

**HOWELL TOWNSHIP  
ZONING BOARD OF APPEALS  
REGULAR MEETING**

3525 Byron Road  
Howell, MI 48855  
September 17, 2024  
6:30 pm

1. Call to Order
2. Roll Call:     ( ) Ken Frenger - Chair  
                  ( ) Carol Weaver – Vice Chair  
                  ( ) Jim McEvoy – Secretary  
                  ( ) Jeff Smith – Board Rep.  
                  ( ) Wayne Williams – P.C. Rep.
3. Pledge of Allegiance
4. Approval of the Agenda:
5. Approval of the Minutes:  
   Regular Meeting August 20, 2024
6. Township Board Report:
7. Planning Commission Report:
9. Old Business:
10. New Business:
  - A. Public Hearing: Brandon Sacker, PZBA2024-05,  
Parcel #: 4706-13-300-003, 3300 Oak Grove Rd. Howell, MI 48855.  
**Section 14.07-B Accessory Building Provisions**  
**Request:** 50-foot variance to allow accessory building to be located in front of the rear line of the house.
  
  - B. Public Hearing: Russell Springborn, PZBA2024-06,  
Parcel #: 4706-25-200-048, 100 Springborn Dr. Howell, MI 48855.  
**Section 14.35 Retention or Detention Ponds Located on Adjacent  
Parcels of Land:** Variance to allow detention basin to be located in the 50-foot property setback.
11. Other Business:
12. Call to the Public:
13. Adjournment

**This meeting is open to all members of the public under Michigan’s Open Meetings Act.  
Persons with disabilities who need accommodations to participate in this meeting should contact the Township Clerk’s Office  
at 517-546-2817 at least two (2) business days prior to the meeting.**

HOWELL TOWNSHIP ZONING BOARD OF APPEALS

UNAPPROVED MINUTES: August 20<sup>th</sup> 2024

3525 BYRON RD. HOWELL TOWNSHIP HALL, HOWELL MI 48855 (517-546-2817)

MEMBERS PRESENT:

MEMBERS ABSENT:

Ken Frenger	Chairman
Carol Weaver	Vice Chair
Jim McEvoy	Secretary
Wayne Williams	PC – Rep.
Jeff Smith	Board Rep
Jonathan Hohenstein	Zoning Administrator

Ken Frenger called the meeting to order at 6:30 p.m. The roll was called.

**APPROVAL OF AGENDA:** MOTION by Smith seconded by Weaver, “To Approve the August 20,2024 Zoning Board of Appeals Agenda” Motion carried.

**APPROVAL OF MINUTES:** MOTION by Williams, seconded by Weaver, “To Approve the May 21 ,2024 Zoning Board of Appeals Minutes as Presented” Motion carried.

**TOWNSHIP BOARD REPORT:** Synopsis was given by Smith no questions.

**PLANNING COMMISSION REPORT:** Williams reviewed the minutes from the planning commission meeting. No questions

NEW BUSINESS:

- A. Public Hearing: Rebecca and Dustin Briscoe, **PZBA-2024-04, Parcel # 4706-08-400-017**, 4201 N. Burkhart Rd. Howell, MI 48855 Section 14.07 – **Accessory Building Provisions**

**Request:** Applying for a variance from 14.07-G. to split the existing property leaving the accessory buildings on the vacant lot with the intent to build a house behind the accessory buildings requiring an eight-hundred fifty (850) foot dimensional variance from 14.07-B

Rebecca and Dustin Briscoe, presented the reasons for the request. Discussion between board members and Briscoe’s ensued. Board members raised questions, given guidance from Zoning Administrator on issues of the property split, free standing structures (2 barns), and the potential ramification of the success or failure to complete the intended reason for the variance.

The requested change by the Briscoe’s is based on split being approved; selling the existing Home on 1 (one) acre parcel. The approval of the variance 14.07G and 14.07-B would be required to achieve the desired split, and not have free standing structures (2 barns) on vacant land.

After discuss by board member and Zoning Administrator

For the variance to be approved, there would be a \$5000 (Five thousand dollar) escrow funding,

requirement. This escrow is in the case where the construction (foundation of structure) is not started in a timely manner (approximately 1 year). Escrow funds would be used to destroy the free-standing structures should the house not be built. (not desired outcome.)

In the case of Hardship, failure to sell split parcel, financial distress, unforeseen issues. The Briscoe’s can apply for extension(s), for a “reasonable” period of time. Further an additional remedy would be to rejoin the split properties to their original acreage.

The desire of the board is to keep the appearance of the community intact, which the proposal would accomplish while achieving the Briscoe’s goals of a new home on remaining acreage.

- B. **Motion** to approve **PZBA-2024-04, Parcel # 4706-08-400-017**, 4201 N. Burkhart Rd. Howell, MI 48855 Sections 14.07-G and B is contingent on an escrow being established for the split of acreage of \$5000 (five thousand dollar). Motion Weaver, second McEvoy Roll was called, Williams – Yes, Frenger – Yes, Weaver – Yes, McEvoy – Yes, Smith-Yes: Motion carried. (5-0)

**OLD BUSINESS:**     **None**

**OTHER BUSINESS:** **None**

**CALL TO THE PUBLIC:** **No Response.**

**ADJOURNMENT:** Meeting adjourned at 7:30 P.M.

Approved: \_\_\_\_\_

\_\_\_\_\_

As Presented: \_\_\_\_\_

Jim McEvoy, Secretary

As Amended: \_\_\_\_\_

As Corrected: \_\_\_\_\_

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

**DRAFT**

**HOWELL TOWNSHIP REGULAR BOARD  
MEETING MINUTES**  
3525 Byron Road Howell, MI 48855  
August 12, 2024  
6:30 P.M.

**MEMBERS PRESENT:**

Mike Coddington	Supervisor
Sue Daus	Clerk
Jonathan Hohenstein	Treasurer
Matthew Counts	Trustee
Jeff Smith	Trustee
Harold Melton	Trustee
Bob Wilson	Trustee

**MEMBERS ABSENT:****Also in Attendance:**

14 people were in attendance.

Supervisor Coddington called the meeting to order at 6:30 p.m. The roll was called. Supervisor Coddington requested members rise for the Pledge of Allegiance.

**CALL TO THE BOARD:**

Trustee Melton requested the letter he submitted to be added to the board packet.

**APPROVAL OF THE AGENDA:**

August 12, 2024

**Motion** by Melton, **Second** by Smith, **“To approve the agenda as presented.”** Motion carried.

**APPROVAL OF BOARD MEETING MINUTES:**

July 8, 2024

REGULAR BOARD MEETING MINUTES

**Motion** by Hohenstein, **Second** by Melton, **“To accept the minutes from July 8<sup>th</sup> as presented.”** Motion carried, 1 dissent.

**CALL TO THE PUBLIC:**

Curt Hamilton, 1367 Crestwood Lane: Spoke about the Shiawassee River, EPA report is available, would like it added to the September Board agenda.

Shane Fagan, 30 Santa Rosa Drive: Spoke about Tooley Rd development, sound system installation and Zoning Ordinance Enforcement.

Tim Boal, 66 Santa Rosa Drive: Spoke on Trustee Wilson.

Andrew Hamm, 14 Santa Rosa Drive: Spoke on Tim Boal.

**UNFINISHED BUSINESS:**

A. Salary Resolution- Clerk

Supervisor Coddington noted that at the previous meeting the resolution for the Clerk's salary did not receive support prior to voting on the resolution.

**Motion** by Hohenstein, **Second** by Smith, **"To accept resolution 04.07.24.538 for a 4.2% increase in salary for the Clerk as presented."** Roll call vote: Wilson- no, Hohenstein- yes, Melton- yes, Smith- yes, Daus- yes, Counts- yes, Coddington- yes. Motion carried 6-1.

B. Spicer Engineering Contract- Oak Grove Road Sidewalk

Treasurer Hohenstein discussed the easements to install sidewalks on Oak Grove Road, and the agreement from Spicer Group to proceed with the survey work to be done. Trustee Smith questioned the timeframe to allocate funds for the project. **Motion** by Hohenstein, **Second** by Counts, **"To accept agreement with Spicer Group for the Oak Grove Road sidewalk easement as presented and utilizing ARPA funds to do so."** Motion carried.

**NEW BUSINESS:**

A. Howell Area Parks and Recreation Authority: Tim Church, Executive Director of Howell Parks and Recreation, reported on the failed millage and requesting to continue in supporting Recreation Authority. **Motion** by Hohenstein, **Second** by Smith, **"To continue Township support with the Howell Area Park and Rec. Authority for the benefit of the citizens of Howell Township."** Discussion followed. Motion carried

B. Township Fall Event- Proposal: Treasurer Hohenstein discussed the fall event proposed by Deputy Treasurer Murrish with Township staff providing all supplies. **Motion** by Counts, **Second** by Smith, **"To accept Howell event proposal as presented."** Motion carried.

C. Tooley Road Park- Proposal: Treasurer Hohenstein discussed the Tooley Road Park plan and the end of the year transfer of funds from the Sewer and Water fund to the General fund and the request to transfer that money from the General Fund to the Park and Rec. Fund. A Conservation Easement on the park property was also discussed. **Motion** by Hohenstein, **Second** by Counts, **"To add Deputy Treasurer Teresa Murrish to the Park and Recreation Committee."** Discussion followed. Motion carried, 1 dissent. **Motion** by Hohenstein, **Second** by Smith, **"To accept recommendation to transfer 1.2 million dollars from the General Fund to the Park and Recreation funds for the Tooley Road Park."** Roll Call: Hohenstein- yes, Melton- yes, Wilson- no, Smith- yes, Daus- yes, Coddington- yes, Counts- yes. Motion carried 6-1.

D. Sound System: Trustee Wilson is requesting that the Township seek quotes for a new sound system for the Boardroom. Treasurer Hohenstein discussed adding the audio recording of the Board meetings to the Township website. **Motion** by Wilson, **Second** by Melton, **"To get quotes."** Clarification was requested. **"To get prices on a sound system so we can allow these people to hear, I think six speakers and microphones up here. I'd like to see a video, I'd like to be able to put videos online, other than just mine and Shane's. I'd like to get quotes on a system."** Motion carried.

E. Township Walking Path: Trustee Wilson discussed quotes for mowing the walking path, treatment for spraying the walking path, and leveling the ground around the Township walking path. It was brought to the Board's attention that we already have a contract to mow the Township property and to spray the walking path.

- F. Ordinance Enforcement and General Grievance: Trustee Wilson discussed that he would like to see more personal contact with the Ordinance Officer, does not like how Shane Fagan was violated under the Ordinance. Trustee Wilson would like Trustee Melton to be the Township Zoning Ordinance Officer. Trustee Counts requested that Trustee Wilson provide his evidence including names and addresses of people that have complained to Trustee Wilson about Zoning Administrator Hohenstein.

**CALL TO THE PUBLIC:**

John Mills, 1750 Oak Grove Rd.: Spoke about the Oak Grove Rd. sidewalk, Tooley Rd. Park, sound system for the Boardroom.

Curt Hamilton, 1367 Crestwood Ln.: Spoke about Tooley Rd. Park, Shiawassee River contamination, sound system and posting audio on the Township website.

Shane Fagan, 30 Santa Rosa Dr.: Spoke about Tooley Rd. Park.

Tim Boal, 66 Santa Rosa Dr.: Spoke on Santa Rosa Dr. and civil matters.

Andrew Hamm, 14 Santa Rosa Dr.: Spoke on Santa Rosa Dr. and civil matters.

Jordan Lamb, 1312 Edgebrook Dr.: Spoke on Tooley Rd. Park, sidewalks throughout the Township.

Jeff Demaske, 3180 Warner Rd.: Spoke on Tooley Rd. Park.

Shane Fagan, 30 Santa Rosa Dr.: Spoke on agreement with Trustee Wilson to work on the Township property.

Jeff Demaske, 3180 Warner Rd.: Spoke on Tooley Rd. Park.

Andrew Hamm, 14 Santa Rosa Dr.: Spoke on Tooley Rd. Park.

**REPORTS:**

A. SUPERVISOR:  
No report

B. TREASURER:  
Treasurer Hohenstein reported on the quarterly report from G2G, collection of taxes

C. CLERK:  
No report

D. ZONING:  
See Zoning Administrator Hohenstein's report

E. ASSESSING:  
See Assessor Kilpela's report

F. FIRE AUTHORITY:  
Supervisor Coddington reported on the Fire Authority

G. MHOG:

Trustee Counts reported on MHOG

H. PLANNING COMMISSION:

See draft minutes

I. ZONING BOARD OF APPEALS (ZBA):

No report

J. WWTP:

Treasurer Hohenstein discussed pump station 70, the modification to the MHOG operating agreement needed due to the new storage buildings MHOG is working on, and a project to fix the clarifier scum drains. **Motion** by Hohenstein, **Second** by Counts, **“Move to accept the quote from Kennedy Industries for \$19,825 for a backup pump for station number 70 as presented.”** Discussion followed. Motion carries.

**Motion** by Hohenstein, **Second** by Melton, **“Move to accept the modification to the agreement with MHOG as presented.”** Discussion followed. Motion rescinded due to needing more clarification.

**Motion** by Hohenstein, **Second** by Smith, **“Move to accept the scum drain project from Vince D’Angelo, D’Angelo Brothers, for \$11,971 as presented.”** Motion carried.

H. HAPRA:

No report

I. PROPERTY COMMITTEE:

No report

J. PARK & RECREATION COMMITTEE:

No report. Trustee Wilson inquired as to public comment on the Tooley Road park. It was indicated that public input was sought as part of the Park and Recreation Master Plan.

K. SHIAWASSEE RIVER COMMITTEE:

Supervisor Coddington reported that the Committee have had discussions, EPA report has been received, looking to get a meeting with the Committee members along with the County Drain Commissioner, and EGLE, trying to get an in-depth explanation of the EPA report.

**DISBURSEMENTS: REGULAR PAYMENTS AND CHECK REGISTER:**

**Motion** by Hohenstein, **Second** by Melton, **“Move to accept the disbursements as presented and any normal and customary payments for the month.”** Motion carried.

**ADJOURNMENT:** **Motion** by Counts, **Second** by Smith, **“To adjourn.”** Motion carried. The meeting was adjourned at 8:20 pm.

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Sue Daus, Howell Township Clerk

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Mike Coddington, Howell Township Supervisor

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Tanya Davidson, Recording Secretary



**HOWELL TOWNSHIP**  
**Application for Zoning Board of Appeals**

3525 Byron Road Howell, MI 48855  
 Phone: 517-546-2817 ext. 108  
 Email: inspector@howelltownshipmi.org

File Number: PZBA- 2024-05 Parcel ID: 4706- 13 - 300 - 003 Date 7-30-24

Residential Request, Fee \$400.00

Commercial Request, Fee \$900.00

Owner Name <u>Brandon Sacker</u> Owner Address <u>3300 oak Grove Rd</u>	
Applicant Name <u>Brandon Sacker</u> Applicant Address <u>3300 oak Grove Rd</u>	
Contact Person for all Correspondence <u>Brandon Sacker</u>	
Address <u>3300 oak Grove Rd Howell, MI 48855</u>	
Phone <u>517-231-9099</u> Fax _____	Email <u>brandonsacker@gmail.com</u>
Applicant is: <input checked="" type="checkbox"/> Owner <input type="checkbox"/> Tenant <input type="checkbox"/> Land Contract Purchaser	
<input type="checkbox"/> Other, Explain _____	
<b>Nature of Request</b>	
<input checked="" type="checkbox"/> Application for Variance	<input type="checkbox"/> Appealing Planning Commission Decision
<input type="checkbox"/> Appealing Zoning Administrator Decision	<input type="checkbox"/> Application for Interpretation of Ordinance

General Location of Property <u>3300 oak Grove Rd Howell MI 48855</u>
Between Roads <u>Barron Rd</u> & <u>Old Franklin Rd</u>
Please attach a copy of the legal description of property to the application.
Current Zoning Classification <del>DA</del> <u>SFR</u>

Details of your request and reasons why the request should be granted: The reason for the request is because of the Back property set back is 40 feet. If I were to build it would put the barn under DTE Powerline. The side yard set back is only 10 feet giving me more room to build the maximum size barn on my property

Have previous appeal(s) been made on this property?  No  Yes  
 If yes: Date of appeal n/a Nature of appeal n/a Decision n/a

Appealing the Zoning Administrator's decision?  Yes  No  
 Appealing the Planning Commission's decision?  Yes  No  
 If yes, grounds for appeal:  
n/a  
 Specify ordinance sections which substantiate your reasons for appeal:  
n/a

Requesting an interpretation of the ordinance?  Yes  No  
 If yes, Zoning Ordinance section n/a  
 Applicants interpretation of the Ordinance section (attach any supporting material)  
n/a

Please provide the following:

Zoning Ordinance Section	<u>n/a</u>	
Is this a request for a dimensional variance?	<input checked="" type="checkbox"/> Yes <u>BS</u>	<input checked="" type="checkbox"/> No
Is this a request for a use variance?	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <u>BS</u>
State the minimal acceptable variance being requested	<u>50 Foot</u>	
Date and Decision of Zoning Administrator and/or Planning Commission		

Applicant hereby acknowledges the following (initial each section)

That granting of the variance request will not confer upon the Applicant any special privileges that are denied by the provisions of the ordinance to other lands, under the provisions of the ordinance.	BS
The practical difficulties or unnecessary hardship in the strict application of the ordinance was not created or caused by the Applicant.	BS
The Zoning Board of Appeals cannot grant a variance for a use that is not permissible in the designated zoning district.	BS
The Zoning Board of Appeals has the right to prescribe conditions and safeguards for any variance granted.	BS
The Applicant acknowledges that the use for construction authorized by such variance or permit must be commenced within one year of granting the variance, otherwise the variance is null and void.	BS
No application for a variance which has been denied shall be resubmitted for a period of one year except on grounds of new evidence of change of conditions.	BS
Applicant acknowledges he has read and understands Article XXII entitled "Zoning Board of Appeals."	BS
Applicant grants permission to all ZBA members access to the property to view all relevant areas pertaining to the request.	BS

I hereby depose and say that all the above statements and information contained in this Application and any attachments submitted herein are true and accurate.

*Brandon Sucker*

Owner's Signature

Brandon Sucker

Print Name

7/30/24

Date

Subscribed and sworn to before me this

30<sup>th</sup> day of July 2024

*[Signature]*

Notary Public

Steven Ray Whittaker

Printed Name

Livingston County, Michigan

My Commission expires: 10/23/2025

*Brandon Sucker*

Applicant's Signature

Brandon Sucker

Print Name

7/30/24

Date

Subscribed and sworn to before me this

30<sup>th</sup> day of July 2024

*[Signature]*

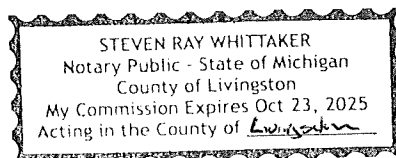
Notary Public

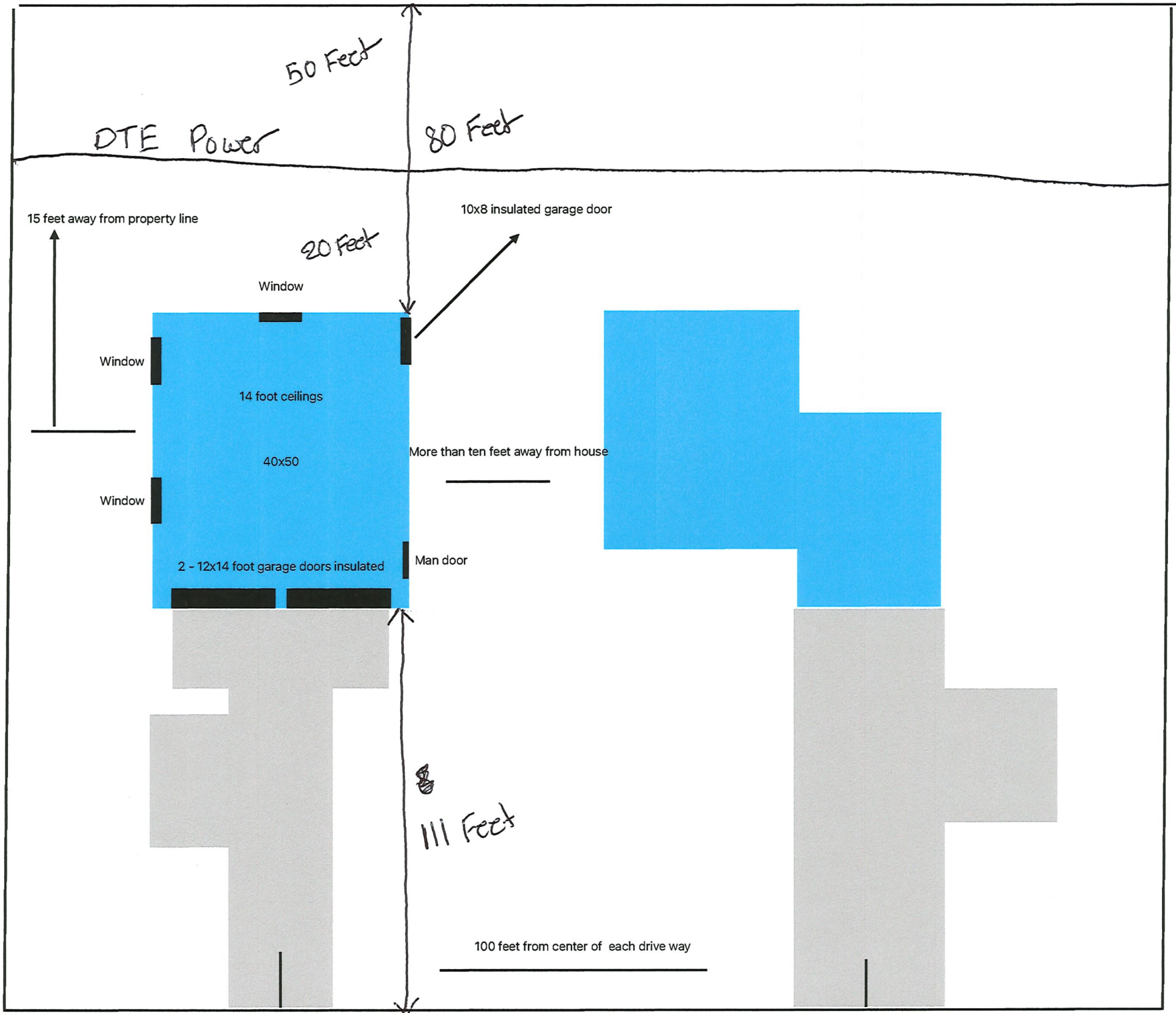
Steven Ray Whittaker

Printed Name

Livingston County, Michigan

My Commission expires: 10/23/2025





50 Feet

DTE Power

80 Feet

15 feet away from property line

10x8 insulated garage door

20 Feet

Window

Window

14 foot ceilings

40x50

More than ten feet away from house

Window

2 - 12x14 foot garage doors insulated

Man door

111 Feet

100 feet from center of each drive way

**APPLICATION AND PERMIT**

to construct, operate, maintain  
use and/or remove within a county  
road right-of-way

Permit Number

**2410-005**

Issuance Date

**8/2/2024**

BOARD OF COUNTY ROAD COMMISSIONERS, of LIVINGSTON COUNTY, MICHIGAN  
ADDRESS: 3535 GRAND OAKS, HOWELL, MICHIGAN 48843-8575  
TELEPHONE: 517-546-4250

If applicant hires a contractor to perform the work, BOTH must complete this form and BOTH assume responsibility for the provisions of this Application and Permit.

APPLICANT	CONTRACTOR
NAME: <b>BRANDON SACKER</b>	NAME: _____
MAILING ADDRESS: <b>3300 OAK GROVE ROAD</b> <b>HOWELL, MI 48855</b>	MAILING ADDRESS: _____ _____ ,
TELEPHONE NO.: <b>(517) 231-9099</b>	TELEPHONE NO.: _____
EMAIL: _____	EMAIL: _____

By receiving this permit electronically, the Property Owner, Contractor and Applicant are hereby accepting the terms and conditions as outlined on the permit and the provided supplemental information.

FINANCIAL REQUIREMENTS	ATTACHMENTS REQUIRED
Application/Permit Fee <b>\$75.00</b>	<u>Proof of Insurance</u>
Receipt Number <b>949768</b>	Insurance Attached: <input type="checkbox"/> Yes <input type="checkbox"/> No
Date <b>7/30/2024</b>	Expiration Date: _____
	LCRC File #: _____

This permit is for the purpose indicated below and in the attached plans and specifications at the following location:

TOWNSHIP Howell SECTION 13  
NAME OF ROAD 3300 OAK GROVE ROAD ( 06-13-300-003 ) Lot # \_\_\_\_\_  
for a period beginning 8/2/2024 and ending 1/29/2025  
and agrees to the terms of the permit.

**PERMIT TO CONSTRUCT A RESIDENTIAL DRIVEWAY APPROACH PER L.C.R.C. SPECIFICATIONS. GRADE AND SLOPE AS SHOWN IN THE ATTACHED SKETCH. PERMIT HOLDER ACKNOWLEDGES SUPPLEMENTAL NOTICE.**  
**A 12"X30' CSP CULVERT IS REQUIRED TO BE PLACED IN THE PUBLIC ROAD RIGHT-OF-WAY. THE CLEAR VISION AREA SHALL BE ESTABLISHED AND MAINTAINED IN PERPETUITY BY THE PROPERTY OWNER(S). SIGHT DISTANCE REQUIRED: 600 FEET NORTH AND SOUTH OF APPROACH. CROSSROAD REFERENCE: 1550 FEET SOUTH OF BARRON ROAD ON THE EAST SIDE.**  
**NOTIFY L.C.R.C. FOR FINAL INSPECTION WITHIN SIX (6) MONTHS OR PERMIT MAY BE REVOKED.**

A permit is granted in accordance with the foregoing application for the period stated above, subject to the following terms agreed to by the Permit Holder. When Applicant hires a Contractor the "Permit Holder" is both the Applicant and the Contractor.

RECOMMENDED FOR ISSUANCE:

BOARD OF COUNTY ROAD COMMISSIONERS  
LIVINGSTON COUNTY, MICHIGAN

KIM HILLER, P.E. Investigator  
8/2/2024 Date \_\_\_\_\_ Title \_\_\_\_\_

By Kim Hiller \_\_\_\_\_

1. All work performed under this permit must be done in accordance with the plans, specifications, maps and statements filed with the Commission and must comply with the Commission's current requirements and specifications on file at its office and M.D.O.T. specifications.
2. **Fees and Costs.**  
Permit Holder shall be responsible for all fees incurred by the Commission in connection with this permit and shall deposit estimated fees and costs as determined by the Commission, at the time the permit is issued.
3. **Bond.**  
Permit Holder shall provide a cash deposit, letter of credit or bond in a form and amount acceptable to the Commission at the time permit is issued.
4. **Insurance.**  
Permit Holder shall furnish proof of liability and property damage insurance in the amount stated on this permit naming the Commission as an insured. Such insurance shall cover a period not less than the term of this permit and shall provide that it cannot be cancelled without ten (10) days advance written notice by certified mail with return receipt required to the Commission.
5. **Indemnification.**  
Permit Holder shall hold harmless and indemnify and keep indemnified the Commission, its officers and employees from all claims, suits and judgments to which the Commission, its officers, or employees may be subject and for all costs and actual attorney fees which may be incurred on account of injury to persons or damage to property, including property of the commission, whether due to the negligence of the Permit Holder or the joint negligence of the Permit Holder and the Commission, arising out of the work under this permit, or in connection with work not authorized by this permit, or resulting from failure to comply with the terms of this permit, or arising out the continued existence of the work product which is the subject of this permit; or any other claim relating to or arising out of the operations, use or continued existence of the work which is the subject of this permit.
6. **Miss Dig.**  
The Permit Holder must comply with the requirements of Act 53 of Public Acts of 1974, as amended. CALL MISS DIG AT (800) 482-7171 AT LEAST THREE (3) FULL WORKING DAYS, BUT NOT MORE THAT TWENTY-ONE (21) CALENDAR DAYS, BEFORE YOU START WORK. Permit Holder assumes all responsibility for damage to or interruption of underground utilities.
7. **Notification of Start and Completion of Work.**  
Permit Holder must notify the Commission at least 48 hours before starting work and must notify the Commission when work is completed.
8. **Time Restrictions.**  
All work shall be performed Mondays through Fridays between 8:00 A.M. and 5:00 P.M. unless written approval is obtained from the Commission, and work shall be performed only during the period set forth in this permit.
9. **Safety.**  
Permit Holder agrees to work under this permit in a safe manner and to keep the area affected by this permit in a safe condition until the work is completed. All work site conditions shall comply with Michigan Manual of Uniform Traffic Control Devices.
10. **Restoration and Repair of Road.**  
Permit Holder agrees to restore the road and right-of-way to a condition equal to or better than its condition before the work began; and to repair any damage to the road right-of-way which is the result of the facility whenever it occurs or appears.
11. **Limitation of Permit.**  
This permit does not relieve Permit Holder from meeting other applicable laws and regulations of other agencies. Permit Holder is responsible for obtaining additional permits or releases which may be required in connection with this work from other government agencies, public utilities, corporations and individuals, including property owners. Permission may be required from the adjoining property owners.
12. **Revocation of Permit.**  
This permit may be suspended or revoked at will, and the Permit Holder shall surrender this permit and alter, relocate or remove its facilities at its expense at the request of the Commission. It is to be understood that the rights granted herein are revocable at the will of this Board and that the Permit Holder acquires no rights in the highway and expressly waives any right to claim damages or compensation in case this permit is revoked. In the event the County Road Commission determines it is in the public interest to widen or make any other improvements to the county road in which this permit is granted, Permit Holder agrees that if, in the course of widening, altering or modifying said road right-of-way and/or the roadbed itself which necessitates changes, modifications, or alterations to the Permit Holder's installation within or outside the existing county road right-of-way, such changes, alterations and modifications will be undertaken promptly upon receipt of a written request from the County Road Commission and without costs or expenses to the County Road Commission. The Permit Holder herein acknowledges that the contents of this paragraph are a substantial portion of the consideration received by the County Road Commission in the issuance of this permit.
13. **Violation of Permit.**  
This permit shall become immediately null and void if Permit Holder violates the terms of this permit and this Commission may require immediate removal of Permit Holder's facilities, or the Commission may remove them without notice at Permit Holder's expense.
14. **Assignability.**  
This permit may not be assigned without the prior approval of the Commission. If approval is granted, the assignor shall remain liable and the assignee shall be bound by all terms of this permit.
15. This permit is subject to supplemental specifications on file with the Road Commission and Act 200 of Public Acts of 1969.
16. **Cooperation With Others.**  
The issuance of this permit does not give the Permit Holder an exclusive right to work within the area covered by this permit. The Permit Holder shall cooperate with others and shall conduct his operations in such a fashion as to cause minimum conflict with and/or inconvenience to others working in area. The work of others does not relieve the Permit Holder of this responsibility to complete the work in accordance with the permit.

**Howell Township  
Zoning Board of Appeals  
Variance Request Staff Report**

July 31, 2024

Applicant: Brandon Sacker  
Property: 4706-13-300-003

Parcel 4706-13-300-003 is a 1.190-acre site situated at the northern end of the Township on Oak Grove Road in the Single Family Residential (SFR) Zoning District. Applicant has submitted a request for a 50-foot dimensional variance to allow an accessory structure to be built in the front of the rear line of the house. The proposed 2000 square foot structure would sit north of the existing house in the side yard, 15 feet off of the northern property line, over 10 feet from the house, and over 100 feet from the front property line; all of which are within the requirements provided by the Township Zoning Ordinances. The proposed structure is depicted as having its own driveway; the applicant will be required to get approval for the driveway from the Livingston County Road Commission. Should the Township receive proof of the driveway approval prior to the meeting it will be included in the ZBA packet.

Respectfully submitted,  
Jonathan Hohenstein



06-13-302-011

ROW

06-13-302-010

06-13-300-014

06-14-400-034

06-13-302-009

OAK GROVE ROAD

06-13-302-008

06-13-300-003

06-13-302-990

06-14-400-033

06-13-302-007

06-13-300-031

06-13-302-006

04/16/2024



**HOWELL TOWNSHIP**  
**Application for Zoning Board of Appeals**

3525 Byron Road Howell, MI 48855  
 Phone: 517-546-2817 ext. 108  
 Email: inspector@howelltownshipmi.org

File Number: PZBA- 2024-06 Parcel ID: 4706-25-200-048 Date 08/20/2024

Residential Request, Fee \$400.00

Commercial Request, Fee \$900.00

Owner Name <u>Springborn Propoerties</u>	Owner Address <u>3535 High Hillcrest Drive</u>
Applicant Name <u>Russ Springborn</u>	Applicant Address <u>3535 High Hillcrest Drive</u>
Contact Person for all Correspondence <u>Russ Springborn</u>	
Address <u>3535 High Hillcrest Drive, Howell MI 48843</u>	
Phone <u>313-350-3358</u>	Fax <u>-----</u> Email <u>russs@springbornproperties.com</u>
Applicant is: <input checked="" type="checkbox"/> Owner <input type="checkbox"/> Tenant <input type="checkbox"/> Land Contract Purchaser	
<input type="checkbox"/> Other, Explain _____	
<b>Nature of Request</b>	
<input checked="" type="checkbox"/> Application for Variance	<input type="checkbox"/> Appealing Planning Commission Decision
<input type="checkbox"/> Appealing Zoning Administrator Decision	<input type="checkbox"/> Application for Interpretation of Ordinance

General Location of Property <u>NE Corner of Oak Grove Road and Highland / M-59</u>
Between Roads <u>Highland / M-59</u> & <u>Union Grove Road</u>
Please attach a copy of the legal description of property to the application.
Current Zoning Classification <u>NSC</u>

Applicant hereby acknowledges the following (initial each section)

That granting of the variance request will not confer upon the Applicant any special privileges that are denied by the provisions of the ordinance to other lands, under the provisions of the ordinance.	<i>RS</i>
The practical difficulties or unnecessary hardship in the strict application of the ordinance was not created or caused by the Applicant.	<i>RS</i>
The Zoning Board of Appeals cannot grant a variance for a use that is not permissible in the designated zoning district.	<i>RS</i>
The Zoning Board of Appeals has the right to prescribe conditions and safeguards for any variance granted.	<i>RS</i>
The Applicant acknowledges that the use for construction authorized by such variance or permit must be commenced within one year of granting the variance, otherwise the variance is null and void.	<i>RS</i>
No application for a variance which has been denied shall be resubmitted for a period of one year except on grounds of new evidence of change of conditions.	<i>RS</i>
Applicant acknowledges he has read and understands Article XXII entitled "Zoning Board of Appeals."	<i>RS</i>
Applicant grants permission to all ZBA members access to the property to view all relevant areas pertaining to the request.	<i>RS</i>

I hereby depose and say that all the above statements and information contained in this Application and any attachments submitted herein are true and accurate.

*Russell Springborn*

Owner's Signature

Russell Springborn

Print Name

08/20/2024

Date

Subscribed and sworn to before me this

20<sup>th</sup> day of August

*Steve Schippers*

Notary Public

STEVE SCHIPPERS

Printed Name

Livingston County, Michigan

My Commission expires: 1-26-28

*Russell Springborn*

Applicant's Signature

Russell Springborn

Print Name

08/20/2024

Date

Subscribed and sworn to before me this

20<sup>th</sup> day of August

*Steve Schippers*

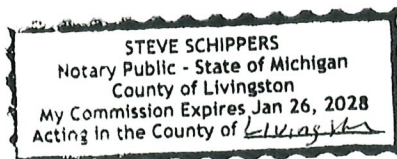
Notary Public

STEVE SCHIPPERS

Printed Name

Livingston County, Michigan

My Commission expires: 1-26-28



## 23-135 SPRINGBORN PROPERTIES - SOAPY BUCKET CARWASH

### VARIANCE NARRATIVE – STORMWATER/DRAINAGE BASIN

We are requesting a 34-foot variance to allow a stormwater detention/drainage basin and its associated sedimentation forebay to be able to be constructed within the 50-ft front yard building setback. This as defined in Section 14.35 'Retention or Detention Ponds Located on Adjacent Parcels of Land' that defines a basin as a 'Structure'.

Section 22.07 Terms Addressed:

- 1) *That special conditions and circumstances exist which are peculiar to the land use, land, structure or building in the same zoning district.*

It is a unique site. It is uniquely shaped, constrained by significant rights-of-way, utilities and easements to the south and west, the open county drain (and associated easement) to the east, and a separately owned parcel to the north. It is uniquely sloped with a highpoint near the north with increasingly steep slopes to the south and east, increasing from 10% to 33%+. Significant grading and retaining walls are required to make the site constructable and with the detention basin needing to be on the low-end of the site where it is most constrained by M-59 and Oak Grove Road associated utilities and easement lines

- 2) *That literal interpretation of the provisions of this ordinance would deprive the applicant of rights commonly enjoyed by other parties in the same zoning district under the provisions of this Ordinance.*

This particular site is further restricted by its proximity to Oak Grove and Highland Road / M-59 that require 50-ft front yard setbacks by special ordinance in lieu of the standard 35-ft setback. The amount of the variance would be reduced by approximately half except for this proximity.

- 3) *That granting of the variance requested will not confer on the applicant any special privilege that is denied by the provisions of this Ordinance to other lands, structures, or buildings in the same zoning district.*

We are asking that the stormwater/drainage system be considered in the context of drainage grading allowed by ordinance or similar to a landscaped berm, another 'designed earthen feature' that is allowed within the front yard setback.

- 4) *That no nonconforming uses of other lands, structures, or buildings in the same zoning district, and not permitted use of lands, structures or buildings in other zoning districts, shall be considered grounds for the issuance of a variance.*

We are not making comparisons to other constructed buildings in the area.

- 5) *Applicants shall also follow the outline of requirements prescribed by the Zoning Board of Appeals when applying for an appeal for an interpretation of or a variance from the provisions or requirements of this Zoning Ordinance.*

In the event of an appeal, we would follow the outline of procedures and requirements in the Zoning Ordinance.

We request that by granting the variance it would be in concurrence with Section 22.07.D 'The Board of Appeals shall further make a finding that the granting of the variance will be in harmony with the general purpose and intent of this Ordinance, and will not be injurious or otherwise detrimental to the public welfare of the zoning district in which it is located'

**PROPERTY DESCRIPTION:**

**GENERAL INFORMATION:**

PARCEL NOS.: [E-1A] 4706-25-200-048 & [D] 4706-25-200-047 (PART)  
 ZONING: NSC (NEIGHBORHOOD SERVICE COMMERCIAL)  
 AREA - GROSS: 8.242 ACRES+ (E-1A)  
 NET: 5.985 ACRES (EXCL. OF OAK GROVE & PRIVATE RD R.O.W.S & DRAIN)

**RECONFIGURED PARCEL "E-1A":**

Part of the Northeast 1/4 and part of the Northwest 1/4 of Section 25, T3N-R4E, Howell Township, Livingston County, Michigan, more particularly described as follows: Commencing at the West 1/4 Corner of Section 25; thence along the West line of Section 25, N 01°27'44" W (recorded as N 00°03'35" W), 1,329.05 feet; thence along the North 1/8 line of Section 25, N 89°45'10" E (recorded as S 88°50'41" E), 1,931.32 feet; thence along the centerline of Oak Grove Road (66 foot wide Right of Way), S 31°35'27" E (recorded as S 30°11'18" E), 635.84 feet, to the POINT OF BEGINNING of the Parcel to be described; thence N 62°17'12" E (recorded as N 63°41'21" E), 680.34 feet; thence N 81°32'13" E (recorded as N 82°56'22" E), 200.18 feet; thence S 62°17'12" W (recorded as S 63°41'21" W), 189.99 feet; thence S 27°42'48" E, 563.44 feet; thence along the East Bank of Bogue Creek the next seven courses, 1) N 85°32'00" W (recorded as N 84°07'51" W), 66.44 feet, 2) S 73°00'34" W (recorded as S 74°24'43" W), 94.50 feet, 3) S 53°07'16" W (recorded as S 54°31'25" W), 61.57 feet, 4) continuing S 53°07'16" W (recorded as S 54°31'25" W), 16.95 feet, 5) S 21°02'57" W (recorded as S 22°27'06" W), 35.05 feet, 6) S 22°13'48" W (recorded as S 23°37'57" W), 62.18 feet, 7) S 01°09'12" E (recorded as S 00°14'57" W), 117.93 feet; thence along the centerline of Hartland Road (so-called in Liber 104, page 183, Livingston County Records), N 86°48'04" W (recorded as N 85°23'55" W), 425.25 feet; thence along the centerline of Oak Grove Road (66 foot wide Right of Way), Northerly along an arc left, having a length of 279.87 feet, a radius of 766.16 feet, a central angle of 20°55'45", and a long chord which bears N 16°38'16" W (recorded as N 15°14'11" W), 278.31 feet; thence N 62°17'12" E (recorded as N 63°41'21" E), 388.80 feet; thence N 27°42'48" W (recorded as N 26°18'39" W), 200.00 feet; thence S 62°17'12" W (recorded as S 63°41'21" W), 400.00 feet; thence N 31°35'27" W (recorded as N 30°11'18" W), 66.15 feet, to the POINT OF BEGINNING, containing 8.242 acres, more or less, and subject to the rights of the public over the existing Oak Grove Road, the center line of Hartland Road, so-called, the parcel's southerly property line, is the North right of way line of M-59 (Highland Road). The center line of Bogue Creek is the center line of a 120 feet wide easement (60 feet on each side of the creek's center line) for the Howell & Oceola County Drain, on file with the Livingston County Drain Commissioner. This parcel is subject to an easement for highway purposes (site distance) at its Southwesterly corner as recorded in Liber 254, Page 94, Livingston County Records. This parcel is subject to a 16.5 feet wide easement for the Bell Telephone Company (Ameritech) being adjacent to, parallel with and lying easterly of the easterly line of Oak Grove Road, 66 feet wide. This parcel is subject to and having the use of a private, 66 feet wide, nonexclusive, ingress, egress, and public/private utilities easement. Also subject to any other easements or restrictions of record.

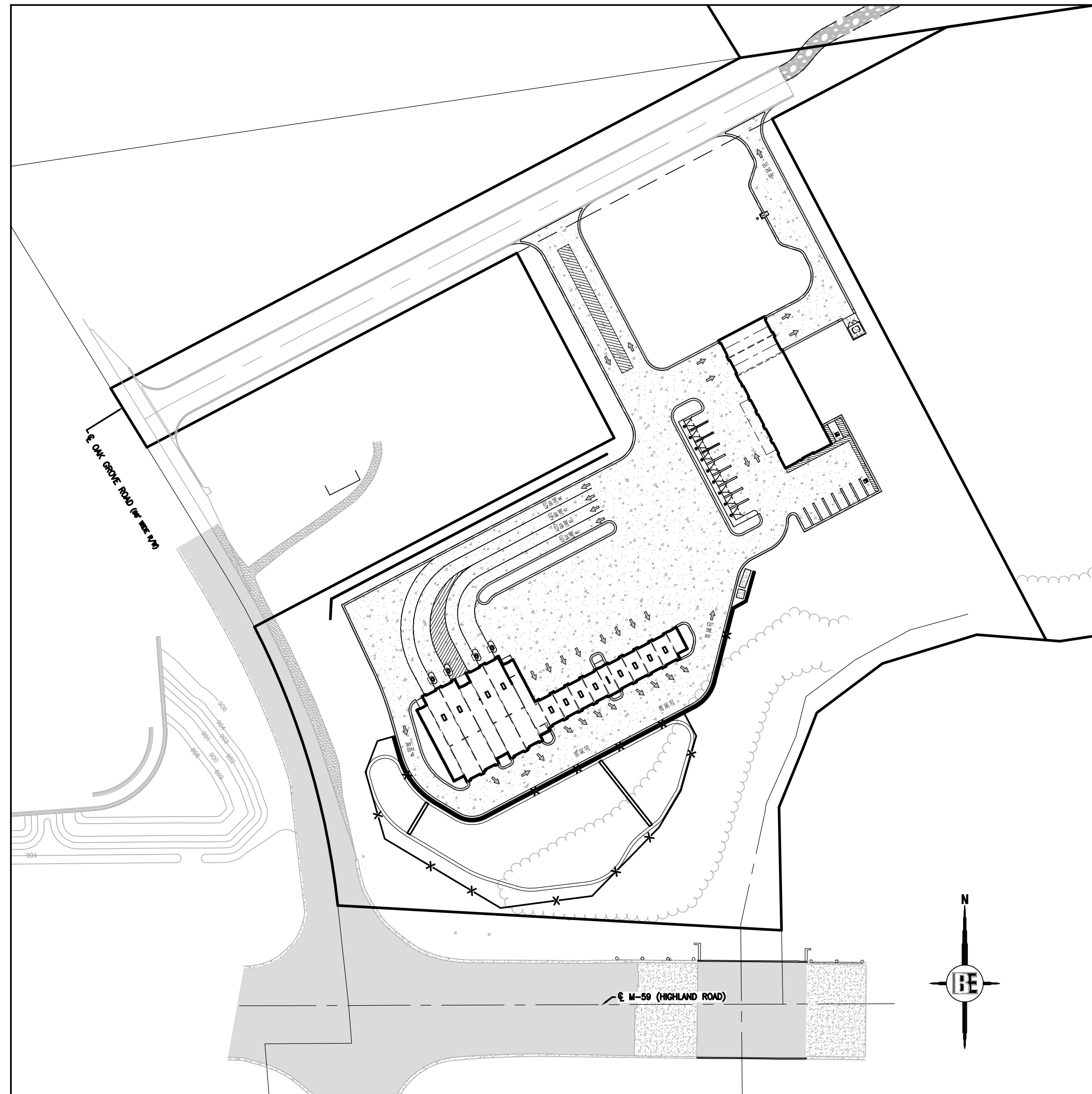
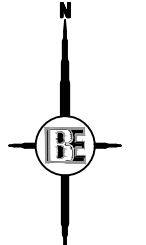
# FINAL SITE PLAN / CONSTRUCTION PLANS FOR SOAPY BUCKET - M-59 & OAK GROVE PART OF NE 1/4 & NW 1/4, SECTION 25, T.3N., R.4E. HOWELL TOWNSHIP, LIVINGSTON COUNTY, MI



FOR INFORMATION REGARDING SANITARY SEWER, SANITARY FORCEMAIN, PUMP STATION, AND WATERMAIN, SEE SOAPY BUCKET OFF SITE UTILITY PLANS UNDER SEPARATE COVER.

**LOCATION MAP**

NOT TO SCALE



**OVERALL SITE MAP**

SCALE: 1"=80'

**PERMITS & APPROVALS**

AGENCY	DATE SUBMITTED	DATE APPROVED
• HOWELL TOWNSHIP	11-21-23	-
• LCDC	11-21-23	-
• MHOG (WATERMAIN)	11-21-23	03-11-24
• SESC	02-29-24	-
• NPDES SESC NOC	-	-
• EGLE - ACT 399	03-22-24	-
• EGLE - PART 41	04-15-24	06-12-24

**Land Use Summary**

Characteristic	Existing Conditions	Proposed Conditions
<b>Total Development Area (ac)</b>	8.23	8.23
<b>Impervious Area (ac)</b>	0.18	3.54
<b>Total Pervious Area (ac)</b>	8.05	4.69
<b>Pervious Area Breakdown by Cover Type</b>		
<i>Meadow/fallow/natural areas (non-cultivated)</i>	0	0
<i>Predominant NRCS Soil Type (A, B, C, or D)</i>	N/A	N/A
<i>Improved areas (turf grass, landscape, row crops)</i>	6.71	3.58
<i>Predominant NRCS Soil Type (A,B,C, or D)</i>	B	B
<i>Wooded Areas</i>	1.34	1.11
<i>Predominant NRCS Soil Type (A,B,C, or D)</i>	C	C
CPVC Volume <i>Calculated</i> (cubic feet)		17519
CPVC Volume <i>Provided</i> (cubic feet)		0
CPRC Volume Provided (cubic feet)		25605

**INDEMNIFICATION STATEMENT**

THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.

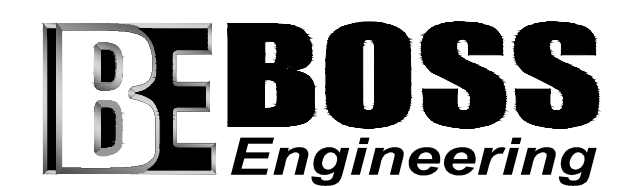
**ARCHITECT:**

LINDHOUT ASSOCIATES ARCHITECTS, AIA, PC  
 10465 CITATION DRIVE  
 BRIGHTON, MI 48116  
 CONTACT: DAVE RICHARDSON  
 DAR@LINDHOUT.COM  
 (810) 227-5668

**PREPARED FOR:**

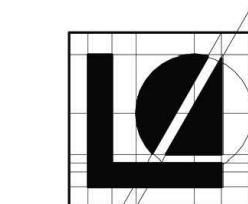
SPRINGBORN PROPERTIES  
 3535 HIGH HILLCREST DRIVE  
 HOWELL, MI 48843  
 CONTACT: MR. RUSS SPRINGBORN  
 PHONE: 313-350-3358  
 EMAIL: RUSS@SPRINGBORNPROPERTIES.COM

**PREPARED BY:**



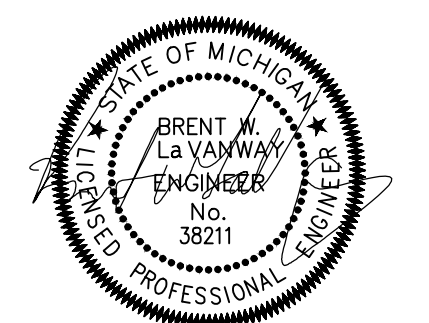
3121 E. GRAND RIVER AVE.  
 HOWELL, MI. 48843  
 517.546.4836 FAX 517.548.1670

CONTACT: PATRICK CLEARY  
 EMAIL: PATRICKC@BOSSENG.COM



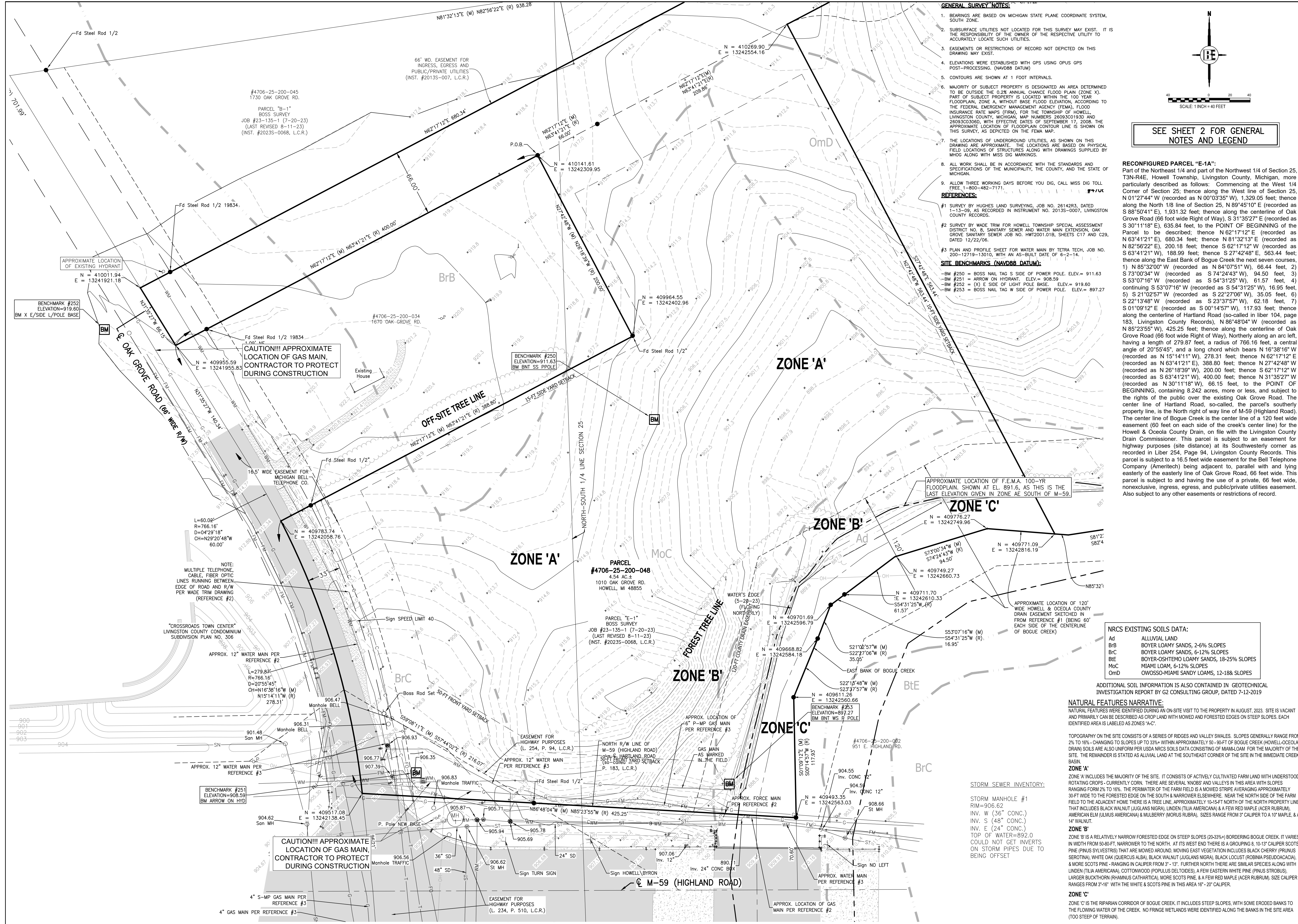
**LIGHTING PREPARED BY:**

GASSER BUSH ASSOCIATES  
 30984 INDUSTRIAL RD  
 LIVONIA, MI 48150  
 QUOTES@GASSERBUSH.COM  
 PHONE: 734-266-6705



NO	BY	CK	REVISION	DATE	JOB NO:
3	NL	PC	PER L.C.D.C., SESC, TWP. ENG., & FIRE DEPT. REVIEW	7/26/24	23-135
2	NL	PC	PROGRESS SET FOR CLIENT	3/18/24	
1	NL	BL	PER L.C.D.C. & TWP. ENGINEER REVIEW	2/29/24	
ISSUE DATE: 11/21/23					1
DATE					





**GENERAL SURVEY NOTES:**

- BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE.
- SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
- EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICTED ON THIS DRAWING MAY EXIST.
- ELEVATIONS WERE ESTABLISHED WITH GPS USING OPUS GPS POST-PROCESSING. (NAVD88 DATUM).
- CONTOURS ARE SHOWN AT 1 FOOT INTERVALS.
- MAJORITY OF SUBJECT PROPERTY IS DESIGNATED AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN (ZONE X). PART OF SUBJECT PROPERTY IS LOCATED WITHIN THE 100 YEAR FLOODPLAIN, ZONE A, WITHOUT BASE FLOOD ELEVATION, ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), FLOOD INSURANCE RATE MAPS (FIRM), FOR THE TOWNSHIP OF HOWELL, LIVINGSTON COUNTY, MICHIGAN, MAP NUMBERS 280300193D AND 280300306D, WITH EFFECTIVE DATES OF SEPTEMBER 17, 2008. THE APPROXIMATE LOCATION OF FLOODPLAIN CONTOUR LINE IS SHOWN ON THIS SURVEY, AS DEPICTED ON THE FEMA MAP.
- THE LOCATIONS OF UNDERGROUND UTILITIES, AS SHOWN ON THIS DRAWING ARE APPROXIMATE. THE LOCATIONS ARE BASED ON PHYSICAL FIELD LOCATIONS OF STRUCTURES ALONG WITH DRAWINGS SUPPLIED BY MISC ALONG WITH MISS DIG MARKINGS.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, THE COUNTY, AND THE STATE OF MICHIGAN.
- ALLOW THREE WORKING DAYS BEFORE YOU DIG, CALL MISS DIG TOLL FREE, 1-800-482-7171.

**REFERENCES:**

- SURVEY BY HUGHES LAND SURVEYING, JOB NO. 26142R3, DATED 1-13-09, AS RECORDED IN INSTRUMENT NO. 20135-007, LIVINGSTON COUNTY RECORDS.
- SURVEY BY WADE TRIM FOR HOWELL TOWNSHIP SPECIAL ASSESSMENT DISTRICT NO. 8, SANITARY SEWER AND WATER MAIN EXTENSION, OAK GROVE SANITARY SEWER JOB NO. HW2001.01B, SHEETS C17 AND C29, DATED 12/22/06.
- PLAN AND PROFILE SHEET FOR WATER MAIN BY TETRA TECH, JOB NO. 200-129-13010, WITH AN AS-BUILT DATE OF 6-2-14.

**SITE BENCHMARKS (NAVD88 DATUM):**

- BM #250 = BOSS NAIL TAG S SIDE OF POWER POLE. ELEV. = 911.63
- BM #251 = ARROW ON HYDRANT. ELEV. = 908.59
- BM #252 = (X) E SIDE OF LIGHT POLE BASE. ELEV. = 919.60
- BM #253 = BOSS NAIL TAG W SIDE OF POWER POLE. ELEV. = 897.27

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

**RECONFIGURED PARCEL "E-1A":**  
 Part of the Northeast 1/4 and part of the Northwest 1/4 of Section 25, T3N-R4E, Howell Township, Livingston County, Michigan, more particularly described as follows: Commencing at the West 1/4 Corner of Section 25; thence along the West line of Section 25, N 01°27'44" W (recorded as N 0°03'35" W), 1,329.05 feet; thence along the North 1/8 line of Section 25, N 89°45'10" E (recorded as S 88°50'41" E), 1,931.32 feet; thence along the centerline of Oak Grove Road (66 foot wide Right of Way), S 31°35'27" E (recorded as S 30°11'18" E), 635.84 feet, to the POINT OF BEGINNING of the Parcel to be described; thence N 62°17'12" E (recorded as N 63°41'21" E), 680.34 feet; thence N 81°32'13" E (recorded as N 82°56'22" E), 200.18 feet; thence S 62°17'12" W (recorded as S 63°41'21" W), 188.99 feet; thence S 27°42'48" E, 563.44 feet; thence along the East Bank of Bogue Creek the next seven courses, 1) N 85°32'00" W (recorded as N 84°07'51" W), 66.44 feet, 2) S 73°00'34" W (recorded as S 74°24'43" W), 94.50 feet, 3) S 53°07'16" W (recorded as S 54°31'25" W), 61.57 feet, 4) continuing S 53°07'16" W (recorded as S 54°31'25" W), 16.95 feet, 5) S 21°02'57" W (recorded as S 22°27'06" W), 35.05 feet, 6) S 22°13'48" W (recorded as S 23°37'57" W), 62.18 feet, 7) S 01°09'12" E (recorded as S 00°14'57" W), 117.93 feet; thence along the centerline of Hartland Road (so-called in liber 104, page 183, Livingston County Records), N 86°48'04" W (recorded as N 85°23'55" W), 425.25 feet; thence along the centerline of Oak Grove Road (66 foot wide Right of Way), Northerly along an arc, having a length of 279.87 feet, a radius of 766.16 feet, a central angle of 20°55'45", and a long chord which bears N 16°38'16" W (recorded as N 15°14'11" W), 278.31 feet; thence N 62°17'12" E (recorded as N 63°41'21" E), 388.80 feet; thence N 27°42'48" W (recorded as N 26°18'39" W), 200.00 feet; thence S 62°17'12" W (recorded as S 63°41'21" W), 400.00 feet; thence N 31°35'27" W (recorded as N 30°11'18" W), 66.15 feet, to the POINT OF BEGINNING, containing 8.242 acres, more or less, and subject to the rights of the public over the existing Oak Grove Road. The center line of Hartland Road, so-called, the parcel's southerly property line, is the North right of way line of M-59 (Highland Road). The center line of Bogue Creek is the center line of a 120 feet wide easement (60 feet on each side of the creek's center line) for the Howell & Oceola County Drain, on file with the Livingston County Drain Commissioner. This parcel is subject to an easement for highway purposes (site distance) at its Southwesterly corner as recorded in Liber 254, Page 94, Livingston County Records. This parcel is subject to a 16.5 feet wide easement for the Bell Telephone Company (Ameritech) being adjacent to, parallel with and lying easterly of the easterly line of Oak Grove Road, 66 feet wide. This parcel is subject to and having the use of a private, 66 feet wide, nonexclusive, ingress, egress, and public/private utilities easement. Also subject to any other easements or restrictions of record.

**NRCS EXISTING SOILS DATA:**

Ad	ALLUVIAL LAND
BrB	BOYER LOAMY SANDS, 2-6% SLOPES
BrC	BOYER LOAMY SANDS, 6-12% SLOPES
BtE	BOYER-OCHTMO LOAMY SANDS, 18-25% SLOPES
MoC	MIAMI LOAM, 6-12% SLOPES
OmD	OWOSSO-MIAMI SANDY LOAMS, 12-18% SLOPES

**NATURAL FEATURES NARRATIVE:**  
 NATURAL FEATURES WERE IDENTIFIED DURING AN ON-SITE VISIT TO THE PROPERTY IN AUGUST 2023. SITE IS VACANT AND PRIMARILY CAN BE DESCRIBED AS CROP LAND WITH MOWED AND FORESTED STEEP SLOPES. EACH IDENTIFIED AREA IS LABELED AS ZONES "A-C".

**TOPOGRAPHY ON THE SITE CONSISTS OF A SERIES OF RIDGES AND VALLEY SWALES. SLOPES GENERALLY RANGE FROM 2% TO 16% - CHANGING TO SLOPES UP TO 33% WITHIN APPROXIMATELY 50-90 FT OF BOGUE CREEK (HOWELL-OCEOLA DRAIN) SOILS ARE ALSO UNIFORM PER USDA NRCS SOILS DATA CONSISTING OF MIAMLOAM FOR THE MAJORITY OF THE SITE. THE REMAINDER IS STATED AS ALLUVIAL LAND AT THE SOUTHEAST CORNER OF THE SITE IN THE IMMEDIATE CREEK BASIN.**

**ZONE 'A':**  
 ZONE 'A' INCLUDES THE MAJORITY OF THE SITE. IT CONSISTS OF ACTIVELY CULTIVATED FARM LAND WITH UNDERSTOOD ROTATING CROPS - CURRENTLY CORN. THERE ARE SEVERAL 'KNOBS' AND VALLEYS IN THIS AREA WITH SLOPES RANGING FROM 2% TO 16%. THE PERIMETER OF THE FARM FIELD IS A MOVED STRIPE AVERAGING APPROXIMATELY 30-FT WIDE TO THE FORESTED EDGE ON THE SOUTH & NARROWER ELSEWHERE. NEAR THE NORTH SIDE OF THE FARM FIELD TO THE ADJACENT HOME THERE IS A TREE LINE, APPROXIMATELY 10-15 FT NORTH OF THE NORTH PROPERTY LINE THAT INCLUDES BLACK WALNUT (JUGLANS NIGRA), LINDEN (TILIA AMERICANA) & A FEW RED MAPLE (ACER RUBRUM), AMERICAN ELM (ULMUS AMERICANA) & MULBERRY (MORUS RUBRA). SIZES RANGE FROM 3" CALIPER TO A 10" MAPLE & A 14" WALNUT.

**ZONE 'B':**  
 ZONE 'B' IS A RELATIVELY NARROW FORESTED EDGE ON STEEP SLOPES (20-33%+) BORDERING BOGUE CREEK. IT VARIES IN WIDTH FROM 50-80 FT, NARROWER TO THE NORTH. AT ITS WEST END THERE IS A GROUPING OF 8, 10-13" CALIPER SCOTS PINE (PINUS SYLVESTRIS) THAT ARE MOVED AROUND, MOVING EAST VEGETATION INCLUDES BLACK CHERRY (PRUNUS SEROTINA), WHITE OAK (QUERCUS ALBA), BLACK WALNUT (JUGLANS NIGRA), BLACK LOCUST (ROBINIA PSEUDOACACIA), & MORE SCOTS PINE - RANGING IN CALIPER FROM 3" - 13". FURTHER NORTH THERE ARE SIMILAR SPECIES ALONG WITH LINDEN (TILIA AMERICANA), COTTONWOOD (POPULUS DELTOIDES), A FEW EASTERN WHITE PINE (PINUS STROBUS), LARGER BURKHORST (RHAMNUS CATHARTICA), MORE SCOTS PINE, & A FEW RED MAPLE (ACER RUBRUM). SIZE CALIPER RANGES FROM 3"-16" WITH THE WHITE & SCOTS PINE IN THIS AREA 16" - 20" CALIPER.

**ZONE 'C':**  
 ZONE 'C' IS THE RIPARIAN CORRIDOR OF BOGUE CREEK IT INCLUDES STEEP SLOPES, WITH SOME ERODED BANKS TO THE FLOWING WATER OF THE CREEK. NO FRINGE WETLANDS WERE IDENTIFIED ALONG THE BANKS IN THE SITE AREA (TOO STEEP OF TERRAIN).

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACTED UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. THE APPROPRIATE LOCATION OF FLOODPLAIN CONTOUR LINE IS SHOWN ON THESE DRAWINGS AS DEPICTED ON THE FEMA MAP.

BE BOSS  
 CALL MISS DIG  
 1-800-482-7171  
 www.beboss.com

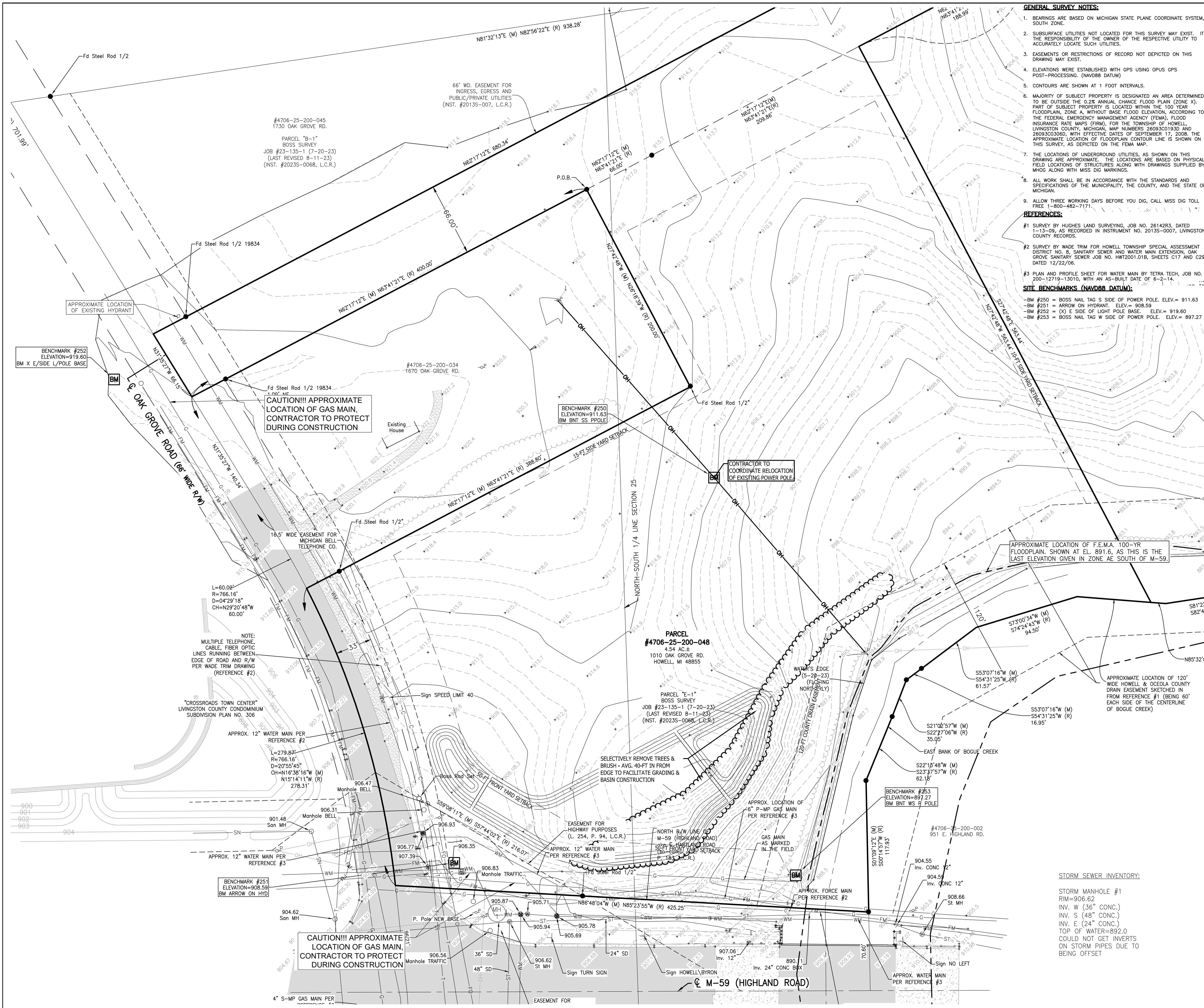
**BEBOSS Engineering**  
 Engineers Surveyors Planners Landscape Architects  
 3121 E. GRAND RIVER AVE.  
 HOWELL, MI. 48843  
 517.546.4836 FAX 517.548.1670

**SOAPY BUCKET - OAK GROVE**  
 SPRINGBORN PROPERTIES  
 3535 HIGH HILLCREST DRIVE  
 HOWELL, MI 48843  
 313-390-3538

**EXISTING CONDITIONS & NATURAL FEATURES PLAN**

NO.	DATE	REVISION PER
3	7/26/24	PC
2	3/19/24	NL
1	2/29/24	NL
0		

DESIGNED BY: PC  
 DRAWN BY: NL  
 CHECKED BY:  
 SCALE: 1" = 40'  
 JOB NO: 23-135  
 DATE: 11/21/23  
 SHEET NO. 3



- GENERAL SURVEY NOTES:**
- BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE.
  - SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
  - EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICED ON THIS DRAWING MAY EXIST.
  - ELEVATIONS WERE ESTABLISHED WITH GPS USING OPUS GPS POST-PROCESSING. (NAVD88 DATUM)
  - CONTOURS ARE SHOWN AT 1 FOOT INTERVALS.
  - MAJORITY OF SUBJECT PROPERTY IS DESIGNATED AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN (ZONE X). PART OF SUBJECT PROPERTY IS LOCATED WITHIN THE 100 YEAR FLOODPLAIN, ZONE A, WITHOUT BASE FLOOD ELEVATION, ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), FLOOD INSURANCE RATE MAPS (FIRM), FOR THE TOWNSHIP OF HOWELL, LIVINGSTON COUNTY, MICHIGAN, MAP NUMBERS 26030C0332 AND 26030C036D, WITH EFFECTIVE DATES OF SEPTEMBER 17, 2008. THE APPROXIMATE LOCATION OF FLOODPLAIN CONTOUR LINE IS SHOWN ON THIS SURVEY, AS DEPICTED ON THE FEMA MAP.
  - THE LOCATIONS OF UNDERGROUND UTILITIES, AS SHOWN ON THIS DRAWING ARE APPROXIMATE. THE LOCATIONS ARE BASED ON PHYSICAL FIELD LOCATIONS OF STRUCTURES ALONG WITH DRAWINGS SUPPLIED BY MRCG ALONG WITH MESS DIG MARKINGS.
  - ALL WORK SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, THE COUNTY, AND THE STATE OF MICHIGAN.
  - ALLOW THREE WORKING DAYS BEFORE YOU DIG, CALL MISS DIG TOLL FREE 1-800-482-7171.
- REFERENCES:**
- SURVEY BY HUGHES LAND SURVEYING, JOB NO. 26142R3, DATED 1-13-09, AS RECORDED IN INSTRUMENT NO. 20135-007, LIVINGSTON COUNTY RECORDS.
  - SURVEY BY WADE TRIM FOR HOWELL TOWNSHIP SPECIAL ASSESSMENT DISTRICT NO. 8, SANITARY SEWER AND WATER MAIN EXTENSION, OAK GROVE SANITARY SEWER JOB NO. HWI2001.01B, SHEETS C17 AND C29, DATED 12/22/06.
  - PLAN AND PROFILE SHEET FOR WATER MAIN BY TETRA TECH, JOB NO. 200-12719-13010, WITH AN AS-BUILT DATE OF 6-2-14.
- SITE BENCHMARKS (NAVD88 DATUM):**
- BM #250 = BOSS NAIL TAG S SIDE OF POWER POLE. ELEV. = 911.63
  - BM #251 = ARROW ON HYDRANT. ELEV. = 908.59
  - BM #252 = (X) E SIDE OF LIGHT POLE BASE. ELEV. = 919.60
  - BM #253 = BOSS NAIL TAG W SIDE OF POWER POLE. ELEV. = 897.27

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

**RECONFIGURED PARCEL "E-1A":**  
 Part of the Northeast 1/4 and part of the Northwest 1/4 of Section 25, T3N-R4E, Howell Township, Livingston County, Michigan, more particularly described as follows: Commencing at the West 1/4 Corner of Section 25, thence along the West line of Section 25, N 01°27'44" W (recorded as N 00°03'35" W), 1,329.05 feet; thence along the North 1/8 line of Section 25, N 89°45'10" E (recorded as S 88°50'41" E), 1,931.32 feet; thence along the centerline of Oak Grove Road (66 foot wide Right of Way), S 31°35'27" E (recorded as S 30°11'18" E), 635.84 feet, to the POINT OF BEGINNING of the Parcel to be described; thence N 62°17'12" E (recorded as N 63°41'21" E), 680.34 feet; thence N 81°32'13" E (recorded as N 82°56'22" E), 200.18 feet; thence S 62°17'12" W (recorded as S 63°41'21" W), 188.99 feet; thence S 27°42'48" E, 563.44 feet; thence along the East Bank of Bogue Creek the next seven courses, 1) N 85°32'00" W (recorded as N 84°07'51" W), 66.44 feet, 2) S 73°00'34" W (recorded as S 74°24'43" W), 94.50 feet, 3) S 53°07'16" W (recorded as S 54°31'25" W), 61.57 feet, 4) continuing S 53°07'16" W (recorded as S 54°31'25" W), 16.95 feet, 5) S 21°02'57" W (recorded as S 22°27'06" W), 35.05 feet, 6) S 22°13'48" W (recorded as S 23°37'57" W), 62.18 feet, 7) S 01°09'12" E (recorded as S 00°14'57" W), 117.93 feet; thence along the centerline of Hartland Road (so-called in Liber 104, page 183, Livingston County Records), N 86°48'04" W (recorded as N 85°23'55" W), 425.25 feet; thence along the centerline of Oak Grove Road (66 foot wide Right of Way), Northerly along an arc line, having a length of 279.87 feet, a radius of 766.16 feet, a central angle of 20°55'45", and a long chord which bears N 16°38'16" W (recorded as N 15°14'11" W), 278.31 feet; thence N 62°17'12" E (recorded as N 63°41'21" E), 388.80 feet; thence N 27°42'48" W (recorded as N 26°18'39" W), 200.00 feet; thence S 62°17'12" W (recorded as S 63°41'21" W), 400.00 feet; thence N 31°35'27" W (recorded as N 30°11'18" W), 66.15 feet, to the POINT OF BEGINNING, containing 8.242 acres, more or less, and subject to the rights of the public over the existing Oak Grove Road. The center line of Hartland Road, so-called, the parcel's southerly property line, is the North right of way line of M-59 (Highland Road). The center line of Bogue Creek is the center line of a 120 feet wide easement (60 feet on each side of the creek's center line) for the Howell & Oceola County Drain, on file with the Livingston County Drain Commissioner. This parcel is subject to an easement for highway purposes (site distance) at its Southwesterly corner as recorded in Liber 254, Page 94, Livingston County Records. This parcel is subject to a 16.5 feet wide easement for the Bell Telephone Company (Ameritech) being adjacent to, parallel with and lying easterly of the easterly line of Oak Grove Road, 66 feet wide. This parcel is subject to and having the use of a private, 66 feet wide, nonexclusive, ingress, egress, and public/private utilities easement. Also subject to any other easements or restrictions of record.

**NRCS EXISTING SOILS DATA:**

Ad	ALLUVIAL LAND
Bb	BOYER LOAMY SANDS, 2-6% SLOPES
Bc	BOYER LOAMY SANDS, 6-12% SLOPES
Be	BOYER-OSHTEMO LOAMY SANDS, 18-25% SLOPES
Mc	MIAMI LOAM, 6-12% SLOPES
OmD	OWOSSO-MIAMI SANDY LOAMS, 12-18% SLOPES

ADDITIONAL SOIL INFORMATION IS ALSO CONTAINED IN GEOTECHNICAL INVESTIGATION REPORT BY G2 CONSULTING GROUP, DATED 7-12-2019

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES. THE CONTRACTOR SHALL BE EXCLUSIVE RESPONSIBLE FOR DETERMINING THE EXACTED UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. THE APPROPRIATE LOCATION OF FLOODPLAIN CONTOUR LINE IS SHOWN ON THIS SURVEY, AS DEPICTED ON THE FEMA MAP.

BEBOSS Engineering  
 Engineers Surveyors Planners Landscape Architects  
 3121 E. GRAND RIVER AVE.  
 HOWELL, MI. 48843  
 517.546.4836 FAX 517.548.1670

**SOAPY BUCKET - OAK GROVE**

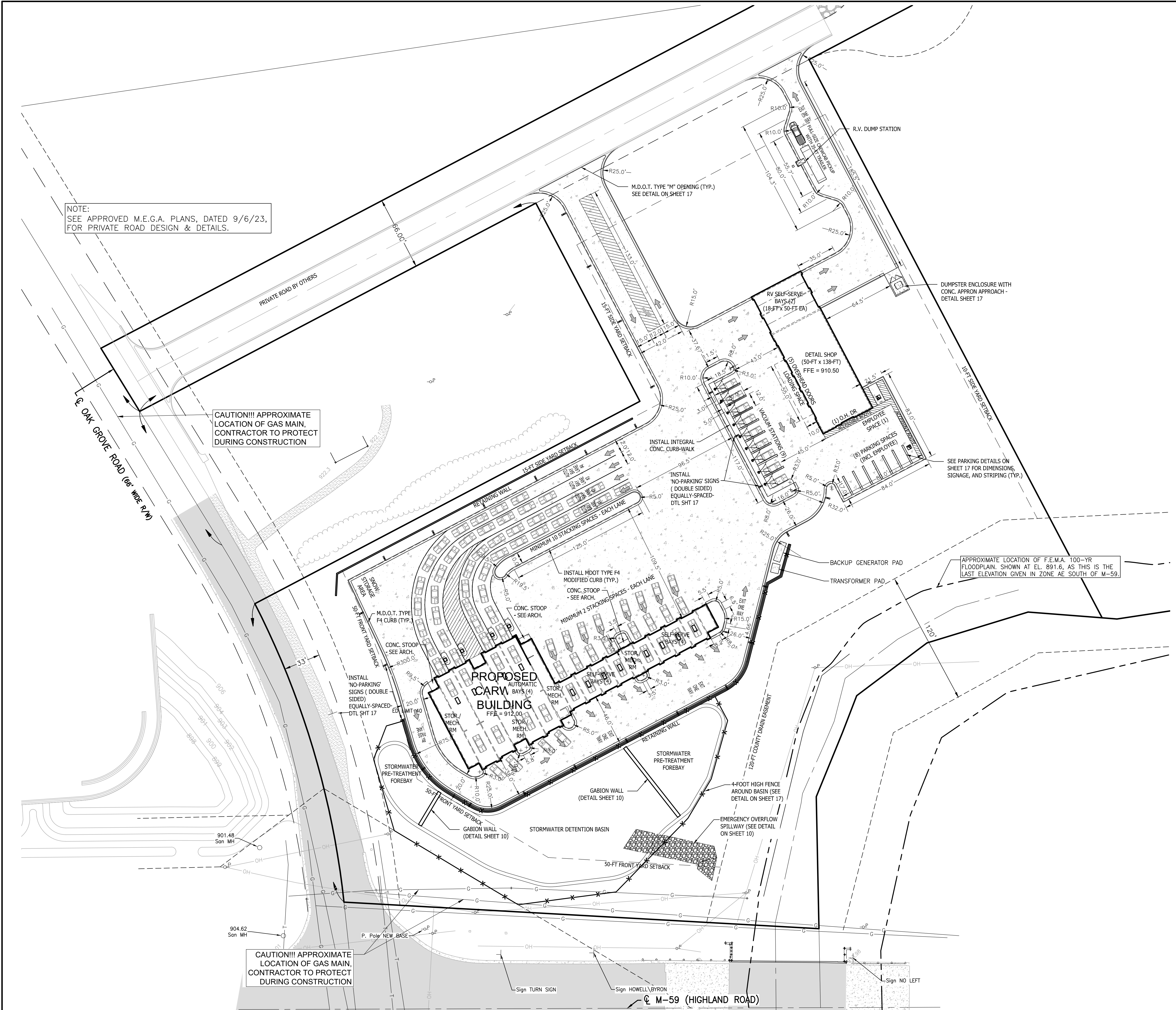
SPRINGBORN PROPERTIES  
 3535 HIGH HILLCREST DRIVE  
 HOWELL, MI 48843  
 313-390-3538

PREPARED FOR

PROJECT

DEMOLITION PLAN

DESIGNED BY:	PC
DRAWN BY:	NL
CHECKED BY:	
SCALE:	1" = 40'
JOB NO:	23-135
DATE:	11/21/23
SHEET NO.	4



SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

**SITE STATISTICAL DATA:**  
 ZONING: 'NSC' - NEIGHBORHOOD SERVICE COMMERCIAL  
 ADJACENT ZONING: 'OS' - NORTH, 'NSC' - EAST, SOUTH & WEST (CITY OF HOWELL - COMMERCIAL)  
 DEVELOPMENT TYPE/USE: CAR WASH (AUTOMATIC & SELF-SERVE BAYS) + DETAIL SHOP (WITH RV SELF-SERVE WASH BAYS)  
 GROSS SITE AREA: 7.07 AC (308,030 SQ.FT.) RECONFIGURED PARCEL + 1.17 AC (50,990 SQ.FT.) PRIVATE ROAD  
 TOTAL GROSS = 8,242 AC (359,020 SQ.FT.)  
 TOTAL NET = 5,985 AC (260,700 SQ.FT.)  
 [EXCLUSIVE OF OAK GROVE & PRIVATE RD. R.O.W.'S & DRAIN]  
 BUILDING #1 SQUARE FOOTAGE (FOOTPRINT): 13,030 SQ.FT. (5.0%)  
 BUILDING #2 SQUARE FOOTAGE (FOOTPRINT): 6,800 SQ.FT. (2.6%)  
 IMPERVIOUS SURFACE (EXCL. OF BUILDING & PRIVATE RD.): 1.93 AC (32.2%)  
 PERVIOUS SURFACE: 3.6 AC (60.2%)

**MIN. SETBACKS REQUIRED:**  
 FRONT: 50-FT (WEST - OAK GROVE)  
 FRONT: 50-FT (SOUTH - M-59)  
 FRONT: 35-FT (NORTH - PRIVATE ROAD)  
 REAR: N.A. (NO ADJACENT ZONED RESIDENTIAL)  
 SIDES: 15-FT (NORTH) & 10-FT (EAST) = TOTAL 25-FT  
 SIDES: 15-FT (WEST) & 10-FT (EAST) = TOTAL 25-FT LOT FLAG TO PRIVATE RD.  
 MIN LOT SIZE: 10,000 SQ.FT.; MIN LOT WIDTH 80 LFT (MUNICIPAL SERVICES)  
 MAX BLDG. HGT: 30-FT (2-STORIES)

**PROPOSED BUILDING #1 - CARWASH WITH AUTOMATIC & SELF-SERVE BAYS:**  
 FRONT (SOUTH): 127.4-FT (MIN.) [54.4-FT MIN. SE TO DRAIN EASEMENT]  
 FRONT (WEST): 84.50-FT (MIN.)  
 REAR: N.A.  
 SIDE (EAST): 101.8-FT (MIN.)  
 SIDE (NORTH): 134.5-FT (MIN.)  
 MAX BLDG. HGT: 28-FT (HALF GABLE HGT.)

**PROPOSED BUILDING #2 - DETAIL SHOP WITH RV SELF-SERVE BAYS:**  
 FRONT (SOUTH): 211-FT (VARIES - MIN.)  
 FRONT (WEST): 487.3-FT (VARIES - MIN FROM OAK GROVE RD)  
 FRONT (NORTH): 163.9-FT (FROM PRIVATE RD)  
 SIDE (WEST): 131.5-FT (FROM PARCEL LEG TO PRIVATE RD)  
 SIDE (EAST): 94.5-FT  
 MAX BLDG HGT: 23-FT (HALF GABLE HGT.)

**PARKING CALCULATION:**  
 CARWASH BUILDING #1 - AUTO AUTOMATIC & SELF-SERVE BAYS:  
 AUTO SERVICE GARAGE EQUIVALENT (NO 'SHOWROOM') = 2 SPACES / 1 BAY + 1 SPACE / EMPLOYEE MAX SHIFT = [8 SELF-SERVE BAYS \* 2] + [4 AUTOMATIC BAYS \* 2] = 24 + 8 = 32 SUBTOTAL SPACES REQUIRED = 32

**LOADING SPACE: MIN 1, 10-FT X 55-FT SPACE REQUIRED**  
 CARWASH BUILDING #2 - DETAIL BUILDING WITH RV SELF-SERVE BAYS:  
 AUTO SERVICE GARAGE EQUIVALENT (NO 'SHOWROOM') = 2 SPACES / 1 BAY + 1 SPACE / EMPLOYEE MAX SHIFT = [2 SELF-SERVE BAYS \* 2] + [6 MAINTENANCE BAYS \* 2] = 4 + 12 = 16 + 1 EMPLOYEE = SUBTOTAL SPACES REQUIRED = 17

**LOADING SPACE: MIN 1, 10-FT X 55-FT SPACE REQUIRED**  
 PROVIDED PARKING: FOR CARWASH BLDG #1: EACH BAY WILL FUNCTION AS THE PATRON PARKING/WORKING SPACE. EACH SELF-SERVE BAY (CAR) IS PROPOSED TO BE COUNTED AS (1) FOR SUBTOTAL OF 8 + EACH AUTOMATIC BAY CONTAINS (2) SEPARATE, ENCLOSED WASH & DRY BAY SECTIONS FOR SUBTOTAL OF 8 + EACH VACUUM BAY WILL ALSO SERVE AS (1) PATRON PARKING/WORKING SPACE FOR SUBTOTAL OF 9 = 25 SUBTOTAL +

FOR CARWASH BLDG #2 (DETAIL SHOP): EACH (1) OVERHEAD DOOR BAY TO COUNT AS (1) PARKING SPACE AS THEY MAY BE USED FOR TYPES OF MAINTENANCE VEHICLE/EQUIPMENT OR PATRON CAR (DETAILING) FOR SUBTOTAL OF (6) + (2) SELF-SERVE BAYS (RV) + 5 ADDITIONAL SPACES + 4 EMPLOYEE ONLY PARKING SPACES (INCL 2 BARRIER-FREE SPACE) = 17 SUBTOTAL = 25 + 17 = TOTAL OF 42 SPACES PROVIDED

**PROVIDED LOADING: 1, 10-FT X 55-FT DESIGNATED AREA PROVIDED - REQUEST WAIVER FOR SECOND LOADING AREA**  
 LOT COVERAGE:  
 60% = MAX. FOR COMBINED BUILDING FOOTPRINT AND IMPERVIOUS SURFACES FOR NSC ZONING DISTRICT (NEIGHBORHOOD SERVICE COMMERCIAL) = 43.01% (3.54 AC / 8.23 AC) PROVIDED

**GENERAL SITE NOTES**  
 1. THE BUILDING ADDRESS SHALL BE A MINIMUM 6" HIGH LETTERS OF CONTRASTING COLORS AND BE CLEARLY VISIBLE FROM THE STREET. THE LOCATION AND SIZE SHALL BE VERIFIED PRIOR TO INSTALLATION.  
 2. A KEY BOX/KNOX BOX SHALL BE LOCATED NEAR THE FRONT ENTRY (FINAL LOCATION TO BE DETERMINED BETWEEN THE OWNER & FIRE MARSHALL).  
 3. ONE SIDE OF THE SITE CIRCULATION ROUTE SHALL BE MARKED AS A FIRE LANE AND SHALL HAVE APPROPRIATE SIGNAGE.  
 4. SITE CIRCULATION ROUTE SHALL BE CONSTRUCTED TO BE CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS WEIGHING AT LEAST 100,000 LBS.  
 5. A MINIMUM VERTICAL CLEARANCE OF 13.5 FEET SHALL BE MAINTAINED THROUGHOUT THE SITE. THIS INCLUDES ENCROACHMENTS FROM LARGE TREE CANOPIES, LIGHTING, ETC.

NOTE:  
 SEE APPROVED M.E.G.A. PLANS, DATED 9/6/23,  
 FOR PRIVATE ROAD DESIGN & DETAILS.

CAUTION!!! APPROXIMATE  
 LOCATION OF GAS MAIN.  
 CONTRACTOR TO PROTECT  
 DURING CONSTRUCTION

APPROXIMATE LOCATION OF F.E.M.A. 100-YR  
 FLOODPLAIN, SHOWN AT EL. 891.6, AS THIS IS THE  
 LAST ELEVATION GIVEN IN ZONE AE SOUTH OF M-59.

CAUTION!!! APPROXIMATE  
 LOCATION OF GAS MAIN.  
 CONTRACTOR TO PROTECT  
 DURING CONSTRUCTION

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES FROM DAMAGE APPARENT OR IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

BEBOSS Engineering  
 Engineers Surveyors Planners Landscape Architects  
 3121 E. GRAND RIVER AVE.  
 HOWELL, MI. 48843  
 517.546.4836 FAX 517.548.1670

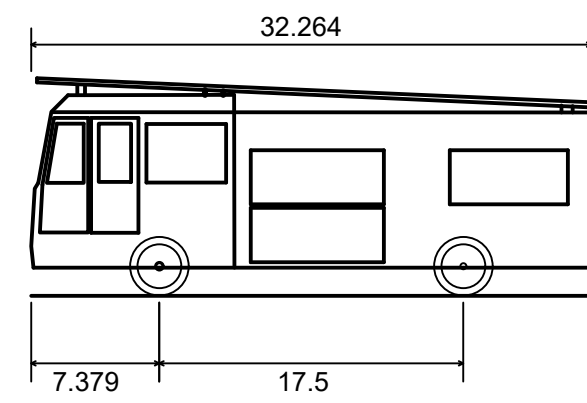
PROJECT: SOAPOY BUCKET - OAK GROVE  
 PREPARED FOR: SPRINGBORN PROPERTIES  
 3339 HIGH HILLCREST DRIVE  
 HOWELL, MI 48843  
 313.350.3358

NO	BY	REVISION PER	DATE
3	NL	L.C.D.C., S.S.C., TWP. ENG. & FIRE DEPT. REVIEW	7/26/24
2	NL	PROGRESS SET FOR CLIENT	3/18/24
1	NL	L.C.D.C. & TWP. ENGINEER REVIEW	2/29/24

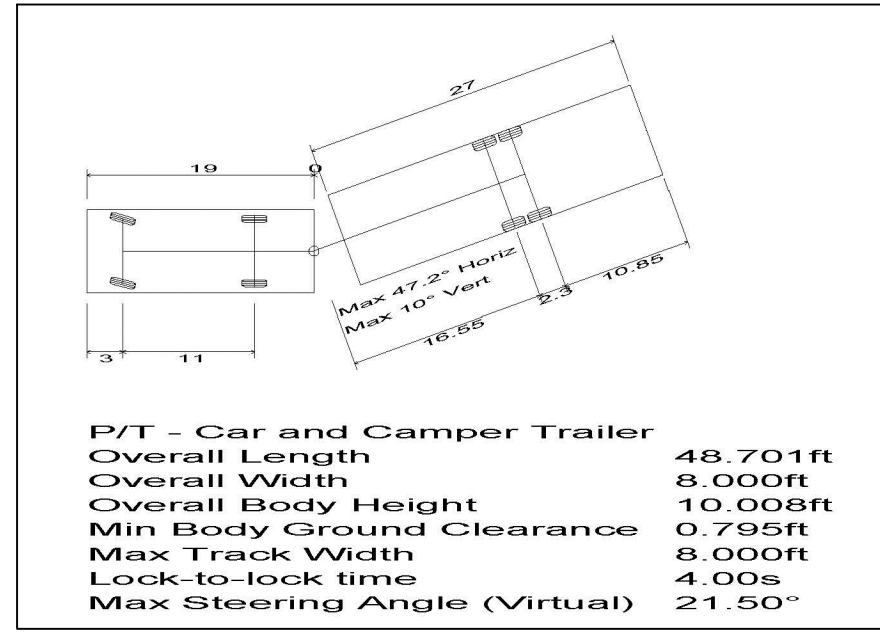
DESIGNED BY: PC  
 DRAWN BY: PC  
 CHECKED BY:  
 SCALE: 1" = 40'  
 JOB NO: 23-135  
 DATE: 11/21/23  
 SHEET NO. 5



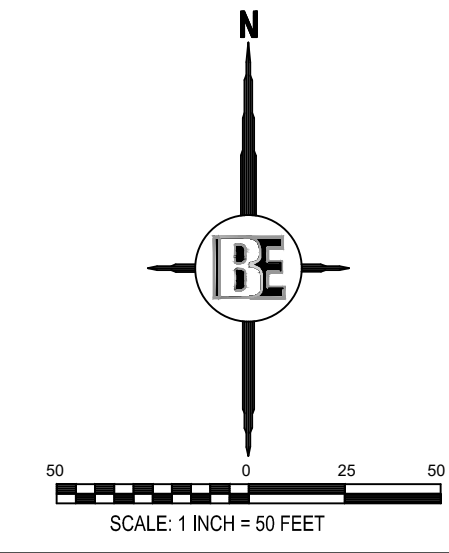
- EMERGENCY CIRCULATION SITE NOTES**
1. THE BUILDING ADDRESS SHALL BE A MINIMUM 6" HIGH LETTERS OF CONTRASTING COLORS AND BE CLEARLY VISIBLE FROM THE STREET. THE LOCATION AND SIZE SHALL BE VERIFIED PRIOR TO INSTALLATION.
  2. A KEY BOX/KNOX BOX SHALL BE LOCATED NEAR THE FRONT ENTRY (FINAL LOCATION TO BE DETERMINED BETWEEN THE OWNER & FIRE MARSHALL).
  3. ONE SIDE OF THE SITE CIRCULATION ROUTE SHALL BE MARKED AS A FIRE LANE AND SHALL HAVE APPROPRIATE SIGNAGE.
  4. SITE CIRCULATION ROUTE SHALL BE CONSTRUCTED TO BE CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS WEIGHING AT LEAST 100,000 LBS.
  5. A MINIMUM VERTICAL CLEARANCE OF 13.5 FEET SHALL BE MAINTAINED THROUGHOUT THE SITE. THIS INCLUDES ENCROACHMENTS FROM LARGE TREE CANOPIES, LIGHTING, ETC.



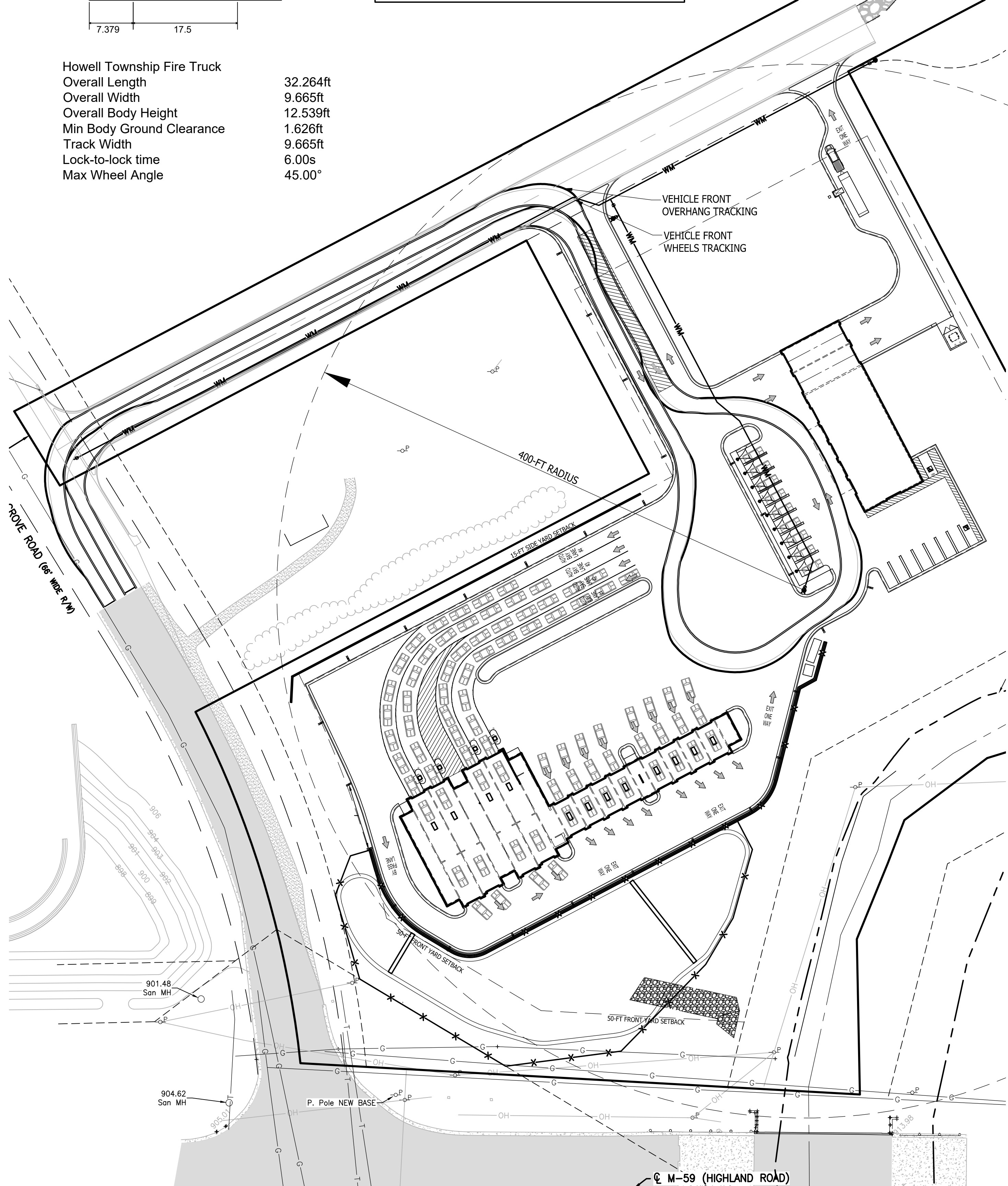
Howell Township Fire Truck  
 Overall Length 32.264ft  
 Overall Width 9.665ft  
 Overall Body Height 12.539ft  
 Min Body Ground Clearance 1.626ft  
 Track Width 9.665ft  
 Lock-to-lock time 6.00s  
 Max Wheel Angle 45.00°



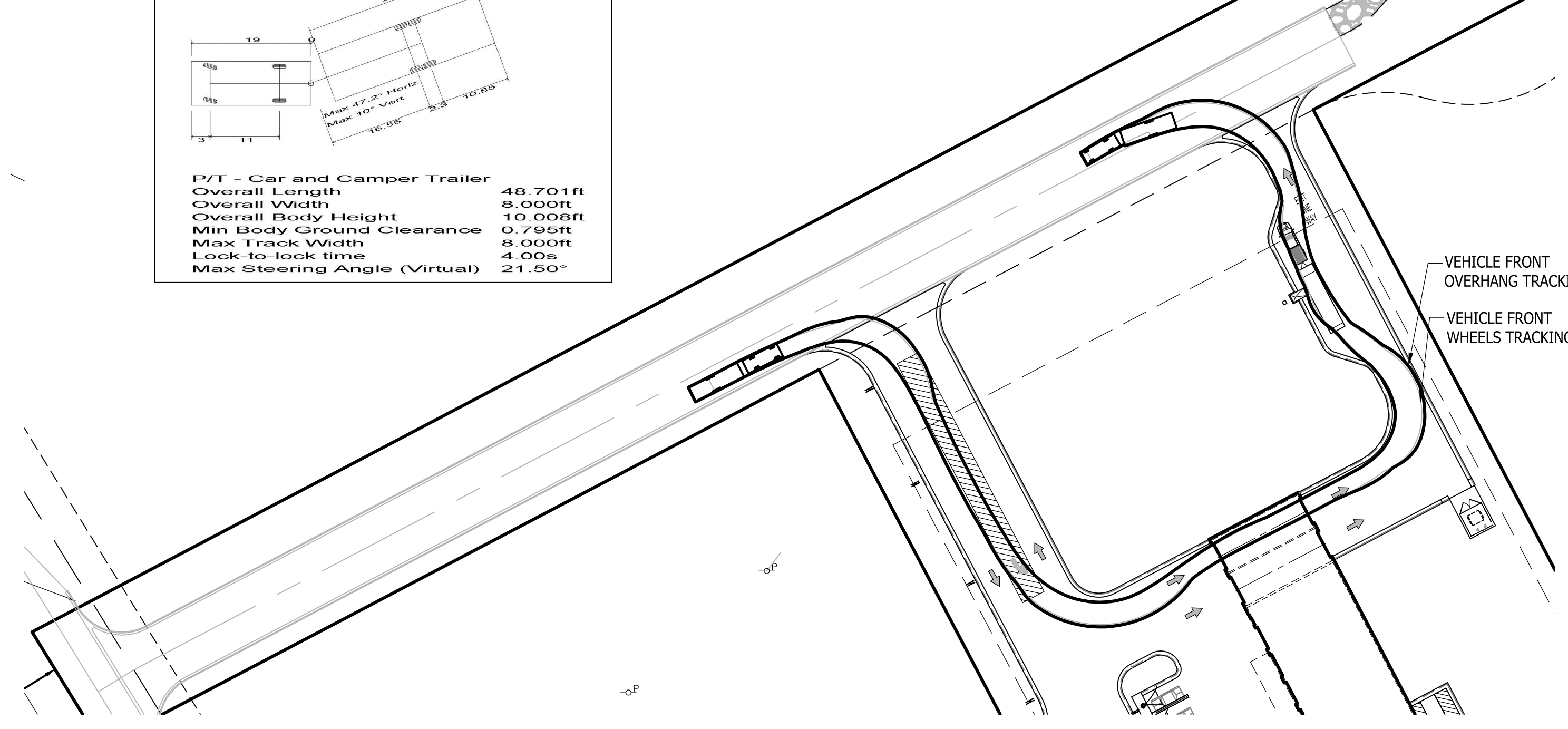
P/T - Gar and Camper Trailer  
 Overall Length 48.701ft  
 Overall Width 8.000ft  
 Overall Body Height 10.008ft  
 Min Body Ground Clearance 0.735ft  
 Max Track Width 8.000ft  
 Lock-to-lock time 4.00s  
 Max Steering Angle (Virtual) 21.50°



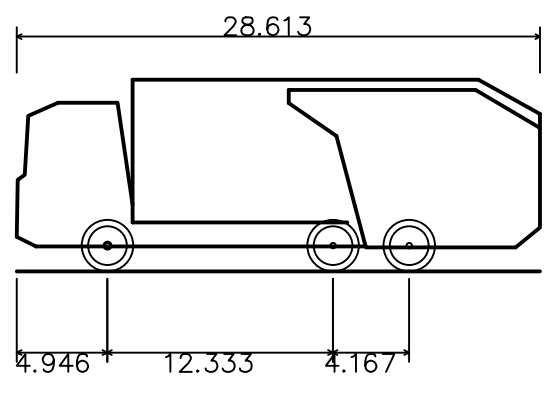
SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



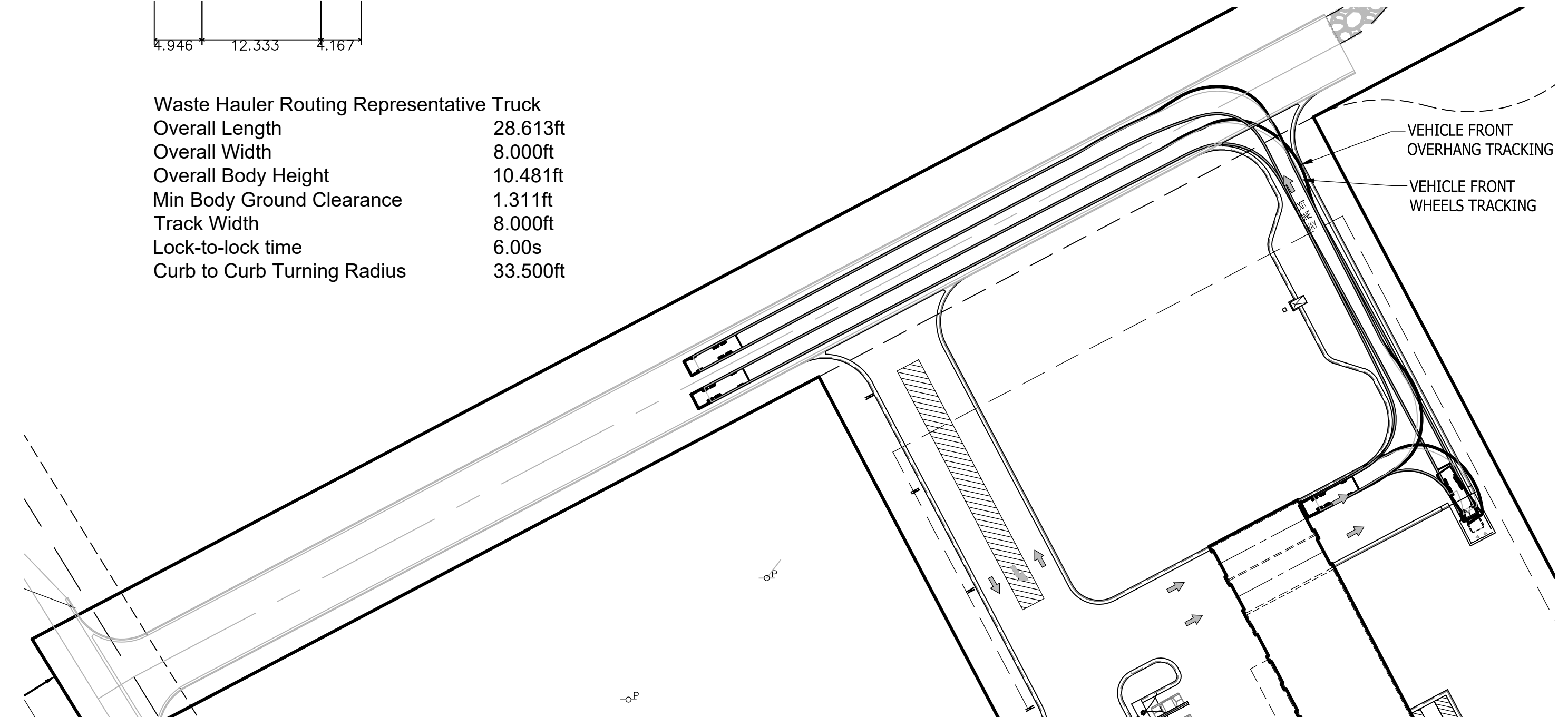
FIRE LADDER TRUCK  
 VEHICLE TRACKING PLAN



FULL-SIZE PICK-UP WITH 30-FT TRAILER  
 VEHICLE TRACKING PLAN



Waste Hauler Routing Representative Truck  
 Overall Length 28.613ft  
 Overall Width 8.000ft  
 Overall Body Height 10.481ft  
 Min Body Ground Clearance 1.311ft  
 Track Width 8.000ft  
 Lock-to-lock time 6.00s  
 Curb to Curb Turning Radius 33.500ft



FRONT LOADING GARBAGE TRUCK  
 VEHICLE TRACKING PLAN

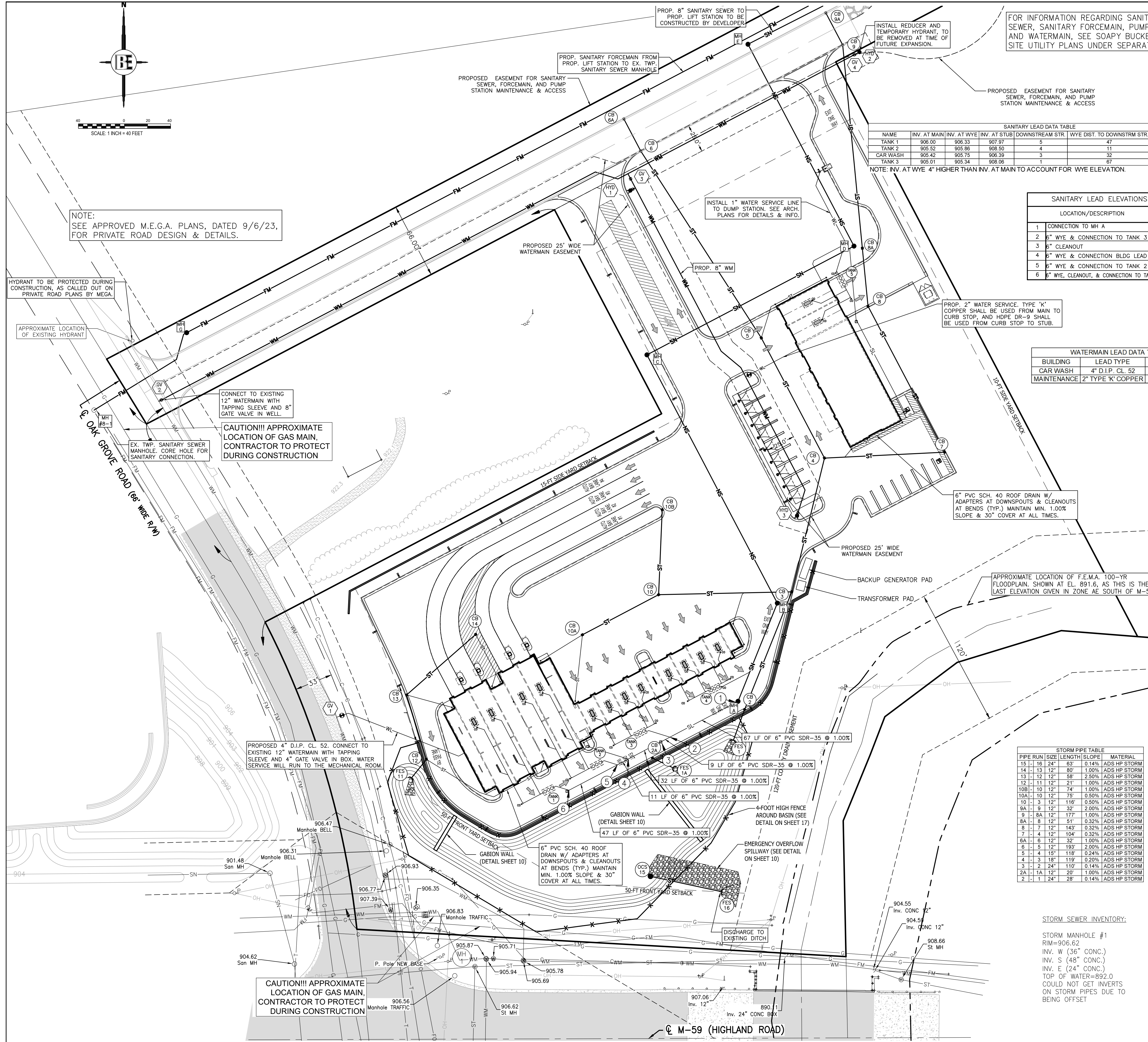
THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO WARRANTIES, EXPRESS OR IMPLIED, ARE MADE BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES OR OTHER PROPERTY CAUSED BY THE CONTRACTOR'S NEGLIGENCE OR INEPTITUDE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES.

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 Engineering  
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 517.546.4836 FAX 517.548.1670

PROJECT: SOAPY BUCKET - OAK GROVE  
 PREPARED FOR: SPRINGBORN PROPERTIES  
 3535 HIGH HILLCREST DRIVE  
 HOWELL, MI 48843  
 313-390-3358

NO	BY	DATE	REVISION PER
3	NL	7/26/24	L.C.D.C., SESS. TMP. ENG. & FIRE DPT. REVIEW
2	NL	3/19/24	PROGRESS SET FOR CLIENT
1	NL	2/29/24	L.C.D.C. & TMP. ENGINEER REVIEW
NO	BY	DATE	REVISION PER

DESIGNED BY: PC  
 DRAWN BY: NL  
 CHECKED BY:  
 SCALE: 1" = 50'  
 JOB NO: 23-135  
 DATE: 11/21/23  
 SHEET NO. 6



**SEE SHEET 2 FOR GENERAL NOTES AND LEGEND**

**SANITARY SEWER BASIS OF DESIGN**

Reference	Units	REU/Unit	REUs
Car Washes (self-service)	Per Howell Twp.	10	2.5
Car Washes (automatic, no conveyor)	Per Howell Twp.	4	10.6
RV Dump Station	Assumed	1	1.0
Bathrooms (toilet & sink only)	Assumed	2	0.5
			<b>TOTAL 69.4</b>

**SANITARY LEAD DATA TABLE**

NAME	INV. AT MAIN	INV. AT WYE	INV. AT STUB	DOWNSTREAM STR.	WYE DIST. TO DOWNSTREAM STR.	SLOPE	LENGTH	RISE
TANK 1	908.00	908.33	907.97	5	47	1.00%	14	1.50
TANK 2	905.52	905.86	908.50	4	11	1.00%	14	2.50
CAR WASH	905.42	905.75	906.39	3	32	1.50%	43	0.00
TANK 3	905.01	905.34	908.06	1	67	1.00%	21	2.50

NOTE: INV. AT WYE 4" HIGHER THAN INV. AT MAIN TO ACCOUNT FOR WYE ELEVATION.

**SANITARY LEAD ELEVATIONS TABLE**

LOCATION/DESCRIPTION	ELEVATION
1 CONNECTION TO MH A	904.34
2 8" WYE & CONNECTION TO TANK 3	905.01
3 8" CLEANOUT	905.10
4 8" WYE & CONNECTION BLDG LEAD	905.42
5 8" WYE & CONNECTION TO TANK 2	905.52
6 8" WYE, CLEANOUT, & CONNECTION TO TANK 1	906.00

**WATERMAIN LEAD DATA TABLE**

BUILDING	LEAD TYPE	LEAD LENGTH
CAR WASH	4" D.I.P. CL. 52	124
MAINTENANCE	2" TYPE 'K' COPPER	52

**Average Flow**

$Q_{avg} = 218 \text{ Gal Per REU per day (Wastewater Collection and Treatment System Ordinance Township of Howell Ord. 21)}$

$Q_{avg} = 15,129 \text{ GPD}$

$Q_{avg} = \frac{15,129 \text{ GPD}}{86,400 \text{ sec}} = 0.1751 \text{ gps}$   $\times \frac{1 \text{ ft}^3}{7.48 \text{ gal}} = 0.0234 \text{ cfs}$

$Q_{avg} = \frac{15,129 \text{ GPD}}{60 \text{ min}} = 252.15 \text{ gpm}$   $\times \frac{1 \text{ ft}^3}{7.48 \text{ gal}} = 33.71 \text{ cfs}$

**Peak Flow**

Peaking Factor =  $\frac{18 + \sqrt{\text{population}/1000}}{4 + \sqrt{\text{population}/1000}}$

In order to determine the population to use in this equation  
Convert the Avg. Daily Flow of 15,129 GPD to equivalent population

Assume: 100 GPCD

Equivalent Population = 15,129 GPD/100 GPCD = 151,292 persons

Peaking Factor =  $\frac{18 + \sqrt{151,292/1000}}{4 + \sqrt{151,292/1000}} = 4.19$

$Q_{peak} = Q_{avg} \times \text{Peaking Factor}$

$Q_{peak} = 252.15 \text{ gpm} \times 4.19 = 1,056.51 \text{ gpm}$  which is equivalent to 0.10 cfs

**CAPACITY OF 8" SANITARY MAIN @ 0.40% SLOPE**  
USE MANNING'S EQUATION

$Q = 1.49 \text{ ft}^3 \text{ s}^{-1} \times A \times R^{2/3} \times S^{1/2}$   
 $Q = (1.49)(0.013) \times (0.349) \times (0.167)^{2/3} \times (0.004)^{1/2}$   
 $Q = 0.766 \text{ CFS}$

**CONCLUSION:**  
SINCE CAPACITY OF THE 8-INCH MAIN AT A SLOPE OF 0.40% IS GREATER THAN PEAK FLOW, AN 8-INCH MAIN IS SUFFICIENT

**STORM STRUCTURE TABLE**

STRUCTURE NAME	STRUCTURE DETAILS	STRUCTURE NAME	STRUCTURE DETAILS
CB 2 4'0" COVER TYPE 'K'2' SUMP N = 409707.78 E = 13242475.04	RIM = 910.62 24" INV N = 904.04 24" INV S = 904.04	CB 10 4'0" COVER TYPE 'D'2' SUMP N = 409807.46 E = 13242400.39	RIM = 910.50 12" INV SW = 906.07 12" INV N = 906.07 12" INV E = 906.07
CB 2A 4'0" COVER TYPE 'K'2' SUMP N = 409865.67 E = 13242395.03	RIM = 911.13 12" INV SE = 904.20	CB 10A 4'0" COVER TYPE 'D'2' SUMP N = 409772.64 E = 13242334.21	RIM = 910.50 6" INV S = 906.95 6" INV SW = 906.95 12" INV NE = 906.45
CB 3 4'0" COVER TYPE 'K'2' SUMP N = 409809.95 E = 13242515.99	RIM = 909.92 18" INV N = 904.59 12" INV W = 905.49 24" INV S = 904.19	CB 10B 2'0" COVER TYPE 'K'2' SUMP N = 409881.24 E = 13242403.49	RIM = 911.08 12" INV S = 906.81
CB 4 4'0" COVER TYPE 'D'2' SUMP N = 409826.01 E = 13242544.35	RIM = 909.75 15" INV NW = 905.03 12" INV E = 905.23 18" INV S = 904.83	CB 12 4'0" COVER TYPE 'K'2' SUMP N = 409864.56 E = 13242198.76	RIM = 909.92 12" INV N = 904.96 6" INV SE = 904.71 12" INV SW = 904.21
CB 5 4'0" COVER TYPE 'D'2' SUMP N = 410030.36 E = 13242489.53	RIM = 909.50 12" INV NW = 905.52 6" INV N = 905.82 15" INV SE = 905.32	CB 13 4'0" COVER TYPE 'K'2' SUMP N = 409720.46 E = 13242181.61	RIM = 911.09 12" INV NE = 906.42 6" INV E = 906.92 12" INV S = 906.42
CB 6 4'0" COVER TYPE 'K'2' SUMP N = 410192.53 E = 13242384.85	RIM = 915.88 12" INV NW = 911.38 12" INV SE = 909.38	CB 14 4'0" COVER TYPE 'D'2' SUMP N = 409773.00 E = 13242241.56	RIM = 911.20 6" INV SE = 907.72 12" INV SW = 907.22
CB 6A 2'0" COVER TYPE 'K'2' SUMP N = 410220.42 E = 13242370.20	RIM = 915.86 12" INV SE = 911.69	FES 1	N = 409681.15 E = 13242465.30
CB 7 4'0" COVER TYPE 'K'2' SUMP N = 409931.12 E = 13242648.69	RIM = 909.42 12" INV NW = 905.57 12" INV W = 905.57	FES 1A	N = 409657.10 E = 13242413.10
CB 8 4'0" COVER TYPE 'K'2' SUMP N = 410057.82 E = 13242582.14	RIM = 909.92 12" INV N = 906.03 12" INV SE = 906.03	FES 11	N = 409648.36 E = 13242185.76
CB 8A 4'0" COVER TYPE 'E'2' SUMP N = 410108.21 E = 13242577.25	RIM = 909.35 12" INV N = 906.19 12" INV S = 906.19	FES 16	N = 409549.71 E = 13242454.90
CB 9 4'0" COVER TYPE 'K'2' SUMP N = 410284.61 E = 13242560.14	RIM = 912.40 12" INV NW = 907.96 12" INV S = 907.96	OCS 15	N = 409549.71 E = 13242454.90
CB 9A 2'0" COVER TYPE 'K'2' SUMP N = 410312.50 E = 13242545.49	RIM = 912.40 12" INV SE = 908.59		

**STORM PIPE TABLE**

PIPE RUN	SIZE	LENGTH	SLOPE	MATERIAL	
15	16	24'	0.14%	ADS HP STORM	
13	12	58'	2.50%	ADS HP STORM	
12	11	21'	1.00%	ADS HP STORM	
10B	10	12'	74'	1.00%	ADS HP STORM
10A	10	12'	75'	0.50%	ADS HP STORM
10	10	12'	116'	0.50%	ADS HP STORM
9A	9	12'	32'	2.00%	ADS HP STORM
9	8A	12'	177'	1.00%	ADS HP STORM
8A	8	12'	51'	0.32%	ADS HP STORM
8	7	12'	143'	0.32%	ADS HP STORM
7	4	12'	104'	0.32%	ADS HP STORM
6A	6	12'	32'	1.00%	ADS HP STORM
6	5	12'	193'	2.00%	ADS HP STORM
5	4	15'	118'	0.24%	ADS HP STORM
4	3	18'	119'	0.20%	ADS HP STORM
3	2	24'	110'	0.14%	ADS HP STORM
2A	1A	12'	20'	1.00%	ADS HP STORM
2	1	24'	28'	0.14%	ADS HP STORM

**STORM SEWER INVENTORY:**

STORM MANHOLE #1  
RIM=906.62  
INV. W (36" CONC.)  
INV. S (48" CONC.)  
INV. E (24" CONC.)  
TOP OF WATER=892.0  
COULD NOT GET INVERTS ON STORM PIPES DUE TO BEING OFFSET

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HOWELL, MI. 48843  
517.546.4836 FAX 517.548.1670

**SOAPOY BUCKET - OAK GROVE**

PROJECT: SPRINGBORN PROPERTIES  
PREPARED FOR: 3535 HIGH HILLCREST DRIVE  
HOWELL, MI 48843  
313-390-3538

TITLE: UTILITY PLAN

NO.	DATE	REVISION PER
3	7/26/24	NL
2	3/18/24	NL
1	2/29/24	NL

DESIGNED BY: PC  
DRAWN BY: NL  
CHECKED BY:  
SCALE: 1" = 40'  
JOB NO: 23-135  
DATE: 11/21/23  
SHEET NO: 7



NOTE:  
SEE APPROVED M.E.G.A. PLANS, DATED 9/6/23,  
FOR PRIVATE ROAD DESIGN & DETAILS.

SEE SHEET 2 FOR GENERAL  
NOTES AND LEGEND

DRAINAGE AREA TABLE				
DRAINAGE AREA	TOTAL AREA (AC)	IMP. AREA (AC)	C VALUE	A <sup>1/4</sup>
2	0.11	0.11	0.90	0.10
2A	0.11	0.10	0.89	0.09
3	0.22	0.21	0.87	0.19
4	0.23	0.22	0.87	0.20
5	0.96	0.38	0.48	0.46
6	0.88	0.18	0.34	0.30
6A	0.17	0.17	0.90	0.15
7	0.20	0.20	0.90	0.18
8	0.19	0.19	0.90	0.17
8A	0.42	-	0.20	0.08
9	0.08	0.08	0.90	0.07
9A	0.08	0.08	0.90	0.07
10	0.28	0.27	0.86	0.24
10A	0.23	0.22	0.85	0.20
10B	0.68	0.25	0.46	0.31
12	0.28	0.25	0.81	0.23
13	0.16	0.06	0.45	0.07
14	0.62	0.41	0.66	0.41
Basin	0.42	-	0.20	0.08
East Forebay	0.14	-	0.20	0.03
West Forebay	0.29	-	0.20	0.06
TOTALS	6.75	3.36	0.55	3.70

**DRAINAGE NARRATIVE:**  
PRE-DEVELOPMENT: THE SUBJECT PROPERTY IS CURRENTLY VACANT. RUNOFF FROM THE EAST PART OF THE PROPERTY SHEET FLOWS DIRECTLY INTO THE COUNTY DRAIN ON THE EAST SIDE OF THE PROPERTY. RUNOFF FROM THE WEST PART OF THE PROPERTY SHEET FLOWS TO A SWALE ON THE NORTH SIDE OF M-59, WHICH THEN FLOWS TO THE COUNTY DRAIN ON THE EAST SIDE OF THE SITE. RUNOFF FROM THE SINGLE FAMILY LOT NORTH OF THE PROPERTY SHEET FLOWS THROUGH THE PROPERTY TO THE SWALE AND COUNTY DRAIN.  
POST-DEVELOPMENT: TWO FOREBAYS AND A DETENTION BASIN ARE PROPOSED TO BE GRADED TO HANDLE THE SITE RUNOFF. THE FOREBAYS AND BASIN ARE SIZED TO HANDLE THE FLOW FROM THE INCREASED IMPERVIOUS SURFACE AREA ON THE PROPERTY. RUNOFF FROM THE WEST PART OF THE PROPERTY WILL SHEET FLOW TO CATCH BASINS AND BE CONVEYED THE WEST FOREBAY THROUGH STORM SEWERS. RUNOFF FROM THE EAST PART OF THE PROPERTY, AND FROM THE PRIVATE ROAD TO THE NORTH OF THE DEVELOPMENT, WILL SHEET FLOW TO CATCH BASINS, WHERE THE RUNOFF WILL THEN BE CONVEYED TO THE EAST FOREBAY THROUGH STORM SEWERS. BOTH FOREBAYS WILL OUTLET TO A DETENTION BASIN THROUGH GABION WALLS. AN OUTLET CONTROL STRUCTURE IN THE BASIN WILL ULTIMATELY DISCHARGE TO THE SWALE ON THE SOUTH SIDE OF THE SITE, AT A POINT OUTSIDE OF THE M.D.O.T. RIGHT-OF-WAY.

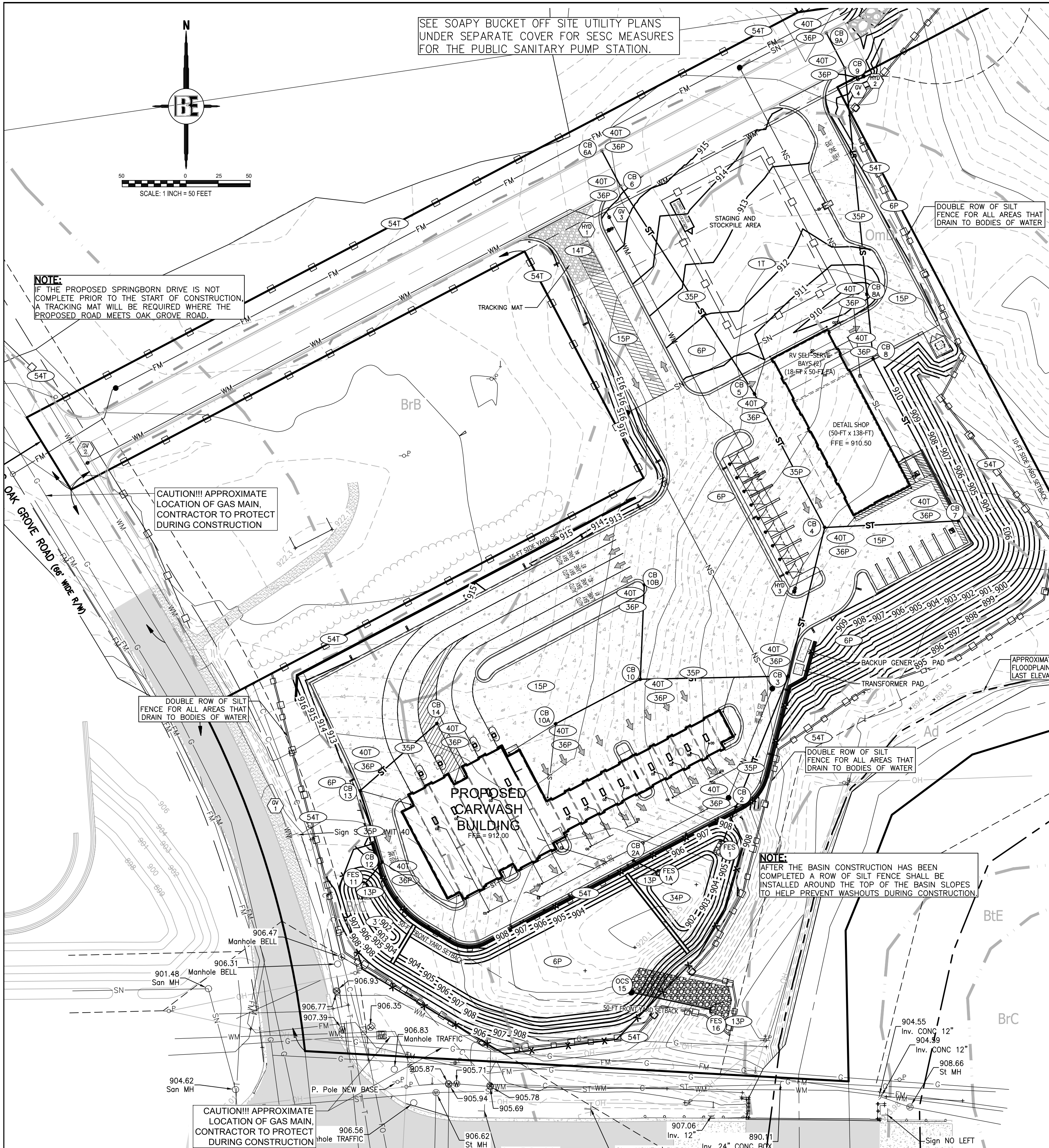
**SITE BENCHMARKS (NAVD88 DATUM):**  
-BM #250 = BOSS NAIL TAG S SIDE OF POWER POLE. ELEV. = 911.63  
-BM #251 = ARROW ON HYDRANT. ELEV. = 908.59  
-BM #252 = (X) E SIDE OF LIGHT POLE BASE. ELEV. = 919.60  
-BM #253 = BOSS NAIL TAG W SIDE OF POWER POLE. ELEV. = 897.27

**STORM SEWER INVENTORY:**  
STORM MANHOLE #1  
RIM=906.62  
INV. W (36" CONC.)  
INV. S (48" CONC.)  
INV. E (24" CONC.)  
TOP OF WATER=892.0  
COULD NOT GET INVERTS ON STORM PIPES DUE TO BEING OFFSET

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO WARRANTIES OR GUARANTEES ARE MADE BY THE CONTRACTOR. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

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HOWELL, MI. 48843  
517.546.4836 FAX 517.548.1670

PROJECT	SOAPY BUCKET - OAK GROVE
PREPARED FOR	SPRINGBORN PROPERTIES 3335 HIGH HILLCREST DRIVE HOWELL, MI 48843 313-390-3358
TITLE	GRADING & DRAINAGE PLAN
DESIGNED BY:	NL
DRAWN BY:	NL
CHECKED BY:	
SCALE:	1" = 40'
JOB NO:	23-135
DATE:	11/21/23
SHEET NO.	8

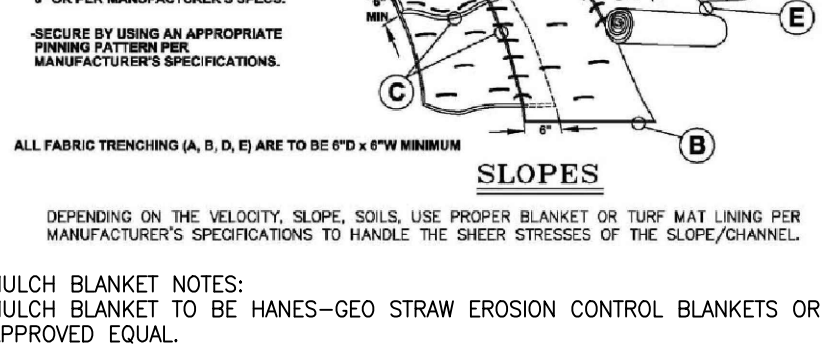
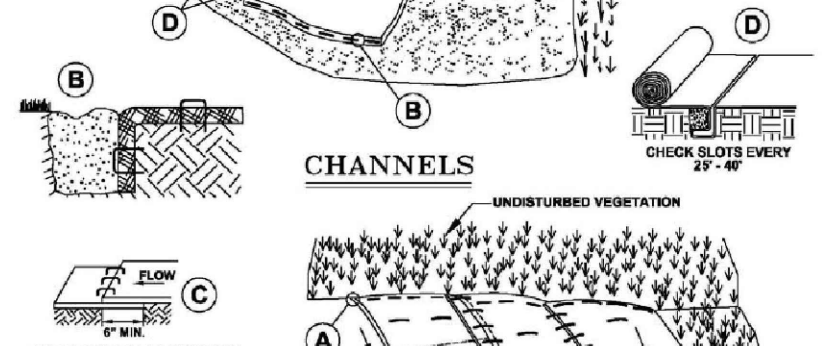
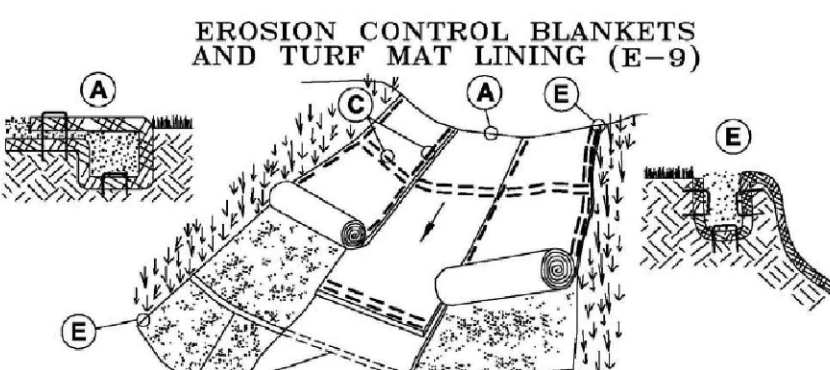


### SOIL EROSION CONTROL MEASURES

1	STRIPPING & STOCKPILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A EMERSON PROTECTIVE COVER. TOPSOIL SHOULD BE TEMPORARILY SEEDED.
6	SEEDING WITH MULCH AND/OR MATING	FACILITATES ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR DRAPAGEMENTS WITH LOW VELOCITY. SEEDS PLACED IN SMALL QUANTITIES BY NONTERRITORY PERSONNEL SHOULD INCLUDE PREPARADO TOPSOIL BED.
13	SEED WHERE VEGETATION IS NOT EASILY ESTABLISHED	EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATIONS. FERTILIZER SHOULD BE APPLIED TO MAINTAIN SOIL NUTRIENT LEVELS AT SYSTEM OUTLETS.
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, THIS MINIMIZES EROSION. PERMITS CONSTRUCTION TRAFFIC IN ADVERSE WEATHER. NOT BE USED AS PART OF PERMANENT EROSION CONTROL MEASURES.
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF 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 DRAINAGE.
34	SEMENT PILES	SEMENT PILES RELEASES RUNOFF AT NON-ROSE RATES. CONTROLS RUNOFF AT SYSTEM OUTLETS.
35	STRIP STRAW	STRIP STRAW REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS. CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF. CONDUCTS RUNOFF TO MUNICIPAL SYSTEM OR STABILIZED OUTLET LOCATION. SEE DETAILS RELATIVE TO COLLECT SYSTEM.
36	EXTRA BERM, DRAIN MAT	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF. MAY USE FILTER CLOTH OVER MAT.
40	INLET SEDIMENT FILTER	EASY TO SHAPE. COLLECTS SEDIMENT. MAY BE CLEANED AND EXPANDED AS NEEDED.
51	RETAINING WALL	RETAINS EXISTING VEGETATION, KEEPING SOIL STABLE IN CRITICAL SLOPES. MAINTAINANCE.
54	SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY. (SEE DETAIL THIS SHEET)

T = TEMPORARY, P = PERMANENT  
**TOTAL DISTURBED AREA = 5.89 AC.**  
 (OFF SITE UTILITIES AND SOAPY BUCKET SITE)

NOTE: ANY DEWATERING REQUIRED SHALL HAVE A DEWATERING PLAN SUBMITTED PRIOR TO STARTING THE ACTIVITY AND MAY REQUIRE EGLE APPROVAL.



MULCH BLANKET NOTES:  
 MULCH BLANKET TO BE HANES-GEO STRAW EROSION CONTROL BLANKETS OR APPROVED EQUAL.

- BEFORE PLACING, PREPARE THE SOIL SURFACE BY RAKING, SEEDING, AND FERTILIZING. MAKE SURE SURFACE HAS NO RILLS, GULLIES, OR VOIDS THAT WILL CAUSE THE BLANKET NOT TO BE IN CONTACT WITH THE GROUND.
- FOLLOW MANUFACTURER'S SPECIFICATIONS IN THE PLACEMENT OF STAPLES/STAKES TO SECURE THE BLANKET TO THE SLOPE.
- ALL ANCHORING TRENCHES, OVERLAPS, OR CHECK SLOTS SHALL BE 6" MINIMUM.
- PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED TO INSURE THAT THE EROSION CONTROL BLANKETS AND TURF MAT LINING OPERATE EFFICIENTLY.

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

**LIVINGSTON COUNTY SOIL EROSION PERMIT TEMPLATE**  
**TEMPORARY CONTROLS AND SEQUENCE**

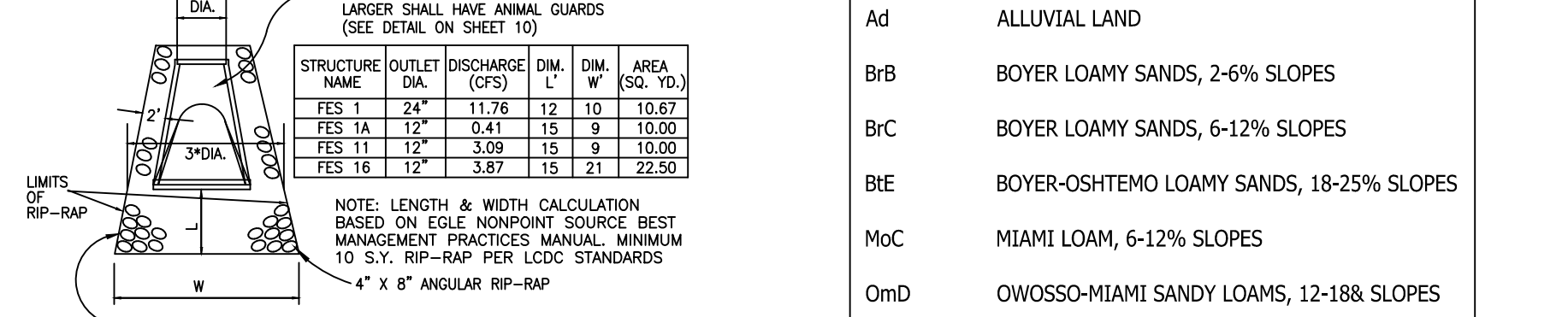
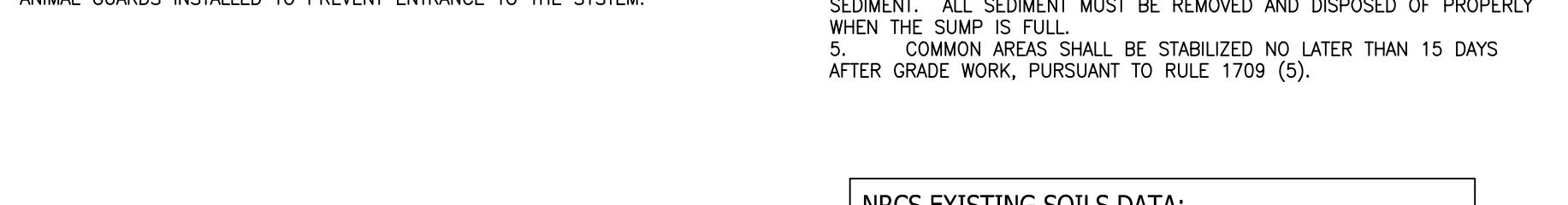
- NOTIFY LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE 24 HOURS PRIOR TO START OF GRADE WORK.
  - IN ACCORDANCE WITH PUBLIC ACT NO. 53, OF 1974 THE PERMIT HOLDER SHALL CALL MISS DIG FOR STAKING AND LOCATING OF UTILITIES, AT LEAST 72 HOURS IN ADVANCE OF THE START OF ANY WORK.
- PERMITTING STANDARDS
- (IMPORTANT NOTICE) RETENTION/DETENTION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. INGRESS/EGRESS MUST HAVE LARGE CRUSHED ROCK TO REDUCE THE TRACKING OF SOIL ONTO THE PUBLIC TRAFFIC AREAS. SEE DETAIL ITEMS BELOW.
  - 36" M.D.O.T SPECIFICATION TYPE SILT FABRIC FENCE AS SHOWN ON PLANS SHALL BE PLACED AND MAINTAINED ALONG PERIMETER ON ALL LOW LYING AREAS OF THE CONSTRUCTION SITE TO FILTER RUNOFF BEFORE LEAVING PROJECT SITE.
  - ALL TEMPORARY EROSION CONTROL DEVICES AS NOTED ON PLANS SHALL BE INSTALLED PRIOR TO THE START OF MASSIVE EARTH DISTRIBUTION.
  - PLAN DOES DENOTE A DETAILED EROSION CONTROL DEVICE FOR THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE. IF REQUIRED, THIS WORK SHALL BE DONE BY A PROFESSIONAL SEWER CLEANING FIRM AND CERTIFIED IN WRITING BY THE PROJECT ENGINEER. ALL SUMPS AND TEMPORARY SILT TRAPS SHALL ALSO BE CLEANED AT THIS TIME.

- RETENTION PONDS
- RETENTION/DETENTION/SEDIMENTATION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
  - DETENTION POND OUTLETS SHALL BE OF THE STANDPIPE AND TACKED WITH TRASH SCREEN. OUTLET FLOW SHALL NOT EXCEED 0.20 CUBIC FEET OF WATER PER SECOND/PER ACRE. POND DIKES SHALL HAVE A MINIMUM OF ONE (1) FOOT OF FREEBOARD. AN EMERGENCY SPILLWAY SHALL BE CONSTRUCTED WITHIN THE FREEBOARD LEVEL.
  - THE EMERGENCY SPILLWAY FROM THE DETENTION POND SHALL BE SODDED AND PEGGED, OR RIP RAPPED, 15 FEET PAST THE TOE OF THE SLOPE OF THE BERM.
  - DIKES AND BERMS SHALL BE FREE OF ALL ORGANIC MATTER.
  - RETENTION/DETENTION PONDS SHALL BE FENCED WITH A 4' CHAIN LINK FENCE, INCLUDING A 12' ACCESS GATE FOR MAINTENANCE UNLESS MINIMUM 5 FT. HORIZONTAL TO 1 FT. VERTICAL SIDE SLOPES ARE PROVIDED. THE FENCE SHALL BE INSTALLED AT THE OUTER PORTION OF THE BERM, TO ALLOW FOR MAINTENANCE WORK TO BE DONE INSIDE THE FENCE.
  - ALL UNIMPROVED DISTURBED AREAS SHALL BE STRIPPED OF TOPSOIL WHICH WILL BE STORED ONSITE DURING THE EXCAVATING STAGE. TOPSOIL PILES SHALL BE SEEDED AND MULCHED, OR MATED WITH STRAW IN THE NON-GROWING SEASON, IMMEDIATELY AFTER THE STRIPPING PROCESS IS COMPLETED, TO PREVENT WIND AND WATER EROSION.
  - SOIL EROSION CONTROLS SHALL BE MONITORED DAILY BY THE ON-SITE ENGINEER, OR CONTRACTOR, WHICHEVER CASE APPLIES.

- SLOPES AND DITCHES
- ON SITE DITCHES SHALL BE OF THE FLAT BOTTOM TYPE MINIMUM WIDTH OF 2' WITH A MINIMUM OF 3' HORIZONTAL TO 1' VERTICAL SIDE SLOPES, 3:1.
  - DITCHES WITH STEEP SLOPES WILL NEED FLOW CHECKS TO PREVENT SCOURING OF THE DITCH BOTTOM. THESE SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR INSPECTOR.
  - SLOPES IN EXCESS OF 3' HORIZONTAL TO 1' VERTICAL SHALL NOT BE USED EXCEPT WITH A MECHANICAL DEVICE SUCH AS A RETAINING WALL, TERRACING, OR OTHER PERMITTED DEVICE.

- STORM DRAINS
- ALL STORM WATER STRUCTURES, CATCH BASINS AND/OR MANHOLES, IF BLOCK SHALL BE PLASTERED ON BOTH THE INSIDE AND OUTSIDE OF THE STRUCTURES. GROUTING AND POINTING WILL BE NECESSARY AT THE CASTING AND STRUCTURE JOINT TO PREVENT LEAKAGE AND THE RESULTING SOIL MOVEMENT, AROUND THE STRUCTURE.

- COUNTY CODE REQUIRES A MINIMUM PIPE SIZE OF 12" IN DIAMETER. IF SMALLER PIPE IS NEEDED FOR OUTLET PURPOSES THE 12" CAN BE BATTLED TO THE CORRECT SIZE. ALL PIPE SHALL MEET THE 12" DIAMETER CODE SIZE.
- ALL STORM DRAIN OUTLETS 15" IN DIAMETER OR LARGER SHALL HAVE ANIMAL GUARDS INSTALLED TO PREVENT ENTRANCE TO THE SYSTEM.



ADDITIONAL SOIL INFORMATION IS ALSO CONTAINED IN GEOTECHNICAL INVESTIGATION REPORT BY G2 CONSULTING GROUP, DATED 7-12-2019

### CONSTRUCTION SEQUENCE

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.

Days	Tasks
1	INSTALL SILT FENCE AS SHOWN ON PLANS
5	ROUGH GRADE AND INSTALL STORM DRAINAGE
1	INSTALL INLET PROTECTION ON STORM INLETS
180	START BLDG. CONSTRUCTION
4	INSTALL PAVEMENT
4	FINE GRADE AROUND BUILDING, SPREAD TOPSOIL, SEED OR SOD AS APPLICABLE.
1	REMOVE ALL EROSION CONTROL STRUCTURES.
1	REMOVE ACCUMULATED SILT FROM ALL EXISTING DRAINAGE.

### SURFACE WATER & COUNTY DRAINS

WETLAND - ON PROPERTY  
 LAKES - APPROXIMATELY 900 FT SOUTH TO THOMPSON LAKE  
 STREAMS - BOGUE CREEK ON PROPERTY  
 BASINS - ON PROPERTY  
 DRAINS - HOWELL OCEOLA DRAIN (BOGUE CREEK) ON PROPERTY  
 PONDS - ON PROPERTY

### PROPOSED CONST. SCHEDULE FOR THE YEAR 2024/25

ACTIVITY	AUG	SEPT	OCT	NOV	DEC	APR
DEMO & CLEAR						
MASS GRADING						
UNDERGROUND UTILITY						
FINAL GRADING						
SEED & MULCH						

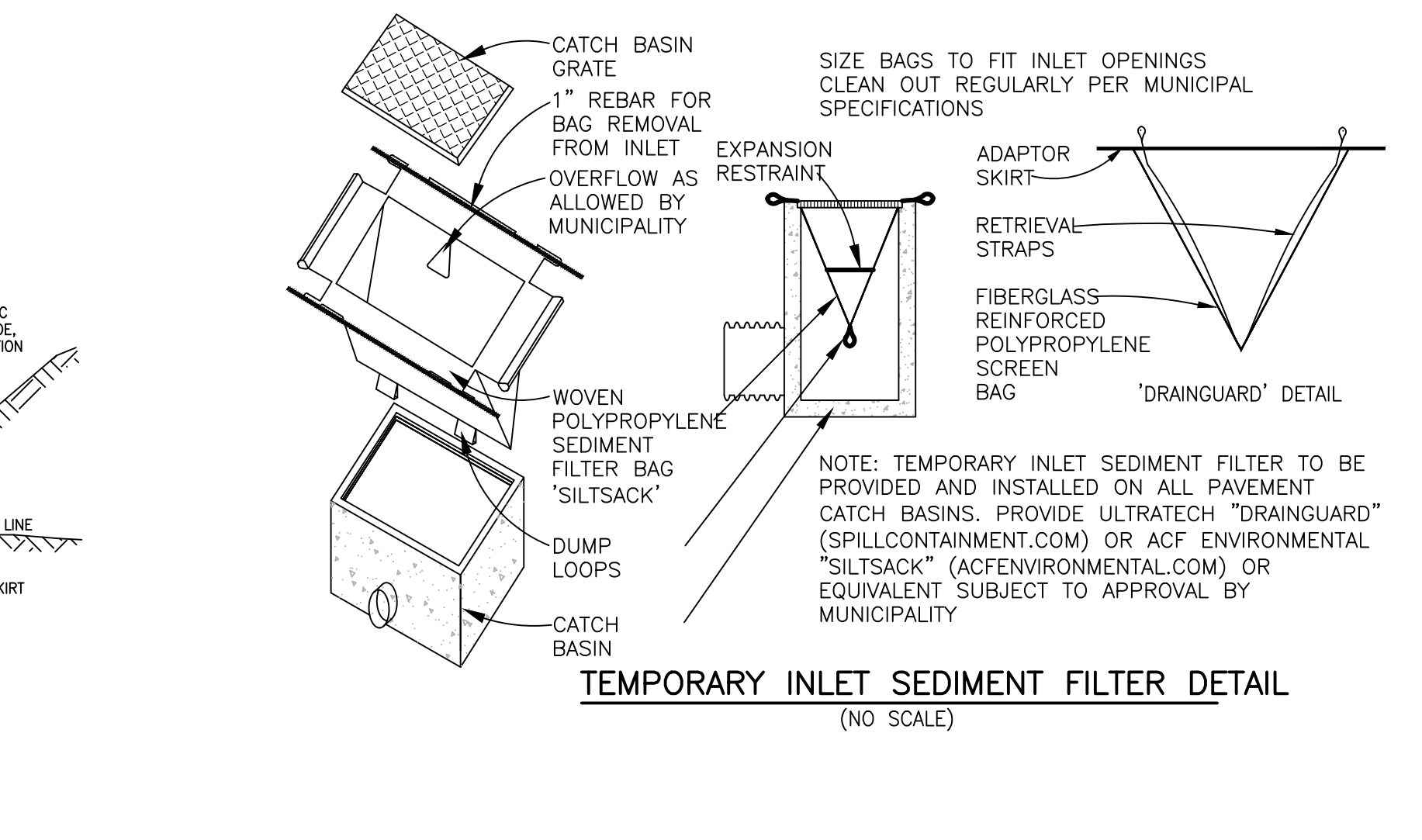
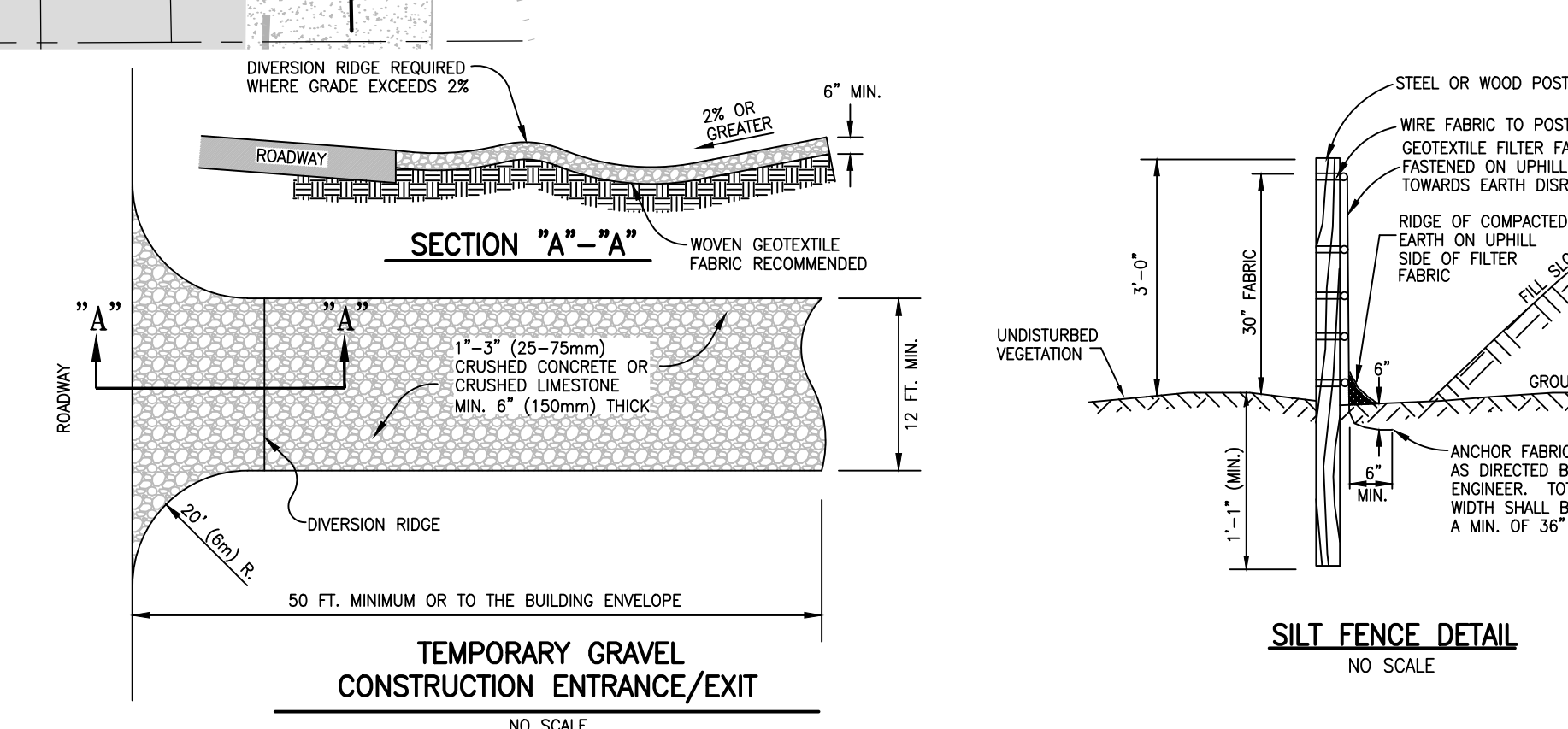
\*IMMEDIATELY AFTER INSTALLATION OF THE SESC MEASURES AND THE DEMOLITION WORK THE BASIN SHALL BE EXCAVATED, TOP SOILED, SEEDED AND MULCH BLANKETED, AND RINGED WITH SILT FENCE PRIOR TO THE MASS EARTH DISRUPTION.

### CONTROLS & MEASURES POST CONSTRUCTION SEQUENCE

ACTIVITY	WEEKLY	MONTHLY	AS REQUIRED
MAINTAIN LANDSCAPING, REPLACE MULCH	X	X	X
CLEAN INLETS		X	X
COLLECT LITTER	X		X
SWEEP PARKING LOT		X	X

### CONTROLS & MEASURES NARRATIVE

ACTIVITY	DESCRIPTION
MAINTAIN LANDSCAPING, REPLACE MULCH	COLLECT GRASS, TREE, AND SHRUB CLIPPINGS. DISPOSE IN APPROVED CONTAINER. REPLACE DEAD SOD, TREES AND SHRUBS.
CLEAN INLETS	REMOVE LITTER, SEDIMENT, AND DEBRIS. DISPOSE OF IN APPROVED LANDFILL.
COLLECT LITTER	DISPOSE OF WITH INLET DEBRIS.
SWEEP PARKING LOT	REMOVE MUD, DIRT, GREASE AND OIL WITH PERIODIC SWEEPING.
DUST CONTROL	SPRINKLE WATER AS NEEDED.



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 HOWELL, MI. 48843  
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**SOIL EROSION & SEDIMENTATION CONTROL PLAN**

PROJECT: SOAPY BUCKET - OAK GROVE  
 PREPARED FOR: SPRINGBORN PROPERTIES  
 3535 HIGH HILLCREST DRIVE  
 HOWELL, MI 48843  
 313-390-3538

NO.	DATE	REVISION PER
1	7/26/24	
2	3/19/24	
3	2/29/24	

DESIGNED BY: NL  
 DRAWN BY: NL  
 CHECKED BY:  
 SCALE: 1" = 50'  
 JOB NO: 23-135  
 DATE: 11/21/23  
 SHEET NO. **9**

LIVINGSTON COUNTY DETENTION BASIN CALCULATIONS

Table with columns: AREA (ACRES), IMPERVIOUS FACTOR, IMPERVIOUS. Values include 3.36, 0.9, 3.03, 0.00, 0.7, 0.00, 3.39, 0.2, 0.68.

Table with columns: WATER QUALITY VOLUME, Vwq, Vwq TOTAL, Vwq EAST, Vwq WEST. Values include 3.630(CIA), 13476 FT³, 10358 FT³, 2784 FT³.

Table with columns: CHANNEL PROTECTION VOLUME CONTROL - REQUIRED, Vcpr, Vcpr R. Values include 4.719(CIA), 17519 FT³.

Table with columns: CHANNEL PROTECTION RATE CONTROL (EXTENDED DETENTION VOLUME), VED, VED R. Values include 6.897(CIA), 29555 FT³.

Table with columns: 100-YEAR ALLOWABLE OUTLET RATE, QDRAN, QDRR, QDRP. Values include 0.15 CFS/ACRE, 0.712 CFS/ACRE, 1.013 CFS.

Table with columns: 100-YEAR DETENTION VOLUME, V100, Q100, R, V100, V100 R. Values include 70482 FT³, 21.58 CFS, 0.6649, 46885 FT³.

Table with columns: EAST FOREBAY STORAGE VOLUME PROVIDED, ELEVATION, AREA, DEPTH, VOLUME, TOTAL VOLUME. Values include 908, 4995, 1, 4.697, 15,407.

Table with columns: WEST FOREBAY STORAGE VOLUME PROVIDED, ELEVATION, AREA, DEPTH, VOLUME, TOTAL VOLUME. Values include 908, 2945, 1, 2.311, 6.625.

Table with columns: BASIN STORAGE PROVIDED, ELEVATION, AREA, DEPTH, VOLUME, TOTAL VOLUME. Values include 908, 16284, 1, 15.613, 59.884.

Table with columns: PROVIDED FOOTPRINT OF BASIN BOTTOM AREA, ELEVATION, AREA, DEPTH, VOLUME, TOTAL VOLUME. Values include 908, 10916, 0, 0, 0.

Table with columns: OUTLET CONTROL STRUCTURE, QED ACTUAL, HED, AED, QED ACTUAL. Values include 2, 0.0109, 0.109 CFS.

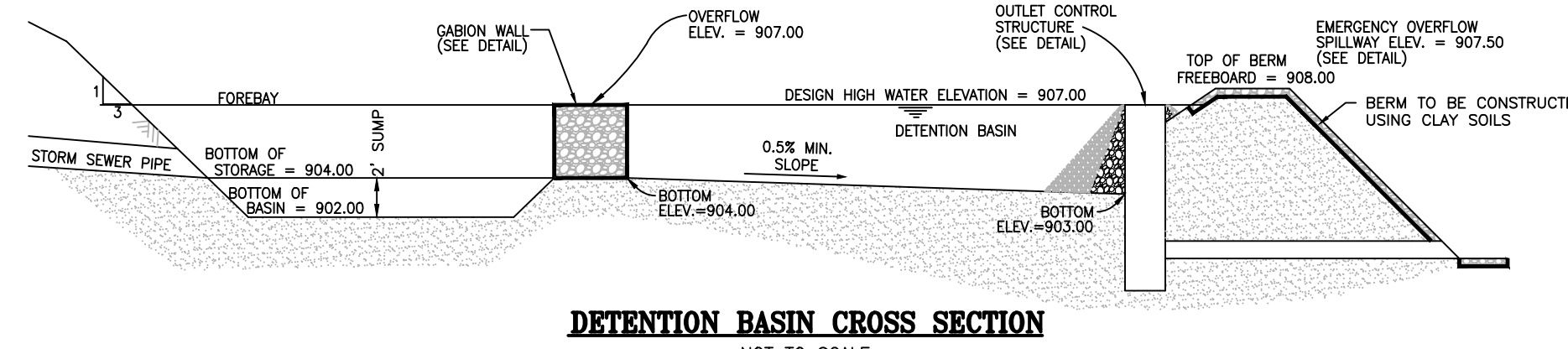
Table with columns: OVERFLOW SPILLWAY DESIGN, Design Flow Rate, Depth of Spillway, Width of Spillway. Values include 21.58 CFS, 6 INCHES, 18.3 FT.

Table with columns: BASIN DESIGN SUMMARY, EAST FOREBAY SIZE REQUIRED, WEST FOREBAY SIZE REQUIRED, BASIN SIZE REQUIRED, BASIN SIZE PROVIDED.

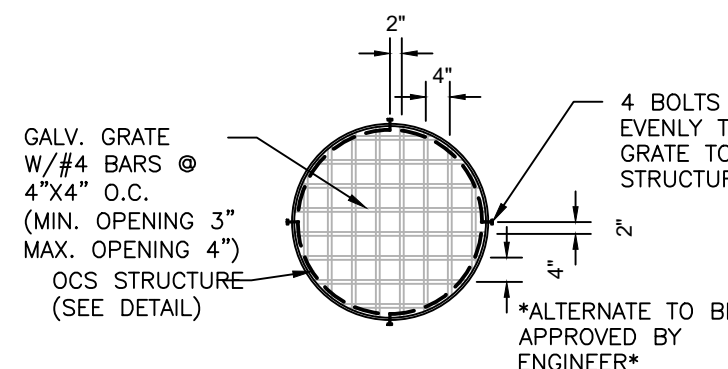
Table with columns: ORIFICE DESIGN SUMMARY, ELEVATION, # OF HOLES, DIAMETER OF HOLES. Values include 903.00, 2.0, 1-INCH.

Table with columns: OVERFLOW SPILLWAY SUMMARY, WIDTH OF OVERFLOW SPILLWAY. Value: 19 FT.

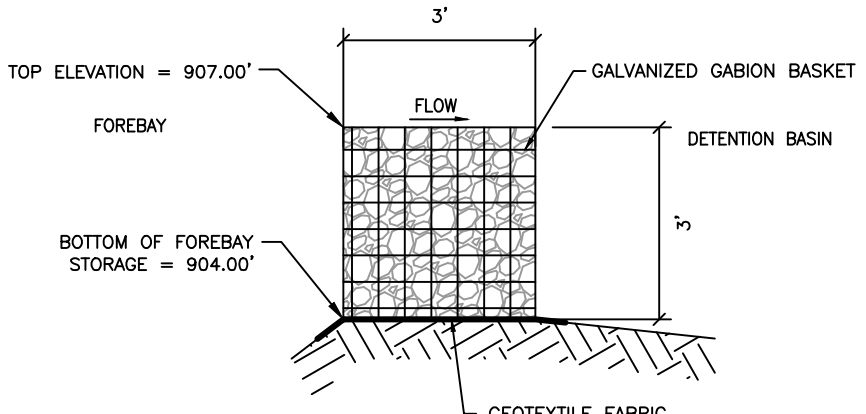
Large table with columns: FROM, TO, DRAIN AREA, RUNOFF COEFF, EQUIV. AREA, INTEN-SITY, TIME OF CONC., ADDL. RUNOFF, PIPE LENGTH, PIPE DIA., VELOCITY, HYDRAULIC GRADIENT, ACTUAL SLOPE, MANNING COEFFICIENT, MANNING FLOW CAPACITY, MANNING'S VELOCITY, TIME, HG ELEV UPPER, HG ELEV LOWER, RIM ELEV UPPER, RIM ELEV LOWER, INVERT UPPER, INVERT LOWER, DROP DISTANCE. Contains multiple rows of data for different pipe segments.



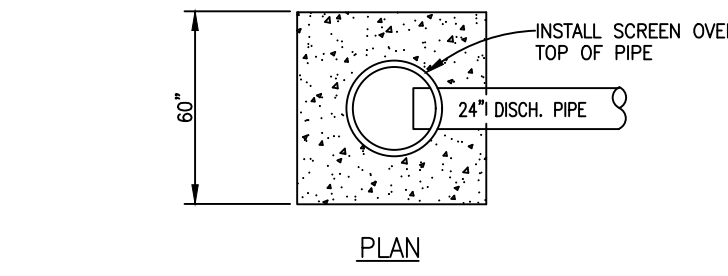
DETENTION BASIN CROSS SECTION NOT TO SCALE



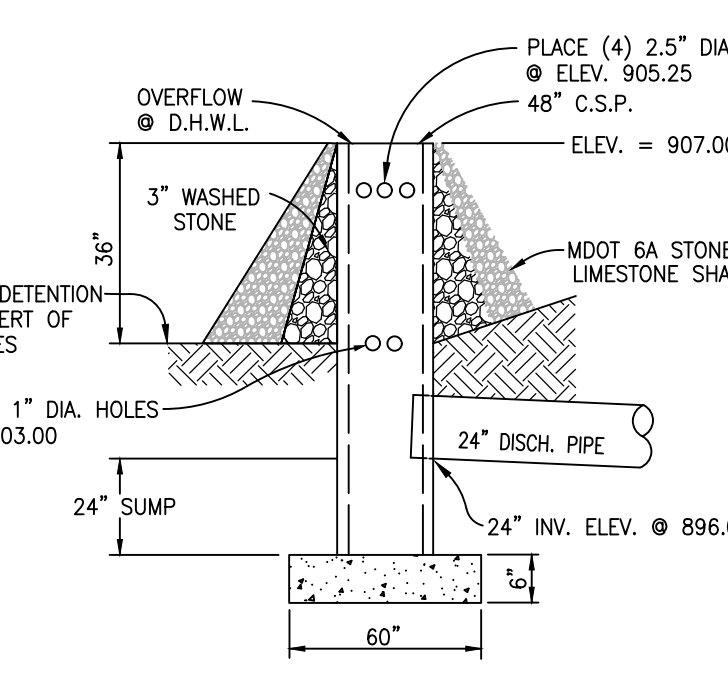
OUTLET CONTROL STRUCTURE GRATE (NO SCALE)



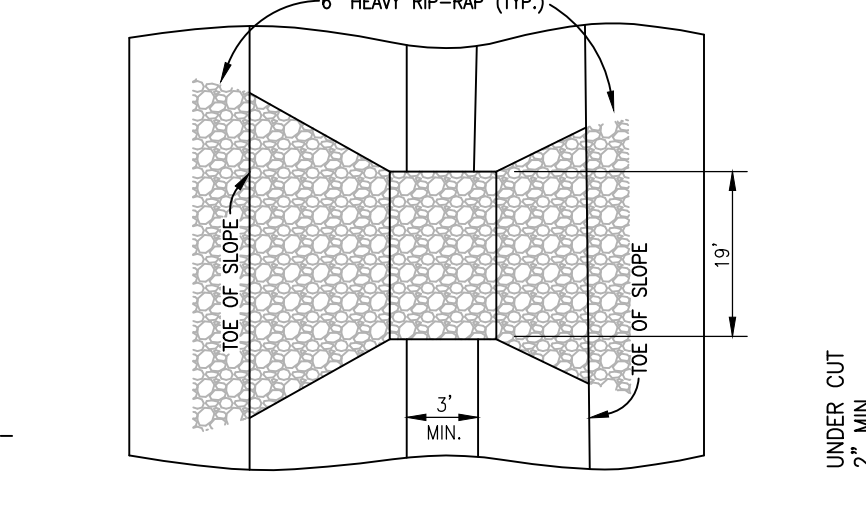
FOREBAY GABION WALL DETAIL NOT TO SCALE



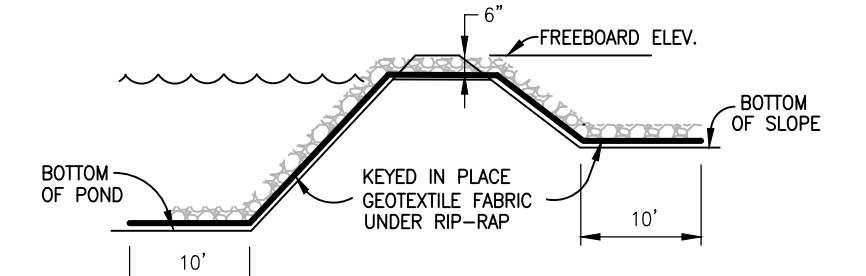
PLAN



PROFILE



PLAN VIEW



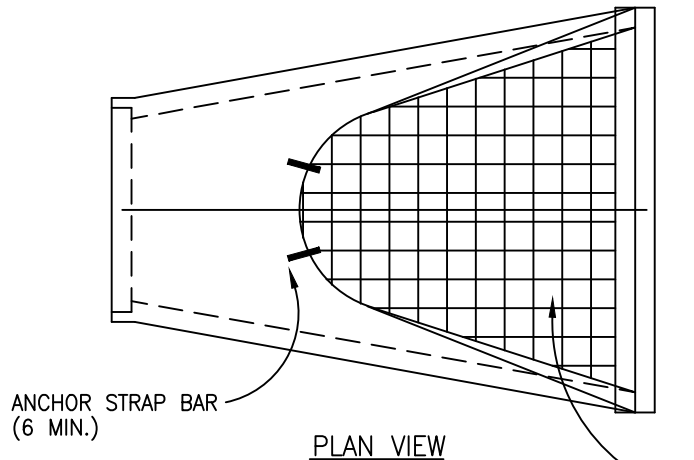
PROFILE VIEW

EMERGENCY OVERFLOW SPILLWAY DETAIL NO SCALE

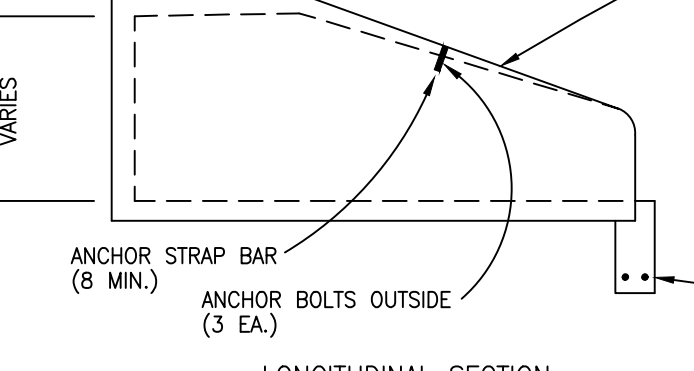
LCDC DETENTION/SEDIMENTATION POND OUTLET CONTROL STRUCTURE (NO SCALE)

Table with columns: COVER, TYPE, USE, EAST JORDAN (OR EQUAL), TYPE OF COVER OR GRATE. Lists various cover types like 'M1', 'M11', 'M12', 'M13', 'M14', 'M15', 'M16', 'M17', 'M18', 'M19', 'M20'.

Table with columns: COVER, TYPE, USE, EAST JORDAN (OR EQUAL), TYPE OF COVER OR GRATE. Lists various cover types like 'M1', 'M11', 'M12', 'M13', 'M14', 'M15', 'M16', 'M17', 'M18', 'M19', 'M20'.

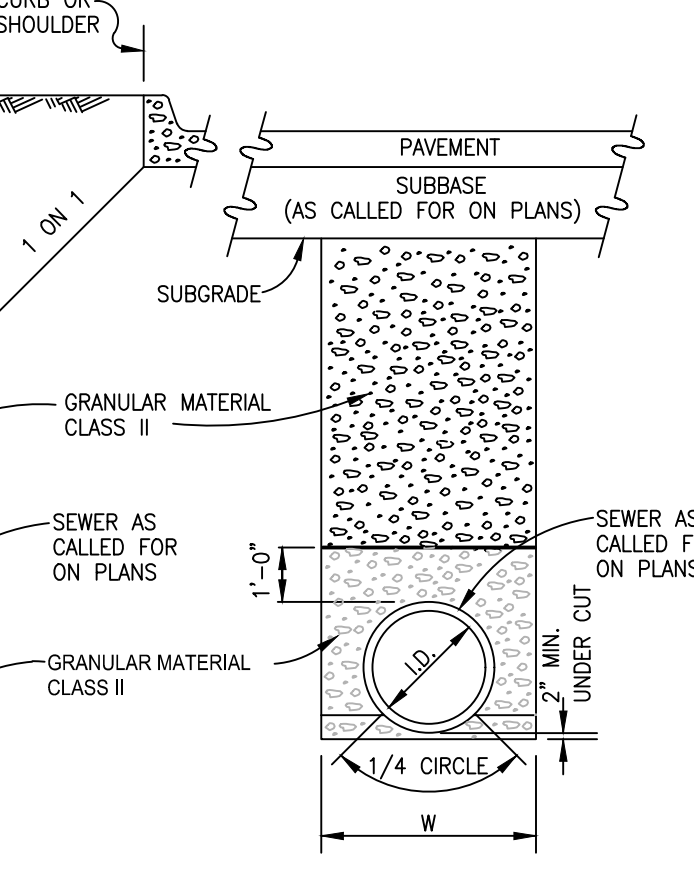


PLAN VIEW



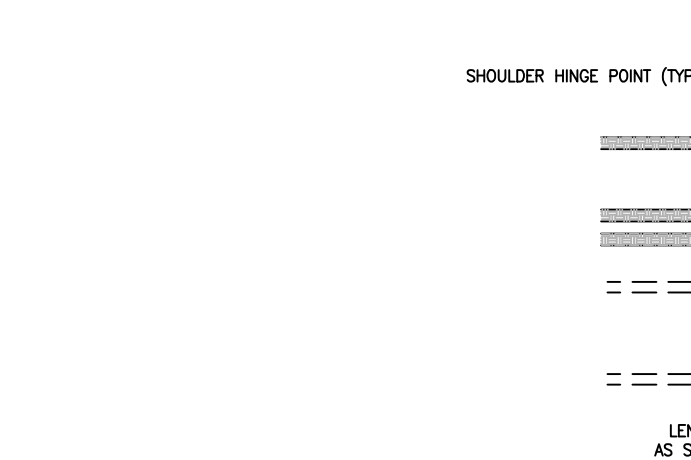
LONGITUDINAL SECTION

PRECAST CONCRETE END SECTION FOR PIPE CULVERT W/ ANIMAL GRATE (NO SCALE)

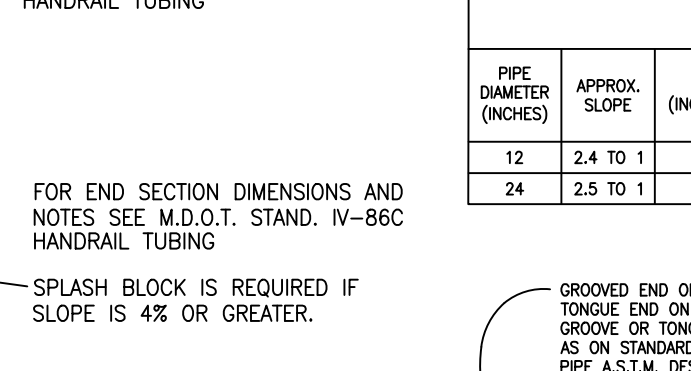


SEWER UNDER ROADBED OR WITHIN INFLUENCE OF ROADBED

(REF. MDOT DETAIL IV-83D) NO SCALE

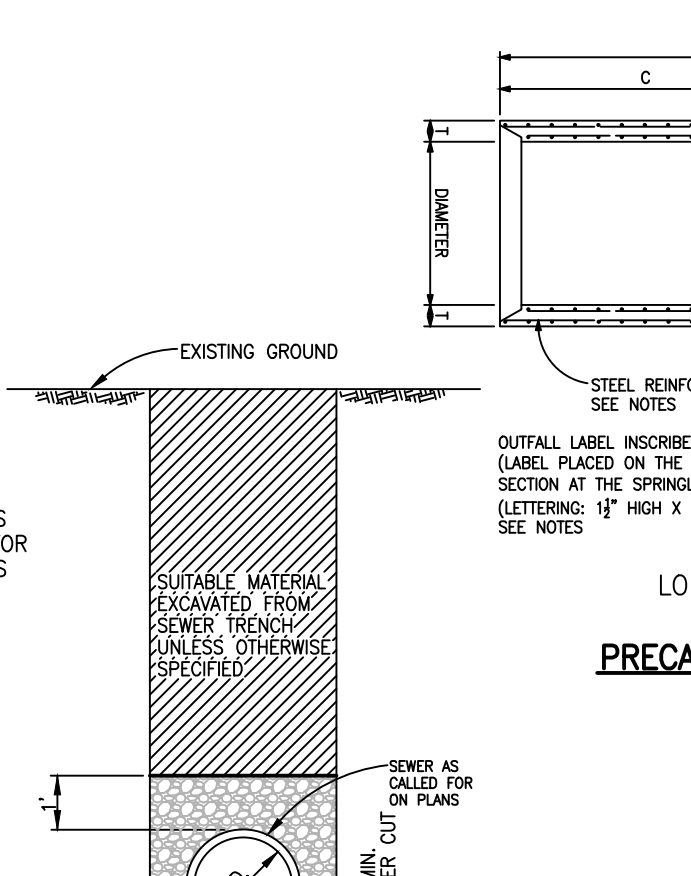


SLOPE DETAIL



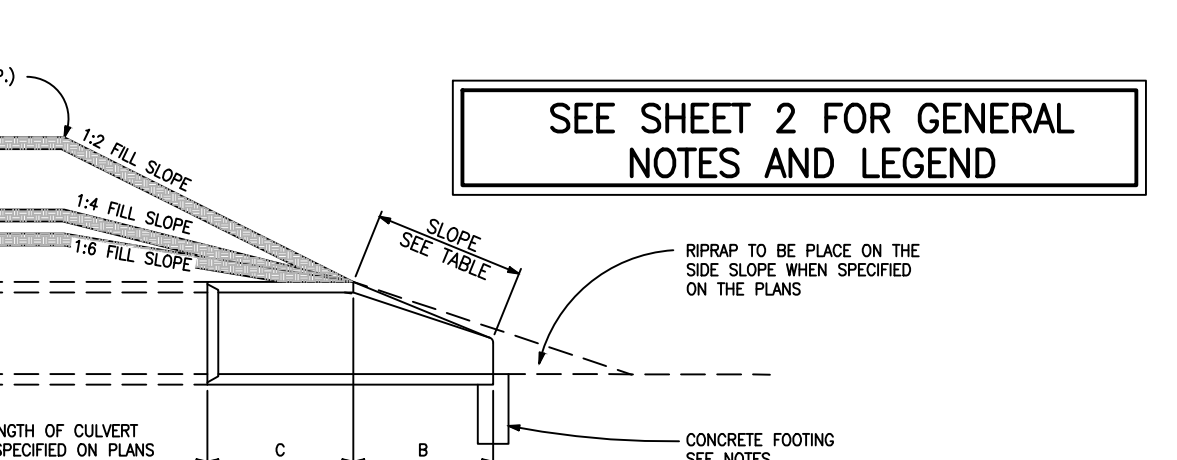
LONGITUDINAL SECTION

PRECAST CONCRETE END SECTION FOR PIPE CULVERT (REF. MDOT DETAIL R-86-F)

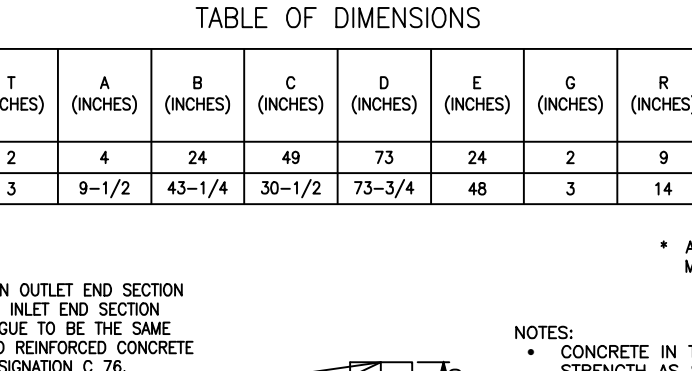


SEWER NOT UNDER ROADBED

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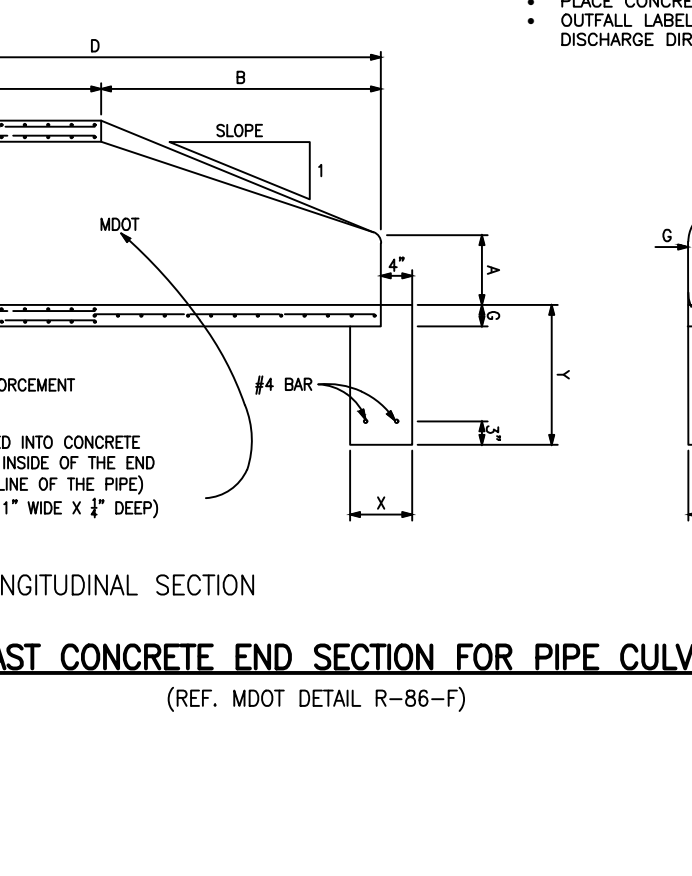


PLAN VIEW



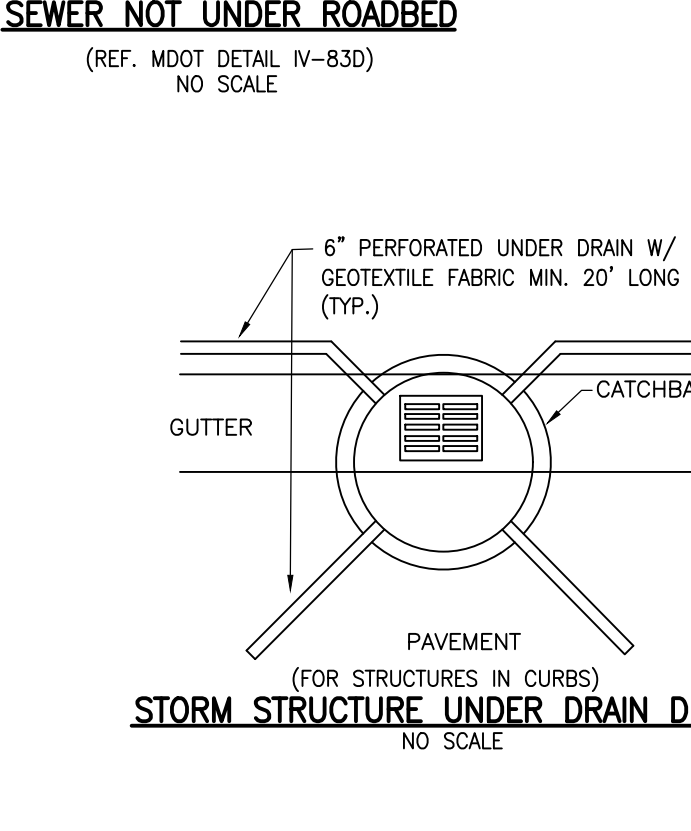
LONGITUDINAL SECTION

STORM STRUCTURE UNDER DRAIN DETAIL (FOR STRUCTURES IN CURBS) NO SCALE

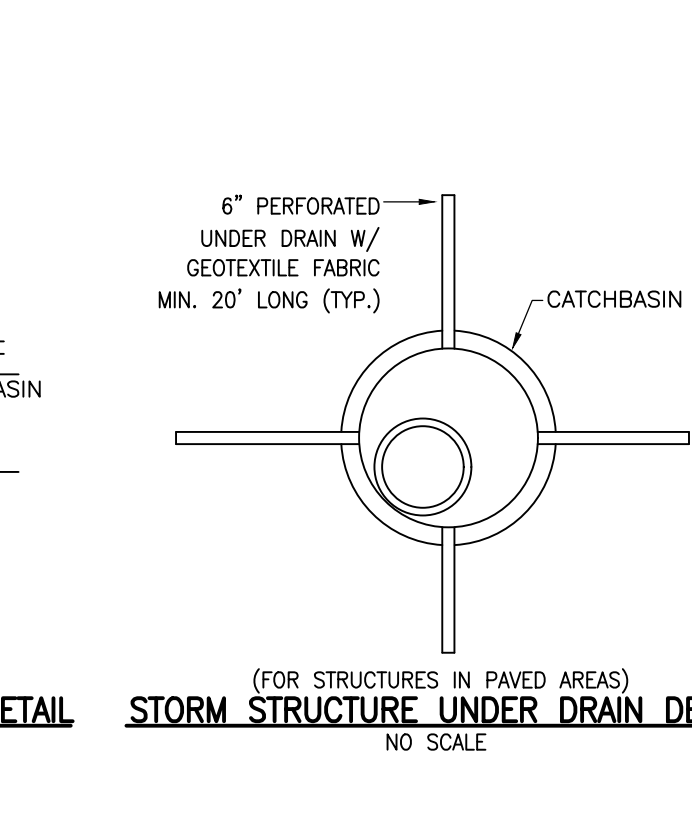


PLAN VIEW

STORM STRUCTURE UNDER DRAIN DETAIL (FOR STRUCTURES IN PAVED AREAS) NO SCALE



4 FT. DIA. CATCH BASIN W/SUMP NO SCALE



LONGITUDINAL SECTION



PLAN VIEW

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

TABLE OF DIMENSIONS table with columns: PIPE DIAMETER (INCHES), APPROX. SLOPE, T (INCHES), A (INCHES), B (INCHES), C (INCHES), D (INCHES), E (INCHES), G (INCHES), R (INCHES), X (INCHES), Y (INCHES).

- NOTES: CONCRETE IN THESE END SECTIONS SHALL BE THE SAME GRADE AND STRENGTH AS SPECIFIED FOR REINFORCED CONCRETE PIPE. A.S.T.M. DESIGNATION C 76 CLASS II, EXCEPT AS MODIFIED BY THE STANDARD SPECIFICATION.

BEBOSS Engineering Surveyors Planners Landscape Architects

3121 E. GRAND RIVER AVE. HOWELL, MI. 48843

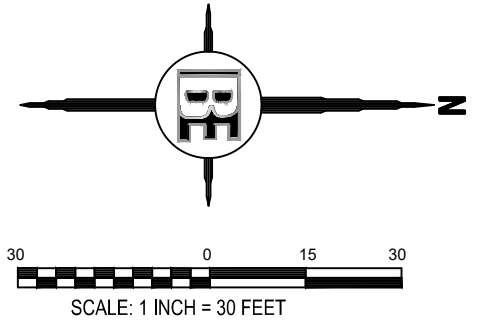
SOOPY BUCKET - OAK GROVE

SPRINGBORN PROPERTIES 3535 HIGH HILLCREST DRIVE HOWELL, MI 48843 313-390-3358

STORM SEWER & BASIN CALCULATIONS & DETAILS

Table with columns: PROJECT, PREPARED FOR, TITLE, DATE, DESIGNED BY, DRAWN BY, CHECKED BY, SCALE, JOB NO., DATE, SHEET NO.

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



STORM SEWER PLAN & PROFILES 1			
Crossing Data Table			
Crossing Number	Crossing Information		
	1	BP	906.18
TP		902.57	SN
CLEARANCE		3.62	FEET
5	BP	909.13	ST
	TP	907.63	WM
	CLEARANCE	1.50	FEET
6	BP	907.83	ST
	TP	906.33	WM
	CLEARANCE	1.50	FEET

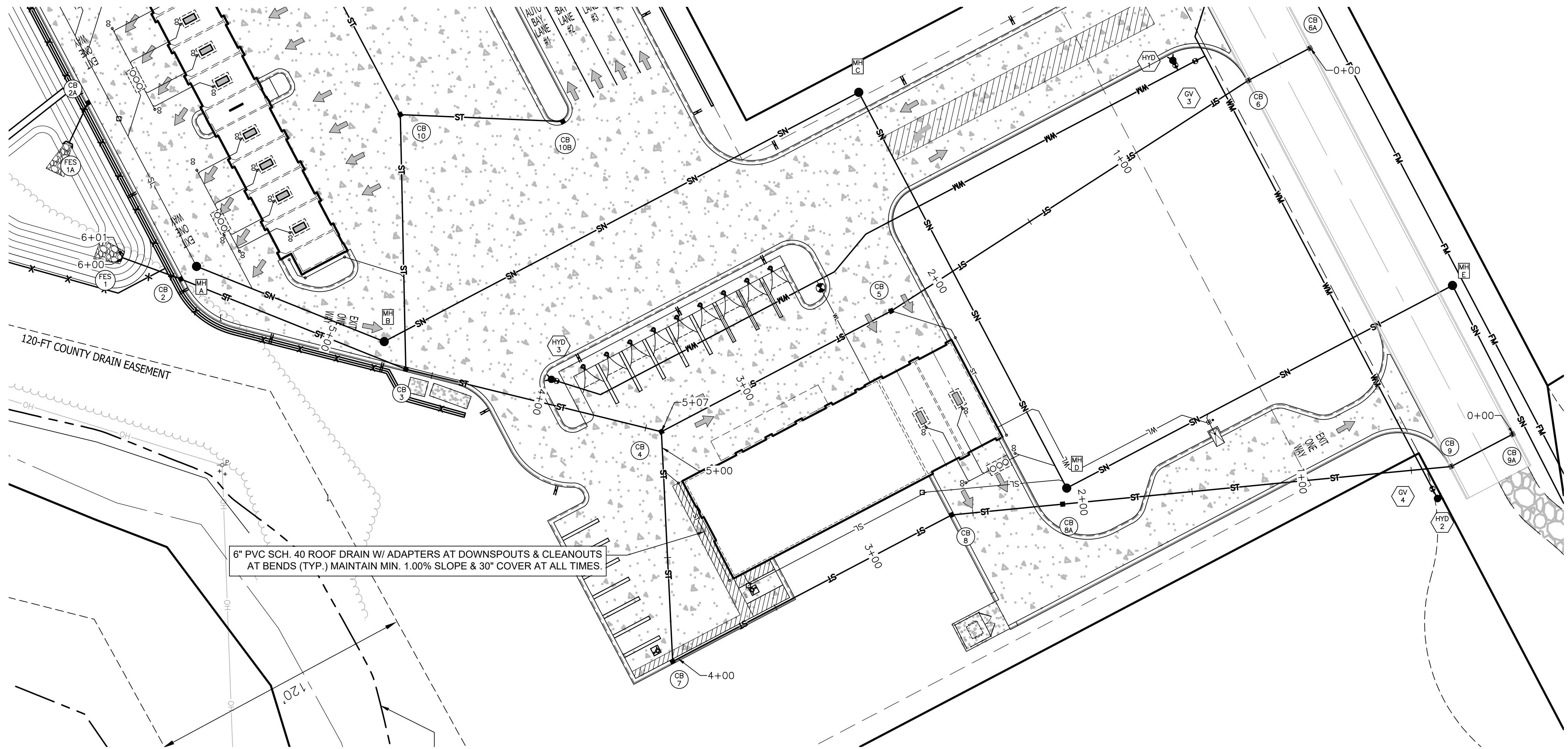
THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

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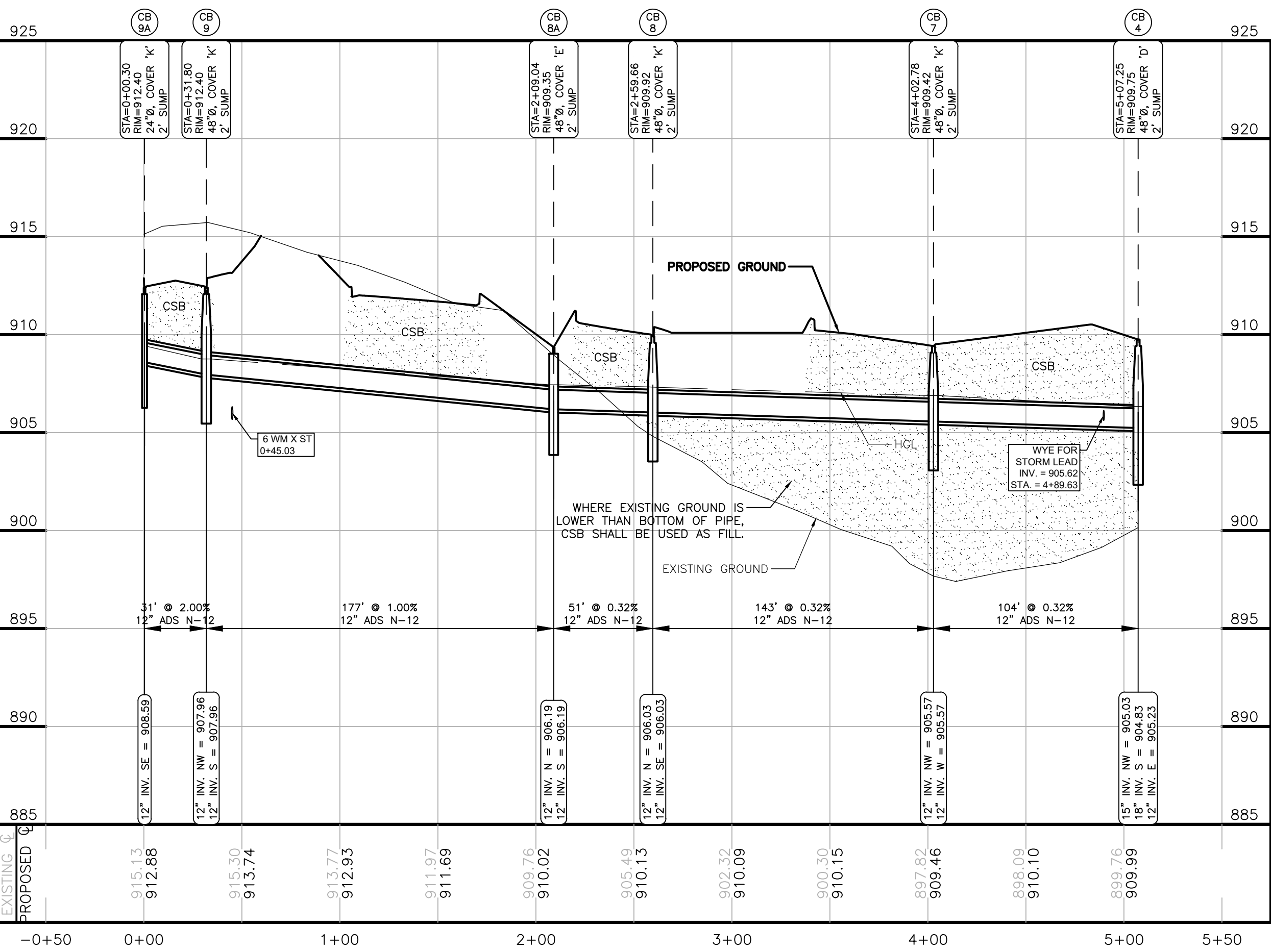
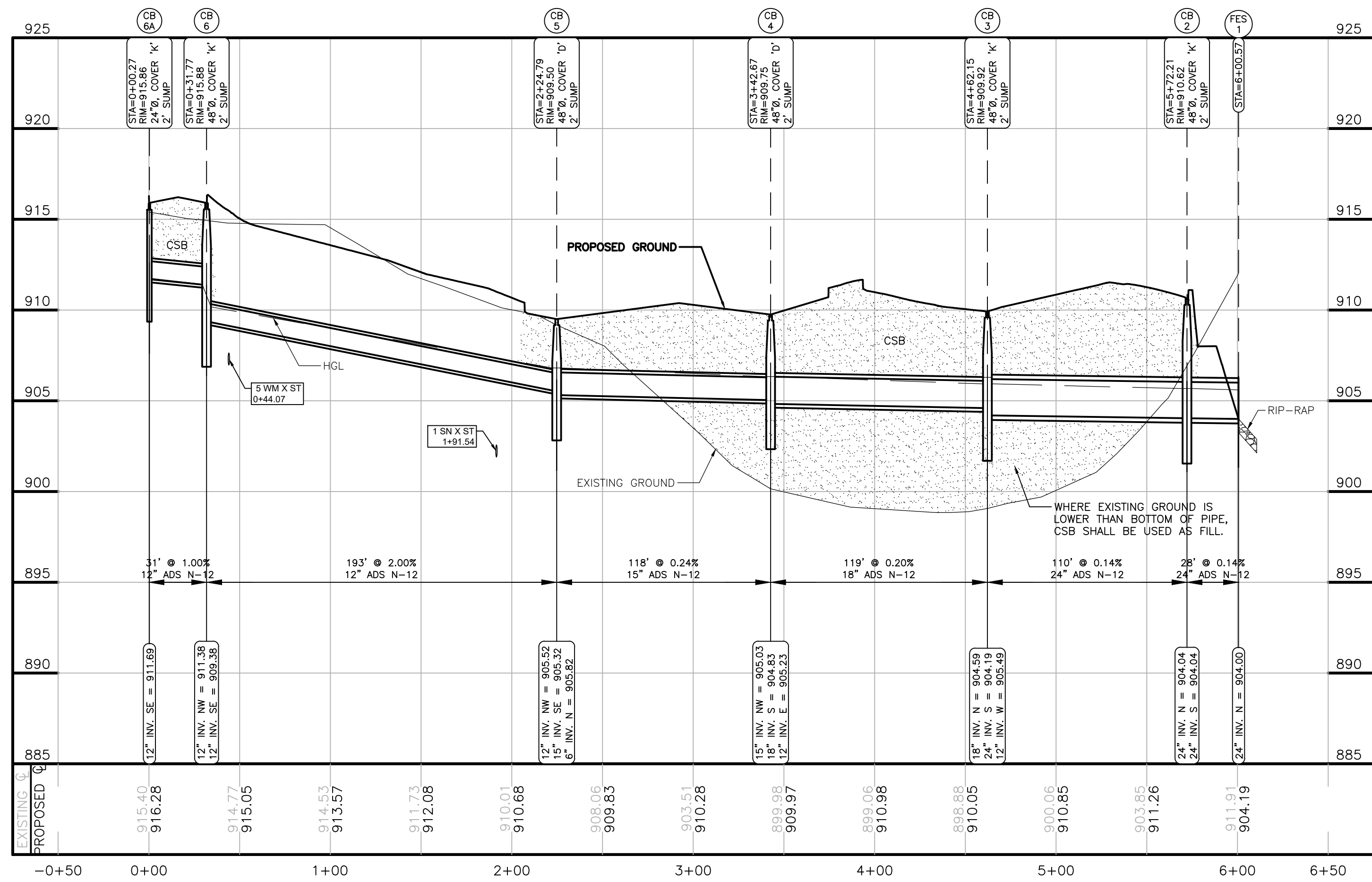
PROJECT: **SOAPY BUCKET - OAK GROVE**  
 PREPARED FOR: **SPRINGBORN PROPERTIES**  
 3535 HIGH HILLOREST DRIVE  
 HOWELL, MI 48843  
 313-390-3358

TITLE: <b>STORM SEWER PLAN &amp; PROFILES 1</b>			
NO	BY	REVISION	DATE
1	NL	DESIGNED	7/26/24
2	NL	CHECKED	3/18/24
3	NL	FOR CLIENT	2/29/24
4	NL	FOR REVIEW	2/29/24

DESIGNED BY: NL  
 DRAWN BY: NL  
 CHECKED BY:  
 SCALE: VARIOUS  
 JOB NO: 23-135  
 DATE: 8/29/23  
 SHEET NO. **11**

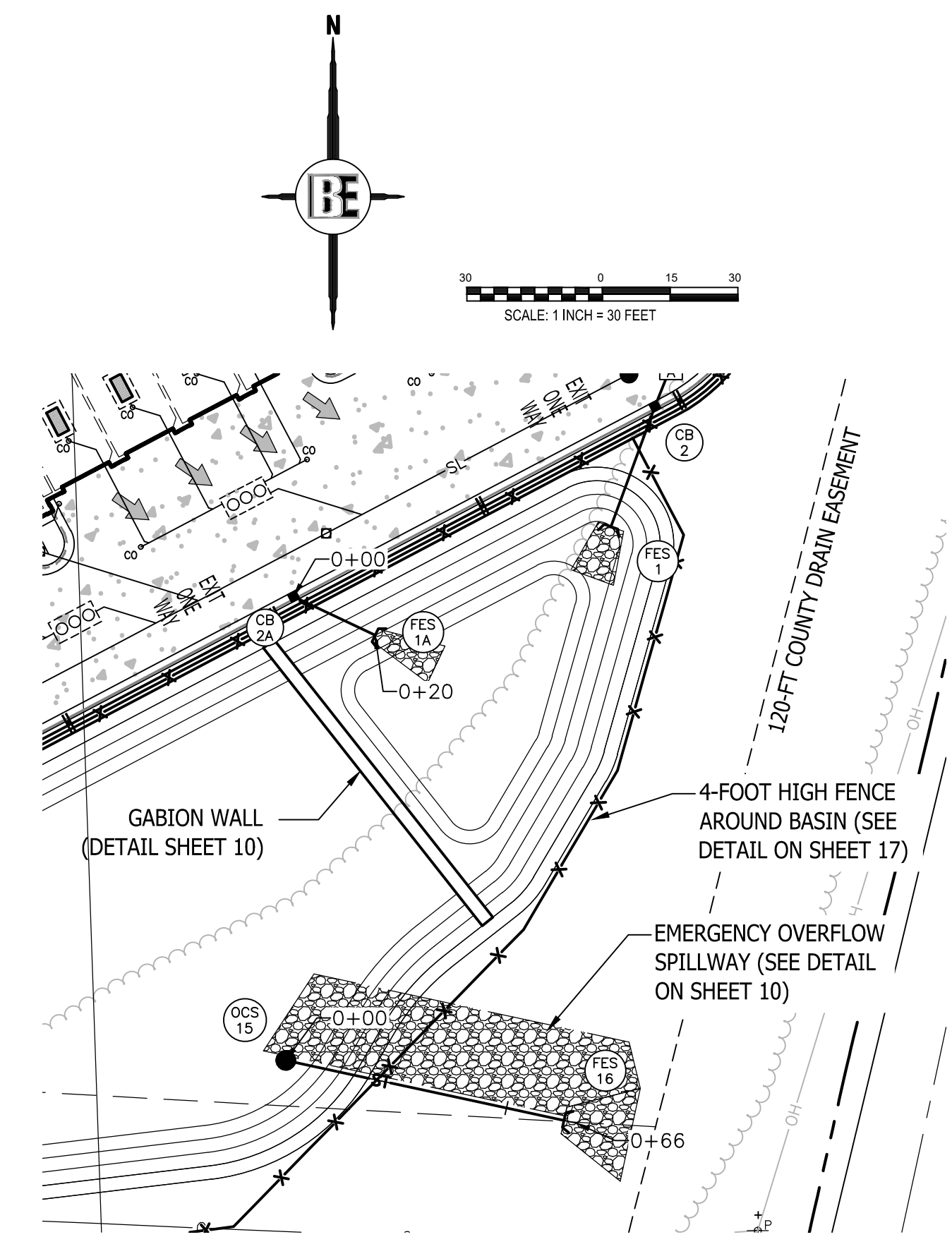
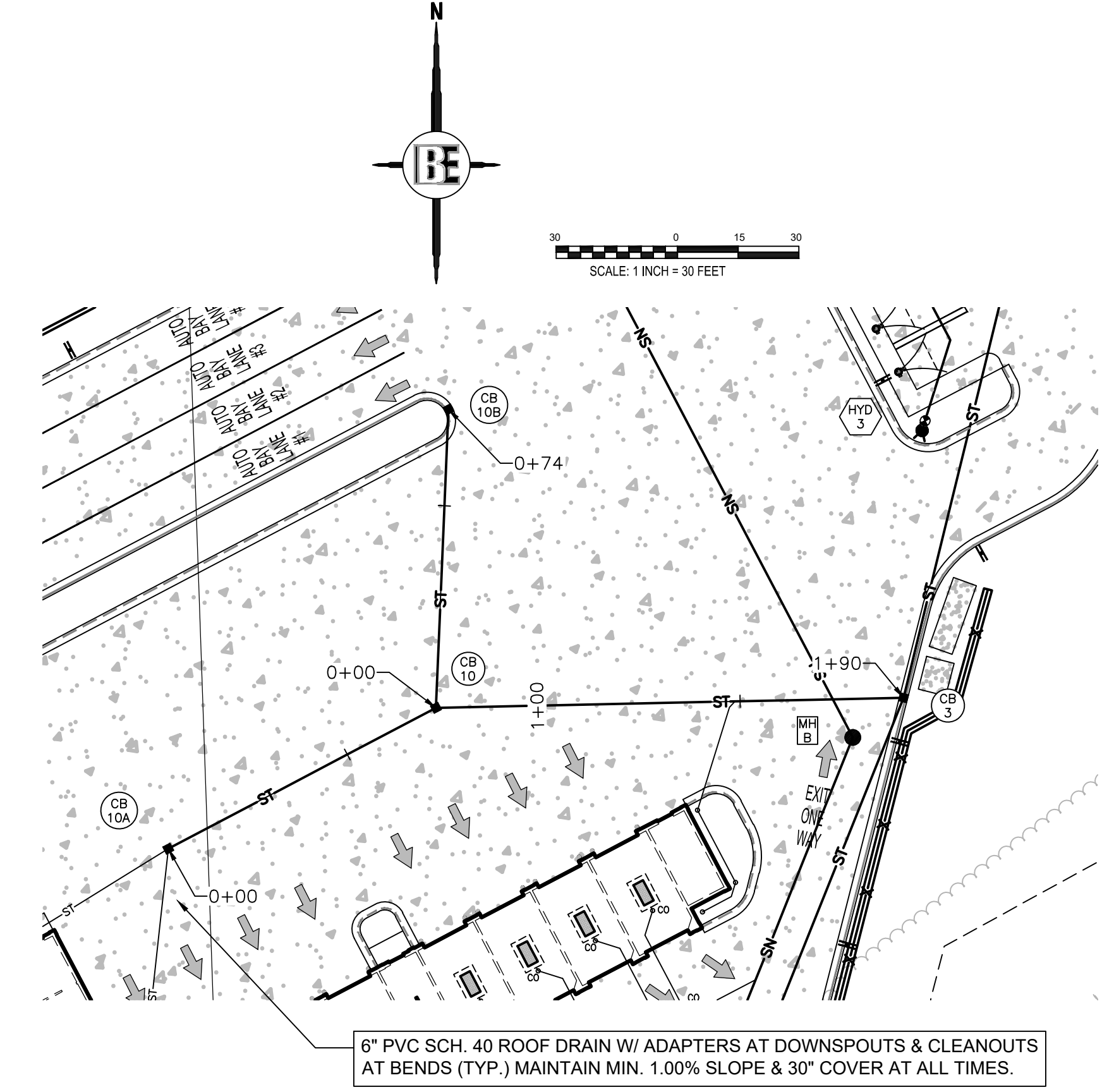
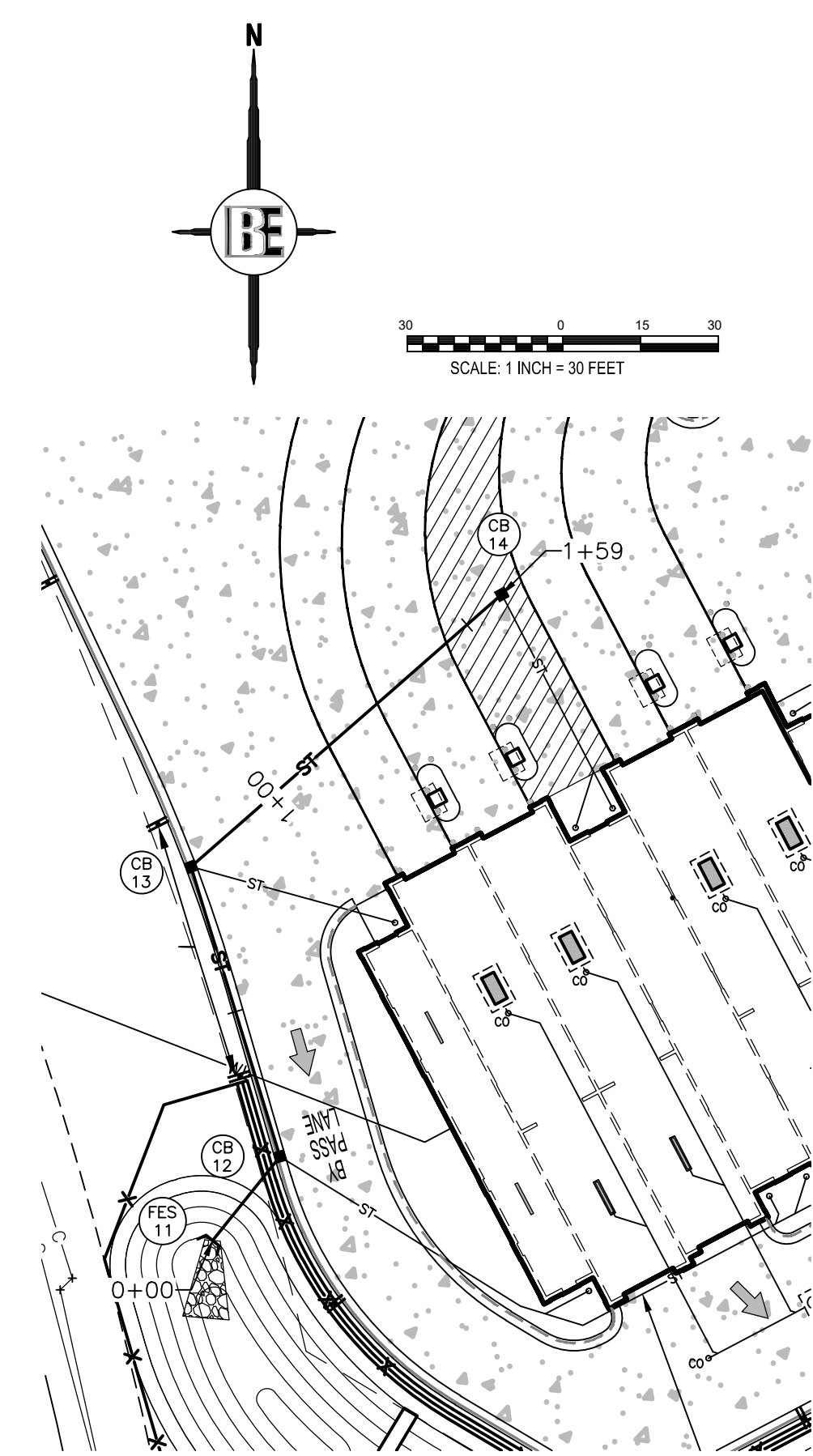


6" PVC SCH. 40 ROOF DRAIN W/ ADAPTERS AT DOWNSPOUTS & CLEANOUTS AT BENDS (TYP.) MAINTAIN MIN. 1.00% SLOPE & 30" COVER AT ALL TIMES



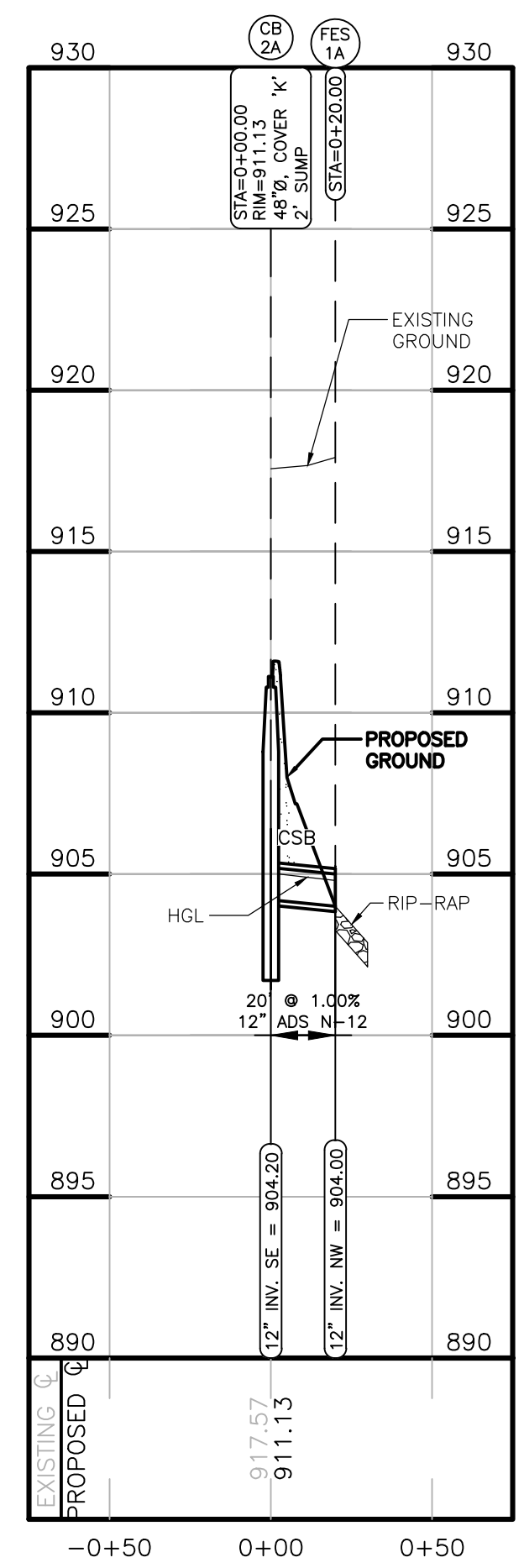
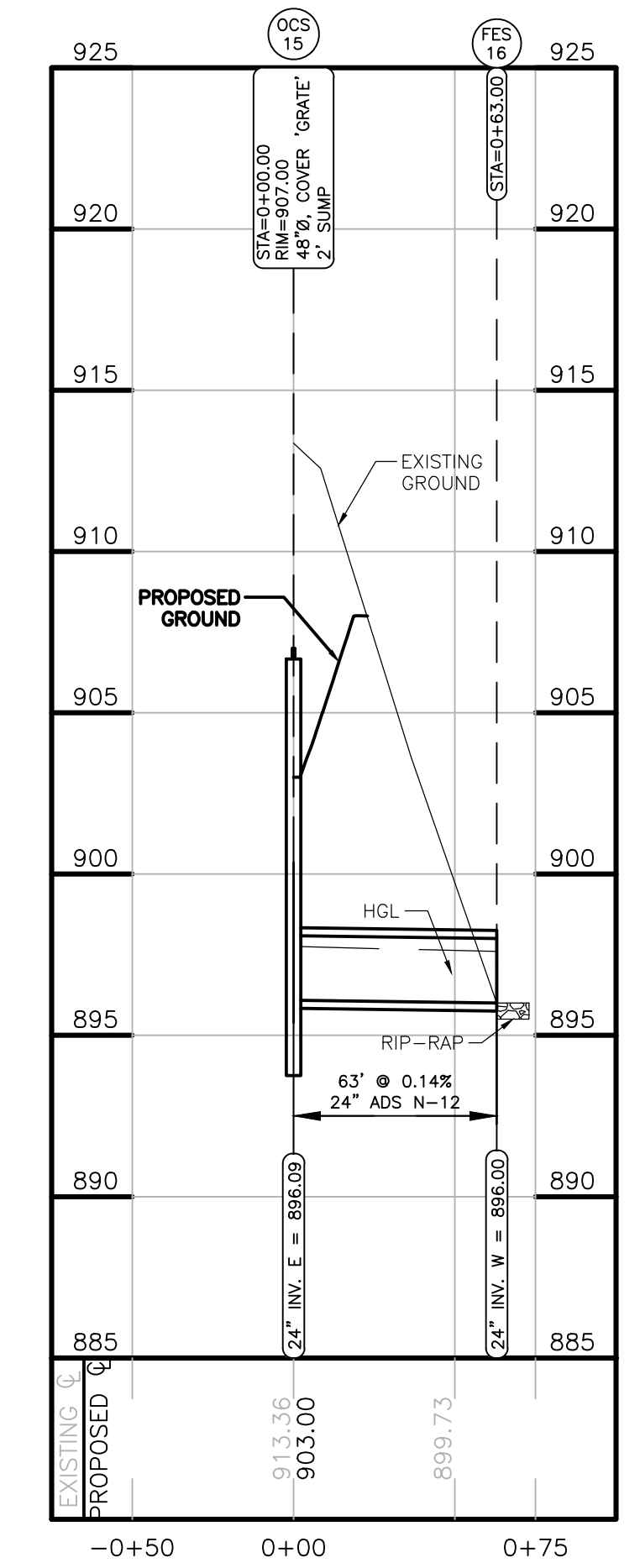
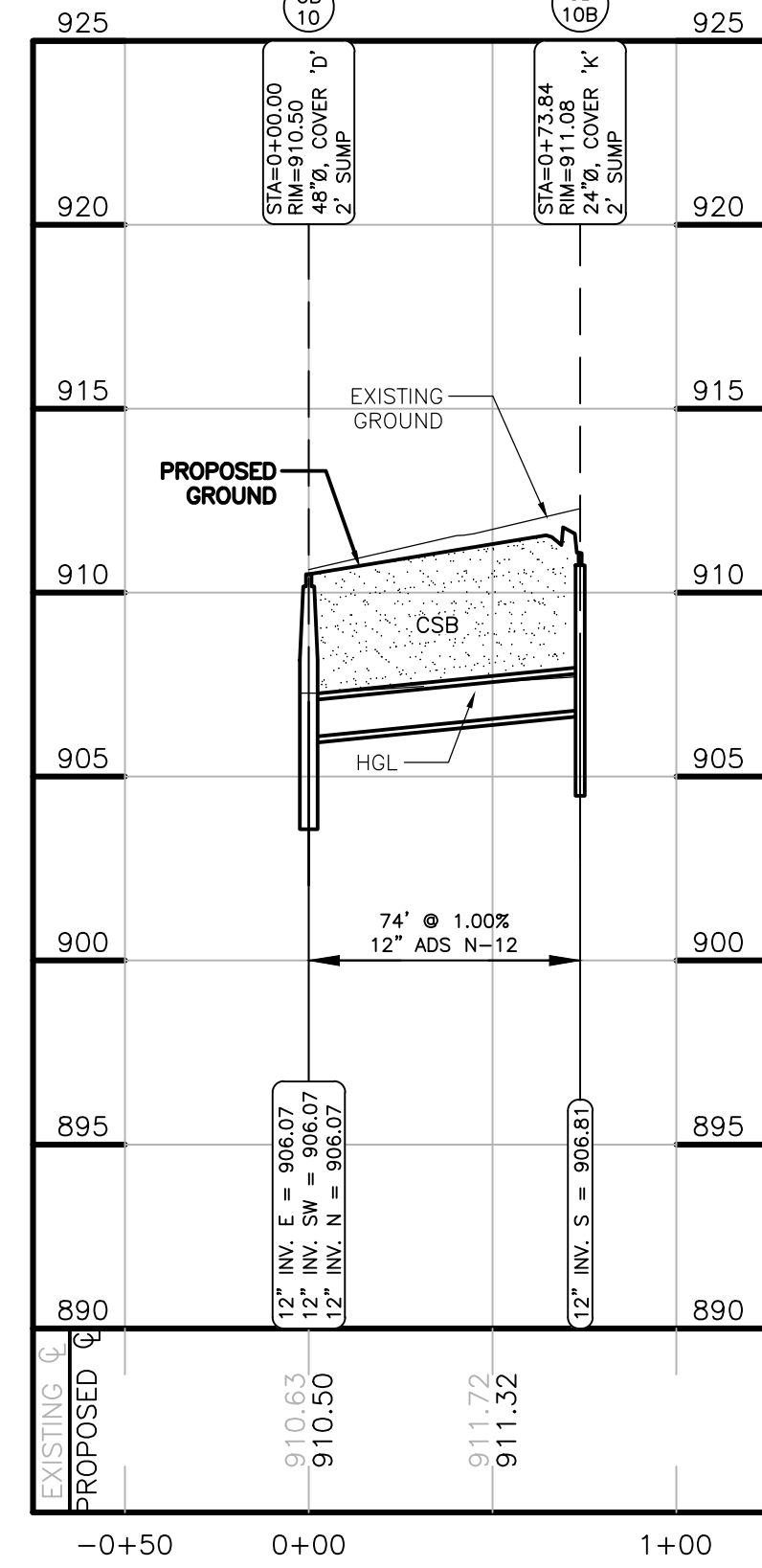
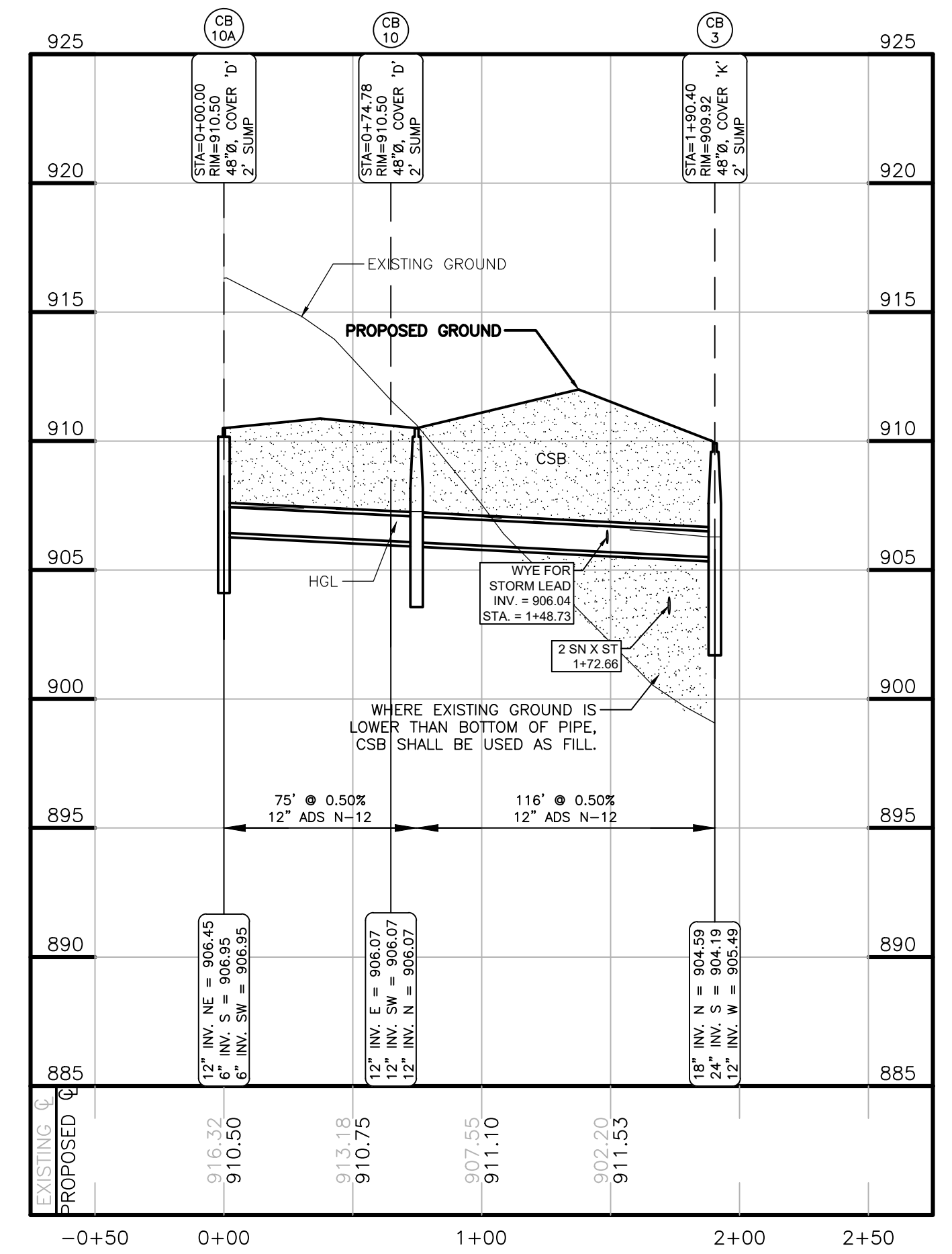
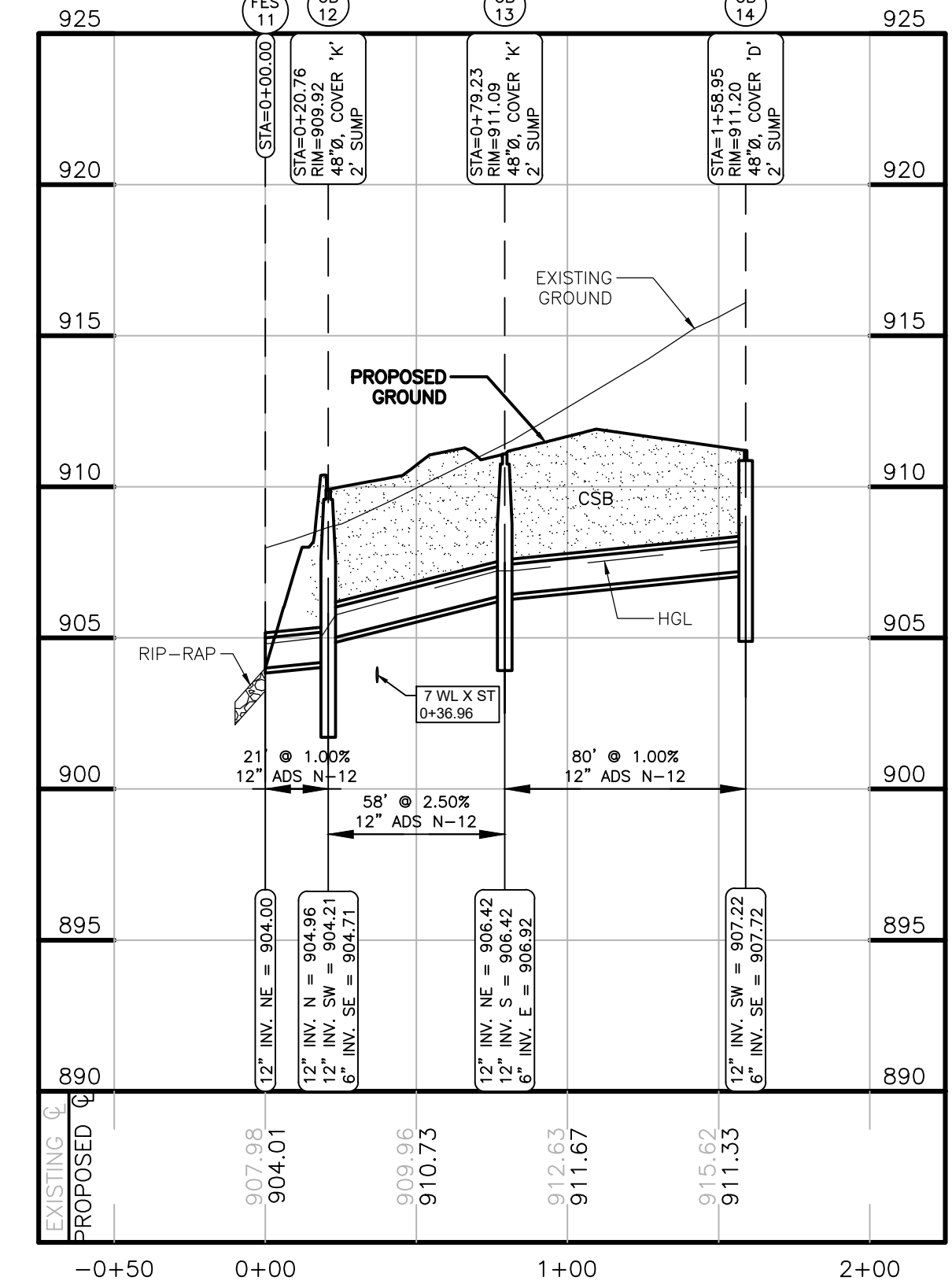
SCALE: 1 INCH = 50 FEET  
 PROFILE SCALE:  
 1" = 5' (VERT)  
 1" = 50' (HORIZ)

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



STORM SEWER PLAN & PROFILES II			
Crossing Data Table			
Crossing Number	Crossing Information		
2	BP	905.58	ST
	TP	903.96	SN
	CLEARANCE	1.62	FEET
7	BP	905.36	ST
	TP	903.86	WM
	CLEARANCE	1.50	FEET

6" PVC SCH. 40 ROOF DRAIN W/ ADAPTERS AT DOWNSPOUTS & CLEANOUTS AT BENDS (TYP.) MAINTAIN MIN. 1.00% SLOPE & 30" COVER AT ALL TIMES.



SCALE: 1" = 50' (VERT)  
SCALE: 1" = 50' (HORIZ)

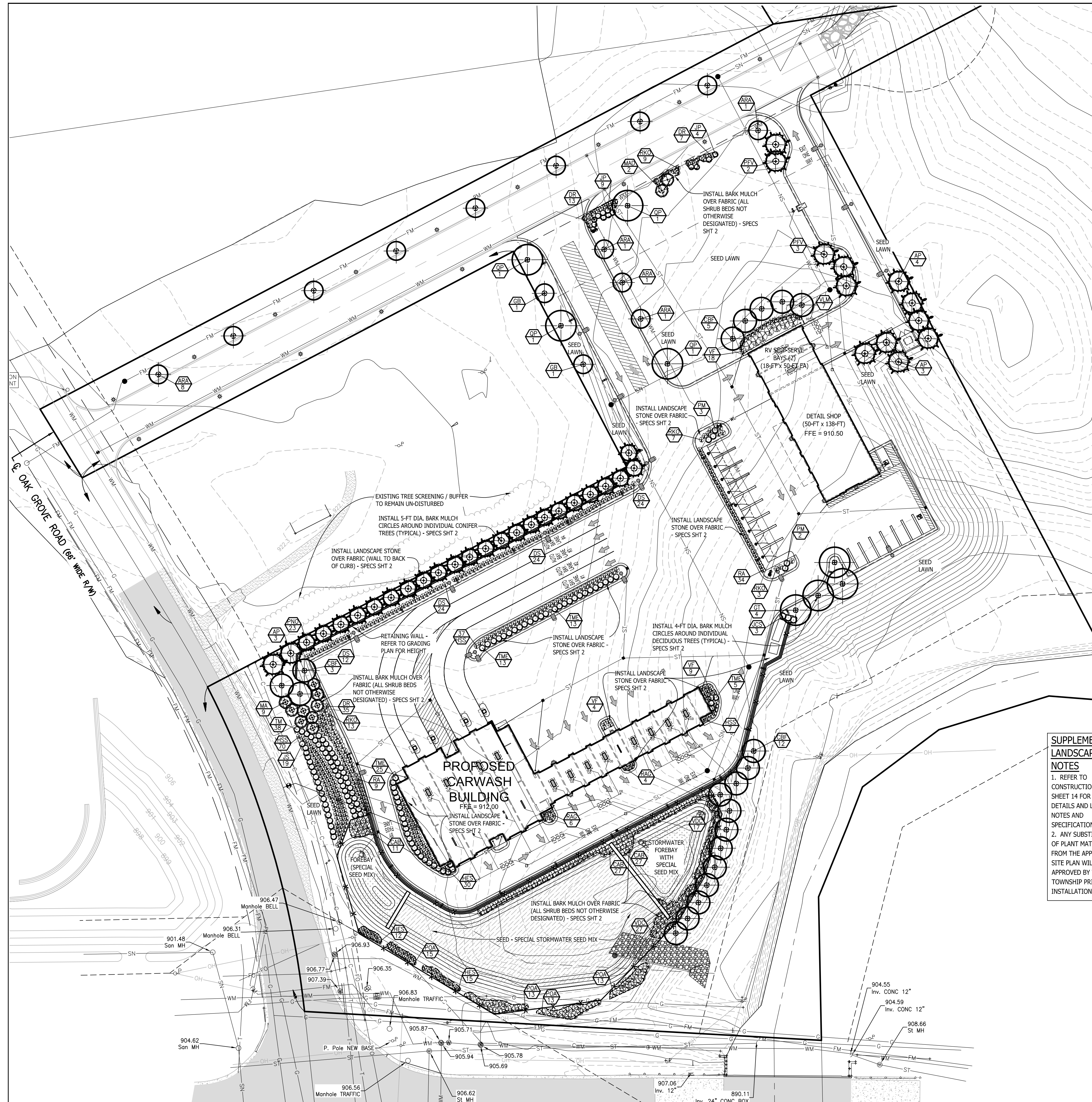
THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH, OR ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

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HOWELL, MI. 48843  
517.546.4836 FAX 517.548.1670

PROJECT: SOAPY BUCKET - OAK GROVE  
PREPARED FOR: SPRINGBORN PROPERTIES  
3535 HIGH HILLOREST DRIVE  
HOWELL, MI 48843  
313-390-3358

NO	BY	DATE	REVISION
1	NL	8/29/23	PROGRESS SET FOR CLIENT
2	NL	7/18/24	L.C.D.C. & TWP. ENGINEER REVIEW
3	NL	7/26/24	L.C.D.C., SESS. TWP. ENCS. & FIRE DEPT. REVIEW

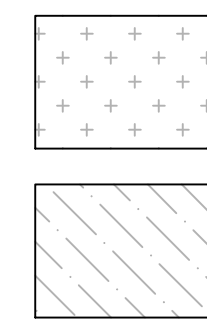
DESIGNED BY: NL  
DRAWN BY: NL  
CHECKED BY:  
SCALE: VARIES  
JOB NO: 23-135  
DATE: 8/29/23  
SHEET NO. 12



**LANDSCAPE LEGEND**

- EXISTING DECIDUOUS TREE
- PROPOSED DECIDUOUS TREE
- PROPOSED CONIFER TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED CONIFER SHRUB
- PROPOSED DECIDUOUS SHRUB
- PROPOSED PERENNIAL FORB
- PROPOSED ORNAMENTAL GRASS
- PROPOSED LANDSCAPE BOULDER

**SPECIAL SEED MIX LEGEND**



**SPECIAL STORMWATER BASIN SEED MIXES**  
 PROVIDE THE FOLLOWING SEED MIXES FROM JFNEW/CARDNO, INC., WWW.CARDNONATIVEPLANTNURSERY.COM, 574-586-2412, WALKERTON, INDIANA:  
 1. SEED 1.5-FT BELOW DESIGN HIGHWATER ELEVATION (+/-15-18-FT DOWN FROM TOP OF BANK) TO BOTTOM OF BASINS WITH 'STORMWATER' SEED MIX INCL. ANNUAL RYE COVER CROP & AT RATE OF 33 PLS POUNDS / ACRE.  
 2. SEED BETWEEN DESIGN HIGHWATER AND FREEBOARD ELEVATION (+/-5-FT FROM TOP OF BANK) WITH 'ECONOMY PRAIRIE MIX' INCL. ANNUAL RYE COVER CROP & AT RATE OF 38 PLS POUNDS/ACRE.

**LANDSCAPE CALCULATIONS**

**ZONING:** NSC (NEIGHBORHOOD SERVICE COMMERCIAL)  
**SITE AREA:** 5.98 AC +/- (260,700 SQFT) (EXCLUSIVE OF R.O.W.'S & COUNTY DRAIN)  
**GENERAL:** 40 PARKING SPACES PROVIDED  
 MIX OF CONIFEROUS & DECIDUOUS TREES AT 1 / 3,000 SQFT OF UN-PAVED OPEN AREAS WHERE NO OTHER LANDSCAPE REQUIREMENTS  
**BERMS - PARKING:** ADJ. TO ALL R.O.W.'S, 20-FT WIDE, 1:3 MAX SLOPE, 2-3 FT HGT UNDULATING MIN 1 TREE (DECID. SHADE) / 30 LFT + 1 ORNAMENTAL TREE / 50 LFT + CONIFERS (6-FT HGT, 15-FT O.C. STAGGERED, BARRIER FOR 50% OF BERM LENGTH)  
**R.O.W. LANDSCAPING:** MIN 1 TREE (DECID. SHADE OR CONIFER) / 40 LFT (NOT INCL OPENINGS) + 1 ORNAMENTAL TREE / 100 LFT + 8 SHRUBS / 40 LFT N.A. (ALL ADJACENT PROPERTIES SAME RSC ZONING)  
**PROTECTIVE SCREENING:** MIN CONIFERS ON 3 SIDES, EXCEEDING HGT. OF EQUIPMENT  
**MECH. EQUIP. SCREENS:** LANDSCAPE ISLANDS 10 SQFT / SPACE - EA MIN 20-FT WIDE & 400 SQFT  
**PARKING LOT:** ALL SIDES FACING ROAD, PARKING OR AREA PROVIDING PUBLIC ACCESS, MIN 150 SQFT BEDS EA & 10-FT WIDE ADJ. TO BLDG / 8-FT IF OFFSET  
**FOUNDATION PLANTINGS:** MIN 1 TREE & 5 SHRUBS / 35 LFT BLDG FRONTAGE  
**STORMWATER BASINS:** MIN 1 DECID. OR CONIFER + 10 SHRUBS / 50 LFT PERIMETER AT TOP OF BANK SIDE SLOPES SEEDED OR SODDED  
**PROVIDED:**  
**GENERAL:** 64,500 SQFT UN-ALLOCATED OPEN SPACE / 3,000 = 22 TREES  
 - PROVIDING 10 DECIDUOUS & 12 CONIFER TREES  
 \*\*\*\*\*  
**BERMS-PARKING-OAK GROVE:** 306.5 LFT / 30 = 10 TREES + 306.5 LFT / 50 = 6 ORN. TREES + 50% CONIFERS = 20@15 FT O.C. (NET) 325 / 40 = 8 TREES + (325 / 40 \* 8) = 65 SHRUBS + 325 / 100 = 3 ORN. TREES  
**R.O.W. - HIGHLAND:** (NET) 307 / 40 = 8 TREES + (307 / 40 \* 8) = 61 SHRUBS + 307 / 100 = 3 ORN. TREES  
**R.O.W. - OAK GROVE:** BERM NOT FEASIBLE ALONG OAK GROVE DUE TO SLOPE TOPOGRAPHY. FOR HIGHLAND & OAK GROVE R.O.W.'S & OAK GROVE PARKING SCREENING PROVIDING 184 SHRUBS ALONG OAK GROVE + 9 ORNAMENTAL TREES + 3 CANOPY TREES + 84 ADDT. SHRUBS ALONG NORTH PROP. LINE FOR ADDT. SCREENING (3.3:1 TREE EQUIVALENT)  
**R.O.W. - PRIVATE ROAD:** (NET) 210 / 40 = 5 TREES + (210 / 40 \* 8) = 42 SHRUBS + 210 / 100 = 2 ORN. TREES  
 - PROVIDING 8 CANOPY TREES + 42 SHRUBS + 2 ORN. TREES  
**PROTECTIVE SCREENING:\*** NORTH PROPERTY LINE RESIDENTIAL USE - NO RESIDENTIAL ZONING - NO SCREENING REQ'D.  
 PROVIDING NON-REQ'D SCREENING AT TOP OF 4-FT RETAINING WALL - 26 CONIFERS @ 15-FT O.C.  
**MECH. EQUIP. SCREENS:** ELEC. TRANSFORMER PAD & GENERATOR PAD SCREENED WITH 6 CONIFER SHRUBS  
**PARKING LOT:** 42 \* 10 = 420 SQFT / 400 = 1, 400 SQ FT AREA REQUIRED  
 - PROVIDING 2 SHRUB LANDSCAPED ISLANDS, (1) @ 1,420 SQ FT & (1) @ 914 SQ FT = TOTAL OF 2,334 SQ FT  
**FOUNDATION PLANTINGS - CARWASH BUILDING #1:** 90 LFT FRONTAGE (OAK GROVE) + 248 LFT (FRONTAGE 'PUBLIC ACCESS') = 338 LFT (TOTAL) / 35 = 10 TREES + 50 SHRUBS REQUIRED  
 - PROVIDING 90 SHRUBS (4:1 TREE EQUIV.) IN LANDSCAPED PENINSULAS BETWEEN BAYS & BLDG. ENDS  
**DETAIL SHOP BUILDING #2:** 50 LFT FRONTAGE (PRIVATE RD) + 136 LFT (FRONTAGE 'PUBLIC ACCESS') = 186 LFT (TOTAL) / 35 = 5 TREES + 25 SHRUBS - PROVIDING ALONG NORTH SIDE OF BLDG. TOWARD PRIVATE ROAD  
**STORMWATER BASINS:** 826 LFT PERIMETER AT TOP OF BANK / 50 LFT = 17 DECID. TREES + 170 SHRUBS REQUIRED  
 - PROVIDING 12 CANOPY TREES + 190 SHRUBS (4:1 TREE EQUIVALENT)

**SUPPLEMENTAL LANDSCAPE NOTES**

1. REFER TO CONSTRUCTION DETAIL SHEET 14 FOR PLANTING DETAILS AND LANDSCAPE NOTES AND SPECIFICATIONS.  
 2. ANY SUBSTITUTIONS OF PLANT MATERIAL FROM THE APPROVED SITE PLAN WILL BE APPROVED BY THE TOWNSHIP PRIOR TO INSTALLATION.

**PLANT LIST**

KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
<b>DECIDUOUS SHADE TREES</b>					
ARA	12	Acer rubrum 'jfs KW 78'	Armstrong Gold Red Maple	2-1/2" cal.	B-B
CBF	20	Corpinus betulus 'Frans Fontaine'	Frans Fontaine European Hornbeam	2-1/2" cal.	B-B
GT	4	Gleditsia triacanthos var inermis 'Skycole'	Skyline Honeylocust	2-1/2" cal.	B-B
GB	2	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	2-1/2" cal.	B-B
QP	4	Quercus palustris	Pin Oak	2-1/2" cal.	B-B
<b>ORNAMENTAL TREES</b>					
MA	9	Malus 'Adirondack'	Adirondack Crabapple	1-1/2" cal.	B-B
MAD	2	Malus X adstringens 'Durleo'	Gladiator Crabapple (columnar)	1-1/2" cal.	B-B
<b>CONIFER TREES</b>					
AP	10	Abies phanerolepis	Canaan Fir	6-ft hgt.	B-B
PV	5	Pinus flexilis 'Vanderwolf'	Vanderwolf Limber Pine	6-ft hgt.	B-B
PNO	23	Pinus nigra 'Oregon Green'	Oregon Green Austrian Pine	6-ft hgt.	B-B
<b>CONIFER SHRUBS</b>					
JCS	3	Juniperus chinensis 'Spartan'	Spartan columnar Juniper	60" ht./#5	Cont.
JP	13	Juniperus chinensis Pfitzeriana compacta	Compact Pfitzer Juniper	36" ht./#5	Cont.
JS	19	Juniperus sobina 'monna'	Calgary Carpet Juniper	36" ht./#5	Cont.
FM	5	Pinus mugo 'Mops'	Mops dwarf Mugo Pine	36" ht./#5	Cont.
TM	38	Toxus x Media 'Densifolmis'	Densifolmis Yew	36" ht./#5	Cont.
TME	56	Toxus x Media 'Everlow'	Everlow Yew	36" ht./#5	Cont.
<b>DECIDUOUS SHRUBS</b>					
CAB	65	Cornus alba 'Bailhata'	Ivory Halo Dogwood	24" ht./#3	Cont.
DR	55	Diervilla rivularis 'Diwibrudi'	Honeybee Bush Honeysuckle	24" ht./#3	Cont.
DS	84	Diervilla splendens 'el Madrigal'	Nightglow Bush Honeysuckle	24" ht./#3	Cont.
HES	57	Hydrangea macrophylla 'Balmier'	Endless Summer Hydrangea	24" ht./#3	Cont.
HSS	114	Hydrangea serrata 'srmnaktar'	Mountain Tuff Stuff Red Hydrangea	24" ht./#3	Cont.
POA	54	Physocarpus opulifolius 'Amber Jubilee'	Amber Jubilee Ninebark	24" ht./#3	Cont.
RA	43	Ribes alpinum 'Greenmound'	Greenmound Currant	36" ht./#5	Cont.
RAG	10	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	24" ht./#3	Cont.
RKO	32	Rosa 'Knockout White'	Knockout White Shrub Rose	24" ht./#3	Cont.
VDC	44	Viburnum dentatum Christom Ppaf	Blue Muffin Arrowwood Viburnum	36" ht./#5	Cont.
VF	31	Viburnum farreri nantum	Fragrant Dwarf Viburnum	36" ht./#5	Cont.
VLM	7	Viburnum lantana 'Mohican'	Mohican Viburnum	36" ht./#5	Cont.

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO ASSURANCE IS MADE AS TO THE ACCURACY OF THESE UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES.

**BEBOSS Engineering**  
 Engineers Surveyors Planners Landscape Architects  
 3121 E. GRAND RIVER AVE.  
 HOWELL, MI. 48843  
 517.546.4836 FAX 517.548.1670

PROJECT: SOAPY BUCKET - M-59 & OAK GROVE  
 PREPARED FOR: SPRINGBORN PROPERTIES  
 3535 HIGH HILLCREST DRIVE  
 HOWELL, MI 48843  
 313-390-3538

TITLE: LANDSCAPE PLAN

NO	BY	DATE	REVISION PER
1	PC	11/21/23	DESIGNED BY
2	PC	11/21/23	DRAWN BY
3	PC	11/21/23	CHECKED BY
4	PC	11/21/23	SCALE: 1" = 40'
5	PC	11/21/23	JOB NO: 23-135
6	PC	11/21/23	DATE:
7	PC	11/21/23	SHEET NO.

**13** BOSS Engineering



BEFORE BACK FILLING AROUND PLANT, REMOVE ALL PLASTIC BALLING MATERIAL & METAL CONTAINERS. PUNCH HOLES IN FIBER POTS TO PROVIDE DRAINAGE.

NEVER PRUNE EVERGREENS  
TREE SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE TO PREVIOUS EXISTING GRADE

RUBBER HOSE 1/2 UP TREE POSITIONED DIRECTLY ABOVE TREE BRANCH

GUYING CABLE @ 3 GUYS PER TREE (120 APART) DOUBLE STRAND = 12 GAUGE TWISTED WIRE

4" MULCH INSIDE SAUCER

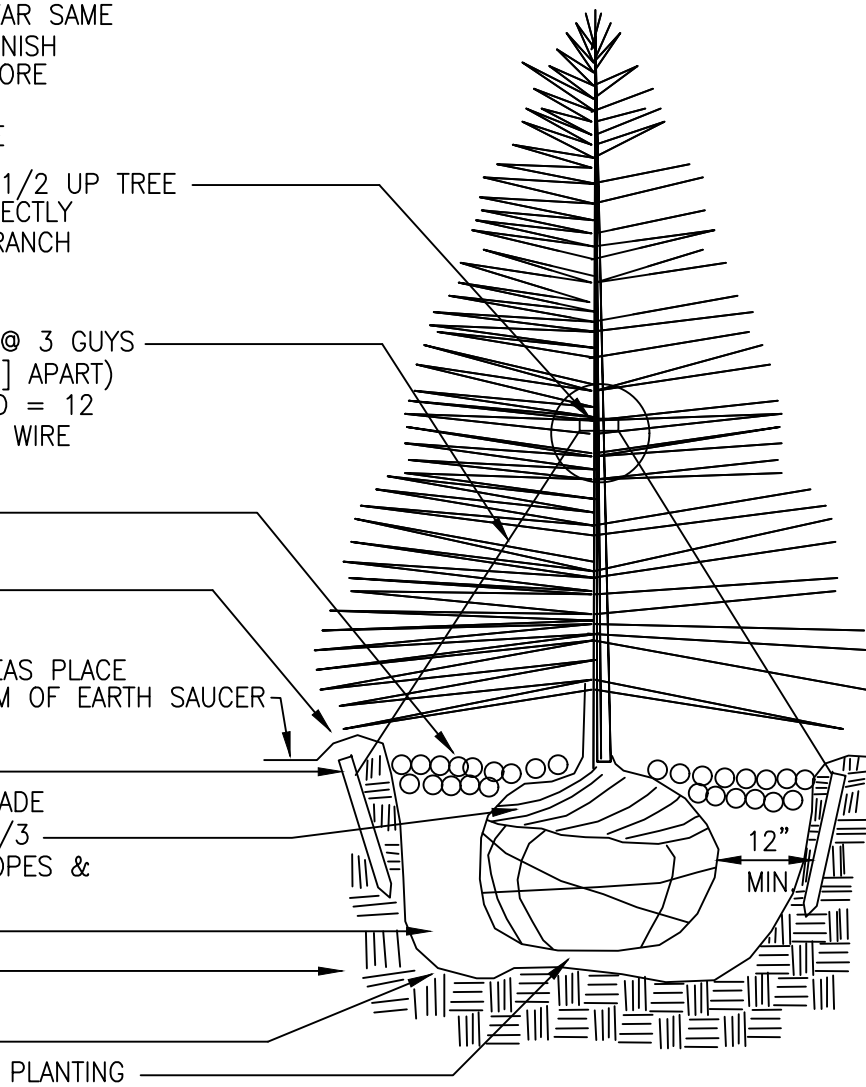
EARTH SAUCER 5" DEEP

IN SODDED AREAS PLACE SOD TO BOTTOM OF EARTH SAUCER

2"x4"x30" STAKE SET BELOW FIN. GRADE REMOVE TOP 1/3 OF BURLAP, ROPES & WIRE

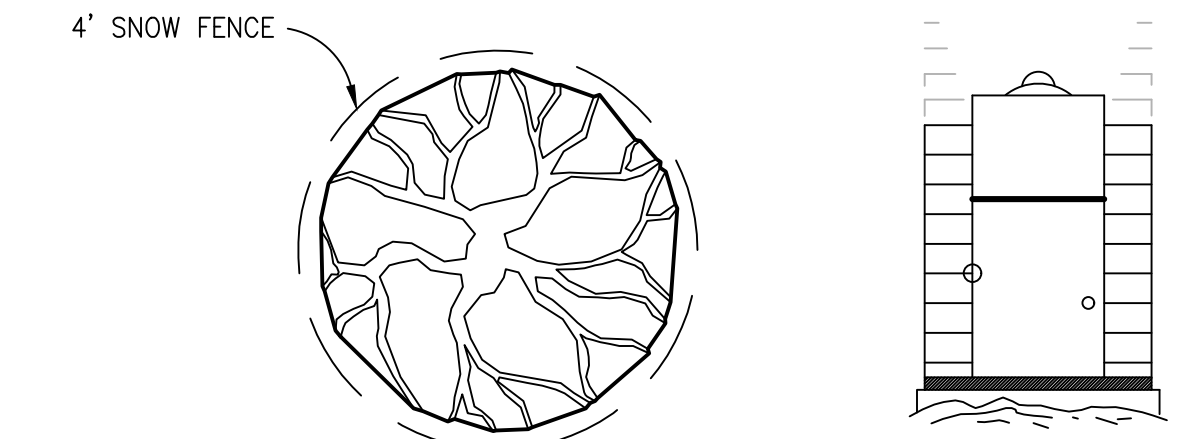
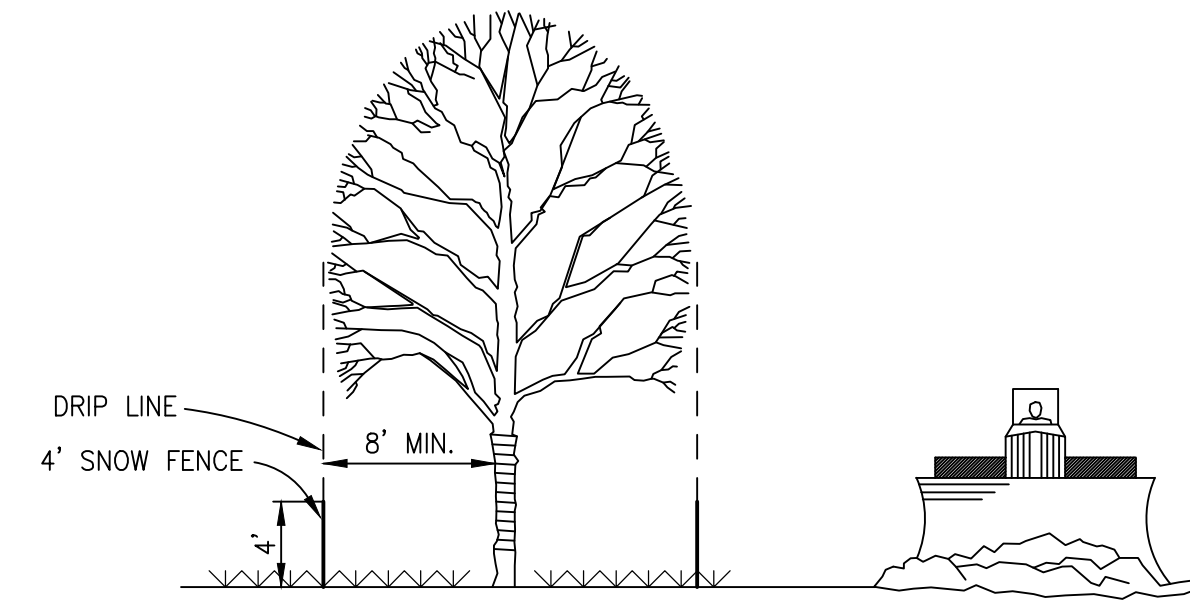
PLANTING MIX SUBGRADE SCARIFY TO 4" DEPTH

6" COMPACTED PLANTING MIX UNDER BALL

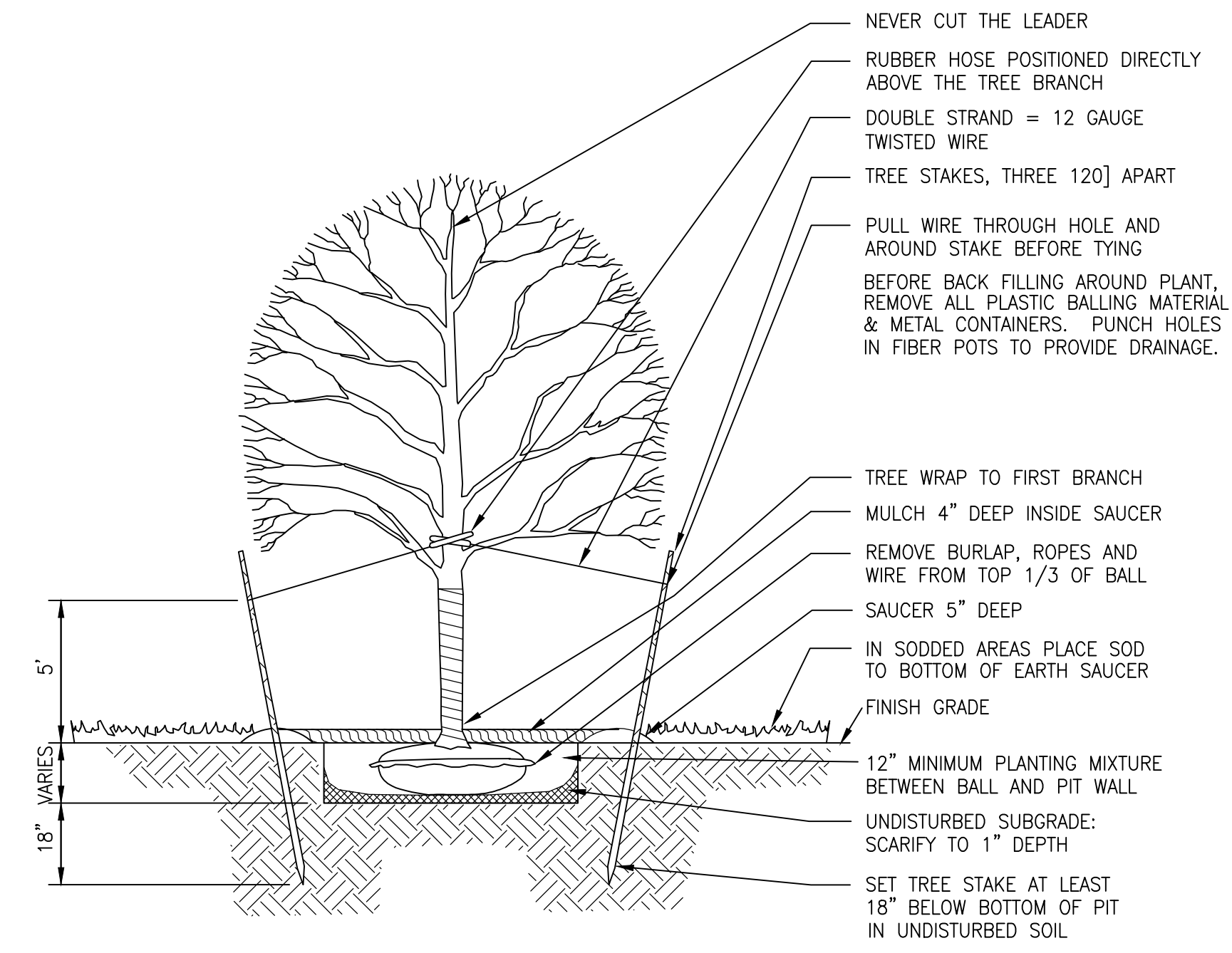


**EVERGREEN TREE PLANTING DETAIL**  
(NO SCALE)

NOTE: MULCH CIRCLES CONIFERS - EXTEND THE DIAMETER OF CIRCLE/SAUCER TO DRIP LINE OF PLANTED TREE OR 5-FT DIAMETER WHICH IS GREATER

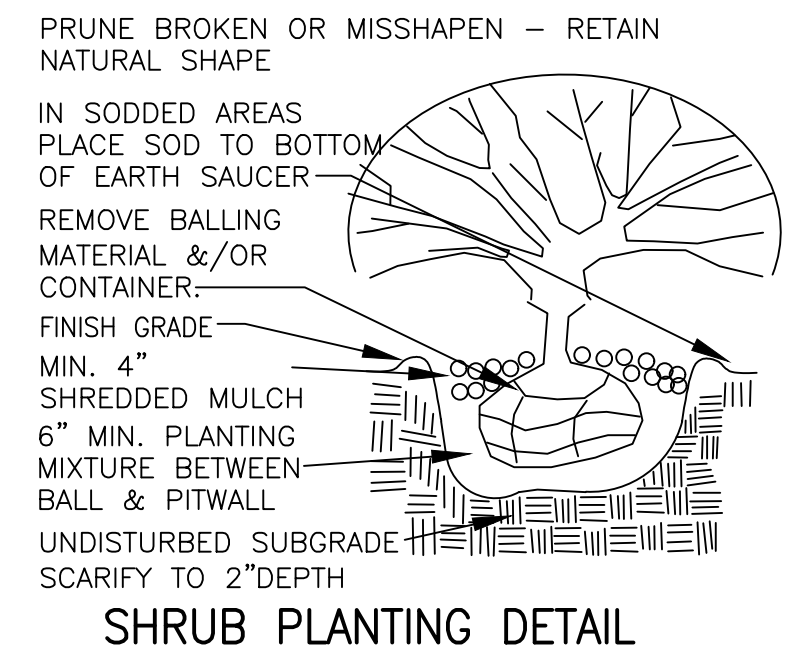


**SNOW FENCE PROTECTION DETAIL**  
(NO SCALE)



**DECIDUOUS TREE PLANTING DETAIL**  
(NO SCALE)

NOTE: MULCH CIRCLES DECIDUOUS - EXTEND THE DIAMETER OF CIRCLE/SAUCER TO DRIP LINE OF PLANTED TREE OR 5-FT DIAMETER WHICH IS GREATER



**SHRUB PLANTING DETAIL**  
(NO SCALE)

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**BEBOSS**  
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517.546.4836 FAX 517.548.1670

PROJECT: **SOAPY BUCKET - M-59 & OAK GROVE**  
PREPARED FOR: **SPRINGBORN PROPERTIES**  
3535 HIGH HILLCREST DRIVE  
HOWELL, MI 48843  
313-390-3338

NO	BY	DATE	REVISION PER
3	NL	7/26/24	REVIEW
2	NL	3/19/24	FOR CLIENT
1	NL	2/29/24	ENGINEER REVIEW
	NO	BY	REVISION PER

DESIGNED BY: PC  
DRAWN BY: PC  
CHECKED BY:  
SCALE: AS NOTED  
JOB NO: 23-135  
DATE: 11/21/23  
SHEET NO. **14**

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND





Specifications: EPA: 0.44 ft (0.04 m), Length: 26.18" (0.67 m), Width: 14.24" (0.36 m), Height H1: 2.26" (0.06 m), Height H2: 7.64" (0.19 m), Weight: 2.3 lbs (0.8 kg)

Introduction: The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficiency, long-life luminaire.



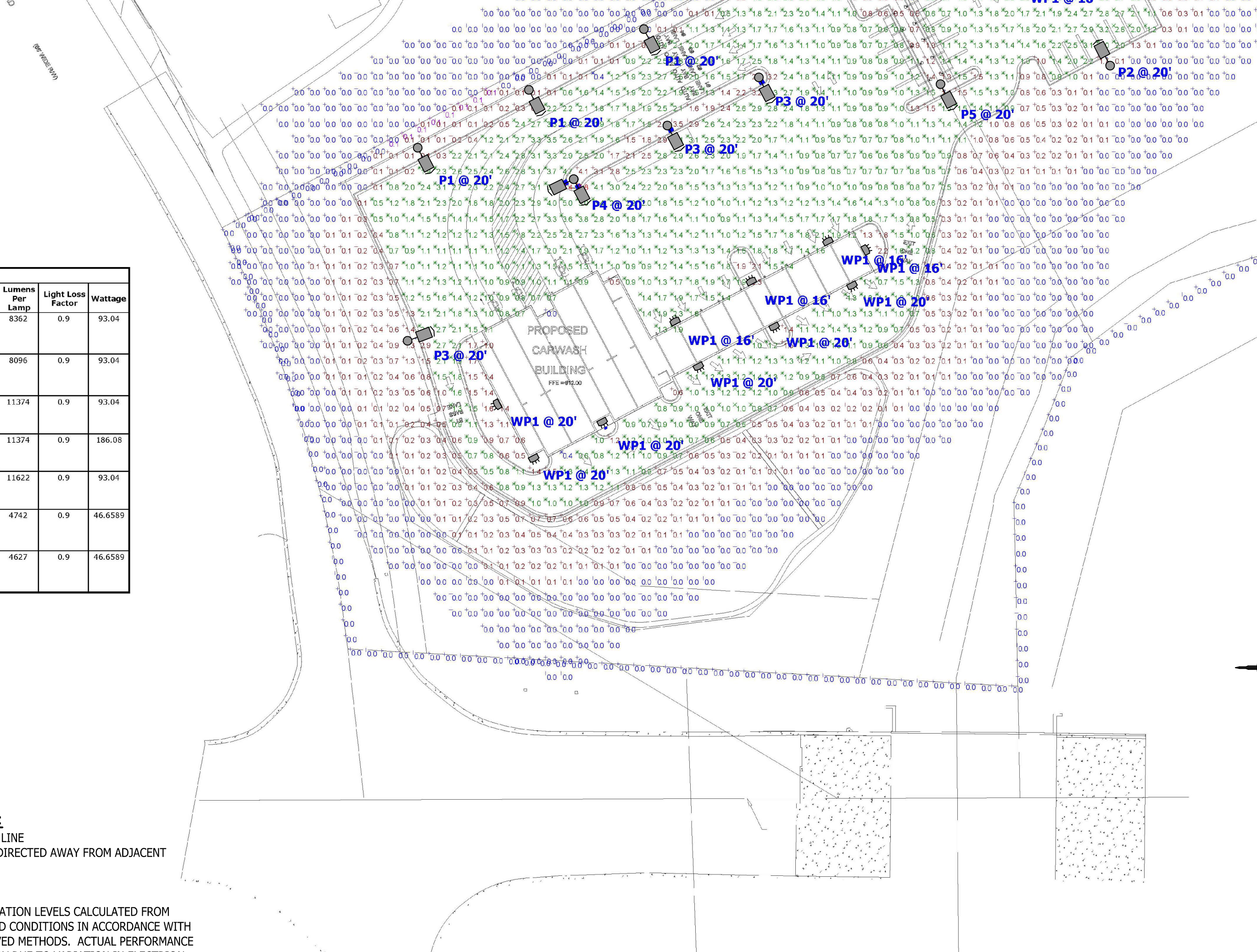
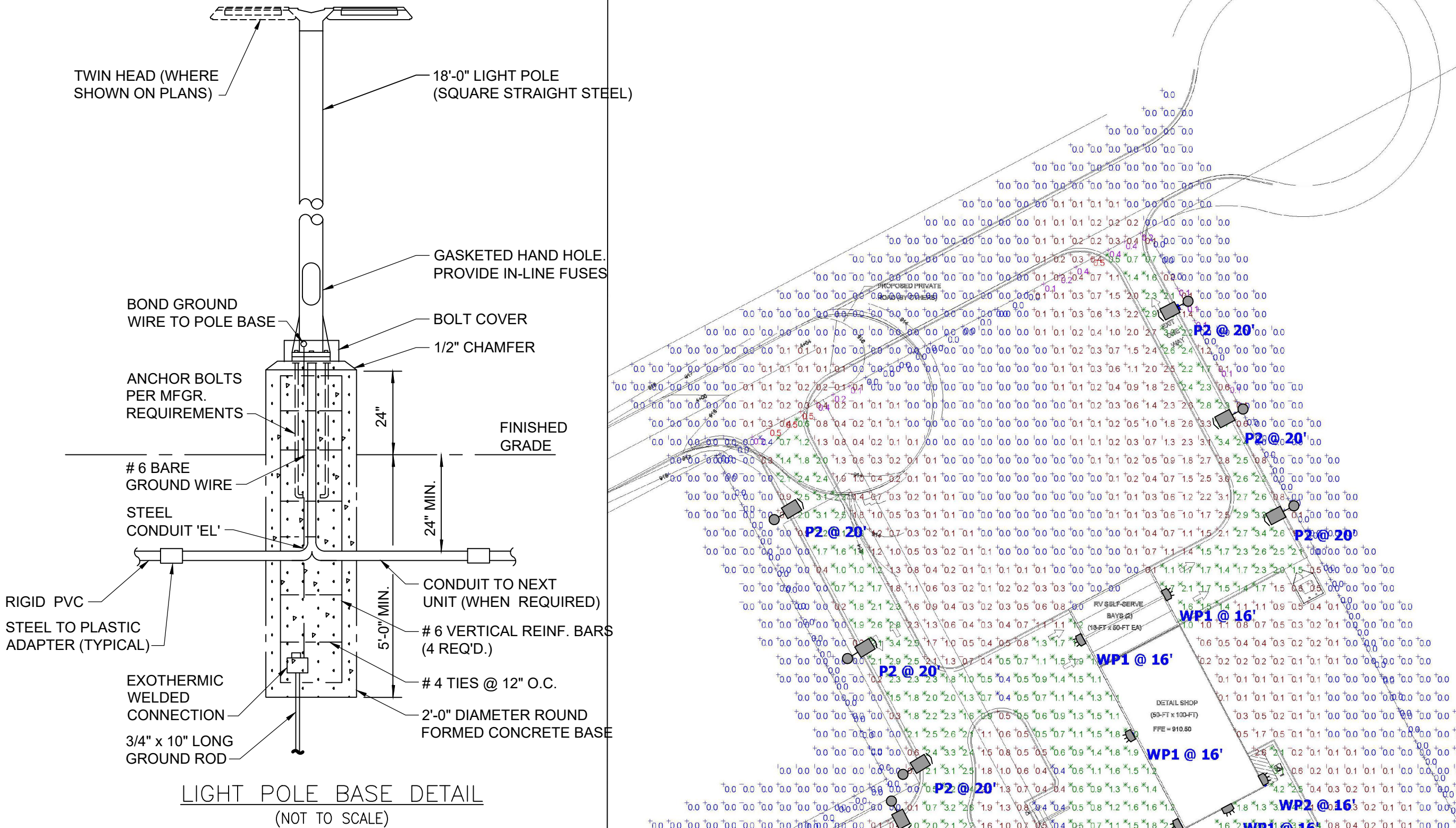
Specifications: Depth (D1): 7", Depth (D2): 1.5", Height: 9", Width: 11.5", Weight: 13.5 lbs (without options)

Introduction: The WDGE2 LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectangular design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true size-wide solution.

Table with 9 columns: Luminaire, Optic, Standard Temp, Color, Mount, Approximate Lumens, etc. Includes rows for various WDGE2 LED models.

Table with 8 columns: Series, Package, Color Temperature, CRI, Distribution, Voltage, Mounting, Shipped Includ, etc. Includes rows for various WDGE2 LED models.

Table with 4 columns: System, Features, Options, Finish. Lists various system options and finish colors.



Statistics table with columns: Description, Symbol, Avg, Max, Min, Avg/Min, Max/Min. Rows include Overall, Parking and Paved Lot, and Property Line.

Schedule table with columns: Symbol, Label, Quantity, Manufacturer, Catalog Number, Description, Lumens Per Lamp, Light Loss Factor, Wattage.

General Note: 1. SEE DRAWING FOR LUMINAIRE MOUNTING HEIGHT. 2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS.

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

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

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

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

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

HOWELL TOWNSHIP LIGHTING STANDARDS:

- 1. 0.0 MAX. FOOTCANDLE (FC) AT THE PROPERTY LINE
2. LIGHTING SHALL UTILIZE FULL-CUTOFF TYPE, DIRECTED AWAY FROM ADJACENT PROPERTIES & RIGHTS-OF-WAY.

GENERAL LIGHTING NOTES:

- 1. THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS.
2. ALL POLES ARE TO BE MOUNTED ON CONCRETE PEDESTALS 2' ABOVE GRADE IN PARKING LOTS AS SHOWN IN DETAIL.
3. ALL POLES LOCATED OUTSIDE OF THE PARKING AREA SHALL BE LOCATED 3' FROM BACK OF CURB OR EDGE OF SIDEWALKS UNLESS OTHERWISE SHOWN.



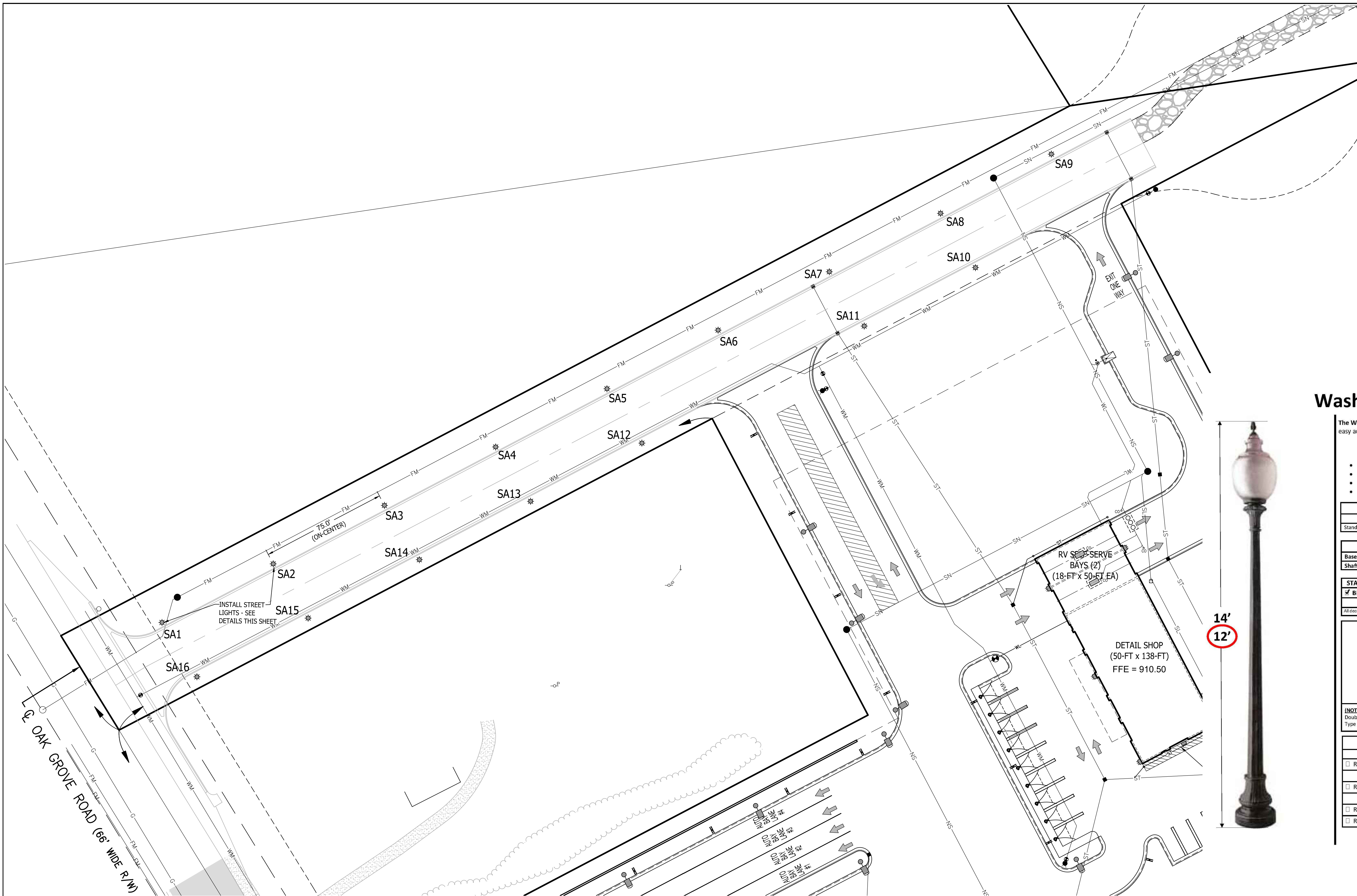
BEBOSS Engineering logo and contact information: Engineers, Surveyors, Planners, Landscape Architects. 3121 E. GRAND RIVER AVE. HOWELL, MI. 48843. 517.546.4836. FAX 517.548.1670.

SOAPY BUCKET CARMASH PHOTOMETRIC PLAN PREPARED FOR: BOSS ENGINEERING GASSER BUSH ASSOCIATES WWW.GASSERBUSH.COM

PROJECT: SOAPY BUCKET - M-59 & OAK GROVE
PREPARED FOR: SPRINGBORN PROPERTIES
3535 HIGH HILLCREST DRIVE HOWELL, MI 48843 313-390-3358

DESIGNED BY: OTHERS
DRAWN BY: OTHERS
CHECKED BY:
SCALE: AS NOTED
JOB NO: 23-135
DATE: 11/21/23
SHEET NO. 15

BOSS Engineering logo and revision table with columns for No, Date, Description.



### Washington Series

The Washington Series has a Round Cast Aluminum Base with a door that provides easy access to the Anchor Bolts and wiring connections.

#### Features

- Strong, lightweight, and easy to install.
- Extruded Aluminum shaft welded to the base.
- 3" tenon optional for luminaire mounting.
- Access door for wiring secured with stainless steel screws.

#### AVAILABLE EXTRUDED ALUMINUM SHAFTS

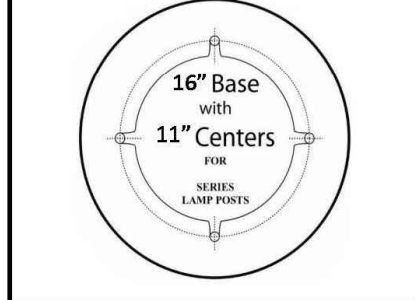
Fluted Tapered Shaft  
Standard wall thickness and height specified above; contact factory for additional options.

#### MATERIALS

Base	Cast Aluminum	Tenon	Cast Aluminum
Shaft	Extruded Aluminum (6063-T5)	Anchor Bolts	Additional Charge

STANDARD FINISH	PREMIUM FINISH (additional charge)
<input checked="" type="checkbox"/> BLK Black	<input type="checkbox"/> WH White
<input type="checkbox"/> SB Statuary Bronze	<input type="checkbox"/> GN Green

All decorative aluminum components have an electrostatically applied thermoset scratch-resistant powder coat finish.



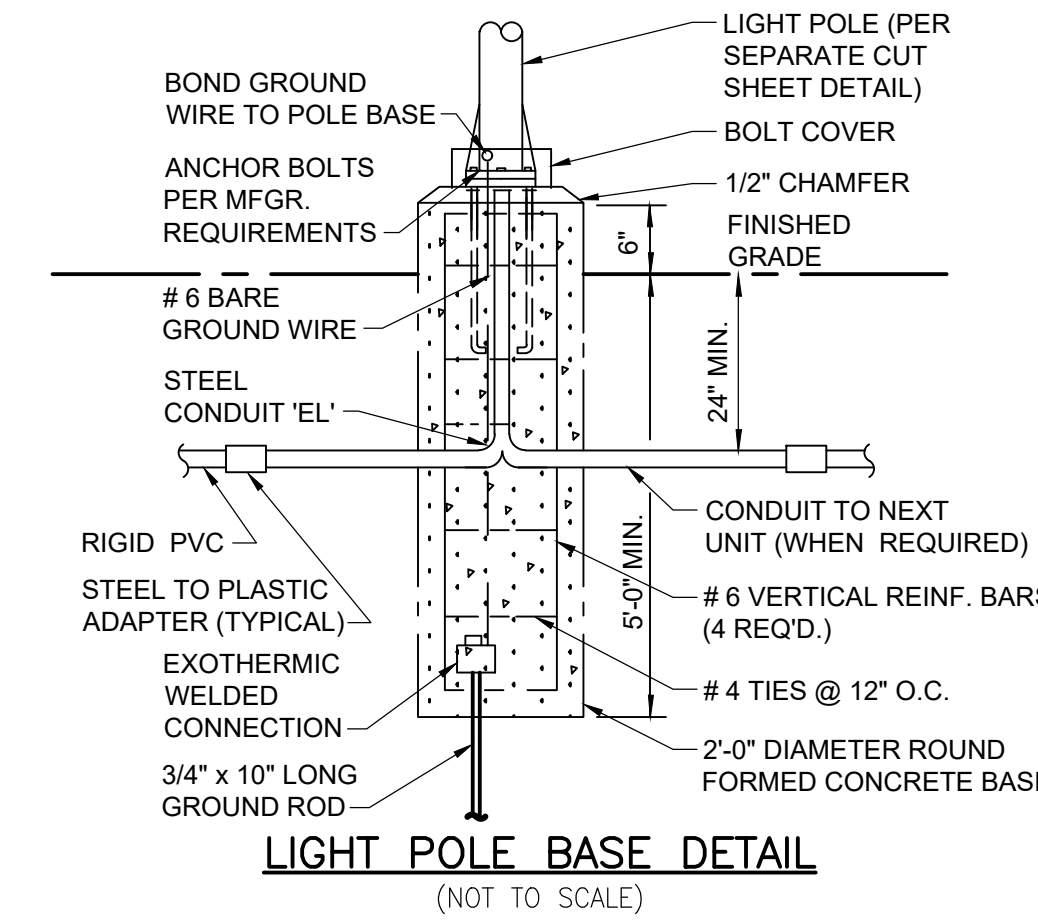
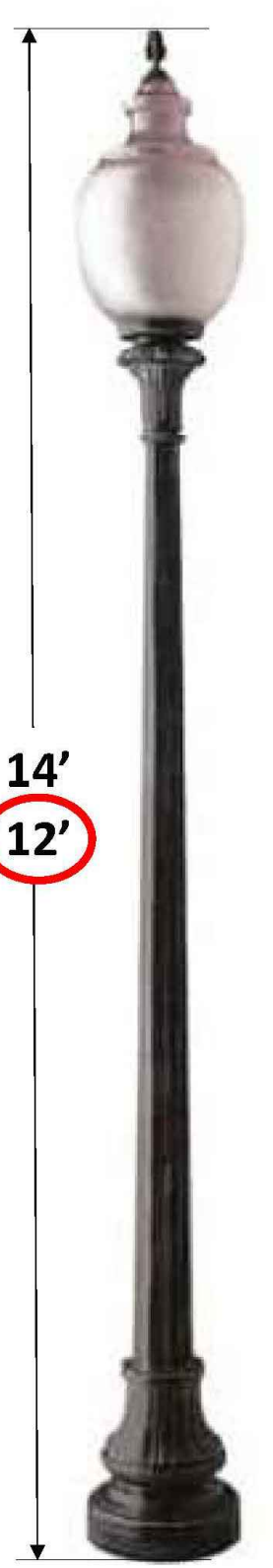
#### ACCESSORIES

<input type="checkbox"/> GFCI	Ground Fault circuit interrupter
<input type="checkbox"/> WLUC	White in Use Cover for GFCI
<input type="checkbox"/> PCL	Photocell

MEL NORTHEY CO INC.  
303 GULF BANK ROAD  
HOUSTON, TEXAS 77037  
1-800-828-0302  
[www.melnorthey.com](http://www.melnorthey.com)

#### LUMINARIES OPTIONS

Retrofit Polycarbonate Acorn Luminaires				
<input type="checkbox"/> RTF 60	<input type="checkbox"/> RTF 61	<input type="checkbox"/> RTF 65	<input checked="" type="checkbox"/> RTF 71	<input type="checkbox"/> RTF 75
Retrofit Acrylic, glare free, state of the art Prismatic Acorn Luminaires				
<input type="checkbox"/> RTF 78	<input type="checkbox"/> RTF 91	<input type="checkbox"/> RTF 91T	<input type="checkbox"/> RTF95	<input type="checkbox"/> RTF 96
Retrofit Heavy Duty Cast Aluminum Lanterns				
<input type="checkbox"/> RTF 46	<input type="checkbox"/> RTF 131	<input type="checkbox"/> RTF 132	<input type="checkbox"/> B-1	<input type="checkbox"/> RTF 54
<input type="checkbox"/> RTF 72	<input type="checkbox"/> RTF 73	<input type="checkbox"/> RTF 97	<input type="checkbox"/> RTF 98	<input type="checkbox"/> RTF 49



**LIGHT POLE BASE DETAIL**  
(NOT TO SCALE)

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

- #### GENERAL LIGHTING NOTES
1. PROPOSED STREET LIGHTS MATCH THE CITY OF HOWELL'S STANDARD STREET LIGHTS IN MANUFACTURER, STYLE, & HEIGHT - BLACK ALUMINUM SHAFT, ACRYLIC GLOBE, LED LUMINAIRE
  2. ALL POLES ARE TO BE MOUNTED ON CONCRETE PEDESTALS 6' ABOVE GRADE, IN STREET TERRACE AS SHOWN IN DETAIL.
  3. ALL POLES SHALL BE LOCATED 3' FROM BACK OF CURB TO CENTER UNLESS OTHERWISE SHOWN.

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH, OR ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION.

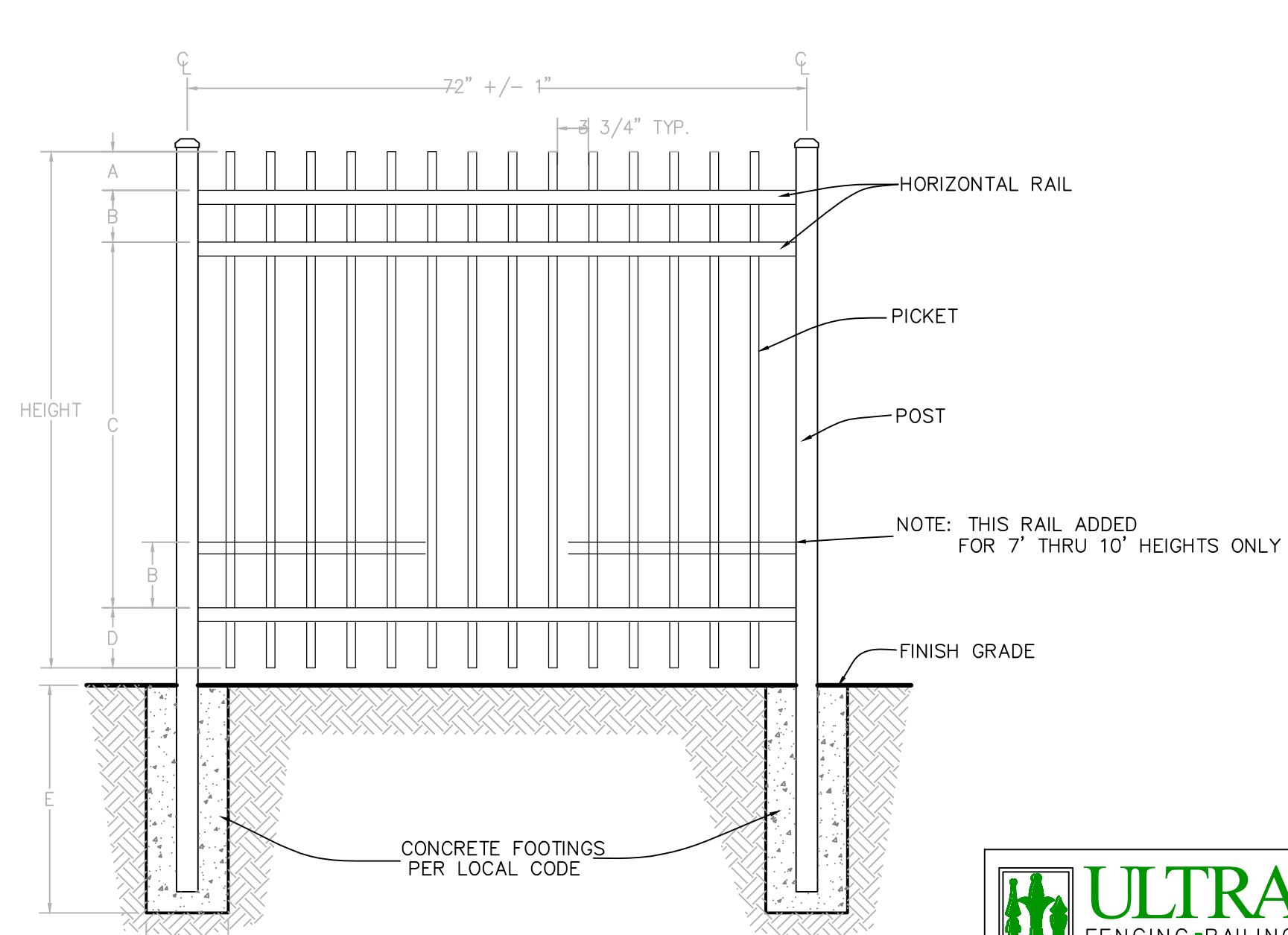
**BEBOSS**  
Engineering  
Engineers Surveyors Planners Landscape Architects  
3121 E. GRAND RIVER AVE.  
HOWELL, MI. 48843  
517.546.4836 FAX 517.548.1670

PROJECT: **SOAPY BUCKET - M-59 & OAK GROVE**  
PREPARED FOR: **SPRINGBORN PROPERTIES**  
3535 HIGH HILLCREST DRIVE  
HOWELL, MI 48843  
313-390-3538

TITLE: **LIGHTING PLAN - PRIVATE ROAD**

3	NL	L.C.D.C., SSC, TP, ENG. & FIRE DPT. REVIEW	7/26/24
2	NL	PROGRESS SET FOR CLIENT	3/19/24
1	NL	L.C.D.C. & TPW. ENGINEER REVIEW	2/29/24
	NO BY	REVISION PER	DATE

DESIGNED BY: PC  
DRAWN BY: PC  
CHECKED BY:  
SCALE: 1" = 30'  
JOB NO: 23-135  
DATE: 11/21/23  
SHEET NO. **16**



DIMENSIONS						
HEIGHT	A	B	C	D	E	F
4'	6 5/8"	7 5/8"	38 3/4"	7"		PER LOCAL CODE
4 1/2'	6 5/8"	7 5/8"	38 3/4"	7"		PER LOCAL CODE
5'	6 5/8"	7 5/8"	38 3/4"	7"		PER LOCAL CODE
6'	6 5/8"	7 5/8"	38 3/4"	7"		PER LOCAL CODE
7'	9 5/8"	10 5/8"	68 3/4"	10"		PER LOCAL CODE
8'	9 5/8"	10 5/8"	68 3/4"	10"		PER LOCAL CODE
9'	13 5/8"	13 5/8"	68 3/4"	13"		PER LOCAL CODE
10'	13 5/8"	13 5/8"	68 3/4"	13"		PER LOCAL CODE

**ULTRA**  
FENCING • RAILING

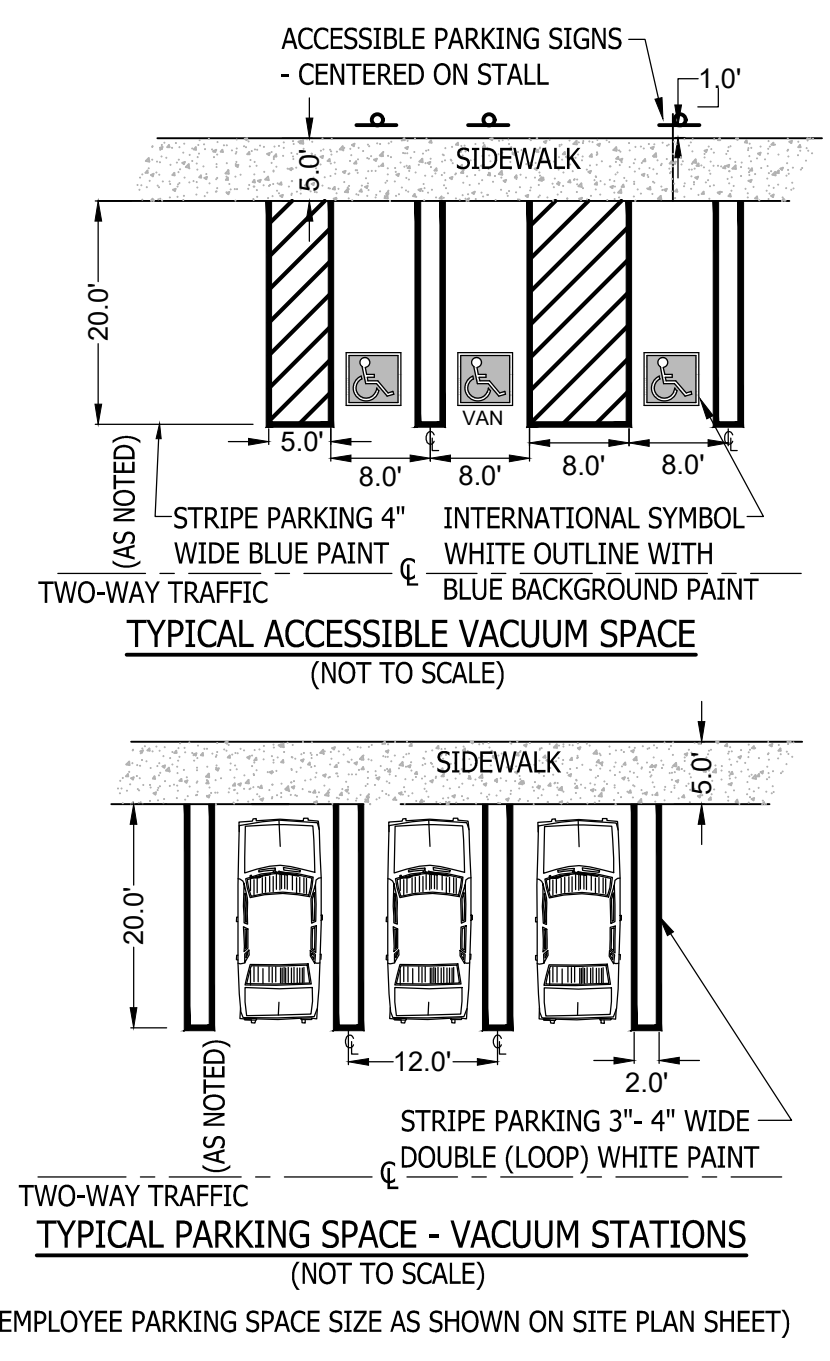
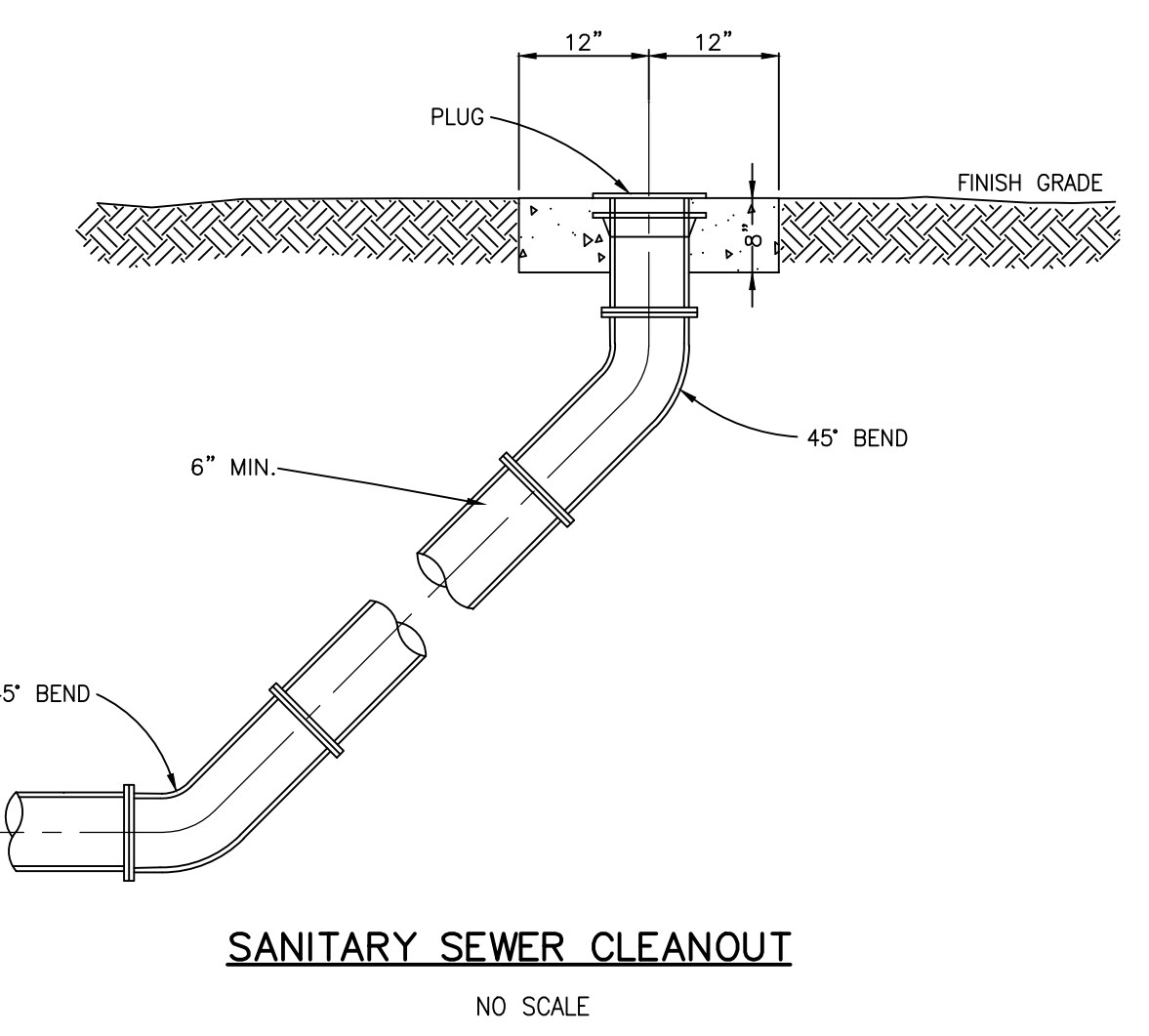
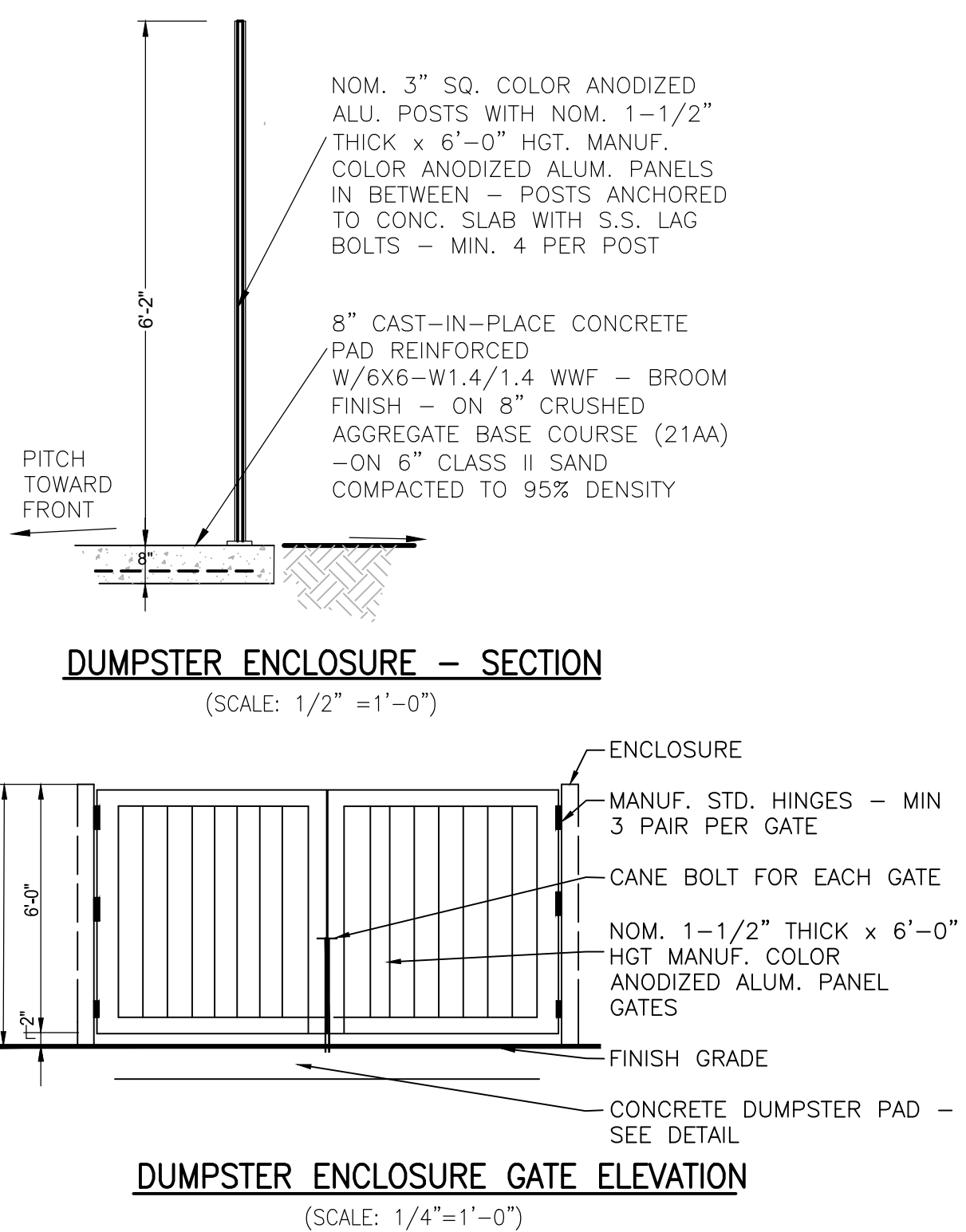
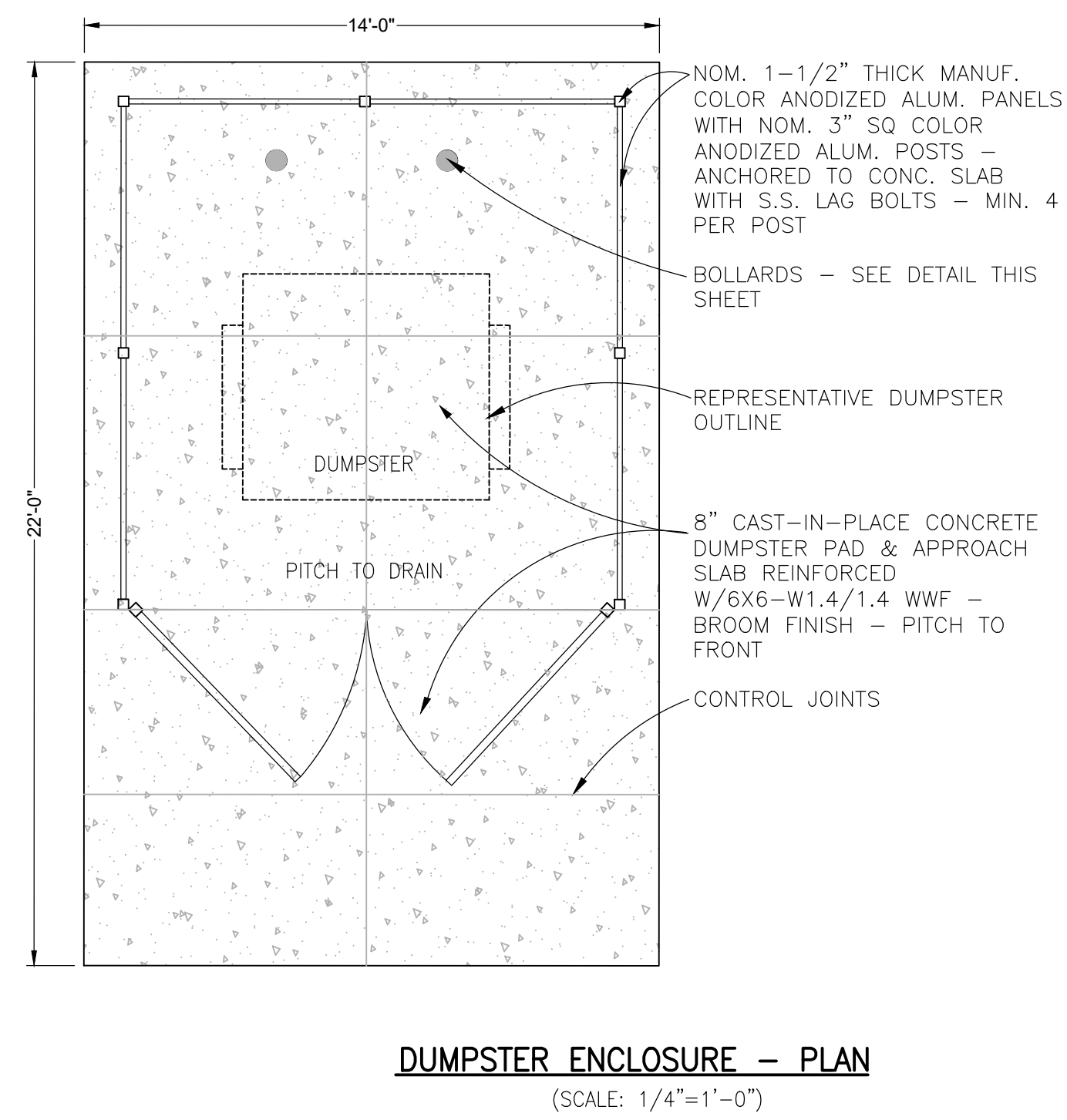
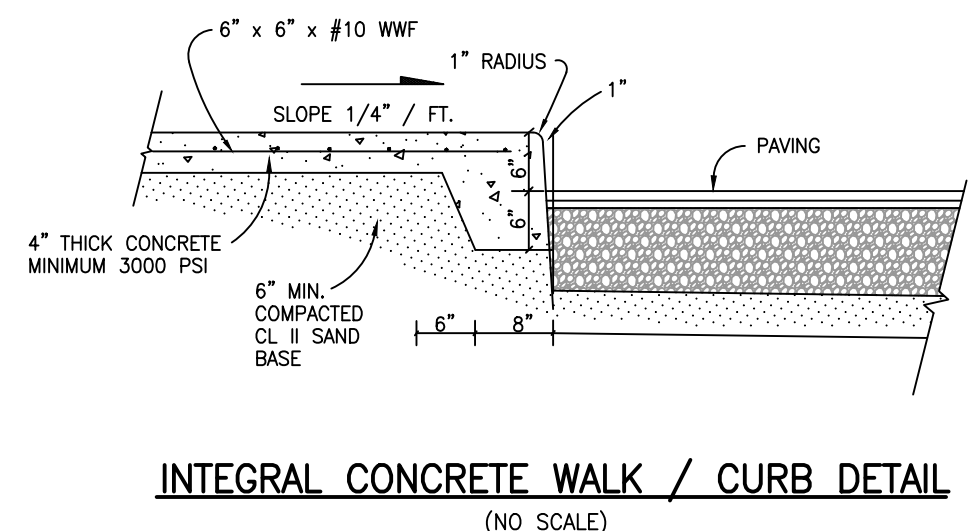
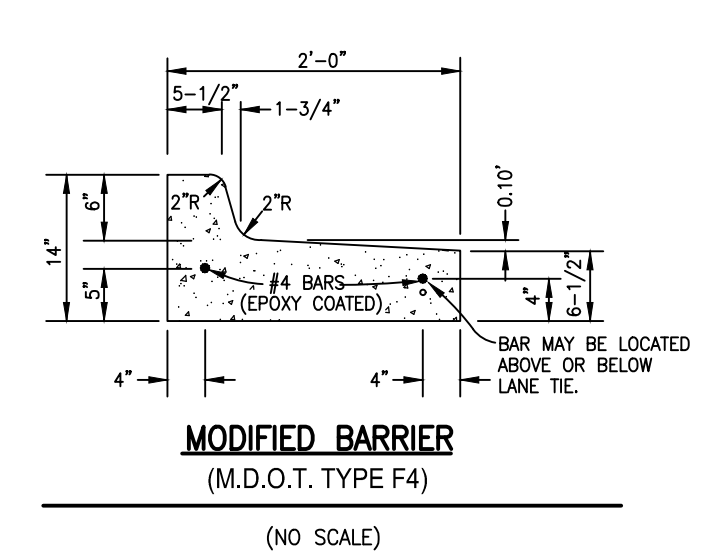
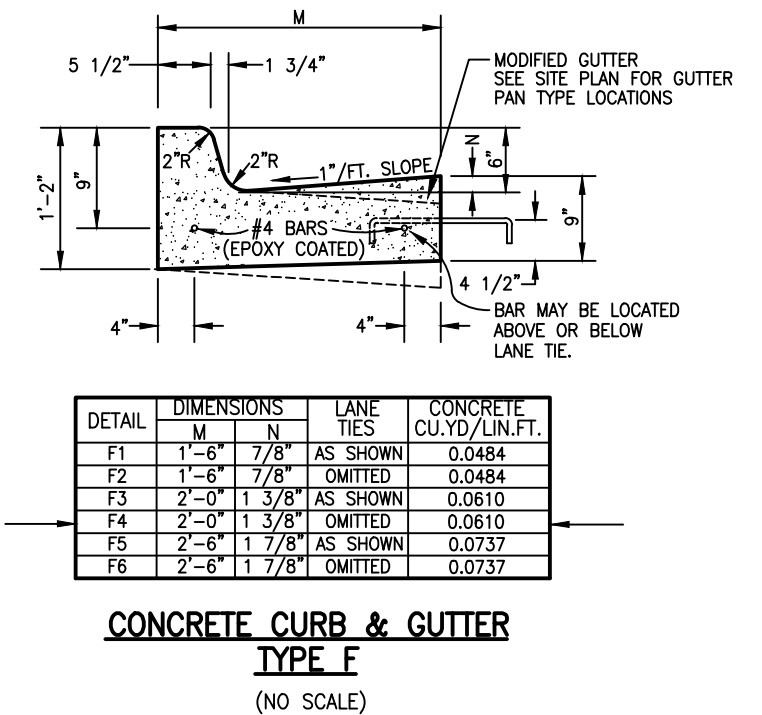
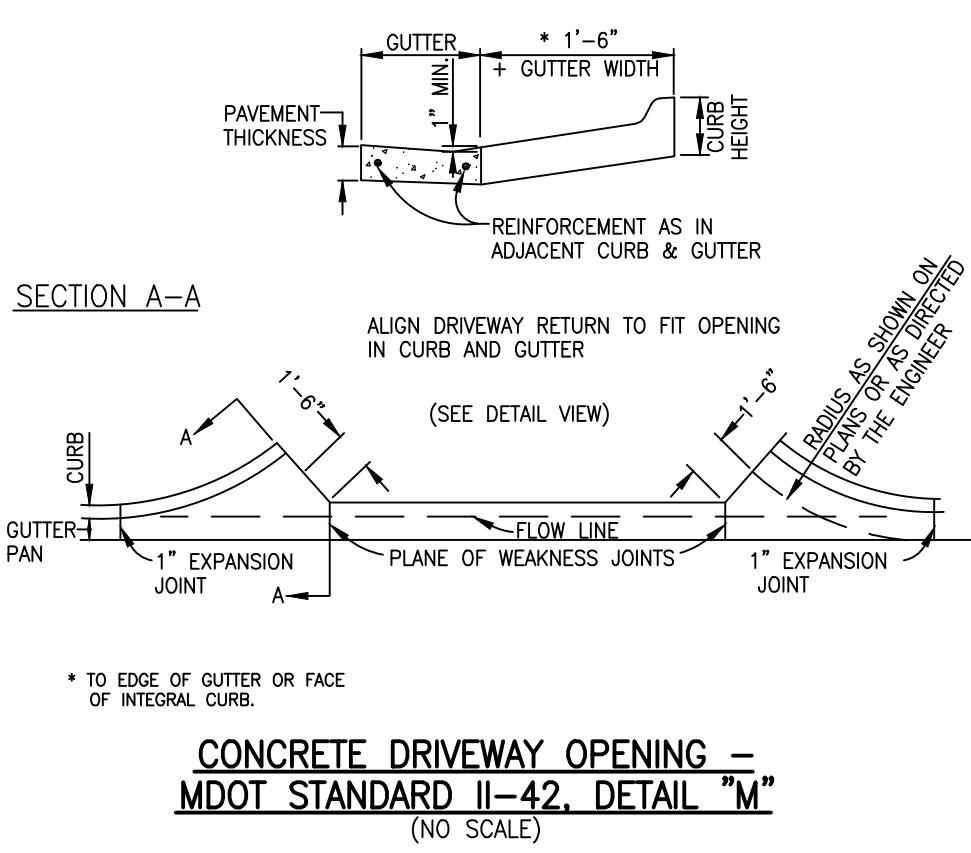
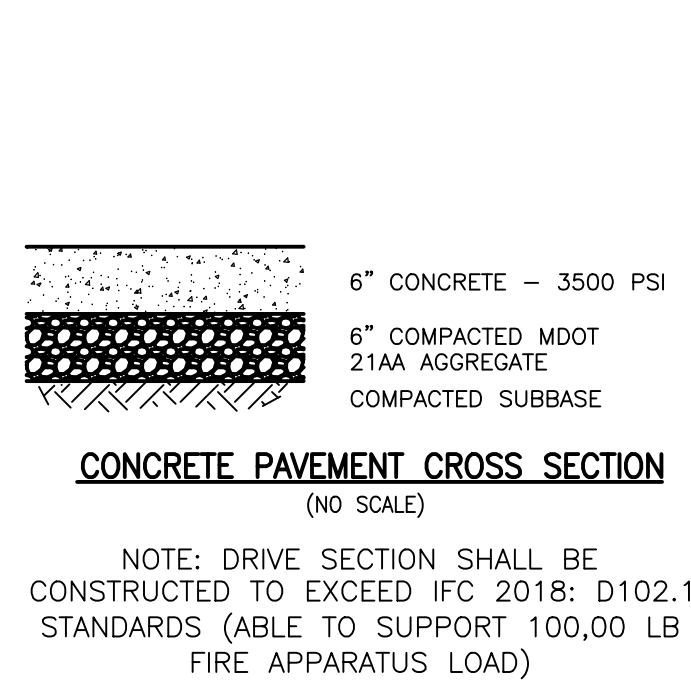
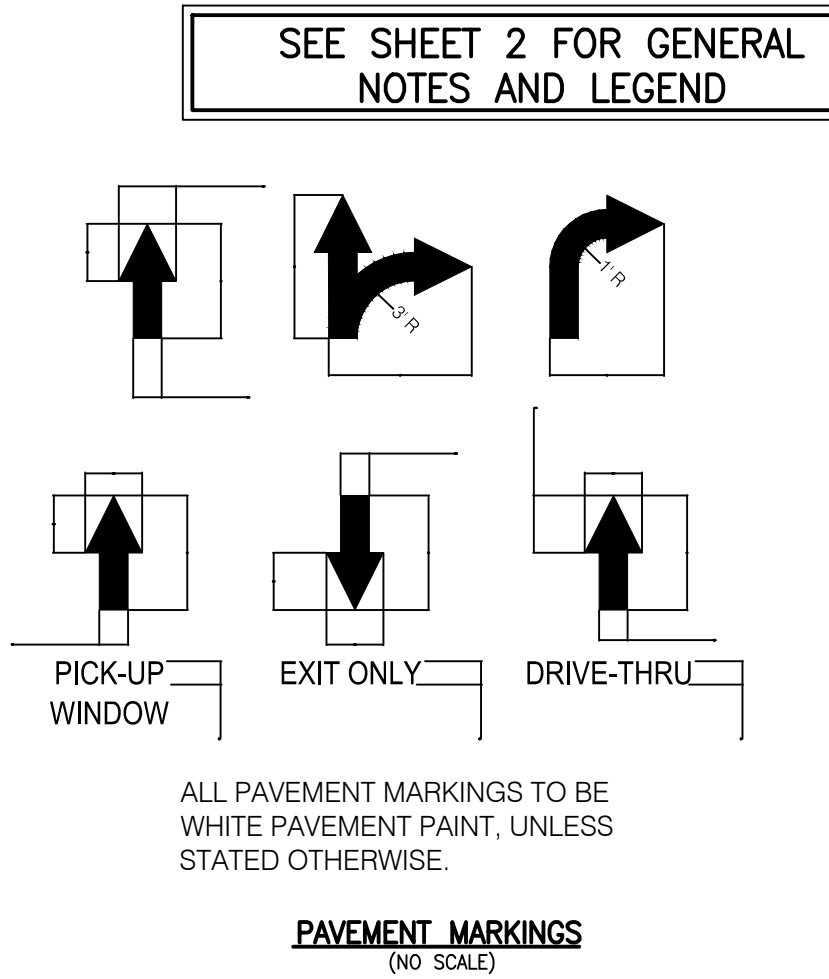
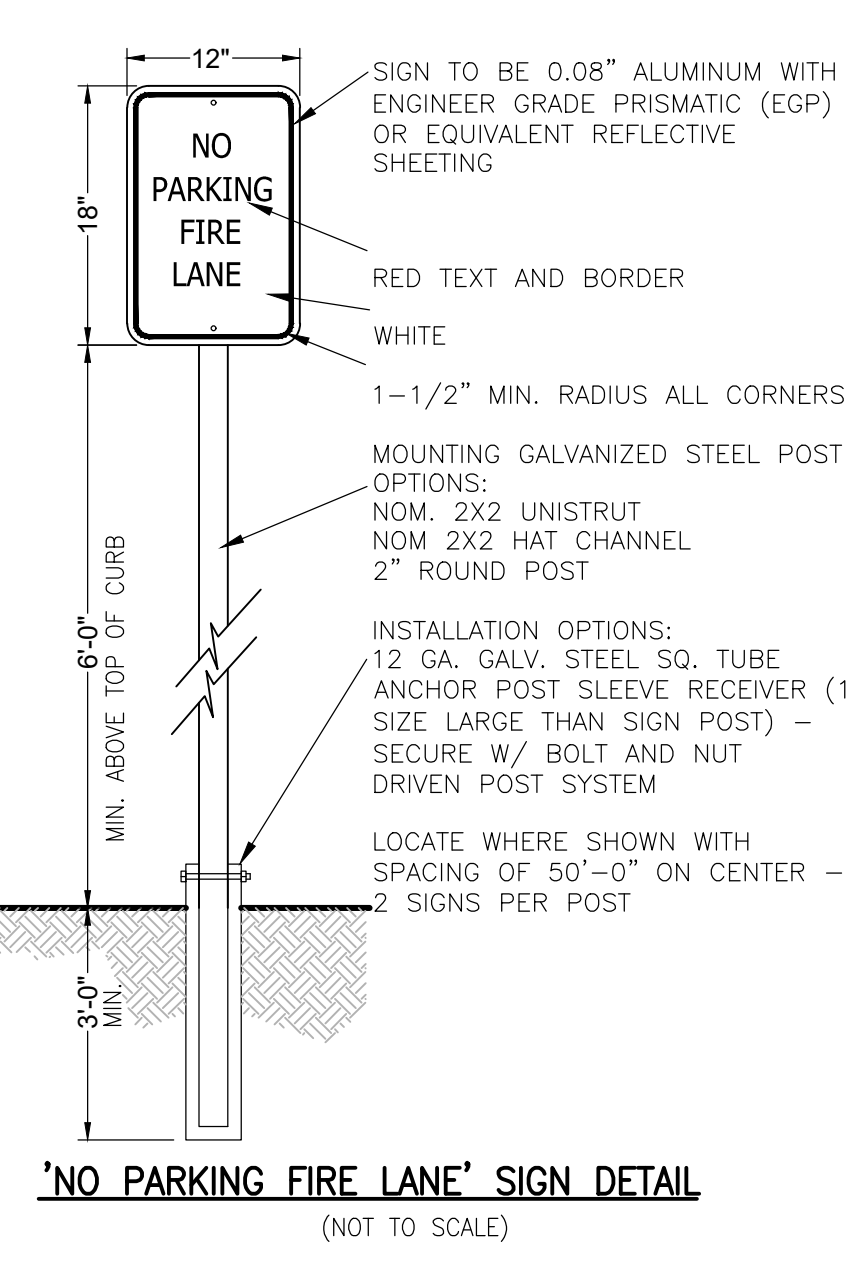
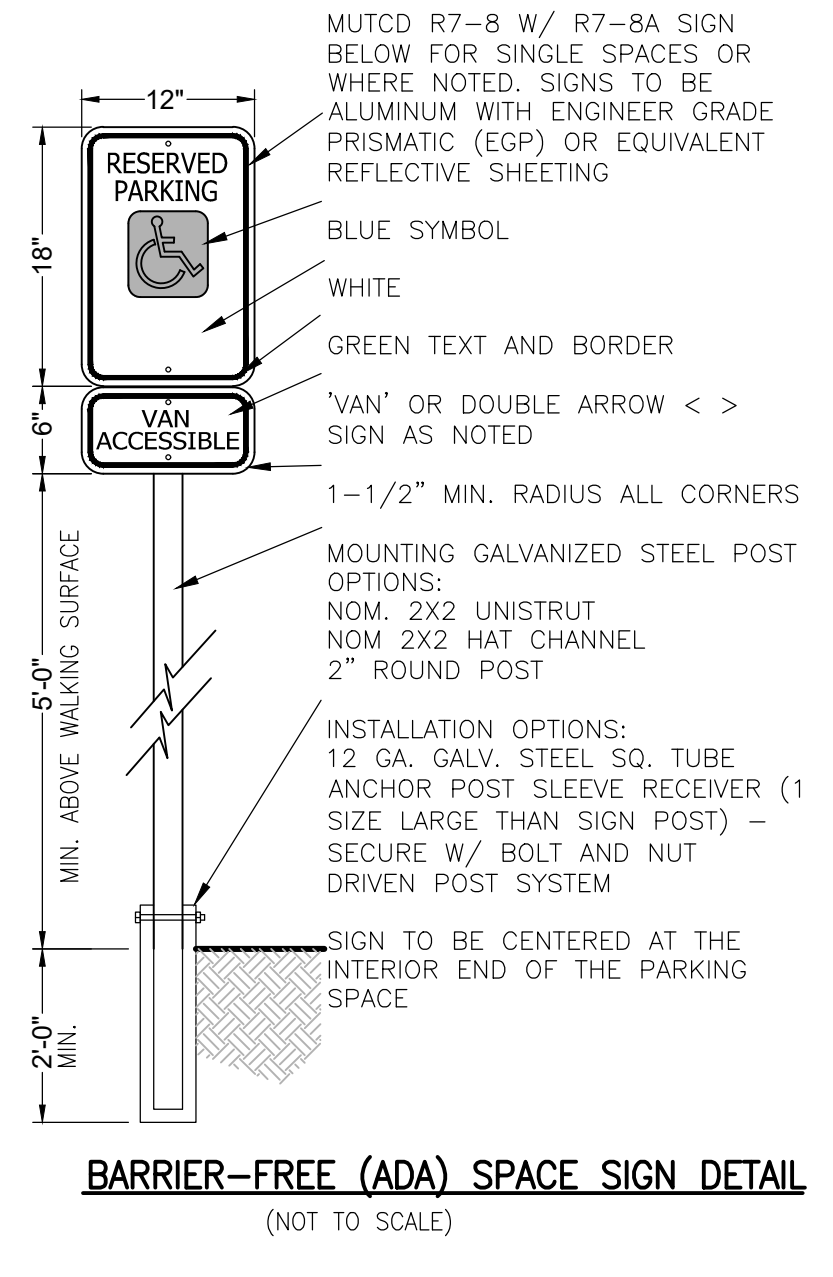
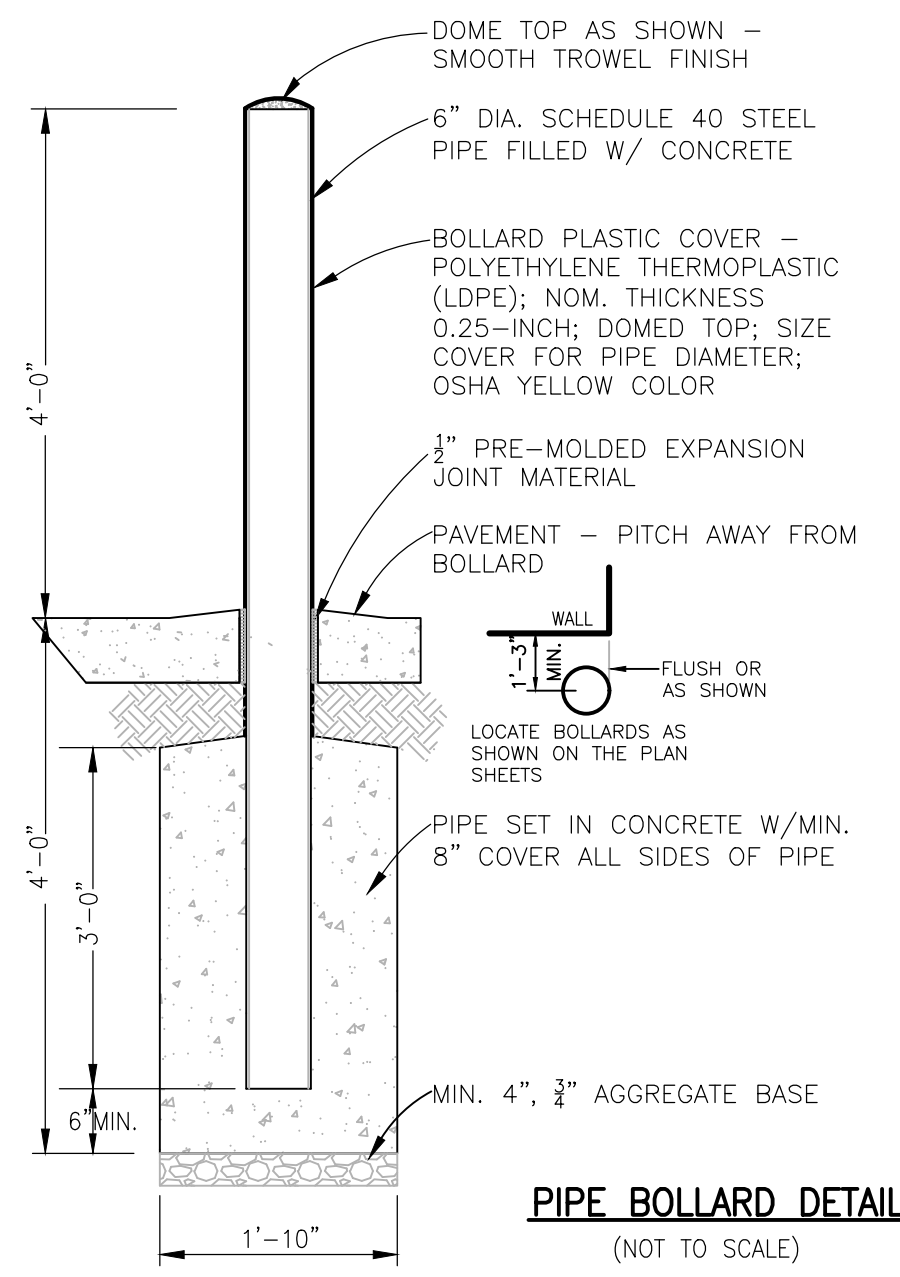
**UAS-100 SPEAR TOP - PLUGGED INDUSTRIAL**  
9-1-13

**SPECIFICATIONS**

POSTS: 2 1/2" x 2 1/2" x .100" WALL  
3" x 3" x .125" WALL  
4" x 4" x .125" WALL

HORIZONTAL RAILS: 1 5/8" W x 1 5/8" H  
SIDE WALLS: .100"  
TOP WALLS: .070"

PICKETS: 1" x 1" x .062" WALL  
PICKET SPACING: 3 3/4" BETWEEN PICKETS



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BE BOSS Engineering  
Engineers Surveyors Planners Landscape Architects  
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HOWELL, MI. 48843  
517.546.4836 FAX 517.548.1670

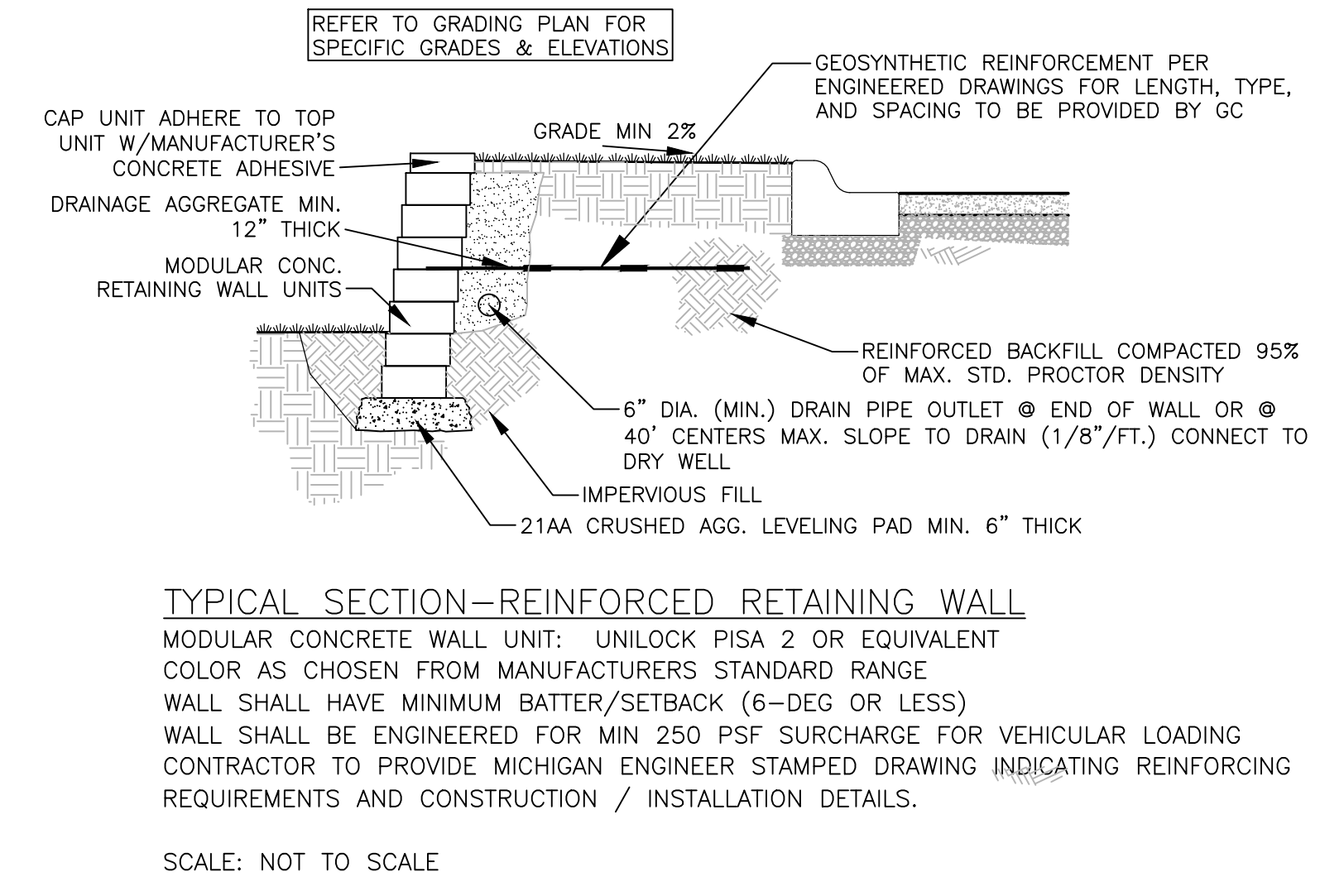
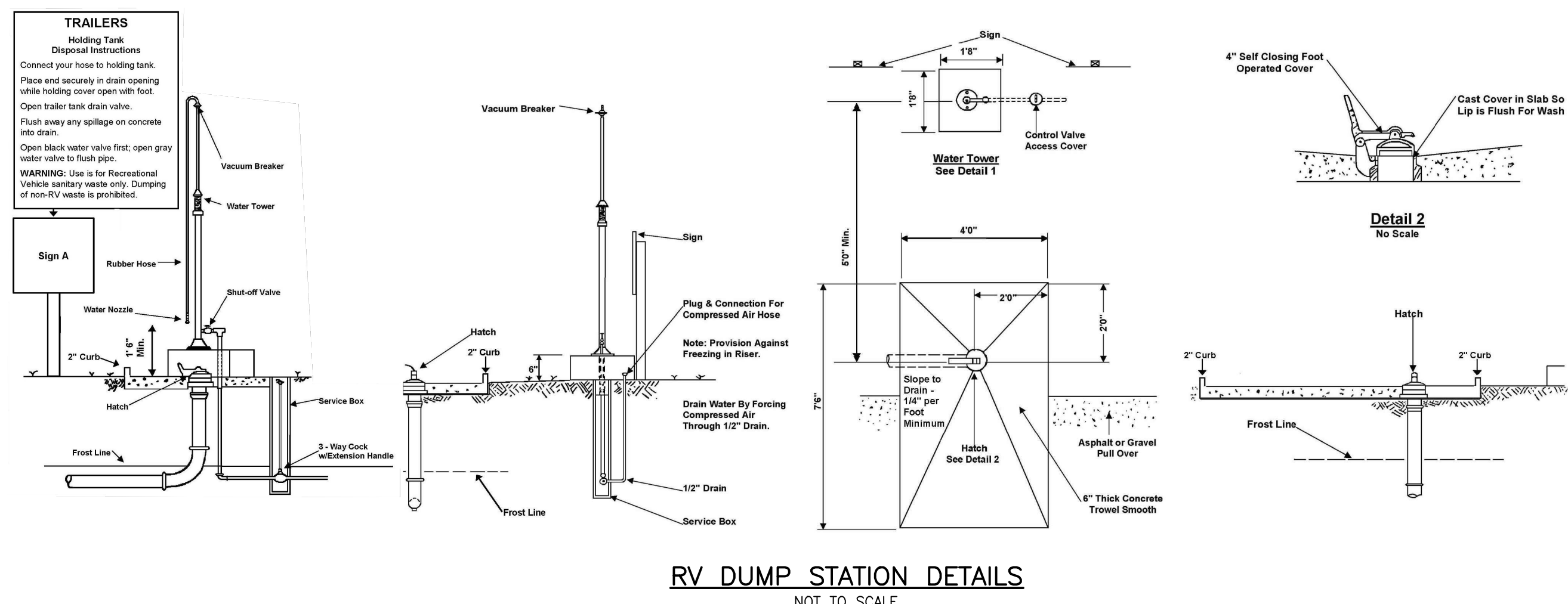
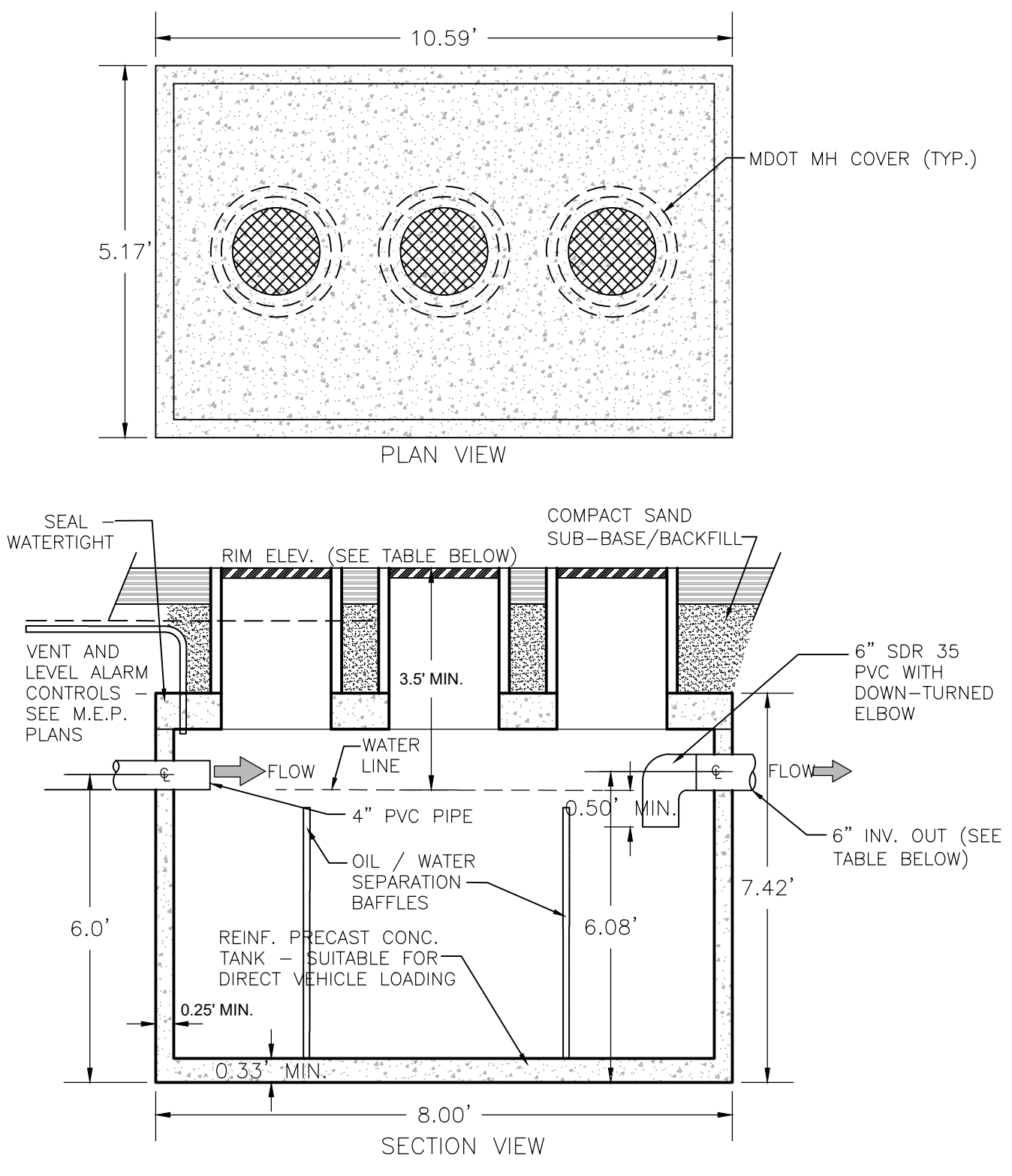
SOAPY BUCKET - OAK GROVE  
SPRINGBORN PROPERTIES  
3535 HIGH HILLCREST DRIVE  
HOWELL, MI 48843  
313-390-3338

CONSTRUCTION DETAILS (1)

NO.	BY	DATE	REVISION
1	PC	7/26/24	DESIGNED BY
2	PC	3/19/24	DRAWN BY
3	PC	2/29/24	CHECKED BY
			SCALE: NO SCALE
			JOB NO: 23-135
			DATE: 11/21/23
			SHEET NO.

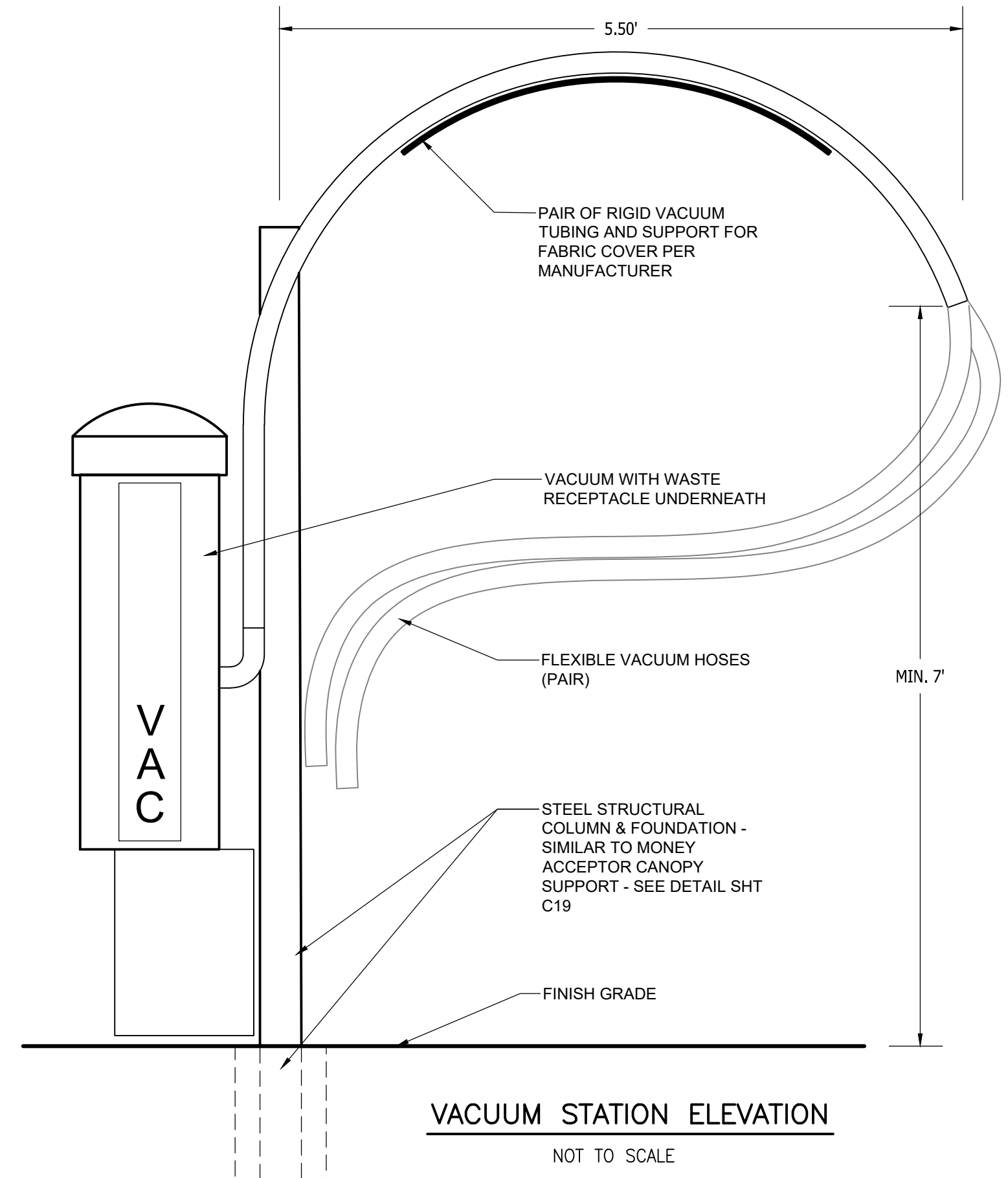
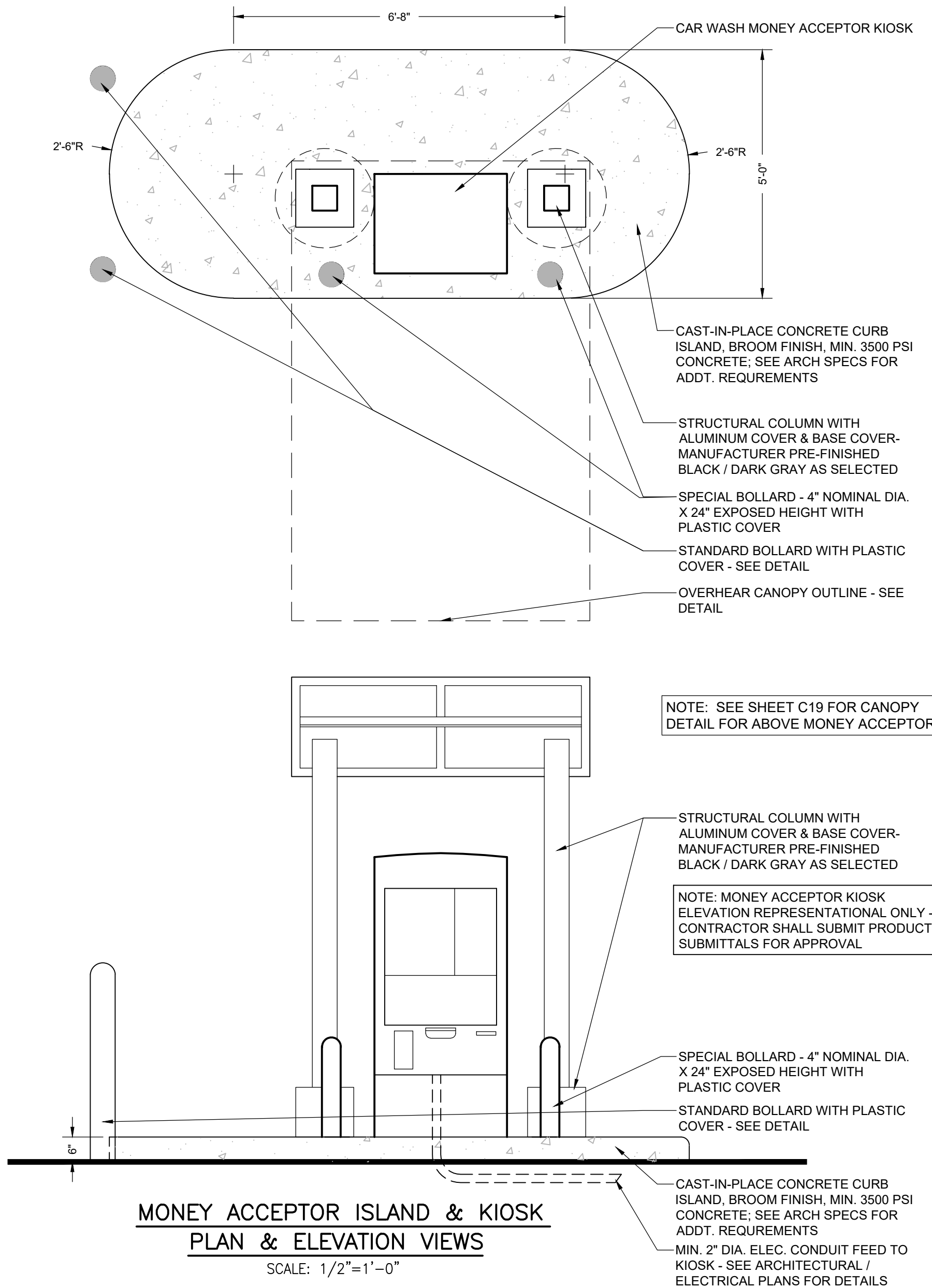
17

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



**CARWASH MONITORING & OIL INTERCEPTOR TANK DTL (TYP.)**  
NOT TO SCALE

TANK DETAILS		
NAME	RIM ELEV.	6\"/>
TANK 1	911.64	907.97
TANK 2	912.00	908.50
TANK 3	911.67	908.06
TANK 4	911.54	907.72
TANK 5	910.40	906.55



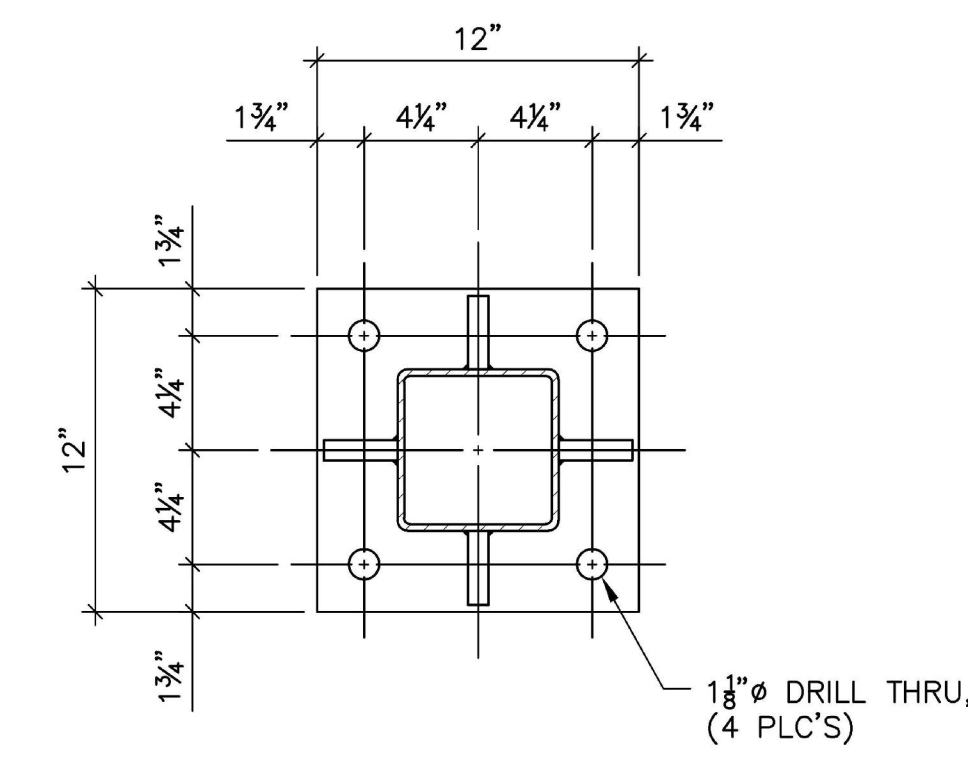
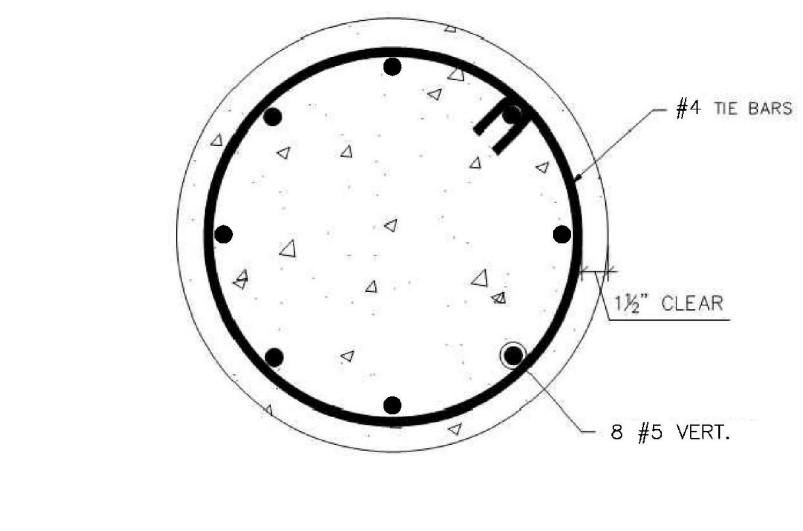
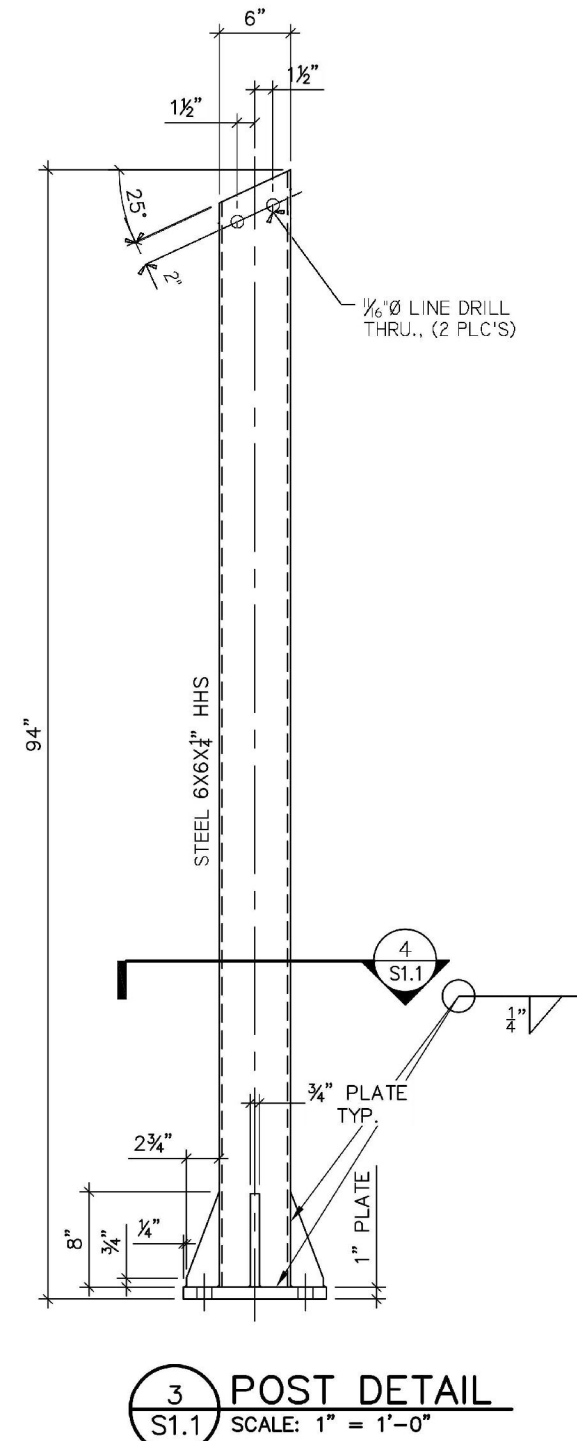
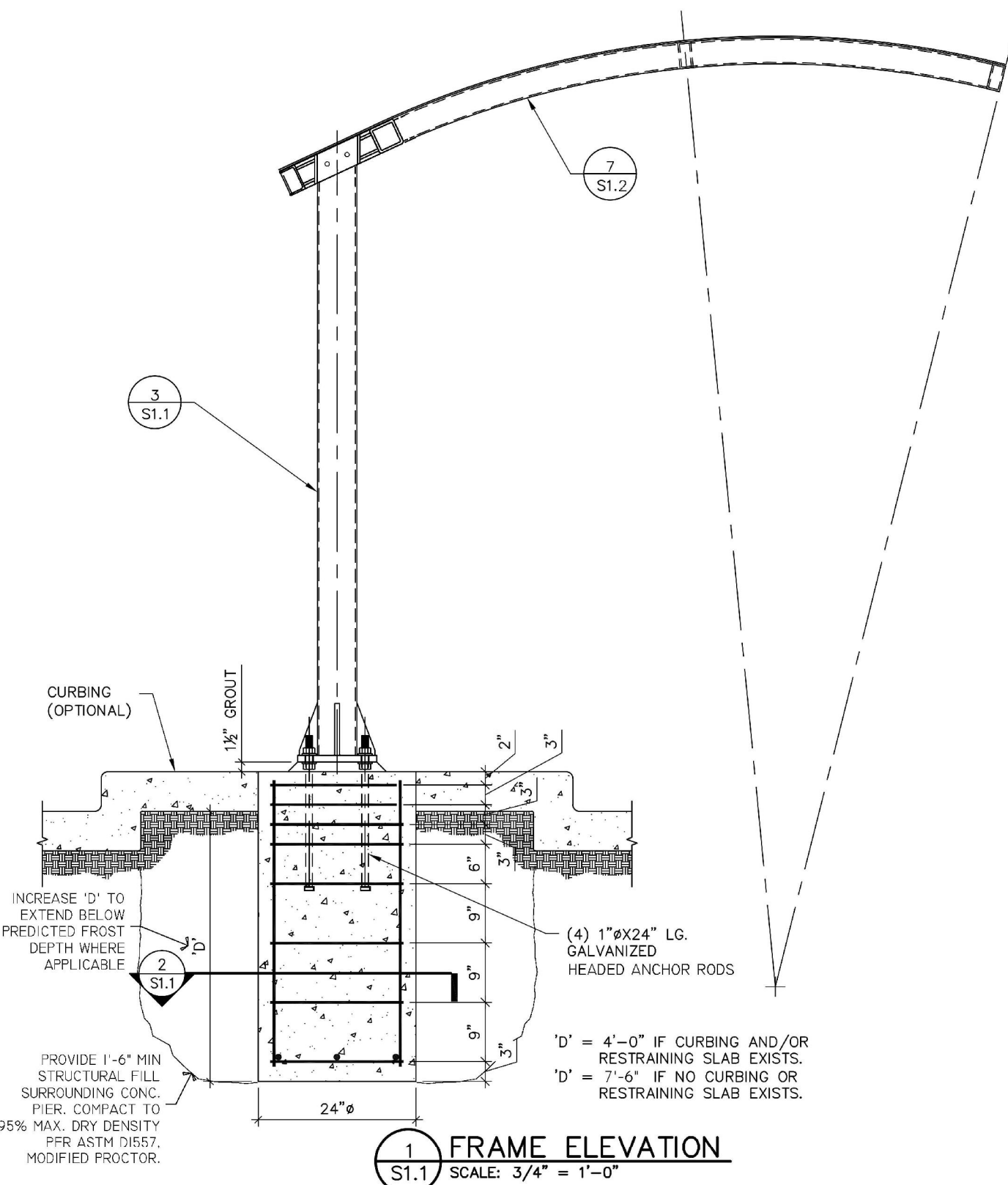
**BEBOSS**  
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Engineers Surveyors Planners Landscape Architects  
3121 E. GRAND RIVER AVE.  
HOWELL, MI. 48843  
517.546.4836 FAX 517.548.1670

PROJECT: SOAPY BUCKET - OAK GROVE  
PREPARED FOR: SPRINGBORN PROPERTIES  
3535 HIGH HILLCREST DRIVE  
HOWELL, MI 48843  
313-390-3538

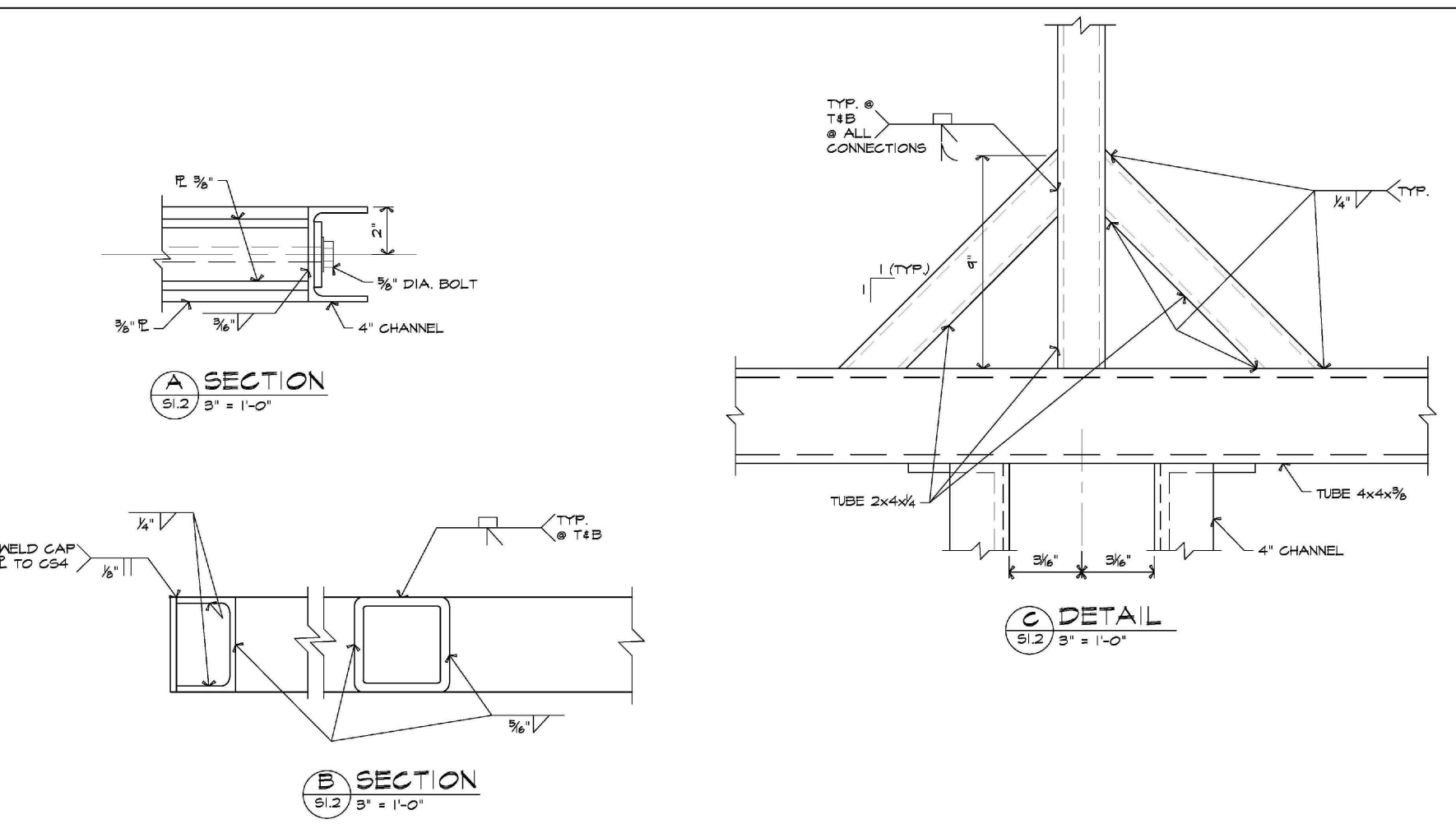
TITLE: CONSTRUCTION DETAILS (2)

NO.	DATE	REVISION PER
3	7/26/24	REVIEW
2	3/19/24	FOR CLIENT
1	2/29/24	ENGINEER REVIEW
NO		BY

DESIGNED BY: AS NOTED  
DRAWN BY: AS NOTED  
CHECKED BY:  
SCALE: AS NOTED  
JOB NO: 23-135  
DATE: 11/21/23  
SHEET NO. 18



1. TOP OF FOUNDATION MAY BE FORMED @ 24" X 24" SQUARE.



MONEY ACCEPTOR CANOPY DETAILS  
SCALES AS NOTED  
[DRAWINGS PROVIDED - BY OTHERS]

STRUCTURAL STEEL NOTES

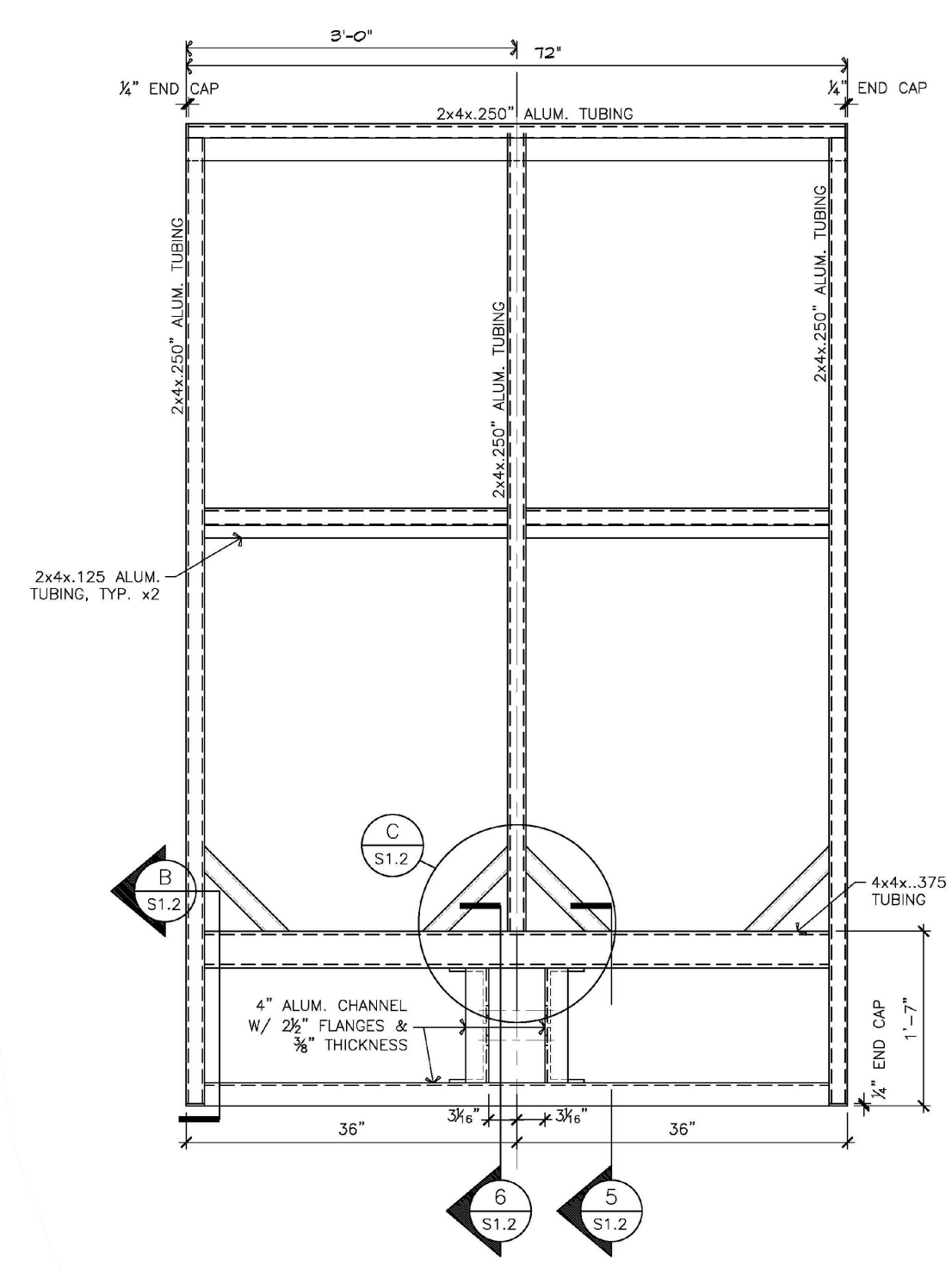
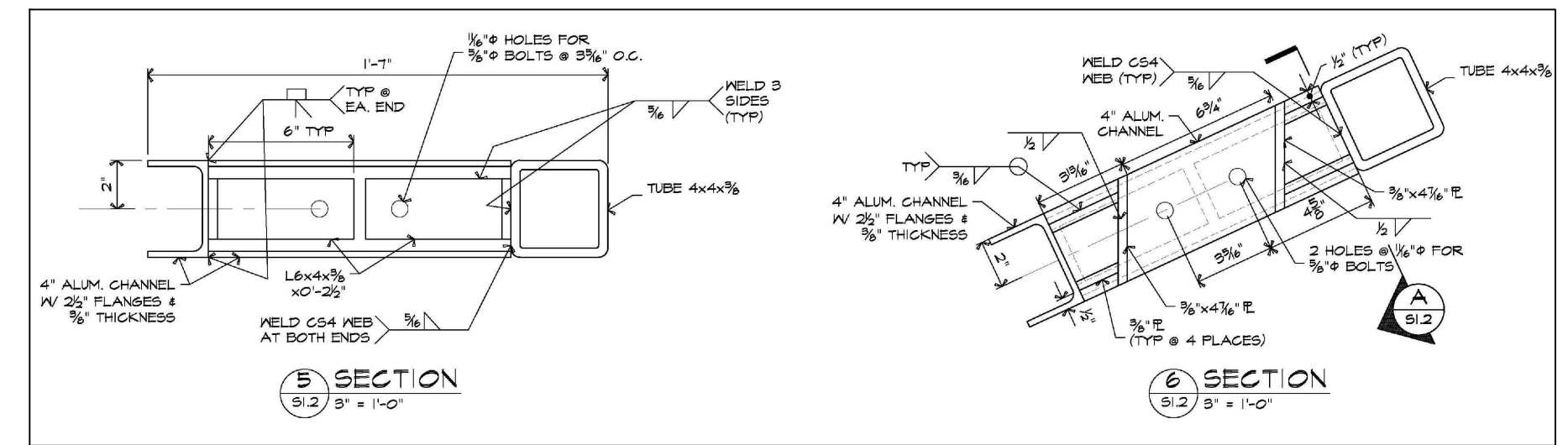
- COMPLY WITH AISC'S "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS--ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN," RCSC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS," AND AWS D1.1 "STRUCTURAL WELDING CODE--STEEL."
- HOLLOW STEEL SECTIONS: ASTM A500, GRADE B, F<sub>y</sub> = 46 KSI.
- PLATES, BARS & OTHER SHAPES: ASTM A36
- ANCHOR BOLTS & NUTS: ASTM F1554, GR. 36, HEADED RODS, AND ASTM A36 NUTS. INSURE THAT RODS ARE FREE OF OIL AND DEBRIS PRIOR TO PLACEMENT.
- GROUT: ASTM C 1107, NONMETALLIC, SHRINKAGE RESISTANT, PREMIXED.
- FABRICATE STRUCTURAL STEEL ACCORDING TO AISC SPECIFICATIONS AND TOLERANCE LIMITS OF AISC'S "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" FOR STRUCTURAL STEEL.
- SHOP PRIMER: ONE COAT OF RED OXIDE, MIN. (2) MILS THICK. TOUCH-UP ANY DAMAGED SURFACES AFTER ERECTION.
- ERECT STRUCTURAL STEEL ACCORDING TO AISC SPECIFICATIONS AND WITHIN ERECTION TOLERANCES OF AISC'S "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."
- SET BASE AND BEARING PLATES ON WEDGES, SHIMS, OR SETTING NUTS. TIGHTEN ANCHOR BOLTS, CUT OFF WEDGES OR SHIMS FLUSH WITH EDGE OF PLATE, AND PACK GROUT SOLIDLY BETWEEN BEARING SURFACES AND PLATES.
- ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS BY CERTIFIED WELDERS. WELD FILLER ALLOY SHALL BE ONE OF THE FOLLOWING: 5183, 5356, 5554, OR 5556.
- BREAK ALL SHARP EDGES.
- ALL ALUMINUM SHALL BE 6061 ALLOY.
- THE STRUCTURE IS DESIGNED FOR LOADS IN ACCORDANCE WITH THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE AND THE 2005 EDITION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS PUBLICATION "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES", ASCE7-05.

- A. ROOF LIVE LOAD: 25 PSF
- B. WIND LOAD:  
 (1) BASIC WIND SPEED V = 120 MPH  
 (2) WIND IMPORTANCE FACTOR I = 1  
 (3) OCCUPANCY CATEGORY II  
 (4) WIND EXPOSURE EXPOSURE B  
 (5) INTERNAL PRESSURE COEFFICIENT GCPI = 0.0
- C. FOUNDATIONS ARE DESIGNED FOR A PRESUMPTIVE ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF.

CAST-IN-PLACE CONCRETE

- COMPLY WITH ASTM C94; ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"; ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"; AND CRSI'S "MANUAL OF STANDARD PRACTICE."
- CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI. CONCRETE THAT WILL NOT BE EXPOSED TO FREEZE-THAW CYCLES SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
- REINFORCING BARS SHALL NOT BE SPLICED.
- DEFORMED REINFORCING BARS: ASTM A615, GRADE 60.
- PORTLAND CEMENT: ASTM C150, TYPE 1.
- FLY ASH: ASTM C618, TYPE F (LIMITED TO 15 PERCENT OF TOTAL CEMENT CONTENT).
- PROPORTION NORMAL-WEIGHT CONCRETE MIXES TO PROVIDE THE FOLLOWING PROPERTIES:  
 A. COMPRESSIVE STRENGTH: 3000 PSI AT 28 DAYS FOR BUILDING FOUNDATIONS AND FOOTINGS.
- DO NOT ADD WATER TO CONCRETE DURING DELIVERY, AT PROJECT SITE, OR DURING PLACEMENT, UNLESS APPROVED BY ENGINEER.
- PROTECT CONCRETE FROM PHYSICAL DAMAGE OR REDUCED STRENGTH DUE TO WEATHER EXTREMES DURING MIXING, PLACING, AND CURING. REPAIR SURFACE DEFECTS AS REQ'D.
- STRUCTURAL FILL SHALL BE CLEAN, NON-FROST SUSCEPTIBLE SAND AND GRAVEL MEETING THE GRADATION REQUIREMENTS GIVEN BELOW:

STRUCTURAL FILL	
SIEVE SIZE	PERCENT FINER BY WEIGHT
4 INCH	100
3 INCH	90 TO 100
3/4 INCH	25 TO 90
#40	0 TO 30
#200	0 TO 5



7 CURVED CANOPY TOP FRAME: Scale 1"

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

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 HOWELL, MI. 48843  
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PROJECT: SOAPY BUCKET - OAK GROVE  
 PREPARED FOR: SPRINGBORN PROPERTIES  
 3535 HIGH HILLCREST DRIVE  
 HOWELL, MI 48843  
 313-390-3358

TITLE: CONSTRUCTION DETAILS (3)

NO	BY	DATE	REVISION PER
3	NL	7/26/24	L.C.D.C., SESS. IMP. ENG. & FIRE DEPT. REVIEW
2	NL	3/18/24	PROGRESS SET FOR CLIENT
1	NL	2/29/24	L.C.D.C. & IMP. ENGINEER REVIEW
NO	NO	NO	NO

DESIGNED BY: BY OTHERS  
 DRAWN BY: BY OTHERS  
 CHECKED BY:  
 SCALE: AS NOTED  
 JOB NO: 23-135  
 DATE: 11/21/23  
 SHEET NO. 19

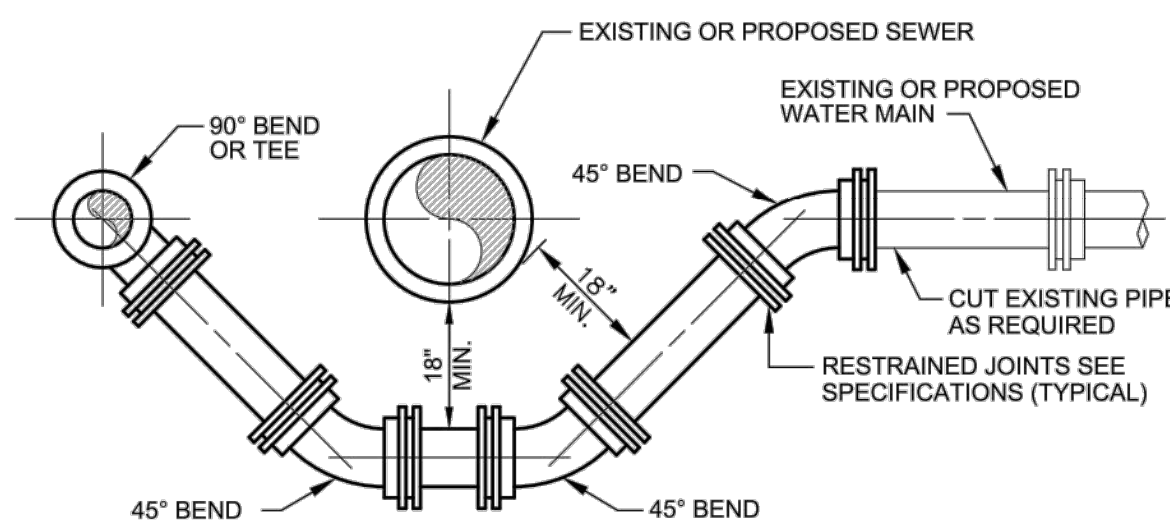
SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

**PIPE RESTRAINT SCHEDULE**

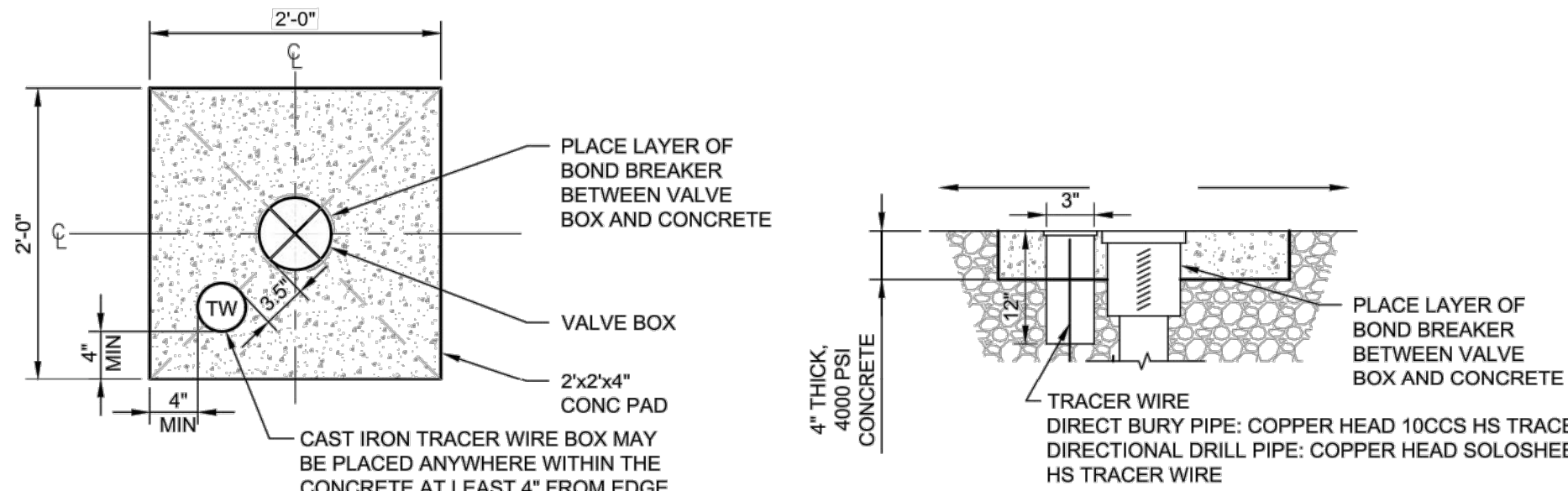
GROUND BURIED PRESSURE PIPE - POLYETHYLENE ENCASED DUCTILE IRON PIPE

PIPE DIAMETER	TEES, 90° BENDS	45° BENDS	22-1/2° BENDS	11-1/4° BENDS	DEAD ENDS	REDUCERS (ONE SIZE REDUCTION)*	REDUCERS (TWO SIZE REDUCTION)*
4	13	5	3	1	40	--	--
6	19	8	4	2	58	31	--
8	24	10	5	2	75	30	70
12	34	14	7	3	107	57	116
16	43	18	9	4	139	59	137
20	52	22	10	5	169	59	134
24	61	25	12	6	199	60	132
30	73	30	15	7	242	85	168
36	84	35	17	8	281	84	168

- LENGTHS OF PIPE RESTRAINT ARE GIVEN IN FEET.
  - IF REQUIRED PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE DIAMETER SHALL BE USED.
  - THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE PLUS WATER HAMMER). FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED PROPORTIONALLY.
  - THE VALUES PROVIDED OF RESTRAINT LENGTH ARE IN EACH DIRECTION FROM THE POINT OF DEFLECTION OR TERMINATION EXCEPT FOR TEES, AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE STEM.
  - IF THE RODS ARE USED, USE FOUR RODS MINIMUM AND ADD 1/8-INCH TO BAR DIAMETER AS CORROSION ALLOWANCE.
  - SIZE REDUCTION IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.
- BASED UPON: INTERNAL PRESSURE: 180  
PIPE DEPTH: 5  
BEDDING CLASS: TYPE 4  
SOIL TYPE: GOOD SAND  
SAFETY FACTOR: 2

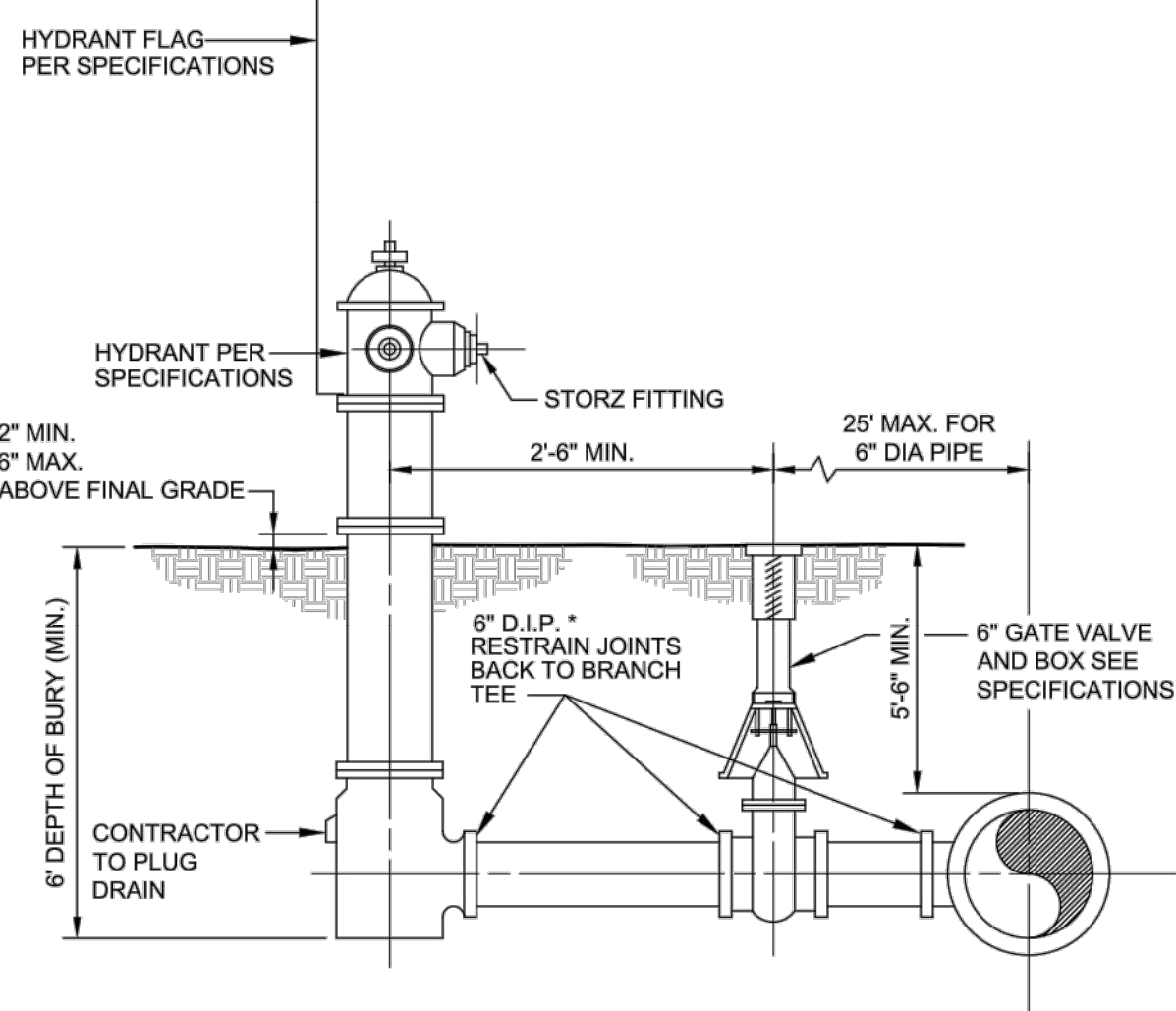


**WATER MAIN UTILITY OFFSET**



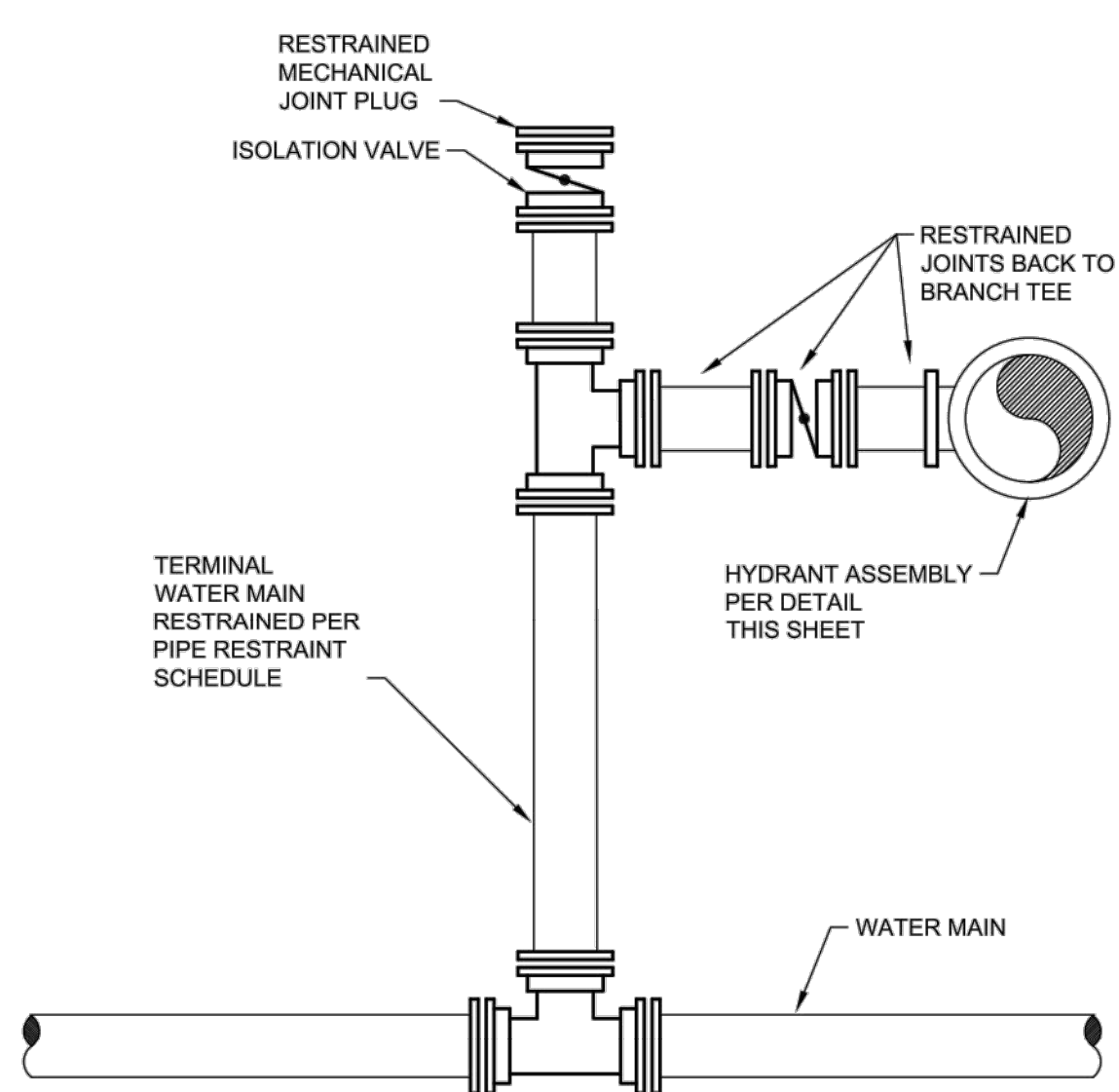
- NOTE: ALL BOXES & ADJOINING TW BOXES SHALL BE ENCASED IN A CONC. PAD UNLESS OTHERWISE DETERMINED BY MHOG.
- NOTE:
- TRACER WIRE BOXES LOCATED WITHOUT A VALVE BOX ONLY REQUIRE AN 18" X 18" CONCRETE PAD.
  - TRACER WIRE BOX SHALL HAVE A LOCKING LID W/STANDARD AWWA PENTAGON KEY.
  - TRACER WIRE BOX SHALL BE COPPERHEAD RB14" TP IN ASPHALT INSTALLATIONS AND CD14" TP FOR ALL OTHER INSTALLATIONS.

**VALVE/TRACER WIRE BOX IN CONCRETE DETAIL**  
NO SCALE

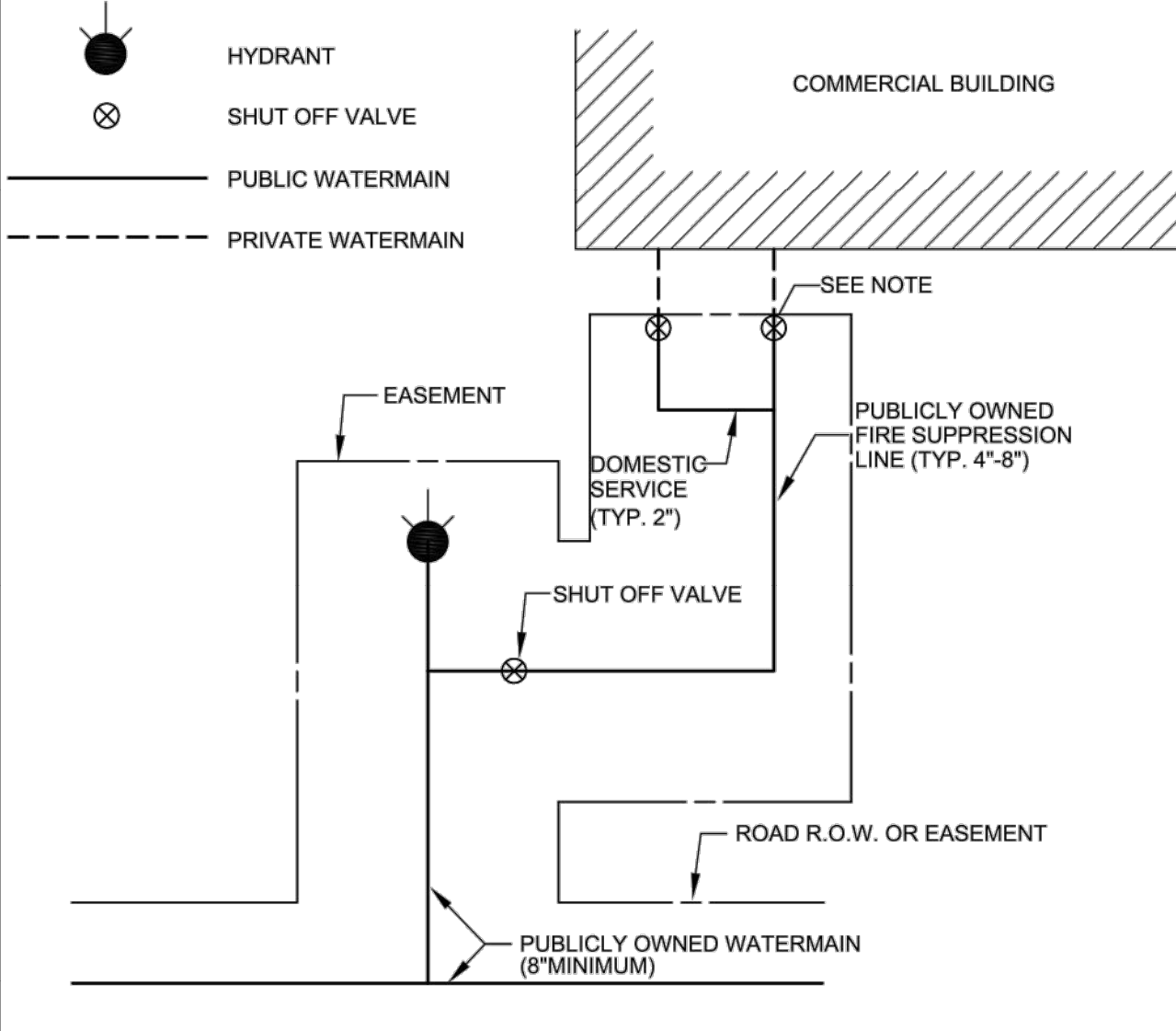


**FIRE HYDRANT ASSEMBLY**

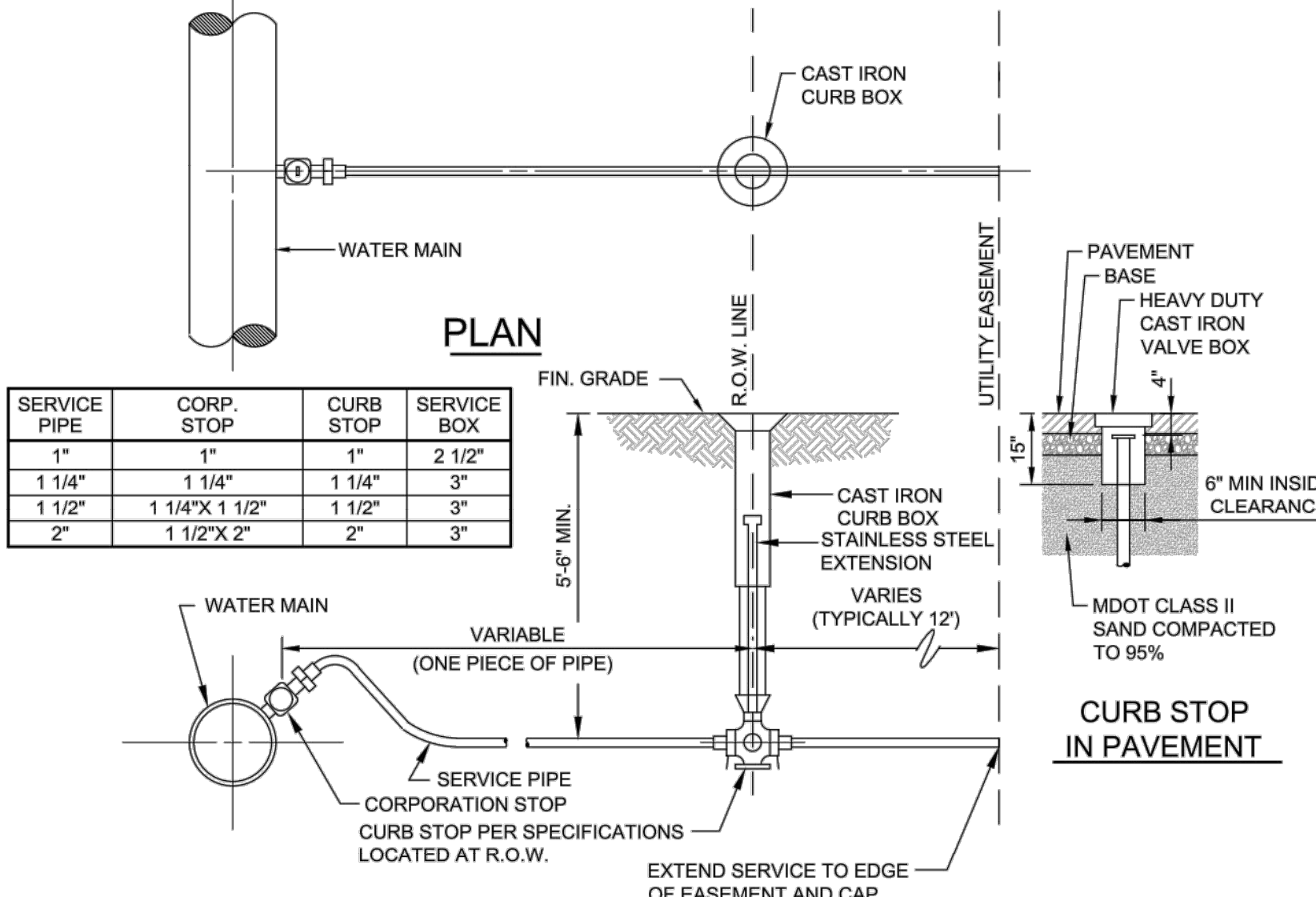
\* THE LENGTH OF 6" PIPE FROM THE MAIN TO THE HYDRANT ASSEMBLY CANNOT EXCEED 25'. ANY PIPE OVER 25 FEET SHALL BE 8" DIAMETER MINIMUM AND DESIGNED PER MHOG SPECIFICATIONS.



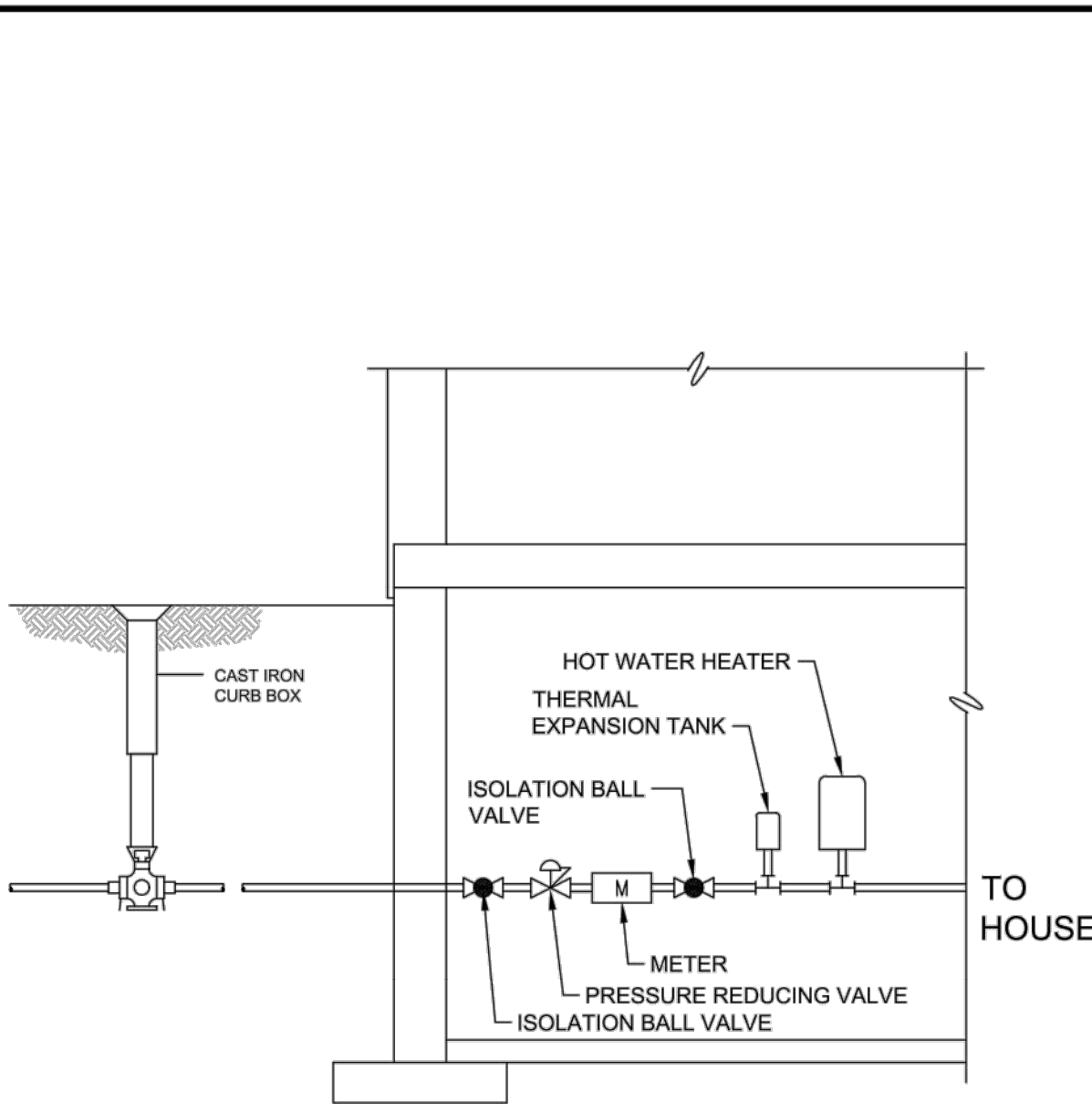
**TERMINAL HYDRANT DETAIL**



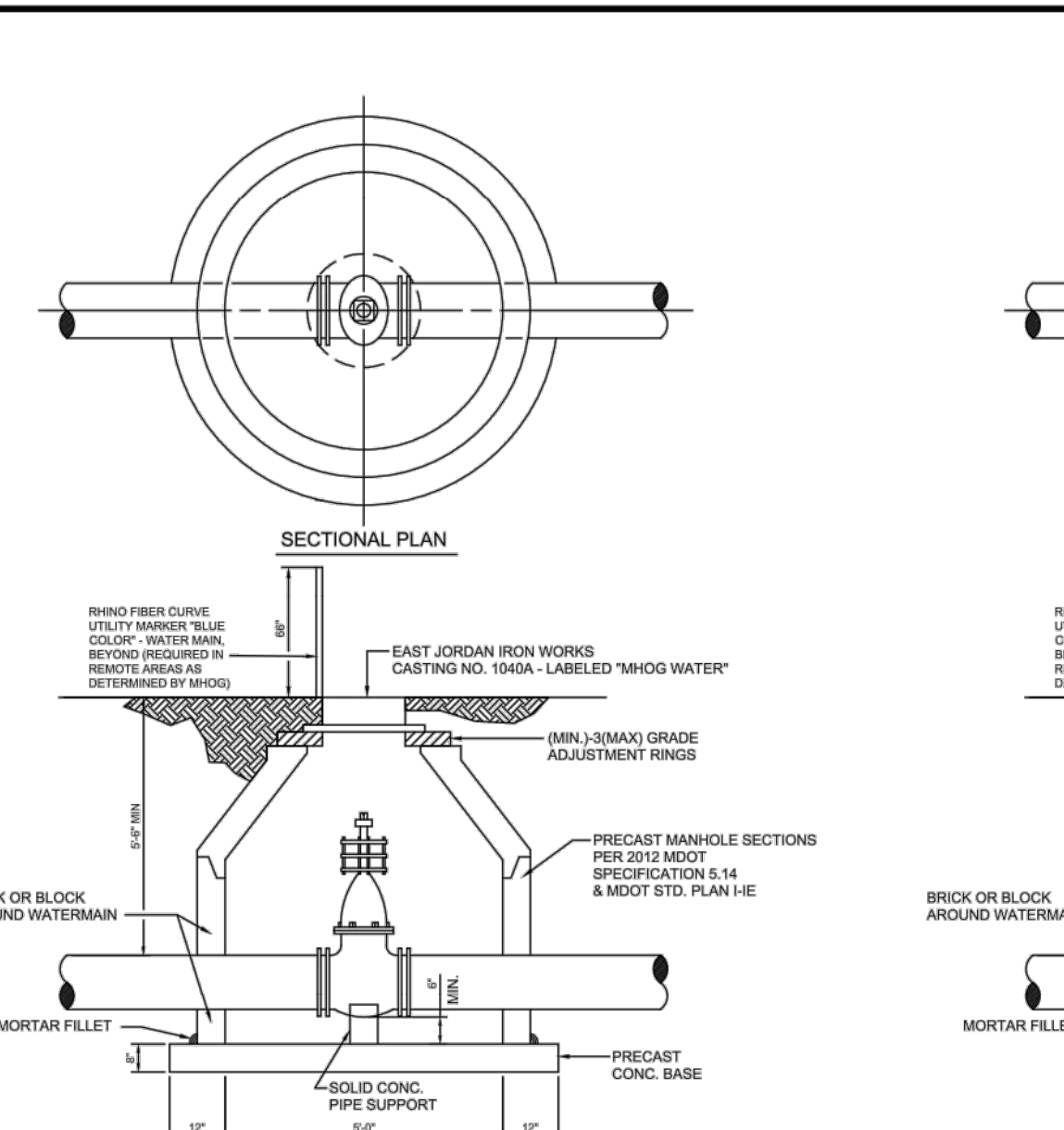
**COMMERCIAL BUILDING WATER SERVICE LAYOUT**  
NOTE: FIRE SUPPRESSION LINE AND DOMESTIC SERVICE TO BE LOCATED WITHIN EASEMENT UP TO SHUTOFF VALVES OUTSIDE OF BUILDING.



**SECTION WATER SERVICE LATERAL**

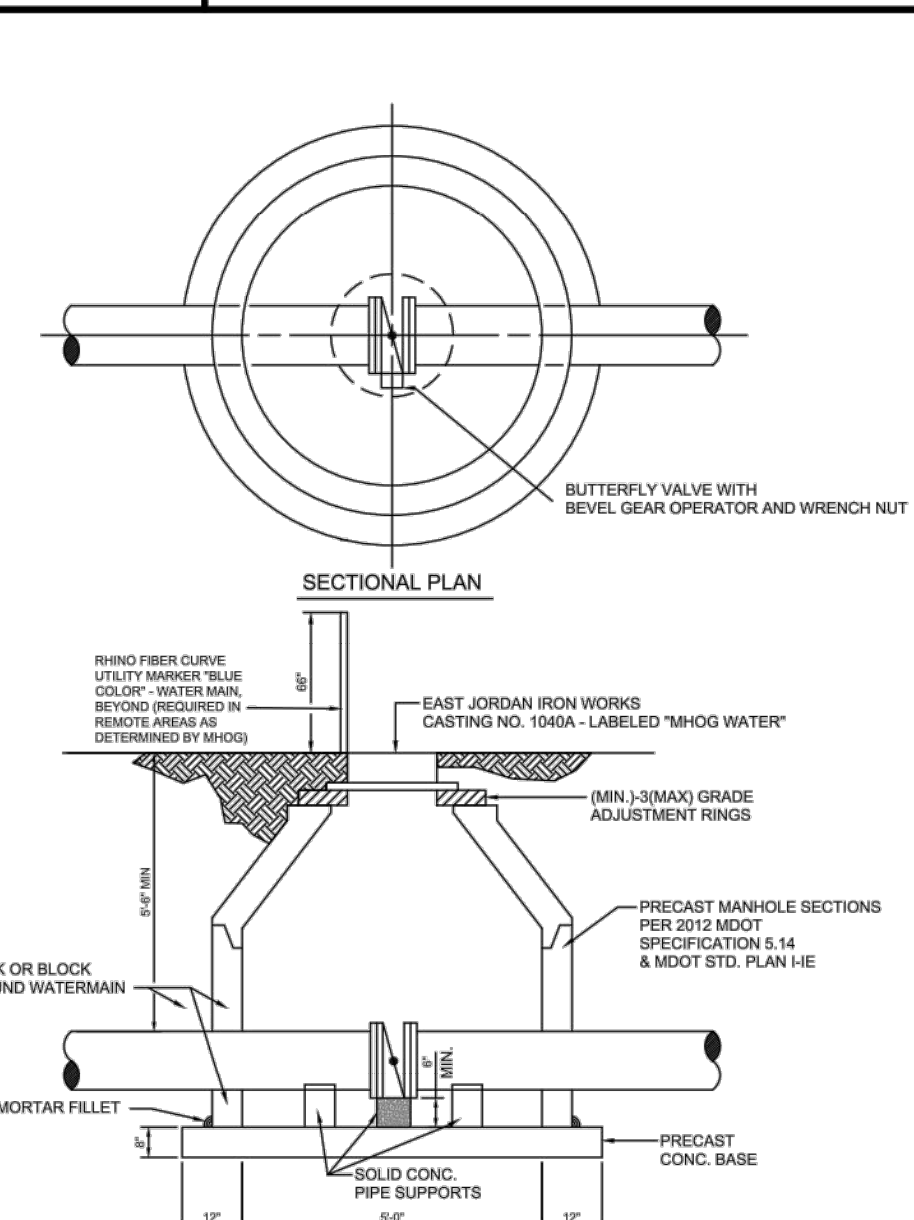


**PRIVATE RESIDENCE PRESSURE REDUCING VALVE (PRV)**



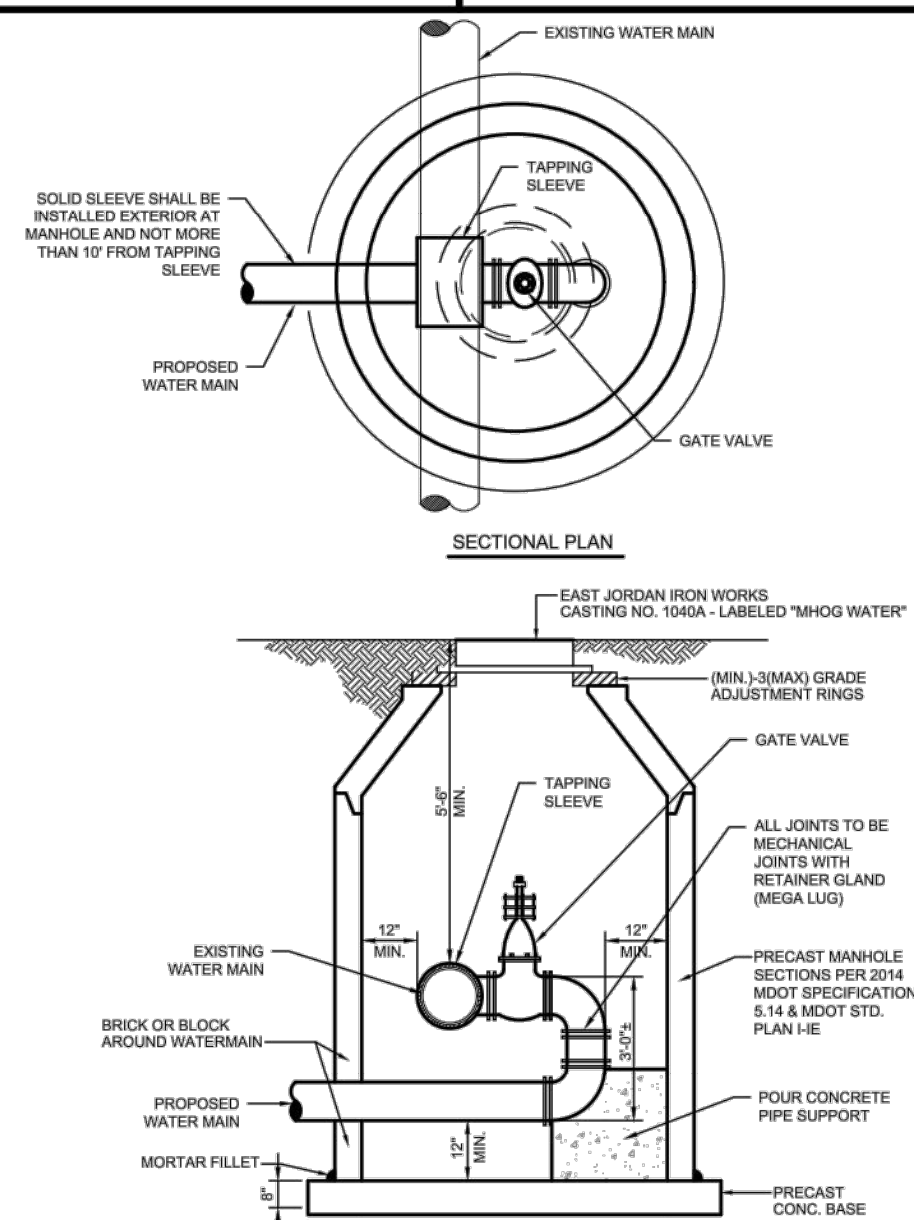
**VALVE AND GATE WELL**

- NOTES:
- ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
  - BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
  - NO STEPS PERMITTED.



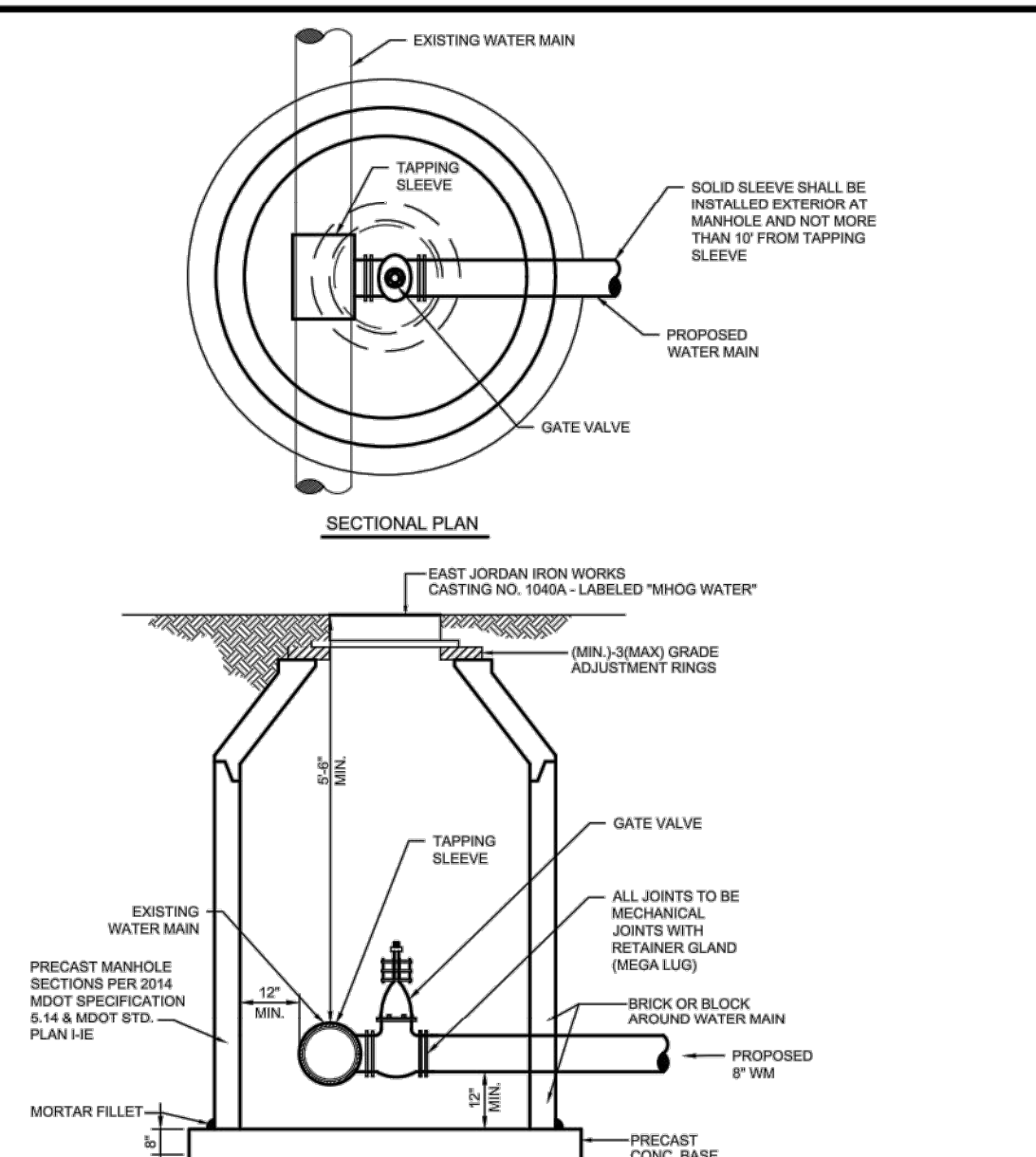
**BUTTERFLY VALVE AND WELL**

- NOTES:
- ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
  - BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
  - NO STEPS PERMITTED.



**REVERSE TAP GATE WELL**

- NOTES:
- ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
  - BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
  - TAPPING BLEWIES ONLY PERMITTED FOR CONNECTIONS SMALLER THAN MAIN LINE.
  - NO STEPS PERMITTED.



**REGULAR TAP GATE WELL**

- NOTES:
- ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
  - BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
  - TAPPING BLEWIES ONLY PERMITTED FOR CONNECTIONS SMALLER THAN MAIN LINE.
  - NO STEPS PERMITTED.

MARION HOWELL OCEOLA GENOA  
Sewer and Water Authority



STANDARD DETAILS

Scale: NONE  
Issued Date: JANUARY - 2014  
UPDATED: MAY 2015  
UPDATED: FEBRUARY 2016  
UPDATED: APRIL 2016  
UPDATED: OCTOBER 2017  
UPDATED: FEBRUARY 2019  
UPDATED: NOVEMBER 2022

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH, OR ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION.

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SOAPY BUCKET - OAK GROVE

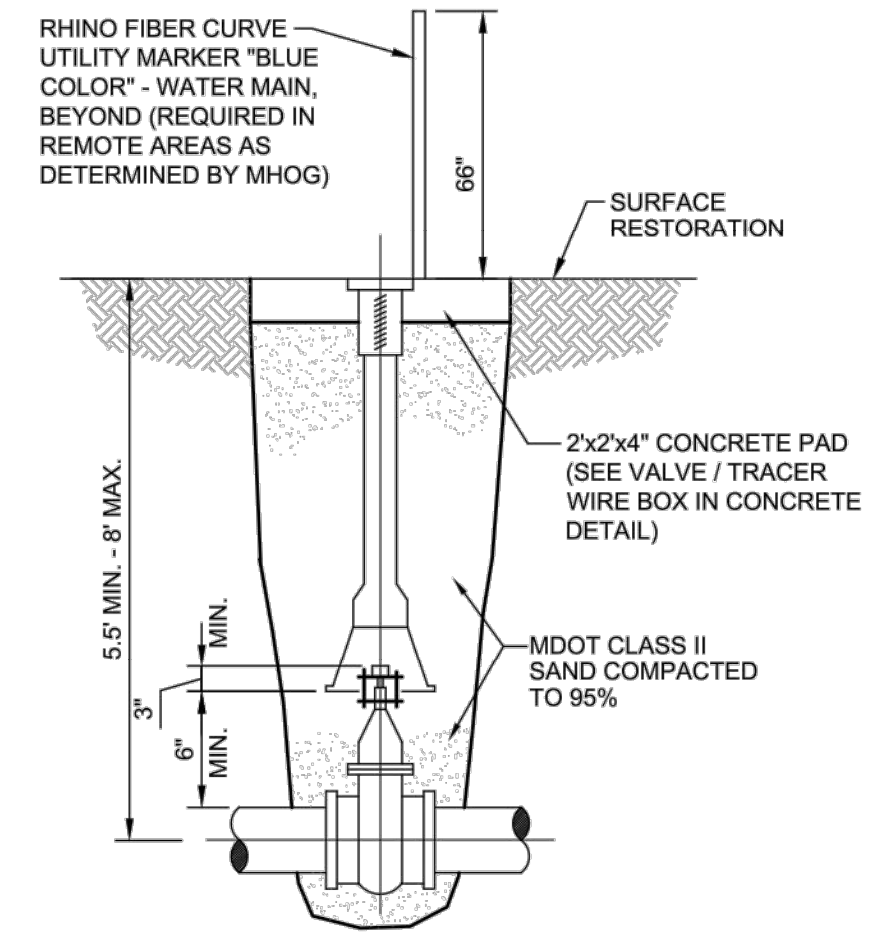
PROJECT: SOAPY BUCKET - OAK GROVE  
PREPARED FOR: SPRINGBORN PROPERTIES  
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313-390-3538

NO.	DATE	REVISION PER
1	3/18/24	L.C.D.C. & TWP. ENGINEER REVIEW
2	2/29/24	L.C.D.C. & TWP. ENGINEER REVIEW
3	7/26/24	L.C.D.C., TWP. ENG. & FIRE DEPT. REVIEW

DESIGNED BY: PC  
DRAWN BY: PC  
CHECKED BY:  
SCALE: NO SCALE  
JOB NO: 23-135  
DATE: 11/21/23

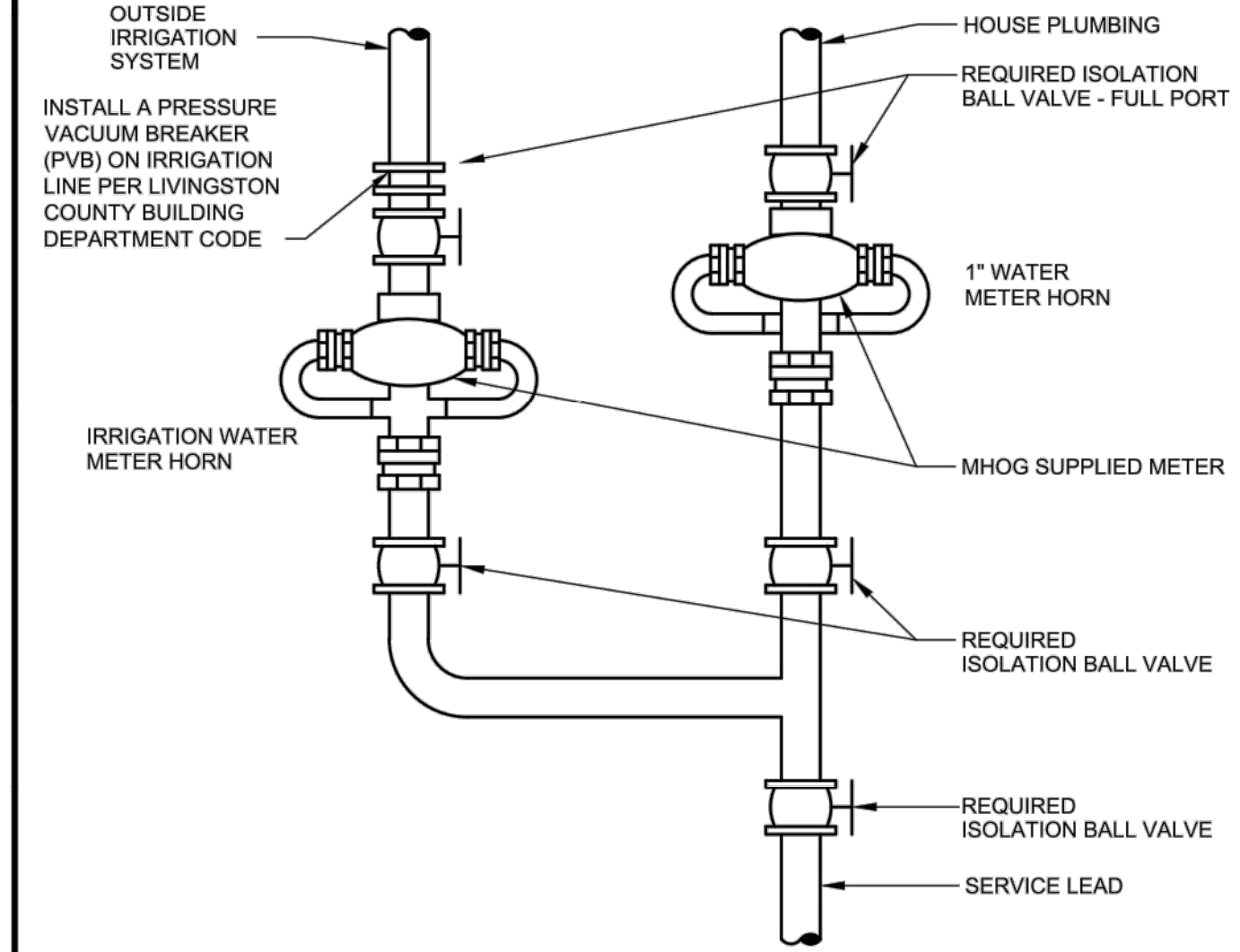


SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



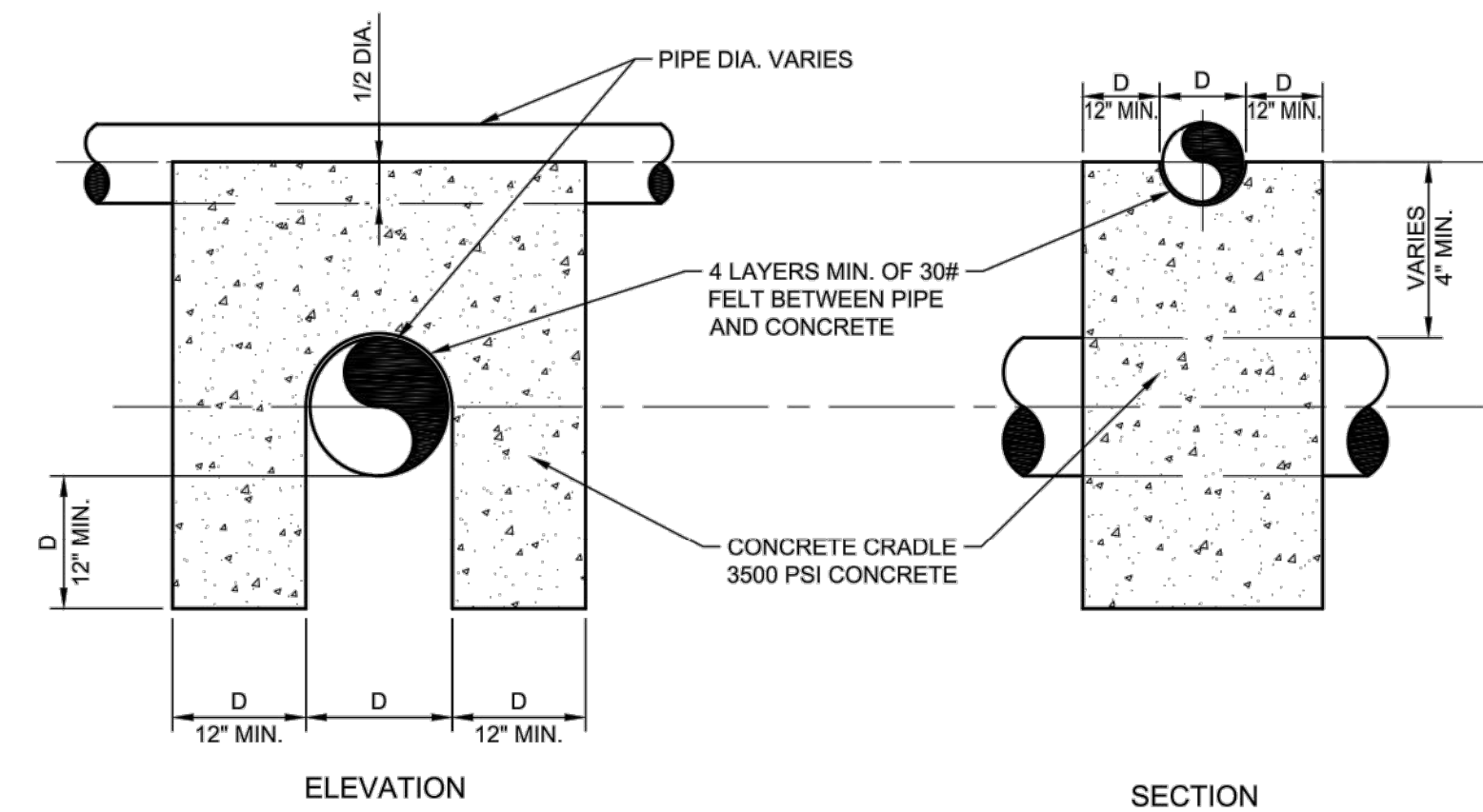
- NOTES:  
 1. VALVE BOX SHALL NOT REST ON VALVE OR MAIN LINE PIPE.  
 2. A VALVE STEM EXTENSION WITH CENTERING RING IS REQUIRED FOR VALVES BURIED DEEPER THAN 6".

**GATE VALVE AND BOX**



- NOTES:  
 1. ALL METERS ARE TO BE INSTALLED HORIZONTALLY IN A DRY, CLEAN, SANITARY LOCATION THAT IS READILY ACCESSIBLE. THIS DRAWING IS NOT TO SCALE & IS ONLY A REPRESENTATION OF HOW THE VALVES AND METERS SHOULD BE INSTALLED. THE SECOND METER IS OPTIONAL FOR IRRIGATION USAGE. METERS SHOULD NOT BE INSTALLED IN LINE (ONE RIGHT AFTER THE OTHER).  
 2. PROPERTIES DESIGNATED "HIGH HAZARD" PER THE MHOG CROSS CONNECTION RULES MANUAL WILL REQUIRE THE INSTALLATION OF A REDUCED PRESSURE ZONE (RPZ) BACK FLOW PREVENTION DEVICE.

**TYPICAL METER HORN INSTALLATION**



**CONCRETE CRADLE DETAIL**  
SCALE: NONE



**MHOG CASTING DETAIL**  
NO SCALE



**MARION HOWELL OCEOLA GENOA**  
Sewer and Water Authority

**STANDARD DETAILS**

Scale: NONE  
 Issued Date: JANUARY - 2014  
 UPDATED: MAY 2015  
 UPDATED: FEBRUARY 2016  
 UPDATED: APRIL 2016  
 UPDATED: OCTOBER 2017  
 UPDATED: FEBRUARY 2019  
 UPDATED: NOVEMBER 2022

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO ASSURANCE IS MADE AS TO THE ACCURACY OF THESE UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE EXCLUDED FROM THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES PRIOR TO CONSTRUCTION.

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**SOAPY BUCKET - OAK GROVE**  
 SPRINGBORN PROPERTIES  
 3535 HIGH HILLCREST DRIVE  
 HOWELL, MI 48843  
 313-390-3338

**M.H.O.G. STANDARD DETAILS - WATER (2)**

NO	BY	DATE	REVISION PER
3	NL	L.C.D.C., S.E.C.C., T.M.P. ENCL. & FIRE DPT. REVIEW	7/26/24
2	NL	PROGRESS SET FOR CLIENT	3/19/24
1	NL	L.C.D.C. & T.M.P. ENGINEER REVIEW	2/29/24
NO	BY	DATE	

DESIGNED BY: PC  
 DRAWN BY: PC  
 CHECKED BY:  
 SCALE: NO SCALE  
 JOB NO: 23-135  
 DATE: 11/21/23



**Howell Township  
Zoning Board of Appeals  
Variance Request Staff Report**

August 22, 2024

Applicant: Russell Springborn  
Property: 4706-25-200-048

Parcel 4706-25-200-048 is a 8.242-acre site situated at the southern end of Oak Grove Road in the Neighborhood Service Commercial (NSC) Zoning District. Applicant has previously gone before the Township Planning Commission and received both preliminary and final site plan approval. After construction plan review the Township Engineer noticed that the detention basin was located inside the 50-foot property setback along Oak Grove Road. Attached is section 14.35 of the Township Zoning Ordinance. Under section 2.02 of the Zoning Ordinance detention basins are considered structures, and therefore need to be located outside of property setbacks.

*“Structure. See “Building”, and in addition any manmade surface or subsurface feature or designed earth feature, other than normal finished grading for drainage purposes, including garden houses, pole barns, sheds, tents, pergolas, decks, porches, play houses, game courts, walls, trailers, septic tanks, underground storage tanks, above ground dispensing devices, among others, but not including wires and their supporting poles, towers, or frames for electrical, telephone, gas or television utilities or other public utilities located above or below ground.”*

Applicant is requesting a variance from section 14.35 to allow the detention basin to be located inside the 50-foot property setback along the Oak Grove Road, a County primary road, due to site conditions including the rolling nature of the terrain and location of various easements for utilities and a County Drain.

Respectfully submitted,  
Jonathan Hohenstein

**Section 14.34 ACCESSORY RESIDENTIAL USES.**

- A. Purpose. Because of the need to provide 24-hour property protection, observation, operation and maintenance of the principal uses permitted in the OS, NSC, RSC, HSC, IF, and I Zoning Districts, it may be necessary to require the presence of an on-site, continuously available daytime, and particularly, a nighttime employee, with or without a family, to live-in an on-site residential facility in order to carry out the necessary functions of the employee.
- B. Requirements. Each such residence shall meet all of the necessities and requirements for a separate single-family dwelling unit or a single-family apartment. Whether a separate dwelling unit structure or an apartment incorporated into the same structure as the principal use or a building accessory to the principal use, the residence shall be provided with an on-site outdoor yard area which at least meets the minimum requirements of the SFR Residential Zoning District.
- C. Location. Such residences shall be permitted as an accessory use to a permitted principal use in the OS, NSC, RSC, HSC, IF, and I Zoning District.

(Ord. No. 69 eff. Aug. 12, 1998)

**Section 14.35 RETENTION OR DETENTION PONDS LOCATED ON ADJACENT PARCELS OF LAND.**

Retention and/or detention ponds, as structures, are permitted in all zoning districts, and shall meet the requirements of this Zoning Ordinance, including the setback requirements from property lines and highway and road right-of-way lines, and, depending upon the location of retention and/or detention pond, they shall meet the following additional requirements and/or exceptions:

- A. If a retention and/or detention pond is located entirely within the boundary property lines of a lot or parcel, the pond shall meet all the requirements of a structure, including those for setbacks from all property lines and highway and road right-of-way lines.
- B. If a detention and/or retention pond is to be shared by adjacent lots or parcels of land, having a common property line or common property lines, but not including highway and road right-of-way lines, and the pond straddles such a property lines or property lines, the setbacks from such property lines shall be abated within the area of the pond, provided that the pond shall be designed to meet the present and future storm water volume required for such adjacent properties as determined by and/or approved by the Livingston County Drain Commissioner. Such a pond may be built in phases as development of such adjacent lots or parcels occurs, provided that an adequate area of land for such a pond of the required storm water volume is reserved to serve the ultimate development of all of the adjacent lots or parcels.
- C. If a detention and/or retention pond is to be shared by all lots or parcels of land located within a subdivision of land, but the pond is completely located off-site from such lots or parcels of land, but within the boundaries of a subdivision of land of which such lots or parcels are a part, the lot or parcel of land upon which a pond is located shall meet all of the requirements of a structure, including those for setbacks from all property lines and highway and road right-of-way lines, provided that the pond shall be designed and built to meet the storm water volume required for the ultimate development of all lots and parcels included in the subdivision of land as determined by and/or approved by the Livingston County Drain Commissioner. Such a pond may be built in phases as development of the lots or parcel of land occurs, provided that an adequate area of land for such ponds is reserved to serve the ultimate development of all lots or parcels in the land subdivision.