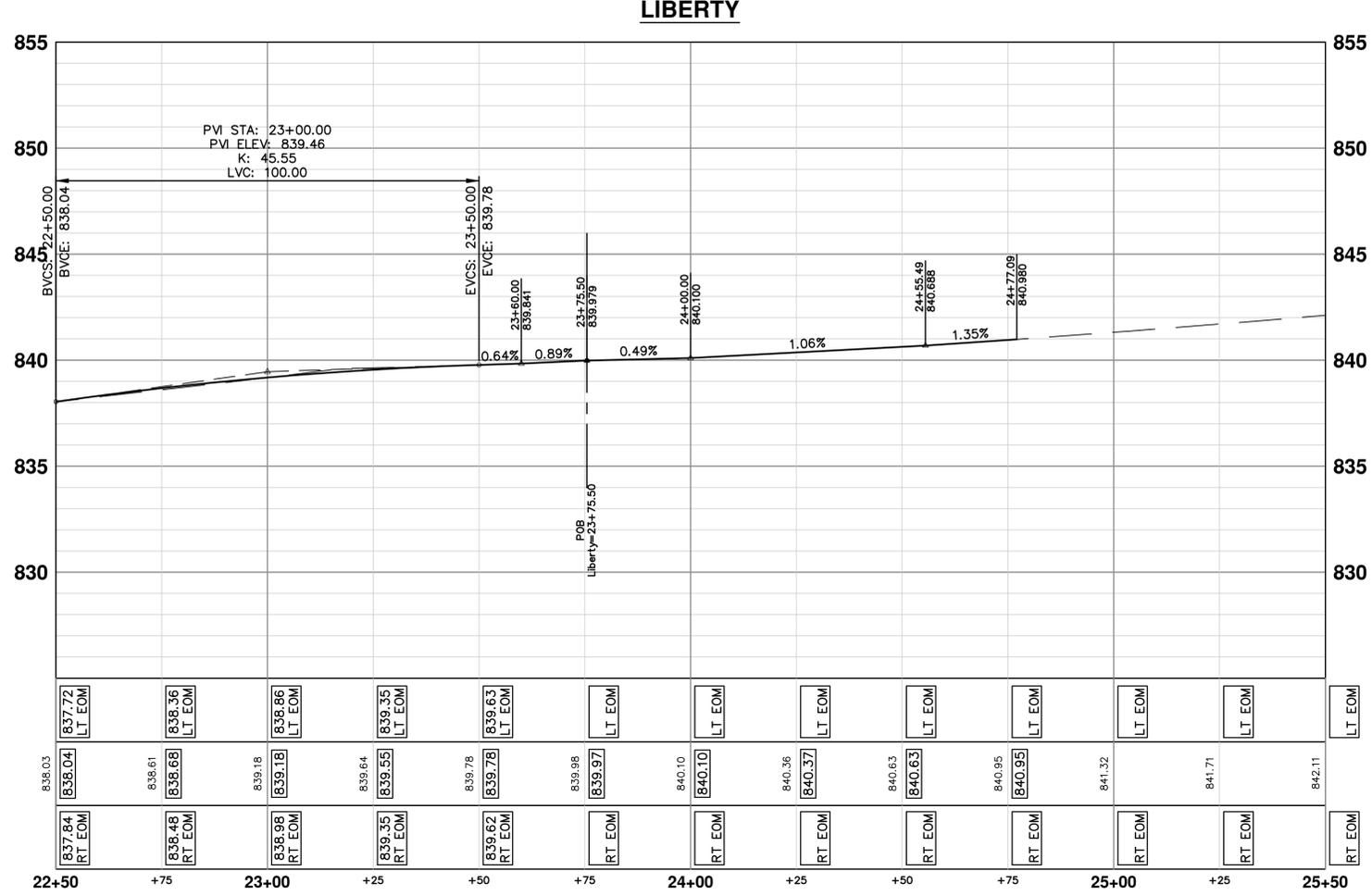
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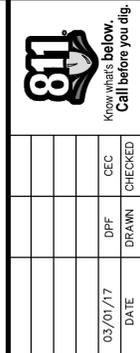
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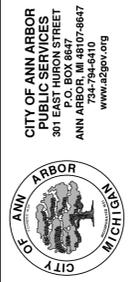
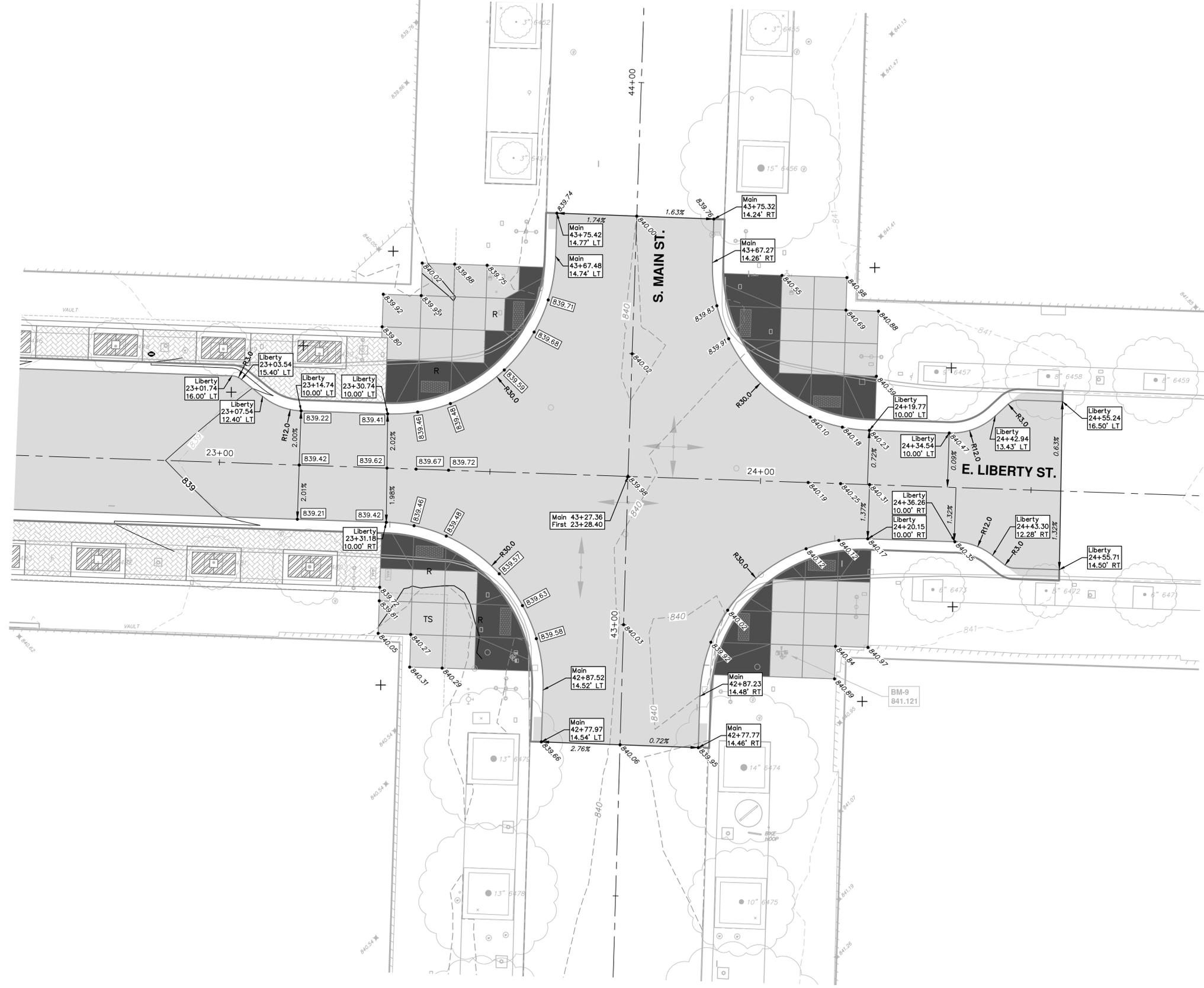
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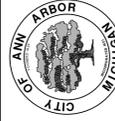
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CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
PO BOX 8640
ANN ARBOR MI 48107-8647
www.a2gov.org



PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
TRAFFIC SIGNAL AND STREET LIGHTING
STA. 14+50 TO STA. 18+50

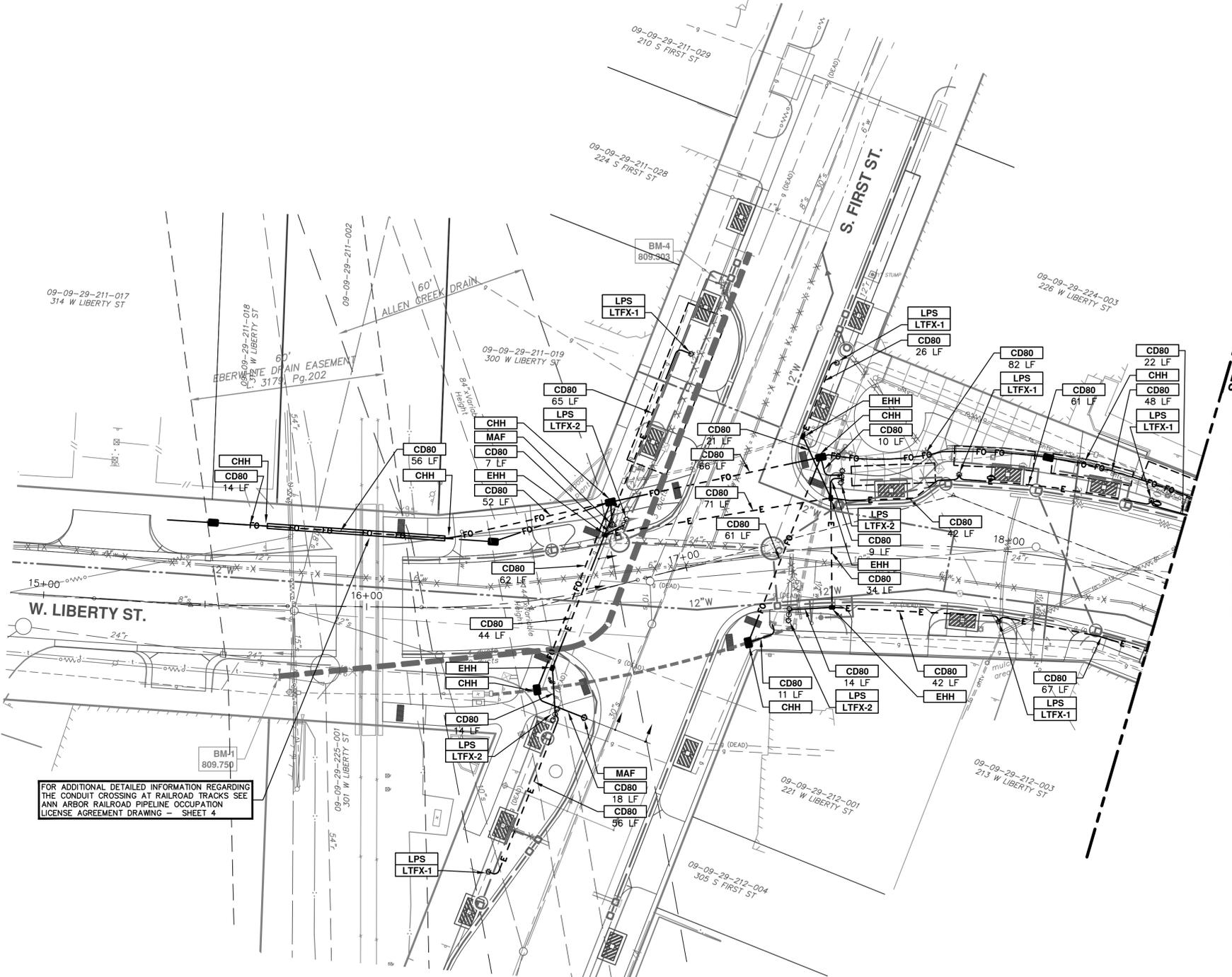
SCALE PLAN: 1" = 20'
DRAWING NO.: 2015034-54
SHEET NO.

PROPOSED ELECTRICAL HANDHOLE			
Point #	Northing	Easting	Description
108	284721.7479	13289986.2720	Pr Elec HH
109	284736.7379	13289971.7806	Pr Elec HH
110	284687.6391	13289924.2145	Pr Elec HH
111	284643.4560	13289922.7836	Pr Elec HH
112	284690.1034	13289997.9511	Pr Elec HH

MAST ARM FOUNDATIONS			
Point #	Northing	Easting	Description
73	284632.3619	13289937.1244	Pr Trfc Fnd Mast Arm
74	284691.3620	13289925.3356	Pr Trfc Fnd Mast Arm

PROPOSED COMMUNICATION HANDHOLES			
Point #	Northing	Easting	Description
1	284650.5794	13289808.9693	Communications Handhole
2	284674.0721	13289892.4629	Communications Handhole
3	284697.7413	13289922.5406	Communications Handhole
4	284732.5738	13289979.1461	Communications Handhole
5	284756.0765	13290045.4606	Communications Handhole
17	284671.1898	13289977.1881	Communications Handhole
18	284635.5705	13289920.5272	Communications Handhole

PROPOSED STREET LIGHTS			
Point #	Northing	Easting	Description
33	284630.2541	13289928.3453	Light Pole Double
34	284692.5441	13289928.8568	Light Pole Double
35	284729.0408	13289987.2024	Light Pole Double
36	284683.5069	13289986.1131	Light Pole Double
43	284577.6308	13289925.2050	Light Pole Single
44	284749.1395	13289930.6533	Light Pole Single
45	284761.6777	13289974.0730	Light Pole Single
46	284703.2822	13290047.9472	Light Pole Single
47	284741.8534	13290021.2375	Light Pole Single
49	284754.3170	13290079.9029	Light Pole Single



FOR ADDITIONAL DETAILED INFORMATION REGARDING THE CONDUIT CROSSING AT RAILROAD TRACKS SEE ANN ARBOR RAILROAD PIPELINE OCCUPATION LICENSE AGREEMENT DRAWING - SHEET 4

SEE SHEET 35
STA: 18+50

CONSTRUCTION KEY	
KEY	DESCRIPTION
CHH	COMMUNICATIONS HANDHOLE ASSEMBLY, COMPLETE
EHH	ELECTRICAL HANDHOLE ASSEMBLY, COMPLETE
CD80	2-3" SCH. 80 PVC CONDUITS
LPS	LIGHT POLE, SINGLE
LTFX	LIGHT FIXTURE - 1, 2 OR 5
MAF	MAST ARM FOUNDATION

- NOTES:
- CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, AND EQUIPMENT AS INDICATED ON PLANS AND AS REQUIRED FOR A COMPLETE ELECTRICAL SYSTEM. REFER TO ROADWAY DRAWINGS FOR ADDITIONAL INFORMATION AND DETAILS. COORDINATE PROPOSED WORK WITH ALL CONTRACTORS. PROVIDE A COMPLETE UNDERGROUND SYSTEM AS SHOWN ON PLANS INCLUDING ALL EXCAVATION AND BACKFILL.
 - ALL ELECTRICAL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIAN OR UNDER THE DIRECT SUPERVISION OF SUCH A PERSON AND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
 - CONTRACTOR SHALL CONTACT THE CITY OF ANN ARBOR REPRESENTATIVE PRIOR TO STARTING ELECTRICAL WORK, SIGNS AND SIGNALS. CONTACT: CHUCK FOJTIK 734-794-6361.
 - CONTRACTOR SHALL VISIT THE JOB SITE, THOROUGHLY CHECK THE EXISTING FIELD CONDITIONS AND EXISTING ELECTRICAL INSTALLATIONS, UTILITIES AND CLARIFY ALL DISCREPANCIES WITH THE ENGINEER BEFORE SUBMITTING A BID. NO EXTRAS WILL BE ALLOWED FOR OMITTED WORK DUE TO FAILURE TO INSPECT THE JOB SITE.
 - ALL ELECTRICAL WORK SHALL COMPLY WITH MDOT, NATIONAL ELECTRICAL CODE, LOCAL CODES, ORDINANCES AND REGULATIONS INCLUDING THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT.
 - THE WIRING METHODS USED SHALL BE SUITABLE FOR THE INSTALLATION AND USE IN CONFORMITY WITH THE PROVISIONS OF THE NEC. ALL MATERIAL SHALL BE NEW AND ONLY LISTED OR LABELED EQUIPMENT SHALL BE USED OR INSTALLED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING. (NEC, SECTION 110-3(A) AND 3(B))
 - ELECTRICAL ENCLOSURES, SUPPORT RACKS, CONDUIT SYSTEMS, ETC., SHALL BE THOROUGHLY GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ALL LOCAL CODES.
 - ALL THREADED ELECTRICAL EQUIPMENT (CONDUIT, COUPLINGS, JUNCTION BOXES, ETC.) INSTALLED OUTDOORS SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.
 - ALL CONDUCTORS SHALL BE COPPER. NO CONDUCTOR SMALLER THAN #12 A.W.G. SHALL BE USED. CONDUCTORS #8 AND LARGER SHALL BE STRANDED COPPER.
 - ALL CABLE SHALL BE INSTALLED IN CONTINUOUS UNCOIL LENGTH BETWEEN HANDHOLES OR LIGHT STANDARDS. MINIMUM WIRE SIZE TO LIGHTING LOADS SHALL BE #10 AWG.

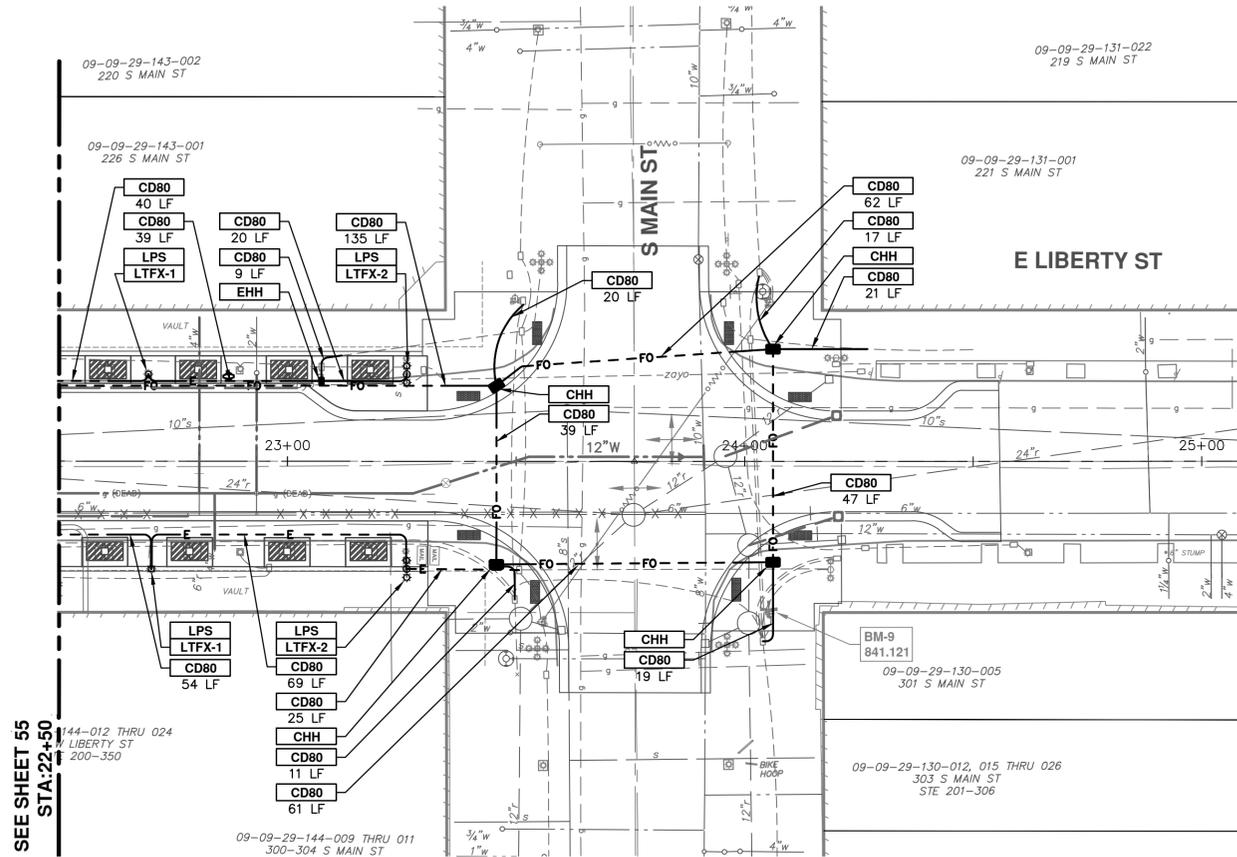
- REDUCE FEEDER SIZE FOR LIGHT FIXTURES TO #10 WITHIN POLE HANDHOLE. FURNISH AND INSTALL WATERLESS CONNECTOR. REFER TO SPECIFICATIONS FOR CONNECTOR REQUIREMENTS.
- ALL FUSES SHALL BE UL LISTED AS MANUFACTURED BY BUSSMAN MANUFACTURING CO. OR APPROVED EQUAL.
- DIRECT BURIAL LIGHTING CONDUITS SHALL BE INSTALLED 24" BELOW GRADE (MIN.). ALL CONDUIT JOINTS SHALL BE WATERTIGHT. MINIMUM BENDING RADIUS FOR ALL CONDUITS SHALL BE AS FOLLOWS: 4" C - 24 INCHES; 3" C - 18 INCHES; 2" C - 12 INCHES.
- STREET LIGHTING CONDUIT SHALL BE SCHEDULE 80 PVC DIRECT BURIED UNLESS NOTED OTHERWISE. MINIMUM STREET LIGHTING CONDUIT SIZE SHALL BE 3".
- CONDUIT SHALL BE RUN IN A STRAIGHT LINE BETWEEN STRUCTURES I.E., HANDHOLE, LIGHT STANDARDS OR BUILDING. CONDUIT SHALL BE SLOPED TOWARD STRUCTURES AT ALL POINTS TO PREVENT WATER FROM ACCUMULATING IN THE CONDUIT. (NO "LOW POINTS").
- COORDINATE ALL ELECTRICAL UNDERGROUND WORK WITH NEW AND EXISTING UNDERGROUND UTILITIES BEFORE INSTALLATION. LOCATION OF EXISTING UNDERGROUND AS SHOWN ON THE PLANS IS ONLY APPROXIMATE. CONTRACTOR TO VERIFY EXACT LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED WORK. ADJUST LOCATION OF DIRECT BURIAL CONDUITS IN THE FIELD TO AVOID CONFLICTS.
- ALL DIRECT BURIAL CONDUITS INSTALLED BELOW ROADWAYS, SIDEWALKS, OR PARKING LOTS SHALL BE BACKFILLED WITH MDOT GRANULAR MATERIAL, CLASS II, AND COMPACTED TO 95% OF ITS MAXIMUM WEIGHT.
- CONTRACTOR TO DISCONNECT AND REMOVE EXISTING STREET LIGHT POSTS. EXISTING CABLES/CONDUIT WILL BE ABANDONED IN PLACE. WHERE THE ABANDONED CABLE/CONDUITS CONFLICTS WITH PROPOSED WORK, THE CONTRACTOR SHALL CUT, CAP, REMOVE, AND ABANDON THE CABLE/CONDUIT AS DIRECTED BY THE ENGINEER
- HAND DIG WHERE REQUIRED TO LOCATE EXISTING UTILITIES PRIOR TO INSTALLATION OF THE NEW DIRECT BURIAL ROADWAY LIGHTING CONDUITS.
- IN AREAS WITH EXISTING TREES, CONTRACTOR SHALL CAREFULLY EXCAVATE THE CONDUIT RUNS SO AS NOT TO DAMAGE MAIN ROOTS OF TREES. DO NOT CUT OR REMOVE MAIN ROOTS OF TREES. ROUTE CONDUIT AROUND ROOTS AS MAY BE REQUIRED BY FIELD CONDITIONS.
- ALL EMPTY CONDUITS AND/OR EMPTY DUCTS IN DUCT BANKS SHALL BE PROVIDED WITH A POLYPROPYLENE FISH LINE.
- ALL LIGHTING POLES SHALL BE STORED WITH WOOD BLOCKING SEPARATION AND CARE SHALL BE TAKEN NOT TO DAMAGE FACTORY FINISH OF POLES AND LUMINAIRES. ALL DAMAGE SHALL BE TOUCHED UP WITH FACTORY APPROVED TOUCH-UP PAINT. ALL REPAIRS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

- CARE SHALL BE EXERCISED DURING POLE BASE INSTALLATION AND POLE PLACEMENT SO THAT ANCHOR BOLTS ARE CORRECTLY ALIGNED, POLES ARE PLUMB, LUMINAIRES ARE HORIZONTAL AND ORIENTATED AS SHOWN ON THE PLANS. REFER TO POLE FOUNDATION DETAIL FOR INSTALLATIONS REQUIREMENTS.
- FINAL LOCATIONS OF LIGHT STANDARDS, CONDUIT, HANDHOLES AND LIGHTING CONTROL ENCLOSURES SHALL BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER TO AVOID CONFLICTS THAT MAY BE ENCOUNTERED.
- COMPLETE UNDERGROUND SYSTEM SHALL BE INSPECTED AND CERTIFIED PRIOR TO BACKFILLING BY THE LOCAL BUILDING DEPARTMENT ELECTRICAL INSPECTOR.
- PROVIDE LIGHTING SYSTEM GROUNDING MEETING THE REQUIREMENTS IN ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE (NEC).
- CONTRACTOR TO INSTALL A 120V, 20A GFCI RECEPTACLE WITH WATERPROOF COVER ON EACH LIGHT POLE. EACH RECEPTACLE SHALL BE CONNECTED TO A UNIQUE CIRCUIT LEG.

PROPOSED ELECTRICAL HANDHOLE			
Point #	Northing	Easting	Description
100	284734.9439	13290550.5738	Pr Elec HH

PROPOSED COMMUNICATION HANDHOLES			
Point #	Northing	Easting	Description
12	284732.6210	13290588.8157	Communications Handhole
13	284738.5542	13290649.5421	Communications Handhole
19	284693.6455	13290587.4693	Communications Handhole
20	284692.0731	13290647.9565	Communications Handhole

PROPOSED STREET LIGHTS			
Point #	Northing	Easting	Description
30	284693.3238	13290567.8151	Light Pole Double
32	284735.7985	13290569.2824	Light Pole Double
40	284695.2525	13290511.9870	Light Pole Single
57	284737.7498	13290512.7993	Light Pole Single



SEE SHEET 55
STA:22+50

CONSTRUCTION KEY	
KEY	DESCRIPTION
CHH	COMMUNICATIONS HANDHOLE ASSEMBLY, COMPLETE
EHH	ELECTRICAL HANDHOLE ASSEMBLY, COMPLETE
CD80	2-3" SCH. 80 PVC CONDUITS
LPS	LIGHT POLE, SINGLE
LTFX	LIGHT FIXTURE - 1, 2 OR 5
MAF	MAST ARM FOUNDATION



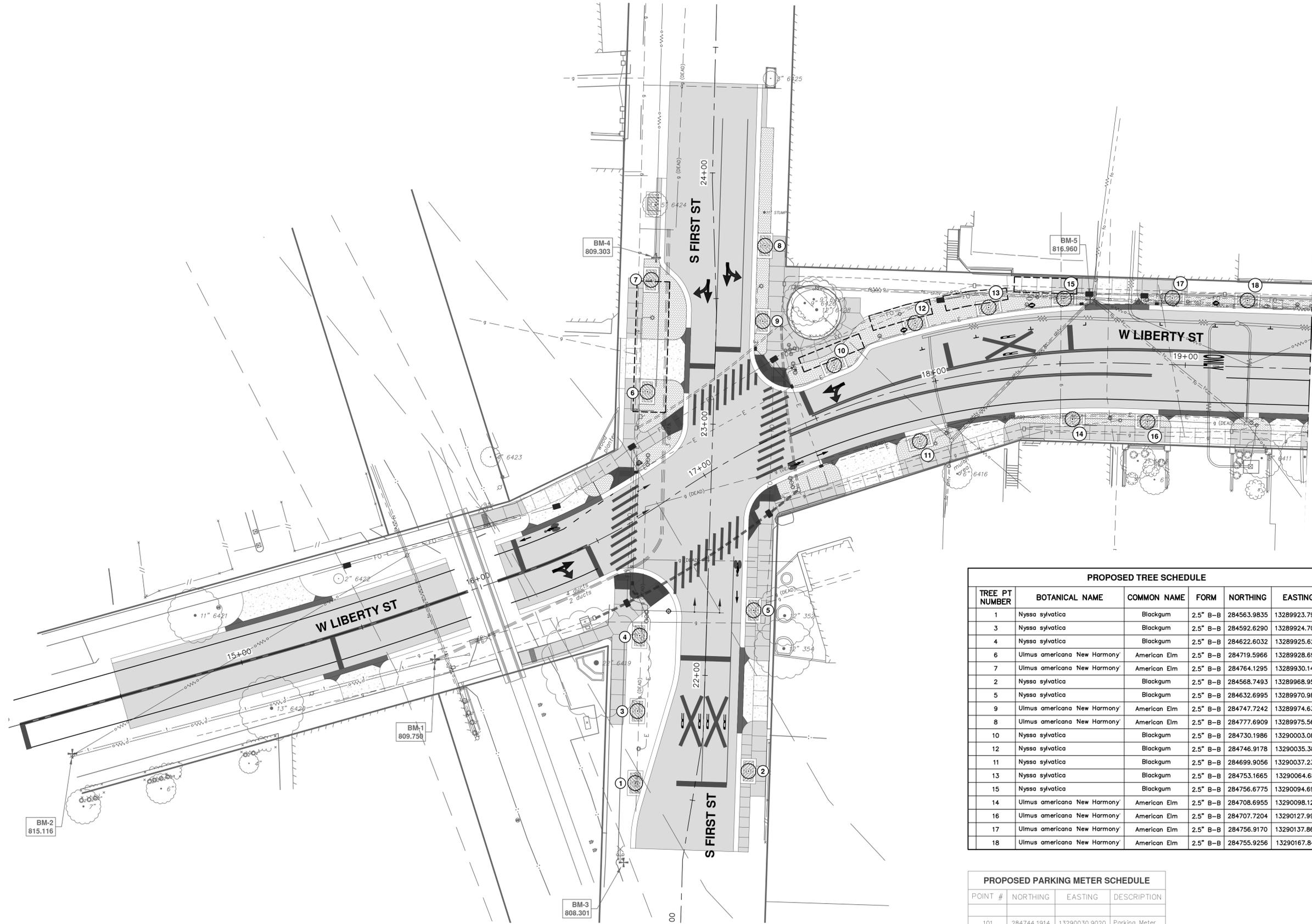
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WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
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SCALE PLAN: 1" = 20'
DRAWING No. 2015034-56

REV.	DATE	DESCRIPTION	DRAWN	CHECKED
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SEE SHEET 58
STA: 19+50

PROPOSED TREE SCHEDULE					
TREE PT NUMBER	BOTANICAL NAME	COMMON NAME	FORM	NORTHING	EASTING
1	Nyssa sylvatica	Blackgum	2.5" B-B	284563.9835	13289923.7994
3	Nyssa sylvatica	Blackgum	2.5" B-B	284592.6290	13289924.7070
4	Nyssa sylvatica	Blackgum	2.5" B-B	284622.6032	13289925.6210
6	Ulmus americana 'New Harmony'	American Elm	2.5" B-B	284719.5966	13289928.6914
7	Ulmus americana 'New Harmony'	American Elm	2.5" B-B	284764.1295	13289930.1482
2	Nyssa sylvatica	Blackgum	2.5" B-B	284568.7493	13289968.9562
5	Nyssa sylvatica	Blackgum	2.5" B-B	284632.6995	13289970.9868
9	Ulmus americana 'New Harmony'	American Elm	2.5" B-B	284747.7242	13289974.6349
8	Ulmus americana 'New Harmony'	American Elm	2.5" B-B	284777.6909	13289975.5655
10	Nyssa sylvatica	Blackgum	2.5" B-B	284730.1986	13290003.0829
12	Nyssa sylvatica	Blackgum	2.5" B-B	284746.9178	13290035.3810
11	Nyssa sylvatica	Blackgum	2.5" B-B	284699.9056	13290037.2354
13	Nyssa sylvatica	Blackgum	2.5" B-B	284753.1665	13290064.6891
15	Nyssa sylvatica	Blackgum	2.5" B-B	284756.6775	13290094.6975
14	Ulmus americana 'New Harmony'	American Elm	2.5" B-B	284708.6955	13290098.1272
16	Ulmus americana 'New Harmony'	American Elm	2.5" B-B	284707.7204	13290127.9988
17	Ulmus americana 'New Harmony'	American Elm	2.5" B-B	284756.9170	13290137.8670
18	Ulmus americana 'New Harmony'	American Elm	2.5" B-B	284755.9256	13290167.8421

PROPOSED PARKING METER SCHEDULE			
POINT #	NORTHING	EASTING	DESCRIPTION
101	284744.1914	13290030.9020	Parking Meter
102	284754.0419	13290081.8912	Parking Meter
104	284754.8621	13290155.2942	Parking Meter
105	284753.4273	13290199.2708	Parking Meter



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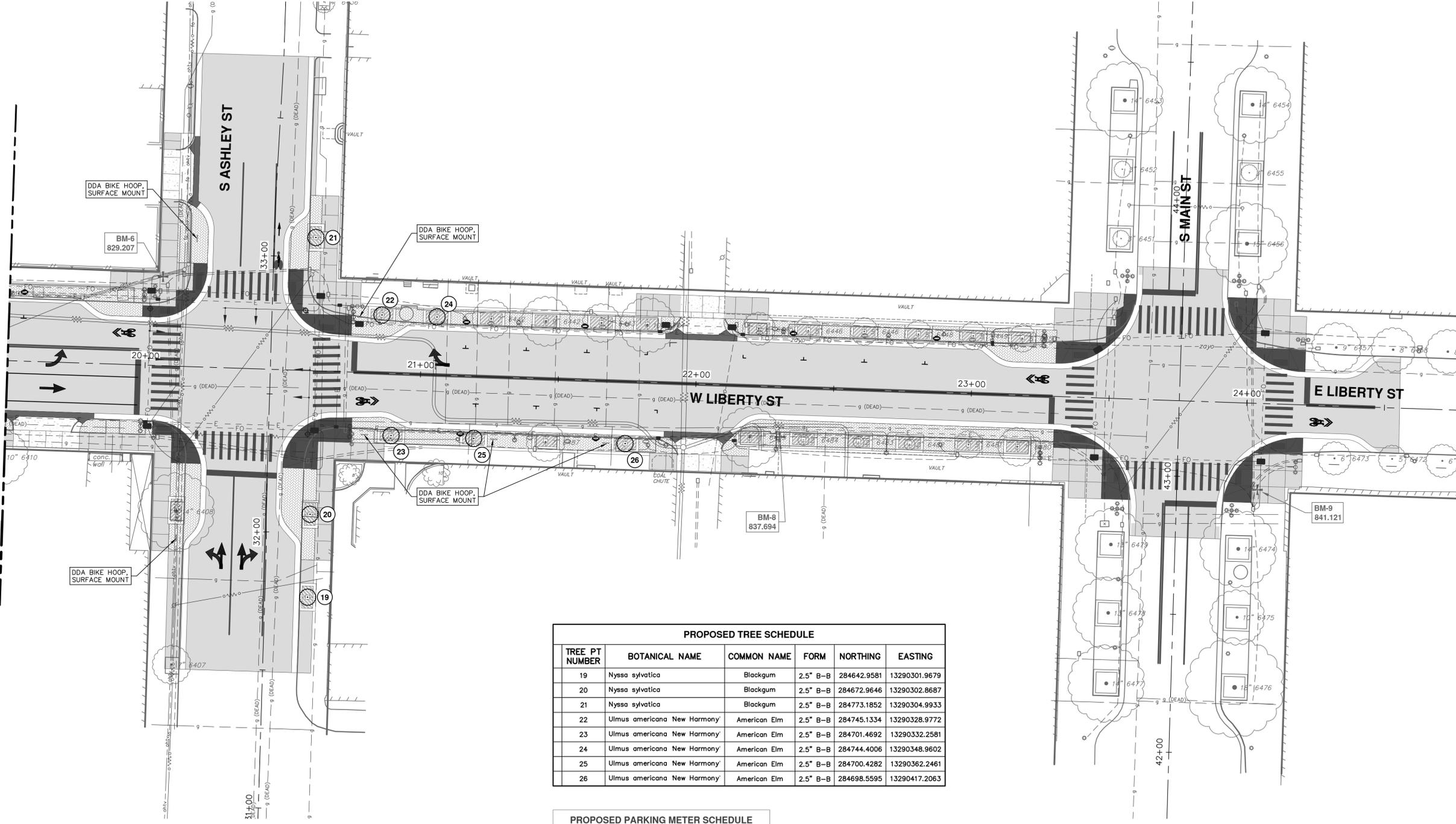


PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION
S. FIRST ST. - N. MAIN ST.
TREE PLANTING
STA. 14+50 TO STA. 19+50

SCALE PLAN: 1" = 20'
DRAWING No.
2015034-57

REV.	DATE	DESCRIPTION
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SEE SHEET 57
STA: 19+50



PROPOSED TREE SCHEDULE

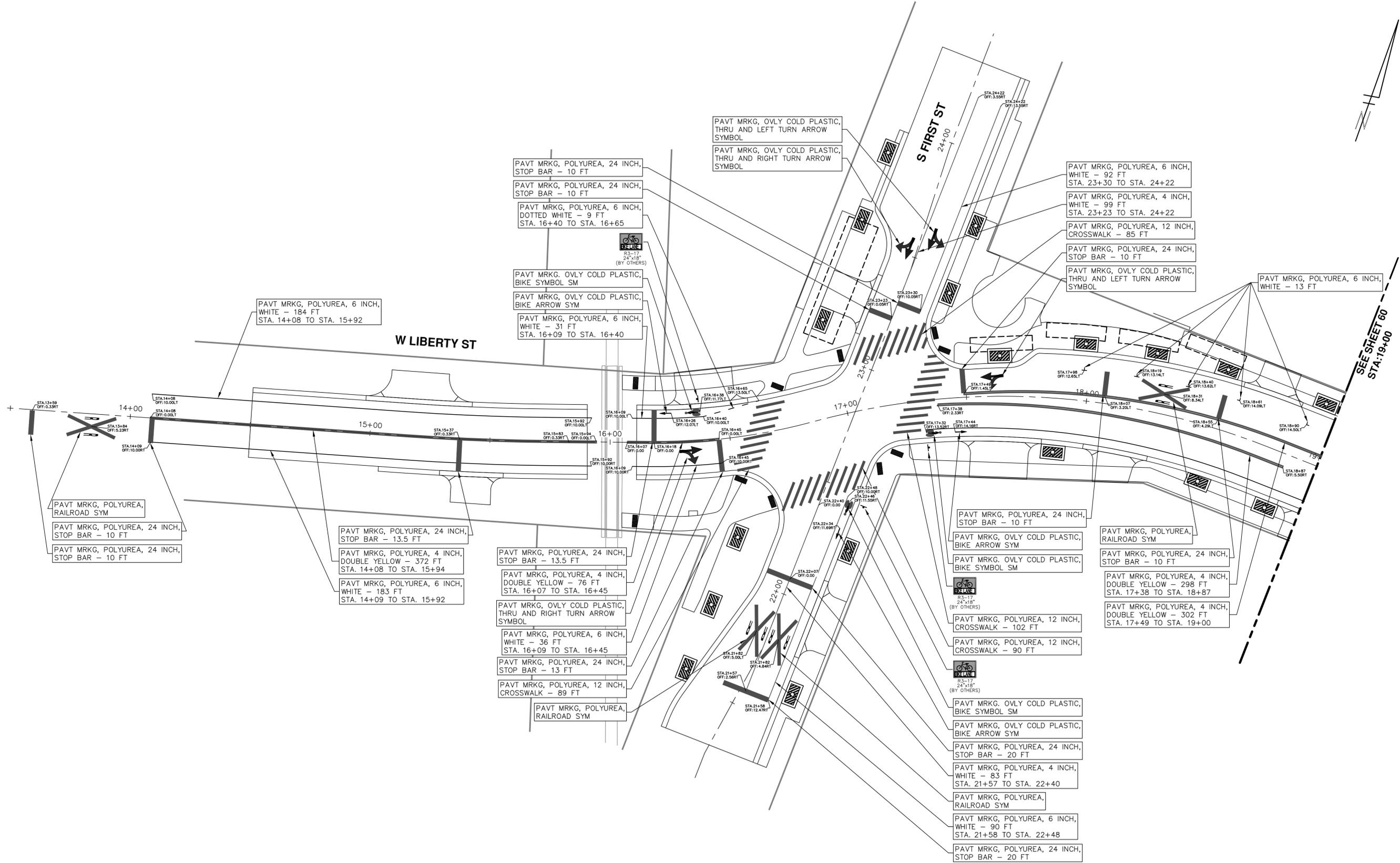
TREE PT NUMBER	BOTANICAL NAME	COMMON NAME	FORM	NORTHING	EASTING
19	<i>Nyssa sylvatica</i>	Blackgum	2.5" B-B	284642.9581	13290301.9679
20	<i>Nyssa sylvatica</i>	Blackgum	2.5" B-B	284672.9646	13290302.8687
21	<i>Nyssa sylvatica</i>	Blackgum	2.5" B-B	284773.1852	13290304.9933
22	<i>Ulmus americana</i> New Harmony	American Elm	2.5" B-B	284745.1334	13290328.9772
23	<i>Ulmus americana</i> New Harmony	American Elm	2.5" B-B	284701.4692	13290332.2581
24	<i>Ulmus americana</i> New Harmony	American Elm	2.5" B-B	284744.4006	13290348.9602
25	<i>Ulmus americana</i> New Harmony	American Elm	2.5" B-B	284700.4282	13290362.2461
26	<i>Ulmus americana</i> New Harmony	American Elm	2.5" B-B	284698.5595	13290417.2063

PROPOSED PARKING METER SCHEDULE

POINT #	NORTHING	EASTING	DESCRIPTION
106	284702.0948	13290357.3683	Parking Meter
107	284742.5389	13290359.6848	Parking Meter
109	284741.0544	13290402.6592	Parking Meter
110	284700.3954	13290406.5620	Parking Meter
112	284738.4406	13290478.3194	Parking Meter
113	284736.6453	13290530.2884	Meter Kiosk



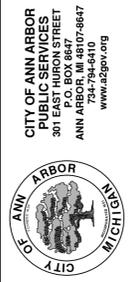
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SEE SHEET 60
STA: 19+00



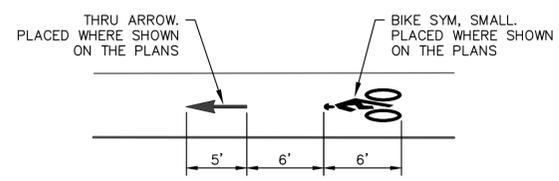
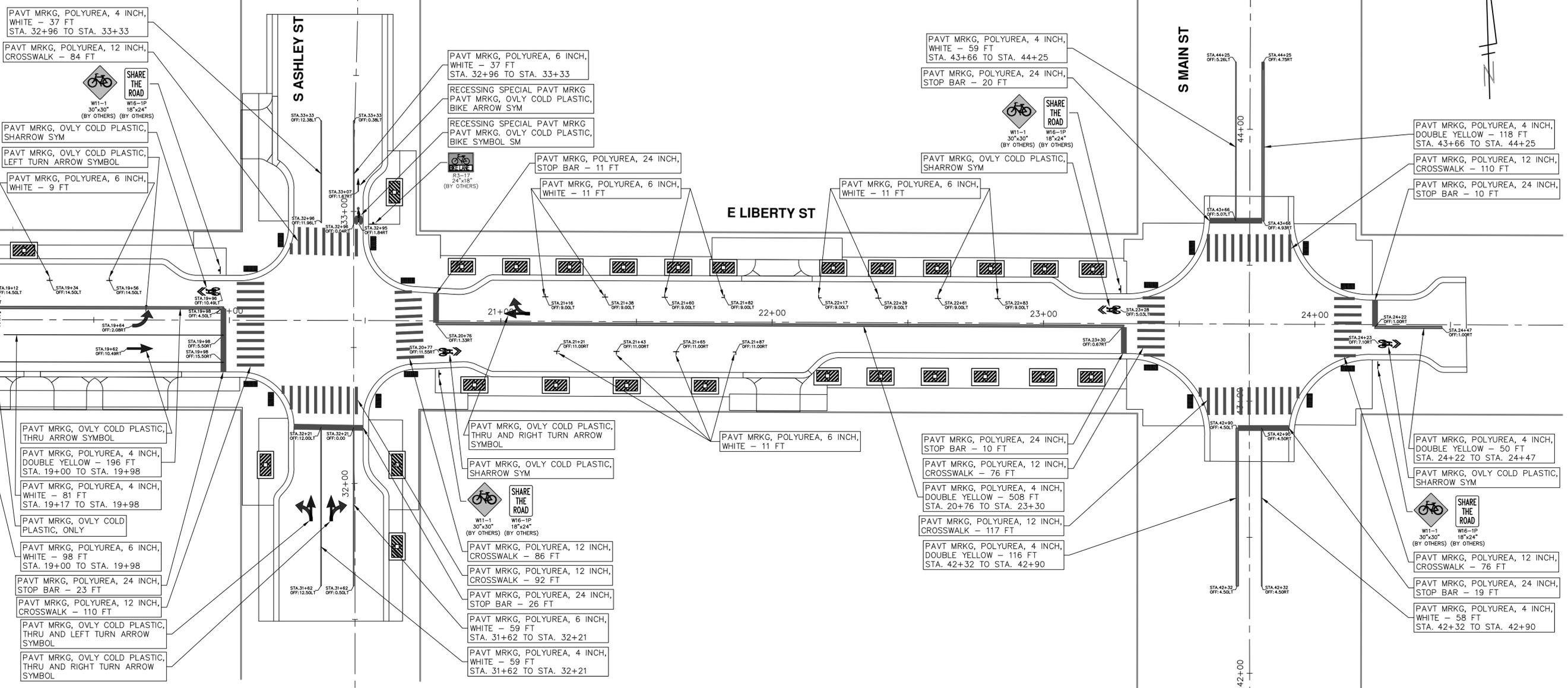
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		CHECKED



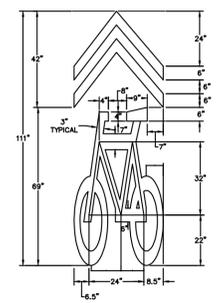
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
WEST LIBERTY STREET RECONSTRUCTION S.
FIRST ST. - N. MAIN ST.
 PAVEMENT MARKINGS
 STA. 14+50 - STA. 19+00

R:\2015034 Liberty - First to Main\Plan Production\2015034PMRK.dwg Dwg Created: 10-Apr-17 - _o2_standard bw.stb - Plot Date: 13-Apr-17

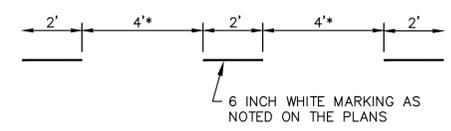
SEE SHEET 59
STA: 19+00



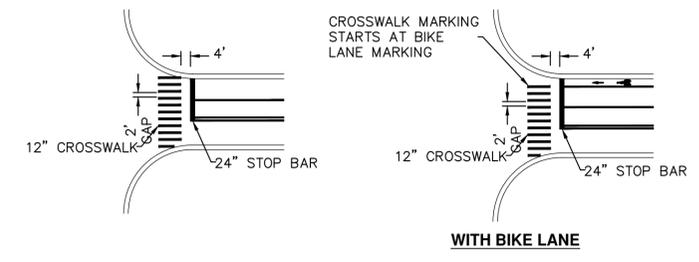
BIKE SYMBOL DETAIL



SHARROW DETAIL



DOTTED LINE DETAIL
* NOTE FOR BROKEN LINE, USE 6' GAPS.



CROSSWALK AND STOP BAR DETAIL



Know what's below.
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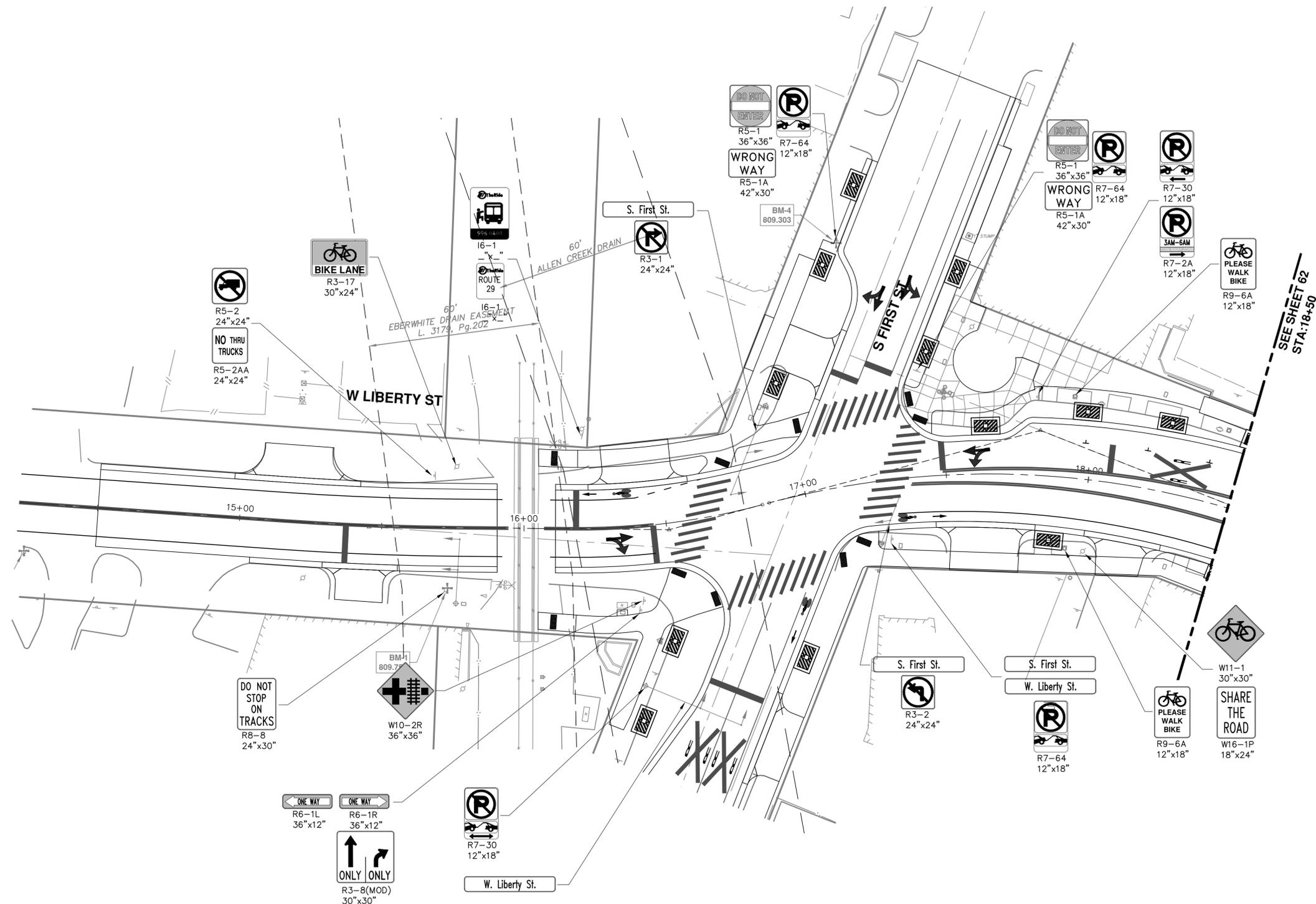
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 PAVEMENT MARKINGS
 STA. 19+00 - P.O.E.



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SCALE PLAN: 1" = 20'
 DRAWING No. 2015034-60
 SHEET No. 60 OF 63



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WEST LIBERTY STREET RECONSTRUCTION S.
FIRST ST. - N. MAIN ST.
 PERMANENT SIGNAGE
 STA. 14+50 - STA. 18+50

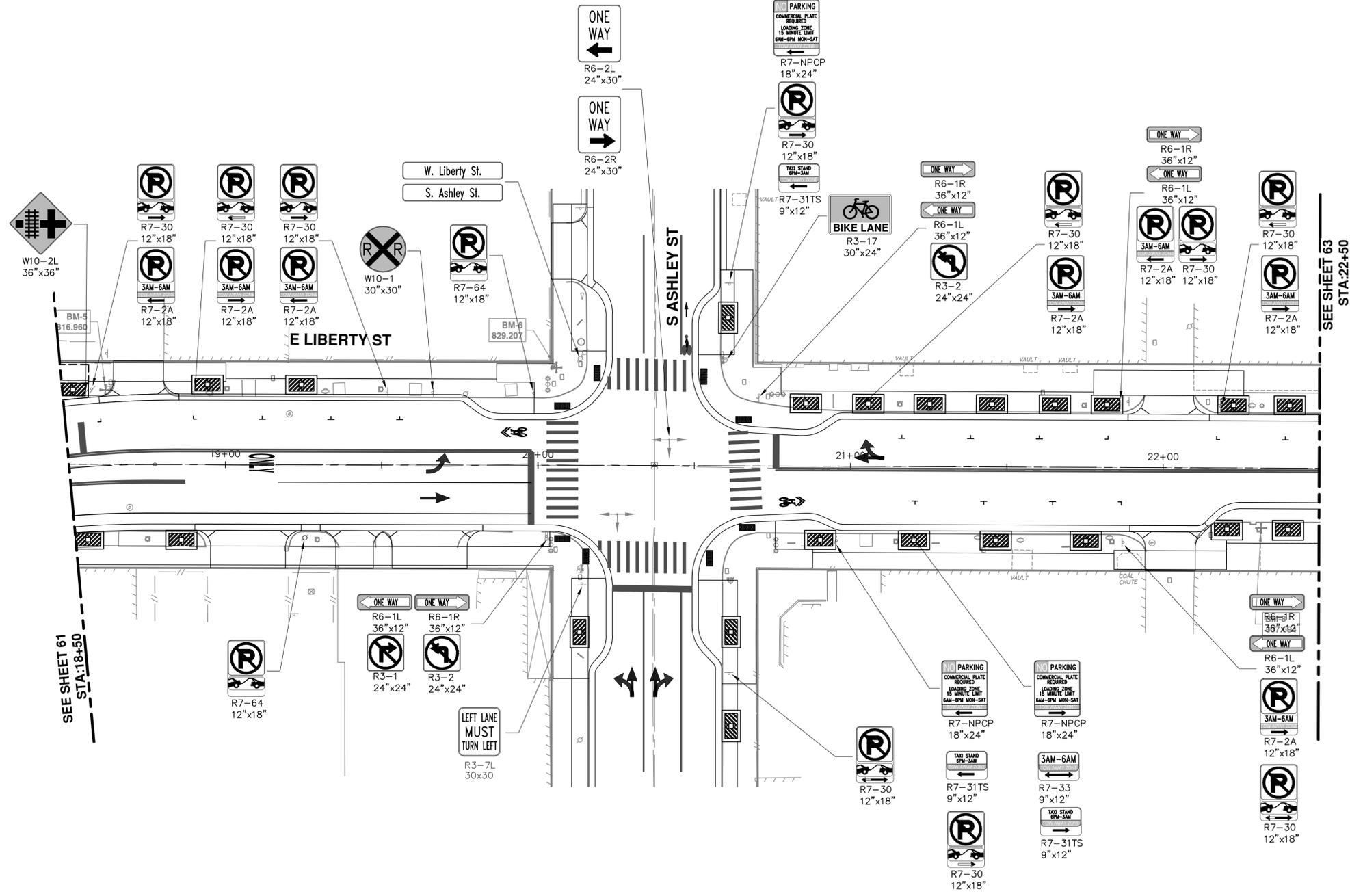
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 PERMANENT SIGNAGE
 STA. 18+50 - STA. 22+50

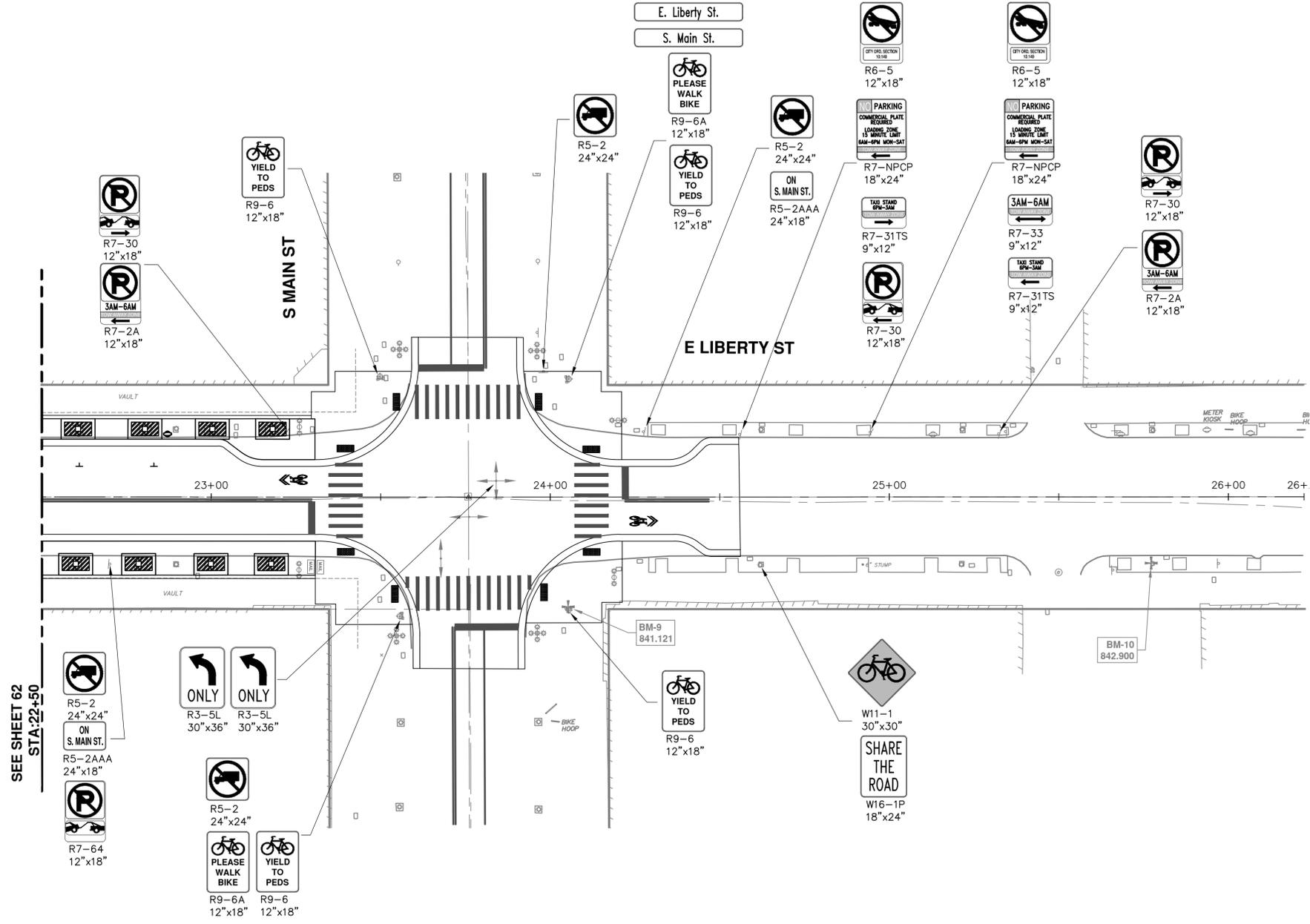
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SEE SHEET 62
STA: 22+50



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