TRAFFIC DATA:
DESIGN SPEED: 25 MPH
AADT: 2,284 (2022)
5% COMMERCIAL
FUTURE AADT: 2,780 (2042)
5% COMMERCIAL

THE IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH SECTION B "NEW CONSTRUCTION/RECONSTRUCTION (4R OF THE) "MICHIGAN DEPARTMENT OF TRANSPORTATION LOCAL AGENCY PROGRAMS GUIDELINES FOR GEOMETRICS ON LOCAL AGENCY PROJECTS, 2017 EDITION AND IN 2012 AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES."

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION AS AMENDED BY SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS

PLAN SHEETS

01 COVER
02 NOTES
03–04 DETAILS
05–06 LEGEND
07–09 CROSS SECTIONS
10 MISC. DETAILS
11–19 REMOVALS, PLAN AND PROFILE
20 4TH AVENUE SANITARY SEWER
21–24 STREET APPROACH PLAN & PROFILE
25 INTERSECTION DETAILS
26–28 BIKE PATH PLAN AND PROFILE
29 PERMANENT PAVEMENT MARKINGS
30–32 PERMANENT SIGNAGE
33–34 MAINTAINING OF TRAFFIC
35–36 SOIL BORINGS
37 SPOILS DISPOSAL AREA

CITY OF SAULT STE. MARIE, MICHIGAN

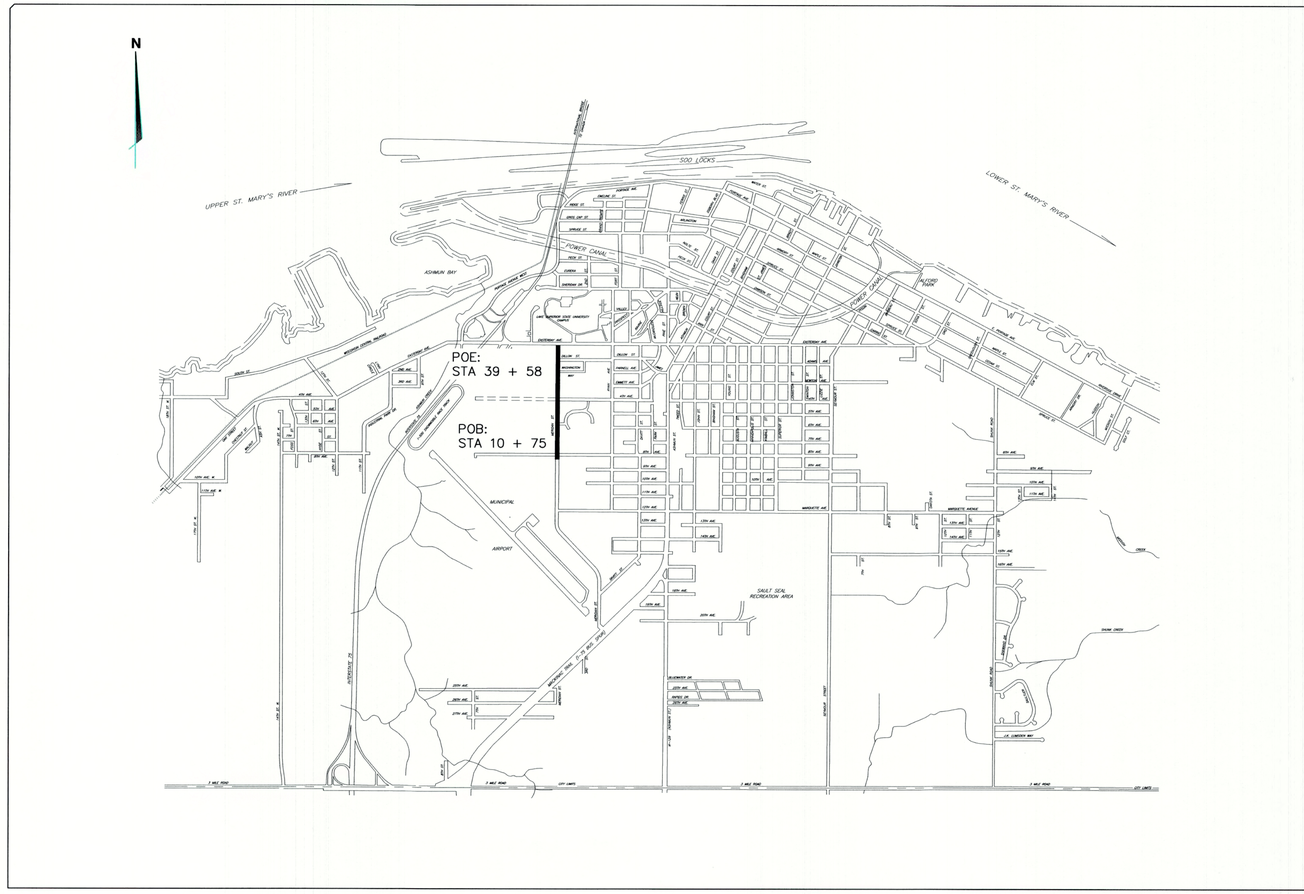
IN COOPERATION WITH THE

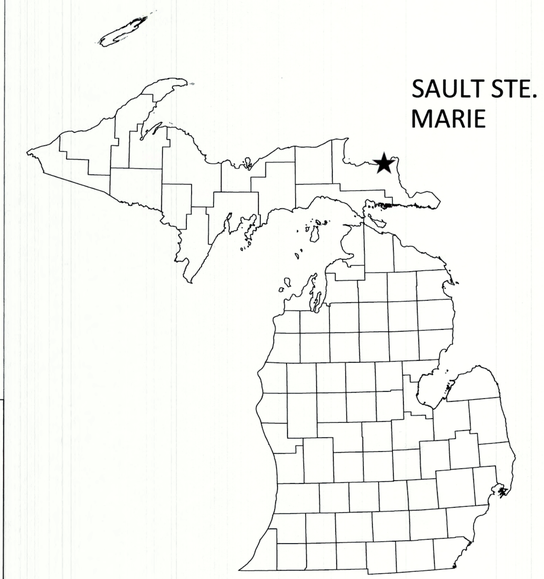
MICHIGAN DEPARTMENT OF TRANSPORTATION AND THE FEDERAL HIGHWAY ADMINISTRATION

PLANS FOR IMPROVEMENTS

MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVENUE

JN: 208179 CS: STUL 17000





LOCATION MAP: NO SCALE

CITY OF
SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

CONTRACT FOR:

RECONSTUCTION OF MERIDIAN STREET BETWEEN WEST EASTERDAY AVENUE AND WEST 8TH AVENUE, INCLUDING CONCRETE CURB AND GUTTER, HMA SURFACE, DRIVEWAY APPROACHES, DRAINAGE STRUCTURES, STORM SEWER, SANITARY SEWER, LINING OF WATER MAIN, ADA COMPLIANT CURB RAMPS, AND PERMANENT TRAFFIC SIGNAGE

CONTRACT LENGTH: 0.540 MILE (2,855 FEET)

CITY OF SAULT STE. MARIE APPROVAL

DAVID S. BOYLE, P.E.
CITY ENGINEER

PREPARED UNDER SUPERVISION OF

DAVID S. BOYLE, P.E.
CITY ENGINEER

STATE OF MICHIGAN
DAVID S. BOYLE
No. 35832
LICENSED PROFESSIONAL ENGINEER

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL-FREE)

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

IT IS UNDERSTOOD THAT THE CONTRACTOR SHALL PERFORM ALL WORK UNDER THIS CONTRACT IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS, POLICIES, RULES AND STANDARDS OF THE MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ACT (MIOSHA), BEING ACT 154 OF THE PUBLIC ACTS OF 1974 AND AS AMENDED.

GENERAL PLAN NOTES

1. UNDERGROUND UTILITIES
FOR PROTECTION OF UNDERGROUND UTILITIES, AND IN CONFORMANCE WITH PUBLIC ACT 53, 1974, THE CONTRACTOR SHALL CALL TOLL FREE 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. ALL "MISS DIG" PARTICIPATING MEMBERS WILL BE THUS ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR FROM NOTIFYING UTILITY OWNERS (CITY OF SAULT STE. MARIE) WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM. UTILITY INTERRUPTIONS MUST FOLLOW STANDARD CITY PROCEDURES WHICH INCLUDE DOOR HANGERS BY CONTRACTOR AND TELEPHONE CONTACT BY THE CITY.

2. EXISTING UTILITIES
EXISTING UTILITY LINES, INCLUDING BUT NOT LIMITED TO GAS LINES, TELEPHONE LINES, WATER MAIN, CABLE TV, ELECTRIC, DATA LINES, STORM SEWER, FORCE MAINS, SANITARY SEWER AND OTHER UNDERGROUND UTILITIES MAY BE SHOWN IN PLAN VIEW OF THE CONSTRUCTION DRAWINGS ONLY, AND LOCATIONS ARE TO BE CONSIDERED INCOMPLETE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES DURING THE CONSTRUCTION OF THIS PROJECT.

3. MONUMENT BOXES
ALL GOVERNMENT CORNERS AND PROPERTY IRONS SHALL BE PRESERVED, WHETHER SHOWN OR NOT. WHERE NECESSARY, MONUMENT BOXES SHALL BE REPLACED, ADJUSTED, OR PLACED. ANY CORNERS OR IRONS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY A LICENSED LAND SURVEYOR AND PAID FOR BY THE CONTRACTOR. ALL COSTS SHALL BE INCLUDED IN THE "MONUMENT BOX" AND "MONUMENT PRESERVATION" PAY ITEM(S).

4. RIGHT-OF-WAY AND PROPERTY LINES
THE LOCATION OF RIGHT-OF-WAY LINES AND PROPERTY LINES SHOWN ON THE PLAN DRAWINGS ARE APPROXIMATE ONLY BASED UPON IRONS AND/OR MONUMENTS LOCATED DURING THE SURVEY AND TAX MAPS PROVIDED BY THE CITY OF SAULT STE. MARIE. THEY DO NOT REPRESENT A BOUNDARY SURVEY AND ARE BEST FIT BASED UPON AVAILABLE INFORMATION. ALL PROPERTY IRONS SHALL BE PROTECTED. ANY PROPERTY IRONS DISTURBED BY CONSTRUCTION, WHETHER SHOWN ON THE DRAWING OR NOT, SHALL BE RESET BY A REGISTERED SURVEYOR AT THE CONTRACTORS EXPENSE.

5. TRAFFIC CONTROL
THE CONTRACTOR SHALL ERECT AND MAINTAIN THE NECESSARY CONSTRUCTION SIGNING THROUGHOUT THE DURATION OF THE PROJECT FOR A DETOUR OF ALL CLOSED STREETS. PLACEMENT OF PERMANENT AND TEMPORARY TRAFFIC CONTROL ITEMS SHALL BE DONE IN ACCORDANCE WITH THE 2011 EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AS AMENDED AND M.D.O.T. GUIDELINES. ALL SIGNAGE SHALL BE REVIEWED AND APPROVED BY THE ENGINEER AND CITY OF SAULT STE. MARIE. THE CONTRACTOR WILL BE REQUIRED TO ADJUST THE CONSTRUCTION SIGNING THROUGHOUT THE PROJECT, AS REQUIRED BY THE CONSTRUCTION. ALL COSTS SHALL BE INCLUDED IN THE "MINOR TRAF DEVICES" AND "TRAF REGULATOR CONTROL" LUMP SUM PAY ITEM(S). IT IS THE INTENT THAT THE ROADS BE MAINTAINED OPEN ONLY TO LOCAL TRAFFIC THROUGHOUT CONSTRUCTION, UNLESS OTHERWISE APPROVED BY THE CITY. THE CONTRACTOR SHALL SUBMIT A MAINTAINING TRAFFIC PLAN TO THE ENGINEER AND CITY FOR APPROVAL AND OBTAIN THE NECESSARY PERMITS. NO WORK SHALL PROCEED UNTIL TRAFFIC CONTROL DEVICES AND SIGNING ARE IN PLACE AND APPROVED BY THE CITY AND ENGINEER.

SPRING WEIGHT RESTRICTIONS APPLY TO ALL CITY STREETS OTHER THAN STATE TRUNKLINES.

6. MAINTAIN ACCESS TO RESIDENTIAL AND COMMERCIAL DRIVES
ACCESS TO ALL RESIDENTIAL AND COMMERCIAL DRIVES SHALL BE MAINTAINED BY THE CONTRACTOR WITH THE USE OF SALVAGED GRAVEL, OFF-SITE GRAVEL OR MILLED TAILINGS. MAINTAIN ACCESS FOR MAIL DELIVERY AT ALL TIMES. ALL COSTS ASSOCIATED WITH THE MAINTENANCE OF DRIVES SHALL BE INCLUDED WITH THE DRIVEWAY APPROACH AND MAINTENANCE GRAVEL PAY ITEM(S). THE CONTRACTOR SHALL PROVIDE A 5 DAY MINIMUM ADVANCE NOTICE TO ANY INDIVIDUAL RESIDENCE OR BUSINESS WHERE DRIVEWAY ACCESS OR UTILITY SERVICE WILL BE AFFECTED BY CONSTRUCTION ACTIVITIES.

7. SAW CUTTING HMA AND CONCRETE SURFACES
SAW CUTTING HMA AND CONCRETE SURFACES TO THE LIMITS OF RECONSTRUCTION OR AS DIRECTED BY THE ENGINEER SHALL BE INCLUDED IN OTHER REMOVAL & RESTORATION PAY ITEMS. THIS ALSO INCLUDES SAW CUTTING DRIVEWAYS AT THE REPLACEMENT LIMITS. IF A PAVEMENT EDGE IS DAMAGED SUBSEQUENT TO SAW CUTTING, THE EDGE SHALL BE RECUT AS DIRECTED BY THE ENGINEER. SAW CUTTING SHALL BE FULL DEPTH OF THE PAVEMENT BEING SAWED.

8. REMOVAL LIMITS
REMOVAL LIMITS ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL USE METHODS TO LIMIT CONSTRUCTION DISTURBANCE TO THE LIMITS SHOWN. DISTURBANCE OUTSIDE OF THE LIMITS SHOWN ON THE DRAWING SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE APPROVED BY THE OWNER OR ENGINEER. THE OWNER RESERVES THE RIGHT TO FIELD ADJUST THE UTILITY ALIGNMENT TO MINIMIZE THE DISTURBANCE WHERE APPLICABLE.

9. EXISTING STRUCTURES
UNLESS SPECIFICALLY NOTED FOR REMOVAL ON THE CONSTRUCTION PLANS, ALL SIDEWALKS, DRIVES, TREES, FENCES AND OTHER APPURTENANCES SHALL BE PROTECTED. ALL SUCH ITEMS DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED, THE COSTS OF WHICH SHALL BE BORN BY THE CONTRACTOR. ALL UTILITY CASTINGS & COVERS SHALL BE PERMANENTLY SET PRIOR TO ANY PAVING OPERATIONS UNLESS OTHERWISE APPROVED BY THE OWNER.

10. PROTECTIVE FENCE
PROTECTIVE FENCE SHALL BE PLACED AROUND ALL TRENCH EXCAVATIONS THAT ARE LEFT OPEN OVERNIGHT. COST OF PROTECTIVE FENCE SHALL BE INCLUDED IN THE FENCE, PROTECTIVE PAY ITEM. A MAXIMUM OF 60 FEET OF TRENCH SHALL BE ALLOWED OPEN AT ANY GIVEN TIME.

11. DUST CONTROL
THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST ON THIS PROJECT THROUGH THE USE OF DUST PALLIATIVE AS DIRECTED BY THE ENGINEER.

12. UTILITY SUPPORT
THE CONTRACTOR SHALL SUPPORT AND PROTECT ALL UTILITIES AND STRUCTURES ALONG THE PROJECT IN COMPLIANCE WITH THE UTILITY OWNER'S REQUIREMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COORDINATING DIRECTLY WITH THE UTILITY COMPANY.

13. SEWER AND WATER SERVICE LOCATIONS
THE LOCATIONS OF EXISTING SANITARY SEWER AND WATER SERVICES, IF SHOWN ON THE DRAWINGS, ARE APPROXIMATE ONLY AND ARE REQUIRED TO BE FIELD VERIFIED.

14. UTILITY SEPARATION REQUIREMENTS
PARALLEL INSTALLATION: SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM EXISTING WATER MAINS, MEASURED FROM PIPE EDGE TO PIPE EDGE.

CROSSINGS: SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE THE MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE WATER MAIN AND SEWER, MEASURED FROM PIPE EDGE TO PIPE EDGE.

15. SALVAGING MATERIALS
WATEROUS AND EJIW HYDRANTS TO BE SALVAGED TO THE CITY; ALL OTHER MATERIAL IS FOR CONTRACTOR TO DISPOSE OF INCLUDING CASTINGS.

GENERAL PLAN NOTES CONTINUED

16. SIDEWALK RAMPS
SIDEWALK RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MOST CURRENT MDOT STANDARD PLAN R-28 SERIES AND SHALL MEET ALL A.D.A. GUIDELINES FOR SLOPES, ETC. HANDICAP WARNING DETECTOR PLATES MUST BE INSTALLED AT ALL SIDEWALK RAMPS. RAMPS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONCRETE PLACEMENT.

17. CONTRACTOR COMMUNICATION
THE CONTRACTOR IS REQUIRED TO NOTIFY THE ENGINEER AND OWNER A MINIMUM OF 72 HOURS IN ADVANCE OF ANY HMA OPERATIONS IN ORDER TO SCHEDULE THE REQUIRED HMA SAMPLING AND LABORATORY TESTING FOR THE PROJECT.

18. SANITARY SEWER INSTALLATION
THE CONTRACTOR SHALL NOT KNOWINGLY CONNECT STORM WATER OR GROUND WATER SOURCES TO SANITARY SEWERS.

19. PROTECTING PAVEMENT
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROTECTING ALL EXISTING PAVEMENTS TO REMAIN. TRACKED VEHICLES SHALL UTILIZE MATS FOR MOVEMENT ON ANY PAVED ROADS NOT SCHEDULED FOR REPLACEMENT.

20. PERMITS
THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY SPECIAL PERMITS, BONDING, OR INSURANCES FOR HAUL ROUTES ON CITY, COUNTY OR MDOT ROADWAYS INCLUDING PRECONSTRUCTION VIDEO RECORDING OF ROUTES WHERE REQUIRED.

MISCELLANEOUS QUANTITIES

THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD GIVEN BELOW THAT IS OPPOSITE FROM EACH ITEM, UNLESS OTHERWISE INDICATED BY THE ENGINEER

PAY ITEM	QTY	UNITS
Mobilization, Max	1	LSUM
Contractor Staking	1	LSUM
Staking Plan Errors and Extras, Max $180/hour	25	Hr
Subgrade Undercutting, Type II	500	Cyd
Erosion Control, Silt Fence	200	Ft
Dust Palliative, Applied	1	Ton
Hand Patching	5	Ton
Post, Mailbox	1	Ea
Monument Box	1	Ea
Monument Preservation	1	Ea
Water Shutoff, Reconst, Case 1, Modified	1	Ea
Gate Box, Reconst, Case 1, Modified	2	Ea
Water Shutoff, Adj, Case 1, Modified	2	Ea
Fence, Protective	200	Ft
Maintenance Gravel	500	Ton
Video Taping Sewer and Culv Pipe	2500	Ft
Pedestrian Type II Barricade, Temp	50	Ea
Pedestrian Path, Temp	500	Ft
Pedestrian Ramp, Temp	10	Ea
Restoration, Modified	13500	Syd
Trench Undercut and Backfill	90	Cyd
Conduit, 3 Inch, Placed	60	Ft

THE FOLLOWING ITEMS OF WORK ARE ESTIMATED FOR MAINTAINING TRAFFIC WHERE DESIGNATED BY THE ENGINEER

PAY ITEM	QTY	UNITS
Minor Traffic Devices	1	LSUM
Barricade, Type III, High Intensity, Double Sided Lighted, Furn	12	Ea
Barricade, Type III, High Intensity, Double Sided Lighted, Oper	12	Ea
Plastic Drum, Fluorescent, Furn	125	Ea
Plastic Drum, Fluorescent, Oper	125	Ea
Traf Regulator Control	1	LSUM
Lighted Arrow, Type C, Furn	2	Ea
Lighted Arrow, Type C, Oper	2	Ea

APPLICABLE STANDARD PLANS

DRAINAGE STRUCTURES	R-1-G
MANHOLE COVER, TYPE B	R-7-F
MANHOLE COVER, TYPE E	R-10-D
MANHOLE COVER, TYPE K	R-15-G
MONUMENT BOXES	R-11-E
MANHOLE COVER, TYPE Q	R-18-F
CURB RAMP AND DETECTABLE WARNING DETAILS	R-28-J
DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS	R-29-I
CONCRETE CURB AND CONCRETE CURB & GUTTER	R-30-G
UTILITY TRENCHES	R-83-C
SOIL EROSION & SEDIMENTATION CONTROL MEASURES	R-96-E
SEEDING & TREE PLANTING	R-100-I (SPECIAL DETAIL)

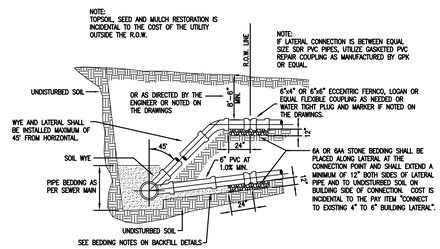
PUBLIC UTILITIES

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED IN A SURVEY DATED DECEMBER 2022 BY ALPINE ENGINEERING, INC, NOVI, MI. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO ITS ACCURACY AND THE LOCATION OF EXISTING UTILITIES.

UTILITY COMPANY	CONTACT PERSON(S)	PHONE NUMBER
CITY OF SAULT STE. MARIE WATER/SEWER SERVICE DEPARTMENT 1200 E. EASTERDAY AVENUE SAULT STE. MARIE, MI 49783	KIRK TEWS BRIAN MASTERSON	906-632-8981 906-632-6940 (FAX)
DTE ENERGY / MICH CON GAS CO. LOCAL OFFICE: 1125 E. EASTERDAY AVENUE SAULT STE. MARIE, MI 49783	 RICH ACKERMAN STEVEN JONES	 906-632-3330 906-630-1066 (CELL) 906-440-7612 (CELL)
LARGE GAS SERVICE REQUESTS: SMALL GAS SERVICE REQUESTS:	ZACHARY KERFOOT JEANINE NAJMOWICZ	231-932-2847 989-356-2499
MAIN OFFICE: (PLAN REVIEWS & PRECON. MTGS) 1250 MICH CON LANE, S.W. P.O. BOX 279 KALKASKA, MI 49646	MATT LOGAN	231-258-3785 231-463-5860 (CELL) 231-258-3786 (FAX)
CLOVERLAND ELECTRIC COOPERATION 2916 W. M-28 DAFTER, MI 49724	PAUL WARNER JOHANNA WILTFONG	906-632-5152 906-632-5168
AT&T (SBC AMERITECH) 310 W. 7TH AVENUE SAULT STE. MARIE, MI 49783	MIKE ANDERSON	906-632-9901 906-632-9973 (FAX) 906-440-4478 (CELL)
PLAN REVIEWS AND PRECON MEETINGS:	JEFF COLLARD	231-463-5860
CHARTER COMMUNICATIONS CO. 2682 ASHMUN STREET SAULT STE. MARIE, MI 49783	MATT CLAYCOMB CRAIG PURPLE	231-463-1903 (CELL) 989-671-7255 906-440-1005 (CELL) 906-635-3101 x 13912 906-635-1520 (FAX)
MAIN OFFICE: (PLAN REVIEWS & PRECON. MTGS) 359 U.S. 41 EAST NEGAUNEE, MI 49866	BRIAN KOSKI (CONSTRUCTION COORDINATOR)	906-475-0107 906-235-7801 (CELL) 906-401-0617 (FAX)
PFN (PENINSULA FIBER NETWORK) 9984 WEST STATE STREET BRIMLEY, MI 49715	RON DENEVE	906-248-3211

TRAFFIC AND SAFETY STANDARD PLANS

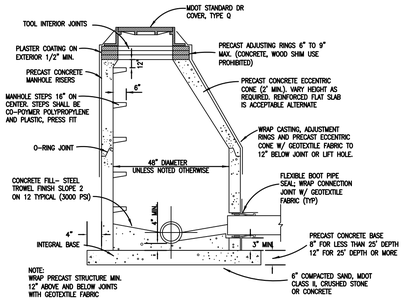
STANDARD SIGN INSTALLATION	SIGN-100-G
STEEL POSTS	SIGN-200-E
TEMPORARY TRAFFIC CONTROL DEVICES	WZD-125-E
GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS	WZD-100-A
TABLES FOR "L", "D", AND "B" VALUES	101-GEN-SPACING-CHARTS
PAVEMENT ARROW & MESSAGE DETAILS	PAVE-900-G
PAVEMENT MARKING & RECESSING DETAILS	PAVE-901-A
LONGITUDINAL LINE TYPES & PLACEMENT	PAVE-905-E
LEFT TURN LANE MARKINGS	PAVE-935-E
INTERSECTION, STOP BAR & CROSSWALK MARKINGS	PAVE-945-D



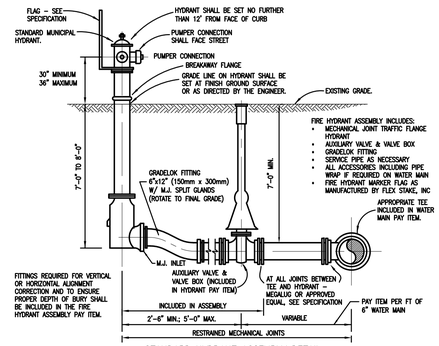
STANDARD SEWER LEAD DETAIL
NO SCALE

NOTE:
THE HOUSE CONNECTION SHALL BE AT A SUFFICIENT DEPTH AT THE HOUSE LEAD TO HAVE A MIN. OF 1% GRADE FROM THE PROPERTY LINE TO 1' BELOW THE BASEMENT FLOOR.

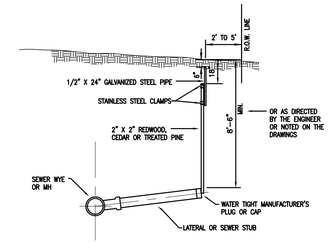
PAID FOR AS SANITARY SERVICE LEAD, 6 INCH



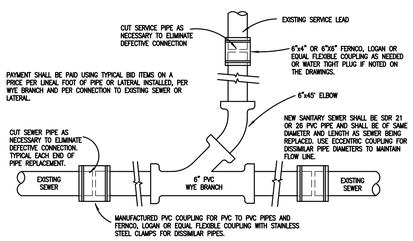
STANDARD SANITARY MANHOLE
NO SCALE



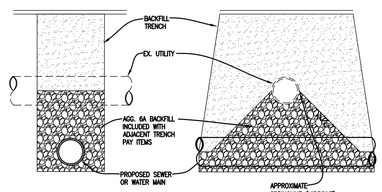
STANDARD HYDRANT ASSEMBLY DETAIL
NO SCALE



CAP AND MARK DETAIL
NO SCALE

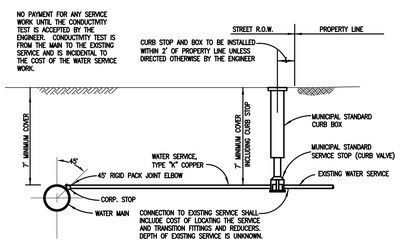


SERVICE CONNECTION REPLACEMENT DETAIL
NO SCALE

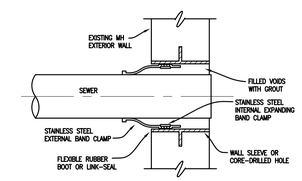


NOTES:
1. THIS SHALL APPLY TO ALL CROSSINGS WITH A VERTICAL CLEARANCE OF 2' OR LESS AND THIS SHALL APPLY TO ALL CROSSINGS WHERE DIRECTED BY ENGINEER WITH A VERTICAL CLEARANCE GREATER THAN 2' AND LESS THAN 5'.
2. APPLICABLE TO ALL PROPOSED SEWERS.

TYPICAL DETAIL FOR PROPOSED SEWER, AND WATER MAIN CROSSING UNDER EXISTING UTILITIES
NO SCALE

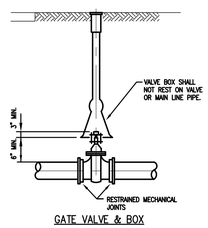


WATER SERVICE CONNECTION DETAIL
NO SCALE

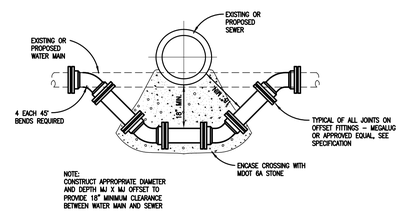


SEWER MANHOLE
RESILIENT CONNECTOR DETAIL
NO SCALE

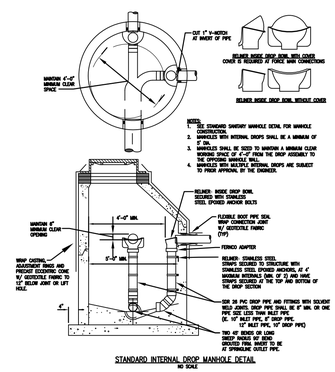
INCLUDED IN PAY ITEM SANITARY STRUCURE, TAP 8 INCH, MODIFIED OR SANITARY STRUCURE, TAP 10 INCH, MODIFIED



GATE VALVE & BOX
NO SCALE



WATER MAIN OFFSET DETAIL
NO SCALE
TO BE PAID AS WATER MAIN, CONFLICT, 8 INCH



STANDARD INTERNAL DROP MANHOLE DETAIL
NO SCALE

TO BE PAID AS SANITARY MANHOLE INTERNAL DROP CONNECTION

UTILITY TRENCH DETAIL C1.01 SEWER / WATER MAIN UNDER ROADBED
NO SCALE

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

CITY OF SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

NO SCALE

FILE: DETAILS_MERIDIAN.DWG

DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

STANDARD DETAILS
MERIDIAN ST RECONSTRUCTION: WEST EASTERDAY TO WEST 8TH

DRAWING: DETAILS 1
SHEET: 3

PIPE RESTRAINT SCHEDULE

GROUND BURIED PRESSURE PIPE – POLYETHYLENE ENCASED DUCTILE IRON PIPE

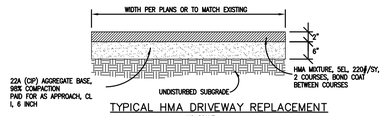
PIPE DIAMETER	TEES, 90° BENDS	45° BENDS	22-1/2° BENDS	DEAD ENDS	REDUCERS (ONE SIZE REDUCTION)*	REDUCERS (TWO SIZE REDUCTION)*
4	13	5	3	40	--	--
6	19	8	4	58	31	--
8	24	10	5	75	30	70
12	34	14	7	107	57	116
16	43	18	9	139	59	137
20	52	22	10	169	59	134
24	61	25	12	199	60	132
30	73	30	15	242	85	168
36	84	35	17	281	84	188

IF REQUIRED PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE DIAMETER SHALL BE USED.

THE VALUES PROVIDED OF RESTRAINT LENGTH ARE IN EACH DIRECTION FROM THE POINT OF DEFLECTION OR TERMINATION EXCEPT FOR TEES, AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE STEM.

* SIZE REDUCTION IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.

NOTE THAT IN ACTUAL INSTALLATIONS, THE RESTRAINED LENGTH WILL BE IN MULTIPLES OF THE LENGTH OF ONE PIECE OF PIPE (NORMALLY 18 OR 20 FEET). FOR EXAMPLE, IF THE REQUIRED RESTRAINED LENGTH IS 30 FEET, TWO FULL RESTRAINED LENGTHS OF PIPE WILL RESULT IN 36 OR 40 FEET OF RESTRAINT, PROVIDING AN ADDITIONAL SAFETY FACTOR. WHERE SHORT CONNECTING OR CLOSURE PIECES ARE NEEDED TO POSITION FITTINGS, THEY SHOULD, WHERE POSSIBLE, BE PLACED OUTSIDE THE RESTRAINED SECTION FOR MAXIMUM ECONOMY.



TYPICAL HMA DRIVEWAY REPLACEMENT

NO SCALE

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

CITY OF
SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

NO SCALE

	DRAWN BY: LJM	JN: 208179	STANDARD DETAILS	DRAWING	SHEET
	APPROVED BY: DSB	CS: STU 17000	MERIDIAN ST RECONSTRUCTION: WEST EASTERDAY TO WEST 8TH	DETAILS 2	4
FILE: DETAILS_MERIDIAN.DWG	DATE: 11/10/2023				

SURVEY

GENERAL

- ALIGNMENT POINT MONUMENT
- MONUMENT BOX

CONTROL

- CP CONTROL POINT
- BM BENCHMARK
- REFERENCE - GPS
- REFERENCE - NGS
- REFERENCE - USGS

BOUNDARY

- CITY LIMIT - MAP
- CITY LIMIT
- PARCEL - LEGAL
- PARCEL - NON-LEGAL
- PLAT - LEGAL
- PLAT - NON-LEGAL
- ROW - FREE ACCESS
- ROW - LIMITED ACCESS
- SECTION LINE
- SECTION LINE - QUARTER
- SECTION LINE - EIGHTH
- SECTION LINE - SIXTEENTH
- TOWNSHIP LINE (MAP)
- CONCRETE MONUMENT
- CONTIGUOUS PROPERTY SYMBOL
- PARCEL CORNER - CAPPED IRON
- PARCEL CORNER - IRON PIN
- PARCEL CORNER - IRON PIPE
- PARCEL CORNER - NO ID
- PARCEL NUMBER BOX
- PLAT CORNER
- PROPERTY OWNERSHIP ARROW
- PROPERTY OWNERSHIP ARROW - DOUBLE
- ROW MONUMENT
- SECTION CORNER - CENTER
- SECTION CORNER - MEANDER
- SECTION CORNER - QUARTER
- SECTION CORNER - QUARTER-HALF
- SECTION CORNER - SECTION
- SECTION CORNER - SECTION-HALF
- SECTION CORNER - SIXTEENTH
- SECTION CORNER - WITNESS

MONUMENT PRESERVATION

- PRESERVE — PRESERVE MONUMENT
- PROTECT — PROTECT MONUMENT

GENERAL LABELING

GENERAL

- LEFT TURN ARROW
- TRAFFIC FLOW ARROW

REMOVAL

- A — ABANDON
- B — BULKHEAD
- C — CLEARING
- R — REMOVE
- SALV — SALVAGE
- S — SAVE

CONSTRUCTION

- ADJ — ADJUST
- ADJ-B — ADJUST - STRUC COVER WITH TYPE
- ADJ-B/O — ADJUST - BY OTHERS

REMOVAL AND CONSTRUCTION

- REL-1 — RELOCATE - WITH CASE NUMBER
- REL-B/O — RELOCATE - BY OTHERS

CONSTRUCTION LIMITS

- SLOPE STAKE LINE

BORINGS

- BH# — BORING

STRUCTURES

- BEAM UNDERCLEARANCE
- REFERENCE POINT
- S01 OF 12345 — STRUCTURE NO. + CONTROL SEC. LABEL

VEGETATION

- BRUSH LINE
- HEDGE LINE
- TREE LINE - CANOPY OR TRUNK
- TREE LINE - TRUNK
- TRUNK LINE
- SHRUBTREE
- CONIFERTREE
- DECIDUOUS TREE
- STUMP

ENVIRONMENTAL

- EROSION CONTROL - SILT FENCE
- WETLAND - LEGAL
- WETLAND - NON-LEGAL
- CONTAMINATION - MONITORING WELL
- EROSION CONTROL NUMBER
- EROSION CONTROL - RIPRAP
- W.T. 12' — WATER TABLE - PLAN NOTE
- WETLAND - SPOT EL
- POTENTIALLY CONTAMINATED SITE

ROADSIDE / SITE

- ANTENNA
- BIG ROCK
- FLAG POLE
- PICNIC STOVE
- PICNIC TABLE
- SATELLITE DISH

NOTE:

3

EXISTING ITEMS ARE REPRESENTED BY THIN LINE WEIGHTS.

PROPOSED ITEMS ARE REPRESENTED BY HEAVIER LINE WEIGHTS.

RAILROAD

- TRACK
- CROSSING - GATE
- RR — CROSSING - SIGNAL BOX
- RR — CROSSING - SIGNAL FLASHING
- CROSSING - SYMBOL

SIGNS

- POST - DOUBLE
- POST - SINGLE
- STRUCTURE - CANTILEVER (EXISTING)
- STRUCTURE - CANTILEVER
- STRUCTURE - TRUSS (EXISTING)
- STRUCTURE - TRUSS
- SS — SUSPENDED (EXISTING)

MAINTAINING TRAFFIC

- TYPE III BARRICADE
- CHANNELIZING DEVICE - CONE
- CHANNELIZING DEVICE - DRUM
- LIGHT - HIGH INTENSITY TYPE B
- LIGHT - STEADY BURN TYPE C
- LIGHTED ARROW PANEL - BAR
- LIGHTED ARROW PANEL
- PORTABLE CHANGEABLE MESSAGE SIGN
- TRAFFIC REGULATOR
- TEMPORARY SIGN
- TEMPORARY TRAFFIC SIGNAL
- WORK AREA

BARRIERS

- CABLE BARRIER - NOT TO SCALE
- CABLE BARRIER - TRUE SCALE
- CONCRETE BARRIER - DOUBLE FACE
- CONCRETE BARRIER - SINGLE FACE
- FENCE
- GUARDRAIL - NOT TO SCALE
- GUARDRAIL - TRUE SCALE
- NOISE BARRIER
- FENCE POST
- GUARD RAIL RUN NUMBER
- IMPACT ATTENUATOR POST -
- MAILBOX POST
- NO ID

SURFACING

REMOVAL

- CONCRETE RUBBLIZING OR HMA CRUSH & SHAPE
- 4 — HMA COLDMILLING
- HMA SURFACE REMOVAL AND / OR PAVEMENT REMOVAL

PROPOSED

- AGGREGATE APPROACH
- BRIDGE APPROACH
- 1 — HMA APPROACH
- MISCELLANEOUS CONCRETE

SIDEWALK

- SIDEWALK - REMOVAL
- SIDEWALK - CONCRETE RAMP
- SIDEWALK - DETECT. WARNING SURF.
- SIDEWALK - LANDING
- SWR-F — SIDEWALK - RAMP LABEL

TYPICAL SECTION

- CONCRETE - PROPOSED
- HMA - PROPOSED

CURB & GUTTER

- CURB & GUTTER REMOVAL

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NO SCALE

FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

LEGEND
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING	SHEET
LEGEND	5

UTILITIES

COMBINED SEWER

- COMBINED SEWER
- COMBINED SEWER - OUT OF SERVICE
- COMBINED SEWER - TO BE TAKEN OUT OF SERVICE
- COMBINED SEWER - TO BE REMOVED

COMMUNICATION

- FIBER OPTIC
- FIBER OPTIC - OUT OF SERVICE
- FIBER OPTIC - OVERHEAD
- FIBER OPTIC MARKER
- CABLE
- CABLE - OUT OF SERVICE
- CABLE - OVERHEAD
- CABLE MARKER
- CABLE PEDESTAL
- TELEPHONE
- TELEPHONE - OUT OF SERVICE
- TELEPHONE - OVERHEAD
- TELEPHONE BOX
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL

FUEL / PETROLEUM

- GASOLINE FILLER PIPE
- GASOLINE PUMP
- GASOLINE UNDERGROUND TANK
- PETROLEUM PIPELINE
- PETROLEUM PIPELINE - OUT OF SERVICE
- PETROLEUM PIPELINE MARKER
- PETROLEUM WELL
- PROPANE TANK

NATURAL GAS

- GAS LINE
- GAS LINE - OUT OF SERVICE
- MARKER
- VALVE
- WELL

SANITARY SEWER

- MANHOLE WITH COVER (DIA VARIES)
- SEWER
- SEWER - OUT OF SERVICE
- SEWER - TO BE TAKEN OUT OF SERVICE
- SEWER - TO BE REMOVED

WATER

- FIRE HYDRANT
- GATE VALVE AND BOX
- GATE VALVE IN WELL
- IRRIGATION CONTROL VALVE
- IRRIGATION SPRINKLER HEAD
- SERVICE METER
- SERVICE SHUTOFF
- WATER WELL
- IRRIGATION
- WATER MAIN
- WATER MAIN - OUT OF SERVICE
- WATER MAIN - TO BE TAKEN OUT OF SERVICE
- WATER MAIN - TO BE REMOVED

STEAM

- STEAM
- STEAM - OUT OF SERVICE

GENERIC EXISTING UTILITIES

- CATCH BASIN COVER
- MANHOLE COVER
- MARKER
- PEDESTAL
- SEWER CLEANOUT ACCESS
- STRUCTURE BOTTOM (DIA VARIES)
- UTILITY BOX
- UTILITY

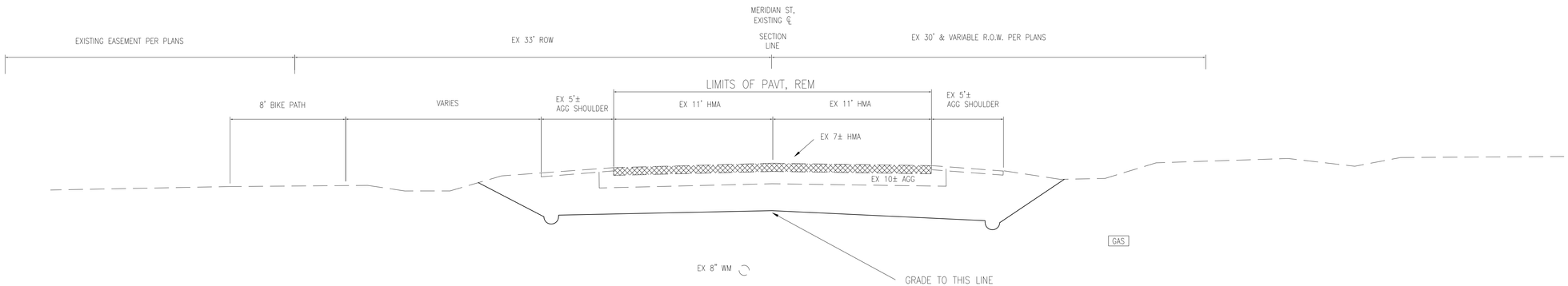
DRAINAGE

- CATCH BASIN W/ COVER (DIA VARIES)
- 12 DRAINAGE STRUCTURE NUMBER
- DRAIN CASTING
- DROP INLET
- END SECTION (SIZE VARIES)
- FLOW DIRECTION ARROW
- HEADWALL (SIZE VARIES)
- MANHOLE W/ COVER (DIA VARIES)
- MANHOLE BASE W/ COVER (SIZE VARIES)
- MANHOLE TEE W/ COVER (SIZE VARIES)
- OUTLET HEADWALL (SIZE VARIES)
- CULVERT - EXISTING
- CULVERT (SIZE VARIES)
- DITCH CENTERLINE
- STORM SEWER - EXISTING
- STORM SEWER
- STORM SEWER - TO BE REMOVED
- UNDERDRAIN
- WATER EDGE

NOTE:

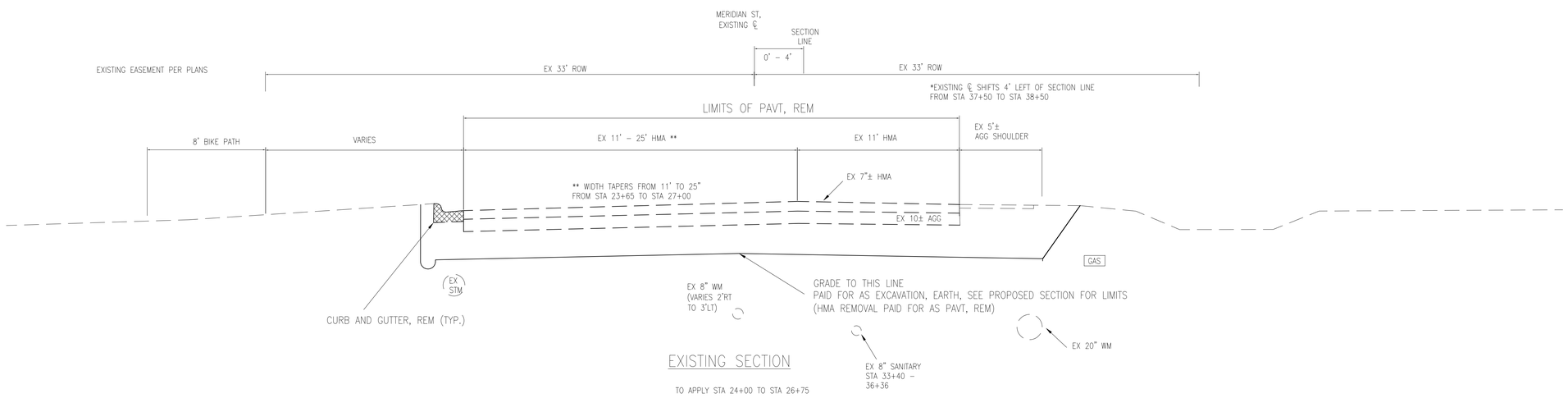
EXISTING ITEMS ARE REPRESENTED BY THIN LINE WEIGHTS.

PROPOSED ITEMS ARE REPRESENTED BY HEAVIER LINE WEIGHTS.



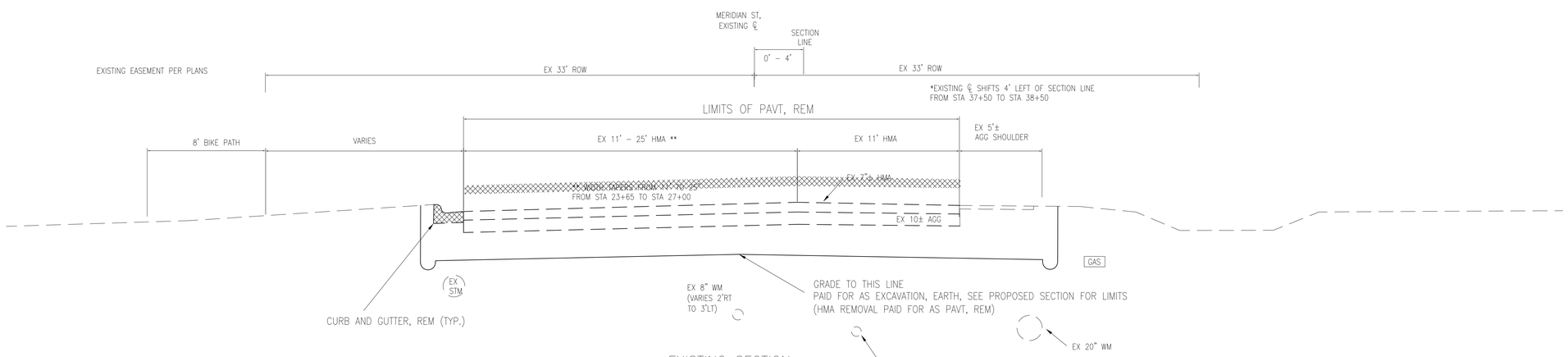
EXISTING SECTION

TO APPLY POB 14+10 TO STA 24 +00



EXISTING SECTION

TO APPLY STA 24+00 TO STA 26+75



EXISTING SECTION

TO APPLY STA 26+75 TO STA 39+30

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SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

NO SCALE

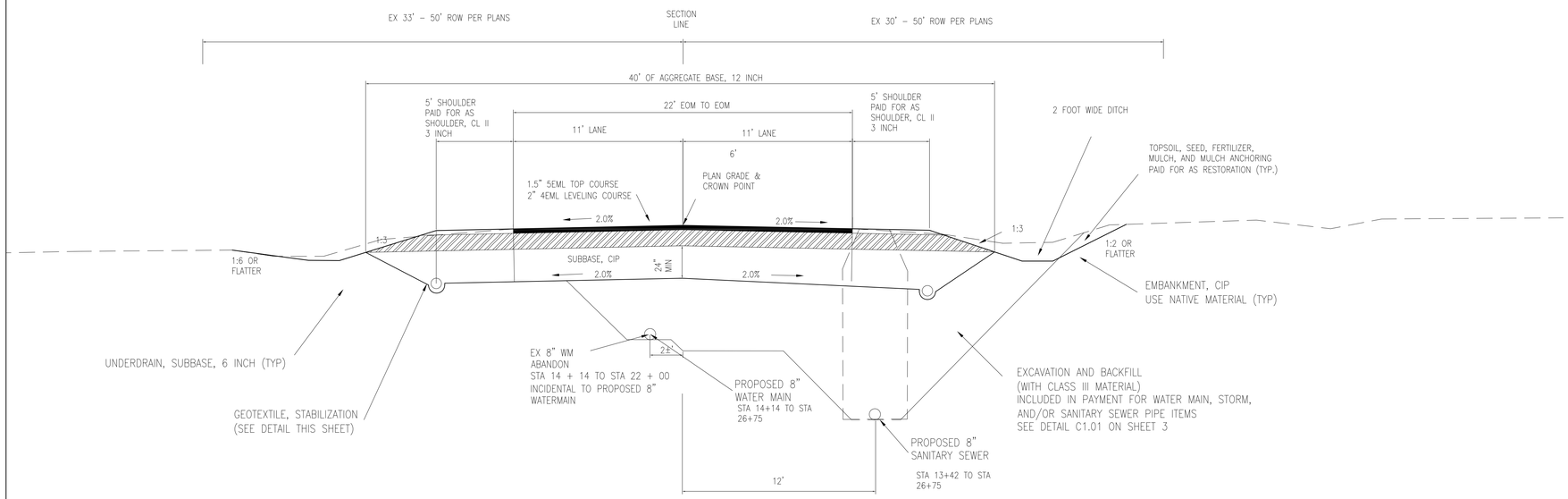
FILE: XXXXX_XSECTIONS_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

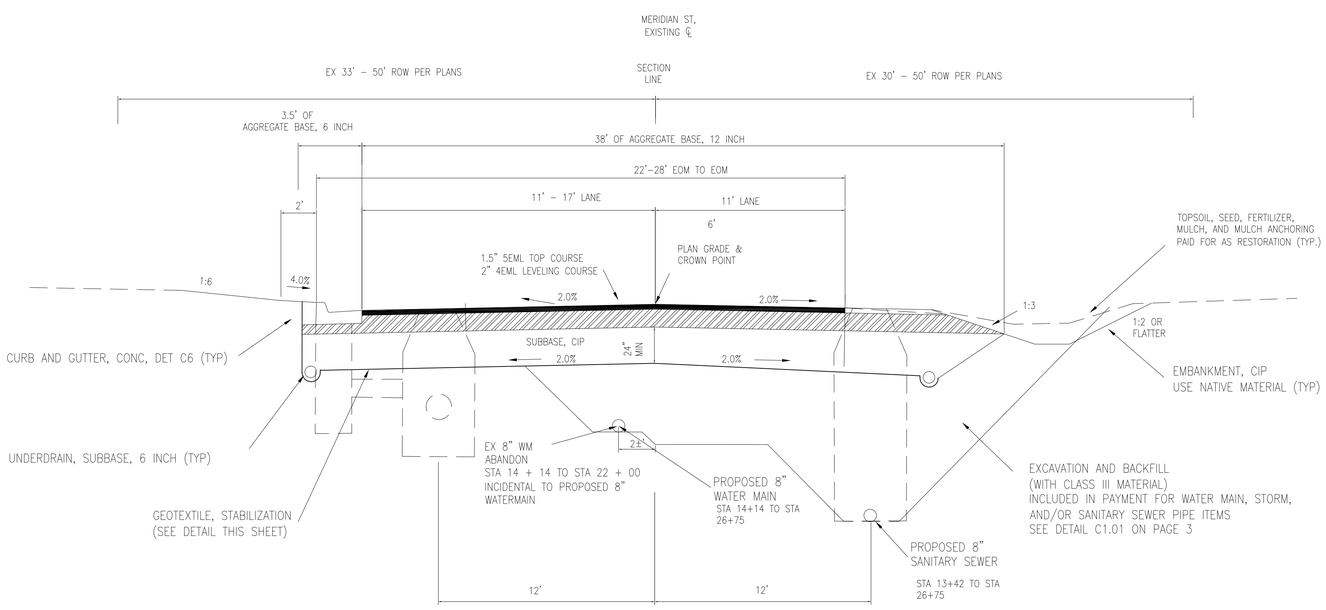
EXISTING CROSS SECTIONS
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVENUE TO WEST 8TH AVE

DRAWING: EXISTING X SECTIONS
SHEET: 7



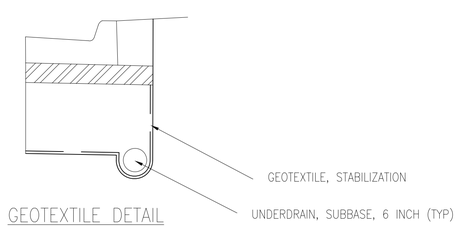
PROPOSED SECTION

TO APPLY POB STA 14 + 10 TO STA 23 + 65



PROPOSED SECTION

TO APPLY POB STA 23 + 65 TO STA 26 + 75



GEOTEXTILE DETAIL

HMA APPLICATION TABLE:

PAY ITEM	RATE: lbs/syd	PERFORMANCE GRADE	REMARKS
HMA, 5EML	165	58–34	HMA, 5EML TOP COURSE
HMA, 4EML	220	58–34	HMA, 4EML LEVELING COURSE
HMA Approach	220	58–34	HMA, 5EL, DRIVEWAY APRONS
HMA Approach	165	58–34	HMA, 5EML TOP COURSE INTERSECTION APPROACH
HMA Approach	220	58–34	HMA, 4EML LEVELING COURSE INTERSECTION APPROACH
Hand Patching	330	58–34	HMA, 4EML
Shared Use Path, HMA	330	58–34	HMA, 5EL, SHARED USE PATH
HMA Bond Coat	0.05 – 0.15 gal /syd		FOR INFORMATION ONLY

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NO SCALE

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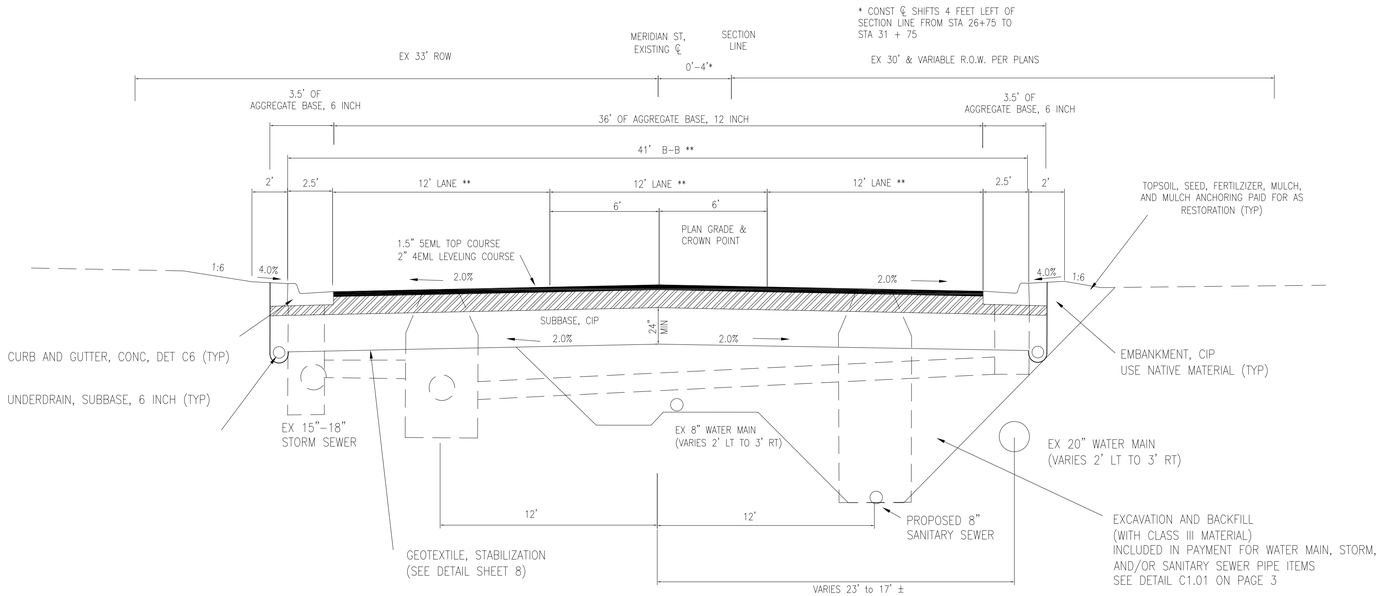
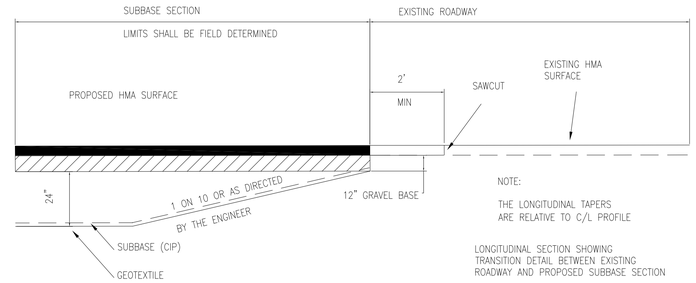
PROPOSED CROSS SECTIONS
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVENUE TO WEST 8TH AVE

DRAWING: PROPOSED X SECTIONS
SHEET: 8



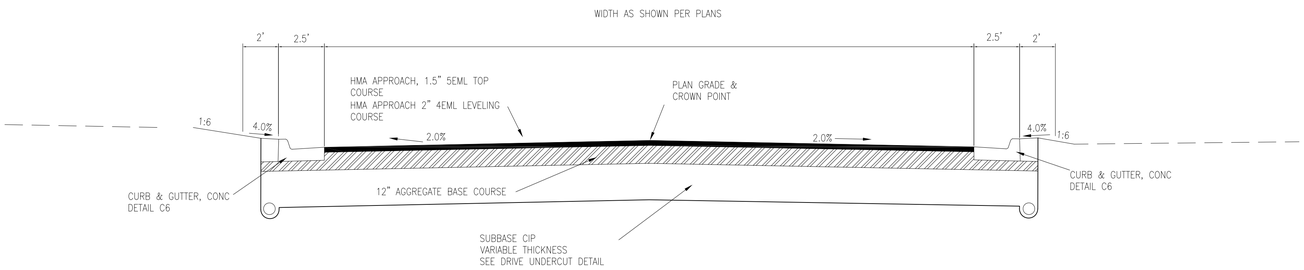
PROPOSED SECTION

TO APPLY STA 26 + 75 TO STA 39 + 30



LONGITUDINAL SECTION SHOWING TRANSITION DETAIL BETWEEN EXISTING ROADWAY AND PROPOSED SUBBASE SECTION

MAINLINE SUBBASE TRANSITION DETAIL



PROPOSED APPROACH STREET

TO APPLY: 8TH AVENUE WEST
TAFFY ABEL COURT
4TH AVENUE WEST
WASHINGTON WAY
DILLON STREET

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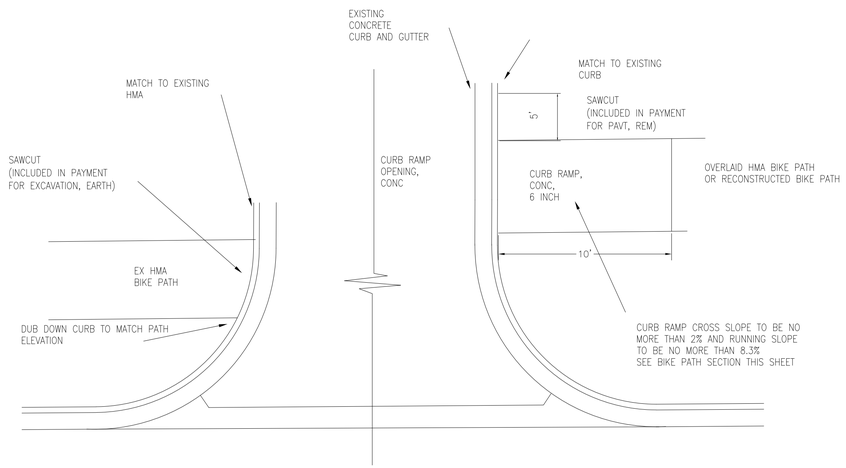
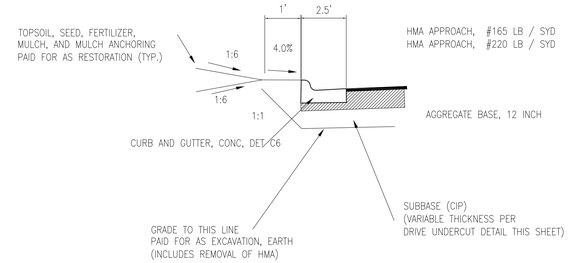
PROPOSED CROSS SECTIONS
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

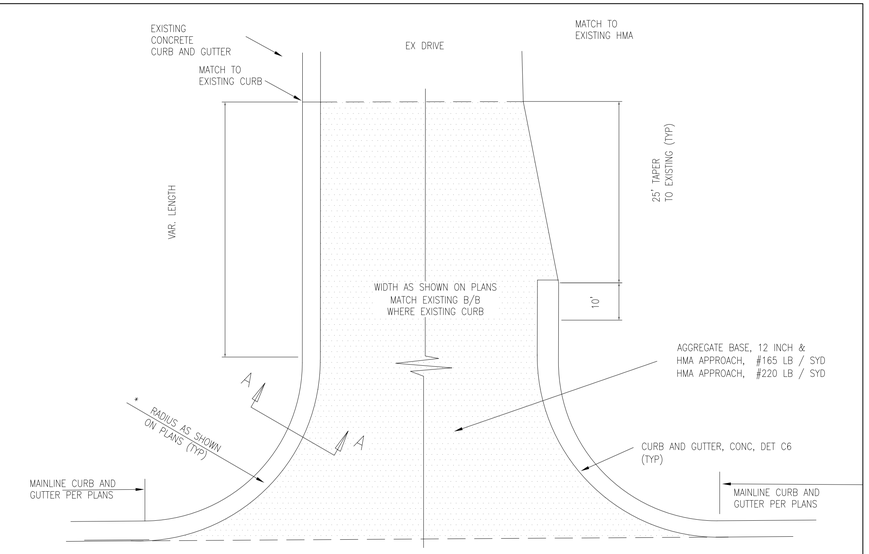
DRAWING	SHEET
PROPOSED X SECTIONS 2	9



DRIVES WITH BIKE PATH



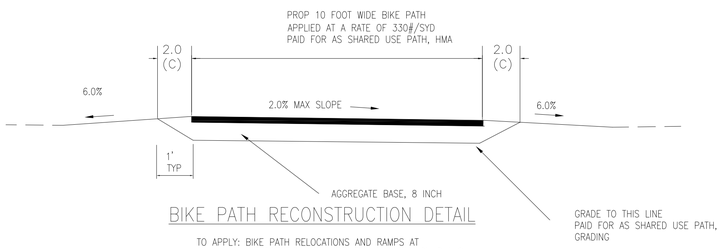
SECTION A–A



SIDE STREET APPROACH DETAIL

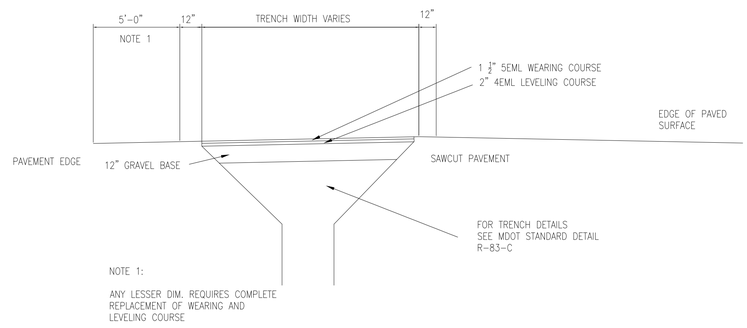
TO APPLY: ALL SIDE STREETS

* RADIUS MAY BE ADJUSTED BY ENGINEER IN FIELD

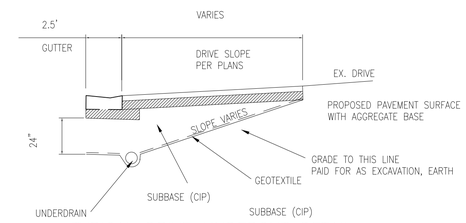


BIKE PATH RECONSTRUCTION DETAIL

TO APPLY: BIKE PATH RELOCATIONS AND RAMPS AT INTERSECTIONS AND DRIVES AS SHOWN ON PLANS

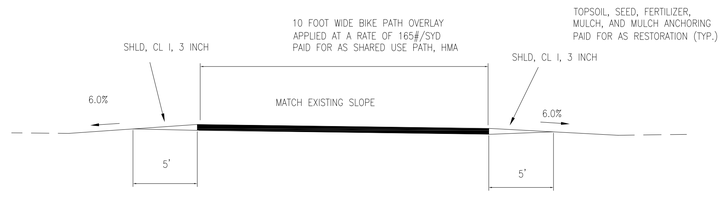


PAVEMENT RESTORATION TYPE "A"



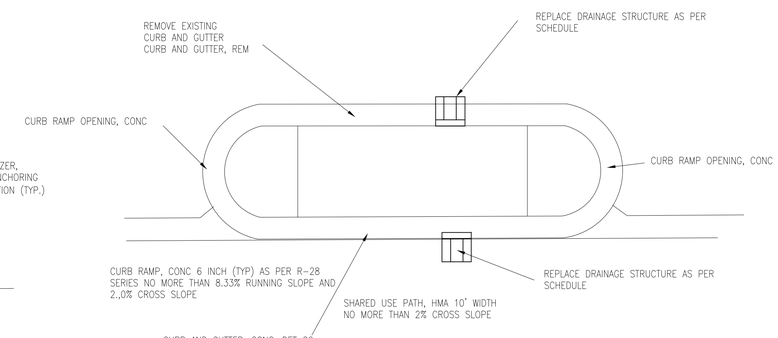
TYPICAL DRIVE UNDERCUT DETAIL

TO APPLY: ALL DRIVES



BIKE PATH OVERLAY DETAIL

TO APPLY: BIKE PATH RELOCATIONS AND RAMPS AT INTERSECTIONS AND DRIVES AS SHOWN ON PLANS



CONCRETE ISLAND DETAIL

TO APPLY: 24 + 30 LT

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NO SCALE

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MISCELLANEOUS DETAILS

MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING	SHEET
MISC DETAILS	10

MERIDIAN STREET
ALIGNMENT DATA

PI = 10+00
N = 630997.9476
E = 26910597.7377

MERIDIAN STREET
ALIGNMENT DATA

Δ = 00°00'00" LT
PI = 13+57.83
N = 631355.5926
E = 26910586.2700

MERIDIAN STREET CONST ℄
& SECTION LINE
N01°50'11"W

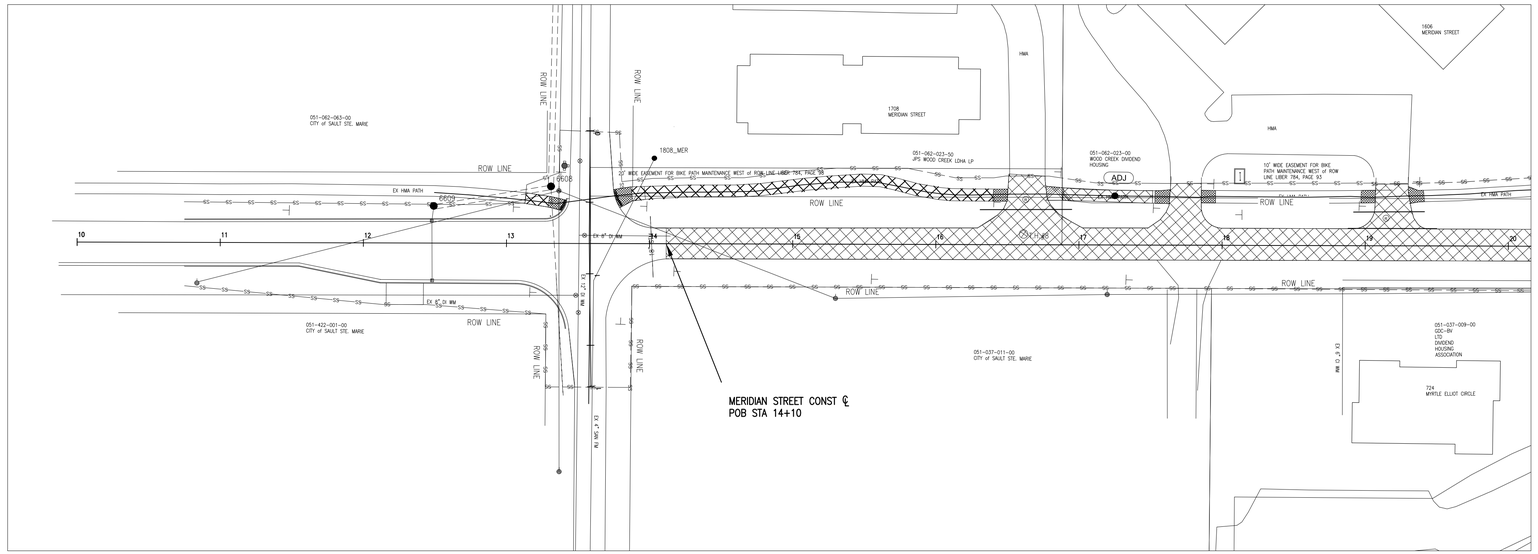
MERIDIAN STREET CONST ℄
& SECTION LINE
N01°50'11"W

0 100 200 Feet

N

WEST EIGHTH AVENUE

MERIDIAN STREET



WEST EIGHTH AVENUE

Mainline Utility Removal Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Culv, Rem, Less Than 24 inch	2	Ea

Non-Participating Items, CAT 003

Description	QTY	UNIT
Gate Box, Adj, Temp, Case 1, Modified	3	Ea

Mainline Road and Bike Path Removal Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Curb and Gutter, Rem	30	Ft
Pavt, Rem	1445	Syd
Excavation, Earth	2750	Cyd

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HORIZ. 1"= 50'
VERT. 1" = 5'

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DATE: 11/10/2023

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CS: STUL 17000

Removals STA 10+00 TO STA 20+00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: Rem STA 10+00 TO STA 20+00
SHEET: 11

MERIDIAN STREET
ALIGNMENT DATA

Δ = 00°00'00" LT
PI = 13+57.83
N = 631355.5926
E = 26910586.2700

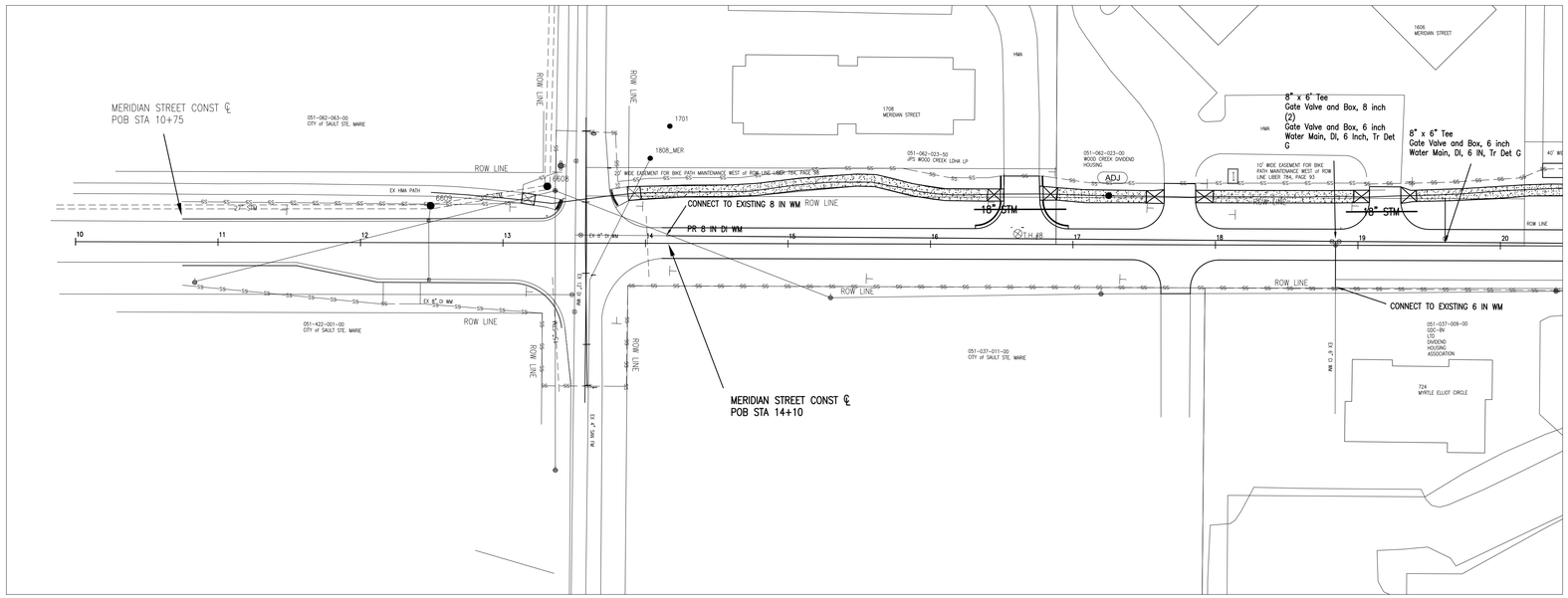
MERIDIAN STREET CONST ℄
& SECTION LINE
N01°50'11"W

MERIDIAN STREET CONST ℄
& SECTION LINE
N01°50'11"W

WEST EIGHTH AVENUE

N

0 100 200 Feet



WEST EIGHTH AVENUE

NOTE:

CONNECT TO EXISTING 8 inch AND 8" X 6" TEE INCLUDED
WITHIN PAYMENT OF WATER MAIN, DI, 8 inch, TR DET G

Utility Construction Quantities THIS SHEET

Participating Quanties, CAT 001

Description	QTY	UNIT
Sewer, Cl A, 18 Inch, Tr Det B1	120	Ft

Non-Participating Quantities, CAT 003

Description	QTY	UNIT
Water Main, DI, 6 inch, Tr Det C1.01, Modified	80	Ft
Water Main, DI, 8 inch, Tr Det C1.01, Modified	586	Ft
Gate Valve and Box, 6 inch, Modified	2	Ea
Gate Valve and Box, 8 inch, Modified	3	Ea
Gate Box, Adj, Case 1, Modified	3	Ea

Drive Quantities THIS SHEET

Participating Quantities, CAT 001

STATION	WIDTH	ENTER GRADE	EXIT RADIUS	RADIUS	Subbase, CIP	Geotextile, Stabilization	Approach, Cl I, 6 inch	HMA Approach	Curb & Gutter, Rem	Curb & Gutter Conc, Det C6	Curb Ramp Opening, Conc	Driveway Opening Conc, Type M	Culv, Rem Less Than 24 inch
16 + 64 LT	25	6.6	20	20	25	75	75	13	45	60	24	62	1
17 + 75 LT	22	4.8	20	20	20	60	60	12		0	0	0	1
17 + 84 RT	20	8	20	20	24	73	73	10		0		0	
19 + 19 LT	22	2.3*	20	20	22	66	66	11		0	0	0	1

Road Construction Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Subbase, CIP	1815	Cyd
Aggregate Base, 12 inch	2625	Syd
Underdrain, Subbase, 6 inch	1180	Ft
HMA, 4EML	160	Ton
HMA, 5EML	120	Ton
Geotextile, Stabilization	2755	Syd
Embankment, CIP	60	Cyd
Machine Grading	12	Sta

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)

NO.	DATE	AUTH	Description	NO.	DATE	AUTH	Description
1	8/14/23	DSB	Added Catch Basin Schedule				

CITY of
SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

HORIZ. 1"= 50'
VERT. 1" = 5'

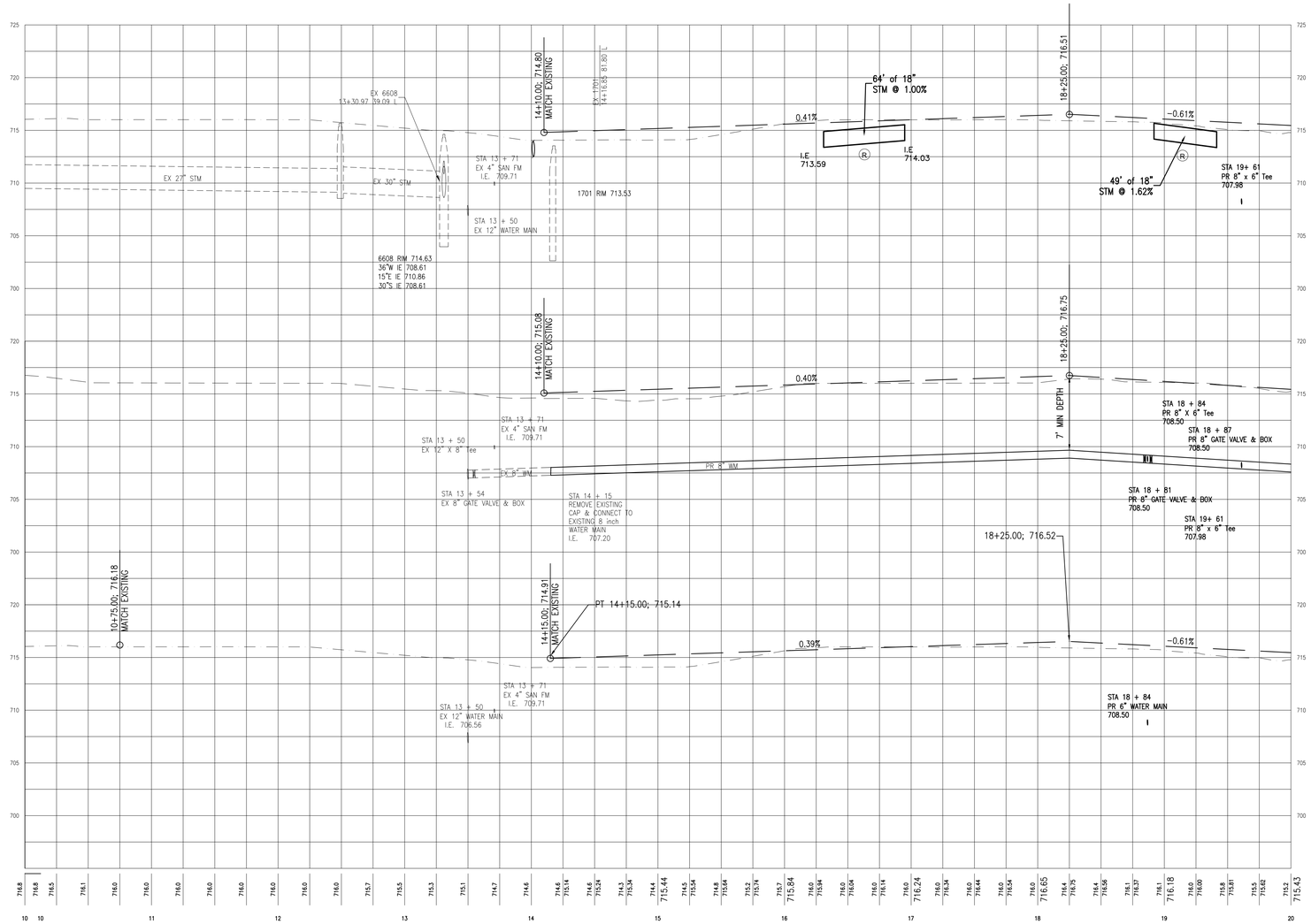
FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

Construction STA 10+00 TO STA 20+00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: CONST STA 10+00 TO STA 20+00
SHEET: 12



FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	Description	NO.	DATE	AUTH	Description

CITY of SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5506

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DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

PROFILE STA 10+00 TO STA 20+00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING	SHEET
PROFILE STA 10+00 TO STA 20+00	13

MERIDIAN STREET
ALIGNMENT DATA

Δ = 00°27'31" LT
PI = 26+75.00
N = 632672.0872
E = 26910544.0574

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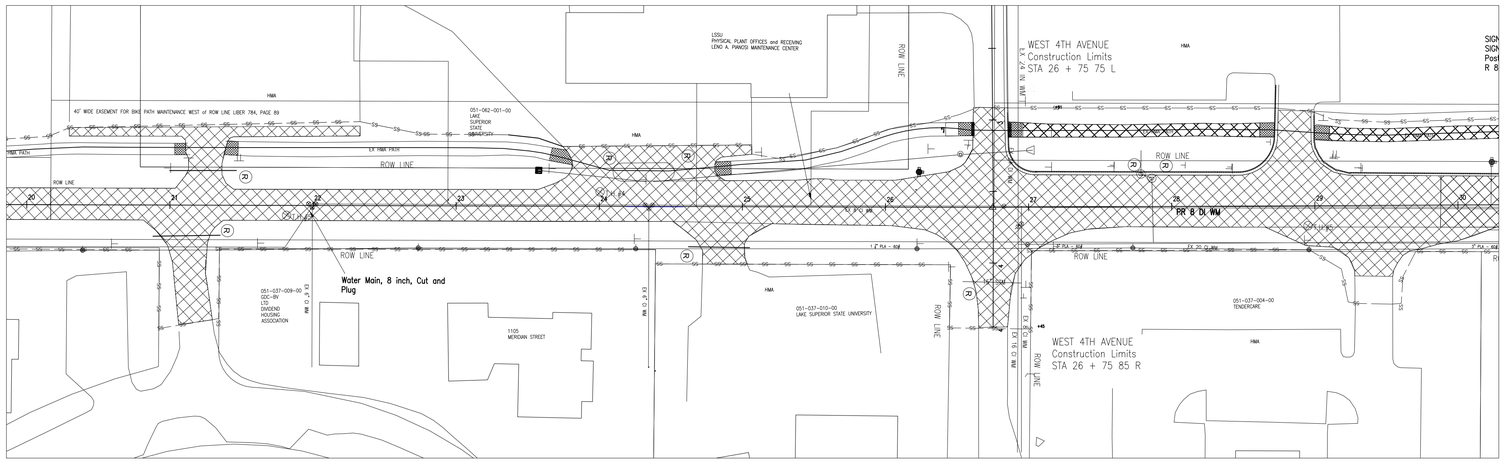
MERIDIAN STREET CONST ℄
& SECTION LINE
N01°50'11"W

WEST FOURTH AVENUE

MERIDIAN STREET CONST ℄
N02°17'42"W

MERIDIAN STREET



WEST FOURTH AVENUE

Mainline Utility Removal Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Culv, Rem, Less Than 24 inch	7	Ea
Dr Structure, Rem	3	Ea
Sewer, Rem, Less Than 24 inch	350	Ft

Non-Participating Quantities, CAT 003

Description	QTY	UNIT
Water Main, 8 inch, Cut & Plug, Modified	1	Ea
Hydrant, Rem, Modified	1	Ea
Flowable Fill, Non-Structural	12	Cyd
Gate Box, Adj, Temp, Case 1, Modified	1	Ea

Mainline Road and Bike Path Removal Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Curb and Gutter, Rem	390	Ft
Pavt, Rem	3470	Syd
Excavation, Earth	6620	Cyd

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)

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CITY of
SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

HORIZ. 1"= 50'
VERT. 1" = 5'

FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

Removals STA 20+00 TO STA 30+00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: Rem STA 20+00 TO STA 30+00
SHEET: 14

MERIDIAN STREET
ALIGNMENT DATA

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PI = 26+75.00
N = 632672.0872
E = 26910544.0574

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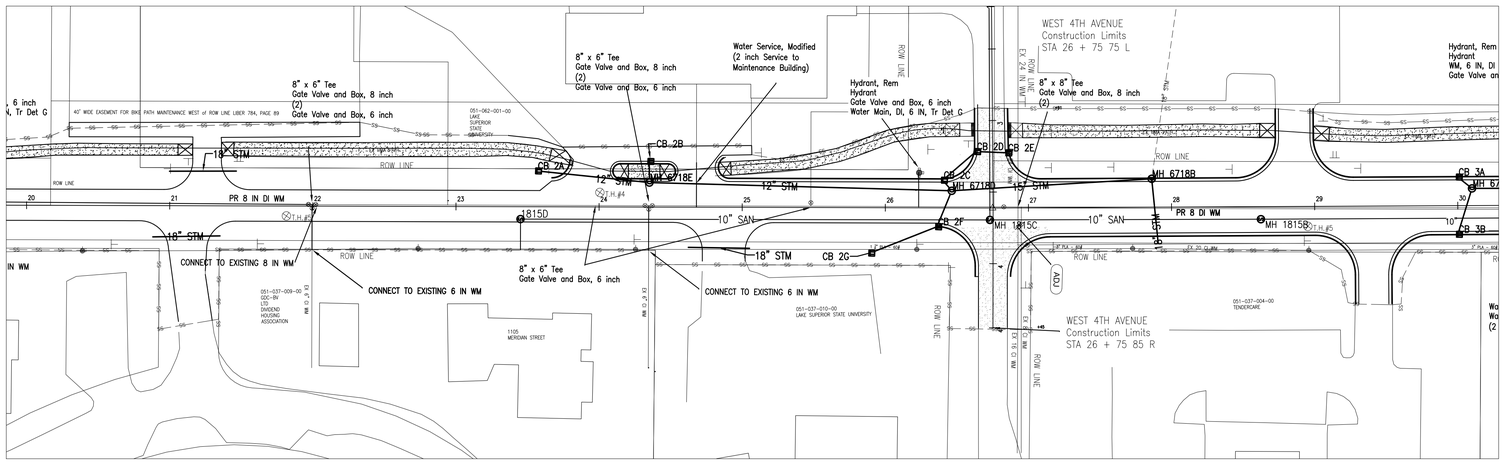
MERIDIAN STREET CONST ℄
& SECTION LINE
N01°50'11"W

WEST FOURTH AVENUE

MERIDIAN STREET CONST ℄
N02°17'42"W



WEST FOURTH AVENUE

NOTE:

8" X 6" TEE AND 8" x 8" TEE INCLUDED WITHIN
PAYMENT OF Water Main, DI, 8 inch, Tr Det G, Modified

Catch Basin Schedule THIS SHEET

Structure	SIZE	COVER	RIM ELEV
2A	24 Inch dia	DET E	
		12" RCP E	704.82
2B	24 Inch dia	DET K	711.23
		8" PVC E	708.1
2C	48 inch dia	DET K	709.75
		12" RCP E	704.6
		12" RCP W	704.6
2D	48 Inch dia	DET K	708.54
		12" RCP E	704.82
		12" RCP W	704.82
2E	24 Inch dia	DET K	708.44
		12" RCP S	705.04
2F	48 inch dia	DET K	709.75
		8" PVC S	705.96
		12" RCP W	705.86
2G	24 Inch dia	DET E	710.02

Utility Construction Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Dr Structure. 24 inch dia	4	Ea
Dr Structure, 48 inch dia	5	Ea
Dr Structure, 72 inch dia	1	Ea
Sewer, Cl A, 12 inch, Tr Det B1	418	Ft
Sewer, Cl A, 15 inch, Tr Det B1	135	Ft
Sewer, Cl A, 18 inch, Tr Det B1	225	Ft
Dr Structure Cover, Type B	3	Ea
Dr Structure Cover, Type E	2	Ea
Dr Structure Cover, Type K	5	Ea
Erosion Control, Inlet Protection Fabric Drop	10	Ea

Drive Quantities THIS SHEET

Participating Quantities, CAT 001

STATION	WIDTH	GRADE	ENTER RADIUS	EXIT RADIUS	Geotextile, Stabilization	Subbase, CIP	Approach, Cl I, 6 inch	HMA Approach	Curb and Gutter, Rem	Curb and Gutter, Conc, Det C6	Curb Ramp Opening, Conc	Driveway Opening Conc, Type M	Culv, Rem, Less Than 24 inch
21 + 96 LT	20	4.5	20	20	27	82	82	14		0	0	0	1
23 + 95 LT	26	6.3	15	5	37	110	110	18	78	23		48	
24 + 68 LT	26	8.7	5	10	39	116	116	19	80		24	48	
24 + 87 RT	30	9.3	20	20	35	103	103	17		0		0	1
26 + 74 LT	19	−1.6	25	5	45	130	130	19	92	100	24	69	
28 + 96 LT	22	−0.5	30	30	45	135	135	23	108	71	24	82	
29 + 41 RT	21	10.9	30	30	44	130	130	22	94	95		81	

Road Construction Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Subbase, CIP	2990	Cyd
Geotextile, Stabilization	4990	Syd
Aggregate Base, 6 inch	505	Syd
Aggregate Base, 12 inch	4315	Syd
Underdrain, Subbase, 6 inch	2000	Ft
HMA, 4EML	345	Ton
HMA, 5EML	265	Ton
Curb and Gutter, Conc Det C6	1357	Ft
Embankment, CIP	30	Cyd
Machine Grading	9	Sta

Non–Participating Quantities. CAT 003

Description	QTY	UNIT
Sanitary Sewer, PVC, 10 inch, Tr Det C1.01, Modified	653	Ft
Sanitary Structure, 48 inch dia, Modified	3	Ea
Sanitary Structure, Add Depth of 48 inch dia 8 Foot TO 15 Foot, Modified	9	Ft
Sanitary Structure Cover, Type Q, Modified	3	Ea
Sanitary Sewer, Service Lead, PVC, 6 inch, Modified	90	Ft
Water Main, DI, 6 inch, Tr Det C1.01, Modified	70	Ft
Water Main, DI, 8 inch, Tr Det C1.01, Modified	1000	Ft
Water Serv, Modified	1	Ea
Gate Valve and Box, 6 inch, Modified	5	Ea
Gate Valve and Box, 8 inch, Modified	6	Ea
Gate Box, Adj, Case 1, Modified	1	Ea
Fire Hydrant, Modified	1	Ea

TAFFY ABEL COURT Construction Quantities

Participating Quantities, CAT 001

Description	QTY	UNIT
Underdrain, Subbase, 6 inch	105	Ft
Subbase, CIP	35	Cyd
Aggregate Base, 12 inch	105	Syd
HMA Approach	20	Ton

WEST 4TH AVENUE (EAST) Construction Quantities

Participating Quantities, CAT 001

Description	QTY	UNIT
Underdrain, Subbase, 6 inch	180	Ft
Geotextile, Stabilization	215	Syd
Subbase, CIP	75	Cyd
Aggregate Base, 12 inch	212	Syd
Curb and Gutter, Conc, Det C6	130	Ft
HMA Approach	41	Ton
Shoulder, Cl II, 3 inch	6	Syd

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)

NO.	DATE	AUTH	Description	NO.	DATE	AUTH	Description

CITY of
SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

HORIZ. 1"= 50'
VERT. 1" = 5'

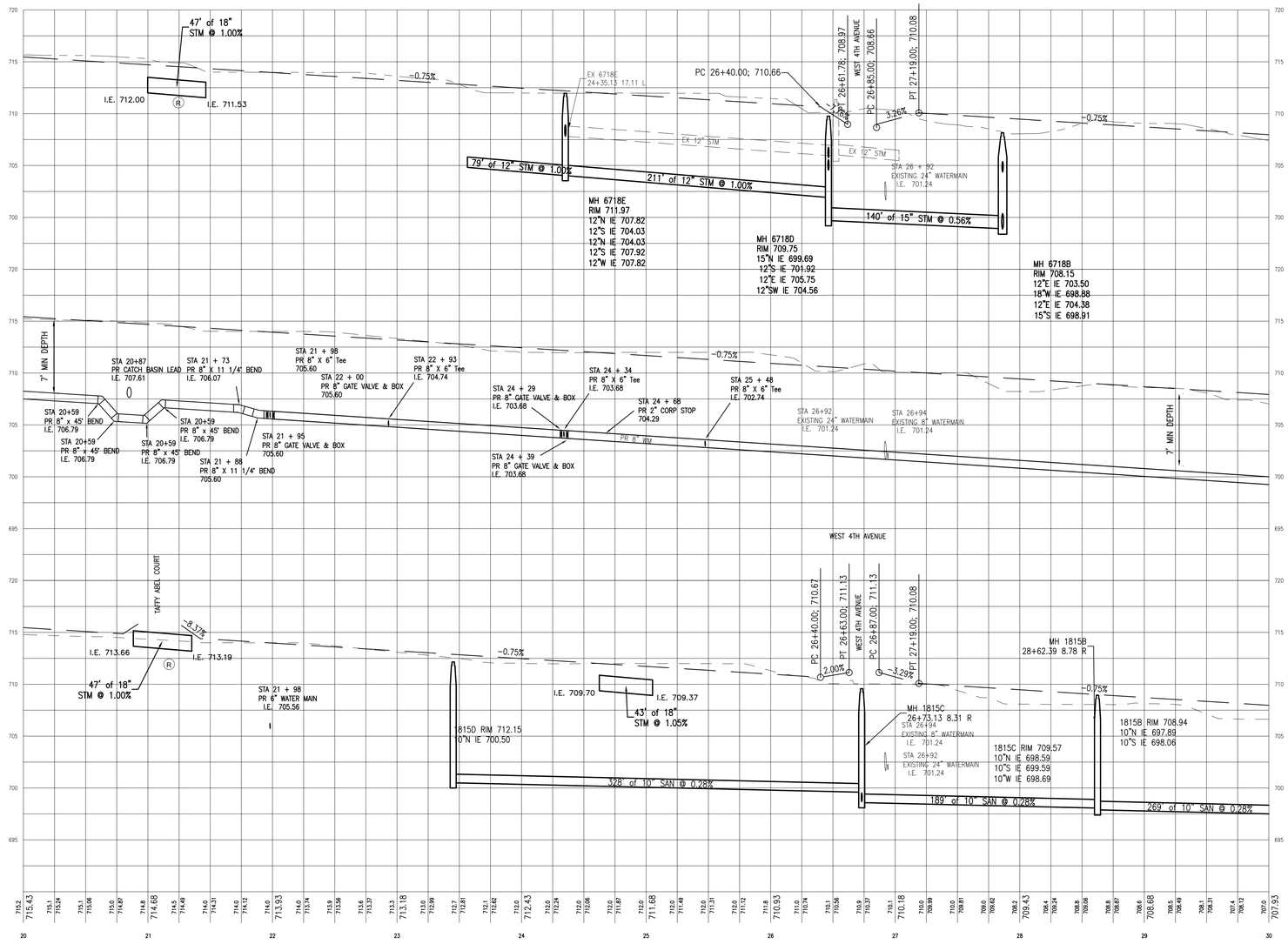
FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

Construction STA 20+00 TO STA 30+00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: CONST STA 20+00 TO STA 30+00
SHEET: 15



FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)

NO.	DATE	AUTH	Description	NO.	DATE	AUTH	Description

CITY of SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-6606

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DRAWN BY: LJM
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DATE: 11/10/2023

JN: 208179
CS: STUL 17000

PROFILE STA 20+00 TO STA 30+00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING	SHEET
PROFILE STA 20+00 TO STA 30+00	16

MERIDIAN STREET
ALIGNMENT DATA

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PI = 31+75.00
N = 633171.6861
E = 26910524.0360

N

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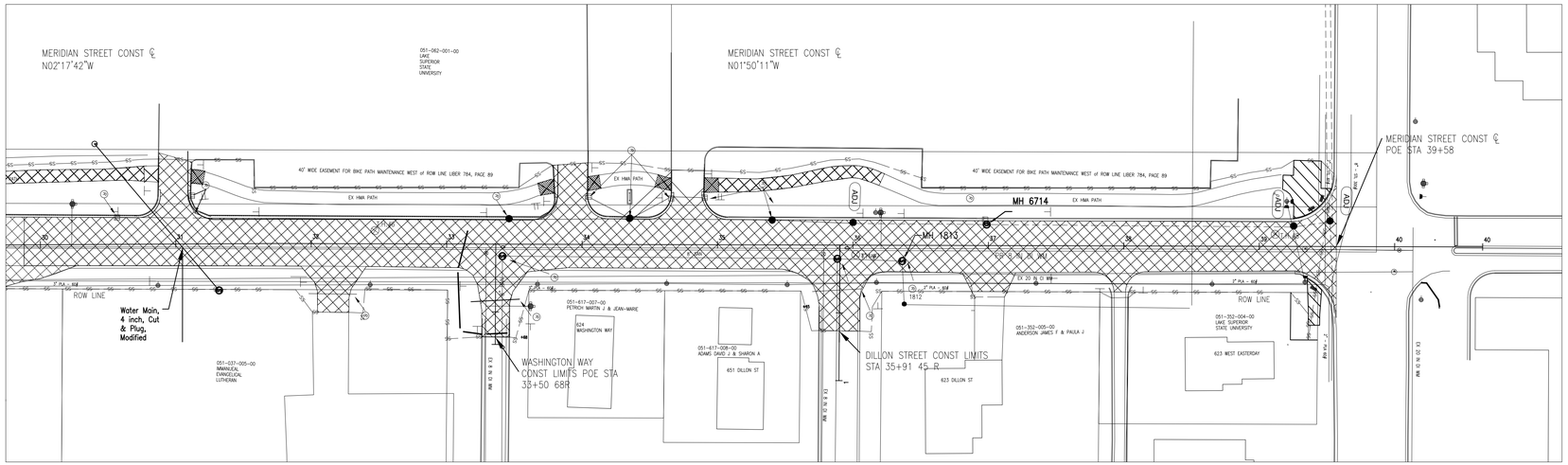
Feet

MERIDIAN STREET
ALIGNMENT DATA

PI = 40+65.00
N = 634061.2250
E = 26910495.5135

WEST EASTERDAY AVENUE



WASHINGTON WAY

DILLON STREET

WEST EASTERDAY AVENUE

Mainline Utility Removal Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Dr Structure, Rem	11	Ea
Sewer, Rem, Less Than 24 inch	750	Ft
Culv, Rem, Less Than 24 inch	3	Ea

Non-Participating Quantities, CAT 003

Description	QTY	UNIT
Sewer, Rem, Less than 24 inch, Modified	702	Ft
Hydrant, Rem, Modified	2	Ea
Sanitary Structure, Rem, Modified	2	Ea
Water Main, 4 inch, Cut & Plug, Modified	1	Ea
Gate Box, Adj, Case 1, Temp, Modified	1	Ea

Mainline Road and Bike Path Removal Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Curb and Gutter, Rem	785	Ft
Pavt, Rem	4405	Syd
Excavation, Earth	7010	Cyd
Sidewalk, Rem	110	Syd

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)

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CITY of
SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

HORIZ. 1"= 50'
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FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

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DATE: 11/10/2023

JN: 208179
CS: STUL 17000

Removals STA 30+00 TO STA 40+00

MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: Rem STA 30+00 TO STA 40+00

SHEET: 17

MERIDIAN STREET CONST ℄
N02°17'42"W

MERIDIAN STREET
ALIGNMENT DATA

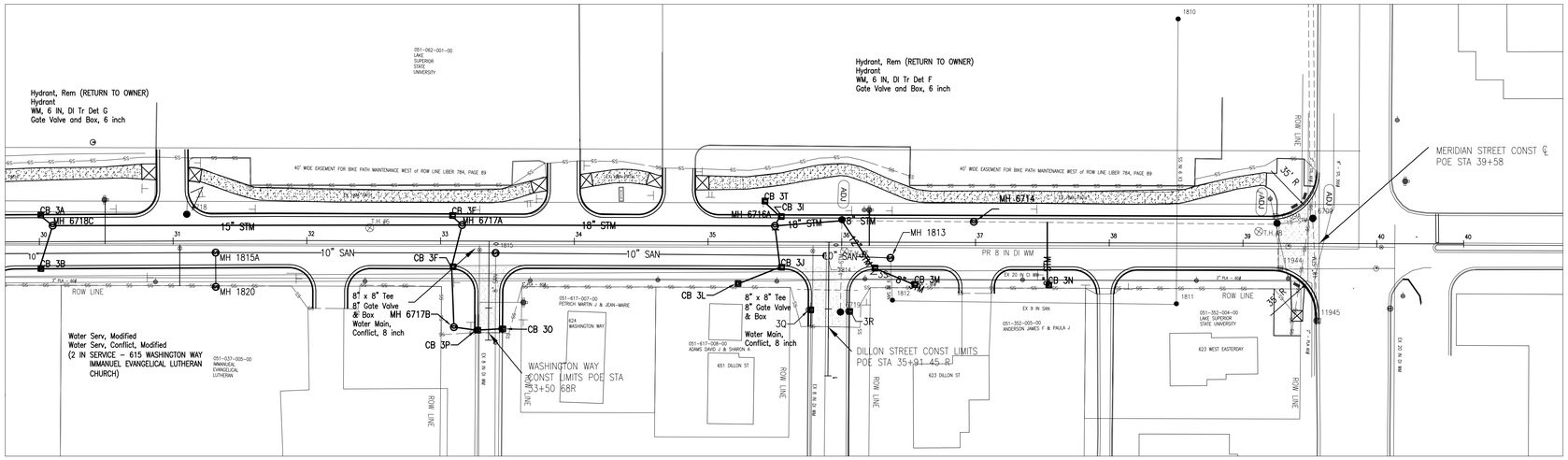
Δ = 00°27'31" RT
PI = 31+75.00
N = 633171.6261
E = 26910524.0360

MERIDIAN STREET CONST ℄
N01°50'11"W

0 100 200 Feet

MERIDIAN STREET
ALIGNMENT DATA

PI = 40+65.00
N = 634061.2250
E = 26910495.5135



CATCH BASIN SCHEDULE THIS SHEET

Structure	SIZE	COVER	RIM ELEV
3A	24 inch dia	DET K	706.9
		12" RCP E	703.97
3B	24 inch dia	DET K	706.9
		12" RCP W	703.87
3E	24 inch dia	DET K	705.03
		12" RCP E	701.45
3F	48 inch dia	DET K	705.03
		12" RCP W	699.53
3I	24 inch dia	DET K	702.22
		12" RCPE	698.74
3J	48 inch dia	DET K	702.22
		12" RCP W	698.58
		8" PVC S	696.79
3L	24 inch dia	DET E	699.49
		8" PVC N	696.96
3M	24 inch dia	DET E	698.27
		8 " PVC S	694.77
3N	24 inch dia	DET E	697.45
		8 " PVC S	693.95
3O	24 inch dia	DET K	703.876
		12" S RCP	700.04
3P	48 inch dia	DET K	703.876
		12" N RCP	700
		12" S RCP	699.9
3S	48 inch dia	DET K	701.43
		8" PVC N	694.58
		12" RCP SW	694.48
3T	24 inch dia	DET E	699.4
		8" PVC E	696.85

Utility Construction Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Dr Structure. 24 inch dia	8	Ea
Dr Structure, 48 inch dia	5	Ea
Dr Structure, 72 inch dia	2	Ea
Sewer, Cl A, 8 inch, Tr Det B1	140	Ft
Sewer, Cl A, 12 inch, Tr Det B1	147	Ft
Sewer, Cl A, 15 inch, Tr Det B1	369	Ft
Sewer, Cl A, 18 inch, Tr Det B1	284	Ft
Sewer Tap, 12 inch	1	Ea
Sewer Tap, 18 inch	3	Ea
Dr Structure Cover, Type B	6	Ea
Dr Structure Cover, Type E	3	Ea
Dr Structure Cover, Type K	11	Ea
Dr Structure Cover, Adj, Case 1, Modified	3	Ea
Erosion Control, Inlet Protection Fabric Drop	12	Ea

Non–Participating Quantities, CAT 003

Description	QTY	UNIT
Sanitary Sewer, PVC, 10 inch, Tr Det C1.01, Modified	635	Ft
Sanitary Structure, 48 inch dia, Modified	5	Ea
Sanitary Structure, Add Depth of 48 inch dia 8 Foot TO 15 Foot, Modified	7	Ft
Sanitary Structure Cover, Type Q, Modified	5	Ea
Sanitary Structure Tap, 8 inch, Modified	2	Ea
Sanitary Structure Tap, 10 inch, Modified	1	Ea
Water Main, DI, 6 inch, Tr Det C1.01, Modified	60	Ft
Water Main, DI, 8 inch, Tr Det C1.01 Modified	1000	Ft
Water Serv, Modified	1	Ea
Water Main Conflict, 8 inch, Modified	2	Ea
Water Serv, Conflict, Modified	1	Ea
Gate Valve and Box, 6 inch, Modified	2	Ea
Gate Valve and Box, 8 inch, Modified	2	Ea
Gate Box, Adjust, Case 1, Modified	1	Ea
Fire Hydrant, Modified	2	Ea

NOTE:

8" x 8" TEE INCLUDED WITHIN
PAYMENT OF Water Main, DI, 8 inch, Tr Det G, Modified

Drive Quantities THIS SHEET

Participating Quantities, CAT 001

STATION	WIDTH	GRADE	ENTER RADIUS	EXIT RADIUS	Subbase, CIP	Geotextile, Stabilization	Approach, Cl I, 6 inch	HMA Approach	Curb and Gutter, Rem	Curb and Gutter Conc, Det C6	Curb Ramp Opening, Conc	Driveway Opening Conc, Type M	Culv, Rem Less Than 24 inch
31 + 00 LT	19	1.1	20	20	38	114	114	19	96	64	24	60	
32 + 19 RT	20	4.9	20	20	25	74	74	12		48		60	1
33 + 92 LT	20	1.1	20	20	30	88	88	15	83	48	24	60	
34 + 78 LT	20	0.2	20	20	28	85	85	14	88	48	24	60	
37 + 01 RT	22	3.8	20	20	27	80	80	14		48		62	1
37 + 97 RT	8	1.9	20	20	11	32	32	5	60	48		48	1

Road Construction Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Subbase, CIP	3190	Cyd
Geotextile, Stabilization	5030	Syd
Aggregate Base, 6 inch	780	Syd
Aggregate Base, 12 inch	4000	Syd
Underdrain, Subbase, 6 inch	2000	Ft
HMA, 4EML	440	Ton
HMA, 5EML	330	Ton
Curb and Gutter, Conc Det C6	1357	Ft
Curb Ramp Opening, Conc	1035	Sft
Detectable Warning Surface, Modified	24	Ft
Embankment, CIP	20	Cyd

DILLON Construction Quantities

Participating Quantities, CAT 001

Description	QTY	UNIT
Culv, Rem, Less than 24 inch	1	Ea
Curb and Gutter, Rem	20	Ft
Underdrain, Subbase, 6 inch	83	Ft
Subbase, CIP	35	Cyd
Aggregate Base, 12 inch	106	Syd
Curb and Gutter, Conc, Det C6	83	Ft
HMA Approach	21	Ton

WASHINGTON WAY Construction Quantities

Participating Quantities, CAT 001

Description	QTY	UNIT
Curb and Gutter, Rem	20	Ft
Underdrain, Subbase, 6 inch	109	Ft
Geotextile, Stabilization	96	Syd
Subbase, CIP	32	Cyd
Aggregate Base, 12 inch	96	Syd
Curb and Gutter, Conc, Det C6	109	Ft
HMA Approach	19	Ton

WEST EASTERDAY AVE Construction Quantities

Participating Quantities, CAT 001

Description	QTY	UNIT
Curb and Gutter, Rem	110	Ft
Underdrain, Subbase, 6 inch	110	Ft
Geotextile, Stabilization	180	Syd
Subbase, CIP	60	Cyd
Aggregate Base, 12 inch	180	Syd
Curb and Gutter, Conc, Det C6	27	Ft
Curb Ramp Opening, Conc	83	Ft
HMA Approach	35	Ton

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)

NO.	DATE	AUTH	Description	NO.	DATE	AUTH	Description

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ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
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HORIZ. 1"= 50'
VERT. 1" = 5'

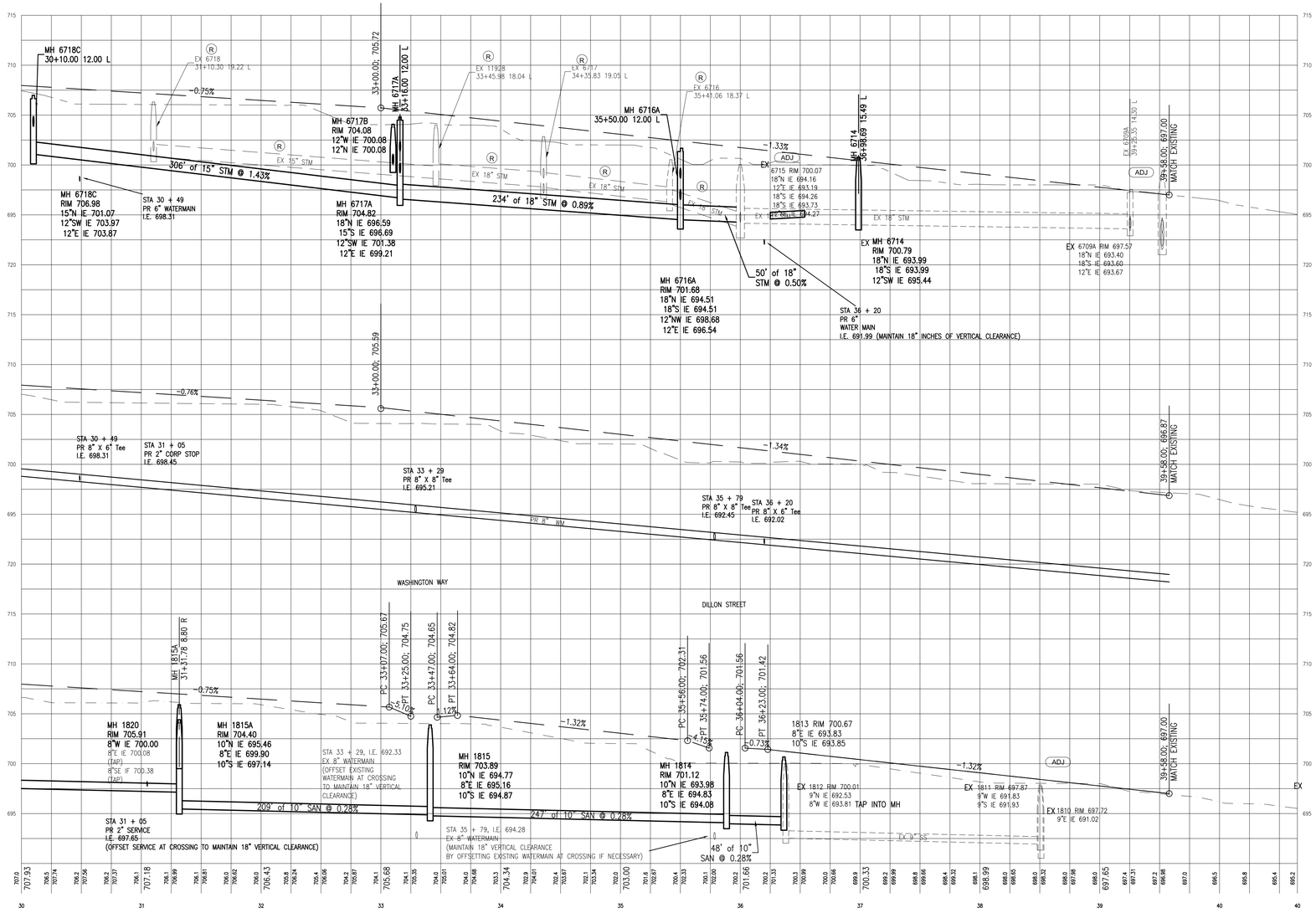
FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

Construction STA 30+00 TO STA 40+00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: CONST STA 30+00 TO STA 40+00
SHEET: 18



FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	Description	NO.	DATE	AUTH	Description

CITY of SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

HORIZ. 1"= 50'
VERT. 1" = 5'

FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

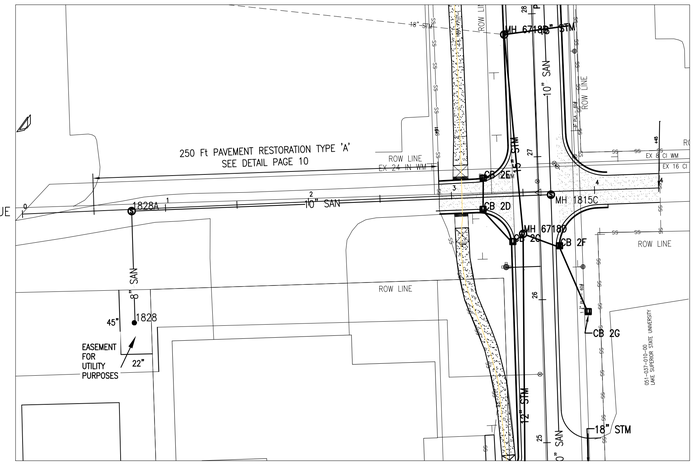
DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

PROFILE STA 30+00 TO STA 40+00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

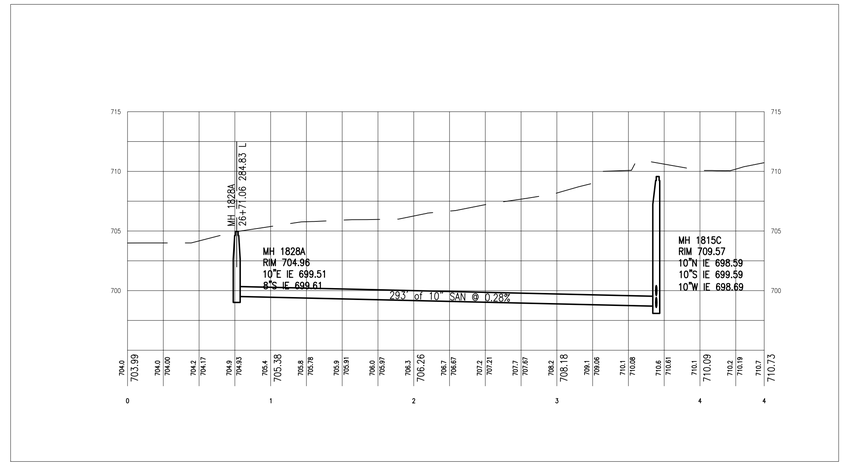
DRAWING	SHEET
PROFILE STA 30+00 TO STA 40+00	19

MH 1828
STA 25+96, 288.3 L
RIM 704.926
8"N I.E 699.926
9"E I.E. 699.926



N

0 100 200 Feet



Utility Construction Quantities THIS SHEET

Non-Participating Quantities, CAT 003

Description	QTY	UNIT
Sanitary Sewer, PVC, 10 inch, Tr Det B2, Modified	343	Ft
Sanitary Structure, 48 inch dia, Modified	2	Ea
Sanitary Structure Cover, Type Q, Modified	2	Ea
Sanitary Sewer, Service Lead, PVC, 6 inch, Modified	60	Ft

Road Construction Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Subbase, CIP	500	Cyd
Aggregate Base, 12 inch	500	Syd
HMA, Approach	100	Ton

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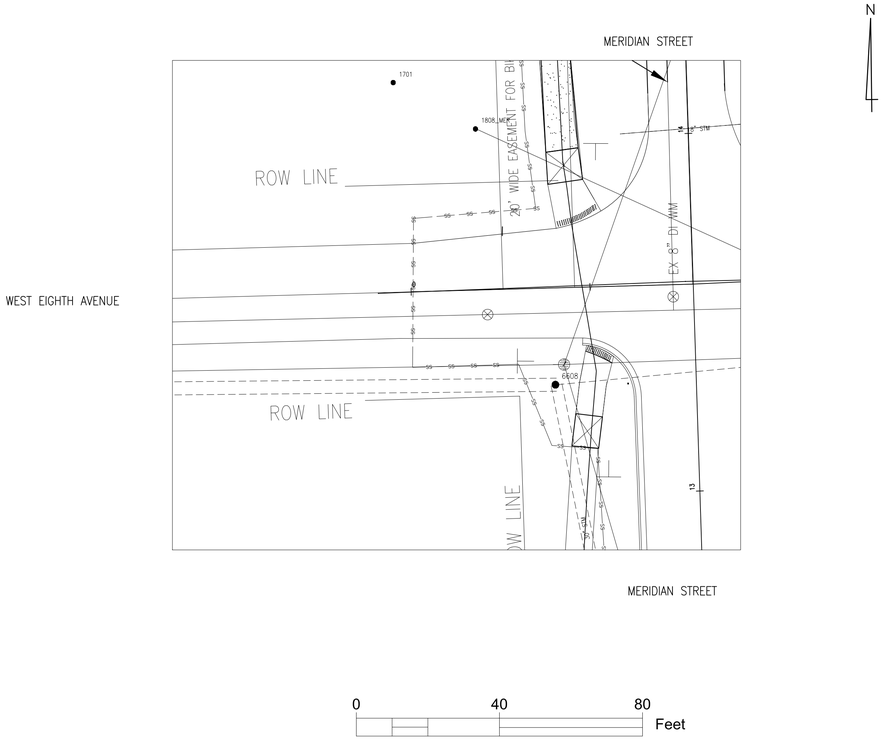
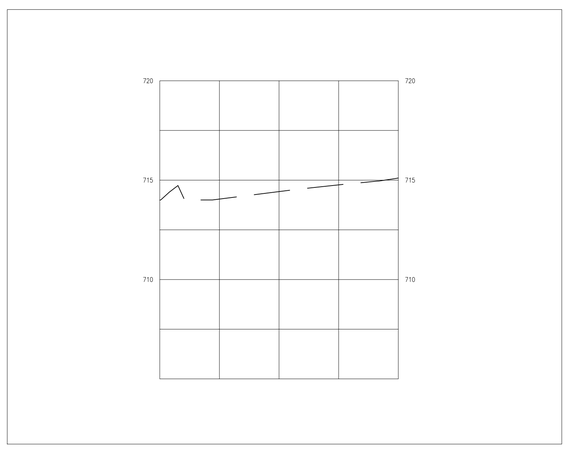
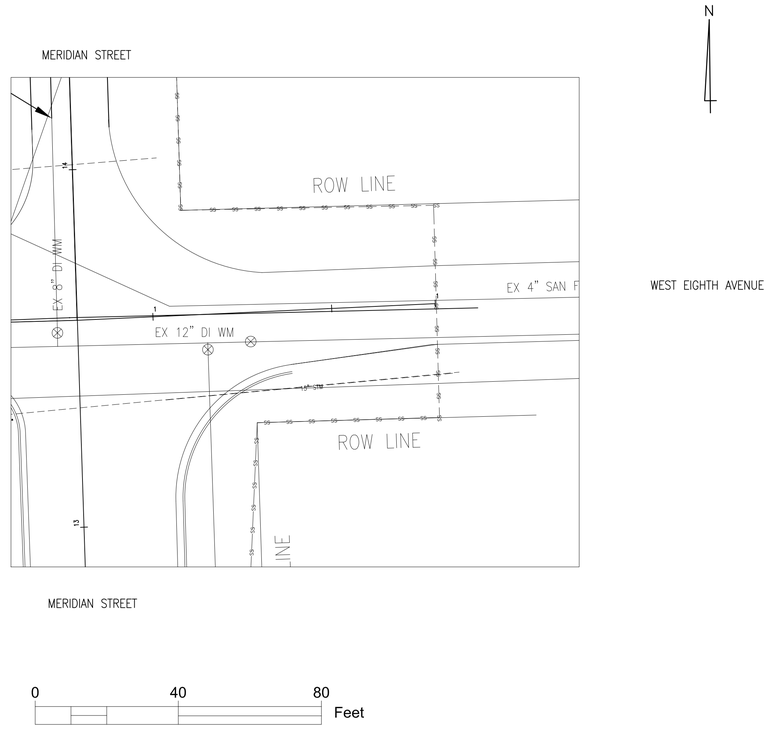
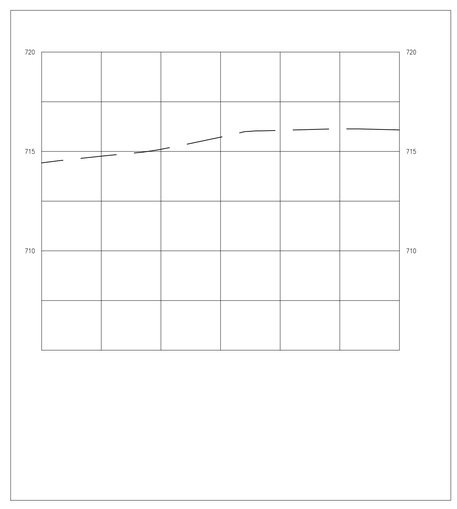
West 4th Avenue Sanitary Sewer: PLAN & PROFILE
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: WEST 4TH SANITARY SEWER
SHEET: 20









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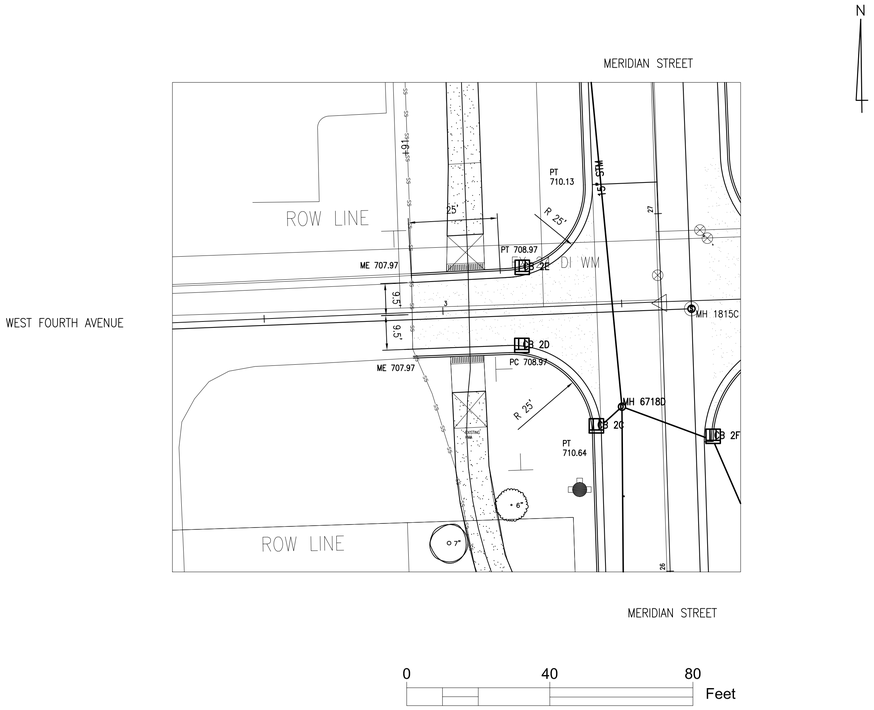
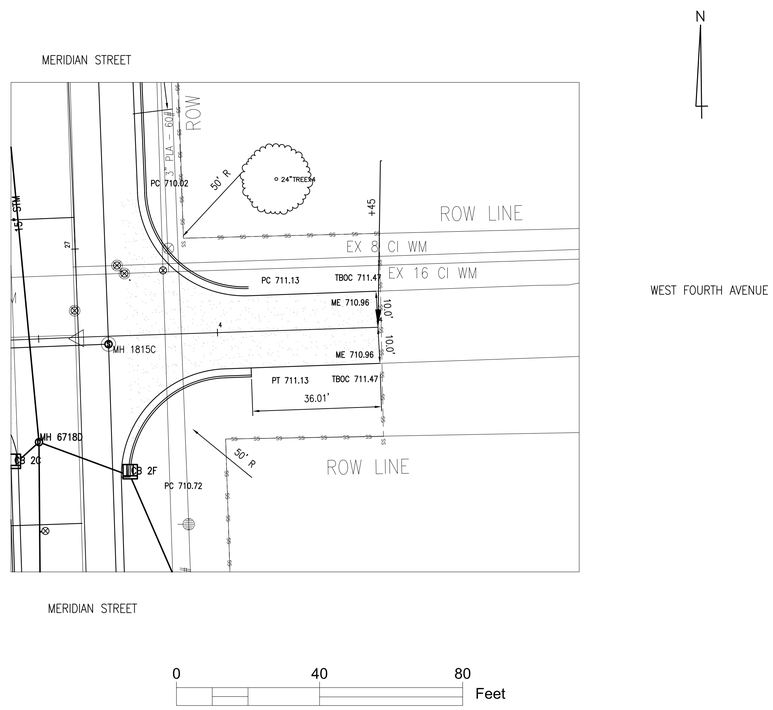
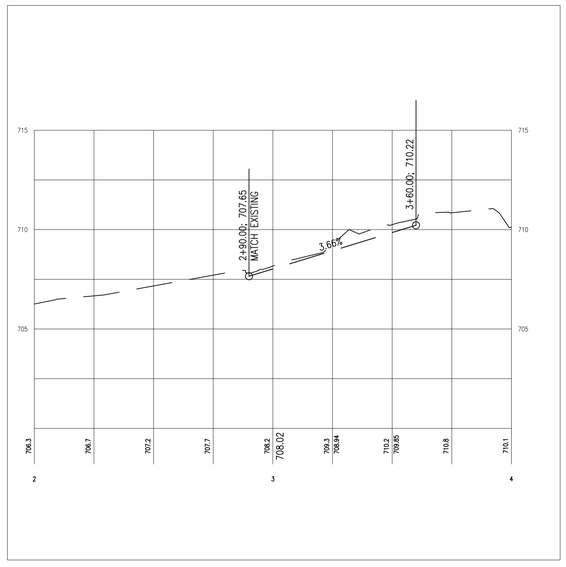
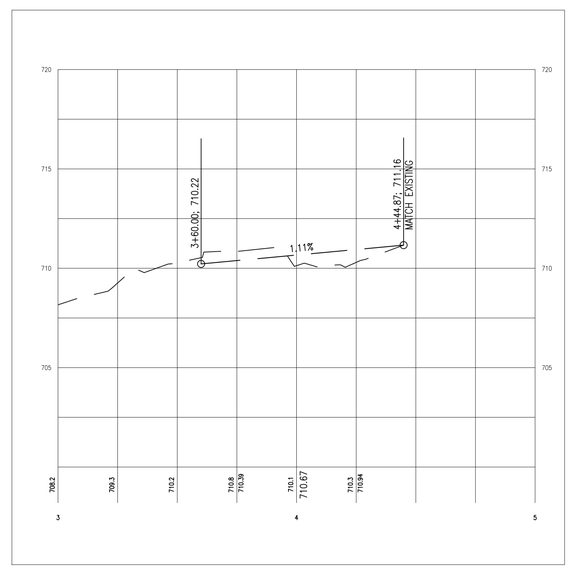
STREET APPROACH PLAN AND PROFILE: WEST 8TH AVENUE
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING	SHEET
8TH PLANPF	21









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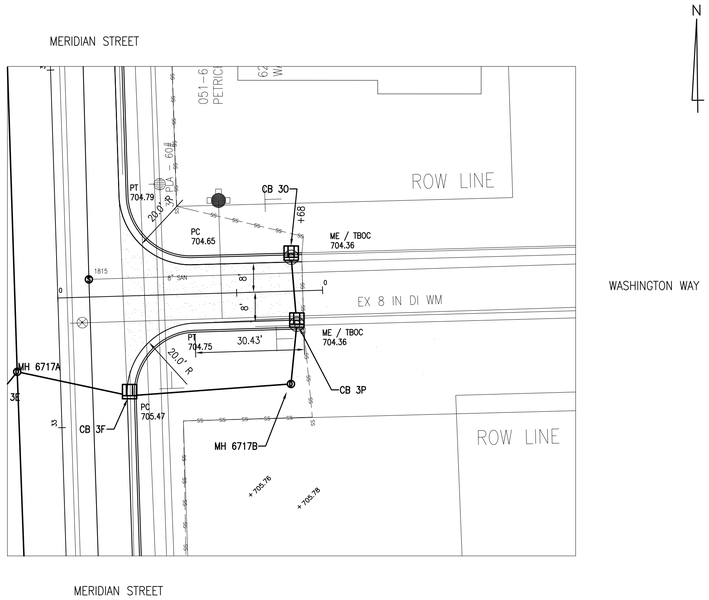
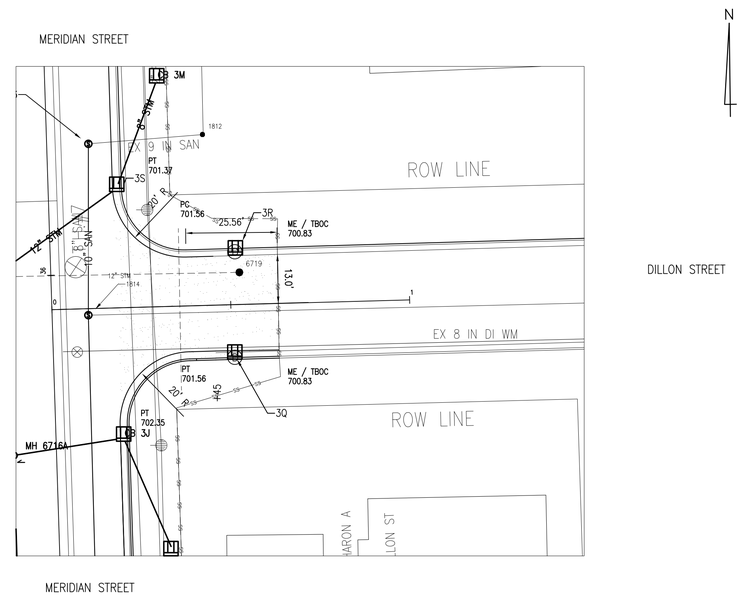
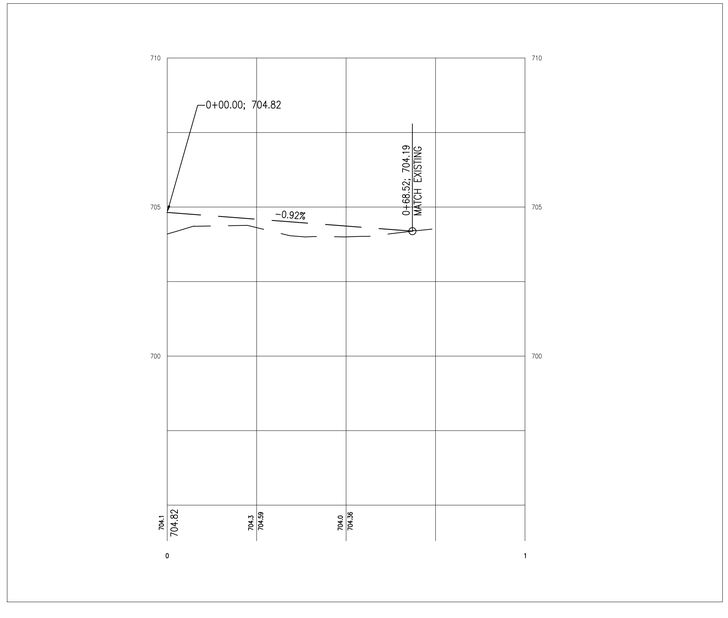
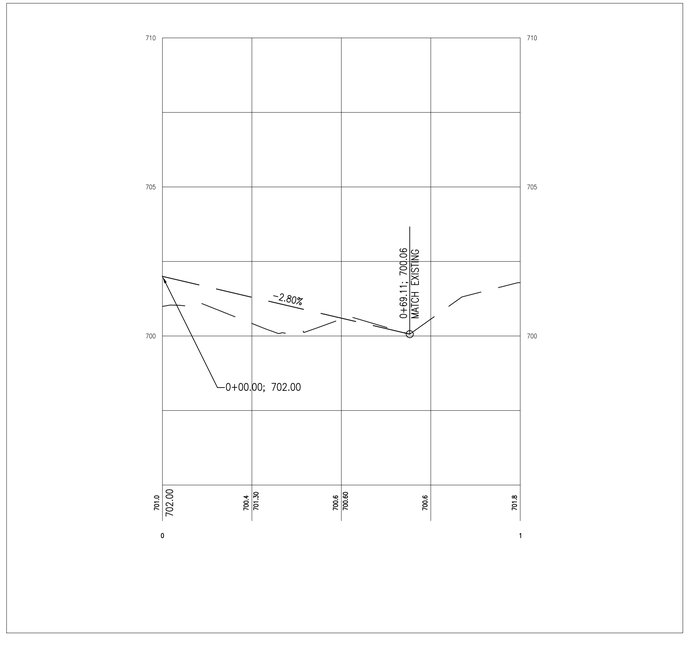
STREET APPROACH PLAN AND PROFILE: WEST 4TH AVENUE
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING	SHEET
4TH PLANPF	22









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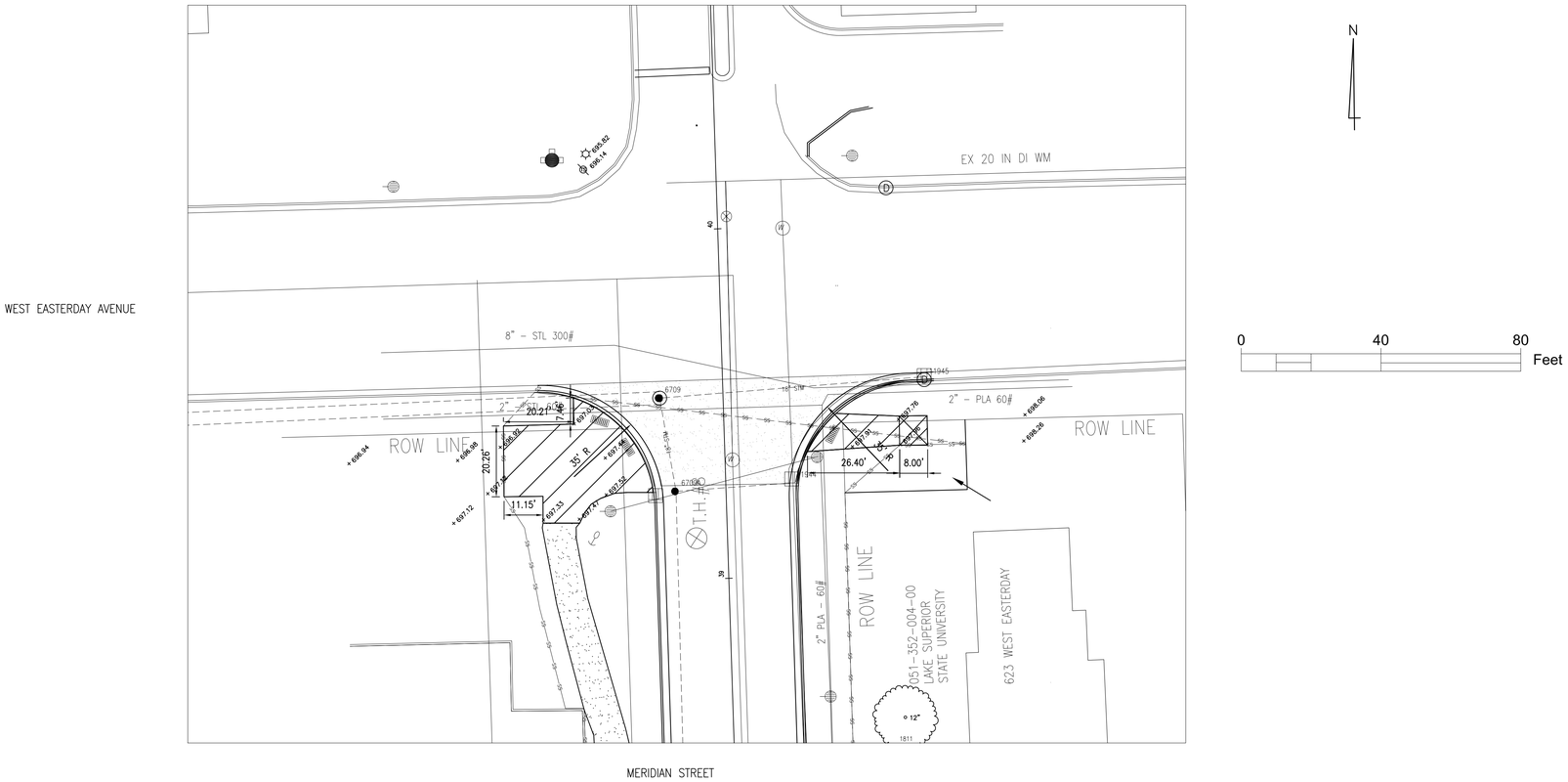
STREET APPROACH PLAN AND PROFILE: WASHINGTON WAY & DILLON
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING	SHEET
WWAY DILLON PLANPF	23



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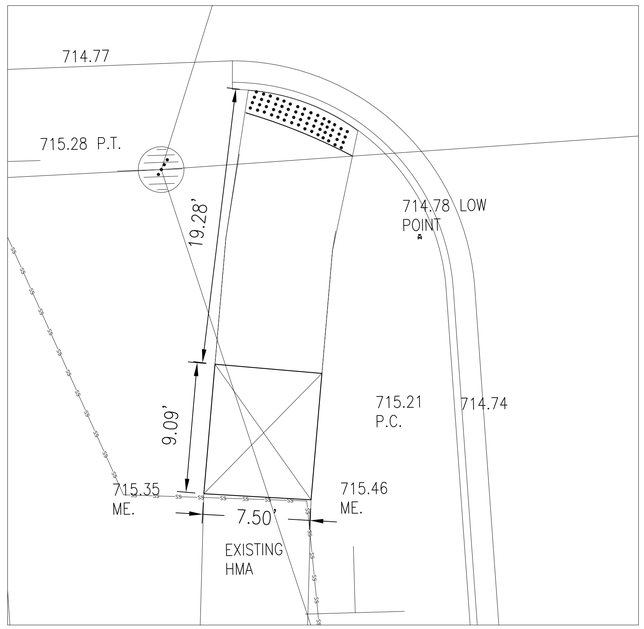
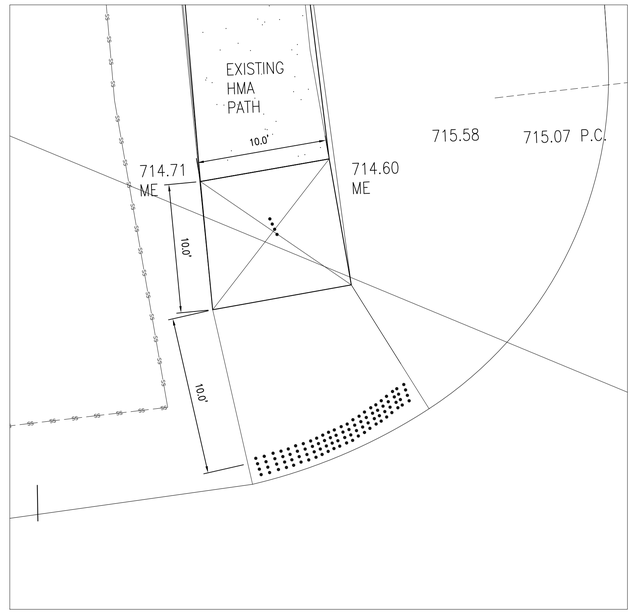
DETAILS WEST EASTERDAY AVENUE INTERSECTION
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

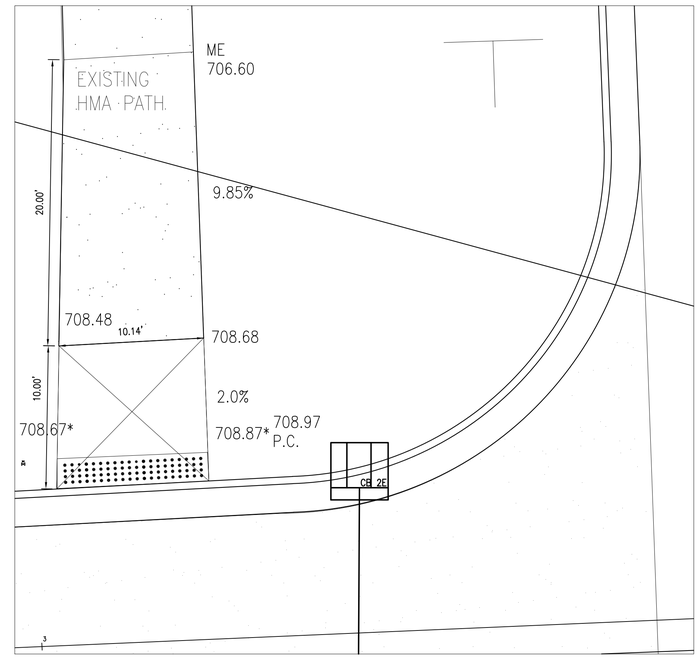
DRAWING	SHEET
DETAILS WEST EASTERDAY	24



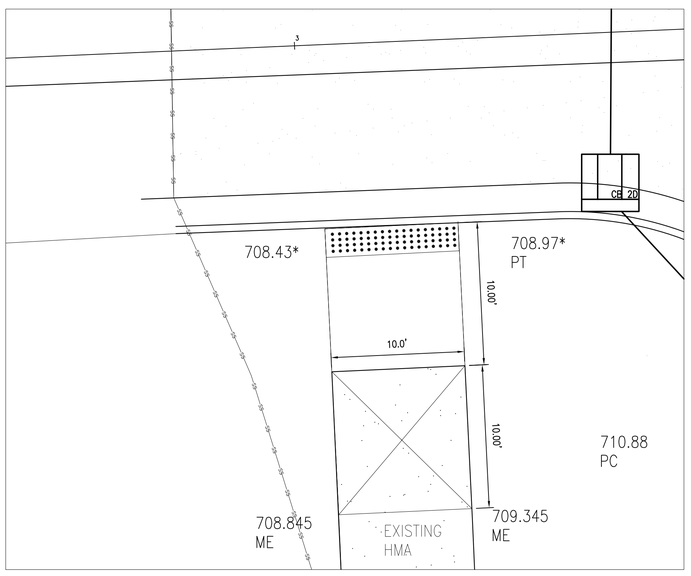
SW QUADRANT MERIDIAN and W 8TH
SCALE 1"= 5'



NW QUADRANT MERIDIAN and W 8TH
SCALE 1"= 5'



NW QUADRANT MERIDIAN and W 4TH
SCALE 1"= 5'



SW QUADRANT MERIDIAN and W 4TH
SCALE 1"= 5'

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SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5608

HORIZ. 1"= 5'

FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
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INTERSECTION DETAILS
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING	SHEET
INTER SECTION DETAILS	25

MERIDIAN STREET
ALIGNMENT DATA

Δ = 00°00'00" LT
PI = 13+57.83
N = 631355.5926
E = 26910586.2700

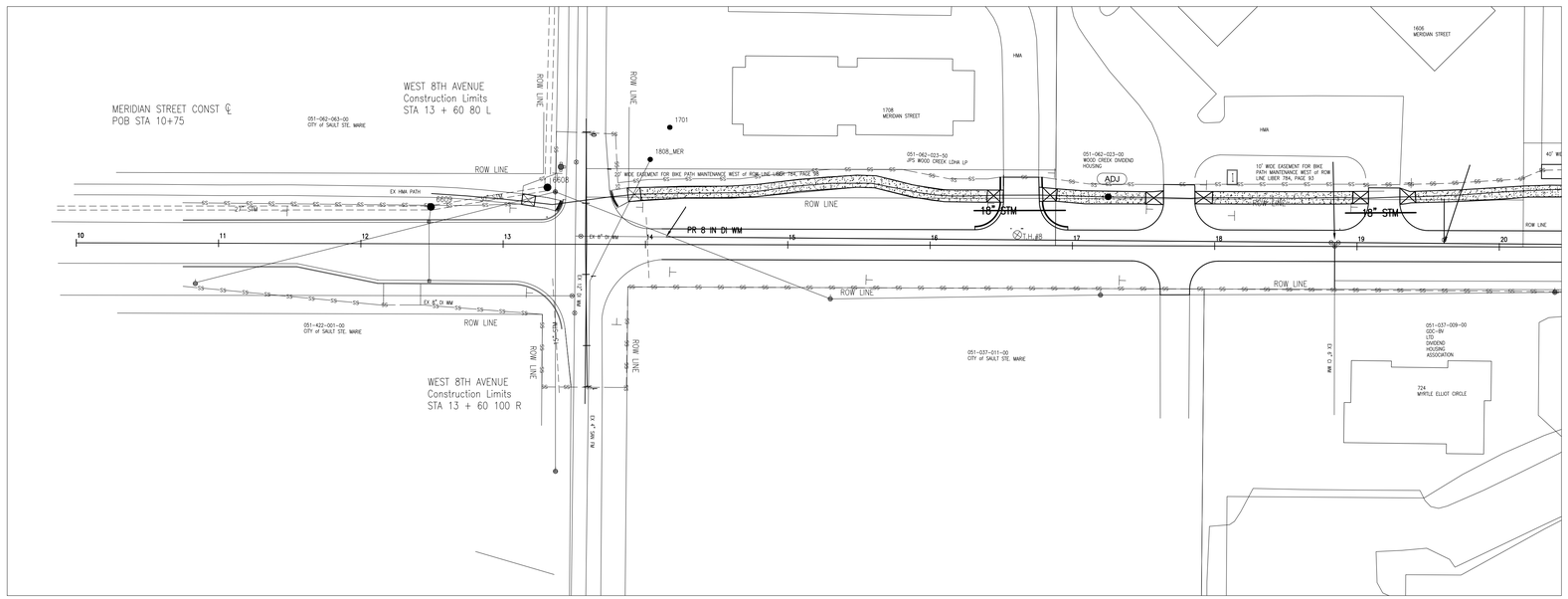
MERIDIAN STREET CONST ℄
& SECTION LINE
N01°50'11"W

WEST EIGHTH AVENUE

MERIDIAN STREET CONST ℄
& SECTION LINE
N01°50'11"W

N

0 100 200 Feet

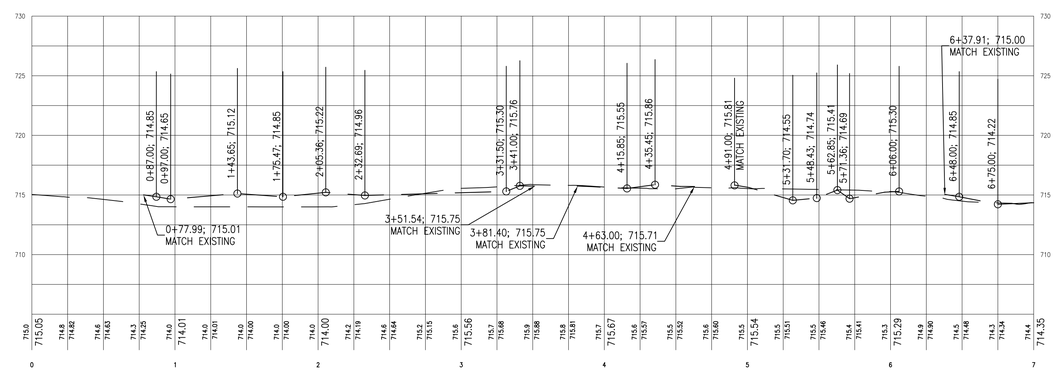


WEST EIGHTH AVENUE

BIKE PATH Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Shared Use Path, HMA	56	Ton
Shared Use Path, Grading	257	Ft
Detectable Warning Surface, Modified	20	Ft
Curb Ramp, Conc, 6 inch	600	Sf
Aggregate Base, 8 inch	285	Syd
Sanitary Structure Cover, Adjust, Case 1	1	Ea
Sanitary Cover, Type Q, Modified	1	Ea



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HORIZ. 1"= 50'
VERT. 1" = 5'

FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

Bike Path Construction STA 0+00 TO STA 7+00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: BPC STA 0+00 TO STA 7+00
SHEET: 26

MERIDIAN STREET
ALIGNMENT DATA

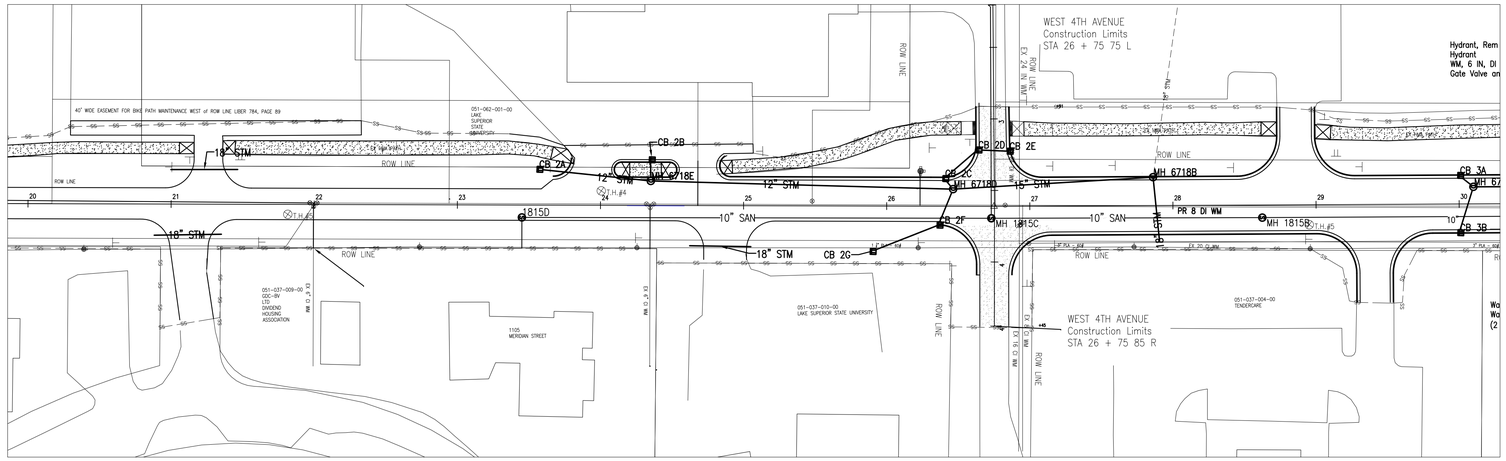
Δ = 00°27'31" LT
PI = 26+75.00
N = 632672.0872
E = 26910544.0574

MERIDIAN STREET CONST ℄
& SECTION LINE
N01°50'11"W

WEST FOURTH AVENUE

MERIDIAN STREET CONST ℄
N02°17'42"W

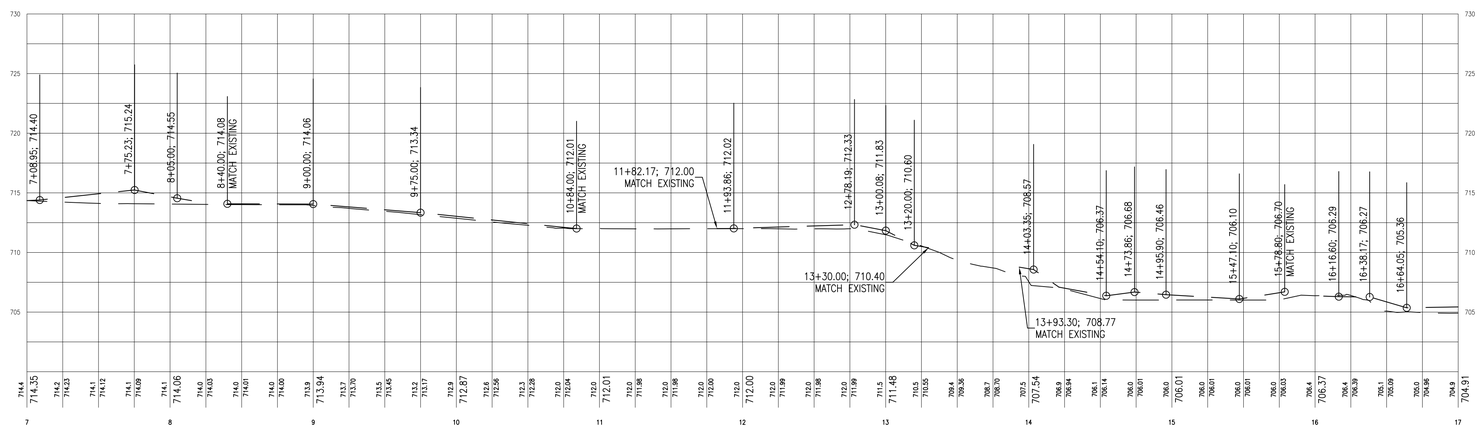
0 100 200 Feet



Bike Path and Concrete Island Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Shared Use Path, HMA	85	Ton
Shared Use Path, Grading	350	Ft
Aggregate Base, 8 inch	412	Syd
Curb Ramp, Conc, 6 inch	1025	Sft
Curb and Gutter, Conc, Det C6	84	Ft
Detectable Warning Surface, Modified	20	Ft



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FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

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DATE: 11/10/2023

JN: 208179
CS: STUL 17000

Bike Path Construction STA 7+00 TO STA 17+00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: BPC STA 7+00 TO STA 17+00
SHEET: 27

MERIDIAN STREET CONST ℄
N02°17'42"W

MERIDIAN STREET
ALIGNMENT DATA

Δ = 00°27'31" RT
PI = 31+75.00
N = 633171.6861
E = 26910524.0360

MERIDIAN STREET CONST ℄
N01°50'11"W

N

0 100 200
Feet

MERIDIAN STREET
ALIGNMENT DATA

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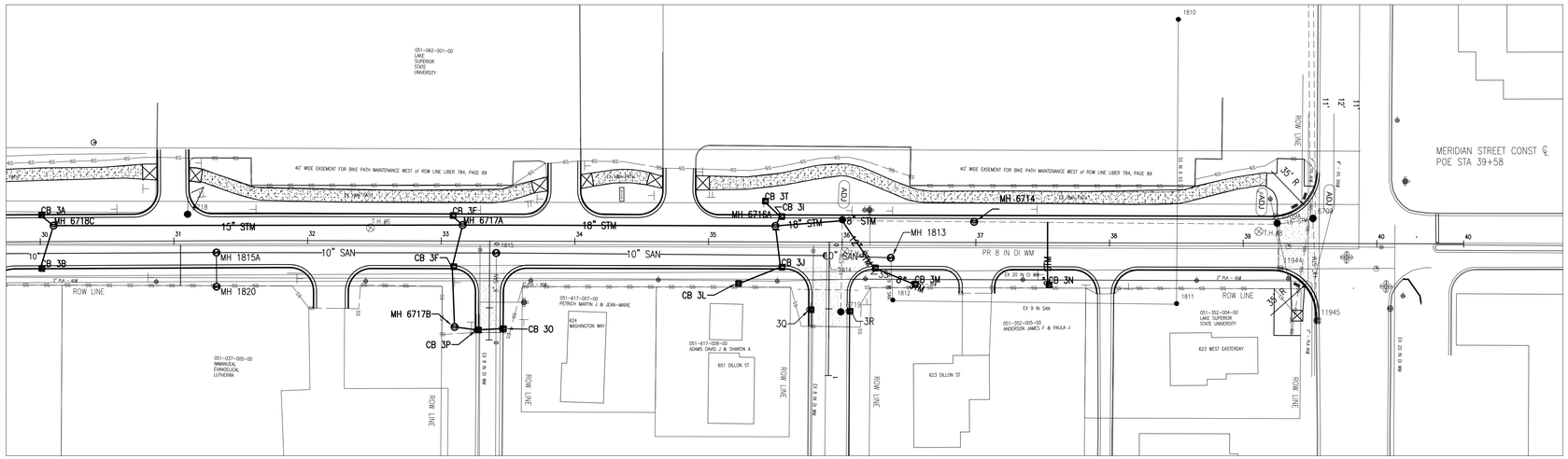
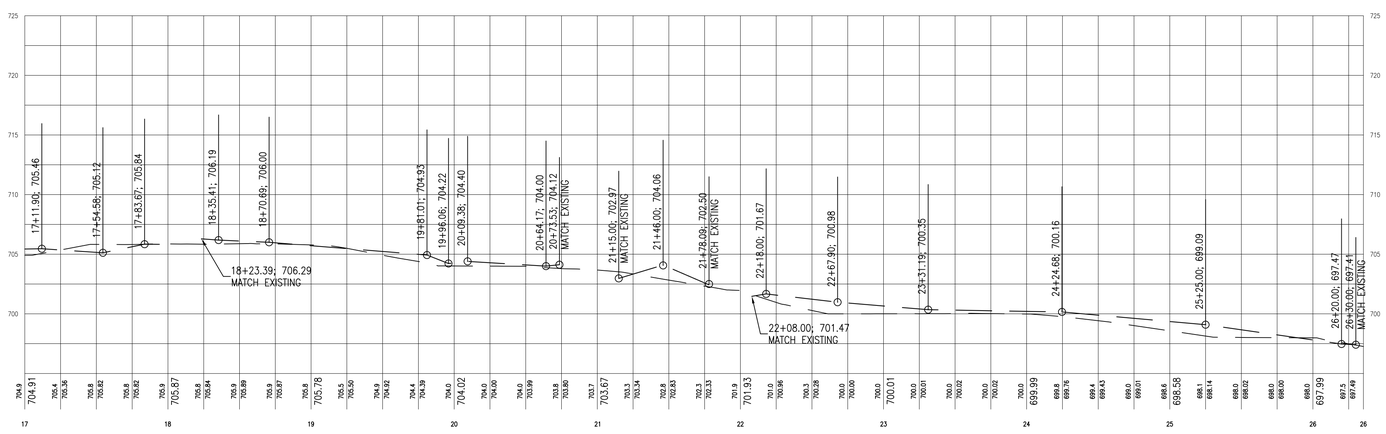
E = 26910495.5135

WEST EASTERDAY AVENUE





BIKE PATH Quantities THIS SHEET

Participating Quantities, CAT 001

Description	QTY	UNIT
Shared Use Path, HMA	110	Ton
Shared Use Path, Grading	285	Ft
Aggregate Base, 8 inch	315	Syd
Sidewalk, Rem	115	Syd
Curb Ramp, Conc, 6 inch	700	Sft

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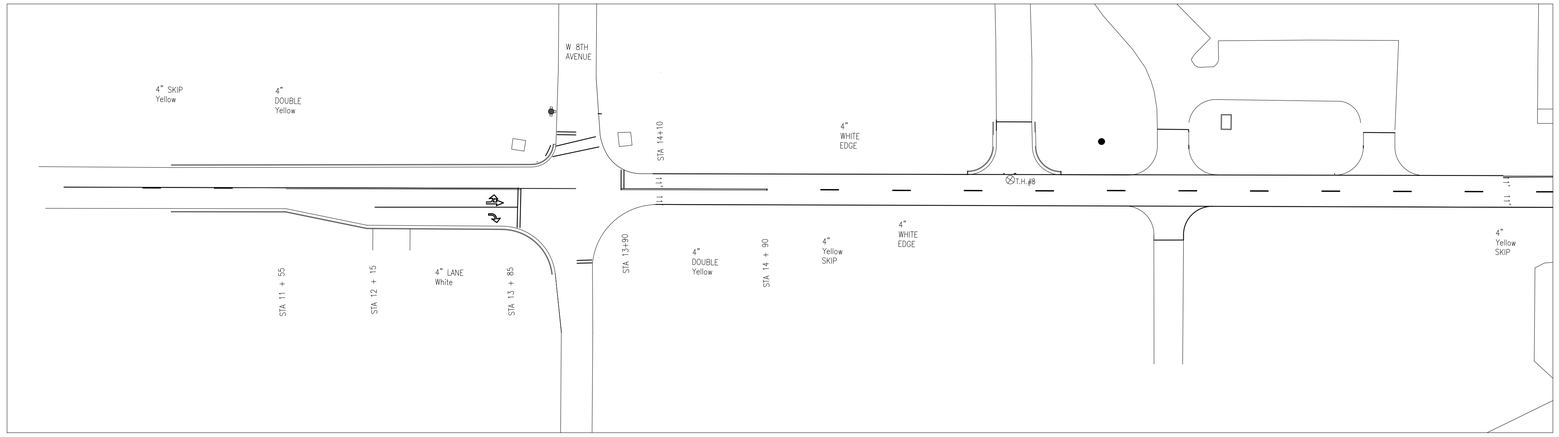
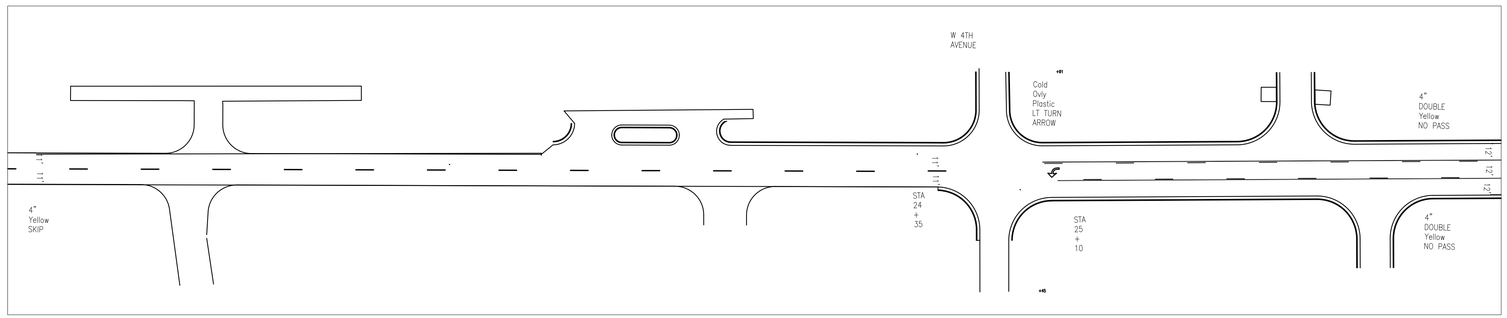
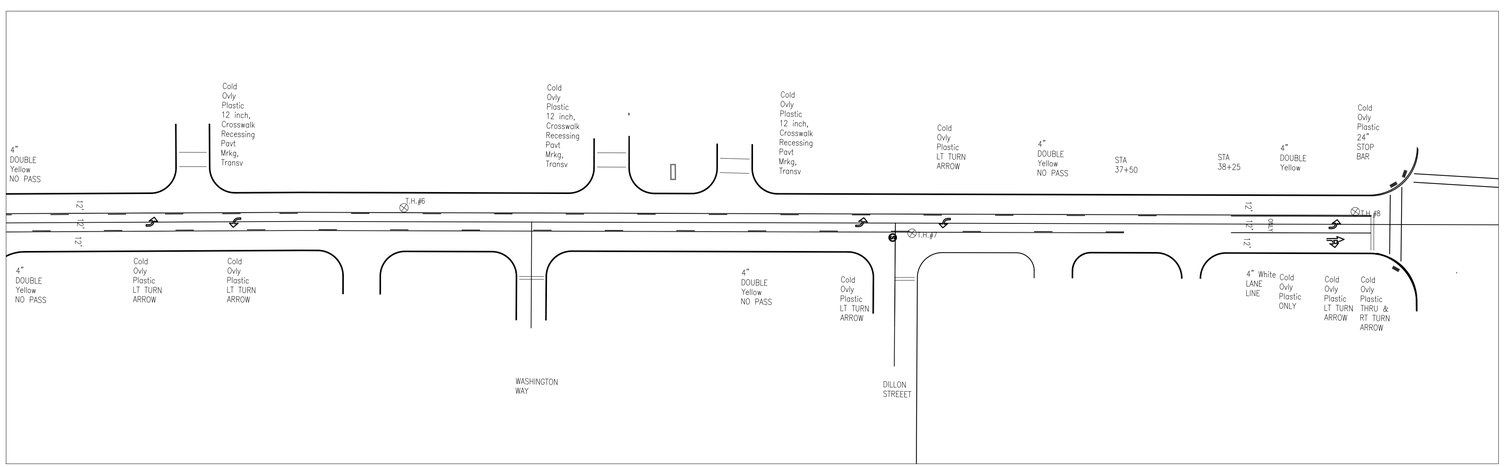
Bike Path Construction STA 17+00 TO STA 27+00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: BPC STA 17+00 TO STA 27+00
SHEET: 28







Pavement Marking Quantities, CAT 001
THIS SHEET

Pavt Marking, Cold Ovly Plastic, 24 inch Stop Bar	176 Ft
Pavt Marking, Cold Ovly Plastic, Lt Turn Arrow	6 Ea
Pavt Marking, Cold Ovly Plastic, Rt Turn Arrow	2 Ea
Pavt Marking, Cold Ovly Plastic, Thru and Rt Turn Arrow	1 Ea
Pavt Marking, Cold Ovly Plastic, Thru and Lt Turn Arrow	1 Ea
Pavt Marking, Cold Ovly Plastic, Only	2 Ea
Pavt Marking, Cold Ovly Plastic, 12 inch, Crosswalk	385 Ft
Recessing Pavt Marking, Transv	561 Ft
Pavt Marking, Waterborne, 4 inch, White	2590 Ft
Pavt Marking, Waterborne, 4 inch Yellow	3778 Ft

Temp Pavement Marking Quantities, CAT 001
THIS SHEET

Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 Inch, White, Temp	5710 Ft
Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 Inch, Yellow, Temp	11200 Ft

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HORIZ. 1"= 50'
VERT. 1" = 5'

FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

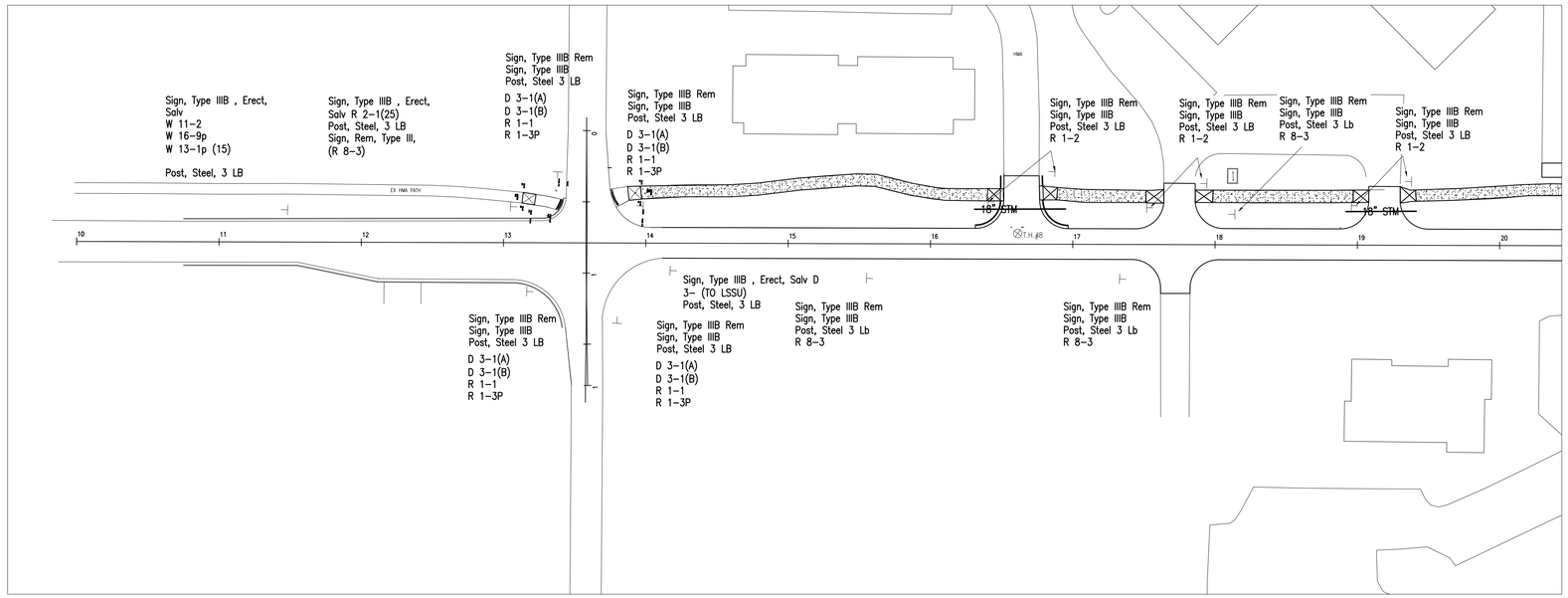
DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

PERMANENT PAVEMENT MARKINGS
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING	SHEET
Pavt MRKGS	29

WEST EIGHTH AVENUE



WEST EIGHTH AVENUE

PERMANENT SIGN PLACEMENT THIS SHEET

STA	CODE	Description	SIZE	SFT	Type
11 + 50 L	W 11-2	PEDESTRIAN	36" x 36"	9	IIIB – Salv EXIST. Sign ON NEW Post
11 + 50 L	W 16-6p	AHEAD	24" x 12"	2	IIIB – Salv EXIST. Sign ON NEW Post
11 + 50 L	W 13-1p	15 MPH PLAQUE	24" x 24"	4	IIIB – Salv EXIST. Sign ON NEW Post
12 + 78 L	R 2-1(25)	SPEED LIMIT 25 MPH	24" x 48"	8	IIIB – Salv EXIST. Sign ON NEW Post
13 + 00 L	R 1-1	STOP	18" X 18"	2.25	IIIB
13 + 16 R	D 3-1(A)	MERIDIAN ST	30" x 6"	1.25	IIIB
13 + 16 R	D 3-1(B)	8TH AVE	18" x 6"	1	IIIB
13 + 16 R	R 1-1	STOP	36" x 36"	9	IIIA
13 + 16 R	R 1-3P	ALL WAY	18" x 6"	1	IIIA
13 + 36 L	D 3-1(A)	MERIDIAN ST	30" x 6"	1.25	IIIB
13 + 36 L	D 3-1(B)	8TH AVE	18" x 6"	1	IIIB
13 + 36 L	R 1-1	STOP	36" x 36"	9	IIIA
13 + 36 L	R 1-3P	ALL WAY	18" x 6"	1	IIIA
13 + 93 L	R 1-1	STOP	18" X 18"	2.25	IIIB
13 + 96 R	D 3-1(A)	MERIDIAN ST	30" x 6"	1.25	IIIB
13 + 96 R	D 3-1(B)	8TH AVE	18" x 6"	1	IIIB
13 + 96 R	R 1-1	STOP	36" x 36"	9	IIIA
13 + 96 R	R 1-3P	ALL WAY	18" x 6"	1	IIIA
13 + 99 L	D 3-1(A)	MERIDIAN ST	30" x 6"	1.25	IIIB
13 + 99 L	D 3-1(B)	8TH AVE	18" x 6"	1	IIIB
13 + 99 L	R 1-1	STOP	36" x 36"	9	IIIA
13 + 99 L	R 1-3P	ALL WAY	18" x 6"	1	IIIA
15 + 52 R	R 8-3	NO PARKING	30" x 12"	2.3	IIIB
16 + 41 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
16 + 89 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
17 + 41 R	R 8-3	NO PARKING	30" x 12"	2.3	IIIB
17 + 54 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
17 + 89 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
18 + 15 L	R 8-3	NO PARKING	30" x 12"	2.3	IIIB
18 + 98 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
19 + 40 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB

PERMANENT SIGNING LEGEND THIS SHEET

CODE	Description	SIZE	SFT	Type	QTY
R 2-1(25)	SPEED LIMIT 25 MPH	24" x 48"	8	IIIB	1
R 8-3	NO PARKING	30" x 12'	2.5	IIIB	3
D 3-1(A)	MERIDIAN ST	30" x 6'	1.25	IIIB	4
D 3-1(B)	8TH AVE	18" x 6'	1	IIIB	4
R 1-1	STOP	36" x 36"	9	IIIA	4
R 1-1	STOP	18" x 18"	2.25	IIIA	2
R 1-2	YIELD	18" x18" x 18"	1.25	IIIB	6
R 1-3P	ALL WAY	18" x 6"	1	IIIA	4
	4 WAY PLAQUE	18" x 6"	1	IIIA	N/A REMOVE ALL
W 40-3	WATCH FOR PEDESTRIANS			IIIB	1
W 11-2	PEDESTRIAN	36" x 36"	9	IIIB	1
W 16-6p	AHEAD	24" x 12"	2	IIIB	1
W 13-1p	15 MPH PLAQUE	24" x 24"	4	IIIB	1
R 3-9b	CENTER LANE TURN ONLY	24" x 48"	8	IIIB	2
R 3-9dP	ENDS	30" x 12'	2.5	IIIB	1
R 3-9cP	BEGINS	30" x 12'	2.5	IIIB	1

Permanent Signing Quantities, CAT 001
THIS SHEET

Sign, Type IIIA	39	Sft
Sign, Type IIIB	27	Sft
Sign, Type III, Rem	20	Ea
Post, Steel, 3 pound	206	Ft
Sign, Type III, Erect, Salv	5	Ea

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)

NO.	DATE	AUTH	Description	NO.	DATE	AUTH	Description

CITY of
SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-6606

HORIZ. 1"= 50'
VERT. 1" = 5'

FILE: XXXXX_UTIL_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
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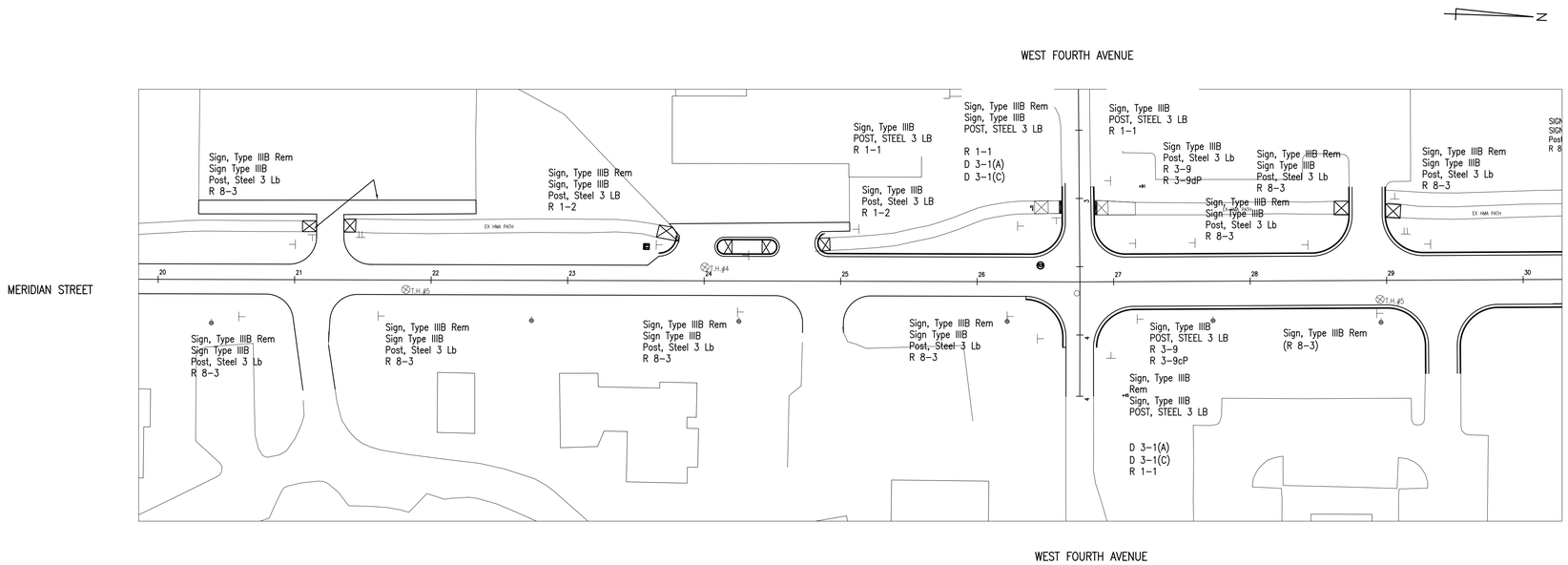
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

PERMANENT SIGNAGE STA 10 + 00 TO STA 20 + 00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: PERM. SIGNAGE 1
SHEET: 30



Permanent Sign Placement THIS SHEET

STA	CODE	Description	SIZE	SFT	Type
20 + 69 R	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
21 + 07 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
21 + 10 R	R 3-9B	CENTER LANE TURN ONLY	24" x 48"	8	IIIB
21 + 10 R	R 3-9cP	BEGINS	30" x 12"	2.5	IIIB
21 + 10 L	R 3-9B	CENTER LANE TURN ONLY	24" x 48"	8	IIIB
21 + 10 L	R 3-9dP	ENDS	30" x 12"	2.5	IIIB
21 + 44 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
21 + 60 R	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
23 + 68 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
24 + 25 R	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
25 + 96 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
26 + 25 R	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
26 + 31 L	R 1-1	STOP	18" x 18"	2.25	IIIA
26 + 55 L	D 3-1(A)	MERIDIAN ST	30" x 6"	1.25	IIIB
26 + 55 L	D 3-1(C)	4TH AVE	18" x 6"	1	IIIB
26 + 55 L	R 1-1	STOP	36" x 36"	9	IIIA
26 + 55 L	R 1-3P	ALL WAY	18" x 6"	1	IIIA
26 + 93 R	D 3-1(A)	MERIDIAN ST	30" x 6"	1.25	IIIB
26 + 93 R	D 3-1(C)	4TH AVE	18" x 6"	1	IIIB
26 + 93 R	R 1-1	STOP	36" x 36"	9	IIIA
26 + 93 R	R 1-3P	ALL WAY	18" x 6"	1	IIIA
26 + 95 L	R 1-1	STOP	18" x 18"	2.25	IIIA
27 + 64 L	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
28 + 44 L	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
28 + 62 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
28 + 94 R	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
29 + 77 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB

Permanent Signing Legend THIS SHEET

CODE	Description	SIZE	SFT	Type	QTY
R 2-1(25)	SPEED LIMIT 25 MPH	24" x 48"	8	IIIB	1
R 8-3	NO PARKING	30" x 12'	2.5	IIIB	7
R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB	6
R 1-1	STOP	18" x 18"	2.25	IIIA	2
D 3-1(A)	MERIDIAN ST	30" x 6'	1.25	IIIB	4
D 3-1(C)	4TH AVE	18" x 6'	1	IIIB	4
R 1-1	STOP	36" x 36"	9	IIIA	4
R 1-3P	ALL WAY	18" x 6"	1	IIIA	4
	4 WAY PLAQUE	18" x 6"	1	IIIA	N/A REMOVE ALL

Permanent Signing Quantities, CAT 001
THIS SHEET

Sign, Type IIIB	23 Sft
Sign, Type IIIB	51 Sft
Sign, Type III, Rem	16 Ea
Post, Steel, 3 pound	226 Ft

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)

NO.	DATE	AUTH	Description	NO.	DATE	AUTH	Description

CITY of
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ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-6606

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DRAWN BY: LJM
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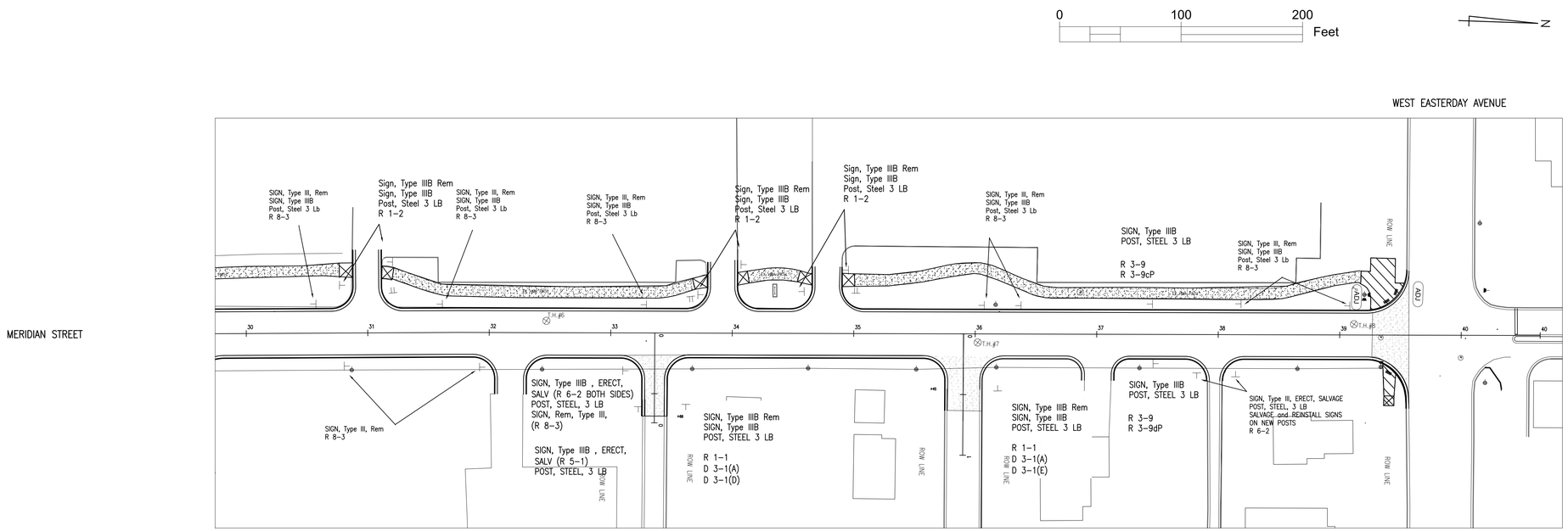
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

PERMANENT SIGNAGE STA 20 + 00 TO STA 30 + 00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: PERM SIGNAGE 2
SHEET: 31



Permanent Sign Placement THIS SHEET

STA	CODE	Description	SIZE	SFT	Type
26 + 93 R	D 3-1(A)	MERIDIAN ST	30" x 6"	1.25	IIIB
26 + 93 R	D 3-1(D)	WASHINGTON WAY	30" x 6"	1.25	IIIB
26 + 93 R	R 1-1	STOP	36" x 36"	9	IIIA
26 + 93 R	D 3-1(A)	MERIDIAN ST	30" x 6"	1.25	IIIB
26 + 93 R	D 3-1(E)	DILLON ST	24" x 6"	1	IIIB
26 + 93 R	R 1-1	STOP	36" x 36"	9	IIIA
30 + 60 L	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
30 + 77 R	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
30 + 79 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
31 + 18 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
31 + 64 L	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
31 + 88 R	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
33 + 11 R	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
33 + 31 L	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
33 + 73 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
34 + 08 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
34 + 57 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
34 + 93 L	R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB
36 + 04 L	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
36 + 38 L	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
36 + 95 L	R 8-3	NO PARKING	30" x 12'	2.5	IIIB
37 + 44 R	R 3-9b	CENTER LANE TURN ONLY	24" x 48"	8	IIIB
37 + 44 R	R 3-9dP	ENDS	30" x 12"	2.5	IIIB
37 + 44 L	R 3-9b	CENTER LANE TURN ONLY	24" x 48"	8	IIIB
37 + 44 L	R 3-9cP	BEGINS	30" x 12'	2.5	IIIB

Permanent Signing Legend THIS SHEET

CODE	Description	SIZE	SFT	Type	QTY
R 2-1(25)	SPEED LIMIT 25 MPH	24" x 48"	8	IIIB	1
R 8-3	NO PARKING	30" x 12'	2.5	IIIB	6
D 3-1(A)	MERIDIAN ST	30" x 6'	1.25	IIIB	2
D 3-1(D)	WASHINGTON WAY	30" x 6"	1.25	IIIB	1
D 3-1(E)	DILLON ST	24" x 6"	1	IIIB	1
R 1-1	STOP	36" x 36"	9	IIIA	2
R 1-2	YIELD	18" x 18" x 18"	1.25	IIIB	6
R 6-2	ONE WAY				
R 3-9b	CENTER LANE TURN ONLY	24" x 48"	8	IIIB	2
R 3-9dP	ENDS	30" x 12'	2.5	IIIB	1
R 3-9cP	BEGINS	30" x 12'	2.5	IIIB	1

Permanent Signing Quantities, CAT 001
THIS SHEET

18 SFT	Sign, Type IIIA
56 SFT	Sign, Type IIIB
22 Ea	Sign, Type III, Rem
276 Ft	Post, Steel, 3 pound
6 Ea	Sign, Type III, Erect, Salv

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)

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CITY of
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ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

HORIZ. 1"= 50'
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DRAWN BY: LJM
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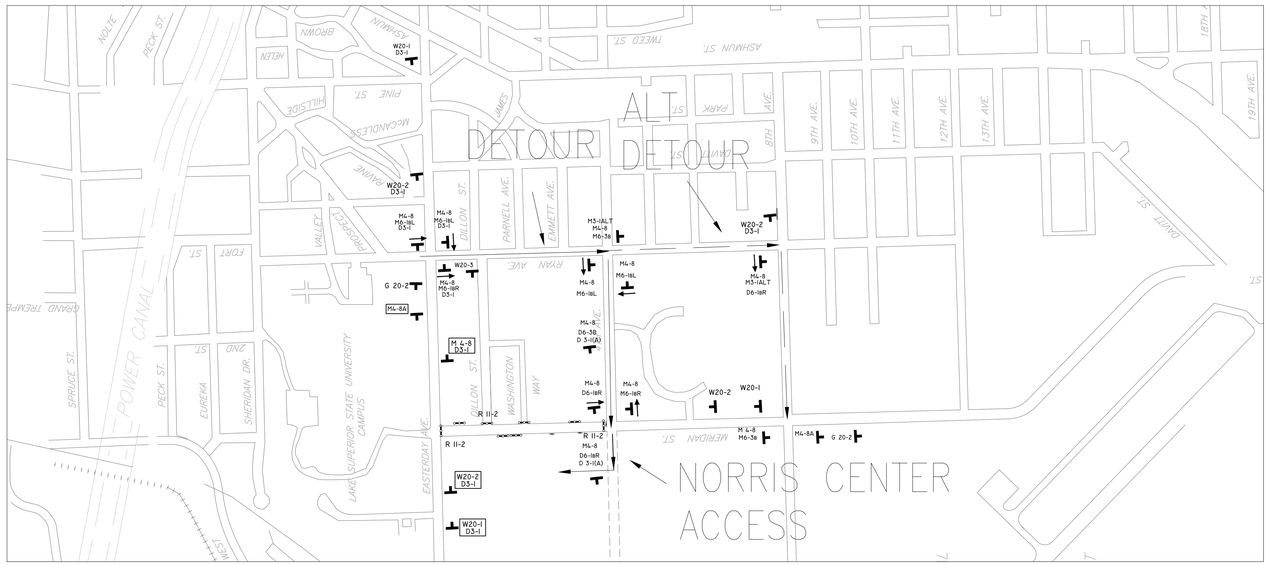
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

PERMANENT SIGNAGE STA 30 + 00 TO STA 40 + 00
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: PERM SIGNAGE 3
SHEET: 32

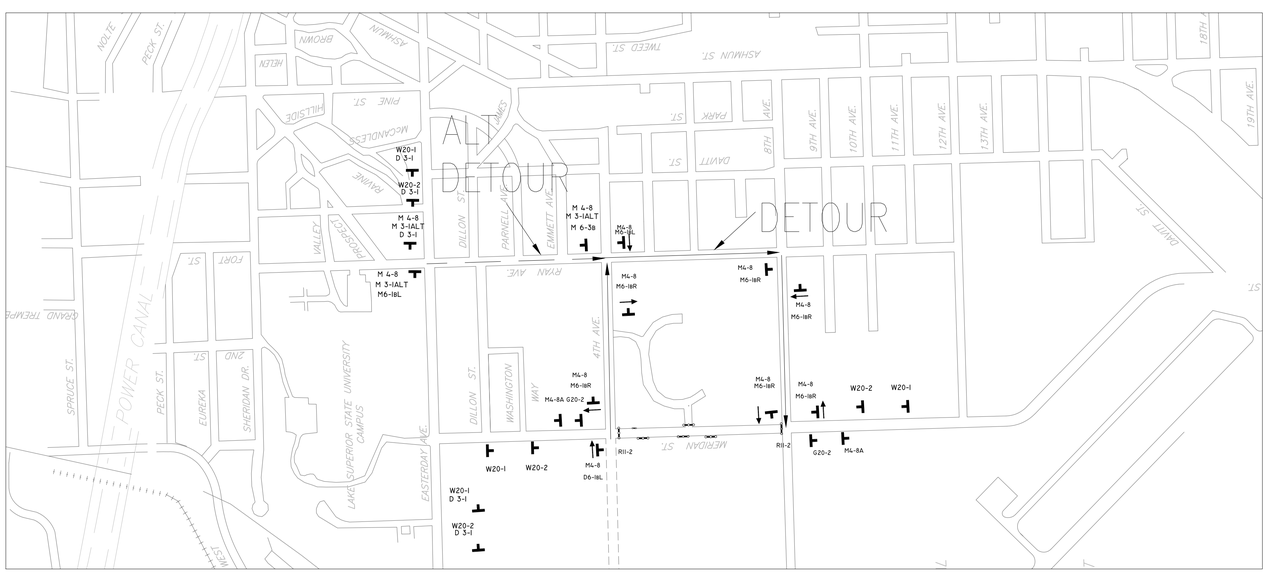


PHASE 1: WEST 4TH AVENUE TO WEST EASTERDAY AVENUE
NOTE: ALL BARRICADES TO BE TYPE III BARRICADES

N

SIGN	SIZE	DESIGNATION	QTY
W 20–1	48" x 48"	ROAD WORK AHEAD	3
W 20–2	48" x 48"	DETOUR AHEAD	4
D 3–1	8" x 30"	MERIDIAN STREET DIRECTIONAL PLAQUE	8
D 3–1(A)	8" x 30"	NORRIS CENTER	2
G 20–2	60" x 24"	END ROAD WORK	2
R 11–2	30" x 48"	ROAD CLOSED	2
M 3–1(ALT)	12 x 24"	ALT	2
M 4–8	12" x 24"	DETOUR	12
M 4–8A	18 x 24"	DETOUR ENDS	2
M 6–1bL	15" x 21"	LEFT ARROW	4
M 6–1bR	15" x 21"	RIGHT ARROW	5
M 6–3b	15" x 21"	STRAIGHT	3

TOTAL: Sign, Type B, Temp, Prismatic, Furn 243 SFT
Sign, Type B, Temp, Prismatic, Oper 243 SFT



N

SIGN	SIZE	DESIGNATION	QTY
W 20–1	48" x 48"	ROAD WORK AHEAD	4
W 20–2	48" x 48"	DETOUR AHEAD	4
D 3–1	8" x 30"	MERIDIAN STREET DIRECTIONAL PLAQUE	5
G 20–2	60" x 24"	END ROAD WORK	2
R 11–2	30" x 48"	ROAD CLOSED	2
M 3–1(ALT)	12" x 24"	ALT	3
M 4–8	12" x 24"	DETOUR	8
M 4–8A	18 x 24"	DETOUR ENDS	2
M 6–1bL	15" x 21"	LEFT ARROW	3
M 6–1bR	15" x 21"	RIGHT ARROW	5
M 6–3b	15" x 21"	STRAIGHT	1

TOTAL: Sign, Type B, Temp, Prismatic, Furn 230 SFT
Sign, Type B, Temp, Prismatic, Furn 230 SFT

PHASE 2: POB TO WEST 4TH AVENUE
NOTE: ALL BARRICADES TO BE TYPE III BARRICADES

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)

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CITY OF
SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-3700 FAX: (906) 635-5606

NO SCALE

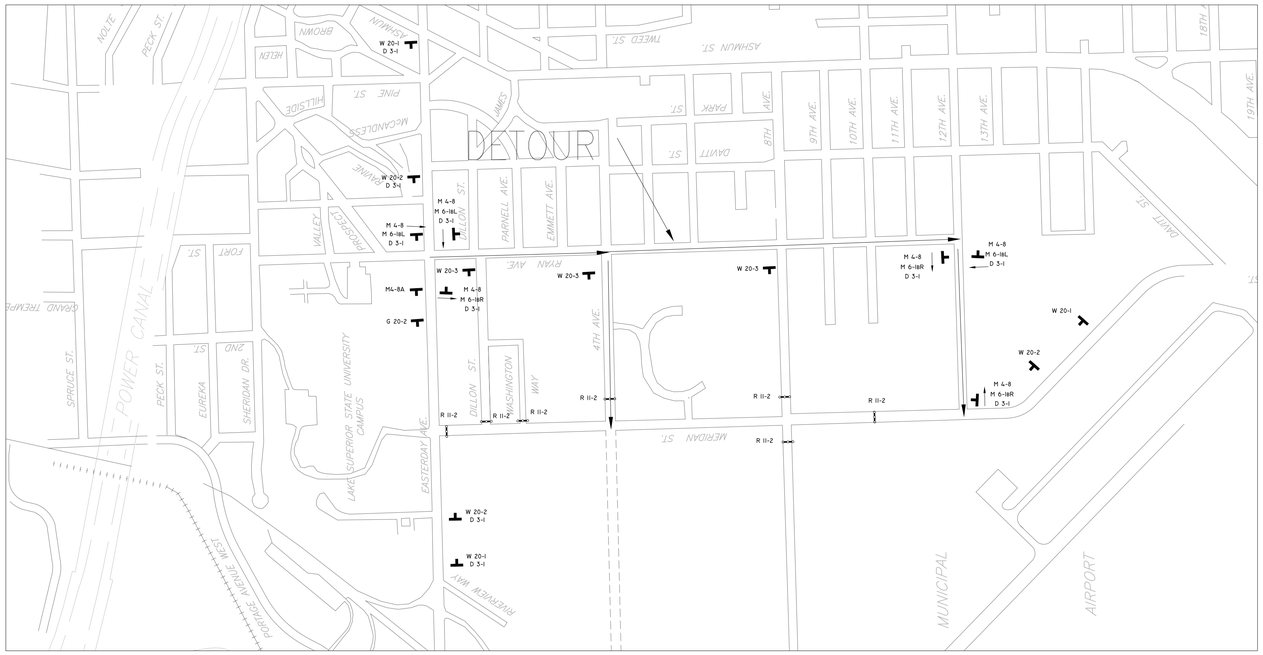
FILE: XXXXX_XSECTIONS_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

MAINTAINING TRAFFIC TYPICALS
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: MOT
SHEET: 33



PHASE 3 NOTE: VARIOUS CLOSURES FOR UTILITY REPAIRS OUTSIDE OF MAIN CLOSURE AREA.
DETOUR WILL BE SET UP AS NECESSARY WITH MINIMAL DISTURBANCES TO OUTSIDE AREA.
SOME CLOSURES MAY ALLOW FOR ONE-LANE TRAFFIC.
ALL BARRICADES TO BE TYPE III BARRICADES

SIGN	SIZE	DESIGNATION	QTY
W 20-1	48" x 48"	ROAD WORK AHEAD	3
W 20-2	48" x 48"	DETOUR AHEAD	3
D 3-1	8" x 30"	MERIDIAN STREET DIRECTIONAL PLAQUE	9
G 20-2	60" x 24"	END ROAD WORK	2
R 11-2	30" x 48"	ROAD CLOSED	4
M 4-8	12" x 24"	DETOUR	6
M 4-8A	18 x 24"	DETOUR ENDS	1
M 6-1bL	15" x 21"	LEFT ARROW	3
M 6-1bR	15" x 21"	RIGHT ARROW	3

TOTAL: Sign, Type B, Temp, Prismatic, Furn 200 SFT
Sign, Type B, Temp, Prismatic, Oper 200 SFT

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NO SCALE

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MAINTAINING TRAFFIC TYPICALS
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: MOT
SHEET: 34

T.H.#1
STA 13+57 RT

0.0'-0.16'	HMA (2")
0.16' -1.0'	AGGREGATE (10")
1.0'-1.75'	BLACK, FINE TO COARSE SAND AND FINE TO MEDIUM GRAVEL (POSSIBLE FILL) (9")
1.75'-11.5'	REDDISH BROWN, MOIST TO SATURATED CLAY
	SATURATED @ 7.5'

T.H.#2
STA 16+61 LT

0.0'-0.54'	HMA (6.5")
0.54'-1.33'	AGGREGATE (10")
1.33'-3.0'	BROWN SILTY FINE SAND WITH FINE TO MEDIUM GRAVEL (POSSIBLE FILL) (20")
1.75'-11.5'	REDDISH BROWN, SLIGHTLY MOIST TO SATURATED CLAY
	SATURATED @ 7.5'

T.H.#3
STA 21+81 RT

0.0'-0.54'	HMA (6.5")
0.54'-1.46'	AGGREGATE (11")
1.46'-2.0'	RED SILTY SAND WITH FINE TO MEDIUM GRAVEL (POSSIBLE FILL) (6.5")
2.0'-11.5'	REDDISH BROWN, SLIGHTLY MOIST TO MOIST CLAY

T.H.#4
STA 24+00 LT

0.0'-0.58'	HMA (7")
0.58'-1.5'	AGGREGATE (10")
1.5'-2.0'	REDDISH BROWN SILTY SAND WITH FINE TO MEDIUM GRAVEL (POSSIBLE FILL) (6")
2.0'-4.0'	BROWN, SLIGHTLY MOIST CLAY
4.0'-11.5'	REDDISH BROWN, SLIGHTLY MOIST TO MOIST CLAY

T.H.#5
STA 28+95 RT

0.0'-0.58'	HMA (7")
0.58'-1.08'	AGGREGATE (6")
1.08'-4.5'	DARK BROWN TO BROWN, MOIST SILTY SAND WITH FINE TO MEDIUM GRAVEL (POSSIBLE FILL) (41")
3.5'	GROUNDWATER
4.5' -11.5'	REDDISH BROWN, SLIGHTLY MOIST TO MOIST CLAY

T.H.#6
STA 35+47 LT

0.0'-0.75'	HMA (9")
0.75'-2.5'	AGGREGATE (FILL) (21")
2.5'-3.0'	GRAYISH BROWN, DRY CLAY
1.75'-11.5'	REDDISH BROWN, MOIST CLAY

T.H.#8
STA 39+12 LT

0.0'-0.54'	HMA (6.5")
0.54'-1.67'	AGGREGATE (9")
1.67'-3.5'	REDDISH BROWN, MOIST TO VERY MOIST, FINE TO COARSE SAND WITH SILT AND FINE TO MEDIUM GRAVEL (POSSIBLE FILL) (16")
3.5'-11.5'	REDDISH BROWN, SLIGHTLY MOIST TO MOIST CLAY

T.H.#9
STA 26+69 318' RT

0.0'-0.13'	HMA (1.5")
0.13'-1.13'	AGGREGATE (12")
1.13'-1.75'	DARK BROWN SAND WITH GRAVEL (POSSIBLE FILL) (7.5")
1.75'-2.75'	DARK BROWN, MOIST CLAY
2.75'-11.5'	REDDISH BROWN, SLIGHTLY MOIST TO MOIST CLAY

SOIL BORINGS
TAKEN 2007

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

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ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
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NO SCALE

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CS: STUL 17000

SOIL BORINGS
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

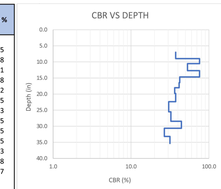
DRAWING	SHEET
SOIL BORINGS	35

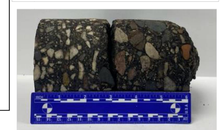
SOILS & STRUCTURES

Boring ID B-1
DCP Starting Depth (in) 7

Project Name	Meridian Street - Sault Ste. Marie
Project Number	2023.2013
Date	11/9/2023
Client	City of Sault Ste. Marie
Boring Type	Geoprobe®
Location	See Boring Location Diagram

# of Blows	Cumulative Penetration (mm)	Hammer Type	Soil Type	CBR %
0	290	1	GM	
8	340	1	GM	37.5
12	380	1	GM	75.8
12	435	1	GM	53.1
15	485	1	GM	75.8
8	530	1	GM	42.2
7	570	1	GM	41.5
7	615	1	GM	36.3
7	680	1	CH	37.5
7	760	1	CH	30.5
7	835	1	CH	32.5
7	890	1	CH	44.3
5	955	1	CH	26.8
5	1010	1	CH	31.7





From	To	Thickness	Description	Classification
0	1.5	1.5	Asphalt Concrete Wearing Course	
1.5	3	1.5	Asphalt Concrete Leveling Course	
3	7	4	Asphalt Concrete Leveling Course	
7	20	13	Silty GRAVEL with Sand - Natural Aggregate	GM
20	30	10	Fat CLAY - Reddish Brown - (QP = 2.0 TSF, MC=21.8%)	CH
30	127	97	Fat CLAY - Reddish Brown - (QP = 2.0 TSF, MC=27.8%)	CH
127	137	10	Fat CLAY - Reddish Brown - (QP = 2.0 TSF, MC=28.0%)	CH

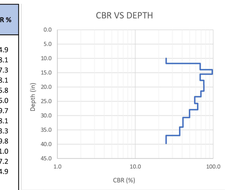
Comments: Groundwater was not encountered.

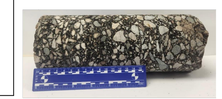
SOILS & STRUCTURES

Boring ID B-2
DCP Starting Depth (in) 10

Project Name	Meridian Street - Sault Ste. Marie
Project Number	2023.2013
Date	11/9/2023
Client	City of Sault Ste. Marie
Boring Type	Geoprobe®
Location	See Boring Location Diagram

# of Blows	Cumulative Penetration (mm)	Hammer Type	Soil Type	CBR %
0	265	1	GP-GM	
5	310	1	GP-GM	24.9
15	365	1	GP-GM	68.1
15	405	1	GP-GM	97.3
15	460	1	GP-GM	68.1
12	500	1	GP-GM	75.8
12	555	1	CH	76.0
10	605	1	CH	69.7
10	665	1	CH	58.1
10	720	1	CH	63.3
10	790	1	CH	49.8
10	875	1	CH	41.0
8	950	1	CH	37.2
5	1020	1	CH	24.9





From	To	Thickness	Description	Classification
0	1.5	1.5	Asphalt Concrete Wearing Course	
1.5	4.25	2.75	Asphalt Concrete Leveling Course	
4.25	6	1.75	Asphalt Concrete Leveling Course	
6	10	4	Asphalt Concrete Leveling Course	
10	21	11	Sandy GRAVEL with Silt - Dark Brown - Aggregate Base	GP-GM
21	97	76	Fat CLAY - Reddish Brown (QP=2.5 TSF, MC=21.4%)	CH
97	111	14	Fat CLAY - Reddish Brown (QP=0.5 TSF, MC=27.9%)	CH
111	145	34	Fat Clay - Reddish Brown (QP=0.5 TSF, MC = 31.0%)	CH

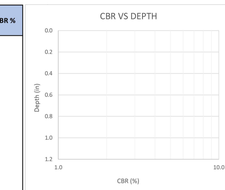
Comments: Groundwater was not encountered

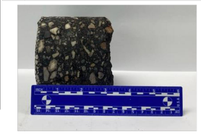
SOILS & STRUCTURES

Boring ID B-3
DCP Starting Depth (in) 3.5

Project Name	Meridian Street - Sault Ste. Marie
Project Number	2023.2013
Date	11/9/2023
Client	City of Sault Ste. Marie
Boring Type	Geoprobe®
Location	See Boring Location Diagram

# of Blows	Cumulative Penetration (mm)	Hammer Type	Soil Type	CBR %
DCP was not performed				





From	To	Thickness	Description	Classification
0	0.25	0.25	Chip Seal	
0.25	2	1.75	Asphalt Concrete Leveling Course	
2	3.25	1.25	Asphalt Concrete Leveling Course	
3.25	21.25	18	Sandy GRAVEL with Silt and Pulverized HMA - Black - Aggregate Base	GP-GM
21.25	31.25	10	Fine to Medium SAND with Silt - Brown	SP-SM
31.25	58.25	27	Fat CLAY - Reddish Brown (QP=3.0 TSF)	CH
58.25	93	34.75	Fat CLAY - Reddish Brown (QP=2.5 TSF)	CH
93	112	19	Fat CLAY - Reddish Brown (QP=2.0 TSF)	CH
112	124	12	Fat CLAY - Reddish Brown (QP=1.0 TSF)	CH

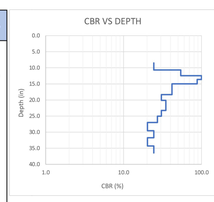
Comments: Groundwater was not encountered

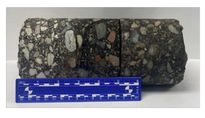
SOILS & STRUCTURES

Boring ID B-4
DCP Starting Depth (in) 8.5

Project Name	Meridian Street - Sault Ste. Marie
Project Number	2023.2013
Date	11/9/2023
Client	City of Sault Ste. Marie
Boring Type	Geoprobe®
Location	See Boring Location Diagram

# of Blows	Cumulative Penetration (mm)	Hammer Type	Soil Type	CBR %
0	325	1	GP-GM	
6	380	1	GP-GM	24.4
10	425	1	GP-GM	54.2
12	455	1	GP-GM	100.0
12	490	1	GP-GM	88.0
15	575	1	GP-GM	41.8
6	620	1	GP-GM	30.6
6	660	1	GP-GM	34.9
6	700	1	GP-GM	34.9
6	745	1	GP-GM	30.6
6	795	1	SP-SM	27.2
6	860	1	SP-SM	20.3
6	915	1	SP-SM	24.4
6	980	1	SP-SM	20.3
6	1035	1	SP-SM	24.4





From	To	Thickness	Description	Classification
0	2	2	Asphalt Concrete Wearing Course	
2	3	1	Asphalt Concrete Leveling Course	
3	5	2	Asphalt Concrete Leveling Course	
5	8.5	3.5	Asphalt Concrete Leveling Course	
8.5	26.5	18	Sandy GRAVEL with Silt - Dark Brown	GP-GM
26.5	44.5	18	Fine to Coarse SAND with Silt and Gravel - Dark Brown	SP-SM
44.5	81.5	37	Silty Lean to Fat CLAY - Black (QP=1.0 TSF, MC = 19.4%)	CL-CH
81.5	129	47.5	Fat CLAY - Reddish Brown (QP=1.0 TSF, MC=26.6%)	CH

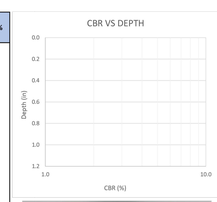
Comments: Groundwater was not encountered

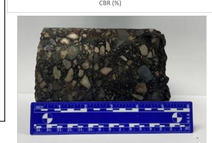
SOILS & STRUCTURES

Boring ID B-5
DCP Starting Depth (in) 5.25

Project Name	Meridian Street - Sault Ste. Marie
Project Number	2023.2013
Date	11/9/2023
Client	City of Sault Ste. Marie
Boring Type	Geoprobe®
Location	See Boring Location Diagram

# of Blows	Cumulative Penetration (mm)	Hammer Type	Soil Type	CBR %
DCP was not performed				





From	To	Thickness	Description	Classification
0	2.25	2.25	Asphalt Concrete Wearing Course	
2.25	5.25	3	Asphalt Concrete Leveling Course	
5.25	39.25	34	Fine to Coarse Gravely SAND with Silt - Black	SP-SM
39.25	55.25	16	Lean to Fat CLAY - Dark Brown (QP=2.5 TSF)	CL-CH
55.25	116.25	61	Fat CLAY - Reddish Brown (QP=1.75)	CH
116.25	132	15.75	Fat CLAY - Reddish Brown (QP=1.5)	CH

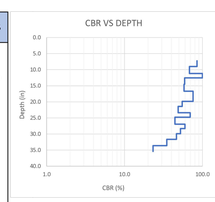
Comments: Groundwater was not encountered

SOILS & STRUCTURES

Boring ID B-6
DCP Starting Depth (in) 7.25

Project Name	Meridian Street - Sault Ste. Marie
Project Number	2023.2013
Date	11/9/2023
Client	City of Sault Ste. Marie
Boring Type	Geoprobe®
Location	See Boring Location Diagram

# of Blows	Cumulative Penetration (mm)	Hammer Type	Soil Type	CBR %
0	295	1	GP-GM	
15	340	1	GP-GM	85.3
15	395	1	GP-GM	68.1
15	430	1	GP-GM	100.0
12	480	1	GP-GM	59.0
13	535	1	GP-GM	58.0
12	575	1	GP-GM	75.8
12	615	1	GP-GM	75.8
9	655	1	GP-GM	54.9
7	705	1	CH	48.8
7	740	1	CH	69.7
7	795	1	CH	44.3
6	830	1	CH	59.7
6	870	1	CH	52.2
6	915	1	CH	46.4
5	965	1	CH	34.8
3	1010	1	CH	23.2



From	To	Thickness	Description	Classification
0	1.5	1.5	Asphalt Concrete Wearing Course	
1.5	4.5	3	Asphalt Concrete Leveling Course	
4.5	7.25	2.75	Asphalt Concrete Leveling Course	
7.25	23.25	16	Sandy GRAVEL with Silt - Brown	GP-GM
23.25	38	14.75	Fat CLAY - Reddish Brown (QP=2.25 TSF)	CH
38	64	26	Fat CLAY - Reddish Brown (QP=1.0 TSF)	CH
64	73	9	Fat CLAY - Reddish Brown (QP=2.0 TSF)	CH
73	113	40	Fat CLAY - Reddish Brown (QP=1.75 TSF)	CH
113	131	18	Fat CLAY - Reddish Brown (QP=0.75 TSF)	CH

Comments: Groundwater was not encountered

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)

NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

CITY OF
SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

NO SCALE

FILE: XXXXX_XSECTIONS_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

SOIL BORINGS
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING: SOIL BORINGS
SHEET: 36

N

NOTE:
*EXCAVATED MATERIAL FROM UTILITIES, AND ROADWAY SPOIL AREA.
MATERIALS THAT WOULD MEET CLASS III EMBANKMENT TO BE DISPOSED HERE
CLAY AND PEAT MATERIALS TO BE DISPOSED OF ELSEWHERER
LOCATION ON THIS SITE TO BE DETERMINED BY ENGINEER PRIOR DUMPING.

FINAL ROW PLAN REVISIONS (SUBMITTAL DATE:)							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

CITY OF SAULT STE. MARIE, MI
ENGINEERING DEPARTMENT
225 EAST PORTAGE AVENUE
SAULT STE. MARIE, MI 49783
(906) 632-5700 FAX: (906) 635-5606

NO SCALE

FILE: XXXXX_XSECTIONS_MERIDIAN_PHASE_1.DWG

DRAWN BY: LJM
APPROVED BY: DSB
DATE: 11/10/2023

JN: 208179
CS: STUL 17000

SURPLUS AND UNSUITABLE MATERIAL DISPOSAL LOCATION
MERIDIAN STREET RECONSTRUCTION: WEST EASTERDAY AVE TO WEST 8TH AVE

DRAWING	SHEET
DISP LOCATION	37