



Department of Management Services  
Purchasing Division  
241 West South Street  
Kalamazoo, MI 49007-4796  
Phone: 269.337.8020  
Fax: 269.337.8500  
[www.kalamazoo-city.org](http://www.kalamazoo-city.org)  
[purchasing@kalamazoo-city.org](mailto:purchasing@kalamazoo-city.org)

**NON-MANDATORY PRE-BID MEETING - Wednesday April 3, 2024, at 11:00 a.m. (ET)**  
**Harrison Facility (Conference Room A)**  
**1415 Harrison, Kalamazoo, MI 49007**

### INVITATION FOR BIDS (IFB)

The City of Kalamazoo, Michigan is soliciting sealed bids for:

**PROJECT NAME: Streets for All: Michikal Street Improvements - REBID**

**Bid Reference #: 91396-021.0**

**IFB ISSUE DATE: March 15, 2024**

**BID DUE/OPENING DATE: April 16, 2024 at 3:30 p.m. Local Time (ET)**

*Facsimile Bids Will Not Be Accepted.*

#### MAILING ADDRESS & INSTRUCTIONS

**Mail to:**

Purchasing Division  
241 W. South Street  
Kalamazoo, MI 49007

**Questions about this IFB should be directed to:**

Department Contact: **Anthony Ladd, PE,**  
**Assistant City Engineer – Public Works at**  
[ladda@kalamazoo-city.org](mailto:ladda@kalamazoo-city.org) or 269-910-1622

*Include on the Envelope the Project Name and Bid Reference Number. All Envelopes Must Be Sealed.*

You are invited to submit a bid for this project. Specifications, terms, conditions and instructions for submitting bids are contained herein. This Invitation for Bids with all pages, documents and attachments contained herein, or subsequently added to and made a part hereof, submitted as a fully and properly executed bid shall constitute the contract between the City and the successful bidder when approved and accepted on behalf of the City by an authorized official or agent of the City. Please review the bid document as soon as possible and note the **DEADLINE FOR QUESTIONS** in the Instructions to Bidders.

All bidders shall complete and return the Bid and Award page(s) and submit all information requested herein in order for a bid to be responsive. The bid document shall be returned in its entirety, in a properly identified and sealed envelope to the Purchasing Division at the above address. **BIDS MUST BE RECEIVED BEFORE THE DUE DATE - LATE BIDS WILL NOT BE CONSIDERED.** The City reserves the right to postpone the bid opening for its own convenience.

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**STATEMENT OF NO BID**

**NOTE: If you DO NOT intend to bid on this commodity or service, please complete and return this form immediately.** Your response will assist us in evaluating all responses for this important project and to improve our bid solicitation process.

The Purchasing Division of the City of Kalamazoo wishes to keep its bidders list file up-to-date. If, for any reason you cannot supply the commodity/service noted in this bid solicitation, this form must be completed and returned to remain on the particular bid list for future projects of this type.

**If you do not respond to this inquiry within the time set for the bid opening date and time noted, we will assume that you can no longer supply this commodity/service, and your name will be removed from this bid list.**

- \_\_\_\_\_ Specifications too “tight”, i.e. geared toward one brand or manufacturer only (explain below).
- \_\_\_\_\_ Specifications are unclear (explain below).
- \_\_\_\_\_ We are unable to meet specifications.
- \_\_\_\_\_ Insufficient time to respond to the Invitation for Bid.
- \_\_\_\_\_ Our schedule would not permit us to perform.
- \_\_\_\_\_ We are unable to meet bond requirements.
- \_\_\_\_\_ We are unable to meet insurance requirements.
- \_\_\_\_\_ We do not offer this product or service.
- \_\_\_\_\_ Remove us from your bidders list for this commodity or service.
- \_\_\_\_\_ Other (specify below).

REMARKS: \_\_\_\_\_

\_\_\_\_\_

SIGNED: \_\_\_\_\_ NAME: \_\_\_\_\_  
(Type or Print)

TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

FIRM NAME: \_\_\_\_\_  
(if any)

ADDRESS: \_\_\_\_\_  
(Street address) (City) (State) (Zip)

PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

EMAIL: \_\_\_\_\_

**SECTION I**  
**INSTRUCTIONS TO BIDDERS**

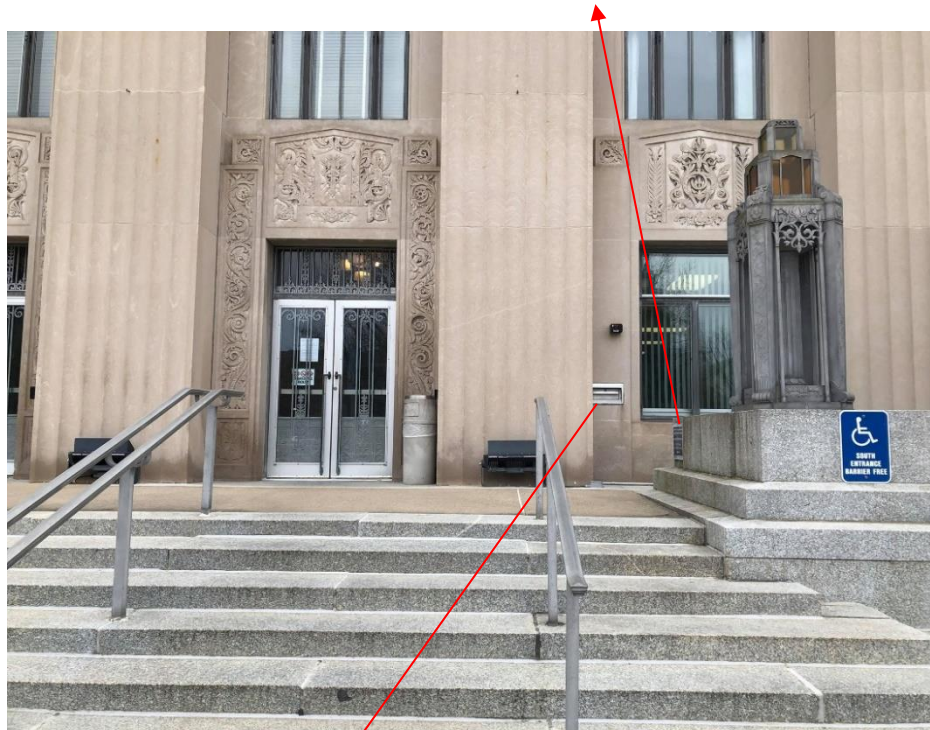
1. **EXAMINATION OF BID DOCUMENT**-Before submitting a bid, bidders shall carefully examine the specifications and shall fully inform themselves as to all existing conditions and limitations. The bidder shall indicate in the bid the sum to cover the cost of all items included on the bid form.
2. **PREPARATION OF BID**-The bid shall be legibly prepared in ink or typed. If a unit price or extension already entered by the bidder on the Bid and Award form is to be altered, it shall be crossed out and the new unit price or extension entered above or below and initialed by the bidder with ink. The bid shall be legally signed and the complete address of the bidder given thereon.

All bids shall be tightly sealed in an envelope plainly marked SEALED BID and identified by project name, bid opening date and time. Bids opened by mistake, due to improper identification, will be so documented and resealed. The Purchasing Division will maintain and guarantee confidentiality of the contents until the specified opening date and time. Bids submitted electronically will not be accepted.

3. **EXPLANATION TO BIDDERS**-Any binding explanation desired by a bidder regarding the meaning or interpretation of the Invitation for Bids (IFB) and attachments must be requested in writing, **at least 5 business days before the bid opening** so a reply may reach all prospective bidders prior to the submission of bids. Any information given to a prospective bidder concerning the IFB will be furnished to all prospective bidders as an amendment or addendum to the IFB if such information would be prejudicial to uninformed bidders. Receipt of amendments or addenda by a bidder must be acknowledged in the bid by attachment, or by letter or fax received before the time set for opening of bids. Oral explanation or instructions given prior to the opening will not be binding.
4. **CASH DISCOUNTS**-Discount offered for payment of less than thirty (30) days will not be considered in evaluating bids for award. Offered discounts of less than thirty (30) days will be taken if payment is made within the discount period, even though not considered in evaluation of the bid.
5. **WITHDRAWAL OF BIDS**-Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the exact time set for receipt of bid. No bid may be withdrawn for at least ninety (90) days after bid opening.
6. **ALTERNATE BIDS**-bidders are cautioned that any alternate bid, unless specifically requested or any changes, insertions or omissions to the terms and conditions, specifications or any other requirement of this IFB may be considered non-responsive, and at the option of the City, result in rejection of the alternate bid.
7. **LATE BIDS**-Any bid received at the office designated herein after the exact time specified for receipt will not be considered. (Note: The City reserves the right to consider bids that have been determined by the City to be received late due to mishandling by the City after receipt of the bid and no award has been made.)
8. **UNIT PRICES**-If there is a discrepancy between unit prices and their extension, unit prices shall prevail.
9. **BID SUBMITTAL**- Bidders can submit sealed bids in one of the following ways:
  - 9.1. **Mail your bid**, to be received before the bid due date and time indicated in the bid document, to the City of Kalamazoo at the following address:

City of Kalamazoo  
Purchasing Division  
241 West South Street  
Kalamazoo, MI 49007

- 9.2. **Deliver your bid to City Hall In-Person** before the bid due date and time indicated in the bid document.
- 9.3. **Deliver your bid to the Treasurer’s Office Payment Drop Box** located in the northwest corner of City Hall (see photos below) before the bid due date and time indicated in the bid document.



1. Open drop box located at City Hall.



2. Insert SEALED BID here.



- 10. **BID TABULATIONS-** The Purchasing Division makes an effort to post bid tabulations to the City of Kalamazoo website within 24 hours after the bid opening date and time at: <https://www.kalamazoocity.org/bidopportunities>. However, in certain cases the posting of the bid tabulation may extend beyond the 24-hour window.



**SECTION II**  
**BID AND AWARD**

The undersigned having become thoroughly familiar with all of the bid/contract documents incorporated herein, the project site and the location conditions affecting the work, hereby proposes to perform everything required to be performed in strict conformity with the requirements of these documents, and to provide and furnish all the equipment, labor and materials necessary to complete in a professional manner the furnishing and installing of all of the following, meeting or exceeding the specifications as set forth herein for the prices as stated below.

**STREETS FOR ALL: MICHIKAL STREET IMPROVEMENTS BASE BID**

| <b>ITEM</b>                                    | <b>QTY</b> | <b>UNIT</b> | <b>UNIT PRICE</b> | <b>EXTENDED PRICE</b> |
|--|------------|-------------|-------------------|-----------------------|
| Mobilization, Max \$180,000                    | LSUM       | 1           |                   |                       |
| Tree, Rem, 19 inch to 36 inch                  | EA         | 10          |                   |                       |
| Tree, Rem, 37 inch or Larger                   | EA         | 2           |                   |                       |
| Tree, Rem, 6 inch to 18 inch                   | EA         | 24          |                   |                       |
| Dr Structure, Rem                              | EA         | 18          |                   |                       |
| Sewer, Rem, Less than 24 inch                  | FT         | 850         |                   |                       |
| Curb and Gutter, Rem                           | FT         | 4,500       |                   |                       |
| Fence, Rem                                     | FT         | 1,055       |                   |                       |
| Guardrail, Rem                                 | FT         | 90          |                   |                       |
| Masonry and Conc Structure, Rem                | CYD        | 50          |                   |                       |
| Sidewalk, Rem                                  | SYD        | 285         |                   |                       |
| Exploratory Investigation, Vertical            | FT         | 10          |                   |                       |
| Pavt, Rem, Modified                            | SYD        | 6,450       |                   |                       |
| Subgrade Undercutting, Type II                 | CYD        | 1,000       |                   |                       |
| Machine Grading, Modified                      | STA        | 14          |                   |                       |
| Erosion Control, Inlet Protection, Fabric Drop | EA         | 57          |                   |                       |
| Erosion Control, Silt Fence                    | FT         | 500         |                   |                       |
| Subbase, CIP                                   | CYD        | 3,080       |                   |                       |
| Aggregate Base, 8 Inch, Modified               | SYD        | 7,910       |                   |                       |
| Maintenance Gravel, LM                         | CYD        | 1,000       |                   |                       |
| Sewer, Cl E, 12 inch, Tr Det B                 | FT         | 1,355       |                   |                       |
| Sewer, Cl E, 15 inch, Tr Det B                 | FT         | 20          |                   |                       |
| Sewer Tap, 6 inch                              | EA         | 1           |                   |                       |
| Sewer Tap, 12 inch                             | EA         | 4           |                   |                       |
| Sewer Tap, 15 inch                             | EA         | 2           |                   |                       |
| Dr Structure Cover, Adj, Case 2                | EA         | 3           |                   |                       |
| Dr Structure Cover, Type D                     | EA         | 2           |                   |                       |
| Dr Structure Cover, Type G                     | EA         | 1           |                   |                       |
| Dr Structure Cover, Type K                     | EA         | 21          |                   |                       |
| Dr Structure, 24 inch dia                      | EA         | 8           |                   |                       |
| Dr Structure, 48 inch dia                      | EA         | 13          |                   |                       |
| Dr Structure, 60 inch dia                      | EA         | 1           |                   |                       |
| Dr Structure, Adj, Add Depth                   | FT         | 10          |                   |                       |
| Dr Structure, Tap, 12 inch                     | EA         | 1           |                   |                       |

|  |     |       |  |  |
|--|-----|-------|--|--|
| Dr Structure Cover, Adj, Case 1, Modified                        | EA  | 6     |  |  |
| Dr Structure Cover, Type B, Modified                             | EA  | 4     |  |  |
| Dr Structure Cover, Type Q, Modified                             | EA  | 6     |  |  |
| HMA Surface, Rem   | SYD | 3,615 |  |  |
| Hand Patching  | TON | 50    |  |  |
| HMA Approach   | TON | 20    |  |  |
| HMA, 3EML  | TON | 1,230 |  |  |
| HMA, 4EML  | TON | 920   |  |  |
| HMA, 5EML  | TON | 635   |  |  |
| Conc Base Cse, Nonreinf, 6 inch                                  | SYD | 5     |  |  |
| Conc Pavt, Decorative, Nonreinf, 4 inch                          | SYD | 20    |  |  |
| Driveway, Nonreinf Conc, 6 inch                                  | SYD | 10    |  |  |
| Curb and Gutter, Conc, Det C4                                    | FT  | 2,700 |  |  |
| Curb and Gutter, Conc, Det F2                                    | FT  | 170   |  |  |
| Detectable Warning Surface                                       | FT  | 135   |  |  |
| Curb Ramp Opening, Conc  | FT  | 165   |  |  |
| Sidewalk, Conc, 4 inch   | SFT | 8,765 |  |  |
| Sidewalk, Conc, 6 inch   | SFT | 180   |  |  |
| Curb Ramp, Conc, 6 inch  | SFT | 1,380 |  |  |
| Curb Slp, HMA  | FT  | 525   |  |  |
| Shared use Path, Conc  | SYD | 1,485 |  |  |
| Shared use Path, Grading   | FT  | 1,330 |  |  |
| Perforated Steel Square Tube Breakaway System                    | EA  | 2     |  |  |
| Post, Steel, 3 pound   | FT  | 500   |  |  |
| Sign, Type III, Rem  | EA  | 24    |  |  |
| Sign, Type IIIA  | SFT | 90    |  |  |
| Sign, Type IIIB  | SFT | 150   |  |  |
| Sign, Type IIIC  | SFT | 20    |  |  |
| Post, Flexible Delineator, Surface Mtd, 36 Inch                  | EA  | 40    |  |  |
| Sign, Type III, Perimeter Lighted, W11-2 (LED)                   | EA  | 4     |  |  |
| Pavt Mrkg, Waterborne, 6 inch, White                             | FT  | 2,050 |  |  |
| Pavt Mrkg, Waterborne, 6 inch, Yellow                            | FT  | 2,900 |  |  |
| Rem Spec Mrkg  | SFT | 40    |  |  |
| Pavt Mrkg, Waterborne, For On-Street Parking, 4 inch, White      | FT  | 640   |  |  |
| Pavt Mrkg, Waterborne, 12 inch, Cross Hatching, White            | FT  | 470   |  |  |
| Pavt Mrkg, Waterborne, 12 inch, Cross Hatching, Yellow           | FT  | 230   |  |  |
| Pavt Mrkg, Waterborne, 12 inch, Yellow, Curb Painting            | FT  | 70    |  |  |
| Pavt Mrkg, Waterborne, 24 inch, Stop Bar                         | FT  | 85    |  |  |
| Pavt Mrkg, Waterborne, Accessible Sym                            | EA  | 2     |  |  |
| Pavt Mrkg, Waterborne, Ped                                       | EA  | 5     |  |  |
| Pavt Mrkg, Waterborne, Xing                                      | EA  | 5     |  |  |
| Barricade, Type III, High Intensity, Double Sided, Lighted, Furn | EA  | 25    |  |  |
| Barricade, Type III, High Intensity, Double Sided, Lighted, Oper | EA  | 25    |  |  |
| Pedestrian Type II Barricade, Temp                               | EA  | 10    |  |  |
| Channelizing Device, 42 inch, Fluorescent, Furn                  | EA  | 100   |  |  |
| Channelizing Device, 42 inch, Fluorescent, Oper                  | EA  | 100   |  |  |

|   |      |       |  |  |
|---|------|-------|--|--|
| Conc Barrier Ending, Temp, Det 2, Furn                          | EA   | 2     |  |  |
| Conc Barrier Ending, Temp, Det 2, Oper                          | EA   | 2     |  |  |
| Conc Barrier, Temp, Furn  | FT   | 130   |  |  |
| Conc Barrier, Temp, Oper  | FT   | 130   |  |  |
| Delineator, Flexible, Temp, Furn                                | EA   | 30    |  |  |
| Delineator, Flexible, Temp, Oper                                | EA   | 30    |  |  |
| High Intensity Light, Type B, Furn                              | EA   | 7     |  |  |
| High Intensity Light, Type B, Oper                              | EA   | 7     |  |  |
| Lighted Arrow, Type C, Furn                                     | EA   | 2     |  |  |
| Lighted Arrow, Type C, Oper                                     | EA   | 2     |  |  |
| Minor Traf Devices  | LSUM | 1     |  |  |
| Pavt Mrkg, Longit, 6 inch or Less Width, Rem                    | FT   | 350   |  |  |
| Pavt Mrkg, Type NR, Paint, 24 inch, Stop Bar                    | FT   | 10    |  |  |
| Pavt Mrkg, Type NR, Paint, Lt Turn Arrow                        | EA   | 4     |  |  |
| Pavt Mrkg, Type NR, Paint, Rt Turn Arrow                        | EA   | 1     |  |  |
| Pavt Mrkg, Type NR, Paint, Thru Arrow                           | EA   | 1     |  |  |
| Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, White, Temp  | FT   | 100   |  |  |
| Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, Yellow, Temp | FT   | 100   |  |  |
| Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, White, Temp    | FT   | 100   |  |  |
| Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp   | FT   | 100   |  |  |
| Plastic Drum, Fluorescent, Furn                                 | EA   | 35    |  |  |
| Plastic Drum, Fluorescent, Oper                                 | EA   | 35    |  |  |
| Sign Cover  | EA   | 10    |  |  |
| Sign, Portable, Changeable Message, Furn                        | EA   | 4     |  |  |
| Sign, Portable, Changeable Message, Oper                        | EA   | 4     |  |  |
| Sign, Type B, Temp, Prismatic, Furn                             | SFT  | 1,125 |  |  |
| Sign, Type B, Temp, Prismatic, Oper                             | SFT  | 1,125 |  |  |
| Sign, Type B, Temp, Prismatic, Spec, Furn                       | SFT  | 200   |  |  |
| Sign, Type B, Temp, Prismatic, Spec, Oper                       | SFT  | 200   |  |  |
| Site Preparation, Max   | LSUM | 1     |  |  |
| Watering and Cultivating, First Season, Min                     | LSUM | 1     |  |  |
| Amelanchier canadensis, clump form, 10 foot                     | EA   | 3     |  |  |
| Celtis occidentalis 'Chicagoland', 4 inch                       | EA   | 3     |  |  |
| Cornus kousa, clump form, 10 foot                               | EA   | 3     |  |  |
| Corylus colurna, 4 inch   | EA   | 3     |  |  |
| Ginkgo bilboa 'Autumn Gold', 4 inch                             | EA   | 6     |  |  |
| Ginkgo bilboa 'Princeton Sentry', 4 inch                        | EA   | 3     |  |  |
| Heptacodium miconioides 'Temple of Bloom', clump form, 10 foot  | EA   | 8     |  |  |
| Liriodendron tulipifera, 4 inch                                 | EA   | 2     |  |  |
| Picea glauca 'Densata', 10 foot                                 | EA   | 5     |  |  |
| Pinus strobus, 10 foot  | EA   | 7     |  |  |
| Platanus acerifolia 'Morton Circle', 4 inch                     | EA   | 3     |  |  |
| Quercus Alba, 4 inch  | EA   | 4     |  |  |
| Quercus muehlenbergii, 4 inch                                   | EA   | 3     |  |  |
| Tilia americana 'Redmond', 4 inch                               | EA   | 8     |  |  |
| Ulmus americana 'Valley Forge', 4 inch                          | EA   | 3     |  |  |

|  |     |       |           |  |
|--|-----|-------|-----------|--|
| Slope Restoration, Non-Freeway, Type B       | SYD | 8,600 |           |  |
| Power Company (Estimated Cost to Contractor) | DLR | 1,000 |           |  |
| Conduit, DB, 1, 1 1/2 inch                   | FT  | 65    |           |  |
| Conduit, DB, 1, 3 inch                       | FT  | 1,300 |           |  |
| Cable, Sec, 600V, 1, 3/C#6                   | FT  | 200   |           |  |
| Hh, Polymer Conc                             | EA  | 2     |           |  |
| Hh, Round                                    | EA  | 2     |           |  |
| Hh, Round, 3 foot dia                        | EA  | 3     |           |  |
| Conduit, 1 1/4 inch, innerduct               | FT  | 1,245 |           |  |
| Conduit, DB, 1, 2 inch                       | FT  | 2,320 |           |  |
| Light Std Arm, Rem                           | EA  | 1     |           |  |
| Light Std Fdn, Rem                           | EA  | 1     |           |  |
| Light Std Shaft, Rem                         | EA  | 1     |           |  |
| Pedestal, Alum                               | EA  | 3     |           |  |
| Pedestal, Fdn                                | EA  | 3     |           |  |
| Pushbutton                                   | EA  | 3     |           |  |
| TS, Span Wire Mtd, Rem                       | EA  | 3     |           |  |
| TS Head, Adj                                 | EA  | 1     |           |  |
| TS Head, Temp                                | EA  | 1     |           |  |
| TS Face, Bag                                 | EA  | 3     |           |  |
| TS Face, Bag, Rem                            | EA  | 3     |           |  |
| Gate Box Adj, Case 2                         | EA  | 1     |           |  |
| Gate Box, Adj, Case 1, Modified              | EA  | 1     |           |  |
| Water Shutoff, Adj, Case 1, Modified         | EA  | 1     |           |  |
| Water Shutoff, Adj, Case 2                   | EA  | 1     |           |  |
| <b>BASE BID GRAND TOTAL</b>                  |     |       | <b>\$</b> |  |

**STREETS FOR ALL: MICHIKAL STREET IMPROVEMENTS ALTERNATE A**

| <b>ITEM</b>                                    | <b>QTY</b> | <b>UNIT</b> | <b>UNIT PRICE</b> | <b>EXTENDED PRICE</b> |
|--|------------|-------------|-------------------|-----------------------|
| Mobilization, Max \$150,000                    | LSUM       | 1           |                   |                       |
| Tree, Rem, 19 inch to 36 inch                  | EA         | 10          |                   |                       |
| Tree, Rem, 37 inch or Larger                   | EA         | 2           |                   |                       |
| Tree, Rem, 6 inch to 18 inch                   | EA         | 24          |                   |                       |
| Dr Structure, Rem                              | EA         | 18          |                   |                       |
| Sewer, Rem, Less than 24 inch                  | FT         | 850         |                   |                       |
| Curb and Gutter, Rem                           | FT         | 4,500       |                   |                       |
| Fence, Rem                                     | FT         | 1,055       |                   |                       |
| Guardrail, Rem                                 | FT         | 90          |                   |                       |
| Masonry and Conc Structure, Rem                | CYD        | 50          |                   |                       |
| Sidewalk, Rem                                  | SYD        | 285         |                   |                       |
| Exploratory Investigation, Vertical            | FT         | 10          |                   |                       |
| Pavt, Rem, Modified                            | SYD        | 6,450       |                   |                       |
| Subgrade Undercutting, Type II                 | CYD        | 1,000       |                   |                       |
| Machine Grading, Modified                      | STA        | 14          |                   |                       |
| Erosion Control, Inlet Protection, Fabric Drop | EA         | 57          |                   |                       |
| Erosion Control, Silt Fence                    | FT         | 500         |                   |                       |
| Subbase, CIP                                   | CYD        | 2,520       |                   |                       |
| Aggregate Base, 8 Inch, Modified               | SYD        | 6,190       |                   |                       |
| Maintenance Gravel, LM                         | CYD        | 1,000       |                   |                       |
| Shld, Cl II, 6 inch                            | SYD        | 340         |                   |                       |
| Sewer, Cl E, 12 inch, Tr Det B                 | FT         | 1,235       |                   |                       |
| Sewer, Cl E, 15 inch, Tr Det B                 | FT         | 20          |                   |                       |
| Sewer Tap, 6 inch                              | EA         | 1           |                   |                       |
| Sewer Tap, 12 inch                             | EA         | 4           |                   |                       |
| Sewer Tap, 15 inch                             | EA         | 2           |                   |                       |
| Dr Structure Cover, Adj, Case 2                | EA         | 4           |                   |                       |
| Dr Structure Cover, Type D                     | EA         | 2           |                   |                       |
| Dr Structure Cover, Type G                     | EA         | 2           |                   |                       |
| Dr Structure Cover, Type K                     | EA         | 14          |                   |                       |
| Dr Structure, 24 inch dia                      | EA         | 3           |                   |                       |
| Dr Structure, 48 inch dia                      | EA         | 13          |                   |                       |
| Dr Structure, 60 inch dia                      | EA         | 1           |                   |                       |
| Dr Structure, Adj, Add Depth                   | FT         | 10          |                   |                       |
| Dr Structure, Tap, 12 inch                     | EA         | 1           |                   |                       |
| Dr Structure Cover, Adj, Case 1, Modified      | EA         | 5           |                   |                       |
| Dr Structure Cover, Type B, Modified           | EA         | 5           |                   |                       |
| Dr Structure Cover, Type Q, Modified           | EA         | 6           |                   |                       |
| HMA Surface, Rem                               | SYD        | 3,615       |                   |                       |
| Hand Patching                                  | TON        | 50          |                   |                       |
| HMA Approach                                   | TON        | 20          |                   |                       |
| HMA, 3EML                                      | TON        | 875         |                   |                       |
| HMA, 4EML                                      | TON        | 715         |                   |                       |

**CITY OF KALAMAZOO – INVITATION FOR BIDS**  
**Streets for All: Michikal Street Improvements - REBID**

|  |      |       |  |  |
|--|------|-------|--|--|
| HMA, 5EML  | TON  | 470   |  |  |
| Conc Base Cse, Nonreinf, 6 inch                                  | SYD  | 5     |  |  |
| Curb and Gutter, Conc, Det C4                                    | FT   | 1515  |  |  |
| Curb and Gutter, Conc, Det F2                                    | FT   | 105   |  |  |
| Detectable Warning Surface                                       | FT   | 50    |  |  |
| Curb Ramp Opening, Conc  | FT   | 45    |  |  |
| Sidewalk, Conc, 4 inch   | SFT  | 590   |  |  |
| Sidewalk, Conc, 6 inch   | SFT  | 50    |  |  |
| Curb Ramp, Conc, 6 inch  | SFT  | 695   |  |  |
| Curb Slp, HMA  | FT   | 1,175 |  |  |
| Shared use Path, Conc  | SYD  | 1,485 |  |  |
| Shared use Path, Grading   | FT   | 1,330 |  |  |
| Post, Steel, 3 pound   | FT   | 375   |  |  |
| Sign, Type III, Rem  | EA   | 24    |  |  |
| Sign, Type IIIA  | SFT  | 70    |  |  |
| Sign, Type IIIB  | SFT  | 90    |  |  |
| Sign, Type IIIC  | SFT  | 15    |  |  |
| Post, Flexible Delineator, Surface Mtd, 36 Inch                  | EA   | 6     |  |  |
| Pavt Mrkg, Waterborne, 6 inch, White                             | FT   | 1,900 |  |  |
| Rem Spec Mrkg  | SFT  | 40    |  |  |
| Pavt Mrkg, Waterborne, 12 inch, Cross Hatching, White            | FT   | 100   |  |  |
| Pavt Mrkg, Waterborne, 24 inch, Stop Bar                         | FT   | 85    |  |  |
| Pavt Mrkg, Waterborne, Ped                                       | EA   | 2     |  |  |
| Pavt Mrkg, Waterborne, Xing                                      | EA   | 2     |  |  |
| Barricade, Type III, High Intensity, Double Sided, Lighted, Furn | EA   | 20    |  |  |
| Barricade, Type III, High Intensity, Double Sided, Lighted, Oper | EA   | 20    |  |  |
| Pedestrian Type II Barricade, Temp                               | EA   | 10    |  |  |
| Channelizing Device, 42 inch, Fluorescent, Furn                  | EA   | 100   |  |  |
| Channelizing Device, 42 inch, Fluorescent, Oper                  | EA   | 100   |  |  |
| Conc Barrier Ending, Temp, Det 2, Furn                           | EA   | 2     |  |  |
| Conc Barrier Ending, Temp, Det 2, Oper                           | EA   | 2     |  |  |
| Conc Barrier, Temp, Furn   | FT   | 130   |  |  |
| Conc Barrier, Temp, Oper   | FT   | 130   |  |  |
| Delineator, Flexible, Temp, Furn                                 | EA   | 30    |  |  |
| Delineator, Flexible, Temp, Oper                                 | EA   | 30    |  |  |
| High Intensity Light, Type B, Furn                               | EA   | 7     |  |  |
| High Intensity Light, Type B, Oper                               | EA   | 7     |  |  |
| Lighted Arrow, Type C, Furn                                      | EA   | 2     |  |  |
| Lighted Arrow, Type C, Oper                                      | EA   | 2     |  |  |
| Minor Traf Devices   | LSUM | 1     |  |  |
| Pavt Mrkg, Longit, 6 inch or Less Width, Rem                     | FT   | 350   |  |  |
| Pavt Mrkg, Type NR, Paint, 24 inch, Stop Bar                     | FT   | 10    |  |  |
| Pavt Mrkg, Type NR, Paint, Lt Turn Arrow                         | EA   | 4     |  |  |
| Pavt Mrkg, Type NR, Paint, Rt Turn Arrow                         | EA   | 1     |  |  |
| Pavt Mrkg, Type NR, Paint, Thru Arrow                            | EA   | 1     |  |  |
| Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, White, Temp   | FT   | 100   |  |  |
| Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, Yellow, Temp  | FT   | 100   |  |  |



**CITY OF KALAMAZOO – INVITATION FOR BIDS**  
**Streets for All: Michikal Street Improvements - REBID**

|  |      |        |  |  |
|--|------|--------|--|--|
| Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, White, Temp   | FT   | 100    |  |  |
| Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp  | FT   | 100    |  |  |
| Plastic Drum, Fluorescent, Furn                                | EA   | 35     |  |  |
| Plastic Drum, Fluorescent, Oper                                | EA   | 35     |  |  |
| Sign Cover   | EA   | 10     |  |  |
| Sign, Portable, Changeable Message, Furn                       | EA   | 4      |  |  |
| Sign, Portable, Changeable Message, Oper                       | EA   | 4      |  |  |
| Sign, Type B, Temp, Prismatic, Furn                            | SFT  | 1,125  |  |  |
| Sign, Type B, Temp, Prismatic, Oper                            | SFT  | 1,125  |  |  |
| Sign, Type B, Temp, Prismatic, Spec, Furn                      | SFT  | 200    |  |  |
| Sign, Type B, Temp, Prismatic, Spec, Oper                      | SFT  | 200    |  |  |
| Site Preparation, Max  | LSUM | 1      |  |  |
| Watering and Cultivating, First Season, Min                    | LSUM | 1      |  |  |
| Amelanchier canadensis, clump form, 10 foot                    | EA   | 2      |  |  |
| Celtis occidentalis 'Chicagoland', 4 inch                      | EA   | 2      |  |  |
| Cornus kousa, clump form, 10 foot                              | EA   | 3      |  |  |
| Corylus colurna, 4 inch  | EA   | 2      |  |  |
| Ginkgo bilboa 'Autumn Gold', 4 inch                            | EA   | 5      |  |  |
| Ginkgo bilboa 'Princeton Sentry', 4 inch                       | EA   | 3      |  |  |
| Heptacodium miconioides 'Temple of Bloom', clump form, 10 foot | EA   | 8      |  |  |
| Liriodendron tulipifera, 4 inch                                | EA   | 2      |  |  |
| Picea glauca 'Densata', 10 foot                                | EA   | 5      |  |  |
| Pinus strobus, 10 foot   | EA   | 7      |  |  |
| Platanus acerifolia 'Morton Circle', 4 inch                    | EA   | 3      |  |  |
| Quercus muehlenbergii, 4 inch                                  | EA   | 1      |  |  |
| Tilia americana 'Redmond', 4 inch                              | EA   | 5      |  |  |
| Slope Restoration, Non-Freeway, Type B                         | SYD  | 11,900 |  |  |
| Conduit, DB, 1, 1 1/2 inch                                     | FT   | 35     |  |  |
| Conduit, DB, 1, 3 inch   | FT   | 1,300  |  |  |
| Hh, Polymer Conc   | EA   | 2      |  |  |
| Hh, Round  | EA   | 1      |  |  |
| Hh, Round, 3 foot dia  | EA   | 3      |  |  |
| Conduit, 1 1/4 inch, innerduct                                 | FT   | 1,300  |  |  |
| Conduit, DB, 1, 2 inch   | FT   | 1,190  |  |  |
| Light Std Arm, Rem   | EA   | 1      |  |  |
| Light Std Fdn, Rem   | EA   | 1      |  |  |
| Light Std Shaft, Rem   | EA   | 1      |  |  |
| TS, Span Wire Mtd, Rem   | EA   | 3      |  |  |
| TS Head, Adj   | EA   | 1      |  |  |
| TS Head, Temp  | EA   | 1      |  |  |
| TS Face, Bag   | EA   | 3      |  |  |
| TS Face, Bag, Rem  | EA   | 3      |  |  |
| Gate Box Adj, Case 2   | EA   | 1      |  |  |

|                                      |    |   |           |  |
|--------------------------------------|----|---|-----------|--|
| Gate Box, Adj, Case 1, Modified      | EA | 1 |           |  |
| Water Shutoff, Adj, Case 1, Modified | EA | 1 |           |  |
| Water Shutoff, Adj, Case 2           | EA | 1 |           |  |
| <b>ALTERNATE A GRAND TOTAL</b>       |    |   | <b>\$</b> |  |

Bidder shall provide all of the information as requested herein with their bid. **Failure to do so and/or failure to provide post-bid requested information may be cause for rejecting the bid as non-responsive.**

See the Progress Clause contained in **Appendix C** for project start and completion dates. **A critical path Progress Schedule shall be included with the bid.**

Bidder/Contractor has examined and carefully studied the bidding documents and attachments, and acknowledges receipt of the following addenda:

Addendum No: \_\_\_\_\_

Dated: \_\_\_\_\_

The City encourages the use of local labor in fulfilling the requirements of this contract.

This contract shall be governed by the laws of the State of Michigan.

By my signature below, I certify that the firm bidding on this contract, when making hiring decisions, does not use a past criminal conviction as a bar to or preclude a person with a criminal conviction from being considered for employment with the bidding firm unless otherwise precluded by federal or state law. I further certify that I have read and agree to be bound by the provisions of the City’s Non-Discrimination Clause found in Appendix A as updated by City Ordinance 1856.

Signed: \_\_\_\_\_ Name: \_\_\_\_\_

Title: \_\_\_\_\_

CITY OF KALAMAZOO EX-OFFENDER POLICY CHECKLIST

As part of the City’s commitment to reducing unacceptable poverty, encouraging rehabilitation, reducing recidivism and strengthening families in Kalamazoo, the City has updated its Purchasing Policy to ensure that firms with whom the City does business share in this commitment by utilizing hiring practices that do not unfairly deny people with arrest and conviction records gainful employment. *(Important: This requirement also extends to any subcontractors the bidder intends to use to fulfill the contract for goods or services being sought from the City.)*

**Part I: Proof that the bidder does not inquire about an individual’s past arrest or criminal history on the bidders employment application form**

- Attach a copy of the current application for employment being used by the bidder

**Part II: Certification that the bidder does not use an individual’s past arrest or criminal history to unlawfully discriminate against them by checking *one or more* of the following:**

- That pursuant to federal or state law bidder is precluded from hiring persons with certain criminal records from holding particular positions or engaging in certain occupations by providing a cite to the applicable statute or regulation; if checking this box, provide a citation to the applicable statute or rule upon which the bidder is relying:\_\_\_\_\_
- That bidder conducts criminal history background checks only as necessary, and only after making a conditional offer of employment; that any withdrawal of an offer of employment to an individual because of a past criminal history is job-related and consistent with business necessity after the individual has been provided an individualized assessment opportunity to review and challenge or supplement the history of past criminal conduct being relied upon by the bidder;
- That the use by bidder of criminal history background checks complies with the U.S. Equal Employment Opportunity Commission’s Enforcement Guidance on the Consideration of Arrest and Conviction Records in Employment Decisions and that the bidder has not had a determination rendered against it in the past 7 years that it discriminated against a person through the use of an individual’s arrest or criminal history.

I CERTIFY THAT THE ABOVE STATEMENTS ARE TRUE.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Position

**CITY OF KALAMAZOO**  
**LOCAL PREFERENCE POLICY AND CERTIFICATION**

The lowest responsive Kalamazoo County bidder whose bid is not low but falls within 2% of the lowest responsive bid is afforded the opportunity to become the successful bidder if it agrees to reduce its bid to match the lowest responsive bid. The City of Kalamazoo is the sole determiner whether a bidder is responsible, qualifies as a Kalamazoo County bidder, and if its bid is responsive to the City’s specifications, terms and conditions.

If the lowest Kalamazoo County bidder chooses not to match the lowest bid, the next lowest responsive Kalamazoo County bidder whose bid falls within 2% of the lowest bid, is given the opportunity to match the lowest responsive bid.

To qualify as a Kalamazoo County bidder, the bidder must meet both the following criteria:

1. Have a physical presence in Kalamazoo County by maintaining a permanent office, factory or other facility in Kalamazoo County with employees working in Kalamazoo County.
2. Have paid real or personal property taxes related to said business to the City of Kalamazoo, County of Kalamazoo or other municipal corporation within Kalamazoo County in the previous tax year, except that a non-profit entity need not meet this requirement.

This local preference policy applies only to purchases for materials, supplies, capital outlay, and services for maintenance, repair or operation of City facilities that are over \$25,000. If more than 50% of the contract is sub-contracted to firms located outside of Kalamazoo County that bid does not qualify for the local preference policy outlined above. The local preference policy will not apply if prohibited by law. The Purchasing Agent has the authority to finally determine if the bidder qualifies as a Kalamazoo County bidder as set forth herein. The Purchasing Agent may take into account the permanency of the business in Kalamazoo, and whether the business appears to be claiming to be a Kalamazoo County business solely or primarily to qualify as a Kalamazoo County business under this Resolution, and any other material factors.

**CERTIFICATION**

If you qualify as a Kalamazoo County bidder and wish to be considered for the local preference provisions as provided above please certify that fact by providing the information requested below and attesting to its accuracy.

Firm Name: \_\_\_\_\_

Street Address of Business: \_\_\_\_\_

City, State, and Zip Code: \_\_\_\_\_

Number of employees working in Kalamazoo County: \_\_\_\_\_

Name the city or township to which business real and/or personal property taxes are paid or provide non-profit status: \_\_\_\_\_

The above information is accurate:

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

**SUB-CONTRACTING INFORMATION**

Using the table below provide information regarding the sub-contractors that will be working to fulfill the requirements of this contract. Submit as complete a list as possible at the time of your bid. You will have two business days after the bid opening to update the list as needed. The information provided will be used for evaluating your bid and to assist in determining if you qualify as a Kalamazoo County Bidder.

**INSTRUCTIONS:**

**Nature of Contract** – State a brief description of the work or product that will be provided.

**BIDDER** – Provide the percentage of services or construction activity that will be provided by your firm.

**Subcontractors:**

- Provide the Name and Address for each subcontractor providing services or construction activities for this contract.
- Indicate with **YES** or **NO** under the “Local?” box if they qualify as a “Kalamazoo County bidder” (see local preference certification page)
- Provide the percentage for the dollar amount of the contract work they will be performing.

If there are not enough lines in the table below make additional copies as needed.

|                                   |               |                            |
|-----------------------------------|---------------|----------------------------|
| <b>Nature of Contract:</b>        |               |                            |
| <b>Subcontractor Name/Address</b> | <i>Local?</i> | <b>% Of Total Contract</b> |
| <b>BIDDER</b>                     |               |                            |
|                                   |               |                            |
|                                   |               |                            |
|                                   |               |                            |
|                                   |               |                            |
|                                   |               |                            |
|                                   |               |                            |
|                                   |               |                            |
|                                   |               |                            |
|                                   |               |                            |
|                                   |               |                            |
|                                   |               |                            |
|                                   |               |                            |
|                                   |               |                            |

Does this List of Subcontractors need to be updated after the bid opening? **Yes** \_\_ **No** \_\_

**REFERENCE QUESTIONNAIRE**

Please answer the following questions completely.

- 1. Firm name: \_\_\_\_\_
- 2. Established: Year \_\_\_\_\_ Number of Employees: \_\_\_\_\_
- 3. Type of organization:
  - a. Individual: \_\_\_\_\_
  - b. Partnership: \_\_\_\_\_
  - c. Corporation: \_\_\_\_\_
  - d. Other: \_\_\_\_\_
- 4. Former firm name(s) if any, and year(s) in business:  
\_\_\_\_\_  
\_\_\_\_\_
- 5. Include at least 3 references of contracts for similar work performed over the last five (5) years. Include: owner, contact person and phone number and description of work performed.
  - 5.1 Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Type of work or contract: \_\_\_\_\_
  - 5.2 Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Type of work or contract: \_\_\_\_\_
  - 5.3 Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Type of work or contract: \_\_\_\_\_

I hereby certify that all of the information provided is true and answered to the best of my ability.

Signed: \_\_\_\_\_ Name: \_\_\_\_\_  
(type or print)

Title: \_\_\_\_\_ Date: \_\_\_\_\_



I hereby state that all of the information I have provided is true, accurate and complete. I hereby state that I have the authority to submit this bid which will become a binding contract if accepted by the City of Kalamazoo. I hereby state that I have not communicated with nor otherwise colluded with any other bidder, nor have I made any agreement with nor offered/accepted anything of value to/from an official or employee of the City of Kalamazoo that would tend to destroy or hinder free competition.

The firm’s identification information provided will be used by the City for purchase orders, payment and other contractual purposes. If the contractual relationship is with, or the payment made to, another firm please provide a complete explanation on your letterhead and attach to your bid. Please provide for accounts payable purposes:

Tax Identification Number (Federal ID): \_\_\_\_\_

Remittance Address: \_\_\_\_\_

Financial Contact Name: \_\_\_\_\_ Financial Contact Phone Number: \_\_\_\_\_

Financial Contact Email Address: \_\_\_\_\_

I hereby state that I have read, understand and agree to be bound by all terms and conditions of this bid document.

SIGNED: \_\_\_\_\_ NAME: \_\_\_\_\_  
(Type or Print)

TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

FIRM NAME: \_\_\_\_\_  
(if any)

ADDRESS: \_\_\_\_\_  
(Street address) (City) (State) (Zip)

PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

EMAIL ADDRESS: \_\_\_\_\_

**FOR CITY USE ONLY – DO NOT WRITE BELOW**

**SECTION III**  
**CITY OF KALAMAZOO**  
**INDEMNITY AND INSURANCE**

Contractor, or any of their subcontractors, shall not commence work under this contract until they have obtained the insurance required under this paragraph, and shall keep such insurance in force during the entire life of this contract. All coverage shall be with insurance companies licensed and admitted to do business in the State of Michigan and acceptable to the City of Kalamazoo within ten (10) days of the Notice of Award. The requirements below should not be interpreted to limit the liability of the Contractor. All deductibles and SIR's are the responsibility of the Contractor.

The contractor shall procure and maintain the following insurance coverage:

Workers' Compensation Insurance including Employers' Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

Commercial General Liability Insurance on an "Occurrence Basis" with limits of liability not less than \$1,000,000 per occurrence and aggregate. Coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent Contractors Coverage; (D) Broad Form General Liability Extensions or equivalent, if not already included and I XCU coverage if the nature of the contract requires XC or U work.

Automobile Liability in accordance with all applicable statutes of the State of Michigan, with limits of liability not less than \$1,000,000 per occurrence, combined single limit for Bodily Injury, and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.

Additional Insured: Commercial General Liability and Automobile Liability, as described above, shall include an endorsement stating that the following shall be *Additional Insureds*: The City of Kalamazoo, all elected and appointed officials, all employees and volunteers, all boards, commissions, and/or authorities and board members, including employees and volunteers thereof. It is understood and agreed that by naming the City of Kalamazoo as additional insured, coverage afforded is considered to be primary and any other insurance the City of Kalamazoo may have in effect shall be considered secondary and/or excess.

To the fullest extent permitted by law the Contractor agrees to pay on behalf of, indemnify, and hold harmless the City of Kalamazoo, its elected and appointed officials, and employees against any claims, demands, suits, or loss, including all costs connected therewith, and for any damages which may be asserted, claimed, or recovered against or from the City of Kalamazoo, by reason of personal injury, including bodily injury or death and/or property damage, including loss of use thereof, caused in whole or part by any negligent act or omission by the Contractor, its employees, agents, or officers which arises out of, or is in any way connected or associated with, this contract.

Cancellation Notice: All policies, as described above, shall include an endorsement stating that it is understood and agreed that thirty (30) days, or ten (10) days for non-payment of premium, Advance Written Notice of Cancellation, Non-Renewal, Reduction, and/or Material Change shall be sent to: City of Kalamazoo, Purchasing Division, 241 W. South Street, Kalamazoo, MI 49007.

Proof of Insurance Coverage: The Contractor shall provide the City of Kalamazoo at the time that the contracts are returned by him/her for execution, or within 10 days of Notice of Award, whichever is earlier, a Certificate of Insurance as well as the required endorsements. In lieu of required endorsements, if applicable, a copy of the policy sections where coverage is provided for additional insured and cancellation notice would be acceptable. Copies or certified copies of all policies mentioned above shall be furnished, if so requested.

**INDEMNITY AND INSURANCE**  
*Continued*

If any of the above coverages expire during the term of this contract, the Contractor shall deliver renewal certificates and/or policies to City of Kalamazoo at least ten (10) days prior to the expiration date.

Scope of Coverage: The above requirements and conditions shall not be interpreted to limit the liability of the Contractor under this Contract but shall be interpreted to provide the greatest benefit to the City and its officers and employees. The above listed coverages shall protect the Contractor, its employees, agents, representatives and subcontractors against claims arising out of the work performed. It shall be the Contractor's responsibility to provide similar insurance for each subcontractor or to provide evidence that each subcontractor carries such insurance in like amount prior to the time such subcontractor proceeds to perform under the contract.

**SECTION IV**  
**SPECIAL REQUIREMENTS**

**1. BID BOND/GUARANTEE**

The bid must be accompanied by a bid bond which shall not be less than five (5%) percent of the total amount of the bid. No bid will be considered unless it is accompanied by the required guarantee. The bid guarantee shall ensure the execution of the bid and award, and the furnishing of a performance bond and a labor and material bond (A and B below) by the successful bidder. (Contractors Note: A cashier's or certified check in lieu of a bid bond is **NOT** acceptable.)

**A. PERFORMANCE BOND**

A performance bond shall be furnished in the full amount of the contract ensuring the City of faithful performance of all the provisions of the contract, and the satisfactory performance of any equipment required hereunder. The bond shall also ensure the City against defective workmanship and/or materials.

**B. LABOR AND MATERIAL (PAYMENT) BOND**

A labor and material (payment) bond shall be furnished for the period covered by the contract, in the full amount of the contract for the protection of labor and material suppliers and sub-contractors.

Bonds shall be secured by a guaranty or a surety company listed in the latest issue of the U.S. Treasury, circular 570, and licensed to do business in the State of Michigan, and written in favor of the City of Kalamazoo. The amount of such bonds shall be within the maximum amount specified for such company in said circular 570. The bonds shall be accompanied by a power of attorney showing authority of the bonding agent to sign such bonds on behalf of the guaranty or surety company. The cost of the bonds shall be borne by the Contractor.

Failure of the Contractor to supply the required bonds within ten (10) days after Notice of Award, or within such extended period as the Purchasing Agent may agree to, shall constitute a default and the City of Kalamazoo may either award this contract to the next lowest bidder or re-advertise for bids and may charge against the Contractor for the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid bond. If a more favorable bid is received by re-advertising, the defaulting bidder shall have no claim against the City of Kalamazoo for a refund.

**2. WAIVERS OF LIEN**

Upon completion of all work and request for final payment, the Contractor shall furnish a 100% waiver of lien from each supplier and sub-contractor covering all items of the work. Failure to supply waivers of lien for the entire job upon completion and final payment request will be considered grounds for withholding final payment.

**3. SUBCONTRACTORS**

- A. Contractors shall state on the Bid and Award page any and all subcontractors to be associated with their bid, including the type work to be performed. Any and all subcontractors shall be bound by all of the terms, conditions and requirements of the contract; however, the prime contractor shall be responsible for the performance of the total work requirements.
- B. The Contractor shall cooperate with the City of Kalamazoo in meeting its commitments and goals with regard to maximum utilization of minority and women business enterprise, and shall use its best efforts to ensure that minority and women business enterprises have maximum practicable opportunity to compete for subcontract work under this agreement.

**4. PREVAILING WAGES**

The successful bidder will be required to comply with Section 2-125 of the Code of Ordinances of the City of Kalamazoo regarding prevailing wages and Appendix B attached, incorporated herein by reference. Special note: This provision applies only to projects in excess of \$100,000 for City (\$2,000 federal) funded projects.

The City's requirements as it relates to prevailing wages includes a meeting with the City's Purchasing Division **prior** to work and payroll and work monitoring during the duration of the contract. Please contact Purchasing at (269) 337-8020 if you have any questions regarding Davis-Bacon provisions.

**SECTION V**  
**SCOPE OF WORK & SPECIAL CONDITIONS**

1. **INTENT**

It is the intent of these plans and specifications to provide for a general contractor who shall provide all labor, materials, tools and equipment necessary to perform in a professional manner for Streets for All: Michikal Improvements project as described in the specifications, plans, and bid document.

2. **SCOPE OF WORK**

The work will consist of full depth pavement removal and roadway reconstruction including HMA pavement, aggregate base, sand subbase, machine grading, curb and gutter, sidewalk, curb ramps, concrete shared use path, drainage structures, storm sewer, signage, pavement markings, traffic signal replacement, watermain and service replacement, hydrant replacement, landscaping, street-lighting facilities, restoration, and providing temporary traffic control. The project limits shall be as indicated on the plans including Michikal Street from W. Michigan Avenue to Kalamazoo Avenue. Intersecting street approaches on Elm Street, Elm Place, Elm Crossover, Allen Boulevard, and Eleanor Street will also be included. The items of work have been included in multiple alternates described below:

*Base Bid:* Fully remove Michikal Street, including the parallel shared use path and Elm Place/Allen Boulevard roadway. Temporary access must be provided to properties with access on these streets until the proposed intersections are constructed. Full depth removal will also occur on the additional streets within the project limits as shown on the plans. Regrade and reconstruct all roadways and intersections to the complete pavement section and cross-section indicated. A temporary intersection will be constructed from Michikal Street to the Kalamazoo Avenue and Westnedge Avenue intersection and to the W. Main Street and Michigan Avenue intersection. A shared use path will be constructed on the northwest side of the road. The pedestrian refuge island will be constructed. Storm sewer will be removed replaced as indicated. Install signage, pavement markings, streetlight conduit, and landscaping where shown.

*Alternate A:* Perform full removals as indicated in the *Base Bid*. Install all improvements indicated in the *Base Bid* on Michikal Street from the W. Main Street intersection to the Elm Place intersection, except the sidewalk southeast of Michikal. From the Elm Place intersection to the P.O.E. Michikal Street will be constructed with a part width cross-section including temporary HMA and gravel shoulder. Proposed improvements southeast of the roadway in this area are not included except for temporary intersections at Elm Place, Allen Boulevard, and Eleanor Street. The pedestrian refuge island is not included. The shared use path will be constructed on the northwest side of the road. A temporary intersection will be constructed from Michikal Street to the Kalamazoo Avenue and Westnedge Avenue intersection and to the W. Main Street and Michigan Avenue intersection. Install signage, pavement markings, streetlight conduit, and landscaping where shown.

The bidder shall furnish all labor, supervision, supplies, tools, equipment and other means necessary or proper for performing and completing the work. The bidder shall be responsible for cleaning up of the job site and shall repair or restore all structures and property that may be damaged or disturbed during performance of the work to the satisfaction of the Public Services Department for the City of Kalamazoo. Further details and information on the scope of the project and items therein can be found in the plan set (Appendix C) and the specifications (Appendix D)



**3. UNIT PRICING**

The unit price, including its pro rata share of overhead, multiplied by the quantity shown shall represent the total bid and shall be held firm for the life of this contract. Any bid not conforming to this requirement shall be rejected as non-responsive.

**4. TEMPORARY UTILITIES**

5.1 Temporary or construction water will NOT be available on the sites. The Contractor must provide for drinking water.

5.2 Temporary toilets: To be supplied by the Contractor as may be necessary.

**5. Progress Schedule**

5.1 A critical path Progress Schedule shall be submitted with the Contractor's bid.

5.2 After receipt of notification by the Contractor of Notice to Proceed work shall start no later than 10 business days, unless otherwise approved by the Project Manager.

5.3 See the Progress Clause, included in the Special Provisions (**Appendix C**), for specific contract dates.

5.4 Work of a similar nature may be added to this contract if agreed to by the City and the Contractor. In the event that work is added, the progress schedule for the existing work will remain unchanged. Any contract time added for additional work will be applied to that additional work only and cannot be added to items in the original contract. Any work done on the items in the original contract past the number of working days stated herein will be subject to liquidated damages regardless of any work that may be added at a later date.

5.5 The Contractor will be required to meet with the Public Services representatives to work out a detailed progress schedule. The schedule for this meeting will be within two weeks after contract award has been made.

5.6 The named sub contractor(s) for all items shall also be present at the scheduled meeting and be required to sign the Progress Schedule to indicate their approval of the scheduled dates of work set forth in the Progress Schedule. If unable to attend the scheduled meeting, the sub-contractor shall, at a minimum, sign the Progress Schedule to indicate their approval of the dates of work. MDOT Form 1130 shall be used for schedule submission and signature of all parties.

5.7 The Progress Schedule shall include, as a minimum, the starting and completion dates for major items, and where specified in the bid document the date the project is to be opened to traffic as well as the final project completion date specified in the bid document. The Progress Schedule shall be coordinated with all aspects of the work occurring at the site.

5.8 Failure on the part of the Contractor to carry out the provisions of the Progress Schedule as established may be considered sufficient cause to prevent bidding future projects until a satisfactory rate of progress is again established.

5.9 The starting date and the contract time to the completion date for this project may be adjusted by Public Services without imposing liquidated damages upon the receipt of satisfactory documented evidence that unforeseen delayed delivery of critical materials will prevent the orderly prosecution of the work.

5.10 Any request extension of the completion date and satisfactory documented evidence of unforeseen delays shall be submitted via MDOT Form 1100A – Extension of Contract Time.

5.11 MDOT Standard Specifications for Construction Section 501.03.I.1, Weather Limitations, shall apply.

**6. LIQUIDATED DAMAGES**

Liquidated damages will be assessed per Section 108.10C of the MDOT Standard Specifications for Construction.

**7. Maintaining Traffic**

7.1 This work shall be in accordance with the requirements of Section 812 of the MDOT Standard Specifications for Construction, the Maintaining Traffic special provision, and as specified herein. The Contractor is advised that the current Michigan Manual of Uniform Traffic Control Devices (MMUTCD) is hereby established as governing all work in connection with traffic control devices, barricade lighting, etc. required on this project.

7.2 The Contractor shall furnish, erect, maintain and, upon completion of the work, remove all traffic control devices and barricade lights within the project and around the perimeter of the project for the safety and protection of through and local traffic. This includes, but is not limited to: Advance, regulatory and warning signs; barricades and channelizing devices at intersecting streets on which traffic is to be maintained; barricades at the ends of the project and at right of way lines for intersecting streets which are to be closed with the first usable street on each side of the project.

7.3 Where the existing pavement or partial widths of new pavement are to be utilized for the maintenance of through and local traffic, channelizing devices will be required at 50' intervals or as directed by the Engineer for channeling and directing traffic through the construction area.

7.4 Through traffic shall be maintained utilizing sidewalk closures with detours and traffic shifts per MDOT traffic and safety details.

7.5 Protection of all pedestrian traffic shall be maintained at all times in accordance with the MMUTCD. Type II barricades and sidewalk detour signs shall be used in accordance with the MMUTCD at all intersections and ramps. Sidewalk detours shall direct pedestrians safely around closed sidewalk locations and shall be placed at the nearest pedestrian crossing locations still open to traffic.

7.6 Payment for furnishing and operating all temporary traffic control devices and traffic regulators shall be paid as pay items included in this contract and shall include all the temporary traffic control measures on all road segments.

- 7.7 Under Article 812.04.D “Operated Pay Items” the term ‘Relocating’ shall include the relocating of the item from any street covered by the contract to any other street covered by the contract.
- 7.8 No work shall be allowed on the following dates:  
4/7/24 Good Friday  
5/27/24 Memorial Day Holiday  
6/19/24 Juneteenth  
7/4/24 Fourth of July Holiday  
9/2/24 Labor Day Holiday  
11/11/24 Veteran’s Day  
11/24/24 Thanksgiving  
12/25/24 Christmas  
1/1/24 New Year’s Day
- 7.9 Milled surfaces will not be allowed on travel lanes for longer than 5 business days unless approved by the Project Manager. Any traffic surface within the construction area containing a drop off at the edge of a pavement greater than two (2) inches shall not be allowed to be opened to the public without proper wedging of the edges according to the COK standard detail. Any areas not conforming to the road levelness and profile shall be signed appropriately in accordance with the MMUTCD and best management practices.
- 7.10 Once work is initiated that includes lane restrictions or detours, that work shall be continuous until complete. If work is suspended for more than three (3) continuous working days all lane restrictions and detours shall be removed at the Contractor’s expense.

Special Restrictions: Access to frontage properties shall be maintained as much as practical. Emergency access shall be maintained at all times. The Contractor shall maintain two way traffic with flag control as needed when the road is restricted to only one traffic lane.

**8. COORDINATING**

The Contractor’s attention is called to Article 104.08 of the MDOT Standard Specifications for Construction entitled “Cooperation by Contractor” and the special provisions contained within this contract.

**9. WORK HOURS**

All work shall be done between the hours of 7 am to 7 pm (Monday – Saturday). Work done outside of these times will be at the discretion of the Project Manager.

No work shall be done on Sunday, unless otherwise approved by the Project Manager in writing.

The Contractor shall conduct their work in such a manner that no excavations are left open overnight. If this is not possible, the Contractor shall provide and install a temporary fence to protect the excavation, at the Contractor’s expense.

**10. INVOICING**

All invoices must be approved by the Project Manager in writing (via paper or email copy) prior to being sent to the City's Financial Services Division. This will ensure completed quantities are accurate and project close out can occur without the need to remedy mismatching quantities. Additionally, this will ensure payment is issued in a timely manner for all work completed. Once approved by the Project Manager, original invoices should be sent as detailed in Section VII, Terms & Conditions, 5. Invoicing.

**11. QUESTIONS**

Bidders shall address questions regarding the specifications to Anthony Ladd, P.E., Public Works Division Manager at [ladda@kalamazoocity.org](mailto:ladda@kalamazoocity.org). (This does not relieve the requirements of Page 6, Item 3.) Questions regarding terms, conditions and other related bid requirements may be addressed to the Kyle Dunn, Buyer, at (269) 337-8720.

**16. SAFETY**

- 16.1. Contractor and/or sub-contractors are responsible to follow all State and Federal safety regulations and guidelines as they pertain to contractors performing this type of work.
- 16.2. The Contractor will be required to submit the company's Safety Plan to the Project Manager for review prior to the commencement of any on-site work.

**SECTION VI**  
**GENERAL CONDITIONS**

**1. SUBCONTRACTORS**

Contractors shall state on the Bid and Award page any and all subcontractors to be associated with their bid, including the type work to be performed. Any and all subcontractors shall be bound by all of the terms, conditions and requirements of the contract; however, the prime contractor shall be responsible for the performance of the total work requirements.

**2. PROJECT MANAGER**

- 2.1 The Project Manager or his/her duly authorized representative shall have the duties and responsibilities as provided in the contract.
- 2.2 The Project Manager shall have the authority to reject any work or materials that do not conform to the contract and to decide questions or make interpretations that may arise from the contract documents.
- 2.3 The Contractor shall immediately report to the Project Manager any questionable or obvious error or omission that may be apparent in the contract documents and shall not proceed with work until the Project Manager or his/her representative has resolved the error or omission.
- 2.4 The Project Manger shall have authority to stop work whenever such stoppage may be necessary to ensure the proper execution of the contract.

**3. CONSTRUCTION SCHEDULE AND COORDINATION**

- 3.1 **TIME IS OF THE ESSENCE** in respect to the work contemplated herein, and the Contractor agrees to do the work covered by the contract in conformity with the provisions set forth herein. Failure on the part of the Contractor to complete the work within the stated time he/she has set for and agreed to herein, shall constitute default by the Contractor. Regardless of any other provision of this contract, if Contractor fails to complete the work within the time he/she has set forth and agreed to herein, the Contractor may be liable to the owners(s) for any damages incurred by the owner(s).
- 3.2 The Contractor shall supply the City with an agreeable work schedule before commencing work on this contract. This schedule shall detail beginning and completion dates for each major component of the project.
- 3.3 The Contractor shall coordinate and cooperate with all other contractors who may be working on the site in order to allow for the orderly progress of work being done.
- 3.4 The Contractor is required to keep the Project Manager fully informed of any proposed work that will tend to interfere with the existing operations at the site.
- 3.5 The Contractor shall schedule all work to accommodate the City's schedule. In the event Contractor's schedule falls on weekends, nights or overtime work is required, no additional compensation will be allowed. All work shall be part of this contract without regard to when it is done.

3.6 The Contractor shall notify, by door hanger/written flier (pre-approved by the Project Manager), affected residents and business of work and areas to be disturbed by construction at least 72 hours in advance. Work shall not commence until the affected residents/business have been notified and given advanced notice. The Contractor shall work to minimize impacts to those affected by the construction while still maintaining project schedule and objectives. For impacts to driveways or property access points that affect residents or businesses, resident/business shall be notified 24 hours in advance of the work taking place and coordinated with for parking and property access.

**4. PROTECTION OF WORK**

The Contractor shall maintain adequate protection of all his/her work from damage and shall protect all public and private abutting property from injury or loss arising in connection with this contract. He/She shall provide and maintain all barricades, lights, fences, watchpersons or other facilities necessary to protect all persons from danger or hazardous conditions resulting from the work in the contract.

**5. PROTECTION OF PROPERTY**

5.1 The Contractor shall confine his/her equipment and operations to those areas of the work site necessary for the completion of the work, or as authorized by the Project Manager. The Contractor shall protect and preserve from damage any facilities, utilities or features including trees, shrubs and turf that are not required to be disturbed by the scope of work.

5.2 The Contractor shall be responsible for determining the location of and for protecting from damage any utilities or other improvements.

**6. REMOVAL OF RUBBISH**

The Contractor shall daily remove all rubbish and accumulated materials due to his/her construction.

**7. RESPONSIBILITY OF CONTRACTOR**

7.1 Contractor shall be responsible for his/her own work and every part thereof and all work of every description used in connection with this contract. He/She shall specifically and distinctly assume and does assume all risk of damage from any action or operations under the contract or in connection with his/her work. He/She undertakes and promises to protect and defend the owner(s) against all claims on account any such damage or injury.

7.2 The contractor shall be held responsible for the satisfactory and complete execution of the work in accordance with the true intent of the specifications. He/She shall provide, without extra cost incidental items required as a part of his/her work even though not particularly specified or indicated.

7.3 The contractor shall personally superintend the work or shall have a competent person at the site at all times to act for him/her.

**8. SITE SECURITY**

The Contractor shall be responsible for job site security of all materials and tools provided by him/her and no claim for loss or damage will be considered by the City.

**9. MATERIALS INSPECTION AND RESPONSIBILITY**

9.1 The Project Manager shall have the right to inspect any materials to be used in carrying out the terms of the contract.



- 9.2 The City does not assume any responsibility for the contracted quality and standard of all materials, equipment, components or completed work furnished under this contract.
- 9.3 Any materials, equipment, components or completed work which does not comply with contract specifications or applicable city and state codes may be rejected by the City and shall be replaced by the Contractor at no cost to the City.
- 9.4 Any materials, equipment or components rejected shall be removed within a reasonable period of time from the premises of the City at the entire expense of the Contractor after written notice has been mailed by the City to the Contractor that such materials, equipment or components have been rejected.
- 9.5 Installation shall comply with the applicable rules of the industry or industries which shall be considered as included in these specifications and shall comply with all local and state codes.
- 9.6 Any reference in these documents to standard specifications shall mean the latest revisions of these specifications and shall become a part of this contract. Any part of the work not completely detailed in these documents, or referenced to a standard specification, shall be governed by the latest edition of the proper industry document.

**10. SAFETY**

The Contractor shall comply with all applicable OSHA and MIOSHA regulations.

**11. AWARD**

Award is subject to availability of funds and will be made to the contractor that best meets the specifications and the following award criteria:

- 11.1 Bidder's experience on similar type projects; size, type, cost and location.
- 11.2 Capacity of firm to start and complete a project of this size on target.
- 11.3 Price.
- 11.4 Schedule.
- 11.5 References.

**12. INSPECTION OF WORK**

The City may maintain inspectors on the job who shall at all times have access to work.

**13. UNDERGROUND UTILITIES**

For protection of underground utilities, the Contractor shall dial Miss Dig at 1-800-482-7171 a minimum of 72 hours prior to excavating in the vicinity of utility lines. All "Miss Dig" participating members will thus be routinely notified. This does not relieve the Contractor of notifying utility owners who may not be part of the "Miss Dig" alert system.

**14. PAY ESTIMATES**

The Contractor shall be responsible for the generation of invoices for payment. Payment will be generated by the City based upon an approved invoice. Recommended frequency of payment is monthly, however, frequency of payment will not exceed bi-weekly.

**15. INSPECTION OF SITE**

Each bidder shall visit the site of the proposed work and fully acquaint himself/herself with the existing conditions relating to construction and labor, and shall fully inform himself/herself as to the facilities involved and the difficulties and restrictions attending the performance of this contract. The bidder shall thoroughly examine and become familiar with the drawings, specifications and all other bid/contract documents. The Contractor, by the execution of this contract, shall in no way be relieved of any obligation under it due to his failure to receive or examine any form or legal instrument, or to visit the site and acquaint himself/herself with the conditions there existing. No allowance shall be made subsequently in this connection in behalf of the Contractor for any negligence of his/her part. For inspection call the Public Services Department, Public Works Division.

**16. LAYING OUT WORK**

Before submitting a bid the Contractor shall verify all measurements and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of differences between actual dimensions and the measurements indicated on the drawings. Any difference that may be found shall be submitted to the City Engineer for consideration before proceeding.

**17. SUPERVISION**

The Contractor shall employ an experienced superintendent or foreperson on the job at all times.

**18. TARDINESS**

Construction delays resulting from tardiness on the part of the Contractor will be reviewed by the City in the event of any request for contract extension by the Contractor.

**19. ADDITIONS**

Any modification to the contract shall be subject to prior approval by the Purchasing Agent. City Commission approval may also be required.

Prices for additional work required are not requested in the itemized listing contained herein for the base project. Should additional work be authorized, compensation shall be made on the basis of price or prices to be mutually agreed upon. Such additional work shall not begin until a Change Order has been approved

**20. INSPECTION AND TESTING**

The Contractor shall give the Project Manager timely notice of readiness of the work for all required inspections, tests or approvals, and shall cooperate with inspections and testing personnel to facilitate required inspections or tests.

**21. SPECIFICATIONS FOR CONSTRUCTION**

The items of work in this contract shall conform to the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction, MDOT Supplemental Specifications, and/or the City of Kalamazoo Standard Specifications unless superseded by a Special Provision Contained in this document.

**21. QUESTIONS**

Bidders shall address questions regarding the specifications to Anthony Ladd, PE Assistant City Engineer at (269) 910-1622 or [ladda@kalamazoocity.org](mailto:ladda@kalamazoocity.org). (This does not relieve the requirements of Page 1, Item 3). Questions regarding terms, conditions and other related bid requirements may be addressed to Kyle Dunn, Buyer at (269) 337-8720 or [dunnk@kalamazoocity.org](mailto:dunnk@kalamazoocity.org).

**SECTION VII**  
**TERMS AND CONDITIONS**

**1. AWARD OF CONTRACT**

- A. This contract will be awarded to that responsible bidder whose bid, conforming to this solicitation, will be most advantageous to the City, price and other factors considered. The City reserves the right to accept or reject any or all bids and waive informalities and minor irregularities in bids received. Other factors include, as an example but not limited to, delivery time, conformance to specifications, incidental costs such as demurrage and deposits, etc.

Notification of award will be in writing by the Purchasing Manager. Upon notification, the Contractor shall submit to the Purchasing Division all required insurance certificates (if required) and such other documentation as may be requested or required hereunder. Upon their receipt and subsequent approval by the City, the Purchasing Manager will forward to the Contractor a written **NOTICE TO PROCEED**. Work shall **NOT** be started until such **NOTICE TO PROCEED** is received by the Contractor.

- B. Unilateral changes in bid prices by the bidder shall not be allowed. However, the City, at its sole option, reserves the right to negotiate with bidders in the event of, but not limited to:
- 1) No bids received;
  - 2) A single bid being received; or
  - 3) Prices quoted are over budget and/or unreasonable.

**2. COMPLETE CONTRACT**

This bid document together with its addenda, amendments, attachments and modifications, when executed, becomes the complete contract between the parties hereto, and no verbal or oral promises or representations made in conjunction with the negotiation of this contract shall be binding on either party.

**3. SUBCONTRACTORS – NON-ASSIGNMENT**

Bidders shall state in writing any and all sub-contractors to be associated with this bid, including the type of work to be performed. The Contractor shall cooperate with the City of Kalamazoo in meeting its commitments and goals with regard to maximum utilization of minority and women-owned business enterprises.

The Contractor hereby agrees and understands that the contract resulting from this solicitation shall not be transferred, assigned or sublet without prior written consent of the City of Kalamazoo.

**4. TAXES**

The City of Kalamazoo is exempt from all federal excise tax and state sales and use taxes.

**5. INVOICING**

All original invoice(s) will be sent to the Financial Services Division, 241 W. South Street, Kalamazoo, MI 49007 or via email at [apinvoice@kalamazoo.org](mailto:apinvoice@kalamazoo.org). The Finance Division processes payments after receipt of an original invoice from the Contractor and approval by the department. The City of Kalamazoo's policy is to pay invoice(s) within 30 days from the receipt of the original invoice, if the services or supplies are satisfactory and the proper paperwork and procedures have been followed. **In order to guarantee payment to the vendor on a timely basis, the vendor needs to receive a purchase order number before supplying the City of Kalamazoo with goods or services.** All original, and copies of original invoice(s), will clearly state which purchase order they are being billed against.

**The City of Kalamazoo is a government municipality and therefore is tax exempt from all sales tax.**

**The vendor is responsible for supplying the Finance Division with a copy of their W9 if they are providing a service to the City of Kalamazoo.**

**6. PAYMENTS**

Upon issuance of certificates of Payment by the Architect/Engineer for labor and material incorporated in the work and the materials suitably stored at the site payment shall be made up to ninety (90%) percent of the value thereof.

When the cumulative total of payment is equal to fifty (50%) percent of the contract sum, subsequent payments will be made in the full amount for labor and material certified by the Architect/Engineer.

The amount retained shall be held until final acceptance of the work, receipt of all payrolls, releases, and waiver of liens.

**7. CHANGES AND/OR CONTRACT MODIFICATIONS**

The City reserves the right to increase or decrease quantities, service or requirements, or make any changes necessary at any time during the term of this contract, or any negotiated extension thereof. Price adjustments due to any of the foregoing changes shall be negotiated and mutually agreed upon by the Contractor and the City.

Changes of any nature after contract award which reflect an increase or decrease in requirements or costs shall not be permitted without prior approval by the Purchasing Agent. City Commission approval may also be required.

**ANY CHANGES PERFORMED IN ADVANCE OF PURCHASING AGENT APPROVAL, MAY BE SUBJECT TO DENIAL AND NON-PAYMENT.**

**8. LAWS, ORDINANCES AND REGULATIONS**

The Contractor shall keep himself/herself fully informed of all local, state and federal laws, ordinances and regulations in any manner affecting those engaged or employed in the work and the equipment used. Contractor and/or employees shall, at all times, serve and comply with such laws, ordinances and regulations.

Any permits, licenses, certificates or fees required for the performance of the work shall be obtained and paid for by the Contractor.

This contract shall be governed by the laws of the State of Michigan.

**9. RIGHT TO AUDIT**

The City or its designee shall be entitled to audit all of the Contractor's records, and shall be allowed to interview any of the Contractor's employees, throughout the term of this contract and for a period of three years after final payment or longer if required by law to the extent necessary to adequately permit evaluation and verification of:

- A. Contractor compliance with contract requirements,
- B. Compliance with provisions for pricing change orders, invoices or claims submitted by the Contractor or any of his payees.

**10. HOLD HARMLESS**

If the negligent acts or omissions of the Contractor/Vendor or its employees, agents or officers, cause injury to person or property, the Contractor/Vendor shall indemnify and save harmless the City of Kalamazoo, its agents, officials, and employees against all claims, judgments, losses, damages, demands, and payments of any kind to persons or property to the extent occasioned from any claim or demand arising therefrom.

**11. DEFAULT**

The City may at any time, by written notice to the Contractor, terminate this contract and the Contractor's right to proceed with the work, for just cause, which shall include, but is not limited to the following:

- A. Failure to provide insurance and bonds (when called for), in the exact amounts and within the time specified or any extension thereof.
- B. Failure to make delivery of the supplies, or to perform the services within the time specified herein, or any extension thereof.
- C. The unauthorized substitution of articles for those bid and specified.
- D. Failure to make progress if such failure endangers performance of the contract in accordance with its terms.
- E. Failure to perform in compliance with any provision of the contract.

**DEFAULT (cont.)**

- F. Standard of Performance – Contractor guarantees the performance of the commodities, goods or services rendered herein in accordance with the accepted standards of the industry or industries concerned herein, except that if this specification calls for higher standards, then such higher standards shall be provided.

Upon notice by the City of Contractor’s failure to comply with such standards or to otherwise be in default of this contract in any manner following the Notice to Proceed, Contractor shall immediately remedy said defective performance in a manner acceptable to the City. Should Contractor fail to immediately correct said defective performance, said failure shall be considered a breach of this contract and grounds for termination of the same by the City.

In the event of any breach of this contract by Contractor, Contractor shall pay any cost to the City caused by said breach including but not limited to the replacement cost of such goods or services with another Contractor.

The City reserves the right to withhold any or all payments until any defects in performance have been satisfactorily corrected.

In the event the Contractor is in breach of this contract in any manner, and such breach has not been satisfactorily corrected, the City may bar the Contractor from being awarded any future City contracts.

- G. All remedies available to the City herein are cumulative and the election of one remedy by the City shall not be a waiver of any other remedy available to the City.

**12. TERMINATION OF CONTRACT**

The City may, at any time and without cause, suspend the work of this contract for a period of not more than ninety days after providing notice in writing to the Contractor. The Contractor shall be allowed an adjustment in the contract price or an extension of the contract times, or both, directly attributable to the suspension if Contractor makes an approved claim.

The City may, without prejudice to any other right or remedy of the City, and with or without cause, terminate the contract by giving seven days written notice to the Contractor. In such case the Contractor shall be paid, without duplication, for the following items:

- A. Completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such work;
- B. Expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials or equipment as required by the contract documents in connection with uncompleted work, plus fair and reasonable sums for overhead and profit on such expenses;
- C. All documented claims, costs, losses and damages incurred in settlement of terminated contracts with Subcontractors, Suppliers and others; and
- D. Reasonable expenses directly attributable to termination.

The Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

**13. INDEPENDENT CONTRACTOR**

At all times, the Contractor, any of his/her employees, or his/her sub-contractors and their subsequent employees shall be considered independent contractors and not as City employees. The Contractor shall exercise all supervisory control and general control over all workers' duties, payment of wages to Contractor's employees and the right to hire, fire and discipline their employees and workers. As an independent contractor, payment under this contract shall not be subject to any withholding for tax, social security or other purposes, nor shall the Contractor or his/her employees be entitled to sick leave, pension benefit, vacation, medical benefits, life insurance or workers' unemployment compensation or the like.

**14. PROJECT SUPERVISOR**

The Contractor shall employ an individual to act as Project Supervisor. The Project Supervisor shall be available to the Contractor's workers and the Project Manager at all times by use of a mobile phone, beeper or other reliable means. The Project Supervisor shall prepare daily work plans for the employees, monitor employee performance, attendance and punctuality; and work closely with the City's Project Manager in assuring contract compliance.

**15. MEETINGS**

The Contractor and/or Project Supervisor shall be available to meet with the Department Head or Project Manager at a mutually agreeable time to discuss problems, issues or concerns relative to the contract. Either party may call a meeting at any time. When such a request for a meeting is made, the meeting date shall, in no case exceed five (5) working days after the request; and, if in the sole opinion of the Department Head, the severity of the circumstance warrants, no more than one (1) working day.

**16. INSPECTION OF WORK SITE**

Before submitting bids or quotes for work, the Contractor shall be responsible for examining the work site and satisfying himself/herself as to the existing conditions under which he/she will be obligated to operate, or that in any way affects the work under this contract. No allowance shall be made subsequently, in behalf of the Contractor, for any negligence on his/her part.

**17. CONTRACT PERIOD, EXTENSIONS, CANCELLATION**

- A. The contract shall be in effect for the term stated in the specifications.
- B. The City may opt to extend this contract upon mutual agreement of both parties. The number of extensions shall be limited to that stated in the specifications.
- C. The City may, from time to time, find it necessary to continue this contract on a month-to-month basis only, not to exceed a six (6) month period. Such month-to-month extended periods shall be by mutual agreement of both parties, with all provisions of the original contract or any extension thereof remaining in full force and effect.
- D. All contracts, extensions and cost increases are subject to availability of funds and the approval of the City Commission (if required).

**CONTRACT PERIOD, EXTENSIONS, CANCELLATION (*cont.*)**

- E. The City reserves the right to cancel the contract due to non-appropriation of funds by the City with thirty (30) days written notice.
- F. Either party may terminate the contract (or any extension thereof) without cause at the end of any twelve (12) month term by giving written notice of such intent at least 60 days prior to the end of said twelve (12) month term.
- G. All notices are in effect commencing with the date of mailing. Written notices may be delivered in person or sent by First Class mail; faxed or emailed to the last known address.
- H. If cancellation is for default of contract due to non-performance, the contract may be canceled at any time (see Item 11, DEFAULT)



**APPENDIX A**  
**NON-DISCRIMINATION CLAUSE FOR ALL CITY OF KALAMAZOO CONTRACTS**

The Contractor agrees to comply with the Federal Civil Rights Act of 1964 as amended; the Federal Civil Rights Act of 1991 as amended; the Americans With Disabilities Act of 1990 as amended; the Elliott-Larson Civil Rights Act, Act. No. 453, Public Act of 1976 as amended; the Michigan Handicappers Civil Rights Act, Act No. 220, Public Act of 1976 as amended, City Ordinance 1856 and all other applicable Federal and State laws. The Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability, family status, sexual orientation or gender identity that is unrelated to the individual's ability to perform the duties of the particular job or position. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment advertising, layoff or termination; rates of pay or other forms of compensations; and selection for training, including apprenticeship.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability family status, sexual orientation or gender identity that is unrelated to the individual's ability to perform the duties of the particular job or position.
3. If requested by the City, the Contractor shall furnish information regarding practices, policies and programs and employment statistics for the Contractor and subcontractors. The Contractor and subcontractors shall permit access to all books, records and accounts regarding employment practices by agents and representatives of the City duly charged with investigative duties to assure compliance with this clause.
4. Breach of the covenants herein may be regarded as a material breach of the contract or purchasing agreement as provided in the Elliott-Larsen Civil Rights Act and City Ordinance 1856.
5. The Contractor will include or incorporate by reference the provisions of the foregoing paragraphs 1 through 4 in every subcontract or purchase order unless exempted by the rules, regulations or orders of the Michigan Civil Rights Commission\* and will provide in every subcontract or purchase order that said provision will be binding upon each subcontractor or seller.
6. The Contractor will not preclude a person with a criminal conviction from being considered for employment unless otherwise precluded by federal or state law. (for contracts over \$25,000)

The Elliott-Larson Civil Rights Act, Sec. 202 of Act. No. 453 of 1976 reads in part as follows:

Sec. 202. (1) An employer shall not:

- (a) Fail or refuse to hire, or recruit, or discharge or otherwise discriminate against an individual with respect to employment, compensation, or a term condition or privilege of employment because of religion, race, color, national origin, age, sex, height, weight or marital status.
- (b) Limit, segregate or classify an employee or applicant for employment in a way which deprives or tends to deprive the employee or applicant of an employment opportunity or otherwise adversely affects the status of an employee or applicant because of religion, race, color, national origin, age, sex, height, weight or marital status.
- I Segregate, classify or otherwise discriminate against a person on the basis of sex with respect to a term, condition or privilege of employment, including a benefit plan or system.

\* Except for contracts entered into with parties employing less than three employees.

## APPENDIX B – PREVAILING WAGES

Prevailing wages are applicable to this contract, therefore, rates will apply as follows:

- (XX) Project is funded by City of Kalamazoo monies and is estimated to be in excess of \$100,000.00. The applicable prevailing wage rates are attached.

Specifications for projects in which the City of Kalamazoo is party for construction, alterations and/or repair including painting and decorating of public buildings or public works in or for the City of Kalamazoo and which requires or involves the employment of mechanics and/or laborers shall contain the following provisions stating the minimum wages to be paid the various classes of laborers and mechanics for the project. Prevailing wage rates determined by the U.S. Department of Labor under Davis Bacon and related acts will be used for City of Kalamazoo construction projects.

By the incorporation of prevailing wage rates within this specification, the City of Kalamazoo stipulates that:

- ✓ Contractor or his/her subcontractor shall pay all mechanics and laborers employed directly upon the site of the work, unconditionally and not less than once a week and without subsequent deduction or rebate on any account the full amount, accrued at the time of payment, computed at wage rates as incorporated herein regardless of any contractual relationship which may be alleged to exist between the contractor or subcontractor and such laborers and mechanics;
- ✓ The scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work;
- ✓ The Prime Contractor and all subcontractors shall submit weekly certified payrolls documenting the hours worked and wages paid by work classification. **NOTE: Contactor shall not include Social Security numbers of employees on certified payrolls.**
- ✓ There may be withheld from the contractor's accrued payments the amount considered necessary by the City's Contracting Official to pay to laborers and mechanics employed by the contractor or any subcontractor on the work for the difference between the rates of wages required by the contract and the rates of wages received by such laborers and mechanics except those amounts properly deducted or refunded pursuant to the terms of the Davis-Bacon Act (USC, Title 40, Sec. 276a) and interpretations thereof.

**Special Note:** The City's requirements as it relates to prevailing wages **includes a meeting with the City's Purchasing Agent prior to starting work and the submission of weekly certified payrolls by prime contractors and all subcontractors.** The City will monitor certified payrolls, work progress, and conduct interviews with the mechanics and labors employed directly upon the site during the duration of the contract Please contact the Purchasing Department at (269) 337-8020 if you have any questions regarding prevailing wage provision.

The overtime pay to which a laborer or mechanic Is entitled under this contract shall be that overtime pay to which he/she is entitled by any agreement made with the contractor or subcontractor or by any applicable provision of law; but in no event shall such amount be less than the prevailing wage in the Kalamazoo community for such overtime.

Revised 4-08

# Appendix B



***PREVAILING WAGE RATES***  
**(Heavy & Highway)**  
**STREETS FOR ALL: MICHIKAL STREET**  
**IMPROVEMENTS**

**Bid Reference #: 91396-021.0**

**MARCH 2024**

"General Decision Number: MI20240061 01/05/2024

Superseded General Decision Number: MI20230061

State: Michigan

Construction Type: Heavy

County: Kalamazoo County in Michigan.

Heavy, Includes Water, Sewer Lines and Excavation (Excludes Hazardous Waste Removal; Coal, Oil, Gas, Duct and other similar Pipeline Construction)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

|  |   |
|--|---|
| <p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p> | <ul style="list-style-type: none"> <li>. Executive Order 14026 generally applies to the contract.</li> <li>. The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.</li> </ul>  |
| <p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>         | <ul style="list-style-type: none"> <li>. Executive Order 13658 generally applies to the contract.</li> <li>. The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.</li> </ul> |

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number      Publication Date  
 0                              01/05/2024

CARP0525-006 06/01/2023

|                                   | Rates    | Fringes |
|-----------------------------------|----------|---------|
| CARPENTER, Includes Form Work.... | \$ 28.29 | 21.42   |

-----  
ELEC0131-006 06/01/2023

|                  | Rates    | Fringes |
|------------------|----------|---------|
| ELECTRICIAN..... | \$ 38.29 | 19.47   |

-----  
ENGI0325-009 09/01/2023

POWER EQUIPMENT OPERATORS: Underground Construction (Including Sewer)

|                          | Rates    | Fringes |
|--------------------------|----------|---------|
| POWER EQUIPMENT OPERATOR |          |         |
| GROUP 1.....             | \$ 39.27 | 25.25   |
| GROUP 2.....             | \$ 34.38 | 25.25   |
| GROUP 3.....             | \$ 33.88 | 25.25   |
| GROUP 4.....             | \$ 33.60 | 25.25   |

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Backhoe/ Excavator, Boring Machine, Bulldozer, Crane, Grader/ Blade, Loader, Roller, Scraper, Trencher (over 8 ft. digging capacity)

GROUP 2: Trencher (8-ft digging capacity and smaller)

GROUP 3: Boom Truck (non-swinging, non- powered type boom)

GROUP 4: Broom/ Sweeper, Fork Truck, Tractor, Bobcat/ Skid Steer /Skid Loader

-----  
ENGI0326-025 06/01/2023

EXCLUDES UNDERGROUND CONSTRUCTION

|                           | Rates    | Fringes |
|---------------------------|----------|---------|
| OPERATOR: Power Equipment |          |         |
| GROUP 1.....              | \$ 45.48 | 25.25   |
| GROUP 2.....              | \$ 42.18 | 25.25   |
| GROUP 3.....              | \$ 39.53 | 25.25   |
| GROUP 4.....              | \$ 37.82 | 25.25   |
| GROUP 5.....              | \$ 37.82 | 25.25   |
| GROUP 6.....              | \$ 31.96 | 25.25   |
| GROUP 7.....              | \$ 29.48 | 25.25   |

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Crane operator with main boom and jib 400', 300', or 220' or longer.

GROUP 2: Crane operator with main boom and jib 140' or

longer, tower crane, gantry crane, whirley derrick

GROUP 3: Backhoe/Excavator; Boring Machine; Bulldozer; Crane; Grader/Blade; Loader; Roller; Scraper; Tractor; Trencher

GROUP 4: Bobcat/Skid Loader; Broom/Sweeper; Fork Truck (over 20' lift)

GROUP 5: Boom truck (non-swinging)

GROUP 6: Fork Truck (20' lift and under for masonry work)

GROUP 7: Oiler

FOOTNOTES:

Crane operator with main boom and jib 300' or longer: \$1.50 per hour above the group 1 rate.

Crane operator with main boom and jib 400' or longer: \$3.00 per hour above the group 1 rate.

-----  
IRON0025-011 06/01/2023

|                               | Rates    | Fringes |
|-------------------------------|----------|---------|
| IRONWORKER (REINFORCING)..... | \$ 31.43 | 34.77   |
| IRONWORKER (STRUCTURAL).....  | \$ 34.85 | 38.44   |

-----  
LAB00334-011 09/01/2022

SCOPE OF WORK:

OPEN CUT CONSTRUCTION: Excavation of earth and sewer, utilities, and improvements, including underground piping/conduit (including inspection, cleaning, restoration, and relining)

|   | Rates    | Fringes |
|---|----------|---------|
| LABORER                                   |          |         |
| (1) Common or General.....                | \$ 22.42 | 12.95   |
| (2) Mason Tender-<br>Cement/Concrete..... | \$ 22.55 | 12.95   |
| (4) Grade Checker.....                    | \$ 22.73 | 12.95   |
| (5) Pipelayer.....                        | \$ 22.85 | 12.95   |

-----  
LAB00355-010 06/01/2022

EXCLUDES OPEN CUT CONSTRUCTION

|   | Rates    | Fringes |
|---|----------|---------|
| LABORER   |          |         |
| Common or General; Grade<br>Checker; Mason Tender -<br>Cement/Concrete..... | \$ 26.70 | 12.95   |
| Pipelayer.....  | \$ 20.34 | 12.85   |

-----  
PAIN0312-014 06/12/2014

|  | Rates | Fringes |
|--|-------|---------|
|--|-------|---------|

PAINTER

|                     |          |       |
|---------------------|----------|-------|
| Brush & Roller..... | \$ 21.75 | 11.94 |
| Spray.....          | \$ 22.75 | 11.94 |

-----  
PLAS0016-020 04/01/2014

Rates Fringes

|                                   |          |       |
|-----------------------------------|----------|-------|
| CEMENT MASON/CONCRETE FINISHER... | \$ 22.31 | 12.83 |
|-----------------------------------|----------|-------|

-----  
PLUM0333-026 06/01/2022

Fort Custer

Rates Fringes

|              |          |       |
|--------------|----------|-------|
| PLUMBER..... | \$ 42.29 | 23.94 |
|--------------|----------|-------|

-----  
PLUM0357-012 07/01/2020

Excluding Fort Custer

Rates Fringes

|              |          |       |
|--------------|----------|-------|
| PLUMBER..... | \$ 35.20 | 22.35 |
|--------------|----------|-------|

-----  
TEAM0007-011 06/01/2023

Rates Fringes

TRUCK DRIVER

|                              |          |           |
|------------------------------|----------|-----------|
| Lowboy/Semi-Trailer Truck... | \$ 31.55 | .75 + a+b |
| Tractor Haul Truck.....      | \$ 31.30 | .75 + a+b |

FOOTNOTE:

- a. \$470.70 per week.
- b. \$68.70 daily.

-----  
SUMI2010-059 11/09/2010

Rates Fringes

|  |             |      |
|--|-------------|------|
| LABORER: Landscape.....                  | \$ 12.25 ** | 0.00 |
| TRUCK DRIVER: Dump Truck.....            | \$ 18.00    | 6.43 |
| TRUCK DRIVER: Off the Road<br>Truck..... | \$ 20.82    | 3.69 |

-----  
WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====  
\*\* Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave

for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates



the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

"General Decision Number: MI20240001 02/23/2024

Superseded General Decision Number: MI20230001

State: Michigan

Construction Types: Highway (Highway, Airport & Bridge xxxxx and Sewer/Incid. to Hwy.)

Counties: Michigan Statewide.

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

|  |   |
|--|---|
| <p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p> | <ul style="list-style-type: none"> <li>. Executive Order 14026 generally applies to the contract.</li> <li>. The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.</li> </ul>  |
| <p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>         | <ul style="list-style-type: none"> <li>. Executive Order 13658 generally applies to the contract.</li> <li>. The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.</li> </ul> |

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

| Modification Number | Publication Date |
|---------------------|------------------|
| 0                   | 01/05/2024       |
| 1                   | 02/23/2024       |

CARP0004-004 06/01/2019

REMAINDER OF STATE

|                              | Rates    | Fringes |
|------------------------------|----------|---------|
| CARPENTER ( Piledriver)..... | \$ 27.62 | 20.59   |

-----  
CARP0004-005 06/01/2018

LIVINGSTON (Townships of Brighton, Deerfield, Genoa, Hartland, Oceola & Tyrone), MACOMB, MONROE, OAKLAND, SANILAC, ST. CLAIR AND WAYNE COUNTIES

|                             | Rates    | Fringes |
|-----------------------------|----------|---------|
| CARPENTER (Piledriver)..... | \$ 30.50 | 27.28   |

-----  
ELEC0017-005 06/01/2023

STATEWIDE

|   | Rates    | Fringes  |
|---|----------|----------|
| Line Construction   |          |          |
| Groundman/Driver.....   | \$ 29.24 | 7.20+32% |
| Journeyman Signal Tech,<br>Communications Tech, Tower<br>Tech & Fiber Optic Splicers. | \$ 52.02 | 7.20+32% |
| Journeyman Specialist.....  | \$ 53.83 | 32%+7.20 |
| Operator A.....   | \$ 37.13 | 7.20+32% |
| Operator B.....   | \$ 34.67 | 7.20+32% |

Classifications

Journeyman Specialist: Refers to a crew of only one person working alone.  
 Operator A: Shall be proficient in operating all power equipment including: Backhoe, Excavator, Directional Bore and Boom/Digger truck.  
 Operator B: Shall be proficient in operating any 2 of the above mentioned pieces of equipment listed under Operator A.

-----  
ENGI0324-003 06/01/2023

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LENAWEE, LIVINGSTON, MACOMB, MIDLAND, MONROE, MONTMORENCY, OAKLAND, OGEMAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLAIR, SANILAC, SHIAWASSEE, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

|   | Rates    | Fringes |
|---|----------|---------|
| OPERATOR: Power Equipment<br>(Steel Erection) |          |         |
| GROUP 1.....                                  | \$ 53.02 | 25.25   |
| GROUP 2.....                                  | \$ 54.02 | 25.25   |
| GROUP 3.....                                  | \$ 51.52 | 25.25   |
| GROUP 4.....                                  | \$ 52.52 | 25.25   |
| GROUP 5.....                                  | \$ 50.02 | 25.25   |

|               |          |       |
|---------------|----------|-------|
| GROUP 6.....  | \$ 51.02 | 25.25 |
| GROUP 7.....  | \$ 49.75 | 25.25 |
| GROUP 8.....  | \$ 50.75 | 25.25 |
| GROUP 9.....  | \$ 49.30 | 25.25 |
| GROUP 10..... | \$ 50.30 | 25.25 |
| GROUP 11..... | \$ 48.57 | 25.25 |
| GROUP 12..... | \$ 49.57 | 25.25 |
| GROUP 13..... | \$ 48.21 | 25.25 |
| GROUP 14..... | \$ 49.21 | 25.25 |
| GROUP 15..... | \$ 47.57 | 25.25 |
| GROUP 16..... | \$ 44.37 | 25.25 |
| GROUP 17..... | \$ 28.89 | 12.40 |
| GROUP 18..... | \$ 33.38 | 25.25 |

FOOTNOTE:

Paid Holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Engineer when operating combination of boom and jib 400' or longer

GROUP 2: Engineer when operating combination of boom and jib 400' or longer on a crane that requires an oiler

GROUP 3: Engineer when operating combination of boom and jib 300' or longer

GROUP 4: Engineer when operating combination of boom and jib 300' or longer on a crane that requires an oiler

GROUP 5: Engineer when operating combination of boom and jib 220' or longer

GROUP 6: Engineer when operating combination of boom and jib 220' or longer on a crane that requires an oiler

GROUP 7: Engineer when operating combination of boom and jib 140' or longer

GROUP 8: Engineer when operating combination of boom and jib 140' or longer on a crane that requires an oiler

GROUP 9: Tower crane & derrick operator (where operator's work station is 50 ft. or more above first sub-level)

GROUP 10: Tower crane & derrick operator (where operator's work station is 50 ft. or more above first sub-level) on a crane that requires an oiler

GROUP 11: Engineer when operating combination of boom and jib 120' or longer

GROUP 12: Engineer when operating combination of boom and jib 120' or longer on a crane that requires an oiler

GROUP 13: Crane operator; job mechanic and 3 drum hoist and excavator

GROUP 14: Crane operator on a crane that requires an oiler

GROUP 15: Hoisting operator; 2 drum hoist and rubber tired backhoe

GROUP 16: Forklift and 1 drum hoist

GROUP 17: Compressor or welder operator

GROUP 18: Oiler

-----  
ENGI0324-004 06/01/2023

AREA 1: ALLEGAN, BARRY, BERRIEN, BRANCH, CALHOUN, CASS, EATON, HILLSDALE, IONIA, KALAMAZOO, KENT, LAKE, MANISTEE, MASON, MECOSTA, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH, VAN BUREN

AREA 2: ANTRIM, BENZIE, CHARLEVOIX, EMMET, GRAND TRAVERSE, KALKASKA, LEELANAU, MISSAUKEE AND WEXFORD COUNTIES:

|   | Rates    | Fringes |
|---|----------|---------|
| OPERATOR: Power Equipment<br>(Steel Erection) |          |         |
| AREA 1  |          |         |
| GROUP 1.....                                  | \$ 53.02 | 25.25   |
| GROUP 2.....                                  | \$ 49.75 | 25.25   |
| GROUP 3.....                                  | \$ 48.21 | 25.25   |
| GROUP 4.....                                  | \$ 44.37 | 25.25   |
| GROUP 5.....                                  | \$ 28.89 | 12.40   |
| GROUP 6.....                                  | \$ 33.38 | 25.25   |
| AREA 2  |          |         |
| GROUP 1.....                                  | \$ 53.02 | 25.25   |
| GROUP 2.....                                  | \$ 49.75 | 24.25   |
| GROUP 3.....                                  | \$ 48.21 | 25.25   |
| GROUP 4.....                                  | \$ 44.37 | 25.25   |
| GROUP 5.....                                  | \$ 28.89 | 12.40   |
| GROUP 6.....                                  | \$ 33.38 | 25.25   |

FOOTNOTES:

Crane operator with main boom and jib 300' or longer: \$1.50 additional to the group 1 rate. Crane operator with main boom and jib 400' or longer: \$3.00 additional to the group 1 rate.

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS:

GROUP 1: Crane Operator with main boom & jib 400', 300', or 220' or longer.

GROUP 2: Crane Operator with main boom & jib 140' or longer, Tower Crane; Gantry Crane; Whirley Derrick.

GROUP 3: Regular Equipment Operator, Crane, Dozer, Loader, Hoist, Straddle Wagon, Mechanic, Grader and Hydro Excavator.

GROUP 4: Air Tugger (single drum), Material Hoist Pump 6" or over, Elevators, Brokk Concrete Breaker.

GROUP 5: Air Compressor, Welder, Generators, Conveyors

GROUP 6: Oiler and fire tender

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 ENGI0324-005 09/01/2023

AREA 1: GENESEE, LAPEER, LIVINGSTON, MACOMB, MONROE, OAKLAND, ST. CLAIR, WASHTENAW AND WAYNE COUNTIES

AREA 2: ALCONA, ALLEGAN, ALGER, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KWEENAW, LAKE, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SCHOOLCRAFT, SHIAWASSEE, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

Rates Fringes

OPERATOR: Power Equipment  
 (Underground construction  
 (including sewer))

|              |          |       |
|--------------|----------|-------|
| AREA 1:      |          |       |
| GROUP 1..... | \$ 41.08 | 25.25 |
| GROUP 2..... | \$ 36.25 | 25.25 |
| GROUP 3..... | \$ 35.52 | 25.25 |
| GROUP 4..... | \$ 34.95 | 25.25 |
| GROUP 5..... | \$ 25.35 | 12.10 |
| AREA 2:      |          |       |
| GROUP 1..... | \$ 39.27 | 25.25 |
| GROUP 2..... | \$ 34.38 | 25.25 |
| GROUP 3..... | \$ 33.88 | 25.25 |
| GROUP 4..... | \$ 33.60 | 25.25 |
| GROUP 5..... | \$ 25.35 | 12.10 |

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Backfiller tamper; Backhoe; Batch plant operator (concrete); Clamshell; Concrete paver (2 drums or larger); Conveyor loader (Euclid type); Crane (crawler, truck type or pile driving); Dozer; Dragline; Elevating grader; Endloader; Gradall (and similar type machine); Grader; Mechanic; Power shovel; Roller (asphalt); Scraper (self-propelled or tractor drawn); Side boom tractor (type D-4 or equivalent and larger); Slip form paver; Slope paver; Trencher (over 8 ft. digging capacity); Well drilling rig; Concrete pump with boom operator; Hydro Excavator

GROUP 2: Boom truck (power swing type boom); Crusher; Hoist; Pump (1 or more - 6-in. discharge or larger - gas or diesel- powered or powered by generator of 300 amperes or more - inclusive of generator); Side boom tractor (smaller than type D-4 or equivalent); Tractor (pneu-tired, other than backhoe or front end loader); Trencher (8-ft. digging capacity and smaller); Vac Truck and End dump operator;

GROUP 3: Air compressors (600 cfm or larger); Air compressors (2 or more-less than 600 cfm); Boom truck (non-swinging, non- powered type boom); Concrete breaker (self-propelled or truck mounted - includes compressor); Concrete paver (1 drum-1/2 yd. or larger); Elevator (other than passenger);

Maintenance person; Pump (2 or more-4-in. up to 6-in. discharge-gas or diesel powered - excluding submersible pumps); Pumpcrete machine (and similar equipment); Wagon drill (multiple); Welding machine or generator (2 or more-300 amp. or larger - gas or diesel powered)

GROUP 4: Boiler; Concrete saw (40 hp or over); Curing machine (self-propelled); Farm tractor (with attachment); Finishing machine (concrete); Hydraulic pipe pushing machine; Mulching equipment; Pumps (2 or more up to 4-in. discharge, if used 3 hours or more a day, gas or diesel powered - excluding submersible pumps); Roller (other than asphalt); Stump remover; Trencher (service); Vibrating compaction equipment, self-propelled (6 ft. wide or over); Sweeper (Wayne type); Water wagon and Extend-a boom forklift

Group 5: Fire Person, Oiler

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\* ENGI0324-006 06/01/2023

GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW, WAYNE, ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

Rates Fringes

Power equipment operators:  
(AIRPORT, BRIDGE & HIGHWAY  
CONSTRUCTION)

|              |          |       |
|--------------|----------|-------|
| GROUP 1..... | \$ 40.46 | 25.25 |
| GROUP 2..... | \$ 37.73 | 25.25 |
| GROUP 3..... | \$ 33.17 | 25.55 |
| GROUP 4..... | \$ 33.00 | 25.25 |

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Asphalt plant operator; Crane operator (does not include work on bridge construction projects when the crane operator is erecting structural components); Dragline operator; Shovel operator; Locomotive operator; Paver operator (5 bags or more); Elevating grader operator; Pile driving operator; Roller operator (asphalt); Blade grader operator; Trenching machine operator (ladder or wheel type); Auto-grader; Slip form paver; Self-propelled or tractor-drawn scraper; Conveyor loader operator (Euclid type); Endloader operator (1 yd. capacity and over); Bulldozer; Hoisting engineer; Tractor operator; Finishing machine operator (asphalt); Mechanic; Pump operator (6-in. discharge or over, gas, diesel powered or generator of 300 amp. or larger); Shouldering or gravel distributing machine operator (self-propelled); Backhoe (with over 3/8 yd. bucket); Side boom tractor (type D-4 or equivalent or larger); Tube finisher (slip form paving); Gradall (and



similar type machine); Asphalt paver (self-propelled); Asphalt planer (self-propelled); Batch plant (concrete-central mix); Slurry machine (asphalt); Concrete pump (3 in. and over); Roto-mill; Swinging boom truck (over 12 ton capacity); Hydro demolisher (water blaster); Farm-type tractor with attached pan; Vacuum truck operator; Batch Plant (concrete dry batch); Concrete Saw Operator (40h.p. or over; Tractor Operator (farm type); Finishing Machine Operator (concrete); Grader Operator (self-propelled fine grade or form (concrete)).

GROUP 2: Screening plant operator; Washing plant operator; Crusher operator; Backhoe (with 3/8 yd. bucket or less); Side boom tractor (smaller than D-4 type or equivalent); Sweeper (Wayne type and similar equipment); Greese Truck; Air Compressor Operator (600 cu.ft. per min or more); Air Compressor Operator (two or more, less than 600 cfm);

GROUP 3: Boiler fire tender; Tractor operator (farm type with attachment); Concrete Breaker; Wagon Drill Operator;

GROUP 4: Oiler; Fire tender; Trencher (service); Flexplane operator; Cleftplane operator; Boom or winch hoist truck operator; Endloader operator \*under 1 yd. capacity); Roller Operator (other than asphalt); Curing equipment operator (self-propelled); Power bin operator; Plant drier (6 ft. wide or over); Guard post driver operator (power driven); All mulching equipment; Stump remover; Concrete pump (under 3-in.); Mesh installer (self-propelled); End dump; Skid Steer.

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ENGI0324-007 05/01/2023

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

|  | Rates    | Fringes |
|--|----------|---------|
| OPERATOR: Power Equipment<br>(Steel Erection)          |          |         |
| Compressor, welder and<br>forklift.....                | \$ 38.50 | 25.00   |
| Crane operator, main boom<br>& jib 120' or longer..... | \$ 44.97 | 25.00   |
| Crane operator, main boom<br>& jib 140' or longer..... | \$ 44.17 | 24.60   |
| Crane operator, main boom<br>& jib 220' or longer..... | \$ 45.27 | 25.00   |
| Mechanic with truck and<br>tools.....                  | \$ 44.10 | 25.00   |
| Oiler and fireman.....                                 | \$ 39.96 | 25.00   |
| Regular operator.....                                  | \$ 42.32 | 25.00   |

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\* ENGI0324-008 10/01/2023

ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE,

MACKINAC, MACOMB, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MONROE, MUSKEGON, NEWAYGO, OAKLAND, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN, WASHTENAW, WAYNE AND WEXFORD COUNTIES

Rates Fringes

OPERATOR: Power Equipment (Sewer Relining)

|              |          |       |
|--------------|----------|-------|
| GROUP 1..... | \$ 37.37 | 15.44 |
| GROUP 2..... | \$ 35.33 | 15.44 |

SEWER RELINING CLASSIFICATIONS

GROUP 1: Operation of audio-visual closed circuit TV system, including remote in-ground cutter and other equipment used in connection with the CCTV system

GROUP 2: Operation of hot water heaters and circulation systems, water jettors and vacuum and mechanical debris removal systems

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ENGI0325-012 05/01/2023

Rates Fringes

Power equipment operators - gas distribution and duct installation work:

|              |          |       |
|--------------|----------|-------|
| GROUP 1..... | \$ 36.18 | 25.25 |
| GROUP 2..... | \$ 33.45 | 25.25 |

SCOPE OF WORK: The construction, installation, treating and reconditioning of pipelines transporting gas vapors within cities, towns, subdivisions, suburban areas, or within private property boundaries, up to and including private meter settings of private industrial, governmental or other premises, more commonly referred to as ""distribution work,"" starting from the first metering station, connection, similar or related facility, of the main or cross country pipeline and including duct installation.

Group 1: Backhoe, crane, grader, mechanic, dozer (D-6 equivalent or larger), side boom (D-4 equivalent or larger), trencher(except service), endloader (2 yd. capacity or greater).

GROUP 2: Dozer (less than D-6 equivalent), endloader (under 2 yd. capacity), side boom (under D-4 capacity), backfiller, pumps (1 or 2 of 6-inch discharge or greater), boom truck (with powered boom), tractor (wheel type other than backhoe or front endloader). Tamper (self-propelled), boom truck (with non-powered boom), concrete saw (20 hp or larger), pumps (2 to 4 under 6-inch discharge), compressor (2 or more or when one is used continuously into the second day) and trencher(service). Oiler, hydraulic pipe pushing machine, grease person and hydrostatic testing operator.

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IRON0008-007 06/01/2022

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES:

|   | Rates    | Fringes |
|---|----------|---------|
| Ironworker - pre-engineered metal building erector..... | \$ 23.70 | 6.95    |
| IRONWORKER  |          |         |
| General contracts                                       |          |         |
| \$10,000,000 or greater.....                            | \$ 38.14 | 28.70   |
| General contracts less than \$10,000,000.....           | \$ 38.14 | 28.70   |

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

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IRON0025-002 06/01/2023

ALCONA, ALPENA, ARENAC, BAY, CHEBOYGAN, CLARE, CLINTON, CRAWFORD, GENESEE, GLADWIN, GRATIOT, HURON, INGHAM, IOSCO, ISABELLA, JACKSON, LAPEER, LIVINGSTON, MACOMB, MIDLAND, MONTMORENCY, OAKLAND, OGEAW, OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, TUSCOLA, WASHTENAW AND WAYNE COUNTIES:

|  | Rates    | Fringes |
|--|----------|---------|
| Ironworker - pre-engineered metal building erector   |          |         |
| ALLEGAN, ANTRIM, BARRY, BENZIE, BRANCH, CALHOUN, CHARLEVOIX, EATON, EMMET, GRAND TRAVERSE, HILLSDALE, IONIA, KALAMAZOO, KALKASKA, KENT, LAKE, LEELANAU, MANISTEE, MASON, MECOSTA, MISSAUKEE, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH, VAN BUREN AND WEXFORD COUNTIES:.. | \$ 24.59 | 25.43   |
| Bay, Genesee, Lapeer, Livingston (east of Burkhardt Road), Macomb, Midland, Oakland, Saginaw, St. Clair, The University of Michigan, Washtenaw (east of U.S. 23) & Wayne...  | \$ 25.81 | 26.43   |
| IRONWORKER   |          |         |
| Ornamental and Structural...   | \$ 34.50 | 38.44   |
| Reinforcing.....   | \$ 32.68 | 35.15   |

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IRON0055-005 07/01/2022

LENAWEE AND MONROE COUNTIES:

|                                     | Rates    | Fringes |
|-------------------------------------|----------|---------|
| IRONWORKER                          |          |         |
| Pre-engineered metal buildings..... | \$ 23.59 | 19.35   |

All other work.....\$ 33.00 27.20

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IRON0292-003 06/01/2020

BERRIEN AND CASS COUNTIES:

|   | Rates    | Fringes |
|---|----------|---------|
| IRONWORKER (Including pre-engineered metal building erector)..... | \$ 31.75 | 22.84   |

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\* LAB0005-006 10/01/2022

|  | Rates       | Fringes |
|--|-------------|---------|
| Laborers - hazardous waste abatement: (ALCONA, ALPENA, ANTRIM, BENZIE, CHARLEVOIX, CHEBOYGAN, CRAWFORD, EMMET, GRAND TRAVERSE, IOSCO, KALKASKA, LEELANAU, MISSAUKEE, MONTMORENCY, OSCODA, OTSEGO, PRESQUE ISLE AND WEXFORD COUNTIES - Zone 10) |             |         |
| Levels A, B or C.....  | \$ 17.45    | 12.75   |
| class b.....   | \$ 18.64    | 12.90   |
| Work performed in conjunction with site preparation not requiring the use of personal protective equipment;  |             |         |
| Also, Level D.....   | \$ 16.45 ** | 12.75   |
| class a.....   | \$ 17.64    | 12.90   |

Zone 10

|  |          |       |
|--|----------|-------|
| Laborers - hazardous waste abatement: (ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES - Zone 11) |          |       |
| Levels A, B or C.....  | \$ 25.18 | 12.90 |
| Work performed in conjunction with site preparation not requiring the use of personal protective equipment;  |          |       |
| Also, Level D.....   | \$ 22.58 | 12.90 |

|   |          |       |
|---|----------|-------|
| Laborers - hazardous waste abatement: (ALLEGAN, BARRY, BERRIEN, BRANCH, CALHOUN, CASS, IONIA COUNTY (except the city of Portland); KALAMAZOO, KENT, LAKE, MANISTEE, MASON, MECOSTA, MONTCALM, MUSKEGON, NEWAYGO, OCEANA, OSCEOLA, OTTAWA, ST. JOSEPH AND VAN BUREN COUNTIES - Zone 9) |          |       |
| Levels A, B or C.....   | \$ 21.88 | 13.26 |
| Work performed in conjunction with site   |          |       |

|   |       |
|---|-------|
| preparation not requiring<br>the use of personal<br>protective equipment;<br>Also, Level D.....\$ 20.80   | 12.90 |
| Laborers - hazardous waste<br>abatement: (ARENAC, BAY,<br>CLARE, GLADWIN, GRATIOT,<br>HURON, ISABELLA, MIDLAND,<br>OGEMAW, ROSCOMMON, SAGINAW<br>AND TUSCOLA COUNTIES - Zone 8)                                 |       |
| Levels A, B or C.....\$ 23.74   | 12.95 |
| Work performed in<br>conjunction with site<br>preparation not requiring<br>the use of personal<br>protective equipment;<br>Also, Level D.....\$ 20.80   | 12.90 |
| Laborers - hazardous waste<br>abatement: (CLINTON, EATON<br>AND INGHAM COUNTIES; IONIA<br>COUNTY (City of Portland);<br>LIVINGSTON COUNTY (west of<br>Oak Grove Rd., including the<br>City of Howell) - Zone 6) |       |
| Levels A, B or C.....\$ 26.33   | 12.95 |
| Work performed in<br>conjunction with site<br>preparation not requiring<br>the use of personal<br>protective equipment;<br>Also, Level D.....\$ 24.64   | 12.90 |
| Laborers - hazardous waste<br>abatement: (GENESEE, LAPEER<br>AND SHIAWASSEE COUNTIES -<br>Zone 7)   |       |
| Levels A, B or C.....\$ 24.20   | 13.80 |
| Work performed in<br>conjunction with site<br>preparation not requiring<br>the use of personal<br>protective equipment;<br>Also, Level D.....\$ 23.20   | 13.80 |
| Laborers - hazardous waste<br>abatement: (HILLSDALE,<br>JACKSON AND LENAWEЕ COUNTIES<br>- Zone 4)   |       |
| Levels A, B or C.....\$ 27.13   | 14.95 |
| Work performed in<br>conjunction with site<br>preparation not requiring<br>the use of personal<br>protective equipment;<br>Also, Level D.....\$ 24.17   | 12.90 |
| Laborers - hazardous waste<br>abatement: (LIVINGSTON COUNTY<br>(east of Oak Grove Rd. and<br>south of M-59, excluding the<br>city of Howell); AND<br>WASHTENAW COUNTY - Zone 3)                                 |       |
| Levels A, B or C.....\$ 29.93   | 14.20 |
| Work performed in<br>conjunction with site<br>preparation not requiring<br>the use of personal<br>protective equipment;   |       |

|   |       |
|---|-------|
| Also, Level D.....\$ 28.93  | 14.20 |
| Laborers - hazardous waste abatement: (MACOMB AND WAYNE COUNTIES - Zone 1)  |       |
| Levels A, B or C.....\$ 29.93   | 16.90 |
| Work performed in conjunction with site preparation not requiring the use of personal protective equipment;   |       |
| Also, Level D.....\$ 28.93  | 16.90 |
| Laborers - hazardous waste abatement: (MONROE COUNTY - Zone 4)  |       |
| Levels A, B or C.....\$ 31.75   | 14.90 |
| Work performed in conjunction with site preparation not requiring the use of personal protective equipment;   |       |
| Also, Level D.....\$ 31.75  | 14.90 |
| Laborers - hazardous waste abatement: (OAKLAND COUNTY and the Northeast portion of LIVINGSTON COUNTY bordered by Oak Grove Road on the West and M-59 on the South - Zone 2) |       |
| Level A, B, C.....\$ 29.93  | 16.90 |
| Work performed in conjunction with site preparation not requiring the use of personal protective equipment;   |       |
| Also, Level D.....\$ 28.93  | 16.90 |
| Laborers - hazardous waste abatement: (SANILAC AND ST. CLAIR COUNTIES - Zone 5)   |       |
| Levels A, B or C.....\$ 26.21   | 16.62 |
| Work performed in conjunction with site preparation not requiring the use of personal protective equipment;   |       |
| Also, Level D.....\$ 24.75  | 16.35 |

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LAB00259-001 09/01/2023

AREA 1: MACOMB, OAKLAND AND WAYNE COUNTIES  
 AREA 2: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONROE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN, WASHTENAW AND WEXFORD COUNTIES

Rates Fringes

Laborers - tunnel, shaft and caisson:

|              |          |       |
|--------------|----------|-------|
| AREA 1       |          |       |
| GROUP 1..... | \$ 23.62 | 16.93 |
| GROUP 2..... | \$ 23.73 | 16.93 |
| GROUP 3..... | \$ 23.79 | 16.93 |
| GROUP 4..... | \$ 23.97 | 16.93 |
| GROUP 5..... | \$ 24.22 | 16.93 |
| GROUP 6..... | \$ 24.55 | 16.93 |
| GROUP 7..... | \$ 17.83 | 16.93 |
| AREA 2       |          |       |
| GROUP 1..... | \$ 27.57 | 16.93 |
| GROUP 2..... | \$ 25.24 | 16.93 |
| GROUP 3..... | \$ 25.34 | 16.93 |
| GROUP 4..... | \$ 29.57 | 16.93 |
| GROUP 5..... | \$ 25.76 | 16.93 |
| GROUP 6..... | \$ 26.07 | 16.93 |
| GROUP 7..... | \$ 25.57 | 16.93 |

SCOPE OF WORK: Tunnel, shaft and caisson work of every type and description and all operations incidental thereto, including, but not limited to, shafts and tunnels for sewers, water, subways, transportation, diversion, sewerage, caverns, shelters, aquifers, reservoirs, missile silos and steel sheeting for underground construction.

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Tunnel, shaft and caisson laborer, dump, shanty, hog house tender, testing (on gas) and watchman

GROUP 2: Manhole, headwall, catch basin builder, bricklayer tender, mortar machine and material mixer

GROUP 3: Air tool operator (jackhammer, bush hammer and grinder), first bottom, second bottom, cage tender, car pusher, carrier, concrete, concrete form, concrete repair, cement invert laborer, cement finisher, concrete shoveler, conveyor, floor, gasoline and electric tool operator, gunite, grout operator, welder, heading dinky person, inside lock tender, pea gravel operator, pump, outside lock tender, scaffold, top signal person, switch person, track, tugger, utility person, vibrator, winch operator, pipe jacking, wagon drill and air track operator and concrete saw operator (under 40 h.p.)

GROUP 4: Tunnel, shaft and caisson mucker, bracer, liner plate, long haul dinky driver and well point

GROUP 5: Tunnel, shaft and caisson miner, drill runner, key board operator, power knife operator, reinforced steel or mesh (e.g. wire mesh, steel mats, dowel bars, etc.)

GROUP 6: Dynamite and powder

GROUP 7: Restoration laborer, seeding, sodding, planting, cutting, mulching and top soil grading; and the restoration of property such as replacing mailboxes, wood chips, planter boxes, flagstones, etc.

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LAB00334-001 09/01/2022

Rates Fringes

Laborers - open cut:

ZONE 1 - MACOMB, OAKLAND  
AND WAYNE COUNTIES:

|              |          |       |
|--------------|----------|-------|
| GROUP 1..... | \$ 23.47 | 16.72 |
| GROUP 2..... | \$ 23.58 | 16.72 |
| GROUP 3..... | \$ 23.63 | 16.72 |
| GROUP 4..... | \$ 23.71 | 16.72 |
| GROUP 5..... | \$ 24.17 | 16.72 |
| GROUP 6..... | \$ 22.00 | 16.72 |
| GROUP 7..... | \$ 17.84 | 16.72 |

ZONE 2 - LIVINGSTON COUNTY  
(east of M-151 (Oak Grove  
Rd.)); MONROE AND

WASHTENAW COUNTIES:

|              |          |       |
|--------------|----------|-------|
| GROUP 1..... | \$ 25.20 | 16.72 |
| GROUP 2..... | \$ 24.91 | 16.72 |
| GROUP 3..... | \$ 25.03 | 16.72 |
| GROUP 4..... | \$ 25.10 | 16.72 |
| GROUP 5..... | \$ 25.25 | 16.72 |
| GROUP 6..... | \$ 22.55 | 16.72 |
| GROUP 7..... | \$ 22.11 | 16.72 |

ZONE 3 - CLINTON, EATON,  
GENESEE, HILLSDALE AND  
INGHAM COUNTIES; IONIA  
COUNTY (City of Portland);  
JACKSON, LAPEER AND  
LENAWEE COUNTIES;  
LIVINGSTON COUNTY (west of  
M-151 Oak Grove Rd.);  
SANILAC, ST. CLAIR AND  
SHIAWASSEE COUNTIES:

|              |          |       |
|--------------|----------|-------|
| GROUP 1..... | \$ 23.39 | 16.72 |
| GROUP 2..... | \$ 23.13 | 16.72 |
| GROUP 3..... | \$ 23.25 | 16.72 |
| GROUP 4..... | \$ 23.30 | 16.72 |
| GROUP 5..... | \$ 23.44 | 16.72 |
| GROUP 6..... | \$ 20.74 | 16.72 |
| GROUP 7..... | \$ 22.23 | 16.72 |

ZONE 4 - ALCONA, ALLEGAN,  
ALPENA, ANTRIM, ARENAC,  
BARRY, BAY, BENZIE,  
BERRIEN, BRANCH,  
CALHOUN, CASS, CHARLEVOIX,  
CHEBOYGAN, CLARE,  
CRAWFORD, EMMET,  
GLADWIN, GRAND TRAVERSE,  
GRATIOT AND HURON  
COUNTIES; IONIA COUNTY  
(EXCEPT THE CITY OF  
PORTLAND); IOSCO,  
ISABELLA, KALAMAZOO,  
KALKASKA, KENT,  
LAKE, LEELANAU, MANISTEE,  
MASON, MECOSTA, MIDLAND,  
MISSAUKEE, MONTCALM,  
MONTMORENCY, MUSKEGON,  
NEWAYGO, OCEANA, OGEMAW,  
OSCEOLA, OSCODA, OTSEGO,  
OTTAWA, PRESQUE ISLE,  
ROSCOMMON, SAGINAW, ST.  
JOSEPH, TUSCOLA, VAN BUREN  
AND WEXFORD COUNTIES:

|              |          |       |
|--------------|----------|-------|
| GROUP 1..... | \$ 22.42 | 16.72 |
| GROUP 2..... | \$ 22.15 | 16.72 |



|   |          |       |
|---|----------|-------|
| GROUP 3.....  | \$ 22.26 | 16.72 |
| GROUP 4.....  | \$ 22.33 | 16.72 |
| GROUP 5.....  | \$ 22.45 | 16.72 |
| GROUP 6.....  | \$ 19.67 | 16.72 |
| GROUP 7.....  | \$ 22.30 | 16.72 |
| ZONE 5 - ALGER, BARAGA,<br>CHIPPEWA, DELTA,<br>DICKINSON, GOGEBIC,<br>HOUGHTON, IRON,<br>KEWEENAW, LUCE, MACKINAC,<br>MARQUETTE, MENOMINEE,<br>ONTONAGON AND SCHOOLCRAFT<br>COUNTIES: |          |       |
| GROUP 1.....  | \$ 22.24 | 16.72 |
| GROUP 2.....  | \$ 22.38 | 16.72 |
| GROUP 3.....  | \$ 22.51 | 16.72 |
| GROUP 4.....  | \$ 22.56 | 16.72 |
| GROUP 5.....  | \$ 22.64 | 16.72 |
| GROUP 6.....  | \$ 19.99 | 16.72 |
| GROUP 7.....  | \$ 22.45 | 16.72 |

#### SCOPE OF WORK:

Open cut construction work shall be construed to mean work which requires the excavation of earth including industrial, commercial and residential building site excavation and preparation, land balancing, demolition and removal of concrete and underground appurtenances, grading, paving, sewers, utilities and improvements; retention, oxidation, flocculation and irrigation facilities, and also including but not limited to underground piping, conduits, steel sheeting for underground construction, and all work incidental thereto, and general excavation. For all areas except the Upper Peninsula, open cut construction work shall also be construed to mean waterfront work, piers, docks, seawalls, breakwalls, marinas and all incidental work. Open cut construction work shall not include any structural modifications, alterations, additions and repairs to buildings, or highway work, including roads, streets, bridge construction and parking lots or steel erection work and excavation for the building itself and back filling inside of and within 5 ft. of the building and foundations, footings and piers for the building. Open cut construction work shall not include any work covered under Tunnel, Shaft and Caisson work.

#### OPEN CUT LABORER CLASSIFICATIONS

##### GROUP 1: Construction laborer

GROUP 2: Mortar and material mixer, concrete form person, signal person, well point person, manhole, headwall and catch basin builder, headwall, seawall, breakwall and dock builder

GROUP 3: Air, gasoline and electric tool operator, vibrator operator, driller, pump person, tar kettle operator, bracer, rodder, reinforced steel or mesh person (e.g., wire mesh, steel mats, dowel bars, etc.), welder, pipe jacking and boring person, wagon drill and air track operator and concrete saw operator (under 40 h.p.), windlass and tugger person and directional boring person

##### GROUP 4: Trench or excavating grade person

GROUP 5: Pipe layer (including crock, metal pipe, multi-plate or other conduits)

GROUP 6: Grouting man, audio-visual television operations and all other operations in connection with closed circuit television inspection, pipe cleaning and pipe relining work and the installation and repair of water service pipe and appurtenances

GROUP 7: Restoration laborer, seeding, sodding, planting, cutting, mulching and top soil grading; and the restoration of property such as replacing mailboxes, wood chips, planter boxes, flagstones, etc.

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LAB00465-001 06/01/2023

LABORER: Highway, Bridge and Airport Construction

AREA 1: GENESEE, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES

AREA 2: ALLEGAN, BARRY, BAY, BERRIEN, BRANCH, CALHOUN, CASS, CLINTON, EATON, GRATIOT, HILLSDALE, HURON, INGHAM, JACKSON, KALAMAZOO, LAPEER, LENAWEE, LIVINGSTON, MIDLAND, MUSKEGON, SAGINAW, SANILAC, SHIAWASSEE, ST. CLAIR, ST. JOSEPH, TUSCOLA AND VAN BUREN COUNTIES

AREA 3: ALCONA, ALPENA, ANTRIM, ARENAC, BENZIE, CHARLEVOIX, CHEBOYGAN, CLARE, CRAWFORD, EMMET, GLADWIN, GRAND TRAVERSE, IONIA, IOSCO, ISABELLA, KALKASKA, KENT, LAKE, LEELANAU, MANISTEE, MASON, MECOSTA, MISSAUKEE, MONTCALM, MONTMORENCY, NEWAYGO, OCEANA, OGEMAW, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON AND WEXFORD COUNTIES

AREA 4: ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON AND SCHOOLCRAFT COUNTIES

|                  | Rates    | Fringes |
|------------------|----------|---------|
| LABORER (AREA 1) |          |         |
| GROUP 1.....     | \$ 29.67 | 13.45   |
| GROUP 2.....     | \$ 29.88 | 13.45   |
| GROUP 3.....     | \$ 30.17 | 13.45   |
| GROUP 4.....     | \$ 30.61 | 13.45   |
| GROUP 5.....     | \$ 30.23 | 13.45   |
| GROUP 6.....     | \$ 30.66 | 13.45   |
| LABORER (AREA 2) |          |         |
| GROUP 1.....     | \$ 26.92 | 12.90   |
| GROUP 2.....     | \$ 27.12 | 12.90   |
| GROUP 3.....     | \$ 27.36 | 12.90   |
| GROUP 4.....     | \$ 27.71 | 12.90   |
| GROUP 5.....     | \$ 27.58 | 12.90   |
| GROUP 6.....     | \$ 27.92 | 12.90   |
| LABORER (AREA 3) |          |         |
| GROUP 1.....     | \$ 26.22 | 12.90   |
| GROUP 2.....     | \$ 26.43 | 12.90   |
| GROUP 3.....     | \$ 26.72 | 12.90   |
| GROUP 4.....     | \$ 27.16 | 12.90   |
| GROUP 5.....     | \$ 26.78 | 12.90   |
| GROUP 6.....     | \$ 27.21 | 12.90   |
| LABORER (AREA 4) |          |         |
| GROUP 1.....     | \$ 26.22 | 12.90   |

|              |          |       |
|--------------|----------|-------|
| GROUP 2..... | \$ 26.43 | 12.90 |
| GROUP 3..... | \$ 26.72 | 12.90 |
| GROUP 4..... | \$ 27.16 | 12.90 |
| GROUP 5..... | \$ 26.78 | 12.90 |
| GROUP 6..... | \$ 27.21 | 12.90 |

LABORER CLASSIFICATIONS

GROUP 1: Asphalt shoveler or loader; asphalt plant misc.; burlap person; yard person; dumper (wagon, truck, etc.); joint filling laborer; miscellaneous laborer; unskilled laborer; sprinkler laborer; form setting laborer; form stripper; pavement reinforcing; handling and placing (e.g., wire mesh, steel mats, dowel bars); mason's tender or bricklayer's tender on manholes; manhole builder; headwalls, etc.; waterproofing,(other than buildings) seal coating and slurry mix, shoring, underpinning; pressure grouting; bridge pin and hanger removal; material recycling laborer; horizontal paver laborer (brick, concrete, clay, stone and asphalt); ground stabilization and modification laborer; grouting; waterblasting; top person; railroad track and trestle laborer; carpenters' tender; guard rail builders' tender; earth retention barrier and wall and M.S.E. wall installer's tender; highway and median installer's tender(including sound, retaining, and crash barriers); fence erector's tender; asphalt raker tender; sign installer; remote control operated equipment.

GROUP 2: Mixer operator (less than 5 sacks); air or electric tool operator (jackhammer, etc.); spreader; boxperson (asphalt, stone, gravel); concrete paddler; power chain saw operator; paving batch truck dumper; tunnel mucker (highway work only); concrete saw (under 40 h.p.) and dry pack machine; roto-mill grounds person.

GROUP 3: Tunnel miner (highway work only); finishers tenders; guard rail builders; highway and median barrier installer; earth retention barrier and wall and M.S.E. wall installer's (including sound, retaining and crash barriers); fence erector; bottom person; powder person; wagon drill and air track operator; diamond and core drills; grade checker; certified welders; curb and side rail setter's tender.

GROUP 4: Asphalt raker

GROUP 5: Pipe layers, oxy-gun

GROUP 6: Line-form setter for curb or pavement; asphalt screed checker/screw man on asphalt paving machines.

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LAB01076-005 04/01/2023

MICHIGAN STATEWIDE

|                             | Rates    | Fringes |
|-----------------------------|----------|---------|
| LABORER (DISTRIBUTION WORK) |          |         |
| Zone 1.....                 | \$ 25.17 | 13.32   |
| Zone 2.....                 | \$ 24.22 | 13.45   |
| Zone 3.....                 | \$ 21.60 | 13.45   |
| Zone 4.....                 | \$ 20.97 | 13.43   |
| Zone 5.....                 | \$ 21.00 | 13.40   |

DISTRIBUTION WORK - The construction, installation, treating and reconditioning of distribution pipelines transporting coal, oil, gas or other similar materials, vapors or liquids, including pipelines within private property boundaries, up to and including the meter settings on residential, commercial, industrial, institutional, private and public structures. All work covering pumping stations and tank farms not covered by the Building Trades Agreement. Other distribution lines with the exception of sewer, water and cable television are included.

Underground Duct Layer Pay: \$.40 per hour above the base pay rate.

Zone 1 - Macomb, Oakland and Wayne

Zone 2 - Monroe and Washtenaw

Zone 3 - Bay, Genesee, Lapeer, Midland, Saginaw, Sanilac, Shiawassee and St. Clair

Zone 4 - Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon and Schoolcraft

Zone 5 - Remaining Counties in Michigan

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PAIN0022-002 07/01/2008

HILLSDALE, JACKSON AND LENAWEE COUNTIES; LIVINGSTON COUNTY (east of the eastern city limits of Howell, not including the city of Howell, north to the Genesee County line and south to the Washtenaw County line); MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES:

|              | Rates    | Fringes |
|--------------|----------|---------|
| PAINTER..... | \$ 25.06 | 14.75   |

FOOTNOTES: For all spray work and journeyman rigging for spray work, also blowing off, \$0.80 per hour additional (applies only to workers doing rigging for spray work on off the floor work. Does not include setting up or moving rigging on floor surfaces, nor does it apply to workers engaged in covering up or tending spray equipment. For all sandblasting and spray work performed on highway bridges, overpasses, tanks or steel, \$0.80 per hour additional. For all brushing, cleaning and other preparatory work (other than spraying or steeplejack work) at scaffold heights of fifty (50) feet from the ground or higher, \$0.50 per hour additional. For all preparatorial work and painting performed on open steel under forty (40) feet when no scaffolding is involved, \$0.50 per hour additional. For all swing stage work-window jacks and window belts-exterior and interior, \$0.50 per hour additional. For all spray work and sandblaster work to a scaffold height of forty (40) feet above the floor level, \$0.80 per hour additional. For all preparatorial work and painting on all highway bridges or overpasses up to forty (40) feet in height, \$0.50 per hour additional. For all steeplejack work performed where the elevation is forty (40) feet or more, \$1.25 per hour additional.

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PAIN0312-001 06/01/2018

EXCLUDES: ALLEGAN COUNTY (Townships of Dorr, Fillmore, Heath,

Hopkins, Laketown, Leighton, Manlius, Monterey, Overisel, Salem, Saugatuck and Wayland); INCLUDES: Barry, Berrien, Branch, Calhoun, Cass, Hillsdale, Kalamazoo, St. Joseph, Van Buren

Rates Fringes

PAINTER

|                        |          |       |
|------------------------|----------|-------|
| Brush and roller.....  | \$ 23.74 | 13.35 |
| Spray, Sandblast, Sign |          |       |
| Painting.....          | \$ 24.94 | 13.35 |

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PAIN0845-003 05/10/2018

CLINTON COUNTY; EATON COUNTY (does not include the townships of Bellevue and Olivet); INGHAM COUNTY; IONIA COUNTY (east of Hwy. M 66); LIVINGSTON COUNTY (west of the eastern city limits of Howell, including the city of Howell, north to the Genesee County line and south to the Washtenaw County line); AND SHIAWASSEE COUNTY (Townships of Bennington, Laingsbury and Perry):

Rates Fringes

|              |          |       |
|--------------|----------|-------|
| PAINTER..... | \$ 25.49 | 13.74 |
|--------------|----------|-------|

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PAIN0845-015 05/10/2018

MUSKEGON COUNTY; NEWAYGO COUNTY (except the Townships of Barton, Big Prairie, Brooks, Croton, Ensley, Everett, Goodwell, Grant, Home, Monroe, Norwich and Wilcox); OCEANA COUNTY; OTTAWA COUNTY (except the townships of Allendale, Blendone, Chester, Georgetown, Holland, Jamestown, Olive, Park, Polkton, Port Sheldon, Tallmadge, Wright and Zeeland):

Rates Fringes

|              |          |       |
|--------------|----------|-------|
| PAINTER..... | \$ 25.49 | 13.74 |
|--------------|----------|-------|

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PAIN0845-018 05/10/2018

ALLEGAN COUNTY (Townships of Dorr, Fillmore, Heath, Hopkins, Laketown, Leighton, Manlius, Monterey, Overisel, Salem, Saugatuck and Wayland); IONIA COUNTY (west of Hwy. M-66); KENT, MECOSTA AND MONTCALM COUNTIES; NEWAYGO COUNTY (Townships of Barton, Big Prairie, Brooks, Croton, Ensley, Everett, Goodwell, Grant, Home, Monroe, Norwich and Wilcox); OSCEOLA COUNTY (south of Hwy. #10); OTTAWA COUNTY (Townships of Allendale, Blendone, Chester, Georgetown, Holland, Jamestown, Olive, Park, Polkton, Port Sheldon, Tallmadge, Wright and Zeeland):

Rates Fringes

|              |          |       |
|--------------|----------|-------|
| PAINTER..... | \$ 25.49 | 13.74 |
|--------------|----------|-------|

FOOTNOTES: Lead abatement work: \$1.00 per hour additional.  
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PAIN1011-003 06/02/2022

ALGER, BARAGA, CHIPPEWA, DELTA, DICKINSON, GOGEBIC, HOUGHTON, IRON, KEWEENAW, LUCE, MACKINAC, MARQUETTE, MENOMINEE, ONTONAGON

AND SCHOOLCRAFT COUNTIES:

|              | Rates    | Fringes |
|--------------|----------|---------|
| PAINTER..... | \$ 24.66 | 14.99   |

FOOTNOTES: High pay (bridges, overpasses, watertower): 30 to 80 ft.: \$.65 per hour additional. 80 ft. and over: \$1.30 per hour additional.

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PAIN1474-002 06/01/2010

HURON COUNTY; LAPEER COUNTY (east of Hwy. M-53); ST. CLAIR, SANILAC AND TUSCOLA COUNTIES:

|              | Rates    | Fringes |
|--------------|----------|---------|
| PAINTER..... | \$ 23.79 | 12.02   |

FOOTNOTES: Lead abatement work: \$1.00 per hour additional. Work with any hazardous material: \$1.00 per hour additional. Sandblasting, steam cleaning and acid cleaning: \$1.00 per hour additional. Ladder work at or above 40 ft., scaffold work at or above 40 ft., swing stage, boatswain chair, window jacks and all work performed over a falling height of 40 ft.: \$1.00 per hour additional. Spray gun work, pick pullers and those handling needles, blowing off by air pressure, and any person rigging (setting up and moving off the ground): \$1.00 per hour additional. Steeplejack, tanks, gas holders, stacks, flag poles, radio towers and beacons, power line towers, bridges, etc.: \$1.00 per hour additional, paid from the ground up.

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PAIN1803-003 06/01/2019

ALCONA, ALPENA, ANTRIM, ARENAC, BAY, BENZIE, CHARLEVOIX, CHEBOYGAN, CLARE, CRAWFORD, EMMET, GLADWIN, GRAND TRAVERSE, GRATIOT, IOSCO, ISABELLA, KALKASKA, LAKE, LEELANAU, MANISTEE, MASON, MIDLAND, MISSAUKEE, MONTMORENCY AND OGEMAW COUNTIES; OSCEOLA COUNTY (north of Hwy. #10); OSCODA, OTSEGO, PRESQUE ISLE, ROSCOMMON, SAGINAW AND WEXFORD COUNTIES:

|  | Rates    | Fringes |
|--|----------|---------|
| PAINTER  |          |         |
| Work performed on water, bridges over water or moving traffic, radio and powerline towers, elevated tanks, steeples, smoke stacks over 40 ft. of falling heights, recovery of lead-based paints and any work associated with industrial plants, except maintenance of industrial plants..... | \$ 25.39 | 14.68   |
| All other work, including maintenance of industrial plant.....   | \$ 25.39 | 14.68   |

FOOTNOTES: Spray painting, sandblasting, blowdown associated with spraying and blasting, water blasting and work involving a swing stage, boatswain chair or spider: \$1.00 per hour additional. All work performed inside tanks, vessels, tank trailers, railroad cars, sewers, smoke stacks, boilers or other spaces having limited egress not including buildings, opentop tanks, pits, etc.: \$1.25 per hour additional.

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PLAS0514-001 06/01/2023

ZONE 1: GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, SAGINAW, WASHTENAW AND WAYNE COUNTIES

ZONE 2: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SANILAC, SCHOOLCRAFT, SHIAWASSEE, ST. CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

|                                | Rates    | Fringes |
|--------------------------------|----------|---------|
| CEMENT MASON/CONCRETE FINISHER |          |         |
| ZONE 1.....                    | \$ 33.00 | 18.51   |
| ZONE 2.....                    | \$ 31.50 | 18.51   |

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PLUM0190-003 05/01/2015

ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GENESEE, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LIVINGSTON, LUCE, MACKINAC, MACOMB, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MONROE, MUSKEGON, NEWAYGO, OAKLAND, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, ST. CLARE, ST. JOSEPH, SANILAC, SCHOOLCRAFT, SHIAWASSEE, TUSCOLA, VAN BUREN, WASHTENAW, WAYNE AND WEXFORD COUNTIES

|   | Rates    | Fringes |
|---|----------|---------|
| Plumber/Pipefitter - gas distribution pipeline:                 |          |         |
| Welding in conjunction with gas distribution pipeline work..... | \$ 33.03 | 20.19   |
| All other work:.....  | \$ 24.19 | 12.28   |

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TEAM0007-004 06/01/2020

AREA 1: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA,

BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SAGINAW, SANILAC, SCHOOLCRAFT, SHIAWASSEE, ST. CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

AREA 2: GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES

|   | Rates     | Fringes   |
|---|-----------|-----------|
| TRUCK DRIVER                              |           |           |
| AREA 1                                    |           |           |
| Euclids, double bottoms and lowboys.....  | \$ 28.05  | .50 + a+b |
| Trucks under 8 cu. yds.....               | \$ 27.80  | .50 + a+b |
| Trucks, 8 cu. yds. and over.....          | \$ 27.90  | .50 + a+b |
| AREA 2                                    |           |           |
| Euclids, double bottomms and lowboys..... | \$ 24.895 | .50 + a+b |
| Euclids, double bottoms and lowboys.....  | \$ 28.15  | .50 + a+b |
| Trucks under 8 cu. yds.....               | \$ 27.90  | .50 + a+b |
| Trucks, 8 cu. yds. and over.....          | \$ 28.00  | .50 + a+b |

Footnote:

- a. \$470.70 per week
- b. \$68.70 daily

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TEAM0247-004 04/01/2013

AREA 1: ALCONA, ALGER, ALLEGAN, ALPENA, ANTRIM, ARENAC, BARAGA, BARRY, BAY, BENZIE, BERRIEN, BRANCH, CALHOUN, CASS, CHARLEVOIX, CHEBOYGAN, CHIPPEWA, CLARE, CLINTON, CRAWFORD, DELTA, DICKINSON, EATON, EMMET, GLADWIN, GOGEBIC, GRAND TRAVERSE, GRATIOT, HILLSDALE, HOUGHTON, HURON, INGHAM, IONIA, IOSCO, IRON, ISABELLA, JACKSON, KALAMAZOO, KALKASKA, KENT, KEWEENAW, LAKE, LAPEER, LEELANAU, LENAWEE, LUCE, MACKINAC, MANISTEE, MARQUETTE, MASON, MECOSTA, MENOMINEE, MIDLAND, MISSAUKEE, MONTCALM, MONTMORENCY, MUSKEGON, NEWAYGO, OCEANA, OGEMAW, ONTONAGON, OSCEOLA, OSCODA, OTSEGO, OTTAWA, PRESQUE ISLE, ROSCOMMON, SANILAC, SCHOOLCRAFT, SHIAWASSEE, SAGINAW, ST. CLAIR, ST. JOSEPH, TUSCOLA, VAN BUREN AND WEXFORD COUNTIES

AREA 2: GENESEE, LIVINGSTON, MACOMB, MONROE, OAKLAND, WASHTENAW AND WAYNE COUNTIES

|                | Rates    | Fringes |
|----------------|----------|---------|
| Sign Installer |          |         |
| AREA 1         |          |         |
| GROUP 1.....   | \$ 21.78 | 11.83   |
| GROUP 2.....   | \$ 25.27 | 11.8375 |
| AREA 2         |          |         |
| GROUP 1.....   | \$ 22.03 | 11.83   |



GROUP 2.....\$ 25.02 11.8375

FOOTNOTE:

a. \$132.70 per week, plus \$17.80 per day.

SIGN INSTALLER CLASSIFICATIONS:

GROUP 1: performs all necessary labor and uses all tools required to construct and set concrete forms required in the installation of highway and street signs

GROUP 2: performs all miscellaneous labor, uses all hand and power tools, and operates all other equipment, mobile or otherwise, required for the installation of highway and street signs

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TEAM0247-010 04/01/2018

AREA 1: LAPEER AND SHIAWASSEE COUNTIES

AREA 2: GENESEE, MACOMB, MONROE, OAKLAND, ST. CLAIR, WASHTENAW AND WAYNE COUNTIES

Rates Fringes

TRUCK DRIVER (Underground construction)

|                |       |       |
|----------------|-------|-------|
| AREA 1         |       |       |
| GROUP 1.....\$ | 23.82 | 19.04 |
| GROUP 2.....\$ | 23.91 | 19.04 |
| GROUP 3.....\$ | 24.12 | 19.04 |
| AREA 2         |       |       |
| GROUP 1.....\$ | 24.12 | 19.04 |
| GROUP 2.....\$ | 24.26 | 19.04 |
| GROUP 3.....\$ | 24.45 | 19.04 |

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

SCOPE OF WORK: Excavation, site preparation, land balancing, grading, sewers, utilities and improvements; also including but not limited to, tunnels, underground piping, retention, oxidation, flocculation facilities, conduits, general excavation and steel sheeting for underground construction. Underground construction work shall not include any structural modifications, alterations, additions and repairs to buildings or highway work, including roads, streets, bridge construction and parking lots or steel erection.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Truck driver on all trucks (EXCEPT dump trucks of 8 cubic yards capacity or over, pole trailers, semis, low boys, Euclid, double bottom and fuel trucks)

GROUP 2: Truck driver on dump trucks of 8 cubic yards capacity or over, pole trailers, semis and fuel trucks

GROUP 3: Truck driver on low boy, Euclid and double bottom

\* SUMI2002-001 05/01/2002

|  | Rates       | Fringes |
|--|-------------|---------|
| Flag Person.....   | \$ 10.10 ** | 0.00    |
| LINE PROTECTOR (ZONE 1:<br>GENESEE, MACOMB, MONROE,<br>OAKLAND, WASHTENAW AND WAYNE)....   | \$ 22.89    | 13.45   |
| LINE PROTECTOR (ZONE 2:<br>STATEWIDE (EXCLUDING GENESEE,<br>MACOMB, MONROE, OAKLAND,<br>WASHTENAW AND WAYNE).....                                  | \$ 20.19    | 13.45   |
| Pavement Marking Machine<br>(ZONE 1: GENESEE, MACOMB,<br>MONROE, OAKLAND, WASHTENAW<br>AND WAYNE COUNTIES)<br>Group 1.....                         | \$ 30.52    | 13.45   |
| Pavement Marking Machine<br>(ZONE 1: GENESEE, MACOMB,<br>MONROE, OAKLAND, WASHTENAW<br>AND WAYNE)<br>Group 2.....                                  | \$ 27.47    | 13.45   |
| Pavement Marking Machine<br>(ZONE 2: STATEWIDE (EXCLUDING<br>GENESEE, MACOMB, MONROE,<br>OAKLAND, WASHTENAW AND WAYNE<br>COUNTIES)<br>Group 1..... | \$ 26.92    | 13.45   |
| Pavement Marking Machine<br>(ZONE 2: STATEWIDE (EXCLUDING<br>GENESEE, MACOMB, MONROE,<br>OAKLAND, WASHTENAW AND WAYNE)<br>Group 2.....             | \$ 24.23    | 13.45   |

WORK CLASSIFICATIONS:

PAVEMENT MARKER GROUP 1: Drives or operates a truck mounted striper, grinder, blaster, groover, or thermoplastic melter for the placement or removal of temporary or permanent pavement markings or markers.

PAVEMENT MARKER GROUP 2: Performs all functions involved for the placement or removal of temporary or permanent pavement markings or markers not covered by the classification of Pavement Marker Group 1 or Line Protector.

LINE PROTECTOR: Performs all operations for the protection or removal of temporary or permanent pavement markings or markers in a moving convoy operation not performed by the classification of Pavement Marker Group 1. A moving convoy operation is comprised of only Pavement Markers Group 1 and Line Protectors.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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\*\* Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate

changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

# Appendix C



## *SPECIAL PROVISIONS*

### **STREETS FOR ALL: MICHIKAL STREET IMPROVEMENTS**

**Bid Reference #: 91396-021.0**

**MARCH 2024**

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**EROSION CONTROL, INLET PROTECTION, FABRIC DROP**

COS:DMG

1 of 2

APPR:TWK:CP:03-11-20  
FHWA:APPR:03-13-20

**a. Description.** This work consists of furnishing and installing acceptable alternatives to inlet protection devices (devices) listed in the *Soil Erosion and Sedimentation Control Manual* when the pay item Erosion Control, Inlet Protection, Fabric Drop is included in the contract.

This work consists of furnishing, installing, maintaining, disposing of collected material and removing devices at the locations shown on the plans or as directed by the Engineer.

**b. Materials.** The following devices are approved for use as acceptable alternatives:

1. Siltsack Type B, Regular Flow, by ACF Environmental, Inc.
2. Inlet Pro Sediment Bag, Standard Flow, with optional foam deflector by Hanes Geo Components.
3. Dandy Curb Bag, Dandy Bag, Dandy Curb Sack, Dandy Sack, or Dandy Pop by Dandy Products, Inc.
4. Basin Bag, Regular Flow by CSI Geoturf.
5. Flexstorm Catch-It and Flexstorm Pure used with filter bag types FX, FX+, FXO, PC, PC+ or IL.

Ensure provided devices are sized appropriately for the drainage structures in which they will be installed.

**c. Construction.** Install, maintain and remove the devices in accordance with the manufacturer's guidelines. Remove material collected by the devices in accordance with the manufacturer's guidelines or as directed by the Engineer.

Dispose of collected material in accordance with subsection 205.03.P of the Standard Specifications for Construction. Those devices that are no longer needed and have been removed may be reused elsewhere on the project as approved by the Engineer.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

| <b>Pay Item</b>                                     | <b>Pay Unit</b> |
|---|-----------------|
| Erosion Control, Inlet Protection, Fabric Drop..... | Each            |

**Erosion Control, Inlet Protection, Fabric Drop** will be paid for as one each for each time the alternate device listed herein is installed, maintained, and removed at a separate location within the project limits.



MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**MAINTENANCE GRAVEL, DRIVEWAY MAINTENANCE, AND INTERSECTION  
MAINTENANCE MEASUREMENT AND PAYMENT**

CFS:MJE

1 of 1

APPR:DMG:LLR:11-17-23

FHWA:APPR:11-21-23

**Delete subsections 306.04.B and 306.04.C, on pages 3-24 and 3-25 of the Standard Specifications for Construction, in their entirety and replace with the following:**

- B. Maintenance Gravel.** The Engineer will measure **Maintenance Gravel, LM** based on hauling unit dimensions and load count before placement and compaction.

The Engineer will measure **Maintenance Gravel** in tons by the scale weight of the material. The Engineer will perform moisture tests at the start of weighing operations and if construction operations, weather conditions, or other causes may change the moisture content of the material. If tests indicate a moisture content greater than 8%, the Engineer will deduct the weight of the excess moisture from the scale weight of the maintenance gravel until moisture tests indicate the moisture content is no greater than 8%.

The Engineer will determine the moisture content and pay weights as specified in section 109.

The unit price for **Maintenance Gravel** and **Maintenance Gravel, LM** includes the cost of furnishing the aggregate and constructing, maintaining, and removing the aggregate surface.

- C. Driveway Maintenance, Commercial; Driveway Maintenance, Residential and Intersection Maintenance** includes material, construction, grading, maintenance, removal, replacement, and disposal of the aggregate surface. These items will be paid for once per location regardless of the number of times the aggregate surface is placed, maintained, removed, or replaced.

**Intersection Maintenance** will be paid for separately for each approach of the highway, street, or alley that joins or crosses the roadway.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**RECYCLED HOT MIX ASPHALT MIXTURE ON LOCAL AGENCY PROJECTS**

CFS:KPK

1 of 2

APPR:JWB:CJB:02-26-20  
FHWA:APPR:03-02-20

**Add the following subsection to subsection 501.02.A.2 of the Standard Specifications for Construction.**

- c. **Reclaimed Asphalt Pavement (RAP) and Binder Grade Selection.** The method for determining the binder grade in HMA mixtures incorporating RAP is divided into three categories designated Tier 1, Tier 2 and Tier 3. Each tier has a range of percentages that represent the contribution of the RAP binder toward the total binder, by weight. The tiers identified below apply to HMA mixtures with the following exception: Superpave mixture types EML, EML High Stress, EMH, EMH High Stress, and EH, EH High Stress used as leveling or top course must be limited to a maximum of 27 percent RAP binder by weight of the total binder in the mixture.

Recycled materials may be used as a substitute for a portion of the new materials required to produce HMA mixtures in accordance with contract.

- **Tier 1 (0% to 17% RAP binder by weight of the total binder in the mixture).** No binder grade adjustment is made to compensate for the stiffness of the asphalt binder in RAP.
- **Tier 2 (18% to 27% RAP binder by weight of the total binder in the mixture).** For all mixtures no binder grade change will occur in Tier 2 for all shoulder and temporary road mixtures.

Ensure the required asphalt binder grade is at least one grade lower for the low temperature than the design binder grade required for the specified project mixture type. Lowering the high temperature of the binder one grade is optional. For example, if the design binder grade for the mixture type is PG 58-22, the required grade for the binder in the HMA mixture containing RAP would be a PG 52-28 or a PG 58-28.

For Marshall Mixes, no binder grade change will be required when Average Daily Traffic (ADT) is above 7000 or Commercial Average Daily Traffic (CADT) is above 700. No binder grade change will occur for EL mixtures used as leveling or top course.

The asphalt binder grade can also be selected using a blending chart for high and low temperatures. Supply the blending chart and the RAP test data used in determining the binder selection according to *AASHTO M323*.

- **Tier 3 ( $\geq 28\%$  RAP binder by weight of the total binder in the mixture).** The binder grade for the asphalt binder is selected using a blending chart for high and low temperatures per *AASHTO M323*. Supply the blending chart and the RAP test data

used in determining the binder selection.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**FLEXIBLE DELINEATORS**

PMK:MKB

1 of 2

APPR:AJU:MWB:11-09-23  
FHWA APPR:11-20-23

**a. Description.** This work consists of furnishing and installing rebounding ground-mounted and/or surface-mounted flexible delineators with reflective sheeting in accordance with the standard specifications, the contract, and this special provision.

**b. Materials.**

1. Ground-Mounted. Select one of the below products or a Department approved equal. Ensure the overall product is impact resistant and capable of returning to its original upright position after being impacted by a vehicle. The anchor system must consist of 2-inch perforated square tubing 24 inches in length that allows for replacement of the post without impacting the anchor.

Shur-Flex Driveable Delineator – Shur-Tite Products  
Safe-Hit SQR-LOC Flexible Delineator – Valtir

The selected post must have a height of 48 inches. Ensure the color of the post and the sign sheeting applied to the flexible post are the color of the pavement marking line the delineator is supplementing. Ensure the reflective sheeting is *ASTM Type XI* sheeting with a minimum area of 27 square inches. Sheeting is required on both sides of the post on undivided roadways.

2. Surface-Mounted. Select products from the Qualified Products List (919.03D) with a height as specified in the contract. Ensure the color of the post and the sign sheeting applied to the flexible post are the color of the pavement marking line the delineator is supplementing. Ensure the reflective sheeting has a minimum total area of 27 square inches. Sheeting is required to be visible on all sides of the post that face approaching traffic.

**c. Construction.** Install flexible delineator posts with the required anchoring accessories, in accordance with section 810 of the Standard Specifications for Construction and the post manufacturer's directions. Do not bend or damage the posts. Install the flexible post plumb such that its reflective sheeting will be perpendicular or radial to oncoming traffic. Replace posts or sheeting damaged during installation at no additional cost to the contract.

Mount reflective sheeting as shown on the Standard Plan R-127 Series.

Prior to applying reflective sheeting to flexible delineator posts, the application area of the post must be flame treated. Flame treating may be accomplished with either hand-held torches or commercially available flame treaters, through the following steps:

1. Ensure the area to be flame treated is clean and free of dirt and oils.

2. Adjust the torch or flame treater to produce a highly oxygenated blue flame. A poorly oxygenated (yellow) flame will not effectively treat the surface.

3. Expose the application area of the post to the blue flame with one-quarter to two inches of separation, moving over the application area at a speed of greater than or equal to one inch per second.

4. Ensure proper distance and duration are determined for any given substrate or device and should adhere to the post manufacturer’s recommendations. A surface that is properly flame treated will not be exposed to a significant rise in temperature. Improper flame treating operations that overheat the plastic may soften or deform the substrate.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay items:

| <b>Pay Item</b>  | <b>Pay Unit</b> |
|--|-----------------|
| Post, Flexible, Delineator, Ground Mtd .....           | Each            |
| Post, Flexible, Delineator, Surface Mtd, __ inch ..... | Each            |

The above pay items include all costs for the post, reflective sheeting, layout, and installation.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION  
  
SPECIAL PROVISION  
FOR  
**TEMPORARY PEDESTRIAN TYPE II BARRICADE**

COS:CRB

1 of 2

APPR:CAL:CT:03-01-21  
APPR:FHWA:03-08-21

**a. Description.** This work consists of delivering, installing, maintaining, relocating, and removing a temporary pedestrian Type II barricade section as identified in the proposal or on the plans. Use temporary pedestrian Type II barricades to close non-motorized facilities including sidewalks, bicycle paths, pedestrian paths, and shared use paths that are not part of the roadway. One pedestrian Type II barricade is defined as a barricade section at least 43 inches wide, including all supports, ballast, and hardware.

**b. Materials.** Provide a temporary pedestrian Type II barricade that meets the requirements of *National Cooperative Highway Research Program Report 350 (NCHRP 350)* or *Manual for Assessing Safety Hardware (MASH)*, in addition to meeting the following requirements:

1. Provide barricade sections at least 43 inches wide, designed to interconnect to ensure a continuous accessible tactile barrier. Ensure the connection includes provisions to accommodate non-linear alignment as well as variations in elevation at the installation area.

2. Ensure the top surface of the barricade is designed to function as a hand-trailing edge and has a height between 32 and 38 inches. Ensure the lower edge of the barricade is no more than 2 inches above the surface of the non-motorized facility. Ensure the top edge of the bottom rail of the barricade is a minimum of 8 inches above the surface of the non-motorized facility. The barricade may have a solid continuous face. Finally, all features on the front face of the barricade (the face in contact with pedestrians) must share a common vertical plane.

3. Equip both sides of the barricade with bands of alternating 6-inch wide orange and white vertical stripes of reflective sheeting. Two bands of sheeting 6 inches tall and a minimum of 36 inches long containing at least two orange and two white stripes each are required. One band placed near the top and one near the bottom if the barricade section has a solid face. If the barricade consists of two rails, affix one band of sheeting to each rail. Ensure the stripes of reflective sheeting are aligned vertically. Ensure this sheeting meets or exceeds the requirements of *ASTM D4956, Type IV* sheeting.

**c. Construction.** Construct the temporary pedestrian Type II barricade in accordance with the manufacturer's recommendations, MMUTCD, the plans, and the following requirements:

1. Install the barricade as shown on the plans and as directed by the Engineer. Interconnect all barricade sections using hinge components, if necessary, to ensure a continuous detectable edge for the entire installation. Ensure the barricade is ballasted in accordance with the manufacturer's recommendations to ensure stability during wind events and contact with pedestrians.

2. When the barricade is installed near motor vehicle traffic, ensure reflective sheeting is visible to motorists.

3. When temporary pedestrian Type II barricades are used to close a non-motorized facility, ensure a sufficient number of barricade sections are used to block the entire width of the facility. The barricade may extend outside the edge of the non-motorized facility but must not be less than the full width of the facility.

4. If sections of multiple-colored barriers are used (i.e. safety orange and white) install the sections such that the colors alternate to increase conspicuity.

5. Ensure temporary pedestrian Type II barricades are not used to close a motor vehicle facility. Ensure these barricades are not used to guide pedestrian traffic on a motor vehicle facility in the presence of active traffic. This prohibition includes bicycle/shared use lanes or shoulders in the presence of active traffic.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

| <b>Pay Item</b>                          | <b>Pay Unit</b> |
|--|-----------------|
| Pedestrian Type II Barricade, Temp ..... | Each            |

**Pedestrian Type II Barricade, Temp**, includes delivering, installing, maintaining, relocating, and removing one barricade section that is at least 43 inches wide. Additional payment will not be made if wider sections are provided. Payment will be made on delivery for the quantity delivered to the project site, up to planned quantity. Any amount delivered exceeding plan quantity will not be paid unless approved by the Engineer. This includes all rails, supports, ballast, hinge points, reflective sheeting, and miscellaneous hardware needed to install and maintain a barricade section.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION  
  
SPECIAL PROVISION  
FOR  
**LANDSCAPE PLANTS SOURCE LIST**

RSD:JLB

1 of 1

APPR:MRB:JN:04-09-20  
FHWA APPR:04-13-20

**a. Description.** This work consists of submitting a Landscape Plants Source list to the Engineer at the preconstruction meeting.

**b. Materials.** Provide a Landscape Plants Source list to the Engineer that identifies each plant by species, size, origin and quantity specified on the project. The list will be reviewed at the preconstruction meeting. Nursery stock must come from nurseries located in Zone 4 or Zone 5 of the 2012 USDA Hardiness Zone Map for landscaping in Michigan's lower peninsula. Nursery stock for landscaping in Michigan's upper peninsula must come from nurseries located in Zone 3 or Zone 4. Nurseries located in Zone 6 of the upper Great Lakes region will be allowed as follows:

1. Located at or north of latitude 40 degrees North.
2. Zone 6b will only include nurseries located in counties that border the Great Lakes.
3. Zone 6 plants will not be accepted for use in the upper peninsula nor in the lower peninsula counties north of US-10 except for those counties bordering Lake Michigan.

Submit requests for plant substitutions to the Engineer at the preconstruction meeting. All substitution requests must be reviewed and approved by the Engineer and Landscape Architect.

**c. Construction.** None Specified.

**d. Measurement and Payment.** The completed work, as described, will not be paid for separately, but will be included in the plant material pay items.



MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**LANDSCAPING**

RSD:JN

1 of 1

APPR:NJM:DBP:12-08-23  
FHWA:APPR:12-12-23

Make the following changes to section 815 of the Standard Specifications for Construction.

**Delete subsection 815.03.B, on page 8-135 of the Standard Specifications for Construction, in its entirety and replace with the following:**

- B. **Site Preparation.** Excavate holes from the center of staked location. Excavate the hole to a width which is a minimum of twice the diameter of the root ball. Place the root ball on undisturbed soil.

Backfill the planting holes with prepared soil the same day they are dug.

After backfilling is complete, place 4 inches of shredded bark mulch unless otherwise shown on plans.

**Delete subsection 815.03.F.5, on page 8-137 of the Standard Specifications for Construction, in its entirety.**

**Delete subsection 815.04.B, on page 8-141 of the Standard Specifications for Construction, in its entirety and replace with the following:**

- B. **Site Preparation.** The unit price for **Site Preparation, Max (dollar)** includes the cost of digging holes, providing prepared soil, backfilling holes, disposing of excess excavated material, shredded bark mulch, and bracing and guying.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**DELINEATOR HARDWARE**

PMK:MKB

1 of 1

APPR:MWB:DBP:11-09-23  
FHWA:APPR:11-20-23

**Delete subsection 919.03.C on page 9-163 of the Standard Specifications for Construction in its entirety and replace it with the following:**

- C. **Mounting Hardware.** Mounting hardware for aluminum reflectors must consist of a bolt system.

Bolts must be stainless steel and accompanied by a locknut to produce a vandal-resistant attachment. A nylon washer is also required to be placed between the bolt head and/or locknut and the face of the reflector to protect the sign sheeting.

Ensure that the system has a large enough diameter that it will not be subject to pulling through the holes in the delineator reflectors or posts.

Alternative fastening systems may be approved by the Engineer provided they form a vandal-resistant attachment.

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**PAVT, REM, MODIFIED**

Wightman/PAD

1 of 1

08/08/2023

**a. Description.** This work consists of removing HMA, concrete, bricks and masonry and any other common pavement material or combination of materials, except sand and gravel, regardless of thickness, reinforcement, and overlays.

**b. Materials.** None Specified

**c. Construction Methods.** Remove pavement to an existing joint or sawed joint. Saw cut pavement full depth in a straight neat line as directed by the Engineer. Do not use a crane and ball pavement breaker. Do not disturb remaining pavement. Assume ownership of removed materials and dispose of according to subsection 205.03P.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

| <b>Contract Item (Pay Item)</b> | <b>Unit</b> |
|---------------------------------|-------------|
| Pavt, Rem, Modified.....        | Square Yard |

The limits of **Pavt, Rem, Modified** will be established as noted on the plans or at the discretion of the Engineer. The unit price includes all labor, equipment, and materials to saw cut, remove, haul and dispose of the pavement.

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**MACHINE GRADING, MODIFIED**

Wightman/PAD

1 of 1

10/18/2023

**a. Description**

The work of Machine Grading, Modified will consist of all excavation regardless of depth from the roadbed and all intersecting roadways, and the furnishing and placing of borrow. The CONTRACTOR will conduct their work in such a manner so no excavations are left open overnight. If this is not possible, the CONTRACTOR shall provide and install a temporary fence to protect the excavation at their own expense. Machine Grading, Modified will apply to the sections of this project as shown on the plans where a new pavement section is being constructed. The CONTRACTOR will regrade all drives and intersecting roadways within the ROW or area of designated grading limits to match proposed road elevations, included in the item for Machine Grading, Modified.

**b. Construction**

Machine Grading, Modified will include all necessary removal regardless of depth, scarifying, plowing, discing, moving, loading, hauling, shaping and compacting the earth to develop the cross section shown on the plans.

Grading will be performed to the bottom of sand subbase grade as shown on the plans.

The roadbed will be finished to grade with a blade grader or equivalent equipment. All intersections, approaches, entrances, and driveways will be graded as shown or as directed as a part of this item. If additional earth is required to complete the full section, the CONTRACTOR will obtain the required Class II materials to be included in the item of Machine Grading, Modified. All excess excavated materials will be disposed of by the CONTRACTOR. The following quantities are provided for informational purposes only.

**c. Measurement and Payment**

Machine Grading, Modified will be measured along the project centerline and includes both sides of the pavement. No additional measurement will be made for intersecting streets and drives. Machine Grading, Modified will only be measured for payment at locations where shown on the plans. The following quantities are provided for informational purposes only.

Excavation, Earth – 4,750 Cyd (Estimated Qty.)

Embankment, CIP – 3,850 Cyd (Estimated Qty.)

Machine Grading, Modified will be paid for by the station, which price will be payment in full for all work specified herein.

Pay Item

Pay Unit

Machine Grading, Modified

Station

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**AGGREGATE BASE, \_INCH, MODIFIED**

Wightman/PAD

1 of 1

08/08/2023

**a. Description.** This work consists of constructing an aggregate base course on a prepared subbase or subgrade as shown on the plans or as directed by the Engineer. The aggregate base course shall be in accordance with Section 302 and 902 of the Standard Specifications, except as specified herein.

**b. Materials.** The material for Aggregate Base, \_inch, Modified (thickness as specified) shall be MDOT 21AA Gravel.

**c. Construction Methods.** None Specified.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

| <b>Contract Item (Pay Item)</b>       | <b>Unit</b> |
|---------------------------------------|-------------|
| Aggregate Base, _ inch, Modified..... | Square Yard |

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**DR STRUCTURE COVER, ADJ, CASE 1, MODIFIED**

Wightman/PAD

1 of 2

08/08/2023

**a. Description.** This work consists of removing and replacing existing City of Kalamazoo owned manhole structure covers during HMA surface operations with City of Kalamazoo standard covers. This operation uses the Mr. Manhole™, Manhole Leveling System, or equivalent. Section references are to the current version of the MDOT Standard Specifications for Construction.

**b. Materials.** Provide materials in accordance with the following:

Cover and Casting: Supply the City of Kalamazoo standard design cover and casting for Sanitary and Storm sewer meeting the requirements of Section 908 and special provision for “Dr Structure Cover, Type \_\_, Modified”.

Concrete: Use Grade P-NC concrete meeting the requirements of Section 1006.

Mortar Type R-2: Use mortar meeting the requirement of Section 1005.

HMA: Use HMA mixtures as specified in the special provisions.

**c. Construction Methods.** Remove existing pavement around the drainage structure using the Mr. Manhole™ or equivalent system. Remove the existing drainage structure in a manner to avoid roadway materials from entering the manhole structure. Salvage existing manhole covers and castings if in good condition; otherwise replace the casting and cover. If pickup is needed, notify the Engineer when manhole cover and casting are ready for pickup. Place a steel plate over the manhole structure and fill in the resulting void with the HMA mixture or material approved by the Engineer. Record the location of each structure and use a locating system or GPS record of each structure for finding it following final paving.

Prior to paving, ensure that locations of structures are confirmed & recorded, and any markers or caps used are in place to easily identify and find each structure after final paving. Upon completion of final paving, cut out and remove the pavement around the structure using the Mr. Manhole™ or equivalent system. Avoid roadway materials from entering the manhole structure. Remove the plate and locator cap. Set the new structure cover in a full bed of mortar or using custom adjusting rings built for this purpose. Adjust in accordance with manufacturer's instructions, MDOT Standard Specifications, and best practices. Set the structure cover level with the roadway (nominal offset = 0", maximum offset = +/- 1/8"). Fill in resulting void with concrete meeting the requirements of Section 1006. Assume ownership of excess removed materials and dispose of according to subsection 205.03P.

Any material entering the Sewer system must be removed promptly. If the contractor neglects to remove the material within 7 days for storm or 24 hours for sanitary after receiving written notification from the Engineer, the Engineer may proceed with the removal. The Engineer will deduct the cost of the removal from the monies that are or may become due to the contractor.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

| <b>Contract Item (Pay Item)</b>           | <b>Unit</b> |
|---|-------------|
| Dr Structure Cover, Adj, Case 1, Modified | Each        |

The unit price for **Dr Structure Cover, Adj, Case 1, Modified** includes all labor, equipment, and material to remove the existing pavement, install the new cover and casting, and place the concrete collar.

**CITY OF KALAMAZOO**  
**SPECIAL PROVISION**  
**FOR**  
**DR STRUCTURE COVER, TYPE \_\_, MODIFIED**

Wightman/PAD

1 of 1

08/09/2023

**a. Description.** This work consists of furnishing, placing and adjusting to final grade City of Kalamazoo owned sanitary and storm sewer structure covers during construction operations in accordance with Section 403 of the 2020 MDOT Standard Specifications for Construction.

**b. Materials.** Provide materials in accordance with the following:

Cover and Casting: Supply a Dr Structure Cover, Type \_\_, Modified in accordance with City of Kalamazoo Specifications for Sanitary and Storm sewer meeting the requirements of Section 908 of the MDOT Standard Specifications for Construction.

Cover B (Storm Sewer) - shall consist of an EJIW 1045ZPT (bolted) frame with a 1040A (non-bolted) **Non-Vented** Cover with 2 inch "STORM SEWER" lettering or approved equal.

Cover Q (Sanitary Sewer) – shall consist of an EJIW 1045ZPT (bolted) frame with a 1040A (non-vented) Cover with 2 inch "SANITARY SEWER" lettering or approved equal.

**c. Construction Methods.** See the special provision for "Dr Structure Cover, Adj, Case 1, Modified for construction methods.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

| <b>Contract Item (Pay Item)</b>             | <b>Unit</b> |
|---|-------------|
| Dr Structure Cover, Type __, Modified ..... | Each        |

The unit price for **Dr Structure Cover, Type \_\_, Modified** includes supplying the new cover and adjustment rings to be placed and adjusted per the special provision for "Dr Structure Cover, Adj, Case 1, Modified.



**CITY OF KALAMAZOO**  
**SPECIAL PROVISION**  
**FOR**  
**HMA APPLICATION ESTIMATE**

1 of 1

Wightman/PAD

11/29/2022

**a. Description.** This work shall be done in accordance with Division 5 of the 2020 MDOT Standard Specifications for Construction except as herein specified. The Local Agency representative will perform density testing.

**b. Materials.** The HMA application estimate is as follows:

T-1. HMA, 5EML (TOP) shall have a yield of 165 pounds per square yard, AWI shall be 260-min.

L-1. HMA, 4EML (LEVELING) shall have a yield of 220 pounds per square yard

B-1. HMA, 3EML (BASE) shall have a yield of 330 pounds per square yard

T-2. HMA, 4EML (TOP) shall have a yield of 220 pounds per square yard, AWI shall be 260-min

L-2. HMA, 3EML (LEVELING) shall have a yield of 330 pounds per square yard

Asphalt binder shall be PG 64-28 for all mix designs.

HMA, Approach shall be HMA, 4EML (leveling) applied at 165 or 220 pounds per square yard and HMA, 5EML (top) applied at 165 pounds per square yard with an AWI of 260 or other mix as approved by the Engineer in writing prior to placement.

Hand Patching shall be HMA, 5EML or other mix as approved by the Engineer in writing before placement. The maximum application rate for 5EML is 220 pounds per square yard. Install Hand Patching in multiple lifts if necessary.

Target air voids shall be designed for 4.0% and field regressed to 3.0% for all HMA mixes.

Aggregate Wear Index for the HMA, 5EML (Top) shall be 260 minimum.

HMA Bond Coat shall be type SS – 1h and be applied at the rate of 0.05 to 0.15 gal/syd per manufacturer's recommendation.

RAP shall not exceed Tier 1 limits as specified in the *MDOT Special Provision for Recycled Hot Mix Asphalt Mixture on Local Agency Projects* included in this proposal.

**c. Construction Methods.** Construction of HMA pavements, shoulders, and approaches shall be in accordance with Subsection 501.03 of the 2020 MDOT Standard Specifications for Construction. Tapered overlapping longitudinal joints will not be allowed in the top course of the HMA surface. Tapered overlapping longitudinal joints are restricted to base and leveling courses only. Joints in the various courses shall be staggered by a minimum of 6 inches with the joints in the top course placed immediately adjacent to the proposed lane lines.

**d. Measurement and Payment.** Measurement and payment shall be at the contract unit price per ton.

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**DECORATIVE CONCRETE PAVEMENT**

Wightman/PAD

1 of 3

11/29/2023

**a. Description.** This work consists of constructing **herringbone** pattern stamped decorative Portland cement concrete pavement at the locations specified on the plans. Complete this work in accordance with the standard specifications, except as modified herein.

**b. Submittals.** Submit a plan showing the types and locations of joints, reinforcement, and sequence of construction. Submit a report detailing the concrete mix designs to be used, including manufacturers and/or suppliers of mixture components. Submit technical data sheets for a single manufacturer's complete system for products and/or materials including admixtures, colorants, curing compounds, decorative concrete sealer, dry-shake finish materials, imprinting tools, and any other products requested by the Engineer. Submit Test Data Certification with test results conducted by an independent testing laboratory within the past 24 months reporting that the coloring pigment conforms to the general requirements of *ASTM C979/C979M*. Obtain approval from the Engineer prior to beginning work.

**c. Certification.** Provide proof of MCA Decorative Concrete Certification or proven equivalent manufacturer training and certification for placing decorative concrete, to the Engineer.

**d. Materials.** Use a single manufacturer's complete system for products and/or materials.

1. Concrete Colorant. Use complete pigment system including integral colorants, dry shake colorants, and/or release hardeners from one of the following manufacturers, or other sources as approved by the Engineer.

|                                     |              |
|-------------------------------------|--------------|
| Brickform.....                      | 989-792-9009 |
| Decorative Concrete Resources ..... | 866-792-9000 |
| Increte Systems.....                | 800-752-4626 |
| L.M. Scofield Co. ....              | 586-292-1492 |
| Prism Pigments .....                | 888-440-4250 |
| Proline Concrete Tools.....         | 800-795-4750 |

A. Concrete Integral Color. Use Brickform Signature Integral Color: Red Barn, #P1840 pre-weighed and packaged coloring pigment in either powder, granular, or liquid form. Ensure that materials comply with *ASTM C979/C979M* standards for integrally colored concrete.

B. Release Agent. Use Brickform Standard Color: Dark Gray, #100 dry-shake powder to facilitate release of imprinting tools as manufactured by Brickform, Prism Pigments, or approved equal.

2. Curing Compound. Do not use standard curing compounds on decorative concrete. Instead use a surface sealer as listed in subsection d.3 of this special provision.

3. Surface Sealer. Use a Type I, Class A solvent acrylic sealer in accordance with the requirements of *ASTM C1315* from the approved list below, or other as approved by the Engineer.

- A. Brickform.
    - Safety-Seal MS-5.
  - B. ChemMasters.
    - Certi-Vex AC 1315 solvent base sealer.
4. Slip resistant additive. Mix slip resistant additive with the sealer in accordance with the manufacturer's recommendations.
- A. Increte.
    - Shur-Grip.
  - B. ChemMasters.
    - Slip Stop.
  - C. H & C.
    - SharkGrip.

**e. Equipment.** To impart desired texture, use high-quality resilient mats reproduced from castings of natural materials and providing uniform control of joint depth. Use tools capable of producing the pattern(s) shown on the plans and/or as required by the Engineer. Use imprinting tool(s) from the approved manufacturer and pattern list below, or present a substitute mat design, manufacturer, or pattern to the Engineer for approval:

Concrete Stamp. Concrete Stamp to be Brickform Herringbone Used Brick, FM-500 s/o, 25.25" x 36.5", or approved equal. Stamp described as A weatherworn brick surface with an uneven texture and rounded broken edges. Matching skin / touch-up wheel: Used Brick / FM-6540. Joint size 1/4" – 1/2" wide, 1/4" deep. Stone size 3 3/4" wide, 7 1/2" long

**f. Field-Constructed Mock-up.** Prior to installation of colored concrete and/or stamped concrete paving work, construct mock-up panels in place to verify color and texture selections and processes for qualities of appearance, materials, and construction. Build mock-ups to comply with the following requirements:

1. **Size.** Cast a minimum 8 foot by 8 foot mock-up to demonstrate typical joints, surface finish, texture, color, and standard of workmanship.
2. **Acceptance.** If Engineer determines that mock-up does not meet requirements, demolish, and remove it from the site, and cast another until the mock-up is accepted. All costs associated with mock-ups in addition to the first will be borne by the Contractor.
3. **Use.** Keep accepted mock-up undisturbed during construction as a standard for comparison to completed paving. Undamaged mock-up may be incorporated into the work or demolished and removed from the site when directed by the Engineer.

**g. Construction.** Construct pavement in accordance with section 602 of the Standard

Specifications for Construction.

1. Preparation. Carefully lay out the locations of forms and joints, taking into consideration the orientation of the pattern as shown on the plans, intended aesthetics, and construction sequence.

2. Integral Color. Comply with the color manufacturer's published recommendations and instructions for mix designs, admixtures, concrete temperature, mixing, installing, finishing, and curing. Coordinate stamped colored concrete to ensure consistency in color, texture, and quality.

3. Release Agent. Apply powder release agent per manufacturer guidelines at the minimum rate required to cover the previously colored surface. "Liquid Antique" agent can be used as a substitute for the dry release agent. If clear liquid release agent is to be used, apply per manufacturer guidelines. Colored powder release agent can be mixed with clear liquid and sprayed on the surface only after the imprinting has been completed, to create an accent coloring.

4. Imprint Pattern. Comply with tool manufacturer's standards and MCA practices. Lay out to proper alignment and imprint to a consistent depth while concrete is plastic. Do not allow the surface to crust over or harden before stamping. Hand-tool in areas where using imprinting tools is not practical.

5. Removal of Excess Release Agent. Wash off excess release agent with normal water pressure prior to joints being cut. Remove a minimum of 80 percent of the release agent. Temperature conditions will dictate the timing of release agent removal. Dispose of any excess release agent in compliance with local regulations.

Acid washing of decorative surface may be required to achieve the desired finish as directed by the Engineer. A minimum of 36 hours after placement, apply a solution of 1 part muriatic acid to 30 parts potable water to the surface of the pavement and lightly scrub with a straw broom. Wash the surface until proper color has been achieved and then flush thoroughly.

6. Sealing Decorative Surface. Seal the surface with approved sealer in accordance with the manufacturer's recommendations. Refer to subsection d.3. of this special provision for approved products and to the manufacturer's technical data sheets for proper installation procedures, including moisture content restrictions at time of application.

**h. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay items:

| <b>Pay Item</b>                               | <b>Pay Unit</b> |
|---|-----------------|
| Conc Pavt, Decorative, Nonreinf, 4 inch ..... | Square Yard     |

**Conc Pavt, Decorative, Nonreinf, 4 inch** includes coloring, mixing, hauling, placement, strikeoff, finishing, texturing, stamping, curing [and jointing]. **Conc Pavt, Decorative, Nonreinf, 4 inch** will be measured and paid for by area in square yards based on plan quantities.

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**Perimeter Lit Type III Signs**

Wightman/PAD

1 of 2

11/29/2023

**a. Description.** This work consists of furnishing and installing a permanently powered perimeter lit sign in accordance with Sections 810 and 820 of the 2020 MDOT Standard Specifications for Construction and as modified herein.

As applicable, this work includes installation of the sign, radio, antenna, control box, mounting hardware, push-button activation and all associated material required to complete the work.

**b. Materials.** Provide materials in accordance with sections 918, 919, and 921 of the Standard Specifications for Construction and the following requirements of this special provision:

1. LED Perimeter Sign. Provide an LED Perimeter Sign meeting the following requirements:

A. Furnish a Type IIIA sign, with the indicated legend, in accordance with Section 810 of the Standard Specifications for Construction and the MMUTCD.

B. Furnish a solid-state controller which is user programmable and provides an MMUTCD compliant flash pattern. Include the necessary provisions to operate the controller and LED sign from a permanent 120 vac source.

C. Provide a NEMA 4X rated housing for all components

D. LED lighting shall be High Power Luxeon 1-Watt with 100,000 hour life expectancy and shall be amber in color.

E. Base sign shall be yellow-green in color

F. 900 Mhz radios capable of synchronizing activation across all perimeter lit signs at the cross-walk.

G. Perimeter Lit Sign shall be a Blinkersign by Tapco, Trafficalm Basic Flashing Sign System by Trafficalm, or approved equal.

**c. Construction.** Complete this work in accordance with sections 819, 820, and 919 of the Standard Specifications for Construction, per the plans, and this special provision.

1. Sign legend shall be as specified on the plans in accordance with the MMUTCD.
2. Mount the Perimeter Lit Sign to the support as indicated on the plans using *AISI 300* series stainless steel hardware and in accordance with manufacturer recommendations.
3. Configure operation as directed by the Engineer
4. Furnish all warranty and instructional documentation and conduct training on operation and maintenance with City Staff.
5. Obtain shop drawing approval from the Engineer prior to installation of units.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

| <b>Pay Item</b>   | <b>Pay Unit</b> |
|---|-----------------|
| Sign, Type III, Perimeter Lighted, ( <u>Sign Legend</u> ) (LED) ..... | Each            |

The unit price for Sign, Type III, Perimeter Lighted, (Sign Legend) (LED) includes furnishing, installing, and configuring the specified illuminated sign, controller. Electrical service, post, pushbutton, foundation, and additional signs shall be paid separately.

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**WATERBORNE PERMANENT PAVEMENT MARKINGS**

1 of 1

Wightman/PAD

10/26/2023

**a. Description**

This work consists of providing all labor, material, and equipment necessary to prepare pavement surfaces and apply retroreflective permanent waterborne pavement markings. Ensure preparation of pavement surfaces and application of materials is in accordance with this special provision, the contract, 2020 MDOT Standard Specifications for Construction, Michigan Manual on Uniform Traffic Control Devices, manufacturer's recommendations, and as directed by the Engineer.

**b. Material**

Provide material for waterborne pavement markings and glass beads in accordance with section 920 of the 2020 MDOT Standard specifications for Construction and from the Qualified Product List.

**c. Construction**

Install retroreflective permanent waterborne pavement markings of the type indicated at the specified locations or at the direction of the Engineer in accordance with section 811 of the 2020 MDOT Standard specifications for construction. Legends and symbols shall be of the appropriate shape and dimensions as provided for in the most recent edition of the Michigan Manual on Uniform Traffic Control Devices.

**d. Measurement and Payment**

The completed work as described will be measured and paid for at the contract price using the following pay items:

| <u>Pay Item</u>   | <u>Pay Unit</u> |
|---|-----------------|
| Pavt Mrkg, Waterborne, ___ inch, (type)                           | Foot            |
| Pavt Mrkg, Waterborne, (legend/symbol)                            | Each            |
| Pavt Mrkg, Waterborne, ___ inch, Cross Hatching, (color)          | Foot            |
| Pavt Mrkg, Waterborne, ___ inch, Dotted Thru Guide Line, (color)  | Foot            |
| Pavt Mrkg, Waterborne, ___ inch, Solid Turning Guideline, (color) | Foot            |

Removing curing compound, removing existing pavement marking, or recessing pavement markings required for the work in this special provision will be paid for separately under the respective pay items.

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**CONDUIT, \_\_INCH, INNERDUCT**

1 of 1

Wightman/PAD

11/30/2023

**a. Description**

This work shall include all labor, materials and equipment necessary to install the conduit of the diameter specified as shown on the plans, inside an existing conduit, as directed by the Engineer in the field, and as specified herein. All work shall be coordinated with the contact shown on the plans for each utility, or their designated representative. All work shall be performed in accordance with Section 818 of the MDOT 2020 Standard Specifications for Construction and as specified herein.

**b. Materials**

All pipe materials shall be schedule 40 PVC conduit, with a nylon cord line, minimum 1/8" diameter, to allow a cable pulling rope to be pulled through the duct. Conduit materials shall meet the requirements of section 918 of the MDOT 2020 Standard Specifications for Construction. All ends of conduit must be sealed and marked. All conduit interiors shall be clean and dry upon completion.

**c. Construction**

The conduits shall be installed in accordance with Section 819 of the 2012 Standard Specifications for Construction. All conduits shall be installed inside existing conduits as shown on the plans or as directed by the Engineer.

**d. Measurement and Payment**

The Contractor will be paid the unit price bid for each foot of the conduit actually installed and will be payment in full for all labor, materials, and equipment required for complete installation.

Pay Item

Pay Unit

Conduit, 1 ¼ inch, Innerduct

Foot



**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**CONDUIT, DB, 1, 2 INCH**

Wightman/PAD

1 of 1

11/29/2023

**a. Description.** This work consists of furnishing and installing direct burial conduit in accordance with section 818 and 918 of the 2020 MDOT Standard Specifications for constructions and as modified herein.

**b. Materials.** Conduit and fittings shall be schedule 40 PVC in accordance with subsection 918.01 of the 2020 MDOT Standard Specifications for Construction.

**c. Construction Methods.** Install conduit in accordance with subsection 818.03.A of the 2020 MDOT Standard Specifications for Construction.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

| <b>Contract Item (Pay Item)</b> | <b>Unit</b> |
|---------------------------------|-------------|
| Conduit, DB, 1, 2 inch.....     | Foot        |

The unit price for Conduit, DB, 1, 2 inch includes the cost of installing the conduit shown on the plans and marking tape.

**CITY OF KALAMAZOO**  
**SPECIAL PROVISION**  
**FOR**  
**GATE BOX, ADJUST, CASE 1, MODIFIED**

Wightman/PAD

1 of 1

10/27/2023

**a. Description**

This work consists of adjusting gate boxes in accordance with Subsection 403.03C and 823.03 of the 2020 MDOT Standard Specifications for Construction.

**b. Materials**

Use MDOT P-NC Concrete with no fly ash and coarse aggregate 6AA meeting the requirements of section 1006.

**c. Construction**

Adjust gate box according to subsection 823.03 and place a concrete collar around the adjusted structure. The concrete shall be uniformly placed around the valve box to a depth specified by the Engineer with the top of the concrete flush with the top of the final course of HMA. Concrete collar thickness shall be 6-inches minimum.

**d. Measurement and Payment**

The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

| <u>Pay Item</u>                    | <u>Pay Unit</u> |
|------------------------------------|-----------------|
| Gate Box, Adjust, Case 1, Modified | Each            |

The Unit price for Gate Box, Adjust, Case 1, Modified Refers to structures located in hard surfaced travel areas, and the unit price includes saw cutting using the Mr. Manhole Method or other City approved method; removing and replacing existing pavement, curb, or curb and gutter; adjusting the water shutoff or gate box to final grade, and placing the concrete collar.

**CITY OF KALAMAZOO**  
**SPECIAL PROVISION**  
**FOR**  
**GATE BOX, RECONSTRUCT, MODIFIED**

Wightman/PAD

1 of 2

10/27/2023

**a. Description**

This work consists of furnishing and placing a gate box centered, plumbed, and adjusted to the required pavement grade over the existing gate valve.

**b. Materials**

Valve boxes and vaults shall be supplied new by the Contractor. No second hand or salvaged material shall be allowed or supplied. All supplied products shall be “**Buy American**” unless otherwise specified and comply with the conditions of this section.

Valve Boxes and Vaults

Gate Valve Box or 2 inch Service Box – the valve box shall be of adjustable length screw type for 5-foot depth of cover. The valve box shall be a malleable iron casting conforming to subsection 908.03 of the 2020 Michigan Department of Transportation Standard Specifications for Construction. This valve box shall either be a two or three piece screw type and the cover shall be inscribed with the word “water.” Valve box 8550 Series (two piece) or 8560 Series (three piece) manufactured by EJ, 4905 size no. 22 manufactured by Bingham & Taylor, or approved equal.

Gate Valve Box extensions shall be cast iron and manufactured by EJ or Bingham & Taylor, capable of being mounted directly to the gate valve box.

Concrete

Use MDOT Grade P-NC concrete with no fly ash and coarse aggregate 6AA meeting the requirements of Section 601.

Masonry Unit

Use Masonry units meeting the requirement of Section 913.

Granular Material Class II

Use Granular Material Class II meeting the requirements of Section 902.

**c. Construction**

Adjust and reconstruct water shutoffs or valve boxes to the final grade or as approved by the Engineer or authorized representative. Replace shutoff or gate box materials damaged during adjustment or reconstruction, as determined by the Engineer, or authorized representative, at no additional cost to the City of Kalamazoo.

Remove pavement around the existing gate box and remove gate box in accordance with Section 204. Salvage existing gate box and place in a secure location for pick up and notify the Engineer when all gate boxes are ready for pick up. Place four (4) evenly spaced masonry units around gate valve ensuring the gate box rests on the masonry units and not the valve. Install gate box level and plumb. Backfill in accordance with Subsection 204.03 ensuring the gate box does not shift during backfilling. Adjust cover to final grade after placement of final road surface and hold in place with a concrete collar uniformly placed around the gate box to a depth of 6-inches minimum or as instructed by the Engineer with the top of the concrete flush with the top of the final road surface.

Valve Boxes

1. Place valve boxes plumb over the operating nut of the valve, with the box cover flush with the pavement, or as approved by the Engineer or authorized representative. Provide firm support for valve boxes using concrete bricks.
2. Valve boxes shall be installed, centered and plumbed over the operating nut of the valve. The area around the valve box shall be back-filled with Granular Material Class II placed in layers not to exceed 12 inches, and thoroughly compacted to the required density. The Contractor shall take due care to prevent the box from shifting during backfilling operations. The tops of the valve boxes shall be flush with the established pavement or ground surface.

**d. Measurement and Payment**

The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

| <u>Pay Item</u>                 | <u>Pay Unit</u> |
|---------------------------------|-----------------|
| Gate Box, Reconstruct, Modified | Each            |

The unit price for Gate Box, Reconstruct, Modified includes all labor, equipment, and materials to remove the existing pavement and backfill, and install the gate box, backfill and compact, and place the concrete collar.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**CURB PAINTING**

PMK:MKB

1 of 1

APPR:MWB:JLB:05-06-20

**a. Description.** This work consists of preparing the curb surface and applying pavement marking material to the top and/or face of the curb.

**b. Materials.** Select pavement marking material from the Qualified Products Lists, 811.03.

**c. Construction.** Prepare the curb surface as recommended by the manufacturer and apply pavement marking material to the top and/or face of curb as specified on the project plans or as directed by the Engineer. Remove curing compound on new concrete curbs. Complete the work in accordance with this special provision, the project plans, the standard specifications, and as directed by the Engineer.

Apply pavement marking material uniformly at the rates shown in Table 811-1 of the Standard Specifications for Construction. For materials not shown on this chart, use the specifications shown in the separate special provision for the material to be used, or the manufacturer's recommendations. Ensure curb markings are retro-reflective and have no visible drips.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

| <b>Pay Item</b>   | <b>Pay Unit</b> |
|---|-----------------|
| Pavt Mrkg, (Material), __ inch, (color), Curb Painting..... | Foot            |

All curing compound removal required by this special provision will be paid for as Rem Curing Compound, for Spec Mrkg in accordance with section 811 of the Standard Specifications for Construction.

**CITY OF KALAMAZOO**  
**NOTICE TO BIDDERS**  
**UTILITY COORDINATION**

Wightman/PAD

1 of 2

11/29/2023

The Contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in section 104.08 of the 2020 MDOT Standard Specifications for Construction. In addition, for the protection of underground utilities, the Contractor shall follow the requirements in Section 107.12 of the 2020 MDOT Standard Specifications for Construction. Contractor delay claims resulting from a utility, will be determined based upon Section 109.05 of the 2020 MDOT Standard Specifications for Construction.

For protection of underground utilities in conformance with Public Act 53, the Contractor shall dial 1-800-482-7171 or 811 a minimum of three (3) full working days, excluding Saturdays, Sundays and holidays, prior to beginning each excavation in areas where public utilities have not been previously located. Members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be a part of the "MISS dig" alert system.

**PUBLIC UTILITIES**

The following Public Utilities have facilities located within the right-of-way.

Cable: Charter Communications, 4176 Commercial Avenue  
Portage, MI 49002  
(269) 459-8746, Mr. Bryan Longcore  
Bryan.Longcore2@Charter.com

Comcast Cable Communications, 25626 Telegraph Road  
Southfield, MI 480234  
(734) 359-1669, Mr. Jeff Dobies  
Jeff\_Dobies@Cable.Comcast.Com

Electric: Consumers Energy, 2500 East Cork Street  
Kalamazoo, MI 49001  
(269) 337-2245, Mr. Andre Taylor  
andre.taylor@cmsenergy.com

Consumers Energy, 2500 East Cork Street  
Kalamazoo, MI 49001  
(269) 337-2245, Mr. Ryan Walcott  
ryan.walcott@cmsenergy.com

Gas: Consumers Energy, 2500 East Cork Street  
Kalamazoo, MI 49001  
(269) 337-2366, Mr. Tyler Lawrence  
Tyler.Lawrence@cmsenergy.com

Telephone: AT&T, 2919 Millcork Street  
Kalamazoo, MI 49001  
(269) 823-3339, Mr. Phil Bardocz  
Philip.D.Bardocz@att.com

Fiber Optic: City of Kalamazoo, 415 Stockbridge Avenue  
Kalamazoo, MI 49001  
(269) 337-8601, Mr. Ron Ridenour  
ridenourr@kalamazoocity.org

Lumen, 19675 West 10 Mile Road  
Southfield, MI 48075  
(517) 812-2592, Mr. Dave Huckfeldt  
Dave.Huckfeldt@Lumen.com

Midwest Communications, 60590 Decatur Road  
Cassopolis, MI 49031  
(269) 963-7173, Mr. Larry Powell  
LarryMCS@Voyager.net

Zayo Fiber/MCI Fiber  
George Huss  
(443) 403-2023  
George.Huss@Zayo.com

Traffic: City of Kalamazoo, 415 Stockbridge Avenue  
Kalamazoo, MI 49001  
(269) 337-8612, Mr Dennis Randolph, P.E., P.T.O.E.  
randolphd@kalamazoocity.org

Water: City of Kalamazoo, 415 Stockbridge Avenue  
Kalamazoo, MI 49001  
(269) 491-3882, Mr. Eric Sajtar  
sajtare@kalamazoocity.org

Sewer: City of Kalamazoo, 1415 North Harrison Street  
Kalamazoo, MI 49007  
(269) 337-8551, Mr. Sohil Manjiyani  
manjiyanis@kalamazoocity.org

Public Works: City of Kalamazoo, 415 Stockbridge Avenue  
Kalamazoo, MI 49001  
(269) 337-8601, Mr. Anthony Ladd  
ladda@kalamazoocity.org

The owners of existing service facilities that are within grading or structure limits will move them to locations designated by the Engineer or will remove them entirely from the highway right-of-way. Owners of the Public Utilities will not be required by the City to move additional poles or structures in order to facilitate the operation of construction equipment unless it is determined by the Engineer that such poles or structures constitute a hazard to the public or are extraordinarily dangerous to the Contractor's operations.

No additional compensation will be paid to the CONTRACTOR for delays due to material shortages or other reasons beyond the control of the City of Kalamazoo, or for delays on construction due to the encountering of existing utilities that are, or are not, shown on the plans.

Work stoppages by employees of utility companies which results in a delay of utility revisions on any portion of this project may be considered the basis for a claim for an extension of time for completion but will not be considered the basis for a claim for extra compensation or an adjustment in contract unit prices.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**SLOPE RESTORATION, NON-FREEWAY**

RSD:NJM

1 of 5

APPR:DMG:JJG:04-05-23

**a. Description.** This work consists of preparing all lawns and slopes on non-freeway projects designated for slope restoration on the plans or as directed by the Engineer and applying topsoil, fertilizer, seed, mulch with mulch anchor, mulch blanket, high velocity mulch blanket, permanent turf reinforcement mat (TRM), bonded fiber matrix (BFM), or modified mulch blanket to those areas. Ensure turf establishment is in accordance with section 816 and 917 of the Standard Specifications for Construction and Standard Plan R-100 Series, except as modified herein or otherwise directed by the Engineer.

**b. Materials.** The materials, application rates, and construction methods specified in sections 816 and 917 of the Standard Specifications for Construction apply unless modified by this special provision or otherwise directed by the Engineer. Furnish the following materials on this project:

1. Seeding mixture as called for on the plans.
2. Chemical fertilizer nutrient, Class A.
3. Topsoil. The following percentages of furnished and salvaged topsoil are estimated for this project and provided for informational purposes only.

Topsoil Furnished: 30 percent

Topsoil Salvaged: 70 percent

4. Mulching material.
5. Permanent Turf Reinforcement Mat (TRM) must be 100 percent synthetic and consist of 100 percent ultraviolet (UV) stabilized polyolefin fibers sewn between two layers of black UV stabilized polypropylene netting with polyolefin thread. The TRM must meet the following "minimum average roll value" requirements:

| <u>Property</u>         | <u>Test Method</u> | <u>Requirement</u> |
|-------------------------|--------------------|--------------------|
| Mass/Unit Area          | ASTM D6566         | 10 oz/syd          |
| UV Stability @ 1000 hrs | ASTM D4355/D4355M  | 80 percent         |
| Tensile Strength (MD)   | ASTM D6818         | 165 lbs/ft         |

Acceptance. Supply a general certification for the permanent TRM from one of the following manufacturers or approved equal:

|                 |                                       |                |
|-----------------|---------------------------------------|----------------|
| Recyclex TRM    | American Excelsior Co., Arlington, TX | (800) 777-7645 |
| P300 TRM        | North American Green, Poseyville, IN  | (800) 772-2040 |
| Landlok 450 TRM | Propex, Inc., Chattanooga, TN         | (800) 621-1273 |



|                  |                                      |                |
|------------------|--------------------------------------|----------------|
| Excel PP5-10 TRM | Western Excelsior, Evansville, IN    | (866) 540-9810 |
| Vmax P550 TRM    | North American Green, Poseyville, IN | (800) 772-2040 |

6. Bonded Fiber Matrix (BFM). Furnish a product from the list below or an approved equal.

|                |   |                |
|----------------|---|----------------|
| Soil Guard     | Mat Inc., Floodwood, MN                 | (888) 477-3028 |
| HydroStraw BFM | HydroStraw, LLC, Rockford, WA           | (800) 545-1755 |
| HydraMax       | North American Green, Poseyville, IN    | (800) 772-2040 |
| Bindex BFM     | American Excelsior Co., Arlington, TX   | (800) 777-7645 |
| ProMatrix EFM  | Profile Products LLC, Buffalo Grove, IN | (800) 508-8681 |

If multiple grades of the selected product are available, use the grade appropriate for the application as approved by the Engineer.

Approved equal BFM must consist of long strand, virgin wood fibers (90 percent by weight) bound together by a pre-blended, high-strength polymer adhesive (10 percent by weight). The virgin wood fibers will be thermally refined from clean whole wood chips. Ensure the organic binders are a high-viscosity colloidal polysaccharide tackifier with activating agents to render the resulting matrix insoluble upon drying.

7. Modified Mulch Blanket. Where modified mulch blanket is required, provide an excelsior mulch blanket free of chemical additives. Ensure the netting thread is 100 percent biodegradable and manufactured with non-plastic materials such as jute, sisal, or coir fiber. Degradable, photodegradable, UV-degradable, oxo-degradable, or oxo-biodegradable plastic netting including polypropylene, nylon, polyethylene, and polyester is not an acceptable alternative. All netting materials must have a loose weave design with movable junctions between the machine and cross-machine direction twines that move independently and reduce the potential for wildlife entanglement.

For Slope Restoration, Non-Freeway, Type F, provide a single net modified mulch blanket from the list below or an approved equal.

|                                   |                            |                |
|-----------------------------------|----------------------------|----------------|
| Premier Straw Single Net FibreNet | American Excelsior Co.     | (800) 777-7645 |
| Curlex NetFree 100% Biodegradable | American Excelsior Co.     | (800) 777-7645 |
| ECS-1B Biodegradable Single Straw | East Coast Erosion Control | (800) 582-4005 |
| S1000BD Single Net                | Enviroscape ECM, Ltd.      | (888) 550-1999 |
| Excel SR-1 All Natural            | Western Excelsior Corp.    | (866) 540-9810 |

For Slope Restoration, Non-Freeway, Type G, provide a double net modified mulch blanket from the list below or an approved equal.

|                                   |                            |                |
|-----------------------------------|----------------------------|----------------|
| Premier Straw Double Net FibreNet | American Excelsior Co.     | (800) 777-7645 |
| Curlex II FibreNet                | American Excelsior Co.     | (800) 777-7645 |
| ECX-2B Double Net Biodegradable   | East Coast Erosion Control | (800) 582-4005 |
| S2000BD Double Net                | Enviroscape ECM, Ltd.      | (888) 550-1999 |
| Excel R-2 All Natural             | Western Excelsior Corp.    | (866) 540-9810 |

**c. Construction.** Ensure construction methods are in accordance with subsection 816.03 of the Standard Specifications for Construction. Begin this work as soon as possible after final grading of the areas designated for slope restoration but no later than the maximum time frames

specified in subsection 208.03 of the Standard Specifications for Construction. It may be necessary, as directed by the Engineer, to place materials by hand.

Shape, compact, and ensure all areas to be seeded are weed-free prior to placing topsoil. Place topsoil to the minimum depth as detailed herein and in accordance with the plans and standard specifications to meet proposed finished grade. If the area being restored requires more than the minimum depth of topsoil to meet finished grade, fill this additional depth using topsoil or, at the Contractor's option, embankment. Furnishing and placing this additional material is included in this item of work.

Ensure topsoil is weed and weed seed free and friable prior to placing seed. Remove any stones greater than 1/2-inch in diameter or other debris. Apply seed mixture and fertilizer to prepared soil surface. Incorporate seed into top 1/2-inch of topsoil.

Spread mulch at a rate of two tons per acre. If the Engineer allows dormant seeding spread mulch at a rate of 3 tons per acre. Place mulch anchoring over the mulch at a rate in accordance with subsection 816.03.F of the Standard Specifications for Construction. Place mulch blanket and high-velocity mulch blanket in accordance with subsection 816.03.G of the Standard Specifications for Construction and Standard Plan R-100 Series.

Install areas constructed with the TRM on prepared (seeded) grades as shown on the plans in accordance with the manufacturer's published installation guidelines. Anchor the top edge of the TRM in a minimum six-inch deep trench. Operation of equipment on the slope is prohibited after placement of the TRM. No credit for splices, overlaps, tucks, or wasted material will be made.

Mix the BFM and organic binders thoroughly at a rate of 40 pounds for each 100 gallons of water or as otherwise recommended by the manufacturer. Hydraulically apply the BFM slurry in successive layers, from two or more directions, to fully cover 100 percent of the soil surface. Ensure the minimum application rate is at least 3000 pounds of BFM for each acre or otherwise apply in accordance with the manufacturer's recommendations as appropriate depending on site conditions.

Do not apply BFM on saturated soils or immediately before, during, or after rainfall.

Install modified mulch blanket in accordance with the manufacturer's published guidelines and as directed by the Engineer.

If an area washes out after this work has been properly completed and approved by the Engineer, make the required corrections to prevent future washouts and replace the topsoil, fertilizer, seed, and mulch treatment. This replacement will be paid for as additional work using the applicable pay items.

If an area washes out for reasons attributable to the Contractor's activity or failure to take proper precautions, replacement will be at no cost to the contract.

The Engineer will inspect the seeded turf to ensure it is well-established, in a vigorous growing condition, and contains the species called for in the seeding mixture.

If the seeded turf is not well-established at the end of the first growing season, the Contractor is responsible to re-seed until the turf is well established and approved by the Engineer.

Provide weed control, if weeds are determined by the Engineer to cover more than 10 percent of the total area of slope restoration, in accordance with subsection 816.03.I of the Standard Specifications for Construction. Weed control will be at no additional cost to the contract.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay items:

| <b>Pay Item</b>                                 | <b>Pay Unit</b> |
|---|-----------------|
| Slope Restoration, Non-Freeway, Type ____ ..... | Square Yard     |

1. Place **Slope Restoration, Non-Freeway, Type A** in all areas not described in the other types of slope restoration and will be measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type A** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; Mulch; and Mulch Anchoring.

2. Place **Slope Restoration, Non-Freeway, Type B** parallel (8 feet minimum) to the edge of the roadway, in areas that have a 1 on 3 slope and in any ditch with a grade less than 1.5 percent, as shown on the plans, or as directed by the Engineer. **Slope Restoration, Non-Freeway, Type B** will be measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type B** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and Mulch Blanket.

3. Place **Slope Restoration, Non-Freeway, Type C** in areas that have a 1 on 2 slope, any ditch with a grade of 1.5 percent to 3 percent as shown on the plans, or as directed by the Engineer. **Slope Restoration, Non-Freeway, Type C** will be measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type C** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and Mulch Blanket, High Velocity.

4. Place **Slope Restoration, Non-Freeway, Type D** in areas that have a slope steeper than 1 on 2, any ditch with a grade steeper than 3 percent as shown on the plans, or as directed by the Engineer. **Slope Restoration, Non-Freeway, Type D** will be measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type D** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and Turf Reinforcement Mat.

5. Place **Slope Restoration, Non-Freeway, Type E** as shown on the plans, or as directed by the Engineer and measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type E** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and Bonded Fiber Matrix.

6. Place **Slope Restoration, Non-Freeway, Type F** parallel (8 feet minimum) to the edge of the roadway, in areas that have a 1 on 3 slope and in any ditch with a grade less than 1.5 percent. **Slope Restoration, Non-Freeway, Type F** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and single net modified Mulch Blanket.

7. Place **Slope Restoration, Non-Freeway, Type G** in areas that have a 1 on 2 slope and in any ditch with a grade of 1.5 percent to 3 percent. **Slope Restoration, Non-Freeway,**

**Type G** includes installing Topsoil Surface, Furn, LM or Topsoil Surface, Salv, 4 inch; Fertilizer, Chemical Nutrient, Class A; seeding mixture; and double net modified Mulch Blanket.

**CITY OF KALAMAZOO**

**SPECIAL PROVISION**

**FOR**

**MAINTAINING TRAFFIC**

Wightman/PAD

1 of 7

02/19/2024

**a. Description.** This work consists of all labor, materials, and equipment required for maintaining traffic in accordance with this special provision for storm sewer improvements, road reconstruction and conversion from one-way to two-way traffic on Michikal Street in the City of Kalamazoo, Kalamazoo County.

**b. General.** Maintain traffic according to Sections 104.11, 812 and 922 of the Michigan Department of Transportation *2020 Standard Specifications for Construction*, the Michigan Manual of Uniform Traffic Control Devices (MMUTCD), including any Supplemental Specifications, and as specified herein.

1. The Contractor shall notify the Engineer, the City of Kalamazoo, local police department, local fire department, and other emergency response units a **minimum of 10 business days** prior to the implementation of any detours, road closures, bridge closures, ramp closures or lane closures, and major traffic shifts.
2. Coordinate operations with Contractors performing work on other projects within or adjacent to the Construction Influence Area (CIA) as described below. The Contract Maintenance Agency will coordinate their operations with the Engineer to minimize the interference with the Contractor. No additional payment will be made to the Contractor for the joint use of the traffic control items.
3. During all times of construction, access to local businesses and drives for emergency vehicles shall be maintained by the Contractor until the project is completed unless a temporary closure is approved in writing by the Engineer. This work will not be considered for additional payment but shall be included in the payment for Minor Traf Devices.
4. The Contractor shall conduct their work in such a manner so no excavations are left open overnight. If this is not possible, the Contractor shall provide and install a temporary fence to protect the excavation at their own expense. Whenever possible, the Contractor shall use a trench box and backfill all excavations and/or trenches and cover or protect the trench box at the end of each work day. No excavations and/or trenches are to be left open overnight unless a full closure is in place. Payment for this work shall be included in Minor Traf Devices.
5. Coordinate all lane or road closures with Kalamazoo Metro Transit to maintain access or provide alternate access for any bus stops within the CIA.

6. The Contractor shall coordinate all signal modifications, temporary signals, signal bagging and un-bagging and traffic shifts with the City of Kalamazoo Traffic Engineer so that appropriate signal timing and camera adjustments can be completed. The Contractor shall notify the City of Kalamazoo a **minimum of 10 business days** prior to implementing traffic shifts requiring traffic signal modifications.

**c. Relations and Responsibility to the Public.**

1. Notification shall be provided to residents/businesses directly affected by the proposed work via door hanger notices no less than 72 hours before the portion of the road where their property is located is planned to receive work. The Contractor will provide a pre-printed door hanger to carry the Contractor's message to the residents/businesses. Message content must be approved by the Engineer prior to printing and distribution. The responsibility for filling out the door hangers and distributing them will be the Contractor's. Payment for this work will be paid separately, but payment will be included in the item for Minor Traf Devices. No work shall be performed in each section of the project prior to the affected residents/businesses have been notified via distribution of door hangers.
2. 24 hours before every construction operation that will substantially affect a resident or business adjacent to the project site, (such as driveway closures, mailbox relocation, etc.) the Contractor will notify affected residents or businesses. The Contractor shall assist the Engineer and/or Owner in coordinating work and mitigating impacts to the extent possible while maintaining construction schedules.

**d. Construction Influence Area (CIA).** The CIA includes the right-of-way of the following roadways, within the approximate limits described below:

1. Michikal Street from the W Main Street / W Michigan Avenue / Michikal Street intersection to the W Kalamazoo Avenue / N Westendge Avenue / Michikal Street intersection.
2. N Westnedge Avenue from Willard Street to Eleanor Street.
3. W Kalamazoo Avenue from N Park Street to Greenwich Place.
4. W Main Street from Woodward Avenue to the W Main Street, W Michigan Avenue / Michikal Street intersection.
5. W Michigan Avenue from W South Street to Allen Blvd.
6. In addition, the CIA shall include the rights-of-way of any intersecting roads adjacent to the work zone for a distance of approximately 500 feet in advance of the roads listed above. The roads include:  
  
Elm Street, Academy Street, Elm Crossover, Allen Blvd., Elm Place, Eleanor Street, Old Orchard Place.
7. Include in the CIA shall include the rights-of-way of any intersecting roads and ramps adjacent to the work zone for the distance noted in the signing standards.
8. Include in the CIA the rights-of-way of any signed detour routes.

**e. Traffic Restrictions.**

1. No work shall be performed during the Memorial Day, Independence Day, Labor Day holiday periods, as defined by the Engineer.
2. All work shall be done between the hours of 7 a.m. to 7 p.m. (Monday – Saturday) unless otherwise specified herein. Work done outside of the times specified herein will be at the discretion of the Engineer and any additional cost for maintaining traffic shall be borne by the Contractor.
3. No work shall be done on Sunday unless otherwise specified herein or approved by the Engineer in writing. The Contractor shall request permission to work no later than 12:00 p.m. the Wednesday prior to the weekend they are requesting to work.
4. The arrow board, signs, and channelizing tapers for any flag control operations shall be placed at locations approved by the Engineer for adequate visibility to oncoming traffic.
5. The minimum lane width throughout the CIA shall be 10 feet.
6. Maintain access to commercial and residential properties at all times. Part-width driveway construction will be required. All driveway closures must be approved by the Engineer. Where a driveway is closed or partially closed, the adjacent driveway must remain open to traffic. The Contractor shall coordinate their work with the impacted property owners and give a minimum of 3 days' notice prior to closing a driveway.
7. Utilize intermediate traffic regulators during the reconstruction of driveways with commercial traffic. The cost of all required traffic regulators is included in the payment for Traffic Regulator Control.
8. Maintain access for pedestrians to all commercial and residential properties.
9. Cover all existing regulatory, warning, and construction signs that are not applicable during construction.
10. The Contractor must submit a work zone traffic control plan to the Engineer in accordance with section 104 of the 2020 MDOT Standard Specifications for Construction. The Engineer will have seven (7) calendar days to review the plan for acceptance or provide comments for plan revisions required to obtain acceptance. At a minimum, the plan shall include the proposed ingress/egress locations for construction equipment and vehicles, traffic control devices that will be utilized to warn the motoring public of ingress/egress locations, and measures that will be taken to ensure compliance with the plan as specified herein. No work shall begin prior to acceptance of the work zone traffic control plan. Additional time required to obtain an accepted work zone traffic control plan shall not be cause for delay or impact claims. All costs associated with obtaining an acceptable plan, providing and executing all parts of the accepted plan including required traffic control devices, or resolving an incomplete or unacceptable plan shall be borne by the Contractor.
11. The Contractor shall comply with local noise ordinances, which are available on the City of Kalamazoo's website, except for any night work specified herein.

**f. Traffic Control.** The traffic control required by this Special Provision for work on Michikal Street and adjacent roadways is to erect and maintain signs for through traffic when specified. Maintain local traffic as provided herein. An alternate traffic control plan may be used by the Contractor, subject to review and approval by both the Engineer and the City of Kalamazoo. The Contractor shall provide access to all properties within the Construction Zone for the duration of the project.

The traffic control described in this special provision is depicted on sheets C025 – C027 of the plans. The pedestrian detour described in this special provision is depicted on sheet C028 of the plans.

Michikal Street will be closed to all traffic during all contract work for this project. Implement two (2) detour routes for Michikal Street as depicted on sheet C025 of the plans. The first detour route will be for southbound traffic on N Westnedge Avenue and westbound traffic on Kalamazoo Avenue. This detour route will utilize Kalamazoo Avenue, Douglas Avenue and W Main Street. As part of the Michikal Street closure, northbound traffic on W Michigan Avenue will not be permitted to use Allen Boulevard, Elm Place, Elm Crossover or Elm Street to access the Stuart neighborhood. The second detour route for this traffic movement using W Michigan Avenue, N Park Street and W Kalamazoo Avenue. Both detour routes are to be maintained for the duration of the project. The contractor shall maintain local access to Old Orchard Place and Elm Place.

Once all contract work for this project is complete and accepted by the Engineer and the City of Kalamazoo, temporary traffic control measures shall be left in place as shown on the proposed pavement marking and permanent signing plan, depicted on sheet C022 (Base Bid) and C023 (Alternate A) of the plans. Northbound traffic will not be permitted on Michikal Street after construction is completed. Michikal Street will be open to two (2) lanes of southbound traffic.

**g. Pedestrian or Non-Motorized Facilities.**

1. Maintain all facilities in accordance with *The Americans with Disability Act (ADA)* requirements. Provide facilities equivalent to or better than the route a person would have encountered prior to construction activities.
2. Close and detour any sidewalk ramps and crosswalk areas to pedestrian traffic that are impacted by the work as described below. Cover pedestrian signal heads when the crosswalk or ramp is affected.
3. Keep sidewalk areas clear of any equipment or materials at all times the sidewalks are open to pedestrian traffic.

The existing HMA shared use path along the easterly side of Michikal Street will be closed and removed during construction. Close the existing path at the intersection of Michikal Street and N Westnedge Avenue and at the intersection of W Main Street / W Michigan Avenue / Michikal Street. Implement a detour route using the north side of W Michigan Avenue and the west side of N Westnedge Avenue. Furnish, erect and maintain temporary signage and pedestrian barricades for this detour route as shown on sheet C028 of the plans.



## **h. Traffic Control Devices**

1. *General.* Conform all traffic control devices and their usage to Part 6 of the Michigan Manual on Uniform Traffic Control Devices (MMUTCD). This document can be found at the following website:  
<http://mdotjboss.state.mi.us/TSSD/tssdHome.htm>

- a. During construction, maintain access to all business and residential drives.

2. Temporary Signs

- a. Place temporary sign spacing and taper lengths as shown on the attached Typical 101-GEN-SPACING-CHARTS.
  - b. Utilize MDOT Typical 102-GEN-NOTES if called for on the MDOT Maintaining Traffic Typicals included in the Special Provision.
  - c. Utilize signs identified in the MDOT Maintaining Traffic Typical 103-GEN-SIGN unless otherwise specified on the plans or in this Special Provision.
  - d. Place temporary advance signing treatment and signing for lane closures and lane shifts on the project as shown on the attached MDOT Typical 123-NFW-1LC-(R).
  - e. Place temporary concrete barriers on the project as shown on the attached MDOT Standard Plan R-126-I.
  - f. Fabricate all temporary signs with legends and symbols flush to the sign's face and do not extend beyond the sign borders or edges.
  - g. Mount all temporary signs that will be in place for more than 14 days on driven posts.
  - h. When a portable construction sign is no longer applicable, remove it or lay the sign down with legs pointed in the same direction as traffic flow, with its feet off and laid flat.

3. Temporary Pavement Markings

- a. Temporary pavement markings consist of the following:

**Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, White, Temp**  
**Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, Yellow, Temp**  
**Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, White, Temp**  
**Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, White, Temp**  
**Pavt Mrkg, Type NR, Paint, 24 inch, Stop Bar**  
**Pavt Mrkg, Type NR, Paint, Lt Turn Arrow**  
**Pavt Mrkg, Type NR, Paint, Rt Turn Arrow**  
**Pavt Mrkg, Type NR, Paint, Thru Arrow**

- b. **Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, \_\_\_\_\_, Temp** and **Pavt Mrkg, Type NR, Paint \_\_\_\_\_** shall be placed on pavement areas that **will** be removed or covered during construction for interim traffic control at locations specified by the Engineer.
  - c. **Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, \_\_\_\_\_, Temp** shall be placed on pavement areas that **will not** be removed or covered during construction for interim traffic control at locations specified by the Engineer.
4. Channelizing Devices
- a. Channelizing devices required shall be **Channelizing Device, 42 inch, Flourescent, Furn.**
5. Plastic Drums
- a. Plastic Drums required shall be **Plastic Drum, Flourescent, Furn.**
6. Lighted Arrows
- a. **Lighted Arrow, Type C, Furn** shall be used whenever closing a traffic lane or shoulder and as called for on the traffic control plans.
  - b. The quantity of channelizing devices required for the lighted arrows are already included in the quantity for **Channelizing Device, 42 inch, Flourescent, Furn.**
7. Portable Changeable Message Sign
- a. PCMS shall be furnished to the site 2 weeks prior to commencement of construction at locations agreed upon by the Engineer.
  - b. Contractor shall verify the message with the Engineer and change as directed per current operations in a timely manner.
    - i. Acceptable Messages:
      - 1. Michikal Street Closed Beginning X-XX-XX
      - 2. Road Closed Ahead Michikal Street
  - c. The quantity of channelizing devices required for the message boards are already included in the quantity for **Channelizing Device, 42 inch, Flourescent, Furn.**
8. Permanent Pavement Markings.
- a. Permanent pavement markings consist of the following:
    - Pavt Mrkg, Waterborne, 6 inch, White**
    - Pavt Mrkg, Waterborne, 6 inch, Yellow**
    - Pavt Mrkg, Waterborne, For On-Street Parking, 4 inch, White**
    - Pavt Mrkg, Waterborne, 12 inch, Cross Hatching, White**
    - Pavt Mrkg, Waterborne, 12 inch, Cross Hatching, Yellow**
    - Pavt Mrkg, Waterborne, 24 inch, Stop Bar**

**Pavt Mrkg, Waterborne, 12 inch, Yellow, Curb Painting**  
**Pavt Mrkg, Waterborne, Accessible Sym**

- b. Fabricate all pavement markings per MDOT Pavement Marking Standards and Special Details PAVE-900 through PAVE-985.
9. Permanent Signs.
- a. Fabricate and place permanent signs according to the current editions of the Michigan Manual on Uniform Traffic Control Devices (MMUTCD), Standard Highway Signs manual and sign support typicals, published by the Michigan Department of Transportation.
  - b. Mount all permanent signs at a 7-foot bottom height.
  - c. Fabricate all new permanent signs with high intensity reflective sheeting.
  - d. Install all permanent signs as shown on the permanent signing plans or specifications prior to opening roadways to traffic.
  - e. Replace signs requiring relocation, due to Contractor convenience or damage, at locations determined by the Engineer at the Contractor's expense.

**i. Measurement and Payment.** Maintain traffic according to sections 812 and 922 of the 2020 Standard Specifications for Construction. Estimated quantities for maintaining traffic on this project are based on the suggested sequence of operations contained in the staging plans and described in this special provision. Payments for these devices are in accordance with the 2020 Standard Specifications for Construction unless otherwise specified.

**PROGRESS CLAUSE**

1 of 1

Wightman/PAD

2/26/2024

The Engineer anticipates that construction can begin no earlier than 10 calendar days after award or as directed by the Engineer.

In no case shall any work be commenced prior to receipt of formal notice of award by the City.

The Contractor shall prepare and submit a complete, detailed, signed critical path Progress Schedule with their bid.

***The contractor shall have 120 calendar days from closing Michikal Street to traffic to reach open to traffic (Paved HMA top course, permanent signs, and pavement markings).***

***The project shall be open to traffic on or before:***

***November 1, 2024***

***All Contract work shall be complete on or before:***

***May 1, 2025***

Unless specific pay items are provided in the contract, any extra costs incurred by the Contractor due to cold-weather protection and winter grading will not be paid for separately but will be included in the payment of other pay items in the contract.

After award and prior to the start of work, the Contractor must attend a preconstruction meeting with the Engineer. The Engineer will determine the day, time and place for the preconstruction meeting. The meeting will be conducted after project award and may be rescheduled if there are delays in the award of the project.

The named subcontractor(s) for Designated and/or Specialty Items, as shown in the Proposal, should attend the preconstruction meeting if such items materially affect the work schedule.

Failure by the Contractor to meet interim completion, open to traffic, and/or final completion dates will result in the assessment of liquidated damages in accordance with subsection 108.10 of the 2020 MDOT Standard Specifications for Construction.

# Appendix D



## *MDOT STANDARD DETAILS*

## **STREETS FOR ALL: MICHIKAL STREET IMPROVEMENTS**

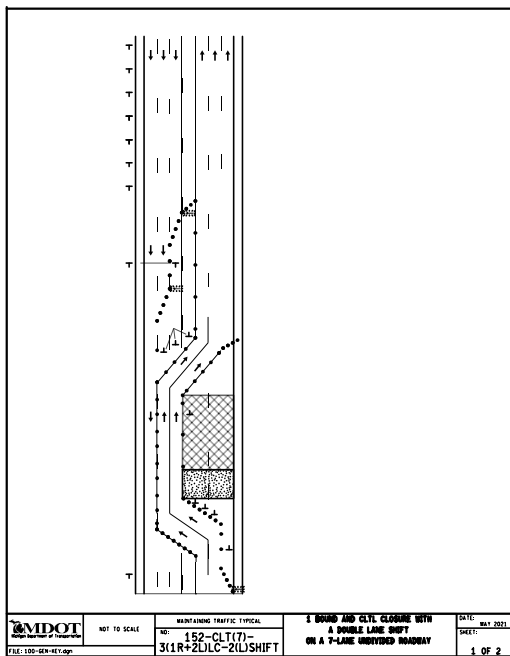
**Bid Reference #: 91396-021.0**

**MARCH 2024**

# TYPICAL NUMBER KEY

## CODES

|  |   |
|--|---|
| AB = ARROW BOARD<br>AW = ADVANCE WARNING<br>C = CLOSURE<br>CLT = CENTER LEFT TURN LANE<br>CROSS = CROSSOVER<br>CruSha = CRUSH AND SHAPE<br>EM = EARLY MERGE<br>EnR = ENTRANCE RAMP<br>ExR = EXIT RAMP<br>FW = FREEWAY<br>GEN = GENERAL INFORMATION<br>GORE = FREEWAY GORE AREA<br>IN = INSIDE<br>INT = INTERSECTION<br>L = LANE<br>(L) = LEFT<br>LC = LANE CLOSURE<br>LD = LONG DURATION | LO = LANE OPEN<br>O = OUTSIDE (LANE CLOSURE)<br>OUT = OUTSIDE OF SHOULDER<br>MID = MIDDLE OF INTERSECTION OR ROAD<br>NFW = NON-FREEWAY<br>PARK = PARKING LANE<br>PCMS = PORTABLE CHANGEABLE MESSAGE SIGN<br>(R) = RIGHT<br>ROLL = ROLLING ROADBLOCK<br>RUM = RUMBLE STRIP<br>SD = SHORT DURATION<br>SHL = SHOULDER CLOSURE<br>SIGN = SIGN<br>SP = SPECIAL<br>SPEED = SPEED<br>STA = STOPPED TRAFFIC ADVISORY<br>TR = TRAFFIC REGULATOR<br>TS = TEMPORARY SIGNAL<br>ZIP = ZIPPER MERGE |
|--|---|



- 100 - GENERAL NOTES
- 110 - TRAFFIC REGULATORS
- 120 - NON-FREEWAY
- 130 - CENTER LEFT TURN (CLT) LANES
- 140 - PARKING LANES
- 150 - CLT 7 LANE SECTIONS
- 160 - SIGNAL WORK
- 200 - FREEWAY CLOSURES
- 210 - FREEWAY LANE SHIFTS
- 220 - FREEWAY ENTRANCE RAMPS
- 230 - FREEWAY EXIT RAMPS
- 300 - ADVANCE WARNINGS
- 310 - CROSSOVER CLOSURE
- 320 - CRUSH AND SHAPE
- 340 - MERGE SYSTEMS
- 350 - GORE LOCATIONS
- 360 - ROLLING ROADBLOCK
- 4000 - MAINTENANCE
- 5000 - SURVEY

EXAMPLE TYPICAL

CODE: 152-CTL(7)-3(1R+2L)LC-2(L)SHIFT

152 - TYPICAL NUMBER

CTL(7) = CENTER LEFT TURN LANE, 7 LANES TOTAL.

3(1R+2L)LC = 3 LANES CLOSED, (1 RIGHT LANE AND 2 LEFT LANES).

2(L)SHIFT = 2 LANES SHIFTED TO THE LEFT.

NOT TO SCALE

|  |              |                             |                       |                        |
|--|--------------|-----------------------------|-----------------------|------------------------|
|  | NOT TO SCALE | MAINTAINING TRAFFIC TYPICAL | TYPICAL NUMBERING KEY | DATE:<br>DECEMBER 2021 |
|  |              | NO:<br>100-GEN-KEY          |                       | SHEET:<br>1 OF 2       |

FILE: 100-GEN-KEY.dgn

1 OF 1

**DISTANCE BETWEEN TRAFFIC SIGNS, "D"**

| "D"<br>DISTANCES | POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA) |     |     |     |     |     |     |     |     |     |     |
|------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                  | 25   | 30  | 35  | 40  | 45  | 50  | 55  | 60  | 65  | 70  | 75  |
| D (FEET)         | 250  | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 |

**GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE, "B"**

| "B"<br>LENGTHS | SPEED*, MPH (PRIOR TO WORK AREA) |    |    |     |     |     |     |     |     |     |     |     |
|----------------|----------------------------------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                | 20                               | 25 | 30 | 35  | 40  | 45  | 50  | 55  | 60  | 65  | 70  | 75  |
| B (FEET)       | 33                               | 50 | 83 | 132 | 181 | 230 | 279 | 329 | 411 | 476 | 542 | 625 |

\* POSTED SPEED, OFF-PEAK 85TH PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED.

**MINIMUM MERGING TAPER LENGTH, "L" (FEET)**

| OFFSET<br>(FEET) | POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA) |     |     |     |     |     |     |     |     |      |      |
|------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
|                  | 25   | 30  | 35  | 40  | 45  | 50  | 55  | 60  | 65  | 70   | 75   |
| 1                | 11   | 15  | 21  | 27  | 45  | 50  | 55  | 60  | 65  | 70   | 75   |
| 2                | 21   | 30  | 41  | 54  | 90  | 100 | 110 | 120 | 130 | 140  | 150  |
| 3                | 32   | 45  | 62  | 80  | 135 | 150 | 165 | 180 | 195 | 210  | 225  |
| 4                | 42   | 60  | 82  | 107 | 180 | 200 | 220 | 240 | 260 | 280  | 300  |
| 5                | 53   | 75  | 103 | 134 | 225 | 250 | 275 | 300 | 325 | 350  | 375  |
| 6                | 63   | 90  | 123 | 160 | 270 | 300 | 330 | 360 | 390 | 420  | 450  |
| 7                | 73   | 105 | 143 | 187 | 315 | 350 | 385 | 420 | 455 | 490  | 525  |
| 8                | 84   | 120 | 164 | 214 | 360 | 400 | 440 | 480 | 520 | 560  | 600  |
| 9                | 94   | 135 | 184 | 240 | 405 | 450 | 495 | 540 | 585 | 630  | 675  |
| 10               | 105  | 150 | 205 | 267 | 450 | 500 | 550 | 600 | 650 | 700  | 750  |
| 11               | 115  | 165 | 225 | 294 | 495 | 550 | 605 | 660 | 715 | 770  | 825  |
| 12               | 125  | 180 | 245 | 320 | 540 | 600 | 660 | 720 | 780 | 840  | 900  |
| 13               | 136  | 195 | 266 | 347 | 585 | 650 | 715 | 780 | 845 | 910  | 975  |
| 14               | 146  | 210 | 286 | 374 | 630 | 700 | 770 | 840 | 910 | 980  | 1050 |
| 15               | 157  | 225 | 307 | 400 | 675 | 750 | 825 | 900 | 975 | 1050 | 1125 |

NOT TO SCALE

|  |              |                             |   |                   |
|--|--------------|-----------------------------|---|-------------------|
|  | NOT TO SCALE | MAINTAINING TRAFFIC TYPICAL | <b>"B", "D" AND "L" TABLES</b><br><b>CHANNELIZING DEVICE SPACING,</b><br><b>SIGN BORDER KEY, AND ROLL-AHEAD SPACING</b> | DATE:<br>MAY 2021 |
|  |              | NO: 101-GEN-SPACING-CHARTS  |   | SHEET:<br>1 OF 3  |

THE FORMULAS FOR THE MINIMUM LENGTH OF A MERGING TAPER IN DERIVING THE "L" VALUES SHOWN IN THE ABOVE TABLES ARE AS FOLLOWS:

"L" =  $\frac{W \times S^2}{60}$  WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 40 MPH OR LESS

"L" = W X S WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 45 MPH OR GREATER

L = MINIMUM LENGTH OF MERGING TAPER  
 S = POSTED SPEED LIMIT IN MPH PRIOR TO WORK AREA  
 W = WIDTH OF OFFSET

TYPES OF TAPERS

**UPSTREAM TAPERS**

- MERGING TAPER
- SHIFTING TAPER
- SHOULDER TAPER
- 2 TO 1 LANE ROAD TAPER

TAPER LENGTH

- L - MINIMUM
- 1/2 L - MINIMUM
- 1/3 L - MINIMUM
- 100' - MAXIMUM

**DOWNSTREAM TAPERS**

(USE IS RECOMMENDED)

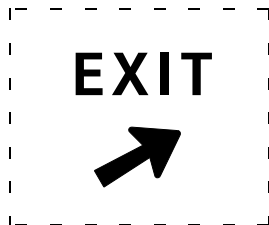
100' (PER LANE)

**MAXIMUM SPACING FOR CHANNELIZING DEVICES**

| WORK ZONE<br>SPEED LIMIT | DRUM AND 42" DEVICE SPACING (FT) |                 | NIGHTTIME 42" DEVICE SPACING (FT) |         |
|--------------------------|----------------------------------|-----------------|-----------------------------------|---------|
|                          | TAPER                            | TANGENT         | TAPER                             | TANGENT |
| < 45 MPH                 | 1 x SPEED LIMIT                  | 2 x SPEED LIMIT | 25 FEET                           | 50 FEET |
| ≥ 45 MPH                 | 50 FEET                          | 100 FEET        | 25 FEET                           | 50 FEET |

**SIGN OUTLINE KEY**

DASHED OUTLINES INDICATE A SIGN THAT EXISTS ON SITE, AND NEEDS TO BE COVERED.



SOLID OUTLINES INDICATE A SIGN THAT IS TO BE PLACED ON THE PROJECT



NOT TO SCALE

|  |              |                             |   |                   |
|--|--------------|-----------------------------|---|-------------------|
|  | NOT TO SCALE | MAINTAINING TRAFFIC TYPICAL | <b>"B", "D" AND "L" TABLES</b><br><b>CHANNELIZING DEVICE SPACING</b><br><b>SIGN BORDER KEY AND ROLL-AHEAD SPACING</b> | DATE:<br>MAY 2021 |
|  |              | NO: 101-GEN-SPACING-CHARTS  |   | SHEET:<br>2 OF 3  |



GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES – TEST LEVEL 2

| WEIGHT OF TMA VEHICLE | PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE) | ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA) |
|-----------------------|--|--|
| 5.5 TONS (STATIONARY) | 40 MPH OR LESS                                     | 25 FT  |

\* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 4,410 POUND IMPACT VEHICLE WEIGHT.

GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES – TEST LEVEL 3

| WEIGHT OF TMA VEHICLE | PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE) | ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA) |
|-----------------------|--|--|
| 5 TONS (MOBILE)       | 45 MPH   | 100 FT   |
|                       | 50-55 MPH  | 150 FT   |
|                       | 60-75 MPH  | 175 FT   |
| 12 TONS (STATIONARY)  | 45 MPH   | 25 FT  |
|                       | 50-55 MPH  | 25 FT  |
|                       | 60-75 MPH  | 50 FT  |

\* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 10,000 POUND IMPACT VEHICLE WEIGHT.



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO: 101-GEN-SPACING-CHARTS

"B", "D" AND "L" TABLES  
CHANNELIZING DEVICE SPACING  
SIGN BORDER KEY AND ROLL AHEAD SPACING

DATE: MAY 2021  
SHEET:

3 OF 3

**THE FOLLOWING NOTES APPLY IF CALLED FOR ON THE TRAFFIC TYPICAL**

**GENERAL NOTES**

- G1: SEE GEN-SPACING-CHARTS FOR COMMON VALUES INCLUDING:  
 D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES  
 L = MINIMUM LENGTH OF TAPER  
 B = LENGTH OF LONGITUDINAL BUFFER  
 ROLL AHEAD DISTANCE
- G2: DISTANCE BETWEEN SIGNS, "D", THE VALUES FOR WHICH ARE SHOWN IN TYPICAL GEN-KEY ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- G3: ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING MUST MEET NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT 350 (NCHRP 350) TEST LEVEL 3, OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) TL-3 AS WELL AS THE CURRENT EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDOT WILL BE ALLOWED.
- G4: DO NOT STORE EQUIPMENT, MATERIALS OR PERFORM WORK IN ESTABLISHED BUFFER AREAS.
- G5: ALL EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH EITHER PROPOSED CHANGES IN TRAFFIC PATTERNS OR PROPOSED TEMPORARY TRAFFIC MARKINGS SHALL BE REMOVED BEFORE ANY CHANGE IS MADE IN THE TRAFFIC PATTERN. EXCEPTION WILL BE MADE FOR TRAFFIC PATTERNS FOR WORK LESS THAN THREE DAYS THAT ARE ADEQUATELY DELINEATED BY OTHER TRAFFIC CONTROL DEVICES.

**SIGN NOTES**

- S1: ALL NON-APPLICABLE SIGNING WITHIN THE CIA MUST BE MODIFIED TO FIT CONDITIONS, COVERED, OR REMOVED. FOR GUIDANCE SEE THE WORK ZONE SAFETY AND MOBILITY MANUAL, SECTIONS 6.01.09 AND 6.01.10.
- S2: R5-18b SIGNS ARE ONLY REQUIRED ON FREEWAY PROJECTS WITH A DURATION OF 15 DAYS OR LONGER OR NON-FREEWAY PROJECTS WITH A DURATION OF 90 DAYS OR LONGER. TO APPLY THIS TYPICAL WITHOUT R5-18b SIGNS, REMOVE THE SIGNS AND CONSOLIDATE THE SEQUENCE AS APPROPRIATE.
- S3: R5-18c IS ONLY REQUIRED IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. OMIT THIS SIGN IN SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE.
- S4: ADDITIONAL SIGNING AND/OR ELONGATED SIGNING SEQUENCES SHOULD BE USED WHEN TRAFFIC VOLUMES ARE SIGNIFICANT ENOUGH TO CREATE BACKUPS BEYOND THE W20-5 SIGNS.
- S5: PLACE ADDITIONAL SPEED LIMIT SIGNS REFLECTING THE WORK ZONE SPEED AFTER EACH MAJOR CROSSROAD THAT INTERSECTS THE WORK ZONE, OR AFTER EACH ENTRANCE RAMP THAT COMES ONTO THE FREEWAY WHERE THE REDUCED SPEED IS IN EFFECT. PLACE ADDITIONAL SPEED LIMIT SIGNS AT INTERVALS ALONG THE ROADWAY SUCH THAT NO SPEED LIMIT SIGNS ARE MORE THAN 2 MILES APART. WHEN REDUCED SPEED LIMITS ARE UTILIZED IN THE WORK AREA, PLACE ADDITIONAL SPEED LIMIT SIGNS RETURNING TRAFFIC TO ITS NORMAL SPEED BEYOND THE LIMITS OF THE WORK AREA AS INDICATED. IF PERMANENT SIGNS DISPLAYING THE CORRECT SPEED LIMIT ARE POSTED, OMIT ALL W3-5b AND R2-1 SIGNS AND REDUCE SPACING ACCORDINGLY.
- S6: FABRICATE SPECIAL SIGNS IN ACCORDANCE WITH CURRENT SIGNING DESIGN STANDARDS.
- S7: PLACE ADDITIONAL R8-3 SIGNS AT A MAXIMUM 500' SPACING THROUGHOUT THE WORK ZONE.
- S8: WHEN SPEED LIMIT SIGNS CANNOT BE PLACED SIDE BY SIDE AS SHOWN, PLACE THEM "D" DISTANCE APART.
- S9: STOP SIGNS NOT REQUIRED IF SIGNALS ARE ON 4-WAY FLASHING RED. STOP AHEAD SIGNS ARE NOT REQUIRED IF THERE IS ADEQUATE VISIBILITY OF THE STOP SIGN OR IF SIGNALS ARE BEING USED TO CONTROL TRAFFIC.
- S10: PLACE REDUCED SPEED ZONE AHEAD SIGN (W3-5b) HERE WHEN USING A SPEED REDUCTION IN THIS DIRECTION.
- S11: THE NUMBER OF W1-6 SHIFT SIGNS TO PLACE FOR A SHIFT IS AS FOLLOWS:  
 SHIFTS 4FT OR LESS, PLACE ONE W1-6(R)(L)  
 SHIFTS 5FT TO 12FT, PLACE TWO W1-6(R)(L)  
 SHIFTS MORE THAN 12FT, PLACE THREE OR MORE W1-6(R)(L) SIGNS DEPENDING UPON LENGTH OF SHIFT AND AS PER THE ENGINEER.
- S12: PLACE R2-1 SIGNS AS DETAILED IN NOTE S5 WHEN THERE IS A SPEED REDUCTION IN THIS DIRECTION

**TRAFFIC REGULATOR NOTES**

- TR1: TRAFFIC REGULATORS MUST FOLLOW ALL THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS, THE CURRENT VERSIONS OF THE TRAFFIC REGULATOR'S INSTRUCTION MANUAL AND THE VIDEO "HOW TO SAFELY REGULATE TRAFFIC IN MICHIGAN". THE MAXIMUM DISTANCE BETWEEN THE TRAFFIC REGULATORS IS DETERMINED BY THE ROADWAY ADT, GEOMETRICS, AND AS DIRECTED BY THE ENGINEER.
- TR2: PROVIDE APPROPRIATE BALLOON LIGHTING TO SUFFICIENTLY ILLUMINATE TRAFFIC REGULATOR'S STATIONS WHEN TRAFFIC REGULATING IS ALLOWED DURING THE HOURS OF DARKNESS.
- TR3: PROVIDE EITHER A STOP/SLOW AFAD OR A RED/YELLOW LENS AFAD, MEETING THE REQUIREMENTS OF THE MMUTCD

**TEMPORARY TRAFFIC CONTROL DEVICE NOTES**

- TCD1: THE MAXIMUM DISTANCE IN FEET BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD NOT EXCEED 1.0 TIMES THE WORK ZONE SPEED LIMIT IN MPH FOR ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT LESS THAN 45 MPH AND SHOULD NOT EXCEED 50 FEET ON ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT OF 45 MPH OR GREATER. THE SPACING FOR 42 INCH CHANNELIZING DEVICE TAPERS ARE NOT TO EXCEED 25 FEET AT NIGHT.
- TCD2: THE MAXIMUM DISTANCE IN FEET BETWEEN CHANNELIZING DEVICES IN A TANGENT SHOULD NOT EXCEED TWICE THE WORK ZONE SPEED LIMIT IN MPH FOR ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT LESS THAN 45 MPH AND SHOULD NOT EXCEED 100 FEET ON ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT OF 45 MPH OR GREATER. THE SPACING FOR 42 INCH CHANNELIZING DEVICE TANGENTS ARE NOT TO EXCEED 50 FEET AT NIGHT.
- TCD3: TYPE III BARRICADES MUST BE LIGHTED FOR OVERNIGHT CLOSURES.
- TCD4: WHEN THE HAUL ROAD IS NOT IN USE, PLACE LIGHTED TYPE III BARRICADES WITH "ROAD CLOSED" EXTENDING COMPLETELY ACROSS THE HAUL ROAD.
- TCD5: USE OBJECT MARKER SIGNS IN LIEU OF THE TYPE B HIGH INTENSITY LIGHT SHOWN IN THE STANDARD PLAN FOR TEMPORARY CONCRETE BARRIER (R-53, AND R-126) WHEN USED WITH A TEMPORARY SIGNAL SYSTEM. THE OBJECT MARKERS MUST BE A MINIMUM OF 12 INCHES IN WIDTH AND 36 INCHES IN HEIGHT AND HAVE ORANGE AND WHITE RETROREFLECTIVE SHEETING. THE RETROREFLECTIVE SHEETING MUST HAVE ALTERNATING DIAGONAL ORANGE AND WHITE STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION VEHICULAR TRAFFIC IS TO PASS.
- TCD6: PLACE LIGHTED ARROW PANELS AS CLOSE TO THE BEGINNING OF TAPERS AS PRACTICAL, BUT NOT IN A MANNER THAT WILL OBSCURE OR CONFUSE APPROACHING MOTORISTS WHEN PHYSICAL LIMITATIONS RESTRICT PLACEMENT. IN CURBED SECTIONS, IF ARROW BOARD CANNOT BE PLACED BEHIND CURB, PLACE ARROW BOARD IN THE CLOSED LANE AS CLOSE TO THE BEGINNING OF TAPER AS POSSIBLE.
- TCD7: ADDITIONAL TYPE III BARRICADES MAY BE REQUIRED TO COMPLETELY CLOSE OFF ROAD FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT.
- TCD8: WHERE THE SHIFTED SECTION IS SHORTER THAN 600 FEET, A DOUBLE REVERSE CURVE SIGN (W24-1) CAN BE USED INSTEAD OF THE FIRST REVERSE CURVE SIGN, AND THE SECOND REVERSE CURVE SIGN CAN BE OMITTED.
- TCD9: RUMBLE STRIPS ARE TO BE PLACED AS SPECIFIED IN THE CONTRACT. IF NOT SPECIFIED IN THE CONTRACT, PLACE RUMBLE STRIPS AS SHOWN, AND IN ACCORDANCE WITH THE RUMBLE STRIP MANUFACTURER'S RECOMMENDATIONS. AN ARRAY OF RUMBLE STRIPS CONTAINS THREE RUMBLE STRIPS. PLACE THE RUMBLE STRIPS IN THE ARRAY AT A CONSISTENT DISTANCE, BETWEEN 10' AND 20' APART.
- TCD10: SEE THE WORK ZONE SAFETY AND MOBILITY MANUAL, PORTABLE CHANGEABLE MESSAGE SIGN GUIDELINES FOR RECOMMENDED AND CORRECT PCMS MESSAGING. STAGGER PCMS THAT ARE ON OPPOSING SIDES OF THE ROAD 1000 FEET FROM EACH OTHER.

**RAMP NOTES**

- RMP1: WHEN CONDITIONS ALLOW, E5-1 SIGNS MUST BE REMOVED OR COVERED AND CHANNELIZING DEVICES MUST BE POSITIONED TO ENABLE RAMP TRAFFIC TO DIVERGE IN A FREE MANNER
- RMP2: STOP AND YIELD CONDITIONS SHOULD BE AVOIDED WHENEVER PRACTICAL. WHEN CONDITIONS WARRANT, R1-1 SIGNS MAY BE USED IN PLACE OF R1-2 SIGNS. WHEN R-1 SIGNS ARE USED, W3-1 SIGNS MUST BE USED IN PLACE OF W3-2 SIGNS. CONSIDERATION SHOULD BE GIVEN TO CLOSING THE RAMP TO COMPLETE WORK TO ALLOW AN ADEQUATE MERGE DISTANCE. WORK SHOULD BE EXPEDITED TO AVOID THE STOP AND/OR YIELD CONDITIONS.

|  |              |                             |  |                      |
|--|--------------|-----------------------------|--|----------------------|
|  | NOT TO SCALE | MAINTAINING TRAFFIC TYPICAL | <b>TRAFFIC TYPICALS<br/>NOTE SHEET</b> | DATE:<br>MAY 2022    |
|  |              | NO:<br><b>102-GEN-NOTES</b> |  | SHEET:<br><br>1 OF 2 |
| FILE: 102-GEN-NOTES.dgn  |              |                             |  |                      |

THE FOLLOWING NOTES APPLY IF CALLED FOR ON THE TRAFFIC TYPICAL

**SIGNAL NOTES**

- SIG1: EXISTING SIGNAL MUST BE EITHER 4-WAY FLASHING RED, BAGGED, OR TURNED OFF.
- SIG2: SIGNAL IS IN OPERATION.
- SIG3: DELINEATE THE WORK ZONE AREA WITH 28 INCH CONES FOR DAYTIME WORK, OR 42 INCH CHANNELIZING DEVICES FOR NIGHTTIME WORK.
- SIG4: THE CONTRACTOR MUST HAVE A DESIGNATED SPOTTER IF THE AERIAL BUCKET TRUCK IS LOCATED OVER ACTIVE TRAVEL LANES.
- SIG5: THE LOWEST POINT OF THE BUCKET MAY NOT TRAVEL BELOW 14 FOOT VERTICAL CLEARANCE. THE CONTRACTOR MUST UTILIZE AN ALTERNATE SET UP, OR PLACE THE INTERSECTION IN A 4 WAY STOP IF THE 14 FOOT VERTICAL CLEARANCE IS COMPROMIZED. USE TRAFFIC REGULATORS TO CONTROL TRAFFIC THROUGH THE INTERSECTION WHEN TRAFFIC IS PLACED IN A 4 WAY STOP.
- SIG6: DELINEATE THE TRUCK WITH CHANNELIZING DEVICES. THE POSITION OF THE TRUCK MAY BE MOVED TO FACILITATE WORK.

**MAINTENANCE AND SURVEYING NOTES**

- MS1: WHENEVER STOPPING SIGHT DISTANCE EXISTS TO THE REAR, THE SHADOW VEHICLES SHOULD MAINTAIN THE RECOMENDED DISTANCE FROM THE WORK AREA AND PROCEED AT THE SAME SPEED. THE SHADOW VEHICLE SHOULD SLOW DOWN AND TRAVEL AT A FARTHER DISTANCE TO PROVIDE ADEQUATE SIGHT DISTANCE IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES.
- MS2: WORKERS OUTSIDE OF VEHICLES SHOULD WORK WITHIN 150' OF WORK VEHICLES WITH AN ACTIVATED BEACON, BETWEEN THE "BEGIN WORK CONVOY" SIGN AND THE "END WORK CONVOY" SIGN, OR BETWEEN THE "WORK ZONE BEGINS" AND "END ROAD WORK" SIGN.
- MS3: WORK OR SHADOW VEHICLES WITH OR WITHOUT A TMA MAY BE USED TO SEPARATE THE WORK SPACE FROM TRAFFIC. IF USED, THE VEHICLES SHOULD BE PARKED ACCORDING TO THE ROLL AHEAD DISTANCE TABLES.
- MS4: WORK AND SHADOW VEHICLES SHALL BE APPROPRIATELY EQUIPPED WITH AN ACTIVATED AMBER BEACON.
- MS5: WHEN WORKERS ARE OUTSIDE THEIR VEHICLES IN AN EXISTING LANE WHILE A MOBILE OPERATION IS OCCURRING DURING THE NIGHTTIME HOURS, CHANNELIZING DEVICES TO DELINEATE OPEN OR CLOSED LANES AT 50 FT SPACING MUST BE USED. AN EXAMPLE OF AN OPERATION (BUT NOT LIMITED TO) IS THE LAYOUT OF CONCRETE PATCHES.
- MS6: W21-6 AND W20-1 SIGNS MAY BE SUBSTITUTED AS DETERMINED BY THE TYPE OF WORK TAKING PLACE AS PER THE ENGINEER.



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO: 102-GEN-NOTES

TRAFFIC TYPICALS  
NOTE SHEET

DATE: MAY 2022  
SHEET:

2 OF 2

SIGN NUMBER KEY

|   |   |  |  |   |   |   |   |
|---|---|--|--|---|---|---|---|
| <br>E5-1f<br>48" x 48"<br>60" x 48"                                     | <br>E5-2<br>48" x 36"   | <br>E5-2a<br>48" x 36"   | <br>E5-3<br>48" x 36"  | <br>E13-1P<br>VAR x 24"   | <br>E13-1aP<br>36" x 24"  | <br>G20-1<br>60" x 24"  | <br>G20-2<br>48" x 24"  |
| <br>G20-4<br>36" x 18"  | <br>I-6a<br>18" x 18"<br>24" x 24"<br>30" x 30"                         | <br>M1-1<br>18" x 18"<br>24" x 24"<br>36" x 36"<br>48" x 48"             | <br>M1-1<br>22.5" x 18"<br>30" x 24"<br>45" x 36"<br>60" x 48"           | <br>M1-2<br>18" x 18"<br>24" x 24"<br>36" x 36"<br>48" x 48"            | <br>M1-2<br>22.5" x 18"<br>30" x 24"<br>45" x 36"<br>60" x 48"          | <br>M1-3<br>18" x 18"<br>24" x 24"<br>36" x 36"<br>48" x 48"            | <br>M1-3<br>22.5" x 18"<br>30" x 24"<br>45" x 36"<br>60" x 48"            |
| <br>M1-4<br>18" x 18"<br>24" x 24"<br>36" x 36"<br>48" x 48"            | <br>M1-4<br>22.5" x 18"<br>30" x 24"<br>45" x 36"<br>60" x 48"          | <br>M1-5<br>18" x 18"<br>24" x 24"<br>30" x 30"<br>36" x 36"             | <br>M1-5a<br>18" x 18"<br>24" x 24"                                      | <br>M1-6<br>18" x 18"<br>24" x 24"<br>36" x 36"                         | <br>M1-6<br>22.5" x 18"<br>30" x 24"<br>45" x 36"                       | <br>M3-1<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18" | <br>M3-2<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18"   |
| <br>M3-3<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18" | <br>M3-4<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18" | <br>M4-1<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18"  | <br>M4-1a<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18" | <br>M4-2<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18" | <br>M4-3<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18" | <br>M4-4<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18"             | <br>M4-5<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18"   |
| <br>M4-6<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18" | <br>M4-7<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18" | <br>M4-7a<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18" | <br>M4-8<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"               | <br>M4-8a<br>24" x 18"  | <br>M4-8b<br>24" x 12"  | <br>M4-9L<br>30" x 24"<br>48" x 36"<br>60" x 48"                        | <br>M4-9R<br>30" x 24"<br>48" x 36"<br>60" x 48"                          |
| <br>M4-9j<br>30" x 24"<br>48" x 36"<br>60" x 48"                        | <br>M4-9kL<br>30" x 30"<br>48" x 42"<br>60" x 54"                       | <br>M4-9kR<br>30" x 30"<br>48" x 42"<br>60" x 54"                        | <br>M4-9mL<br>30" x 30"<br>48" x 42"<br>60" x 54"                        | <br>M4-9mR<br>30" x 30"<br>48" x 42"<br>60" x 54"                       | <br>M4-9dL<br>12" x 18"   | <br>M4-9dR<br>12" x 18"   | <br>M4-9e<br>12" x 18"  |
| <br>M4-9f<br>12" x 18"  | <br>M4-9gL<br>12" x 18"   | <br>M4-9gR<br>12" x 18"  | <br>M4-9h<br>12" x 24"   | <br>M4-9i<br>12" x 18"  | <br>M4-10L<br>48" x 18"   | <br>M4-10R<br>48" x 18"   | <br>M4-11a<br>12" x 6"<br>18" x 9"<br>24" x 12"<br>30" x 15"<br>36" x 18" |
| <br>M5-1L<br>12" x 9"<br>21" x 15"<br>30" x 21"                         | <br>M5-1R<br>12" x 9"<br>21" x 15"<br>30" x 21"                         | <br>M5-2L<br>12" x 9"<br>21" x 15"<br>30" x 21"                          | <br>M5-2R<br>12" x 9"<br>21" x 15"<br>30" x 21"                          | <br>M5-3<br>12" x 9"<br>21" x 15"<br>30" x 21"                          | <br>M6-1L<br>12" x 9"<br>18" x 12"<br>21" x 15"<br>30" x 21"            | <br>M6-1R<br>12" x 9"<br>18" x 12"<br>21" x 15"<br>30" x 21"            | <br>M6-2L<br>12" x 9"<br>18" x 12"<br>21" x 15"<br>30" x 21"              |
| <br>M6-2R<br>12" x 9"<br>18" x 12"<br>21" x 15"<br>30" x 21"            | <br>M6-3<br>12" x 9"<br>18" x 12"<br>21" x 15"<br>30" x 21"             | <br>M6-4<br>12" x 9"<br>18" x 12"<br>21" x 15"<br>30" x 21"              | <br>M6-5<br>12" x 9"<br>18" x 12"<br>21" x 15"<br>30" x 21"              | <br>M6-6L<br>12" x 9"<br>18" x 12"<br>21" x 15"<br>30" x 21"            | <br>M6-6R<br>12" x 9"<br>18" x 12"<br>21" x 15"<br>30" x 21"            | <br>M6-7L<br>12" x 9"<br>18" x 12"<br>21" x 15"<br>30" x 21"            | <br>M6-7R<br>12" x 9"<br>18" x 12"<br>21" x 15"<br>30" x 21"              |

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS



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103-GEN-SIGN

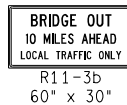
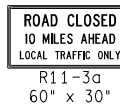
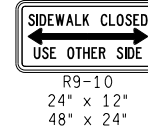
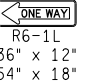
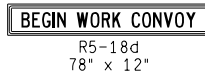
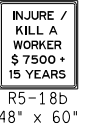
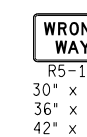
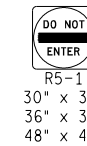
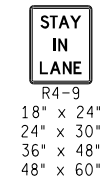
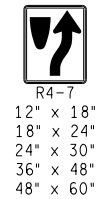
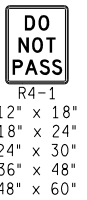
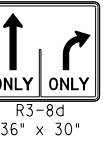
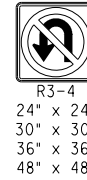
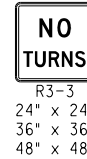
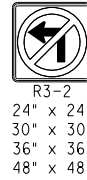
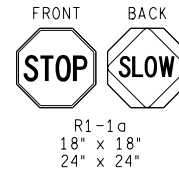
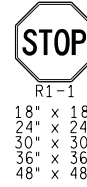
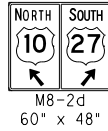
TRAFFIC TYPICALS  
SIGN SHEET

DATE:  
JUNE 2021

SHEET:

1 OF 5

SIGN NUMBER KEY



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NO:

103-GEN-SIGN

TRAFFIC TYPICALS SIGN SHEET

DATE: JUNE 2021  
SHEET:

SIGN NUMBER KEY



W1-1L  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-1R  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-2L  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-2R  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-2bL  
36" x 36"  
48" x 48"



W1-2bR  
36" x 36"  
48" x 48"



W1-3L  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-3R  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4L  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4R  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4bL  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4bR  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4cL  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W1-4cR  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W24-1L  
30" x 30"  
36" x 36"  
48" x 48"

ALL LANES

W24-1cP  
24" x 18"  
30" x 24"



W24-1R  
30" x 30"  
36" x 36"  
48" x 48"



W24-1aL  
30" x 30"  
36" x 36"  
48" x 48"



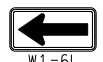
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36" x 36"  
48" x 48"



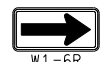
W24-1bL  
30" x 30"  
36" x 36"  
48" x 48"



W24-1bR  
30" x 30"  
36" x 36"  
48" x 48"



W1-6L  
24" x 12"  
36" x 18"  
48" x 24"  
60" x 30"  
96" x 48"



W1-6R  
24" x 12"  
36" x 18"  
48" x 24"  
60" x 30"  
96" x 48"



W1-8L  
12" x 18"  
18" x 24"  
24" x 30"  
30" x 36"  
36" x 48"



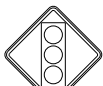
W1-8R  
12" x 18"  
18" x 24"  
24" x 30"  
30" x 36"  
36" x 48"



W3-1  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W3-2  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W3-3  
18" x 18"  
30" x 30"  
36" x 36"  
48" x 48"



W3-4  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W3-4b  
30" x 30"  
36" x 36"  
48" x 48"



W3-5  
36" x 36"  
48" x 48"



W3-5a  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W3-5b  
30" x 30"  
36" x 36"  
48" x 48"



W4-1L  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-1R  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-2L  
30" x 30"  
36" x 36"  
48" x 48"



W4-2R  
30" x 30"  
36" x 36"  
48" x 48"



W4-3L  
30" x 30"  
36" x 36"  
48" x 48"



W4-3R  
30" x 30"  
36" x 36"  
48" x 48"



W4-5L  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-5R  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-5P  
18" x 24"  
24" x 30"



W4-6L  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-6R  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W4-7L  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W4-7R  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W5-1  
30" x 30"  
36" x 36"  
48" x 48"



W5-2  
18" x 18"  
30" x 30"  
36" x 36"  
48" x 48"



W5-3  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W5-4  
30" x 30"  
36" x 36"  
48" x 48"



W6-1  
30" x 30"  
36" x 36"  
48" x 48"



W6-2  
30" x 30"  
36" x 36"  
48" x 48"



W6-3  
30" x 30"  
36" x 36"  
48" x 48"



W6-4  
12" x 18"



W7-1  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W7-1a  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-1  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO:

103-GEN-SIGN

TRAFFIC TYPICAL  
SIGN SHEET

DATE:  
JUNE 2021

SHEET:

3 OF 5

SIGN NUMBER KEY



W8-2  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-3  
18" x 18"  
30" x 30"  
36" x 36"  
48" x 48"



W8-4  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-5  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-5P  
24" x 18"  
30" x 24"  
36" x 30"



W8-7  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-8  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-9  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-11  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-12  
30" x 30"  
36" x 36"  
48" x 48"



W8-14  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-15  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



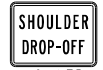
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30" x 24"  
36" x 30"



W8-17L  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-17R  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-17P  
24" x 18"  
30" x 24"  
36" x 30"



W8-18  
24" x 24"  
36" x 36"  
48" x 48"



W8-23  
24" x 24"  
36" x 36"  
48" x 48"



W8-24  
30" x 30"  
36" x 36"  
48" x 48"



W8-25  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W8-26  
36" x 36"  
48" x 48"



W9-1L  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W9-1R  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W9-2L  
30" x 30"  
36" x 36"  
48" x 48"



W9-2R  
30" x 30"  
36" x 36"  
48" x 48"



W9-3C  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W9-3L  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W9-3R  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W9-3a  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W9-3b  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W11-10  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W11-10a  
30" x 30"  
36" x 36"  
48" x 48"



W11-24  
36" x 36"  
48" x 48"



W12-1  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



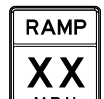
W12-2  
18" x 18"  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W13-1P  
18" x 18"  
24" x 24"  
30" x 30"



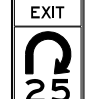
W13-2  
24" x 30"  
36" x 48"  
48" x 60"



W13-3  
24" x 30"  
36" x 48"  
48" x 60"



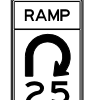
W13-4P  
24" x 24"  
36" x 36"



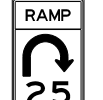
W13-6  
24" x 42"  
36" x 60"  
48" x 84"



W13-6a  
24" x 42"  
36" x 60"  
48" x 84"



W13-7  
24" x 42"  
36" x 60"  
48" x 84"



W13-7a  
24" x 42"  
36" x 60"  
48" x 84"



W14-3  
36" x 24"  
40" x 30"  
48" x 36"  
64" x 48"



W16-2P  
18" x 12"  
24" x 18"  
30" x 24"



W16-4aP  
18" x 12"  
24" x 18"  
30" x 24"  
36" x 30"



W16-12P  
24" x 18"



W16-13P  
24" x 18"  
30" x 24"



W20-1  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W20-1a  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W20-1b  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W20-1c  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W20-1d  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W20-2  
30" x 30"  
36" x 36"  
48" x 48"



W20-3  
30" x 30"  
36" x 36"  
48" x 48"



W20-3a  
30" x 30"  
36" x 36"  
48" x 48"

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103-GEN-SIGN

TRAFFIC TYPICALS  
SIGN SHEET

DATE:  
JUNE 2021

SHEET:

4 OF 5

SIGN NUMBER KEY



W20-3b  
30" x 30"  
36" x 36"  
48" x 48"



W20-4  
30" x 30"  
36" x 36"  
48" x 48"



W20-4c  
36" x 36"  
48" x 48"



W20-5c  
30" x 30"  
36" x 36"  
48" x 48"



W20-5L  
30" x 30"  
36" x 36"  
48" x 48"



W20-5L1  
30" x 30"  
36" x 36"  
48" x 48"



W20-5L2  
30" x 30"  
36" x 36"  
48" x 48"



W20-5R  
30" x 30"  
36" x 36"  
48" x 48"



W20-5R1  
30" x 30"  
36" x 36"  
48" x 48"



W20-5R2  
30" x 30"  
36" x 36"  
48" x 48"



W20-5aL2  
30" x 30"  
36" x 36"  
48" x 48"



W20-5aL3  
30" x 30"  
36" x 36"  
48" x 48"



W20-5aR2  
30" x 30"  
36" x 36"  
48" x 48"



W20-5aR3  
30" x 30"  
36" x 36"  
48" x 48"



W20-7a  
30" x 30"  
36" x 36"  
48" x 48"



W20-8  
24" x 18"



W20-9  
54" x 48"



W20-10  
48" x 24"  
66" x 30"



W20-11  
12" x 18"



W20-12P  
VARIABLE x 12"



W20-13P  
VARIABLE x 12"



W20-14L  
36" x 36"  
48" x 48"



W20-14R  
36" x 36"  
48" x 48"



W20-14dP  
36" x 12"  
48" x 12"



W20-14bP  
36" x 12"  
48" x 12"



W20-15  
36" x 36"  
48" x 48"



W20-15a  
36" x 36"  
48" x 48"



W20-15c  
48" x 54"



W20-15d  
48" x 54"



W20-16  
36" x 36"  
48" x 48"



W20-17  
36" x 36"  
48" x 48"



W21-1  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



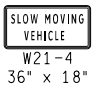
W21-2  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W21-2  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W21-3  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W21-4  
36" x 18"



W21-5  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W21-5dL  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W21-5dR  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W21-5bL  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W21-5bR  
30" x 30"  
36" x 36"  
48" x 48"  
60" x 60"



W21-6  
24" x 24"  
30" x 30"  
36" x 36"  
48" x 48"



W21-7  
30" x 30"  
36" x 36"  
48" x 48"



W21-8  
30" x 30"  
36" x 36"  
48" x 48"



W22-1  
30" x 30"  
36" x 36"  
48" x 48"



W22-2  
42" x 36"



W22-3  
36" x 30"  
42" x 36"



W23-1  
48" x 24"



W23-2  
36" x 36"  
48" x 48"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO:

103-GEN-SIGN

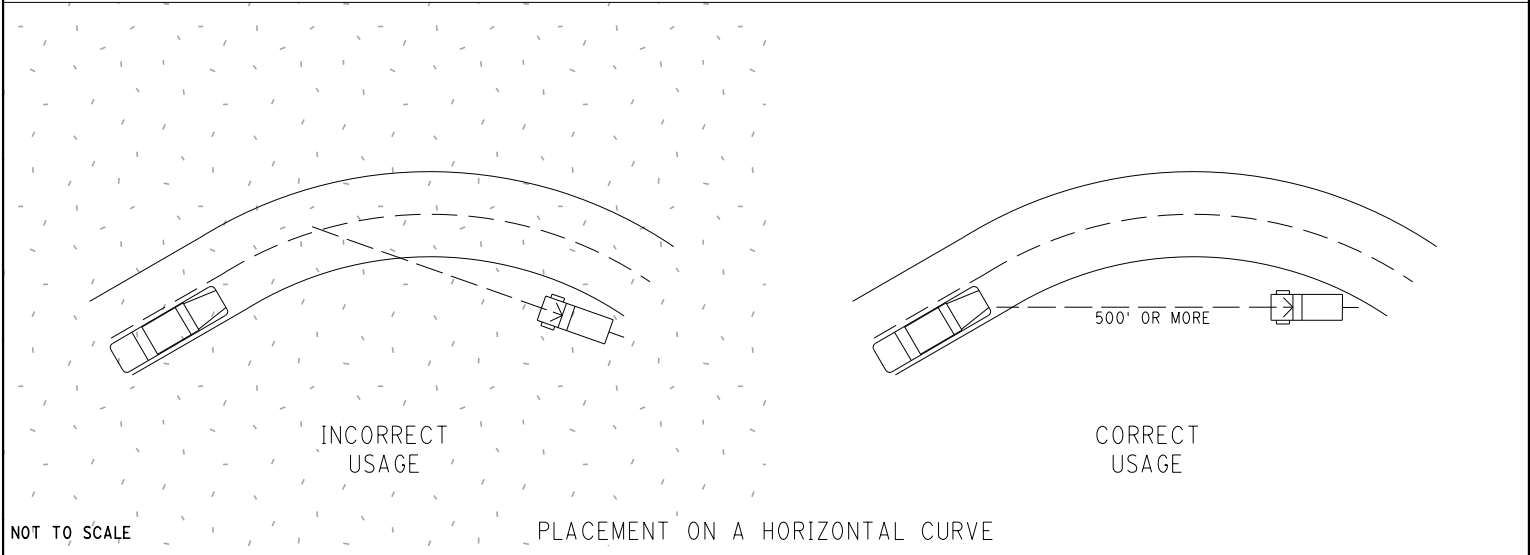
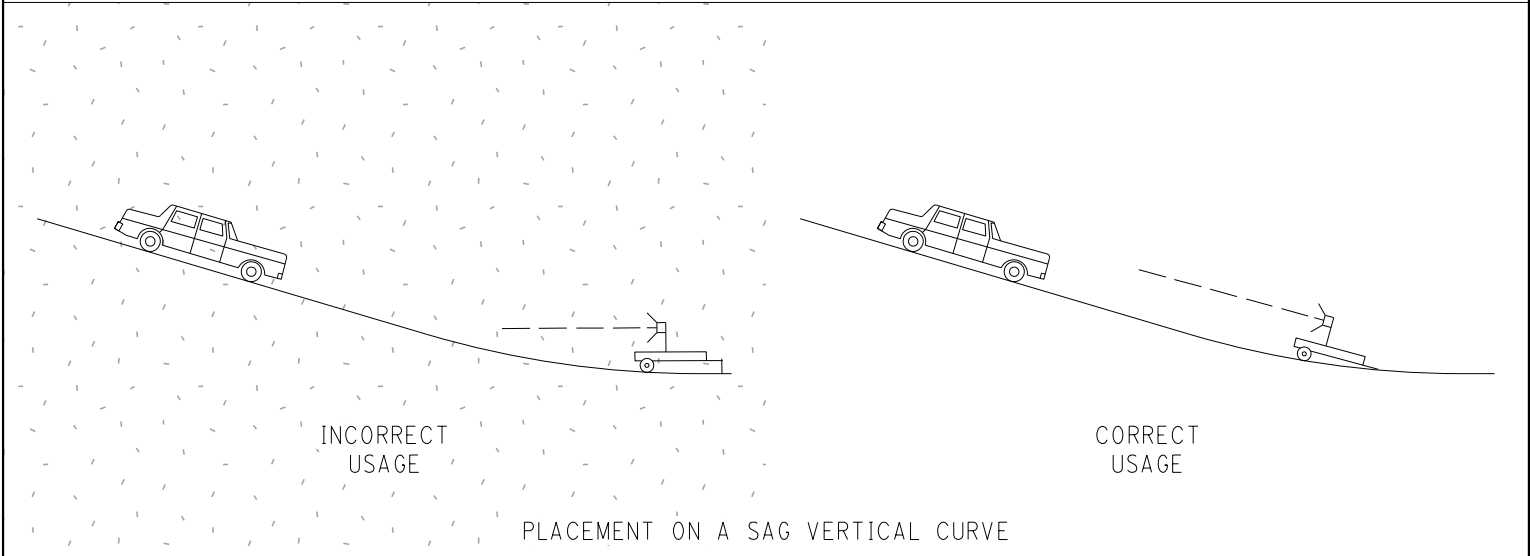
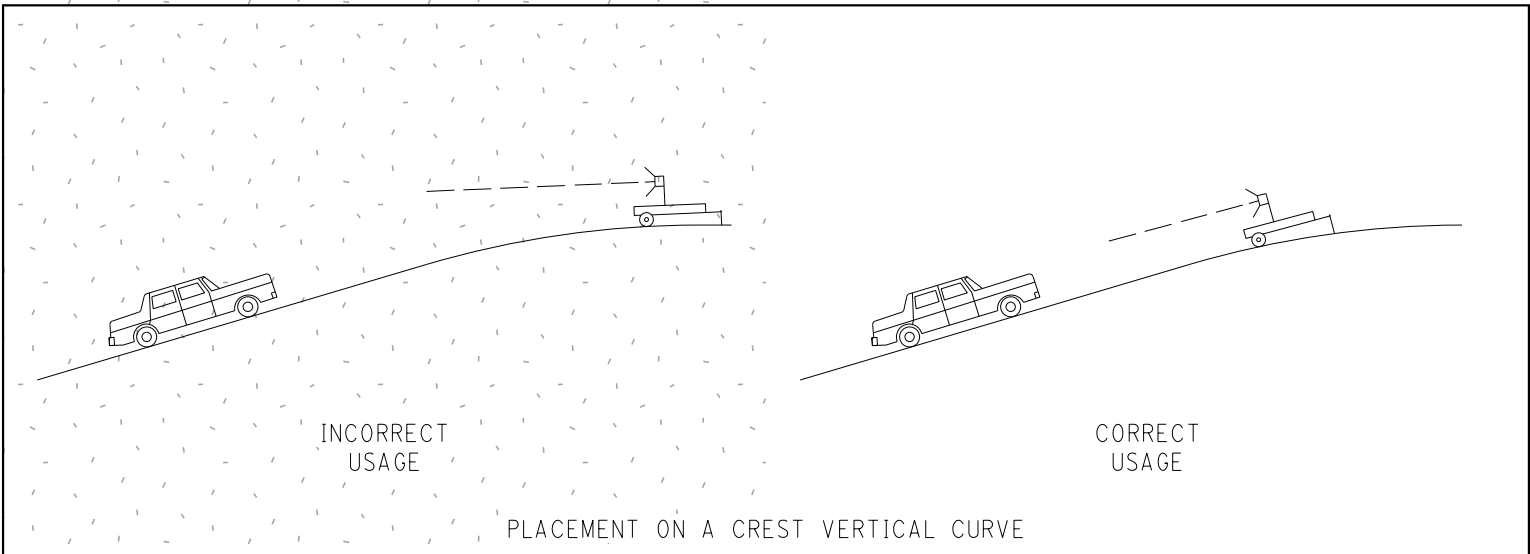
TRAFFIC TYPICAL  
SIGN SHEET

DATE:  
JUNE 2021

SHEET:

5 OF 5

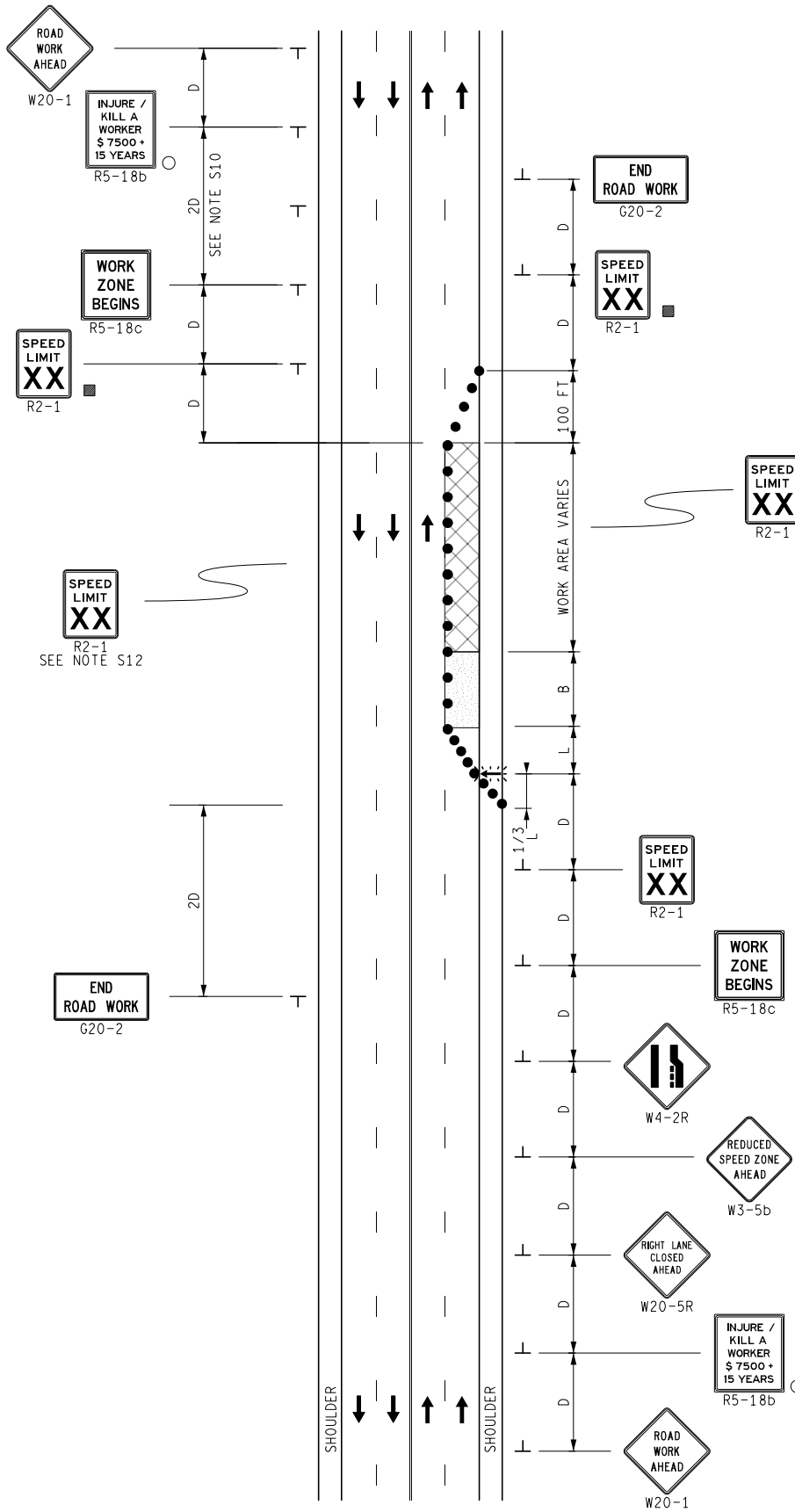




**NOTE:**

ENSURE THE ARROW REMAINS CLEARLY LEGIBLE AT DISTANCES FROM 2,500 FEET TO 200 FEET, FROM ALL TRAFFIC LANES AND ROADWAY ENTRANCES. DO NOT PLACE THE LIGHTED ARROW ON A HORIZONTAL OR VERTICAL CURVE THAT MIGHT INTERFERE WITH THIS LEGIBILITY REQUIREMENT.

|                      |              |                             |   |                |
|----------------------|--------------|-----------------------------|---|----------------|
|                      | NOT TO SCALE | MAINTAINING TRAFFIC TYPICAL | <b>USE OF ARROW BOARD ON HILL OR CURVE<br/>AND WORK ZONE LAYOUT</b> | DATE: MAY 2021 |
|                      |              | NO: 104-GEN-AB              |   | SHEET:         |
| FILE: 104-GEN-AB.dgn |              |                             |   | 1 OF 1         |



**KEY**

- CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- PLACE SIGN AS INDICATED IN NOTE S5
- PLACE SIGN AS INDICATED IN NOTE S2

**STANDARD NOTES**

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4  
 SIGNING: S1, S2, S3, S5, S10, S12  
 DEVICES: TCD1, TCD2, TCD6



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

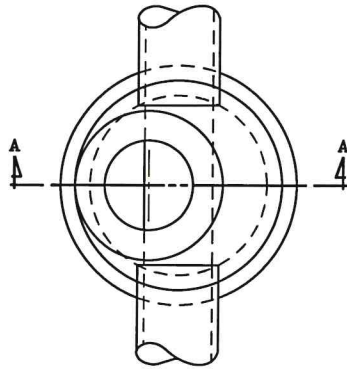
NO: 123-NFW-1LC-(R)

1 RIGHT LANE CLOSURE  
 ON A 4-LANE UNDIVIDED ROADWAY

DATE: MAY 2021

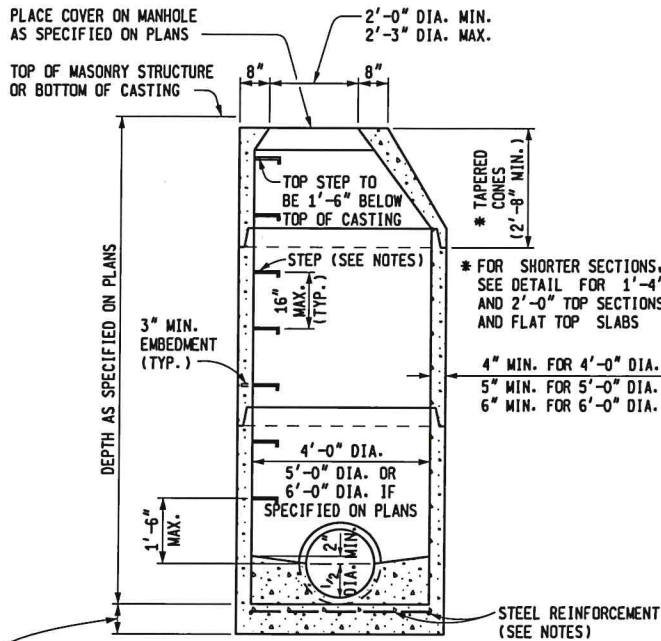
SHEET:

1 OF 1



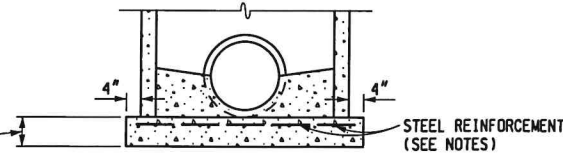
PLAN VIEW

PLACE COVER ON MANHOLE AS SPECIFIED ON PLANS  
 TOP OF MASONRY STRUCTURE OR BOTTOM OF CASTING



INTEGRAL BASE OPTION

CONCRETE FOOTING SHALL BE 8" THICK FOR DEPTHS TO 25'-0" AND 1'-0" THICK FOR DEPTHS OVER 25'-0"

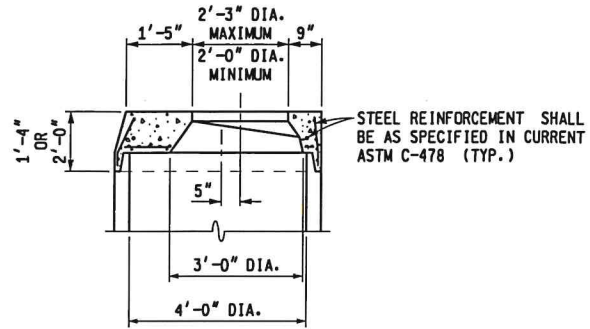


SEPARATE BASE OPTION

CONCRETE FOOTING SHALL BE 8" THICK FOR DEPTHS TO 25'-0" AND 1'-0" THICK FOR DEPTHS OVER 25'-0"

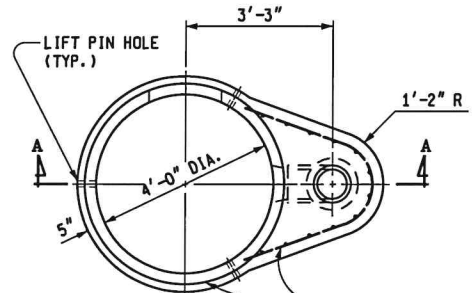
SECTION A - A  
 TYPICAL MANHOLE

PRECAST REINFORCED CONCRETE SHOWN  
 OTHER OPTIONS INCLUDE CONCRETE BLOCK, BRICK, OR CAST-IN-PLACE WALL SECTIONS  
 SEE TYPICAL WALL SECTIONS FOR WALL THICKNESS

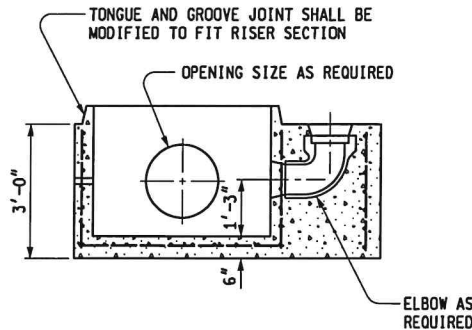


DETAIL FOR  
 1'-4" & 2'-0" TOP SECTIONS

SHAPE MAY VARY FROM DETAIL SHOWN BUT MUST COMPLY WITH ASTM C-478 AND JOINTS SHALL BE COMPATIBLE WITH THE RISER



STEEL REINFORCEMENT SHALL BE AS SPECIFIED IN CURRENT ASTM C-478



SECTION A - A

TYPICAL PRECAST REINFORCED  
 BOTTOM SECTION FOR DROP MANHOLE



PREPARED BY  
 DESIGN DIVISION

DRAWN BY: B.L.T.

CHECKED BY: W.K.P.

DEPARTMENT DIRECTOR  
 Paul C. Ajegba

APPROVED BY: Gregg Brunner, P.E. Gregg Brunner  
 Sep 19 2019 2:17 PM

DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: Bradley C. Wiefelrich Bradley C. Wiefelrich  
 Sep 19 2019 11:22 AM

DIRECTOR, BUREAU OF DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION  
 BUREAU OF DEVELOPMENT STANDARD PLAN FOR

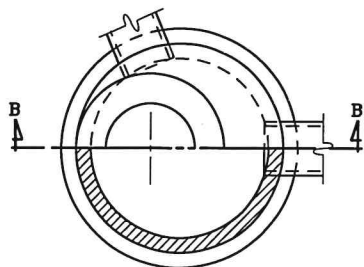
DRAINAGE STRUCTURES

5-18-2020  
 F.H.W.A. APPROVAL

9-19-2019  
 PLAN DATE

R-1-G

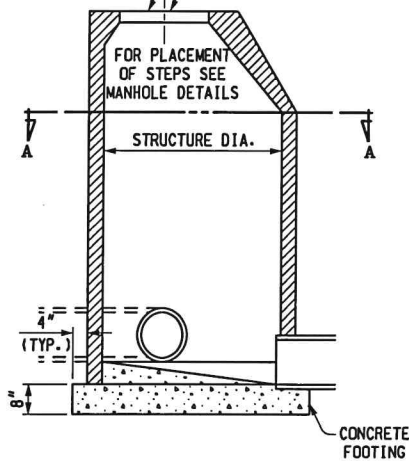
SHEET  
 1 OF 9



HALF SECTION A - A

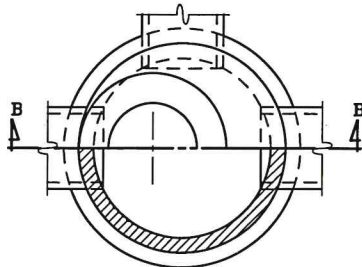
TOP OF MASONRY STRUCTURE OR BOTTOM OF CASTING

PLACE CASTING ON INLET AS SPECIFIED ON PLANS



SEE MANHOLE DETAILS FOR SIZE AND BASE OPTIONS SECTION B - B

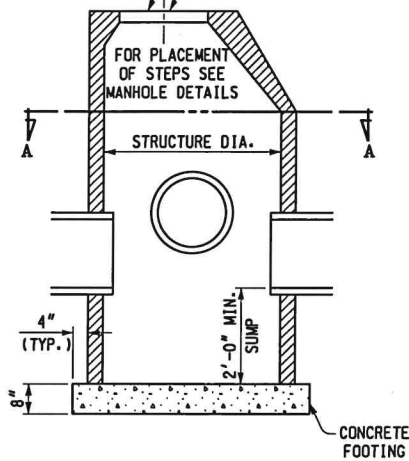
INLET



HALF SECTION A - A

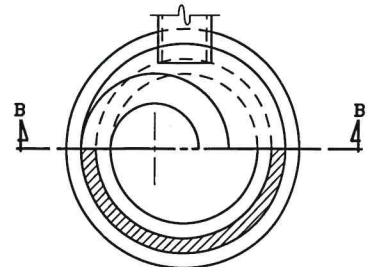
TOP OF MASONRY STRUCTURE OR BOTTOM OF CASTING

PLACE CASTING ON CATCH BASIN AS SPECIFIED ON PLANS



SEE MANHOLE DETAILS FOR SIZE AND BASE OPTIONS SECTION B - B

CATCH BASIN

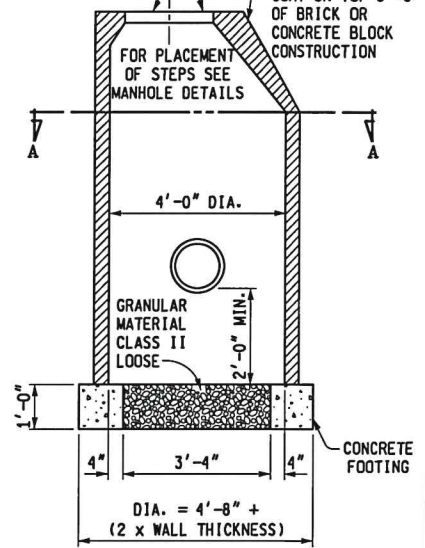


HALF SECTION A - A

TOP OF MASONRY STRUCTURE OR BOTTOM OF CASTING

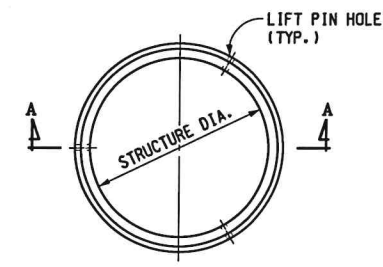
PLACE CASTING ON LEACHING BASIN AS SPECIFIED ON PLANS

1/2" CEMENT PLASTER COAT ON TOP 5'-0" OF BRICK OR CONCRETE BLOCK CONSTRUCTION



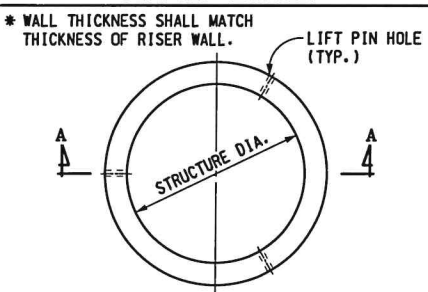
SEE MANHOLE DETAILS FOR BASE OPTIONS SECTION B - B

LEACHING BASIN



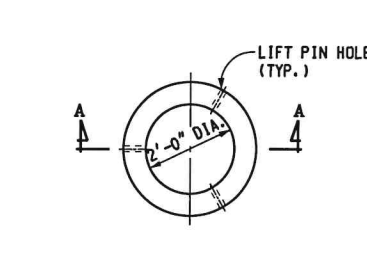
SEE MANHOLE DETAILS FOR SIZE AND BASE OPTIONS

PRECAST SUMP FOR PRECAST RISERS



SEE TYPICAL BRICK AND BLOCK SECTION FOR SIZE AND BASE OPTIONS

PRECAST SUMP FOR BRICK OR BLOCK CONSTRUCTION



SEE MANHOLE DETAILS FOR SIZE AND BASE OPTIONS

PRECAST SUMP FOR 2'-0" DIA. STRUCTURES

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

**DRAINAGE STRUCTURES**

5-18-2020  
F.H.W.A. APPROVAL

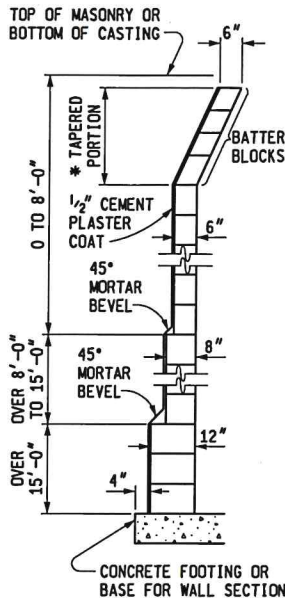
9-19-2019  
PLAN DATE

R-1-G

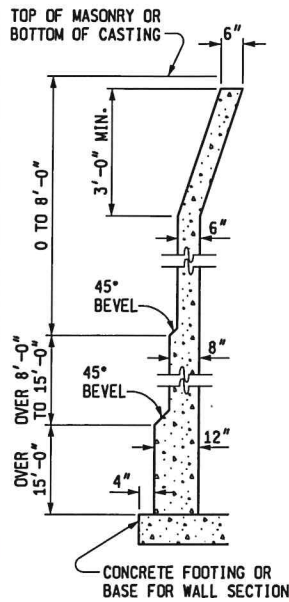
SHEET  
2 OF 9



\* 4 BLOCK MIN. FOR 4'-0" DIA. STRUCTURE  
 \* 6 BLOCK MIN. FOR 5'-0" DIA. STRUCTURE  
 \* 6 BLOCK MIN. FOR 6'-0" DIA. STRUCTURE

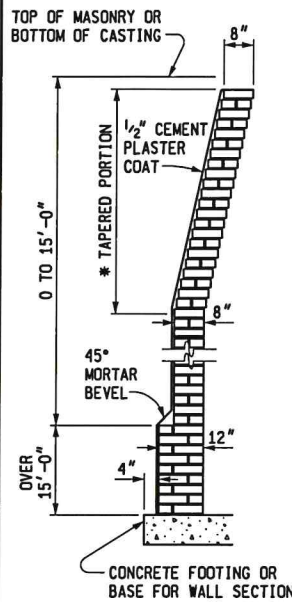


TYPICAL  
 CONCRETE BLOCK  
 WALL SECTION

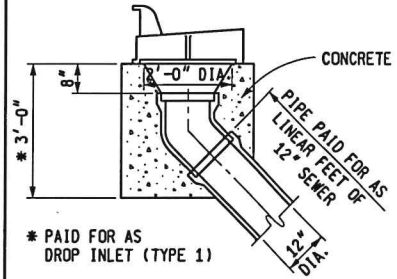
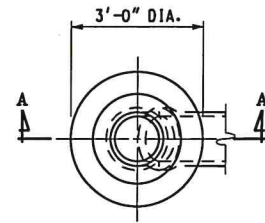


TYPICAL  
 CAST-IN-PLACE  
 CONCRETE  
 WALL SECTION

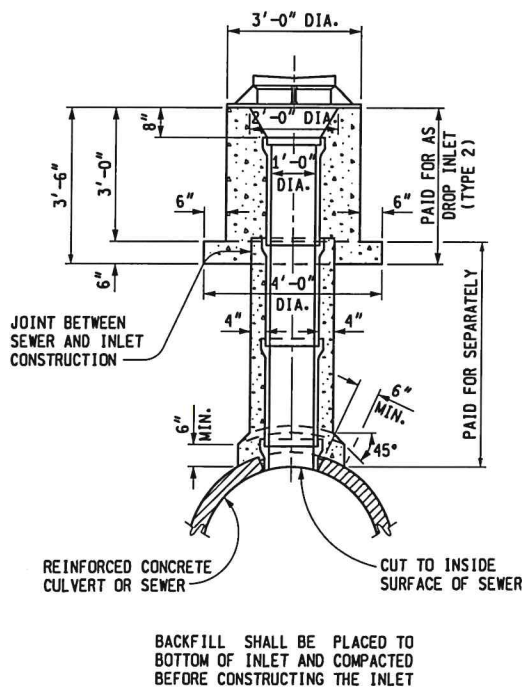
\* 5'-0" MIN. FOR 4'-0" DIA. STRUCTURE  
 \* 6'-0" MIN. FOR 5'-0" DIA. STRUCTURE  
 \* 6'-0" MIN. FOR 6'-0" DIA. STRUCTURE



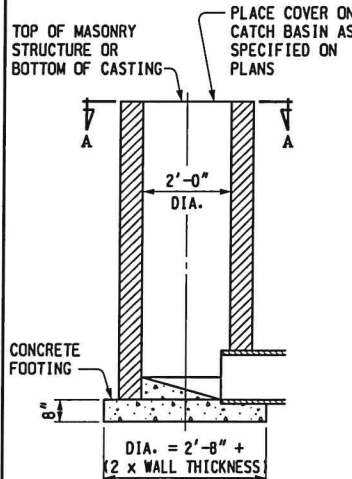
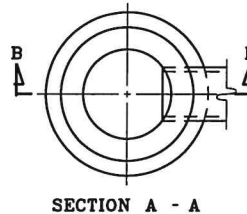
TYPICAL BRICK  
 WALL SECTION



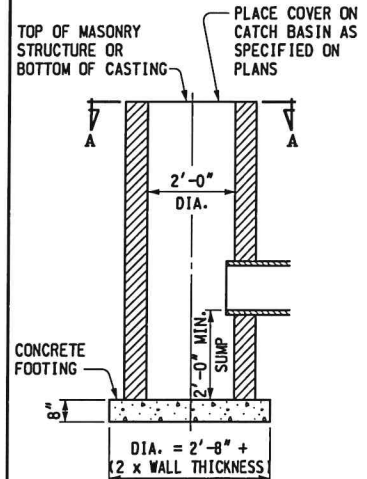
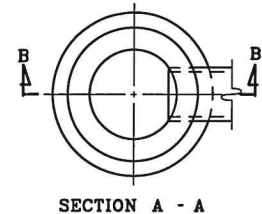
SECTION A - A  
 DROP INLET (TYPE 1)



DROP INLET (TYPE 2)



SECTION B - B  
 INLET



SECTION B - B  
 CATCH BASIN

MICHIGAN DEPARTMENT OF TRANSPORTATION  
 BUREAU OF DEVELOPMENT STANDARD PLAN FOR

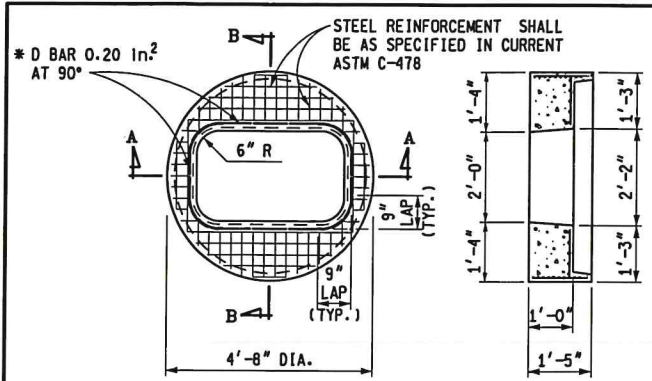
DRAINAGE STRUCTURES

5-18-2020  
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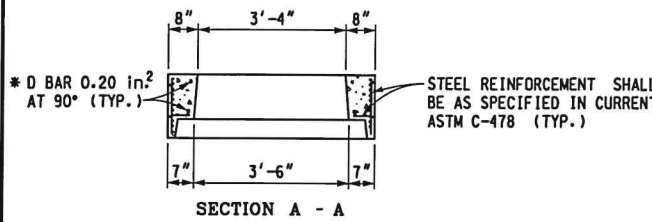
9-19-2019  
 PLAN DATE

R-1-G

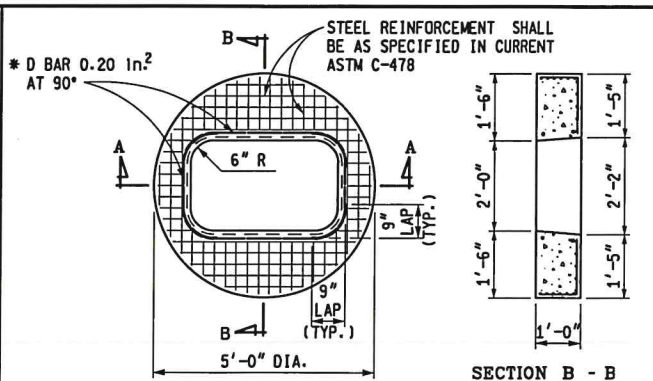
SHEET  
 3 OF 9



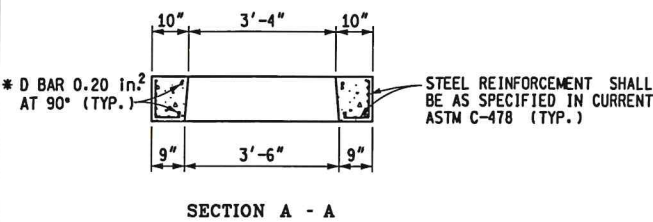
\* D BARS MAY BE BENT AT A SMALLER RADIUS RATHER THAN PARALLELING THE RADIUS IN THE DRAIN OPENING



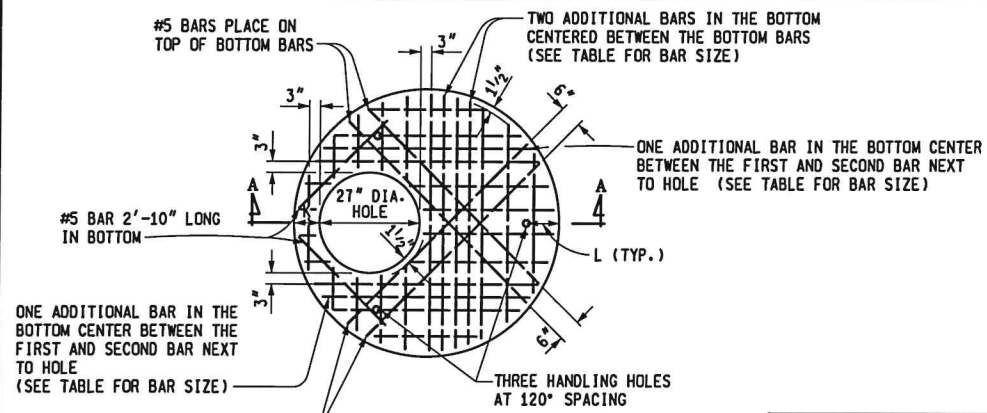
PRECAST FLAT SLAB TOP FOR PRECAST CONCRETE STRUCTURE, 2' x 4' CASTING



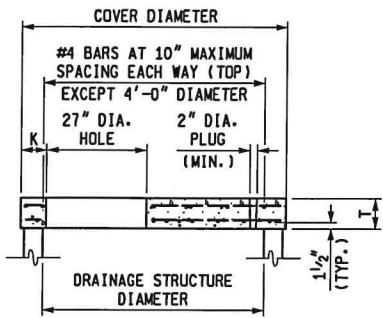
\* D BARS MAY BE BENT AT A SMALLER RADIUS RATHER THAN PARALLELING THE RADIUS IN THE DRAIN OPENING



PRECAST FLAT SLAB TOP FOR MASONRY STRUCTURE, 2' x 4' CASTING



PLAN (SHOWING BOTTOM LAYER OF REINFORCEMENT)



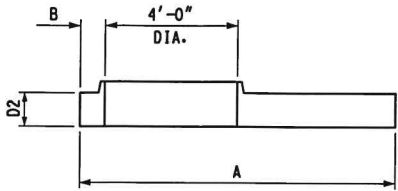
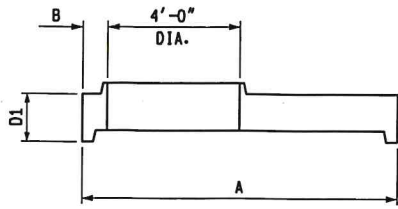
SECTION A - A  
PRECAST REINFORCED CONCRETE FLAT SLAB TOP

| TABLE OF DIMENSIONS |                |     |        |     |                                       |
|---------------------|----------------|-----|--------|-----|---------------------------------------|
| STRUCTURE DIAMETER  | COVER DIAMETER | T   | K      | L   | BAR MAXIMUM SPACING (BOTTOM EACH WAY) |
| * 4'-0"             | 58"            | 6"  | 6"     | 8"  | #5 AT 6"                              |
| 5'-0"               | 72"            | 8"  | 7"     | 9"  | #5 AT 7"                              |
| 6'-0"               | 86"            | 8"  | 8"     | 10" | #5 AT 6"                              |
| 7'-0"               | 101 1/2"       | 12" | 8 3/4" | 11" | #5 AT 5"                              |
| 8'-0"               | 114"           | 12" | 9"     | 11" | #6 AT 6"                              |
| 9'-0"               | 128"           | 12" | 10"    | 12" | #5 AT 6"                              |
| 10'-0"              | 140"           | 12" | 10"    | 13" | #5 AT 6"                              |

\* ONLY BOTTOM LAYERS OF STEEL NECESSARY

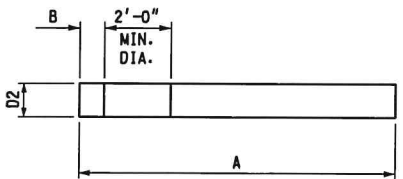
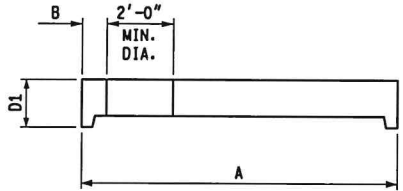
MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

**DRAINAGE STRUCTURES**



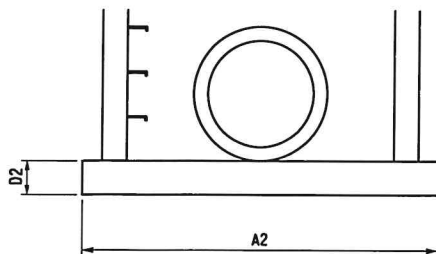
PRECAST REDUCER CAP

| REDUCER CAP DIMENSIONS |                  |        |                |                |
|------------------------|------------------|--------|----------------|----------------|
| STRUCTURE DIAMETER     | CAP DIAMETER "A" | B      | CAP DEPTH "D1" | CAP DEPTH "D2" |
| 7'-0"                  | 101 1/2"         | 8 3/4" | 1'-5"          | 12"            |
| 8'-0"                  | 114"             | 9"     | 1'-5"          | 12"            |
| 9'-0"                  | 128"             | 10"    | 1'-5"          | 12"            |
| 10'-0"                 | 140"             | 10"    | 1'-6"          | 12"            |



PRECAST FLAT SLAB TOP

| FLAT SLAB TOP DIMENSIONS |                    |        |                  |                  |
|--------------------------|--------------------|--------|------------------|------------------|
| STRUCTURE DIAMETER       | COVER DIAMETER "A" | B      | COVER DEPTH "D1" | COVER DEPTH "D2" |
| 7'-0"                    | 101 1/2"           | 8 3/4" | 1'-5"            | 12"              |
| 8'-0"                    | 114"               | 9"     | 1'-5"            | 12"              |
| 9'-0"                    | 128"               | 10"    | 1'-5"            | 12"              |
| 10'-0"                   | 140"               | 10"    | 1'-6"            | 12"              |



SEPARATE BASE OPTION

| BASE AND RISER DIMENSIONS |                    |                    |                         |                 |                 |
|---------------------------|--------------------|--------------------|-------------------------|-----------------|-----------------|
| STRUCTURE DIAMETER        | BASE DIAMETER "A1" | BASE DIAMETER "A2" | MIN. WALL THICKNESS "T" | BASE DEPTH "D1" | BASE DEPTH "D2" |
| 7'-0"                     | 101 1/2"           | 108"               | 7"                      | 8"              | 12"             |
| 8'-0"                     | 114"               | 128"               | 8"                      | 8"              | 12"             |
| 9'-0"                     | 128"               | 140"               | 9"                      | 8"              | 12"             |
| 10'-0"                    | 140"               | 154"               | 10"                     | 8"              | 12"             |

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

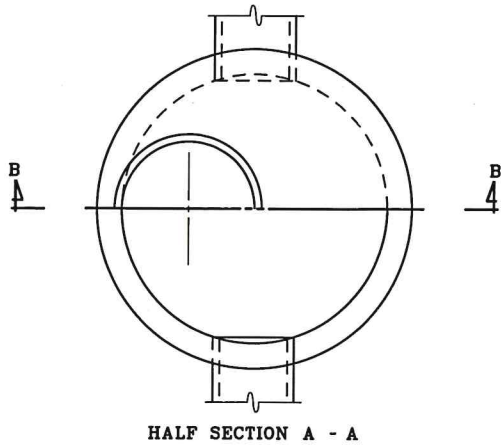
## DRAINAGE STRUCTURES

5-18-2020  
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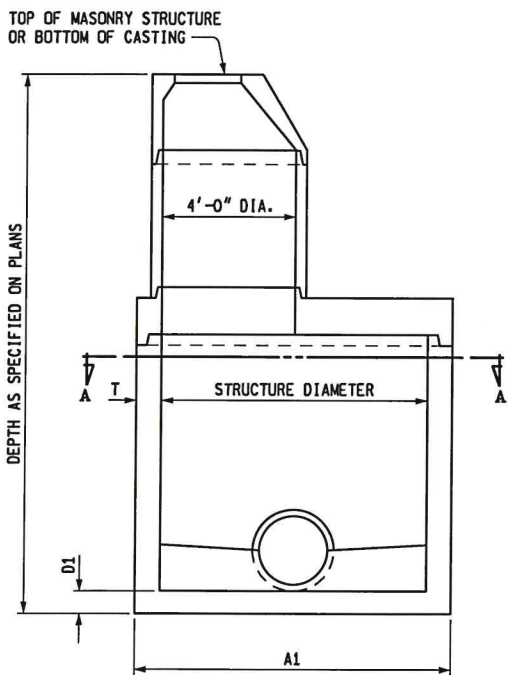
9-19-2019  
PLAN DATE

R-1-G

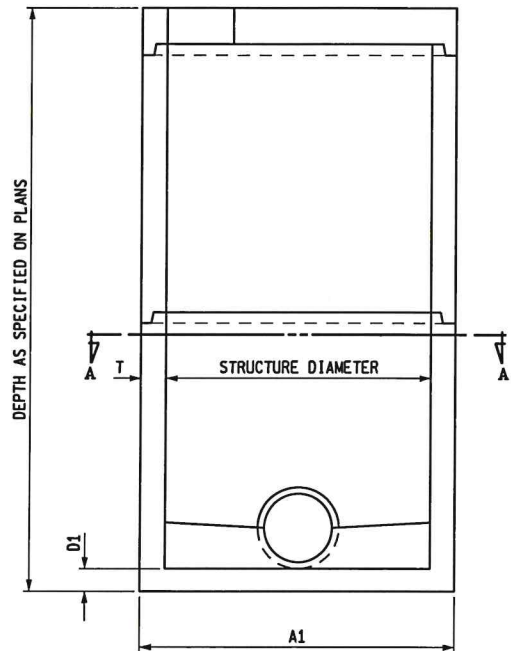
SHEET  
5 OF 9



HALF SECTION A - A



SECTION B - B  
SHOWING REDUCER CAP



SECTION B - B  
SHOWING FLAT SLAB TOP

PRECAST MANHOLE

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

DRAINAGE STRUCTURES

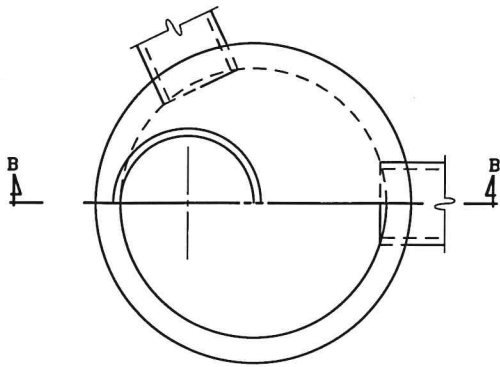
5-18-2020  
F.H.W.A. APPROVAL

9-19-2019  
PLAN DATE

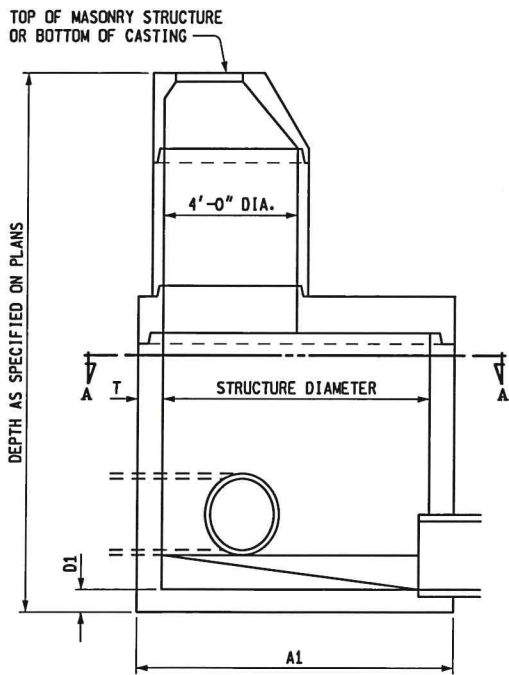
R-1-G

SHEET  
6 OF 9

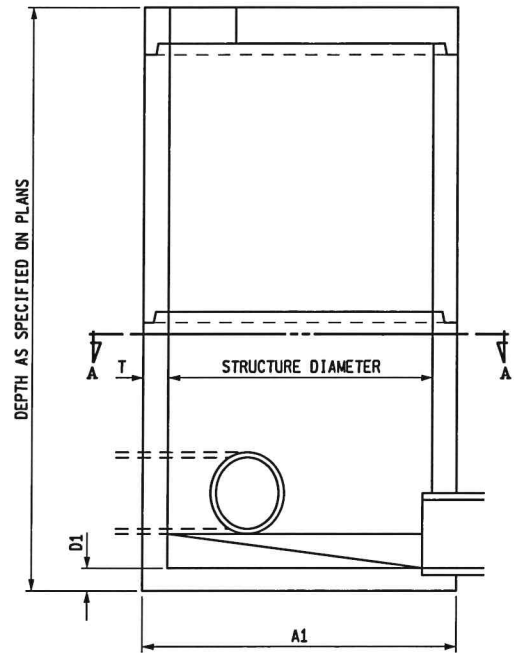




HALF SECTION A - A



SECTION B - B  
SHOWING REDUCER CAP



SECTION B - B  
SHOWING FLAT SLAB TOP

PRECAST INLET

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

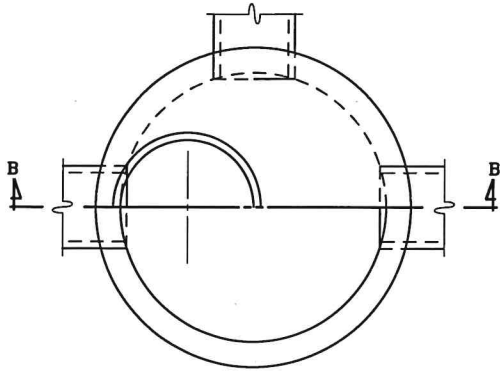
**DRAINAGE STRUCTURES**

5-18-2020  
F.H.W.A. APPROVAL

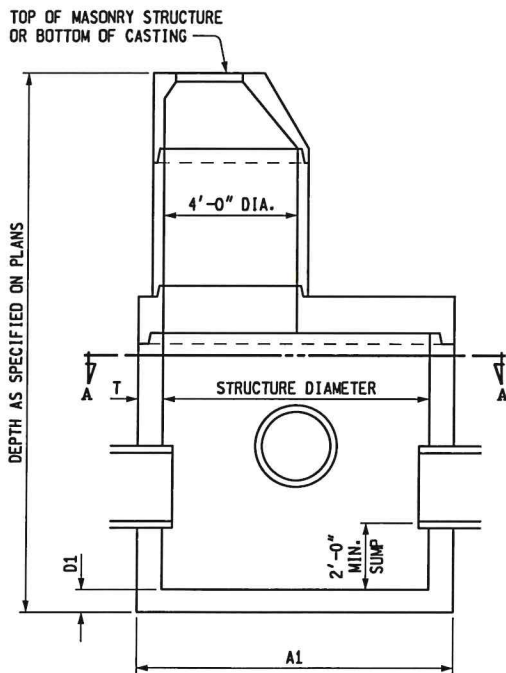
9-19-2019  
PLAN DATE

**R-1-G**

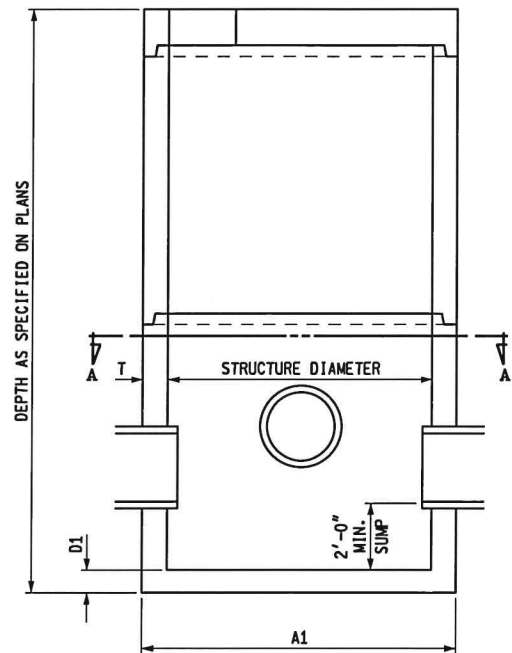
SHEET  
7 OF 9



HALF SECTION A - A



SECTION B - B  
SHOWING REDUCER CAP



SECTION B - B  
SHOWING FLAT SLAB TOP

PRECAST CATCH BASIN

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

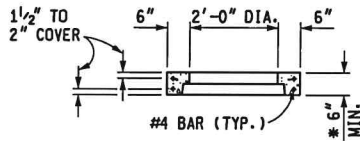
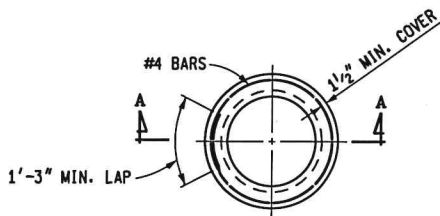
**DRAINAGE STRUCTURES**

5-18-2020  
F.H.W.A. APPROVAL

9-19-2019  
PLAN DATE

**R-1-G**

SHEET  
8 OF 9



SECTION A - A

\* WHEN RISER TONGUE LENGTH IS GREATER THAN 3", USE 2 TIMES THE TONGUE LENGTH.

NOTE: PRECAST RISER SHALL FULLY ENGAGE THE TONGUE OF THE RISER PIPE.

**PRECAST RISER RING**  
(FOR 2'-0" DIAMETER STRUCTURE)

**NOTES:**

THE DRAINAGE STRUCTURE COVERS ALLOWED FOR USE ON THESE DRAINAGE STRUCTURES ARE SPECIFIED IN SUBSEQUENT STANDARD PLANS AND ARE INTERCHANGEABLE ON ANY STRUCTURE.

THE TOPS OF MASONRY STRUCTURES SHALL BE SUFFICIENTLY LOW TO PERMIT PROPER ADJUSTMENT OF COVER TO GRADE USING MORTAR OR BRICK AS DIRECTED BY THE ENGINEER.

PREMIUM JOINTS ARE REQUIRED ON ALL SANITARY MANHOLES. SEE ASTM DESIGNATION C-923.

GRANULAR MATERIAL CLASS III SHALL BE USED IN BACKFILLING AROUND ALL STRUCTURES THAT FALL WITHIN THE 1:1 INFLUENCE LINES FROM THE EDGE OF PAVEMENT OR BACK OF CURB.

STEPS FOR DRAINAGE STRUCTURES SHALL BE OF AN APPROVED DESIGN AND MADE FROM CAST IRON, ALUMINUM, OR PLASTIC COATED STEEL. RUNGS SHALL BE A MINIMUM OF 10" IN CLEAR LENGTH, DESIGNED TO PREVENT THE FOOT FROM SLIPPING OFF THE END. THE MINIMUM HORIZONTAL PULL OUT LOAD SHALL BE 400 LBS. THE MINIMUM VERTICAL LOAD SHALL BE 800 LBS.

THE BELL SHALL BE REMOVED FOR THE FIRST LENGTH OF OUTLET PIPE PROJECTING THROUGH THE WALL OF THE MANHOLE.

PRECAST CONCRETE SECTIONS, SUMPS, BASE SECTIONS, AND FLAT TOP SLABS SHALL BE BUILT ACCORDING TO CURRENT ASTM C-478 AND ACCORDING TO DETAILS SPECIFIED ON THIS PLAN. PRECAST REINFORCED CONCRETE FLAT TOP SLAB SHALL BE MARKED TO SHOW LOCATION OF REINFORCEMENT. THE WALLS OF THE PRECAST UNITS MAY HAVE A SLIGHT TAPER TO ALLOW FOR FORM REMOVAL. PRECAST CONCRETE 2'-0" DIAMETER DRAINAGE STRUCTURES SHALL HAVE A MINIMUM 3" WALL THICKNESS WITH A 6" MINIMUM BEARING SURFACE ON TOP. SEE PRECAST RISER RING FOR 2'-0" DIAMETER STRUCTURE.

THE MAXIMUM INSIDE DIAMETER OF PIPES ENTERING OR LEAVING PRECAST DRAINAGE STRUCTURES SHALL BE 2'-0" LESS THAN THE INSIDE DIAMETER OF THE DRAINAGE STRUCTURE. A PIPE LEAVING A 2'-0" DIAMETER DRAINAGE STRUCTURE IS ALLOWED TO HAVE 1'-0" INSIDE DIAMETER OR LESS.

THE NUMBER OF PIPE OPENINGS IN A RISER SHALL BE DETERMINED BY THE DESIGNER. SPACING BETWEEN OPENINGS SHALL BE 1'-0" MINIMUM. OPENINGS MAY BE CONSTRUCTED BY CASTING OR SCRIBING IN PRECAST STRUCTURES DURING FABRICATION OR BY CORING THE CURED CONCRETE.

PRECAST CONCRETE FOOTINGS OR BASES SHALL BE REINFORCED WITH #4 BARS SPACED AT 1'-0" BOTH WAYS OR WITH TWO LAYERS OF WELDED WIRE FABRIC OF EQUIVALENT CROSS SECTIONAL AREA LAID AT RIGHT ANGLES AND WIRED TOGETHER. REINFORCEMENT SHALL BE PLACED IN TOP OF FOOTING AND SHALL BE MARKED.

PRECAST CONCRETE FOOTINGS SHALL BE SUPPORTED BY A COMPACTED 6" GRANULAR SUBBASE.

THE MINIMUM WALL THICKNESS FOR ALL 2'-0", 4'-0", 5'-0", AND 6'-0" DRAINAGE STRUCTURES USING CONCRETE BLOCK, BRICK, OR CAST-IN-PLACE CONCRETE SHALL BE AS SPECIFIED IN TYPICAL WALL SECTIONS.

THE CONICAL SECTION OF MANHOLES OR CATCH BASINS CONSTRUCTED OF BLOCK OR BRICK SHALL BE SHROUDED WITH GEOTEXTILE FABRIC TO A MINIMUM DEPTH OF 5'-0" OR THROUGH THE FROST ZONE. ENOUGH GEOTEXTILE MATERIAL SHALL BE LEFT ON THE TOP (8" OR MORE) TO ROLL OVER THE TOP OF THE CONE.

PREFORMED HIGH DENSITY POLYSTYRENE FILLER PIECES MAY BE USED TO CHANNEL FLOW IN THE BOTTOM OF MANHOLES PROVIDED THEY HAVE AT LEAST 2" OF CONCRETE COVER. THE USE OF THIS MATERIAL FOR CHANNEL FLOW IS RESTRICTED TO MANHOLES WHERE THE BOTTOM SECTION IS NOT SUBJECT TO FREEZING. THE USE OF THIS MATERIAL MUST BE APPROVED BY THE ENGINEER.

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

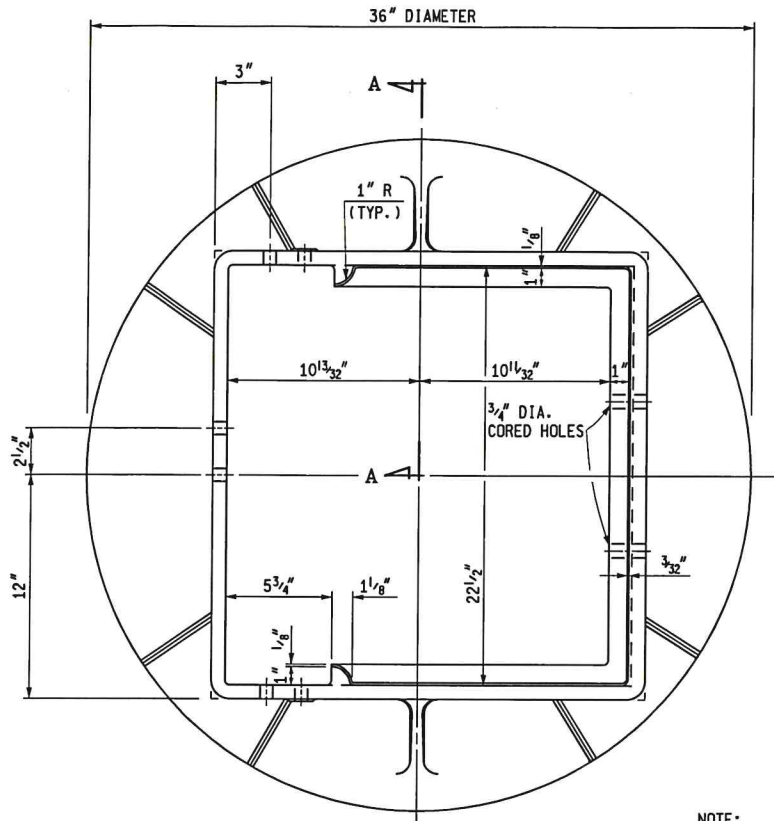
**DRAINAGE STRUCTURES**

5-18-2020  
F.H.W.A. APPROVAL

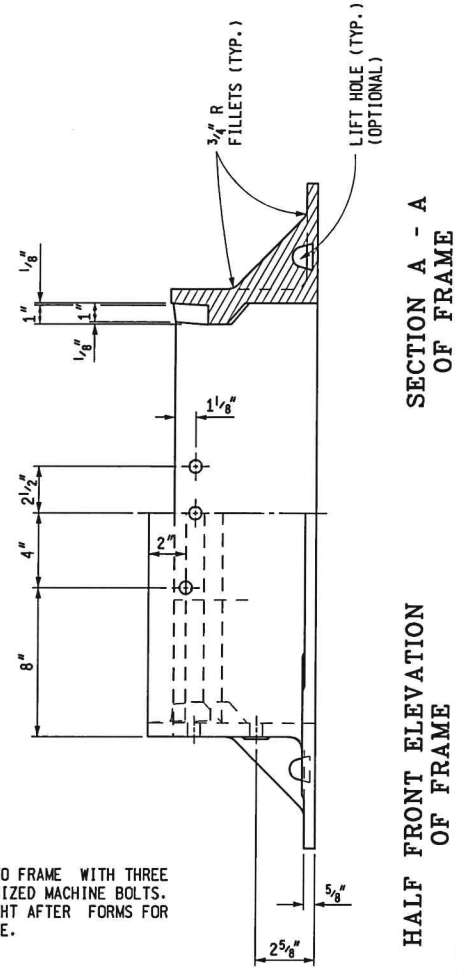
9-19-2019  
PLAN DATE

**R-1-G**

SHEET  
9 OF 9

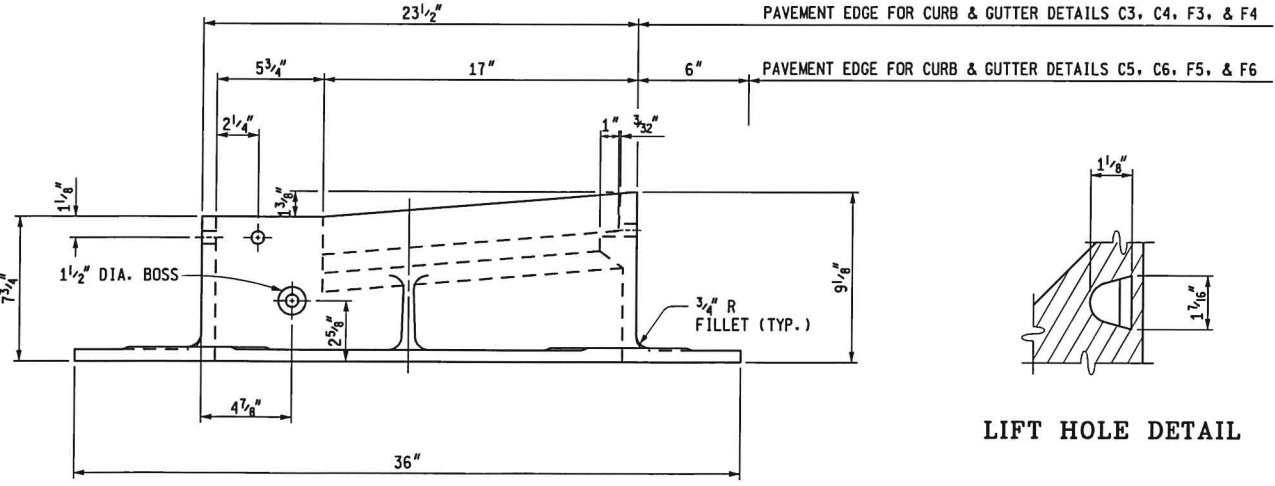


PLAN VIEW OF FRAME



SECTION A - A  
OF FRAME  
  
HALF FRONT ELEVATION  
OF FRAME

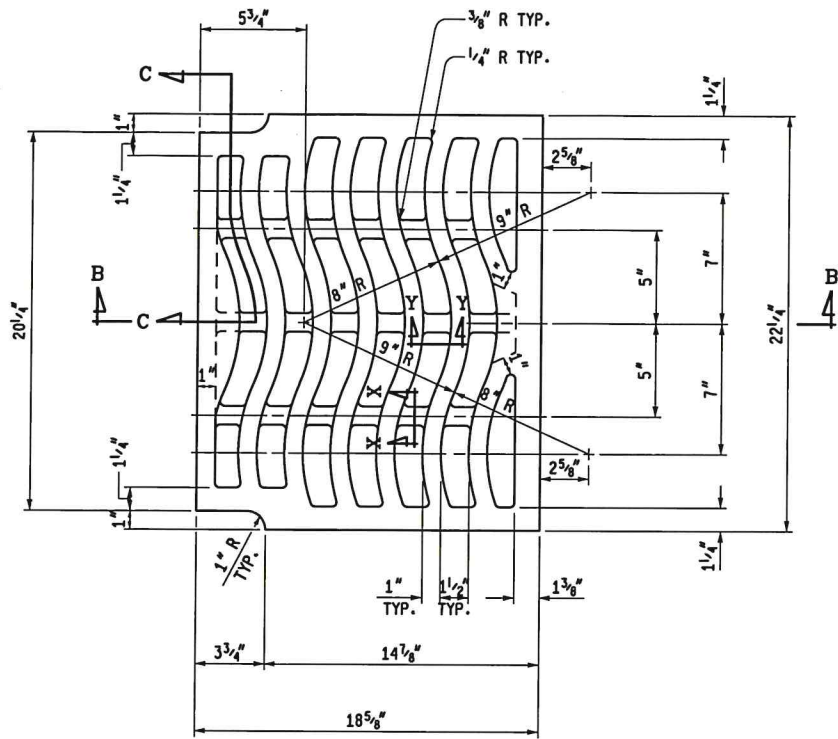
NOTE:  
BOLT CURB BOX TO FRAME WITH THREE  
5/8" x 2 1/2" GALVANIZED MACHINE BOLTS.  
ADJUST FOR HEIGHT AFTER FORMS FOR  
CURB ARE IN PLACE.



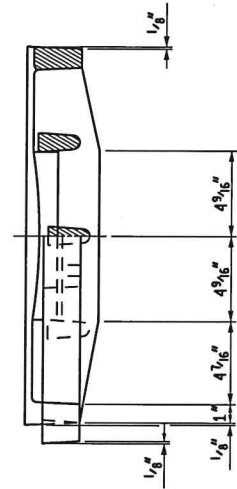
SIDE ELEVATION OF FRAME

LIFT HOLE DETAIL

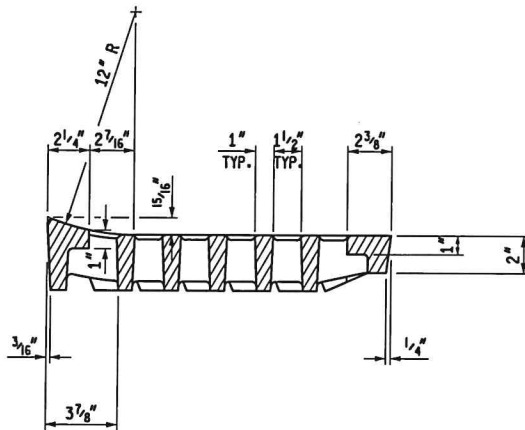
|  |  |   |   |   |
|--|--|---|---|---|
| <p>PREPARED BY<br/>DESIGN DIVISION</p> <p>DRAWN BY: <u>B.L.T.</u></p> <p>CHECKED BY: <u>W.K.P.</u></p> | <p>DEPARTMENT DIRECTOR<br/>Paul C. Ajegba</p>                    | <p>MICHIGAN DEPARTMENT OF TRANSPORTATION<br/>BUREAU OF DEVELOPMENT STANDARD PLAN FOR</p>      |   |   |
|  | <p>APPROVED BY: _____<br/>DIRECTOR, BUREAU OF FIELD SERVICES</p> | <p><b>COVER K</b></p> <p>FOR USE WITH CONCRETE CURB &amp; GUTTER<br/>DETAILS C, E &amp; F</p> |   |   |
|  | <p>APPROVED BY: _____<br/>DIRECTOR, BUREAU OF DEVELOPMENT</p>    | <p>Gregg Brunner, P.E. Gregg Brunner<br/>Oct 14 2021 12:31 PM</p>                             | <p>Bradley C. Wierfuch Bradley C. Wierfuch<br/>Oct 14 2021 11:00 AM</p> | <p>4-7-2022 7-26-2019<br/>F.H.W.A. APPROVAL PLAN DATE</p> |
|  | <p><b>R-15-G</b></p>   |   | <p>SHEET<br/>1 OF 3</p>   |   |



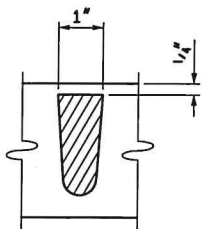
PLAN VIEW OF GRATE



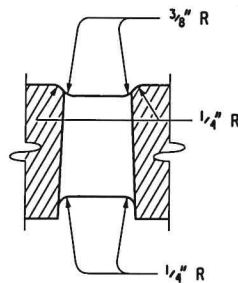
SECTION C - C  
HALF FRONT  
ELEVATION  
OF GRATE



SECTION B - B



SECTION X - X



SECTION Y - Y

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

**COVER K**

FOR USE WITH CONCRETE CURB & GUTTER  
DETAILS C, E & F

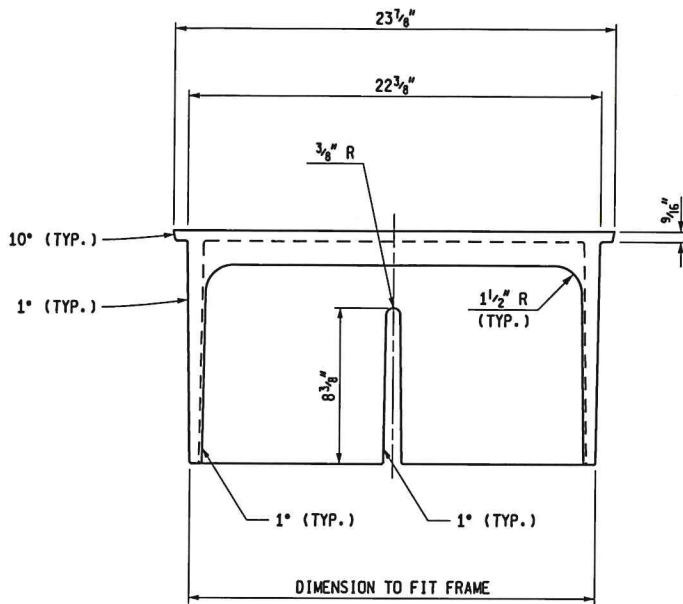
4-7-2022  
F.H.W.A. APPROVAL

7-26-2019  
PLAN DATE

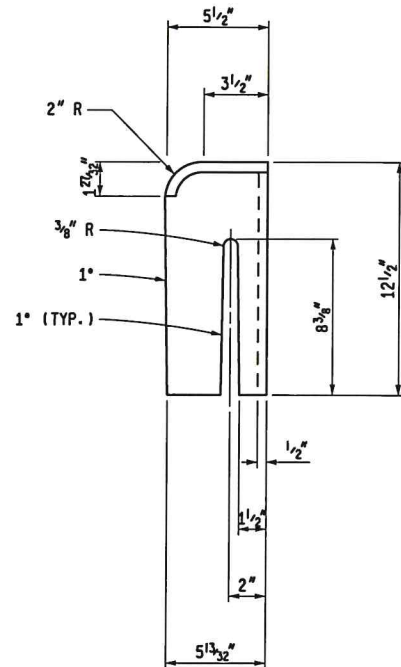
R-15-G

SHEET  
2 OF 3





FRONT VIEW OF CURB BOX



SIDE VIEW

NOTES:

THE CASTINGS SHALL MEET THE REQUIREMENTS OF THE CURRENT STANDARD SPECIFICATION FOR GRAY IRON OR DUCTILE IRON CASTINGS.

ALL CASTINGS SHALL BE CLEANED BY CURRENT APPROVED BLASTING METHODS.

THE SEATING FACE OF THE GRATE AND THE SEAT FOR THE SAME ON THE FRAME SHALL BE GROUND OR MACHINED SO THAT THE GRATE WILL HAVE AN EVEN BEARING ON ITS SEAT TO PREVENT ROCKING OR TILTING.

THE CASTINGS SHALL BE FREE OF POURING FAULTS, BLOW HOLES, CRACKS AND OTHER IMPERFECTIONS. THEY SHALL BE SOUND, TRUE TO FORM AND THICKNESS, CLEAN AND NEATLY FINISHED, AND SHALL BE COATED WITH COAL TAR PITCH VARNISH.

THE CURB BOX AND FRAME SHALL BE SHIPPED ASSEMBLED.

THIS COVER IS DESIGNED TO FIT ON ANY INLET, CATCH BASIN OR ON ANY EXISTING SIMILAR STRUCTURE WHEN SO DESIGNATED ON THE PLANS.

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

**COVER K**  
FOR USE WITH CONCRETE CURB & GUTTER  
DETAILS C, E & F

4-7-2022  
F.H.W.A. APPROVAL

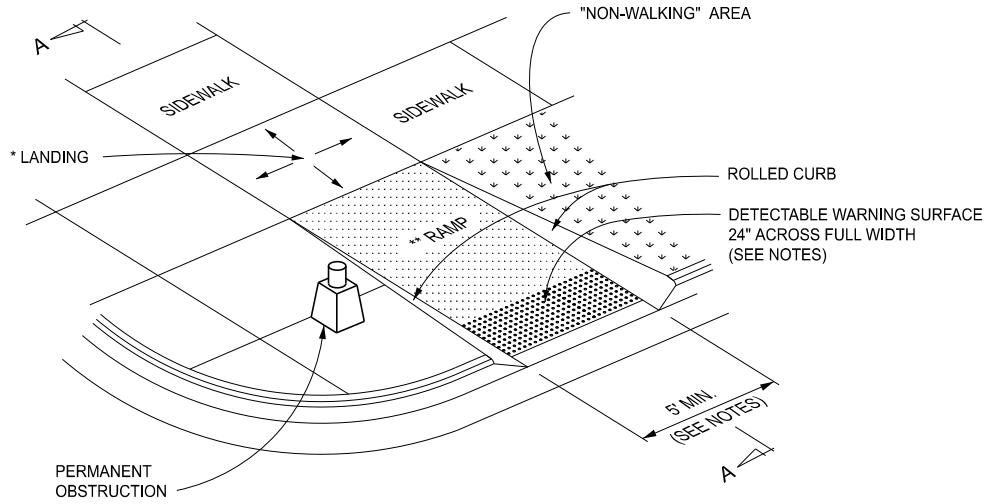
7-26-2019  
PLAN DATE

R-15-G

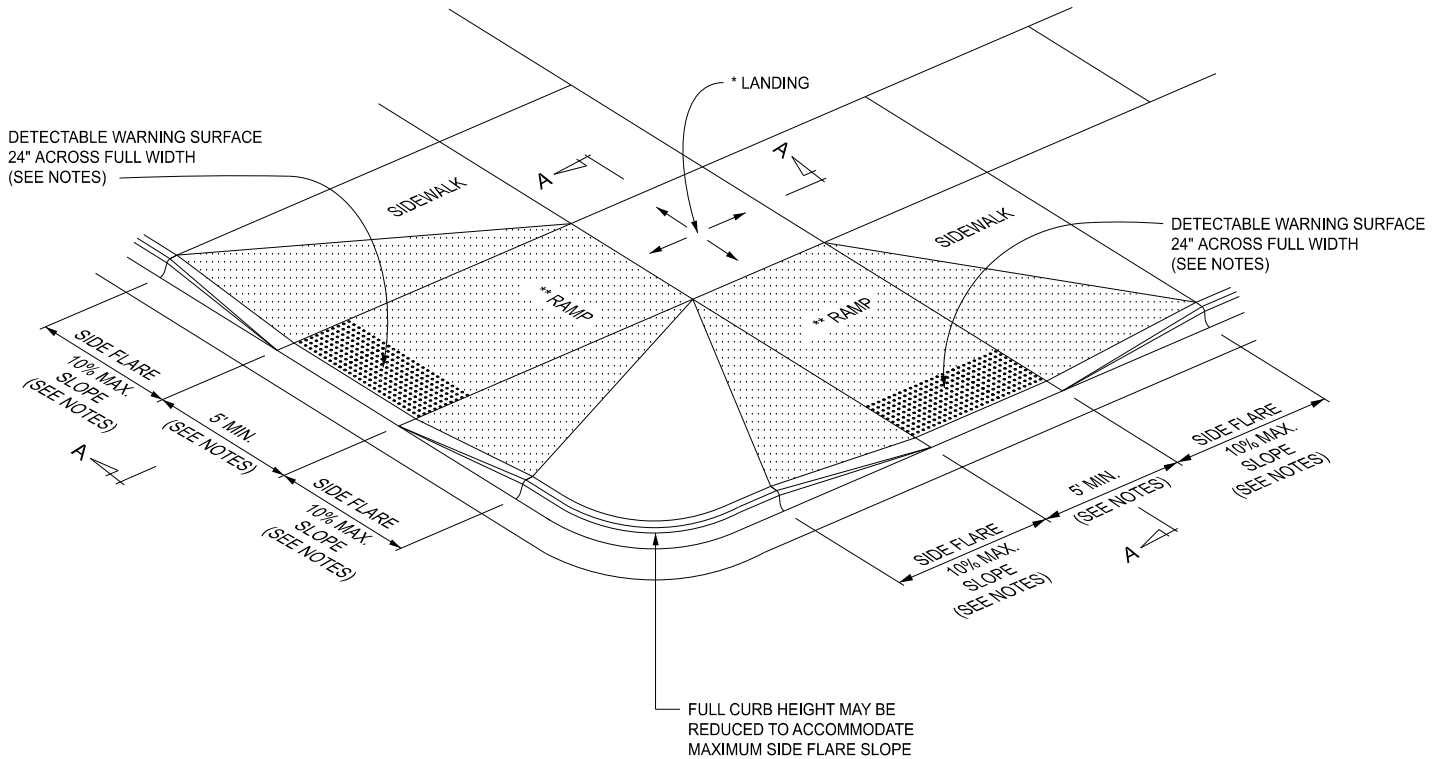
SHEET  
3 OF 3

\* MAXIMUM LANDING SLOPE IS 2.1% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

\*\* MAXIMUM RAMP CROSS SLOPE IS 2.1%, RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



**CURB RAMP TYPE R**  
(ROLLED SIDES)



**CURB RAMP TYPE F**  
(FLARED SIDES, TWO RAMPS SHOWN)

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF DEVELOPMENT



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR  
**CURB RAMP AND  
DETECTABLE WARNING DETAILS**

(SPECIAL DETAIL)  
FHWA APPROVAL

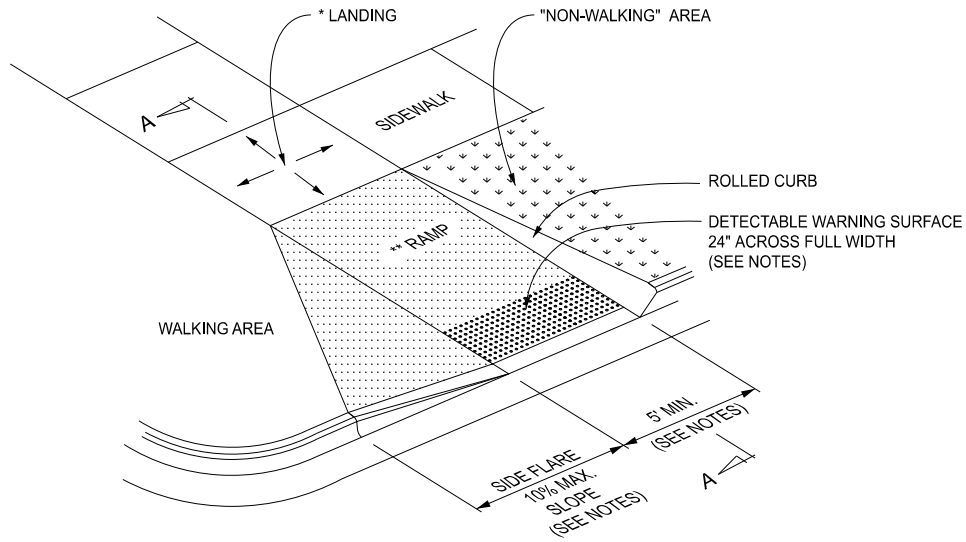
11/08/2023  
PLAN DATE

**R-28-K**

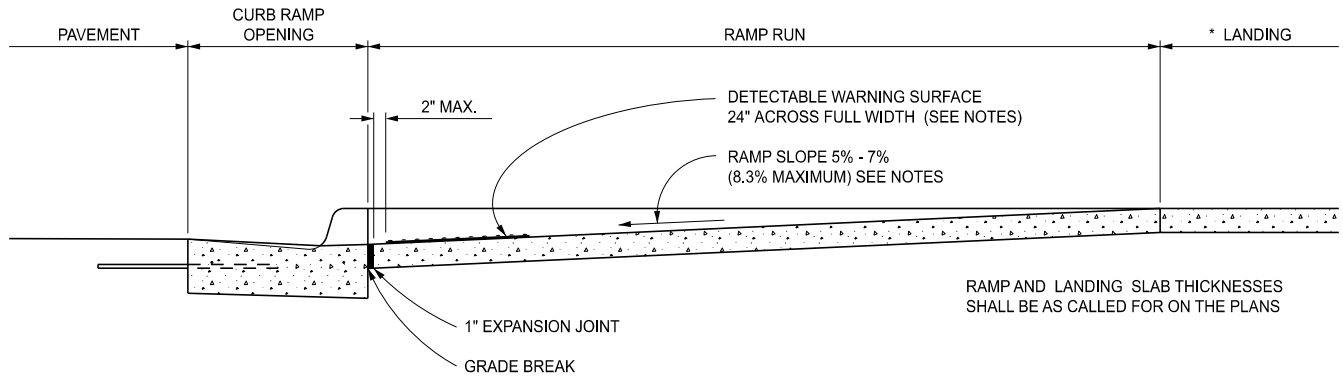
SHEET  
1 OF 7

\* MAXIMUM LANDING SLOPE IS 2.1% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

\*\* MAXIMUM RAMP CROSS SLOPE IS 2.1%, RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



**CURB RAMP TYPE RF**  
(ROLLED / FLARED SIDES)

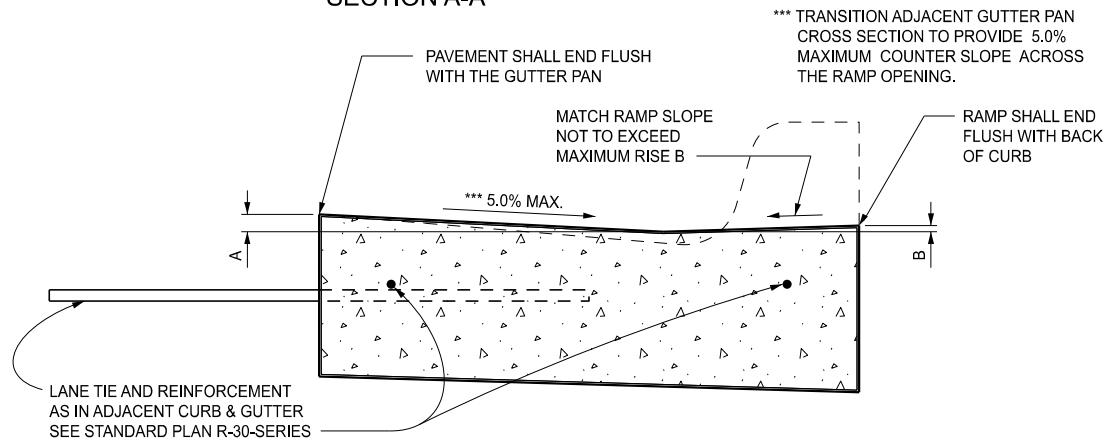


RAMP AND LANDING SLAB THICKNESSES SHALL BE AS CALLED FOR ON THE PLANS


**SECTION A-A**

| CURB TYPE | MAXIMUM RISE (INCHES) |   |
|-----------|-----------------------|---|
|           | A                     | B |
| B1        | ¾                     | 1 |
| B2        | ¾                     | 1 |
| B3        | ¾                     | 1 |
| D1        | ¾                     | 1 |
| D2        | ¾                     | 1 |
| D3        | ¾                     | 1 |
| C1        | ½                     | ½ |
| C2        | ½                     | ½ |
| C3        | ¾                     | ½ |
| C4        | ¾                     | ½ |
| C5        | 1                     | ½ |
| C6        | 1                     | ½ |
| F1        | ½                     | ½ |
| F2        | ½                     | ½ |
| F3        | ¾                     | ½ |
| F4        | ¾                     | ½ |
| F5        | 1                     | ½ |
| F6        | 1                     | ½ |

FOR CURB TYPES SEE STANDARD PLAN R-30-SERIES



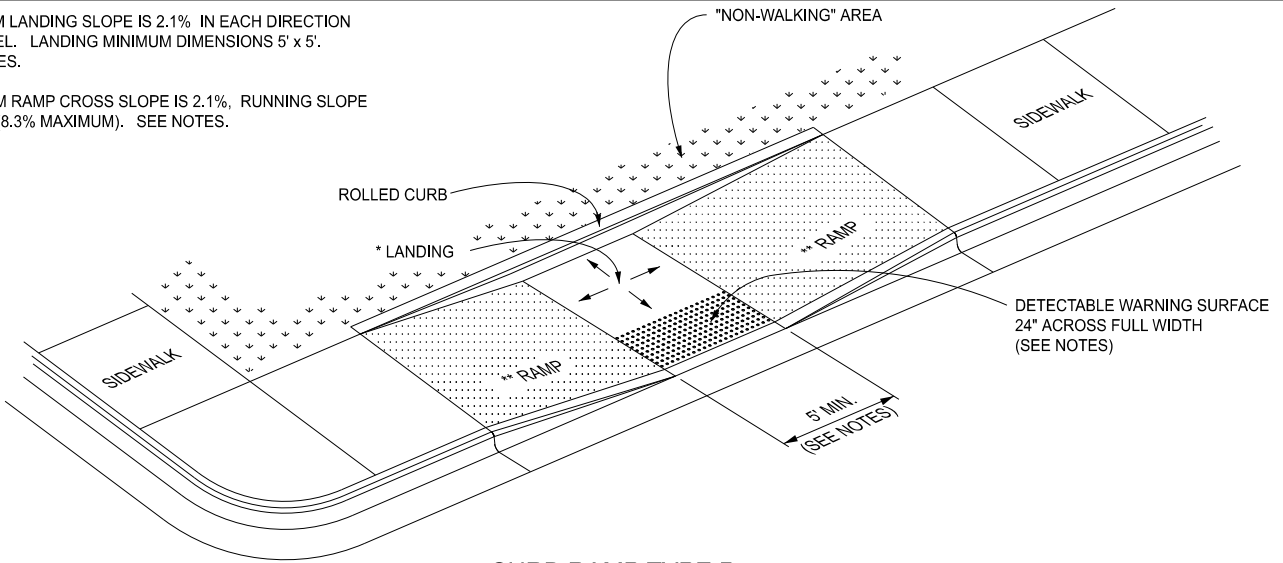
**SECTION THROUGH CURB RAMP OPENING**  
(TYPICAL ALL RAMP TYPES)

|  |   |                         |               |                 |
|--|---|-------------------------|---------------|-----------------|
| <br>DEPARTMENT DIRECTOR<br>BRADLEY C. WIEFERICH, PE | STANDARD PLAN FOR<br><b>CURB RAMP AND<br/>                 DETECTABLE WARNING DETAILS</b> |                         | <b>R-28-K</b> | SHEET<br>2 OF 7 |
|  | (SPECIAL DETAIL)<br>FHWA APPROVAL   | 11/08/2023<br>PLAN DATE |               |                 |



\* MAXIMUM LANDING SLOPE IS 2.1% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

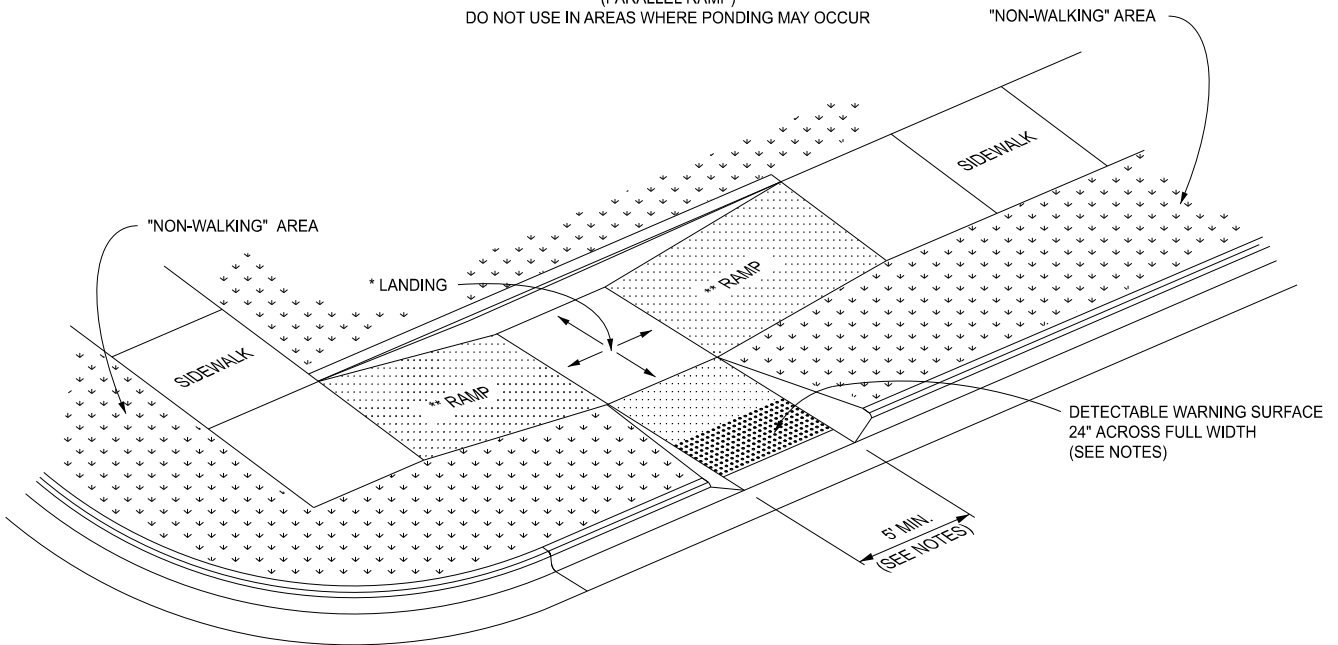
\*\* MAXIMUM RAMP CROSS SLOPE IS 2.1%, RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



**CURB RAMP TYPE P**

(PARALLEL RAMP)

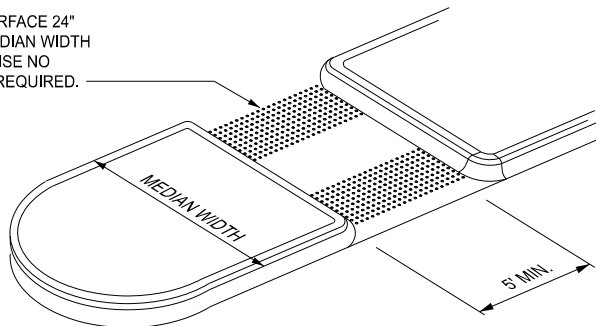
DO NOT USE IN AREAS WHERE PONDING MAY OCCUR



**CURB RAMP TYPE C**

(COMBINATION RAMP)

DETECTABLE WARNING SURFACE 24" ACROSS FULL WIDTH IF MEDIAN WIDTH IS AT LEAST 6'-0". OTHERWISE NO DETECTABLE WARNING IS REQUIRED.



**CURB RAMP TYPE M**

(MEDIAN ISLAND)



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR  
**CURB RAMP AND  
DETECTABLE WARNING DETAILS**

(SPECIAL DETAIL)  
FHWA APPROVAL

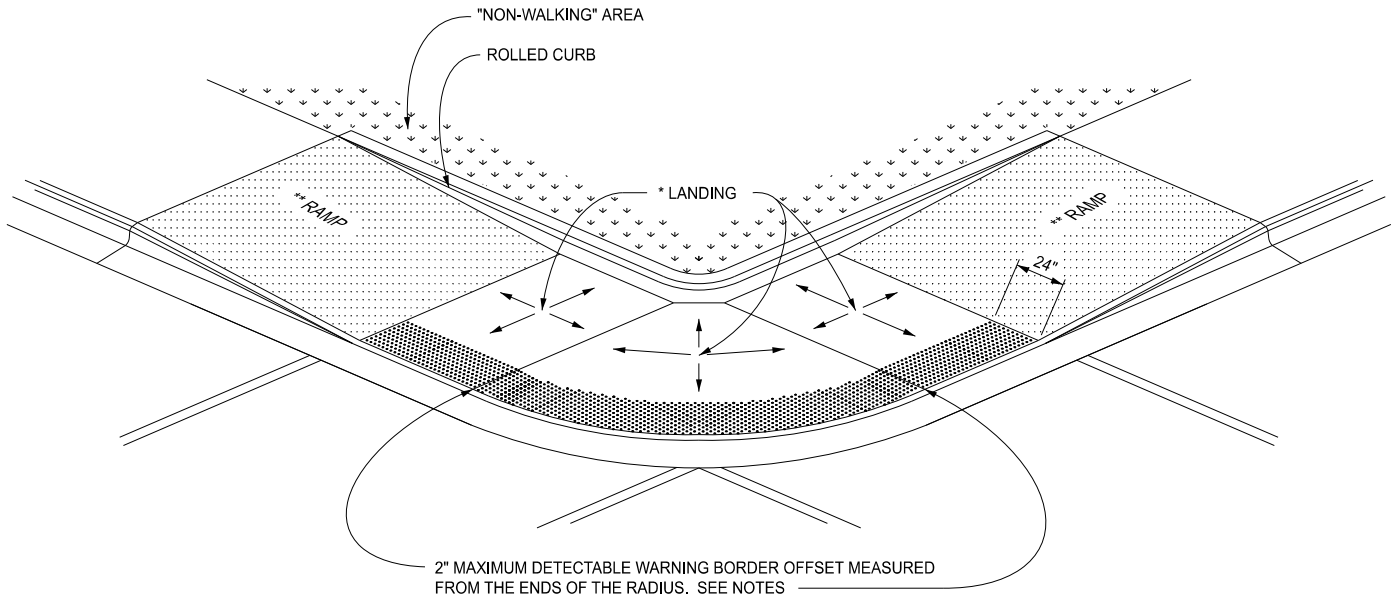
11/08/2023  
PLAN DATE

**R-28-K**

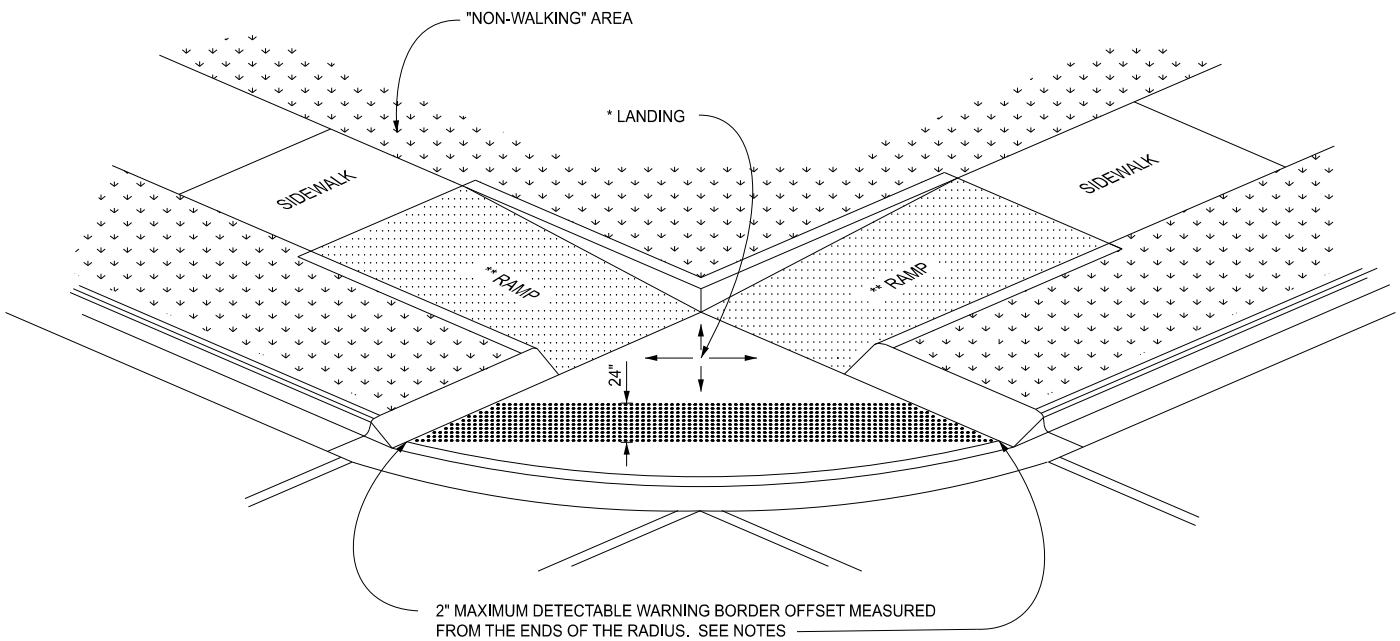
SHEET  
3 OF 7

\* MAXIMUM LANDING SLOPE IS 2.1% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

\*\* MAXIMUM RAMP CROSS SLOPE IS 2.1%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



( RADIAL DETECTABLE WARNING SHOWN )



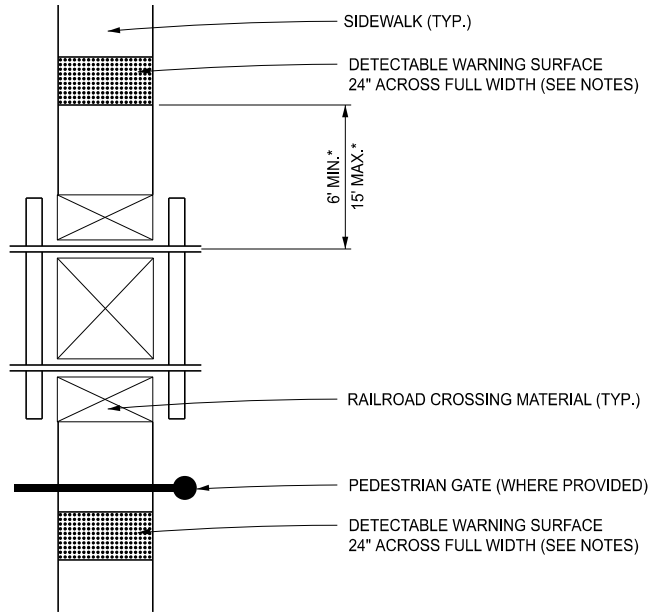
( TANGENT DETECTABLE WARNING SHOWN )

**CURB RAMP TYPE D**  
(DEPRESSED CORNER)

USE ONLY WHEN INDEPENDENT DIRECTIONAL RAMPS CAN NOT BE CONSTRUCTED FOR EACH CROSSING DIRECTION

|   |   |                                 |                      |                         |
|---|---|---------------------------------|----------------------|-------------------------|
| <p>MDOT<br/>Michigan Department of Transportation</p> <p>DEPARTMENT DIRECTOR<br/>BRADLEY C. WIEFERICH, PE</p> | <p>STANDARD PLAN FOR<br/>CURB RAMP AND<br/>DETECTABLE WARNING DETAILS</p> |                                 |                      | <p>SHEET<br/>4 OF 7</p> |
|   | <p>(SPECIAL DETAIL)<br/>FHWA APPROVAL</p>                                 | <p>11/08/2023<br/>PLAN DATE</p> | <p><b>R-28-K</b></p> |                         |

\* THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE RAIL CROSSING IS 6' MINIMUM AND 15' MAXIMUM FROM THE CENTERLINE OF THE NEAREST RAIL. DO NOT PLACE DETECTABLE WARNING ON RAILROAD CROSSING MATERIAL.

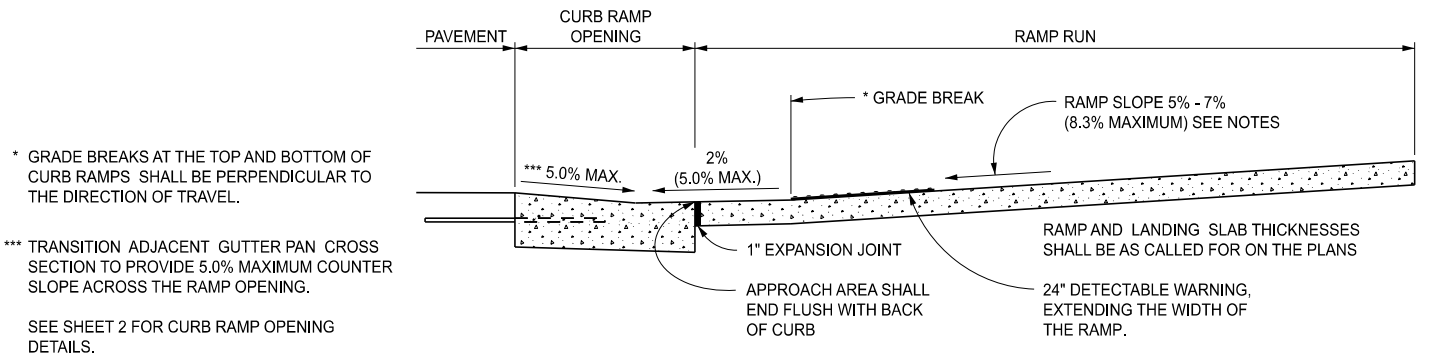
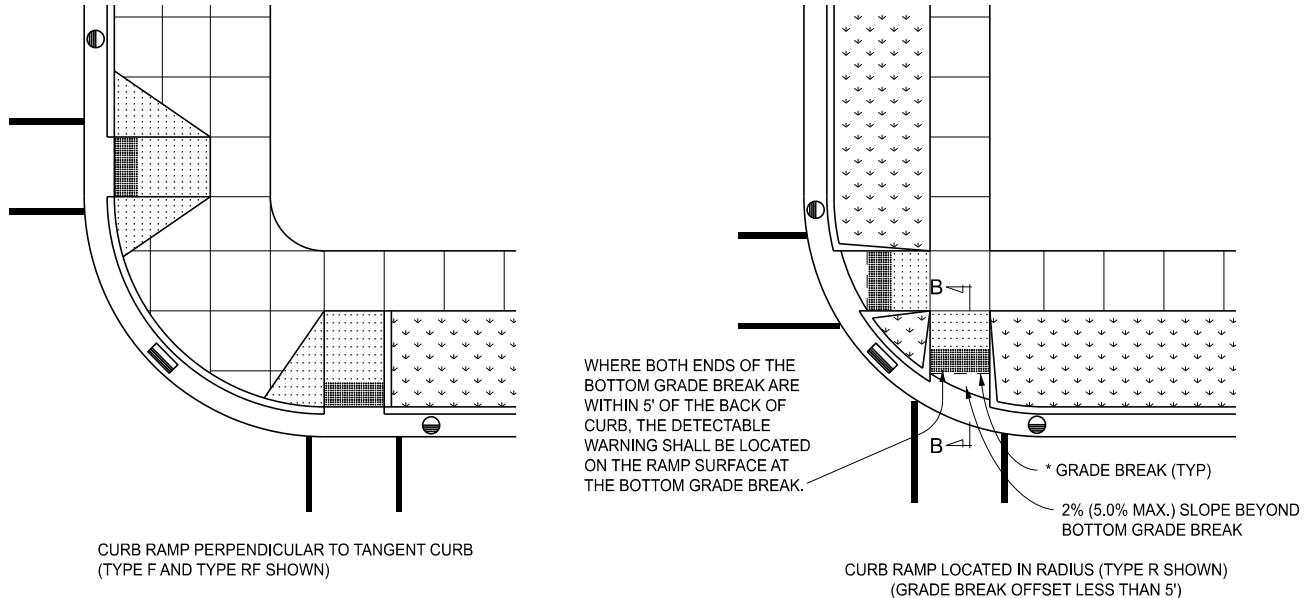
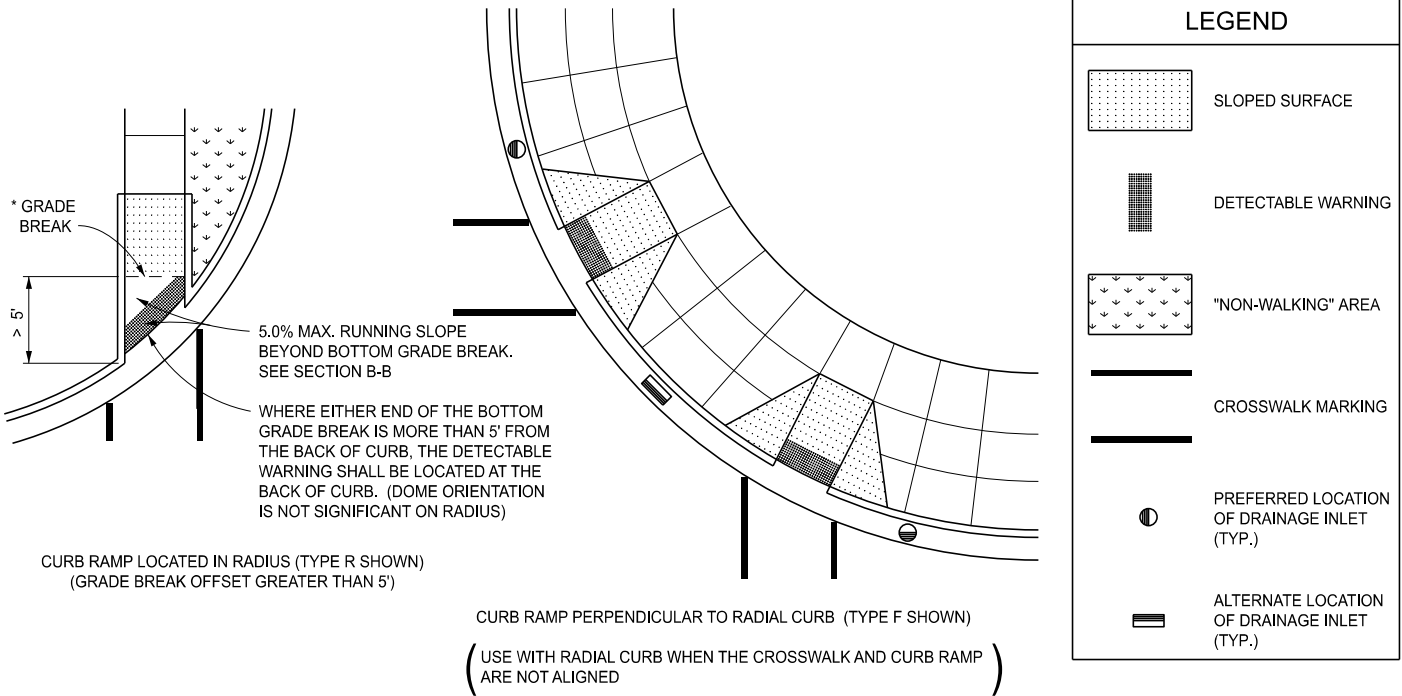


DETECTABLE WARNING AT RAILROAD CROSSING



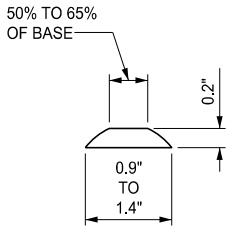
DETECTABLE WARNING AT FLUSH SHOULDER OR ROADWAY

|   |   |                         |               |                 |
|---|---|-------------------------|---------------|-----------------|
| <p>DEPARTMENT DIRECTOR<br/>BRADLEY C. WIEFERICH, PE</p> | STANDARD PLAN FOR<br><b>CURB RAMP AND<br/>                 DETECTABLE WARNING DETAILS</b> |                         | <b>R-28-K</b> | SHEET<br>5 OF 7 |
|   | (SPECIAL DETAIL)<br>FHWA APPROVAL   | 11/08/2023<br>PLAN DATE |               |                 |

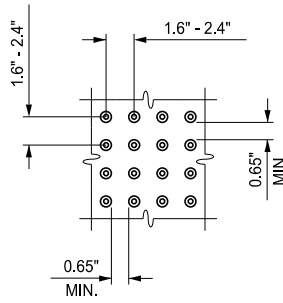


SECTION B-B  
CURB RAMP ORIENTATION

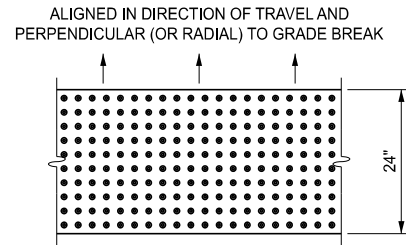
|   |   |                                 |               |
|---|---|---------------------------------|---------------|
| <p>DEPARTMENT DIRECTOR<br/>BRADLEY C. WIEFERICH, PE</p> | <p>STANDARD PLAN FOR<br/>CURB RAMP AND<br/>DETECTABLE WARNING DETAILS</p> |                                 | <p>R-28-K</p> |
|   | <p>(SPECIAL DETAIL)<br/>FHWA APPROVAL</p>                                 | <p>11/08/2023<br/>PLAN DATE</p> |               |



DOME SECTION



DOME SPACING



DOME ALIGNMENT

DETECTABLE WARNING DETAILS

NOTES:

DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS IN THE PUBLIC RIGHT OF WAY.

CURB RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

RAMPS SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT MARKED AND/OR SIGNALIZED MID-BLOCK CROSSINGS.

SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE RUNNING SLOPE.

SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.

CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP. WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SNOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.

WHEN 5' MINIMUM WIDTHS ARE NOT FEASIBLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4' AND LANDINGS TO NOT LESS THAN 4' x 4'.

CURB RAMPS WITH A RUNNING SLOPE  $\leq 5\%$  DO NOT REQUIRE A TOP LANDING. HOWEVER, ANY CONTINUOUS SIDEWALK OR PEDESTRIAN ROUTE CROSSING THROUGH OR INTERSECTING THE CURB RAMP MUST INDEPENDENTLY MAINTAIN A CROSS SLOPE NOT GREATER THAN 2.1% PERPENDICULAR TO ITS OWN DIRECTION(S) OF TRAVEL.

DETECTABLE WARNING SURFACE COVERAGE IS 24" MINIMUM IN THE DIRECTION OF RAMP/PATH TRAVEL AND THE FULL WIDTH OF THE RAMP/PATH OPENING EXCLUDING CURBED OR FLARED CURB TRANSITION AREAS. A BORDER OFFSET NOT GREATER THAN 2" MEASURED ALONG THE EDGES OF THE DETECTABLE WARNING IS ALLOWABLE. FOR RADIAL CURB THE OFFSET IS MEASURED FROM THE ENDS OF THE RADIUS.

FOR NEW ROADWAY CONSTRUCTION, THE RAMP CROSS SLOPE MAY NOT EXCEED 2.1%. FOR ALTERATIONS TO EXISTING ROADWAYS, THE CROSS SLOPE MAY BE TRANSITIONED TO MEET AN EXISTING ROADWAY GRADE. THE CROSS SLOPE TRANSITION SHALL BE APPLIED UNIFORMLY OVER THE FULL LENGTH OF THE RAMP.

THE MAXIMUM RUNNING SLOPE OF 8.3% IS RELATIVE TO A FLAT (0%) REFERENCE. HOWEVER, IT SHALL NOT REQUIRE ANY RAMP OR SERIES OF RAMPS TO EXCEED 15 FEET IN LENGTH NOT INCLUDING LANDINGS OR TRANSITIONS.

DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. THE LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER THE LOCATION OF THE DRAINAGE STRUCTURE. WHERE EXISTING DRAINAGE STRUCTURES ARE LOCATED IN THE RAMP PATH OF TRAVEL, USE A MANUFACTURER'S ADA COMPLIANT GRATE. OPENINGS SHALL NOT BE GREATER THAN 1/2". ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.

CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED ALONG THE ROADSIDE CURB LINE, SHALL BE PROVIDED WHERE AN UNOBSTRUCTED CIRCULATION PATH LATERALLY CROSSES THE CURB RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE RAMP IS BORDERED BY LANDSCAPING, UNPAVED SURFACE OR PERMANENT FIXED OBJECTS. WHERE THEY ARE NOT REQUIRED, FLARED SIDES CAN BE CONSIDERED IN ORDER TO AVOID SHARP CURB RETURNS AT RAMP OPENINGS.

DETECTABLE WARNING PLATES MUST BE INSTALLED USING FABRICATED OR FIELD CUT UNITS CAST AND/OR ANCHORED IN THE PAVEMENT TO RESIST SHIFTING OR HEAVING.



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

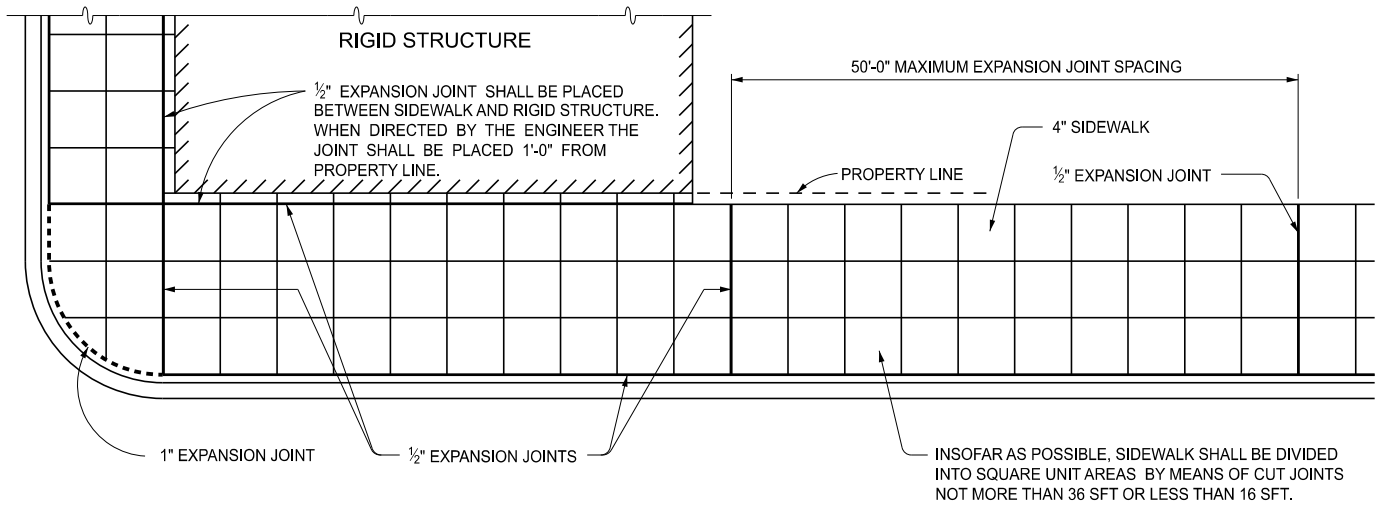
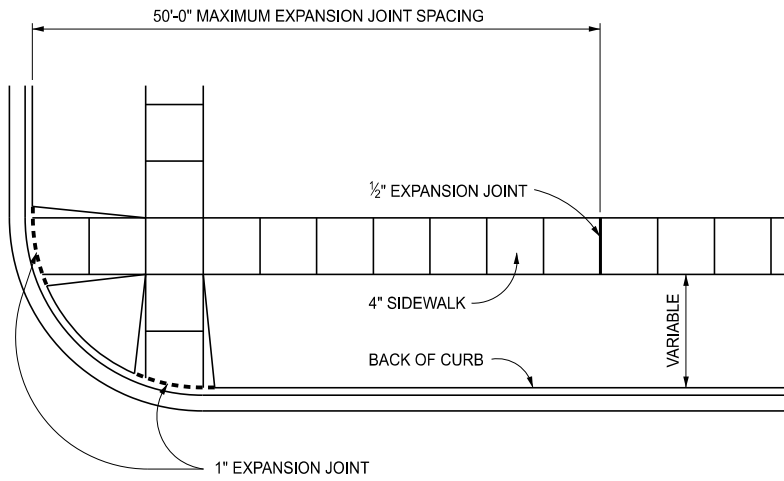
STANDARD PLAN FOR  
CURB RAMP AND  
DETECTABLE WARNING DETAILS

(SPECIAL DETAIL)  
FHWA APPROVAL

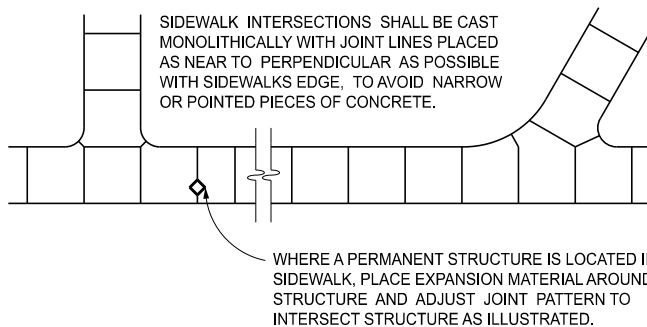
11/08/2023  
PLAN DATE

R-28-K

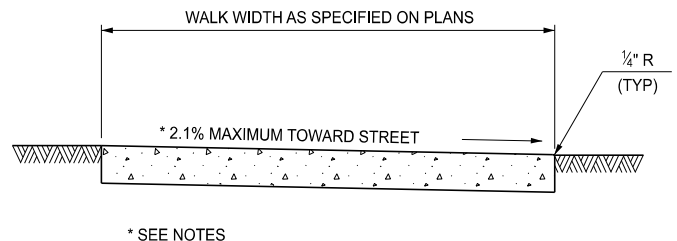
SHEET  
7 OF 7



LOCATION OF JOINTS IN CONCRETE SIDEWALK



TYPICAL SIDEWALK JOINT LAYOUTS



4" CONCRETE SIDEWALK

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF DEVELOPMENT



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

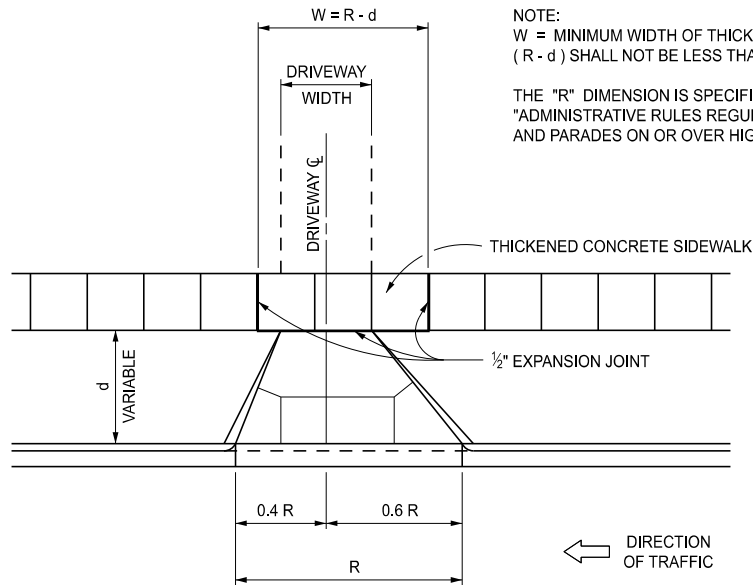
STANDARD PLAN FOR  
DRIVEWAY OPENINGS & APPROACHES,  
AND CONCRETE SIDEWALK

(SPECIAL DETAIL)  
FHWA APPROVAL

11/08/2023  
PLAN DATE

R-29-J

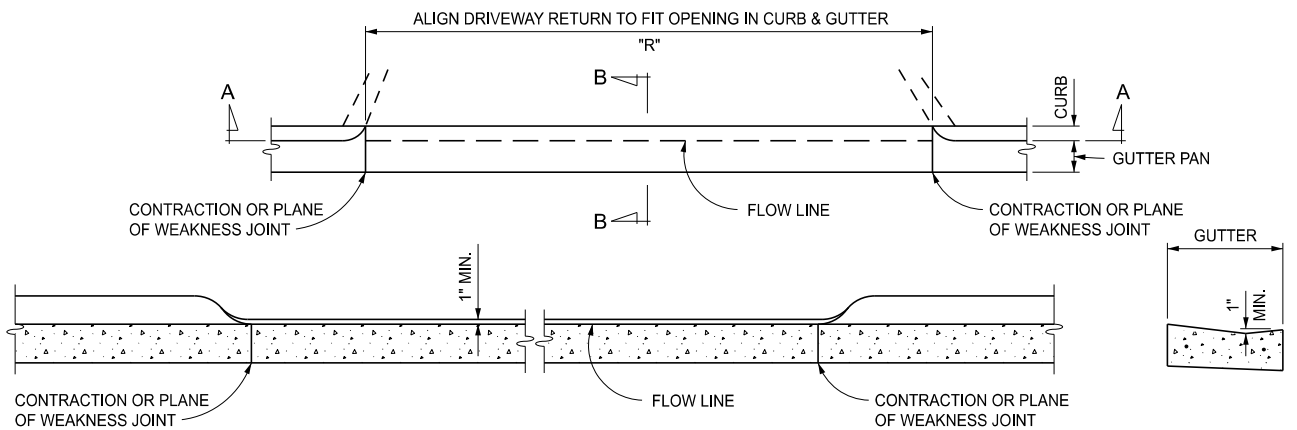
SHEET  
1 OF 4



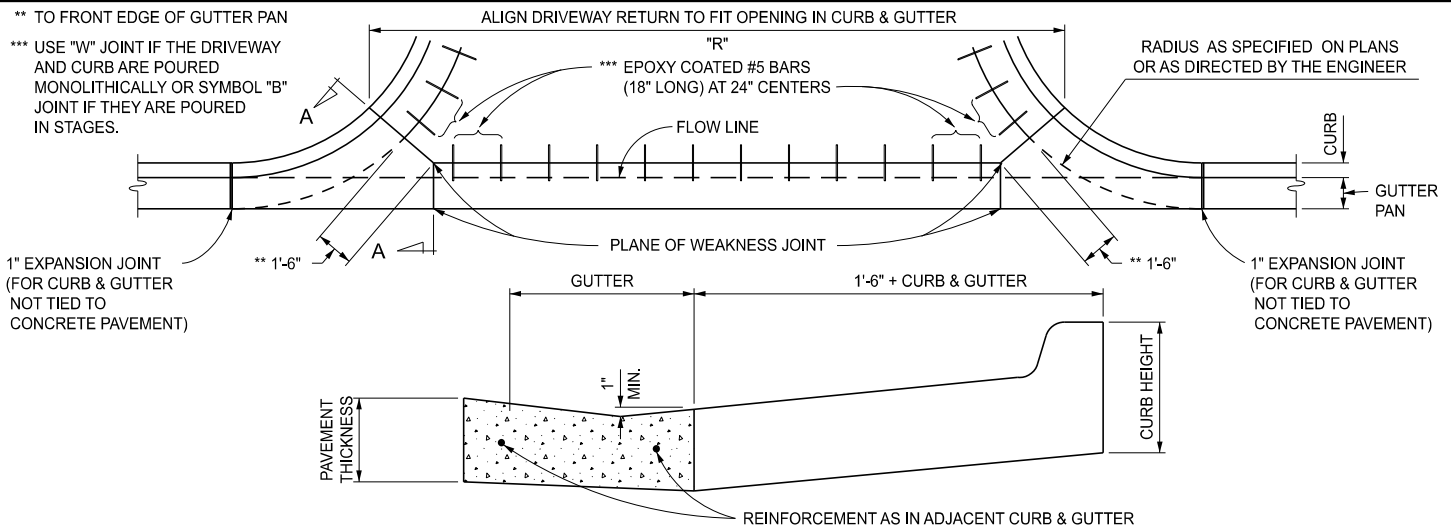
NOTE:  
 $W =$  MINIMUM WIDTH OF THICKENED CONCRETE SIDEWALK.  
 $(R - d)$  SHALL NOT BE LESS THAN DRIVEWAY WIDTH.

THE "R" DIMENSION IS SPECIFIED IN THE PUBLICATION  
 "ADMINISTRATIVE RULES REGULATING DRIVEWAYS, BANNERS  
 AND PARADES ON OR OVER HIGHWAYS".

CONCRETE DRIVEWAY OPENING LAYOUT



SECTION A - A  
 SECTION B - B  
 CONCRETE DRIVEWAY OPENING, DETAIL L



SECTION A - A  
 CONCRETE DRIVEWAY OPENING, DETAIL M

NOTE:  
 FOR ROADWAYS WITH CONCRETE PAVEMENTS,  
 LONGITUDINAL LANE TIES WILL BE CONTINUOUS  
 THROUGH THE DRIVEWAY OPENING AND THE  
 SPACING OF THE #5 BARS IN CONCRETE DRIVEWAYS  
 SHALL BE ADJUSTED TO AVOID CONFLICT WITH THE  
 LONGITUDINAL LANE TIES.



DEPARTMENT DIRECTOR  
 BRADLEY C. WIEFERICH, PE

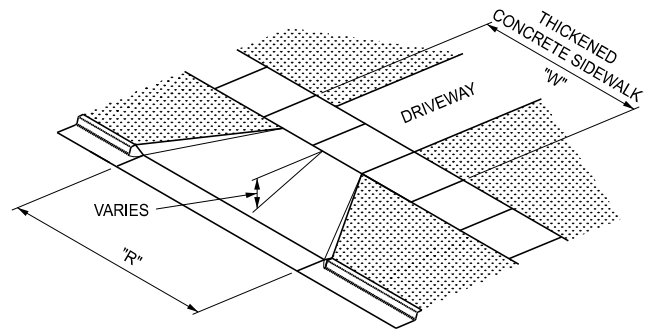
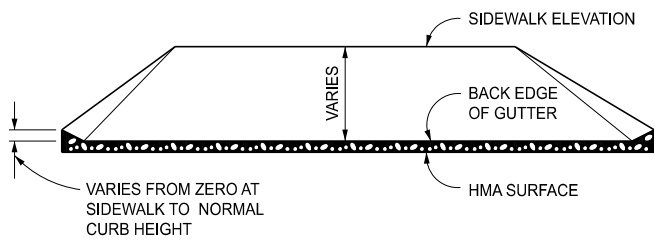
STANDARD PLAN FOR  
 DRIVEWAY OPENINGS & APPROACHES,  
 AND CONCRETE SIDEWALK

(SPECIAL DETAIL)  
 FHWA APPROVAL

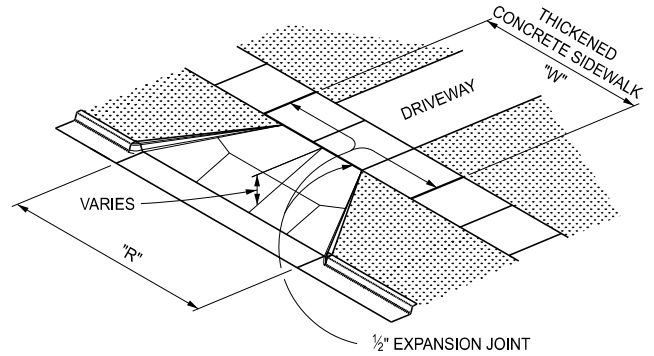
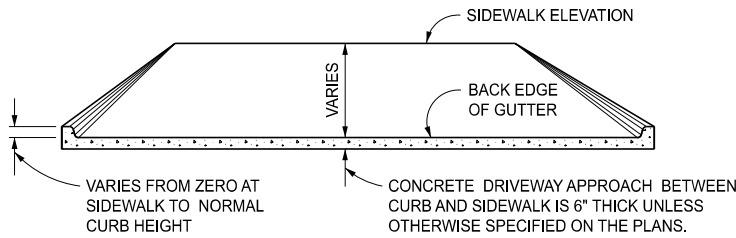
11/08/2023  
 PLAN DATE

R-29-J

SHEET  
 2 OF 4



**HMA DRIVEWAY APPROACH**  
(TO BE USED WITH DETAIL L)

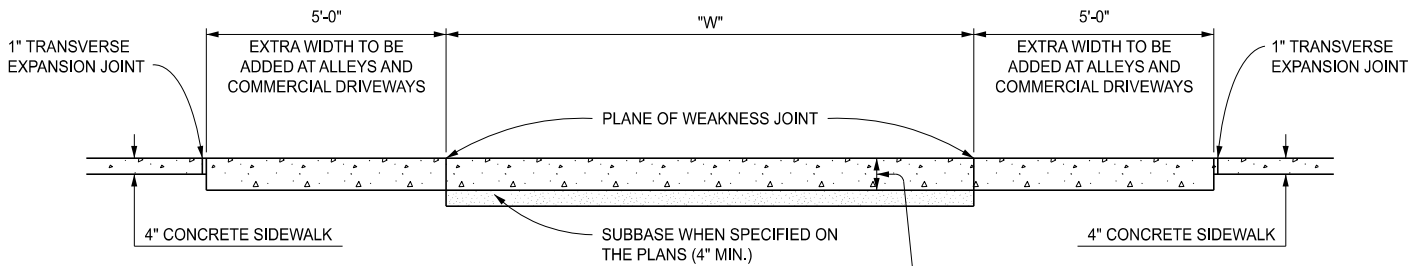


**CONCRETE DRIVEWAY APPROACH**  
(TO BE USED WITH DETAIL L OR M)

**NOTES:**

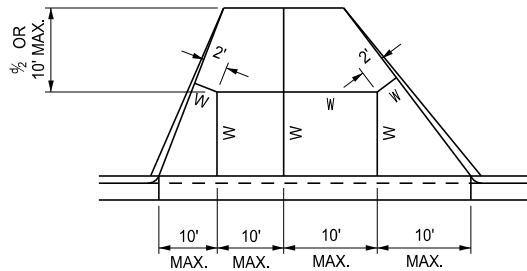
MONOLITHIC CURB IS INCLUDED IN THE CONCRETE DRIVEWAY APPROACH QUANTITY.

REINFORCEMENT IS NOT REQUIRED UNLESS SPECIFIED ON THE PLANS. WHEN REINFORCEMENT IS SPECIFIED, SEE CHART ON THIS SHEET.



WHEN CONCRETE DRIVEWAY APPROACH IS SPECIFIED, THE THICKENED CONCRETE SIDEWALK THICKNESS IS EQUAL TO THE THICKNESS OF THE CONCRETE DRIVEWAY APPROACH. WHEN HMA DRIVEWAY APPROACH IS SPECIFIED, THE THICKENED CONCRETE SIDEWALK THICKNESS IS 6" MIN.

**THICKENED CONCRETE SIDEWALK**



ADJUST DRIVEWAY JOINTS AS NEEDED TO ALIGN WITH ANY COINCIDING TRANSVERSE PAVEMENT JOINTS.

JOINT LAYOUT IS AS INDICATED OR AS DIRECTED BY THE ENGINEER.

**INTERMEDIATE DRIVEWAY JOINT DETAILS**

| REINFORCEMENT FOR CONCRETE DRIVEWAYS |  |                              |
|--------------------------------------|--|------------------------------|
| CONCRETE DRIVEWAY THICKNESS          | WIRE SIZE (6" x 6" MESH)   | AVERAGE WEIGHT (LBS/100 SFT) |
| LESS THAN 8"                         | W1.4   | 21                           |
|                                      | W2.9   | 42                           |
| 8" OR GREATER                        | USE WIRE FABRIC REINFORCEMENT SPECIFIED ON STANDARD PLAN R-37-SERIES |                              |



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR  
**DRIVEWAY OPENINGS & APPROACHES,  
AND CONCRETE SIDEWALK**

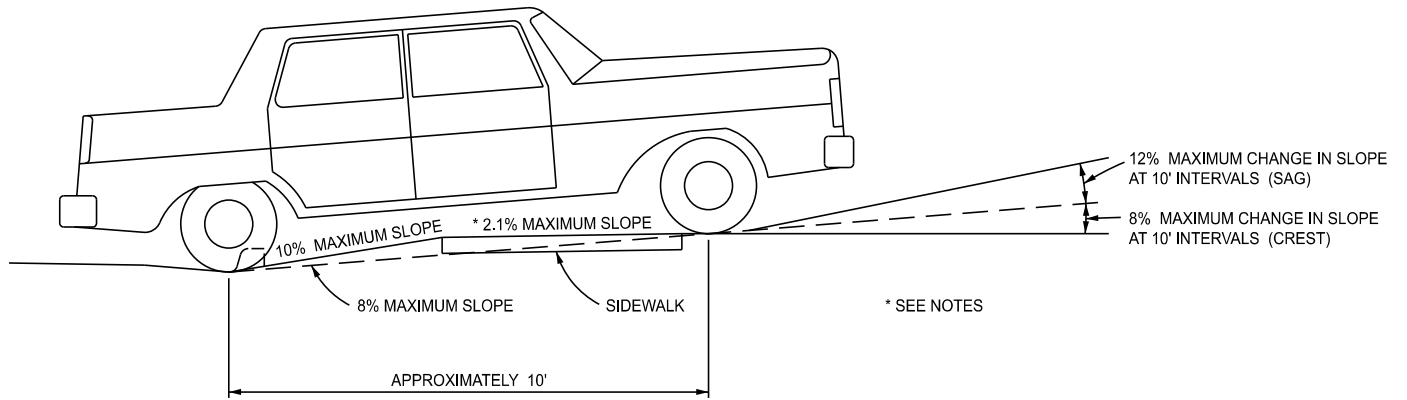
(SPECIAL DETAIL)  
FHWA APPROVAL

11/08/2023  
PLAN DATE

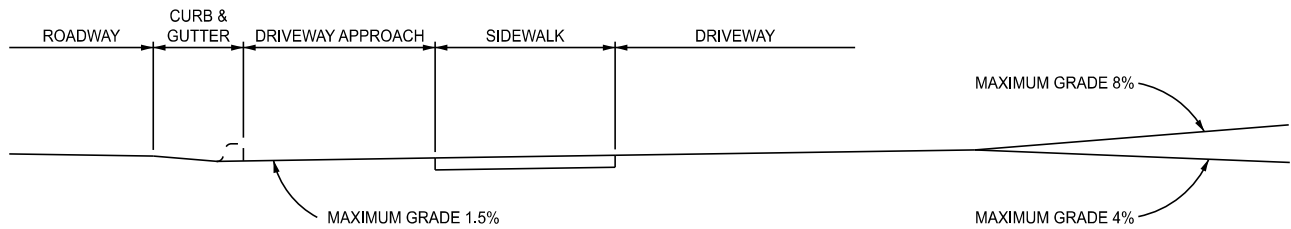
**R-29-J**

SHEET  
3 OF 4





LOW VOLUME COMMERCIAL OR RESIDENTIAL DRIVEWAY SLOPES



COMMERCIAL DRIVEWAY PROFILE FOR MAJOR TRAFFIC GENERATORS

NOTES:

FOR DRIVEWAY DESIGN REFER ALSO TO "ADMINISTRATIVE RULES REGULATING DRIVEWAYS, BANNERS, AND PARADES ON OR OVER HIGHWAYS" AND GEOMETRIC DESIGN G-680-SERIES, COMMERCIAL DRIVEWAYS.

FOR CURB AND GUTTER DETAILS, SEE STANDARD PLAN R-30-SERIES.

TRANSVERSE SIDEWALK SLOPES ARE 2.1% MAXIMUM. IN ORDER TO MEET SITE CONDITIONS, IF THE TRANSVERSE SLOPE IS REQUIRED TO BE LESS THAN 1.5%, LONGITUDINAL DRAINAGE MUST BE PROVIDED.

WHEN SETTING GRADES FOR COMMERCIAL DRIVES, THE TYPES OF VEHICLES USING THE DRIVE SHOULD BE CONSIDERED.



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

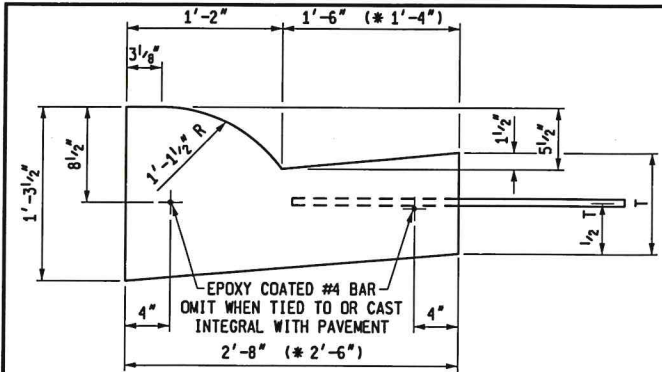
STANDARD PLAN FOR  
DRIVEWAY OPENINGS & APPROACHES,  
AND CONCRETE SIDEWALK

(SPECIAL DETAIL)  
FHWA APPROVAL

11/08/2023  
PLAN DATE

R-29-J

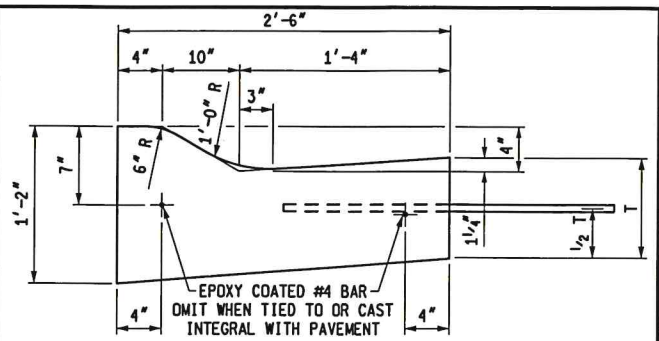
SHEET  
4 OF 4



(\* GUTTER PAN WIDTH MAY BE REDUCED WHEN APPROVED BY THE ENGINEER)

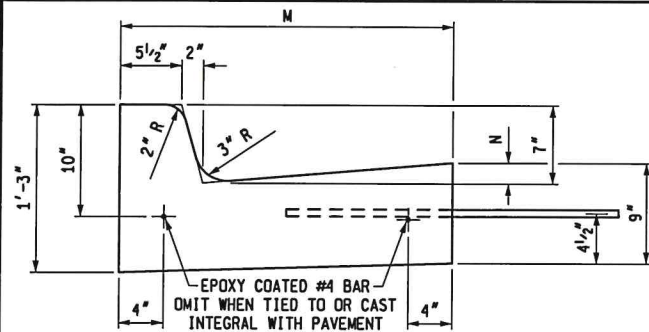
| DETAIL | DIMENSION | LANE TIES | CONCRETE<br>CYD / LFT | CONCRETE<br>CYD / LFT |
|--------|-----------|-----------|-----------------------|-----------------------|
|        | T         |           |                       |                       |
| B1     | 9"        | AS SHOWN  | 0.0900                | (* 0.0855)            |
| B2     | 9"        | OMITTED   | 0.0900                | (* 0.0855)            |
| B3     | 10"       | AS SHOWN  | 0.0941                | (* 0.0894)            |

B



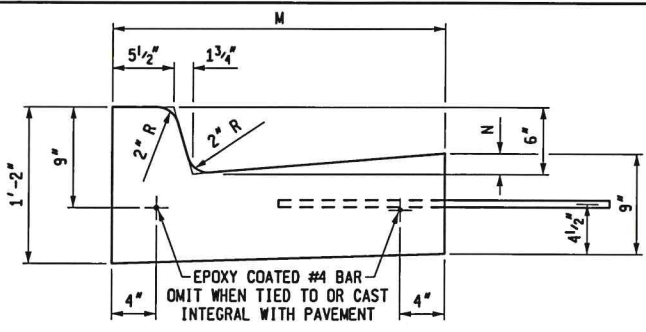
| DETAIL | DIMENSION | LANE TIES | CONCRETE<br>CYD / LFT |
|--------|-----------|-----------|-----------------------|
|        | T         |           |                       |
| D1     | 9"        | AS SHOWN  | 0.0788                |
| D2     | 9"        | OMITTED   | 0.0788                |
| D3     | 10"       | AS SHOWN  | 0.0826                |

D



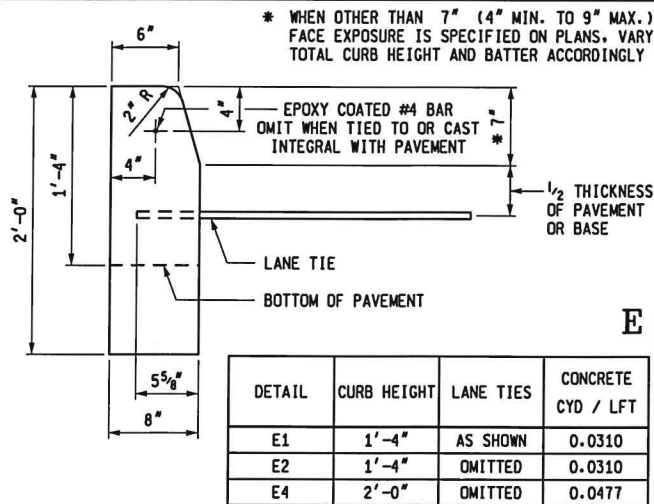
| DETAIL | DIMENSION |        | LANE TIES | CONCRETE<br>CYD / LFT |
|--------|-----------|--------|-----------|-----------------------|
|        | M         | N      |           |                       |
| C1     | 1'-6"     | 7/8"   | AS SHOWN  | 0.0506                |
| C2     | 1'-6"     | 7/8"   | OMITTED   | 0.0506                |
| C3     | 2'-0"     | 1 3/8" | AS SHOWN  | 0.0632                |
| C4     | 2'-0"     | 1 3/8" | OMITTED   | 0.0632                |
| C5     | 2'-6"     | 1 1/8" | AS SHOWN  | 0.0757                |
| C6     | 2'-6"     | 1 7/8" | OMITTED   | 0.0757                |

C



| DETAIL | DIMENSION |        | LANE TIES | CONCRETE<br>CYD / LFT |
|--------|-----------|--------|-----------|-----------------------|
|        | M         | N      |           |                       |
| F1     | 1'-6"     | 7/8"   | AS SHOWN  | 0.0484                |
| F2     | 1'-6"     | 7/8"   | OMITTED   | 0.0484                |
| F3     | 2'-0"     | 1 3/8" | AS SHOWN  | 0.0610                |
| F4     | 2'-0"     | 1 3/8" | OMITTED   | 0.0610                |
| F5     | 2'-6"     | 1 1/8" | AS SHOWN  | 0.0737                |
| F6     | 2'-6"     | 1 7/8" | OMITTED   | 0.0737                |

F



\* WHEN OTHER THAN 7" (4" MIN. TO 9" MAX.)  
FACE EXPOSURE IS SPECIFIED ON PLANS, VARY  
TOTAL CURB HEIGHT AND BATTER ACCORDINGLY

| DETAIL | CURB HEIGHT | LANE TIES | CONCRETE<br>CYD / LFT |
|--------|-------------|-----------|-----------------------|
| E1     | 1'-4"       | AS SHOWN  | 0.0310                |
| E2     | 1'-4"       | OMITTED   | 0.0310                |
| E4     | 2'-0"       | OMITTED   | 0.0477                |

E



PREPARED BY  
DESIGN DIVISION

DRAWN BY: B.L.T.

CHECKED BY: W.K.P.

DEPARTMENT DIRECTOR  
Kirk T. Stuedle

APPROVED BY: *Randy Van Pelt*  
DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: *Neil A. Van Pelt*  
DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

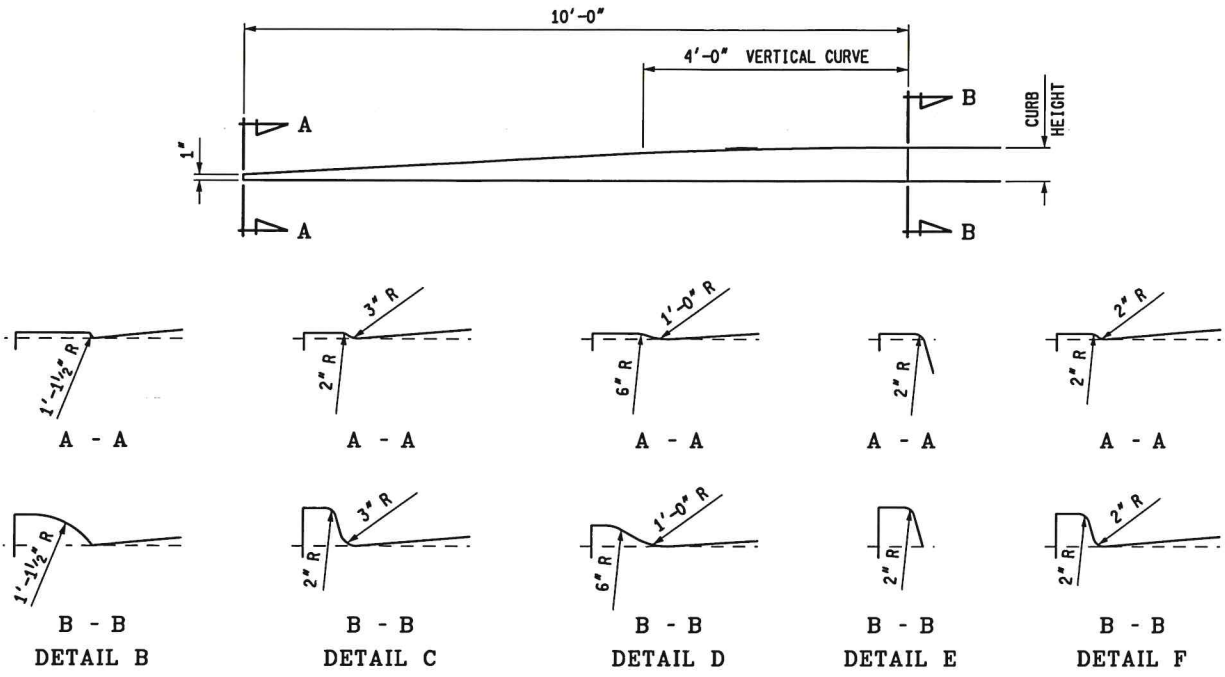
## CONCRETE CURB AND CONCRETE CURB & GUTTER

9-30-2014  
F.H.W.A. APPROVAL

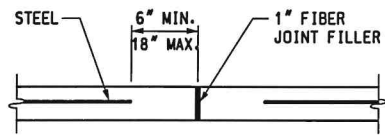
2-6-2014  
PLAN DATE

R-30-G

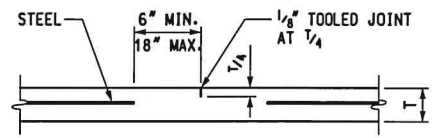
SHEET  
1 OF 2



**CONCRETE CURB, CURB AND GUTTER ENDINGS**



**1" FIBER JOINT FILLER**



**CONTRACTION JOINT**

**NOTES:**

CURB AND GUTTER RADII SHALL BE DIMENSIONED TO THE FRONT EDGE OF THE GUTTER PAN OR EDGE OF PAVEMENT.

CONCRETE CURB AND GUTTER ENDINGS WILL BE PAID FOR IN LINEAR FEET OF THE ADJACENT CURB DETAIL.

JOINTS SHALL BE PLACED AT RIGHT ANGLES TO THE EDGE OF CONCRETE CURB AND GUTTER.

JOINTS DETAILED ON THE PLANS SHALL SUPERSEDE THOSE SPECIFIED ON THIS STANDARD PLAN.

BOTTOM SLOPE OF CURB AND GUTTER STRUCTURE MAY BE THE SAME SLOPE AS BOTTOM OF PAVEMENT. BACK OF CURB AND VERTICAL EDGE OF GUTTER PAN MAY HAVE A MAXIMUM 1/2" BATTER TO FACILITATE FORMING.

WHEN CURB AND GUTTER IS CAST INTEGRALLY, SEE CURRENT STANDARD PLAN R-31-SERIES.

ALL JOINTS FOR CURB OR CURB AND GUTTER ARE INCLUDED IN THE PAY ITEM FOR THE CURB OR CURB AND GUTTER.

JOINTS IN CURB OR CURB AND GUTTER NOT TIED TO CONCRETE PAVEMENT; ADJACENT TO CONCRETE BASE COURSE; OR ADJACENT TO HMA PAVEMENT:

- A. PLACE 1" FIBER JOINT FILLER AT 400' MAXIMUM INTERVALS.
- B. PLACE 1" FIBER JOINT FILLER AT SPRING POINTS OF INTERSECTING STREETS.
- C. PLACE 1/2" ISOLATION JOINT AT CATCH BASINS PER STANDARD PLAN R-37-SERIES.
- D. PLACE CONTRACTION JOINTS AT 40' MAXIMUM INTERVALS.

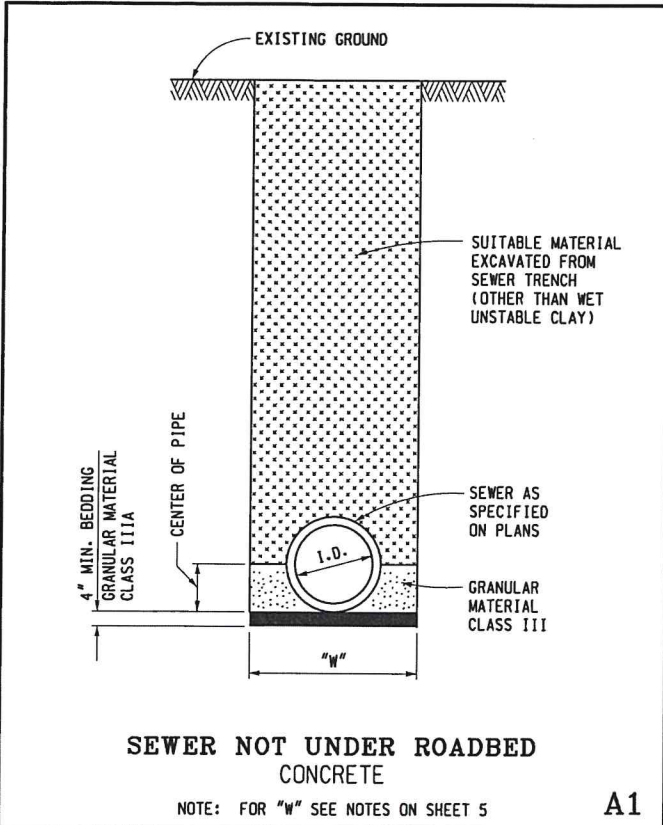
JOINTS IN CURB OR CURB AND GUTTER TIED TO JOINTED PAVEMENT

- A. PLACE 1" FIBER JOINT FILLER OPPOSITE ALL TRANSVERSE EXPANSION JOINTS IN PAVEMENT.
- B. PLACE 1/2" ISOLATION JOINT AT CATCH BASINS PER STANDARD PLAN R-37-SERIES.
- C. PLACE CONTRACTION JOINTS OPPOSITE ALL TRANSVERSE CONTRACTION JOINTS IN PAVEMENT.
- D. A SYMBOL (B) JOINT SHALL BE PLACED BETWEEN CURB OR CURB AND GUTTER AND ADJACENT CONCRETE PAVEMENT AS SPECIFIED ON STANDARD PLAN R-41-SERIES.

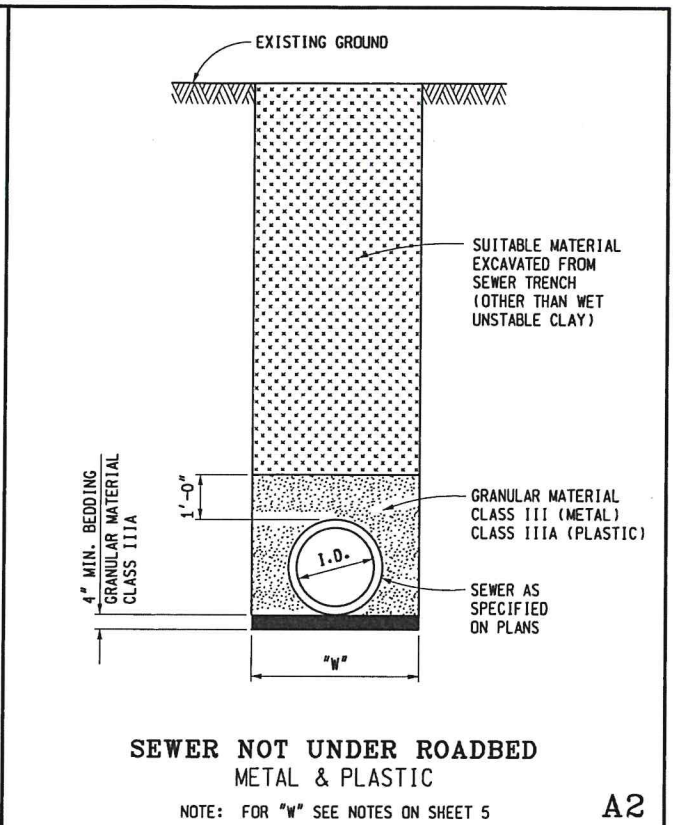
MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**CONCRETE CURB AND  
CONCRETE CURB & GUTTER**

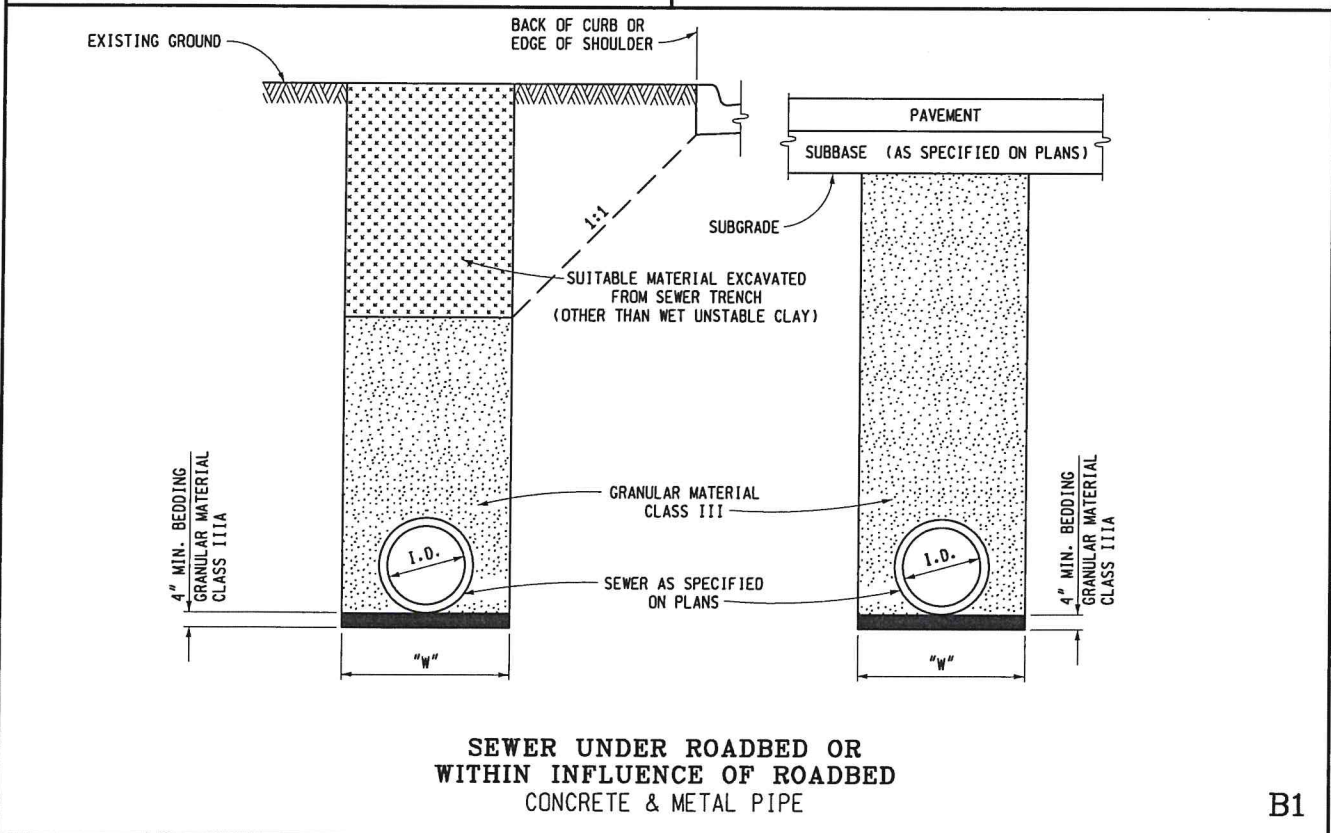
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| 9-30-2014<br>F.H.W.A. APPROVAL | 2-6-2014<br>PLAN DATE | R-30-G | SHEET<br>2 OF 2 |
|--------------------------------|-----------------------|--------|-----------------|



**A1**



**A2**



**MDOT**  
Michigan Department of Transportation

PREPARED BY  
DESIGN DIVISION

DRAWN BY: B.L.T.

CHECKED BY: W.K.P.

DEPARTMENT DIRECTOR  
Kirk T. Stuedle

APPROVED BY: Kimberly Avery  
DIRECTOR, BUREAU OF FIELD SERVICES

Bradley C. Wieferich  
DIRECTOR, BUREAU OF DEVELOPMENT

Digitally signed by Kimberly Avery  
DN: cn=Kimberly Avery, o=MDOT,  
ou=Bureau of Field Services,  
email=kimberly@mdot.state.mi.us  
Date: 2016.12.15 09:23:17 -0500

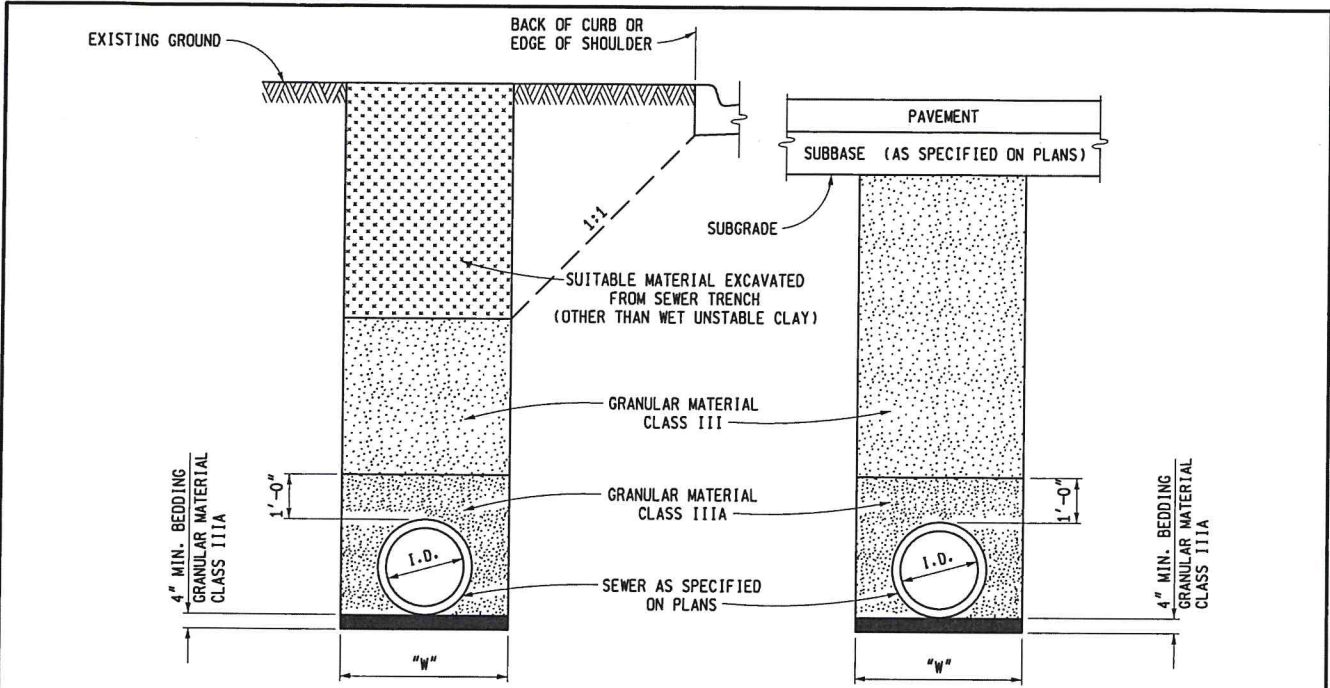
Digitally signed by Bradley C. Wieferich  
DN: cn=Bradley C. Wieferich, o=MDOT,  
ou=Department of Transportation,  
email=bradleywieferich@mdot.state.mi.us  
Date: 2016.12.15 09:23:17 -0500

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

**UTILITY TRENCHES**

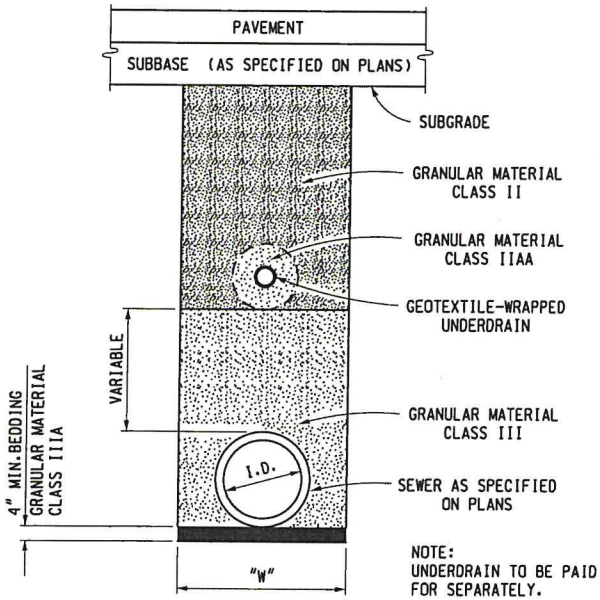
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|--------------------------------|-----------------------|---------------|-----------------|
| 7-25-2017<br>F.H.W.A. APPROVAL | 2-8-2016<br>PLAN DATE | <b>R-83-C</b> | SHEET<br>1 OF 5 |
|--------------------------------|-----------------------|---------------|-----------------|





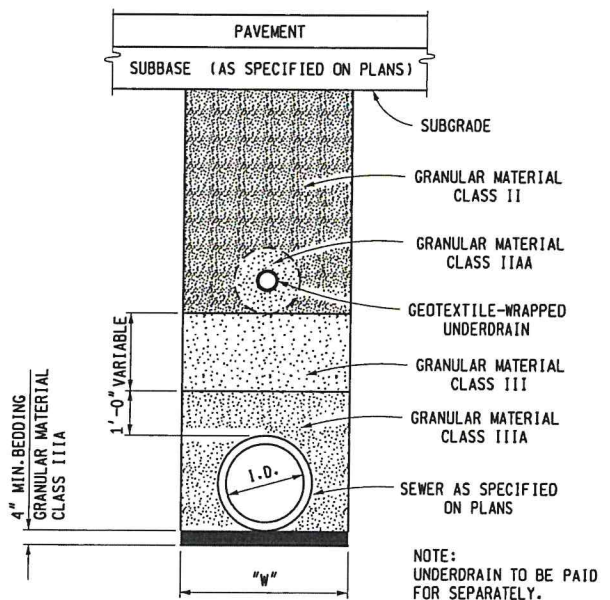
**SEWER UNDER ROADBED OR  
WITHIN INFLUENCE OF ROADBED  
PLASTIC PIPE**

**B2**



**SEWER WITH UNDERDRAIN UNDER ROADBED  
CONCRETE & METAL PIPE**

**C1**



**SEWER WITH UNDERDRAIN UNDER ROADBED  
PLASTIC PIPE**

**C2**

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

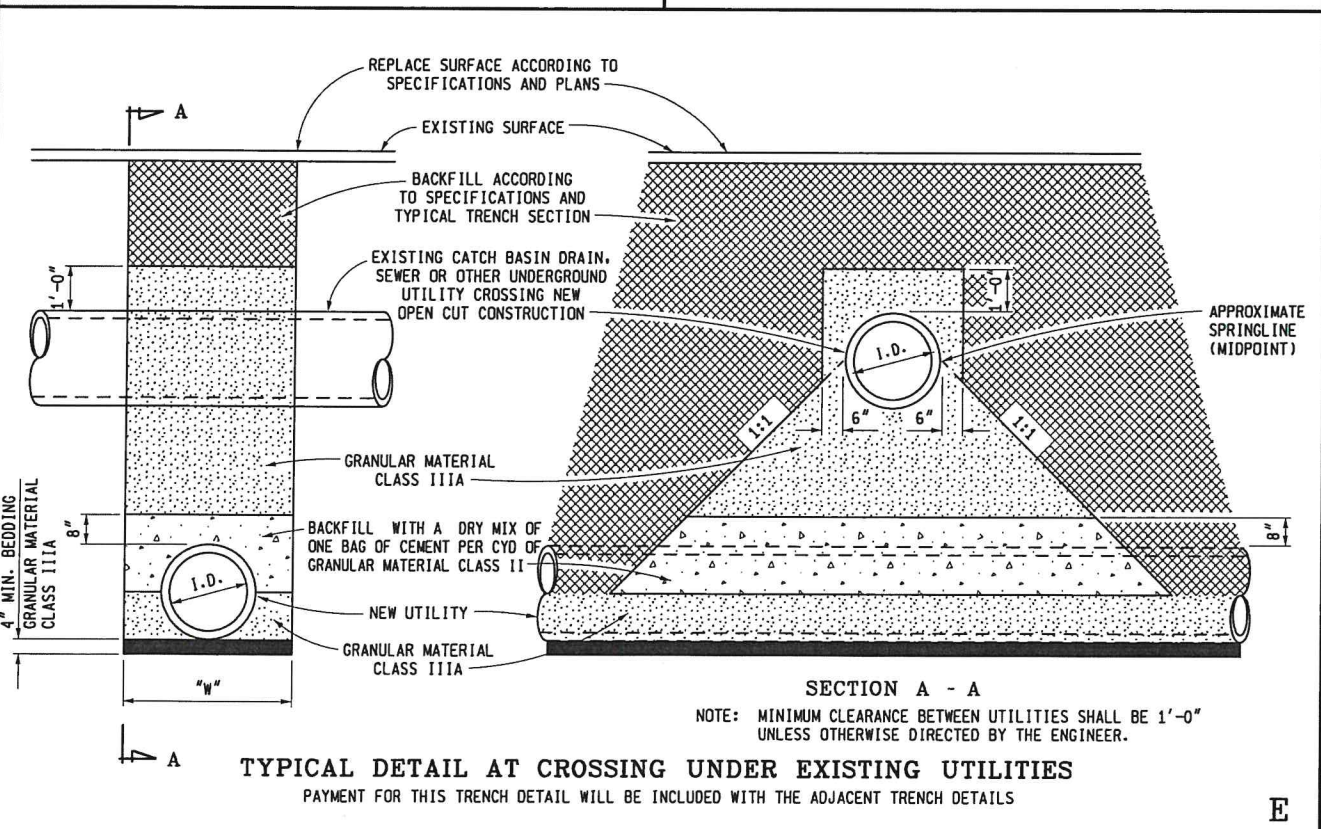
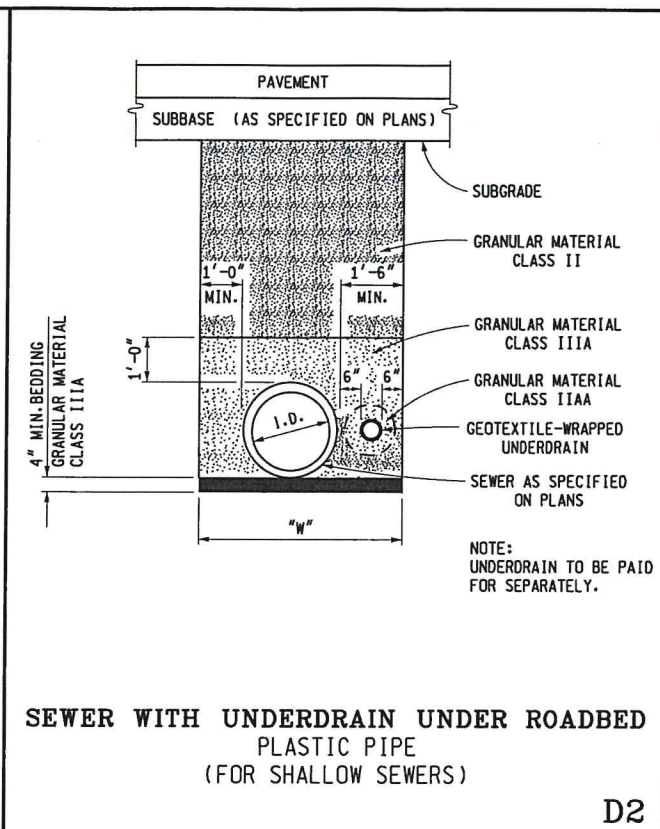
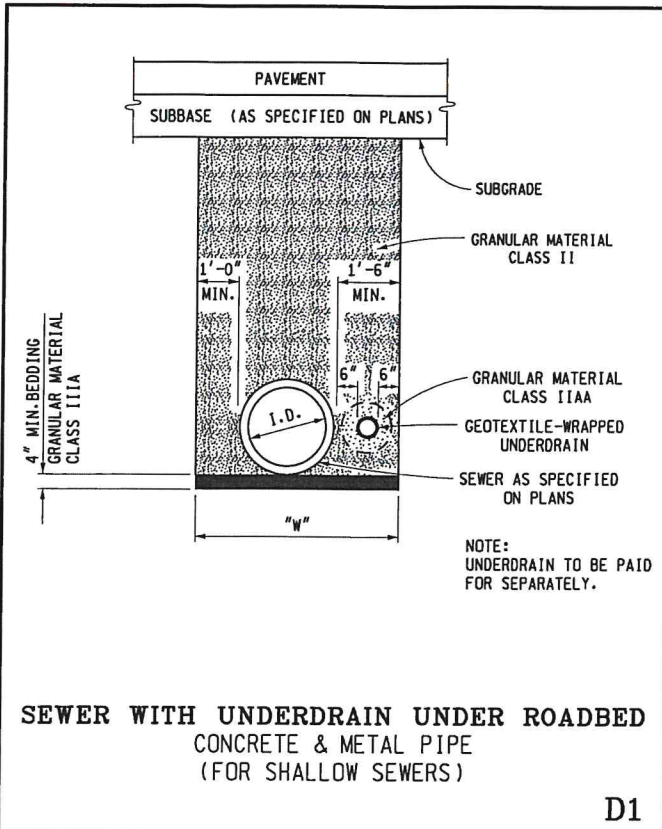
**UTILITY TRENCHES**

7-25-2017  
F.H.W.A. APPROVAL

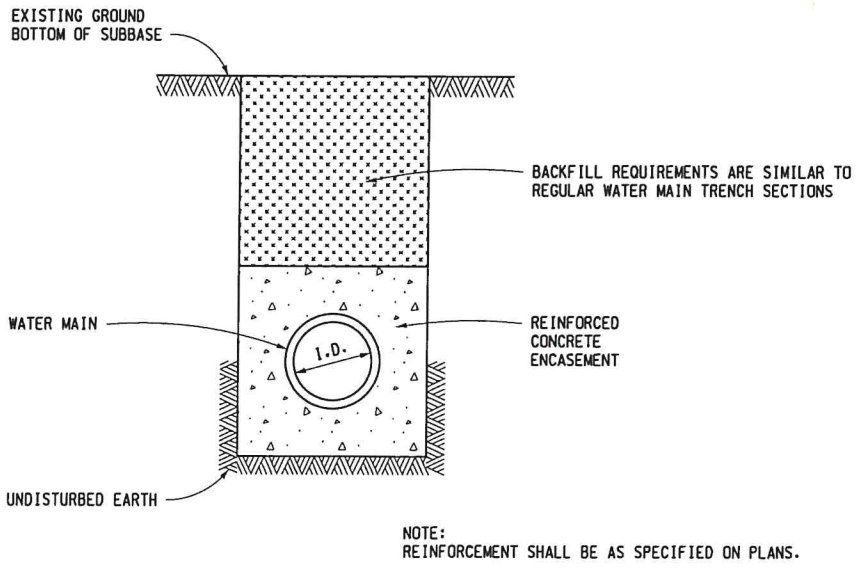
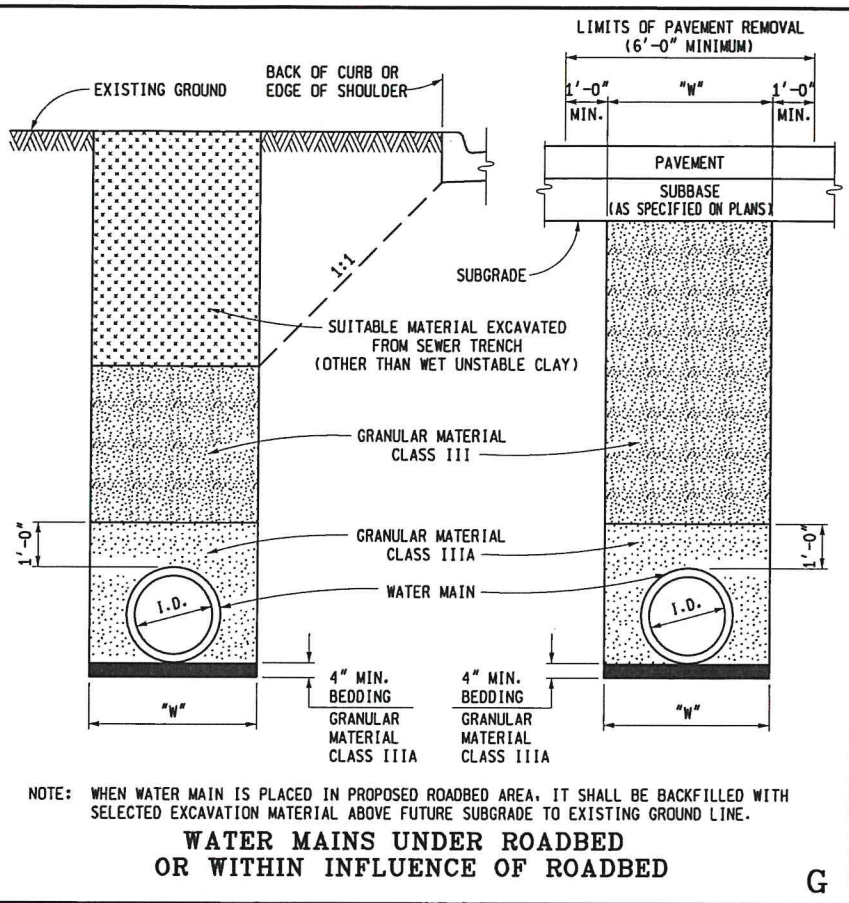
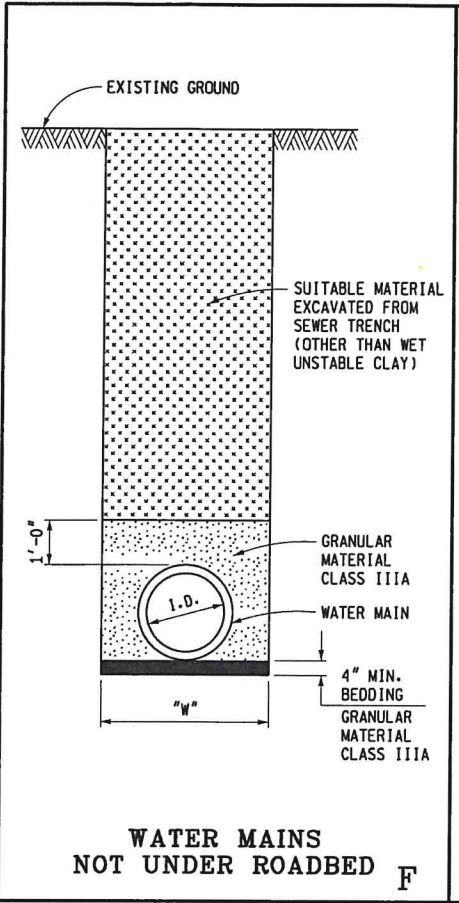
2-8-2016  
PLAN DATE

**R-83-C**

SHEET  
2 OF 5







| REQUIRED ENCASEMENT SIZE FOR RESPECTIVE PIPE SIZES |                                  |
|--|----------------------------------|
| DIAMETER OF PIPE                                   | ENCASEMENT SIZE AND TRENCH WIDTH |
| 6" - 12"   | 3'-0"                            |
| 16"  | 3'-6"                            |
| 24"  | 4'-6"                            |
| 30"  | 5'-0"                            |
| 36"  | 5'-6"                            |
| 42"  | 6'-0"                            |
| 48"  | 7'-0"                            |
| 54"  | 7'-6"                            |
| 60"  | 8'-0"                            |
| 66"  | 8'-6"                            |
| 72"  | 9'-0"                            |

NOTES:

BACKFILLING SHALL BE ACCORDING TO THE STANDARD SPECIFICATION.

SUFFICIENT TRENCH WIDTH SHALL BE PROVIDED TO ALLOW FREE WORKING SPACE AND TO PERMIT COMPACTING THE BACKFILL AROUND THE PIPE.

THE FOLLOWING ARE MINIMUM TRENCH WIDTHS:

|                               |                 |     |     |     |     |
|-------------------------------|-----------------|-----|-----|-----|-----|
| I.D.<br>PIPE SIZE<br>(INCHES) | LESS THAN<br>18 | 21  | 24  | 30  | 36  |
| "W"<br>TRENCH WIDTH<br>(FEET) | 3.0             | 3.5 | 4.0 | 5.0 | 6.0 |

|                               |     |     |     |      |      |      |
|-------------------------------|-----|-----|-----|------|------|------|
| I.D.<br>PIPE SIZE<br>(INCHES) | 42  | 48  | 54  | 60   | 66   | 72   |
| "W"<br>TRENCH WIDTH<br>(FEET) | 7.0 | 8.0 | 9.5 | 10.0 | 10.5 | 11.0 |

|                               |      |      |      |      |      |      |
|-------------------------------|------|------|------|------|------|------|
| I.D.<br>PIPE SIZE<br>(INCHES) | 78   | 84   | 90   | 96   | 102  | 108  |
| "W"<br>TRENCH WIDTH<br>(FEET) | 11.5 | 12.0 | 12.5 | 13.0 | 13.5 | 14.0 |

ESTIMATED PAVEMENT REMOVAL WIDTH IS TO BE TRENCH WIDTH "W" PLUS 1'-0" EACH SIDE OF THE TRENCH (6'-0" MINIMUM).

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

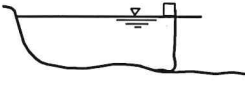
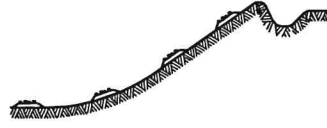


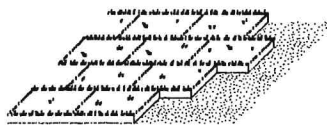

**UTILITY TRENCHES**

|                                |                       |               |                 |
|--------------------------------|-----------------------|---------------|-----------------|
| 7-25-2017<br>F.H.W.A. APPROVAL | 2-8-2016<br>PLAN DATE | <b>R-83-C</b> | SHEET<br>5 OF 5 |
|--------------------------------|-----------------------|---------------|-----------------|



**APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES**  
 (COMPREHENSIVE DETAILS ARE LOCATED IN SECTION 6 OF  
 THE SOIL EROSION & SEDIMENTATION CONTROL MANUAL)

- A = SLOPES
- B = STREAMS AND WATERWAYS
- C = SURFACE DRAINAGEWAYS
- D = ENCLOSED DRAINAGE (INLET & OUTFALL CONTROL)
- E = LARGE FLAT SURFACE AREAS
- F = BORROW AND STOCKPILE AREAS
- G = DNRE PERMIT MAY BE REQUIRED

| KEY | DETAIL   | CHARACTERISTICS   | A | B | C | D | E | F | G |
|-----|--|---|---|---|---|---|---|---|---|
| 1   | <br>TURBIDITY CURTAIN             | A Turbidity Curtain is used when slack water area is necessary to isolate construction activities from the watercourse. The still water area contains the sediments within the construction limits.   |   | • |   |   |   |   |   |
| 2   | <br>GRUBBING OMITTED              | Retains existing root mat which assists in stabilizing slopes. Assists in the revegetation process by providing sprout growth. Reduces sheet flow velocities preventing rilling and gulying. Discourages off-road vehicle use.                            |   | • |   |   | • |   |   |
| 3   | <br>PERMANENT/TEMPORARY SEEDING | Inexpensive but effective erosion control measure to stabilize flat areas and mild slopes. Permits runoff to infiltrate soil, reducing runoff volumes. Proper preparation of the seed bed, fertilizing, mulching and watering is critical to its success. |   | • | • |   | • | • |   |
| 4   | <br>DUST CONTROL                | Dust control can be accomplished by watering, and/or applying calcium chloride. The disturbed areas should be kept to a minimum. PERMANENT/TEMPORARY SEEDING (KEY 3) should be applied as soon as possible.   |   | • |   |   | • | • |   |
| 5   | <br>SODDING                     | Provides immediate vegetative cover such as at spillways and ditch bottoms. Proper preparation of the topsoil, placement of the sod, and watering is critical to its success.   |   | • |   |   | • | • |   |
| 6   | <br>VEGETATED BUFFER STRIPS     | Reduces sheet flow velocities preventing rilling and gulying. Assists in the collection of sediments by filtering runoff. Assists in the establishment of a permanent vegetative cover.   |   | • |   |   | • |   |   |

**MDOT**  
Michigan Department of Transportation

PREPARED BY  
DESIGN DIVISION

DRAWN BY: B.L.T.

CHECKED BY: W.K.P.

DEPARTMENT DIRECTOR  
Kirk T. Stuedle


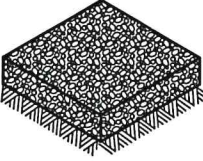
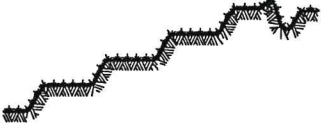
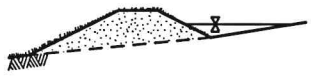
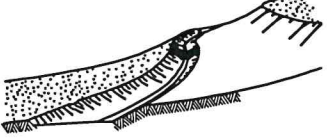


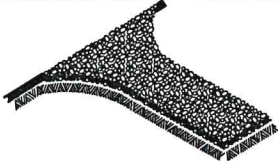
APPROVED BY: John C. Friend  
ENGINEER OF DELIVERY

APPROVED BY: Mark A. Van Pelt  
ENGINEER OF DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**SOIL EROSION & SEDIMENTATION CONTROL MEASURES**

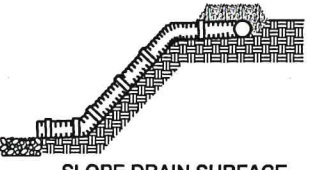

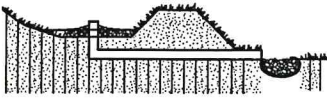
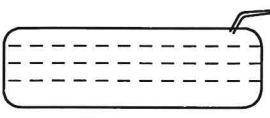

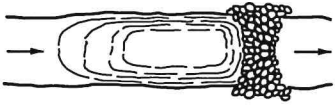
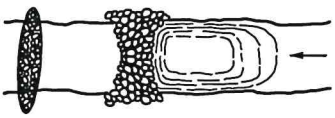

|                                |                       |               |                 |
|--------------------------------|-----------------------|---------------|-----------------|
| 9-10-2010<br>F.H.W.A. APPROVAL | 6-3-2010<br>PLAN DATE | <b>R-96-E</b> | SHEET<br>1 OF 6 |
|--------------------------------|-----------------------|---------------|-----------------|

| KEY | DETAIL   | CHARACTERISTICS  | A | B | C | D | E | F | G |
|-----|--|--|---|---|---|---|---|---|---|
| 7   |  <p>RIPRAP</p>                                  | Used where vegetation cannot be established.<br>Very effective in protecting against high velocity flows.<br>Should be placed over a geotextile liner.   | • | • | • | • |   |   | • |
| 8   |  <p>AGGREGATE COVER</p>                         | Can be used in any area where a stable condition is needed for construction operations, equipment storage or in heavy traffic areas.<br>Reduces potential soil erosion and fugitive dust by stabilizing raw areas.   | • |   |   |   | • | • |   |
| 9   |  <p>BENCHES</p>                                 | Reduces sheet flow velocities preventing rilling and gulying.<br>Assists in the collection and filtering of sediments.<br>Provides access for stabilizing slopes.  | • |   |   |   |   |   | • |
| 10  |  <p>DIVERSION DIKE</p>                          | Assists in the diversion of runoff to a stable outlet or sediment control device.<br>Reduces sheet flow velocities preventing rilling and gulying.<br>Collects and diverts runoff to properly stabilized drainage ways.<br>Works well with INTERCEPTING DITCH (KEY 11) | • |   |   |   | • | • |   |
| 11  |  <p>INTERCEPTING DITCH</p>                     | Assists in the diversion of runoff to a stable outlet or sediment control device.<br>Reduces sheet flow velocities preventing rilling and gulying.<br>Works well with DIVERSION DIKE (KEY 10)  | • |   |   |   | • | • |   |
| 12  |  <p>INTERCEPTING DITCH AND DIVERSION DIKE</p> | Assists in the diversion of runoff to a stable outlet or sediment control device.<br>Reduces sheet flow velocities preventing rilling and gulying.   | • |   |   |   | • | • |   |
| 13  |  <p>GRAVEL FILTER BERM</p>                    | Useful in filtering flow prior to its reentry into a lake, stream or wetland.<br>Works well with SEDIMENT TRAP (KEY 20) and TEMPORARY BYPASS CHANNEL (KEY 35).<br>Not to be used in lieu of a CHECK DAM (KEY 37) in a ditch.   | • |   | • |   |   |   | • |
| 14  |  <p>GRAVEL ACCESS APPROACH</p>                | Provides a stable access to roadways minimizing fugitive dust and tracking of materials onto public streets and highways.  |   |   |   |   |   | • | • |

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**SOIL EROSION & SEDIMENTATION  
CONTROL MEASURES**

|                                |                       |               |                 |
|--------------------------------|-----------------------|---------------|-----------------|
| 9-10-2010<br>F.H.W.A. APPROVAL | 6-3-2010<br>PLAN DATE | <b>R-96-E</b> | SHEET<br>2 OF 6 |
|--------------------------------|-----------------------|---------------|-----------------|

| KEY | DETAIL  | CHARACTERISTICS  | A | B | C | D | E | F | G |
|-----|---|--|---|---|---|---|---|---|---|
| 15  |  <p>SLOPE DRAIN SURFACE</p>                | <p>Excellent device for carrying water down slopes without creating an erosive condition.</p> <p>Generally used in conjunction with DIVERSION DIKE (KEY 10), INTERCEPTING DITCH (KEY 11) and INTERCEPTING DITCH AND DIVERSION DIKE (KEY 12) to direct flow to a stable discharge area or SEDIMENT TRAP (KEY 20).</p>   |   | • |   | • |   |   |   |
| 16  |  <p>TREES, SHRUBS AND PERENNIALS</p>       | <p>Trees, shrubs and perennials can provide low maintenance long term erosion protection. These plants may be particularly useful where site aesthetics are important along the roadside slopes.</p>   |   | • |   |   |   | • |   |
| 17  |  <p>PIPE DROP</p>                          | <p>Effective way to allow water to drop in elevation very rapidly without causing an erosive condition.</p> <p>Also works as a sediment collector device.</p> <p>May be left in place as a permanent erosion control device.</p>   |   | • |   | • |   |   |   |
| 18  |  <p>DEWATERING WITH FILTER BAG</p>         | <p>It may be necessary to dewater from behind a cofferdam or construction dam to create a dry work site.</p> <p>Discharged water must be pumped to a filter bag.</p> <p>A GRAVEL FILTER BERM (KEY 13) may be placed downslope of the filter bag to provide additional filtration prior to entering any stream or wetland.</p>                                  |   |   | • |   |   |   | • |
| 19  |  <p>ENERGY DISSIPATORS</p>               | <p>A device to prevent the erosive force of water from eroding soils.</p> <p>Used at outlets of culverts, drainage pipes or other conduits to reduce the velocity of the water.</p> <p>Prevents structure scouring and undermining.</p>  |   | • | • | • | • |   |   |
| 20  |  <p>SEDIMENT TRAP</p>                    | <p>Used to intercept concentrated flows and prevent sediments from being transported off site or into a watercourse or wetland.</p> <p>The size of a Sediment Trap is 5 cubic yards or less.</p> <p>Works well when used with CHECK DAM (KEY 37).</p>  |   | • |   | • | • |   |   |
| 21  |  <p>SEDIMENT BASIN</p>                   | <p>A Sediment Basin is used to trap sediments from an upstream construction site.</p> <p>Requires periodic inspections, repairs, and maintenance.</p> <p>Where practical, sediments should be contained on site.</p> <p>A Sediment Basin should be the last choice of sediment control.</p> <p>The size of a Sediment Basin is greater than 5 cubic yards.</p> |   |   | • |   |   |   | • |
| 22  |  <p>VEGETATIVE BUFFER AT WATERCOURSE</p> | <p>This practice is used to maintain a vegetative buffer adjacent to a watercourse.</p> <p>When utilized with SILT FENCE (KEY 26) it will, under normal circumstances, prevent sediment from leaving the construction site.</p>  |   | • | • | • |   | • | • |

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**SOIL EROSION & SEDIMENTATION  
CONTROL MEASURES**

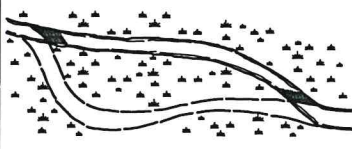
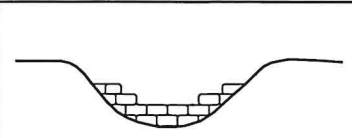
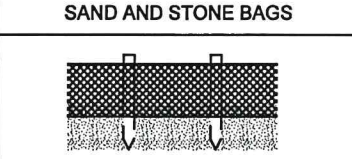
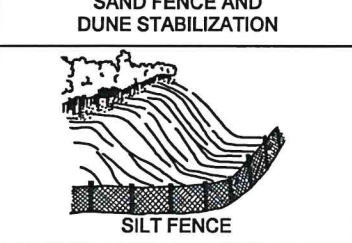


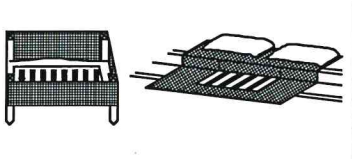
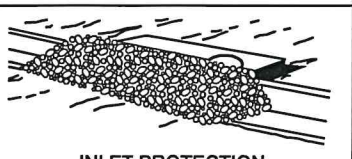
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F.H.W.A. APPROVAL

6-3-2010  
PLAN DATE

**R-96-E**

SHEET  
3 OF 6

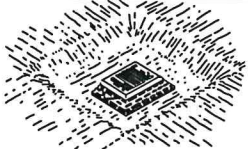

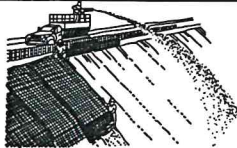
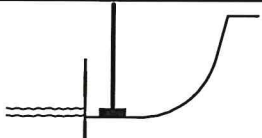

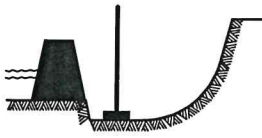



| KEY | DETAIL   | CHARACTERISTICS   | A | B | C | D | E | F | G |
|-----|--|---|---|---|---|---|---|---|---|
| 23  |  <p>STREAM RELOCATION</p>                       | <p>A detail depicting the proper procedures for stream relocation. Maintains same width, depth, and flow velocity as the natural stream. Revegetate banks with PERMANENT/TEMPORARY SEEDING (KEY 3), MULCHING AND MULCH ANCHORING (KEY 28), MULCH BLANKETS AND HIGH VELOCITY MULCH BLANKETS (KEY 33) and woody plants to shade the stream.</p> |   | • |   |   |   |   | • |
| 24  |  <p>SAND AND STONE BAGS</p>                     | <p>Sand and stone bags are a useful tool in the prevention of erosion. Can be used to divert water around a construction site by creating a DIVERSION DIKE (KEY 10). Works well for creating a CONSTRUCTION DAM (KEY 36) and temporary culvert end fill.</p>  | • | • | • | • | • | • | • |
| 25  |  <p>SAND FENCE AND DUNE STABILIZATION</p>       | <p>A Sand Fence traps blowing sand by reducing wind velocities. Can be used to prevent sand from blowing onto roads. Must be maintained until sand source is stabilized.</p>  | • |   |   |   | • | • |   |
| 26  |  <p>SILT FENCE</p>                              | <p>A permeable barrier erected below disturbed areas to capture sediments from sheet flow. Can be used to divert small volumes of water to stable outlets. Ineffective as a filter and should never be placed across streams or ditches where flow is concentrated.</p>   | • |   |   |   | • | • |   |
| 27  |  <p>PLASTIC SHEETS OR GEOTEXTILE COVER</p>    | <p>Plastic Sheets can be used to create a liner in temporary channels. Can also be used to create a temporary cover to prevent erosion of stockpiled materials.</p>   | • | • | • |   |   | • |   |
| 28  |  <p>MULCHING AND MULCH ANCHORING</p>          | <p>Anchored mulch provides erosion protection against rain and wind. Mulch must be used on seeded areas to promote water retention and growth. Should be inspected after every rainstorm and repaired as necessary until vegetation is well established.</p>  | • |   | • |   | • | • |   |
| 29  |  <p>INLET PROTECTION FABRIC DROP</p>          | <p>Provides settling and filtering of silt laden water prior to its entry into the drainage system. Can be used in median and side ditches where vegetation will be disturbed. Allows for early use of drainage systems prior to project completion.</p>  |   |   | • |   | • |   |   |
| 30  |  <p>INLET PROTECTION GEOTEXTILE AND STONE</p> | <p>Provides settling and filtering of silt laden water prior to its entry into the drainage system. Should be used in paved areas where drainage structures are existing or proposed. Allows for early use of drainage systems prior to project completion.</p>   |   |   | • |   | • |   |   |

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

## SOIL EROSION & SEDIMENTATION CONTROL MEASURES

|                                |                       |        |                 |
|--------------------------------|-----------------------|--------|-----------------|
| 9-10-2010<br>F.H.W.A. APPROVAL | 6-3-2010<br>PLAN DATE | R-96-E | SHEET<br>4 OF 6 |
|--------------------------------|-----------------------|--------|-----------------|

| KEY | DETAIL   | CHARACTERISTICS  | A | B | C | D | E | F | G |
|-----|--|--|---|---|---|---|---|---|---|
| 31  | <br>INLET PROTECTION SEDIMENT TRAP                  | An Inlet Protection Sediment Trap is a temporary device that can be used in areas where medium flows are anticipated. Effective in trapping small quantities of sediments prior to water entering the drainage system. Can be used in areas such as median and side ditches.   |   |   | • |   | • |   |   |
| 32  | <br>SLOPE ROUGHENING AND SCARIFICATION              | A simple and economical way to reduce soil erosion by wind and water. Can be accomplished by harrowing with a disk, back blading, or tracking with a dozer perpendicular to the slope.   | • |   |   |   | • | • |   |
| 33  | <br>MULCH BLANKETS AND HIGH VELOCITY MULCH BLANKETS | Mulch blankets provide an immediate and effective cover over raw erodible slopes affording excellent protection against rain and wind erosion. High velocity mulch blankets work well for stabilizing the bottom of ditches in waterways.  | • |   | • |   | • | • |   |
| 34  | <br>COFFERDAM                                       | Used to create a dry construction area and protect the stream from raw erodible areas. Must be pumped dry or dewatered according to DEWATERING WITH FILTER BAG (KEY 18).   |   | • |   |   |   |   | • |
| 35  | <br>TEMPORARY BYPASS CHANNEL                       | Utilized when a dry construction area is needed. Isolates stream flows from raw erodible areas minimizing erosion and subsequent siltation. Can incorporate SEDIMENT BASIN (KEY 21), CHECK DAM (KEY 37), and GRAVEL FILTER BERM (KEY 13) to remove sediments from water. Construction sequence of events may be necessary. |   | • |   |   |   |   | • |
| 36  | <br>CONSTRUCTION DAM                              | Used to create a dry or slack water area for construction. Isolates the stream from raw erodible areas. Can be created out of any non-erodible materials such as SAND AND STONE BAGS (KEY 24), a gravel dike with clay core or plastic liner, steel plates or plywood.   |   | • |   |   |   |   | • |
| 37  | <br>CHECK DAM                                     | Can be constructed across ditches or any area of concentrated flow. Protects vegetation in early stages of growth. A Check Dam is intended to reduce water velocities and capture sediment. A Check Dam is not a filtering device.   | • |   | • |   |   | • |   |

MICHIGAN DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**SOIL EROSION & SEDIMENTATION  
 CONTROL MEASURES**

|                                |                       |               |                 |
|--------------------------------|-----------------------|---------------|-----------------|
| 9-10-2010<br>F.H.W.A. APPROVAL | 6-3-2010<br>PLAN DATE | <b>R-96-E</b> | SHEET<br>5 OF 6 |
|--------------------------------|-----------------------|---------------|-----------------|

NOTES:

THIS STANDARD PLAN WILL SERVE AS A KEY IN THE SELECTION OF THE APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL DETAILS. THIS PLAN ALSO PROVIDES THE KEY TO THE NUMBERED EROSION CONTROL ITEMS SPECIFIED ON THE CONSTRUCTION PLANS. REFER TO THE MDT SOIL EROSION & SEDIMENTATION CONTROL MANUAL, SECTION 6 FOR SPECIFIC DETAILS, CONTRACT ITEMS (PAY ITEMS), AND PAY UNITS.

COLLECTED SILT AND SEDIMENT SHALL BE REMOVED PERIODICALLY TO MAINTAIN THE EFFECTIVENESS OF THE SEDIMENT TRAP, SEDIMENT BASIN, AND SILT FENCE. AGGREGATES PLACED IN STREAMS SHOULD CONTAIN A MINIMUM OF FINES.

TEMPORARY EROSION AND SEDIMENTATION CONTROL PROVISIONS SHALL BE COORDINATED WITH THE PERMANENT CONTROL MEASURES TO ASSURE EFFECTIVE CONTROL OF SEDIMENTS DURING CONSTRUCTION OF THE PROJECT.

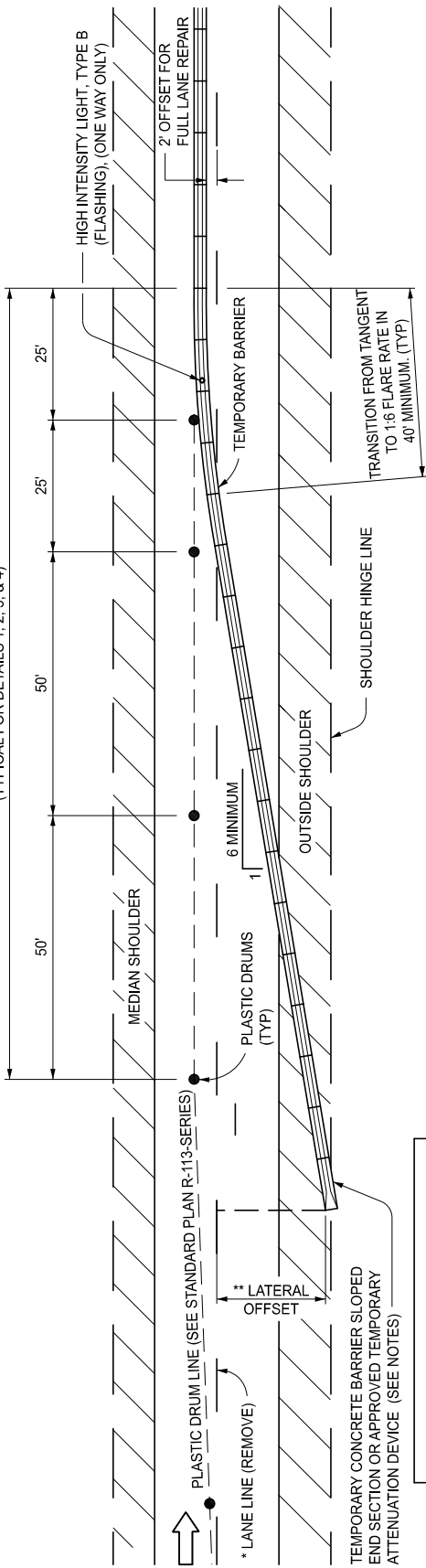
ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AFTER VEGETATION ESTABLISHMENT OR AT THE DISCRETION OF THE ENGINEER. CARE SHALL BE TAKEN DURING REMOVAL TO MINIMIZE SILTATION IN NEARBY DRAINAGE COURSES.

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**SOIL EROSION & SEDIMENTATION  
CONTROL MEASURES**

|                                |                       |        |                 |
|--------------------------------|-----------------------|--------|-----------------|
| 9-10-2010<br>F.H.W.A. APPROVAL | 6-3-2010<br>PLAN DATE | R-96-E | SHEET<br>6 OF 6 |
|--------------------------------|-----------------------|--------|-----------------|

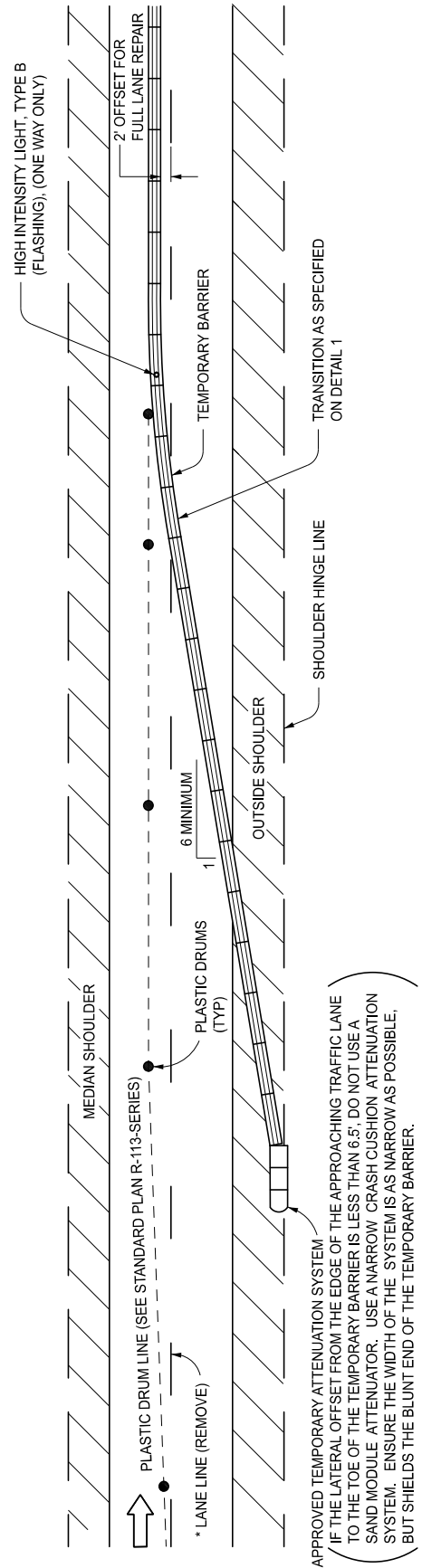
150' ON TANGENT  
(TYPICAL FOR DETAILS 1, 2, 3, & 4)



- \* LANE LINE SHALL BE REMOVED A MINIMUM LENGTH EQUAL TO THE LENGTH OF THE DRUM LINE TAPER; TYPICAL FOR DETAILS 1, 2, 3, 4, AND 5.
- \*\* THE LATERAL OFFSET REFERS TO THE MINIMUM DISTANCE BETWEEN THE EDGE OF THE NEAREST TRAVELED (OPEN) LANE AND THE TRAFFIC SIDE OF THE ENDING OF THE TEMPORARY BARRIER. THE BARRIER SHALL BE EXTENDED TO THE EDGE OF THE SHOULDER EVEN IF THIS DISTANCE IS BEYOND THE LATERAL OFFSET. IF THE LATERAL OFFSET DISTANCE IS GREATER THAN THE DISTANCE TO THE SHOULDER HINGE LINE, USE DETAIL 2.

DETAIL 1

| ** LATERAL OFFSET (MINIMUM DISTANCE) |                 |
|--------------------------------------|-----------------|
| SPEED (MPH)                          | DISTANCE (FEET) |
| ≤ 35                                 | 15              |
| 40                                   | 18              |
| 45                                   | 20              |
| 50                                   | 23              |
| ≥ 55                                 | 31              |



DETAIL 2

WHEN DETAIL 1 CANNOT BE USED BECAUSE OF RESTRICTED LATERAL OFFSET

APPROVED TEMPORARY ATTENUATION SYSTEM  
(IF THE LATERAL OFFSET FROM THE EDGE OF THE APPROACHING TRAFFIC LANE TO THE TOE OF THE TEMPORARY BARRIER IS LESS THAN 6.5', DO NOT USE A SAND MODULE ATTENUATOR. USE A NARROW CRASH CUSHION ATTENUATION SYSTEM. ENSURE THE WIDTH OF THE SYSTEM IS AS NARROW AS POSSIBLE, BUT SHIELDS THE BLUNT END OF THE TEMPORARY BARRIER.)

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF FIELD SERVICES



APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF DEVELOPMENT

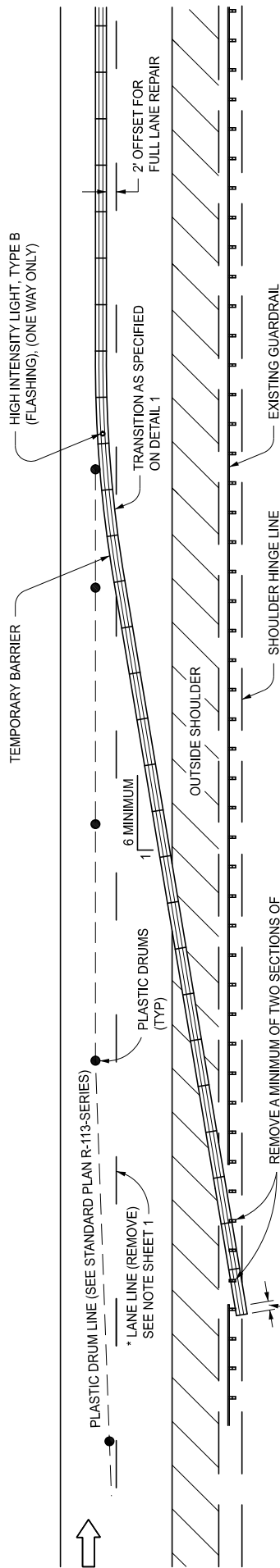
DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR  
PLACEMENT OF TEMPORARY CONCRETE BARRIER  
AND TEMPORARY STEEL BARRIER

(SPECIAL DETAIL) 08/25/2015  
FHWA APPROVAL PLAN DATE

R-126-I

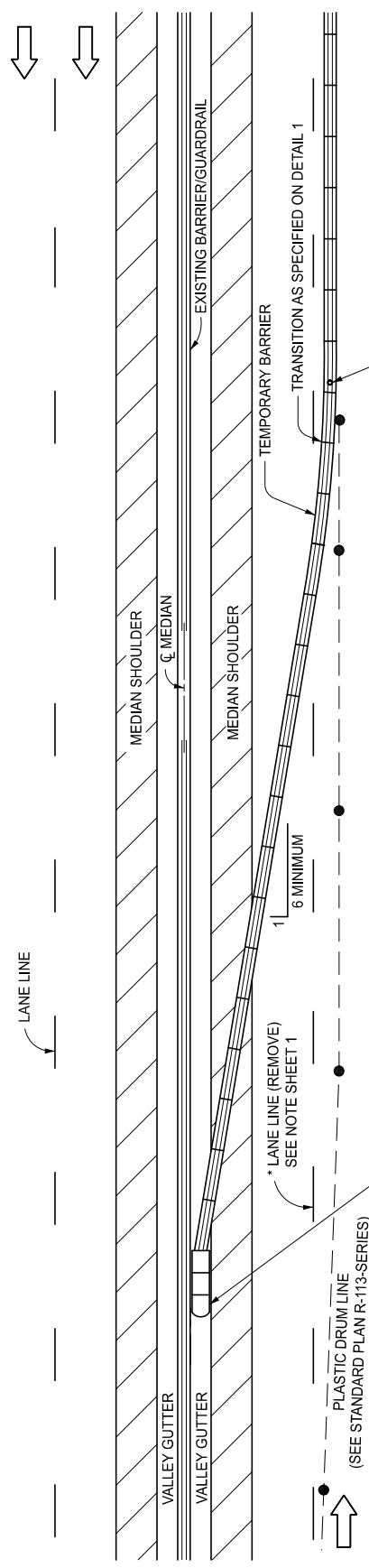
SHEET  
1 OF 5



REMOVE A MINIMUM OF TWO SECTIONS OF GUARDRAIL AND POSTS IN THE RESULTING OPENING. (REPLACE THE GUARDRAIL WHEN TEMPORARY BARRIER IS REMOVED.)

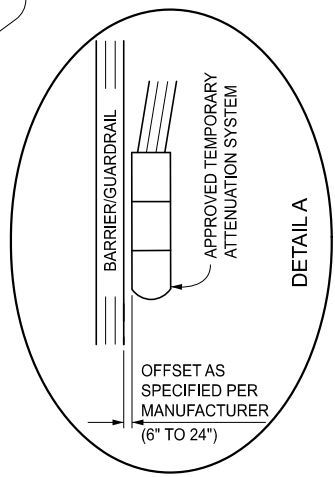
THE TEMPORARY BARRIER SHALL EXTEND A MINIMUM OF 2' BEYOND THE GUARDRAIL POST. PLACE BARRIER AGAINST POST. DO NOT BREAK INTO THE LENGTH OF A GUARDRAIL ENDING TERMINAL. BEGIN BARRIER A MINIMUM OF ONE SECTION OF RAIL BEYOND THE LENGTH OF THE APPROACH TERMINAL OR REVISE THE TAPER RATE OF THE BARRIER.

**DETAIL 3**  
( TEMPORARY BARRIER IN GUARDRAIL AREA )



APPROVED TEMPORARY ATTENUATION SYSTEM (SEE DETAIL A)  
(IF THE LATERAL OFFSET FROM THE EDGE OF THE APPROACHING TRAFFIC LANE TO THE TOE OF THE EXISTING BARRIER/GUARDRAIL IS LESS THAN 8', DO NOT USE A SAND MODULE ATTENUATOR. USE A NARROW CRASH CUSHION ATTENUATION SYSTEM. ENSURE THE WIDTH OF THE SYSTEM IS AS NARROW AS POSSIBLE, BUT SHIELDS THE BLUNT END OF THE TEMPORARY BARRIER.)

NOTE: VALLEY GUTTER MAY BE ADJACENT TO PAVEMENT.



**DETAIL 4**  
( TEMPORARY BARRIER IN MEDIAN BARRIER AREA )

NOTE: SIMILAR TREATMENT MAY BE USED ON SINGLE FACE BARRIER ON OUTSIDE SHOULDER.

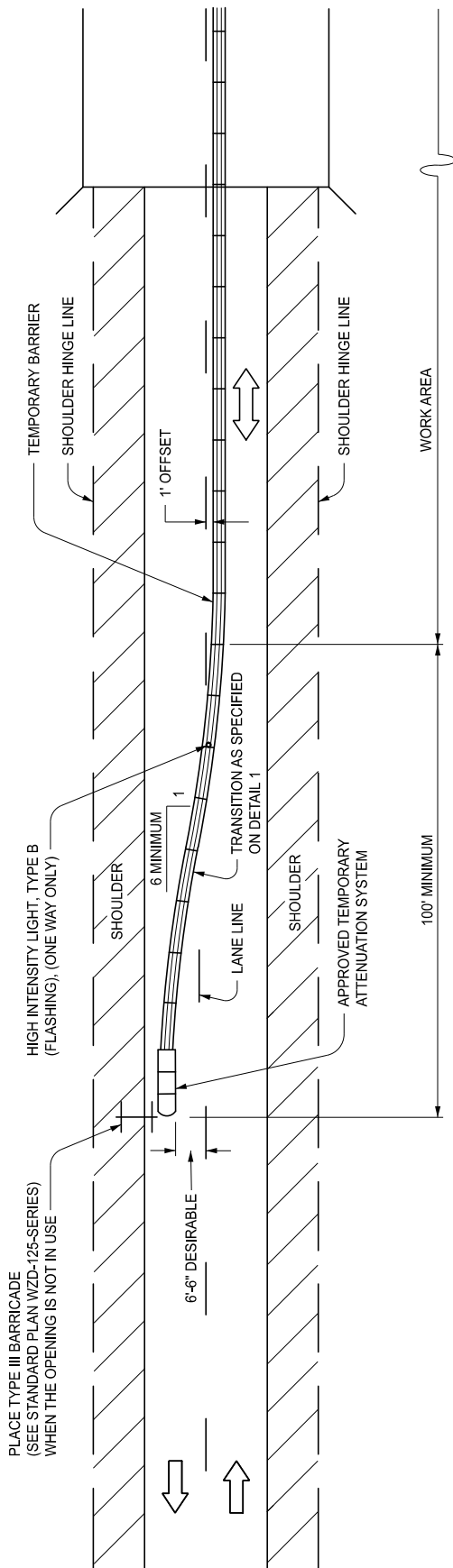


DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

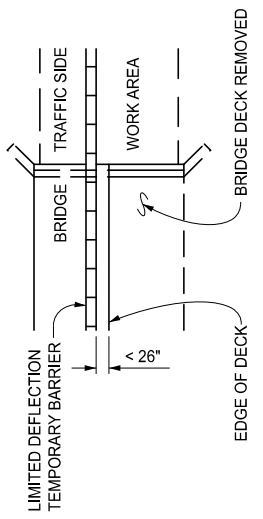
STANDARD PLAN FOR  
PLACEMENT OF TEMPORARY CONCRETE BARRIER  
AND TEMPORARY STEEL BARRIER

|                  |            |         |                 |
|------------------|------------|---------|-----------------|
| (SPECIAL DETAIL) | 08/25/2015 | R-126-I | SHEET<br>2 OF 5 |
| FHWA APPROVAL    | PLAN DATE  |         |                 |





**DETAIL 5**  
 (TRAILING END OF TEMPORARY BARRIER ON TWO-WAY ROADWAY)



**DETAIL 5 NOTES:**

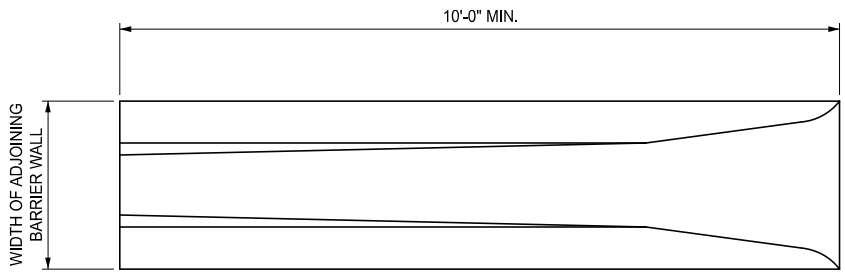
WHERE CONTROLLED BIDIRECTIONAL TRAFFIC IS MAINTAINED ON A SINGLE LANE, THE PLACING OF TEMPORARY BARRIER ON THE APPROACHING END OF A LANE CLOSURE SHALL BE THE SAME AS SPECIFIED ON DETAIL 1, 2 OR 3. THE TRAILING END OF THE LANE CLOSURE SHALL BE AS SPECIFIED ON DETAIL 5. THE PLASTIC DRUM LINE TAPER WILL BE ACCORDING TO THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES OR WITH THE MAINTAINING TRAFFIC PROVISIONS IN THE PLANS OR PROPOSAL. THE TEMPORARY BARRIER END SECTION ON THE TRAILING END OF THE TEMPORARY BARRIER SHALL BE PARALLEL WITH THE TRAFFIC.

**BARRIER ADJACENT TO A PRECIPITOUS DROP-OFF:**

WHEN THERE IS 26" OR MORE, LATERALLY BETWEEN THE TOE OF THE BARRIER ON THE CONSTRUCTION SIDE AND THE DROP-OFF, STANDARD TEMPORARY CONCRETE BARRIER OR TEMPORARY STEEL BARRIER MEETING MDOT SPECIFICATIONS MAY BE USED NEAR THE DROP-OFF. NO SPECIAL HARDWARE OR PROCEDURES ARE NECESSARY. HOWEVER, WHEN THERE IS LESS THAN 26" LATERALLY BETWEEN THE TOE OF THE BARRIER ON THE CONSTRUCTION SIDE AND THE DROP-OFF, AN APPROPRIATE LIMITED DEFLECTION TEMPORARY BARRIER DETAIL MEETING THE REQUIREMENTS OF STANDARD PLAN R-53-SERIES, OR AN APPROVED ALTERNATIVE, MUST BE USED.

REFER TO STANDARD PLAN R-53-SERIES FOR ADDITIONAL INFORMATION REGARDING LIMITED DEFLECTION TEMPORARY BARRIER DETAILS.

**TEMPORARY BARRIER ADJACENT TO A PRECIPITOUS DROP-OFF**



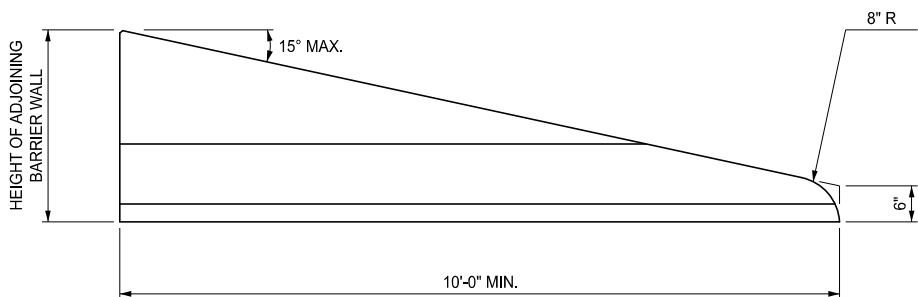
TOP VIEW

**NOTES:**

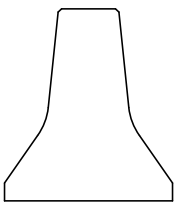
CONNECTIONS AND HARDWARE USED TO CONNECT THE SLOPED END SECTION TO TEMPORARY CONCRETE BARRIER (TCB) MUST MATCH CONNECTIONS BETWEEN TCB SEGMENTS AND MEET THE REQUIREMENTS OF NCHRP 350 OR MASH (TEST LEVEL 3 OR HIGHER).

STIRRUP DETAILS PROVIDED FOR ILLUSTRATION PURPOSES. ACTUAL STIRRUP DETAILS WILL VARY BASED ON END SECTION SHAPE, DIMENSIONS, AND STIRRUP LOCATION.

STIRRUPS MUST BE DESIGNED TO PROVIDE A MINIMUM OF 2 INCHES OF CLEAR COVER FROM ANY LOCATION ON THE SURFACE OF THE END SECTION.



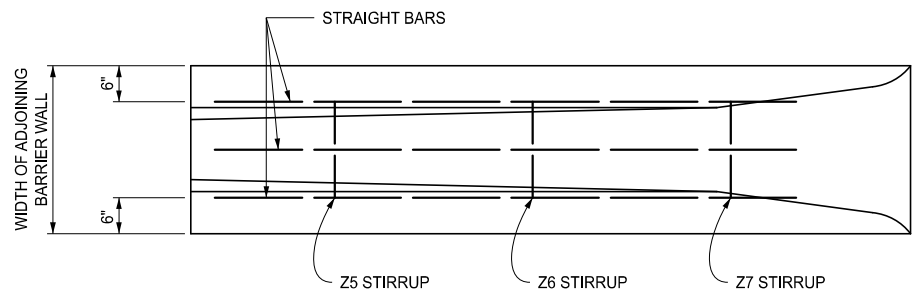
ELEVATION VIEW



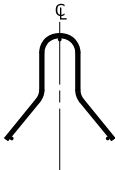
END VIEW

MUST MATCH CROSS-SECTIONAL SHAPE AND DIMENSIONS OF ADJOINING BARRIER WALL

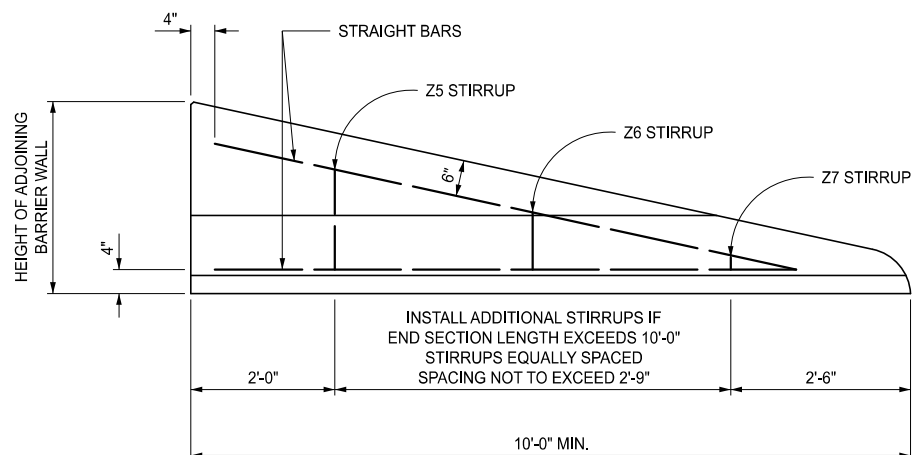
**TEMPORARY CONCRETE BARRIER SLOPED END SECTION**



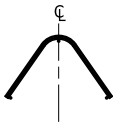
TOP VIEW



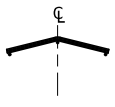
Z5 STIRRUP DETAIL



ELEVATION VIEW



Z6 STIRRUP DETAIL



Z7 STIRRUP DETAIL

**STEEL REINFORCEMENT FOR TEMPORARY CONCRETE BARRIER SLOPED END SECTION**

NOTE: #5 BARS SHALL BE USED FOR ALL STRAIGHT BARS AND STIRRUPS

|   |   |                                 |                       |                         |
|---|---|---------------------------------|-----------------------|-------------------------|
| <p>DEPARTMENT DIRECTOR<br/>BRADLEY C. WIEFERICH, PE</p> | <p>STANDARD PLAN FOR<br/><b>PLACEMENT OF TEMPORARY CONCRETE BARRIER<br/>AND TEMPORARY STEEL BARRIER</b></p> |                                 | <p><b>R-126-I</b></p> | <p>SHEET<br/>4 OF 5</p> |
|   | <p>(SPECIAL DETAIL)<br/>FHWA APPROVAL</p>   | <p>08/25/2015<br/>PLAN DATE</p> |                       |                         |

NOTES:

THE DETAILS IN STANDARD PLAN R-126-SERIES ARE NOT APPLICABLE TO PORTABLE WATER-FILLED BARRIER. PLACEMENT OF PORTABLE WATER-FILLED BARRIER SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE SEQUENCE OF BARRIER PLACEMENT SHALL BE IN THE DIRECTION OF TRAFFIC FLOW. BARRIER REMOVAL SHALL BE IN THE DIRECTION OPPOSITE TO TRAFFIC FLOW.

TEMPORARY BARRIER ENDINGS SUBJECT TO APPROACH TRAFFIC AND NOT TERMINATED BEHIND GUARDRAIL MUST BE ATTENUATED OR, IF APPLICABLE, SHIELDED WITH A TEMPORARY CONCRETE BARRIER SLOPED END SECTION.

DETAIL 2 WILL BE USED WHEN THERE IS NO EXISTING GUARDRAIL OR BARRIER AVAILABLE AS SPECIFIED IN DETAILS 3 OR 4.

THE LOCATION OF THE HIGH INTENSITY LIGHT, TYPE B (FLASHING) SPECIFIED IN DETAIL 1, SHALL APPLY TO DETAILS 2, 3, 4, AND 5. ALSO THE HIGH INTENSITY LIGHT, TYPE B SHALL BE FASTENED ON THE TOP OF THE BARRIER.

THE BARRIER FLARE RATE SHALL BE AT LEAST 6' OF RUN FOR EVERY FOOT OF OFFSET.

EXACT LATERAL PLACEMENT OF BARRIER MUST BE SPECIFIED ON THE PLANS OR IN THE PROPOSAL. BARRIER POSITION SPECIFIED IS DESIRABLE WHEN WORK AREA INVOLVES THE FULL WIDTH OF THE CLOSED LANE. WHEN PARTIAL LANE WORK IS INVOLVED, OR SHOULDER WORK ONLY, BARRIER SHOULD BE SET INSIDE CLOSED LANE, AS ALLOWED BY WORK AREA, WITH 2' OR MORE OFFSET DESIRABLE TO LANE LINE.

IN DETAIL 3, EXISTING GUARDRAIL POSTS ARE REMOVED TO FACILITATE PLACING OF TEMPORARY BARRIER BEHIND THE GUARDRAIL. THE DEGREE OF THE BARRIER DEPARTURE ANGLE WILL DETERMINE THE AMOUNT OF BEAM GUARDRAIL AND THE NUMBER OF POSTS TO BE REMOVED.

THE HIGH INTENSITY LIGHT, TYPE B SHALL BE OMITTED WHERE TWO-WAY TRAFFIC IS MAINTAINED ON ONE LANE AND IS CONTROLLED BY TRAFFIC SIGNALS.

IN DETAIL 1, WHEN USING STEEL BARRIER, ATTACH AN APPROVED TEMPORARY ATTENUATION SYSTEM TO TEMPORARY STEEL BARRIER. ATTACHING A TEMPORARY CONCRETE BARRIER SLOPED END SECTION TO TEMPORARY STEEL BARRIER WILL BE PROHIBITED. WHEN USING CONCRETE BARRIER, ATTACH TEMPORARY CONCRETE BARRIER SLOPED END SECTION OR AN APPROVED TEMPORARY ATTENUATION SYSTEM TO THE TEMPORARY CONCRETE BARRIER.



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR  
PLACEMENT OF TEMPORARY CONCRETE BARRIER  
AND TEMPORARY STEEL BARRIER

(SPECIAL DETAIL)  
FHWA APPROVAL

08/25/2015  
PLAN DATE

R-126-I

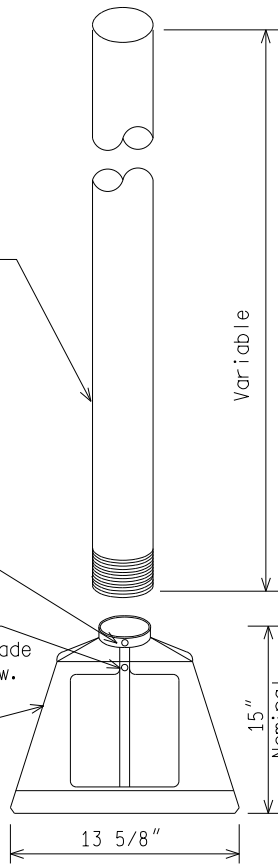
SHEET  
5 OF 5

Aluminum Pedestal  
6063-T6 alloy, 4" x .237"  
wall schedule 40-3.73 #/ft.  
spun finish.

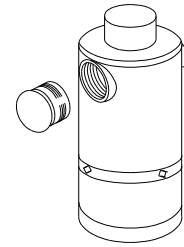
3/8"x1 1/4" stainless  
steel set screw

Cover held in place with a  
1/4"x 20 UNC Hex head 300 grade  
stainless steel machine screw.

Frangible Square  
aluminum base  
See Note 4) on  
sheet 3 of 3.



SQUARE ALUMINUM BASE

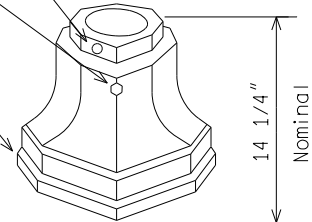


POST TOP  
(SLIP FITTER)

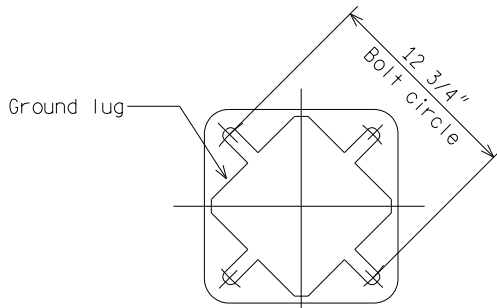
3/8" x 20 UNC x 2" stainless  
steel set screw

Cover held in place with a  
1/4"x20 UNC Hex head 300 grade  
stainless steel machine screw.

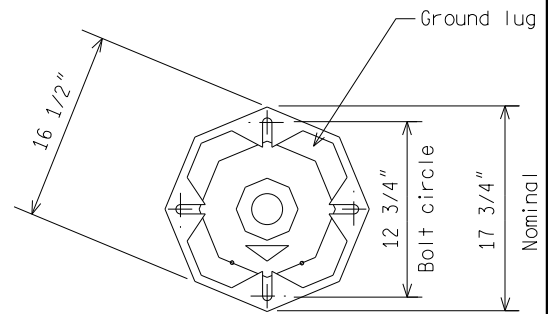
Frangible Octagonal  
aluminum base  
See Note 4) on  
sheet 3 of 3.  
See Note 5) on sheet 3 of 3  
for RCOC preference.



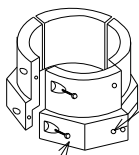
OCTAGONAL BASE



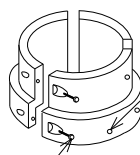
SQUARE BASE  
BOTTOM PLAN



OCTAGONAL BASE  
BOTTOM PLAN



COLLAR  
(OCTAGONAL BASE)



COLLAR  
(SQUARE BASE)

NOTE: Use pedestal collar for pedestal length greater than or equal to 14' (typical for 3 color traffic signals with pedestrian signals)

NOT TO SCALE

File: RefDoc/TR/Signals/Web/Sp Det/Fin/SIG070A.dgn Rev. 04/05/21



PREPARED BY  
TRAFFIC AND SAFETY

DRAWN BY:  
CHECKED BY:

ENGINEER OF DELIVERY

ENGINEER OF DEVELOPMENT

(SPECIAL DETAIL)  
FHWA APPROVAL DATE

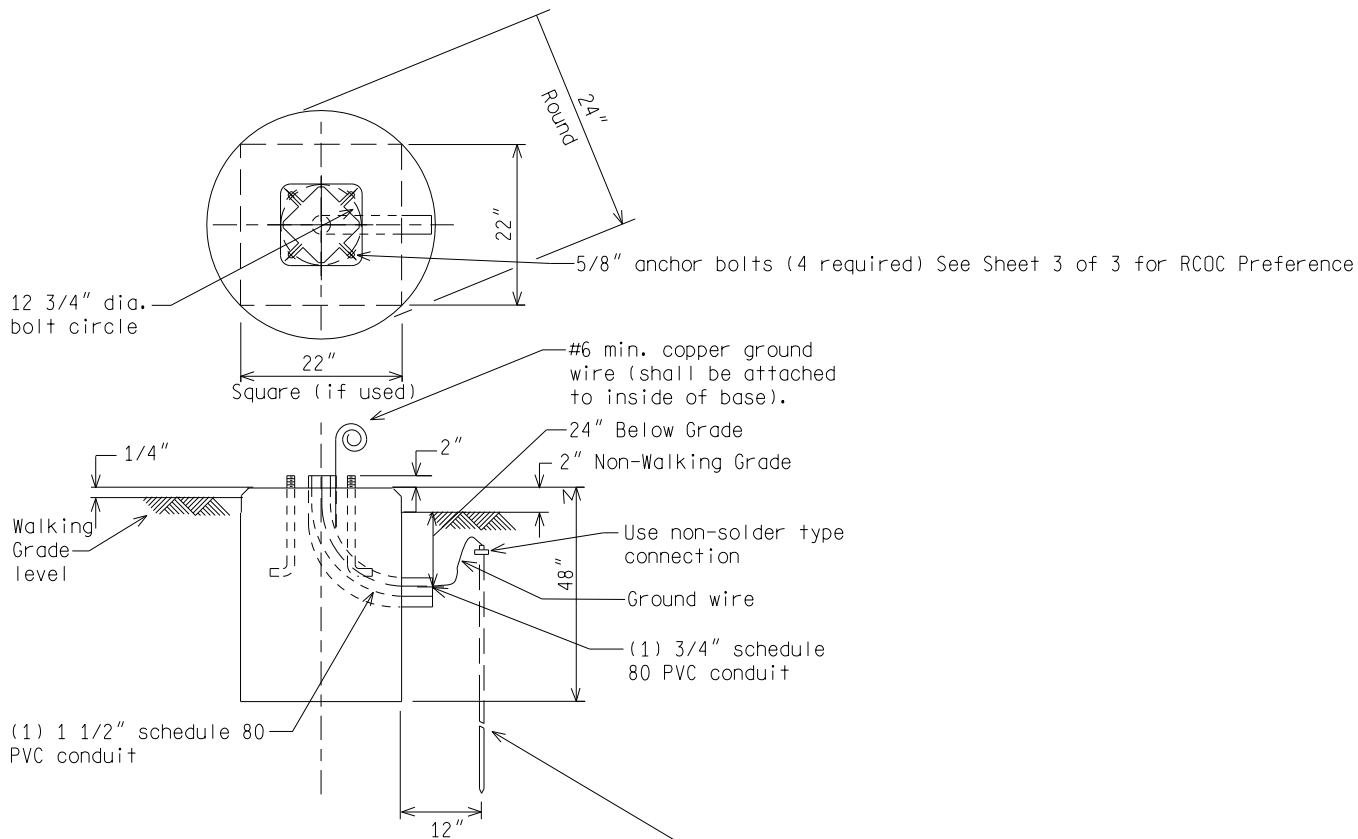
MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR

PEDESTAL FOUNDATION

PLAN DATE

SIG-070-A

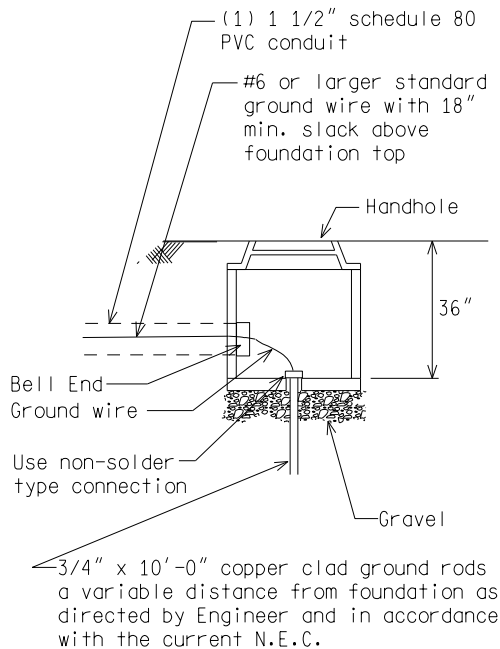
SHEET  
1 of 3



3/4"x10'-0" copper clad ground rod(s). (Ground rod(s) must be installed in handhole outside of fdn. (a min. of 12" from fdn.-6" below grade) or as directed by the Engineer.)

**PEDESTAL FOUNDATION**

See notes 1, 2 & 3 on sheet 3 of 3.



**HANDHOLE DETAIL**

NOT TO SCALE

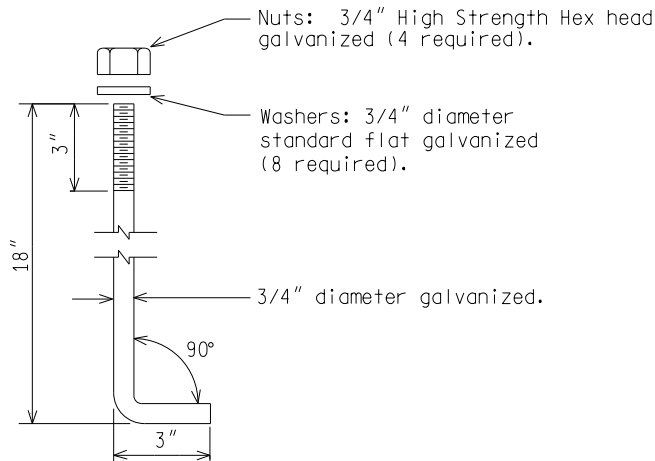
MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

(SPECIAL DETAIL)  
FHWA APPROVAL DATE

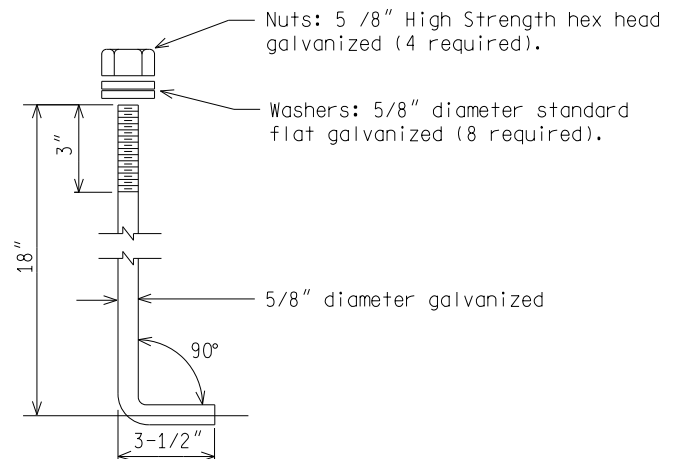
PLAN DATE

SIG-070-A

SHEET  
2 of 3



For use on MDOT Trunkline.



For use on Oakland County Roads only.

#### ANCHOR BOLT DETAIL

NOTE: Anchor bolts are to be ASTM-F1554 Grade 36 (Hot dipped galvanized) ( 4-required )

#### NOTES:

- 1) Alternate foundation may be constructed 22"x22" square - 48" deep.
- 2) Grounding system shall measure 10 ohm or less to ground.
- 3) Construction joints not permitted in foundation.
- 4) Pedestal base must meet the requirements of National Cooperative Highway Research Program Report 350 (NCHRP 350) or Manual for Assessing Safety Hardware (MASH) and have Federal Highway Administration (FHWA) acceptance. Pedestal base must also be certified to have a 4-inch maximum stub height after the support has broken away from its base, as specified in the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals and the AASHTO Roadside Design Guide.
- 5) Use the Octagonal Base as a preference by the Road Commission for Oakland County (RCOC), for use on Oakland County roads only.

NOT TO SCALE

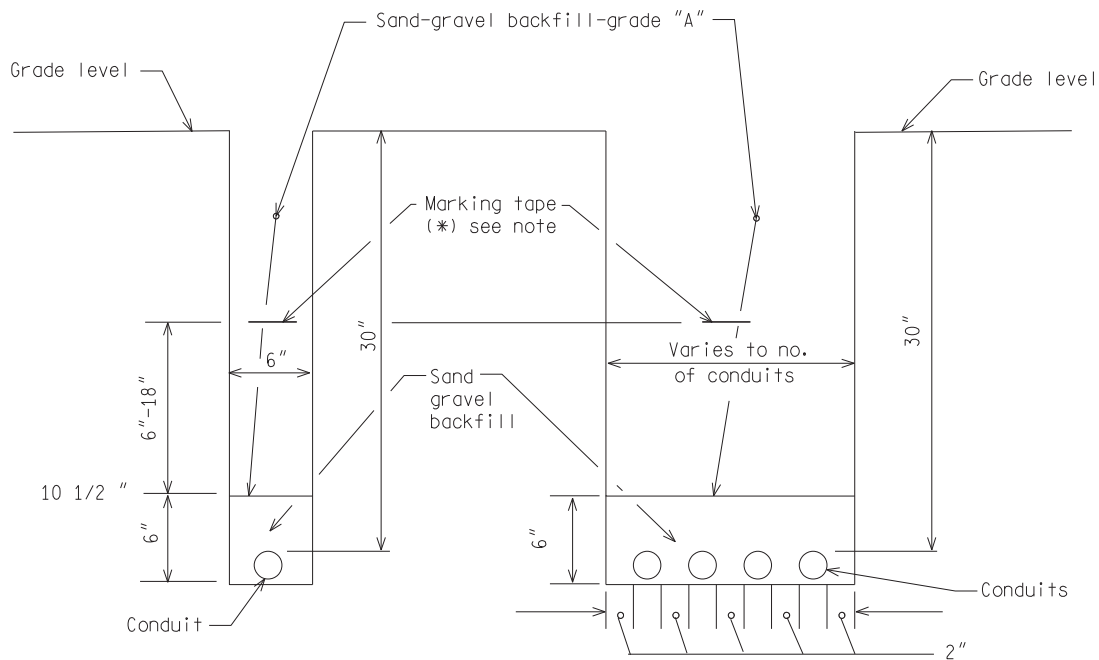
MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

(SPECIAL DETAIL)  
FHWA APPROVAL DATE

PLAN DATE

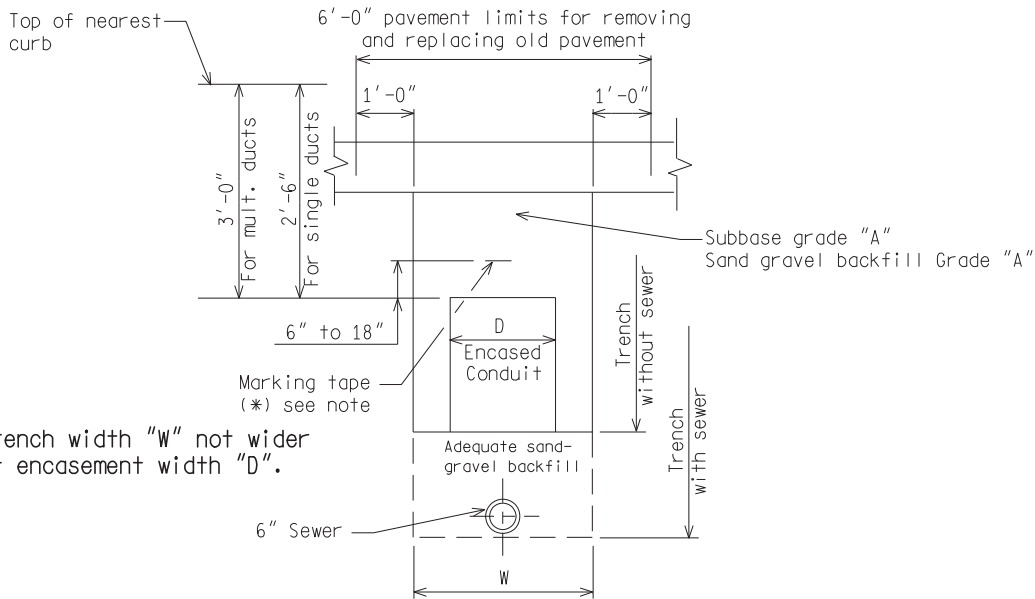
SIG-070-A

SHEET  
3 of 3



(\*) NOTE:  
 Marking tape shall have proper logo as supplied  
 by the Engineer and installed by the Contractor.

### DIRECT BURIAL CONDUIT(S)/CABLE(S)



NOTE:  
 Preferred trench width "W" not wider  
 than conduit encasement width "D".

TYPICAL SECTION OF TRENCH  
 ENCASED CONDUIT

NOT TO SCALE

File: RefDoc/TR/Signals/Web/Sp Det/Fin/SIG250A.dgn Rev: 02/16/17



PREPARED BY  
 TRAFFIC AND SAFETY

DRAWN BY: DJF

CHECKED BY:

\_\_\_\_\_  
 ENGINEER OF DELIVERY

\_\_\_\_\_  
 ENGINEER OF DEVELOPMENT

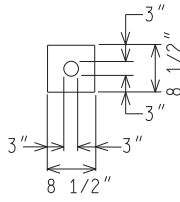
(SPECIAL DETAIL)  
 FHWA APPROVAL DATE

MICHIGAN DEPARTMENT OF TRANSPORTATION  
 BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR  
**CONDUIT**  
 (DIRECT BURIAL/ENCASED)

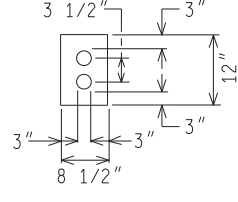
SIG-250-A

\_\_\_\_\_  
 PLAN DATE

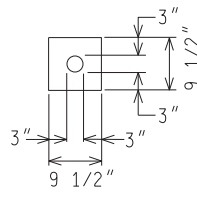
SHEET  
 1 of 2



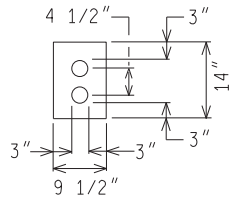
1 2" CONDUIT



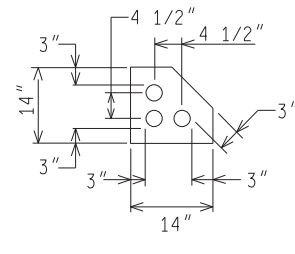
2 2" CONDUIT



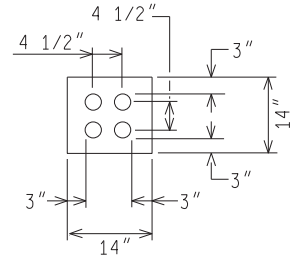
ONE  
2 1/2" CONDUIT



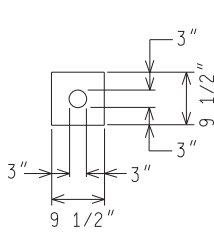
TWO  
2 1/2" CONDUIT



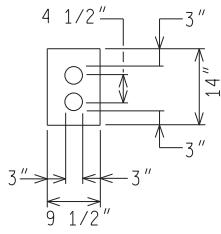
THREE  
2 1/2" CONDUIT



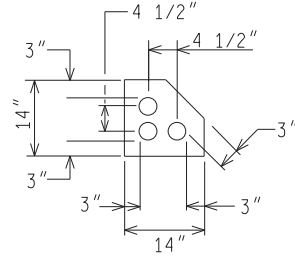
FOUR  
2 1/2" CONDUIT



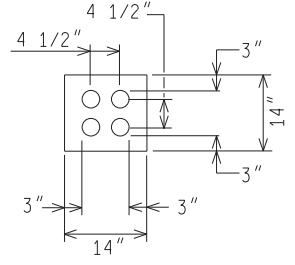
1 3" CONDUIT



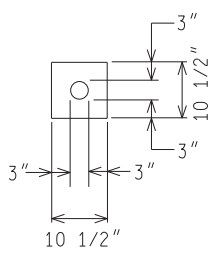
2 3" CONDUIT



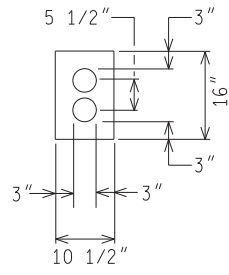
3 3" CONDUIT



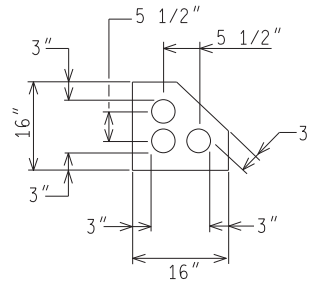
4 3" CONDUIT



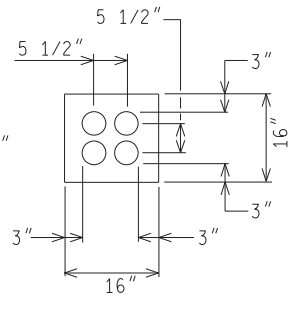
1 4" CONDUIT



2 4" CONDUIT



3 4" CONDUIT



4 4" CONDUIT

ENCASED CONDUIT SECTIONS

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

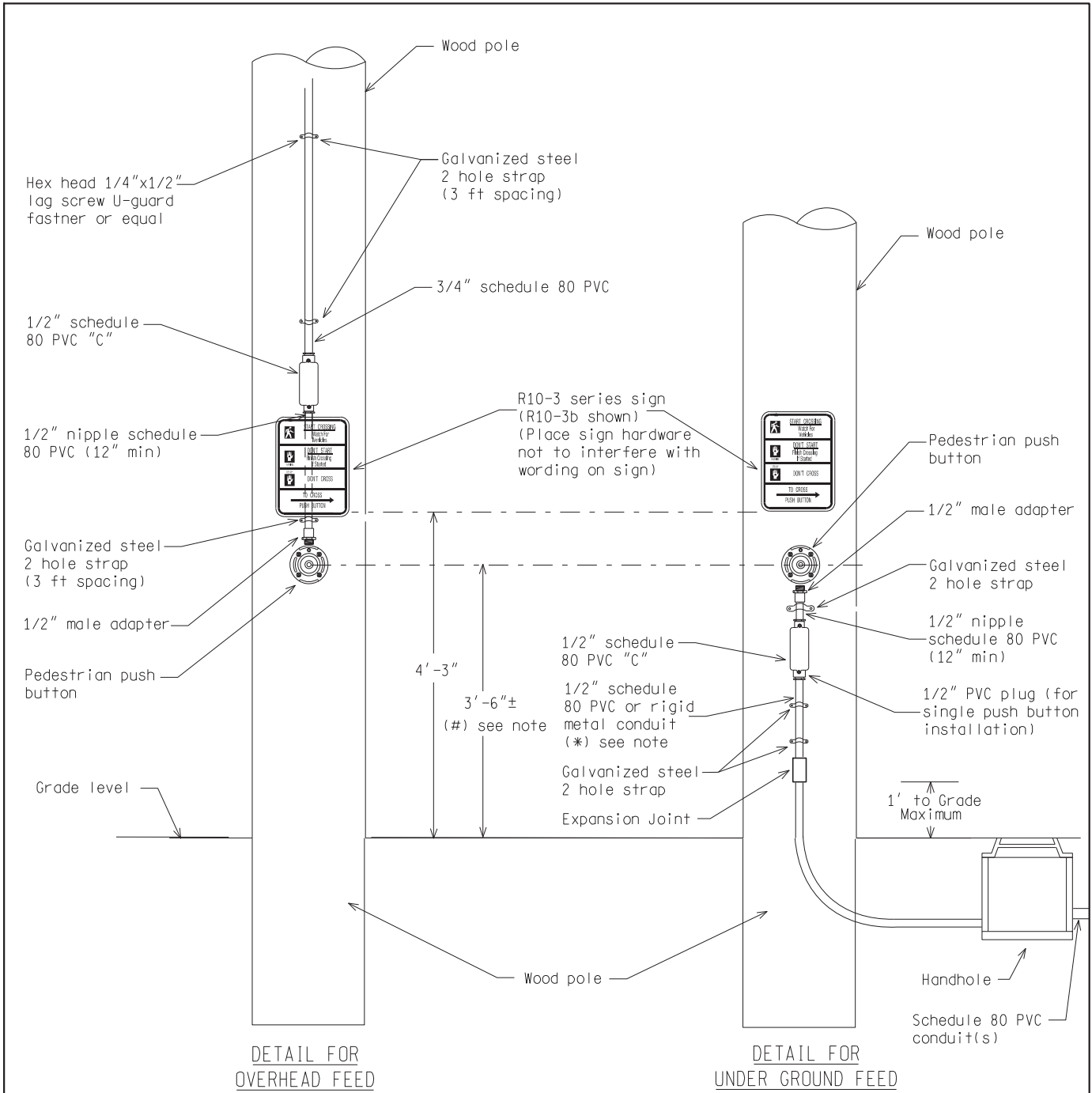
(SPECIAL DETAIL)  
FHWA APPROVAL DATE

PLAN DATE

SIG-250-A

SHEET  
2 of 2





DETAIL FOR OVERHEAD FEED

DETAIL FOR UNDER GROUND FEED

Note: (\*) For projects maintained by the Wayne Co. Department of Public Services (WCDPS), use rigid metal for conduit(s) from grade level to 10' (min.) above grade or as directed by the Engineer.

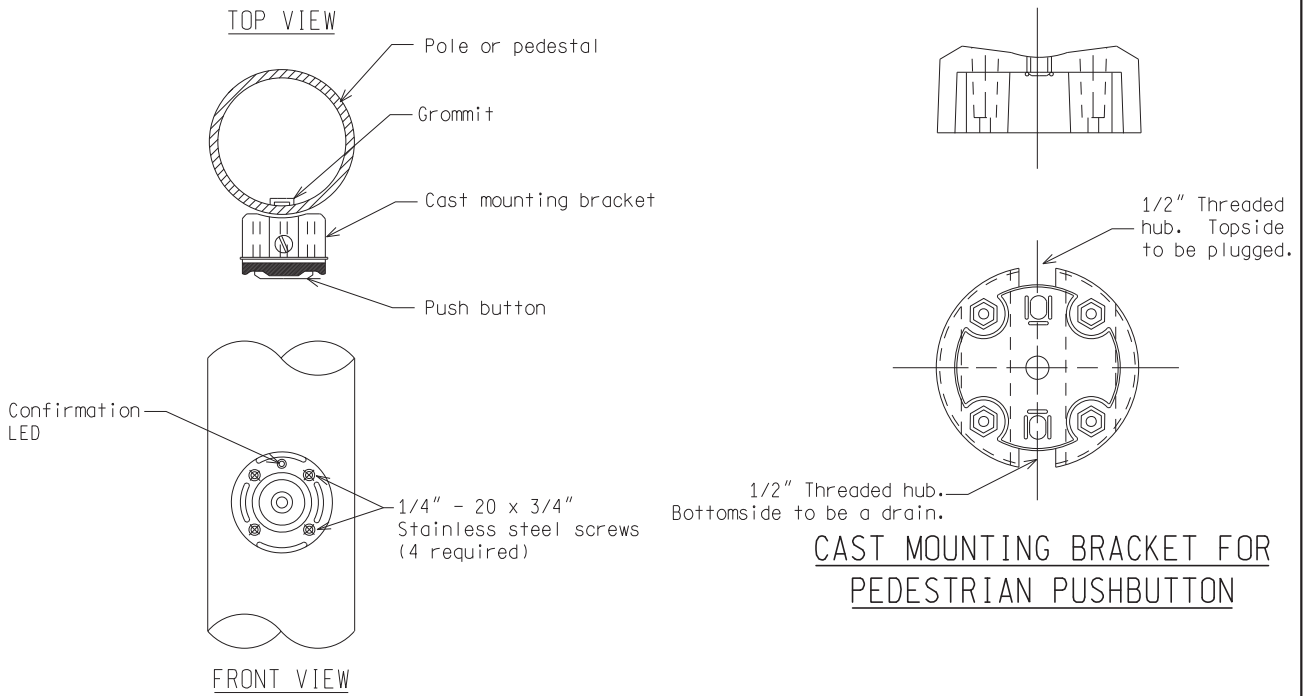
(#) If pushbutton is from 10" to 24" from edge of sidewalk an acceptable range is 38" to 46"

PEDESTRIAN PUSH BUTTON DETAILS ON WOOD POLE

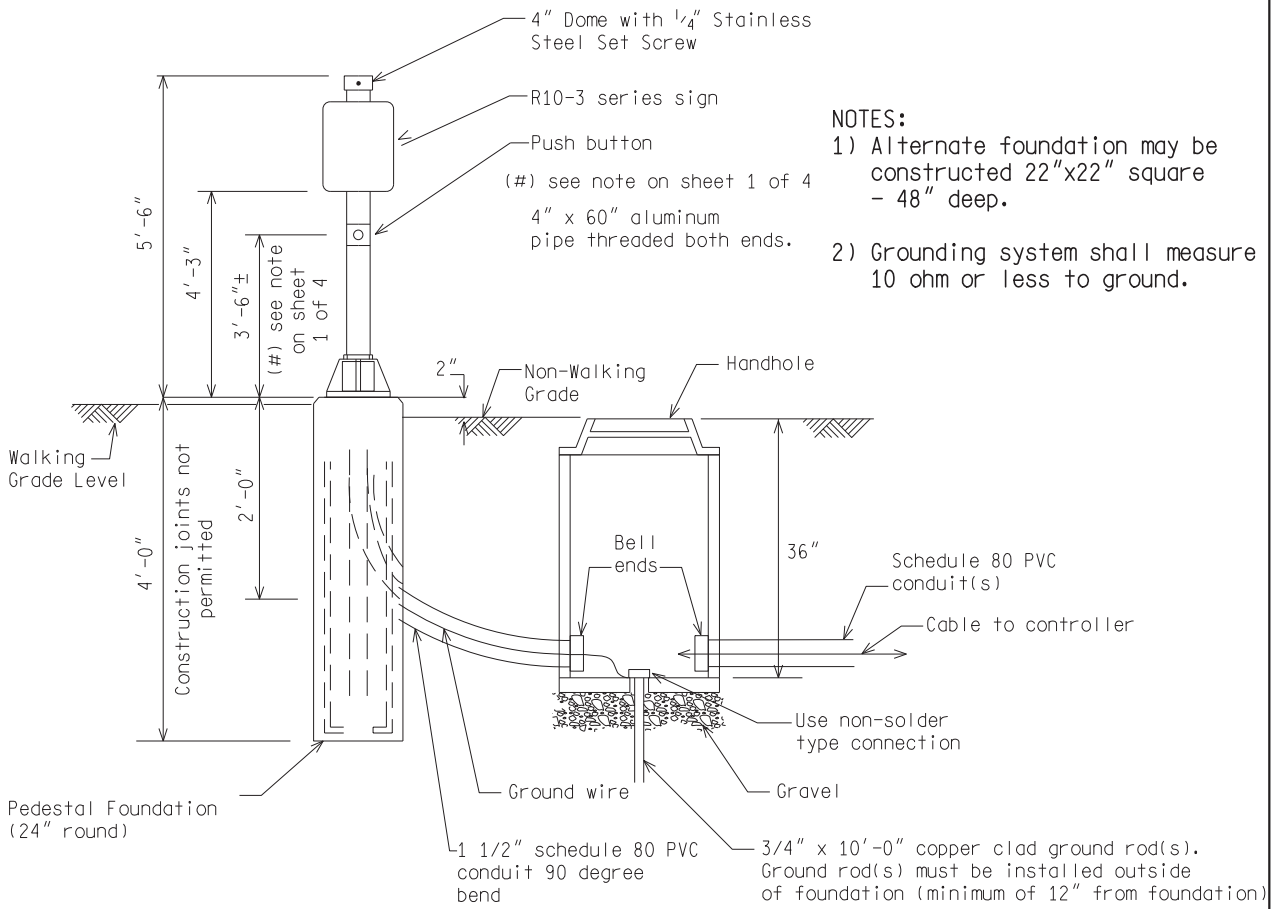
NOT TO SCALE

File: RefDoc/TR/Signals/Web/Sp Det/Fin/SIG400A.dgn Rev: 02/16/17

|   |                                |  |                         |
|---|--------------------------------|--|-------------------------|
| <p>PREPARED BY<br/>TRAFFIC AND SAFETY</p> | <p>ENGINEER OF DELIVERY</p>    | <p>MICHIGAN DEPARTMENT OF TRANSPORTATION<br/>BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR</p> |                         |
|   | <p>ENGINEER OF DEVELOPMENT</p> | <p>PEDESTRIAN PUSH<br/>BUTTON DETAILS</p>  |                         |
| <p>DRAWN BY:</p>                          | <p>(SPECIAL DETAIL)</p>        | <p>SIG-400-A</p>   | <p>SHEET<br/>1 of 4</p> |
| <p>CHECKED BY:</p>                        | <p>FHWA APPROVAL DATE</p>      |  |                         |



**PEDESTRIAN PUSHBUTTON INSTALLATION ON STEEL POLE OR PEDESTAL**



**PUSH BUTTON PEDESTAL**

NOT TO SCALE

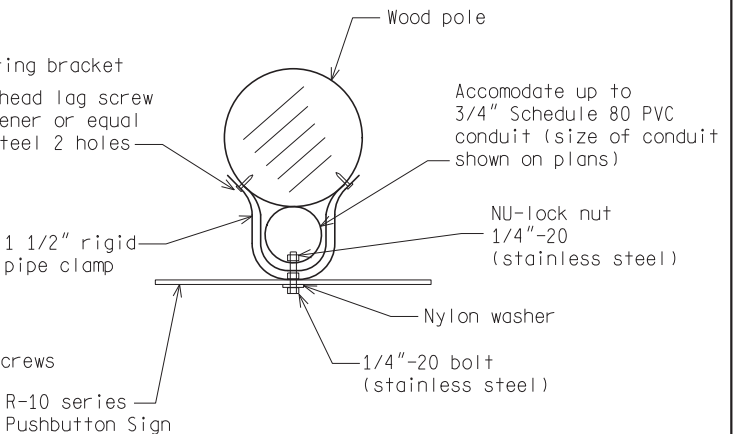
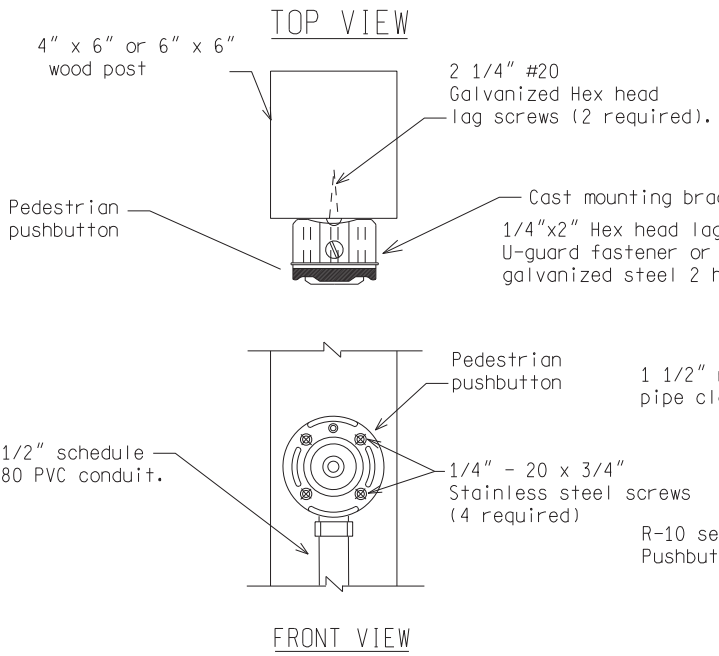
MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

(SPECIAL DETAIL)  
FHWA APPROVAL DATE

PLAN DATE

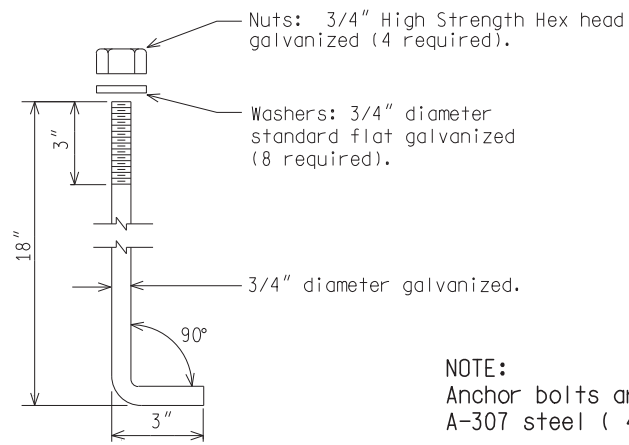
SIG-400-A

SHEET  
2 of 4



PEDESTRIAN PUSHBUTTON  
INSTALLATION ON WOOD POST

PEDESTRIAN PUSHBUTTON  
SIGN INSTALLATION  
ON WOOD POLE

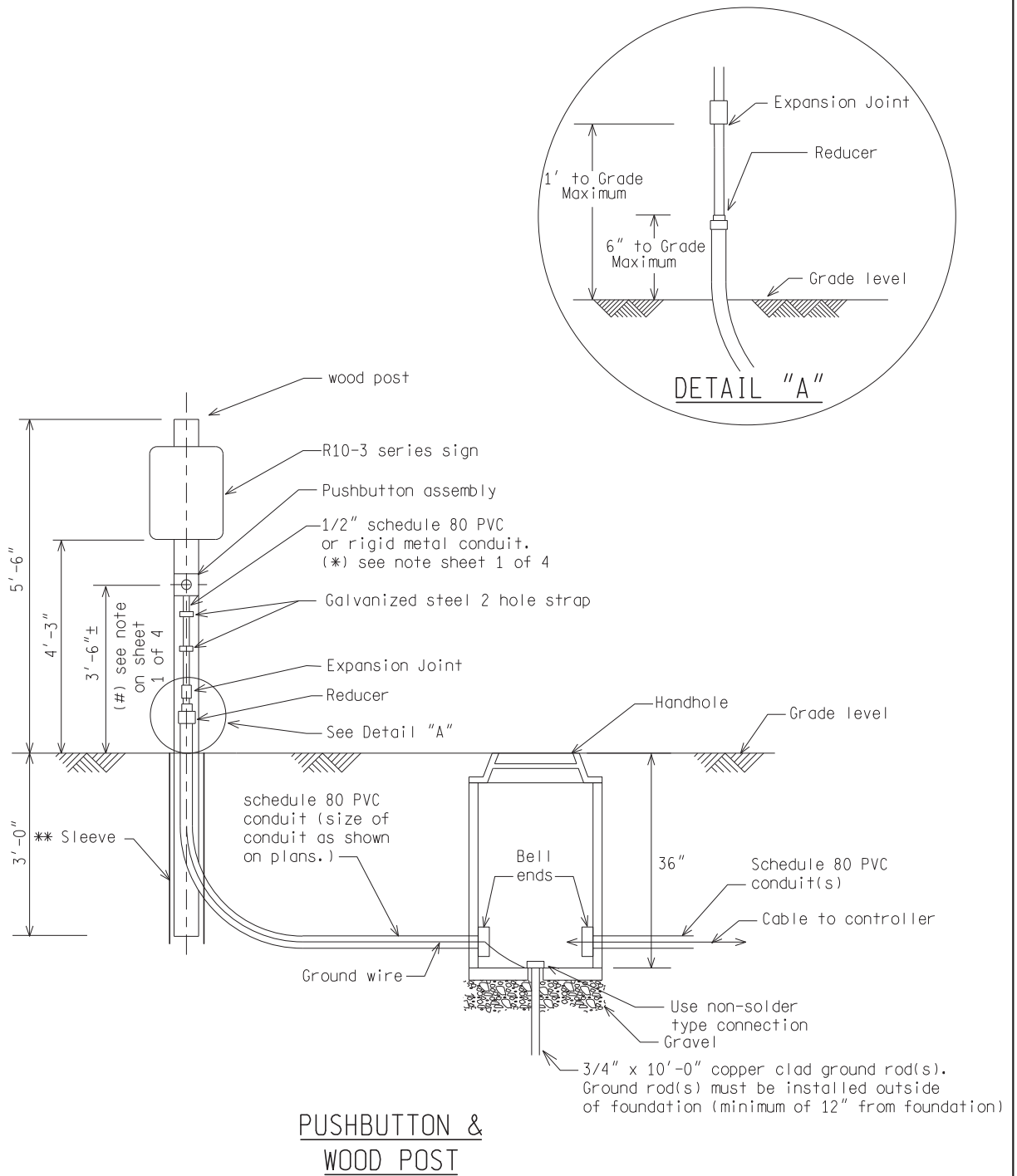


NOTE:  
Anchor bolts are to be ASTM  
A-307 steel ( 4-required )

ANCHOR BOLT DETAIL

NOT TO SCALE

|  |  |           |           |                 |
|--|--|-----------|-----------|-----------------|
| MICHIGAN DEPARTMENT OF TRANSPORTATION<br>BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN | (SPECIAL DETAIL)<br>FHWA APPROVAL DATE |           | SIG-400-A | SHEET<br>3 of 4 |
| File: RefDoc/TR/Signals/Web/Sp Det/F in/SIG400A.dgn                                | Rev. 02/16/17                          | PLAN DATE |           |                 |



\*\* Refer to Standard Plan for Wood Posts

NOT TO SCALE

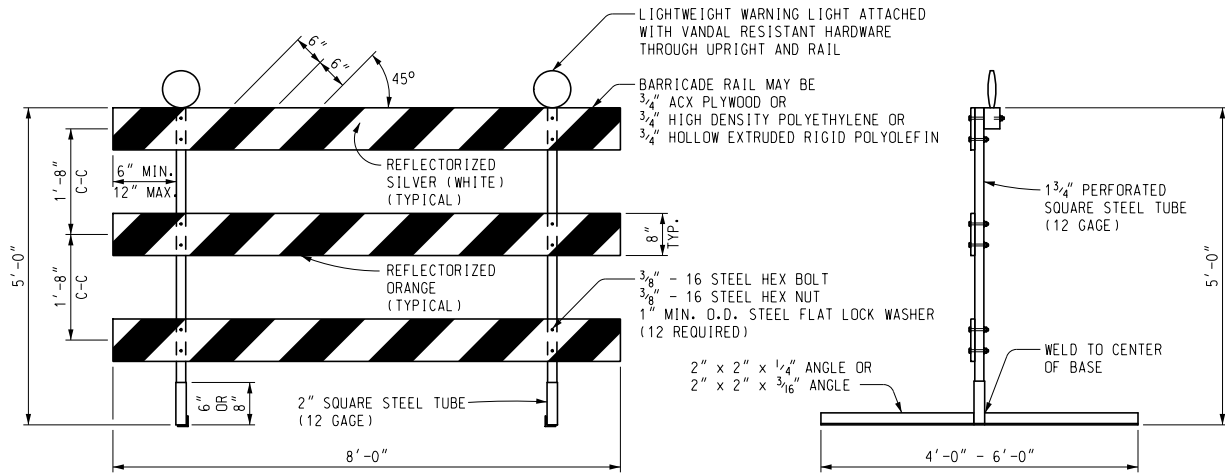
MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN

(SPECIAL DETAIL)  
FHWA APPROVAL DATE

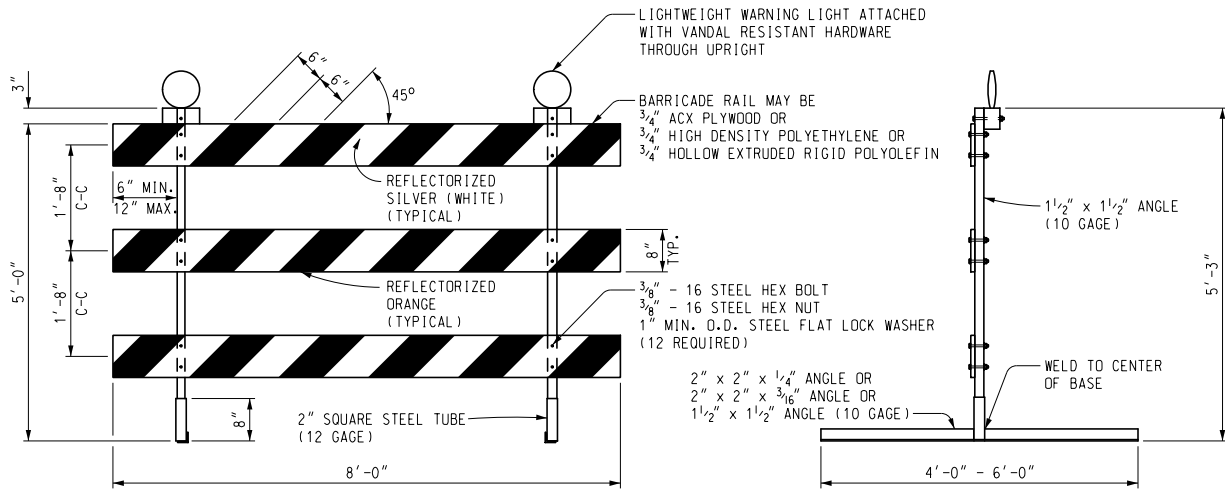
PLAN DATE

SIG-400-A

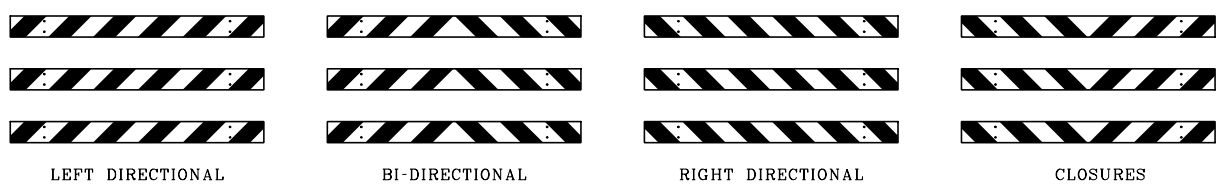
SHEET  
4 of 4



FRONT ELEVATION SIDE VIEW  
**PERFORATED SQUARE STEEL TUBE OPTION**



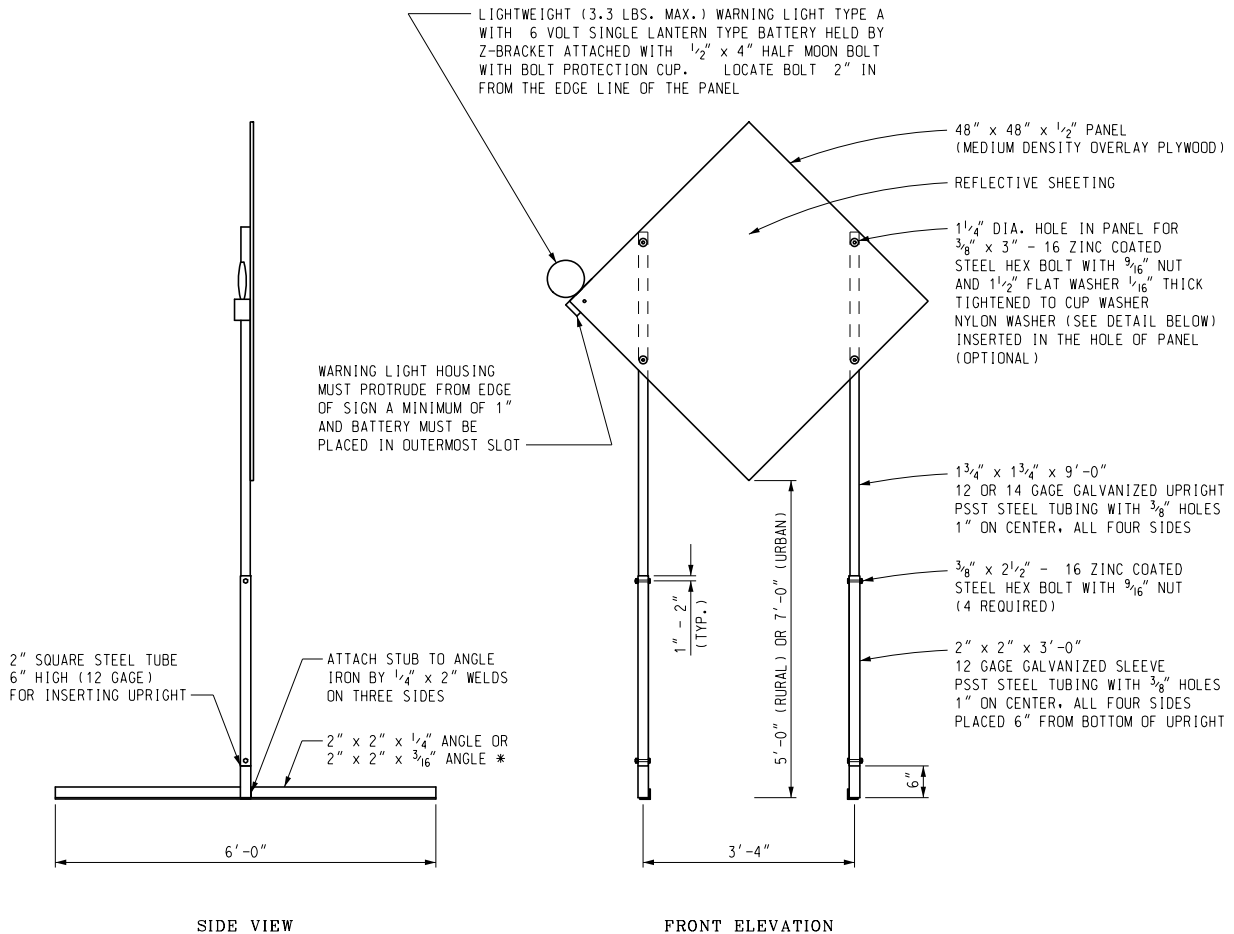
FRONT ELEVATION SIDE VIEW  
**ANGLE IRON OPTION**



**BARRICADE RAIL SHEETING OPTIONS  
 TYPE III BARRICADES**

Other Type III Barricades meeting current NCHRP crash worthy criteria can be found on the FHWA Safety website at [http://safety.fhwa.dot.gov/roadway\\_dept/road\\_hardware/wzd.htm](http://safety.fhwa.dot.gov/roadway_dept/road_hardware/wzd.htm)

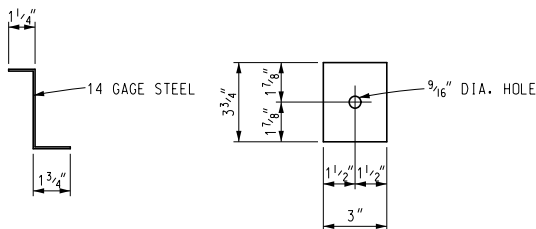
|  |  |   |                              |
|--|--|---|------------------------------|
| <p>PREPARED BY OPERATIONS FIELD SERVICES</p> <p>DRAWN BY: <u>ECH</u></p> <p>CHECKED BY: <u>MWB</u></p> | <p>DEPARTMENT DIRECTOR<br/>Paul C. Ajegba</p> <p>APPROVED BY: _____<br/>DIRECTOR, BUREAU OF FIELD SERVICES</p> | <p>MICHIGAN DEPARTMENT OF TRANSPORTATION<br/>BUREAU OF FIELD SERVICES SPECIAL DETAIL FOR</p> <p style="text-align: center;">Temporary<br/>Traffic Control Devices</p> |                              |
|  | <p>APPROVED BY: _____<br/>(SPECIAL DETAIL)<br/>DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT</p>                     | <p>F.H.W.A. APPROVAL</p>  | <p>6/16/22<br/>PLAN DATE</p> |



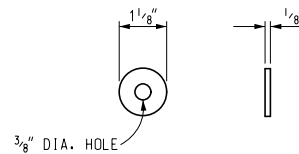
### TEMPORARY SIGN SUPPORT

(WARNING LIGHT PLACED ON SIDE CLOSEST TO TRAFFIC)

\* SIGN STAND IS BALLASTED WITH FOUR OR MORE 35 LB SANDBAGS. A MINIMUM OF ONE ON EACH END. UPRIGHTS SHALL NOT EXTEND ABOVE THE SIGN PANEL.



Z-BRACKET DETAIL



OPTIONAL NYLON WASHER

Other temporary sign supports meeting current NCHRP crash worthy criteria can be found on the FHWA Safety website at [http://safety.fhwa.dot.gov/roadway\\_dept/road\\_hardware/wzd.htm](http://safety.fhwa.dot.gov/roadway_dept/road_hardware/wzd.htm)

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION  
BUREAU OF FIELD SERVICES SPECIAL DETAIL

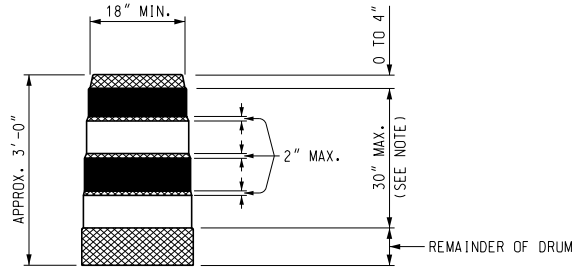
SPECIAL DETAIL  
F.H.W.A. APPROVAL

6/16/22  
PLAN DATE

WZD-125-E

SHEET  
2 OF 3

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



- REFLECTORIZED ORANGE
- REFLECTORIZED WHITE
- NON REFLECTORIZED ORANGE

NOTE:  
 DRUMS SHALL HAVE AT LEAST 4 HORIZONTAL REFLECTORIZED STRIPES (2 ORANGE AND 2 WHITE) OF 6" UNIFORM WIDTH, ALTERNATING IN COLOR WITH THE TOPMOST REFLECTORIZED STRIPE BEING ORANGE. NON REFLECTORIZED SPACES BETWEEN THE HORIZONTAL REFLECTORIZED ORANGE AND WHITE STRIPES SHALL BE ORANGE IN COLOR AND EQUAL IN WIDTH.

### PLASTIC DRUM

NOTES:

2" PERFORATED SQUARE STEEL TUBES MAY BE USED TO FABRICATE THE HORIZONTAL BASE OF THE TYPE III BARRICADE.

WARNING LIGHTS SHALL BE PLACED ACCORDING TO THE CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND ALL OTHER PROVISIONS IN THE CONTRACT ON TYPE III BARRICADES.

SEE ROAD STANDARD PLANS R-113-SERIES FOR TEMPORARY CROSSOVERS FOR DIVIDED ROADWAY, AND R-126-SERIES FOR TYPICAL LOCATION AND SPACING OF PLASTIC DRUMS FOR PLACEMENT OF TEMPORARY CONCRETE BARRIER.

SIGNS, BARRICADES, AND PLASTIC DRUMS SHALL BE FACED WITH PRESSURE-SENSITIVE REFLECTIVE SHEETING ACCORDING TO THE CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

SANDBAGS SHALL BE USED WHEN SUPPLEMENTAL WEIGHTS ARE REQUIRED TO ACHIEVE STABILITY OF THE BARRICADE. THE SANDBAGS SHALL BE PLACED SO THEY WILL NOT COVER OR OBSTRUCT ANY REFLECTIVE PORTION OF THE TRAFFIC CONTROL DEVICE.

NOT TO SCALE

MICHIGAN DEPARTMENT OF TRANSPORTATION  
 BUREAU OF FIELD SERVICES SPECIAL DETAIL

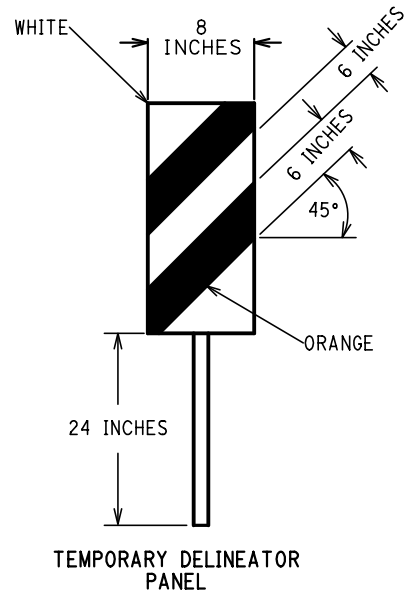
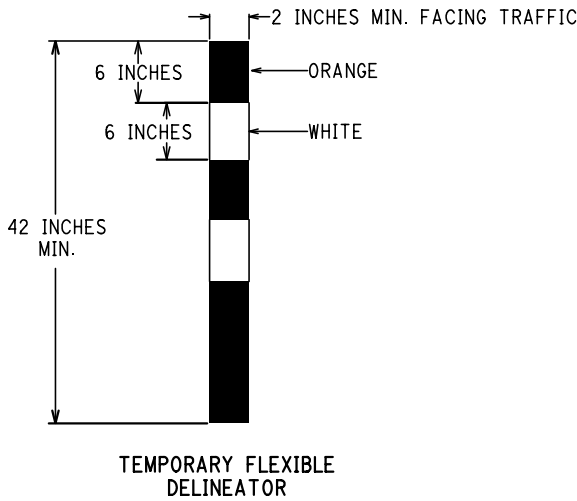
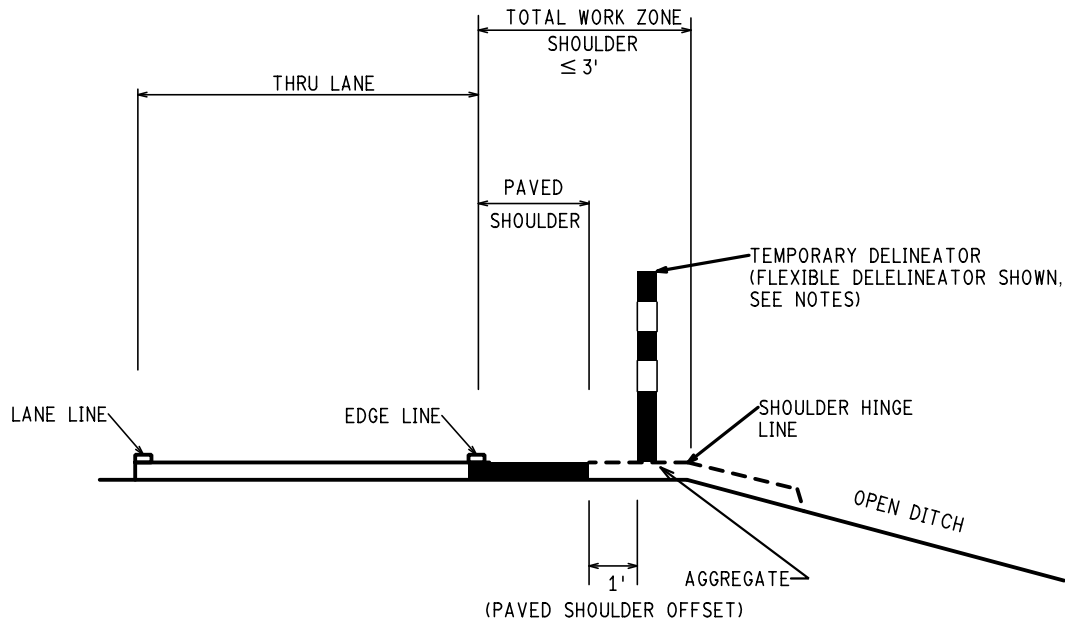
(SPECIAL DETAIL)  
 F.H.W.A. APPROVAL

6/16/22  
 PLAN DATE

WZD-125-E

SHEET  
 3 OF 3

NOTE: THE ORIGINAL SIGNED COPY IS KEPT ON FILE AT THE MICHIGAN DEPARTMENT OF TRANSPORTATION.



**TEMPORARY DELINEATOR**  
 (WORK ZONE SHOULDERS LESS THAN OR EQUAL TO THREE FEET  
 ON 3R/4R FREEWAY PROJECTS WITH OPEN DITCHES OR AS CALLED IN  
 PLANS AND PROPOSAL)

**NOTES:**

1. TEMPORARY DELINEATOR TYPE EITHER FLEXIBLE OR PANEL MUST BE AS CALLED FOR ON THE PLANS AND PROPOSAL.
2. ORANGE AND WHITE ALTERNATING STRIPES ON DELINEATOR PANEL MUST SLOPE DOWNWARD IN THE DIRECTION VEHICLE IS TO PASS.
3. TEMPORARY DELINEATORS MUST BE SPACED AT 200 FT MAXIMUM INTERVALS.
4. EMBEDMENT DEPTH AS RECOMMENDED BY THE MANUFACTURER



PREPARED BY  
 OPERATIONS DIVISION

DRAWN BY: RL

CHECKED BY: CRB

DEPARTMENT DIRECTOR  
 Kirk T. Steudle

APPROVED BY: \_\_\_\_\_  
 (SPECIAL DETAIL)  
 DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: \_\_\_\_\_  
 (SPECIAL DETAIL)  
 DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION  
 BUREAU OF FIELD SERVICES STANDARD PLAN FOR

**TEMPORARY SHOULDER  
 DELINEATORS**

F.H.W.A. APPROVAL

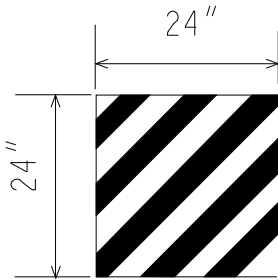
7/12/17  
 PLAN DATE

WZD-126-A

SHEET  
 1 OF 1

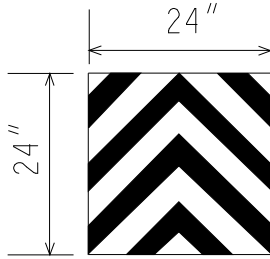


# USE APPROPRIATE SIGN ACCORDING TO CONDITIONS



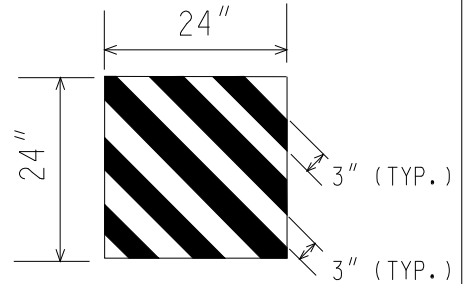
Traffic Passing  
on Left

OM-3La



Traffic Passing  
on Both Sides

OM-3Ca



Traffic Passing  
on Right

OM-3Ra

**NOTES:**

1. ALTERNATE BLACK 3-INCH AND YELLOW 3-INCH STRIPES AT A 45-DEGREE ANGLE.
2. THE YELLOW STRIPES SHALL MEET ASTM D4956 SPECIFICATIONS FOR TYPE IX RETROREFLECTIVE SHEETING.
3. THE OBJECT MARKER SHALL BE MADE OF 0.040-INCH THICK ALUMINUM.
4. ATTACH OBJECT MARKER TO ATTENUATOR NOSE WITH TWO 5/16-INCH DIAMETER HEX BOLTS, NUTS AND WASHERS (PREFERRED METHOD) OR OTHER METHOD APPROVED BY THE ATTENUATOR MANUFACTURER.

NOT TO SCALE

File: PW:DOC/RD/TS/TYP/SIGNS/WORK\_ZONE/WZD-150-A.dgn

Rev. 10/21/2008 JT



PREPARED BY  
TRAFFIC AND SAFETY

DRAWN BY: SCT

CHECKED BY: CT

\_\_\_\_\_  
ENGINEER OF DELIVERY

\_\_\_\_\_  
ENGINEER OF DEVELOPMENT

(SPECIAL DETAIL)  
FHWA APPROVAL DATE

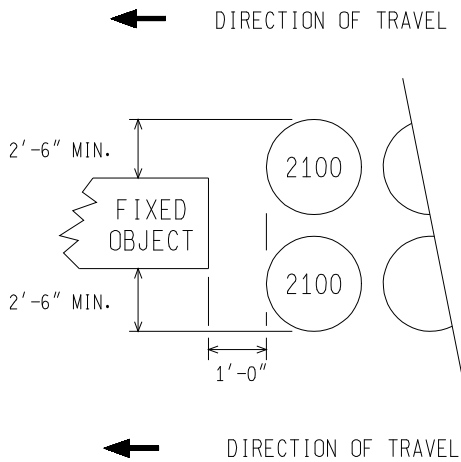
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR  
IMPACT ATTENUATOR  
OBJECT MARKER

09/21/08  
PLAN DATE

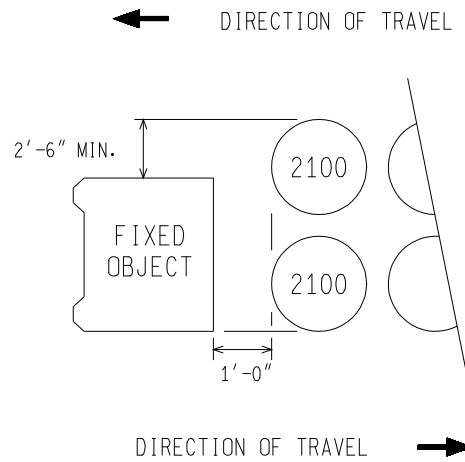
WZD-150-A

SHEET  
1 of 1

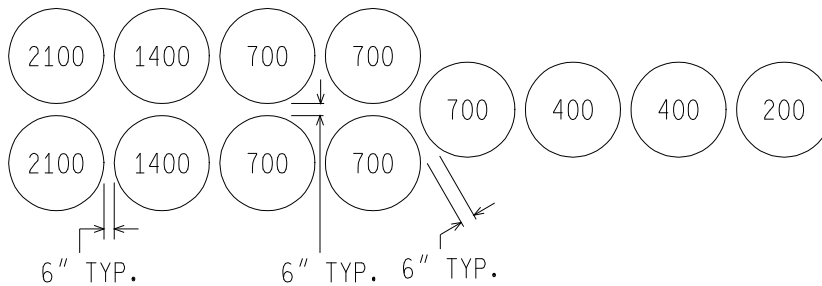
DIRECTIONAL TRAFFIC



BIDIRECTIONAL TRAFFIC



PREFERRED LAYOUT



NOTES:

1. (xxx) INDICATES MODULE LOCATION AND WEIGHT OF SAND IN POUNDS(LBS) FOR EACH MODULE.
2. EACH MODULE SHALL CONTAIN AMOUNT OF SAND INDICATED.
3. BIDIRECTIONAL ATTENUATOR ARRAYS MAY BE ANGLED TOWARD APPROACHING TRAFFIC AS INDICATED BY THE ENGINEER. AMOUNT OF ANGLE NOT TO EXCEED 10 DEGREES.

NOT TO SCALE

File: PW:/RD/TS/TYP/SIGNS//WORK\_ZONE/WZD-175-A.dgn Rev. 10/21/2008 jt



PREPARED BY  
TRAFFIC AND SAFETY

DRAWN BY: JT  
CHECKED BY: CT

\_\_\_\_\_  
ENGINEER OF DELIVERY

\_\_\_\_\_  
ENGINEER OF DEVELOPMENT

(SPECIAL DETAIL)  
FHWA APPROVAL DATE

BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR  
SAND MODULE IMPACT  
ATTENUATOR (TEMPORARY)

09/21/08  
PLAN DATE

WZD-175-A

SHEET  
1 of 1

# Appendix E



## *DRAWINGS*

# **STREETS FOR ALL: MICHIKAL STREET IMPROVEMENTS**

**Bid Reference #: 91396-021.0**

**MARCH 2024**

# CITY OF KALAMAZOO

## STREETS FOR ALL: MICHIKAL IMPROVEMENTS

### NOTES

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED THEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2020 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.

THE PLACING OF PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SHALL BE DONE IN ACCORDANCE WITH THE 2011 MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS AMENDED.

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

### TRAFFIC DATA MICHIKAL STREET

|                        |   |        |
|------------------------|---|--------|
| DESIGN SPEED           | = | 30 MPH |
| POSTED SPEED           | = | 30 MPH |
| ADT (2024)             | = | 9,000  |
| ADT (2044)             | = | 16,250 |
| DHV (2044)             | = | 1,625  |
| % TRUCKS (2024 & 2044) | = | 3%     |

### UTILITIES

|                      |   |                 |   |
|----------------------|---|-----------------|---|
| <b>CABLE:</b>        | CHARTER COMMUNICATIONS<br>4176 COMMERCIAL AVENUE<br>PORTAGE, MI 49002<br>BRYAN LONGCORE<br>(269) 459-8746<br>BRYAN.LONGCORE2@CHARTER.COM      | FIBER OPTIC:    | LUMEN<br>19675 WEST 10 MILE ROAD<br>SOUTHFIELD, MI 48075<br>DAVE HUCKFELDT<br>(517) 812-2592<br>DAVE.HUCKFELDT@LUMEN.COM                                  |
|                      | COMCAST CABLE COMMUNICATIONS<br>2526 TELEGRAPH ROAD<br>SOUTHFIELD, MI 48034<br>JEFF DOBIES<br>(734) 359-1669<br>JEFF_DOBIES@CABLE.COMCAST.COM |                 | MIDWEST COMMUNICATIONS<br>60590 DECATUR ROAD<br>CASSOPOLIS, MI 49031<br>LARRY POWELL<br>(269) 963-7173<br>LARRYMCS@VOYAGER.NET                            |
| <b>ELECTRIC:</b>     | CONSUMERS ENERGY<br>2500 E. CORK STREET<br>KALAMAZOO, MI 49001<br>ANDRE TAYLOR<br>(269) 337-2245<br>ANDRE.TAYLOR@CMSENERGY.COM                |                 | ZAYO FIBER<br>GEORGE HUSS<br>(443) 403-2023<br>GEORGE.HUSS@ZAYO.COM   |
|                      | CONSUMERS ENERGY METRO<br>2500 E. CORK STREET<br>KALAMAZOO, MI 49001<br>RYAN WALCOTT<br>(616) 302-3041<br>RYAN.WALCOTT@CMSENERGY.COM          |                 | MCI FIBER<br>GEORGE HUSS<br>(443) 403-2023<br>GEORGE.HUSS@ZAYO.COM  |
| <b>GAS:</b>          | CONSUMERS ENERGY<br>2500 E. CORK STREET<br>KALAMAZOO, MI 49001<br>TYLER LAWRENCE<br>(269) 337-2366<br>TYLER.LAWRENCE@CMSENERGY.COM            |                 | CITY OF KALAMAZOO<br>415 E. STOCKBRIDGE AVENUE<br>KALAMAZOO, MI 49001<br>RON RIDENOUR<br>(269) 337-3601<br>RIDENOURR@KALAMAZOOCITY.ORG                    |
|                      | AT&T<br>2919 MILLCORK STREET<br>KALAMAZOO, MI 49001<br>PHIL BARDOCCZ<br>(269) 384-4476<br>PB3132@ATT.COM                                      | <b>TRAFFIC:</b> | CITY OF KALAMAZOO<br>415 E. STOCKBRIDGE AVENUE<br>KALAMAZOO, MI 49001<br>DENNIS RANDOLPH, P.E., P.T.O.E.<br>(269) 337-8612<br>RANDOLPHD@KALAMAZOOCITY.ORG |
| <b>TELEPHONE:</b>    |   | <b>WATER:</b>   | CITY OF KALAMAZOO<br>415 E. STOCKBRIDGE AVENUE<br>KALAMAZOO, MI 49001<br>ERIC SAJTAR, P.E.<br>(269) 491-3882<br>SAJTARE@KALAMAZOOCITY.ORG                 |
| <b>PUBLIC WORKS:</b> | CITY OF KALAMAZOO<br>415 E. STOCKBRIDGE AVENUE<br>KALAMAZOO, MI 49001<br>ANTHONY LADD<br>(269) 337-8601<br>LADDA@KALAMAZOOCITY.ORG            | <b>SEWER:</b>   | CITY OF KALAMAZOO<br>1415 NORTH HARRISON STREET<br>KALAMAZOO, MI 49007<br>SOHIL MANIYANI<br>(269) 216-1794<br>MANIYANIS@KALAMAZOOCITY.ORG                 |
| <b>*MISS DIG*</b>    | 811   |                 |   |

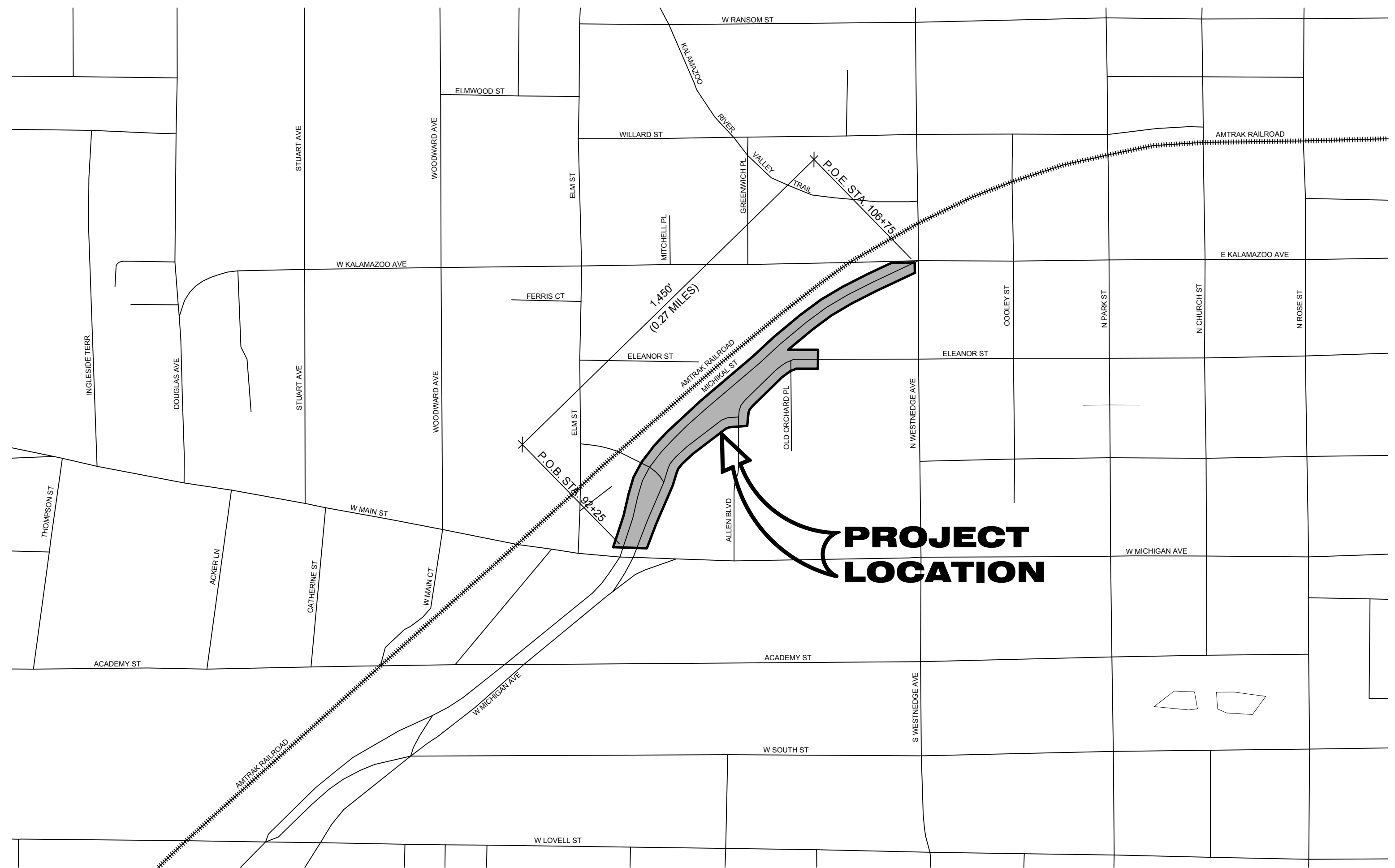
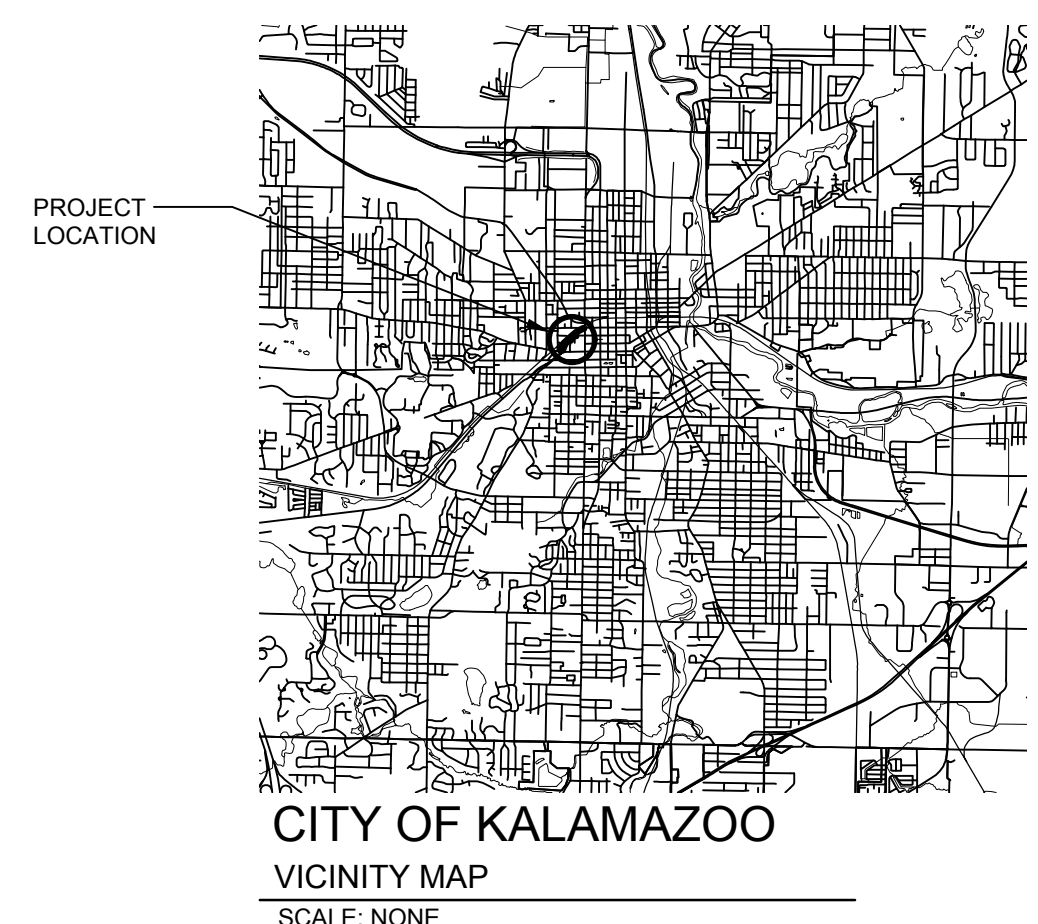
### INDEX OF PLANS

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| C004 | PROPOSED TYPICAL SECTIONS BASE BID FULL ROAD RECONSTRUCTION                  |
| C005 | PROPOSED TYPICAL SECTIONS ALTERNATE A PART-WIDTH RECONSTRUCTION              |
| C006 | SOIL BORINGS AND STRUCTURE TABLES  |
| C007 | REMOVAL PLAN - STA. 92+25 (P.O.B.) TO STA. 97+75                             |
| C008 | REMOVAL PLAN - STA. 97+75 TO STA. 102+75                                     |
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| C016 | INTERSECTION PLAN - MICHIGAL AND ALLEN BLVD INTERSECTION - BASE BID          |
| C017 | INTERSECTION PLAN - MICHIGAL AND ELEANOR STREET INTERSECTION - BASE BID      |
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PHILIP A. DOORLAG  
6201067363

PROJECT NAME:  
**STREETS FOR ALL: MICHIKAL IMPROVEMENTS**

**CITY OF KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001




PROJECT LOCATION MAP  
SCALE: 1" = 300'

**CONTRACT FOR ROAD IMPROVEMENTS**  
 0.27 MILES OF ROADWAY IMPROVEMENTS ON MICHIKAL STREET INCLUDING FULL DEPTH ROADWAY RECONSTRUCTION AND REALIGNMENT, STORM SEWER IMPROVEMENTS, CONCRETE CURB & GUTTER, CONCRETE SIDEWALK AND ADA RAMP IMPROVEMENTS, CONCRETE SHARED USE PATH, PAVEMENT MARKINGS, PERMANENT SIGNS, LANDSCAPING AND RESTORATION. CONVERSION OF EXISTING ROADWAYS FROM ONE-WAY TO TWO-WAY TRAFFIC.

**REVISIONS**

|               |     |                                    |
|---------------|-----|------------------------------------|
| 06/03/2024    | PAD | RE-ISSUED FOR BIDDING              |
| 05/12/2023    | PAD | ISSUED FOR BIDDING                 |
| 04/10/2023    | PAD | 90% SUBMITTAL                      |
| 03/07/24/2023 | PAD | RE-ISSUED FOR EGLE PART 399 PERMIT |
| 02/07/03/2023 | PAD | ISSUED FOR EGLE PART 399 PERMIT    |
| 01/06/30/2023 | PAD | 70% SUBMITTAL                      |

DATE: MARCH, 2024  
SCALE: AS NOTED



CITY OF KALAMAZOO  
415 STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001

**APPROVAL**

ANTHONY LADD, P.E. PUBL. SERV. DIV. MANAGER DATE \_\_\_\_\_

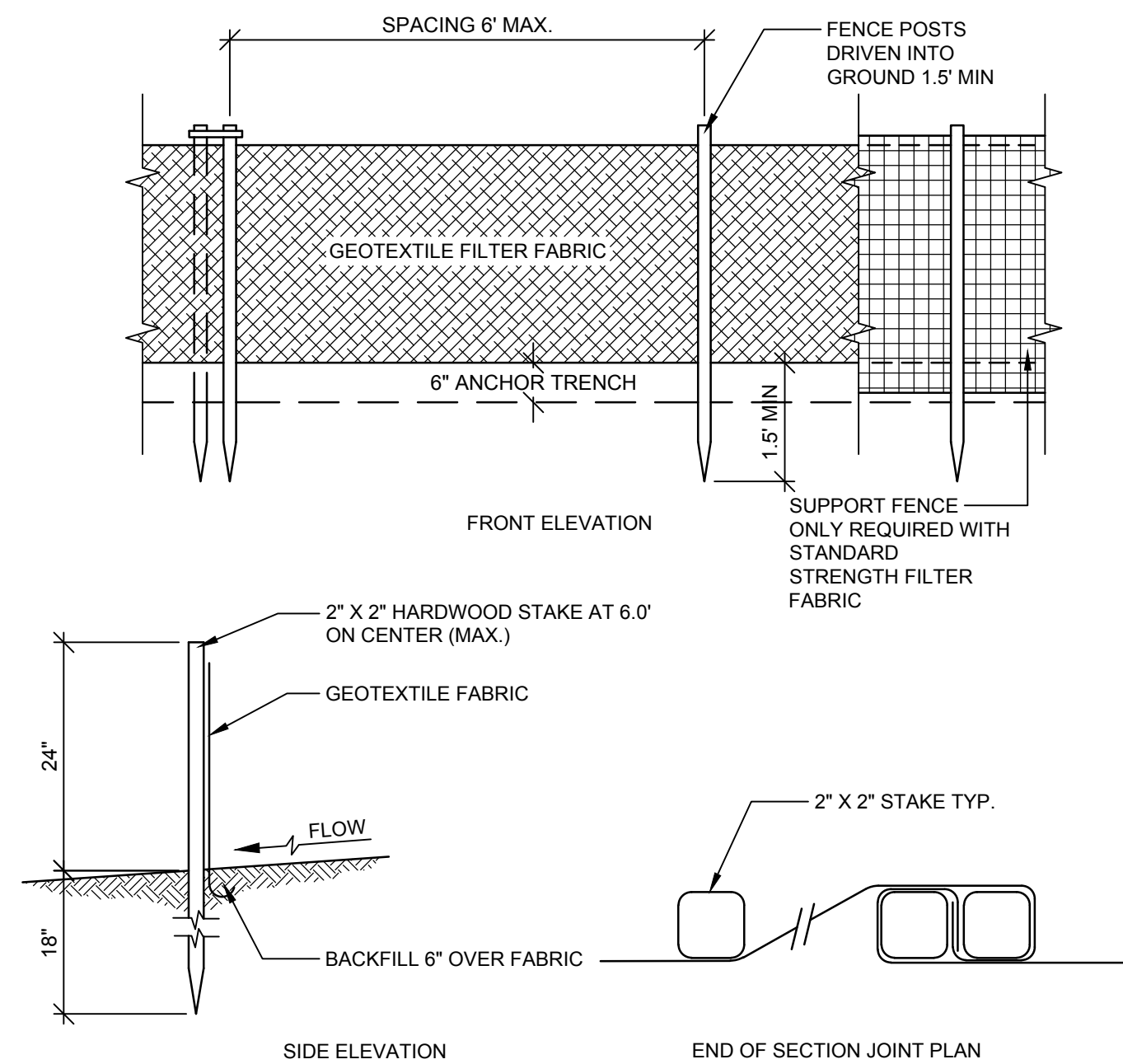
COVER SHEET

JOB No. 224022  
**C001**



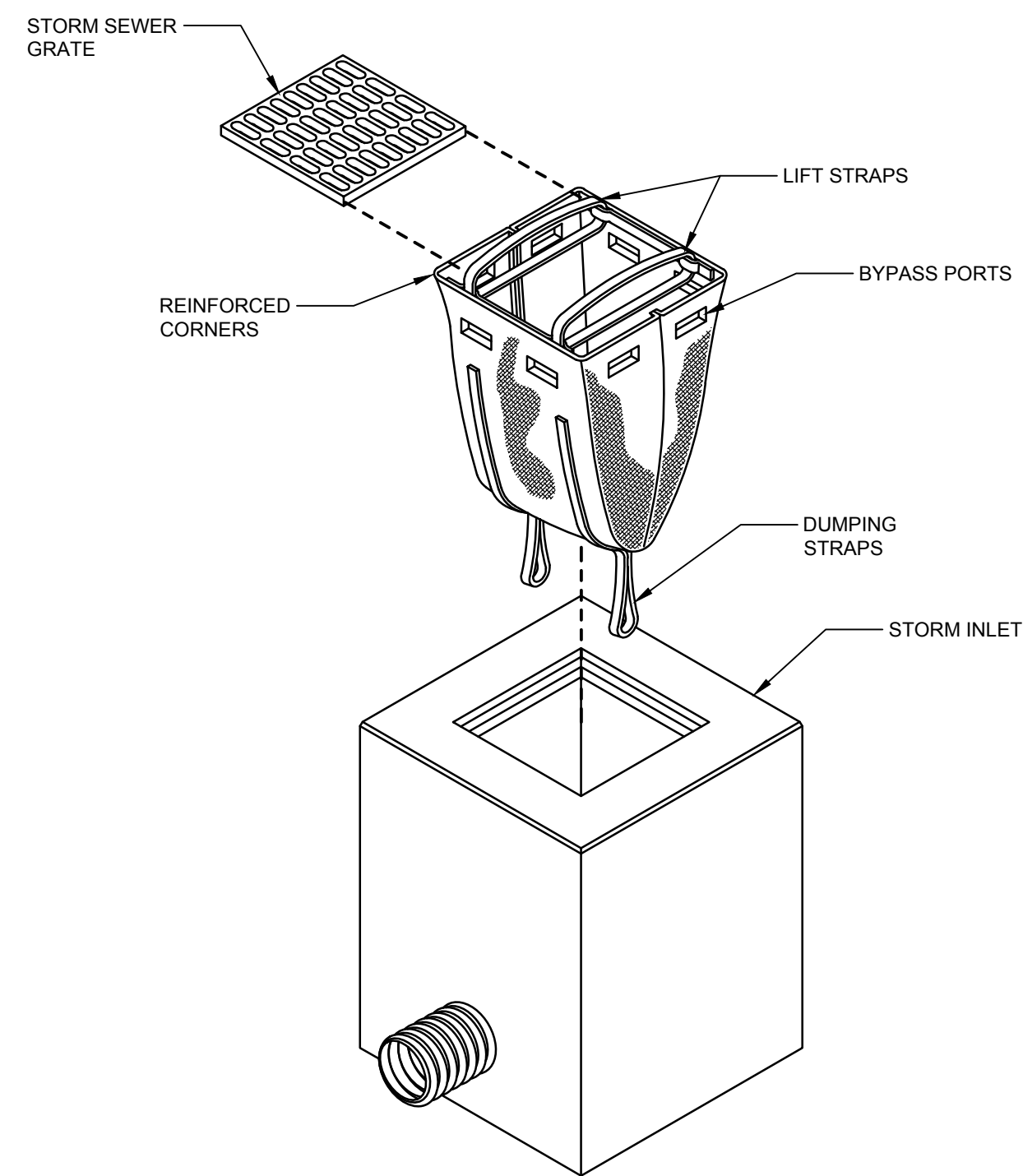
**PROJECT NOTES**

- THE "2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND "STANDARD PLANS" BY THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) ARE HEREBY INCORPORATED INTO THESE CONTRACT DOCUMENTS. COPIES OF THESE STANDARDS ARE AVAILABLE FOR INSPECTION AT THE OFFICE OF THE ENGINEER.
- THE PLACING OF TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL BE DONE IN ACCORDANCE WITH THE 2011 MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD), AS AMENDED.
- ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT THE TIME OF CONSTRUCTION.
- IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, ALL CONTRACTORS SHALL CALL MISS DIG @ 811 OR 800-482-7171 FOR PROTECTION OF UNDERGROUND UTILITIES A MINIMUM OF THREE FULL WORKING DAYS (EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS) PRIOR TO BEGINNING EACH EXCAVATION IN ANY AREA. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.
- THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE CITY OF KALAMAZOO TO NOTIFY THEM THAT WORK IS COMMENCING.
- THE SOIL BORINGS WERE TAKEN BY WIGHTMAN ON 3/28/2023 AND 4/17/2023.
- THE TEST BORINGS REPRESENT POINT INFORMATION AND MAY NOT HAVE ENCOUNTERED ALL THE TYPES AND MATERIALS WHICH ARE PRESENT AT THE SITE. THESE BORING LOGS DO NOT CONSTITUTE A GUARANTEE OF THE SOIL OR GROUNDWATER CONDITIONS, OR THAT THE TEST BORINGS ARE AN EXACT REPRESENTATION OF THE SOIL OR GROUNDWATER CONDITIONS AT ALL POINTS ON THE SITE.
- SEE SHEET C006 FOR SOIL BORING LOGS AND PLAN SHEETS FOR SOIL BORING LOCATIONS.
- THE CONTRACTOR SHALL CONDUCT THE WORK IN SUCH A MANNER SO NO EXCAVATIONS ARE LEFT OPEN OVERNIGHT. IF THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL INSTALL A TEMPORARY FENCE TO PROTECT THE EXCAVATION AT THEIR OWN EXPENSE.
- DRIVE REPLACEMENT SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
- ALL GOVERNMENT CORNERS ON THIS PROJECT SHALL BE PRESERVED, WHETHER SHOWN OR NOT. IT MAY BE NECESSARY TO PLACE OR ADJUST MONUMENT BOXES, AS REQUIRED.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EXISTING DRAINAGE PATTERNS, AND SHALL RESOLVE ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH MAY RESULT FROM THE CONTRACTOR'S ACTIVITIES.
- ADEQUATE DUST CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER IN THE FIELD, TO BE INCLUDED IN THE VARIOUS ITEMS OF WORK
- DATUM REFERS TO NAVD88 DATUM.
- SPOT ELEVATIONS WITHIN VICINITY OF PROPOSED CONCRETE CURB AND GUTTER REFER TO EDGE OF METAL. ELEVATIONS, PITCH PAVEMENT/CONCRETE GUTTERS UNIFORMLY BETWEEN PROPOSED SPOT ELEVATIONS.
- ALL DRIVES SHALL HAVE C4 DETAIL CURB AND GUTTER OR MATCH EXISTING DETAIL FROM THE TYPE M OPENING TO THE R.O.W. LINE OR LIMITS OF REMOVAL UNLESS NOTED FOR TYPE "L" OPENINGS.
- ALL SCALES FOR DRAWINGS AND DETAILS ARE BASED ON 24"x36" PRINTED PLANS. DIMENSIONS TAKE PRECEDENCE OVER SCALE. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.
- ALL RADII FOR CURB AND GUTTER ARE DIMENSIONED TO THE BACK OF THE CURB.
- TAPER THE CURBS TO ZERO HEIGHT AT SIDEWALKS. SIDEWALK RAMPS SHALL BE BARRIER FREE AND CONSTRUCTED IN ACCORDANCE WITH THE MDOT SIDEWALK RAMP AND DETECTABLE WARNING DETAILS (R-28 SERIES). SIDEWALK JOINTS SHALL BE IN ACCORDANCE WITH THE MDOT DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS (R-29 SERIES) UNLESS NOTED OTHERWISE.
- EXPANSION JOINTS FOR CONCRETE CURB AND GUTTER SHALL BE PLACED AT: CURB CORNERS, BEGINNING AND ENDING OF RADII, ALL CATCH BASINS AND MANHOLES, INTERSECTION OF CURB/SIDEWALK, CURB/RETAINING WALL, CURB/BUILDING, AND EXISTING/NEW CONSTRUCTION, AT LENGTHS OF NOT MORE THAN 120' APART, AND AS SPECIFIED ELSEWHERE.
- PAVT, REM, MODIFIED SHALL INCLUDE REMOVING THE FULL DEPTH OF CONCRETE PAVEMENT INCLUDING HMA OVERLAYS, REGARDLESS OF THICKNESS. HMA SURFACE, REM, MODIFIED SHALL INCLUDE REMOVING THE FULL DEPTH OF HMA PAVEMENT REGARDLESS OF THICKNESS. ALL CURB AND GUTTER REMOVAL SHALL BE MEASURED AS CURB AND GUTTER, REM PER FT. ALL REQUIRED SAW CUTTING SHALL BE INCLUDED IN THE RESPECTIVE REMOVAL ITEMS.
- EXISTING DRAINAGE STRUCTURE COVERS FOR STORM MANHOLES THAT ARE TO REMAIN SHALL BE REPLACED WITH COVER B, MODIFIED PRIOR TO FINAL ADJUSTMENT. EXISTING DRAINAGE STRUCTURE COVERS FOR SANITARY MANHOLES SHALL BE REPLACED WITH COVER Q, MODIFIED PRIOR TO FINAL ADJUSTMENT. EXISTING CATCH BASIN COVERS THAT ARE TO REMAIN SHALL BE REPLACED WITH COVER K PRIOR TO FINAL ADJUSTMENT. INCLUDED IN THE NEW CASTING ITEMS SHALL BE TEMPORARY PLATING OF THE EXISTING STRUCTURE THROUGH THE LEVELING COURSE. FINAL ADJUSTMENT SHALL BE PAID FOR AS DR STRUCTURE COVER, ADJ, CASE \_\_\_\_.
- MAINTAIN 10 FOOT MINIMUM HORIZONTAL SEPARATION BETWEEN THE SANITARY OR STORM SEWER AND WATER MAIN UTILITIES. PROVIDE 18" MINIMUM VERTICAL SEPARATION WHERE THE WATER MAIN CROSSES A SANITARY OR STORM SEWER.
- ANY SANITARY SEWER, SANITARY SEWER SERVICE LEADS, WATER MAIN, WATER SERVICES, OR STORM SEWER THAT IS DAMAGED BY THE CONTRACTOR DURING THEIR OPERATIONS SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AND AT THE CONTRACTOR'S EXPENSE.
- THE TACTILE PLATES FOR THE ADA RAMPS WILL BE COLONIAL RED IN COLOR TO MATCH EXISTING DETECTABLE WARNING PLATES THROUGHOUT THE CITY. TRUNCATED DOMES SHALL BE DUCTILE IRON MANUFACTURED AND INSTALLED IN ACCORDANCE WITH MDOT AND ADA ACCESSIBILITY GUIDELINES FOR DETECTABLE WARNINGS AND THE MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.
- PROPERTY OWNER'S NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY, AND THEIR ACCURACY IS NOT GUARANTEED.
- TAPERED OVERLAPPING JOINTS WILL NOT BE ALLOWED IN THE TOP COURSE OF THE HMA SURFACE. TAPERED OVERLAPPING LONGITUDINAL JOINTS ARE RESTRICTED TO BASE AND LEVELING COURSE ONLY. JOINTS IN THE VARIOUS COURSES SHALL BE STAGGERED BY A MINIMUM OF 6 INCHES WITH THE JOINTS IN THE TOP COURSE PLACED ON LANE LINES.
- ANY EXISTING PROPERTY CORNERS SHALL BE PRESERVED. CORNERS THAT ARE DISTURBED SHALL BE REPLACED BY A SURVEYOR LICENSED IN THE STATE OF MICHIGAN AT THE CONTRACTOR'S EXPENSE.



**SILT FENCE NOTES**

- THE HEIGHT OF SILT FENCE SHALL NOT EXCEED 36 INCHES ABOVE GROUND.
- THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM OF A 6 INCH OVERLAP, AND SECURELY SEALED.
- POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 18 INCHES).
- A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4-INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
- WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1-INCH LONG, THE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2-INCHES.
- THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 6-INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH.
- FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
- WHEN EXTRA STRENGTH FILTER FABRIC IS USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS.
- THE TRENCH SHALL BE BACKFILLED AND SOIL COMPACTED OVER THE FILTER FABRIC.
- SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
- SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED

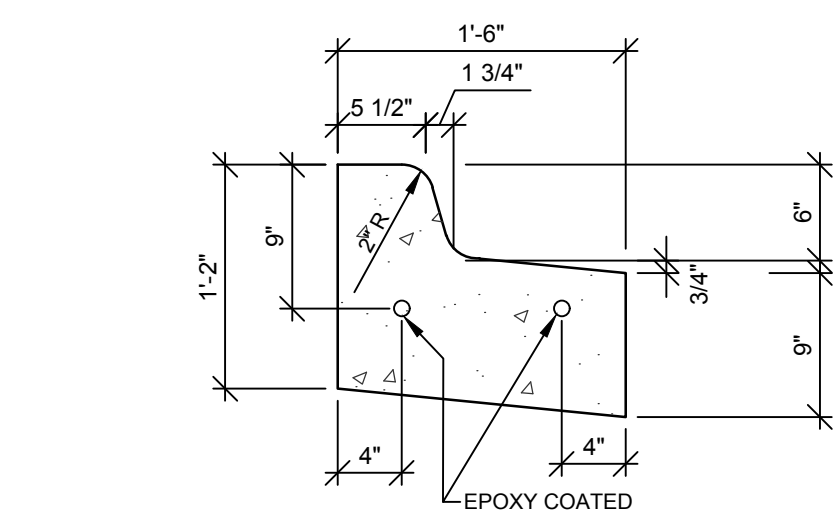
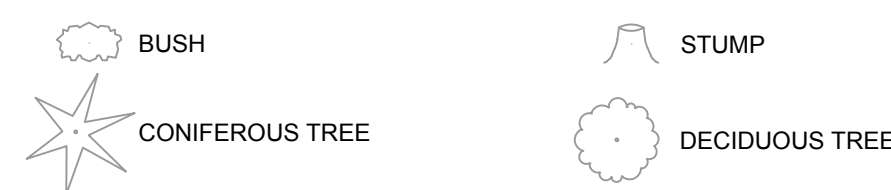


NOTES:  
REMOVE INLET PROTECTION WHEN THE CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.

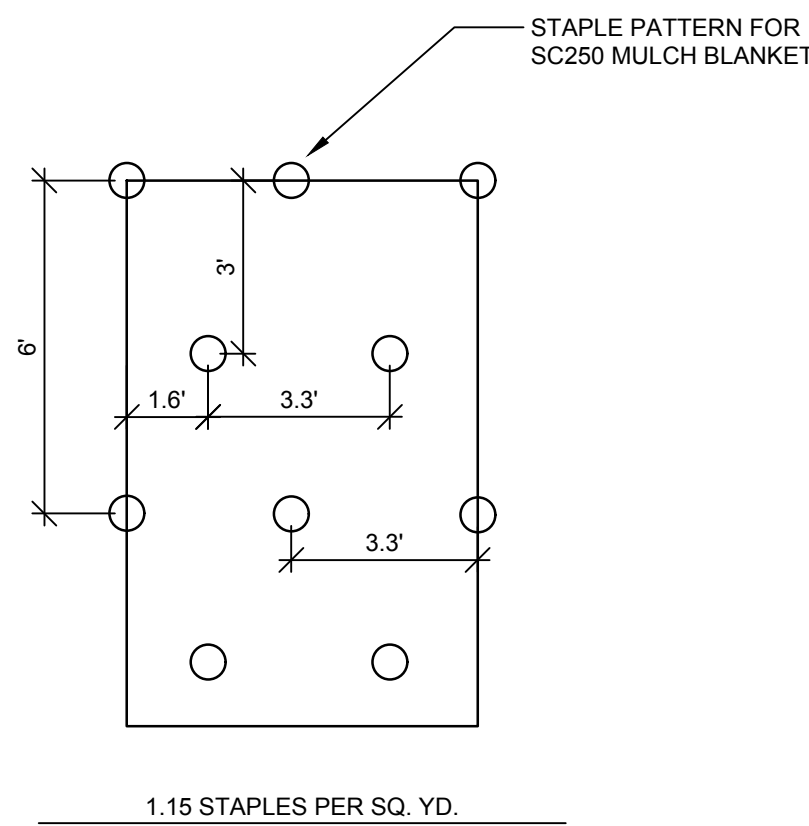
**LEGEND**

| EXISTING | PROPOSED |                                      |
|----------|----------|--------------------------------------|
| C        | C        | CABLE                                |
| E        | E        | ELECTRIC LINE                        |
| OHE      | OHE      | ELECTRIC LINE (OVERHEAD)             |
| FO       | FO       | FIBER OPTIC LINE                     |
| G        | G        | GAS LINE                             |
| T        | T        | TELEPHONE LINE                       |
|          | —+—+—+—  | FENCE                                |
|          | —+—+—+—  | FORCEMAIN                            |
|          | —+—+—+—  | SANITARY SEWER                       |
|          | —+—+—+—  | STORM SEWER                          |
|          | —+—+—+—  | WATER MAIN                           |
|          | —+—+—+—  | CENTER LINE                          |
| ~        | ~        | EXISTING TREE LINE                   |
| - - -    | - - -    | EXISTING DITCH LINE                  |
| - - -    | - - -    | EASEMENT LINE/GRADING PERMIT         |
| - - -    | - - -    | GRADING LIMITS/LIMITS OF DISTURBANCE |
| - - -    | - - -    | PROPERTY LINE                        |
| - - -    | - - -    | RIGHT-OF-WAY LINE                    |
| - - -    | - - -    | SECTION LINE                         |
| - - -    | - - -    | TO BE ABANDONED                      |
| ⊠        | ⊠        | = ANTENNA                            |
| ⊠        | ⊠        | = CATCH BASIN                        |
| ⊠        | ⊠        | = CABLE RISER BOX                    |
| ⊠        | ⊠        | = CLEAN OUT                          |
| ⊠        | ⊠        | = CURB INLET                         |
| ⊠        | ⊠        | = ELECTRIC MANHOLE                   |
| ⊠        | ⊠        | = FIRE HYDRANT                       |
| ⊠        | ⊠        | = FOUND IRON PIPE                    |
| ⊠        | ⊠        | = GAS VALVE                          |
| ⊠        | ⊠        | = GUY ANCHOR                         |
| ⊠        | ⊠        | = LIGHT POLE                         |
| ⊠        | ⊠        | = MAILBOX                            |
| ⊠        | ⊠        | = MONITORING WELL                    |
| ⊠        | ⊠        | = POST                               |
| ⊠        | ⊠        | = SATELLITE DISH                     |
| ⊠        | ⊠        | = SANITARY MANHOLE                   |
| ⊠        | ⊠        | = WATER MANHOLE                      |
| ⊠        | ⊠        | = WATER METER                        |
| ⊠        | ⊠        | = WATER VALVE                        |
| ⊠        | ⊠        | = WATER SPIGOT                       |
| ⊠        | ⊠        | = WELL                               |
| ⊠        | ⊠        | = PAVEMENT/SOIL BORING               |
| ⊠        | ⊠        | = PROPOSED HYDRANT                   |
| ⊠        | ⊠        | = PROPOSED GATE VALVE & BOX          |
| ⊠        | ⊠        | = PROPOSED GATE VALVE & VAULT        |
| ⊠        | ⊠        | = PROPOSED REDUCER                   |
| ⊠        | ⊠        | = PROPOSED SANITARY MANHOLE          |
| ⊠        | ⊠        | = PROPOSED STORM MANHOLE             |
| ⊠        | ⊠        | = STORM MANHOLE                      |
| ⊠        | ⊠        | = TELEPHONE MANHOLE                  |
| ⊠        | ⊠        | = TELEPHONE RISER BOX                |
| ⊠        | ⊠        | = TURNING POINT/TRVERSE              |
| ⊠        | ⊠        | = UTILITY POLE                       |
| ⊠        | ⊠        | = VAULT                              |
| ⊠        | ⊠        | = WATER ELEVATION                    |
| ⊠        | ⊠        | = WATER MANHOLE                      |
| ⊠        | ⊠        | = WATER METER                        |
| ⊠        | ⊠        | = WATER VALVE                        |
| ⊠        | ⊠        | = WELL                               |

**TREE DESIGNATORS**



APPLIES TO:  
MICHIKAL STREET PEDESTRIAN ISLAND STA. 99+80 TO STA. 100+20  
MICHIKAL STREET AND W KALAMAZOO AVENUE INTERSECTION ISLAND  
PAID AS CURB AND GUTTER, CONC, DET F2



**QUANTITIES THIS SHEET**

| ITEM  | QTY.      |
|---|-----------|
| Mobilization, Max   | 1 LSUM    |
| Tree, Rem, 19 inch to 36 inch                                   | 1 Ea      |
| Tree, Rem, 37 inch or Larger                                    | 1 Ea      |
| Tree, Rem, 6 inch to 18 inch                                    | 1 Ea      |
| Dr Structure, Rem   | 1 Ea      |
| Sewer, Rem, Less than 24 inch                                   | 100 Ft    |
| Curb and Gutter, Rem  | 100 Ft    |
| Masonry and Conc Structure, Rem                                 | 50 Cyd    |
| Sidewalk, Rem   | 20 Syd    |
| Exploratory Investigation, Vertical                             | 10 Ft     |
| Pavt, Rem, Modified   | 100 Syd   |
| Subgrade Undercutting, Type II                                  | 1,000 Cyd |
| Erosion Control, Silt Fence                                     | 500 Ft    |
| Subbase, CIP  | 100 Cyd   |
| Aggregate Base, 8 Inch, Modified                                | 200 Syd   |
| Maintenance Gravel, LM  | 500 Cyd   |
| Sewer Tap, 6 inch   | 1 Ea      |
| Sewer Tap, 12 inch  | 1 Ea      |
| Sewer Tap, 15 inch  | 1 Ea      |
| Dr Structure Cover, Adj, Case 2                                 | 1 Ea      |
| Dr Structure Cover, Type D                                      | 1 Ea      |
| Dr Structure Cover, Type G                                      | 1 Ea      |
| Dr Structure Cover, Type K                                      | 1 Ea      |
| Dr Structure, Adj, Add Depth                                    | 10 Ft     |
| Dr Structure, Tap, 12 inch                                      | 1 Ea      |
| Dr Structure Cover, Adj, Case 1, Modified                       | 1 Ea      |
| Dr Structure Cover, Type B, Modified                            | 1 Ea      |
| Dr Structure Cover, Type Q, Modified                            | 1 Ea      |
| HMA Surface, Rem  | 100 Syd   |
| Hand Patching   | 50 Ton    |
| Curb and Gutter, Conc, Det C4                                   | 50 Ft     |
| Curb and Gutter, Conc, Det F2                                   | 50 Ft     |
| Sidewalk, Conc, 4 inch  | 100 Sft   |
| Sidewalk, Conc, 6 inch  | 50 Sft    |
| Curb Ramp, Conc, 6 inch   | 30 Sft    |
| Minor Traf Devices  | 1 LSUM    |
| Pavt Mrkg, Longtl, 6 inch or Less Width, Rem                    | 100 Ft    |
| Pavt Mrkg, Type NR, Paint, 24 inch, Stop Bar                    | 10 Ft     |
| Pavt Mrkg, Type NR, Paint, Lt Turn Arrow                        | 1 Ea      |
| Pavt Mrkg, Type NR, Paint, Rt Turn Arrow                        | 1 Ea      |
| Pavt Mrkg, Type NR, Paint, Thru Arrow                           | 1 Ea      |
| Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, White, Temp  | 100 Ft    |
| Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, Yellow, Temp | 100 Ft    |
| Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, White, Temp    | 100 Ft    |
| Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp   | 100 Ft    |
| Sign Cover  | 10 Ea     |
| Slope Restoration, Non-Freeway, Type B                          | 500 Syd   |
| Light Std Arm, Rem  | 1 Ea      |
| Light Std Fdn, Rem  | 1 Ea      |
| Light Std Shaft, Rem  | 1 Ea      |
| TS, Span Wire Mtd, Rem  | 1 Ea      |
| TS Head, Adj  | 1 Ea      |
| TS Head, Temp   | 1 Ea      |
| TS Face, Bag  | 1 Ea      |
| TS Face, Bag, Rem   | 1 Ea      |
| Gate Box, Adj, Case 1, Modified                                 | 1 Ea      |
| Gate Box, Adj, Case 2   | 1 Ea      |
| Water Shutoff, Adj, Case 2                                      | 1 Ea      |
| Water Shutoff, Adj, Case 1                                      | 1 Ea      |

**WIGHTMAN**  
433 E. RANSOM ST.  
KALAMAZOO, MI. 49007  
269.327.3532  
www.wightman.com

PHILIP A. DOORLAG  
6201067363  
PROJECT NAME:

**STREETS FOR ALL: MICHIKAL IMPROVEMENTS**

**CITY OF KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001

|                       |     |
|-----------------------|-----|
| 06/02/23/2024         | PAD |
| RE-ISSUED FOR BIDDING |     |
| 05/12/01/2023         | PAD |
| ISSUED FOR BIDDING    |     |
| 04/10/25/2023         | PAD |
| 90% SUBMITTAL         |     |
| 01/06/30/2023         | PAD |
| 70% SUBMITTAL         |     |

**REVISIONS**  
DATE: FEBRUARY, 2024  
SCALE: NONE

PROJECT NOTES, DETAILS, AND MISC. QUANTITIES





**WIGHTMAN**

433 E. RANSOM ST.  
KALAMAZOO, MI. 49007  
269.327.3532

www.gowightman.com

PHILIP A. DOORLAG  
6201067363

PROJECT NAME:

**STREETS FOR ALL:  
MICHIKAL  
IMPROVEMENTS**

**CITY OF  
KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001

06/23/2024 PAD  
RE-ISSUED FOR BIDDING

05/12/2023 PAD  
ISSUED FOR BIDDING

04/10/2023 PAD  
90% SUBMITTAL

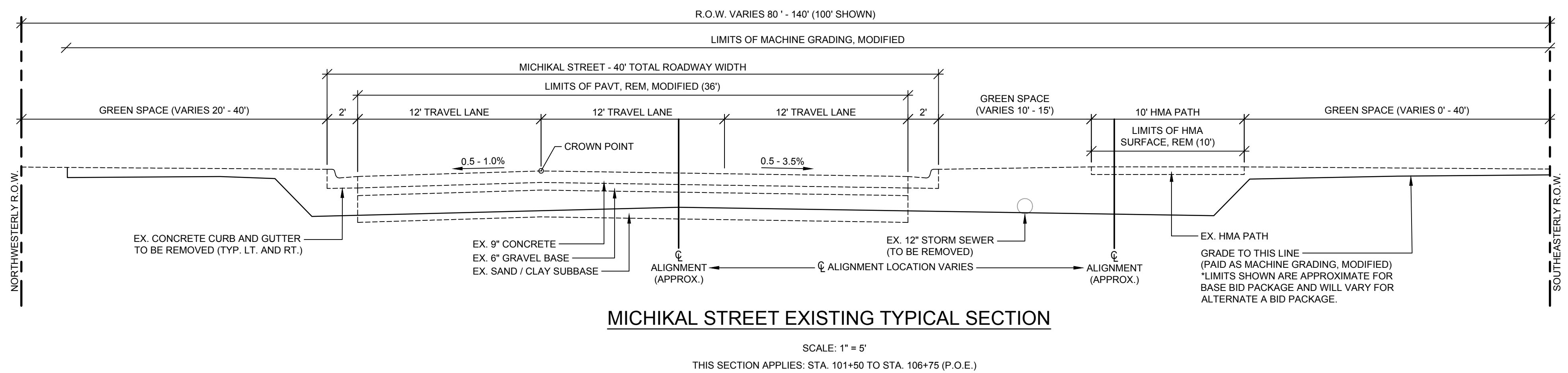
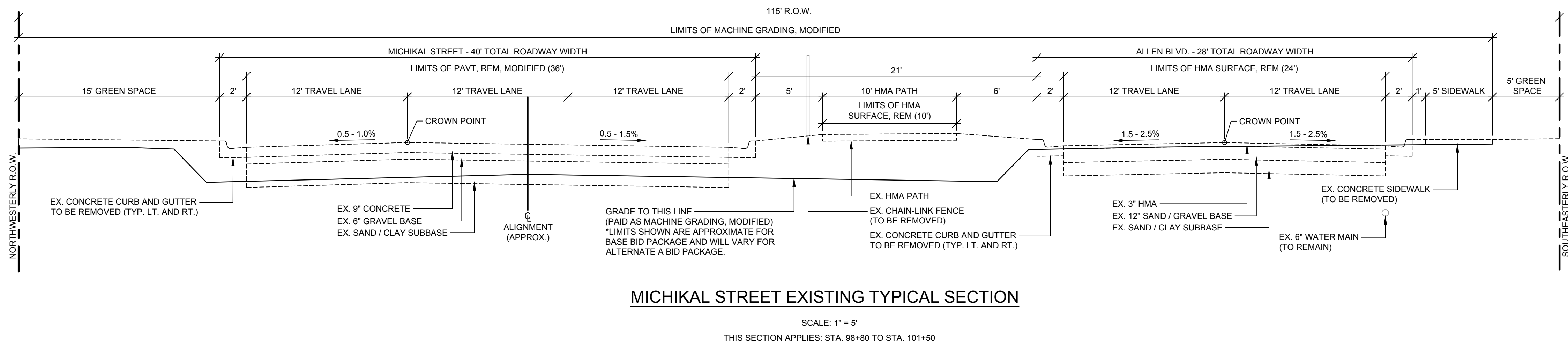
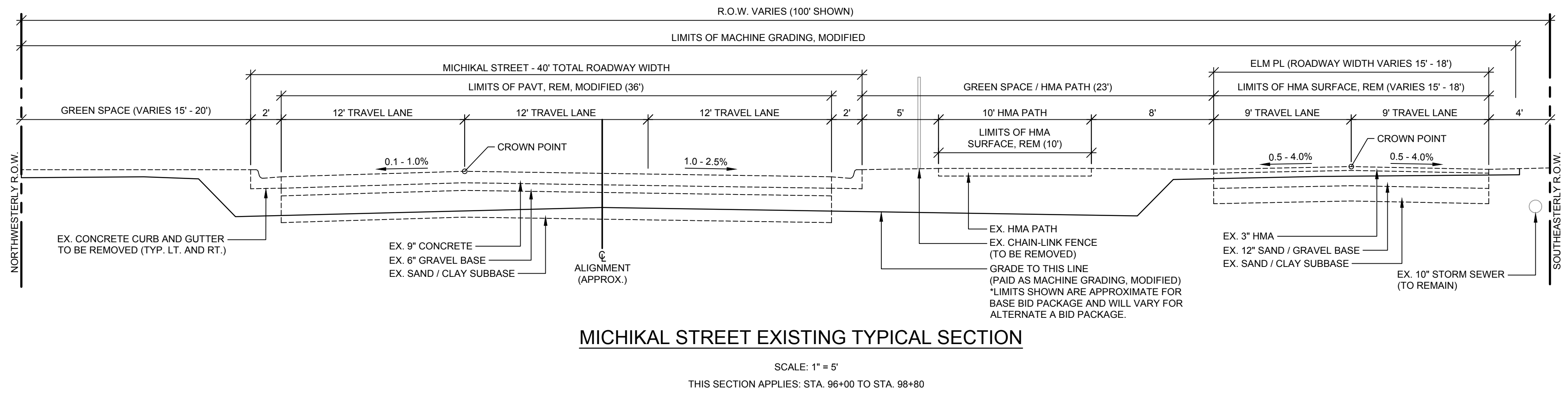
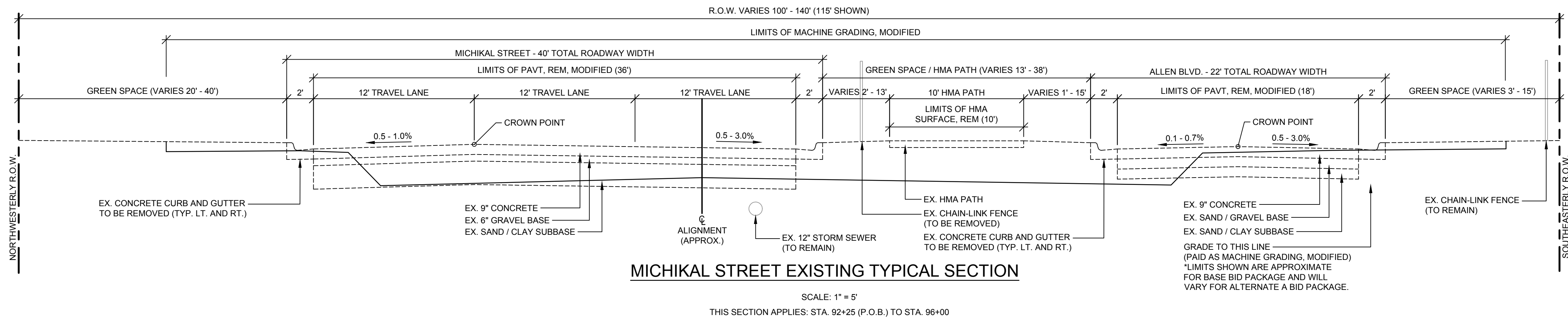
01/06/2023 PAD  
70% SUBMITTAL

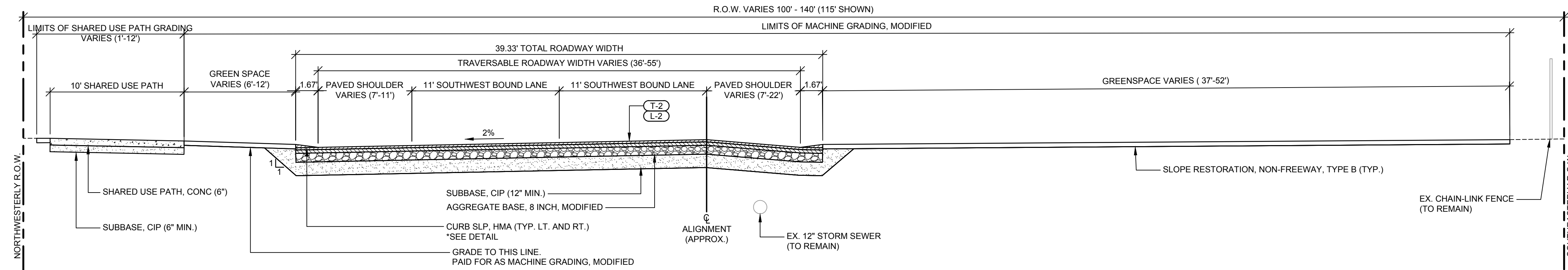
**REVISIONS**

DATE: FEBRUARY, 2024  
SCALE: 1" = 5'

EXISTING TYPICAL  
SECTIONS

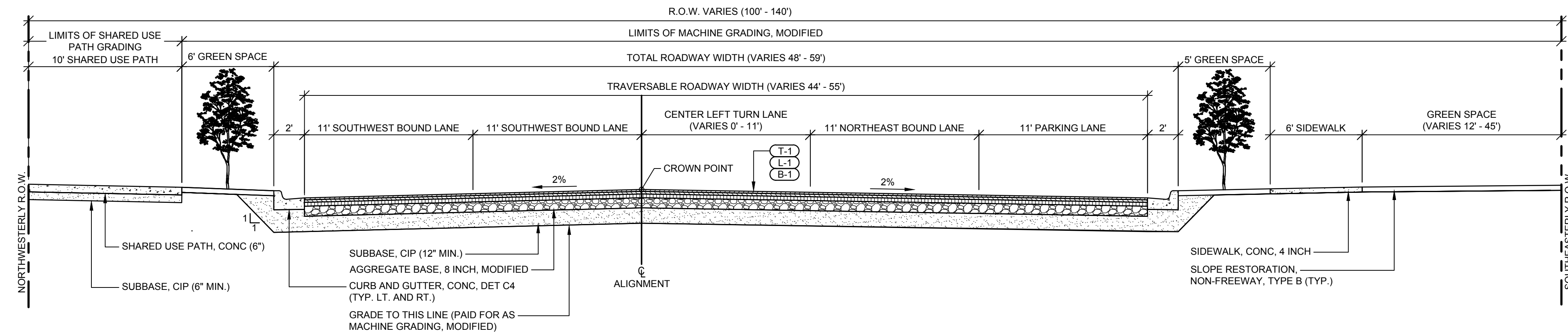
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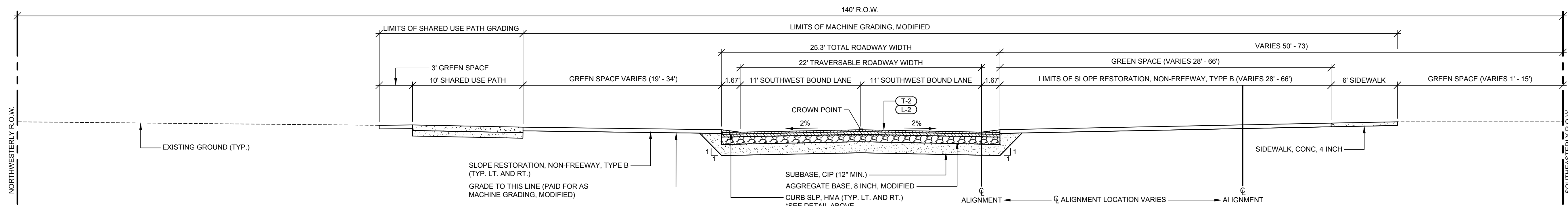
**MICHIKAL STREET PROPOSED TYPICAL SECTION**

SCALE: 1" = 5'  
 THIS SECTION APPLIES: STA. 92+25 (P.O.B.) TO STA. 93+25



**MICHIKAL STREET PROPOSED TYPICAL SECTION**

SCALE: 1" = 5'  
 THIS SECTION APPLIES: STA. 93+25 TO STA. 104+50

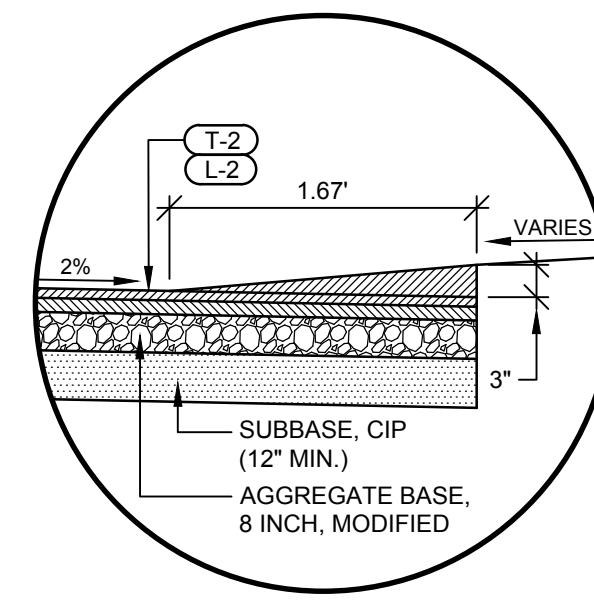


**MICHIKAL STREET PROPOSED TYPICAL SECTION**

SCALE: 1" = 5'  
 THIS SECTION APPLIES: STA. 104+50 TO STA. 106+75 (P.O.E.)

|      | ITEM                           | AWI | YIELD                | PERFORMANCE GRADE | NOTES                         |
|------|--------------------------------|-----|----------------------|-------------------|-------------------------------|
| T-1  | HMA, 5EML (TOP)                | 260 | 165#/SYD             | P.G. 64 - 28      | MICHIKAL MAINLINE PAVING      |
| L-1  | HMA, 4EML (LEVELING)           |     | 220#/SYD             | P.G. 64 - 28      | MICHIKAL MAINLINE PAVING      |
| B-1  | HMA, 3EML (BASE)               |     | 330#/SYD             | P.G. 64 - 28      | MICHIKAL MAINLINE PAVING      |
| T-2  | HMA, 4EML (TOP)                | 260 | 220#/SYD             | P.G. 64 - 28      | MICHIKAL TEMPORARY CONNECTION |
| L-2  | HMA, 3EML (LEVELING)           |     | 330#/SYD             | P.G. 64 - 28      | MICHIKAL TEMPORARY CONNECTION |
| 4EML | HMA, APPROACH (LEVELING)       |     | 165#/SYD             | P.G. 64 - 28      | DRIVEWAY APPROACHES           |
| 5EML | HMA, APPROACH (TOP)            | 260 | 165#/SYD             | P.G. 64 - 28      | DRIVEWAY APPROACHES           |
| 4EML | HMA, APPROACH (LEVELING)       |     | 220#/SYD             | P.G. 64 - 28      | SIDE STREET APPROACHES        |
| 5EML | HMA, APPROACH (TOP)            | 260 | 165#/SYD             | P.G. 64 - 28      | SIDE STREET APPROACHES        |
|      | HAND PATCHING (HMA, 5EML)      |     | 165 - 220#/SYD       | P.G. 64 - 28      |                               |
|      | HMA BOND COAT (NOT A PAY ITEM) |     | 0.05 TO 0.15 GAL/SYD | SS - 1h           |                               |

**HMA APPLICATION TABLE**



**DETAIL - CURB SLP, HMA**

SCALE: NONE  
 APPLIES TO MICHIKAL STREET TEMPORARY CONNECTION

|               |     |                       |
|---------------|-----|-----------------------|
| 06/03/2024    | PAD | RE-ISSUED FOR BIDDING |
| 05/12/2023    | PAD | ISSUED FOR BIDDING    |
| 04/10/25/2023 | PAD | 90% SUBMITTAL         |
| 01/08/30/2023 | PAD | 70% SUBMITTAL         |

REVISIONS  
 DATE: MARCH, 2024  
 SCALE: 1" = 5'

PROPOSED TYPICAL  
 SECTIONS  
 BASE BID  
 FULL ROAD  
 RECONSTRUCTION





**WIGHTMAN**

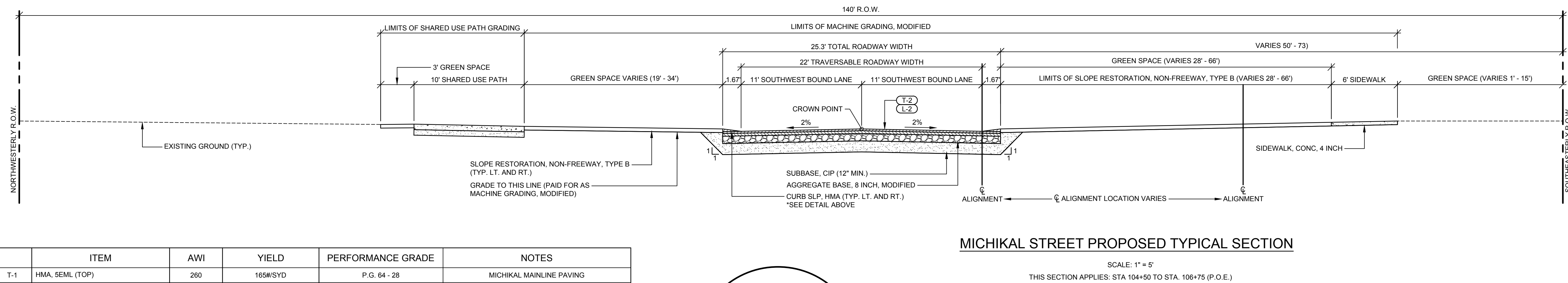
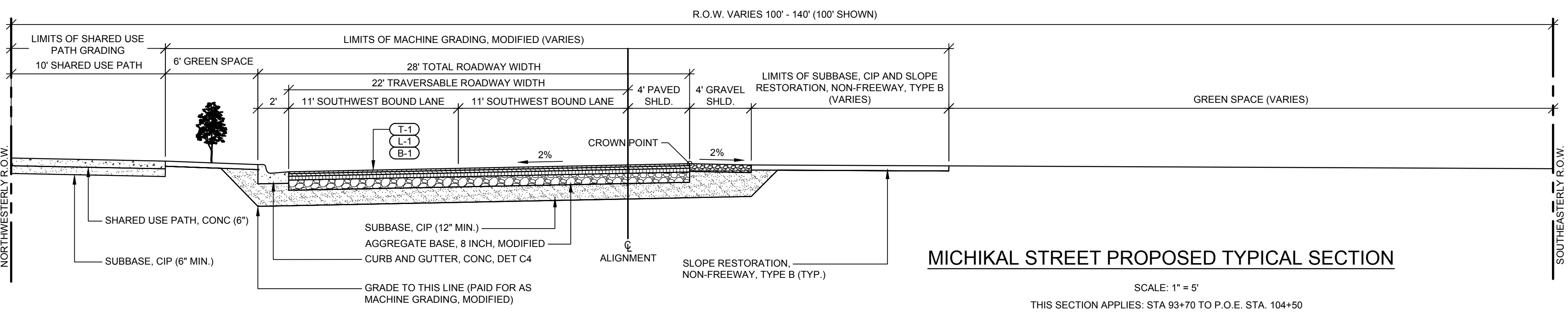
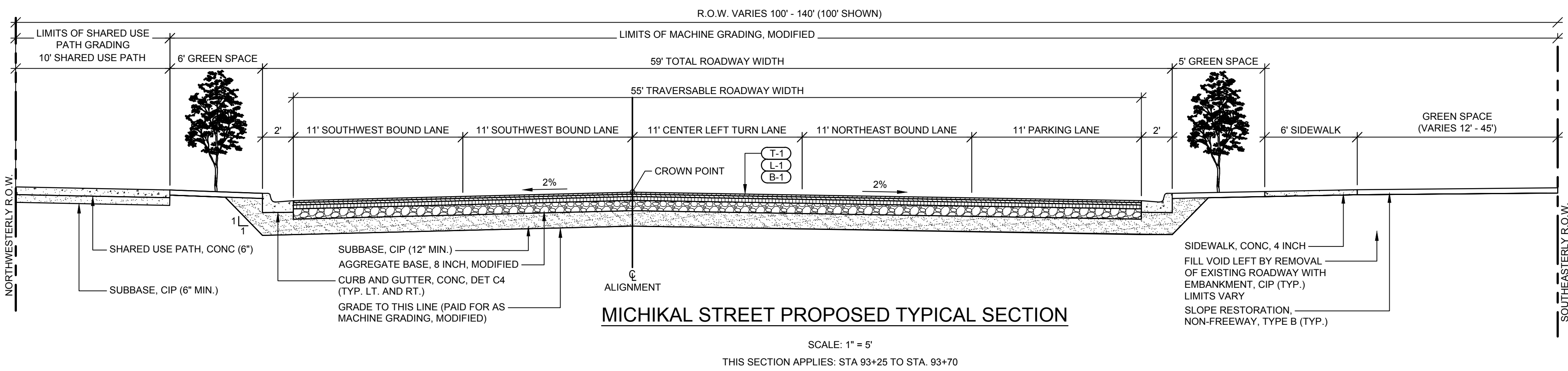
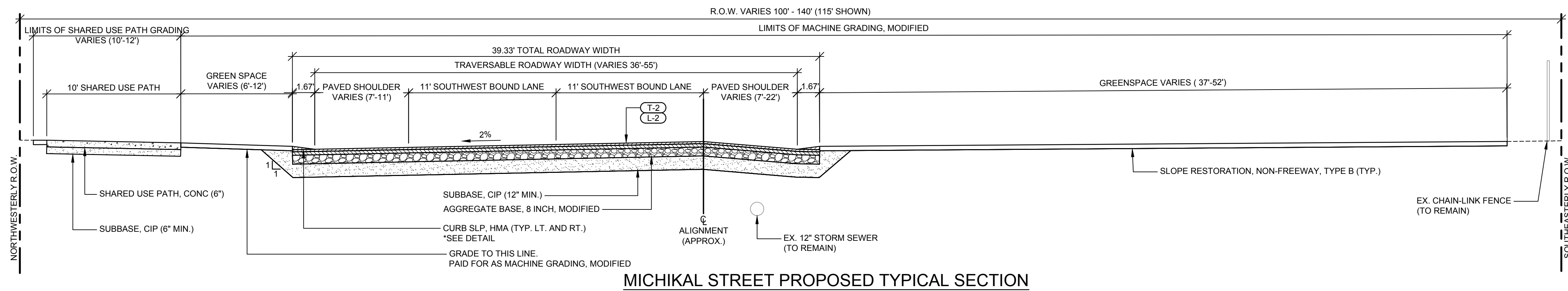
433 E. RANSOM ST.  
KALAMAZOO, MI. 49007  
269.327.3532

www.gowightman.com

PHILIP A. DOORLAG  
6201067363

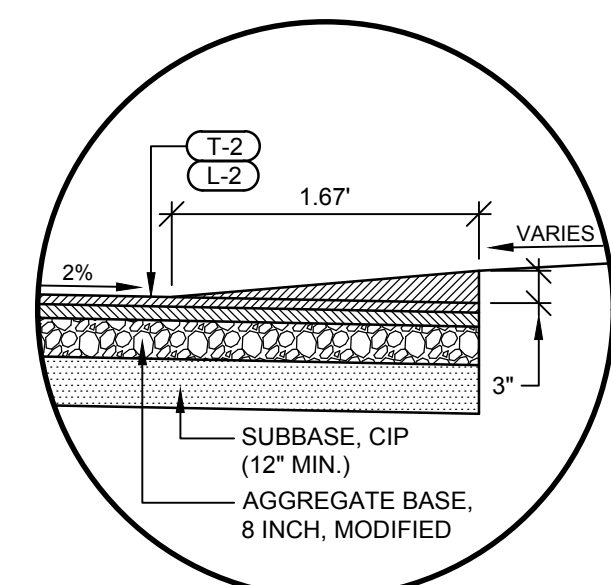
PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL  
IMPROVEMENTS**

**CITY OF  
KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



|      | ITEM                           | AWI | YIELD                | PERFORMANCE GRADE | NOTES                         |
|------|--------------------------------|-----|----------------------|-------------------|-------------------------------|
| T-1  | HMA, 5EML (TOP)                | 260 | 165#/SYD             | P.G. 64 - 28      | MICHIKAL MAINLINE PAVING      |
| L-1  | HMA, 4EML (LEVELING)           |     | 220#/SYD             | P.G. 64 - 28      | MICHIKAL MAINLINE PAVING      |
| B-1  | HMA, 3EML (BASE)               |     | 330#/SYD             | P.G. 64 - 28      | MICHIKAL MAINLINE PAVING      |
| T-2  | HMA, 4EML (TOP)                | 260 | 220#/SYD             | P.G. 64 - 28      | MICHIKAL TEMPORARY CONNECTION |
| L-2  | HMA, 3EML (LEVELING)           |     | 330#/SYD             | P.G. 64 - 28      | MICHIKAL TEMPORARY CONNECTION |
| 4EML | HMA, APPROACH (LEVELING)       |     | 165#/SYD             | P.G. 64 - 28      | DRIVEWAY APPROACHES           |
| 5EML | HMA, APPROACH (TOP)            | 260 | 165#/SYD             | P.G. 64 - 28      | DRIVEWAY APPROACHES           |
| 4EML | HMA, APPROACH (LEVELING)       |     | 220#/SYD             | P.G. 64 - 28      | SIDE STREET APPROACHES        |
| 5EML | HMA, APPROACH (TOP)            | 260 | 165#/SYD             | P.G. 64 - 28      | SIDE STREET APPROACHES        |
|      | HAND PATCHING (HMA, 5EML)      |     | 165 - 220#/SYD       | P.G. 64 - 28      |                               |
|      | HMA BOND COAT (NOT A PAY ITEM) |     | 0.05 TO 0.15 GAL/SYD | SS - 1h           |                               |

**HMA APPLICATION TABLE**



|               |     |                       |
|---------------|-----|-----------------------|
| 06/03/2024    | PAD | RE-ISSUED FOR BIDDING |
| 05/12/2023    | PAD | ISSUED FOR BIDDING    |
| 04/10/25/2023 | PAD | 90% SUBMITTAL         |
| 01/08/30/2023 | PAD | 70% SUBMITTAL         |

**REVISIONS**

DATE: MARCH, 2024

SCALE: 1" = 5'

**PROPOSED TYPICAL SECTIONS  
ALTERNATE A  
PART-WIDTH  
RECONSTRUCTION**

JOB No. 224022  
**C005**  
OF 39





**WIGHTMAN**

433 E. RANSOM ST.  
KALAMAZOO, MI. 49007  
269.327.3532

www.gowightman.com

PHILIP A. DOORLAG  
6201067363

PROJECT NAME:

**STREETS FOR ALL:  
MICHIKAL  
IMPROVEMENTS**

**CITY OF  
KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001

**PB-44**  
MICHIKAL STREET  
STA. 92+99 LT  
0 - 9.25" CONCRETE  
9.25 - 16" GRAVEL  
16 - 32" BROWN FINE TO COARSE SAND WITH TRACE OF GRAVEL  
32 - 35" DARK BROWN CLAYEY SAND  
35 - 37" CONCRETE  
37 - 50" BLACK SANDY CLAY WITH A TRACE OF GRAVEL (STRONG PETROL ODOR)  
50 - 55" DARK BROWN FINE TO COARSE SAND AND GRAVEL  
55 - 60" BLACK CLAY WITH TRACE OF GRAVEL  
60" END OF BORING

**PB-50**  
MICHIKAL STREET  
STA. 104+56 LT  
0 - 9.25" CONCRETE  
9.25 - 15" BLACK CLAY  
15 - 48" BROWN FINE TO COARSE SAND WITH TRACE OF GRAVEL  
48 - 60" BLACK SANDY CLAY WITH ORGANICS  
60" END OF BORING

**PB-45**  
MICHIKAL STREET  
STA. 94+35 LT  
0 - 9" CONCRETE  
9 - 40" BROWN FINE TO COARSE SAND WITH GRAVEL  
40 - 45" DARK BROWN CLAYEY SAND WITH FOUNDRY FILL AND BRICK  
45 - 51" BROWN FINE TO COARSE SAND WITH FINES AND TRACE OF GRAVEL  
51 - 60" BROWN FINE TO COARSE SAND WITH GRAVEL  
60" END OF BORING

**PB-14**  
MICHIKAL STREET  
STA. 106+28 LT  
0 - 8.75" CONCRETE  
8.75 - 18.5" BROWN FINE TO COARSE SAND AND GRAVEL  
18.5 - 40" BROWN MEDIUM TO COARSE SAND WITH TRACE OF GRAVEL  
40 - 45" DARK BROWN FINE TO COARSE CLAYEY SAND  
45 - 60" BLACK SANDY CLAY (ORGANICS)  
60" END OF BORING

**PB-46**  
MICHIKAL STREET  
STA. 94+85 LT  
0 - 2" TOPSOIL  
2 - 14" BROWN MEDIUM TO COARSE SAND WITH GRAVEL  
14 - 26" DARK BROWN FINE TO COARSE SAND WITH FINES AND GRAVEL  
26" END OF BORING (OBSTRUCTION - VERY LARGE ROCKS)

**SB-4**  
MICHIKAL STREET  
STA. 93+99 RT  
0 - 9" TOPSOIL  
9 - 30" DARK BROWN FINE TO COARSE CLAYEY SAND WITH GRAVEL  
30" END OF BORING (OBSTRUCTION - TOP OF ARCADIA CREEK BOX CULVERT)

**PB-47**  
MICHIKAL STREET  
STA. 95+84 LT  
0 - 9.25" CONCRETE  
9.25 - 12" BLACK CLAY  
12 - 41" BROWN FINE TO VERY COARSE SAND WITH GRAVEL  
41 - 44.5" DARK BROWN CLAYEY SAND WITH GRAVEL  
44.5 - 54" FOUNDRY FILL  
54 - 60" DARK BROWN FINE TO COARSE SAND WITH TRACE OF FINES AND GRAVEL  
60" END OF BORING

**SB-5**  
MICHIKAL STREET  
STA. 97+60 LT  
0 - 9" TOPSOIL  
9 - 30" FINE TO COARSE BROWN SAND WITH TRACE OF GRAVEL  
30" END OF BORING (LARGE CONCRETE OBSTRUCTION)

**PB-48**  
MICHIKAL STREET  
STA. 96+14 RT  
0 - 2.75" ASPHALT  
2.75 - 14" BROWN FINE TO COARSE SAND AND GRAVEL  
14 - 18.5" BLACK FINE TO COARSE SAND WITH FINES  
18.5 - 22" BROWN FINE TO MEDIUM SAND  
22 - 25" BROWN CLAYEY SAND  
25 - 44" BROWN FINE TO COARSE SAND WITH GRAVEL AND TRACE OF CLAY  
44 - 50" DARK BROWN CLAYEY SAND  
50 - 60" BLACK SOFT SILTY CLAY  
60" END OF BORING

**SB-6**  
MICHIKAL STREET  
STA. 98+64 RT  
0 - 19" TOPSOIL  
19 - 28" FINE TO MEDIUM BROWN SAND WITH TRACE OF GRAVEL  
28 - 48" FINE TO COARSE LIGHT BROWN SAND  
48 - 60" BLACK ORGANIC CLAY  
60" END OF BORING

**PB-49**  
MICHIKAL STREET  
STA. 99+17 LT  
0 - 9.25" CONCRETE  
9.25 - 12" GRAVEL  
12 - 29.5" BROWN FINE TO VERY COARSE SAND WITH GRAVEL  
29.5 - 41" DARK BROWN FINE TO VERY COARSE SAND WITH GRAVEL AND TRACE OF CLAY  
41 - 52" BROWN FINE TO MEDIUM SAND WITH CLAY  
52 - 60" BLACK FINE SANDY CLAY  
60" END OF BORING

**SB-7**  
MICHIKAL STREET  
STA. 100+77 LT  
0 - 19" TOPSOIL  
19 - 45" MIX OF FINE TO COARSE SAND WITH GRAVEL AND CONCRETE / BRICK FILL MATERIAL  
45 - 60" BLACK ORGANIC CLAY  
60" END OF BORING

**PB-48**  
MICHIKAL STREET  
STA. 96+14 RT  
0 - 14" TOPSOIL  
14 - 25" FINE TO COARSE BROWN SAND WITH GRAVEL  
25 - 34" FOUNDRY FILL MIXED WITH BLACK ORGANIC CLAY AND BRICK FILL  
34" END OF BORING (LARGE OBSTRUCTION)

**SB-8**  
MICHIKAL STREET  
STA. 101+56 RT  
0 - 14" TOPSOIL  
14 - 28" FINE TO COARSE BROWN SAND WITH GRAVEL  
28 - 38" LIGHT BROWN SANDY CLAY WITH TRACE GRAVEL  
38 - 45" FINE TO COARSE DARK BROWN TO BLACK SAND WITH ORGANICS  
45 - 60" BLACK ORGANIC CLAY  
60" END OF BORING

**PB-49**  
MICHIKAL STREET  
STA. 99+17 LT  
0 - 14" TOPSOIL  
14 - 25" FINE TO COARSE BROWN SAND WITH GRAVEL  
25 - 34" FOUNDRY FILL MIXED WITH BLACK ORGANIC CLAY AND BRICK FILL  
34" END OF BORING (LARGE OBSTRUCTION)

**SB-9**  
MICHIKAL STREET  
STA. 104+57 LT  
0 - 10" TOPSOIL  
10 - 16" FOUNDRY FILL  
16 - 30" FOUNDRY FILL MIXED WITH BLACK ORGANIC CLAY AND TRACE OF SAND AND ASH  
30 - 60" BLACK ORGANIC CLAY WITH TRACE SAND  
60" END OF BORING

**PB-49**  
MICHIKAL STREET  
STA. 99+17 LT  
0 - 10" TOPSOIL  
10 - 16" FOUNDRY FILL  
16 - 30" FOUNDRY FILL MIXED WITH BLACK ORGANIC CLAY AND TRACE OF SAND AND ASH  
30 - 60" BLACK ORGANIC CLAY WITH TRACE SAND  
60" END OF BORING

**SB-10**  
MICHIKAL STREET  
STA. 105+58 RT  
0 - 10" TOPSOIL  
10 - 16" FOUNDRY FILL  
16 - 30" FOUNDRY FILL MIXED WITH BLACK ORGANIC CLAY AND TRACE OF SAND AND ASH  
30 - 60" BLACK ORGANIC CLAY WITH TRACE SAND  
60" END OF BORING

**STRUCTURE ADJUST**

**STRUCTURE, ADJ**

SA030  
EXISTING SAN STRUCTURE  
(REPLACE WITH COVER Q, MODIFIED)  
RIM 788.71 (EX)  
RIM 788.45± (PROP)  
INV. 778.76 - 8" NE  
INV. 778.85 - 8" S

SA032  
EXISTING SAN STRUCTURE  
(REPLACE WITH COVER Q, MODIFIED)  
RIM 788.23 (EX)  
RIM 788.14± (PROP)  
INV. 781.20 - 8" W  
INV. 781.28 - 8" NE

SA033  
EXISTING SAN STRUCTURE  
(REPLACE WITH COVER Q, MODIFIED)  
RIM 787.70 (EX)  
RIM 787.87± (PROP)  
INV. 780.87 - 8" SW  
INV. 780.37 - 8" E

SA034  
EXISTING SAN STRUCTURE  
(REPLACE WITH COVER Q, MODIFIED)  
RIM 787.24 (EX)  
RIM 786.58± (PROP)  
INV. 776.91 - 8" W  
INV. 777.46 - 8" S  
INV. 777.02 - 8" E

SA037  
EXISTING SAN STRUCTURE  
(REPLACE WITH COVER Q, MODIFIED)  
RIM 785.50 (EX)  
RIM 785.80± (PROP)  
INV. 776.82 - 8" W  
INV. 776.86 - 8" S  
INV. 776.88 - 8" E

ST066  
EXISTING DR STRUCTURE  
(REPLACE WITH COVER D)  
RIM 783.82 (EX)  
RIM 783.82± (PROP)  
INV. 781.15 - 12" S

**STRUCTURE REMOVALS**

**STORM STRUCTURES**

ST063  
EX 24 INCH DIA STRUCTURE  
RIM 783.66  
INV. 780.54 - 12" SE

ST064  
EX 24 INCH DIA STRUCTURE  
RIM 784.32  
INV. 780.50 - 12" NW  
INV. 780.35 - 12" SW  
INV. 780.35 - 12" E

ST065  
EX 48 INCH DIA STRUCTURE  
RIM 784.31  
INV. 780.21 - 12" W  
INV. 780.06 - 6" W  
INV. 780.29 - 12" N  
INV. 779.86 - 15" NE

ST248  
EX 24 INCH DIA STRUCTURE  
RIM 788.64  
INV. 784.70 - 12" SW  
INV. 784.21 - 12" SE

ST251  
EX 24 INCH DIA STRUCTURE  
RIM 788.45  
INV. 785.39 - 12" NE

ST253  
EX 24 INCH DIA STRUCTURE  
RIM 788.08  
INV. 784.05 - 12" NW  
INV. 783.72 - 6" E  
INV. 783.61 - 12" SE

ST254  
EX 48 INCH DIA STRUCTURE  
RIM 787.94  
INV. 784.52 - 12" SE  
INV. 784.30 - 12" W  
INV. 784.30 - 12" W  
INV. 784.30 - 12" N

ST256  
EX 24 INCH DIA STRUCTURE  
RIM 787.78  
INV. 784.07 - 6" S  
INV. 784.03 - 12" SE

ST257  
EX 48 INCH DIA STRUCTURE  
RIM 787.78  
INV. 783.75 - 12" NW  
INV. 783.60 - 12" SW  
INV. 783.40 - 12" S  
INV. 783.68 - 12" N  
INV. 783.27 - 12" E

ST258  
EX 24 INCH DIA STRUCTURE  
RIM 787.72  
INV. 783.92 - 12" NW

**STORM STRUCTURES**

ST260  
EX 24 INCH DIA STRUCTURE  
RIM 787.36  
INV. 784.42 - 12" W

ST261  
EX 24 INCH DIA STRUCTURE  
RIM 787.24  
INV. 781.00 - 12" SE  
INV. 781.00 - 12" NW

ST262  
EX 24 INCH DIA STRUCTURE  
RIM 787.21  
INV. 782.03 - 12" S  
INV. 782.19 - 12" NW

ST264  
EX 24 INCH DIA STRUCTURE  
RIM 786.99  
INV. 783.14 - 12" SE  
INV. 782.42 - 12" N

ST265  
EX 24 INCH DIA STRUCTURE  
RIM 786.98  
INV. 783.03 - 12" NW

ST266  
EX 24 INCH DIA STRUCTURE  
RIM 785.41  
INV. 781.63 - 12" SE

ST268  
EX 24 INCH DIA STRUCTURE  
RIM 784.74  
INV. 781.27 - 12" NW  
INV. 781.27 - 12" NE

**PROPOSED STRUCTURES**

**STORM STRUCTURES**

ST566  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 787.69  
INV. 783.98 - 12" SW  
INV. 783.98 - 12" NE  
INV. 783.98 - 12" SE

ST572  
DR STRUCTURE, 24 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 785.85  
INV. 782.07 - 12" NW

ST573  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 790.76  
INV. 787.33 - 18" E  
INV. 787.33 - 18" NE  
INV. 788.50 - 6" S(EX)

ST578  
DR STRUCTURE, 24 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 787.57  
INV. 783.57 - 12" NW

ST579  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 787.34  
INV. 784.19 - 12" SE  
INV. 784.19 - 12" SW

ST581  
DR STRUCTURE, 24 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 787.21  
INV. 783.21 - 12" NW

ST583  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 787.69  
INV. 783.66 - 12" E  
INV. 783.66 - 12" NW

ST584  
DR STRUCTURE, 48 INCH DIA  
COVER B, MODIFIED  
0.0 FT SUMP  
RIM 787.91  
INV. 783.68 - 12" N(EX)  
INV. 783.37 - 12" W  
INV. 783.27 - 12" E(EX)

ST585  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 787.33  
INV. 782.96 - 12" SE  
INV. 781.41 - 12" NE  
INV. 781.41 - 12" SW

ST586  
DR STRUCTURE, 24 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 786.60  
INV. 782.60 - 12" NE

**STORM STRUCTURES**

ST588  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 786.77  
INV. 780.67 - 12" W(EX)  
INV. 780.67 - 12" E  
INV. 780.67 - 12" SW

ST592  
DR STRUCTURE, 24 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 785.09  
INV. 781.42 - 12" NE

ST593  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 785.13  
INV. 781.31 - 12" SW  
INV. 781.31 - 12" E

ST594  
DR STRUCTURE, 24 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 784.98  
INV. 781.40 - 12" N

ST596  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 785.85  
INV. 781.85 - 12" NE  
INV. 781.85 - 12" SE

ST597  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 784.93  
INV. 781.17 - 12" SW  
INV. 781.17 - 12" S  
INV. 781.17 - 12" W  
INV. 781.17 - 12" NE

ST602  
DR STRUCTURE, 60 INCH DIA  
COVER B, MODIFIED  
0.0 FT SUMP  
RIM 784.31  
INV. 780.78 - 12" SW  
INV. 779.86 - 15" N  
INV. 779.86 - 15" NE (EX)

ST603  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 783.87  
INV. 779.92 - 15" S  
INV. 779.92 - 12" SW  
INV. 780.71 - 12" N (EX)

ST666  
DR STRUCTURE, 24 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 789.95  
INV. 785.95 - 12" W

ST667  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 789.82  
INV. 785.70 - 12" E  
INV. 785.25 - 12" NE

**STORM STRUCTURES**

ST668  
DR STRUCTURE, 24 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 787.34  
INV. 784.34 - 12" NW

ST670  
DR STRUCTURE, 48 INCH DIA  
COVER K  
2.0 FT SUMP  
RIM 786.41  
INV. 780.29 - 12" W  
INV. 780.29 - 12" E(EX)  
INV. 781.97 - 12" SW

06 02/23/2024 PAD  
RE-ISSUED FOR BIDDING

05 12/01/2023 PAD  
ISSUED FOR BIDDING

04 10/25/2023 PAD  
90% SUBMITTAL

01 08/30/2023 PAD  
70% SUBMITTAL

**REVISIONS**

DATE: FEBRUARY, 2024  
SCALE: NONE

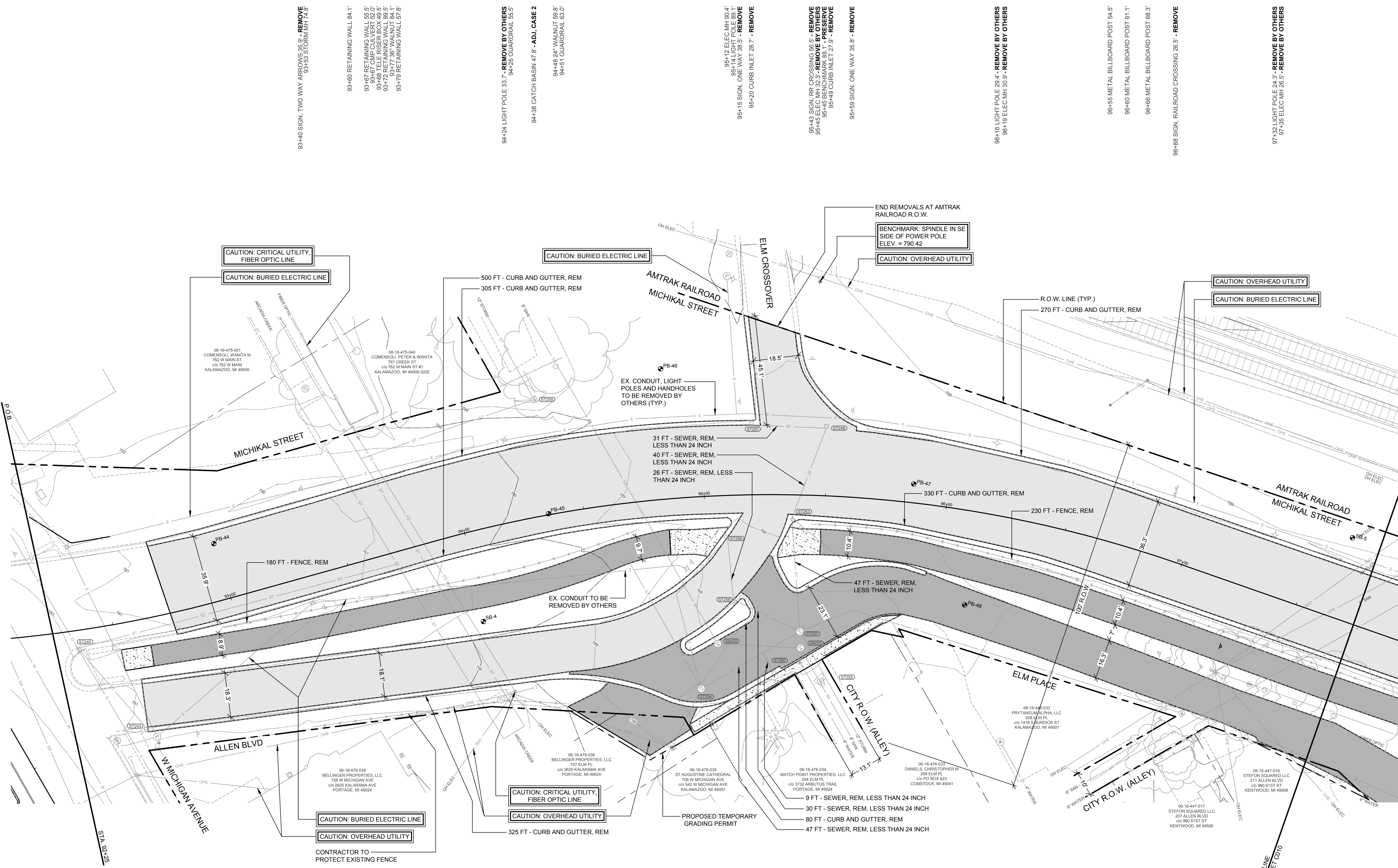
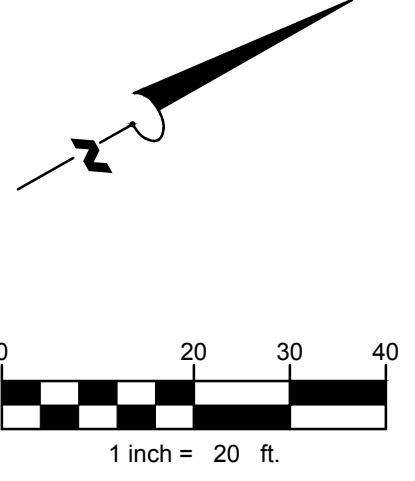
**SOIL BORINGS AND  
STRUCTURE TABLES**

JOB No. 224022

**C006**  
OF 39



| QUANTITIES THIS SHEET         |           |
|-------------------------------|-----------|
| ITEM                          | QTY.      |
| Tree, Rem, 19 inch to 36 inch | 5 Ea      |
| Tree, Rem, 6 inch to 18 inch  | 2 Ea      |
| Dr Structure, Rem             | 8 Ea      |
| Sewer, Rem, Less than 24 inch | 230 Ft    |
| Curb and Gutter, Rem          | 1,810 Ft  |
| Fence, Rem                    | 410 Ft    |
| Sidewalk, Rem                 | 95 Syd    |
| Pavt, Rem, Modified           | 2,750 Syd |
| HMA Surface, Rem              | 1,250 Syd |
| Sign, Type III, Rem           | 9 Ea      |



92+75 SIGN, STOP AHEAD 50.9' - REMOVE  
92+94 FENCE 11.0' - REMOVE

93+04 GAS METER 76.7'  
93+11 BUILDING 75.6'  
93+13 FENCE 12.5' - REMOVE  
93+14 BUILDING 72.3'  
93+15 FENCE 69.2'  
93+16 FENCE 69.2'  
93+21 BUILDING 73.3'  
93+25 BUILDING 72.3'  
93+32 LIGHT POLE 10.9' - REMOVE BY OTHERS  
93+33 FENCE 14.1' - REMOVE  
93+34 WALKWAY ARROWS 13.9' - REMOVE  
93+40 BUILDING 70.5'  
93+45 FENCE 69.6' - REMOVE  
93+58 FENCE 69.6' - REMOVE  
93+63 FENCE 16.4' - REMOVE

93+73 FENCE 67.6'  
93+89 FENCE 18.4' - REMOVE  
93+97 STORM MH 70.1'  
94+03 POWER POLE 69.0'  
94+05 TELE RISER BOX 68.3'  
94+13 GUY WIRE 68.6'

94+28 FENCE 78.0'  
94+33 FENCE 18.4' - REMOVE

94+71 FENCE 11.4' - REMOVE  
94+87 CLEAN OUT 27.6'  
94+91 LIGHT POLE 29.2' - REMOVE BY OTHERS  
94+94 STORM MH 70.0' - REMOVE  
94+97 WOOD FENCE 94.3'  
95+03 SAN MH 80.9' - ADJ. CASE 1  
95+09 CURB INLET 17.6' - REMOVE  
95+11 CURB INLET 45.1' - REMOVE

95+27 11" PINE 99.8' - REMOVE  
95+28 CURB INLET 72.8' - REMOVE  
95+36 CURB INLET 9.5' - REMOVE  
95+38 FENCE 74.7' - REMOVE  
95+41 STORM MH 69.3' - REMOVE  
95+41 WATER VALVE 68.8' - ADJ. CASE 1  
95+41 SAN MH 63.0' - ADJ. CASE 1  
95+42 CATCH BASIN 76.6' - REMOVE  
95+45 FENCE 97.9'

95+43 FENCE 50.4'  
95+88 FENCE 13.1' - REMOVE  
95+89 FENCE 69.2'

96+37 FENCE 16.9' - REMOVE  
96+44 WATER MH 91.2'

96+68 FENCE 19.3' - REMOVE

96+80 FENCE 20.2' - REMOVE

97+03 6" MULBERRY CLUSTER 37.1' - REMOVE  
97+03 SIGN, NO PARKING 37.7' - REMOVE  
97+13 WATER VALVE 62.4' - REMOVE  
97+18 15" MULBERRY 77.6'  
97+20 CATCH BASIN 57.8' - ADJ. CASE 2  
97+21 12" MULBERRY 36.9' - REMOVE  
97+26 TELE RISER BOX 36.9'  
97+28 POWER POLE 37.1'  
97+31 WATER VALVE 61.2'  
97+32 FENCE 20.2' - REMOVE  
97+43 24" POPLAR 37.3' - REMOVE  
97+48 24" POPLAR 37.5' - REMOVE  
97+49 24" POPLAR 37.5' - REMOVE

97+63 18" DEAD TREE 39.4' - REMOVE  
97+68 FENCE 20.4' - REMOVE

**LEGEND**

|  |  |
|--|--|
|  | SAWCUT AND REMOVE FULL DEPTH EXISTING PAVEMENT STRUCTURE PAID FOR AS PAVT, REM, MODIFIED |
|  | SAWCUT AND REMOVE FULL DEPTH EXISTING HMA PAID FOR AS HMA SURFACE, REM                   |
|  | SAWCUT AND REMOVE FULL DEPTH EXISTING CONCRETE PAID FOR AS PAVT, REM, MODIFIED           |
|  | SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK PAID FOR AS SIDEWALK, REM.                  |

**REVISIONS**

| DATE          | DESCRIPTION               | BY |
|---------------|---------------------------|----|
| 06/03/2024    | PAD RE-ISSUED FOR BIDDING |    |
| 05/12/2023    | PAD ISSUED FOR BIDDING    |    |
| 04/10/25/2023 | PAD 90% SUBMITTAL         |    |
| 01/08/30/2023 | PAD 70% SUBMITTAL         |    |

DATE: MARCH, 2024  
SCALE: 1" = 20'

REMOVAL PLAN - STA. 92+25 (P.O.B.) TO STA. 97+75  
JOB No. 224022  
**C007**  
OF 39



| QUANTITIES THIS SHEET         |           |
|-------------------------------|-----------|
| ITEM                          | QTY.      |
| Tree, Rem, 19 inch to 36 inch | 4 Ea      |
| Tree, Rem, 37 inch or Larger  | 1 Ea      |
| Tree, Rem, 6 inch to 18 inch  | 21 Ea     |
| Dr Structure, Rem             | 4 Ea      |
| Sewer, Rem, Less than 24 inch | 155 Ft    |
| Curb and Gutter, Rem          | 1,800 Ft  |
| Fence, Rem                    | 615 Ft    |
| Guardrail, Rem                | 90 Ft     |
| Sidewalk, Rem                 | 155 Syd   |
| Pavt, Rem, Modified           | 2,050 Syd |
| HMA Surface, Rem              | 1,850 Syd |
| Sign, Type III, Rem           | 14 Ea     |

**WIGHTMAN**

433 E. RANSOM ST.  
KALAMAZOO, MI. 49007  
269.327.3532

www.gowightman.com

PHILIP A. DOORLAG  
6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL  
IMPROVEMENTS**

CITY OF  
KALAMAZOO  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001

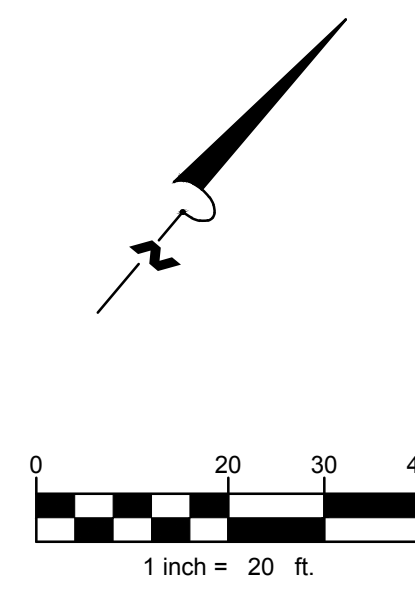
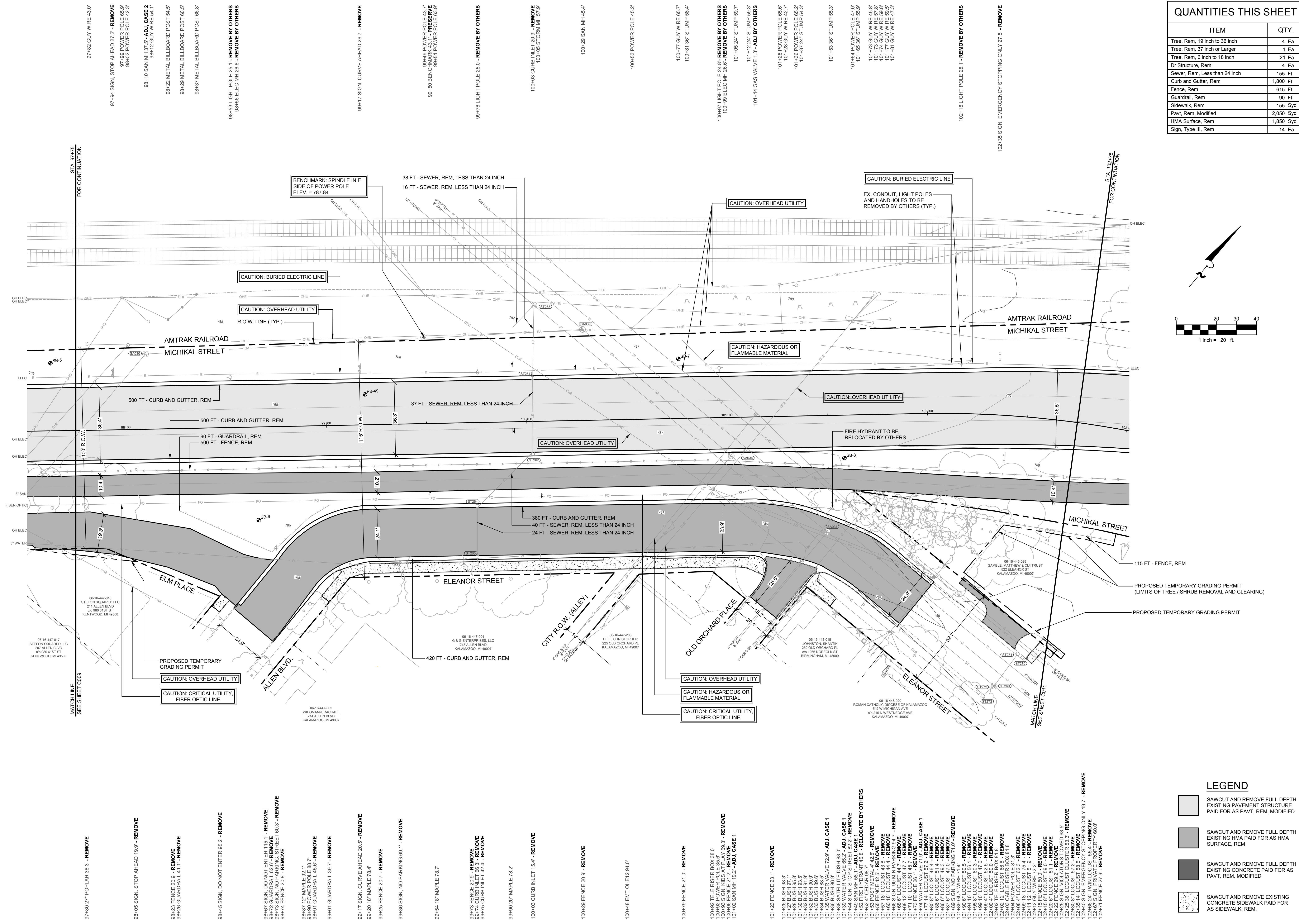
|            |     |                    |
|------------|-----|--------------------|
| 05/12/2023 | PAD | ISSUED FOR BIDDING |
| 04/10/2023 | PAD | 90% SUBMITTAL      |
| 01/06/2023 | PAD | 70% SUBMITTAL      |

REVISIONS

DATE: FEBRUARY, 2024  
SCALE: 1" = 20'

REMOVAL PLAN -  
STA. 97+75 TO STA. 102+75

JOB No. 224022  
**C008**  
OF 39



- 97+82 GUY WIRE 43.0' - REMOVE
- 97+94 SIGN, STOP AHEAD 27.2' - REMOVE
- 97+99 POWER POLE 65.9' - REMOVE
- 98+02 POWER POLE 42.3' - REMOVE
- 98+10 SAN MH 37.5' - ADJ. CASE 2
- 98+12 GUY WIRE 54.1' - REMOVE
- 98+22 METAL BILLBOARD POST 54.5' - REMOVE
- 98+29 METAL BILLBOARD POST 60.5' - REMOVE
- 98+37 METAL BILLBOARD POST 66.8' - REMOVE
- 98+43 LIGHT POLE 35.1' - REMOVE BY OTHERS
- 98+46 ELEC. MH 26.6' - REMOVE BY OTHERS
- 98+17 SIGN, CURVE AHEAD 26.7' - REMOVE
- 99+49 POWER POLE 43.7' - REMOVE
- 99+50 BENCHMARK 43.1' - PRESERVE
- 99+51 POWER POLE 63.9' - REMOVE
- 99+78 LIGHT POLE 25.0' - REMOVE BY OTHERS
- 100+03 CURB INLET 20.9' - REMOVE
- 100+05 STORM MH 57.9' - REMOVE
- 100+29 SAN MH 45.4' - REMOVE
- 100+53 POWER POLE 45.2' - REMOVE
- 100+77 GUY WIRE 65.7' - REMOVE
- 100+81 3/8" STUMP 56.4' - REMOVE
- 100+97 LIGHT POLE 24.6' - REMOVE BY OTHERS
- 100+99 ELEC. MH 26.6' - REMOVE BY OTHERS
- 101+05 24" STUMP 59.7' - REMOVE
- 101+12 24" STUMP 55.3' - REMOVE
- 101+14 GAS VALVE 1.3' - ADJ. BY OTHERS
- 101+28 POWER POLE 65.6' - REMOVE
- 101+28 GUY WIRE 42.7' - REMOVE
- 101+36 POWER POLE 64.2' - REMOVE
- 101+37 24" STUMP 54.3' - REMOVE
- 101+53 3/8" STUMP 55.3' - REMOVE
- 101+64 POWER POLE 47.0' - REMOVE
- 101+65 3/8" STUMP 55.9' - REMOVE
- 101+73 GUY WIRE 45.8' - REMOVE
- 101+74 GUY WIRE 54.9' - REMOVE
- 101+77 GUY WIRE 59.5' - REMOVE
- 101+81 GUY WIRE 47.3' - REMOVE
- 102+16 LIGHT POLE 25.1' - REMOVE BY OTHERS
- 102+35 SIGN, EMERGENCY STOPPING ONLY 27.9' - REMOVE

- 97+60 27" POPLAR 36.3' - REMOVE
- 98+05 SIGN, STOP AHEAD 19.9' - REMOVE
- 98+23 FENCE 20.9' - REMOVE
- 98+25 GUARDRAIL 41.1' - REMOVE
- 98+45 SIGN, DO NOT ENTER 95.2' - REMOVE
- 98+67 SIGN, DO NOT ENTER 115.1' - REMOVE
- 98+72 GUARDRAIL 62.6' - REMOVE
- 98+73 SIGN, STOP AHEAD 100.3' - REMOVE
- 98+74 FENCE 20.6' - REMOVE
- 98+87 12" MAPLE 92.1' - REMOVE
- 98+90 POWER POLE 88.7' - REMOVE
- 98+91 GUARDRAIL 45.6' - REMOVE
- 99+01 GUARDRAIL 39.7' - REMOVE
- 99+17 SIGN, CURVE AHEAD 20.5' - REMOVE
- 99+20 18" MAPLE 78.4' - REMOVE
- 99+25 FENCE 20.7' - REMOVE
- 99+36 SIGN, NO PARKING 69.1' - REMOVE
- 99+54 18" MAPLE 78.7' - REMOVE
- 99+73 FENCE 20.9' - REMOVE
- 99+74 CURB INLET 65.3' - REMOVE
- 99+75 CURB INLET 42.4' - REMOVE
- 99+90 20" MAPLE 78.2' - REMOVE
- 100+03 CURB INLET 15.4' - REMOVE
- 100+29 FENCE 20.9' - REMOVE
- 100+48 EMT OHE 12.94.0' - REMOVE
- 100+79 FENCE 21.0' - REMOVE
- 100+92 TELE RISER BOX 38.0' - REMOVE
- 100+93 SIGN, STOP AHEAD 19.9' - REMOVE
- 100+94 SIGN, STOP AHEAD 19.9' - REMOVE
- 101+02 SAN MH 19.2' - ADJ. CASE 1
- 101+23 FENCE 23.1' - REMOVE
- 101+24 28" BUSH 98.3' - REMOVE
- 101+27 BUSH 97.1' - REMOVE
- 101+28 BUSH 95.8' - REMOVE
- 101+30 BUSH 91.9' - REMOVE
- 101+32 BUSH 91.9' - REMOVE
- 101+33 BUSH 90.9' - REMOVE
- 101+34 BUSH 88.5' - REMOVE
- 101+35 BUSH 86.9' - REMOVE
- 101+36 BUSH 86.9' - REMOVE
- 101+38 WATER VALVE 72.9' - ADJ. CASE 1
- 101+39 WATER VALVE 68.0' - REMOVE
- 101+44 SIGN, STOP AHEAD 82.2' - REMOVE
- 101+46 SAN MH 56.1' - ADJ. CASE 1
- 101+47 18" LOCUST 44.4' - REMOVE
- 101+48 18" LOCUST 44.4' - REMOVE
- 101+52 4" CEDAR 98.7' - REMOVE
- 101+53 4" CEDAR 98.7' - REMOVE
- 101+54 18" LOCUST 45.7' - REMOVE
- 101+55 18" LOCUST 45.7' - REMOVE
- 101+56 SIGN, 30 MIN PARKING 94.7' - REMOVE
- 101+57 18" LOCUST 44.4' - REMOVE
- 101+58 18" LOCUST 44.4' - REMOVE
- 101+60 18" LOCUST 44.4' - REMOVE
- 101+61 18" LOCUST 44.4' - REMOVE
- 101+62 18" LOCUST 44.4' - REMOVE
- 101+63 18" LOCUST 44.4' - REMOVE
- 101+64 18" LOCUST 44.4' - REMOVE
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- 101+68 18" LOCUST 44.4' - REMOVE
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- 102+01 18" LOCUST 44.4' - REMOVE
- 102+02 18" LOCUST 44.4' - REMOVE
- 102+03 18" LOCUST 44.4' - REMOVE
- 102+04 18" LOCUST 44.4' - REMOVE
- 102+05 18" LOCUST 44.4' - REMOVE
- 102+06 18" LOCUST 44.4' - REMOVE
- 102+07 18" LOCUST 44.4' - REMOVE
- 102+08 18" LOCUST 44.4' - REMOVE
- 102+09 18" LOCUST 44.4' - REMOVE
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- 102+12 18" LOCUST 44.4' - REMOVE
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- 102+18 18" LOCUST 44.4' - REMOVE
- 102+19 18" LOCUST 44.4' - REMOVE
- 102+20 18" LOCUST 44.4' - REMOVE
- 102+21 18" LOCUST 44.4' - REMOVE
- 102+22 18" LOCUST 44.4' - REMOVE
- 102+23 18" LOCUST 44.4' - REMOVE
- 102+24 18" LOCUST 44.4' - REMOVE
- 102+25 18" LOCUST 44.4' - REMOVE
- 102+26 18" LOCUST 44.4' - REMOVE
- 102+27 18" LOCUST 44.4' - REMOVE
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- 102+29 18" LOCUST 44.4' - REMOVE
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- 102+75 18" LOCUST 44.4' - REMOVE
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- 102+91 18" LOCUST 44.4' - REMOVE
- 102+92 18" LOCUST 44.4' - REMOVE
- 102+93 18" LOCUST 44.4' - REMOVE
- 102+94 18" LOCUST 44.4' - REMOVE
- 102+95 18" LOCUST 44.4' - REMOVE
- 102+96 18" LOCUST 44.4' - REMOVE
- 102+97 18" LOCUST 44.4' - REMOVE
- 102+98 18" LOCUST 44.4' - REMOVE
- 102+99 18" LOCUST 44.4' - REMOVE
- 103+00 18" LOCUST 44.4' - REMOVE

**LEGEND**

- SAWCUT AND REMOVE FULL DEPTH EXISTING PAVEMENT STRUCTURE PAID FOR AS PAVT, REM, MODIFIED
- SAWCUT AND REMOVE FULL DEPTH EXISTING HMA PAID FOR AS HMA SURFACE, REM
- SAWCUT AND REMOVE FULL DEPTH EXISTING CONCRETE PAID FOR AS PAVT, REM, MODIFIED
- SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK PAID FOR AS SIDEWALK, REM.



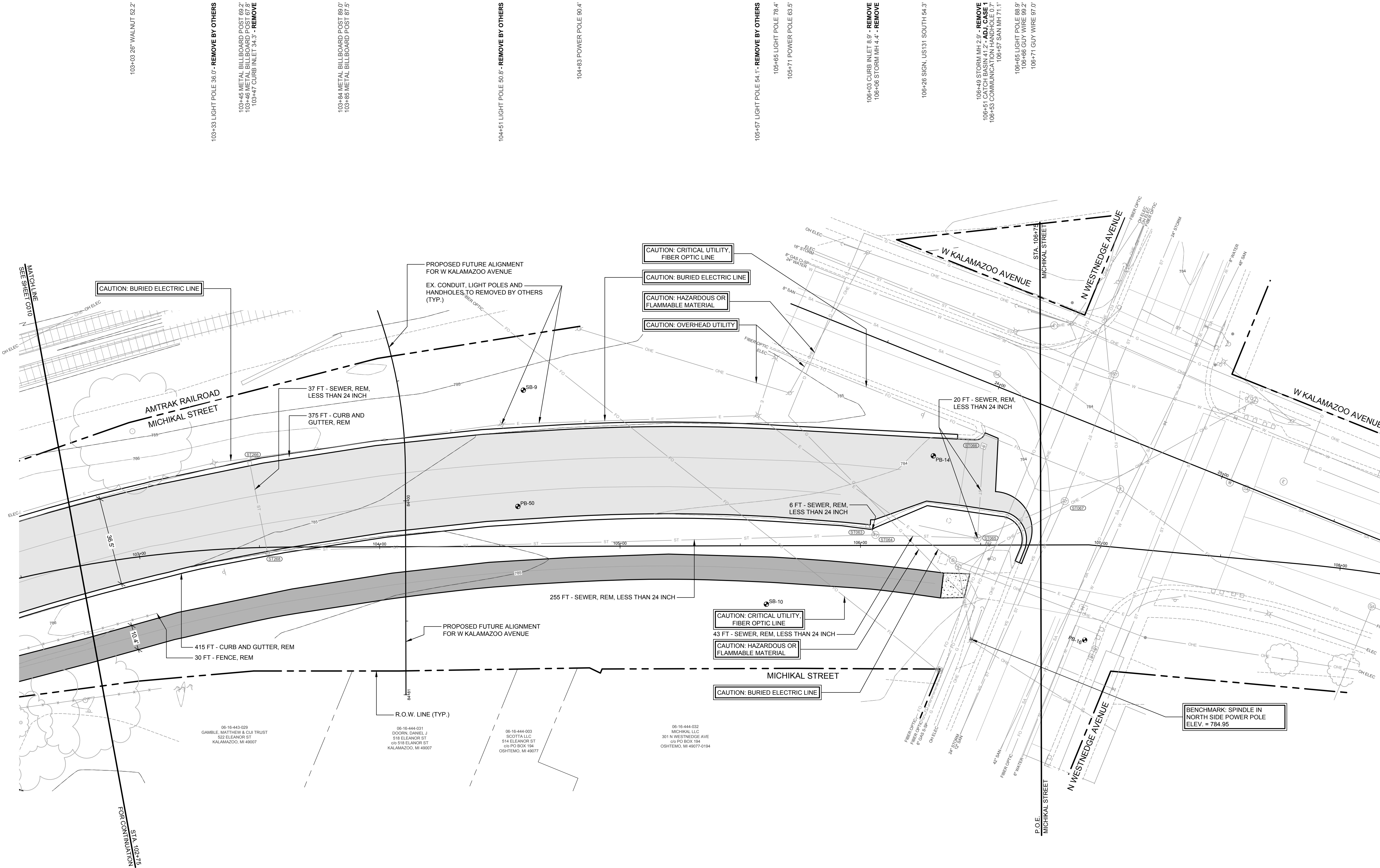
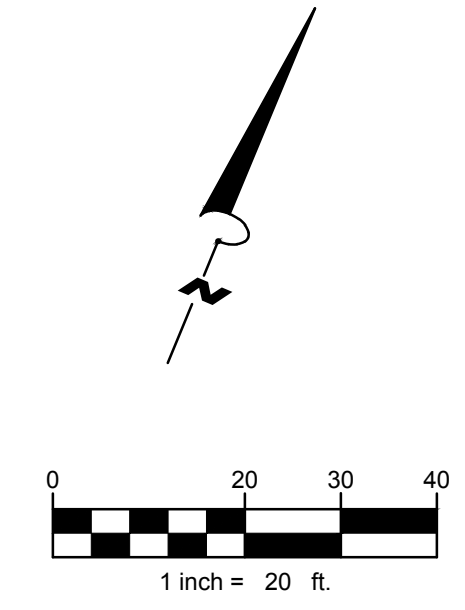
| QUANTITIES THIS SHEET         |           |
|-------------------------------|-----------|
| ITEM                          | QTY.      |
| Dr Structure, Rem             | 5 Ea      |
| Sewer, Rem, Less than 24 inch | 365 Ft    |
| Curb and Gutter, Rem          | 790 Ft    |
| Fence, Rem                    | 30 Ft     |
| Sidewalk, Rem                 | 15 Syd    |
| Pavt, Rem, Modified           | 1,550 Syd |
| HMA Surface, Rem              | 415 Syd   |
| Sign, Type III, Rem           | 1 Ea      |

**WIGHTMAN**  
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 KALAMAZOO, MI. 49007  
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PHILIP A. DOORLAG  
 6201067363

**STREETS FOR ALL:  
 MICHIKAL  
 IMPROVEMENTS**

**CITY OF  
 KALAMAZOO**  
 415 E STOCKBRIDGE AVENUE  
 KALAMAZOO, MI 49001



CAUTION: CRITICAL UTILITY,  
 FIBER OPTIC LINE  
 CAUTION: BURIED ELECTRIC LINE  
 CAUTION: HAZARDOUS OR  
 FLAMMABLE MATERIAL  
 CAUTION: OVERHEAD UTILITY

BENCHMARK: SPINDLE IN  
 NORTH SIDE POWER POLE  
 ELEV. = 784.95

**LEGEND**

|  |  |
|--|--|
|  | SAWCUT AND REMOVE FULL DEPTH<br>EXISTING PAVEMENT STRUCTURE<br>PAID FOR AS PAVT, REM, MODIFIED |
|  | SAWCUT AND REMOVE FULL DEPTH<br>EXISTING HMA PAID FOR AS HMA<br>SURFACE, REM                   |
|  | SAWCUT AND REMOVE FULL DEPTH<br>EXISTING CONCRETE PAID FOR AS<br>PAVT, REM, MODIFIED           |
|  | SAWCUT AND REMOVE EXISTING<br>CONCRETE SIDEWALK PAID FOR<br>AS SIDEWALK, REM.                  |

**REVISIONS**

|                       |     |
|-----------------------|-----|
| 06/02/23/2024         | PAD |
| RE-ISSUED FOR BIDDING |     |
| 05/12/01/2023         | PAD |
| ISSUED FOR BIDDING    |     |
| 04/10/25/2023         | PAD |
| 90% SUBMITTAL         |     |
| 01/08/30/2023         | PAD |
| 70% SUBMITTAL         |     |

**REMOVAL PLAN -  
 STA. 102+75 TO STA. 106+75  
 (P.O.E.)**

Job No. 224022  
**C009**  
 OF 39



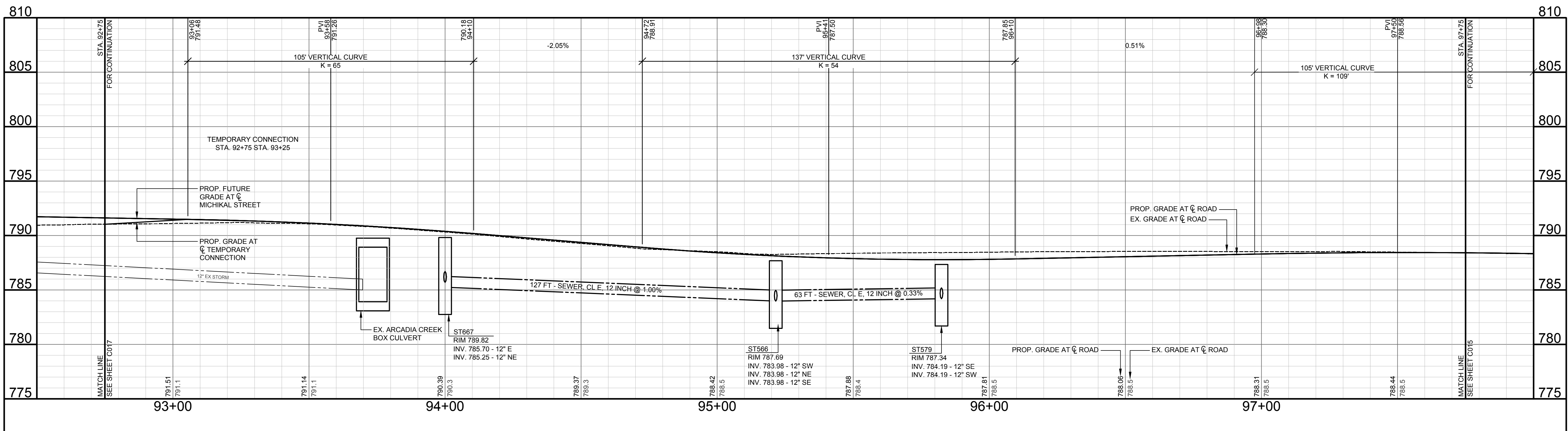
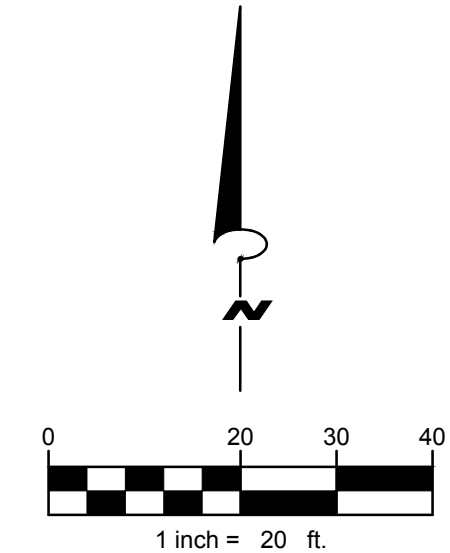
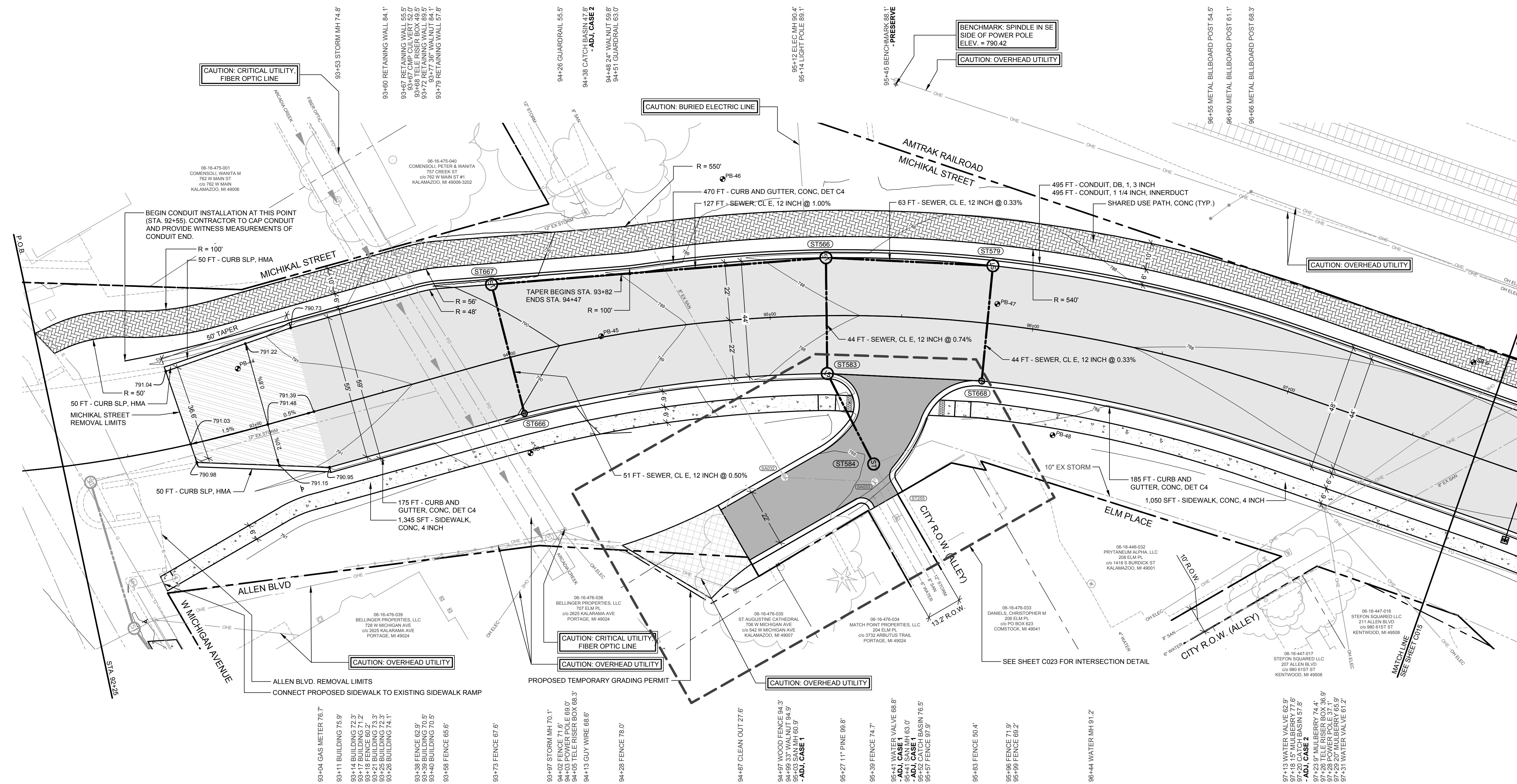
QUANTITIES THIS SHEET

| ITEM                                   | QTY.      |
|--|-----------|
| Machine Grading, Modified              | 5 Sta     |
| Subbase, CIP                           | 965 Cyd   |
| Aggregate Base, 8 inch, Modified       | 2,600 Syd |
| Sewer, Cl E, 12 inch, Tr Det B         | 330 Ft    |
| Dr Structure Cover, Adj, Case 2        | 1 Ea      |
| Dr Structure Cover, Type K             | 4 Ea      |
| Dr Structure, 24 inch dia              | 1 Ea      |
| Dr Structure, 48 inch dia              | 3 Ea      |
| Dr Structure Cover, Type B, Modified   | 1 Ea      |
| HMA, 3EML                              | 470 Ton   |
| HMA, 4EML                              | 315 Ton   |
| HMA, 5EML                              | 215 Ton   |
| Curb and Gutter, Conc, Det C4          | 830 Ft    |
| Sidewalk, Conc, 4 inch                 | 2,400 Sft |
| Curb Slp, HMA                          | 100 Ft    |
| Shared use Path, Conc                  | 635 Syd   |
| Shared use Path, Grading               | 570 Ft    |
| Slope Restoration, Non-Freeway, Type B | 2,500 Syd |
| Conduit, DB, 1, 3 inch                 | 495 Ft    |
| Conduit, 1 1/4 inch, innerduct         | 495 Ft    |

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PHILIP A. DOORLAG  
 6201067363  
 PROJECT NAME:  
**STREETS FOR ALL:  
 MICHIKAL IMPROVEMENTS**

CITY OF KALAMAZOO  
 415 E STOCKBRIDGE AVENUE  
 KALAMAZOO, MI 49001



**LEGEND**

- INSTALL CONC BASE CSE, NONREINF. 6 INCH AND 220#/SYD HMA, SEMI (HAND PATCHING).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (BASE); 220#/SYD HMA, 4EML (LEVELING) AND 165#/SYD HMA, SEMI (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#/SYD HMA, APPROACH (LEVELING) AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (LEVELING) AND 220#/SYD HMA, 4EML (TOP).
- RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165 #/SYD HMA, APPROACH (LEVELING), AND 165#/SYD HMA, APPROACH (TOP)
- INSTALL SUBBASE, CIP (6" MIN.) AND SHARED USE PATH, CONC.
- INSTALL SIDEWALK, CONC, 4 INCH; SIDEWALK, CONC, 6 INCH; CURB RAMP, CONC, 6 INCH AND DRIVEWAY, NONREINF CONC, 6 INCH AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- INSTALL DETECTABLE WARNING SURFACE AT PROPOSED SIDEWALK RAMPS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

06 03/08/2024 PAD RE-ISSUED FOR BIDDING  
 05 12/01/2023 PAD ISSUED FOR BIDDING  
 04 10/25/2023 PAD 90% SUBMITTAL  
 01 06/30/2023 PAD 70% SUBMITTAL

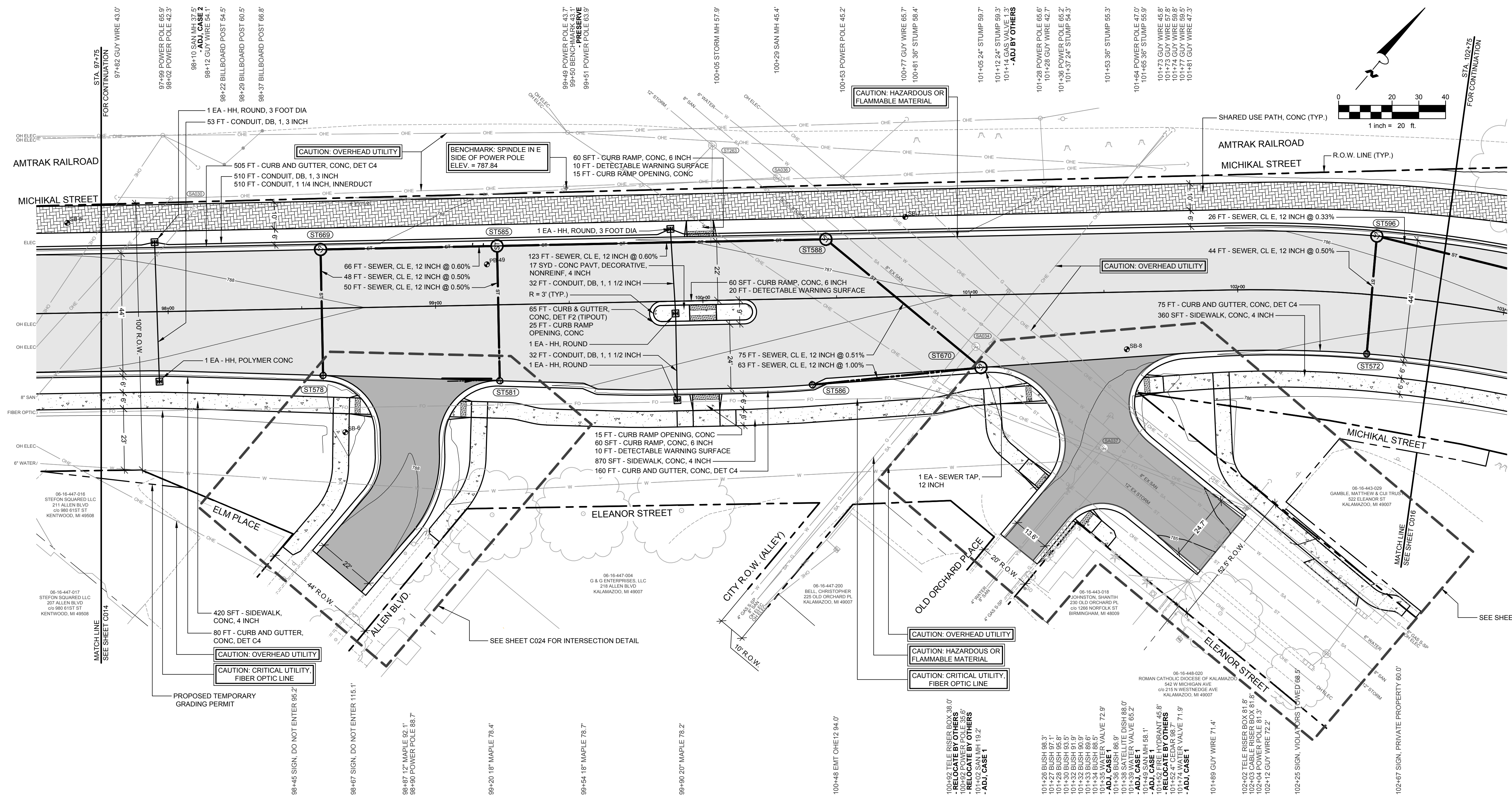
**REVISIONS**

DATE: MARCH, 2024  
 SCALE: 1" = 20'H, 5'V

**PLAN AND PROFILE - BASE BID - STA. 92+25 (P.O.B.) TO STA. 97+75**

JOB No. 224022  
**C010**  
 OF 39





### QUANTITIES THIS SHEET

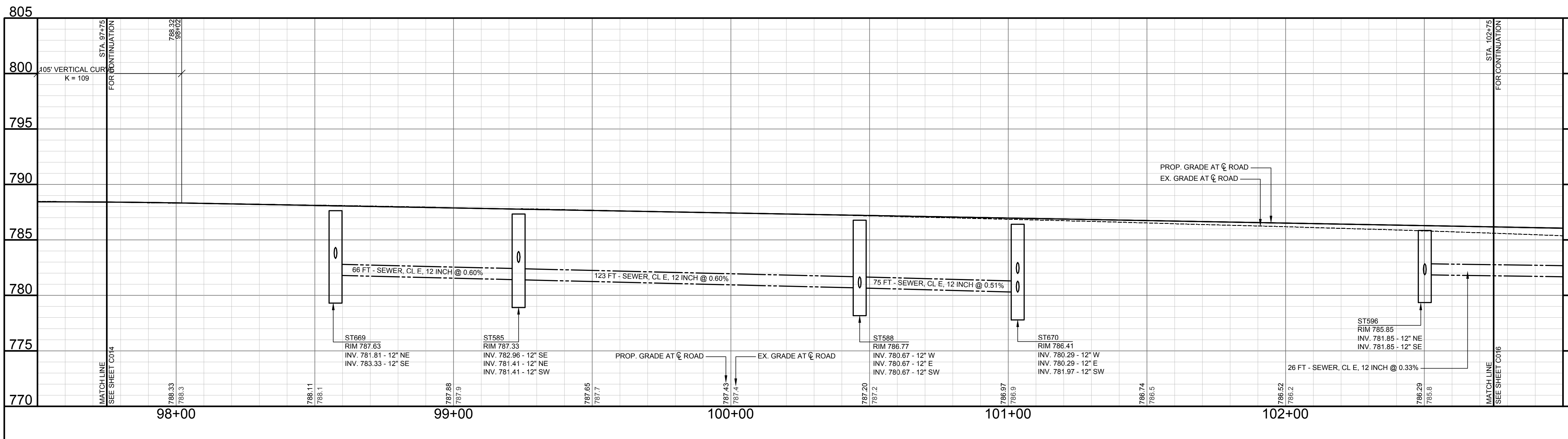
| ITEM                                      | QTY.      |
|---|-----------|
| Machine Grading, Modified                 | 5 Sta     |
| Subbase, CIP                              | 1,050 Cyd |
| Aggregate Base, 8 Inch, Modified          | 2,650 Syd |
| Sewer, Cl E, 12 inch, Tr Det B            | 495 Ft    |
| Sewer Tap, 12 inch                        | 1 Ea      |
| Dr Structure Cover, Adj, Case 2           | 1 Ea      |
| Dr Structure, 24 inch dia                 | 7 Ea      |
| Dr Structure, 48 inch dia                 | 2 Ea      |
| Dr Structure Cover, Adj, Case 1, Modified | 5 Ea      |
| Dr Structure Cover, Type Q, Modified      | 1 Ea      |
| HMA, 3EML                                 | 2 Ea      |
| HMA, 4EML                                 | 480 Ton   |
| HMA, 5EML                                 | 320 Ton   |
| Conc Pavt, Decorative, Nonreinf, 4 inch   | 240 Ton   |
| Curb and Gutter, Conc, Det C4             | 790 Ft    |
| Curb and Gutter, Conc, Det F2             | 65 Ft     |
| Detectable Warning Surface                | 40 Ft     |
| Curb Ramp Opening, Conc                   | 55 Ft     |
| Sidewalk, Conc, 4 inch                    | 1,650 Sft |
| Curb Ramp, Conc, 6 inch                   | 180 Sft   |
| Shared use Path, Conc                     | 565 Syd   |
| Shared use Path, Grading                  | 505 Ft    |
| Slope Restoration, Non-Freeway, Type B    | 1,250 Syd |
| Conduit, DB, 1, 1 1/2 inch                | 65 Ft     |
| Conduit, DB, 1, 3 inch                    | 565 Ft    |
| Hh, Polymer Conc                          | 1 Ea      |
| Hh, Round                                 | 2 Ea      |
| Hh, Round, 3 foot dia                     | 2 Ea      |
| Conduit, 1 1/4 inch, Innerduct            | 510 Ft    |

**WIGHTMAN**  
433 E. RANSOM ST.  
KALAMAZOO, MI 49007  
269.327.3532  
www.gowightman.com

PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL  
IMPROVEMENTS**

CITY OF  
**KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001

PHILIP A. DOORLAG  
6201067363



### LEGEND

- INSTALL CONC BASE CSE, NONREINF, 6 INCH AND 220#/SYD HMA, SEMI (HAND PATCHING).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (BASE); 220#/SYD HMA, 4EML (LEVELING) AND 165#/SYD HMA, SEMI (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#/SYD HMA, APPROACH (LEVELING) AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SUBBASE, CIP (6" MIN.) AND SHARED USE PATH, CONC.
- RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165 #/SYD HMA, APPROACH (LEVELING), AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SIDEWALK, CONC, 4 INCH; SIDEWALK, CONC, 6 INCH; CURB RAMP CONC, 6 INCH AND DRIVEWAY, NONREINF CONC, 6 INCH AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- INSTALL DETECTABLE WARNING SURFACE AT PROPOSED SIDEWALK RAMPS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

### REVISIONS

| NO. | DATE       | DESCRIPTION               |
|-----|------------|---------------------------|
| 06  | 03/08/2024 | PAD RE-ISSUED FOR BIDDING |
| 05  | 12/01/2023 | PAD ISSUED FOR BIDDING    |
| 04  | 10/25/2023 | PAD 90% SUBMITTAL         |
| 01  | 06/30/2023 | PAD 70% SUBMITTAL         |

DATE: MARCH, 2024  
SCALE: 1" = 20'H, 5'V  
PLAN AND PROFILE -  
BASE BID -  
STA. 97+75 TO STA. 102+75  
JOB No. 224022  
**C011**  
OF 39



QUANTITIES THIS SHEET

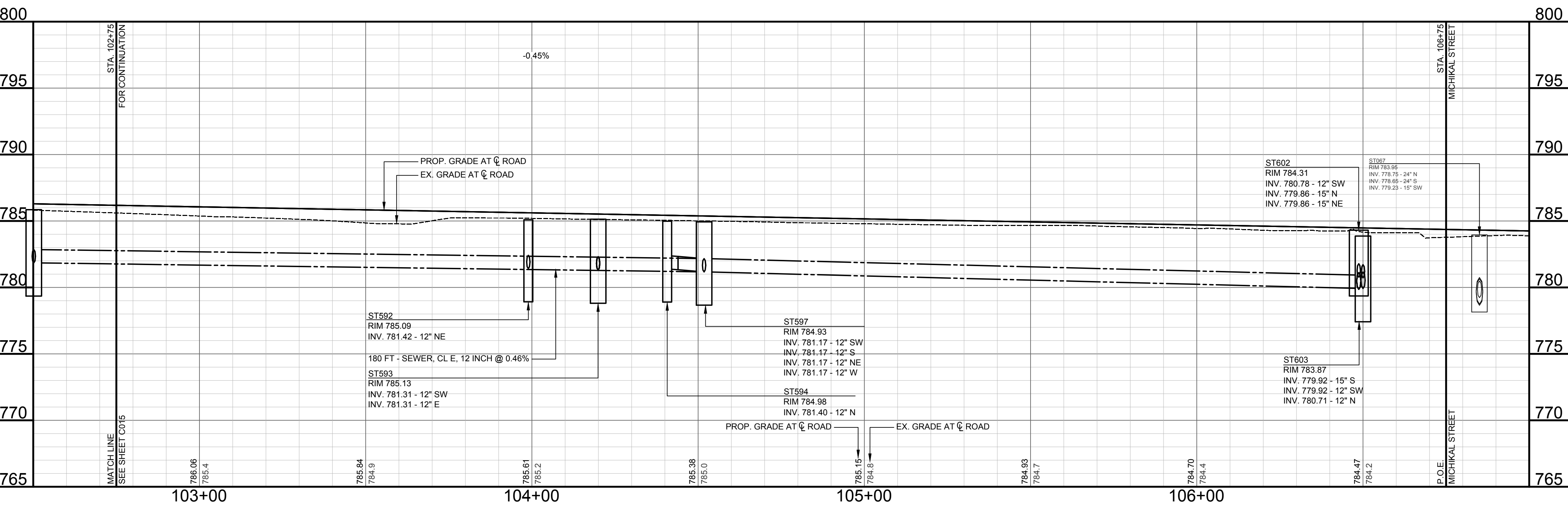
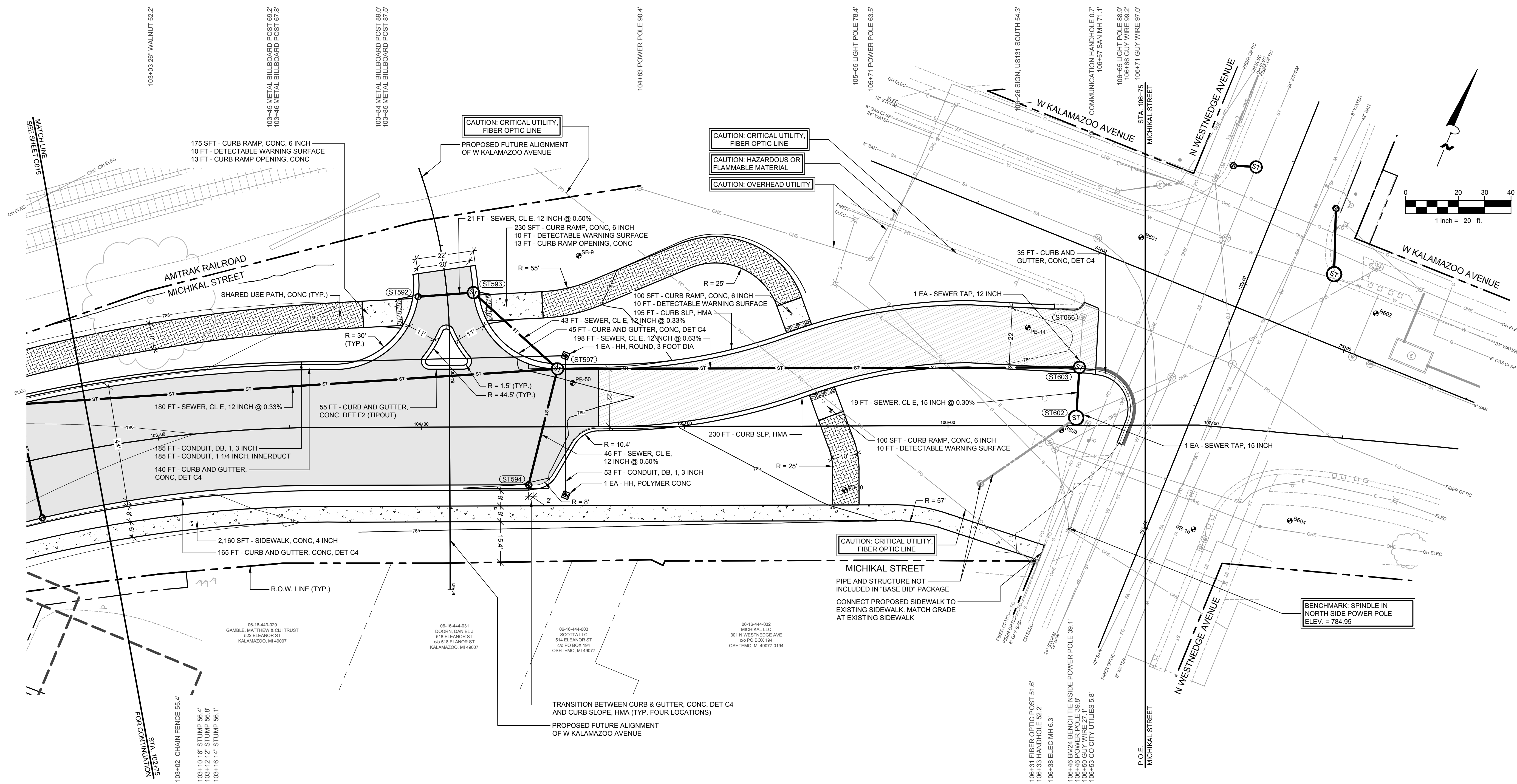
| ITEM                                      | QTY.      |
|---|-----------|
| Machine Grading, Modified                 | 4 Sta     |
| Subbase, CIP                              | 635 Cyd   |
| Aggregate Base, 8 Inch, Modified          | 1,550 Syd |
| Sewer, Cl E, 12 inch, Tr Det B            | 490 Ft    |
| Sewer, Cl E, 15 inch, Tr Det B            | 20 Ft     |
| Sewer Tap, 12 inch                        | 1 Ea      |
| Sewer Tap, 15 inch                        | 1 Ea      |
| Dr Structure Cover, Type D                | 1 Ea      |
| Dr Structure Cover, Type K                | 5 Ea      |
| Dr Structure, 24 inch dia                 | 2 Ea      |
| Dr Structure, 48 inch dia                 | 3 Ea      |
| Dr Structure, 60 inch dia                 | 1 Ea      |
| Dr Structure Cover, Adj, Case 1, Modified | 1 Ea      |
| Dr Structure Cover, Type B, Modified      | 1 Ea      |
| HMA, 3EML                                 | 280 Ton   |
| HMA, 4EML                                 | 185 Ton   |
| HMA, 5EML                                 | 100 Ton   |
| Conc Base Cse, Nonreinf, 6 inch           | 5 Syd     |
| Curb and Gutter, Conc, Det C4             | 385 Ft    |
| Curb and Gutter, Conc, Det F2             | 55 Ft     |
| Detectable Warning Surface                | 40 Ft     |
| Curb Ramp Opening, Conc                   | 30 Ft     |
| Sidewalk, Conc, 4 inch                    | 2,160 Sft |
| Curb Slp, HMA                             | 605 Sft   |
| Shared use Path, Conc                     | 285 Syd   |
| Shared use Path, Grading                  | 255 Ft    |
| Slope Restoration, Non-Freeway, Type B    | 3,000 Syd |
| Conduilt, DB, 1, 3 inch                   | 240 Ft    |
| Hh, Polymer Conc                          | 1 Ea      |
| Hh, Round, 3 foot dia                     | 1 Ea      |
| Conduilt, 1 1/4 inch, innerduct           | 240 Ft    |

**W+**  
**WIGHTMAN**  
433 E. RANSOM ST.  
KALAMAZOO, MI 49007  
269.327.3532  
www.wightman.com

PHILIP A. DOORLAG  
6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL IMPROVEMENTS**

**CITY OF KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



**LEGEND**

- INSTALL CONC BASE CSE, NONREINF, 6 INCH AND 220#/SYD HMA, 5EML (HAND PATCHING).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (BASE); 220#/SYD HMA, 4EML (LEVELING) AND 165#/SYD HMA, 5EML (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#/SYD HMA, APPROACH (LEVELING) AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (LEVELING) AND 220#/SYD HMA, 4EML (TOP).
- RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165 #/SYD HMA, APPROACH (LEVELING), AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SUBBASE, CIP (6" MIN.) AND SHARED USE PATH, CONC.
- INSTALL SIDEWALK, CONC, 4 INCH; SIDEWALK, CONC, 6 INCH; CURB RAMP, CONC, 6 INCH AND DRIVEWAY, NONREINF CONC, 6 INCH AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- INSTALL DETECTABLE WARNING SURFACE AT PROPOSED SIDEWALK RAMP AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

06 03/08/2024 PAD RE-ISSUED FOR BIDDING  
05 12/01/2023 PAD ISSUED FOR BIDDING  
04 10/25/2023 PAD 90% SUBMITTAL  
01 06/30/2023 PAD 70% SUBMITTAL

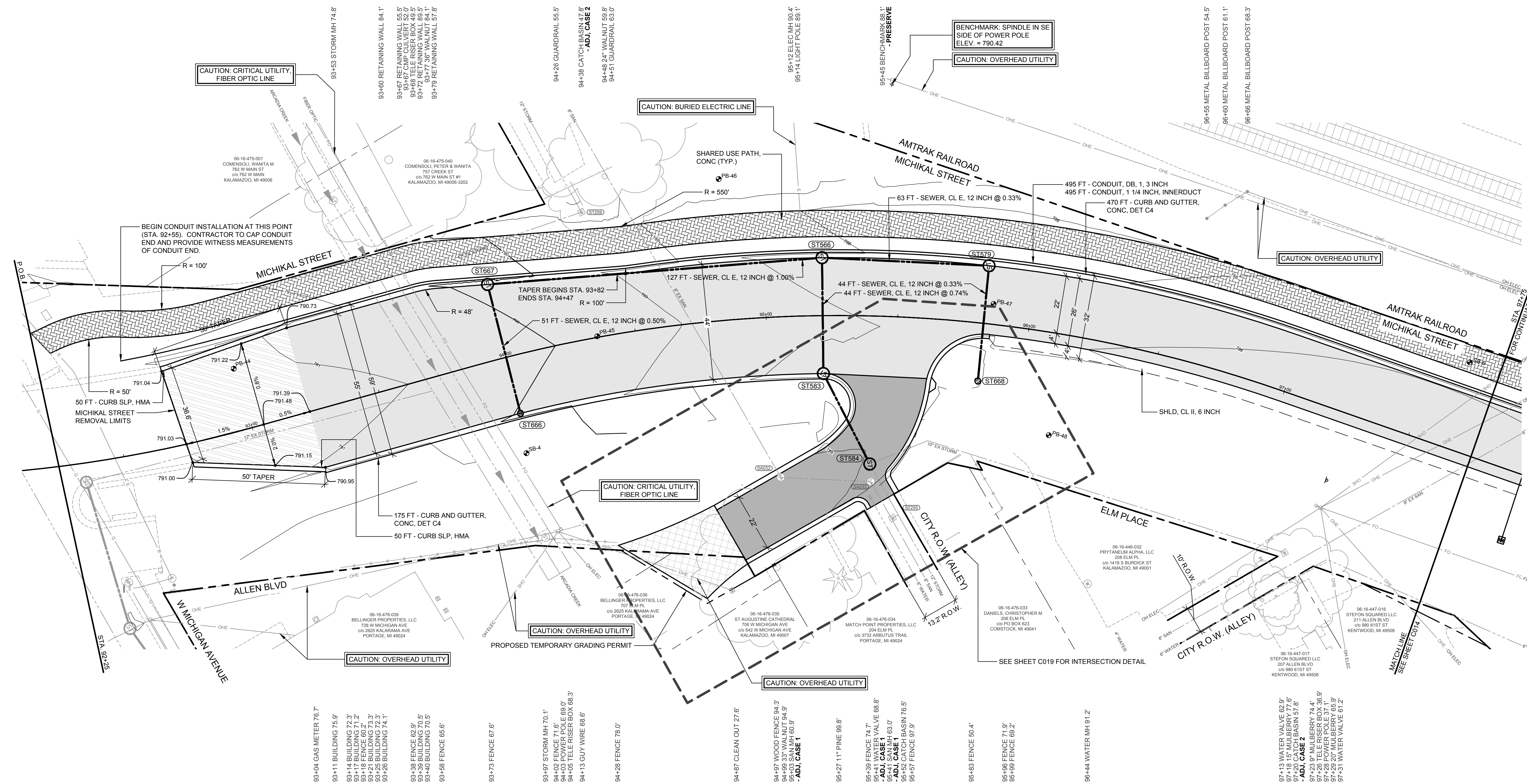
**REVISIONS**

DATE: MARCH, 2024  
SCALE: 1" = 20'H, 5'V

**PLAN AND PROFILE - BASE BID - STA. 102+75 TO STA. 106+75 (P.O.E.)**

JOB No. 224022  
**C012**  
OF 39





### QUANTITIES THIS SHEET

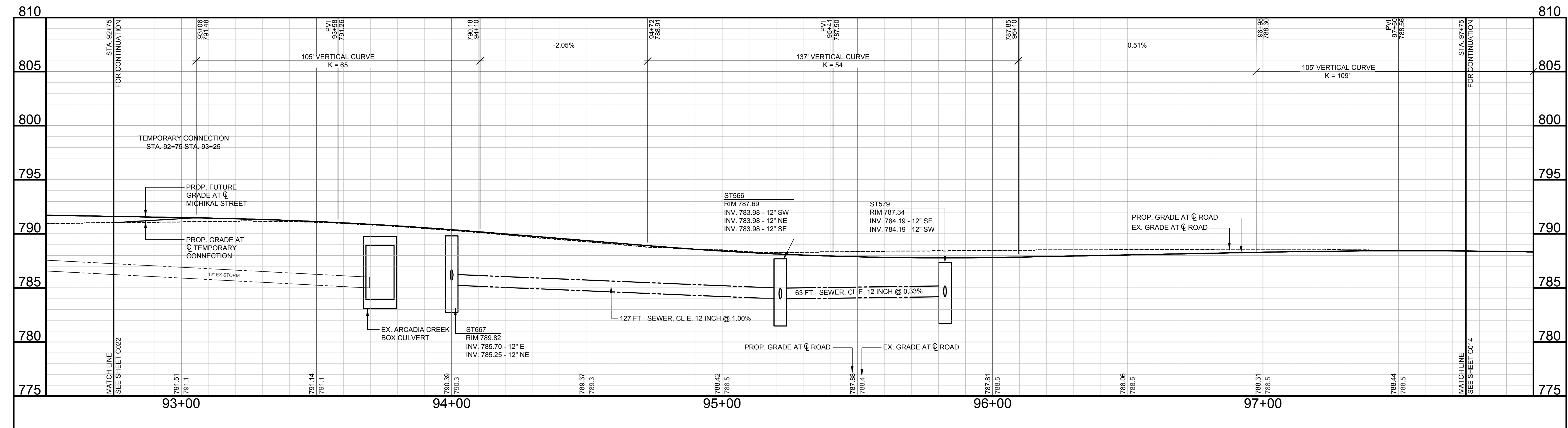
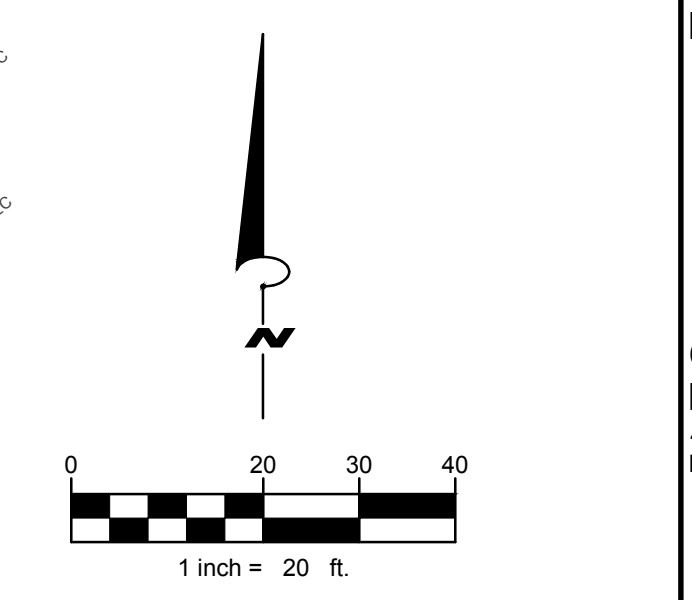
| ITEM                                   | QTY.      |
|--|-----------|
| Machine Grading, Modified              | 5 Sta     |
| Subbase, CIP                           | 855 Cyd   |
| Aggregate Base, 8 inch, Modified       | 2,200 Syd |
| Shld, Cl II, 6 inch                    | 85 Syd    |
| Sewer, Cl E, 12 inch, Tr Det B         | 330 Ft    |
| Dr Structure Cover, Adj, Case 2        | 1 Ea      |
| Dr Structure Cover, Type K             | 4 Ea      |
| Dr Structure, 24 inch dia              | 1 Ea      |
| Dr Structure, 48 inch dia              | 3 Ea      |
| Dr Structure Cover, Type B, Modified   | 1 Ea      |
| HMA, 3EML                              | 395 Ton   |
| HMA, 4EML                              | 265 Ton   |
| HMA, 5EML                              | 175 Ton   |
| Curb and Gutter, Conc, Det C4          | 645 Ft    |
| Curb Slp, HMA                          | 100 Ft    |
| Shared use Path, Conc                  | 635 Syd   |
| Shared use Path, Grading               | 570 Ft    |
| Slope Restoration, Non-Freeway, Type B | 3,100 Syd |
| Conduit, DB, 1, 3 inch                 | 495 Ft    |
| Conduit, 1 1/4 inch, innerduct         | 495 Ft    |

**WIGHTMAN**  
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KALAMAZOO, MI. 49007  
269.327.3532  
www.wightman.com

PHILIP A. DOORLAG  
6201067363  
PROJECT NAME:

**STREETS FOR ALL: MICHIKAL IMPROVEMENTS**

CITY OF KALAMAZOO  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



### LEGEND

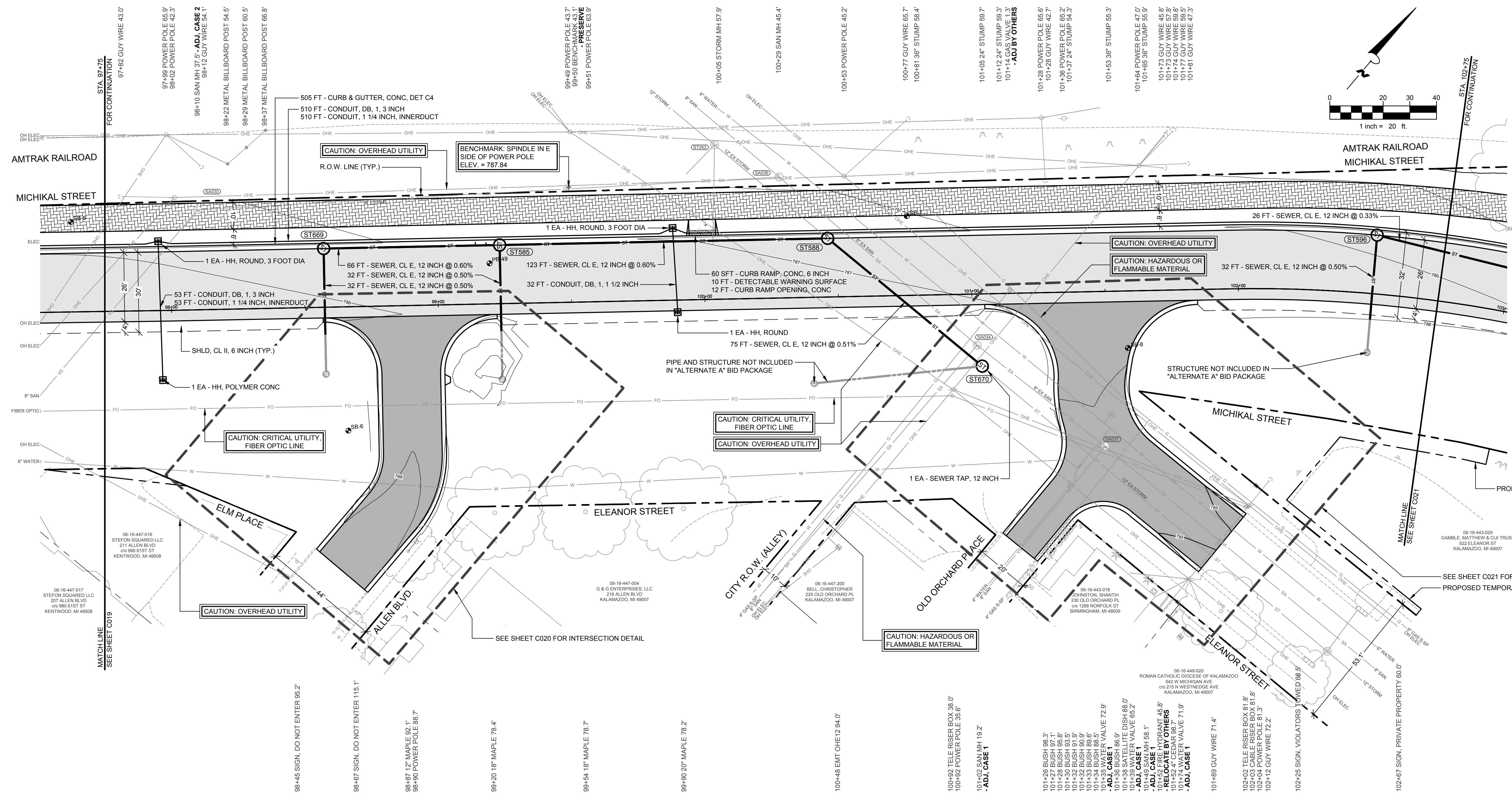
- INSTALL CONC BASE CSE, NONREINF, 6 INCH AND 220#/SYD HMA, 5EML (HAND PATCHING).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (BASE); 220#/SYD HMA, 4EML (LEVELING) AND 165#/SYD HMA, 5EML (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#/SYD HMA, APPROACH (LEVELING) AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (LEVELING) AND 220#/SYD HMA, 4EML (TOP).
- RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165 #/SYD HMA, APPROACH (LEVELING), AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SUBBASE, CIP (6" MIN.) AND SHARED USE PATH, CONC.
- INSTALL SIDEWALK, CONC, 4 INCH; SIDEWALK, CONC, 6 INCH; CURB RAMP, CONC, 6 INCH AND DRIVEWAY, NONREINF CONC, 6 INCH AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- INSTALL DETECTABLE WARNING SURFACE AT PROPOSED SIDEWALK RAMPS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

### REVISIONS

| DATE          | DESCRIPTION               | BY  |
|---------------|---------------------------|-----|
| 06/03/08/2024 | PAD RE-ISSUED FOR BIDDING | PAD |
| 05/12/01/2023 | ISSUED FOR BIDDING        | PAD |
| 04/10/25/2023 | 90% SUBMITTAL             | PAD |
| 01/06/30/2023 | 70% SUBMITTAL             | PAD |

PLAN AND PROFILE - ALTERNATE A - STA. 92+25 (P.O.B.) TO STA. 97+75  
JOB No. 224022  
**C013**  
OF 39



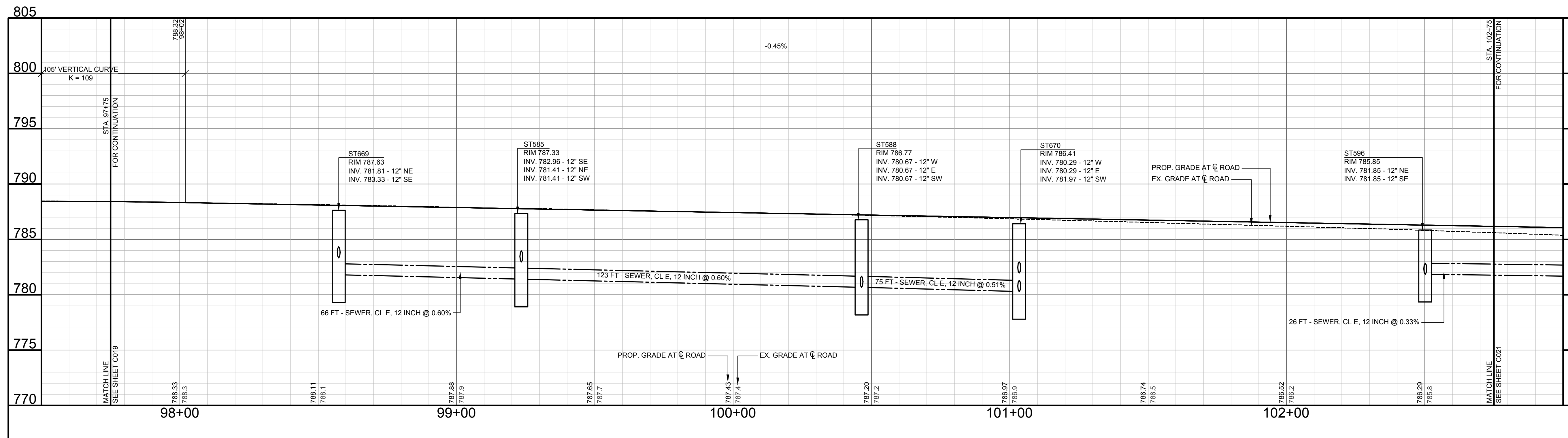
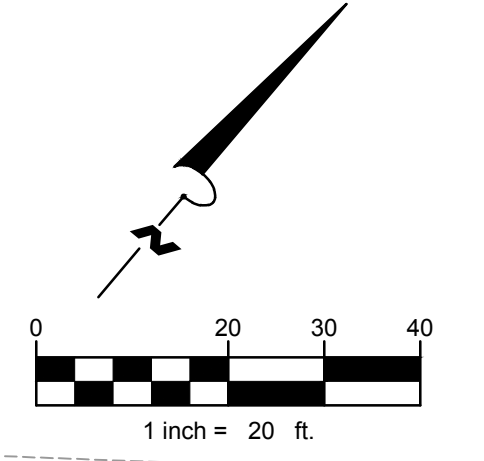


| QUANTITIES THIS SHEET                  |           |
|--|-----------|
| ITEM                                   | QTY.      |
| Machine Grading, Modified              | 5 Sta     |
| Subbase, CIP                           | 690 Cyd   |
| Aggregate Base, 8 inch, Modified       | 1,450 Syd |
| Shld, Cl II, 6 inch                    | 175 Syd   |
| Sewer, Cl E, 12 inch, Tr Det B         | 390 Ft    |
| Sewer Tap, 12 inch                     | 1 Ea      |
| Dr Structure Cover, Adj, Case 2        | 2 Ea      |
| Dr Structure Cover, Type K             | 4 Ea      |
| Dr Structure, 48 inch dia              | 5 Ea      |
| Dr Structure Cover, Type B, Modified   | 1 Ea      |
| Dr Structure Cover, Type Q, Modified   | 2 Ea      |
| HMA, 3EML                              | 265 Ton   |
| HMA, 4EML                              | 175 Ton   |
| HMA, 5EML                              | 135 Ton   |
| Curb and Gutter, Conc, Det C4          | 485 Ft    |
| Detectable Warning Surface             | 10 Ft     |
| Curb Ramp Opening, Conc                | 15 Ft     |
| Curb Ramp, Conc, 6 inch                | 60 Sft    |
| Shared use Path, Conc                  | 565 Syd   |
| Shared use Path, Grading               | 505 Ft    |
| Slope Restoration, Non-Freeway, Type B | 2,400 Syd |
| Conduit, DB, 1, 1 1/2 inch             | 35 Ft     |
| Conduit, DB, 1, 3 inch                 | 565 Ft    |
| Hh, Polymer Conc                       | 1 Ea      |
| Hh, Round                              | 1 Ea      |
| Hh, Round, 3 foot dia                  | 2 Ea      |
| Conduit, 1 1/4 inch, innerduct         | 565 Ft    |

**WIGHTMAN**  
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 KALAMAZOO, MI 49007  
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PROJECT NAME:  
**STREETS FOR ALL: MICHIKAL IMPROVEMENTS**

CITY OF KALAMAZOO  
 415 E STOCKBRIDGE AVENUE  
 KALAMAZOO, MI 49001



**LEGEND**

- INSTALL CONC BASE CSE, NONREINF, 6 INCH AND 220#/SYD HMA, 5EML (HAND PATCHING).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (BASE); 220#/SYD HMA, 4EML (LEVELING) AND 165#/SYD HMA, 5EML (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#/SYD HMA, APPROACH (LEVELING) AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (LEVELING) AND 220#/SYD HMA, 4EML (TOP).
- RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165 #/SYD HMA, APPROACH (LEVELING), AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SUBBASE, CIP (6" MIN.) AND SHARED USE PATH, CONC.
- INSTALL SIDEWALK, CONC, 4 INCH; SIDEWALK, CONC, 6 INCH; CURB RAMP, CONC, 6 INCH AND DRIVEWAY, NONREINF CONC, 6 INCH AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- INSTALL DETECTABLE WARNING SURFACE AT PROPOSED SIDEWALK RAMP AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

REVISIONS

| DATE          | DESCRIPTION               | BY  |
|---------------|---------------------------|-----|
| 06/03/2024    | PAD RE-ISSUED FOR BIDDING | PAD |
| 05/12/2023    | ISSUED FOR BIDDING        | PAD |
| 04/10/25/2023 | 90% SUBMITTAL             | PAD |
| 01/06/30/2023 | 70% SUBMITTAL             | PAD |

PLAN AND PROFILE - ALTERNATE A - STA. 97+75 TO STA. 102+75  
 JOB No. 224022  
**C014**  
 OF 39



QUANTITIES THIS SHEET

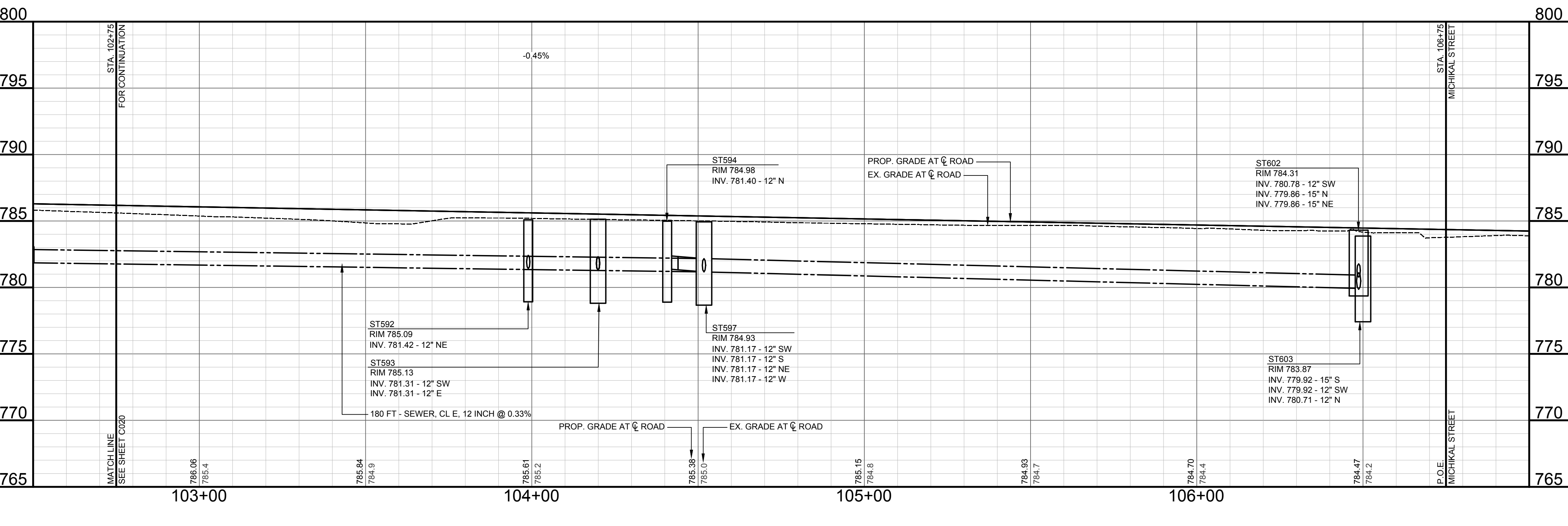
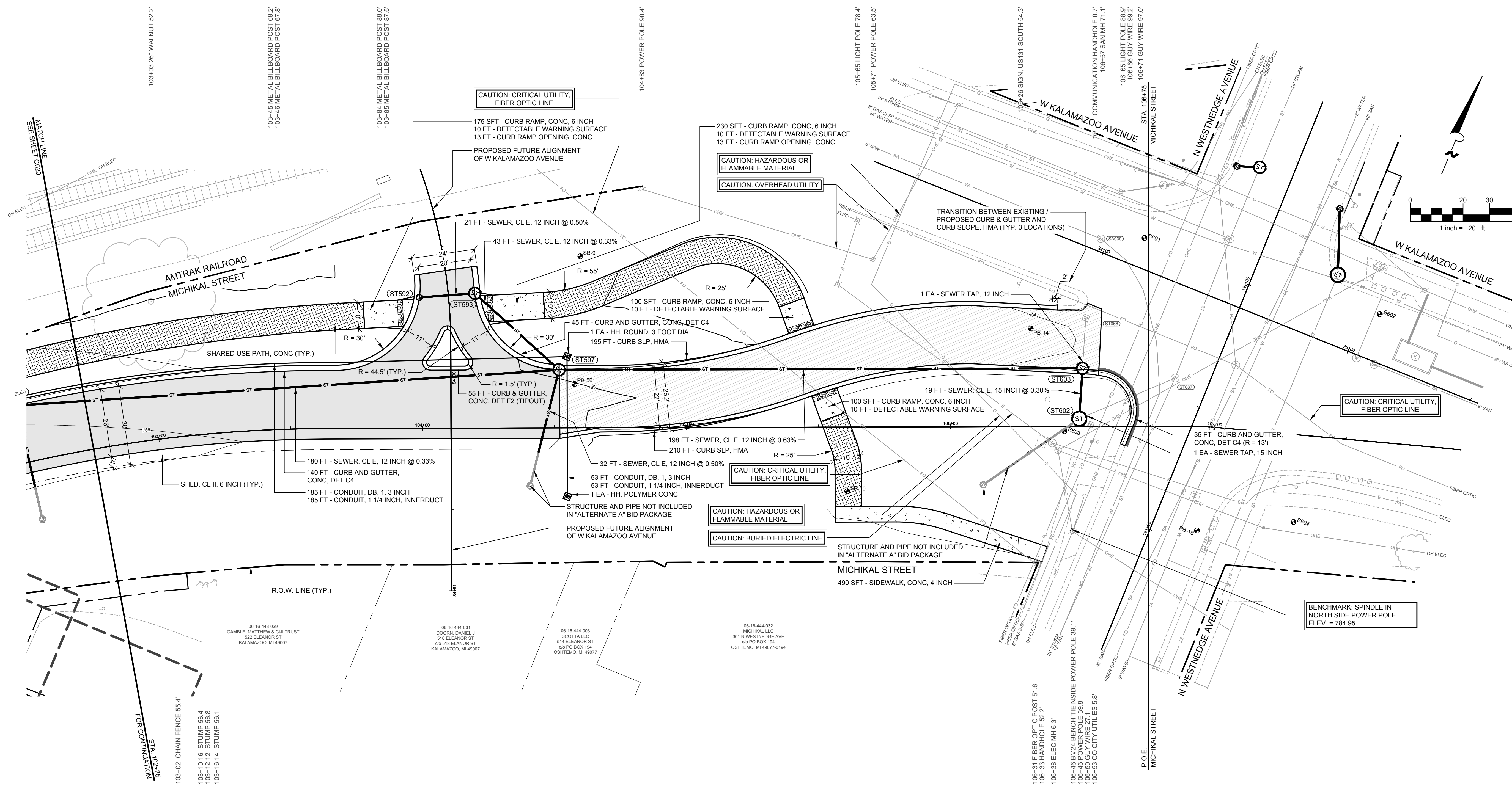
| ITEM                                      | QTY.      |
|---|-----------|
| Machine Grading, Modified                 | 4 Sta     |
| Subbase, CIP                              | 505 Cyd   |
| Aggregate Base, 8 inch, Modified          | 1,200 Syd |
| Shld, Cl II, 6 inch                       | 80 Syd    |
| Sewer, Cl E, 12 inch, Tr Det B            | 475 Ft    |
| Sewer, Cl E, 15 inch, Tr Det B            | 20 Ft     |
| Sewer Tap, 12 inch                        | 1 Ea      |
| Sewer Tap, 15 inch                        | 1 Ea      |
| Dr Structure Cover, Type D                | 1 Ea      |
| Dr Structure Cover, Type K                | 4 Ea      |
| Dr Structure, 24 inch dia                 | 1 Ea      |
| Dr Structure, 48 inch dia                 | 3 Ea      |
| Dr Structure, 60 inch dia                 | 1 Ea      |
| Dr Structure Cover, Adj, Case 1, Modified | 1 Ea      |
| Dr Structure Cover, Type B, Modified      | 1 Ea      |
| HMA, 3EML                                 | 215 Ton   |
| HMA, 4EML                                 | 145 Ton   |
| HMA, 5EML                                 | 60 Ton    |
| Conc Base Cse, Nonreinf, 6 inch           | 5 Syd     |
| Curb and Gutter, Conc, Det C4             | 220 Ft    |
| Curb and Gutter, Conc, Det F2             | 55 Ft     |
| Detectable Warning Surface                | 40 Ft     |
| Curb Ramp Opening, Conc                   | 30 Ft     |
| Sidewalk, Conc, 4 inch                    | 490 Sft   |
| Curb Ramp, Conc, 6 inch                   | 605 Sft   |
| Curb Slp, HMA                             | 405 Ft    |
| Shared use Path, Conc                     | 285 Syd   |
| Shared use Path, Grading                  | 255 Ft    |
| Slope Restoration, Non-Freeway, Type B    | 3,600 Syd |
| Conduit, DB, 1, 3 inch                    | 240 Ft    |
| Hh, Polymer Conc                          | 1 Ea      |
| Hh, Round, 3 foot dia                     | 1 Ea      |
| Conduit, 1 1/4 inch, innerduct            | 240 Ft    |

**WIGHTMAN**  
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KALAMAZOO, MI 49007  
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PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL IMPROVEMENTS**

CITY OF  
**KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001

PHILIP A. DOORLAG  
6201067363



**LEGEND**

- INSTALL CONC BASE CSE, NONREINF, 6 INCH AND 220#/SYD HMA, 5EML (HAND PATCHING).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (BASE); 220#/SYD HMA, 4EML (LEVELING) AND 165#/SYD HMA, 5EML (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#/SYD HMA, APPROACH (LEVELING) AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (LEVELING) AND 220#/SYD HMA, 4EML (TOP).
- RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165 #/SYD HMA, APPROACH (LEVELING), AND 165#/SYD HMA, APPROACH (TOP)
- INSTALL SUBBASE, CIP (6" MIN.) AND SHARED USE PATH, CONC.
- INSTALL SIDEWALK, CONC, 4 INCH; SIDEWALK, CONC, 6 INCH; CURB RAMP, CONC, 6 INCH AND DRIVEWAY, NONREINF CONC, 6 INCH AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- INSTALL DETECTABLE WARNING SURFACE AT PROPOSED SIDEWALK RAMPS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

06/22/2024 PAD RE-ISSUED FOR BIDDING

05/12/2023 PAD ISSUED FOR BIDDING

04/10/25/2023 PAD 90% SUBMITTAL

01/06/20/2023 PAD 70% SUBMITTAL

**REVISIONS**

DATE: FEBRUARY, 2024  
SCALE: 1" = 20'H, 5'V

PLAN AND PROFILE -  
**ALTERNATE A -**  
STA. 102+75 TO STA. 106+75  
(P.O.E.)

JOB No. 224022  
**C015**  
OF 39



QUANTITIES THIS SHEET

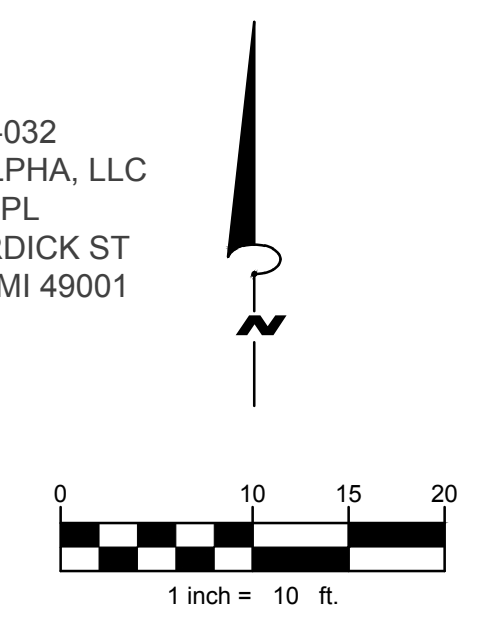
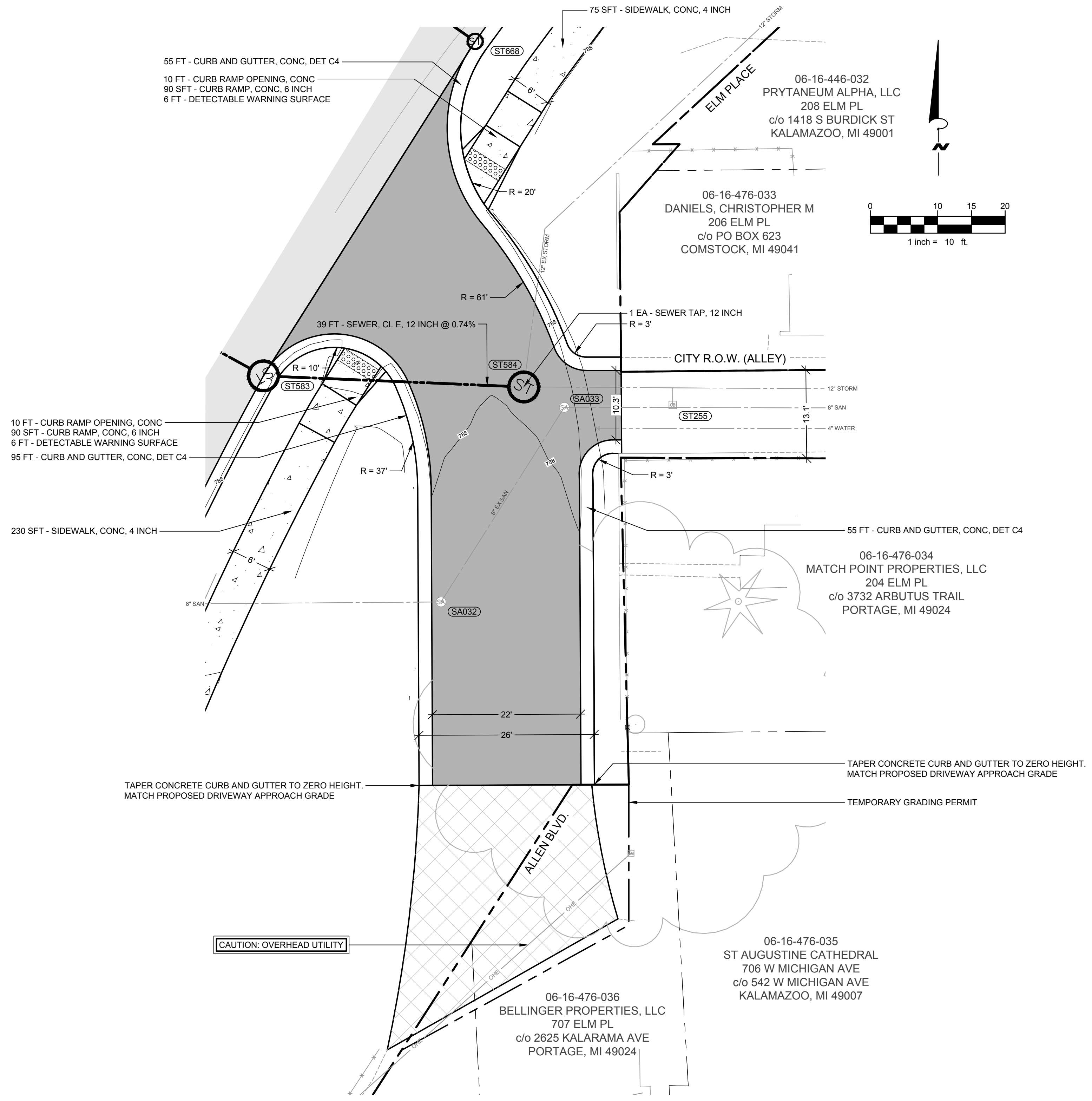
| ITEM                                      | QTY.    |
|---|---------|
| Subbase, CIP                              | 100 Cyd |
| Aggregate Base, 8 Inch, Modified          | 350 Syd |
| Sewer, Cl E, 12 inch, Tr Det B            | 40 Ft   |
| Sewer Tap, 12 inch                        | 1 Ea    |
| Dr Structure Cover, Type K                | 2 Ea    |
| Dr Structure, 24 inch dia                 | 1 Ea    |
| Dr Structure, 48 inch dia                 | 2 Ea    |
| Dr Structure Cover, Adj, Case 1, Modified | 2 Ea    |
| Dr Structure Cover, Type B, Modified      | 1 Ea    |
| Dr Structure Cover, Type Q, Modified      | 2 Ea    |
| HMA Approach                              | 20 Ton  |
| HMA, 4EML                                 | 30 Ton  |
| HMA, 5EML                                 | 25 Ton  |
| Curb and Gutter, Conc, Det C4             | 205 Ft  |
| Detectable Warning Surface                | 15 Ft   |
| Curb Ramp Opening, Conc                   | 20 Ft   |
| Sidewalk, Conc, 4 inch                    | 305 Sft |
| Curb Ramp, Conc, 6 inch                   | 180 Sft |
| Slope Restoration, Non-Freeway, Type B    | 450 Syd |

**W+**  
**WIGHTMAN**  
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 6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
 MICHIKAL  
 IMPROVEMENTS**

**CITY OF  
 KALAMAZOO**  
 415 E STOCKBRIDGE AVENUE  
 KALAMAZOO, MI 49001



**LEGEND**

|  |   |
|--|---|
|  | INSTALL CONC BASE CSE, NONREINF, 6 INCH AND 220#/SYD HMA, 5EML (HAND PATCHING).   |
|  | INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (BASE); 220#/SYD HMA, 4EML (LEVELING) AND 165#/SYD HMA, 5EML (TOP).                 |
|  | INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#/SYD HMA, APPROACH (LEVELING) AND 165#/SYD HMA, APPROACH (TOP).                                    |
|  | INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (LEVELING) AND 220#/SYD HMA, 4EML (TOP).  |
|  | RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165 #/SYD HMA, APPROACH (LEVELING), AND 165#/SYD HMA, APPROACH (TOP)   |
|  | INSTALL SIDEWALK, CONC, 4 INCH; SIDEWALK, CONC, 6 INCH; CURB RAMP, CONC, 6 INCH AND DRIVEWAY, NONREINF CONC, 6 INCH AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. |
|  | INSTALL DETECTABLE WARNING SURFACE AT PROPOSED SIDEWALK RAMPS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.   |

|                       |     |
|-----------------------|-----|
| 06/22/2024            | PAD |
| RE-ISSUED FOR BIDDING |     |
| 05/12/01/2023         | PAD |
| ISSUED FOR BIDDING    |     |
| 04/10/25/2023         | PAD |
| 90% SUBMITTAL         |     |
| 01/08/30/2023         | PAD |
| 70% SUBMITTAL         |     |

**REVISIONS**  
DATE: FEBRUARY, 2024  
 SCALE: 1" = 10'

**INTERSECTION PLAN -  
 MICHIKAL AND ELM  
 PLACE INTERSECTION**  
 -  
 BASE BID

JOB No. 224022  
**C016**  
 OF 39

QUANTITIES THIS SHEET

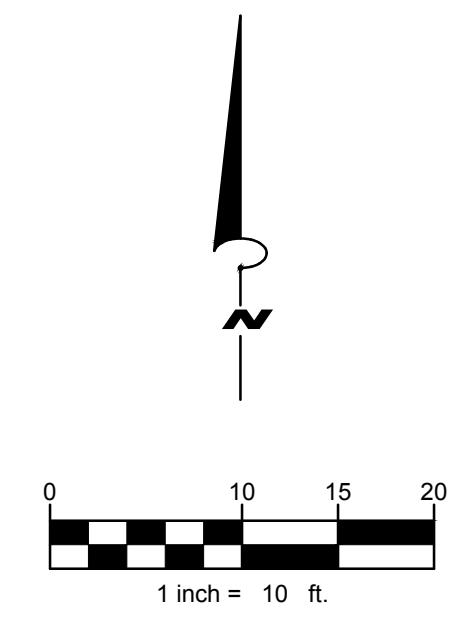
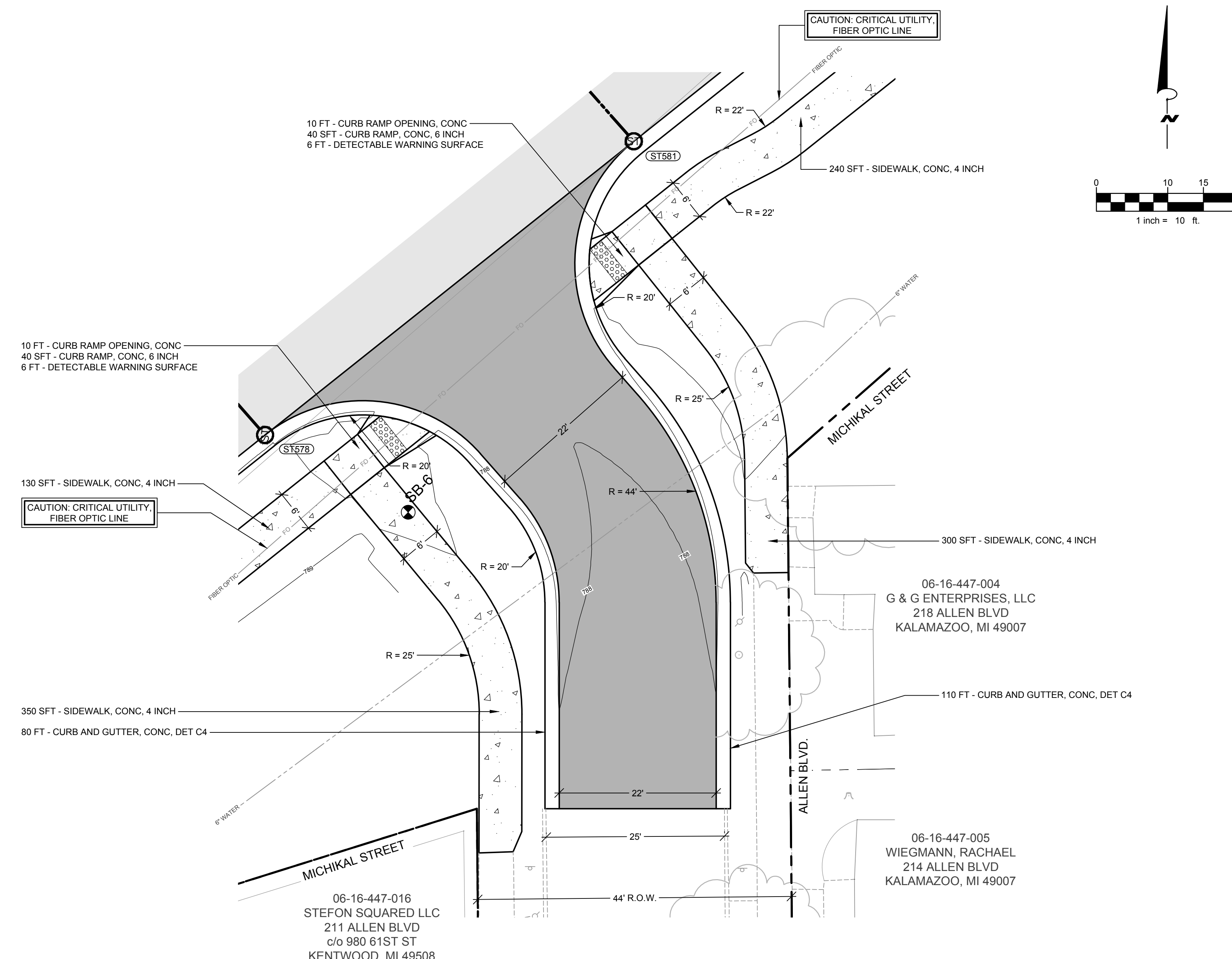
| ITEM                                   | QTY.      |
|--|-----------|
| Subbase, CIP                           | 90 Cyd    |
| Aggregate Base, 8 Inch, Modified       | 230 Syd   |
| Dr Structure Cover, Type K             | 2 Ea      |
| Dr Structure, 24 inch dia              | 2 Ea      |
| HMA, 4EML                              | 30 Ton    |
| HMA, 5EML                              | 25 Ton    |
| Curb and Gutter, Conc, Det C4          | 190 Ft    |
| Detectable Warning Surface             | 15 Ft     |
| Curb Ramp Opening, Conc                | 20 Ft     |
| Sidewalk, Conc, 4 inch                 | 1,020 Sft |
| Curb Ramp, Conc, 6 inch                | 80 Sft    |
| Slope Restoration, Non-Freeway, Type B | 400 Syd   |

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



PHILIP A. DOORLAG  
6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL  
IMPROVEMENTS**

**CITY OF  
KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



**LEGEND**

-  INSTALL CONC BASE CSE, NONREINF, 6 INCH AND 220#SYD HMA, 5EML (HAND PATCHING).
-  INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#SYD HMA, 3EML (BASE); 220#SYD HMA, 4EML (LEVELING) AND 165#SYD HMA, 5EML (TOP).
-  INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#SYD HMA, APPROACH (LEVELING) AND 165#SYD HMA, APPROACH (TOP).
-  INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#SYD HMA, 3EML (LEVELING) AND 220#SYD HMA, 4EML (TOP).
-  RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165 #SYD HMA, APPROACH (LEVELING), AND 165#SYD HMA, APPROACH (TOP).
-  INSTALL SIDEWALK, CONC, 4 INCH; SIDEWALK, CONC, 6 INCH; CURB RAMP, CONC, 6 INCH AND DRIVEWAY, NONREINF CONC, 6 INCH AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
-  INSTALL DETECTABLE WARNING SURFACE AT PROPOSED SIDEWALK RAMPS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

| DATE       | DESCRIPTION                        | BY  |
|------------|------------------------------------|-----|
| 05/12/2023 | ISSUED FOR BIDDING                 | PAD |
| 04/10/2023 | 90% SUBMITTAL                      | PAD |
| 03/07/2023 | RE-ISSUED FOR EGLE PART 399 PERMIT | PAD |
| 02/07/2023 | ISSUED FOR EGLE PART 399 PERMIT    | PAD |
| 01/06/2023 | 70% SUBMITTAL                      | PAD |

**REVISIONS**  
DATE: FEBRUARY, 2024  
SCALE: 1" = 10'

**INTERSECTION PLAN -  
MICHIKAL AND ALLEN  
BLVD INTERSECTION -  
BASE BID**

JOB No. 224022  
**C017**  
OF 39



QUANTITIES THIS SHEET

| ITEM                                      | QTY.      |
|---|-----------|
| Subbase, CIP                              | 140 Cyd   |
| Aggregate Base, 8 Inch, Modified          | 330 Syd   |
| Dr Structure Cover, Adj, Case 1, Modified | 1 Ea      |
| Dr Structure Cover, Type Q, Modified      | 1 Ea      |
| HMA, 4EML                                 | 40 Ton    |
| HMA, 5EML                                 | 30 Ton    |
| Driveway, Nonreinf Conc, 6 inch           | 10 Syd    |
| Curb and Gutter, Conc, Det C4             | 250 Ft    |
| Detectable Warning Surface                | 25 Ft     |
| Curb Ramp Opening, Conc                   | 40 Ft     |
| Sidewalk, Conc, 4 inch                    | 1,130 Sft |
| Sidewalk, Conc, 6 inch                    | 130 Sft   |
| Curb Ramp, Conc, 6 inch                   | 305 Sft   |
| Slope Restoration, Non-Freeway, Type B    | 500 Syd   |

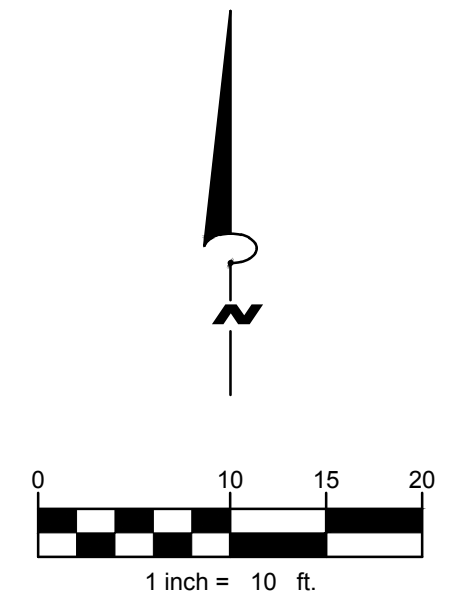
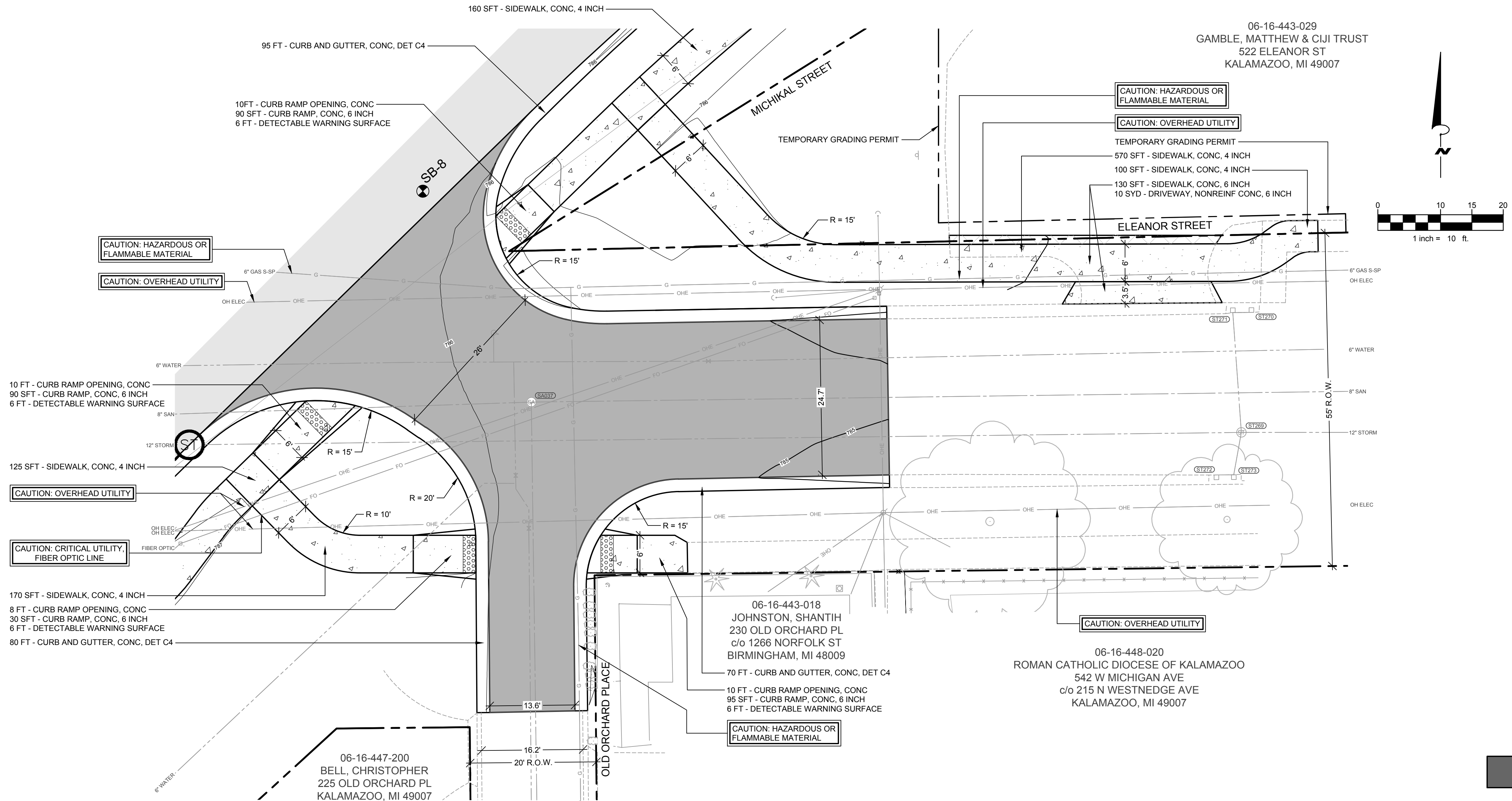
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**WIGHTMAN**  
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269.327.3532  
www.gowightman.com

PHILIP A. DOORLAG  
6201067363

PROJECT NAME:

**STREETS FOR ALL:  
MICHIKAL  
IMPROVEMENTS**

**CITY OF  
KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



**LEGEND**

- INSTALL CONC BASE CSE, NONREINF, 6 INCH AND 220#/SYD HMA, 5EML (HAND PATCHING).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (BASE); 220#/SYD HMA, 4EML (LEVELING) AND 165#/SYD HMA, 5EML (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#/SYD HMA, APPROACH (LEVELING) AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (LEVELING) AND 220#/SYD HMA, 4EML (TOP).
- RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165 #/SYD HMA, APPROACH (LEVELING), AND 165#/SYD HMA, APPROACH (TOP).
- INSTALL SIDEWALK, CONC, 4 INCH; SIDEWALK, CONC, 6 INCH; CURB RAMP, CONC, 6 INCH AND DRIVEWAY, NONREINF CONC, 6 INCH AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- INSTALL DETECTABLE WARNING SURFACE AT PROPOSED SIDEWALK RAMPS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

|               |     |                       |
|---------------|-----|-----------------------|
| 06/22/2024    | PAD | RE-ISSUED FOR BIDDING |
| 05/10/2023    | PAD | ISSUED FOR BIDDING    |
| 04/10/25/2023 | PAD | 90% SUBMITTAL         |
| 01/08/30/2023 | PAD | 70% SUBMITTAL         |

**REVISIONS**  
DATE: FEBRUARY, 2024  
SCALE: 1" = 10'

**INTERSECTION PLAN -  
MICHIKAL AND  
ELEANOR STREET  
INTERSECTION -  
BASE BID**

JOB No. 224022  
**C018**  
OF 39

QUANTITIES THIS SHEET

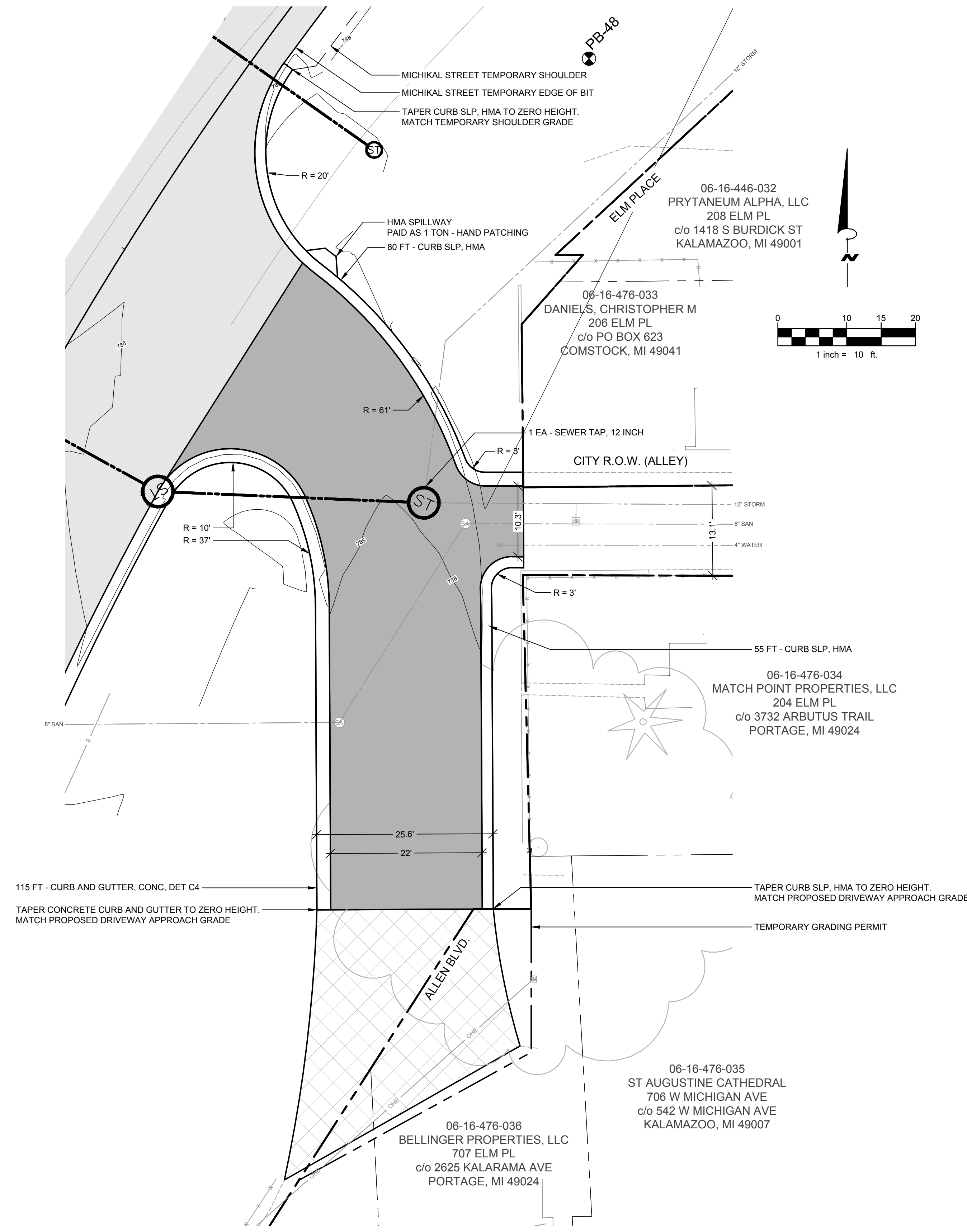
| ITEM                                      | QTY.    |
|---|---------|
| Subbase, CIP                              | 100 Cyd |
| Aggregate Base, 8 Inch, Modified          | 340 Syd |
| Sewer, CI E, 12 inch, Tr Det B            | 40 Ft   |
| Sewer Tap, 12 inch                        | 1 Ea    |
| Dr Structure Cover, Adj, Case 1, Modified | 2 Ea    |
| Dr Structure Cover, Type G                | 1 Ea    |
| Dr Structure Cover, Type K                | 1 Ea    |
| Dr Structure, 24 inch dia                 | 1 Ea    |
| Dr Structure, 48 inch dia                 | 2 Ea    |
| Dr Structure Cover, Type B, Modified      | 1 Ea    |
| Dr Structure Cover, Type Q, Modified      | 2 Ea    |
| Hand Patching                             | 1 Ton   |
| HMA Approach                              | 20 Ton  |
| HMA, 4EML                                 | 30 Ton  |
| HMA, 5EML                                 | 25 Ton  |
| Curb and Gutter, Conc, Det C4             | 115 Ft  |
| Curb Slp, HMA                             | 135 Ft  |
| Slope Restoration, Non-Freeway, Type B    | 700 Syd |

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PHILIP A. DOORLAG  
 6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
 MICHIKAL  
 IMPROVEMENTS**

**CITY OF  
 KALAMAZOO**  
 415 E STOCKBRIDGE AVENUE  
 KALAMAZOO, MI 49001



**LEGEND**

|  |   |
|--|---|
|  | INSTALL CONC BASE CSE, NONREINF, 6 INCH AND 220#/SYD HMA, 5EML (HAND PATCHING).   |
|  | INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (BASE); 220#/SYD HMA, 4EML (LEVELING) AND 165#/SYD HMA, 5EML (TOP). |
|  | INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#/SYD HMA, APPROACH (LEVELING) AND 165#/SYD HMA, APPROACH (TOP).                    |
|  | INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (LEVELING) AND 220#/SYD HMA, 4EML (TOP).                            |
|  | RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165 #/SYD HMA, APPROACH (LEVELING), AND 165#/SYD HMA, APPROACH (TOP)                                     |

05 12/01/2023 PAD  
 ISSUED FOR BIDDING

04 10/25/2023 PAD  
 90% SUBMITTAL

01 08/30/2023 PAD  
 70% SUBMITTAL

**REVISIONS**

DATE: FEBRUARY, 2024  
 SCALE: 1" = 10'

**INTERSECTION PLAN -  
 MICHIKAL AND ELM  
 PLACE INTERSECTION**

ALTERNATE A

JOB No. 224022  
**C019**  
 OF 39



QUANTITIES THIS SHEET

| ITEM                                   | QTY.    |
|--|---------|
| Subbase, CIP                           | 110 Cyd |
| Aggregate Base, 8 Inch, Modified       | 330 Syd |
| HMA, 4EML                              | 40 Ton  |
| HMA, 5EML                              | 30 Ton  |
| Curb Slp, HMA                          | 235 Ft  |
| Slope Restoration, Non-Freeway, Type B | 850 Syd |



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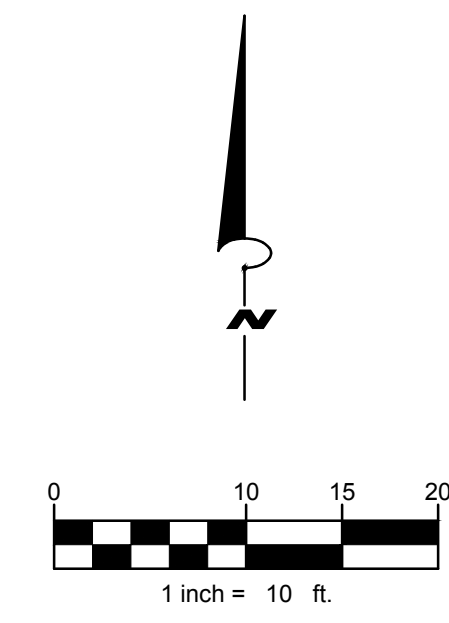
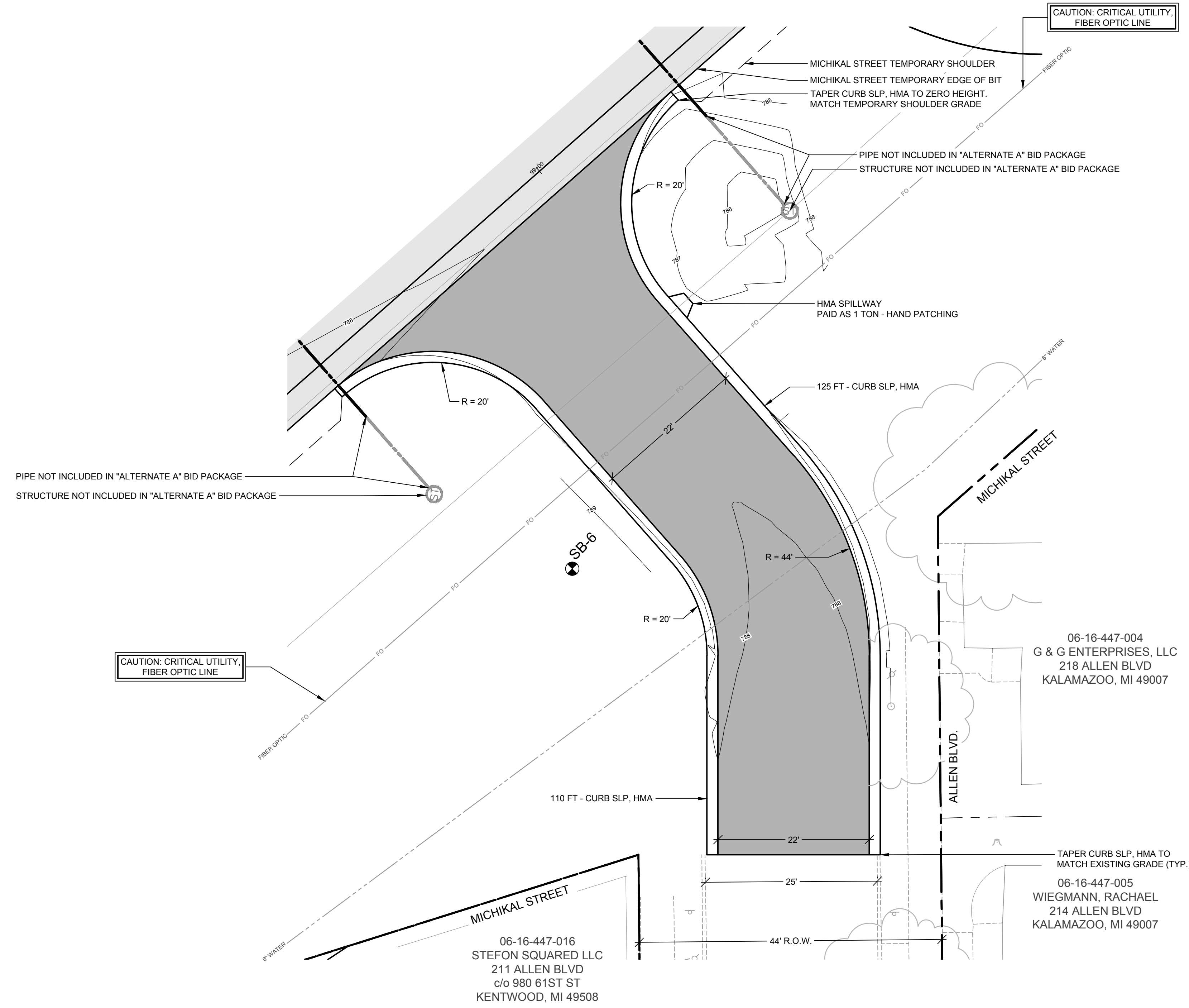
www.gowightman.com

PHILIP A. DOORLAG  
6201067363

PROJECT NAME:

**STREETS FOR ALL:  
MICHIKAL  
IMPROVEMENTS**

**CITY OF  
KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



- LEGEND**
- INSTALL CONC BASE CSE, NONREINF, 6 INCH AND 220#/SYD HMA, 5EML (HAND PATCHING).
  - INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (BASE); 220#/SYD HMA, 4EML (LEVELING) AND 165#/SYD HMA, 5EML (TOP).
  - INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#/SYD HMA, APPROACH (LEVELING) AND 165#/SYD HMA, APPROACH (TOP).
  - INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (LEVELING) AND 220#/SYD HMA, 4EML (TOP).
  - RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165#/SYD HMA, APPROACH (LEVELING), AND 165#/SYD HMA, APPROACH (TOP).

05 12/01/2023 PAD  
ISSUED FOR BIDDING

04 10/25/2023 PAD  
90% SUBMITTAL

01 08/30/2023 PAD  
70% SUBMITTAL

**REVISIONS**

DATE: FEBRUARY, 2024  
SCALE: 1" = 10'

**INTERSECTION PLAN -  
MICHIKAL AND ALLEN  
BLVD INTERSECTION -  
ALTERNATE A**

JOB No. 224022  
**C020**  
OF 39



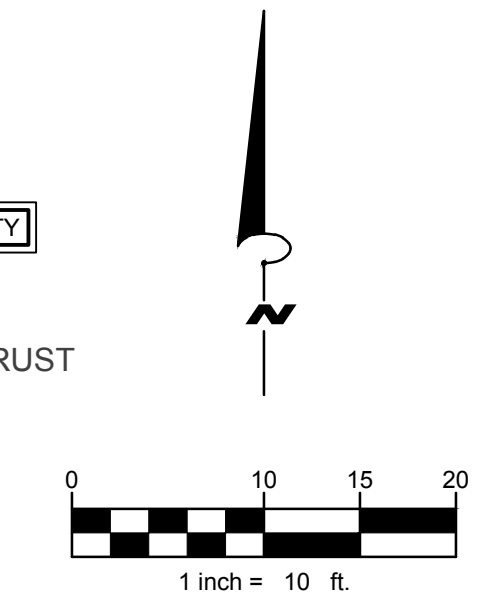
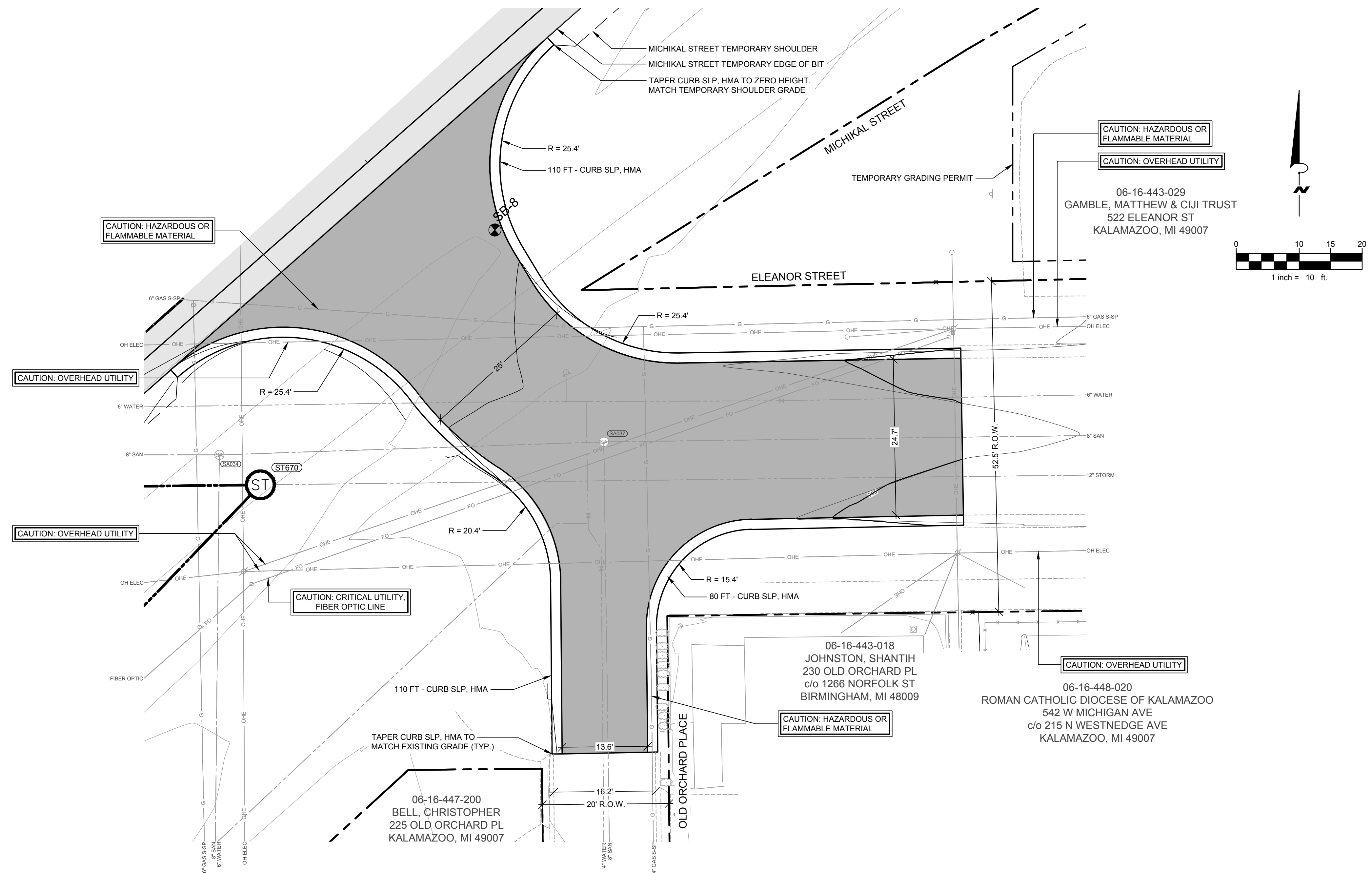
QUANTITIES THIS SHEET

| ITEM                                      | QTY.    |
|---|---------|
| Subbase, CIP                              | 160 Syd |
| Aggregate Base, 8 Inch, Modified          | 470 Syd |
| Dr Structure Cover, Adj, Case 1, Modified | 1 Ea    |
| Dr Structure Cover, Type Q, Modified      | 1 Ea    |
| HMA, 4EML                                 | 60 Ton  |
| HMA, 5EML                                 | 45 Ton  |
| Curb Slp, HMA                             | 300 Ft  |
| Slope Restoration, Non-Freeway, Type B    | 750 Syd |

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6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL  
IMPROVEMENTS**

**CITY OF  
KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001

|                    |     |
|--------------------|-----|
| 05 12/01/2023      | PAD |
| ISSUED FOR BIDDING |     |
| 04 10/25/2023      | PAD |
| 90% SUBMITTAL      |     |
| 01 06/30/2023      | PAD |
| 70% SUBMITTAL      |     |

REVISIONS

DATE: FEBRUARY, 2024  
SCALE: 1" = 10'

- LEGEND**
- INSTALL CONC BASE CSE, NONREINF, 6 INCH AND 220#/SYD HMA, 5EML (HAND PATCHING).
  - INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (BASE); 220#/SYD HMA, 4EML (LEVELING) AND 165#/SYD HMA, 5EML (TOP).
  - INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 220#/SYD HMA, APPROACH (LEVELING) AND 165#/SYD HMA, APPROACH (TOP).
  - INSTALL SUBBASE, CIP (12" MIN.); AGGREGATE BASE, 8 INCH, MODIFIED; 330#/SYD HMA, 3EML (LEVELING) AND 220#/SYD HMA, 4EML (TOP).
  - RESURFACE DRIVEWAYS WITH AGGREGATE BASE, 8 INCH, 165 #/SYD HMA, APPROACH (LEVELING), AND 165#/SYD HMA, APPROACH (TOP).

**INTERSECTION PLAN -  
MICHIKAL AND  
ELEANOR STREET  
INTERSECTION -  
ALTERNATE A**

JOB No. 224022  
**C021**  
OF 39



QUANTITIES THIS SHEET

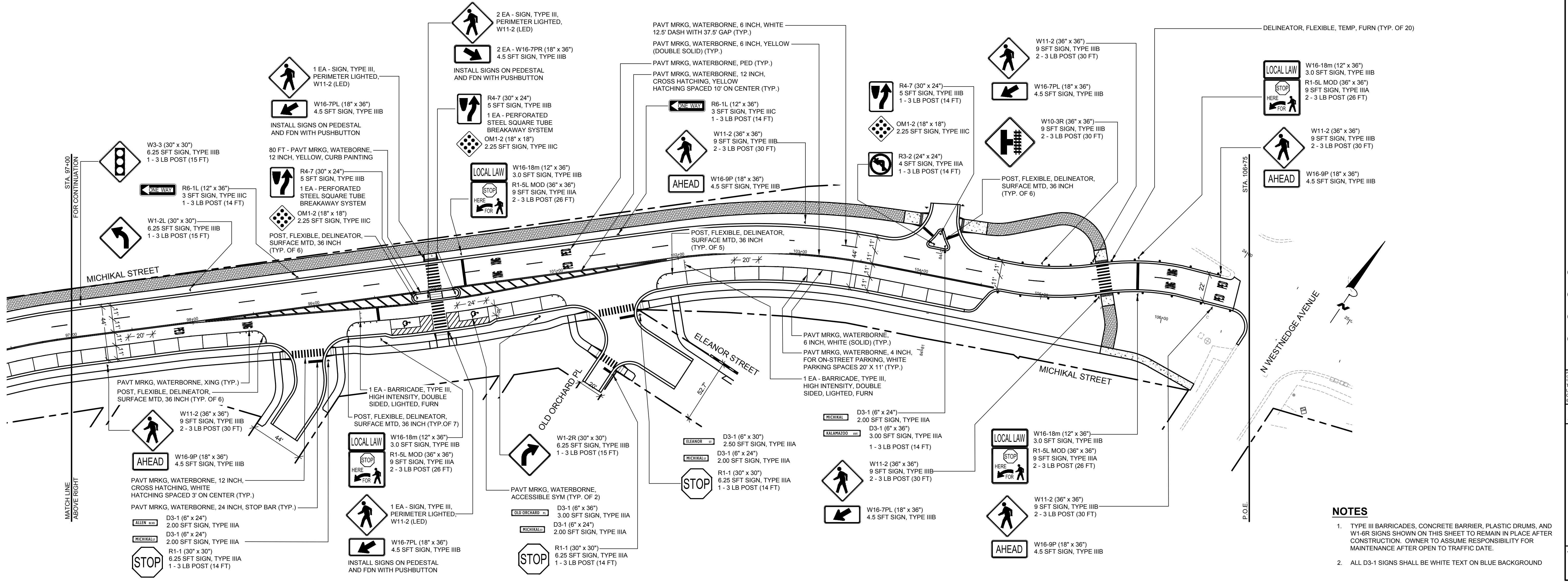
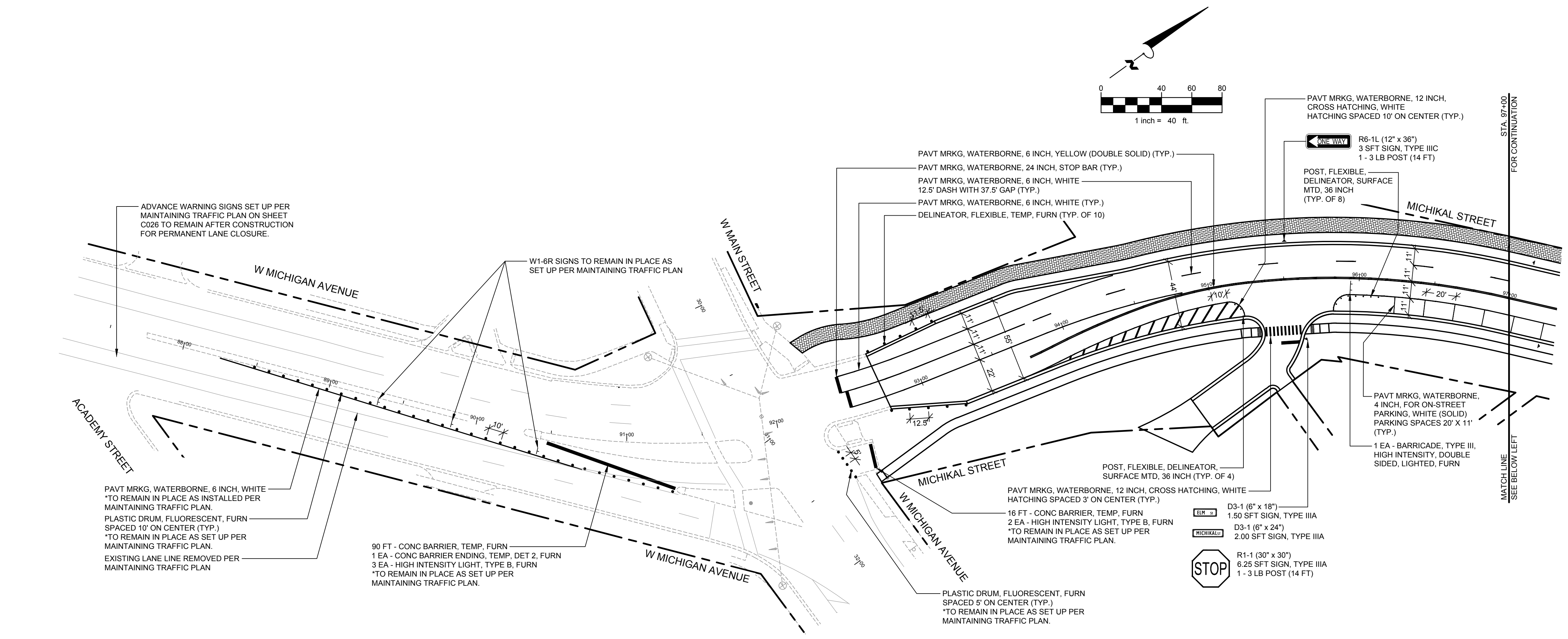
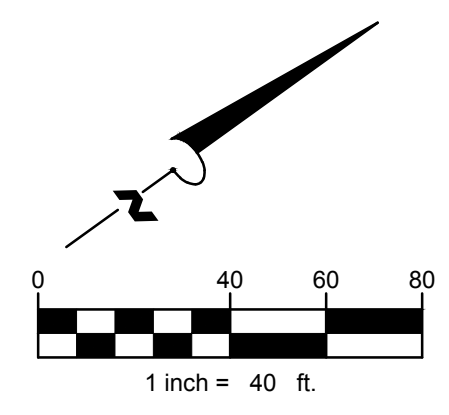
| ITEM   | QTY.      |
|--|-----------|
| Perforated Steel Square Tube Breakaway System                    | 2 Ea      |
| Post, Steel, 3 pound   | 500 Ft    |
| Sign, Type IIIA  | 90 Sft    |
| Sign, Type IIIB  | 150 Sft   |
| Sign, Type IIIC  | 20 Sft    |
| Post, Flexible, Delineator, Surface Mtd, 36 Inch                 | 40 Ea     |
| Sign, Type III, Perimeter Lighted, W11-2 (LED)                   | 4 Ea      |
| Pavt Mrkg, Waterborne, 6 inch, White                             | 1,800 Ft  |
| Pavt Mrkg, Waterborne, 6 inch, Yellow                            | 2,900 Ft  |
| Pavt Mrkg, Waterborne, For On-Street Parking, 4 inch, White      | 640 Ft    |
| Pavt Mrkg, Waterborne, 24 inch, Stop Bar (TYP.)                  | 85 Ft     |
| Pavt Mrkg, Waterborne, 12 inch, Cross Hatching, White            | 470 Ft    |
| Pavt Mrkg, Waterborne, 12 inch, Cross Hatching, Yellow           | 230 Ft    |
| Pavt Mrkg, Waterborne, 12 inch, Yellow, Curb Painting            | 70 Ft     |
| Pavt Mrkg, Waterborne, Accessible Sym                            | 2 Ea      |
| Pavt Mrkg, Waterborne, Xing                                      | 5 Ea      |
| Pavt Mrkg, Waterborne, Ped                                       | 5 Ea      |
| Barricade, Type III, High Intensity, Double Sided, Lighted, Furn | 3 Ea      |
| Barricade, Type III, High Intensity, Double Sided, Lighted, Oper | 3 Ea      |
| Conc Barrier, Temp, Furn   | 20 Ft     |
| Conc Barrier, Temp, Oper   | 20 Ft     |
| Delineator, Flexible, Temp, Furn                                 | 30 Ea     |
| Delineator, Flexible, Temp, Oper                                 | 30 Ea     |
| High Intensity Light, Type B, Furn                               | 2 Ea      |
| High Intensity Light, Type B, Oper                               | 2 Ea      |
| Power Company (Estimated Cost to Contractor)                     | 1,000 Dir |
| Cable, Sec, 600v, 1, 3/C#6                                       | 200 Ft    |
| Pedestal, Alum   | 3 Ea      |
| Pedestal, Fdn  | 3 Ea      |
| Pushbutton   | 3 Ea      |

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PHILIP A. DOORLAG  
6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL IMPROVEMENTS**

CITY OF  
**KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



- NOTES**
- TYPE III BARRICADES, CONCRETE BARRIER, PLASTIC DRUMS, AND W11-6R SIGNS SHOWN ON THIS SHEET TO REMAIN IN PLACE AFTER CONSTRUCTION. OWNER TO ASSUME RESPONSIBILITY FOR MAINTENANCE AFTER OPEN TO TRAFFIC DATE.
  - ALL D3-1 SIGNS SHALL BE WHITE TEXT ON BLUE BACKGROUND

REVISIONS

| DATE          | DESCRIPTION               | BY  |
|---------------|---------------------------|-----|
| 06/03/2024    | PAD RE-ISSUED FOR BIDDING | PAD |
| 05/12/2023    | PAD ISSUED FOR BIDDING    | PAD |
| 04/10/25/2023 | PAD 90% SUBMITTAL         | PAD |
| 01/08/30/2023 | PAD 70% SUBMITTAL         | PAD |

DATE: MARCH, 2024  
SCALE: 1" = 40'

PAVEMENT MARKINGS AND PERMANENT SIGNS - BASE BID

JOB No. 224022  
**C022**  
OF 39



QUANTITIES THIS SHEET

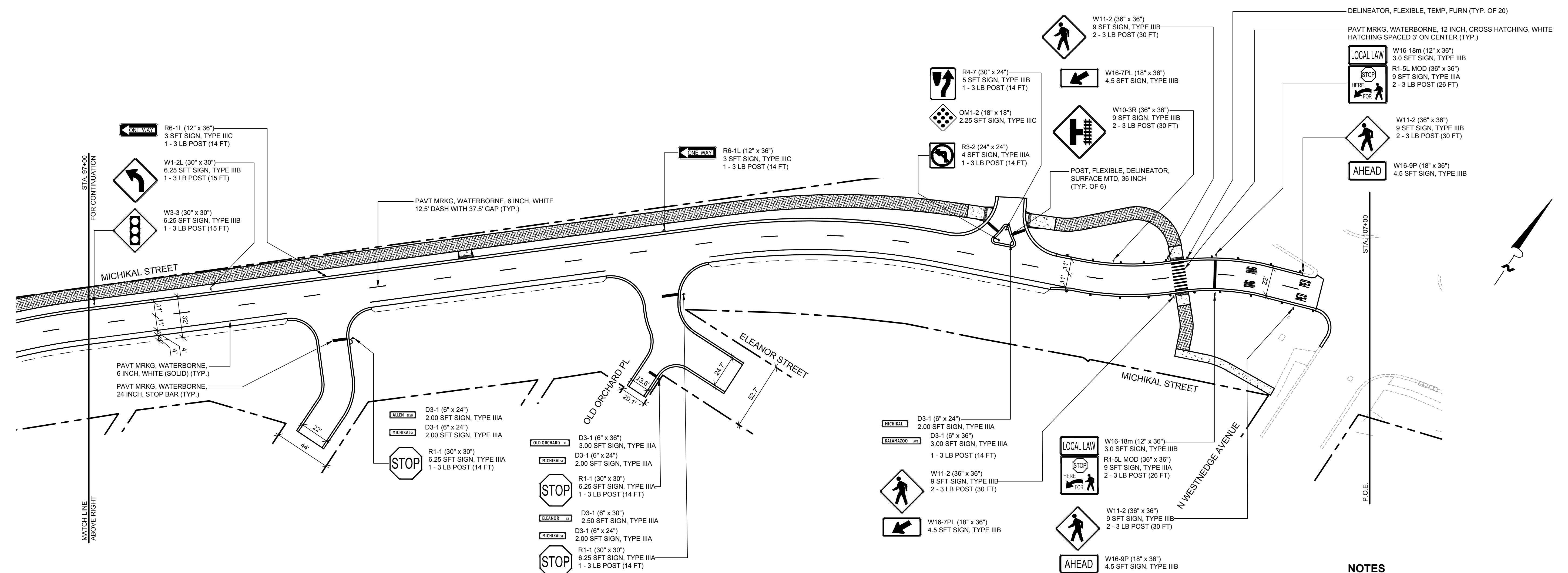
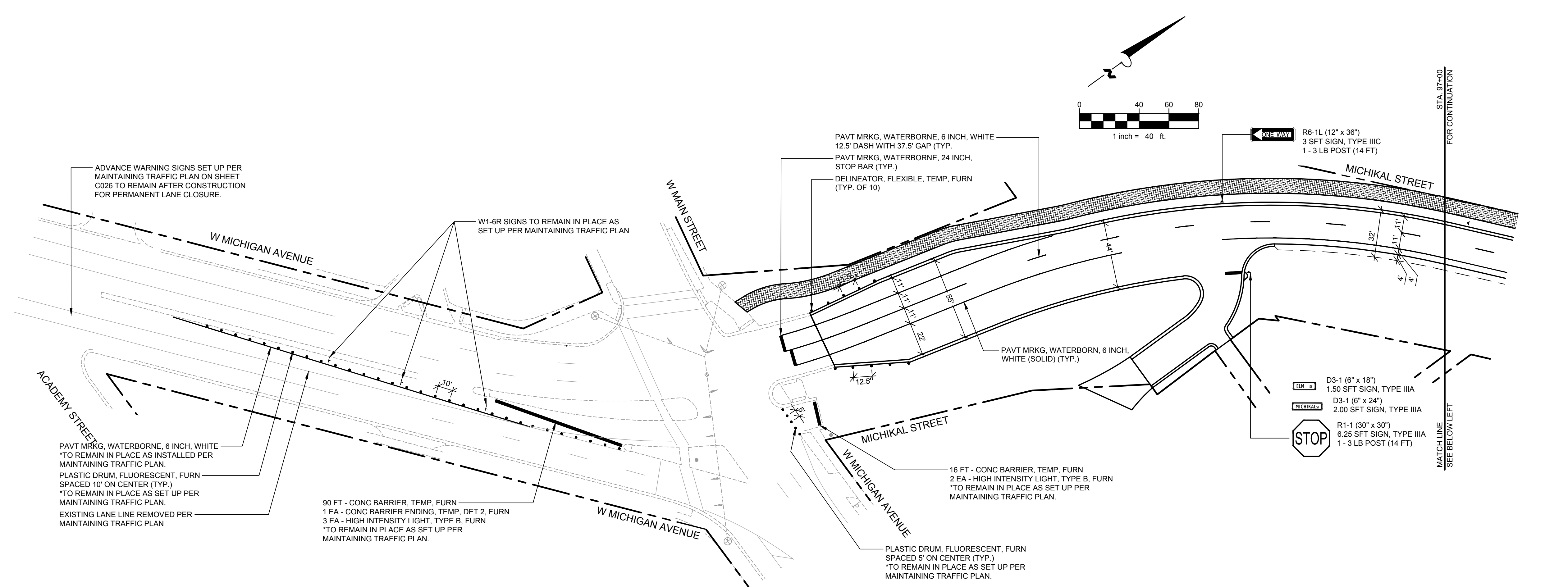
| ITEM  | QTY.      |
|---|-----------|
| Post, Steel, 3 pound                                  | 375 Ft    |
| Sign, Type IIIA                                       | 70 Sft    |
| Sign, Type IIIB                                       | 90 Sft    |
| Sign, Type IIIC                                       | 15 Sft    |
| Post, Flexible, Delineator, Surface Mtd, 36 inch      | 6 Ea      |
| Pavt Mrkg, Waterborne, 6 inch, White                  | 1,650 Ft  |
| Pavt Mrkg, Waterborne, 24 inch, Stop Bar              | 85 Ft     |
| Pavt Mrkg, Waterborne, 12 inch, Cross Hatching, White | 100 Ft    |
| Pavt Mrkg, Waterborne, Xing                           | 2 Ea      |
| Pavt Mrkg, Waterborne, Ped                            | 2 Ea      |
| Conc Barrier, Temp, Furn                              | 20 Ft     |
| Conc Barrier, Temp, Oper                              | 20 Ft     |
| Delineator, Flexible, Temp, Furn                      | 30 Ea     |
| Delineator, Flexible, Temp, Oper                      | 30 Ea     |
| High Intensity Light, Type B, Furn                    | 2 Ea      |
| High Intensity Light, Type B, Oper                    | 2 Ea      |
| Power Company (Estimated Cost to Contractor)          | 1,000 Dir |
| Cable, Sec, 600v, 1, 3/C#6                            | 200 Ft    |
| Pedestal, Alum  | 3 Ea      |
| Pedestal, Fdn   | 3 Ea      |
| Pushbutton  | 3 Ea      |

**WIGHTMAN**  
433 E. RANSOM ST.  
KALAMAZOO, MI. 49007  
269.327.3532  
www.gowightman.com

PHILIP A. DOORLAG  
6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL IMPROVEMENTS**

**CITY OF KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



**NOTES**  
1. ALL D3-1 SIGNS SHALL BE WHITE TEXT ON BLUE BACKGROUND

|                       |     |
|-----------------------|-----|
| 06 03/08/2024         | PAD |
| RE-ISSUED FOR BIDDING |     |
| 05 12/01/2023         | PAD |
| ISSUED FOR BIDDING    |     |
| 04 10/25/2023         | PAD |
| 90% SUBMITTAL         |     |
| 01 08/30/2023         | PAD |
| 70% SUBMITTAL         |     |

**REVISIONS**  
DATE: MARCH, 2024  
SCALE: 1" = 40'

**PAVEMENT MARKINGS  
AND PERMANENT  
SIGNS -  
ALTERNATE A**

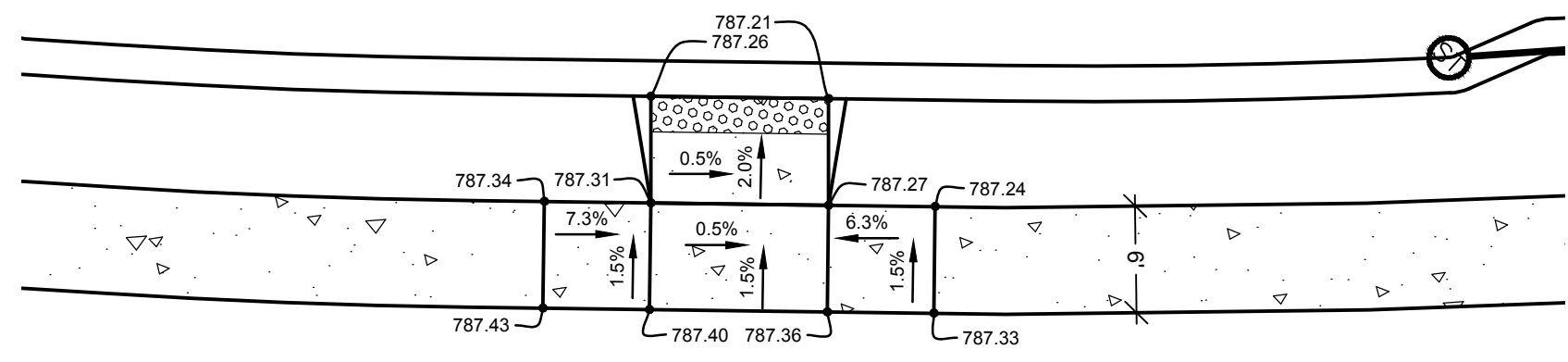
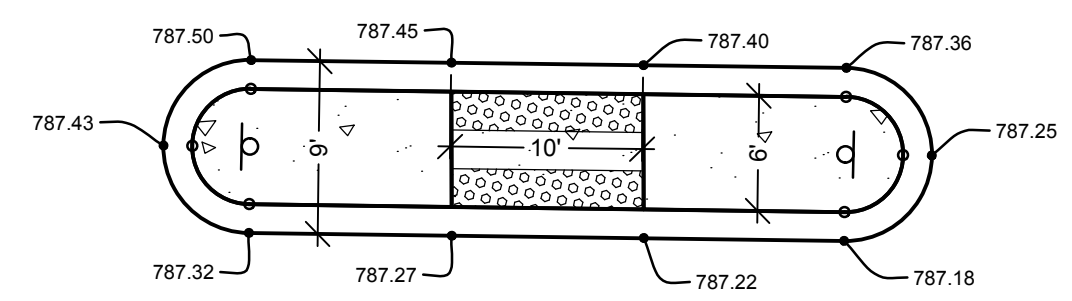
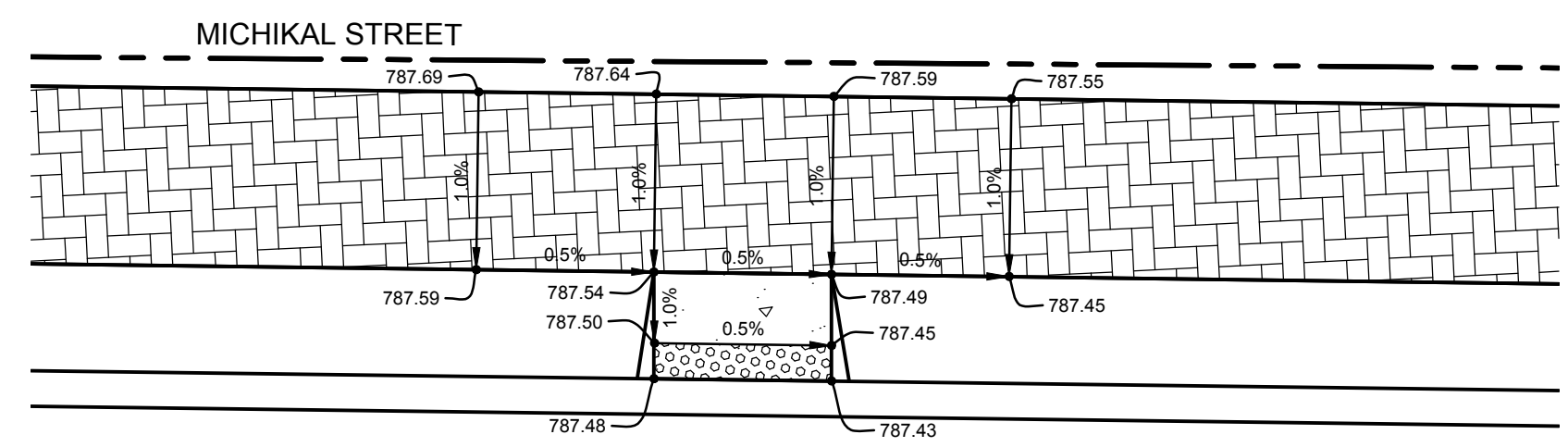


|                       |     |
|-----------------------|-----|
| 06/03/2024            | PAD |
| RE-ISSUED FOR BIDDING |     |
| 05/12/2023            | PAD |
| ISSUED FOR BIDDING    |     |
| 04/10/25/2023         | PAD |
| 90% SUBMITTAL         |     |
| 01/06/30/2023         | PAD |
| 70% SUBMITTAL         |     |

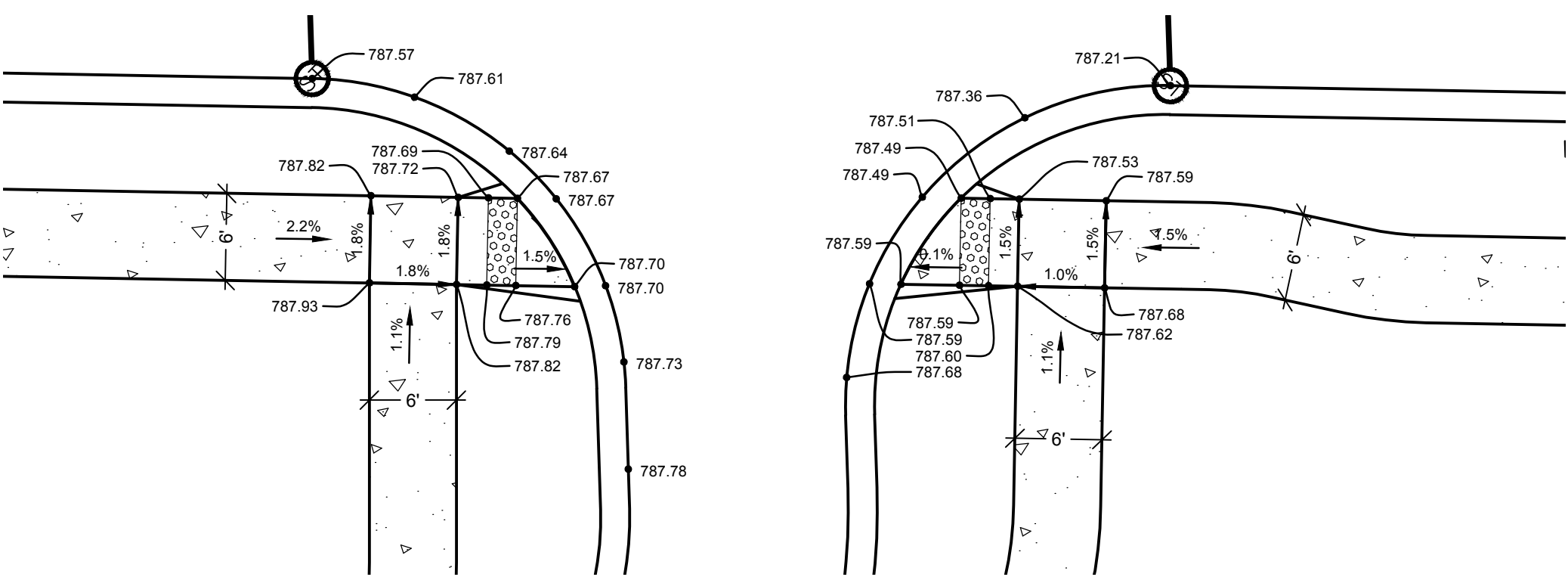
**REVISIONS**

DATE: MARCH, 2024  
 SCALE: 1" = 10'

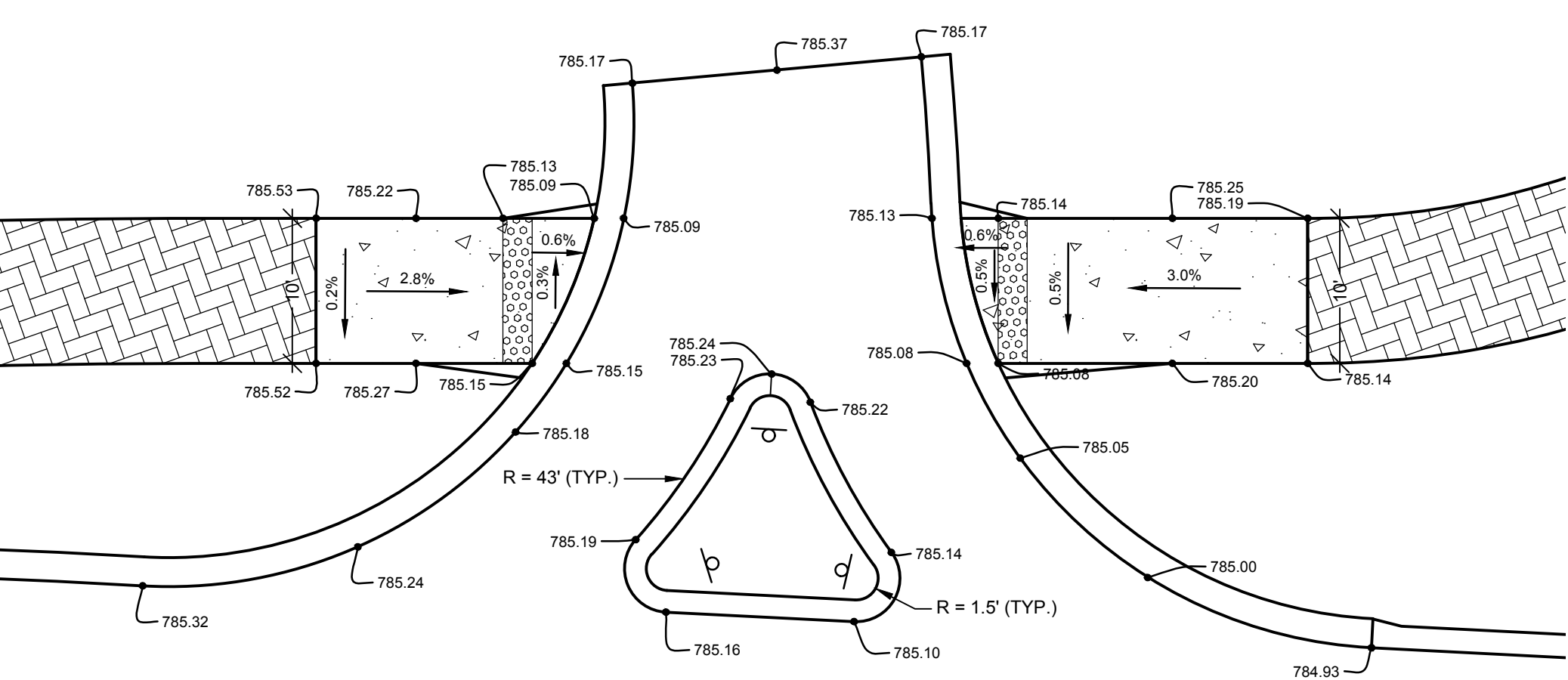
ADA RAMP AND  
 PEDESTRIAN DETAILS



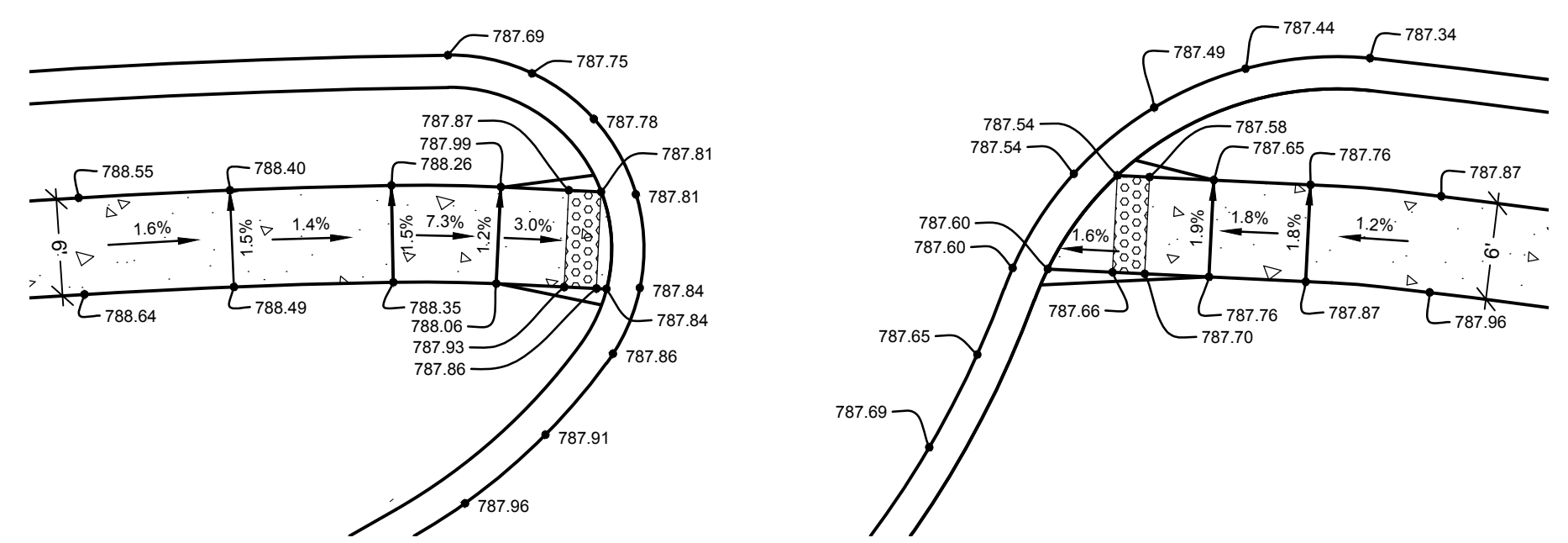
INCLUDED ONLY IN "BASE BID" PACKAGE  
 MICHIKAL STREET  
 PEDESTRIAN ISLAND  
 SCALE: 1" = 10'



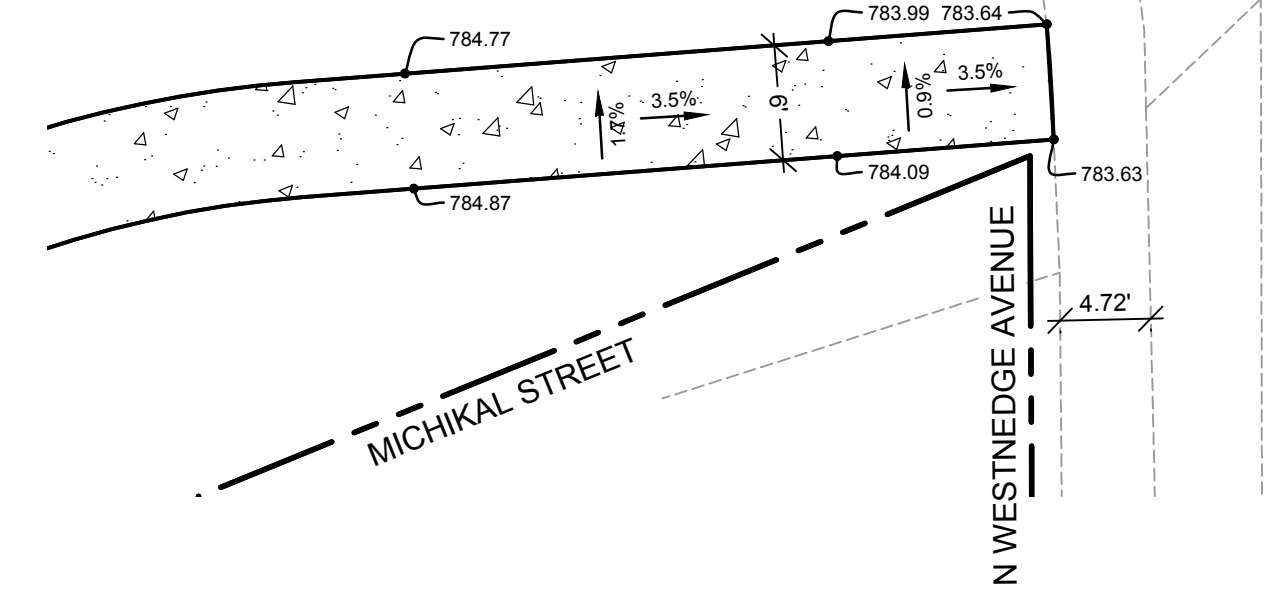
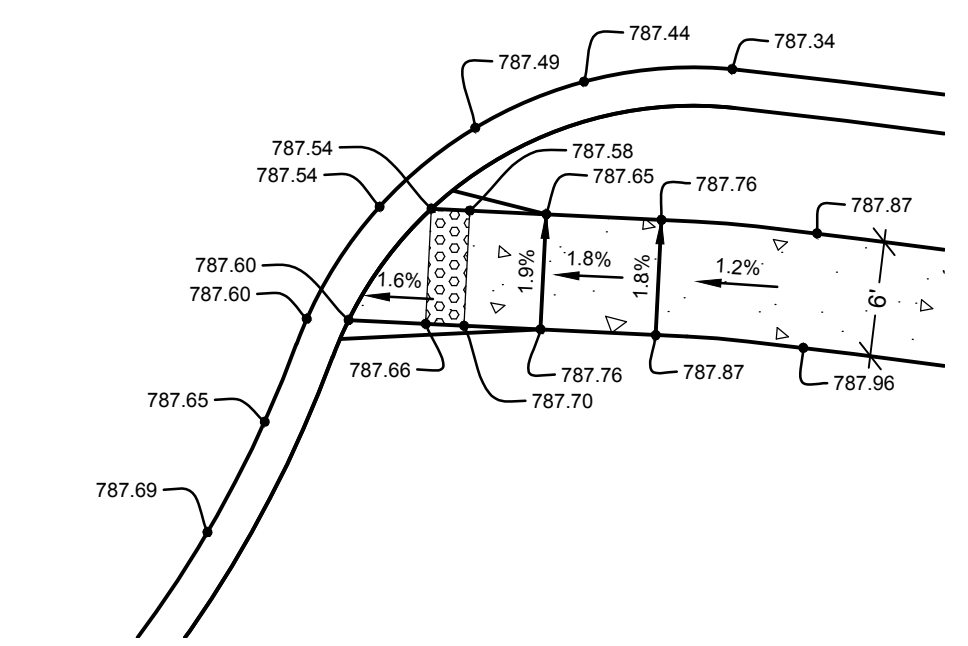
INCLUDED ONLY IN "BASE BID" PACKAGE  
 MICHIKAL STREET AND ALLEN BLVD.  
 INTERSECTION  
 SCALE: 1" = 10'



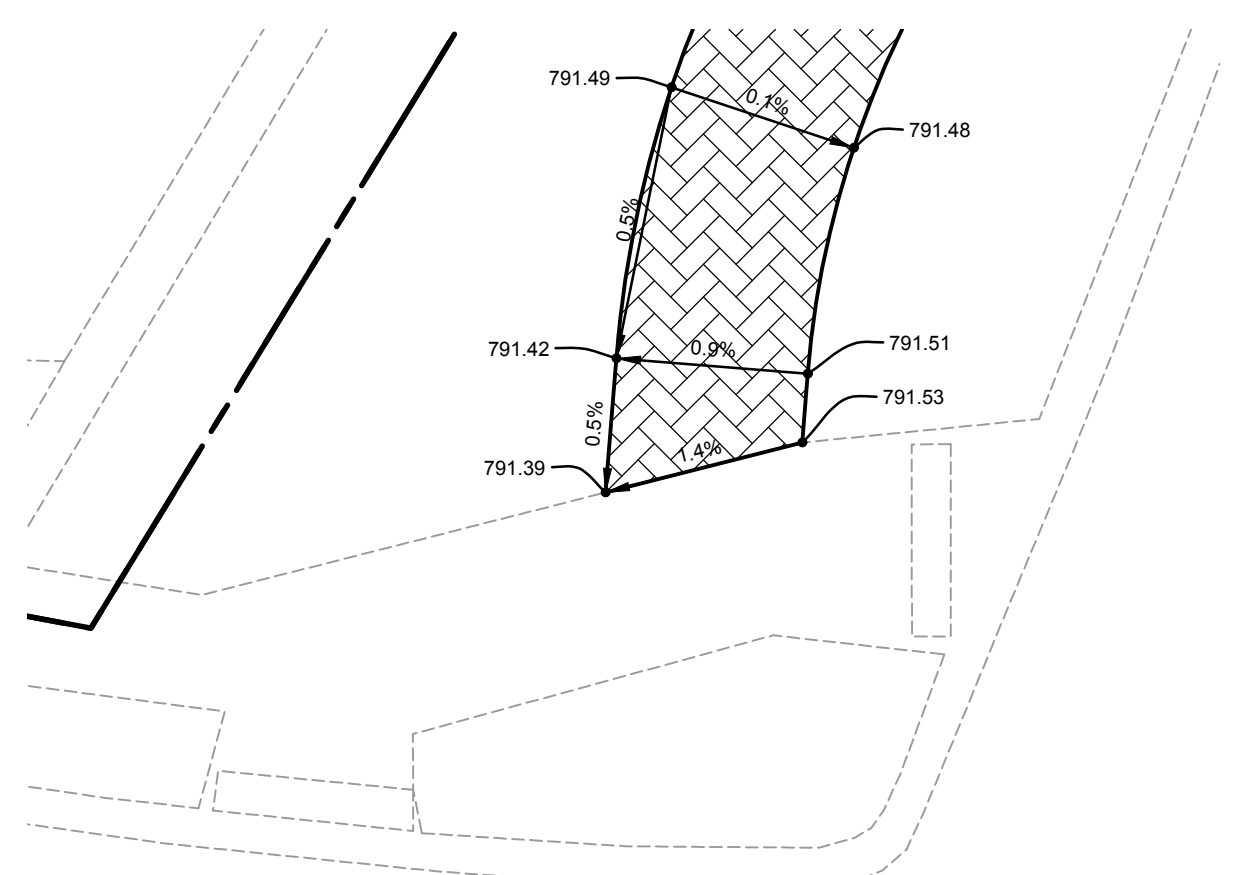
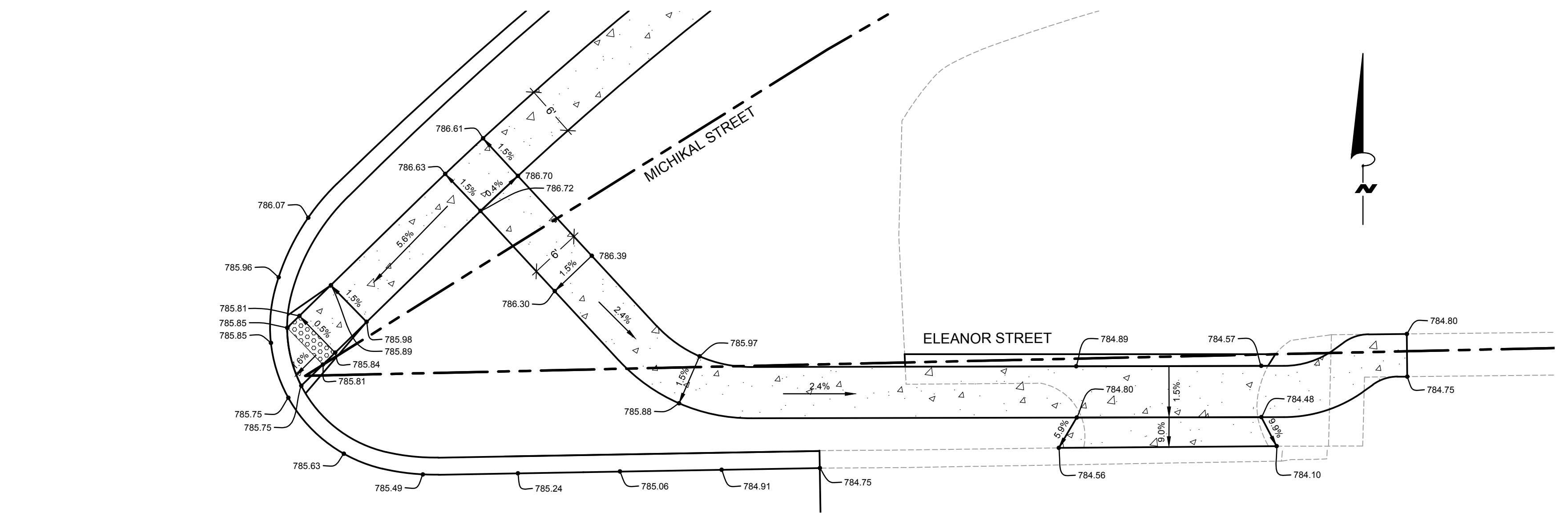
INCLUDED IN "BASE BID" AND  
 "ALTERNATE A" PACKAGE  
 MICHIKAL STREET AND W KALAMAZOO AVENUE  
 INTERSECTION  
 SCALE: 1" = 10'



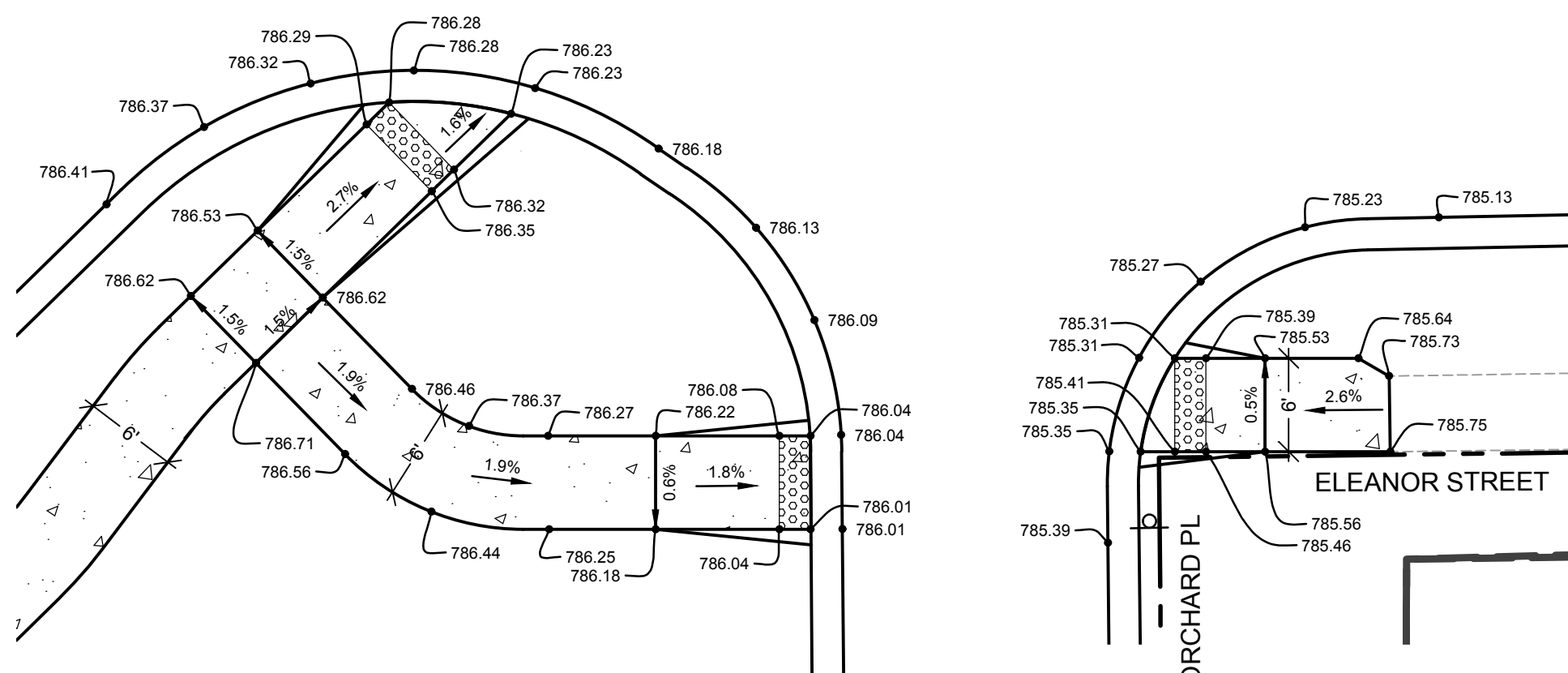
INCLUDED ONLY IN "BASE BID" PACKAGE  
 MICHIKAL STREET AND ELM PLACE  
 INTERSECTION  
 SCALE: 1" = 10'



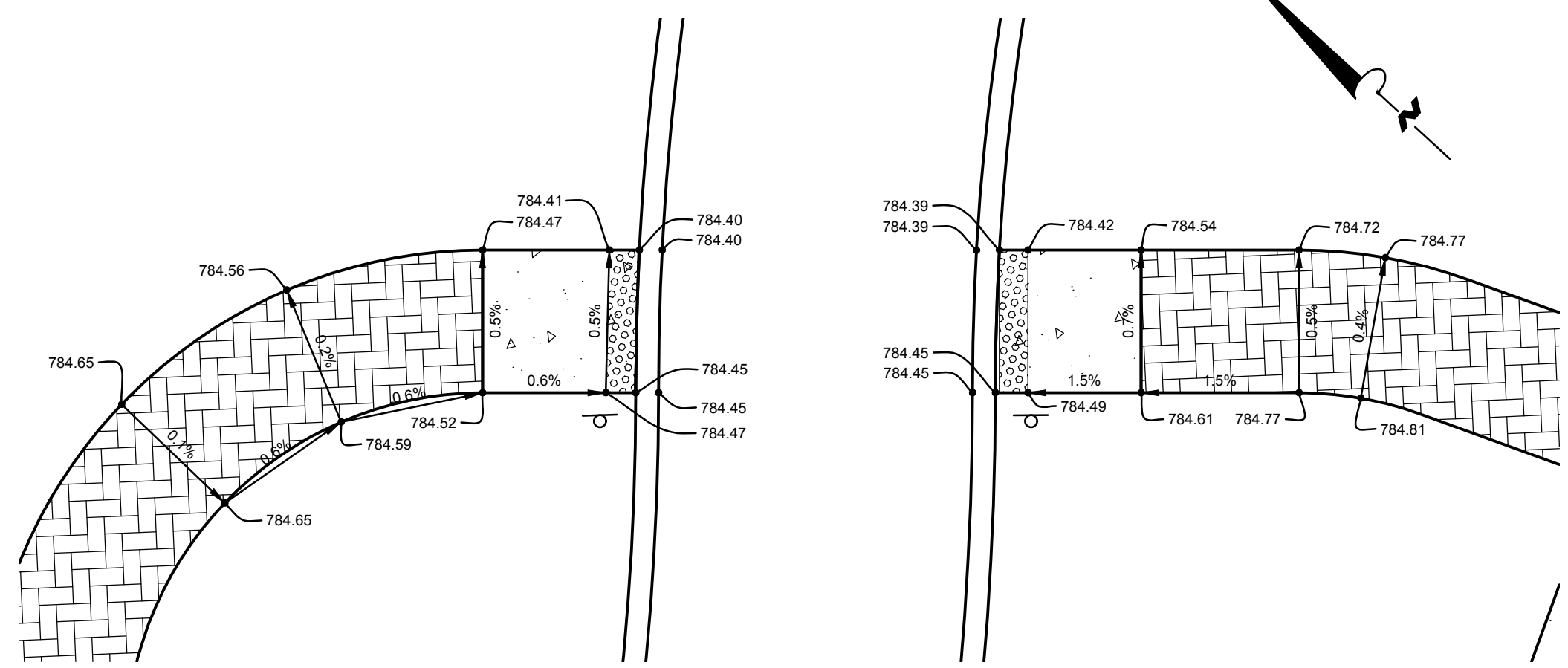
INCLUDED IN "BASE BID" PACKAGE AND "ALTERNATE A" PACKAGE  
 N WESTNEDGE AVENUE AND MICHIKAL STREET INTERSECTION  
 TEMPORARY CONNECTION TO EXISTING SIDEWALK  
 SCALE: 1" = 10'



INCLUDED IN "BASE BID" AND  
 "ALTERNATE A" PACKAGE  
 MICHIKAL / W MAIN / W MICHIGAN AVENUE  
 TEMPORARY SHARED USE PATH CONNECTION  
 SCALE: 1" = 10'



INCLUDED ONLY IN "BASE BID" PACKAGE  
 MICHIKAL STREET AND ELEANOR STREET  
 INTERSECTION  
 SCALE: 1" = 10'



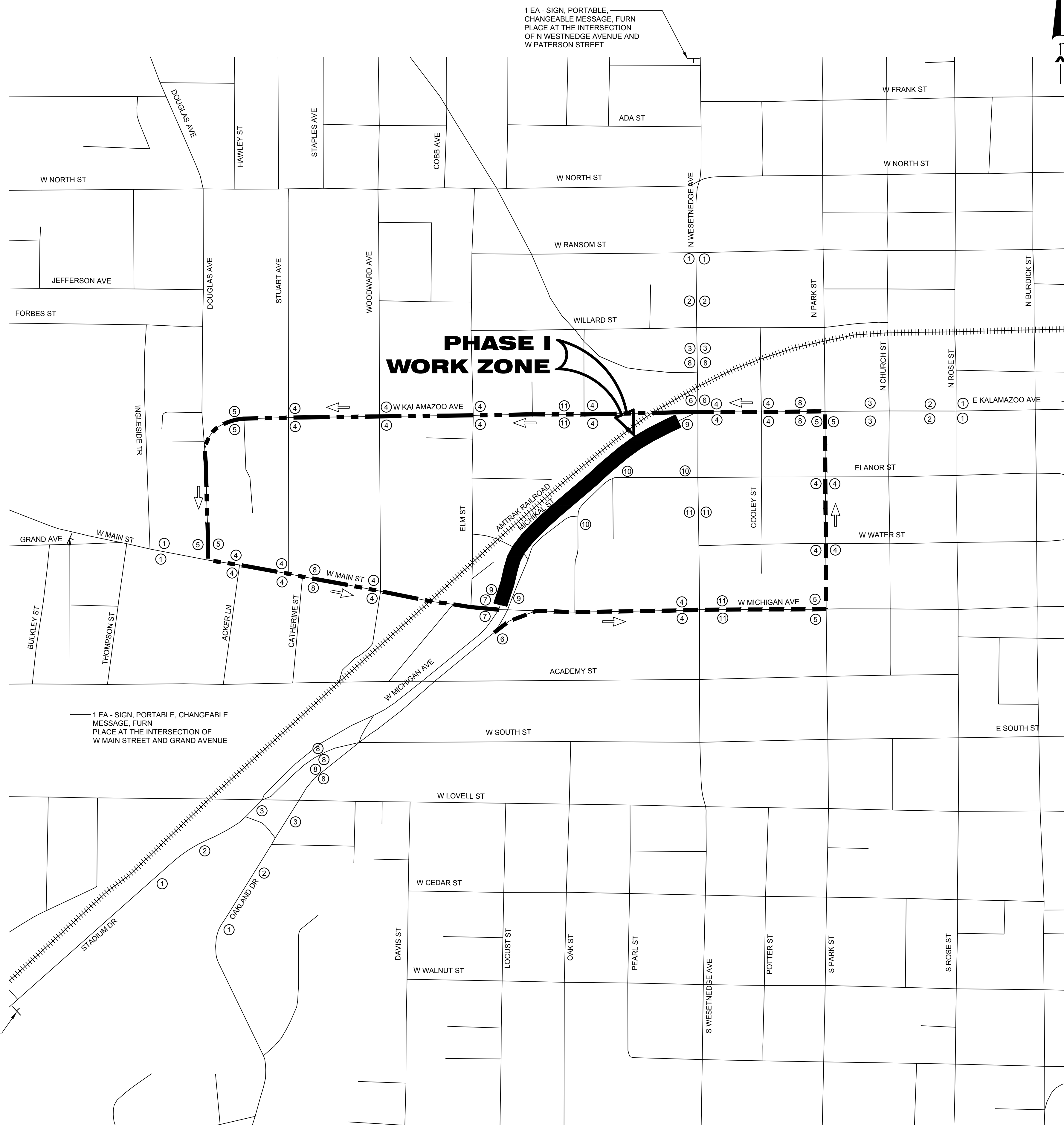
INCLUDED IN "BASE BID" AND  
 "ALTERNATE A" PACKAGE  
 MICHIKAL STREET  
 TEMPORARY SHARED USE PATH CROSSING  
 SCALE: 1" = 10'



| LEGEND   |       |  |             |   |          |
|----------|-------|--|-------------|---|----------|
| SIGN NO. | QTY.  | SIGN DESIGNATION   | DESCRIPTION | SIZE  | AREA     |
| 1        | 8 EA  | W20-1  |             | 48 INCH x 48 INCH   | 128 SFT  |
| 2        | 6 EA  | W20-3  |             | 48 INCH x 48 INCH   | 96 SFT   |
|          |       | W16-8P   |             | 36 INCH x 12 INCH   | 18 SFT   |
| 3        | 6 EA  | W20-2  |             | 48 INCH x 48 INCH   | 96 SFT   |
| 4        | 24 EA | M4-9   |             | 30 INCH x 24 INCH   | 120 SFT  |
|          |       | W16-8P   |             | 36 INCH x 12 INCH   | 72 SFT   |
| 5        | 8 EA  | M4-9   |             | 30 INCH x 24 INCH   | 40 SFT   |
|          |       | W16-8P   |             | 36 INCH x 12 INCH   | 24 SFT   |
| 6        | 3 EA  | M4-9   |             | 30 INCH x 24 INCH   | 15 SFT   |
|          |       | W16-8P   |             | 36 INCH x 12 INCH   | 9 SFT    |
| 7        | 2 EA  | W16-8P   |             | 36 INCH x 12 INCH   | 6 SFT    |
|          |       | M4-8a  |             | 24 INCH x 18 INCH   | 6 SFT    |
| 8        | 10 EA | R5-18c   |             | 48 INCH x 48 INCH   | 160 SFT  |
| 9        | 3 EA  | BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED |             | SEE SHEETS C038 AND C039 FOR NUMBER REQUIRED AT EACH LOCATION | 3 EA     |
|          |       | R11-2  |             | 48 INCH x 30 INCH   | 30 SFT   |
| 10       | 3 EA  | BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED |             | SEE SHEETS C038 AND C039 FOR NUMBER REQUIRED AT EACH LOCATION | 2 EA     |
|          |       | R11-4  |             | 60 INCH x 30 INCH   | 37.5 SFT |
| 11       | 6 EA  | G20-2  |             | 48 INCH x 24 INCH   | 48 SFT   |

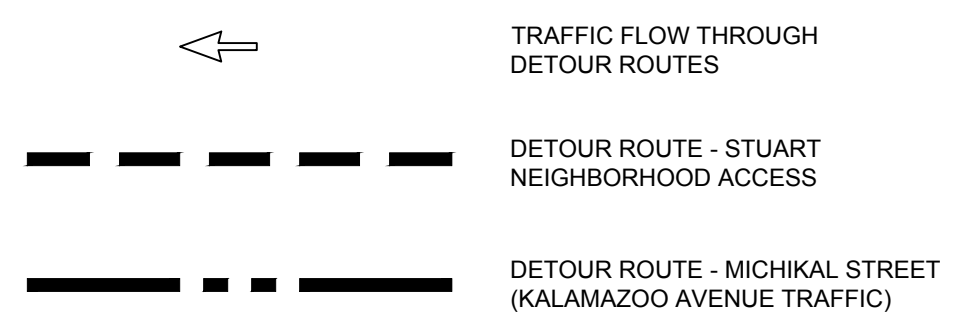
TOTAL AREA = 906 SFT

1 EA - SIGN, PORTABLE, CHANGEABLE MESSAGE, FURN PLACE AT THE INTERSECTION OF STADIUM DRIVE AND HOWARD STREET



MICHIKAL IMPROVEMENTS - PHASE I OVERVIEW  
SCALE: 1" = 300'

| QUANTITIES THIS SHEET  |           |
|--|-----------|
| ITEM   | QTY.      |
| Maintenance Gravel, LM   | 500 Cyd   |
| Pavt Mrkg, Waterborne, 6 inch, White                             | 250 Ft    |
| Rem Spec Mrkg  | 40 Sft    |
| Barricade, Type III, High Intensity, Double Sided, Lighted, Furn | 20 Ea     |
| Barricade, Type III, High Intensity, Double Sided, Lighted, Oper | 20 Ea     |
| Channelizing Device, 42 inch, Fluorescent, Furn                  | 100 Ea    |
| Channelizing Device, 42 inch, Fluorescent, Oper                  | 100 Ea    |
| Conc Barrier Ending, Temp, Det 2, Furn                           | 2 Ea      |
| Conc Barrier Ending, Temp, Det 2, Oper                           | 2 Ea      |
| Conc Barrier, Temp, Furn   | 110 Ft    |
| Conc Barrier, Temp, Oper   | 110 Ft    |
| High Intensity Light, Type B, Furn                               | 5 Ea      |
| High Intensity Light, Type B, Oper                               | 5 Ea      |
| Lighted Arrow, Type C, Furn                                      | 2 Ea      |
| Lighted Arrow, Type C, Oper                                      | 2 Ea      |
| Pavt Mrkg, Longit, 6 inch or Less Width, Rem                     | 250 Ft    |
| Pavt Mrkg, Type NR, Paint, Lt Turn Arrow                         | 3 Ea      |
| Plastic Drum, Fluorescent, Furn                                  | 35 Ea     |
| Plastic Drum, Fluorescent, Oper                                  | 35 Ea     |
| Sign, Portable, Changeable Message, Furn                         | 4 Ea      |
| Sign, Portable, Changeable Message, Oper                         | 4 Ea      |
| Sign, Type B, Temp, Prismatic, Furn                              | 1,000 Sft |
| Sign, Type B, Temp, Prismatic, Oper                              | 1,000 Sft |
| Sign, Type B, Temp, Prismatic, Spec, Furn                        | 150 Sft   |
| Sign, Type B, Temp, Prismatic, Spec, Oper                        | 150 Sft   |
| TS, Span Wire Mtd, Rem   | 2 Ea      |
| TS Face, Bag   | 2 Ea      |
| TS Face, Bag, Rem  | 2 Ea      |



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269.327.3532

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PHILIP A. DOORLAG  
6201067363

PROJECT NAME:  
**STREETS FOR ALL: MICHIKAL IMPROVEMENTS**

---

**CITY OF KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001

---

|                       |     |
|-----------------------|-----|
| 06/22/2024            | PAD |
| RE-ISSUED FOR BIDDING |     |
| 05/12/2023            | PAD |
| ISSUED FOR BIDDING    |     |
| 04/10/25/2023         | PAD |
| 90% SUBMITTAL         |     |
| 01/08/30/2023         | PAD |
| 70% SUBMITTAL         |     |

**REVISIONS**

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DATE: FEBRUARY, 2024  
SCALE: 1" = 300'

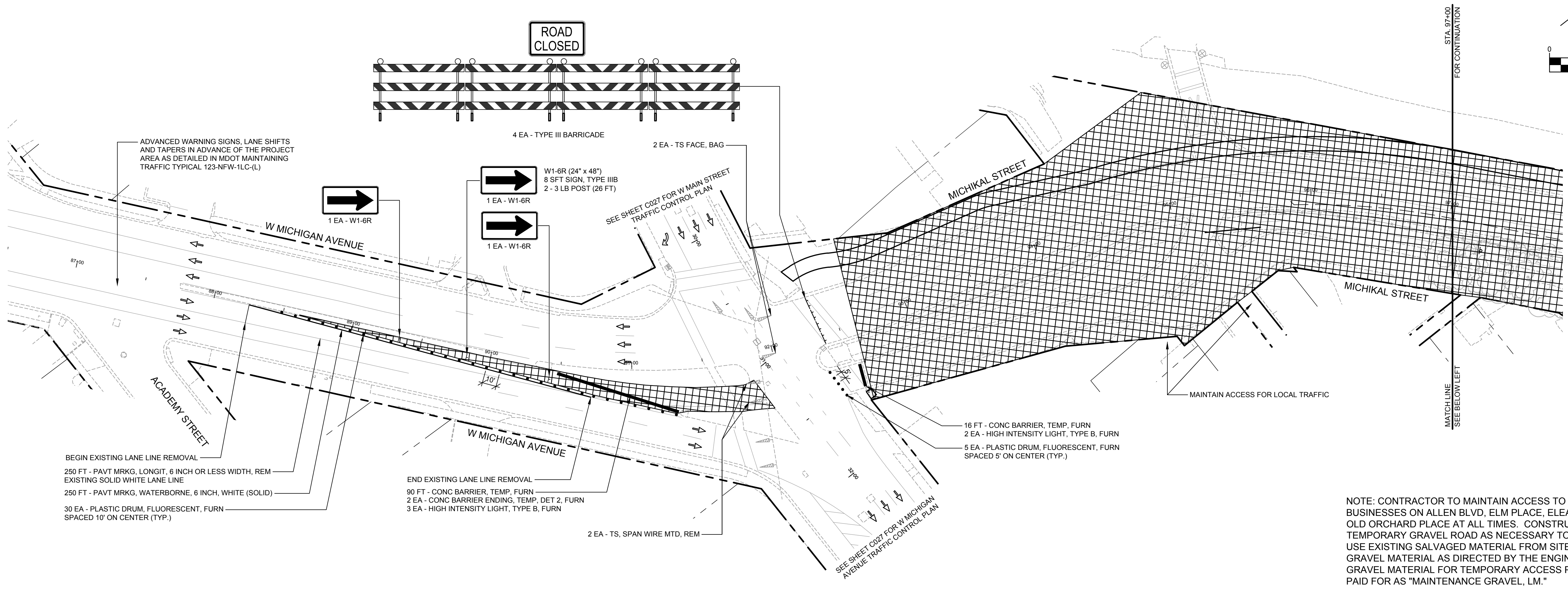
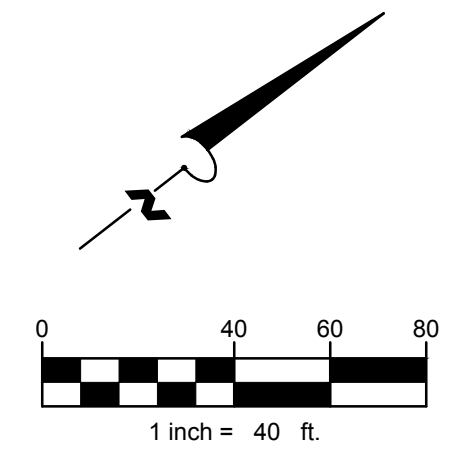
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MAINTAINING TRAFFIC - OVERVIEW AND DETOUR ROUTE

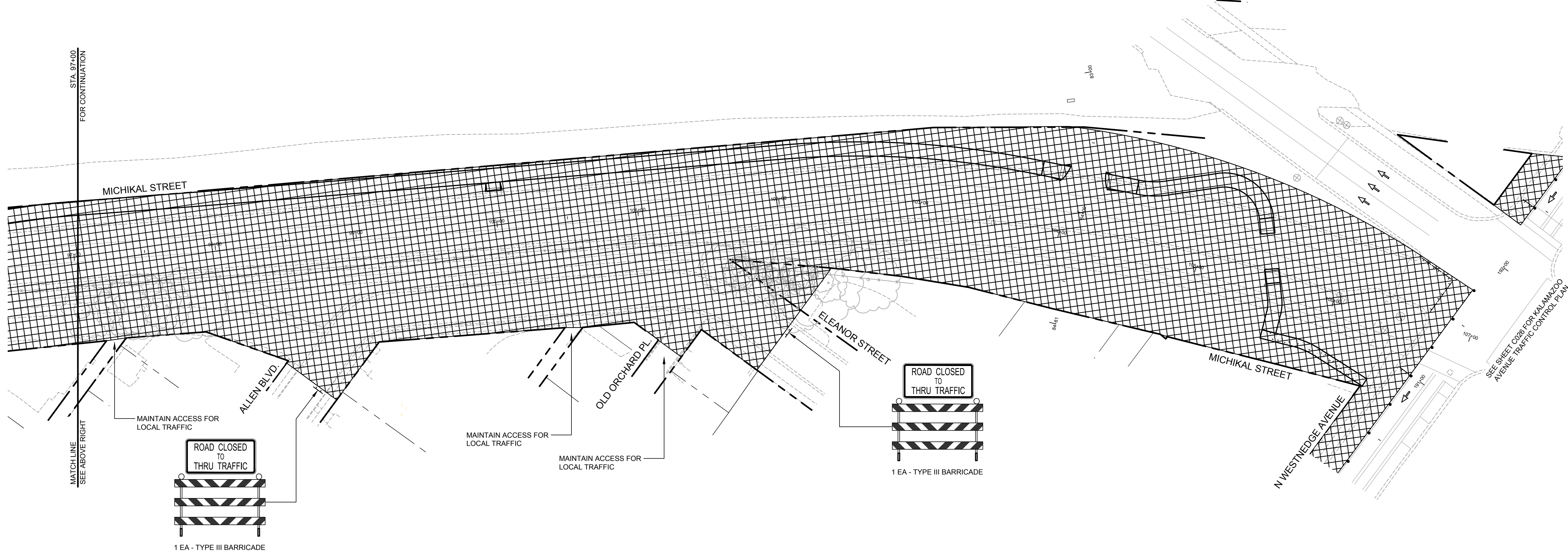
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JOB No. 224022  
**C025**  
OF 39





NOTE: CONTRACTOR TO MAINTAIN ACCESS TO HOMES AND BUSINESSES ON ALLEN BLVD, ELM PLACE, ELEANOR STREET AND OLD ORCHARD PLACE AT ALL TIMES. CONSTRUCT AND MAINTAIN TEMPORARY GRAVEL ROAD AS NECESSARY TO MAINTAIN ACCESS. USE EXISTING SALVAGED MATERIAL FROM SITE OR FURNISH GRAVEL MATERIAL AS DIRECTED BY THE ENGINEER. FURNISHED GRAVEL MATERIAL FOR TEMPORARY ACCESS PURPOSES TO BE PAID FOR AS "MAINTENANCE GRAVEL, LM."

**PHASE I LEGEND**

- WORK AREA
- CHANNELIZING DEVICES
- TRAFFIC FLOW
- TEMPORARY PAVEMENT MARKING
- EXISTING TRAFFIC SIGNAL HEAD
- TEMPORARY TRAFFIC SIGNAL HEAD
- TEMPORARY PAVEMENT MARKING

|                       |     |
|-----------------------|-----|
| 06/02/2024            | PAD |
| RE-ISSUED FOR BIDDING |     |
| 05/12/01/2023         | PAD |
| ISSUED FOR BIDDING    |     |
| 04/10/25/2023         | PAD |
| 90% SUBMITTAL         |     |
| 01/08/30/2023         | PAD |
| 70% SUBMITTAL         |     |

REVISIONS

DATE: FEBRUARY, 2024  
SCALE: 1" = 40'

MAINTAINING TRAFFIC  
MICHIKAL STREET  
RECONSTRUCTION





# WIGHTMAN

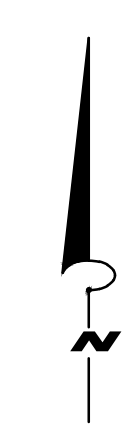
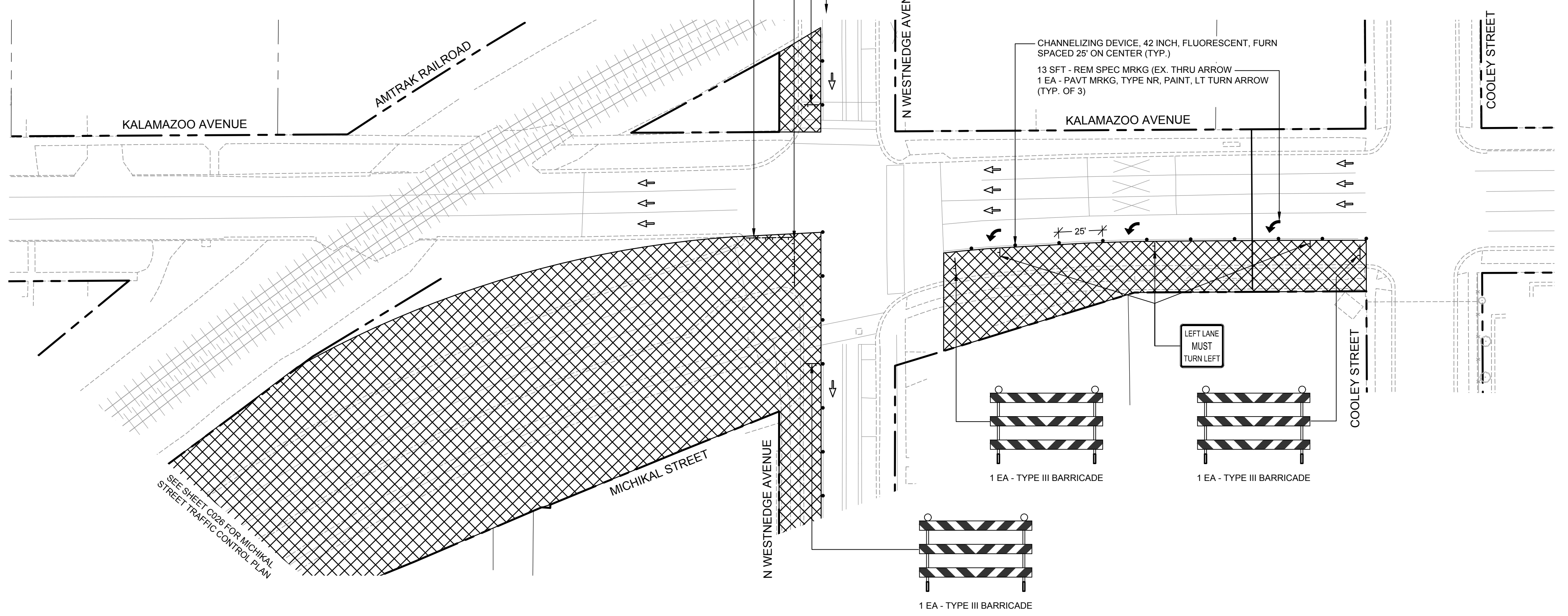
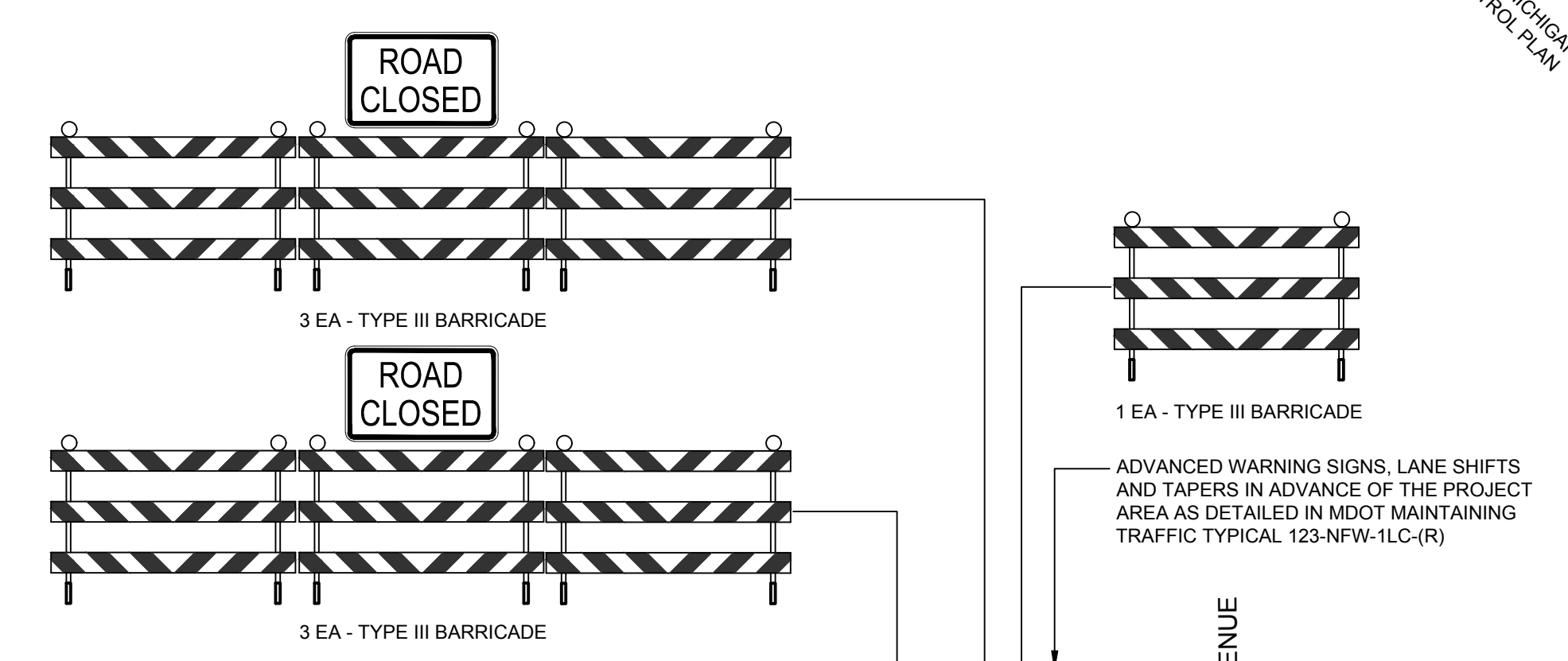
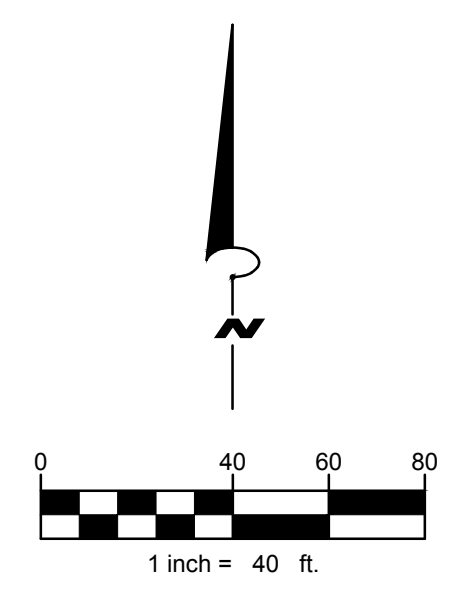
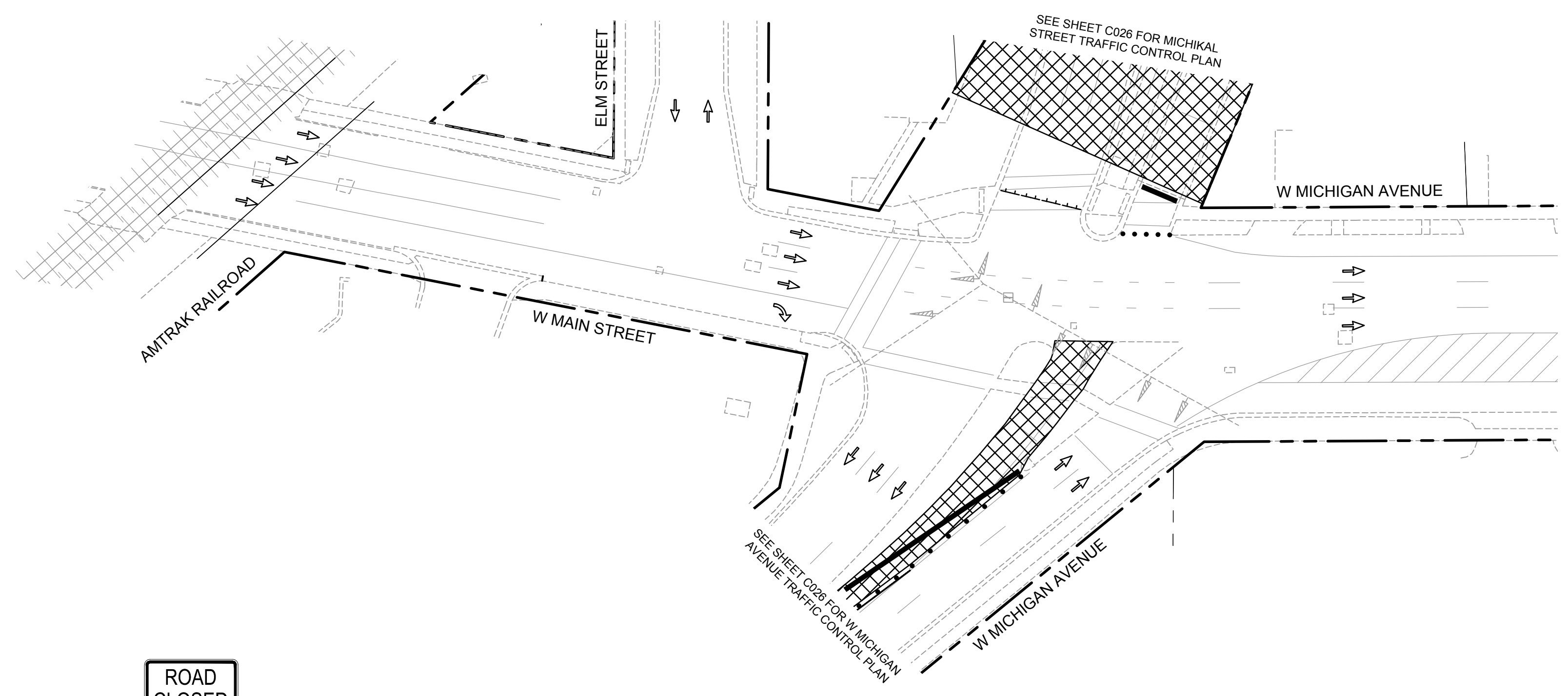
433 E. RANSOM ST.  
KALAMAZOO, MI. 49007  
269.327.3532

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PHILIP A. DOORLAG  
6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
MICHICAL  
IMPROVEMENTS**

**CITY OF  
KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



### PHASE I LEGEND

- WORK AREA
- CHANNELIZING DEVICES
- TRAFFIC FLOW
- TEMPORARY PAVEMENT MARKING
- EXISTING TRAFFIC SIGNAL HEAD
- TEMPORARY TRAFFIC SIGNAL HEAD
- TEMPORARY PAVEMENT MARKING

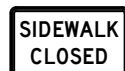





|                    |     |
|--------------------|-----|
| 05 12/01/2023      | PAD |
| ISSUED FOR BIDDING |     |
| 04 10/25/2023      | PAD |
| 90% SUBMITTAL      |     |
| 01 08/30/2023      | PAD |
| 70% SUBMITTAL      |     |

REVISIONS

DATE: FEBRUARY, 2024  
SCALE: 1" = 40'

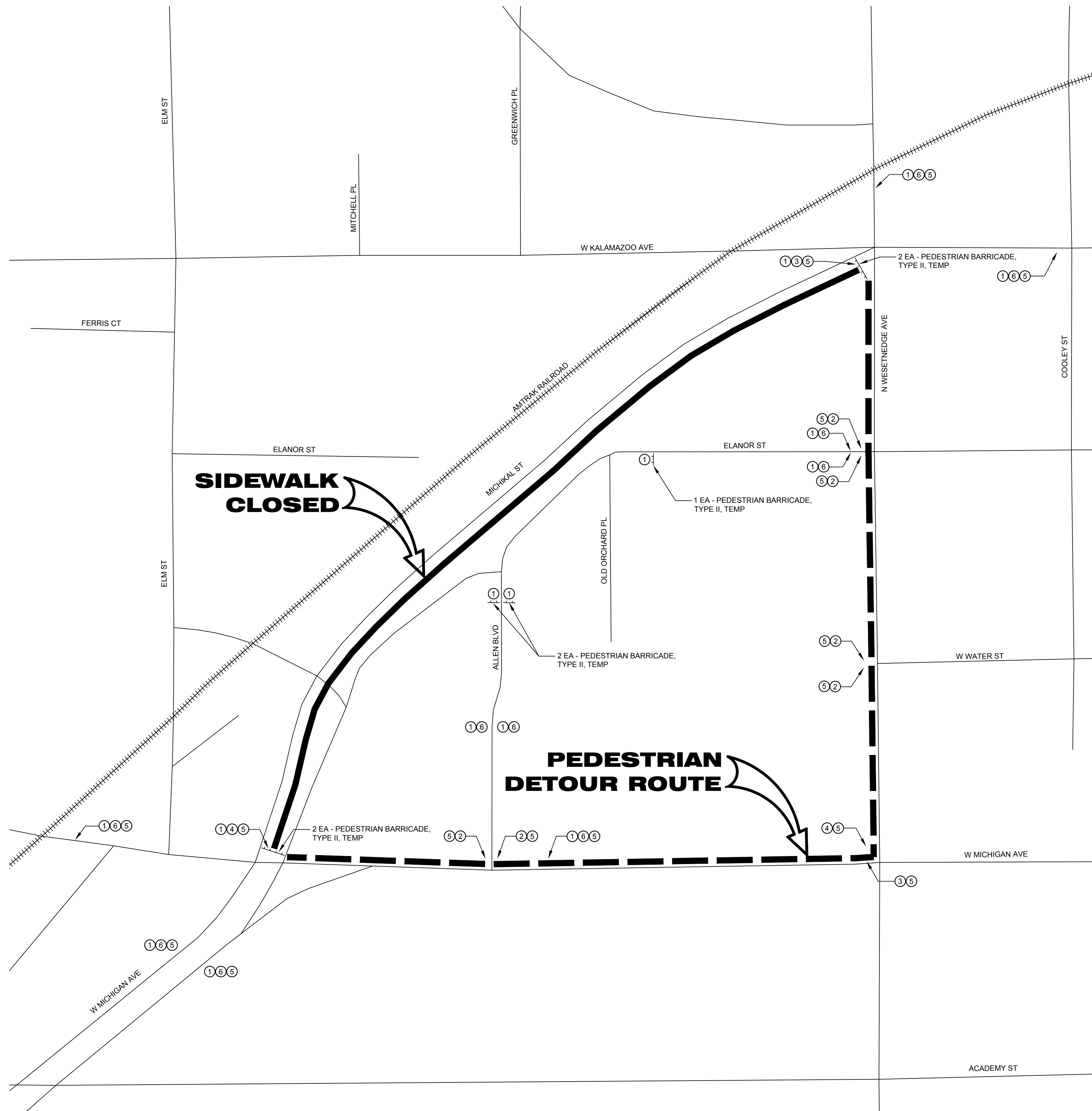
MAINTAINING TRAFFIC  
MICHICAL STREET  
RECONSTRUCTION



| LEGEND |                  |             |   |                   |           |
|--------|------------------|-------------|---|-------------------|-----------|
| QTY.   | SIGN DESIGNATION | DESCRIPTION | SIZE  | AREA              |           |
| ①      | 15 EA            | R9-9        |  | 30 INCH x 18 INCH | 56.25 SFT |
| ②      | 6 EA             | M4-9a       |  | 30 INCH x 24 INCH | 30 SFT    |
| ③      | 2 EA             | M4-9a       |  | 30 INCH x 24 INCH | 10 SFT    |
| ④      | 2 EA             | M4-9a       |  | 30 INCH x 24 INCH | 10 SFT    |
| ⑤      | 16 EA            | *W16-8P     |  | 36 INCH x 12 INCH | 48 SFT    |
| ⑥      | 10 EA            | *W16-8P     |  | 18 INCH x 12 INCH | 15 SFT    |

TOTAL AREA = 189.25 SFT

\* DENOTES SPECIAL SIGN



PEDESTRIAN DETOUR  
SCALE: 1" = 100'

| QUANTITIES THIS SHEET                     |         |
|---|---------|
| ITEM                                      | QTY.    |
| Pedestrian Type II Barricade, Temp        | 7 Ea    |
| Sign, Type B, Temp, Prismatic, Furn       | 125 Sft |
| Sign, Type B, Temp, Prismatic, Oper       | 125 Sft |
| Sign, Type B, Temp, Prismatic, Spec, Furn | 50 Sft  |
| Sign, Type B, Temp, Prismatic, Spec, Oper | 50 Sft  |

**W+**  
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KALAMAZOO, MI. 49007  
269.327.3532  
[www.gowightman.com](http://www.gowightman.com)

PHILIP A. DOORLAG  
6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL  
IMPROVEMENTS**

**CITY OF  
KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001

|                    |     |
|--------------------|-----|
| 05/12/2023         | PAD |
| ISSUED FOR BIDDING |     |
| 04/10/25/2023      | PAD |
| 90% SUBMITTAL      |     |
| 01/08/30/2023      | PAD |
| 70% SUBMITTAL      |     |

REVISIONS  
DATE: FEBRUARY, 2024  
SCALE: 1" = 100'

PEDESTRIAN DETOUR

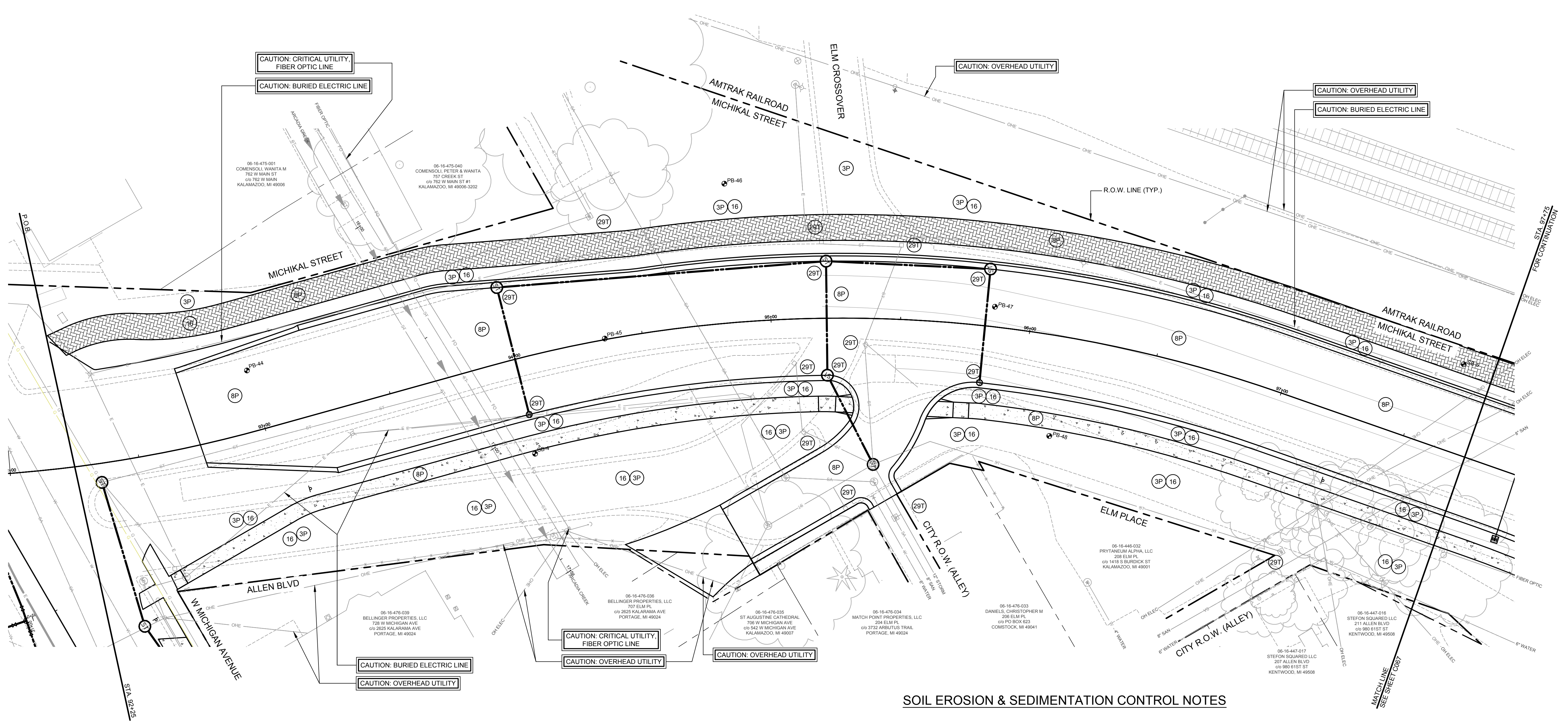


| QUANTITIES THIS SHEET                          |       |
|--|-------|
| ITEM   | QTY.  |
| Erosion Control, Inlet Protection, Fabric Drop | 15 Ea |



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PHILIP A. DOORLAG  
6201067363  
PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL IMPROVEMENTS**  
  
CITY OF  
KALAMAZOO  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



**SOIL EROSION & SEDIMENTATION CONTROL NOTES**

- ALL CONSTRUCTION METHODS SHALL BE DONE IN COMPLIANCE WITH THE MICHIGAN SOIL EROSION AND SEDIMENTATION CONTROL ACT. EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS AND SHALL NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROVIDING ALL REQUIRED EROSION CONTROL MEASURES.
  - INSTALLATION OF SESC MEASURES SHALL BE DONE IN ACCORDANCE WITH THE CURRENT EDITION OF THE MDT/DTMB SOIL EROSION MANUAL AND CURRENT EDITION OF THE MDT STANDARD SPECIFICATIONS. REFER TO THE APPROPRIATE MANUAL FOR PROPER MAINTENANCE AND INSTALLATION OF SESC MEASURES.
  - AVOID UNNECESSARY DISTURBING OR REMOVING OF EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE COVER AREAS ACT AS SEDIMENT FILTERS.
  - ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS REQUIRED FOR FINAL CLEAN UP AND APPROVAL.
  - GEOTEXTILE SILT FENCE SHALL BE INSTALLED AS REQUIRED WHEN CROSSING CREEKS OR WHEN ADJACENT TO WETLANDS OR SURFACE WATER BODIES TO PREVENT SILTATION AND ELSEWHERE AS DIRECTED BY THE ENGINEER. SEEDING AND/OR SODDING SHALL BE INSTALLED ON CREEK BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.
  - MAINTENANCE, CLEANING, AND REMOVAL OF THE VARIOUS SEDIMENT CONTROL MEASURES SHALL BE INCLUDED IN THE VARIOUS EROSION CONTROL ITEMS.
  - CLEAN ADJACENT ROADWAY WHEN NECESSARY.
  - WATER SITE WHEN NECESSARY TO PREVENT AIRBORNE SEDIMENT TRANSFER.
  - TO PREVENT OFFSITE TRACKING OF SEDIMENT, SWEEP THE ROADWAY AND CURB WEEKLY OR AS DIRECTED BY THE ENGINEER. IF SWEEPING IS LIKELY TO CREATE EXCESSIVE DUST, WET / DAMPEN SEDIMENTS PRIOR TO SWEEPING.
  - CONTRACTOR TO ENSURE ALL CONSTRUCTION DEBRIS HAS BEEN REMOVED FROM ALL NEW AND EXISTING DRAINAGE STRUCTURES PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
- NUMBER IN CIRCLE REFERS TO NUMBERED DETAILS ON MDT STANDARD PLAN R-96 SERIES, SOIL EROSION & SEDIMENTATION CONTROL MEASURES. "P" DENOTES PERMANENT MEASURE AND "T" DENOTES TEMPORARY MEASURE. SOIL EROSION CONTROL PLANS DENOTE MINIMUM EROSION MEASURES REQUIRED AS DESCRIBED BELOW.

- 3P DENOTES PERMANENT SEEDING. ALL DISTURBED AREAS NOT PAVED OR GRAVELED SHALL BE RESTORED. PLACE TOPSOIL SURFACE, FURN OR SALV, 4 INCH, MDT SEEDING, MIXTURE TUF APPLIED AT A RATE OF 220 LB/ACRE, FERTILIZER, CHEMICAL NUTRIENT, CL A APPLIED AT A RATE OF 176 LB/ACRE; MULCH AT A RATE OF 2 TON/ACRE AND MULCH ANCHORING. (APPLIES TO ENTIRE PROJECT)
- 8P DENOTES AGGREGATE COVER/PERMANENT PAVEMENT RESTORATION
- 16 DENOTES TREES, SHRUBS AND PERENNIALS
- 26T DENOTES TEMPORARY SILT FENCE. SILT FENCE SHALL BE INSTALLED AT CREEK CROSSINGS, ADJACENT TO ALL WETLANDS AND SURFACE WATERS, AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. EACH SILT FENCE SHALL BE INSTALLED GENERALLY ALONG THE SAME CONTOUR ELEVATION.
- 29T DENOTES INLET PROTECTION FABRIC DROP. SHALL BE INSTALLED AT EXISTING AND PROPOSED STORM SEWER INLETS TO PROVIDE SETTLING AND FILTERING OF SILT LADEN WATER PRIOR TO ENTRY INTO THE DRAINAGE SYSTEM.

|               |     |                                    |
|---------------|-----|------------------------------------|
| 06 03/08/2024 | PAD | RE-ISSUED FOR BIDDING              |
| 05 12/01/2023 | PAD | ISSUED FOR BIDDING                 |
| 04 10/25/2023 | PAD | 90% SUBMITTAL                      |
| 03 07/24/2023 | PAD | RE-ISSUED FOR EGLE PART 399 PERMIT |
| 02 07/03/2023 | PAD | ISSUED FOR EGLE PART 399 PERMIT    |
| 01 06/30/2023 | PAD | 70% SUBMITTAL                      |

**REVISIONS**  
DATE: MARCH, 2024  
SCALE: 1" = 20'

**SOIL EROSION AND SEDIMENTATION CONTROL**  
STA. 92+25 (P.O.B.) TO STA. 97+75



QUANTITIES THIS SHEET

| ITEM   | QTY.  |
|--|-------|
| Erosion Control, Inlet Protection, Fabric Drop | 17 Ea |

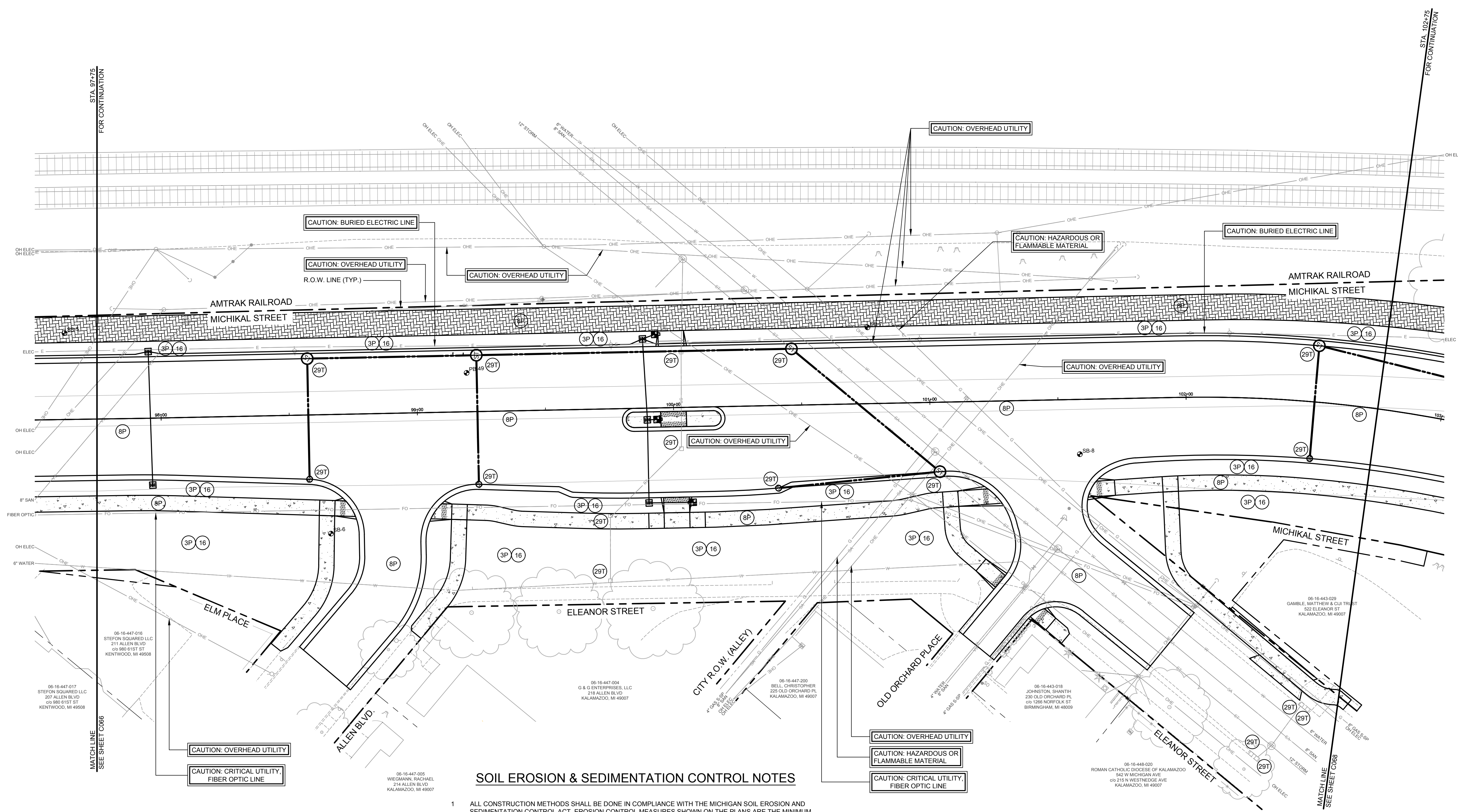
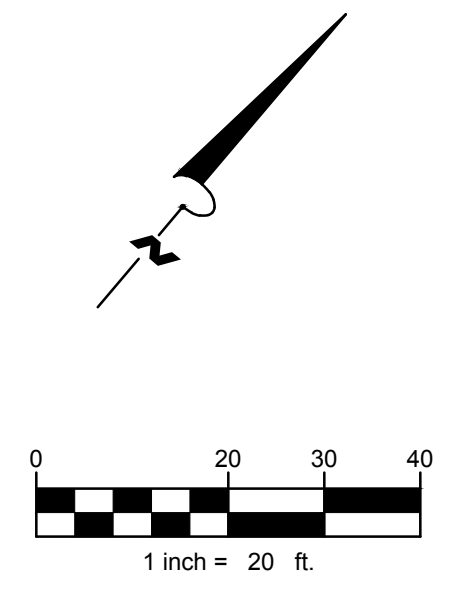


**WIGHTMAN**  
433 E. RANSOM ST.  
KALAMAZOO, MI. 49007  
269.327.3532  
www.gowightman.com

PHILIP A. DOORLAG  
6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
MICHIKAL  
IMPROVEMENTS**

**CITY OF  
KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



**SOIL EROSION & SEDIMENTATION CONTROL NOTES**

- ALL CONSTRUCTION METHODS SHALL BE DONE IN COMPLIANCE WITH THE MICHIGAN SOIL EROSION AND SEDIMENTATION CONTROL ACT. EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS AND SHALL NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROVIDING ALL REQUIRED EROSION CONTROL MEASURES.
  - INSTALLATION OF SESC MEASURES SHALL BE DONE IN ACCORDANCE WITH THE CURRENT EDITION OF THE MDT/DTMB SOIL EROSION MANUAL AND CURRENT EDITION OF THE MDT STANDARD SPECIFICATIONS. REFER TO THE APPROPRIATE MANUAL FOR PROPER MAINTENANCE AND INSTALLATION OF SESC MEASURES.
  - AVOID UNNECESSARY DISTURBING OR REMOVING OF EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE COVER AREAS ACT AS SEDIMENT FILTERS.
  - ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS REQUIRED FOR FINAL CLEAN UP AND APPROVAL.
  - GEOTEXTILE SILT FENCE SHALL BE INSTALLED AS REQUIRED WHEN CROSSING CREEKS OR WHEN ADJACENT TO WETLANDS OR SURFACE WATER BODIES TO PREVENT SILTATION AND ELSEWHERE AS DIRECTED BY THE ENGINEER. SEEDING AND/OR SODDING SHALL BE INSTALLED ON CREEK BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.
  - MAINTENANCE, CLEANING, AND REMOVAL OF THE VARIOUS SEDIMENT CONTROL MEASURES SHALL BE INCLUDED IN THE VARIOUS EROSION CONTROL ITEMS.
  - CLEAN ADJACENT ROADWAY WHEN NECESSARY.
  - WATER SITE WHEN NECESSARY TO PREVENT AIRBORNE SEDIMENT TRANSFER.
  - TO PREVENT OFFSITE TRACKING OF SEDIMENT, SWEEP THE ROADWAY AND CURB WEEKLY OR AS DIRECTED BY THE ENGINEER. IF SWEEPING IS LIKELY TO CREATE EXCESSIVE DUST, WET / DAMPEN SEDIMENTS PRIOR TO SWEEPING.
  - CONTRACTOR TO ENSURE ALL CONSTRUCTION DEBRIS HAS BEEN REMOVED FROM ALL NEW AND EXISTING DRAINAGE STRUCTURES PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
- NUMBER IN CIRCLE REFERS TO NUMBERED DETAILS ON MDT STANDARD PLAN R-96 SERIES, SOIL EROSION & SEDIMENTATION CONTROL MEASURES. "P" DENOTES PERMANENT MEASURE AND "T" DENOTES TEMPORARY MEASURE. SOIL EROSION CONTROL PLANS DENOTE MINIMUM EROSION MEASURES REQUIRED AS DESCRIBED BELOW.

- (3P) DENOTES PERMANENT SEEDING. ALL DISTURBED AREAS NOT PAVED OR GRAVELED SHALL BE RESTORED. PLACE TOPSOIL SURFACE, FURN OR SALV. 4 INCH, MDT SEEDING, MIXTURE TUF APPLIED AT A RATE OF 220 LB/ACRE, FERTILIZER, CHEMICAL NUTRIENT, CL A APPLIED AT A RATE OF 176 LB/ACRE; MULCH AT A RATE OF 2 TON/ACRE AND MULCH ANCHORING. (APPLIES TO ENTIRE PROJECT)
- (8P) DENOTES AGGREGATE COVER/PERMANENT PAVEMENT RESTORATION
- (16) DENOTES TREES, SHRUBS AND PERENNIALS
- (26T) DENOTES TEMPORARY SILT FENCE. SILT FENCE SHALL BE INSTALLED AT CREEK CROSSINGS, ADJACENT TO ALL WETLANDS AND SURFACE WATERS, AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. EACH SILT FENCE SHALL BE INSTALLED GENERALLY ALONG THE SAME CONTOUR ELEVATION.
- (29T) DENOTES INLET PROTECTION FABRIC DROP. SHALL BE INSTALLED AT EXISTING AND PROPOSED STORM SEWER INLETS TO PROVIDE SETTLING AND FILTERING OF SILT LADEN WATER PRIOR TO ENTRY INTO THE DRAINAGE SYSTEM.

|               |     |                                    |
|---------------|-----|------------------------------------|
| 06 03/08/2024 | PAD | RE-ISSUED FOR BIDDING              |
| 05 12/01/2023 | PAD | ISSUED FOR BIDDING                 |
| 04 10/25/2023 | PAD | 90% SUBMITTAL                      |
| 03 07/24/2023 | PAD | RE-ISSUED FOR EGLE PART 399 PERMIT |
| 02 07/03/2023 | PAD | ISSUED FOR EGLE PART 399 PERMIT    |
| 01 08/30/2023 | PAD | 70% SUBMITTAL                      |

REVISIONS  
DATE: MARCH, 2024  
SCALE: 1" = 20'

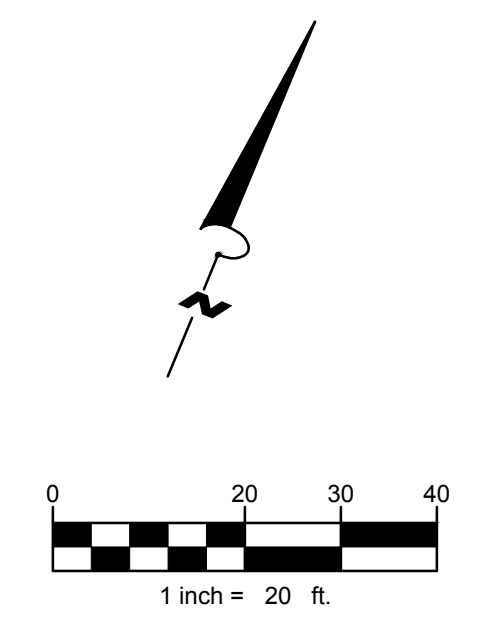
SOIL EROSION AND  
SEDIMENTATION  
CONTROL -  
STA. 97+75 TO STA. 102+75



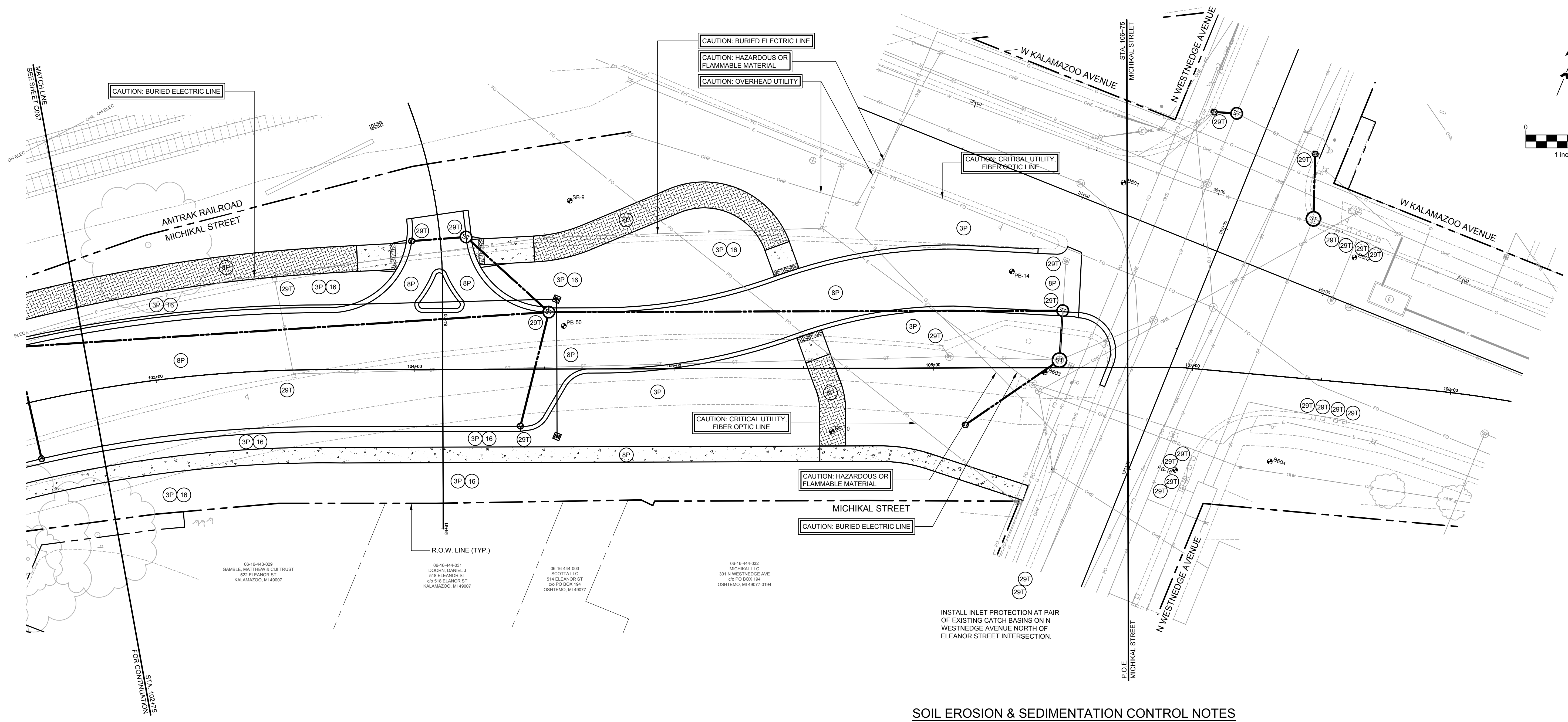
| QUANTITIES THIS SHEET                          |       |
|--|-------|
| ITEM   | QTY.  |
| Erosion Control, Inlet Protection, Fabric Drop | 25 Ea |



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|                       |     |
|-----------------------|-----|
| 06/03/2024            | PAD |
| RE-ISSUED FOR BIDDING |     |
| 05/12/2023            | PAD |
| ISSUED FOR BIDDING    |     |
| 04/10/25/2023         | PAD |
| 90% SUBMITTAL         |     |
| 01/08/30/2023         | PAD |
| 70% SUBMITTAL         |     |
| <b>REVISIONS</b>      |     |
| DATE: MARCH, 2024     |     |
| SCALE: 1" = 20'       |     |

**SOIL EROSION AND  
SEDIMENTATION  
CONTROL -**  
STA. 102+75 TO STA. 106+75  
(P.O.E.)



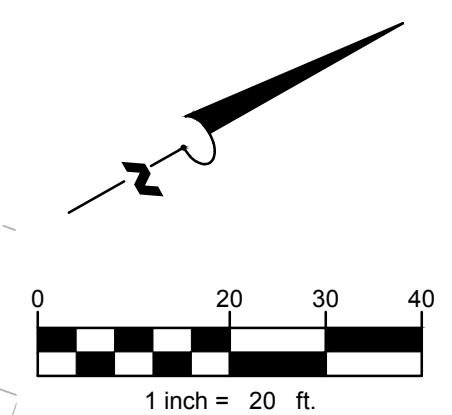
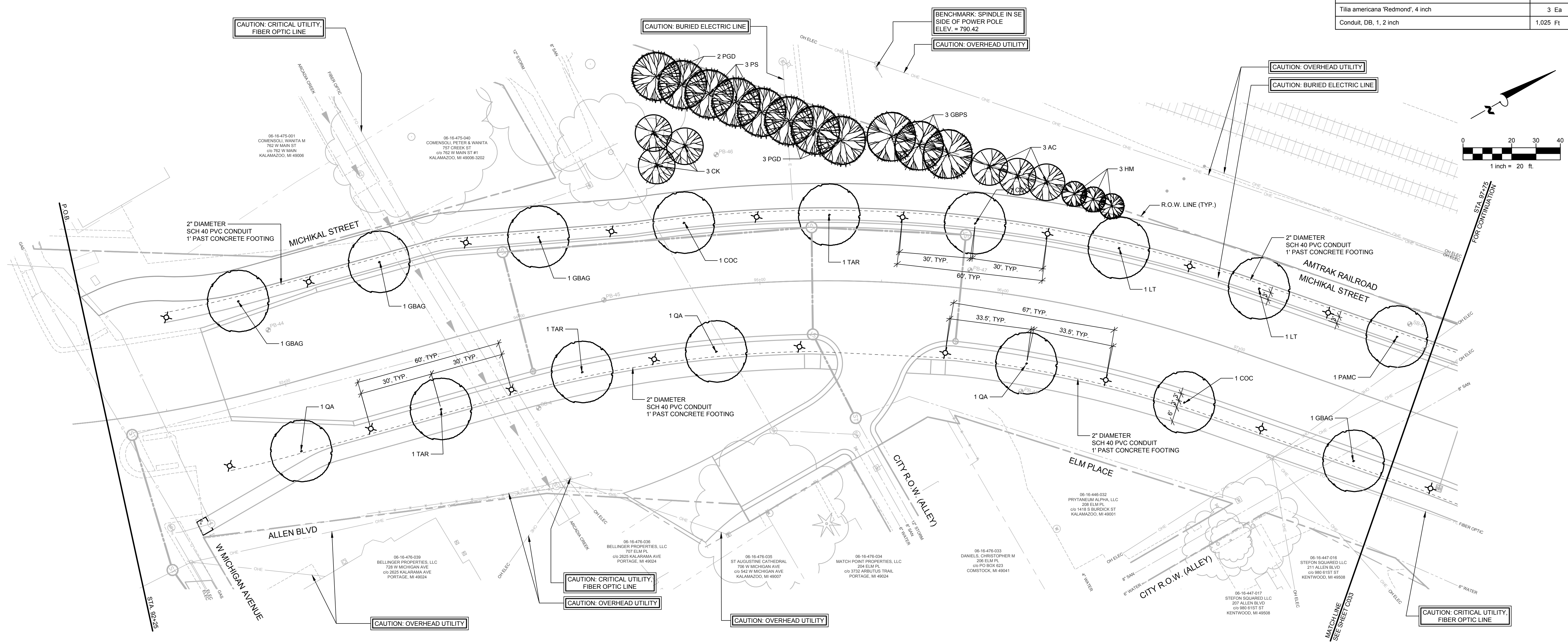
QUANTITIES THIS SHEET

| ITEM   | QTY.     |
|--|----------|
| Amelanchier canadensis, clump form, 10 foot                    | 3 Ea     |
| Celtis occidentalis 'Chicagoland', 4 inch                      | 3 Ea     |
| Cornus kousa, clump form, 10 foot                              | 3 Ea     |
| Ginkgo bilboa 'Autumn Gold', 4 inch                            | 4 Ea     |
| Ginkgo bilboa 'Princeton Sentry', 4 inch                       | 3 Ea     |
| Heptacodium miconioides 'Temple of Bloom', clump form, 10 foot | 3 Ea     |
| Liriodendron tulipifera, 4 inch                                | 2 Ea     |
| Picea glauca 'Densata', 10 foot                                | 5 Ea     |
| Pinus strobus, 10 foot   | 3 Ea     |
| Platanus acerifolia 'Morton Circle', 4 inch                    | 1 Ea     |
| Quercus Alba, 4 inch   | 3 Ea     |
| Tilia americana 'Redmond', 4 inch                              | 3 Ea     |
| Conduit, DB, 1, 2 inch   | 1,025 Ft |



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6201067363  
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MICHIKAL  
IMPROVEMENTS**  
**CITY OF  
KALAMAZOO**  
415 E STOCKBRIDGE AVENUE  
KALAMAZOO, MI 49001



**NOTES**

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- SEE SECTION 815 AND 917 OF THE 2020 MDT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- ALL LANDSCAPE BEDS ADJACENT TO LAWN AREAS SHALL HAVE A SPADED EDGE.
- LANDSCAPE ARCHITECT TO REVIEW ALL TREES EITHER IN THE NURSERIES OR VIA PHOTOGRAPHS OF EACH PLANT. CONTRACTOR TO COORDINATE.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IF AREAS OF POOR DRAINAGE OR OTHER UNUSUAL SUBSURFACE CONDITIONS ARE ENCOUNTERED DURING EXCAVATION FOR PLANTING PITS

**LEGEND**

-  SHADE TREE
-  EVERGREEN TREE
-  ORNAMENTAL TREE

|                       |     |
|-----------------------|-----|
| 06/03/2024            | PAD |
| RE-ISSUED FOR BIDDING |     |
| 05/12/2023            | PAD |
| ISSUED FOR BIDDING    |     |
| 04/10/25/2023         | PAD |
| 90% SUBMITTAL         |     |
| 01/08/30/2023         | PAD |
| 70% SUBMITTAL         |     |

**REVISIONS**  
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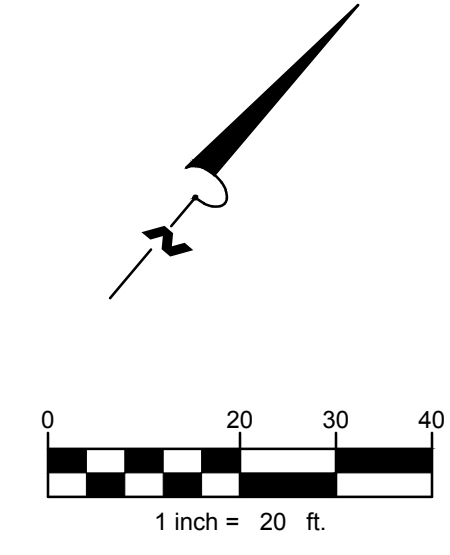
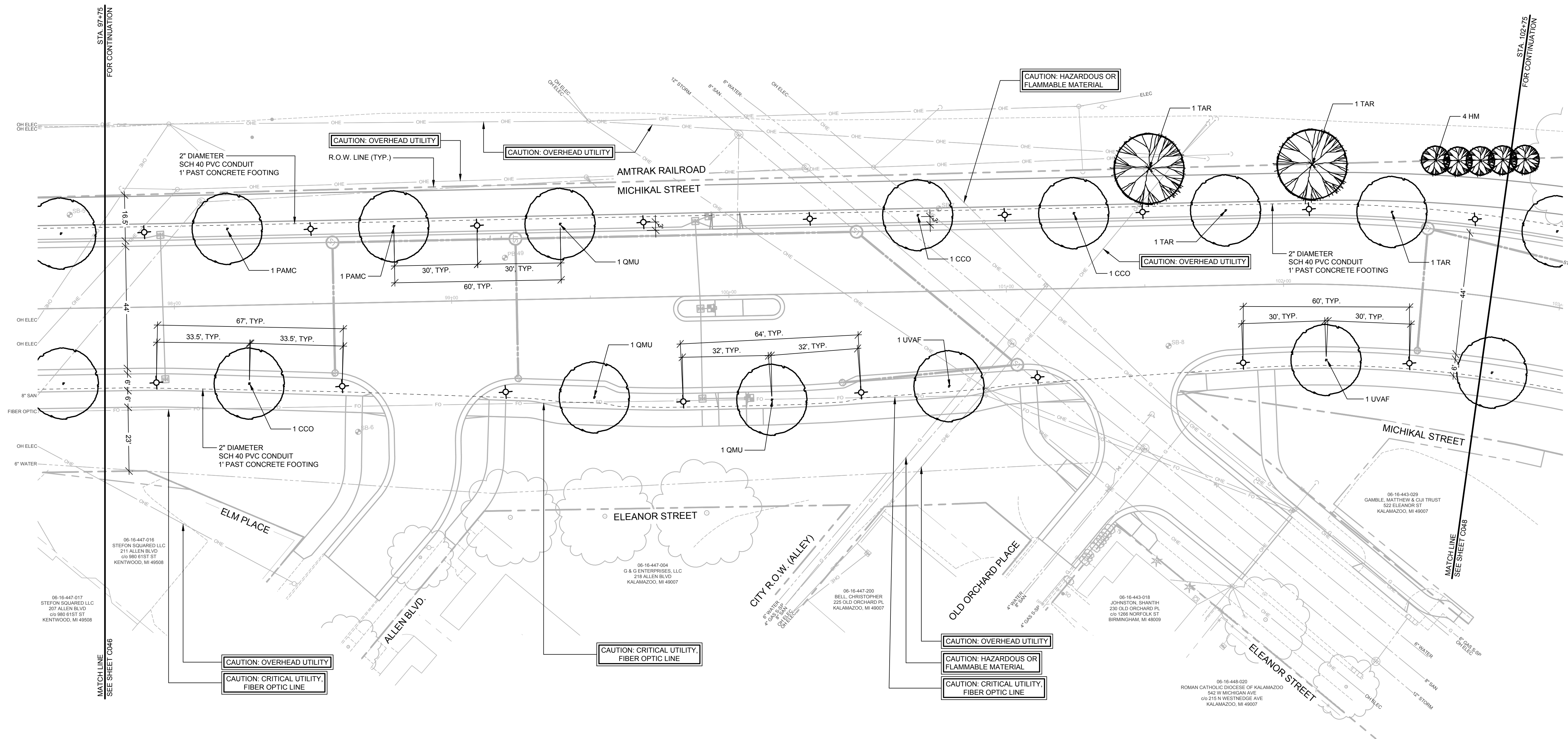
LANDSCAPE PLAN -  
BASE BID -  
STA. 92+25 (P.O.B.) TO STA.  
97+75



| QUANTITIES THIS SHEET  |          |
|--|----------|
| ITEM   | QTY.     |
| Corylus columa, 4 inch   | 3 Ea     |
| Heptacodium miconioides 'Temple of Bloom', clump form, 10 foot | 4 Ea     |
| Platanus acerifolia 'Morton Circle', 4 inch                    | 2 Ea     |
| Quercus muehlenbergii, 4 inch                                  | 3 Ea     |
| Tilia americana 'Redmond', 4 inch                              | 4 Ea     |
| Ulmus americana 'Valley Forge', 4 inch                         | 2 Ea     |
| Conduit, DB, 1, 2 inch   | 1,000 Ft |

**W+**  
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**LEGEND**

- SHADE TREE
- EVERGREEN TREE
- ORNAMENTAL TREE

|                       |     |
|-----------------------|-----|
| 06/03/2024            | PAD |
| RE-ISSUED FOR BIDDING |     |
| 05/12/2023            | PAD |
| ISSUED FOR BIDDING    |     |
| 04/10/25/2023         | PAD |
| 90% SUBMITTAL         |     |
| 01/08/30/2023         | PAD |
| 70% SUBMITTAL         |     |

**REVISIONS**  
 DATE: MARCH, 2024  
 SCALE: 1" = 20'

LANDSCAPE PLAN -  
 BASE BID -  
 STA. 97+75 TO STA. 102+75

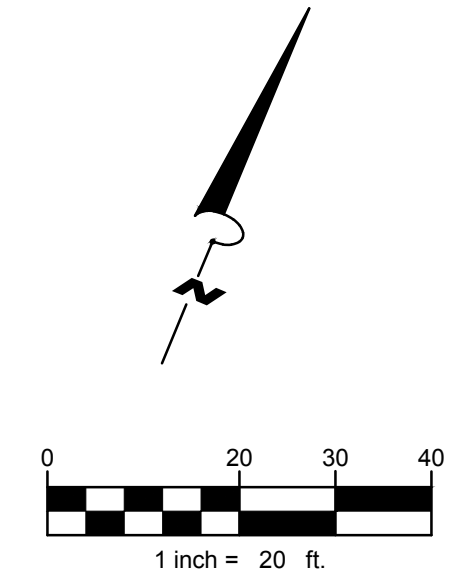
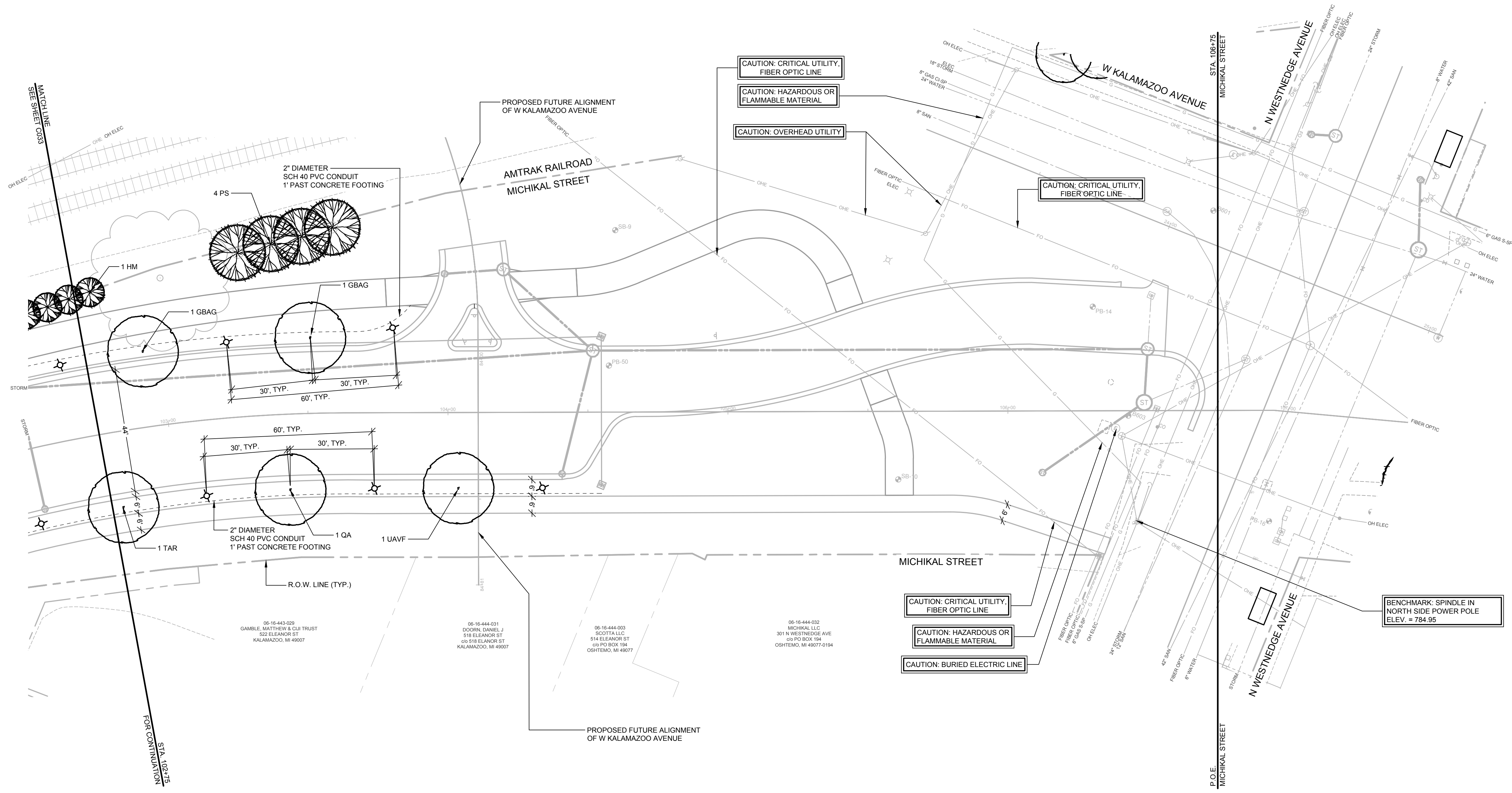


| QUANTITIES THIS SHEET  |        |
|--|--------|
| ITEM   | QTY.   |
| Ginkgo biloba 'Autumn Gold', 4 inch                            | 2 Ea   |
| Heptacodium miconioides 'Temple of Bloom', clump form, 10 foot | 1 Ea   |
| Pinus strobus, 10 foot   | 4 Ea   |
| Quercus Alba, 4 inch   | 1 Ea   |
| Tilia americana 'Redmond', 4 inch                              | 1 Ea   |
| Ulmus americana 'Valley Forge', 4 inch                         | 1 Ea   |
| Conduit, DB, 1, 2 inch   | 295 Ft |



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**KALAMAZOO**  
 415 E STOCKBRIDGE AVENUE  
 KALAMAZOO, MI 49001



06-16-443-029  
 GAMBILE, MATTHEW & CUI TRUST  
 522 ELEANOR ST  
 KALAMAZOO, MI 49007

06-16-444-031  
 DOORNI, DANIEL J  
 518 ELEANOR ST  
 626 518 ELEANOR ST  
 KALAMAZOO, MI 49007

06-16-444-003  
 SCOTTA LLC  
 514 ELEANOR ST  
 626 PO BOX 194  
 OSHTEMO, MI 49077

06-16-444-032  
 MICHIKAL LLC  
 301 N WESTNEDGE AVE  
 626 PO BOX 194  
 OSHTEMO, MI 49077-0194

CAUTION: CRITICAL UTILITY,  
 FIBER OPTIC LINE

CAUTION: HAZARDOUS OR  
 FLAMMABLE MATERIAL

CAUTION: OVERHEAD UTILITY

CAUTION: CRITICAL UTILITY,  
 FIBER OPTIC LINE

CAUTION: CRITICAL UTILITY,  
 FIBER OPTIC LINE

CAUTION: HAZARDOUS OR  
 FLAMMABLE MATERIAL




CAUTION: BURIED ELECTRIC LINE

BENCHMARK: SPINDLE IN  
 NORTH SIDE POWER POLE  
 ELEV. = 784.95

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|                       |     |
|-----------------------|-----|
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LANDSCAPE PLAN -  
 BASE BID -  
 STA. 102+75 TO STA. 106+75  
 (P.O.E.)

| QUANTITIES THIS SHEET                       |        |
|---|--------|
| ITEM  | QTY.   |
| Site Preparation, Max                       | 1 LSUM |
| Watering and Cultivating, First Season, Min | 1 LSUM |

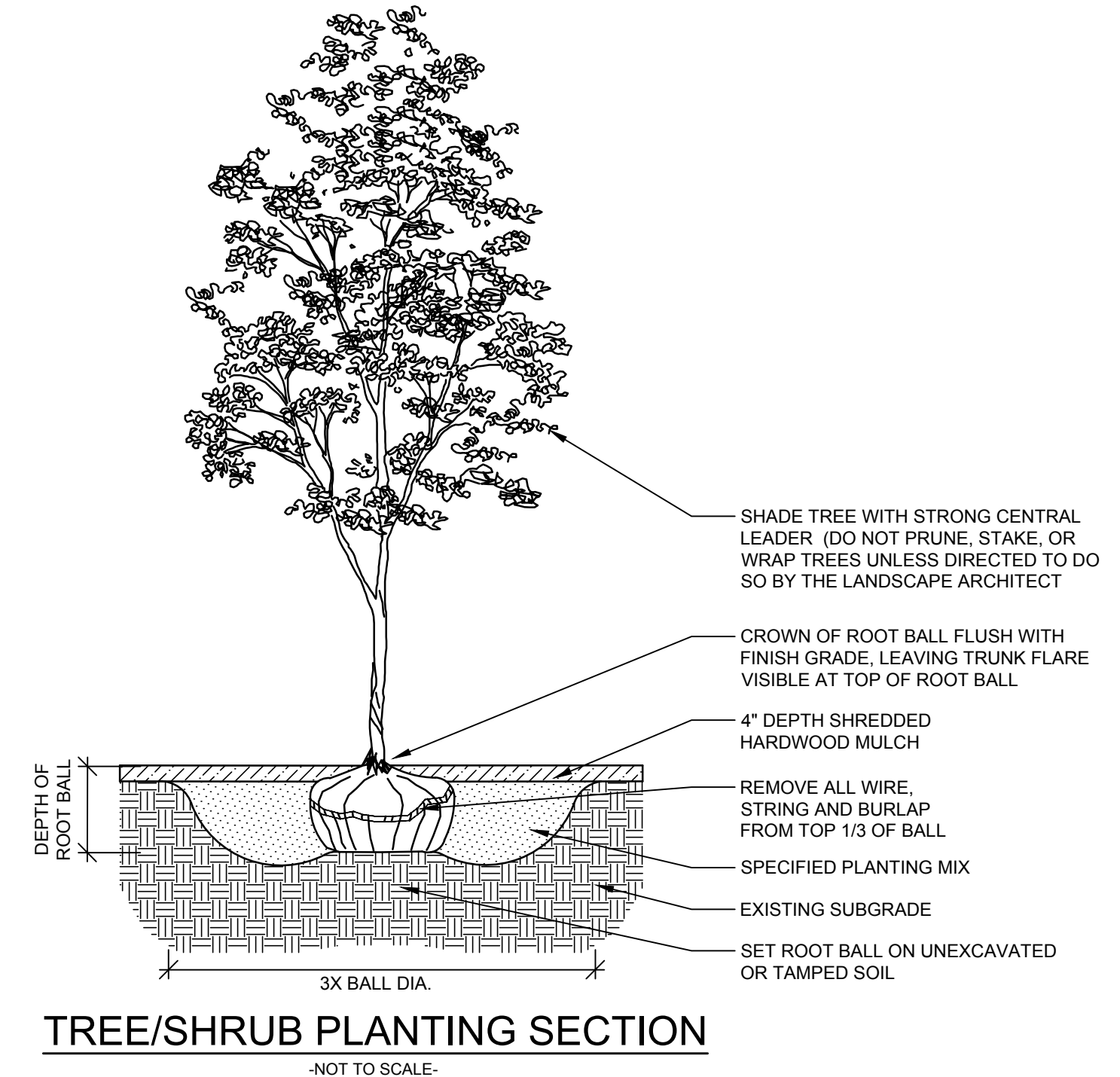


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**PLANT LIST - BASE BID**

NOTE: QUANTITIES ON THE PLANT LIST ARE PROVIDED FOR INFORMATION ONLY. PLANT QUANTITIES UNDER THE CONTRACT ARE INDICATED ON THE PLANS. IN THE EVENT OF ANY DISCREPANCIES, THE CONTRACT SHALL BE BASED ON THE QUANTITIES SHOWN ON THE PLANS.

| CODE                    | BOTANICAL NAME                           | COMMON NAME                      | QTY | CAL | HT  | ROOT | REMARKS  |
|-------------------------|--|----------------------------------|-----|-----|-----|------|--|
| <b>SHADE TREES</b>      |  |                                  |     |     |     |      |  |
| COC                     | CELTIS OCCIDENTALIS 'CHICAGOLAND'        | CHICAGOLAND COMMON HACKBERRY     | 3   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| CCO                     | CORYLUS COLURNA                          | TURKISH FILBERT                  | 3   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| GBAG                    | GINKGO BILOBA 'AUTUMN GOLD'              | AUTUMN GOLD GINGKO               | 6   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| GBPS                    | GINKGO BILOBA PRINCETON SENTRY           | PRINCETON SENTRY GINGKO          | 3   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| LT                      | LIRIODENDRON TULIPIFERA                  | TULIPTREE                        | 2   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| PAMC                    | PLATANUS X ACERIFOLIA 'MORTON CIRCLE'    | EXCLAMATION! LONDON PLANETREE    | 3   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| QMU                     | QUERCUS MUEHLENBERGII                    | CHINKAPIN OAK                    | 3   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| QA                      | QUERCUS ALBA                             | WHITE OAK                        | 4   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| TAR                     | TILIA AMERICANA 'REDMOND'                | REDMOND AMERICAN LINDEN          | 8   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| UAVF                    | ULMUS AMERICANA 'VALLEY FORGE'           | VALLEY FORGE AMERICAN ELM        | 3   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| <b>EVERGREEN TREES</b>  |  |                                  |     |     |     |      |  |
| PGD                     | PICEA GLAUCA 'DENSATA'                   | BLACK HILLS SPRUCE               | 5   |     | 10' |      | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY                          |
| PS                      | PINUS STROBUS                            | EASTERN WHITE PINE               | 7   |     | 10' | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY                          |
| <b>ORNAMENTAL TREES</b> |  |                                  |     |     |     |      |  |
| AC                      | AMELANCHIER CANADENSIS                   | SHADBLOW SERVICEBERRY            | 3   |     | 10' | B&B  | MULTI-STEM, 4-5 STEMS MINIMUM                                    |
| CK                      | CORNUS KOUSA                             | KOUSA DOGWOOD                    | 3   |     | 10' | B&B  | MULTI-STEM, 4-5 STEMS MINIMUM                                    |
| HM                      | HEPTACODIUM MICONIODES 'TEMPLE OF BLOOM' | TEMPLE OF BLOOM SEVEN-SON FLOWER | 8   |     | 10' | B&B  | MULTI-STEM, 4-5 STEMS MINIMUM                                    |



PHILIP A. DOORLAG  
 6201067363

PROJECT NAME:  
**STREETS FOR ALL:  
 MICHIKAL  
 IMPROVEMENTS**

**CITY OF  
 KALAMAZOO**  
 415 E STOCKBRIDGE AVENUE  
 KALAMAZOO, MI 49001

|                       |     |
|-----------------------|-----|
| 06 03/08/2024         | PAD |
| RE-ISSUED FOR BIDDING |     |
| 05 12/01/2023         | PAD |
| ISSUED FOR BIDDING    |     |
| 04 10/25/2023         | PAD |
| 90% SUBMITTAL         |     |
| 01 08/30/2023         | PAD |
| 70% SUBMITTAL         |     |

**REVISIONS**

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DATE: MARCH, 2024  
 SCALE: NONE

LANDSCAPE PLAN -  
 BASE BID -  
 DETAILS AND PLANT LIST



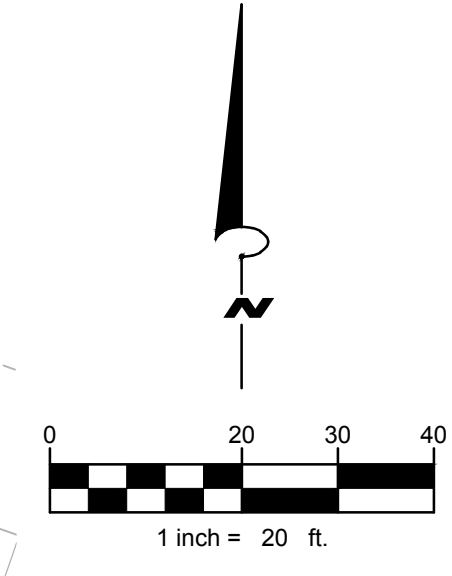
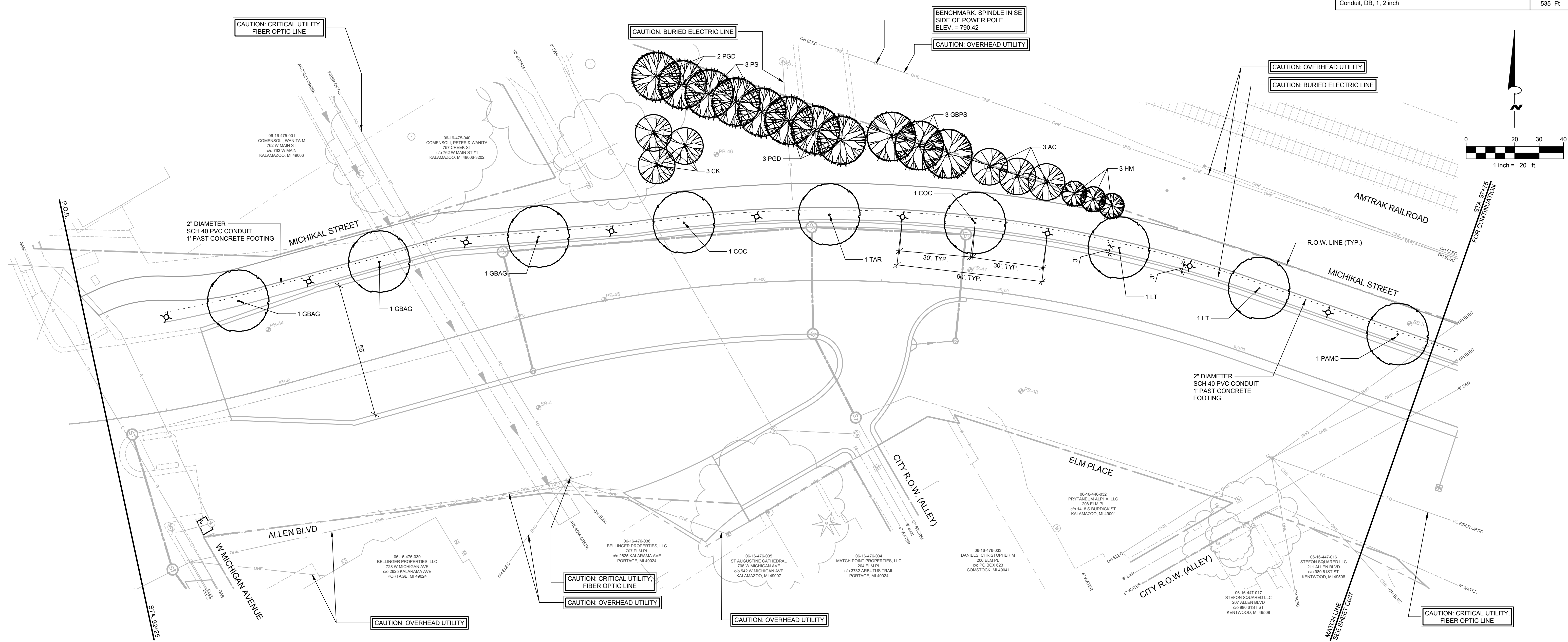
QUANTITIES THIS SHEET

| ITEM   | QTY.   |
|--|--------|
| Amelanchier canadensis, clump form, 10 foot                    | 2 Ea   |
| Celtis occidentalis 'Chicagoland', 4 inch                      | 2 Ea   |
| Cornus kousa, clump form, 10 foot                              | 3 Ea   |
| Ginkgo bilboa 'Autumn Gold', 4 inch                            | 3 Ea   |
| Ginkgo bilboa 'Princeton Sentry', 4 inch                       | 3 Ea   |
| Heptacodium miconioides 'Temple of Bloom', clump form, 10 foot | 3 Ea   |
| Liriodendron tulipifera, 4 inch                                | 2 Ea   |
| Picea glauca 'Densata', 10 foot                                | 5 Ea   |
| Pinus strobus, 10 foot   | 3 Ea   |
| Platanus acerifolia 'Morton Circle', 4 inch                    | 1 Ea   |
| Tilia americana 'Redmond', 4 inch                              | 1 Ea   |
| Conduit, DB, 1, 2 inch   | 535 Ft |



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**NOTES**

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- SEE SECTION 815 AND 917 OF THE 2020 MDT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- ALL LANDSCAPE BEDS ADJACENT TO LAWN AREAS SHALL HAVE A SPADED EDGE.
- LANDSCAPE ARCHITECT TO REVIEW ALL TREES EITHER IN THE NURSERIES OR VIA PHOTOGRAPHS OF EACH PLANT. CONTRACTOR TO COORDINATE.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IF AREAS OF POOR DRAINAGE OR OTHER UNUSUAL SUBSURFACE CONDITIONS ARE ENCOUNTERED DURING EXCAVATION FOR PLANTING PITS

**LEGEND**

-  SHADE TREE
-  EVERGREEN TREE
-  ORNAMENTAL TREE

|                       |     |
|-----------------------|-----|
| 06 03/08/2024         | PAD |
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**REVISIONS**  
DATE: MARCH, 2024  
SCALE: 1" = 20'

LANDSCAPE PLAN -  
ALTERNATE A -  
STA. 92+25 (P.O.B.) TO STA.  
97+75



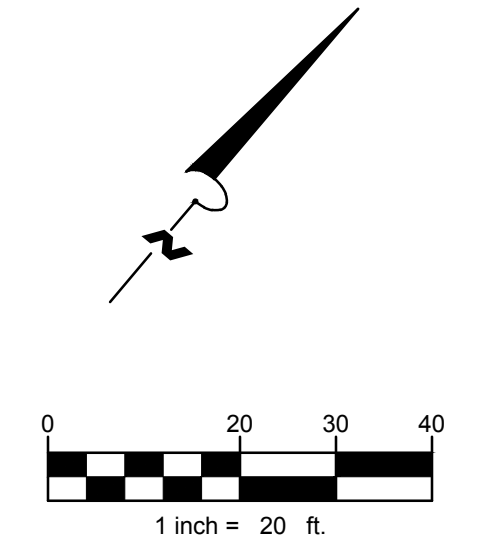
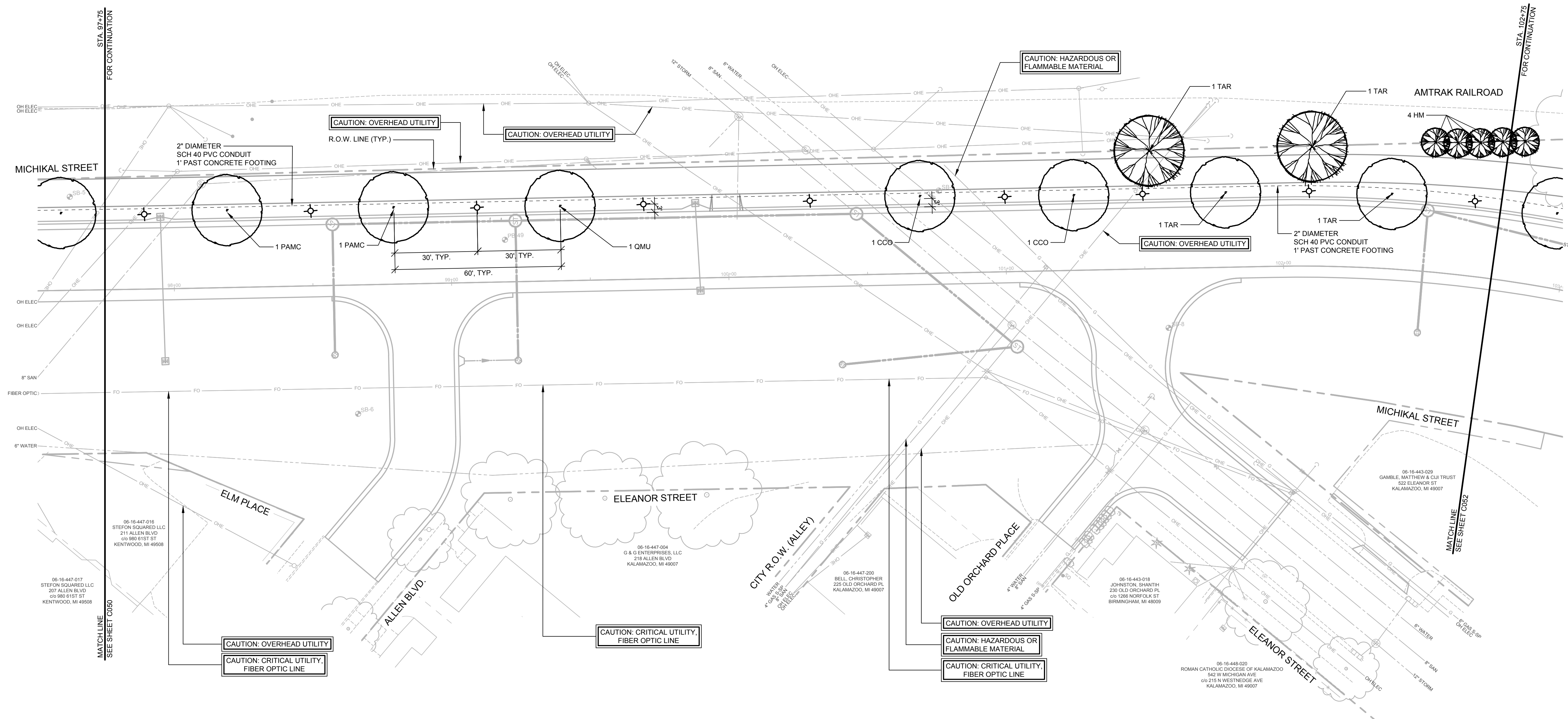
QUANTITIES THIS SHEET

| ITEM   | QTY.   |
|--|--------|
| Corylus columa, 4 inch   | 2 Ea   |
| Heptacodium miconioides 'Temple of Bloom', clump form, 10 foot | 4 Ea   |
| Platanus acerifolia 'Morton Circle', 4 inch                    | 2 Ea   |
| Quercus muehlenbergii, 4 inch                                  | 1 Ea   |
| Tilia americana 'Redmond', 4 inch                              | 4 Ea   |
| Conduit, DB, 1, 2 inch   | 510 Ft |



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**LEGEND**

-  SHADE TREE
-  EVERGREEN TREE
-  ORNAMENTAL TREE

|                       |     |
|-----------------------|-----|
| 06 03/08/2024         | PAD |
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| 90% SUBMITTAL         |     |
| 01 08/30/2023         | PAD |
| 70% SUBMITTAL         |     |
| <b>REVISIONS</b>      |     |
| DATE: MARCH, 2024     |     |
| SCALE: 1" = 20'       |     |

LANDSCAPE PLAN -  
ALTERNATE A -  
STA. 97+75 TO STA. 102+75

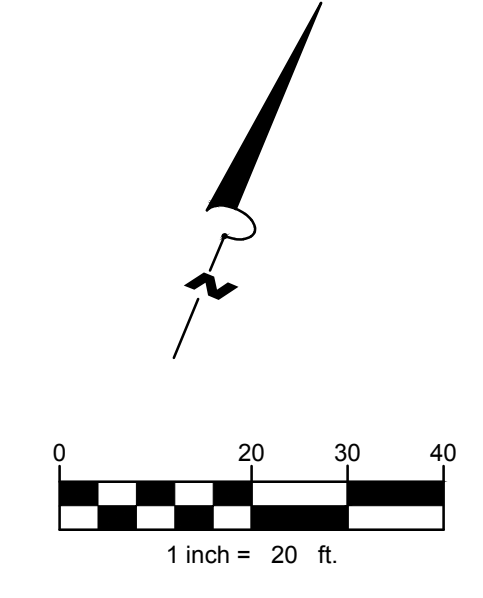
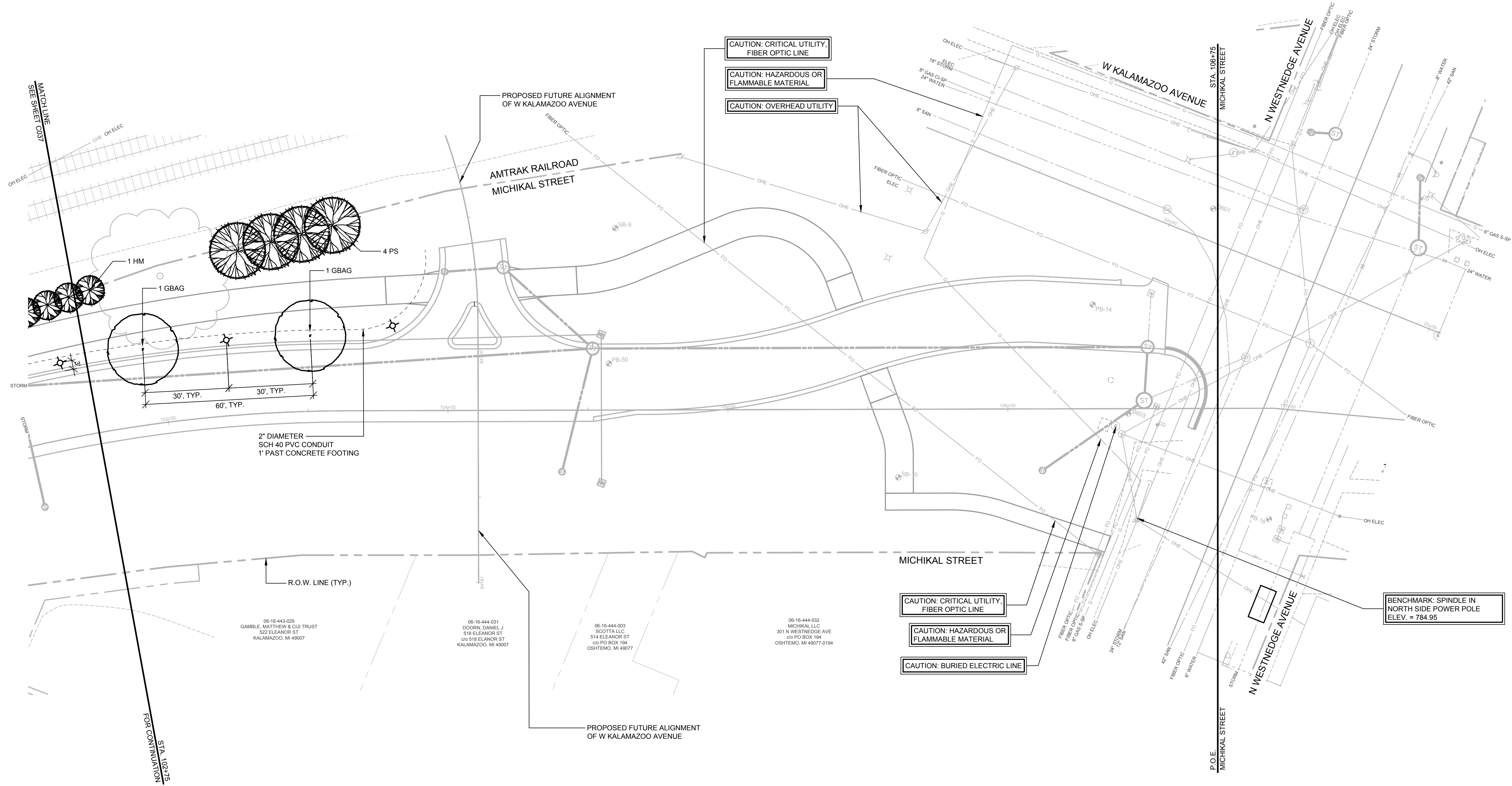


| QUANTITIES THIS SHEET  |        |
|--|--------|
| ITEM   | QTY.   |
| Ginkgo bilboa 'Autumn Gold', 4 inch                            | 2 Ea   |
| Heptacodium miconioides 'Temple of Bloom', clump form, 10 foot | 1 Ea   |
| Pinus strobus, 10 foot   | 4 Ea   |
| Conduit, DB, 1, 2 inch   | 145 Ft |



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**LEGEND**

-  SHADE TREE
-  EVERGREEN TREE
-  ORNAMENTAL TREE

|                       |     |
|-----------------------|-----|
| 06 03/08/2024         | PAD |
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| <b>REVISIONS</b>      |     |
| DATE: MARCH, 2024     |     |
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LANDSCAPE PLAN -  
 ALTERNATE A -  
 STA. 102+75 TO STA. 106+75  
 (P.O.E.)

| QUANTITIES THIS SHEET                       |        |
|---|--------|
| ITEM  | QTY.   |
| Site Preparation, Max                       | 1 LSUM |
| Watering and Cultivating, First Season, Min | 1 LSUM |



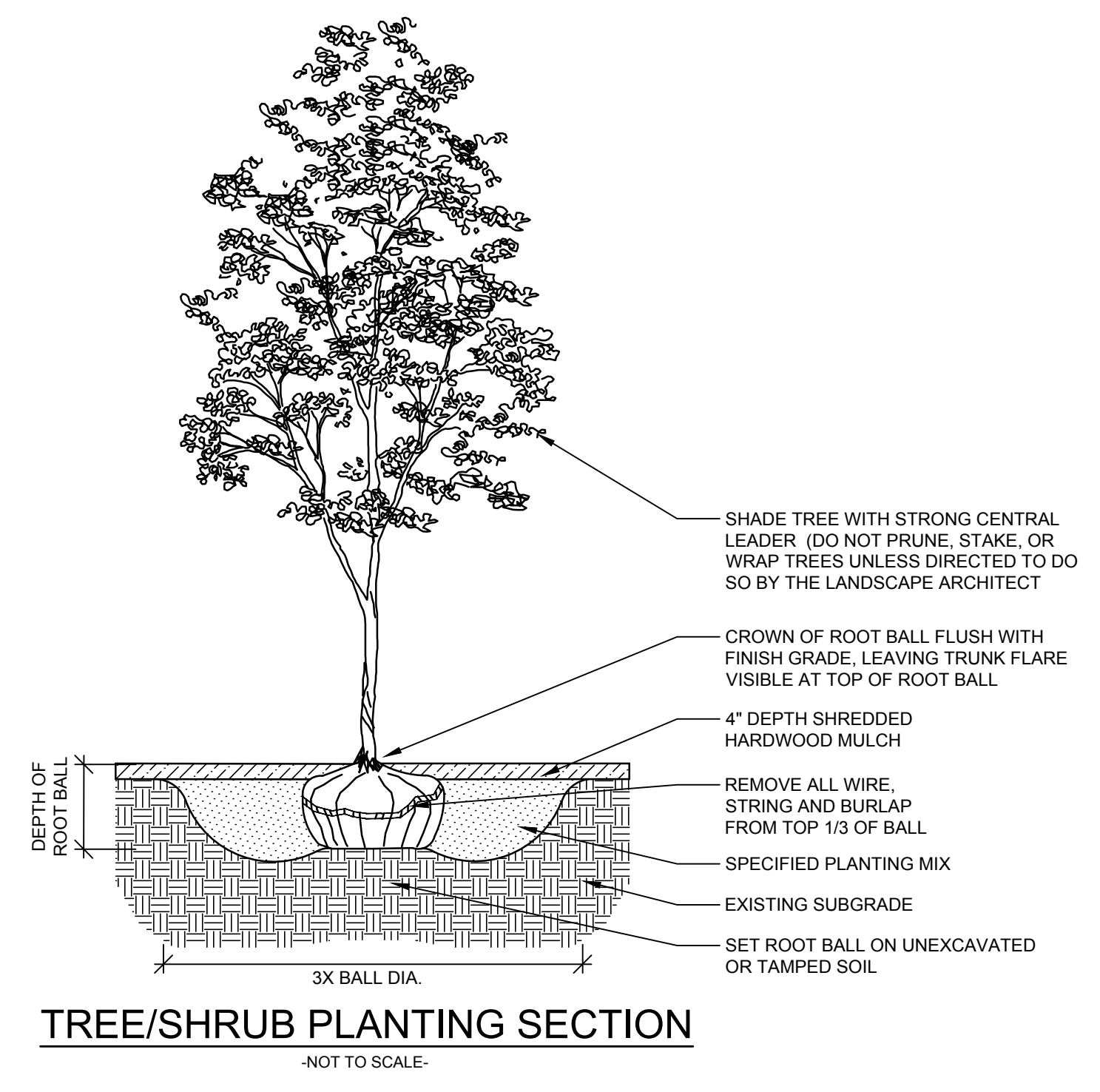
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**PLANT LIST - ALTERNATE A**

NOTE: QUANTITIES ON THE PLANT LIST ARE PROVIDED FOR INFORMATION ONLY. PLANT QUANTITIES UNDER THE CONTRACT ARE INDICATED ON THE PLANS. IN THE EVENT OF ANY DISCREPANCIES, THE CONTRACT SHALL BE BASED ON THE QUANTITIES SHOWN ON THE PLANS.

| CODE                    | BOTANICAL NAME                           | COMMON NAME                      | QTY | CAL | HT  | ROOT | REMARKS  |
|-------------------------|--|----------------------------------|-----|-----|-----|------|--|
| <b>SHADE TREES</b>      |  |                                  |     |     |     |      |  |
| COC                     | CELTIS OCCIDENTALIS 'CHICAGOLAND'        | CHICAGOLAND COMMON HACKBERRY     | 2   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| CCO                     | CORYLUS COLURNA                          | TURKISH FILBERT                  | 3   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| GBAG                    | GINKGO BILOBA 'AUTUMN GOLD'              | AUTUMN GOLD GINGKO               | 5   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| GBPS                    | GINKGO BILOBA PRINCETON SENTRY           | PRINCETON SENTRY GINGKO          | 3   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| LT                      | LIRIODENDRON TULIPIFERA                  | TULIPTREE                        | 2   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| PAMC                    | PLATANUS X ACERIFOLIA 'MORTON CIRCLE'    | EXCLAMATION! LONDON PLANETREE    | 3   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| QMU                     | QUERCUS MUEHLENBERGII                    | CHINKAPIN OAK                    | 1   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| TAR                     | TILIA AMERICANA 'REDMOND'                | REDMOND AMERICAN LINDEN          | 5   | 4"  |     | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY, LOWEST BRANCH 6' HEIGHT |
| <b>EVERGREEN TREES</b>  |  |                                  |     |     |     |      |  |
| PGD                     | PICEA GLAUCA 'DENSATA'                   | BLACK HILLS SPRUCE               | 5   |     | 10' |      | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY                          |
| PS                      | PINUS STROBUS                            | EASTERN WHITE PINE               | 7   |     | 10' | B&B  | SINGLE STRAIGHT TRUNK, SPECIMEN QUALITY                          |
| <b>ORNAMENTAL TREES</b> |  |                                  |     |     |     |      |  |
| AC                      | AMELANCHIER CANADENSIS                   | SHADBLow SERVICEBERRY            | 2   |     | 10' | B&B  | MULTI-STEM, 4-5 STEMS MINIMUM                                    |
| CK                      | CORNUS KOUSA                             | KOUSA DOGWOOD                    | 3   |     | 10' | B&B  | MULTI-STEM, 4-5 STEMS MINIMUM                                    |
| HM                      | HEPTACODIUM MICONIODES 'TEMPLE OF BLOOM' | TEMPLE OF BLOOM SEVEN-SON FLOWER | 8   |     | 10' | B&B  | MULTI-STEM, 4-5 STEMS MINIMUM                                    |

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| 01 08/30/2023  | PAD         |
| 70% SUBMITTAL  |             |
| <b>REVISIONS</b>   |             |
| <small>           03/08/2024 03:08:00 PM 2/24/2024 10:00:00 AM<br/>           12/01/2023 12:01:00 PM 10/25/2023 10:25:00 AM<br/>           10/25/2023 10:25:00 AM 08/30/2023 08:30:00 AM<br/>           THE REPRODUCTION, COPYING OR OTHER USE OF THIS DRAWING WITHOUT WRITTEN CONSENT IS PROHIBITED.<br/>           © 2024 WIGHTMAN &amp; ASSOCIATES, INC.         </small> |             |
| DATE:  | MARCH, 2024 |
| SCALE:   | NONE        |

LANDSCAPE PLAN -  
 ALTERNATE A  
 DETAILS AND PLANT LIST