CITY OF ANN ARBOR ENGINEERING

IN COOPERATION WITH THE UNIVERSITY OF MICHIGAN

E. MEDICAL CENTER DRIVE BRIDGE REHABILITATION AND WIDENING

CITY FILE NO. 2021-008

TRAFFIC DATA

PRESENT ADT

18,500 (2021)

FUTURE ADT

20,000 (2041)

1% COMMERCIAL

2.0%

POSTED SPEED

25 MPH

DESIGN SPEED

30 MPH

PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION AT NO COST TO CONTRACTOR.

PROJECT

CITY OF ANN ARBOR ENGINEERING

SOURCE: UNIVERSITY OF MICHIGAN

COMPANY

ACCESS AGREEMENT

EAST MEDICAL CENTER DRIVE OVER MILITARY TRAFFIC CONTROL DEVICES

STR 11065

EAST MEDICAL CENTER DRIVE OVER MILITARY SOUTHERN RAILROAD

CONTRACT FOR: DECK REPLACEMENT AND WIDENING, STRUCTURAL STEEL REPAIRS, BEAM GALVANIZATION, PIER CAP REPLACEMENT, SUBSTRUCTURE PATCHING, SUBSTRUCTURE WIDENING.

PREPARED UNDER THE SUPERVISION OF
Carrie L Hanrel, PE
2023.10.06 16:20:03-0400

CONTRACT FOR: APPROACH WORK, ROADWAY WIDENING, SIDEWALK REPLACEMENT, HMA RESURFACING AND RECONSTRUCTION, SIGNAL WORK AND MAINTENANCE OF TRAFFIC.

PREPARED UNDER THE SUPERVISION OF

Digitally signed by Leigh C Merrill III
Date: 2023.10.06 15:56:10-0400
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

LIGHTING CONDUIT. INCLUDED IN THE PAY ITEM "EXPLORATORY EXCAVATION, VERTICAL"

THE CONTRACT, FOR THE VARIOUS TYPES AND SIZES OF SEWER TO BE REPLACED. SUPPORT
SHALL BE MADER, HAND DIGGING MAY BE REQUIRED. PRECAUTIONS MUST BE TAKEN TO PREVENT ANY INTERRUPTION TO AMTRAK'S OPERATION.

THE LOCATION OF MATERIAL, STOCK PIECES AND ON-SITE STAGING AREAS TO BE APPROVED BY THE ENGINEER. ANY MATERIALS STORED OR STORED SHALL NOT CREATE A HAZARD OR INTERFERENCE WITH THE PUBLIC FUNCTION. MATERIALS STORED OR STORED SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE RELATED ITEM OF WORK.

A RAILWAY PERMIT IS REQUIRED TO ACCESS THE TRACK SIDE OF THE PIES TO PERFORM THE SUBTRIBUTION REPAIRS.

THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND SERVICE LEADS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

DURING HAND DIGGING NO MORE THAN 10 FEET OF TRENCH SHALL BE OPENED AT A TIME. WHEN TRENCH SHALL BE PROPERLY Secured WITH PROTECTIVE FENCING. THIS WORK SHALL BE INCLUDED IN THE TIME OF WORK BEING PERFORMED AND WILL NOT BE PAID FOR SEPARATELY.

THE EXISTING STREET NAME, GRADING, REGULATORY SIGNS, STREET LIGHTING, ETC. WHICH CONFLICT WITH THE PROPOSED CONSTRUCTION SHALL BE REMOVED PRIOR TO CONSTRUCTION, STORED IN A MANNER WHICH SHALL BE APPROPRIATE TO THE SPECIFIC UTILITIES OR STREET LIGHTING TO BE EXCAVATED. THE WORK TO COMPLY WITH THESE REQUIREMENTS WILL BE PAID FOR SEPARATELY.

BECAUSE EXCAVATED CONCRETE CORNERS SHOULD BE SMOOTHED ON THE PLANS WITH 1/2 TRANSLATION MOLDING WITH EXCEPT AS NOTED.

UNLESS OTHERWISE SHOWN ON THE PLANS PROVIDE MINIMUM CONCRETE COVER FOR REINFORCEMENT AS SPECIFIED IN THE CONTRACT. CONCRETE CAST AGAINST EARTH SHALL NOT HAVE A MINIMUM COVER OF 3 IN. CONCRETE CAST AGAINST EARTH SHALL HAVE A MINIMUM COVER OF 3 IN.

REMOVAL OF EXISTING HMA PATCHES AS A RESULT OF REMOVAL OF OTHER SUPERSTRUCTURE ITEMS SHALL BE MADE BY THE CONTRACTOR AND SHALL BE PAYABLE ONLY AT THE CONTRACTOR'S ESTIMATE.

NO PORTION OF THE FORMWORK OR FALSEWORK SHALL EXCEED THE END-OF-THE-LANDING.

THIS PROJECT HAS BEEN EVALUATED USING THE FAA NOTICE CRITERIA TOOL FOR A PROPOSED STRUCTURAL HEIGHT OF 335 FEET ABOVE A GROUND LEVEL OF 771 FEET AND IS NOT REQUIRED.

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# PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

## Bridge LTG, Oper and Maintain

- **Joint Waterproofing**
- **Steel Sheet Piling, Temp, Leave in Place**
- **Conduit, Schedule 80, 4 inch, Structure**
- **Structural Steel, Galvanizing (STR 11065)**
- **Micropile mobilization, LRFD (STR 11065)**

## General Conditions
- **Max $650,000**

## Additional Items
- **Lighted Arrow, Type C, Oper**
- **Barricade, Type III, High Intensity, Lighted, Oper**
- **Hemispherical Video Detection Camera**
- **Soil nails for slope stabilization**
- **Tree fence, protective**
- **Sidewalk ramp, concrete, 8 inch**
- **Conduit, DB, 1, 1 1/2 Inch**
- **Machine grading, modified**
- **Project supervision**

### CALL MISS DIG
- **504-222-4222**
- **L**

### NOTES:
- **CODE NO.**
- **DESCRIPTION**
- **UNIT**
- **AS-BUILT**
- **TOTAL**
- **CATG**
- **0001**
- **0002**
- **0003**

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**PROJECT: 2022 E. MEDICAL CENTER DRIVE BRIDGE REHABILITATION AND WIDENING QUANTITY SHEET**

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**EAST MEDICAL CENTER DRIVE**

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**MICROSCALE QUANTITIES**

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**EAST MEDICAL CENTER DRIVE**

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**LAYOUT LENGTH**

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**EAST MEDICAL CENTER DRIVE**

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**SHEET:** 1 OF 1
BM#1
ELEV=790.619'
TOP OF SW TRAFFIC SIGNAL BASE BOLT AT THE SW CORNER OF THE INTERSECTION OF FULLER AVE AND MAIDEN AVENUE/E. MEDICAL CENTER DRIVE

BM#2
ELEV=806.437'
TOP OF NE LIGHT POLE BASE BOLT ON NORTH SIDE OF W MEDICAL CENTER DRIVE +/- 40' FROM THE INTERSECTION OF E. MEDICAL CENTER DRIVE

FOR UTILITY STRUCTURE INFORMATION, SEE STRUCTURE TABLE - SHEET 59.

NOTE
HORIZONTAL DATUM: MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE 2113, INTERNATIONAL FEET, NAD 83, 2011 ADJUSTMENT YEAR.

UTILITIES SHOWN ARE BASED OFF MARKED LOCATIONS PROVIDED BY T2 UTILITY ENGINEERS AND PLAN INFORMATION RECEIVED FROM UTILITY OWNERS IN RESPONSE TO A MISS DIG TICKET. UTILITY INFORMATION SHOULD BE CONSIDERED APPROXIMATE AND WILL NEED TO BE VERIFIED PRIOR TO ANY CONSTRUCTION.

MISS DIG TICKET #: B13010469

NOTES
EXISTING CONDITIONS (FULLER RD.)

1. S01D09'E TO NORTHERN AMTRAK RAIL
2. S62D59'E TO SW CORNER OF PARKING LOT
3. N78D20'E 43.39' TO THE INTERSECTION OF THE CURB AND SIDEWALK.
4. N22D02'W 34.24' TO REBAR CONTROL POINT 3
5. S86D46'W 93.43' TO REBAR CONTROL POINT 8

WITNESSES:
1. 0.999928086
2. 0.999928338

COORDINATES:
1. N=287038.7366 E=13294856.2800 EL=770.34'
2. N=286959.8056 E=13295063.1500 EL=802.00
3. N=286890.9640 E=13295149.6300 EL=804.56'
4. N=287055.2903 E=13295078.6600 EL=797.58'
5. N=287188.4723 E=13294921.5700 EL=790.30'
6. N=287046.5865 E=13295189.4300 EL=769.97'

COMBINED FACTOR:
0.99992966

Horizontal Datum:
NAD 83 (NSRS 2011)
Vertical Datum:
Geoid 12B
Coordinate System:
State Plane Grid

EAST MEDICAL CENTER DRIVE BRIDGE.

BEFORE YOU DIG

1. S02D45'E 53.30' TO THE NE CORNER OF RETAINING WALL.
2. S70D38'E 7.08' TO THE WEST EDGE OF THE SOUTHERN PIER OF THE EAST MEDICAL CENTER BRIDGE OVER AMTRAK

COMBINED FACTOR:
0.999929683

COORDINATES:
1. N=287078.6776 E=13294780.0000 EL=781.27'
2. N01D19'E 29.05' TO A 12" TREE
3. N76D05'E 5.95' TO CENTER OF TELEPHONE MANHOLE
4. N48D04'W 20.58' TO THE SE CORNER OF DETETABLE WARNING SURFACE
5. N72D53'W 27.10' TO 36" TREE
6. N79D09'E 27.63' TO THE SW CORNER OF DETETABLE WARNING SURFACE
7. N35D03'W 62.92' TO THE NE CORNER OF RETAINING WALL.
8. S35D03'W 62.92' TO A TELEPHONE HAND HOLE
9. N83D51'W 78.32' TO A TELEPHONE HAND HOLE
10. S28D52'W TO A 8" TREE
11. S7D38"E 48.10' TO A 12" TREE
12. N04D41'W 39.31' TO 36" TREE
14. N21D30'W 28.36' TO THE SE CORNER OF RETAINING WALL
15. S04D20'W 53.56' TO THE NE CORNER OF RETAINING WALL

WITNESSES:
1. 0.999928338
2. 0.999929105

Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the south side of the Amtrak tracks, WEST OF THE
CONTROL POINT #: 1
Control Point #: 2
Control Point #: 3

Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the north side of the Amtrak tracks, EAST OF THE
CONTROL POINT #: 5
Control Point#: 6
Control Point#: 7

Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the south side of FULLER AVENUE APPOXIMATELY

Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the north side of the Amtrak tracks, WEST OF THE
CONTROL POINT #: 3

This point was set by the City of Ann Arbor in 1993 and is paired with
MONUMENT AND IS DESCRIBED AS THE 1993 EDITION OF THE CITY OF ANN ARBOR BRASS DISC, SET IN CONCRETE PER
CONCRETE BRIDGE ABUTMENT ON THE EASTERLY SIDE OF MAIDEN LANE. SAID STATION IS A PRIMARY CONTROL
EASTERLY EDGE OF THE STONE WALL AND 71 FT (21.6 M) SOUTHEASTERLY OF THE SOUTHERLY MOST POINT OF THE

This point was set by the City of Ann Arbor in 1994 and is paired with
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CONTROL POINT #: 1
Control Point #: 2
Control Point #: 3

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Set a 5/8" Diameter by 24" long rebar flush with the existing ground on the north side of FULLER AVENUE APPOXIMATELY
SOIL EROSION CONTROL MEASURES

ESTIMATED QUANTITIES THIS SHEET

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosion Control, Silt Fence</td>
<td>1289 FT</td>
</tr>
<tr>
<td>Erosion Control, Inlet Filter</td>
<td>7 EA</td>
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</table>
ROADWAY REMOVAL PLAN

ESTIMATED QUANTITIES THIS SHEET

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb &amp; Gutter, Any Type or Size, Rem</td>
<td>381 FT</td>
</tr>
<tr>
<td>Sidewalk and Drive, Any Type or Thickness, Rem</td>
<td>641 SYD</td>
</tr>
<tr>
<td>Pavt, Rem</td>
<td>192 SYD</td>
</tr>
<tr>
<td>Guardrail, Rem</td>
<td>176 FT</td>
</tr>
<tr>
<td>Cold Milling, HMA Surface, Modified</td>
<td>1501 SYD</td>
</tr>
<tr>
<td>Cold Milling, Conc Surface, Modified</td>
<td>26 SYD</td>
</tr>
<tr>
<td>Tree Fence, Protective</td>
<td>47 FT</td>
</tr>
<tr>
<td>Post and Chain Fence, Salvage</td>
<td>84 FT</td>
</tr>
<tr>
<td>Sign, Salvage</td>
<td>1 EA</td>
</tr>
<tr>
<td>Machine Grading, Modified</td>
<td>2.3 STA</td>
</tr>
<tr>
<td>Clearing</td>
<td>0.20 ACRE</td>
</tr>
</tbody>
</table>

E. MEDICAL CENTER DRIVE

BEFORE YOU DIG
CALL MISS DIG
800-482-7171

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

BENCH MARK
BOOK SURVEY
REV. NO.

ORIGINAL ISSUE
DR.BY
DATE
CH.BY
SHEET NO.

2021-008-R1

TOLL FREE

SCALE 1"=20'
EXISTING SECTION

STAGE 2

NOTES:

STAGE 1 IS A PREPARATORY STAGE
PLACE LIMITED DEFLECTION TEMPORARY BARRIER ACCORDING TO MDOT STANDARDS PLAN R-53 SERIES.
STAGE 3

PROPOSED SECTION

(EAST MEDICAL CENTER DRIVE)
NOTE:
- FOR TEMPORARY SIGNS, BARRICADES, DRUMS AND PORTABLE CHANGEABLE MESSAGE SIGN QUANTITIES SEE SHEET 19.
- PORTABLE CHANGEABLE MESSAGE SIGNS TO BE PLACED ALONG ALL APPROACHES: MAIDEN LANE, EASTBOUND FULLER ROAD, WESTBOUND FULLER ROAD, AND EAST MEDICAL CENTER DRIVE.
Curb & Gutter: 66 FT
Relocate Existing Stop Sign

Curb & Gutter: 92 FT

Sign, Type III, Erect, Salvage: 1 EA

(11) Pavt Mrkg, Longit, 6 in or Less Width, Rem: 121 FT

Pavt Mrkg, Longit, 6 in or Less Width, Rem: 105 FT

Pavt Mrkg, Longit, 6 in or Less Width, Rem: 105 FT

Pavt Mrkg, Longit, 6 in or Less Width, Rem: 68 FT

Pavt Mrkg, Longit, 6 in or Less Width, Rem: 222 FT

Pavt Mrkg, Longit, 6 in or Less Width, Rem: 84 FT

Pavt Mrkg, Longit, Greater Than 6 in, Longit, Rem: 20 FT

Pavt Mrkg, Longit, Greater Than 6 in, Longit, Rem: 10 FT
E. MEDICAL CENTER DRIVE
MAINTENANCE OF TRAFFIC PLAN
PAVEMENT MARKING REMOVAL PLAN
STAGE II

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

MAINTENANCE OF TRAFFIC PLAN
PAVEMENT MARKING REMOVAL PLAN
STAGE II

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<table>
<thead>
<tr>
<th>DESCRIPTION</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Pavt Mrkg, Longit, 6 in or Less Width, Rem</td>
<td>904 FT</td>
</tr>
<tr>
<td>Spec Mrkg, Rem</td>
<td>700 SFT</td>
</tr>
<tr>
<td>Sign, Type III, Erect, Salvage</td>
<td>1 EA</td>
</tr>
</tbody>
</table>

LEGEND

- REMOVE MARKING
- REMOVE ITEM
- WORK SPACE

DRAWING NO. 2021-008-MOT11
Sign, Type III, Erect, Salvage: 1 EA

Replace prior to Stage 3. See Sheet 55 for Location.

MAINTENANCE OF TRAFFIC PLAN
PAVEMENT MARKING REMOVAL PLAN
STAGE III

LOCATION: EAST MEDICAL CENTER DRIVE

LEGEND
- REMOVE MARKING
- REMOVE ITEM
- WORK SPACE

ESTIMATED QUANTITIES THIS SHEET

<table>
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<th>DESCRIPTION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sign, Type III, Erect, Salvage</td>
<td>2 EA</td>
</tr>
</tbody>
</table>
NOTE:

PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

PHASE DIAGRAM

LIST OF MATERIAL

<table>
<thead>
<tr>
<th>NO.</th>
<th>ITEM</th>
<th>QUANTITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HEMISPHERICAL VIDEO DETECTION CAMERA</td>
<td>1 Ea</td>
</tr>
<tr>
<td>2</td>
<td>HEMISPHERICAL VIDEO DETECTION SYSTEM</td>
<td>1 Ea</td>
</tr>
</tbody>
</table>

HEMISPHERICAL CAMERAS TO BE MOUNTED AT 25’ OVER THE INTERSECTION.

TIME OF BAGGING AND UNBAGGING OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER.

CONTRACTOR TO UTILIZE MOST TYPICAL 163-INT-LD-OUT FOR ALL SIGNAL WORK RELATED TO THIS INTERSECTION.
CABLES TO BE USED UNLESS SPECIFIED OTHERWISE

1. 1W-3C TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
2. 1W-3C TRAFFIC SIGNALS WITH 12"/27" CASE SIGN CABLES ARE 7/C#16 PJ.
3. HEMISPHERICAL VIDEO DETECTION CAMERA CABLES ARE CAT5e 600V.

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

NOTE:
FIBER OPTIC CABLES ARE PRESENT WITHIN EXISTING HANDHOLES BUT SIZE AND ROUTING IS UNKNOWN.

Span Calculations

Span #1, Load = 1000

Span: 27'-9"

Span #1 PITCH: 24'-10"
NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

STAGE 2 REMOVAL PLAN

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

PHASE DIAGRAM

LIST OF MATERIAL

<table>
<thead>
<tr>
<th>NO.</th>
<th>ITEM</th>
<th>QUANTITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TS Mast Arm &amp; Bld.  Rem.</td>
<td>1 Ea.</td>
</tr>
</tbody>
</table>
NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
ORDERING ANY MATERIAL OR MAKING ANY CHANGES

1W-3C TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
1W-3C TRAFFIC SIGNALS WITH 12"/27" CASE SIGN CABLES ARE 7/C#16 PJ.
HEMISPHERICAL VIDEO DETECTION CAMERA CABLES ARE CAT5e 600V.

CABLES TO BE USED
UNLESS SPECIFIED OTHERWISE

NOTE:
FIBER OPTIC CABLES ARE PRESENT WITHIN EXISTING HANDHOLES BUT SIZE
AND ROUTING IS UNKNOWN.
NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
ORDERING ANY MATERIAL OR MAKING ANY CHANGES

NO.
ITEM
QUANTITIES

LIST OF MATERIAL

ROW WAS NOT SURVEYED AND IS NOT
MARKED ON PLANS
CONTRACTOR TO UTILIZE TS #13 FOR ALL SIGNAL WORK
RELATED TO THIS INTERSECTION

PHASE DIAGRAM

CONTRACTOR TO UTILIZE ONLY TYPICAL
SIGNAL HEADS FOR ALL SIGNAL WORK
RELATING TO THIS INTERSECTION

EX WIRELESS VEHICLE DETECTION SENSOR
EX PEDESTRIAN SIGNAL (PS #2)
EX PEDESTRIAN SIGNAL

EX PEDESTAL AND FOUNDATION
EX PEDESTRIAN SIGNAL (PS #4)
EX PEDESTRIAN SIGNAL (PS #5)

EX MAST ARM AND FOUNDATION
EX PEDESTRIAN SIGNAL (PS #3)

EX PEDESTAL AND FOUNDATION
EX PEDESTRIAN SIGNAL (PS #6)

STAGE 2 INSTALLATION PLAN

EX PEDESTAL AND FOUNDATION
EXISTING PEDESTRIAN SIGNAL (PS #6)

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

BEFORE YOU DIG CALL MISS DIG 800-482-7171

TRAFFIC SIGNAL PLANS

E. MEDICAL CENTER DRIVE

FULLER RD AT E. MED. CENTER RD

STAGE 2

LIST OF MATERIAL

<table>
<thead>
<tr>
<th>NO.</th>
<th>ITEM</th>
<th>QUANTITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TS Head, Temp</td>
<td>1 Ea</td>
</tr>
<tr>
<td>2</td>
<td>TS Face, Bag</td>
<td>1 Ea</td>
</tr>
</tbody>
</table>
NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

<table>
<thead>
<tr>
<th>STEADY WATTS</th>
<th>OPENINGS</th>
<th>CYCLIC WATTS</th>
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</thead>
<tbody>
<tr>
<td>45</td>
<td>516</td>
<td>40</td>
</tr>
</tbody>
</table>

SIGNALS
- EX PUSHBUTTON
- EX PEDESTAL
- EX MAST ARM
- EX SP" warns radio
- EX MICROWAVE
- EX SPP RADIO
- EX CELLULAR MODEM
- EX GPS MODULE
- EX CCTV

STAGE 2 INSTALLATION CABLE DIAGRAM

CABLES TO BE USED UNLESS SPECIFIED OTHERWISE
1. 1W-3C TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
2. 1W-3C TRAFFIC SIGNALS WITH 12"/27" CASE SIGN CABLES ARE 7/C#16 PJ.
3. HEMISPHERICAL VIDEO DETECTION CAMERA CABLES ARE CAT5e 600V.

NOTE:
- FIBER OPTIC CABLES ARE PRESENT WITHIN EXISTING HANDHOLES BUT SIZE AND ROUTING IS UNKNOWN.
- PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

BENCH MARK BOOK SURVEY REV. NO.
ORIGINAL ISSUE DATE CH.BY
DRAWING NO. SHEET NO.

TRAFFIC SIGNAL PLANS FULLER RD AT E. MED. CENTER RD STAGE 2

DLZ E. MEDICAL CENTER DRIVE

SCALE 0 INCH 1
STAGE 4 REMOVAL PLAN

NOTE: PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

EXISTING PUSHBUTTON AND SIGN
EX PEDESTRIAN SIGNAL (PS #1)
EX SPP RADIO
EX MICROWAVE VEHICLE DETECTOR
EX HEMISPHERICAL VIDEO CAMERA

CONTRACTOR TO UTILIZE MOT TYPICAL 163-INT-LD-OUT FOR ALL SIGNAL WORK RELATED TO THIS INTERSECTION.

PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

SIGNalling HEADS

STAGE 4 REMOVAL PLAN

NOTE: PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

EXISTING PUSHBUTTON AND SIGN
EX PEDESTRIAN SIGNAL (PS #4)
EX SPP RADIO
EX MICROWAVE VEHICLE DETECTOR
EX HEMISPHERICAL VIDEO CAMERA

CONTRACTOR TO UTILIZE MOT TYPICAL 163-INT-LD-OUT FOR ALL SIGNAL WORK RELATED TO THIS INTERSECTION.

PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.
NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

CABLES TO BE USED UNLESS SPECIFIED OTHERWISE

1. 1W-3C TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
2. 1W-3C TRAFFIC SIGNALS WITH 12"/27" CASE SIGN CABLES ARE 7/C#16 PJ.
3. HEMISPHERICAL VIDEO DETECTION CAMERA CABLES ARE CAT5e 600V.

NOTE:
FIBER OPTIC CABLES ARE PRESENT WITHIN EXISTING HANDHOLES BUT SIZE AND ROUTING IS UNKNOWN.

STAGE 4 REMOVAL CABLE DIAGRAM
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

CABLES TO BE USED UNLESS SPECIFIED OTHERWISE

1. 1W/3C TRAFFIC SIGNAL CABLES ARE 5/C #16 PJ.
2. 1W/3C TRAFFIC SIGNALS WITH 12"/27" CASE SIGN CABLES ARE 7/C #16 PJ.
3. HEMISPHERICAL VIDEO DETECTION CAMERA CABLES ARE CAT5e 600V.

NOTE: FIBER OPTIC CABLES ARE PRESENT WITHIN EXISTING HANDHOLES BUT SIZE AND ROUTING IS UNKNOWN.
STAGE 1 REMOVAL PLAN

CONTRACTOR TO UTILIZE MOT TYPICAL A
FOR INSTALLATION OF TEMPORARY
SIGNALS PRIOR TO STAGE 1

NO.
ITEM
QUANTITIES

EXISTING CONTROLLER AND CABINET
EXISTING HEMISPHERICAL CAMERA SYSTEM
EXISTING PEDESTAL AND FOUNDATION
EXISTING PUSHBUTTON AND SIGN
EXISTING PEDESTRIAN SIGNAL (PS #1)
EXISTING PEDESTRIAL AND FOUNDATION
EXISTING PUSHBUTTON AND SIGN
EXISTING PEDESTRIAN SIGNAL (PS #2)
EXISTING PEDESTRIAL AND FOUNDATION
EXISTING PUSHBUTTON AND SIGN
EXISTING PEDESTRIAN SIGNAL (PS #3)
EXISTING PEDESTRIAL AND FOUNDATION
EXISTING PUSHBUTTON AND SIGN
EXISTING PEDESTRIAN SIGNAL (PS #4)
EXISTING PEDESTRIAL AND FOUNDATION
EXISTING PUSHBUTTON AND SIGN
EXISTING PEDESTRIAN SIGNAL (PS #5)
EXISTING PEDESTRIAL AND FOUNDATION
EXISTING PUSHBUTTON AND SIGN
EXISTING PEDESTRIAN SIGNAL (PS #6)

CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.

WARNING:
BEFORE YOU DIG CALL MISS DIG (TOLL FREE) 800-482-7171
CALL MISS DIG BEFORE YOU DIG

TRAFFIC SIGNAL PLANS
FULLER RD AT E. MED. CENTER RD
STAGE 1

SIGNAL HEADS

LIST OF MATERIAL

<table>
<thead>
<tr>
<th>NO.</th>
<th>ITEM</th>
<th>QUANTITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pedestal Fdn, Rem</td>
<td>1 Ea</td>
</tr>
<tr>
<td>2</td>
<td>Pedestal, Rem</td>
<td>1 Ea</td>
</tr>
<tr>
<td>3</td>
<td>Pedestal, Sign</td>
<td>1 Ea</td>
</tr>
<tr>
<td>4</td>
<td>Contact, Rem</td>
<td>1/EA</td>
</tr>
</tbody>
</table>

WARNING:
BEFORE YOU DIG CALL MISS DIG (TOLL FREE) 800-482-7171
CALL MISS DIG BEFORE YOU DIG
NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

STAGE 1 REMOVAL CABLE DIAGRAM
STAGE 1 INSTALLATION CABLE DIAGRAM

NOTE: PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE
TRAFFIC SIGNAL PLANS
FULLER RD AT E. MED. CENTER RD
STAGE 1

SPAN CALCULATIONS
NOT TO SCALE

1. TRAFFIC SIGNAL CABLES ARE 2C#16 P.T.
2. 24" X 39" L.E.D. CASE SIGNS ARE 4C#16 P.T.
3. PEDESTRIAN SIGNALS CABLES ARE TOPPS P.T.
4. PUSHBUTTON CABLES ARE 2C#16 SHIELDED P.T.
TIME OF BAGGING AND UNBAGGING OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER.

TIME OF REMOVAL OR ADJUSTMENT OF TRAFFIC SIGNALS TO BE AS DIRECTED BY THE ENGINEER.

NOTE: PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLELY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

CONTRACTOR TO UTILIZE WORK ZONES AND LANE CLOSURES FOR INSTALLATION OF TRAFFIC SIGNALS PRIOR TO STAGE 2.

STAGE 2 REMOVAL PLAN

LIST OF MATERIAL

<table>
<thead>
<tr>
<th>NO.</th>
<th>ITEM</th>
<th>QUANTITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wood Pole, Rem</td>
<td><em>1 Ea</em></td>
</tr>
<tr>
<td>2</td>
<td>Pedestal Fdn, Rem</td>
<td><em>1 Ea</em></td>
</tr>
<tr>
<td>3</td>
<td>Pedestal, Rem</td>
<td><em>1 Ea</em></td>
</tr>
<tr>
<td>4</td>
<td>Pushbutton, Rem</td>
<td><em>1 Ea</em></td>
</tr>
<tr>
<td>5</td>
<td>Span Wire, Rem</td>
<td><em>1 Ea</em></td>
</tr>
<tr>
<td>6</td>
<td>TS Face, Bag, Rem</td>
<td><em>3 Ea</em></td>
</tr>
<tr>
<td>7</td>
<td>Remove Traffic signal panel for Ts Head, Temp</td>
<td><em>2 Ea</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>30 Ft</em></td>
</tr>
</tbody>
</table>

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

BEFORE YOU DIG CALL MISS DIG (TOLL FREE) 800-482-7171 CALL MISS DIG BEFORE YOU DIG

NOTE: PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLELY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.
NOTE:
Plans have been prepared without the aide of record drawings and are solely based on field observations. Conduit size is unknown. Contractor to verify any conduit and cable routing before ordering any material or making any changes.

Cables to be used unless specified otherwise:

1. Traffic signal cables are 4/C #16 PJ.
2. 24" x 30" L.E.D. Case signs are 4/C #16 PJ.
3. Pedestrian signals cables are 7/C #16 PJ.
4. Pushbutton cables are 2/C #16 SHIELDED PJ.

Span calculations not to scale:

<table>
<thead>
<tr>
<th>Span #1</th>
<th>Tension</th>
<th>Poch: 21'-5&quot;_5&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Span #2</td>
<td>Tension</td>
<td>Poch: 25'-2&quot;_5&quot;</td>
</tr>
<tr>
<td>Span #3</td>
<td>Poch: 26'-8&quot;_8&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Traffic Signal Cables are 5/C #16 PJ.
24" x 30" L.E.D. Case Signs are 4/C #16 PJ.
Pedestrian Signals Cables are 7/C #16 PJ.
Pushbutton Cables are 2/C #16 SHIELDED PJ.

Stage 2 REMOVAL CABLE DIAGRAM

Plan shown stems length are suggested only.
LIST OF MATERIAL

<table>
<thead>
<tr>
<th>NO.</th>
<th>ITEM</th>
<th>QUANTITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pedestal, Alum, Bn</td>
<td>1 Ea.</td>
</tr>
<tr>
<td>2</td>
<td>Pedestal, Alum, Bn</td>
<td>3 Ea.</td>
</tr>
<tr>
<td>3</td>
<td>Pedestal, Alum, Bn</td>
<td>2 Ea.</td>
</tr>
<tr>
<td>4</td>
<td>TS Head, Temp</td>
<td>5 Ea.</td>
</tr>
<tr>
<td>5</td>
<td>Conduit, DB, 1, 1</td>
<td>10 Ft.</td>
</tr>
</tbody>
</table>

NOTE: PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLELY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.
NOTE:
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EX PS #1
EX PS #2
EX PS #3

TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
24" X 30" L.E.D. CASE SIGNS ARE 4/C#16 PJ.
PEDESTRIAN SIGNALS CABLES ARE 7/C#16 PJ.
PUSHBUTTON CABLES ARE 2/C#16 SHIELDED PJ.

STAGE 3 CABLE DIAGRAM

SPAN CALCULATIONS
NOT TO SCALE

SPAN #2
POCH: 26'-_3" 19'
8'
34'
SPAN #3
POCH: 20-11" 24" 0"

SHOWN STEMS LENGTH ARE SUGGESTED ONLY

CABLES TO BE USED UNLESS SPECIFIED OTHERWISE

1. TRAFFIC SIGNAL CABLES ARE 5/C#16 PJ.
2. 24" X 30" L.E.D. CASE SIGNS ARE 4/C#16 PJ.
3. PEDESTRIAN SIGNALS CABLES ARE 7/C#16 PJ.
4. PUSHBUTTON CABLES ARE 2/C#16 SHIELDED PJ.
CABLES TO BE USED UNLESS SPECIFIED OTHERWISE
1. TRAFFIC SIGNAL CABLES ARE 5/C #16 PJ.
2. 24" X 30" L.E.D. CASE SIGNS ARE 4/C #16 PJ.
3. PEDESTRIAN SIGNALS CABLES ARE 7/C #16 PJ.
4. PUSHBUTTON CABLES ARE 2/C #16 SHIELDED PJ.

NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

TRAFFIC SIGNAL CABLES ARE 5/C #16 PJ.
24" X 30" L.E.D. CASE SIGNS ARE 4/C #16 PJ.
PEDESTRIAN SIGNALS CABLES ARE 7/C #16 PJ.
PUSHBUTTON CABLES ARE 2/C #16 SHIELDED PJ.

STAGE 3 REMOVAL CABLE DIAGRAM
### LIST OF MATERIAL

<table>
<thead>
<tr>
<th>NO.</th>
<th>ITEM</th>
<th>QUANTITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wood Pole, Cat. 30 foot</td>
<td>4 EA</td>
</tr>
<tr>
<td>2</td>
<td>Sign Light</td>
<td>4 EA</td>
</tr>
<tr>
<td>3</td>
<td>Wood Pole, Cl. 14</td>
<td>1 EA</td>
</tr>
<tr>
<td>4</td>
<td>TS Heads</td>
<td>5 EA</td>
</tr>
</tbody>
</table>

**NOTE:**

Plans have been prepared without the aide of record drawings and are solely based on field observations. Conduit size is unknown. Contractor to verify any conduit and cable routing before ordering any material or making any changes.

*Contractor to utilize work zones and not typical 163-INT-LD-OUT for installation of traffic signals prior to stage 3.*

---

**PHASE DIAGRAM**

**STAGE 3 INSTALLATION PLAN**

**E. Medical Center Drive**

Traffic Signal Plans

Fuller Rd at E. Med. Center Rd

Stage 3

**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**

*Call Miss Dig BEFORE YOU DIG (TOLL FREE) 800-482-7171*

**DLZ**

Fuller Rd at E. Med. Center Rd

Stage 3

**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**

*Call Miss Dig BEFORE YOU DIG (TOLL FREE) 800-482-7171*
Stealth Watts:
Openings:
Cyclic Watts:

Signals:

Note:

Plans have been prepared without the aid of record drawings and are solely based on field observations. Conduit size is unknown. Contractor to verify any conduit and cable routing before ordering any material or making any changes.

Traffic signal cables are 5/C#16 PJ. 24" x 30" L.E.D. case signs are 4/C#16 PJ. Pedestrian signals cables are 7/C#16 PJ. Pushbutton cables are 2/C#16 Shielded PJ.

Stage 3 Installation Cable Diagram

Span Calculations
Not to Scale

Shown stem lengths are suggested only.

Traffic Signal Plans

E. Medical Center Drive
Fuller Rd at E. Med. Center Rd
Stage 3

Project Management - Public Services - City of Ann Arbor

DLZ

Call Miss Dig Before You Dig

302-308-6015

(800) 482-7171

Page Dimensions: 1584.0x2448.0
NOTE:

PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS
AND ARE SOLELY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN.
CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

ROOM TO UTILIZE MOTT TYPICAL
163-INT-LD-OUT FOR REMOVAL OF TRAFFIC SIGNALS AFTER COMPLETION OF STAGE 3

TIME OF REMOVAL OR ADJUSTMENT OF TRAFFIC SIGNALS TO BE AS DIRECTED
BY THE ENGINEER.

CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE
ORDERING ANY MATERIAL OR MAKING ANY CHANGES.
NOTE:
PLANS HAVE BEEN PREPARED WITHOUT THE AIDE OF RECORD DRAWINGS AND ARE SOLEY BASED ON FIELD OBSERVATIONS. CONDUIT SIZE IS UNKNOWN. CONTRACTOR TO VERIFY ANY CONDUIT AND CABLE ROUTING BEFORE ORDERING ANY MATERIAL OR MAKING ANY CHANGES.

- Traffic Signal Cables are 5/C #16 PJ.
- 24" x 30" L.E.D. Case Signs are 4/C #16 PJ.
- Pedestrian Signals Cables are #16 PJ.
- Pushbutton Cables are 2/C #16 SHIELDED PJ.

CABLES TO BE USED UNLESS SPECIFIED OTHERWISE

FINAL REMOVAL CABLE DIAGRAM

SHOWS STEMS LENGTH ARE SUGGESTED ONLY

SPAN CALCULATIONS NOT TO SCALE
Estimate quantities this sheet

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pavt Mrkg, Polyurea, 24 Inch, Stop Bar</td>
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</tr>
<tr>
<td>Pavt Mrkg, Polyurea, 12 Inch, Crosswalk</td>
<td>55 FT</td>
</tr>
<tr>
<td>Pavt Mrkg, Polyurea, 4 Inch, White</td>
<td>685 FT</td>
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<tr>
<td>Pavt Mrkg, Polyurea, 4 Inch, Yellow</td>
<td>504 FT</td>
</tr>
<tr>
<td>Pavt Mrkg, Sprayable Thermopl, 4 Inch, White</td>
<td>336 FT</td>
</tr>
<tr>
<td>Pavt Mrkg, Sprayable Thermol, 4 Inch, Yellow</td>
<td>256 FT</td>
</tr>
<tr>
<td>Pavt Mrkg, Polyurea, LT Turn Arrow Sym</td>
<td>4 EA</td>
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<tr>
<td>Pavt Mrkg, Polyurea, Only</td>
<td>13 EA</td>
</tr>
<tr>
<td>Pavt Mrkg, Polyurea, RT Turn Arrow Sym</td>
<td>6 EA</td>
</tr>
<tr>
<td>Pavt Mrkg, Polyurea, Thru Arrow Sym</td>
<td>3 EA</td>
</tr>
<tr>
<td>Recessing Pavt Mrkg, Longitudinal</td>
<td>1823 FT</td>
</tr>
<tr>
<td>Recessing Pavt Mrkg, Transverse</td>
<td>108 FT</td>
</tr>
<tr>
<td>Rem Curing Compound, for Longit Mrkg, 4 inch</td>
<td>791 FT</td>
</tr>
<tr>
<td>Rem Curing Compound, for Spec Mrkg</td>
<td>211 SFT</td>
</tr>
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</table>

UM PROPERTY ONLY
Sprayable Thermol on all lane lines
Polyurea on all symbols
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<td>Recessing Pavt Mrkg, Transverse</td>
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Sprayable Thermopl on all lane lines
Polyurea on all symbols

UM PROPERTY ONLY

E. MEDICAL CENTER DRIVE
PERMANENT PAVEMENT
PAVEMENT MARKING PLAN

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

2021-008-PM2

CALL MISS DIG
BEFORE YOU DIG

( TOLL FREE )
800-482-7171

Legal Seal/Signature:...
Scale: 1" = 20'
EXISTING UM CONDUITS IN THE SIDEWALK WILL NEED TO BE CUT AND MARKED AS REUSE FROM THE BRIDGE STRUCTURE BACK TO THE MANHOLES AT BOTH ENDS OF THE BRIDGE.
NOTES

1. CONTRACTOR TO COORDINATE WITH AT&T FOR FINAL AT&T CONNECTIONS AT EACH END OF THE BRIDGE. FINAL AT&T CONDUIT CONNECTIONS TO BE COMPLETED BY OTHERS.

2. CONTRACTOR TO COORDINATE WITH THE UNIVERSITY OF MICHIGAN AND THE UNIVERSITY OF MICHIGAN TO ENSURE PROPER CONNECTIONS OF PROPOSED CONDUITS.

ESTIMATED QUANTITIES THIS SHEET

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<tr>
<td>Utility Structure Cover, Adjust, Case 1</td>
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TOLL FREE: 800-482-7171
CALL MISS DIG BEFORE YOU DIG

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

E. MEDICAL CENTER DRIVE
OVERALL UTILITY PLAN

SCALE: 1" = 40'
NOTES

1. UM CONDUITS SHAL: DURAMT IN ALL CONDUIT, BOTH STAFF AND INSERTING THE END OF THE CONDUIT. THE END DURAMT OF EACH INSERTING THE END OF THE DURAMT TO BE PAID FOR AS "Conduit, Encased, 1, 4 inch".

2. CONTRACTOR TO INSTALL (1) 4" PVC EXPANSION COUPLINGS ON ALL CONDUITS AT EACH END OF THE BRIDGE. DETAIL ON SHEET 111.

3. TRACER WIRE SHALL BE REQUIRED PER PACKAGE. A MINIMUM OF 60" OF TRACER WIRE SHALL EXTEND FROM THE ENDPOINT OF THE DUCT AND BE NEATLY COILED AT THE DUCT END. TRACER WIRE IS NOT TO BE PLACED INSIDE THE DUCT. WHERE MULTIPLE DUCTS ARE PLACED, ONLY 1 COPPERHEAD™ COPPER COATED STEEL LOCATING WIRE, (#12 CCS EXTRA HIGH STRENGTH HARD DRAWN 1150# (SOLOSHOT)), OR EQUIVALENT, SHALL BE PLACED OUTSIDE THE CONDUIT EXPANSION COUPLINGS SHALL BE INSTALLED ON ALL CONDUITS AT EACH END OF THE BRIDGE. DETAIL ON SHEET 111.

4. DUCT BANKS SHALL BE MARKED WITH A 6" WIDE RED PLASTIC MARKER STRIP PLACED IN THE BACKFILL APPROXIMATELY 12" ABOVE THE ENTIRE LENGTH OF THE DUCT BANK. DUCT BANKS SHALL BE SLOPED DOWNWARD TOWARD MANHOLES AND AWAY FROM BUILDINGS A MINIMUM OF 6" PER 100'. DUCT BANKS SHALL NOT CONTAIN TRAPS WHERE THAT READS "TRAFFIC SIGNAL" OR "STREET LIGHTING", BASED ON THEIR INTENDED USE. THE TOTAL DEPTH OF THE HANDHOLE SHALL BE 18 INCHES.

5. HANDHOLES IN PUBLIC ROADWAY SHALL BE BUILT WITH 17" MINIMAL WALLS WITH MANUFACTURED BORDERS.

6. DUCT BANKS SHALL BE SUPPORTED ON UNDISTURBED SOIL OR ON PIERS EXTENDING DOWN TO UNDISTURBED SOIL.

7. CONTRACTOR TO PROVIDE SCH. 80 PVC EXPANSION JOINT EVERY 100' UNDER THE BRIDGE DECK, AS WELL AS AT EACH END OF THE BRIDGE. SEE SHEET 103 FOR DETAIL. TO BE PAID FOR IN "Conduit, Encased, 6, 4 inch" AND "Conduit, Encased, 1, 4 inch".

COPPERHEAD™ COPPER COATED STEEL LOCATING WIRE, (#12 CCS EXTRA HIGH STRENGTH HARD DRAWN 1150# (SOLOSHOT)), OR EQUIVALENT, SHALL BE PLACED OUTSIDE THE DUCT AND INSTALLED WHEN DUCT PULLBACK/PLACEMENT IS PERFORMED. TRACER WIRE IS NOT TO BE PLACED INSIDE THE DUCT. WHERE MULTIPLE DUCTS ARE PULLED ON 1 TRACER WIRE SHALL BE REQUIRED TO BE PAIRED. A MINIMUM OF 1 TRACER WIRE SHALL EXTEND FROM THE ENTRANCE OF THE DUCT TO THE WORKING AREA WHERE IT IS TO BE CONNECTED TO THE TERMINATION UNIT TO BE USED FOR CONNECTING THE TRACER WIRE TO THE CONDUIT. WHERE MULTIPLE DUCTS ARE PLACED, 1 TRACER WIRE SHALL BE REQUIRED PER PACKAGE. A MINIMUM OF 60" OF TRACER WIRE SHALL BE PROVIDED FROM THE ENDPOINT OF THE DUCT AND BE NEATLY COILED AT THE DUCT PATHWAY TERMINATION ENDPOINT TO BE PAID FOR IN "Conduit, Encased, 6, 4 inch" AND "Conduit, Encased, 1, 4 inch".

**TELECOMMUNICATIONS MANHOLE/HANDHOLE CONDUIT PENETRATIONS (4" TYP)**

**CONDUIT CONNECTION ENCASEMENT DETAIL**

**TYPICAL DUCT BANK SPACER & REINFORCING DETAILS**

---

**NOTES**

- **CONDUIT CONNECTION ENCASEMENT DETAIL**
  - Conduit shall be punched for encased connection points as shown.
  - Copperhead™ Copper Coated Steel Locating Wire, (#12 CCS Extra High Strength Hard Drawn 1150#, SoloShot), or equivalent, shall be placed outside the duct and installed when duct pullback/placement is performed. Tracer wire is not to be placed inside the duct. Where multiple ducts are pulled on 1 tracer wire, 1 tracer wire shall be required to be paired. A minimum of 60" of tracer wire shall be provided from the endpoint of the duct and neatly coiled at the duct pathway termination endpoint to be paid for in "Conduit, Encased, 6, 4 inch" and "Conduit, Encased, 1, 4 inch".

---

**TELECOMMUNICATIONS MANHOLE/HANDHOLE CONDUIT PENETRATIONS (4" TYP)**

**NOTES**

- Coupling adhesive shall be a 2-part adhesive: adhesive A, 4 parts by volume of bonding agent and adhesive B, equal parts by volume of bonding agent. PVC glues or adhesives that are not compatible with Coupling Adhesive are not acceptable.

- Used to be sealed with concrete: Polyurethane or equivalent. All engineering specification, calcium or calcium chloride-based fillers are not acceptable.

- Bell end installed flush to interior of enclosure and reinforced with 4" PVC coupling at 90°. Bell end, cemented with 4" PVC bell end or equivalent. Location of duct penetration(s) to be determined by the engineer prior to installation.

---

**TELECOMMUNICATIONS CONDUIT DETAILS**

**NOTES**

- Copperhead™ Copper Coated Steel Locating Wire, (#12 CCS Extra High Strength Hard Drawn 1150#, SoloShot), or equivalent, shall be placed outside the duct and installed when duct pullback/placement is performed. Tracer wire is not to be placed inside the duct. Where multiple ducts are pulled on 1 tracer wire, 1 tracer wire shall be required to be paired. A minimum of 60" of tracer wire shall be provided from the endpoint of the duct and neatly coiled at the duct pathway termination endpoint to be paid for in "Conduit, Encased, 6, 4 inch" and "Conduit, Encased, 1, 4 inch".
NOTES:

NUMBERS IN CIRCLES DENOTE NUMBER OF BORES REQUIRED TO DRIVE A 2" O.D. X 1.5" I.D. SPLIT SPOON SAMPLER 3 SUCCESSIVE 6" INCREMENTS USING A 140 lb HAMMER FALLING 30".

WATER LEVELS MAY BE INFLUENCED BY RESIDUAL BORING WATER

THE SOIL BORING LOGS REPRESENT POINT INFORMATION PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT THE SUBSURFACE CONDITIONS ARE THE SAME AT LOCATION OTHER THAN THE EXACT LOCATION OF THE BORING.

SEE GENERAL PLAN OF SITE AND STRUCTURE SHEETS FOR SOIL BORING LOCATIONS.
THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW.

- PROPOSED WORK
- DENOTES REMOVAL PORTIONS

NOTES:

- REMOVE PORTIONS OF EXISTING ABUTMENTS. EXISTING REINFORCING STEEL SHALL BE BLAST CLEANED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)"

PLAN ELEVATIONS REFER TO NAVD88 DATUM.

ELEVATION EQUATION:

PROP ELEV = EXIST. PLAN ELEV - 0.39 FT

EXISTING ABUTMENT A DETAILS

- REMOVAL
- SAWCUT ELEV 796.69

NOT AS-BUILT, BEST AVAILABLE INFO.

CITY OF ANN ARBOR
BRIDGE CARRYING HEALII STREET OVER THE SKEEL RAILROAD IN ANN ARBOR

ABUTMENT DETAILS (X)

DESIGNED BY: J.M. LANIY & SON, LTD.
CONSULTING ENGINEERS

APPROVED BY: "INSPECTOR-ENGINEER"

APPROVED BY:

R1 of 81-1-19
91 of 101

EAST MEDICAL CENTER DRIVE
EXISTING ABUTMENT A DETAILS
REMOVAL

SCALE

INCH

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

DLZ

2021-008-BR10

REV. NO.

DESCRIPTION

DRAWING NO.

SHEET NO.

OF

PROPOSED WORK

DENOES REMOVAL PORTIONS

BEFORE YOU DIG
CALL MISS DIG
800-482-7171
CALL MISS DIG
BEFORE YOU DIG

0
1 INCH

0
NOTES:

- REMOVE PORTIONS OF EXISTING ABUTMENTS. EXISTING REINFORCING STEEL SHALL BE BLAST CLEANED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)."
- PLAN ELEVATIONS REFER TO NAVD88 DATUM.
- PROP ELEV. = EXIST. PLAN ELEV. - 0.39 FT

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW:

- PROPOSED WORK
- DENOTES REMOVAL PORTIONS

NOTES:

- REMOVE PORTIONS OF EXISTING ABUTMENTS.
- EXISTING REINFORCING STEEL SHALL BE BLAST CLEANED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)."
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- PROP ELEV. = EXIST. PLAN ELEV. - 0.39 FT
THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW.

- PROPOSED WORK
- DENOTES REMOVAL PORTIONS

NOTES:

1. REMOVE PORTIONS OF EXISTING ABUTMENTS. EXISTING REINFORCING STEEL SHALL BE BLAST CLEANED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)."

2. PLAN ELEVATIONS REFER TO NAVD88 DATUM.

ELEVATION EQUATION:

PROP ELEV. = EXIST. PLAN ELEV. - 0.39 FT

NOTES:

- REMOVE PORTIONS OF EXISTING ABUTMENTS.
- REMOTE REINFORCING STEEL SHALL BE BLAST CLEANED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)."

PLAN ELEVATIONS REFER TO NAVD88 DATUM.

ELEVATION EQUATION:

PROP ELEV. = EXIST. PLAN ELEV. - 0.39 FT

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED USING THE LEGEND BELOW.

- PROPOSED WORK
- DENOTES REMOVAL PORTIONS

NOTES:

1. REMOVE PORTIONS OF EXISTING ABUTMENTS. EXISTING REINFORCING STEEL SHALL BE BLAST CLEANED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)."

2. PLAN ELEVATIONS REFER TO NAVD88 DATUM.

ELEVATION EQUATION:

PROP ELEV. = EXIST. PLAN ELEV. - 0.39 FT

NOTES:

- REMOVE PORTIONS OF EXISTING ABUTMENTS. EXISTING REINFORCING STEEL SHALL BE BLAST CLEANED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)."

PLAN ELEVATIONS REFER TO NAVD88 DATUM.

ELEVATION EQUATION:

PROP ELEV. = EXIST. PLAN ELEV. - 0.39 FT
NOTES:

REMOVE PORTIONS OF EXISTING ABUTMENTS - EXISTING REINFORCING STEEL SHALL BE BLAST CLEARED, STRAIGHTENED AND EMBEDDED IN PROPOSED ABUTMENTS. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)."

PLAN ELEVATIONS REFER TO NAVD88 DATUM.

ELEVATION EQUATION:

PROP ELEV. = EXIST. PLAN ELEV. - 0.39 FT

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW:

- PROPOSED WORK
- ❌ Denotes Removal Portions

CITY OF ANN ARBOR
BRIDGE CARING MILL'S STREET OVER THE CORRAL, RAILROAD IN ANN ARBOR

ABUTMENT "B" DETAILS

DESIGNED BY: GLJAMERG B. SONS, INC.
CONSTRUCTION ENGINEERS

APPROVED BY:

S. OF 81-1-15
80025-BRD
THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW.

- PROPOSED WORK
- DENOTES REMOVAL PORTIONS

NOTES:
- REMOVE EXISTING PIER CAPS AND PORTIONS OF THE CRASH WALL. SALVAGE BLAST CLEAN, AND STRAIGHTEN EXISTING VERTICAL REINFORCEMENT IN PIER COLUMNS AND EMBED IN PROPOSED PIER CAP. SALVAGE BLAST CLEAN AND STRAIGHTEN EXISTING HORIZONTAL REINFORCEMENT IN THE CRASH WALL. INCLUDED IN THE BID ITEM "STRUCTURES, REHABILITATION, REM PORTIONS (STR 11065)."
- PLAN ELEVATIONS REFER TO NAVD88 DATUM.
- ELEVATION EQUATION: PROP ELEV = EXIST. PLAN ELEV - 0.39 FT

EXISTING PIER 1 DETAILS

- REMOVAL
- 6" (TYP)
- 1'-1"

EXISTING SHEET PILING TO BE CUT OFF AT BOTTOM OF FOOTING

1'-8" (TYP)
NOTES:

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW.

- PROPOSED WORK
- DENOTES REMOVAL PORTIONS

The elevation equation:

PROP ELEV. = EXIST. PLAN ELEV. - 0.39 FT

The drawing is for the East Medical Center Drive project, with revisions and notes to remove existing pier caps and portions of the crash wall. Salvage blast clean and straighten existing vertical reinforcement in pier columns and embed in proposed pier cap. Salvage blast clean and straighten existing horizontal reinforcement in the crash wall. Included in the bid item "Structures Rehabilitation."

The elevation datum is NAVD88. ELEVATION EQUATION:

PROP ELEV. = EXIST. PLAN ELEV. - 0.39 FT

EXISTING PIER 2 DETAILS

- REMOVAL
- 1'-2" 6" (TYP)
- 1'-8" (TYP)

EXISTING SHEET PILING TO BE CUT OFF AT BOTTOM OF FOOTING

PLAN ELEVATIONS REFER TO NAVD88 DATUM. ELEVATION EQUATION:

PROP ELEV. = EXIST. PLAN ELEV. - 0.39 FT

The drawing shows existing pier details, proposed work, and elevation views.
NOTES:
- REPAIR AREAS/CATEGORY AND APPROXIMATES ARE BASED ON A BRIDGE INSPECTION THAT TOOK PLACE IN OCTOBER 2021 AND A FOLLOW-UP INSPECTION IN APRIL 2022.
- PIER COLUMN AND CRASHWALLS SHALL BE SOLIDIFIED PRIOR TO CONSTRUCTION AND ADDITIONAL AREAS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER.
- PENETRATING WATER REPLACEMENT TREATMENT SHALL BE APPLIED TO THE PIER REPAIR AREAS AS DIRECTED BY THE ENGINEER. INSTALL GALVANIZED ANDESIS ON EXPOSED REPAIR ALONG PERIMETER OF REPAIR, SPACED PER MANUFACTURER'S RECOMMENDATIONS OR PER HAYMA.
- A COACH THAT EXTENDS BELOW THE GROUND LINE SHALL BE APPLIED WITH PRIOR APPROVAL OF THE ENGINEER. ALL EXCAVATION, BACKFILL, WORK, AND MATERIAL, REQUIRED, SHALL BE IN PAYMENT FOR 'CONSTRUCTION CRACK REPAIR'.
- APPLY SUBSTRUCTURE HORIZONTAL SURFACE SEALER TO THE TOP HORIZONTAL SURFACE OF PIER 1 & 2 AFTER THE PLASTIC/SHEARING BEARINGS HAVE BEEN PLACED AND BULKHEAD DETIALS ON THE STRUCTURE. Q-ZAB ACCIDENTALLY COATED VERTICAL SURFACES AT THE CONTRACTORS EXPENSE.
- APPLY LOW TEMPERATURE PROTECTION OF CONCRETE ACCORDING TO SECTION 302.5 OF THE MDD 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION. LOW TEMPERATURE PROTECTION OF CONCRETE IS INCLUDED IN THE RELATED ITEM OF WORK.
- ADJUST BAR SPACING IN FOOTINGS AS NECESSARY TO AVOID CRACKS.

ESTIMATED QUANTITIES THIS SHEET

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CRASHWALL METAL BULKHEAD DETAILS

NOTES: METAL BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION ALUMINUM BULKHEAD (1/2" THICK) TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.
PLAN OF WEST SIDEWALK

- SEE SITE, REINFORCEMENT SHEETS FOR BAR CUT DIAGRAM DETAILS
42'-0" (CONST STAGE 2)

BACKWALL ELEVATION ABUTMENT B - CONST STAGE 2

- OPTIONAL CONSTRUCTION JOINT IF BACKWALL IS POURED WITH DECK

49'-6½" (CONST STAGE 3)

BACKWALL ELEVATION ABUTMENT B - CONST STAGE 3

- OPTIONAL CONSTRUCTION JOINT IF BACKWALL IS POURED WITH DECK

MIN LAP TABLE

EACH BARS: 1/2"  EACH BARS: 1/4"  EACH BARS: 2"  EACH BARS: 2 1/2"
FENCE POST LAYOUT - WEST SIDEWALK

FENCE POST LAYOUT - EAST SIDEWALK

NOTE:
ALL MEASUREMENTS ARE OFF SIDEWALK FASCIA.
PROPER CONCRETE PAD (SIDEWALK, CONC. 6 INCH)

PROPER SLOPE PAVING, MATCH EX JOINT LAYOUT

CONCRETE ENCASED STEEL SHEET PILE RETAINING WALL

CONCRETE CAP OUTLINE (NS)

CONCRETE CAP OUTLINE (FS)

FUTURE PATHWAY

EX GROUND

PERMANENT STEEL SHEET PILING, AZ 48

PLAN

ELEVATION

2021-008-BR50

EAST MEDICAL CENTER DRIVE

RETAINING WALL DETAILS

PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

2021-008-BR51
## Steel Reinforcement Details

**Drawing No.** Hor. 1" = 40'  
Vert. 1" = 4'

### Project Management - Public Services - City of Ann Arbor

**Call Miss Dig Before You Dig**

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### Misceleaneous Quantities

- **178000** Lb Reinforcement, Steel, Epoxy Coated

**NOTES:** REINFORCEMENT SHALL BE BUNDLE AND TAGGED AS TO THE LOCATION SHOWN ON THIS SHEET.

---

**AABBAMENT A**

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**MISCELANEOUS QUANTITIES**

- **178000** Lb Reinforcement, Steel, Epoxy Coated

**NOTES:** REINFORCEMENT SHALL BE BUNDLED AND TAGGED AS TO THE LOCATION SHOWN ON THIS SHEET.

---

**Drawing Sheet:**

- **2021-008-BR52**
- **2021-008-BR53**

**Scale:** Hor. 1" = 40'  
Vert. 1" = 4'

---

**DLZ**

**EAST MEDICAL CENTER DRIVE**

**STEEL REINFORCEMENT DETAILS**

**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**

---

**Call Miss Dig Before You Dig**

---

**Chop and Date:**

- **Project:** 2021-068-BR53
- **Revision:** 0
- **Drawing No.:** 003
- **Date:** 003

**Issue:**

- **Original:** 003
- **Change:** 003
- **Date:** 003

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**Sheet No.:**

- **2021-008-BR52**
- **2021-008-BR53**

**Scale:**

- **1/12" = 1'-0"** (VITAL SCALE)

---

****141.765 LB (4730.00G) 35.445 LB (1600.00G) 114.320 LB (4000.00G) 36.835 LB (1300.00G) 314.455 LB (11000.00G) 28.495 LB (1000.00G) 23.795 LB (800.00G) 22.490 LB (700.00G) 1740.000 LBS OR LESS FOR SUBJECT JL/FACILYA PAVING AS DIRECTED BY THE ENGINEER.

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**Threaded**

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**NOTES:**

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REINFORCEMENT IS TO BE SHOWN AS SHOWN. THE EPOXY COATING SHALL BE APPLIED. REFER TO SECTION 307.8.5(2) OF THE CODE FOR SPECIFICATIONS FOR CONSTRUCTION.
SOIL NAILS FOR SLOPE STABILIZATION SHALL BE DESIGNED AND CONSTRUCTED BY THE CONTRACTOR PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION AND THE REQUIREMENTS IN THE SPECIAL PROVISIONS 813 SOIL NAILS FOR SLOPE STABILIZATION.

CONSTRUCTION TO STABILIZE THE REQUIRED PORTION OF SLOPE SHALL BE CONSTRUCTED SO AS TO NOT DISTURB OR IMPACT THE PERFORMANCE OF EXISTING UTILITIES, EXISTING STRUCTURAL ELEMENTS, PROPOSED STRUCTURAL ELEMENTS, AND THE EXISTING RAILROAD.

COBBLES AND BOULDERS WERE ENCOUNTERED IN THE SUBSURFACE EXPLORATIONS FOR THE SITE. THE CONTRACTOR SHALL SELECT APPROPRIATE MEANS AND METHODS FOR INSTALLATION THROUGH COBBLES AND BOULDERS. THIS WORK SHALL INCLUDE OFFSETTING AND REDRILLING FOR OBSTRUCTIONS, INCLUDING ASSOCIATED ENGINEERING, FOR AN ADDITIONAL QUANTITY EQUIVALENT TO 10 PERCENT OF THE TOTAL NAILS ESTIMATED.

PROVIDE THE FINISH GRADE SHOWN ON THE PLANS. ANY BACKFILL REQUIRED TO ACHIEVE THE FINISH GRADE SHALL BE STRUCTURE, BACKFILL, C.I.P. AND IS CONSIDERED INCIDENTAL TO THE WORK.
UTILITY TRENCH-TYPE I SD-TD-1A
(UNDER BITUMINOUS PAVEMENT EXCL. SANITARY SEWER & EDGE DRAIN)
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734-794-6410
www.a2gov.org

UTILITY TRENCH-TYPE VI SD-TD-6
(IN GREENBELT AREA REQUIRING CLASS II BACKFILL)
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734-794-6410
www.a2gov.org

UTILITY TRENCH-TYPE VII SD-TD-7
(UNDER SIDEWALK OR DRIVE APPROACH)
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734-794-6410
www.a2gov.org

SILT FENCE SD-SESC-3
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734-794-6410
www.a2gov.org

INLET PROTECTION SD-SESC-1
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734-794-6410
www.a2gov.org

2021-008-STD3
ANN ARBOR STANDARD DETAILS
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR

Plan View
Front View
Section A-A
Section B-B

Silt Fence

Inlet Protection
**TRAFFIC SIGNAL TIMING PERMIT**

**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**

**TRAFFIC SIGNAL TIMING PERMIT**

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**TRAFFIC SIGNAL TIMING PERMITS**

**E. MEDICAL CENTER DRIVE**

**ADVANCED TIMING PARAMETERS FORM**

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**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**

**TRAFFIC SIGNAL TIMING PERMITS**

**E. MEDICAL CENTER DRIVE**

**ADVANCED TIMING PARAMETERS FORM**

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**PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR**

**TRAFFIC SIGNAL TIMING PERMITS**

**E. MEDICAL CENTER DRIVE**

**ADVANCED TIMING PARAMETERS FORM**

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### Traffic Signal Timing Permits

#### E. Medical Center Drive

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**Legend**

- **Phase**
- **Duration**
- **Traffic Signal**
- **Timber Details**
- **Advanced Timing Information**

**Project Management - Public Services - City of Ann Arbor**