

**AGENDA**  
**JOINT PLANNING COMMISSION**  
Marshall City Hall – 323 West Michigan Avenue  
Tuesday – September 13, 2022 - 7:00 p.m.

**CALL TO ORDER**

**ROLL CALL**

**APPROVAL OF AGENDA**

**APPROVAL OF MINUTES** – Minutes from May 12, 2020

**AUDIENCE PARTICIPATION**

**Items on the agenda--** Citizens who wish to speak on a matter on the agenda may do so when called upon by the Chairman. Those people addressing the Board are required to give their name and address for the record and shall be limited to speaking for a maximum of five (5) minutes on a given matter. Rebuttals shall be limited to one (1) minute when called upon by the Chairman.

**PUBLIC HEARINGS**

**OLD BUSINESS**

None

**NEW BUSINESS**

1. Receive and consider Site Plan #JPC22.01 for Family Bible Church at 725 Old US 27 N
2. Schedule public hearing for Zoning Amendment request #JPCRZ22.01 to rezone property coming in to City on a 425 Land Transfer at 550 West Hughes

**PUBLIC COMMENTS FOR ITEMS NOT ON THE AGENDA** -- Citizens who wish to address the Board on items not on the agenda may do so at this time. When called upon by the Chairman, please state your name and address for the record. Members of the public shall be limited to speaking for a maximum of two (2) minutes.

**REPORTS**

**ADJOURN**

**City of Marshall and Marshall Township**

**Joint Planning Commission Minutes**

**May 12, 2020 7:00 PM**

In a regular session, Tuesday, May 12, 2020 at 7:00 p.m. via Teleconference Call, the City of Marshall and Marshall Township Joint Planning Commission was called to order by Chair Lyng.

**ROLL CALL**

Members Present: Chair Lyng, Commissioners Burke-Smith, Davis(@7:07), Kiessling, Rodgers, Walsh and alternate Gresly

Members Absent: None

Staff Present: Paul Anderson, Marshall Township

Trisha Nelson, City of Marshall Planning and Zoning

**ESTABLISH RULES FOR REMOTE MEETINGS**

**MOTION** by Walsh, supported by Burke Smith to adopt resolution #20.01 to establish Rules for Remote Meetings. On a roll call vote; ayes-Lyng, Burke Smith, Davis, Kiessling, Rodgers, Walsh; nays- none; **MOTION CARRIED.**

**AGENDA**

**MOTION** by Kiessling, supported by Walsh to accept the agenda for the Tuesday, May 12, 2020 as submitted. On a voice vote; **MOTION CARRIED.**

**MINUTES**

**MOTIONS** by Burke Smith, supported by Kiessling, to accept the minutes from the Tuesday, January 14, 2019 as submitted. On a voice vote; **MOTION CARRIED.**

**PUBLIC COMMENTS ON AGENDA ITEMS**

None

**PUBLIC HEARINGS**

None

**NEW BUSINESS**

Chair Lyng opened the review of Site Plan #JPC20.01 for Family Bible Church at 725 Old US 27 N. Walsh stated that it is a straightforward site plan and it encompasses previous discussions. Kiessling agreed. Lyng questioned in the blueprints on page C6 the sidewalk detail and layout was in the key, but there wasn't any sidewalk in the plan, and that they had been removed from previous versions of the plan. Sean from FED, the general contractor for Family Bible Church, stated that due to location of the church there was a variance granted since there isn't any sidewalk currently out there. Nelson stated that the initial site plan showed it on 227 and F Dr both, and that with the ditch line on 227 it would be difficult

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**PUBLIC HEARINGS**

**OLD BUSINESS**

None

**NEW BUSINESS**

1. Receive and consider Site Plan #JPC22.01 for Family Bible Church at 725 Old US 27 N
2. Schedule public hearing for Zoning Amendment request #JPCRZ22.01 to rezone property coming in to City on a 425 Land Transfer at 550 West Hughes

**PUBLIC COMMENTS FOR ITEMS NOT ON THE AGENDA** -- Citizens who wish to address the Board on items not on the agenda may do so at this time. When called upon by the Chairman, please state your name and address for the record. Members of the public shall be limited to speaking for a maximum of two (2) minutes.

**REPORTS**

**ADJOURN**

to put it. She further state that other buildings have not put it in and the church was willing to put in an agreement that if other sidewalks went in they would put in the sidewalks on their property. Lyng stated that when the other buildings went in, the city didn't have a sidewalk requirement, and when other site plans have come in since the requirement that the city hasn't budged on the sidewalks. Nelson stated that in the past year and a half, we have allowed sites to put an agreement in with City Council to allow the sidewalks to be built when there is sidewalk to connect to. Walsh stated that as long as the church comes to an agreement that if a sidewalk needs to be connected at some point they will put it in, he's in agreement to not force it. Kiessling, Davis, Rodgers and Burke Smith agreed. Nelson stated that the project can be contingent on the Church coming to an agreement with City Council before construction can start. Lyng stated that it makes sense to have them put it in when it ties into something.

**MOTION** by Walsh, supported by Burke Smith to approve Site Plan #JPC20.01 for Family Bible Church at 725 Old Us 27 N contingent upon an agreement between the City and Family Bible Church that if at some point a sidewalk needs to be put in, the church would pay for it.

Davis stated that he feels that the JPC should see the agreement and agree on it since it isn't just a city property. Lyng stated that he feels Nelson knows what they are all looking for. Nelson stated that the agreement would have to be approved by Council. Davis stated that he thought the township may want to have a say. Lyng stated that even though it is Joint Planning, it goes by City Ordinance. Anderson stated that the agreement could come to the township and the commissioners could read the agreement before it's signed and make any suggestions if needed. Nelson stated she will share it as soon as she has it. Lyng stated that if anyone has any issues to get back to their administrator and we will get together if needed.

On a roll call vote; ayes-Burke Smith, Kiessling, Lyng, Rodgers, Walsh; Nays- None; **MOTION CARRIED**

#### **PUBLIC COMMENT ON NON-AGENDA ITEMS**

#### **REPORTS**

None

#### **ADJOURN**

The Joint Planning Commission adjourned at 7:28 p.m.

Submitted by,

Michelle Eubank



# JOINT PLANNING COMMISSION

## Staff Report

**Report To:** Joint Planning Commission Members

**From:** Trisha Nelson, Planning & Zoning Administrator

**Re:** Receive and Consider Approval of Site Plan #JPC22.01 for Family Bible Church located at 725 Old US 27 N.

**Date:** September 8, 2022

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The City of Marshall received a resubmittal for a site plan application for 725 Old US 27 N on August 24, 2022. JPC previously approved the original site plan for the Family Bible Church on May 12, 2020. There have been no changes to the previously approved plan. I have attached a copy of the original JPC report for reference.

Marshall City Council did execute a Sidewalk Installation Deferral Agreement as requested. A copy of that agreement is attached.

The JPC is being asked to consider approval of Site Plan application #JPC22.01 for 725 OLD US 27 N for Family Bible Church.

# **COPY OF ORIGINAL REPORT SUBMITTED AND APPROVED IN 2020**

**Report To:** Joint Planning Commission Members

**From:** Trisha Nelson, Planning & Zoning Administrator

**Re:** Receive and Consider Approval of Site Plan #JPC20.01 for Family Bible Church located at 725 Old US 27 N.

**Date:** May 6, 2020

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The City received a site plan application for 725 Old US 27 N in October of 2019 and several revisions have transpired since that point. City and Township staffs were present for an initial "staff review" of the site plan and suggested changes were made. Some of those changes included: confirmed Water service lead, showed the sanitary sewer extending from the existing building to service the new building, added concrete curb, and made a lot line adjustment and amendment the 425 agreement to accomplish the lot line adjustment.

When staff reviews a site plan, all applicable department representatives are present and the following ordinance requirements are reviewed against the plan:

- A. Plans submitted for site plan review shall be stamped by a design professional licensed by the State of Michigan such as a landscape architect, architect, or civil engineer.
- B. Site plans shall be drawn to an engineer's scale appropriate for a sheet size of at least 24 inches by 36 inches, not to exceed one-inch equals 50 feet. If a large development must be depicted in sections on multiple sheets, then an overall composite sheet shall be provided.
- C. Date, north arrow scale, existing zoning, zoning of adjacent properties, legal description of the property, easements, and the names and addresses of the architect, planner, designer, or civil engineer responsible for the preparation of the site plan.
- D. The dimensions of all lot and property lines, showing the relationship of the subject property to abutting properties and a boundary survey of the parcel.
- E. The location, height and dimensions of all existing and proposed structures on the subject property and all existing structures within 100 feet of the subject property.
- F. A finished floor elevation and exterior building elevation drawing shall be submitted with the site plan.
- G. The location of all existing and proposed drives, walks and parking areas.
- H. The location and right-of-way widths of all abutting streets and alleys.
- I. The location and size of all existing and proposed sanitary sewer lines, water lines, and storm drainage facilities must be shown.

## **COPY OF ORIGINAL REPORT SUBMITTED AND APPROVED IN 2020**

- J. The location and size of all existing and proposed electric, natural gas, telephone, cable TV and solid waste disposal facilities must be shown.
- K. The location, height area of illumination and fixture details of all existing and proposed lighting shall be provided. All lighting shall be located and oriented to have minimal impact on adjacent properties.
- L. The size, height, location and illumination of all existing and proposed signs shall be provided to ensure ordinance compliance.
- M. The location of existing natural features such as wooded areas, floodplains, wetlands, drainage courses, and a topographic survey of spot elevations of the site.
- N. Other information as requested by the Zoning Administrator or Planning Commission to verify that the site and use are in compliance with this Chapter.
- O. The Planning Commission may waive any of the foregoing requirements determined unnecessary for site plan review purposes.

The JPC is being asked to consider the Site Plan #JPC20.01 for 725 OLD US 27 N for Family Bible Church.

### **SIDEWALK INSTALLATION DEFERRAL AGREEMENT**

Pursuant to the City Council Resolution No.2020-34, this AGREEMENT made this 17<sup>th</sup> day of August, A.D., 2020, by and between Family Bible Church, an ecclesiastical non-profit organization (the "Owner" or "Property Owner") and the City of Marshall, a Michigan municipal corporation, 323 West Michigan Avenue, Marshall, MI 49068 (the "City")

#### **W I T N E S S E T H:**

WHEREAS, the Property Owner owns property within the City of Marshall, legally described as:

SEC 23 T2S R6W, PART OF NE 1/4 OF NE 1/4 BEG IN CEN US27 HWY N 89DEG 42' W 15.29FT FROM NE SEC COR FOR POB; TH S 00 DEG 27' E 535 FT IN CEN SD RD; TH N 89 DEG 42' W 460FT; TH N 00 DEG, 27' E 535 FT; TH S 89 DEG 42' E 460 FT TO BEG. EXC N 200 FT OF W 120FT TO POB. CONTAINS 5.0987 +/- ACRES. ALSO INCL MARSHALL TWO SEC 23, T2S R6W; BEG 355.29 FT W OF NE SEC COR; TH S 200 FT; TH W 120 FT; TH N 200 FT; TH E 120 FT TO POB. .55 A M/L P.A. LAND TRANSFER WITH MARSHALL TWP OCCURRED MIDNIGHT 7/1/14, ALSO INCLUDES PART OF THE NORTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER OF SECTION 23, T2S-R6W, CITY OF MARSHALL, CALHOUN COUNTY, STATE OF MICHIGAN, DESCRIBED AS: N8942'00"W ALONG THE NORTH SECTION LINE 15 .29' FROM THE NORTHEAST COMER OF SAID SECTION 23 TO THE CENTER LINE OF OLD US 27; THENCE CONTINUING ALONG SAID NORTH SECTION LINE N8942'00"W, 460.00' ;TO THE POINT OF BEGINNING, THENCE S0033'25"E, 535.00' THENCE N89\*42'00"W, 200.00', THENCE N00\*33'25"W, 535.00' THENCE S8942'00"E, 200.00'; TO THE POINT OF BEGINNING. CONTAINING 2.46 ACRES, MORE OR LESS. P.A. LAND TRANSER WITH MARSHALL TWP EFFECTIVE FOR THE 2020 ROLL APPROVED ON 2-18-20.SPLIT/COMBINED ON 06/03/2019 FROM 53-002-173-00, 53-002-173-50;

Commonly known as: 725 Old US 27 North, Marshall, MI 49068

WHEREAS, the City has in effect Zoning Ordinance, Section 5.16, requiring that the property described above have constructed within the public street right-of-way, located adjacent to its boundaries, a sidewalk located and constructed as required by said Ordinance; and,

WHEREAS, pursuant to provisions within said Ordinance, the Property Owner has requested that the City grant permission to install said sidewalk at a date subsequent to this Agreement at such a time the installation satisfies the Intent of 5.16(1) including, but not be limited to, providing convenient access to all properties and connecting to the City-wide sidewalk system as well as satisfying the mandates within 5.16(3)(A) which includes, among other things, sidewalks aligning horizontally and vertically with existing sidewalks on adjacent lots; and,

WHEREAS, the Owner has been issued a building permit pursuant to applicable statutes of the State of Michigan and Ordinances of the City for the construction, improvement, addition, or modification of a principal structure on the land more particularly described above and **Exhibit A**; and

WHEREAS, said building permit mandates the installation of sidewalks as a condition thereof; and

WHEREAS, the Owner has petitioned the City to administratively defer the requirement for the installation of said sidewalks, and the City has determined that such deferral is appropriate pursuant to the Ordinances of the City, subject to the conditions hereinafter set forth.

WHEREAS, the City is agreeable to deferral/postpone installation of said sidewalk until such time as the City shall request such construction, in writing, and

NOW THEREFORE, it is MUTUALLY AGREED by and between the parties hereto as follows:

1. The Parties hereby agree to the deferral/postpone installation of said sidewalk until such time as the City shall request such construction, in writing, and pursuant to terms and conditions herein.
2. The Owner hereby agrees that in consideration for the extension of time granted it by the City for the construction of sidewalk as required on said property, the Property Owner will construct said sidewalk upon written request of the City within one hundred and eighty (180) days of the receipt of such request. Such request shall be deemed received by said Property Owner upon the mailing of same by the City to the last known address of said property owner as same appears in the property tax rolls of the City or posting a copy of said request on the premises described above.
3. The Property Owner hereby agrees to construct a sidewalk along its entire street frontage on Old US-27 North and F Drive North as of this date and as shown in **Exhibit B**, at no cost to the City, to be located upon and of the type, quality and location as required by the City's Ordinances in effect at the time such request is made.
4. The Property Owner shall construct the sidewalk according to state building codes and City ordinances and codes, and thereafter the Property Owner shall maintain the sidewalk in reasonable repair.

5. That the obligation incurred herein shall run with, and constitute a lien upon, the property described above and that a copy of this Agreement shall be recorded with the Register of Deeds, the cost of said recording to be paid by the Property Owner, and that the obligation herein shall apply to his heirs, successors and the assigns of the parties hereto.
6. Should the Owner fail to install said sidewalks within the aforesaid period, the City may proceed to install the same and assess the costs of said installation against the lands described in Exhibit "A" pursuant to and in accordance with the provisions of Act 279 of the Public Acts of 1909, as amended, Article X of the Marshall City Charter, and Section 5.16 of the Zoning Ordinance.
7. Owner agrees and hereby waives any and all hearings, notices of hearing and/or other requirements preliminary to the establishment of a lien against said land for recovery of the actual costs incurred by the City for the design and installation of said sidewalks as may be required by the aforesaid.
8. That the Property Owner is the owner of the property described above and that there are no other persons holding fee or equitable title to such property except as set forth herein and that it is under no disability to execute this agreement and bind the property to the terms hereof.
9. That there are no other agreements or understandings, written or oral, between the parties except as set forth herein and this agreement shall be construed as having been drafted by the parties jointly.
10. The Property Owner shall indemnify and hold harmless the City, its Council members, City administrators, employees, agents and volunteers from any and all claims, demands, actions, suits, including reasonable attorneys' fees and costs of litigation arising out of any action or inaction of the Property Owner as a result of activities related to or because of sidewalks or lack of sidewalks on the property, until such time the sidewalk is installed, except to the extent that any such loss, claim, demand, action, suit, damages or liability resulted from the negligence, bad faith, willful conduct, or reckless disregard by the Indemnatee(s). By entering into this Agreement, the Property Owner and the City do not intend to benefit any third party, nor waive any defenses, including governmental immunity, with regard to claims by any third party or Property Owner.
11. Compliance with Laws/Regulations. The Property Owner agrees to comply with all Federal, State, local laws, rules and regulations, as applicable.
12. Modification of Agreement. None of the terms and provisions of this Agreement may be modified or amended in any way except by an instrument in writing executed by authorized representatives of the City and the Property Owner.

13. Entire Agreement. This Agreement constitutes the entire Agreement between the parties regarding its subject matter and supersedes any prior or contemporaneous understandings or agreements with respect to sidewalks or deferral/postponement of sidewalks.
14. No Waiver/Modification. The failure of either party to enforce, at any time, the provisions of the Agreement shall not constitute a waiver of such provisions or the right of the City at any time to avail itself of such remedies that may have for any breach or breaches of such provisions. No waiver, alteration, or modification of any provision of this Agreement shall be binding unless committed to writing and signed by duly authorized representatives of both parties.
15. Any notices required by this Agreement shall be by certified mail, return receipt requested, directed to the addresses of the parties stated herein. Notice shall be deemed effective upon date of mailing.
16. Choice of Laws. This Agreement shall be interpreted and enforced under the laws of the State of Michigan. The parties irrevocably consent to the jurisdiction of the Courts of Michigan, Calhoun County, to determine all issues which may arise under this Agreement.
17. If any provision of this Agreement should be invalid, illegal, or unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions of this Agreement shall not in any way be affected, impaired, or prejudiced thereby.
18. Nothing in this Agreement shall be intended to confer third party beneficiary status or rights, pursuant to MCL 600.1405 or under the common law, to any person or entity that is not a party to this Agreement.
19. Authorization. This Agreement has been duly authorized, executed and delivered by the parties and constitutes a legal, valid, and binding obligation upon each of them and enforceable in accordance with its terms. Each person placing his/her signature below represents and warrants that he/she is the signatory duly authorized to execute this Agreement on behalf of the City and Property Owner as is respectively applicable.

[Signatures on Following Page]

IN WITNESS WHEREOF the parties have hereunto set their hands and seals the date above first written.

**PROPERTY OWNER**

Allen L. Byam  
Al Byam  
Vice Chairperson, FBC Board of Directors

STATE OF MICHIGAN     )  
                                  ) ss.  
COUNTY OF CALHOUN    )

Subscribed to and sworn before me this 22nd day of December,  
A.D. 2020.

DIANE K. PETERS  
NOTARY PUBLIC - STATE OF MICHIGAN  
COUNTY OF CALHOUN  
My Commission Expires February 4, 2021  
Acting in County of Calhoun

Diane K Peters  
Notary Public  
Calhoun County, Michigan  
My commission expires: 02-04-2021

**CITY OF MARSHALL**

Trisha Nelson  
Trisha Nelson  
Marshall City Clerk

STATE OF MICHIGAN     )  
                                  ) ss.  
COUNTY OF CALHOUN    )

Subscribed to and sworn before me this 18th day of December,  
A.D. 2020.

William C Dopp III  
Notary Public  
~~Calhoun~~ Ingham County, Michigan  
My commission expires: 1/17/2026

PREPARED BY:  
City of Marshall  
323 West Michigan Avenue, Marshall MI 49068

Upon recording, return to same.

WILLIAM C. DOPP III  
Notary Public - State of Michigan  
County of Calhoun  
My Commission Expires 1/17/2026  
Acting in the County of Calhoun



**Exhibit A**

Legal Description here.

SEC 23 T2S R6W, PART OF NE 1/4 OF NE 1/4 BEG IN CEN US27 HWY N 89DEG 42' W 15.29FT FROM NE SEC COR FOR POB; TH S 00 DEG 27' E 535 FT IN CEN SD RD; TH N 89 DEG 42' W 460FT; TH N 00 DEG, 27' E 535 FT; TH S 89 DEG 42' E 460 FT TO BEG. EXC N 200 FT OF W 120FT TO POB. CONTAINS 5.0987 +/- ACRES. ALSO INCL MARSHALL TWO SEC 23, T23 R6W; BEG 355.29 FT W OF NE SEC COR; TH S 200 FT; TH W 120 FT; TH N 200 FT; TH E 120 FT TO POB. .55 A M/L P.A. LAND TRANSFER WITH MARSHALL TWP OCCURRED MIDNIGHT 7/1/14, ALSO INCLUDES PART OF THE NORTHEAST ONE-QUARTER OF THE NORTHEAST ONE-QUARTER OF SECTION 23, T2S-R6W, CITY OF MARSHALL, CALHOUN COUNTY, STATE OF MICHIGAN, DESCRIBED AS: N8942'00"W ALONG THE NORTH SECTION LINE 15 .29' FROM THE NORTHEAST COMER OF SAID SECTION 23 TO THE CENTER LINE OF OLD US 27; THENCE CONTINUING ALONG SAID NORTH SECTION LINE N8942'00"W, 460.00' ;TO THE POINT OF BEGINNING, THENCE S0033'25"E, 535.00' THENCE N89\*42'00"W, 200.00', THENCE N00\*33'25"W, 535.00' THENCE S8942'00"E, 200.00'; TO THE POINT OF BEGINNING. CONTAINING 2.46 ACRES, MORE OR LESS. P.A. LAND TRANSER WITH MARSHALL TWP EFFECTIVE FOR THE 2020 ROLL APPROVED ON 2-18-20.SPLIT/COMBINED ON 06/03/2019 FROM 53-002-173-00, 53-002-173-50;

## **Exhibit B**

Image will be inserted here.





CITY OF MARSHALL

SITE PLAN  
APPLICATION

## SITE PLAN REVIEW PROCESS

**THE CITY NOW REQUIRES ALL SITE SUBMISSIONS IN ELECTRONIC .PDF FORMAT, ACCOMPANIED BY TWO (2) LARGE SIZE PAPER COPIES.**

Plans can be emailed to: [TNelson@cityofmarshall.com](mailto:TNelson@cityofmarshall.com)

1. Site plan application and fee are submitted to the Department of Community Services at City Hall, 323 W. Michigan Ave., Marshall, MI from the hours of 8:00 a.m.-5:00 p.m. Applications and fees may be submitted by mail or in person. Site plan submissions are **required electronically with 2 large size paper copies.**
2. The initial site plan submission is dedicated to internal City staff review. The developer is welcome to attend this meeting. If the developer does not attend, revisions will be suggested in a letter.
4. A deadline is given to the developer to prepare revisions and re-submit by the corresponding Planning Commission "Submission Date" (dates attached).
5. At their next regular meeting, Planning Commission accepts the site plan. If the plan is complete, upon request, the Planning Commission may also move to approve. If the plan is not complete or there is no request, the Planning Commission will move to approve at their next regularly scheduled meeting.

### **Site Plan Submission Requirements (Review Zoning Ordinance for all requirements)**

1. Complete the Application.
2. Review and follow the Site Plan Review checklist.
3. Go to [www.cityofmarshall.com](http://www.cityofmarshall.com) - Planning and Zoning and click on "Zoning Ordinance" under Helpful Link.
4. Submit a certified survey of the property with the site plan.
5. Submit a copy of the deed showing ownership

## City Departments

Web site: [www.cityofmarshall.com](http://www.cityofmarshall.com)

<b>City Manager</b> Derek Perry	269.558.0315 <a href="mailto:DPerry@cityofmarshall.com">DPerry@cityofmarshall.com</a>
<b>Planning and Zoning</b> Trisha Nelson	269.558.0304 <a href="mailto:TNelson@cityofmarshall.com">TNelson@cityofmarshall.com</a>
<b>Chief of Police</b> Josh Lanker	269.781.9810 <a href="mailto:JLanker@cityofmarshall.com">JLanker@cityofmarshall.com</a>
<b>Director of Public Utilities</b> Marguerite Davenport	269.558.0323 <a href="mailto:MDavenport@cityofmarshall.com">MDavenport@cityofmarshall.com</a>
<b>Director of Electric Utilities</b> Kevin Maynard	269.558.0329 <a href="mailto:KMaynard@cityofmarshall.com">KMaynard@cityofmarshall.com</a>
<b>Building Official</b> Tim Musser	269.781.3985 x1507 <a href="mailto:TMusser@cityofmarshall.com">TMusser@cityofmarshall.com</a>
<b>Water Dept. Supervisor</b> Aaron Ambler	269.558.0338 <a href="mailto:AAmbler@cityofmarshall.com">AAmbler@cityofmarshall.com</a>
<b>Wastewater Dept. Supervisor</b> Alec Egnatuk	269.558.0337 <a href="mailto:AEgnatuk@cityofmarshall.com">AEgnatuk@cityofmarshall.com</a>

## County Department

[www.calhouncountymi.gov](http://www.calhouncountymi.gov)

Health Department – Food Services- Battle Creek	269-969-6373
Road Department – Soil and Erosion Permits - Marshall	269-781-9841

## Michigan Department of Transportation

[www.michigan.gov](http://www.michigan.gov)

269-789-0560 or toll free 1-877-324-6368

**City of Marshall**  
**Application for Site Plan Review**

Attn: Planning and Zoning Administrator  
323 W Michigan Ave.  
Marshall, Michigan, 49068

The following application is made to the City of Marshall Planning Commission in accordance with the provisions of the Planning and Zoning Department.

**1. Applicant Information**

Address of property being developed:

725 US Hwy 27 N, Marshall, MI 49068

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Owner of property being developed:

Family Bible Church

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Owner's Address:

725 US Hwy 27 N, Marshall, MI 49068

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City

State

Zip

Owner's Phone Number:

(269) 781-8400

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**2. Owner's Agent if working for property owner.**

Name and Title:

FED Corporation (General Contractor)

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Address: 777 West Cedar Ave

Gladwin

MI

48624

City

State

Zip

Phone Number:

989-246-9122

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**City of Marshall**  
**Application for Site Plan Review**

**3. Brief description of proposed project**

Construction of new church lobby and fellowship hall

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**4. Property Information**

Is this property located in a floodplain?	<u>No</u>
Is this property located in a wetland?	<u>No</u>
Land area in square feet?	<u>5.65 acres</u>
Proposed building area in square feet?	<u>10,545</u>
Proposed paved area in square feet?	<u>15,215</u>
Existing paved area in square feet?	<u>45,500 to remain</u>
Lake or stream within 500 feet?	<u>No</u>
Any other agencies contacted for approvals?	<u>No</u>
If so, please list:	

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# City of Marshall

## Application for Site Plan Review

### 5. Authorization (Must be signed by the owner of the property)

I am the owner of record for this property for which this application is being filed and as such, I am familiar with the development being proposed to be carried out on my property.

I hereby, give permission for this application to be filed with the full understanding that certain restriction may be placed on the property relative to the approval of the proposed work.

I further certify that under penalties of perjury, I am to sign this application.

Name (Please Print) <sup>AB</sup> Al Byam Allen Byam

Title: Vice Chair Date: August 24, 2022

Signature: Allen L. Byam

**Note:** If there are multiple owners of the property or you are representing a group, corporation, or other organization attach a copy of a certified letter authorizing you to sign this application for the proposed development.

LAND USE AND DEVELOPMENT FEES		
<b>PLATS</b>		
	Up to 30 Lots	\$550.00
	Over 30 Lots	\$750.00
<b>SITE CONDOMINIUMS</b>		
	Up to 30 Lots	\$450.00
	Over 30 Lots	\$650.00
<b>SITE PLANS</b>		
	Commercial and	\$350.00 < 30 acres
	Special Land Use	\$400.00
	Planned Unit Development	\$500.00
	Amend a PUD	\$150.00
	Multiple Family Developments (Apartment &	\$50 plus \$5.00 per unit or lot
Additions to existing Site Plans if Planning Commission Review is required		\$100.00
Extending Site Plan with Planning Commission		\$150.00



# CITY OF MARSHALL

## City of Marshall Grease Discharge Control Policy

All non-residential establishments that prepare, cook, or dispense food and discharge wastewater to the City of Marshall sanitary sewer system, are required to install and maintain an appropriately sized grease trap/grease interceptor. These establishments include but are not limited to restaurants, school kitchens, hotel kitchens, hospitals, church kitchens, bars, clubs, grocery stores, etc.

The City of Marshall Sewer Use Ordinance prohibits the discharge of grease in amounts that could cause interference or obstruction of wastewater flow. The Sewer Use Ordinance establishes the City's authority to enforce this policy and to impose fines and penalties for non-compliance, and to recover costs associated with enforcement & non-compliance.

Owners are required to contract a licensed plumber to install a properly sized grease trap/interceptor in accordance with the State of Michigan Plumbing Code. The grease trap or interceptor shall be certified by and/or designed according to the Plumbing and Drainage Institute standards. Prior to final connection to the City's sanitary sewer, the owner must notify the City Plumbing Inspector for inspection. The City of Marshall Wastewater Treatment Department must also be notified. Grease trap/interceptor location and specifications must be provided along with a written employee grease handling policy and an appropriate grease trap/interceptor maintenance schedule. Failure to meet code requirements, or provide required information will result in a denial to connect.

City personnel will inspect grease trap/interceptors and maintenance records on a regular basis. Failure to appropriately maintain a grease trap/interceptor may result in fines and/or disruption of service.

### **Cross Connections**

In an effort to eliminate cross connections, the applicant needs to install backflow prevention devices in accordance with the Michigan Plumbing Code. For non-residential water users, backflow prevention devices for facility containment are preferred. Prior to connecting to water services, a cross connection inspection must be scheduled with the Water Superintendent.

**Water Superintendent:** Aaron Ambler 269.558.0328

**Building Official:** Tim Musser 269.781.3985

## CITY OF MARSHALL

### Site Plan Review Checklist for General Development

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

Zoning District \_\_\_\_\_

Proposed Use: \_\_\_\_\_

Is this a Permitted Use? ☐ Yes ☐ No

If yes list section number: \_\_\_\_\_

Is the property in the Well Head Protection Area? ☐ Yes ☐ No ☐ NA

Property Address: \_\_\_\_\_

### Information of Responsible Party that prepared plans

Name: Lapham Associates

Company Name: Scott Bell

Company Address: 116 South 3rd Street

West Branch, MI 48661

\_\_\_\_\_

## CITY OF MARSHALL

Zoning Ordinance, Article 6: Development Procedures: Section 6:3 - Site Plan Review is needed when:

- ☐ (A) - Any use or development stipulated elsewhere in the ordinance.
- ☐ (B) - All uses subject to land approval.
- ☐ (C) - Any areas for which off-street parking is required except for single- and two-family dwellings on a single lot.
- ☐ (D) - All permitted use, new construction, or any change of use lying contiguous to or across the street from a residential district.
- ☐ (E) - All residentially related uses permitted in a one-family district such as, but not limited to, institutional uses, churches, or public facilities.
- ☐ (F) - Any new use, addition or accessory structure that requires additional off-street parking to that already provided.
- ☐ (G) - Site plans for subdivisions and site condo developments.
- ☐ (H) - All uses not otherwise included within a specific use district.
- ☐ (I) - Any use for which the zoning administrator determines that PC review is necessary to determine compliance with the zoning ordinance.
- ☐ (J) - Amendments to approve site plans, except that the City Manager may approve minor modifications.

**Note: Staff will review all plans prior to submitting them to Planning Commission.**

**Development Procedures: 6.3 – Site Plan Review: The following information should be included in your site plan:**

- ☐ Plans submitted for site plan review shall be stamped by a design professional licensed by the State of Michigan such as a landscape architect, architect, or civil engineer.
- ☐ Site plans shall be drawn to an engineer's scale appropriate for a sheet size of at least 24 by 36 inches, not to exceed one (1) inch equals 50 feet. If a large development must be depicted in sections on multiple sheets, then an overall composite sheet shall be provided.
- ☐ Date, north arrow scale, existing zoning, zoning of adjacent properties, legal description of the property, easements, and the names and addresses of the

## CITY OF MARSHALL

architect, planner, designer, or civil engineer responsible for the preparation of the site plan.

☐

The dimensions of all lot and property lines, showing the relationship of the subject property to abutting properties and a boundary survey of the parcel.

☐

The location, height and dimensions of all existing and proposed structures on the subject property and all existing structures within 100 feet of the subject property.

☐

A finished floor elevation and exterior building elevation drawing shall be submitted with the site plan.

☐

The location of all existing and proposed drives, walks and parking areas.

☐

The location and right-of-way widths of all abutting streets and alleys.

☐

The location and size of all existing and proposed sanitary sewer lines, water lines, and storm drainage facilities must be shown.

☐

The location and size of all existing and proposed electric, natural gas, telephone, cable TV and solid waste disposal facilities must be shown.

☐

The location, height area of illumination and fixture details of all existing and proposed lighting shall be provided. All lighting shall be located and oriented to have a minimal impact on adjacent properties.

☐

The size, height, location and illumination of all existing and proposed signs shall be provided to insure ordinance compliance.

☐

The location of existing natural features such as wooded areas, floodplains, wetlands, drainage courses, and a topographic survey of spot elevations of the site.

☐

Other information as requested by the Zoning Administrator or Planning Commission to verify that the site and use follow the Ordinance.

☐

The Planning Commission may waive any of the foregoing requirements determined unnecessary for site plan review purposes.

# CITY OF MARSHALL

## PLANNING COMMISSION CONSIDERATIONS

The Planning Commission shall consider the following standards in the process of reviewing any site plan for approval:

1. **Adequacy of information.** The site plan information is complete, accurate, and in an understandable form that accurately depicts and describes the proposed development.
2. **Site appearance and preservation.** The site layout promotes the normal and orderly development of surrounding lots, and the development layout preserves, to the extent feasible, the site's natural, cultural, and historical features, such as but not limited to significant buildings, wetlands, topography, and woodlands.
3. **Pedestrian access.** Existing and proposed sidewalks or pedestrian pathways connect to existing and planned public sidewalks and pathways in the area, and comply with applicable barrier-free access standards.
4. **Vehicular circulation.** Drives, streets, parking, site access and other vehicle-related elements are designed to minimize traffic conflicts on adjacent streets, and to promote safe and efficient traffic circulation.
5. **Parking and loading.** Off-street parking lots and loading areas are arranged and located to accommodate the intensity of proposed uses, minimize conflicts with adjacent uses, and promote shared-use of common facilities where feasible.
6. **Building composition.** Building design and architecture are harmonious with the surrounding neighborhood with regard to scale, mass, proportion, and materials.
7. **Screening.** Adequate screening elements have been provided to buffer or separate unlike or conflicting land uses, and to screen off-street parking, mechanical appurtenances, loading and unloading areas and storage areas from abutting residential districts and street rights-of-way.
8. **Exterior lighting.** All exterior lighting fixtures are designed and arranged to minimize glare and light trespass, prevent vision impairments, and maximize security.
9. **Impact upon public services.** The impact upon public services (including utilities, streets, police and fire protection, emergency access, and public sidewalks and pathways) will not exceed the existing or planned capacity of such services.

August 25, 2022

City of Marshall  
323 W. Michigan Ave.  
Marshall, MI 49068

To Whom It May Concern:

On Wednesday, July 13, 2022 at the regularly scheduled monthly Board Meeting of Family Bible Church, the Motion, as written below, was made, supported, and approved by the Family Bible Church Board, giving authorization to Allen Byam, Vice Chair of the FBC Board, to sign Building expansion documents, including the Site Plan document with the City of Marshall, Michigan, on behalf of Family Bible Church.

*Item #3: Building – Pastor Tarkiewicz gave an update on behalf of the Building Committee and shared that there are several things that will need to occur in the next month or so. These include a site plan with the city, FED bid process, shopping and applying for loan, and signing a contract to be voted on by the Board at the August 10 scheduled Board meeting. The Building committee will be meeting at the end of July to address these items. **Phil Smith made a motion that the Vice Chair of the FBC Board, currently Allen Byam, has authority to sign the Building Contract and Building Loan. Dennis Craft gave support. Motion moved.***

Sincerely,



Mark Pike  
Board Secretary  
Family Bible Church

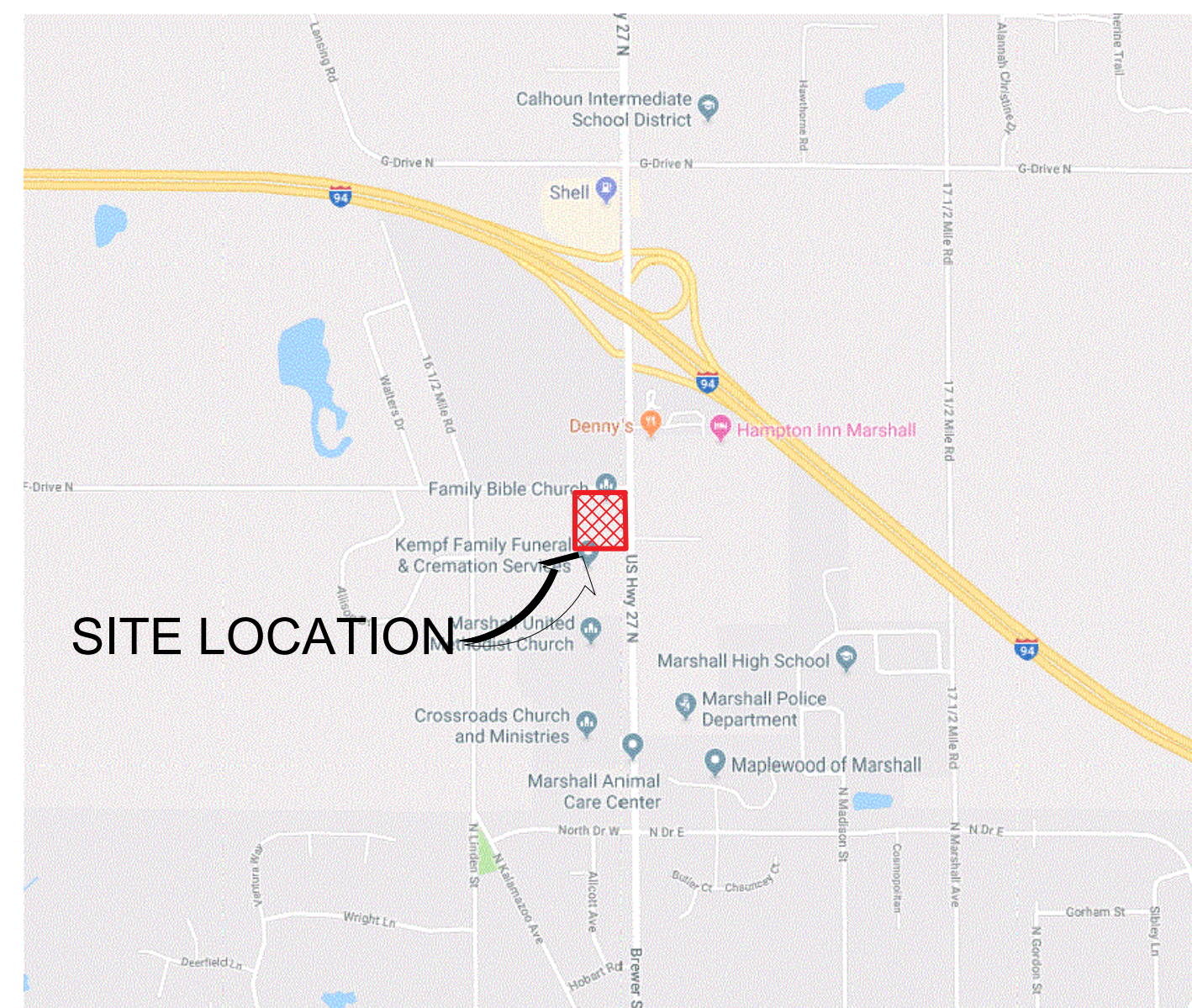
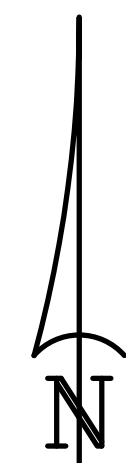


SITE ADDRESS: 725 Old US-27 North, Marshall, Michigan 49068

Part of the Northeast One-quarter of the Northeast One-quarter of Section 23, T2S-R6W, City of Marshall, Calhoun County, State of Michigan, described as: Beginning N 89°42'00" W, along the North Section line 15.29' from the Northwest Corner of said Section 23 to the Center Line of Old US 27; Thence continuing along said North Section line N 89°42' 00" W 660.00'; thence S 00° 33' 25" E, 535.00'; Thence N 89° 42' 00" E, parallel with said North Section line 660.00' to the Center Line of Old US 27; thence N 00° 33' 25" W along said Center line 535.00' ; back to the Point of Beginning. This property is subject to an easement for the installation and maintenance of public utilities within the right-of-way of F Drive North and Old US 27. Containing 8.11 acres, more or less, and being subject to restrictions, reservations, easements, rights-of-way, zoning, governmental regulations, and matters visible, if any, upon or affecting said lands.

C-1	Cover Sheet
C-2	General Notes
C-3	Existing Topographic Survey
C-4	Demolition Plan
C-5	Site Plan
C-6	Site Details
C-7	Water Main Plan & Profile
C-8	Site Lighting / Photometric Plan
C-9	Grading & Storm Water Plan
C-10	SESC Plan
C-11	SESC Key
C-12	Site Specifications
C-13	Site Specifications
LAP 1 of 3	Landscape Demolition Plan
LAP 2 of 3	Trees to Remain
LAP 3 of 3	Trees and Landscaping Buffer Plan

August 12, 2019	Submit initial preliminary site plans for site plan review. <b>These plans are not to be used for construction.</b>
October 8, 2019	Revisions to the plans including the comments from the preliminary site plan review and submittal to the joint planning commission. <b>These plans are not to be used for construction.</b>
October 26, 2019	Revised to relocated drive to save trees; remove curb on the new westerly drive; and the sidewalk along US 27. <b>These plans are not to be used for construction.</b>
January 7, 2020	Revised plans to move entrance drive; keep annex building and increase new parking lot size per owner's request. <b>These plans are not to be used for construction.</b>



**LOCATION MAP**  
Not to Scale

[illegible]

**Cover Sheet**  
**Family Bible Church Expansion**  
**For**  
**FED Corporation**

**LAPHAM ASSOCIATES**  
PLANNING ENVIRONMENTAL SURVEYING  
116 South 3rd Street  
West Branch, MI 48661  
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☐ PRELIMINARY

☒ PERMIT/BID

☐ CONSTRUCTION

☐ FINAL RECORD

**1-C**



# NOTE SHEET

- 1. SOIL EROSION:** The DEVELOPER shall submit a detailed Soil Erosion and Sedimentation Control plan and obtain an Act 451 Part 91, Soil Erosion and Sedimentation Control permit. This includes the payment of fees and the providing of necessary bonds. **No earth changes or excavation shall be started prior to the issuance of this permit.** The DEVELOPER shall protect all existing and proposed storm sewer facilities on and adjacent to the site during excavation and construction. All sediment shall be contained on site. Any silt in county drains, storm sewer, culverts, etc. as a result of this project, shall be removed by the DEVELOPER at the cost of the DEVELOPER.
- 2. NPDES STORM WATER DISCHARGE PERMIT:** The owner of the property shall obtain a NPDES Storm Water Discharge permit for construction activities from MDEQ as required under Public Act 451. The notice of coverage form shall be submitted through CalhounCounty with the Soil Erosion Control permit application. All MDEQ fees shall accompany the Notice of Coverage.
- 3. MUNICIPALITY SANITARY SEWER AND WATER PERMIT:** Prior to the issuance of a building permit by the local municipality, the developer shall be required to obtain a sanitary sewer and/or water tap-in permit from the local municipality.
- 4. STATE CONSTRUCTION PERMITS:** The sanitary sewer and water main construction permits from the Michigan Department of Environmental Quality shall be submitted to the MDEQ after approval of local municipality. Construction shall not begin until these state permits are issued.
- 5. Utility Warning -** Underground locations as shown on the plans were obtained from utility owners, and were not field located. A minimum of three (3) working days prior to beginning construction, the contractor shall notify "MISS DIG" (800-482-7171) and have all underground utilities staked before any work may begin. The contractor shall be responsible for the protection and/or relocation of all utilities that may interfere with construction. Three (3) Working Days Before You DIG - Call MISS DIG (1-800-482-7171).

# OTHER NOTES

1. The contractor shall be responsible to review and be familiar with all portions of these plans. Any discrepancies between different portions of the plans shall be brought to the attention of the Engineer and shall be resolved prior to construction.

# NRCS SOILS MAP

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
16B	Oshtemo sandy loam, 0 to 6 percent slopes	3.7	60.7%
16C	Oshtemo sandy loam, 6 to 12 percent slopes	2.4	39.3%
Totals for Area of Interest		6.1	100.0%



# BENCHMARKS

## Benchmark #1

Set spike in south side of utility pole on east side of driveway on south side of F Drive North.  
Elevation 942.13 (NAVD 88)

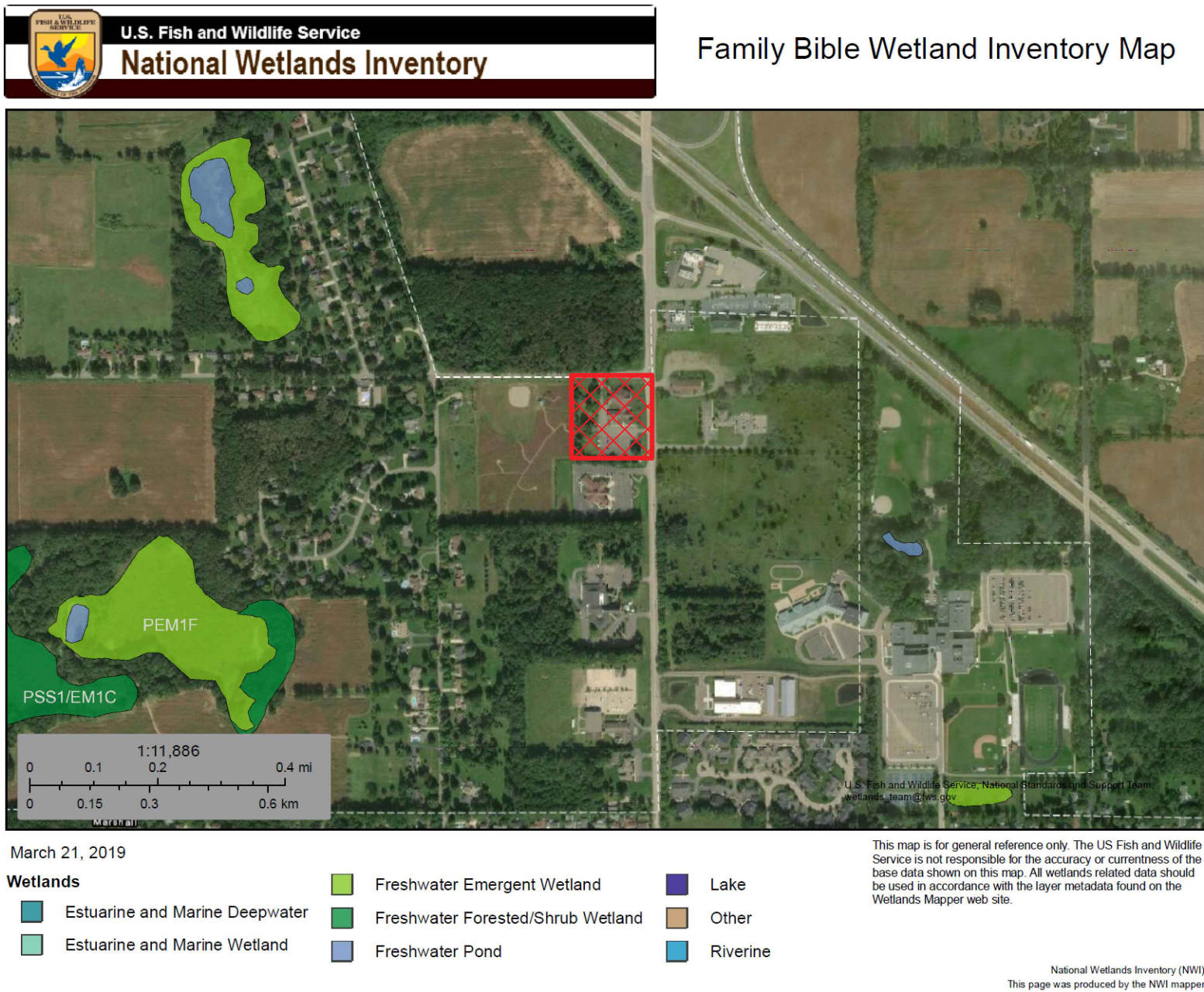
## Benchmark #2

Set Spike on East side of utility pole on west side of parking lot at north side of garage.  
Elevation 944.29 (NAVD 88)

# PLAN LEGEND

— O/ELECT —	= OVERHEAD ELECTRIC LINE
— GAS — GAS —	= BURIED GAS LINE
— SAN — SAN —	= SANITARY SEWER
— WATER —	= WATER MAIN
— U/G TELE —	= UNDERGROUND TELEPHONE
⊙	= SANITARY MANHOLE
⊙	= STORM MANHOLE
●	= CATCH BASIN
⊠	= CURB INLET
⊙	= FIRE HYDRANT
⊠	= WATER VALVE
⊠	= LIGHT POLE
⊠	= STREET SIGN
⊠	= FENCE LINE
⊠	= UTILITY POLE
○	= FOUND CAPPED IRON
●	= SET CAPPED IRON
■	= BITUMINOUS PAVING
■	= CONCRETE PAVING OR WALKWAY
⊠	= PLS SYSTEM CORNER
R	= RECORDED AS IN TITLE DESCRIPTION
P	= PREVIOUSLY DESCRIBED
M	= MEASURED AS
⊠	= PROPOSED LIGHT POLE

# WETLAND MAP



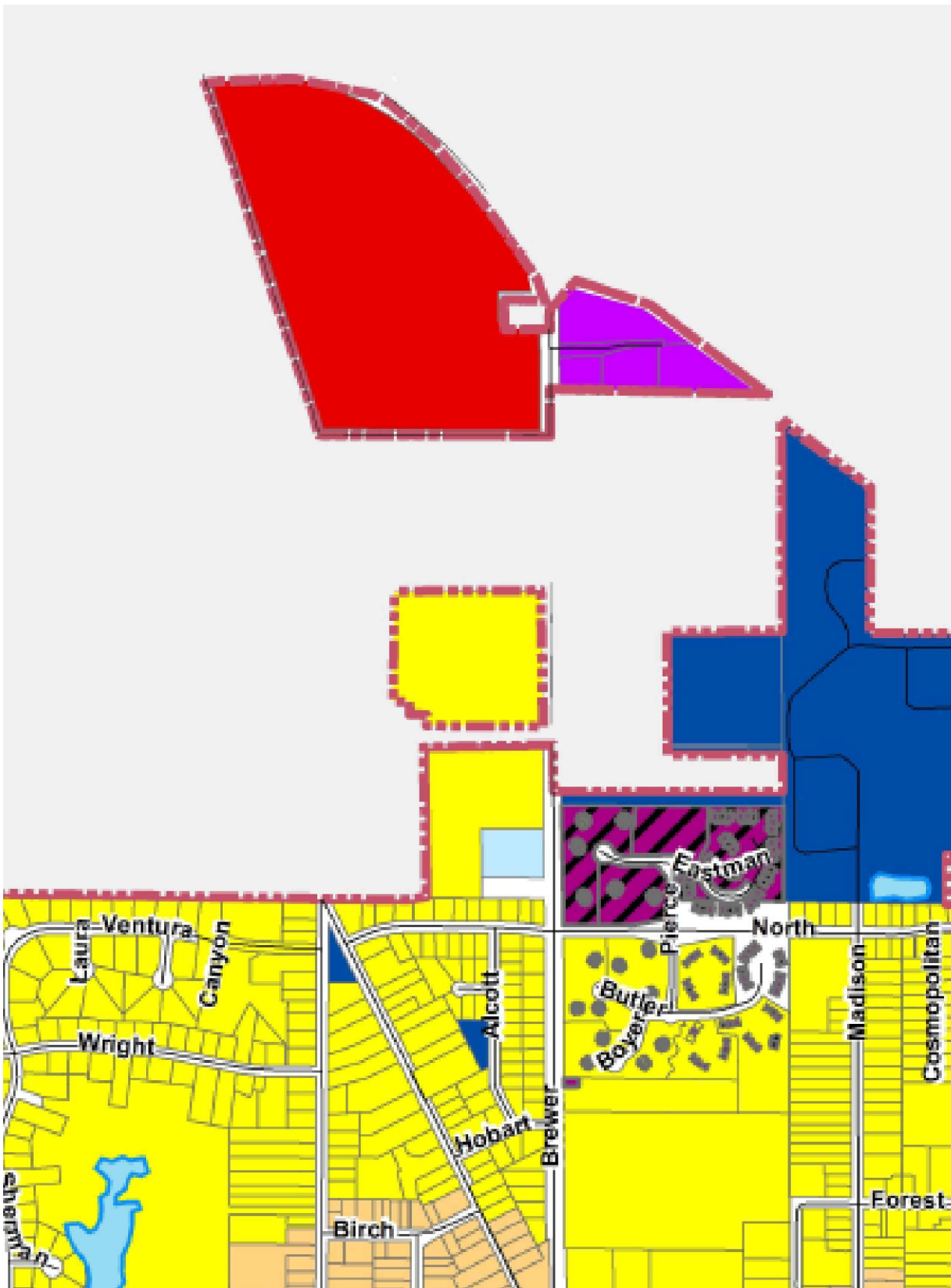
# ABBREVIATIONS

## LIST OF ABBREVIATIONS

	Definitions
A.C.	Alternating Current
A.F.C.	Adult Foster Care
ASPH.	Asphalt Paving
ASTM	American Society of Testing Materials
AWS	American Welding Society
AWWA	American Waterworks Association
BLDG.	Building
CIP	Compacted in place
CL	Class
CONC.	Concrete
C.Y.d. or CYD	Cubic Yard
DR	Dimension Ratio
°	Degrees
EA	Each
EJ	East Jordan Iron Works
ELEV.	Elevation
EX	Existing
F.F.	Finish Floor
G.P.M.	Gallons Per Minute
I.Q.	Inside Diameter
Inv.	Invert
Lbs.	Pounds
LFT	Lineal Feet
L.S.	Lump Sum
Max.	Maximum
MDOT	Michigan Department of Transportation
M.H.	Manhole
Mil.	Millimeter
Min.	Minimum
MUW	Maximum Unit Weight at optimum moisture content
No.	Number
NSF	National Sanitation Foundation
OSHA	Occupational Safety Health Administration
PSIGP	Pounds per square inch gauge
PVC	Polyvinyl Chloride
R.O.W. or R/W	Right-of-Way
RAD.	Radius
SDR	Standard Dimension Ratio
SYD	Square Yard
T.D.H.	Total Dynamic Head
V.L.F.	Vertical Lineal Feet
'	Minutes of angles or Feet
"	Seconds of angles or Inches
%	Percent
#	Pounds

# ZONING MAP

R-1 Residential Estate	B-3 Neighborhood Commercial	Hospital Campus Overlay District
R-2 Suburban Residential	B-4 Regional Commercial	River District Overlay
R-3 Traditional Residential	FS Freeway Services	DDA
MFRD Multiple Family Residential	I-1 Research and Manufacturing	Municipal Boundary
MHPD Manufactured Housing Park	I-2 General Industrial	
POSD Professional Office Services	PSP Public/ Semi-Public Services	
HCHSD Health Care and Human Services	PUD Planned Unit Development	
B-2 Local Business		



## General Notes

## Family Bible Church Expansion

For  
FED Corporation

## LAPHAM ASSOCIATES

ENGINEERING  
PLANNING  
ENVIRONMENTAL  
SURVEYING

116 South 3rd Street  
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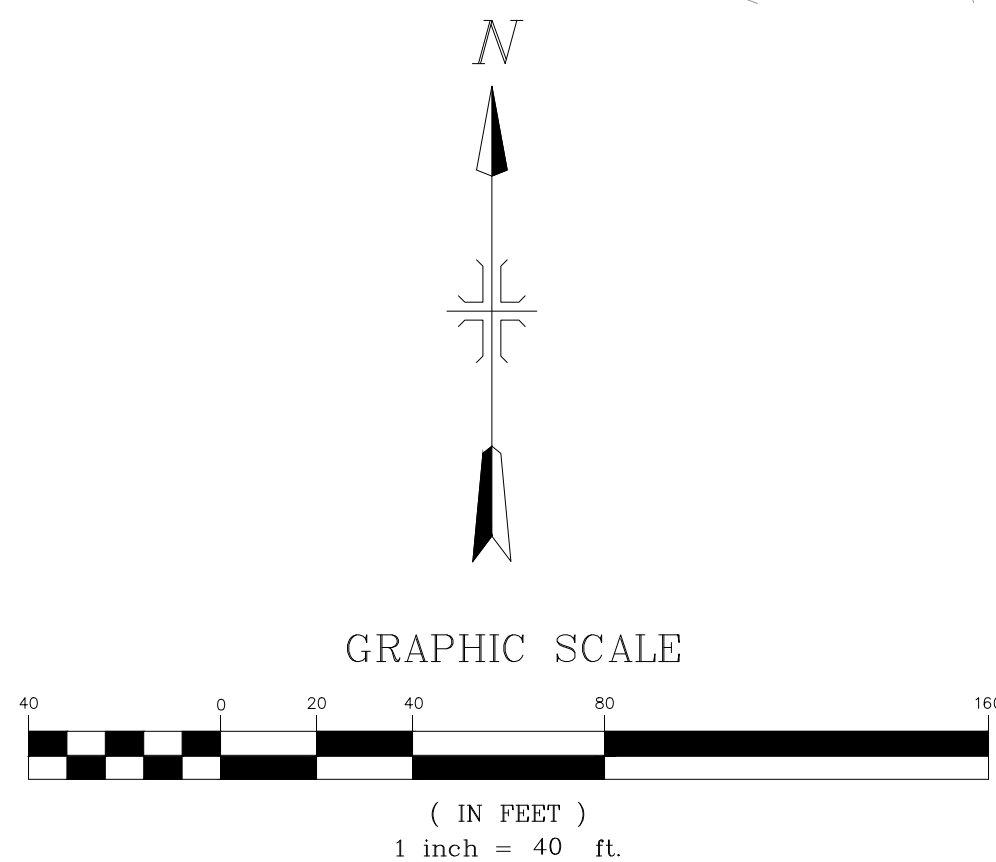
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○ FINAL RECORD

C-2





Marshall Township Zoned "RA" Low Density Residential

S00°33'25"E, 535.00'

25' Rear Setback

Zoned 425 Agreement

F Drive North

N89°42'00"W, 460.00'

Zoned 425 Agreement

N89°42'00"E, 660.00'

25' Rear Setback

Zoned 425 Agreement

Old US-27 aka Brewer Street

N00°33'25"W, 535.00'

Sanitary Manhole #23  
Rim Elev. 943.7  
North 12" PVC Inv. 928.99  
South 12" PVC Inv. 928.84

Northeast Cor., Sec. 23,  
T.2S., R.6W., Marshall Twp.,  
Calhoun Co., Michigan  
Found Re-mon Monument  
Mon Box

Sanitary Manhole #22A  
Rim Elev. 939.5  
West 12" PVC Inv. 925.95

Sanitary Manhole #22  
Rim Elev. 937.2  
North 12" PVC Inv. 925.58  
East 12" PVC Inv. 925.73  
South 12" PVC Inv. 925.48

Sanitary Manhole #16  
Rim Elev. 936.0  
North 12" PVC Inv. 921.06  
South 12" PVC Inv. 921.16  
West 12" PVC Inv. 920.76



Know what's below.  
Call before you dig.

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**Existing Topographic Survey**  
**Family Bible Church Expansion**  
For  
**FED Corporation**

APPROVED USE FOR:  
○ PRELIMINARY  
● PERMIT/BID  
○ CONSTRUCTION  
○ FINAL RECORD

**C-3**

PROJECT NUMBER: P-190052

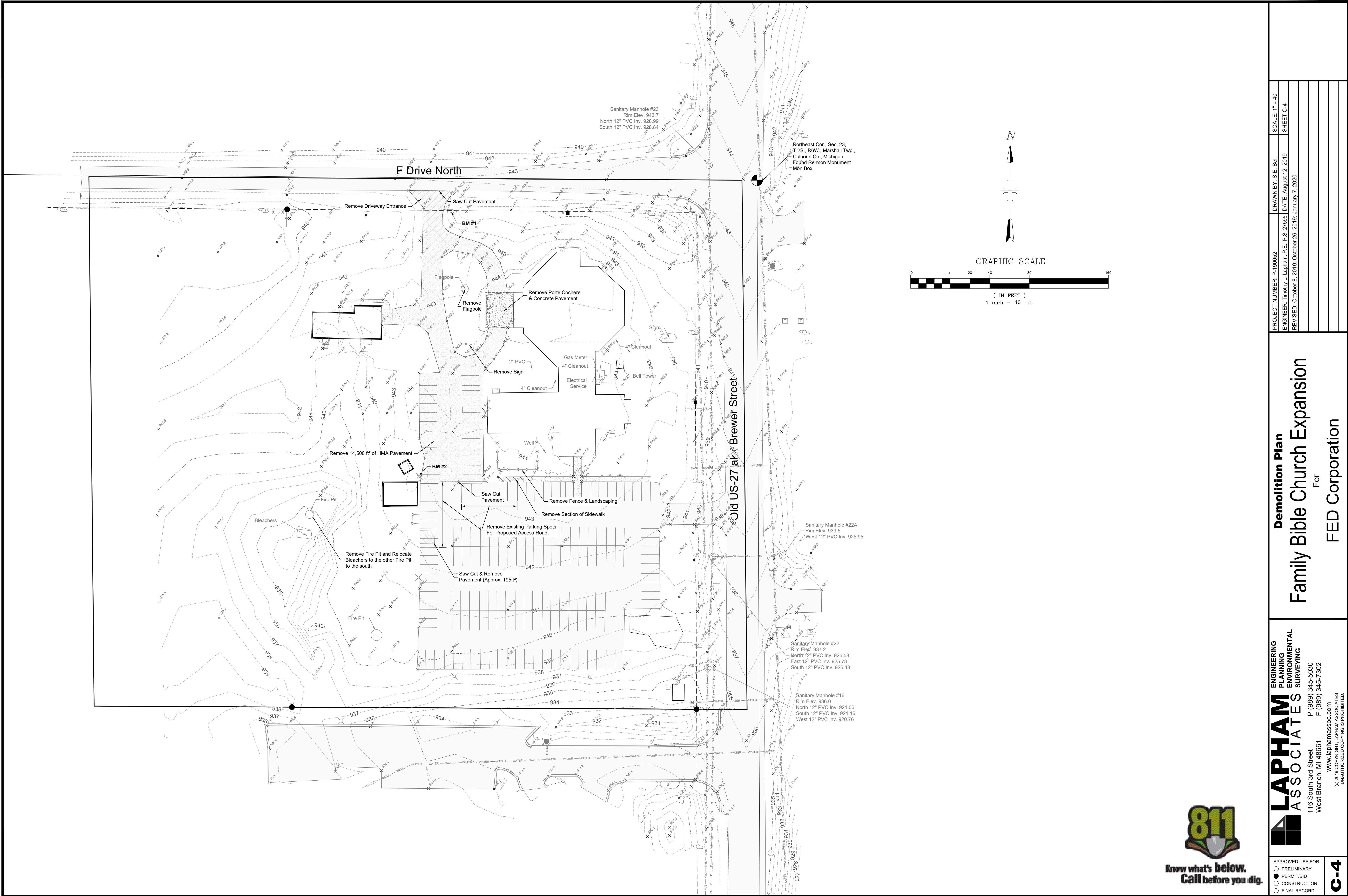
ENGINEER: Timothy L. Lapham, P.E., P.S. 77595

REVISION: October 8, 2019; October 26, 2019; January 7, 2020

SCALE: 1" = 40'

SHEET C-3

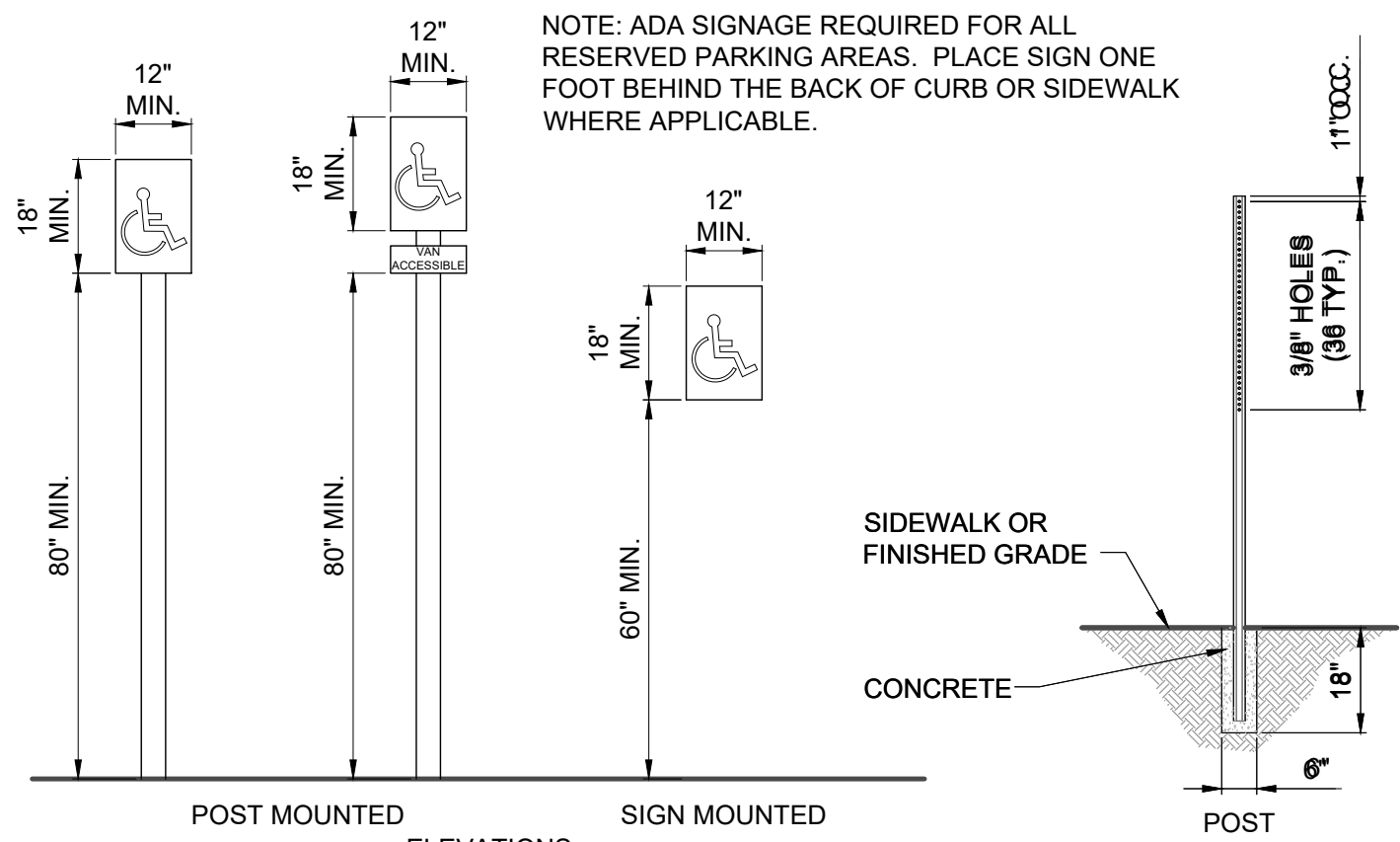




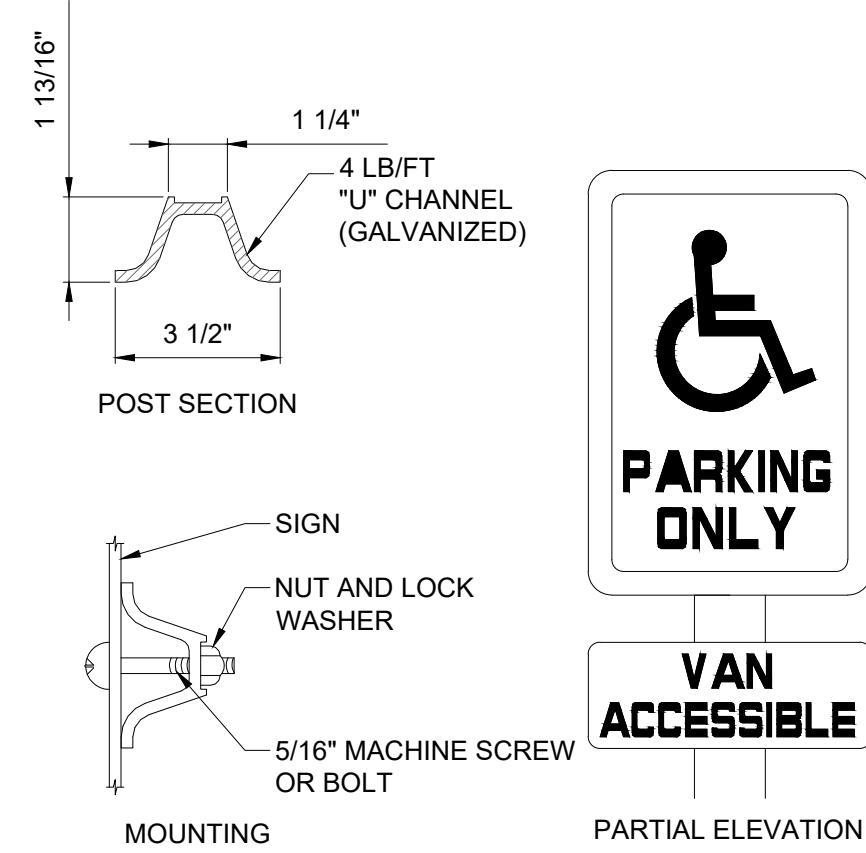
<b>LAPHAM ASSOCIATES</b> ENGINEERING PLANNING ENVIRONMENTAL SURVEYING 116 South 3rd Street West Branch, MI 48661 P (989) 345-5030 F (989) 345-7302 www.laphamassoc.com © 2019 COPYRIGHT, LAPHAM ASSOCIATES UNAUTHORIZED COPYING IS PROHIBITED.	<b>Demolition Plan</b> <b>Family Bible Church Expansion</b> For <b>FED Corporation</b>		PROJECT NUMBER: P-190052	DRAWN BY: S.E. Bell	SCALE: 1" = 40'	
			ENGINEER: Timothy L. Lapham, P.E., P.S. 27595	DATE: August 12, 2019	SHEET C-4	
			REVISED: October 8, 2019; October 26, 2019; January 7, 2020			
APPROVED USE FOR: ○ PRELIMINARY ● PERMIT/BID ○ CONSTRUCTION ○ FINAL RECORD		<b>C-4</b>				



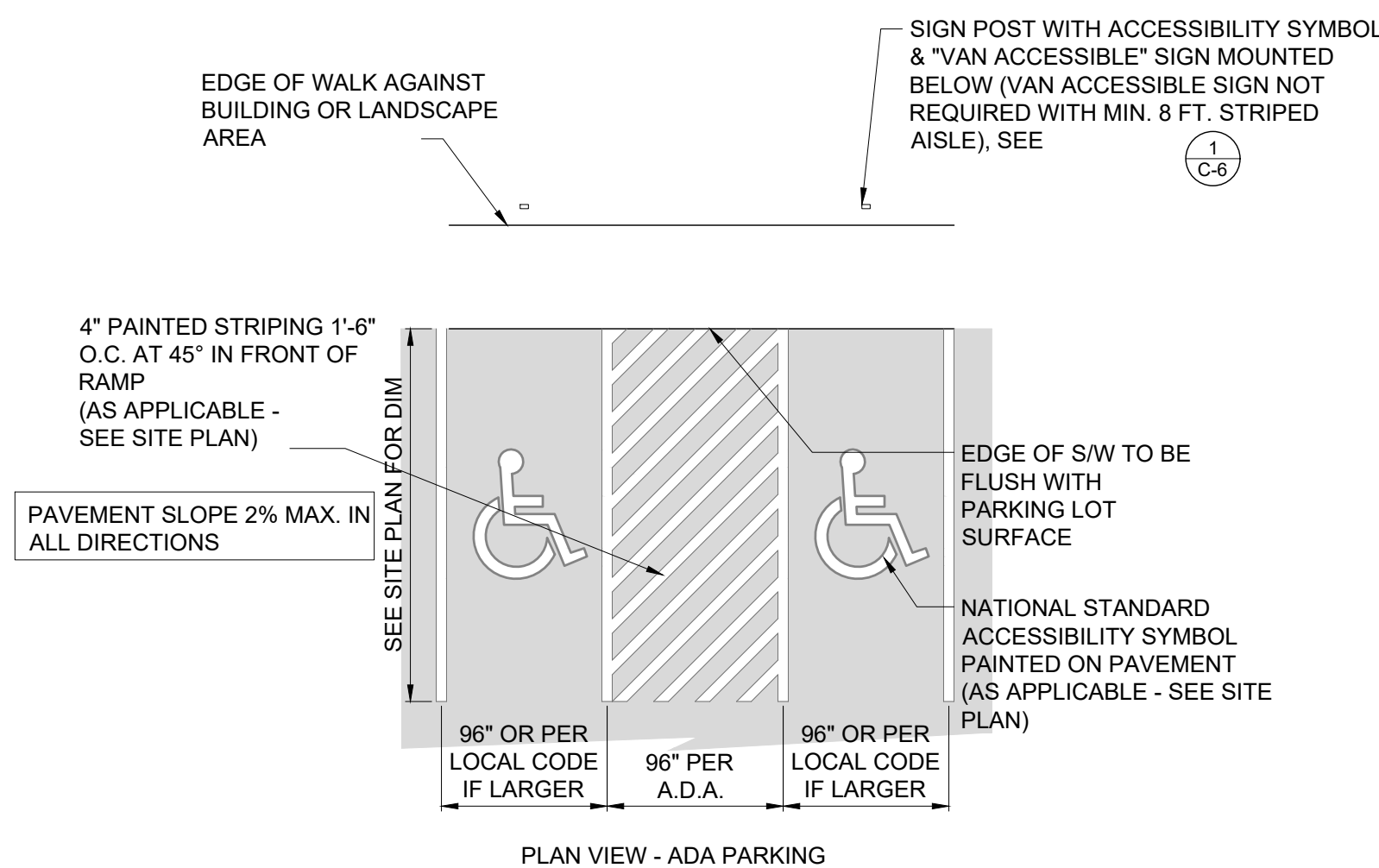
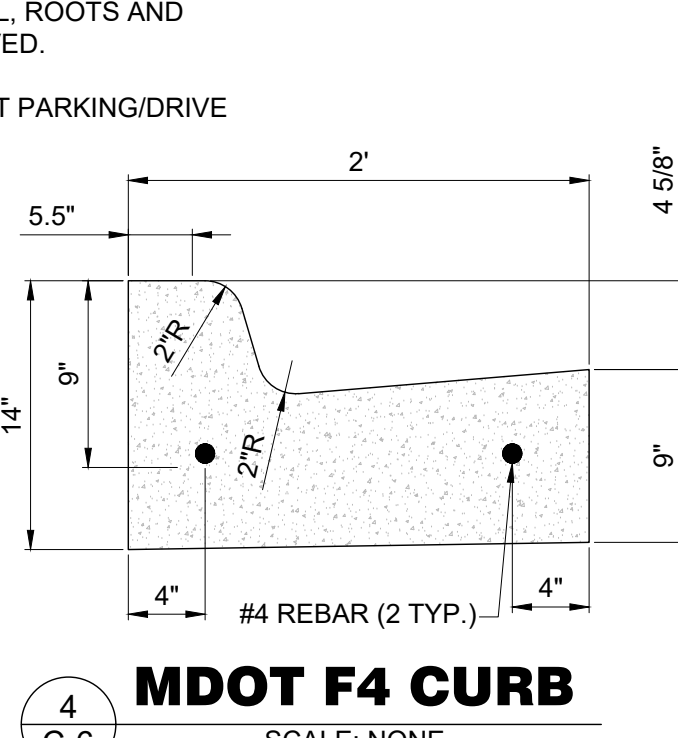
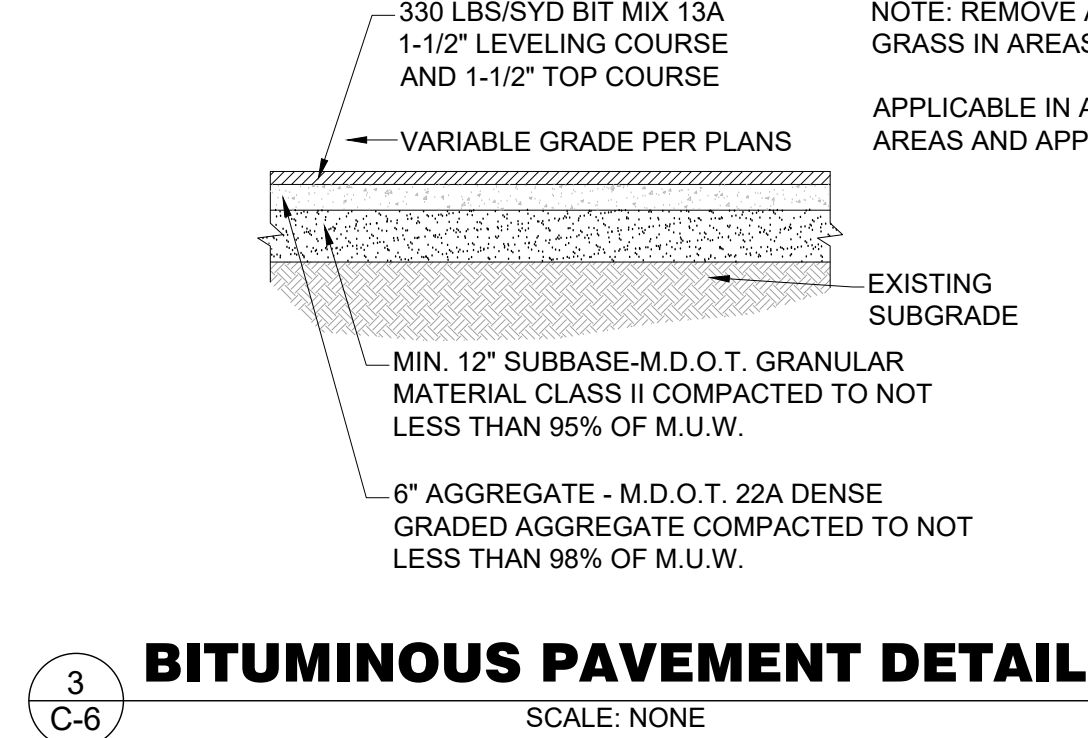




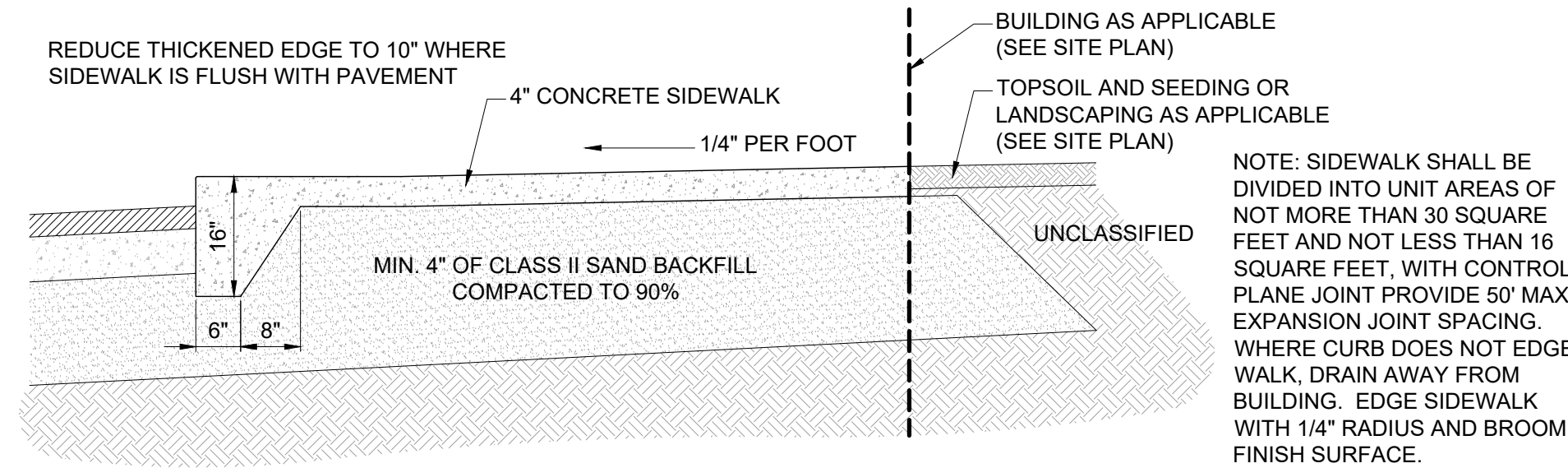
1  
C-6  
**ADA SIGNAGE DETAIL**  
SCALE: NONE



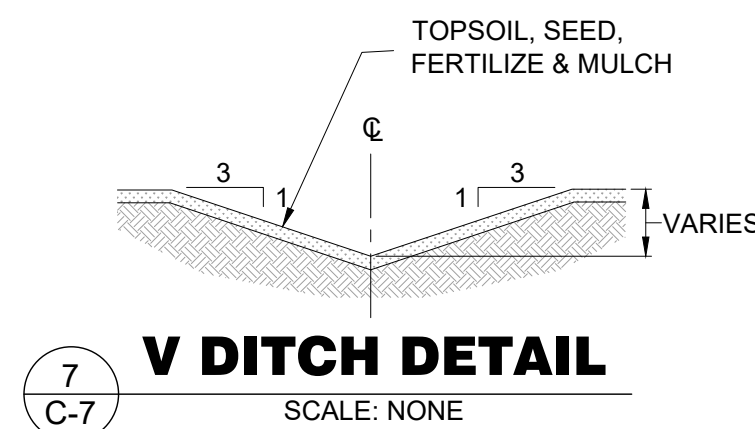
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C-6  
**TYPICAL CONCRETE SIDEWALK LAYOUT**  
SCALE: NONE



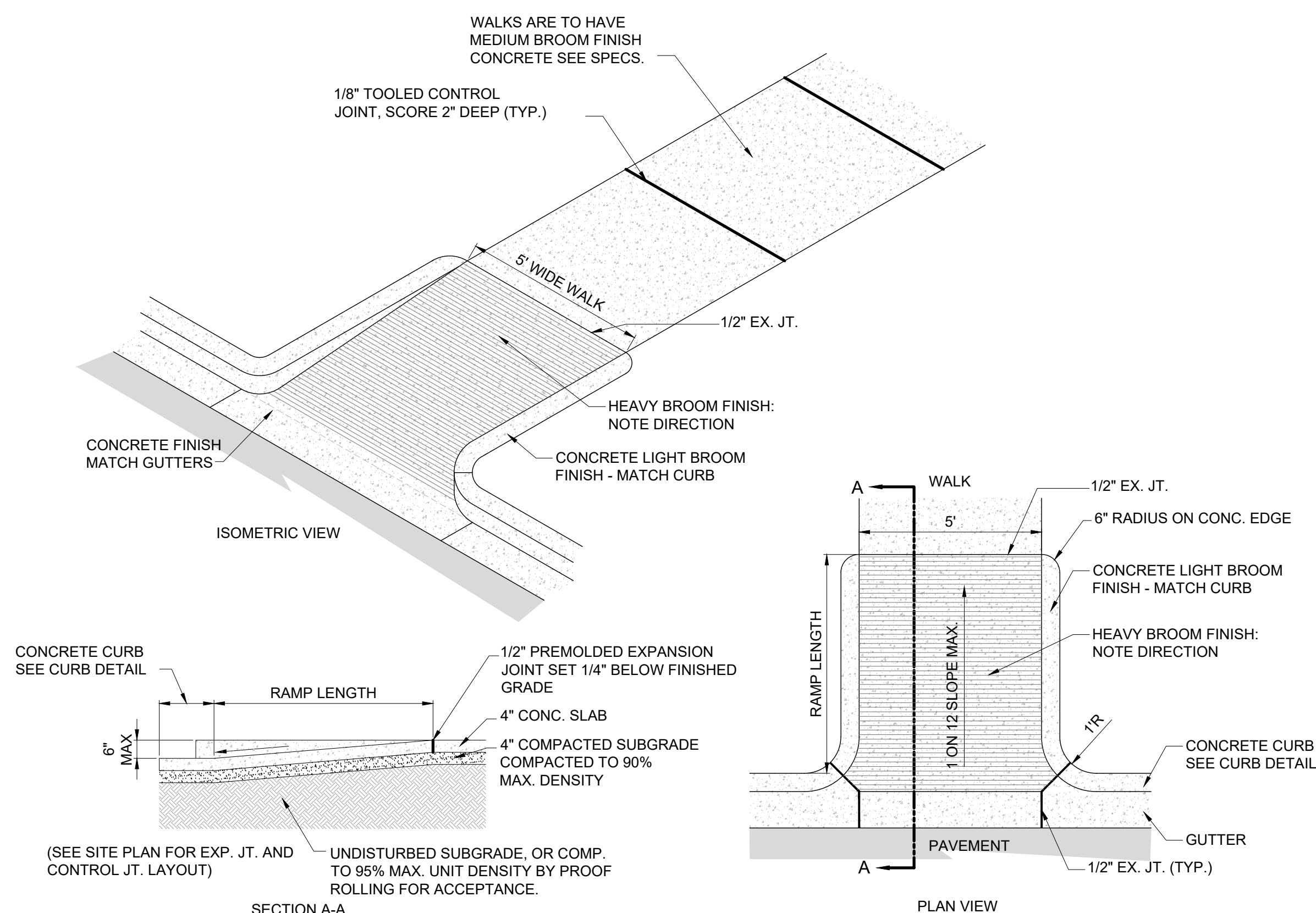
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C-6  
**ACCESSIBLE PARKING STALLS**  
SCALE: NONE



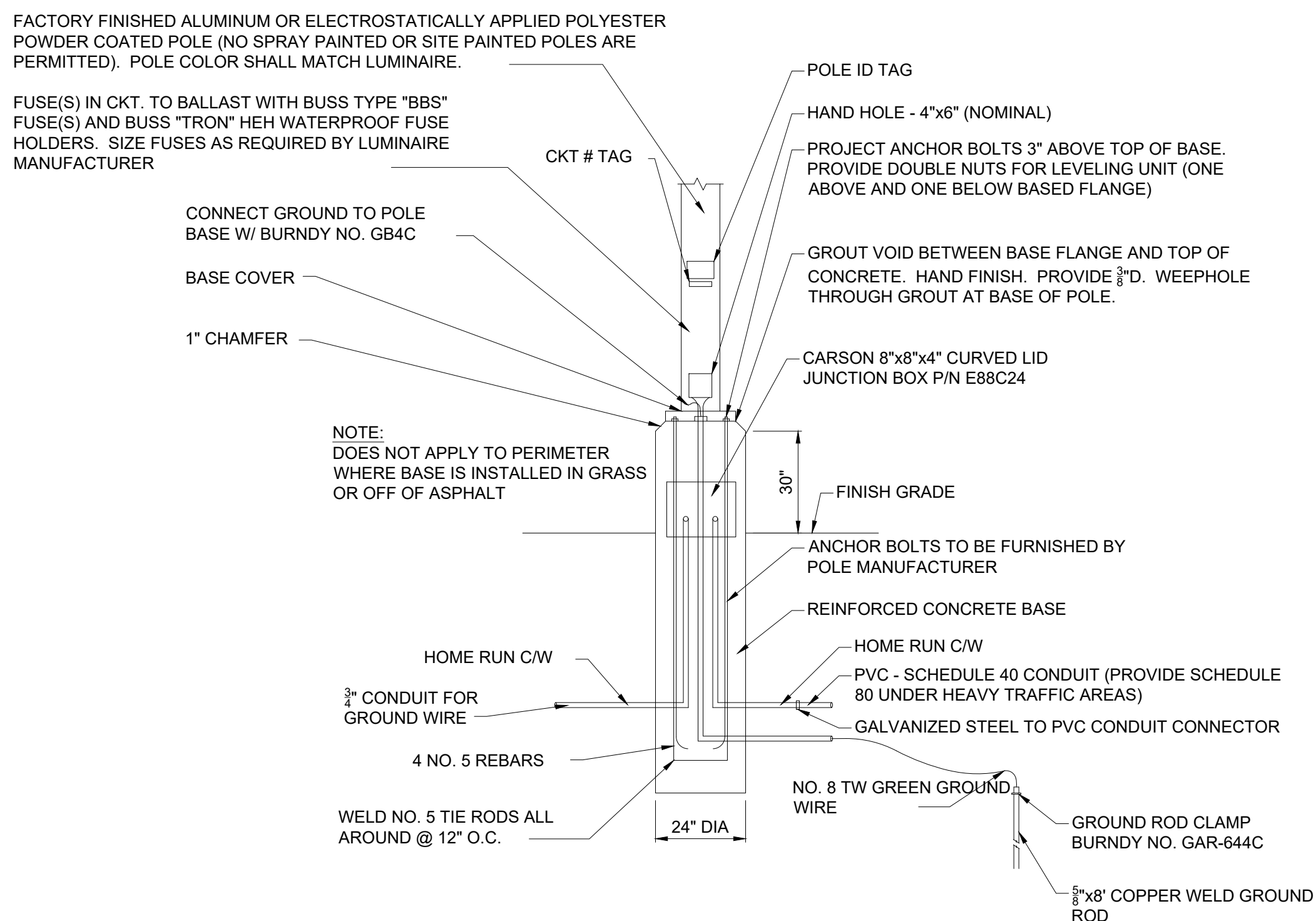
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C-6  
**TYPICAL SIDEWALK DETAIL**  
SCALE: NONE



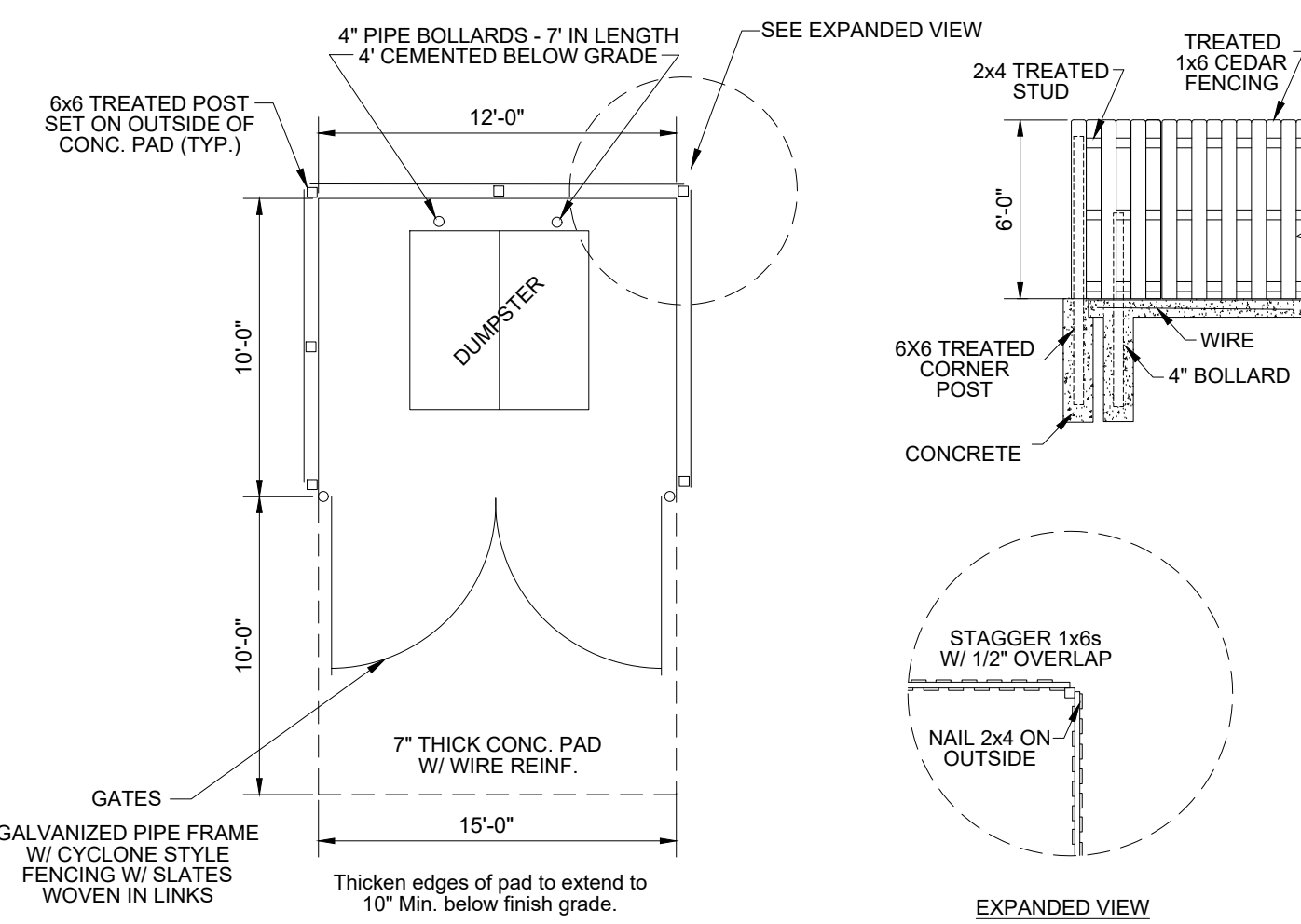
7  
C-7  
**V DITCH DETAIL**  
SCALE: NONE



8  
C-6  
**BARRIER FREE RAMP - TYPE I**  
SCALE: NONE



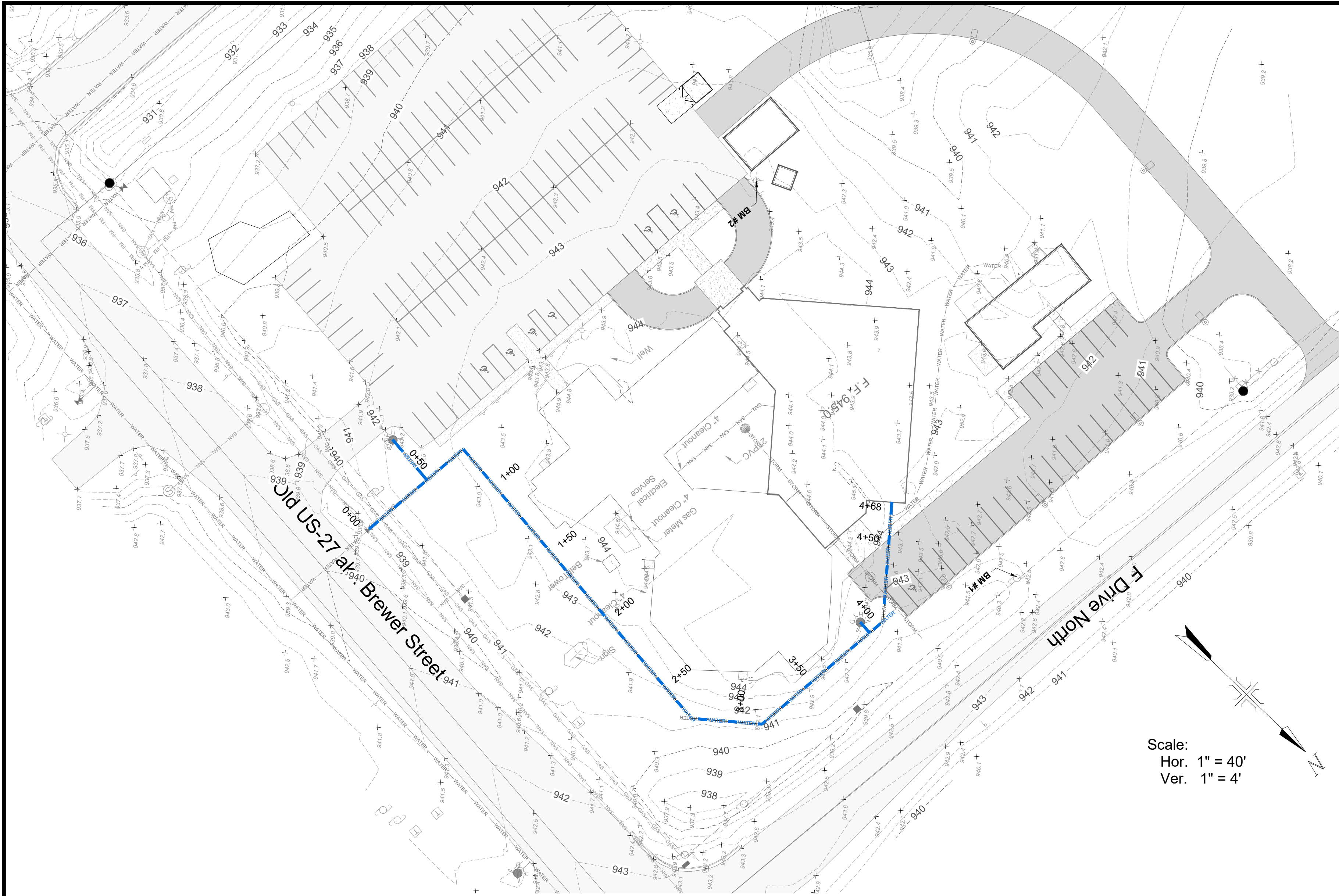
9  
C-6  
**LIGHT POLE BASE**  
SCALE: NONE



10  
C-6  
**DUMPSTER ENCLOSURE**  
SCALE: NONE

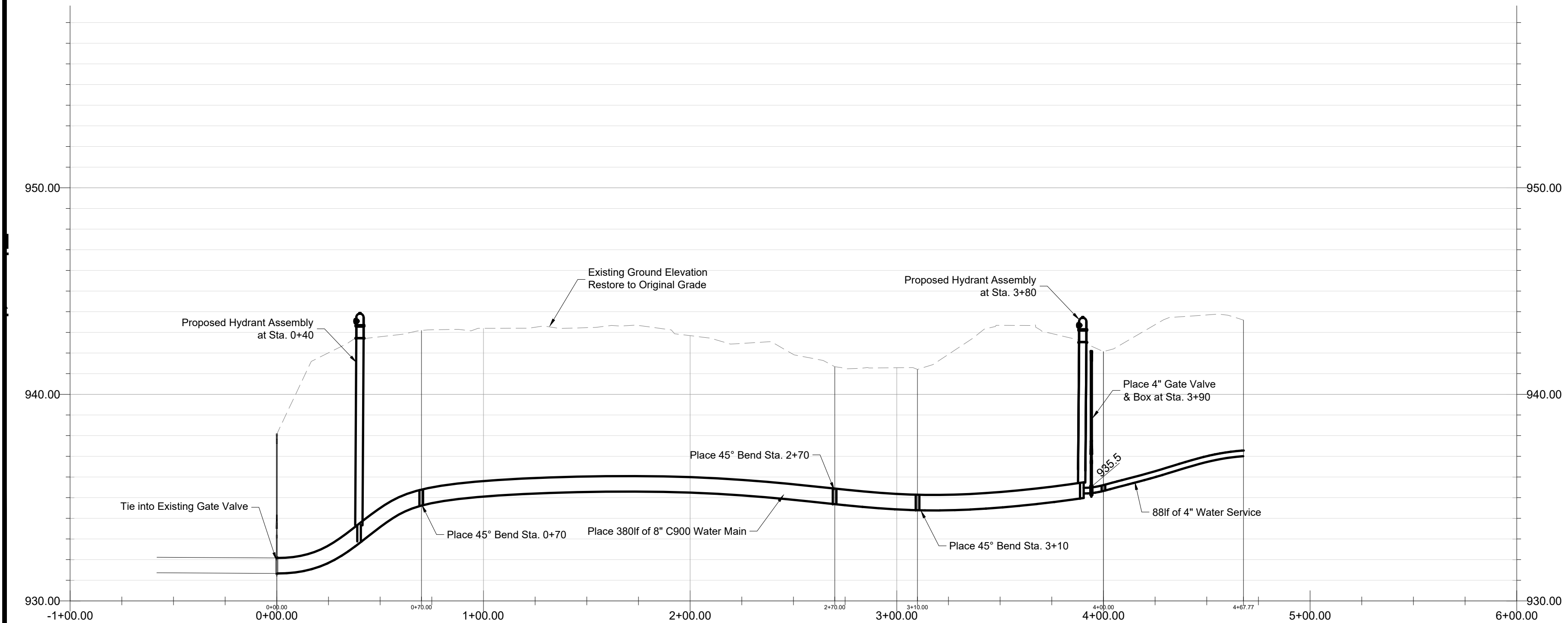
DRAWN BY: S.E. Bell		SCALE: N/A
ENGINEER: Timothy L. Lapham, P.E., P.S. 27585		SHEET C-6
REVISOR: October 8, 2019; October 26, 2019; January 7, 2020		
<b>Site Details</b>		
<b>Family Bible Church Expansion</b>		
For		
<b>FED Corporation</b>		
<b>ENGINEERING PLANNING ENVIRONMENTAL ASSOCIATES SURVEYING</b>		
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<b>C-6</b>		





WATER MAIN NOTES:

- Watermain shall be placed at a minimum depth of 5.5' and a maximum depth of 7.5' from finish grade.
- Watermain shall be in a 20' wide public easement centered on the main dedicated to The City of Marshall.

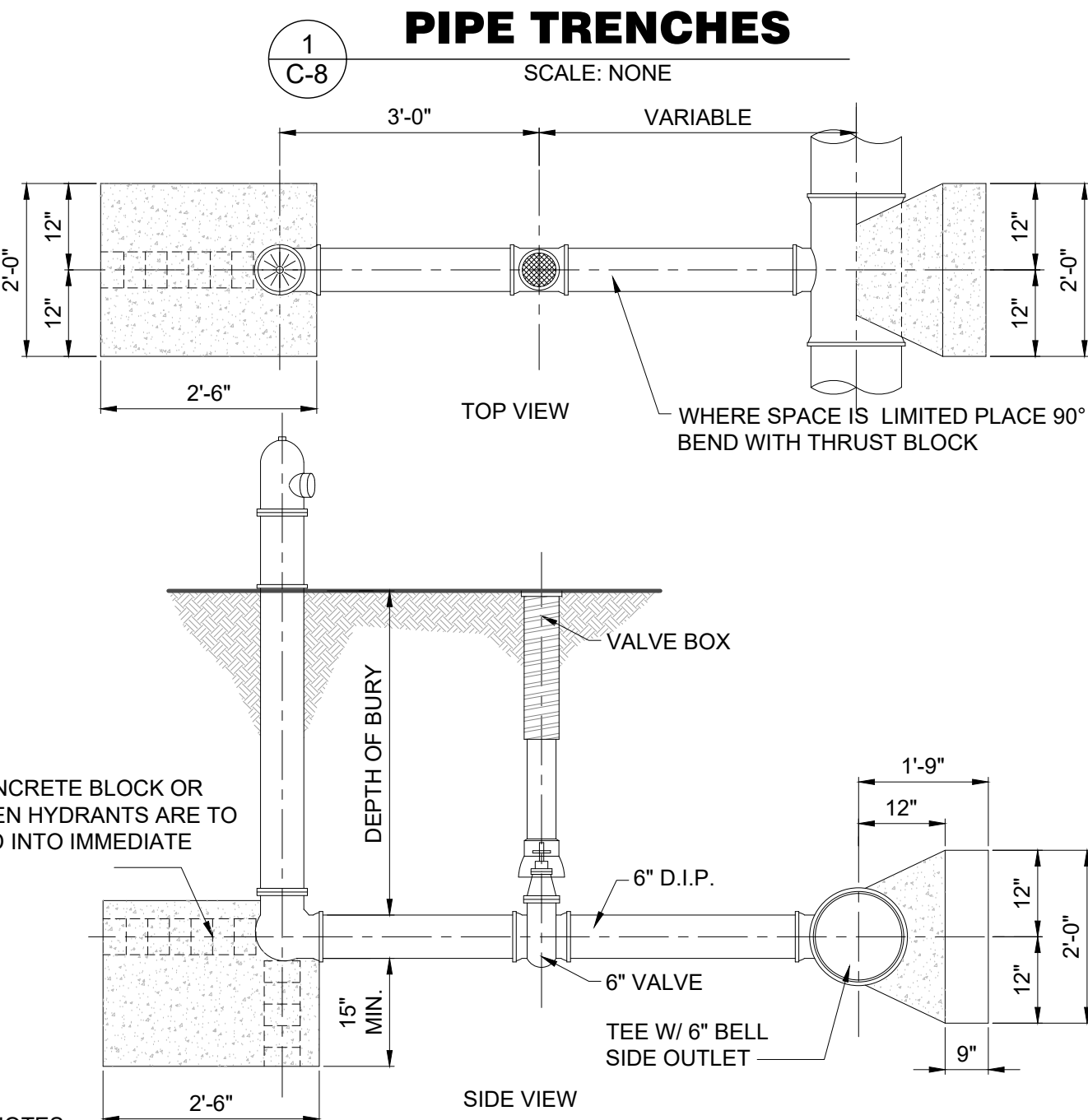
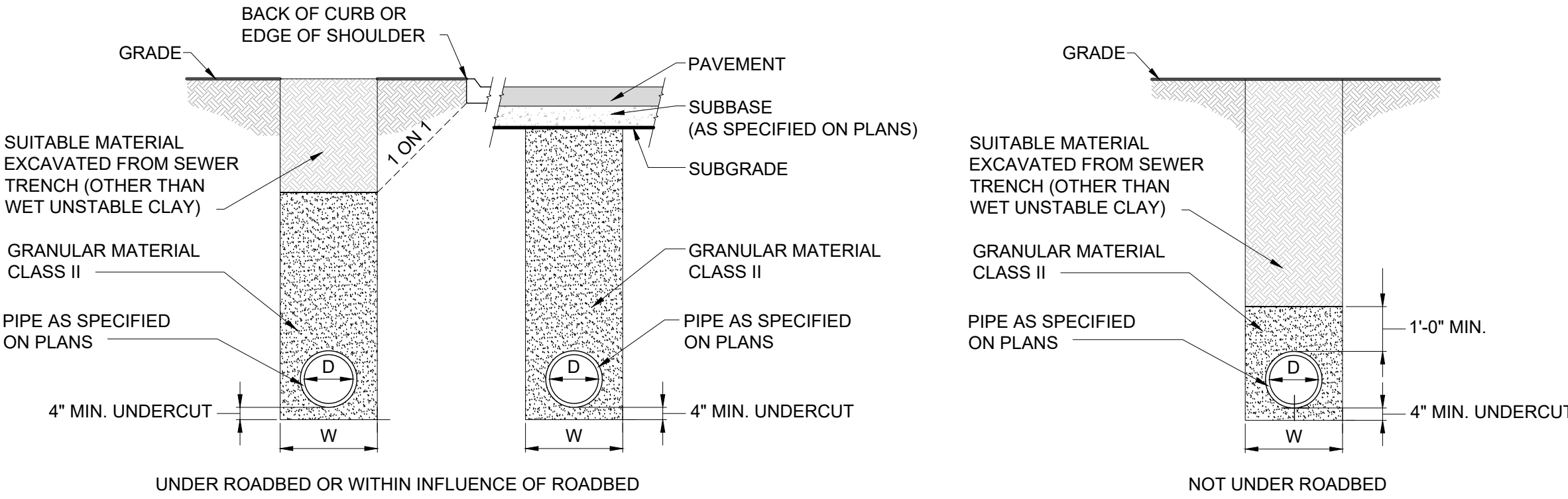


MINIMUM TRENCH WIDTHS					
I.D. PIPE SIZE (INCHES)	LESS THAN 18	21	24	30	36
"W" TRENCH WIDTH (FEET)	3.0	3.5	4.0	5.0	6.0

I.D. PIPE SIZE (INCHES)	42	48	54	60	66	72
"W" TRENCH WIDTH (FEET)	7.0	8.0	9.5	10.0	10.5	11.0

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

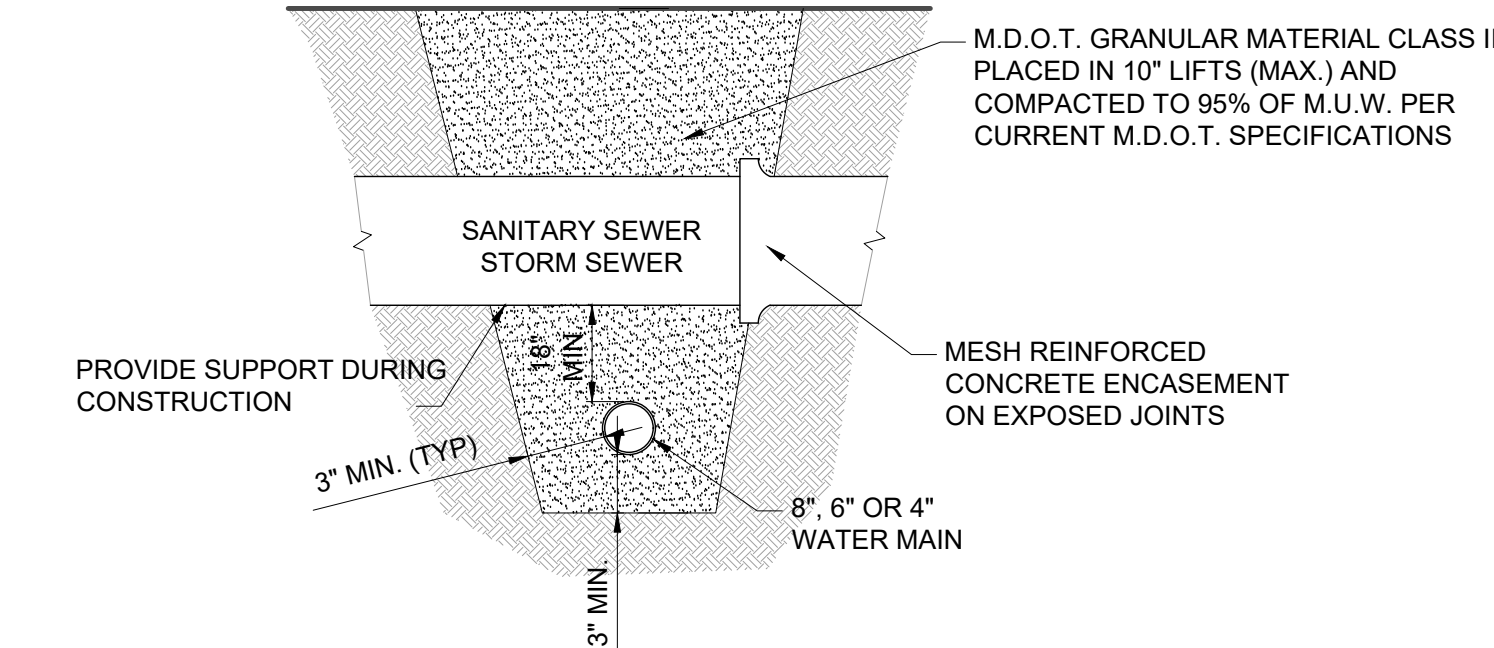
ESTIMATED PAVEMENT REMOVAL WIDTH IS TO BE TRENCH WIDTH "W" PLUS 1'-0" EACH SIDE OF THE TRENCH (6'-0" MINIMUM)



GENERAL HYDRANT NOTES:

- INSTALL ADDITIONAL FITTINGS & SPIGOT PIPE AS NECESSARY BETWEEN WATER MAIN AND VALVE BOX TO ADJUST FOR PROPER LOCATION AND GRADE OF HYDRANT.
- VERTICAL ANCHORS WILL BE REQUIRED ON ALL VERTICAL HYDRANT BENDS IN EXCESS OF 11-1/4".
- WHERE HYDRANTS ARE INSTALLED ON EXISTING MAINS THAT ARE TO BE PLACED BACK INTO SERVICE IMMEDIATELY, PLACE CONCRETE BLOCK OR BRICK TO UNDISTURBED SOIL AND ENCASE WITH CONCRETE.
- ALL CONCRETE TO BE 3500 P.S.I. CONCRETE POURED AGAINST UNDISTURBED SOIL.

STANDARD HYDRANT SETTING



LIMITED ISOLATION POTABLE WATER CROSSINGS

Water Main Plan & Profile  
Family Bible Church Expansion  
For  
FED Corporation

**LAPHAM ASSOCIATES**  
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C-7

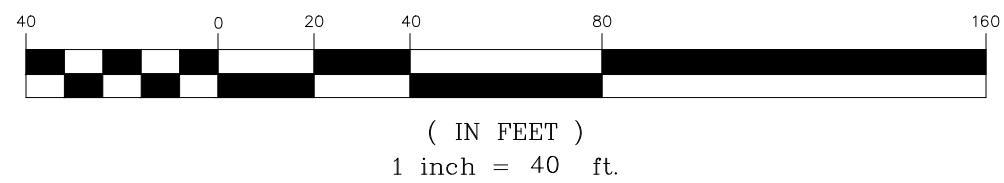
PROJECT NUMBER: P-190052  
ENGINEER: Timothy L. Lapham, P.E., P.S. 27595  
REVISED: October 8, 2019; October 26, 2019; January 7, 2020

DRAWN BY: S.E. Bell  
SCALE: As Shown  
SHEET C-7

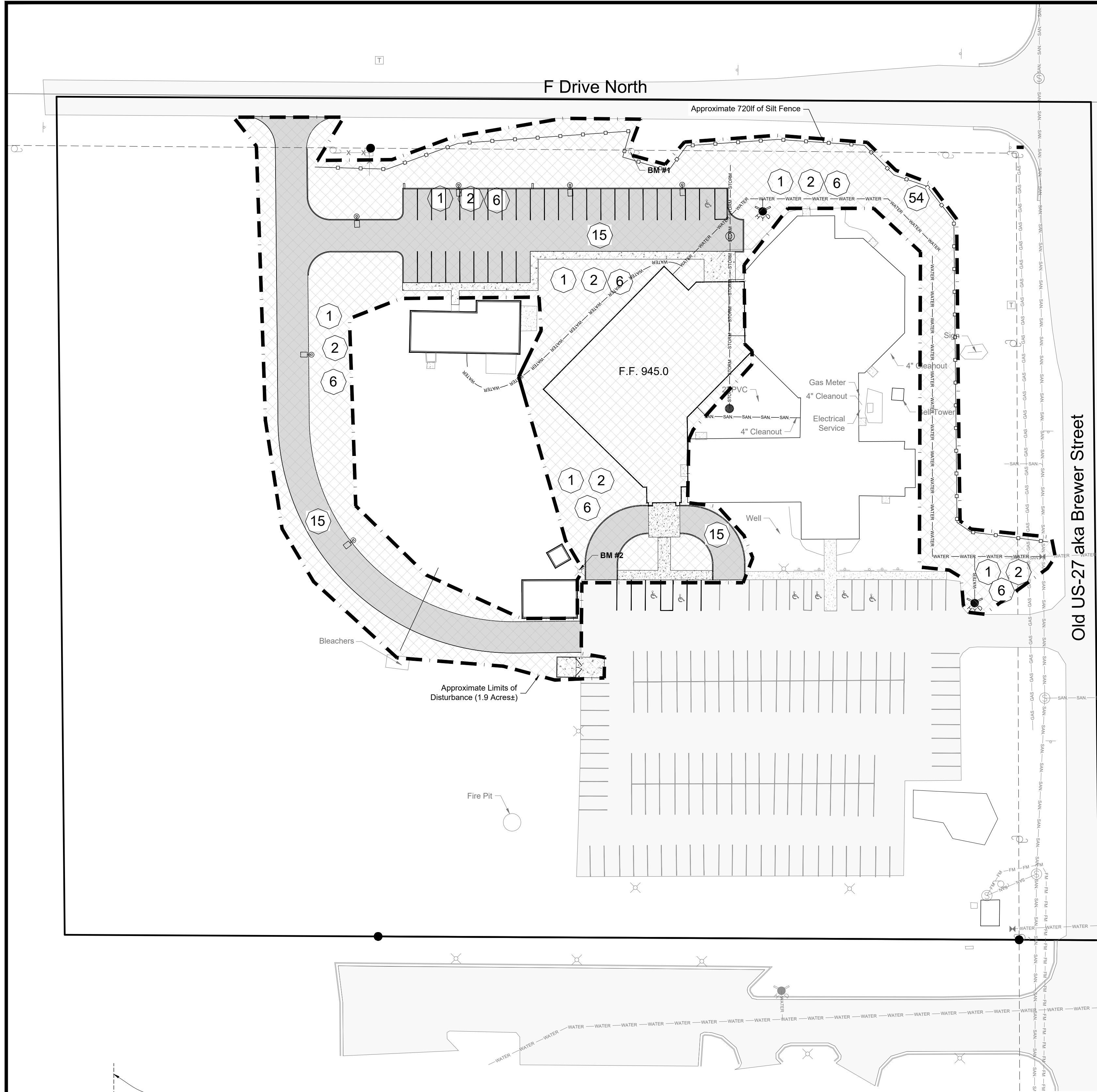




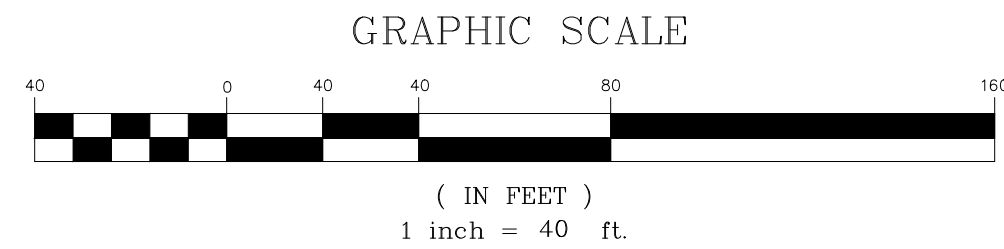
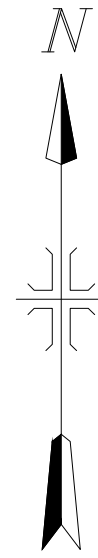








Northeast Cor., Sec. 23,  
T.2S., R.6W., Marshall Twp.,  
Calhoun Co., Michigan  
Found Re-mon Monument  
Mon Box



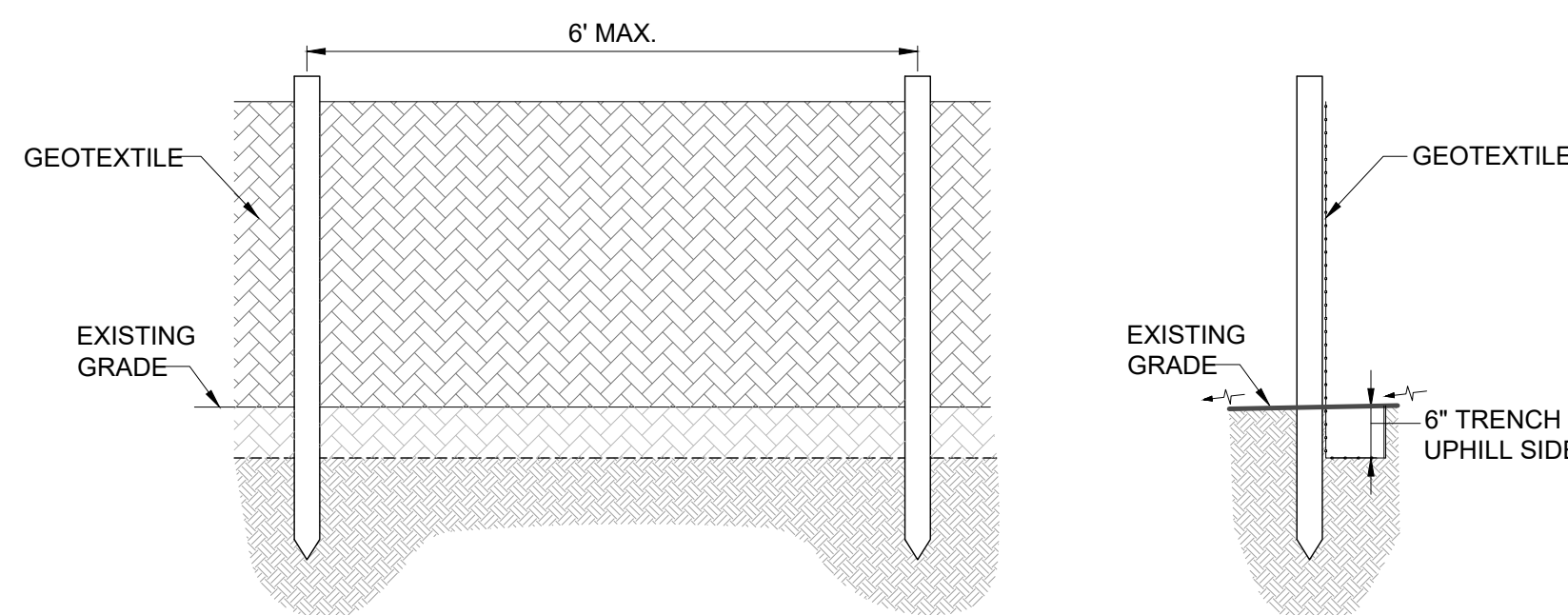
## SESC Plan Notes:

1. This project shall be constructed in compliance with the Calhoun County Soil Erosion and Sedimental Control ordinance, authorized under Part 91 of Act 451 of 1994, as amended, the Soil Erosion and Sedimentation Control Act.
2. All erosion and sedimentation control work shall conform to the standards and specifications of the local controlling jurisdiction.
3. Erosion and any sedimentation from work on this site shall be contained on the site and not allowed to collect on any off site areas or in waterways. Waterways include both natural and man made open ditches, streams, storm drains, lakes and ponds.
4. Staging the work will be done by the landowner or landowner's representative as directed in these plans and as required to ensure progressive stabilization of disturbed earth change.
5. The landowner or landowner's representative shall be responsible for installation and maintenance of soil erosion and sedimentation control devices.
6. The landowner or landowner's representative shall implement and maintain the soil erosion control measures as shown on the plans before and at all times during construction on this project. Any modifications or additions to soil erosion control measures due to construction or changed conditions shall be complied with as required or directed by the local jurisdiction.
7. If any of the SESC measures on the site are deemed inadequate or ineffective, the Calhoun County Road Department's office has the right to require additional SESC measures at the expense of the landowner.
8. Contractor is clean the portions of roads adjacent to the project if dirt, debris or other material is being deposited on the roadway as needed. Adjacent roadway should be inspected at minimum once a day to determine if street sweeping is needed, and may be required multiple times a day, depending on vehicular traffic and debris.
9. During dry periods, all disturbed areas shall be watered for dust control.
10. Permanent soil erosion control measures for all slopes, channels, ditches, or any disturbed land area shall be completed within 5 calendar days after final grading or the final earth change has been completed. When it is not possible to permanently stabilize a disturbed area after earth change activity ceases, temporary soil erosion control measures shall be implemented immediately. All temporary soil erosion control shall be maintained until permanent soil erosion control measures are implemented. All permanent soil erosion control measures will be implemented and established before a certificate of compliance is issued.
11. Final grade, establish vegetation and or landscape all disturbed areas not built or paved upon.
12. Dewatering is not anticipated during the life of this project. If dewatering should become necessary, the site will be dewatered into a well established vegetative buffer and in accordance with all other rules and regulations of the local jurisdiction. The contractor shall be responsible for obtaining any necessary permits for dewatering prior to discharge.
13. Remove all temporary soil erosion devices after permanent stabilization is established.
14. Area of disturbance approximately 6.5 acres.

### LEGEND:

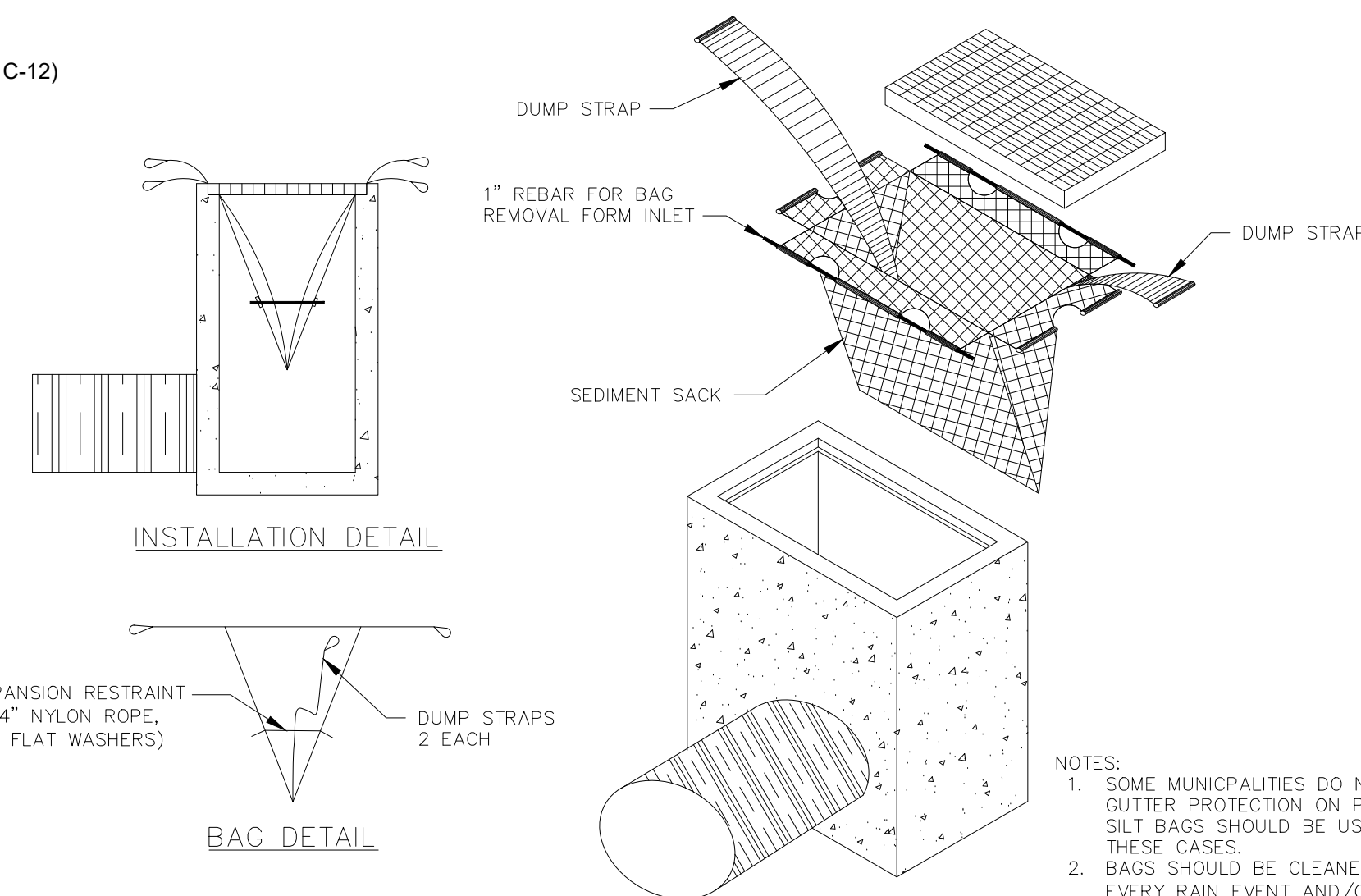
54 SESC Key Number (See Sheet C-12)

NOTE: SILT FENCE SHALL CONSIST OF FURNISHING, ERECTING, MAINTAINING, REMOVING, AND DISPOSING OF A SILT FENCE, CONSISTING OF A POST SUPPORTED GEOTEXTILE. INSTALLATION, INCLUDING PROPER ENTRENCHING, SHALL BE ACCOMPLISHED AS SPECIFIED OR APPROVED ACCORDING TO THE MANUFACTURER'S PUBLISHED RECOMMENDED PRACTICE. (CURRENT M.D.O.T. SPECIFICATIONS)



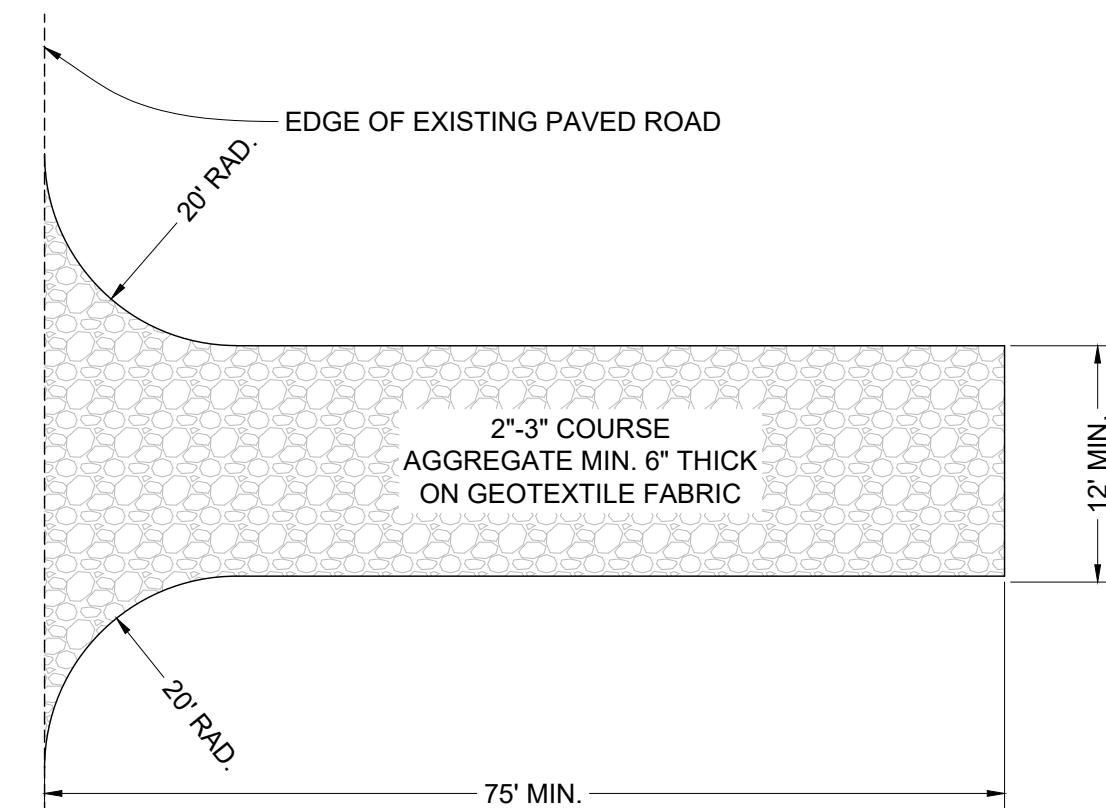
### GEOTEXTILE SILT FENCE

SCALE: NONE



### SILT SACK DETAIL

SCALE: NONE



### GRAVEL CONSTRUCTION ENTRANCE

SCALE: NONE

PROJECT NUMBER: P-190052		DRAWN BY: S.E. Bell		SCALE: As Shown
ENGINEER: Timothy L. Lapham, P.E., P.S. 27595		DATE: August 12, 2019		SHEET C-10
REVISED: October 8, 2019; October 26, 2019; January 7, 2020				
SESC Plan				
Family Bible Church Expansion				
For				
FED Corporation				
ENGINEERING PLANNING ENVIRONMENTAL SURVEYING				
LAPHAM ASSOCIATES				
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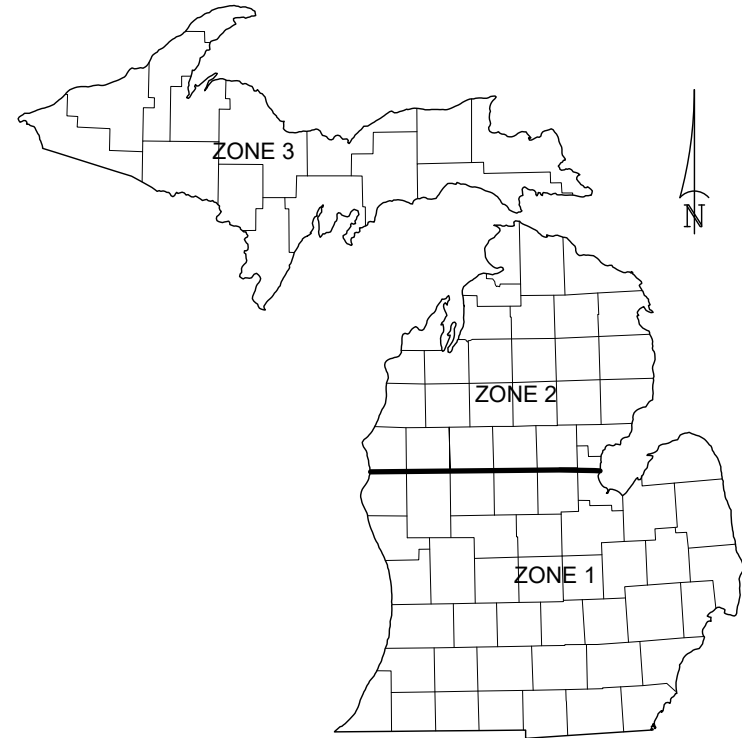
# MICHIGAN

SOIL EROSION & SEDIMENTATION CONTROL

## GUIDEBOOK

FEBRUARY 1975

FIGURE 2



SEEDING ZONES

RATE OF APPLICATION (ALL ZONES)

TYPE OF SEED	PER/1000 SF	PER ACRE
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS	2 LBS 1/2 LB	3 BU 20-25 LBS
SUDANGRASS	1 LB	30-40 LBS
RYE OR PERENNIAL RYE	3 LBS 1/2 LB	2-3 BU 20-25 LBS
WHEAT	3 LBS	2-3 BU

PERMANENT SEEDING GUIDE

	APR	MAY	JUN	JUL	AUG	SEP	OCT	
IRRIGATED AND/OR MULCH								ZONE 1
WITHOUT IRRIGATION OR MULCH								
IRRIGATED AND/OR MULCHED								ZONE 2
WITHOUT IRRIGATION OR MULCH								
IRRIGATED AND/OR MULCHED								ZONE 3
WITHOUT IRRIGATION OR MULCH								

TEMPORARY SEEDING GUIDE

ZONE 1							
TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	OCT
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS							
SUDANGRASS							
RYE OR PERENNIAL RYE							
WHEAT							
ZONE 2							
TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	OCT
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS							
SUDANGRASS							
RYE OR PERENNIAL RYE							
WHEAT							
ZONE 3							
TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	OCT
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS							
SUDANGRASS							
RYE OR PERENNIAL RYE							
WHEAT							

# SOIL EROSION & SEDIMENTATION CONTROL PLAN

## MICHIGAN UNIFIED KEYING SYSTEM

### SESC GENERAL NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TEMPORARY AND PERMANENT CONTROL MEASURES UNTIL VEGETATION HAS BEEN ESTABLISHED ON ALL DISTURBED AREAS. MAINTENANCE SHALL INCLUDE: PERIODIC INSPECTIONS, REMOVING ACCUMULATED SEDIMENT AND REPAIRING OR REPLACING DAMAGED CONTROL MEASURES. INSPECTIONS SHALL BE PERFORMED DAILY DURING THE CONSTRUCTION PROCESS. FOLLOWING CONSTRUCTION INSPECTIONS SHALL BE PERFORMED AT LEAST ON A WEEKLY BASIS AND AFTER EVERY SIGNIFICANT RAIN EVENT UNTIL VEGETATION HAS BEEN ESTABLISHED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF TEMPORARY CONTROL MEASURES AFTER ALL DISTURBED AREAS HAVE BEEN RESTORED AND VEGETATION HAS BEEN ESTABLISHED. INSTALL FILTER FABRIC UNDER ALL CATCH BASIN GRATES UNTIL PERMANENT SOIL EROSION MEASURES HAVE TAKEN EFFECT. INSTALL SILT FENCES PRIOR TO ANY SITE WORK.
- THE OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE OF PERMANENT CONTROL MEASURES AFTER THE ESTABLISHMENT OF VEGETATION ON DISTURBED AREAS. THE OWNER SHALL MAKE PERIODIC INSPECTIONS, AND REPLACE OR REPAIR DAMAGED PERMANENT CONTROL MEASURES AS REQUIRED.
- TIMING SEQUENCE AND CONSTRUCTION SCHEDULE:  
PHASE ONE - EARTH GRADE CHANGE, CONSTRUCT DITCHES, UTILITIES, PARKING LOT SUBGRADE, PLACE AND MAINTAIN TEMPORARY CONTROL MEASURES DURING THIS CONSTRUCTION PHASE.  
- COVER CATCH BASINS  
- GEOTEXTILE SILT FENCE AND/OR STRAW BALES.  
PHASE TWO - FINAL RESTORATION AND BITUMINOUS PAVING  
MAINTAIN TEMPORARY AND PERMANENT CONTROL MEASURES  
PLACE PERMANENT CONTROL MEASURES  
- TOPSOIL, SEED, MULCH AND FERTILIZER IN ACCORDANCE WITH CURRENT MDOT STANDARDS AND SPECIFICATIONS.  
PERMANENT SEEDING REQUIRED BETWEEN MAY 1 THROUGH OCTOBER. DORMANT SEEDING REQUIRED AFTER NOVEMBER 15, BUT NOT ON FROZEN GROUND.
- ANTICIPATED START CONSTRUCTION DATES: To Be Determined - 2019 Construction Planned.  
Construct driveway entrance  
Start excavation  
Start foundation  
Start underground utilities  
Start parking lot and retention pond  
Pave parking lot  
Start landscaping  
Contractor to supply dates after selection and prior to commencing construction.
- PERMANENT CONTROL MEASURES SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL EARTH CHANGE IS COMPLETED.
- TEMPORARY SEEDING, OR DORMANT SEEDING SHALL BE UTILIZED FOR "WINTER STABILIZATION".

INDICATES APPLICABILITY OF A SPECIFIC CONTROL MEASURE TO ONE OR MORE OF THE SEVEN PROBLEM AREAS

KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
1	STRIPPING & STOCKPILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION. STOCKPILE SHOULD BE TEMPORARILY SEEDED.	*				*	*	
2	SELECTIVE GRADING & SHAPING	WATER CAN BE DIVERTED TO MINIMIZE EROSION. FLATTER SLOPES EASE EROSION PROBLEMS.	*				*	*	*
3	GRUBBING OMITTED	SAVES COST OF GRUBBING, PROVIDES NEW SPROUTS, RETAINS EXISTING ROOT MAT SYSTEM, REDUCES WIND FAL AT NEW FOREST EDGE, DISCOURAGES EQUIPMENT ENTRANCE	*				*	*	*
4	VEGETATIVE STABILIZATION	MAY UTILIZE A VARIETY OF PLANT MATERIAL STABILIZES SOIL SLOWS RUNOFF VELOCITY FILTERS SEDIMENT FROM RUNOFF	*	*	*		*	*	*
5	SEEDING	INEXPENSIVE AND VERY EFFECTIVE STABILIZES SOIL, THUS MINIMIZING EROSION PERMITS RUNOFF TO INFILTRATE SOIL, REDUCING RUNOFF VOLUME SHOULD INCLUDE PREPARED TOPSOIL BED	*		*		*	*	*
6	SEEDING WITH MULCH AND/OR MATTING	FACILITATES ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR DRAINAGEWAYS WITH LOW VELOCITY EARLY PLACED IN SMALL QUANTITIES BY INEXPERIENCED PERSONNEL SHOULD INCLUDE PREPARED TOPSOIL BED	*		*		*	*	*
7	HYDRO-SEEDING	EFFECTIVE ON LARGE AREAS MULCH TRACING AGENT USED TO PROVIDE IMMEDIATE PROTECTION UNTIL GRASS IS ROOTED SHOULD INCLUDE PREPARED TOPSOIL BED	*				*	*	*
8	SODDING	PROVIDES IMMEDIATE PROTECTION CAN BE USED ON STEEP SLOPES WHERE SEED MAY BE DIFFICULT TO ESTABLISH EASY TO PLACE, MAY BE REPAIRED IF DAMAGED SHOULD INCLUDE PREPARED TOPSOIL BED	*		*		*	*	*
9	VEGETATIVE BUFFER STRIP	SLOWS RUNOFF VELOCITY FILTERS SEDIMENT FROM RUNOFF REDUCES VOLUME OF RUNOFF ON SLOPES	*	*					*
10	MULCHING	USED ALONE TO PROTECT EXPOSED AREAS FOR SHORT PERIODS PROTECTS SOIL FROM IMPACT OF FALLING RAIN PRESERVES SOIL MOISTURE AND PROTECTS GERMINATING SEED FROM TEMPERATURE EXTREMES	*				*	*	*
11	ROUGHENED SURFACE	REDUCES VELOCITY AND INCREASES INFILTRATION RATES COLLECTS SEDIMENT HOLDS WATER, SEED, AND MULCH BETTER THAN SMOOTH SURFACES	*				*		
12	COMPACTION	HELPS HOLD SOIL IN PLACE, MAKING EXPOSED AREAS LESS VULNERABLE TO EROSION	*				*		
13	RIPRAP, RUBBLE, GABIONS	USED WHERE VEGETATION IS NOT EARLY ESTABLISHED EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATIONS PERMITS RUNOFF TO INFILTRATE SOIL DISAPPEARS ENERGY FLOW AT SYSTEM OUTLETS	*	*	*				
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, THUS MINIMIZING EROSION PERMITS CONSTRUCTION TRAFFIC IN ADVERSE WEATHER MAY BE USED AS PART OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS					*		
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VOLUME AND VELOCITY IRREGULAR SURFACE WILL HELP SLOW VELOCITY	*				*		
16	CURB & GUTTER	KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE COLLECTS AND CONDUCTS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGEWAY					*	*	*
17	BENCHES	REDUCES RUNOFF VELOCITY BY REDUCING EFFECTIVE SLOPE LENGTH COLLECTS SEDIMENT PROVIDES ACCESS TO SLOPES FOR SEEDING, MULCHING AND MAINTENANCE	*					*	*
18	DIVERSION BERM	DIVERTS WATER FROM VULNERABLE AREAS COLLECTS AND DIRECTS WATER TO PREPARED DRAINAGEWAYS MAY BE PLACED AS PART OF NORMAL CONSTRUCTION OPERATION	*					*	*

INDICATES APPLICABILITY OF A SPECIFIC CONTROL MEASURE TO ONE OR MORE OF THE SEVEN PROBLEM AREAS

KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
19	DIVERSION DITCH	COLLECTS AND DIVERTS WATER TO REDUCE EROSION POTENTIAL MAY BE INCORPORATED IN PERMANENT PROJECT DRAINAGE SYSTEMS	*					*	*
20	BERM & DITCH	DIVERTS WATER TO A PREPARED DRAINAGEWAY MAY BE USED AT INTERVALS ACROSS SLOPE FACE TO REDUCE EFFECTIVE SLOPE LENGTH	*					*	*
21	FILTER BERM	CONSTRUCTED OF GRASS OR STONE INTERCEPTS AND DIVERTS RUNOFF TO STABILIZED AREAS OR PREPARED DRAINAGE SYSTEMS SLOWS RUNOFF AND COLLECTS SEDIMENT	*	*					*
22	BRUSH FILTER	USES SLASH AND LOGS FROM CLEARING OPERATIONS CAN BE COVERED AND SEEDED RATHER THAN REMOVED ELIMINATES NEED FOR BURNING OR REMOVAL OF MATERIAL FROM SITE						*	*
23	BARE CHANNEL	LEAST EXPENSIVE FORM OF DRAINAGEWAY MAY BE USED ONLY WHERE GRADIENT IS VERY LOW AND WITH SOILS OF MINIMAL EROSION POTENTIAL			*				
24	GRASSSED WATERWAY	MUCH MORE STABLE FORM OF DRAINAGEWAY THAN BARE CHANNEL GRASS TENDS TO SLOW RUNOFF AND FILTER OUT SEDIMENT USED WHERE BARE CHANNEL WOULD BE ERODED			*				
25	SLOPE DRAIN (SURFACE PIPE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	*						
26	SLOPE DRAIN (PIPE CHUTE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	*						
27	SLOPE DRAIN (SUBSURFACE PIPE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	*						
28	DROP SPILLWAY	SLOWS VELOCITY OF FLOW, REDUCING EROSION CAPACITY		*	*				
29	PIPE DROP	REDUCES RUNOFF VELOCITY REMOVES SEDIMENT AND TURBIDITY CAN BE DESIGNED TO HANDLE LARGE VOLUMES OF FLOW			*				
30	PIPE SPILLWAY	REMOVES SEDIMENT AND TURBIDITY FROM RUNOFF MAY BE PART OF PERMANENT EROSION CONTROL PLAN			*				
31	ENERGY DISSIPATER	SLOWS RUNOFF VELOCITY TO NON-EROSIVE LEVEL PERMITS SEDIMENT COLLECTION FROM RUNOFF	*		*	*			
32	LEVEL SPREADER	CONVERTS COLLECTED CHANNEL OR PIPE FLOW BACK TO SHEET FLOW AVOIDS CHANNEL EASEMENTS AND CONSTRUCTION OF PROJECT SITE SIMPLE TO CONSTRUCT			*				
33	SEDIMENTATION TRAP	MAY BE CONSTRUCTED OF A VARIETY OF MATERIALS TRAPS SEDIMENT AND REDUCES VELOCITY OF FLOW CAN BE CLEANED AND EXPANDED AS NEEDED	*	*	*				
34	SEDIMENT BASIN	TRAPS SEDIMENT RELEASES RUNOFF AT NON-EROSIVE RATES CONTROLS RUNOFF AT SYSTEM OUTLETS CAN BE VISUAL AMENITIES	*	*	*				
35	STORM SEWER	SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS, CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION, USE CATCH BASINS TO COLLECT SEDIMENT			*	*	*	*	*
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET			*	*	*	*	*

INDICATES APPLICABILITY OF A SPECIFIC CONTROL MEASURE TO ONE OR MORE OF THE SEVEN PROBLEM AREAS

KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
37	SOD FILTER	INEXPENSIVE AND EASY TO CONSTRUCT PROVIDES IMMEDIATE PROTECTION PROTECTS AREA AROUND INLETS FROM EROSION				*			
38	STRAW BALE FILTER	INEXPENSIVE AND EASY TO CONSTRUCT CAN BE LOCATED AS NECESSARY TO COLLECT SEDIMENT MAY BE USED IN CONJUNCTION WITH SNOW FENCE FOR ADDED STABILITY				*			*
39	ROCK FILTER	CAN UTILIZE MATERIAL FOUND ON SITE EASY TO CONSTRUCT FILTERS SEDIMENT FROM RUNOFF				*			*
40	INLET SEDIMENT TRAP	EASY TO SHAPE COLLECTS SEDIMENT MAY BE CLEANED AND EXPANDED AS NEEDED				*			
41	STONE AND ROCK CROSSING	MAY BE ROCK OR CLEAN RUBBLE MINIMIZES STREAM TURBIDITY INEXPENSIVE MAY ALSO SERVE AS DITCH CHECK OR SEDIMENT TRAP		*					
42	TEMPORARY CULVERT	ELIMINATES STREAM TURBULENCE AND TURBIDITY PROVIDES UNOBSTRUCTED PASSAGE FOR FISH AND OTHER WATER LIFE CAPACITY FOR NORMAL FLOW CAN BE PROVIDED WITH STORM WATER FLOWING OVER ROADWAY		*					
43	CULVERT SEDIMENT TRAP	EASY TO INSTALL AT INLET KEEPS CULVERT CLEAN AND FREE FLOWING MAY BE CONSTRUCTED OF LUMBER OR LOGS		*					*
44	CULVERT SEDIMENT TRAP	DEFLECTS CURRENTS AWAY FROM STREAMBANK AREAS		*					
45	TEMP. STREAM CHANNEL CHANGE	NEW CHANNEL KEEPS NORMAL FLOWS AWAY FROM CONSTRUCTION REQUIRES STATE PERMIT		*					
46	SHEET PILING	PROTECTS ERODIBLE BANK AREAS FROM STREAM CURRENTS DURING CONSTRUCTION MINIMAL DISRUPTION WHEN REMOVED		*					
47	COFFERDAM	WORK CAN BE CONTINUED DURING MOST ANTICIPATED PERIODS OF FLOODING CLEAR WATER CAN BE PUMPED DIRECTLY BACK INTO STREAM		*					
48	CONSTRUCTION DAM	PERMITS WORK TO CONTINUE DURING NORMAL STREAM STAGES CONTROLLED FLOODING CAN BE ACCOMPLISHED DURING PERIODS OF INACTIVITY		*					
49	CHECK DAMS	REDUCES FLOW VELOCITY CATCHES SEDIMENT CAN BE CONSTRUCTED OF LOGS, STRAW, HAY, ROCK, LUMBER, MASONRY, OR SAND BAGS		*					
50	WEIR	CONTROLS SEDIMENTATION IN LARGE STREAMS CAUSES MINIMAL TURBIDITY		*	*				
51	RETAINING WALL	REDUCES GRADIENT WHERE SLOPES ARE EXTREMELY STEEP PERMITS RETENTION OF EXISTING VEGETATION, KEEPING SOIL STABLE IN CRITICAL AREAS MINIMIZES MAINTENANCE	*						*
52	SEEPAGE CONTROL	PREVENTS PIPING AND SOIL SLIPPAGE ON CUT SLOPES	*						*
53	WINDBREAK	MINIMIZES WIND EROSION MAY BE SNOW FENCE					*	*	*
54	SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.			*	*	*	*	*

SESC Key

Family Bible Church Expansion

For

FED Corporation

ENGINEERING  
PLANNING  
ENVIRONMENTAL  
SURVEYING  
ASSOCIATES

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C-11

PROJECT NUMBER: P-190052

ENGINEER: Timothy L. Lapham, P.E., P.S. 27595

REVISION: October 8, 2019, October 26, 2019, January 7, 2020

DRAWN BY: S.E. Bell

DATE: August 12, 2019

SHEET C-11

SCALE: N/A

<div>CONCRETE FORMING</div> <div>DIVISION 03 10 00</div> <div>PART 1 GENERAL</div> <div>1.01 Scope:</div> <div>A. Provide, install and remove all concrete formwork and accessories necessary for concrete construction as indicated on the drawings and specified herein.</div> <div>1.02 Related Work Specified Elsewhere:</div> <div>A. Concrete Reinforcement -DIVISION 03 20 00</div> <div>B. Cast-in-place Concrete -DIVISION 03 30 00</div> <div>1.03 Referenced Standards:</div> <div>A. ACI, "ACI Manual of Concrete Practice"</div> <div>B. American Plywood Association, "Plywood for Concrete Forming"</div> <div>C. American Institute of Timber Construction, "Timber Construction Manual"</div> <div>D. National Forest Products Association, "Design of Wood Formwork for Concrete Structures"</div> <div>1.04 Design:</div> <div>A. The Design and Engineering of Concrete Formwork shall be the responsibility of the Contractor.</div> <div>PART 2 PRODUCTS</div> <div>2.01 Form Materials:</div> <div>A. Forms shall be either metal free of irregularities, dents, and/or sags; or plywood made specifically for concrete form use complying with APA "Plywood for Concrete Forming."</div> <div>2.02 Coatings and Release Agents:</div> <div>A. Steel Forms: Colorless mineral oil which will not stain concrete.</div> <div>2.03 Accessories:</div> <div>A. Form ties and spreaders shall be removable or snap-off commercially manufactured metal with cone ends leaving no metal exposed within 1" of finished face of concrete and causing no surface disfiguration greater than 3/4" in diameter.</div> <div>PART 3 EXECUTION</div> <div>3.01 General Requirements:</div> <div>A. Design, install, and remove Concrete Formwork specified herein in strict accordance with the Referenced Standards.</div> <div>3.03 Supplemental Requirements:</div> <div>A. Attach, as required elsewhere in the Construction Documents or as required to properly interface Concrete Work with the Work of other trades, all required accessories, anchor bolts, hangers, sleeves, slots and/or inserts.</div> <div>B. Unless indicated otherwise on the Drawings, provide 3/4" chamfer strips at all outside corners of exposed Cast-in-Place Concrete.</div> <div>C. Earth cuts may be used as forms where concrete is not to be exposed or to receive waterproofing.</div> <div>D. Formwork shall be constructed to the shape, line, and dimension as required by the plans. Do not scale off plans. Construction is to be according to written dimensions.</div> <div>E. Forms shall be sufficiently tight to prevent leakage of concrete and shall be properly braced and tied together to maintain position and shape during concrete placement.</div> <div>END OF SECTION</div> <div>CONCRETE REINFORCEMENT</div> <div>DIVISION 03 20 00</div> <div>PART 1 GENERAL</div> <div>1.01 Scope:</div> <div>A. Provide and install all concrete reinforcement and accessories, complete, as indicated on the drawings and specified herein.</div> <div>1.02 Related Work Specified Elsewhere:</div> <div>A. Concrete Forming -DIVISION 03 10 00</div> <div>B. Cast-in-Place Concrete -DIVISION 03 30 00</div> <div>1.03 Referenced Standards:</div> <div>A. ACE "ACI Manual of Concrete Practice"</div> <div>B. ASTM A185, "Welded Steel Wire Fabric for Concrete Reinforcement"</div> <div>C. ASTM A615, "Specifications for Pre formed and Plain Built-Steel Bars for Concrete Reinforcement"</div> <div>1.04 Storage of Materials:</div> <div>A. Materials shall be stored so as not to deteriorate due to excessive rusting or become contaminated by foreign substances.</div> <div>PART 2 PRODUCTS</div> <div>2.10 Bar Reinforcement:</div> <div>A. Shall comply with ASTM A615, grade 60 billet steel deformed bars, uncoated finish.</div> <div>2.02 Welded Wire Fabric:</div> <div>A. Shall conform to ASTM A185, plain type.</div> <div>2.03 Accessories:</div> <div>A. Tie Wire: Annealed steel, 16-gauge minimum.</div> <div>B. Reinforcement Supports: Galvanized steel bolster, chairs and supports with plastic coating where in contact with formwork.</div>	<div>PART 3 EXECUTION</div> <div>3.01 General Requirements:</div> <div>A. Design, fabricate and place Concrete Reinforcement specified herein in strict accordance with Referenced Standards.</div> <div>3.02 Supplemental Requirements:</div> <div>A. Unless indicated otherwise on the Drawings, maintain a minimum 3" clearance between all reinforcement specified and the outside face of the concrete enclosing the reinforcement through the use of concrete bricks and galvanized reinforcement bars anchored into adjacent earth where earth cut forms are utilized and through the use of prefabricated chairs and spreaders with vinyl coated feet where concrete formwork utilized.</div> <div>END OF SECTION</div> <div>CAST-IN-PLACE CONCRETE</div> <div>DIVISION 03 30 00</div> <div>PART 1 GENERAL</div> <div>1.01 Scope:</div> <div>A. Provide, place, patch, cure and finish all concrete as indicated on the Drawings and specified herein.</div> <div>1.02 Related Work Specified Elsewhere:</div> <div>A. Concrete Forming -DIVISION 03 10 00</div> <div>B. Concrete Reinforcement -DIVISION 03 20 00</div> <div>1.03 Submittals:</div> <div>A. Concrete test results.</div> <div>B. Concrete design mix proposed to comply with Specifications.</div> <div>C. Provide Specification indicating materials to actually be utilized under this Section if choice permitted.</div> <div>D. Concrete Truck batch ticket indicating presence of specified admixture and amount added.</div> <div>1.04 Referenced Standards:</div> <div>A. ACI, "Manual of Concrete Practice"</div> <div>B. ASTM C31, "Practice for Making and Curing Concrete Test Specimens in the field"</div> <div>C. ASTM C33, "Specification for Concrete Aggregates"</div> <div>D. ASTM C39, "Test Method of Compressive Strength of Cylindrical Concrete Specimens"</div> <div>E. ASTM C94, "Specification for Ready-Mixed Concrete"</div> <div>F. ASTM C143, "Test Method for Slump of Hydraulic Cement Concrete"</div> <div>G. ASTM C150, "Specification for Portland Cement"</div> <div>H. ASTM C172, "Method of Sampling Freshly Mixed Concrete"</div> <div>I. ASTM C231, "Test Method of Air Content of Freshly Mixed Concrete By the Pressure Method"</div> <div>J. ASTM C260, "Specification for Air-Entraining Admixtures for Concrete"</div> <div>1.05 Testing:</div> <div>A. Testing of concrete as specified in this section shall be arranged by the Contractor.</div> <div>B. Concrete shall be sampled, handled and tested in strict accordance with the following Referenced Standards for the procedure indicated.</div> <div>1) Sampling fresh Concrete: ASTM C172</div> <div>2) Slump Determination: ASTM C143</div> <div>3) Making, curing, protecting and transporting concrete test specimens: ASTM C31</div> <div>4) Testing Compressive Strength: ASTM C39</div> <div>5) Testing Air Content: ASTM C231</div> <div>C. The following information shall be recorded concerning each sampling by the Testing Technician:</div> <div>1) Name of Technician taking sample.</div> <div>2) Date and time of sampling.</div> <div>3) Air temperature and weather condition at time of sampling.</div> <div>4) Design compressive strength of Concrete being sampled.</div> <div>5) Source of Concrete, Truck Number and Ticket Number if batched offsite.</div> <div>6) List of Admixtures indicated to be present in Concrete on batch ticket.</div> <div>7) List of Admixtures and/or water added to the Concrete mix on site, whether added before or after sampling taken by Testing Technician and quantity of item added.</div> <div>8) Specific location in structure in which the concrete is placed after sampling.</div> <div>D. Tests shall be performed for each Concrete Sampling to determine the following:</div> <div>1) Concrete temperature at time of sampling.</div> <div>2) Concrete Slump.</div> <div>3) Concrete Air Content, if air entrainment specified, at the time of sampling.</div> <div>4) Compressive Strength of Test Cylinders in the following quantities at the following increments from the date of sampling:</div> <div>a) One test at 7 days</div> <div>b) Two tests at 28 days</div> <div>c) One specimen shall be retained in reserve for later testing if required.</div> <div>E. The Testing Laboratory shall prepare a report recording the information required in items C. and D. above and mail the report directly to the Owner, Engineer and Contractor the day of the compressive tests.</div> <div>F. Four cylinders shall be made for each test. Perform a minimum of one test for each 100 cubic yards per class of concrete placed, but in no case shall there be less than one test for each day's concreting per class of concrete.</div> <div>G. Concrete to be tested shall be randomly selected by the Testing Technician without direction from the Contractor or material supplier.</div> <div>PART 2 PRODUCTS</div> <div>2.01 Concrete:</div> <div>A. Concrete shall be composed of Portland Cement in conformance with ASTM C150, aggregates in conformance with ASTM C33 and water in conformance with ASTM C94, proportioned to achieve a compressive strength of 3,500 psi at 28 days unless noted otherwise in the specifications or on the drawings. Unless noted otherwise the maximum allowable slump shall be 4".</div> <div>B. Unless noted otherwise the water-cement ration shall not exceed .5 by weight.</div> <div>C. Air-entraining Admixture, where specified, shall conform with Referenced Standard ASTM C260. Provide air entraining admixture for all concrete exposed to freeze-thaw cycling. Air content shall be 7% +/- 1%.</div> <div>2.02 Additives:</div> <div>A. Admixtures containing thiocyanates or calcium chloride are not permitted.</div> <div>B. Water reducing chemical admixtures shall conform to ASTM C494 - Type A.</div>	<div>C. Unless specified herein, additives or admixtures shall not be used without written approval from the Engineer.</div> <div>2.03 Curing Compound:</div> <div>A. "Ellis Clear Acrylic cure 309" as manufactured by Ellis Construction Accessories, or equal meeting ASTM C309. Curing compound shall be an acrylic formula designed and certified to be compatible with resilient flooring adhesives.</div> <div>2.04 Non-Shrink Grout:</div> <div>A. "Masterflow 713" by Master Building Co.; "SonogROUT" by Sonnebrone Building Products; "Crystex", as manufactured by L&amp;M Construction Chemicals, Inc., or approved equal; with a minimum compressive strength of 5 psi at 28 days.</div> <div>2.05 Vapor Barrier:</div> <div>A. 6 mil. polyethylene film.</div> <div>PART 3 EXECUTION</div> <div>3.01 General Requirements:</div> <div>A. Mix, transport, test, place, finish and cure all Cast-In-Place Concrete and other products specified herein in strict accordance with Referenced Standards and manufacturer's written specifications.</div> <div>B. Notify Testing Laboratory 24 hours prior to placement of all concrete.</div> <div>3.02 Supplemental Requirements:</div> <div>A. Grind smooth surface projections, remove loose concrete and patch with Non-shrink grout, in strict accordance with manufacturer's written specifications, all surface honeycombs, wall tie holes and other vertical wall surface deformations on concrete walls to be exposed or to receive waterproofing assembly.</div> <div>B. Provide light broom finish on sidewalks unless noted otherwise.</div> <div>C. Apply curing Compound to all slab concrete in strict accordance with manufacturer's written specifications. Apply in sufficient quantity and reapply if necessary depending on weather conditions to protect concrete from premature drying. Apply additional coat of Curing Compound to slab concrete immediately after final cleaning of floor.</div> <div>D. Perform Cold Weather Concreting operations in strict accordance with the requirements of ACI 306R.</div> <div>E. Perform Hot Weather Concreting operations in strict accordance with the requirements of ACI 305R.</div> <div>F. Secure and install items to be embedded in Cast-In-Place Concrete in strict accordance with the manufacturer's written specifications, Referenced Standards and/or as indicated in the Drawings and Specifications.</div> <div>3.03 Defective Concrete:</div> <div>A. Modify or replace concrete not conforming to required strength, levels, lines, details, and elevations.</div> <div>B. Repair or replace concrete not properly placed or not of the specified type or finish.</div> <div>END OF SECTION</div> <div>SITE CLEARING</div> <div>SECTION 31 10 00</div> <div>PART 1 - GENERAL</div> <div>1.01 DESCRIPTION OF WORK</div> <div>The extent of site preparation work expected to be minimal. This work includes, but is not limited to furnishing all labor, material, equipment, tools, incidentals, and services necessary for:</div> <div>Temporary silt fencing</div> <div>Protection of existing trees and vegetation</div> <div>Related work as required</div> <div>1.02 SOIL EROSION AND SEDIMENTATION CONTROL</div> <div>A. Purpose - The purpose of this section is to minimize soil erosion and control sedimentation as required by the Soil Erosion and Sedimentation Control Act, Part 91, PA 451 of 1994 of the State of Michigan as amended.</div> <div>B. Permit - It is anticipated that a Soil Erosion and Sedimentation Control Permit will be required for this project. If a permit is required it shall be obtained prior to construction and shall be the responsibility of the contractor.</div> <div>C. Implementation - It shall be the responsibility of the Contractor to implement the Soil Erosion and Sedimentation Control Plan for this project in strict accordance with the permit, if required to be obtained. Unless specified within other sections of the specifications, all work under this section shall be in strict accordance with the construction methods as prescribed by the State of Michigan Department of Natural Resources for the implementation of this legislation. Refer to Michigan Guidebook for Soil Erosion and Sedimentation Control, prepared for and distributed by the Water Resources Commission of the Department of Natural Resources, State of Michigan.</div> <div>1.03 JOB CONDITIONS</div> <div>A. Protection of Existing Improvements - Provide barricades, coverings or other types of protection necessary to prevent damage to existing improvements indicated to remain in place. Protect improvements on adjoining properties and on the Owner's property. Restore any improvements damaged by this work to the original condition as acceptable to the Owner and other parties or authorities having jurisdiction.</div> <div>PART 2 - PRODUCTS</div> <div>2.01 PREASSEMBLED SILT FENCE</div> <div>A. Geotextile fabric - Polypropylene woven fabric, 2.3 oz./sq.yd., UV resistance 80% Propex® 2127, as mfd by Amoco Fabrics and Fibers Company, Austell, GA (770-944-4569), or approved equal.</div> <div>B. Silt Fence posts - As mfd by Amoco Fabrics and Fibers Company, Austell, GA (770-944-4569), or approved equal.</div> <div>PART 3 - EXECUTION</div> <div>3.01 GENERAL</div> <div>Call Miss Dig (1-800-482-7171) 72 hours prior to start of clearing and excavation work. Work shall not begin on site until after the project site has been marked by all utility companies.</div> <div>3.02 PREASSEMBLED SILT FENCE</div> <div>Install silt fencing where shown on drawings and prior to beginning site clearing and grubbing work. Unroll, stretch, and drive fence posts plumb. Posts shall be installed on the downward side of the fencing. The bottom of the fabric shall be placed under 6" of compacted soil to prevent sediment from flowing underneath the fence.</div>	<div>3.03 SITE CLEARING AND GRUBBING</div> <div>Remove vegetation, improvements or obstruction interfering with the installation of new construction. Clear the project site of trees, shrubs and other vegetation - except for those indicated to be left standing. Removal includes new and old stumps of trees and their roots. Carefully and cleanly cut roots and branches of trees indicated to be left standing, where such roots and branches obstruct new construction. Completely remove stumps, roots and other debris protruding through the ground surface. Use only hand methods for grubbing inside the drip line of trees indicated to be left standing. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated. Place fill material in horizontal layers not exceeding 0.5' loose depth, and thoroughly compact to a density equal to adjacent original ground.</div> <div>3.04 DISPOSAL OF WASTE MATERIALS</div> <div>Burning of combustible cleared and grubbed materials is not permitted on the Owner's property. Remove from the Owner's property and legally dispose of all waste materials and unsuitable or excess soils.</div> <div>3.05 TOPSOIL REMOVAL</div> <div>Topsoil is defined as friable clay loam surface soil found in a depth of not less than 0.4' or greater depth as indicated on the drawings. Satisfactory topsoil is reasonably free of subsoil, clay lumps, stones and other objects over 2.0" in diameter, and without weeds, roots and foreign materials. Strip topsoil from within the areas to be occupied by the construction and from other areas within the grading limits to be cut, filled or re-graded. Strip topsoil to whatever depth encountered in a manner to prevent intermingling with the underlying subsoil or objectionable material. Remove heavy growth of grass from areas before stripping. Where trees are indicated to be left standing, stop topsoil stripping at a sufficient distance to prevent damage to the main root system. Stockpile topsoil as indicated and where it will not interfere with construction operations or site work. Locate topsoil storage piles in areas shown or where otherwise directed. Construct storage piles to freely drain surface water and cover if required to prevent windblown dust. If soil or weather conditions are unsuitable, the Contractor shall cease topsoil removal operations and resume only when directed to do so by the owner or engineer. Dispose of excess topsoil the same as waste material, herein specified.</div> <div>3.06 SILT FENCE REMOVAL</div> <div>Upon completion of all work, remove the silt control fence and legally dispose off project site. Rake and smooth soil along location of silt fence, and seed as required.</div> <div>END OF SECTION</div> <div>EARTH MOVING</div> <div>SECTION 31 20 00</div> <div>PART 1 - GENERAL</div> <div>1.01 DESCRIPTION OF WORK</div> <div>The extent of Earthwork required is shown on the drawings. This work includes, but is not limited to furnishing all labor, material, equipment, tools, incidentals, and services necessary for:</div> <div>Site grading</div> <div>Placement of fill materials</div> <div>Related work as required</div> <div>1.02 QUALITY ASSURANCE</div> <div>A. Codes and Standards - Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction.</div> <div>B. Lines and Grades - The Contractor shall provide all instrumental surveying required to lay out and construct this work in conformance with the drawings.</div> <div>1.03 JOB CONDITIONS</div> <div>A. Site Information - The Contractor shall make his or her own investigation, as he or she deems necessary prior to the bid opening. Data on surface or subsurface conditions is not intended as representations or warranties of accuracy or continuity of actual site conditions. It is expressly understood that the Owner and project consultants employed as representatives of the work will not be responsible for interpretations or conclusions drawn therefrom by the Contractor. Data made available is for the convenience of the Contractor.</div> <div>B. Existing Utilities - Call MISS DIG prior to beginning work on the site. Locate existing underground utilities in the areas of work. If utilities are to remain in place, provide adequate means of protection during earthwork operations. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult the utility owner immediately for directions. Cooperate with the Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to the satisfaction of the utility owner. Do not interrupt existing utilities serving facilities occupied and used by the Owner or others, except when permitted in writing by the owner or engineer, and then only after acceptable temporary utility services have been provided.</div> <div>C. Explosives - The use of explosives is not permitted.</div> <div>D. Protection of Persons and Property - Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washouts and other hazards created by earthwork operations.</div> <div>PART 2 - PRODUCTS</div> <div>2.01 DEFINITIONS</div> <div>A. Standards - Satisfactory soil materials are defined as those complying with American Association of State Highway and Transportation Officials (AASHTO) M145, soil classification Groups A-1, A-2-4, A-2-5 and A-3. Unsatisfactory soil materials are those defined in AASHTO M145 Soil Classification Groups A-2-6, A-2-7, A-4, A-6 and A-7. Also listed as unsatisfactory are peat and other highly organic soils. Cohesion-less soil materials include gravel, sand gravel mixture and gravelly sands. Cohesive soil materials include clay and silty gravel, sand clay mixtures, gravel silt mixtures, clay and silty sands, sand silt mixtures, clays, silts and very fine sands.</div> <div>B. Subbase Material - Subbase material shall be properly graded mixtures of natural or crushed gravel, crushed stone, crushed slag, or natural or processed sand that will readily compact to the required density complying with AASHTO M147, Grade A, unless otherwise indicated or acceptable to the owner or engineer.</div> <div>C. Topsoil - Topsoil shall be fertile, friable organic soil, characteristic of the soils in the project area that will produce heavy growths of vegetation. Topsoil shall be capable of supporting a healthy and vigorous stand of turf (lawn) grass.</div> <div>PART 3 - EXECUTION</div> <div>3.01 EXCAVATION</div> <div>A. Excavation consists of removal and disposal of material encountered when establishing required grade elevations. Earth excavation includes removal and disposal of pavements and other obstructions visible on the ground surface, underground structures and utilities indicated to be demolished and removed, material of any classification indicated in data on subsurface conditions, and other materials encountered that are not classified as rock excavation or unauthorized excavation. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of the owner or engineer. Unauthorized excavation, as well as remedial work directed by the owner or engineer, shall be at the expense of the Contractor.</div>	<div>B. Dewatering - Prevent surface water and subsurface or groundwater from flowing into excavations and from flooding project site and surrounding area. Convey water removed from excavations and rainwater to collecting or runoff areas. Establish and maintain temporary drainage ditches and other diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.</div> <div>C. Materials Storage - Stockpile satisfactory excavated materials where directed, until required for fill. Place grade and shape stockpiles for proper drainage. Locate and retain soil materials away from the edge of excavations. Cover stockpile, or provide temporary vegetative cover as may be required to comply with the Soil Erosion and Sedimentation Act. Dispose of excess soil material and waste materials as directed.</div> <div>3.03 COMPACTION</div> <div>Control soil compaction during construction providing minimum percentages of density specified for each area classification. Compact soil to not less than the following percentages of maximum dry density for soils that exhibit a well-defined moisture density relationship determined in accordance with ASTM D 1557.</div> <div>3.04 BACKFILL AND FILL</div> <div>Place acceptable soil material in layers to required subgrade elevations, for each area classification listed below:</div> <div>A. Placement and Compaction - Place fill materials in layers not more than 1.0 foot in loose depth for material compaction by heavy construction equipment and not more than 0.5 foot in loose depth for material compacted by hand operated tampers.</div> <div>B. At Existing Trees to Remain - Remove vegetation within dripline and fill with a single layer of uncomplicated topsoil. Hand grade to attain required finish grade.</div> <div>3.05 DISTRIBUTION OF TOPSOIL</div> <div>Prior to topsoil placement, the subgrade shall be prepared to uniform levels and slope between points where elevations are shown. Abrupt changes in slope are to be rounded off. Loosen subgrade to a minimum depth of 0.4 foot. Remove stones over 1.0" in any dimension and sticks roots, rubbish and other extraneous matter. Fine rake by York Rake®, Viking Roller Blade®, or approved equal or by hand to produce a smooth even surface that conforms to the grades established on the drawings. Any irregularities shall be corrected in order to prevent the formation of depressions or water pockets. Topsoil shall be uniformly distributed to a minimum depth of 0.4 foot after firming, unless otherwise indicated. Topsoil in planting bed areas, if applicable, shall be placed to a minimum depth of 1.0 foot. Topsoil shall be spread in such a manner that finish grading, seeding or sodding, and landscape planting operations can proceed with a minimum of additional soil preparation. Place approximately 50% of the total amount of the topsoil required, work into top of loosened subgrade to create a transition layer, and then place remainder of topsoil. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet or in a condition that may otherwise be detrimental to proper grading. Irregularities in the surface resulting from topsoil spreading or other operations shall be corrected in order to prevent the formation of depressions or water pockets. Provide additional clean topsoil - subject to approval of the owner or engineer - as may be required to complete work. Remove any excess topsoil from the site, or distribute it and grade it as directed by engineer on site if approved by Owner.</div> <div>3.06 MAINTENANCE</div> <div>A. Protection of Graded Areas - Protect newly graded areas from traffic and erosion. Keep free of trash and debris. Repair and reestablish grades in settled, eroded and rutted areas to specified tolerances.</div> <div>B. Reconditioning of Compacted Areas - Where completed compacted areas are disturbed by subsequent construction operation or adverse weather, scarify surface, reshape and compact to required density prior to further construction.</div> <div>3.07 DISPOSAL OF EXCESS AND WASTE MATERIALS</div> <div>Remove excess excavated material, soil, trash, debris and waste materials and legally dispose of such off the property, except as otherwise specifically noted.</div> <div>END OF SECTION</div> <div>BASES, BALLASTS AND PAVING</div> <div>DIVISION 32 10 00</div> <div>PART 1 GENERAL</div> <div>1.01 Scope:</div> <div>A. Provide sub-base, base and bituminous paving for driveways walkway, sidewalk, and concrete pads, as indicated on the drawings, as specified herein, and as needed for a complete and proper installation.</div> <div>1.02 Referenced Standards:</div> <div>A. MDOT Standard Specifications</div> <div>PART 2 PRODUCTS</div> <div>2.01 Materials</div> <div>A. MDOT 22A Aggregate (Base)</div> <div>B. MDOT Class II Granular Material (Subbase)</div> <div>C. MDOT 13A HMA (Pavement)</div> <div>D. Seed, Mulch and Fertilizer (See Seeding Section 32 92 00)</div>	<div>PROJECT NUMBER: P-190052</div> <div>ENGINEER: Timothy L. Lapham, P.E., P.S. 27595</div> <div>DATE: August 12, 2019</div> <div>REVISED: October 8, 2019; October 26, 2019; January 7, 2020</div> <div>DRAWN BY: S.E. Bell</div> <div>SHEET C-12</div> <div>SCALE: N/A</div> <div>Site Specifications</div> <div>Family Bible Church Expansion</div> <div>For</div> <div>FED Corporation</div> <div>ENGINEERING</div> <div>PLANNING</div> <div>ENVIRONMENTAL</div> <div>SURVEYING</div> <div>LAPHAM ASSOCIATES</div> <div>116 South 3rd Street</div> <div>West Branch, MI 48861</div> <div>P (989) 345-5030</div> <div>F (989) 345-7302</div> <div>www.laphamassoc.com</div> <div>© 2019 COPYRIGHT, LAPHAM ASSOCIATES</div> <div>UNAUTHORIZED COPYING IS PROHIBITED.</div> <div>APPROVED USE FOR:</div> <div><input type="radio"/> PRELIMINARY</div> <div><input checked="" type="radio"/> PERMIT/BID</div> <div><input type="radio"/> CONSTRUCTION</div> <div><input type="radio"/> FINAL RECORD</div> <div>C-12</div>
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PART 3 EXECUTION

3.01 General Requirements:

A. Base

1. Subgrade Preparation for Subbase - The subgrade shall be smoothed and trimmed to the required line, graded and cross sectioned to receive the sub base course with no topsoil, organic material, sticks, roots or other deleterious materials and shall be compacted to not less then 90 percent (90%) M.U.W.

2. Subbase Preparation for Base - the subbase shall be smoothed and trimmed to the required line, grade, and cross section to receive the base course and shall be compacted to not less than 95 percent (95%) of M.U.W.

3. The subbase thus formed shall be maintained in a smooth and compacted condition until the base course has been placed.

4. No base course shall be placed on the subbase until it has been approved in writing by the Engineer or owner.

a. Placing Base - aggregate base shall not be placed when there are indications that the mixture may become frozen before the M.U.W. is attained and in no case shall the base be placed on a frozen subbase or subgrade.

5. The subbase shall be shaped to the specified crown and grade and maintained in a smooth condition. If hauling equipment should cause ruts in the subbase, such equipment will not be permitted on the subbase but shall be operated on the aggregate base.

6. The aggregate shall be placed in uniform layers to such a depth that when compacted the course will have the thickness shown on the plans. The aggregate shall be compacted to not less than 98% of M.U.W.

7. The finished surface shall be shaped to the crown and grade within a tolerance of ¼ inch, more or less. The surface shall be continuously maintained in a smooth condition.

8. Should the subbase or aggregate base become damaged due to the Contractor's operation, the subgrade, subbase or base shall be restored to the conditions required by these specifications at the Contractor's expense.

9. If the subbase or subgrade at any time prior to acceptance of the work becomes soft or unstable to the extent that it is forced up through or prevents compaction of the aggregate, such subbase or subgrade material and aggregate shall be immediately removed and disposed of and new material shall be placed and compacted as required by these documents.

10. A certification that the base material is in compliance with MDOT Specifications for Aggregate Base under Bituminous 22A shall be furnished to the Owner prior to payment or test slips shall be provided.

B. Bituminous Paving

1. All materials and placement shall meet the requirements specified he MDOT Specifications, current Edition .

2. A certification that the bituminous material is in compliance with MDOT Specifications shall be furnished to the Owner prior to payment for the material.

C. Foundation Preparation

1. Before placing the bituminous mixture, the surface of the foundation shall be swept clean and all foreign material removed.

2. The finished aggregate base surface shall be shaped to the crown and grade within a tolerance of plus or minus ¼ inch, and compacted to at least 98% of M.U.W. before placing bituminous material.

3. Catch basins, manhole covers, and water valve covers shall be adjusted to the proper elevation by removing the castings and setting them to the required elevation by supporting them on a concrete collar or on masonry so constructed as to hold them firmly in place and not allow settlement around them.

D. Rollers

1. Self-propelled steel tandem rollers weighing not less than eight tons each will be required unless rollers of other types are specifically permitted. Rollers shall be equipped with wheel sprinklers and scrapers.

E. Placing Bituminous Paving

1. Bituminous mixture shall be placed with an approved mechanical paver. Bituminous material thickness shall not exceed 2-½ inches per application. Placing, rolling and other requirements or restrictions shall be governed by the MDOT Specifications, current Edition.

2. No bituminous material shall be placed without written permission from the Engineer.

END OF SECTION

TURF & GRASSES  
SECTION 32 92 00

PART 1 - GENERAL

1.01 SCOPE

The extent of seeding work required for this project is shown on the drawings. The work of this section includes, but is not limited to furnishing all labor, materials, tools, incidentals, equipment and service for:

Seeding of all turf.

Related work as required

1.03 DELIVERY, STORAGE AND HANDLING

Seed and fertilizer materials shall be in original unopened containers and shall indicate weight, analysis, germination rate, name, and date code of the manufacturer. Materials shall be stored in an orderly manner, at a location acceptable to the Engineer, in a manner to prevent wetting and/or deterioration.

1.04 PROJECT CONDITIONS

A. Seed Blend - Submit proposed seed blend to the owner or Engineer for approval.

B. Seeding - Perform seeding work only after other work affecting ground surface has been completed.

C. Watering - Provide adequate hose and watering equipment as required.

D. Germination - Within thirty (30) days after seeding, it is expected that 60-80% of the seed will have germinated and grown.

1.05 SITE CONDITIONS

All unsatisfactory topsoil quantities or qualities or other unsatisfactory conditions detrimental to seeding shall be reported in writing to the Engineer or Owner. Seeding shall not continue prior to correction of, or written acceptance of the encountered conditions by the Owner.

1.06 WARRANTY

The Contractor shall provide a uniform stand of grass and shall provide watering, mowing and maintenance of all seeded areas prior to final acceptance by the Owner. The Contractor shall reseed all areas, with specified materials, which fail to provide a uniform stand of grass until the Owner accepts all affected areas.

PART 2 - PRODUCTS

2.01 TURF SEED

A. Turf Supplier: All turf seed shall be as supplied from Michigan State Seed Company, 717 Clinton St., Grand Ledge, MI (Ph. 800-647-8873) or approved alternate source.

B. Permanent cover (& Dormant Cover): shall be a consistent mixture of the following varieties for the Area Designated:

Grade A Mixture

Seed %/Wt. Germination

Kentucky Bluegrass (Mix.) 40% 85%

Fine Fescue 40% 85%

Note: On highly erodable slopes, contractor may have to add other varieties to the seed mix such as cereal grass.

2.02 FERTILIZER

Fertilizer for turf areas shall have a chemical analysis of at least 12% available nitrogen, 12% readily available phosphoric acid and 12% total available potash (12-12-12).

2.03 HYDRO-SEED MULCH

Nu-Wool® HydroGreen Plus™ 50/50 Hydroseeding Mulch, prepared for use in a tank of a hydro-mulching machine, as mfd by Nu-Wool, Inc., Jenison, MI, (Ph. 800-748-0128), or approved equal. Mulch shall be made from recycled paper material and be green in color. Mulch may be made from 50% virgin wood fiber and 50% recycled paper where approved by the Engineer.

2.04 STRAW MULCH

Mulch shall be straw or other approved organic material commonly used by the industry for the purpose of the mulching of seeded areas, and approved by the Engineer. Mulch shall be held in place with an approved seal/binder agent and Nu-Wool® HydroGreen Plus™ 50/50 Hydroseeding Mulch.

2.05 STRAW BINDER/ SEALER

Terra-Mulch Tacking Agent III, a water emulsified acrylic resin, Seal, as manufactured by Profile Products, Buffalo Grove, IL, (Ph. 800-508-8681), or approved equal.

2.06 WATER

Water shall be potable water, free of substance harmful to seed growth or other foreign mater. The Contractor shall furnish hoses and other methods of water transportation and application.

3.01 TURF AREA SURFACE PREPARATION

Topsoil shall be fine raked to produce a smooth even surface that conforms to established grades. All stones, roots, clods 1.0" and larger in diameter, and all foreign matter shall be removed from the surface of areas to be seeded. The area shall be made smooth and uniform and parallel to the finished grade. The tops and bottoms of all slopes shall be rounded to blend into the natural ground or adjacent slopes by vertical curves. Seeded areas will be allowed a tolerance of 0.1 foot. Slope for drainage over turf areas shall have a minimum grade of 0.5%.

3.02 TURF - HYDRO-SEEDING METHOD

A. This method shall be used for permanent seeding unless otherwise authorized in writing by the Engineer. The mixture of the seed, fertilizer, mulch and a tackifier used shall be as follows (2 parts water to one part mulch):

Grade A Seed Mixture: 4-5# /1,000 sq. ft. (175-220#/acre)

Fertilizer: 3.5# /1,000 sq. ft.

Hydro-Seed Mulch:

On slopes up to 3/1: (38) 40# bags / acre

On slopes from 3:1 to 2:1: (50) 40# bags / acre

Greater than 2:1 slopes: (62.5) 40# bags / acre. Tackifier: 20# /acre (or more based on slope and mfr's recommendations)

B. Slopes 2:1 and greater shall also be straw mulched after being hydroseeded. Apply straw, and then apply Terra-Mulch Seal and Nu-Wool® HydroGreen Plus™ 50/50 with a hydroseeder at the rate as recommended by mfr.

C. Protect surfaces and areas from overspray which are not indicated to be hydroseeded, including shrub bed, walks, light poles, etc. Immediately remove and clean hydroseed material from all such areas, which may accidentally have been sprayed.

D. Provide barriers as required to keep traffic off the seeded areas after they are completed. Contractor shall remove all barriers he installed when turf is established, and before acceptance by Owner.

E. For dormant cover areas, mulching must also be used on the hydro-seeded areas. The rate of application shall be 3 tons per acre of prepared seed bed.

3.09 TURF - MULCHING

Spread straw at the rate of one bale per 1000 square feet (43.5 bales /acre). Straw shall be mechanically crimped, and a sealer/binder shall be applied by hydro-seeder at the rate of 30# to 1,000 gallons of water along with 150# cellulose fiber per acre.

3.12 WATERING

To the point of acceptance, the Contractor shall be responsible for providing adequate water and application to assure the establishment of a dense, permanent turf. Provide adequate water during germination and after to continually keep the seed bed moist (without puddling).

END OF SECTION

APPROVED USE FOR:

PRELIMINARY

PERMIT/BID

CONSTRUCTION

FINAL RECORD

C-13

LAPHAM ASSOCIATES

ENGINEERING  
PLANNING  
ENVIRONMENTAL  
SURVEYING

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Site Specifications

Family Bible Church Expansion

For

FED Corporation

PROJECT NUMBER: P-190052

DRAWN BY: S.E. Bell

SCALE: N/A

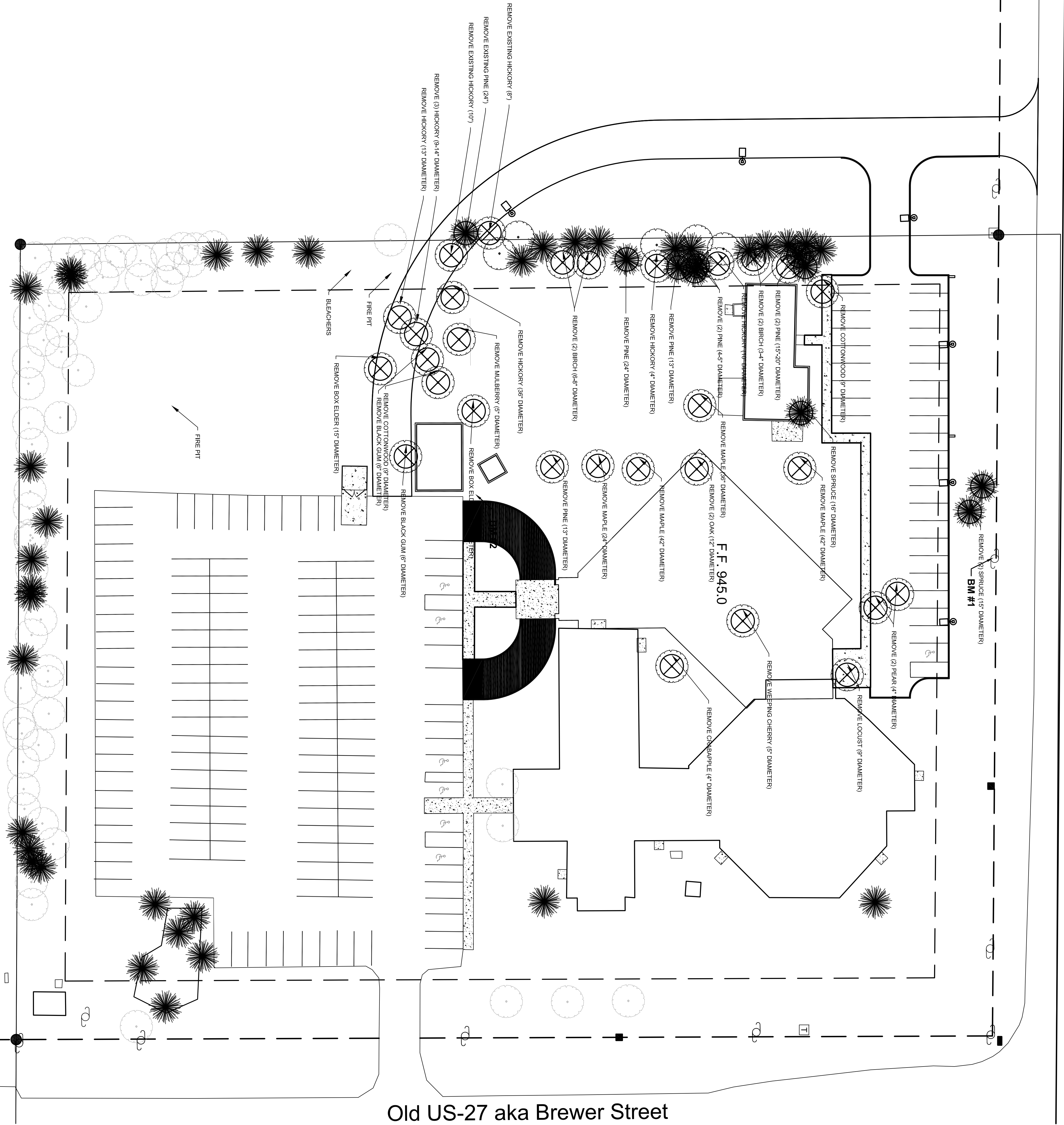
ENGINEER: Timothy L. Lapham, P.E., P.S. 27595

DATE: August 12, 2019

SHEET C-13

REVISED: October 8, 2019; October 26, 2019; January 7, 2020

F Drive North



Old US-27 aka Brewer Street

RELEVANT CITY OF MARSHALL ORDINANCES:

5 - SITE STANDARDS

5.15 LANDSCAPING AND SCREENING

- 1. SPECIAL PROVISIONS FOR EXISTING SITES: WHERE PARKING LOT LANDSCAPING CANNOT BE PROVIDED, ADDITIONAL LANDSCAPING ALONG THE STREET OR IN THE BUFFER AREAS SHALL BE CONSIDERED.
- (PARKING LOT ISLAND REQUIREMENT IS BEING WAIVED)

3. PARKING LOT SCREENING

- SIZE AND PLANT SPACING TO ALLOW FOR CONTINUOUS SCREENING WITHIN 3 YEARS.
- (1) TREE AND (5) SHRUBS PER EACH 30 LINEAR FEET (ONLY APPLIED TO NEW PARKING AREA)

4. GREENBELTS

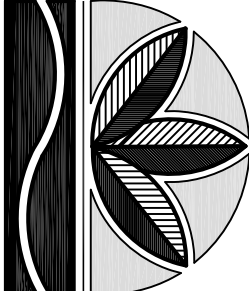
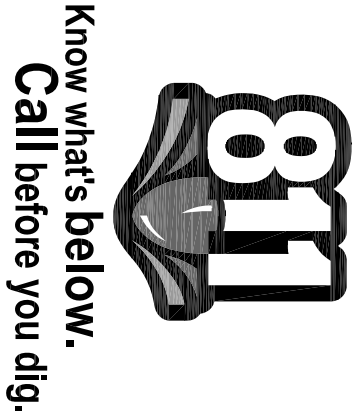
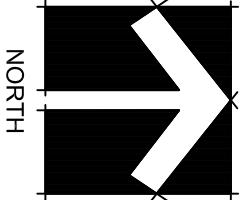
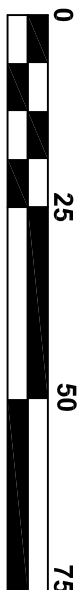
- AT LEAST ONE DECIDUOUS TREE AND FOUR SHRUBS PER 40 LINEAL FEET OF STREET FRONTAGE.
- THE GREENBELT AREA SHALL CONTAIN GRASS OR OTHER SUITABLE LIVING GROUND COVER.

5.15.13.E CREDIT FOR PRESERVED TREES

- OVER 12" - (3) TREES CREDITED
- 8-12" - (2) TREES CREDITED
- 2.5-4" - (1) TREE CREDITED

SITE PLAN LEGEND

- TREES TO BE REMOVED



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info@laplanners.com

REVISIONS

INITIALS	DATE	COMMENTS

LANDSCAPE PLAN

725 Old US-27 North  
Marshall, MI 49068

LAPHAM ASSOCIATES  
MARSHALL FAMILY BIBLE CHURCH EXPANSION

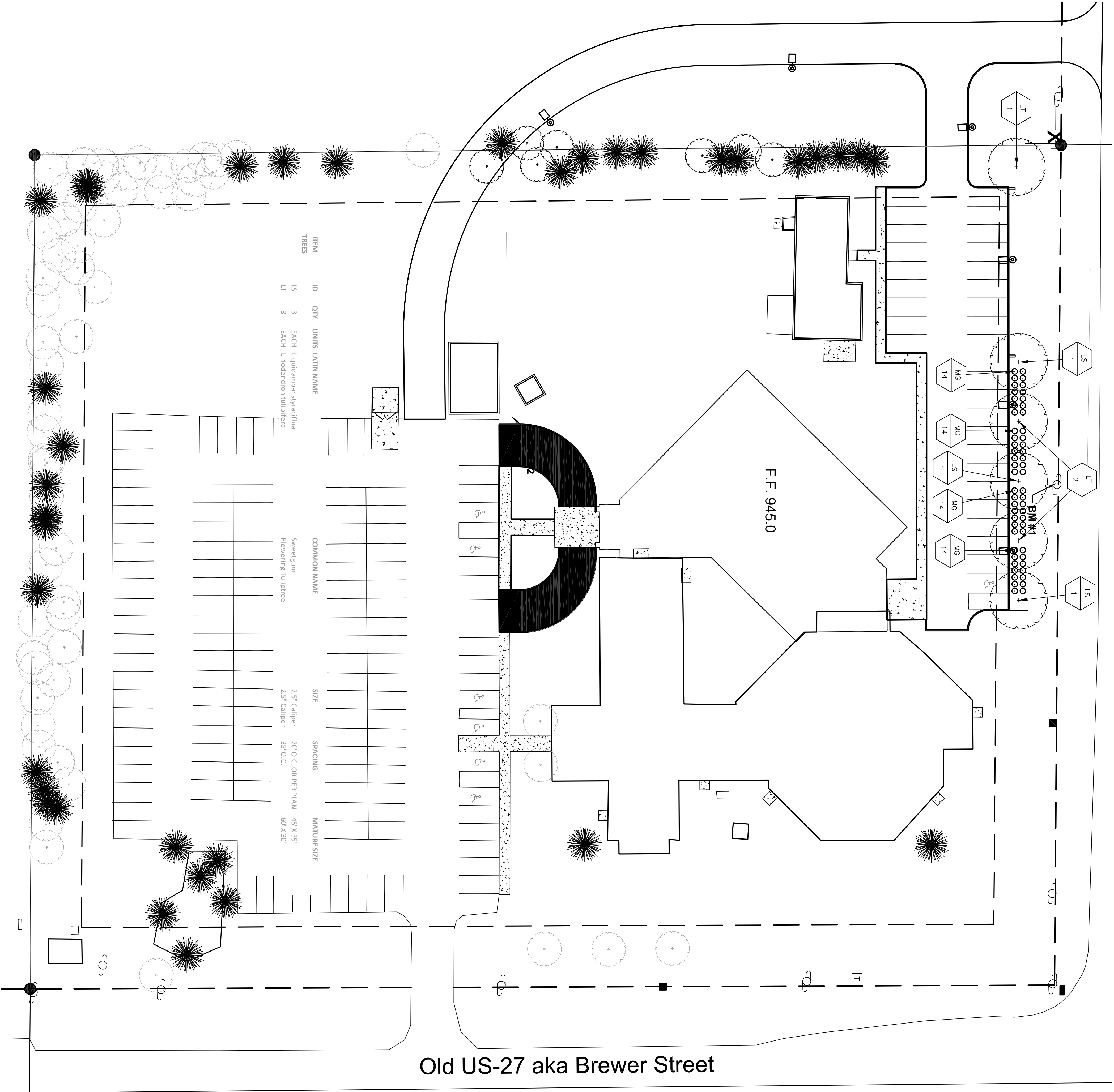
LANDSCAPE DEMOLITION PLAN

DATE: 10/30/2019  
DESIGNED BY: JEJ  
CHECKED BY: REF  
DRAWN BY: JEJ  
PROJECT NO: 19041  
SCALE: 1"=25'  
HORIZ: N/A  
VERT: N/A

SHEET  
1 OF 3

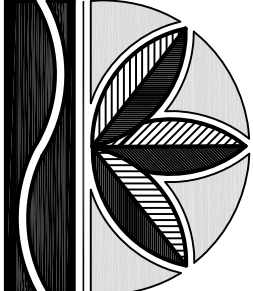
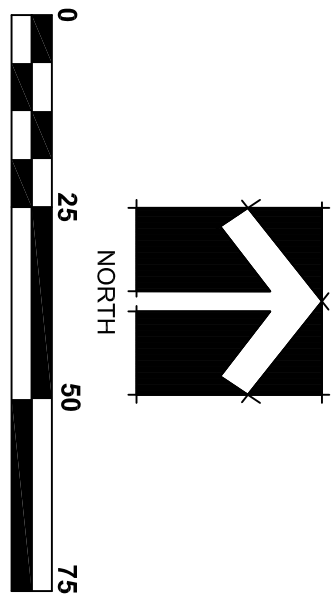






TREE REQUIREMENTS:

1. FRONT YARD RIGHT OF WAY PLANTING REQUIREMENTS:  
413' + 502' = 915' LINEAR FEET: 915' / 40' = 23;  
23 X 1 = 23 TREES REQUIRED: 23 X 4 = 92 SHRUBS REQUIRED  
(36) TREES CREDITED FROM EXISTING - 5 OF THESE ARE EVERGREEN.  
(6) TREES PROVIDED BETWEEN PARKING LOT AND STREET.  
(56) SHRUBS PROVIDED WITHIN THE FRONT YARD, PLACED TO SCREEN VEHICLE HEADLIGHTS.
2. SIDE/REAR YARD BUFFER PLANTING REQUIREMENTS:  
503' + 409' = 912' LINEAR FEET: 912' / 40' = 23 TREES REQUIRED: 23 X 4 = 92 SHRUBS REQUIRED  
(151) TREES CREDITED IN NATURALIZED AREA: 28 OF THESE ARE EVERGREEN
2. PARKING LOT TREE REQUIREMENT: (ONLY APPLIES TO NEW PARKING AREAS)  
(13) TOTAL SPACES: 13 / 12 = 1 TREE REQUIRED  
(126) LINEAR FEET: 12600' = 4 TREES: 4 X 4 = 16 SHRUBS REQUIRED  
(6) TREES PROVIDED ADJACENT TO PARKING AREA.  
(9) CANOPY TREES AND (56) SHRUBS.  
PROVIDED TREES AND SHRUBS OVERLAP WITH FRONT YARD BUFFER REQUIREMENTS.
3. (6) TOTAL TREES PROVIDED  
1 OF EVERY 5 (2) TO BE EVERGREEN: 33 EXISTING TREES ARE EVERGREEN  
1 OF EVERY 5 (2) TO BE CANOPY TREES.



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REVISIONS

INITIALS	DATE	COMMENTS

LANDSCAPE PLAN

725 OLD US-27 NORTH  
MARSHALL, MI 49068

LAPHAM ASSOCIATES  
MARSHALL FAMILY BIBLE CHURCH EXPANSION  
TREE AND LANDSCAPING BUFFER PLAN

DATE: 10/16/2019  
DESIGNED BY: JEJ  
CHECKED BY: REF  
DRAWN BY: JEJ  
PROJECT NO: 19041  
SCALE: 1"=25'  
HORIZ: N/A  
VERT: N/A

SHEET  
3 OF 3

# ZONING DISTRICT AMENDMENT APPLICATION

For Changing Zoning District Designation

Fee: \$200

**PROPERTY OWNER NAME (Last, First):** Anderson, Jason

**ADDRESS (House Number and Street):** 430 Rosewood Ave SE

**CITY, STATE, ZIP:** Grand Rapids, MI 49506

**TELEPHONE:** 612-998-4123

**EMAIL ADDRESS:** andersonjason000@gmail.com

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**I would like to rezone my property from** Township **to** MFRD

**because** 425 transfer to City for a proposed multi-family housing development

- **ATTACH A LEGAL DESCRIPTION OF PROPERTY TO THIS FORM**

**ADDRESS OF SUBJECT PROPERTY:** 550 W Hughes St, Marshall, MI 49068

**EXISTING AND PROPOSED USE OF PROPERTY:** Agriculture to Multi-family

**NAME, ADDRESS & PHONE NUMBER OF ALL OTHER PERSONS, FIRMS, etc.  
HAVING A LEGAL CONNECTION TO THE SUBJECT PROPERTY:**

**OWNER'S SIGNATURE:**  **DATE:** 9/8/2022

---

-OFFICIAL USE-

CASE # \_\_\_\_\_ FILING DATE \_\_\_\_\_ FEE PAID \_\_\_\_\_ RCD BY \_\_\_\_\_

APPROVED FOR PC MEETING DATE \_\_\_\_\_



## ITEM

---

**TO:** Joint Planning Commission Members

**FROM:** Eric Zuzga, Director of Community Services

**DATE:** September 13, 2022

**SUBJECT:** 550 West Hughes Multi-Family Proposed Project

The city has been working with a group of developers on a proposed housing project at 550 West Hughes Street (aka 902 S. Kalamazoo). The City Council approved a 425 Transfer agreement with Marshall Township at one of its meetings in August. The proposed project (see attached layout) would encompass 248 units across 5 2-story and 7 3-story buildings. The developers are proposing a mix of market rate and LHTC (low-income tax credits) units. Four acres in the northeast corner of the property will have solar panels installed to provide power to the apartments. We are currently working to identify the costs of extending utilities to the site and exploring traffic issues with MDOT and the county. The City intends to expand the current South Neighborhood Improvement Authority to include the proposed development.

The following criteria are to be used as a guide in determining whether the rezoning should be approved:

- A. The proposed zoning district is more appropriate than any other zoning district, or more appropriate than adding the desired use as a special land use in the existing zoning district.

*There is no existing zoning district and the use is appropriate to comply with reason for the 425 agreement.*

- B. The property cannot be reasonably used as zoned.

*No zoning district at this time due to being previously zoned by the Township.*

- C. The proposed zone change is supported by and consistent with the goals, policies and future land use map of the adopted City Master Plan. If conditions have changed since the plan was adopted, as determined by the Planning Commission, the consistency with recent development trends in the area shall be considered.

*The Marshall community has seen a high demand for new housing to support its existing residents, but also to support projected development and increased employment at the Marshall Mega Site. This need has expanded greatly since the Master Plan was developed*



*and is expected to expand even more in the near future. The Master Plan states that there is a desire to have a mix of housing types for all segments of the population. The City does not currently have any multi-family housing developments proposed so a definite need is being met by this project.*

- D. The proposed zone change is compatible with the established land use pattern, surrounding uses, and surrounding zoning in terms of land suitability, impacts on the environment, density, nature of use, traffic impacts, aesthetics, infrastructure, and potential influence on property values, and is consistent with the needs of the community.

*This area of the City has single family, two-family, and multi-family developments. The location of the proposed project will have an impact on traffic and other infrastructure; however, City staff are working with other units of government to address these concerns. The developer intends to leave the majority of the trees on the riverfront and will address storm water impacts on the site. City staff and the South NIA will be working to expand the necessary utilities to the site and ensure that the site is tied in to existing pedestrian networks ensuring a walkable site. The developer is committed to developing an attractive development that provides walking trails along the river, a multi-sport court, playground, and clubhouse. Staff believes that this will be a positive addition to the community.*

- E. All the potential uses allowed in the proposed zoning district are compatible with the site's physical, geological, hydrological, and other environmental features.

*Staff review has not identified any issues with the features identified in this category. The developers are committed to maintaining the riverfront trees and general aesthetics of the property.*

- F. The change would not severely impact traffic, public facilities, utilities, and the natural characteristics of the area, or significantly change population density, and would not compromise the health, safety, and welfare of the City.

*The project will increase traffic and expand the city's infrastructure to serve the site. Both the water and sewer plants have the capacity to serve this development. Both departments are reviewing the impact to the existing water and sewer mains. Fire and Police Departments have reviewed the project and have not provided any concerns that would affect the health, safety, or welfare of the City. The city is in discussions with the developer about the possible addition of a dog park to the site.*

- G. The rezoning would constitute and create an isolated and unplanned district contrary to the City Master Plan which may grant a special privilege to one landowner not available to others.

*There are other multi-family zoned properties in the vicinity.*

- H. The change of present district boundaries is consistent in relation to existing uses, and construction on the site will be able to meet the dimensional regulations for the proposed zoning district listed in the schedule of regulations.

*There are other multi-family uses/zoning east and north of the proposed site. The conceptual plan meets the dimensional regulations in the MFRD zoning district.*

- I. There was a mistake in the original zoning classification, or a change of conditions in the area supporting the proposed rezoning.

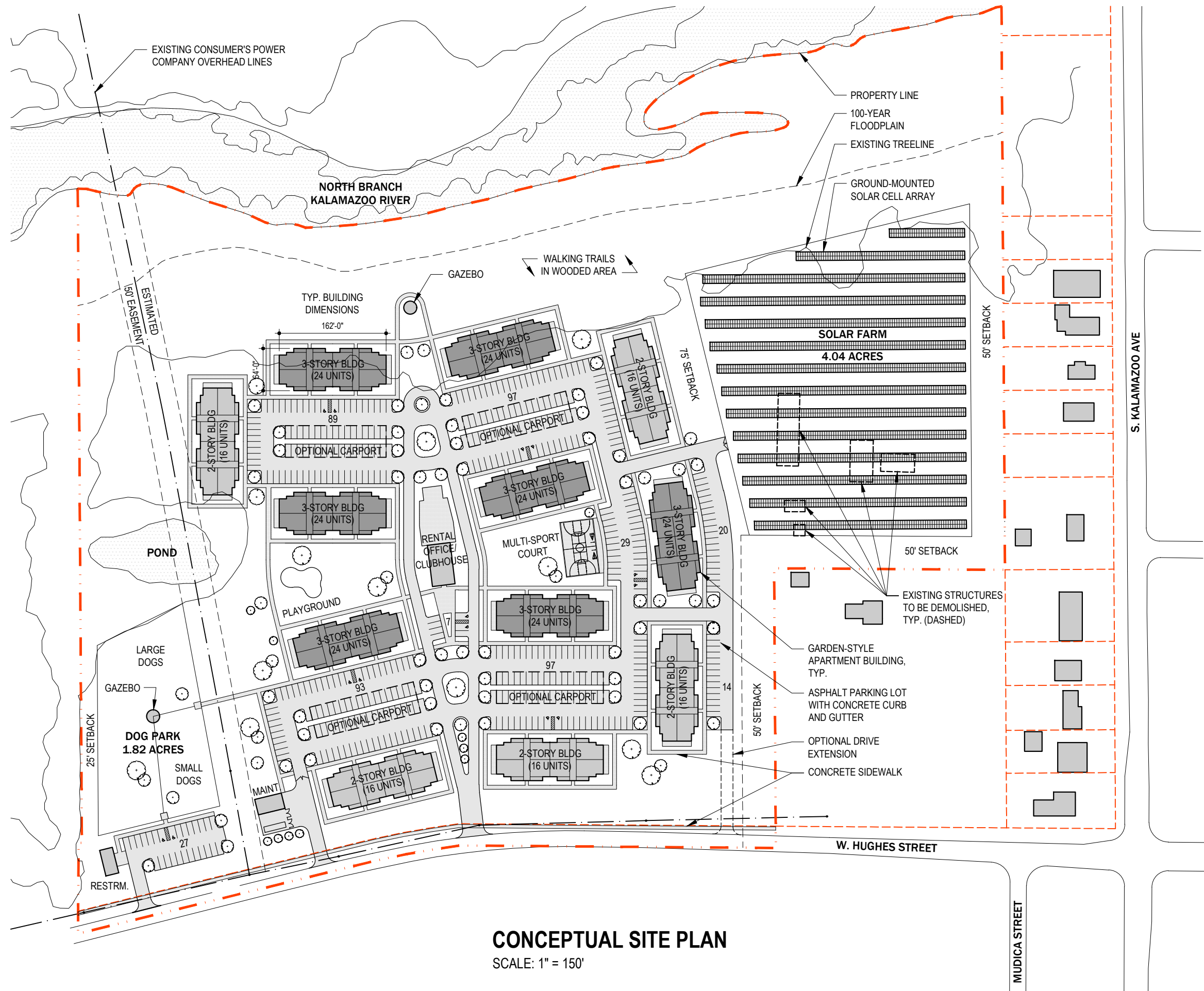
*No mistake was made as there is no existing City zoning on the parcel.*

- J. Adequate sites are neither properly zoned nor available elsewhere to accommodate the proposed uses permitted in the requested zoning district

*Most of the current property zoned for multi-family developments is already developed. As the City is seeing increased employment, there is a larger need for housing.*

**Recommendation:**

Staff are recommending approval of the rezoning request.



**UNIT COUNT**

APARTMENT UNITS:	
TWO-STORY BUILDINGS:	80
THREE-STORY BUILDINGS:	168
TOTAL:	248

**PARKING COUNT**

APARTMENT (REQUIRED):	434
APARTMENT (PROVIDED):	439
OFFICE/CLUBHOUSE:	7
DOG PARK:	27

**UNIT DENSITY**

LOT AREA:	31.67 ACRES
SOLAR FARM:	4.04 ACRES
DOG PARK:	1.82 ACRES
NET LOT AREA:	25.81 ACRES

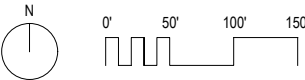
DENSITY: 10.41 UNITS/AC

**BUILDING AREA**

APARTMENT BUILDINGS (EA):	
GROSS TYP FLR PLATE:	9,600 SF
TWO-STORY BLD'G:	19,200 SF
THREE-STORY BLD'G:	28,800 SF

ACCESSORY STRUCTURES:	
MAINTENANCE BLD'G:	1,000 SF
DOG PARK RESTROOMS:	800 SF
OFFICE/CLUBHOUSE:	2,200 SF

**FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION**



**550 W. HUGHES**  
Marshall, MI

Conceptual Site Plan  
26 August 2022

01

**CONCEPTUAL SITE PLAN**

SCALE: 1" = 150'