

| SHEET NO. | DESCRIPTION  |
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POSTED SPEED: 35 MPH  
DESIGN SPEED: 35 MPH

PRESENT AVERAGE DAILY TRAFFIC: 8,960 with 7.3% COMMERCIAL; CALENDAR YEAR 2022  
FUTURE AVERAGE DAILY TRAFFIC: 9,600 with 7.8% COMMERCIAL; CALENDAR YEAR 2024

# CITY OF WALLED LAKE IN CO-OPERATION WITH MICHIGAN DEPARTMENT OF TRANSPORTATION AND FEDERAL HIGHWAY ADMINISTRATION DECKER ROAD REHABILITATION CONSTRUCTION PLANS

**CONTROL SECTION #STU: 63000      JOB: 209472**

## GENERAL PROVISIONS

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE PROPOSAL AND ACCOMPANYING SPECIFICATIONS FOR THIS PROJECT INCLUDING THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PAVEMENT MARKING AND PLACING OF TRAFFIC CONTROL SIGNS SHALL BE DONE IN ACCORDANCE WITH THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD), AS UPDATED. THIS WORK WILL BE DONE PRIOR TO THE FINAL ACCEPTANCE OF THIS PROJECT.

THE LOCATION OF ALL PUBLIC UTILITIES SHOWN ON THESE PLANS IS TAKEN FROM THE BEST AVAILABLE DATA. BOSS ENGINEERING WILL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATIONS FROM THE LOCATIONS SHOWN. PURSUANT TO ACT 153 OF THE PA OF 2013 AS A CONDITION OF THIS CONTRACT, NOTICE SHALL BE GIVEN TO MISS DIG PRIOR TO UNDERGROUND WORK TO BE PERFORMED IN ACCORDANCE WITH THIS CONTRACT. PHONE (800) 482-7171, OR 811.

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH CURRENT MICHIGAN DEPARTMENT OF TRANSPORTATION LOCAL AGENCY PROGRAMS GUIDELINES FOR GEOMETRICS DATED AUGUST 9, 2017, 3R.

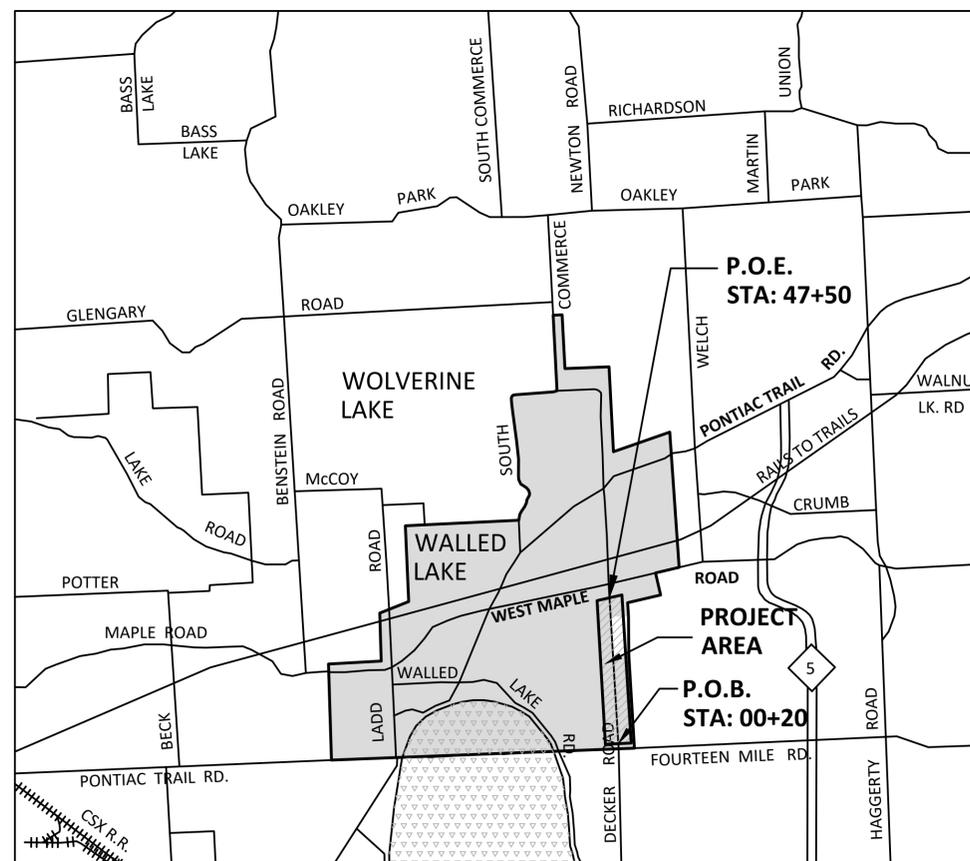
THE ELEVATIONS AND COORDINATES ON THESE PLANS ARE BASED ON NAVD 88 DATUM.

## PROJECT DESCRIPTION

0.89 MILE PROJECT CONSISTING OF: MILLING AND OVERLAYING 2" OF HOT MIX ASPHALT (HMA) IN ONE LIFT; HOT MIX ASPHALT HMA BASE CRUSHING AND SHAPING; RESURFACING WITH 4" OF HMA IN TWO LIFTS; WIDENING FOR CENTER TURN LANE AND TRAVEL LANES TO 12 FEET EACH, ALSO ADDING CURB AND GUTTER AND EDGE DRAIN FOR DRAINAGE; RE-DITCHING WHERE NECESSARY; ADDITIONAL OR REPLACEMENT STORM DRAIN WHERE NECESSARY; AND APPROACH IMPROVEMENTS AT DRIVEWAYS, INTERSECTING STREETS AND PRIVATE DEVELOPMENT ENTRANCES.

| INDEX OF SHEETS   |                        |
|---|------------------------|
| CONSTRUCTION OF THE FOLLOWING ITEMS, WHERE CALLED FOR ON THE PLANS, WILL BE CONSTRUCTED ACCORDING TO MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD PLANS AS INDICATED. |                        |
| ITEM OF WORK  | STANDARD PLAN NUMBERS  |
| TEMPORARY PAVEMENT STRIPING   | PAVE-904-A*            |
| DRAINAGE STRUCTURE  | R-1-G                  |
| COVER D   | R-9-D                  |
| COVER K   | R-15-G*                |
| SIDEWALK RAMP AND DETECTABLE WARNING DETAILS  | R-28-J*                |
| DRIVEWAY OPENINGS AND APPROACHES AND CONCRETE SIDEWALKS   | R-29-I                 |
| CONCRETE CURB AND CONCRETE CURB & GUTTER  | R-30-G                 |
| CONCRETE SHOULDER GUTTER AND SPILLWAY   | R-35-E                 |
| GRANULAR BLANKET, UNDERDRAINS, OUTLET ENDINGS FOR UNDERDRAINS, AND SEWER BULKHEADS  | R-80-F                 |
| UTILITY TRENCHES  | R-83-C                 |
| PRECAST CONCRETE END SECTION FOR PIPE CULVERT   | R-86-F                 |
| SOIL EROSION AND SEDIMENTATION CONTROL MEASURES   | R-96-E                 |
| TRAFFIC SAFETY STANDARD PLANS   |                        |
| GROUND DRIVEN SIGN SUPPORTS FOR TEMPORARY SIGNS   | WZD-100-A*             |
| TEMPORARY TRAFFIC CONTROL DEVICES   | WZD-125-E*             |
| MAINTAINING TRAFFIC TYPICALS  |                        |
| TYPICAL NUMBERING KEY   | 100-GEN-KEY            |
| CHANNELIZING DEVICE SPACING   | 101-GEN-SPACING-CHARTS |
| TRAFFIC TYPICALS NOTES  | 102-GEN-NOTES          |
| SHOULDER CLOSURE  | 4122-M-NFW-SHL         |
| SINGLE LANE CLOSURE   | 4123B-M-NFW-1LC-(R)    |
| LEAP FROG LANE CLOSURE  | 4180-M-TR NFW-2L       |
| *REFER TO SPECIAL DETAIL  |                        |

|                            |                            |
|----------------------------|----------------------------|
| SCALE                      | SCALE                      |
| FULL SIZE (22" X 34")      | REDUCED SIZE (11" X 17")   |
| TITLE SHEET 1" = 3000 FT.  | TITLE SHEET 1" = 6000 FT.  |
| PLAN SHEET 1" = 30 FT.     | PLAN SHEET 1" = 60 FT.     |
| PROFILE HORIZ. 1" = 30 FT. | PROFILE HORIZ. 1" = 60 FT. |
| VERT. 1" = 3 FT.           | VERT. 1" = 6 FT.           |



CITY OF WALLED LAKE

PREPARED FOR:  
CITY OF WALLED LAKE  
1499 E. WEST MAPLE  
WALLED LAKE, MI 48390  
(248) 624-4847  
CONTACT: CHELSEA PESTA

PREPARED BY:

**BEBOSS**  
**Engineering**  
Engineers Surveyors Planners Landscape Architects  
3121 E. GRAND RIVER AVE.  
HOWELL, MI. 48843  
800.246.6735 FAX 517.548.1670

**SPECIAL NOTES**

GENERAL

THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE M.D.O.T. 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION EXCEPT AS NOTED HEREIN AND IN THE PROPOSAL BOOK.

CONTRACT PLANS FOR THE PROJECT HAVE BEEN DEVELOPED AND PREPARED BY BOSS ENGINEERING. IMMEDIATE PROJECT SUPERVISION AND INSPECTION WILL BE PERFORMED BY A QUALIFIED CONSTRUCTION ENGINEER, OTHER THAN BOSS ENGINEERING, CONTRACTED BY THE LOCAL AGENCY.

LIMITATIONS ON PRIVATE WORK: DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT. WORK MAY BE ALLOWED WHEN REQUESTED BY LOCAL MUNICIPALITIES, BUT ONLY WITH THE WRITTEN CONSENT OF THE ENGINEER.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES FOR NOISE LEVELS, VIBRATIONS, OR ANY OTHER RESTRICTIONS WHILE REMOVING PAVEMENT OR FOR ANY OTHER CONSTRUCTION OPERATIONS WITHIN THIS CONTRACT TO BE INCLUDED IN THE RESPECTIVE ITEM OF WORK. IF WORK EXTENDS BEYOND NOVEMBER 15, 2022 NO COMPENSATION WILL BE DUE TO THE CONTRACTOR FOR ANY WINTER PROTECTION MEASURES THAT MAY BE REQUIRED BY THE ENGINEER.

THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE LOCAL FIRE AND POLICE DEPARTMENTS 24 HOURS IN ADVANCE OF PROPOSED ROAD CLOSURES REQUIRED FOR WORK SUCH AS BUT NOT LIMITED TO SEWER, CULVERT CROSSINGS AND PEAT EXCAVATION.

THE CONTRACTOR AND/OR HIS SUBCONTRACTOR SHALL NOTIFY "MISS DIG", THE ROAD COMMISSION AND THE APPROPRIATE MUNICIPALITY'S WATER, SEWER, FIRE AND POLICE DEPARTMENTS 3 WORKING DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

NO USE OF PRIVATE PROPERTY BY THE CONTRACTOR OR ANY SUBCONTRACTORS SHALL OCCUR BEFORE THE PROJECT ENGINEER HAS POSSESSION OF THE WRITTEN PERMISSION, WHICH MUST BE NOTARIZED BY A PUBLIC NOTARY. IF SUCH USE DOES OCCUR BEFORE THE PROJECT ENGINEER HAS POSSESSION OF THE NOTARIZED AGREEMENT, THE PROJECT ENGINEER WILL ISSUE A NOTICE OF NON-COMPLIANCE SUSPENDING ALL WORK IMMEDIATELY UNTIL SUCH TIME AS A COPY OF THE WRITTEN, NOTARIZED PERMISSION OR THE PROPERTY IN QUESTION HAS BEEN VACATED BY THE CONTRACTOR, OR ANY SUBCONTRACTORS, AND RESTORED TO ITS ORIGINAL CONDITION, WITH NO EXTENSION OF TIME OR ADDITIONAL COST FOR IDLE EQUIPMENT, DOWNTIME, ETC.

UTILITIES

THE FOLLOWING UTILITIES MAY BE RELOCATING OR REPLACING FACILITIES, WHICH MAY OR MAY NOT BE SHOWN ON THE PLANS IN CONJUNCTION WITH THE PROPOSED ROADWORK. THE ROAD CONTRACTOR MAY BE REQUIRED TO COORDINATE THEIR OPERATIONS WITH THESE AND/OR OTHER UTILITIES AS DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT OF COMPENSATION WILL BE ALLOWED FOR THIS ACTIVITY:

OAKLAND COUNTY WATER RESOURCE COMMISSIONER  
SANITARY SEWER  
CONTACT: MARK DAVIS  
BLDG. 95 WEST - ONE PUBLIC WORKS DR  
WATERFORD, MICHIGAN 48328  
PHONE: (248) 452-2172

OAKLAND COUNTY WATER RESOURCE COMMISSIONER  
WATERMAIN  
CONTACT: CHRISTOPHER ROBERTSON  
BLDG. 95 WEST - ONE PUBLIC WORKS DR  
WATERFORD, MICHIGAN 48328  
PHONE: (248) 452-2172

CONSUMERS ENERGY  
UNDERGROUND GAS  
CONTACT: CHRIS SCHNEIDER  
LIVONIA SERVICE CENTER  
11801 FARMINGTON ROAD  
LIVONIA, MI 48150  
PHONE: (734) 513-6277

AT&T  
CONTACT: GREG HILLS  
54 N. MILL ST  
P.O. BOX 32  
PONTIAC, MI 48342  
PHONE: (248) 456-0841

DTE ENERGY  
ELECTRIC - TRAFFIC SIGNALS  
CONTACT: MARK CETNOR  
NORTHWEST REGION PLANNING & DESIGN CENTER  
37849 INTERCHANGE DRIVE  
FARMINGTON HILLS, MI 48335  
PHONE: (248) 427-2901

UTILITIES (CONT.)

WALLED LAKE SCHOOLS  
CONTACT: BRIAN ROCHOWIAK  
46740 W. PONTIAC TRAIL  
WALLED LAKE, MI 48390  
PHONE: (248) 956-3091

MCLEOD USA  
UNDERGROUND FIBER OPTIC  
CONTACT: GREG SIRICH  
4074 S LINDEN ROAD  
FLINT, MI 48507  
PHONE: (800) 600-2090

CITY OF WALLED LAKE  
STORM SEWER  
CONTACT: CHELSEA PESTA  
1499 E. WEST MAPLE ROAD  
WALLED LAKE, MI 48390  
PHONE: (248) 624-4847

COMCAST CABLE  
OVERHEAD CABLE  
CONTACT: MIKE MARLOW  
25626 TELEGRAPH ROAD  
SOUTHFIELD, MI 48033  
PHONE: (248) 809-2765

ALL GAS FACILITIES SHALL BE PROTECTED AND SUPPORTED PER CONSUMERS ENERGY GAS DISTRIBUTION STANDARDS.

PRIOR TO WORK ON FACILITIES BELONGING TO THE ABOVE AGENCIES, A MINIMUM OF 72 HOURS NOTICE MUST BE GIVEN IN ORDER TO INSURE PROPER INSPECTION BY THE RESPECTIVE AGENCIES.

ALL EXPLORATORY WORK REQUIRED FOR LOCATING EXISTING UTILITIES SHALL NOT BE PAID FOR SEPARATELY.

EARTHWORK AND GRADING

ALL SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE CONTRACTOR SHALL FOLLOW LOCAL RULES AND REGULATIONS FOR SOIL EROSION AND SEDIMENTATION CONTROL FOR ALL MATERIALS THAT ARE DISPOSED OF OFF THE PROJECT SITE.

SURPLUS EXCAVATED MATERIAL AND UNSUITABLE MATERIAL MAY BE USED TO FLATTEN FILL SLOPES AS DIRECTED BY THE ENGINEER TO BE INCLUDED IN EXCAVATION.

ALL SLOPES SHALL BE FINISHED AS CLASS A SLOPES.

ALL NATURAL SOIL LEFT IN PLACE, IN CUT SECTIONS, SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT OF MAXIMUM UNIT WEIGHT TO A MINIMUM DEPTH OF 12 INCHES.

ROADWAY EXCAVATION ON BOTH SIDES OF THE ROAD AT THE SAME TIME WILL NOT BE PERMITTED. THE CONTRACTOR SHALL BRING ONE SIDE UP TO THE EXISTING EDGE WITH PAVING MATERIALS PRIOR TO BEGINNING EXCAVATION OPERATIONS ON THE OTHER SIDE. PART WIDTH CONSTRUCTION WILL NOT BE PAID FOR SEPARATELY.

SAWING FOR PAVEMENT REMOVAL AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE TO THE DEPTH REQUIRED FOR NEAT REMOVAL OF PAVEMENTS OR CURBS. SAWING DEPTH SHALL BE ADEQUATE TO PREVENT SPALLING, CHIPPING, OR DAMAGE TO EXISTING PAVEMENT EDGES LEFT IN PLACE AS DIRECTED BY THE ENGINEER. SAW CUTTING FOR CURB & GUTTER SHALL BE PAID AS PART OF THE "CURB AND GUTTER,REM" PAY ITEM. SAW CUTTING FOR PAVEMENT SHALL BE PAID AS PART OF THE "PAVT, REM, MODIFIED" PAY ITEM.

THROUGHOUT THE PROJECT, NO UNDERCUTS WILL BE LEFT OVERNIGHT NEXT TO THE EDGE OF THE THE TRAVELED WAY.

THE LIMITS OF EARTH DISTURBANCE SHALL BE THE SLOPE STAKE LINE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

IF PRIVATE PERSONAL PROPERTY LOCATED IN THE RIGHT-OF-WAY (SPECIFIED ON THE PLANS TO BE REMOVED OR RELOCATED BY OTHERS) IS NOT REMOVED, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE ITEMS AS A PART OF MATERIAL, SURPLUS AND UNSUITABLE, REM, LM (CYD) AS DIRECTED BY THE ENGINEER.

SALVAGED TOPSOIL IS THE PROPERTY OF THE CONTRACTOR. ITS USE WILL NOT BE ALLOWED ON THIS PROJECT. SURPLUS EXCAVATED TOPSOIL OR SALVAGED TOPSOIL WILL NOT BE STOCKPILED IN THE RIGHT-OF-WAY. ALL EXCAVATED TOPSOIL AND EXCESS GRADING MATERIAL OUTSIDE THE ROADWAY CURB AND GUTTER WILL BE REMOVED AND DISPOSED OF AND SHALL BE INCLUDED IN THE COST OF MACHINE GRADING, MODIFIED (STA).

MONUMENT PRESERVATION

WORK ASSOCIATED WITH MONUMENT PRESERVATION, AS DESCRIBED AS FOLLOWS, SHALL BE THE RESPONSIBILITY OF BOSS ENGINEERING. BOSS ENGINEERING OR ITS ASSIGNS SHALL PERPETUATE BY WITNESSING ALL PUBLIC LAND SURVEY CORNERS AND PROPERTY CONTROLLING CORNERS AND THEIR WITNESSES LOCATED WITHIN THE CONSTRUCTION AREA THAT ARE EXPECTED TO BE DISTURBED BY THE CONSTRUCTION PROCESS. BOSS ENGINEERING OR ITS ASSIGNS WILL RE-ESTABLISH ALL CORNERS DISTURBED BY THE CONSTRUCTION.

IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER A MINIMUM OF 10 WORKING DAYS PRIOR TO STARTING WORK WHICH IS EXPECTED TO DISTURB SAID CORNERS AND/OR THEIR WITNESSES. CONTRACTOR SHALL NOT COMMENCE ANY CONSTRUCTION THAT WOULD POTENTIALLY DISTURB EXISTING SAID CORNERS OR THEIR WITNESSES UNTIL AUTHORIZED IN WRITING BY THE ENGINEER.

TRAFFIC CONTROL

THE CONSTRUCTION INFLUENCE AREA (C.I.A.) SHALL CONSIST OF THE WIDTH OF THE PROPOSED RIGHT-OF-WAY FROM THE PROJECT POINT OF BEGINNING TO THE POINT OF ENDING AND A SUFFICIENT DISTANCE BEFORE AND AFTER THE PROJECT TO WARN MOTORISTS OF THE CONSTRUCTION AHEAD.

THE FOLLOWING GENERAL PAY ITEMS ARE HEREBY INCLUDED IN THIS PROJECT AS PAY ITEMS AND/OR FOR USE AS DIRECTED BY THE ENGINEER:

TRAFFIC REGULATOR CONTROL (LS)  
MINOR TRAFFIC DEVICES (LS)

PART-WIDTH CONSTRUCTION AT COMMERCIAL DRIVEWAYS AND SIDESTREET APPROACHES REQUIRED TO MAINTAIN ACCESS SHALL BE INCLUDED IN THE COST OF THE PROJECT.

LOCAL TRAFFIC WILL BE MAINTAINED DURING THE CONSTRUCTION IN ACCORDANCE WITH THE CONSTRUCTION SIGNING DIAGRAM PAID FOR AS "MAINTENANCE GRAVEL, (TON)". IN ADDITION TO THE BARRICADES, AND SIGNS SPECIFIED ON THE CONSTRUCTION SIGNING DIAGRAM, THE CONTRACTOR SHALL ALSO PROVIDE NECESSARY SIGNS, BARRICADES, DRUMS AND LIGHTS TO PROTECT THE TRAFFIC AND THE WORK AS DIRECTED BY THE ENGINEER. ADDITIONAL QUANTITIES TO BE CALCULATED AND PAID FOR BY THE APPROPRIATE SIGN PAY ITEMS AS DIRECTED BY THE ENGINEER.

ORANGE PLASTIC SAFETY FENCING (ALSO KNOWN AS SNOW FENCING), 4' HEIGHT, MEETING THE APPROVAL OF THE ENGINEER SHALL BE SECURELY ERRECTED ALONG THE SIDES OF ALL UNDERGROUND WORK AREAS WHEN TRENCHES EXCEED 3' DEPTH. SAFETY FENCING WILL BE MAINTAINED UNTIL BACKFILL IS UP TO WITHIN 3' OF ADJACENT GRADE. PAYMENT FOR SAFETY FENCING WILL BE INCLUDED IN MINOR TRAFFIC DEVICES (LS).

PAVING

THE LOCATION OF ALL CURB DROPS SHOWN ON THE PLANS ARE TO BE VERIFIED IN THE FIELD BY THE ENGINEER PRIOR TO CONSTRUCTION.

THE TERM "HMA" WHEN USED IN THE PROPOSAL BOOK AND PLANS SHALL MEAN HOT MIX ASPHALT.

ANY RANDOM, IRREGULARLY CRACKED NEW CONCRETE PAVEMENT OR CONCRETE CURB AND GUTTER THAT OCCURS BEFORE THE PAVEMENT IS OPENED TO TRAFFIC SHALL BE REMOVED, REPLACED AND SURROUNDING AREAS REQUIRING RESTORATION AT THE SOLE EXPENSE OF THE CONTRACTOR PRIOR TO OPENING THE PAVEMENT TO TRAFFIC.

THE LOCATION OF ALL CURB REMOVAL AND PROPOSED CURB SHOWN ON THE PLANS ARE TO BE VERIFIED IN THE FIELD BY THE ENGINEER PRIOR TO CONSTRUCTION.

EXCAVATION EARTH NOTES

1. WORK SHALL BE DONE IN ACCORDANCE WITH SECTION 205 OF THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. WORK INCLUDES EXCAVATION FOR THE PROPOSED ROADWAY WIDENING OUTSIDE OF THE EXISTING ROAD SURFACE FROM THE EXISTING ROAD SURFACE TO THE PROPOSED ROAD SUBGRADE. REQUIRED MATERIAL REMOVAL FOR THE ROAD BELOW ROAD SUBGRADE WILL BE MEASURED AND PAID UNDER 'SUBGRADE UNDERCUTTING, TYPE III'.
3. EXCAVATED MATERIAL IN THIS PROVISION IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR MAY COORDINATE REUSE OF EXCAVATED MATERIAL FOR THIS PROJECT AT THE DISCRETION OF THE ENGINEER FOR THE MUTUAL BENEFIT OF THE LOCAL AGENCY DESIRING REUSE OF THE MATERIAL FOR EMBANKMENT OR OTHER USES, AND FOR THE CONTRACTOR AVOIDING MATERIAL REMOVAL AND HAULING IN NEW MATERIAL. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ANY WORK RELATED TO MOVING, TEMPORARY STOCKPILE, OR RELOCATION OF EXCAVATED MATERIAL FROM THE ROAD WIDENING TO BE REUSED. AS USE OF EXISTING EXCAVATED MATERIAL AVOIDS REMOVAL AND HAULING OF NEW MATERIAL BY THE CONTRACTOR, REUSE OF EXCAVATED MATERIAL SHALL BE AT A NEGOTIATED RATE WITHIN AND LESS THAN THE RELATED PAY ITEM RATE AS COORDINATED WITH THE ENGINEER. OTHERWISE, EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE.
4. DISPOSAL OF EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 205 OF THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.

HMA BASE CRUSHING AND SHAPING - MATERIALS AND OPERATION WITHIN CRUSHING AND SHAPING OPERATION LIMITS:

1. CRUSH AND SHAPE OPERATION SHALL BE PER SECTION 305 OF THE 2020 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND IS LIMITED TO LOCATIONS WHERE ACTUAL CRUSH AND SHAPE ACTIVITY OCCURS.
2. DEPTH OF CRUSH AND SHAPE OPERATION SHALL INCLUDE AREAS DETAILED IN THE CROSS-SECTION SHEETS TO A DEPTH AS NEEDED TO MIX WITH 1-1/2 TO 2 INCHES OF MATERIAL BELOW HMA AT THE DISCRETION OF THE ENGINEER, REPRESENTATIVE SAMPLING OR MEASURING SHALL BE PROVIDED BY THE CONTRACTOR TO VERIFY LESS THAN 5% OF THE CRUSH AND SHAPE MATERIAL IS BETWEEN 1-1/2-INCH AND 4 INCHES. IF THIS PERCENTAGE DOES NOT OR CANNOT BE VERIFIED TO THE SATISFACTION OF THE ENGINEER, THEN THE ENGINEER WILL HAVE DISCRETION TO FURTHER REVIEW MATERIAL AND COORDINATE REMOVAL OF ANY DETERMINED CRUSHED MATERIAL EXCEEDING 2 INCHES AT NO ADDITIONAL COST TO THE PROJECT. IN ALL CASES, CRUSHED MATERIAL OVER 4-INCH LONG IS NOT PERMITTED AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AND SHALL NOT BE PAID FOR SEPARATELY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST AS DETERMINED BY THE ENGINEER AND SHALL NOT BE PAID FOR SEPARATELY. THE GRADE MAY NEED TO BE RE-GRADED, WATERED AND COMPACTED TO THE REQUIRED SLOPE PRIOR TO PAVING AS DIRECTED BY THE ENGINEER AND SHALL NOT BE PAID FOR SEPARATELY. BOTH OPERATIONS SHALL BE INCLUDED IN THE ITEM FOR HMA BASE CRUSHING AND SHAPING.
4. RELATED WORK WITHIN THE OPERATION LIMITS SHALL BE PAID AS 'HMA BASE CRUSHING AND SHAPING'.

USE OF SURPLUS HMA BASE CRUSHING AND SHAPING MATERIALS OUTSIDE THE LIMITS OF CRUSHING AND SHAPING:

1. ALTERNATIVE USE OF SURPLUS HMA CRUSH AND SHAPE MATERIAL OUTSIDE THE LIMITS OF THE "HMA BASE CRUSHING AND SHAPING" PAY ITEM SHALL BE AT THE DISCRETION AND DIRECTION OF THE ENGINEER
2. CRUSH AND SHAPE OPERATION SHALL BE PER SECTION 305 OF THE 2020 MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
3. CRUSH AND SHAPE MATERIAL USED OUTSIDE THE OPERATION LIMITS WILL BE AS SHOWN ON THE PLANS, AS DIRECTED BY THE ENGINEER AND WILL BE CHARGED UNDER THE PAY ITEM THAT THIS MATERIAL IS REPLACING OR AS DIRECTED BY THE ENGINEER.
4. MOVEMENT OF CRUSH AND SHAPE MATERIAL USED OUTSIDE THE OPERATION LIMITS WILL BE CHARGED AS SHOWN BELOW:
  - ANY CRUSH AND SHAPE MATERIAL USED TO REPLACE PROPOSED BASE HMA IN THE ROAD WIDENING SECTION SHALL BE PAID AS 'AGGREGATE BASE, 8 INCH'.
  - OTHERWISE, MOVEMENT OF CRUSH AND SHAPE MATERIAL ADJACENT TO THE OPERATION LIMITS SHALL BE PAID AS PART OF THE PAY ITEM BEING REPLACED.
  - MOVEMENT OF CRUSH AND SHAPE MATERIAL FOR DRIVEWAY AND INTERSECTION MAINTENANCE SHALL BE PAID AS PART OF THE RELATED PAY ITEMS.
  - MOVEMENT OF CRUSH AND SHAPE MATERIAL TO BE LOADED AND REUSED ELSEWHERE ON THE PROJECT SHALL BE PAID AS 'SALV CRUSHED MATERIAL, LM'.
  - MOVEMENT OF CRUSH AND SHAPE MATERIAL TO BE UNUSED AND REMOVED FROM THE SITE SHALL BE PAID AS 'MATERIAL, SURPLUS AND UNSUITABLE, REM, LM'.

MAILBOX NOTES

MAILBOXES MUST REMAIN ACCESSIBLE AND USABLE THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT. CONTRACTOR IS ALSO RESPONSIBLE FOR MAINTAINING AND PROTECTING MAILBOXES AND REPLACING REMOVED OR OTHERWISE DAMAGED MAILBOXES AND POSTS TO A CONDITION AT OR GREATER THAN EXISTING. NO COMPENSATION WILL BE PROVIDED FOR REPAIR OR REPLACEMENT OF MAILBOXES DUE TO CONSTRUCTION OR CONTRACTOR NEGLIGENCE.

|    |    |                |          |
|----|----|----------------|----------|
|    |    |                |          |
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

|   |                |                |           |
|---|----------------|----------------|-----------|
|  <p><b>Engineers Surveyors Planners Landscape Architects</b></p> <p>3121 E. GRAND RIVER AVE.<br/>HOWELL, MI. 48843<br/>800.246.6735 FAX 517.548.1670</p> |                |                |           |
| PREPARED FOR<br><b>CITY OF WALLED LAKE</b><br>1499 E. WEST MAPLE<br>WALLED LAKE, MI 48390<br>(248) 624-4847   |                |                |           |
| PROJECT<br><b>DECKER ROAD</b>   |                |                |           |
| SHEET TITLE<br><b>SPECIAL NOTES 1</b>   |                |                |           |
| DESIGNED: BM  | SCALE          | NO SCALE       | SHEET NO. |
| DRAWN: DH   | JOB NO. 18-274 | <b>2 OF 48</b> |           |

**SPECIAL NOTES**

**GENERAL NOTES - RESTORATION**

ANY ESTIMATED QUANTITY OF SEEDING, MIXTURE CR (LB) HAS BEEN INCLUDED AS AN ESTIMATED EXTRA TO BE USED AS DIRECTED BY THE ENGINEER FOR SOIL AND SEDIMENTATION CONTROL.

ALL AREAS DISTURBED BY THE CONTRACTOR AND/OR HIS SUBCONTRACTOR BEYOND THE SLOPE STAKE LINE OF THIS PROJECT SHALL BE SODDED OR SEEDED AS SPECIFIED OR DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT OR COMPENSATION WILL BE ALLOWED FOR THIS ACTIVITY.

TOPSOIL SHALL BE RICH BLACK EARTH, FREE FROM SOD, STONES, WEED STALKS, CLODS, OR DEBRIS.

THE QUANTITIES INCLUDE AN ESTIMATED EXTRA FOR THE ITEMS MULCH (SYD) AND TOPSOIL SURFACE, FURN, 2 INCH (SYD) TO BE USED AS DIRECTED BY THE ENGINEER.

**RESTORATION NOTES - SPRINKLERS**

ANY AND ALL SPRINKLER SYSTEMS WITHIN THE PROJECT LIMITS, OR IMPACTED BY THE WORK OF THIS CONTRACT, SHALL BE CONSIDERED AS CATEGORY 3. THEY SHALL BE REPAIRED TO AT LEAST EQUAL QUALITY MATERIALS AND WORKMANSHIP, TO A FUNCTIONING CONDITION AT LEAST AS GOOD AS EXISTED PRIOR TO WORK BEGINNING AND SHALL BE PAID AT THE DIRECTION OF THE ENGINEER.

FOR THE CONTRACTOR TO BE REIMBURSED FOR SUCH REPAIRS, BEFORE ANY CONTRACT WORK BEGINS, CONTRACTOR SHALL ARRANGE A WALK-THROUGH WITH THE PROPERTY OWNER OR DESIGNATED REPRESENTATIVE ACCOMPANIED BY THE PROJECT ENGINEER OR INSPECTOR, OF EACH AND EVERY ADJACENT PROPERTY, FOR THE PURPOSE OF DETERMINING AND EVALUATING THE EXISTING SPRINKLER SYSTEM DESIGN (LOCATION AND TYPES OF LINES, HEADS, VALVES, CONTROLLERS) AND ITS FUNCTIONALITY AND INTEGRITY.

THIS INFORMATION WILL BE DOCUMENTED WITH SKETCHES, DRAWINGS, AND NARRATIVE, BY THE CONTRACTOR, TO BE SUBMITTED TO AND USED BY THE PROJECT ENGINEER TO VERIFY NEED AND APPROVE ANY PAYMENT FOR REPAIRS TO THE SYSTEM.

NO PAYMENT SHALL BE MADE FOR REPAIRS NOT DEEMED NECESSARY AND APPROVED BY THE PROJECT ENGINEER AS A RESULT OF THIS WALK-THROUGH AND EVALUATION PROCESS. FAILURE OF THE CONTRACTOR TO FULFILL THESE REQUIREMENTS SHALL CAUSE THE PROJECT ENGINEER TO MAKE THE REPAIRS AND CHARGE THE FULL COST TO THE CONTRACTOR AS A CONTRACT ADJUSTMENT.

SPRINKLER HEADS SHALL NOT BE COVERED WHEN PLACING TOPSOIL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO SPRINKLER SYSTEMS OUTSIDE AND INSIDE THE PROJECT LIMITS RESULTING FROM CONTRACTOR NEGLIGENCE.

**GENERAL NOTES - SOIL EROSION AND SEDIMENTATION CONTROL**

SOIL EROSION AND SEDIMENTATION CONTROL: IN ADDITION TO THE GENERAL SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS IN THE PROPOSAL, THE FOLLOWING MEASURES SHALL BE INCORPORATED INTO THIS PROJECT:

1. THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS IN SUCH A MANNER AS TO MINIMIZE THE AREAS LEFT BARREN DURING CONSTRUCTION AND TO DISTURB ONLY THOSE AREAS ABSOLUTELY REQUIRED FOR THE CONSTRUCTION OF THE PROJECT.
2. EROSION CONTROL ITEMS SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE DETAIL SHOWN ON THE PLANS AND SHALL BE REMOVED WHEN NO LONGER EFFECTIVE AS DETERMINED BY THE ENGINEER. NO SEPARATE PAYMENT SHALL BE ALLOWED FOR EITHER MAINTENANCE OR REMOVAL OF THE EROSION CONTROL ITEMS.
3. THE CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED IN CULVERTS AND SUMPS OF ALL DRAINAGE STRUCTURES CONSTRUCTED WITH THE PROJECT WHEN SUCH SEDIMENT EXCEEDS 1/2 OF THE SUMP DEPTH OR CULVERT DIAMETER. THE ENGINEER WILL INSPECT CULVERTS, SUMPS, AND ALL SESC ITEMS AFTER STORMS AND DIRECT THE CONTRACTOR TO CLEANOUT CULVERTS, SUMPS, AND ALL SESC ITEMS. CLEARING CULVERTS AND SUMPS FOR SEDIMENTATION CONTROL SHALL NOT BE PAID FOR SEPARATELY.
4. THE CONTRACTOR SHALL FOLLOW LOCAL RULES AND REGULATIONS FOR SOIL EROSION AND SEDIMENTATION CONTROL FOR ALL MATERIALS THAT ARE DISPOSED OF OFF THE PROJECT SITE.

**GENERAL PLAN NOTES**

**PLAN SHEETS**

1. THE EXISTING RIGHT-OF-WAY LABELS ARE BASED ON THE DISTANCE FROM THE CENTER OF RIGHT-OF-WAY
2. STRUCTURE ADJUSTMENT BOXES BASED ON:  
CENTERLINE FOR STATIONS AND OFFSETS

**MISCELLANEOUS NOTES**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY BEYOND THE SLOPE STAKE LINE, INCLUDING EXISTING FENCING, LAWN, TREES, SHRUBBERY, AND SPRINKLER SYSTEMS.

THE CONTRACTOR SHALL RELOCATE DISTURBED ORNAMENTAL OBJECTS AS DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT OR COMPENSATION WILL BE ALLOWED FOR THIS ACTIVITY.

SIDEWALK, CONCRETE WHERE SHOWN ON THE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY POTENTIAL LOCATION, STRUCTURE AND GRADE CONFLICTS OR DISCREPANCIES AND SHALL REPORT FINDINGS TO ENGINEER PRIOR TO RELATED WORK. FINAL LOCATION AND ELEVATION WILL BE DETERMINED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.

ALL FINAL TRIM AND CLEANUP ITEMS FOR SIDEWALK CONSTRUCTION SHALL BE CONSIDERED AS BEING INCLUDED IN THE CONTRACT UNIT PRICE FOR THESE ITEMS.

THE "FG" MEANS FINISH GRADE AND THE LOCATION IS SHOWN ON THE TYPICAL CROSS SECTIONS.

THE "SSL" MEANS SLOPE STAKE LINE AND THE LOCATION IS SHOWN ON THE TYPICAL CROSS SECTIONS.

WHEN THE FOLLOWING ITEMS OF WORK ARE SPECIFIED ON THE PLANS OR REQUIRED BY THE ENGINEER IN THE CONSTRUCTION OF THE PROJECT, THE ITEM WILL NOT BE PAID FOR SEPARATELY, UNLESS A PAY ITEM FOR THESE ITEMS IS PROVIDED.

- CLEARING
- REMOVING TREES LESS THAN 3 INCH DIAMETER
- REMOVING SHRUBS AND BUSHES
- REMOVING HMA CURBS
- REMOVING, RESETTING, OR DISPOSING OF CONCRETE BUMPER BLOCKS AND RAILROAD TIES.
- RELOCATING ORNAMENTAL ROCKS AND BOULDERS TO THE RIGHT-OF-WAY LINE.
- BITUMINOUS BOND COAT
- ROCK EXCAVATION
- SAWING FOR PAVEMENT AND CURB REMOVAL
- CONCRETE ADMIXTURES
- REMOVING EDGE DRAIN

FOUR-INCH SIDEWALK IS SUSCEPTIBLE TO CRACKING. THEREFORE, ONCE IT HAS BEEN PLACED, OR IF IT IS EXISTING SIDEWALK, THE CONTRACTOR CANNOT PUT ANY EQUIPMENT OF ANY KIND ON IT, FOR ANY REASON, EVEN FOR TURF ESTABLISHMENT OR RESTORATION WORK OUTSIDE THE SIDEWALK. THE CONTRACTOR SHALL PLAN AND STAGE NECESSARY WORK OUTSIDE THE SIDEWALK TO PREVENT THE PLACEMENT OF ANY EQUIPMENT ON THE SIDEWALK, EXISTING OR NEW. CRACKED, CHIPPED, SPALLED, OR DAMAGED SIDEWALK, NEW OR EXISTING, SHALL NOT BE ACCEPTED AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

SIDEWALK SHALL BE DELINEATED WITH JOINTS THROUGH ALL APPROACHES AS SHOWN ON PLANS. APPROACH SIDEWALK SHALL BE STAKED AND THE CROSS-SLOPE (TRANSVERSE) SLOPE OF SIDEWALKS, FOR THEIR FULL WIDTH, AS SHOWN ON PLANS, SHALL NOT EXCEED 2% TOWARDS CENTERLINE. IF ATTAINING THESE REQUIREMENTS NECESSITATES PLACING SIDEWALK THROUGH THE DRIVE INDEPENDENT OF THE REST OF THE APPROACH, THEN THE CONTRACTOR SHALL PERFORM THE WORK PER THE PROJECT ENGINEER. CONCRETE WITHIN AN APPROACH THAT IS ALSO SIDEWALK SHALL BE PAID AS SIDEWALK. PAYMENT SHALL INCLUDE JOINTING, TOOLING OR SAWING.

FAILURE TO PROVIDE THE PROPER DELINEATION OR CROSS-SLOPE FOR THE FULL WIDTH OF THE APPROACH SIDEWALK, ON THE PROPER LINE, SHALL RESULT IN REMOVAL AND REPLACEMENT OF THE APPROACH AT THE CONTRACTOR'S EXPENSE.

|   |                |                |           |
|---|----------------|----------------|-----------|
| <br><b>Engineers Surveyors Planners Landscape Architects</b><br>3121 E. GRAND RIVER AVE.<br>HOWELL, MI. 48843<br>800.246.6735 FAX 517.548.1670 |                |                |           |
| PREPARED FOR<br><b>CITY OF WALLED LAKE</b><br>1499 E. WEST MAPLE<br>WALLED LAKE, MI 48390<br>(248) 624-4847   |                |                |           |
| PROJECT<br><b>DECKER ROAD</b>   |                |                |           |
| SHEET TITLE<br><b>SPECIAL NOTES 2</b>   |                |                |           |
| DESIGNED: BM  | SCALE          | NO SCALE       | SHEET NO. |
| DRAWN: DH   | JOB NO. 18-274 | <b>3 OF 48</b> |           |

|    |    |                |          |
|----|----|----------------|----------|
|    |    |                |          |
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

# LEGEND SHEET

## WATER & SEWER SYMBOLS

- MANHOLE
- WATER MANHOLE
- STORM CATCH BASIN (BEEHIVE)
- STORM CATCH BASIN (SQUARE)
- STORM INVERT
- HYDRANT
- GATE VALVE
- WELL

## UTILITIES SYMBOLS

- POWER POLE
- GUY WIRE
- GAS PUMP
- PUMP CHAMBER
- GAS RISER
- U.G. GAS MARKER
- ELECTRICAL RISER
- U.G. ELECTRICAL MARKER
- TELEPHONE RISER
- U.G. TELEPHONE MARKER
- CABLE TV RISER
- U.G. CABLE TV MARKER
- TRANSFORMER PAD
- AIR CONDITIONING UNIT
- LIGHT POLE
- ORNAMENTAL LIGHT
- GAS METER
- UTILITY POLE

## TOPO LIFESTYLES

- CONTOUR
- FENCE
- TREE LINE
- GRAVEL LINE
- PARCEL LINE
- DITCH
- EDGE OF PAVEMENT
- WETLAND BOUNDARY
- R.O.W. LINE

## UTILITY LIFESTYLES

- SANITARY MAIN
- WATER MAIN
- STORM SEWER
- GAS MAIN
- ELECTRIC
- TELEPHONE
- OVERHEAD WIRES

## PROPOSED LIFESTYLES

- STORM SEWER
- STORM DRAINAGE FLOW
- CULVERT
- SILT FENCE
- LIMITS OF GRADING/CLEARING
- FENCE
- DITCH
- EDGE OF PAVEMENT
- CONTOUR
- ASPHALT - (MAINLINE)
- ASPHALT - (COM. DRIVE, & SIDE STREET)
- ASPHALT - (RES. DRIVE & SIDEWALK)
- STAMPED CONCRETE
- CONCRETE (CURB & GUTTER, DRIVEWAY, SIDEWALK AND RAMP)
- MONUMENT BOX/PRESERVATION
- RIP RAP

## MISCELLANEOUS SYMBOLS

- ANTENNA
- SATELLITE DISH
- NEWSPAPER BOX
- PARKING METER
- PHONE BOOTH
- HANDICAP SYMBOL
- MAILBOX
- SIGN
- MARSH
- WOOD LATH SET
- BENCHMARK

- DECIDUOUS TREE
- CONIFEROUS TREE
- SOIL BORING
- IRON SET
- IRON FOUND
- MONUMENT
- SECTION CORNER
- EXISTING SPOT ELEVATION
- SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)

## PLAN & REMOVAL SHEET LEGEND

- TREE TO BE REMOVED
- STRUCTURE TO BE REMOVED
- CURB AND GUTTER TO BE REMOVED
- 2" COLD MILL
- STORM SEWER AND CULVERT TO BE REMOVED
- PAVERS TO BE REMOVED
- PAVEMENT TO BE REMOVED
- PAVEMENT TO BE CRUSHED AND SHAPED
- EXISTING CONCRETE

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PREPARED FOR  
**CITY OF WALLED LAKE**  
1499 E. WEST MAPLE  
WALLED LAKE, MI 48390  
(248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**LEGEND**

|              |                |          |                |
|--------------|----------------|----------|----------------|
| DESIGNED: BM | SCALE          | NO SCALE | SHEET NO.      |
| DRAWN: DH    | JOB NO. 18-274 |          | <b>4 OF 48</b> |

TRAFFIC SAFETY NOTES - CONTRACTOR SIGNING

TEMPORARY PAVEMENT MARKINGS

1. TEMPORARY PAVEMENT MARKINGS WILL BE REQUIRED IMMEDIATELY FOLLOWING LEVELING AND TOP COURSE PAVING.
2. TOP COURSE TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO FINAL PAVEMENT MARKING INSTALLATION.
3. ALL PAVEMENT MARKINGS SHALL MEET MDOT 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND SHALL BE PAID PER RELATED LISTED PAY ITEM. MORE SPECIFICALLY, TEMPORARY PAVEMENT MARKINGS SHALL BE PROVIDED IN THE FOLLOWING MANNER AND/OR AS DIRECTED BY THE ENGINEER.
  - 3.1. WITHIN 24-HOURS FOLLOWING LEVELING COURSE AND TOP COURSE HMA INSTALLATION, INSTALL TEMPORARY 4-INCH WIDE BY 4 FEET LONG DASHED LINES (DOUBLE DASHES SIDE BY SIDE FOR EACH SIDE OF THE ROAD CENTER TURN LANE).
  - 3.2. TEMPORARY PAVEMENT MARKINGS ON LEVELING COURSE HMA SHALL BE WET REFLECTIVE (WR) NON REMOVABLE (NR) PAINT UNLESS DETERMINED TO BE REMOVABLE BY THE ENGINEER. REFER TO THE SPECIAL PROVISIONS FOR MAINTAINING TRAFFIC FOR ADDITIONAL INFORMATION.
  - 3.3. FOLLOWING TOP COURSE HMA PAVING, TEMPORARY MARKINGS SHALL BE WET REFLECTIVE (WR) REMOVABLE (R) TAPE INSTALLED WITH THE SAME PATTERN USED FOR PAVEMENT MAKINGS OVER THE LEVELING COURSE HMA INSTALLATION
  - 3.4. PRIOR TO FINAL PAVEMENT MARKING INSTALLATION AND WITHIN 24-HOURS OR SOONER, AS DETERMINED BY THE ENGINEER, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED, AND THE LOCATIONS OF PERMANENT PAVEMENT LINE MARKINGS ON THE TOP COURSE HMA SHALL BE RECESSED (GROOVED) PRIOR TO THERMOPLASTIC TAPE INSTALLATION.
  - 3.5. RECESSING WORK SHALL BE IN ACCORDANCE WITH THE PAVEMENT MARKING MATERIAL MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ALL RECESSING CONFIGURATIONS SHALL BE PER SECTION 811 OF THE MDOT 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MUST BE IN ACCORDANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MDOT'S *PAVEMENT MARKING STANDARD PLANS*.

PERMANENT SIGNING AND PAVEMENT MARKING

1. THE LOCATION OF THE PERMANENT SIGNING SHALL BE MARKED IN THE FIELD BY THE ENGINEER.
2. STREET NAME SIGNS SHALL BE BACK TO BACK. THEY SHALL BE MOUNTED ON A 4 IN SQUARE TUBE THAT GOES INSIDE A U-CHANNEL WITH A BOTTOM SIGN HEIGHT OF 10'.
3. THE PERMANENT PAVEMENT MARKING SHALL BE LAID OUT IN THE FIELD BY THE ENGINEER. BEFORE DOING SO, THE CONTRACTORS SHALL BROOM AND CLEAN THE PAVEMENT TO BE STRIPED.
4. ALL PAVEMENT MARKINGS WHICH CONFLICT WITH NEW CONSTRUCTION SHALL BE REMOVED.

CONSTRUCTION SIGNING

CONTRACTOR'S RESPONSIBILITY

1. ALL TRAFFIC CONTROL DEVICES INCLUDING SIGNS, BARRICADES, VERTICAL PANELS, DRUMS, WARNING LIGHTS, ARROW BOARDS, AND CHANGEABLE MESSAGE SIGNS SHALL MEET THE "ACCEPTABLE" REQUIREMENTS OF AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA), "QUALITY STANDARD FOR WORK ZONE TRAFFIC CONTROL DEVICES". COPIES OF THIS PUBLICATION ARE AVAILABLE DIRECTLY FROM ATSSA. ALL TRAFFIC CONTROL DEVICES SHALL BE IN LIKE-NEW CONDITION.
2. SIGN LOCATIONS AND DISTANCES BETWEEN SIGNS SHOULD BE FIELD REVIEWED BY THE ENGINEER BEFORE PLACING TO ASSURE APPROPRIATE PLACEMENT. THE LOCATION OF THE CONSTRUCTION SIGNING SHALL BE CLEARLY MARKED IN THE FIELD BY THE CONTRACTOR.
3. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE 2011 MMUTCD. ALL CONSTRUCTION SIGNING SHALL BE BLACK LETTERS ON FLORESCENT ORANGE BACKGROUND UNLESS SPECIFIED OTHERWISE.
4. ALL TRAFFIC SIGNS WITHIN THE PROJECT WILL BE RELOCATED BY THE CONTRACTOR FOR EACH STAGE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ALL TRAFFIC CONTROL DEVICES WITHIN THE PROJECT LIMITS. ANY TRAFFIC CONTROL DEVICES DAMAGED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.
5. SPECIAL SIGNS INDICATING THE START DATE OF THE CONSTRUCTION PROJECT AND/OR THE START DATE OF A ROAD CLOSURE SHALL BE POSTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE.
6. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ANY ADDITIONAL SIGNS, BARRICADES AND LIGHTS WITHIN THE PROJECT TO PROTECT THE TRAFFIC AND WORK AREA.

7. THE CONTRACTOR SHALL PLACE A MINIMUM OF EIGHT SANDBAGS ON CONTRACTOR FURNISHED TYPE III BARRICADES TO PREVENT MOVEMENT. THE CONTRACTOR SHALL ATTACH AND MAINTAIN TWO (2) STEADY BURN AMBER LIGHTS (TYPE "C") ON EACH OF THESE BARRICADES. ALL TYPE III BARRICADES SHALL BE DOUBLE SIDED.
9. ALL SIGNS PLACED IN CONJUNCTION WITH A TYPE III BARRICADE SHALL BE PLACED ON SEPARATE SUPPORTS IMMEDIATELY BEHIND AND ABOVE THE TYPE III BARRICADE. THESE SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS. THE CONTRACTOR SHALL PLACE A MINIMUM OF EIGHT SANDBAGS ON THESE SIGNS TO PREVENT MOVEMENT.
10. CONSTRUCTION SIGNING MOUNTED ON PORTABLE SUPPORTS SHOULD NOT BE USED FOR A DURATION OF MORE THAN THREE (3) DAYS. OTHERWISE, SIGNS SHALL BE GROUND MOUNTED ON 3 LB U-CHANNEL POSTS WHEN POSSIBLE. THE FOLLOWING SIGNS MAY BE PLACED ON TEMPORARY SUPPORTS: SIGNS PLACED IN CONJUNCTION WITH THE TYPE III BARRICADES, SIGNS PLACED FOR SIDEWALK CLOSURE, AND SIGNS WITHIN THE CLOSED PORTION OF ROADWAY ITSELF. THE CONTRACTOR SHALL INSTALL ONE FLASHER ON ANY CONSTRUCTION SIGN THAT IS INSTALLED ON TEMPORARY SUPPORTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COVERING AND UNCOVERING ALL CONSTRUCTION SIGNS AS NEEDED FOR THE PROPER MAINTENANCE OF TRAFFIC THROUGHOUT THE CONSTRUCTION AREA.
12. TRAFFIC CONTROL SIGNS AND STREET NAMES SHALL BE REMOVED, SALVAGED, RELOCATED AND MAINTAINED BY THE CONTRACTOR AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THIS WORK MAY BE REQUIRED MULTIPLE TIMES DURING THE PROJECT TO ACCOMMODATE CONSTRUCTION OPERATIONS. THIS WORK SHALL BE PERFORMED ON THE SAME DAY OF A CHANGE IN OPERATIONS REQUIRING THE SIGN WORK AS DETERMINED AND/OR APPROVED BY THE PROJECT ENGINEER. UPON COMPLETION OF THE PROJECT, PERMANENT TRAFFIC CONTROL SIGNS WILL BE RELOCATED OR REPLACED IN THEIR PROPER POSITION BY THE CONTRACTOR AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE SIGN REMOVAL, SALVAGING, RELOCATING, INSTALLATION, AND RELATED WORK WILL BE PAID FOR WITH THE APPROPRIATE PAY ITEM, AT THE CONTRACT UNIT PRICES EACH TIME THE WORK IS DETERMINED TO BE NECESSARY BY THE PROJECT ENGINEER TO ACCOMMODATE CONSTRUCTION OPERATIONS.
13. ANY OTHER SIGNS WHICH THE CONTRACTOR MAY BE REQUIRED TO FURNISH SHALL CONFORM TO THE 2011 MMUTCD. THE CONTRACTOR SHALL NOT BEGIN ANY OPERATIONS ON THE PROJECT UNTIL ALL OF THE STOP SIGNS AND STREET NAME SIGNS HAVE BEEN RELOCATED AND FLASHER LIGHTS ARE ATTACHED TO ALL REQUIRED SIGNS AND BARRICADES.
14. TRAFFIC CHANNELING DEVICES (PLASTIC BARRELS) FURNISHED BY THE CONTRACTOR FOR WORK PROTECTION SHALL BE COATED WITH REFLECTERIZED MATERIAL AND AT SPACING BASED ON POSTED SPEED LIMIT AND PER THE 2011 MMUTCD.

|   |                |              |           |
|---|----------------|--------------|-----------|
| <br><b>BEBOSS</b><br><i>Engineering</i><br>Engineers Surveyors Planners Landscape Architects<br>3121 E. GRAND RIVER AVE.<br>HOWELL, MI. 48843<br>800.246.6735 FAX 517.548.1670 |                |              |           |
| PREPARED FOR<br><b>CITY OF WALLED LAKE</b><br>1499 E. WEST MAPLE<br>WALLED LAKE, MI 48390<br>(248) 624-4847   |                |              |           |
| PROJECT<br><b>DECKER ROAD</b>   |                |              |           |
| SHEET TITLE<br><b>TRAFFIC SAFETY NOTES</b>  |                |              |           |
| DESIGNED: BM  | SCALE          | NO SCALE     | SHEET NO. |
| DRAWN: DH   | JOB NO. 18-274 | <b>50F48</b> |           |

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

**KEY**

SPECIAL\* ①

**Decker Rd Construction**  
 14 Mile Rd to E. West Maple Rd  
 Alternate Route Advised

**Starting XX/XX/XX**

NOTE: SEE SIGN FABRICATION DETAILS SHEET FOR DIMENSIONS

②

W20-1-48

2A

W20-1-48  
Decker Rd  
D3-1\*

2B

W20-1-36\*\*

③

R5-18B

④

R5-18

⑤

W3-5

⑥

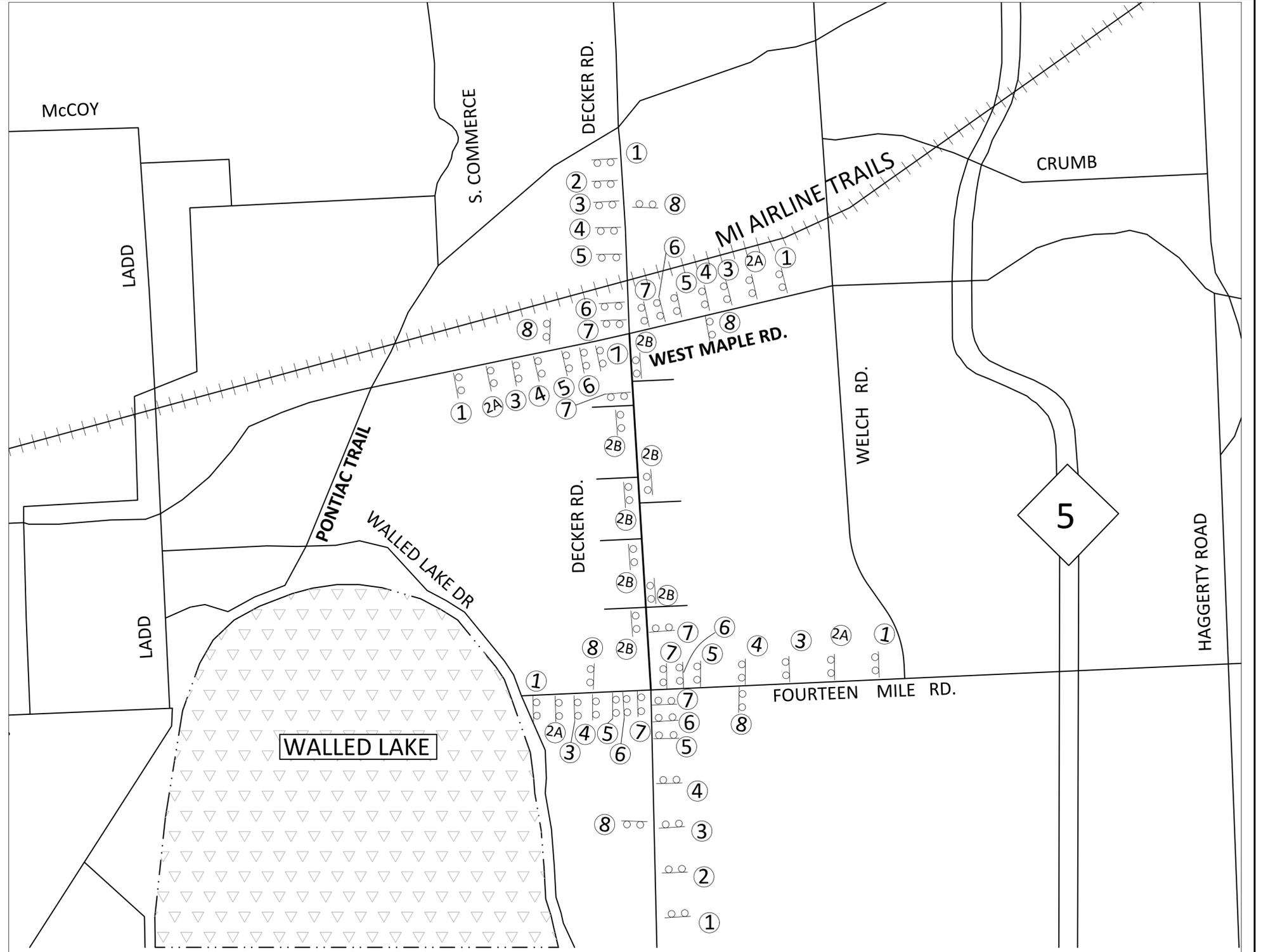
R5-18C

⑦

R2-1

⑧

G20-2



**MATERIAL REQUIRED**

|                   |                                   |
|-------------------|-----------------------------------|
| 6 - SPECIALS (1)  | 6 - W3-5(SPEED LIMIT 25) (5)      |
| 4 - W20-1-48 (2)  | 6 - R5-18C (6)                    |
| 7 - W20-1-36 (2B) | 8 - R2-1(SPEED LIMIT 25) (7)      |
| 6 - R5-18B (3)    | 6 - G20-2 (8)                     |
| 6 - R5-18 (4)     | 4 - D3-1(36"x12")(Decker Rd) (2A) |

PAID AS: Sign, Type B, Temp, Prismatic, Oper  
 \*PAID AS: Sign, Type B, Temp, Prismatic, Special, Oper  
 \*\*Signs to be installed at all approaching cross streets within work zone. (Typical of 7)

**SIGNS THIS SHEET BY CONTRACTOR**

| ITEM   | UNIT | QTY |
|--|------|-----|
| Sign, Type B, Temp, Prismatic, Furn          | SF   | 779 |
| Sign, Type B, Temp, Prismatic, Oper          | SF   | 779 |
| Sign, Type B, Temp, Prismatic, Special, Furn | SF   | 192 |
| Sign, Type B, Temp, Prismatic, Special, Oper | SF   | 192 |

**CONSTRUCTION SIGNAGE NOTES:**

- CONSTRUCTION SIGNAGE WILL BE USED IN CONJUNCTION WITH DETOUR SIGNAGE AS PROVIDED ON SHEET 8.
- CONSTRUCTION SIGNAGE AS SHOWN ON THIS SHEET (WITHOUT DETOUR SIGNAGE) MAY BE USED PRIOR TO BEGINNING CRUSH & SHAPE AND/OR MILLING OPERATIONS AND FOLLOWING PAVING OPERATIONS WHEN THE ROADWAY IS UNRESTRICTED AND FULLY OPEN TO TRAFFIC AND WITH TEMPORARY OR PERMANENT PAVEMENT MARKINGS ARE IN PLACE AND FUNCTIONAL AND APPROVED AND DIRECTED BY THE ENGINEER.

DECKER NB @ 25 MPH  
 MAPLE EB @ 35 MPH  
 MAPLE WB @ 35 MPH  
 PONTIAC TR NEB @ 40 MPH  
 PONTIAC TR SWB @ 40 MPH  
 14 MILE EB @ 45 MPH  
 14 MILE WB @ 45 MPH

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PREPARED FOR  
**CITY OF WALLED LAKE**  
 1499 E. WEST MAPLE  
 WALLED LAKE, MI 48390  
 (248) 624-4847

PROJECT **DECKER ROAD**

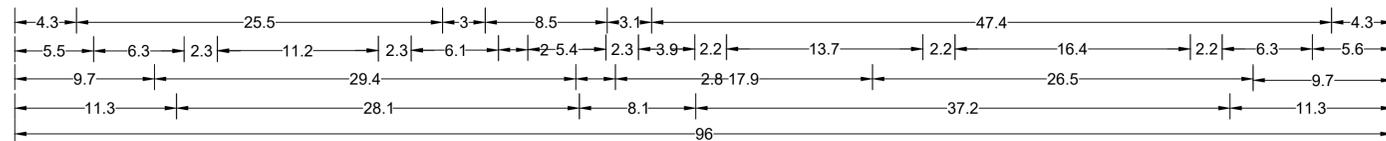
SHEET TITLE **CONSTRUCTION SIGNING**

DESIGNED: BM SCALE NO SCALE SHEET NO.  
 DRAWN: DH JOB NO. 18-274 **6 OF 48**

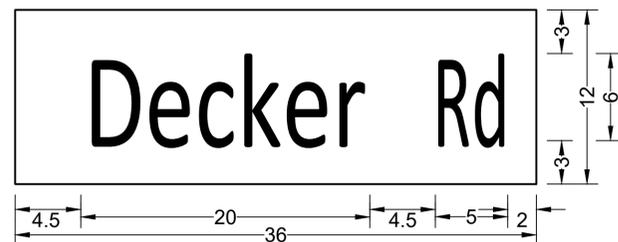
|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

Decker Rd Construction  
 14 Mile Rd to E. West Maple Rd  
 Alternate Route Advised

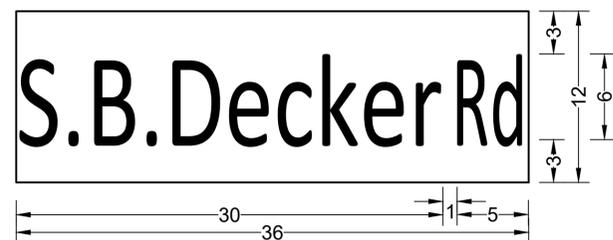
Starting ~~XX~~ ~~XX~~ ~~XX~~



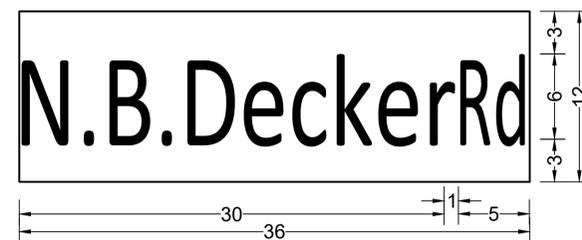
Special 1; 1.5" Radius, 0.8" Border, Black on Orange;  
 [14 Mile Rd to E. West Maple Rd] E 50% spacing;  
 [Alternate Route Advised] E 50% spacing;  
 [Starting XX/XX/XX] E 50% spacing;



Detour D3-1; No Border, Black on Orange;  
 [Decker Rd] ClearviewHwy-1-W;



Detour D3-1; No Border, Black on Orange;  
 [S.B. Decker Rd] ClearviewHwy-1-W;



Detour D3-1; No Border, Black on Orange;  
 [N.B. Decker Rd] ClearviewHwy-1-W;

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 Engineering

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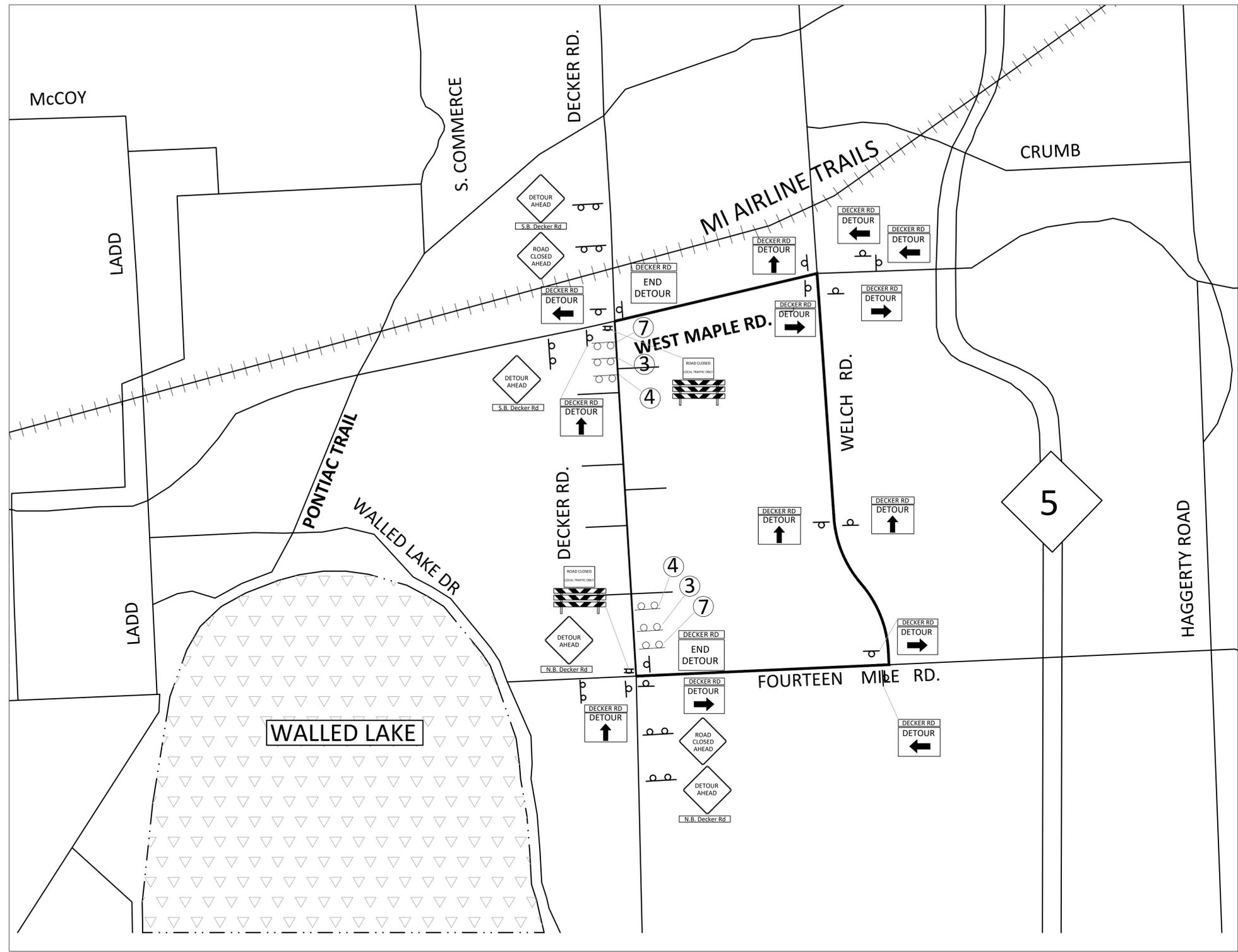
PROJECT  
**DECKER ROAD**

SHEET TITLE  
**SIGN FABRICATION**

\*PAID AS: Sign, Type B, Temp, Prismatic, Special, Oper

|                  |                 |           |
|------------------|-----------------|-----------|
| DESIGNED: BM     | SCALE: 1" = 30' | SHEET NO. |
| DRAWN: DH        | JOB NO. 18-274  | 7 OF 48   |
| 1 BY: MDO        | MDOT GI REVIEW  | 12/16/21  |
| NO: REVISION PER | DATE            |           |

| KEY |                       |                                   |
|-----|-----------------------|-----------------------------------|
| 2   |                       |                                   |
| 2   | R11-3-48              | ROAD CLOSED<br>LOCAL TRAFFIC ONLY |
| 4   | W20-2-48              | DETOUR<br>AHEAD                   |
| 2   | CONSTRUCTION<br>D3-1* | N.B. Decker Rd                    |
| 2   | CONSTRUCTION<br>D3-1* | S.B. Decker Rd                    |
| 2   | W20-3-48              | ROAD<br>CLOSED<br>AHEAD           |
| 2   | M4-8A-30              | END<br>DETOUR                     |
| 11  | DETOUR<br>D3-1*       | DECKER RD                         |
| 3   | M4-9-30 R             | DETOUR<br>→                       |
| 5   | M4-9-30 T             | DETOUR<br>↑                       |
| 3   | M4-9-30 L             | DETOUR<br>←                       |



PAID AS: Sign, Type B, Temp, Prismatic, Oper  
and Barricade, Type III, High Intensity, Double Sided, Oper  
\*PAID AS: Sign, Type B, Temp, Prismatic, Special, Oper

| SIGNS THIS SHEET BY CONTRACTOR                          |      |     |
|---|------|-----|
| ITEM  | UNIT | QTY |
| Sign, Type B, Temp, Prismatic, Furn                     | SFT  | 231 |
| Sign, Type B, Temp, Prismatic, Oper                     | SFT  | 231 |
| Barricade, Type III, High Intensity, Double Sided, Furn | EA   | 4   |
| Barricade, Type III, High Intensity, Double Sided, Oper | EA   | 4   |
| Sign, Type B, Temp, Prismatic, Special, Furn            | SFT  | 128 |
| Sign, Type B, Temp, Prismatic, Special, Oper            | SFT  | 128 |

Note: Plastic Drums to be placed as directed by Engineer and paid for as, "Plastic Drum, High Intensity, Oper".

**CONSTRUCTION/DETOUR SIGNAGE NOTES:**

- CONSTRUCTION SIGNAGE FROM SHEET 6 WILL BE USED IN CONJUNCTION WITH DETOUR SIGNAGE PROVIDED ON THIS SHEET.
- DETOUR SIGNAGE MAY NOT BE REQUIRED PRIOR TO BEGINNING CRUSH & SHAPE AND/OR MILLING OPERATIONS AND FOLLOWING PAVING OPERATIONS WHEN THE ROADWAY IS UNRESTRICTED AND FULLY OPEN TO TRAFFIC AND WITH TEMPORARY OR PERMANENT PAVEMENT MARKINGS IN PLACE AND FUNCTIONAL AS APPROVED AND DIRECTED BY THE ENGINEER.

**CONSTRUCTION/DETOUR SIGNAGE ADJUSTMENT NOTES:**

- CONSTRUCTION APPROACH SIGNS 3,4,5, & 7 SHALL BE REMOVED OR LAID DOWN FROM NB NOVI RD AND SB DECKER RD.  
CONSTRUCTION APPROACH SIGNS 3 & 4 SHALL BE MOVED IN THE FOLLOWING MANNER, WITH SUFFICIENT SPACING AS DETERMINED BY ENGINEER:
- NB NOVI RD APPROACH - MOVE TO N. OF SIGN 7 LOCATED N. OF 14 MILE RD
  - SB DECKER RD APPROACH - MOVE TO S. OF SIGN 7 LOCATED S. OF E. WEST MAPLE RD
- ALSO:
- FOR EB 14 MILE RD AND BOTH EB & WB E. WEST MAPLE RD, REMOVE CONSTRUCTION APPROACH SIGNS 3 & 4 AND SHIFT DOWNSTREAM SIGNING TO ACCOMMODATE THE DETOUR SIGNING CLOSEST TO THE INTERSECTION AS SHOWN ON THE DETOUR PLAN PER MDOT STANDARD SIGN SPACING REQUIREMENTS AND/OR AS DIRECTED BY ENGINEER.

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800.246.6735 FAX 517.548.1670

PREPARED FOR  
**CITY OF WALLED LAKE**  
1499 E. WEST MAPLE  
WALLED LAKE, MI 48390  
(248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**DETOUR STAGE**

DESIGNED: BM SCALE NO SCALE SHEET NO.  
DRAWN: DH JOB NO. 18-274 **8 OF 48**

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT CI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |



**BENCHMARK INFORMATION**

BM #261  
STATION 3+60  
N. 375676.4642  
E. 13365841.4266  
ELEV.=957.47  
MAG NAIL/BOSS TAG N/S 12" OAK, 43'±  
E/S DECKER ROAD @ .

BM #262  
STATION  
N. 375251.0889  
E. 13365876.7051  
ELEV.=954.60  
RR SPIKE N/S P.POLE S/S 14 MILE  
ROAD & E/S NOVI RD.

BM #258  
STATION 16+76  
N. 376983.2094  
E. 13365668.7613  
ELEV.=962.90  
MAG NAIL/BOSS TAG E/S P. POLE 61'± W/S  
DECKER ROAD.

BM #259  
STATION 12+28  
N. 376537.2771  
E. 13365696.9252  
ELEV.=972.39  
MAG NAIL/BOSS TAG E/S P.POLE 57'± W/S  
DECKER ROAD.

BM #260  
STATION 8+41  
N. 376155.7406  
E. 13365820.0867  
ELEV.=961.81  
MAG NAIL/BOSS TAG W/S 4" ELEV 47'± E/S  
DECKER ROAD.

BM #257  
STATION 23+87  
N. 377696.9347  
E. 13365727.3791  
ELEV.=960.66  
RR SPIKE W/S P. POLE 35'± E/S DECKER ROAD.

BM #254  
STATION 35+00  
N. 378809.5397  
E. 13365668.0754  
ELEV.=943.49  
FOUND BOLT SPIKE W/S P.POLE 33'± E/S  
DECKER ROAD.

BM #255  
STATION 31+50  
N. 378454.1728  
E. 13365603.6998  
ELEV.=948.09  
RR SPIKE E/S P.POLE 49'± W/S OF DECKER RD.

BM #256  
STATION 26+75  
N. 377997.5778  
E. 13365707.6158  
ELEV.=960.69  
MAG NAIL/BOSS TAG W/S P.POLE 31'± E/S  
DECKER ROAD.

BM #253  
STATION 37+75  
N. 379083.58  
E. 13365663.7002  
ELEV.=949.72  
MAG NAIL/BOSS TAG W/S P.POLE 44'± E/S  
DECKER ROAD.

BM #252  
STATION 43+00  
N. 379605.181  
E. 13365625.3022  
ELEV.=942.03  
ARROW ON HYD E/S DECKER ROAD.

BM #216  
STATION 45+26  
N. 379836.4208  
E. 13365619.5867  
ELEV.=904.91  
BOSS NAIL/TAG W/S P.POLE 39'± E/S DECKER  
ROAD.

BM #251  
STATION 48+52  
N. 380152.8701  
E. 13365523.8764  
ELEV.=948.34  
RR SPIKE W/S P.POLE N/S E. WEST MAPLE RD.  
& 40'± W/S OF DECKER ROAD.

**TRAVERSE POINT INFORMATION**

TP #55  
STATION  
N. 375249.7712  
E. 13365982.3112  
ELEV.=955.59

TP #54  
STATION 0+29  
N. 375339.3725  
E. 13365763.2779  
ELEV.=953.72

TP #14407  
STATION 1+88  
N. 375503.2557  
E. 13365834.5169  
ELEV.= 953.361

TP #53  
STATION 5+85  
N. 375898.6085  
E. 13365817.7914  
ELEV.= 936.012

TP #52  
STATION 11+20  
N. 376428.7969  
E. 13365716.1915  
ELEV.=970.230

TP #51  
STATION 14+56  
N. 376764.4724  
E. 13365688.56  
ELEV.=967.21

TP #50  
STATION 20+88  
N. 377400.2183  
S. 13365752.0034  
ELEV.=964.27

TP #49  
STATION 25+20  
N. 377826.3417  
E. 13365643.3968  
ELEV.=956.96

TP #48  
STATION 28+40  
N. 378150.4957  
E. 13365701.9441  
ELEV.=958.76

TP #47  
STATION 33+46  
N. 378652.1647  
E. 13365601.1790  
ELEV.= 943.88

TP #46  
STATION 38+37  
N. 379147.2557  
E. 13365659.8594  
ELEV.=946.16

TP #45  
STATION 41+50  
N. 379454.9664  
E. 13365564.3002  
ELEV.=937.99

TP #43  
STATION 47+60  
N. 380064.1298  
E. 13365520.5460  
ELEV.=943.485

TP #715  
STATION 47+71  
N. 380074.4178  
E. 13365506.4660  
ELEV.=943.99

TP #714  
STATION 52+20  
N. 380527.8823  
E. 13365574.6867  
ELEV.=944.84

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PROJECT  
**DECKER ROAD**

SHEET TITLE  
**CONTROL-ALIGNMENT**

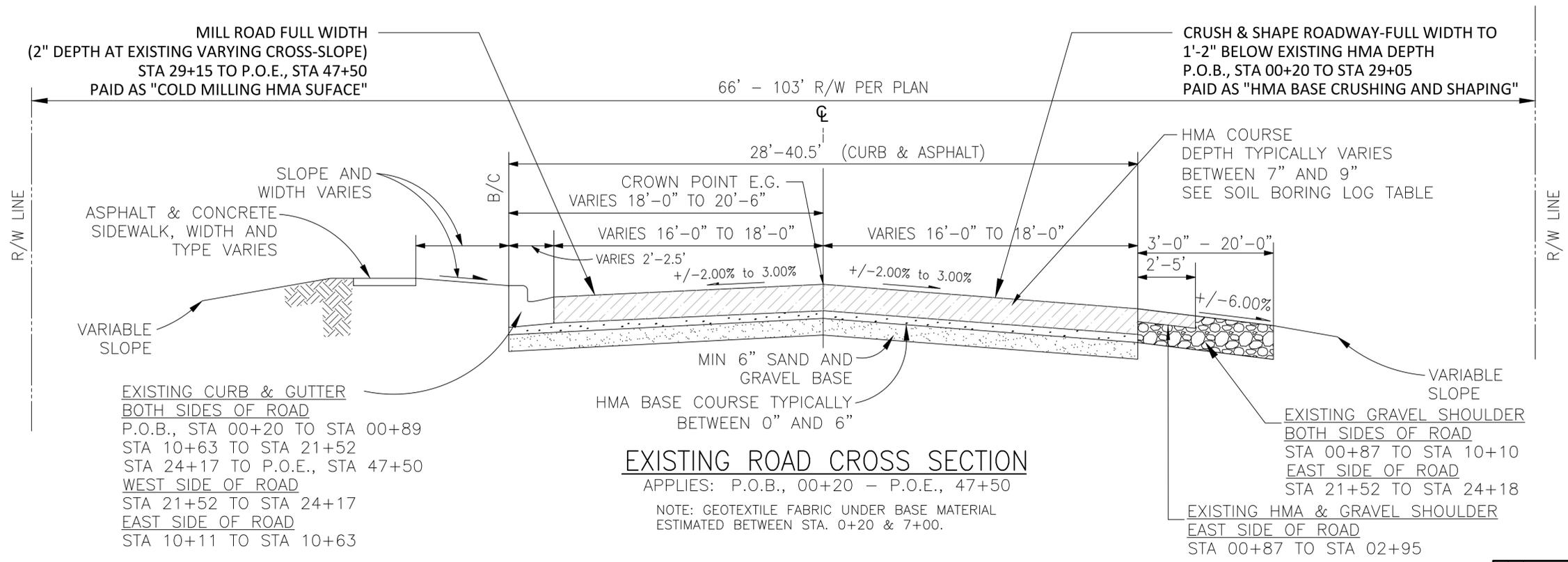
|              |                 |                |
|--------------|-----------------|----------------|
| DESIGNED: BM | SCALE 1" = 200' | SHEET NO.      |
| DRAWN: DH    | JOB NO. 18-274  | <b>9 OF 48</b> |

|    |    |               |          |
|----|----|---------------|----------|
| 1  | BM | MDOT G REVIEW | 12/16/21 |
| NO | BY | REVISION PER  | DATE     |

# SOIL BORING LOG

| DEPTH (FT) | SB-#0   | SB-#1   | SB-#1A  | SB-#2   | SB-#3  | SB-#4   | SB-#5   | SB-#6   | SB-#7   | SB-#8   | SB-#9   | DEPTH (FT) |
|------------|---|---|---|---|--|---|---|---|---|---|---|------------|
|            | STATION 03+50   | STATION 05+00   | STATION 05+50   | STATION 10+00   | STATION 15+00  | STATION 20+00   | STATION 25+00   | STATION 30+00   | STATION 35+00   | STATION 40+00   | STATION 45+00   |            |
| 1          | 0'2" MOIST BROWN SAND & GRAVEL WITH STONES, FILL<br>0'9" MOIST DARK BROWN SANDY TOPSOIL WITH TRACE OF GRAVEL, FILL    | 1'1" ASPHALT  | 0'10" ASPHALT   | 0'11" ASPHALT   | 0'11" ASPHALT  | 1'0" ASPHALT  | 0'11" ASPHALT   | 0'10" ASPHALT   | 1'1" ASPHALT  | 1'0" ASPHALT  | 0'11" ASPHALT   | 1          |
| 2          | 1'5" MOIST BROWN SAND & GRAVEL FILL   | 1'9" MOIST DARK BROWN GRAVELLY SAND FILL  | 1'1" MOIST GRAY CRUSHED STONE, AGGREGATE FILL<br>1'5" MOIST TO WET BROWN AND DISCOLORED BROWN SAND & GRAVEL WITH PLASTIC GEOPAPIR, FILL | 1'5" MOIST DARK BROWN GRAVELLY SAND FILL  | 1'11" COMPACT MOIST BROWN SAND & GRAVEL WITH STONES, AGGREGATE FILL                                | 1'7" MOIST DARK BROWN GRAVELLY SAND, FILL   | 1'10" EXTREMELY COMPACT MOIST BROWN GRAVELLY SAND WITH OCCASIONAL STONES, FILL                                | 1'1" ASPHALT MILLINGS   | 1'8" MOIST BROWN GRAVELLY SAND, FILL  | 1'7" MOIST BROWN GRAVELLY SAND, FILL  | 1'9" MOIST BROWN GRAVELLY SAND, FILL  | 2          |
| 3          | 2'9" VERY STIFF MOIST DISCOLORED BROWN SILTY CLAY WITH SAND AND PEBBLES, TRACE OF ASPHALT AND OCCASIONAL STONES, FILL | 2'7" VERY STIFF MOIST DISCOLORED BROWN SANDY CLAY WITH GRAVEL AND OCCASIONAL TOPSOIL STEAKS, FILL           | 3'2" STIFF MOIST DISCOLORED BROWN SILTY CLAY WITH SAND AND PEBBLES, MOIST FINE SAND LENSES AND TRACE OF VEGETATION, FILL                | 3'6" EXTREMELY STIFF MOIST BROWN SILTY CLAY WITH SAND AND PEBBLES   | 3'6" STIFF MOIST DISCOLORED BROWN SAND CLAY WITH TOPSOIL SEAMS AND TRACES OF PEBBLES AND WOOD FILL | 4'6" EXTREMELY STIFF MOIST BROWN SILTY CLAY WITH SAND AND PEBBLES                                 | 2'9" EXTREMELY COMPACT MOIST DISCOLORED BROWN CLAYEY FINE SAND WITH TRACE OF GRAVEL AND TOPSOIL STREAKS, FILL | 2'10" VERY STIFF MOIST BROWN SILTY CLAY WITH TRACES OF SAND AND PEBBLES | 3'6" EXTREMELY COMPACT MOIST DISCOLORED BROWN CLAYEY FINE SAND WITH GRAVEL, FILL  | 3'6" EXTREMELY STIFF MOIST DISCOLORED BROWN SANDY CLAY WITH PEBBLES AND MOIST FINE SAND LENSES FILL | 3'2" EXTREMELY COMPACT MOIST DISCOLORED BROWN GRAVELLY SAND WITH TOPSOIL, PEBBLES AND OCCASIONAL STONES, FILL | 3          |
| 4          | 3'6" VERY STIFF MOIST BROWN SILTY CLAY WITH SAND AND PEBBLES  | 4'0" VERY STIFF MOIST VARIEGATED SILTY CLAY WITH TRACES OF SAND AND PEBBLES AND OCCASIONAL MOIST SILT SEAMS | 5'6" STIFF MOIST VARIEGATED SILTY CLAY WITH SAND AND PEBBLES  | 6'0" EXTREMELY STIFF MOIST BROWN SILTY CLAY WITH SAND AND PEBBLES AND OCCASIONAL STONES                   | 6'0" STIFF MOIST VARIEGATED SILTY CLAY WITH SAND AND PEBBLES                                       | 6'0" VERY STIFF MOIST VARIEGATED SILTY CLAY WITH SAND AND PEBBLES                                 | 5'2" MEDIUM COMPACT MOIST DISCOLORED BROWN CLAYEY FINE SAND WITH GRAVEL, FILL                                 | 3'6" VERY COMPACT MOIST BROWN FINE SAND WITH TRACE OF GRAVEL            | 6'0" FIRM MOIST DISCOLORED BROWN AND DARK BROWN ORGANIC SILTY CLAY WITH SAND AND PEBBLES, TOPSOIL SEAMS AND TRACE OF WOOD, FILL | 6'0" STIFF MOIST DISCOLORED BROWN SILTY CLAY WITH SAND AND PEBBLES AND OCCASIONAL STONES, FILL      | 3'10" FIRM MOIST DARK BROWN CLAYEY TOPSOIL FILL   | 4          |
| 5          | 4'8" FIRM MOIST BROWN SANDY CLAY WITH SAND AND PEBBLES  | 6'0" EXTREMELY STIFF MOIST BROWN SILTY CLAY WITH TRACES OF SAND AND PEBBLES                                 |   |   |  |   |   |   |   |   | 6'3" SLIGHTLY COMPACT MOIST DISCOLORED BROWN CLAYEY SAND WITH SILT AND GRAVEL, FILL                           | 5          |
| 6          | 5'6" MEDIUM COMPACT WET BROWN CLAYEY FINE SAND WITH TRACE OF GRAVEL   |   |   |   |  |   |   |   |   |   |   | 6          |
| 7          |   | 8'0" EXTREMELY STIFF MOIST BROWN SILTY CLAY WITH TRACES OF SAND AND PEBBLES AND OCCASIONAL COBBLES          |   | 8'0" EXTREMELY STIFF MOIST BROWN SILTY CLAY WITH SAND AND PEBBLES, OCCASIONAL STONES AND MOIST SAND SEAMS | 8'0" VERY STIFF MOIST VARIEGATED SILTY CLAY WITH SAND AND PEBBLES                                  | 8'0" VERY STIFF MOIST BROWN SILTY CLAY WITH SAND AND PEBBLES AND OCCASIONAL MOIST FINE SAND SEAMS | 8'0" COMPACT WET BROWN FINE SAND WITH TRACE OF GRAVEL AND OCCASIONAL MOIST BROWN SILTY CLAY SEAMS             | 8'0" VERY STIFF MOIST BROWN SILT CLAY WITH SAND AND PEBBLES             | 8'0" STIFF MOIST DISCOLORED BROWN SILTY CLAY WITH SANDS AND PEBBLES AND MOIST FINE SAND LENSES FILL                             | 8'0" STIFF MOIST DISCOLORED BROWN SANDY CLAY WITH PEBBLES AND WET GRAVELLY SAND SEAMS, FILL         | 7'6" COMPACT WET BROWN SILTY FINE SAND WITH TRACE OF GRAVEL   | 7          |
| 8          |   |   |   |   |  |   |   |   |   |   | 8'0" STIFF MOIST VARIEGATED SILTY CLAY WITH TRACES OF SAND AND PEBBLE   | 8          |

NOTE:  
EXISTING ASPHALT DEPTH COURTESY OF GEOTECHNICAL EXPLORATION AND ENGINEERING REPORT. BORINGS CONDUCTED BY PROFESSIONAL SERVICES INDUSTRIES, INC. (PSI) ON 05-18-2018, AND 01-24-2019. ALSO, SB-#0 & SB-#1A WERE CONDUCTED BY MCDOWELL & ASSOCIATES (M&A) ON MAY 18, 2018.



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PROJECT  
**DECKER ROAD**

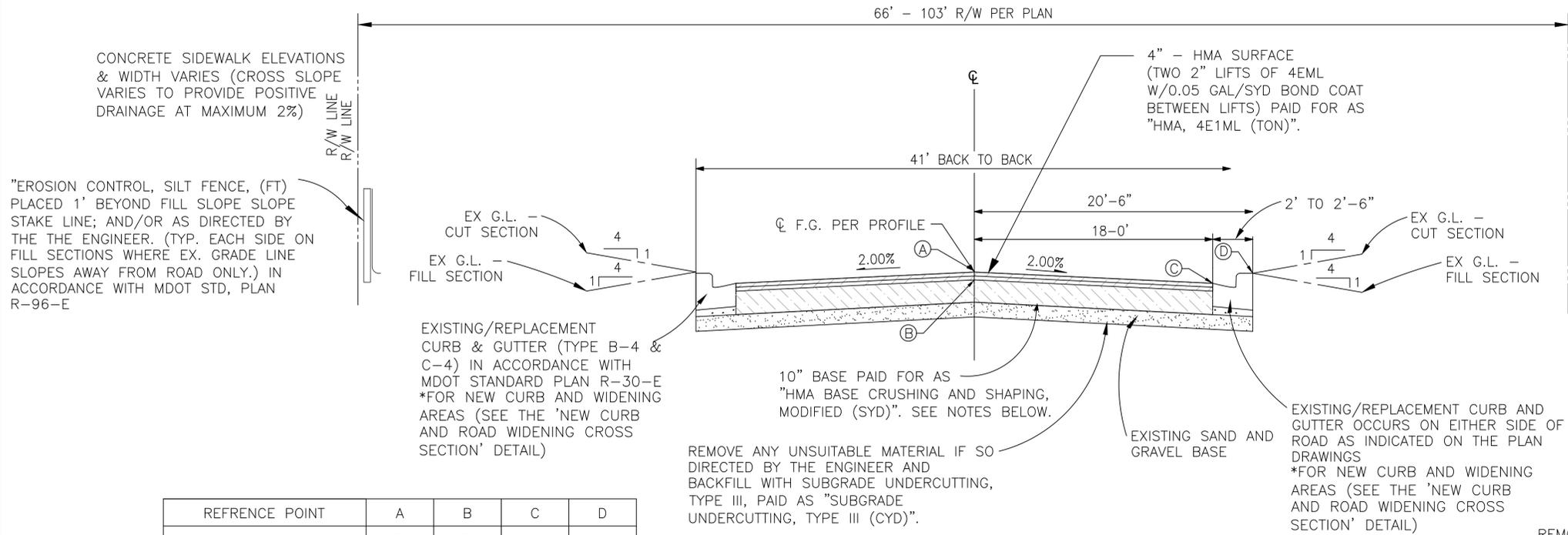
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SHEET TITLE  
**TYPICAL CROSS SECTIONS**

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|              |                |          |                               |
|--------------|----------------|----------|-------------------------------|
| DESIGNED: BM | SCALE          | NO SCALE | <b>SHEET NO.<br/>10 OF 48</b> |
| DRAWN: DH    | JOB NO. 18-274 |          |                               |

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |



CONCRETE SIDEWALK ELEVATIONS & WIDTH VARIES (CROSS SLOPE VARIES TO PROVIDE POSITIVE DRAINAGE AT MAXIMUM 2%)

"EROSION CONTROL, SILT FENCE, (FT) PLACED 1' BEYOND FILL SLOPE STAKE LINE; AND/OR AS DIRECTED BY THE THE ENGINEER. (TYP. EACH SIDE ON FILL SECTIONS WHERE EX. GRADE LINE SLOPES AWAY FROM ROAD ONLY.) IN ACCORDANCE WITH MDOT STD, PLAN R-96-E

EXISTING/REPLACEMENT CURB & GUTTER (TYPE B-4 & C-4) IN ACCORDANCE WITH MDOT STANDARD PLAN R-30-E \*FOR NEW CURB AND WIDENING AREAS (SEE THE 'NEW CURB AND ROAD WIDENING CROSS SECTION' DETAIL)

10" BASE PAID FOR AS "HMA BASE CRUSHING AND SHAPING, MODIFIED (SYD)". SEE NOTES BELOW.

REMOVE ANY UNSUITABLE MATERIAL IF SO DIRECTED BY THE ENGINEER AND BACKFILL WITH SUBGRADE UNDERCUTTING, TYPE III, PAID AS "SUBGRADE UNDERCUTTING, TYPE III (CYD)".

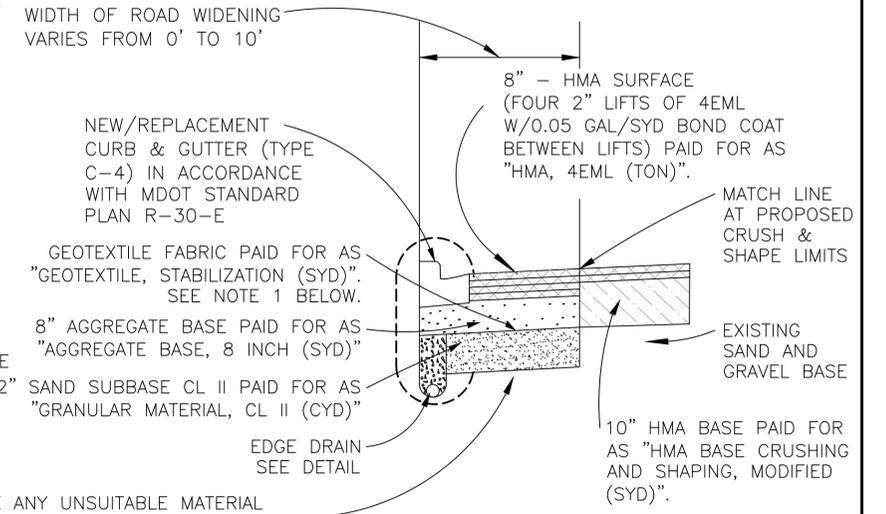
EXISTING/REPLACEMENT CURB AND GUTTER OCCURS ON EITHER SIDE OF THE ROAD AS INDICATED ON THE PLAN DRAWINGS \*FOR NEW CURB AND WIDENING AREAS (SEE THE 'NEW CURB AND ROAD WIDENING CROSS SECTION' DETAIL)

| REFERENCE POINT             | A             | B             | C      | D     |
|-----------------------------|---------------|---------------|--------|-------|
| DISTANCE FROM $\mathcal{C}$ | $\mathcal{C}$ | $\mathcal{C}$ | 18.0'  | 20.5' |
| RELATION TO PLAN GRADE      | P.G.          | -0.167'       | -0.36' | 0.62' |

**TYPICAL ASPHALT ROAD CROSS-SECTION A**

APPLIES: P.O.B. STA 00+20 - STA 29+15 (CRUSH & SHAPE AND ROAD WIDENING SECTIONS)

- NOTES:
- 1) GEOTEXTILE IS REQUIRED BELOW CRUSH & SHAPE BASE MATERIAL WITHIN THE WIDENING AREAS BETWEEN STA. 0+20 AND 7+00.
  - 2) SUBGRADE UNDERCUTTING MAY BE BACKFILLED WITH ONSITE HMA CRUSHING AND SHAPING MATERIAL OR AS DIRECTED BY THE ENGINEER
  - 3) A LOW SECTION OF THE ROAD WILL BE RAISED WITH THE WIDENING AREA. ONSITE HMA BASE MATERIAL WILL BE REQUIRED ABOVE CRUSH & SHAPE MATERIAL IN THIS AREA FROM STA 06+00 TO STA 10+75



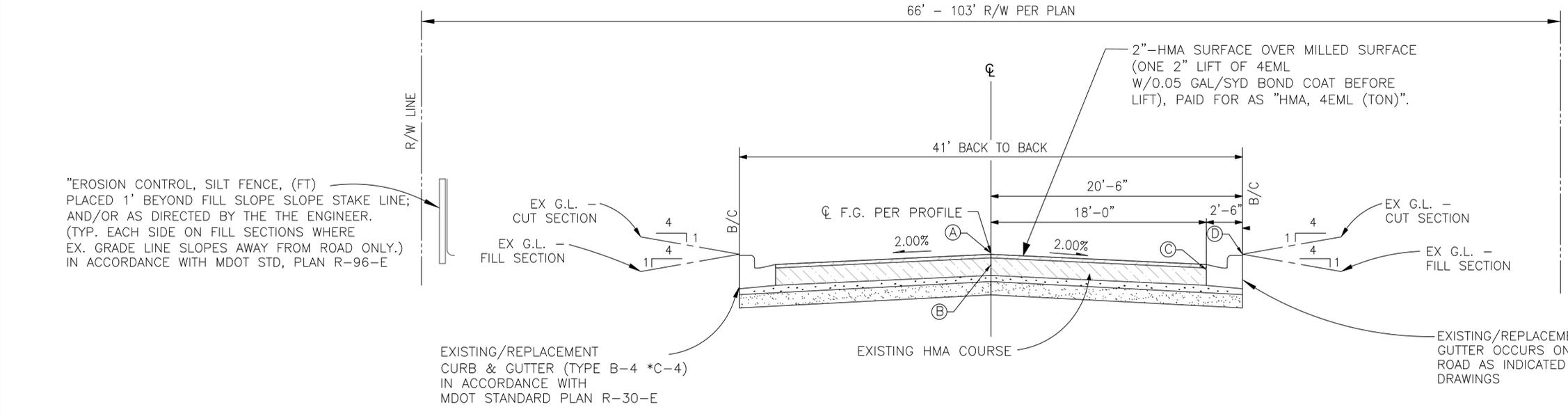
REMOVE ANY UNSUITABLE MATERIAL BELOW SAND SUBBASE AS DIRECTED BY THE ENGINEER AND BACKFILL WITH SUBGRADE UNDERCUTTING, TYPE III, PAID AS "SUBGRADE UNDERCUTTING, TYPE III (CYD)".

- NOTES:
- 1) SUBGRADE UNDERCUTTING MAY BE BACKFILLED WITH ONSITE HMA CRUSHING AND SHAPING MATERIAL AS DIRECTED BY THE ENGINEER

**\*NEW CURB & ROAD WIDENING AREA CROSS-SECTION**

APPLIES: BOTH SIDES OF ROAD STA 00+86 - STA 10+62 EAST SIDE OF ROAD STA 21+47 -STA 24+17

- LANDSCAPE RESTORATION NOTES:  
UPON PRIOR APPROVAL BY THE ENGINEER, AND UNLESS OTHERWISE DIRECTED, RESTORE ALL SLOPES WITH:  
"TOPSOIL SURFACE, FURN, 2 INCH (SYD)"  
"SEEDING MIXTURE THM (LB)"  
"SEEDING MIXTURE CR (LB)"  
"FERTILIZER, CHEMICAL NUTRIENT, CI A (LB)"  
-EXISTING GEOTEXTILE FABRIC, IF ENCOUNTERED, SHALL BE MAINTAINED.



"EROSION CONTROL, SILT FENCE, (FT) PLACED 1' BEYOND FILL SLOPE STAKE LINE; AND/OR AS DIRECTED BY THE THE ENGINEER. (TYP. EACH SIDE ON FILL SECTIONS WHERE EX. GRADE LINE SLOPES AWAY FROM ROAD ONLY.) IN ACCORDANCE WITH MDOT STD, PLAN R-96-E

EXISTING/REPLACEMENT CURB & GUTTER (TYPE B-4 \*C-4) IN ACCORDANCE WITH MDOT STANDARD PLAN R-30-E

EXISTING HMA COURSE

EXISTING/REPLACEMENT CURB AND GUTTER OCCURS ON EITHER SIDE OF THE ROAD AS INDICATED ON THE PLAN DRAWINGS

| REFERENCE POINT             | A             | B             | C      | D     |
|-----------------------------|---------------|---------------|--------|-------|
| DISTANCE FROM $\mathcal{C}$ | $\mathcal{C}$ | $\mathcal{C}$ | 18.0'  | 20.5' |
| RELATION TO PLAN GRADE      | P.G.          | -0.167'       | -0.36' | 0.62' |

**TYPICAL ASPHALT ROAD CROSS-SECTION B**

APPLIES: STA 29+15 - P.O.E. STA 47+50 (MILL & OVERLAY SECTION)

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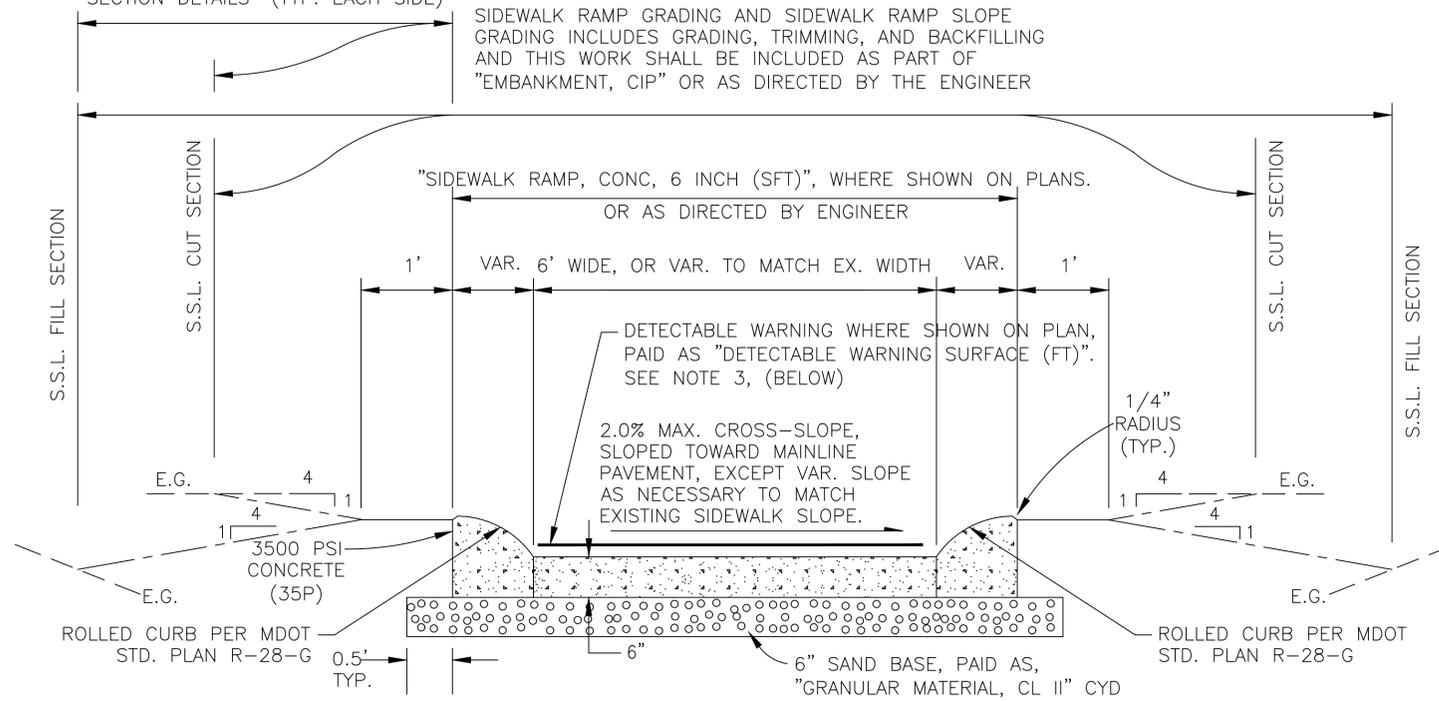
PROJECT  
**DECKER ROAD**

SHEET TITLE  
**TYPICAL CROSS SECTIONS**

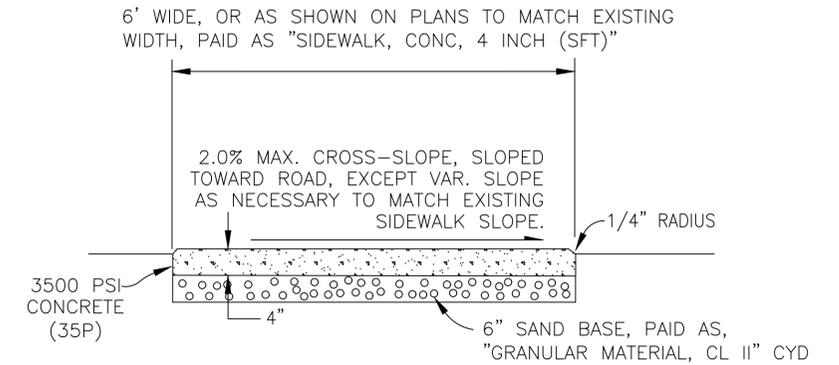
|              |                |          |                 |
|--------------|----------------|----------|-----------------|
| DESIGNED: BM | SCALE          | NO SCALE | SHEET NO.       |
| DRAWN: DH    | JOB NO. 18-274 |          | <b>11 OF 48</b> |

|    |    |                |          |
|----|----|----------------|----------|
| NO | BY | REVISION PER   | DATE     |
| 1  | BM | MDOT GI REVIEW | 12/16/21 |

SLOPE RESTORATION LIMITS. RESTORE SLOPE RESTORATION NOTE ON "TYPICAL CROSS SECTION DETAILS" (TYP. EACH SIDE)



**SIDEWALK RAMP DETAIL**



**SIDEWALK, CONCRETE, 4 INCH DETAIL**

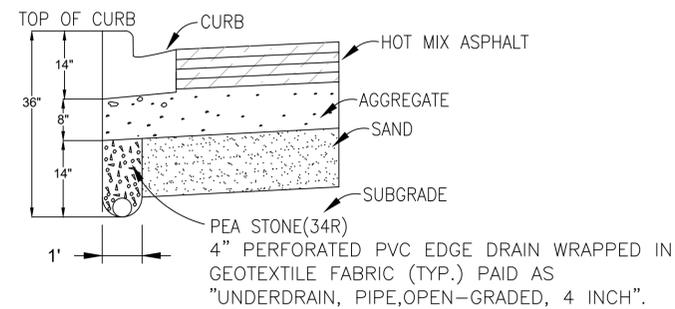
NOTE: SIDEWALK JOINTS PAID AS PART OF SIDEWALK PAY ITEM. LOCATION OF SIDEWALK JOINTS AND JOINT DETAILS SHALL BE IN ACCORDANCE WITH MDOT DETAIL R-29-H

**NOTES:**

1. SIDEWALK JOINTS PAID AS PART OF SIDEWALK PAY ITEM. LOCATION OF SIDEWALK JOINTS AND JOINT DETAILS SHALL BE IN ACCORDANCE WITH MDOT SPECIAL DETAILS.
2. SIDEWALK RAMPS CONSTRUCTED IN ACCORDANCE WITH MDOT STD. PLAN R-28-J AND THIS DETAIL.
3. DETECTABLE WARNING SURFACE, PAID AS, "DETECTABLE WARNING SURFACE (FT)", THE DETECTABLE WARNING SURFACE SHALL BE BRICK RED IN COLOR UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
4. CONTRACTOR SHALL USE EXCESS CRUSH AND SHAPE MATERIAL FROM ROAD AS BASE COURSE

**EDGE DRAIN NOTE:**

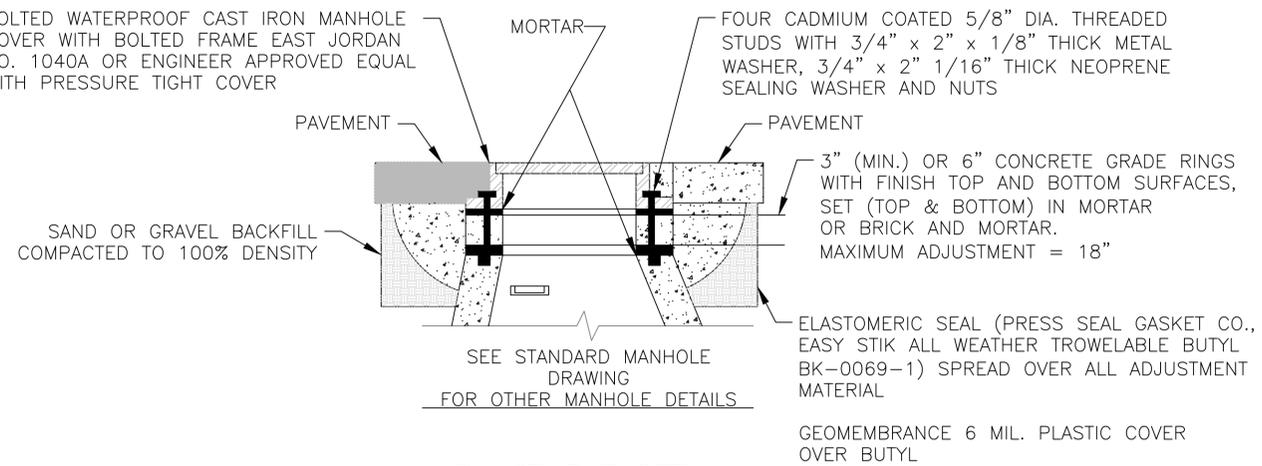
4" EDGE DRAIN ONLY UNDER NEWLY INSTALLED CURB ON BOTH SIDES OF ROAD. PROVIDE ADDITIONAL EDGE DRAIN AS DIRECTED BY ENGINEER DURING CONSTRUCTION.



**EDGE DRAIN DETAIL**

NO SCALE

BOLTED WATERPROOF CAST IRON MANHOLE COVER WITH BOLTED FRAME EAST JORDAN NO. 1040A OR ENGINEER APPROVED EQUAL WITH PRESSURE TIGHT COVER



**ADJUSTMENT DETAIL**

**MANHOLE TOPS WITHIN PAVEMENT AREAS**

NO SCALE

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PROJECT  
**DECKER ROAD**

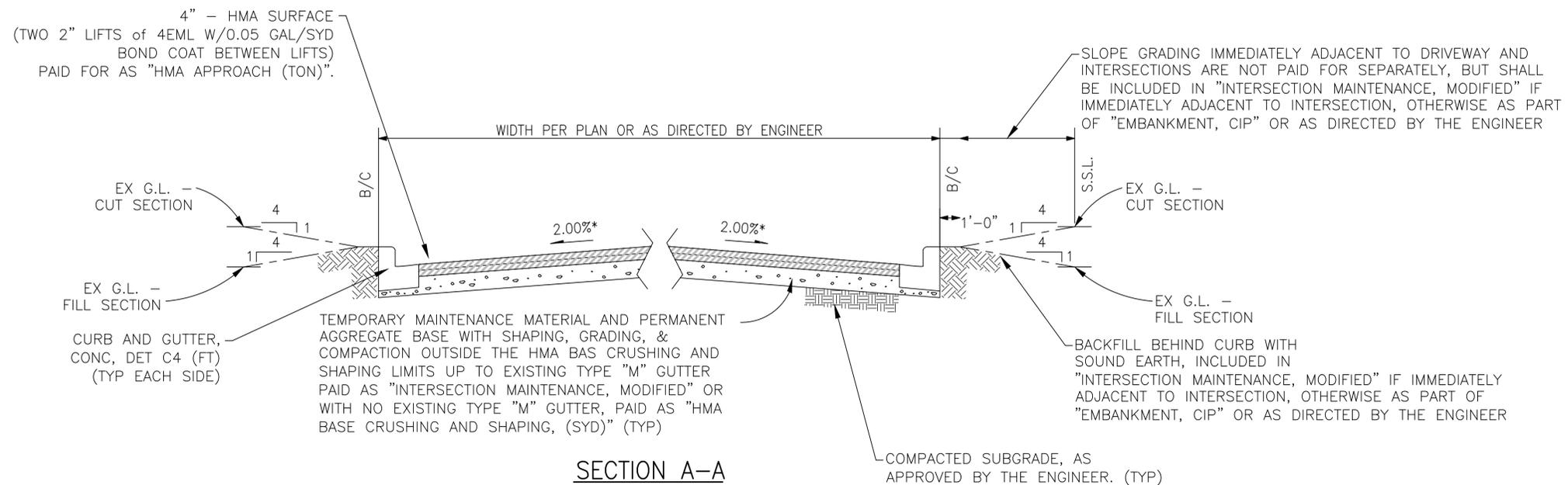
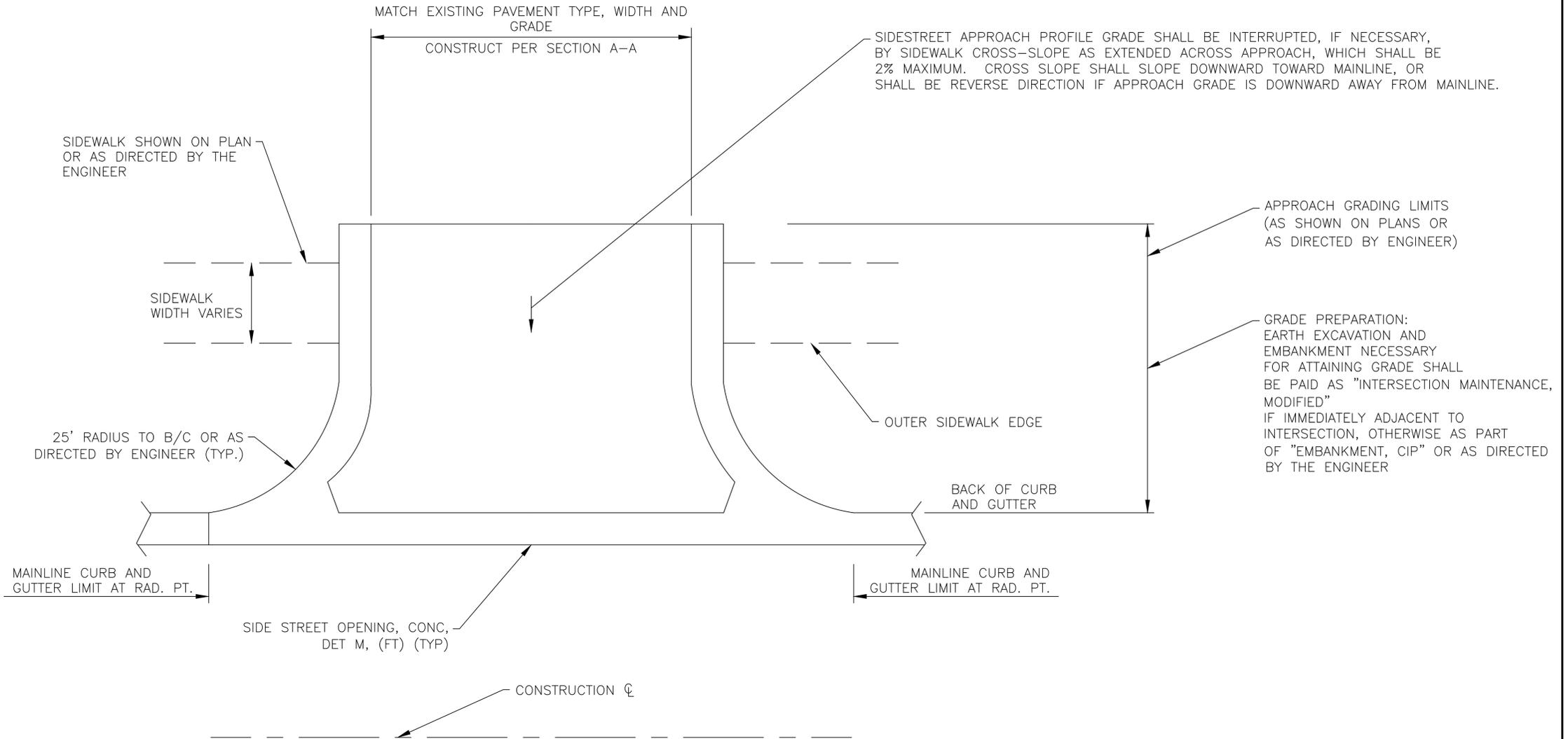
SHEET TITLE  
**CONSTRUCTION NOTES**

|              |                |          |                 |
|--------------|----------------|----------|-----------------|
| DESIGNED: BM | SCALE          | NO SCALE | SHEET NO.       |
| DRAWN: DH    | JOB NO. 18-274 |          | <b>12 OF 48</b> |

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

NOTES: (APPLY TO ALL ASPHALT SIDESTREETS AND COMMERCIAL DRIVES):

1. THE REMOVAL OF EXISTING HMA SHALL BE MEASURED AND PAID ACCORDING TO THE "PAVT, REM, SPECIAL (SYD)" PAY ITEM.
2. ALL PREPARATION WORK, INCLUDING EDGE TRIMMING, GRADING, EXCAVATION, AND EMBANKMENT SHALL BE INCLUDED IN THE PAY ITEM, "INTERSECTION MAINTENANCE, MODIFIED" IF IMMEDIATELY ADJACENT TO INTERSECTION, OTHERWISE AS PART OF "EMBANKMENT, CIP" OR AS DIRECTED BY THE ENGINEER.
3. MAINTENANCE MATERIAL AND RELATED GRADING IN AND AROUND THE IMMEDIATE DRIVEWAY OR INTERSECTION OUTWARDS OF HMA CRUSHING AND SHAPING LIMITS SHALL BE AS DIRECTED BY THE ENGINEER, TO MAINTAIN SIDE STREET TRAFFIC, COMMERCIAL DRIVEWAY TRAFFIC, AND PEDESTRIAN TRAFFIC. GRADING SHALL BE INCLUDED IN THE "INTERSECTION MAINTENANCE, MODIFIED" IF IMMEDIATELY ADJACENT TO INTERSECTION, OTHERWISE AS PART OF "EMBANKMENT, CIP" OR AS DIRECTED BY THE ENGINEER.
4. DRIVEWAY PROFILE GRADE SHALL BE STRAIGHT LINE GRADE BETWEEN MAINLINE PROPOSED BACK OF GUTTER OR EDGE OF PAVEMENT TO EXISTING AT MAINLINE UNLESS OTHERWISE SHOWN ON PLAN DETAIL, DRIVEWAY PROFILES, OR AS DIRECTED BY ENGINEER. DRIVEWAY PROFILE GRADE SHALL BE INTERRUPTED, IF NECESSARY, BY SIDEWALK CROSS-SLOPE AS SHOWN ON PLANS OR DIRECTED BY THE ENGINEER.
5. PROPOSED SIDEWALK IS SUSCEPTIBLE TO CRACKING. THEREFORE, ONCE IT HAS BEEN PLACED, OR IF IT IS EXISTING SIDEWALK, THE CONTRACTOR CANNOT PUT ANY EQUIPMENT OF ANY KIND ON IT, FOR ANY REASON, EVEN FOR TURF ESTABLISHMENT OR RESTORATION WORK OUTSIDE THE SIDEWALK. THE CONTRACTOR SHALL PLAN AND STAGE NECESSARY WORK OUTSIDE THE SIDEWALK TO PREVENT THE PLACEMENT OF ANY EQUIPMENT ON THE SIDEWALK, EXISTING OR NEW. CRACKED, CHIPPED, SPALLED, OR DAMAGED SIDEWALK, NEW OR EXISTING, SHALL NOT BE ACCEPTED AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

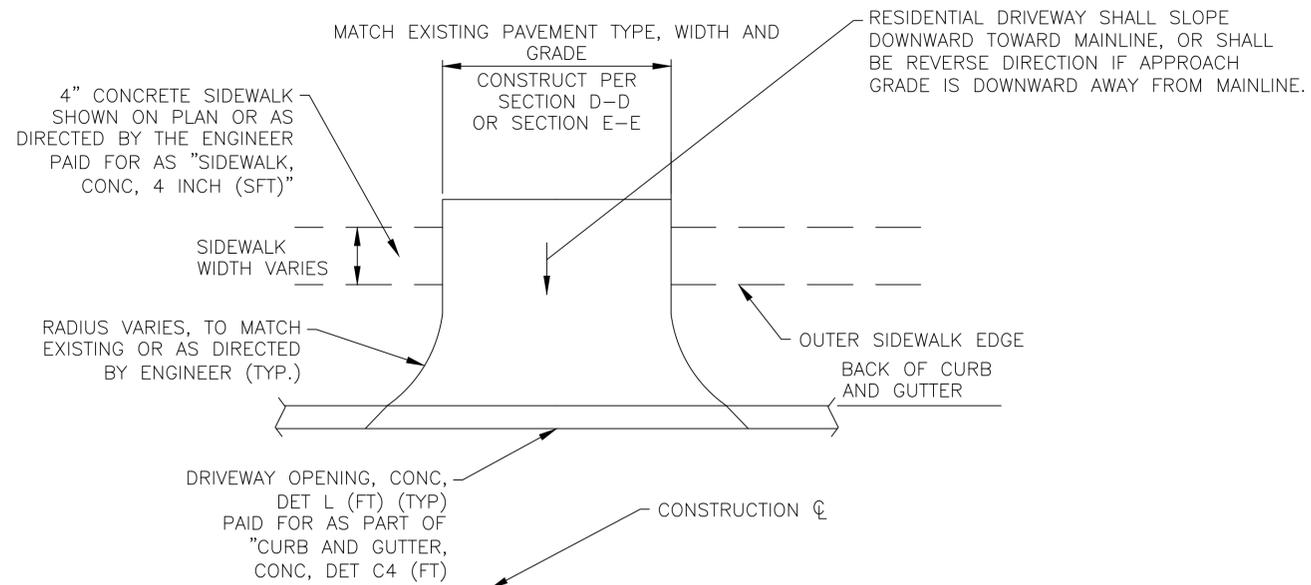


SECTION A-A  
\*CROWN VARIABLE PER STAKING BY ENGINEER  
**TYPICAL SIDESTREET APPROACH DETAIL**

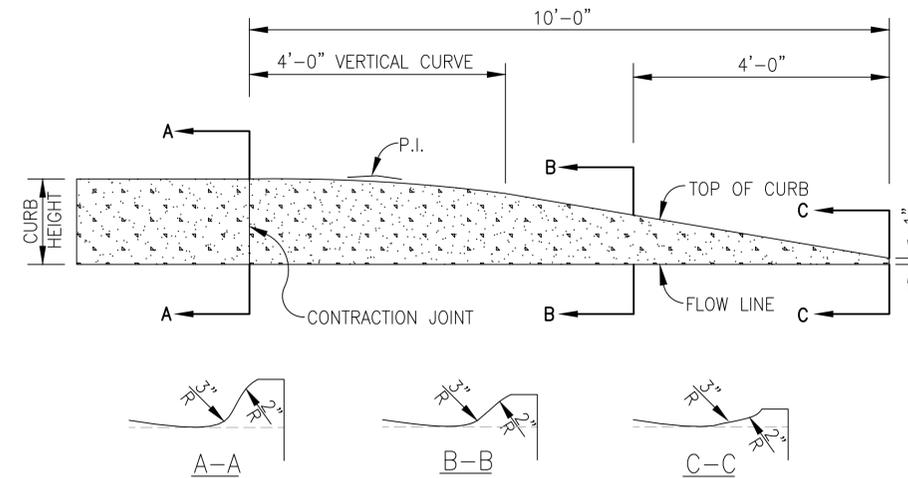
|  |                |          |                 |
|--|----------------|----------|-----------------|
| <b>BEBOSS Engineering</b><br>Engineers Surveyors Planners Landscape Architects<br>3121 E. GRAND RIVER AVE.<br>HOWELL, MI. 48843<br>800.246.6735 FAX 517.548.1670 |                |          |                 |
| PREPARED FOR<br><b>CITY OF WALLED LAKE</b><br>1499 E. WEST MAPLE<br>WALLED LAKE, MI 48390<br>(248) 624-4847  |                |          |                 |
| PROJECT<br><b>DECKER ROAD</b>  |                |          |                 |
| SHEET TITLE<br><b>CONSTRUCTION NOTES</b>   |                |          |                 |
| DESIGNED: BM   | SCALE          | NO SCALE | SHEET NO.       |
| DRAWN: DH  | JOB NO. 18-274 |          | <b>13 OF 48</b> |

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

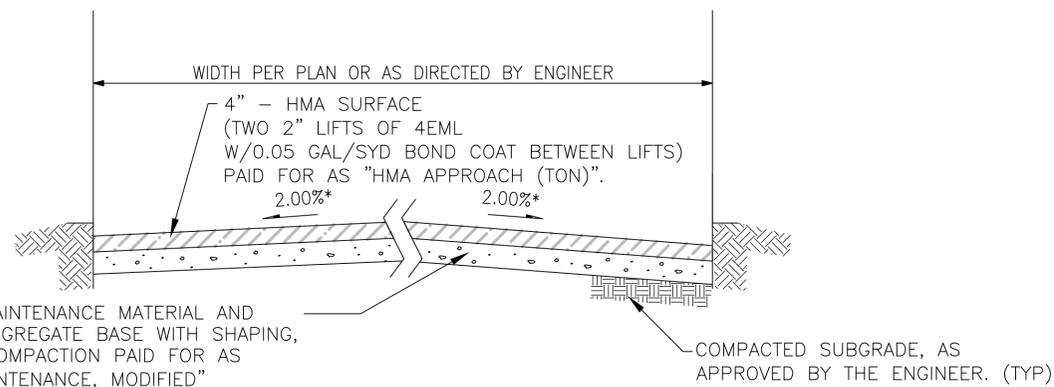




TYPICAL RESIDENTIAL DRIVE DETAIL

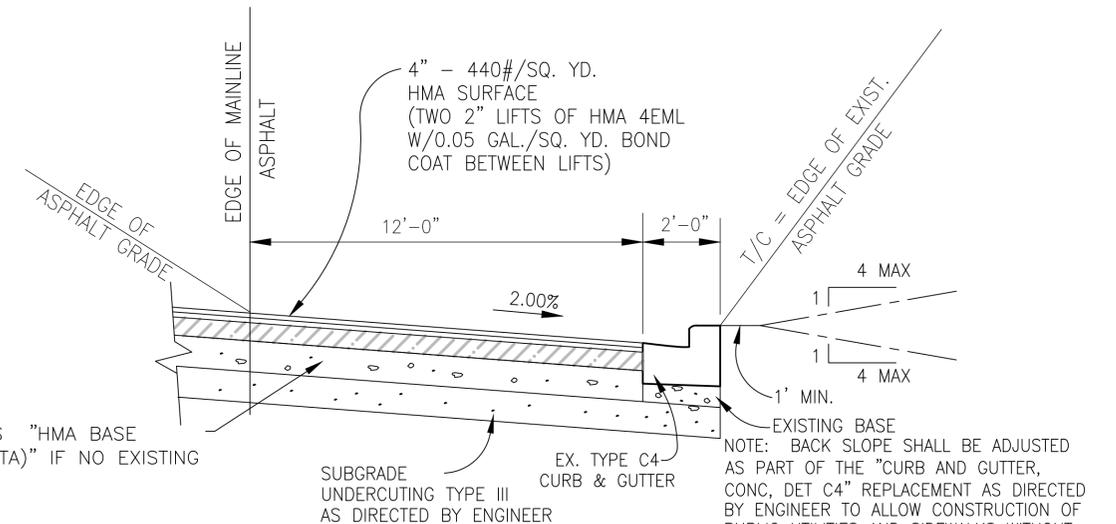


CONCRETE CURB AND GUTTER ENDINGS



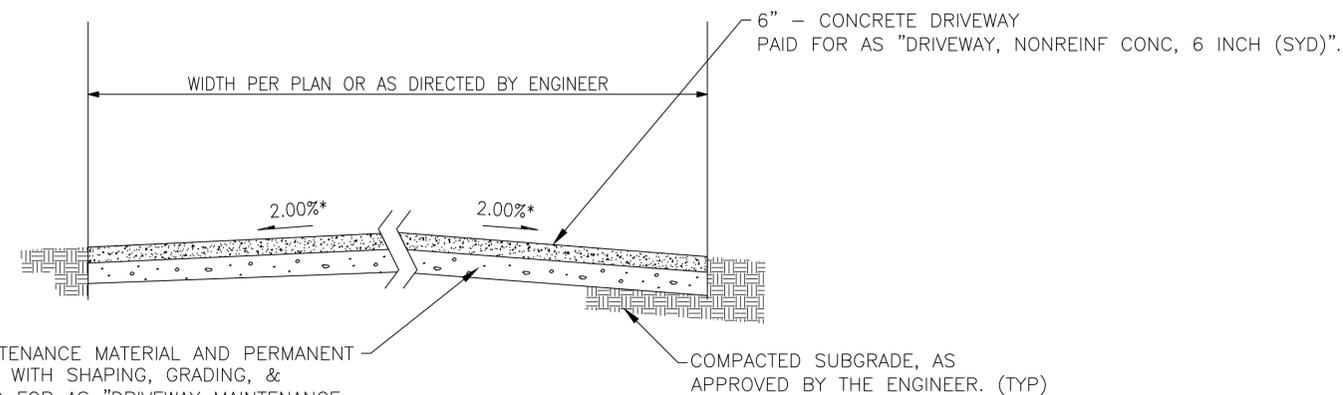
\*CROWN VARIABLE PER STAKING BY ENGINEER

SECTION D-D



\*SLOPE VARIABLE PER STAKING BY ENGINEER

STANDARD ACCEL/DECEL CROSS-SECTION



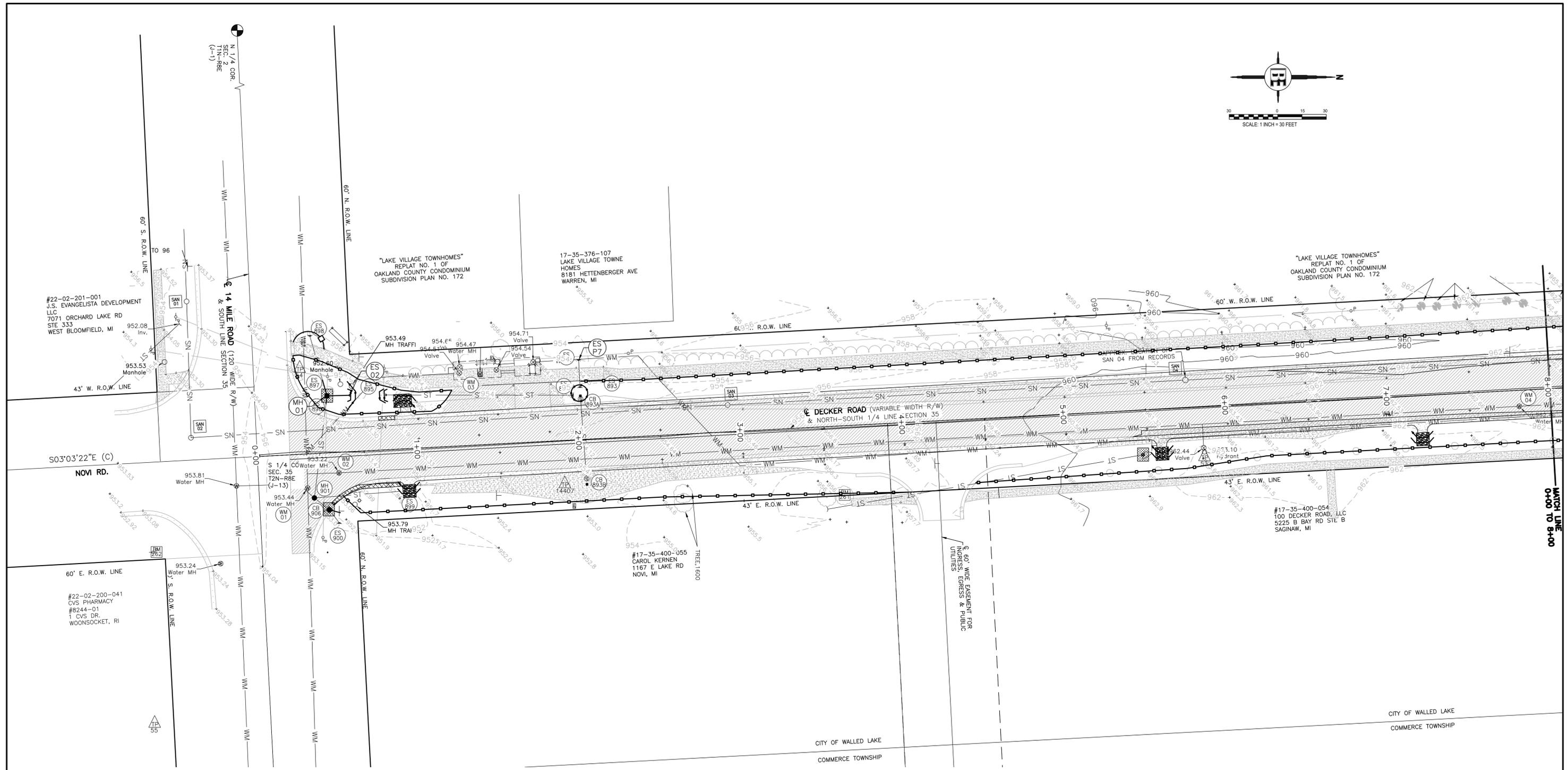
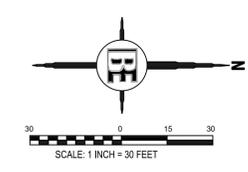
\*CROWN VARIABLE PER STAKING BY ENGINEER

SECTION E-E

NOTE FOR ACCEL/DECEL OUTSIDE HMA CRUSH AND SHAPE LIMITS:  
 IF ACCEL/DECEL LANE IS OUTSIDE HMA CRUSH AND SHAPE LIMITS,  
 OR OUTSIDE EXISTING TYPE "M" CURB OPENING, THEN REMOVE  
 PAVEMENT AS PAID BY "PAVT REM, MODIFIED" AND INSTALL,  
 GRADE AND/OR MAINTAIN 8" AGG BASE TO BE PAID AS "DRIVEWAY  
 MAINTENANCE, MODIFIED" AT DRIVEWAY OR "INTERSECTION  
 MAINTENANCE, MODIFIED" AT INTERSECTION.

|   |                |          |                 |
|---|----------------|----------|-----------------|
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| PREPARED FOR<br><b>CITY OF WALLED LAKE</b><br>1499 E. WEST MAPLE<br>WALLED LAKE, MI 48390<br>(248) 624-4847 |                |          |                 |
| PROJECT<br><b>DECKER ROAD</b>   |                |          |                 |
| SHEET TITLE<br><b>CONSTRUCTION NOTES</b>  |                |          |                 |
| DESIGNED: BM  | SCALE          | NO SCALE | SHEET NO.       |
| DRAWN: DH   | JOB NO. 18-274 |          | <b>15 OF 48</b> |

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |



| SOIL EROSION AND SEDIMENTATION—THIS SHEET                    |      |
|--|------|
| PAY ITEM   | QTY  |
| EROSION CONTROL, SILT FENCE (FT)                             | 1783 |
| EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | 3    |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                                |
|--|--|--------------------------------|
| KEY  | PAY ITEM                                 | LOCATION                       |
| PERMANENT                                    |  |                                |
| △  | FERTILIZER, CHEMICAL NUTRIENT, CL A (LB) | REFER TO TYPICAL CROSS SECTION |
| △  | MULCH (SYD)                              | AS DIRECTED BY ENGINEER        |
| △  | SEEDING, MIXTURE CR (LB)                 | REFER TO TYPICAL CROSS SECTION |
| △  | SEEDING, MIXTURE THM (LB)                | REFER TO TYPICAL CROSS SECTION |
| △  | TOPSOIL SURFACE, FURN, 2 INCH            | REFER TO TYPICAL CROSS SECTION |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                     |
|--|--|---------------------|
| KEY  | PAY ITEM   | LOCATION            |
| TEMPORARY                                    |  |                     |
| —○—  | EROSION CONTROL, SILT FENCE (FT)                             | REFER TO SESC PLANS |
| ■  | EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | REFER TO SESC PLANS |

\* PROPOSED CB AND MH DETAILS  
—SEE STORM PROFILE SHEETS  
SHEET# 40 AND 41

\*\* REFER TO SOIL EROSION  
SEDIMENTATION CONTROL MEASURES  
DETAIL MDOT R-96-E (TYP) TO ALL  
ESC SHEETS

|              |                 |           |
|--------------|-----------------|-----------|
| DESIGNED: BM | SCALE: 1" = 30' | SHEET NO. |
| DRAWN: DH    | JOB NO. 18-274  | 16 OF 48  |

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PREPARED FOR

## CITY OF WALLED LAKE

1499 E. WEST MAPLE  
WALLED LAKE, MI. 48390  
(248) 624-4847

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PROJECT

## DECKER ROAD

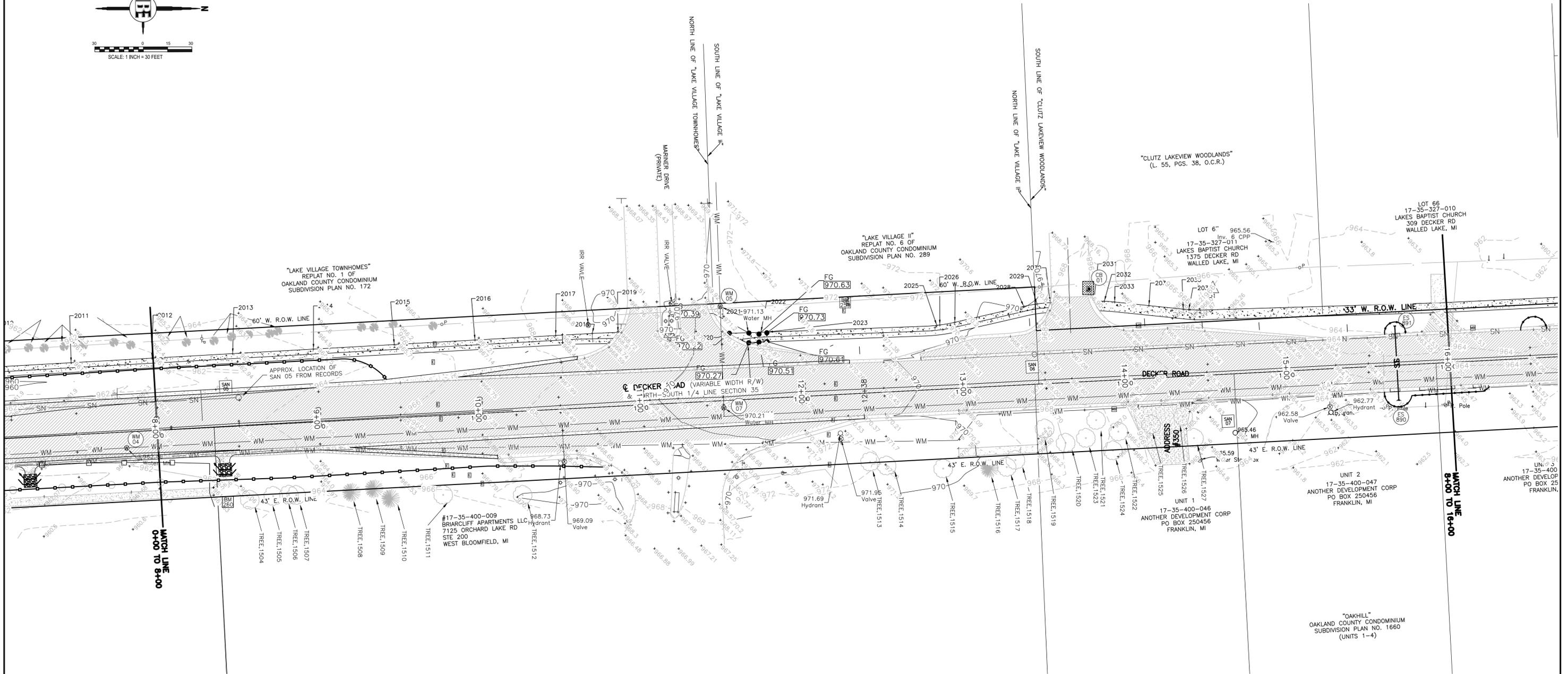
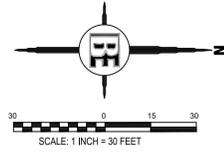
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SHEET TITLE

## SESC 1

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|              |                 |           |
|--------------|-----------------|-----------|
| DESIGNED: BM | SCALE: 1" = 30' | SHEET NO. |
| DRAWN: DH    | JOB NO. 18-274  | 16 OF 48  |



| SOIL EROSION AND SEDIMENTATION—THIS SHEET                    |     |
|--|-----|
| PAY ITEM   | QTY |
| EROSION CONTROL, SILT FENCE (FT)                             | 527 |
| EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | 1   |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                     |
|--|--|---------------------|
| KEY  | PAY ITEM   | LOCATION            |
| TEMPORARY                                    |  |                     |
|  | EROSION CONTROL, SILT FENCE (FT)                             | REFER TO SESC PLANS |
|  | EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | REFER TO SESC PLANS |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                                |
|--|--|--------------------------------|
| KEY  | PAY ITEM                                 | LOCATION                       |
| PERMANENT                                    |  |                                |
|  | FERTILIZER, CHEMICAL NUTRIENT, CL A (LB) | REFER TO TYPICAL CROSS SECTION |
|  | MULCH (SYD)                              | AS DIRECTED BY ENGINEER        |
|  | SEEDING, MIXTURE CR (LB)                 | REFER TO TYPICAL CROSS SECTION |
|  | SEEDING, MIXTURE THM (LB)                | REFER TO TYPICAL CROSS SECTION |
|  | TOPSOIL SURFACE, FURN, 2 INCH            | REFER TO TYPICAL CROSS SECTION |

\* PROPOSED CB AND MH DETAILS  
 -SEE STORM PROFILE SHEETS  
 SHEET# 40 AND 41  
 \*\* REFER TO SOIL EROSION  
 SEDIMENTATION CONTROL MEASURES  
 DETAIL MDOT R-96-E (TYP) TO ALL  
 ESC SHEETS

|           |                |                |
|-----------|----------------|----------------|
| DESIGNED: | SCALE 1" = 30' | SHEET NO.      |
| BY:       | DATE           | 17 OF 48       |
| NO.       | REVISION PER   |                |
| 1         | MDOT G REVIEW  | 12/16/21       |
|           | REVISION PER   | DATE           |
|           | DRAWN: KRJ     | JOB NO. 18-274 |

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 (248) 624-4847

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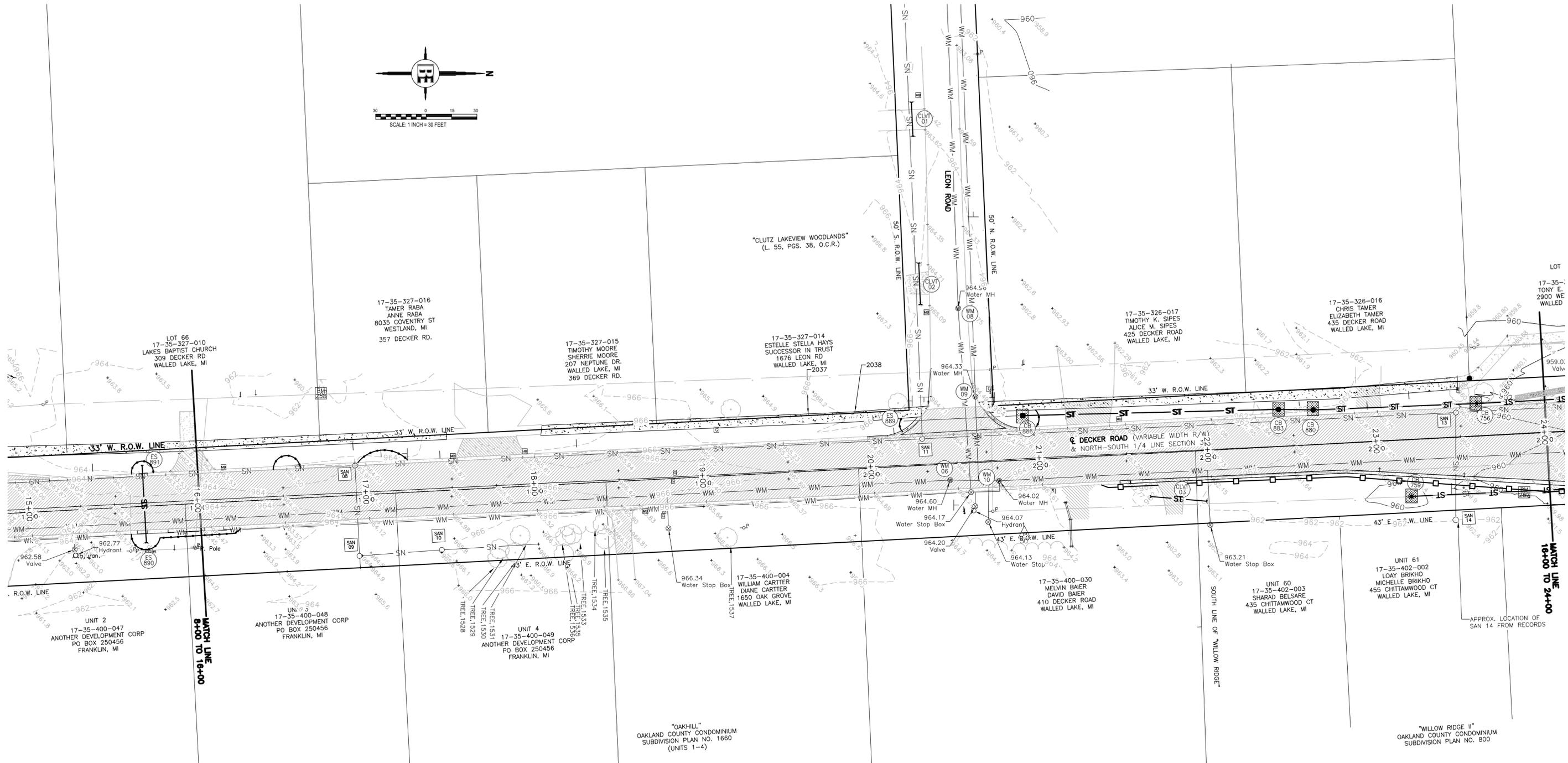
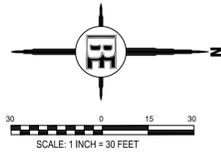
PROJECT  
**DECKER ROAD**

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SHEET TITLE  
**SESC 2**

---

DESIGNED: SCALE 1" = 30' SHEET NO.  
 17 OF 48



| SOIL EROSION AND SEDIMENTATION—THIS SHEET                    |     |
|--|-----|
| PAY ITEM   | QTY |
| EROSION CONTROL, SILT FENCE (FT)                             | 353 |
| EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | 5   |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                     |
|--|--|---------------------|
| KEY  | PAY ITEM   | LOCATION            |
| TEMPORARY                                    |  |                     |
|  | EROSION CONTROL, SILT FENCE (FT)                             | REFER TO SESC PLANS |
|  | EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | REFER TO SESC PLANS |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                                |
|--|--|--------------------------------|
| KEY  | PAY ITEM                                 | LOCATION                       |
| PERMANENT                                    |  |                                |
|  | FERTILIZER, CHEMICAL NUTRIENT, CL A (LB) | REFER TO TYPICAL CROSS SECTION |
|  | MULCH (SYD)                              | AS DIRECTED BY ENGINEER        |
|  | SEEDING, MIXTURE CR (LB)                 | REFER TO TYPICAL CROSS SECTION |
|  | SEEDING, MIXTURE THM (LB)                | REFER TO TYPICAL CROSS SECTION |
|  | TOPSOIL SURFACE, FURN, 2 INCH            | REFER TO TYPICAL CROSS SECTION |

\* PROPOSED CB AND MH DETAILS  
—SEE STORM PROFILE SHEETS  
SHEET# 40 AND 41

\*\* REFER TO SOIL EROSION  
SEDIMENTATION CONTROL MEASURES  
DETAIL MDOT R-96-E (TYP) TO ALL  
ESC SHEETS

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT CI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

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WALLED LAKE, MI 48390  
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PROJECT

**DECKER ROAD**

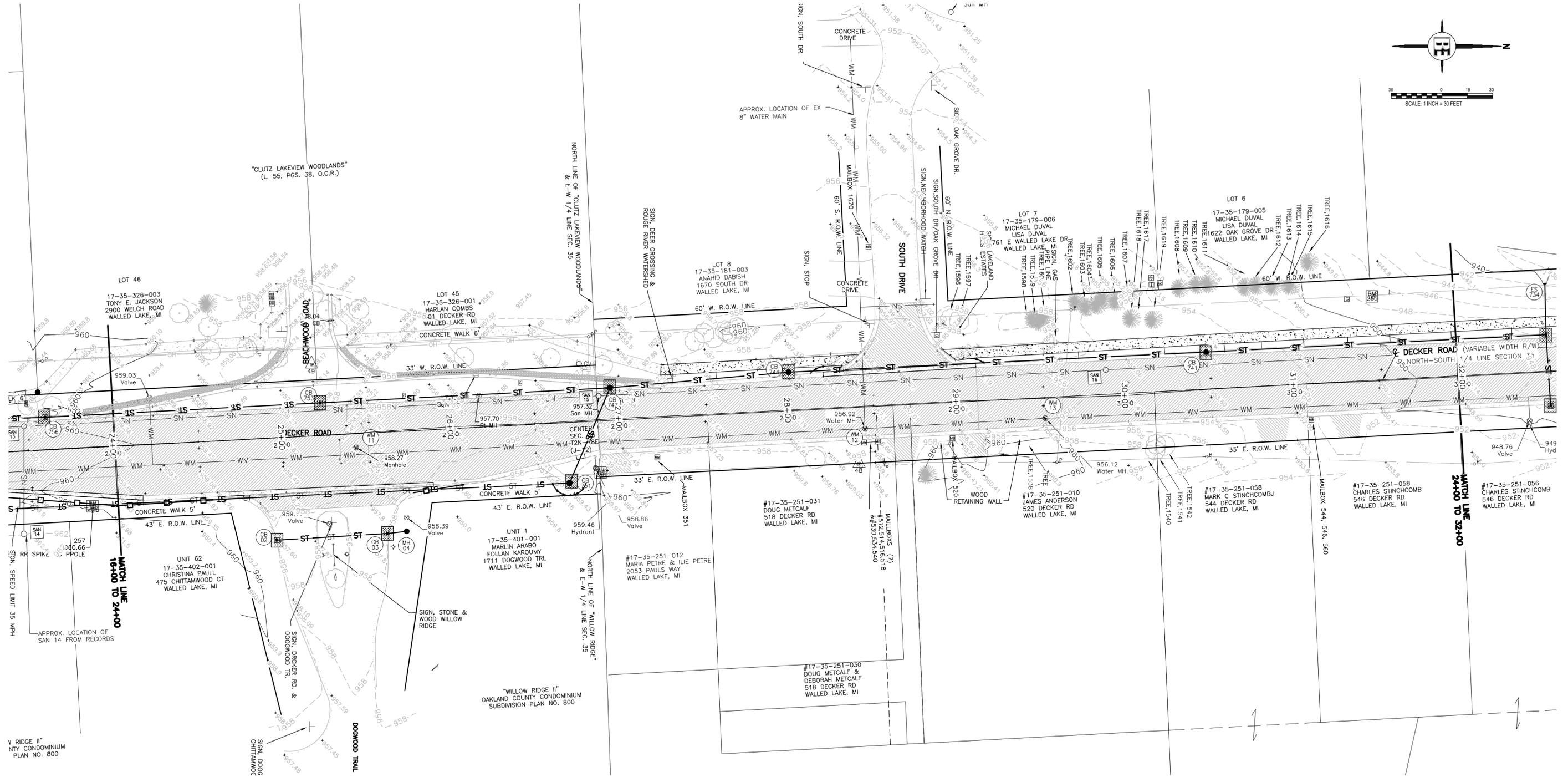
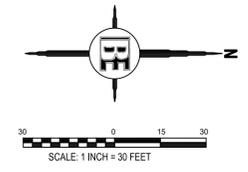
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SHEET TITLE

**SESC 3**

---

|           |                |                 |
|-----------|----------------|-----------------|
| DESIGNED: | SCALE 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274 | <b>18 OF 48</b> |



| SOIL EROSION AND SEDIMENTATION—THIS SHEET                    |     |
|--|-----|
| PAY ITEM   | QTY |
| EROSION CONTROL, SILT FENCE (FT)                             | 148 |
| EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | 7   |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                     |
|--|--|---------------------|
| KEY  | PAY ITEM   | LOCATION            |
| TEMPORARY                                    |  |                     |
|  | EROSION CONTROL, SILT FENCE (FT)                             | REFER TO SESC PLANS |
|  | EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | REFER TO SESC PLANS |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                                |
|--|--|--------------------------------|
| KEY  | PAY ITEM                                 | LOCATION                       |
| PERMANENT                                    |  |                                |
|  | FERTILIZER, CHEMICAL NUTRIENT, CL A (LB) | REFER TO TYPICAL CROSS SECTION |
|  | MULCH (SYD)                              | AS DIRECTED BY ENGINEER        |
|  | SEEDING, MIXTURE CR (LB)                 | REFER TO TYPICAL CROSS SECTION |
|  | SEEDING, MIXTURE THM (LB)                | REFER TO TYPICAL CROSS SECTION |
|  | TOPSOIL SURFACE, FURN, 2 INCH            | REFER TO TYPICAL CROSS SECTION |

\* PROPOSED CB AND MH DETAILS -SEE STORM PROFILE SHEETS SHEET# 40 AND 41

\*\* REFER TO SOIL EROSION SEDIMENTATION CONTROL MEASURES DETAIL MDOT R-96-E (TYP) TO ALL ESC SHEETS

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WALLED LAKE, MI 48390  
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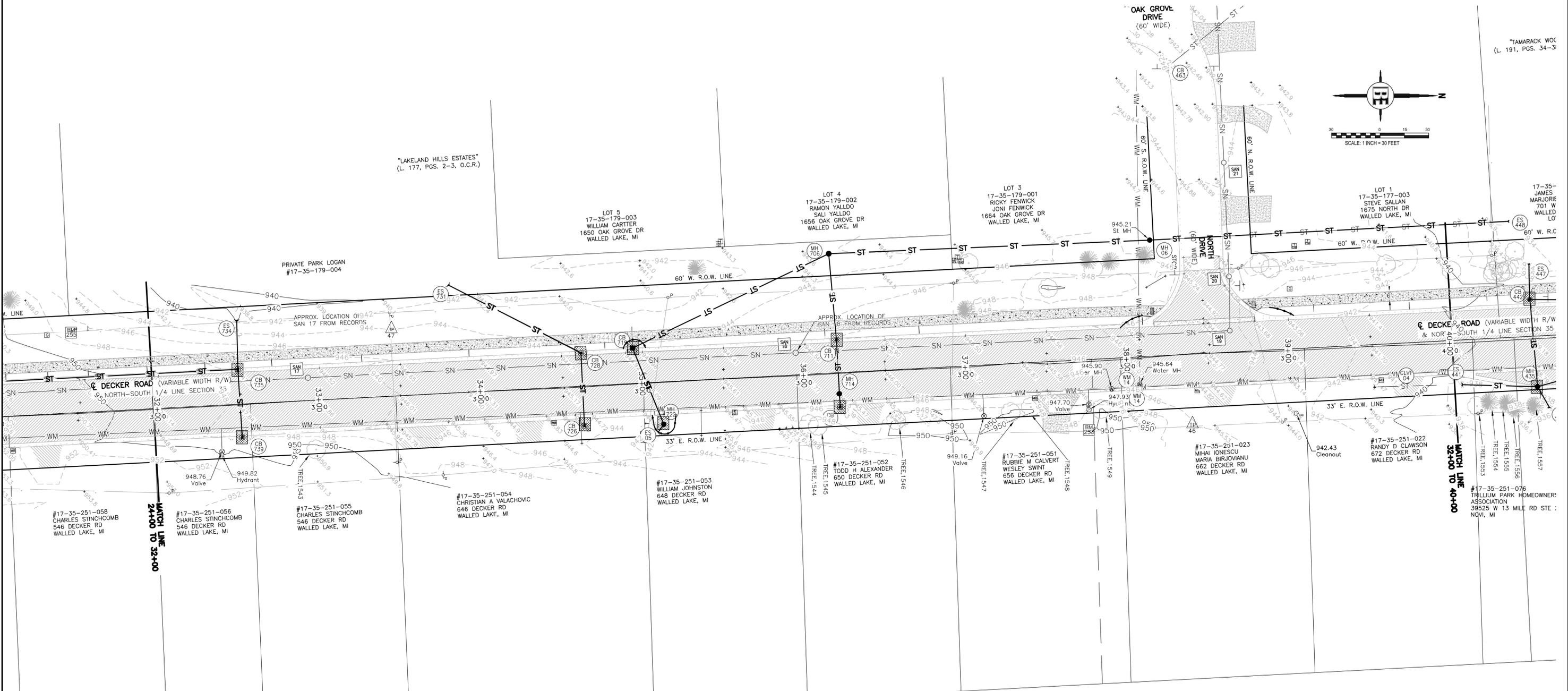
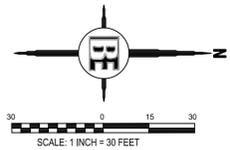
PROJECT  
**DECKER ROAD**

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SHEET TITLE  
**SESC 4**

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|           |                 |                 |
|-----------|-----------------|-----------------|
| DESIGNED: | SCALE: 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274  | <b>19 OF 48</b> |



| SOIL EROSION AND SEDIMENTATION—THIS SHEET                    |     |
|--|-----|
| PAY ITEM   | QTY |
| EROSION CONTROL, SILT FENCE (FT)                             | 83  |
| EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | 8   |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                     |
|--|--|---------------------|
| KEY  | PAY ITEM   | LOCATION            |
| TEMPORARY                                    |  |                     |
|  | EROSION CONTROL, SILT FENCE (FT)                             | REFER TO SESC PLANS |
|  | EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | REFER TO SESC PLANS |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                                |
|--|--|--------------------------------|
| KEY  | PAY ITEM                                 | LOCATION                       |
| PERMANENT                                    |  |                                |
|  | FERTILIZER, CHEMICAL NUTRIENT, CL A (LB) | REFER TO TYPICAL CROSS SECTION |
|  | MULCH (SYD)                              | AS DIRECTED BY ENGINEER        |
|  | SEEDING, MIXTURE CR (LB)                 | REFER TO TYPICAL CROSS SECTION |
|  | SEEDING, MIXTURE THM (LB)                | REFER TO TYPICAL CROSS SECTION |
|  | TOPSOIL SURFACE, FURN, 2 INCH            | REFER TO TYPICAL CROSS SECTION |

\* PROPOSED CB AND MH DETAILS  
—SEE STORM PROFILE SHEETS  
SHEET# 40 AND 41

\*\* REFER TO SOIL EROSION  
SEDIMENTATION CONTROL MEASURES  
DETAIL MDOT R-96-E (TYP) TO ALL  
ESC SHEETS

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

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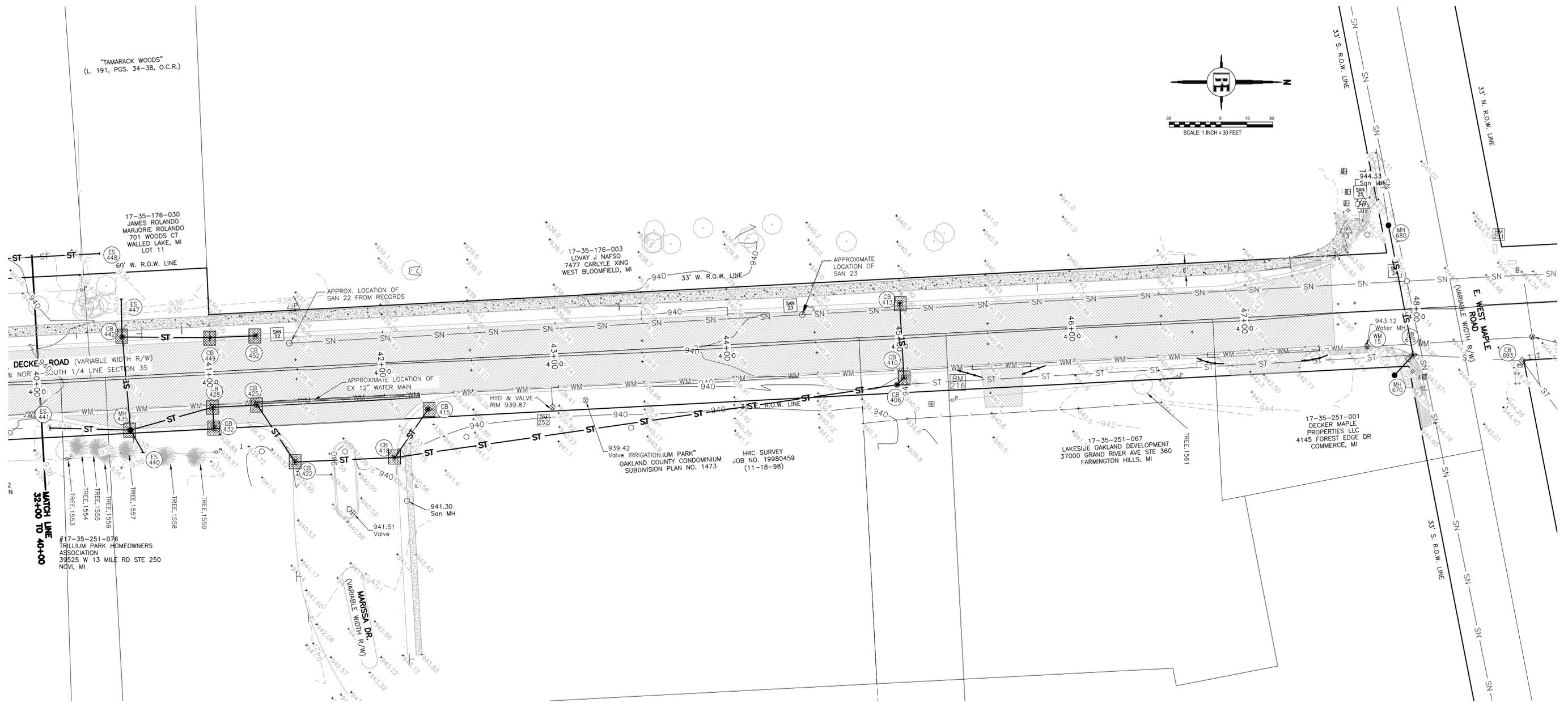
PROJECT  
**DECKER ROAD**

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SHEET TITLE  
**SESC 5**

---

|           |                |                 |
|-----------|----------------|-----------------|
| DESIGNED: | SCALE 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274 | <b>20 OF 48</b> |



| SOIL EROSION AND SEDIMENTATION—THIS SHEET                    |     |
|--|-----|
| PAY ITEM   | QTY |
| EROSION CONTROL, SILT FENCE (FT)                             | 61  |
| EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | 12  |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                     |
|--|--|---------------------|
| KEY  | PAY ITEM   | LOCATION            |
| TEMPORARY                                    |  |                     |
| —□—  | EROSION CONTROL, SILT FENCE (FT)                             | REFER TO SESC PLANS |
| ■  | EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE (EA) | REFER TO SESC PLANS |

| SOIL EROSION AND SEDIMENTATION CONTROL SHEET |  |                                |
|--|--|--------------------------------|
| KEY  | PAY ITEM                                 | LOCATION                       |
| PERMANENT                                    |  |                                |
| △  | FERTILIZER, CHEMICAL NUTRIENT, CL A (LB) | REFER TO TYPICAL CROSS SECTION |
| △  | MULCH (SYD)                              | AS DIRECTED BY ENGINEER        |
| △  | SEEDING, MIXTURE CR (LB)                 | REFER TO TYPICAL CROSS SECTION |
| △  | SEEDING, MIXTURE THM (LB)                | REFER TO TYPICAL CROSS SECTION |
| △  | TOPSOIL SURFACE, FURN, 2 INCH            | REFER TO TYPICAL CROSS SECTION |

\* PROPOSED CB AND MH DETAILS  
—SEE STORM PROFILE SHEETS  
SHEET# 40 AND 41

\*\* REFER TO SOIL EROSION  
SEDIMENTATION CONTROL MEASURES  
DETAIL MDOT R-96-E (TYP) TO ALL  
ESC SHEETS

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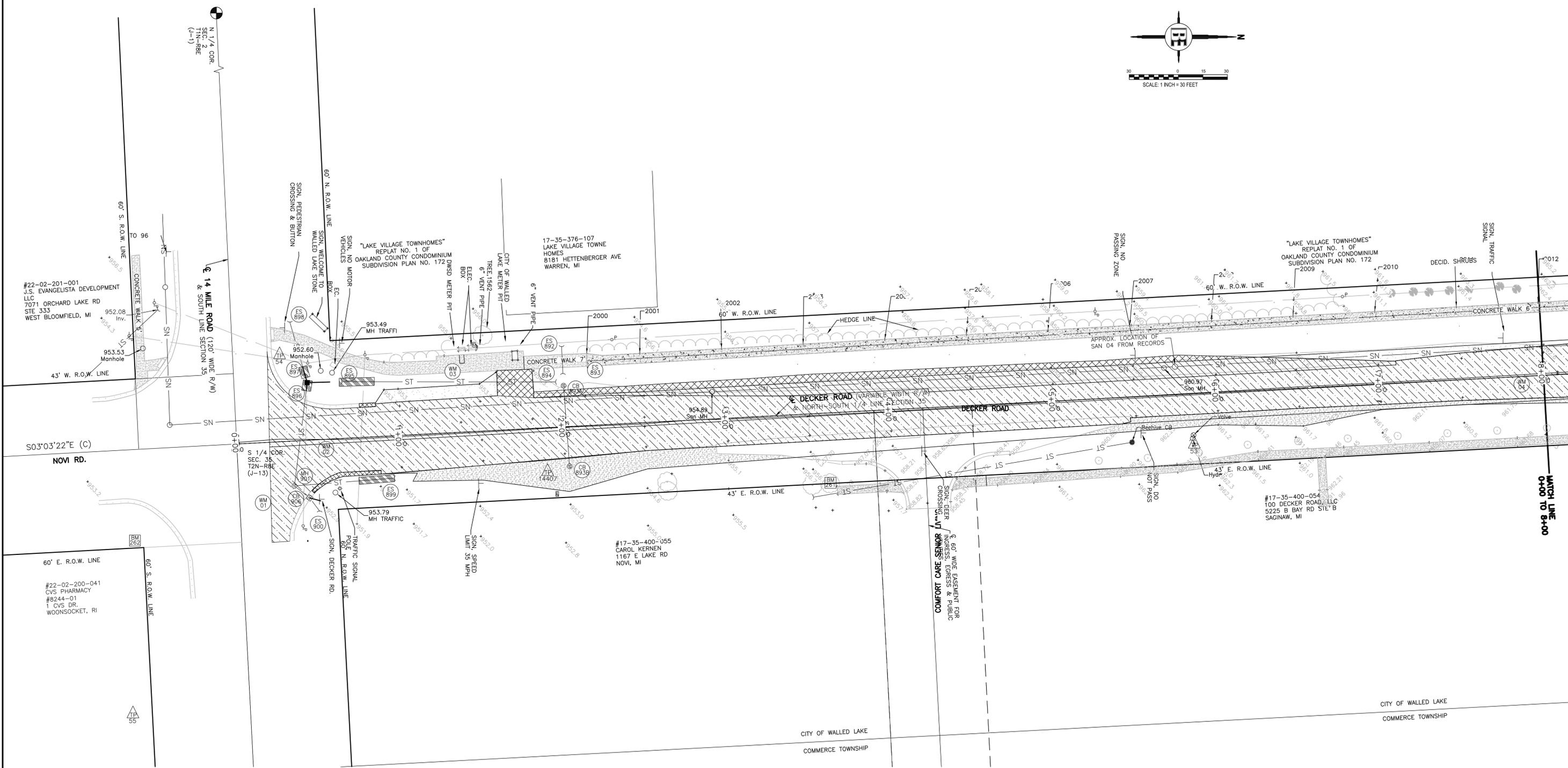
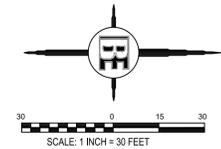
PROJECT  
**DECKER ROAD**

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SHEET TITLE  
**SESC 6**

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|           |                |                 |
|-----------|----------------|-----------------|
| DESIGNED: | SCALE 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274 | <b>21 OF 48</b> |



| REMOVAL QUANTITIES STA. 0+00 TO 8+00 |      |
|--------------------------------------|------|
| SEWER, REM, LESS THAN 24 INCH (EA)   | 76   |
| CURB AND GUTTER REMOVAL (FT)         | 55   |
| _PAVT, REM, MODIFIED (SYD)           | 230  |
| EMBANKMENT, CIP (CYD)                | 615  |
| EXCAVATION, EARTH (CYD)              | 328  |
| HMA BASE CRUSHING AND SHAPING (SYD)  | 2770 |
| COLD MILLING HMA SURFACE (SYD)       | 404  |

**NOTE:**  
 FILLING AREA BETWEEN PROPOSED TOP OF CURB AND EXISTING EDGE OF SIDEWALK, FROM STA. 2+20 TO 8+00, PAID FOR AS "EMBANKMENT, CIP".

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Engineers Surveyors Planners Landscape Architects

3121 E. GRAND RIVER AVE.  
HOWELL, MI. 48843  
800.246.6735 FAX 517.548.1670

---

PREPARED FOR  
**CITY OF WALLED LAKE**  
 1499 E. WEST MAPLE  
 WALLED LAKE, MI 48390  
 (248) 624-4847

---

PROJECT  
**DECKER ROAD**

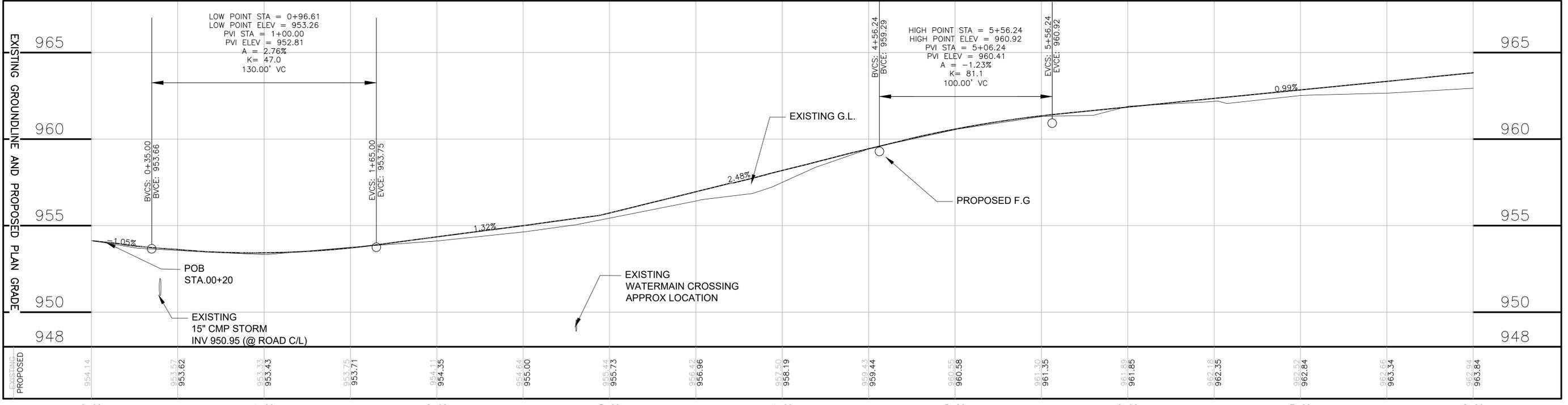
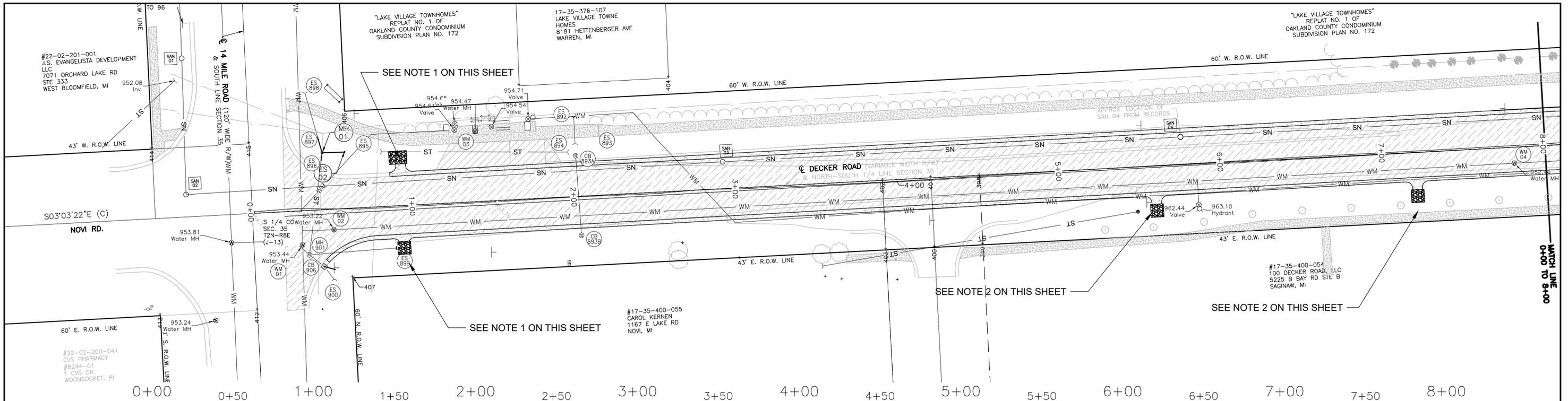
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SHEET TITLE  
**REMOVAL 1**

---

|              |                |                 |
|--------------|----------------|-----------------|
| DESIGNED: BM | SCALE 1" = 30' | SHEET NO.       |
| DRAWN: DH    | JOB NO. 18-274 | <b>22 OF 48</b> |

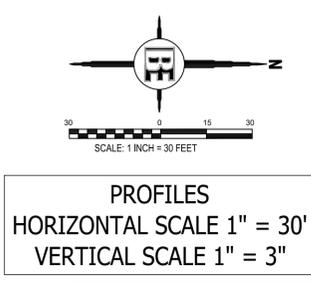
| NO | BY | REVISION PER   | DATE     |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |



PROPOSED QUANTITIES STA 0+20 TO 8+00

|                                       |      |     |
|---------------------------------------|------|-----|
| GRANULAR MATERIAL, CL II              | 206  | CYD |
| AGGREGATE BASE, 8 INCH                | 618  | SYD |
| GEOTEXTILE, STABILIZATION             | 79   | SYD |
| GEOTEXTILE, STABILIZATION NON-WOVEN   | 32   | SYD |
| CULV END SECT, 12"                    | 2    | EA  |
| CULV END SECT, 18"                    | 1    | EA  |
| CULV, CL E, 18 INCH                   | 15   | FT  |
| SEWER, CL E, 12 INCH, TR DET B        | 10   | FT  |
| SEWER, CL E, 18 INCH, TR DET B        | 10   | FT  |
| DR STRUCTURE COVER, TYPE B            | 1    | EA  |
| DR STRUCTURE, 48 INCH DIA             | 1    | EA  |
| UNDERDRAIN, PIPE, OPEN-GRADED, 4 INCH | 1641 | FT  |
| HMA APPROACH                          | 26   | TON |
| HMA, 4EML                             | 708  | TON |
| CURB AND GUTTER, CONC, DET B3         | 55   | FT  |
| CURB AND GUTTER, CONC, DET C4         | 1158 | FT  |
| DRIVEWAY OPENING, CONC, DET M         | 483  | FT  |
| SPILLWAY, CONC                        | 17   | FT  |
| RIPRAP, PLAIN                         | 32   | SYD |

- NOTES:
- 1) MDOT R-35-E DETAIL 3. SPILLWAY PAID FOR AS "SPILLWAY, CONC (FT)". RIP RAP PAID FOR AS "RIPRAP, PLAIN (SYD)" & "\_GEOTEXTILE, STABILIZATION, NON-WOVEN (SYD)".
  - 2) MDOT R-35-E DETAIL 1. SPILLWAY PAID FOR AS "SPILLWAY, CONC (FT)". RIP RAP PAID FOR AS "RIPRAP, PLAIN (SYD)" & "\_GEOTEXTILE, STABILIZATION, NON-WOVEN (SYD)".
  - 3) MDOT R-35-E DETAIL 1. SPILLWAY PAID FOR AS "SPILLWAY, CONC (FT)". RIP RAP PAID FOR AS "RIPRAP, GROUDED(SYD)" & "\_GEOTEXTILE, STABILIZATION, NON-WOVEN (SYD)".



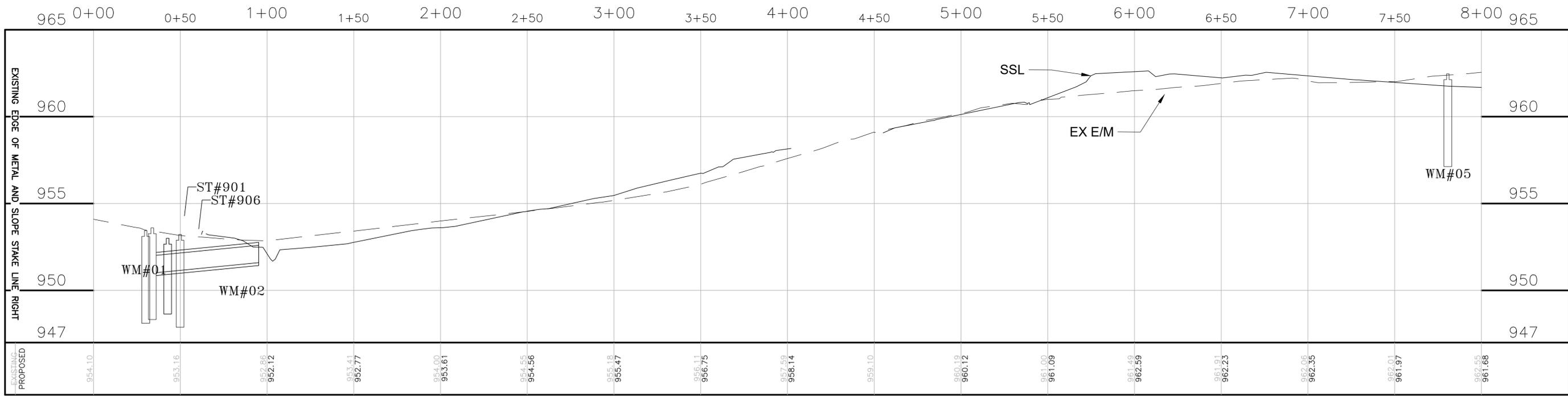
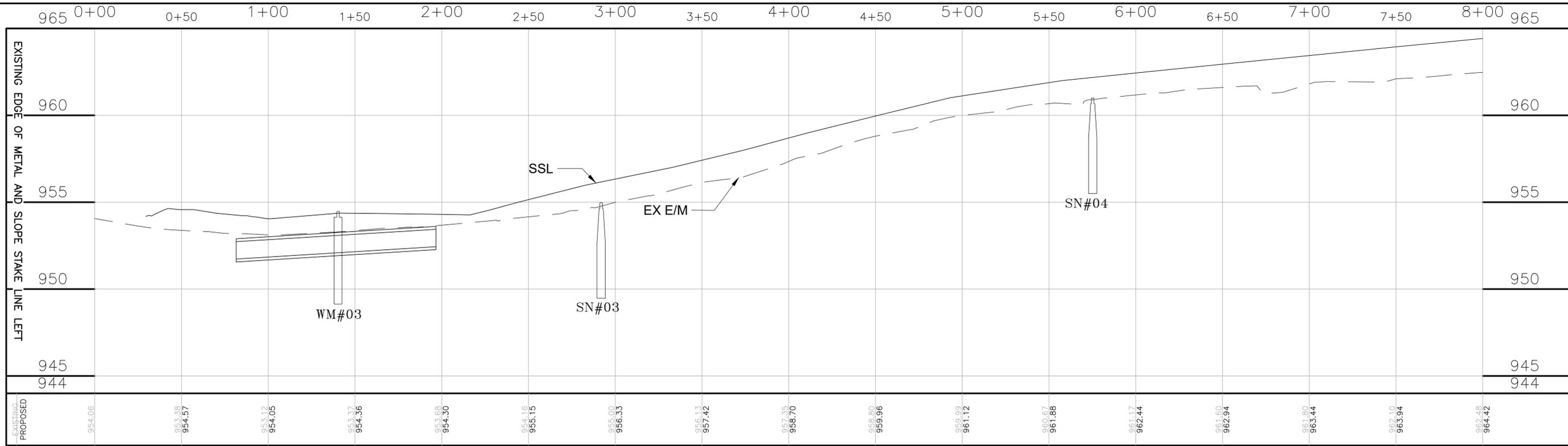
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PREPARED FOR  
**CITY OF WALLED LAKE**  
 1499 E. WEST MAPLE  
 WALLED LAKE, MI 48390  
 (248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**PLAN & PROFILE 1**

DESIGNED: BM SCALE 1" = 30' SHEET NO.  
 DRAWN: DH JOB NO. 18-274 **23 OF 48**



LEFT E/M & SSL

|   |  |  |   |
|---|--|--|---|
| STORM MH 892<br>RIM 953.3<br>12" CMP NE 950.89<br>15" CMP NE 950.81<br>18" CMP SW 950.88<br>15: CMP W 950.66<br>00+33.95 (27.32R) | SANITARY MH 03<br>RIM 954.97<br>10" N 947.37<br>10" S 947.32<br>2+91.98 (16.71L) | SANITARY MH 04<br>RIM 961.00±<br>INV TO BE FIELD<br>VERIFIED<br>5+75.31 (17.19L) | WATERMAIN MH 03<br>RIM 954.47<br>1+40.24 (43.66L) |
|---|--|--|---|

RIGHT E/M & SSL

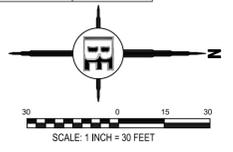
|   |   |   |   |  |
|---|---|---|---|--|
| STORM MH 901<br>RIM 953.3<br>12" CMP NE 950.89<br>15" CMP NE 950.81<br>18" CMP SW 950.88<br>15: CMP W 950.66<br>00+33.95 (27.32R) | STORM CB 906<br>RIM 952.89<br>12" CMP SE 951.00<br>12" CMP SW 950.98<br>00+42.77 (35.11R) | WATERMAIN MH 01<br>RIM 953.44<br>0+30.10 (21.09R) | WATERMAIN MH 02<br>RIM 953.22<br>0+49.89 (12.75R) | WATERMAIN MH 05<br>RIM 962.46<br>7+80.62 (9.94R) |
|---|---|---|---|--|

STRUCTURE ADJUSTMENTS

| STR   | STA     | R/L | TYPE                            | EX RIM |
|-------|---------|-----|---------------------------------|--------|
| SAN 3 | 2+91.98 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 954.97 |
| SAN 4 | 5+75.31 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 961.00 |
| WM 1  | 0+30.10 | R   | DR STRUCTURE COVER, ADJ, CASE 1 | 953.44 |
| WM 2  | 0+49.89 | R   | DR STRUCTURE COVER, ADJ, CASE 1 | 953.22 |
| WM 5  | 7+80.62 | R   | DR STRUCTURE COVER, ADJ, CASE 1 | 962.46 |

NOTE: PROPOSED RIM ELEVATION SHALL BE ADJUSTED WHERE NECESSARY TO MEET ROAD GRADE (SEE DETAIL SHEET 11)

\* PROPOSED CB AND MH DETAILS SEE STORM PROFILE SHEETS SHEET #40 AND #41



PROFILES  
HORIZONTAL SCALE 1" = 30'  
VERTICAL SCALE 1" = 3"

|    |    |                |     |          |
|----|----|----------------|-----|----------|
| NO | BY | REVISION       | PER | DATE     |
| 1  | BM | MDOT QI REVIEW |     | 12/16/21 |

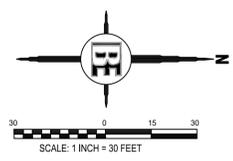
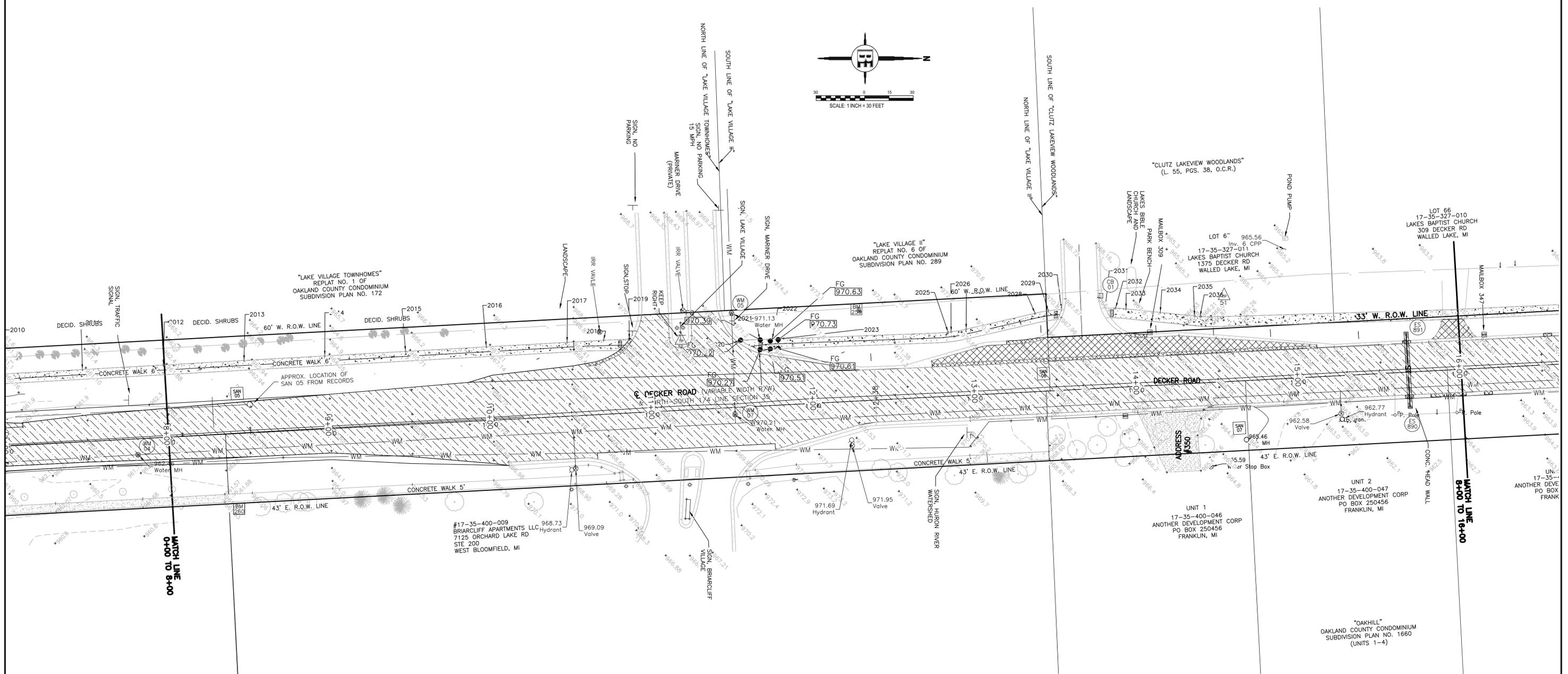
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PREPARED FOR  
**CITY OF WALLED LAKE**  
1499 E. WEST MAPLE  
WALLED LAKE, MI 48390  
(248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**CURB PROFILE 1**

DESIGNED: BM SCALE 1" = 30' SHEET NO.  
DRAWN: DH JOB NO. 18-274 **24 OF 48**



**REMOVAL QUANTITIES STA. 8+00 TO 16+00**

|                                     |      |
|-------------------------------------|------|
| CULV, REM, LESS THAN 24 INCH (EA)   | 1    |
| CURB AND GUTTER REMOVAL (FT)        | 341  |
| _PAVT, REM, MODIFIED (SYD)          | 238  |
| EMBANKMENT, CIP (CYD)               | 185  |
| EXCAVATION, EARTH (CYD)             | 134  |
| HMA BASE CRUSHING AND SHAPING (SYD) | 3701 |

**NOTE:**  
 FILLING AREA BETWEEN PROPOSED TOP OF CURB  
 AND EXISTING EDGE OF SIDEWALK, FROM STA.  
 8+00 TO 10+75, PAID FOR AS "EMBANKMENT, CIP".



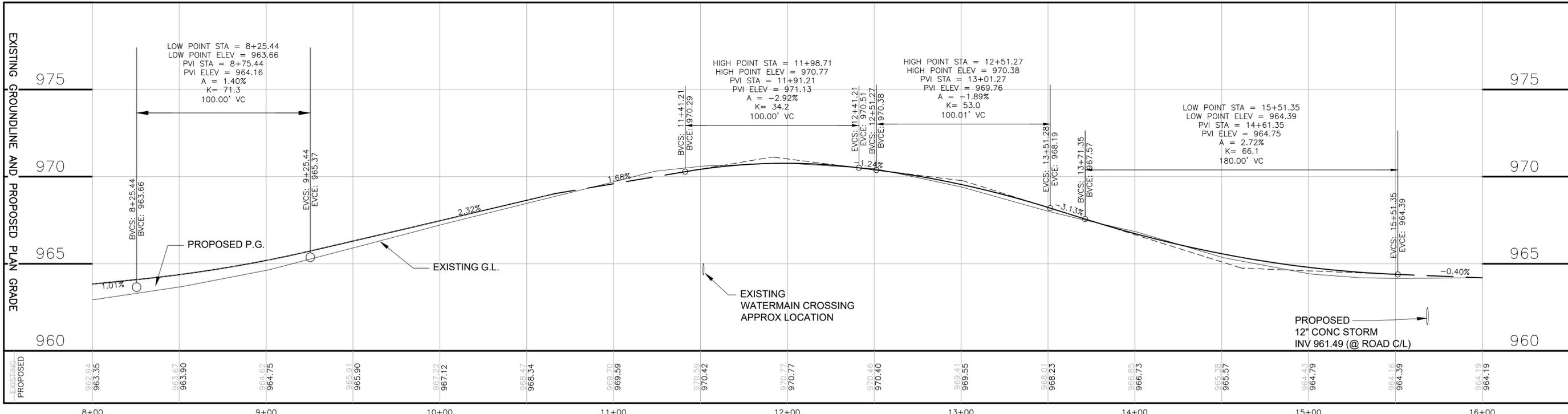
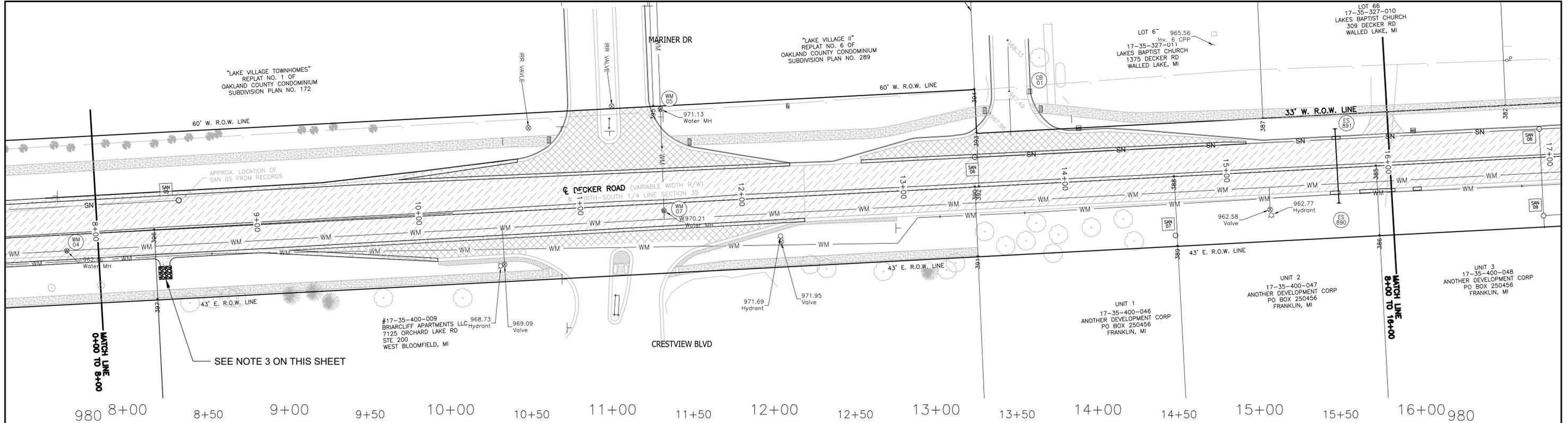
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PREPARED FOR  
**CITY OF WALLED LAKE**  
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 WALLED LAKE, MI 48390  
 (248) 624-4847

PROJECT  
**DECKER ROAD**

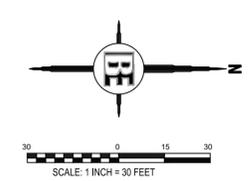
SHEET TITLE  
**REMOVAL 2**

|            |                |                 |
|------------|----------------|-----------------|
| DESIGNED:  | SCALE 1" = 30' | SHEET NO.       |
| DRAWN: KRJ | JOB NO. 18-274 | <b>25 OF 48</b> |



| PROPOSED QUANTITIES STA 8+00 TO 16+00 |      |     |
|---------------------------------------|------|-----|
| GRANULAR MATERIAL, CL II              | 125  | CYD |
| AGGREGATE BASE, 8 INCH                | 374  | SYD |
| GEOTEXTILE, STABILIZATION NON-WOVEN   | 8    | SYD |
| CULV END SECT, 12"                    | 2    | EA  |
| CULV, CL E, 12 INCH                   | 46   | FT  |
| UNDERDRAIN, PIPE, OPEN-GRADED, 4 INCH | 1273 | FT  |
| HMA APPROACH                          | 179  | TON |
| HMA, 4EML                             | 661  | TON |
| CURB AND GUTTER, CONC, DET C4         | 504  | FT  |
| DRIVEWAY OPENING, CONC, DET M         | 799  | FT  |
| SPILLWAY, CONC                        | 5    | FT  |
| RIPRAP, GROUTED                       | 8    | SYD |

- NOTES:**
- MDOT R-35-E DETAIL 3. SPILLWAY PAID FOR AS "SPILLWAY, CONC (FT)". RIP RAP PAID FOR AS "RIPRAP, PLAIN (SYD)" & "GEOTEXTILE, STABILIZATION, NON-WOVEN (SYD)".
  - MDOT R-35-E DETAIL 1. SPILLWAY PAID FOR AS "SPILLWAY, CONC (FT)". RIP RAP PAID FOR AS "RIPRAP, PLAIN (SYD)" & "GEOTEXTILE, STABILIZATION, NON-WOVEN (SYD)".
  - MDOT R-35-E DETAIL 1. SPILLWAY PAID FOR AS "SPILLWAY, CONC (FT)". RIP RAP PAID FOR AS "RIPRAP, GROUTED(SYD)" & "GEOTEXTILE, STABILIZATION, NON-WOVEN (SYD)".



**PROFILES**  
 HORIZONTAL SCALE 1" = 30'  
 VERTICAL SCALE 1" = 3"

| NO | BY | REVISION       | PER | DATE     |
|----|----|----------------|-----|----------|
| 1  | BM | MDOT GI REVIEW |     | 12/16/21 |

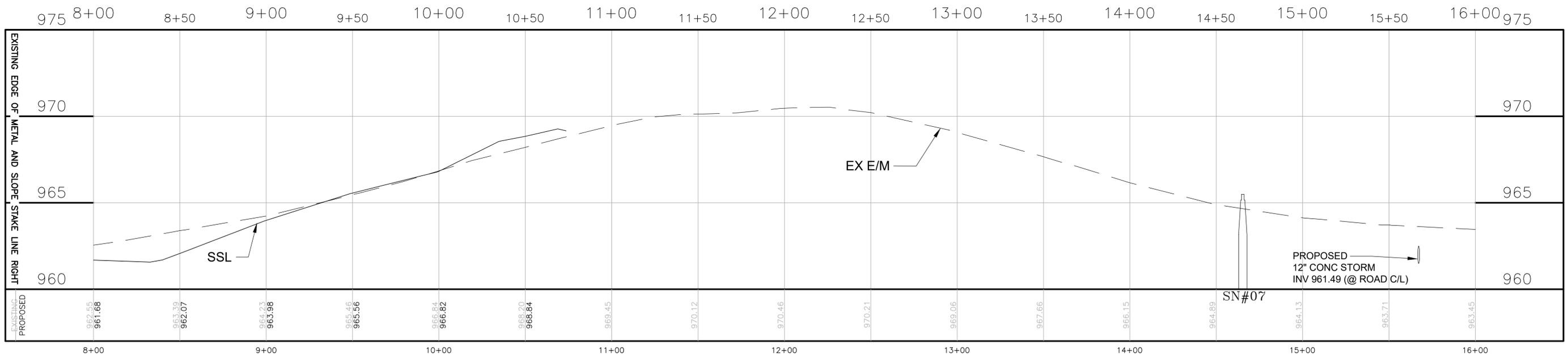
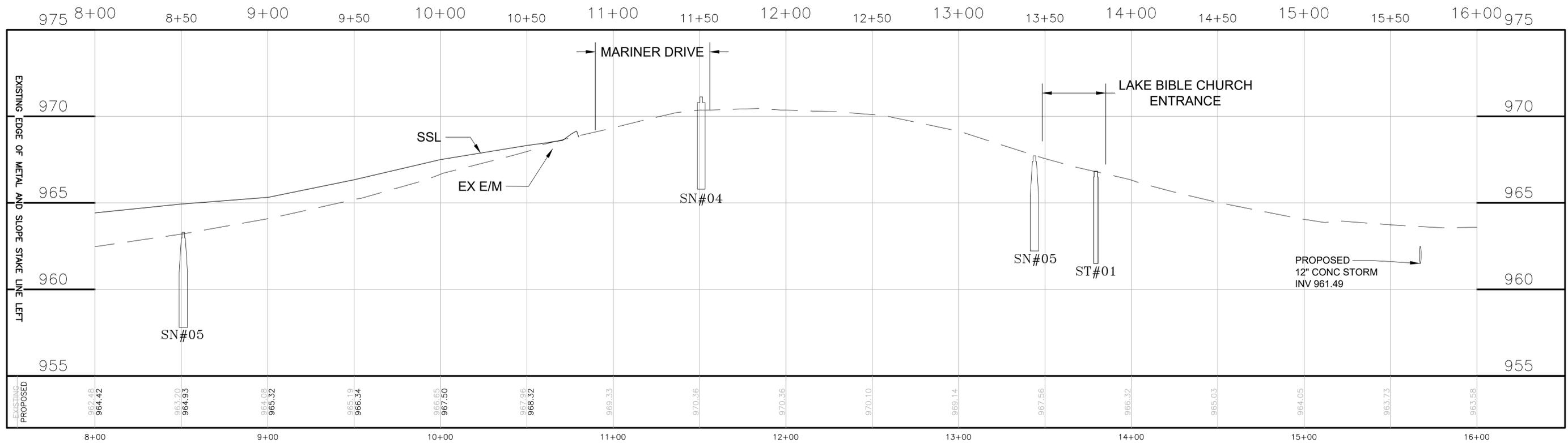
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PREPARED FOR  
**CITY OF WALLED LAKE**  
 1499 E. WEST MAPLE  
 WALLED LAKE, MI 48390  
 (248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**PLAN & PROFILE 2**

DESIGNED: SCALE 1" = 30' SHEET NO.  
 DRAWN: KRJ JOB NO. 18-274 **26 OF 48**



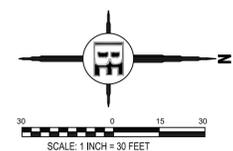
|  |  |  |
|--|--|--|
| SANITARY MH 05<br>RIM 963.30±<br>INV TO BE FIELD<br>VERIFIED<br>8+51.25 (17.67L) | SANITARY MH 06<br>RIM 967.72<br>INV TO BE FIELD<br>VERIFIED<br>13+43.91 (18.50L) | STORM CB 1<br>RIM 966.83<br>CB FULL<br>13+79.62 (57.09L) |
|--|--|--|

|  |
|--|
| SANITARY MH 07<br>RIM 965.49<br>INV TO BE FIELD<br>VERIFIED<br>14+65.37 (36.20R) |
|--|

PROFILES  
HORIZONTAL SCALE 1" = 30'  
VERTICAL SCALE 1" = 3"

| STR   | STA      | R/L | TYPE                            | EX RIM |
|-------|----------|-----|---------------------------------|--------|
| SAN 5 | 8+51.25  | L   | DR STRUCTURE COVER, ADJ. CASE 1 | 963.30 |
| SAN 6 | 13+43.91 | L   | DR STRUCTURE COVER, ADJ. CASE 1 | 967.72 |
| SAN 7 | 14+65.37 | R   | DR STRUCTURE COVER, ADJ. CASE 1 | 965.49 |

NOTE: PROPOSED RIM ELEVATION SHALL BE ADJUSTED WHERE NECESSARY TO MEET ROAD GRADE (SEE DETAIL SHEET 11)



\* PROPOSED CB AND MH DETAILS SEE STORM PROFILE SHEETS SHEET# 40 AND 41

NOTE: PROPOSED E/M WILL MEET EXISTING. STA. 0+20 TO 47+50

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

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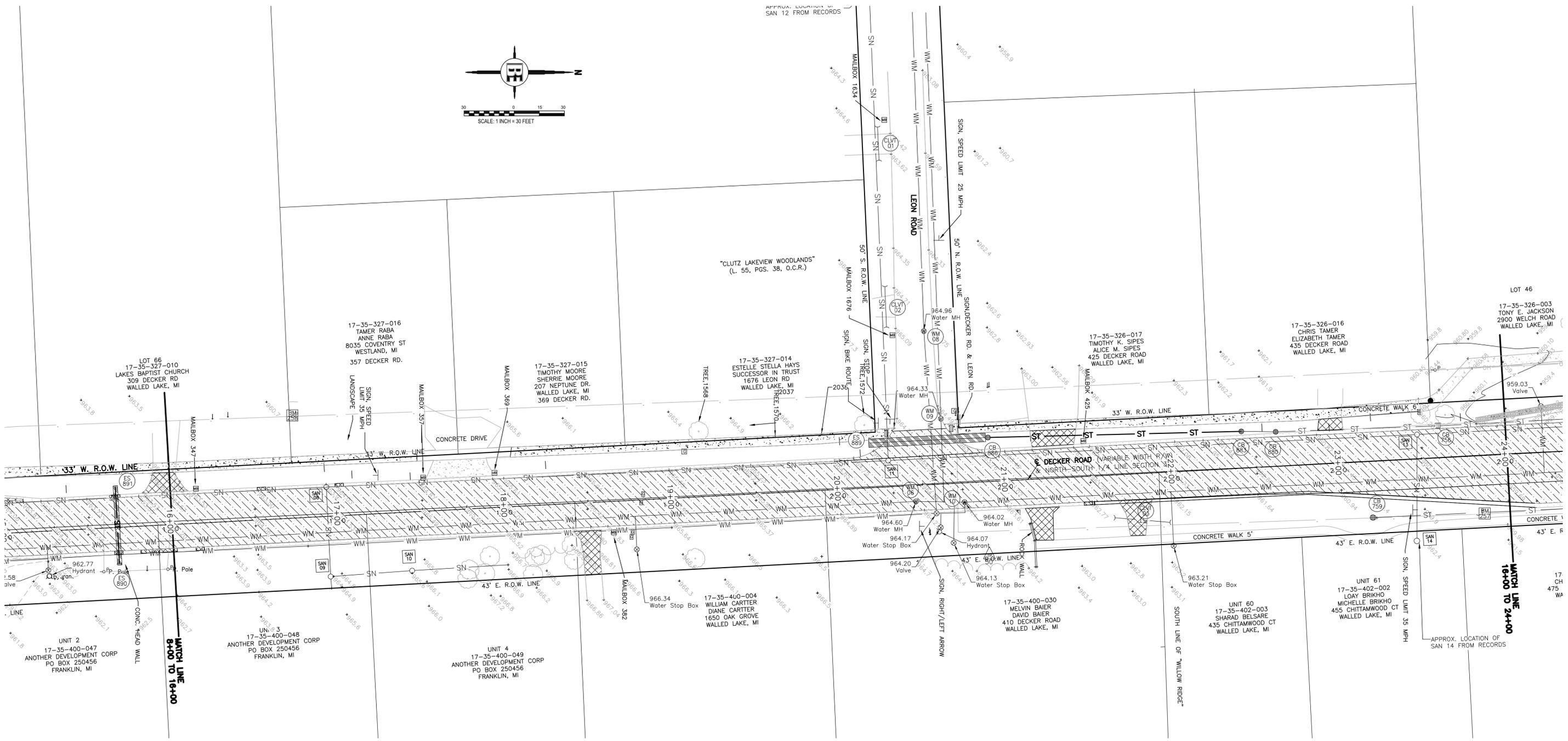
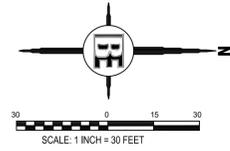
PREPARED FOR  
**CITY OF WALLED LAKE**  
1499 E. WEST MAPLE  
WALLED LAKE, MI 48390  
(248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**CURB PROFILE 2**

DESIGNED: SCALE 1" = 30' SHEET NO.  
DRAWN: KRJ JOB NO. 18-274 **27 OF 48**

APPROX. LOCATION OF SAN 12 FROM RECORDS



**REMOVAL QUANTITIES STA. 16+00 TO 24+00**

|                                     |      |
|-------------------------------------|------|
| CULV, REM, LESS THAN 24 INCH (EA)   | 1    |
| CURB AND GUTTER REMOVAL (FT)        | 22   |
| _PAVT, REM, MODIFIED (SYD)          | 139  |
| HMA BASE CRUSHING AND SHAPING (SYD) | 3059 |



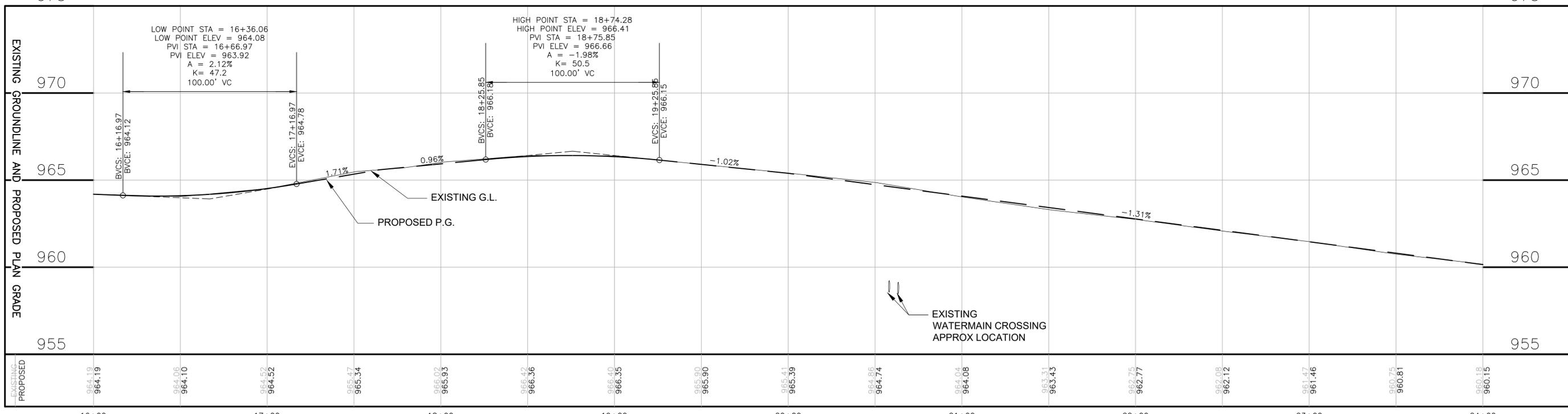
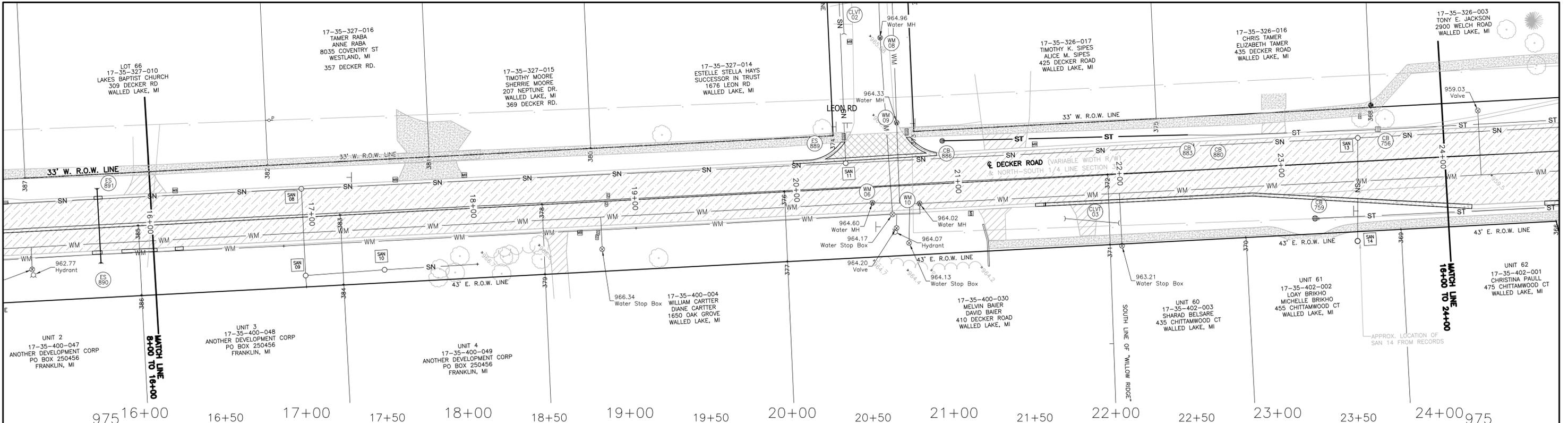
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PROJECT  
**DECKER ROAD**

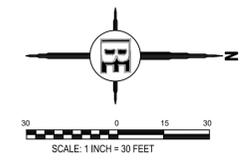
SHEET TITLE  
**REMOVAL 3**

|           |                 |                 |
|-----------|-----------------|-----------------|
| DESIGNED: | SCALE: 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274  | <b>28 OF 48</b> |
| 1 BM      | MDOT CI REVIEW  | 12/16/21        |
| NO BY     | REVISION PER    | DATE            |



PROPOSED QUANTITIES STA 16+00 TO 24+00

| Item                                  | Quantity | Unit |
|---------------------------------------|----------|------|
| GRANULAR MATERIAL, CL II              | 35       | CYD  |
| AGGREGATE BASE, 8 INCH                | 103      | SYD  |
| SEWER, CL E, 12 INCH, TR DET B        | 71       | FT   |
| UNDERDRAIN, PIPE, OPEN-GRADED, 4 INCH | 371      | FT   |
| HMA APPROACH                          | 45       | TON  |
| HMA, 4EML                             | 653      | TON  |
| CURB AND GUTTER, CONC, DET C4         | 310      | FT   |
| DRIVEWAY OPENING, CONC, DET M         | 68       | FT   |



PROFILES  
 HORIZONTAL SCALE 1" = 30'  
 VERTICAL SCALE 1" = 3"

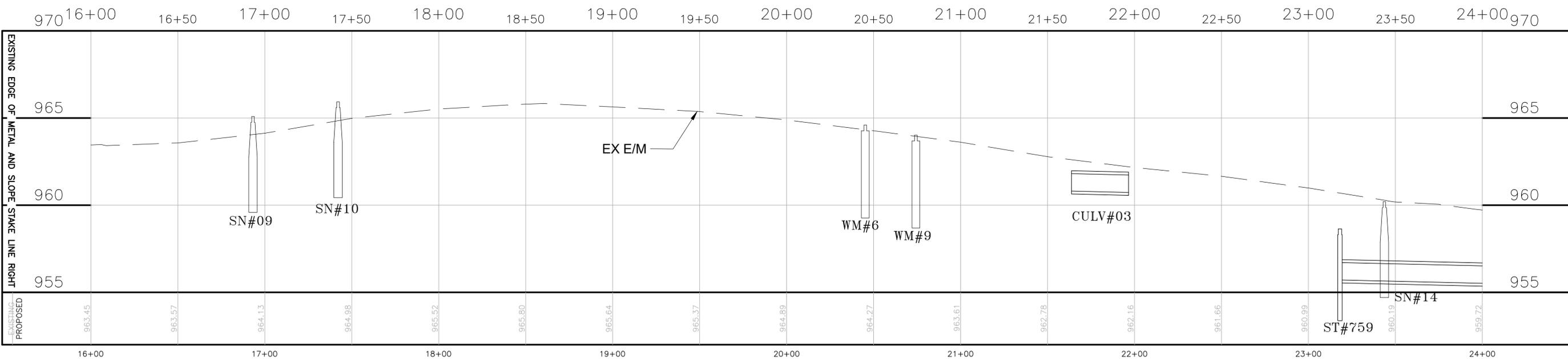
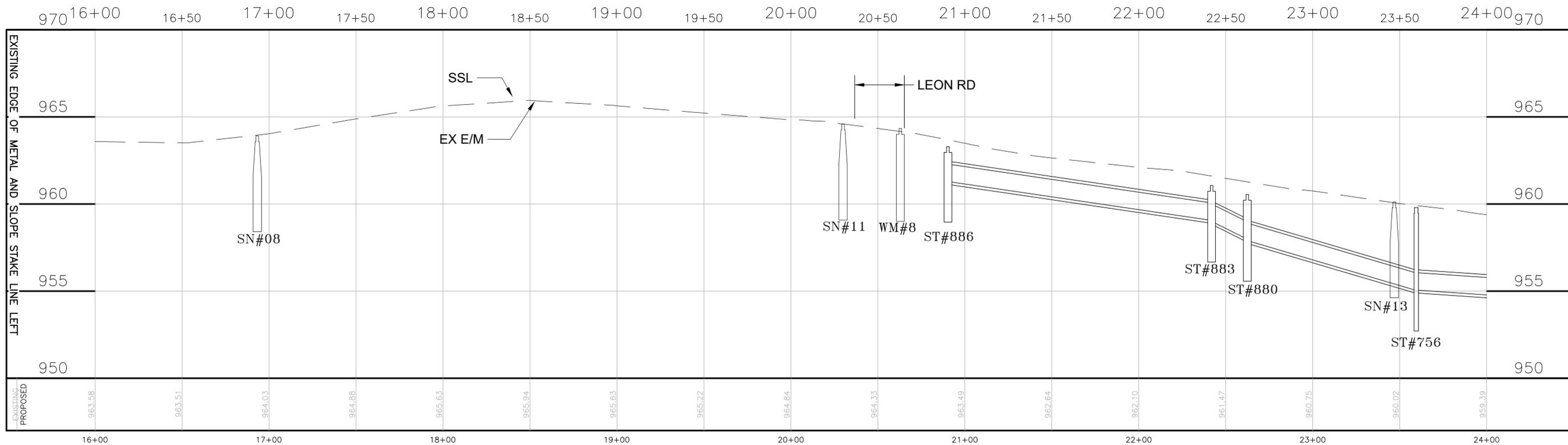
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 WALLED LAKE, MI 48390  
 (248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**PLAN & PROFILE 3**

|           |                |           |
|-----------|----------------|-----------|
| DESIGNED: | SCALE 1" = 30' | SHEET NO. |
| DRAWN:    | JOB NO. 18-274 | 29 OF 48  |

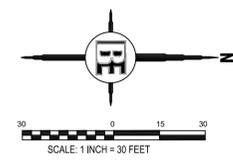


| LEFT E/M & SSL   | RIGHT E/M & SSL   |
|--|---|
| SANITARY MH 08<br>RIM 963.91<br>INV TO BE FIELD<br>VERIFIED<br>16+93.27 (17.61L)   | SANITARY MH 09<br>RIM 965.09<br>INV TO BE FIELD<br>VERIFIED<br>16+93.15 (35.89R)  |
| SANITARY MH 11<br>RIM 964.58<br>INV TO BE FIELD<br>VERIFIED<br>20+30.06 (15.70L)   | SANITARY MH 10<br>RIM 965.93<br>INV TO BE FIELD<br>VERIFIED<br>17+42.05 (34.89R)  |
| SANITARY MH 13<br>RIM 960.12<br>INV TO BE FIELD<br>VERIFIED<br>23+46.99 (14.75L)   | SANITARY MH 14<br>RIM 960.20±<br>INV TO BE FIELD<br>VERIFIED<br>23+43.55 (48.71R) |
| STORM CB 886<br>RIM 963.09<br>BEEHIVE<br>12" CMP N 961.29<br>12" CMP S 961.19<br>20+90.39 (26.31L)<br>S.END TO BE<br>BULK HEADED | STORM CB 759<br>RIM 958.64<br>BEEHIVE<br>12" CONC N 955.71<br>23+46.99 (14.75R)   |
| STORM CB 883<br>RIM 961.05<br>BEEHIVE<br>12" CMP N 959.00<br>12" CONC S 959.06<br>22+41.97 (22.03L)                              | WATERMAIN MH 6<br>RIM 964.60<br>20+45.22 (9.67R)                                  |
| STORM CB 880<br>RIM 960.55<br>BEEHIVE<br>12" CONC N 957.90<br>12" CONC S 957.98<br>22+62.50 (20.68L)                             | WATERMAIN MH 9<br>RIM 964.02<br>20+74.34 (11.517R)                                |
| STORM CB 756<br>RIM 959.80<br>12" CONC N 955.04<br>12" CONC S 955.06<br>23+59.59 (19.35L)  |   |
| WATERMAIN GW 8<br>RIM 964.33<br>20+62.83 (38.94L)  |   |

| STRUCTURE ADJUSTMENTS |          |     |                                 |        |  |
|-----------------------|----------|-----|---------------------------------|--------|--|
| STR                   | STA      | R/L | TYPE                            | EX RIM |  |
| SAN 8                 | 16+93.27 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 963.91 |  |
| SAN11                 | 20+30.06 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 964.58 |  |
| SAN13                 | 23+46.99 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 960.12 |  |
| WM 6                  | 20+45.22 | R   | DR STRUCTURE COVER, ADJ, CASE 1 | 964.60 |  |
| WM 8                  | 20+62.83 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 964.33 |  |
| WM 9                  | 20+74.34 | R   | DR STRUCTURE COVER, ADJ, CASE 1 | 964.02 |  |
| ST886                 | 20+90.39 | L   | DR STRUCTURE COVER, ADJ, CASE 2 | 963.09 |  |
| ST883                 | 23+43.55 | L   | DR STRUCTURE COVER, ADJ, CASE 2 | 961.05 |  |
| ST880                 | 23+43.55 | L   | DR STRUCTURE COVER, ADJ, CASE 2 | 960.55 |  |

NOTE: PROPOSED RIM ELEVATION SHALL BE ADJUSTED WHERE NECESSARY TO MEET ROAD GRADE (SEE DETAIL SHEET 11)

PROFILES  
HORIZONTAL SCALE 1" = 30'  
VERTICAL SCALE 1" = 3"



\* PROPOSED CB AND MH DETAILS SEE STORM PROFILE SHEETS SHEET# 40 AND 41

NOTE: PROPOSED E/M WILL MEET EXISTING. STA. 0+20 TO 47+50

| NO | BY | REVISION       | PER | DATE     |
|----|----|----------------|-----|----------|
| 1  | BM | MDOT GI REVIEW |     | 12/16/21 |
|    |    |                |     |          |

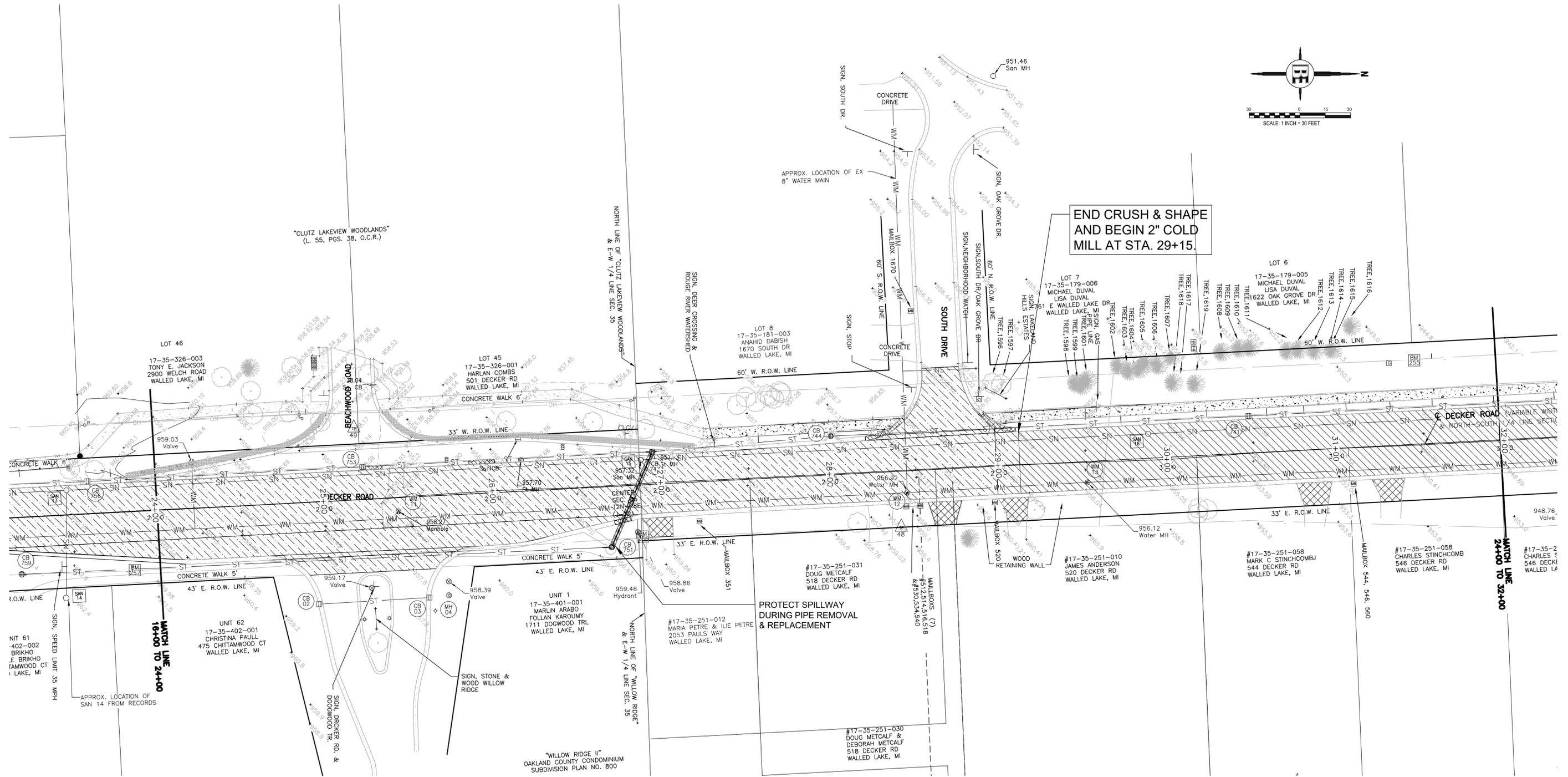
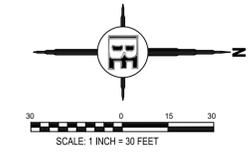
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PREPARED FOR  
**CITY OF WALLED LAKE**  
1499 E. WEST MAPLE  
WALLED LAKE, MI 48390  
(248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**CURB PROFILE 3**

|           |                |                 |
|-----------|----------------|-----------------|
| DESIGNED: | SCALE 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274 | <b>30 OF 48</b> |



| REMOVAL QUANTITIES STA. 24+00 TO 32+00 |      |
|--|------|
| CULV, REM, LESS THAN 24 INCH (EA)      | 1    |
| CURB AND GUTTER REMOVAL (FT)           | 113  |
| _PAVT, REM, MODIFIED (SYD)             | 114  |
| HMA BASE CRUSHING AND SHAPING (SYD)    | 2645 |
| COLD MILLING HMA SURFACE (SYD)         | 1161 |

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---

PROJECT  
**DECKER ROAD**

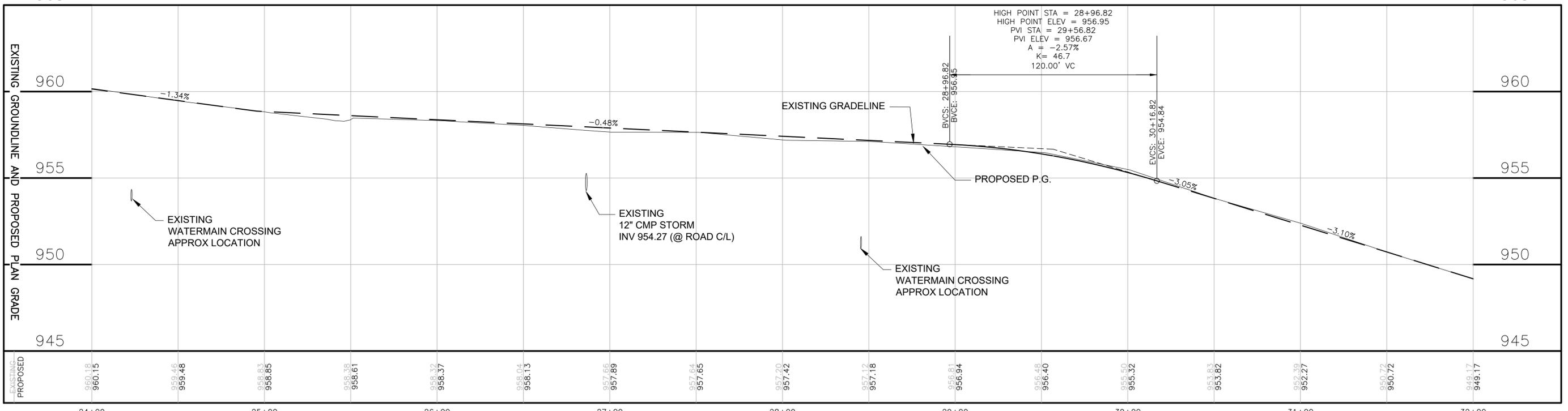
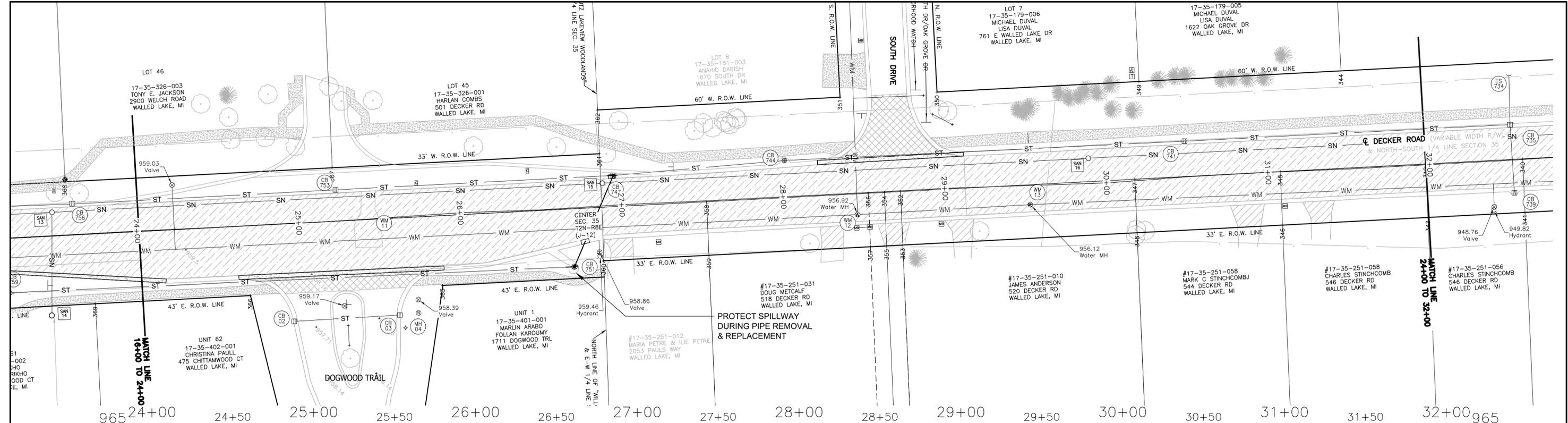
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SHEET TITLE  
**REMOVAL 4**

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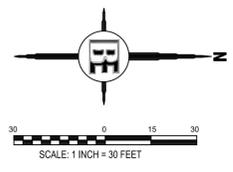
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| DESIGNED: | SCALE 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274 | <b>31 OF 48</b> |

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |



**PROPOSED QUANTITIES STA 24+00 TO 32+00**

|                                       |     |     |
|---------------------------------------|-----|-----|
| GRANULAR MATERIAL, CL II              | 33  | CYD |
| AGGREGATE BASE, 8 INCH                | 97  | SYD |
| SEWER, CL E, 12 INCH, TR DET B        | 68  | FT  |
| UNDERDRAIN, PIPE, OPEN-GRADED, 4 INCH | 347 | FT  |
| HMA APPROACH                          | 83  | TON |
| HMA, 4EML                             | 644 | TON |
| CURB AND GUTTER, CONC, DET C4         | 113 | FT  |
| DRIVEWAY OPENING, CONC, DET M         | 243 | FT  |



**PROFILES**  
 HORIZONTAL SCALE 1" = 30'  
 VERTICAL SCALE 1" = 3"

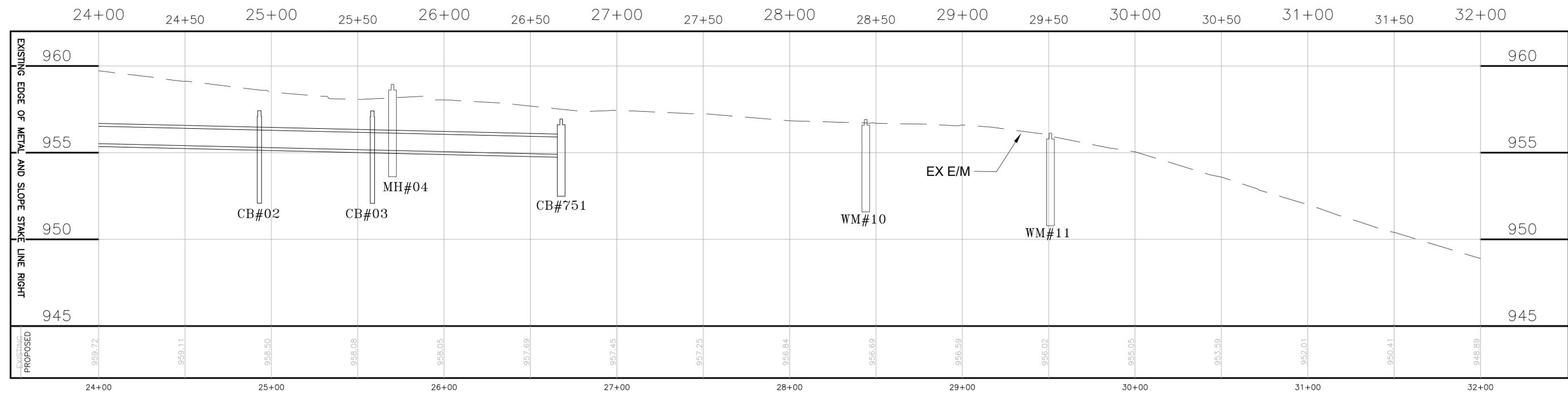
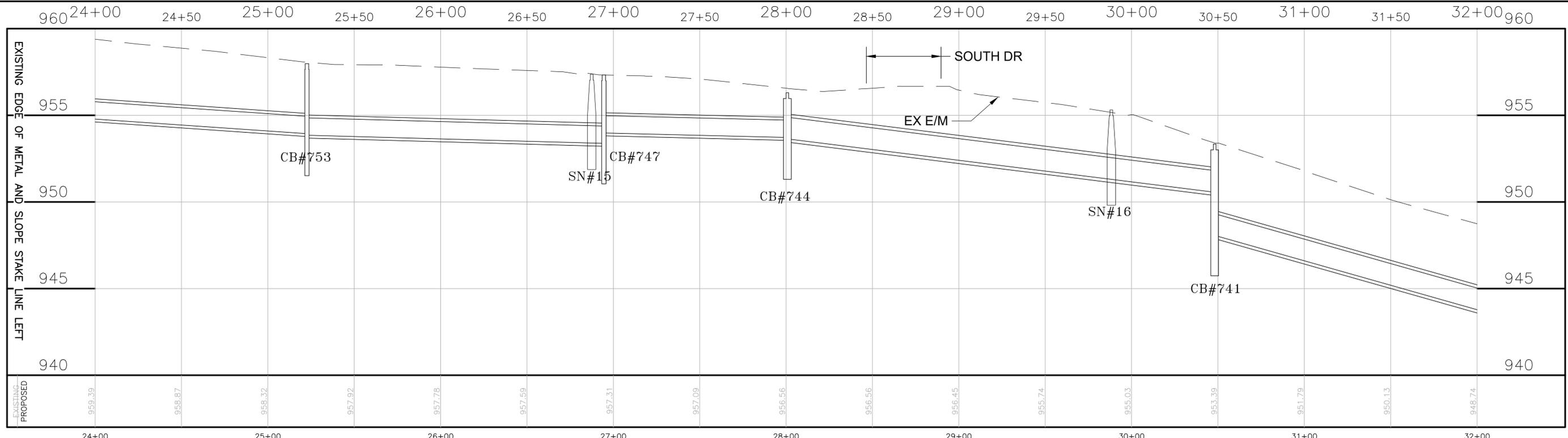
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 WALLED LAKE, MI 48390  
 (248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**PLAN & PROFILE 4**

|           |                |                 |
|-----------|----------------|-----------------|
| DESIGNED: | SCALE 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274 | <b>32 OF 48</b> |

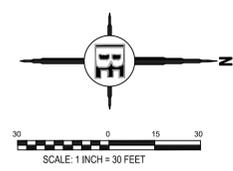


|  |  |   |  |  |   |
|--|--|---|--|--|---|
| SANITARY MH 15<br>RIM 957.37<br>INV TO BE FIELD<br>VERIFIED<br>26+87.53 (14.87L) | SANITARY MH 16<br>RIM 955.31<br>INV TO BE FIELD<br>VERIFIED<br>29+88.32 (14.50L) | STORM CB 753<br>RIM 957.98<br>12" CONC N 954.35<br>12" CONC S 954.44<br>25+22.69 (19.33L) | STORM CB 747<br>RIM 957.33<br>12" CONC N 953.88<br>12" CONC S 953.98<br>12" CMP SE 953.98<br>26+95.42 (17.74L) | STORM CB 744<br>RIM 956.30<br>15" CMP N 953.64<br>12" CONC S 953.72<br>28+00.66 (22.88L) | STORM CB 741<br>RIM 953.34<br>15" CONC N 948.07<br>15" CONC S 950.56<br>30+48.14 (21.72L) |
| STORM CB 02<br>RIM 957.42<br>INV TO BE FIELD<br>VERIFIED<br>24+92.87 (60.23R)    | STORM CB 03<br>RIM 957.41<br>INV TO BE FIELD<br>VERIFIED<br>25+58.33 (59.70R)    | STORM MH 4<br>RIM 958.94<br>INV TO BE FIELD<br>VERIFIED<br>25+69.96 (59.05R)              | STORM CB 751<br>RIM 956.94<br>BEEHIVE<br>12" CMP NW 954.82<br>12" CONC S 954.90<br>26+67.70 (35.83R)           | WATERMAIN MH 10<br>RIM 956.92<br>28+44.05 (12.89R)                                       | WATERMAIN MH 11<br>RIM 956.12<br>29+50.99 (12.25R)  |

PROFILES  
 HORIZONTAL SCALE 1" = 30'  
 VERTICAL SCALE 1" = 3"

| STR   | STA      | R/L | TYPE                            | EX RIM |
|-------|----------|-----|---------------------------------|--------|
| SAN15 | 26+87.53 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 957.37 |
| SAN16 | 29+88.32 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 955.31 |
| WM10  | 28+44.05 | R   | DR STRUCTURE COVER, ADJ, CASE 1 | 956.92 |
| WM11  | 29+50.99 | R   | DR STRUCTURE COVER, ADJ, CASE 1 | 956.12 |

NOTE: PROPOSED RIM ELEVATION SHALL BE ADJUSTED WHERE NECESSARY TO MEET ROAD GRADE (SEE DETAIL SHEET 11)



\* PROPOSED CB AND MH DETAILS SEE STORM PROFILE SHEETS SHEET# 40 AND 41  
 NOTE: PROPOSED E/M WILL MEET EXISTING. STA. 0+20 TO 47+50

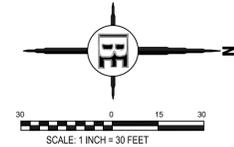
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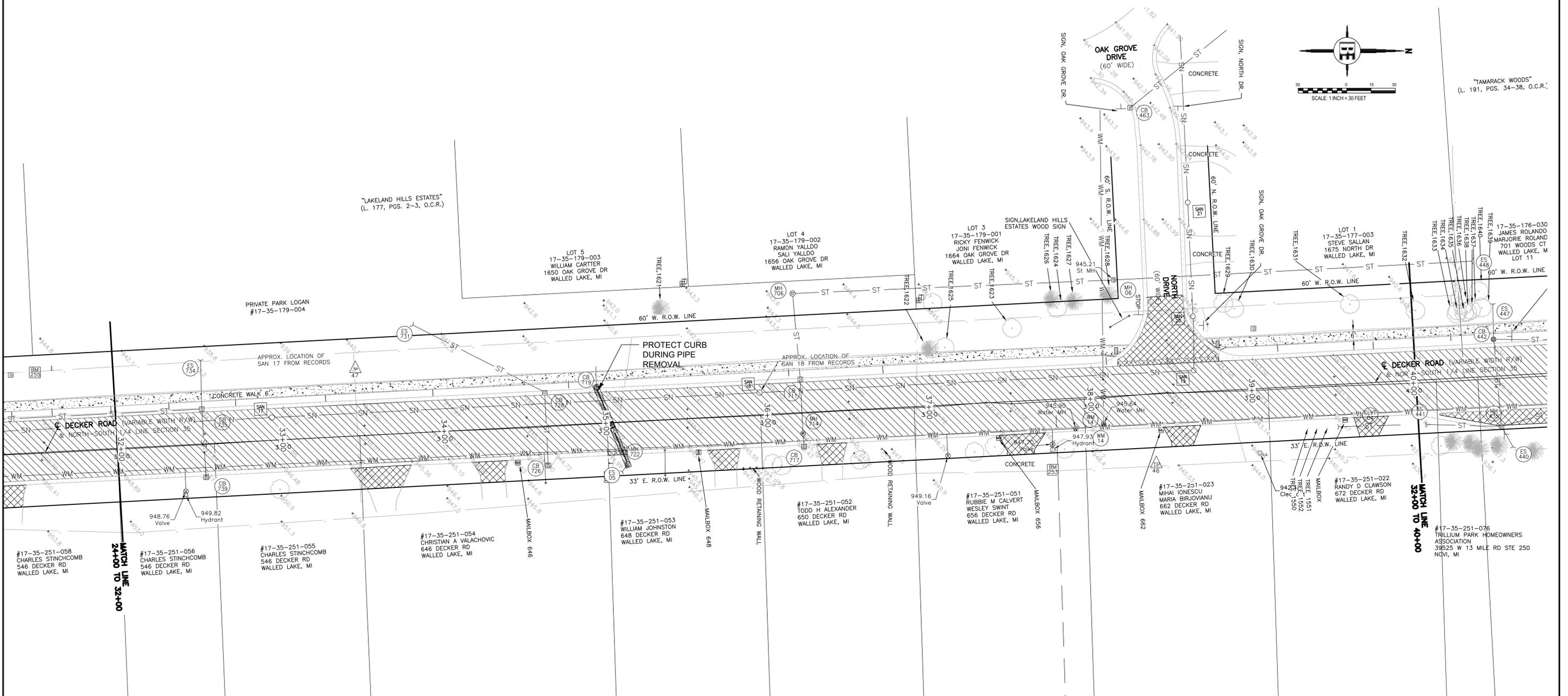
PROJECT  
**DECKER ROAD**

SHEET TITLE  
**CURB PROFILE 4**

|           |                |                 |
|-----------|----------------|-----------------|
| DESIGNED: | SCALE 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274 | <b>33 OF 48</b> |



"TAMARACK WOODS"  
(L. 191, PGS. 34-38, O.C.R.)



**REMOVAL QUANTITIES STA. 32+00 TO 40+00**

|                                    |      |
|------------------------------------|------|
| SEWER, REM, LESS THAN 24 INCH (EA) | 51   |
| CURB AND GUTTER REMOVAL (FT)       | 75   |
| _PAVT, REM, MODIFIED (SYD)         | 336  |
| COLD MILLING HMA SURFACE (SYD)     | 3264 |

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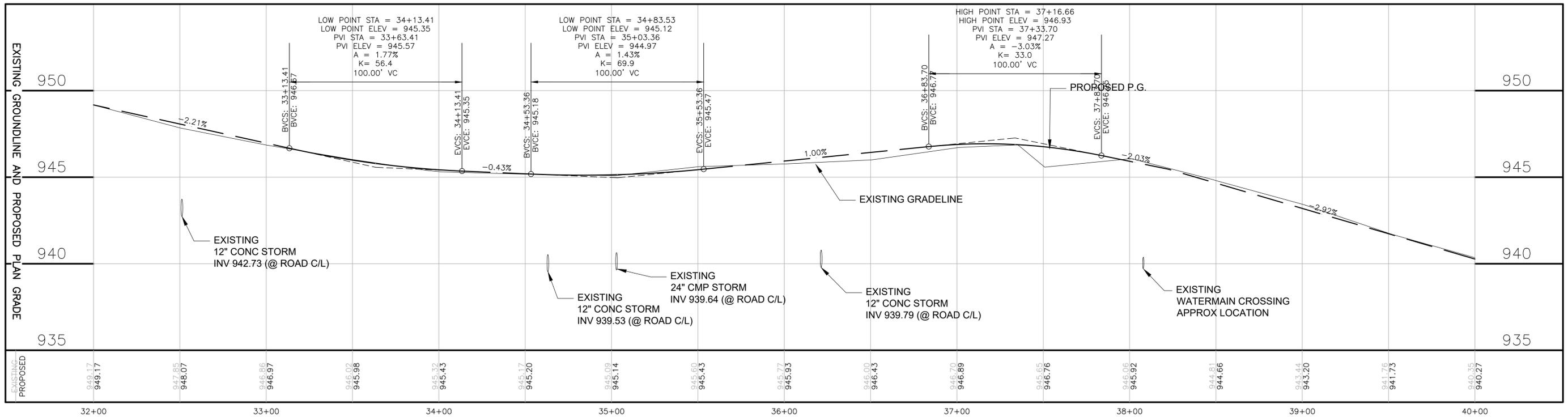
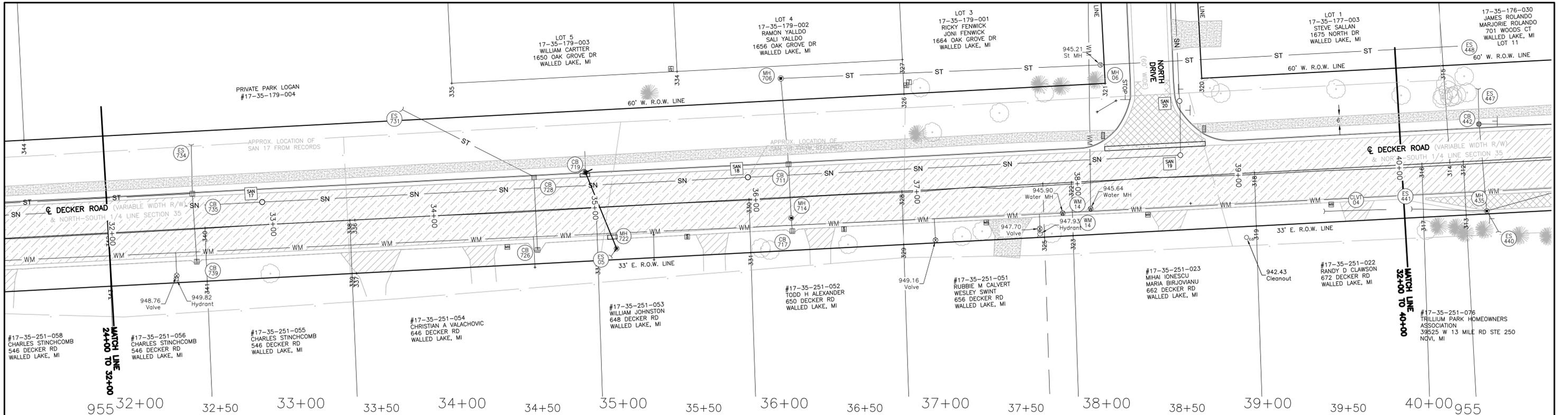
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PROJECT  
**DECKER ROAD**

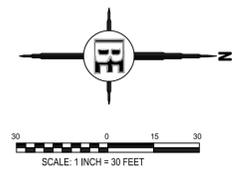
SHEET TITLE  
**REMOVAL 5**

DESIGNED: SCALE 1" = 30' SHEET NO.  
DRAWN: JOB NO. 18-274 **34 OF 48**

|    |    |                |          |
|----|----|----------------|----------|
| NO | BY | REVISION PER   | DATE     |
| 1  | BM | MDOT CI REVIEW | 12/16/21 |



| PROPOSED QUANTITIES STA 32+00 TO 40+00 |     |     |
|--|-----|-----|
| SEWER, CL E, 12 INCH, TR DET B         | 51  | FT  |
| HMA APPROACH                           | 68  | TON |
| HMA, 4EML                              | 360 | TON |
| CURB AND GUTTER, CONC, DET C4          | 12  | FT  |
| DRIVEWAY OPENING, CONC, DET M          | 63  | FT  |



PROFILES  
 HORIZONTAL SCALE 1" = 30'  
 VERTICAL SCALE 1" = 3"

| NO | BY | REVISION PER   | DATE     |
|----|----|----------------|----------|
| 1  | BM | MDOT QI REVIEW | 12/16/21 |

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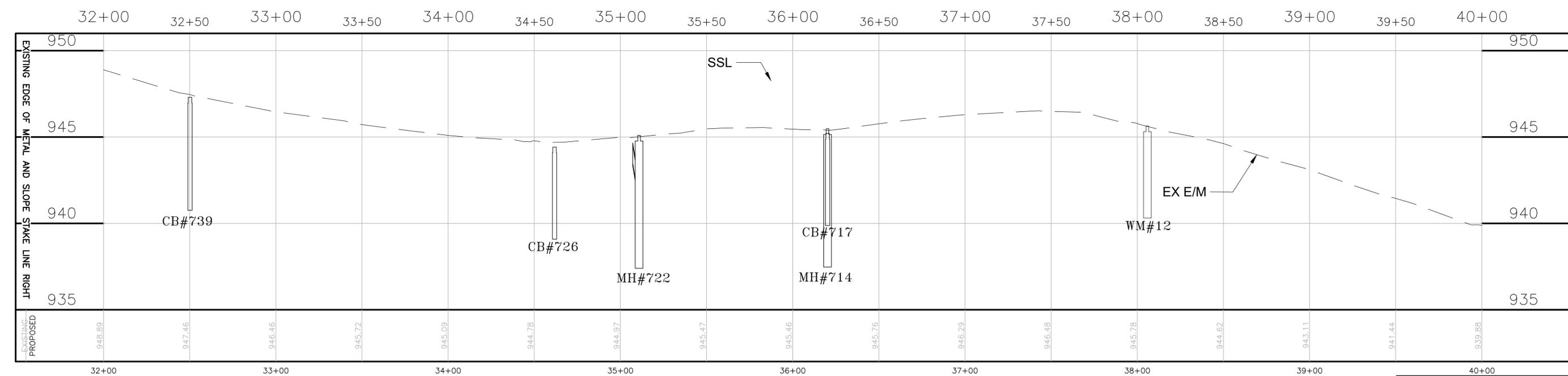
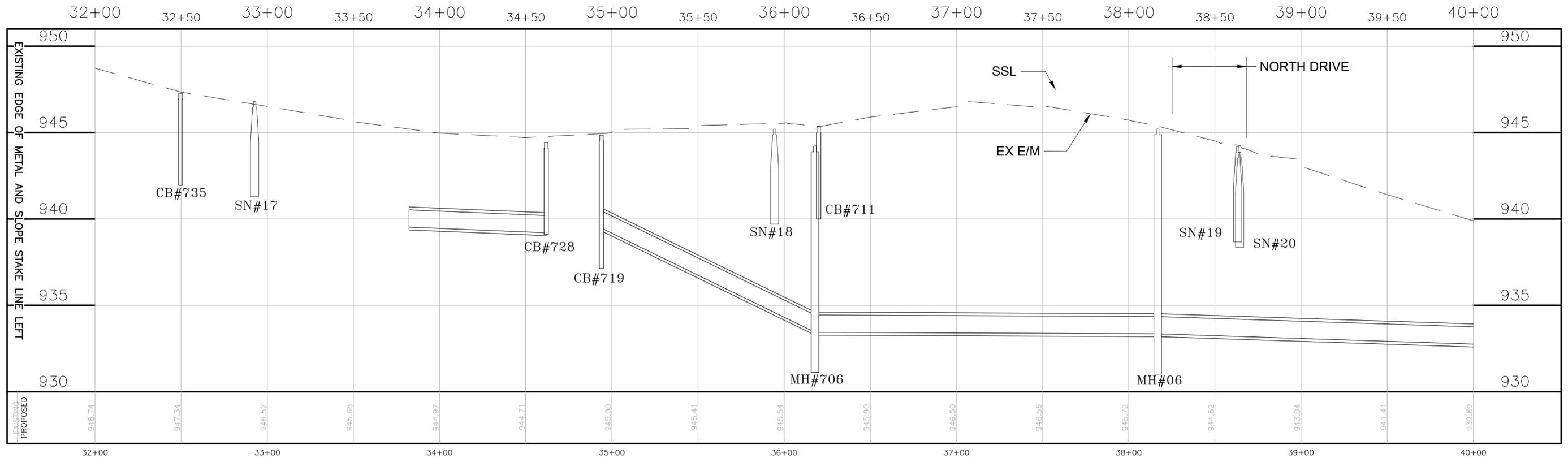
PROJECT  
**DECKER ROAD**

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SHEET TITLE  
**PLAN & PROFILE 5**

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|           |                |                 |
|-----------|----------------|-----------------|
| DESIGNED: | SCALE 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274 | <b>35 OF 48</b> |

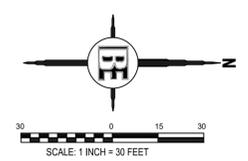


|                   |  |  |  |   |  |   |   |   |   |   |
|-------------------|--|--|--|---|--|---|---|---|---|---|
| LEFT<br>E/M & SSL | SANITARY 17<br>RIM 946.80±<br>INV TO BE FIELD<br>VERIFIED<br>32+92.67 (14.14L) | SANITARY 18<br>RIM 945.20±<br>INV TO BE FIELD<br>VERIFIED<br>35+94.48 (13.72L) | SANITARY 19<br>RIM 944.18±<br>INV TO BE FIELD<br>VERIFIED<br>38+65.19 (13.35L) | SANITARY 20<br>RIM 945.43<br>INV TO BE FIELD<br>VERIFIED<br>38+64.42 (46.79L)               | STORM CB 735<br>RIM 947.28<br>18" CONC W 939.95<br>15" CONC S 942.38<br>12" CONC E 942.38<br>32+46.65 (21.50L) | STORM CB 728<br>RIM 944.43<br>12" CONC E 939.20<br>12" CMP SW 939.20<br>34+61.93 (20.47L) | STORM CB 719<br>RIM 944.86<br>BEEHIVE<br>24" CMP NE 939.57<br>24" CMP W 939.20<br>34+93.95 (21.84L) | STORM MH 706<br>RIM 944.22<br>24" CONC N 933.94<br>24" CONC SE 933.94<br>12" CONC E 939.77<br>36+18.07 (73.58L) | STORM CB 711<br>RIM 945.33<br>BEEHIVE<br>12" CONC E 939.77<br>36+20.06 (20.34L) | STORM MH 06<br>RIM 945.21<br>INV TO BE FIELD<br>VERIFIED<br>38+16.64 (71.57L) |
|                   | RIGHT<br>E/M & SSL   | STORM CB 739<br>RIM 947.30<br>12" CONC W 943.09<br>32+50.19 (20.59R)           | STORM CB 726<br>RIM 944.42<br>12" CONC W 939.91<br>34+61.77 (24.43R)           | STORM MH 722<br>RIM 945.10<br>24" CMP SW 939.73<br>12" CONC SE 941.32<br>35+10.81 (26.116R) | STORM CB 717<br>RIM 945.21<br>12" CONC W 942.19<br>36+20.22 (21.10R)   | STORM MH 714<br>RIM 945.48<br>12" CONC E 941.96<br>12" CONC W 939.80<br>36+20.19 (13.00R) | WATERMAIN MH 12<br>RIM 945.64<br>38+05.83 (17.14R)  |   |   |   |

PROFILES  
HORIZONTAL SCALE 1" = 30'  
VERTICAL SCALE 1" = 3"

| STRUCTURE ADJUSTMENTS |          |     |                                 |        |
|-----------------------|----------|-----|---------------------------------|--------|
| STR                   | STA      | R/L | TYPE                            | EX RIM |
| SAN17                 | 32+92.67 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 946.80 |
| SAN18                 | 35+94.48 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 945.20 |
| SAN19                 | 38+65.19 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 944.18 |
| SAN20                 | 38+64.42 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 945.43 |
| WM12                  | 38+05.64 | R   | DR STRUCTURE COVER, ADJ, CASE 1 | 945.64 |
| ST714                 | 36+20.19 | R   | DR STRUCTURE COVER, ADJ, CASE 1 | 945.48 |

NOTE: PROPOSED RIM ELEVATION SHALL BE ADJUSTED WHERE NECESSARY TO MEET ROAD GRADE (SEE DETAIL SHEET 11)



\* PROPOSED CB AND MH DETAILS SEE STORM PROFILE SHEETS SHEET# 40 AND 41

NOTE: PROPOSED E/M WILL MEET EXISTING. STA. 0+20 TO 47+50

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

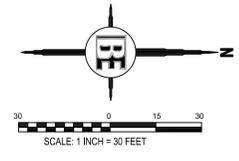
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1499 E. WEST MAPLE  
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(248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**CURB PROFILE 5**

DESIGNED: SCALE 1" = 30' SHEET NO.  
DRAWN: JOB NO. 18-274 **36 OF 48**



| REMOVAL QUANTITIES STA. 40+00 TO 48+00 |      |
|--|------|
| CURB AND GUTTER REMOVAL (FT)           | 214  |
| _PAVT, REM, MODIFIED (SYD)             | 305  |
| COLD MILLING HMA SURFACE (SYD)         | 3052 |

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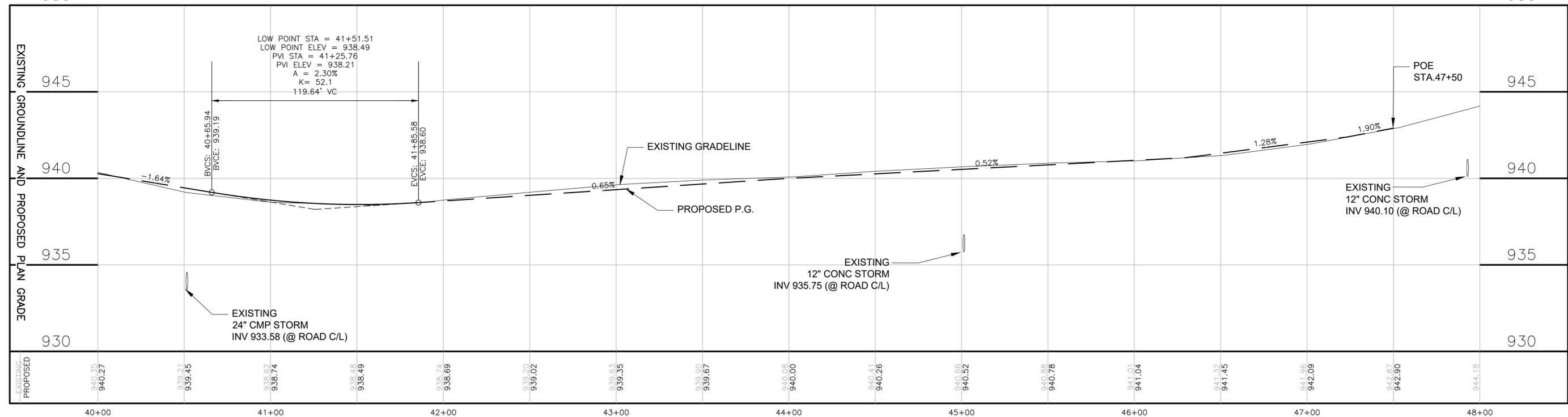
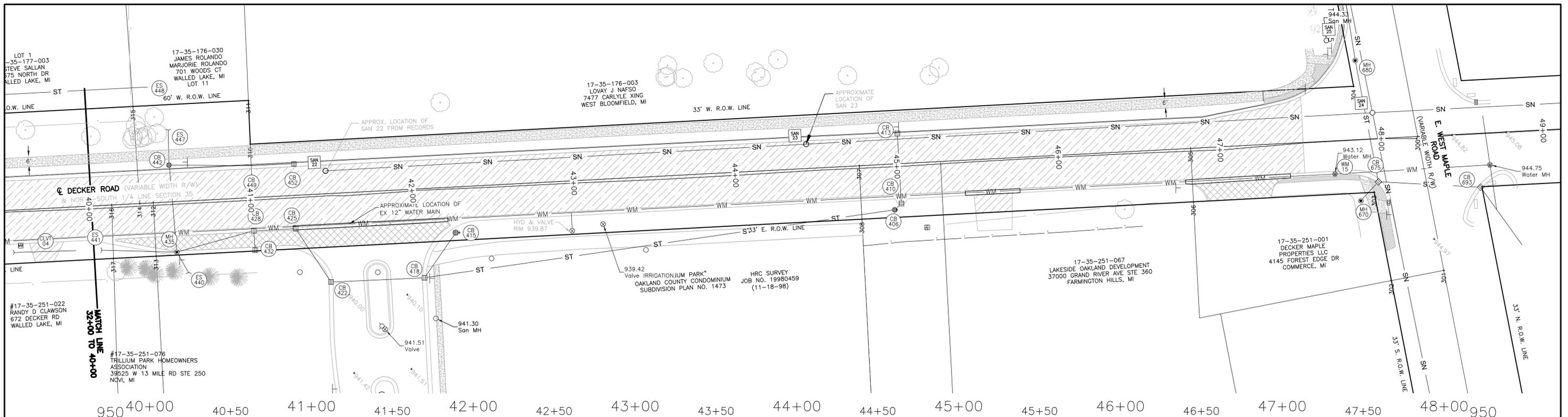
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PROJECT  
**DECKER ROAD**

SHEET TITLE  
**REMOVAL 6**

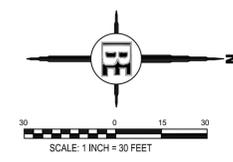
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| DESIGNED: | SCALE 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274 | <b>37 OF 48</b> |

|    |    |                |          |
|----|----|----------------|----------|
| NO | BY | REVISION PER   | DATE     |
| 1  | BM | MDOT GI REVIEW | 12/16/21 |



**PROPOSED QUANTITIES STA 40+00 TO 48+00**

|                               |     |     |
|-------------------------------|-----|-----|
| HMA APPROACH                  | 66  | TON |
| HMA, 4EML                     | 336 | TON |
| CURB AND GUTTER, CONC, DET C4 | 53  | FT  |
| DRIVEWAY OPENING, CONC, DET M | 161 | FT  |



**PROFILES**  
 HORIZONTAL SCALE 1" = 30'  
 VERTICAL SCALE 1" = 3"

|    |    |               |          |
|----|----|---------------|----------|
| 1  | BM | MDOT G REVIEW | 12/16/21 |
| NO | BY | REVISION PER  | DATE     |

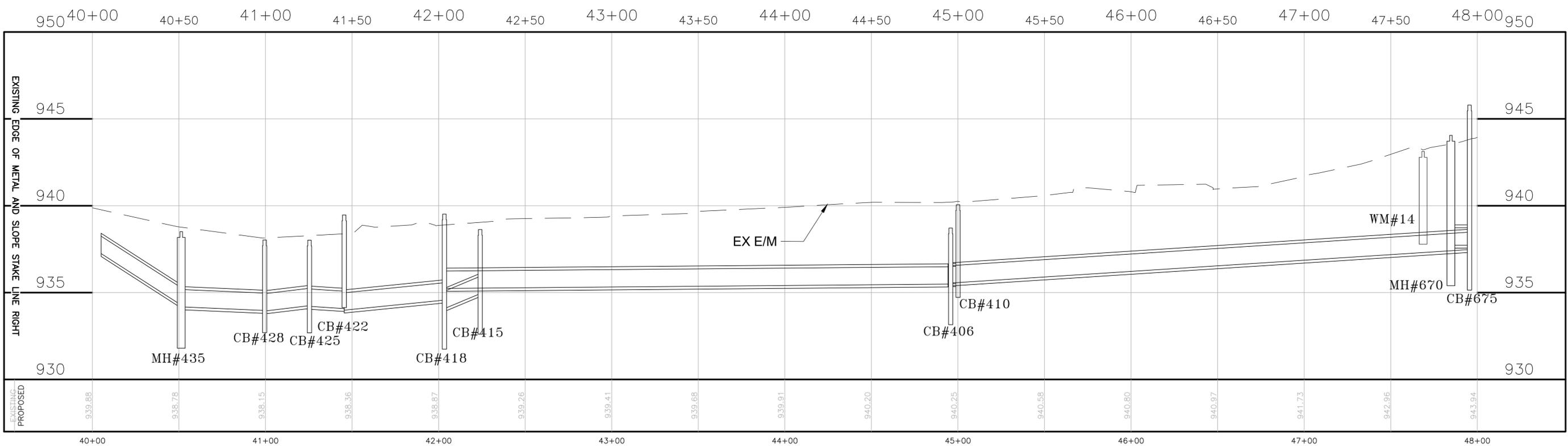
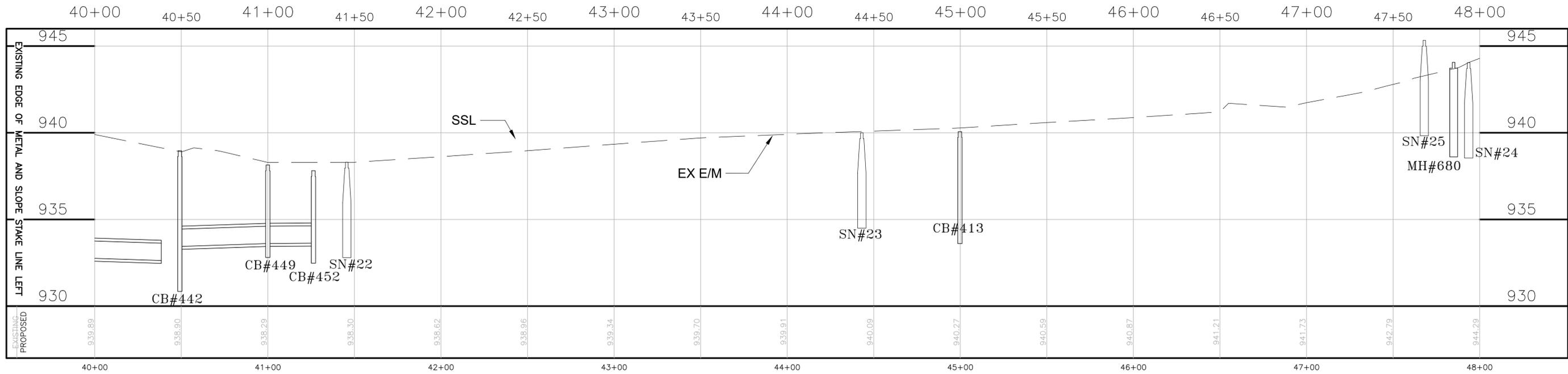
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PROJECT  
**DECKER ROAD**

SHEET TITLE  
**PLAN & PROFILE 6**

|           |                |                 |
|-----------|----------------|-----------------|
| DESIGNED: | SCALE 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274 | <b>38 OF 48</b> |



LEFT E/M & SSL

|   |   |  |  |  |   |  |  |   |
|---|---|--|--|--|---|--|--|---|
| SANITARY MH 22<br>RIM 938.30±<br>INV TO BE FIELD<br>VERIFIED<br>41+45.67 (14.21L) | SANITARY MH 23<br>RIM 940.00±<br>INV TO BE FIELD<br>VERIFIED<br>44+43.15 (15.12L) | SANITARY MH 24<br>RIM 944.04<br>INV TO BE FIELD<br>VERIFIED<br>47+93.69 (16.18L) | SANITARY MH 25<br>RIM 945.33<br>INV TO BE FIELD<br>VERIFIED<br>47+67.70 (62.20L) | STORM CB 442<br>RIM 945.33<br>INV TO BE FIELD<br>VERIFIED<br>40+49.21 (22.75L) | STORM CB 449<br>RIM 938.14<br>15" CONC N 933.51<br>15" CONC S 933.61<br>41+00.00 (19.72L) | STORM CB 452<br>RIM 937.81<br>15" CONC S 933.63<br>41+26.36 (19.43L) | STORM CB 413<br>RIM 940.15<br>12" CONC E 935.94<br>44+99.80 (18.75L) | STORM MH 680<br>RIM 944.06<br>12" CONC E 940.19<br>12" CONC W 940.19<br>47+84.76 (48.81L) |
|---|---|--|--|--|---|--|--|---|

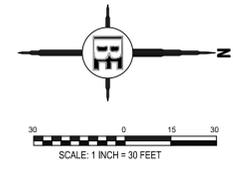
RIGHT E/M & SSL

|   |   |   |  |   |   |  |  |  |  |  |
|---|---|---|--|---|---|--|--|--|--|--|
| STORM MH 435<br>RIM 938.51<br>24" CMP NE 934.18<br>24" CMP E 934.92<br>12" CMP E 934.92<br>18" CONC N 934.28<br>40+51.31 (31.19R) | STORM CB 428<br>RIM 938.03<br>18" CONC N 933.94<br>18" CONC S 933.97<br>40+99.50 (20.49R) | STORM CB 425<br>RIM 938.02<br>15" CONC N 934.21<br>18" CONC S 934.25<br>41+25.38 (20.56R) | STORM CB 422<br>RIM 939.02<br>15" CONC N 933.99<br>15" CONC SW 934.08<br>41+45.41 (54.56R) | STORM CB 418<br>RIM 939.52<br>12" CONC N 935.24<br>15" CONC NW 934.08<br>15" CONC S 934.57<br>42+03.30 (54.56R) | STORM CB 415<br>RIM 938.63<br>BEEHIVE<br>15" CONC N 935.05<br>15" CONC SE 934.94<br>42+24.02 (28.17R) | STORM CB 406<br>RIM 938.72<br>BEEHIVE<br>18" CONC N 935.55<br>18" CONC S 935.49<br>12" CONC NW 935.52<br>44+95.77 (28.26R) | STORM CB 410<br>RIM 940.06<br>12" CONC W 935.51<br>15" CONC SE 935.51<br>45+00.03 (24.61R) | STORM MH 670<br>RIM 944.05<br>12" CONC E 937.97<br>12" CONC NE 938.05<br>47+83.74 (37.83R) | STORM CB 675<br>RIM 943.46<br>18" CONC S 937.48<br>18" CONC N 937.73<br>12" CONC SE 937.73<br>12" CONC W 940.05<br>47+95.09 (26.68R) | WATERMAIN MH 14<br>RIM 943.12<br>47+68.54 (20.62R) |
|---|---|---|--|---|---|--|--|--|--|--|

| STR   | STA      | R/L | TYPE                            | EX RIM |
|-------|----------|-----|---------------------------------|--------|
| SAN22 | 41+45.67 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 938.30 |
| SAN23 | 44+43.15 | L   | DR STRUCTURE COVER, ADJ, CASE 1 | 940.00 |
| WM14  | 47+68.54 | R   | DR STRUCTURE COVER, ADJ, CASE 1 | 943.12 |
| ST435 | 40+51.31 | R   | DR STRUCTURE COVER, ADJ, CASE 1 | 938.51 |

NOTE: PROPOSED RIM ELEVATION SHALL BE ADJUSTED WHERE NECESSARY TO MEET ROAD GRADE (SEE DETAIL SHEET 11)

PROFILES  
HORIZONTAL SCALE 1" = 30'  
VERTICAL SCALE 1" = 3"



\* PROPOSED CB AND MH DETAILS SEE STORM PROFILE SHEETS SHEET# 40 AND 41  
NOTE: PROPOSED E/M WILL MEET EXISTING. STA. 0+20 TO 47+50

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

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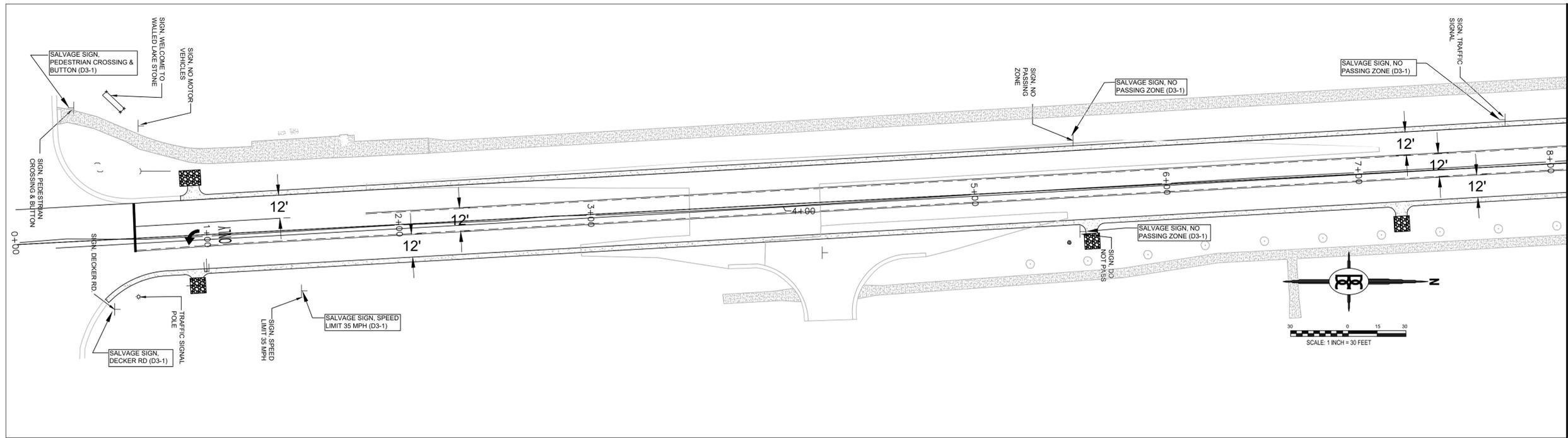
PREPARED FOR  
**CITY OF WALLED LAKE**  
1499 E. WEST MAPLE  
WALLED LAKE, MI 48390  
(248) 624-4847

PROJECT  
**DECKER ROAD**

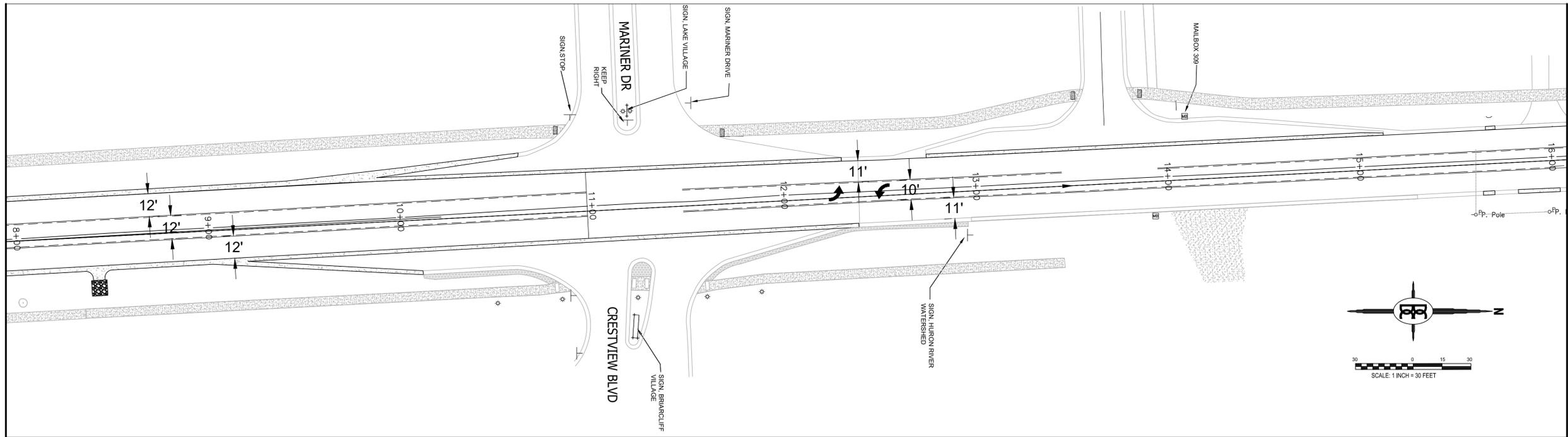
SHEET TITLE  
**CURB PROFILE 6**

|           |                |                 |
|-----------|----------------|-----------------|
| DESIGNED: | SCALE 1" = 30' | SHEET NO.       |
| DRAWN:    | JOB NO. 18-274 | <b>39 OF 48</b> |





MATCHLINE "A" THIS SHEET



MATCHLINE "B" SHEET 43

| SIGNS THIS SHEET BY CONTRACTOR |      |     |
|--------------------------------|------|-----|
| ITEM                           | UNIT | QTY |
| POST, STEEL, 3 LB              | FT   | 84  |
| SIGN, TYPE III, ERECT, SALV    | EA   | 6   |

| PAVEMENT MARKINGS THIS SHEET BY CONTRACTOR |      |      |
|--|------|------|
| DESCRIPTION                                | QTY  |      |
|  | EACH | FT   |
| PAVT MRKG, POLYUREA, LT TURN ARROW SYM     | 3    | -    |
| PAVT MRKG, POLYUREA, ONLY                  | 1    | -    |
| PAVT MRKG, THERMOPL, 4 INCH, WHITE         | -    | 75   |
| PAVT MRKG, THERMOPL, 4 INCH, YELLOW        | -    | 3556 |
| PAVT MRKG, THERMOPL, 24 INCH, STOP BAR     | -    | 26   |

STREET NAME SIGNS (D3-1) SHALL BE REMOVED, SALVAGED, RELOCATED AS DETERMINED AND/OR APPROVED BY THE PROJECT ENGINEER. THE SIGN REMOVAL, SALVAGING, RELOCATING, INSTALLATION, AND RELATED WORK WILL BE PAID FOR AS: "SIGN, TYPE III, ERECT, SALV (EA)"

REFER TO SHEET FIVE AND 'SPECIAL PROVISION FOR MAINTAINING TRAFFIC' REGARDING TEMPORARY PAVEMENT MARKINGS.

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(248) 624-4847

PROJECT  
**DECKER ROAD**

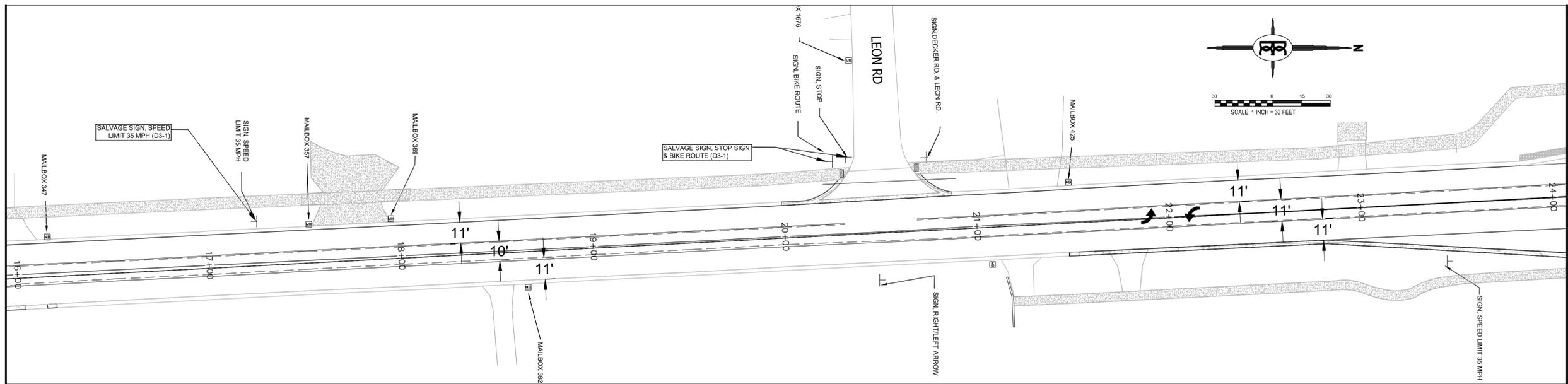
SHEET TITLE  
**PERMANENT SIGNING 1**

| NO | BY | REVISION       | PER | DATE     |
|----|----|----------------|-----|----------|
| 1  | BM | MDOT QI REVIEW |     | 12/16/21 |

DESIGNED: BM SCALE 1" = 30'  
DRAWN: DH JOB NO. 18-274

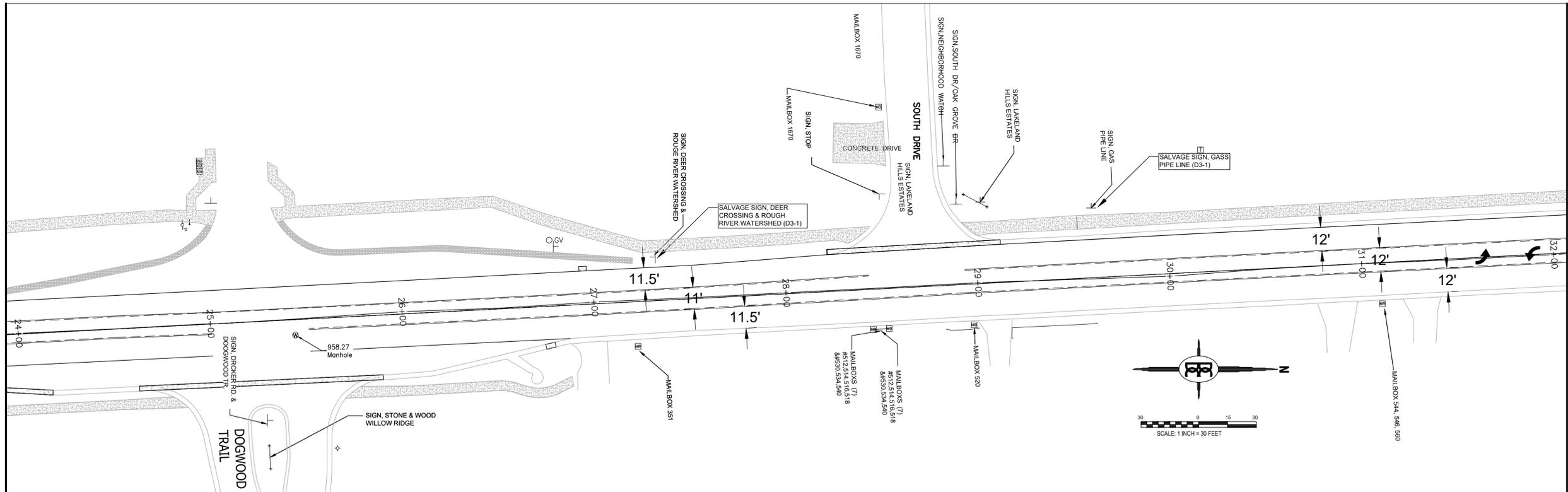
SHEET NO.  
**41 OF 48**

MATCHLINE "B" SHEET 42



MATCHLINE "C" THIS SHEET

MATCHLINE "C" THIS SHEET



MATCHLINE "D" SHEET 44

| SIGNS THIS SHEET BY CONTRACTOR |      |     |
|--------------------------------|------|-----|
| ITEM                           | UNIT | QTY |
| POST, STEEL, 3 LB              | FT   | 56  |
| SIGN, TYPE III, ERECT, SALV    | EA   | 4   |

| PAVEMENT MARKINGS THIS SHEET BY CONTRACTOR |      |      |
|--|------|------|
| DESCRIPTION                                | QTY  |      |
|  | EACH | FT   |
| PAVT MRKG, POLYUREA, LT TURN ARROW SYM     | 4    | -    |
| PAVT MRKG, THERMOPL, 4 INCH, WHITE         | -    | 355  |
| PAVT MRKG, THERMOPL, 4 INCH, YELLOW        | -    | 3828 |

STREET NAME SIGNS (D3-1) SHALL BE REMOVED, SALVAGED, RELOCATED AS DETERMINED AND/OR APPROVED BY THE PROJECT ENGINEER. THE SIGN REMOVAL, SALVAGING, RELOCATING, INSTALLATION, AND RELATED WORK WILL BE PAID FOR AS: "SIGN, TYPE III, ERECT, SALV (EA)"

REFER TO SHEET FIVE AND 'SPECIAL PROVISION FOR MAINTAINING TRAFFIC' REGARDING TEMPORARY PAVEMENT MARKINGS.

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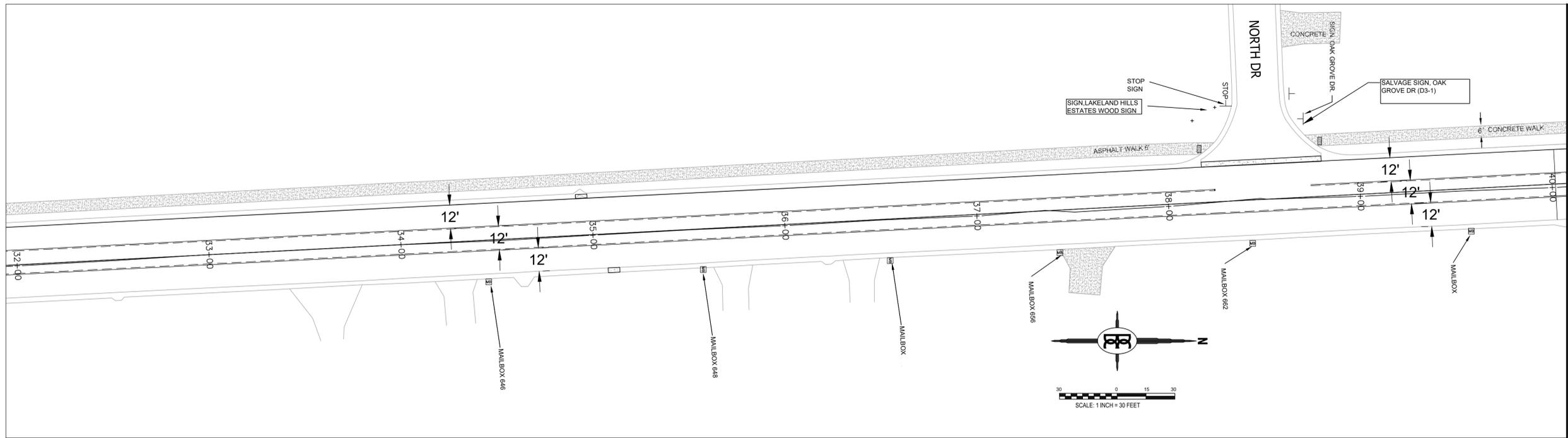
PROJECT  
**DECKER ROAD**

SHEET TITLE  
**PERMANENT SIGNING 2**

|              |                 |           |
|--------------|-----------------|-----------|
| DESIGNED: BM | SCALE: NO SCALE | SHEET NO. |
| DRAWN: DH    | JOB NO. 18-274  | 42 OF 48  |

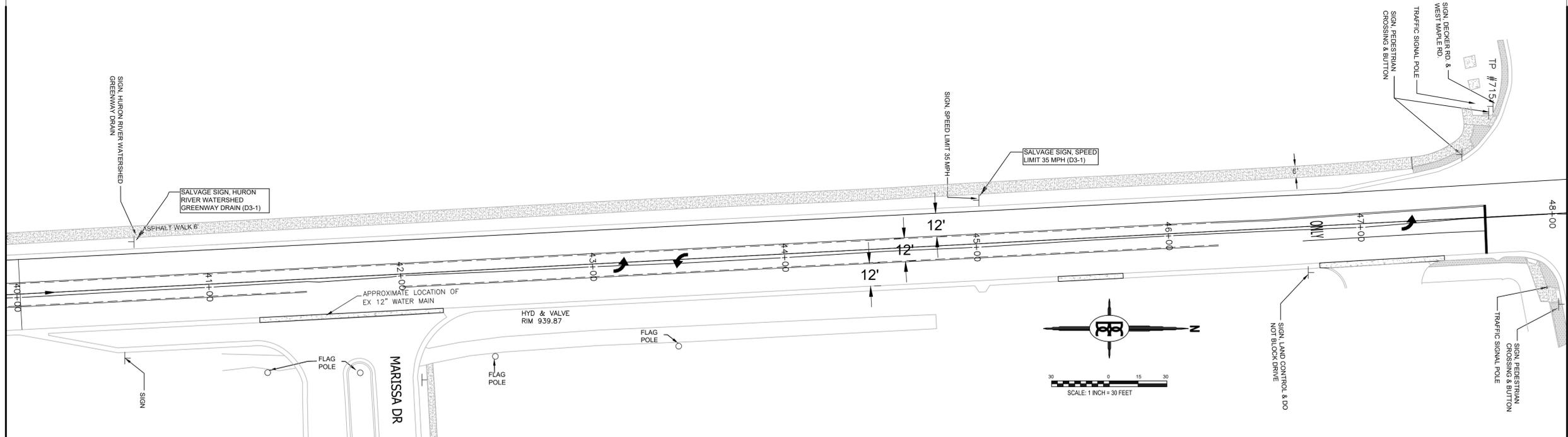
|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT QI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

MATCHLINE "B" SHEET 42



MATCHLINE "C" THIS SHEET

MATCHLINE "C" THIS SHEET



MATCHLINE "D" SHEET 44

| SIGNS THIS SHEET BY CONTRACTOR |      |     |
|--------------------------------|------|-----|
| ITEM                           | UNIT | QTY |
| POST, STEEL, 3 LB              | FT   | 56  |
| SIGN, TYPE III, ERECT, SALV    | EA   | 4   |

| PAVEMENT MARKINGS THIS SHEET BY CONTRACTOR |      |      |
|--|------|------|
| DESCRIPTION                                | QTY  |      |
|  | EACH | FT   |
| PAVT MRKG, POLYUREA, LT TURN ARROW SYM     | 3    | -    |
| PAVT MRKG, POLYUREA, ONLY                  | 1    | -    |
| PAVT MRKG, THERMOPL, 4 INCH, WHITE         | -    | 95   |
| PAVT MRKG, THERMOPL, 4 INCH, YELLOW        | -    | 3436 |
| PAVT MRKG, THERMOPL, 24 INCH, STOP BAR     | -    | 26   |

STREET NAME SIGNS (D3-1) SHALL BE REMOVED, SALVAGED, RELOCATED AS DETERMINED AND/OR APPROVED BY THE PROJECT ENGINEER. THE SIGN REMOVAL, SALVAGING, RELOCATING, INSTALLATION, AND RELATED WORK WILL BE PAID FOR AS: "SIGN, TYPE III, ERECT, SALV (EA)"

REFER TO SHEET FIVE AND 'SPECIAL PROVISION FOR MAINTAINING TRAFFIC' REGARDING TEMPORARY PAVEMENT MARKINGS.

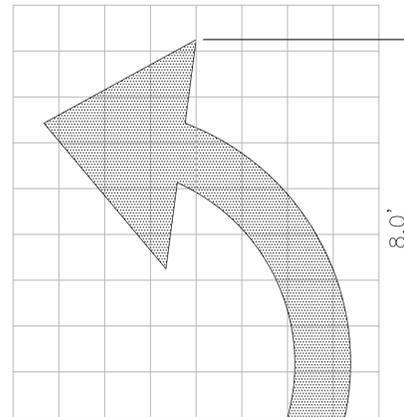
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PROJECT  
**DECKER ROAD**

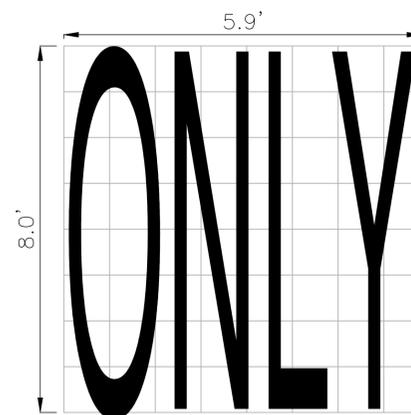
SHEET TITLE  
**PERMANENT SIGNING 3**

|              |                |                 |
|--------------|----------------|-----------------|
| DESIGNED: BM | SCALE NO SCALE | SHEET NO.       |
| DRAWN: DH    | JOB NO. 18-274 | <b>43 OF 48</b> |



LEFT TURN ONLY DETAIL

PAID FOR AS "PAVT MRKG, LT TURN ARROW SYM (EA)"



"ONLY" DETAIL

PAID FOR AS "PAVT MRKG, POLYUREA, ONLY (EA)"

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WALLED LAKE, MI 48390

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PROJECT

**DECKER ROAD**

SHEET TITLE

**PERMANENT SIGNING 4**

| NO | BY | REVISION       | PER | DATE     |
|----|----|----------------|-----|----------|
| 1  | BM | MDOT GI REVIEW |     | 12/16/21 |

|              |                |                 |
|--------------|----------------|-----------------|
| DESIGNED: BM | SCALE NO SCALE | SHEET NO.       |
| DRAWN: DH    | JOB NO. 18-274 | <b>44 OF 48</b> |

| DECKER ROAD |   |      | REMOVAL SHEETS |      |      |      |      |      | PLAN AND PROFILE SHEETS |      |     |     |     |     | PROFLIE SHEETS |   |   |   |   |   | SESC SHEETS |     |     |     |    |    |
|-------------|---|------|----------------|------|------|------|------|------|-------------------------|------|-----|-----|-----|-----|----------------|---|---|---|---|---|-------------|-----|-----|-----|----|----|
| PAY ITEM    | DESCRIPTION   | UNIT | 1              | 2    | 3    | 4    | 5    | 6    | 1                       | 2    | 3   | 4   | 5   | 6   | 1              | 2 | 3 | 4 | 5 | 6 | 1           | 2   | 3   | 4   | 5  | 6  |
| 1100001     | Mobilization, Max. _____                                | LS   |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2030001     | Culv, Rem, Less than 24 inch                            | Ea   |                | 1    | 1    | 1    |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2030011     | Dr Structure, Rem                                       | Ea   |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2030015     | Sewer, Rem, Less than 24 inch                           | Ft   | 76             |      |      |      | 51   |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2040020     | Curb and Gutter, Rem                                    | Ft   | 55             | 341  | 22   | 113  | 75   | 214  |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2040045     | Masonry and Conc Structure, Rem                         | Cyd  |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2040055     | Sidewalk, Rem   | Syd  |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2047011     | _ Pavt, Rem, Modified                                   | Syd  | 230            | 238  | 139  | 114  | 336  | 305  |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2050006     | Ditch Cleanout  | Sta  |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2050010     | Embankment, CIP   | Cyd  | 615            | 185  |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2050016     | Excavation, Earth                                       | Cyd  | 328            | 134  |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2050023     | Granular Material, Cl II                                | Cyd  |                |      |      |      |      |      | 206                     | 125  | 35  | 33  |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2050042     | Subgrade Undercutting, Type III                         | Cyd  |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 2080022     | Erosion Control, Inlet Protection, Geotextile and Stone | Ea   |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   | 3           | 1   | 5   | 7   | 8  | 12 |
| 2080036     | Erosion Control, Silt Fence                             | Ft   |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   | 1783        | 527 | 353 | 148 | 83 | 61 |
| 3020020     | Aggregate Base, 8 inch                                  | Syd  |                |      |      |      |      |      | 618                     | 374  | 103 | 97  |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 3050002     | HMA Base Crushing and Shaping                           | Syd  | 2770           | 3701 | 3059 | 2645 |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 3050010     | Material, Surplus and Unsuitable, Rem, LM               | Cyd  |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 3050015     | Salv Crushed Material, LM                               | Cyd  |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 3060020     | Maintenance Gravel                                      | Ton  |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 3067050     | _ Driveway Maintenance, Modified                        | Each |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 3067050     | _ Intersection Maintenance, Modified                    | Each |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 3080010     | Geotextile, Stabilization                               | Syd  |                |      |      |      |      |      | 79                      |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 3082001     | Geotextile, Stabilization, Non-Woven                    | Syd  |                |      |      |      |      |      | 32                      | 8    |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 4010012     | Culv End Sect, 12 inch                                  | Ea   |                |      |      |      |      |      | 2                       | 2    |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 4010018     | Culv End Sect, 18 inch                                  | Ea   |                |      |      |      |      |      | 1                       |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 4010539     | Culv, Cl E, 12 inch                                     | Ft   |                |      |      |      |      |      |                         | 46   |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 4010541     | Culv, Cl E, 18 inch                                     | Ft   |                |      |      |      |      |      | 15                      |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 4020600     | Sewer, Cl E, 12 inch, Tr Det B                          | Ft   |                |      |      |      |      |      | 10                      |      | 71  | 68  | 51  |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 4020602     | Sewer, Cl E, 18 inch, Tr Det B                          | Ft   |                |      |      |      |      |      | 10                      |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 4030005     | Dr Structure Cover, Adj, Case 1                         | Ea   |                |      |      |      |      |      |                         |      |     |     |     | 5   | 3              | 6 | 4 | 6 | 4 |   |             |     |     |     |    |    |
| 4030006     | Dr Structure Cover, Adj, Case 2                         | Ea   |                |      |      |      |      |      |                         |      |     |     |     |     |                | 3 |   |   |   |   |             |     |     |     |    |    |
| 4030010     | Dr Structure Cover, Type B                              | Ea   |                |      |      |      |      |      | 1                       |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 4030210     | Dr Structure, 48 inch dia                               | Ea   |                |      |      |      |      |      | 1                       |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 4040041     | Underdrain, Pipe, Open-Graded, 4 inch                   | Ft   |                |      |      |      |      |      | 1641                    | 1273 | 371 | 347 |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 4040091     | Underdrain, Outlet, 4 inch                              | Ft   |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 4040111     | Underdrain, Outlet, Ending, 4 inch                      | Ea   |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 5010002     | Cold Milling HMA Surface                                | Syd  | 404            |      |      | 1161 | 3264 | 3052 |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 5010025     | Hand Patching   | Ton  |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 5010061     | HMA Approach  | Ton  |                |      |      |      |      |      | 26                      | 179  | 45  | 83  | 68  | 66  |                |   |   |   |   |   |             |     |     |     |    |    |
| 5012025     | HMA, 4EML   | Ton  |                |      |      |      |      |      | 708                     | 661  | 653 | 644 | 360 | 336 |                |   |   |   |   |   |             |     |     |     |    |    |
| 6030020     | Joint, Contraction, Crg                                 | Ft   |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |
| 6030021     | Joint, Expansion, Erg                                   | Ft   |                |      |      |      |      |      |                         |      |     |     |     |     |                |   |   |   |   |   |             |     |     |     |    |    |

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WALLED LAKE, MI 48390  
(248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**QUANTITIES**

DESIGNED: BM SCALE NO SCALE SHEET NO.  
DRAWN: DH JOB NO. 18-274 **45 OF 48**

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

| DECKER ROAD |  |      | REMOVAL SHEETS |   |   |   |   |   | PLAN AND PROFILE SHEETS |     |     |     |    |     | PROFLIE SHEETS |   |   |   |   |   | SESC SHEETS |   |   |   |   |   |
|-------------|--|------|----------------|---|---|---|---|---|-------------------------|-----|-----|-----|----|-----|----------------|---|---|---|---|---|-------------|---|---|---|---|---|
| PAY ITEM    | DESCRIPTION  | UNIT | 1              | 2 | 3 | 4 | 5 | 6 | 1                       | 2   | 3   | 4   | 5  | 6   | 1              | 2 | 3 | 4 | 5 | 6 | 1           | 2 | 3 | 4 | 5 | 6 |
| 8010003     | Driveway, Reinf Conc, 8 inch                                     | Syd  |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8020017     | Curb and Gutter, Conc, Det B3                                    | Ft   |                |   |   |   |   |   | 55                      |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8020023     | Curb and Gutter, Conc, Det C4                                    | Ft   |                |   |   |   |   |   | 1158                    | 504 | 310 | 113 | 12 | 53  |                |   |   |   |   |   |             |   |   |   |   |   |
| 8020050     | Driveway Opening, Conc, Det M                                    | Ft   |                |   |   |   |   |   | 483                     | 799 | 68  | 243 | 63 | 161 |                |   |   |   |   |   |             |   |   |   |   |   |
| 8020075     | Spillway, Conc   | Ft   |                |   |   |   |   |   | 17                      | 5   |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8030010     | Detectable Warning Surface                                       | Ft   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8030044     | Sidewalk, Conc, 4 inch   | Sft  |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8032002     | Curb Ramp, Conc, 6 inch  | Sft  |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8070095     | Post, Mailbox  | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8100371     | Post, Steel, 3 lb  | Ft   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8100402     | Sign, Type III, Erect, Salv                                      | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8100403     | Sign, Type III, Rem  | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8100404     | Sign, Type IIIA  | Sft  |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8110195     | Pavt Mrkg, Thermopl, 4 inch, White                               | Ft   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8110196     | Pavt Mrkg, Thermopl, 4 inch, Yellow                              | Ft   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8110218     | Pavt Mrkg, Thermopl, 24 inch, Stop Bar                           | Ft   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8110405     | Pavt Mrkg, Polyurea, Lt Turn Arrow Sym                           | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8110410     | Pavt Mrkg, Polyurea, Only  | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8110450     | Recessing Pavt Mrkg, Longit                                      | Ft   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120012     | Barricade, Type III, High Intensity, Double Sided, Lighted, Furn | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120013     | Barricade, Type III, High Intensity, Double Sided, Lighted, Oper | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120170     | Minor Traf Devices   | LS   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120210     | Pavt Mrkg, Longit, 6 inch or Less Width, Rem                     | Ft   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120213     | Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, Yellow, Temp  | Ft   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120246     | Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp    | Ft   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120252     | Plastic Drum, Flourescent, Furn                                  | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120253     | Plastic Drum, Flourescent, Oper                                  | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120310     | Sign Cover   | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120350     | Sign, Type B, Temp, Prismatic, Furn                              | Sft  |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120351     | Sign, Type B, Temp, Prismatic, Oper                              | Sft  |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120352     | Sign, Type B, Temp, Prismatic, Spec, Furn                        | Sft  |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120353     | Sign, Type B, Temp, Prismatic, Spec, Oper                        | Sft  |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8120370     | Traf Regulator Control   | LS   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8130001     | Riprap, Grouted  | Syd  |                |   |   |   |   |   |                         | 8   |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8130010     | Riprap, Plain  | Syd  |                |   |   |   |   |   | 32                      |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8160020     | Fertilizer, Chemical Nutrient, Cl A                              | Lb   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8160025     | Mulch  | Syd  |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8160035     | Seeding, Mixture CR  | Lb   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8160039     | Seeding, Mixture THM   | Lb   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8160060     | Topsoil Surface, Furn, 2 inch                                    | Syd  |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8210001     | Monument Box   | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8230421     | Water Shutoff, Adj, Case 1                                       | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |
| 8230431     | Gate Box, Adj, Case 1  | Ea   |                |   |   |   |   |   |                         |     |     |     |    |     |                |   |   |   |   |   |             |   |   |   |   |   |

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PREPARED FOR  
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1499 E. WEST MAPLE  
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PROJECT  
**DECKER ROAD**

SHEET TITLE  
**QUANTITIES 2**

DESIGNED: BM SCALE NO SCALE SHEET NO.  
DRAWN: DH JOB NO. 18-274 **46 OF 48**

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

| DECKER ROAD |   |      | CONSTRUCTION SIGNING SHEET | DETOUR DIAGRAMS | PERMANENT SIGNING SHEETS |   |   |   | SUBTOTAL | AS DIRECTED | CONTRACT |
|-------------|---|------|----------------------------|-----------------|--------------------------|---|---|---|----------|-------------|----------|
| PAY ITEM    | DESCRIPTION   | UNIT | 1                          | 1               | 1                        | 2 | 3 | 4 |          | BY ENGINEER | TOTAL    |
| 1100001     | Mobilization, Max. _____                                | LS   |                            |                 |                          |   |   |   | 0        | 1           | 1        |
| 2030001     | Culv, Rem, Less than 24 inch                            | Ea   |                            |                 |                          |   |   |   | 3        |             | 3        |
| 2030011     | Dr Structure, Rem                                       | Ea   |                            |                 |                          |   |   |   | 0        | 1           | 1        |
| 2030015     | Sewer, Rem, Less than 24 inch                           | Ft   |                            |                 |                          |   |   |   | 127      |             | 127      |
| 2040020     | Curb and Gutter, Rem                                    | Ft   |                            |                 |                          |   |   |   | 820      |             | 820      |
| 2040045     | Masonry and Conc Structure, Rem                         | Cyd  |                            |                 |                          |   |   |   | 0        | 10          | 10       |
| 2040055     | Sidewalk, Rem   | Syd  |                            |                 |                          |   |   |   | 0        | 30          | 30       |
| 2047011     | _ Pavt, Rem, Modified                                   | Syd  |                            |                 |                          |   |   |   | 1362     |             | 1362     |
| 2050006     | Ditch Cleanout  | Sta  |                            |                 |                          |   |   |   | 0        | 3           | 3        |
| 2050010     | Embankment, CIP   | Cyd  |                            |                 |                          |   |   |   | 800      |             | 800      |
| 2050016     | Excavation, Earth                                       | Cyd  |                            |                 |                          |   |   |   | 462      |             | 462      |
| 2050023     | Granular Material, CI II                                | Cyd  |                            |                 |                          |   |   |   | 399      | 6           | 405      |
| 2050042     | Subgrade Undercutting, Type III                         | Cyd  |                            |                 |                          |   |   |   | 0        | 300         | 300      |
| 2080022     | Erosion Control, Inlet Protection, Geotextile and Stone | Ea   |                            |                 |                          |   |   |   | 36       |             | 36       |
| 2080036     | Erosion Control, Silt Fence                             | Ft   |                            |                 |                          |   |   |   | 2955     |             | 2955     |
| 3020020     | Aggregate Base, 8 inch                                  | Syd  |                            |                 |                          |   |   |   | 1192     | 100         | 1292     |
| 3050002     | HMA Base Crushing and Shaping                           | Syd  |                            |                 |                          |   |   |   | 12175    |             | 12175    |
| 3050010     | Material, Surplus and Unsuitable, Rem, LM               | Cyd  |                            |                 |                          |   |   |   | 0        | 1186        | 1186     |
| 3050015     | Salv Crushed Material, LM                               | Cyd  |                            |                 |                          |   |   |   | 0        | 300         | 300      |
| 3060020     | Maintenance Gravel                                      | Ton  |                            |                 |                          |   |   |   | 0        | 100         | 100      |
| 3067050     | _ Driveway Maintenance, Modified                        | Each |                            |                 |                          |   |   |   | 0        | 26          | 26       |
| 3067050     | _ Intersection Maintenance, Modified                    | Each |                            |                 |                          |   |   |   | 0        | 6           | 6        |
| 3080010     | Geotextile, Stabilization                               | Syd  |                            |                 |                          |   |   |   | 79       | 11          | 90       |
| 3082001     | Geotextile, Stabilization, Non-Woven                    | Syd  |                            |                 |                          |   |   |   | 40       |             | 40       |
| 4010012     | Culv End Sect, 12 inch                                  | Ea   |                            |                 |                          |   |   |   | 4        |             | 4        |
| 4010018     | Culv End Sect, 18 inch                                  | Ea   |                            |                 |                          |   |   |   | 1        |             | 1        |
| 4010539     | Culv, CI E, 12 inch                                     | Ft   |                            |                 |                          |   |   |   | 46       |             | 46       |
| 4010541     | Culv, CI E, 18 inch                                     | Ft   |                            |                 |                          |   |   |   | 15       |             | 15       |
| 4020600     | Sewer, CI E, 12 inch, Tr Det B                          | Ft   |                            |                 |                          |   |   |   | 200      |             | 200      |
| 4020602     | Sewer, CI E, 18 inch, Tr Det B                          | Ft   |                            |                 |                          |   |   |   | 10       |             | 10       |
| 4030005     | Dr Structure Cover, Adj, Case 1                         | Ea   |                            |                 |                          |   |   |   | 28       |             | 28       |
| 4030006     | Dr Structure Cover, Adj, Case 2                         | Ea   |                            |                 |                          |   |   |   | 3        |             | 3        |
| 4030010     | Dr Structure Cover, Type B                              | Ea   |                            |                 |                          |   |   |   | 1        |             | 1        |
| 4030210     | Dr Structure, 48 inch dia                               | Ea   |                            |                 |                          |   |   |   | 1        | 1           | 2        |
| 4040041     | Underdrain, Pipe, Open-Graded, 4 inch                   | Ft   |                            |                 |                          |   |   |   | 3632     |             | 3632     |
| 4040091     | Underdrain, Outlet, 4 inch                              | Ft   |                            |                 |                          |   |   |   | 0        | 80          | 80       |
| 4040111     | Underdrain, Outlet, Ending, 4 inch                      | Ea   |                            |                 |                          |   |   |   | 0        | 6           | 6        |
| 5010002     | Cold Milling HMA Surface                                | Syd  |                            |                 |                          |   |   |   | 7881     |             | 7881     |
| 5010025     | Hand Patching   | Ton  |                            |                 |                          |   |   |   | 0        | 15          | 15       |
| 5010061     | HMA Approach  | Ton  |                            |                 |                          |   |   |   | 467      | 10          | 477      |
| 5012025     | HMA, 4EML   | Ton  |                            |                 |                          |   |   |   | 3362     | 100         | 3462     |
| 6030020     | Joint, Contraction, Crg                                 | Ft   |                            |                 |                          |   |   |   | 0        | 10          | 10       |
| 6030021     | Joint, Expansion, Erg                                   | Ft   |                            |                 |                          |   |   |   | 0        | 30          | 30       |

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1499 E. WEST MAPLE  
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(248) 624-4847

PROJECT  
**DECKER ROAD**

SHEET TITLE  
**QUANTITIES 3**

DESIGNED: BM SCALE NO SCALE SHEET NO.  
DRAWN: DH JOB NO. 18-274 **47 OF 48**

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |

| DECKER ROAD |  |      | CONSTRUCTION SIGNING SHEET | DETOUR DIAGRAMS | PERMANENT SIGNING SHEETS |      |      |   | SUBTOTAL | AS DIRECTED | CONTRACT |
|-------------|--|------|----------------------------|-----------------|--------------------------|------|------|---|----------|-------------|----------|
| PAY ITEM    | DESCRIPTION  | UNIT | 1                          | 1               | 1                        | 2    | 3    | 4 |          | BY ENGINEER | TOTAL    |
| 8010003     | Driveway, Reinf Conc, 8 inch                                     | Syd  |                            |                 |                          |      |      |   | 0        | 20          | 20       |
| 8020017     | Curb and Gutter, Conc, Det B3                                    | Ft   |                            |                 |                          |      |      |   | 55       |             | 55       |
| 8020023     | Curb and Gutter, Conc, Det C4                                    | Ft   |                            |                 |                          |      |      |   | 2150     |             | 2150     |
| 8020050     | Driveway Opening, Conc, Det M                                    | Ft   |                            |                 |                          |      |      |   | 1817     |             | 1817     |
| 8020075     | Spillway, Conc   | Ft   |                            |                 |                          |      |      |   | 22       |             | 22       |
| 8030010     | Detectable Warning Surface                                       | Ft   |                            |                 |                          |      |      |   | 0        | 10          | 10       |
| 8030044     | Sidewalk, Conc, 4 inch   | Sft  |                            |                 |                          |      |      |   | 0        | 120         | 120      |
| 8032002     | Curb Ramp, Conc, 6 inch  | Sft  |                            |                 |                          |      |      |   | 0        | 400         | 400      |
| 8070095     | Post, Mailbox  | Ea   |                            |                 |                          |      |      |   | 0        | 1           | 1        |
| 8100371     | Post, Steel, 3 lb  | Ft   |                            |                 | 84                       | 56   | 56   |   | 196      |             | 196      |
| 8100402     | Sign, Type III, Erect, Salv                                      | Ea   |                            |                 | 6                        | 4    | 4    |   | 14       |             | 14       |
| 8100403     | Sign, Type III, Rem  | Ea   |                            |                 |                          |      |      |   | 0        | 18          | 18       |
| 8100404     | Sign, Type IIIA  | Sft  |                            |                 |                          |      |      |   | 0        | 72          | 72       |
| 8110195     | Pavt Mrkg, Thermopl, 4 inch, White                               | Ft   |                            |                 | 75                       | 355  | 95   |   | 525      |             | 525      |
| 8110196     | Pavt Mrkg, Thermopl, 4 inch, Yellow                              | Ft   |                            |                 | 3548                     | 3867 | 3740 |   | 11155    |             | 11155    |
| 8110218     | Pavt Mrkg, Thermopl, 24 inch, Stop Bar                           | Ft   |                            |                 | 26                       |      | 26   |   | 52       |             | 52       |
| 8110405     | Pavt Mrkg, Polyurea, Lt Turn Arrow Sym                           | Ea   |                            |                 | 3                        | 4    | 3    |   | 10       |             | 10       |
| 8110410     | Pavt Mrkg, Polyurea, Only  | Ea   |                            |                 | 1                        |      | 1    |   | 2        |             | 2        |
| 8110450     | Recessing Pavt Mrkg, Longit                                      | Ft   |                            |                 | 3623                     | 4222 | 3835 |   | 11680    | 52          | 11732    |
| 8120012     | Barricade, Type III, High Intensity, Double Sided, Lighted, Furn | Ea   |                            | 9               |                          |      |      |   | 9        |             | 9        |
| 8120013     | Barricade, Type III, High Intensity, Double Sided, Lighted, Oper | Ea   |                            | 9               |                          |      |      |   | 9        |             | 9        |
| 8120170     | Minor Traf Devices   | LS   |                            |                 |                          |      |      |   | 0        | 1           | 1        |
| 8120210     | Pavt Mrkg, Longit, 6 inch or Less Width, Rem                     | Ft   |                            |                 |                          |      |      |   | 0        | 1488        | 1488     |
| 8120213     | Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, Yellow, Temp  | Ft   |                            |                 |                          |      |      |   | 0        | 1488        | 1488     |
| 8120246     | Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp    | Ft   |                            |                 |                          |      |      |   | 0        | 1488        | 1488     |
| 8120252     | Plastic Drum, Flourescent, Furn                                  | Ea   |                            |                 |                          |      |      |   | 0        | 300         | 300      |
| 8120253     | Plastic Drum, Flourescent, Oper                                  | Ea   |                            |                 |                          |      |      |   | 0        | 300         | 300      |
| 8120310     | Sign Cover   | Ea   |                            |                 |                          |      |      |   | 0        | 4           | 4        |
| 8120350     | Sign, Type B, Temp, Prismatic, Furn                              | Sft  | 779                        | 231             |                          |      |      |   | 1010     |             | 1010     |
| 8120351     | Sign, Type B, Temp, Prismatic, Oper                              | Sft  | 779                        | 231             |                          |      |      |   | 1010     |             | 1010     |
| 8120352     | Sign, Type B, Temp, Prismatic, Spec, Furn                        | Sft  | 192                        | 128             |                          |      |      |   | 320      |             | 320      |
| 8120353     | Sign, Type B, Temp, Prismatic, Spec, Oper                        | Sft  | 192                        | 128             |                          |      |      |   | 320      |             | 320      |
| 8120370     | Traf Regulator Control   | LS   |                            |                 |                          |      |      |   | 0        | 1           | 1        |
| 8130001     | Riprap, Grouted  | Syd  |                            |                 |                          |      |      |   | 8        |             | 8        |
| 8130010     | Riprap, Plain  | Syd  |                            |                 |                          |      |      |   | 32       |             | 32       |
| 8160020     | Fertilizer, Chemical Nutrient, CI A                              | Lb   |                            |                 |                          |      |      |   | 0        | 100         | 100      |
| 8160025     | Mulch  | Syd  |                            |                 |                          |      |      |   | 0        | 5000        | 5000     |
| 8160035     | Seeding, Mixture CR  | Lb   |                            |                 |                          |      |      |   | 0        | 150         | 150      |
| 8160039     | Seeding, Mixture THM   | Lb   |                            |                 |                          |      |      |   | 0        | 150         | 150      |
| 8160060     | Topsoil Surface, Furn, 2 inch                                    | Syd  |                            |                 |                          |      |      |   | 0        | 5000        | 5000     |
| 8210001     | Monument Box   | Ea   |                            |                 |                          |      |      |   | 0        | 1           | 1        |
| 8230421     | Water Shutoff, Adj, Case 1                                       | Ea   |                            |                 |                          |      |      |   | 0        | 1           | 1        |
| 8230431     | Gate Box, Adj, Case 1  | Ea   |                            |                 |                          |      |      |   | 0        | 1           | 1        |

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PROJECT  
**DECKER ROAD**

SHEET TITLE  
**QUANTITIES 4**

DESIGNED: BM SCALE NO SCALE SHEET NO.  
DRAWN: DH JOB NO. 18-274 **48 OF 48**

|    |    |                |          |
|----|----|----------------|----------|
| 1  | BM | MDOT GI REVIEW | 12/16/21 |
| NO | BY | REVISION PER   | DATE     |