

HOWELL TOWNSHIP PLANNING COMMISSION

REGULAR MEETING

3525 Byron Road
Howell, MI 48855
November 19, 2024
6:30 pm

1. Call to Order
2. Roll Call: () Wayne Williams - Chair () Paul Pominville
 () Robert Spaulding – Vice Chair () Tim Boal
 () Mike Newstead – Secretary () Chuck Frantjeskos
 () Matthew Counts – Board Rep.
3. Pledge of Allegiance
4. Approval of the Agenda:
 Planning Commission Regular Meeting: November 19, 2024
5. Approval of the Minutes:
 Regular Meeting October 22, 2024
6. Call to the Public
7. Zoning Board of Appeals Report:
8. Township Board Report:
9. Ordinance Violation Report:
10. Scheduled Public Hearings:
11. Other Matters to be Reviewed by the Planning Commission:
 - A. Re-appointments for Members
 - B. Zoning Ordinance section 14.19 Home Occupations - Board Request to Review
12. Business Items
 - A. Old Business:
 1. Heritage Square, PC2024-15, Parcel # 4706-32-400-013. Final Site Plan Review for PUD, Phase I – Single Family Residential.
 2. Storage Container Ordinance – Discussion
 3. ADU Ordinance – Discussion
 4. Wellhead Protection Ordinance - Discussion
 - B. New Business:
13. Call to the Public:
14. Adjournment

DRAFT

**HOWELL TOWNSHIP PLANNING COMMISSION
REGULAR MEETING MINUTES**

3525 Byron Road Howell, MI 48855

October 22, 2024

6:30 P.M.

MEMBERS PRESENT:

Robert Spaulding	Vice Chair
Mike Newstead	Secretary
Matthew Counts	Board Rep.
Paul Pominville	Commissioner
Tim Boal	Commissioner
Chuck Frantjeskos	Commissioner

MEMBERS ABSENT:

Wayne Williams	Chair
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Also in Attendance:

Township Planner Paul Montagno, Associate Planner Grayson Moore, Zoning Administrator Jonathan Hohenstein, Township Attorney Wayne Beyea

Vice Chair Spaulding called the meeting to order at 6:30 pm. The roll was called. Vice Chair Spaulding requested members rise for the Pledge of Allegiance.

APPROVAL OF THE AGENDA:

Motion by Counts, **Second** by Pominville, **"To approve the agenda."** Motion carried.

APPROVAL OF THE MEETING MINUTES:

September 24, 2024

Motion by Boal, **Second** by Newstead, **"To approve the minutes as presented."** Motion carried.

ZONING BOARD OF APPEALS REPORT:

Draft minutes are included in the packet.

TOWNSHIP BOARD REPORT:

Draft minutes are included in the packet.

SCHEDULED PUBLIC HEARINGS:

- A. Special Use Request PC2024-13 and Preliminary Site Plan Review PC2024-14: The Quarry RV Resort, Bedrock Ventures 4944 Mason Road Parcel #s: 4706-31-400-003, 4706-32-300-002, 4706-32-300-003. Vice Chair Spaulding opened the public hearing. Planner Montagno provided an extensive overview of the project and his review comments related to the special use request and preliminary site plan, highlighted the comments from Spicer Engineering. Commissioner Counts inquired about the location of the registration building, the parking deficiencies, the bathhouse calculation taking into account the individual hook-ups at each site. Commissioner Pominville inquired about the concern of increased traffic. Vice Chair Spaulding recused himself from the discussion and voting on this project as he works for the applicant's brother. **Motion** by Counts, **Second** by Boal, **"To appoint Mike Newstead to moderate this hearing."** Motion carried. Owner Brad Jonckheere spoke about his family, the history of the property, and the draft plan of the project. Due to the date when the quarry was started it does not currently have a reclamation plan. Commissioner Counts inquired about the changes requested

by the Planner's report, Mr. Jonckheere has no issue with the changes requested. Commissioner Pominville inquired about the swim-up bar, Mr. Jonckheere spoke about the other campgrounds that have swim-up bars and how popular they are. Commissioner Boal spoke about the portion of the property zoned NSC that has the approved brewery, the hours of operation and months of operation, and needing to move the registration building, Mr. Jonckheere does not have an issue with moving the registration building. Commissioner Frantjeskos inquired about a traffic study, Planner Montagno indicated that a traffic study would have to be requested by the Planning Commission. Secretary Newstead took comments from the public:

Andrew Hamm, 14 Santa Rosa Dr.: Spoke in favor of the project

Shane Fagan, 30 Santa Rosa Dr.: Impartial to the project, noticed a lot of RVs in people's driveways, spoke about people's opinions to not allow any new development around them

Mike Reaid, 249 Dieterle: In opposition to project, concerned with noise, prefers people camp up north

JoAnne Shelters, 5101 Mason Rd.: In opposition, traffic issues with Mason Road

Boyd Creech, Mason Rd.: In opposition, traffic issues, decreased property values

Ron Johnson, 254 Olde English Circle: In opposition, decreased property values, traffic issues, need for privacy fence

John Siekinka, 5125 Mason Rd.: In opposition, issue with noise

Sue Johnson, 255 Dieterle Rd.: In opposition, decrease in value, noise issues

Theodore Christiansen, 375 Dieterle Rd.: In opposition

Joe Harvey, 5301 Preston Rd.: Neutral on project, spoke to people's concern about property values around a gravel pit versus around an RV park

Frank Munsell, 6679 Mason Rd.: In favor of project, spoke about all of his property, farm values, Eagle's Grove in Byron and how nice it is, the traffic that has been caused by the people in the room, no issues with traffic from Burkhart Ridge

Laura Webber 550 N. Dieterle Rd.: Concerned with fencing the property and keeping visitors to the park on the park property, concerned with traffic and would like more information

Paul Olhoff, 55 Dieterle Rd.: Concerned with traffic

Gary Shelters, 5101 Mason Rd.: Concerned with sewage issues

Shane Fagan, 30 Santa Rosa Dr.: Spoke on home values, does not think the RV park will bring down values, does not want the Township to tell people what they can do with their property

Andrew Hamm, 14 Santa Rosa Dr.: Proposal is better than a developer putting in houses, does not think project will bring down home values, spoke about a personal ongoing lawsuit, traffic issues

Bob Wilson, 2945 Brewer Rd.: Not much to do in this area, Burkhart Road needs to be changed

Cade Wilson, 1598 Woodhaven: Nothing stays the same forever, negotiate concessions, asks Township to only regulate for health and safety

Motion by Counts, **Second** by Pominville, **“To close the public hearing.”** Motion carried.

Commissioner Boal started looking through the six special use standards from the Zoning Ordinance section 16.06:

1. Harmonious with the Ordinance: Commissioner Boal would like to see more information before making a determination such as a landscaping plan. Commissioner Counts spoke to the fact that this is a preliminary site plan and a lot of detail is not normally provided at this time but as a concept feels that this is a less intense use than a quarry. Commissioner Boal spoke about the usable acres and single family houses.
2. Harmonious with the character of the vicinity: Commissioner Boal and Counts think in concept it could fit well into the area. Planner Montagno discussed setting the hours of operation and management as conditions should this project move forward.
3. Project adequately served by public or private facilities: Commissioner Frantjeskos spoke about the need of a traffic study. Planner Montagno spoke on the proposed septic systems.
4. Hazardous to existing or future neighboring uses: Commissioner Counts spoke to adequate screening, emergency access to Dieterle Road.
5. Will not create excessive requirements at public cost: Commissioner Counts and Planner Montagno spoke about storm water management.
6. Substantial adverse impacts to natural resources: Commissioner Boal would like more information from EGLE.

Discussion followed. **Motion** by Frantjeskos, **“Based on what has been presented as a preliminary site plan that a traffic study be conducted for the area along Mason Road and the impact that the traffic is going to have based on number of parties in cars coming in and out of the proposed campground.”** Clarity was sought. **“To postpone action on the application for the preliminary site plan with the condition of a traffic study be conducted.”** Commissioner Boal suggested friendly amendments to the motion: **“That the screening be addressed, setbacks from the property lines, and that the environment is protected, issue with the parking and bathhouses be addressed.”** Commissioner Counts spoke about the difference between needs for the special use versus for the preliminary site plan. The motion received no support and Commission Frantjeskos rescinded his motion. **Motion** by Frantjeskos, **Second** by Boal, **“To postpone action on both the preliminary site plan and the special land use application until a traffic study is completed.”** Commissioner Boal requested a friendly amendment to **“add screening and setbacks.”** Frantjeskos and Boal both accept the changes. Discussion followed. Frantjeskos requested to add to his motion, **“based on the Planner’s report.”** Discussion followed. Commissioner Frantjeskos rescinded his motion. **Motion** by Counts, **Second** by Pominville, **“To postpone action on the special use request PC2024-13 and preliminary site plan review PC2024-14, the Quarry RV Resort, Bedrock Ventures, 4944 Mason Road, based on the findings of fact listed in the Planner’s report dated October 9th, 2024 under special land use standards section 16.06, looking for additional information around property screening of neighbors, setback lines, as well as a traffic study to understand the impact to surrounding neighbors and whether or not this special use is harmonious, in addition to that I would like to note the Spicer Engineering report of October 22nd, 2024 and postpone the preliminary site plan approval as well.”** Motion carried, one abstention. Discussion followed.

Motion by Counts, **Second** by Boal, **“To let Mr. Spaulding do his, take care of his duties, put him back in his chair spot.”** Motion carried.

B. ADU Ordinance

Vice Chair Spaulding opened the public hearing on the ADU Ordinance. Planner Montagno gave an overview of the changes to the draft ADU Ordinance. Chair Spaulding took comments from the public:

Kerry McFarland, 2885 W. Marr Rd.: In favor of allowing ADUs due to her personal situation with her aging parents that do not live near her. Would like detached units to be allowed to give her parents some dignity and privacy.

Shane Fagan, 30 Santa Rosa Dr.: Township needs to include detached units, concerned with affordability, has issue with only allowing two bedrooms.

Bob Wilson, 2945 Brewer Rd.: Concerned with affordability, wants ADUs to be temporary, allow detached units.

Joe Harvey, 5301 Preston Rd.: Concerned with affordability, allow detached units, good for parents and children.

Aaron McFarland, 2885 W. Marr Rd.: Does not see the logic of splitting property for an additional unit.

Sharon Lollo, 2650 Fisher Rd.: What happens when family is no longer using the unit. What happens when they are rental units?

Brian Scagliarini, formerly from 7770 Golf Club Rd.: Need some sort of supplemental units so people can live here.

Andrew Hamm, 14 Santa Rosa Dr.: Housing and rental prices are very high, making an ADU be attached makes it too expensive. Wants to stipulate to family only for ADUs.

Shane Fagan, 30 Santa Rosa Dr.: Does not feel the Township should regulate if ADUs are rentals.

Sharon Lollo, 2650 Fisher Rd.: Clarified her previous comments on renters and how bad renters impact the neighbors.

Aaron McFarland, 2885 W. Marr Rd.: Can you rent without a separate address?

Joe Harvey, 5301 Preston Rd.: Are there rules in place for rental property in the Township?

Andrew Hamm, 14 Santa Rosa Dr.: Spoke on rental units, in favor of allowing ADUs to be rented.

Cade Wilson, 1598 Woodhaven: Difference between an ADU and a house with an additional kitchen and bedrooms?

Brian Scagliarini, 7770 Golf Club Rd.: Don't limit ADUs to family only.

Shane Fagan, 30 Santa Rosa Dr.: Township has other Ordinances to deal with problems with renters.

Public hearing was closed by Chair Spaulding at 8:41 p.m. and opened to discussion by the Planning Commission. Planner Montagno clarified how multiple family units are not allowed in a single house. Commissioner Boal addressed the rental of ADUs attached or detached. Commissioner Counts along with other commissioners would like to allow detached ADUs as part of the ordinance. Assessor Kilpela spoke to taxable value and the homestead exemption for ADUs. **Motion** by Counts, **Second** by Pomerville, **“To table the accessory dwelling units, and Paul, I would ask that you bring it back with the detached ADU included.”** Discussion followed regarding size of the ADU and to take acreage into consideration. Motion carried.

C. Storage Container Ordinance

Vice Chair Spaulding opened the public hearing at 8:56 p.m.. Planner Montagno provided a summary of the changes made to the draft Storage Container Ordinance. Vice Chair Spaulding took comments from the public:

Joe Harvey, 5301 Preston Rd.: Confused if the Ordinance is to allow or not allow storage containers. Wants to allow storage containers due to cost of units versus building traditional storage. Spoke on the rural character of the Township.

Shane Fagan, 30 Santa Rosa Dr.: Ordinance will allow 2 20-foot containers but not 1 40-foot container. Stop worrying about what your neighbor does, if you don't like it pursue your happiness elsewhere.

Andrew Hamm, 14 Santa Rosa Dr.: Restrict the number of containers based on acreage. Spoke to the Ordinance and restrictions for accessory structures based on acreage and setbacks.

Mr. Denure, Oceola Township: Against storage containers. Keep aesthetics in place to preserve the neighborhood.

Cade Wilson, 1598 Woodhaven: Spoke on the issue between himself and his neighbor. Spoke on his shipping containers.

Joe Harvey, 5301 Preston Rd.: Spoke on passing ordinances for aesthetics.

Mr. Denure, Oceola Township: Questioned if there was an approved use for shipping containers. Can they be used for housing?

Cade Wilson, 1598 Woodhaven: Spoke on aesthetics.

Bob Wilson, 2945 Brewer Rd.: Spoke on limits to farmers. Would rather not see stuff around people's yard, would rather everything be nice and neat and tucked away.

Michael Dietz, 3870 Byron Rd.: Spoke on issues with his neighbor, vermin getting under his neighbor's storage containers, position of his neighbor's storage containers.

Andrew Hamm, 14 Santa Rosa Dr.: Wants public hearing comments limited to Howell Township residents.

Sharon Lollo, 2650 Fisher Rd.: Spoke on the language in the draft ordinance regarding the looks of shipping containers. Spoke on being neighborly and keeping the Township looking nice.

Cade Wilson, 1598 Woodhaven: Spoke on his shipping containers, enforcement of Township Ordinances.

Shane Fagan, 30 Santa Rosa Dr.: Spoke on permissive zoning, enforcement of Ordinances, weaponization of Ordinances.

Jamie Body, 2015 Bowen Rd.: Agrees on painting containers or shrubby, standards should be based on acreage. Spoke on Ordinance enforcement being complaint based.

Vice Chair Spaulding closed the public hearing at 9:31 p.m.. Commissioner Pominville spoke about stipulations based on acreage and questioned how the ordinance came to the Planning Commission. Zoning Administrator Hohenstein spoke about all the complaints brought to the Township regarding storage containers being the reason the topic went before the Board and why the Board sent a request to the Planning Commission to draft an ordinance. Discussion followed. Planner Montagno spoke on the International Building Code addressing foundations for shipping containers and the Right to Farm Act protecting farmers for agricultural use. Attorney Beyea spoke on addressing standards in the ordinance. Commissioner Boal spoke about the limit of units per acre. Vice Chair Spaulding inquired about the distinction between accessory structure versus accessory building. **Motion** by Counts, **Second** by Newstead, **“To table the ordinance on portable storage containers and discuss at a later date pending feedback that was provided to the Planner.”** Motion carried.

D. Wellhead Protection Ordinance

Vice Chair Spaulding opened the public hearing at 9:53 p.m.. Planner Montagno provided a summary of the draft Wellhead Protection Ordinance. Attorney Beyea spoke on how an overlay Zoning District works and that the more restrictive overlay district would control in the event of a conflict between ordinance language. Vice Chair Spaulding took comments from the public:

Curt Hamilton, 1367 Crestwood Ln.: Spoke in support of the wellhead overlay district, on the Mugg & Bopps lawsuit, on issues with another Mugg & Bopps gas station.

Frank Munsell, 6679 Mason Rd.: Questions on farmer's rights in relation to the wellhead protection area.

Vice Chair Spaulding closed the public hearing. Commissioner Counts spoke about the prohibited uses in the overlay district. Planner Montagno spoke about farmer protections. Vice Chair Spaulding spoke about prohibited uses that are potentially harmful to the wellhead. Commissioner Frantjeskos inquired about the Enbridge pipeline. **Motion** by Boal, **Second** by Counts, **“To forward this to the Board with our recommendation for approval.”** Attorney Beyea spoke about the regulated substances portion of the ordinance may need more clarification before the Board can approve the ordinance. Commissioner Boal rescinded his motion. Discussion followed. **Motion** by Counts, **Second** by Newstead, **“To table discussion on wellhead protection area until such time as language can be drafted around regulated substances and how it applies to either permitted principle use versus prohibited use.”** Motion carried.

OTHER MATTERS TO BE REVIEWED BY THE PLANNING COMMISSION:

- A. 2025 Planning Commission Meeting Dates
Zoning Administrator Hohenstein indicated that this is the draft calendar for 2025 and inquired if the Commission wanted any changes to their meeting dates.
- B. Ordinance Violation Report
Report is in the packet, there were no questions.

OLD BUSINESS:

- A. Planning Commission Bylaws Update
Zoning Administrator Hohenstein spoke about the updated bylaws and the public hearing section and requested to change it to match the process that the Planning Commission takes on public hearings. Section 3-G, number 6 will be moved to number 3. **Motion** by Counts, **Second** by Newstead, **“To approve Howell Township Planning Commission bylaws as amended.”** Roll call vote: Newstead – yes, Frantjeskos – yes, Spaulding – yes, Counts -yes, Pominville – yes, Boal – yes. Motion carried (6-0).

NEW BUSINESS:

Commissioner Boal asked Township Attorney Beyea about the lawsuit over PA-233 started by the law firm Foster and Swift. Attorney Beyea spoke on PA-233 for renewable energy projects and the class-action lawsuit started by Foster and Swift on behalf of municipalities in the state.

CALL TO THE PUBLIC:

Frank Munsell, 6679 Mason Rd.: Spoke on living together and being a good neighbor.

Shane Fagan, 30 Santa Rosa Dr.: Spoke on the storage container ordinance and his concerns.

Bob Wilson, 2945 Brewer Rd.: Spoke on Shane Fagan’s comments.

Andrew Hamm, 14 Santa Rosa Dr.: Spoke on an ongoing personal lawsuit and Board moral ethics.

ADJOURMENT:

Motion by Pominville, **Second** by Counts, **“To adjourn.”** Motion carried. The meeting was adjourned at 10:32 p.m.

Date

Mike Newstead
Planning Commission Secretary

Jonathan Hohenstein
Recording Secretary

Draft

**HOWELL TOWNSHIP REGULAR BOARD
MEETING MINUTES**

3525 Byron Road Howell, MI 48855

November 4, 2024

6:30 P.M.

MEMBERS PRESENT:

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

MEMBERS ABSENT:

Jeff Smith Trustee

Also in Attendance:

9 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:

None

APPROVAL OF THE AGENDA:

November 4, 2024

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

APPROVAL OF BOARD MEETING MINUTES:

October 7, 2024

REGULAR BOARD MEETING MINUTES

Motion by Hohenstein, **Second** by Melton, **“To accept the minutes from October 7th as presented.”** Motion carried.

CALL TO THE PUBLIC:

Curt Hamilton, 1367 Crestwood- Spoke on Parks and Recreation Master Plan and establishing a task force of residents to draw up future park plans.

Justin Frederick, 225 Bain Drive- Spoke on grievances with neighbors and Zoning Administrator.

Shane Fagan, 30 Santa Rosa Dr.- Spoke on his business run out of his home and township ethics.

Andrew Hamm, 14 Santa Rosa Dr- Spoke on clarification of a video presented to Zoning Administrator.

UNFINISHED BUSINESS:

Motion by Hohenstein, **Second** by Counts, **” To deviate from our resolution to Item 8-G, followed by item 11.”** Motion carried.

Motion by Counts, **Second** by Hohenstein, **”To enter closed session to discuss Burkhart Ridge v. Howell Township.”** Motion carried. Closed session began at 6:55 P.M.

Motion by Melton, **Second** by Counts, **”To come back into regular session from our closed session.”** Motion carried. Returned to Regular session at 7:49 P.M.

Motion by Hohenstein, Second by Melton, **”To allow the township attorneys to continue negotiations as discussed in closed session.”** Motion carried.

- A. Trustee Wilson’s grievances with Ordinance Enforcement and Zoning Administrator: List of names and addresses has been submitted as requested by the board. Trustee Wilson requested more committees to be formed. **Motion** by Wilson, **”To put a committee together to oversee the decisions that are made in the ordinance department because I feel they are not being fair.”** Motion received no support..
- B. Sound System for Board Room- Matt Eckman from American Video Transfer Inc. discussed additional options for sound system. Discussion followed. **Motion** by Hohenstein, **Second** by Counts, **”To move forward with the items as he presented so it would be the blue items on the top section then the upgraded Audio PA system for a total of \$10,222.”** A friendly amendment by Trustee Counts **”To add AV streaming camera for a total of \$12,172.00.”** Motion carried.
- C. Oakland Tactical v. Howell Township- Treasurer Hohenstein provided updated information in packet.
- D. Howell-Mason v. Howell Township- Treasurer Hohenstein reported Howell- Mason will be appealing decision to Court of Appeals.

NEW BUSINESS

- A. 2025 Meeting Dates- Treasurer Hohenstein provided proposed dates of 2025 calendar of all boards. **Motion** by Counts, **Second** by Hohenstein, **”For resolution 11.24.543, 2025 meeting dates as presented.”** Roll Call: Counts-yes, Daus-yes, Coddington-yes, Melton-yes, Hohenstein-yes, Wilson-yes. Motion carried (6-0).
- B. Sewer Connection Fee- Treasurer Hohenstein discussed increasing sewer and water connection fee costs or leaving them as is. Discussion followed. **Motion** by Counts, **Second** by Hohenstein, **”To make resolution number 11.24.544 resolution setting township sewer charges to maintain at \$5,000.00.”** Roll Call: Melton-yes, Hohenstein-yes, Daus-yes, Wilson-yes, Counts-yes, Coddington-yes. Motion carried (6-0).
- C. Water Connection Fee- **Motion** by Counts, **Second** by Hohenstein, **”For Resolution 11.24.545 resolution setting township water charges maintaining at \$5000.00.”** Roll Call: Hohenstein-yes, Daus-yes, Counts-yes, Melton-yes, Coddington-yes, Wilson- yes. Motion carried (6-0).

- D. Zoning Ordinance Section 14.19 Home Occupation (Requested by Shane Fagan)- Zoning Administrator Hohenstein discussed options with either sending the request to change the Zoning Ordinance to the Planning Commission, stays the same, or investing the time and money into redoing all the Township Zoning Ordinances. Discussion followed. **Motion** by Wilson, **Second** by Counts, **“To send it to the Planning Commission.”** Motion carried, 1 dissent.
- E. Ordinance 284 -Amendment- Zoning Administrator Hohenstein reported Union of Oak Grove has ordinance 284 in place that can help residents with discounts based on income, this ordinance date ended in 2023. Union of Oak Grove is planning on completing the project within the next month. They are asking to amend the ordinance date to December 31st, 2024. Discussion followed. **Motion** by Hohenstein, **Second** by Melton, **“To accept ordinance number 287, amending ordinance number 284 as presented.”** Roll call: Melton-yes, Hohenstein-yes, Coddington-yes, Counts-yes, Wilson-yes, Daus-yes. Motion carried.
- F. Fowlerville Community Schools Resolution- Informational Correspondence
- G. Resolution of Appreciation for Benjamin Costello- Benjamin completed his Eagle Scout project of building three quality benches for the Howell Township gazebo for township residents to sit and relax. **Motion** by Hohenstein, **Second** by Melton, **“To accept the resolution of appreciation, resolution number 11.24.546 as presented.”** Roll call: Coddington-yes, Counts-yes, Wilson-yes, Daus-yes, Hohenstein-yes, Melton-yes. Motion carried (6-0).
- H. Township Ethics Policy-Treasurer Hohenstein discussed the Township’s Ethics policy and strengthening the Township’s ethics with two resolutions. Discussion followed. **Motion** by Counts, **Second** by Melton, **“To approve resolution 11.24.547, Resolutions of Principles of Township Excellence in Governance.”** Roll Call: Coddington-yes, Counts-yes, Wilson-yes, Daus-yes, Hohenstein-yes, Melton-yes. Motion carried (6-0).
- Motion** by Counts, **Second** by Hohenstein, **“To approve resolution 11.24.548.”** Roll call: Melton-yes, Wilson-yes, Counts-yes, Coddington-yes, Daus-yes, Hohenstein-yes. Motion carried (6-0).
- I. Human Resource Committee- Recommendations- Re-assigning accounting payroll from Assessor Kilpela to the clerk’s department with no change in the budget. **Motion** by Hohenstein, **Second** by Counts, **“To accept the recommendation from the Human Resource committee on redistribution of accounting clerk duties as presented.”** Motion carried.

CALL TO THE PUBLIC:

Shane Fagan- Wishes everyone good luck on Election Day.

Curt Hamilton- Questions regarding future Land Use Map organization but will discuss later.

REPORTS:

- A. SUPERVISOR:
No report

- B. TREASURER: Treasurer Hohenstein reported that the Surf Internet projects that were left open are now completed, ARPA funds have been disbursed. Updated the Board on the Brewer Road drainage project becoming a public drain, spoke on continuing education through MTA that all board members should attend. **Motion** by Hohenstein, **Second** by Daus, **“To allow any board member to attend MTA’s new official training events as presented.”** Motion carried.
- C. CLERK: There was a great turn out with Early Voting, close to 2000 Absentee Ballots were returned.
- D. ZONING:
There is currently a complaint with an industrial plant regarding a loud noise, a decimal reader may be needed in the future. **Motion** by Wilson, **Second** by Hohenstein, **“Buy a decimal reader.”** Motion carried.
- J. Assessors Report:
See Assessor Kilpela’s reports
- K. FIRE AUTHORITY:
Supervisor Coddington reported on the Fire Authority
- E. MHOG:
Trustee Counts reported on MHOG
- F. PLANNING COMMISSION:
See draft minutes
- G. ZONING BOARD OF APPEALS (ZBA):
No October meeting
- H. WWTP:
See Report
- I. HAPRA:
No report
- J. PROPERTY COMMITTEE:
No report
- K. PARK & RECREATION COMMITTEE: See information in board packet regarding driveway options for Tooley Road Park. Township will be getting quotes for an Environmental study on the property.
- L. Shiawassee River Committee:
No report

DISBURSEMENTS: REGULAR PAYMENTS AND CHECK REGISTER:

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

ADJOURNMENT: Motion by Melton, **Second** by Counts, **“To adjourn at this time”** Motion carried. The meeting was adjourned at 9:15 pm.

Sue Daus, Howell Township Clerk

Mike Coddington, Howell Township Supervisor

Marnie Hebert, Recording Secretary

Monthly Permit List

Grading

Permit #	Applicant	Address	Fee Total	Const. Value
P24-166	LUCY ROAD RESOURCES LLC	HIGHLAND	\$250.00	\$0.00
Work Description: Removal of all trees and branches, seed and straw area.				

Total Permits For Type: 1
Total Fees For Type: \$250.00
Total Const. Value For Type: \$0.00

MHOG

Permit #	Applicant	Address	Fee Total	Const. Value
PMHOG24-029	RAND CONSTRUCTION	2212 GRAND COMMERCE DR	\$0.00	\$0.00
Work Description: 2" meter along with 1.5" irrigation meter				

Total Permits For Type: 1
Total Fees For Type: \$0.00
Total Const. Value For Type: \$0.00

Residential Land Use

Permit #	Applicant	Address	Fee Total	Const. Value
P24-167	T&J HOME IMPROVEMENT	2044 BYRON RD	\$50.00	\$0.00
Work Description: Tear off and replace existing deck with a 20' x 16', 20' x 12' deck.				
P24-165	MR. ROOF ANN ARBOR, LLC	116 CASTLEWOOD DR	\$10.00	\$0.00
Work Description: Re-roof - house and attached garage. No structural changes.				
P24-172	BURKHART ROAD ASSOC LLC	1024 ELLINGTON DR	\$0.00	\$0.00
Work Description: Set new manufactured unit, no charge per consent judgment.				
P24-173	BURKHART ROAD ASSOC LLC	1044 ELLINGTON DR	\$0.00	\$0.00
Work Description: Set new manufactured unit, no charge per consent judgment.				
P24-169	Install Partners LLC	4076 INDIAN CAMP TRL	\$10.00	\$0.00
Work Description: window replacement				
P24-164	ROOFING PD	1637 KIM TRAIL	\$10.00	\$0.00
Work Description: Tear off and re-shingle house, using GAF asphalt shingles. No structural changes. Owner: Mary Frances Grun-Jackson				
P24-168	A-BETTER EXTERIOR, LLC	1585 LAYTON RD	\$10.00	\$0.00
Work Description: Reroof - tear off and re-shingle house and garage. No structural changes.				
P24-178	BLOOMFIELD RANDALL AND CYNTHIA	5568 MASON RD	\$75.00	\$0.00
Work Description: 36' x 40' pole barn located in front of the rear line of the house per the variance granted by the ZBA				
P24-163	SACKER BRANDON ROBERT	3300 OAK GROVE RD	\$75.00	\$0.00

Work Description: 50' x 40' pole barn - approved at 9-17-2024 ZBA for variance due to DTE power line.

P24-171	BURKHART ROAD ASSOC LLC 4424 POOLSIDE DR	\$0.00	\$0.00
	Work Description: Set new manufactured unit, no charge per consent judgment.		
P24-170	MANUS BUILDERS 2240 TOOLEY RD	\$50.00	\$0.00
	Work Description: Removal of old wood deck, replacing as is 44'6" by 20" with Trex		
P24-177	WESCOTT HOUSE LLC 3691 WESCOTT CT	\$150.00	\$0.00
	Work Description: Fence installed in rear yard.		
P24-174	BURKHART ROAD ASSOC LLC 4420 WILLOWBANK DR	\$0.00	\$0.00
	Work Description: Set new manufactured unit, no charge per consent judgment.		

Total Permits For Type:	13
Total Fees For Type:	\$440.00
Total Const. Value For Type:	\$0.00

Sewer Connection

Permit #	Applicant	Address	Fee Total	Const. Value
PWS24-057	BURKHART ROAD ASSOC LLC	1024 ELLINGTON DR	\$5000.00	\$0.00
	Work Description:			
PWS24-059	BURKHART ROAD ASSOC LLC	1044 ELLINGTON DR	\$5000.00	\$0.00
	Work Description:			
PWS24-055	BURKHART RIDGE LLC	4424 POOLSIDE DR	\$5000.00	\$0.00
	Work Description:			
PWS24-061	BURKHART ROAD ASSOC LLC	4420 WILLOWBANK DR	\$5000.00	\$0.00
	Work Description:			

Total Permits For Type:	4
Total Fees For Type:	\$20000.00
Total Const. Value For Type:	\$0.00

Sign

Permit #	Applicant	Address	Fee Total	Const. Value
P24-162	CHESTNUT WOODS LLC	ELIJAH LANE BLDG A	\$75.00	\$0.00
	Work Description: Temporary sign 11.6" wide 3 x 6'8" tall located east of Elijah Lane and 88' north of W. Highland. EXPIRES - 1-1-2025			
P24-175	THE SIGN GUYS DBA IMAGE 360 BRIGHTON	2895 W GRAND RIV	\$225.00	\$0.00
	Work Description: 4' x 8' double sided panel sign with post			
P24-176	PROSIGNS	2395 W GRAND RIVER AVE	\$225.00	\$0.00
	Work Description: 1 wall sign for Grand River Liquor 57.2 square ft. Replace face of sign on existing pole at road.			

Total Permits For Type:	3
Total Fees For Type:	\$525.00
Total Const. Value For Type:	\$0.00

Water Connection

Permit #	Applicant	Address	Fee Total	Const. Value
PWS24-058	BURKHART ROAD ASSOC LLC	1024 ELLINGTON DR	\$5000.00	\$0.00
	Work Description:			
PWS24-060	BURKHART ROAD ASSOC LLC	1044 ELLINGTON DR	\$5000.00	\$0.00
	Work Description:			
PWS24-056	BURKHART ROAD ASSOC LLC	4424 POOLSIDE DR	\$5000.00	\$0.00
	Work Description:			
PWS24-062	BURKHART ROAD ASSOC LLC	4420 WILLOWBANK DR	\$5000.00	\$0.00
	Work Description:			

Total Permits For Type:	4
Total Fees For Type:	\$20000.00
Total Const. Value For Type:	\$0.00

Grand Total Fees:	\$41,215.00
Grand Total Permits:	26.00

Code Enforcement List

10/30/2024

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
1044 DURANT DR Complaint	EM TCK II LLC	4706-28-401-034	09/26/2024		OPEN - COMPLANT RECEIVE
Excessive blowing noise that can be heard in Jonathan's Landing with windows and doors closed.					
Comments					
9.25.24 - Complaint received. Site visit to 1044 Durant Drive and Jonathan's Landing. No noise was observed. Will return on Monday morning (when noise usually starts.)					
9.30.24 - Site visit to Jonathan's Landing. Verified noise as described. Site visit to 1044 Durant Drive. All doors locked. Letter sent to owner.					
4141 W GRAND RIV Complaint	TONON CHIARINA S	4706-20-400-012	09/24/2024		OPEN - COMPLANT RECEIVE
House is neglected, building unsafe, junk in yard.					
Comments					
9.24.24 - Contacted Livingston County Building Department RE performing dangerous building inspection.					
10.3.24 - Received LCBD determination letter. Contacted Spicer RE Dangerous Buildings Hearing Officer availability. Spicer does not currently have availability to perform these duties.					
10.17.24 - Letter sent to owner.					

Code Enforcement List

10/30/2024

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
5407 OAK GROVE RD Complaint	RAMIREZ JUSTICE	4706-02-401-008	09/10/2024	PUBLIC - EMAIL	OPEN - COMPLANT RECEIVE
Garbage outside on the lawn surrounding the house and overflowing from the garage. Garbage is attracting vermin.					
Comments					
9.10.24 - Complaint received. Site visit completed. Letter sent to owner and to bank.					
10.8.24 - Site visit completed. No change in condition. Letter sent to owner and to bank.					
10.17.24 - Original certified letter to owner returned.					
10.21.24 - Letter posted on the house.					
<hr/>					
30 SANTA ROSA DR Complaint	FAGAN SHANE	4706-33-400-050	07/02/2024		OPEN - COMPLANT RECEIVE
Owner is operating a manufacturing business in the SFR zoning district.					
Comments					
7.2.24 - Reviewed information regarding Speakeasy Speed Shop. Not a permitted use in the SFR zoning district. Violation letter sent to owner.					
8.1.24 - Site visit completed. No observed business activity at site.					
9.4.24 - Site visit completed. Searched website and watched YouTube videos. Industrial use is continuing at this location in SFR Zoning district. Letter sent to owner.					
9.30.24 - Communication from owner received, attached. Owner is requesting Township Board to modify home occupation portion of Zoning Ordinance to allow this use in SFR Zoning. Enforcement action will pause until a decision has been made.					
10.16.24 - Ticket submitted to Court					
10.17.24 - Ticket presented to homeowner. Discussion with homeowners.					

Code Enforcement List

10/30/2024

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
3265 W GRAND RIVER A Complaint Starting to add more parking on adjacent lot owned by MDOT without permits.	AMERICAN LEGION P	4706-28-200-010	05/21/2024		OPEN - COMPLANT RECEIVE
Comments 4.25.24 - Received call regarding work being done by American Legion. Site visit, verified work was underway. Contacted MDOT RE approval. 5.21.24 - Site visit completed, violation still present. Sent letter to American Legion. 6.18.24 - Site visit. More work has been completed including installing gravel in excavated area and a tent and fencing has been erected next to gravel area on MDOT property. Letter sent to American Legion. 8.1.24 - Site visit completed. Tent and fencing have been removed, large pile of dirt has been removed, additional gravel parking area still on MDOT property. 9.4.24 - Site visit completed. Violation still present. Posted Notice of Violation Ticket to front door, mailed a copy of the violation. Ticket #: 0202 9.4.24 - Phone conversation with Commander Laura Goldthwait. Requested letter explaining the violation and steps moving forward. Mailed to Legion, emailed to Laura, attached. 9.12.24 - Received correspondence from Legion's attorney denying all responsibility. Documents provided to Township's attorney. Township's attorney has contacted Legion's attorney. 10.8.24 - Site visit completed. Photos of Legion using the additional parking attached.					
3590 W GRAND RIV Complaint Zoning Violations:Outdoor storage without screening, setback issues, parking not hard surfaced, no sign permit.	HASLOCK PROPERTIE	4706-28-100-024	05/06/2024		OPEN - FIRST LETTER SENT
Comments 5.13.24 - Violation letter to Occupant returned. 5.20.24 - Received phone call from owner. Will be preparing a site plan to take before the Planning Commission for approval. 6.20.24 - Received phone call from owner, discussed site plan requirements. 9.4.24 - Sent letter to owner RE site plan progress. 9.12.24 - Spoke to owner, Engineer has site plans almost complete. Will submit for review in the near future.					

Code Enforcement List

10/30/2024

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
4348 CRANDALL RD Complaint	RITCHEY TROY AND	4706-09-400-017	05/01/2024		OPEN - COMPLANT RECEIVE
<p>The front yard of the property is filled with numerous vehicles, including cars, lawn tractors, and an RV that haven't been moved in years. There is also garbage all over the property. I am tired of living next to this mess.</p>					
Comments					
5.1.24 -Complaint received. Site visit completed; verified complaint, photos attached. Letter sent to homeowner.					
6.18.24 - Site visit. Some clean up has been completed, violations still present. Sent letter to owner.					
7.8.24 - Homeowner came in to discuss violation. Owner said they can get the property cleaned up by the end of the month; scheduled site visit.					
8.1.24 - Site visit completed. No action has been completed on site. Letter sent to owner.					
9.4.24 - Site visit completed. No action has been completed on site. Letter sent to owner.					
9.16.24 - Owners came into the office, requested until end of October to clean up the site. Will reinspect in November.					
10.28.24 - Owners came into the office, remaining items will be removed this weekend. Will inspect next week.					
2520 BOWEN RD Complaint	SOJA LORI A AND MO	4706-22-100-011	01/09/2024	PUBLIC - PHONE	OPEN - FIRST LETTER SENT
<p>Backyard looks like a land file.</p>					
Comments					
1.9.2024 Did a site visit. found junk cars and piles of junk.					
1.11.2024 Sent out first letter.					
1.25.2024 The owner was in the office today, said he could have the cars moved in the next two weeks, and ask for ninety days to get the rest of the yard cleaned up.					
3.20.24 - Site visit. Violation still present. Owner working on getting issue resolved. Scheduled future site visit.					
4.23.24 - Site visit. Work is underway. Scheduled reinspection.					
5.1.24 - Additional complaint received. Site visit. Letter sent to property owner.					
5.20.24 - Site visit. Work is underway. Numerous large piles of crushed concrete are on site. Scheduled reinspection as agreed upon.					
6.18.24 - Site visit, spoke to owner. Most of the site has been cleaned up, owner claimed all work will be complete by July 4th. Crushed concrete is being used on the driveway. Will reinspect in July for compliance.					
8.1.24 - Site visit completed. Crushed concrete is mostly distributed on the driveway, one small pile remains. Site clean-up is almost complete.					
9.4.24 - Site visit completed. One pile of crushed concrete remains, clean-up of site incomplete.					
10.8.24 - Site visit completed. Clean-up still not complete. Final violation notice sent to owner.					

Code Enforcement List

10/30/2024

Address	Owners Name	Parcel Number	Date Filed	Origin	Status
5057 WARNER RD Complaint LARGE AMOUNT OF JUNK AND LITTER IN THE YARD.	HARTER EDWARD H	4706-19-200-005	03/14/2022	PUBLIC/ EMAIL	OPEN - SECOND LETTER SEN

Comments

- 4.17.2023 THERE IS MORE JUNK NOW THEN THERE WAS LAST MARCH OF 2022 OR JANUARY OF 2023.
- 5.25.2023 I SPOKE WITH MR. HARTER HE IS STARTING TO CLEAN THE SITE UP, HE SAID THAT IT WILL TAKE SOME TIME TO GET IT ALL CLEANED UP. I WILL BEE CHECKING ON HIS PROGRESS EVERY FEW WEEKS TO MAKE SURE HE IS MAKING PROGRESS.
- 6.29.2023 SOME PROGRESS HAS BEEN MADE. WILL CHECK BACK IN A COUPLE OF WEEKS.
- 1.9.2024 did a site vist there has been no progress made on the clean up.
- 1.11.2024 Finial letter sent.
- 3.20.24 - Site visit. No remediation of issues has taken place. Photos attached.
- 3.25.24 Spoke to owner. Owner is working on cleaning up the property, has dumpsters being delivered, scrap is in piles and ready to be taken to the scrap yard. Has requested 3 months to get the property cleaned up. Letter sent in confirmation of agreement. Scheduled visit for June 25th.
- 4.23.24 - Site visit. Violation still present. Scheduled reinspection.
- 5.20.24 - Site visit. Work has been started. Violation still present. Scheduled reinspection.
- 6.18.24 - Site visit. Violation still present, no evidence of continued clean up activity. Will reinspect on June 25th as agreed.
- 6.25.24 - Site visit. Minimal changes to site, violation still present. Letter sent to owner.
- 8.1.24 - Site visit completed. Owner still working on clean-up.
- 9.4.24 - Site visit completed, spoke to homeowner. Owner claims to have back of property nearly complete. Dumpster to be arriving next week, neighbors helping to remove scrap in the next few days.
- 10.8.24 - Site visit completed. No evidence of activity. Final violation letter sent to owner.

Records: 9

Population: All Records

BOARD POSITIONS

TOWNSHIP BOARD					
4 YEARS					
POSITION	NAME	REP TO:	TERM START	TERM ENDING	OATH
Supervisor	Mike Coddington	FIRE/HR/FMC/ Election Comm/Shiawassee River	11/20/2020	11/20/2024	*
Clerk	Sue Daus	HAPRA/HR/FMC/ Property/WWTP/ Election Comm	8/28/2023	11/20/2024	*
Treasurer	Jonathan Hohenstein	HR/FMC/Fire Alt/MHOG Alt/Election Comm/Property/ WWTP/Park and Rec.	11/20/2020	11/20/2024	*
Trustee	Matthew Counts	PC/MHOG/FIRE Alt	11/20/2020	11/20/2024	*
Trustee	Jeff Smith	Property/ZBA	11/20/2020	11/20/2024	*
Trustee	Harold Melton	HAPRA Alt/ZBA Alt	11/20/2020	11/20/2024	*
Trustee - partial term	Bob Wilson	PC Alt	11/20/2022	11/20/2024	*
Deputy Supervisor	Brent Kilpela	WWTP/FMC	11/20/2020	11/20/2024	*
Deputy Clerk	Tanya Davidson		8/28/2023	11/20/2024	*
Deputy Treasurer	Teresa Murrish	Park and Rec./Shiawassee River	11/20/2020	11/20/2024	*
PLANNING COMMISSION					
3 YEARS					
POSITION	NAME	REP TO:	TERM START	TERM ENDING	OATH
Chair	Wayne Williams		1/1/2022	12/31/2024	*
Vice-Chair	Robert Spaulding		7/10/2023	12/31/2026	*
Commissioner	Mike Newstead		3/20/2023	12/31/2024	*
Commissioner	Chuck Frantjeskos		5/13/2024	12/31/2024	*
Commissioner	Tim Boal		10/2/2023	12/31/2026	*
Commissioner	Paul Pominville		1/1/2021	12/31/2026	*
Board Representative	Matthew Counts	Board Rep.	12/20/2020	11/20/2024	*
Board Representative- Alterna	Bob Wilson	Alt. Board Rep.	4/10/2023	11/20/2024	*
ZBA					
3 YEARS					
POSITION	NAME	REP TO:	TERM START	TERM ENDING	OATH
Member	Jim McEvoy		10/2/2023	12/31/2024	*
Member	Kenneth Frenger		1/1/2021	12/31/2026	*
Member	Carol Weaver		1/9/2023	12/31/2026	*
PC Representative	Wayne Williams	PC Rep.	10/2/2023	12/31/2024	*
Board Representative	Jeff Smith	Board Rep.	3/21/2023	11/20/2024	*
Board Representative - Alterna	Harold Melton	Alt. Board Rep.	1/1/2021	11/20/2024	*
BOARD OF REVIEW					
2 YEARS					
POSITION	NAME	REP TO:	TERM START	TERM ENDING	OATH
Member	Bill Graham		1/1/2023	12/31/2024	*
Member	Jonathan Dekoninck		9/11/2023	12/31/2024	*
Member	Carol Makushik		1/1/2023	12/31/2024	*
Alternate	Robert Spaulding		9/11/2023	12/31/2024	*
Alternate	Aaren Currie		1/1/2023	12/31/2024	*

ARTICLE XIV

and areas used for offices, power generators, power transformers, storage, fabrication or manufacture of materials necessary to the provision of essential services. See Sections 14.36 and 20.08 E.

- F. Refer to Ordinance No. 85 Pipeline Ordinance for additional regulations and Refer to Ordinance No. 204 Ordinance to Approve with reservations, a Uniform Video Service Franchise Agreement Submitted by Comcast.

(Ord. No. 1 eff. Jan. 8, 1983; amend. by Ord. No. 97 eff. Feb. 23, 2000)

Section 14.18 SWIMMING POOLS (OUTDOOR).

Private pools shall be permitted as an accessory use in all zoning districts within the rear and side yards only, provided they meet the following requirements:

- A. There shall be a distance of not less than twenty (20) feet between the adjoining property line and the outside of the pool wall.
- B. There shall be a distance of not less than four (4) feet between the outside pool wall and any building located on the same lot.
- C. No swimming pool shall be located less than thirty-five (35) feet from any front lot line.
- D. No swimming pool shall be located less than the distance required for a side yard by the zoning ordinance.
- E. If electrical service drop conductors or other utility wires cross under or over a proposed pool area, the applicant shall make satisfactory arrangements with the utility involved for the relocation of wires before a permit shall be issued for the construction of a swimming pool.
- F. No swimming pool shall be located in an easement.
- G. For the protection of the public, all yards containing swimming pools shall be completely enclosed by a fence not less than four (4) feet in height. The gate shall be of a self-closing and latching type, with the latch on the inside of the gate not readily available for children to open. Gates shall be capable of being securely locked when the pool is not in use for extended periods. Provided, however, that if the entire premises of the residence are enclosed, then this provision may be waived by the Zoning Administrator upon inspection and approval.
- H. Above ground pools require removable ladders, or deck with self latching gate. (Ord. No. 240 eff. September 3, 2010)

(Ord. No. 1 eff. Jan. 8, 1983; amend. By Ord. No.107 eff. May 24, 2000)

Section 14.19 HOME OCCUPATIONS AND ON-SITE SALES.

Home occupations shall be permitted in all residences in all districts and include such customary home occupations as small workshops and businesses: hairdressing, millinery, dressmaking, bookkeeping and accounting service, real estate and insurance sales; professional office for occupancy by not more than one (1) physician, surgeon, dentist, attorney, architect, engineer or similar recognized professional practitioner provided such home occupation shall satisfy the following conditions:

XIV-6

- A. The nonresidential use shall be only incidental to the primary residential use.
- B. The occupation shall utilize no more than twenty-five (25) percent of the ground floor area of the principal structure or an accessory structure not to exceed twenty-five (25) percent of the gross floor area of the principal structure.
- C. Only normal domestic or household equipment and equipment characteristic of small workshops, businesses and professional office shall be used to accommodate the home occupation.
- D. The home occupation shall involve no employees other than members of the immediate family residing on the premises except one non-resident employee shall be permitted per dwelling unit.
- E. All activities shall be carried on indoors. No outdoor activities or storage shall be permitted.
- F. No alterations, additions, or changes to a principal or accessory structure which will change the residential character of the dwelling structure shall be permitted in order to accommodate or facilitate a home occupation.
- G. There shall be no external evidence of such occupations except a small announcement sign not to exceed two (2) square feet in area and attached to the principal or accessory structure.
- H. The permission for home occupations as provided herein is intended to secure flexibility in the application of the requirements of this Ordinance; but such permission is not intended to allow the essential residential character of Residential Districts, in terms of use and appearance, to be changed by the occurrence of home occupations.
- I. Garage sales, rummage sales, yard sales and similar activities may be conducted for no longer than three (3) days and no more than twice per calendar year on the same property.

(Ord. No. 1 eff. Jan. 8, 1983; amend. by Ord. No. 97 eff. Feb. 23, 2000, further amend. by Ord. No.107 eff. May 24, 2000)

Section 14.20 TEMPORARY BUILDINGS AND STRUCTURES.

Temporary buildings and structures are permitted during the period of construction, and sales involving change of ownership or rental occupancy. Such buildings, and structures shall be removed upon completion or abandonment of construction, sale or rental activities and prior to occupancy and use of the building or structure for permitted uses. Also refer to Sections 14.28 and 16.09 for permits to park or use mobile homes on a temporary basis.

Also, refer to Sections 14.25 and 14.28.

(Ord. No. 1 eff. Jan. 8, 1983; further amend. eff. Mar. 31, 2019)

HOWELL TOWNSHIP
APPLICATION FOR SITE PLAN REVIEW

PARCEL ID #4706 32 - 400 - 013

FILE # PC 2024 - 15

DATE OF APPLICATION: 09/25/2024

CHECK ONE: Preliminary Site Plan Review (20.06)
 Final Site Plan Review (20.07)
 Temporary Use Section (14.34)

Commercial/Industrial Development _____
Subdivision/Site Condo _____
Multi Family/Condo _____
Planned Unit Development (PUD) _____
Type: 1. _____ 2. _____ 3. _____ 4. 5. _____

I. APPLICANT:

Company Name M/I Homes of Michigan, LLC Owner: _____

Phone #: (248) 221-5011 E-Mail: see below

Address: 40950 Woodward Ave, Ste 203, Bloomfield Hills , MI 48304

Applicant: David Straub E-Mail: _____

Phone #: (248) 221-5011 E-Mail: dstraub@mihomes.com

Address: 40950 Woodward Ave, Ste 203, Bloomfield Hills , MI 48304

All Representatives to receive information and/or reports:

Contact Name: David Straub E-Mail: dstraub@mihomes.com

Contact Name: _____ E-Mail: _____

Contact Name: _____ E-Mail: _____

2. LOCATION OF PROPERTY: North of Mason Road, West of Burkhart Road. Northwest of Chestnut Crossing.

a. Attach legal description of property. See Plan

b. Current zoning district. PUD - Type 4

c. Existing use. Agricultural

d. Description of proposed use. Single Family Residential

HOWELL TOWNSHIP
APPLICATION FOR SITE PLAN REVIEW

3. The Site Plan is to contain the following information or the drawing submitted under the Land Use Permit can be utilized if it also contains the following information and is accurately drawn to scale:
- a. The date, north arrow and scale. The scale shall be not less than 1" = 20' for property under three (3) acres and at least 1" = 100' for those (3) acres or more.
 - b. Statistical data including number of dwelling units, size of dwelling units, if any, and total gross acreage involved. In the case of mobile home park, the size and location of each mobile home site shall be shown.
 - c. The location and height of all existing and proposed structures on and within 100' of the subject property's boundary.
 - d. All lot and/or property lines are to be shown and dimensioned, including building setback lines on corner lots.
 - e. The location and dimensions of all existing and proposed drives, sidewalks, curb openings, signs, exterior lighting, curbing, parking areas (show dimensions of a typical parking space), unloading areas and recreation areas.
 - f. Vehicular traffic and pedestrian circulation features within and without the site.
 - g. The location of all proposed landscaping, fences or walls.
 - h. Size and location of existing and proposed utilities, including proposed connection to public sewer or water supply system.
 - i. A location map indicating the relationship of the site to the surrounding land uses.
 - j. The location and pavement width and right-of-way width of all abutting roads, streets, alleys or easements.
 - k. Show properties and respective zoning abutting the subject property.
 - l. The location and size of all surface water drainage facilities.
 - m. Contour intervals shall be shown at a maximum of 2' intervals, with 1' intervals preferred for topographic features of the site.
4. Applicant to initial the following statements:
- a. Planning Commission has sixty (60) days from filing date to approve or deny Site Plan.
 - b. Acknowledgement that approval of Preliminary Site Plan is valid for a period of one (1) year from date of approval.
- _____

HOWELL TOWNSHIP
APPLICATION FOR SITE PLAN REVIEW

- c. Acknowledge that a one (1) year extension may be granted upon written request of the applicant and approval by Planning Commission
 - d. Acknowledge that the approval of Preliminary Site Plan shall expire one year after approval of Final Site Plan unless zoning permit has been obtained.
 - e. Applicant acknowledges approval of the Final Site Plan expires six (6) months after approval unless a Land Use Permit Application is applied for and granted.
 - f. Applicant acknowledges that the Final Site Plan approval shall expire one year following the date of approval unless construction has begun on the property in accordance with the plan.
 - g. Applicant acknowledges that he can appeal the Planning Commission's ruling of the Final Site Plan to the Board of Appeals within ten (10) days of its decision on all matters except use of the land, use of buildings or structures.
 - i. The Planning Commission has sixty (60) days from the date of the Planning Commission meeting at which the Final Site Plan was received to approve or disapprove.
 - j. Improvements not in conformance with the Final Site Plan shall be deemed a violation of the ordinance and be subject to the penalties of the ordinance.
 - k. Applicant acknowledges that sewer system tap in fee, if applicable, must be paid prior to issuance of a Land Use Permit.
5. Twelve (12) copies of the Preliminary Site Plan drawing shall be submitted with an Application for Site Plan Review (20.06a) **30 DAYS PRIOR TO MEETING.**

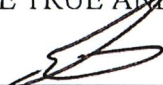









APPLICANT HERBY DEPOSES AND SAYS THAT ALL THE ABOVE STATEMENTS AND INFORMATION CONTAINED IN THIS APPLICATION AND ANY STATEMENTS SUBMITTED HERewith OR ON THE SITE PLAN ARE TRUE AND ACCURATE.

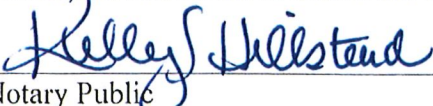


Owner Signature

David Straub

Print Name

Subscribed and sworn to before me this 25th day of September, 20 24.



Notary Public _____ County, Michigan

My Commission Expires: _____, 20____.

KELLY S. HILLSTEAD
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF OAKLAND
My Commission Expires August 18, 2028
Acting in the County of Oakland

FINAL SITE PLAN FOR

HERITAGE SQUARE

SINGLE FAMILY

PHASE 1

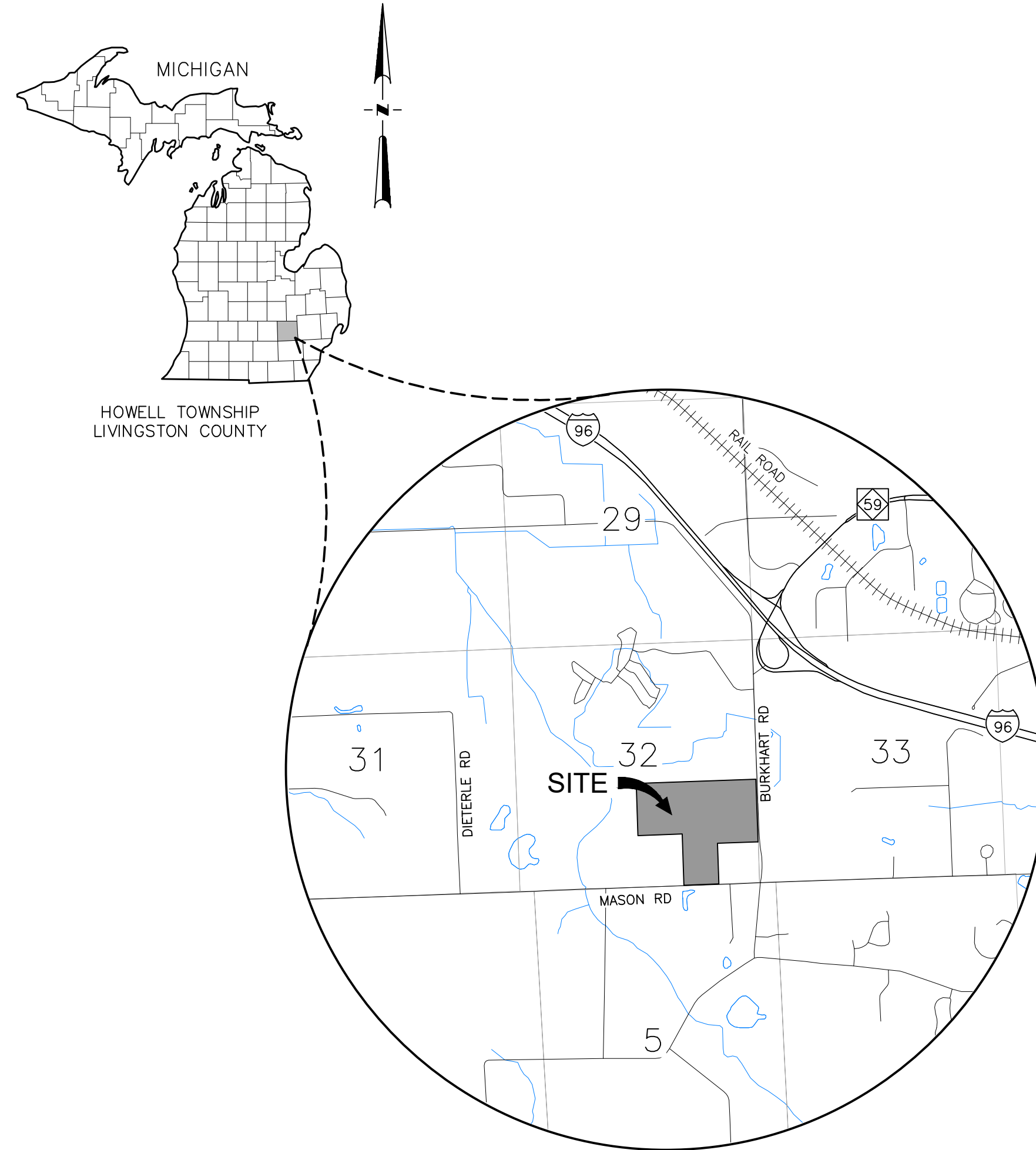
LEGAL DESCRIPTION (AS PROVIDED)

(PER TITLE AGENCY: ATA NATIONAL TITLE GROUP
 TITLE COMMITMENT NO: 47-23889492-SCM,
 EFFECTIVE DATE: SEPTEMBER 05,2023)

PARCEL TAX NUMBER: 47-06-32-400-013

SITUATED IN THE TOWNSHIP OF HOWELL, COUNTY OF LIVINGSTON, STATE OF MICHIGAN

PART OF THE SOUTHEAST 1/4 OF SECTION 32 AND PART OF THE SOUTHWEST 1/4 OF SECTION 33, TOWN 3 NORTH, RANGE 4 EAST, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE SOUTH LINE OF SAID SECTION 32, SAID POINT BEING SOUTH 89 DEGREES 55 MINUTES 08 SECONDS WEST 903.41 FEET FROM THE SOUTHEAST CORNER OF SECTION 32; THENCE SOUTH 89 DEGREES 55 MINUTES 08 SECONDS WEST 769.27 FEET ALONG THE SOUTH SECTION LINE; THENCE NORTH 00 DEGREES 05 MINUTES 59 SECONDS EAST 1133.64 FEET; THENCE SOUTH 89 DEGREES 55 MINUTES 08 SECONDS WEST 980.63 FEET TO THE NORTH-SOUTH 1/4 LINE; THENCE NORTH 00 DEGREES 04 MINUTES 04 SECONDS EAST 1155.25 FEET ALONG THE NORTH-SOUTH 1/4 LINE; THENCE SOUTH 89 DEGREES 59 MINUTES 30 SECONDS EAST 2649.93 FEET TO THE EAST SECTION LINE; THENCE SOUTH 00 DEGREES WEST 1374.40 FEET ALONG THE EAST SECTION LINE; THENCE SOUTH 03 DEGREES 58 MINUTES 40 SECONDS EAST 10.20 FEET ALONG THE CENTERLINE OF BURKHART ROAD; THENCE SOUTH 89 DEGREES 55 MINUTES 08 SECONDS WEST 904.12 FEET; THENCE SOUTH 00 DEGREES WEST 900.16 FEET TO THE POINT OF BEGINNING.



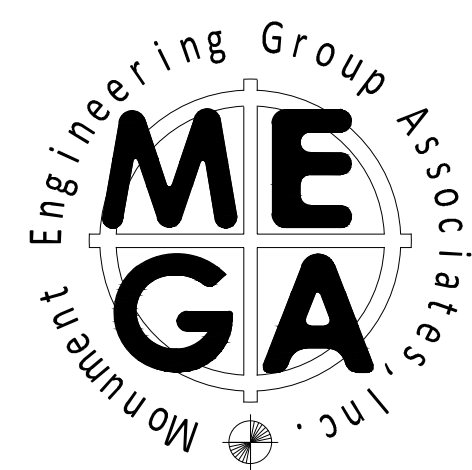
LOCATION MAP

LAND USE SUMMARY			
LAND USE DATA	CHARACTERISTIC	EXISTING CONDITIONS	PROPOSED CONDITIONS
	TOTAL DEVELOPMENT AREA (AC)	95.02 AC	95.02 AC
	IMPERVIOUS AREA (AC)	0.00 AC	29.95 AC
	TOTAL PERVIOUS AREA (AC)	95.02 AC	65.07 AC
PERVIOUS AREA BREAKDOWN BY COVER TYPE			
PERVIOUS AREA	MEADOW/FALLOW/NATURAL AREAS (NON-CULTIVATED)	19.07 AC	16.12 AC
	PREDOMINANT NRCS SOIL TYPE (A, B, C, OR D)	TYPE C	TYPE C
	IMPROVED AREAS (TURF GRASS, LANDSCAPE, ROW CROPS)	45.28 AC	38.68 AC
	PREDOMINANT NRCS SOIL TYPE (A, B, C, OR D)	TYPE B	TYPE B
	WOODED AREAS	30.67 AC	10.27 AC
	PREDOMINANT NRCS SOIL TYPE (A, B, C, OR D)	TYPE C	TYPE C
	CPVC VOLUME CALCULATED (CF)		X,XXX CF
	CPVC VOLUME PROVIDED (CF)		X,XXX CF
	CPRC VOLUME PROVIDED (CF)		X,XXX CF

THE PROFESSIONAL ENGINEER WHO SIGNS AND SEALS THIS SITE PLAN CERTIFIES THAT THE VALUES IN THIS TABLE REFLECT THE WRC STORMWATER CALCULATIONS REQUIRED FOR THIS DEVELOPMENT AND THAT GEOTECHNICAL INVESTIGATIONS WERE PERFORMED THAT PROVIDE CONCLUSIVE DOCUMENTATION THAT DEMONSTRATES WHETHER INFILTRATION (I.E. CPVC VOLUME CONTROL) IS PRACTICABLE.

DESIGN ENGINEER/SURVEYOR

MONUMENT ENGINEERING GROUP ASSOCIATES, INC
 INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS
 298 VETERANS DRIVE,
 FOWLERVILLE, MI 48836
 PHONE: 517-223-3512

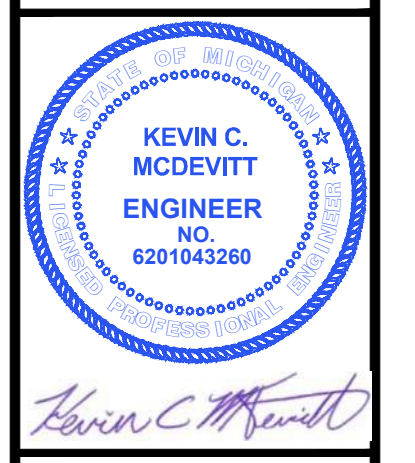


SINGLE FAMILY DEVELOPER

M/I HOMES OF MICHIGAN, LLC
 40950 WOODWARD AVE
 SUITE 203
 BLOOMFIELD HILLS, MI 48304
 POC: DAVID STRAUB
 PHONE: 248-221-5011

ARCHITECT

FELINO PASCUAL ASSOCIATES
 24333 Orchard Lake Road
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 Farmington Hills, MI 48336
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 PHONE: 248-557-5588



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CLIENT :
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 (248)-221-5011

COVER
 HERITAGE SQUARE (SINGLE FAMILY)
 95 AC. NW CORNER BURKHART & MASON ROADS
 PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
 HOWELL TWP, LIVINGSTON COUNTY, MICHIGAN

DATE	PLAN SUBMITTALS/REVISIONS
05/09/2024	SITE PLAN SUBMITTAL
09/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE: 5/09/2024
 PROJECT NO: 21-075C
 SCALE: N/A
 FIELD: DRAWN BY: DC,MN,CK,DJ
 DESIGN BY: KM
 CHECK BY: KM

G-10

NOTE: BUILDING PERMITS (BUILDING, ELECTRICAL, PLUMBING, MECHANICAL, ETC.) ARE TRACKED SEPARATELY ON THE ARCHITECTURAL PLANS.

NOT FOR CONSTRUCTION



SHEET INDEX

PLAN SUBMITTALS

	PLAN SUBMITTALS		INCLUDED SHEETS	
	5/09/2024	9/18/2024		
GENERAL				
SHEET G-1.0 COVER	●	●		
SHEET G-1.1 SHEET INDEX	●	●		
SURVEY				
SHEET V-1.0 TOPO SURVEY AND DEMO PLAN	●	●		
SITE PLAN				
SHEET C-0.0 PHASING PLAN - OVERVIEW	●	●		
SHEET C-0.1 FIRE PROTECTION PLAN	●	●		
SHEET C-1.0 SITE PLAN - OVERVIEW	●	●		
SHEET C-1.1 DIMENSION AND PAVING PLAN - PHASE 1	●	●		
SHEET C-1.2 DIMENSION AND PAVING PLAN - PHASE 2 (WEST)	●	●		
SHEET C-1.3 DIMENSION AND PAVING PLAN - PHASE 2 (EAST)	●	●		
SHEET C-1.4 DIMENSION AND PAVING PLAN - PHASE 3	●	●		
SHEET C-1.5 DIMENSION AND PAVING PLAN - PHASE 4	●	●		
SHEET C-1.6 DIMENSION AND PAVING PLAN - PHASE 5	●	●		
SHEET C-1.7 DIMENSION AND PAVING PLAN - PHASE 6	●	●		
SHEET C-1.8 DIMENSION AND PAVING PLAN - HIGHLANDER PARK DRIVE (PH 2)	●	●		
WETLAND PLANS				
SHEET C-2.0 WETLAND IMPACT PLAN - OVERALL				
SHEET C-2.1 WETLAND IMPACTS - WETLAND A				
SHEET C-2.2 WETLAND IMPACTS - WETLAND D				
SHEET C-2.3 WETLAND IMPACTS - WETLAND Y				
SHEET C-2.4 WETLAND IMPACTS - WETLAND Z				
UTILITY				
SHEET C-3.0 UTILITY PLAN - OVERVIEW	●	●		
SHEET C-3.1 SANITARY SEWER AND WATERMAIN PLAN - PHASE 1	●	●		
SHEET C-3.2 SANITARY SEWER AND WATERMAIN PLAN - PHASE 2	●	●		
SHEET C-3.3 SANITARY SEWER AND WATERMAIN PLAN - PHASE 2	●	●		
SHEET C-3.4 SANITARY SEWER AND WATERMAIN PLAN - PHASE 3	●	●		
SHEET C-3.5 SANITARY SEWER AND WATERMAIN PLAN - PHASE 4	●	●		
SHEET C-3.6 SANITARY SEWER AND WATERMAIN PLAN - PHASE 5	●	●		
SHEET C-3.7 SANITARY SEWER AND WATERMAIN PLAN - PHASE 6	●	●		
SHEET C-3.8 SANITARY SEWER AND WATERMAIN PLAN - HIGHLANDER PARK DR (PH2)	●	●		
SHEET C-4.1 SANITARY SEWER PROFILES - SHAGBARK DR (NORTH) & AMERICAN ELM DR	●	●		
SHEET C-4.2 SANITARY SEWER PROFILES - FORESTRY RD & SEDGEVIEW CIRCLE (WEST)	●	●		
SHEET C-4.3 SANITARY SEWER PROFILES - SEDGEVIEW CIRCLE (NORTH) & SEDGEVIEW COURT	●	●		
SHEET C-4.4 SANITARY SEWER PROFILES - SHAGBARK DR (WEST) & FORESTRY ROAD	●	●		
SHEET C-4.5 SANITARY SEWER PROFILES - SEDGEVIEW CIRCLE (EAST)	●	●		
SHEET C-4.6 SANITARY SEWER PROFILES - SEDGEVIEW CIRCLE (SOUTH & WEST)	●	●		
SHEET C-4.7 SANITARY SEWER PROFILES - HERITAGE SQ DR & FORESTRY RD (EAST)	●	●		
SHEET C-4.8 SANITARY SEWER PROFILES - IRON OAK LANE & MULBERRY LANE	●	●		
SHEET C-5.1 WATER MAIN PROFILES - SHAGBARK DRIVE (WEST) & FORESTRY ROAD	●	●		
SHEET C-5.2 WATER MAIN PROFILES - SHAGBARK DR (NORTH) & AMERICAN ELM DR (NORTH)	●	●		
SHEET C-5.3 WATER MAIN PROFILES - AMERICAN ELM DRIVE (SOUTH)	●	●		
SHEET C-5.4 WATER MAIN PROFILES - SEDGEVIEW CIRCLE (EAST AND SOUTH)	●	●		
SHEET C-5.5 WATER MAIN PROFILES - SEDGEVIEW CIRCLE (SOUTH, WEST & NORTH)	●	●		
SHEET C-5.6 WATER MAIN PROFILES - SEDGEVIEW CIRCLE (NORTH & EAST)	●	●		
SHEET C-5.7 WATER MAIN PROFILES - SEDGEVIEW COURT	●	●		
SHEET C-5.8 WATER MAIN PROFILES - FORESTRY ROAD	●	●		
SHEET C-5.9 WATER MAIN PROFILES - HERITAGE SQUARE DRIVE	●	●		
SHEET C-5.10 WATER MAIN PROFILES - MULBERRY LANE	●	●		
SHEET C-5.11 WATER MAIN PROFILES - IRON OAK LANE	●	●		
SHEET C-5.12 WATER MAIN PROFILES - HIGHLANDER PARK DRIVE	●	●		
SHEET C-5.13 WATER MAIN PROFILES - MASON ROAD	●	●		
SHEET C-6.1 STORM SEWER PLAN (PHASE 1)	●	●		
SHEET C-6.2 STORM SEWER PLAN (PHASE 2) - (WEST)	●	●		
SHEET C-6.3 STORM SEWER PLAN (PHASE 2) - (EAST)	●	●		
SHEET C-6.4 STORM SEWER PLAN (PHASE 3)	●	●		
SHEET C-6.5 STORM SEWER PLAN (PHASE 4)	●	●		
SHEET C-6.6 STORM SEWER PLAN (PHASE 5)	●	●		
SHEET C-6.7 STORM SEWER PLAN (PHASE 6)	●	●		
SHEET C-6.8 STORM SEWER PLAN (OFFSITE) - HIGHLANDER PARK DRIVE	●	●		
SHEET C-6.9 STORM SEWER AND ROAD PLAN & PROFILE - HERITAGE SQUARE DRIVE	●	●		
SHEET C-6.10 STORM SEWER AND ROAD PLAN & PROFILE - SEDGEVIEW CIRCLE (NORTH)	●	●		
SHEET C-6.11 STORM SEWER AND ROAD PLAN & PROFILE - SEDGEVIEW COURT	●	●		
SHEET C-6.12 STORM SEWER AND ROAD PLAN & PROFILE - SEDGEVIEW CIRCLE (EAST)	●	●		
SHEET C-6.13 STORM SEWER AND ROAD PLAN & PROFILE - SEDGEVIEW CIRCLE (WEST)	●	●		
SHEET C-6.14 STORM SEWER AND ROAD PLAN & PROFILE - FORESTRY ROAD (WEST)	●	●		
SHEET C-6.15 STORM SEWER AND ROAD PLAN & PROFILE - FORESTRY ROAD (EAST)	●	●		

SHEET INDEX

PLAN SUBMITTALS

	PLAN SUBMITTALS		INCLUDED SHEETS	
	5/09/2024	9/18/2024		
UTILITY - CONTINUED				
SHEET C-6.16 STORM SEWER AND ROAD PLAN & PROFILE - SEDGEVIEW CIRCLE (SOUTH)	●	●		
SHEET C-6.17 STORM SEWER AND ROAD PLAN & PROFILE - AMERICAN ELM DRIVE	●	●		
SHEET C-6.18 STORM SEWER AND ROAD PLAN & PROFILE - MULBERRY LANE	●	●		
SHEET C-6.19 STORM SEWER AND ROAD PLAN & PROFILE - SHAGBARK DRIVE (WEST)	●	●		
SHEET C-6.20 STORM SEWER AND ROAD PLAN & PROFILE - SHAGBARK DRIVE (NORTH)	●	●		
SHEET C-6.21 STORM SEWER AND ROAD PLAN & PROFILE - IRON OAK LANE	●	●		
SHEET C-6.22 STORM SEWER AND ROAD PLAN & PROFILE - HIGHLANDER PARK DRIVE (S)	●	●		
SHEET C-6.23 STORM SEWER AND ROAD PLAN & PROFILE - HIGHLANDER PARK DRIVE (N)	●	●		
SHEET C-6.24 STORM SEWER PROFILES	●	●		
SHEET C-6.25 STORM SEWER PROFILES	●	●		
SHEET C-6.26 STORM SEWER PROFILES	●	●		
SHEET C-6.27 STORM SEWER PROFILES	●	●		
SHEET C-6.28 STORM SEWER PROFILES	●	●		
SHEET C-6.29 STORM SEWER PROFILES	●	●		
SHEET C-6.30 STORM SEWER PROFILES	●	●		
SHEET C-6.31 STORM SEWER PROFILES	●	●		
SHEET C-6.32 STORM SEWER PROFILES	●	●		
GRADING				
SHEET C-7.1 GRADING PLAN (PHASE 1)	●	●		
SHEET C-7.2 GRADING PLAN (PHASE 2 - WEST)	●	●		
SHEET C-7.3 GRADING PLAN (PHASE 2 - EAST)	●	●		
SHEET C-7.4 GRADING PLAN (PHASE 3)	●	●		
SHEET C-7.5 GRADING PLAN (PHASE 4)	●	●		
SHEET C-7.6 GRADING PLAN (PHASE 5)	●	●		
SHEET C-7.7 GRADING PLAN (PHASE 6)	●	●		
SHEET C-7.8 GRADING PLAN - HIGHLANDER PARK DR (PHASE 2)	●	●		
SOIL EROSION & SEDIMENTATION CONTROL (SESC)				
SHEET C-8.1 SESC PLAN - PHASE 1 ONLY	●	●		
SHEET C-8.2 LDC SESC NOTES AND DETAILS	●	●		
SHEET C-8.3 LDC SESC DETAILS	●	●		
STORM WATER MANAGEMENT				
SHEET C-9.0 EAST POND DRAINAGE AREA PLAN	●	●		
SHEET C-9.1 EAST POND DRAINAGE AREA CALCS	●	●		
SHEET C-9.2 EAST POND STORM SEWER CALCS	●	●		
SHEET C-9.3 EAST POND DETENTION BASIN CALCS	●	●		
SHEET C-9.4 EAST POND DETENTION BASIN DETAILS	●	●		
SHEET C-9.5 WEST POND DRAINAGE AREA PLAN	●	●		
SHEET C-9.6 WEST POND DRAINAGE AREA CALCS	●	●		
SHEET C-9.7 WEST POND DRAINAGE AREA CALCS	●	●		
SHEET C-9.8 WEST POND STORM SEWER CALCS	●	●		
SHEET C-9.9 WEST POND DETENTION BASIN CALCS	●	●		
SHEET C-9.10 WEST POND DETENTION BASIN DETAILS	●	●		
ROAD PLANS				
SHEET C-10.0 TYPICAL COUNTY ROAD SECTIONS	●	●		
SHEET C-10.1 EXISTING CONDITIONS, REMOVAL & CONSTRUCTION PLAN - BURKHART ROAD	●	●		
SHEET C-10.2 EXISTING CONDITIONS, REMOVAL & CONSTRUCTION PLAN - MASON ROAD	●	●		
SHEET C-10.3 GRADING PLAN - BURKHART ROAD	●	●		
SHEET C-10.4 GRADING PLAN - MASON ROAD	●	●		
SHEET C-10.5 MAINTENANCE OF TRAFFIC PLAN - BURKHART ROAD	●	●		
SHEET C-10.6 MAINTENANCE OF TRAFFIC PLAN - MASON ROAD	●	●		
SHEET C-10.7 PAVEMENT MARKING AND SIGNAGE PLAN - BURKHART ROAD	●	●		
SHEET C-10.8 PAVEMENT MARKING AND SIGNAGE PLAN - MASON ROAD	●	●		
DETAILS				
SHEET C-11.0 MISCELLANEOUS DETAILS	●	●		
SHEET C-11.1 MISCELLANEOUS DETAILS	●	●		
SPECIFICATIONS				
SHEET C-12.0 SPECIFICATIONS	●	●		
SHEET C-12.1 SPECIFICATIONS	●	●		
LANDSCAPE				
SHEET LS-1 OVERALL LANDSCAPE PLAN VIEW	●	●		
SHEET LS-2 PLANTING DETAIL PLAN (SINGLE FAMILY)	●	●		
SHEET LS-3 PLANTING DETAIL PLAN (SINGLE FAMILY)	●	●		
SHEET LS-4 PLANTING DETAIL PLAN (DETENTION POND)	●	●		
SHEET LS-5 PLANTING DETAIL PLAN (SOD AND SEEDING)	●	●		
DTE LIGHTING				
SHEET 1-6 DTE LIGHTING PLANS	●	●		

HOWELL TOWNSHIP, MHOG, LIVINGSTON COUNTY STANDARD DETAILS

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THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT :

M/I HOMES OF MICHIGAN, L.L.C.

40950 WOODWARD AVE
SUITE 203
BLOOMFIELD HILLS, MI 48304
POC: DAVID STRAUB
(248)-221-5011

SHEET INDEX

HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

PLAN SUBMITTALS/REVISIONS	DATE
SITE PLAN SUBMITTAL	05/09/2024
PHASE 1 FINAL SITE PLAN SUBMITTAL	09/18/2024

ORIGINAL ISSUE DATE: 5/09/2024

PROJECT NO: 21-075C

SCALE: N/A

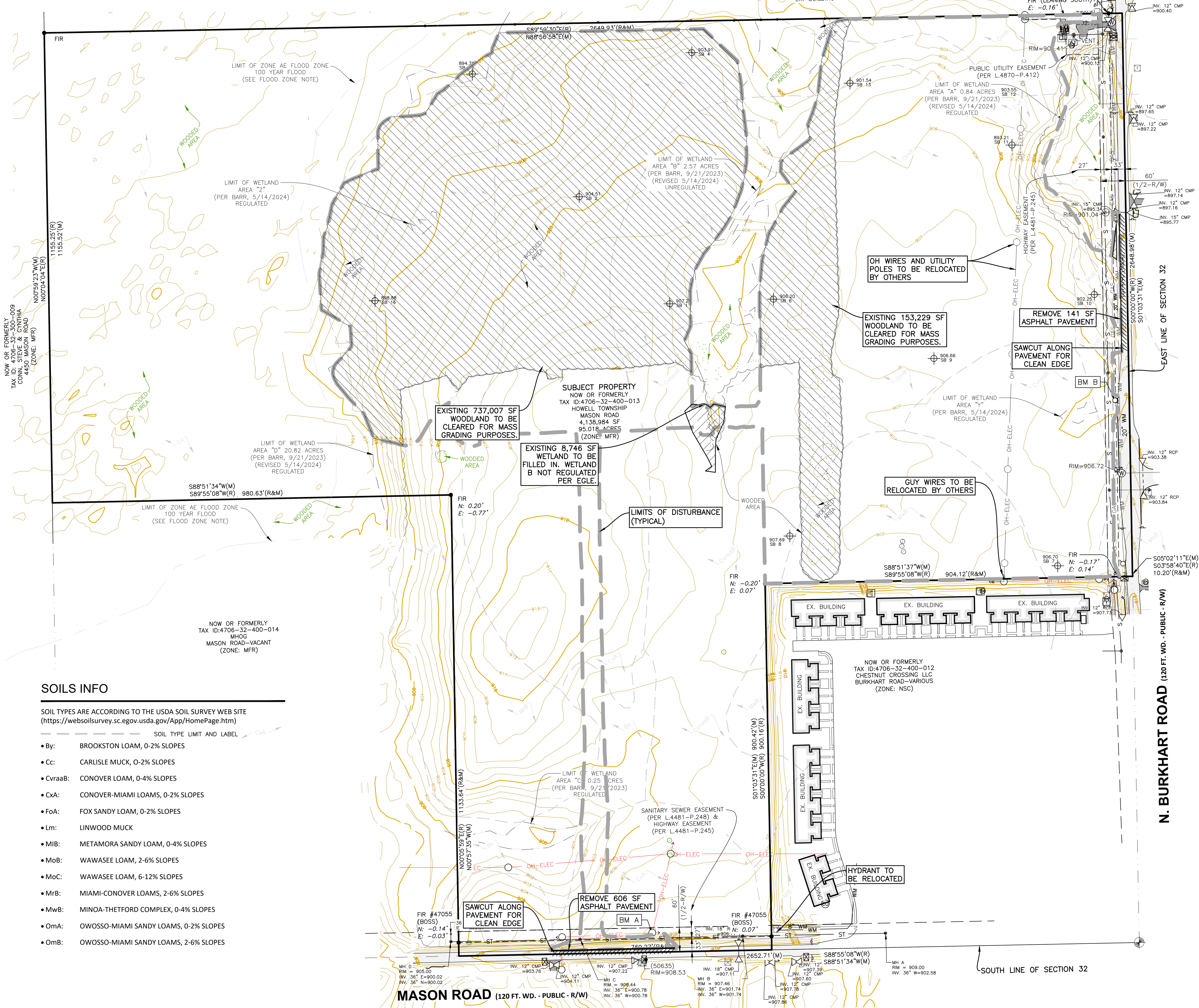
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DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

G-11

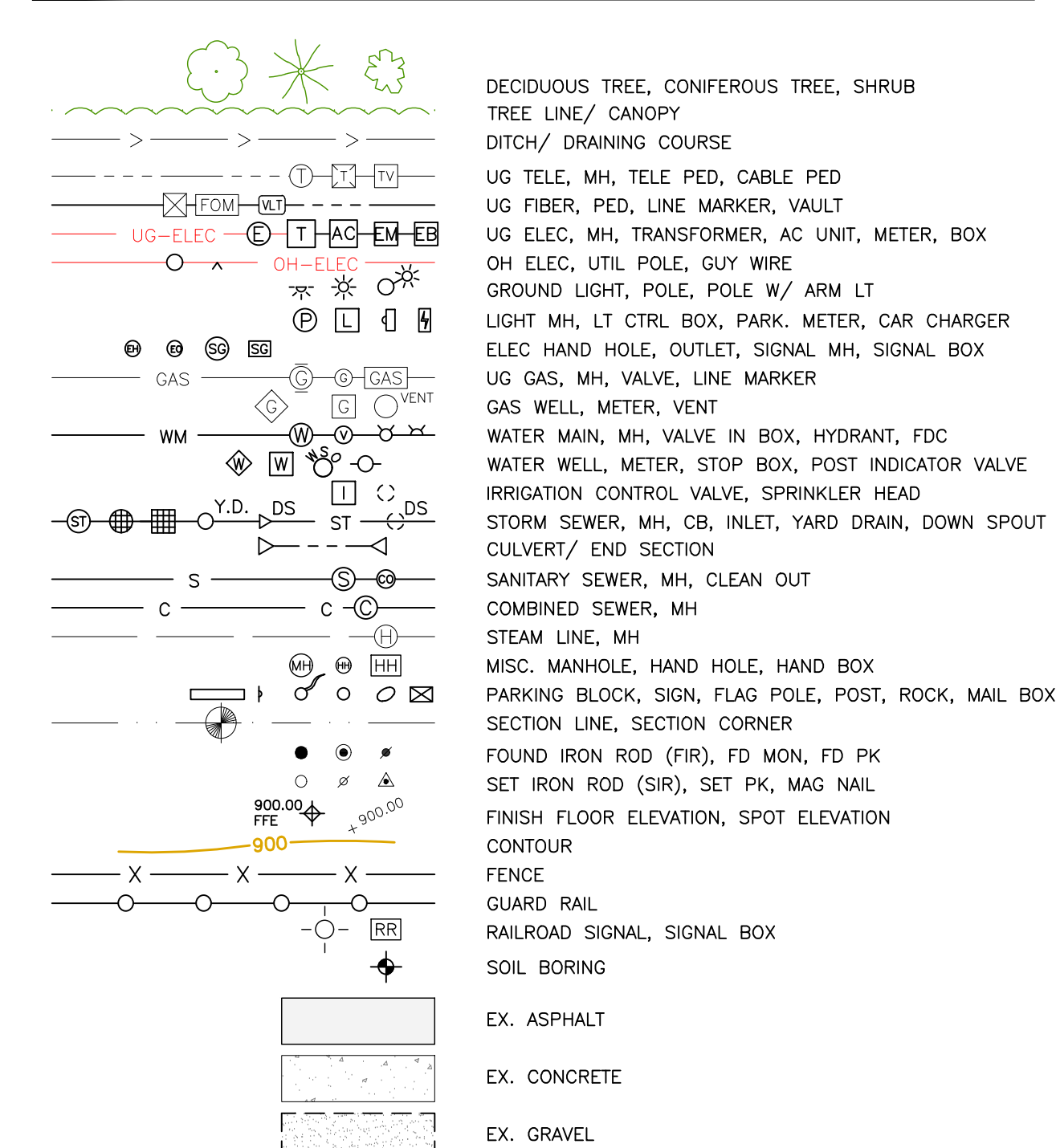
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WETLAND NOTE

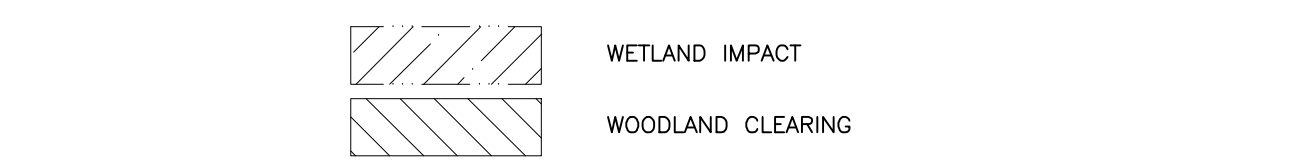
ACCORDING TO THE NATIONAL WETLAND INVENTORY WEBSITE (HTTP:WWW.FWS.GOV/WETLANDSDATAMAPPER.HTML), THERE ARE NOTED WETLANDS ON THE SUBJECT PARCEL. WETLAND LIMITS IDENTIFIED ON THE TOPO ARE PER WETLAND FLAGGING PERFORMED BY BARR ENGINEERING ON SEPTEMBER 21, 2023. EGLE PERFORMED AN ON-SITE WIP REVIEW ON 5/13/2024, VERIFYING ALL WETLAND BOUNDARIES AND REGULATED STATUS AS NOTED ON PLAN BELOW.



EXISTING LEGEND



REMOVAL LEGEND



FLOOD ZONE

FEMA MAP SCALES DO NOT SUPPLY SUFFICIENT LEVEL OF DETAIL TO PLOT ACCURATELY. ZONES IF PLOTTED HEREIN ARE APPROXIMATE.

BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY APPEARS TO LIE PARTIALLY IN ZONE (X) AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN AND ALSO PARTIALLY IN ZONE (AE) THE 1% ANNUAL CHANCE FLOOD (100 YEAR FLOOD), ALSO KNOWN AS THE BASE FLOOD, IS THE FLOOD THAT HAS A 1% CHANCE OF BEING EQUALLED OR EXCEEDED IN ANY GIVEN YEAR. THE SPECIAL FLOOD HAZARD AREA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. AREAS OF SPECIAL FLOOD HAZARD MAY INCLUDE ZONES A, AE, AH, AO, A99, V AND VE. THE BASE FLOOD ELEVATION IS THE WATER-SURFACE ELEVATION OF THE 1% ANNUAL CHANCE FLOOD; BASED FLOOD ELEVATIONS DETERMINED ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR THE COUNTY OF LIVINGSTON, COMMUNITY PANEL NO. (26093C0282D) & (26093C0301D), BOTH WITH EFFECTIVE DATE 9/17/2008.

UTILITY REFERENCES

WM: RECEIVED:	MARION, HOWELL, OCEOLA & GENOA TOWNSHIPS (MHOG) 8/16/21
SAN: RECEIVED:	MARION, HOWELL, OCEOLA & GENOA TOWNSHIPS (MHOG) 8/16/21
STORM: RECEIVED:	MARION, HOWELL, OCEOLA & GENOA TOWNSHIPS (MHOG) 8/16/21
GAS: RECEIVED:	CONSUMERS ENERGY N/A
ELEC: RECEIVED:	DETROIT EDISON N/A
PHONE/CABLE: RECEIVED:	AT&T ~ CHARTER ~ COMCAST N/A ~ N/A ~ N/A

UTILITY NOTES

- MISS DIG WAS NOT PERFORMED AT TIME OF SURVEY.
- ANY UTILITIES SHOWN ARE FROM ABOVE GROUND VISIBILITY AND ANY PLANS PROVIDED.
- THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

BENCHMARKS

DATUM: NAVD88
 BM A: SET BENCH TIE IN S/SIDE OF UTILITY POLE ON NORTH SIDE OF MASON ROAD 290± WEST OF EAST PROPERTY LINE. ELEV = 909.83
 BM B: ARROW ON HYDRANT ON WEST SIDE OF BURKHART ROAD 430± NORTH OF SOUTH PROPERTY LINE. ELEV = 906.59

SOILS INFO

SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm)

- By: BROOKSTON LOAM, 0-2% SLOPES
- Cc: CARLISLE MUCK, 0-2% SLOPES
- CvraaB: CONOVER LOAM, 0-4% SLOPES
- CxA: CONOVER-MIAMI LOAMS, 0-2% SLOPES
- FoA: FOX SANDY LOAM, 0-2% SLOPES
- Lm: LINWOOD MUCK
- MIB: METAMORA SANDY LOAM, 0-4% SLOPES
- MoB: WAWASEE LOAM, 2-6% SLOPES
- MoC: WAWASEE LOAM, 6-12% SLOPES
- MrB: MIAMI-CONOVER LOAMS, 2-6% SLOPES
- MwB: MINOA-THETFORD COMPLEX, 0-4% SLOPES
- OmA: OWOSSO-MIAMI SANDY LOAMS, 0-2% SLOPES
- OmB: OWOSSO-MIAMI SANDY LOAMS, 2-6% SLOPES

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KEVIN C. McDEVITT
 ENGINEER
 NO. 6201043260

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M/I HOMES OF MICHIGAN, L.L.C.
 40950 WOODWARD AVE SUITE 203 BLOOMFIELD HILLS, MI 48304
 POC: DAVID STRAUB (248)-221-5011

TOPO SURVEY AND DEMO PLAN
 HERITAGE SQUARE (SINGLE FAMILY)
 95 AC. NW CORNER BURKHART & MASON ROADS PART OF THE SE 1/4 OF SEC. 32, T3N, R4E, HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL
08/18/2024	

ORIGINAL ISSUE DATE: 5/09/2024

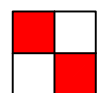
PROJECT NO: 21-075C

SCALE: 1" = 120'

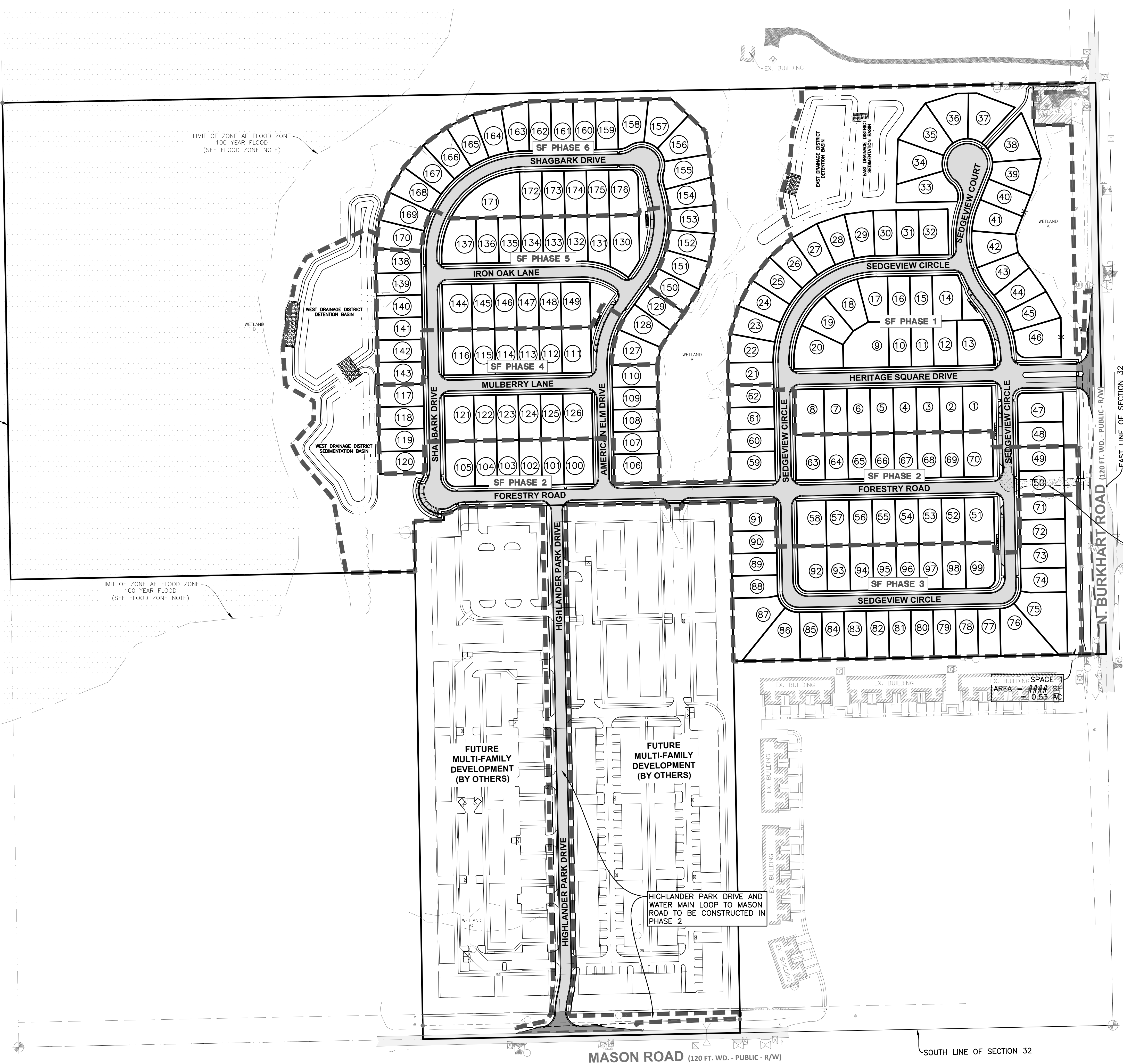
FIELD: DRAWN BY: DC,MM,CK,DJ
 DESIGN BY: KM
 CHECK BY: KM

V-10

NOT FOR CONSTRUCTION



NORTH-SOUTH 1/4 LINE OF SECTION 32



DENSITY AND UNIT COUNT

TOTAL SITE AREA: 92 ACRES

NOTE: DENSITY CALCULATIONS FROM APPROVED PUD PLAN. MULTIFAMILY DEVELOPMENT AND SENIOR LIVING BY OTHERS. SEE UNDERLYING PUD PLAN FOR DETAILS.

AREA CURRENTLY ZONED SFR: 26.8 AC (24.0 AC UPLAND)
 AREA CURRENTLY ZONED MFR: 65.2 AC (44.4 AC UPLAND)

OPEN SPACE REQUIRED (27.07.E)
 10% OF TOTAL LAND AREA EXCLUSIVE OF WATER SURFACES
 10% * (68.4 ACRES UPLAND) = 6.84 ACRES

OPEN SPACES PROVIDED = 8.48 ACRES (11.9% OF UPLAND AREA)

ALLOWED DENSITY (27.07.A)
 UPLAND AREA SFR = 24.0 ACRES
 REDUCED 10% FOR REQUIRED OPEN SPACE = 21.6 ACRES
 SFR = 3.0 UNITS/ACRE x 1.25 = 3 x 21.6 x 1.25 = 81 UNITS

UPLAND AREA MFR = 44.4 ACRES
 REDUCED 10% FOR REQUIRED OPEN SPACE = 40 ACRES
 MFR = 12 UNITS/ACRE x 1.25 = 12 x 40 x 1.25 = 600 UNITS

TOTAL ALLOWED UNITS = 681

UNITS PROPOSED

SINGLE FAMILY UNITS: 176 PROPOSED

MULTI-FAMILY UNITS: 288 PROPOSED

- 55 - 3 BR / 2 BA - RANCH STYLE TOWNHOMES
- 81 - 2 BR / 2.5 BA - 2 STORY TOWNHOMES
- 40 - 1 BR / 1 BA - GARDEN STYLE APARTMENTS
- 112 - 3 BR / 2.5 BA - 2 STORY TOWNHOMES W/ GARAGE

3 - STORY SENIOR LIVING BUILDING: APPROX. 90 PROPOSED

TOTAL: 554 RESIDENTIAL UNITS

GATED TEMPORARY EMERGENCY ACCESS DRIVE CONSTRUCTED IN PHASE 1. TO BE REMOVED ONCE HIGHLANDER PARK DRIVE IS CONSTRUCTED AND OPEN TO TRAFFIC IN PHASE 2.

PHASING PLAN

NOTE: FUTURE PHASE SCHEDULES ARE ROUGH ESTIMATES. ACTUAL CONSTRUCTION YEARS DEPENDENT ON MARKET CONDITIONS.

PHASE 1 (2025 CONSTRUCTION)
 SINGLE FAMILY UNITS: 48 HOMES (UNITS 1 - 48)
 ALSO BUILD:
 • BURKHART ROAD ENTRANCE
 • EAST DRAINAGE DISTRICT DETENTION BASIN
 • TEMPORARY GRAVEL EMERGENCY ACCESS ON BURKHART ROAD

PHASE 2 (EST. 2027 CONSTRUCTION)
 SINGLE FAMILY UNITS: 28 HOMES (UNITS 49-76, 100-105)
 ALSO BUILD:
 • HIGHLANDER PARK DRIVE TO MASON ROAD
 • WATER MAIN LOOP FROM FORESTRY DRIVE TO SOUTHEAST CORNER OF MULTI-FAMILY AREA ON MASON ROAD
 • SANITARY, STORM AND WATER MAIN STUBS TO MULTI-FAMILY.
 • WEST DRAINAGE DISTRICT DETENTION BASIN

PHASE 3 (EST. 2028)
 SINGLE FAMILY UNITS: 29 HOMES (UNITS 71-99)

PHASE 4 (EST. 2029)
 SINGLE FAMILY UNITS: 21 HOMES (UNITS 106-126)

PHASE 5 (EST. 2030)
 SINGLE FAMILY UNITS: 23 HOMES (UNITS 127-149)

PHASE 6 (EST. 2031)
 SINGLE FAMILY UNITS: 27 HOMES (UNITS 150-176)

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 ENGINEER
 NO. 6201043260

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CLIENT:

M/I HOMES OF MICHIGAN, L.L.C.
 40950 WOODWARD AVE
 SUITE 203
 BLOOMFIELD HILLS, MI 48304
 POC: DAVID STRAUB
 (248)-221-5011

PHASING PLAN - OVERVIEW

HERITAGE SQUARE (SINGLE FAMILY)
 95 AC. NW CORNER BURKHART & MASON ROADS
 PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
 HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL
09/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE: 5/09/2024

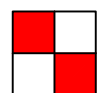
PROJECT NO: 21-075C

SCALE: 1" = 120'

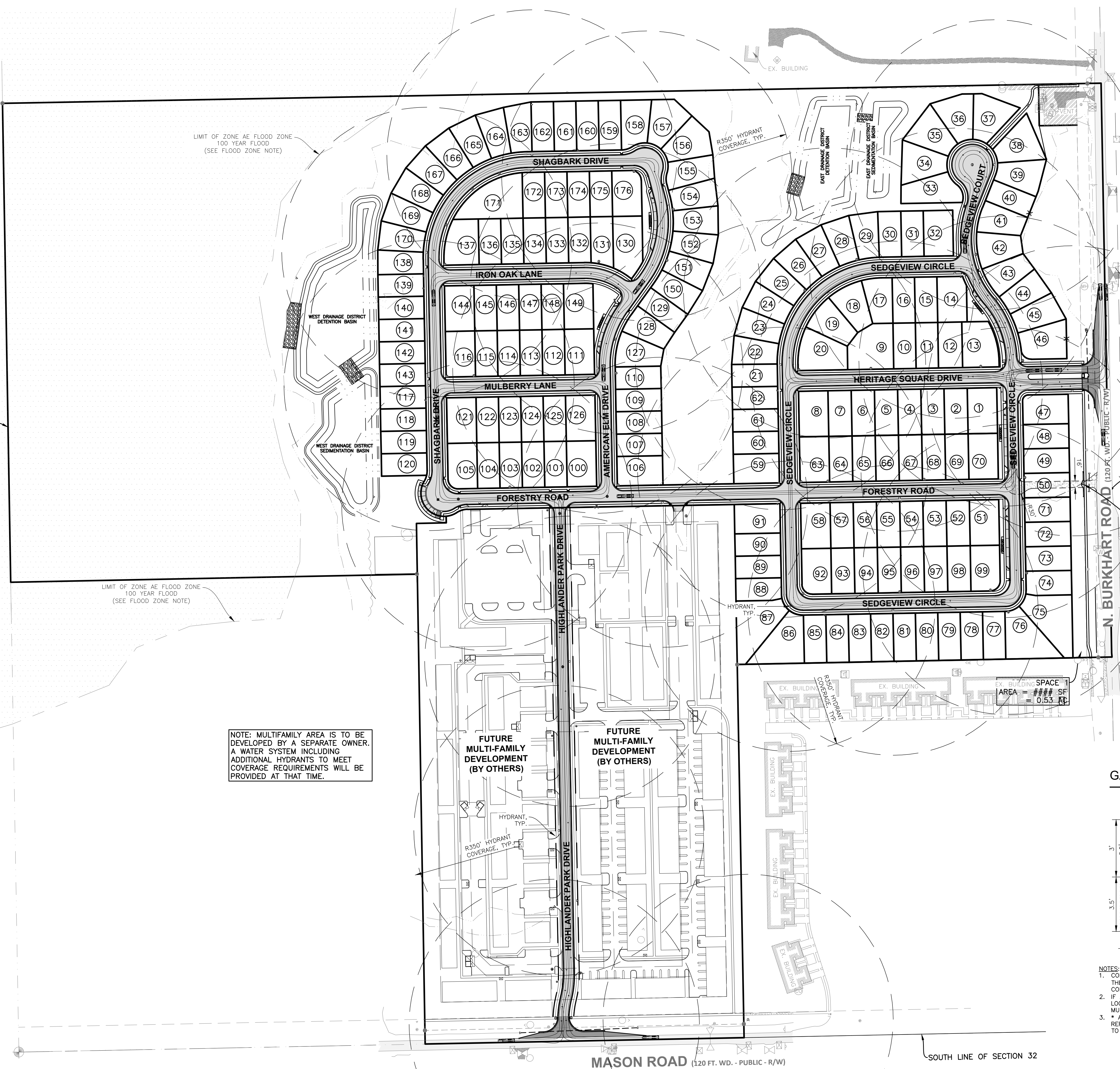
FIELD:
 DRAWN BY: DC,MN,CK,DJ
 DESIGN BY: KM
 CHECK BY: KM

C-0.0

NOT FOR CONSTRUCTION



NORTH-SOUTH 1/4 LINE OF SECTION 32



LIMIT OF ZONE AE FLOOD ZONE 100 YEAR FLOOD (SEE FLOOD ZONE NOTE)

LIMIT OF ZONE AE FLOOD ZONE 100 YEAR FLOOD (SEE FLOOD ZONE NOTE)

NOTE: MULTIFAMILY AREA IS TO BE DEVELOPED BY A SEPARATE OWNER. A WATER SYSTEM INCLUDING ADDITIONAL HYDRANTS TO MEET COVERAGE REQUIREMENTS WILL BE PROVIDED AT THAT TIME.

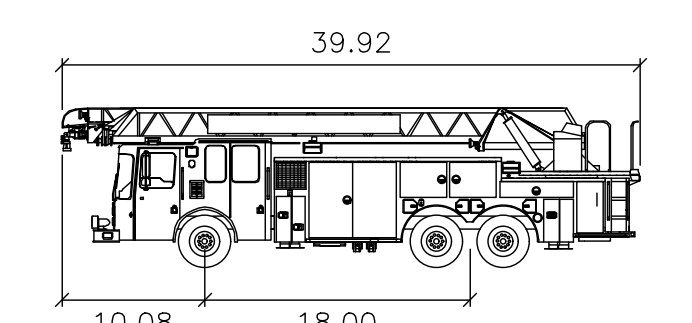
FUTURE MULTI-FAMILY DEVELOPMENT (BY OTHERS)

FUTURE MULTI-FAMILY DEVELOPMENT (BY OTHERS)

MASON ROAD (120 FT. WD. - PUBLIC - R/W)

SOUTH LINE OF SECTION 32

EMERGENCY VEHICLE



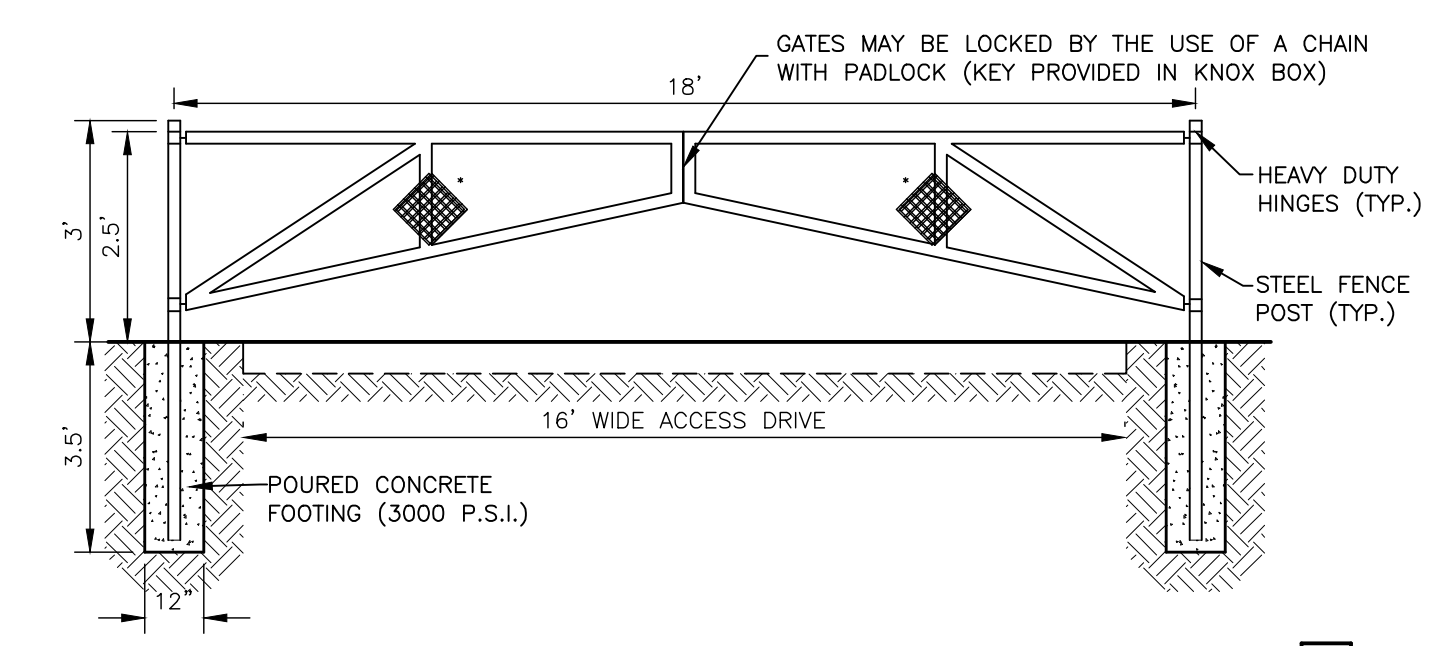
Smeal Aerial RM 100ft
feet
Width : 8.33
Track : 7.92
Lock to Lock Time : 6.0
Steering Angle : 45.0

FIRE PROTECTION NOTES

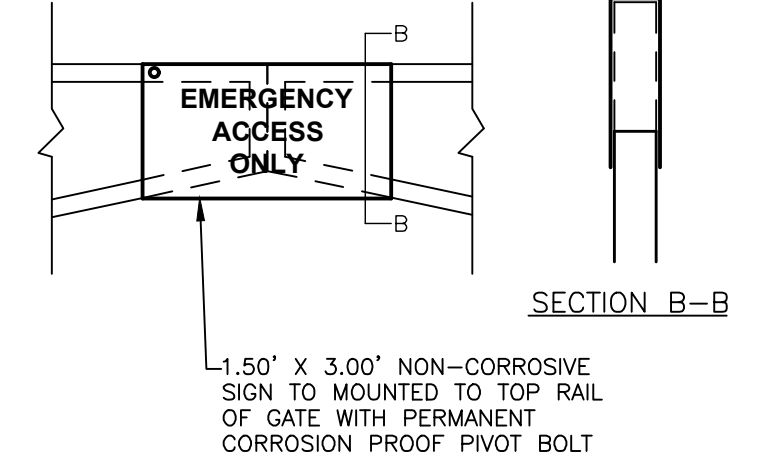
1. PARKING SHALL ONLY BE ALLOWED ON ONE SIDE OF THE INTERNAL STREETS. EACH STREET SHALL HAVE 12"x18" R8-31 "NO PARKING FIRE LANE" SIGNS POSTED AT A MAXIMUM SPACING OF 100 FEET ON THE SIDE OF THE STREET OPPOSITE HYDRANTS.
2. 12"x18" R8-31 "NO PARKING FIRE LANE" SIGNS SHALL BE POSTED ON BOTH SIDES OF THE TEMPORARY EMERGENCY ACCESS ROAD LOCATED THROUGH UNIT 50, OFF NORTH BURKHART ROAD. SIGNS SHALL BE PLACED FACING TRAFFIC AT BOTH ENDS.
3. EMERGENCY ACCESS DRIVE THROUGH UNIT 50 SHALL REMAIN IN SERVICE THROUGHOUT CONSTRUCTION OF PHASES 1 AND 2, UNTIL HIGHLANDER PARK DRIVE TO MASON ROAD HAS BEEN OPENED TO TRAFFIC.
4. NO OCCUPANCY SHALL BE ALLOWED FOR ANY UNITS BEYOND PHASE 1 UNTIL HIGHLANDER PARK DRIVE IS OPEN TO TRAFFIC. ONCE HIGHLANDER PARK DRIVE IS OPEN TO TRAFFIC, THE CONTRACTOR SHALL REMOVE THE EMERGENCY ACCESS DRIVE (EXCEPT FOR THE APPROACH AND CULVERT, WHICH SHALL REMAIN IN PLACE FOR MHOG AND FIRE AUTHORITY USE).
5. A EMERGENCY ALERT TORNADO SIREN SHALL BE INSTALLED WITHIN THE PARK AT THE INTERSECTION OF FORESTRY ROAD AND SHAGBARK DRIVE. LOCATION OF THE SIREN SHALL BE COORDINATED WITH THE FIRE MARSHAL AND HOWELL TOWNSHIP.
6. A KNOX BOX SHALL BE MOUNTED TO THE EMERGENCY ENTRANCE GATE.

GATED TEMPORARY EMERGENCY ACCESS DRIVE CONSTRUCTED IN PHASE 1. TO BE REMOVED ONCE HIGHLANDER PARK DRIVE IS CONSTRUCTED AND OPEN TO TRAFFIC IN PHASE 2.

GATE DETAIL - EMERGENCY - ACCESS



- NOTES:
1. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO THE CITY/TOWNSHIP FOR APPROVAL PRIOR TO CONSTRUCTION.
 2. IF A LOCKED GATE IS DESIRED (OPTIONAL), LOCKING MECHANISMS MUST BE APPROVED BY MUNICIPALITY FIRE DEPARTMENT.
 3. * AT EACH LOCATION, 2-12"x12" RED REFLECTORIZED DIAMOND PANELS, PLACED BACK TO BACK.



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FIRE PROTECTION PLAN

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DATE	DESCRIPTION
05/09/2024	SITE PLAN SUBMITTAL
09/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE: 5/09/2024

PROJECT NO: 21-075C

SCALE: 1" = 120'

FIELD:
DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-01

NOT FOR CONSTRUCTION



PAVEMENT LEGEND

- EX. ASPHALT
- EX. CONCRETE
- EX. GRAVEL
- PR. STANDARD DUTY ASPHALT
- PR. CONCRETE
- STANDARD CURB AND GUTTER
- STRAIGHT CURB
- PROPOSED CLUSTER MAILBOX

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SITE PLAN - PUD OVERVIEW

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PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

DATE	REVISIONS
05/09/2024	PLAN SUBMITTAL
09/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE: 5/09/2024

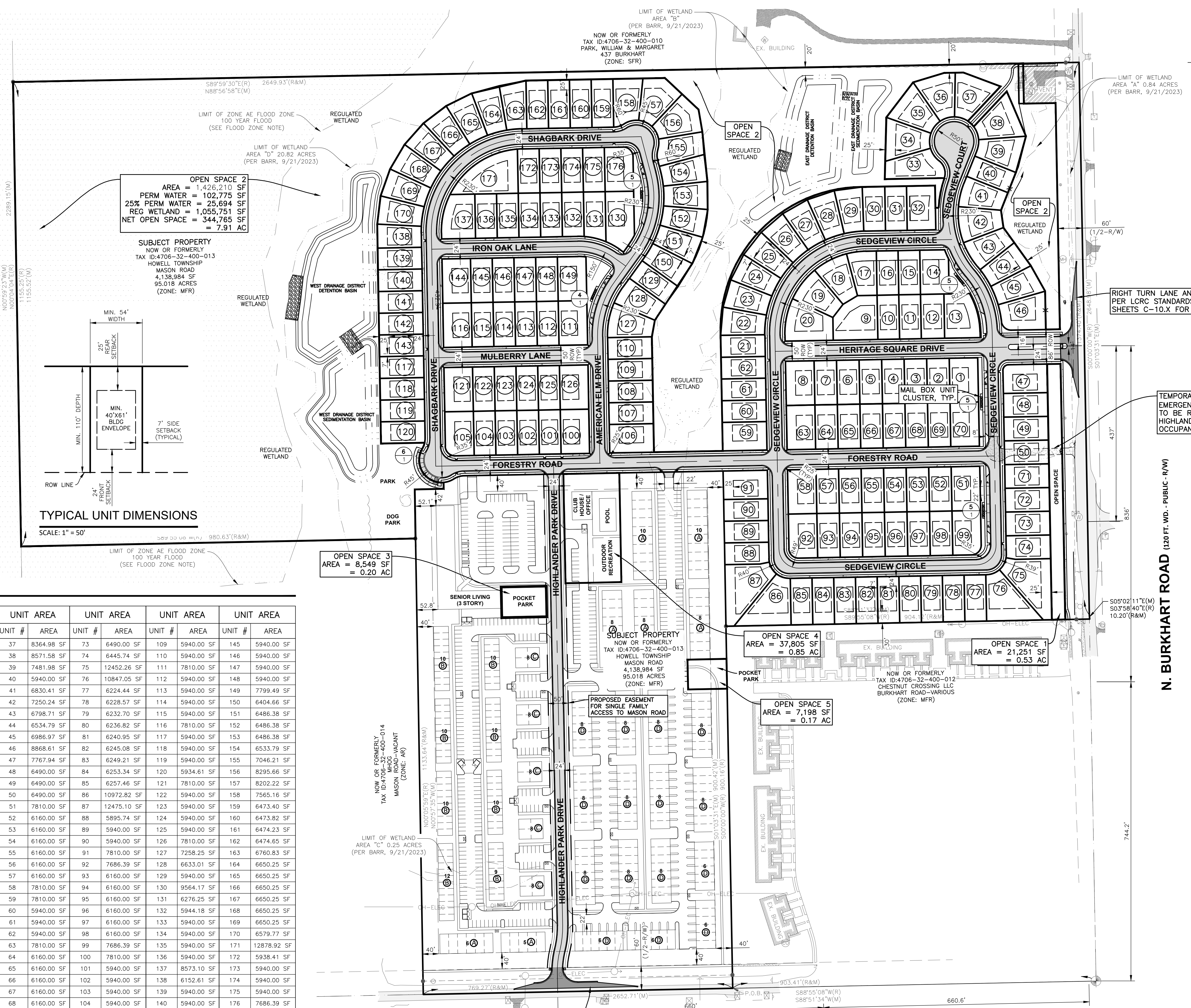
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FIELD: DRAWN BY: DC,MM,CK,DJ
DESIGN BY: KM
CHECK BY: KM

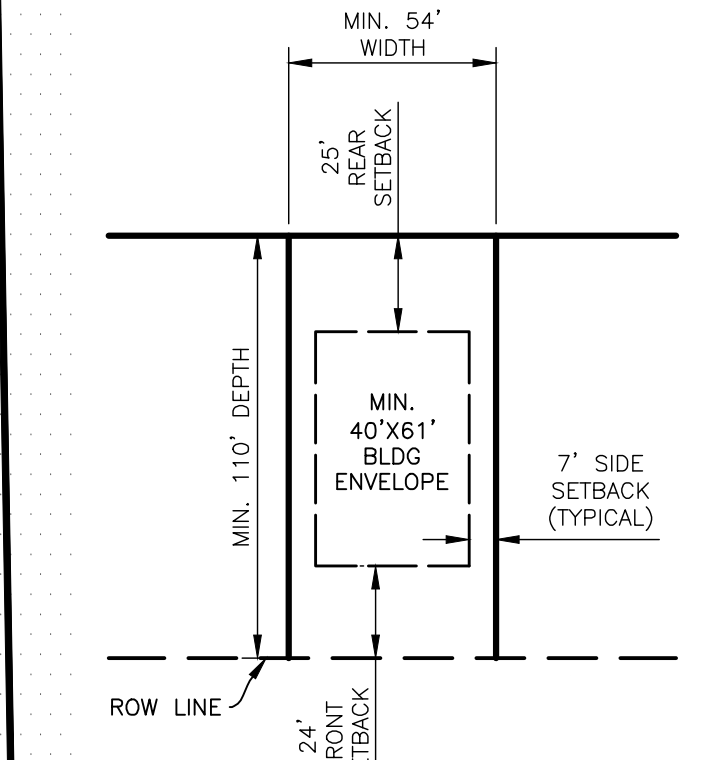
C-10

NOT FOR CONSTRUCTION



OPEN SPACE 2
AREA = 1,426,210 SF
PERM WATER = 102,775 SF
25% PERM WATER = 25,694 SF
REG WETLAND = 1,055,751 SF
NET OPEN SPACE = 344,765 SF
= 7.91 AC

SUBJECT PROPERTY
NOW OR FORMERLY
TAX ID: 4706-32-400-013
HOWELL TOWNSHIP
MASON ROAD
4,138,984 SF
95.018 ACRES
(ZONE: MFR)



TYPICAL UNIT DIMENSIONS
SCALE: 1" = 50'

OPEN SPACE 3
AREA = 8,549 SF
= 0.20 AC

OPEN SPACE 4
AREA = 37,805 SF
= 0.85 AC

OPEN SPACE 1
AREA = 21,251 SF
= 0.53 AC

OPEN SPACE 5
AREA = 7,198 SF
= 0.17 AC

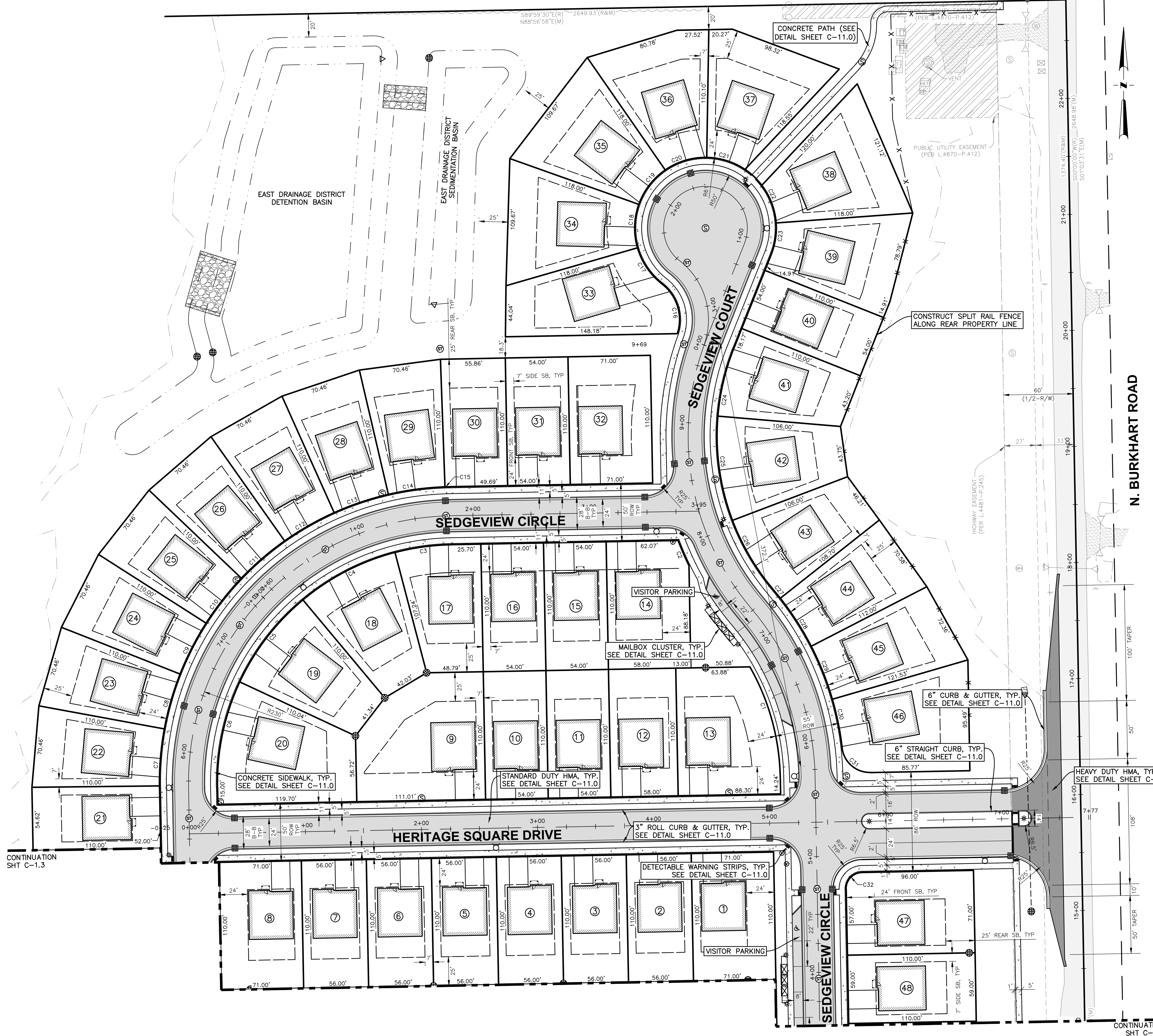
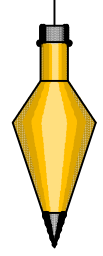
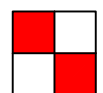
RIGHT TURN LANE AND TAPER
PER LCRC STANDARDS. SEE
SHEETS C-10.X FOR DETAILS.

TEMPORARY GATED SECONDARY GRAVEL
EMERGENCY ACCESS (ONLY FOR PHASE 1).
TO BE REMOVED UPON COMPLETION OF
HIGHLANDER PARK DRIVE AND PRIOR TO
OCCUPANCY OF PHASE 2 UNITS.

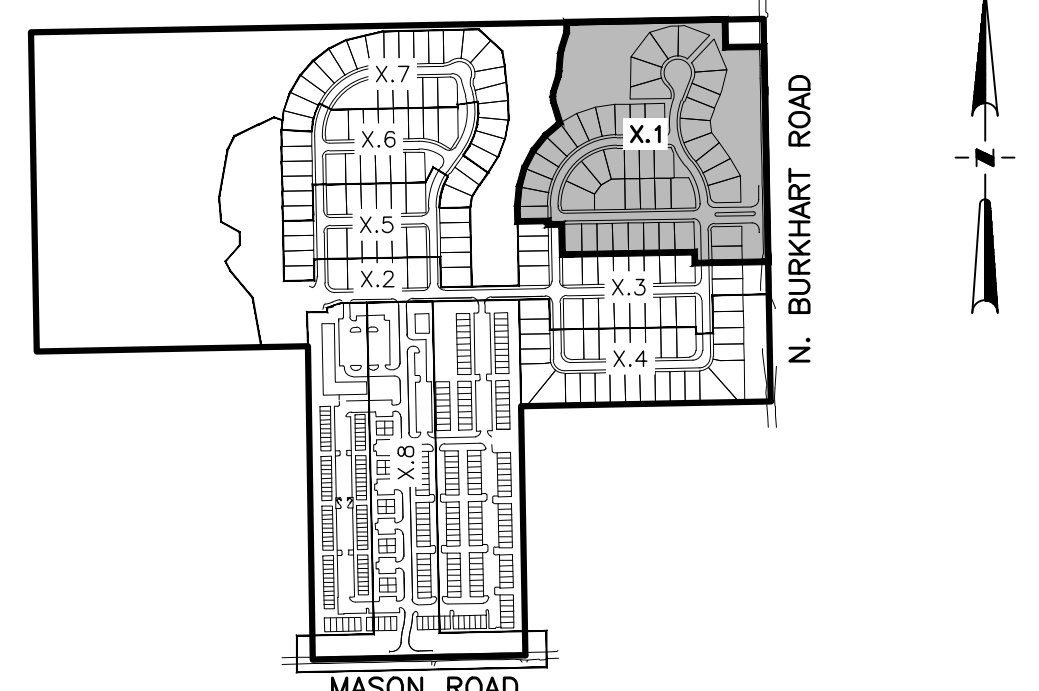
RIGHT TURN LANE AND TAPER
PER LCRC STANDARDS. SEE
SHEETS C-10.X FOR DETAILS.

UNIT AREAS

UNIT #	AREA	UNIT #	AREA	UNIT #	AREA	UNIT #	AREA	UNIT #	AREA
1	7810.00 SF	37	8364.98 SF	73	6490.00 SF	109	5940.00 SF	145	5940.00 SF
2	6160.00 SF	38	8571.58 SF	74	6445.74 SF	110	5940.00 SF	146	5940.00 SF
3	6160.00 SF	39	7481.98 SF	75	12452.26 SF	111	7810.00 SF	147	5940.00 SF
4	6160.00 SF	40	5940.00 SF	76	10847.05 SF	112	5940.00 SF	148	5940.00 SF
5	6160.00 SF	41	6830.41 SF	77	6224.44 SF	113	5940.00 SF	149	7799.49 SF
6	6160.00 SF	42	7250.24 SF	78	6228.57 SF	114	5940.00 SF	150	6404.66 SF
7	6160.00 SF	43	6798.71 SF	79	6232.70 SF	115	5940.00 SF	151	6486.38 SF
8	7810.00 SF	44	6534.79 SF	80	6236.82 SF	116	7810.00 SF	152	6486.38 SF
9	10872.09 SF	45	6986.97 SF	81	6240.95 SF	117	5940.00 SF	153	6486.38 SF
10	5940.00 SF	46	8868.61 SF	82	6245.08 SF	118	5940.00 SF	154	6533.79 SF
11	5940.00 SF	47	7767.94 SF	83	6249.21 SF	119	5940.00 SF	155	7046.21 SF
12	6380.00 SF	48	6490.00 SF	84	6253.34 SF	120	5934.61 SF	156	8295.66 SF
13	8953.35 SF	49	6490.00 SF	85	6257.46 SF	121	7810.00 SF	157	8202.22 SF
14	7708.24 SF	50	6490.00 SF	86	10972.82 SF	122	5940.00 SF	158	7565.16 SF
15	5940.00 SF	51	7810.00 SF	87	12475.10 SF	123	5940.00 SF	159	6473.40 SF
16	5940.00 SF	52	6160.00 SF	88	5895.74 SF	124	5940.00 SF	160	6473.82 SF
17	6740.01 SF	53	6160.00 SF	89	5940.00 SF	125	5940.00 SF	161	6474.23 SF
18	7246.25 SF	54	6160.00 SF	90	5940.00 SF	126	7810.00 SF	162	6474.65 SF
19	7303.38 SF	55	6160.00 SF	91	7810.00 SF	127	7258.25 SF	163	6760.83 SF
20	9574.50 SF	56	6160.00 SF	92	7686.39 SF	128	6633.01 SF	164	6650.25 SF
21	5964.47 SF	57	6160.00 SF	93	6160.00 SF	129	5940.00 SF	165	6650.25 SF
22	6512.90 SF	58	7810.00 SF	94	6160.00 SF	130	9564.17 SF	166	6650.25 SF
23	6512.90 SF	59	7810.00 SF	95	6160.00 SF	131	6276.25 SF	167	6650.25 SF
24	6512.90 SF	60	5940.00 SF	96	6160.00 SF	132	5944.18 SF	168	6650.25 SF
25	6512.90 SF	61	5940.00 SF	97	6160.00 SF	133	5940.00 SF	169	6650.25 SF
26	6512.90 SF	62	5940.00 SF	98	6160.00 SF	134	5940.00 SF	170	6579.77 SF
27	6512.90 SF	63	7810.00 SF	99	7686.39 SF	135	5940.00 SF	171	12878.92 SF
28	6512.90 SF	64	6160.00 SF	100	7810.00 SF	136	5940.00 SF	172	5938.41 SF
29	6512.90 SF	65	6160.00 SF	101	5940.00 SF	137	8573.10 SF	173	5940.00 SF
30	6040.82 SF	66	6160.00 SF	102	5940.00 SF	138	6152.61 SF	174	5940.00 SF
31	5940.00 SF	67	6160.00 SF	103	5940.00 SF	139	5940.00 SF	175	5940.00 SF
32	7810.00 SF	68	6160.00 SF	104	5940.00 SF	140	5940.00 SF	176	7686.39 SF
33	8404.92 SF	69	6160.00 SF	105	7686.39 SF	141	5940.00 SF		
34	8184.99 SF	70	7810.00 SF	106	7810.00 SF	142	5940.00 SF		
35	8184.99 SF	71	6490.00 SF	107	5940.00 SF	143	5940.00 SF		
36	8076.40 SF	72	6490.00 SF	108	5940.00 SF	144	7810.00 SF		



SHEET KEY



PAVEMENT LEGEND

- EX. ASPHALT
- EX. CONCRETE
- EX. GRAVEL
- PR. STANDARD DUTY ASPHALT
- PR. HEAVY DUTY ASPHALT
- PR. CONCRETE
- PR. GRAVEL
- STANDARD CURB AND GUTTER
- REVERSE CURB AND GUTTER

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	CHORD
C1	99.86'	200.00'	28°36'24"	S15°21'43"E 98.82'
C2	23.59'	255.00'	5°18'01"	S23°19'02"E 23.58'
C3	48.87'	205.00'	13°39'31"	N82°06'43"E 48.75'
C4	89.94'	205.00'	25°08'16"	N62°42'50"E 89.22'
C5	89.95'	205.00'	25°08'23"	N37°34'31"E 89.23'
C6	93.26'	205.00'	26°03'51"	N11°58'24"E 92.45'
C7	49.30'	255.00'	11°04'40"	N04°53'28"E 49.23'
C8	49.30'	255.00'	11°04'40"	N15°58'08"E 49.23'
C9	49.30'	255.00'	11°04'40"	N27°02'47"E 49.23'
C10	49.30'	255.00'	11°04'40"	N38°07'27"E 49.23'
C11	49.30'	255.00'	11°04'40"	N49°12'07"E 49.23'
C12	49.30'	255.00'	11°04'40"	N60°16'47"E 49.23'
C13	49.30'	255.00'	11°04'40"	N71°21'27"E 49.23'
C14	49.30'	255.00'	11°04'40"	N82°26'07"E 49.23'
C15	4.31'	255.00'	0°58'03"	N88°27'28"E 4.31'
C16	47.67'	39.00'	70°02'01"	N17°06'40"W 44.76'
C17	38.36'	61.00'	36°01'51"	N34°06'45"W 37.73'
C18	37.98'	61.00'	35°40'39"	N01°44'30"E 37.37'
C19	37.98'	61.00'	35°40'39"	N37°25'09"E 37.37'
C20	37.98'	61.00'	35°40'39"	N73°05'48"E 37.37'
C21	35.00'	61.00'	32°52'26"	S72°37'40"E 34.52'
C22	35.26'	61.00'	33°07'22"	S20°45'31"E 34.78'
C23	27.56'	61.00'	25°53'26"	S08°44'53"W 27.33'
C24	60.45'	205.00'	16°53'44"	S13°14'44"W 60.23'
C25	91.34'	205.00'	25°31'41"	S07°57'59"E 90.58'
C26	70.22'	205.00'	19°37'29"	S30°32'34"E 69.87'
C27	9.00'	255.00'	2°01'23"	S39°20'37"E 9.00'
C28	49.28'	255.00'	11°04'26"	S32°47'43"E 49.21'
C29	49.28'	255.00'	11°04'26"	S21°43'18"E 49.21'
C30	42.83'	255.00'	9°37'21"	S11°22'24"E 42.78'
C31	35.39'	24.00'	84°29'47"	S48°48'37"E 32.27'
C32	21.99'	14.00'	90°00'00"	N43°56'29"E 19.80'

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DIMENSION AND PAVING PLAN PH1

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05/09/2024	PLAN SUBMITTAL / REVISIONS
08/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE:
5/09/2024

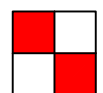
PROJECT NO: 21-075C

SCALE: 1" = 40'

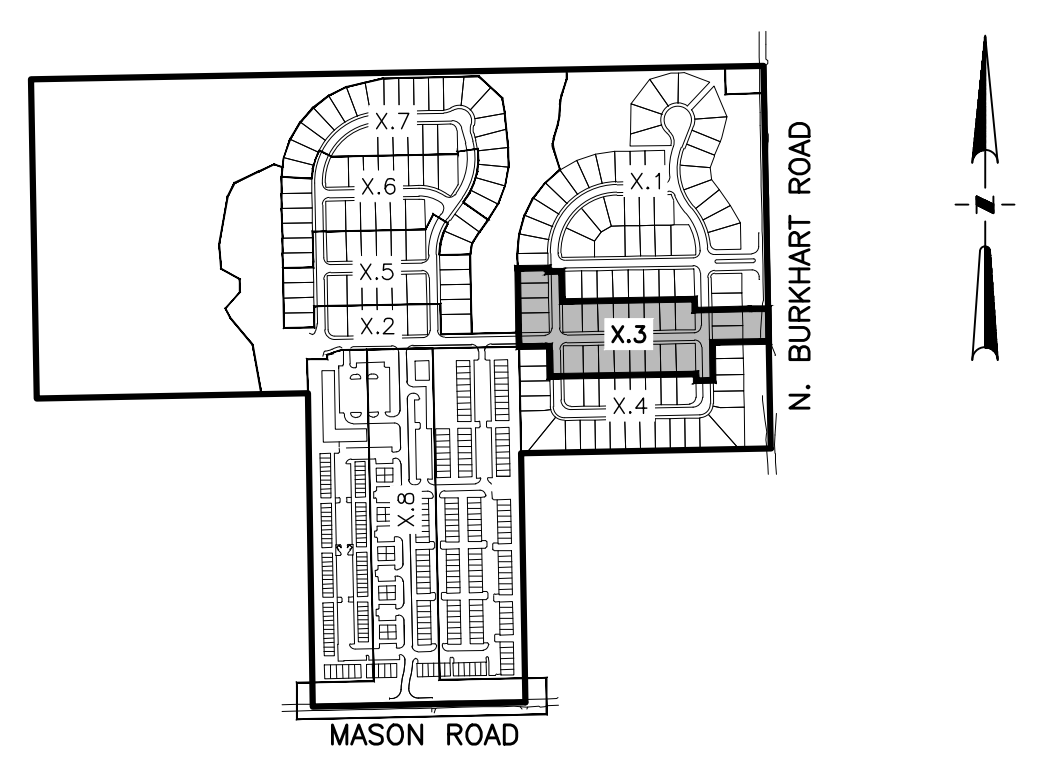
FIELD:
DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-11

NOT FOR CONSTRUCTION



SHEET KEY

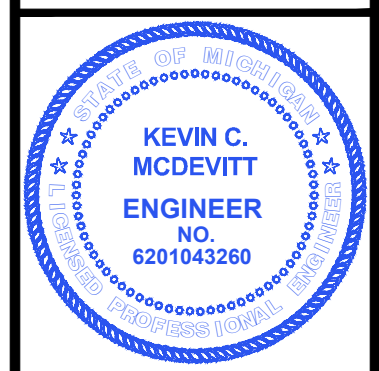


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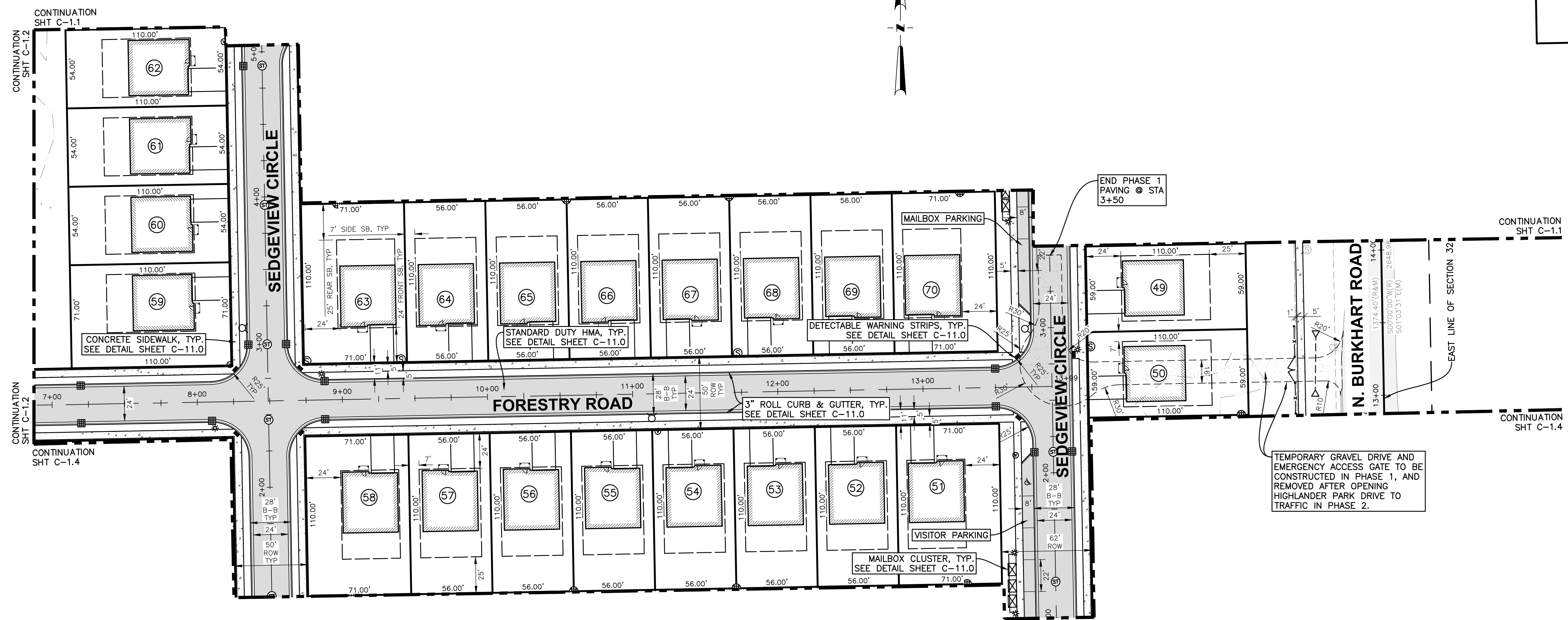
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PAVEMENT LEGEND

- EX. ASPHALT
- EX. CONCRETE
- EX. GRAVEL
- PR. STANDARD DUTY ASPHALT
- PR. HEAVY DUTY ASPHALT
- PR. CONCRETE
- PR. GRAVEL
- STANDARD CURB AND GUTTER
- REVERSE CURB AND GUTTER



DIMENSION AND PAVING PLAN PHZE

HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP, LIVINGSTON COUNTY, MICHIGAN

PLAN SUBMITTALS/REVISIONS	DATE
SITE PLAN SUBMITTAL	05/09/2024
PHASE 1 FINAL SITE PLAN SUBMITTAL	09/18/2024

ORIGINAL ISSUE DATE: 5/09/2024

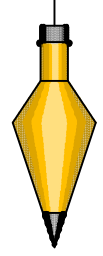
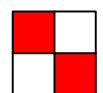
PROJECT NO: 21-075C

SCALE: 1" = 40'

FIELD:
DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-13

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KEVIN C. McDEVITT
ENGINEER
NO. 6201043260

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CLIENT :

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40950 WOODWARD AVE
SUITE 203
BLOOMFIELD HILLS, MI 48304
POC: DAVID STRAUB
(248)-221-5011

UTILITY PLAN

HERITAGE SQUARE (SINGLE FAMILY) ROADS
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024	PLAN SUBMITTAL
08/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE: 5/09/2024

PROJECT NO: 21-075C

SCALE: 1" = 120'

FIELD:
DRAWN BY: DC,MM,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-3.0

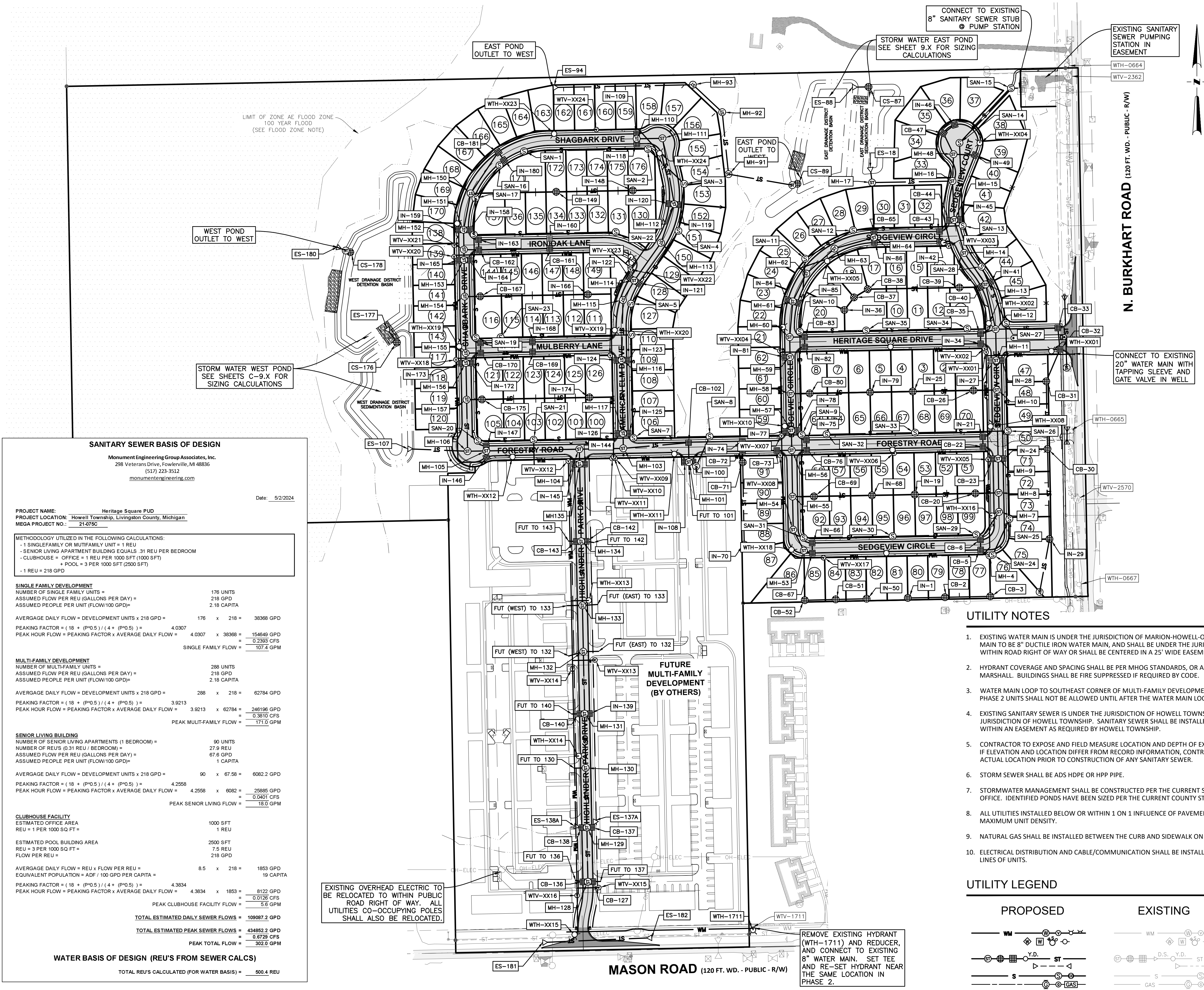
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SANITARY SEWER QUANTITIES

QTY	UNIT	ITEM
7633	LF	8" PVC SDR 26
9006	LF	6" PVC SDR 23.5
36	EA	4" MANHOLE
12	EA	CLEANOUT

WATER MAIN QUANTITIES

QTY	UNIT	ITEM
9988	LF	8" DI CL 52 WATER MAIN
157	LF	6" DI CL 52 WATER MAIN
9755	LF	1" TYPE K, COPPER WATER SERVICE
1	EA	8" CROSS
21	EA	8"x8"x8" TEE
17	EA	8"x8"x6" TEE
47	EA	8" 45° BEND
24	EA	8" 22.5° BEND
15	EA	8" 11.25° BEND
1	EA	8" TO 6" REDUCER
1	EA	20"x8" TSW&W
25	EA	8" GVB IN 2'X2' CONCRETE APRON
18	EA	STANDARD HYDRANT ASSEMBLY



SANITARY SEWER BASIS OF DESIGN

Monument Engineering Group Associates, Inc.
298 Veterans Drive, Fowlerville, MI 48836
(517) 223-3512
monumentengineering.com

Date: 5/2/2024

PROJECT NAME: Heritage Square PUD
PROJECT LOCATION: Howell Township, Livingston County, Michigan
MEGA PROJECT NO.: 21-075C

METHODOLOGY UTILIZED IN THE FOLLOWING CALCULATIONS:
- 1 SINGLE FAMILY OR MULTIFAMILY UNIT = 1 REU
- SENIOR LIVING APARTMENT BUILDING EQUALS 31 REU PER BEDROOM
- CLUBHOUSE = OFFICE = 1 REU PER 1000 SFT (1000 SFT)
+ POOL = 3 PER 1000 SFT (2500 SFT)
- 1 REU = 218 GPD

SINGLE FAMILY DEVELOPMENT

NUMBER OF SINGLE FAMILY UNITS = 176 UNITS
ASSUMED FLOW PER REU (GALLONS PER DAY) = 218 GPD
ASSUMED PEOPLE PER UNIT (FLOW/100 GPD) = 2.18 CAPITA

AVERAGE DAILY FLOW = DEVELOPMENT UNITS x 218 GPD = 176 x 218 = 38368 GPD
PEAKING FACTOR = (18 + (P^0.5) / (4 + (P^0.5))) = 4.0307
PEAK HOUR FLOW = PEAKING FACTOR x AVERAGE DAILY FLOW = 4.0307 x 38368 = 154649 GPD = 0.2393 CFS
SINGLE FAMILY FLOW = 107.4 GPM

MULTI-FAMILY DEVELOPMENT

NUMBER OF MULTI-FAMILY UNITS = 288 UNITS
ASSUMED FLOW PER REU (GALLONS PER DAY) = 218 GPD
ASSUMED PEOPLE PER UNIT (FLOW/100 GPD) = 2.18 CAPITA

AVERAGE DAILY FLOW = DEVELOPMENT UNITS x 218 GPD = 288 x 218 = 62784 GPD
PEAKING FACTOR = (18 + (P^0.5) / (4 + (P^0.5))) = 3.9213
PEAK HOUR FLOW = PEAKING FACTOR x AVERAGE DAILY FLOW = 3.9213 x 62784 = 246196 GPD = 0.3810 CFS
PEAK MULTI-FAMILY FLOW = 171.0 GPM

SENIOR LIVING BUILDING

NUMBER OF SENIOR LIVING APARTMENTS (1 BEDROOM) = 90 UNITS
NUMBER OF REUS (0.31 REU / BEDROOM) = 27.9 REU
ASSUMED FLOW PER REU (GALLONS PER DAY) = 67.6 GPD
ASSUMED PEOPLE PER UNIT (FLOW/100 GPD) = 1 CAPITA

AVERAGE DAILY FLOW = DEVELOPMENT UNITS x 218 GPD = 90 x 67.56 = 6082.2 GPD
PEAKING FACTOR = (18 + (P^0.5) / (4 + (P^0.5))) = 4.2558
PEAK HOUR FLOW = PEAKING FACTOR x AVERAGE DAILY FLOW = 4.2558 x 6082 = 25885 GPD = 0.0401 CFS
PEAK SENIOR LIVING FLOW = 18.0 GPM

CLUBHOUSE FACILITY

ESTIMATED OFFICE AREA
REU = 1 PER 1000 SQ FT = 1000 SFT / 1 REU = 1 REU

ESTIMATED POOL BUILDING AREA
REU = 3 PER 1000 SQ FT = 2500 SFT / 7.5 REU = 218 GPD

AVERAGE DAILY FLOW = REU x FLOW PER REU = 8.5 x 218 = 1853 GPD
EQUIVALENT POPULATION = ADF / 100 GPD PER CAPITA = 1853 / 100 = 18.53 CAPITA
PEAKING FACTOR = (18 + (P^0.5) / (4 + (P^0.5))) = 4.3834
PEAK HOUR FLOW = PEAKING FACTOR x AVERAGE DAILY FLOW = 4.3834 x 1853 = 8122 GPD = 0.0126 CFS
PEAK CLUBHOUSE FACILITY FLOW = 5.6 GPM

TOTAL ESTIMATED DAILY SEWER FLOWS = 109087.2 GPD
TOTAL ESTIMATED PEAK SEWER FLOWS = 434852.3 GPD
PEAK TOTAL FLOW = 302.0 GPM

WATER BASIS OF DESIGN (REU'S FROM SEWER CALCS)

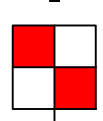
TOTAL REU'S CALCULATED (FOR WATER BASIS) = 500.4 REU

UTILITY NOTES

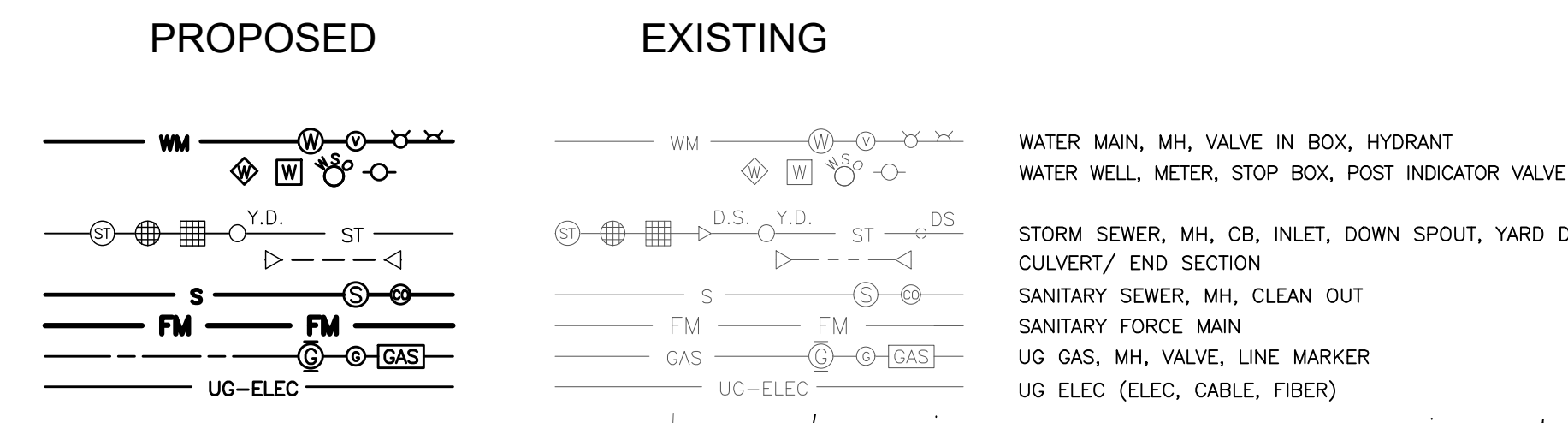
- EXISTING WATER MAIN IS UNDER THE JURISDICTION OF MARION-HOWELL-OCOLA-GENOA WATER AUTHORITY (MHOG). PROPOSED WATER MAIN TO BE 8" DUCTILE IRON WATER MAIN, AND SHALL BE UNDER THE JURISDICTION OF MHOG. WATER MAIN SHALL BE CONSTRUCTED WITHIN ROAD RIGHT OF WAY OR SHALL BE CENTERED IN A 25' WIDE EASEMENT AS REQUIRED BY MHOG.
- HYDRANT COVERAGE AND SPACING SHALL BE PER MHOG STANDARDS, OR AS MODIFIED BY THE HOWELL AREA FIRE DEPARTMENT FIRE MARSHALL. BUILDINGS SHALL BE FIRE SUPPRESSED IF REQUIRED BY CODE.
- WATER MAIN LOOP TO SOUTHEAST CORNER OF MULTI-FAMILY DEVELOPMENT TO BE CONSTRUCTED IN PHASE 2. HOME OCCUPATION OF PHASE 2 UNITS SHALL NOT BE ALLOWED UNTIL AFTER THE WATER MAIN LOOP IS PLACED INTO SERVICE.
- EXISTING SANITARY SEWER IS UNDER THE JURISDICTION OF HOWELL TOWNSHIP. PROPOSED 8 INCH SANITARY SEWER SHALL BE UNDER THE JURISDICTION OF HOWELL TOWNSHIP. SANITARY SEWER SHALL BE INSTALLED WITHIN PROPOSED RIGHT OF WAY, OR SHALL BE PLACED WITHIN AN EASEMENT AS REQUIRED BY HOWELL TOWNSHIP.
- CONTRACTOR TO EXPOSE AND FIELD MEASURE LOCATION AND DEPTH OF EXISTING 8" SANITARY STUB OUT OF THE EXISTING PUMP STATION. IF ELEVATION AND LOCATION DIFFER FROM RECORD INFORMATION, CONTRACTOR TO INFORM THE OWNER, TOWNSHIP AND MHOG OF ACTUAL LOCATION PRIOR TO CONSTRUCTION OF ANY SANITARY SEWER.
- STORM SEWER SHALL BE ADS HDPE OR HPP PIPE.
- STORMWATER MANAGEMENT SHALL BE CONSTRUCTED PER THE CURRENT STANDARDS OF THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE. IDENTIFIED PONDS HAVE BEEN SIZED PER THE CURRENT COUNTY STANDARDS.
- ALL UTILITIES INSTALLED BELOW OR WITHIN 1 ON 1 INFLUENCE OF PAVEMENT SHALL BE BACKFILLED WITH CLASS II SAND COMPACTED TO 95% MAXIMUM UNIT DENSITY.
- NATURAL GAS SHALL BE INSTALLED BETWEEN THE CURB AND SIDEWALK ON THE SAME SIDE OF THE ROAD AS THE WATER MAIN.
- ELECTRICAL DISTRIBUTION AND CABLE/COMMUNICATION SHALL BE INSTALLED UNDERGROUND IN AN EASEMENT ALONG THE REAR PROPERTY LINES OF UNITS.

UTILITY LEGEND

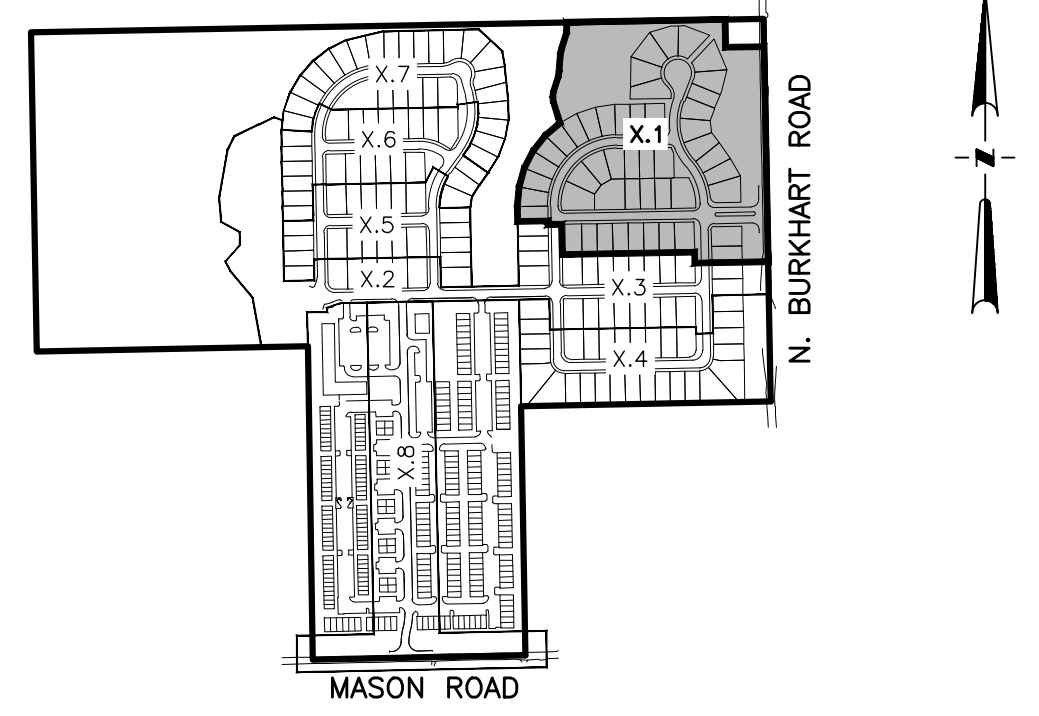
PROPOSED	EXISTING	
WM	WM	WATER MAIN, MH, VALVE IN BOX, HYDRANT
W	W	WATER WELL, METER, STOP BOX, POST INDICATOR VALVE
ST	ST	STORM SEWER, MH, CB, INLET, DOWN SPOUT, YARD DRAIN CULVERT/ END SECTION
S	S	SANITARY SEWER, MH, CLEAN OUT
GAS	GAS	UG GAS, MH, VALVE, LINE MARKER
UG-ELEC	UG-ELEC	UG ELEC (ELEC, CABLE, FIBER)



UTILITY LEGEND



SHEET KEY



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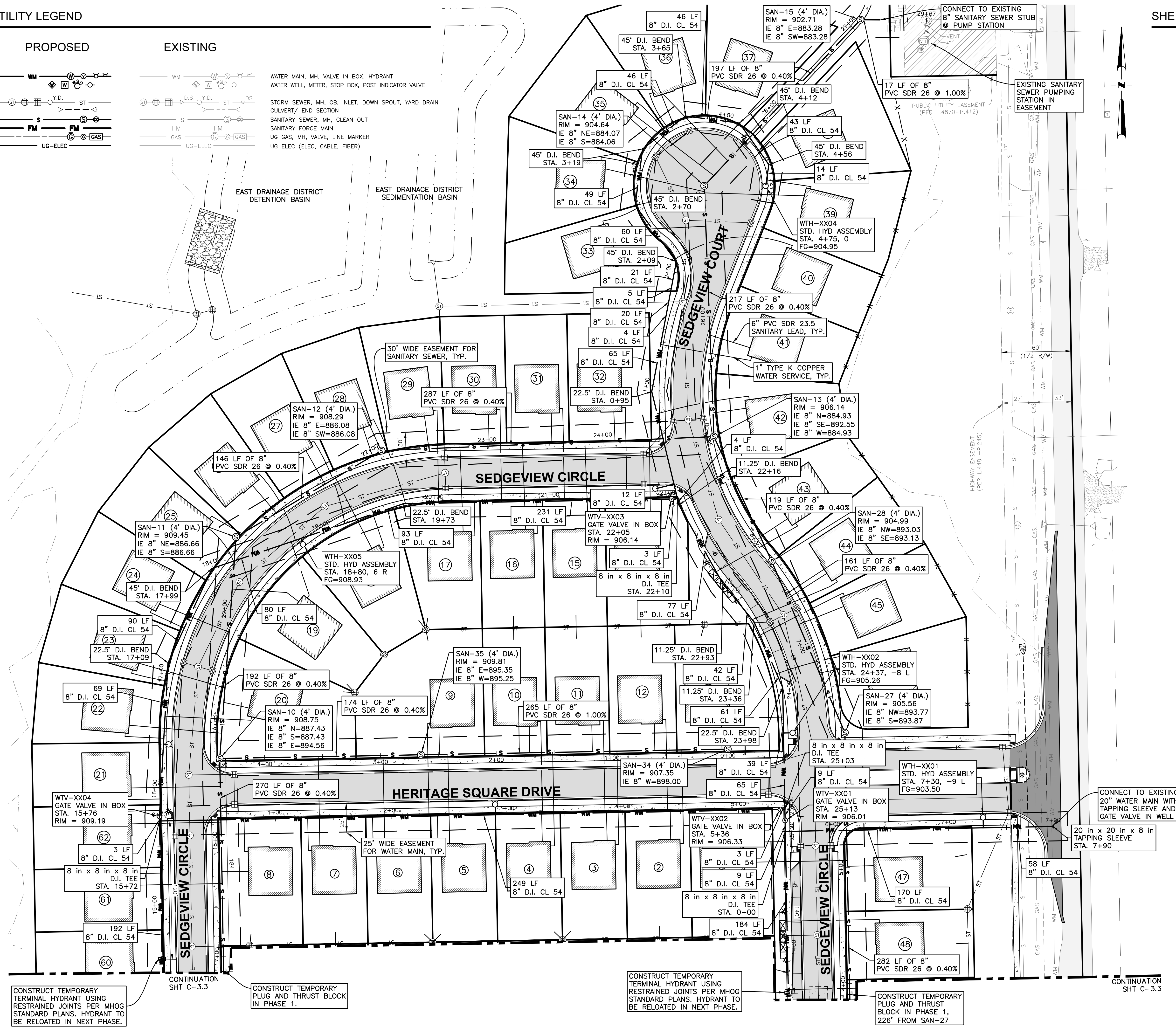
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SUITE 203
BLOOMFIELD HILLS, MI 48304
POC: DAVID STRAUB
(248)-221-5011

SANITARY SEWER AND WATERMAIN PLAN
HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

Table with columns: DATE, PLAN SUBMITTAL/REVISIONS, ORIGINAL ISSUE DATE, PROJECT NO., SCALE, FIELD.

C-3.1

NOT FOR CONSTRUCTION



SANITARY SEWER NOTES

- 1. SANITARY "MH" SHALL HAVE EIJJ 1020 FRAME WITH TYPE A COVER.
- 2. ...

MHOG WATER NOTES

- 1. WATER IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT MARION, HOWELL, OCEOLA, AND GENOA (MHOG) DESIGN STANDARDS AND SPECIFICATIONS.
- 2. WATER MAIN TO BE 5.5' DEEP PER MHOG DESIGN STANDARDS.
- 3. ALL WATER MAIN SHALL BE CLASS 52 DUCTILE IRON PIPE (DIP) WITH POLYETHYLENE (P.E.) ENCASMENT IN ACCORDANCE WITH AWWA C105/A191 21.5 AND TRACER WIRE INSTALLED.

TRACER WIRE NOTES

- 1. TRACER WIRE IS TO BE INSTALLED ON ALL WATER MAIN DISTRIBUTION LINES AND SERVICE LINES. REFER TO MHOG DESIGN STANDARDS SECTION 22.11.13 FOR DETAILS.
- 2. TRACING WIRE SYSTEMS SHALL TERMINATE IN RHINO TRIVIEW TRACING WIRE STATIONS OR A TRACER WIRE BOX. THE TRACER WIRE BOX SHALL HAVE A CONCRETE HOUSEKEEPING PAD IN DEVELOPED AREAS.

SANITARY SEWER QUANTITIES

Table with columns: QTY, UNIT, ITEM. Lists quantities for 8" PVC SDR 26, 6" PVC SDR 23.5, 4" manhole, and cleanout.

WATER MAIN QUANTITIES

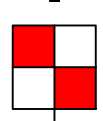
Table with columns: QTY, UNIT, ITEM. Lists quantities for 8" DI CL 52 water main, 6" DI CL 52 water main, 1" type K copper water service, 8"x8" tee, 8"x6" tee, 8" 45' bend, 8" 22.5' bend, 8" 11.25' bend, 20"x8" TSV&W, 8" to 6" reducer, 8" GVB in 2'x2' concrete apron, and standard hydrant assembly.

CONSTRUCT TEMPORARY TERMINAL HYDRANT USING RESTRAINED JOINTS PER MHOG STANDARD PLANS. HYDRANT TO BE RELOATED IN NEXT PHASE.

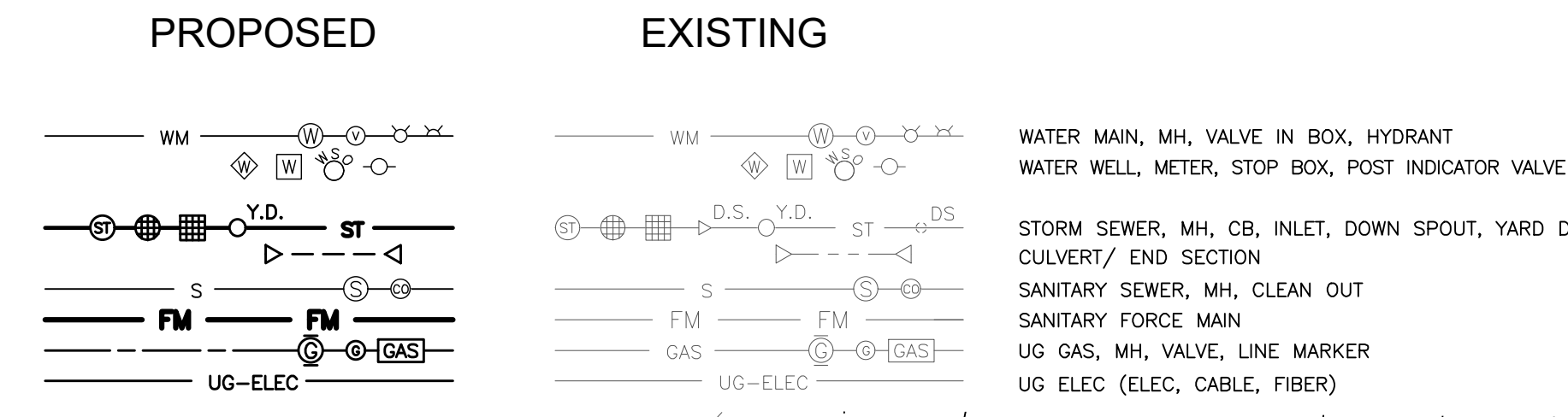
CONSTRUCT TEMPORARY PLUG AND THRUST BLOCK IN PHASE 1.

CONSTRUCT TEMPORARY TERMINAL HYDRANT USING RESTRAINED JOINTS PER MHOG STANDARD PLANS. HYDRANT TO BE RELOATED IN NEXT PHASE.

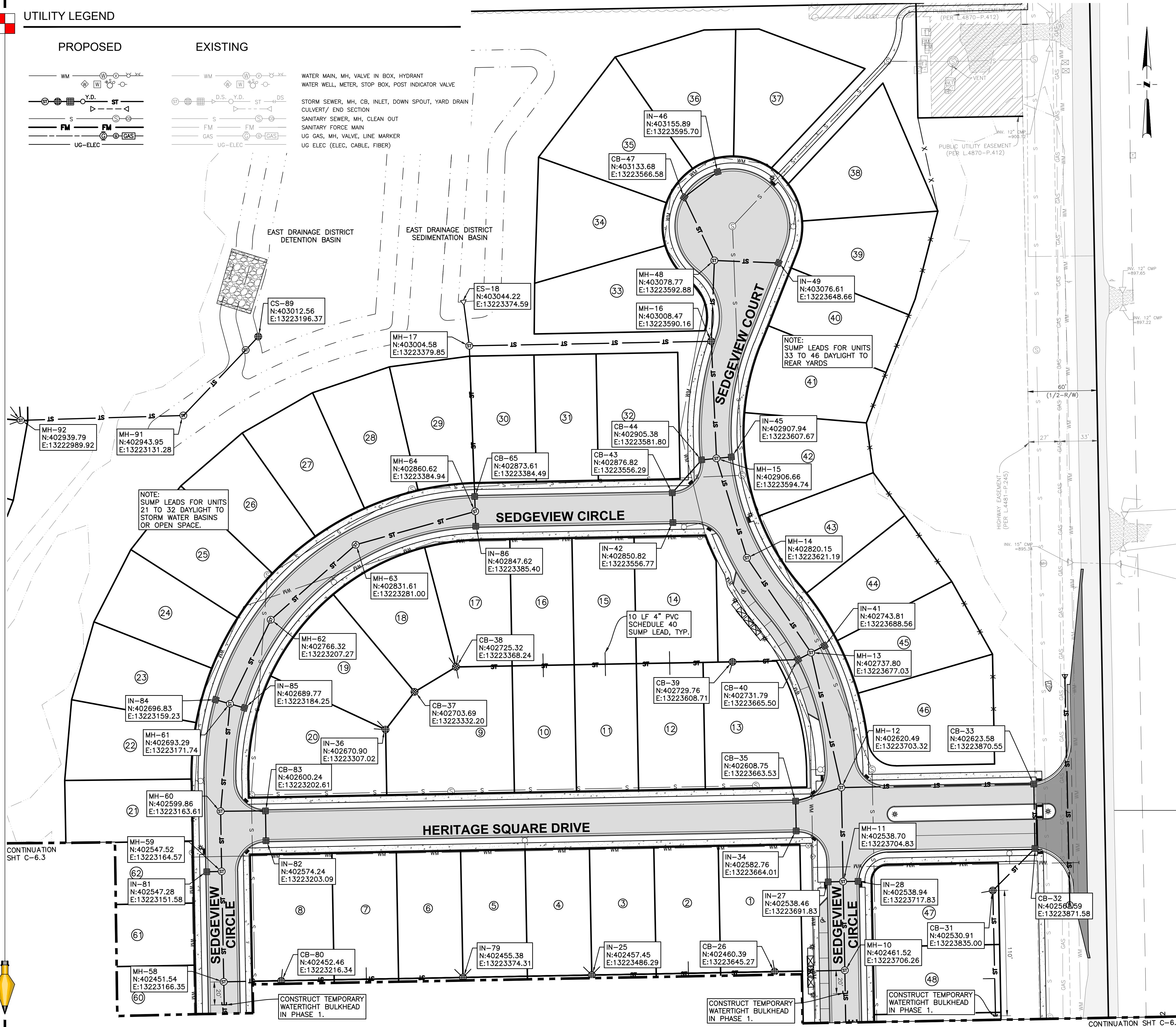
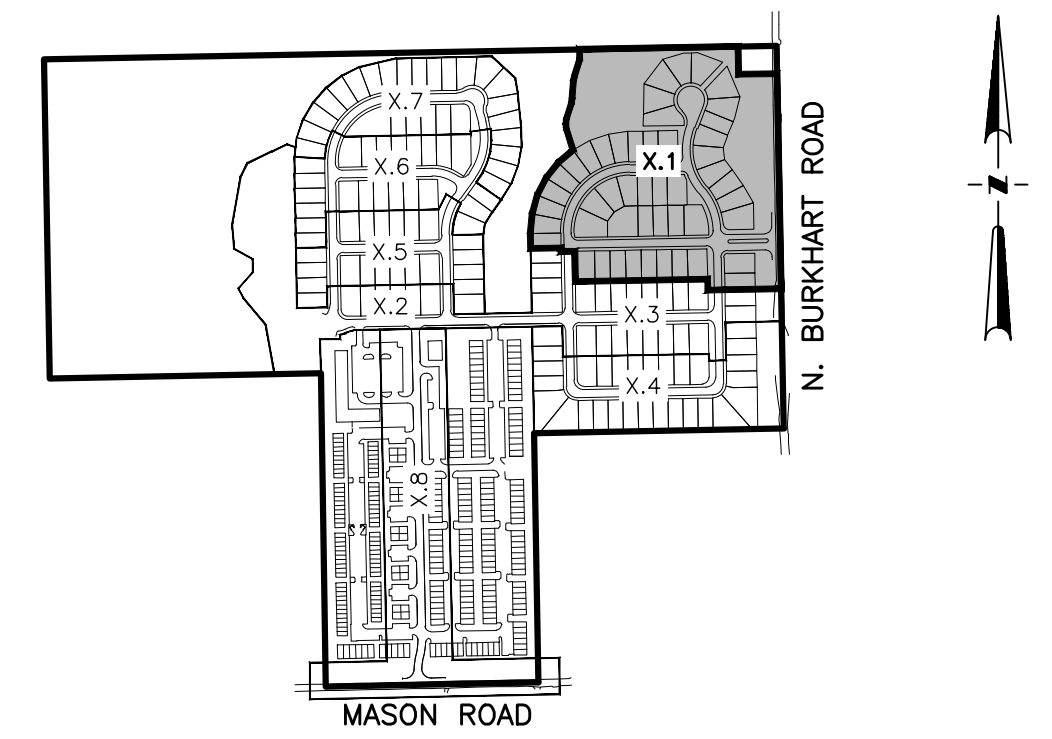
CONSTRUCT TEMPORARY PLUG AND THRUST BLOCK IN PHASE 1, 226' FROM SAN-27



UTILITY LEGEND



SHEET KEY



STORM SEWER NOTES

- YARD "IN" & "CB" STRUCTURES SHALL HAVE EJIW 1020 FRAME WITH TYPE O1 BEEHIVE COVER.
- MOUNTABLE CURB "IN" & "CB" STRUCTURES SHALL HAVE EJIW 7060 FRAME WITH TYPE T1 BACK AND M1 GRATE.
- STRAIGHT CURB "IN" & "CB" STRUCTURES SHALL HAVE EJIW 7010 FRAME WITH TYPE T1 BACK AND M1 GRATE.
- STORM "MH" STRUCTURES SHALL HAVE EJIW 1040 FRAME WITH A TYPE A PERFORATED COVER.
- END SECTIONS 18" AND LARGER SHALL HAVE ANIMAL GRATES.
- THE PROPOSED DRAINAGE SYSTEMS ARE TO BE OWNED AND PROPERLY MAINTAINED BY THE SITE CONDOMINIUM PROPERTY OWNER'S ASSOCIATION.

NOTE

SEE PROFILES ON SHEETS C-6.9 TO C-6.32 FOR SEWER AND STRUCTURE DETAILS

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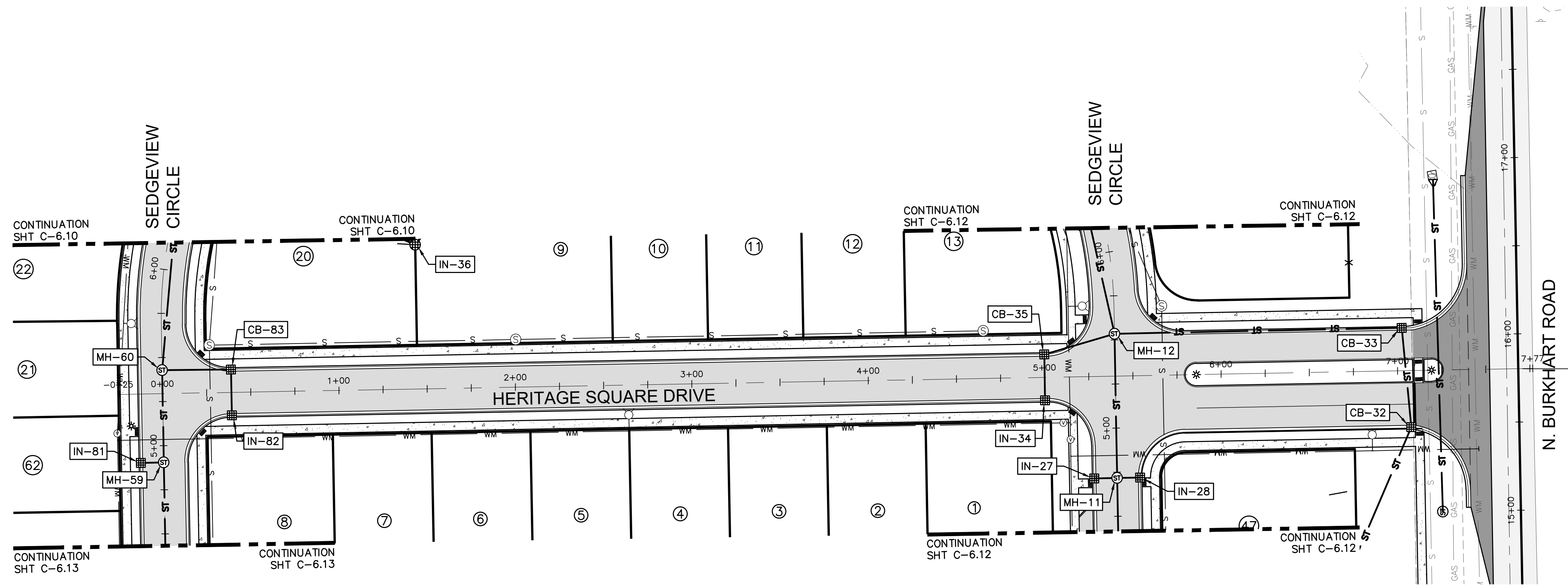
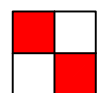
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 SUITE 203
 BLOOMFIELD HILLS, MI 48304
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STORM SEWER PLAN (PHASE 1)

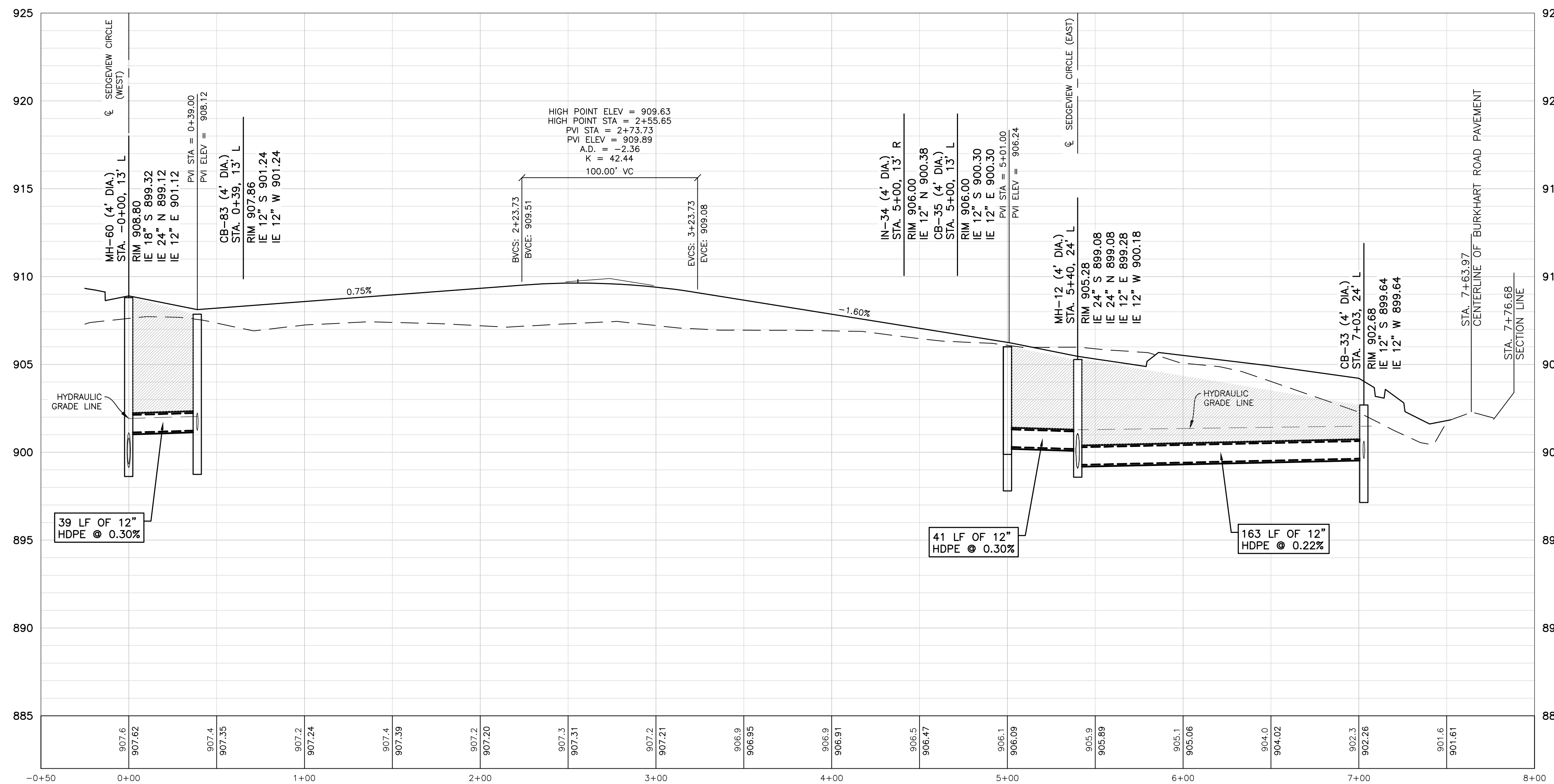
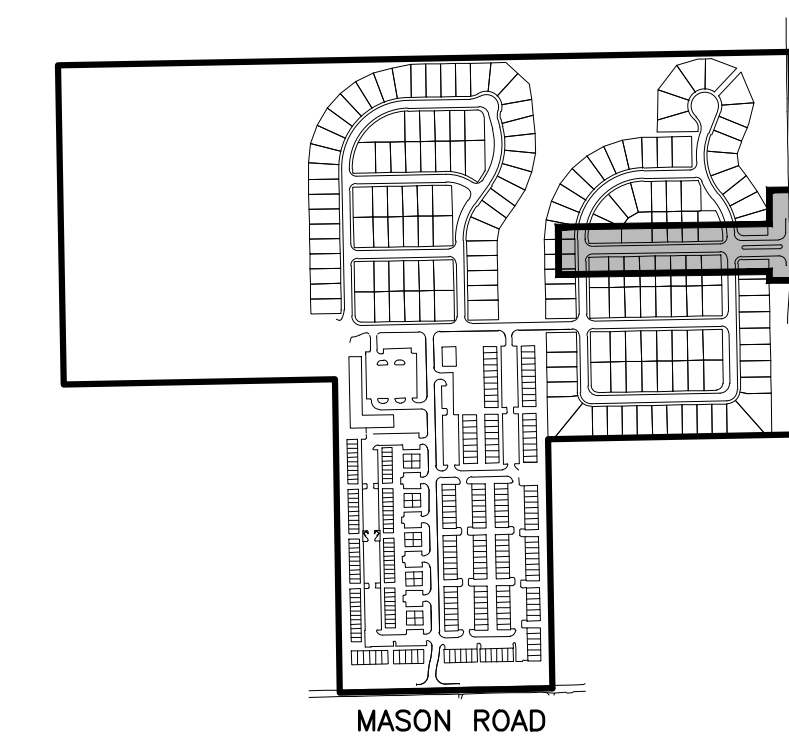
HERITAGE SQUARE (SINGLE FAMILY)
 95 AC. NW CORNER BURKHART & MASON ROADS
 PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
 HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

DATE	05/09/2024
PLAN SUBMITTALS/REVISIONS	
PHASE 1 FINAL SITE PLAN SUBMITTAL	09/18/2024
ORIGINAL ISSUE DATE:	5/09/2024
PROJECT NO:	21-075C
SCALE:	1" = 40'
FIELD:	
DRAWN BY:	DC, MN, CK, DJ
DESIGN BY:	KM
CHECK BY:	KM
C-6.1	

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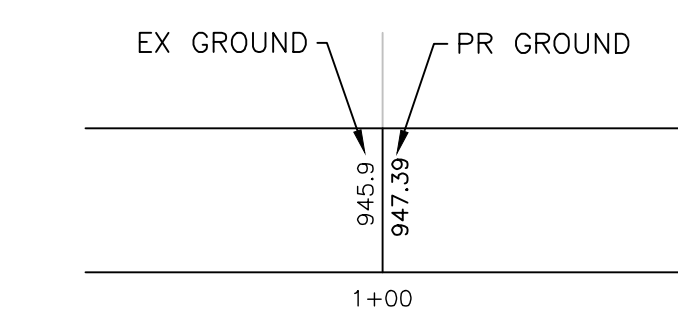


SHEET KEY



PROFILE LEGEND

- (X) UTILITY CROSSING
- [Hatched Area] SAND BACKFILL (REFER TO TRENCH DETAILS)
- [Dashed Line] EXISTING GROUND
- [Solid Line] PROPOSED GROUND
- [Dotted Line] H.G. LINE



NOTES

1. SAND BACKFILL AND BEDDING TO BE MDOT CL. II.
2. MAINTAIN MINIMUM 18" VERTICAL CLEARANCE BETWEEN ALL UTILITIES.
3. ALL PIPES SHOWN TO OUTSIDE DIAMETER.

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POC: DAVID STRAUB
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STORM SEWER AND ROAD PLAN & PROFILE

HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024 <td>DATE</td>	DATE
09/18/2024 <td>DATE</td>	DATE

ORIGINAL ISSUE DATE: 5/09/2024

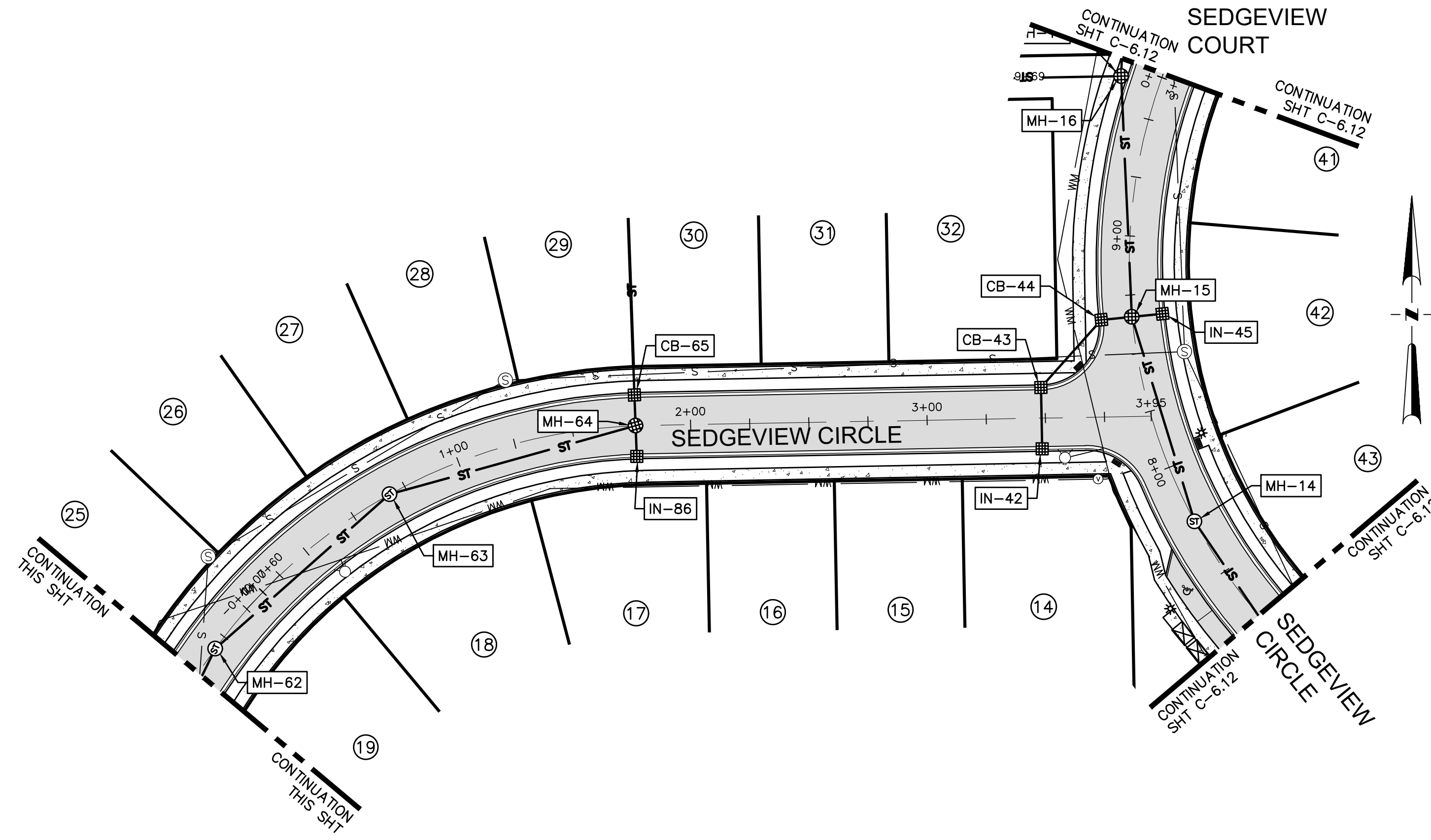
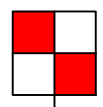
PROJECT NO: 21-075C

SCALE: 1" = 40'

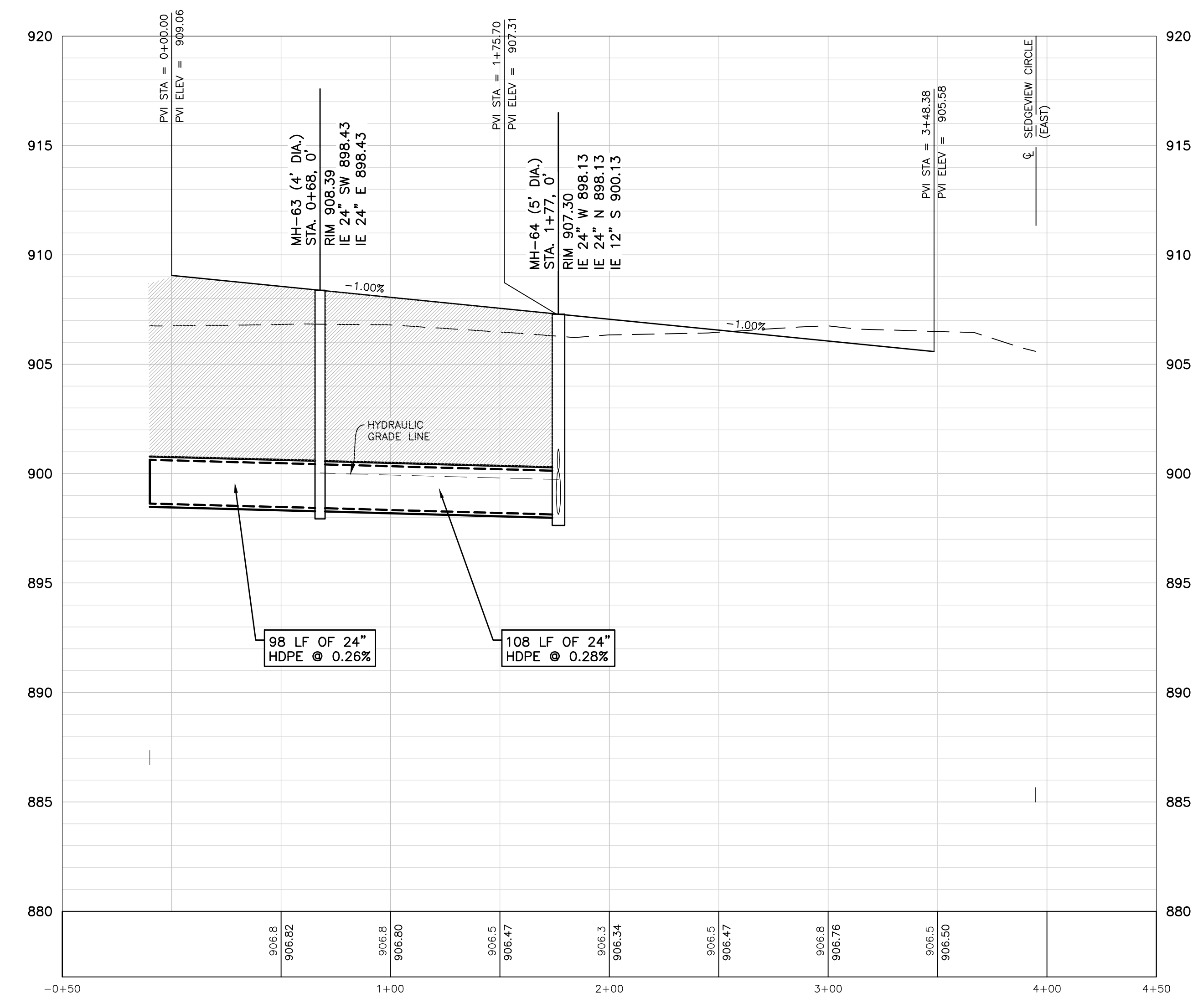
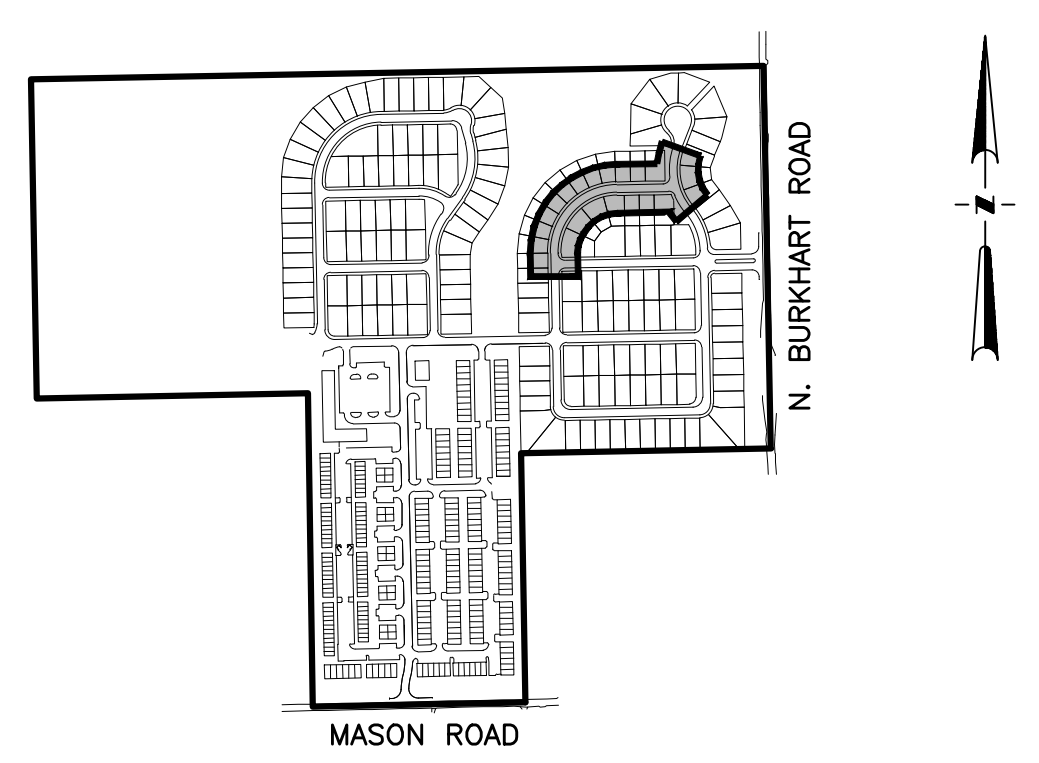
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DESIGN BY: KM
CHECK BY: KM

C-6.9

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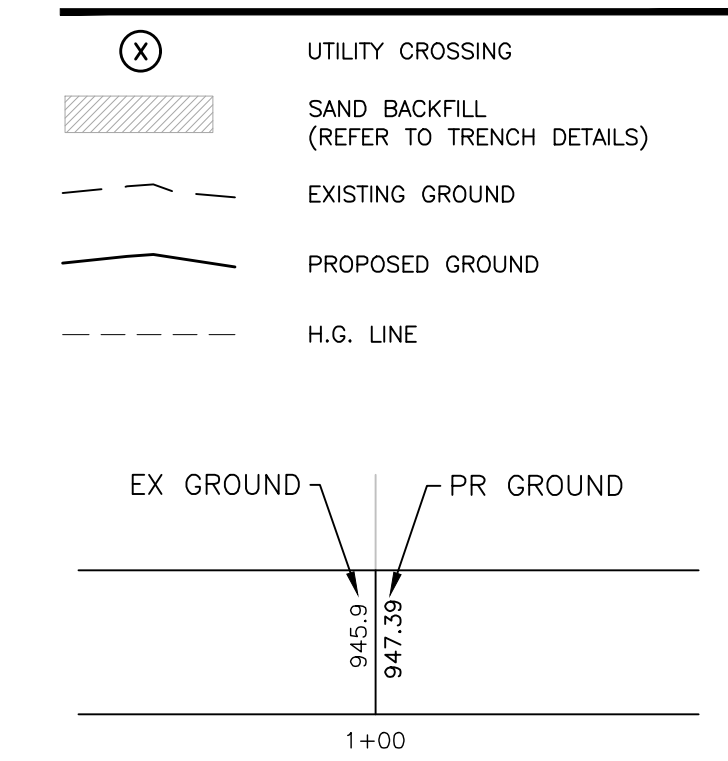
SHEET KEY



SEDGEVIEW CIRCLE (NORTH)

PROFILE SCALE
HORIZ: 1"=40'
VERT: 1"=4'

PROFILE LEGEND



NOTES

- SAND BACKFILL AND BEDDING TO BE MDOT CL II.
- MAINTAIN MINIMUM 18" VERTICAL CLEARANCE BETWEEN ALL UTILITIES.
- ALL PIPES SHOWN TO OUTSIDE DIAMETER.

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STORM SEWER AND ROAD PLAN & PROFILE

HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
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HOWELL TWP, LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024 <td>SITE PLAN SUBMITTAL</td>	SITE PLAN SUBMITTAL
08/18/2024 <td>PHASE 1 FINAL SITE PLAN SUBMITTAL</td>	PHASE 1 FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE: 5/09/2024

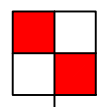
PROJECT NO: 21-075C

SCALE: 1" = 40'
0 1/2" 1"

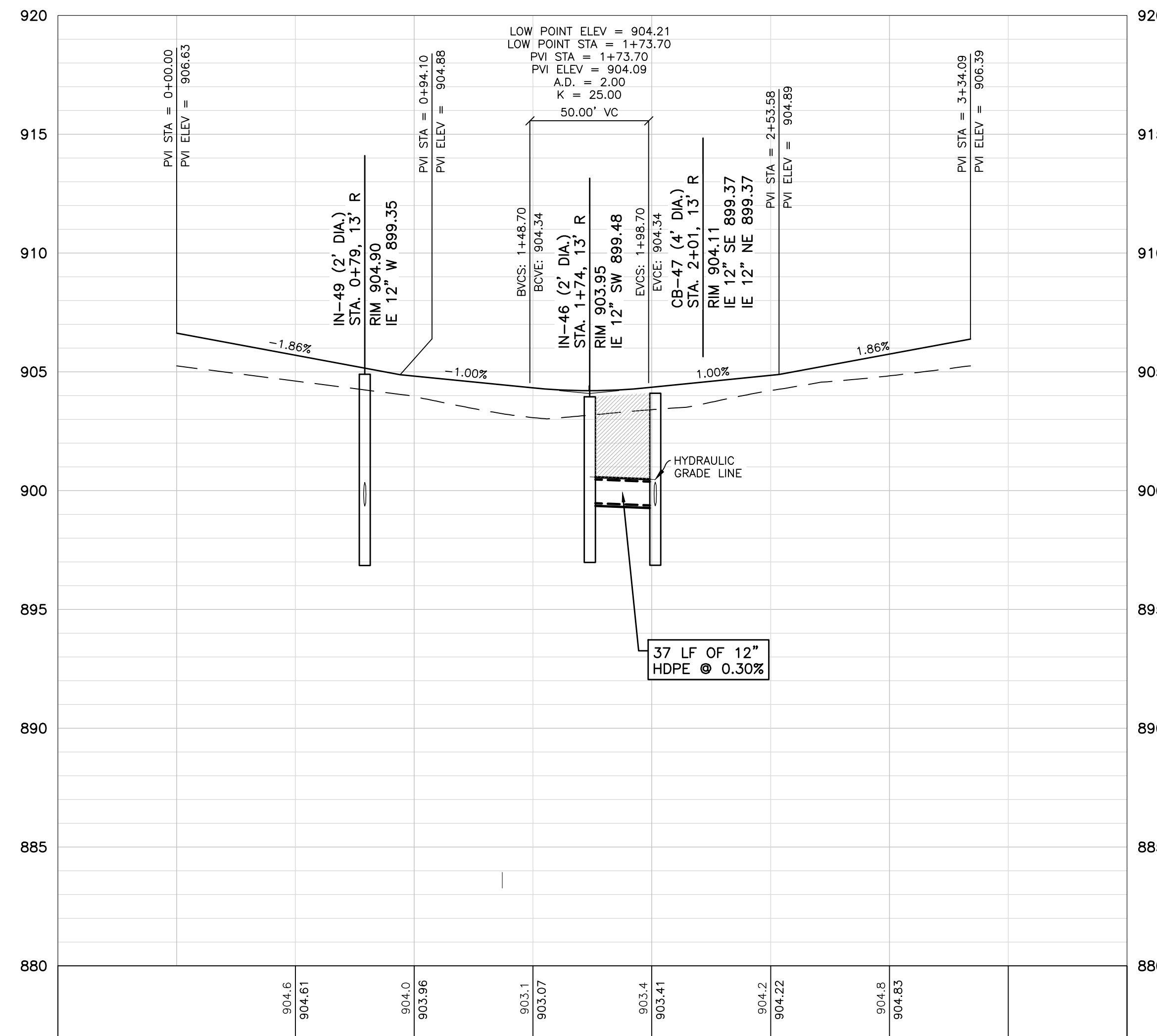
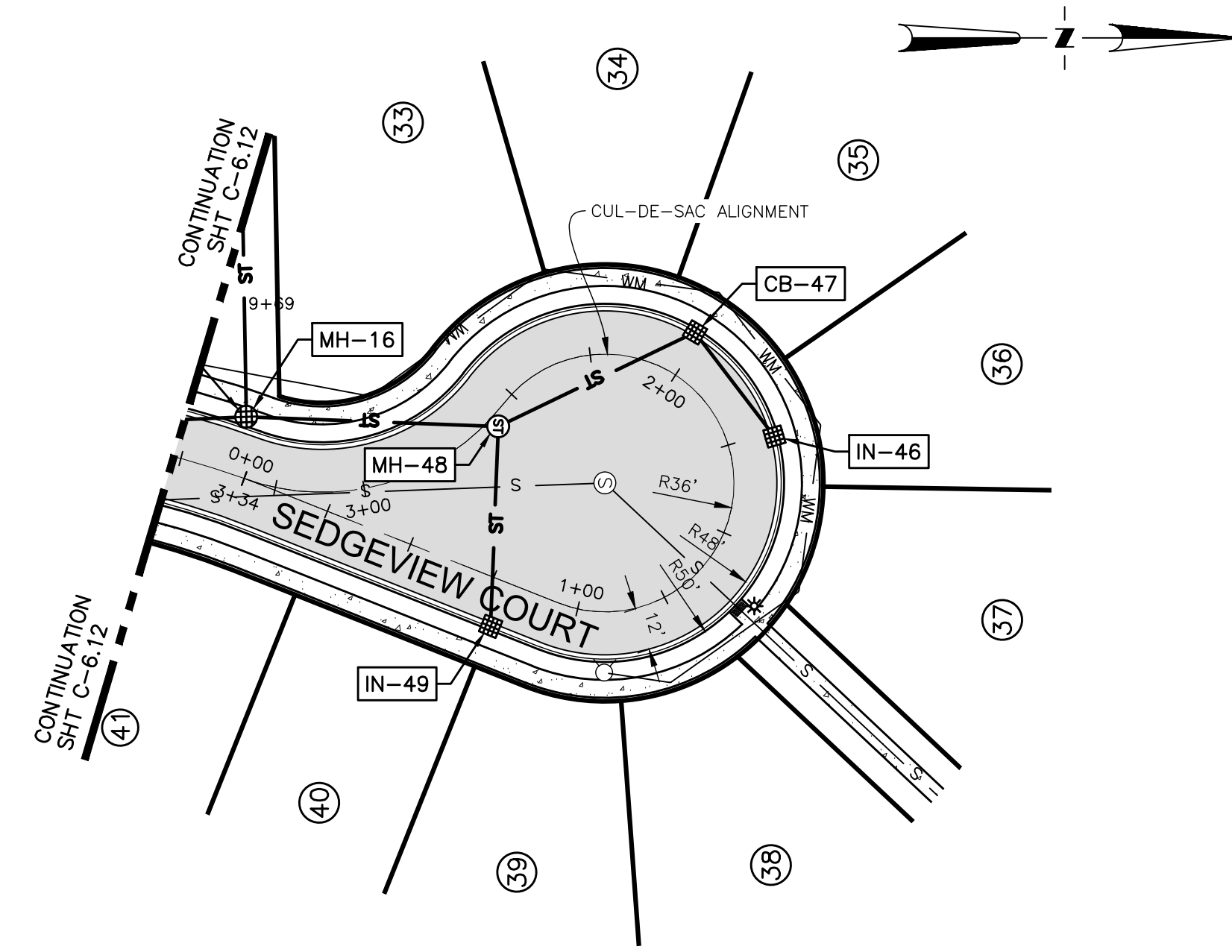
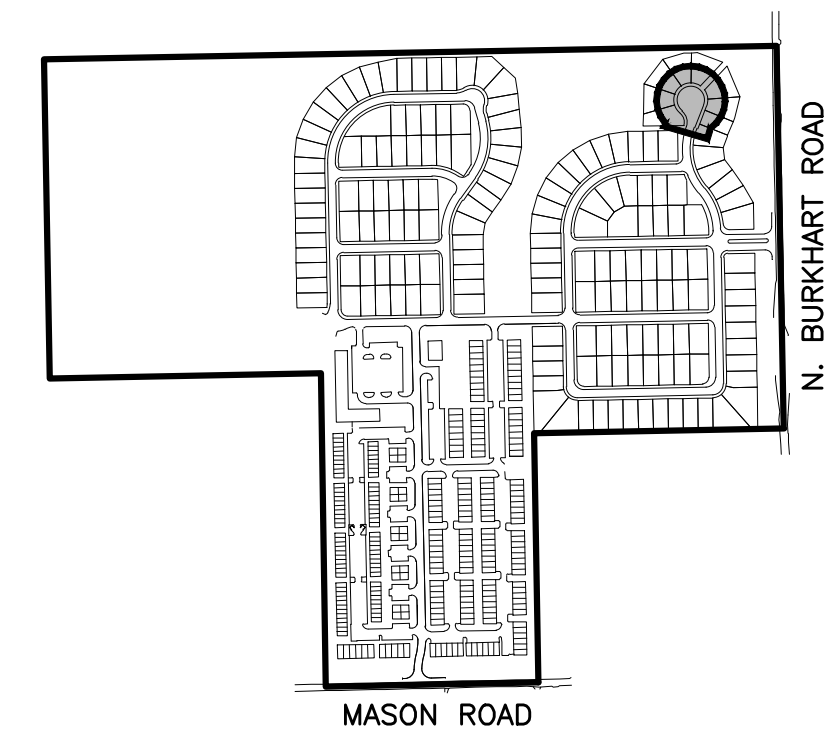
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DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-6.10

NOT FOR CONSTRUCTION



SHEET KEY

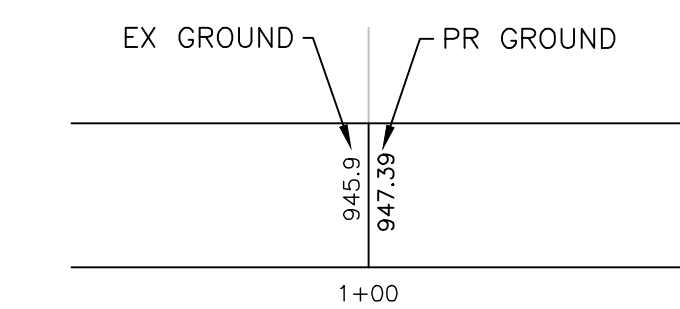


SEDGEVIEW COURT
STA. 0+00 TO 3+34

PROFILE SCALE
HORIZ: 1"=40'
VERT: 1"=4'

PROFILE LEGEND

- (X) UTILITY CROSSING
- [Hatched Box] SAND BACKFILL (REFER TO TRENCH DETAILS)
- [Dashed Line] EXISTING GROUND
- [Solid Line] PROPOSED GROUND
- [Dotted Line] H.G. LINE



NOTES

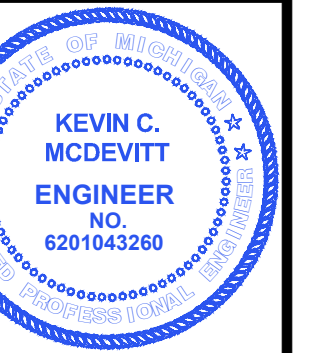
- SAND BACKFILL AND BEDDING TO BE MDOT CL II.
- MAINTAIN MINIMUM 18" VERTICAL CLEARANCE BETWEEN ALL UTILITIES.
- ALL PIPES SHOWN TO OUTSIDE DIAMETER.

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CLIENT :

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40950 WOODWARD AVE
SUITE 203
BLOOMFIELD HILLS, MI 48304
POC: DAVID STRAUB
(248)-221-5011

STORM SEWER AND ROAD PLAN & PROFILE

HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP, LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024 <td>SITE PLAN SUBMITTAL</td>	SITE PLAN SUBMITTAL
09/18/2024 <td>PHASE 1 FINAL SITE PLAN SUBMITTAL</td>	PHASE 1 FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE: 5/09/2024

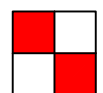
PROJECT NO: 21-075C

SCALE: 1" = 40'

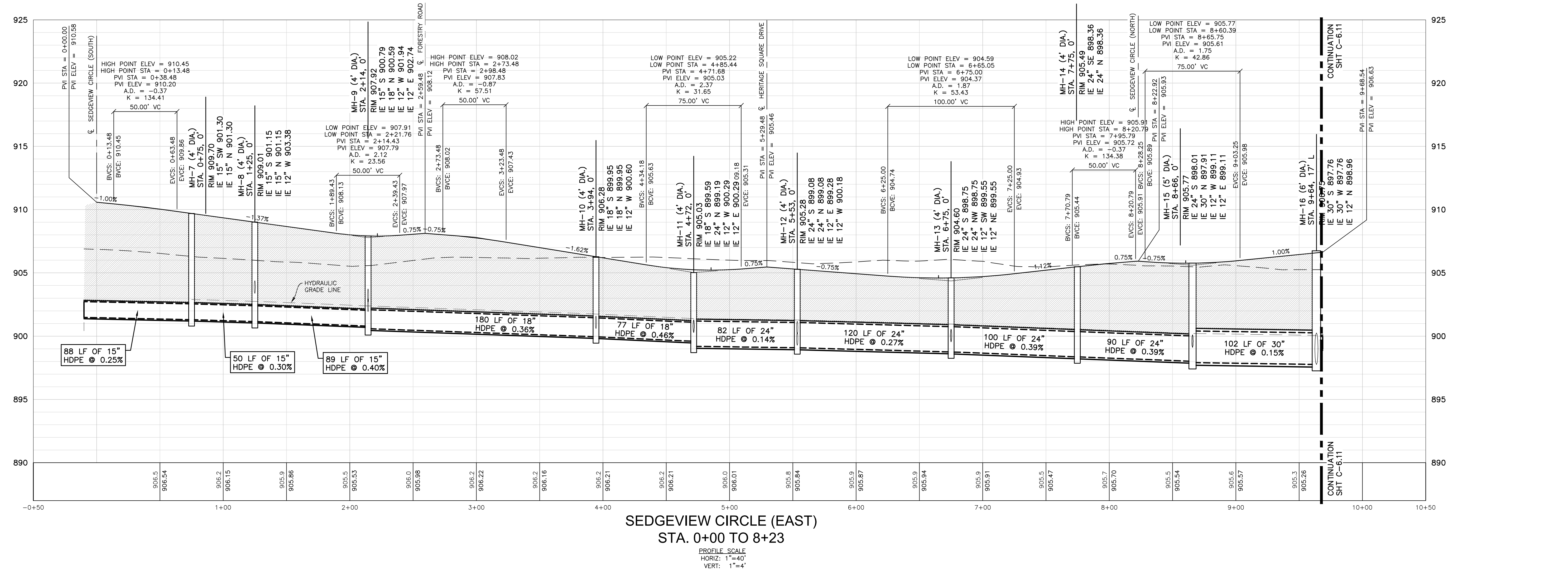
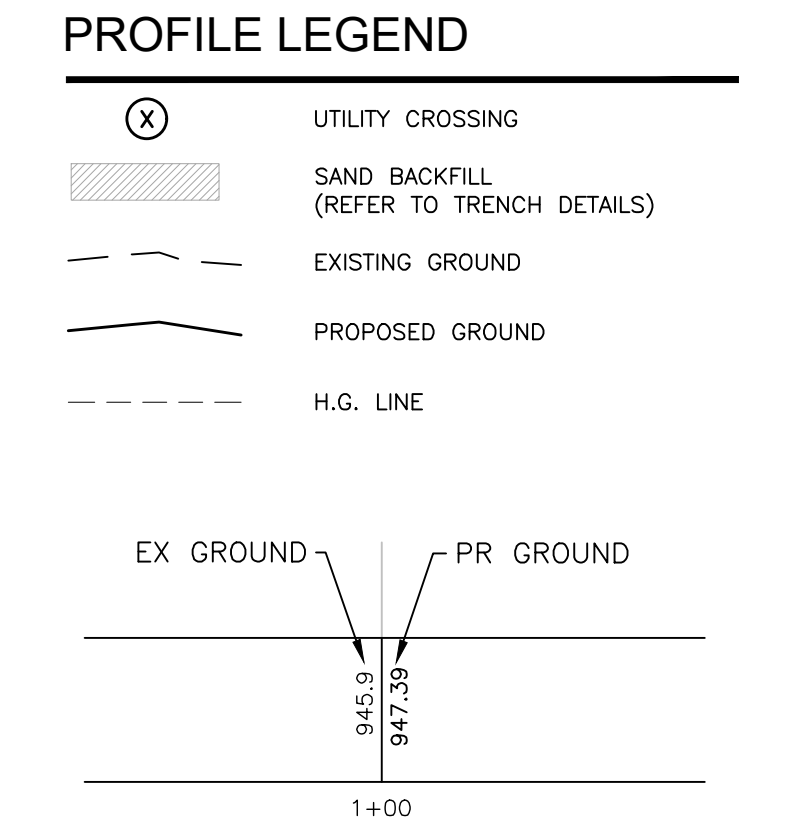
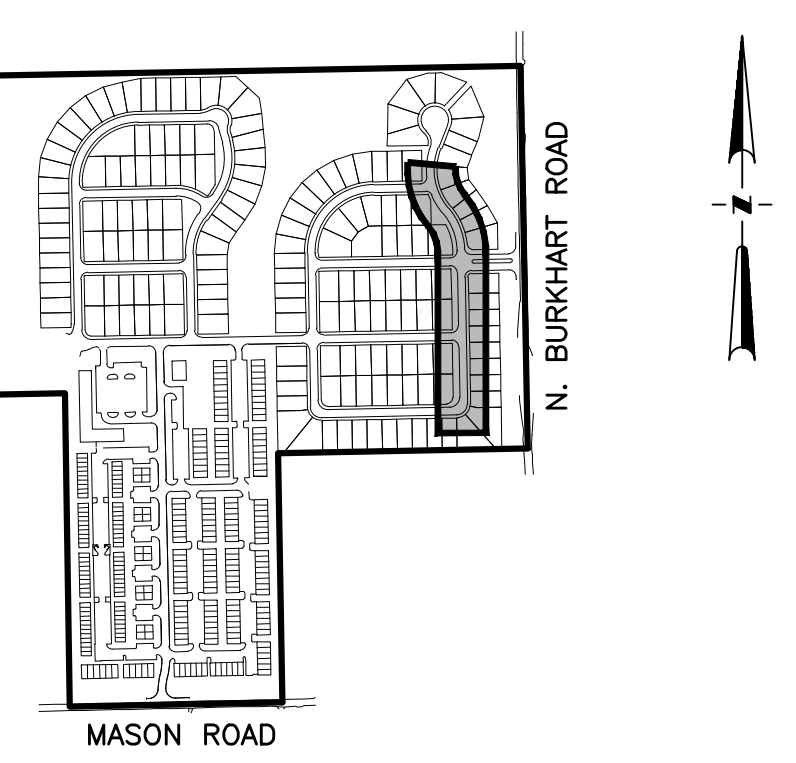
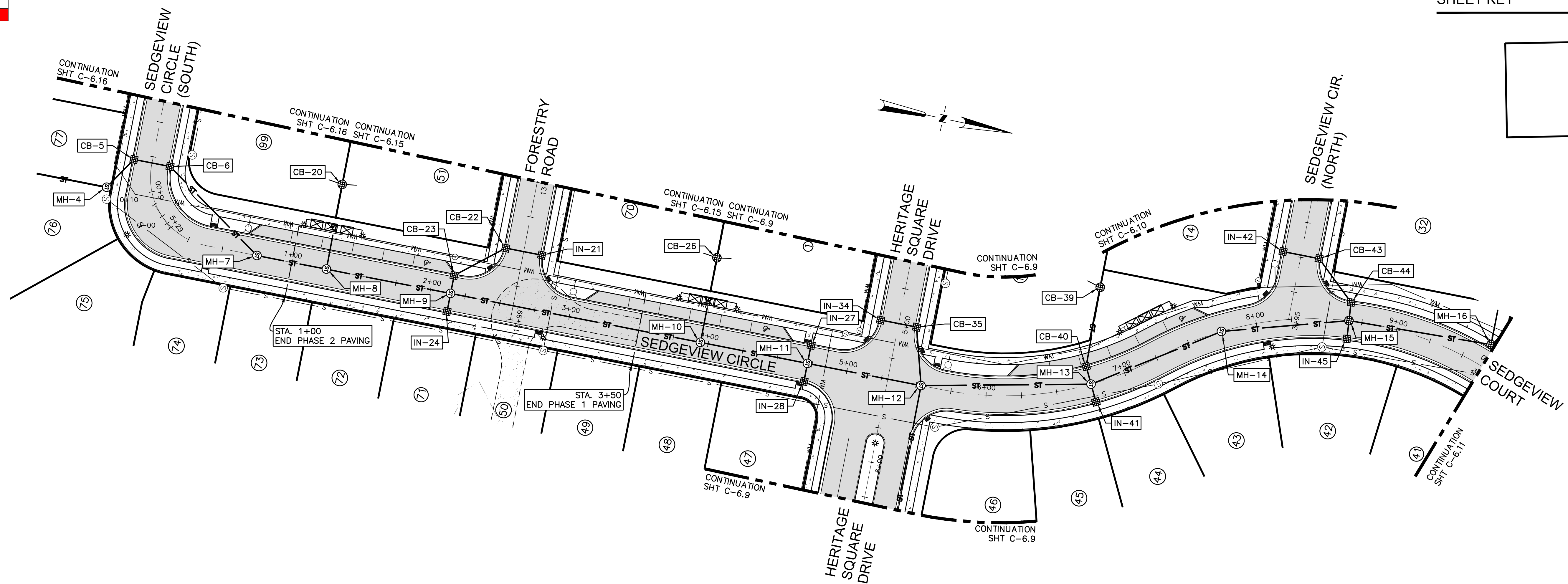
FIELD:
DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-6.11

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SHEET KEY



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ENGINEER
NO. 6201043260

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BLOOMFIELD HILLS, MI 48304
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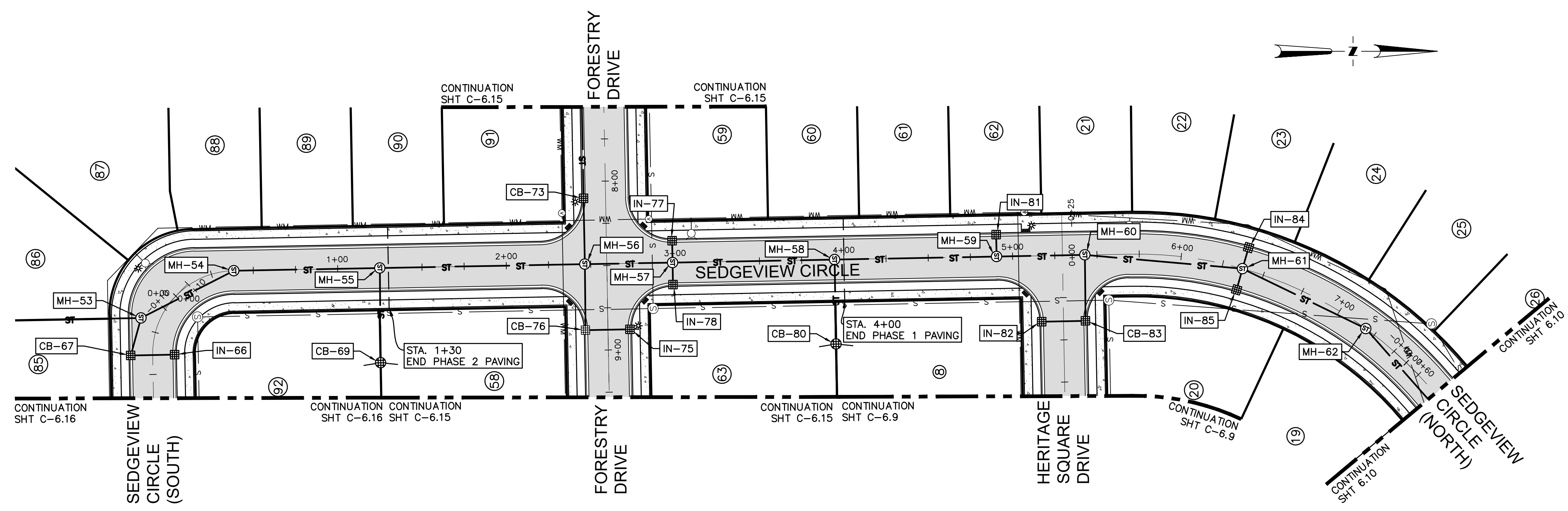
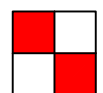
STORM SEWER AND ROAD PLAN & PROFILE
HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024	PLAN SUBMITTAL
09/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL

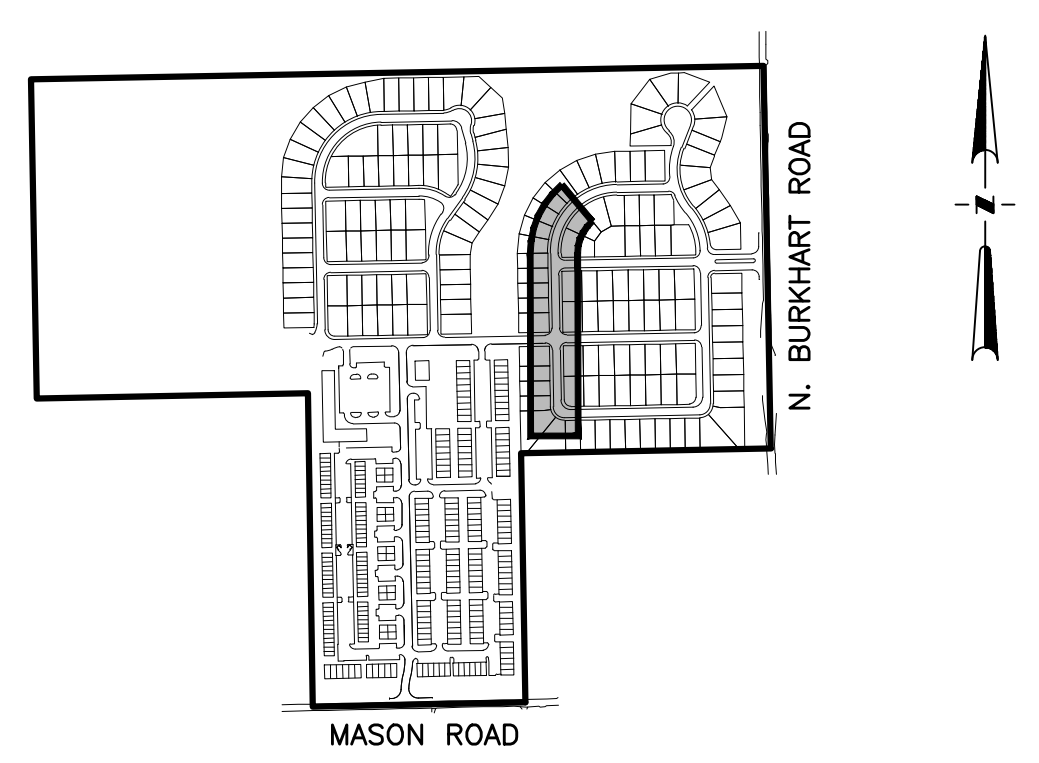
ORIGINAL ISSUE DATE: 5/09/2024
PROJECT NO: 21-075C
SCALE: 1" = 40'
FIELD:
DRAWN BY: DC, MN, CK, DJ
DESIGN BY: KM
CHECK BY: KM

C-6.12

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SHEET KEY



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CLIENT :

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40950 WOODWARD AVE
SUITE 203
BLOOMFIELD HILLS, MI 48304
POC: DAVID STRAUB
(248)-221-5011

STORM SEWER AND ROAD PLAN & PROFILE

HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024	PLAN SUBMITTAL
09/19/2024	FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE: 5/09/2024

PROJECT NO: 21-075C

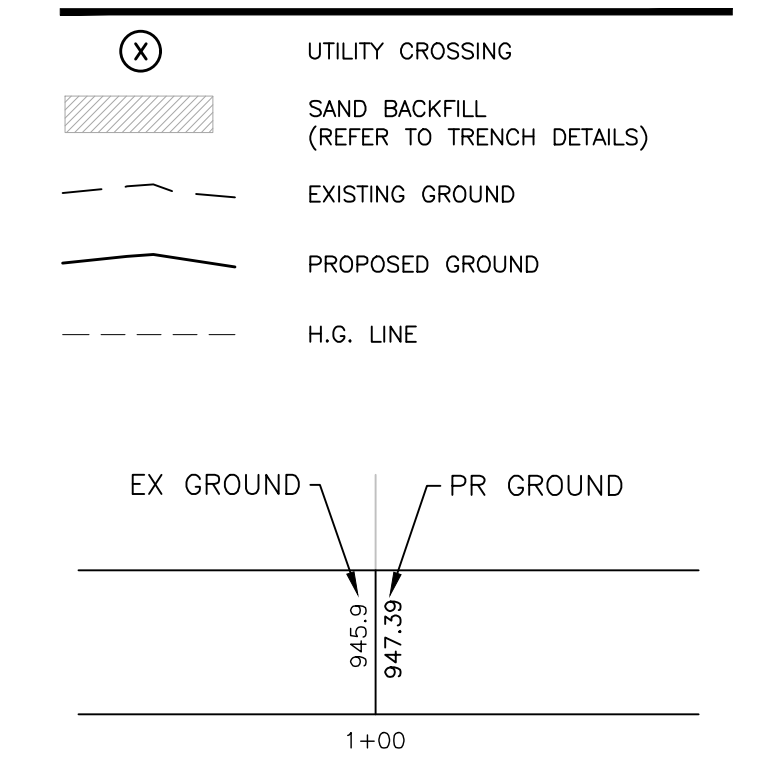
SCALE: 1" = 40'

FIELD:
DRAWN BY: DC, MN, CK, DJ
DESIGN BY: KM
CHECK BY: KM

C-6.13

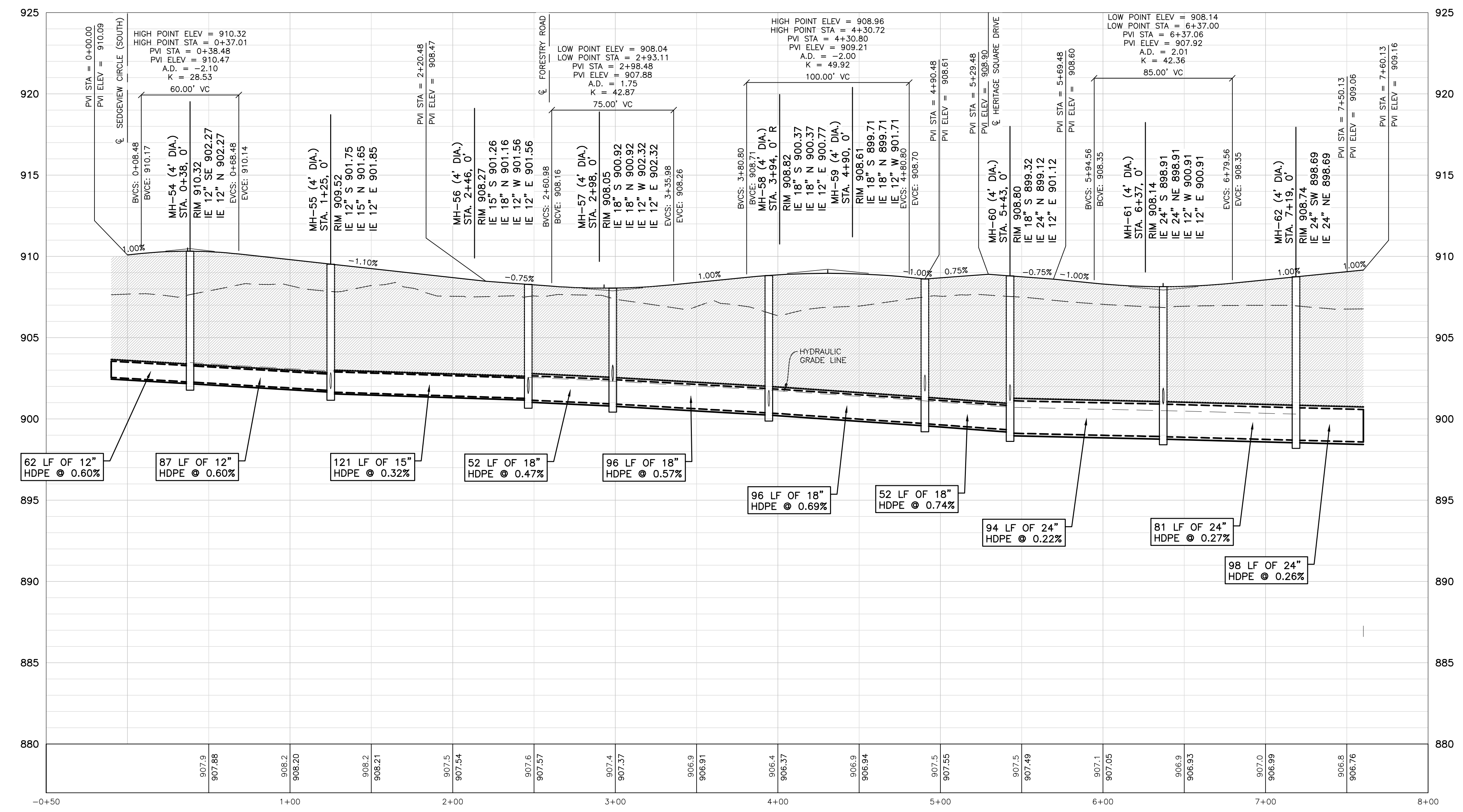
NOT FOR CONSTRUCTION

PROFILE LEGEND



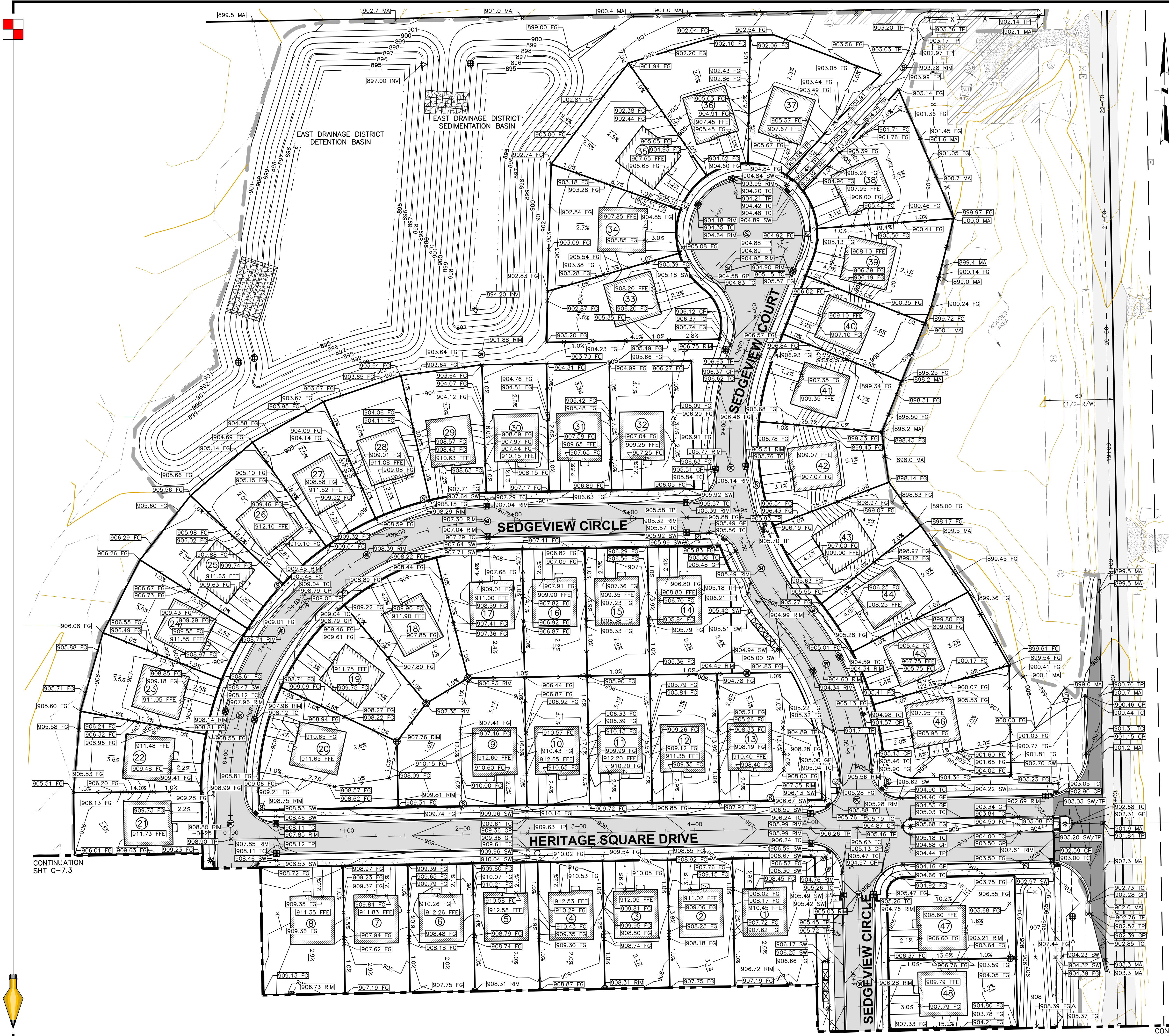
NOTES

- SAND BACKFILL AND BEDDING TO BE MDOT CL. II.
- MAINTAIN MINIMUM 18" VERTICAL CLEARANCE BETWEEN ALL UTILITIES.
- ALL PIPES SHOWN TO OUTSIDE DIAMETER.

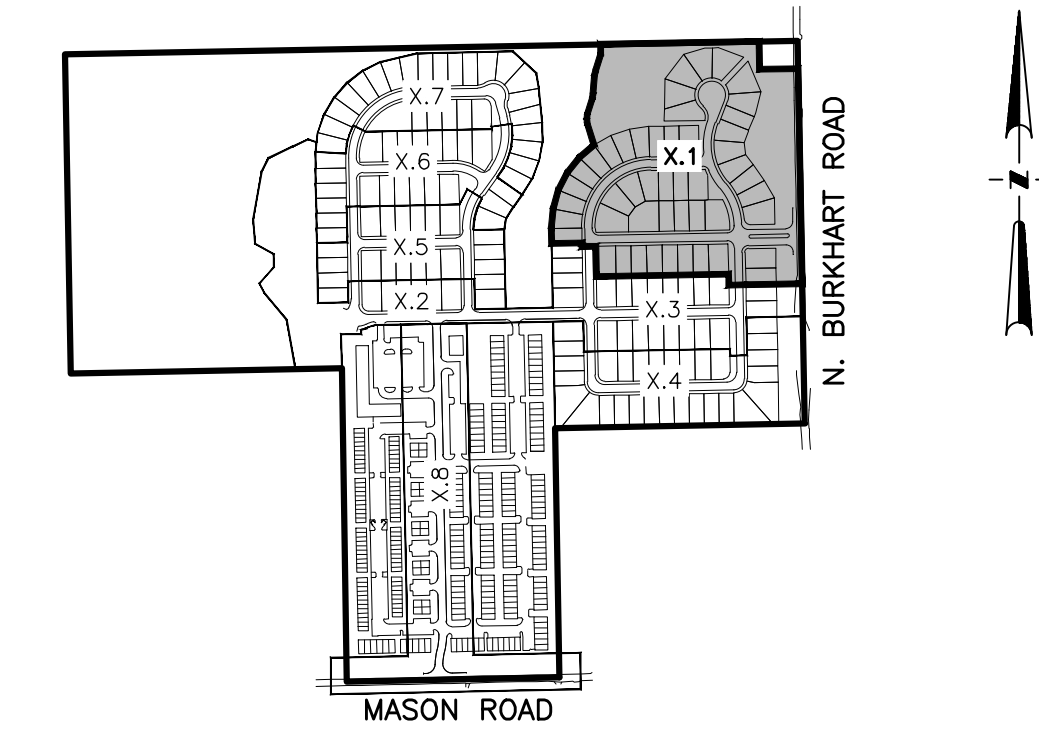


SEdgeview Circle (West)
STA. 0+00 TO 7+60

PROFILE SCALE
HORIZ: 1"=40'
VERT: 1"=4'



SHEET KEY



GRADING LEGEND

- X 940.00 TP PROPOSED TOP OF PAVEMENT GRADE
- X 940.00 SW PROPOSED SIDEWALK GRADE
- X 940.00 FG PROPOSED FINISH GRADE
- X 940.00 TC PROPOSED TOP OF CURB GRADE
- X 940.00 GP PROPOSED GUTTER PAN GRADE
- X 940.00 TW PROPOSED TOP OF WALL GRADE
- X 940.00 BW PROPOSED BOTTOM OF WALL GRADE
- X 940.0 MA MATCH EXISTING GRADE
- X 940.0 FFE PROPOSED FINISH FLOOR GRADE
- X 940.0 RIM PROPOSED RIM GRADE
- X 940.00 ADJ-RIM ADJUSTED RIM GRADE
- X 940.00 INV PROPOSED INVERT GRADE
- R ADA COMPLIANT SIDEWALK RAMP
- L ADA COMPLIANT SIDEWALK LANDING
- 900 EXISTING CONTOUR
- 900 PROPOSED CONTOUR
- LIMITS OF DISTURBANCE
- OVERFLOW ROUTE

BENCHMARKS

- DATUM: NAVD88
- BM A:
SET BENCH TIE IN S/SIDE OF UTILITY POLE ON NORTH SIDE OF MASON ROAD
290'S WEST OF EAST PROPERTY LINE.
ELEV = 909.83
- BM B:
ARROW ON HYDRANT ON WEST SIDE OF BURKHART ROAD 430'± NORTH OF
SOUTH PROPERTY LINE.
ELEV = 906.59

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40950 WOODWARD AVE
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BLOOMFIELD HILLS, MI 48304
POC: DAVID STRAUB
(248)-221-5011

GRADING PLAN

HERITAGE SQUARE (SINGLE FAMILY) ROADS
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024	PLAN SUBMITTAL
08/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE: 5/09/2024

PROJECT NO: 21-075C

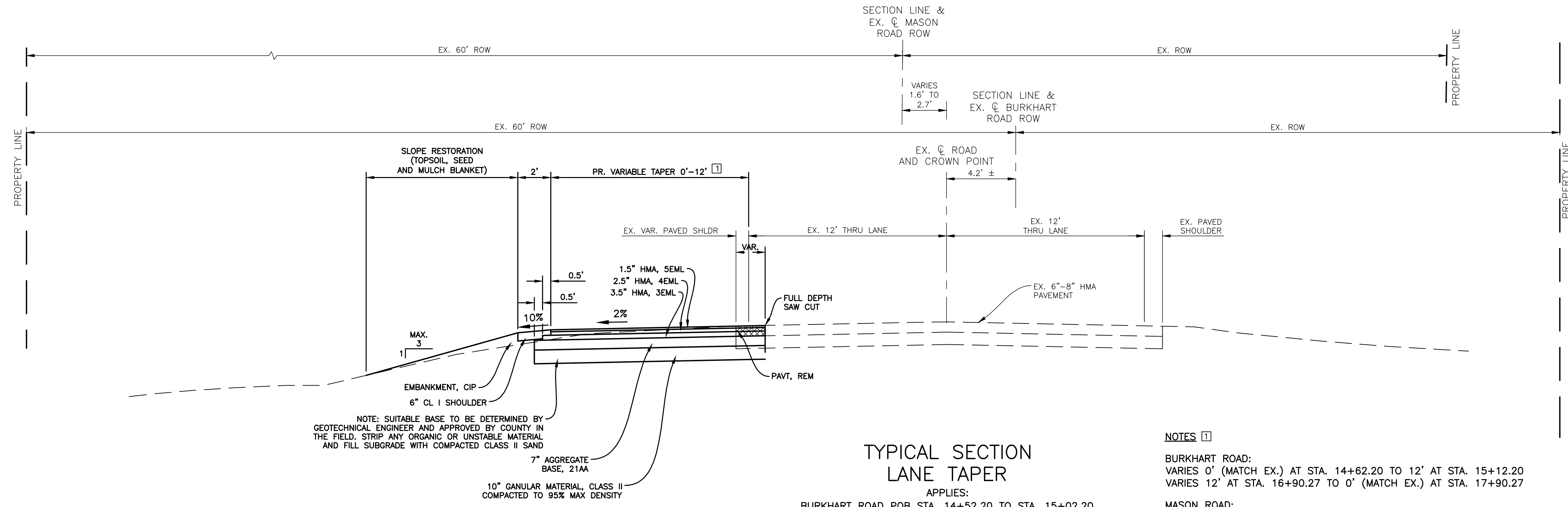
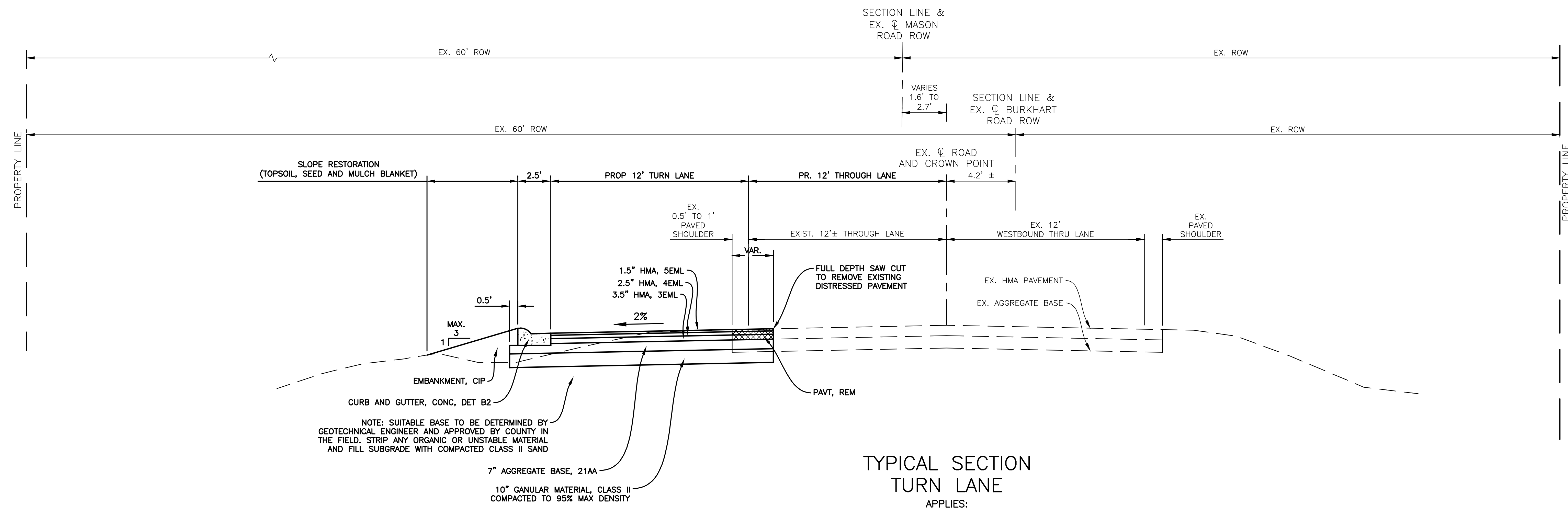
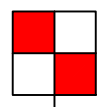
SCALE: 1" = 40'

0 1/2" 1"

FIELD:
DRAWN BY: DC,MM,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-7.1

NOT FOR CONSTRUCTION



NOTES [1]
 BURKHART ROAD:
 VARIES 0' (MATCH EX.) AT STA. 14+62.20 TO 12' AT STA. 15+12.20
 VARIES 12' AT STA. 16+90.27 TO 0' (MATCH EX.) AT STA. 17+90.27
 MASON ROAD:
 VARIES 0' (MATCH EX.) AT STA. 12+05.63 TO 12' AT STA. 12+55.63
 VARIES 12' AT STA. 14+13.84 TO 0' (MATCH EX.) AT STA. 15+13.84

IDENTIFICATION NO.	ITEM	THICKNESS	RATE PER SYD	PERFORMANCE GRADE	COMMENTS
5EML	HMA, 5EML	1.5 INCHES	165 LBS	64-22	AWI 260
4EML	HMA, 4EML	2.5 INCHES	275 LBS	64-22	
3EML	HMA, 3EML	3.5 INCHES	385 LBS	58-22	
	BOND COAT		0.05 TO 0.15 GALLONS		SS-1h (FOR INFORMATION ONLY)

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KEVIN C. MCDEVITT
 ENGINEER
 NO. 6201043260

Kevin C. McDevitt

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CLIENT :

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 BLOOMFIELD HILLS, MI 48304
 POC: DAVID STRAUB
 (248)-221-5011

TYPICAL ROAD SECTIONS

HERITAGE SQUARE (SINGLE FAMILY)
 95 AC. NW CORNER BURKHART & MASON ROADS
 PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
 HOWELL TWP, LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024	DATE
09/18/2024	DATE

ORIGINAL ISSUE DATE:
 5/09/2024

PROJECT NO: 21-075C

SCALE: N/A

FIELD:
 DRAWN BY: DC,MN,CK,DJ
 DESIGN BY: KM
 CHECK BY: KM

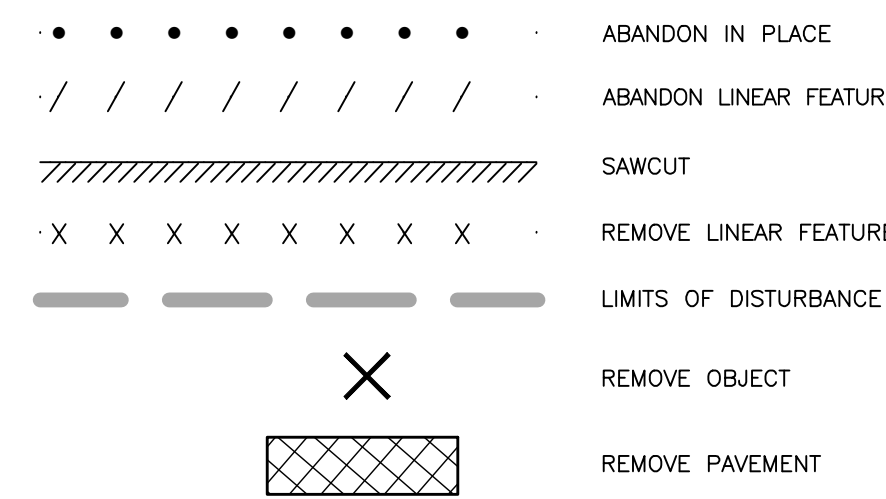
C-10.0

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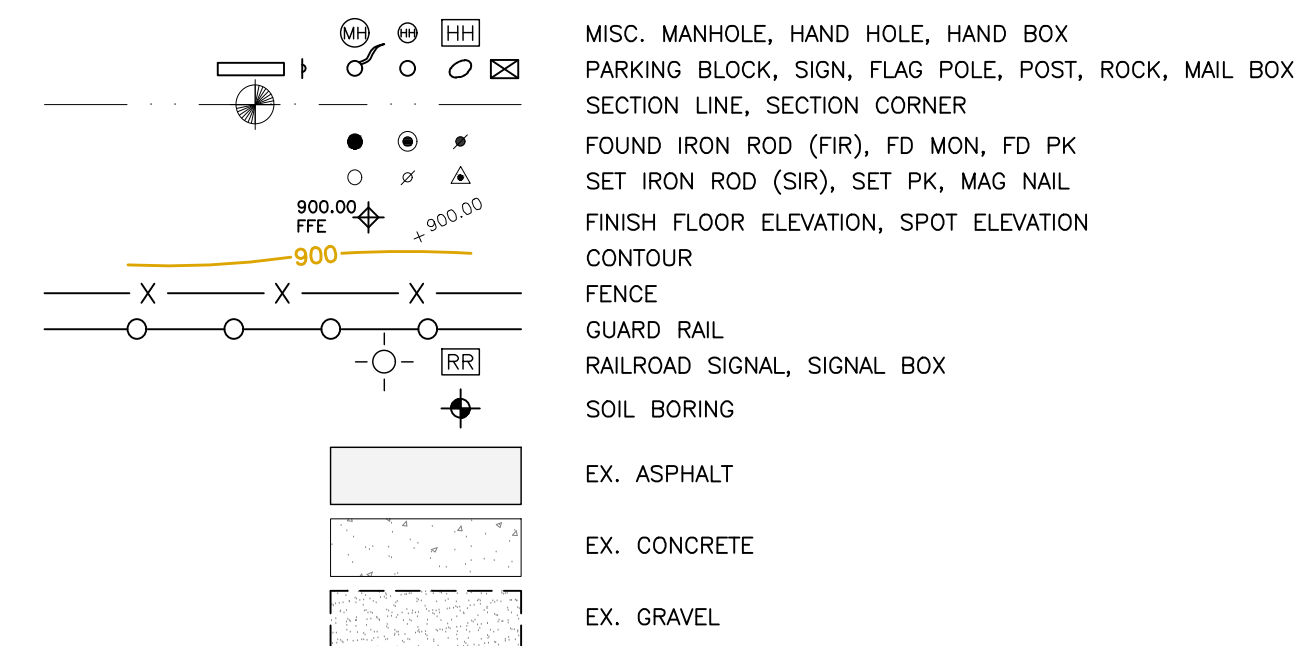
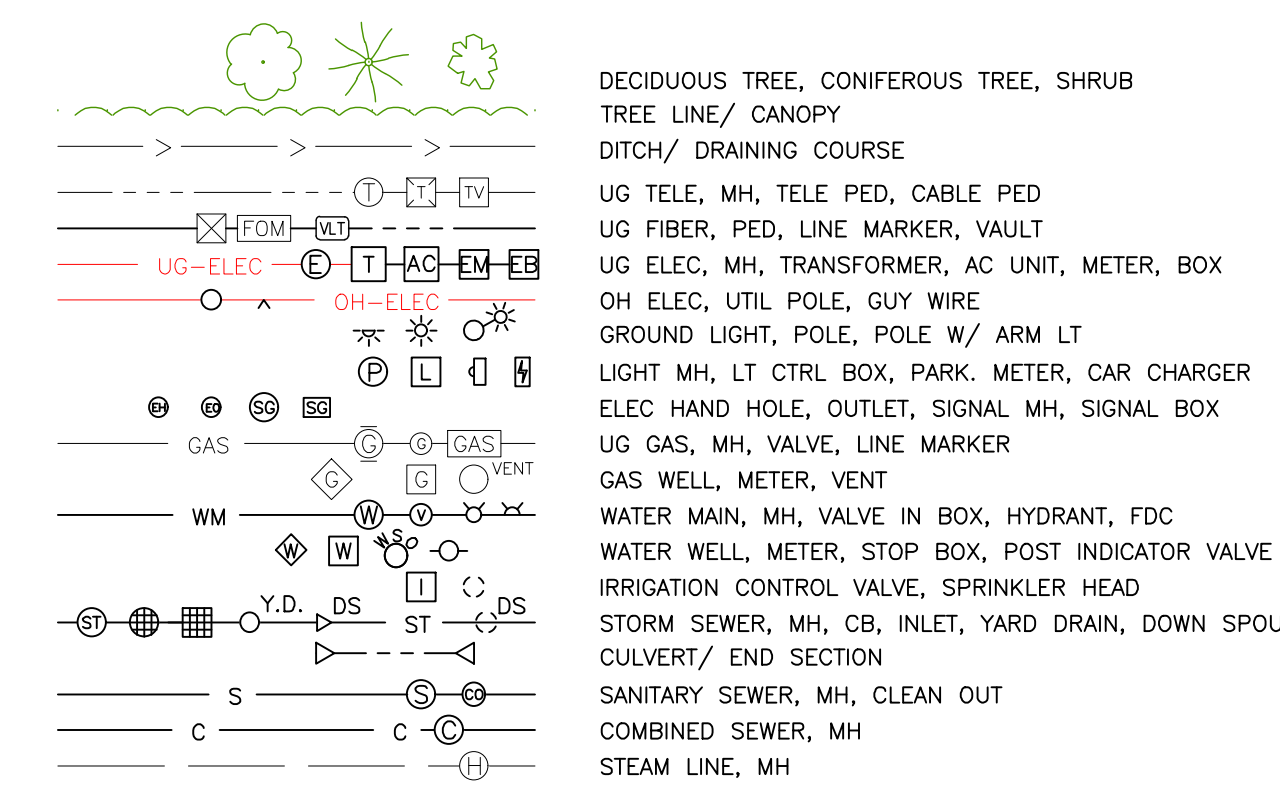
REMOVAL NOTES

- UTILITY OBJECTS SUCH AS GAS METER, TRANSFORMER, TELEPHONE PEDESTAL, UTILITY POLE & WIRES ARE TO BE REMOVED BY OTHERS.
- ANY TREES NOT MARKED PER PLAN ARE TO BE PROTECTED & PRESERVED DURING CONSTRUCTION.
- REMOVAL LIMITS SHOWN FOR UNDERGROUND CONSTRUCTION ARE APPROXIMATE ONLY. CONTRACTOR TO DETERMINE APPROPRIATE REMOVALS NEEDED FOR SAFE EXCAVATION PRACTICES AND TO COMPLY WITH APPLICABLE SAFETY STANDARDS.
- AT LEAST THREE (3) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT MISS DIG (1-800-482-7171) TO VERIFY THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES AND SHALL NOTIFY REPRESENTATIVES OF OTHER UTILITIES IN THE VICINITY OF THE WORK.

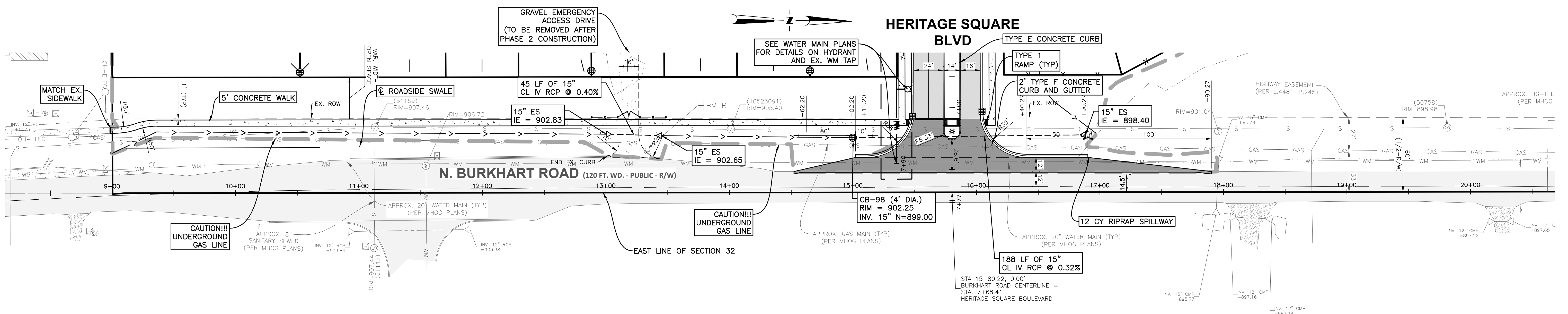
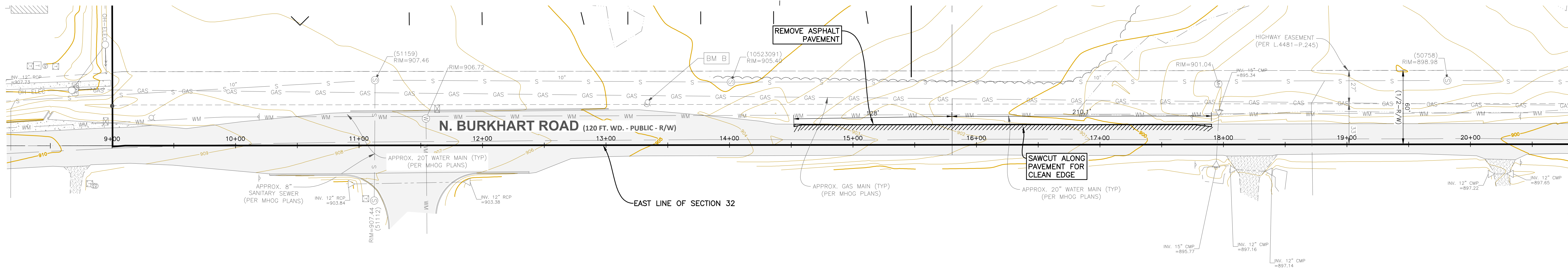
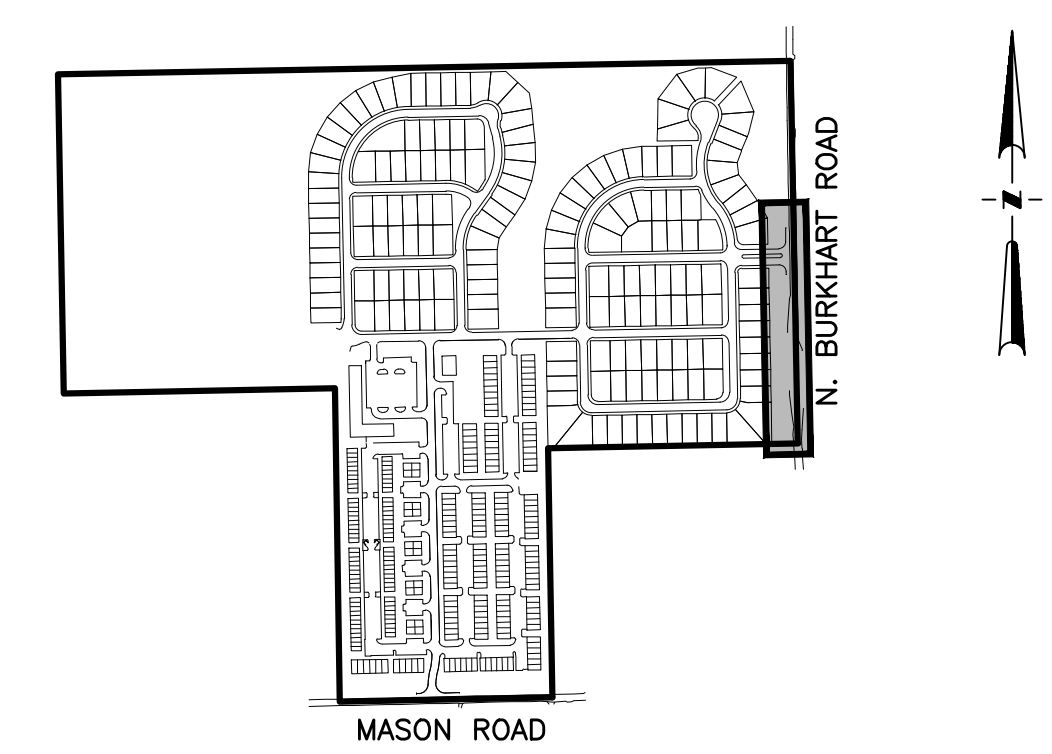
REMOVAL LEGEND



EXISTING LEGEND

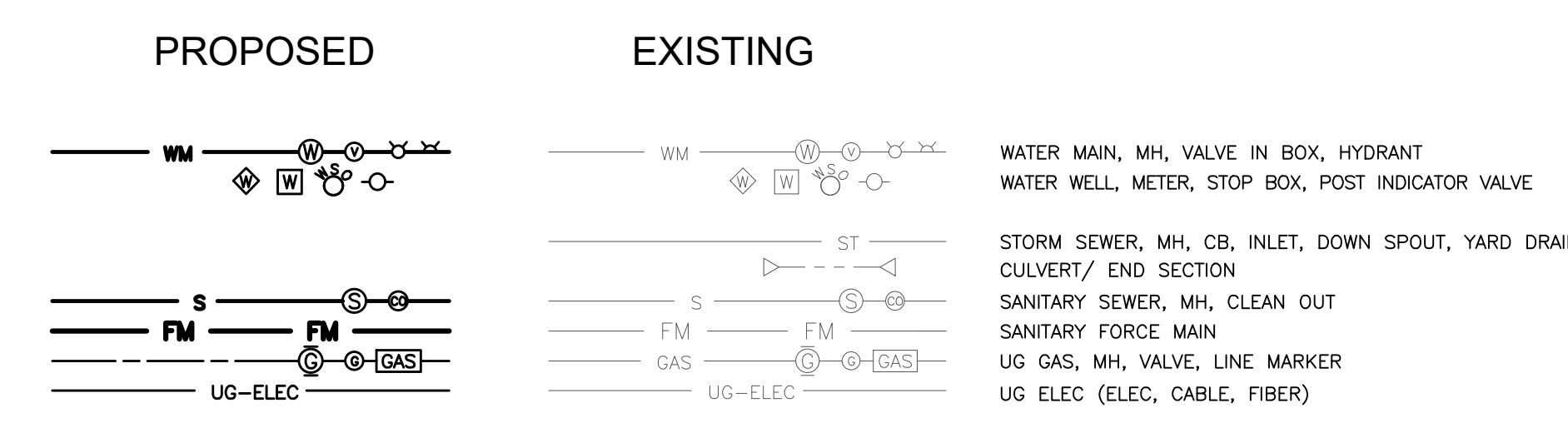


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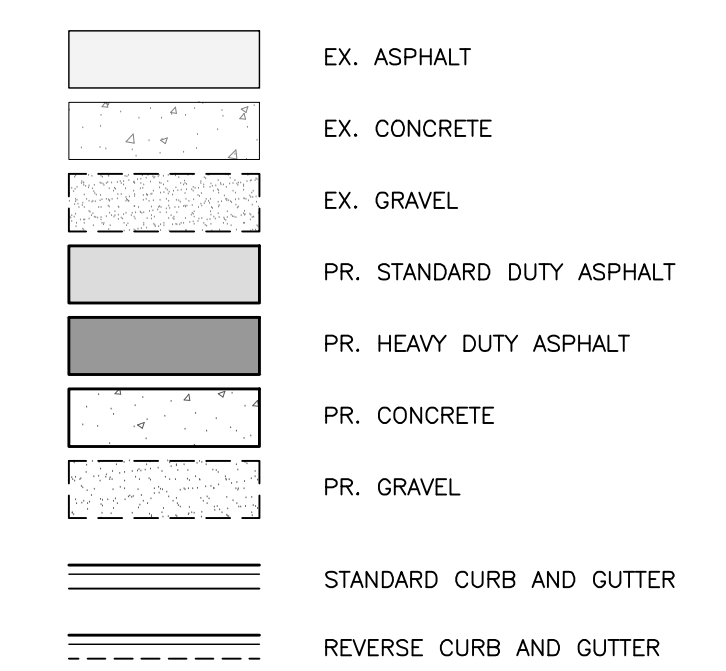


CONSTRUCTION

UTILITY LEGEND



PAVEMENT LEGEND



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CLIENT :

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(248)-221-5011

EX. CONDITIONS, REMOVAL & CONSTRUCTION PLAN

HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024	PLAN SUBMITTAL
08/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE:
5/09/2024

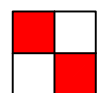
PROJECT NO: 21-075C

SCALE: 1" = 40'

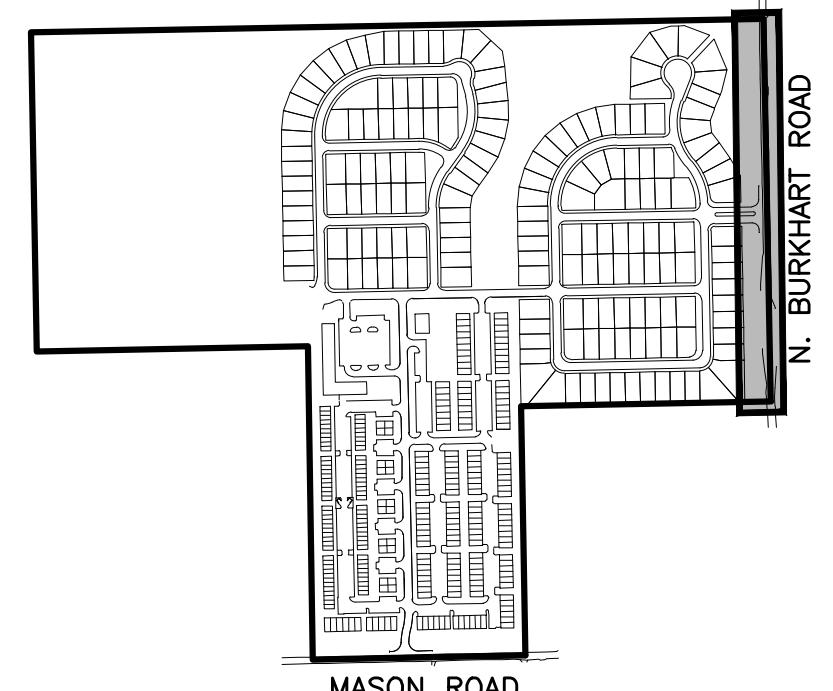
FIELD:
DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-10.1

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SHEET KEY



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KEVIN C. McDEVITT
ENGINEER
NO. 6201043260

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BLOOMFIELD HILLS, MI 48304
POC: DAVID STRAUB
(248)-221-5011

GRADING PLAN - BURKHART ROAD

HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP, LIVINGSTON COUNTY, MICHIGAN

DATE	REVISIONS
05/09/2024	PLAN SUBMITTAL
08/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL

ORIGINAL ISSUE DATE:
5/09/2024

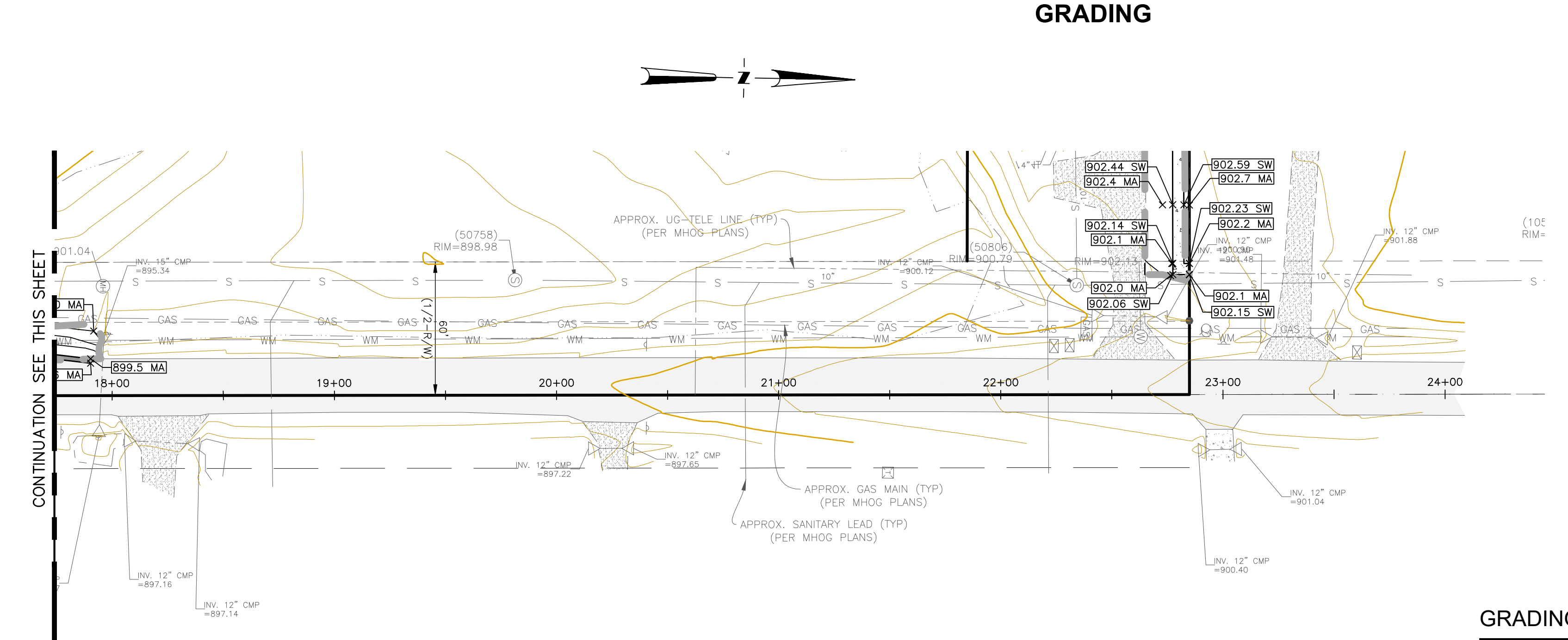
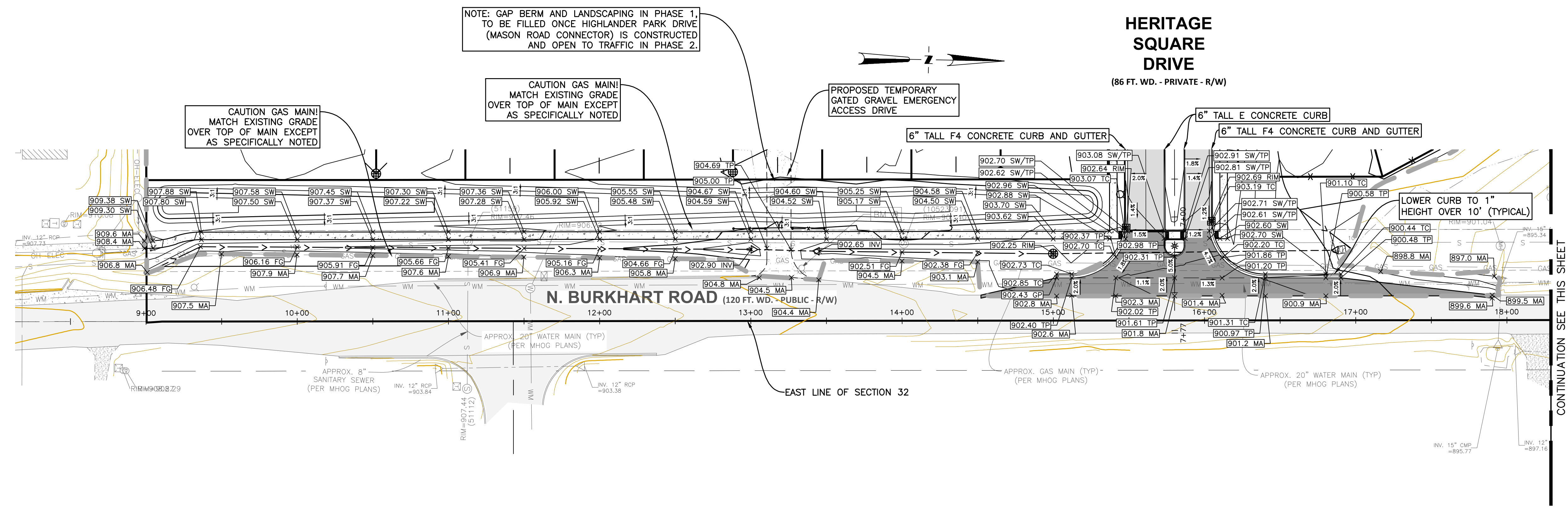
PROJECT NO: 21-075C

SCALE: 1" = 40'
0 1/2" 1"

FIELD:
DRAWN BY: DC, MN, CK, DJ
DESIGN BY: KM
CHECK BY: KM

C-10.3

NOT FOR CONSTRUCTION



EXISTING LEGEND

	DECIDUOUS TREE, CONIFEROUS TREE, SHRUB		MISC. MANHOLE, HAND HOLE, HAND BOX
	TREE LINE/ CANOPY		PARKING BLOCK, SIGN, FLAG POLE, POST, ROCK, MAIL BOX
	DITCH/ DRAINING COURSE		SECTION LINE, SECTION CORNER
	UG TELE, MH, TELE PED, CABLE PED		FOUND IRON ROD (FIR), FD MON, FD PK
	UG FIBER, PED, LINE MARKER, VAULT		SET IRON ROD (SIR), SET PK, MAG NAIL
	UG ELEC, MH, TRANSFORMER, AC UNIT, METER, BOX		FINISH FLOOR ELEVATION, SPOT ELEVATION
	OH ELEC, UTIL POLE, GUY WIRE		CONTOUR
	GROUND LIGHT, POLE W/ ARM LT		FENCE
	LIGHT MH, LT CTRL BOX, PARK. METER, CAR CHARGER		GUARD RAIL
	ELEC HAND HOLE, OUTLET, SIGNAL MH, SIGNAL BOX		RAILROAD SIGNAL, SIGNAL BOX
	UG GAS, MH, VALVE, LINE MARKER		SOIL BORING
	GAS WELL, METER, VENT		EX. ASPHALT
	WATER MAIN, MH, VALVE IN BOX, HYDRANT, FDC		EX. CONCRETE
	WATER WELL, METER, STOP BOX, POST INDICATOR VALVE		EX. GRAVEL
	IRRIGATION CONTROL VALVE, SPRINKLER HEAD		
	STORM SEWER, MH, CB, INLET, YARD DRAIN, DOWN SPOUT		
	CULVERT/ END SECTION		
	SANITARY SEWER, MH, CLEAN OUT		
	COMBINED SEWER, MH		
	STEAM LINE, MH		

GRADING LEGEND

	PROPOSED TOP OF PAVEMENT GRADE		ADA COMPLIANT SIDEWALK RAMP
	PROPOSED SIDEWALK GRADE		ADA COMPLIANT SIDEWALK LANDING
	PROPOSED FINISH GRADE		EXISTING CONTOUR
	PROPOSED TOP OF CURB GRADE		PROPOSED CONTOUR
	PROPOSED GUTTER PAN GRADE		LIMITS OF DISTURBANCE
	PROPOSED TOP OF WALL GRADE		OVERFLOW ROUTE
	PROPOSED BOTTOM OF WALL GRADE		
	MATCH EXISTING GRADE		
	PROPOSED FINISH FLOOR GRADE		
	PROPOSED RIM GRADE		
	ADJUSTED RIM GRADE		
	PROPOSED INVERT GRADE		

BENCHMARKS

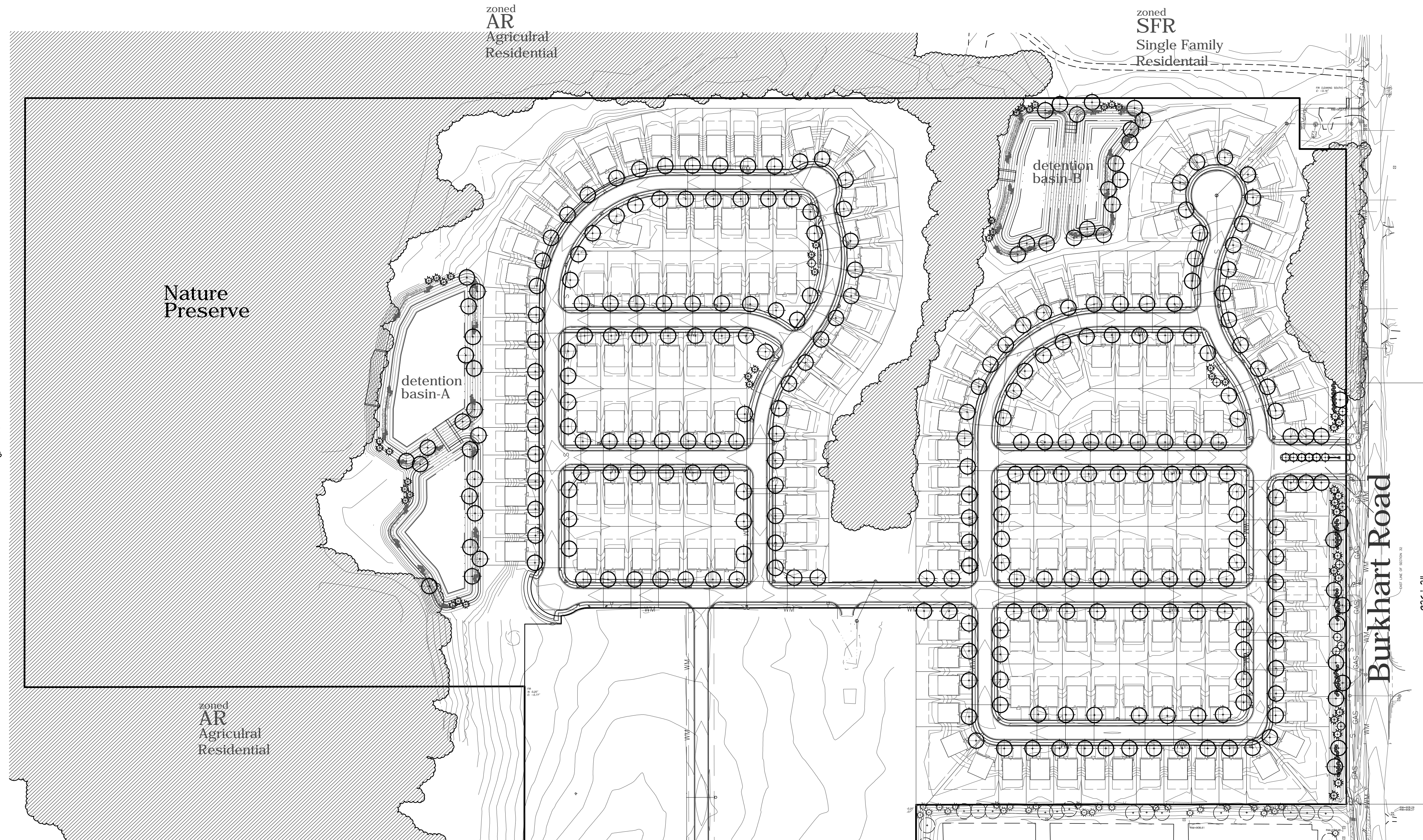
DATUM: NAVD88

BM A:
SET BENCH TIE IN S/SIDE OF UTILITY POLE ON NORTH SIDE OF MASON ROAD
290± WEST OF EAST PROPERTY LINE.
ELEV = 909.83

BM B:
ARROW ON HYDRANT ON WEST SIDE OF BURKHART ROAD 430± NORTH OF
SOUTH PROPERTY LINE.
ELEV = 906.59

landscape note:

- LANDSCAPE CONTRACTOR SHALL VISIT THE SITE, INSPECT EXISTING CONDITIONS, REVIEW PROPOSED PLANTINGS AND RELATED WORK, CONTACT THE OWNER AND/OR LANDSCAPE ARCHITECT WITH ANY CONCERNS OR DISCREPANCY BETWEEN THE PLAN, PLANT MATERIAL LIST, AND/OR SITE CONDITIONS.
- PRIOR TO BEGINNING OF CONSTRUCTION ON ANY WORK, CONTRACTORS SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES, GAS, ELECTRIC, TELEPHONE, CABLE TO BE LOCATED BY CONTACTING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER PRIOR TO COMMENCING.
- NUMERICAL VALUE ON THE LANDSCAPE QUANTITIES SPECIFIED ON THE PLAN TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION. VERIFY ANY CONCERN-DISCREPANCY WITH LANDSCAPE ARCHITECT.
- ALL CONSTRUCTION AND PLANT MATERIAL LOCATION TO BE ADJUSTED ON SITE IF NECESSARY.
- ALL SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED BY HOWELL TOWNSHIP AND LANDSCAPE ARCHITECT.
 - ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED AND WRAPPED AS DETAILED, SHOWN ON PLAN.
- PLANT BEDS TO BE DRESSED WITH MIN. 4" OF FINELY DOUBLE SHREDDED HARDWOOD MULCH.
 - DIG SHRUB PITS 1' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN ROOT BALL. BACK FILL WITH ONE PART TOP SOIL AND ONE PART SOIL FROM EXCAVATED PLANTING HOLE.
- NATURAL COLOR FINELY SHREDDED HARDWOOD BARK MULCH REQUIRED FOR ALL PLANTINGS.
 - REMOVE ALL TWINE, WIRE AND BURLAP FROM TREE AND SHRUB EARTH BALLS, AND FROM TREE TRUNKS. 4" THICK BARK MULCH FOR TREES IN 4" DIA. CIRCLE WITH 3" PULLED AWAY FROM TRUNK. 4" THICK BARK MULCH FOR SHRUBS AND 4" THICK BARK MULCH FOR PERENNIALS.
- PLANT MATERIAL QUALITY & INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS.
 - ALL NEW AND DISTURBED LAWN AREAS TO RECEIVE SEEDING UNLESS NOTED OTHERWISE.
- ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION.
- PLANT TREES AND SHRUBS GENERALLY NO CLOSER THAN THE FOLLOWING DISTANCES FROM SIDEWALKS, CURBS AND PARKING STALLS:
 - SHADE TREES _____ 5 FT.
 - ORNAMENTAL AND EVERGREEN TREES (CRAB, FINE SPRUCE, ETC.) _____ 10 FT.
 - SHRUBS THAT ARE LESS THAN 1 FOOT TALL AND WIDE AT MATURITY _____ 2 FT.
- NO TREES OR EVERGREENS TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UTILITY LINES AS SHOWN ON THE OVERALL LANDSCAPE PLAN. SEE ENGINEERING PLANS FOR LOCATION AND DETAILS.
- ALL LAWN AREAS AND LANDSCAPE BEDS TO BE FULLY IRRIGATED WITH AN AUTOMATIC UNDERGROUND SYSTEM. IRRIGATION SYSTEM TO HAVE SEPARATE ZONES FOR LAWN AREAS, PARKING ISLANDS, AND SHRUB BEDS WITH DIFFERENT CONTROL MOISTURE LEVEL ADJUSTMENT PER ZONE AS REQUIRED.
- UNLESS NOTED OTHERWISE, LANDSCAPE BEDS ADJACENT TO LAWN TO RECEIVE EDGING. EDGING SHALL BE 4" X 1/8" METAL (FINISH BLACK OR GREEN) OR APPROVED EQUAL AND TO BE INSTALLED WITH HORIZONTAL METAL STAKES AT 32" O.C. OR PER MANUFACTURER'S SPECIFICATION.
- ALL NEW PARKING ISLANDS AND LANDSCAPE BEDS ADJACENT AND NEXT TO BUILDING SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND POOR SOILS A MIN. OF 16"-18" DEPTH, BACK FILL WITH GOOD, MEDIUM TEXTURED PLANTING SOILS, ADD A MIN. 4" OF TOPSOIL OVERFILL TO FINISH GRADE. PROVIDE POSITIVE DRAINAGE.
- WATERING OF ALL PLANTS AND TREES TO BE PROVIDED IMMEDIATELY AND MULCHING WITHIN 24 HOURS AFTER INSTALLATION.
- ALL TREE PITS TO BE TESTED FOR PROPER DRAINAGE PRIOR TO TREE PLANTING. PROVIDE APPROPRIATE DRAINAGE SYSTEM AS REQUIRED IF THE TREE PIT DOES NOT DRAIN SUFFICIENTLY.
- THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE PLANT MATERIALS AND IRRIGATION INSTALLATION FOR A PERIOD OF TWO YEAR BEGINNING AFTER THE COMPLETION OF LANDSCAPE INSTALLATION DATE APPROVED BY THE CITY OR LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE DURING AND AT THE END OF THE GUARANTEE PERIOD, ANY DEAD OR UNACCEPTABLE PLANTS, AS DETERMINED BY THE TOWNSHIP OR LANDSCAPE ARCHITECT, WITHOUT COST TO THE OWNER.



sheet index

- LS-1 OVERALL LANDSCAPE PLAN VIEW
- LS-2 PLANTING DETAIL PLAN (SINGLE FAMILY)
- LS-3 PLANTING DETAIL PLAN (SINGLE FAMILY)
- LS-4 PLANTING DETAIL PLAN (DETENTION POND)
- LS-5 PLANTING DETAIL PLAN (SOD AND SEEDING)

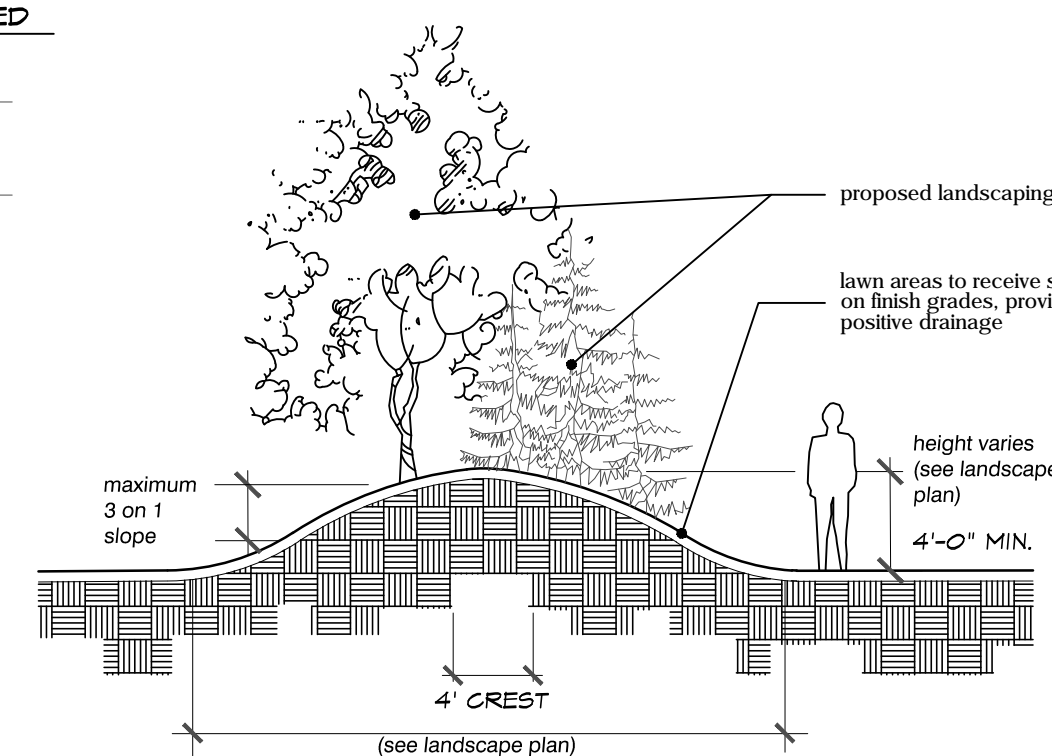
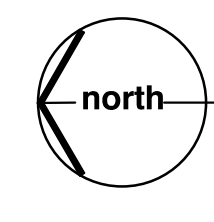
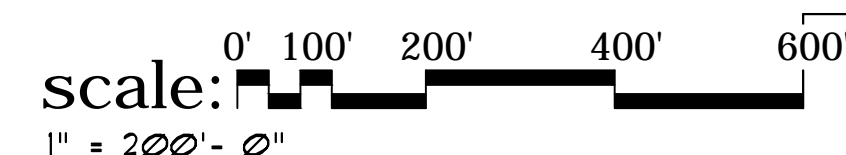
landscape requirement summary

	REQUIRED	PROVIDED
Burkhart Road Frontage Landscape		
TOTAL LIN.FT. OF BURKHART ROAD GREENBELT	746' ±	
(826 LIN.FT. OF BURKHART ROAD LESS 80' ACCESS ROAD)		
ONE (1) CANOPY OR EVERGREEN TREE PER 40'	19	26
(146' / 40' PER TREE = 10.65 TREES)		
ONE (1) ORNAMENTAL TREE PER 100'	7	7+
(146' / 100' PER TREE = 1.4 TREES)		
EIGHT (8) SHRUB PER 40'	144	208
(146' / 40' PER 8-SHRUBS = 10.65 X 8 = 149.2 SHRUBS)		
blvd. island divider median		
TOTAL LIN.FT. OF BLVD. ISLAND	146' ±	
ONE (1) CANOPY OR EVERGREEN TREE PER 30'	5	6
(146' / 30' PER TREE = 4.86 TREES)		
detention pond B		
TOTAL LIN.FT. OF A POND	1347' ±	
ONE (1) CANOPY OR EVERGREEN TREE PER 50'	28	28
(1347' / 50' PER TREE = 27.44 TREES)		
TEN (10) SHRUB PER 50'	274	274
(1014' / 50' = 27.44 X 10 = 274.4 SHRUBS)		

	REQUIRED	PROVIDED
detention pond A		
TOTAL LIN.FT. OF A POND	1642' ±	
ONE (1) CANOPY OR EVERGREEN TREE PER 50'	34	34
(1642' / 50' PER TREE = 32.84 TREES)		
TEN (10) SHRUB PER 50'	338	338
(1642' / 50' = 32.84 X 10 = 328.4 SHRUBS)		
open space landscape		
TOTAL SQ.FT. OF OPEN AREA	261,746' ±	
ONE (1) CANOPY OR EVERGREEN TREE PER 3000 SQ.FT	87	EXISTING TREES SAVE
(261,746' / 3000 SQ.FT PER TREE = 87.3 TREES)		

landscape plan for:
“Heritage Square”
 a planned residential community
 Howell Township, Michigan

note:
 conceptual landscape plan for inspection purposes only
 and in no way official or approved for construction.

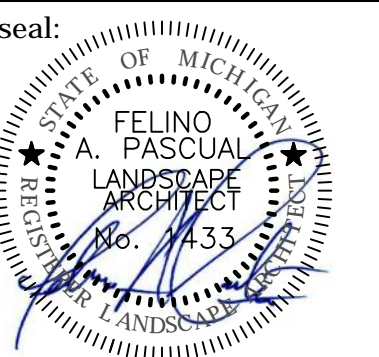


berm planting detail
 no scale

landscape maintenance notes:

- LANDSCAPE MAINTENANCE PROCEDURES AND FREQUENCIES TO BE FOLLOWED SHALL BE SPECIFIED ON THE LANDSCAPE PLAN, ALONG WITH THE MANNER IN WHICH THE EFFECTIVENESS, HEALTH AND INTENDED FUNCTIONS OF THE VARIOUS LANDSCAPE AREAS ON THE SITE WILL BE ENSURED.
- LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING CONDITION, FREE FROM DEBRIS AND REFUSE.
 - PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION. ONLY TO REMOVE DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE.
 - ALL DEAD OR DISEASED PLANT MATERIAL SHALL BE REMOVED AND REPLACED WITHIN SIX (6) MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER OCCURS FIRST. THE PLANTING SEASON FOR DECIDUOUS PLANTS SHALL BE BETWEEN MARCH 15 AND NOVEMBER 15 OR UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREEN PLANTS SHALL BE BETWEEN MARCH 1 AND JUNE 1. PLANT MATERIAL INSTALLED TO REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE.

FP A
 FELINO A. PASCUAL
 and ASSOCIATES
 Community Land Planner and
 registered Landscape Architect
 24333 Orchard Lake Rd, Suite G
 Farmington Hills, MI 48336
 ph. (248) 557-5588
 fax. (248) 557-5416



client:
**BURKHART MASON
 COMMUNITY LLC.**
 29350 Woodward
 Avenue Royal Oak,
 Michigan

project:
**HERITAGE
 SQUARE
 A PLANNED
 RESIDENTIAL
 COMMUNITY**

project location:
 Howell Township,
 Michigan
 Burkhart Road &
 Mason Road

sheet title:
**OVERALL
 LANDSCAPE PLAN
 VIEW**

job no./issue/revision date:
 LS24.064.06 REVIEW 7-1-2024
 LS24.064.09 SPA 9-19-2024

drawn by:
 JP, DK
 checked by:
 FP
 date:
 6-3-2024

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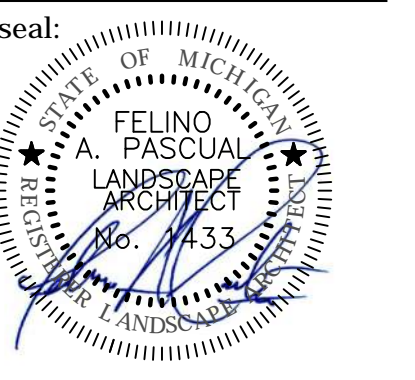
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The location and elevations of existing
 underground utilities as shown on this
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 is either expressed or implied as to the
 completeness of accuracy. contractor shall
 be exclusively responsible for determining the
 exact location and elevation prior to the start
 of construction

project no:
 LS24.064.06

sheet no:
LS-1 of 5



client:
BURKHART MASON
COMMUNITY LLC.
 29350 Woodward
 Avenue Royal Oak,
 Michigan

project:
HERITAGE
SQUARE
 A PLANNED
 RESIDENTIAL
 COMMUNITY

project location:
 Howell Township,
 Michigan
 Burkhart Road &
 Mason Road

sheet title:
CONCEPTUAL
LANDSCAPE PLAN

job no./issue/revision date:
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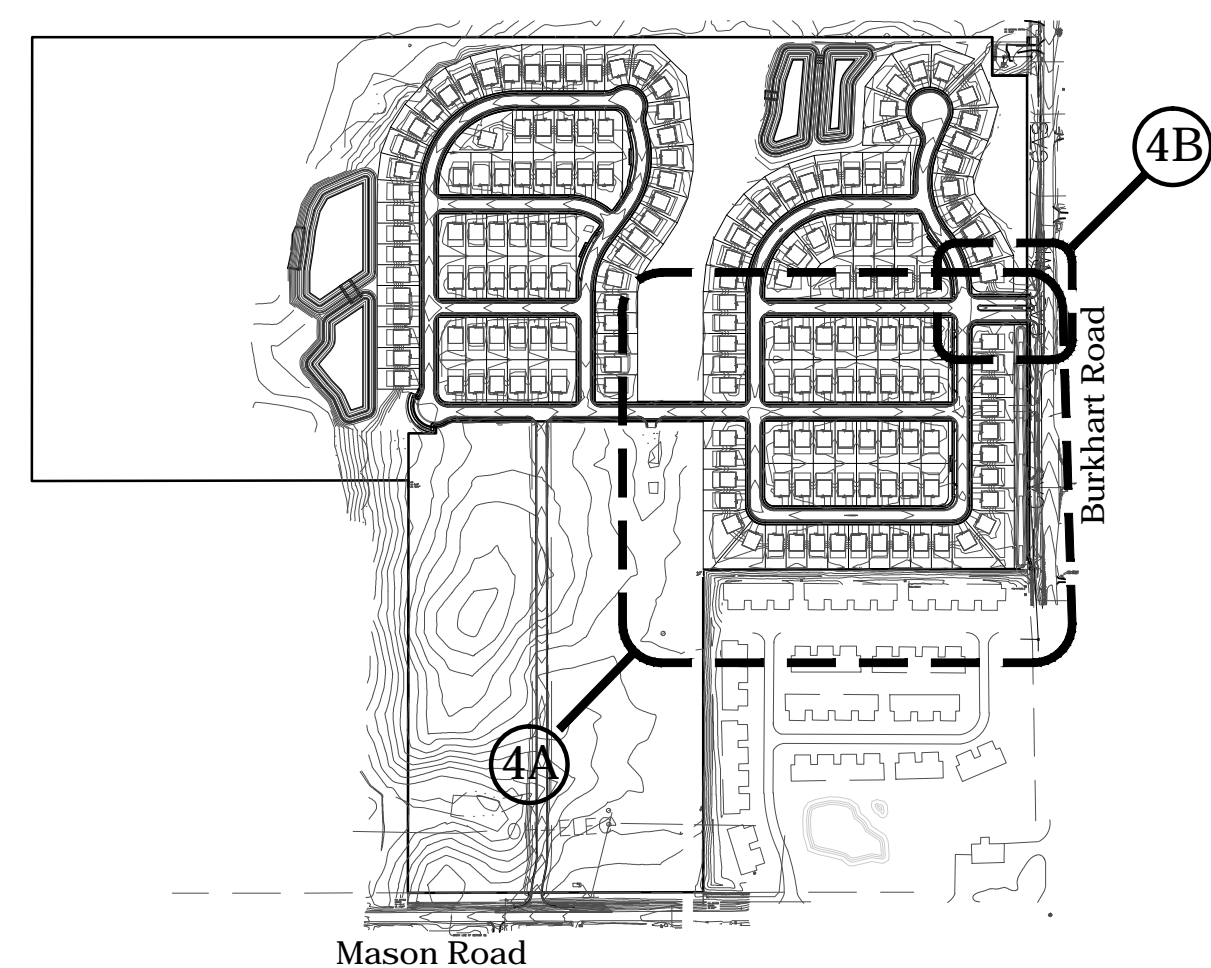
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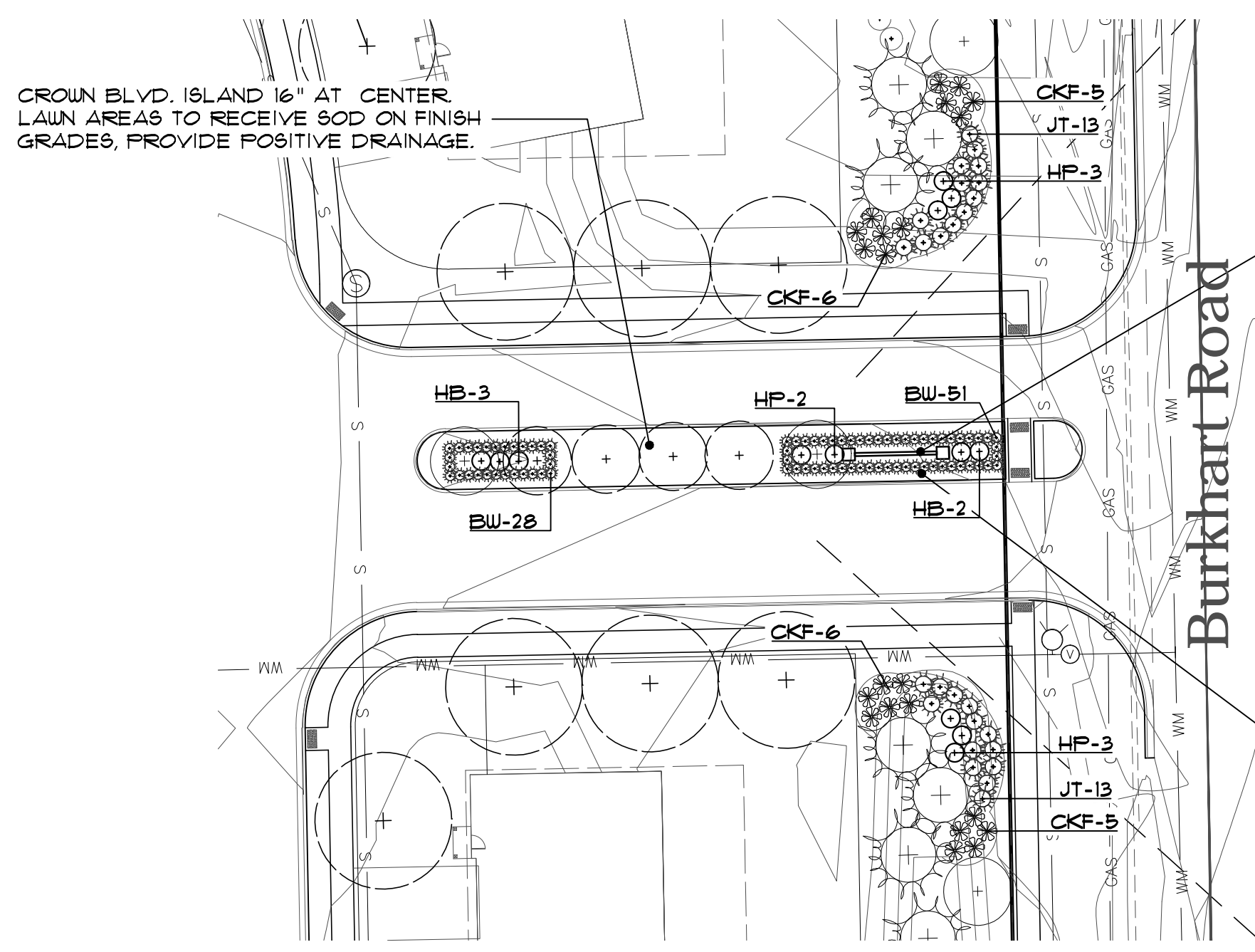
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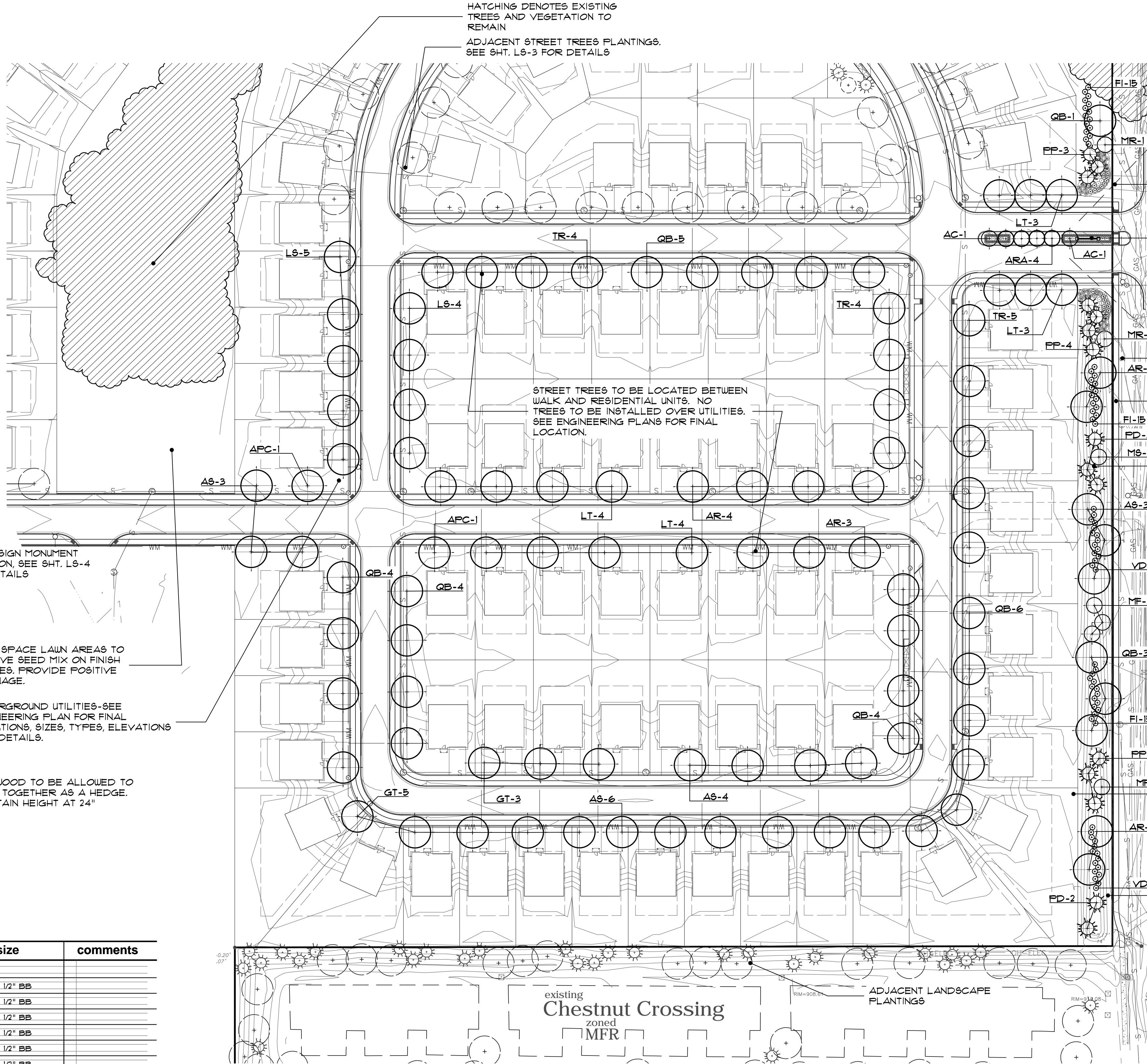
sheet no:



key reference location map
 NO SCALE



entrance landscape planting detail
 SCALE: 1" = 30'-0"



landscape planting detail
 SCALE: 1" = 60'-0"

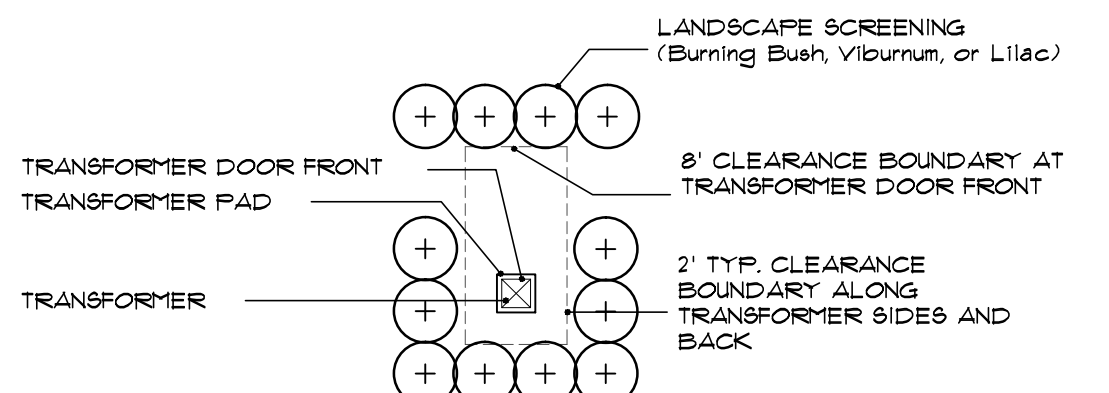
planting landscape notes:

- GENERAL NOTES:
- PLANT MATERIALS TO BE INSTALLED ACCORDING TO THE HOWELL TOWNSHIP AND CURRENT AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS.
 - PLANT MATERIALS TO BE GUARANTEED FOR 2 YEARS. REPLACE FALLING MATERIAL WITHIN 1 YEAR, OR THE NEXT APPROPRIATE PLANTING PERIOD.
 - PLANT MATERIALS TO BE OF PREMIUM QUALITY. NO. 1 GRADE NORTHERN NURSURY GROWN, IN HEALTHY CONDITION, FREE OF PESTS AND DISEASES.
 - MULCH IS TO BE NATURAL COLORED, FINELY SHREDDED HARDWOOD BARK OF 4" THICK BARK MULCH FOR TREES IN 4" DIA. CIRCLE 1/3" PULLED AWAY FROM TRUNK; 3" THICK BARK MULCH FOR SHRUBS AND 2" THICK BARK MULCH FOR PERENNIALS.
 - CALL MISS DIG AT 1-800-482-7171 PRIOR TO ANY CONSTRUCTION.
- DECIDUOUS & EVERGREEN TREES:
- TREE SHALL BE INSTALLED SAME RELATIONSHIP TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 4" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY SOIL AREAS.
 - DO NOT PRUNE TERMINAL LEADER PRUNE ONLY DEAD OR BROKEN BRANCHES.
 - REMOVE ALL TAGS, STRING, PLASTICS AND OTHER MATERIALS THAT ARE UNSIGHTLY AND COULD CAUSE GIRDLING.
 - REMOVE TREE STAKES, GUY WIRES AND TREE WRAP AFTER ONE WINTER SEASON.

- SHRUB SHALL BE INSTALLED SAME RELATIONSHIP TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 4" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY SOIL AREAS.
- DO NOT PRUNE TERMINAL LEADER PRUNE ONLY DEAD OR BROKEN BRANCHES.
- REMOVE ALL TAGS, STRING, PLASTICS AND OTHER MATERIALS THAT ARE UNSIGHTLY AND COULD CAUSE GIRDLING.

Burkhart Road Frontage Landscape

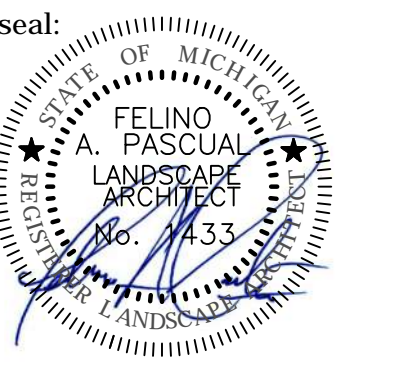
	REQUIRED	PROVIDED
TOTAL LIN.FT. OF BURKHART ROAD GREENBELT	746' ±	
(826 LIN.FT. OF BURKHART ROAD LESS 80' ACCESS ROAD)		
ONE (1) CANOPY OR EVERGREEN TREE PER 40'	19	26
(746' / 40' PER TREE = 18.65 TREES)		
ONE (1) ORNAMENTAL TREE PER 100'	7	7+
(746' / 100' PER TREE = 7.4 TREES)		
EIGHT (8) SHRUB PER 40'	149	208
(746' / 40' PER 8-SHRUBS = 18.65 X 8=149.2 SHRUBS)		



transformer pad planting detail
 SCALE: 1" = 20'-0"

A MINIMUM OF 2' SEPARATION BETWEEN TRANSFORMER AND FULL GROWN SHRUBS AND TREES. GROUND COVERS ALLOWED UP TO TRANSFORMER PAD IF MAINTAINED BELOW 4" FULL GROWTH. IF TRANSFORMER FACES TOWARDS THE HOUSE, THEN THE SAME CONDITIONS EXIST. NO FULL GROWTH IN FRONT OF THE TRANSFORMER FOR AT LEAST A MINIMUM OF 8'. THERE ARE NO WAIVERS GRANTED TO THE ABOVE CONDITION. DETAIL PER THE DETROIT EDISON COMPANY-SERVICE PLANNING DEPARTMENT (9-11-98)

SEE ENGINEERING PLANS FOR PROPOSED LOCATIONS, TOTAL NUMBER OF TRANSFORMERS AND FINAL LOCATION PER DETROIT EDISON REQUIREMENTS.



client:
BURKHART MASON
COMMUNITY LLC.
 29350 Woodward
 Avenue Royal Oak,
 Michigan

project:
HERITAGE
SQUARE
 A PLANNED
 RESIDENTIAL
 COMMUNITY

project location:
 Howell Township,
 Michigan
 Burkhardt Road &
 Mason Road

sheet title:
LANDSCAPE
PLANTING DETAIL

job no./issue/revision date:
 LS24.064.06 REVIEW 7-1-2024
 LS24.064.09 SPA 9-19-2024

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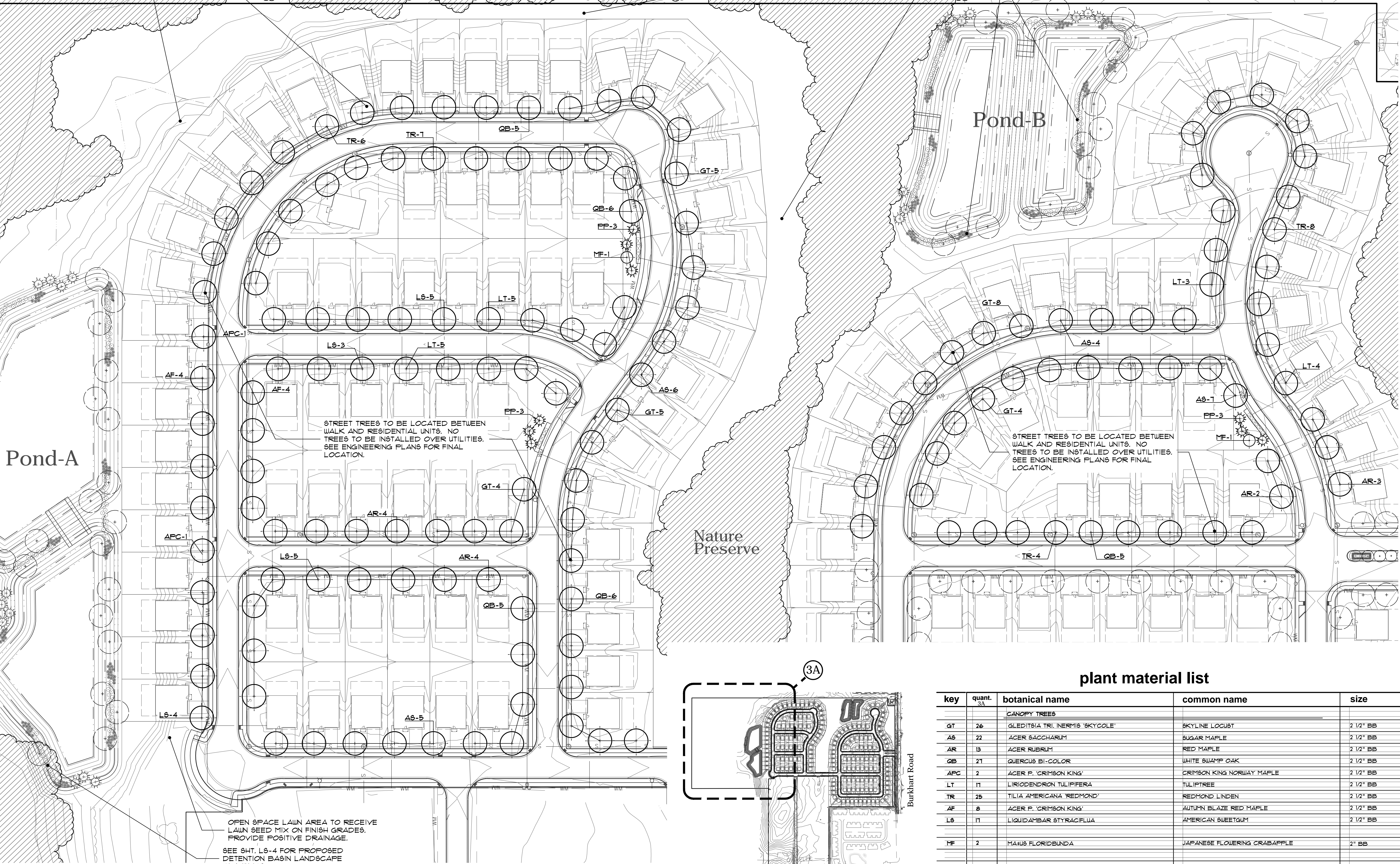
sheet no:
LS-3 of 5

UNDERGROUND UTILITIES -SEE
 ENGINEERING PLAN FOR FINAL
 LOCATIONS, SIZES, TYPES, ELEVATIONS
 AND DETAILS.

OPEN SPACE LAWN AREAS TO
 RECEIVE SEED MIX ON FINISH
 GRADES. PROVIDE POSITIVE
 DRAINAGE.

OPEN SPACE LAWN AREAS TO RECEIVE
 LAWN SEED MIX ON FINISH GRADES.
 PROVIDE POSITIVE DRAINAGE.

SEE SHT. LS-4 FOR PROPOSED
 DETENTION BASIN LANDSCAPE
 PLANTINGS

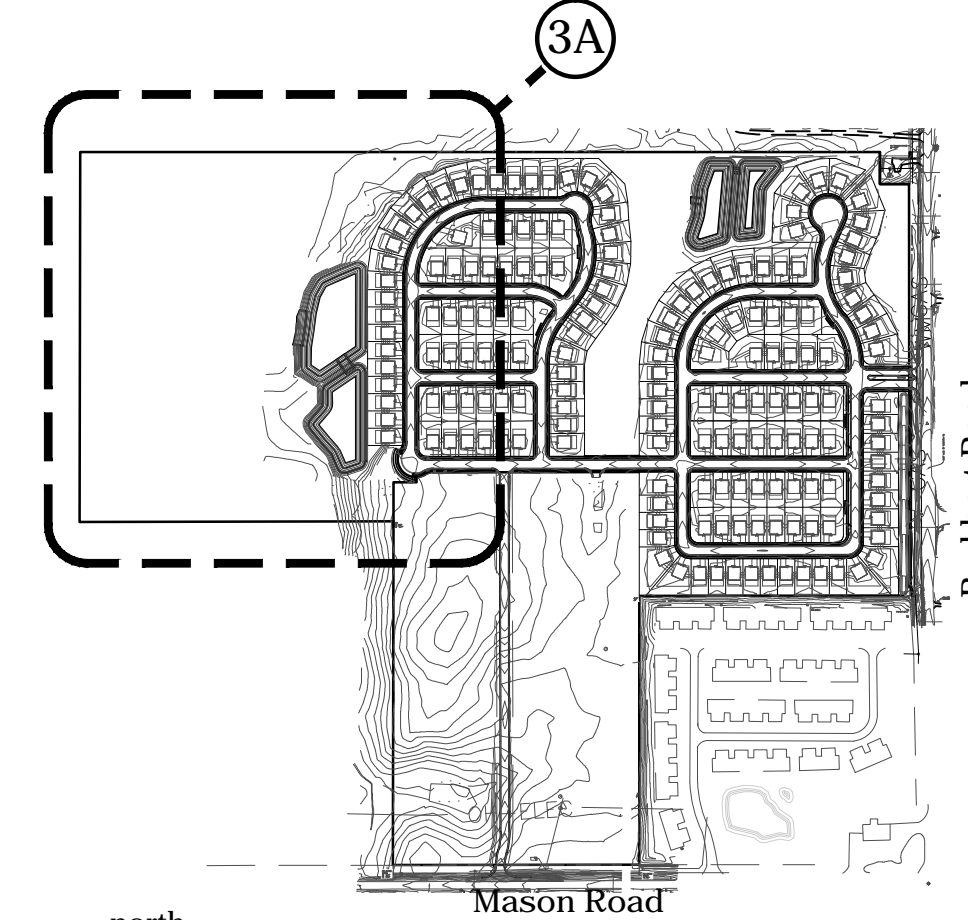


STREET TREES TO BE LOCATED BETWEEN
 WALK AND RESIDENTIAL UNITS. NO
 TREES TO BE INSTALLED OVER UTILITIES.
 SEE ENGINEERING PLANS FOR FINAL
 LOCATION.

STREET TREES TO BE LOCATED BETWEEN
 WALK AND RESIDENTIAL UNITS. NO
 TREES TO BE INSTALLED OVER UTILITIES.
 SEE ENGINEERING PLANS FOR FINAL
 LOCATION.

OPEN SPACE LAWN AREA TO RECEIVE
 LAWN SEED MIX ON FINISH GRADES.
 PROVIDE POSITIVE DRAINAGE.

SEE SHT. LS-4 FOR PROPOSED
 DETENTION BASIN LANDSCAPE
 PLANTINGS

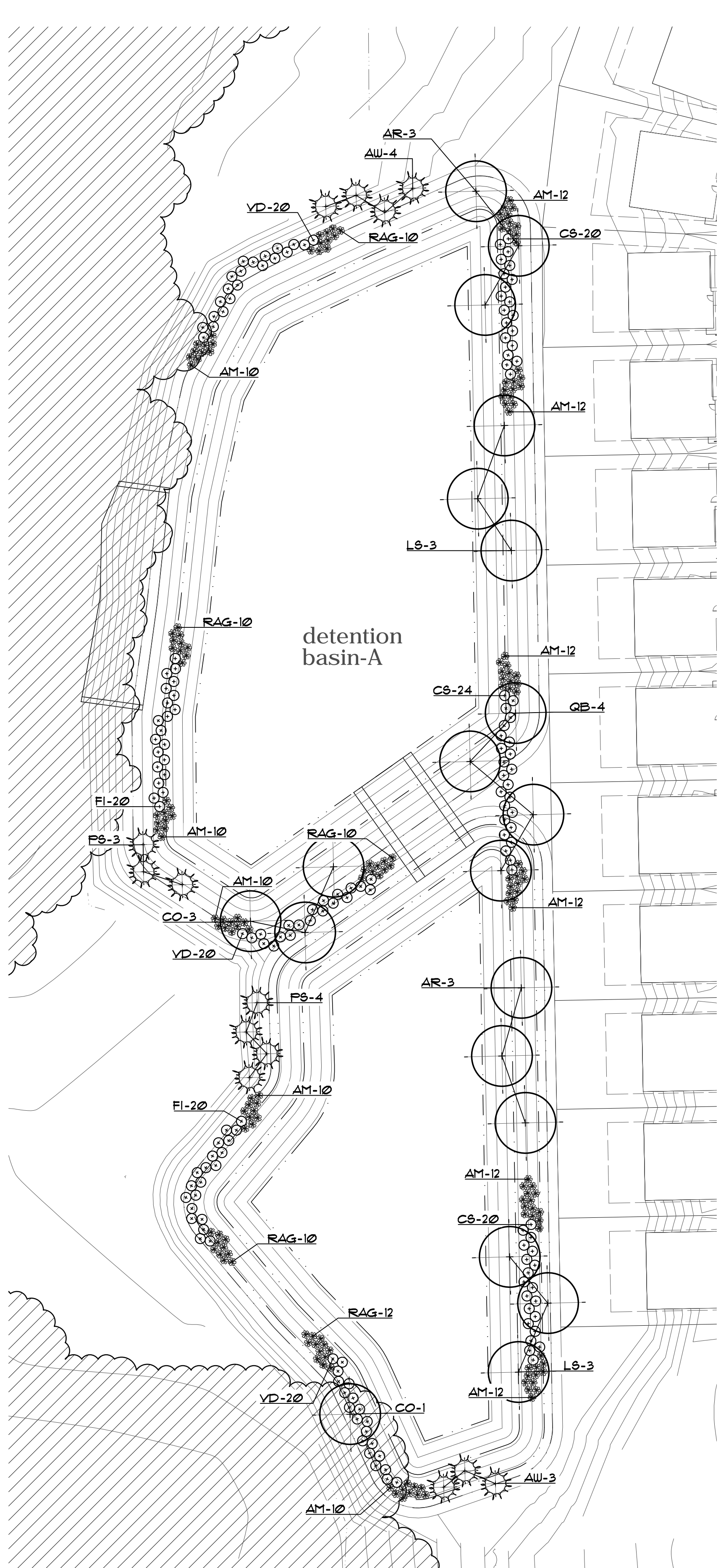


north
 key reference location map
 NO SCALE

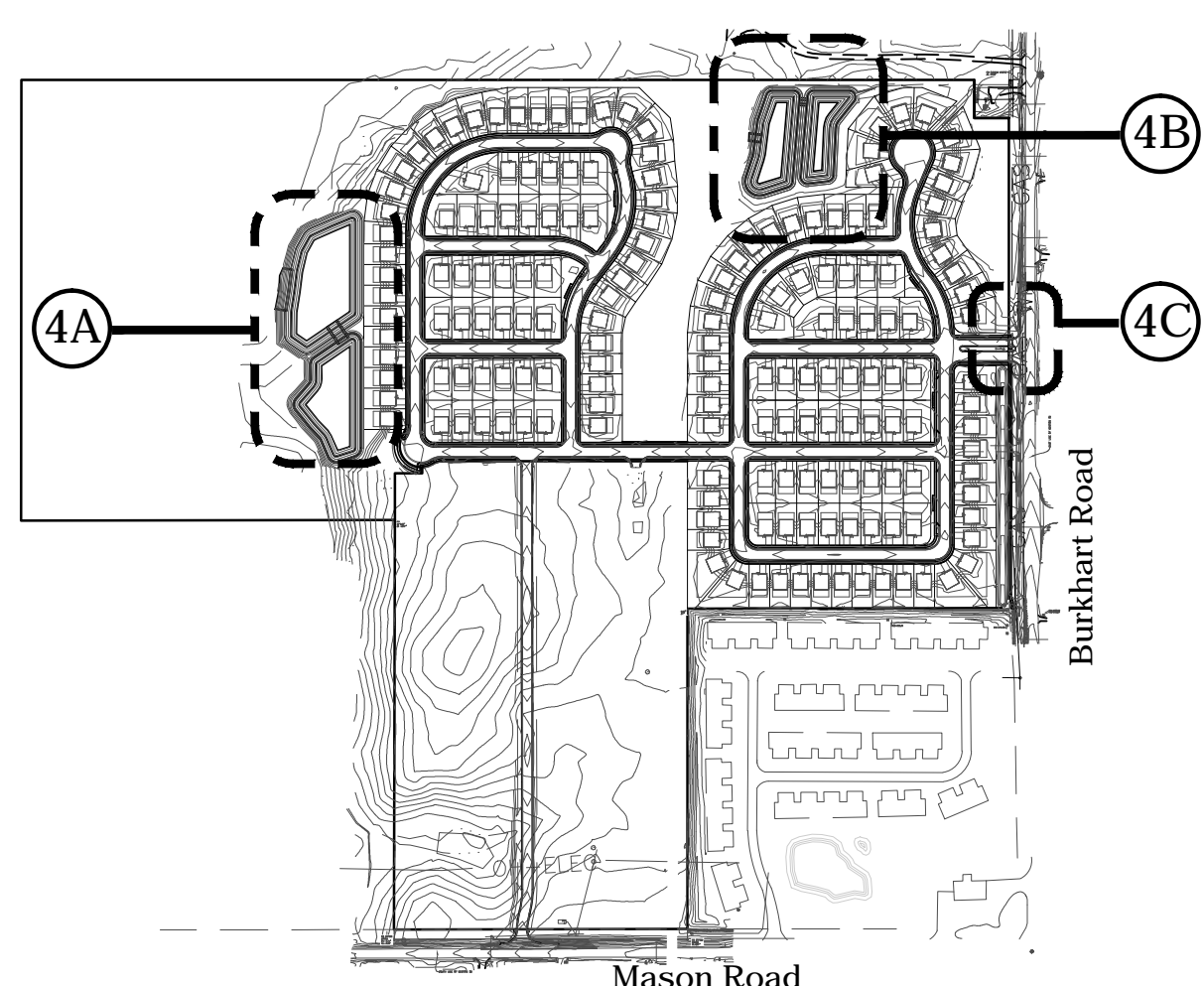
plant material list

key	quant.	botanical name	common name	size	comments
CANOPY TREES					
GT	26	GLEDITSIA TRI. INERMIS 'SKYCOLE'	SKYLINE LOCUST	2 1/2" BB	
AS	22	ACER SACCHARUM	SUGAR MAPLE	2 1/2" BB	
AR	13	ACER RUBRUM	RED MAPLE	2 1/2" BB	
QB	21	QUERCUS BI-COLOR	WHITE SWAMP OAK	2 1/2" BB	
APC	2	ACER P. 'CRIMSON KING'	CRIMSON KING NORWAY MAPLE	2 1/2" BB	
LT	11	LIRIODENDRON TULIPIFERA	TULIPTREE	2 1/2" BB	
TR	25	TILIA AMERICANA 'REDMOND'	REDMOND LINDEN	2 1/2" BB	
AF	8	ACER P. 'CRIMSON KING'	AUTUMN BLAZE RED MAPLE	2 1/2" BB	
L8	11	LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEETGUM	2 1/2" BB	
MF	2	MAHUA FLORIBUNDA	JAPANESE FLOWERING CRABAPPLE	2" BB	
EVERGREEN TREES					
PP	5	PICEA PINGENS	COLORADO GREEN SPRUCE	8" BB	

3A landscape planting detail
 SCALE: 1" = 60'-0"



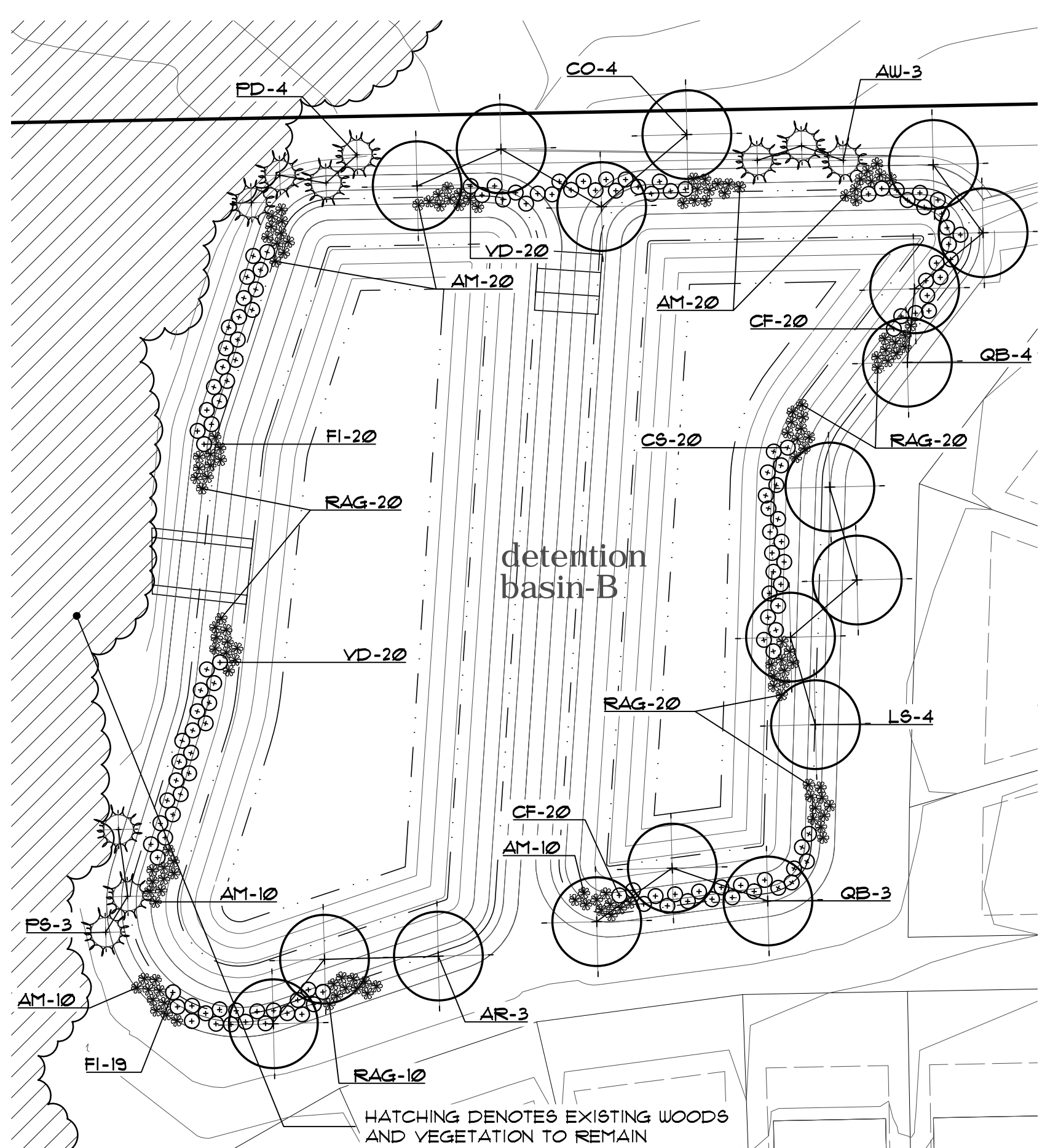
4A detention basin-A planting detail
SCALE: 1" = 40'-0"



key reference location map
NO SCALE

detention landscape requirements

detention pond A	REQUIRED	PROVIDED
TOTAL LINFT. OF A POND	1642' ±	
ONE (1) CANOPY OR EVERGREEN TREE PER 50'	34	34
(1642' / 50' = 32.84 X 10 = 328.4 TREES)		
TEN (10) SHRUB PER 50'	338	338
(1642' / 50' = 32.84 X 10 = 328.4 SHRUBS)		
detention pond B	REQUIRED	PROVIDED
TOTAL LINFT. OF A POND	1341' ±	
ONE (1) CANOPY OR EVERGREEN TREE PER 50'	28	28
(1341' / 50' PER TREE = 27.44 TREES)		
TEN (10) SHRUB PER 50'	274	274
(1014' / 50' = 27.44 X 10 = 274.4 SHRUBS)		



4B detention basin-B planting detail
SCALE: 1" = 40'-0"

entry monument notes:

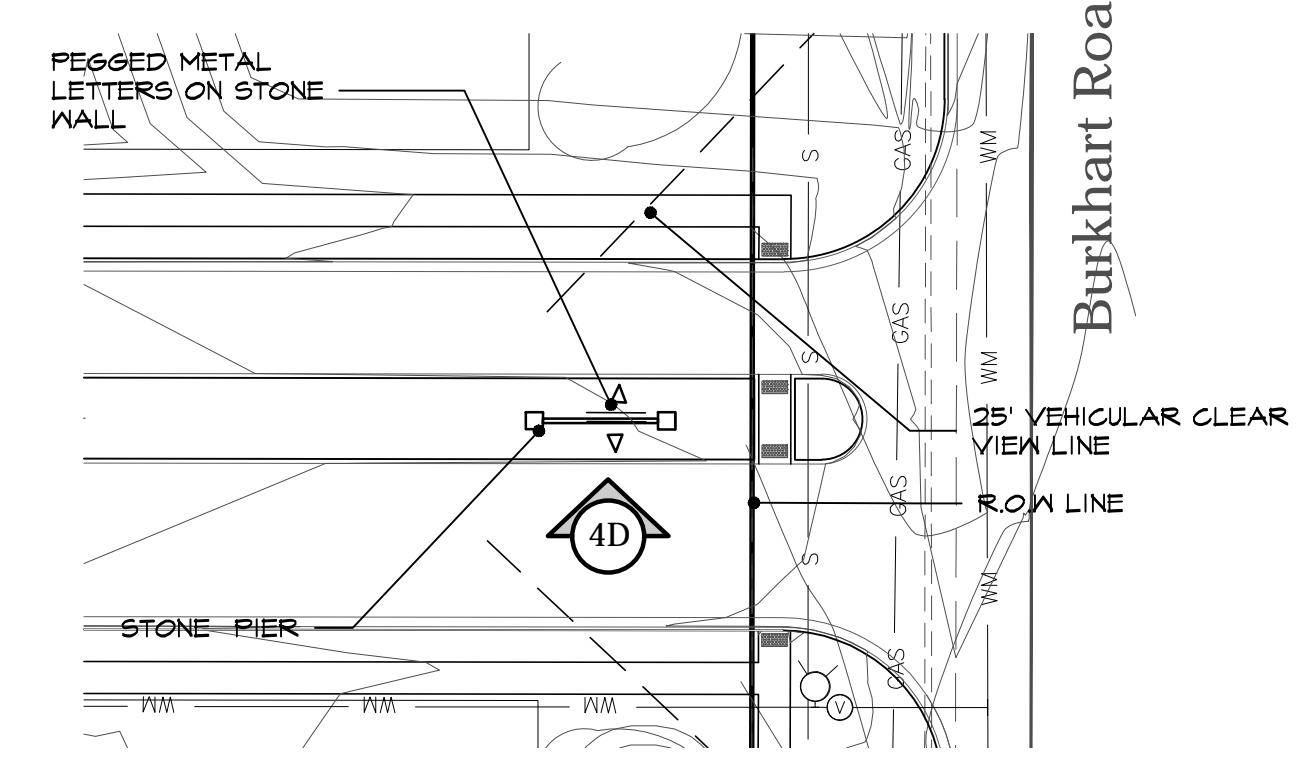
- ALL INFORMATION CONTAINED HEREIN IS SUBJECT TO APPROVAL, AND PERMITS TO BE OBTAINED PRIOR TO CONSTRUCTION FROM ALL NECESSARY AGENCIES.
- CONTRACTOR SHALL VISIT THE SITE, INSPECT EXISTING CONDITIONS, REVIEW PROPOSED PLANS AND RELATED WORK. CONTACT THE OWNER WITH ANY CONCERNS OR DISCREPANCY BETWEEN THE PLANS AND/OR SITE CONDITIONS.
- PRIOR TO BEGINNING OF CONSTRUCTION ON ANY WORK, CONTRACTORS SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES, GAS, ELECTRIC, TELEPHONE, CABLE. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER PRIOR TO COMMENCING. CONTACT MISS DIG AT 811 OR 800-482-7171 BEFORE YOU DIG.
- DO NOT SCALE DRAWING. USE FIGURED DIMENSIONS ONLY.
- VERIFY SOIL BEARING CAPACITY PRIOR TO ANY FOOT FOUNDING CONSTRUCTION. IF SOIL BEARING CAPACITY FALLS BELOW STANDARD REQUIREMENTS, CONSULT STRUCTURAL ENGINEER FOR RECOMMENDATION OF FINAL FOOT FOUNDING DESIGN.
- GRADES BY OTHERS. FINAL GRADES TO PROVIDE POSITIVE DRAINAGE.
- FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL WITH AN ASSUMED SAFE BEARING CAPACITY OF 2000 P.S.I. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, FOOTINGS SHALL BE ENLARGED OR LOWERED AT THE DIRECTION OF THE ARCHITECT. VERIFY FOUNDATION SOIL BEARING PRESSURE IN FIELD BY SOILS ENGINEER.
- PROVIDE NECESSARY SHEETING SHORING BRACING, ETC. AS REQUIRED DURING EXCAVATIONS TO PROTECT SIDES OF EXCAVATIONS.
- MINIMUM CONCRETE STRENGTH TO BE 3000 P.S.I. @ 28 DAYS. U.O.N. SLABS SHALL BE 3500 P.S.I. MIN. U.O.N. EXPOSED CONCRETE SHALL BE 4000 P.S.I. WITH 6% ± 1% ENTRAINED AIR U.O.N.
- ALL CONCRETE WORK AND PLACEMENT SHALL CONFORM TO THE LATEST RECOMMENDATIONS OF A.C.I.
- PROVIDE DOUELS INTO FOUNDATION TO MATCH SIZE AND SPACING OF VERTICAL REINFORCEMENT AT ALL WALLS, UNLESS OTHERWISE NOTED.
- PROVIDE MINIMUM 3" CONCRETE COVER FOR REINFORCEMENT BARS BELOW GRADE AND MINIMUM 2" CONCRETE COVER FOR REINFORCEMENT BARS ABOVE GRADE.
- LOCATE AND STAKE ALL EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. COORDINATE ANY ADJUSTMENTS WITH ARCHITECT.
- ALL ENTRY WALL LIGHTING SHALL BE CONTROLLED WITH A 'PHOTO-EYE' SWITCH. ALL LIGHTING SHALL BE SHIELDED FROM PUBLIC ROW'S AND ADJACENT PROPERTIES.
- SIGN TEXT AND LOGO TO BE PAINTED METAL LOGO/LETTER ON LIMESTONE STONE. PERMITS TO BE OBTAINED PER CITY OF STERLING HEIGHTS REQUIREMENTS AND APPROVALS.

signage uplighting

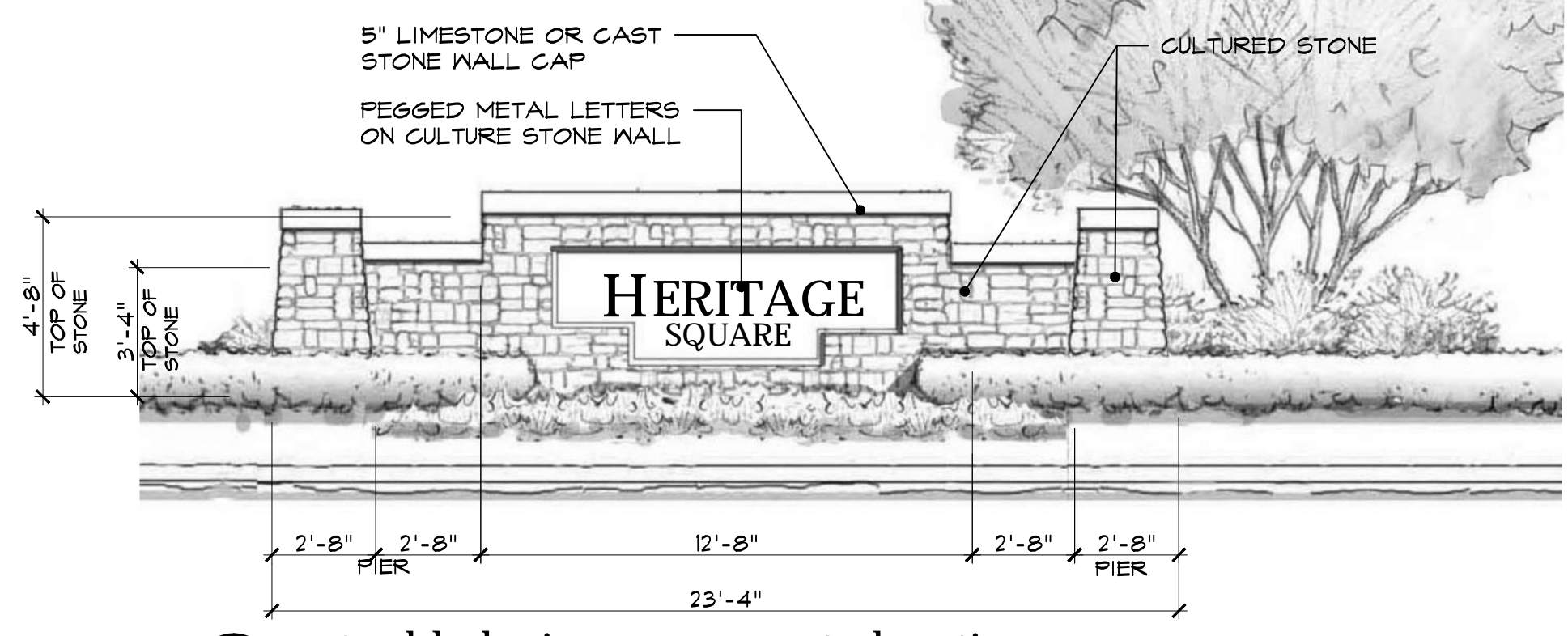
SIGNAGE UPLIGHTING MANUFACTURED BY HYDREL, MODEL NO. 4799, 20660 NORTHOFF STREET, SUITE B CHATSWORTH, CA 91311
WEB SITE: WWW.HYDREL.COM
PHONE: 866-533-9901
FAX: 866533-5291
FINISH SELECTION: BRONZE



NOTE:
LIGHT TO BE SHIELDED FROM PUBLIC ROW. AND LAMPS SHALL NOT BE VISIBLE FROM NORMAL VIEWING ANGLES.



4C conceptual entry site plan
SCALE: 1" = 50'-0"

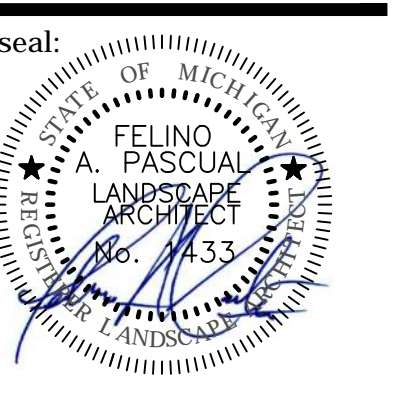


4D entry blvd. sign monument elevation
SCALE: 1/4"=1'-0"

plant material list

key	quant.	quant.	botanical name	common name	size	comments
TREES						
CO	4	4	CELTIS OCCIDENTALIS	HACKBERRY	2 1/2" BB	
AR	6	3	ACER R. FRANKSRED'	RED SUNSET RED MAPLE	2 1/2" BB	
L8	6	4	LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEETGUM	2 1/2" BB	
QB	4	1				
AW	1	3	ABIES CONCOLOR	CONCOLOR WHITE FIR	8' BB	
FS	1	3	PINUS STROBUS	EASTERN WHITE PINE	8' BB	
FD	-	4	PICEA GLAUGA 'DENSATA'	BLACK HILL SPRUCE	8' BB	
SHRUBS						
FI	40	39	FORSYTHIA X INTERMEDIA	BORDER FORSYTHIA	3' BB	60" O.C. SPACING
IV	-	-	ILEX VERTICILLATA	MICHIGAN HOLLY	3' BB	60" O.C. SPACING
VD	60	40	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	3' BB	48" O.C. SPACING
CF	-	40	CORNUS FLAVIRAMEA	YELLOWTIG DOGWOOD	3' BB	60" O.C. SPACING
CS	64	20	CORNUS STOLONIFERA	REDTIG DOGWOOD	3' BB	60" O.C. SPACING
RAG	52	10	RHUS AROMATIC 'GRO-LOW'	'GRO-LOW' FRAGRANT SUMAC	24" CONT	48" O.C. SPACING
AM	122	10	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	RED CHOKEBERRY	30" CONT	42" O.C. SPACING

FP A
FELINO A. PASCUAL
and ASSOCIATES
Community Land Planner and
registered Landscape Architect
24333 Orchard Lake Rd. Suite G
Farmington Hills, MI 48336
ph. (248) 557-5588
fax. (248) 557-5416



client:
**BURKHART MASON
COMMUNITY LLC.**
29350 Woodward
Avenue Royal Oak,
Michigan

project:
**HERITAGE
SQUARE**
A PLANNED
RESIDENTIAL
COMMUNITY

project location:
Howell Township,
Michigan
Burkhart Road &
Mason Road

sheet title:
**CONCEPTUAL BLDG
FOUNDATION &
ENTRANCE
MONUMENT**

job no./issue/revision date:
LS24.064.06 REVIEW 7-1-2024
LS24.064.09 SPA 9-19-2024

drawn by:
JP, DK

checked by:
FP

date:
6-3-2024

notice:
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The location and elevations of existing
underground utilities as shown on this
drawing are only approximate. no guarantee
is either expressed or implied as to the
completeness of accuracy. contractor shall
be exclusively responsible for determining the
exact location and elevation prior to the start
of construction.

project no:
LS24.064.06

sheet no:
LS-4 of 5

economy prairie seed mix

THIS PRAIRIE SEED MIX OFFERS AN ECONOMICAL WAY TO ESTABLISH A PRAIRIE. IN ADDITION TO NATIVE PRAIRIE GRASSES, FLOWERING SPECIES PROVIDE COLOR THROUGHOUT THE GROWING SEASON AND FOOD SOURCES FOR BIRDS AND BUTTERFLIES. ADDING SEED OR PLANT PLUGS AT A LATER DATE IS A WONDERFUL WAY TO INCREASE A PRAIRIE'S RICHNESS AND DIVERSITY. THIS SEED MIX INCLUDES AT LEAST 6 OF 7 NATIVE PERMANENT GRASS AND SEDGE SPECIES AND 10 OF 13 NATIVE FORB SPECIES. APPLY AT 40.95 PLS POUNDS PER ACRE.

BOTANICAL NAME	COMMON NAME	PLS OZ/ACRE
PERMANENT GRASSES/SEDGES		
ANDROPOGON GERARDII	BIG BLUESTEM	12.00
BOUTELOUA CURTIPENDULA	SIDE-OATS GRAMA	16.00
CAREX SPP.	PRAIRIE SEDGE SPECIES	3.00
ELYMUS CANADENSIS	CANADA WILD RYE	24.00
PANICUM VIRGATUM	SWITCH GRASS	2.50
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	32.00
SORGHASTRUM NUTANS	INDIAN GRASS	12.00
	TOTAL	101.50

TEMPORARY COVER		
AVENA SATIVA	COMMON OAT 512.00	
	TOTAL	512.00

FORBS		
ASCLEPIAS SYRIACA	COMMON MILKWEED	1.00
ASCLEPIAS TUBEROSA	BUTTERFLY WEED	1.00
CHAMAECRISTA FASCICULATA	PARTRIDGE PEA	10.00
COREOPSIS LANCEOLATA	SAND COREOPSIS	6.00
ECHINACEA PURPUREA	BROAD-LEAVED PURPLE CONEFLOWER	8.00
HELIOPSIS HELIANTHOIDES	FALSE SUNFLOWER	0.25
MONARDA FISTULOSA	WILD BERGAMOT	0.50
PENSTEMON DIGITALIS	FOXGLOVE BEARD TONGUE	1.00
RATIBIDA PINNATA	YELLOW CONEFLOWER	4.00
RUDBECKIA HIRTA	BLACK-EYED SUSAN	8.00
SOLIDAGO SPECIOSA	SHOWY GOLDENROD	0.50
SYMPHYOTRICHUM LAEVE	SMOOTH BLUE ASTER	1.00
SYMPHYOTRICHUM NOVAE-ANGLIAE	NEW ENGLAND ASTER	0.50
	TOTAL	41.75

detention basin seed mix

A WETLAND SEED MIX FOR SATURATED SOILS IN A DETENTION POND OR FOR SEEDING A SATURATED BASIN. THIS MIX WILL TOLERATE HIGHLY FLUCTUATING WATER LEVELS AND POOR WATER QUALITY ASSOCIATED WITH URBAN STORMWATER WETLANDS AND PONDS. FOR DETENTION BASINS THAT EXPERIENCE LONG, DRY PERIODS, USE THE ECONOMY PRAIRIE SEED MIX IN THE UPPER THIRD TO HALF OF THE BASIN AREA IN COMBINATION WITH THIS MIX. THIS SEED MIX INCLUDES AT LEAST 10 OF 12 NATIVE PERMANENT GRASS AND SEDGE SPECIES AND 13 OF 17 NATIVE FORB SPECIES. APPLY AT 36.22 PLS POUNDS PER ACRE.

BOTANICAL NAME	COMMON NAME	PLS OZ/ACRE
PERMANENT GRASSES/SEDGES		
BOLBOSCHOENUS FLUVIATILIS	RIVER BULRUSH	1.00
CAREX CRISTATELLA	CRESTED OVAL SEDGE	0.50
CAREX LURIDA	BOTTLEBRUSH SEDGE	3.00
CAREX VULPINOIDEA	BROWN FOX SEDGE	2.00
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	24.00
GLYCERIA STRIATA	FOWL MANNA GRASS	1.00
JUNCUS EFFUSUS	COMMON RUSH	1.00
LEERSIA ORYZOIDES	RICE CUT GRASS	1.00
PANICUM VIRGATUM	SWITCH GRASS	2.00
SCHOENOPLECTUS TABERNAEMONTANI	GREAT BULRUSH	3.00
SCIRPUS ATROVIRENS	DARK GREEN RUSH	2.00
SCIRPUS CYPERINUS	WOOL GRASS	1.00
	TOTAL	41.50

TEMPORARY COVER		
AVENA SATIVA	COMMON OAT	512.00
	TOTAL	512.00

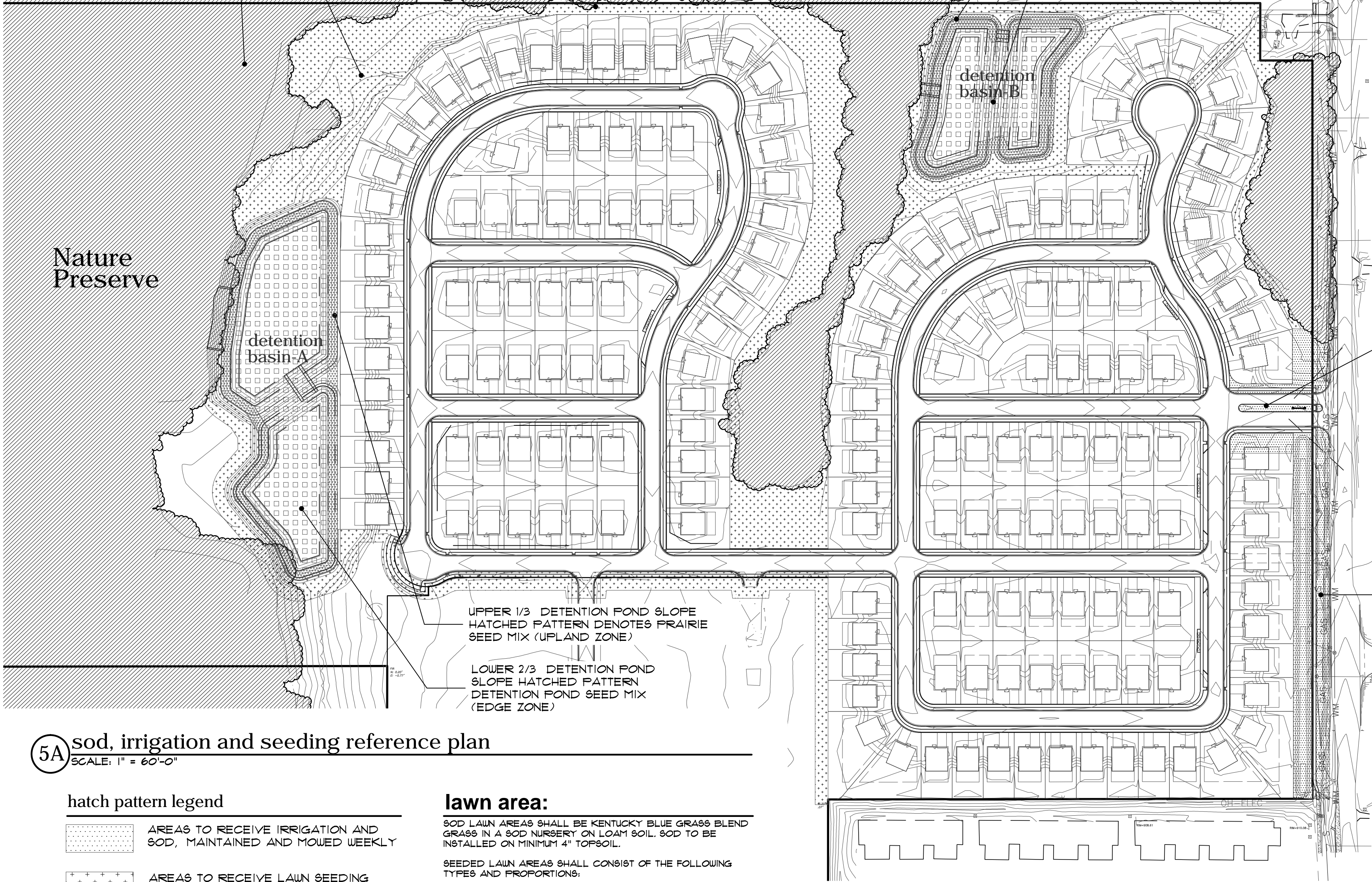
FORBS		
ALISMA SUBCORDATUM	COMMON WATER PLANTAIN	2.50
ASCLEPIAS INCARNATA	SWAMP MILKWEED	2.00
BIDENS SPP. BIDENS	SPECIES	2.00
EUPATORIUM PERFORLIATUM	COMMON BONESET	1.00
HELENIUM AUTUMNALE	SNEEZEWEED	2.00
IRIS VIRGINICA V. SHREVEI	BLUE FLAG	4.00
LYCOPUS AMERICANUS	COMMON WATER HOREHOUND	0.50
MIMULUS RINGENS	MONKEY FLOWER	1.00
PENTHORUM SEDOIDES	DITCH STONECROP	0.50
PERSICARIA SPP.	PINKWEED SPECIES	2.00
RUDBECKIA SUBTOMENTOSA	SWEET BLACK-EYED SUSAN	1.00
RUDBECKIA TRILOBA	BROWN-EYED SUSAN	1.50
SAGITTARIA LATIFOLIA	COMMON ARROWHEAD	1.00
SENNA HEBECARPA	WILD SENNA	2.00
SYMPHYOTRICHUM LANCEOLATUM	PANICLED ASTER	0.50
SYMPHYOTRICHUM NOVAE-ANGLIAE	NEW ENGLAND ASTER	0.50
THALICTRUM DASycARPUM	PURPLE MEADOW RUE	2.00
	TOTAL	26.00

OPEN SPACE LAWN AREAS TO RECEIVE SEED MIX ON FINISH GRADES. PROVIDE POSITIVE DRAINAGE.

HATCHING DENOTES EXISTING WOODS AND VEGETATION TO REMAIN

UPPER 1/3 DETENTION POND SLOPE HATCHED PATTERN DENOTES PRAIRIE SEED MIX (UPLAND ZONE)

LOWER 2/3 DETENTION POND SLOPE HATCHED PATTERN DETENTION POND SEED MIX (EDGE ZONE)



CROWN BLVD. ISLAND 16" AT CENTER. LAWN AREAS TO RECEIVE IRRIGATION AND SOD ON FINISH GRADES, PROVIDE POSITIVE DRAINAGE.

ROW LAWN AREAS TO RECEIVE IRRIGATION AND SOD ON FINISH GRADES, PROVIDE POSITIVE DRAINAGE

5A sod, irrigation and seeding reference plan

SCALE: 1" = 60'-0"

hatch pattern legend

- AREAS TO RECEIVE IRRIGATION AND SOD, MAINTAINED AND MOVED WEEKLY
- AREAS TO RECEIVE LAWN SEEDING
- AREAS TO RECEIVE PRAIRIE SEED MIX. (NO MOVED AREA)
- AREAS TO RECEIVE DETENTION POND SEED MIX

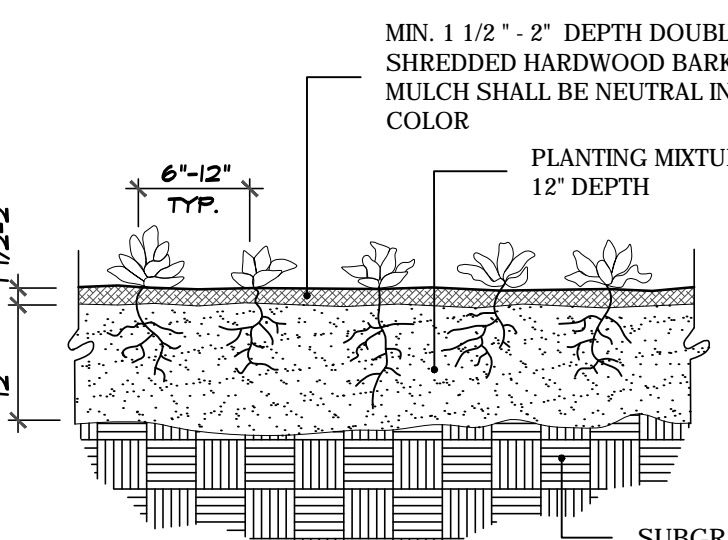
lawn area:

SOD LAWN AREAS SHALL BE KENTUCKY BLUE GRASS BEHND GRASS IN A SOD NURSERY ON LOAM SOIL. SOD TO BE INSTALLED ON MINIMUM 4" TOPSOIL.

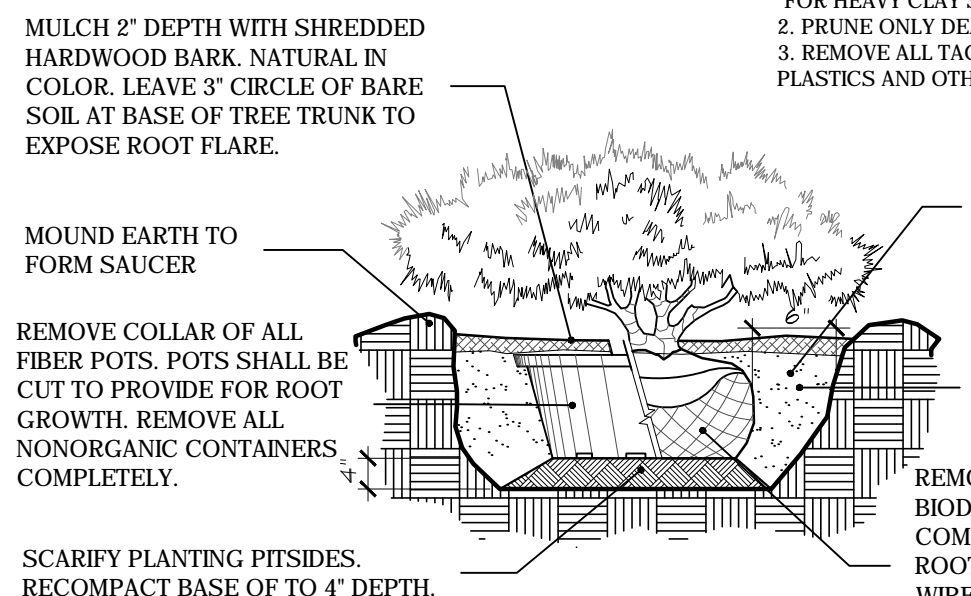
SEEDED LAWN AREAS SHALL CONSIST OF THE FOLLOWING TYPES AND PROPORTIONS:

- 5% PERENNIAL RYE GRASS
- 10% RED FESCUE
- 25% CHEWING FESCUE
- 60% KENTUCKY BLUE GRASS

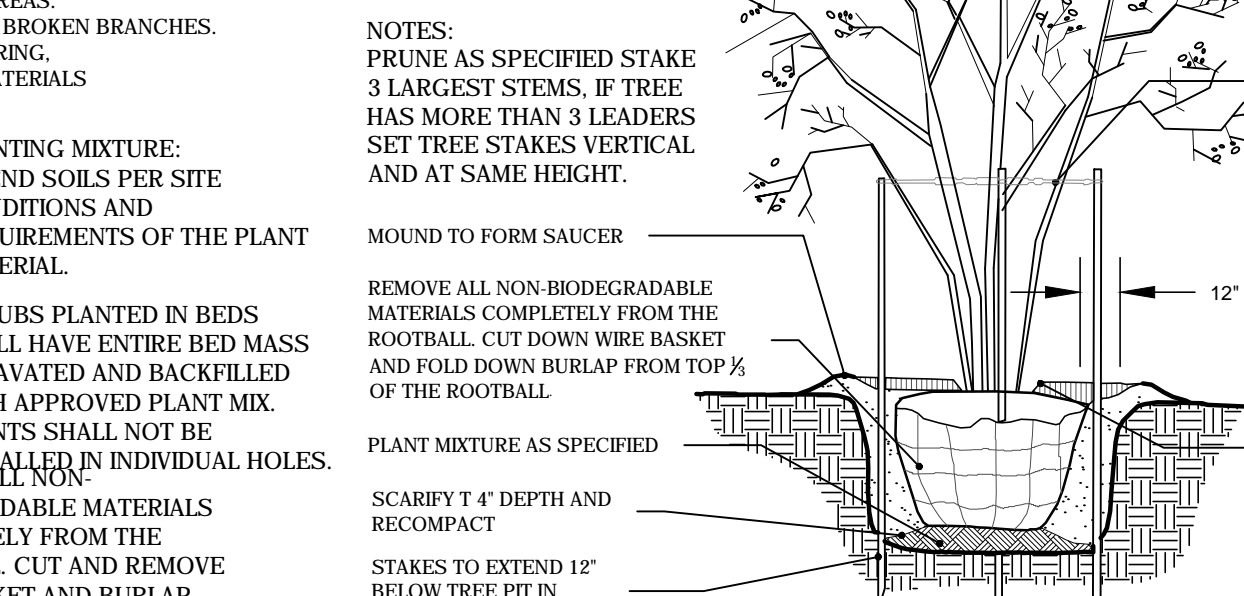
SEED MIX SHALL BE APPLIED AT A RATE OF 200 POUNDS PER ACRE AND UREB CONTENT SHALL NOT EXCEED 1%. SEED PROVIDE A MINIMUM 4" TOP SOIL ON ALL SEEDED LAWN AREA



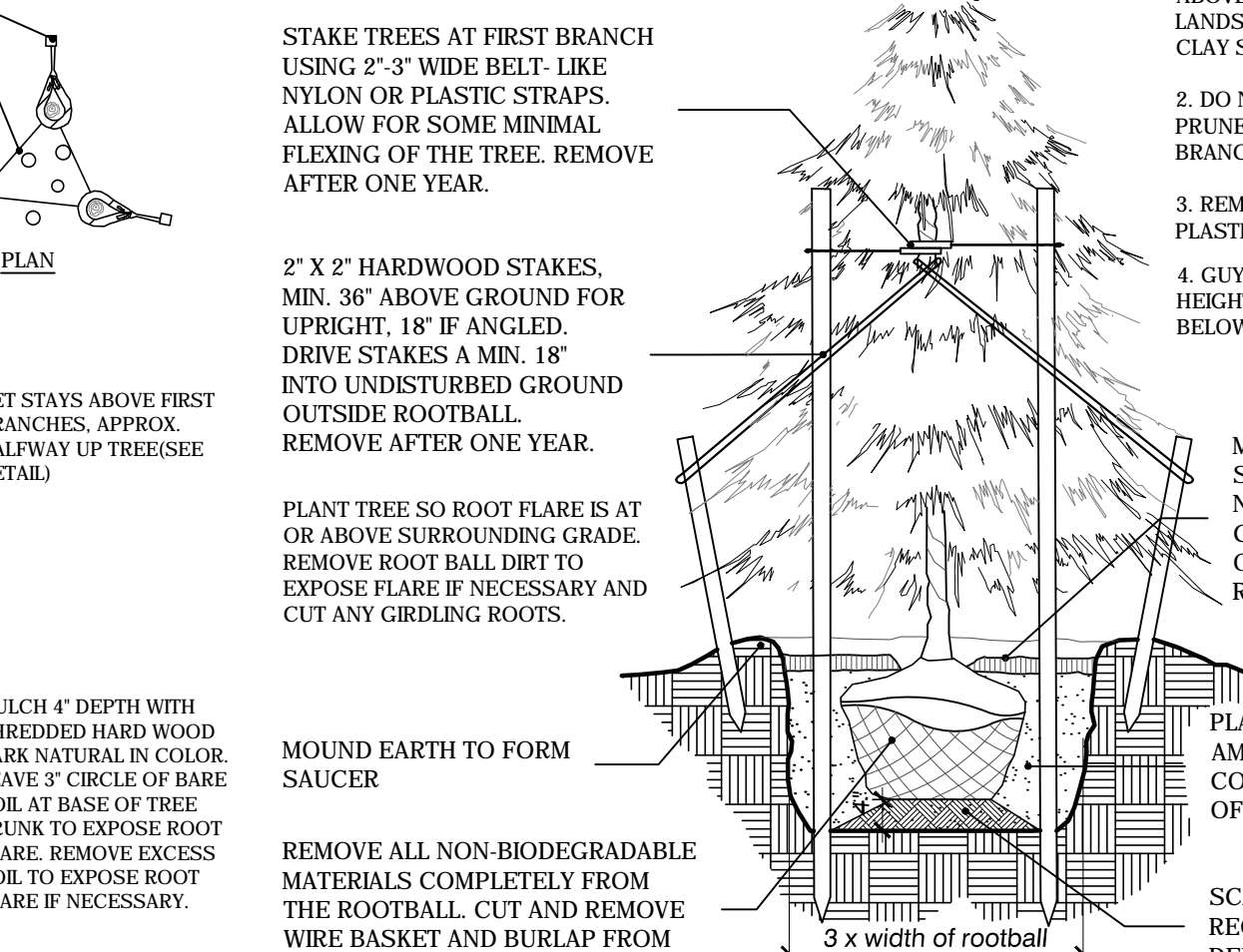
perennial planting detail
no scale



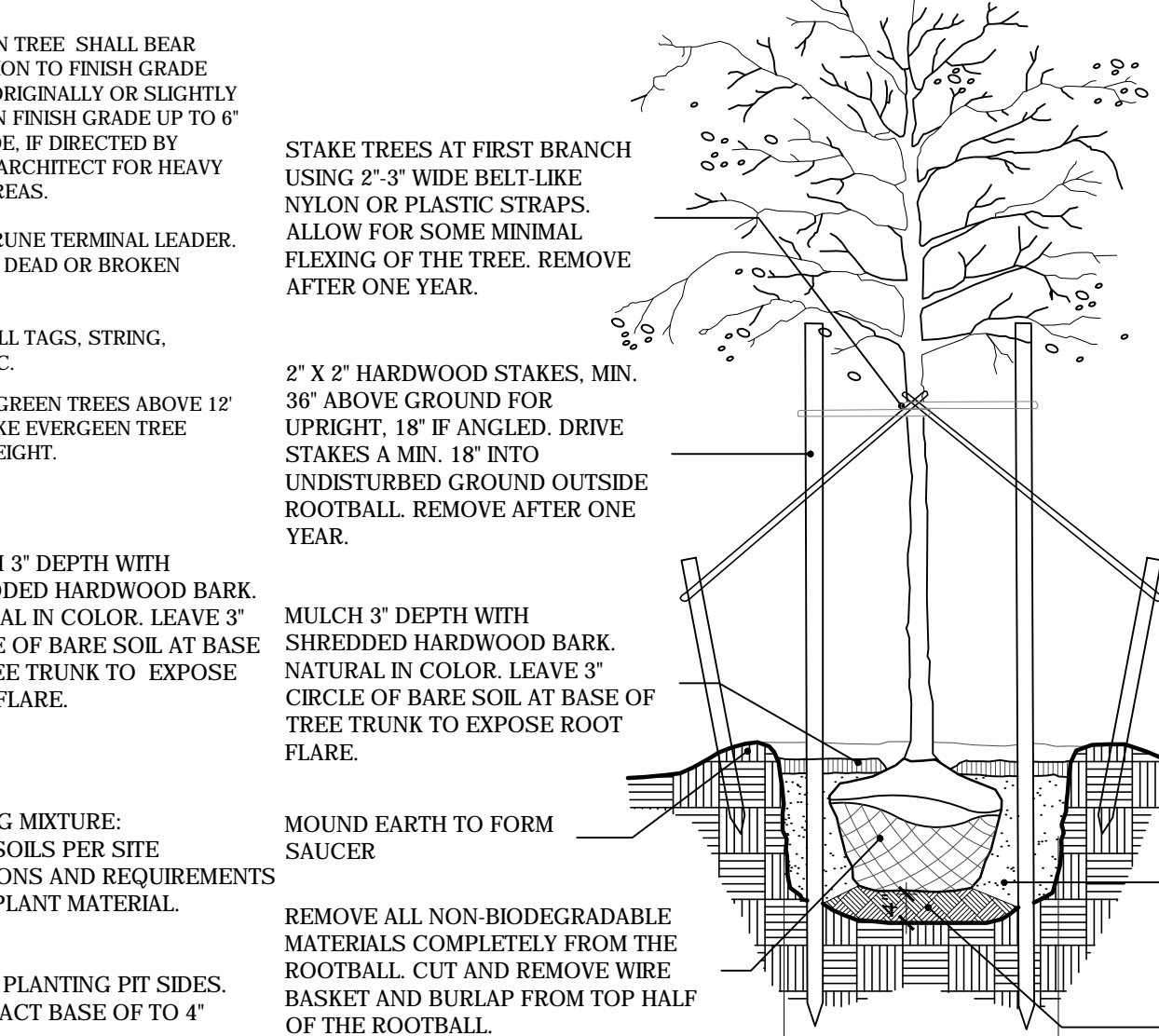
shrub planting detail
no scale



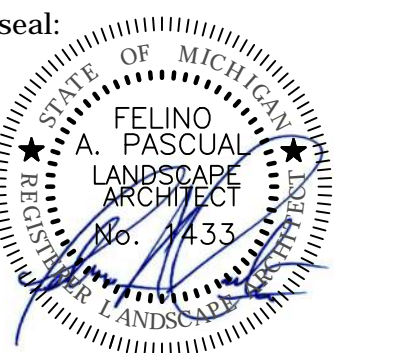
multi-stem planting detail
no scale



evergreen planting detail
no scale



tree planting detail
no scale



client:
BURKHART MASON COMMUNITY LLC.
29350 Woodward
Avenue Royal Oak, Michigan

project:
HERITAGE SQUARE
A PLANNED RESIDENTIAL COMMUNITY

project location:
Howell Township, Michigan
Burkhart Road & Mason Road

sheet title:
SOD AND SEEDING REFERENCE PLAN

job no./issue/revision date:
LS24.064.06 REVIEW 7-1-2024
LS24.064.09 SPA 9-19-2024

drawn by:
JP, DK

checked by:

date:
6-3-2024

notice:
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3 WORKING DAYS BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
For free location of public utility lines

The location and elevations of existing underground utilities as shown on this drawing are only approximate. no guarantee is either expressed or implied as to the completeness of accuracy. contractor shall be exclusively responsible for determining the exact location and elevation prior to the start of construction

project no:
LS24.064.06

sheet no:
LS-5 of 5



DENSITY AND UNIT COUNT

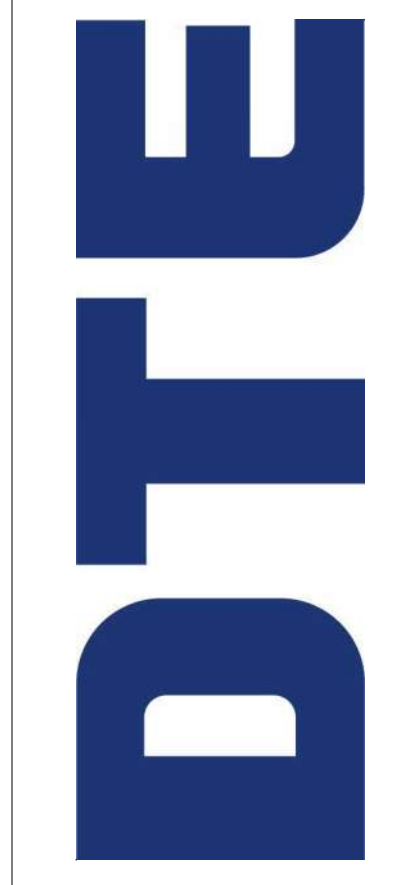
TOTAL SITE AREA: 92 ACRES
 AREA CURRENTLY ZONED SFR: 25.8 AC (24.0 AC UPLAND)
 AREA CURRENTLY ZONED MFR: 65.2 AC (44.4 AC UPLAND)
 OPEN SPACE REQUIRED (27.07 E)
 10% OF TOTAL LAND AREA EXCLUSIVE OF WATER SURFACES
 10% * (68.4 ACRES UPLAND) = 6.84 ACRES
 OPEN SPACES PROVIDED = 8.48 ACRES (11.9% OF UPLAND AREA)
 ALLOWED DENSITY (27.07 A)
 UPLAND AREA SFR = 24.0 ACRES
 REDUCED 10% FOR REQUIRED OPEN SPACE = 21.6 ACRES
 SFR = 3.0 UNITS/ACRE x 1.25 = 3 x 21.6 = 64.8 UNITS
 UPLAND AREA MFR = 44.4 ACRES
 REDUCED 10% FOR REQUIRED OPEN SPACE = 40 ACRES
 MFR = 12 UNITS/ACRE x 1.25 = 12 x 40 = 480 UNITS
 TOTAL ALLOWED UNITS = 544.8
 UNITS PROPOSED
 SINGLE FAMILY UNITS: 176 PROPOSED
 MULTI-FAMILY UNITS: 288 PROPOSED
 35-3 BR / 2 BA - RANCH STYLE TOWNHOMES
 81-2 BR / 2.5 BA - 2 STORY TOWNHOMES
 40-1 BR / 1 BA - GARDEN STYLE APARTMENTS
 112-3 BR / 2.5 BA - 2 STORY TOWNHOMES W/ GARAGE
 3- STORY SENIOR LIVING BUILDING - APPROX. 90 UNITS
 TOTAL: 554 RESIDENTIAL UNITS

PHASING PLAN

SF PHASE 1 (2023)
 SINGLE FAMILY UNITS: 46 HOMES
 PHASE 2 (2024-2025)
 SINGLE FAMILY UNITS: 90 HOMES
 MF PHASE 2 (2024)
 MULTI-FAMILY UNITS: 107 UNITS
 19-3 BR / 2 BA - RANCH STYLE TOWNHOMES
 40-1 BR / 1 BA - GARDEN STYLE APARTMENTS
 48-3 BR / 2.5 BA - 2 STORY TOWNHOMES W/ GARAGE
 ALSO BUILD OUT CLUBHOUSE, MAIN ROADS, PARK, AND AMENITIES, AND SECOND WATER MAIN CONNECTION.
 SF PHASE 3 (2026)
 SINGLE FAMILY UNITS: 29 HOMES
 MF PHASE 3 (2026)
 MULTI-FAMILY UNITS: 100 UNITS
 36-3 BR / 2 BA - RANCH STYLE TOWNHOMES
 64-3 BR / 2.5 BA - 2 STORY TOWNHOMES W/ GARAGE
 SF PHASE 4 (2027)
 SINGLE FAMILY UNITS: 21 HOMES
 MF PHASE 4 (2028)
 MULTI-FAMILY UNITS: 81
 81-2 BR / 2.5 BA - 2 STORY TOWNHOMES
 SF PHASE 5 (2028)
 SINGLE FAMILY UNITS: 23 HOMES
 MF PHASE 5 (2026 - 2028) - ACTUAL BUILD YEAR TBD
 3- STORY SENIOR LIVING BUILDING - APPROX. 90 UNITS
 SF PHASE 6 (2029)
 SINGLE FAMILY UNITS: 27 HOMES

PHASING PLAN - OVERVIEW

DATE	5/01/24
PLAN SUBMITTAL/REVISIONS	
SITE PLAN SUBMITTAL	
PROJECT	
SCALE	
FIELD	
DRAWN	
DESIGN	
CHECK	



#	Date	Comments

Drawn By: M. Valascho
 Checked By:
 Date: 9/16/2024
 Scale:

Heritage Square Street Lighting Plan 4
 DTE Community Lighting Group

Site Plan_Pole Placements
 Scale: 1 inch= 130 Ft.



DENSITY AND UNIT COUNT

TOTAL SITE AREA: 92 ACRES
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 REDUCED 10% FOR REQUIRED OPEN SPACE = 21.6 ACRES
 SFR = 3.0 UNITS/ACRE x 1.25 = 3 x 21.6 x 1.25 = 81 UNITS
 UPLAND AREA MFR = 44.4 ACRES
 REDUCED 10% FOR REQUIRED OPEN SPACE = 40 ACRES
 MFR = 12 UNITS/ACRE x 1.25 = 12 x 40 x 1.25 = 600 UNITS
 TOTAL ALLOWED UNITS = 681
 UNITS PROPOSED
 SINGLE FAMILY UNITS: 176 PROPOSED
 MULTI-FAMILY UNITS: 288 PROPOSED
 ① 35- 3 BR / 2 BA - RANCH STYLE TOWNHOMES
 ② 81- 2 BR / 2.5 BA - 2 STORY TOWNHOMES
 ③ 40- 1 BR / 1 BA - GARDEN STYLE APARTMENTS
 ④ 112- 3 BR / 2.5 BA - 2 STORY TOWNHOMES W/ GARAGE
 3- STORY SENIOR LIVING BUILDING - APPROX. 90 UNITS
 TOTAL: 554 RESIDENTIAL UNITS

PHASING PLAN

SF PHASE 1 (2023)
 SINGLE FAMILY UNITS: 46 HOMES
 PHASE 2 (2024-2025)
 SINGLE FAMILY UNITS: 90 HOMES
 MF PHASE 2 (2024)
 MULTI-FAMILY UNITS: 107 UNITS
 ① 19- 3 BR / 2 BA - RANCH STYLE TOWNHOMES
 ② 40- 1 BR / 1 BA - GARDEN STYLE APARTMENTS
 ③ 48- 3 BR / 2.5 BA - 2 STORY TOWNHOMES W/ GARAGE
 ALSO BUILD OUT CLUBHOUSE, MAIN ROADS, PARK, AND AMENITIES, AND SECOND WATER MAIN CONNECTION.
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PHASING PLAN - OVERVIEW

DATE	DESCRIPTION
5/01/24	DATE
	PLAN SUBMITTAL/REVISIONS
	SITE PLAN SUBMITTAL
	PROJECT
	SCALE
	FIELD
	DRAWN
	DESIGN
	CHECK



#	Date	Comments

Drawn By: M. Valascho
 Checked By:
 Date: 9/16/2024
 Scale:

Heritage Square Street Lighting Plan 4
 DTE Community Lighting Group

Site Plan_Photometric Layout
 Scale: 1 inch= 130 Ft.

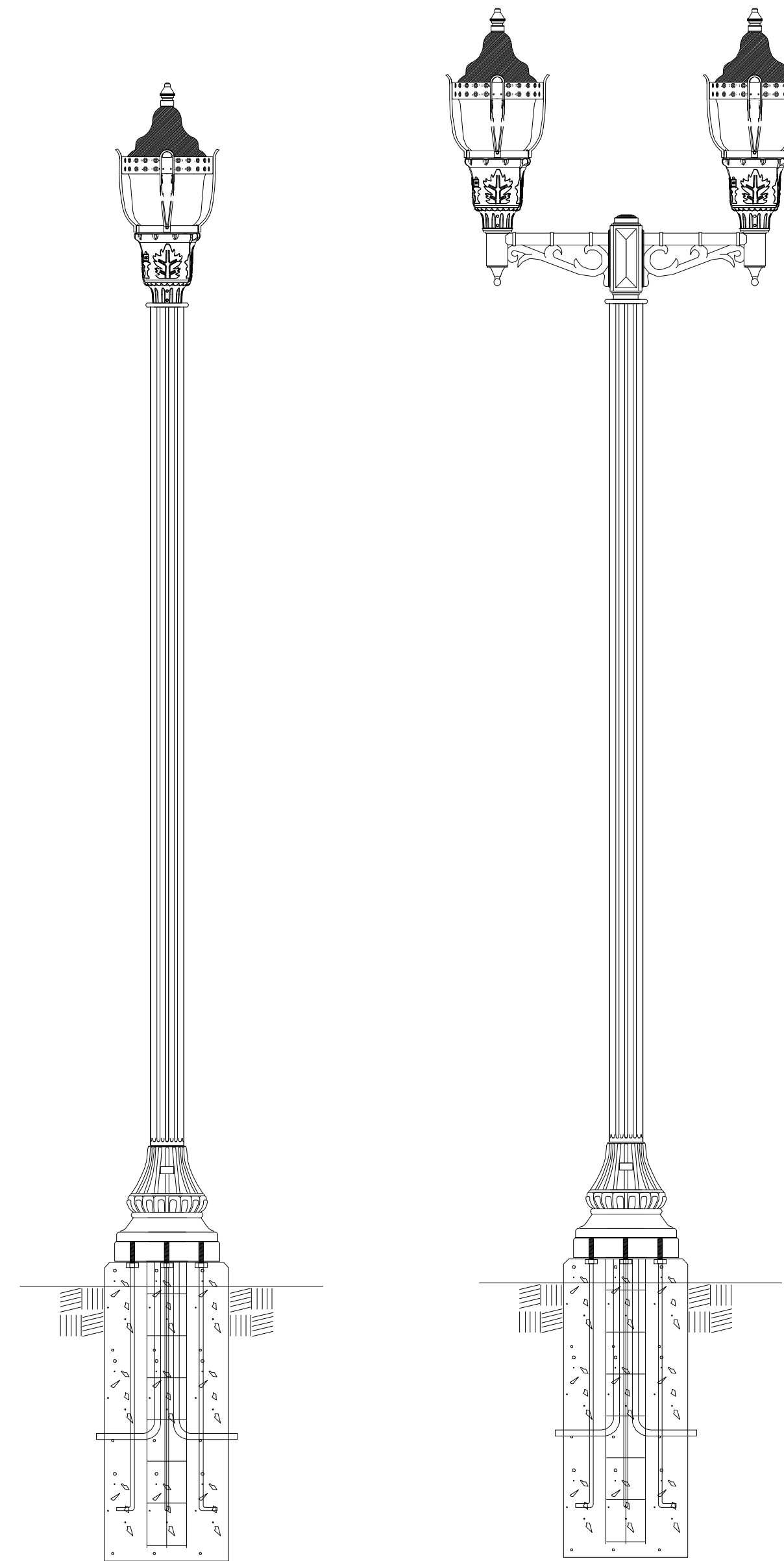


Photometric Layout

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Overall_Horizontal	Illuminance	Fc	0.01	1.7	0.0	N.A.	N.A.

Isoline Legend	
Illuminance (Fc)	
Color	Value
	0.1
	0.5
	1

Luminaire Schedule					
Symbol	Qty	Label	Arrangement	Mounting Height	
	1	39W LED_GVD3_FULL COVER_DUAL (0, 180)	Back-Back	14.9	
	1	39W LED_GVD3_FULL COVER_DUAL (FWD)	Twin	14.9	
	30	39W LED_GVD3_FULL COVER_SINGLE	Single	14	



Comments

Date

#

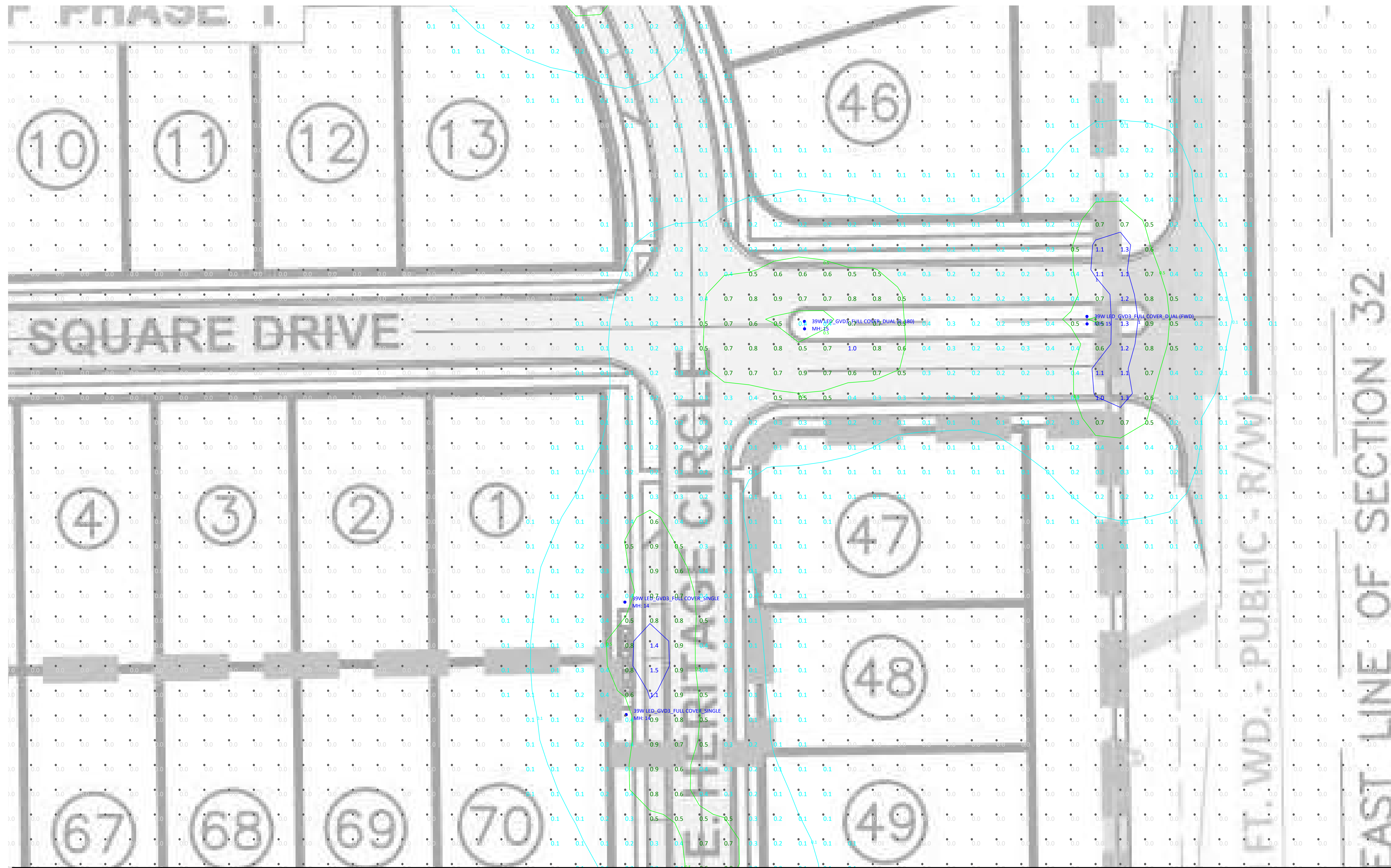
Revisions

Drawn By: M. Valascho

Checked By:

Date: 9/16/2024

Scale:



Plan View 1

DTE

Comments

Date

#

Revisions

Drawn By: M. Valascho

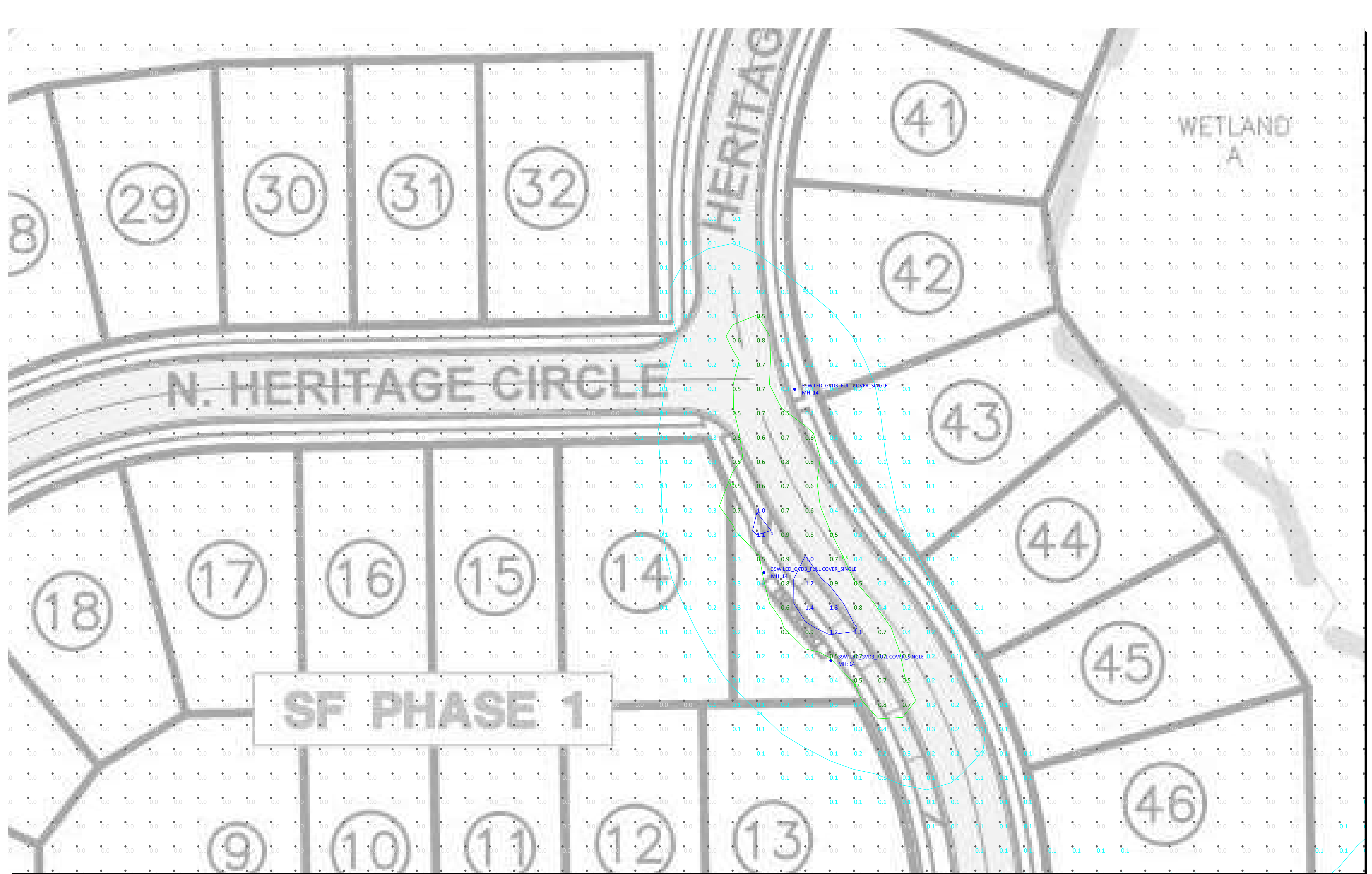
Checked By:

Date: 9/16/2024

Scale:

Heritage Square Street Lighting Plan 4

DTE Community Lighting Group

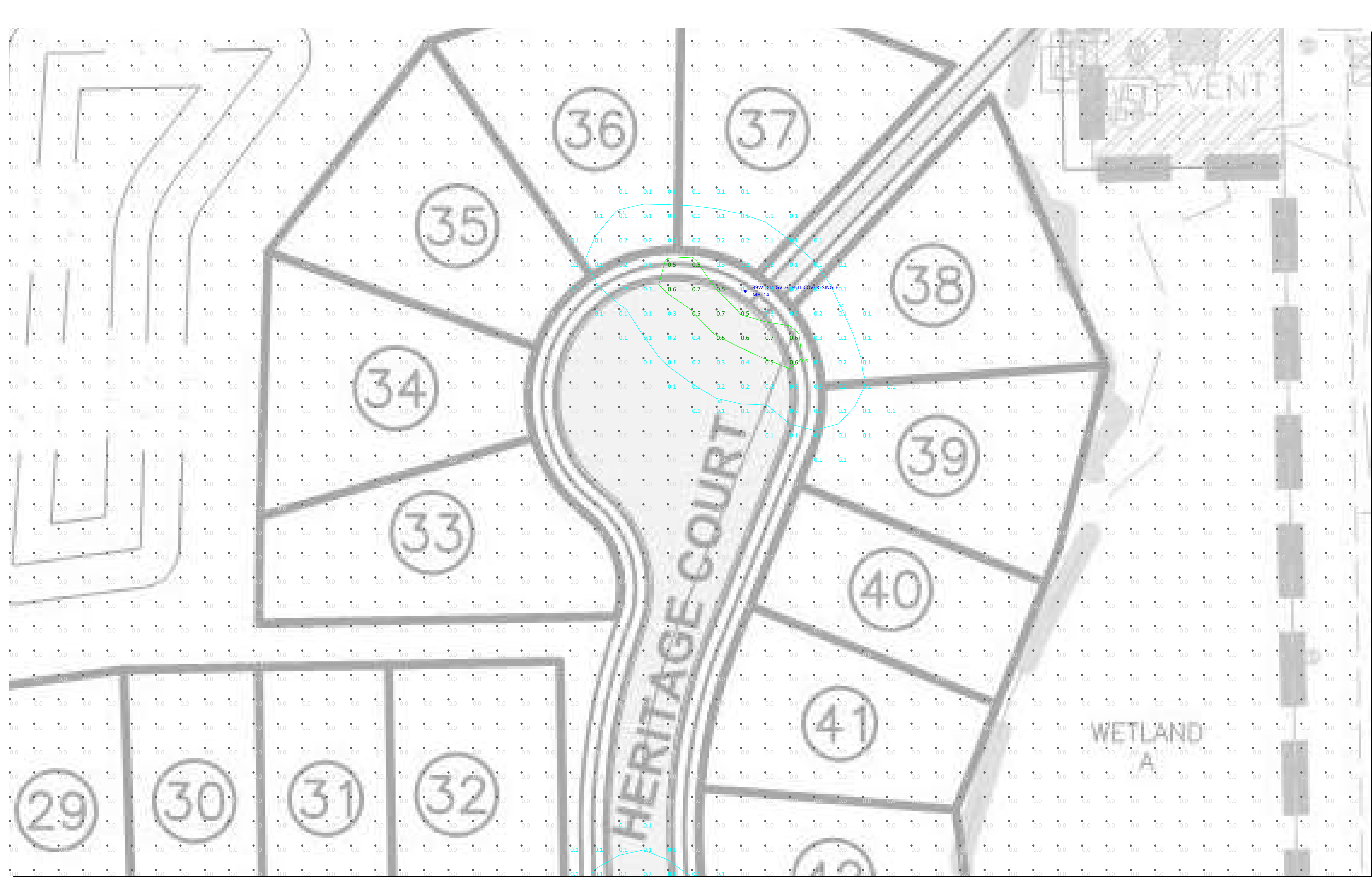


Plan View 2

#	Date	Comments

Revisions	

Drawn By: M. Valascho	Heritage Square Street Lighting Plan 4
Checked By:	
Date: 9/16/2024	DTE Community Lighting Group
Scale:	

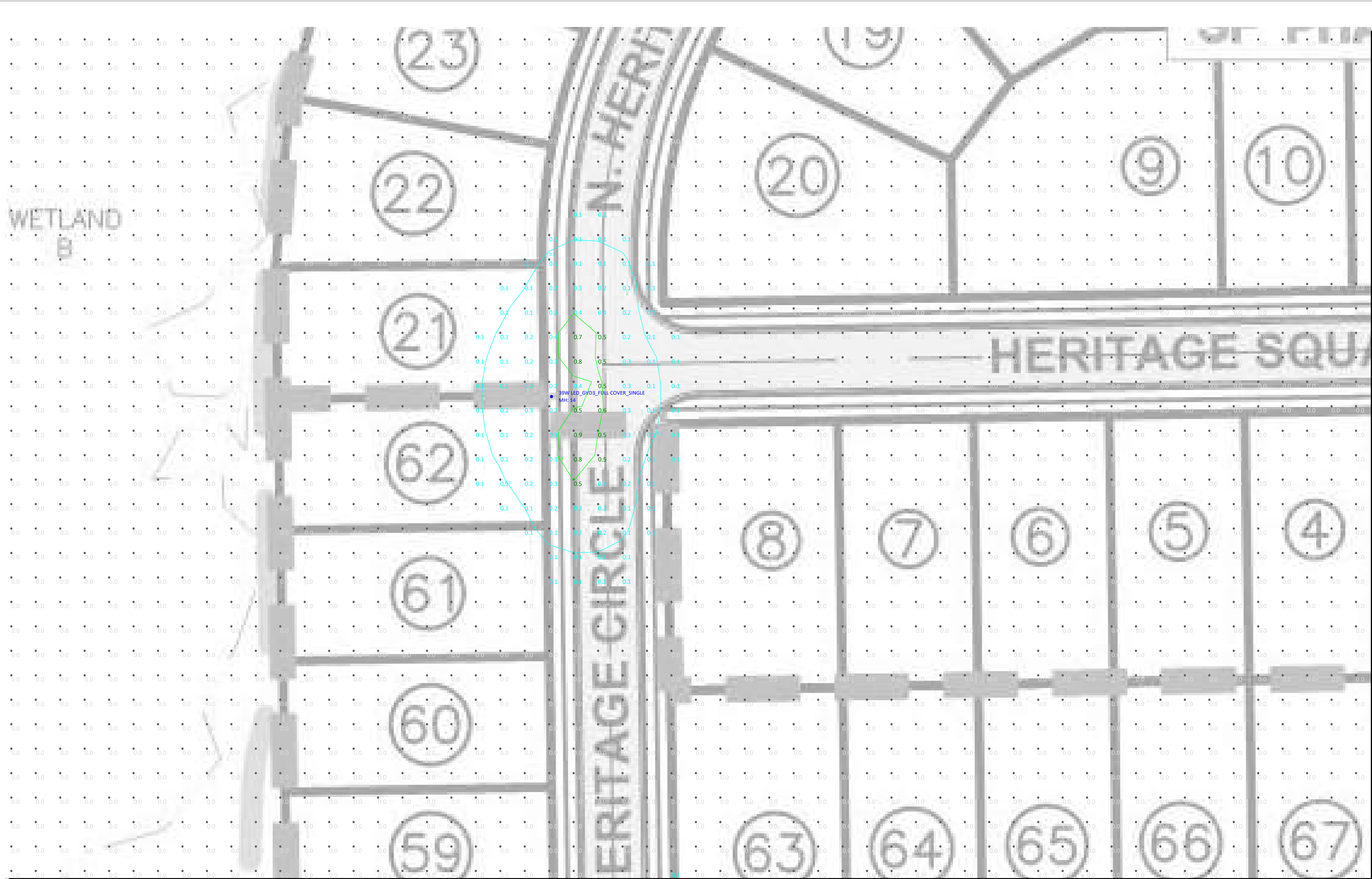


Plan View 3

#	Date	Comments

Drawn By: M. Valascho
Checked By:
Date: 9/16/2024
Scale:

Heritage Square Street Lighting Plan 4
DTE Community Lighting Group



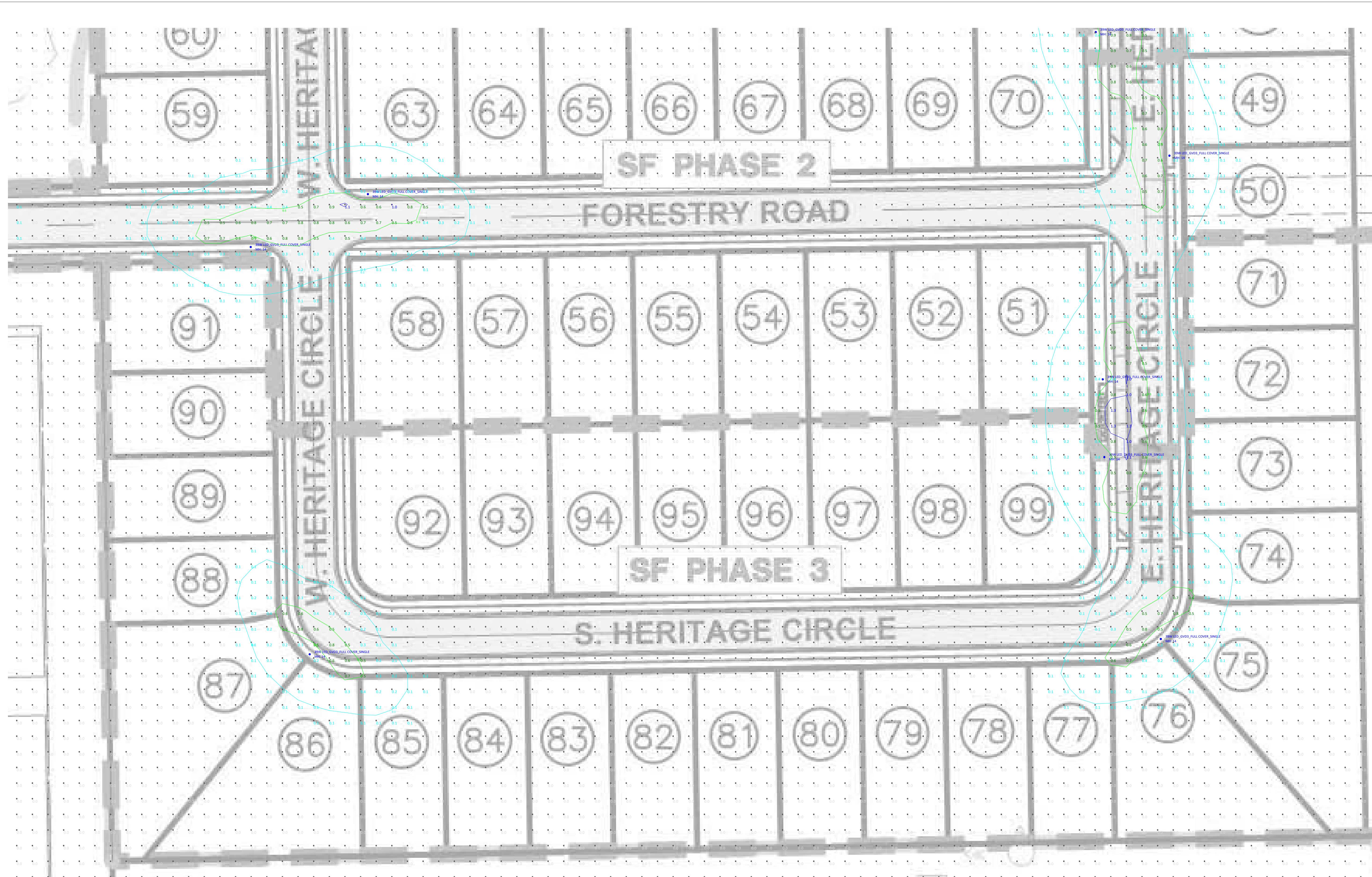
Plan View 4



#	Date	Comments

Revisions	

Drawn By: M. Valascho	Heritage Square Street Lighting Plan 4
Checked By:	
Date: 9/16/2024	DTE Community Lighting Group
Scale:	



Plan View 5

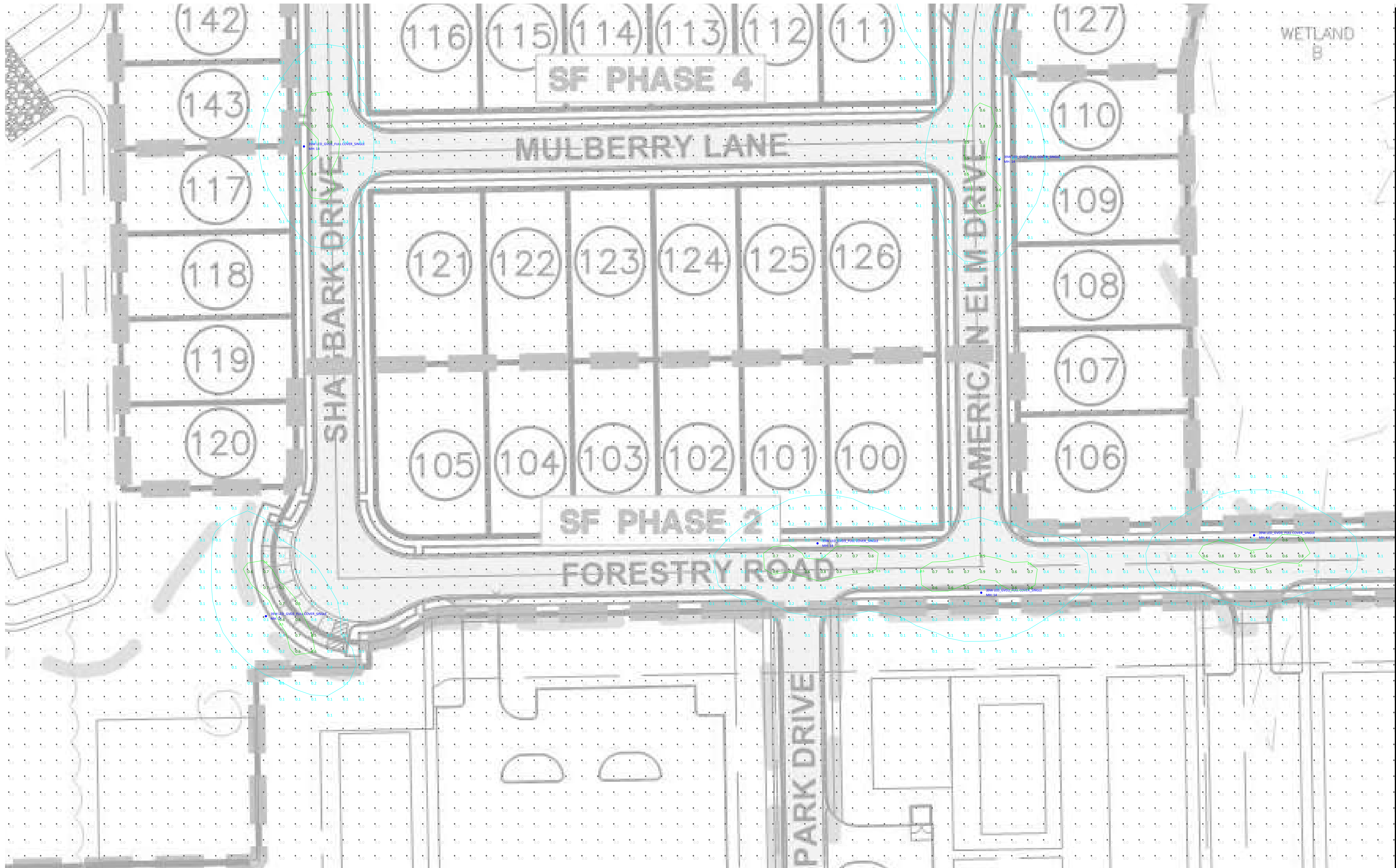
Drawn By: M. Valascho
Checked By:
Date: 9/16/2024

Revisions

Scale:

Heritage Square Street Lighting Plan 4

DTE Community Lighting Group



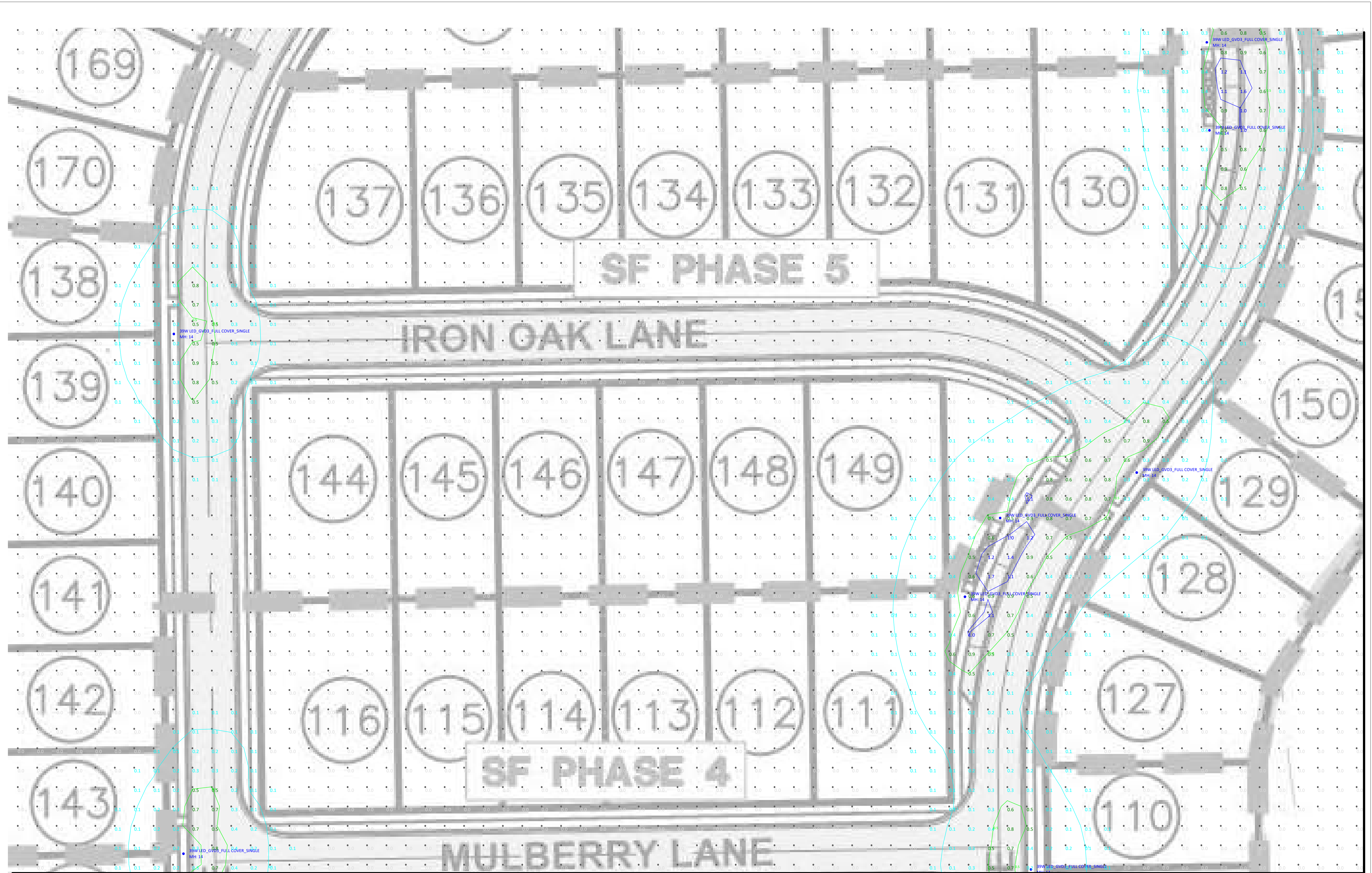
Plan View 6



#	Date	Comments
Revisions		

Drawn By: M. Valascho
 Checked By:
 Date: 9/16/2024
 Scale:

Heritage Square Street Lighting Plan 4
 DTE Community Lighting Group



Plan View 7

Comments

Date

#

Revisions

Drawn By: M. Valascho

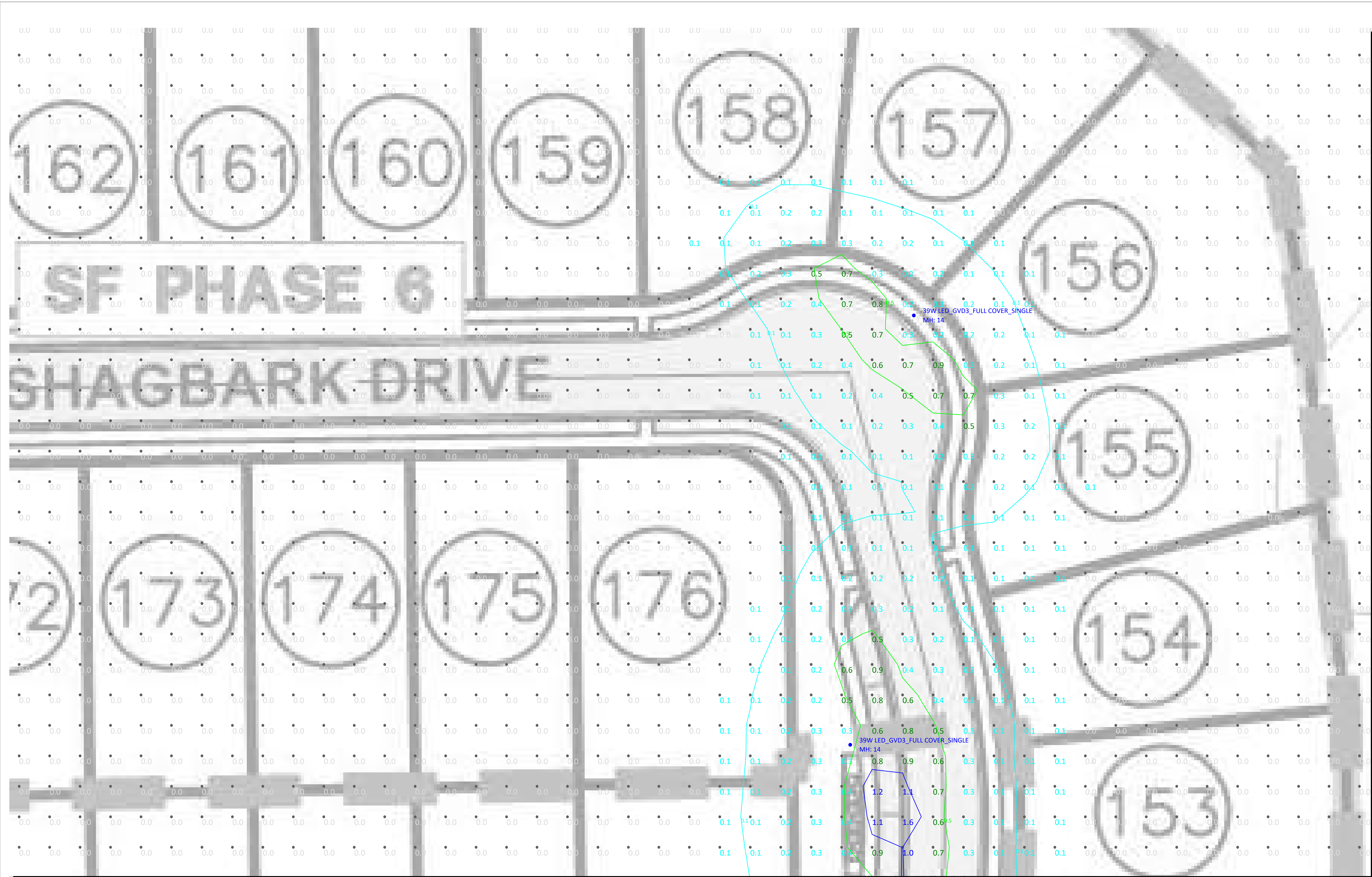
Checked By:

Date: 9/16/2024

Scale:

Heritage Square Street Lighting Plan 4

DTE Community Lighting Group



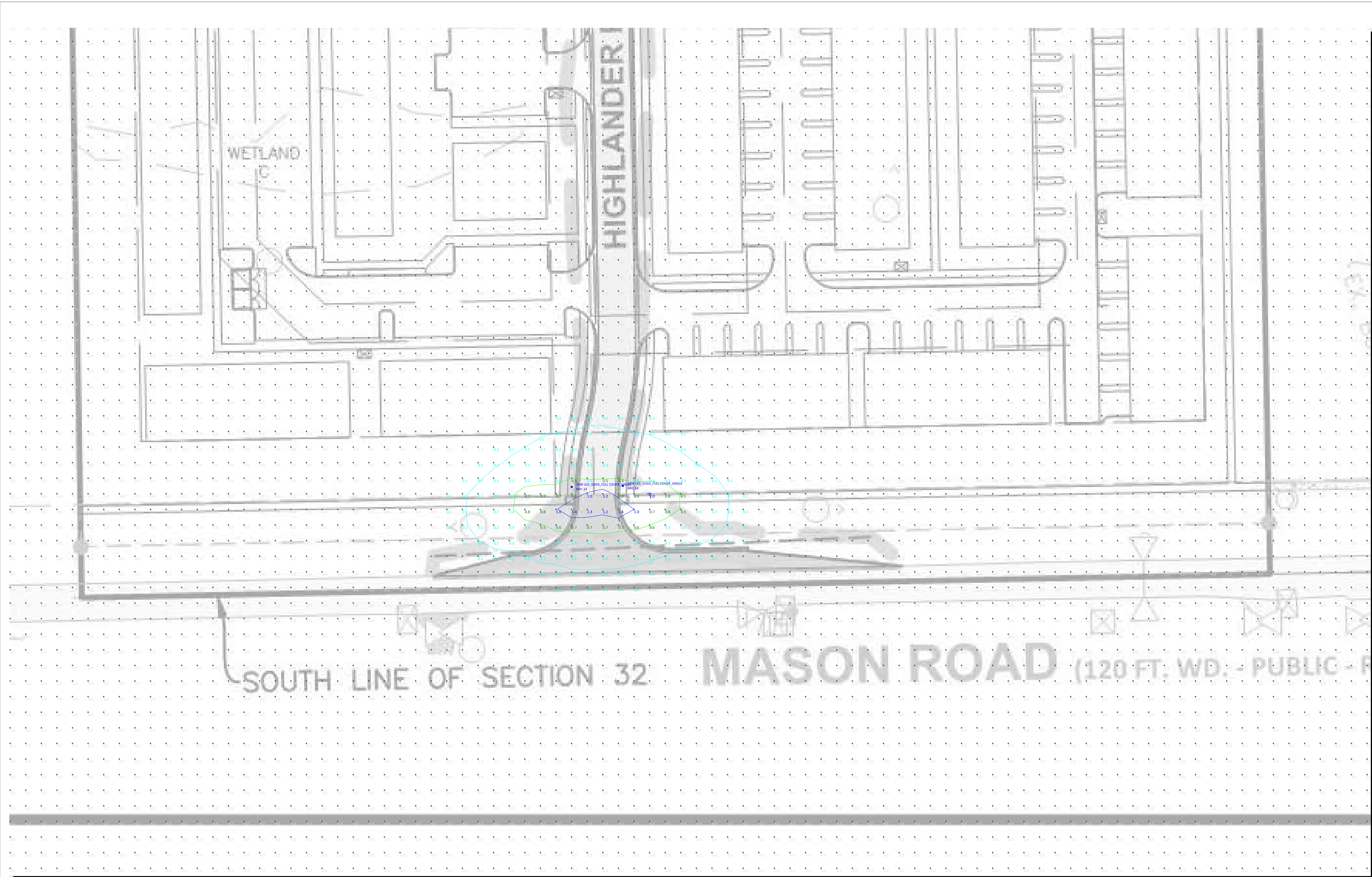
Plan View 8



#	Date	Comments

Drawn By: M. Valascho
Checked By:
Date: 9/16/2024
Scale:

Heritage Square Street Lighting Plan 4
DTE Community Lighting Group



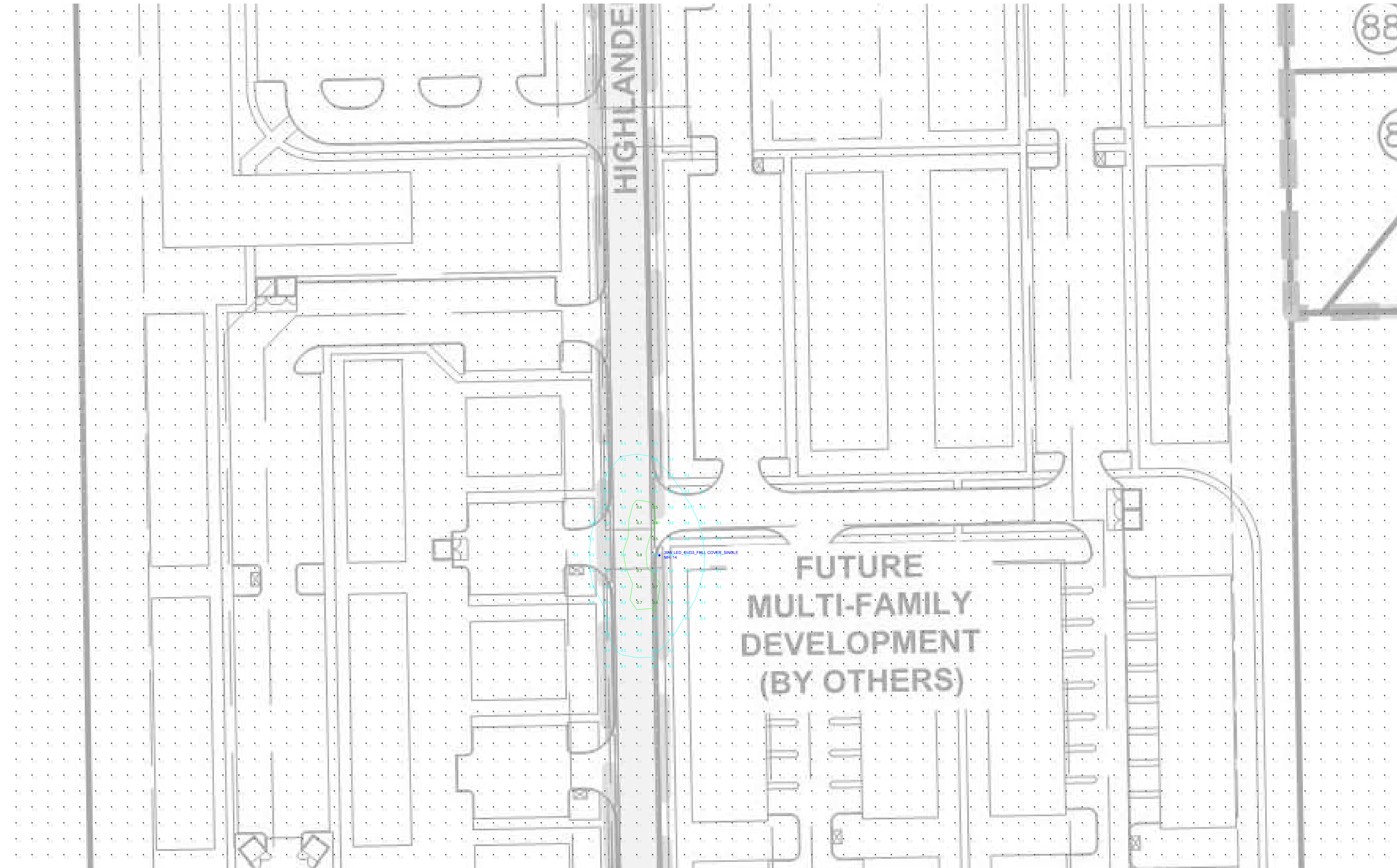
Plan View 9

DTE

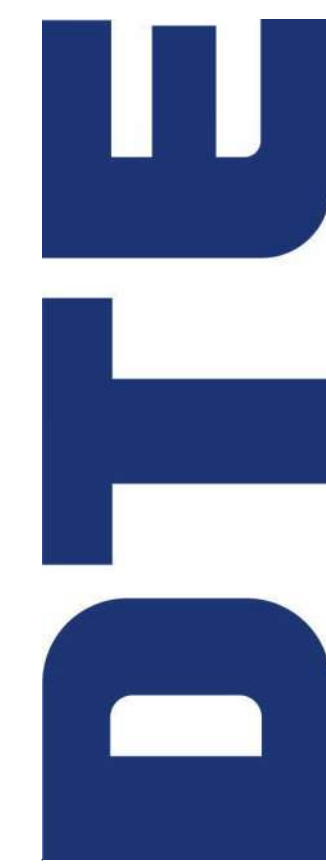
#	Date	Comments
Revisions		

Drawn By: M. Valascho
 Checked By:
 Date: 9/16/2024
 Scale:

Heritage Square Street Lighting Plan 4
 DTE Community Lighting Group



Plan View 10



#	Date	Comments
Revisions		

Drawn By: M. Valascho
 Checked By:
 Date: 9/16/2024
 Scale:

Heritage Square Street Lighting Plan 4
 DTE Community Lighting Group



Carlisle | Wortman
ASSOCIATES, INC.

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

Date: November 14, 2024

**Final Site Plan Review
For
Howell Township, Michigan**

Applicant:	Burkhart Mason Community, LLC
Project Name:	Heritage Square PUD
Plan Date:	September 25, 2024
Location:	Northwest Corner of Mason and Burkhart
Zoning:	PUD (pending)
Action Requested:	Final Site Plan & PUD Review
Required Information:	As noted in the following review

PROJECT AND SITE DESCRIPTION

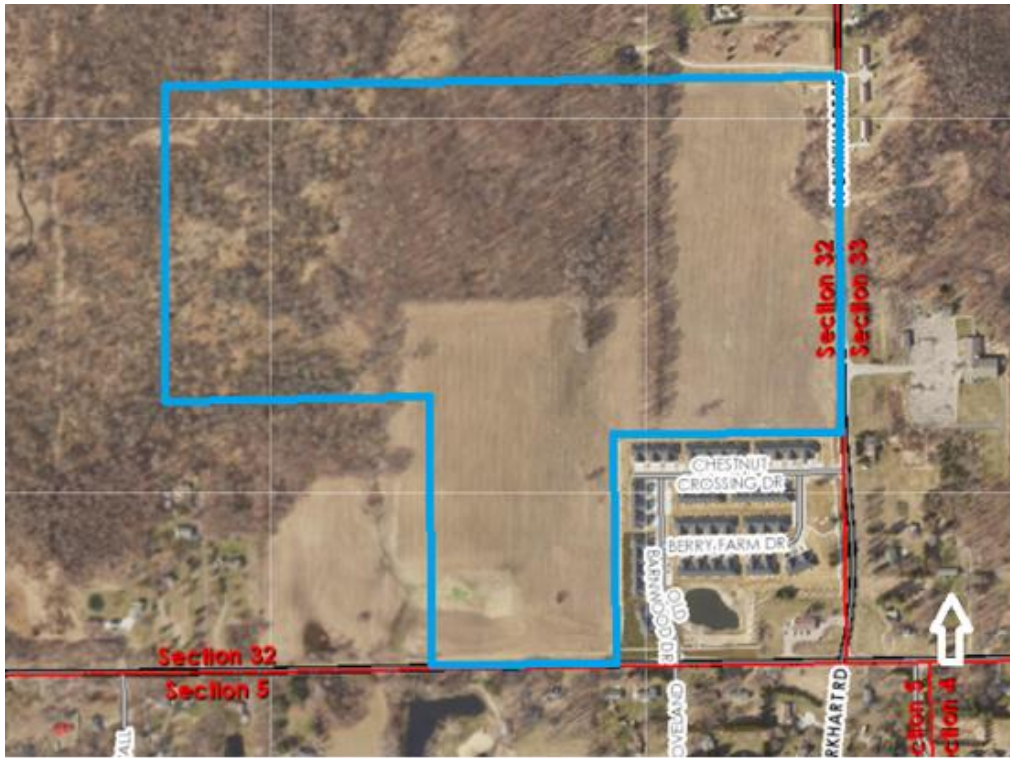
The applicant is seeking approval for the final site plan for Phases 1-6 of the Heritage Square, Planned Unit Development (PUD), which was recommended for approval on December 19, 2023 by the Township Planning Commission. On January 8, 2024, The Township Board granted approval for the revised site plan and rezoning application with conditions. The applicant aims to develop one-hundred and seventy-six (176) single family housing units by 2031 through six (6) phases. The report will identify if the final site plan for these phases comply with the requirements of 27.07(M) of the Zoning Ordinance

The site is located on an approximately ninety-five (95)-acre single parcel of land located on the northwest corner of Mason and Burkhart Roads. The parcel surrounds two developments, a seventeen (17)-acre multi-family residential development and a convenience store, which are located at the intersection of the two roads. The proposed development has frontage on both Mason and Burkhart.

Prior to the approval of the PUD, the subject parcel had split zoning with twenty-seven (27) acres of SFR - Single Family Residential fronting on Burkhart and sixty-five (65) acres zoned MFR -

Multiple Family Residential. The applicant chose to pursue a PUD because of the proposed mixture of residential densities being consistent with the underlying zoning districts, but not following the delineation of those zoning districts. This was processed as a Type 2 PUD which constitutes a rezoning of the property to the PUD designation. The proposed final site plans are consistent with the approved PUD.

Aerial Image of Subject Site and Vicinity



Source: Nearmap

Items to be Addressed: None.

NEIGHBORING ZONING, LAND USE AND MASTER PLAN

Neighboring zoning, land use, and current Master Plan designations are summarized in the following chart:

**Table 1
 Zoning, Land Use and Master Plan Designations**

	North	South	East	West
Zoning	AR & SFR	MFR	SFR	AR
Land Use	Large Lot Rural Residential	Large Lot Rural Residential & Medium Density	Church & Residential	Undeveloped Open Space
Master Plan	Residential – Medium Density	Low Density Residential	General Commercial	Agricultural Preservation

Items to be Addressed: *None.*

DENSITY, AREA, WIDTH, HEIGHT, SETBACKS

During the December 19, 2023 Planning Commission meeting and public hearing, the Planning Commission recommended approval subject to the Planner report dated November 19, 2023. The Planning Commission also determined that the deviations listed in the table below meet the intent of Section 27.08 of the Howell Township Zoning Ordinance.

The PUD designation requires a 10% (6.48 acres) open space exclusive of water surface to be provided. The applicant has provided calculations indicating that they are preserving 8.48 acres of the total 68.4 acres of upland for open space. This represents 11.9 % open space. There is a discrepancy as Sheet C-1.0 proposes five (5) different areas of open space, which is equal to 9.66 acres. The pool area is not proposed as part of phases 1-6. The applicant must update their open space calculations to clearly demonstrate the amount of open space that is being provided as part of the proposed phases 1-6.

The following table summarizes the Density, Placement, and Height Regulations for the approved PUD and what has been provided on the final site plan for phase 1-6.

Density, Placement, and Height Regulations

Single-Family	APPROVED PUD	Proposed
Lot Area	5500 SF min	Average Lot = 6817 SF
Lot Width	50 Feet	Minimum = 54 Feet
Front Setback	24 Feet	24 Feet
Side Setback	7 Feet	7 Feet
Rear Setback	25 Feet	25 Feet
Perimeter Setback	40 Feet (Adjacent to SFR) 30 Feet (Adjacent to MFR)	40 Feet (Adjacent to SFR) 30 Feet (Adjacent to MFR)
Lot Coverage	Review for individual units	29.4% Max
Building Height	Review for individual units	

Items to be Addressed: The applicant must update their open space calculations to clearly demonstrate the amount of open space that is being provided as part of the proposed phases 1-6.

NATURAL RESOURCES

Topography: The site is generally flat. The grade slopes gradually upward towards the northwest corner within the proposed development area.

Woodlands: There are substantial woodlands on the site. Roughly 50 acres of the site contain woodlands. No tree inventory is provided. Sheet V 1.0 indicates that 22.88 acres of woodland will be cleared. The provisions of Section 15.09 would suggest that the area should not be clear cut as this area is designated as a priority 1 environmental feature in the Township Master Plan. The applicant has demonstrated that they are in compliance with section 15.09.B.3. of the Zoning Ordinance.

Wetlands: There are substantial wetlands depicted on sheet V 1.0. 3,219 square feet of wetlands are indicated to be filled. The applicant has provided a permit from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) verifying the wetland boundaries.

Items to be Addressed: None.

PARKING, LOADING

Parking must be provided in accordance with section 18.02. The requirement for single-family dwellings is two (2) parking spaces per unit. This has been provided.

Items to be Addressed: None

SITE ACCESS AND CIRCULATION

There are access points proposed on Burkhardt Road and Mason Road. The residential units are then accessed by a series of internal drives. The access from Mason Road becomes the main drive than runs through the middle of the multi-family area and provides access to the single-family area from Mason Road through the multi-family portion of the development as well as access to the parking area for the multi-family buildings. Currently, the multi-family area is being proposed as a separate development with separate phasing. The Planning Commission has approved the plans provided the connection to Mason Road is installed no later than Phase 2 of the single family development. The Mason Road access point is being shown as part of this final site plan.

Five-foot sidewalks are proposed throughout the site. A pathway is provided along the frontage of Mason Road and along Burkhardt Road from the entrance to the development going south. There are wetlands along the frontage to the north. A pedestrian connection to the north is provided internally though a pathway at the end of the cul-de-sac in the northeast corner of the development. Dimensions of the sidewalks and pathways are needed to determine consistency with the previously approved PUD plans.

Additionally, on Sheet C-1.1, several notes say, "SEE DETAIL SHEET C-11.0." There is no Sheet C-11.0 included in the plan set. This sheet contains details of the concrete path, mailbox cluster, and sidewalk details among other things and should be included.

Items to be Addressed: *Provide Sheet C-11.0.*

LANDSCAPING

The applicant has provided a landscaping plan on Sheet LS-1-5 approved by the Township Board on January 8, 2024.

We recommend that plants located around the detention basins be replaced with alternatives such as meadowsweet, buttonbush, soft stem bulrush, or woolgrass to reduce the plantings shed into the basin.

Items to be Addressed: *Consider a modification to landscaping plan to include better suited plantings surrounding the detention basins.*

LIGHTING

A lighting plan has been proposed by DTE Community Lighting Group. Page 2 of the lighting plan is labeled as a draft without proof of the plan being prepared by a licensed/registered Engineer or Architect as required by 20.06(B)(3). The draft plan has included streetlights at every intersection in the single-family residential areas. This is consistent with what was agreed to by the Planning Commission.

Items to be Addressed: *Provide a final lighting plan prepared by a licensed/registered Engineer or Architect.*

SIGNS

Any proposed sign must meet the requirements of Section 19.03 and Section 19.07. If a sign is proposed a separate sign permit must be obtained before installation.

Items to be Addressed: *None*

FLOOR PLAN AND ELEVATIONS

Floor plans or elevations have been provided for all for the building types in the development. The Township Board approved the proposed exterior materials at their January 8, 2024 meeting.

Items to be Addressed: None.

TRASH ENCLOSURE

Trash enclosures are located throughout the multi-family area. Single family homes will utilize individual bins for each household.

Items to be Addressed: None.

RECOMMENDATIONS

Following the review of plans dated September 18, 2024, for consistency with the previously approved plans and the outstanding items from our previous report dated July 1, 2024. The remaining outstanding items must be addressed:

1. The applicant must update their open space calculations to clearly demonstrate the amount of open space that is being provided as part of the proposed phases 1-6.
2. Draft lighting plan shall be finalized by a licensed/registered Engineer or Architect.
3. Consider a modification to landscaping plan to include better suited plantings surrounding the detention basins.
4. A PUD agreement shall be completed and executed.
5. Provide Sheet C-11.0



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



CARLISLE/WORTMAN ASSOC., INC.
Grayson Moore
Community Planner

November 12th, 2024

Jonathan Hohenstein
Howell Township
3525 Byron Road
Howell, MI 48855

RE: Heritage Square Single Family Phase 1
Parcel Number 4706-32-400-013
Final Site Plan Review

Mr. Hohenstein,

We have received and reviewed the plans for Heritage Square Single-Family Phase 1, issued as Final Site Plans. Plans were prepared by Monument Engineering Group Associates, Inc on behalf of M/I Homes of Michigan, LCC and are dated September 18th, 2024.

A separate Construction Plan set for all phases of this project was submitted on November 4, 2024 while the review of the Final Site Plan was being conducted. It should be noted that in a cursory review of the Construction Site Plan provided, several of the comments below appear to have been addressed. A more detailed review of the Construction Site Plan will be provided at a later date.

Based on our review of the Final Site Plans for Heritage Square Single Family Phase 1, dated September 18th, 2024, we offer the following comments.

General

The Township Zoning Map shows that the project site has a total area of 92.0 acres, 26.8 acres previously zoned Single Family Residential (SFR) and 65.2 acres previously zoned Multiple Family Residential (MFR). The site is surrounded by AR (Agricultural Residential) to the West and North, SFR to the East and the township boundary to the South.

The setbacks listed on the plans appear to meet the PUD requirements for the rezoning and dimensional setback reductions agreed upon by the Planning Commission and subsequent PUD preliminary site plan approval.

It should be noted that the PUD agreement has not been executed by the Township and the Developer as identified in the Township Planners July, 01, 2024 Administrative Review Letter.

The grading permit may be requested to begin earthwork activities. It must be requested and formal approval must be granted from the Planning Commission to receive the permit.

The Cover Sheet includes the project name, name of Howell Township, Livingston County, Michigan, the developer's, engineer's, and architect's, address, phone and fax number, a location map with north arrow, plan sheet index, and professional architect's or engineer's seal Licensed in the State of Michigan.

November 12, 2024
2 of 5

A legal description has been provided that includes bearings, distances, and closes within acceptable tolerances.

Grading and Drainage

The plans include a topographical survey plan sheet that includes 1-foot contour lines for the entire parcel and the 100 feet abutting.

Two benchmarks with NAVD88 are identified on Sheet V-1.0.

The current site sheet flows generally to the west and the remainder of the site sheet flows to the northeast. There is an existing storm sewer running parallel to Mason Road at the south end of the site. The type, size, and inverts of the existing utilities should be provided.

The storm water management system for this phase is comprised of 12-inch to 30-inch storm sewers that outlets to sedimentation and detention basins to the northwest. It is unclear how the rear yard drainage of the units on the perimeter, that are not adjacent to the basins, is directed to the proposed storm water management system. The rear yards of units 21-25 sheet flow directly to the wooded wetlands to the west, units 26-28 sheet flow directly to the detention basin, units 38-46 sheet flow to the wooded area between the development and Burkhart Road runoff is to be diverted to the proposed detention basins this should be directed to the sedimentation basin. MEGA's November 4, 2024 response letter stated "*As was proposed during the Site Plan stage, all roof areas are being tied into the storm sewer system and directed to the stormwater treatment areas. Rear yard areas adjacent to the wetlands, however, are proposed to drain directly to the adjacent wetlands. These rear yard areas are too low in most cases to capture in the storm sewer system. Also, if the rear yard drainage was redirected from the wetlands, it would cause a water imbalance in those wetlands, particularly those adjacent to the central and north-easterly wetland areas as those areas. These wetlands would receive significantly less runoff than they currently do.*" We defer to LCDC for acceptance of the proposed storm water management plan.

CS-87 to ES-88 should be shown on Plan Sheet C-6.1. A profile and detail of the OCS should also be provided.

No stormwater calculations were provided. It appears that full comprehensive calculations have been provided in the construction plans dated November 4th, 2024. These calculations will be evaluated in our review of the provided November 4, 2024 construction plan set. The storm water management plan must be approved by LCDC prior to earth disturbance.

Sheet C-6.12 includes the pipe segments from MH-7 to MH-9 and sheet C-6.13 includes the pipe segments from MH-54 to MH-57 from Phase 2. Temporary bulkheads, shown on plan sheet C-6.1 South of MH-10 and south of MH-58, from Phase 1 should be labeled on the profile sheets.

November 12, 2024
3 of 5

The following pipe segments are shown on plan sheet 6.1 for Phase 1, but no profile views provided. It is noted that many of these profiles appear to be included in the November 4th submission:

IN-82 TO CB-83
MH-58 TO MH-10
IN-81 TO CB-59
IN-84 TO IN-85
IN-86 TO ES-18
IN-36 TO IN-41
CB-47 TO MH-16
IN-49 TO MH-48
IN-42 TO IN-45
IN-27 TO IN-28
IN-34 TO CB-35
CB-33 TO BULKHEAD SOUTH OF CB-31
Mh-92 to CS-89

All utility crossings including top and bottom pipe elevations, should be shown in the profiles for pages C-6.9 through C-6.13. This appears to have been addressed in the November 4th submission. The crossings will be reviewed in future construction reviews.

Details should be provided for all proposed storm sewer structures.

Sanitary Sewer

The proposed sanitary sewers are 8-inch PVC SDR 26 and 6-inch PVC SDR 23.5 sanitary sewer leads, both meet Howell Township Sanitary Standards. The Sanitary sewers discharge at the existing sanitary pump station #72 in the Northeast corner of the site.

A 30-foot-wide easement for sanitary sewer is shown on the Sanitary and Watermain Plan sheet, C-3.1.

Sanitary sewer profile sheets should be provided including the length, size, type, and slope between each structure. The profile sheets shall also include rim elevations, existing and proposed ground elevations, and utility crossings with bottom of pipe elevations. All sanitary sewers located in the influence of the pavement areas shall be identified as such on the profile sheets. Profiles appear to be in the construction plan set and will be reviewed at a later day for conformance and permitting purposes

The contractor shall verify the sanitary sewer connection point stub elevation at Pump Station #72. Verify invert elevation, diameter and grade of stub before commencing sewer elevation. This elevation is critical to achieve Sanitary permitting from EGLE. The stub and the proposed sewer to connect, must be the same grade / slope.

The sanitary sewer basis of design calculations have been reviewed and no issues were noted.

The Developer is required to submit all required EGLE Part 41 Permit Application information to Township Engineer for review as the resulting sanitary sewer will be publicly owned. The Township's Engineer will submit the EGLE Part 41 Permit Application on behalf of Township. The Township's Engineer will coordinate the permit process with MEGA.

November 12, 2024
4 of 5

The proposed basis of design flow outlined on Sheet C-3.0 is 302 GPM. Pump Station #72 has a firm capacity of 555 GPM. Currently, there is approximately 30 GPM of flow contributing to this station. Based on this information, it is Spicer Group's opinion that Pump Station #72 has sufficient capacity to service the Heritage Square development. No modifications are required for Pump Station #72 at this time.

The basis of design proposes estimated 500.4 REUs will be required for this development. The Township has indicated to the Township that this site currently has 569 sewer REUs allocated to it. No additional sanitary REUs will be required for this site.

Howell Township Sanitary Details should be provided.

Site Access and Paving

ADA stalls are shown on sheet C-1.0 and C-1.1 do not appear to provide access aisles.

Sheet C-1.1 references pavement details on sheet C-11.0. This sheet was not included in this plan set, please include details for all pavement types, curbs and sidewalks.

Water main

The plans include a network of 8" ductile iron watermain, 2" copper water services to each unit, hydrants, and valves.

Water main profiles and details should be provided.

The water main was previously reviewed by MHOG, all comments from their June 24, 2024 review letter should be addressed

We defer to MHOG for further comment on the water main.

Landscaping

A landscaping plan is provided. We defer to the Township Planner to comment on the Landscaping plan.

Lighting

A photometric plan is provided. We defer to the Township Planner for further comments on the lighting requirements.

Recommendations

Based on our review we recommend that the Township grant conditional Final Site Plan approval for Phase 1 with the understanding that all items noted below, and all comments provided by other stakeholders must be addressed and approved in subsequent Construction Plan submissions before any earthwork disturbance commences:

1. Review and approval of the plans by:
 - a. Howell Township Planner
 - b. Fire Marshal
 - c. Livingston County Drain Commissioner

November 12, 2024
5 of 5

- d. MHOG
 - e. Livingston County Road Commission
2. Include CS-87 to ES-88 on plan sheet C-6.1 and provide details and profiles for the outlet control structure.
 3. Please provide all storm water storage and conveyance calculations.
 4. Please omit segments not included in this phase and include bulkheads, plugs and thrust blocks on appropriate profile sheets.
 5. Please include the omitted storm sewer segments on the profile sheets.
 6. Please include all utility crossing information on the profile sheets.
 7. Please include sanitary sewer profile sheets.
 8. Please provide appropriate details for all utilities and pavement.
 9. Please verify and include the elevation of the stub for the proposed sanitary connection at pump station #72

If you have any questions or need anything further, please feel free to contact our office.

Sincerely,



Adam C. Jacqmain
Phone: (989) 598-6196
Mailto: adamj@spicergroup.com



John W. Bradley
Phone: (517) 719-5503
Mailto: johnbradley@spicergroup.com

SPICER GROUP, INC.
1595 W Lake Lansing Rd Suite 200
East Lansing, MI 48823

CC: SGI File
Jonathan Hohenstein, Howell Township Planner
Ken Recker, Livingston County Chief Deputy Drain Commissioner
Paul Montagno, Carlisle Wortman
Bryan Hager, Howell Township Fire Inspector
Kevin McDevitt, MEGA



Howell Area Fire Department Fire Marshal Division

1211 W Grand River Ave Howell, MI 48843
office: 517-546-0560 fax: 517-546-6011
firemarshal@howellfire.net

DATE: October 2, 2024

TO: Jonathan Hohenstein
Howell Township
3525 Byron Rd
Howell, MI 48855

FROM: Bryan Hager- Fire Inspector

PROJECT: Site Plan Review for Heritage Square Phase 1. – Howell Twp

COMMENTS: I have reviewed the above-listed site plan and find it is **satisfactory** as presented with the following comments. All of the following is required to be complete at time of Final Inspection for C of O:

1. Where the road is 20' wide to 26' wide, "No Parking-Fire Lane" signs would be required on both sides of the street. Where the road is between 27' and 32' wide, "No Parking this side of street" signs would be required on the hydrant side of the street.
2. Fire hydrants shall be available along the fire department access road and spaced no further than 400 feet apart.
3. All roads in this development shall not exceed 10 percent in grade.
4. Building(s) shall have approved building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall be at least 6" high and shall contrast with their background.
5. Any gate would require a Knox Gate Key or Knox Lock. Purchase can be completed on-line at www.knoxbox.com.
6. The fire department access driveway shall meet the following conditions:
 - a. Shall be within 150 feet of all portions of the grade level floor.
 - b. The minimum unobstructed width shall be 16 feet as stated in the plans-normal width is 20 feet but an exception will be made for this project.
 - c. The minimum unobstructed height shall be 13 feet.
 - d. The driveway shall be accessible at all times (i.e. snow removal).
 - e. The driveway shall be constructed so it can support up to 100,000 pound fire apparatus.

Any changes in this site plan shall be submitted to the Howell Area Fire Department for additional approval. Please feel free to give me a call if there are any concerns. Thank you for the opportunity to review this site plan.

Howell Township Treasurer

From: Ken Recker <KRecker@livgov.com>
Sent: Friday, September 27, 2024 11:59 AM
To: Howell Township Treasurer; khiller@livingstonroads.org
Cc: Paul Lewsley
Subject: RE: Heritage Square - Phase 1 Final Site Plan

Jonathan,

I took a quick peek at these, and the only comment I'd have is on the landscaping plans around the basins. Debris is adversarial to proper detention basin function. If visual shielding of the basin must be done, try to get the folks specifying plantings to choose things that have minimal shed (leaf/needle drop, etc.). The irony of plantings around a basin is they're likely to increase the need for future maintenance of the basin, so I'd make sure there's an access point shown that will be free of plantings for heavy equipment.

I'm not sure I see any other value in commenting separately on them.

We'll await the construction plan review sets. Have a great weekend!

Kenneth E. Recker, II, P.E.
Chief Deputy Drain Commissioner
Livingston County, Michigan
Ph. 517-546-0040

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

November 6, 2024

Kevin McDevitt, P.E.
Monument Engineering Group Associates
298 Veterans Drive
Fowlerville, MI 48836

Re: Heritage Square Drive and Highlander Park Drive
Off Burkhart and Mason Roads, Howell Township, Section 32
LCRC# P-24-03 & P-24-04

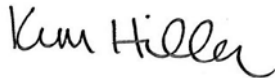
Dear Kevin:

I have completed the review of the revised plans for the proposed private road approaches off Burkhart and Mason Roads, dated November 4, 2024, and offer the following comments.

1. Written approval from the MHOG will need to be obtained for the sanitary and water main connections.
2. The Traffic Study will need to be approved by the LCRC and the MDOT.
3. The comments on the attached, red-lined plans need to be addressed.

Please email the revised plans to khillier@livingstonroads.org. If you have any questions, please do not hesitate to contact me.

Sincerely,



Kim Hiller, P.E.
Utilities & Permits Engineer

Attachment

Cc: File

Jonathan Hohenstein, Howell Township Treasurer (via email)
Adam Jacqmain, Spicer Group (via email)
Ken Recker, Livingston County Drain Commissioner's Office (via email)

CONSTRUCTION PLANS FOR HERITAGE SQUARE SINGLE FAMILY

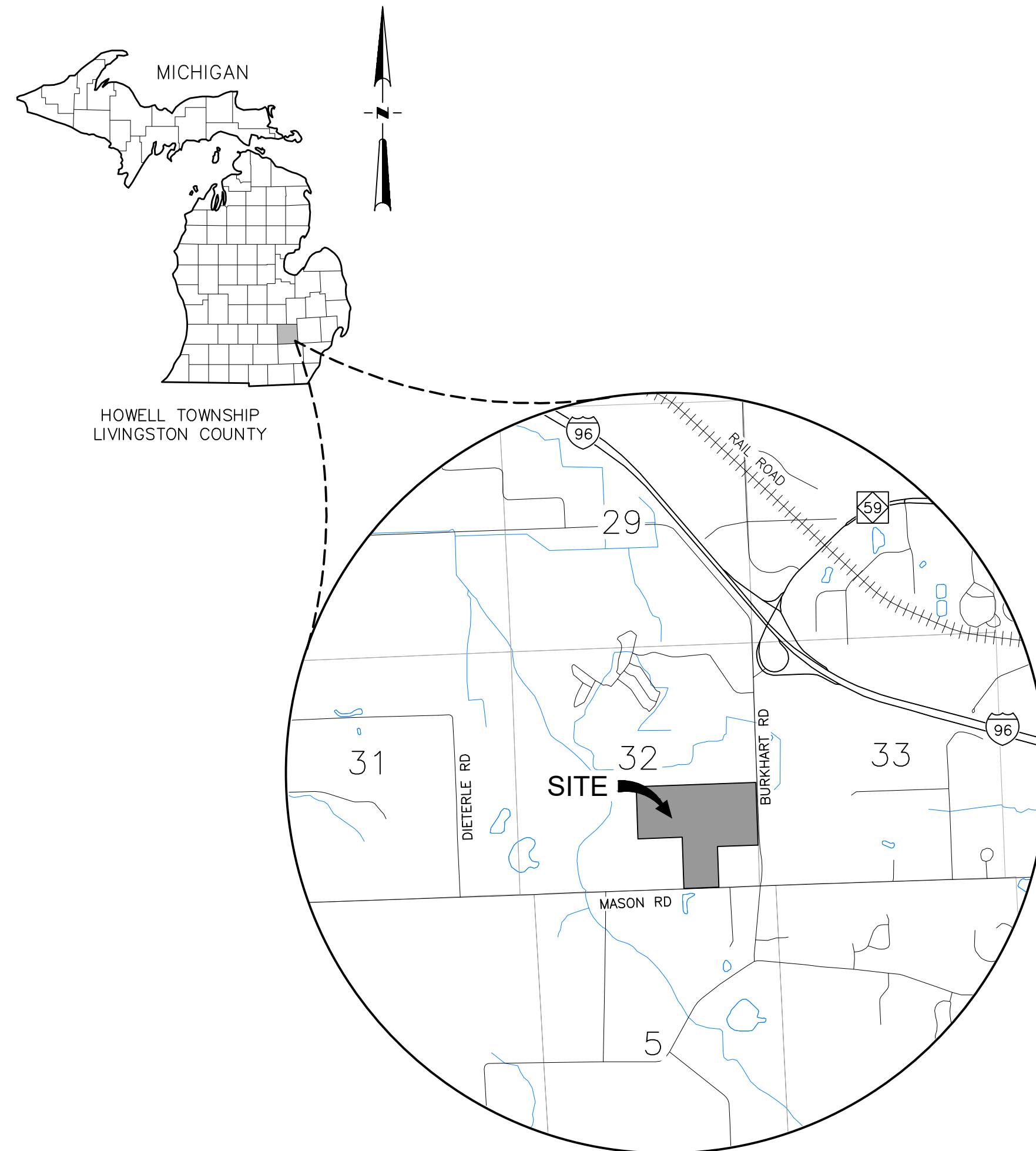
LEGAL DESCRIPTION (AS PROVIDED)

(PER TITLE AGENCY: ATA NATIONAL TITLE GROUP
TITLE COMMITMENT NO: 47-23889492-SCM,
EFFECTIVE DATE: SEPTEMBER 05,2023)

PARCEL TAX NUMBER: 47-06-32-400-013

SITUATED IN THE TOWNSHIP OF HOWELL, COUNTY OF LIVINGSTON, STATE OF MICHIGAN

PART OF THE SOUTHEAST 1/4 OF SECTION 32 AND PART OF THE SOUTHWEST 1/4 OF SECTION 33, TOWN 3 NORTH, RANGE 4 EAST, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE SOUTH LINE OF SAID SECTION 32, SAID POINT BEING SOUTH 89 DEGREES 55 MINUTES 08 SECONDS WEST 903.41 FEET FROM THE SOUTHEAST CORNER OF SECTION 32; THENCE SOUTH 89 DEGREES 55 MINUTES 08 SECONDS WEST 769.27 FEET ALONG THE SOUTH SECTION LINE; THENCE NORTH 00 DEGREES 05 MINUTES 59 SECONDS EAST 1133.64 FEET; THENCE SOUTH 89 DEGREES 55 MINUTES 08 SECONDS WEST 980.63 FEET TO THE NORTH-SOUTH 1/4 LINE; THENCE NORTH 00 DEGREES 04 MINUTES 04 SECONDS EAST 1155.25 FEET ALONG THE NORTH-SOUTH 1/4 LINE; THENCE SOUTH 89 DEGREES 59 MINUTES 30 SECONDS EAST 2649.93 FEET TO THE EAST SECTION LINE; THENCE SOUTH 00 DEGREES WEST 1374.40 FEET ALONG THE EAST SECTION LINE; THENCE SOUTH 03 DEGREES 58 MINUTES 40 SECONDS EAST 10.20 FEET ALONG THE CENTERLINE OF BURKHART ROAD; THENCE SOUTH 89 DEGREES 55 MINUTES 08 SECONDS WEST 904.12 FEET; THENCE SOUTH 00 DEGREES WEST 900.16 FEET TO THE POINT OF BEGINNING.



LOCATION MAP

LAND USE SUMMARY			
LAND USE DATA	CHARACTERISTIC	EXISTING CONDITIONS	PROPOSED CONDITIONS
	TOTAL DEVELOPMENT AREA (AC)	95.02 AC	95.02 AC
	IMPERVIOUS AREA (AC)	0.00 AC	29.95 AC
	TOTAL PERVIOUS AREA (AC)	95.02 AC	65.07 AC
PERVIOUS AREA BREAKDOWN BY COVER TYPE			
PERVIOUS AREA	MEADOW/FALLOW/NATURAL AREAS (NON-CULTIVATED)	19.07 AC	16.12 AC
	PREDOMINANT NRCS SOIL TYPE (A, B, C, OR D)	TYPE C	TYPE C
	IMPROVED AREAS (TURF GRASS, LANDSCAPE, ROW CROPS)	45.28 AC	38.68 AC
	PREDOMINANT NRCS SOIL TYPE (A, B, C, OR D)	TYPE B	TYPE B
	WOODED AREAS	30.67 AC	10.27 AC
	PREDOMINANT NRCS SOIL TYPE (A, B, C, OR D)	TYPE C	TYPE C
CPVC VOLUME CALCULATED (CF)		174,380 CF	
CPVC VOLUME PROVIDED (CF) *		221,666 CF	
CPRC (EXTENDED DETENTION) VOLUME PROVIDED (CF)		254,863 CF	
* NOTED CPVC VOLUME PROVIDED = PERMANENT POOL VOLUME. WAIVER FOR INFILTRATION IS REQUESTED DUE TO HIGH GROUND WATER.			
THE PROFESSIONAL ENGINEER WHO SIGNS AND SEALS THIS SITE PLAN CERTIFIES THAT THE VALUES IN THIS TABLE REFLECT THE WRC STORMWATER CALCULATIONS REQUIRED FOR THIS DEVELOPMENT AND THAT GEOTECHNICAL INVESTIGATIONS WERE PERFORMED THAT PROVIDE CONCLUSIVE DOCUMENTATION THAT DEMONSTRATES WHETHER INFILTRATION (I.E. CPVC VOLUME CONTROL) IS PRACTICABLE.			

DESIGN ENGINEER/SURVEYOR



MONUMENT ENGINEERING GROUP ASSOCIATES, INC

INNOVATIVE GEOSPATIAL &
ENGINEERING SOLUTIONS

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FOWLERVILLE, MI 48836
PHONE: 517-223-3512

SINGLE FAMILY DEVELOPER

M/I HOMES OF MICHIGAN, LLC

40950 WOODWARD AVE
SUITE 203
BLOOMFIELD HILLS, MI 48304
POC: DAVID STRAUB
PHONE: 248-221-5011

ARCHITECT



FELINO PASCUAL ASSOCIATES
24333 Orchard Lake Road
Suite G
Farmington Hills, MI 48336
POC: Felino A. Pascual (Joel), RLA, CLARB Pas
PHONE: 248-557-5588

LCRC Comments 11/6/2024

SITE PERMIT APPROVAL INDEX

NUMBER	PERMIT TYPE	GOVERNING AGENCY	APPROVAL DATE
PC2023-13	PUD APPROVAL (REZONING)	HOWELL TOWNSHIP	01/08/2024
	REZONING - COUNTY PLANNING	LIVINGSTON COUNTY PLANNING	01/19/2022
	PHASE 1 FINAL SITE PLAN	HOWELL TOWNSHIP	XX/XX/XXXX
	FIRE MARSHALL	HOWELL AREA FD	XX/XX/XXXX
	CONSTRUCTION DOCUMENTS	HOWELL TOWNSHIP	XX/XX/XXXX
	WATER AUTHORITY	MHOG	XX/XX/XXXX
	ROAD COMMISSION - MASON ROAD APPROACH PERMIT	COUNTY	XX/XX/XXXX
	ROAD COMMISSION - BURKHART ROAD APPROACH PERMIT	COUNTY	XX/XX/XXXX
	DRAIN COMMISSION - DRAINAGE APPROVAL	COUNTY	XX/XX/XXXX
	SOIL EROSION SEDIMENTATION CONTROL PERMIT	COUNTY	XX/XX/XXXX
	JOINT PERMIT APPLICATION	EGL	XX/XX/XXXX
	ACT 399 PERMIT (WATER)	EGL	XX/XX/XXXX
	PART 41 PERMIT (SANITARY)	EGL	XX/XX/XXXX

NOTE: BUILDING PERMITS (BUILDING, ELECTRICAL, PLUMBING, MECHANICAL, ETC.) ARE TRACKED SEPARATELY ON THE ARCHITECTURAL PLANS.



Kevin C. McDevitt

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COVER
HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP, LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024	PLAN SUBMITTALS/REVISIONS
09/18/2024	SITE PLAN SUBMITTAL
10/14/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL
11/04/2024	EGLE JOINT PERMIT SUBMITTAL
	CONSTRUCTION DOCUMENT REVIEW SET

ORIGINAL ISSUE DATE:
5/09/2024

PROJECT NO: 21-075C

SCALE: N/A
0 1/2" 1"

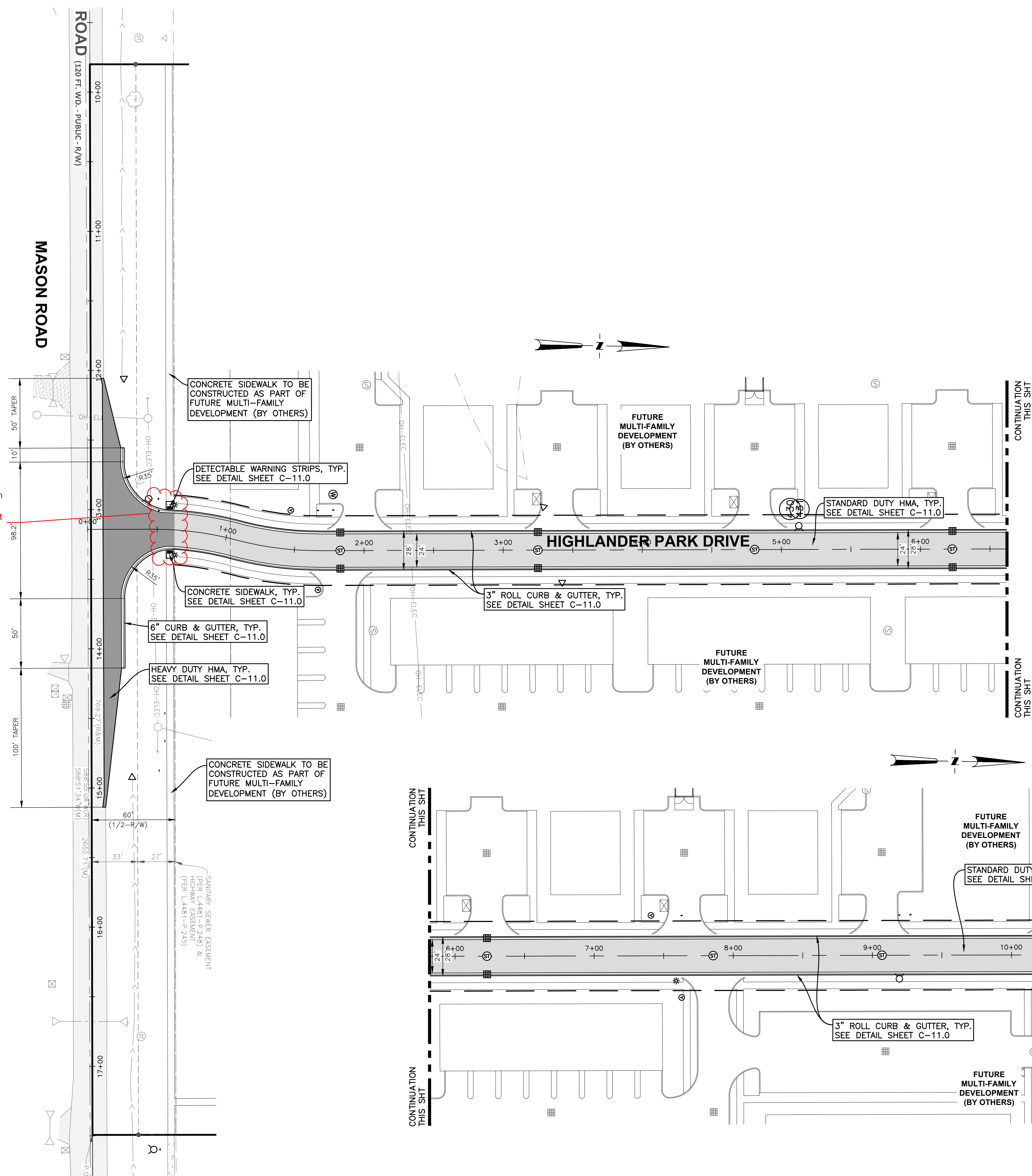
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DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

G-10

NOT FOR CONSTRUCTION



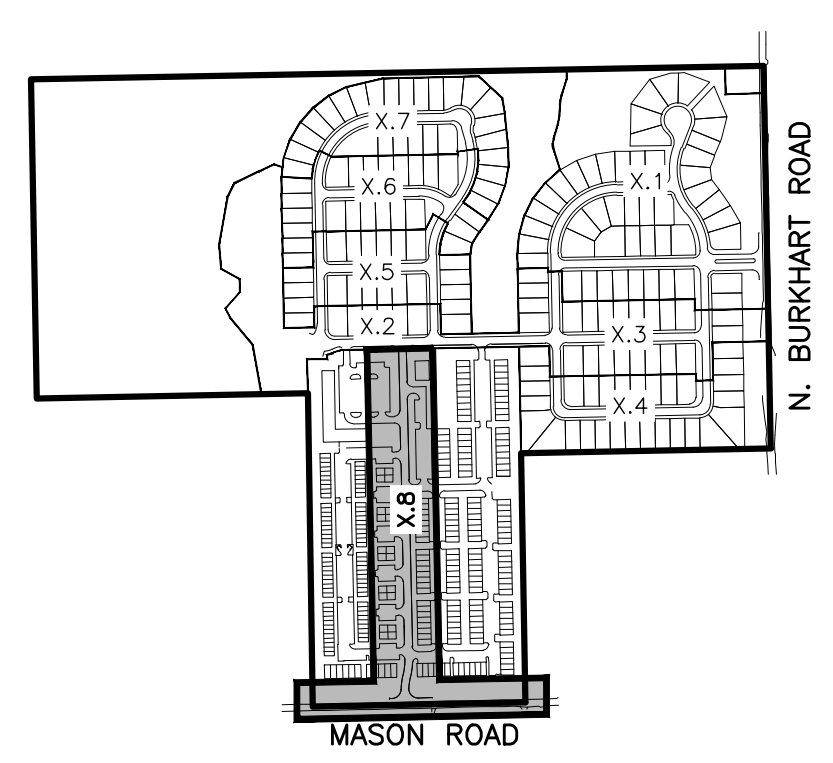
LCRC standards requires the approach to be 30' wide face of curb to face of curb at the radius point. Beyond that point, it can taper to meet the township standards.



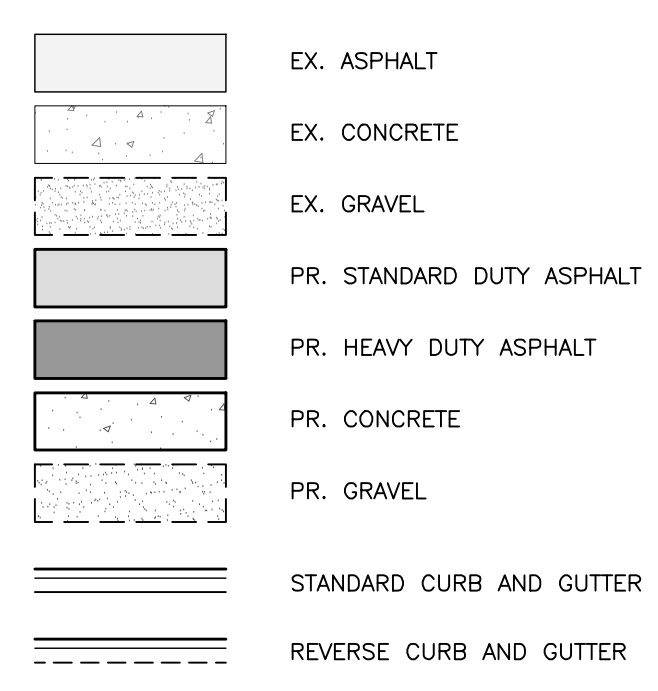
CONTINUATION THIS SHIT

CONTINUATION THIS SHIT

SHEET KEY



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DIMENSION AND PAVING PLAN MF

HERITAGE SQUARE (SINGLE FAMILY)
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PLAN SUBMITTALS/REVISIONS	DATE
PLAN SUBMITTAL	05/09/2024
SITE PLAN SUBMITTAL	09/18/2024
PHASE 1 FINAL SITE PLAN SUBMITTAL	10/14/2024
ECCLE JOINT PERMIT SUBMITTAL	11/04/2024
CONSTRUCTION DOCUMENT REVIEW SET	11/04/2024

ORIGINAL ISSUE DATE: 5/09/2024

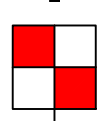
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SCALE: 1" = 40'
0 1/2" 1"

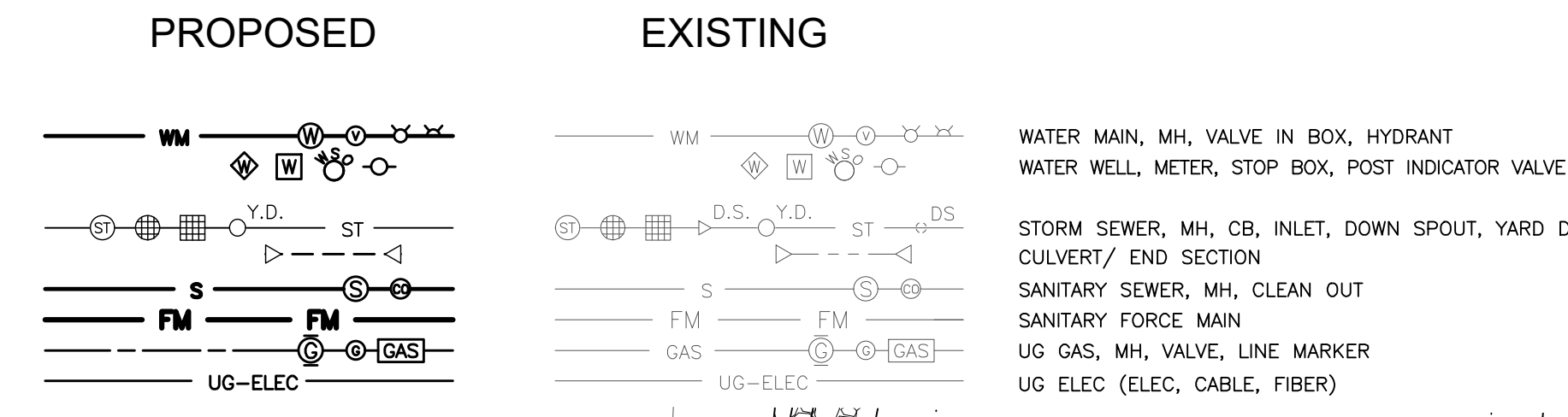
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DESIGN BY: KM
CHECK BY: KM

C-18

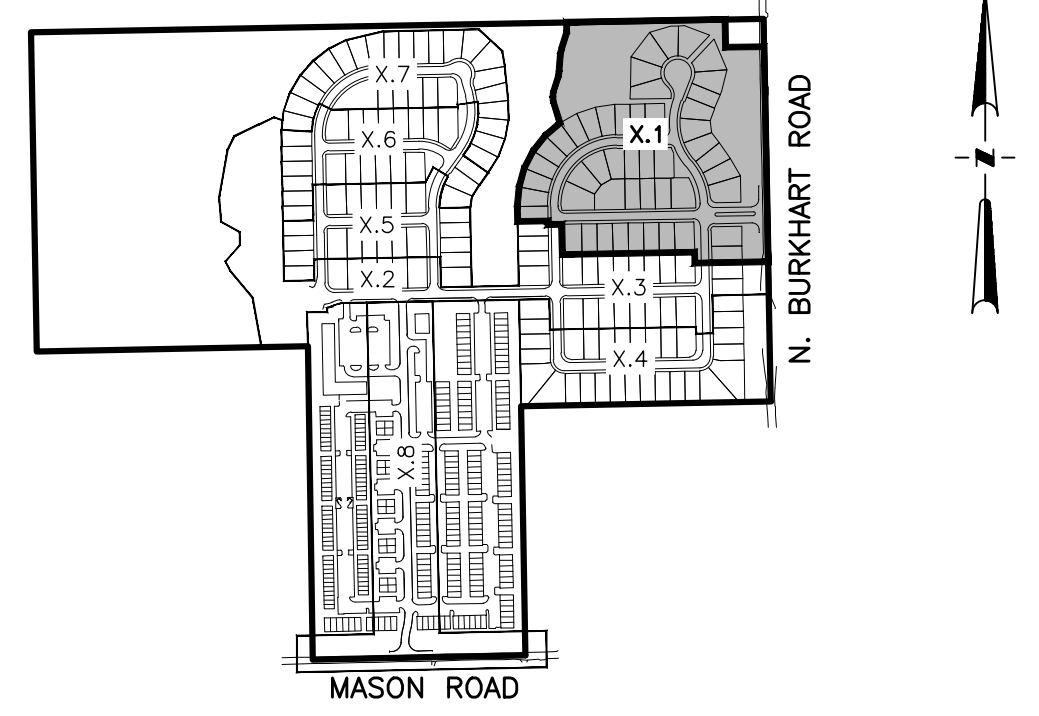
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UTILITY LEGEND



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SANITARY SEWER AND WATERMAIN PLAN

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DATE	DESCRIPTION
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09/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL
10/16/2024	ELEC. JOINT PERMIT SUBMITTAL
11/04/2024	CONSTRUCTION DOCUMENT REVIEW SET

ORIGINAL ISSUE DATE: 5/09/2024

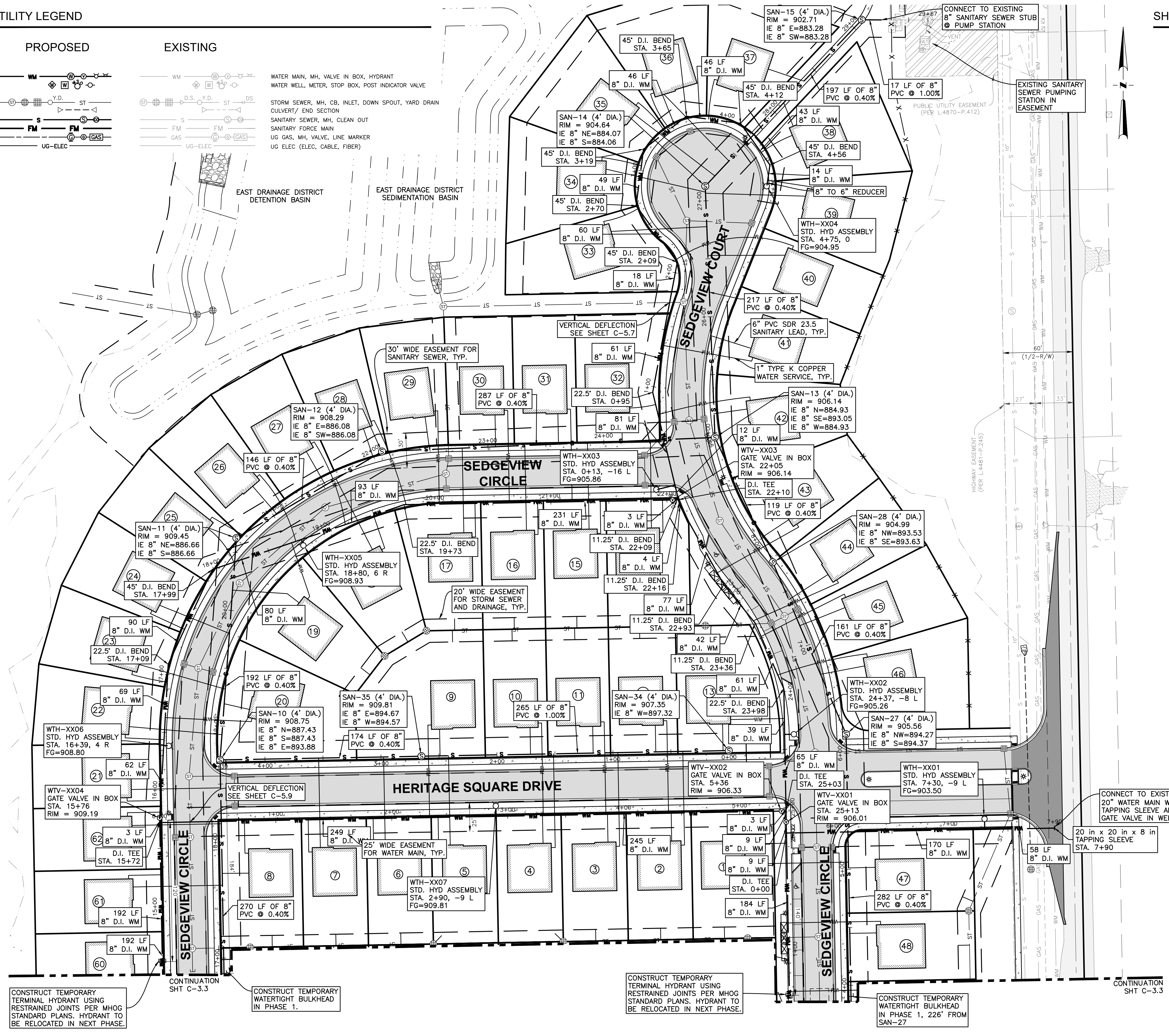
PROJECT NO: 21-075C

SCALE: 1" = 40'

FIELD: DRAWN BY: DC, MN, CK, DJ
DESIGN BY: KM
CHECK BY: KM

C-3.1

NOT FOR CONSTRUCTION



SANITARY SEWER NOTES

- SANITARY "MH" SHALL HAVE EIJW 1020 FRAME WITH TYPE A COVER.

MHOG WATER NOTES

- WATER IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT MARION, HOWELL, OCEOLA, AND GENOA (MHOG) DESIGN STANDARDS AND SPECIFICATIONS.
- WATER MAIN TO BE 5.5' DEEP PER MHOG DESIGN STANDARDS.
- ALL WATER MAIN SHALL BE CLASS 52 DUCTILE IRON PIPE (DIP) WITH POLYETHYLENE (P.E.) ENCASMENT IN ACCORDANCE WITH AWWA C105/ANSI 21.5 AND TRACER WIRE INSTALLED.

TRACER WIRE NOTES

- TRACER WIRE IS TO BE INSTALLED ON ALL WATER MAIN DISTRIBUTION LINES AND SERVICE LINES. REFER TO MHOG DESIGN STANDARDS SECTION 22.11.13 FOR DETAILS.
- TRACING WIRE SYSTEMS SHALL TERMINATE IN RHINO TRIVIEW TRACING WIRE STATIONS OR A TRACER WIRE BOX. THE TRACER WIRE BOX SHALL HAVE A CONCRETE HOUSEKEEPING PAD IN DEVELOPED AREAS.

SANITARY SEWER QUANTITIES

QTY	UNIT	ITEM
2476	LF	8" PVC SDR 26
2646	LF	6" PVC SDR 23.5
10	EA	4" MANHOLE
5	EA	CLEANOUT

WATER MAIN QUANTITIES

QTY	UNIT	ITEM
2430	LF	8" DI CL 52 WATER MAIN
45	LF	6" DI CL 52 WATER MAIN
2605	LF	1" TYPE K, COPPER WATER SERVICE
4	EA	8"x8"x8" TEE
6	EA	8"x8"x6" TEE
11	EA	8" 45° BEND
6	EA	8" 22.5° BEND
4	EA	8" 11.25° BEND
1	EA	20"x8" TSV&W
1	EA	8" TO 6" REDUCER
4	EA	8" GVB IN 2'X2' CONCRETE APRON
7	EA	STANDARD HYDRANT ASSEMBLY

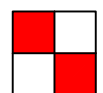
MHOG Approval needed for connection to water and sanitary system.

CONSTRUCT TEMPORARY TERMINAL HYDRANT USING RESTRAINED JOINTS PER MHOG STANDARD PLANS. HYDRANT TO BE RELOCATED IN NEXT PHASE.

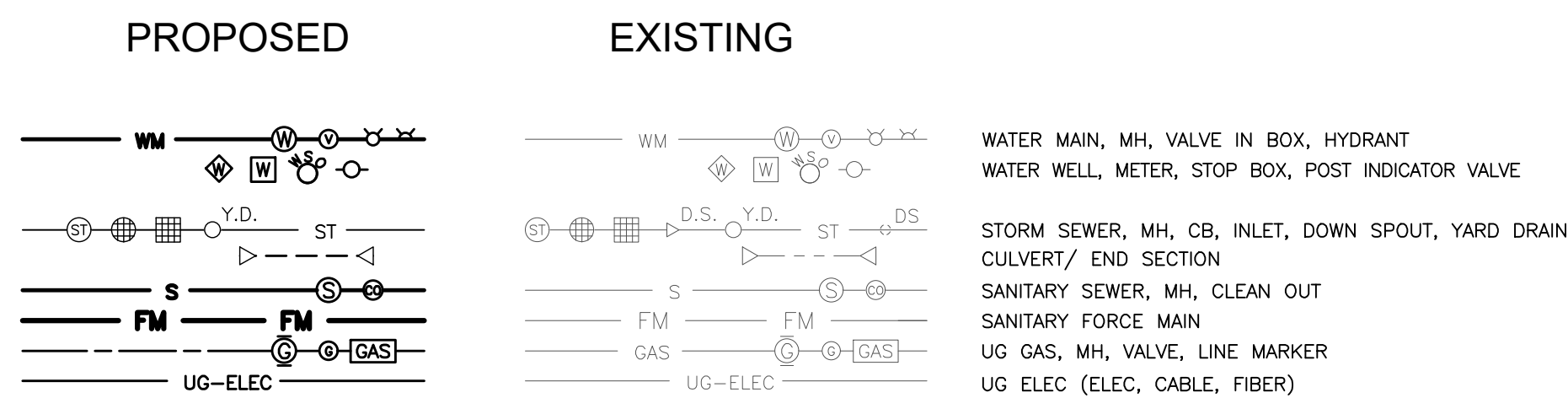
CONSTRUCT TEMPORARY WATER TIGHT BULKHEAD IN PHASE 1.

CONSTRUCT TEMPORARY WATER TIGHT BULKHEAD IN PHASE 1, 226' FROM SAN-27

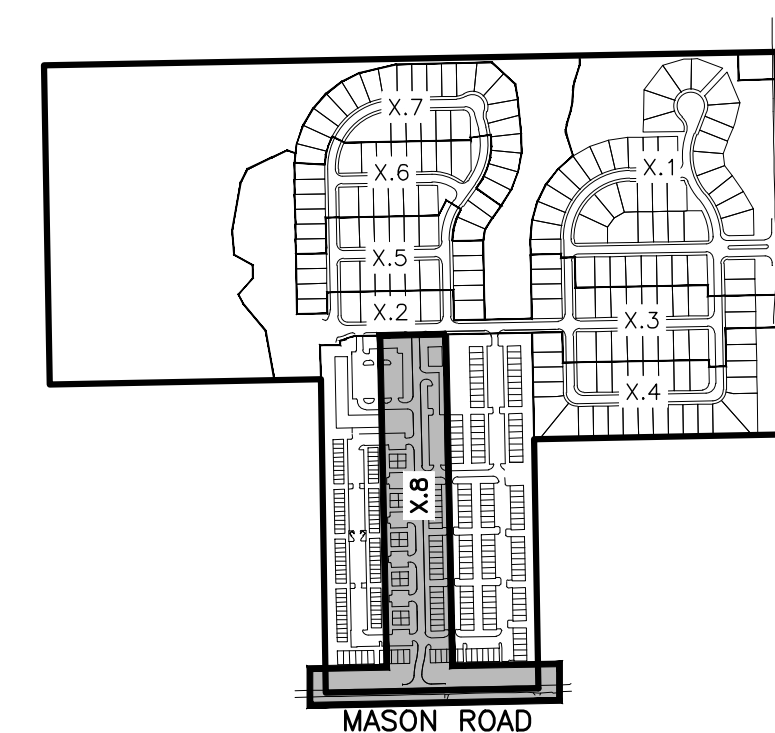
CONSTRUCT TEMPORARY TERMINAL HYDRANT USING RESTRAINED JOINTS PER MHOG STANDARD PLANS. HYDRANT TO BE RELOCATED IN NEXT PHASE.



UTILITY LEGEND



SHEET KEY



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POC: DAVID STRAUB
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SANITARY SEWER AND WATERMAN PLAN
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95 AC. NW CORNER BURKHART & MASON ROADS
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DATE	DESCRIPTION
05/09/2024	PLAN SUBMITTAL/REVISIONS
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10/14/2024	ELEC. JOINT PERMIT SUBMITTAL
11/04/2024	CONSTRUCTION DOCUMENT REVIEW SET

ORIGINAL ISSUE DATE: 5/09/2024

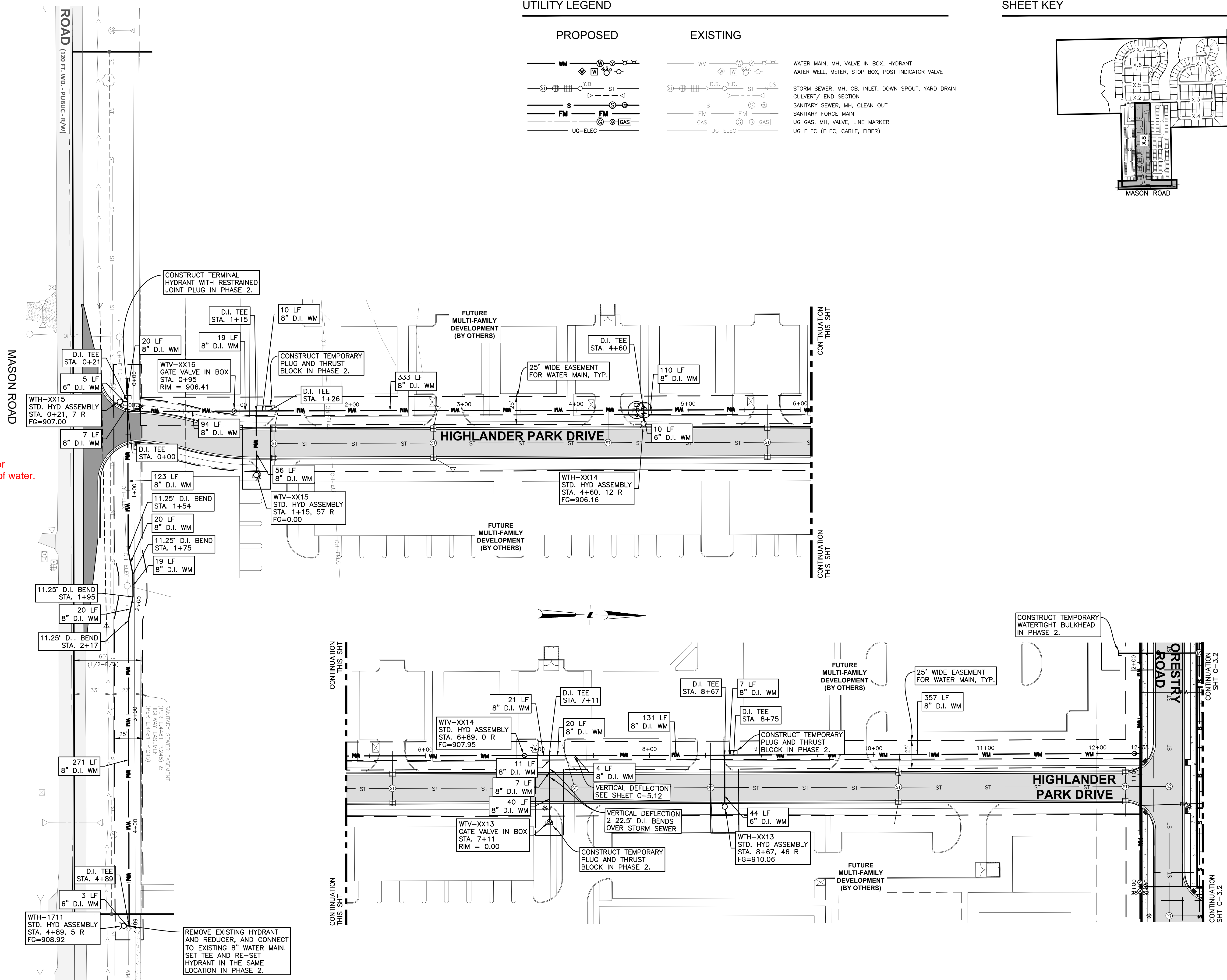
PROJECT NO: 21-075C

SCALE: 1" = 40'

FIELD:
DRAWN BY: DC,MM,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-3.8

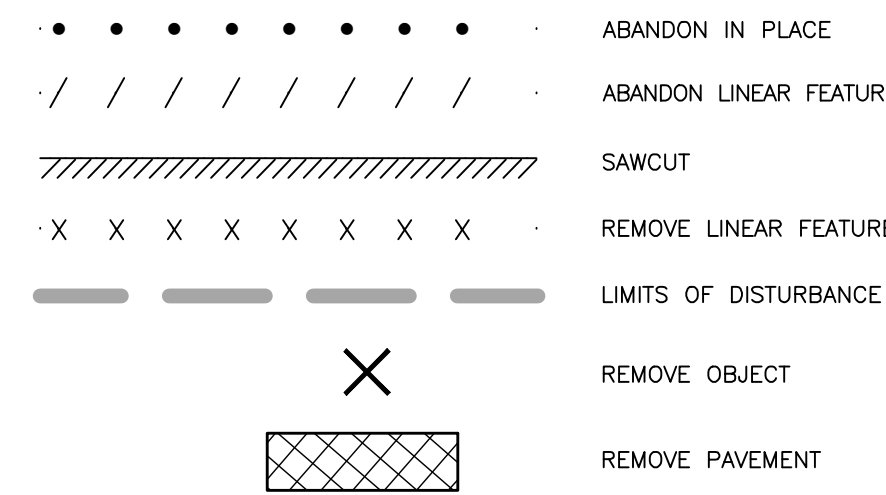
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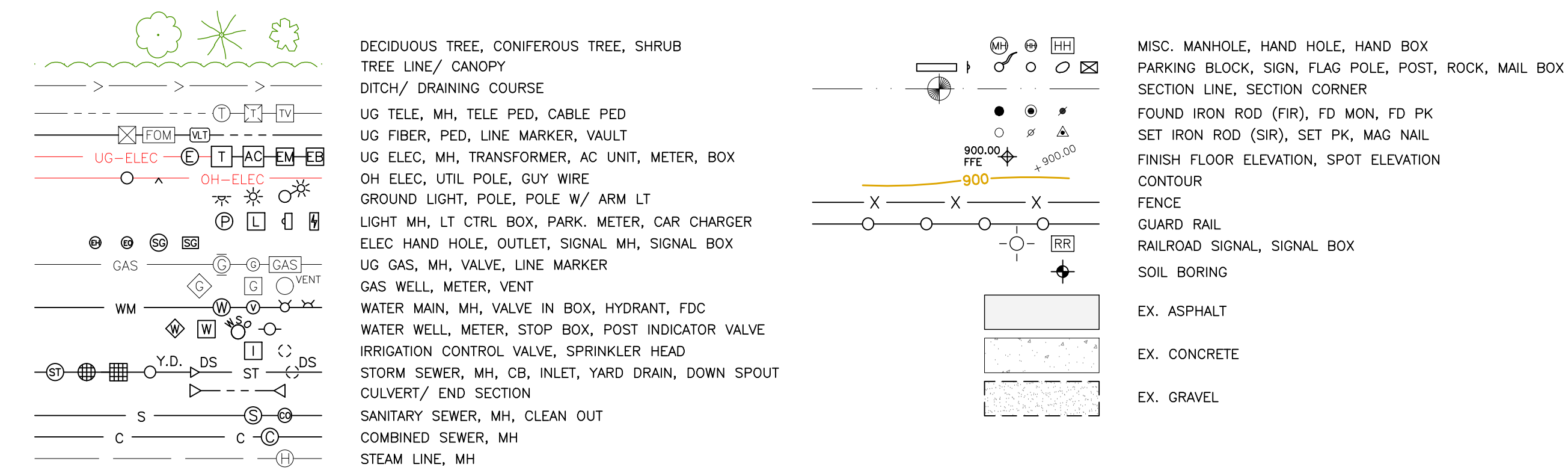
REMOVAL NOTES

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- ANY TREES NOT MARKED PER PLAN ARE TO BE PROTECTED & PRESERVED DURING CONSTRUCTION.
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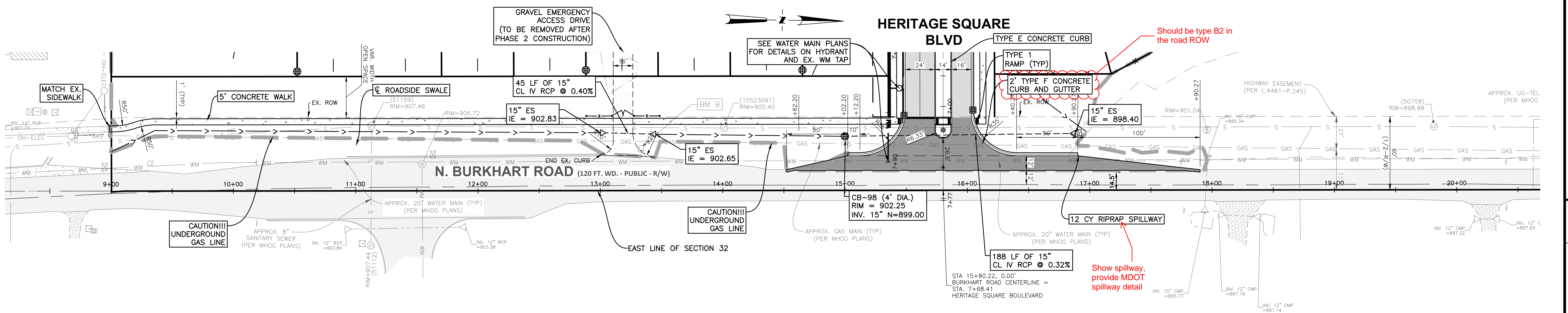
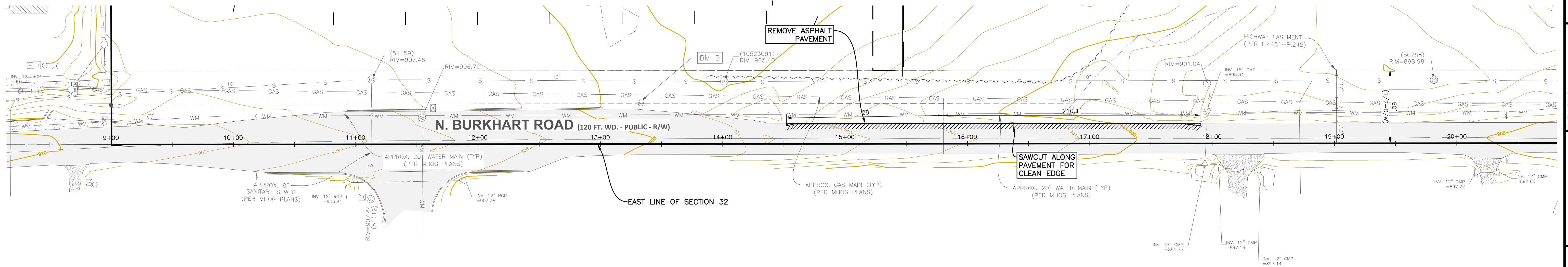
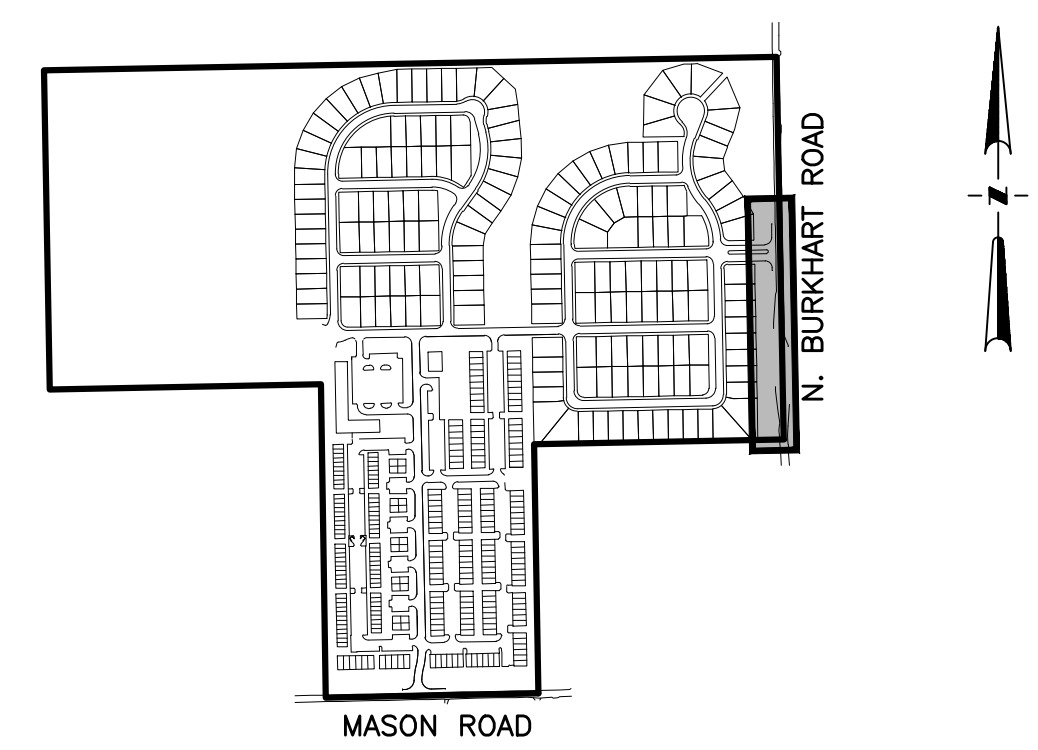
REMOVAL LEGEND



EXISTING LEGEND

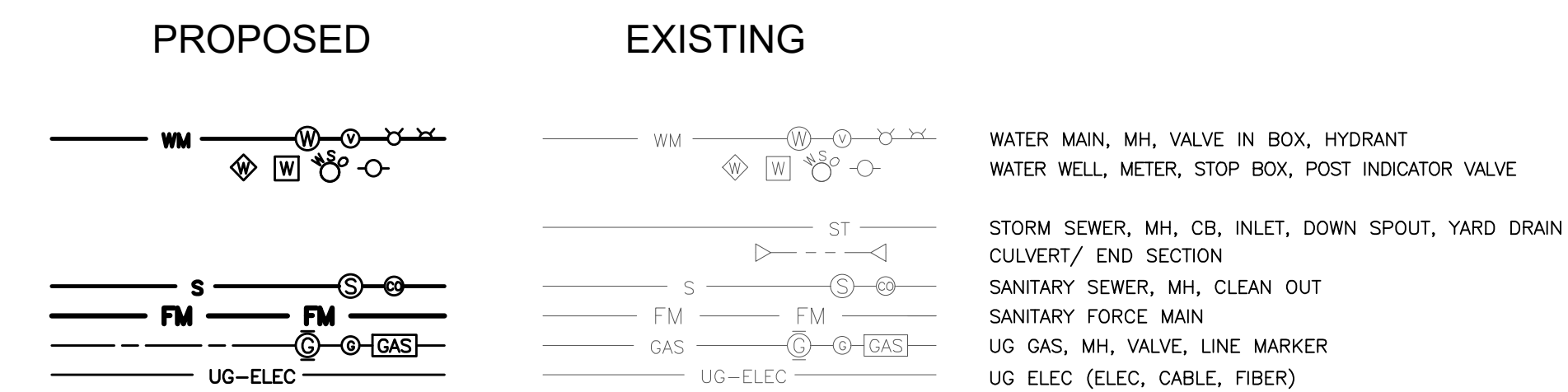


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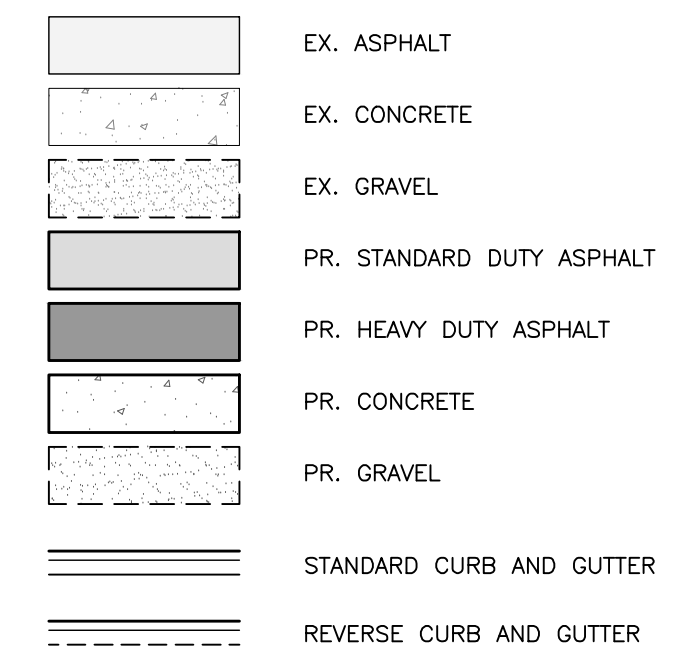


CONSTRUCTION

UTILITY LEGEND



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EX. CONDITIONS, REMOVAL & CONSTRUCTION PLAN

HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
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DATE	DESCRIPTION
05/09/2024	DATE
05/09/2024	DATE
09/18/2024	DATE
10/14/2024	DATE
11/04/2024	DATE

ORIGINAL ISSUE DATE: 5/09/2024

PROJECT NO: 21-075C

SCALE: 1" = 40'

FIELD: DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

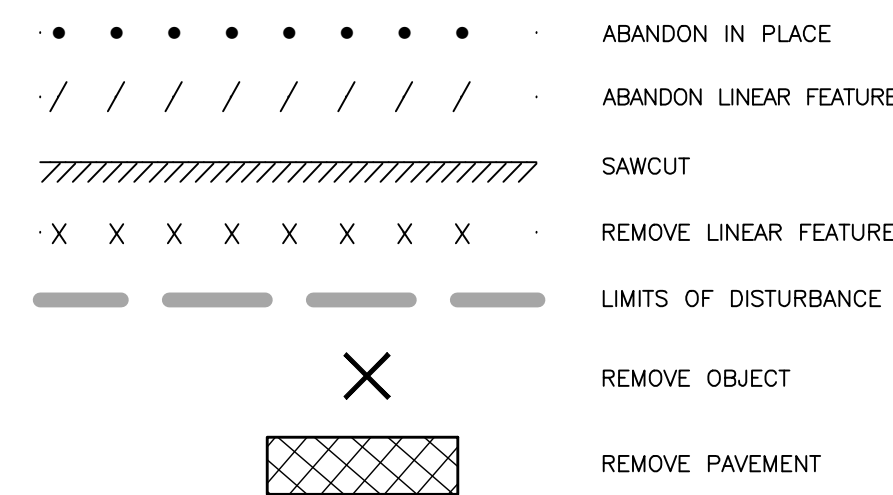
C-10.1

NOT FOR CONSTRUCTION

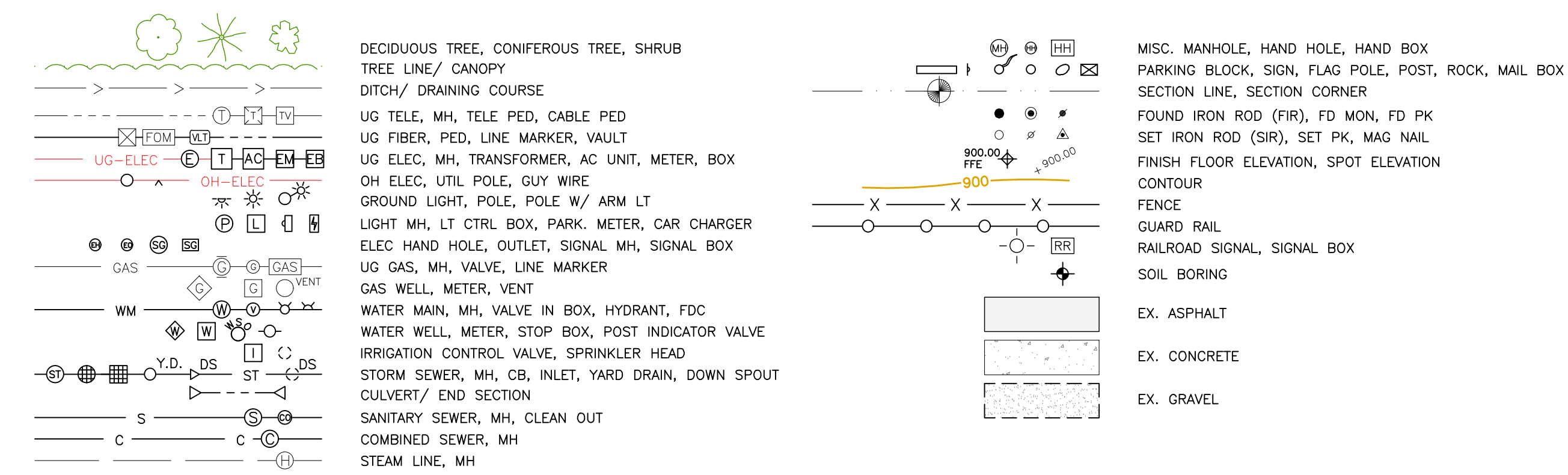
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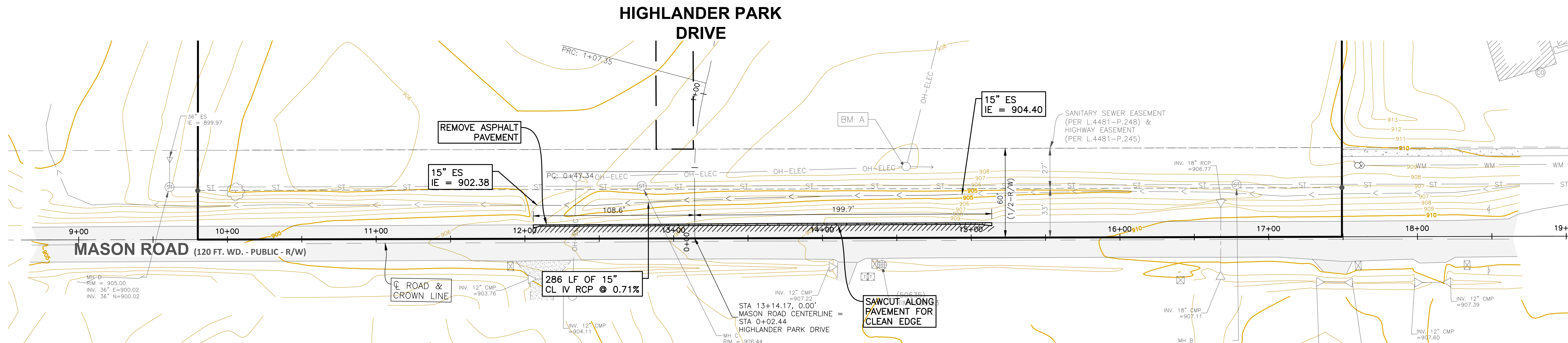
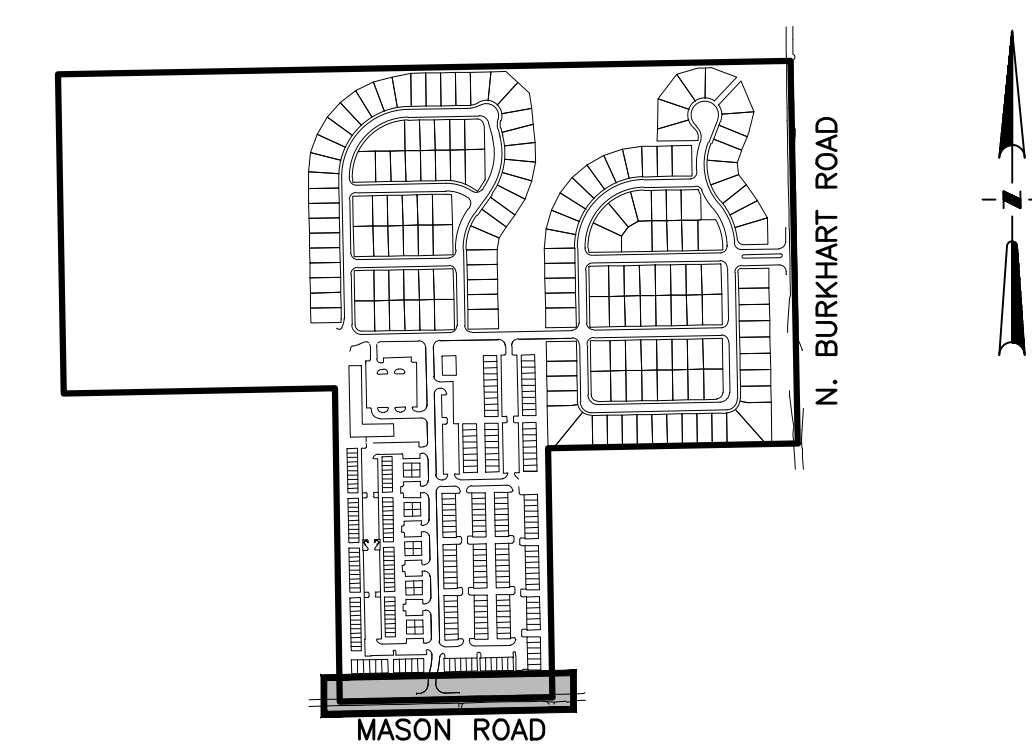
REMOVAL LEGEND



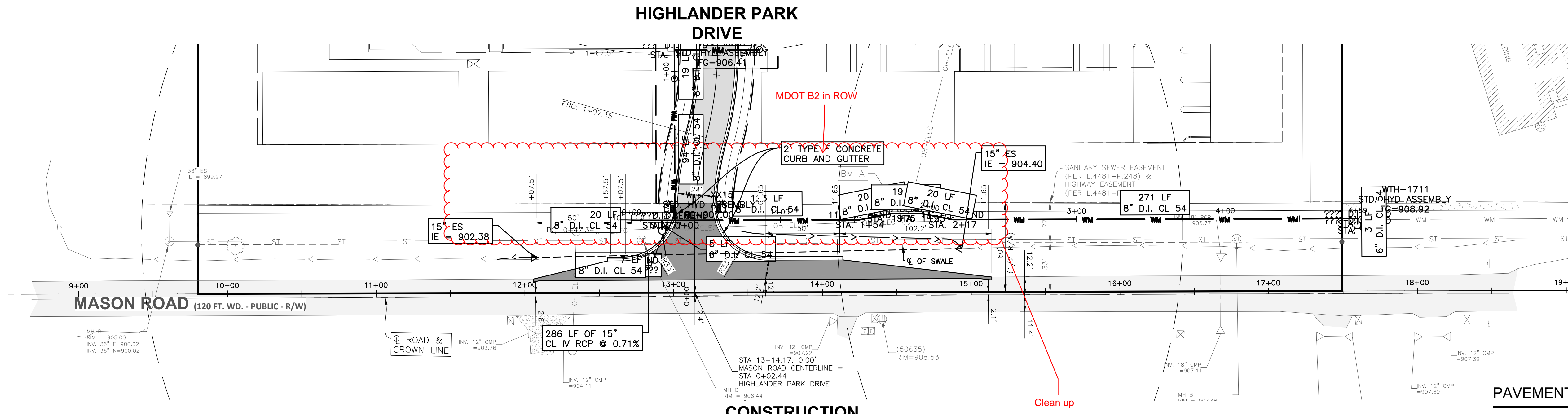
EXISTING LEGEND



SHEET KEY

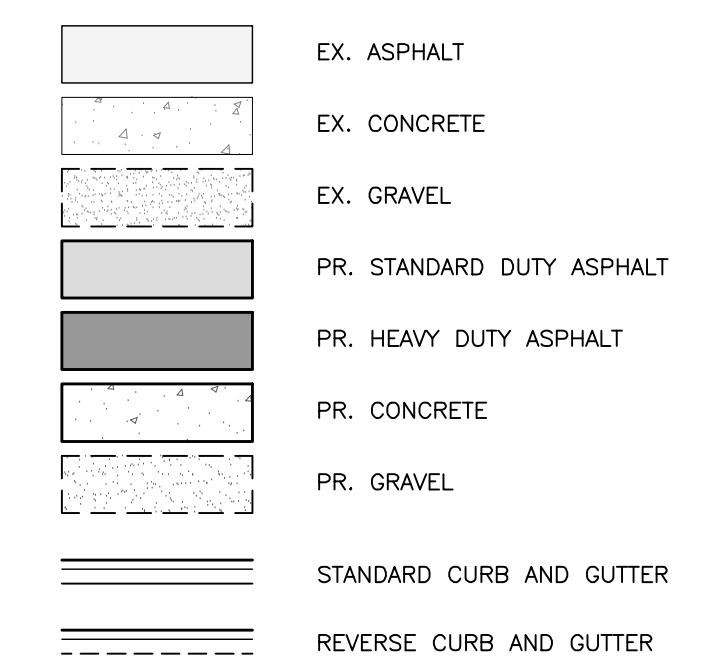


EXISTING CONDITIONS AND REMOVAL



CONSTRUCTION

PAVEMENT LEGEND



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SUITE 203
BLOOMFIELD HILLS, MI 48304
POC: DAVID STRAUB
(248)-221-5011

EX. CONDITIONS, REMOVAL & CONSTRUCTION PLAN

HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP., LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
05/09/2024	PLAN SUBMITTAL/REVISIONS
09/19/2024	SITE PLAN SUBMITTAL
10/14/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL
11/04/2024	ELECTRICAL PERMIT SUBMITTAL
	CONSTRUCTION DOCUMENT REVIEW SET

ORIGINAL ISSUE DATE:
5/09/2024

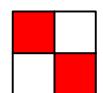
PROJECT NO: 21-075C

SCALE: 1" = 40'

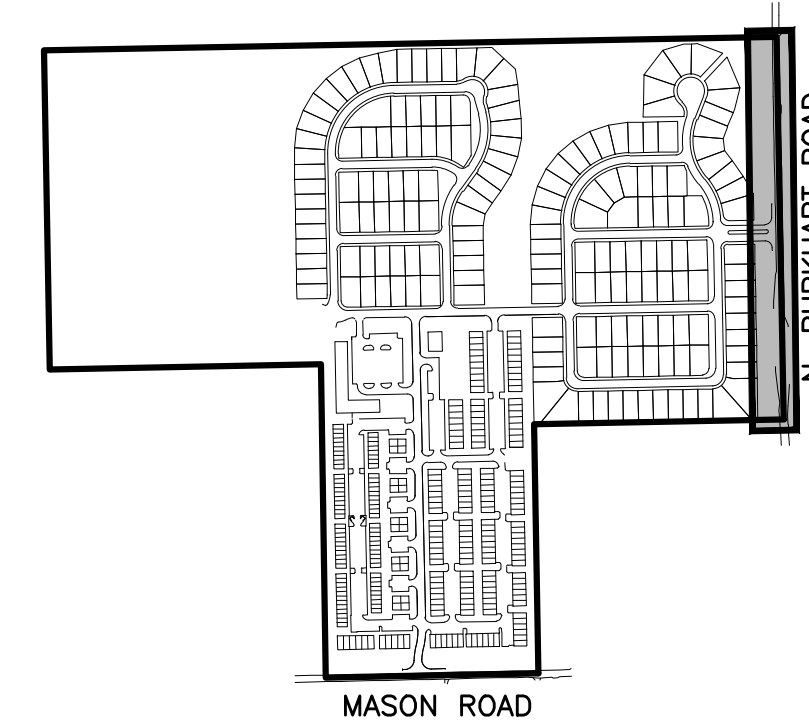
FIELD:
DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-10.2

NOT FOR CONSTRUCTION



SHEET KEY



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SMALL BUSINESS (SDVOBS)

KEVIN C. McDEVITT
ENGINEER
NO. 6201043260

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CLIENT :

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40950 WOODWARD AVE
SUITE 203
BLOOMFIELD HILLS, MI 48304
POC: DAVID STRAUB
(248)-221-5011

GRADING PLAN - BURKHART ROAD

HERITAGE SQUARE (SINGLE FAMILY)
95 AC. NW CORNER BURKHART & MASON ROADS
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
HOWELL TWP, LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
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09/18/2024	PHASE 1 FINAL SITE PLAN SUBMITTAL
10/14/2024	ECCLE JOINT PERMIT SUBMITTAL
11/04/2024	CONSTRUCTION DOCUMENT REVIEW SET

ORIGINAL ISSUE DATE:
5/09/2024

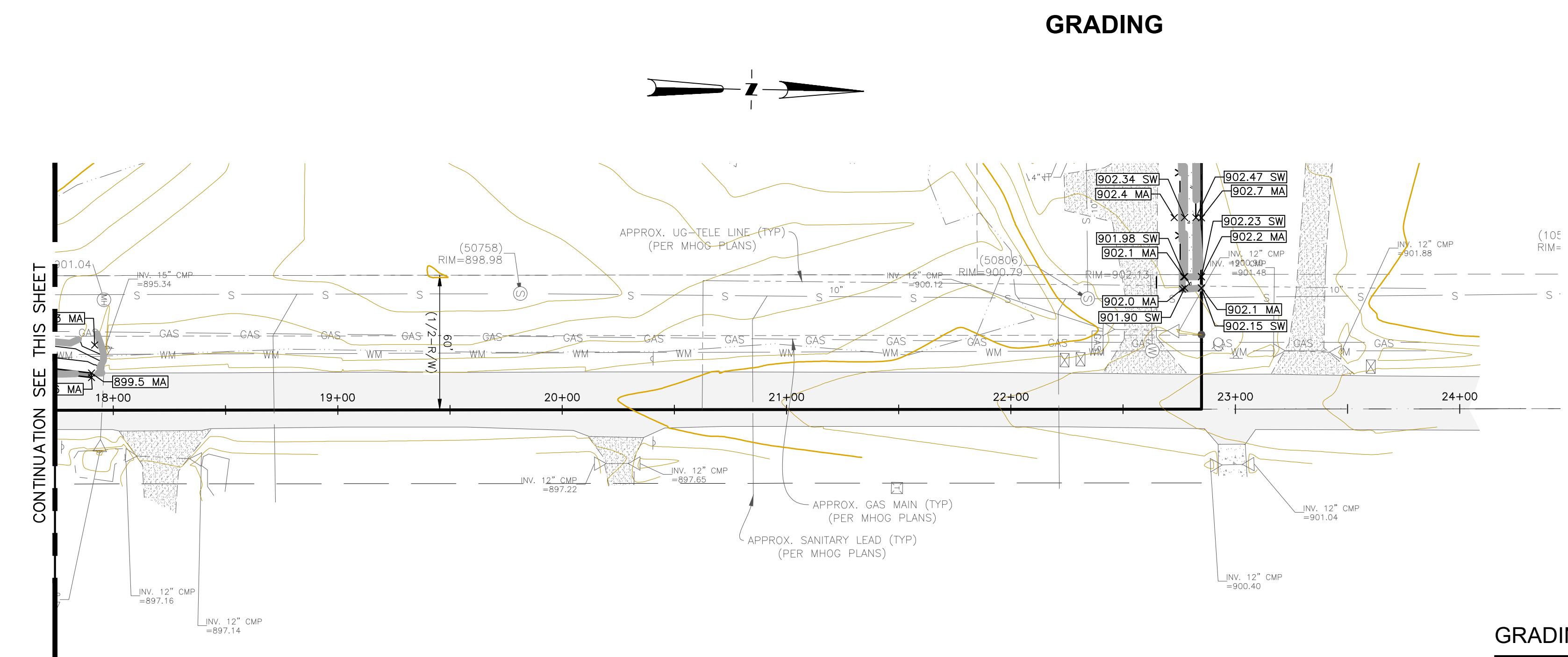
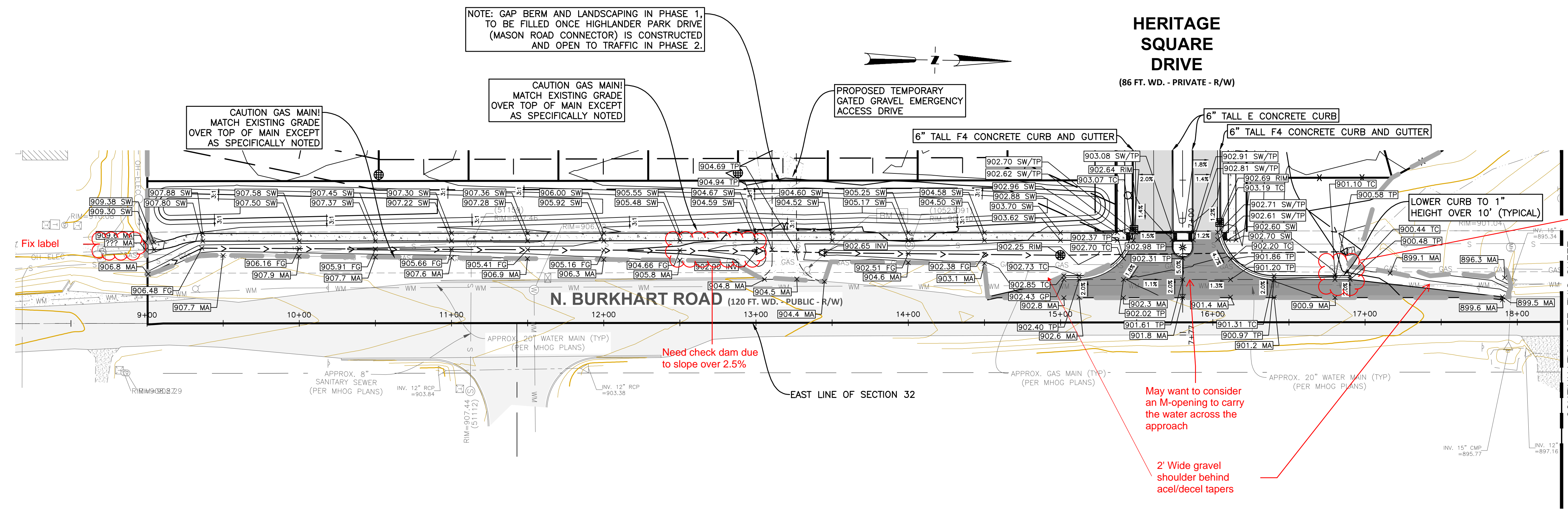
PROJECT NO: 21-075C

SCALE: 1" = 40'
0 1/2" 1"

FIELD:
DRAWN BY: DC, MN, CK, DJ
DESIGN BY: KM
CHECK BY: KM

C-10.3

NOT FOR CONSTRUCTION



EXISTING LEGEND

	DECIDUOUS TREE, CONIFEROUS TREE, SHRUB		MISC. MANHOLE, HAND HOLE, HAND BOX
	TREE LINE/ CANOPY		PARKING BLOCK, SIGN, FLAG POLE, POST, ROCK, MAIL BOX SECTION LINE, SECTION CORNER
	UG TELE, MH, TELE PED, CABLE PED		FOUND IRON ROD (FIR), FD MON, FD PK SET IRON ROD (SIR), SET PK, MAG NAIL
	OH ELEC, UTIL POLE, GUY WIRE		FINISH FLOOR ELEVATION, SPOT ELEVATION
	GROUND LIGHT, POLE W/ ARM LT		CONTOUR
	LIGHT MH, LT CTRL BOX, PARK. METER, CAR CHARGER		FENCE
	ELEC HAND HOLE, OUTLET, SIGNAL MH, SIGNAL BOX		GUARD RAIL
	UG GAS, MH, VALVE, LINE MARKER		RAILROAD SIGNAL, SIGNAL BOX
	GAS WELL, METER, VENT		SOIL BORING
	WATER MAIN, MH, VALVE IN BOX, HYDRANT, FDC		EX. ASPHALT
	WATER WELL, METER, STOP BOX, POST INDICATOR VALVE		EX. CONCRETE
	IRRIGATION CONTROL VALVE, SPRINKLER HEAD		EX. GRAVEL
	STORM SEWER, MH, CB, INLET, YARD DRAIN, DOWN SPOUT		
	CULVERT/ END SECTION		
	SANITARY SEWER, MH, CLEAN OUT		
	COMBINED SEWER, MH		
	STEAM LINE, MH		

GRADING LEGEND

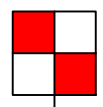
	PROPOSED TOP OF PAVEMENT GRADE		ADA COMPLIANT SIDEWALK RAMP
	PROPOSED SIDEWALK GRADE		ADA COMPLIANT SIDEWALK LANDING
	PROPOSED FINISH GRADE		EXISTING CONTOUR
	PROPOSED TOP OF CURB GRADE		PROPOSED CONTOUR
	PROPOSED GUTTER PAN GRADE		LIMITS OF DISTURBANCE
	PROPOSED TOP OF WALL GRADE		OVERFLOW ROUTE
	PROPOSED BOTTOM OF WALL GRADE		
	MATCH EXISTING GRADE		
	PROPOSED FINISH FLOOR GRADE		
	PROPOSED RIM GRADE		
	ADJUSTED RIM GRADE		
	PROPOSED INVERT GRADE		

BENCHMARKS

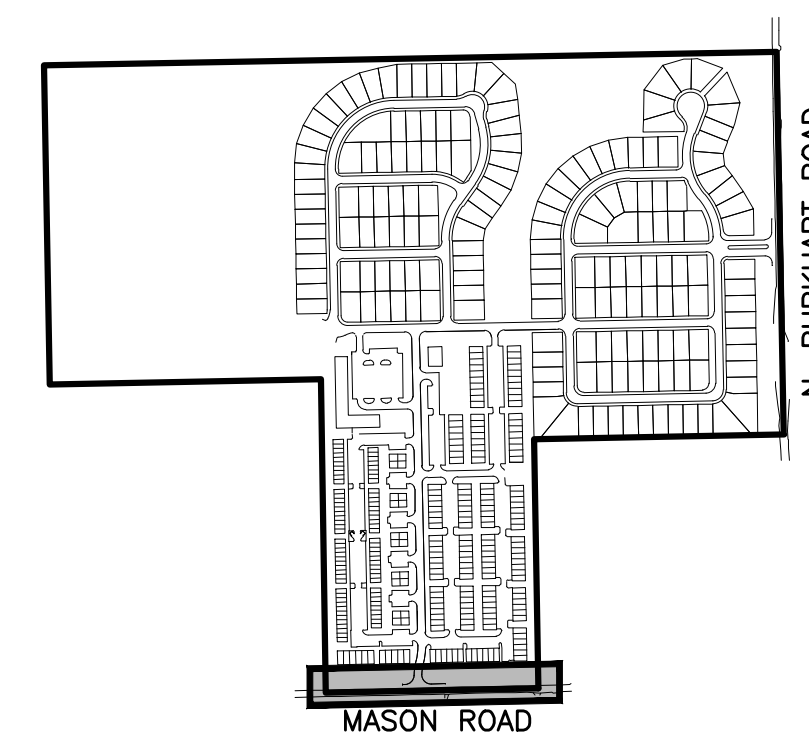
DATUM: NAVD88

BM A:
SET BENCH TIE IN S/SIDE OF UTILITY POLE ON NORTH SIDE OF MASON ROAD
290± WEST OF EAST PROPERTY LINE.
ELEV = 909.83

BM B:
ARROW ON HYDRANT ON WEST SIDE OF BURKHART ROAD 430± NORTH OF SOUTH PROPERTY LINE.
ELEV = 906.59



SHEET KEY



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GRADING PLAN - MASON ROAD

HERITAGE SQUARE (SINGLE FAMILY)
MASON ROAD & BURKHART ROAD
PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
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DATE	DESCRIPTION
05/09/2024	DATE
09/18/2024	DATE
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5/09/2024

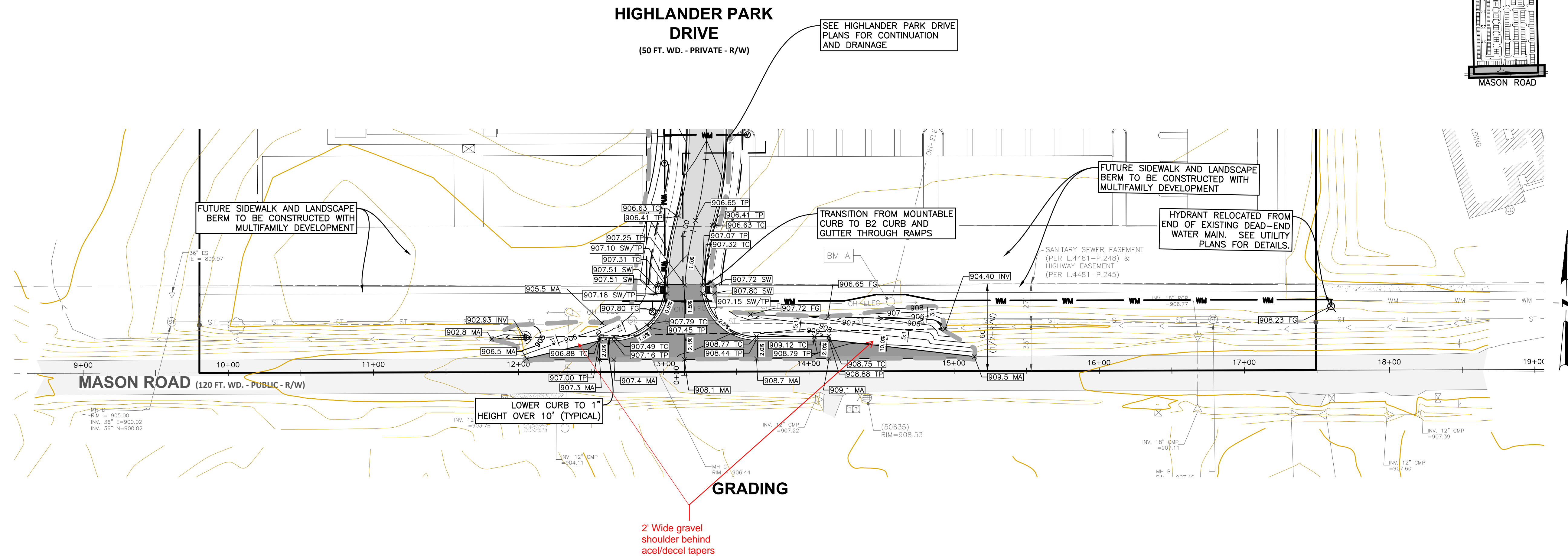
PROJECT NO: 21-075C

SCALE: 1" = 40'
0 1/2" 1"

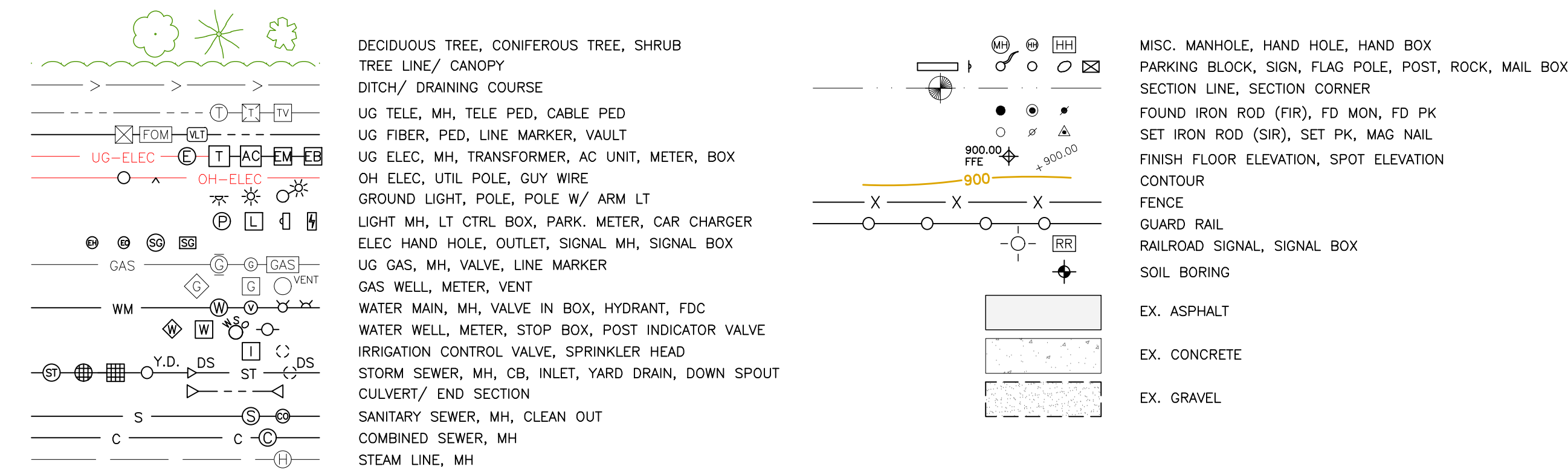
FIELD:
DRAWN BY: DC, MN, CK, DJ
DESIGN BY: KM
CHECK BY: KM

C-10.4

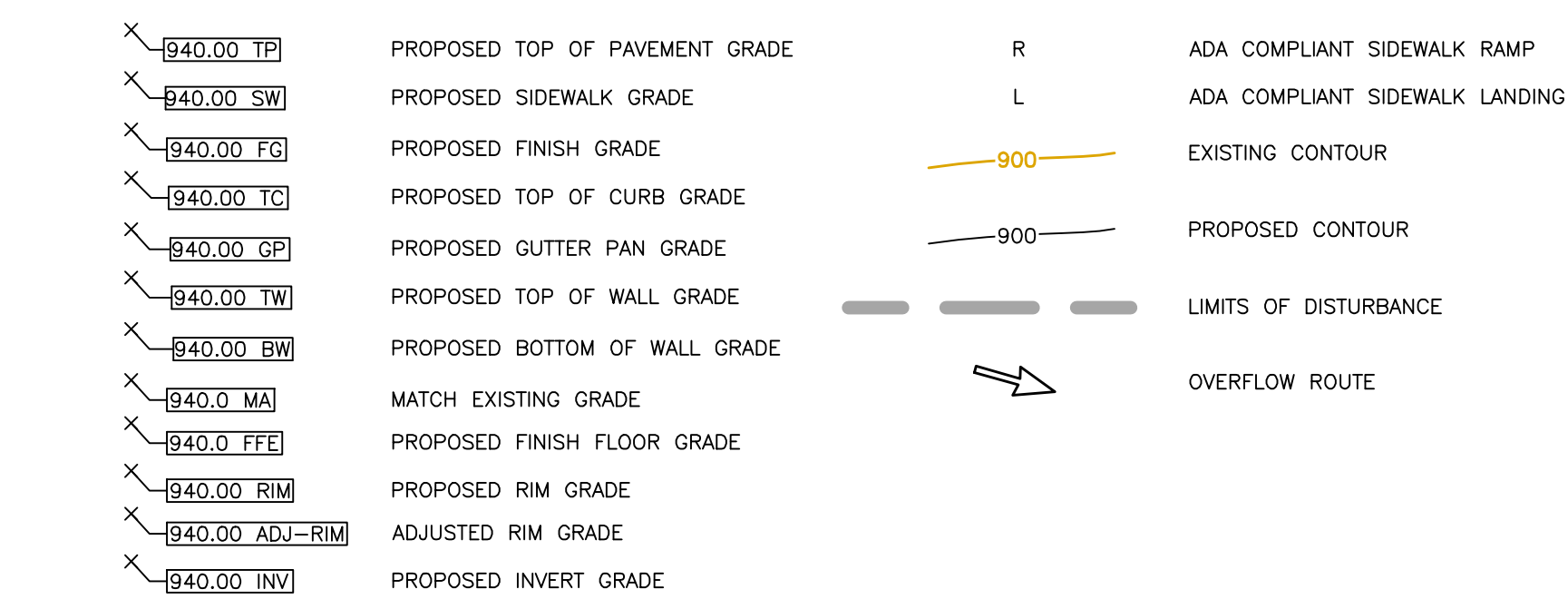
NOT FOR CONSTRUCTION



EXISTING LEGEND



GRADING LEGEND

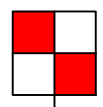


BENCHMARKS

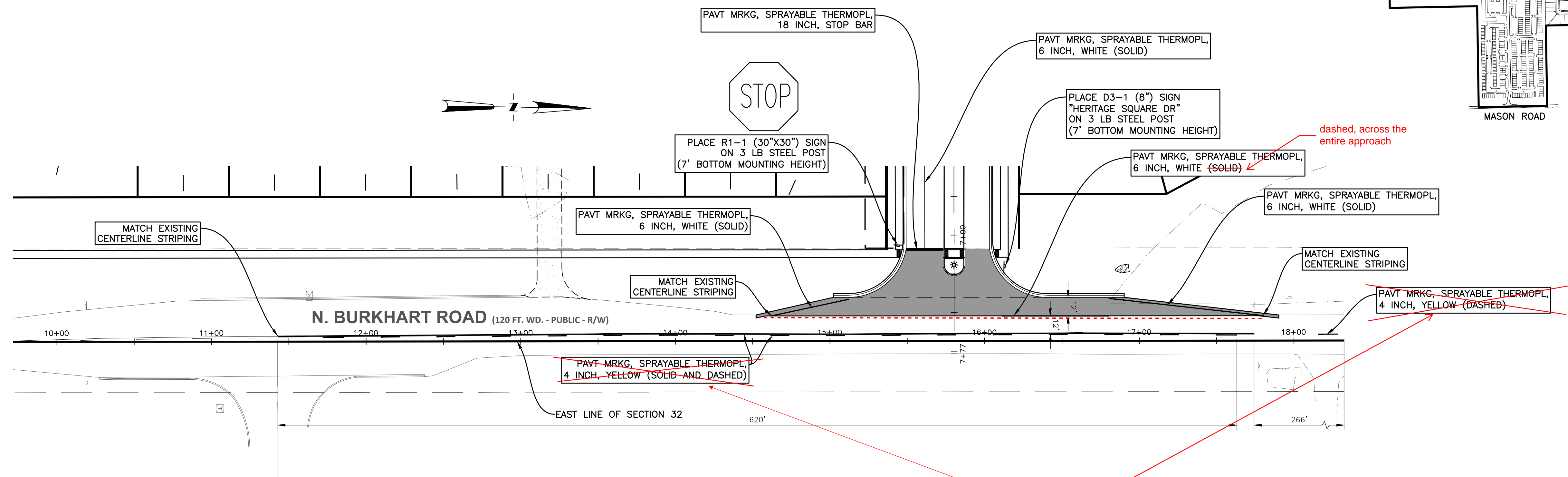
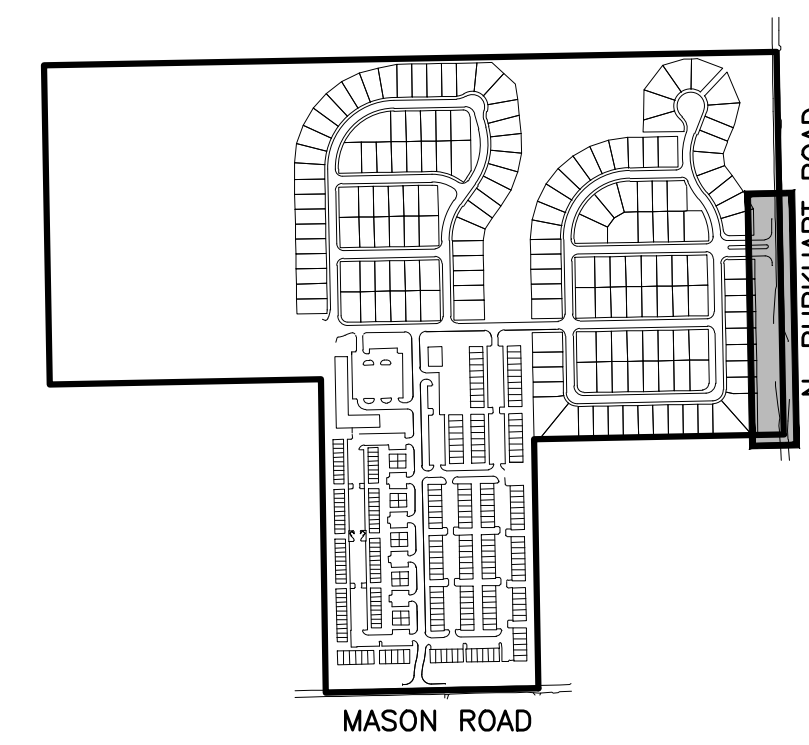
DATUM: NAVD88

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290± WEST OF EAST PROPERTY LINE.
ELEV = 909.83

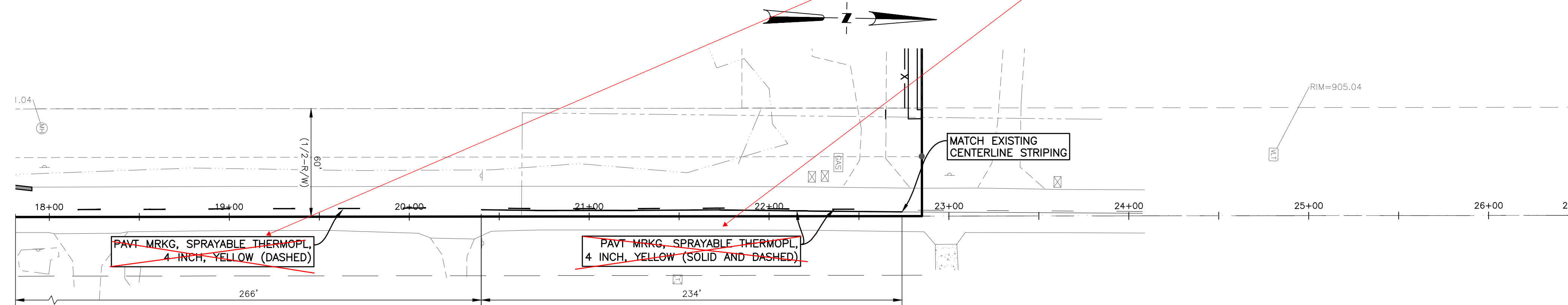
BM B:
ARROW ON HYDRANT ON WEST SIDE OF BURKHART ROAD 430± NORTH OF
SOUTH PROPERTY LINE.
ELEV = 906.59



SHEET KEY



PAVEMENT MARKING AND SIGNAGE - BURKHART ROAD (SOUTH)



PAVEMENT MARKING AND SIGNAGE - BURKHART ROAD (NORTH)

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PART OF THE SE 1/4 OF SEC. 32, T3N, R4E,
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ECCLE JOINT PERMIT SUBMITTAL	10/14/2024
CONSTRUCTION DOCUMENT REVIEW SET	11/04/2024

ORIGINAL ISSUE DATE: 5/09/2024

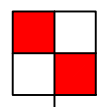
PROJECT NO: 21-075C

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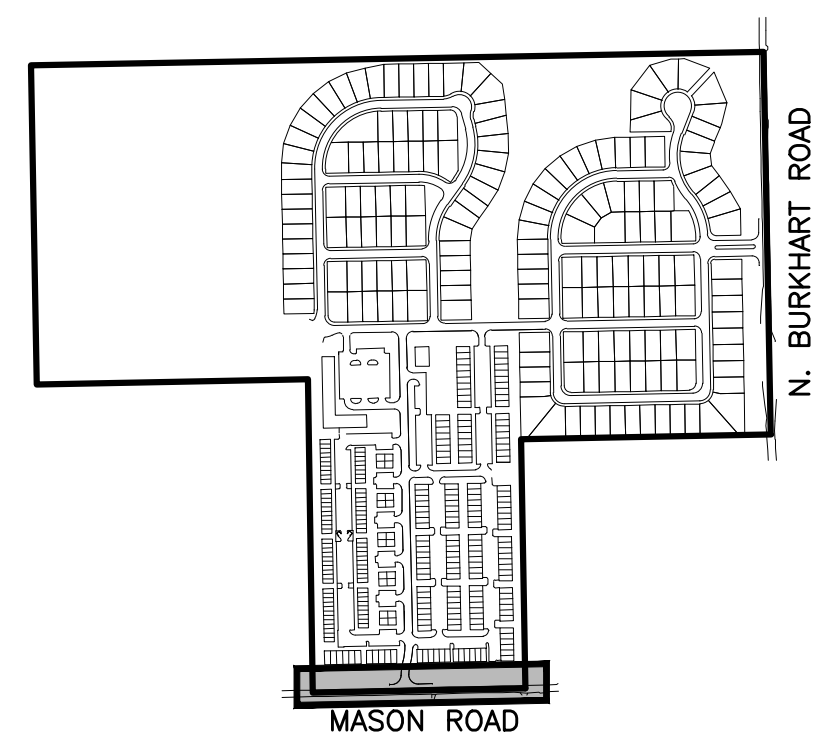
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DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-10.7

NOT FOR CONSTRUCTION



SHEET KEY

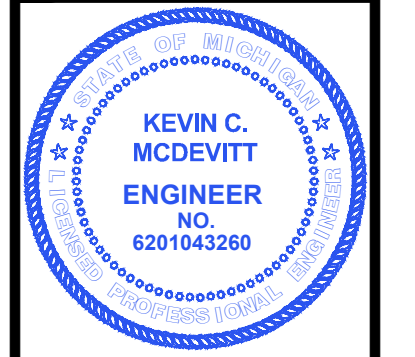


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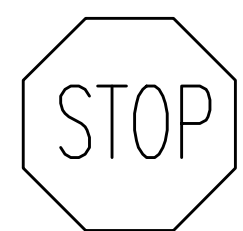
PROJECT NO: 21-075C

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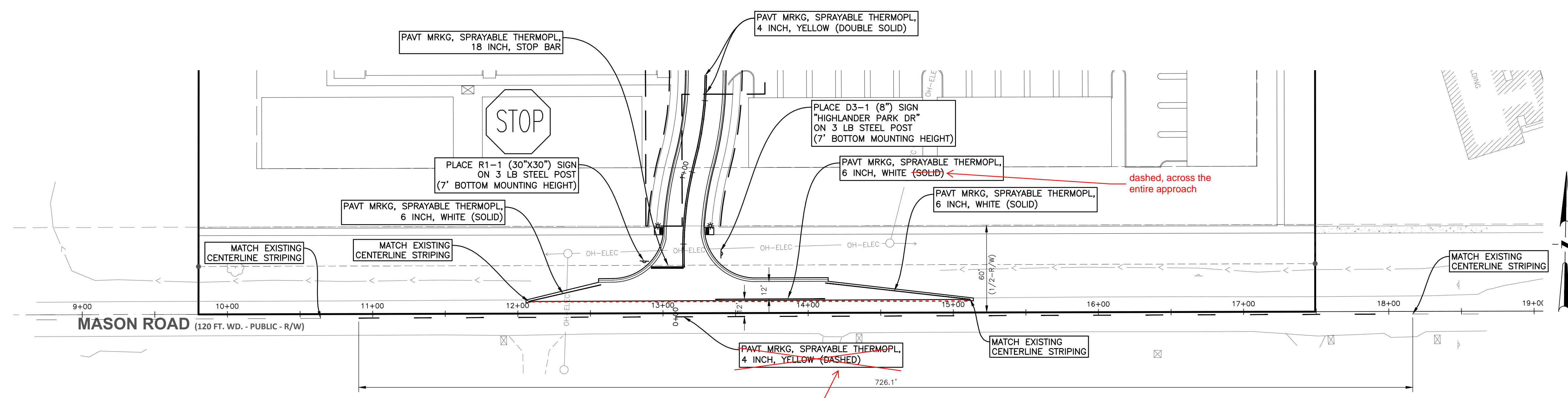
FIELD:
DRAWN BY: DC,MN,CK,DJ
DESIGN BY: KM
CHECK BY: KM

C-10.8

NOT FOR CONSTRUCTION

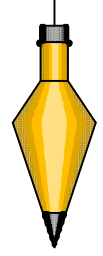


R1-1

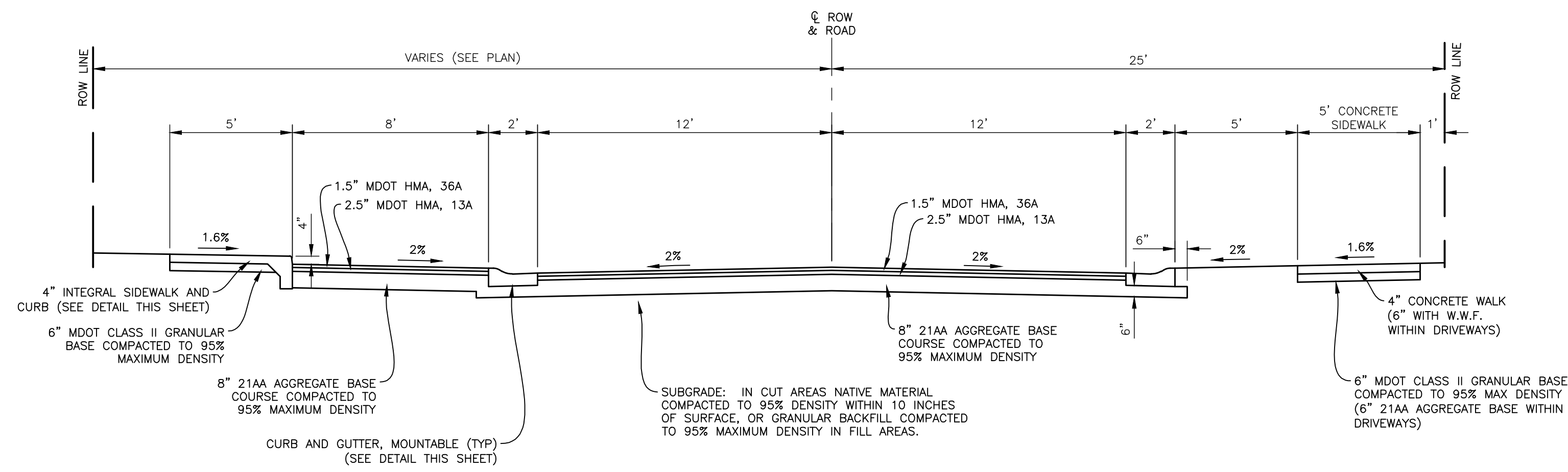


PAVEMENT MARKING AND SIGNING - MASON ROAD

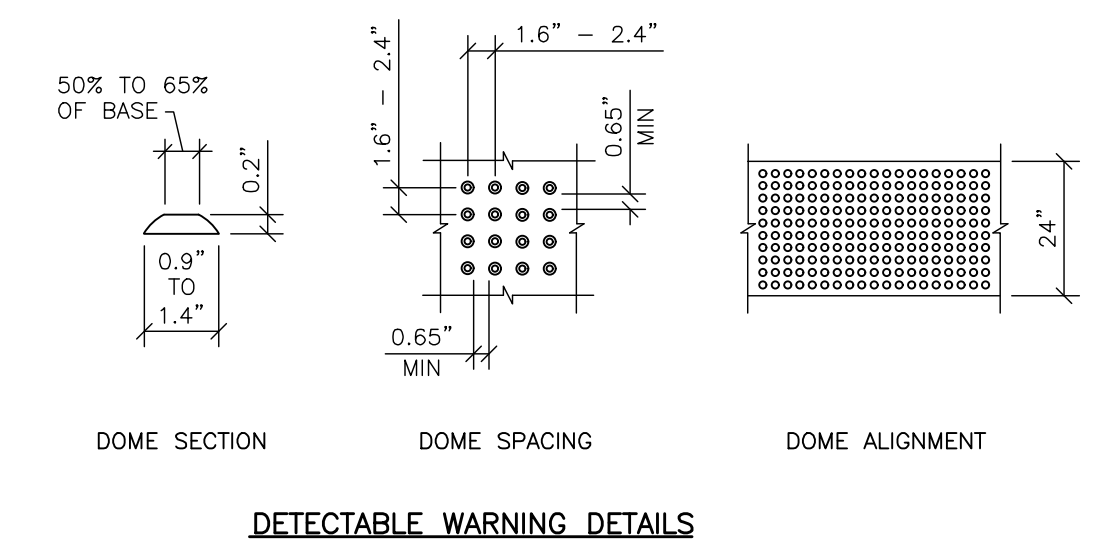
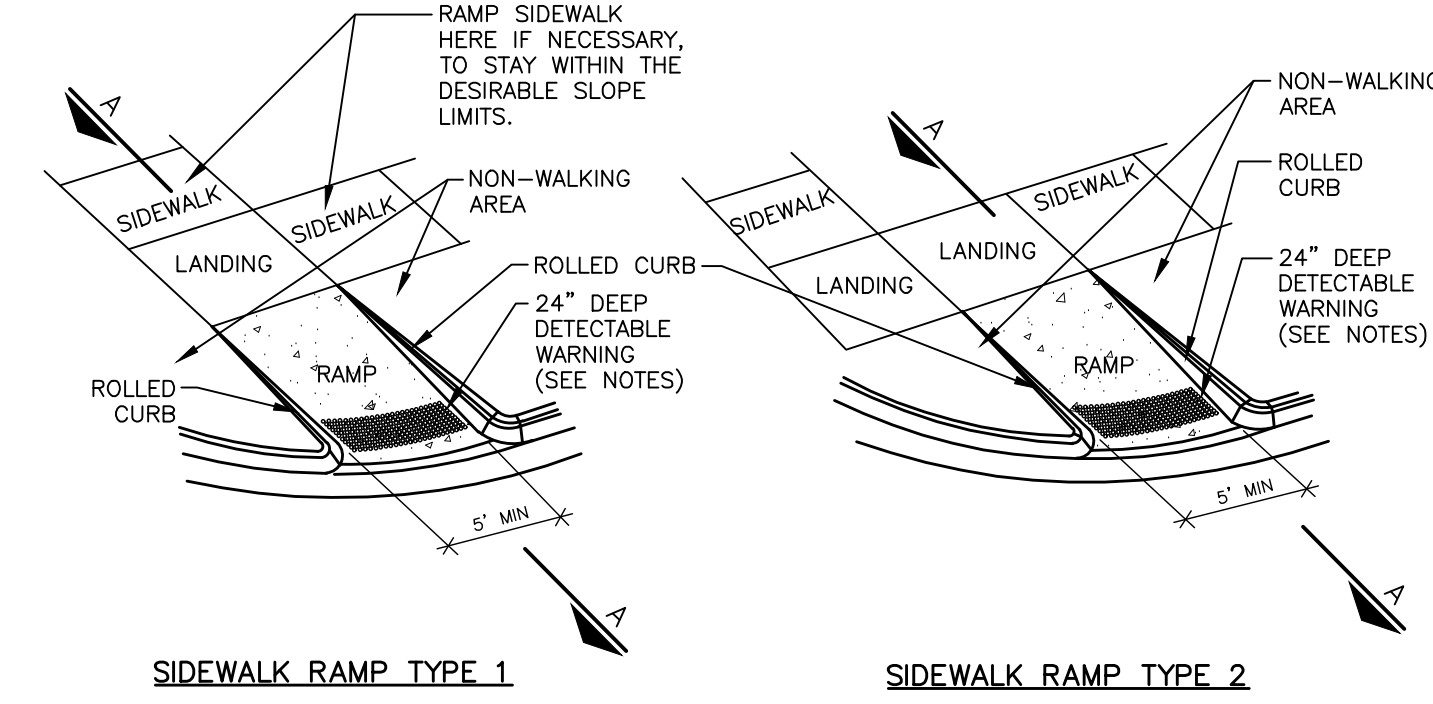
No need to remove or repaint existing center lane lines



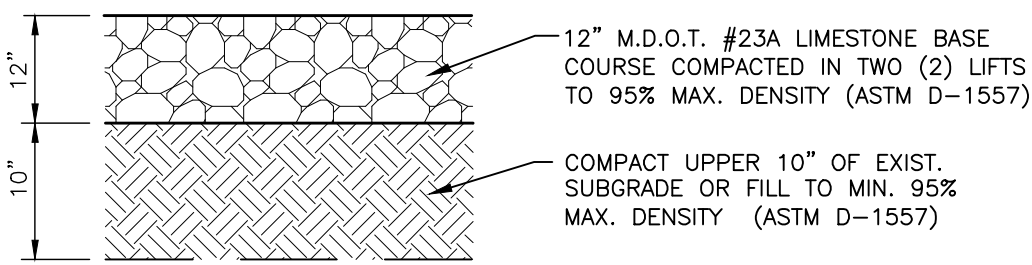
ON-SITE ROADWAY TYPICAL SECTION



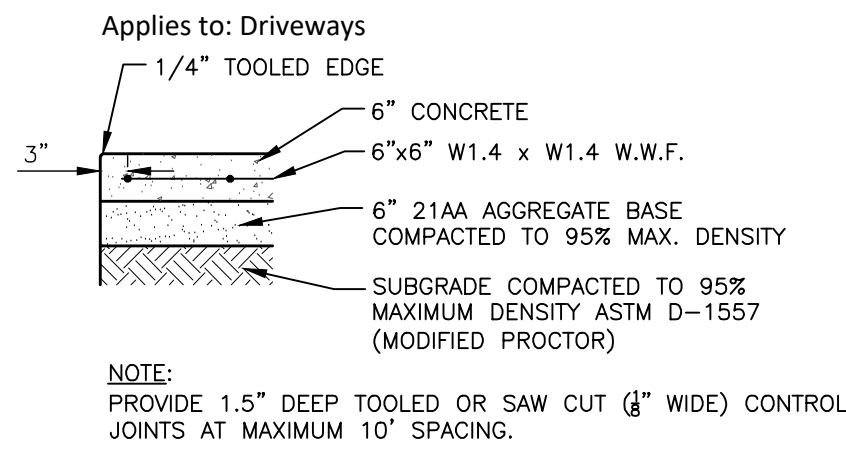
SIDEWALK RAMP DETAIL - WITH NOTES



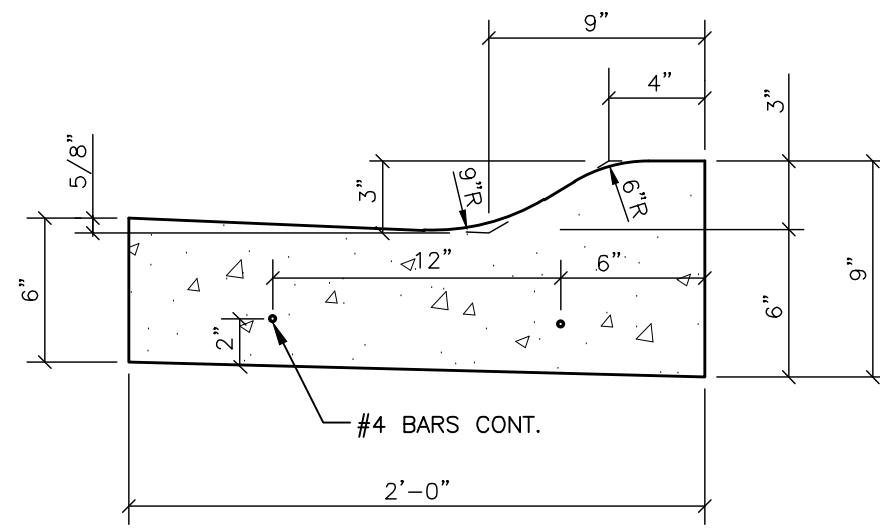
EMERGENCY ACCESS DRIVE GRAVEL PAVEMENT SECTION



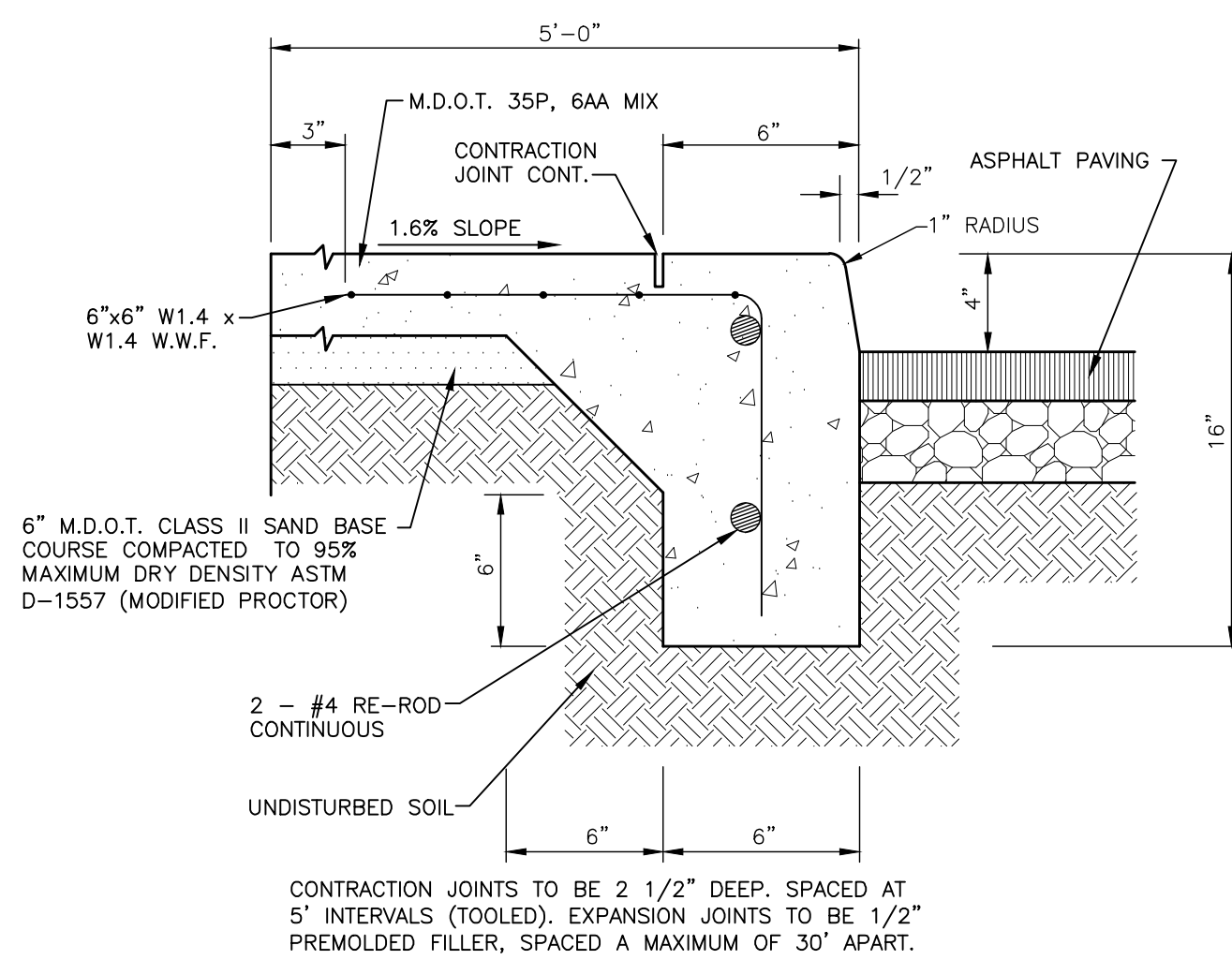
CONCRETE DRIVEWAY SECTION



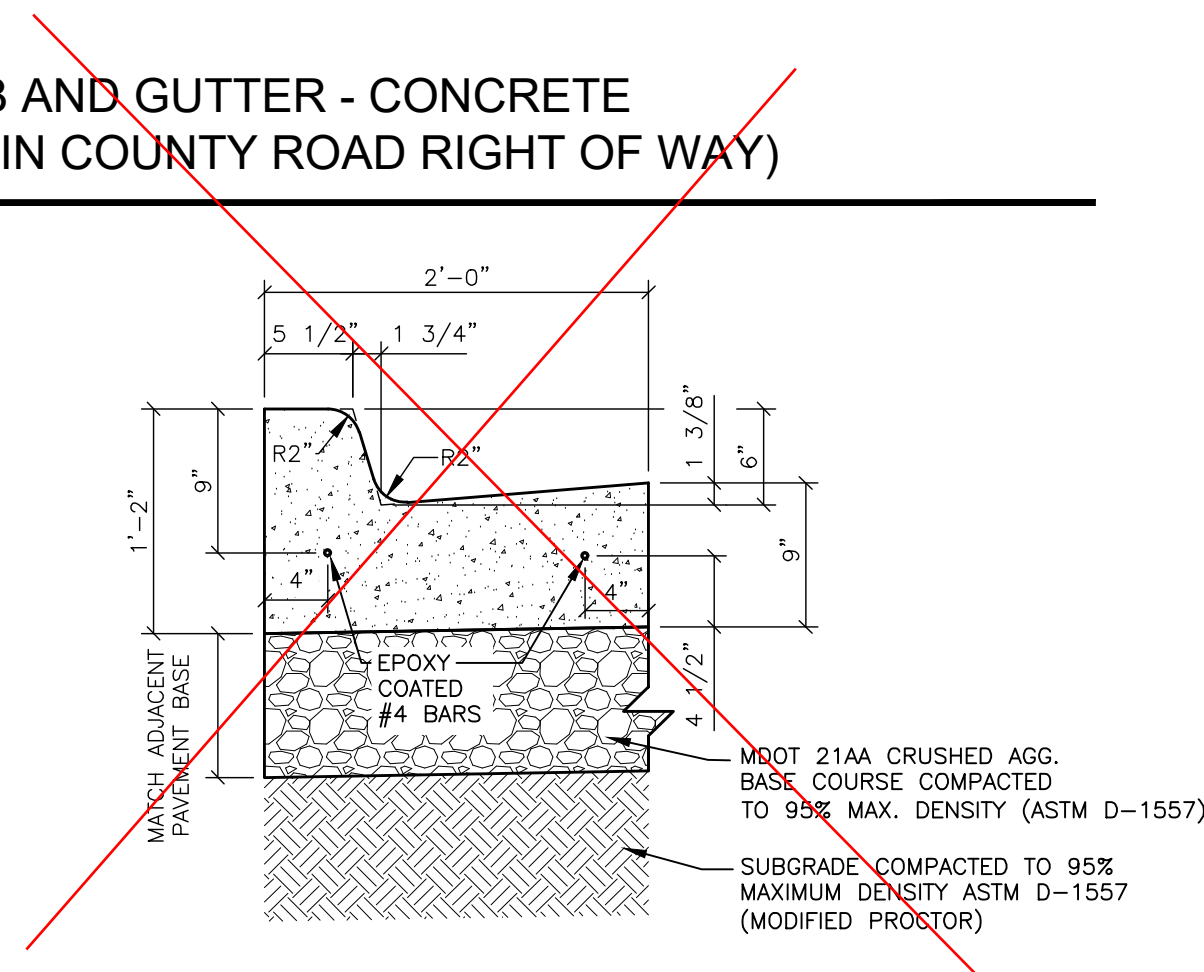
CURB & GUTTER DETAIL - MOUNTABLE - 24" W 3" H 9" D



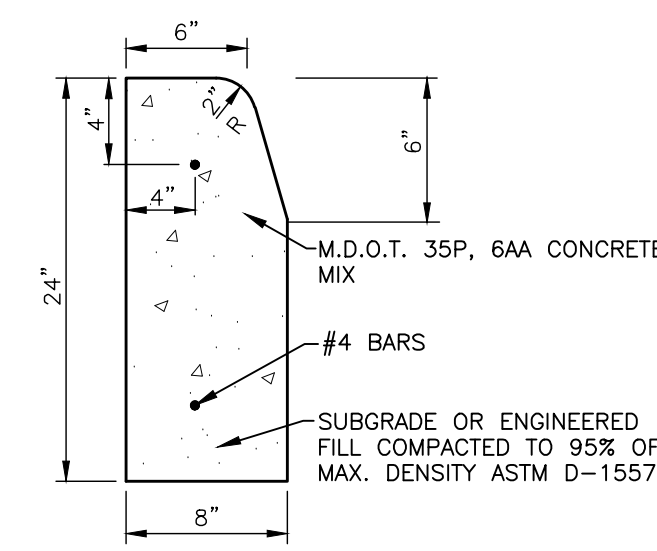
INTEGRAL SIDEWALK AND CURB DETAIL



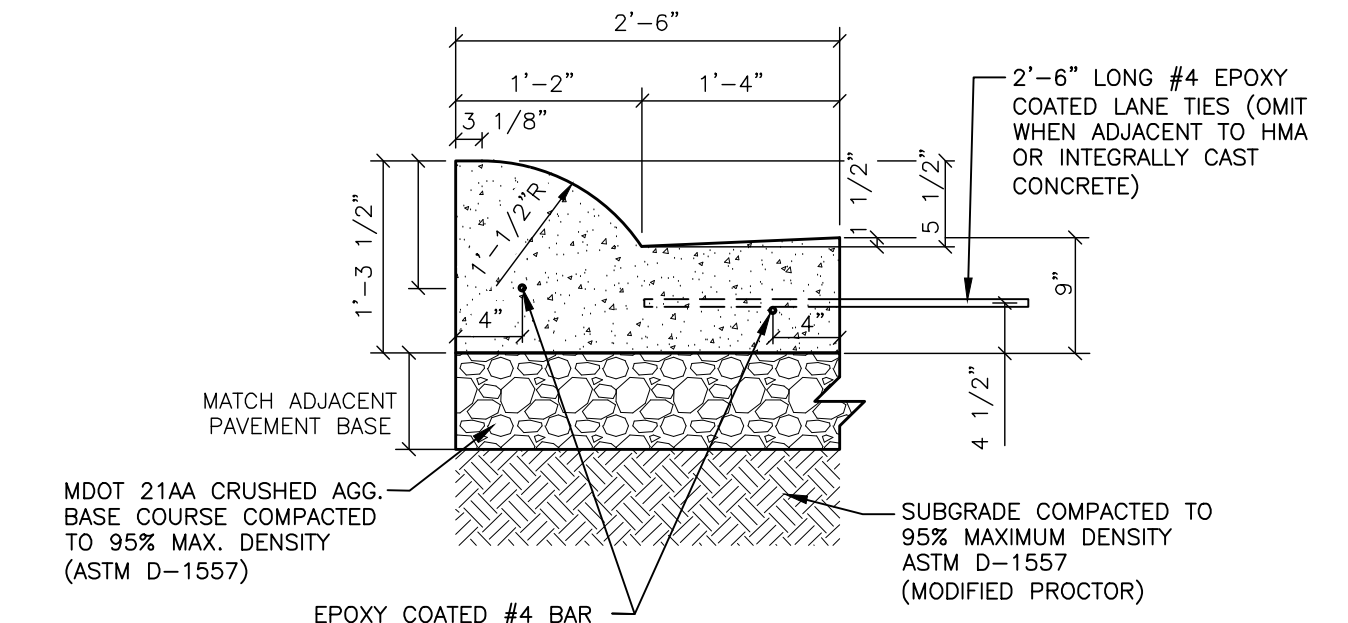
CURB AND GUTTER - CONCRETE (USE IN COUNTY ROAD RIGHT OF WAY)



CURB DETAIL - CONCRETE - STRAIGHT - 6" HT 24" DEEP

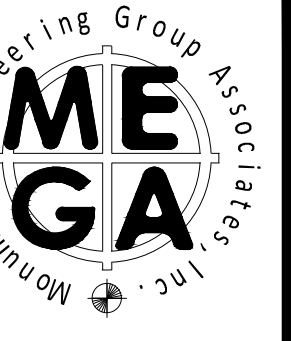


CURB AND GUTTER DETAIL - MDOT - B2 - MODIFIED



- NOTES:
- SIDEWALK RAMP ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
 - SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COURSE BROOMING, TRANSVERSE TO THE SLOPE OF RAMP.
 - CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND SHORT GRADE CHANGES. WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.
 - THE NORMAL GUTTER LINE PROFILE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
 - THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.
 - CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE LOCATED AS TO STOP TRAFFIC SHORT OF THE RAMP CROSSING. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
 - DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP. THEY SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6" TO 8" FROM THE CURB LINE.
 - FLARED SIDES WITH A SLOPE OF 1:10 MAXIMUM, MEASURED ALONG THE CURB LINE, SHALL BE PROVIDED WHERE A CIRCULATION PATH CROSSES THE SIDEWALK RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE EDGES OF A SIDEWALK RAMP ARE PROTECTED BY LANDSCAPING OR OTHER BARRIERS TO TRAVEL BY WHEELCHAIR USERS OR PEDESTRIANS ACROSS THE EDGE OF THE SIDEWALK RAMP.

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10/14/2024	EGLE JOINT PERMIT SUBMITTAL
11/04/2024	CONSTRUCTION DOCUMENT REVIEW SET

ORIGINAL ISSUE DATE:
5/09/2024

PROJECT NO: 21-075C

SCALE: N/A

FIELD:
DRAWN BY: DC, MN, CK, DJ
DESIGN BY: KM
CHECK BY: KM

C-11.0

NOT FOR CONSTRUCTION

MODIFY SECTION 2.02 TO INCLUDE PORTABLE STORAGE CONTAINERS AND CARGO CONTAINERS IN DEFINITIONS

Portable Storage Containers. Portable, weather-resistant receptacle designed and used for the temporary storage and/or shipment of household goods or building materials (i.e. PODS or MODS), which are typically leased on a short-term basis.

Cargo Containers. A primarily metal weather-resistant container designed to store or ship goods or building materials. Such containers include reusable steel boxes, freight and bulk shipping containers, and those with similar qualities which are intended for use as an accessory building or structure.

MODIFY SECTION 14.07 TO INCLUDE CARGO CONTAINER PROVISIONS

Section 14.07 ACCESSORY BUILDING PROVISIONS.

Accessory buildings, except as otherwise permitted in this Ordinance, shall be subject to the following regulations:

A. Residential accessory building or structures having two-hundred (200) square feet or less of internal floor area, which is used for any purpose other than the housing of humans, but is primarily to be used for the housing of non-human purpose such as pets, yard equipment, yard maintenance supplies, tools, toys, including motorized or non-motorized bicycles and types of household equipment, and which structures do not have to meet the requirements of the Livingston County Construction Code and will not be built on a structural foundation as required in the Construction Code for other types of buildings, shall still adhere to the requirements of this section including the need for zoning permits and payment of fees required under other provisions of this Ordinance including the requirements in subsection B. below.

B. Detached accessory buildings and structures shall be located entirely in the rear yard outside of the side and rear setback with the following exceptions:

1. Said building or structure is being constructed pursuant to a Special Use Permit, and in that case, the Township Board after receiving the recommendation of the Planning Commission may authorize the location of the accessory building in any required yard.
2. For accessory buildings or structures to a residential use, if the primary residence is situated in the rear portion of a parcel over 2 acres, an accessory building or structure may be in the front yard if it:
 - a. Is setback at least 100 feet from the front property line.
 - b. Meets the required side yard setback.

- c. Is designed to be architecturally compatible with the principal building or structure, or screening that provides 80% opacity is provided between the buildings or structure and immediately adjacent neighboring properties and the road.
- d. Has a roof overhang or eave of not less than twelve (12) inches on all sides, or alternatively with windowsills or roof drainage systems concentrating roof drainage at collection points along the sides of the building or structure.
- e. In no instance shall an accessory building or structure be located within a dedicated easement right-of-way.

C. Accessory buildings located on lots and parcels in all Zoning Districts shall be subject to the following regulations:

LOT OR PARCEL AREA REGULATION	REGULATION	MAXIMUM SQUARE FOOTAGE*
12,000 sq. ft. to 0.9 acre	4% of lot area	800 sq. ft.
1 acre to 1.9 acres	4% of lot area	2000 sq. ft.
2 acres to under 19.9 acres	4% of lot area, except that commercial agricultural farm operations shall be excluded from this regulation	3000 sq. ft.
20 acres and above	Subject to Max lot coverage	No limit

D. No detached accessory buildings or structures – shall be located closer than ten (10) feet to any main building.

E. No detached accessory building or structure in AR, SFR, MFR, NSC, OS Districts shall exceed one (1) story or twenty (20) feet in height. Accessory buildings or structures in all other districts may be constructed to equal the permitted maximum height in said districts. Height shall be measured in accordance with Article II Definition 24.

F. When accessory buildings or structures are located on a corner lot, they shall not be located in any front yard or side yard, unless it is determined by the Zoning Administrator that there is insufficient rear yard in which to locate them, in which case they may be permitted in the side yard so long as the following criteria are met:

1. Insufficient rear yard shall mean there are natural features such as steep slopes, wetlands or that the location of a well or septic field would preclude the placement of such accessory building or structure.
2. **Front Yard:** The accessory building or structure shall not encroach into the front yard
3. **Side Yard Setback:** The accessory building or structure shall not encroach into the required side yard setback.

4. **Height Limitation:** The height of the building or structure must not exceed 15 feet when located in the front or side yard.

5. **Sight Lines at Intersections:** The accessory building or structure must not fall within a 15-foot visibility triangle at the corner of the lot.

G. In no instance shall an accessory building or structure be allowed until there is a principal building or structure located on the lot or parcel of land.

H. No accessory building or structure shall be used as a dwelling, lodging or sleeping quarters for human beings, except as otherwise permitted in this Ordinance.

I. Additional standards for Cargo Containers to be used as an accessory building or structure to a residential use.

1. Containers shall not be stacked above the height of a single container.
2. The exterior appearance of all cargo containers shall be maintained in a clean and structurally sound condition, free from any visible rust, corrosion, holes, or other signs of deterioration that could compromise the container's appearance or structural integrity.
3. No writing, advertising, or graphics are permitted on the exterior of the container.
4. Cargo containers shall be completely screened from view of abutting properties and/or rights-of-ways by a fence or vegetative screening that meets the requirements of Section 14.26 Fences and 28.03 Specific Landscaping Requirements for Zoning Districts.
5. Cargo containers shall be subject to the requirements for Intermodal Shipping Containers in the International Building Code.
6. No plumbing or electricity may be connected to a cargo container.
7. No livestock or pets may be housed in a cargo container.
9. Cargo containers shall not be used to store hazardous materials, as defined by the Michigan Fire Prevention Code, 1941 PA 107, MCL 29.1 *et seq.*
10. A cargo container shall not be permitted in the front yard of a residential parcel unless the requirements listed in Section 14.07.B.2 are met.
11. No more than one cargo container is permitted per acre, with a maximum of two containers per parcel. This limit does not apply to containers located in the Agricultural District when they are used in a manner consistent with practices recognized under the Michigan Right to Farm Act.

MODIFY SECTION 14.20 TO INCLUDE PORTABLE STORAGE CONTAINER PROVISIONS

Temporary buildings and structures are permitted during the period of construction, and sales involving change of ownership or rental occupancy. Such buildings and structures shall be removed

upon completion or abandonment of construction, sale or rental activities and prior to occupancy and use of the building or structure for permitted uses.

Also refer to Sections 14.28 and 16.09 for permits to park or use mobile homes on a temporary basis.

A. Portable Storage Container may be permitted as a temporary building or structure subject to the following conditions:

1. No portable storage container may be stacked on top of another or any other object.
2. No electricity or plumbing may be connected to a portable storage container.
3. Portable storage containers must be placed on a driveway, gravel or paved area.
4. No portable storage container shall be used for living quarters.
5. No livestock or pets may be stored in a portable storage container.
6. Portable storage containers may be placed on a vacant lot only if that lot is associated with an approved building construction project.
7. Portable storage containers shall not be used to store hazardous materials, as defined by the Michigan Fire Prevention Code, 1941 PA 107, MCL 29.1 *et seq.*
8. No portion of a portable storage container shall be placed in a location which may cause hazardous conditions or constitute a threat to public safety.
9. Portable storage containers in non-residential districts or which are associated with a non-residential use shall not occupy required off-street parking, loading or landscaping areas.

MODIFY SECTION 4.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE AGRICULTURAL RESIDENTIAL DISTRICT

SECTION 4.04 PERMITTED ACCESSORY USES.

- A. Buildings and structures customarily incidental to the operation of an agricultural enterprise.
- B. Accessory buildings and structures customarily incidental to single family residential.
- C. Signs related to the permitted agricultural enterprise, provided that all such signs shall conform to the requirements of this Ordinance.
- D. House Hold Pets
- E. Cargo Containers, subject to Section 14.07

MODIFY SECTION 5.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE RESEARCH AND TECHNOLOGY DISTRICT

Section 5.04 PERMITTED ACCESSORY USES

- A. Normal accessory is uses to all permitted uses in Sections 5.02 and 5.03 above.
- B. Cargo Containers, see Section 14.07

MODIFY SECTION 8.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE OFFICE SERVICE DISTRICT

Section 8.04 PERMITTED ACCESSORY USES.

- A. Normal accessory uses to “Permitted Principal Uses.”
- B. Normal accessory uses to approved “Permitted Principal Special Uses.”
- C. Incidental commercial services that serve only the occupants of the offices and have access only from inside the building in which the occupants are located.
- D. See Section 14.34.
- E. Cargo Containers, subject to Section 14.07

MODIFY SECTION 10.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE REGIONAL SERVICE COMMERCIAL DISTRICT

Section 10.04 PERMITTED ACCESSORY USES.

- A. Normal accessory uses to all “Permitted Principal Uses.”
- B. Normal accessory uses to all “Permitted Principal Special Uses.” See Section 14.34. 14.
- C. Cargo Containers, subject to Section 14.07

MODIFY SECTION 11.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE HIGHWAY SERVICE COMMERCIAL DISTRICT

Section 11.04 PERMITTED ACCESSORY USES.

- A. Normal accessory uses to all “Permitted Principal Uses.”
- B. Normal accessory uses to all “Permitted Principal Special Uses.”
- C. Cargo Containers, subject to Section 14.07

MODIFY SECTION 12.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE INDUSTRIAL FLEX ZONE

Section 12.04 PERMITTED ACCESSORY USES.

A. All normal accessory uses to all “Permitted Principal Uses” and “Permitted Principal Special Uses” including:

1. Restaurants.
2. Cafeterias.
3. Medical and health care facilities.
4. Office facilities.
5. Warehouse and storage facilities.
6. Physical fitness facilities.
7. Work clothing sales and service facilities.
8. Banking facilities.
9. Education, library and training facilities.
10. Research and experimentation facilities.
11. Truck or other vehicular and equipment service maintenance, repair and storage facilities conducted completely within a building or structure.
12. Indoor sales display areas.
13. See Section 14.34.
14. Cargo Containers, subject to Section 14.07

MODIFY SECTION 13.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE INDUSTRIAL DISTRICT

Section 13.04 PERMITTED ACCESSORY USES.

- A. Normal accessory uses to all Permitted Principal Uses.
- B. Normal accessory uses to all Permitted Principal Special Uses.
- C. See Section 14.34
- D. Cargo Containers, see Section 14.07

MODIFY SECTION 2.02 TO INCLUDE PORTABLE STORAGE CONTAINERS AND CARGO CONTAINERS IN DEFINITIONS

Portable Storage Containers. Portable, weather-resistant receptacle designed and used for the temporary storage and/or shipment of household goods or building materials (i.e. PODS or MODS), which are typically leased on a short-term basis.

Cargo Containers. A primarily metal weather-resistant container designed to store or ship goods or building materials. Such containers include reusable steel boxes, freight and bulk shipping containers, and those with similar qualities which are intended for use as an accessory building or structure.

MODIFY SECTION 14.07 TO INCLUDE CARGO CONTAINER PROVISIONS

Section 14.07 ACCESSORY BUILDING PROVISIONS.

Accessory buildings, except as otherwise permitted in this Ordinance, shall be subject to the following regulations:

A. ~~Any Residential accessory building or~~ structures having two-hundred (200) square feet or less of internal floor area, which is used for any purpose other than the housing of humans, but is primarily to be use for the housing of non human purpose such as pets, yard equipment, yard maintenance supplies, tools, toys, including motorized or non motorized bicycles and types of household equipment, and which ~~buildings do~~ structures do not have to meet the requirements of the Livingston County Construction Code and will not be built on a structural foundation as required in the Construction Code for other types of buildings, shall ~~be excluded from the requirements of this Section and any required still adhere to the requirements of this section including the need for zoning permits and payment of fees required under other provisions of this Ordinance including the except for placement~~ requirements in subsection B. below.

B. Detached accessory buildings ~~and structures~~ shall be located entirely in the rear yard outside of the side and rear setback ~~with the following exceptions:; unless said building is being constructed pursuant to a Special Use Permit, and in that case, the Township Board after receiving the recommendation of the Planning Commission may authorize the location of the accessory building in any required yard. In no instance shall an accessory building be located within a dedicated easement right-of-way.~~

1. Said building or structure is being constructed pursuant to a Special Use Permit, and in that case, the Township Board after receiving the recommendation of the Planning Commission may authorize the location of the accessory building in any required yard.

2. For accessory buildings or structures to a residential use, if the primary residence is situated in the rear portion of a parcel over 2 acres, an accessory buildings or structure may be in the front yard if it:
- a. Is setback at least 100 feet from the front property line.
 - b. Meets the required side yard setback.
 - c. Is designed to be architecturally compatible with the principal building or structure, or screening that provides 80% opacity is provided between the buildings or structure and immediately adjacent neighboring properties and the road.
 - d. Has a roof overhang or eave of not less than twelve (12) inches on all sides, or alternatively with windowsills or roof drainage systems concentrating roof drainage at collection points along the sides of the building or structure.
 - e. In no instance shall an accessory building or structure be located within a dedicated easement right-of-way.

C. Accessory buildings located on lots and parcels in all Zoning Districts shall be subject to the following regulations:

LOT OR PARCEL AREA REGULATION	REGULATION	MAXIMUM SQUARE FOOTAGE*
12,000 sq. ft. to 0.9 acre	4% of lot area	800 sq. ft.
1 acre to 1.9 acres	4% of lot area	2000 sq. ft.
2 acres to under 19.9 acres	4% of lot area, except that commercial agricultural farm operations shall be excluded from this regulation	3000 sq ft.
20 acres and above	Subject to Max lot coverage	No limit

D. No detached accessory buildings or structures – shall be located closer than ten (10) feet to any main building.

E. No detached accessory building or structure in AR, SFR, MFR, NSC, OS Districts shall exceed one (1) story or twenty (20) feet in height. Accessory buildings or structures in all other districts may be constructed to equal the permitted maximum height of structures in said districts. Height shall be measured in accordance with Article II Definition 24.

F. When accessory buildings or structures are located on a corner lot, they shall not be located in any front yard or side yard, unless but if it is determined by the Zoning Administrator that there is insufficient rear yard in which to locate them, in which case they may be permitted the Zoning Administrator shall determine the most appropriate location for them in the side yard with minimum encroachment upon the required side yard setback area so long as the following criteria are met:

1. -Insufficient rear yard shall mean Rear Yard Depth: Front or side yard placement may only be considered if the rear yard is less than 10 feet deep there are natural features such as steep slopes, wetlands or that the location of a well or septic field would preclude the placement of such accessory building or structure.

2. **Front Yard:** The accessory building or structure shall not encroach into the front yard

3. **Side Yard Setback:** The accessory building or structure shall not encroach into the required side yard setback.

4. **Height Limitation:** The height of the building or structure must not exceed 15 feet when located in the front or side yard.

5. **Sight Lines at Intersections:** The accessory building or structure must not fall within a 15-foot visibility triangle at the corner of the lot.

G. In no instance shall an accessory building or structure be allowed until there is a principal building or structure located on the lot or parcel of land.

H. No accessory building or structure shall be used as a dwelling, lodging or sleeping quarters for human beings, except as otherwise permitted in this Ordinance.

I. Additional standards for Cargo Containers to be used as an accessory building or structure to a residential use.

1. Containers shall not be stacked above the height of a single container.

2. The exterior appearance of all cargo containers shall be maintained in a clean and structurally sound condition, free from any visible rust, corrosion, holes, or other signs of deterioration that could compromise the container's appearance or structural integrity. ~~The exterior appearance of all cargo containers shall be well maintained and absent of unwarranted rust, holes, and other evidence of aging.~~

3. No writing, advertising, or graphics are permitted on the exterior of the container.

4. Cargo containers shall be completely screened from view of abutting properties and/or rights-of-ways by a fence or vegetative screening that meets the requirements of Section 14.26 Fences and 28.03 Specific Landscaping Requirements for Zoning Districts.

5. Cargo containers shall be subject to the requirements for Intermodal Sipping Containers in the International Building Code.

6. No plumbing or electricity may be connected to a cargo container.

7. No livestock or pets may be housed in a cargo container.

9. Cargo containers shall not be used to store hazardous materials, as defined by the Michigan Fire Prevention Code, 1941 PA 107, MCL 29.1 *et seq.*

- ~~10. A cargo container shall not be permitted in the front yard of a residential parcel unless the requirements listed in Section 14.07.B.2 are met. In no instance shall a cargo container be permitted in the front yard per the locational exception in Section 14.07.B.~~
- ~~11. No more than one cargo container is permitted per acre, with a maximum of two containers per parcel. This limit does not apply to containers located in the Agricultural District when they are used in a manner consistent with practices recognized under the Michigan Right to Farm Act. there shall be no more than 1 cargo container per acre with a maximum of number of 2.~~

MODIFY SECTION 14.20 TO INCLUDE PORTABLE STORAGE CONTAINER PROVISIONS

Temporary buildings and structures are permitted during the period of construction, and sales involving change of ownership or rental occupancy. Such buildings; and structures shall be removed upon completion or abandonment of construction, sale or rental activities and prior to occupancy and use of the building or structure for permitted uses.

Also refer to Sections 14.28 and 16.09 for permits to park or use mobile homes on a temporary basis.

A. Portable Storage Container may be permitted as a temporary building or structure subject to the following conditions:

1. No portable storage container may be stacked on top of another or any other object.
2. No electricity or plumbing may be connected to a portable storage container.
3. Portable storage containers must be placed on a driveway, gravel or paved area.
4. No portable storage container shall be used for living quarters.
5. No livestock or pets may be stored in a portable storage container.
6. Portable storage containers may be placed on a vacant lot only if that lot is associated with an approved building construction project.
7. Portable storage containers shall not be used to store hazardous materials, as defined by the Michigan Fire Prevention Code, 1941 PA 107, MCL 29.1 et seq.
8. No portion of a portable storage container shall be placed in a location which may cause hazardous conditions or constitute a threat to public safety.
9. Portable storage containers in non-residential districts or which are associated with a non-residential use shall not occupy required off-street parking, loading or landscaping areas.

MODIFY SECTION 4.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE AGRICULTURAL RESIDENTIAL DISTRICT

SECTION 4.04 PERMITTED ACCESSORY USES.

- A. Buildings and structures customarily incidental to the operation of an agricultural enterprise.
- B. Accessory buildings and structures customarily incidental to single family residential.
- C. Signs related to the permitted agricultural enterprise, provided that all such signs shall conform to the requirements of this Ordinance.
- D. House Hold Pets
- E. [Cargo Containers, subject to Section 14.07](#)

MODIFY SECTION 5.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE RESEARCH AND TECHNOLOGY DISTRICT

Section 5.04 PERMITTED ACCESSORY USES

- A. Normal accessory is uses to all permitted uses in Sections 5.02 and 5.03 above.
- B. [Cargo Containers, see Section 14.07](#)

MODIFY SECTION 8.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE OFFICE SERVICE DISTRICT

Section 8.04 PERMITTED ACCESSORY USES.

- A. Normal accessory uses to “Permitted Principal Uses.”
- B. Normal accessory uses to approved “Permitted Principal Special Uses.”
- C. Incidental commercial services that serve only the occupants of the offices and have access only from inside the building in which the occupants are located.
- D. See Section 14.34.
- E. [Cargo Containers, subject to Section 14.07](#)

MODIFY SECTION 10.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE REGIONAL SERVICE COMMERCIAL DISTRICT

Section 10.04 PERMITTED ACCESSORY USES.

- A. Normal accessory uses to all “Permitted Principal Uses.”
- B. Normal accessory uses to all “Permitted Principal Special Uses.” See Section 14.34. 14.
- [C. Cargo Containers, subject to Section 14.07](#)

MODIFY SECTION 11.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE HIGHWAY SERVICE COMMERCIAL DISTRICT

Section 11.04 PERMITTED ACCESSORY USES.

- A. Normal accessory uses to all “Permitted Principal Uses.”
- B. Normal accessory uses to all “Permitted Principal Special Uses.”
- [C. Cargo Containers, subject to Section 14.07](#)

MODIFY SECTION 12.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE INDUSTRIAL FLEX ZONE

Section 12.04 PERMITTED ACCESSORY USES.

- A. All normal accessory uses to all “Permitted Principal Uses” and “Permitted Principal Special Uses” including:
 - 1. Restaurants.
 - 2. Cafeterias.
 - 3. Medical and health care facilities.
 - 4. Office facilities.
 - 5. Warehouse and storage facilities.
 - 6. Physical fitness facilities.
 - 7. Work clothing sales and service facilities.
 - 8. Banking facilities.
 - 9. Education, library and training facilities.
 - 10. Research and experimentation facilities.
 - 11. Truck or other vehicular and equipment service maintenance, repair and storage facilities conducted completely within a building; or structure.

12. Indoor sales display areas.

13. See Section 14.34.

[14. Cargo Containers, subject to Section 14.07](#)

MODIFY SECTION 13.04 TO INCLUDE CARGO CONTAINERS AS PERMITTED ACCESSORY USES WITHIN THE INDUSTRIAL DISTRICT

Section 13.04 PERMITTED ACCESSORY USES.

A. Normal accessory uses to all Permitted Principal Uses.

B. Normal accessory uses to all Permitted Principal Special Uses.

C. See Section 14.34

[D. Cargo Containers, see Section 14.07](#)

SECTION 1 MODIFY SECTION 2.02 TO INCLUDE DWELLING, ACCESSORY TO DEFINITIONS

Dwelling, Accessory (ADU): A supplemental, smaller dwelling unit either developed within an existing single-family house such as a basement, attic, ~~or as an attached addition,~~ or as a smaller detached accessory building.

SECTION 3 MODIFY SECTION 14.10 ACCESSORY BUILDING AS DWELLING TO INCLUDE BASEMENT AS DWELLING AND ADDITIONAL REGULATIONS

No building or structure on the same lot with a principal building shall be used for dwelling purposes, ~~except as follows: specifically permitted in this Ordinance.~~

Accessory dwelling units (ADU's), except as otherwise permitted in this Ordinance, shall be subject to Section 14.07 and the following regulations:

- A. **Authorization:** No ADU shall be established prior to the issuance of a land use permit for the ADU. The applicant shall submit the following information for review to the Zoning Administrator:
 1. A plot plan showing the location of the proposed accessory dwelling unit, lot identification (address and property number), size of lot, dimension of lot lines, existing improvements on the lot, location of structures on adjacent lots, abutting streets, driveways, and parking areas.
 2. Sufficient architectural drawings or clear photographs to show the exterior building alterations proposed.
 3. Interior floor plans showing the floor area of the proposed accessory dwelling unit and the primary dwelling.
- B. **Dimensions & Setbacks:** ADU's must meet lot dimensions and setbacks of the corresponding zoning district.
- C. **Lot Coverage:** ADU's shall adhere to the lot coverage requirements of the corresponding zoning district.
- D. **Floor Area:** The floor area of an ADU shall be no more than 1000 Square feet.
- E. **Amount of ADUs per Parcel:** No more than 1 ADU per parcel shall be constructed. ADUs are only permitted on lots with a single-family dwelling. ADUs are not permitted on parcels with existing duplexes/apartments.
- F. **Occupancy/Bedroom Requirements:** An ADU shall have no more than four (4) individuals including those less than 18 years of age residing and no more than two (2) bedrooms within the ADU.
- G. **Access:**
 1. ~~ADUs are permitted to have up to two access points, where one is located in a common entrance foyer and the other is an exterior entrance located on the side or rear of the ADU.~~
 - 4.2. Attached ADU may share a common entrance point with the principle building.

- H. **Design Characteristics:** The ADU shall be designated so that the appearance of the building will remain that of a single-family dwelling. The ADU shall not detract from the appearance of the lot as a place of one (1) residence and shall be aesthetically compatible in appearance with other single-family dwellings in the immediate area based on architectural design and exterior materials.
- I. **Driveway and Parking:** Shall provide a combined off-street parking for a minimum of four (4) automobiles for the parcel. An ADU shall not be permitted to have a separate driveway.
- J. **Renting an ADU:** Leasing or renting an ADU for shorter than thirty (30) days is prohibited. The ADU shall not otherwise be made available to any one (1) person for periods less than thirty (30) days.
- K. **Utilities:**
 - 1. An ADU shall be connected to potable water and sanitary facilities in compliance with the Livingston County Health Department.
- L. **Garage:** A garage may be erected to serve an ADU subject to the following requirements:
 - 1. An ADU garage shall be part of the same structure as the ADU
 - 2. An ADU garage shall be no greater than 450 square feet in gross floor area.
 - 3. An ADU garage shall be no higher than seventeen (17) feet as measured to the highest point of the roof. Shall be a maximum of one (1) story and at no time taller than the Principal Dwelling Unit.
 - 4. An ADU garage shall comply with the same setback standards as required for an ADU in the corresponding zoning district.
 - 5. No more than one (1) ADU garage shall be erected on a lot.
 - 6. At no time shall the garage be used as a dwelling.
- M. Principal Dwelling Unit:**
 - 1. Must be owner occupied.
 - 2. The Principal Dwelling Unit and the ADU must share common water, septic, and electric facilities, in compliance with state and county codes.
 - 3. No basement structure shall be used for an ADU, unless a completed story is situated immediately above the basement structure and is used as an owner-occupied dwelling, apart from underground homes designed and built in accordance with the Construction Code in effect in the Township.
- N. Detached ADU location:**
 - 1. Detached ADUs shall only be located in the rear yard, outside of rear and side setbacks with a minimum of 10 feet behind the Principal Dwelling Unit.
 - 2. Detached ADUs shall comply with all setback requirements for a principle structure.

ARTICLE XXX
WELLHEAD PROTECTION OVERLAY DISTRICT

Howell Township Zoning Ordinance
Livingston County, Michigan

Draft Date 11/14/24

DRAFT

Table of Contents

ARTICLE XXXX WELLHEAD PROTECTION OVERLAY DISTRICT	1
SECTION 1 – STATEMENT OF PURPOSE	1
SECTION 2 – DEFINITIONS	1
SECTION 3 – SCOPE OF AUTHORITY	2
SECTION 4 – CREATION OF OVERLAY DISTRICT BOUNDARIES.....	2
SECTION 5 – DISTRICT DELINEATION.....	2
SECTION 6 – SITE PLAN REVIEW REQUIREMENTS	2
SECTION 7 – DATA REQUIREMENTS	3
SECTION 8 – PERMITTED PRINCIPAL USES	5
SECTION 9 – SPECIAL USES	5
SECTION 10 –CONDITIONS.....	6
SECTION 11 – PROHIBITED USES	6
SECTION 12 – MISCELLANEOUS REQUIREMENTS.....	8
SECTION 13 – ENFORCEMENT	9
SECTION 14 – VARIANCE/APPEAL RIGHTS	9
SECTION 15 – ABATEMENT/REMEDIAL ACTIVITIES BY THE TOWNSHIP	10
SECTION 16 – INJUNCTIVE RELIEF	10
SECTION 17 – VIOLATIONS DEEMED A PUBLIC NUISANCE.....	10
SECTION 18 – CRIMINAL PROSECUTION	10
SECTION 19 – REMEDIES NOT EXCLUSIVE	11

ARTICLE XXX

WELLHEAD PROTECTION OVERLAY DISTRICT

Section 1 – STATEMENT OF PURPOSE

The purpose of the Wellhead Protection Overlay District is to provide supplemental developmental regulations in the designated wellhead protection zone so as to protect and preserve the surface and groundwater resources of Howell Township and the region from any use of land or buildings that may reduce the quality and/or quantity of water resources. This Wellhead Protection Overlay District has been created in accordance with both the City of Howell's and Howell, Marion, Oceola & Genoa Sewer and Water Authority's (MHOG) **Wellhead Protection Plans** drafted by Wood Environment & Infrastructure Solutions, Inc. (Wood). This Wellhead Protection Overlay District was also created in conjunction with the City of Howell and Marion Township.

Section 2 – DEFINITIONS

As used in this Article, the following words and terms shall have the meaning specified, unless the context clearly indicates otherwise.

Aquifer. A geologic formation composed of rock or sand and gravel that contain significant amounts of potentially recoverable potable water.

Discharge. Discharge includes, but is not limited to, any spilling, leaking, seeping, pouring, misapplying, emitting, emptying or dumping of any pollutants prohibited by law or regulation, which affects surface water and/or groundwater.

Impervious Surface. Materials or structures on or above the ground that do not allow precipitation to infiltrate the underlying soil.

Overlay District. That area of the Township in which special requirements and restrictions are applied to land uses and activities to eliminate or minimize contamination of the aquifers supplying the City of Howell's and MHOG's municipal water wells.

Regulated Substances shall include: 1. Substances for which there is a material safety data sheet (MSDS), as established by the United States Occupational Safety and Health Administration, and the MSDS cites possible health hazards for said substance; 2. Hazardous Waste, as defined by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended; 3. Hazardous Substance, as defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) when the hazardous substance is the focus of remedial or removal action being conducted under CERCLA in accordance with the U.S. EPA regulations; 4. Radiological materials; 5. Biohazards; and 6. "Hazardous Materials" as defined in the NFPA 1, the International Fire Code Council, and categorized as a hazardous material under 49 CFR 172.101.

Wellhead Protection Area. The surface and subsurface area surrounding a public water supply well or well field through which contaminants, if discharged, are reasonably likely to move toward and reach the well or the well field. This area is also known as the zone of contribution (ZOC) which contributes groundwater to the well or well field. The Wellhead Protection Area for the City of Howell and MHOG are present in areas of the Township, and the boundaries of such are specifically set forth in Figure 1 attached to this Ordinance.

Section 3 – SCOPE OF AUTHORITY

The Wellhead Protection Overlay District is a mapped zoning district that imposes a set of requirements in addition to those of the underlying zoning district. In an area where an overlay district is established, the property is placed simultaneously in the two districts, and the property may be developed only under the applicable conditions and requirements of both districts. In the event there is a conflict between the requirements of the two districts, the requirements of the Wellhead Protection Overlay District shall prevail.

Section 4 – CREATION OF OVERLAY DISTRICT BOUNDARIES

The Wellhead Protection Overlay District boundaries shall be established on the official Township Zoning Map. The Overlay District boundaries may be amended according to the Zoning Ordinance procedures in Article XXIII.

Section 5 – DISTRICT DELINEATION

- A. The Wellhead Protection Overlay District is hereby established to include all lands within Howell Township, lying within the City of Howell's or MHOG's Wellhead Protection Areas, including recharge areas of groundwater aquifers and watershed areas that lie within the wellhead protection area which now or may in the future provide public water supply. If the wellhead protection area includes a portion of the parcel, the entire parcel shall be considered to be within the wellhead protection area. This area is set forth in Figure 1, and may thereafter be amended.
- B. Where the boundaries delineated are in doubt or in dispute, the burden of proof shall be upon the owner(s) of the land in question to show whether the property should be located in the District. At the request of the owner(s), the Township may engage the services of a qualified professional to determine more accurately the location and extent of an aquifer within the wellhead protection area. The Township shall charge the owner(s) for all or a part of the investigation. The Owner shall place the funds necessary into an escrow account at the Township to cover the necessary fees of the qualified professional. Such dispute shall be presented as an interpretation/appeal to the Zoning Board of Appeals.

Section 6 – SITE PLAN REVIEW REQUIREMENTS

- A. **New or Expanded Uses and Structures.** All proposed new or expanded structures or uses within the Wellhead Protection Overlay District, except single family uses, shall be subject to site plan review, pursuant to Article XX, Section 20.06.
- B. **Existing Uses and Structures.** All land uses and activities existing prior to approval of the Wellhead Protection Overlay District must conform to the site plan review standards in this Article with respect to any new, expanded, or amendments to any approvals existing prior to adoption of the Wellhead Protection Overlay Ordinance.
- C. **Township Determination of No Hazard.** All new or expanded structures or uses subject to site plan review and special land use review shall be subject to a separate determination by the zoning body with authority to approve or deny the zoning request sought that the use of hazardous materials with any permitted use does not pose an unreasonable risk to the Township's Wellhead

Protection Area. Such determination will include consultation with the Township's engineer, MHOG, and any additional consultants with necessary subject matter expertise to assist the zoning body with authority to make such a determination.

Section 7 – DATA REQUIREMENTS

The following data are required for site plan review in the Wellhead Protection Overlay District, in addition to the information required by Article XX, Section 20.06.

- A. **List of Regulated Substances.** A complete list of chemicals, pesticides, fuels, and other Regulated Substances to be used or stored on the premises. Businesses that use or store such Regulated Substances shall file a management plan with the Fire Chief. The management plan shall include the following, at minimum:
1. Provisions to protect against the discharge of Regulated Substances or wastes to the environment due to spillage, accidental damage, corrosion, leakage or vandalism, including spill containment and clean-up procedures.
 2. Provisions for indoor, secured storage of Regulated Substances and wastes with impervious floor surfaces.
 3. Evidence of compliance with the rules and regulations of the Michigan Department of the Environment Great Lakes and Energy (EGLE).
 4. Drainage recharge features and provisions to prevent loss of recharge.
 5. Provisions to control soil erosion and sedimentation, soil compaction, and to prevent seepage from sewer pipes.
 6. Material Safety Data Sheets.
- B. **Service Facilities and Structures.** Location of existing and proposed service facilities and structures, above and below ground, including:
1. General location of the site within the Wellhead Protection Overlay District.
 2. Areas to be used for the storage, loading/unloading, recycling, or disposal of Regulated Substances, including interior and exterior areas.
 3. Underground storage tank locations.
 4. Location of exterior drains, dry wells, catch basins, retention/detention areas, sumps and other facilities designed to collect, store or transport storm water or wastewater. The point of discharge for all drains and pipes shall be specified on the site plan.
- C. **Water Resources.** Location of existing wetlands and watercourses, including ponds and streams on or within a quarter mile of the site.
- D. **Soils.** Soil characteristics of the site, at least to the detail provided by the Natural Resources Conservation Service.

- E. **Topography.** Existing topography of the site, with a maximum contour interval of two (2) feet.
- F. **Existing Contamination.** Delineation of areas on the site that are known or suspected to be contaminated, together with a report on the status of site clean-up.
- G. **EGLE Checklist.** Completion of the EGLE checklist, indicating the types of environmental permits and approvals that may be needed for the project.

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Section 8 – PERMITTED PRINCIPAL USES

The following uses shall be permitted in the Wellhead Protection Overlay District if permitted in the underlying zoning district, provided they comply with all applicable restrictions and standards specified in this Article:

- A. Single family residential uses.
- B. Residential accessory uses, including garages, driveways, private roads, utility rights-of-way, and on-site wastewater disposal systems (i.e., septic systems).
- C. Agricultural uses such as farming, grazing, and horticulture.
- D. Forestry and nursery uses.
- E. Outdoor recreation uses, including fishing, boating, and play areas.
- F. Conservation of water, plants, and wildlife, including wildlife management areas.
- G. Any of the above uses may include the subordinate use of Regulated Substances upon a final determination by a qualified professional that such Regulated Substances will not pose an unreasonable risk to the Township's Wellhead Protection Area after consideration of the following standards with adequate data, information and evidence provided by the applicant:
 - a. Classification of the substance under 49 CFR 172.101.
 - b. Amount of the regulated substance proposed to be contained on the property.
 - c. Whether substances for use in a motor vehicle will be used solely for the operation of a vehicle.
 - d. Whether the substance's storage and use is proposed for on-site air cooling or household appliances.
 - e. Whether the substance will be harmonious with and in accordance with the general objectives, intent and purposes of this Ordinance in terms of their uses, activities, processes, materials, equipment and conditions of operation, that will be detrimental to the Wellhead Protection Area.

Section 9 – SPECIAL USES

The following uses may be permitted if allowed in the underlying zoning district subject to conditions specified for each use, review and recommendation by the Planning Commission and approval by the Township Board, and subject further to any special conditions that are necessary to fulfill the purposes of this Ordinance, and the provisions set forth in Article XVI:

- A. Commercial, industrial, governmental or education uses which are allowed in the underlying district, and which are not prohibited in Section 11.
- B. Any enlargement, intensification, alteration, or change of use of an existing commercial, industrial, governmental or education use that complies with this Article.
- C. The rendering impervious of more than fifteen percent (15%) or 2,500 sq. ft. of any parcel, whichever is less, if allowed in the underlying zoning district, provided that a system for artificial

recharge of precipitation to groundwater is developed, which shall not result in degradation of the groundwater.

- D. The mining or excavation for removal of earth, loam, sand, gravel and other soils or mineral resources, provided that such excavation shall not extend closer than five (5) feet above the historical high groundwater table (as determined from on-site monitoring wells and historical water fluctuation data compiled by the United States Geological Survey). One (1) or more monitoring wells shall be installed by the property owner to verify groundwater elevations. This sub-section shall not apply to excavations incidental to permitted uses, including but not limited to installation or maintenance of structural foundations, freshwater ponds, utility conduits or on-site sewage disposal.
 - 1. Upon completion of earth removal operations, all altered areas shall be restored with topsoil and vegetative plantings suitable to control erosion on the site.
 - 2. All fine materials, such as clays and silts, removed as part of the earth removal operation and leftover as by-products, shall be disposed of off-site to prevent damage to aquifer recharge characteristics.
- E. Fertilizers, pesticides, herbicides, lawn care chemicals, or other leachable materials provide that such materials are stored in accordance with the manufacturer's label instructions approved by the United States Environmental Protection Agency or the Michigan Department of Agriculture and that they are used in routine agricultural operations and applied under the "Generally Accepted Agricultural Management Practices" and all other necessary precautions are taken to minimize adverse impact on surface and groundwater.
- F. The storage of commercial fertilizers and soil conditioners provided such storage shall be within structures designed to prevent the generation and escape of contaminated run-off or leachate.
- G. All Regulated Substances upon a final determination that such Regulated Substances will not pose an unreasonable risk to the Township's Wellhead Protection Area.

Section 10 – CONDITIONS

In addition to Section 9, Special Uses shall comply with the following:

- A. The Township Board may grant Special Use approval only upon finding that the proposed use meets the following standards:
 - 1. In no way, during construction or thereafter, shall a project adversely affect the quality or quantity of water that is available in the Wellhead Protection Overlay District.
 - 2. The project shall be designed to avoid substantial disturbance of the soils, topography, drainage, vegetation and water-related natural characteristics of the site to be developed.
- B. The Township Board shall not approve a Special Use under this section unless the petitioner's application materials include, in the Board's opinion, sufficiently detailed, definite and credible information to support positive findings in relation to the standards of this section.

Section 11 – PROHIBITED USES

The following uses are prohibited in the Wellhead Protection Overlay District:

- A. Business and industrial uses that generate, use, treat, process, store, or dispose of Regulated Substances, including, but not limited to metal plating, chemical manufacturing, wood preserving, and dry-cleaning factory, except for the following:
 - 1. Generators of a very small quantity of Regulated Substances (less than 20 kilograms or six (6) gallons per month), subject to Special Land Use review.
 - 2. Treatment facilities or operations designed for the treatment of contaminated ground or surface waters, provided the facilities have been approved by EGLE.
- B. Business and industrial uses that dispose of processed wastewater on-site.
- C. Solid waste landfills, dumps, landfilling, spreading or storage of sludge or septage, with the exception of disposal of brush or stumps.
- D. Storage of liquid petroleum products of any kind, except for the following:
 - 1. Storage that is incidental to:
 - a. Normal household use and outdoor maintenance or the heating of a structure.
 - b. Use of emergency generators.
 - c. Treatment facilities or operations designed for the treatment of contaminated ground or surface waters, provided the facilities have been approved by EGLE.
 - 2. Replacement of storage tanks and systems for the keeping, dispensing or storing of gasoline, which existed at the time of adoption of this Article, provided that:
 - a. All such replacement storage tanks or systems shall be located underground as required by EGLE.
 - b. All such storage systems shall be protected by a secondary containment system as specified by EGLE.
 - c. The Fire Chief may deny an application for tank replacement or approve it subject to conditions if he/she determines that it would constitute a danger to public or private water supplies.
- E. Outdoor storage of salt, de-icing materials, pesticides, or herbicides and outside storage of Regulated Materials.
- F. Dumping or disposal on the ground, in water bodies, or in residential septic systems of any toxic chemical, including, but not limited to septic systems cleaners which contain toxic chemicals such as methylene chloride and 1-1-1 trichlorethane, or other household Regulated Substances.
- G. Stockpiling and disposal of snow or ice removed from highways and streets located outside of the Wellhead Protection Overlay District that contains sodium chloride, calcium chloride, chemically treated abrasives, or other chemicals used for snow and ice removal.

H. Sewage disposal systems that are designed to receive more than 110 gallons of sewage per quarter acre per day or 440 gallons of sewage per acre per day, whichever is greater, provided that:

1. The replacement or repair of an existing system shall be exempted if it does not result in an increase in design capacity above the original design.

In addition to meeting the above standards, all lots shall conform to any applicable minimum lot size requirements specified in Article III, Section 3.17 of the Zoning Ordinance.

I. Wastewater treatment facilities or operations, except the following:

1. The replacement or repair of an existing system will not result in a design capacity greater than the design capacity of the existing system.
2. The replacement of an existing subsurface sewage disposal system with wastewater treatment facilities or operations will not result in a design capacity greater than the design capacity of the existing system.
3. Treatment facilities or operations designed for the treatment of contaminated ground or surface waters.

J. Prohibited uses include all uses not expressly authorized in Section 8 and 9 of this article.,

Section 12 – MISCELLANEOUS REQUIREMENTS

The following requirements shall apply to all uses in the Wellhead Protection Overlay District:

- A. **Drainage.** For commercial and industrial uses, run-off from impervious surfaces shall not be discharged directly to drains, streams, ponds, or other surface water bodies. Oil, grease and sediment traps shall be used to facilitate removal of contamination. Forebays/sediment basins and other requirements shall be adhered to per the Township Engineering Design Standards.
- B. **Discharge of Regulated Substances.** The property owner shall prevent the discharge of regulated substances.
 1. Upon discovery of a discharge within the Wellhead Protection Area, the owner of the property on which a discharge occurred, as well as the person responsible for the discharge if they are not the same, shall take appropriate reasonable actions to mitigate the potential impact of the discharge on the groundwater and remediate the discharge. Remediation shall be conducted in a timely manner and in accordance with applicable law. Waste generated during remediation of a Regulated Substance discharge must be managed in accordance with all applicable legal requirements. Storage of these materials for a period of greater than ninety (90) days must be reported to, and approved obtained from, the Township Supervisor or his/her designee.

2. All discharges shall be documented in writing and mailed to the Township Supervisor or his/her designee within ten (10) business days of said incident. Initial discharge notification shall include, at a minimum, the following:
 - i. Location of the discharge (name, address, and phone).
 - ii. Reporting party's name, address and phone (if different from above).
 - iii. Emergency contact and phone.
 - iv. Description of the nature of the incident, including date, time, location, and cause of the incident; type, concentration, and volume of substance(s) discharged.
 - v. Map showing exact discharge location, and relevant site features (i.e. paved area, storm sewer catch basins/inlets, water features, etc.), scale, and north arrow.
 - vi. All measures taken to clean up the discharge; and
 - vii. All measures proposed to be taken to reduce and prevent any future discharge.
3. The Township Supervisor or his/her designee shall determine if and where any additional investigative work needs to be completed to assess the potential impact of the discharge. The owner or operator shall retain a copy of the written notice for at least three years.

Section 13 – ENFORCEMENT

- A. Whenever the Township Supervisor or his/her designee determines that a person has violated a provision of this Ordinance, the Township Supervisor or his/her designee may order compliance by issuing a written Notice of Violation to the responsible person/facility.
- B. If the Township Supervisor or his/her designee requires abatement of a violation and/or restoration of affected property, the notice shall set forth a deadline by which such action must be completed. Said notice may further advise that, should the violator fail to remediate or restore within the established deadline, the work could be performed by the Township, with the resulting expense thereof charged to the violator and the expenses may be assessed onto the property if the property owner is also the violator.

Section 14 – VARIANCE/APPEAL RIGHTS

- A. If an owner of property within a Wellhead Protection Area believes the requirements of this ordinance impose an unreasonable burden on the use of the owner's property, the owner may seek a variance from the Howell Township Zoning Board of Appeals ("ZBA") in any appeal to the ZBA, the Township Consulting Engineer shall assist the ZBA for purposes of a variance request or of appeal rights. Such a request must be in writing with enough detail to allow the Township Consulting Engineer to assist the ZBA for purposes of a variance request or of appeal rights, to understand the situation and proposed variance. If the Township Consulting Engineer determines that additional information is needed, the request for additional information shall be made within 15 days of the owner's request. Within 30 days of the receipt of such additional information, or, if no such request is made, within 30 days of the owner's request, a hearing will be held in front of the ZBA. The ZBA shall grant, deny, or partially grant the request. A grant, partial or complete, may relieve the property owner from strict compliance with this Ordinance. Reasonable conditions may be imposed by the ZBA as part of such a grant. The ZBA shall be guided by the primary goal of protecting the Township's Wellhead Protection Area without creating undue hardship upon the property owners affected.
- B. Any person receiving a notice of violation may appeal the determination by submitting a written notice of appeal to the Howell Township Zoning Board of Appeals. The notice of appeal must be received by the Zoning Board of Appeals within 30 days from the date of the notice of violation,

with enough detail to allow the Township's Consulting Engineer, as a staff representative to the ZBA, to understand the situation. Within 30 days of the receipt of such an appeal, the Township Consulting Engineer shall issue a written response to the appeal to the applicant and to the ZBA unless the Township Consulting Engineer has requested additional information, in which case the Township Consulting Engineer's response shall be issued within 30 days of receipt of the information. The Zoning Board of Appeals shall affirm, reverse, or modify the notice of violation being appealed.

- C. If the person who has made a variance request or an appeal of a notice of violation does not agree with the decision of the ZBA, said person may appeal the matter by filing an action in the Livingston County Circuit Court, which may affirm, reverse, or modify the decision being appealed. Such an appeal must be filed within 30 days of the decision of the ZBA or within the time period required by Michigan General Court Rules, whichever has the shortest appeal period.

Section 15 – ABATEMENT/REMEDIAL ACTIVITIES BY THE TOWNSHIP

- A. The Township is authorized to take or contract with others to take reasonable and necessary abatement or remedial activities whenever the Township determines a violation of this Ordinance has occurred and that the responsible party cannot or will not timely correct the violation, or when no known responsible party exists. The responsible party shall reimburse the Township for all expenses thus incurred by the Township.
- B. If the Township desires the responsible party to reimburse it for the abatement activity expenses, the Township, shall within 90 days of the completion of such activities mail to that person a notice of claim outlining the expenses incurred, including reasonable administrative costs, and the amounts thereof. The person billed shall pay said sum in full within 30 days of receipt of the claim. If the person billed desires to object to all or some of the amount sought by the Township, said person may file, within the same 30-day period, a written objection so stating. The Township shall, within 30 days of its receipt of the objection, provide an opportunity for the objecting party to present facts or arguments supporting said objection. If the Township determines that some or the entire amount originally billed is appropriate, the person shall pay said sum within 30 days of receipt of that determination. If the amount due is not timely paid, the Township may cause the charges to become a special assessment against the property and shall constitute a lien on the property. In the alternative, the Township may attempt collection of the sum due by filing a civil lawsuit.

Section 16 – INJUNCTIVE RELIEF

- A. If a person has violated or continues to violate the provisions of this Ordinance, the Township may petition the appropriate court for injunctive relief restraining the person from activities abatement or remediation.

Section 17 – VIOLATIONS DEEMED A PUBLIC NUISANCE

- A. In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this Ordinance is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil infraction to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken by the Township.

Section 18 – CRIMINAL PROSECUTION

- A. Any violation of this Ordinance shall be considered a misdemeanor, punishable by a fine of not more than \$500.00 or imprisonment of not more than 90 days. Each day a violation exists shall be deemed a separate violation. A citation charging such a misdemeanor may be issued by the Township Supervisor, his or her designee, the Township's Ordinance Enforcement Officer or the Sheriff's Department.

Section 19 – REMEDIES NOT EXCLUSIVE

- A. The remedies listed in this Ordinance are not exclusive of any other remedies available under any applicable federal, state, or local law and it is within the discretion of the Department to seek cumulative remedies.

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