



GREEN OAK CHARTER TOWNSHIP

10001 Silver Lake Road, Brighton, MI 48116
Phone: 810-231-1333 ext.104 Fax: 810-231-5080

Green Oak Charter Township
Planning Commission
Regular Meeting
Thursday, October 4, 2018
7:00 p.m.

Green Oak Charter Township Hall
10001 Silver Lake Road
Brighton, MI 48116
810. 231-1333

AGENDA

1. Call to Order
2. The Pledge to the Flag
3. Roll Call of the Commission
4. Approval of the Agenda
5. Approval of September 6, 2018 Regular Meeting Minutes
6. Call to the Public (Limited to agenda items only)
7. Chairman response to previous meeting call of the public
8. Business Items:
 - A: Site Plan Review for Asher Farms, SP03-2018 parcel # 4716 23-300-010- a site condominium with 70 half-acre single family residential lots on 52.94 acres. The parcel is located on the west side of Rushton Road, north of 10 Mile Road, south of Doane Road, in Section 23. The site is zoned R-2 single family residential, in which the single family residential use is permitted at the requested density.
 - B: Reports from Bill Anderson Livingston County Planning Commissioner
9. Reports
 - A. Chairman Report
 - B. Township Board Representative
 - C. Zoning Board of Appeals Representative
 - D. Planning Consultant
 - E. Correspondence
10. Call to the Public
11. Adjournment

Posted: September 27, 2018

PLANNING COMMISSION

Lamberto Smigliani, Chairperson
Keith Lee
Secretary Deborah Sellis
Michelle Stock

Michael Sedlak, Twp. Board Rep.
Sarah Pearsall

Green Oak Charter Township
Planning Commission
Regular Meeting Minutes
September 6, 2018

Approved: _____

The meeting was called to order by Mr. Smigiani at 7:00 p.m.

Roll Call: Chuck Fellows
Keith Lee
Sarah Pearsall
Michael Sedlak
Lamberto Smigiani
Michelle Stock

Absent: Deborah Sellis

Also Present: Debra McKenzie, Zoning Administrator
Paul Montagno, Carlisle Wortman
Leslie Zawada, CES

Guests: 26

APPROVAL OF AGENDA

**Motion by Fellows, second by Pearsall
To approve the agenda as presented.**

**Voice Vote: Ayes: Unanimous
Nays: None**

MOTION APPROVED

Approval of the August 2, 2018 Regular Meeting Minutes

**Motion by Lee, second by Pearsall
To approve the minutes of August 2, 2018 as presented.**

**Voice Vote: Ayes: Unanimous
Nays: None**

MOTION APPROVED

CALL TO THE PUBLIC (Limited to Agenda Items only)

Wendall Brandt 12125 Shenandoah Drive – He is representing Centennial Farms. They are concerned with Ascher Farms. At Centennial Farms there are 80 buildings, with 4 units per building and they share a common well and common septic field. Traffic is their biggest concern for Rushton Road, it has a higher volume of traffic, and Ascher Farms is proposing 2 exits onto that road with very little study. If there is some engineering done, it would be good to line up an exit with the 10 Mile stub. He would like to see a traffic study done. They would like to see buffering between Ascher Farms and Centennial Farms to help with noise and demarcation. He believed that wells and septic's are proposed for Ascher Farms and they want to make sure that will not impact the aquifer they all live off of. Stormwater is another concern. They are not aware of any other sub that has overhead street lighting and they would like to see that removed.

Kimberly Bolongna, resident - She is concerned about the request for additional parking of the storage facility. There are RV's that sit there all the time, she is curious as to if they are expanding into other businesses or will there will be more RV's sitting there.

Derrek Bauer – His property is adjacent to Tranquil Woods. He explained within the setback that is required there are huge beautiful trees and he would not like to see those removed. His main concern is eliminating these trees in lieu of planting something much smaller. He is also concerned with security. He is concerned with this affecting his property value.

Tony Russo, 9833 Cambridge Court – As far as the water goes, Ascher Farms will not be hooking up to the water. They are all concerned with the traffic and they don't know how close it will be to their boundaries.

Kyle Hart, 12810 Ten Mile Road – They are directly adjacent to Tranquil Woods. They are concerned with the nearness of one building which is with 25' from their western boundary. There are some existing old deciduous trees and open gaps as well. It will be an 80' wall across their western property line. Their home is in a limited industrial area and he asked if the setback can be adjusted.

Jen 12844 Ten Mile Road – She asked what they are doing about the safety. She asked if there will be overhead lights because that will diminish the pleasant existence. There is also a body of water for the wildlife and she questioned if that will be left there. The back of her property backs up to the storage facility and she is concerned with that. She is also concerned with traffic on Ten Mile Road. If the public is choosing to store RV's, or campers it may take them a long time to turn into the property because there is no apron. She questioned if this is a gated facility and will they have to enter passcodes. She is worried about security and she wondered if it will be a 24/7 operation.

Mr. Smigliani closed the first call of the public at 7:20 p.m. due to no further comments.

CHAIRMAN RESPONSE TO PREVIOUS MEETING CALL OF THE PUBLIC - None

BUSINESS ITEMS

- 1. Public Hearing Special Approval Use SAU 02-2018, Tranquil Woods Storage LLC, located at 12782 Ten Mile Road, South Lyon, MI 48178**

Parcel #4716-26-200-008.

Mr. Montagno reviewed the Carlisle Wortman memo dated August 30, 2018. He noted the proposed plan is generally acceptable though there are a number of issues related to calculations that should be updated. He would recommend approval with the condition that he applicant submit revised plans to address the following outstanding items:

1. Install screening along the border of the parcel at the northeast corner of the site with a single family residence according to Section 38.177(b)(1)d.

Mr. Montagno noted lighting is proposed and it is down shielded and meets the requirements. There is also a gate proposed.

Ms. Zawada referenced the CES letter of August 29, 2018 and noted the following:

1. The applicant has revised his previous submission and now shows detention instead of retention for storm water management. Proposed basin side slopes are proposed as 1:4; 1:5 maximum slopes are required.
2. They are in favor of the proposed detention concept as the site's soils do not support retention. However, verification of the outlet and an analysis of downstream affects/ultimate outlet needs to be made by the Applicant's Engineer, an item they brought up in their previous review and in a subsequent meeting with the Applicant and Engineer. This analysis shall be completed as part of the site plan package so they can determine if the project is approvable.

She recommended that the plans are revised until they have the downstream analysis complete.

Mr. Crampton explained it won't be open 24 hours/day he thought it will be open like 7:00 a.m. to 6:00 p.m., it is gated and there is lighting

Engineer explained the buffer areas will be modified after discussion with the neighbors. He reviewed the new landscaping for the buffering area. Originally the basin was going to be used as a retention instead of a detention which would have impacted the landscaping to the east. Now it can primarily be preserved. There is fencing and there are gates. There will be low building mounted lighting and will be two or 3 pole mounted lights for the parking area and they are LED cut off fixtures.

Mr. Crampton explained he will be doing the project in phases. It's a national industry average, that there are 7 cars per day that visit per day with 100 leased units, he is confident it should not increase the traffic or safety issues. Mr. Crampton explained he will have good quality people and a good quality business. His goal is not for RV storage it's for mini storage.

**Motion by Fellows, second by Stock
To open the public hearing at 7:44 p.m.**

Voice Vote: Ayes: Unanimous

Nays: None

MOTION APPROVED

Derek Bauer, 12919 Woodgrove Drive – The substantial trees are on the applicant's property, there are at least 12 trees in there that they can't get their arms around. He is concerned about what will be left there. He is concerned with security and buffering for privacy.

Dave, 12931 Woodgrove Drive – He is concerned as well with the trees being removed. Their common plea is that they are able to keep the mature trees and keep the aesthetic benefit, so they are not looking at the parking lot with RV's or boats parked there.

Edward – owns the commercial building west of the dental office. Is there any drainage that is planned to go west? He knows there are issues downstream with capacity.

Kyle Hart, 12810 Ten Mile Road – He questioned what the plan is for the barn/shed on the edge of Mr. Crampton's property. It does provide some screening he wasn't sure if it would be left. There are 3 or 4 very large trees that provide a lot of character to the surrounding area. He questioned if the building will be 2 stories.

Jamie Hart, 12810 Ten Mile Road – Their property is zoned industrial but used as residential. The screening lines would be addressed but she questioned the setback, and asked if re-zoning their property to residential is something they can do.

Mr. Lamberto closed the public hearing at 7:54 p.m. due to no further comments.

2. Pamalane Court, Private Road Extension Parcel #4716-08-300-003

Motion by Smigliani, second by Fellows

To open Pamalane Court for general discussion.

**Voice Vote: Ayes: Unanimous
 Nays: None**

MOTION APPROVED

Ms. McKenzie provided brief background information and explained the right-of-way was approved by LCRC and they have granted conceptual approval. The Township Engineer will review the engineering. Stormwater management and grading is subject to Township Engineer and Fire Marshal approval and must meet all design specifications.

The Carlisle Wortman memo dated July 26, 2018 was referenced. The following conditions were noted.

1. Stormwater management, topography/grading, layout, and design is subject to

- review and approval by the Township Engineer and Township Fire Marshal.
2. The site plan is subject to review and approval of the design requirements and specifications for Class B Roads by the Township Engineer.
 3. The applicant must submit an approved Right-of-Way Permit from the Livingston County Road Commission prior to a private road permit being issued by the Township.
 4. The applicant must submit a complete application for a land division with the Township following approval of the private road application by the Township Board.
 5. An initial review of the proposed road agreement suggest that the document is in compliance with the requirements of Section 38-447(10); however, a complete review may need to be conducted by the Township Attorney to verify compliance.
 6. Correct name of Private Road from Rockwood Court to Pamalane Court in Road and Easement Maintenance agreement.

Tim Zimmer, Livingston Engineering. He thanked everyone for getting them to this point. They understand there is detailed engineering review they will go through with CES. They have talked about getting the submittals together for the planner. They are ready to move forward. They believe they have met all of the comments and concerns from the past.

Mr. Zimmer confirmed It's his understanding the name will be Pamalane Court.

Motion by Fellows, second by Pearsall

To recommend Pamalane Court, Private Road Extension Parcel #4716-08-300-003 to the Township Board for their review.

**Roll Call Vote: Ayes: Unanimous
 Nays: None**

MOTION APPROVED

1. **Site Plan Review for Ascher Farms, SP03-2018 parcel #4716-23-300-010 a site condominium with 70 half acre single family residential lots on 52.94 acres. The parcel is located on the west side of Rushton Road, north of 10 Mile Road, south of Doane Road, in Section 23. The site is zoned R-2 single family residential, in which the single-family residential use is permitted at the requested density.**

Motion by Smiglini, second by Fellows

To consider Site Plan Review for Ascher Farms, SP03-2018 parcel #4716-23-300-010 a site condominium with 70 half acre single family residential lots on 52.94 acres. The parcel is located on the west side of Rushton Road, north of 10 Mile Road, south of Doane Road, in Section 23. The site is zoned R-2 single family residential, in which the single-family residential use is permitted at the requested density

**Voice Vote: Ayes: Unanimous
 Nays: None**

246 **MOTION APPROVED**

247
248
249 Mr. Montagno referenced the Carlisle Wortman memo dated August 29, 2018. He would
250 recommend that all of the following outstanding items must be addressed before action
251 is taken on these plans:

- 252
253 1. Increase width of pathway along Rushton Road to 10 feet.
254 2. Provide non-motorized pathway along the entire Rushton Road frontage.
255 3. Provide approval for work within the ROW from LCRC.
256 4. Provide photometric plan for further review.
257 5. Obtain a sign permit prior to construction.
258

259 Ms. Zawada referenced the CES memo dated August 7, 2018 with the following concerns:

- 260
261 1. the detention basin emergency overflow spillway and the 100 year overland flow
262 route with elevations needs to be shown. It must be demonstrated that flooding of
263 homes will not occur during a 100 year storm event or failure of the storm
264 collection.
265
266 2. The site is proposed to be serviced with wells and septic. CES recommends that
267 the applicant provide documents from the Health Department that is feasible. She
268 noted they did receive correspondence late this afternoon from the Health
269 Department which shows the site will support septic fields.
270
271 3. They note that storm sewer of +/- feet depth is proposed between lots which is a
272 concern for impacts to home foundations well as for future maintenance.
273

274 Due to these concerns she recommended the item be tabled.
275

276 Clerk Sedlak explained he just received the packet before a long holiday weekend and
277 due to the Emily FOIA he has not had time to review the material and would like to table
278 the applicant until the following meeting.
279

280 Mr. Fellows explained since the Plan calls for a pathway to extend north on Rushton to
281 Silver Lake past Doane Road it appears placement on the eastern side of Rushton would
282 be a safer consideration for pedestrian traffic. Placing a Pathway on the western side
283 presents a potential public safety issue at the junction of Doane Road and Ruston.
284 Pedestrian crossing at Ten Mile Road is a much safer consideration and a pathway on
285 the eastern side of Rushton crosses to significant parcels of public property, the Fire
286 Station and Brummer Elementary.
287

288 **Motion by Smigliani, second by Pearsall**
289 **To close discussion and table to the next meeting.**
290

291 **Roll Call Vote: Ayes: Unanimous**
292 **Nays: None**
293

294 **MOTION APPROVED**

295
296
297 **2. Public Hearing to receive comments on Amendment to Chapter 38,**
298 **Zoning, Article VII, Off Street Parking and Loading.**
299

300 Mr. Montagno referenced the Carlisle Wortman memo dated June 14, 2018. He provided
301 some minor proposed text amendments that would allow for parking within the front yard
302 while still maintaining a minimum landscape area adjacent to roads. There are still general
303 screening requirements that would protect the views for any adjacent residential
304 developments The Planning Commission should discuss the intent of this section of the
305 ordinance and determine if the proposed language will accomplish the Township's goals.
306

307 **Motion by Smigliani, second by Stock**
308 **To open the public hearing at 8:15 p.m.**
309

310 **Voice Vote: Ayes: Unanimous**
311 **Nays: None**
312

313 **MOTION APPROVED**
314
315

316 **There were no comments.**
317

318 **Mr. Smigliani closed the public hearing at 8:15 p.m.**
319

320 **Motion by Pearsall, second by Fellow**
321 **To suspend the normal rules and recommend approval of the Amendment**
322 **to Chapter 38 Zoning, Article VII, Off Street Parking and Loading to the**
323 **Township Board.**
324

325 **Roll Call Vote: Ayes: Unanimous**
326 **Nays: None**
327

328 **MOTION APPROVED**
329
330

331 **3. Adoption of amendment to PC By-Laws**
332

333 Mr. Fellows explained the amendment to the Planning Commission By-Laws is to clarify
334 the meeting process and the rules the Planning Commission operates under.
335

336 **Motion by Stock, second by Pearsall**
337 **To recommend to the Township Board to review and approve the**
338 **amendment to the Planning Commission By-Laws as discussed.**
339

340 **Roll Call Vote: Ayes: Unanimous**
341 **Nays: None**
342

343 **MOTION APPROVED**

344
345
346 **REPORTS**
347

348 **Chairman** – None

349 **Township Board Representative** – Clerk Sedlak brought the Planning Commission up
350 to date regarding the last Board meeting. He also explained the Emily FOIA request.

351 **ZBA Representative**- None

352 **Planning Consultant** – None
353

354 **Correspondence** – Ms. McKenzie noted a letter from resident Louann Hopkins was
355 received and well as Jeff Whitcomb.
356

357 **CALL TO THE PUBLIC**
358
359

360 **Tony Russo** – He explained there is a wildlife haven for on the property where Ascher
361 Farms is proposed and said there are ,not too many places you can look out your back
362 door and see that anymore.
363
364

365 **ADJOURNMENT**
366

367 Mr. Smigliani adjourned the Planning Commission meeting at 8:32 p.m. due to no further
368 business.
369

370 Respectfully Submitted,
371

372 *Kellie Angelosanto*

373
374 Kellie Angelosanto
375 Recording Secretary
376



September 5, 2018

Green Oak Charter Township
10001 Silver Lake Road
Brighton, MI 48116

ATTN: Ms. Debra McKenzie & the Township Planning Commission

RE: Asher Farms – 3rd Site Plan Review - Revise and Resubmit - CES #2018-0033

Dear Ms. McKenzie & Planning Commission Members,

Civil Engineering Solutions, Inc. has completed the 3rd Site Plan Review for the above referenced project. The plans are dated July 15, 2018, last revised August 22, 2018 and are stamped "Revise and Resubmit". The following is a list of our comments/concerns:

1. In lieu of soil boring and geotechnical reports, the Applicant has provided Perc Test dig results and Water Well Pump Records, which do not qualify as geotechnical reports. Soil borings with geotechnical reports shall be provided as part of the engineering plan review process.
2. The detention basin emergency overflow spillway and the 100-year overland flow route with elevations has not been shown. Instead, a storage elevation based on back-to-back 100-year storms is offered. The applicant should provide an emergency overflow spillway and proposed overflow route in accordance with Township engineering standards. It must be demonstrated that flooding of homes will not occur during a 100-year storm event or failure of the storm collection system. Finished floors of homes surrounding the basin should be provided for us to review overflow routes.
3. An access path for maintenance shall be provided for the basin, for future maintenance of the outlet structures.
4. The road cross-section will be reviewed during the detailed engineering review.
5. The site is proposed to be serviced with wells and septic, and as mentioned above, Perc Test dig results have been supplied. It is unclear if these digs were witnessed by the Health Department. CES recommends that the Applicant provide documents from the Health Department that the proposed on-site sewage disposal systems are feasible.
6. We note that storm sewer of +/-20 feet depth is proposed between lots which is a concern for future maintenance.
7. Proposed approach locations to Rushton Road appear to be acceptable to the Livingston County Road Commission, based on copies of correspondence received from the LCRC.
8. Please note that condominium documents will require review if this project receives approval from the Planning Commission.



We recommend that this item be tabled until the requirements in the engineering standards are met. Please contact us with any questions or concerns. We may be reached at (248) 264-6906.

Sincerely,
CIVIL ENGINEERING SOLUTIONS, INC.

A handwritten signature in black ink, appearing to read "Leslie Zawada", written over a horizontal line.

Leslie Zawada, P.E.
President

A handwritten signature in blue ink, appearing to read "Rick Miner", written over a horizontal line.

Rick Miner, P.E.
Project Manager

Enclosures: Plans

cc: Paul Montagno, Carlisle-Wortman via e-mail
Tim Kedzierski, Fire Dept via e-mail
Joe Malecke, M&N Development via maleckejoe@gmail.com



September 7, 2018

Green Oak Township Planning Commission:
10001 Silver Lake Road
Brighton, Mi. 48116

Re: Asher Farms Site Condominium:

Dear Commission Members:

As you are aware the Asher Farms Site Condominium project was tabled at the September 6th Planning Commission meeting. Apparently the reason for the tabling was due to a comment raised by Civil Engineering Solutions, Inc. regarding the 100 year overland flow path for the detention pond. We were expecting to be able to discuss this issue with you at the meeting and were somewhat surprised when a motion was made to table the project before we were given an opportunity for discussion. As a result we would ask that you please review the following information in order to have a better understanding of the issue involved prior to us attending the next planning commission meeting.

The Asher Farms Site Condominium project was designed to meet the spirit and intent of all Green Oak Township ordinances and regulations. The existing conditions of the site consist of topography that has a large natural drainage basin in the middle of the property. The natural basin is approximately 25 feet lower in elevation than the surrounding grades. In order to utilize the natural features of the site, maintain natural drainage patterns to the extent possible, avoid unnecessary excavation, and to provide natural well thought out build sites, the large natural drainage basin was used as the general area for the proposed detention facility. The detention facility was designed to meet all Green Oak Township Engineering standards including storage for a 100 storm event, first flush storm release, bank full storm release and a 100 year emergency overflow release. The 100 year emergency overflow was designed to be released through structure OS-69 and discharge through a 30" diameter storm sewer that is directed to a large natural wetland to the Northwest.

Section 5-6 (B)(4) of the Green Oak Township Engineering standards states "An overland flood route for a 100 year storm frequency shall be provided and shown on the plans. A minimum freeboard of six inches shall be provided from any building's exterior finish grade (brick ledge) to the 100 year flood elevation. The overland flood route shall be located in a 20 foot easement or a public right-of-way."

Due to natural conditions of the site with the approximate 25 feet deep natural drainage basin located in the middle of the property, it is not practical to provide an overland flow route from the detention basin. Attempting to do such would require creating an unnatural deep drainage channel through the buildable areas of the site.



As an alternative to the above we have provided storm drainage calculations showing a second 100 year back to back storm event can be accommodated for in the detention area basin. The second 100 year storm event would not cause any flood issues to surrounding proposed structures when the minimum basement opening elevations called out on the plans are used. We believe this information alone meets the ordinance requirement showing the drainage path for a storm exceeding the 100 year storm event. The additional drainage would simply pond in the same general area of the natural drainage basin without causing any flooding to the surrounding structures.

In addition to the above we spoke with the Township Engineer and offered a third redundant option to the detention pond overflow. Our suggestion was to install an additional flared end section or beehive catch basin connected to structure CB-23 at approximate elevation 895.5 and increase the minimum allowable basement opening elevation for proposed structures to 896.0. By doing so a tertiary emergency overflow release would occur in the event the primary detention pond outlet experienced a complete failure, the secondary storm elevation in the detention pond increased to 893.0 during a second 100 year storm event and an additional 2.5 feet of freeboard in the detention basin area was consumed. For this situation to occur it would require a complete failure of the detention outlet, storms in excess of two 100 year back to back storms, 0 permeability in the underlying sandy soils and consumption of an additional 2.5 feet of freeboard from elevation 893.0 to 895.5. In logical sense this condition will simply never occur and we are having a difficult time understanding why the Township Engineer is standing adamant against recommending approval of the project. We believe the project as proposed meets the ordinance and is the best design to utilize the natural features of the land. We look forward to seeing you at the next planning commission meeting and would expect an opportunity to discuss the issue in detail

Sincerely

ACE CIVIL ENGINEERING, LLC

Patrick C. Keough, P.E.
President



**GREEN OAK CHARTER TOWNSHIP
PLANNING AND ZONING DEPARTMENT**

10001 Silver Lake Road, Brighton, MI 48116
Phone: 810-231-1333 ext.104 Fax: 810-231-5080

**CONDOMINIUM AND SITE CONDOMINIUM
TENTATIVE PRELIMINARY
PLAN APPLICATION**

1. Petitioner/Proprietor

- a. Name JOE MALECKE - M&M DEVELOPMENT
b. Address 26050 ORCHARD LK RD, FARM HILLS, 48334
c. Phone # 248-417-6560 Fax # 248-442-3319

2. Petitioner/Proprietor's Agent

- a. Name PAT KEOUKH - ACE ENGINEERING
b. Address 5040 QUEENSWAY, HOWELL, 48843
c. Phone # 517-545-4141 Fax # 517-545-4146

3. Name, address, telephone number and nature of interest of all persons, firms or corporations with an ownership interest in this property. (Attached additional sheet with list if necessary) (SEE ATTACHED)

4. Legal description of the property with the appropriate Green Oak Township Tax Identification Numbers.

4716-23-300-010
(LEGAL DESCRIPTION ATTACHED)

5. The total area of the property to the nearest 1/100th acres. All land to be dedicated as public or private road right-of-way shall be itemized.

52.94 ACRES

6. A description of the purpose of the proposed project.

1/2 ACRE SINGLE FAMILY RESIDENTIAL
DEVELOPMENT

7. Proposed number of units by type of use (residential dwelling, commercial gross floor area, etc.)
70 UNITS, SINGLE FAMILY RESIDENTIAL
8. Source of water (public, private).
PRIVATE WELL
9. Method of sewage disposal (private, public).
PRIVATE SEPTIC
10. Provide floodplain documentation.
11. Provide a utility plan.
12. Provide a storm water management plan.
13. Provide a Master Deed.
14. Fifteen (15) copies submitted.
15. Site Plan information.

This application provides authority for Township representatives to physically view and inspect the property.

If costs of review exceed stated amount the applicant will be billed for the additional amount.


Signature of Applicant

4/10/18
Date

Fee Paid: 4050.00

Received by: _____



LIVINGSTON COUNTY ROAD COMMISSION LAND SPLIT / SIGHT DISTANCE REVIEW

****NOTE: THIS IS NOT A
DRIVEWAY PERMIT.****

Review Number 1806-006

Property Owner and Applicant Information

Owner: M & N Development
Street Address: 26050 Orchard Lake
City, State, ZIP: Farmington Hills, MI 48334
Day Phone: (248) 417-6560 Fax: (248) 442-3319

Applicant:
Company:
Address:
City, State: ,
Applicant Phone:

Applicant Fax:

Location

Township: Green Oak Section: 23
Development: Asher Farms
Approach Type: Private Road
Speed Limit (if posted): 45
Speed Factors (if any):
Roadway On: Rushton Rd Side of Street: West

Field Measurements

Location of existing property corners from nearest crossroad: 0 and 1905 feet North of Ten Mile Road

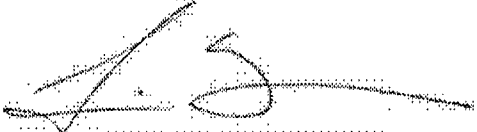
Parcel	Property/ Easement Corners		Access Point(s)	Sight Distance Req.		Sight Distance Measured		Sight Distance Comply	Clear Vision Comply	Neighbor Consent Required	Approve
				Std	Min						
Road #1	0	1097	595	725	500	595 South	725 North	Yes	Yes	No	Yes
Road #2	1323	1905	1620	725	500	715 South	914 North	Yes	Yes	No	Yes

Comments:

A private road approach could be located at either proposed location. See the LCRC specification booklet and contact this office for more information.

Inspection Date: 3/9/2018

Inspector:


Pat Hogan

M&N Development

Joe Malecke

26050 Orchard Lake Rd

Farmington Hills, MI 48334

248-417-6560 (phone)

248-442-3319 (fax)

maleckejoe@gmail.com

Tom Nemes

26050 Orchard Lake Rd

Farmington Hills, MI 48334

248-442-3300 (phone)

248-442-3319 (fax)

tom@nemesassociates.com

Dave Harris

2490 Lone Tree Rd

Milford, MI 48380

248-889-2572 (phone)

248-887-2150 (fax)

milfordexcavating@yahoo.com



August 7, 2018

Green Oak Charter Township
10001 Silver Lake Road
Brighton, MI 48116

ATTN: Ms. Debra McKenzie

RE: Asher Farms – 2nd Site Plan Review - Revise and Resubmit - CES #2018-0033

Dear Ms. McKenzie,

Civil Engineering Solutions, Inc. has completed the 2nd Site Plan Review for the above referenced project. The plans are dated July 15, 2018 and are stamped "Revise and Resubmit". The following is a list of our comments/concerns:

1. Soil boring and geotechnical reports shall be provided as part of the site plan review process.
2. A rear-yard storm sewer system shall be provided for the lots that back to the detention basin.
3. Wetland determinations on the project site were apparently provided by Brooks Williamson; the Applicant shall also provide the wetland delineation report.
4. The detention basin emergency overflow spillway and the 100-year overland flow route with elevations needs to be shown. It must be demonstrated that flooding of homes will not occur during a 100-year storm event or failure of the storm collection system.
5. An access path for maintenance shall be provided for the basin, for future maintenance of the outlet structures.
6. The road cross-section does not meet the Township Private Road Ordinance standards.
7. The site is proposed to be serviced with wells and septic. CES recommends that the Applicant provide documents from the Health Department that this is feasible.
8. We note that storm sewer of +/-20 feet depth is proposed between lots which is a concern for impacts to home foundations as well as for future maintenance.
9. Proposed approach locations to Rushton Road should be reviewed by the Livingston County Road Commission during the site plan review process.
10. Please note that condominium documents will require review if this project receives approval from the Planning Commission.

Please contact us with any questions or concerns. We may be reached at (248) 264-6906.

Sincerely,

CIVIL ENGINEERING SOLUTIONS, INC.

A handwritten signature in blue ink that reads "Rick Miner".

Rick Miner, P.E.
Project Manager

Enclosures: Marked-up plans

cc: Paul Montagno, Carlisle-Wortman via e-mail
Tim Kedzierski, Fire Dept via e-mail
Joe Malecke, M&N Development via maleckejoe@gmail.com



Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: May 30, 2018
August 21, 2018
August 29, 2018

**Site Plan Review
For
Green Oak Township, Michigan**

Applicant:	M & N Development
Project Name:	Asher Farms – Site Condominium
Plan Date:	7/15/2018
Location:	West side of Rushton Road, north of 10 Mile Road
Zoning:	R-2 Single Family Residential
Action Requested:	Final Site Plan Approval

PROJECT AND SITE DESCRIPTION

The applicant is proposing to develop a site condominium with 70 half-acre single family residential lots on 52.94 acres. The subject site is located on the west side of Rushton Road, north of 10 Mile Road, south of Doane Road, in Section 23. The site is zoned R-2 single family residential, in which the single family residential use is permitted at this density.

The site is rectangular in shape with roughly 1,000 feet of frontage on Rushton Road with the exception of a 1.2 acre parcel that contains an existing single family residence located along Rushton in the middle of the subject site. The site includes a proposed private road system for access to all units by way of two access points on Rushton Road.

Aerial Image of Subject Site and Vicinity



Source: Google Map

Neighboring Zoning and Land Use

	Zoning	Land Use
North	R-2	Single Family Residential
West	(16-23-300-007) R-3 (16-23-300-008) RM	Residential/Vacant Multiple Family Condominiums
East	ROW	Rushton Road
South	RM	Multiple Family Condominiums

The site is arranged between a condominium development to the west and south, a single family residential dwelling to the north, and additional single family residence, the fire station, and the elementary school across Rushton Road to the east. The site also surrounds a 1.23 acre parcel, used as single family residential, on the east side of the site.

Items to be Addressed: None.

AREA, WIDTH, HEIGHT, SETBACKS

	<u>Required</u>	<u>Provided</u>
Lot Area	21,750 Square Feet (min)	21,750 Square Feet (min.)
Lot Width	125 Feet	125 Feet
Front Setback	40 Feet	40 Feet
Side Setback	15 Feet	15 Feet
Rear Setback	45 Feet	45 Feet
Impervious Area	N/A	N/A
Building Height	28 Feet Max	28 Feet

The table above provides the lot requirements, as well as what is proposed on the site plan. All lots meet the minimum requirement for lot area.

Items to be Addressed: None.

SITE ARRANGEMENT

The site plan utilizes the entire site area for single family home lots. Within the site, 70 single family units will be served by private roads. Additionally, there is 2.35 acres of proposed open space at the center of the site where the detention pond will be located.

Items to be Addressed: None.

SITE ACCESS AND CIRCULATION

Two road access points will be provided on the east side of the site that connect to Rushton Road. Within the site, a new private road, with a 66.5 foot R.O.W. will be added for access to individual dwellings. This road wraps around the north, west and south side of the site and consists of a 600 foot drive with a cul-de-sac in the center of the site and a large loop at the southern end of the site. The plan indicates that the Ruston Road 33 foot half right-of-Way will be expanded to 60.5 feet. Work within the County ROW must be permitted by the Livingston County Road Commission. The applicant has indicated that plans have been submitted to the LCRC.

The Township's Non-motorized Pathway Plan calls for a pathway on Rushton Road. All new development with frontage along a road that has a pathway indicated on the Township Pathway Plan must install the portion of the pathway along their frontage. The applicant has proposed a 5 foot wide pathway along Ruston Road, only connecting the south access point of the development to the south end property. The pathway must be extended along the entire frontage of the site. Additionally, the pathway must be expanded to 10 feet wide along the entire frontage of the site.

The internal private roads will include 5 foot wide sidewalks on both sides of the road with crosswalks provided at all intersections within the development. Additionally, the applicant has indicated that all sidewalk crossings at roadways, including sidewalk ramps, shall be constructed in accordance with the MDOT detail shown on page 22.

Items to be Addressed:

- 1) *Increase width of pathway along Rushton Road to 10 feet.*
- 2) *Provide non-motorized pathway along the entire Rushton Road frontage.*
- 3) *Provide approval for work within the ROW from LCRC.*

PARKING, LOADING

Parking for single and multiple-family uses on-site are subject to the requirements of Section 38-312, *Off-Street Parking Space Requirements*. Section 38-312 requires two (2) parking spaces to be provided for each single-family dwelling unit. Parking for single family homes will be accommodated in driveways and garages.

Items to be Addressed: *None*

SCREENING & LANDSCAPING

The applicant has provided a tree inventory as well as tree removal and mitigation calculations. A total of 35 non-landmark trees are planned to be removed. Tree mitigation standards provided in Sec. 38-363 (i) of the zoning ordinance require all regulated trees removed to be replaced on a one-for-one basis. It appears the applicant will be providing 35 new 2.5 inch caliper trees, as required by Sec. 38-177. (d). The applicant intends to remove one (1) landmark tree, which is located at the center of lot 44. The applicant will replace the removed tree with 18 trees, meeting the minimum requirement.

The applicant has noted on page 4 that silt fencing will be used to protect remaining trees during construction.

Items to be Addressed: *None.*

LIGHTING

There are six (6) neighborhood-style street lights proposed within the ROW. Page 2 of the site plan features light pole details. However, a photometric grid indicating the light intensity throughout the site should be provided.

The Planning Commission is authorized to waive the requirement of a photometric grid when it is determined that such information is not necessary for site plan review.

Items to be Addressed: *Provide photometric plan for further review.*

SIGNS

There are two proposed 5'x8' ground signs, one for each entrance to the site. The applicant has indicated that sign permits will be applied for prior to construction of the signs.

Items to be Addressed: *Obtain a sign permit prior to construction.*

ELEVATIONS AND FLOORPLANS

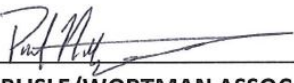
The applicant has provided a floor plan and a rendering for the Planning Commission's review in accordance with Section 38-71 of the Zoning Ordinance.

Items to be Addressed: None.

RECOMMENDATIONS

We would recommend that all of the following outstanding items must be addressed before action is taken on these plans:

1. Increase width of pathway along Rushton Road to 10 feet.
2. Provide non-motorized pathway along the entire Rushton Road frontage.
3. Provide approval for work within the ROW from LCRC.
4. Provide photometric plan for further review.
5. Obtain a sign permit prior to construction.



CARLISLE/WORTMAN ASSOC., INC.
Paul Montagno, AICP
Planner

#175-1805

cc. Mark St. Charles, Township Supervisor
Debra McKenzie, Planning & Zoning Administrator
Leslie Zawada, Township Engineer
Tim Kedzierski, Township Fire Marshal
Wayne Jewell, Township Building Official
John Enos, Principle, CWA
Joe Malecke, Applicant (maleckejoe@gmail.com)

Livingston County Road Commission

3535 Grand Oaks Drive • Howell, Michigan 48843-8575
Telephone: (517) 546-4250 • Facsimile: (517) 546-9628
Internet Address: www.livingstonroads.org

August 27, 2018

Pat Keough, P.E.
ACE Civil Engineering
5040 Queensway
Howell, MI 48843

Re: Janes Landing and Loretta Lane, Green Oak Township, Section 23
LCRC #P-18-08

Dear Mr. Keough:

I have completed the review of the revised plans, dated August 22, 2018, for the private road approaches off of Rushton Road for the above-referenced project and have determined the plans to be in substantial compliance with our specifications.

Before a private road approach permit can be issued, the following items need to be completed.

1. A contractor will need to be selected and the selected contractor must submit a certificate of insurance to the LCRC with the following language: "The Board of Livingston County Road Commissioners, the Livingston County Road Commission, and their officers, agents, and employees are listed additional insured parties with respects to General Liability."
2. The proposed right-of-way on Rushton Road will need to be conveyed to the Livingston County Road Commission.

If you have any questions, please do not hesitate to contact me.

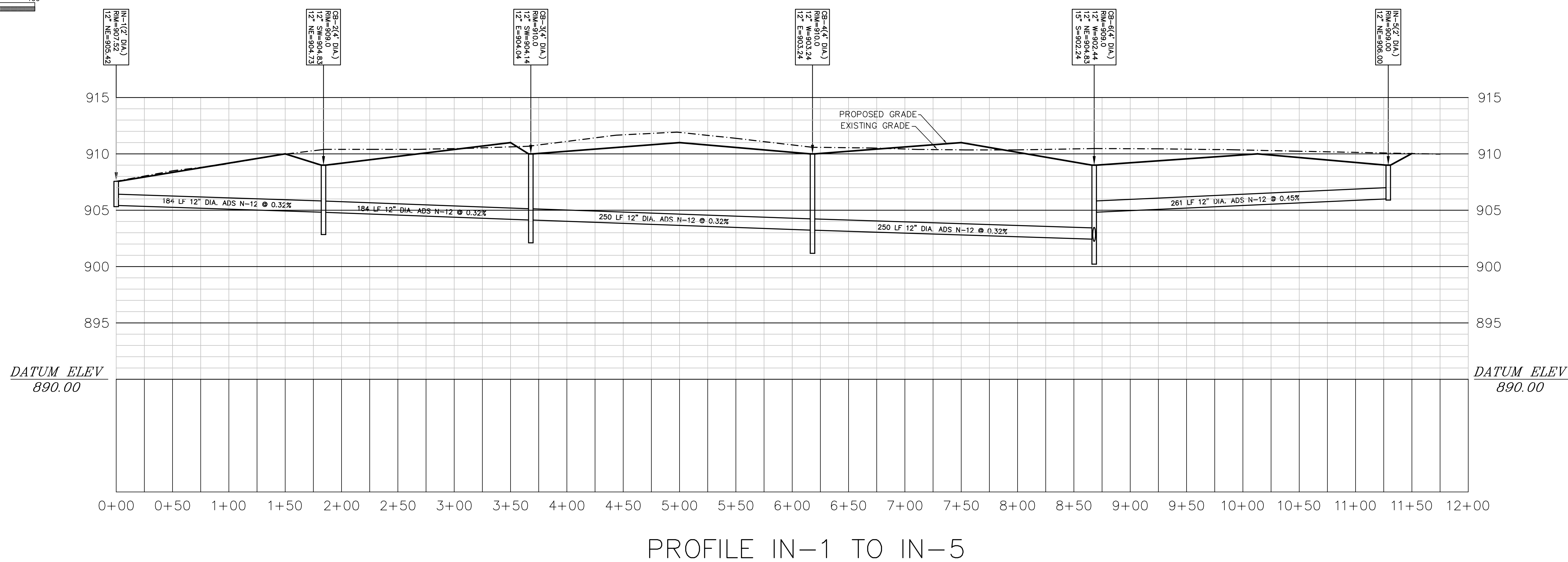
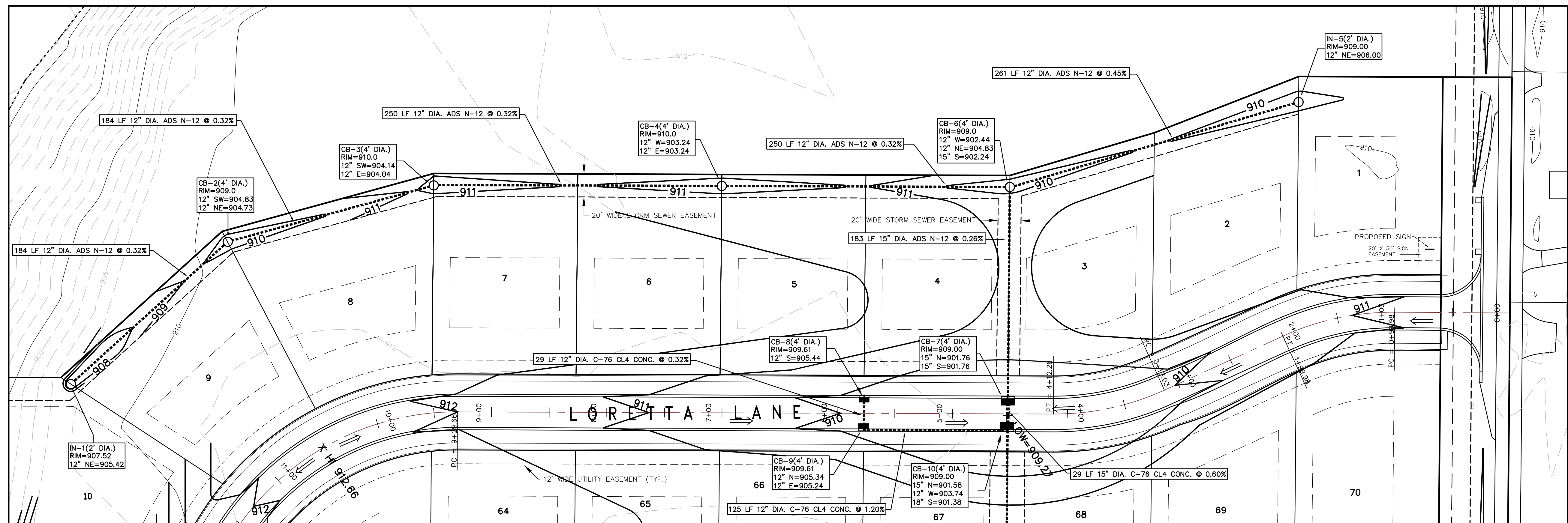
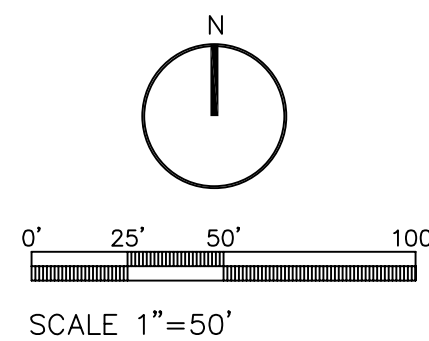
Sincerely,



Kim Hiller, P.E.
Utilities and Permits Engineer

Cc: File

Debra McKenzie, Green Oak Township (via email)
Leslie Zawada, CES (via email)
Ken Recker, Livingston County Drain Commissioner's Office (via email)



REVISIONS:

OWNER/DEVELOPER:
M&N DEVELOPMENT
26050 ORCHARD LAKE RD
SUITE 300
FARMINGTON HILLS, MI. 48334

ASHER FARMS
RESIDENTIAL SITE CONDOMINIUM
STORM SEWER PROFILE

ACE CIVIL ENGINEERING, LLC
5040 Greenway, Royal, MI. 48065 517 245-4141 adam@acecivil.net

DATE: 07-15-18
DRAWN BY: PCK
CHECKED BY: PCK
JOB No. 17024

DRAWING No.

GREEN OAK TOWNSHIP FIRE DEPARTMENT

9384 Whitmore Lake Road
Brighton, Michigan 48116-8325

Phone 810-231-3663
Fax 810-231-4488

Kevin Gentry, Fire Chief

To: GREEN OAK TOWNSHIP PLANNING AND ZONING
Attention: Debra McKenzie

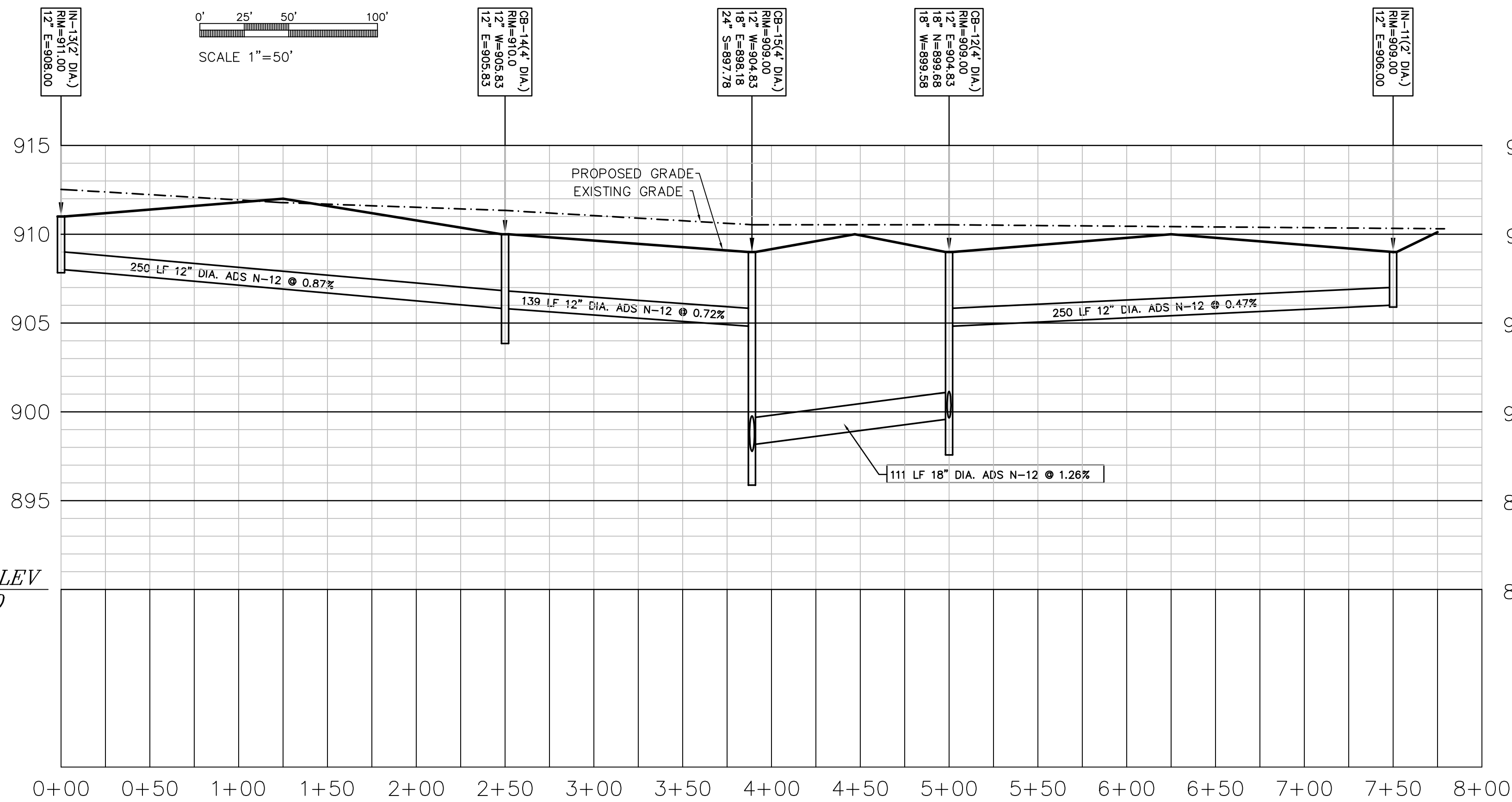
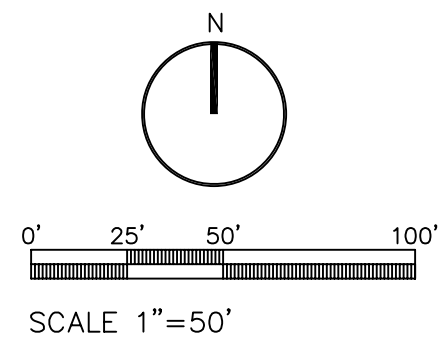
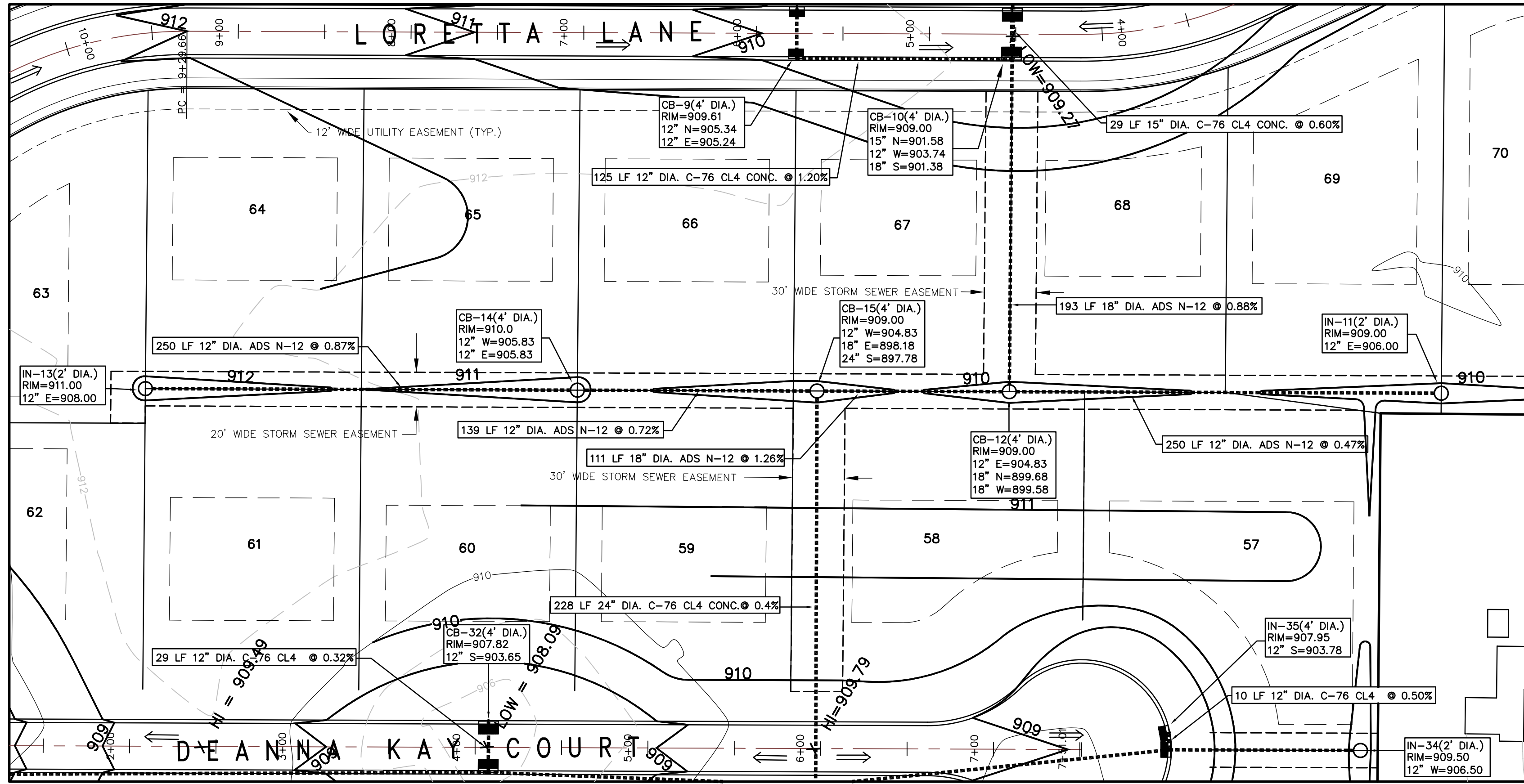
From: Tim Kedzierski, Fire Marshal

Date: April 27, 2018

Re: Site Plan Review, (Asher Farms)

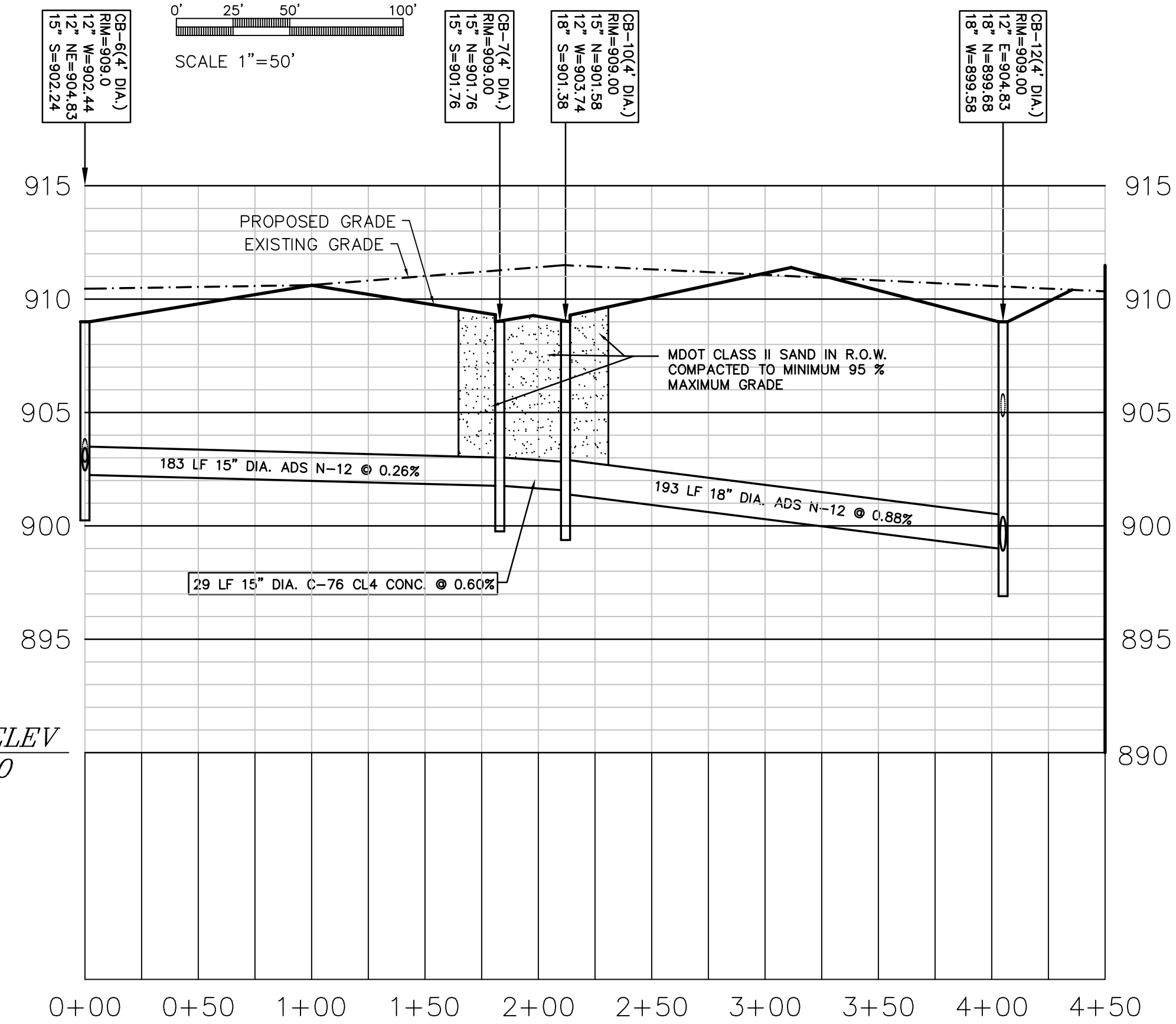
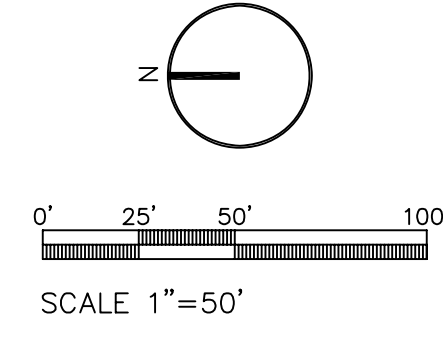
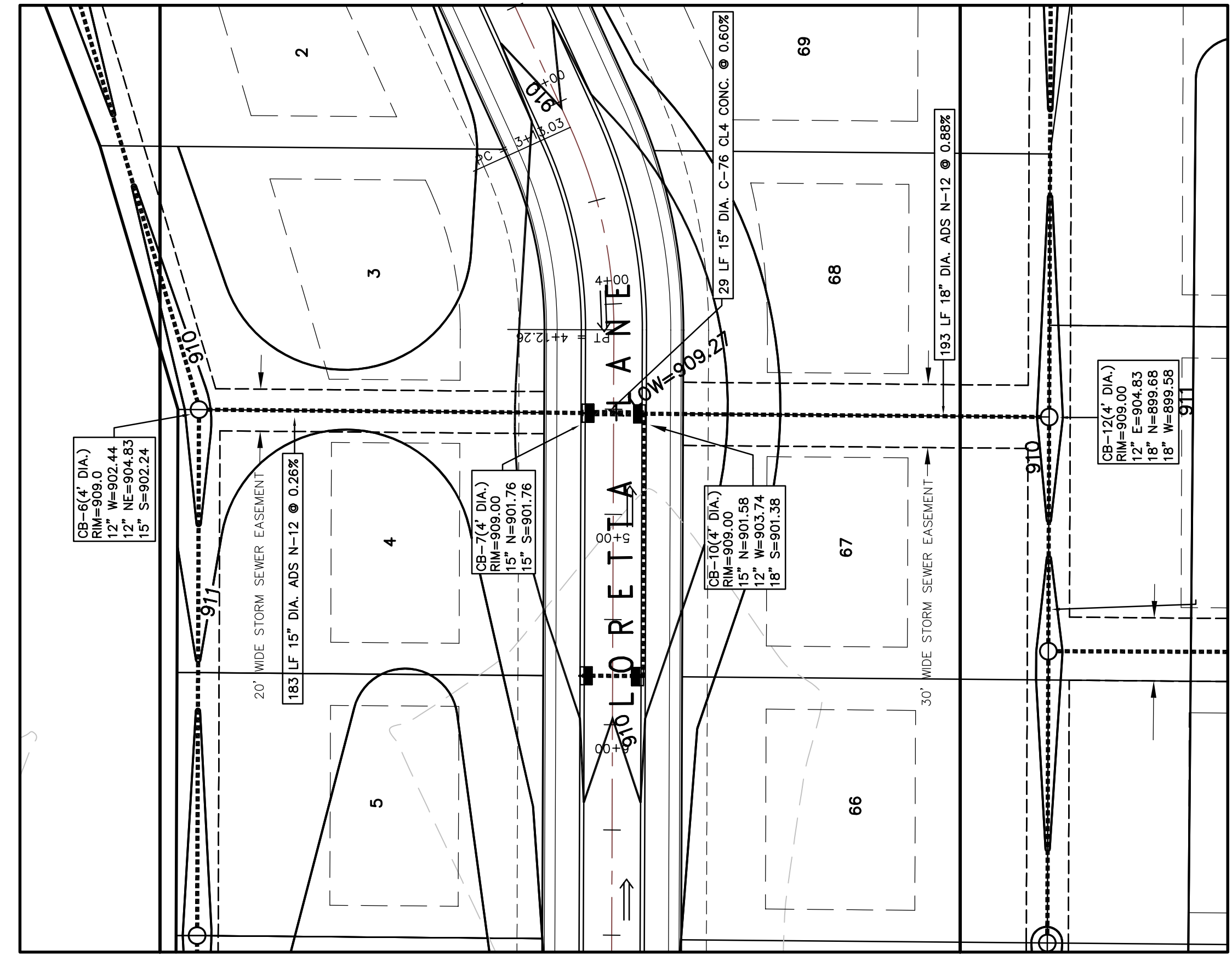
A review of this site plan has been performed and at this time the Fire Department concerns are noted below.

1. Will vehicle parking be allowed on both sides of road way?



DATUM ELEV
890.00

PROFILE IN-13 TO IN-11



DATUM ELEV
890.00

PROFILE CB-6 TO CB-12

REVISIONS:

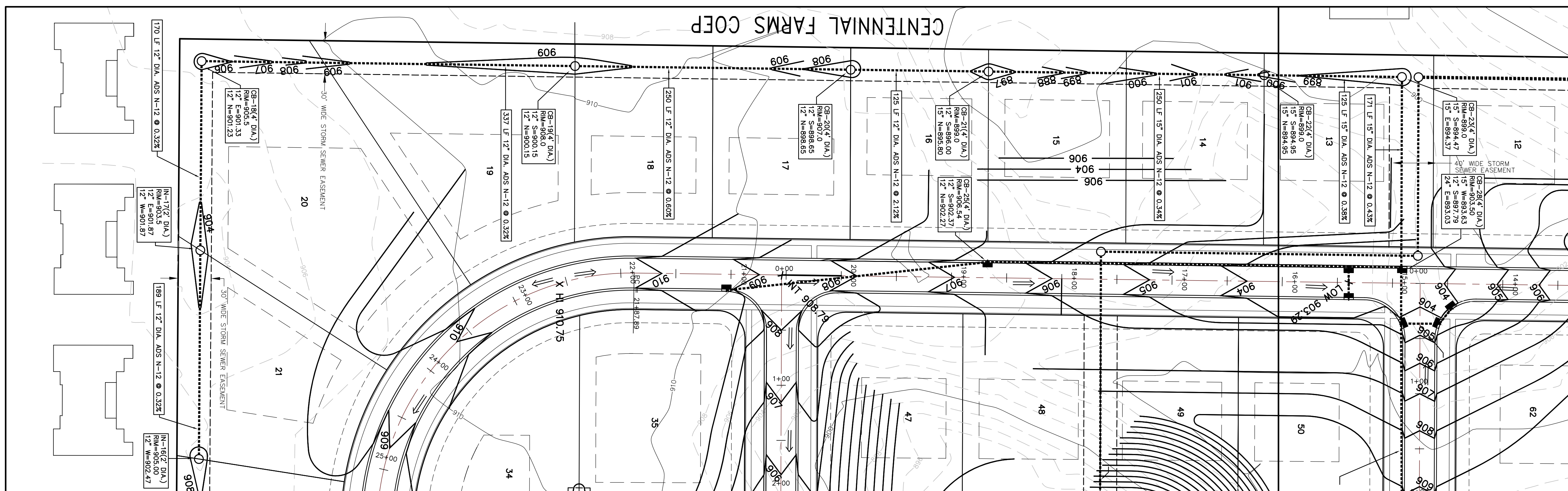
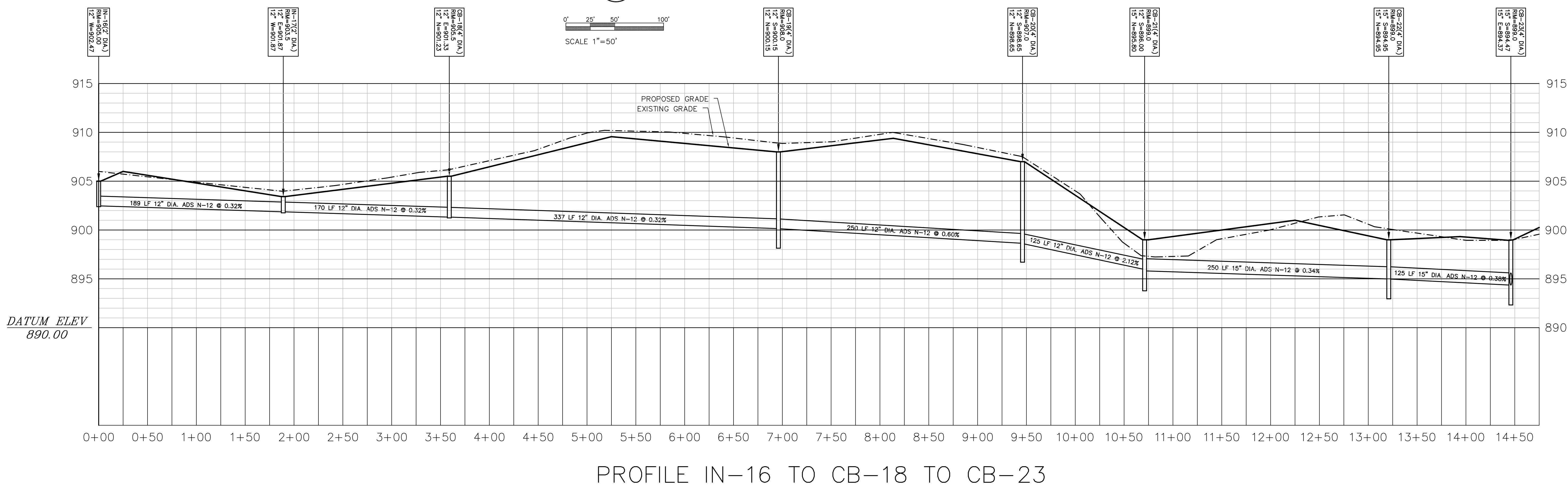
OWNER/DEVELOPER:
M&N DEVELOPMENT
26050 ORCHARD LAKE RD
SUITE 300
FARMINGTON HILLS, MI. 48334

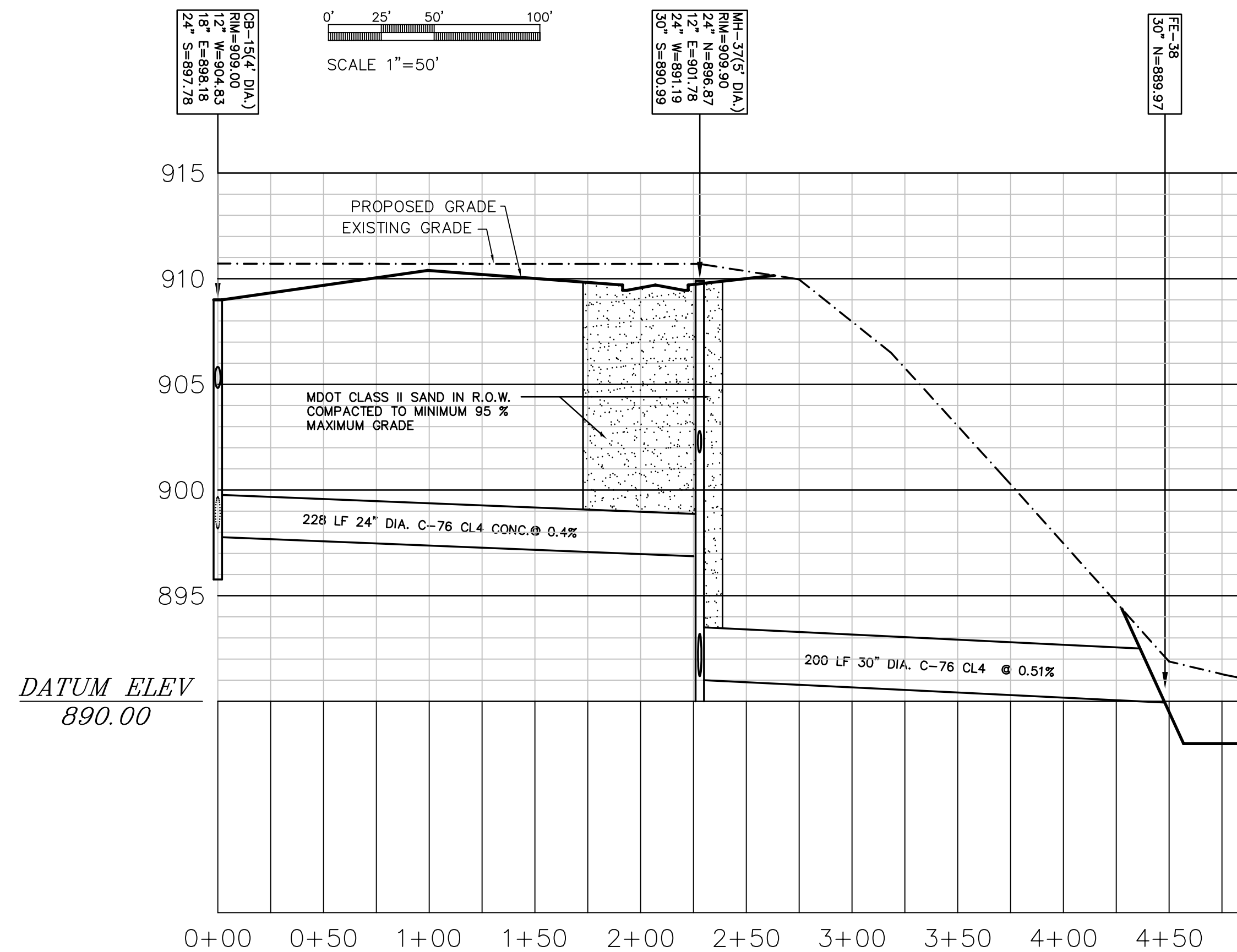
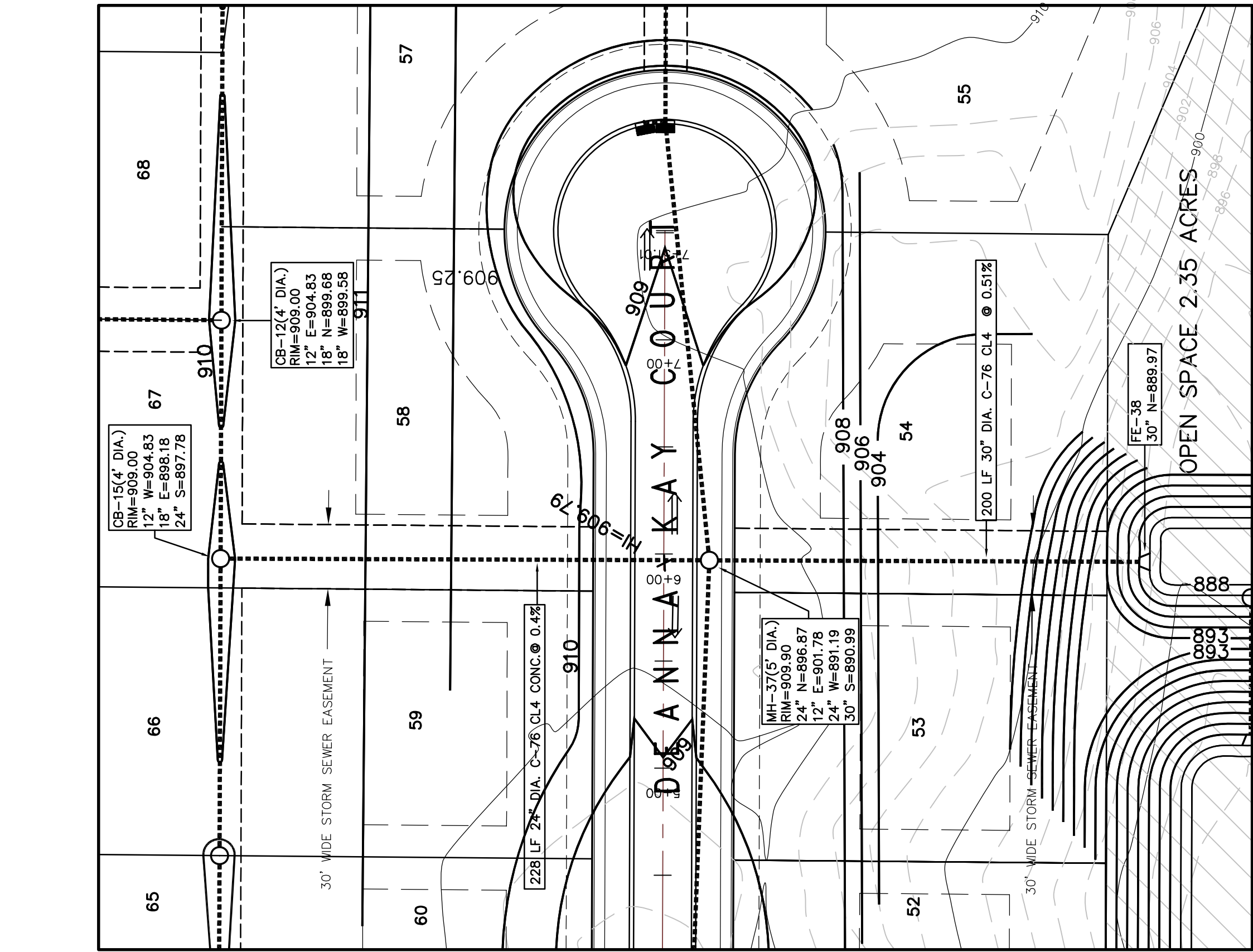
ASHER FARMS
RESIDENTIAL SITE CONDOMINIUM
STORM SEWER PROFILE

ACE CIVIL
ENGINEERING, LLC
5042 Greenway, Royal Oak, MI 48065 577 445-4141 info@acecivil.com

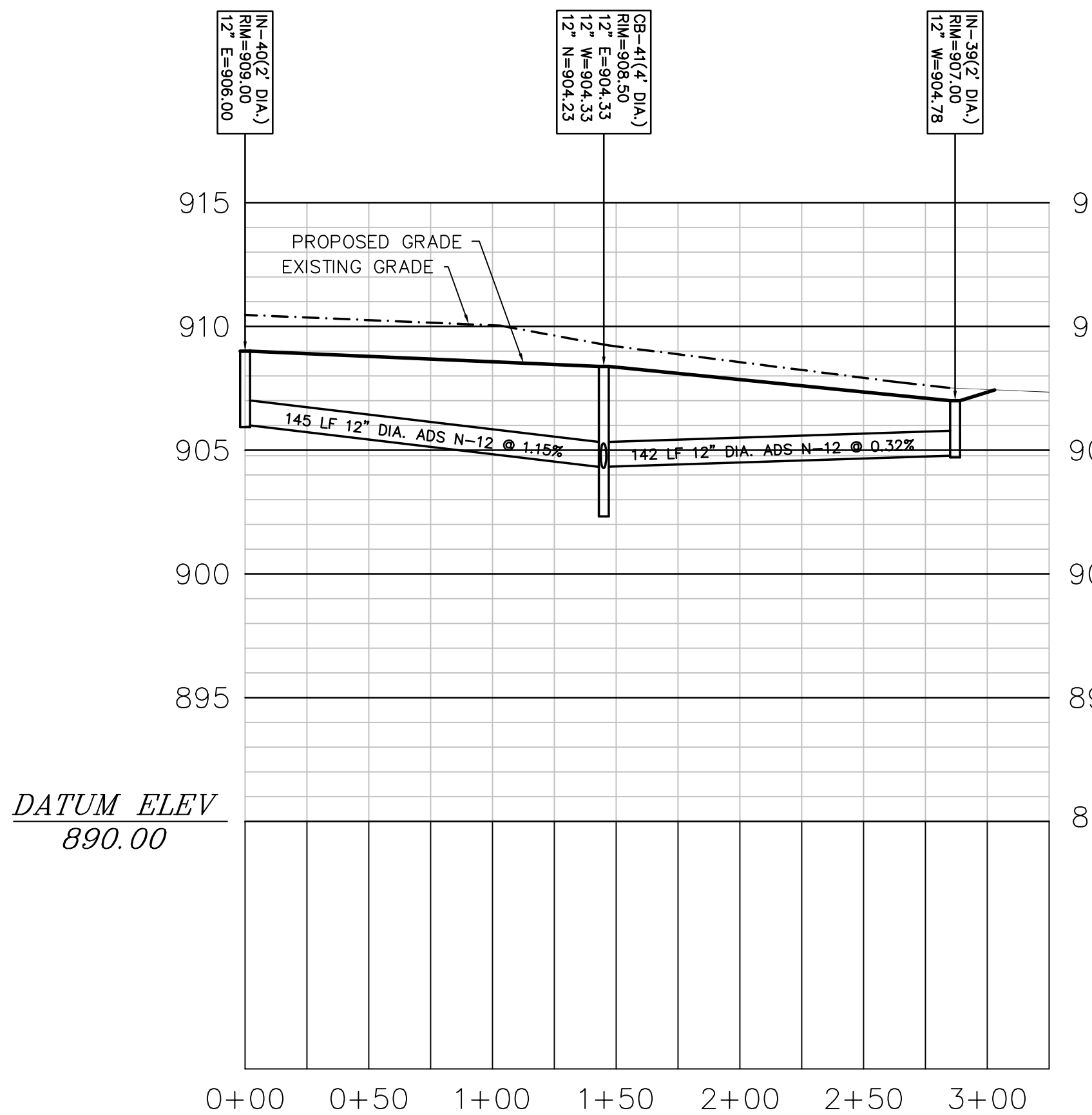
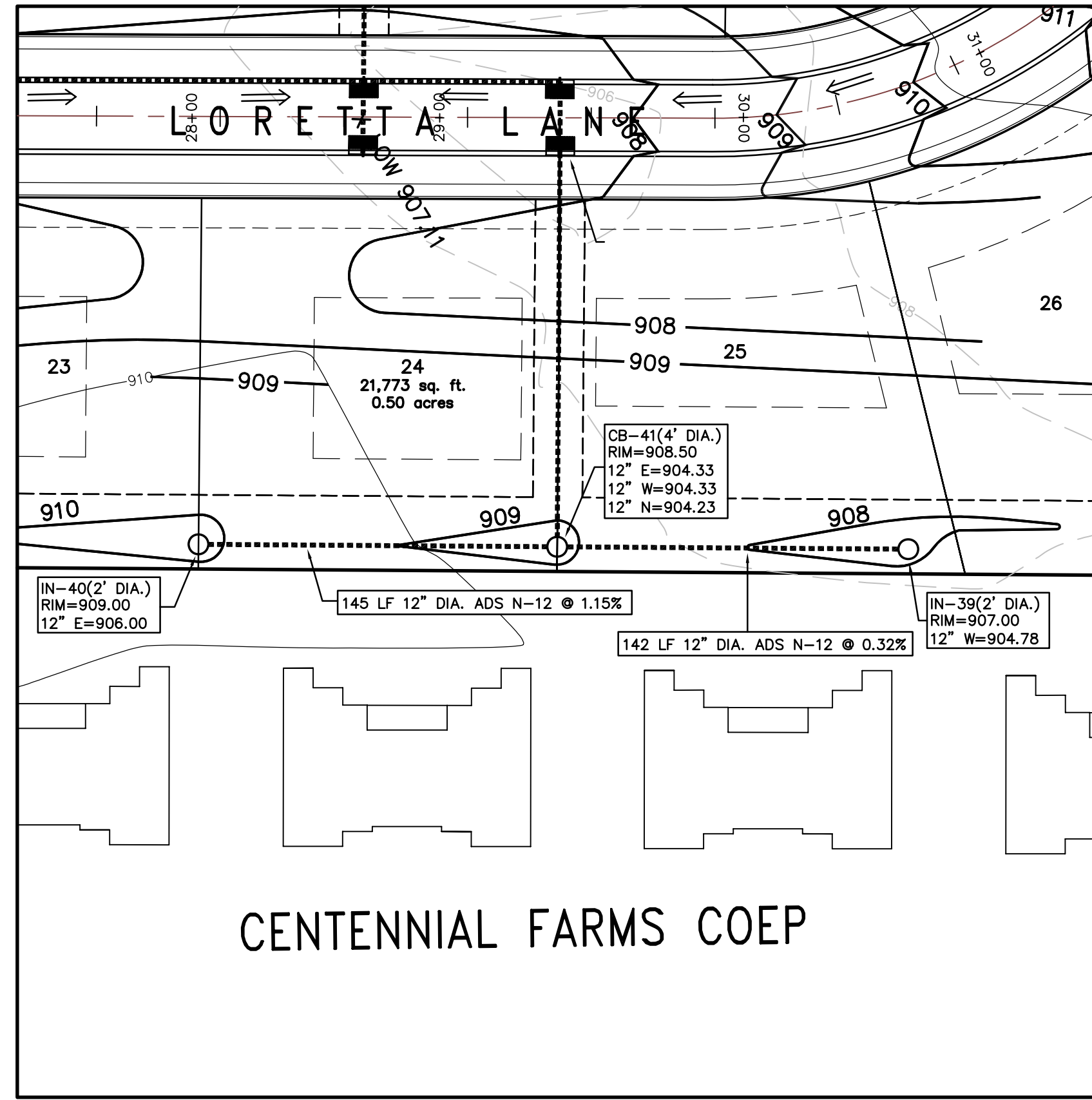
DATE: 07-15-18
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CHECKED BY: PCK
JOB No. 17024

DRAWING No.

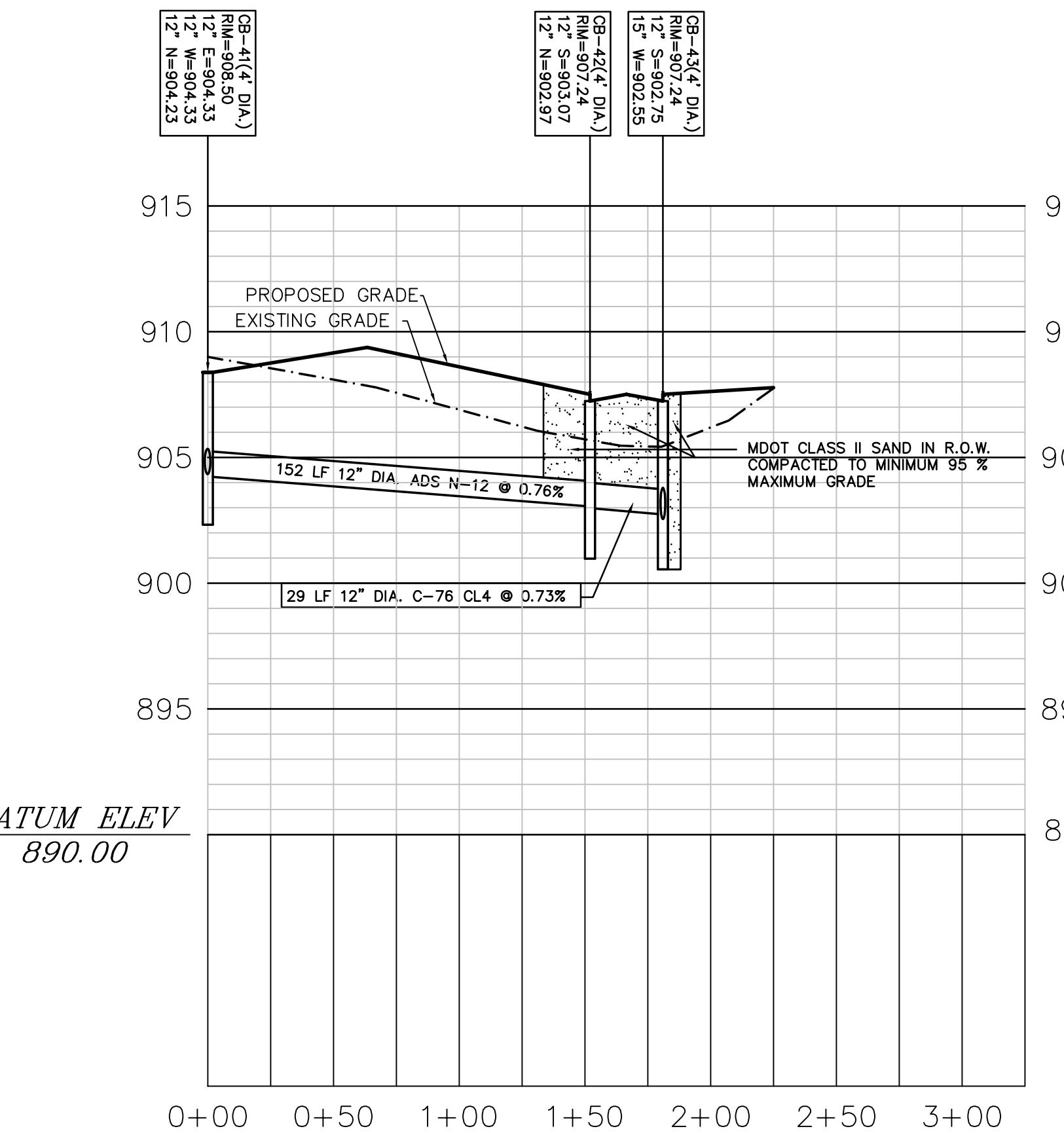
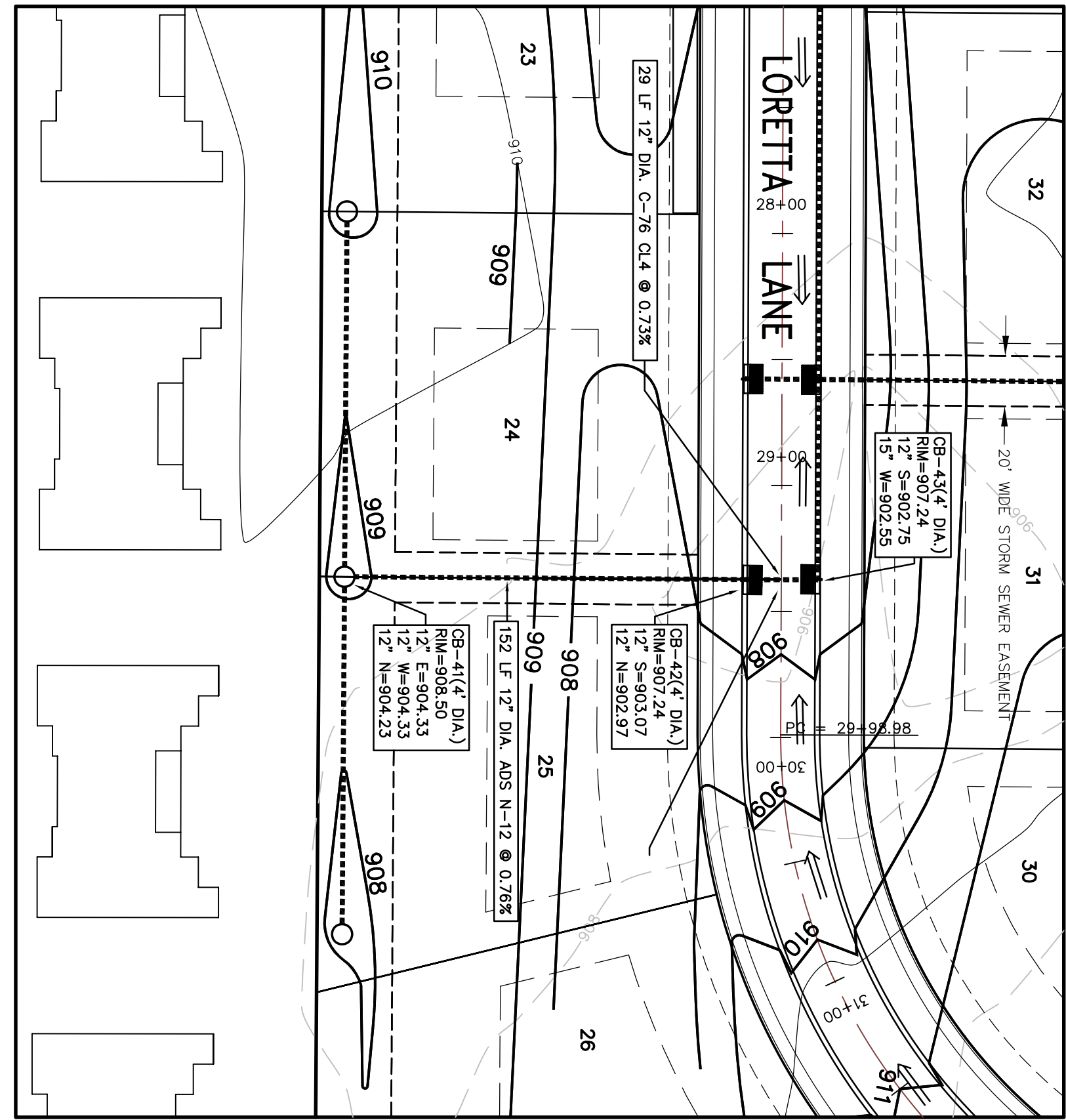




PROFILE CB-15 TO FE-38

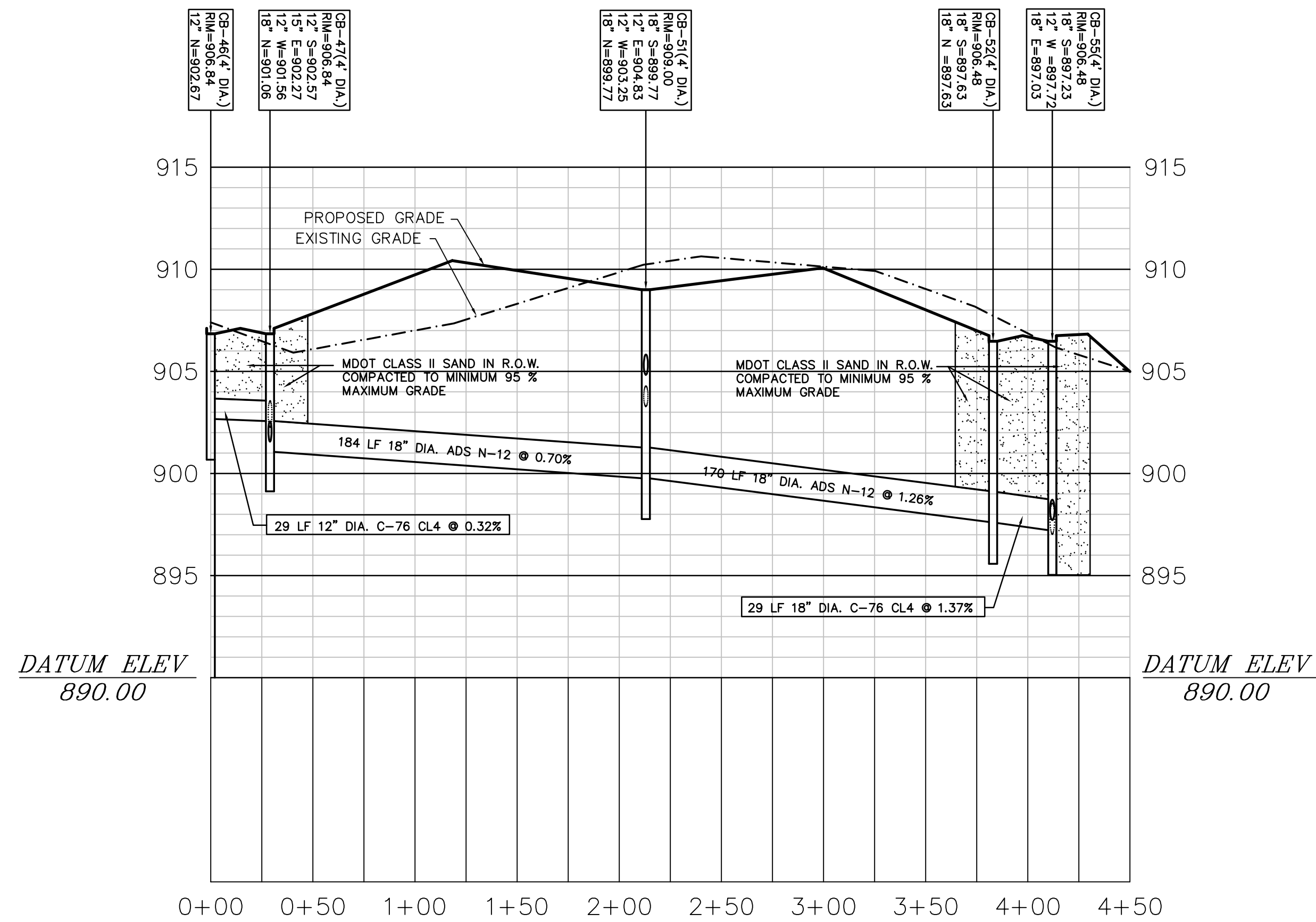
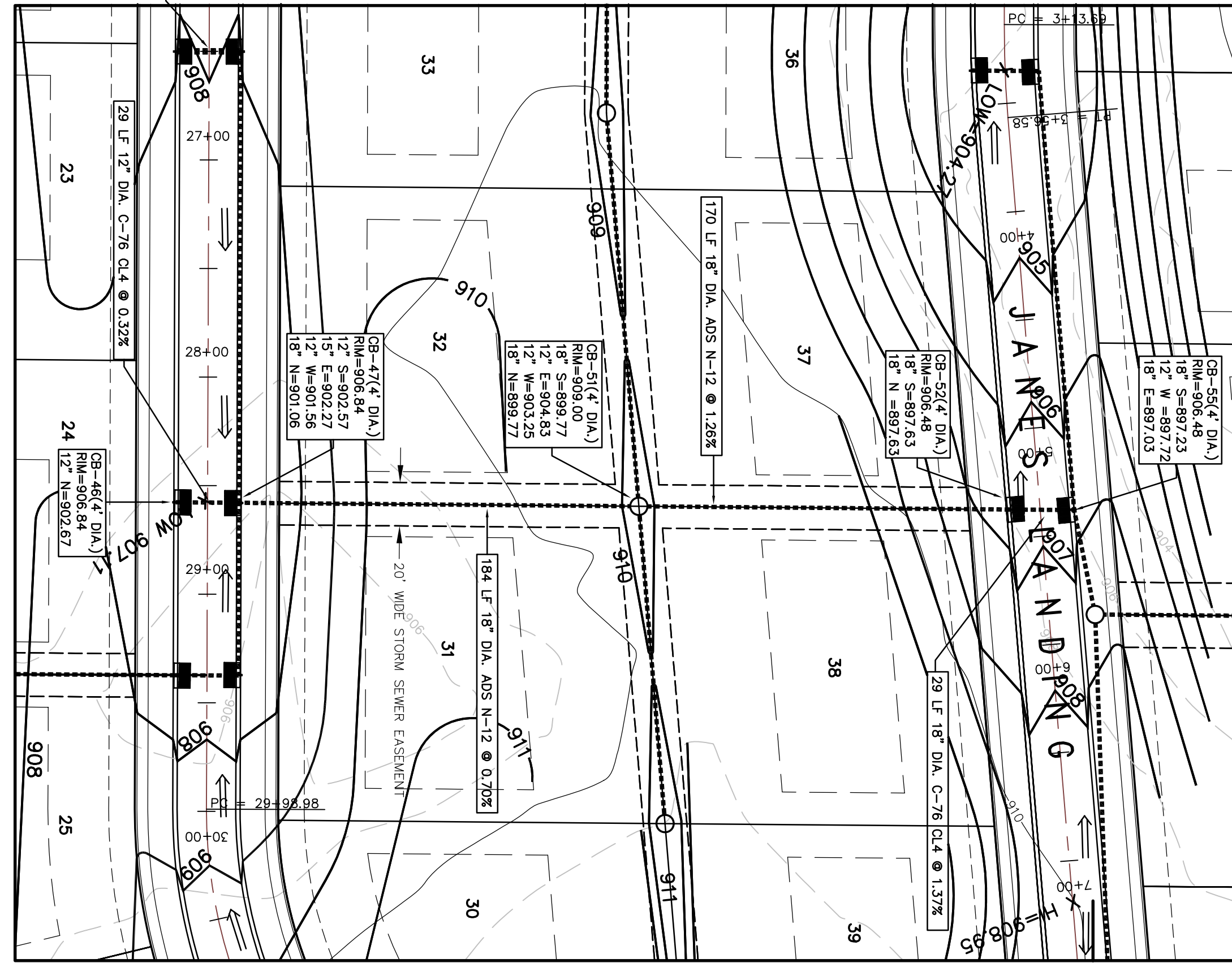


PROFILE IN-40 TO IN-39

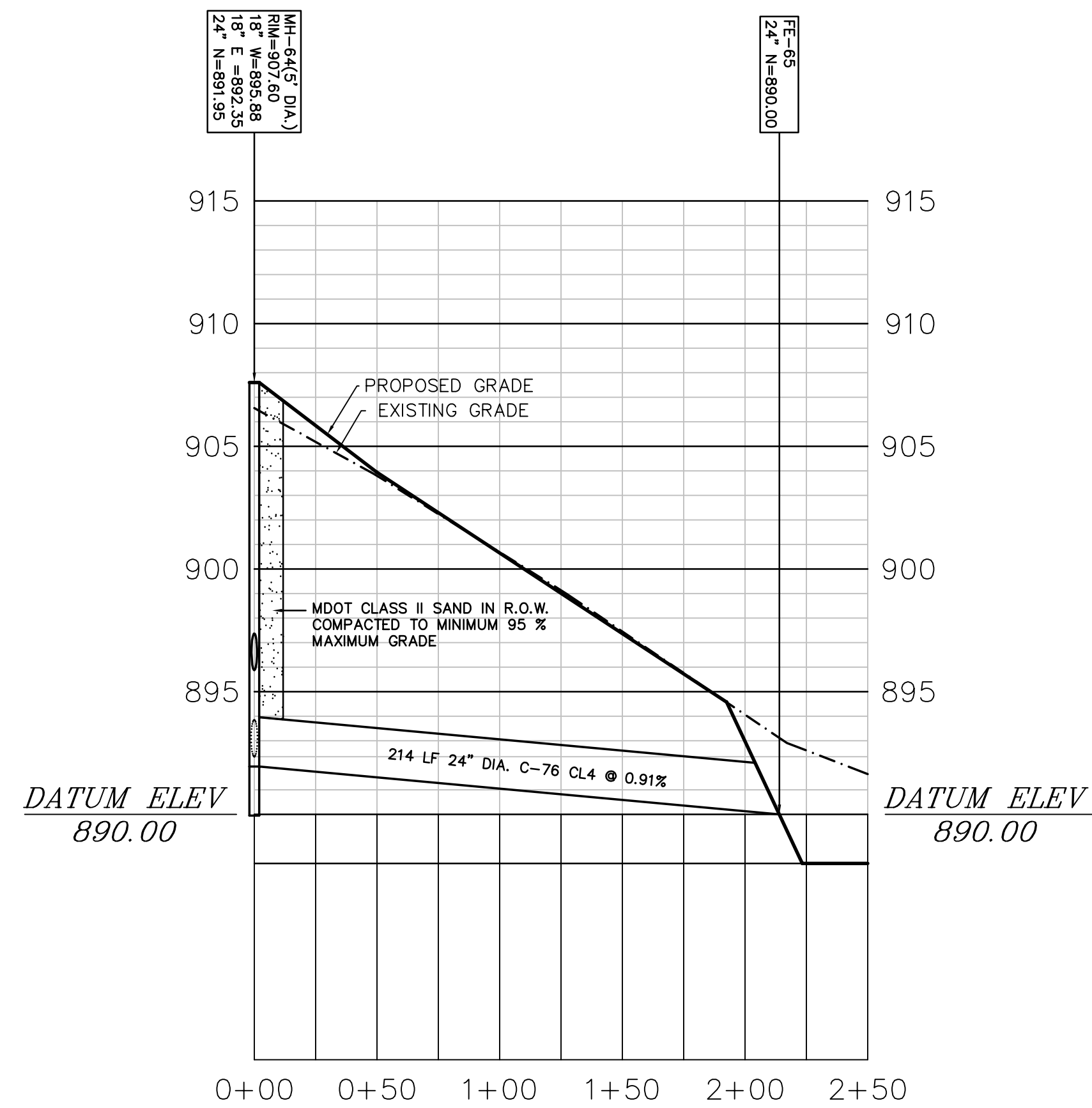
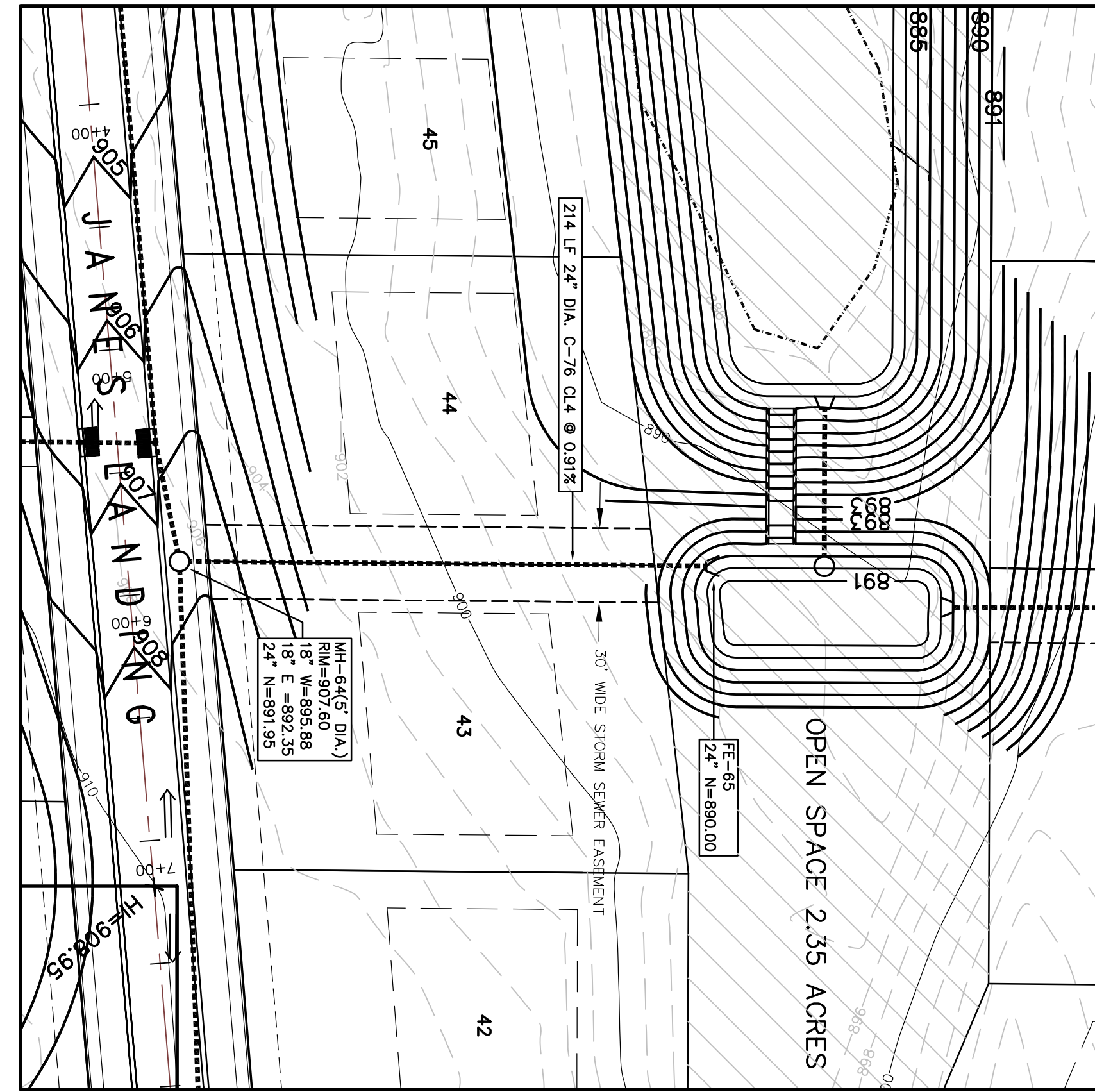


PROFILE CB-41 TO CB-43

OWNER/DEVELOPER: M&N DEVELOPMENT 26050 ORCHARD LAKE RD SUITE 300 FARMINGTON HILLS, MI. 48334	
ASHER FARMS RESIDENTIAL SITE CONDOMINIUM	
STORM SEWER PROFILE	
DATE: 07-15-18 DRAWN BY: PCK CHECKED BY: PCK JOB No. 17024	
DRAWING No.	
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PROFILE CB-46 TO CB-55



PROFILE MH-64 TO FE-65

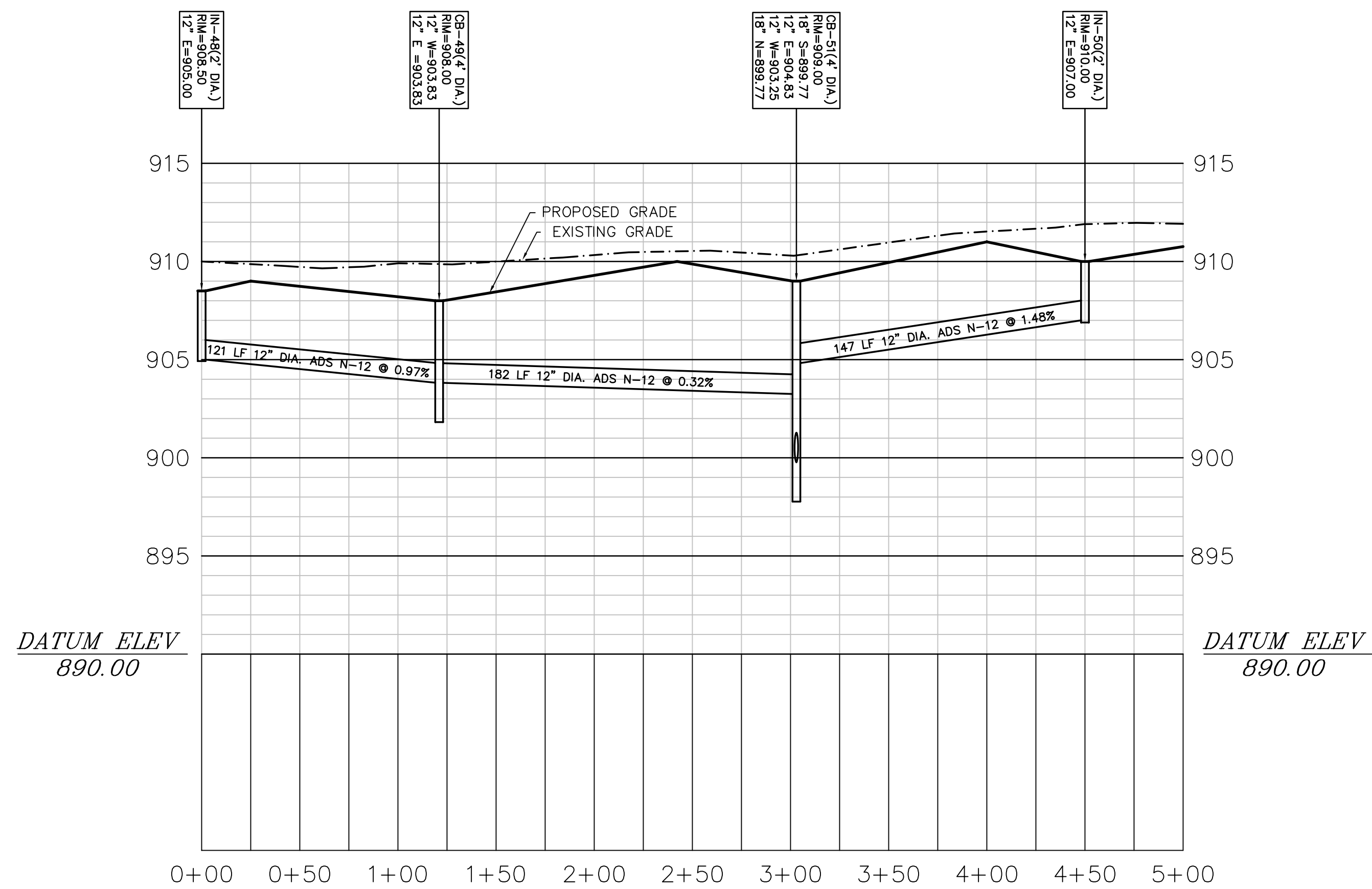
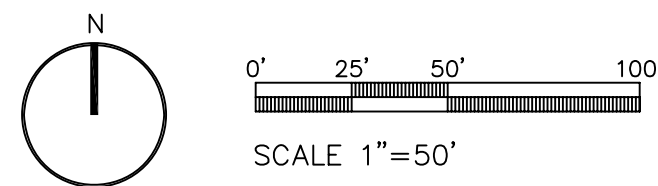
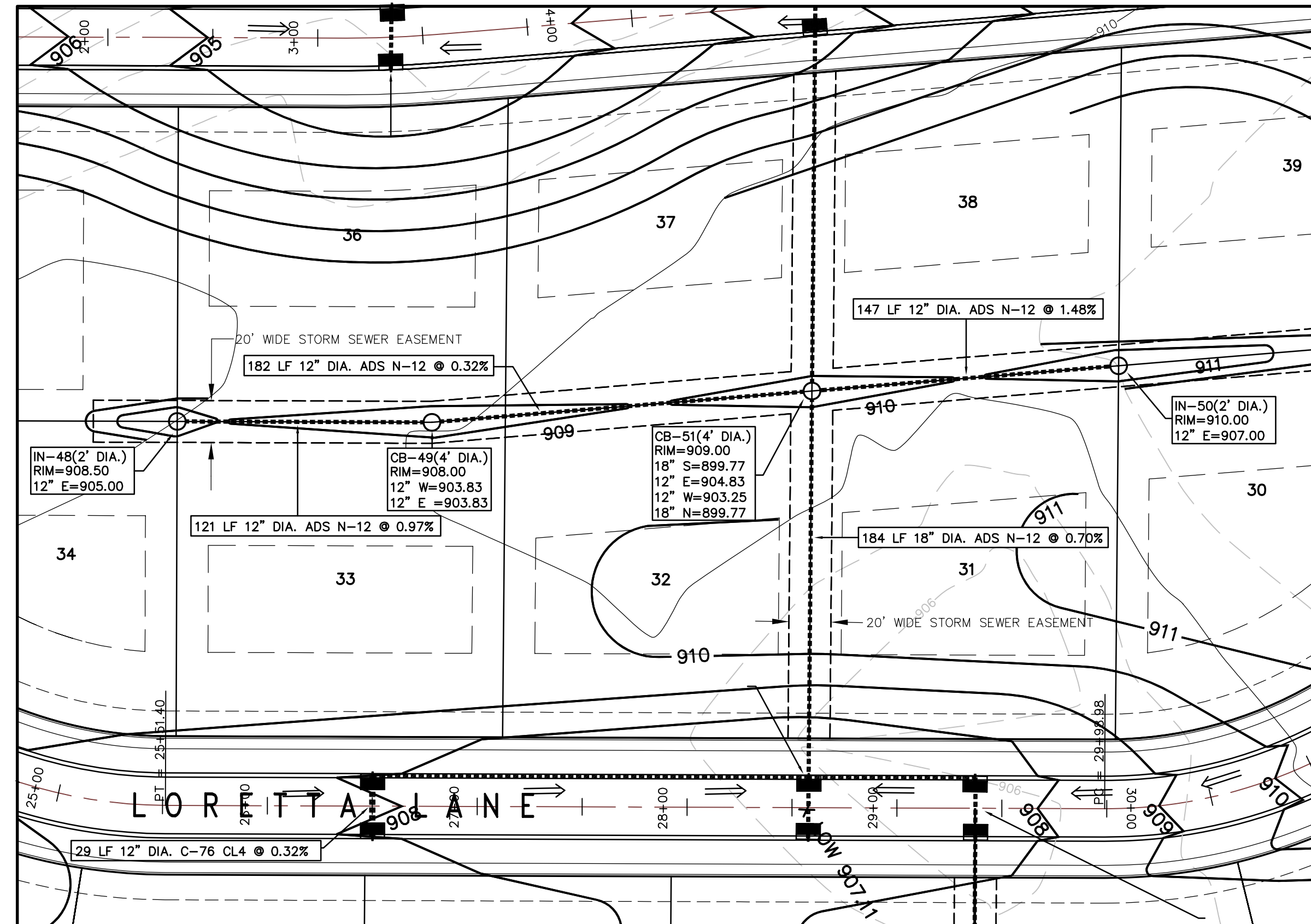
REVISIONS:	

OWNER/DEVELOPER:
M&N DEVELOPMENT
26050 ORCHARD LAKE RD
SUITE 300
FARMINGTON HILLS, MI. 48334

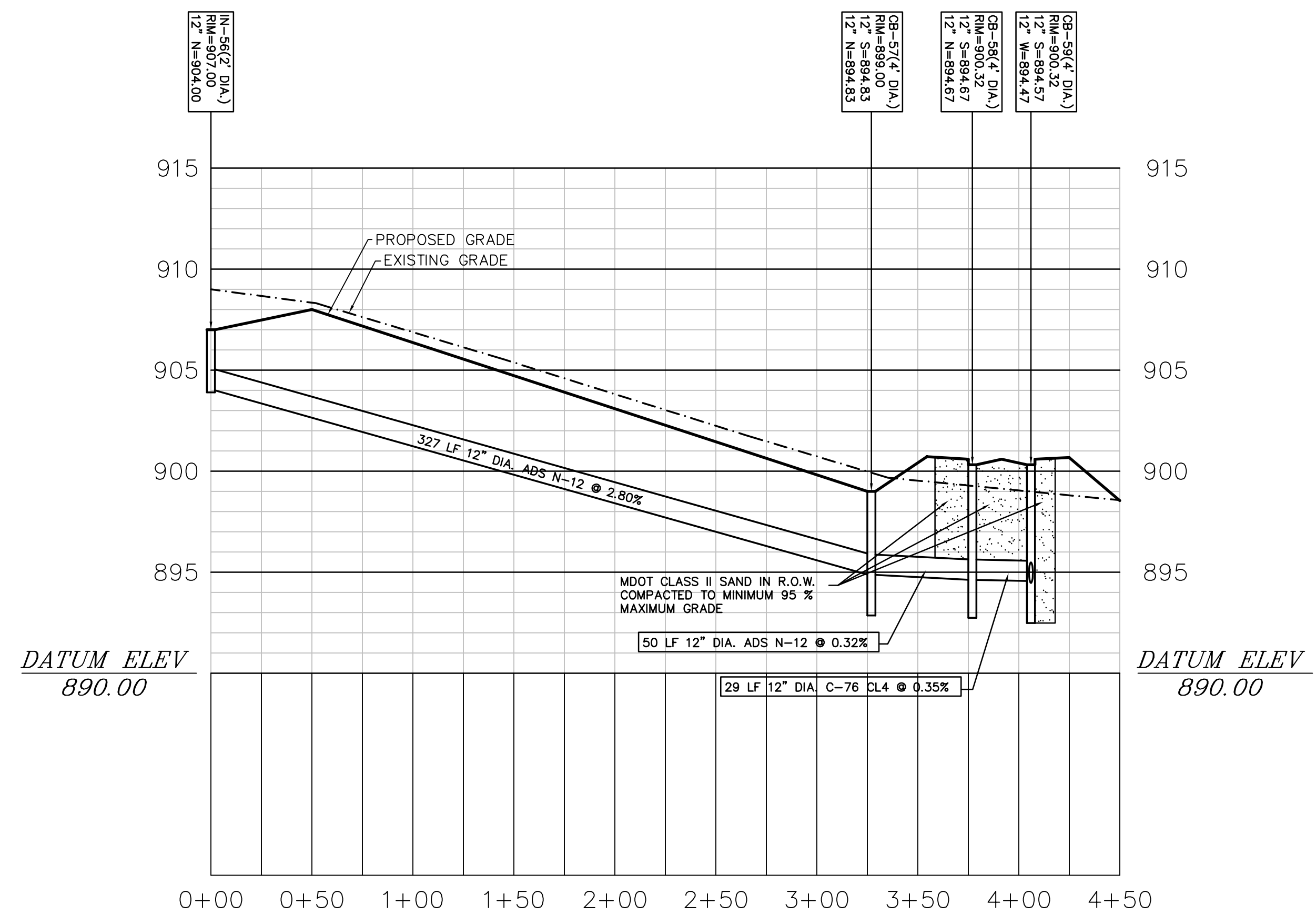
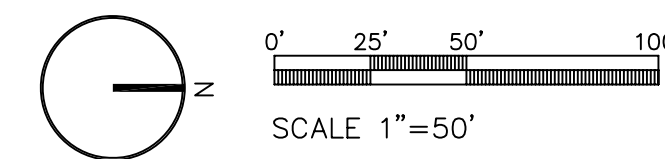
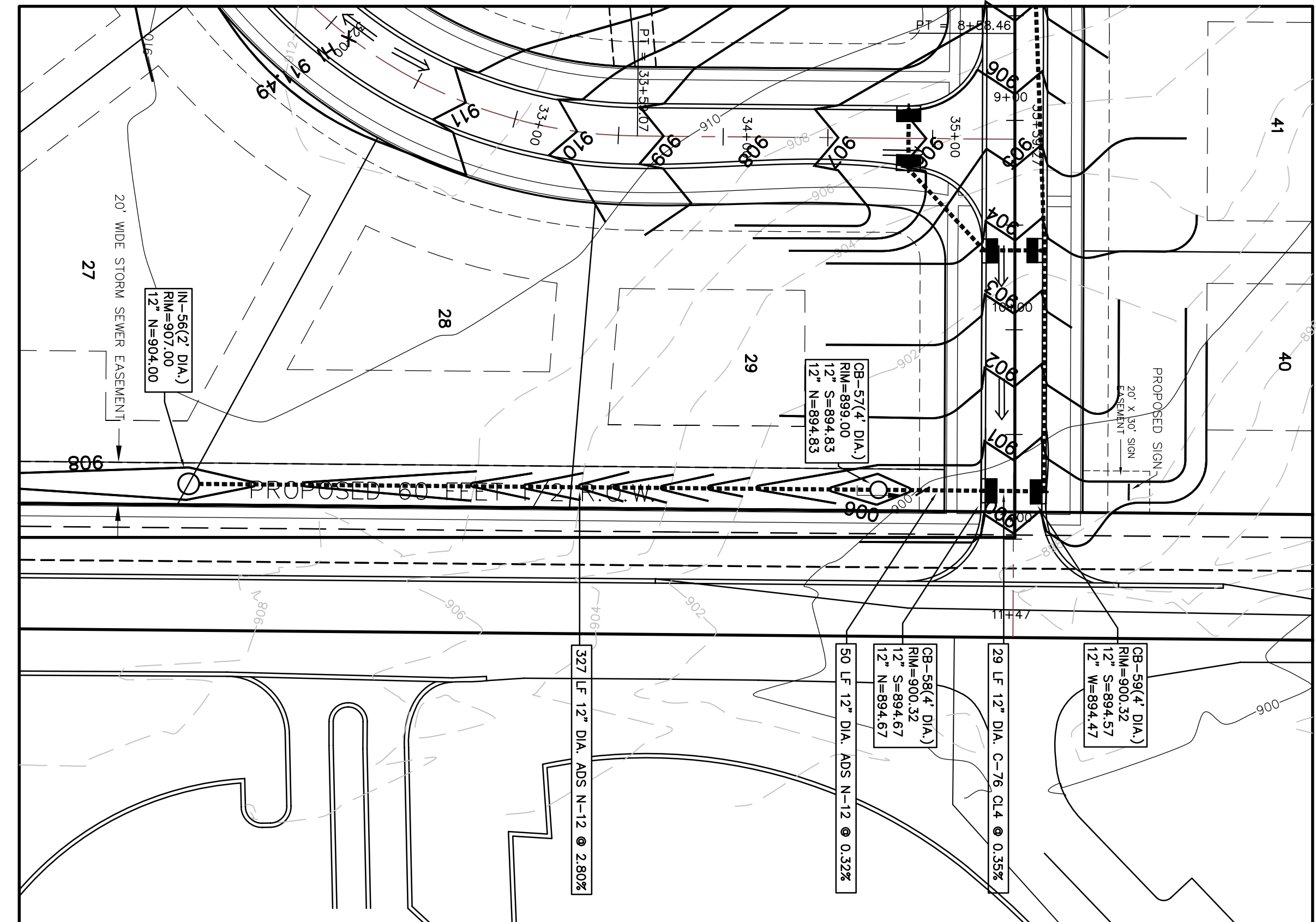
ASHER FARMS
RESIDENTIAL SITE CONDOMINIUM
STORM SEWER PROFILE

ACE CIVIL ENGINEERING, LLC
5040 Greenway, Royal, MI. 48065 517 545-4141 info@acecivil.com

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PROFILE IN-48 TO IN-50



PROFILE IN-56 TO CB-59

REVISIONS:

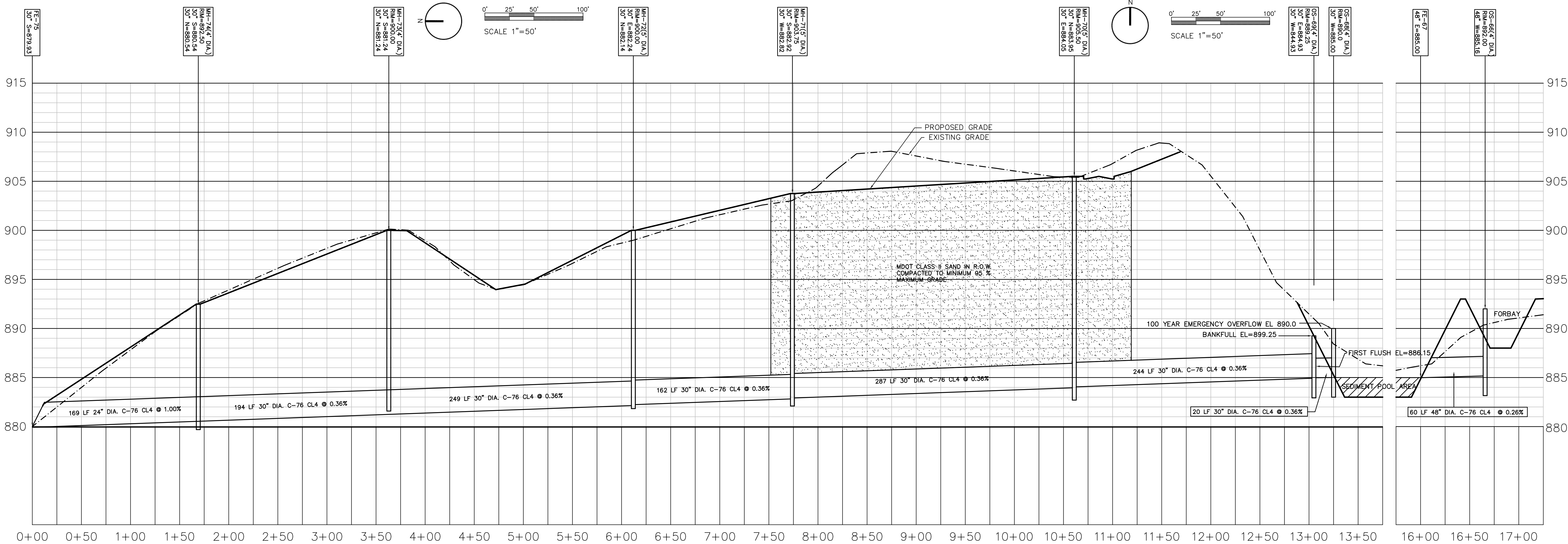
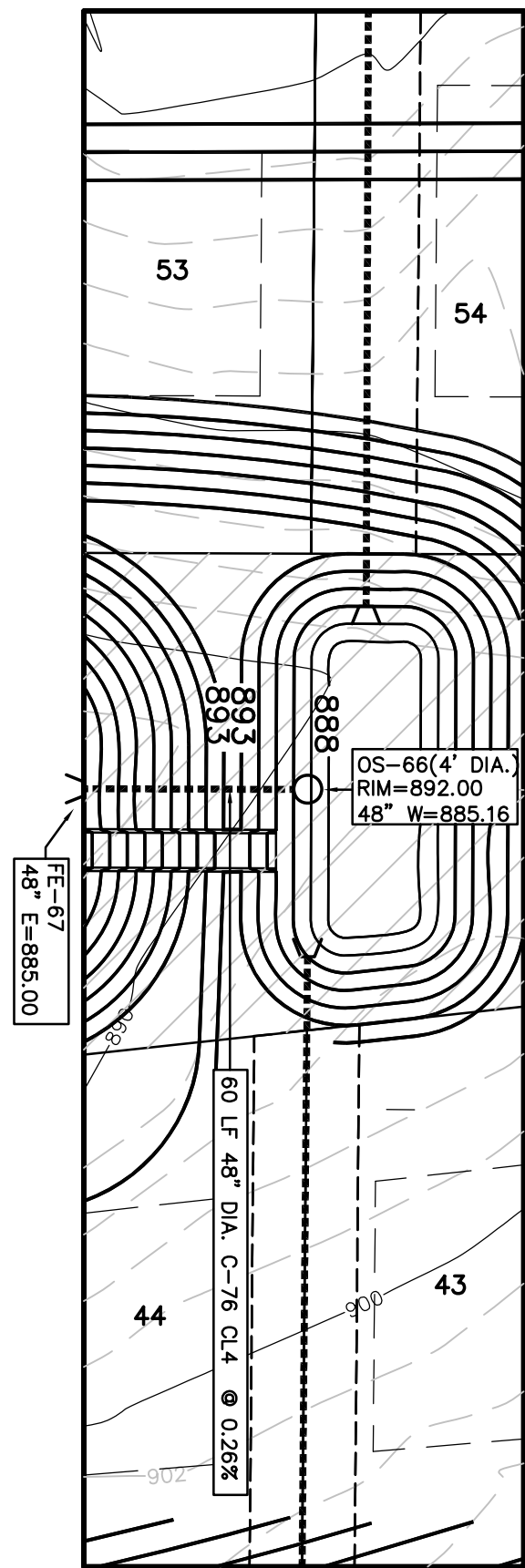
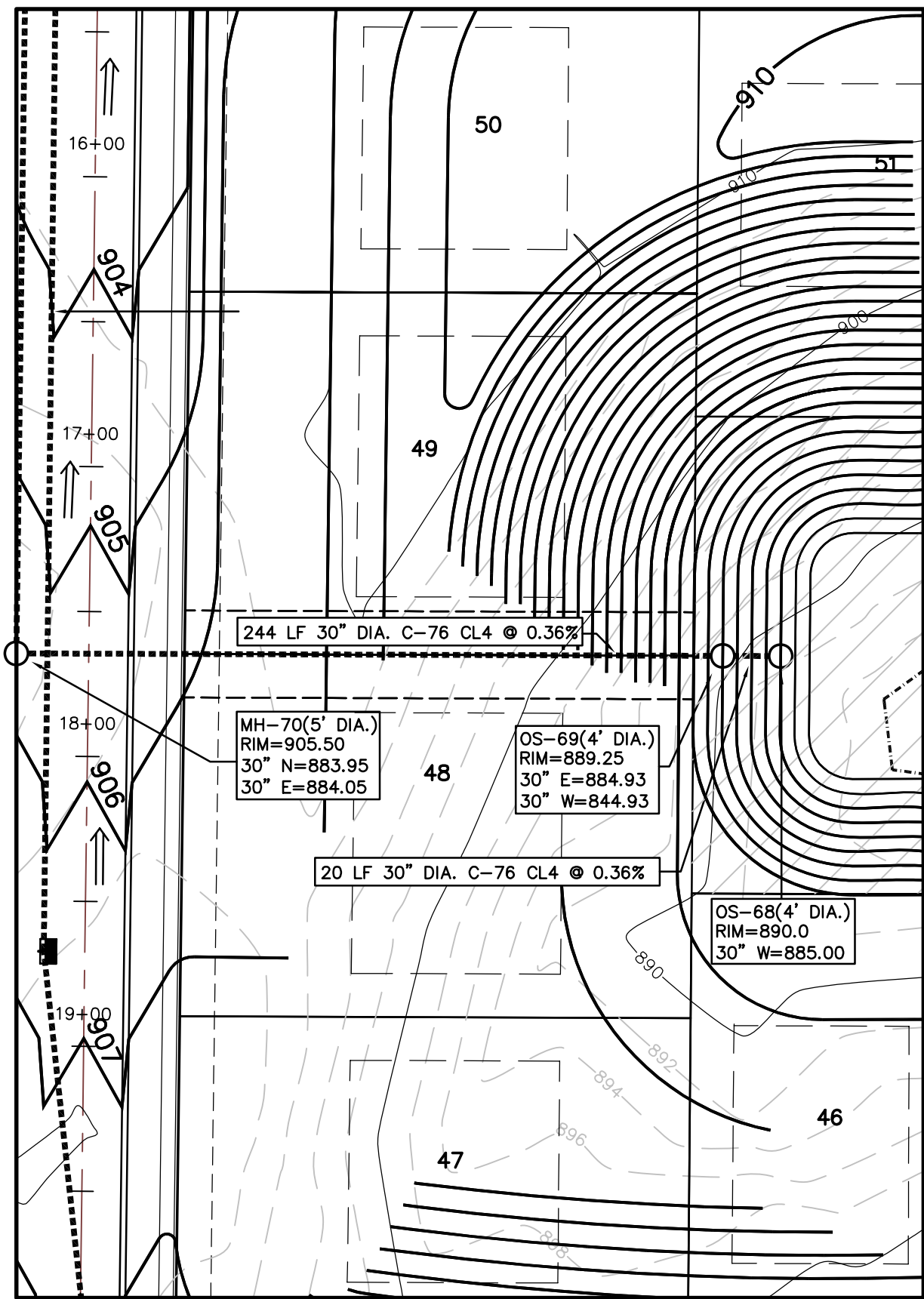
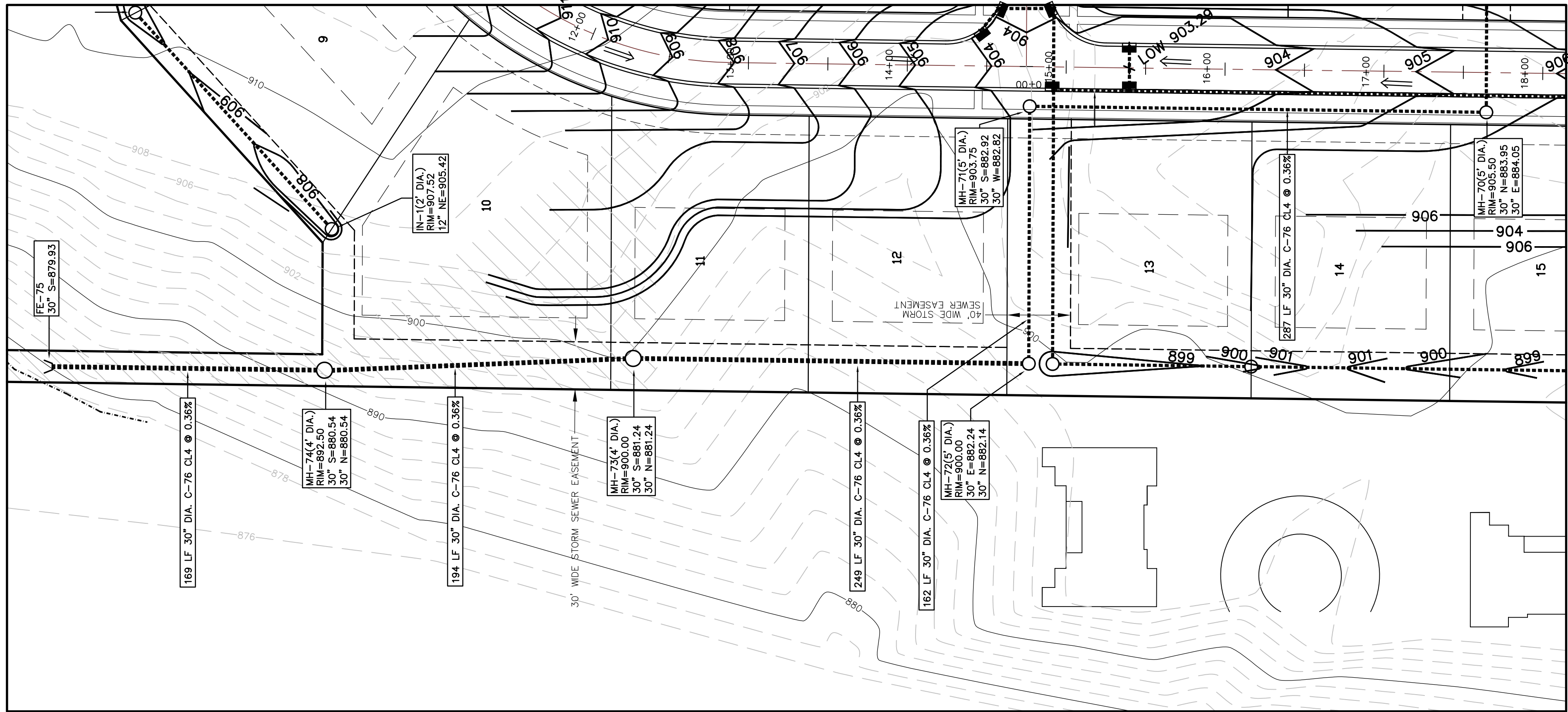
OWNER/DEVELOPER:
M&N DEVELOPMENT
26050 ORCHARD LAKE RD
SUITE 300
FARMINGTON HILLS, MI. 48334

ASHER FARMS
RESIDENTIAL SITE CONDOMINIUM
STORM SEWER PROFILE

ACE CIVIL ENGINEERING, LLC
5400 Greenway, Royal, MI. 48065 517 545-4141 ashermgce@att.net

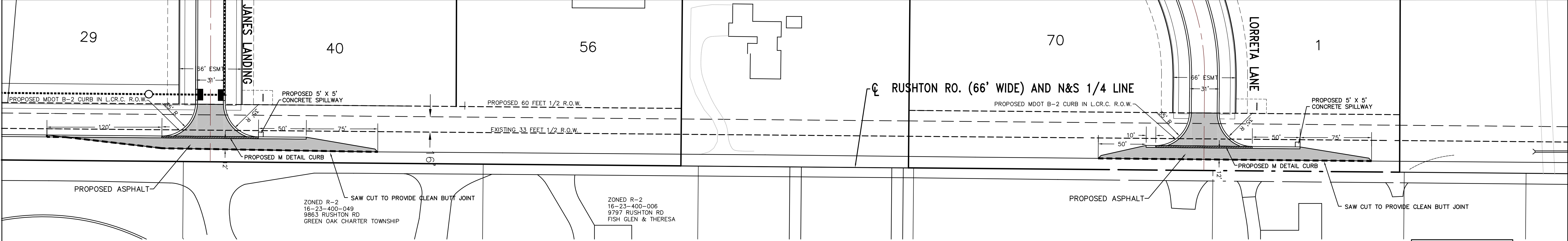
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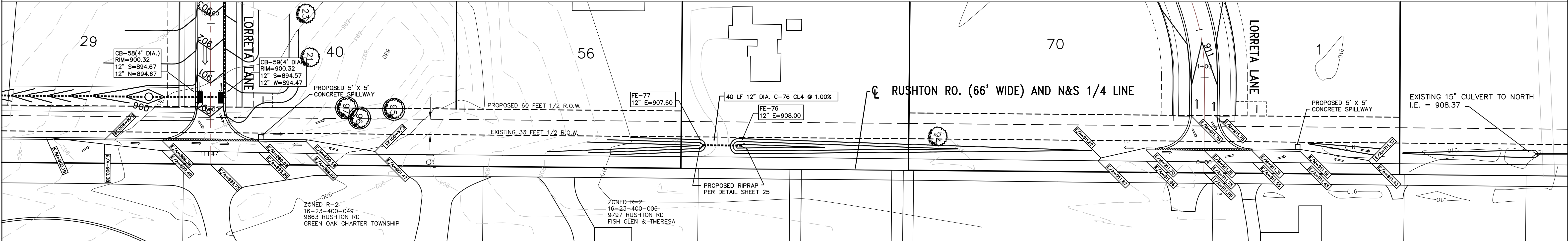


ACE CIVIL ENGINEERING, LLC 5042 Greenway, Norwalk, MI 48645 517 445-4141 info@acecivil.net	OWNER/DEVELOPER: M&N DEVELOPMENT 26050 ORCHARD LAKE RD SUITE 300 FARMINGTON HILLS, MI. 48334		REVISIONS:
	DATE: 07-15-18 DRAWN BY: PCK CHECKED BY: PCK JOB No.: 17024 DRAWING No.:		
ASHER FARMS RESIDENTIAL SITE CONDOMINIUM		STORM SEWER PROFILE	

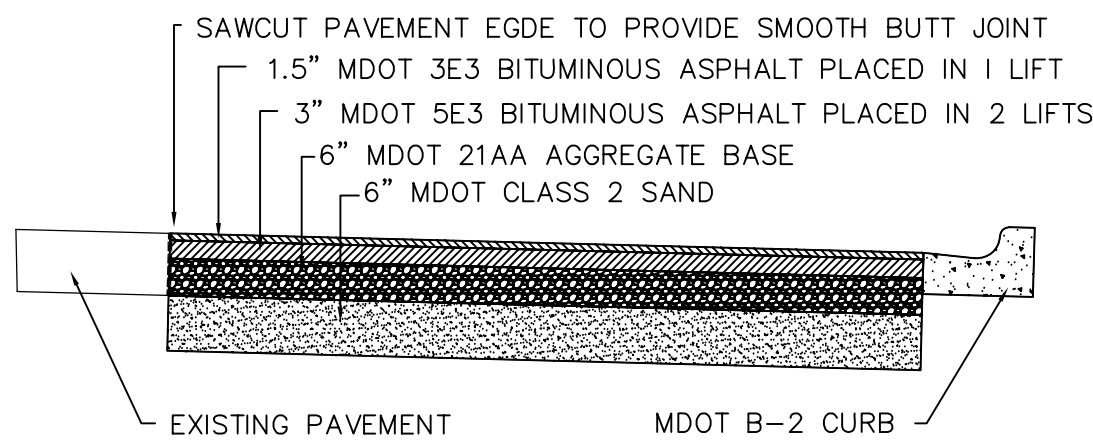
20



RUSHTON ROAD IMPROVEMENTS SITE PLAN



RUSHTON ROAD IMPROVEMENTS GRADING PLAN



TYPICAL RUSHTON ROAD PAVEMENT SECTION
NO SCALE

LEGEND	
	DRAINAGE FLOW
	PROPOSED WELL
	LIGHT POLE
	SIGN
	UTILITY POLE
	TELEPHONE BOX
	TELEPHONE MARKER
	GAS MARKER
	CATCH BASIN
	MANHOLE
	VALVE & BOX
	MAJOR CONTOUR - 10 FT. INTERVAL
	MINOR CONTOUR - 2 FT. INTERVAL
	FENCE LINE
	STORM SEWER
	GAS MAIN
	TELEPHONE LINE
	UNDERGROUND TELEPHONE LINE
	ELECTRIC LINE
	UNDERGROUND ELECTRIC LINE
	DITCH CENTERLINE, TOE OF SLOPE
	EXISTING TREE AND TAG NUMBER
	LANDMARK TREE AND TAG NUMBER
	TREE & BRUSH LINE

TRAFFIC CONTROL PLAN:

#1 ALL WORK WITHIN THE LIVINGSTON COUNTY RIGHT-OF-WAY SHALL BE COORDINATED WITH THE LIVINGSTON COUNTY ROAD COMMISSION.

#2 LANE CLOSURES SHALL BE PERFORMED IN ACCORDANCE WITH THE "MICHIGAN UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)" DETAIL MD-21a (SEE SHEET 22 FOR DETAIL).

#3 VALUES FOR D IN SIGN SPACING SHALL BE 45 MPH.

OWNER/DEVELOPER:
M&N DEVELOPMENT
26050 ORCHARD LAKE RD
SUITE 300
FARMINGTON HILLS, MI. 48334

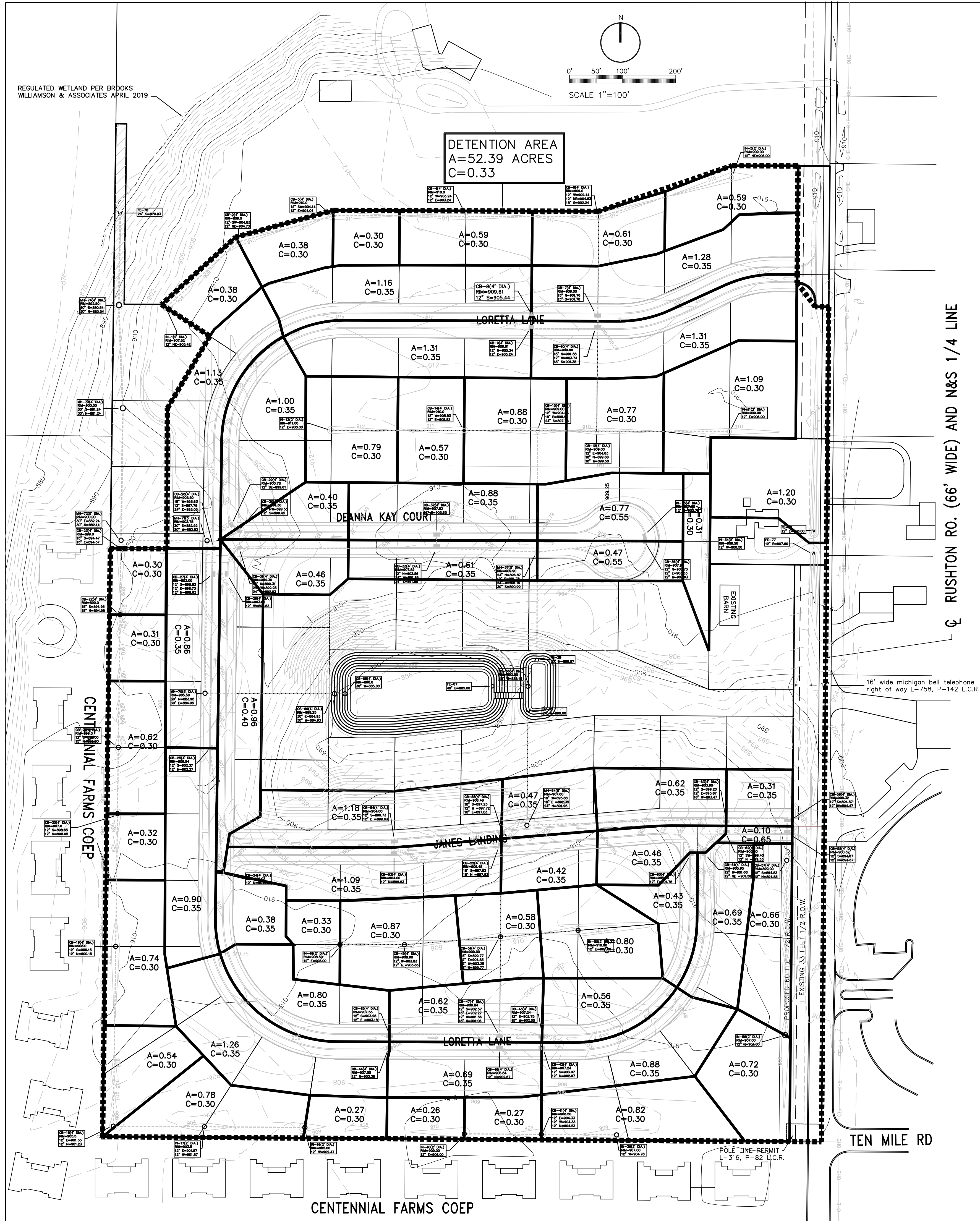
ASHER FARMS
RESIDENTIAL SITE CONDOMINIUM
L.C.R.C ROAD APPROACH PLAN

ACE CIVIL ENGINEERING, LLC
5400 Quakerway, Farmington, MI. 48334 517 245-4141 adam@acecivil.net

DATE: 07-15-18
DRAWN BY: PCK
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JOB No. 17024
DRAWING No. 21

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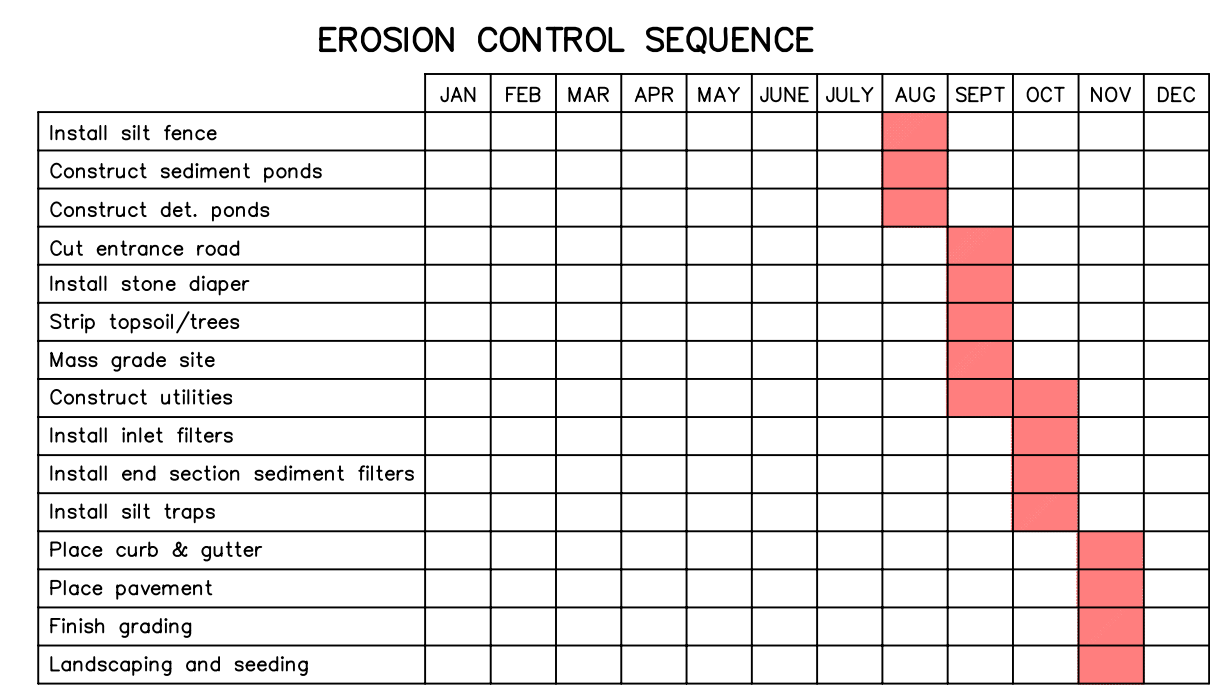
22



☪ RUSHTON RO. (66' WIDE) AND N&S 1/4 LINE

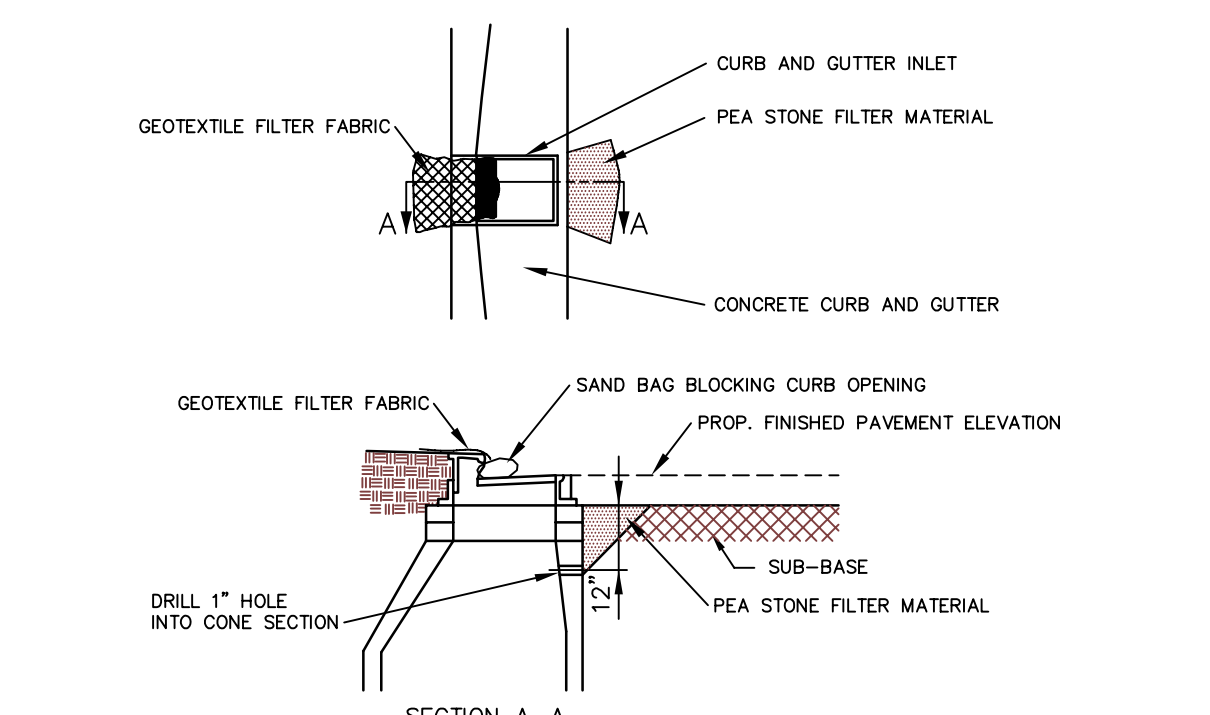
STORM SEWER TABLE

FROM MH OR INLET	TO MH OR INLET	INCREMENT	"C"	EQUIVALENT AREA	TOTAL AREA	T TIME	I INCHES	Q C.F.S.	DIAMETER	SLOPE	SLOPE	LENGTH	VELOCITY	TIME	PIPE	H.G. ELEV	UPPER	LOWER	UPPER	
CB OR INLET	CB OR INLET	ACRES		ACRES	ACRES	MIN.	PER HOUR	C.F.A.	IN.	PIPE	HYDRAULIC	OF LINE	FT/SEC	OF MIN.	C.F.S.	UPPER	INVERT	INVERT	RM ELEVATION	
IN-1	CB-2	0.38	0.30	0.11	0.11	15	4.38	0.48	12	0.32	x	184	2.6	1.17	2.01	x	905.42	904.83	907.52	
CB-2	CB-3	0.38	0.30	0.11	0.22	16.17	4.25	0.94	12	0.32	x	185	2.6	1.19	2.01	x	904.73	904.14	909.00	
CB-3	CB-4	0.30	0.30	0.09	0.31	17.36	4.13	1.28	12	0.32	x	250	2.6	1.60	2.01	x	904.04	903.24	910.00	
CB-4	CB-6	0.59	0.30	0.18	0.49	18.96	3.98	1.95	12	0.32	x	250	2.6	1.60	2.01	x	903.24	902.44	910.00	
IN-5	CB-6	0.59	0.30	0.18	0.18	15	4.38	0.79	12	0.45	x	261	3.0	1.45	2.38	x	906.00	904.83	909.00	
CB-6	CB-7	0.61	0.30	0.18	0.85	20.56	3.84	3.26	15	0.26	x	183	2.7	1.13	3.28	x	902.24	901.76	909.00	
CB-7	CB-10	1.28	0.35	0.45	1.30	21.79	3.74	4.86	15	0.60	x	29	4.1	0.12	5.00	x	901.76	901.58	909.00	
CB-8	CB-9	1.16	0.35	0.41	0.41	15	4.38	1.80	12	0.32	x	29	2.6	0.19	2.01	x	905.44	905.34	909.61	
CB-9	CB-10	1.31	0.35	0.46	0.87	15.19	4.35	3.78	12	1.20	x	125	5.0	0.42	3.90	x	905.24	903.74	909.61	
CB-10	CB-12	1.31	0.35	0.46	2.63	21.91	3.73	9.81	18	0.88	x	193	5.6	0.57	9.85	x	901.38	899.68	909.00	
IN-11	CB-12	1.09	0.30	0.33	0.33	15	4.38	1.45	12	0.47	x	250	3.1	1.34	2.44	x	906.00	904.83	909.00	
CB-12	CB-15	0.77	0.30	0.23	3.19	22.48	3.69	11.77	18	1.26	x	111	6.7	0.28	11.79	x	899.58	898.18	909.00	
IN-13	CB-14	0.79	0.30	0.24	0.24	15	4.38	1.05	12	0.87	x	250	4.2	0.99	3.32	x	908.00	905.83	911.00	
CB-14	CB-15	0.57	0.30	0.17	0.41	15.99	4.27	1.75	12	0.72	x	139	3.8	0.60	3.02	x	905.83	904.83	910.00	
CB-15	MH-37	0.88	0.30	0.26	3.86	22.76	3.69	14.24	24	0.40	x	228	4.6	0.83	14.30	x	897.78	896.87	909.00	
IN-16	IN-17	0.27	0.30	0.08	0.08	15	4.38	0.35	12	0.32	x	189	2.6	1.21	2.01	x	902.47	901.87	905.00	
IN-17	CB-18	0.78	0.30	0.23	0.31	16.21	4.25	1.32	12	0.32	x	170	2.6	1.09	2.01	x	901.87	901.33	903.50	
CB-18	CB-19	0.54	0.30	0.16	0.47	17.30	4.14	1.95	12	0.32	x	337	2.6	2.16	2.01	x	901.23	900.15	905.50	
CB-19	CB-20	0.74	0.30	0.22	0.69	19.46	3.94	2.72	12	0.60	x	250	3.5	1.19	2.76	x	900.15	898.65	908.00	
CB-20	CB-21	0.32	0.30	0.10	0.79	20.65	3.83	3.03	12	2.12	x	125	6.6	0.32	5.18	x	898.65	896.00	907.00	
CB-21	CB-22	0.62	0.30	0.19	0.98	20.97	3.60	3.72	15	0.34	x	250	3.1	1.34	3.78	x	895.80	894.95	899.00	
CB-22	CB-23	0.31	0.30	0.09	1.07	22.31	3.70	3.96	15	0.38	x	125	3.2	0.65	3.98	x	894.95	894.47	899.00	
CB-23	CB-28	0.30	0.30	0.09	1.16	22.96	3.65	4.23	15	0.43	x	171	3.4	0.84	4.23	x	894.37	893.63	899.00	
CB-24	CB-25	0.38	0.35	0.13	0.13	15	4.38	0.57	12	1.04	x	239	4.6	0.87	3.63	x	904.86	902.37	909.03	
CB-25	CB-27	0.90	0.35	0.32	0.45	15.87	4.28	1.93	12	1.05	x	327	4.6	1.18	3.65	x	902.27	898.83	906.54	
CB-26	CB-27	0.96	0.40	0.38	0.38	15	4.38	1.66	12	0.32	x	29	2.6	0.19	2.01	x	898.83	898.73	903.00	
CB-27	CB-28	0.86	0.35	0.30	1.13	17.05	4.16	4.70	12	1.75	x	48	6.0	0.13	4.71	x	898.63	897.79	903.00	
CB-28	CB-31	1.13	0.35	0.40	2.69	23.53	3.61	9.71	24	0.19	x	51	3.1	0.27	9.86	x	893.03	892.93	903.24	
CB-29	CB-30	1.00	0.35	0.35	0.35	15	4.38	1.53	12	0.32	x	18	2.6	0.12	2.01	x	899.61	899.55	903.78	
CB-30	CB-31	0.40	0.35	0.14	0.49	15.12	4.36	2.13	12	0.40	x	35	2.9	0.20	2.25	x	899.45	899.31	904.30	
CB-31	CB-33	0.46	0.35	0.16	3.34	23.80	3.59	11.99	24	0.29	x	371	3.9	1.59	12.18	x	892.93	891.85	904.30	
CB-32	CB-33	0.88	0.35	0.31	0.31	15	4.38	1.36	12	0.32	x	29	2.6	0.19	2.01	x	903.65	903.56	907.82	
CB-33	MH-37	0.61	0.35	0.21	3.86	25.39	3.47	13.39	24	0.35	x	190	4.3	0.74	13.39	x	891.85	891.19	907.82	
CB-34	CB-36	0.31	0.30	0.09	0.09	15	4.38	0.39	12	2.61	x	110	7.3	0.25	5.75	x	906.50	903.63	909.50	
CB-35	CB-36	0.77	0.55	0.42	0.42	15	4.38	1.84	12	0.50	x	10	3.2	0.05	2.51	x	903.78	903.73	907.95	
CB-36	MH-37	0.47	0.55	0.26	0.77	15.25	4.35	3.34	12	0.90	x	206	4.3	0.80	3.38	x	903.63	901.78	907.95	
MH-37	FE-38				NA	8.49	26.13	3.42	29.03	30	0.51	x	220	6.0	0.52	29.29	x	890.99	889.97	909.00
IN-39	CB-41	0.82	0.30	0.25	0.25	15	4.38	1.10	12	0.32	x	142	2.6	0.91	2.01	x	904.78	904.33	907.00	
IN-40	CB-41	0.26	0.30	0.08	0.08	15	4.38	0.35	12	1.15	x	145	4.9	0.49	3.82	x	906.00	904.33	909.00	
CB-41	CB-42	0.27	0.30	0.08	0.41	15.91	4.28	1.75	12	0.76	x	152	4.0	0.63	3.10	x	904.23	903.07	908.50	
CB-42	CB-43	0.88	0.35	0.31	0.72	16.54	4.21	3.03	12	0.73	x	29	3.9	0.12	3.04	x	902.97	902.75	907.24	
CB-43	CB-47	0.56	0.35	0.20	0.92	16.66	4.20	3.86	15	0.36	x	80	3.1	0.43	3.87	x	902.55	902.27	907.24	
CB-44	CB-45	1.26	0.35	0.44	0.44	15	4.38	1.93	12	0.32	x	29	2.6	0.19	2.01	x	903.38	903.28	907.55	
CB-45	CB-47	0.80	0.35	0.28	0.72	15.19	4.35	3.13	12	0.78	x	208	4.0	0.87	3.14	x	903.18	901.56	907.55	
CB-46	CB-47	0.69	0.35	0.24	0.24	15	4.38	1.05	12	0.32	x	29	2.6	0.19	2.01	x	902.67	902.57	906.84	
CB-47	CB-51	0.62	0.35	0.22	2.10	17.09	4.16	8.74	18	0.70	x	184	5.0	0.61	8.78	x	901.06	899.77	906.84	
IN-48	CB-49	0.33	0.30	0.10	0.10	15	4.38	0.44	12	0.97	x	121	4.5	0.45	3.51	x	905.00	903.83	908.50	
CB-49	CB-51	0.87	0.30	0.26	0.36	15.45	4.33	1.56	12	0.32	x	182	2.6	1.17	2.01	x	903.83	903.25	908.00	
CB-50	CB-51	0.80	0.30	0.24	0.24	15	4.38	1.05	12	1.48	x	147	5.5	0.45	4.33	x	907.00	904.83	910.00	
CB-51	CB-52	0.58	0.30	0.17	2.87	17.70	4.10	11.77	18	1.26	x	170	6.7	0.42	11.79	x	899.77	897.63	906.48	
CB-52	CB-55	0.42	0.35	0.15	3.02	18.12	4.06	12.26	18	1.37	x	29	7.0	0.07	12.29	x	897.63	897.23	906.48	
CB-53	CB-54	1.09	0.35	0.38	0.38	15	4.38	1.66	12	0.32	x	29	2.6	0.19	2.01	x	899.83	899.73	904.00	
CB-54	CB-55	1.18	0.35	0.41	0.79	15.19	4.35	3.44	12	0.94	x	203	4.4	0.77	3.45	x	899.63	897.72	904.00	
CB-55	MH-64	0.47	0.35	0.16	3.97	18.19	4.05	16.08	18	2.35	x	49	9.1	0.09	16.10	x	897.03	895.88	906.48	
IN-56	CB-57	0.72	0.30	0.22	0.22	15	4.38	0.96	12	2.80	x	327	7.6	0.71	5.96	x	904.00	894.83	907.00	
CB-57	CB-58	0.66	0.30	0.20	0.42	15.71	4.30	1.81	12	0.32	x	50	2.6	0.32	2.01	x	894.83	894.67	899.00	
CB-58	CB-59	0.10	0.65	0.07	0.49	16.03	4.27	2.09	12	0.35	x	29	2.7	0.18	2.11	x	894.67	894.57	900.32	
CB-59	CB-63	0.31	0.35	0.11	0.60	16.21	4.25	2.55	12	0.52	x	115	3.3	0.58	2.57	x	894.47	893.87	900.32	
CB-60	CB-61	0.43	0.35	0.15	0.15	15	4.38	0.66	12	0.32	x	29	2.6	0.19	2.01	x	901.78	901.68	905.95	
CB-61	CB-62	0.69	0.35	0.24	0.39	15.19	4.35	1.70	12	4.06	x	53	9.1	0.10	7.17	x	901.58	899.43	905.95	
CB-62	CB-63	0.46	0.35	0.16	0.55	15.29	4.34	2.39	12	0.45	x	29	3.0	0.16	2.39	x	899.33	893.20	903.60	
CB-63	MH-64	0.62	0.35	0.22	1.37	16.79	4.19	5.74	18	0.30	x	375	3.3	1.89	5.75	x	893.47	892.35	903.60	
MH-64	FE-65				NA	5.34	18.28	4.04	21.57	24	0.91	x	214	6.9	0.57	21.58	x	891.95	890.00	907.60
OS-66	FE-67	52.39	0.35	18.33	18.33	18.85	3.99	73.14	48	0.26	x	60	5.8	0.17	73.24	x	895.99	895.16	892.0	
OS-68	OS-69	52.39	0.35	18.33	18.33	115	1.52	27.86	24	0.36	0.46	20	5.7	NA	27.86	888.53	885.00	884.93	890.0	
OS-69	MH-70	52.39	0.35	18.33	18.33	115	1.52	27.86	24	0.36	0.46	244	5.7	NA	27.86	888.44	884.93	884.93	889.25	
MH-70	MH-71	52.39	0.35	18.33	18.33	115	1.52	27.86	24	0.36	0.46	287	5.7	NA	27.86	887.32				

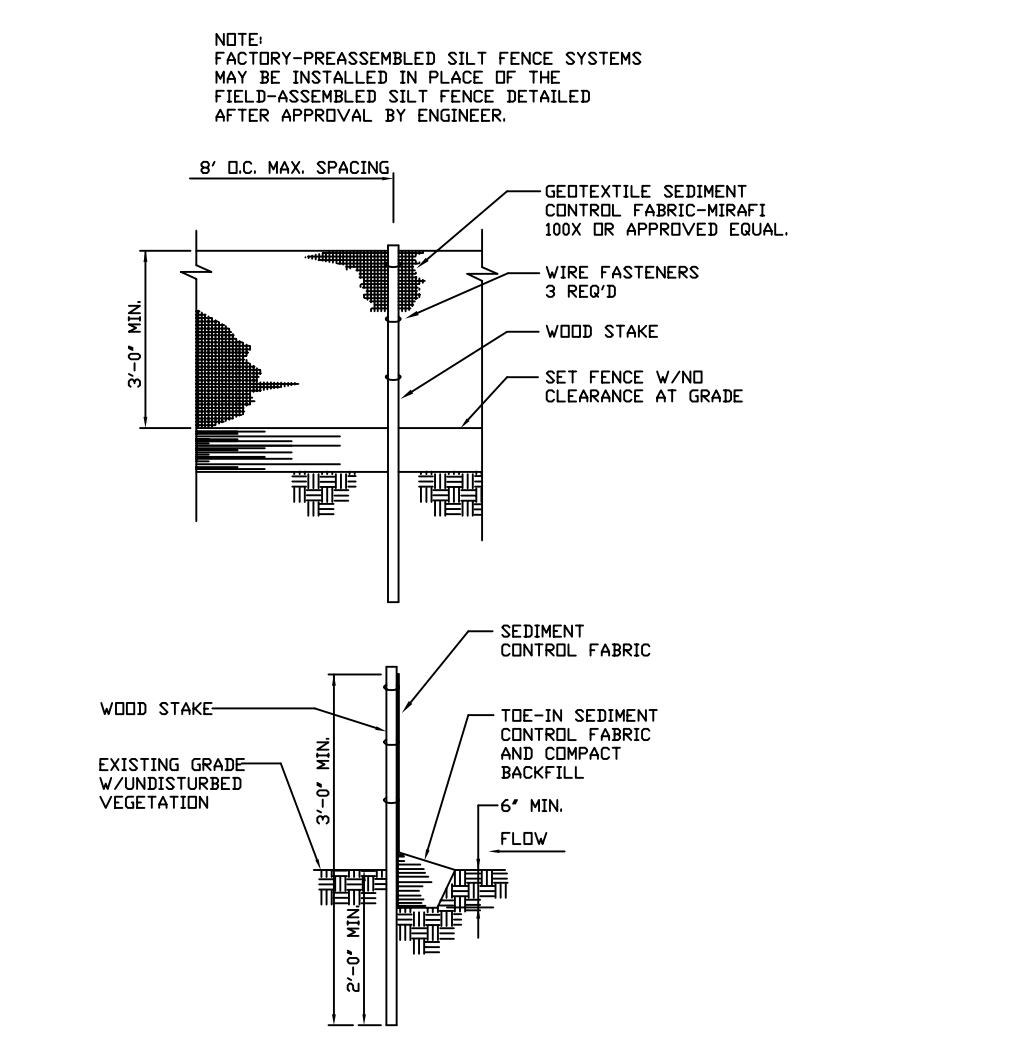


SOIL EROSION CONTROL NOTES:

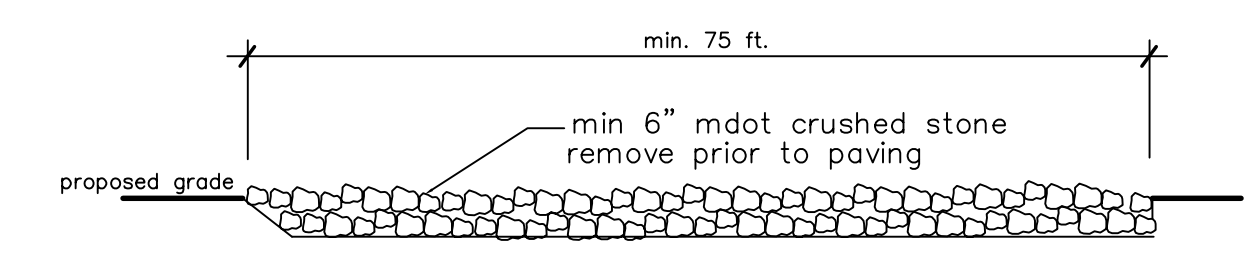
1. All erosion and sediment control work shall conform to standards and specifications of the Livingston County Drain Commissioner.
2. Daily inspections shall be made by Contractor for effectiveness of erosion and sedimentation control measures, and when necessary, repairs shall be performed without delay.
3. site and not allowed to collect on any off-site areas or in waterways. Waterways include both natural and man-made open ditches, streams, storm drains, lakes and ponds.
4. Contractor shall apply temporary erosion and sedimentation control measures as shown on these plans in the following sequence:
 - * Install silt fence —————
 - * Cut entrance road and place stone tracking mat
 - * Strip topsoil and stockpile on site
 - * Mass grade site
 - * Install inlet filters & end section filters
 - * Remove stone tracking mat and asphalt proposed roads
 - * Finish grade landscaped areas, topsoil, seed and mulch
 - * Remove silt fence and inlet filters upon establishment of vegetation
5. The Contractor shall preserve natural vegetation as much as possible.
6. All areas disturbed during construction shall be restored with a minimum 3" of topsoil, seeded and mulched.



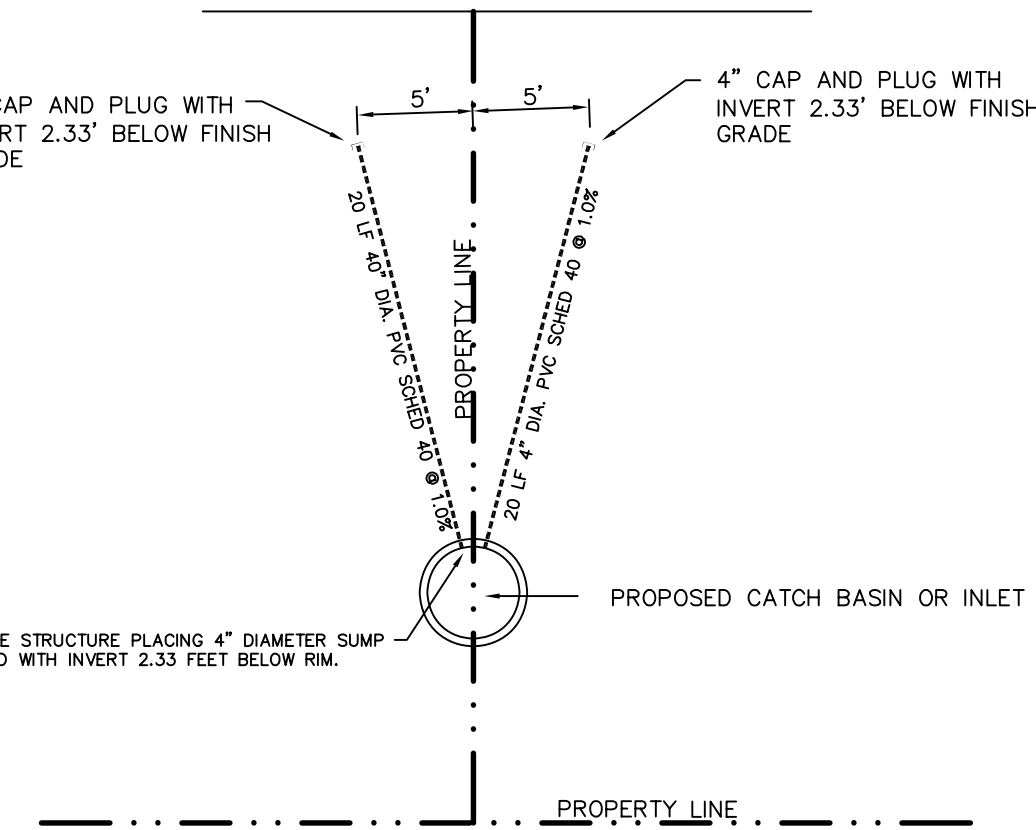
CURB & GUTTER INLET FILTER (AFTER PAVING)
NO SCALE



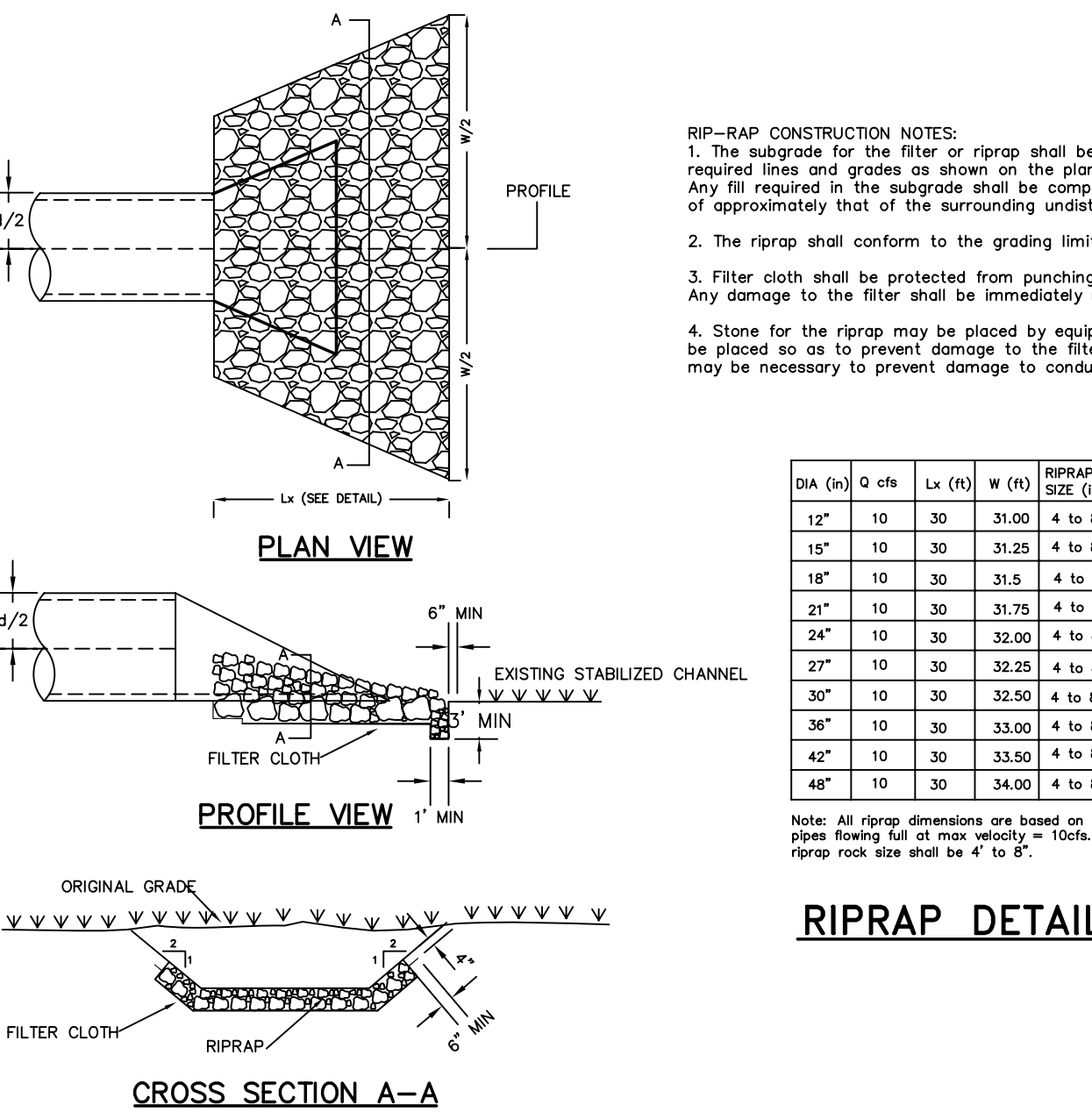
SILT FENCE DETAIL
NO SCALE



TRACKING MAT DETAIL
NO SCALE



TYPICAL SUMP PUMP LEAD DETAIL
NO SCALE



ORIGINAL GRADE

RIPRAP DETAIL

DIA (in)	Q cfs	Lx (ft)	W (ft)	RIPRAP SIZE (in)
12"	10	30	31.00	4 to 8
15"	10	30	31.25	4 to 8
18"	10	30	31.5	4 to 8
21"	10	30	31.75	4 to 8
24"	10	30	32.00	4 to 8
27"	10	30	32.25	4 to 8
30"	10	30	32.50	4 to 8
36"	10	30	33.00	4 to 8
42"	10	30	33.50	4 to 8
48"	10	30	34.00	4 to 8

Note: All riprap dimensions are based on pipes flowing full at max velocity = 10cfs. All riprap rock size shall be 4" to 8".

**LETTER OF SAFETY CONCERNS IN RELTION TO THE ASHER FARM ROAD PERMIT
PRESENTED TO THE LCRC BOARD AT THEIR SEPTEMBER 13, 2018 MEETING**

Livingston County Road Commission Board:

For safety reasons we the undersigned residents of Green Tree Trail in South Lyon, MI and Rushton road near Green Tree Trail strongly urge LCRC to withhold granting the private road permit for the north entrance of the Asher Farms Development (SP03-2018 parcel # 4716 23-300-010) going in at 10 mile and Rushton in Green Oak Township.. Presently, the plans show no center turn lane for Asher Farm residents turning left into the north entrance off Rushton Road.

The proposed north entrance sits directly across from Green Tree Trail. With the already heavy traffic due to Brummer Elementary School on the corner, the significantly increased traffic volume on Rushton Road since the paving of Rushton from Doane to Silver Lake Road and the inevitable increased traffic from the proposed 70 home development, the back-up of traffic on Rushton Road behind Asher Farms residents turning left is predictable. That said, our concerns lie in 1) our ability to turn left out of our subdivision and possibly right depending on the exact north entrance location; 2) the high probability of back-up traffic utilizing the shoulder to get past left turners, cutting across the end of our private road and putting not only us in danger, should any of us be waiting to exit our street, but also the residents. many of whom are children, residing at 9661 Rushton, a home extremely close to Rushton on the North corner of Green Tree Trail; 3) the increased accident potential owing to the added difficulty faced by Green Tree Trail residents pulling out onto Rushton (a road where the posted speed is 45 mph and the actual speed is more like 55mph) at the same time Asher Farms residents are also pulling out onto Rushton and 4) the ability of the fire department to exit the fire house and effectively head North should traffic back up occur.

We request that the LCRC require either a center turn lane for left hand turns into the north entrance of Asher Farms or elimination of the north entrance altogether. The regulations state 'the Road Commission reserves the right to reject a location that is not in the best interest of public safety' and we ask that you exercise this right so that the safety of the current residents and future residents of this development is ensured. . Aside from the safety concerns aforementioned, our private road cuts through a pine forest consisting of over 1000 mature pines and should there ever be a fire on our street, assurance of an unimpeded exit is a must. Additionally the 125 foot distance from the centerline of the proposed road to the centerline of the driveway at 9661 Rushton is not even close to being met. While semantics over regulations saying should versus shall might come into play legally, morally the 125 foot distance is there for safety reasons. The fact that the current proposed distance falls significantly short on a driveway to a home extremely close to the road so much so that a previous guard rail was placed by LCRC before any mention of a development, should raise serious concerns.

Please evaluate the issuance of this permit in light of our concerns and above all, protect our safety.

Sincerely,

The residents of Green Tree Trail and 9661 Rushton Road

**Initiative To Eliminate The Proposed North Entrance/Exit
As Detailed On The Asher Farms Site Plan
6/7/2018**

Reasons For Requesting Elimination Of Proposed North Entrance/Exit Of Asher Farms

- Increased Potential For Accidents As Both Green Tree Trail Residents And Asher Farms Residents Try To Pull Out Onto Rushton Road At Same Time.
- Curve At Doane Road Limiting Site Distance, 45mph Speed Limit, And Increased Northbound Traffic Volume On Rushton Due To Paving Of Rushton To I 96 Requires Increased Awareness Already When Pulling Onto Rushton And This Would Be Complicated By Having To Watch Asher Farms Residents Attempting to Exit Sub
- Risk For Personal Injury To Residents Of 9661 Rushton In The Event Of A Perpendicular Collision Increases With Left Turns Out Of Asher Farms Proposed North Exit As Guard Rail Would Not Be Protective.
- Short Set Back Of 9661 Rushton Makes A Bypass Or Center Turn Lane Impractical And Dangerous.
- The Infeasibility And Therefore Subsequent Lack Of A Bypass Or Center Turn Lane Negatively Impacts The Ability Of Green Tree Trail Residents To Enter Their Street During Peak Traffic Times As Asher Farms Residents Traveling North On Rushton Make Left Turns Into The Sub.
- With No Bypass Or Center Turn Lane For Reasons Aforementioned, Northbound Rushton Drivers Will Inevitably Use The Shoulder And Cut Across The End Of Green Tree Trail To Get Around Asher Farm Residents Making A Left Into The North Entrance
- Impact Of Headlights Going Into The 2 Homes Across From The Proposed North Entrance/Exit As Residents Exit Asher Farms.
- Numerous Other Green Oak Township Subdivisions Have 1 Entrance/Exit So There Is Really No Need For 2. Examples Include Centennial Farms (320 Unit Residential Complex) To The Immediate South Of Asher Farms, Cedar Ridge Sub (1/4 Mile North), and Woodland Ridge (1 Mile South/ 599 Unit Density). These Are Only A Few Of The Subs Nearby. Many More Examples Exist Within The Township.
- Green Tree Trail Is A Private Gravel Road Maintained By Its Residents And Any Increased Traffic From Asher Farms Residents Using It As A Turn Around For Circling Back To Their Homes Would Negatively Impact Its Integrity And Increase The Already High Maintenance Frequency And Cost To Green Tree Trail Residents.
- Currently It Costs Nothing To Eliminate The North Entrance/Exit. If No Action Is Taken By The Board And The Aforementioned Concerns Materialize, Then The Township Will Bear A Heavy Financial Cost To Rectify The Road Situation And (God Forbid) One Of The Township's Residents May Pay The Ultimate Cost.

Guard Rail
To Try To
Protect
Home

Driveway
For Home
At 9661
Rushton

Proposed Second
Entrance/Exit For
Asher Farms

Green Tree
Trail Private
Road

Kids Play
Area



View To Illustrate: (1) How Guardrail Would Not Protect Against Perpendicular Collision Between Cars Making A Left Out Of Asher Farms And Northbound Rushton Traffic and (2) Infeasibility Of Bypass Lane On East Side Of Rushton Due To Guardrail, Closeness Of Home To Rushton, and Utilities.



View Looking North On Rushton Of Area Near Proposed **South** Entrance/Exit Of Asher Farms Illustrating Bypass Lanes Already In Place On East And West Sides Of Rushton And Large Set Back Of Brummer And Fire Station As Compared To 9661 Home For Any Continuance Of Existing Bypass Lanes



View Of Bypass Lanes Looking South On Rushton



Bypass
Lane On
West Side
Of
Rushton

Proposed
South
Entrance/Exit
To Asher
Farms

Bypass Lane On
East Side Of
Rushton

Close-up Of Bypass Lanes Looking North On Rushton





LIVINGSTON COUNTY HEALTH DEPARTMENT

2300 East Grand River Avenue, Suite 102
Howell, Michigan 48843-7578
(517) 546-9850
www.lchd.org

PERSONAL/PREVENTIVE HEALTH SERVICES

P: (517) 546-9850
F: (517) 546-6995

**ENVIRONMENTAL HEALTH SERVICES**

P: (517) 546-9858
F: (517) 546-9853

September 6, 2018

ACE Engineering
Attn.: Patrick Keough, P.E.
5040 Queensway
Howell, MI 48843

RE: Preliminary Approval for "Asher Farms" Site Condominium Community located in Section 23, Green Oak Township, Livingston County, Michigan.

Dear Mr. Keough:

In accordance with Section 71A of Act 59, P.A. 1978 as amended, and the Environmental Health Division of the Livingston County Health Department (LCHD) has reviewed the information submitted for onsite sewage disposal and onsite water supply for the above mentioned site condominium and is granting preliminary Health Department approval in accordance with the restrictions included in this letter.

The proposed "Asher Farms" Site Condominium consists of 70 single-family units with a minimum size of 21,750 sq. ft. per unit. There is no availability to sanitary waste disposal or community water supply system proposed at this time and none in the foreseeable future. Therefore, each unit will be entirely dependent upon individual onsite water and sewage disposal for long-term use.

The site report and soil data has been submitted, reviewed, and soil conditions confirmed on site. The soil conditions encountered were predominantly medium sand soil conditions, which is acceptable for the disposal of onsite wastewater.

Wood Environment & Infrastructure Solutions have provided the water supply information to us with an assessment of the aquifer proposed to serve the individual wells. As indicated in their report, a total of 5 test wells were drilled on proposed units 4, 9, 17, 25 & 55.

Based on information obtained on the test well records along with neighboring well logs, the wells will most likely be completed at depths ranging between 60 and 155 ft. in strata identified as fine sand drift. Therefore, the wells within this development shall be drilled to a depth that will penetrate a minimum of 10 ft. thick impervious layer if possible and the well shall be drilled to a depth that will maintain a minimum of 50 ft. from the static water level to the bottom of the casing

or top of the screen in an unconfined aquifer.

In addition, water samples have been received from the test wells indicating no coliform bacteria present and nitrates were well below the acceptable State limits. Water analysis revealed objectionable iron and hardness results and serious consideration should be given to installing a filtering and/or water softener system.

Therefore, pursuant to Section 71A of Act 59 of P.A. 1978, as amended, the proposed “Asher Farms” Site Condominium located in Section 23, Green Oak Township is granted preliminary approval by this Department contingent upon the following restrictions:

*** Represents all issues that shall be submitted prior to final master deed approval.**

1. No unit shall be used for other than a single-family dwelling.
2. There shall be no future subdividing of any building units, which would utilize individual onsite sewage disposal and/or water supply systems.
3. “Asher Farms” Site Condominium has been approved for 70 individual units as described in ACE Engineering, Job # 17024 site plan dated July 15, 2018, last revision dated August 22, 2018.
4. The wells and septic systems shall be located in the exact area as indicated on the preliminary site plan. There shall be no deviations to these locations due to the potential of making neighboring building sites within this development un-buildable. In the future and ensuring the approvals included in this letter; if for any reason modifications to the originally approved septic areas are considered necessary a written request along with an application for soil evaluation and the associated fees shall be submitted to LCHD for review and approvals.
5. All wells shall be drilled by a Michigan licensed well driller and be drilled to a depth that will penetrate a minimum of a 10 ft. impervious clay layer and/or shall maintain a minimum of 50 ft. from the static water level to the bottom of the casing or top of the screen in an unconfined formation.
6. Review of the water quality test results has indicated that groundwater within some of the test wells in Asher Farms contained sodium and chloride concentrations above the established USEPA Secondary Contaminant Level (SMCLs) of 250 mg/L for chloride and the recommended level of 20 mg/L for sodium. . The SMCLs and recommended levels represent the suggested maximum levels of a specific groundwater constituent for desirable aesthetic characteristics of water. Problems associated with high levels of sodium include taste and possible health affects for persons on a sodium-restricted diet. Problems associated with high levels of chloride include taste and corrosion of plumbing and fixtures. **Therefore, all wells within the Asher Farms development will be required to sample for both sodium and chloride.** Should wells test elevated for sodium and/or chloride



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- reverse osmosis treatment can be installed to reduce to acceptable levels.
7. The water softener and/or water conditioning discharge waters shall not be connected or discharged into the onsite sewage disposal system.
 8. The test wells used to determine onsite water supply adequacy have been drilled on Units 4, 9, 17, 25 & 55. **Prior to Final Master Deed Approval**, any test well not to be used, as the potable water supply system shall be properly abandoned in according to Part 127, Act 368 of the Groundwater Quality Control Act.
 9. The individual unit owners shall be responsible for the maintenance and repair of their individual potable water supply and onsite sewage disposal systems.
 10. The reserve septic locations as designated on the preliminary plan on file at the Livingston County Health Department must be maintained vacant and accessible for future sewage disposal uses.
 11. There shall be no underground utility lines located within the areas designated as active and reserve septic system areas.
 12. The onsite sewage disposal systems for Units 7, 9, 11-15, 18-19, 23, 25-26, 29-34, 36-44, 49-53, 57-60, 62-66, & 70 will require the excavation of slow permeable soils to a more permeable soil ranging between 3.5 to 10 ft. in depth. Due to the fact that unsuitable soils will be excavated in the area and replaced with clean, sharp sand, the cost of the system may be higher than a conventional sewage disposal system.
 13. Units 29, 40, & 54 will require an enlarged system due to the heavy soil structure witnessed on this unit. Please refer to the soil conditions on file at the Livingston County Health Department.
 14. The engineer must give written certification that any additional grades, filling and/or land balancing that has taken place, as part of the construction of the development has not affected the placement for either the active or reserve sewage disposal systems. This certification must be given stating that there have been no changes on any units affected **prior to master deed approval**.
 15. **Prior to master deed approval**, written engineer certification must be given which indicates that all storm drains which are within 25 ft. to the proposed active or reserve septic areas have been sealed with a watertight premium joint material.

16. A 2800 sq. ft. area has been designated on each unit for the active and reserve sewage disposal systems to accommodate a typical four bedroom single family home. Proposed homes exceeding four bedrooms must show that sufficient area exists for both the active and reserve sewage systems, which meet all acceptable isolation distances.
17. There shall be no activity within the regulated wetlands unless permits have been obtained from the Michigan Department of Environmental Quality
18. All restrictions placed on "Asher Farms" Subdivision by the Livingston County Health Department are not severable and shall not expire under any circumstances unless otherwise amended or approved by the Livingston County Health Department.

All deed restrictions along with a copy of the Final Master Deed and Bylaws shall be submitted to the Livingston County Health Department for review and approval prior to being submitted to the Livingston County Register of Deed.

All restrictions established by the Livingston County Health Department must be incorporated into the Deeds for recording. **Any changes within this development from what has been reviewed by the Livingston County Health Department will make this approval null and void.**

If you have any further questions, please do not hesitate to contact me at (517) 552-6858.

Sincerely,



Beau Forgette, REHS
Environmental Sanitarian

cc: MDEQ, Attn.: Kristine Rendon
Green Oak Township Zoning
Green Oak Township Engineer
Developer, M & N Development, LLC.