



**CITY OF OWOSSO**  
**Zoning Board of Appeals**  
Tuesday, April 15, 2025 at 9:30 a.m.  
**AGENDA**

CALL TO ORDER

ROLL CALL

APPROVAL OF AGENDA – April 15, 2025

APPROVAL OF MINUTES – June 18, 2024

SELECTION OF OFFICERS – Due June/July 2025

**PUBLIC HEARINGS:**

1. 826 W King Street – Dimensional Variance

**NEW BUSINESS:**

1. Training

OTHER BOARD BUSINESS

PUBLIC COMMENTS AND COMMUNICATIONS

ADJOURNMENT

Next regular meeting will be on Tuesday, May 20, 2025, if any requests are received.

The City of Owosso will provide necessary reasonable auxiliary aids and services, such as signers for the hearing impaired and recordings of printed materials being considered at the meeting, to individuals with disabilities at the meeting/hearing upon seventy-two (72) hours' notice to the City of Owosso. Individuals with disabilities requiring auxiliary aids or services should contact the City of Owosso by writing or calling the following: Amy Kirkland, City Clerk, 301 W. Main St, Owosso, MI 48867 (989) 725-0500. The City of Owosso website is [www.ci.owosso.mi.us](http://www.ci.owosso.mi.us)

**MINUTES**  
**REGULAR MEETING OF THE CITY OF OWOSSO ZONING BOARD OF APPEALS**  
**June 18, 2024 AT 9:30 A.M.**

**CALL TO ORDER:** Chairman Grubb called the meeting to order at 9:35 a.m.

**ROLL CALL:** Was taken by Tanya Buckelew

**MEMBERS PRESENT:** Chairman Grubb, Vice-Chair Horvath, Board Members Suchanek and Teich

**MEMBERS ABSENT:** Secretary Taylor

**OTHERS PRESENT:** Tanya Buckelew, Planning & Building Director

**AGENDA:**

**MOTION BY VICE-CHAIR HORVATH AND SUPPORTED BY BOARD MEMBER TEICH TO APPROVE THE AGENDA FOR THE JUNE 18, 2024 REGULAR MEETING.**

**YEAS: ALL. MOTION CARRIED.**

**MINUTES:**

**MOTION BY BOARD MEMBER TEICH AND SUPPORTED BY VICE-CHAIR HORVATH TO APPROVE THE MINUTES OF THE APRIL 18, 2023 REGULAR MEETING.**

**YEAS: ALL. MOTION CARRIED.**

**SELECTION OF OFFICERS:**

**MOTION BY VICE-CHAIR HORVATH AND SUPPORTED BY BOARD MEMBER TEICH TO APPROVE THE FOLLOWING SELECTION OF OFFICERS: CHAIRMAN GRUBB, VICE-CHAIR HORVATH AND SECRETARY TAYLOR.**

**YEAS: ALL. MOTION CARRIED.**

**NEW BUSINESS:**

**1. ADOPTION OF THE REVISED BY-LAWS**

**MOTION BY VICE-CHAIR HORVATH, SUPPORTED BY BOARD MEMBER TEICH TO APPROVE THE REVISED BY-LAWS AND FORWARD TO CITY COUNCIL FOR FINAL ADOPTION.**

**YEAS: VICE-CHAIR HORVATH, BOARD MEMBERS SUCHANEK AND TEICH, CHAIRMAN GRUBB**

**NAYS: NONE**

**RCV. MOTION CARRIED.**

## **2. EXTENSION OF VARIANCE REQUEST FOR 804 W OLIVER STREET**

On September 18, 2018, a variance was approved for 804 W. Oliver Street to construct an attached garage with a 2.7' side yard variance, 11.83' rear yard variance and a 2.5% lot coverage variance.

The owners were not able to begin construction and according to the City's ordinance construction was to begin within 6 months of the date the variance was approved.

Based on the newly adopted zoning ordinance, the side yard variance is no longer required due to decreasing the side yard setbacks to 5', the rear yard stays the same and the lot coverage variance is no longer required due to the lot coverage percentage has been increased to 50%.

Owners Kateri Lehr and Geoff Kilpatrick were present. They stated they are now ready to proceed forward with the project and have hired the architect and contractor. The project will have the same footprint as what was presented in 2018.

**MOTION BY BOARD MEMBER TEICH AND SUPPORTED BY VICE-CHAIR HORVATH TO APPROVE THE EXTENSION OF THE VARIANCE REQUEST AND THAT ALL PERMITS BE OBTAINED AND CONSTRUCTION BEGINS WITHIN ONE YEAR OF THE DATE OF THIS MEETING.**

**YEAS: BOARD MEMBERS SUCHANEK AND TEICH, VICE-CHAIR HORVATH AND CHAIRMAN GRUBB**

**NAYS: NONE**

**RCV. MOTION CARRIED.**

**OTHER BOARD BUSINESS: NONE**

**PUBLIC COMMENTS AND COMMUNICATIONS: NONE**

**ADJOURNMENT:**

**MOTION BY VICE-CHAIR HORVATH AND SUPPORTED BY BOARD MEMBER TEICH TO ADJOURN THE MEETING AT 9:55 A.M. UNTIL THE NEXT REGULARLY SCHEDULED MEETING ON TUESDAY, JULY 16, 2024.**

**YEAS: All. Motion carried.**

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**Thomas Taylor, Secretary**

Rec'd 3/27/2025  
P2025-002



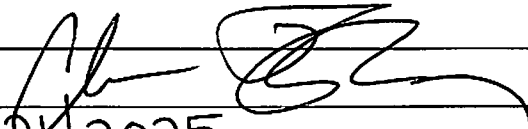
**ZONING BOARD OF APPEALS APPLICATION**

City of Owosso  
301 W. Main Street, Owosso, MI 48867  
Phone: (989) 725.0535  
building@ci.owosso.mi.us

Application must be filed at least 25 days prior to a scheduled ZBA meeting for staff review and proper notices (see last page for submittal deadlines)

<b>I (we) hereby appeal to the Zoning Board of Appeals for a:</b>			
<input checked="" type="checkbox"/> Variance	<input type="checkbox"/> Permit	<input type="checkbox"/> Interpretation	<input type="checkbox"/> Review/Approval
<b>Property Information:</b>			
Property Street Address: 709 ADA Street ( 826 W. King Street)			
Parcel ID #: 050-310-003-008-00		Zoning: COR - Corridor Business District	
<b>Applicant:</b>			
Name: Memorial Healthcare (Charles Thompson)			
Address: 826 W. King Street, Owosso, MI 48867			
Telephone No: (989) 729-4567		Email: CThompson@memorialhealthcare.org	
<b>Description of the property:</b>			
Size of lot: 0.2 Acres	Square footage of lot:	Corner or <del>interior</del> lot	
<b>Description of existing structures:</b>			
Number of buildings now on premises: No Buildings on this specific Lot - Part of the Hospital			
Size of each building now on premises: No Buildings on this specific Lot - Part of the Hospital			
Use of existing buildings on premises: Part of the Hospital			
<b>Description of proposed structure:</b>			
Height of proposed structure: No Buildings are proposed - Parking Only			
Dimensions of proposed building or addition: No Buildings are proposed - Parking Only			
Area of proposed building: No Buildings are proposed - Parking Only			
Percentage of lot coverage of building or addition: No Buildings are proposed - Parking Only			
<b>Yard setbacks after completion of building or addition (measured from lot line):</b>			
Front yard: N/A	Side yard: N/A	Rear yard: N/A	
<b>Section number of Zoning Ordinance that is being appealed:</b> 38-187 (4) (a) (1 & 2)			

<p><b>Clearly state your request:</b> Request to allow parking to be within three feet of the ROW / Property Line (five feet from existing sidewalk) in front yard setback. A 6' high vinyl fence will be installed between parking and sidewalk.</p>
<p><b>Required attachments:</b></p>
<p><b>1. Completed application</b></p>
<p><b>2. Site plan, plus a digital copy</b></p>
<ul style="list-style-type: none"> <li>• Legal description of site</li> </ul>
<ul style="list-style-type: none"> <li>• Area of site (in square feet or acres)</li> </ul>
<ul style="list-style-type: none"> <li>• Dimensions on all property lines, setbacks, etc.</li> </ul>
<ul style="list-style-type: none"> <li>• Location of all existing and proposed structures on subject property</li> </ul>
<ul style="list-style-type: none"> <li>• Location of all existing structures within 100' of subject property</li> </ul>
<ul style="list-style-type: none"> <li>• Location of all existing and proposed drives, turning lanes, parking areas, number of parking spaces, greenbelt screening and walls</li> </ul>
<ul style="list-style-type: none"> <li>• Location and right-of-way widths of all abutting streets and alleys</li> </ul>
<ul style="list-style-type: none"> <li>• Loading and unloading areas</li> </ul>
<p><b>3. Written response to the following for either the Dimensional variance or the Use variance:</b></p>
<p>(1) <b>Dimensional variance.</b> The ZBA may grant a dimensional variance only upon a finding that practical difficulties exist. A dimensional variance is a variance from any dimensional standard or requirement of this chapter, such as, but not limited to, a deviation from density, height, bulk, setback, or parking, landscaping and sign standards and requirements. A finding of practical difficulties shall require demonstration by the applicant of all of the following:</p>
<p>a. Strict compliance with restrictions governing area, setback, frontage, height, bulk, density or other "non-use" matters will unreasonably prevent the owner from using the property for a permitted purpose or will be unnecessarily burdensome. The variance will do substantial justice to the applicant, as well as to other property owners.</p>
<p>b. A lesser variance than that requested will not give substantial relief to the applicant and/or be consistent with justice to other property owners.</p>
<p>c. The need for the variance is due to unique circumstances or conditions peculiar to the property and not generally applicable in the area or to other properties in the same zoning district such as exceptional narrowness, shallowness, shape, topography or area.</p>
<p>d. The problem and resulting need for the variance has not been self-created by the applicant and/ or the applicant's predecessor may or may not be considered depending upon whether the practical difficulty would have existed regardless of the action.</p>
<p>e. The variance will not alter the essential character of the area. In determining whether the effect the variance will have on the character of the area, the established type and pattern of land uses in the area and the natural characteristics of the site and surrounding area will be considered.</p>
<p>f. The granting of the variance will not materially impair the intent and purpose of this chapter.</p>
<p>(2) <b>Use variance.</b> The ZBA may grant a use variance only upon a finding that an unnecessary hardship exists. A use variance is a variance that permits a use that is otherwise not provided for in a zoning district. A finding of an unnecessary hardship shall require demonstration by the applicant of all of the following:</p>
<p>a. The property cannot be reasonably used for any purpose permitted in the zoning district without the variance. There must be financial proof of the applicant's inability to realize any reasonable return; speculation or a qualitative assessment is inadequate.</p>

<p>b. The need for the variance is due to unique circumstances peculiar to the property and not generally applicable in the area or to other properties in the same zoning district. The applicant must prove that there are certain features or conditions of the land that are not generally applicable throughout the zone and that these features make it impossible to earn a reasonable return without some adjustment. In those situations where the difficulty is shared by others, the board may find that relief should be accomplished by an amendment to the zoning ordinance, not a variance.</p>	
<p>c. The problem and resulting need for the variance has not been self-created by the applicant and/ or the applicant's predecessors.</p>	
<p>d. The variance will not alter the essential character of the area. In determining whether the effect the variance will have on the character of the area, the established type and pattern of land uses in the area and the natural characteristics of the site and surrounding area will be considered.</p>	
<p><b>4. Narrative demonstrating why a variance is being sought</b></p>	
<p><b>5. Required fee</b></p>	
Commercial	\$425
Residential	\$200
Escrow Fee (Hourly rate of Staff/Consultant involved)	\$1,500
<ul style="list-style-type: none"> <li>• A cash deposit of \$1,500 shall be placed with the City of Owosso</li> <li>• The City will let the applicants know when additional funds are needed (typically when about 25% is remaining)</li> <li>• Should there be funds remaining in the account after completion of the project, the balance will be returned</li> </ul>	
<p><b>6. The engineer, architect, planner and/or designer retained to develop the site plan shall be responsible and make themselves aware of the Owosso Zoning Ordinance and Master Plan requirements.</b></p>	
<p><b>7. The Applicant or his/her representative must be present at the ZBA meeting</b></p>	
<p><b>8. Filing requests which are not complete or which are not filed by the meeting deadline, as determined by the Zoning Administrator, will not be placed on the agenda of the ZBA meeting, nor will they be considered at the ZBA meeting.</b></p>	
<p><b>9. No order of the ZBA permitting the erection or alteration of buildings shall be valid for a period longer than one year, unless a building permit for such erection or alteration is obtained within such period and such erection or alteration is commenced and proceeds to a completion in accordance with the terms of such permit.</b></p>	
<p><b>10. No application for a variance which has been denied wholly or in part by the board shall be resubmitted for a period of one (1) year from the date of the last denial, except on the grounds of newly discovered evidence or proof of changed conditions found upon inspection by the board to be valid.</b></p>	
<p>Signature </p>	
<p>Date 3/21/2025</p>	

City of Owosso  
Public Hearing Notice

The City of Owosso Zoning Board of Appeals will conduct the following public hearing at the regular meeting scheduled for Tuesday, April 15, 2025, for the following topic:

**PUBLIC HEARING FOR SETBACK VARIANCE:**

- 1. Memorial Healthcare, 826 W. King Street:** The applicant is seeking a variance from the Owosso Zoning Ordinance Chapter 38, Article XV. Off-Street Parking and Loading Standards, Sec. 38-187. Off-street parking space design and setback requirements. (4) Parking lot setbacks (a) From streets rights-of-way, to be less than 20 feet from the right-of-way line, to allow for an additional 34 parking spaces facing King Street.

The Owosso Municipal Code requires approval of a dimensional variance from the Zoning Board of Appeals when it can be shown that ordinance standards have been met.

The property is zoned COR, Corridor Business District, where hospitals and parking lots are permitted in that district. The parcel number is 050-536-000-095-00.

You are receiving this notice because you own and/or occupy property within 300' of the hospital.

The Zoning Board of Appeals meeting will begin at 9:30 a.m. in the City of Owosso Council Chambers, 301 W. Main Street. Persons having any questions regarding these matters are urged to attend this meeting or contact the City Planning and Zoning office at (989) 725-0535.

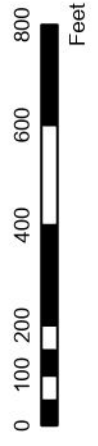
The City of Owosso will provide necessary reasonable auxiliary aids and services, such as signers for the hearing impaired and audio tapes of printed materials being considered at the meeting, to individuals with disabilities at the meeting/hearing upon seventy-two (72) hours' notice to the City of Owosso. Individuals with disabilities requiring auxiliary aids or services should contact the City of Owosso by writing or calling Amy Kirkland, City Clerk, 301 W. Main St, Owosso, MI 48867 (989) 725-0500. Website address is [www.ci.owosso.mi.us](http://www.ci.owosso.mi.us)

# City of Owosso

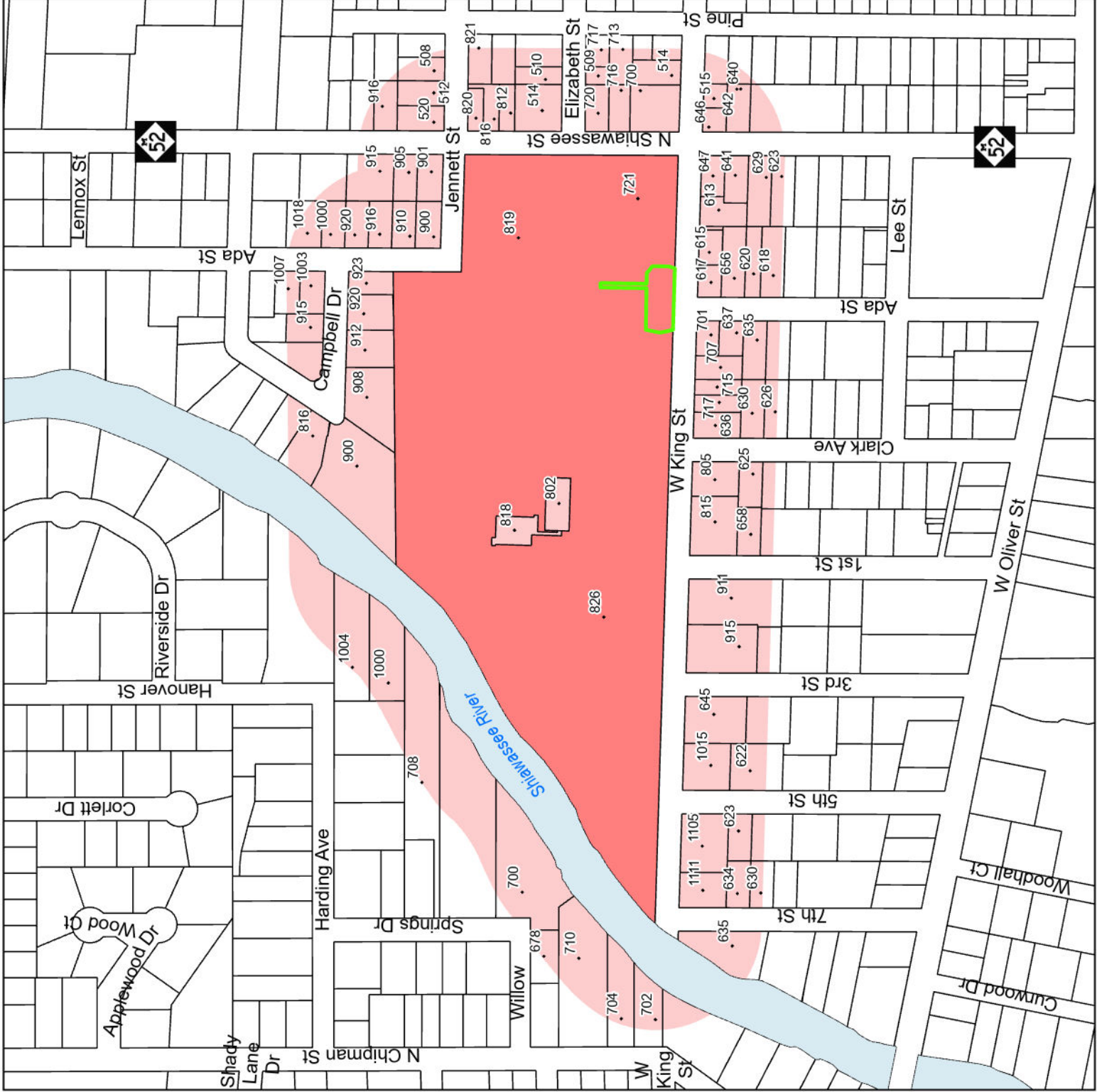
## 300 ft. Buffer Zone Map

Subject Parcel:  
826 W. King St.

- Subject Parcel
- Proposed Work Area
- Area Within 300 ft of Boundary of Subject
- Address Point



28 March, 2025





## Memorial Healthcare – Additional Parking



**4/2/25 (Revised)**

### **Project Narrative – Variance Request #1 Dimensional Requirements**

Memorial Healthcare (MHC) currently operates a healthcare / hospital facility located at 826 W. King Street, Owosso, MI. The overall property consists of more than 22 parcels located just north of W. King Street and east of Shiawassee Street (M-52). Over the years, MHC has expanded numerous times. The current campus contains seven buildings. The parent parcel number is 050-536-000-095-00. The historical parcel for this proposed project is 050-310-003-008-00 and commonly known as 709 Ada Street. Due to increased demand for the new facility, MHC is in need of additional parking to serve users. A new 34 space parking area is proposed. The proposed parking area will be consistent with existing parking areas. The construction is planned to commence in June 2025 (end of school year) and be completed by September 2025. Following is a brief narrative of the proposed project.

#### *Property Data*

Parcel #	050-310-003-008-00 / Combined 050-536-000-095-00
Zoning	COR – Corridor Business District
Parcel Size	0.2 Acres / 27.7 Acres Total

#### *Existing & Proposed Use*

The site is currently used as Medical / Hospital. The proposed use is the same.

#### *Proposed Improvements*

The proposed improvements include the following:

1. Removal of the existing topsoil and existing trees.
2. Construction of new asphalt surface parking lot including concrete curb and gutter.
3. Installation of two storm water catch basins and associated storm sewer.
4. Modify three existing light fixtures with double fixtures to light the parking area.
5. Installation of a landscaped hedge behind sidewalk to block any headlights.

#### *Variance Requests*

The following variances are being requested based upon the proposed use of the site.

#### *Section 38-187 (4) (a) (1&2)*

1. Section 38-187 (4) (a) (1&2) Allows the planning Commission to grant a waiver to allow parking in the front yard setback if appropriate. The section requires that a minimum setback of 20' be maintained from adjacent street right of way in all zoning districts except

CBD. MHC requests a reduction in the setback to three feet from ROW / 5' from the existing sidewalk. A landscaped hedge will be provided between the parking area and sidewalk to shield headlights.

*Variance Justification*

(1) **Dimensional variance.** The ZBA may grant a dimensional variance only upon a finding that practical difficulties exist. A dimensional variance is a variance from any dimensional standard or requirement of this chapter, such as, but not limited to, a deviation from density, height, bulk, setback, or parking, landscaping and sign standards and requirements. A finding of practical difficulties shall require demonstration by the applicant of all of the following:

- a. Strict compliance with restrictions governing area, setback, frontage, height, bulk, density or other "non- use" matters will unreasonably prevent the owner from using the property for a permitted purpose or will be unnecessarily burdensome. The variance will do substantial justice to the applicant, as well as to other property owners.

*Memorial Healthcare provides valuable medical services for the surrounding community. Recent expansions (Cancer Center & NOW Center) have worked to anticipate parking needs, but demand for the health club area is driving the need for additional parking. The proposed parking area is one of the few areas on the current campus that is available for parking. The 20' front yard parking setback requirements eliminate the ability to develop this area with two full bays of parking. Strict adherence to the ordinance would only allow one row of parking and essentially limit the additional parking by 50% of the proposed spaces.*

*The proposed variance will allow MHC to construct the additional parking and continue providing the much-needed medical services that the community relies upon. MHC is proposing to construct a landscaped hedge row to prevent any headlights from projecting into the adjacent parcels.*

- b. A lesser variance than that requested will not give substantial relief to the applicant and/or be consistent with justice to other property owners.

*Due to the limited area available and the City of Owosso parking standards, a lesser variance will not allow the full development of this area. A lesser variance would result in a net gain of approximately half of the anticipated parking.*

- c. The need for the variance is due to unique circumstances or conditions peculiar to the property and not generally applicable in the area or to other properties in the same zoning district such as exceptional narrowness, shallowness, shape, topography or area.

*MHC has developed their current facility over a period of many years. Their facilities have grown over the years and the need for parking has increased significantly. MHC has performed various parking studies over the years and carefully planned expansions to their parking facilities. Usage at the NOW Center has exceeded expectations and parking is at a premium. The proposed area is one of the only remaining areas available for parking*

*expansion.*

- d. The problem and resulting need for the variance has not been self-created by the applicant and/ or the applicant's predecessor may or may not be considered depending upon whether the practical difficulty would have existed regardless of the action.

*MHC has developed their current facility over many years. MHC has carefully planned expansions to their facilities to meet the anticipated demands. The demand for the health club has exceeded their expectations and additional parking is required. Their current campus is surrounded by residential properties that provide valuable housing in the City of Owosso. There have not been many opportunities to obtain additional property for development / parking.*

- e. The variance will not alter the essential character of the area. In determining whether the effect the variance will have on the character of the area, the established type and pattern of land uses in the area and the natural characteristics of the site and surrounding area will be considered.

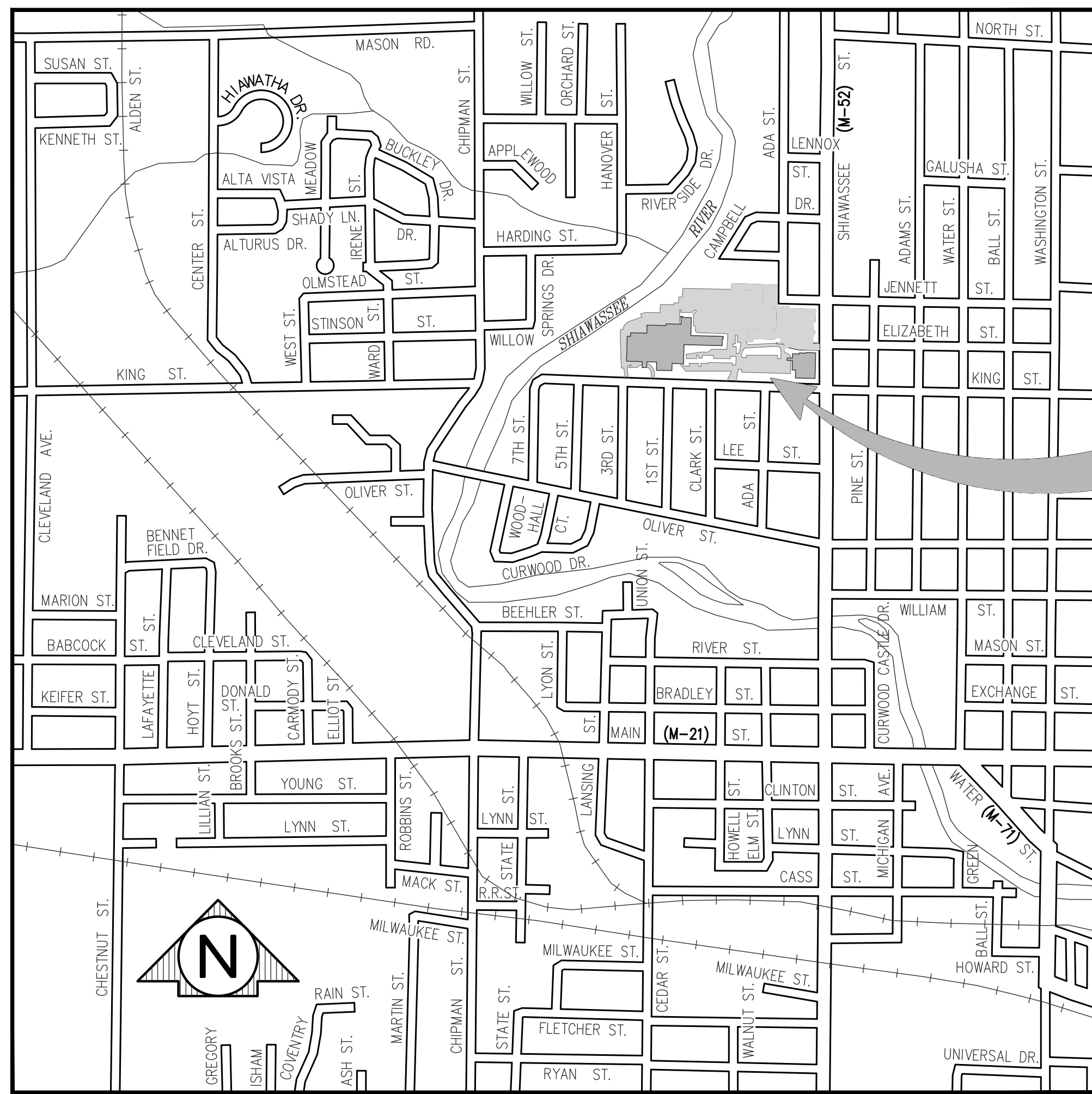
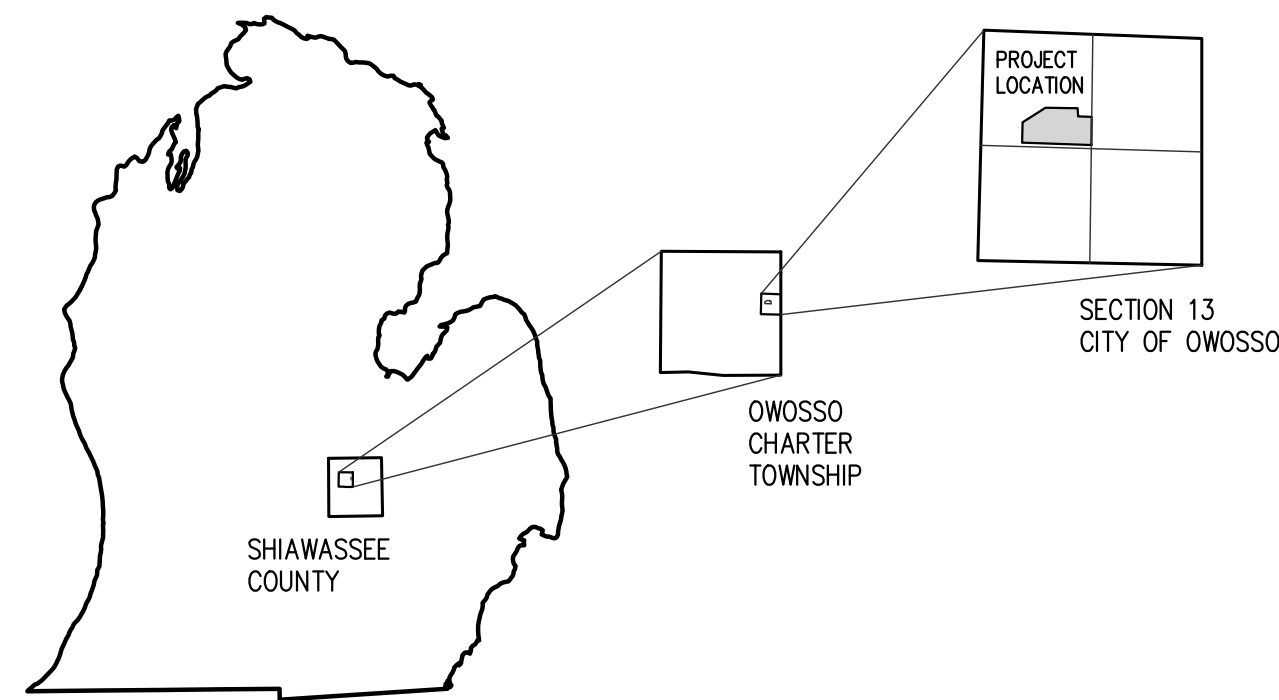
*MHC has been a good neighbor in the community and works to limit any disturbances to the community. Part of this project will involve construction of a landscaped hedge row to prevent headlight impact to the residential neighborhood across the street.*

- f. The granting of the variance will not materially impair the intent and purpose of this chapter.

*The proposed variance will not impair the intent and purpose of the ordinance.*

# SITE PLANS FOR MEMORIAL HEALTHCARE ADDITIONAL PARKING FACILITIES

819 N. SHIAWASSEE STREET (M-52)  
CITY OF OWOSSO, SECTION 13, T.7N.-R.2E.  
SHIAWASSEE COUNTY, MICHIGAN



**LOCATION MAP**  
NOT TO SCALE

**PROJECT  
LOCATION**

**UTILITY CONTACT LOG**

AGENCY	UTILITY
1. CITY OF OWOSSO PUBLIC WORKS DEPARTMENT 522 MILWAUKEE STREET OWOSSO, MI 48867 MR. TOM WHEELER (989) 725-0550 tom.wheeler@ci.owosso.mi.us	D.P.W.
2. CONSUMERS ENERGY 530 WEST WILLOW STREET LANSING, MI 48909 MR. TYLER LAWRENCE (517) 788-1191 tyler.lawrence@cmsenergy.com	GAS
3. CONSUMERS ENERGY 1801 W. MAIN STREET OWOSSO, MI 48867 MR. JOEL HIMM (989) 729-3256 joel.himm@cmsenergy.com	ELECTRIC
4. CHARTER COMMUNICATIONS 7372 DAVISON ROAD DAVISON, MI 48423 MR. DAVID BUJAK (734) 915-2895 david.bujak@charter.com	CABLE
5. FRONTIER/VERIZON 1943 W. W-21 OWOSSO, MI 48867 MR. MARK STEVENS (989) 723-0373 Mark.Stevens@ftr.com	TELEPHONE

**PROJECT DESCRIPTION**

THIS PROJECT INCLUDES THE CONSTRUCTION OF A NEW PARKING AREA ON THE SOUTH SIDE OF THE EXISTING PARCEL. THE PROPOSED PARKING AREA WILL PROVIDE 34 NEW SPACES.

**OWNER INFORMATION**

MEMORIAL HEALTHCARE  
826 W. KING STREET  
OWOSSO, MI 48867  
CHARLES THOMPSON  
(989) 729-4567

**DESIGN ENGINEER**

ROWE PROFESSIONAL SERVICES COMPANY  
540 S. SAGINAW ST, SUITE 200  
FLINT, MI 48502  
DOUGLAS A. SCOTT, PE  
(810) 869-5111

**MDOT TRAFFIC AND SAFETY PLANS**

THE FOLLOWING MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) TRAFFIC AND SAFETY PLANS ARE REFERENCED IN THIS PROJECT. COPIES OF THE MDOT STANDARD PLANS ARE INCLUDED IN THE CONTRACT DOCUMENTS.

- M0020a TABLES FOR "L", "D" AND "B" VALUES
- M0040a TYPICAL ADVANCE SIGNING TREATMENT FOR LONG, INTERMEDIATE AND SHORT TERM STATIONARY WORK ZONE OPERATIONS OF LESS THAN TWO MILES IN LENGTH WHERE TRAFFIC CONTROL DEVICES MAY REMAIN AT END OF WORK DAY ON AN UNDIVIDED TWO-WAY ROADWAY
- M0240a TYPICAL TEMPORARY TRAFFIC CONTROL FOR A ONE-LANE CLOSURE ON AN UNDIVIDED MULTI-LANE ROADWAY, NO SPEED REDUCTION
- WZD-100-A\* GROUND DRIVEN SIGN SUPPORTS FOR TEMPORARY SIGNS
- WZD-125-E\* TEMPORARY TRAFFIC CONTROL DEVICES

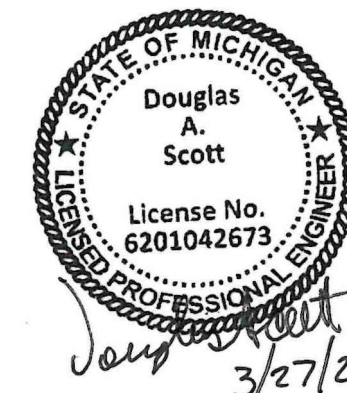
**MDOT STANDARD ROAD PLANS**

THE FOLLOWING MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD ROAD PLANS ARE REFERENCED IN THIS PROJECT. COPIES OF THE MDOT STANDARD PLANS ARE INCLUDED IN THE CONTRACT DOCUMENTS.

- R-7-F COVER B
  - R-9-D COVER D
  - R-12-E COVER G
  - R-15-G\* COVER K
  - R-28-J\* SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
  - R-29-I DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALKS
  - R-30-G CONCRETE CURB AND CONCRETE CURB AND GUTTER
- \* INDICATES SPECIAL DETAIL

**SHEET INDEX**

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- 3 - LEGEND SHEET
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- 6 - OVERALL SITE PLAN
- 7 - EXISTING CONDITIONS AND REMOVAL PLAN
- 8 - PROPOSED SITE PLAN
- 9 - GRADING AND STORM SEWER PLAN
- 10 - SOIL EROSION KEY SHEET
- 11 - LIGHTING PLAN



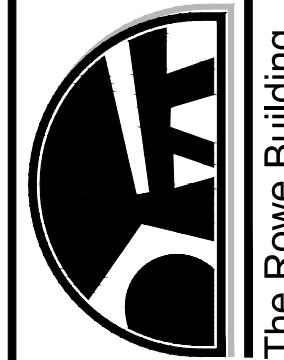
**PLAN SUBMITTALS AND CHANGES**

PRELIMINARY PLANS - **NOT FOR CONSTRUCTION**	
DATE	DESCRIPTION

REV:

SHT# 1 OF 10  
JOB No: 19C0221

**ROWE PROFESSIONAL  
SERVICES COMPANY**



The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502

PLAN DATE: MARCH 2025  
PROJECT MGR: DAS  
REVIEWER: CJA  
SCALE: NOT TO SCALE

O: (810) 341-7500  
www.rowepsc.com

PREPARED FOR  
**MEMORIAL HEALTHCARE  
ADDITIONAL PARKING FACILITIES**

COVER SHEET

## GENERAL CONSTRUCTION NOTES

### EMERGENCY CONTACTS

BEFORE BEGINNING WORK ON THE PROJECT, THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH THE NAMES AND TELEPHONE NUMBERS OF EMERGENCY CONTACTS. AT LEAST ONE PERSON REPRESENTING THE CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO EMERGENCIES THROUGHOUT THE LIFE OF THE PROJECT, 24 HOURS A DAY, 7 DAYS A WEEK.

### UNDERGROUND UTILITY IDENTIFICATION AND LOCATION

THE CONTRACTOR SHALL CALL MISS DIG (1-800-482-7171) A MINIMUM OF THREE WORK DAYS IN ADVANCE OF BEGINNING EXCAVATION. THE CONTRACTOR IS RESPONSIBLE TO IDENTIFY AND NOTIFY UTILITY AGENCIES WITHIN THE PROJECT AREA WHICH DO NOT PARTICIPATE IN THE MISS DIG NOTIFICATION PROGRAM.

### PUBLIC UTILITIES

EXISTING UTILITIES ARE SHOWN BASED UPON RECORDS AND LOCATIONS PROVIDED BY UTILITY AGENCIES. THE INFORMATION SHOWN IS CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR. UNLESS THE PLANS SPECIFICALLY SHOW THAT EXISTING UTILITIES ARE TO BE MOVED, THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN EXISTING UTILITIES.

### VERIFICATION OF UNDERGROUND UTILITIES

THE CONTRACTOR SHALL EXCAVATE AND LOCATE ALL EXISTING UTILITIES IN THE PROJECT AREA IN ADVANCE OF CONSTRUCTION TO VERIFY THEIR ACTUAL LOCATION. POTENTIAL CONFLICTS SHALL BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL MAKE SUCH CHANGES TO GRADE AND ALIGNMENT OF PROPOSED WORK AS DIRECTED BY THE ENGINEER TO AVOID CONFLICTS, AT NO INCREASE IN COST TO THE OWNER.

### UTILITY SERVICE

UNLESS SPECIFICALLY PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS, ALL EXISTING UTILITIES ARE TO REMAIN IN SERVICE DURING THE PROJECT.

### MAILBOXES

MAILBOXES LOCATED WITHIN THE LIMITS OF EXCAVATION, GRADING, OR CONSTRUCTION SHALL BE REMOVED AND PROTECTED FROM DAMAGE BY THE CONTRACTOR. TEMPORARY MAILBOXES SHALL BE PROVIDED AND MAINTAINED DURING THE PROJECT. UPON COMPLETION OF GRADING OR CONSTRUCTION ACTIVITIES, THE ORIGINAL MAILBOX SHALL BE REINSTALLED.

MAILBOXES (AND/OR SUPPORTS) WHICH ARE DAMAGED AS A RESULT OF THE PROJECT SHALL BE REPLACED BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE. MAILBOXES SHALL BE REPLACED IN ACCORDANCE WITH THE STANDARDS OF THE U.S. POSTAL SERVICE AND THE REGULATIONS OF THE AGENCY HAVING JURISDICTION OVER THE ROADS AND STREETS IN THE PROJECT AREA.

### PRIVATE IRRIGATION SYSTEMS

WHERE IRRIGATION SYSTEMS WITHIN THE PUBLIC RIGHT-OF-WAY WILL INTERFERE WITH THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS THAT IT IS THEIR RESPONSIBILITY TO REMOVE AND PROTECT THEIR IRRIGATION SYSTEM. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF THE NOTIFICATION.

WHERE THE OWNER HAS NOT REMOVED THEIR PRIVATE IRRIGATION SYSTEM, THE CONTRACTOR SHALL CUT AND PLUG THOSE SECTIONS OF PIPING WHICH INTERFERE WITH CONSTRUCTION. SPRINKLER HEADS, VALVES, AND PIPING WHICH INTERFERES WITH THE CONTRACTOR'S WORK, SHALL BE REMOVED AND STOCKPILED ON THE OWNER'S PROPERTY.

### SOIL BORINGS / PAVEMENT CORES

IF PROVIDED ON THE PLANS OR IN THE CONTRACT DOCUMENTS, LOGS OF SOIL BORINGS OR PAVEMENT CORES REPRESENT THE SUBSURFACE CONDITIONS ENCOUNTERED AT SPECIFIC POINTS. THE INFORMATION IS PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY.

### MAINTAINING TRAFFIC

LOCAL AND EMERGENCY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES WITHIN THE PROJECT AREA.

WHEN EXCAVATION, FRESH CONCRETE, OR OTHER CONSTRUCTION WORK WILL RESULT IN THE CLOSURE OF A STREET OR DRIVEWAY FOR A PERIOD OF TIME, THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL AFFECTED RESIDENTS AND BUSINESSES IN ADVANCE.

THE CONTRACTOR SHALL NOTIFY EMERGENCY RESPONSE AGENCIES IN ADVANCE OF ROAD CLOSURES OR THE ESTABLISHMENT OF DETOURS.

### TRAFFIC SIGNS

TRAFFIC SIGNS WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED AND REPLACED BY THE AGENCY HAVING JURISDICTION OVER THE STREETS OR ROADS IN THE PROJECT AREA. THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE AGENCY TO ARRANGE FOR REMOVAL OF THE SIGN AND IS RESPONSIBLE TO PAY ANY FEES ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE SIGNS.

### SCHEDULE

THE CONTRACTOR SHALL COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP WORK ON THE PROJECT ONCE BEGUN.

### ALIGNMENT

ALIGNMENT AND GRADES FOR CURB AND GUTTER (INCLUDING THROUGH RAMPS AND DRIVEWAY OPENINGS) SHOWN ON THE PLANS ARE FOR THE TOP, BACK OF CURB, UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE PLANS.

THE HORIZONTAL ALIGNMENT SHOWN ON THE DRAWINGS FOR DRAINAGE STRUCTURES LOCATED IN THE CURB LINE IS TO THE CENTER OF THE CASTING.

THE HORIZONTAL ALIGNMENT SHOWN ON THE DRAWINGS FOR DRAINAGE STRUCTURES WHICH ARE NOT IN THE CURB LINE AND FOR MANHOLES IS TO THE CENTER OF THE STRUCTURE.

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR MANHOLE CASTINGS, THE ELEVATION PROVIDED IS FOR THE TOP OF THE CASTING.

WHERE RIM ELEVATIONS ARE PROVIDED FOR INLET TYPE CASTINGS, THE ELEVATIONS ARE PROVIDED AS FOLLOWS:

- CURB INLETS - THE ELEVATION OF THE TOP OF CURB
- ALL OTHER INLETS - THE ELEVATION OF THE FLOW LINE

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR INLETS OR MANHOLE CASTINGS, THE ELEVATIONS PROVIDED ARE CONSIDERED PRELIMINARY. THE CONTRACTOR SHALL MAKE THE FINAL ADJUSTMENT FOLLOWING THE ESTABLISHMENT OF ACTUAL GRADING AND PAVEMENT ELEVATIONS.

### CONSTRUCTION STAKING

WHEN CONSTRUCTION STAKING IS TO BE PROVIDED BY THE ENGINEER OR OWNER, THE CONTRACTOR SHALL REQUEST STAKING AT LEAST THREE WORKING DAYS IN ADVANCE.

WHEN CONSTRUCTION STAKING IS TO BE PROVIDED BY THE ENGINEER OR OWNER, STAKING WILL BE PROVIDED ONE TIME. THE CONTRACTOR SHALL PROTECT AND PRESERVE SURVEY CONTROL AND STAKING. RE-STAKING WILL BE AT THE CONTRACTOR'S EXPENSE.

### SURVEY CORNERS, BENCHMARKS, AND CONTROL POINTS

THE CONTRACTOR SHALL PRESERVE ALL GOVERNMENT CORNERS, PROPERTY CORNERS, BENCHMARKS, SURVEY CONTROL POINTS AND OTHER SURVEY POINTS WITHIN THE PROJECT AREA. WHERE CORNERS, BENCHMARKS, OR SURVEY POINTS ARE ENCOUNTERED WHICH WILL BE DISTURBED BY THE CONTRACTOR'S ACTIVITIES; A LICENSED SURVEYOR SHALL WITNESS THE POINT BEFORE DISTURBANCE AND SHALL RE-SET THE POINT FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PAY THE SURVEYOR TO WITNESS AND TO RE-SET THE POINTS.

### PROTECTION OF TREES, SHRUBS, AND LANDSCAPING

ALL TREES, SHRUBS, AND LANDSCAPING WITHIN THE CONSTRUCTION AREA WHICH ARE NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED TREES, SHRUBS, AND LANDSCAPING SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

### CONSTRUCTION SIGNING AND BARRICADING

THE CONTRACTOR SHALL PROTECT HAZARDOUS AREAS WITH BARRICADES. BARRICADES LEFT IN PLACE AFTER SUNSET SHALL BE LIGHTED.

THE CONTRACTOR SHALL PROVIDE SUITABLE SANDBAGS OR OTHER SUITABLE MEASURES FOR ANCHORING OF TEMPORARY SIGNS AND BARRICADES, TO PREVENT THEIR TIPPING OR DISPLACEMENT BY WIND OR AIR FLOW FROM VEHICLES.

THE CONTRACTOR SHALL PROVIDE SIGNING, BARRICADES, TRAFFIC REGULATORS, CONES, AND OTHER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER STREETS OR ROADS IN THE PROJECT AREA, THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL COVER OR REMOVE TEMPORARY SIGNS DURING PERIODS WHEN THEY ARE NOT APPROPRIATE.

### TURF ESTABLISHMENT

ALL DISTURBED AREAS WHICH ARE NOT TO BE SURFACED WITH PAVEMENT, AGGREGATE OR OTHER APPROVED SURFACES SHALL BE ESTABLISHED WITH TURF.

TURF AREAS SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE.

DISTURBED AREAS SHALL BE SURFACED WITH THREE INCHES OF SCREENED TOPSOIL.

THE CONTRACTOR IS RESPONSIBLE TO ESTABLISH TURF WHICH IS SUBSTANTIALLY FREE OF BARE SPOTS AND FREE OF WEEDS. THE GROUND SURFACE IN TURF AREAS SHALL BE SMOOTH AND PROVIDE A NATURAL TRANSITION TO ADJACENT, UNDISTURBED AREAS.

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE WATERING, WEEDING, RESEEDING, AND REWORKING AS NECESSARY TO ESTABLISH TURF AREAS TO THE REQUIRED STANDARD.

### ADA COMPLIANCE

ALL PROPOSED CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AND APPLICABLE GUIDELINES OR STANDARDS. WHERE EXISTING CONDITIONS AND/OR THE REQUIREMENTS OF THE PLANS WILL RESULT IN FINISHED CONDITIONS THAT DO NOT MEET THE ADA REQUIREMENTS, GUIDELINES, OR STANDARDS; THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO REMOVE AND REPLACE WORK DETERMINED TO BE NOT IN ACCORDANCE WITH APPLICABLE REQUIREMENTS, GUIDELINES, OR STANDARDS.

### EARTHWORK

EARTHWORK QUANTITIES, IF PROVIDED, ARE FOR THE CONTRACTOR'S INFORMATION. THE QUANTITIES WERE DERIVED USING THE AVERAGE END AREA METHOD. ASSUMPTIONS REGARDING TOPSOIL AND SHRINKAGE ARE STATED WITH THE ESTIMATES OF EXCAVATION AND FILL.

### EARTHWORK SUMMARY (FOR INFORMATION ONLY)

EXCAVATION	1000 CYD
FILL	500 CYD

#### ASSUMPTIONS:

- 8 INCHES OF TOPSOIL, NOT INCLUDED IN EXCAVATION AND FILL VOLUMES
- 3 INCHES OF TOPSOIL, INCLUDED IN EXCAVATION AND FILL VOLUMES
- EXCAVATION AND FILL VOLUMES HAVE BEEN DETERMINED WITHOUT CONSIDERATION OF EFFECT OF DENSITY, MOISTURE CONTENT, EXPANSION, ETC.

THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF THE EARTHWORK QUANTITIES, AND BASE THEIR BID ON THEIR DETERMINATION OF THE QUANTITIES OF WORK REQUIRED.

IF ADDITIONAL FILL MATERIAL MUST BE PROVIDED TO ATTAIN THE FINISH GRADES SHOWN ON THE PLANS, THE CONTRACTOR SHALL PROVIDE THE REQUIRED FILL MATERIAL, UNLESS A SPECIFIC BORROW AREA IS IDENTIFIED ON THE PLANS.

EXCESS SOILS RESULTING FROM EXCAVATION AND EARTHWORK SHALL BECOME THE CONTRACTOR'S PROPERTY AND DISPOSED OF PROPERLY, UNLESS AN AREA(S) HAS BEEN DESIGNATED FOR STOCKPIILING OR 'BLENDING IN' THE EXCESS MATERIAL WITHIN THE PROJECT LIMITS.

### BACKFILL AND EMBANKMENT

BACKFILL OF AN EXCAVATION UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE, SHALL BE SAND, MEETING THE REQUIREMENTS OF GRANULAR MATERIAL CLASS III AS DESCRIBED IN THE CURRENT MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE SAND BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

BACKFILL OF AN EXCAVATION WHICH IS NOT UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE MAY BE SUITABLE EXCAVATED MATERIAL OR OTHER SOIL, WHICH IS FREE OF ORGANIC MATTER, STONES AND ROCKS, ROOTS, BROKEN CONCRETE, FROZEN MATERIAL, OR DEBRIS. THE BACKFILL SHALL BE COMPACTED TO AT LEAST 90% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL INDICATE THE SOURCE OF SAND USED FOR BACKFILL TO THE ENGINEER, AND PROVIDE THE ENGINEER WITH THE RESULTS OF A GRADATION TEST PERFORMED ON A SAMPLE OF THE SAND. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN ADVANCE OF USING SAND FROM OTHER SOURCES.

EMBANKMENT USED TO BUILD THE SUBGRADE TO REQUIRED ELEVATION SHALL BE SUITABLE SOIL EXCAVATED FROM THE PROJECT SITE, OR FURNISHED BY THE CONTRACTOR FROM OTHER SOURCES. SUITABLE SOIL IS FREE FROM ORGANIC MATTER, ROCKS AND STONES, FROZEN MATERIAL, BROKEN CONCRETE, AND DEBRIS.

EMBANKMENT CONSTRUCTED OF GRANULAR SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

EMBANKMENT CONSTRUCTED OF COHESIVE SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

### DENSITY TESTING

THE MAXIMUM UNIT WEIGHT OF SAND AND OTHER GRANULAR SOILS WILL BE DETERMINED BY THE ONE POINT CONE TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

THE MAXIMUM UNIT WEIGHT OF COHESIVE SOILS WILL BE DETERMINED BY THE ONE POINT PROCTOR TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

### WORK HOURS

UNLESS PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS OR LIMITED BY LOCAL ORDINANCE, THE CONTRACTOR SHALL WORK WITHIN THE FOLLOWING TIMES, UNLESS OTHERWISE APPROVED BY THE OWNER: MONDAY THROUGH FRIDAY 7 A.M. TO 8 P.M. SATURDAY 8 A.M. TO 6 P.M.

THE CONTRACTOR SHALL NOT WORK ON SUNDAYS OR HOLIDAYS, UNLESS OTHERWISE APPROVED BY THE OWNER.

## DRAINAGE

THE CONTRACTOR SHALL MAINTAIN DRAINAGE OF THE PROJECT AREA AND ADJACENT AREAS. WHERE EXISTING DRAINAGE FACILITIES ARE DISTURBED OR BLOCKED BY CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY PROVISIONS FOR DRAINAGE.

WHERE CONSTRUCTION HAS DISTURBED EXISTING DITCHES, SWALES, OR OTHER DRAINAGE FACILITIES; THE CONTRACTOR SHALL RESTORE THEM TO THEIR GRADES AND DIMENSIONS WHICH EXISTED PRIOR TO THE BEGINNING OF CONSTRUCTION, UNLESS DIRECTED OTHERWISE.

DRAINAGE SHALL NOT BE REROUTED ONTO ADJACENT PROPERTIES NOR ALLOWED TO DRAIN ONTO ADJACENT PROPERTIES AT AN INCREASED RATE, AS A RESULT OF THE CONTRACTOR'S WORK.

## ROAD PROJECTS

### ADJUSTING STRUCTURES

WHERE CASTINGS FOR MANHOLES, CATCH BASINS, INLETS, VALVE BOXES, AND MONUMENT BOXES ARE TO BE ADJUSTED TO MEET A NEW PAVEMENT SURFACE ELEVATION, THE FINAL ADJUSTMENT SHALL NOT BE COMPLETED UNTIL ALL PAVEMENT COURSES HAVE BEEN PLACED EXCEPT THE FINAL COURSE. THE FINAL ADJUSTMENT SHALL BE COMPLETED JUST PRIOR TO PLACEMENT OF THE FINAL COURSE OF PAVEMENT.

THE MATERIALS AND PROCEDURES FOR ADJUSTING STRUCTURES SHALL MEET THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION OVER THE ROAD AND UTILITIES.

### SUBGRADE PREPARATION

TOPSOIL, PEAT, AND ORGANIC MATERIAL SHALL BE EXCAVATED AND REMOVED.

SOFT AND YIELDING SOILS SHALL BE REMOVED OR DRIED IF THE RESULT OF EXCESSIVE MOISTURE CONTENT.

PRIOR TO CONSTRUCTING FILLS, SUBBASE, OR PAVEMENT ON A SUBGRADE; THE SUBGRADE SHALL BE PROOF-ROLLED TO DETERMINE THE SUITABILITY OF THE SUBGRADE. THE CONTRACTOR SHALL DRIVE A HEAVY PIECE OF WHEELED CONSTRUCTION EQUIPMENT OVER THE SUBGRADE WHILE THE ENGINEER IS OBSERVING. THE CONSTRUCTION OF FILLS, SUBBASE, OR PAVEMENTS SHALL NOT PROCEED UNTIL THE SUBGRADE HAS BEEN DEMONSTRATED TO BE FREE OF SOFT AREAS.

THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE MOISTURE CONTENT OF SUBGRADE SOILS WITHIN A SUITABLE RANGE TO ALLOW FOR COMPACTION TO THE REQUIRED DENSITY. WHEN THE SOIL IS TOO DRY, THE CONTRACTOR SHALL ADD WATER. WHEN THE SOIL IS TOO WET, THE CONTRACTOR SHALL PROVIDE DRAINAGE OR AERATE THE SOIL.

THE SURFACE OF THE SUBGRADE SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT, PRIOR TO CONSTRUCTING FILLS, SUBBASE, OR PAVEMENTS.

### CURB AND GUTTERS

THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DIMENSIONS OF CURB OPENINGS FOR DRIVEWAYS, RAMPS, AND DRAINAGE STRUCTURES.

### HOT MIX ASPHALT (HMA) PAVING

PAVEMENTS WHICH ARE TO BE OVERLAID WITH A NEW PAVEMENT COURSE SHALL BE SWEEPED TO REMOVE ALL DIRT AND DEBRIS.

A BITUMINOUS BOND COAT SHALL BE APPLIED TO PAVEMENTS WHICH ARE TO BE OVERLAID WITH A NEW PAVEMENT COURSE AND ALLOWED TO CURE PRIOR TO CONSTRUCTING THE NEW PAVEMENT COURSE.

HMA PAVEMENT SHALL NOT BE PLACED WHEN THE SURFACE BEING OVERLAID IS WET, OR WHEN RAIN IS FORECAST OR THREATENING.

## DRIVEWAY CONSTRUCTION

DRIVEWAY SLOPES SHALL NOT EXCEED 10% EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE ON THE PLANS OR DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL PROVIDE PROPERTY OWNERS WITH SUITABLE NOTICE BEFORE REMOVING AND REPLACING AN EXISTING DRIVEWAY.

## SIDEWALK CONSTRUCTION

SIDEWALKS SHALL BE CONSTRUCTED TO PROVIDE POSITIVE DRAINAGE OF THE SIDEWALK AND ADJACENT SURFACES.

EXCEPT WHERE NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SURFACES, SIDEWALK SHALL BE CONSTRUCTED WITH A CROSS SLOPE SLOPED TOWARD THE STREET.

SIDEWALK CROSS SLOPES SHALL NOT EXCEED 2%.

IN TURF AREAS, THE SURFACE OF THE SIDEWALK SHALL BE ABOUT 1/4 INCH HIGHER THAN THE ADJACENT GROUND SURFACES, EXCEPT WHERE NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SIDEWALKS, CURBS, OR PAVEMENTS.

SIDEWALK SHALL BE CONSTRUCTED ON A SAND BASE, COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN SIDEWALK FORMS HAVE BEEN SET AND THE SAND BASE PREPARED. CONCRETE SHALL NOT BE PLACED UNTIL THE ENGINEER HAS OBSERVED THE FORMS. CONCRETE DELIVERY SHALL BE SCHEDULED TO ALLOW SUFFICIENT TIME FOR ADJUSTMENT OF THE FORMS, IN THE EVENT THAT ADJUSTMENT IS NECESSARY.

THE CONTRACTOR SHALL PROTECT FRESH CONCRETE FROM DAMAGE BY THE WEATHER, TRAFFIC, OR VANDALISM. DAMAGED CONCRETE SHALL BE REPLACED BY THE CONTRACTOR'S EXPENSE.

## STORM SEWER CONSTRUCTION NOTES

DRAINAGE STRUCTURES SHALL BE CONSTRUCTED FROM PRECAST CONCRETE MANHOLE SECTIONS MEETING ASTM C478.

SUMPS IN DRAINAGE STRUCTURES AND PIPELINES SHALL BE FREE OF SEDIMENT AND DEBRIS AT THE TIME OF ACCEPTANCE BY THE OWNER.

PLAN DATE: MARCH 2025  
PROJECT MGR: DAS  
REVIEWER: CJA  
SCALE: NOT TO SCALE

ROWE PROFESSIONAL SERVICES COMPANY



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The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502

PREPARED FOR  
**MEMORIAL HEALTHCARE  
ADDITIONAL PARKING FACILITIES**

GENERAL NOTES SHEET

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Know what's below.  
Call before you dig.

### PLAN SUBMITTALS AND CHANGES

PRELIMINARY PLANS - \*\*NOT FOR CONSTRUCTION\*\*

DATE	DESCRIPTION

REV:

SHT# 2 OF 10

JOB No: 19c0221

**SURVEY MONUMENTATION**

△ TRAVERSE POINT	□ SET MONUMENT
△ BENCHMARK	■ FOUND MONUMENT
⊙ ALIGNMENT POINT	⊙ SECTION & 1/4 CORNER
○ SET IRON	⊕ 1/8 & 1/16 CORNER
● FOUND IRON	□ NGS & USGS MONUMENT
---	SECTION LINE
- - -	EXISTING PROPERTY LINE (APPROX)
---	PARCEL LINE / LOT LINE
- - -	EXISTING EASEMENT LINE
---	EXISTING RIGHT OF WAY
---	PROPOSED EASEMENT
---	PROPOSED RIGHT OF WAY
---	PROJECT CONTROL LINE

**MISCELLANEOUS TOPO**

⊗ SATELLITE DISH	☐ TRASH CAN
▲ ANTENNA	☐ PICNIC TABLE
○ COLUMN	☐ PARK BENCH
⊗ FLOOD LIGHT	☐ BBQ GRILL
♨ FOUNTAIN	☐ DUMPSTER
♣ STATUE/SCULPTURE	☐ BIKE RACK
○ GRAVE MARKER	○ AIR CONDITIONING UNIT
☐ PLANTER BOX	☐ PAY PHONE/BOOTH
○ ROCK	⊗ SOIL BORING
■ MAILBOX	⊗ MONITORING WELL
○ PAPER BOX	☐ BUMPER BLOCK
⊗ FENCE GATE	⊗ SWAMP OR WETLAND

**SIGNS, SIGNALS & POSTS**

○ FLAG POLE	☐ CANTILEVERED SIGN
⊗ ADVERTISING/BUSINESS SIGN	☐ PEDESTRIAN SIGNAL
○ POST (WOOD/METAL/CONCRETE/FENCE)	⊗ PEDESTRIAN CROSSING BUTTON
○ HIGHWAY DELINEATOR POST	☐ TRAFFIC SIGNAL
⊗ EXISTING TRAFFIC SIGN	⊗ RAILROAD CROSSING GATE
○ PARKING METER	⊗ RAILROAD CROSSING SIGNAL
☐ BILLBOARD	⊗ PROPOSED TRAFFIC SIGN
☐ CANTILEVERED TRAFFIC SIGNAL	

**PLAYGROUND EQUIPMENT**

☐ SWING SET	○ VOLLEYBALL POLE
☐ SLIDE (STRAIGHT)	⊗ MERRY-GO-ROUND
☐ SLIDE (SPIRAL)	⊗ BASKETBALL HOOP POST
☐ MONKEY BARS (RECTANGLE)	☐ FOOTBALL/SOCCER GOAL
☐ MONKEY BARS (ROUND)	

**MISCELLANEOUS UTILITIES**

○ CABLE TV RISER	○ UTILITY HANDHOLE
○ CABLE TV MARKER POST	○ STRAIN POLE
☐ CIRCUIT BREAKER	⊗ UTILITY/LIGHT POLE
⊗ ELECTRIC METER	○ GUY WIRE
⊗ ELECTRIC OUTLET	○ GUY POLE
○ ELECTRIC RISER	○ UTILITY POLE
☐ ELECTRIC TRANSFORMER PAD	⊗ WOOD LIGHT POLE
☐ ELECTRIC TRANSMISSION TOWER	⊗ METAL LIGHT POLE
○ ELECTRIC MANHOLE	⊗ ORNAMENTAL LIGHT POLE
⊗ ELECTRIC MARKER POST	⊗ POLE BOX
○ TELEPHONE RISER	☐ TRAFFIC CONTROL BOX
○ TELEPHONE MANHOLE	⊗ ELECTRIC VEHICLE CHARGING STATION
○ TELEPHONE MARKER POST	○ EXISTING MISCELLANEOUS MANHOLE
○ FIBER OPTIC MARKER POST	
---	EXISTING OVERHEAD UTILITY LINE
---	EXISTING U.G. ELECTRIC LINE
---	EXISTING U.G. TELEPHONE LINE
---	EXISTING U.G. FIBER OPTIC LINE
---	EXISTING U.G. CABLE TV LINE

**GAS**

⊗ GAS METER	○ PROANE TANK
☐ GAS RISER	⊗ GAS TEST STATION
● GAS STOP BOX	⊗ GAS FILLPORT
● GAS VALVE	⊗ GAS PUMP
○ GAS VENT	○ GAS MANHOLE
⊗ GAS BLOW OFF	○ GAS MARKER POST
---	EXISTING U.G. GAS LINE

**WATER MAIN**

⊗ EXISTING FIRE HYDRANT	☐ EXISTING WATER FAUCET/SPIGOT
● EXISTING WATER GATE VALVE AND BOX	○ EXISTING WATER MANHOLE
⊗ EXISTING WATER STOP BOX	● EXISTING WATER VALVE
⊗ EXISTING WATER GATE VALVE AND WELL	● EXISTING WATER POST VALVE
☐ EXISTING WATER METER PIT	● EXISTING WATER AIR RELEASE VALVE
○ EXISTING WATER WELL	○ EXISTING WATER MARKER POST
⊗ EXISTING SPRINKLER HEAD	⊗ PROPOSED FIRE HYDRANT
⊗ EXISTING POST HYDRANT	⊗ PROPOSED WATER GATE VALVE AND BOX
● EXISTING WATER BACK FLOW PREVENTER	● PROPOSED WATER STOP BOX
⊗ EXISTING WATER TOWER	⊗ PROPOSED WATER GATE VALVE AND WELL
⊗ EXISTING SPRINKLER VALVE	▶ PROPOSED WATER MAIN REDUCER
⊗ EXISTING WATER METER	☐ PROPOSED WATER MAIN SLEEVE
---	EXISTING WATER MAIN
---	REMOVE WATER MAIN
---	ABANDON WATER MAIN
---	PROPOSED WATER MAIN

**STORM SEWER**

⊗ EXISTING CURB INLET	☐ PROPOSED CATCH BASIN IN CURB LINE (5' DIA AND SMALLER)
⊗ EXISTING SQUARE CATCHBASIN	⊗ PROPOSED CATCH BASIN IN CURB LINE (6' DIA AND LARGER)
⊗ EXISTING ROUND CATCHBASIN	⊗ PROPOSED CATCH BASIN IN GREEN SPACE (5' DIA AND SMALLER)
● EXISTING DOWNSPOUT	⊗ PROPOSED CATCH BASIN IN GREEN SPACE (6' DIA AND LARGER)
○ EXISTING STORM SEWER CLEANOUT	● PROPOSED STORM MANHOLE (5' DIA AND SMALLER)
○ EXISTING STORM MANHOLE	● PROPOSED STORM MANHOLE (6' DIA AND LARGER)
EXISTING PIPE INLET/OUTLET	▶ PROPOSED CULVERT END SECTION
EXISTING STORM MARKER POST	○ PROPOSED STORM SEWER CLEANOUT
EX 1812	1
---	EXISTING STORM SEWER
---	EXISTING DRIVE/CROSS CULVERT
---	REMOVE STORM SEWER
---	ABANDON STORM SEWER
---	PROPOSED STORM SEWER LESS THAN 24"
---	PROPOSED STORM SEWER 24" AND GREATER

**SANITARY SEWER**

○ EXISTING SANITARY MANHOLE	○ EXISTING SANITARY SEWER CLEANOUT/RISER
○ EXISTING SANITARY PUMP STATION	○ EXISTING SANITARY MARKER POST
● EXISTING SANITARY SEWER VALVE	● EXISTING SANITARY SEWER MANHOLE
☐ EXISTING SEPTIC TANK	○ PROPOSED SANITARY SEWER CLEANOUT
EX 5236	A
---	EXISTING SANITARY SEWER
---	REMOVE SANITARY SEWER
---	ABANDON SANITARY SEWER
---	EXISTING SANITARY FORCE MAIN
---	REMOVE SANITARY FORCE MAIN
---	ABANDON SANITARY FORCE MAIN
---	PROPOSED SANITARY SEWER

**TREES & SHRUBS**

⊗ STUMP	☐ CONIFEROUS TREE
⊗ DECIDUOUS TREE	☐ CONIFEROUS SHRUB
⊗ DECIDUOUS SHRUB	⊗ DEAD TREE
---	EXISTING EDGE OF WOODS
---	EXISTING EDGE OF BRUSH
---	PROPOSED EDGE OF WOODS
---	PROPOSED EDGE OF BRUSH

**PARCEL INFORMATION**

401-069 PARCEL/TAX IDENTIFICATION NUMBER  
 #5324 EXISTING BUILDING AND ADDRESS/BUSINESS NAME

**CAUTION SYMBOLS**

⚠ HAZARDOUS FLAMMABLE MATERIAL UNDERGROUND	USED WITH UNDERGROUND GAS & ELECTRICAL LINES
⚠ FIBER OPTIC	USED WITH FIBER OPTIC LINES
⚠ CRITICAL UNDERGROUND UTILITY	USED WITH CRITICAL UNDERGROUND LINES

**PLAN VIEW LINETYPES**

---	EXISTING CENTERLINE OF DITCH
---	EXISTING FENCE
---	EXISTING GUARDRAIL
---	EXISTING RAILROAD TRACK
---	EXISTING CONTOUR MAJOR
---	EXISTING CONTOUR MINOR
---	EXISTING EDGE OF WETLAND
---	EXISTING SHORELINE / EDGE OF WATER
---	EXISTING TOP OF BANK
---	EXISTING TOE OF SLOPE
---	PROPOSED DITCH CENTERLINE
---	PROPOSED FENCE
---	PROPOSED CONTOUR MAJOR
---	PROPOSED CONTOUR MINOR
---	PROPOSED SLOPE STAKE LINE
---	PROPOSED SILT FENCE

**PROPOSED CALLOUTS**

TOPO CALLOUTS	PLAN VIEW	DESCRIPTION
ADJ	ⓐ	ADJUST STRUCTURE
ADJ-X	ⓐX	ADJUST STRUCTURE W/ NEW COVER
ADJ-B/O	ⓐB/O	ADJUST STRUCTURE BY OTHERS
REC	ⓐ	RECONSTRUCT STRUCTURE
REL	ⓐ	RELOCATE
REL-B/O	ⓐB/O	RELOCATE BY OTHERS
REM	ⓐ	REMOVE
R&R	ⓐR	REMOVE AND REPLACE
SALV	ⓐ	SALVAGE
SAVE	ⓐ	SAVE
ABN	ⓐ	ABANDON
CLR	ⓐ	CLEARING
	ⓐ	BULKHEAD
	SR-X	SIDEWALK RAMP TYPE
	##	SOIL EROSION CONTROL MEASURE

**GPR LOCATED EXISTING U.G. LINES**

---	U.G. CABLE TV LINE (GPR LOCATED)
---	U.G. ELECTRIC LINE (GPR LOCATED)
---	U.G. FIBER OPTIC LINE (GPR LOCATED)
---	U.G. GAS LINE (GPR LOCATED)
---	U.G. MISCELLANEOUS LINE (GPR LOCATED)
---	U.G. SANITARY SEWER LINE (GPR LOCATED)
---	U.G. STORM SEWER LINE (GPR LOCATED)
---	U.G. TELEPHONE LINE (GPR LOCATED)
---	U.G. UNKNOWN LINE (GPR LOCATED)
---	U.G. WATER LINE (GPR LOCATED)

**PAVEMENT IDENTIFICATION**

---	EXISTING EDGE OF GRAVEL
---	EXISTING CURB AND GUTTER
---	PROPOSED FLOW CURB AND GUTTER
---	PROPOSED SPILL CURB AND GUTTER

**EXISTING HATCHING LEGEND**

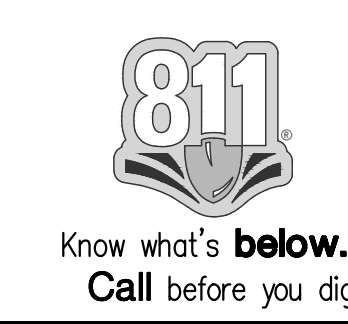
---	EXISTING PAVEMENT
---	EXISTING GRAVEL
---	EXISTING PLAIN RIPRAP
---	EXISTING HEAVY RIPRAP

**REMOVAL HATCHING LEGEND**

---	REMOVE CURB AND GUTTER
---	REMOVE AND REPLACE CURB AND GUTTER
---	REMOVE PAVEMENT
---	COLD MILLING EXISTING PAVEMENT
---	REMOVE SIDEWALK

**PROPOSED HATCHING LEGEND**

---	PROPOSED PAVEMENT
---	PROPOSED CONCRETE DRIVEWAY
---	PROPOSED HMA APPROACH/DRIVEWAY
---	PROPOSED 4 INCH CONCRETE SIDEWALK
---	PROPOSED 6 INCH CONCRETE SIDEWALK/RAMP
---	PROPOSED DETECTABLE WARNING SURFACE (SIDEWALK RAMPS)
---	PROPOSED PLAIN RIPRAP
---	PROPOSED HEAVY RIPRAP
---	SAND BACKFILL (PROFILE)
---	STONE BACKFILL (PROFILE)



**PLAN SUBMITTALS AND CHANGES**

PRELIMINARY PLANS - **NOT FOR CONSTRUCTION**	
DATE	DESCRIPTION

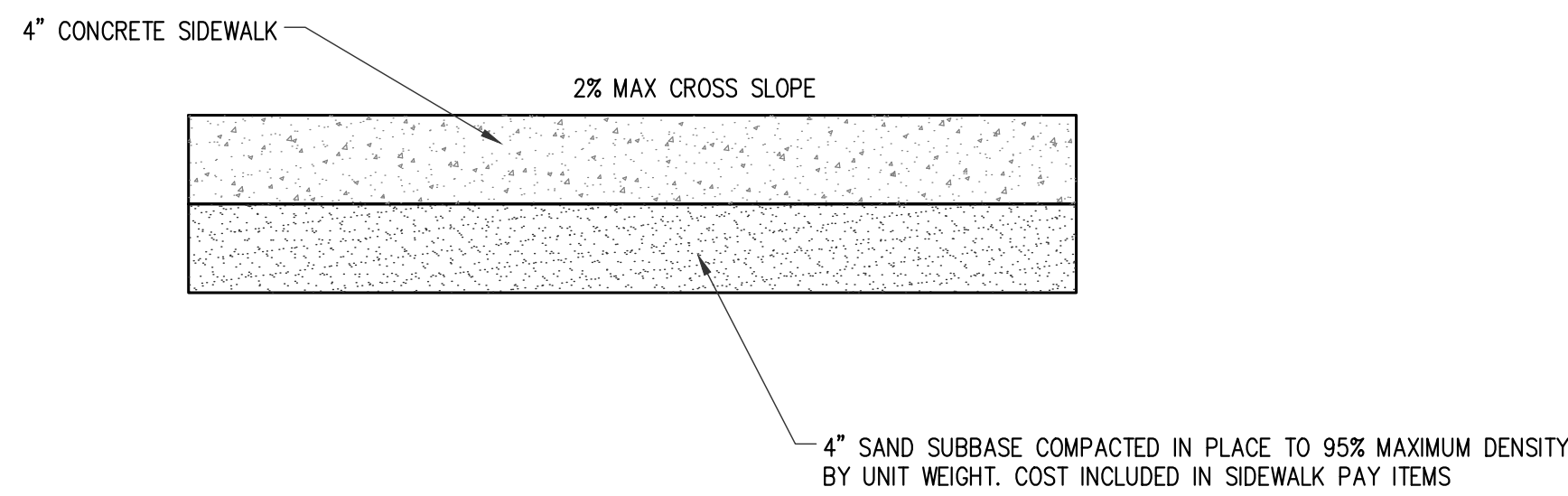
PLAN DATE:	MARCH 2025
PROJECT MGR:	DAS
REVIEWER:	CJA
SCALE:	NOT TO SCALE

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 The Rowe Building  
 540 S. Saginaw St., Suite 200  
 Flint, MI 48802  
 O: (810) 341-7500  
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PREPARED FOR  
**MEMORIAL HEALTHCARE**  
**ADDITIONAL PARKING FACILITIES**  
 LEGEND SHEET

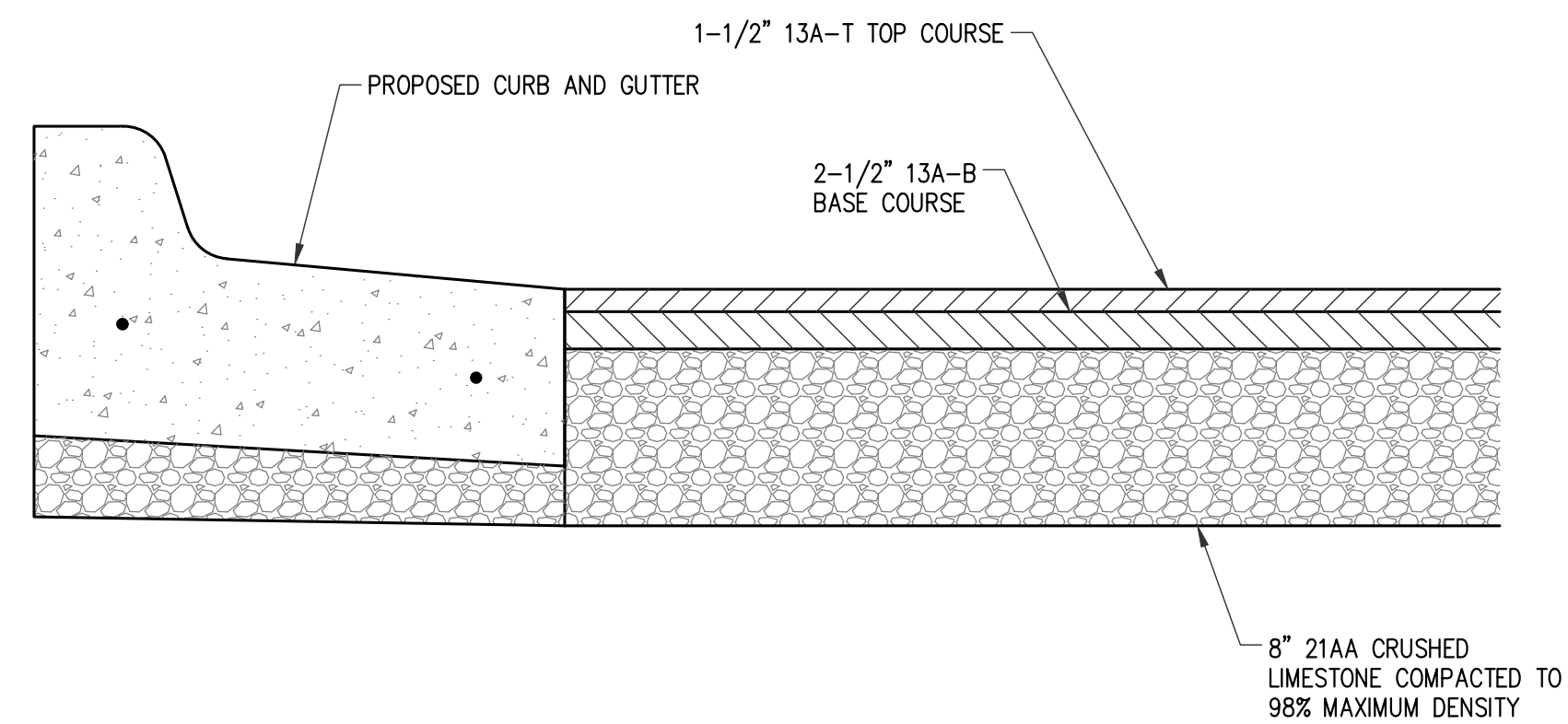
REV:	
SHT#	3 OF 10
JOB No:	19C0221

R:\Projects\190221\19C0221\19C0221-LEGEND



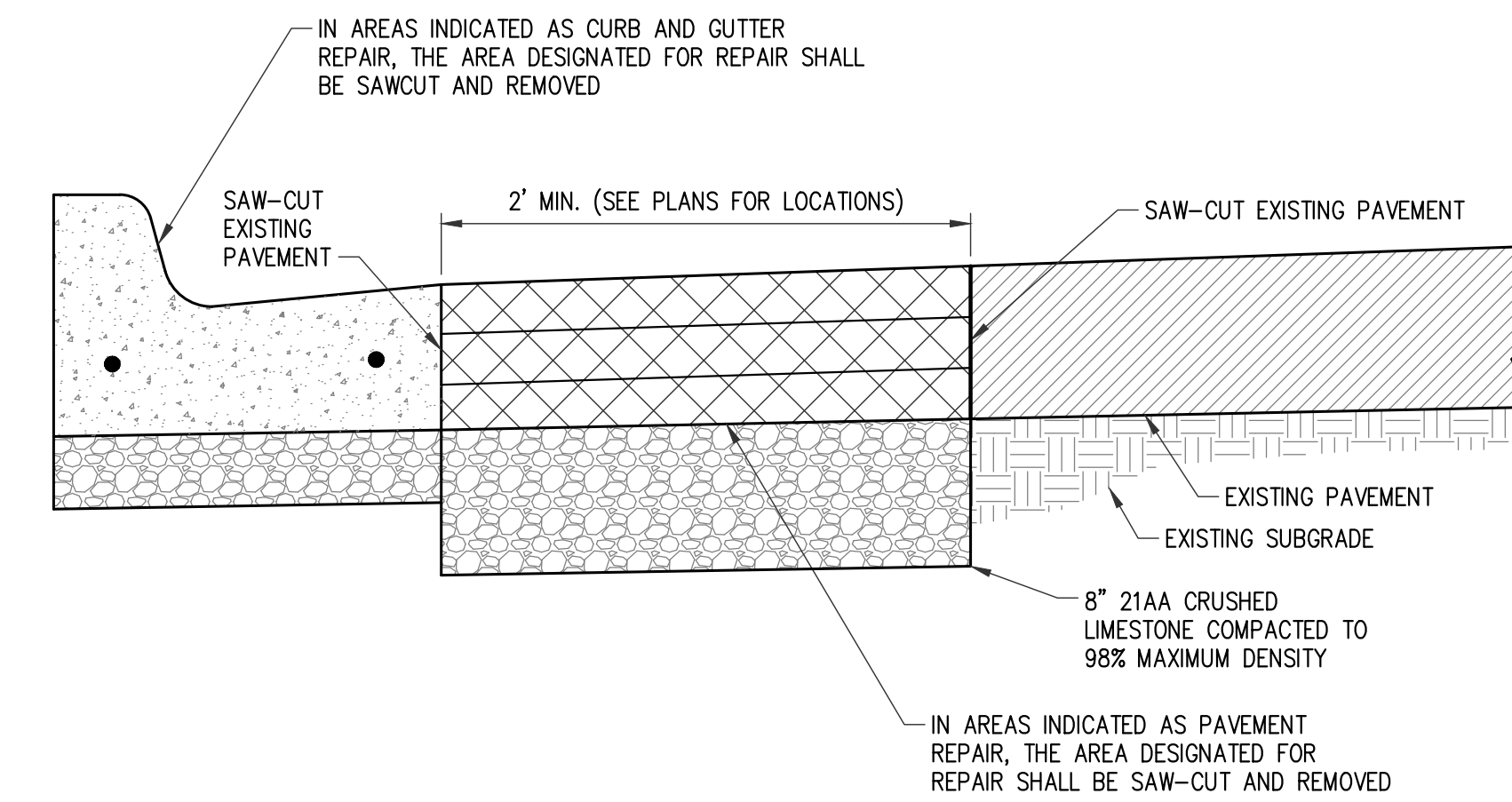
- NOTES:
- CONTRACTOR SHALL PLACE 6" NON-REINFORCED CONCRETE SIDEWALK THROUGH RESIDENTIAL DRIVEWAYS
  - CONTRACTOR SHALL PLACE 8" NON-REINFORCED CONCRETE SIDEWALK THROUGH COMMERCIAL DRIVEWAYS

**SIDEWALK DETAIL**  
NOT TO SCALE



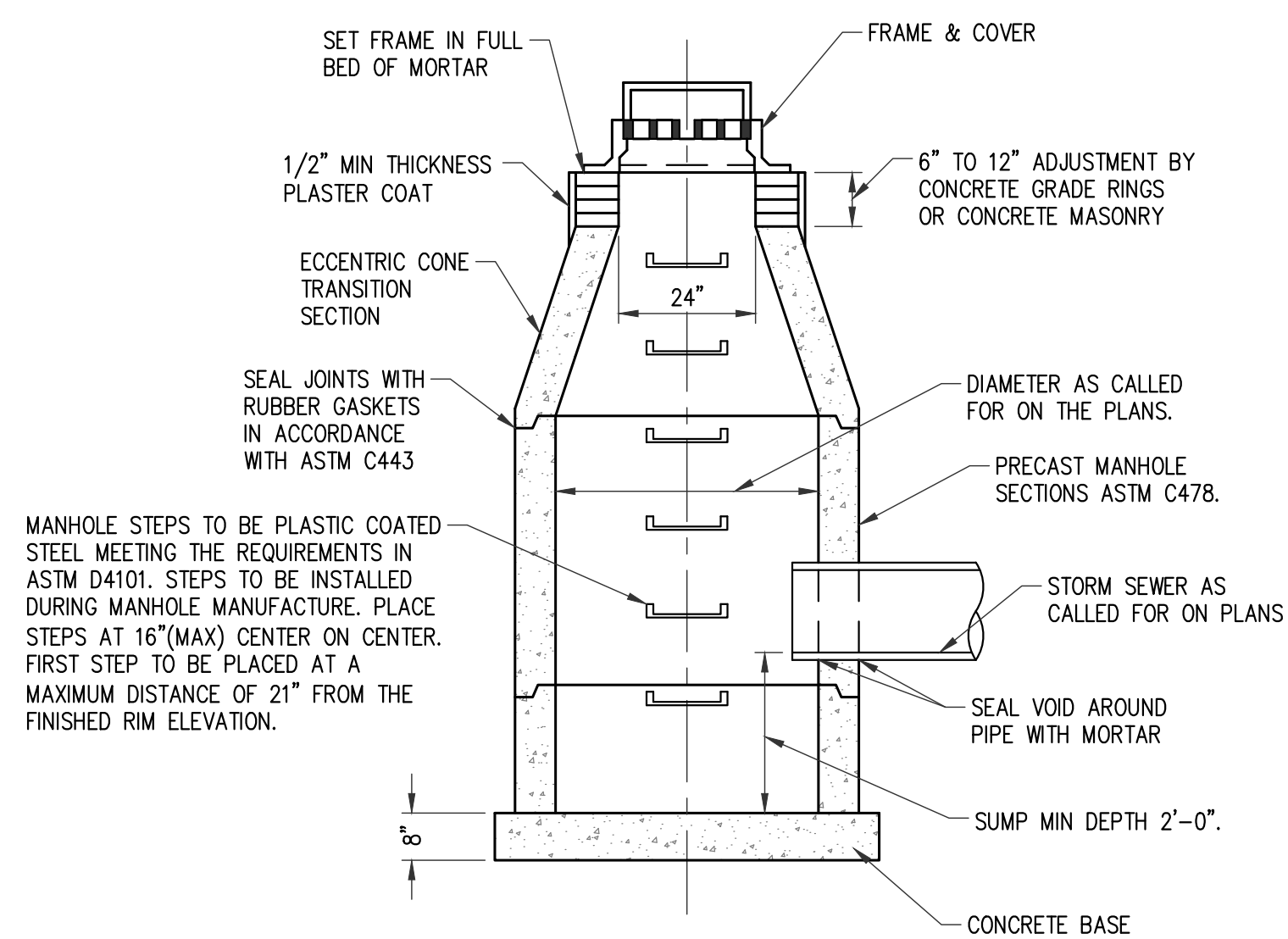
**PARKING LOT PAVEMENT DETAIL**  
NOT TO SCALE

HMA APPLICATION CHART						
IDENT NO	ITEM	HMA PAVEMENT	RATE OF APPLICATION	ESTIMATED THICKNESS	PERFORMANCE GRADE	COMMENTS
13A-T	HMA, 13A, TOP	HMA, 13A	165#/SYD	1.5"	58-28	TOP COURSE (AWI = 220 MINIMUM)
13A-B	HMA, 13A, BASE	HMA, 13A	275#/SYD	2.5"	58-28	BASE COURSE
-	HMA BOND COAT	-	0-0.10 GAL	-	-	NOT A PAY ITEM; FOR INFORMATION ONLY



- NOTES:
- THIS DETAIL AS SHOWN IS FOR CROSS SECTION REFERENCE.

**HMA PAVEMENT/CURB AND GUTTER REPAIR DETAIL**  
NOT TO SCALE



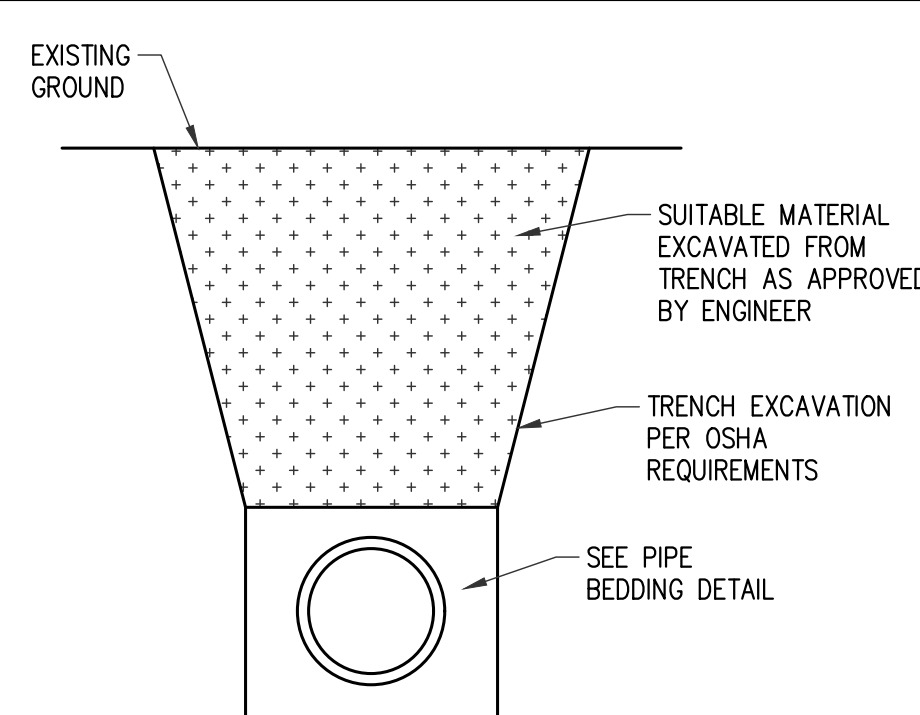
**STANDARD DRAINAGE STRUCTURE WITH 2' SUMP**  
NOT TO SCALE

- NOTES:
- 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:

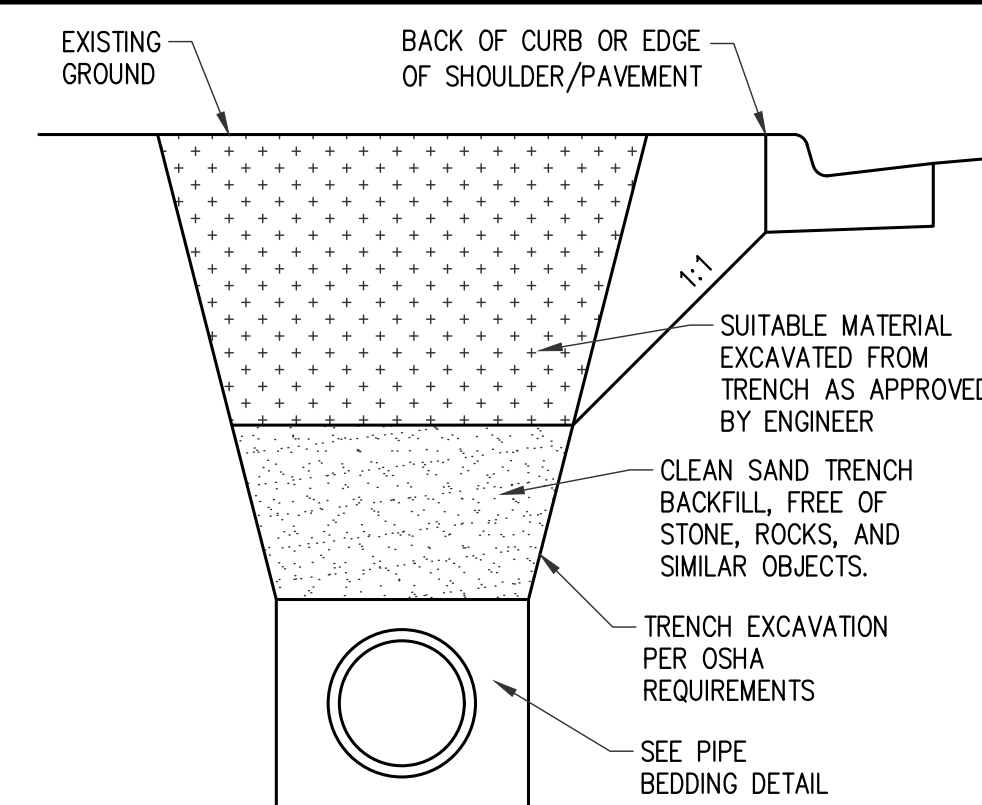
I.D. PIPE SIZE (INCHES)	18 OR SMALLER	21	24	30	36	42	48	54
"W" TRENCH WIDTH (FEET)	3.0	3.5	4.0	5.0	6.0	7.0	8.0	9.5

I.D. PIPE SIZE (INCHES)	60	66	72	78	84	90	96	102	108
"W" TRENCH WIDTH (FEET)	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0

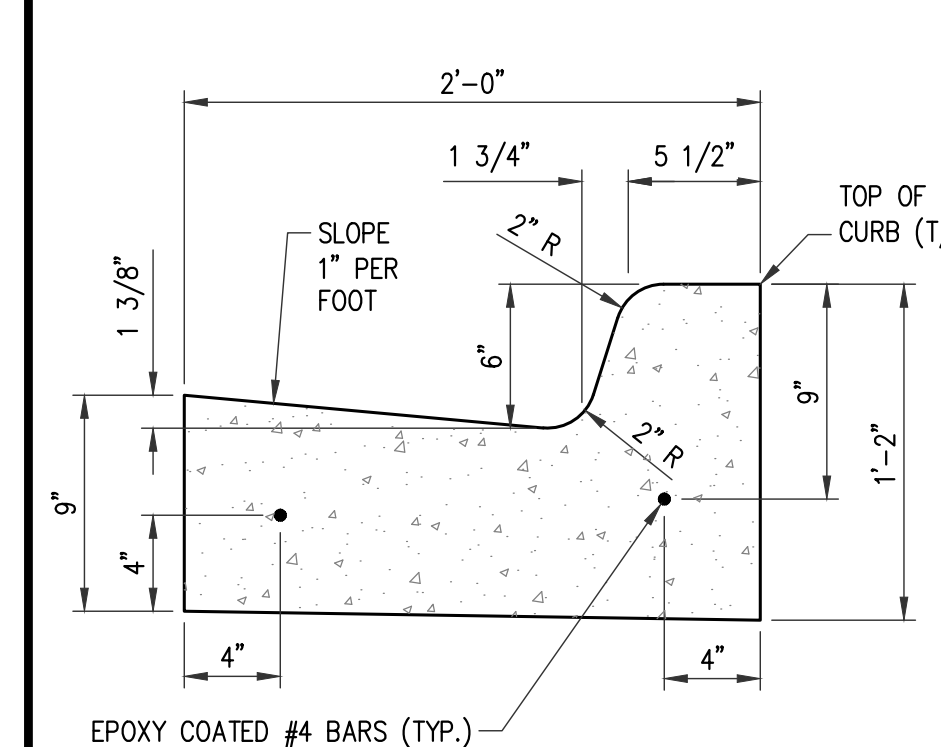


**TRENCH DETAIL A BACKFILL DETAIL**  
NOT TO SCALE

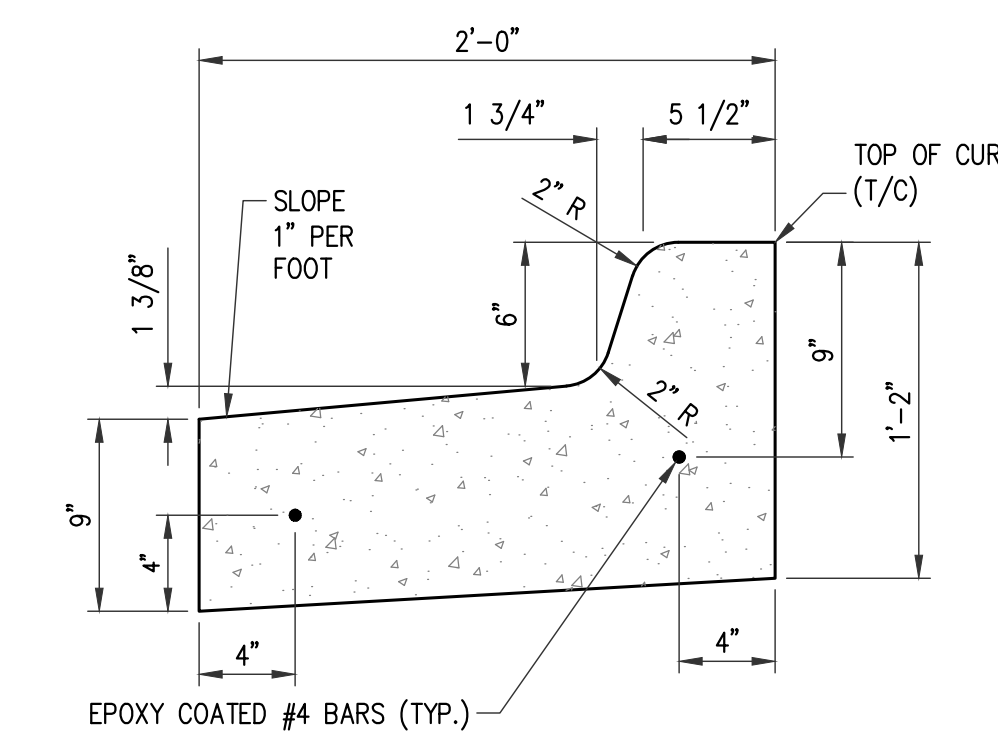


- NOTES:
- SAND SHALL BE MDOT GRANULAR MATERIAL CLASS II.
  - SAND SHALL BE COMPACTED TO 95% OF ITS MAXIMUM UNIT WEIGHT.

**TRENCH DETAIL B BACKFILL DETAIL**  
NOT TO SCALE



**CONCRETE CURB AND GUTTER DETAIL F4, CATCH**  
NOT TO SCALE



**CONCRETE CURB AND GUTTER DETAIL F4, SPILL**  
NOT TO SCALE

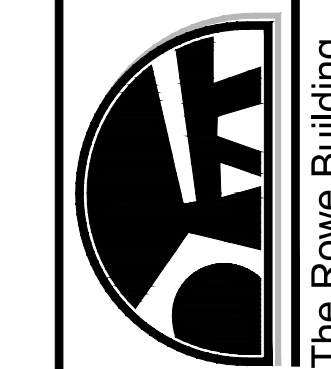


PLAN SUBMITTALS AND CHANGES	
PRELIMINARY PLANS - **NOT FOR CONSTRUCTION**	
DATE	DESCRIPTION

REV:

SHT# 4 OF 10  
JOB No: 19C0221

**ROWE PROFESSIONAL SERVICES COMPANY**



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540 S. Saginaw St., Suite 200  
Flint, MI 48502

PREPARED FOR  
**MEMORIAL HEALTHCARE  
ADDITIONAL PARKING FACILITIES**

DETAIL SHEET

PLAN DATE: MARCH 2025  
PROJECT MGR: DAS  
REVIEWER: CJA  
SCALE: NOT TO SCALE

O: (810) 341-7500  
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PLAN DATE: MARCH 2025  
 PROJECT MGR: DAS  
 REVIEWER: CJA  
 SCALE: 1" = 80'

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**LEGAL DESCRIPTION - MEMORIAL HEALTHCARE CAMPUS**

PART OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 7 NORTH, RANGE 2 EAST, CITY OF OWOSSO, SHIAWASSEE COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS:

ALL OF THE PARCELS DESCRIBED IN THE PLAT OF INGERSOLL'S ADDITION TO THE CITY OF OWOSSO, EXCEPT BLOCK 2, AND ALL OF THE LAND BOUND ON EAST AND NORTH BY SAID PLAT OF INGERSOLL'S ADDITION, BOUND ON THE SOUTH BY WEST KING STREET AND BOUND ON THE WEST BY THE SHIAWASSEE RIVER, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF A LINE 33.00 FEET WESTERLY OF AND PARALLEL WITH THE EAST LINE OF SAID NORTHWEST QUARTER WITH A LINE 33.00 FEET NORTHERLY OF AND PARALLEL WITH THE SOUTH LINE OF SAID NORTHWEST QUARTER, SAID INTERSECTION ALSO BEING THE SOUTHEAST CORNER OF BLOCK 1 OF SAID PLAT OF INGERSOLL'S ADDITION; THENCE N88°15'51"W ALONG THE SOUTH LINES OF BLOCK 1, VACATED ADA STREET, BLOCK 3 AND OUTLOT 1 OF SAID PLAT OF INGERSOLL'S ADDITION, 858.03 FEET TO THE SOUTHWEST CORNER OF SAID OUTLOT 1; THENCE S00°14'48"W ALONG THE SOUTHERLY EXTENSION OF THE WESTERLY LINE OF SAID OUTLOT 1, 33.02 FEET TO SAID SOUTH LINE OF THE NORTHWEST QUARTER; THENCE N88°15'51"W ALONG SAID SOUTH LINE, 705.49 FEET TO THE SOUTHWEST CORNER OF A PARCEL OF LAND DESCRIBED IN LIBER 155 AT PAGE 452, ALSO DESCRIBED IN LIBER 162 AT PAGE 21; THENCE N00°14'48"E ALONG THE WEST LINE OF SAID PARCEL, 33.02 FEET; THENCE N88°15'51"W PARALLEL WITH AND 33.00 FEET NORTH OF SAID SOUTH LINE OF THE NORTHWEST QUARTER, 569.45 FEET TO THE SHIAWASSEE RIVER AS DESCRIBED IN LIBER 153 AT PAGE 298; THENCE ALONG THE SHIAWASSEE RIVER TO THE SOUTHWEST CORNER OF OUTLOT 3 OF SAID PLAT OF INGERSOLL'S ADDITION; THENCE N31°26'43"E ALONG THE WESTERLY LINE OF SAID OUTLOT 3, 165.42 FEET TO THE NORTHWEST CORNER OF SAID OUTLOT 3; THENCE S89°42'43"E ALONG THE NORTH LINE OF SAID OUTLOT 3, 842.00 FEET TO THE NORTHEAST CORNER OF SAID OUTLOT 3; THENCE S00°14'48"W ALONG THE EAST LINE OF SAID OUTLOT 3, 192.17 FEET TO THE WESTERLY EXTENSION OF THE NORTH LINE OF BLOCK 1 OF SAID PLAT OF INGERSOLL'S ADDITION; THENCE S88°15'51"E ALONG SAID WESTERLY EXTENSION AND SAID NORTH LINE OF BLOCK 1, 330.03 FEET TO THE EAST LINE OF SAID BLOCK 1; THENCE S00°14'48"W ALONG SAID EAST LINE, BEING ALSO A LINE THAT IS 33.00 FEET WESTERLY OF AND PARALLEL WITH THE EAST LINE OF SAID NORTHWEST QUARTER, 599.83 FEET TO THE POINT OF BEGINNING; SUBJECT TO ANY EASEMENTS, RESTRICTIONS OR RIGHTS OF WAY OF RECORD.

**GENERAL NOTES**

1. THE EXISTING MEMORIAL HEALTHCARE SITE IS ZONED COR - CORRIDOR BUSINESS DISTRICT.

PARKING INFORMATION		
EXISTING PARKING		PROPOSED PARKING
REGULAR	ADA/DESIGNATED	REGULAR
919	131	34

**SETBACK/HEIGHT REQUIREMENTS (COR ZONING)**

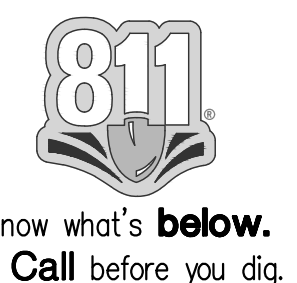
PER SECTION 38-94 OF THE CITY OF OWOSSO ORDINANCE:

**REQUIRED**  
 FRONT YARD: 25 FEET (SHIAWASSEE STREET & KING STREET)  
 SIDE YARD: 0 FEET  
 REAR YARD: 25 FEET

**PROVIDED**  
 FRONT YARD: 36 FEET (EXCEPT EXISTING RESPITE CENTER - 18 FEET)  
 SIDE YARD:  
 REAR YARD: 1180 FEET (APPROXIMATE FROM RIVER)

MAXIMUM STRUCTURE HEIGHT: 35' (PER ZONING ORDINANCE)  
 NO NEW STRUCTURES PROPOSED

EXISTING BUILDINGS ON SITE			
BUILDING #	USE	HEIGHT	AREA
1	MAIN HOSPITAL BUILDING	5 STORIES	246,386 SFT
2	MITCHELL MEDICAL OFFICE	3 STORIES	30,225 SFT
4	MEDICAL ARTS BUILDING	2 STORIES	37,211 SFT
5	KING STREET MEDICAL OFFICE	3 STORIES	34,905 SFT
6	MITCHELL AUDITORIUM	2 STORIES	16,710 SFT
7	NEURO / WELLNESS CENTER	3 STORIES	42,700 SFT



**PLAN SUBMITTALS AND CHANGES**

PRELIMINARY PLANS - **NOT FOR CONSTRUCTION**	
DATE	DESCRIPTION

REV:

SHT# 5 OF 10  
 JOB No: 19C0221

PREPARED FOR  
**MEMORIAL HEALTHCARE**  
**ADDITIONAL PARKING FACILITIES**

OVERALL AREA PLAN



**BENCHMARK DATA TABLE**

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM 2	549188	1317393	749.03	SET CHISELED "4" ON WEST-SOUTHWEST FLANGE BOLT OF HYDRANT ON THE WEST SIDE OF ADA STREET & 20' NORTH OF CENTERLINE OF JENNETT STREET
BM 4	549270	1317346	741.78	SET CHISELED SQUARE ON CONCRETE LIGHT POLE BASE ON THE NORTH SIDE OF PARKING LOT, 115' WEST OF TOM CREGER MEMORIAL PAR COURSE SIGN
BM 6	548899	1317371	746.27	SET CHISELED SQUARE ON EAST SIDE OF CONCRETE LIGHT POLE BASE, 4' NORTH & 18' EAST OF NORTHEAST CORNER OF AUDITORIUM BUILDING
BM 8	548851	1317277	746.43	SET CHISELED "X" ON NORTHWEST FLANGE BOLT OF HYDRANT IN THE NORTHWEST QUADRANT OF 4-WAY STOP INTERSECTION NORTHWEST OF GASTROENTEROLOGY CENTER
BM 10	548856	13174078	746.16	SET CHISELED SQUARE ON WEST SIDE OF CONCRETE LIGHT POLE BASE, ON THE NORTH SIDE OF ENTRANCE MEMORIAL HEALTHCARE, 42' WEST OF BACK OF CURB OF M-52
BM 19	548486	13173785	746.98	SET RAILROAD SPIKE IN WEST FACE OF UTILITY POLE ON THE SOUTH SIDE OF KING STREET AT DRIVE TO HOUSE #817
BM 22	548530	13173691	747.37	SET CHISELED "X" ON NORTHWEST FLANGE BOLT OF HYDRANT ON THE NORTH SIDE OF KING STREET OPPOSITE ADA STREET
BM 23	548542	13173309	747.50	SET CHISELED "X" ON SOUTH SPOUT OF HYDRANT ON THE NORTH SIDE OF KING STREET OPPOSITE CLARK STREET
BM 25	548507	13173013	743.23	SET RAILROAD SPIKE IN NORTH FACE OF UTILITY POLE SECOND POLE EAST OF FIRST STREET ON SOUTH SIDE OF KING STREET
BM 31	549088	13173014	740.63	SET CHISELED SQUARE ON LIGHT POLE BASE NORTHWEST OF NORTHEAST CORNER OF KING STREET PROFESSIONAL BUILDING
BM 32	549095	13173127	742.09	SET CHISELED "4" ON NORTHWEST BOLT OF LIGHT POLE BASE, NORTH OF NORTHEAST CORNER OF KING STREET PROFESSIONAL BUILDING

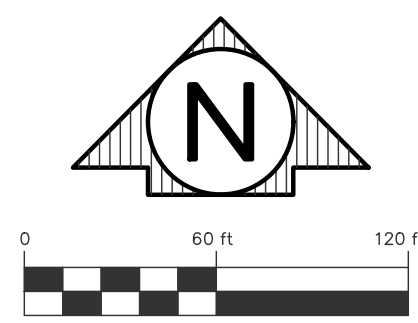
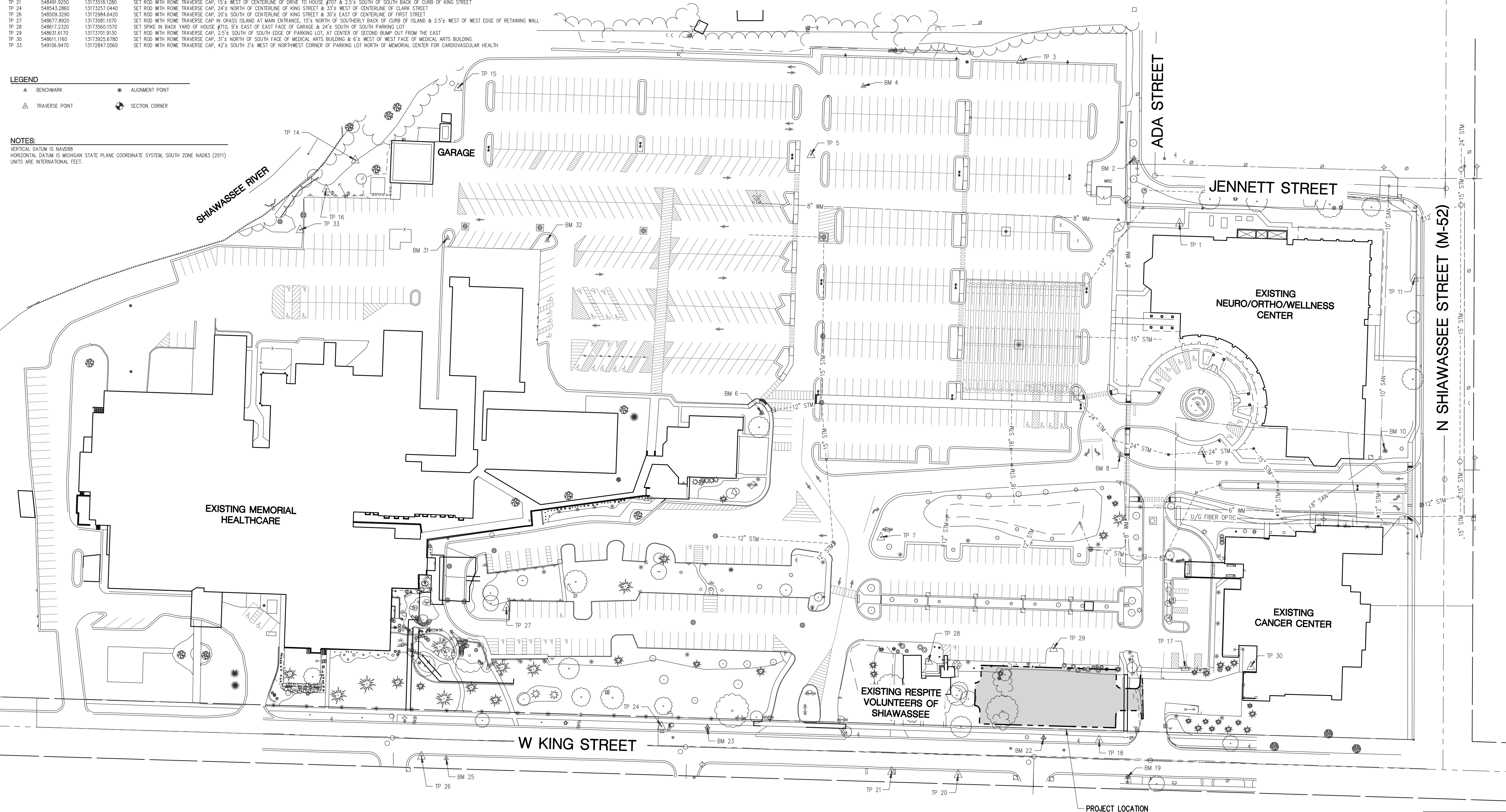
**TRAVERSE POINT DATA TABLE**

NUMBER	NORTHING	EASTING	DESCRIPTION
TP 1	549114.4720	13173644.8000	SET ROD WITH ROWE TRAVERSE CAP AT NORTHEAST CORNER OF PARKING LOT, 12' EAST OF BACK OF CURB OF PARKING LOT & 42' SOUTH OF BACK OF CURB OF JENNETT STREET
TP 3	549299.2940	13173664.3750	SET ROD WITH ROWE TRAVERSE CAP, 12' SOUTH OF HAND-WALK SIGN & 50' WEST-NORTHWEST OF LED STRETCH SIGN
TP 5	549192.1790	13173426.6590	SET ROD WITH ROWE TRAVERSE CAP IN GRASS STRIP BETWEEN PARKING AREAS, 3' NORTH OF ASPHALT PARKING LOT & 41' EAST OF YELLOW HANDRAIL FOR SIDEWALK
TP 7	549158.0150	13173506.9980	SET ROD WITH ROWE TRAVERSE CAP, 9' EAST OF BACK OF CURB OF ENTRANCE DRIVE & 2' NORTH OF BACK OF CURB OF ENTRANCE TO CANCER CENTER
TP 9	548855.3660	13173870.4570	SET ROD WITH ROWE TRAVERSE CAP, 6' SOUTH OF MEDICAL ARTS BUILDING MEMORIAL CANCER CENTER SIGN & 21' EAST OF STOP SIGN
TP 11	549051.8130	13174111.4520	SET ROD WITH ROWE TRAVERSE CAP, 2' WEST OF BACK OF WALK ALONG M-52 & 60' SOUTH OF MEMORIAL HEALTHCARE SIGN
TP 14	549186.1650	13172909.6590	SET SPIKE, 4' NORTH OF NORTH EDGE OF ASPHALT OF NORTH PARKING LOT & 40' WEST OF MAINTENANCE BUILDING
TP 15	549268.2490	13173026.1650	SET SPIKE, 4' WEST OF NORTHEAST CORNER CONCRETE PAD AT THE NORTHEAST CORNER OF NORTH PARKING LOT & 68' NORTH OF MAINTENANCE BUILDING
TP 16	549153.2810	13172816.6300	SET SPIKE, 10' NORTH OF NORTH EDGE OF ASPHALT OF NORTH PARKING LOT & 72' WEST OF MAINTENANCE BUILDING
TP 17	548929.7860	13172951.3390	SET ROD WITH ROWE TRAVERSE CAP, 42' WEST OF WALL AT PARKING LOT ENTRANCE FOR MEDICAL ARTS BUILDING & 15' SOUTH OF SOUTH EDGE OF ASPHALT
TP 18	548527.6120	13173753.5990	SET ROD WITH ROWE TRAVERSE CAP, 20' NORTH OF CENTERLINE OF KING STREET & 48' WEST OF CENTERLINE OF DRIVE TO HOUSE #617 EXTENDED
TP 20	548488.6380	13173553.6810	SET ROD WITH ROWE TRAVERSE CAP, 12' EAST OF CENTERLINE OF DRIVE TO HOUSE #707 & 35' SOUTH OF SOUTH BACK OF CURB OF KING STREET
TP 21	548491.9250	13173518.1280	SET ROD WITH ROWE TRAVERSE CAP, 15' WEST OF CENTERLINE OF DRIVE TO HOUSE #707 & 2.5' SOUTH OF SOUTH BACK OF CURB OF KING STREET
TP 24	548543.2860	13173257.0440	SET ROD WITH ROWE TRAVERSE CAP, 24' NORTH OF CENTERLINE OF KING STREET & 35' WEST OF CENTERLINE OF CLARK STREET
TP 26	548509.3290	13172984.6420	SET ROD WITH ROWE TRAVERSE CAP, 20' SOUTH OF CENTERLINE OF KING STREET & 30' EAST OF CENTERLINE OF FIRST STREET
TP 27	548677.8920	13173081.1070	SET ROD WITH ROWE TRAVERSE CAP IN GRASS ISLAND AT MAIN ENTRANCE, 15' NORTH OF SOUTHERLY BACK OF CURB OF ISLAND & 2.5' WEST OF WEST EDGE OF RETAINING WALL
TP 28	548617.2320	13173560.1570	SET SPIKE IN BACK YARD OF HOUSE #710, 9' EAST OF EAST FACE OF GARAGE & 24' SOUTH OF SOUTH PARKING LOT
TP 29	548631.6170	13173701.8130	SET ROD WITH ROWE TRAVERSE CAP, 2.5' SOUTH OF SOUTH EDGE OF PARKING LOT, AT CENTER OF SECOND BUMP OUT FROM THE EAST
TP 30	548611.1160	13173925.6780	SET ROD WITH ROWE TRAVERSE CAP, 31' NORTH OF SOUTH FACE OF MEDICAL ARTS BUILDING & 6' WEST OF WEST FACE OF MEDICAL ARTS BUILDING
TP 33	549106.9470	13172847.3560	SET ROD WITH ROWE TRAVERSE CAP, 42' SOUTH 3/4' WEST OF NORTHEAST CORNER OF PARKING LOT NORTH OF MEMORIAL CENTER FOR CARDIOVASCULAR HEALTH

**LEGEND**

▲ BENCHMARK	● ALIGNMENT POINT
△ TRAVERSE POINT	⊕ SECTION CORNER

**NOTES:**  
 VERTICAL DATUM IS NAVD88  
 HORIZONTAL DATUM IS MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE NAD83 (2011)  
 UNITS ARE INTERNATIONAL FEET.



**PLAN SUBMITTALS AND CHANGES**

PRELIMINARY PLANS - **NOT FOR CONSTRUCTION**	
DATE	DESCRIPTION

PLAN DATE: MARCH 2025  
 PROJECT MGR: DAS  
 REVIEWER: CJA  
 SCALE: 1" = 60'

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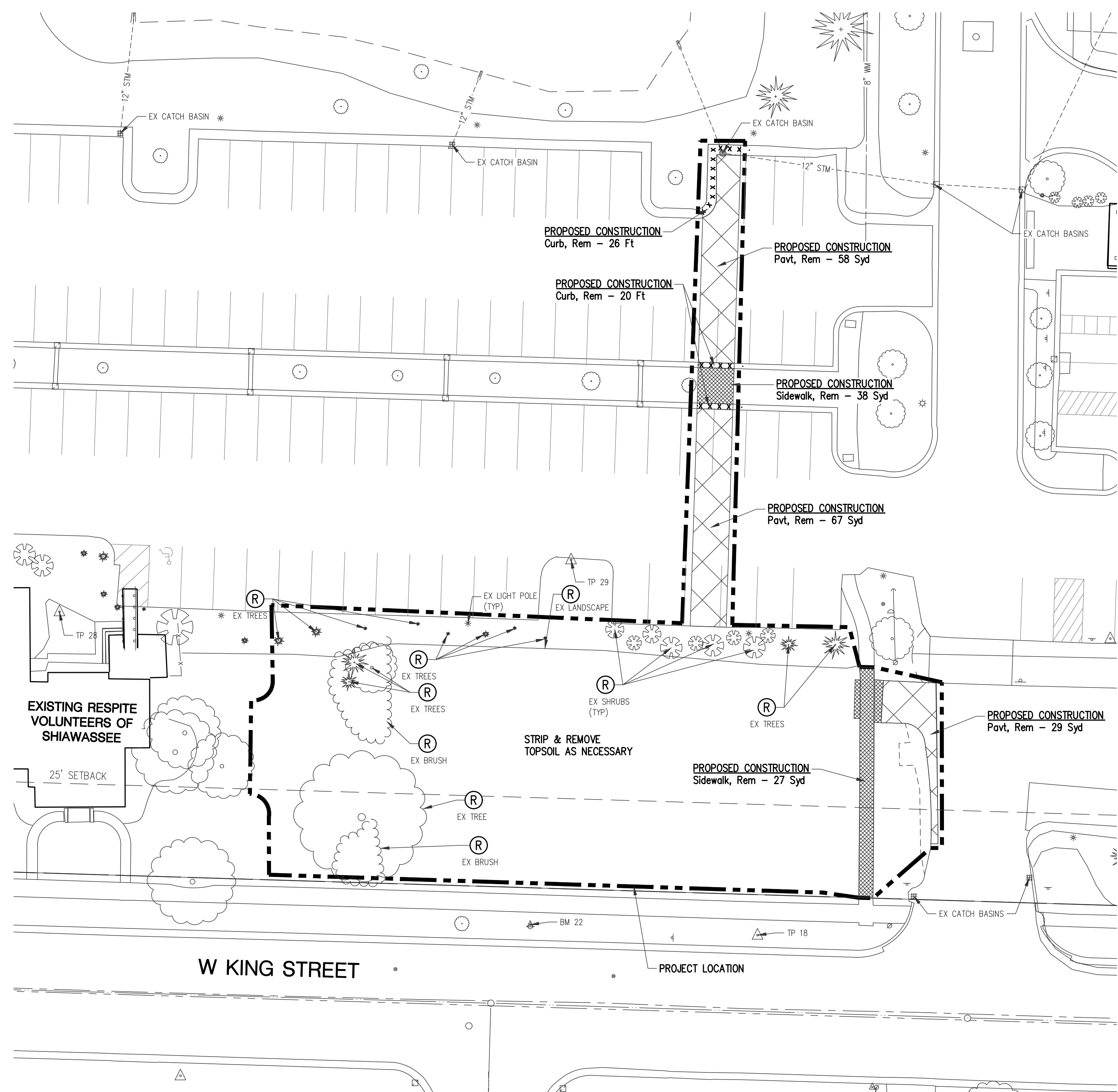
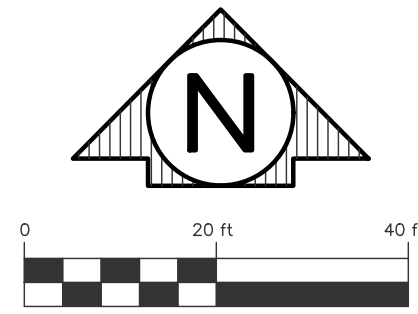
PREPARED FOR  
**MEMORIAL HEALTHCARE**  
**ADDITIONAL PARKING FACILITIES**

OVERALL SITE PLAN

REV:      

SHT# 6 OF 10  
 JOB No: 19C0221

PL0218-3/21/2025 10:17 AM  
 R:\Projects\19C0221\Draw\Construction Drawings\19C-190221-SITE\_OVERALL.dwg



- TREE REMOVAL:**
- 36" WALNUT
  - 14" WALNUT
  - 8" CEDAR
  - 5" CEDAR
  - 3" SPRUCE
  - 3" SPRUCE
  - 1" CEDAR
  - 8" CONIFEROUS TREE
  - 5" CONIFEROUS TREE
  - 2" CONIFEROUS TREE
  - 1" CONIFEROUS TREE
  - 1" CONIFEROUS TREE
  - 1" CONIFEROUS TREE

**PRIVATE UTILITY NOTES**  
 THE TOPOGRAPHICAL SURVEY LOCATED ALL VISIBLE SITE UTILITIES. AVAILABLE EXISTING RECORDS WERE ALSO USED. THERE ARE EXISTING PRIVATE UTILITIES ONSITE THAT WERE NOT VISIBLE. THE CONTRACTOR SHALL WORK WITH THE OWNER TO LOCATE PRIVATE UTILITIES PRIOR TO COMMENCING WORK ONSITE.

- LEGEND**
- REMOVE CONCRETE
  - REMOVE PAVEMENT
  - REMOVE CURB AND GUTTER
  - REMOVE
  - REMOVE TREES

- REMOVAL NOTES:**
1. THE SCOPE OF WORK INCLUDES REMOVING ALL EXISTING SITE FEATURES NECESSARY TO CONSTRUCT THE PROPOSED FACILITIES. THIS SHALL INCLUDE ALL UTILITIES, LANDSCAPING, AND TREES.
  2. THE PLANS IDENTIFY SIGNIFICANT FEATURES THAT NEED TO BE REMOVED. OTHER FEATURES NOT IDENTIFIED MAY ALSO NEED TO BE REMOVED. THE CONTRACTOR WILL BE RESPONSIBLE FOR VISITING THE SITE AND IDENTIFYING OTHER ITEMS THAT MAY NEED TO BE REMOVED. NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR ADDITIONAL REMOVAL ITEMS NOT SHOWN ON THE PLANS.
  3. NO REMOVAL WORK SHALL COMMENCE UNTIL ALL PERMITS ARE IN PLACE. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND ABIDING BY THEIR REQUIREMENTS.
  4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING WORK ON THE PROJECT.
  5. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER. NO PARKING LOT OR DRIVEWAY CLOSINGS WILL TAKE PLACE WITHOUT PROVIDING A MINIMUM OF FIVE DAYS ADVANCE NOTICE.
  6. REMOVAL OF TREES SHALL INCLUDE COMPLETELY REMOVING THE TREE AND STUMP IN THEIR ENTIRETY. NO BURNING ON SITE SHALL BE ALLOWED.
  7. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE ANY SALVAGE ITEMS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, LIGHT POLES, SIGNS, TRASH RECEPTACLES, LANDSCAPING, ETC.
  8. CONTRACTOR SHALL COORDINATE WITH OWNER TO DETERMINE THE EXTENT OF THE LANDSCAPING REMOVAL. THIS SHALL INCLUDE RECONNECTING THE IRRIGATION SYSTEM.

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PREPARED FOR  
**MEMORIAL HEALTHCARE  
 ADDITIONAL PARKING FACILITIES**  
 EXISTING CONDITIONS AND REMOVAL PLAN



**PLAN SUBMITTALS AND CHANGES**

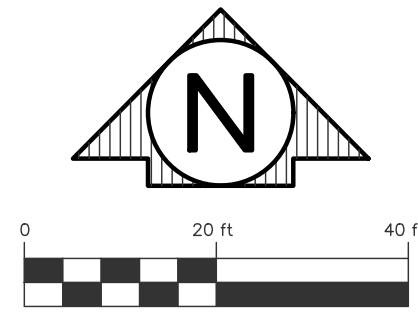
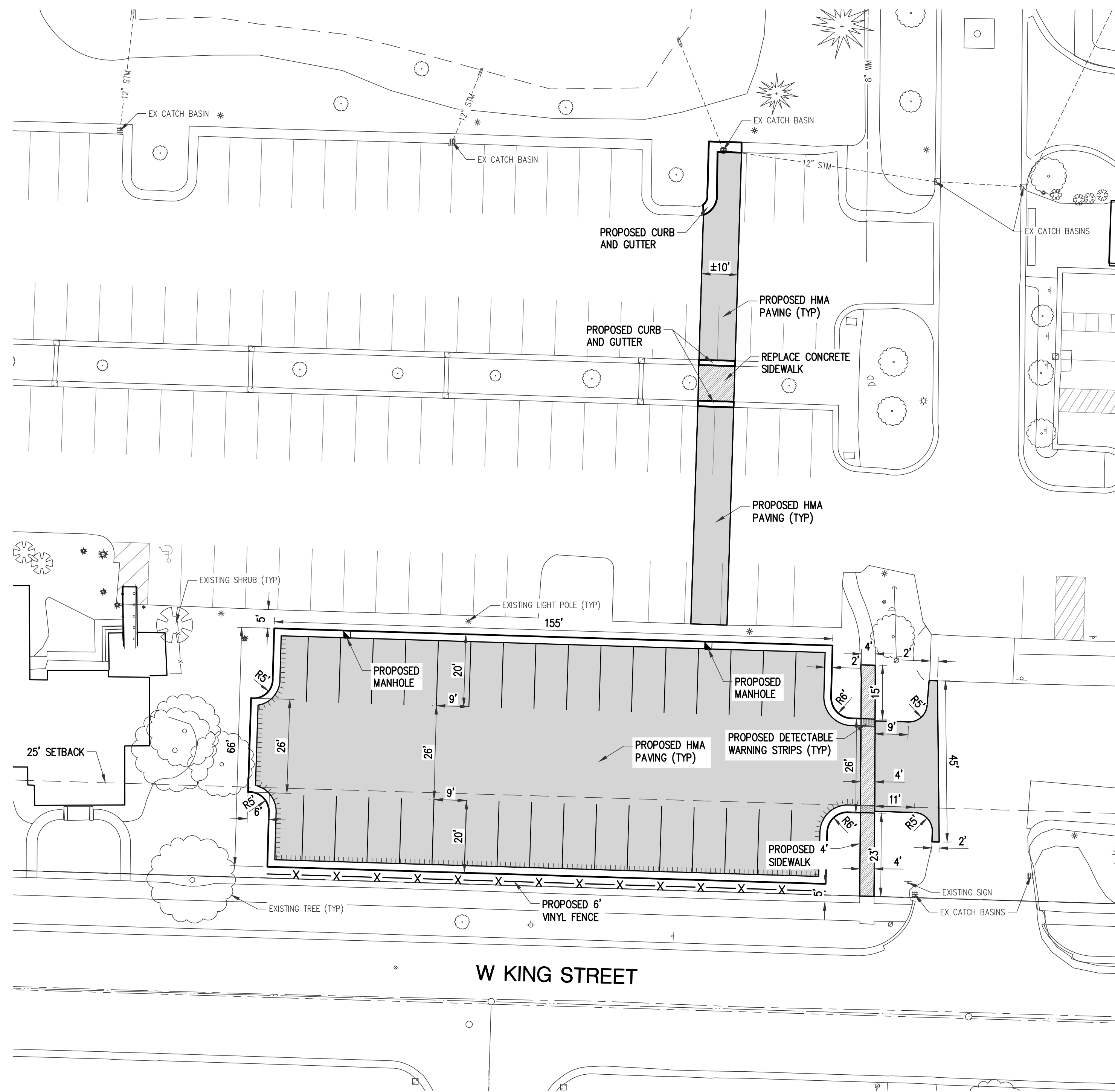
PRELIMINARY PLANS - **NOT FOR CONSTRUCTION**	
DATE	DESCRIPTION

REV: \_\_\_\_\_

SHT# **7** OF 10

JOB No: 19C0221

R:\Projects\19C0221\19C0221\19C0221-SITE.dwg PLOTED: 3/21/2025 10:17 AM



**CONSTRUCTION NOTES**

1. CONTRACTOR SHALL WORK WITH OWNER TO LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK ON THE PROJECT.
2. PROPOSED CATCH BASIN WILL BE LOCATED WITHIN CURB LINE.
3. ALL STORM SEWER SHALL BE SMOOTH LINED CORRUGATED PLASTIC PIPE.

**PROPOSED PARKING NOTES**

1. PROPOSED LAYOUT CONTAINS 34 SPACES.

**SITE PLAN NOTES**

1. NO TRASH DUMPSTER IS PROPOSED FOR THIS PARKING ADDITION. ALL TRASH WILL BE PLACED IN EXISTING TRASH DUMPSTERS.
2. NO NEW BUILDINGS ARE PROPOSED AS PART OF THESE IMPROVEMENTS.
3. NO PART OF THIS WORK IS LOCATED WITHIN AN EXISTING FLOODPLAIN OR WETLAND.
4. REFER TO LIGHTING PLAN FOR PHOTOMETRIC PLAN AND LIGHTING DETAILS.
5. NO SIGNS ARE PROPOSED FOR THESE IMPROVEMENTS.
6. PROPOSED UTILITIES ARE LIMITED TO STORM SEWER AND ELECTRICAL (LIGHTING).

**CURB LEGEND**

- EXISTING CURB AND GUTTER
- == PROPOSED FLOW CURB AND GUTTER
- PROPOSED SPILL CURB AND GUTTER

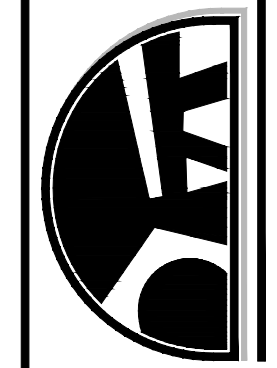
PLAN DATE: MARCH 2025

PROJECT MGR: DAS

REVIEWER: CJA

SCALE: 1" = 20'

**ROWE PROFESSIONAL SERVICES COMPANY**



The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502  
O: (810) 341-7500  
www.rowepsc.com

PREPARED FOR  
**MEMORIAL HEALTHCARE  
ADDITIONAL PARKING FACILITIES**

PROPOSED SITE PLAN



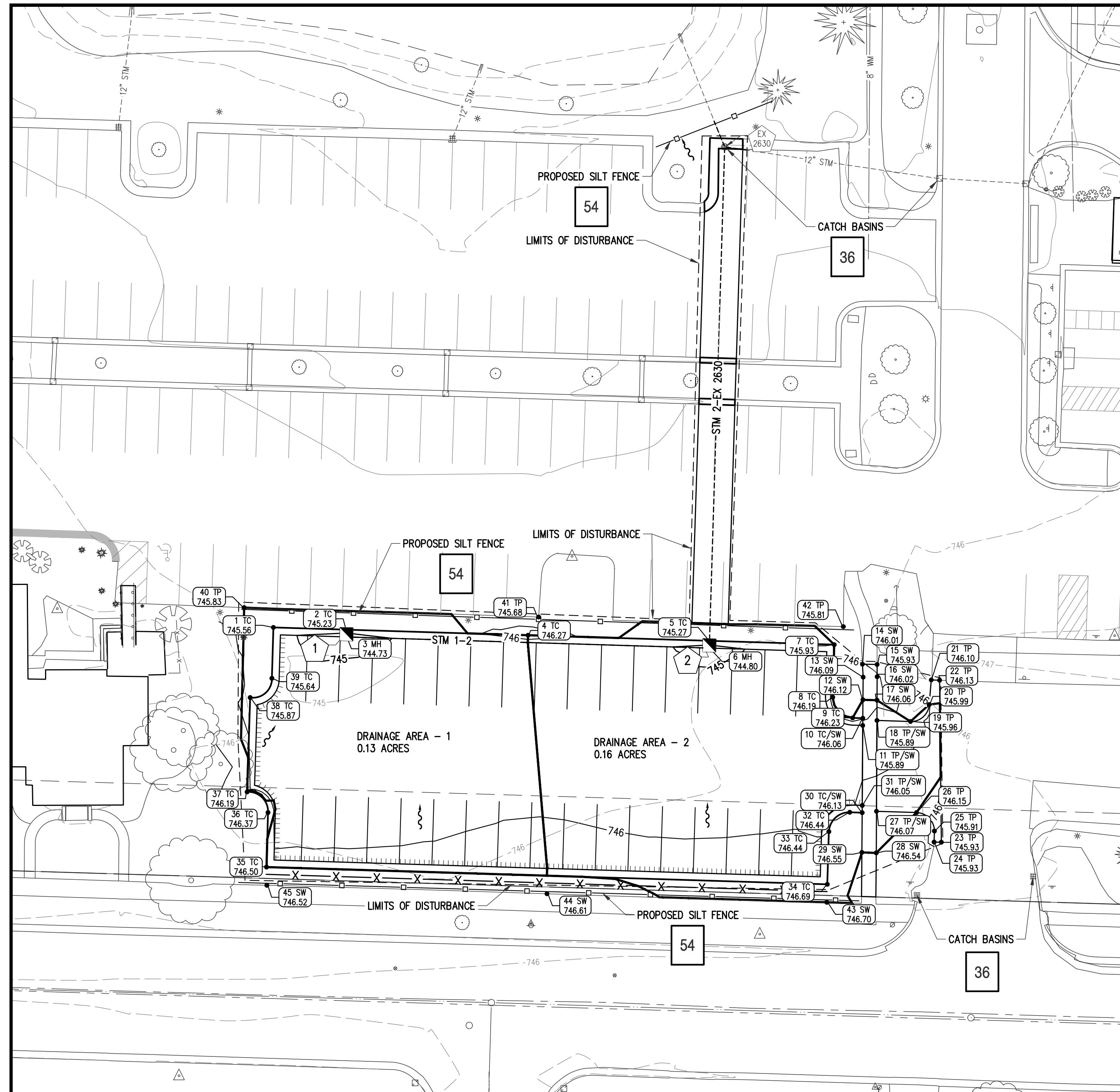
Know what's below.  
Call before you dig.

**PLAN SUBMITTALS AND CHANGES**

PRELIMINARY PLANS - **NOT FOR CONSTRUCTION**	
DATE	DESCRIPTION

REV:

SHT# 8 OF 10  
JOB No: 19C0221



GRADING TABLE				
POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING
1	TC=745.56		548612.06	13173619.67
2	TC=745.23		548611.43	13173639.82
3	MH=744.73	RIM ELEV	548609.44	13173639.76
4	TC=746.27		548609.90	13173689.80
5	TC=745.27		548608.37	13173739.78
6	MH=744.80	RIM ELEV	548606.37	13173739.72
7	TC=745.93		548607.31	13173774.12
8	TC=746.19		548592.83	13173773.70
9	TC=746.23		548587.15	13173779.19
10	TC/SW=746.06		548587.07	13173781.99
11	TP/SW=745.89		548585.07	13173781.97
12	SW=746.12		548592.13	13173782.02
13	SW=746.09		548598.37	13173782.09
14	SW=746.01	ME	548601.94	13173781.89
15	SW=745.93	ME	548601.85	13173785.92
16	SW=746.02		548598.49	13173785.94
17	SW=746.06		548592.01	13173785.91
18	TP/SW=745.89		548586.45	13173785.88
19	TP=745.96		548586.16	13173795.12
20	TP=745.99		548590.82	13173800.27
21	TP=746.10	ME	548597.60	13173800.84
22	TP=746.13	ME	548597.52	13173803.14
23	TP=745.93	ME	548592.93	13173803.62

GRADING TABLE				
POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING
24	TP=745.93	ME	548552.96	13173801.62
25	TP=745.91		548556.01	13173801.71
26	TP=746.15		548561.10	13173796.79
27	TP/SW=746.07		548561.44	13173785.76
28	SW=746.54	ME	548549.99	13173785.70
29	SW=746.55	ME	548550.12	13173781.74
30	TC/SW=746.13		548561.06	13173781.82
31	TP/SW=746.05		548563.06	13173781.83
32	TC=746.44		548561.17	13173778.39
33	TC=746.44		548555.85	13173772.63
34	TC=746.69		548541.34	13173772.21
35	TC=746.50		548546.09	13173617.78
36	TC=746.37		548561.10	13173618.20
37	TC=746.19		548566.77	13173612.44
38	TC=745.87		548592.76	13173613.27
39	TP=745.64		548598.04	13173619.27
40	TP=745.83	ME	548617.51	13173611.63
41	TP=745.68	ME	548614.92	13173692.73
42	TP=745.81	ME	548612.28	13173776.63
43	SW=746.70	ME	548536.39	13173772.07
44	SW=746.61	ME	548538.74	13173695.01
45	SW=746.52	ME	548541.08	13173617.88

PROPOSED STORM SEWER STRUCTURE TABLE					
STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	NORTHING EASTING
EX 2630	48"	Standard	RIM=742.45	12" 740.30 S (PR) 12" 740.26 N (EX) 12" 740.36 E (EX)	548744.33 13173743.95
1	48"	K	RIM=744.73	12" 741.15 E (PR)	548609.44 13173639.78
2	48"	K	RIM=744.80	12" 740.30 W (PR) 12" 740.70 N (PR)	548606.37 13173739.72

PROPOSED STORM SEWER PIPE TABLE				
PIPE NUMBER	DIAMETER	TOTAL LENGTH	SLOPE	MATERIAL
STM 1-2	12"	100'	0.85%	SLCPP
STM 2-EX 2630	12"	138'	0.29%	SLCPP

**OWNER INFORMATION**

MEMORIAL HEALTHCARE  
826 W. KING STREET  
OWOSSO, MI 48867

**SITE ADDRESS**

709 ADA STREET  
OWOSSO, MI 48867

**SITE LOCATION**

SECTION 13 T07N R02E  
CITY OF OWOSSO  
SHIAWASSEE COUNTY

**RECORD LEGAL DESCRIPTION**

PARCEL # 050-310-003-008-00

LOT 8 BLK 3 INGERSOLS ADD, ALSO,  
W 1/2 ADJ CLOSED ADA STREET

**100 YEAR FLOODPLAIN**

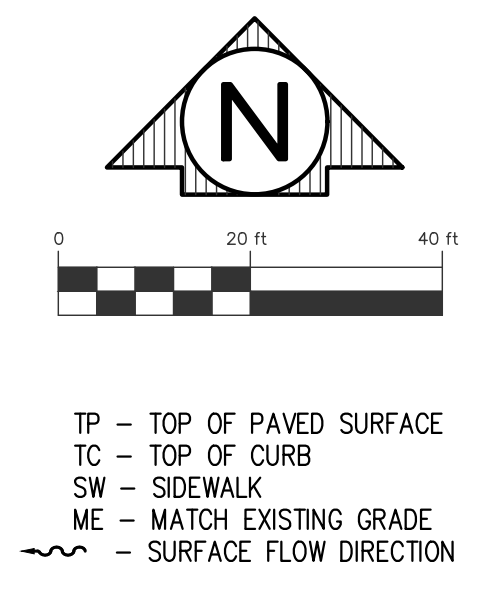
PER FEA COMMUNITY MAP PANEL NUMBER  
26155C0143C - SEPTEMBER 29, 2011, THE SITE  
IS NOT LOCATED WITHIN A FLOODPLAIN ZONE.

**PROXIMITY TO WATERS OF THE STATE**

1000' EAST OF SHIAWASSEE RIVER

**AREA OF DISTURBANCE**

0.35 ACRES



TP - TOP OF PAVED SURFACE  
TC - TOP OF CURB  
SW - SIDEWALK  
ME - MATCH EXISTING GRADE  
~ - SURFACE FLOW DIRECTION

**SOIL EROSION & SEDIMENTATION CONTROL**

- DEVELOPER/PROPERTY OWNER SHALL SUBMIT A DETAILED EROSION CONTROL PLAN AND OBTAIN A SOIL EROSION & SEDIMENTATION CONTROL PERMIT PRIOR TO ANY EARTH CHANGES.
- CONSTRUCTION OPERATION SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING OPERATIONS.
- SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
- CLEANUP WILL BE DONE IN A MANNER TO INSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.
- THE PROJECT WILL CONTINUALLY BE INSPECTED FOR SOIL EROSION AND SEDIMENT CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE DEVELOPER WITHIN 24 HOURS.
- TEMPORARY EROSION CONTROL MEASURES SHALL BE COMPLETELY REMOVED BY THE DEVELOPER UPON ESTABLISHMENT OF PERMANENT CONTROL MEASURES.
- ALL TEMPORARY SOIL EROSION CONTROL MEASURES MUST BE REMOVED FROM ROAD RIGHT-OF-WAY AREAS PRIOR TO ACCEPTANCE OF STREETS FOR ROUTINE MAINTENANCE.
- VEGETATION MUST BE ACCEPTABLY ESTABLISHED PRIOR TO FINAL RELEASE OF THE CONSTRUCTION GUARANTEE BY THE DESIGNATED SOIL EROSION SEDIMENTATION CONTROL AGENT.
- THIS PLAN ILLUSTRATES THE MINIMUM SOIL EROSION AND SEDIMENTATION CONTROLS NEEDED TO PREVENT SILTS FROM LEAVING THE SITE AND IS SUBJECT TO CHANGE AS CONDITIONS IN THE FIELD WARRANT.

**CONSTRUCTION NOTE**

FOR ALL CONSTRUCTION ACTIVITY THAT DISTURBS 5 ACRES OR MORE OF LAND, THE OWNER OF THE PROPERTY SHALL OBTAIN AN NPDES STORM WATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITIES FROM THE EGLE AS REQUIRED UNDER P.A. 245. THE NOTICE OF COVERAGE APPLICATION SHALL BE SUBMITTED THROUGH THE EGLE MWATERS PERMITS WEB SITE. THE DISTURBED AREA FOR THIS PROJECT IS APPROXIMATELY 0.35 ACRES. A NPDES PERMIT IS NOT REQUIRED FOR THIS PROJECT.

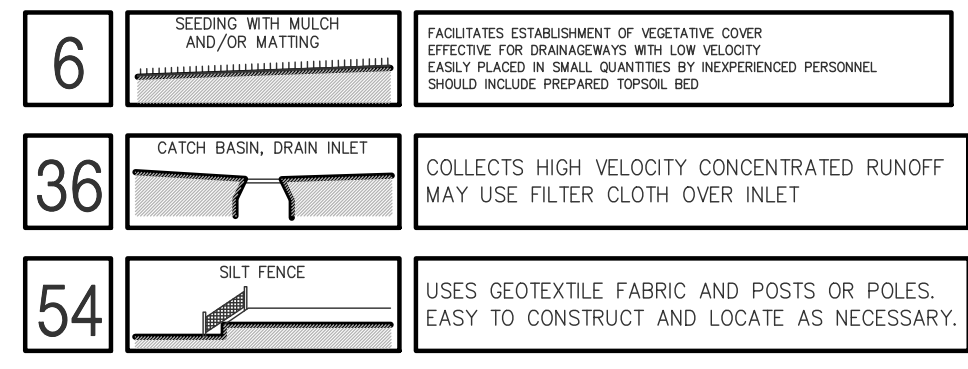
UPSTREAM MANHOLE #	DOWNSTREAM MANHOLE #	DRAINAGE AREA (A)	IMPERVIOUSNESS (C)	EQUIVALENT AREA (AxC)	SUM OF EQUIV. AREAS	T.O.C. (mm)	INTENSITY (in/hr)	RUNOFF (in.) (AxCxI)	PIPE DIAMETER (in.)	SLOPE OF PIPE (in/ft)	MANNING'S N	FULL FLOW CAPACITY (cfs)	FULL VELOCITY (fps)	ACTUAL VELOCITY (fps)	DEPTH OF FLOW (in)	LENGTH OF PIPE (ft)	TRAVEL TIME (min)	INVERT AT UPSTREAM MH	INVERT AT DOWNSTREAM MH	REQUIRED H.G.L. SLOPE (ft)	ACTUAL H2O SLOPE (ft)	H.G.L. CHANGE (ft)	H.G.L. AT UPSTREAM MH	H.G.L. AT DOWNSTREAM MH	RIM ELEVATION (UPSTREAM)	EXCESS FLOW CAPACITY (cfs)	HYDRAULIC COVER (ft)	COVER OVER PIPE (ft)
1	2	0.13	0.82	0.11	0.11	13.5	4.55	0.48	12	0.0035	0.0130	2.11	2.68	2.05	3.8	100	0.8	741.15	740.80	0.0002	0.0035	0.35	742.15	741.80	744.73	1.62	2.58	2.58
2	EX 2360	0.16	0.83	0.13	0.24	14.3	4.45	1.06	12	0.0029	0.0130	1.92	2.44	2.53	6.4	138	0.9	740.70	740.30	0.0009	0.0029	0.40	741.70	741.30	744.80	0.86	3.10	3.10

**Weighted Runoff Coefficients**

MH#	AREA	PERV.	IMP.	C <sub>w</sub>
1	0.13	0.02	0.12	0.82
2	0.16	0.02	0.14	0.83
EX 2360	0.00	0.00	0.00	

**Notes:**  
1. Intensities derived from the 10-year Intensity-Duration-Frequency Curves published by the Oakland County Drain Commissioner.

**SOIL EROSION CONTROL KEY**



**ROWE PROFESSIONAL SERVICES COMPANY**

The Rowe Building  
540 S. Saginaw St., Suite 200  
Flint, MI 48502

PREPARED FOR  
**MEMORIAL HEALTHCARE**  
**ADDITIONAL PARKING FACILITIES**

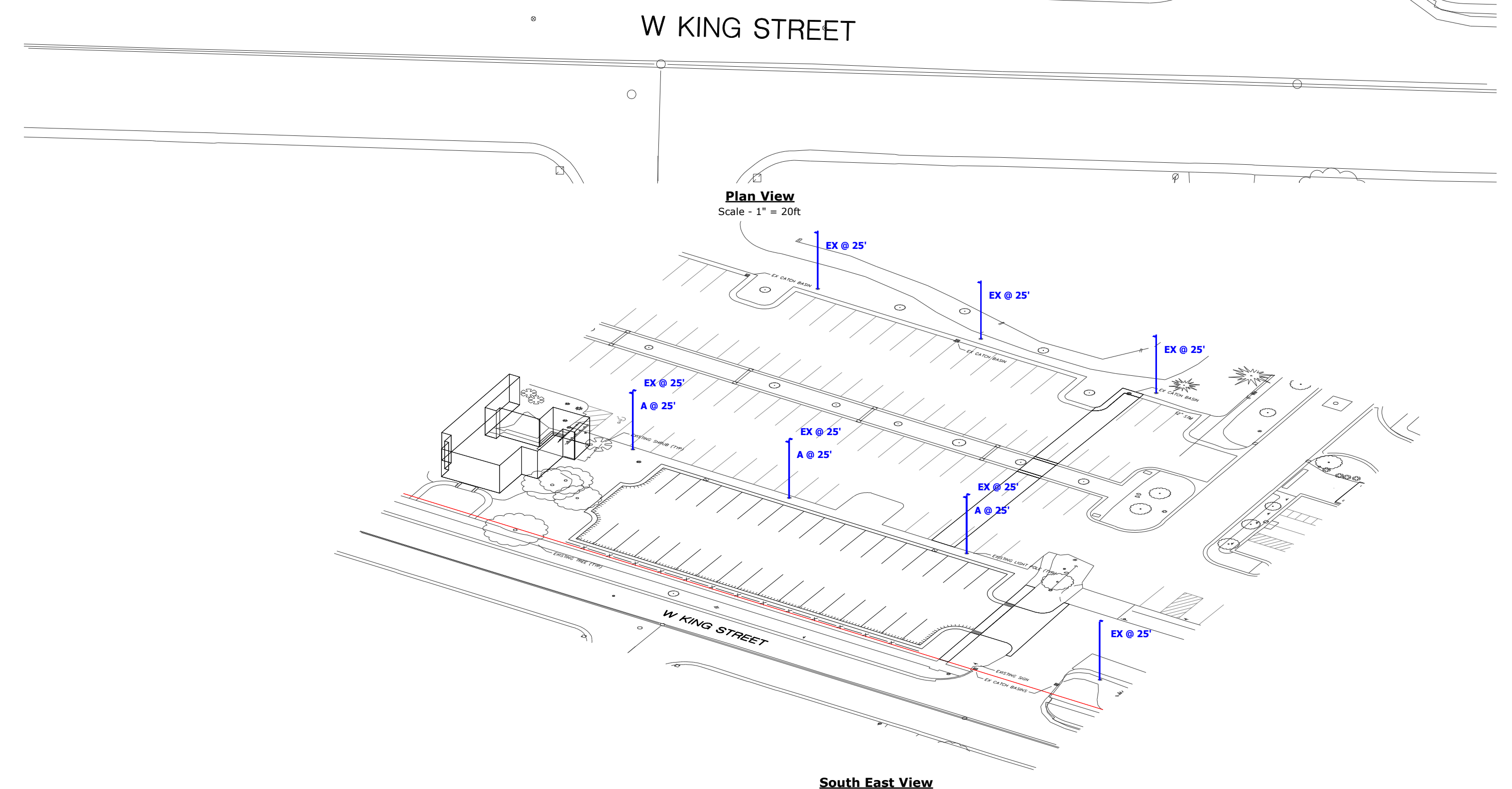
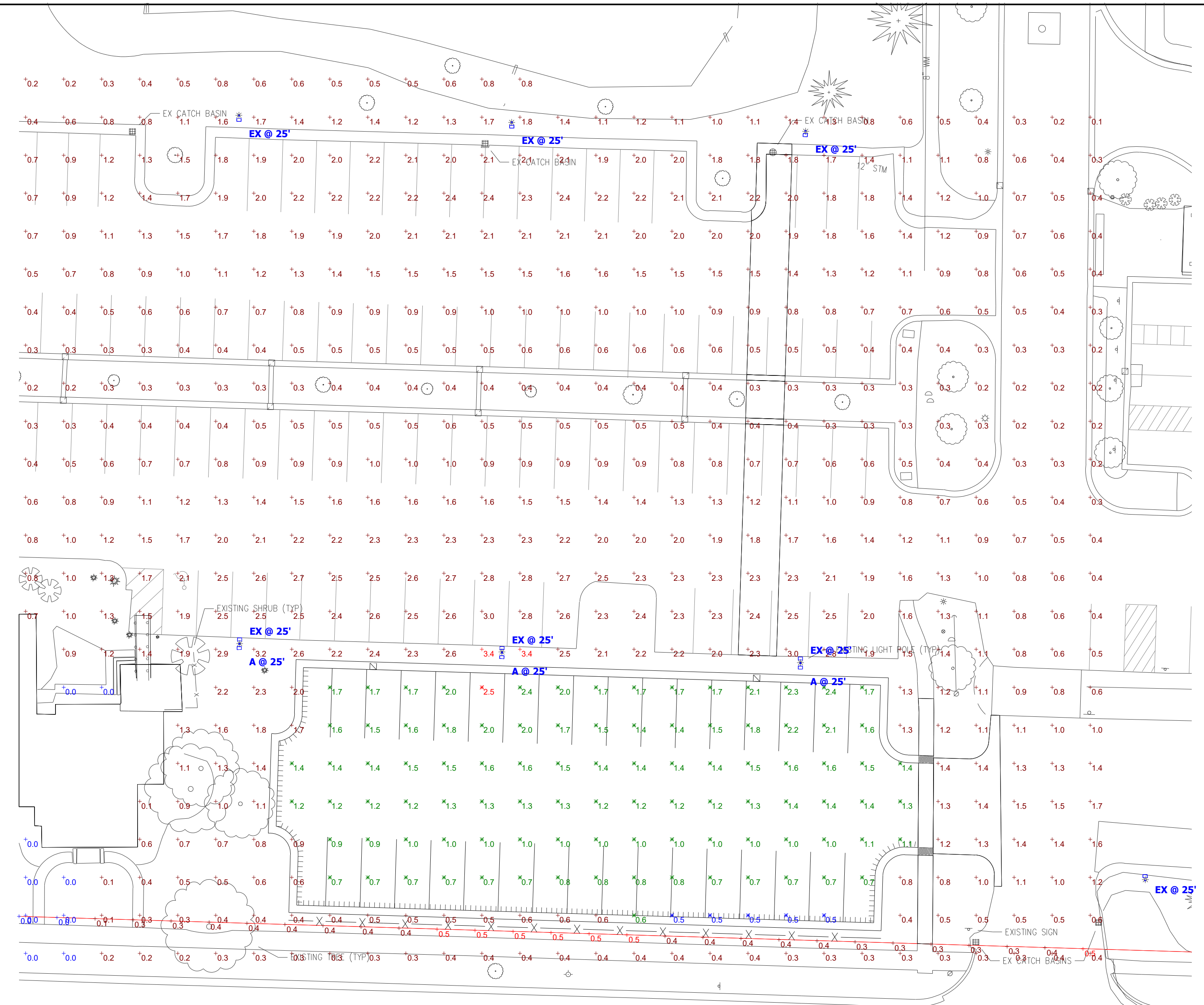
**GRADING AND STORM SEWER PLAN**

PLAN DATE: MARCH 2025  
PROJECT MGR: DAS  
REVIEWER: CJA  
SCALE: 1" = 20'

REV: \_\_\_\_\_  
DATE DESCRIPTION

SH# 9 OF 10  
JOB No: 19C0221





**D-Series Size 0 LED Area Luminaire**

**Specifications**

Size: 0.8' x 1.1'  
 Length: 26.1"  
 Width: 14.0"  
 Height H1: 2.3"  
 Height H2: 2.3"  
 Height: 23.2"

**Ordering Information**

Example: DSX0 LED P4 40K 70CRI T2M MVOLT SPA NLSIARD PRHN DDBD  
 DSX0 LED P4 40K 70CRI T2M MVOLT SPA NLSIARD PRHN DDBD

Symbol	Qty	Manufacturer	Catalog	Description	Lamp Output	LLF	Input Power
EX	7	Lithonia Lighting	DSX0 LED P4 40K 70CRI T2M	EXISTING FIXTURE - D-Series Size 0 Area Luminaire P4 Performance Package 4000K CCT 70 CRI Type 2 Medium	11003	0.9	93.04
A	3	Lithonia Lighting	DSX0 LED P3 40K 70CRI T4M	D-Series Size 0 Area Luminaire P3 Performance Package 4000K CCT 70 CRI Type 4 Medium - TO BE MOUNTED ON EXISTING POLE	8926	0.9	68.95

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Overall	+	1.1 fc	3.4 fc	0.0 fc	N/A	N/A
Property Line	+	0.4 fc	0.5 fc	0.0 fc	N/A	N/A
Proposed Parking	X	1.3 fc	2.5 fc	0.5 fc	5.0:1	2.6:1

Schedule								
Symbol	Label	QTY	Manufacturer	Catalog	Description	Lamp Output	LLF	Input Power
EX	EX	7	Lithonia Lighting	DSX0 LED P4 40K 70CRI T2M	EXISTING FIXTURE - D-Series Size 0 Area Luminaire P4 Performance Package 4000K CCT 70 CRI Type 2 Medium	11003	0.9	93.04
A	A	3	Lithonia Lighting	DSX0 LED P3 40K 70CRI T4M	D-Series Size 0 Area Luminaire P3 Performance Package 4000K CCT 70 CRI Type 4 Medium - TO BE MOUNTED ON EXISTING POLE	8926	0.9	68.95

**General Note**

- SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.
- SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTOR.
- CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIRMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT CONTROLS@GASSERBUSH.COM OR 734-266-6705.

**Alternates Note**

THE USE OF FIXTURE ALTERNATES MUST BE RESUBMITTED TO THE CITY FOR APPROVAL.

**Ordering Note**

FOR INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

**Drawing Note**

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

**Mounting Height Note**

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.