

**WHITE LAKE TOWNSHIP
INTER-OFFICE MEMORANDUM**

COMMUNITY DEVELOPMENT DEPARTMENT

DATE: August 19, 2024

TO: Rik Kowall, Supervisor
Township Board Members

FROM: Sean O'Neil, AICP
Planning Director

**SUBJECT: Lakepointe
Final Site Plan Re-approval
Revised Planned Development Agreement Approval**
Located on the northeast corner of Union Lake Road and Carpathian, consisting of approximately 13.32 acres. The property is currently zoned PD (Planned Development). Identified as parcel number 12-36-177-008.

The above request is now ready for Township Board Consideration. The matter was be considered by the Planning Commission at their regular meeting of August 15, 2024, at which time the Planning Commission recommended the Township approve the revised planned development agreement.

Please find the related documents:

- Draft minutes of the August 15, 2024 Planning Commission meeting
- Review letter prepared by the Township's engineer, Mr. Michael Leuffgen, dated April 10, 2024.
- Review letter prepared by the Township's former staff Planner, Justin Quagliata, dated April 2, 2024
- Review letter prepared by WLT Fire Chief, John Holland, dated March 26, 2024.
- Lakepointe's final engineering and site plans.
- Review letter prepared by the Township's engineer, Mr. Michael Leuffgen, dated August 7, 2024.
- Review letter prepared by the Township' attorney, Lisa Hamameh, dated July 30, 2024.
- Lakepointe's planned development agreement.

Please place this matter on the next available Township Board agenda. Do not hesitate to contact me should you need any additional information.

**WHITE LAKE TOWNSHIP
PLANNING COMMISSION
AUGUST 15, 2024**

CALL TO ORDER

Chairperson Seward called the meeting to order at 6:30 P.M. He then led the Pledge of Allegiance.

ROLL CALL

Present:

T. Joseph Seward, Chairperson
Debby Dehart
Scott Ruggles, Township Board Liaison
Merrie Carlock, Vice Chairperson
Mona Sevic
Robert Seeley
Pete Meagher
Matt Slicker
Steve Anderson

Others:

Sean O'Neil, Community Development Director
Andrew Littman, Staff Planner
Mike Leuffgen, DLZ
Hannah Kennedy-Galley, Recording Secretary

APPROVAL OF AGENDA

MOTION by Commissioner Seeley, seconded by Commissioner Carlock to approve the agenda as presented. The motion carried with a voice vote: (9 yes votes).

APPROVAL OF MINUTES

A. June 20, 2024

Chairperson Seward wanted "round a bout" on the last page of the minutes to read "round-a-bout."

MOTION by Commissioner Anderson, seconded by Commissioner Sevic to approve the minutes of June 20, 2024 as amended. The motion carried with a voice vote: (9 yes votes).

CALL TO THE PUBLIC (FOR ITEMS NOT ON THE AGENDA)

None.

PUBLIC HEARING

None.

CONTINUING BUSINESS

A. Lakepointe

Location: Located on the northeast corner of Union Lake Road and Carpathian, consisting of approximately 13.32 acres. The property is currently zoned PD (Planned Development). Identified as parcel numbers 12-36-177-008.

Request: i) **Final site plan re approval**

ii) **Revised Planned development agreement approval**

Applicant: Fairview Construction Company

Director O'Neil briefly went over the applicant's requests. Director O'Neil noted that the applicant's community benefit would be of a monetary nature due to the neighbor to the north of the site being unresponsive in regards to the previously proposed sidewalk extension.

Commissioner Carlock asked Director O'Neil if the pathway could be put in the right of way. Jason Emerine, Seiber Keast Lehner, said the right of way in front of Independence Village was not deeded and would require an easement from Independence Village. Independence Village was not amenable to an easement. There would be an additional \$7,500.00 donation to the Park fund from the applicant as well.

Commissioner Anderson asked staff if the money would be held for a future pathway in the area. Director O'Neil said no, the money allocation would go to make other connections, the funds would be used in a meaningful way.

Mr. Leuffgen briefly went over his engineering review. There were discrepancies regarding the estimated costs for the sidewalk donation.

Commissioner Anderson asked Mr. Emerine if a TIS was waived. Mr. Emerine stated that RCOC had requested a TIS, and it was done. The results from the study said that there was no impact to the traffic, and RCOC agreed with the findings from the study.

Commissioner Anderson asked staff if they felt all the outstanding items would be addressed prior to construction. Director O'Neil said all of the outstanding comments had to be addressed prior to a pre-construction meeting.

Commissioner Dehart said the proposed bypass lane was no longer shown on the plan. Mr. Emerine said the bypass lane was not warranted by the RCOC, so it was not included, and the previous FSP was approved without the plan.

Commissioner Meagher said all three developments (West Valley, Comfort Care, and Lakepointe) were dependent on West Valley for storm sewer. Mr. Emerine said Lakepointe had a detention basin, as did West Valley, and would outlet storm water by Cedar Island Road. Comfort Care had a retention basin, so stormwater would be absorbed by the ground. DPS Director Aaron Potter wanted each development to have their own easements with their own stormwater management agreements. Mr. Leuffgen added that West Valley had been issued a permit from EGLE for stormwater discharge.

Michael Furnari, developer, said he was excited to get the project going and agreed to a \$8,700.00 donation to the pathway fund in lieu of the previously proposed offsite sidewalk community benefit.

MOTION by Commissioner Meagher, seconded by Commissioner Sevic, to re-approve the final site plan for Lakepointe, parcel identified as 12-36-177-008, subject to the review letters included in the packet being addressed and subject to addressing the comments made by the Township Attorney. The motion carried with a voice vote: (8 yes votes | Seeley no).

MOTION by Commissioner Meagher, seconded by Commissioner Anderson, to recommend approval to the Township Board for Lakepointe’s revised planned development agreement, parcel identified as identified as 12-36-177-008 subject to addressing the remaining outstanding staff and consultant comments and subject to replacing the community benefit contribution off an offsite sidewalk with a monetary contribution for pathways in the amount of \$8,700.00, as agreed to by the developer this evening. The motion carried with a voice vote: (8 yes votes | Seeley no).

NEW BUSINESS

- A. Review and discussion of the 2025-2030 draft Capital Improvement Plan (CIP)

Staff Planner Littman briefly went over the draft CIP. He summarized the increased cost estimates for each department’s projects.

Commissioner Carlock asked staff if there was a list of completed projects. Staff Planner Littman said the projects that were completed were Triangle Trail, the Bogie Lake Water Extension, and the Aspen Meadows Wellhouse. He added that he would include these in the final CIP.

Commissioner Ruggles asked staff where the request for the backhoe machine was requested from. Director O’Neil said it was a request from the DPS department.

Commissioner Anderson asked staff if rating or cost drove the priority of a project. Director O’Neil said there were variables, but highly rated projects indicated a high need for a project.

Staff Planner said a water supply project from last year’s CIP was removed from this year’s report. The project was no longer necessary due to the anticipated Township Hall construction.

Commissioner Sevic asked for clarification regarding the amounts listed on the CIP Components table. The numbers listed in parentheses was the number of sets requested, and a edit needed to be made to clarify the notation.

Commissioner Slicker stated that the backhoe machine project should have clarification regarding the cost sharing.

Commissioner Anderson said the overall funding statement was missing a figure that was referenced in the text. Staff said the text would be clarified.

Commissioner Slicker noted that the Sewer Fund projects were listed to be paid by the General Fund. Director O'Neil said that would need to be clarified as well.

Commissioner Seeley asked if there were any other emergency water connections in the Township. Mr. Leuffgen confirmed, and said the one included in the CIP would be on Williams Lake Road, near Hess-Hathaway Park. Commissioner Seeley spoke highly to emergency water connections.

LIAISON'S REPORT

Commissioner Dehart said the August ZBA meeting was canceled, but the ZBA did meet in July. There were five cases heard. Three were approved, one was denied, and one was tabled.

Commissioner Carlock stated that Parks and Rec met for the first time in a few months. The contractor for Stanley Park was delaying, and the Township was considering asking the State to use the next lowest bidder. Director O'Neil authorized Beckett & Raeder to reach out to the next lowest bidder. The Fisk Farm Festival would be held September 7 and 8, 2024, and Trunk or Treat was scheduled for October 19, 2024. She added that the Parks and Rec millage passed, and she thanked the voters.

Commissioner Ruggles said the Township Board met today at special Board meeting to discuss the budget and approve the 2025 millage rates. He congratulated Commissioner Anderson on his election win.

PLANNING CONSULTANT'S REPORT

None.

DIRECTOR'S REPORT

Director O'Neil said the Planning Commission would meet on September 5, 2024 for the CIP public hearing as well as a public hearing for the Lasting Impressions special land use. There was a potential of a couple other items being eligible for the agenda too.

OTHER BUSINESS

Commissioner Sevic said the Fisk Farm festival was looking for volunteers.

COMMUNICATIONS

None

NEXT MEETING DATE: September 5, 2024

ADJOURNMENT

**MOTION by Commissioner Carlock, seconded by Commissioner Sevic, to adjourn at 7:44 P.M.
The motion carried with a voice vote: (9 yes votes).**



INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

April 10, 2024

Sean O' Neil, Director
Community Development Department
Charter Township of White Lake
7525 Highland Road
White Lake, Michigan 48383

RE: Lake Pointe – Final Site Plan and Final Engineering Plan –7th Review

DLZ # 1745-0385-00

Dear Mr. O' Neil,

Our office has reviewed the above-mentioned revised plans prepared by Seiber, Keast, Lehner Engineering and dated February 13, 2024. These plans were reviewed for conformance with the Township Engineering Design Standards. We offer the following comments for your consideration:

Please note that comments from our December 21, 2023 review are listed in *italics*. Responses to those comments are listed in **bold**. New comments are listed in standard type.

Preliminary Site Plan Comments-The following comments from our Preliminary Site Plan review letter dated January 7, 2020 will need to be addressed:

Grading/Paving

- 1. The proposed bypass lane on the west side of the Union Lake Road has been removed from this submittal. We defer to Oakland County Road Commission regarding the requirements for this bypass lane.* **Comment remains as a notation.**

Storm Sewer & Storm Water Management

- 1. The plans have been revised to utilize detention instead of retention. A detention basin outlet has been provided which will leave the site, cross Union Lake Road, and discharge through the West*

4494 Elizabeth Lake Rd, Waterford, MI 48328 | OFFICE 248.681.7800 | ONLINE WWW.DLZ.COM

*Valley site which is currently under common ownership. The FEP plans for both developments will need to be coordinated to ensure capacity is available in the West Valley development and proposed outlet. Condo Documents will need to be clarified for both developments regarding shared maintenance responsibility. The Road Commission for Oakland County will need to approve and permit the proposed storm sewer outlet crossing. **Comment remains as a notation. We also note that the FEP plans for both developments have been coordinated and that capacity is available in and accounted for in the West Valley storm sewer system. A supplemental sheet (Overall Storm Water Management System “West Valley & Lake Pointe”) has been included in the FEP sets for both developments.***

Final Site Plan/Final Engineering Plan Comments-

Grading/Paving

- 1. An off- site easement will be required from Independence Village for construction of proposed sidewalk should the area for construction fall outside the existing Union Lake Road right of way. Please verify location of right of way relative to proposed sidewalk. Comment remains. Design engineer has indicated that the applicant will be sending an easement request to the Independence Village owner requesting an easement for the sidewalk that is proposed across the Independence Village frontage. **Comment remains as a notation.***
- 2. Note that the grading plan has been reviewed for general conformance with the Township’s requirements for grading. More detailed grading reviews will be conducted on individual buildings at time of plot plan submittal. **Comment remains as a notation.***

Sanitary Sewer

- 1. The sanitary sewer proposed along the Union Lake Road frontage is proposed to be constructed as part of the proposed West Valley development. Note that approval of this development is subject to the approval of that offsite sanitary sewer, and it must be available for use by this development. In addition, an off-site easement will be required from Independence Village granted to West Valley for construction of proposed sanitary sewer should the area for construction fall outside the existing Union Lake Road right of way. Please verify location of right of way relative to proposed sanitary sewer. Design engineer has noted that the existing sanitary sewer to the northwest along Union Lake Road is within the future 60’ half right of way for Union Lake Road. **Comment remains as a notation in regard to West Valley approval requirements.***
 - 2. It should be noted that the REU unit assignment factor of 0.6 REU per unit is acceptable for the purpose of capacity calculations however the Township Ordinance requires 1.0 REU per unit for the purpose of capital connection charges. **Comment remains as a notation.***
-

3. *Approvals/permits will be required from OCWRC and EGLE. Once sanitary sewer revisions have been addressed, please provide signed & sealed electronic set for submittal to WRC along with a completed part 41 Permit Application. Easement exhibits have been submitted for review and comments were provided in our April 6, 2021 review letter. Please provide revised easement exhibits for review. Comment addressed. Revised easement exhibits were submitted, and outstanding comments have been addressed. Please reference our April 28, 2021 PDA review letter. In addition, a signed and sealed electronic set for sanitary sewer permit application and a Part 41 permit application have recently been provided. We note that EGLE held the previous permit submittal until the sanitary sewer plans and permit application were submitted for West Valley. No sanitary sewer permit has been issued for Lake Pointe. Resubmittal of plans and permit application to EGLE is currently in process. **Comment remains as a notation.***

Watermain

1. *The plans show a 20-foot-wide watermain easement which is acceptable. Easement exhibits shall be provided for review as attachments to the Township standard conveyance document. Easement exhibits have been submitted for review and comments were provided in our April 6, 2021 review letter. Please provide revised easement exhibits for review. Comment addressed. Revised easements exhibits were submitted, and outstanding comments have been addressed. Please reference our April 28, 2021, PDA review letter. **Comment remains as a notation.***
2. *A permit will be required from EGLE for the watermain portion of the project. Once the watermain items have been addressed, please provide 5 signed & sealed hard copies of applicable plan sheets along with a completed, electronic Act 399 permit application for Township signature and submittal to EGLE. Comment outstanding; An EGLE Act 399 permit was issued April 14, 2021 and is valid for 2 years, so it is now expired. The permit will need to be renewed. Comment addressed. Signed and sealed plans and permit application for watermain permit renewal have been submitted electronically to our office; submittal to the appropriate agencies for permit renewal is currently in process. **Comment remains as a notation.***

Stormwater Management

1. *A Storm Water Management Facilities Easement, Maintenance Agreement and Lien document will need to be completed and exhibits provided for review. Easement exhibits have been submitted for review and comments were provided in our April 6, 2021 review letter. Please provide revised easement exhibits for review. Comment addressed. Revised easements exhibits were submitted, and*
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outstanding comments have been addressed. Please reference our April 28, 2021, PDA review letter.

Comment remains as a notation.

2. *Flows from the proposed detention basin for this development are proposed to be routed through proposed storm sewer in the proposed West Valley development to the southeast on the south side of Union Lake Road. Note that the West Valley development will require Final Engineering Plan approval prior to approval of Lake Pointe, since the feasibility of Lake Pointe will depend on installation of storm sewer within the West Valley development. **Comment remains as a notation.***
3. *The footings for the proposed retaining wall along the east and southeast part of the property will need to be placed such that the footings have no negative influence with respect to vertical or lateral stresses on the adjacent storm sewer. Please verify this will not occur. Comment partially addressed. The design engineer has stated that “The retaining wall has not yet been designed. The retaining wall has been shifted so the face of wall is at least 10 feet away (horizontally) from the storm sewer. Given that the depth of the storm sewer is less than 10 feet and that the retaining wall will have some sort of buried foundation depth, the retaining wall foundation loads on underlying soils should not have an influence on the storm sewer.” We request that the engineer who will design the wall provide an analysis of the loads and potential impacts the wall may have on surrounding utilities. Please provide completed analysis to our office. Comment addressed; signed & sealed wall design calculations have been provided. Note the wall calculations have not been reviewed by this office but will be filed with the project documents for future reference. **Comment remains as a notation.***
4. **Since Lake Pointe is dependent on West Valley for conveyance of stormwater flows from the Lake Pointe site, we are requesting confirmation from EGLE that they are aware of Lake Pointe’s stormwater contribution to West Valley’s ultimate stormwater outlet and that EGLE has evaluated and approves of this. This confirmation shall be required prior to final engineering approval for Lake Pointe.**

Required Permits and Approvals

The following permits and approvals will be required:

1. Permit from the Road Commission for all work within the Union Lake Road Right-Of-Way including the proposed storm sewer crossing.
 2. SESC permit from OCWRC. **Permit #000698-2021-CO issued 2021.**
 3. A Notice of Coverage for Stormwater Discharge under the NPDES program as administered by EGLE is required.
 4. Watermain permit from EGLE (Expired)- Renewal of permit in progress.
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5. Sanitary sewer permit from OCWRC (We found record of approval from May 17, 2021; OCWRC Job #S21-0125 CW). It will have to be determined if this is still valid or if resubmittal is required.
6. Sanitary sewer permit from EGLE (We recall EGLE was holding their review of plans until West Valley plans were submitted for review concurrently)
7. Executed Stormwater Maintenance Agreement
8. Easements for Sanitary Sewer and Watermain
9. Sidewalk easement from Independence Village

Recommendation

The plans are approvable subject to the applicant acquiring the approvals/permits referenced above, and the related West Valley approvals including that mentioned in Comment 4 under Stormwater Management above.

Please contact our office should you have any questions.

Sincerely,

DLZ Michigan



Michael Leuffgen, P.E.
Department Manager



Victoria Loemker, P. E.
Senior Engineer

Cc: Justin Quagliata, Community Development, *via email*
Hannah Kennedy-Galley, Community Development, *via email*
Aaron Potter, DPS Director, White Lake Township, *via email*
Jason Hanifen, Fire Marshall, White Lake Township, *via email*

Rik Kowall, Supervisor
Anthony L. Noble, Clerk
Mike Roman, Treasurer



Trustees
Scott Ruggles
Liz Fessler Smith
Andrea C. Voorheis
Michael Powell

WHITE LAKE TOWNSHIP

7525 Highland Road • White Lake, Michigan 48383-2900 • (248) 698-3300 • www.whitelaketwp.com

April 2, 2024

JMF White Lake, LLC
1700 W. Big Beaver Road, Suite 120
Troy, MI 48084

ATTN: Michael Furnari

**RE: Lake Pointe – Final Site Plan Backcheck #4
Parcel Number 12-36-177-003**

Dear Mr. Furnari:

Community Development Department staff have completed the second backcheck for the above referenced project. The following comments from the previous backcheck dated December 26, 2023 are listed below. Responses to those comments are provided in **(green)**.

- All required landscape areas in excess of 200 square feet shall be irrigated to assist in maintaining a healthy condition for all plantings and lawn areas. **An irrigation plan shall be provided. (Comment outstanding).** **(Comment addressed. Sheet LS-3 has been revised accordingly).** **(Note: an irrigation plan dated February 3, 2024 (revision date February 21, 2024) has been provided).**
- All required site irrigation systems shall include a rain sensor or similar measure to ensure irrigation does not occur during or shortly after precipitation events. All site plans shall note installation of required irrigation. **Add note to landscape plan. (Comment addressed. A note has been added to Sheet LS-3).**
- Trees shall not be planted closer than four feet to a property line. **Add note to landscape plan. (Comment partially addressed. Note 22 has been added to Sheet LS-1. However, the spelling of the word “planted” is incorrect and shall be addressed).** **(Comment addressed. Note 22 has been revised).**
- Trees identified for protection during construction and the means of protection shall be identified prior to final site plan. No construction shall occur until tree protection has been installed and approved by the Community Development Director. **Add note to landscape plan. (Comment addressed. A note has been added to Sheet LS-3).**
- Austrian Pine and White Pine are not an acceptable evergreen tree. **Pine trees are prohibited in the Township. Revise landscape plan to provide an acceptable species of evergreen tree and remove all references to pine trees. (Comment partially addressed. The landscape legend on Sheet LS-2 still lists pine species. Revise the landscape legend accordingly).** **(Comment remains outstanding).** **(Comment outstanding. Contrary to the response letter, the landscape legend on Sheet LS-2 still needs revision).**

- No more than two planted trees in a row shall be of the same species. **Revise landscape plan. (Comment outstanding).** (Comment addressed. Tree cluster/grouping planting notes have been added to Sheet LS-2).
- The landscape plan mentions mulch. Per the Zoning Ordinance, the mulch product itself shall be at least doubled-shredded quality. **Revise landscape plan. (Comment partially addressed. The tree planting, evergreen planting, and shrub planting details on Sheet LS-2 still do not note double-shredded mulch. Revise accordingly).** (Comment addressed. The details on Sheet LS-3 have been revised accordingly).
- As stated in previous correspondence (dated February 22, 2021), **the building materials shall be labeled on the building elevations, Sheets A201 and A203.** (Comment outstanding). (Comment remains outstanding). (Comment addressed. Material notations have been added to the elevations).
- As stated in previous correspondence (dated February 22, 2021), **elevations and building material details shall be provided for the clubhouse building.** (Comment addressed. Community building elevations have been provided).
- **Architectural plan sheets A101, A102, A200, A201, A203 all list West Valley list in the title block. While the residential buildings proposed between both projects are the same, plans in the Lake Pointe plan set shall be titled as such. Revise accordingly.** (Comment outstanding). (Comment addressed. The title blocks on the aforementioned sheets have been revised).
- As stated in previous correspondence (dated February 22, 2021), Sheet LS-5 indicates a decorative street light is proposed adjacent to the entrance of the development, and pedestrian bollard lighting is proposed at several places along the internal sidewalk network. Neither of the lighting types are full cutoff luminaries as required for outdoor lighting. However, the Zoning Ordinance permits non-cutoff fixtures if they are decorative pedestrian fixtures less than 100 watts and pedestrian fixtures shall not use clear globes. **Wattage for each luminaire shall be noted on Sheet LS-5, and lighting fixture specification sheets (cut sheets) shall be submitted for the two aforementioned luminaries.** (Comment outstanding). (Comment remains outstanding). (Comment addressed. Luminaire wattage has been added to Sheet LS-5 and cut sheets have been provided for both of the aforementioned luminaries).
- **The lighting fixture specification sheet (cut sheet) shall be submitted for the proposed entrance sign panel “uplighting.” The method of sign illumination is subject to review and approval by the Planning Division. Note uplighting is prohibited in the Township and the sign panel uplighting detail on Sheet LS-4 shall be removed.** (Comment addressed. The sign panel uplighting detail on Sheet LS-5 have been removed).

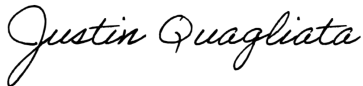
Prior to scheduling a pre-construction meeting, the following items shall be addressed: **(Comments outstanding).** (Comments remain outstanding). (Comments remain outstanding).

- Planned Development Agreement (PDA) review and approval. **(A revised PDA, submitted April 1, 2024, is currently under review).**
- Final Engineering Plan (FEP) review and approval (completed administratively).
- Provide documentation satisfactory to the Township Attorney evidencing ownership of the property.

- Submit ~~reciprocal access~~ **pathway/sidewalk** easement agreement (must be reviewed, approved, and executed prior to scheduling a pre-construction meeting).
- Submit required utility (water, sewer, storm sewer) easement agreements (must be reviewed, approved, and executed prior to scheduling a pre-construction meeting).
- Provide a construction cost estimate sealed by the design engineer.
- Provide inspection fees (payable at the pre-construction meeting).
- Provide Certificates of Insurance listing DLZ and the Township as Additional Insured. Note XCU (Explosion, Collapse, and Underground) coverage must be provided.
- Provide a copy of all applicable agency permits to Township (must be submitted prior to scheduling a pre-construction meeting).
- Five (5) hard copies of the final plans must be brought to the pre-construction meeting for signing/stamping.

If you have any questions regarding this matter, please contact me at (248) 698-3300 ext. 177 or by email at justinq@whitelaketwp.com.

Sincerely,



Justin Quagliata
Staff Planner

cc: Sean O'Neil, Community Development Director
Nick Spencer, Building Official
Michael Leuffgen, DLZ
Victoria Loemker, DLZ
Jason Emerine, Seiber Keast Lehner, Inc.



Fire Department
Charter Township
of White Lake

Site / Construction Plan Review

To: Sean O'Neil, Planning Department Director

Date: 03/26/24

Project: Lake Pointe

File #: Not Shown

Date on Plans: 02/13/24 (revision)

The Fire Department has the following comments with regard to the revised plans for the project known as Lake Pointe:

The Fire Department has no further comments regarding this project as submitted.

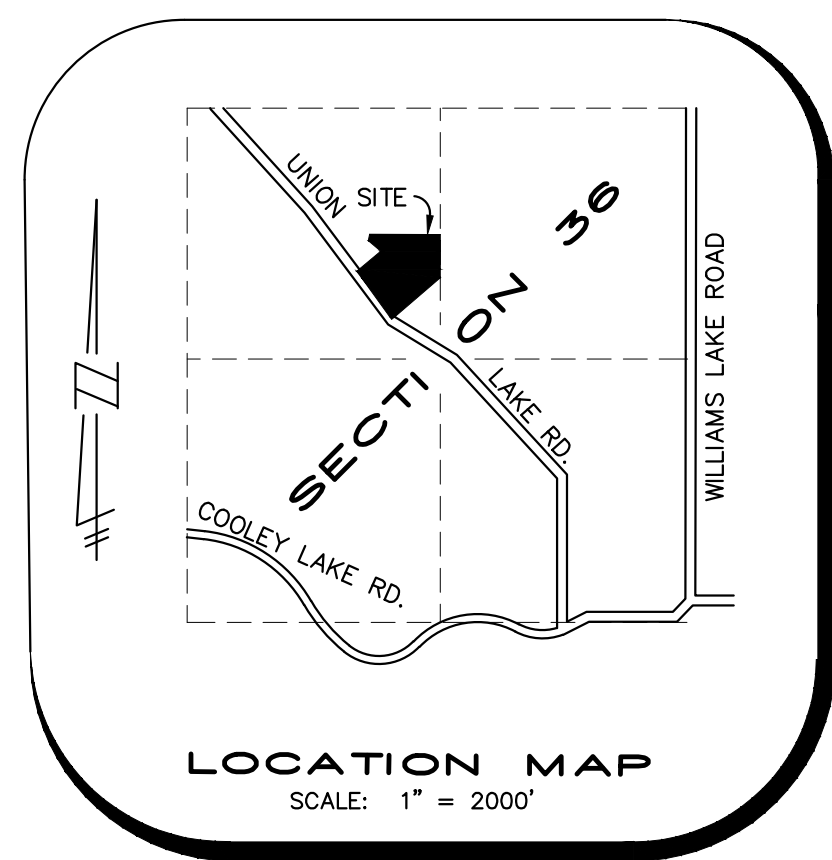
John Holland
Fire Chief
Charter Township of White Lake
(248)698-3993
jholland@whitelaketwp.com

Plans are reviewed using the International Fire Code (IFC), 2015 Edition and Referenced NFPA Standards.

ENGINEERING CONSTRUCTION PLANS FOR LAKE POINTE

A MULTI FAMILY DEVELOPMENT
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP,
OAKLAND COUNTY, MICHIGAN

PREPARED FOR:
JMF, WHITE LAKE, LLC
1700 W. BIG BEAVER ROAD, STE. 120
TROY, MI 48084
PHONE: (248) 602-2220



BENCHMARKS

BM#1 - CONCRETE MONUMENT AT SOUTHWEST CORNER OF PROPERTY.
ELEVATION: 948.29 NAVD88

BM#2 - TELECOM MANHOLE COVER AT NORTHEAST CORNER OF CARPATHIAN DRIVE AND UNION LAKE ROAD.
ELEVATION: 984.75 NAVD88

BM#3 - TELECOM MANHOLE COVER ±485' WSET OF CENTER OF SECTION 36 ALONG THE SOUTH PROPERTY LINE.
ELEVATION: 962.72 NAVD88

NCS PID D16198
ELEVATION 966.63 NAVD88

LEGAL DESCRIPTION

LEGAL DESCRIPTION - OVERALL PARCEL RECOMBINATION:
A PARCEL OF LAND BEING A PART OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 36, T.3N., R.8E., WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH 1/4 POST OF SAID SECTION 36, T.3N., R.8E., OAKLAND COUNTY, MICHIGAN, THENCE PROCEEDING ALONG THE NORTH AND SOUTH 1/4 LINE OF SAID SECTION 36, SOUTH 00 DEGREES 03 MINUTES 47 SECONDS EAST, 1315.77 FEET TO THE NORTHEAST CORNER OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SAID SECTION, THENCE IN PART ALONG THE WESTERLY LINE OF BOCOVINA COUNTRYSIDE HOMES, OAKLAND COUNTY PLAN NO. 755, MASTER DEED AS RECORDED IN LIBER 12457, PAGES 419 THROUGH 492, 1ST AMENDMENT AS RECORDED IN LIBER 13514, PAGES 811 THROUGH 817 OAKLAND COUNTY RECORDS, SOUTH 00 DEGREES 18 MINUTES 25 SECONDS EAST, 475.18 FEET, THENCE ALONG THE NORTHWESTERLY LINE OF CARPATHIAN DRIVE AS RECORDED IN BOCOVINA HOMESITES, OAKLAND PLAN NO. 754, MASTER DEED AS RECORDED IN LIBER 12457, PAGES 493 THROUGH 563, 1ST AMENDMENT AS RECORDED IN LIBER 13514, PAGES 801 THROUGH 810, OAKLAND COUNTY RECORDS, SOUTH 46 DEGREES 03 MINUTES 08 SECONDS WEST, 580.14 FEET TO THE CENTERLINE OF UNION LAKE ROAD, THENCE ALONG THE ARC OF A CURVE TO THE RIGHT, RADIUS 1432.69 FEET, CENTRAL ANGLE 12 DEGREES 18 MINUTES 04 SECONDS, (THE CHORD OF SAID CURVE BEARS NORTH 42 DEGREES 30 MINUTES 07 SECONDS WEST, 307.00 FEET) AND HAVING AN ARC DISTANCE OF 307.58 FEET; THENCE CONTINUING ALONG SAID CENTERLINE THE FOLLOWING TWO COURSES, NORTH 36 DEGREES 21 MINUTES 05 SECONDS WEST, 21.54 FEET AND NORTH 36 DEGREES 44 MINUTES 42 SECONDS WEST, 468.27 FEET; THENCE NORTH 21 DEGREES 07 MINUTES 22 SECONDS EAST, 307.10 FEET; THENCE SOUTH 88 DEGREES 32 MINUTES 43 SECONDS EAST, 812.20 FEET TO THE POINT OF BEGINNING OF THE PARCEL, HEREIN DESCRIBED, CONTAINING 580,140 GROSS SQUARE FEET OR 13.32 GROSS ACRES OF LAND, MORE OR LESS, ALSO BEING SUBJECT TO THE RIGHTS OF THE PUBLIC AND/OR ANY OTHER GOVERNMENTAL UNIT IN ANY PART OF UNION LAKE ROAD TAKEN, USED OR DEDICATED FOR STREET, ROAD, HIGHWAY OR PUBLIC UTILITY PURPOSES. ALSO BEING SUBJECT TO ANY OTHER EASEMENTS, RESTRICTIONS OR CONDITIONS OF RECORD, SIDWELL NOS.: 12-36-177-003, 12-36-177-002.

GENERAL NOTES

- THE CONTRACTOR SHALL CONTACT THE TOWNSHIP ENGINEER AT (248) 334-9901 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION. THE CONTRACTOR SHALL KEEP THE INSPECTOR APPRAISED OF THE NEED FOR INSPECTION ON A DAY TO DAY BASIS. LACKING SPECIFIC SCHEDULING WITH THE INSPECTOR, THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE TO THE TOWNSHIP ENGINEER PRIOR TO RECOMMENDING WORK. INSPECTION FAILURE TO INFORM THE INSPECTOR OR THE TOWNSHIP ENGINEER OF A WORK CANCELLATION MAY RESULT IN A ONE HALF DAY INSPECTION CHARGE TO THE DEVELOPER.
- THE DEVELOPER SHALL CONTACT THE TOWNSHIP PLANNING DEPARTMENT AT (248) 698-3300 TO SCHEDULE A PRE-CONSTRUCTION MEETING. THE DEVELOPER'S PRIME SITE CONTRACTOR SHALL ATTEND. A COPY OF ALL PERMITS MUST BE SUBMITTED TO THE PLANNING DEPARTMENT PRIOR TO SCHEDULING THE MEETING.
- ALL CONSTRUCTION MUST CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS ADOPTED BY WHITE LAKE TOWNSHIP.
- CONTRACTOR SHALL CONTACT MISS DIG AT 1-800-482-7171, 72 HOURS IN ADVANCE OF CONSTRUCTION, FOR EXISTING UNDERGROUND UTILITY LOCATIONS.
- ALL SOIL EROSION AND SILTATION MUST BE CONTROLLED AND CONTAINED ON-SITE.
- ALL EXCAVATION, INCLUDING ALL UTILITIES AND LEADS, UNDER OR WITHIN 1 ON 1 INFLUENCE OF ANY PAVEMENT (INCLUDING SIDEWALKS), EXISTING OR PROPOSED, OR WHERE SAND BACKFILL IS CALLED FOR ON THE PLAN, SHALL BE BACKFILLED AND COMPACTED WITH GRANULAR MATERIAL (SAND) MDOT CLASS II TO 95 PERCENT MAXIMUM UNIT DENSITY (ALL OTHERS 90 PERCENT).
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES AND FACILITIES. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT THE PROPOSED UTILITY CROSSINGS PRIOR TO THE START OF UNDERGROUND CONSTRUCTION. ANY CONFLICTS WITH UTILITIES SHALL BE IMMEDIATELY REPORTED TO THE PROJECT ENGINEER.
- WHERE TWO UTILITIES CROSS, INCLUDING SANITARY SEWER LEADS, PROVIDE POROUS GRADE "B" BACKFILL MATERIAL COMPACTED TO THE UNDERSIDE OF THE HIGHER UTILITY OR AS SPECIFIED ON THE DETAIL SHEET.
- DUST CONTROL SHALL BE MAINTAINED AT ALL TIMES.
- ANY MUD TRACKED ONTO UNION LAKE ROAD SHALL BE REMOVED DAILY.
- IF DEWATERING IS DETERMINED TO BE REQUIRED, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY THE AREA TO BE DEWATERED, SUBMIT A DEWATERING PLAN TO THE WHITE LAKE TOWNSHIP ENGINEERING DIVISION FOR REVIEW, TO MONITOR AND TO DETERMINE THAT THERE WILL NOT BE ANY IMPACT TO ANY ADJOINING OR OFFSITE PROPERTIES. DEWATERING PROCEDURES SHALL BE IN COMPLIANCE WITH WHITE LAKE TOWNSHIP.
- A ROAD COMMISSION FOR OAKLAND COUNTY RIGHT-OF-WAY PERMIT IS REQUIRED FOR ANY WORK WITHIN THE UNION LAKE ROAD RIGHTS-OF-WAY (OR ANY PUBLIC ROAD RIGHT-OF-WAY) AND/OR ANY TOWNSHIP EASEMENT.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS, INVERTS AND GRADES PRIOR TO THE START OF ANY WORK.
- ALL PAVEMENT MARKINGS, TRAFFIC CONTROL SIGNS, AND PARKING SIGNS SHALL COMPLY WITH THE DESIGN AND PLACEMENT REQUIREMENTS OF THE 2011 MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- WHITE LAKE TOWNSHIP HAS NO RESPONSIBILITY TO IMPROVE OR MAINTAIN THE PRIVATE STREETS CONTAINED WITHIN OR PRIVATE STREETS PROVIDING ACCESS TO THE PROPERTY DESCRIBED IN THE PLAN.
- IN ORDER TO VERIFY COMPLIANCE WITH APPROVED PLANS, FULL-TIME CONSTRUCTION OBSERVATION WILL GENERALLY BE REQUIRED DURING ALL PHASES OF UNDERGROUND SITE CONSTRUCTION INCLUDING INSTALLATION OF SANITARY SEWER, STORM SEWERS, DRAINS, WATER MAINS AND APPURTENANCES AS WELL AS PRIVATE STREET CURBING AND PAVING CONSTRUCTION. INTERMITTENT OBSERVATIONS WILL BE MADE FOR SITE GRADING, PARKING LOT CURBING AND PAVING, RETAINING WALL CONSTRUCTION AND OTHER SURFACE ACTIVITY.

LAKE POINTE

Quantity Summary

SANITARY SEWER		QUANTITY
1	6" PVC SDR 35 HOUSE LEAD	1,506 L.F.
2	8" PVC TRUSS SANITARY SEWER	1,387 L.F.
3	4" DIA. MANHOLE	10 EA.
WATER MAIN		QUANTITY
1	8" WATER MAIN D.I. CL54	2,216 L.F.
2	HYDRANT, VALVE & BOX	7 EA.
3	8" G.V.&W.	3 EA.
4	8"x12" TAPPING SLEEVE, VALVE & WELL	2 EA.
5	1" WATER SERVICE	1,101 L.F.
STORM SEWER		QUANTITY
1	12" C-76 CL 4	1,886 L.F.
2	15" C-76 CL 4	611 L.F.
3	18" C-76 CL 4	592 L.F.
4	21" C-76 CL 4	543 L.F.
5	24" C-76 CL 4	47 L.F.
6	2" DIA. INLET	9 EA.
7	4" DIA. CATCH BASIN	21 EA.
8	6" DIA. CATCH BASIN	1 EA.
9	4" DIA. MANHOLE	5 EA.
10	6" DIA. OVERFLOW MANHOLE	1 EA.
11	24" CONC. END SECTION W/ RIP RAP	1 EA.
12	6" DIA. CONTECH CS-6	1 EA.
13	36" STANDPIPE	1 EA.
PAVING		QUANTITY
1	INTERNAL ASPH. PAVEMENT (4" ON 10")	5,124 S.Y.
2	R.C.O.C. ROW ASPHALT PAVEMENT	511 S.Y.
3	CONCRETE SIDEWALK	22,880 S.F.
4	THICKENED EDGE CONCRETE WALK	537 L.F.
5	24" MOUNTABLE CONC. & STANDARD GUTTER	2,922 L.F.
6	F4 CONC. CURB& GUTTER	396 L.F.
7	B2 ROLL CURB WITH GUTTER	121 L.F.

ESTIMATED QUANTITIES ARE FOR REFERENCE ONLY. CONTRACTOR SHALL DETERMINE THE QUANTITIES OF WORK REQUIRED TO COMPLETE THE PROJECT.



- ### SHEET INDEX
- COVER SHEET
 - COMPOSITE UTILITY AND OVERALL SITE PLAN
 - EXISTING CONDITIONS AND DEMOLITION PLAN
 - GRADING & S.E.S.C. PLAN
 - GRADING & S.E.S.C. PLAN
 - GRADING & S.E.S.C. PLAN
 - PROPOSED CONTOUR PLAN
 - DETAILED GRADING PLAN FOR ADA PATHWAYS
 - ROAD AND SANITARY SEWER PLAN
 - ROAD AND SANITARY SEWER PROFILES
 - WATERMAIN PLAN
 - 10A. WATER MAIN PROFILES
 11. STORM SEWER PLAN
 12. STORM SEWER PROFILES
 13. STORM SEWER PROFILES
 14. CONTECH CS-6 DETAILS
 15. DETENTION BASIN PLAN, CALCULATIONS AND PROFILE
 16. DRAINAGE DISTRIBUTION PLAN & STORM SEWER CALCULATIONS
 - 16A. OVERALL STORM WATER MANAGEMENT SYSTEM "WEST VALLEY & LAKE POINTE"
 17. APPROACH PLAN
 - ND1. NOTES AND DETAILS
 - ND2. NOTES AND DETAILS

- ### DETAILS:
- WHITE LAKE TOWNSHIP
SANITARY SEWER STANDARD DETAILS
WATER MAIN STANDARD DETAILS
STORM SEWER STANDARD DETAILS
- OAKLAND COUNTY
SOIL EROSION AND SEDIMENTATION CONTROL DETAILS
- ### LANDSCAPE PLANS:
- LS-1 OVERALL LANDSCAPE PLAN
LS-2 GENERAL LANDSCAPE PLANTING DETAIL
LS-3 PLANT MATERIAL LIST AND PLANT DETAILS
LS-4 BLDG. FOUNDATION, CLUBHOUSE AND ENTRY PLANTINGS
LS-5 SITE AMENITY, PERGOLA AND ENTRY SIGN DETAILS
LS-6 POOL DECK PLAN
LS-7 POOL PERGOLA/TRELLIS ELEVATIONS & DETAILS
- ### IRRIGATION PLANS:
- IRR-1 IRRIGATION PLAN
IRR-2 IRRIGATION PLAN
IRR-3 IRRIGATION PLAN
IRR-4 IRRIGATION NOTES & DETAILS
- ### ARCHITECTURE PLANS:
- A100 BUILDING PLANS
A101 UNIT ELEVATIONS
A200 BUILDING PLANS
A201 BUILDING ELEVATIONS
A202 BUILDING PLANS
A203 BUILDING ELEVATIONS
A204 BUILDING PLANS
A205 BUILDING ELEVATIONS
AS-1 SITE PLAN
CB4.0 COMMUNITY BUILDING ELVATIONS

CLINTON TOWNSHIP OFFICE
17001 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MI 48038
586.412.7050

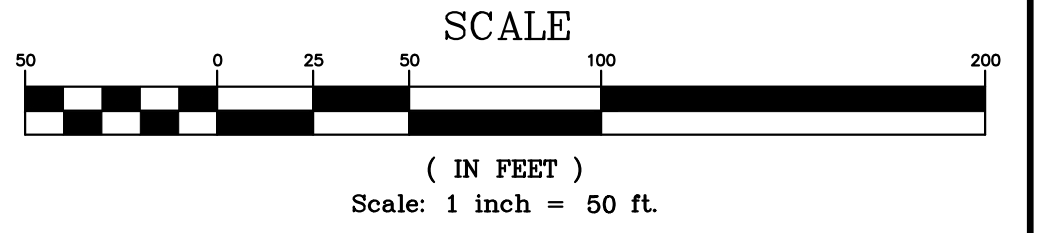
FARMINGTON HILLS OFFICE
39205 COUNTRY CLUB DRIVE, SUITE C8
FARMINGTON HILLS, MI 48331
248.308.3331

ARCHITECTURAL PLANS PROVIDED BY:
ALEXANDER V. BOGAERTS AND ASSOCIATES, P.C.
2445 FRANKLIN ROAD
BLOOMFIELD HILLS, MICHIGAN 48302
PHONE: 248.334.5000

LANDSCAPE PLANS PROVIDED BY:
FELINO PASCUAL & ASSOCIATES LANDSCAPE ARCHITECTURE
24333 ORCHARD LAKE ROAD, SUITE G
FARMINGTON, MICHIGAN 48336
PHONE: 248.557.5588

SURVEY PROVIDED BY:
ALPINE ENGINEERING, INC.
46892 WEST ROAD, SUITE 109
NOVI, MICHIGAN 48377
PHONE: 248.926.3765

REVISIONS			ENGINEER'S SEAL
NO.	ITEM	DATE	
1.	REVISE PER OWNER	6-3-20	
2.	REVISE GRADES ON UNITS 2 AND 6	11-9-20	
3.	REV PER 11-20-20 WL TWP LETTER	02-02-21	
4.	REVISE PER WHITE LAKE TWP	03-03-21	
5.	ADD WATER MAIN PROFILES PER E.G.L.E.	04-07-21	
6.	REVISED PER TOWNSHIP	04-25-23	
8.	REVISE PER AGENCIES	02-13-24	
DATE:	DESIGNED BY: A.A.	JOB NUMBER:	18-039
	CHECKED BY: P.K.	DRAWING FILE:	19089CY.dwg



- ### NOTES
- ON-SITE SANITARY SEWERS, AND WATER MAINS SHALL BE CENTERED IN A 20-FOOT WIDE EASEMENT.
 - ALL OFF-SITE SANITARY AND WATER MAIN IMPROVEMENTS WILL BECOME PUBLIC PROPERTY.
 - CRITICAL STORM STRUCTURES WILL BE FITTED WITH TRAPS.
 - PERIODIC MAINTENANCE OF THE STORM WATER DETENTION BASIN WILL BE REQUIRED.
 - PROVISIONS PURSUANT TO OAKLAND COUNTY DRAIN COMMISSION EROSION CONTROL MANUAL WILL BE UNDERTAKEN INCLUDING, BUT NOT LIMITED TO, SILT FENCE AND INLET FILTERS.
 - "NO PARKING - FIRE LANE" SIGNAGE SHALL BE INSTALLED PROHIBITING PARKING ON ONE SIDE OF THE STREET.
 - PROPOSED GRADES WILL MATCH EXISTING ELEVATIONS AT THE PROPERTY LINE UNLESS RETAINING WALLS ARE PROVIDED OR GRADING EASEMENTS OBTAINED.
 - A PERMIT FROM THE ROAD COMMISSION FOR OAKLAND COUNTY WILL BE REQUIRED FOR ALL WORK IN THE UNION LAKE ROAD RIGHT-OF-WAY.
 - ALL WATER MAIN SHALL BE CLASS 54 DUCTILE IRON. ALL GATE VALVES SHALL BE PLACED IN GATE WELLS.
 - ALL STRUCTURES EXCEPT FOR INLETS WHICH CONNECT TO CATCH BASINS WILL BE A MINIMUM OF FOUR FEET IN DIAMETER.
 - THE DEVELOPMENT SHALL BE CONSTRUCTED AS A SINGLE PHASE.
 - THE CONSTRUCTION TYPE OF THE PROPOSED BUILDINGS IS WOOD CONSTRUCTION WITH BRICK VENEER AND SLAB ON GRADE.
 - THE FRONT PORCH LIGHTS AND THE COACH LIGHTS WILL UTILIZE 75 WATT BULBS.

PARKING CALCULATIONS

SPACES REQUIRED:
2 SPACES FOR EACH UNIT, PLUS 1/4 SPACE FOR EACH BEDROOM.
2 SPACES FOR EACH UNIT = 138 SPACES
138 BEDROOMS/4 = 34.5 SPACES
TOTAL SPACES REQUIRED = 172.5

SPACES PROVIDED:
2 SPACES PER GARAGE = 138
2 SPACES PER DRIVEWAY = 138
ADDITIONAL PARKING SPACES = 31
TOTAL SPACES PROVIDED = 307

Accessible Parking Spaces	
Total Parking Spaces (Excluding Garages)	169
Accessible Spaces	
Per 2010 ADA (208.2.3 Residential Facilities)	
Total Required (Minimum 2% of the total)	4
Total Provided	
Standard Accessible Spaces	2
Van Accessible Spaces	2
	4

- ### SITE DATA
- EXISTING ZONING: R1-C/SINGLE FAMILY RESIDENTIAL AND LB/LOCAL BUSINESS
 - SITE AREA: 13.32 ACRES GROSS, 12.76 ACRES NET
 - PROPOSED LAND USE: ATTACHED SINGLE FAMILY DEVELOPMENT APARTMENTS- MULTI FAMILY
 - ALL PROPOSED UNITS ARE 2-BEDROOMS
 - DENSITY: 69 UNITS/12.76 ACRES = 5.41 UNITS/ACRE
 - PROPERTY LINE SETBACK = FRONT 40 FEET
SIDE 25 FEET
REAR 25 FEET
 - INTERNAL SETBACK = 30 FEET FROM BACK OF CURB.
 - SIDE YARD SETBACK: MIN. 20 FEET BETWEEN BUILDINGS
 - DWELLING UNITS: 69 - (2 BEDROOM UNITS)
 - TRASH DISPOSAL SHALL BE BY CURB SIDE PICKUP.
 - LIGHTING SHALL BE PROVIDED BY PHOTOCELL OPERATED LIGHTS LOCATED ON THE FRONT OF EACH HOME.

WETLANDS

NO WETLANDS EXIST ON SITE.

FLOODPLAIN INFORMATION

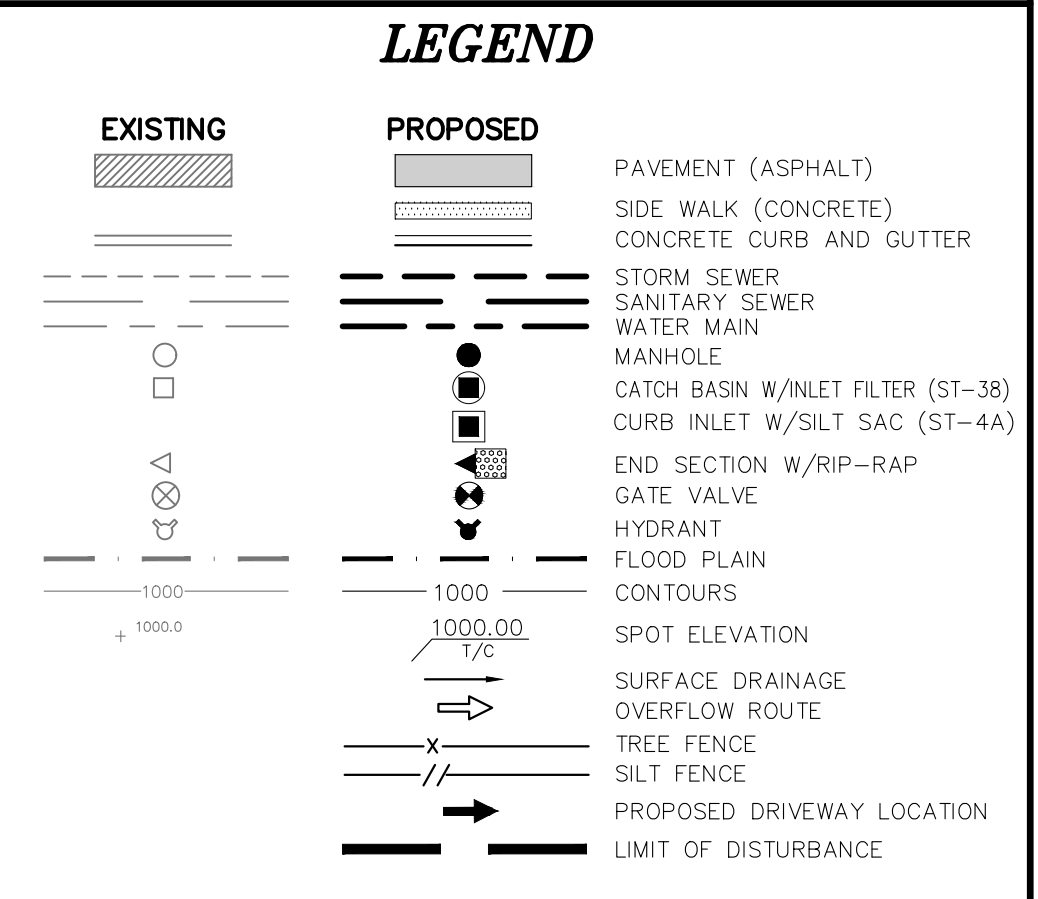
THE SUBJECT PROPERTY LIES WITHIN A ZONE "X" FLOOD HAZARD AREA - "AREAS OF MINIMAL FLOODING", PER THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP, MAP NUMBER 26125C0477F, MAP EFFECTIVE SEPTEMBER 29, 2006.

DENSITY CALCULATION:

AREA OF RESIDENTIAL SITE = 13.32 Ac.
AREA OF 60' R.O.W. = 0.56 Ac.
DENSITY AREA = 13.32-0.56 = 12.76 Ac.
AREA OF INTERNAL ROADS = 1.31 Ac.
NET DENSITY AREA = 12.76-1.31 = 11.45 Ac.
NET DENSITY = 69 UNITS / 12.76 ACRES = 5.41 UNITS / ACRE

IF RM-1 ZONING APPLIED:

FOR 2 BEDROOMS UNITS
REQUIRED 6,000 S.F./UNIT
DEDUCT 10,000 S.F. FOR FIRST UNIT
TOTAL ALLOWABLE UNITS = 498,762 - 10,000 / 6,000 = 81
TOTAL ALLOWABLE UNITS = 82 UNITS
TOTAL UNITS PROVIDED = 69 UNITS
(5.41 UNITS / ACRE)



- ### LIST OF ALL REQUIRED STATE AND FEDERAL PERMITS
- | TYPE | AGENCY | STATUS |
|-------------------|--------|-----------|
| 1. NPDES | MDEQ | NOT FILED |
| 2. SANITARY SEWER | MDEQ | NOT FILED |
| 3. WATER MAIN | MDEQ | NOT FILED |

LAKE POINTE

SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

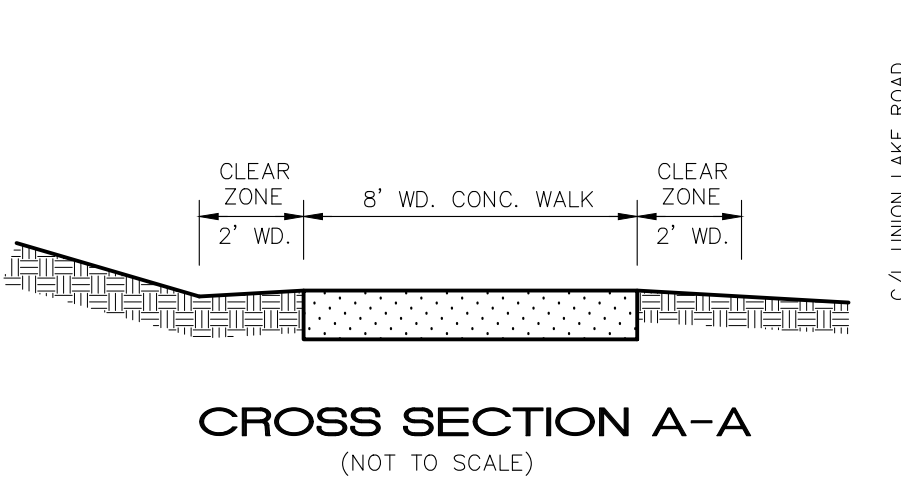
REVISIONS

NO.	ITEM	DATE
1.	REVISE PER OWNER	6-3-20
2.	REVISE GRADES ON UNITS 2 AND 6	11-9-20
3.	REV PER 11-20-20 WL TWP LETTER	02-02-21
4.	REVISE PER WHITE LAKE TWP	03-03-21
5.	REVISED PER TOWNSHIP	04-25-23
6.	REVISED PER TOWNSHIP	7-27-23
7.	REVISED PER AGENCIES	02-13-24

STORM STRUCTURE SCHEDULE

NO.	TYPE	SIZE (DIA)	SUMP DEPTH (feet)	FRAME AND COVER
1	CATCH BASIN	4	2	EJW 7065 Frame Type M1 Cover
2	CATCH BASIN	4	2	EJW 7065 Frame Type M1 Cover
3	MANHOLE	4	0	EJW 1040 Frame Type B Cover
4	CATCH BASIN	4	2	EJW 7065 Frame Type M1 Cover
5	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
6	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
7	CATCH BASIN	6	2	EJW 1040 Frame Type N Cover
8	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
9	CATCH BASIN	4	2	EJW 7065 Frame Type M1 Cover
10	CATCH BASIN	4	2	EJW 7065 Frame Type M1 Cover
11	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
12	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
13	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
14	INLET	2	0	EJW 1040 Frame Type N Cover
15	CATCH BASIN	4	2	EJW 7065 Frame Type M1 Cover
16	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
17	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
18	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
19	INLET	2	0	EJW 1040 Frame Type N Cover
20	CATCH BASIN	4	2	EJW 7045 Frame Type M1 Cover
21	INLET	2	0	EJW 7045 Frame Type M1 Cover
22	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
23	MANHOLE	4	0	EJW 1040 Frame Type B Cover
24	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
25	CATCH BASIN	4	2	EJW 1040 Frame Type N Cover
26	MANHOLE	4	0	EJW 1040 Frame Type B Cover
27	INLET	2	0	EJW 1040 Frame Type N Cover
28	INLET	2	0	EJW 1040 Frame Type N Cover
29	CATCH BASIN	4	2	EJW 7065 Frame Type M1 Cover
30	INLET	2	0	EJW 7065 Frame Type M1 Cover
31	INLET	2	0	EJW 1040 Frame Type N Cover
32	INLET	2	0	EJW 1040 Frame Type N Cover
34C	MANHOLE	4	0	EJW 1040 Frame Type B Cover
34D	MANHOLE	4	0	EJW 1040 Frame Type B Cover
OMH	OVERFLOW MANHOLE	6	0	EJW 1040 Frame Type B Cover
SP	STAND PIPE	3		SEE DETAIL ON SHEET 15
CS	CONTECH	6		SEE DETAIL ON SHEET 14

- ### PROPOSED IMPROVEMENTS
- MUNICIPAL SEWER TO BE PROVIDED BY CONSTRUCTING A GRAVITY SEWER. ALL ON-SITE GRAVITY SEWER SHALL BE 8-INCH DIAMETER.
 - WATER SUPPLY TO BE PROVIDED BY CONNECTING TO EXISTING 12" WATER MAINS ALONG UNION LAKE ROAD. ALL WATER MAIN SHALL BE 8-INCH DIAMETER UNLESS OTHERWISE NOTED.
 - ON-SITE STORM WATER DETENTION SHALL BE PROVIDED PER OAKLAND COUNTY DRAIN COMMISSION STANDARDS. ALL STORM DRAINAGE EASEMENTS SHALL BE A MINIMUM OF 20 FEET WIDE IF NECESSARY.
 - ROADWAYS SHALL BE 27' WD. (B-B) WITH CONC. CURB & GUTTER AND ASPHALT PAVEMENT. ALL ROADWAYS SHALL BE PRIVATE. ALL SIDEWALKS SHALL BE 5 FEET WIDE. UNLESS OTHERWISE NOTED, AND MEET ALL ADA REQUIREMENTS.
 - ALL ELECTRIC, CABLE T.V. AND TELEPHONE LINES SHALL BE LOCATED UNDERGROUND, AND SHALL BE PLACED WITHIN EASEMENTS DEDICATED FOR SUCH USE.



UTILITY WARNING

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

Know what's below. Call before you dig.

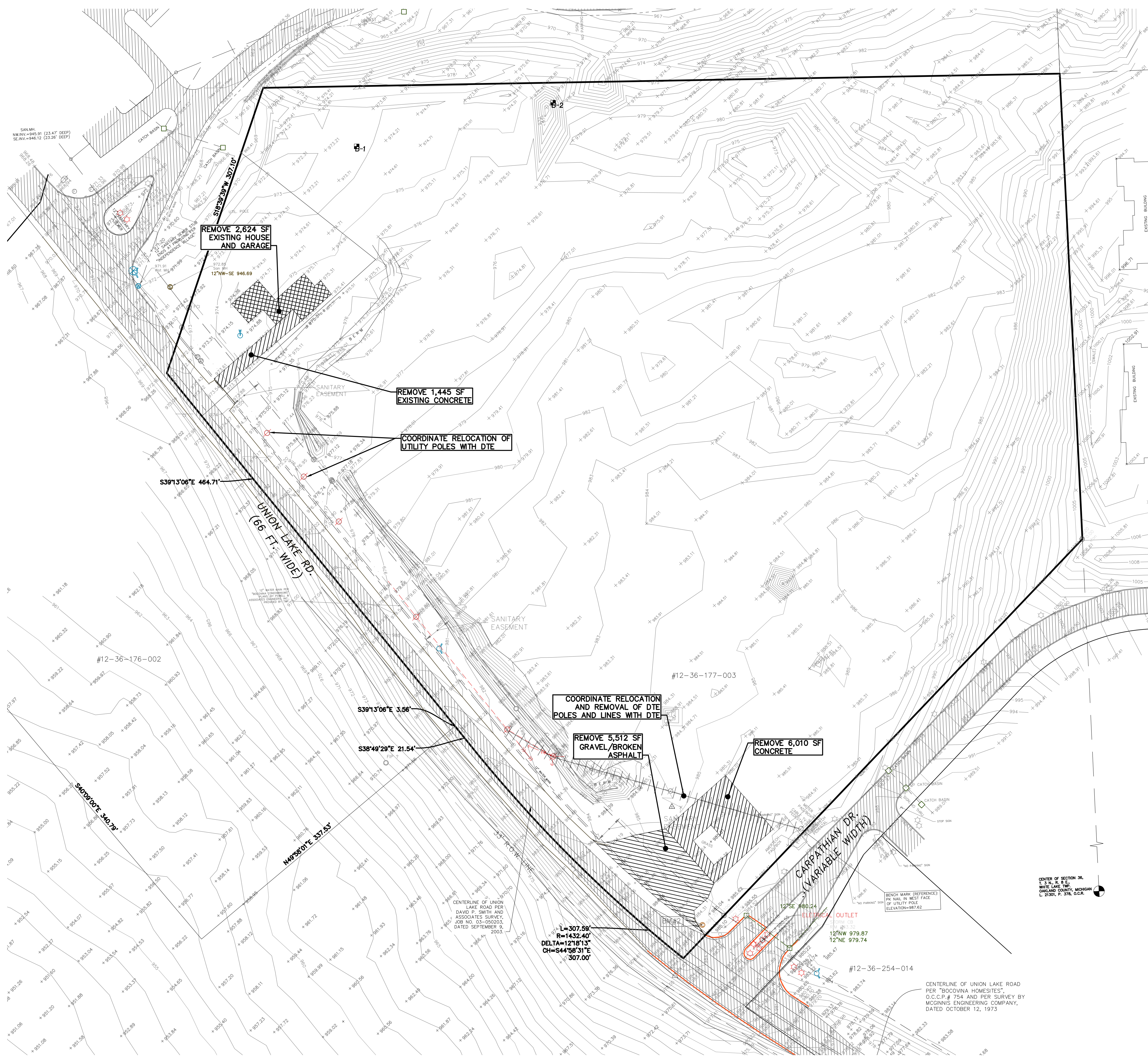
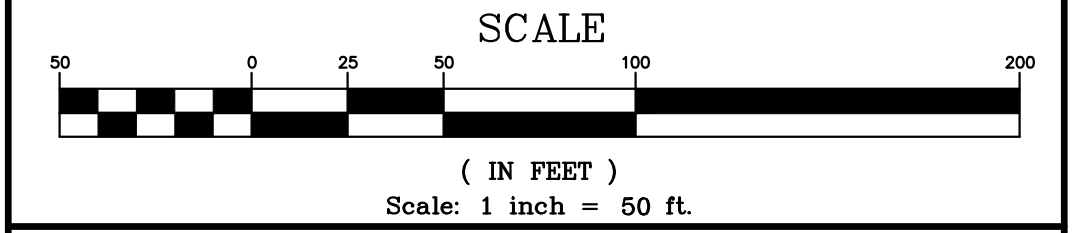
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 190309CU.dwg

COMPOSITE UTILITY AND OVERALL SITE PLAN

CLAYTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLAYTON TOWNSHIP, MI 48038 588.412.7050
PARKMAN FIELD OFFICE: 38205 COUNTRY CLUB DRIVE, SUITE C8 PARKMAN FIELD, MI 48381 248.308.3341

SHEET 2



LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT (ASPHALT)
		SIDE WALK (CONCRETE)
		CONCRETE CURB AND GUTTER
		STORM SEWER
		SANITARY SEWER
		WATER MAIN
		MANHOLE
		CATCH BASIN W/INLET FILTER (ST-38)
		CURB INLET W/SILT SAC (ST-4A)
		END SECTION W/RIP-RAP
		GATE VALVE
		HYDRANT
		FLOOD PLAIN
		CONTOURS
		SPOT ELEVATION
		SURFACE DRAINAGE
		OVERFLOW ROUTE
		TREE FENCE
		SILT FENCE
		PROPOSED DRIVEWAY LOCATION
		LIMIT OF DISTURBANCE

LAKE POINTE
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS		UTILITY WARNING
NO.	ITEM	DATE
1.	REVISE PER OWNER	6-3-20
2.	REVISE GRADES ON UNITS 2 AND 6	11-9-20
3.	REV PER 11-20-20 WL TWP LETTER	02-02-21
4.	REVISE PER WHITE LAKE TWP	03-03-21
6.	REVISED PER TOWNSHIP	04-25-23
7.	REVISED PER TOWNSHIP	7-27-23
8.	REVISE PER AGENCIES	02-13-24

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

811 Know what's below. Call before you dig.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039DM.dwg

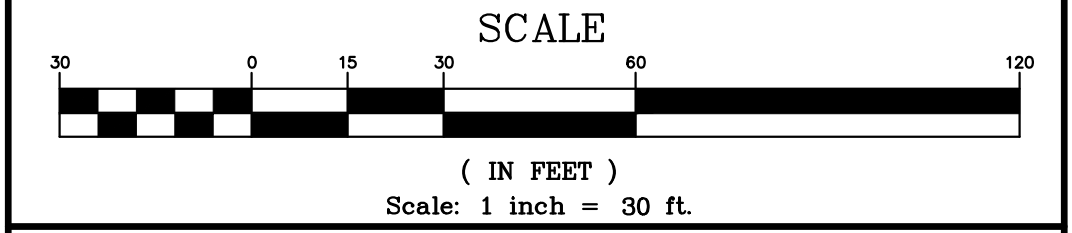
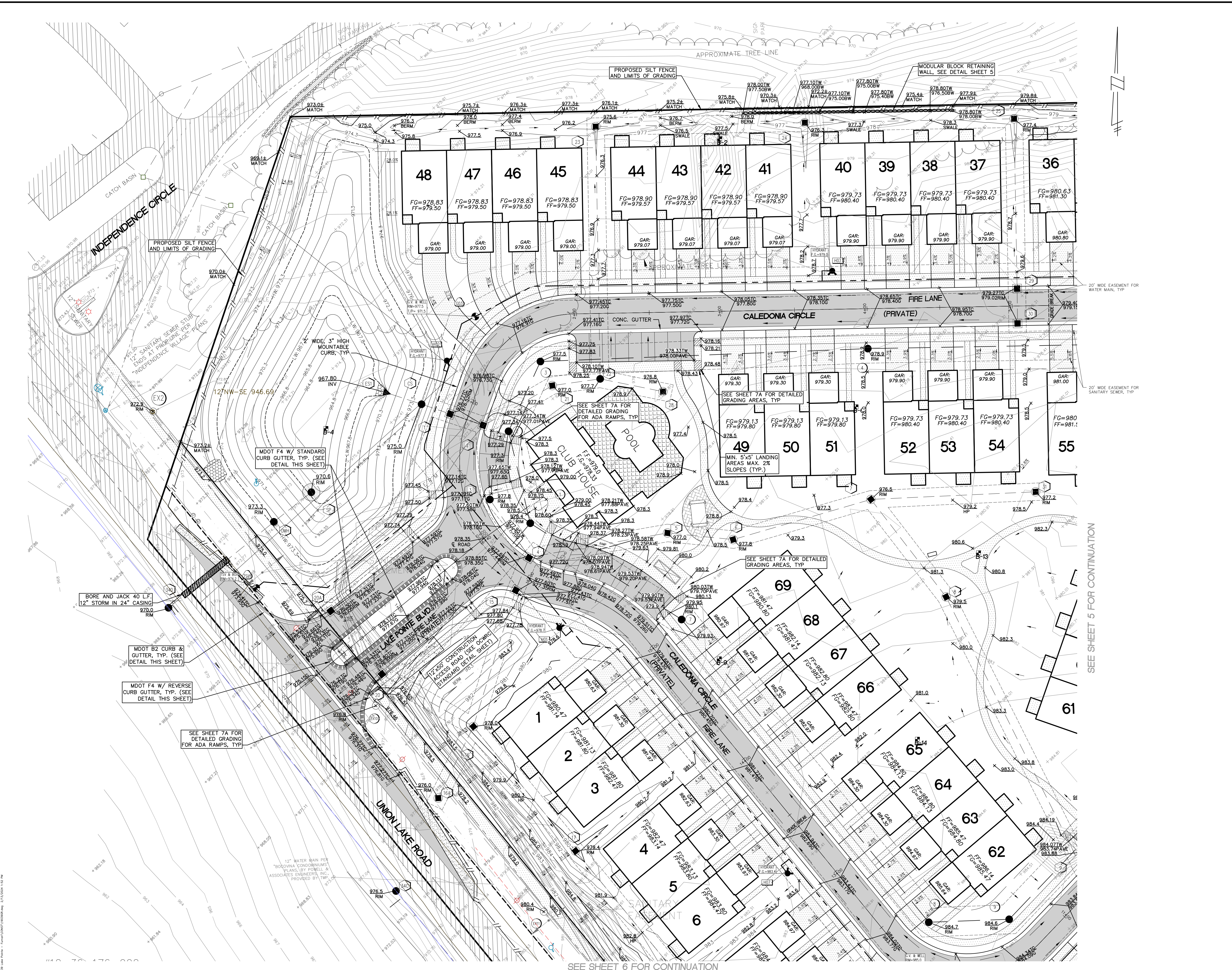
EXISTING CONDITIONS AND DEMOLITION PLAN

SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

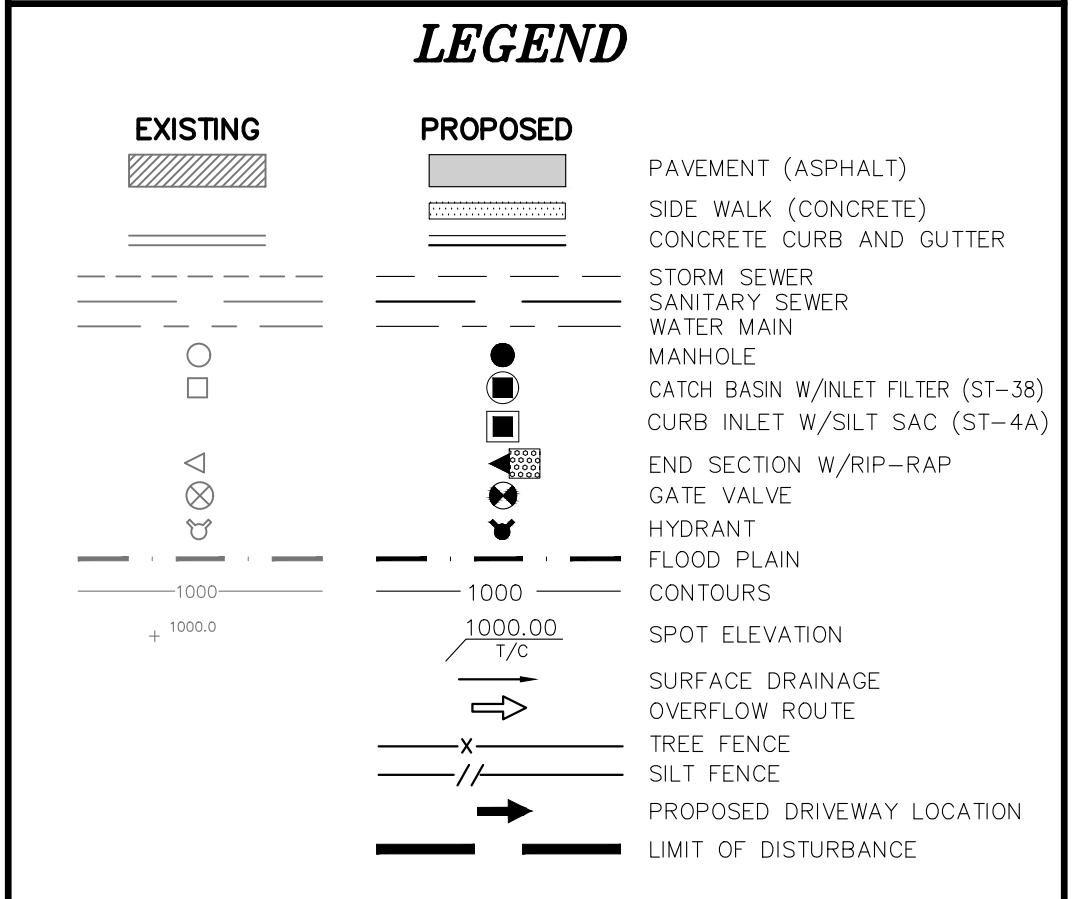
CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48038 588.412.7050

PARMENTON HILLS OFFICE: 38206 COUNTRY CLUB DRIVE, SUITE C8 PARMENTON HILLS, MI 48381 248.308.3341

SHEET 3



- O.C.W.R.C. S.E.S.C. NOTES**
- CONTRACTOR SHALL MAINTAIN ALL SOIL EROSION CONTROLS WEEKLY AND AFTER EVERY STORM EVENT.
 - SEE SHEET ND1 FOR SOIL EROSION CONTROL MAINTENANCE.
- GRADING NOTES**
- PROVIDE MINIMUM 2% SLOPE IN SIDE YARD AND REAR YARD SWALES.
 - MAINTAIN A MAXIMUM 1V:3H SLOPE FROM HOUSE TO SIDE YARD SWALES.
 - AFTER INITIAL EXAMINATION & GRADING OF THE RETENTION BASIN, SILT FENCE SHALL BE PLACED AROUND THE BASINS UNTIL PERMANENT VEGETATION IS ESTABLISHED.
- PAVING NOTES**
- SIDEWALKS AND RAMP CONSTRUCTION SHALL BE ACCORDANCE WITH ADA STANDARDS. (SEE SHEET ND1 FOR RAMP DETAILS)
 - SEE SHEET ND1 & 16 FOR ALL CURB AND PAVING DETAILS.
 - SEE UNION LAKE ROAD APPROACH PLAN NOTES ON SHEETS 16.



LAKE POINTE
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS		UTILITY WARNING
NO.	ITEM	DATE
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2.	REVISE GRADINGS ON UNITS 2 AND 6	11-9-20
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6.	REVISED PER TOWNSHIP	04-25-23
7.	REVISED PER TOWNSHIP	7-27-23
8.	REVISE PER AGENCIES	02-13-24

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

811 Know what's below. Call before you dig.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039GR.dwg

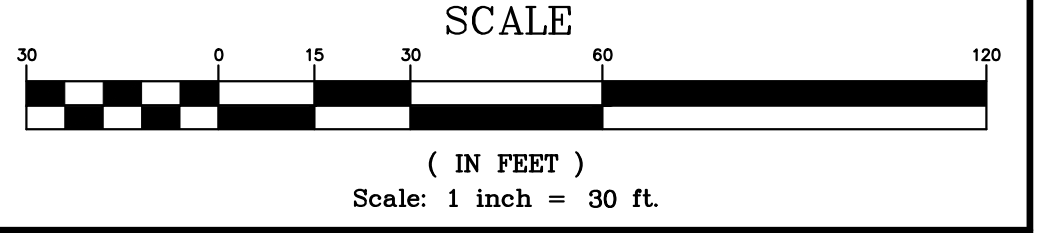
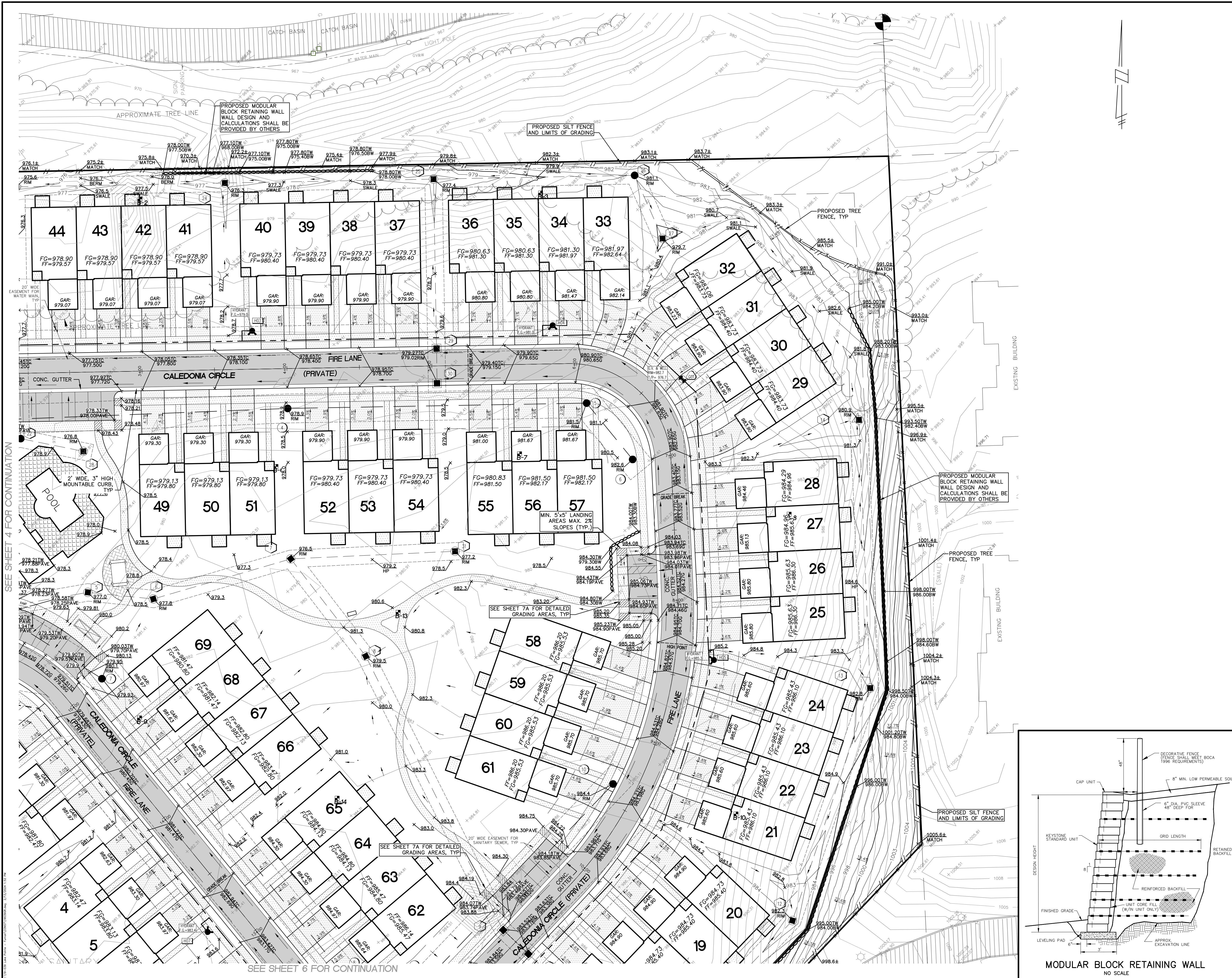
GRADING & S.E.S.C. PLAN

SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48838 588.412.7050

PARMENTON HILLS OFFICE: 38206 COUNTRY CLUB DRIVE, SUITE C8 PARMENTON HILLS, MI 48381 248.308.3341

SHEET 4



O.C.W.R.C. S.E.S.C. NOTES

- CONTRACTOR SHALL MAINTAIN ALL SOIL EROSION CONTROLS WEEKLY AND AFTER EVERY STORM EVENT.
- SEE SHEET ND1 FOR SOIL EROSION CONTROL MAINTENANCE.

GRADING NOTES

- PROVIDE MINIMUM 2% SLOPE IN SIDE YARD AND REAR YARD SWALES.
- MAINTAIN A MAXIMUM 1V:3H SLOPE FROM HOUSE TO SIDE YARD SWALES.
- AFTER INITIAL EXAMINATION & GRADING OF THE RETENTION BASIN, SILT FENCE SHALL BE PLACED AROUND THE BASIN UNTIL PERMANENT VEGETATION IS ESTABLISHED.

PAVING NOTES

- SIDEWALKS AND RAMP CONSTRUCTION SHALL BE ACCORDANCE WITH ADA STANDARDS. (SEE SHEET ND1 FOR RAMP DETAILS)
- SEE SHEET ND1 & 16 FOR ALL CURB AND PAVING DETAILS.
- SEE UNION LAKE ROAD APPROACH PLAN NOTES ON SHEETS 16.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
[Symbol]	[Symbol]	PAVEMENT (ASPHALT)
[Symbol]	[Symbol]	SIDE WALK (CONCRETE)
[Symbol]	[Symbol]	CONCRETE CURB AND GUTTER
[Symbol]	[Symbol]	STORM SEWER
[Symbol]	[Symbol]	SANITARY SEWER
[Symbol]	[Symbol]	WATER MAIN
[Symbol]	[Symbol]	MANHOLE
[Symbol]	[Symbol]	CATCH BASIN W/INLET FILTER (ST-38)
[Symbol]	[Symbol]	CURB INLET W/SILT SAC (ST-4A)
[Symbol]	[Symbol]	END SECTION W/RIP-RAP
[Symbol]	[Symbol]	GATE VALVE
[Symbol]	[Symbol]	HYDRANT
[Symbol]	[Symbol]	FLOOD PLAIN
[Symbol]	[Symbol]	CONTOURS
[Symbol]	[Symbol]	SPOT ELEVATION
[Symbol]	[Symbol]	SURFACE DRAINAGE
[Symbol]	[Symbol]	OVERFLOW ROUTE
[Symbol]	[Symbol]	TREE FENCE
[Symbol]	[Symbol]	SILT FENCE
[Symbol]	[Symbol]	PROPOSED DRIVEWAY LOCATION
[Symbol]	[Symbol]	LIMIT OF DISTURBANCE

LAKE POINTE
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS		UTILITY WARNING
NO.	ITEM	DATE
1.	REVISE PER OWNER	6-3-20
2.	REVISE GRADES ON UNITS 2 AND 6	11-9-20
3.	REV PER 11-20-20 WL TWP LETTER	02-02-21
4.	REVISE PER WHITE LAKE TWP	03-03-21
6.	REVISED PER TOWNSHIP	04-25-23
7.	REVISED PER TOWNSHIP	7-27-23
8.	REVISED PER AGENCIES	02-13-24

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

811 Know what's below. Call before you dig.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

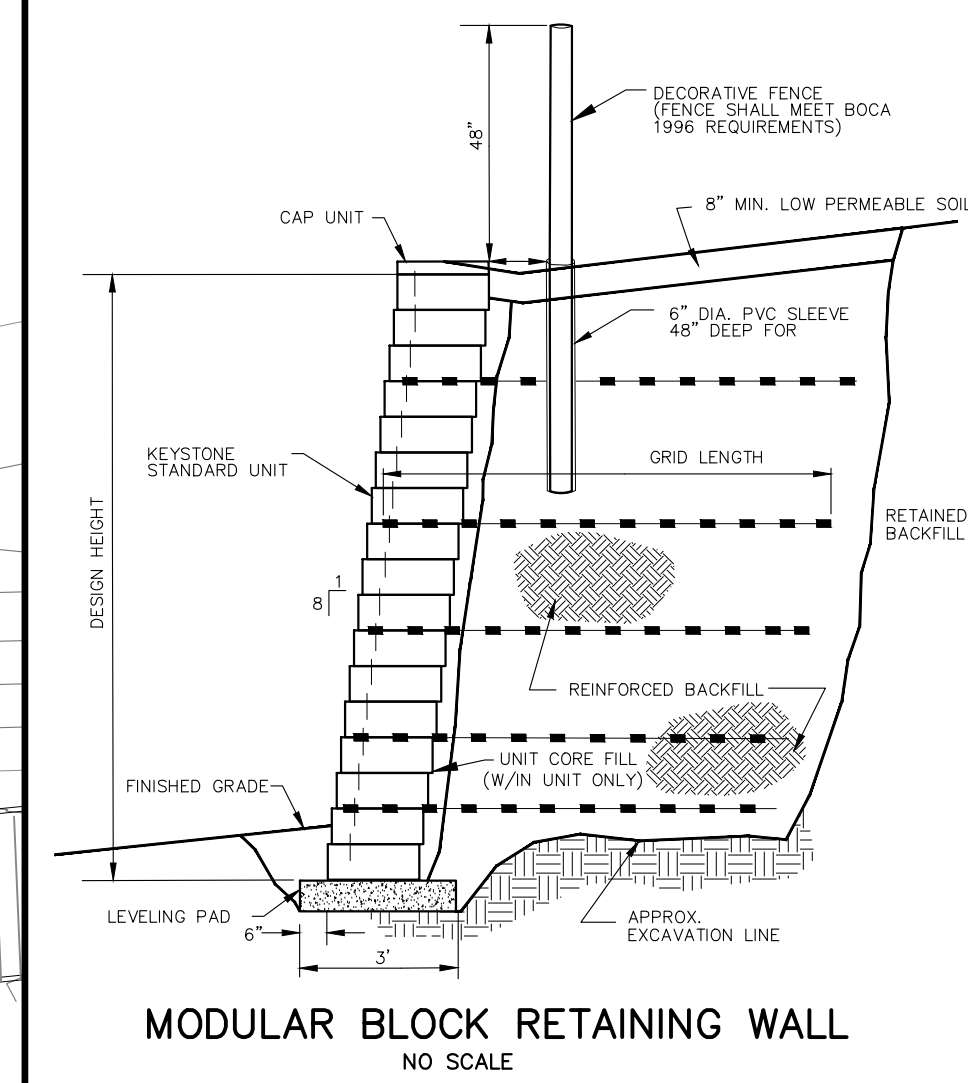
DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
 CHECKED BY: J.E. DRAWING FILE: 19039GR.dwg

GRADING & S.E.S.C. PLAN

SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48038 588.412.7060

PARRAMONT HILLS OFFICE: 38205 COUNTRY CLUB DRIVE, SUITE C8 PARRAMONT HILLS, MI 48381 248.308.3341



MODULAR BLOCK RETAINING WALL
NO SCALE

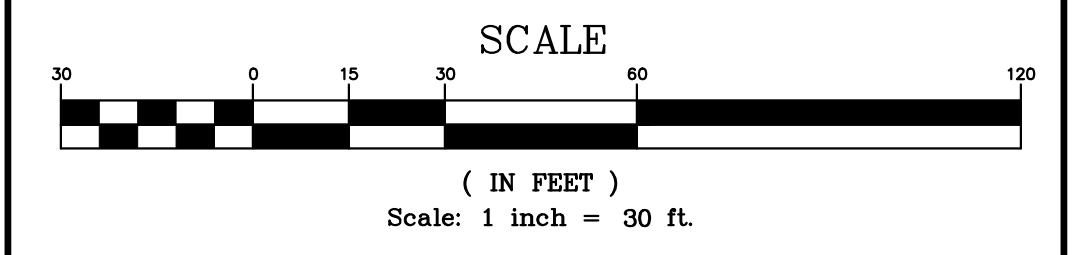
SEE SHEET 4 FOR CONTINUATION

SEE SHEET 6 FOR CONTINUATION



SEE SHEET 4 FOR CONTINUATION

SEE SHEET 5 FOR CONTINUATION



- O.C.W.R.C. S.E.S.C. NOTES**
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 - MAINTAIN A MAXIMUM 1V:3H SLOPE FROM HOUSE TO SIDE YARD SWALES.
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- PAVING NOTES**
- SIDEWALKS AND RAMP CONSTRUCTION SHALL BE ACCORDANCE WITH ADA STANDARDS. (SEE SHEET ND1 FOR RAMP DETAILS)
 - SEE SHEET ND1 & 16 FOR ALL CURB AND PAVING DETAILS.
 - SEE UNION LAKE ROAD APPROACH PLAN NOTES ON SHEETS 16.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT (ASPHALT)
		SIDE WALK (CONCRETE)
		CONCRETE CURB AND GUTTER
		STORM SEWER
		SANITARY SEWER
		WATER MAIN
		MANHOLE
		CATCH BASIN W/INLET FILTER (ST-38)
		CURB INLET W/SILT SAC (ST-4A)
		END SECTION W/RIP-RAP
		GATE VALVE
		HYDRANT
		FLOOD PLAIN
		CONTOURS
		SPOT ELEVATION
		SURFACE DRAINAGE
		OVERFLOW ROUTE
		TREE FENCE
		SILT FENCE
		PROPOSED DRIVEWAY LOCATION
		LIMIT OF DISTURBANCE

LAKE POINTE
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS		UTILITY WARNING
NO.	ITEM	DATE
1.	REVISED PER OWNER	6-3-20
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3.	REV PER 11-20-20 WL TWP LETTER	02-02-21
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8.	REVISED PER AGENCIES	02-13-24

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

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DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039GR.dwg

GRADING & S.E.S.C. PLAN

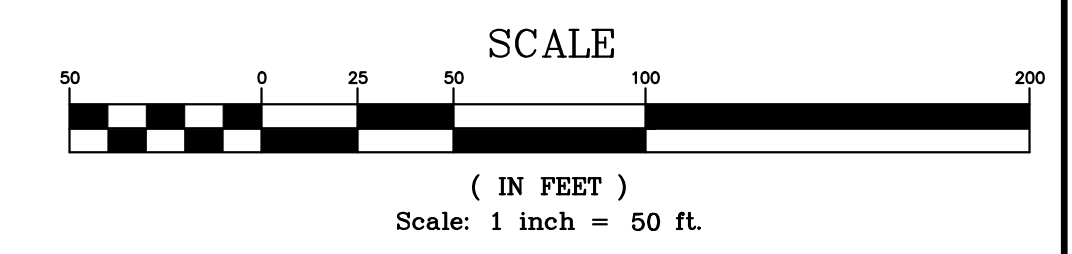
SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48831 588.412.7060

FARMINGTON HILLS OFFICE: 38205 COUNTRY CLUB DRIVE, SUITE C8 FARMINGTON HILLS, MI 48331 248.308.3341

PARCEL ACRES

SHEET 6



LEGEND

EXISTING	PROPOSED	
		PAVEMENT (ASPHALT)
		SIDE WALK (CONCRETE)
		CONCRETE CURB AND GUTTER
		STORM SEWER
		SANITARY SEWER
		WATER MAIN
		MANHOLE
		CATCH BASIN W/INLET FILTER (ST-38)
		CURB INLET W/SILT SAC (ST-4A)
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		GATE VALVE
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		FLOOD PLAIN
		CONTOURS
		SPOT ELEVATION
		SURFACE DRAINAGE
		OVERFLOW ROUTE
		TREE FENCE
		SILT FENCE
		PROPOSED DRIVEWAY LOCATION
		LIMIT OF DISTURBANCE

LAKE POINTE
 SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
 WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS

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1.	REVISE PER OWNER	6-3-20
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7.	REVISED PER TOWNSHIP	7-27-23
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UTILITY WARNING
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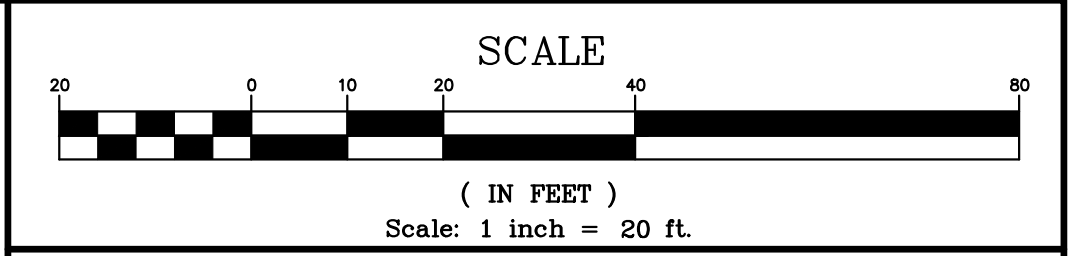
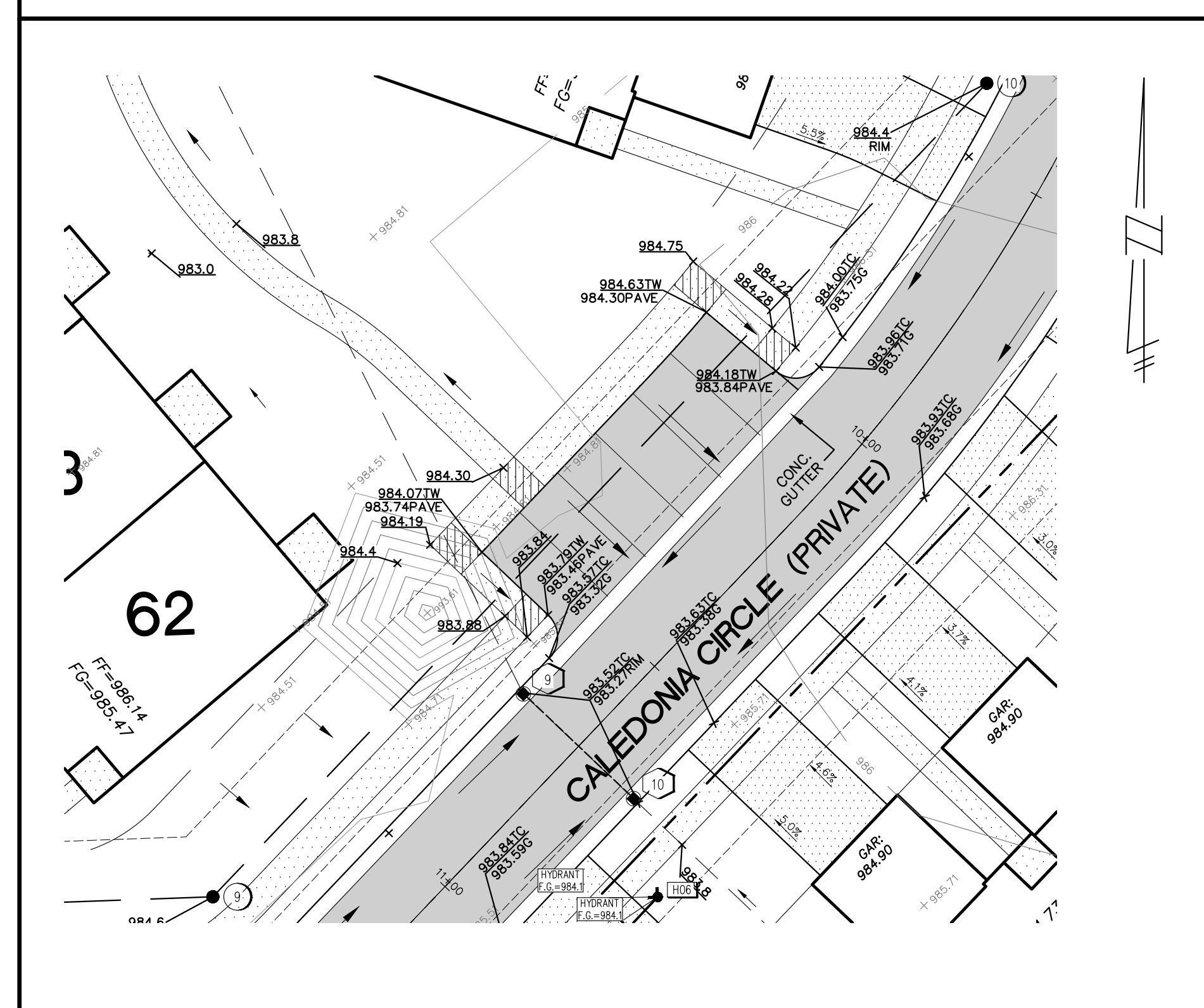
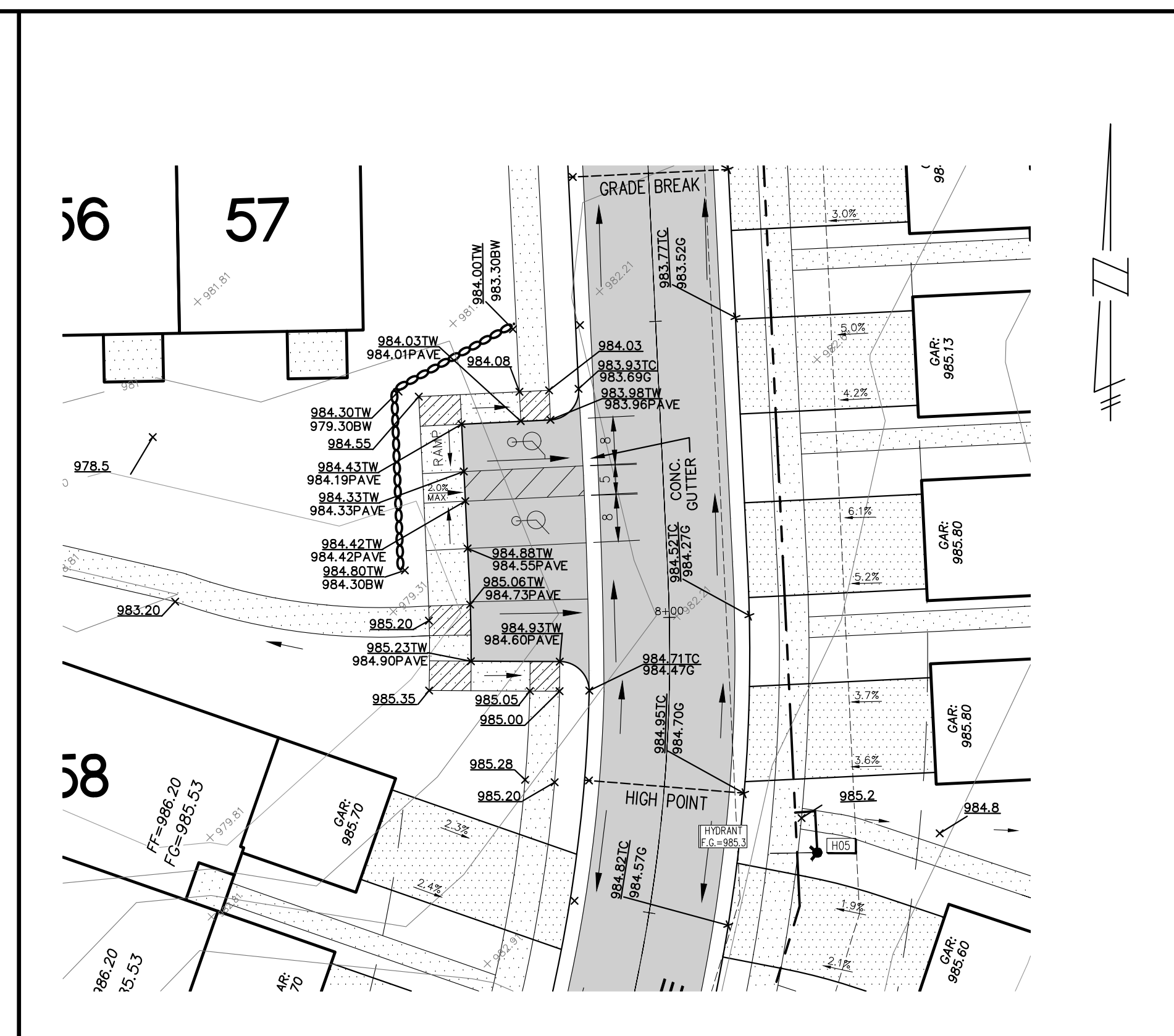
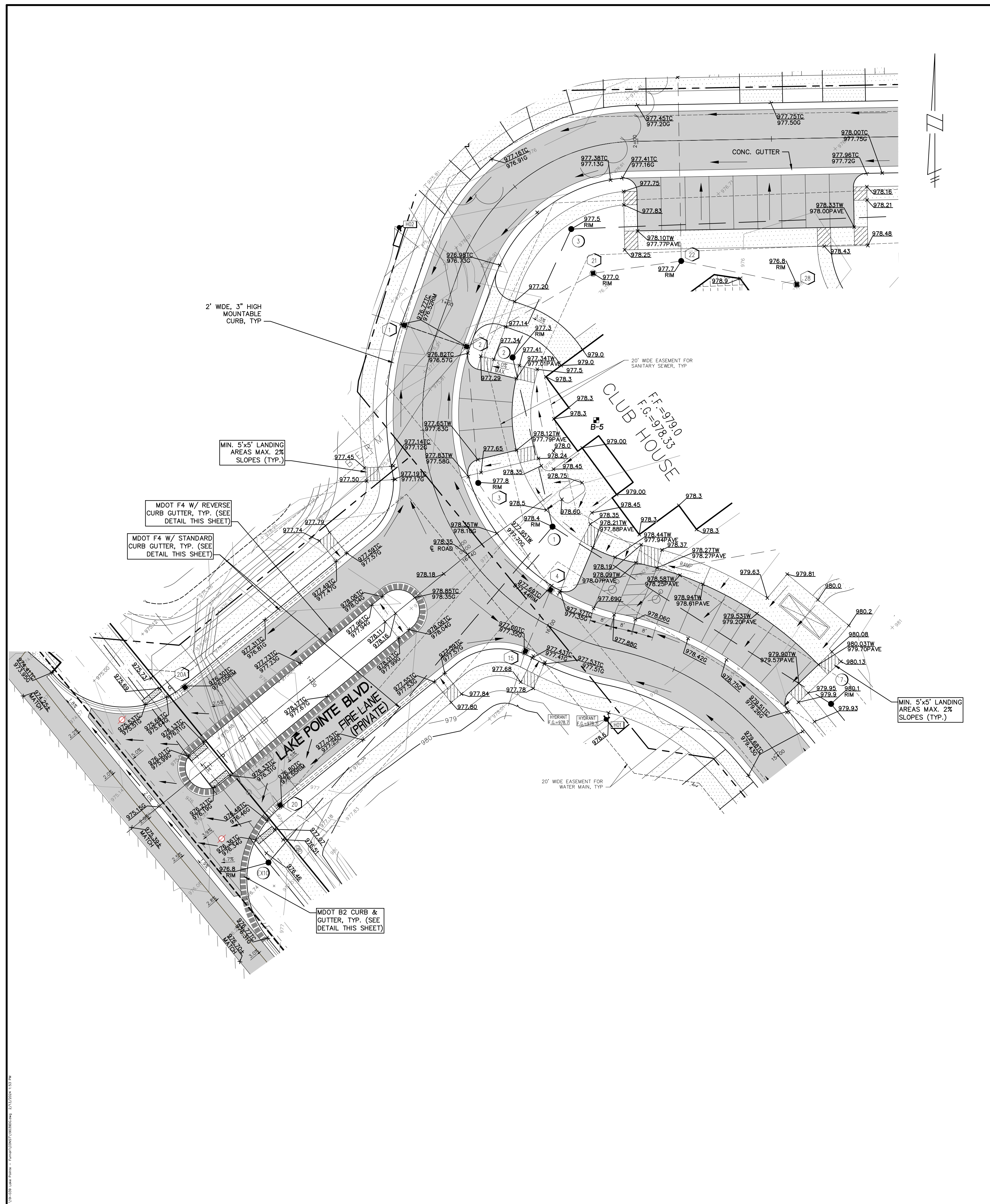
PROPOSED CONTOUR PLAN

SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48038 586.412.7050

PARENTON HILLS OFFICE: 38206 COUNTRY CLUB DRIVE, SUITE C8 PARENTON HILLS, MI 48861 248.308.3311

SHEET 7



- O.C.W.R.C. S.E.S.C. NOTES**
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 - SEE UNION LAKE ROAD APPROACH PLAN NOTES ON SHEETS 16.

LEGEND

EXISTING	PROPOSED	
		PAVEMENT (ASPHALT)
		SIDE WALK (CONCRETE)
		CONCRETE CURB AND GUTTER
		STORM SEWER
		SANITARY SEWER
		WATER MAIN
		MANHOLE
		CATCH BASIN W/INLET FILTER (ST-38)
		CURB INLET W/SILT SAC (ST-4A)
		END SECTION W/RIP-RAP
		GATE VALVE
		HYDRANT
		FLOOD PLAIN
		CONTOURS
		SPOT ELEVATION
		SURFACE DRAINAGE
		OVERFLOW ROUTE
		TREE FENCE
		SILT FENCE
		PROPOSED DRIVEWAY LOCATION
		LIMIT OF DISTURBANCE

LAKE POINTE
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS		UTILITY WARNING
NO.	ITEM	DATE
1.	REVISE PER OWNER	6-3-20
2.	REVISE GRADES ON UNITS 2 AND 6	11-9-20
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7.	REVISED PER TOWNSHIP	7-27-23
8.	REVISE PER AGENCIES	02-13-24

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

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DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039DG.dwg

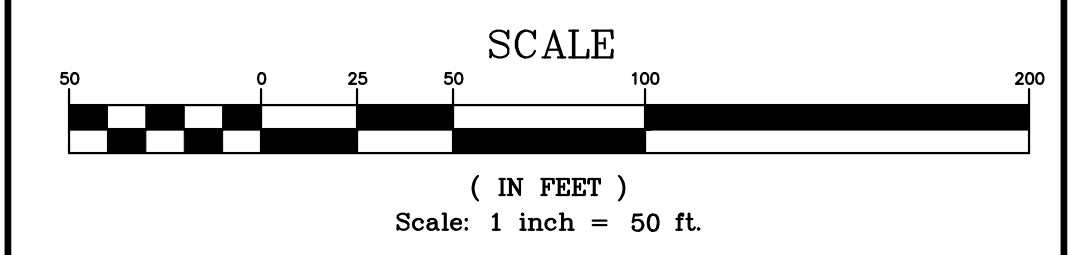
DETAILED GRADING PLAN FOR ADA PATHWAYS

SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48038 588.412.7060

FARMINGTON HILLS OFFICE: 38205 COUNTRY CLUB DRIVE, SUITE C8 FARMINGTON HILLS, MI 48331 248.308.3341

SHEET
7A



SANITARY SEWER BASIS OF DESIGN
 CONNECTION TO PROPOSED MANHOLE / 12-INCH PVC TRUSS
 ON THE NORTHEAST SIDE OF UNION LAKE ROAD AT LAKE POINTE BLVD.

INITIAL DESIGN AND ULTIMATE

RESIDENTIAL EQUIVALENCY UNIT (REU) CALCULATION			
Area (Ac)	Number of Units	Unit Factor	REUs
13.32	69	0.6	41.4
Health Club / Fitness Center w Showers &/or Pool			
Area (SF)	Number of Fixtures	Unit Factor	REUs
	5	1.29	6.5
		TOTAL	47.9

POPULATION	= 2.7 people/unit x 129.20 people	47.9 units
POPULATION DENSITY	= 129.20 people / 13.32 Acres	9.70 ppl / ac
AVERAGE FLOW	= 129.20 people x 12,920 gal/day	100 gal/cap/day
	= 0.0200 cfs	
PEAK FACTOR	= (18+SQRT(P/1000))/(4+SQRT(P/1000))	
	= 4.21 (28,400 > Pop > 500)	
PEAK FLOW	= PEAK FACTOR X AVERAGE FLOW	
	= 0.0842 cfs	

COMPACTED SAND BACKFILL UNDER THE INFLUENCE OF ROADS. MATERIAL COMPACTED TO 95% MAXIMUM UNIT DENSITY.

NOTES

- ALL SANITARY SEWER SHALL BE PVC TRUSS PIPE OR APPROVED EQUIVALENT.
- ALL SANITARY SEWER LEADS SHALL BE SDR 23.5 PVC PIPE.
- ALL TRENCHES WITHIN 1 ON 1 SLOPE FROM TOP OF CURBS SHALL BE BACKFILLED WITH GRANULAR MATERIAL CLASS II AND COMPACTED TO 95% OF MAXIMUM UNIT WEIGHT.
- SANITARY LEADS SHALL BE A MINIMUM OF 1% GRADE, A MAXIMUM OF 150 LF AND A MINIMUM 6" DIAMETER.
- SANITARY LEADS SHALL BE BURIED AT LEAST 5 FEET DEEP WHERE UNDER THE INFLUENCE OF PAVEMENT.
- ALL SANITARY MANHOLES SHALL BE 4' DIAMETER UNLESS OTHERWISE NOTED.

LEGEND

EXISTING	PROPOSED	
		PAVEMENT (ASPHALT)
		SIDE WALK (CONCRETE)
		CONCRETE CURB AND GUTTER
		STORM SEWER
		SANITARY SEWER
		WATER MAIN
		MANHOLE
		CATCH BASIN W/INLET FILTER (ST-38)
		CURB INLET W/SILT SAC (ST-4A)
		GATE VALVE
		HYDRANT
		FLOOD PLAIN
		CONTOURS
		SPOT ELEVATION
		SURFACE DRAINAGE
		OVERFLOW ROUTE
		TREE FENCE
		SILT FENCE
		PROPOSED DRIVEWAY LOCATION
		LIMIT OF DISTURBANCE

LAKE POINTE
 SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
 WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS			UTILITY WARNING
NO.	ITEM	DATE	
1.	REVISE PER OWNER	6-3-20	UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.
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4.	REVISE PER WHITE LAKE TWP	03-03-21	
6.	REVISED PER TOWNSHIP	04-25-23	Know what's below. Call before you dig.
7.	REVISED PER TOWNSHIP	7-27-23	
8.	REVISED PER AGENCIES	02-13-24	

DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
 CHECKED BY: J.E. DRAWING FILE: 19039RD.dwg

ROAD AND SANITARY SEWER PLAN

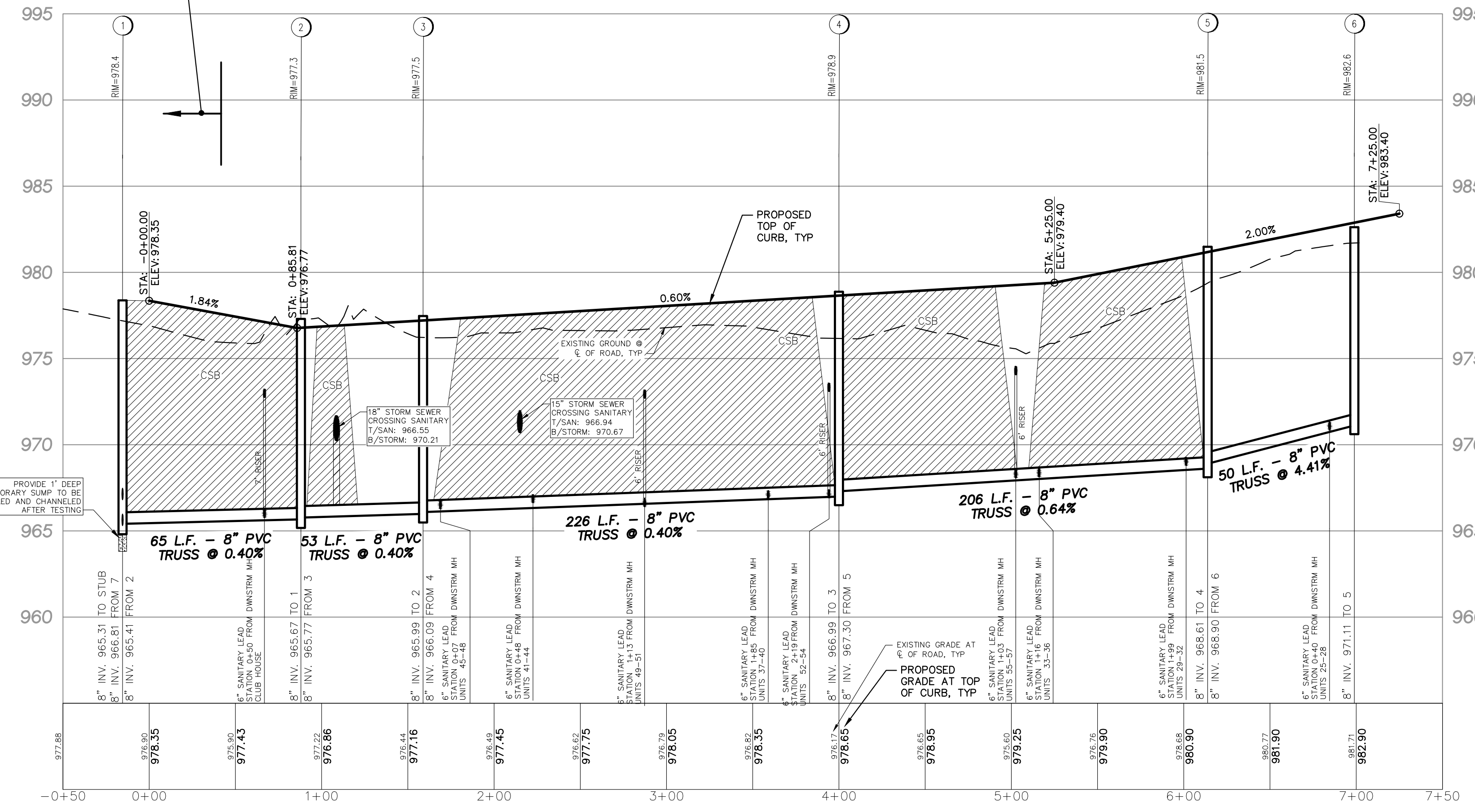
SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48036 586.428.7060

PARMENTON HILLS OFFICE: 38205 COUNTRY CLUB DRIVE, SUITE C8 PARMENTON HILLS, MI 48381 248.308.3341

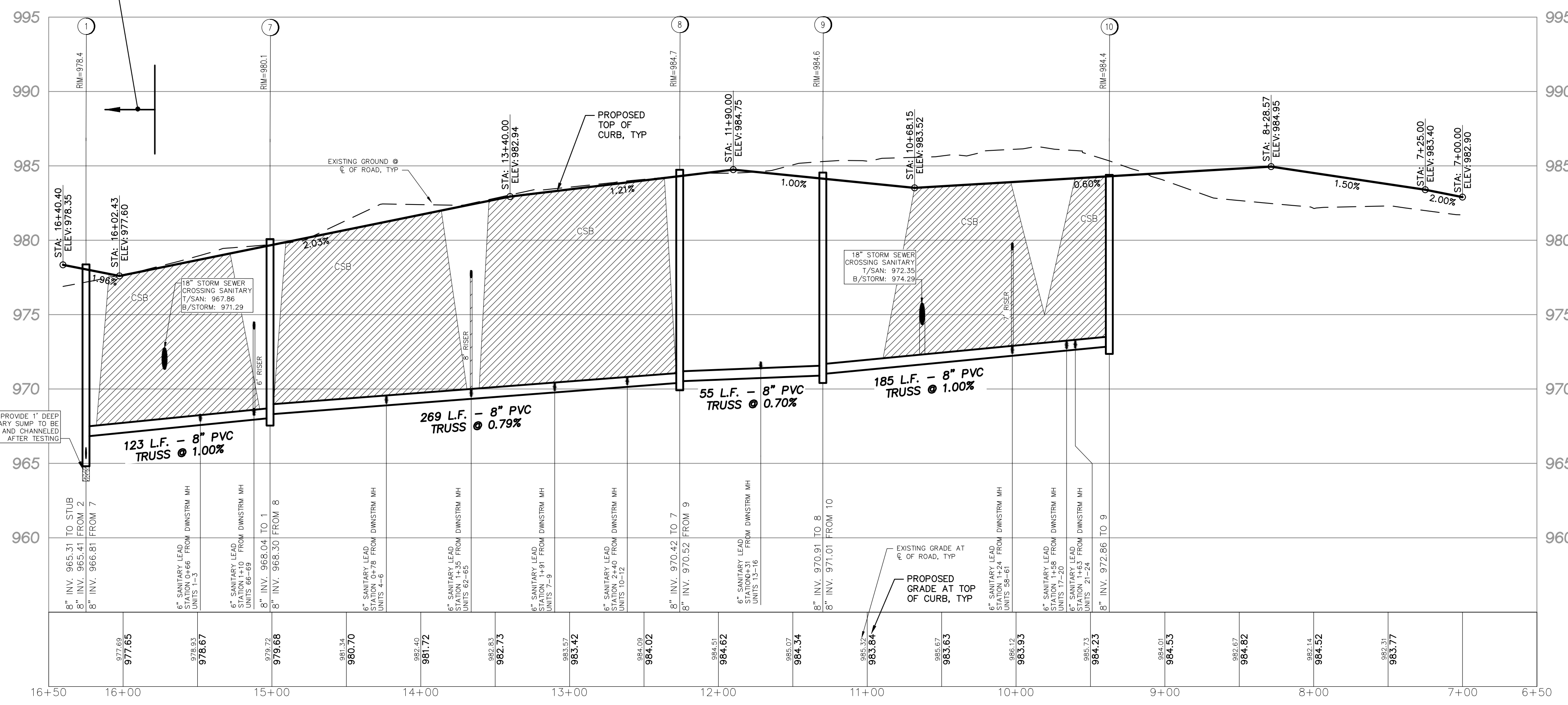
SHEET **8**

SEE GRADING PLAN (SHEET 4) FOR INTERSECTION GRADING DETAIL

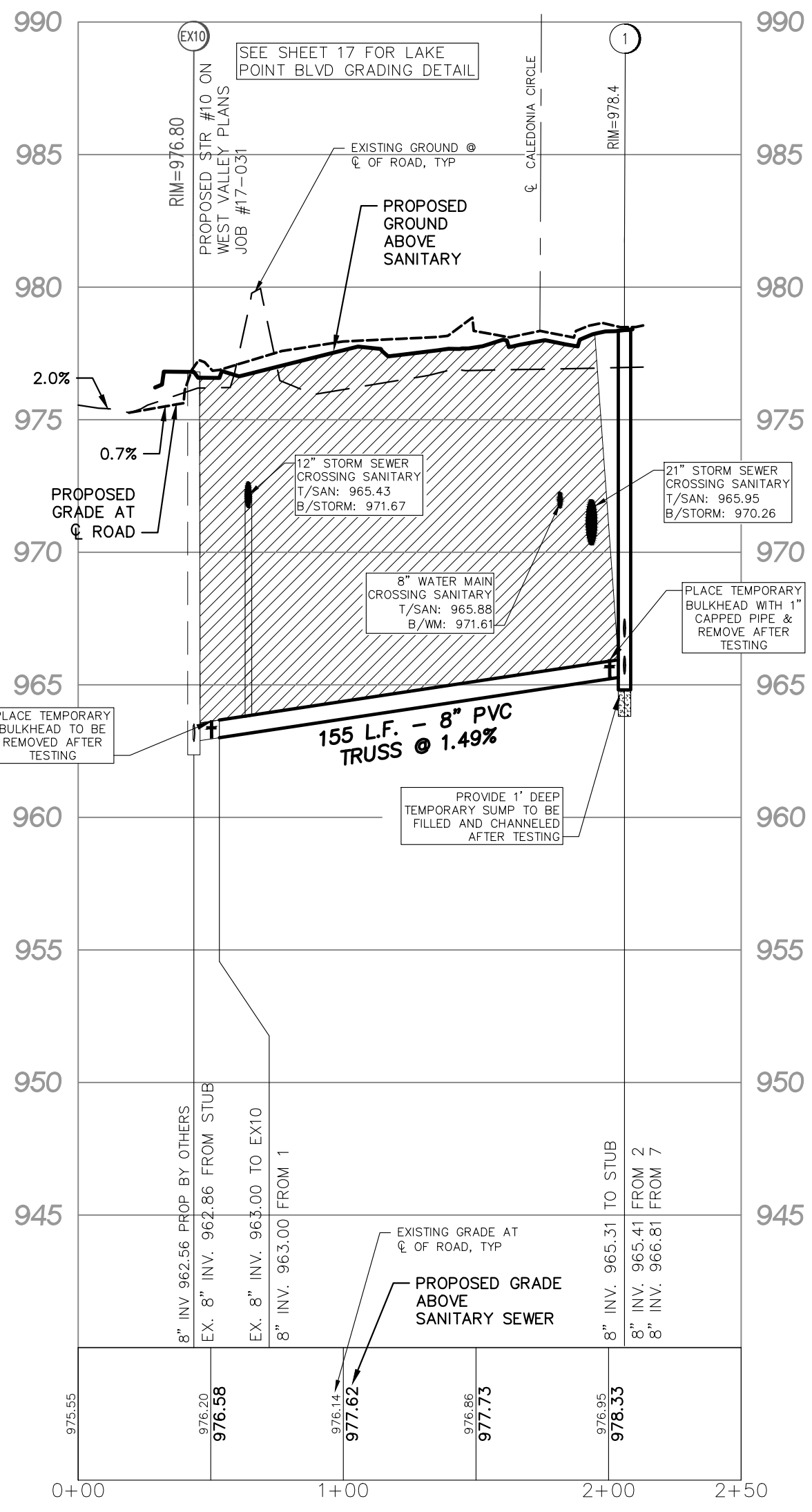


CALEDONIA CIRCLE
SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

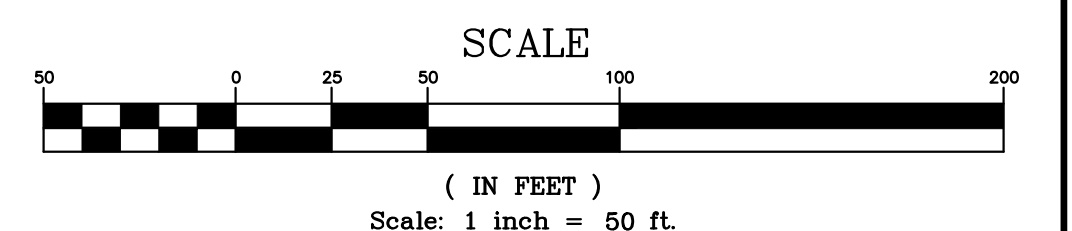
SEE GRADING PLAN (SHEET 4) FOR INTERSECTION GRADING DETAIL



CALEDONIA CIRCLE
SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'



LAKE POINTE BLVD
SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'



LEGEND	
	EXISTING PAVEMENT (ASPHALT)
	PROPOSED PAVEMENT (ASPHALT)
	EXISTING CONCRETE CURB AND GUTTER
	PROPOSED CONCRETE CURB AND GUTTER
	EXISTING STORM SEWER
	PROPOSED STORM SEWER
	EXISTING SANITARY SEWER
	PROPOSED SANITARY SEWER
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	PROPOSED WATER MAIN
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LAKE POINTE
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS			UTILITY WARNING
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DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039RD.dwg

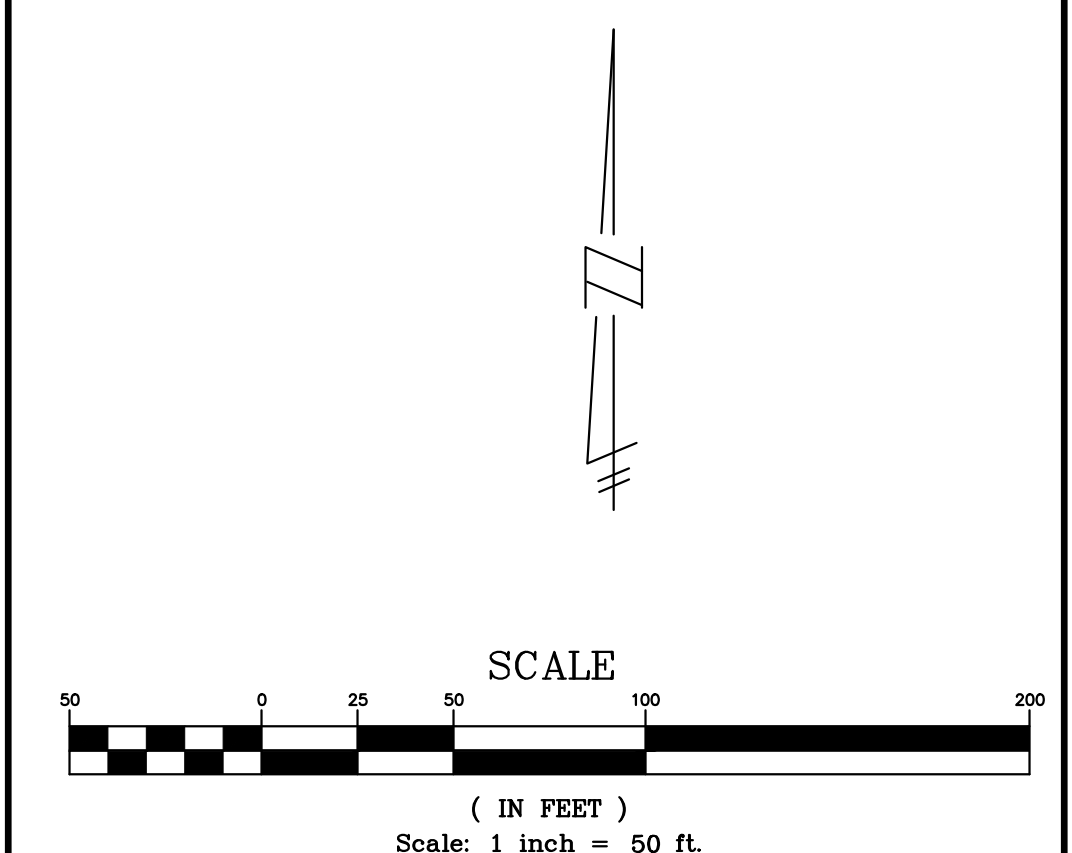
ROAD AND SANITARY SEWER PROFILES

SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48038 588.412.7060

PARENTON HILLS OFFICE: 38205 COUNTRY CLUB DRIVE, SUITE C8 PARENTON HILLS, MI 48381 248.308.3311

SHEET 9

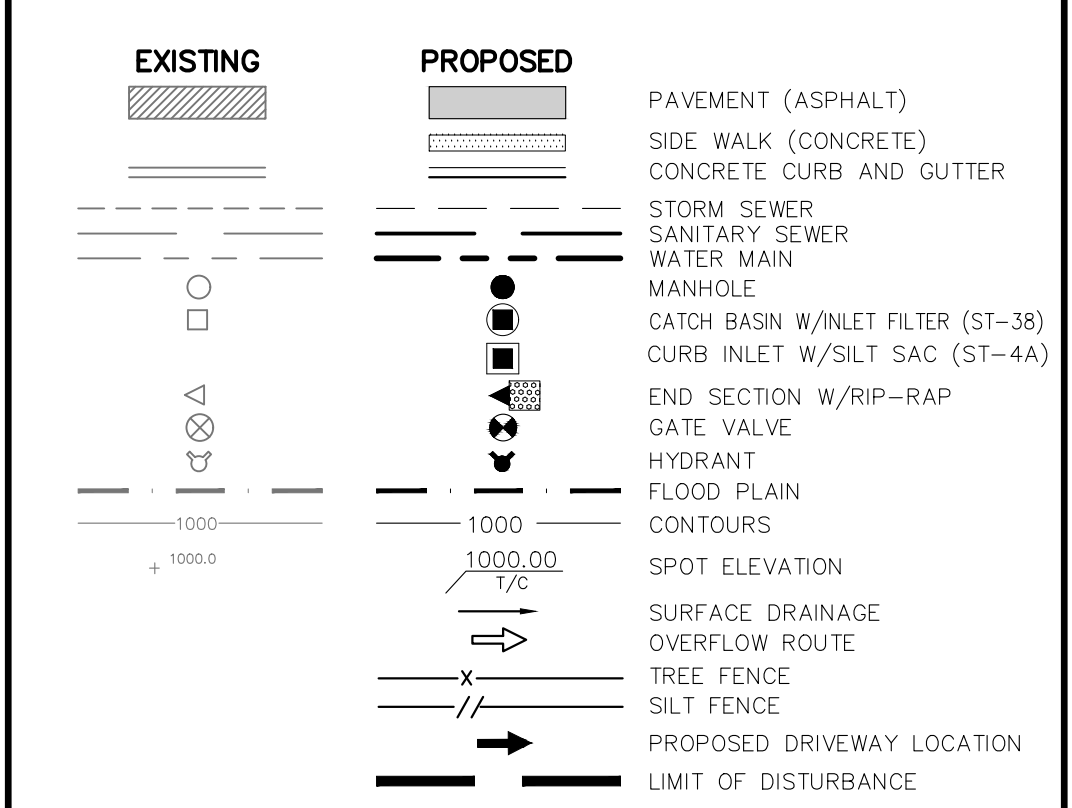


LOWER WATER MAIN AS NECESSARY TO MAINTAIN 18" MINIMUM VERTICAL SEPARATION BETWEEN UTILITIES.
 COMPACTED SAND BACKFILL UNDER THE INFLUENCE OF ROADS. MATERIAL COMPACTED TO 95% MAXIMUM UNIT WEIGHT.

NOTES

1. ALL TRENCHES WITHIN 1 ON 1 SLOPE FROM TOP OF CURBS SHALL BE BACKFILLED WITH GRANULAR MATERIAL CLASS II AND COMPACTED TO 95% OF MAXIMUM UNIT WEIGHT.
2. WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 6'-0" OF COVER EXCEPT AT GATE WELLS WHERE THEY SHALL BE INSTALLED WITH A 5' DEPTH OF COVER.
3. ALL WATER MAIN SHALL BE DUCTILE IRON, CLASS 54, CEMENT LINED.
4. ALL HYDRANTS MUST BE A MINIMUM OF 6' (FROM CENTER) OFF THE BACK OF CURB.
5. HYDRANT LEADS ARE 6". LENGTH OF LEAD IS 13' UNLESS OTHERWISE NOTED.
6. ALL WATER SERVICES ARE TO BE 1" DIAMETER. ALL WATER SERVICES SHALL BE COPPER K OR 200 PSI BLUE POLY SDR9 TUBING WITH TRACER WIRE, OR APPROVED EQUAL.

LEGEND



LAKE POINTE

SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
 WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS

NO.	ITEM	DATE
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UTILITY WARNING

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DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
 CHECKED BY: J.E. DRAWING FILE: 19039WM.dwg

WATERMAIN PLAN

SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48038 588.412.7050

PARRAMONTOUR HILLS OFFICE: 38206 COUNTRY CLUB DRIVE, SUITE C8 PARRAMONTOUR HILLS, MI 48381 248.308.3341

SHEET 10



SANUM 8100-1945.01 (23.47' DEEP)
 UNV-046.12 (23.26' DEEP)

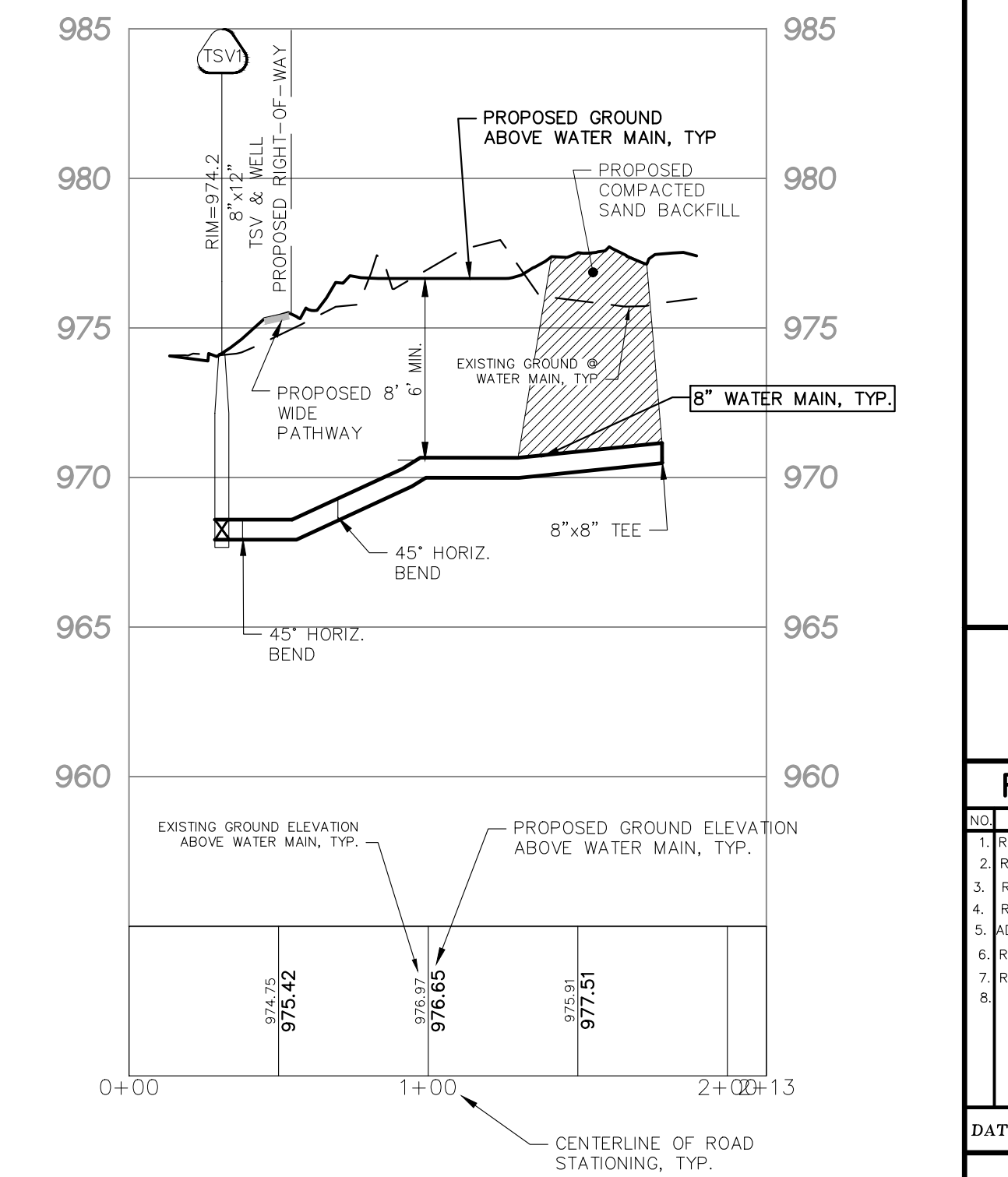
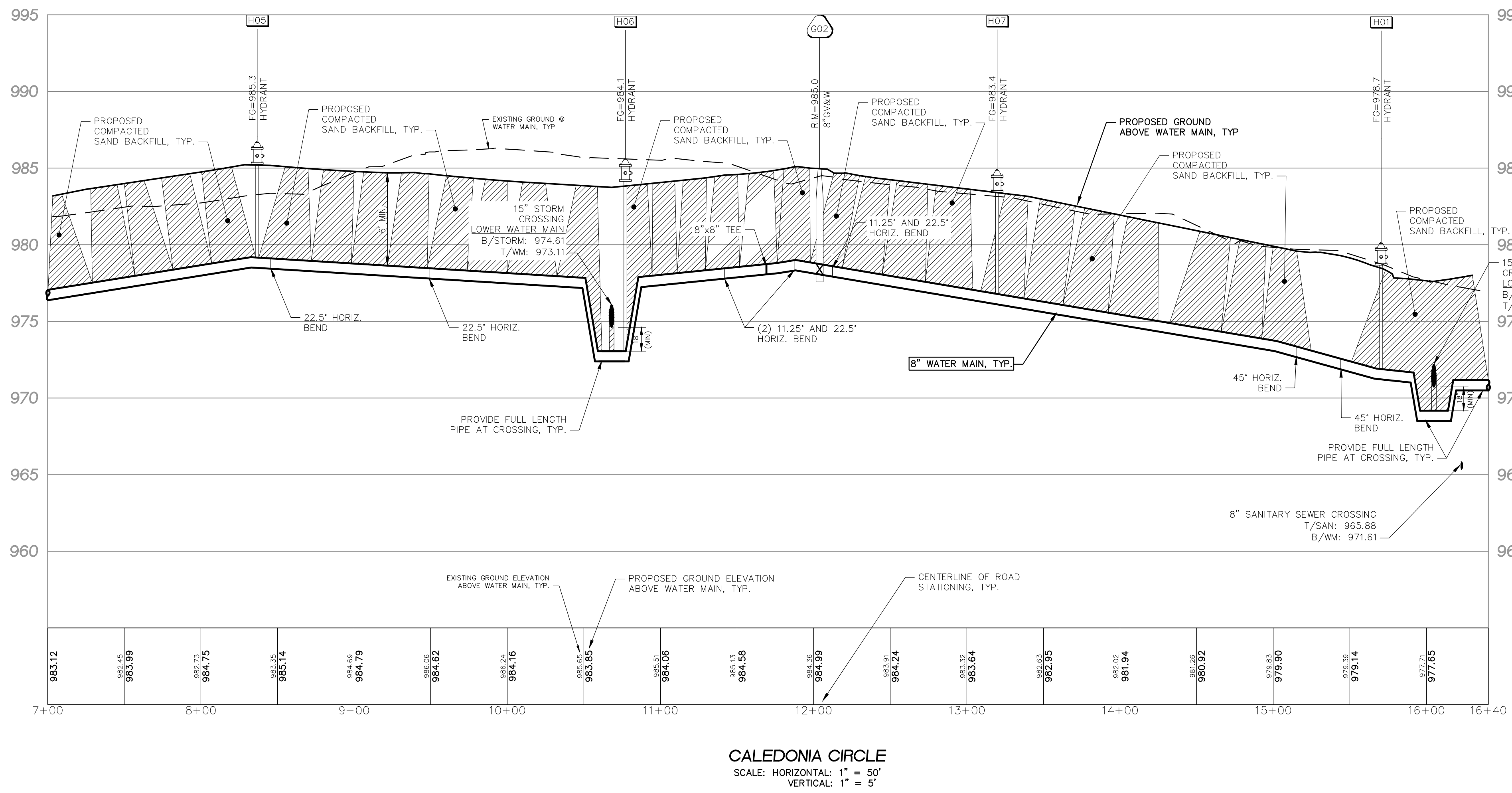
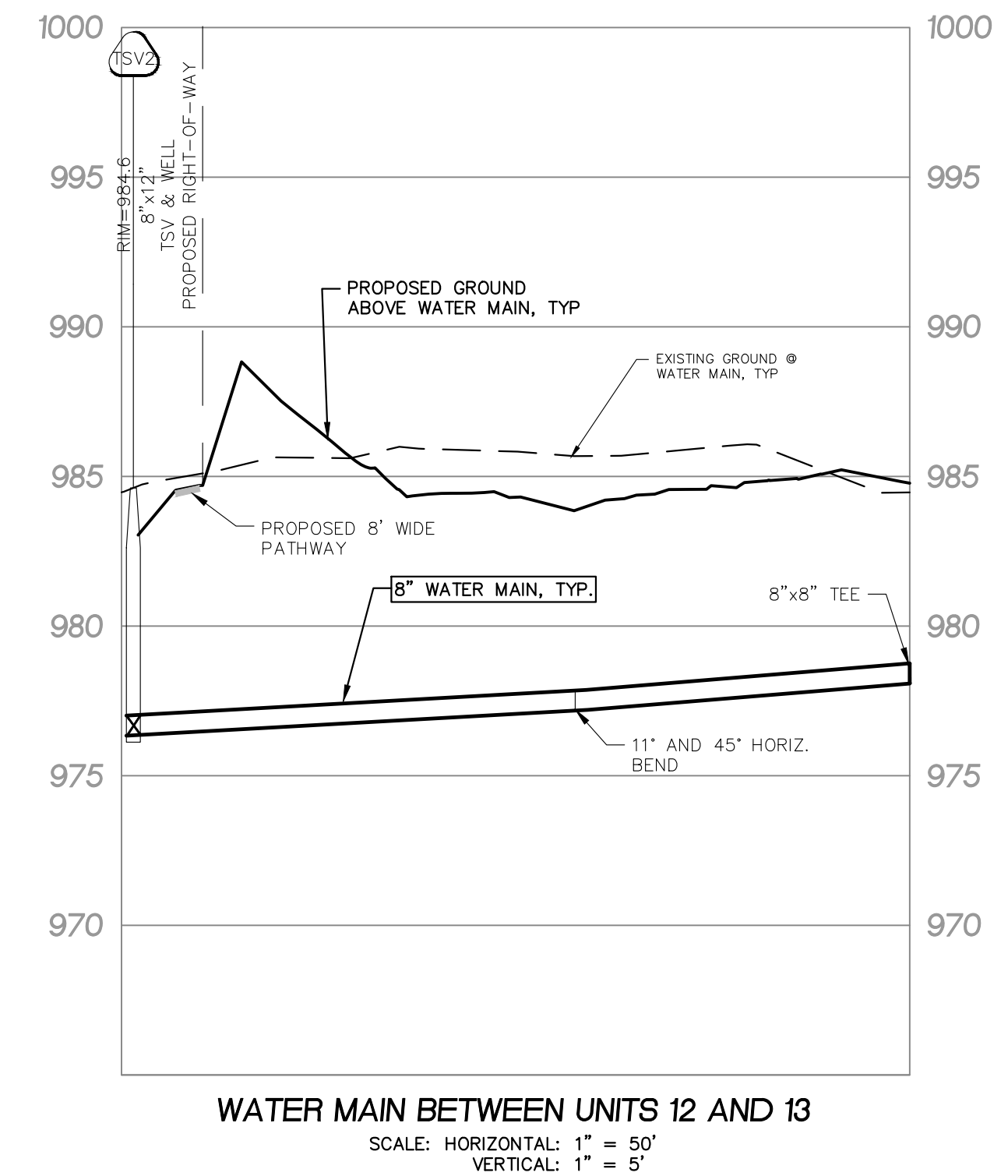
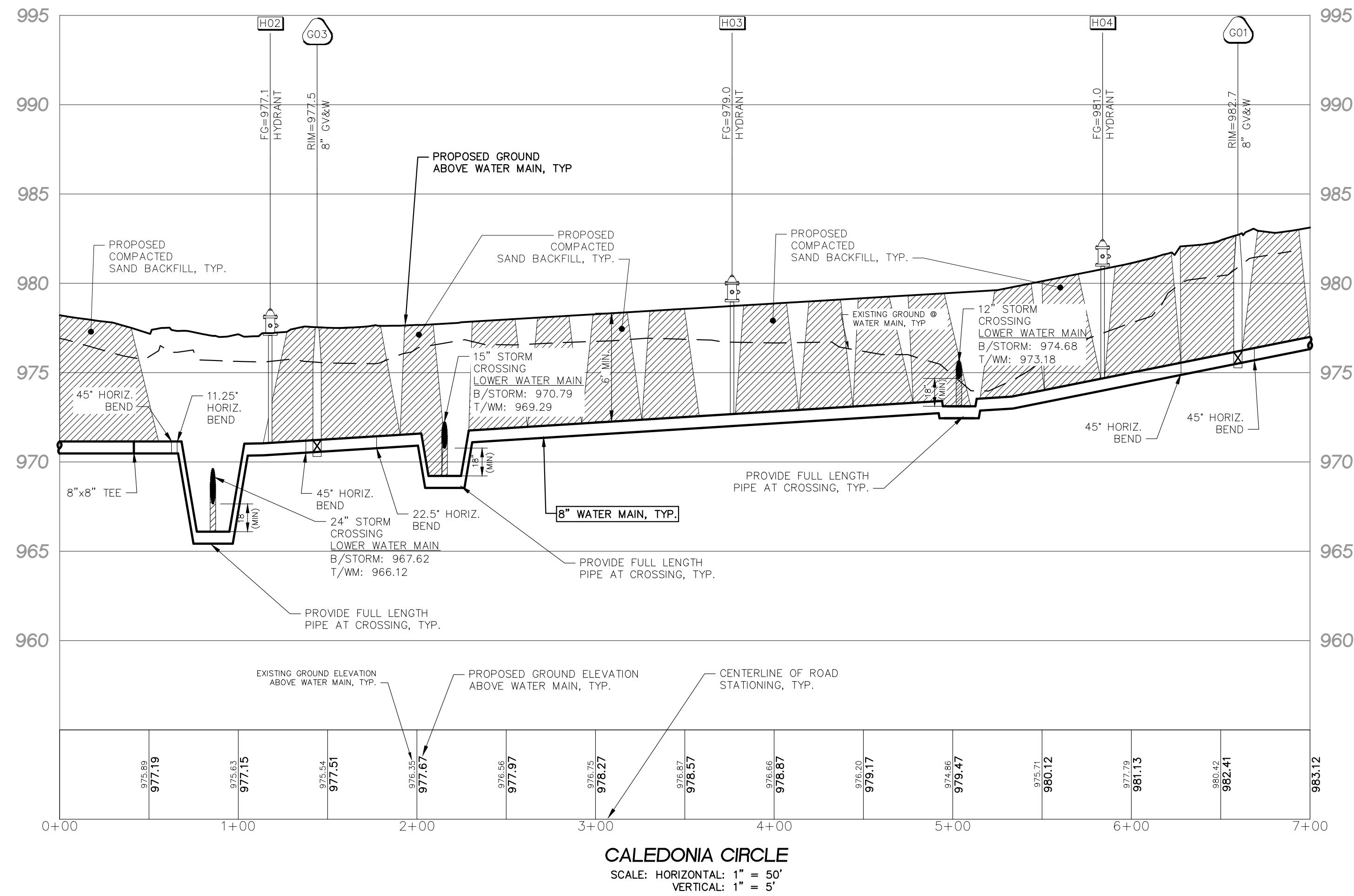
12" WATER MAIN PER "BOCovina CONDOMINIUM" PLANS, BY POWELL & ASSOCIATES ENGINEERS, INC., PROVIDED BY TWP.

CENTERLINE OF UNION LAKE ROAD PER "BOCovina HOMESTES" O.C.P.# 754 AND PER SURVEY BY MCGINNIS ENGINEERING COMPANY, DATED OCTOBER 12, 1973

CENTER OF SECTION 36, T. 3 N., R. 8 E., WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN, L. 21301, P. 378, O.C.R.

CENTERLINE OF UNION LAKE ROAD PER "BOCovina HOMESTES" O.C.P.# 754 AND PER SURVEY BY MCGINNIS ENGINEERING COMPANY, DATED OCTOBER 12, 1973

H 1/4 LINE OF SECTION 36 AS PREVIOUSLY SURVEYED



LEGEND

EXISTING	PROPOSED	DESCRIPTION
[Symbol]	[Symbol]	PAVEMENT (ASPHALT)
[Symbol]	[Symbol]	SIDE WALK (CONCRETE)
[Symbol]	[Symbol]	CONCRETE CURB AND GUTTER
[Symbol]	[Symbol]	STORM SEWER
[Symbol]	[Symbol]	SANITARY SEWER
[Symbol]	[Symbol]	WATER MAIN
[Symbol]	[Symbol]	MANHOLE
[Symbol]	[Symbol]	CATCH BASIN W/INLET FILTER (ST-38)
[Symbol]	[Symbol]	CURB INLET W/SILT SAC (ST-4A)
[Symbol]	[Symbol]	END SECTION W/RIP-RAP
[Symbol]	[Symbol]	GATE VALVE
[Symbol]	[Symbol]	HYDRANT
[Symbol]	[Symbol]	FLOOD PLAIN
[Symbol]	[Symbol]	CONTOURS
[Symbol]	[Symbol]	SPOT ELEVATION
[Symbol]	[Symbol]	SURFACE DRAINAGE
[Symbol]	[Symbol]	OVERFLOW ROUTE
[Symbol]	[Symbol]	TREE FENCE
[Symbol]	[Symbol]	SILT FENCE
[Symbol]	[Symbol]	PROPOSED DRIVEWAY LOCATION
[Symbol]	[Symbol]	LIMIT OF DISTURBANCE

LAKE POINTE
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS		UTILITY WARNING
NO.	ITEM	DATE
1.	REVISE PER OWNER	6-3-20
2.	REVISE GRADES ON UNITS 2 AND 6	11-9-20
3.	REV PER 11-20-20 WL TWP LETTER	02-02-21
4.	REVISE PER WHITE LAKE TWP	03-03-21
5.	ADD WATER MAIN PROFILES PER E.G.L.E	04-07-21
6.	REVISED PER TOWNSHIP	04-25-23
7.	REVISED PER TOWNSHIP	7-27-23
8.	REVISE PER AGENCIES	02-13-24

UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

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THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039WM.dwg

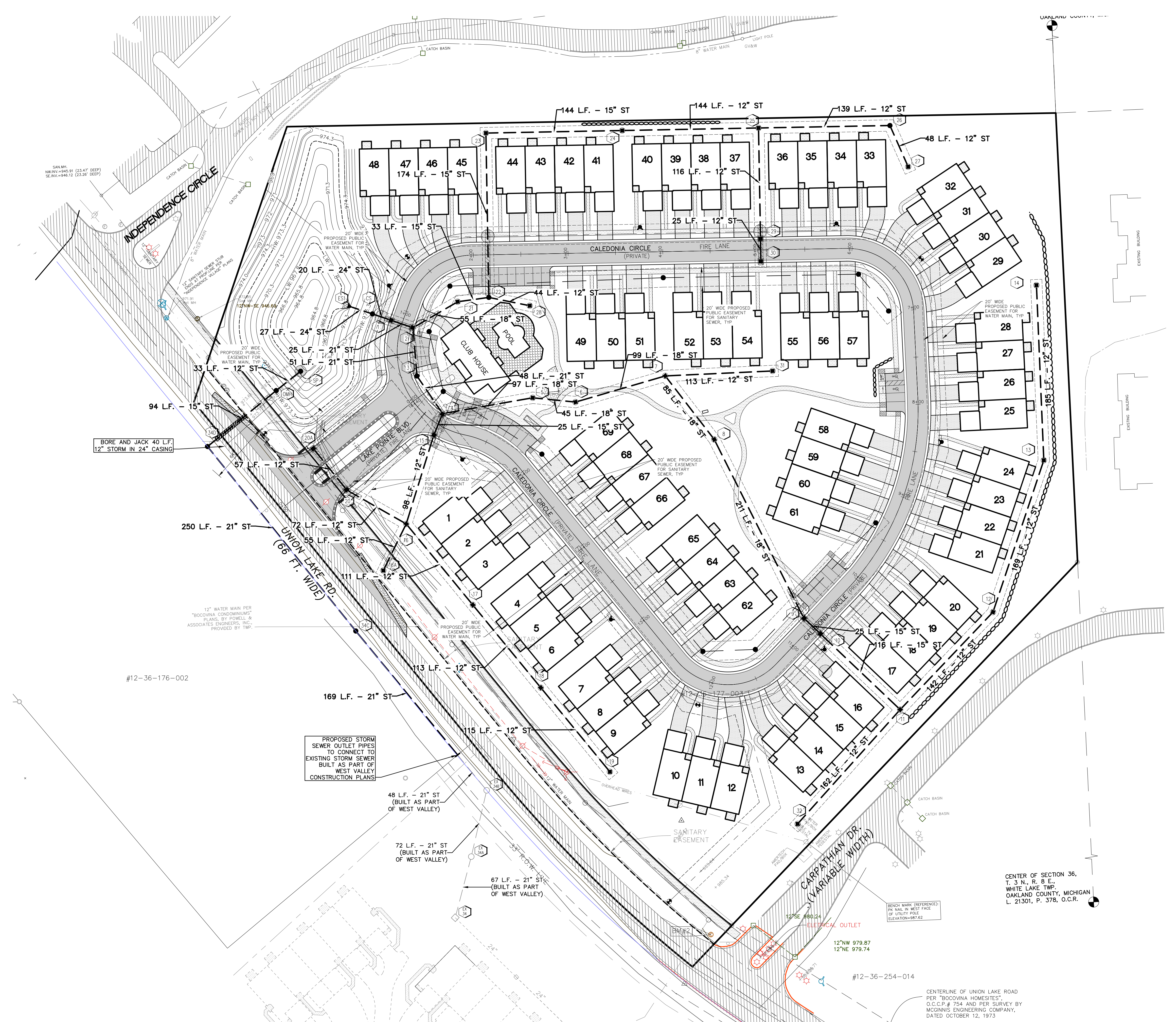
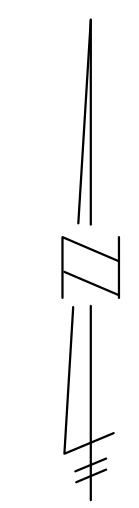
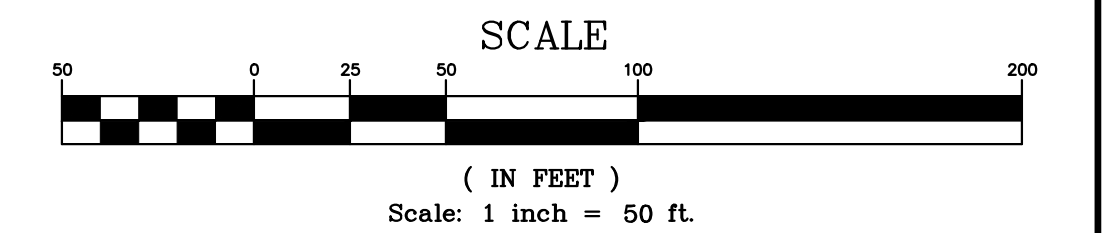
WATER MAIN PROFILES

SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48831 588.412.7050

PARRINGTON HILLS OFFICE: 38206 COUNTRY CLUB DRIVE, SUITE C8 PARRINGTON HILLS, MI 48831 248.308.3311

SHEET 10A



LOWER WATER MAIN AS NECESSARY TO MAINTAIN 18" MINIMUM VERTICAL SEPARATION BETWEEN UTILITIES.

COMPACTED SAND BACKFILL UNDER THE INFLUENCE OF ROADS. MATERIAL COMPACTED TO 95% MAXIMUM UNIT DENSITY.

LEGEND

EXISTING	PROPOSED	
		PAYEMENT (ASPHALT)
		SIDE WALK (CONCRETE)
		CONCRETE CURB AND GUTTER
		STORM SEWER
		SANITARY SEWER
		WATER MAIN
		MANHOLE
		CATCH BASIN W/INLET FILTER (ST-38)
		CURB INLET W/SILT SAC (ST-4A)
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		GATE VALVE
		HYDRANT
		FLOOD PLAIN
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		SPOT ELEVATION
		SURFACE DRAINAGE
		OVERFLOW ROUTE
		TREE FENCE
		SILT FENCE
		PROPOSED DRIVEWAY LOCATION
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LAKE POINTE

SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS		UTILITY WARNING
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6.	REVISED PER TOWNSHIP	04-25-23
7.	REVISED PER TOWNSHIP	7-27-23
8.	REVISE PER AGENCIES	02-13-24

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DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039SST.dwg

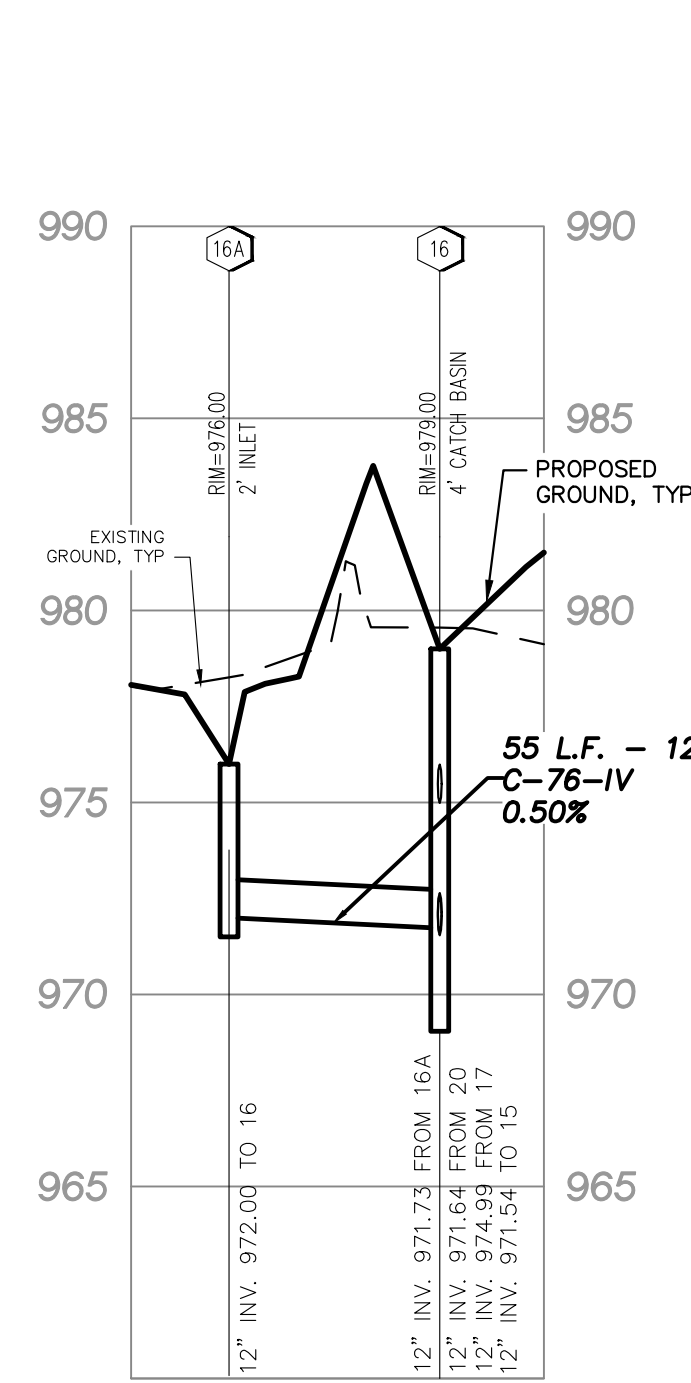
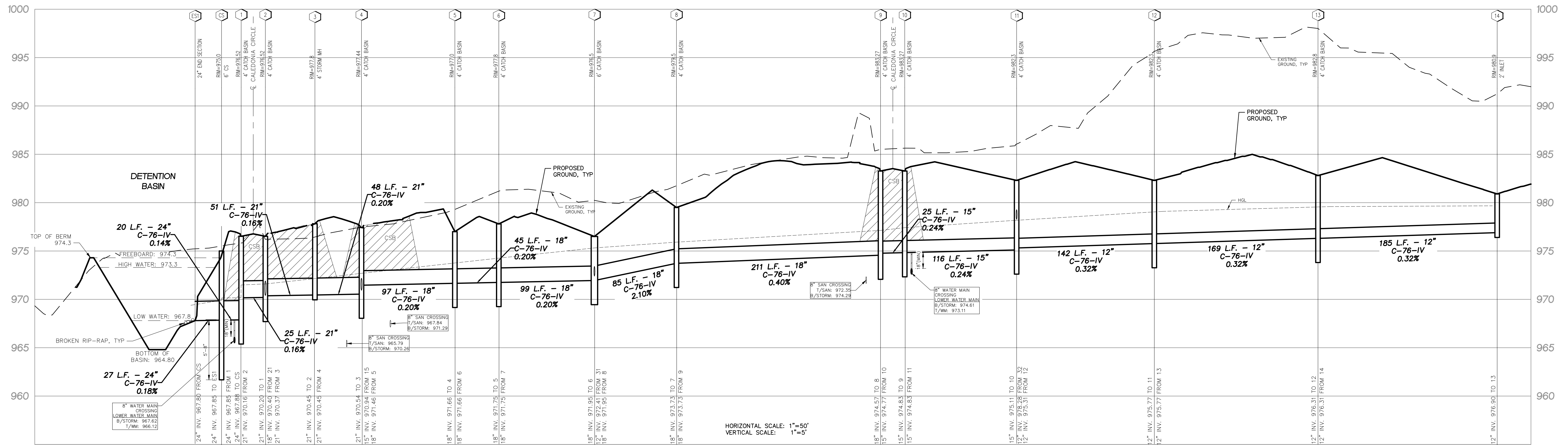
STORM SEWER PLAN

SKL SEIBER KEAST LEHNER
ENGINEERING | SURVEYING

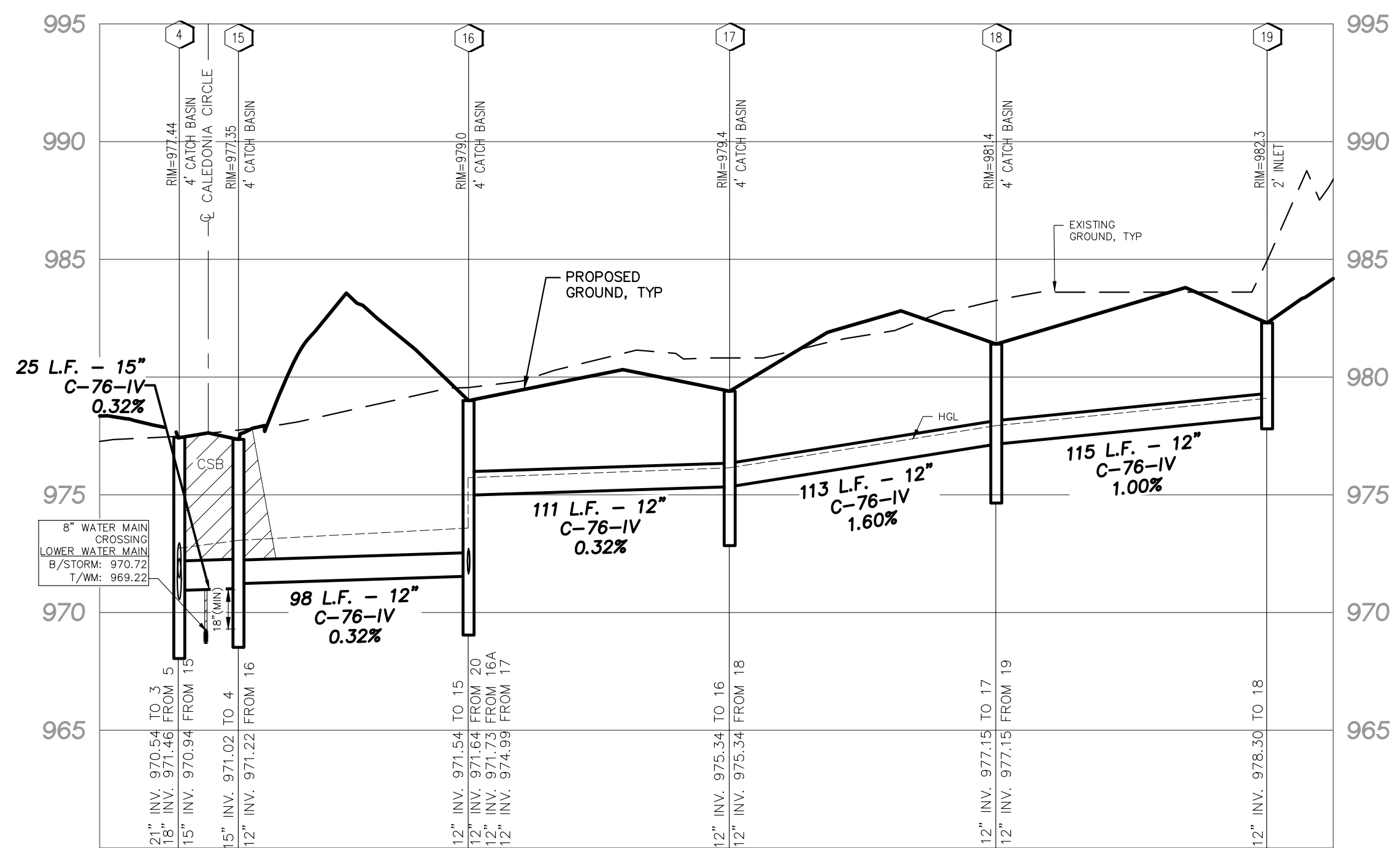
CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48038 586.412.7050

FARMINGTON HILLS OFFICE: 38205 COUNTRY CLUB DRIVE, SUITE C8 FARMINGTON HILLS, MI 48331 248.308.3341

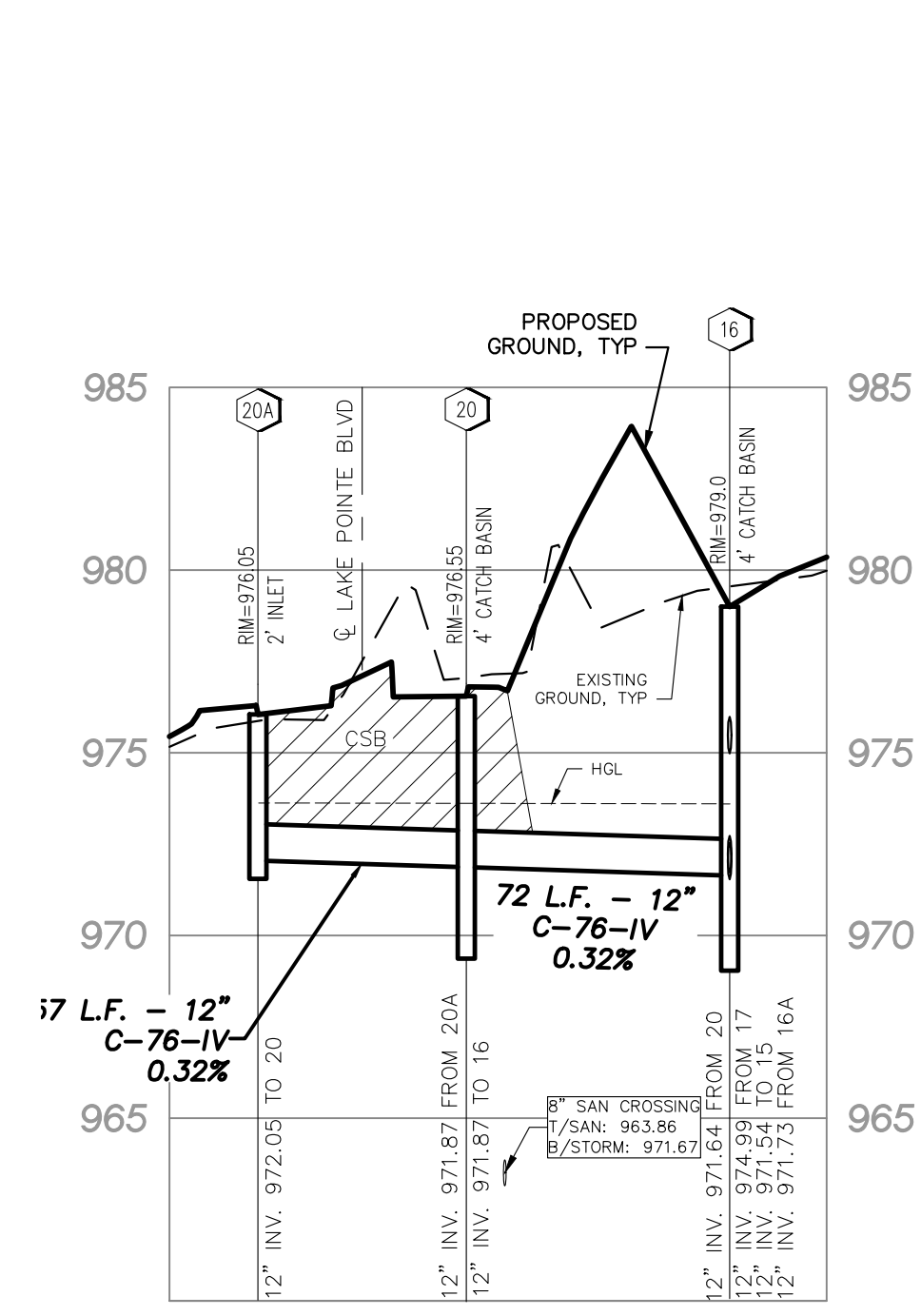
SHEET 11



HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

LAKE POINTE

SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

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DRAWING FILE: 19039ST.dwg

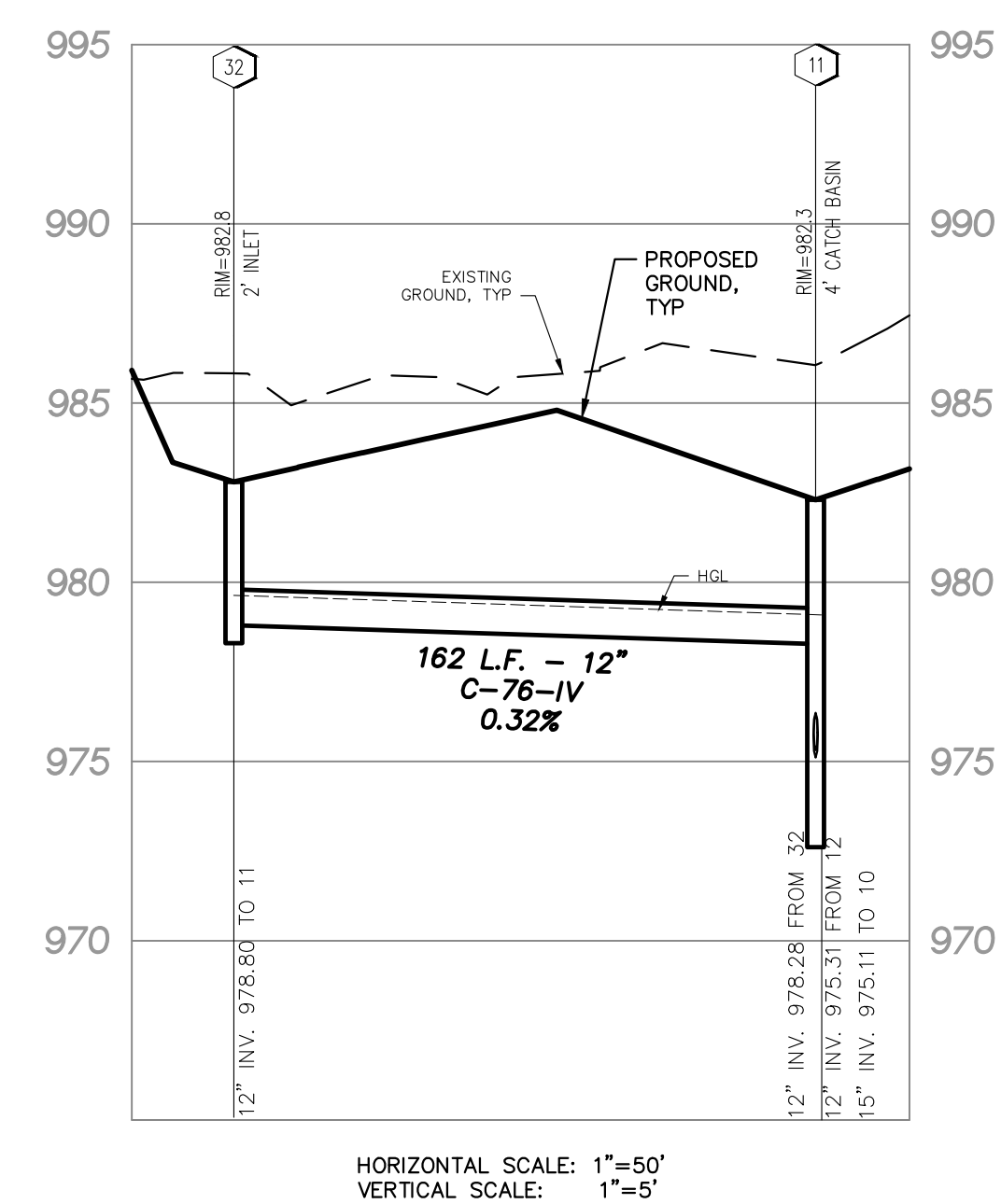
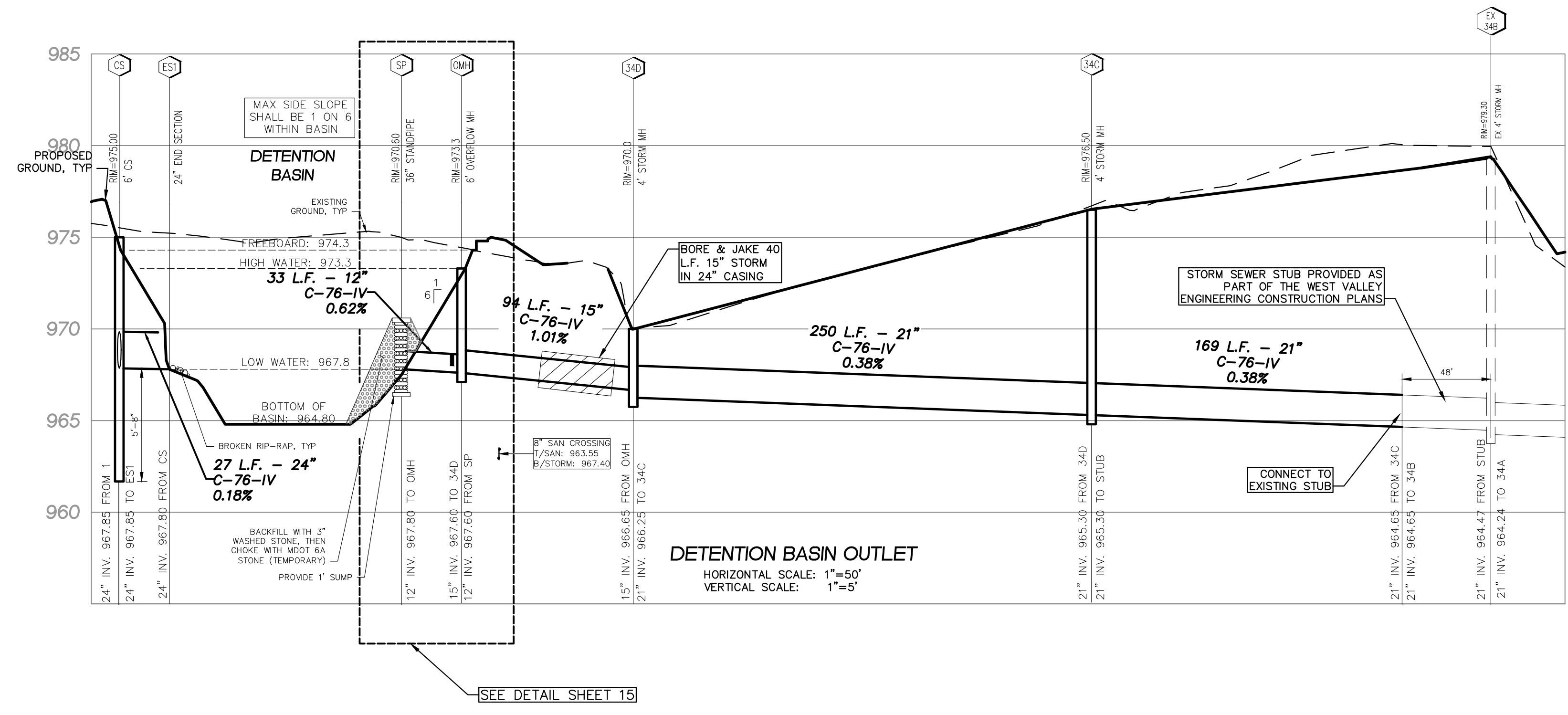
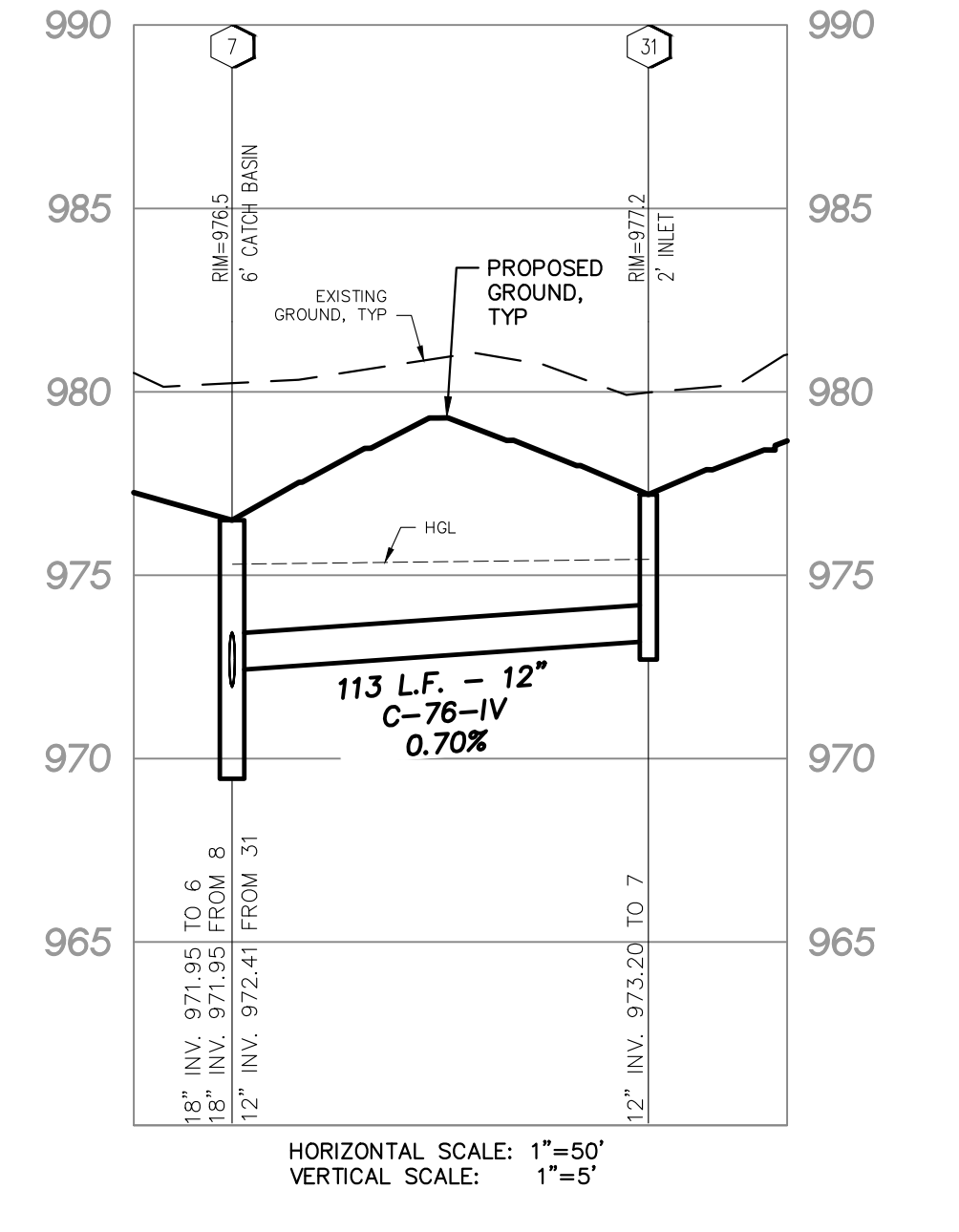
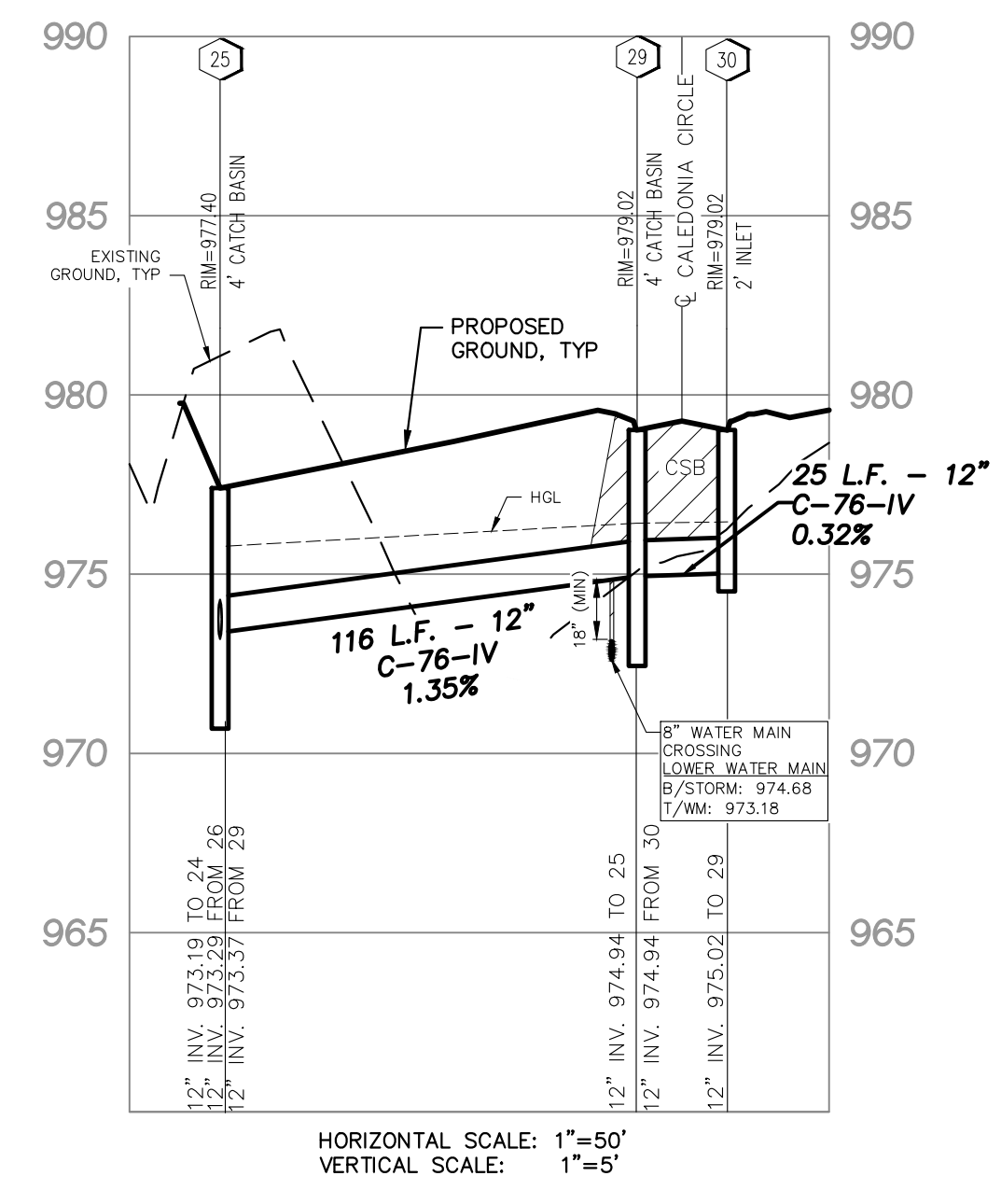
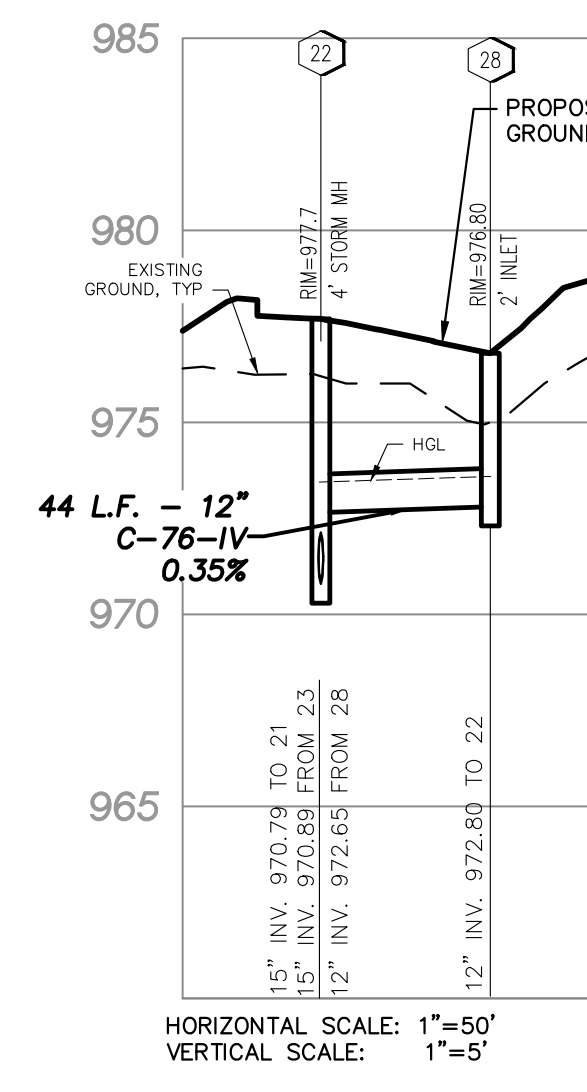
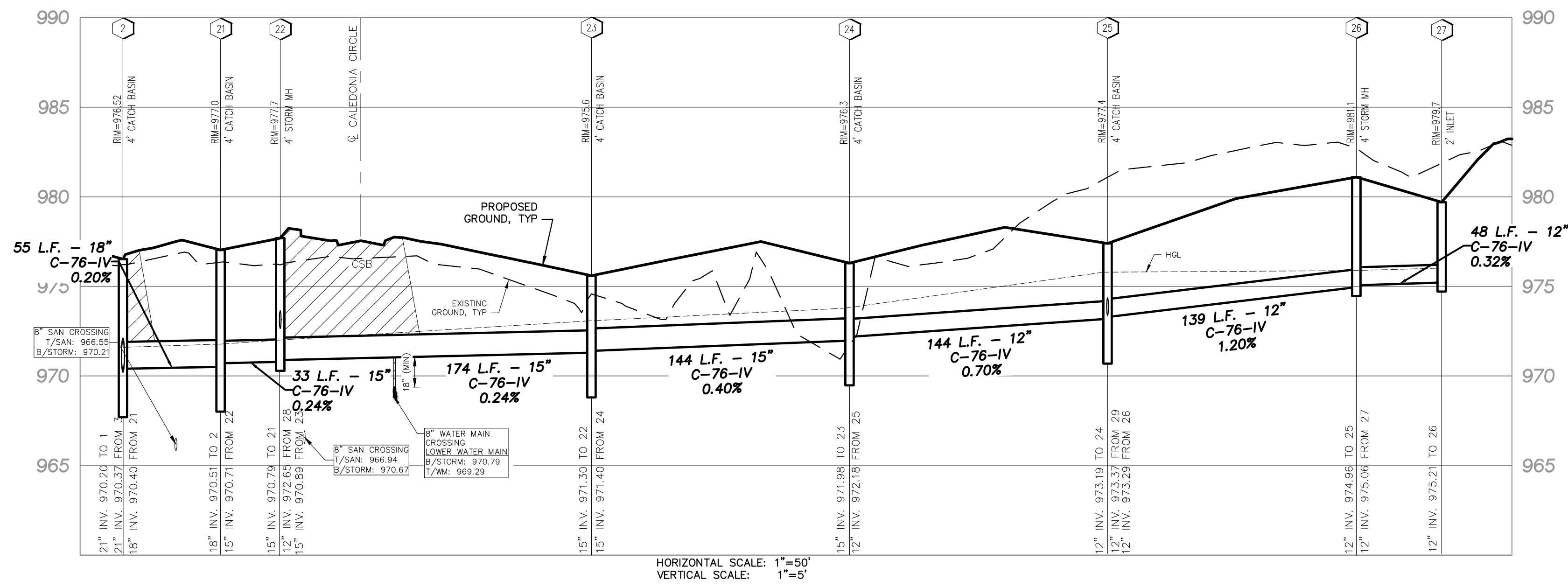
STORM SEWER PROFILES

SEIBER KEAST LEHNER
ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MI 48036
588.412.7060

PARMINGTON HILLS OFFICE:
38205 COUNTRY CLUB DRIVE, SUITE C8
PARMINGTON HILLS, MI 48381
248.308.3331

SHEET
12



LAKE POINTE
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS			UTILITY WARNING
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DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039ST.dwg

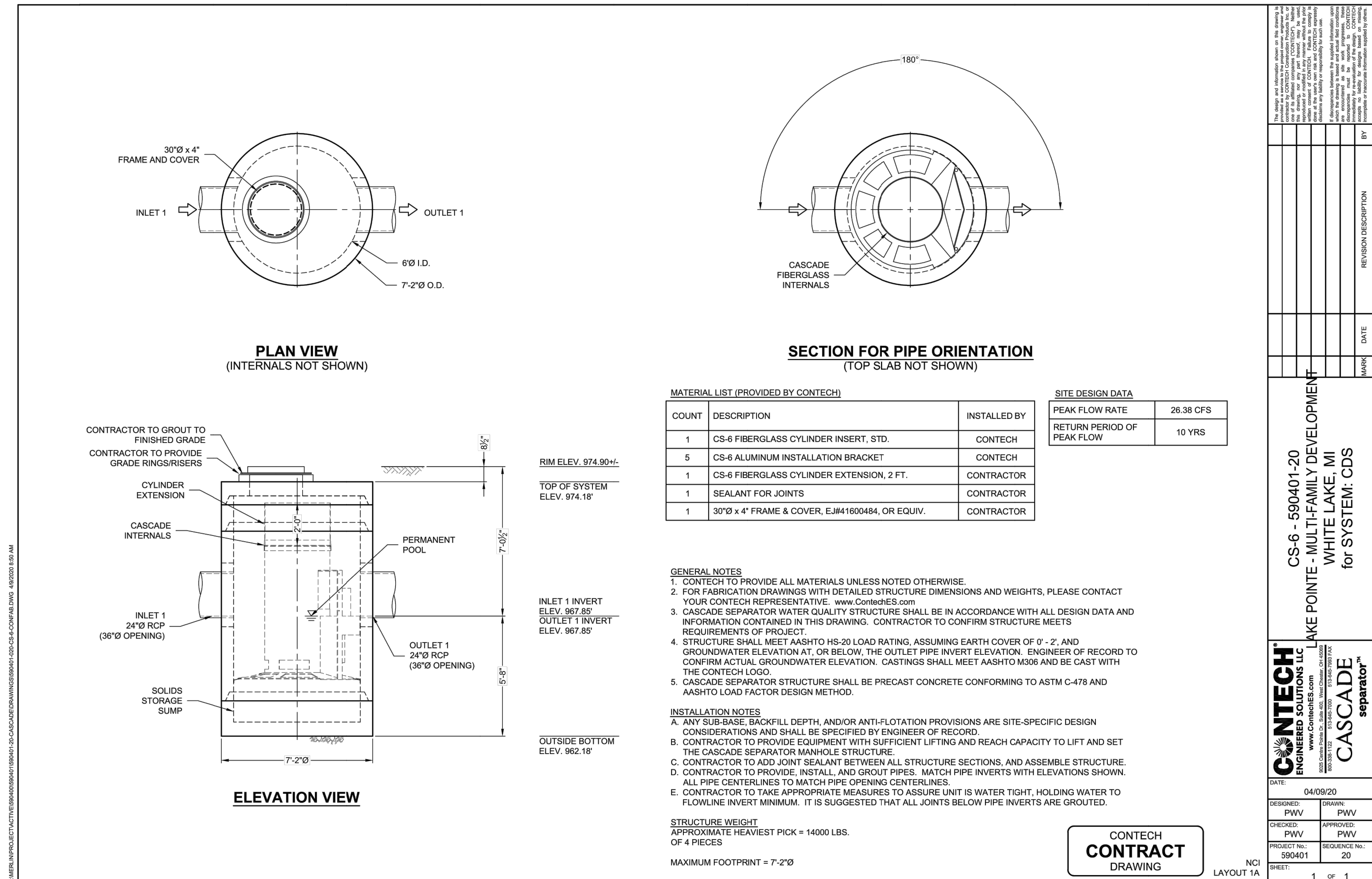
STORM SEWER PROFILES

SEIBER KEAST LEHNER
ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48831 588.412.7060

PARRISVILLE HILLS OFFICE: 38205 COUNTRY CLUB DRIVE, SUITE C8 PARRISVILLE, MI 48861 248.308.3311

SHEET
13



**Estimated Net Annual Solids Load Reduction
Based on the Rational Rainfall Method**

**Lake Pointe
White Lake Twp., MI
Water Quality Unit**

CASCADE separator™

AREA	11.89 acres	CASCADE MODEL	CS-6
WEIGHTED C TC	0.53 minutes	PARTICLE SIZE	110 microns
		RAINFALL STATION	78

Rainfall Intensity ¹ (in/hr)	Percent Rainfall Volume ¹	Cumulative Rainfall Volume	% Rainfall Volume Treated	Total Flowrate (cfs)	Removal Efficiency (%)	Incremental Removal (%)
0.02	13.13%	13.1%	13.1%	0.13	100.0	13.1
0.04	11.36%	24.5%	11.4%	0.25	100.0	11.4
0.06	10.08%	34.6%	10.1%	0.38	100.0	10.1
0.08	7.49%	42.1%	7.5%	0.50	100.0	7.5
0.10	7.01%	49.1%	7.0%	0.63	100.0	7.0
0.12	5.37%	54.4%	5.4%	0.76	100.0	5.4
0.14	4.73%	59.2%	4.7%	0.88	98.7	4.7
0.16	4.13%	63.3%	4.1%	1.01	96.9	4.0
0.18	3.53%	66.8%	3.5%	1.13	95.0	3.4
0.20	2.99%	69.8%	3.0%	1.26	93.1	2.8
0.25	5.50%	75.3%	5.5%	1.58	88.4	4.9
0.30	4.47%	79.8%	4.5%	1.89	83.7	3.7
0.35	3.85%	83.6%	3.9%	2.21	79.0	3.0
0.40	2.16%	85.8%	2.2%	2.52	74.3	1.6
0.45	2.09%	87.9%	2.1%	2.84	69.6	1.5
0.50	1.31%	89.2%	1.3%	3.15	64.9	0.8
0.75	5.07%	94.3%	5.1%	4.73	41.4	2.1
1.00	2.58%	96.9%	2.3%	6.30	25.2	0.6
1.50	2.50%	99.4%	1.5%	9.45	16.8	0.4
2.00	0.51%	99.9%	0.2%	12.60	12.6	0.1
2.54	0.15%	100.0%	0.1%	16.01	9.9	0.0
						88.0
						Removal Efficiency Adjustment ² = 6.5%
						Predicted % Annual Rainfall Treated = 91.8%
						Predicted Net Annual Load Removal Efficiency = 81.5%

1 - Based on 5.5 years of 15 minute precipitation data from NCDC station 2102 at Detroit City Airport in Detroit, MI
2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

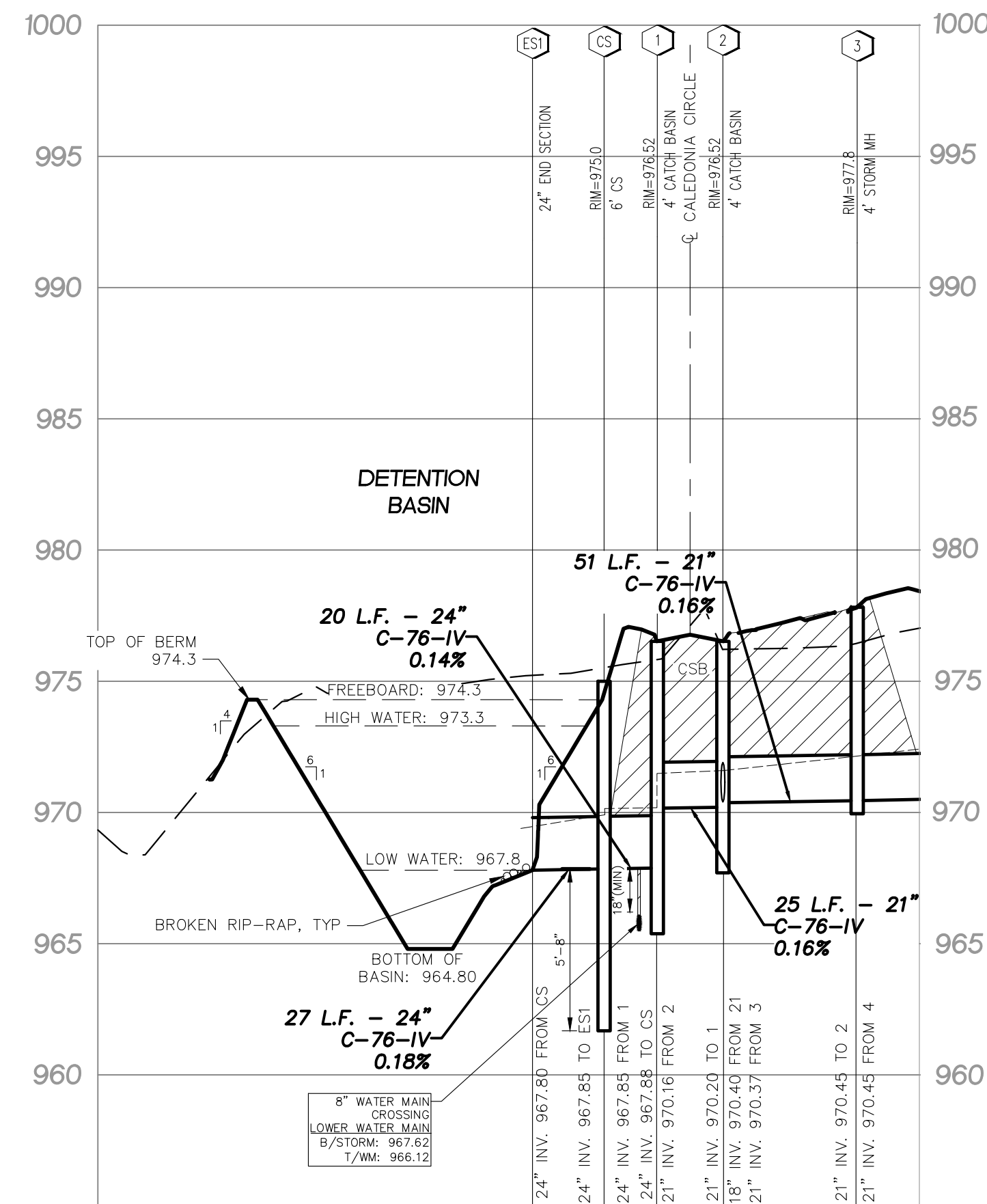
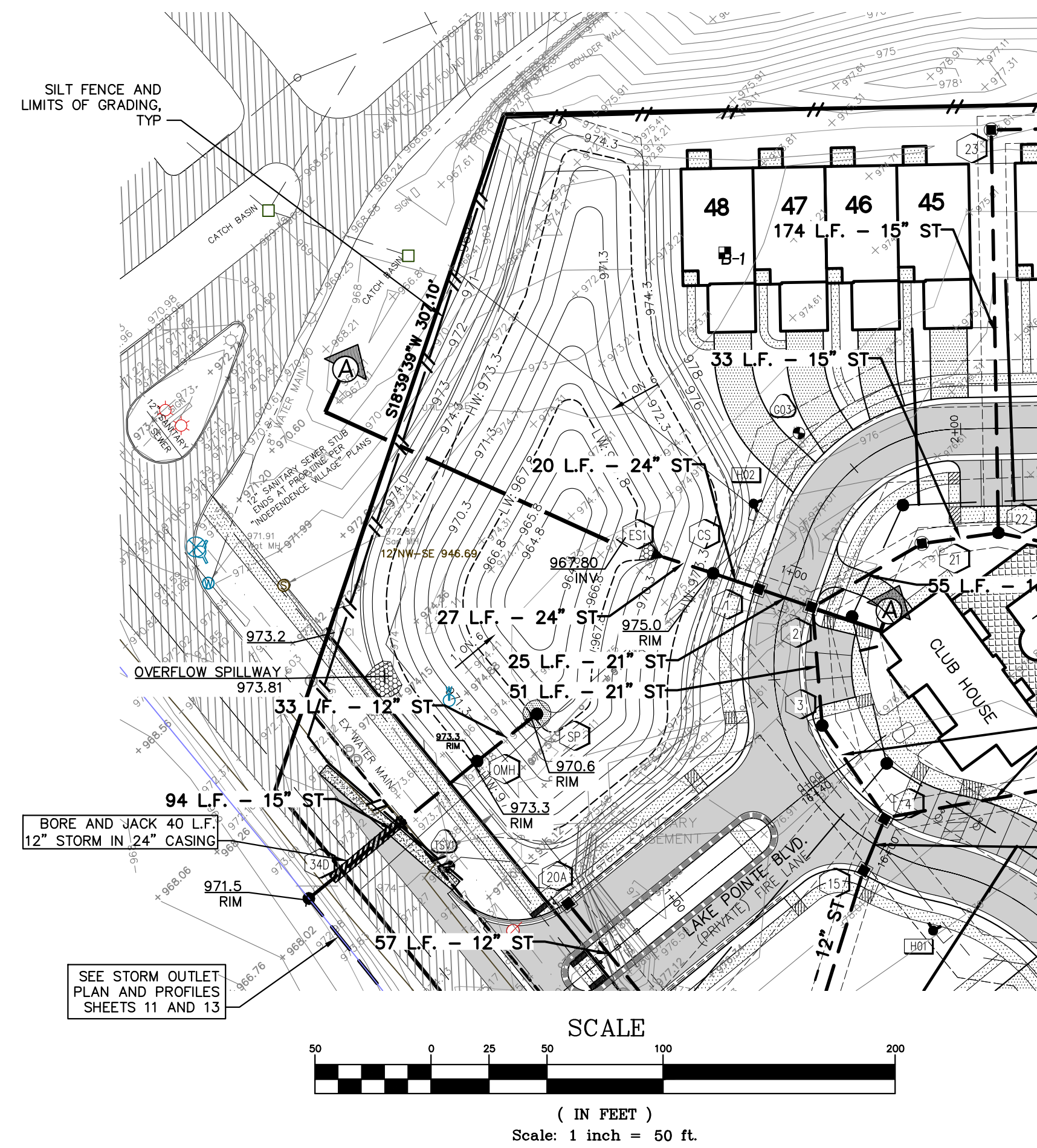
LAKE POINTE
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS			UTILITY WARNING
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DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039CDS.dwg

CONTECH CS-6 DETAILS

SEIBER KEAST LEHNER ENGINEERING SURVEYING CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48038 588.412.7050 PARRAMONT HILLS OFFICE: 38206 COUNTRY CLUB DRIVE, SUITE C8 PARRAMONT HILLS, MI 48381 248.308.3341	SHEET 14
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Detention Basin Calculations

DETERMINE DETENTION VOLUME REQUIREMENTS (100-YEAR STORM)

Ac =	11.64	Ac	Developed ON-SITE area tributary to the Detention Basin
Q _{all} =	2.33	cfs	Allowable Outflow (Total Area x 0.2 cfs/Ac.)
C =	0.53		
Q ₀ = Q _{all} / (Ac * C) =		0.38	cfs/Ac. Imp
T = -25 + sqrt(10312.5/Q ₀) =		139.88	min
Vs = (16500*T)/(T+25) - 40*Q ₀ *T =		11876	cf/Ac. Imp
Vt = Vs * Ac * C =		72,880	ft ³ req'd

DETERMINE DETENTION VOLUME REQUIREMENTS (1-YEAR STORM)

OCWRC Volume (1-yr Storm)

Vr = 4320 * C * A = **26,511 ft³**

DETERMINE VOLUME PROVIDED FOR 1 YEAR AND 100-YEAR STORMS

	Elevation	Area	Vol (ft ³)	
Low Water	967.8	6,248		
	968.3	7,336	3,396	
	969.3	9,785	11,957	1 Year Storm EL. = 970.60 ft
	970.3	12,665	23,182	Volume provided = 27,517 ft ³
	971.3	16,238	37,633	
High Water	972.3	20,112	55,808	100 Year Storm EL. = 973.30 ft
	973.3	24,135	77,932	Volume provided = 77,932 ft ³

DETERMINE OUTLET SIZE TO DEWATER 1 YEAR STORM IN 48 HOURS

Volume of Storage =	27,517	ft ³
Median Surface Area =	9,827	ft ²
Orifice Area Required =	0.038	
Area of 1" diameter hole =	0.00545	
Number of holes required =	6.96	
Therefore use	7	1" Diameter Holes

DETERMINE 100-YEAR DETENTION BASIN OUTLET SIZE

Orifice Formula, Q = 0.625*A*sqrt(64.4*H)	
Q _{all} =	2.33 cfs
Outlet Size =	6.000 in
Invert Elevation =	967.80 ft
Springline EL. =	968.05 ft
H =	5.25 ft
Area Req'd = A =	0.2026 sf
Area of Outlet Used =	0.1963 sf
Diameter Req'd =	6.000 in
USE	6.000 in Dia Outlet
Q Discharge =	2.26 cfs

SIZE PRIMARY OVERFLOW STRUCTURE (OMH)

Size of Overflow MH =	6 ft
% of MH that can be used as a Weir =	50 %
Calculated Length of Weir = L =	9.42 ft
Acegrage Tributary to Overflow (onsite + offsite) =	12.58 Ac
Composite Runoff Coefficient =	0.53

(From Pipe Flow Calculations)

Longest Time of Flow to Basin =	21.19 min
Sum of all Flow into the Basin =	23.74 cfs
Volume of Basin (Det Calcs) =	77,932 ft ³
Storage Elevation =	973.30 ft
Freeboard Elevation =	974.30 ft
Time to Fill Basin Vprow / Flow into Basin =	54.71 min.
l = 175 / (T+25) =	1.73 in / hr
Qexp = C ¹ *A =	11.50 cfs
Qweir = 3.33*(l) ^{3/2}	

Calculate how high the water will rise above the Overflow Structure to pass the expected flow.

h =	0.51 ft
Rim Overflow MH =	973.30 ft
Elevation of Water during Overflow Conditions =	973.81 ft
Elevation of Water during Overflow Condition is Less than	

Determine "C" Factor for Detention Basin

DETERMINE "C" FACTOR

	Area	C	Area * C
AREA TRIBUTARY TO ON-SITE STORM SEWER	10.95 Ac.		
AREA TRIBUTARY TO CB 16A	0.94 Ac.		
AREA OF DETENTION BASIN	0.69 Ac.		
TOTAL AREA TRIBUTARY TO DETENTION BASIN	= 12.58 Ac		
DETENTION BASIN LOW WATER	= 0.17 Ac	@ 1.00	= 0.17
PAVING AREA (WALKS, DRIVE, ROAD)	= 3.14 Ac	@ 0.80	= 2.51
BUILDING AREA	= 3.19 Ac	@ 0.90	= 2.87
LAWN AREA INCLUDING DETENTION BASIN AREA	= 6.25 Ac	@ 0.20	= 1.25
TOTAL AREA	= 12.58 Ac	@	6.63

Cavg = A * C / TOTAL ACRES = **0.53**

Determine On-Site Area to be Detained for in Detention Basin Calculations

(Note: Exclude ROW Area Tributary to CB 16A)

TOTAL AREA TRIBUTARY TO DETENTION BASIN	=	12.58 Ac
AREA TRIBUTARY TO CB 16A	=	-0.94 Ac
ON-SITE AREA TRIBUTARY TO DETENTION BASIN	=	11.64 Ac

NOTES:

- ALL TRENCHES WITHIN 1 ON 1 SLOPE FROM TOP OF CURBS SHALL BE BACKFILLED WITH GRANULAR MATERIAL CLASS II AND COMPACTED TO 95% OF MAXIMUM UNIT WEIGHT.
- ALL END SECTIONS SHALL BE CONSTRUCTED ACCORDING TO THE "END SECTION AND BAR SCREEN DETAIL" ON SHEET ND.

LEGEND

EXISTING	PROPOSED	
[Symbol]	[Symbol]	PAVEMENT (ASPHALT)
[Symbol]	[Symbol]	SIDE WALK (CONCRETE)
[Symbol]	[Symbol]	CONCRETE CURB AND GUTTER
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LAKE POINTE

SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS

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UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

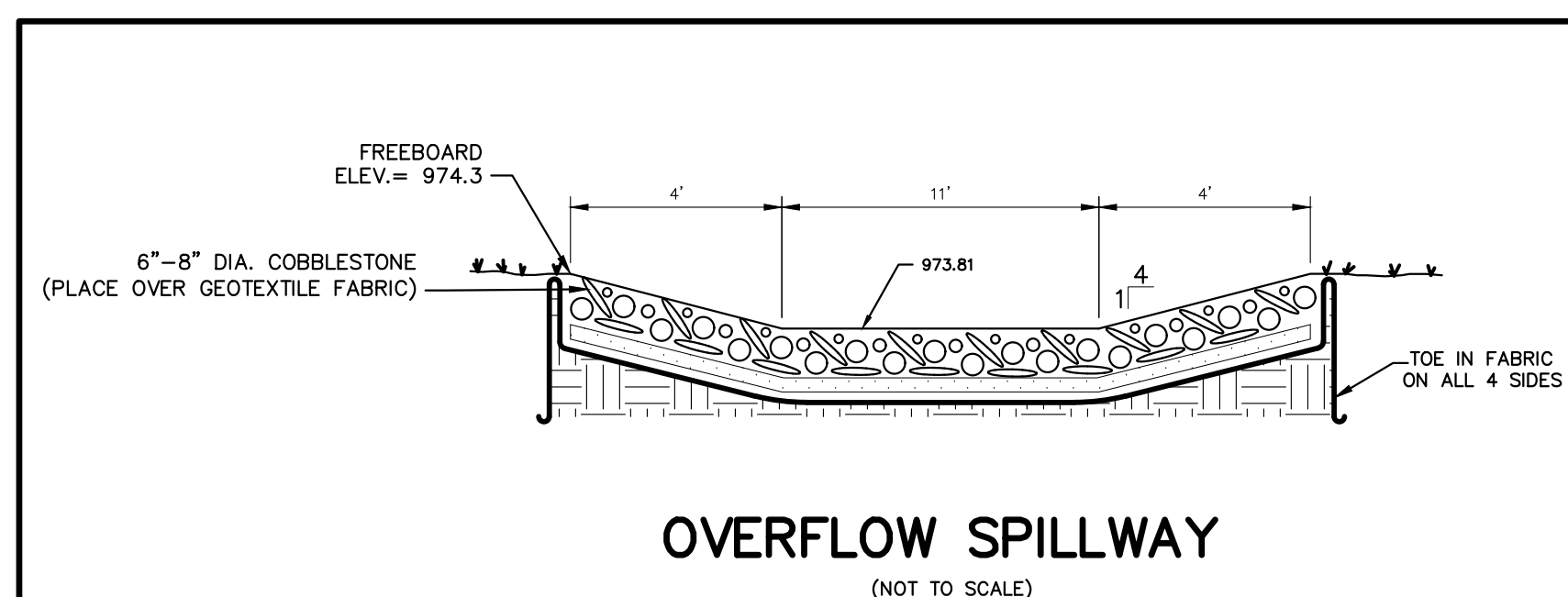
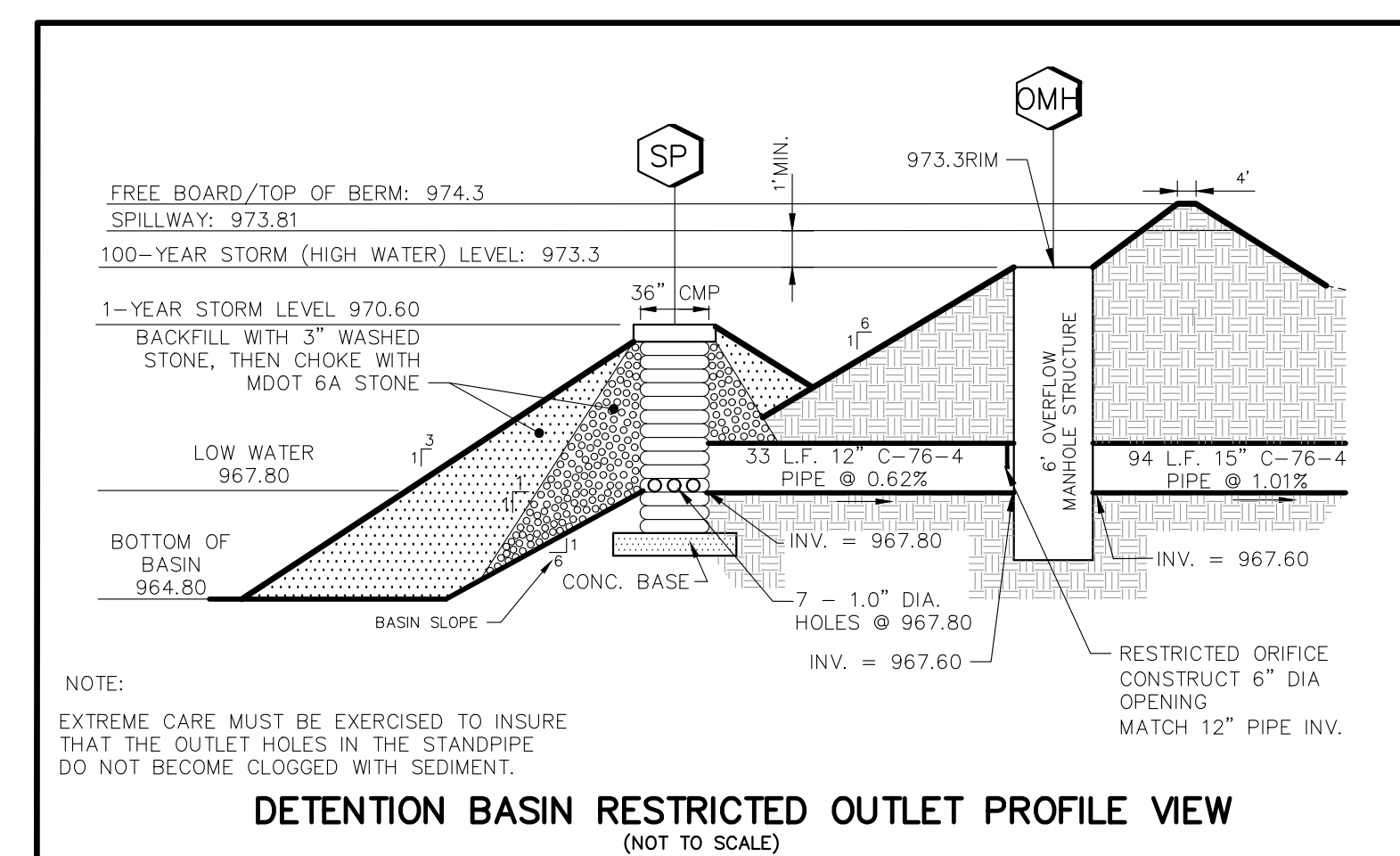


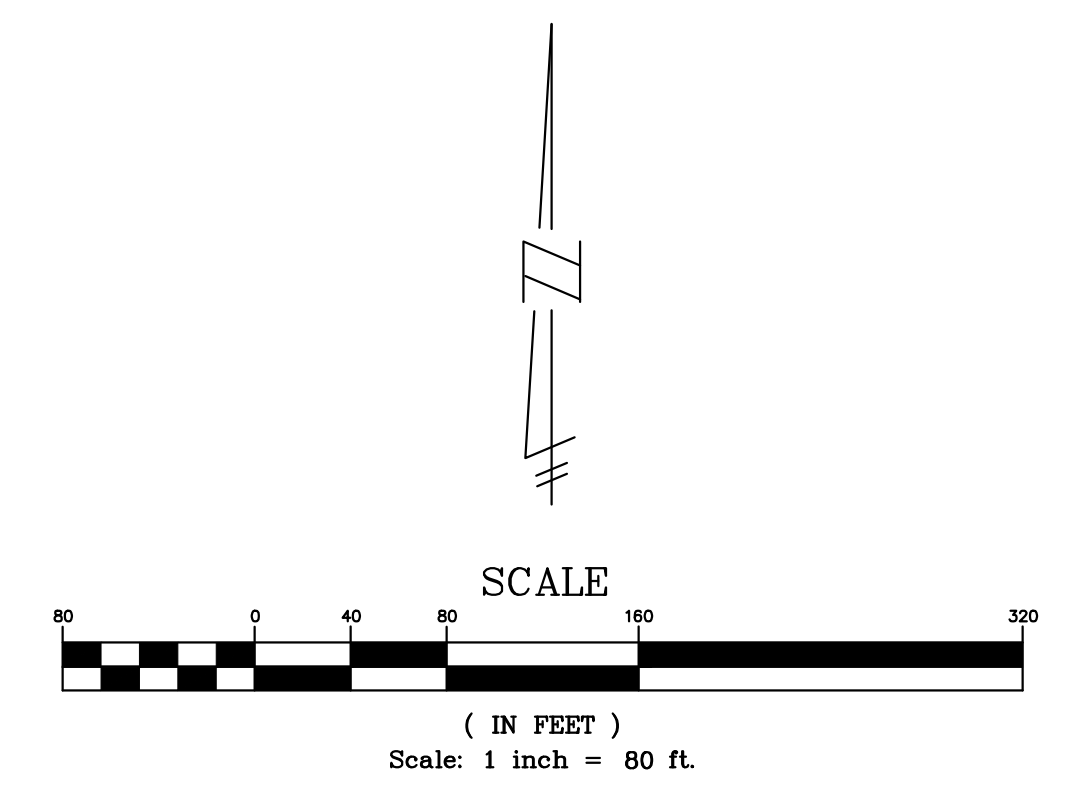
DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039DB.dwg

DETENTION BASIN PLAN, CALCULATIONS AND PROFILE

SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING
CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48831 588.412.7060
FARMINGTON HILLS OFFICE: 38205 COUNTRY CLUB DRIVE, SUITE C8 FARMINGTON HILLS, MI 48331 248.308.3331

SHEET
15





LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT (ASPHALT)
		SIDE WALK (CONCRETE)
		CONCRETE CURB AND GUTTER
		STORM SEWER
		SANITARY SEWER
		WATER MAIN
		MANHOLE
		CATCH BASIN W/INLET FILTER (ST-38)
		CURB INLET W/SILT SAC (ST-4A)
		END SECTION W/ RIP-RAP
		GATE VALVE
		HYDRANT
		FLOOD PLAIN CONTOURS
		SPOT ELEVATION
		SURFACE DRAINAGE
		OVERFLOW ROUTE
		TREE FENCE
		SILT FENCE
		PROPOSED DRIVEWAY LOCATION
		LIMIT OF DISTURBANCE

LAKE POINTE
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS

NO.	ITEM	DATE
1.	REVISED PER OWNER	6-3-20
2.	REVISED GRADES ON UNITS 2 AND 6	11-9-20
3.	REV PER 11-20-20 WL TWP LETTER	02-02-21
4.	REVISED PER WHITE LAKE TWP	03-03-21
6.	REVISED PER TOWNSHIP	04-25-23
7.	REVISED PER TOWNSHIP	7-27-23
8.	REVISED PER AGENCIES	02-13-24

UTILITY WARNING
UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.

811 Know what's below.
Call before you dig.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF AND/OR RELOCATION OF ALL UTILITIES THAT MAY INTERFERE WITH CONSTRUCTION.

DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039 GA-STORM WATER

**OVERALL STORM WATER MANAGEMENT SYSTEM
"WEST VALLEY & LAKE POINTE"**

SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

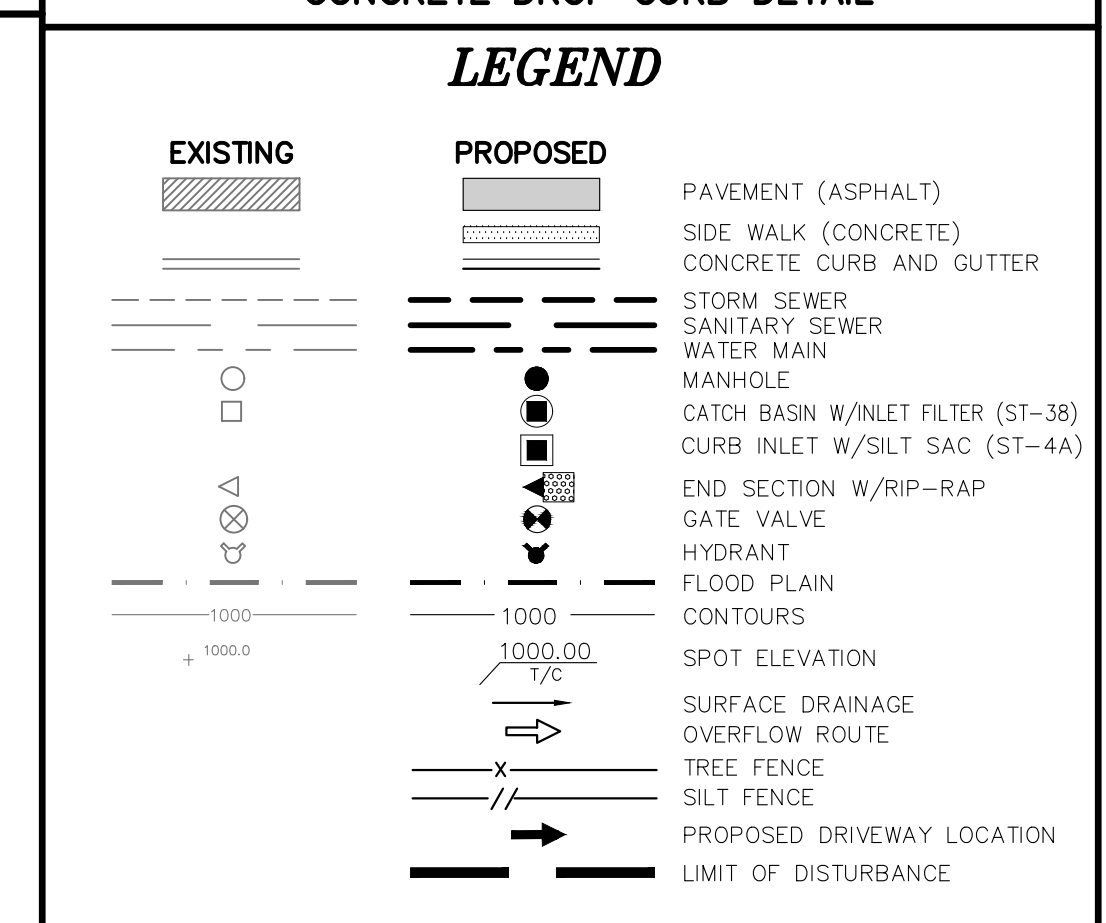
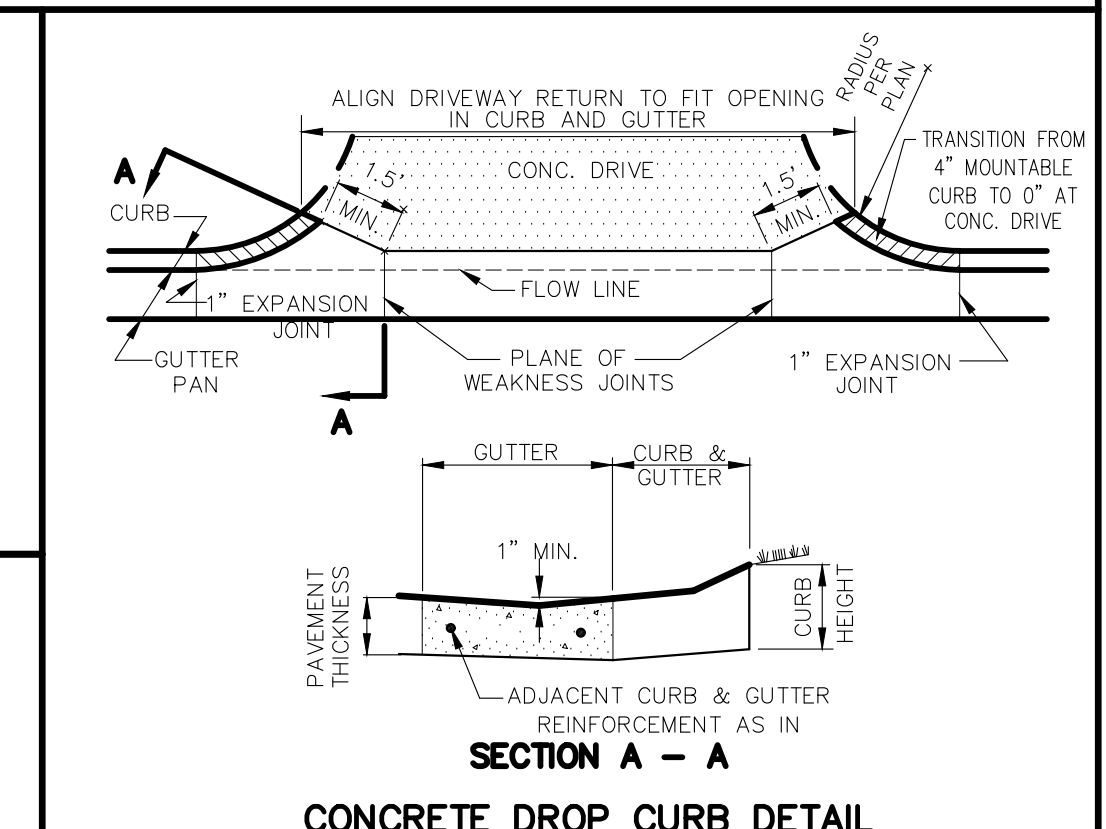
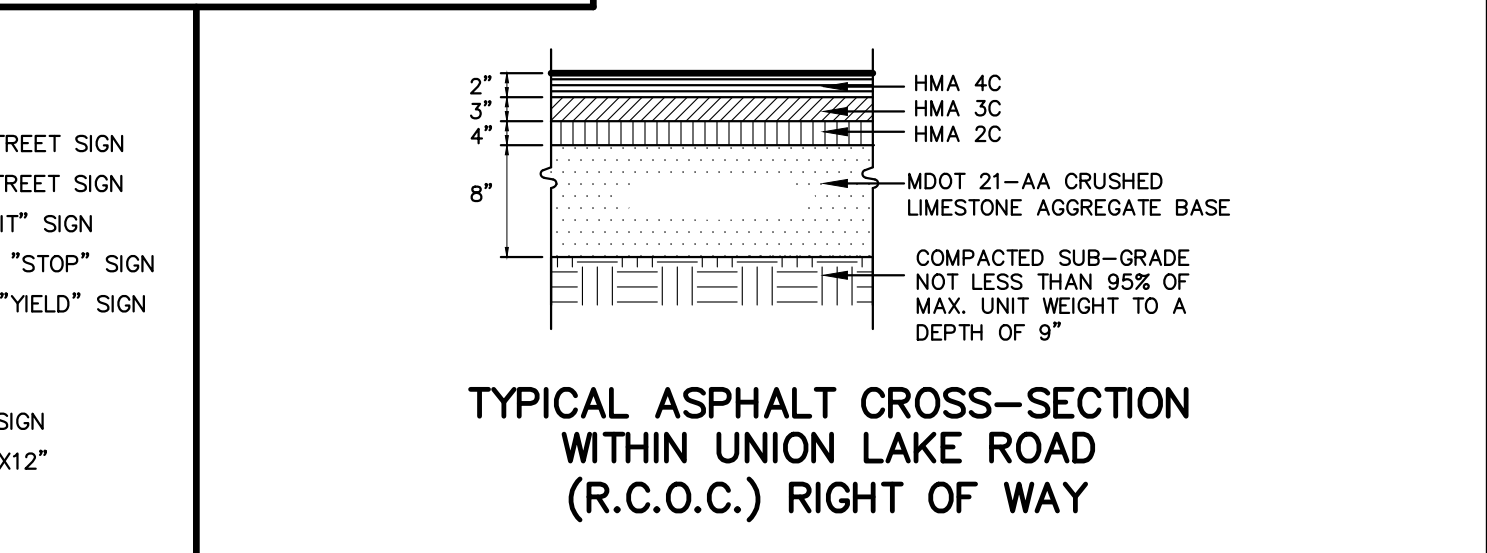
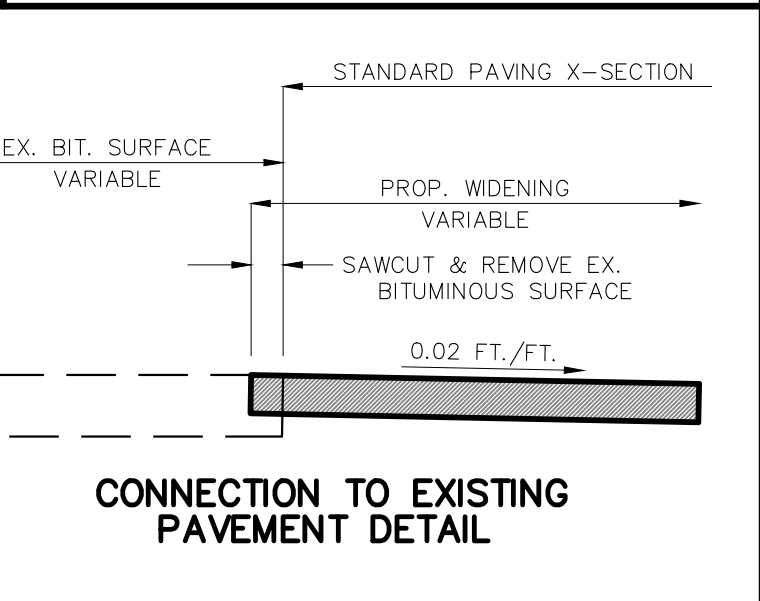
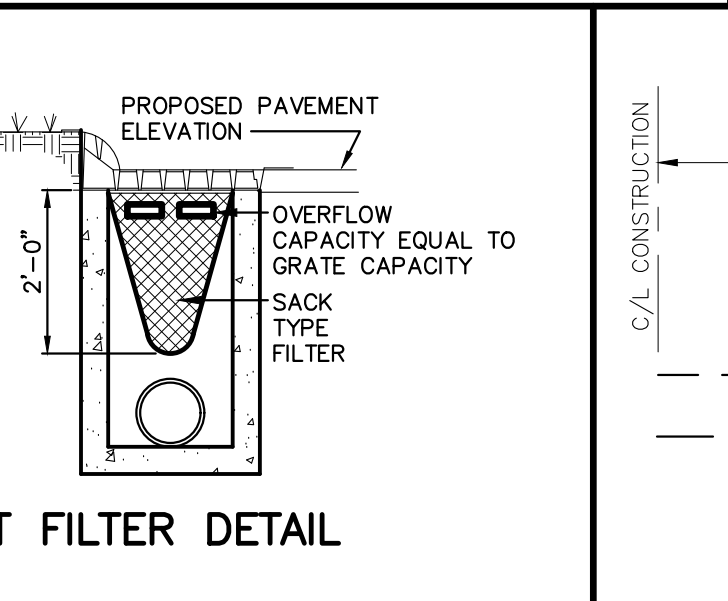
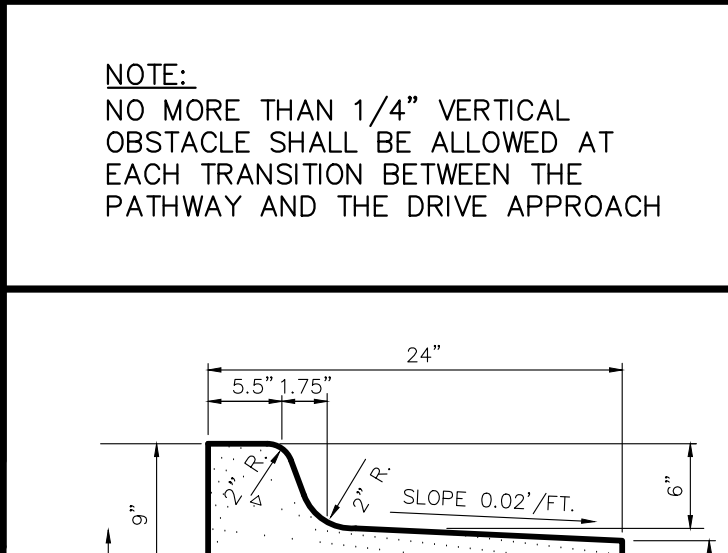
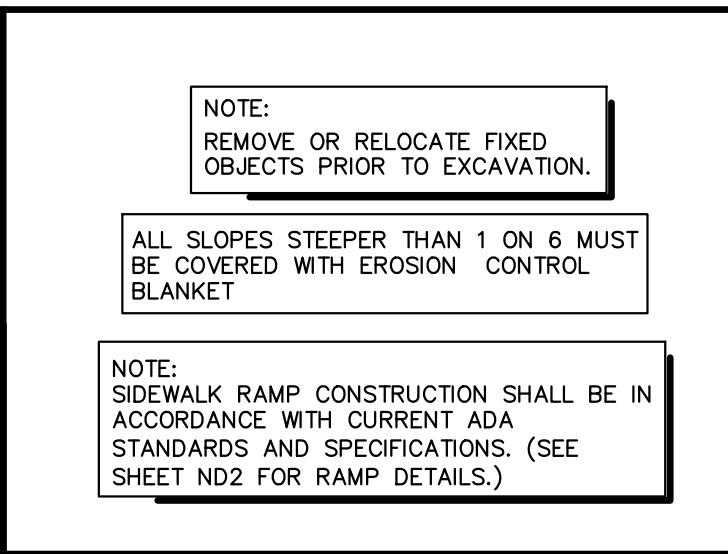
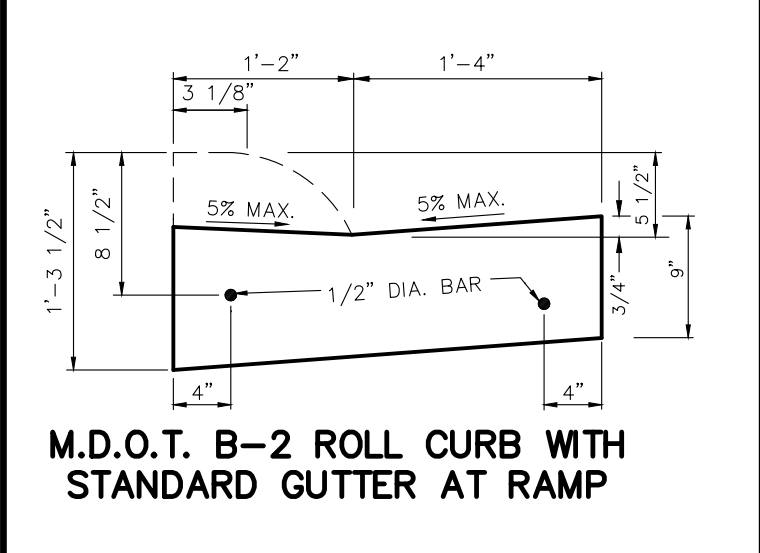
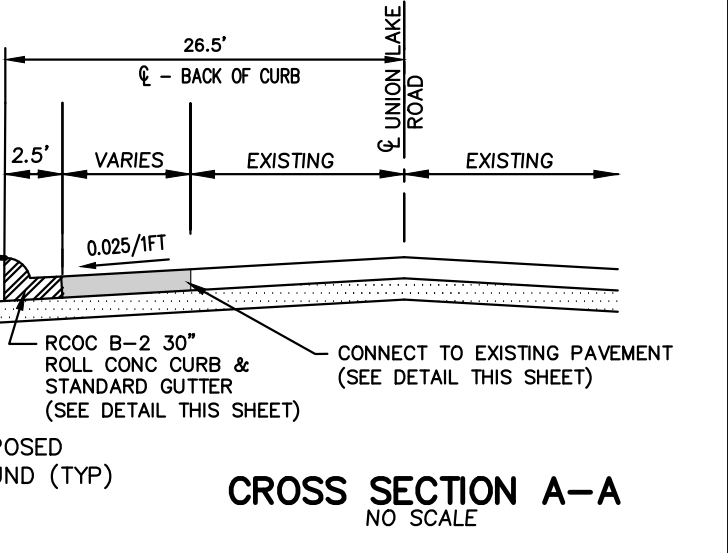
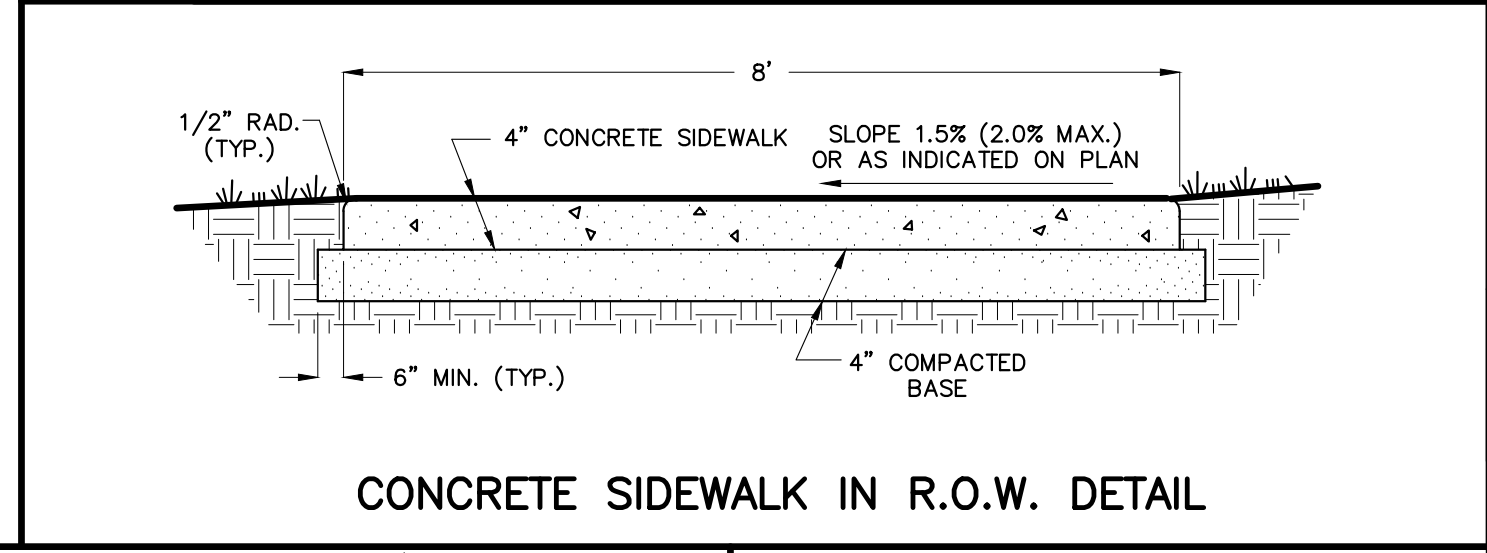
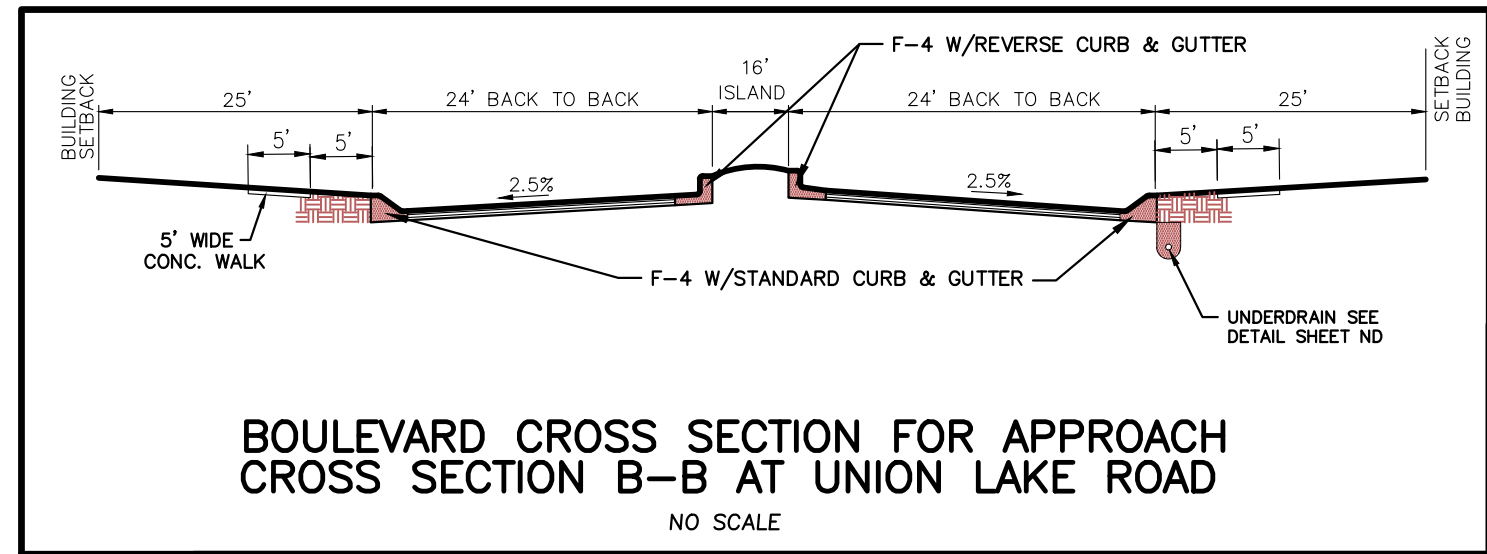
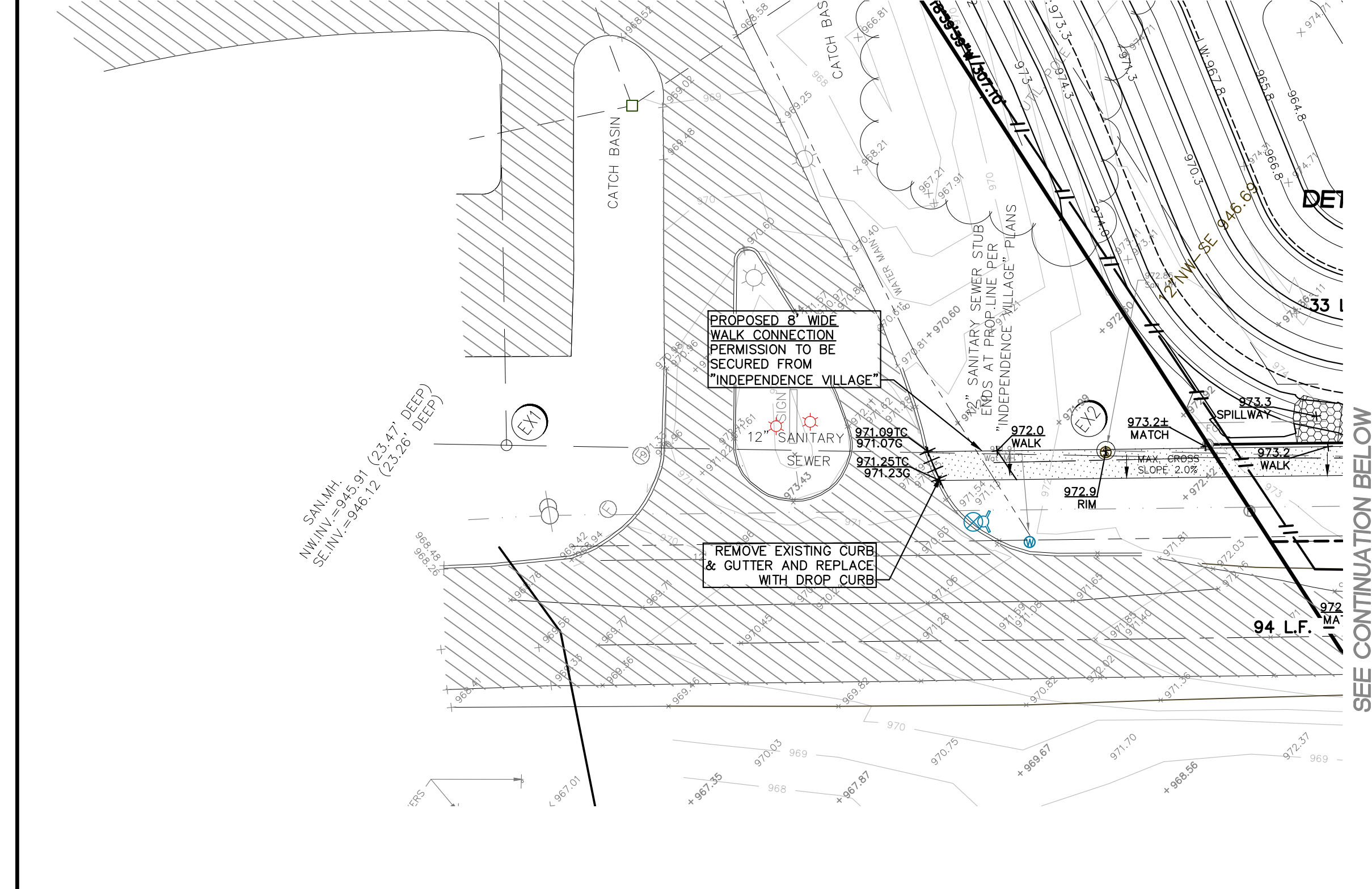
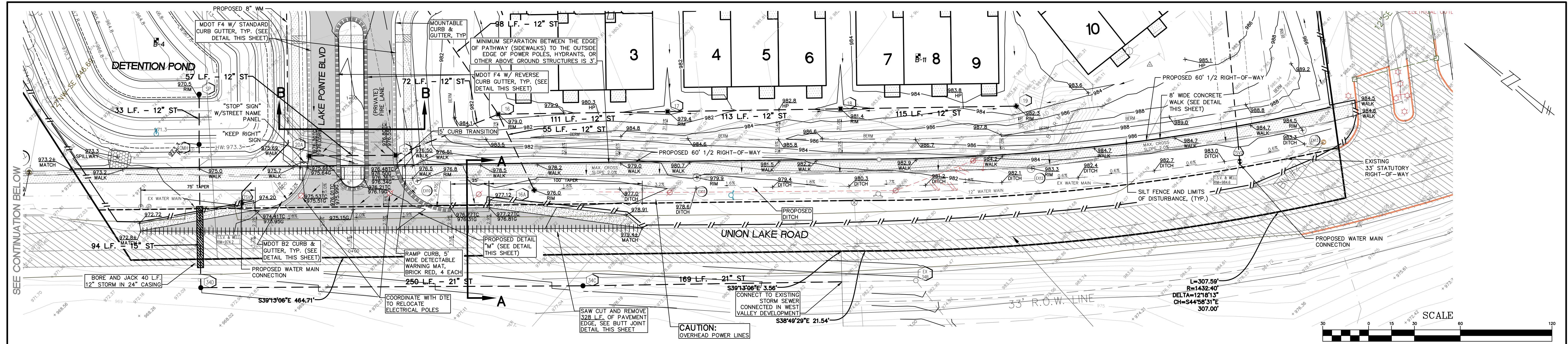
CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48036 586.412.7060

FARMINGTON HILLS OFFICE: 38206 COUNTRY CLUB DRIVE, SUITE C8 FARMINGTON HILLS, MI 48331 248.308.3331

**SHEET
16A**

2024 04 08 10:00 AM C:\PROJECTS\19039 GA-STORM WATER\19039 GA-STORM WATER.dwg

"COOLEY BEACH SUB-DIVISION"
L 24 PLATS, P. 2



LAKE POINTE
SECTION 36, TOWN 3 NORTH, RANGE 8 EAST
WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

REVISIONS			UTILITY WARNING
NO.	ITEM	DATE	UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THE PLAN, WERE OBTAINED FROM UTILITY OWNER AND NOT FIELD LOCATED.
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DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-039
CHECKED BY: J.E. DRAWING FILE: 19039AP.dwg

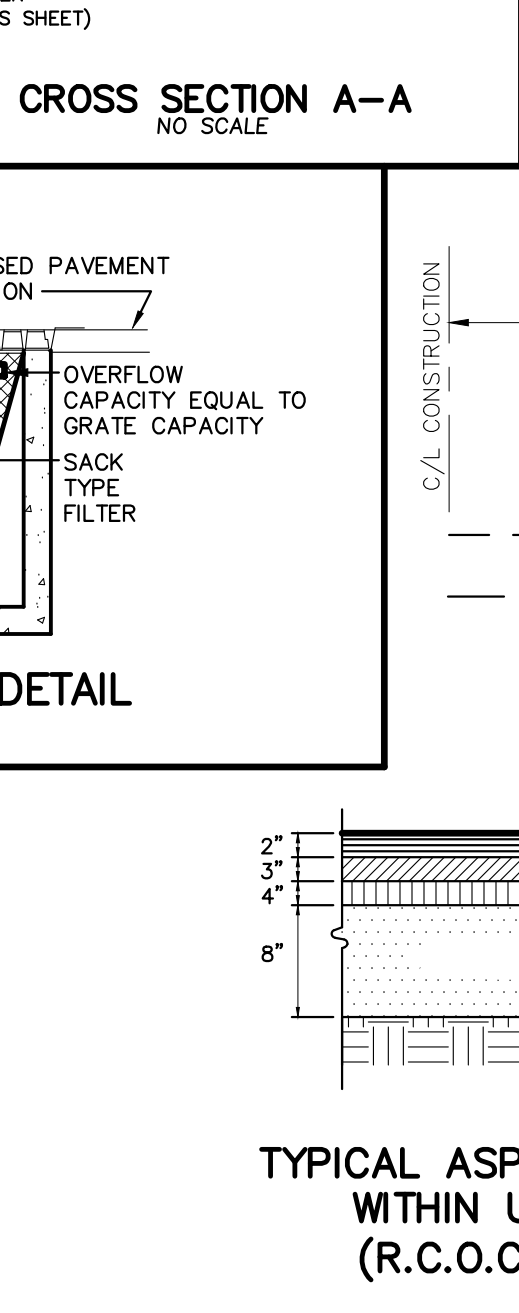
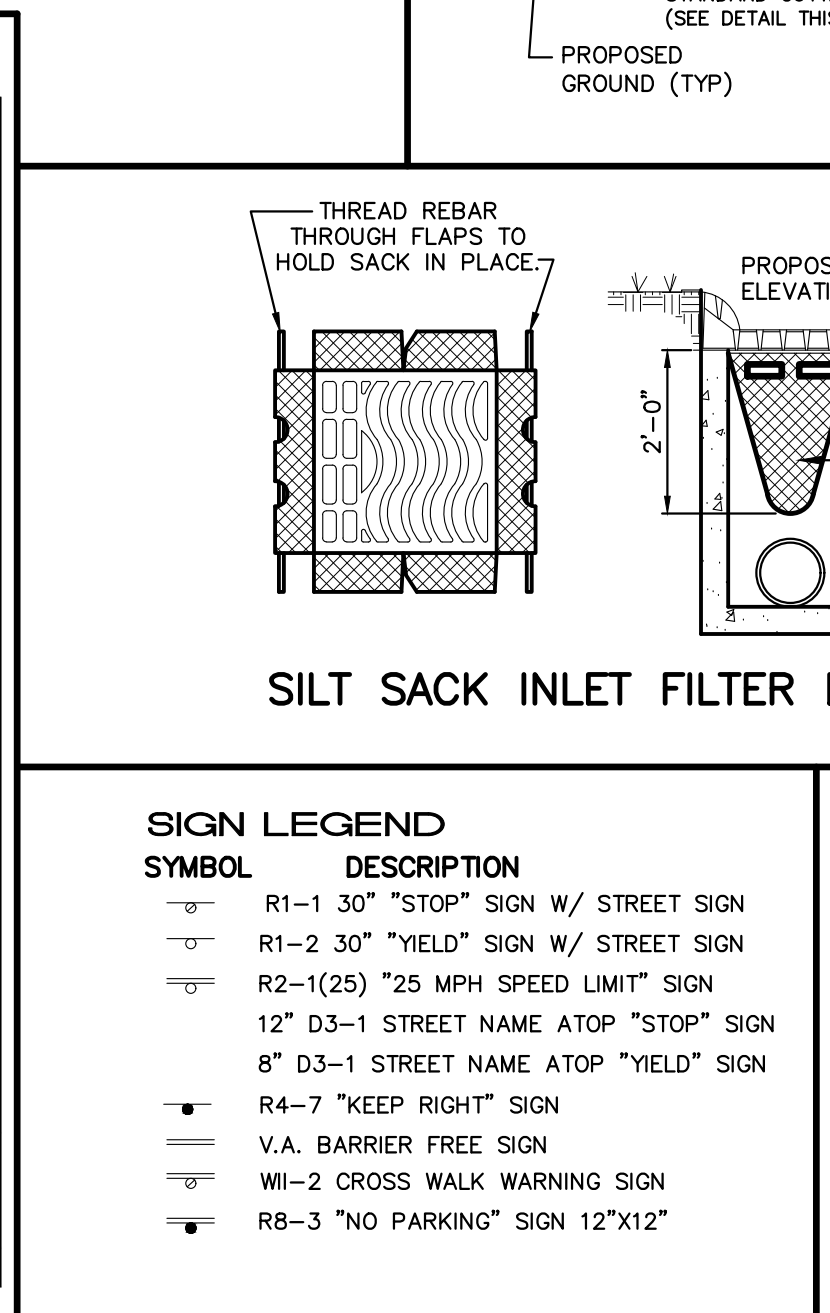
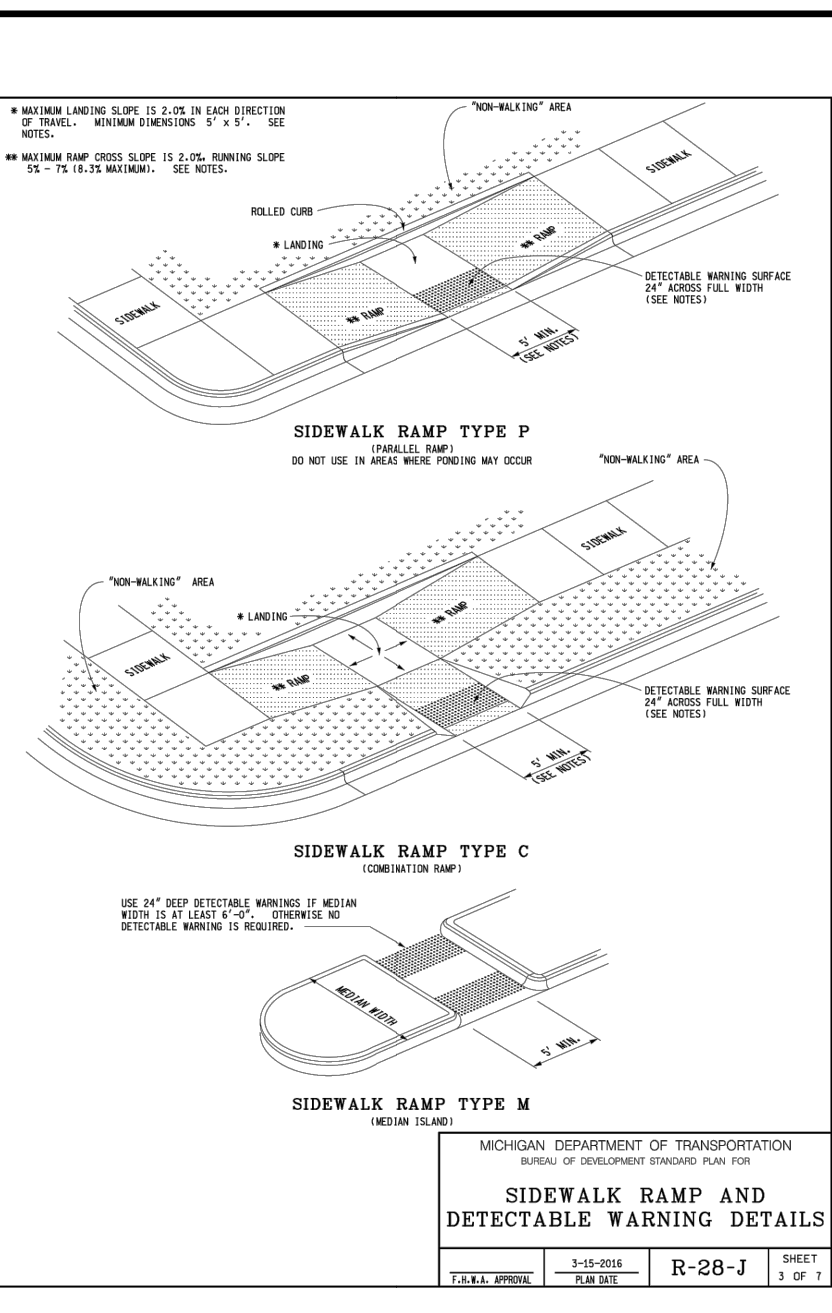
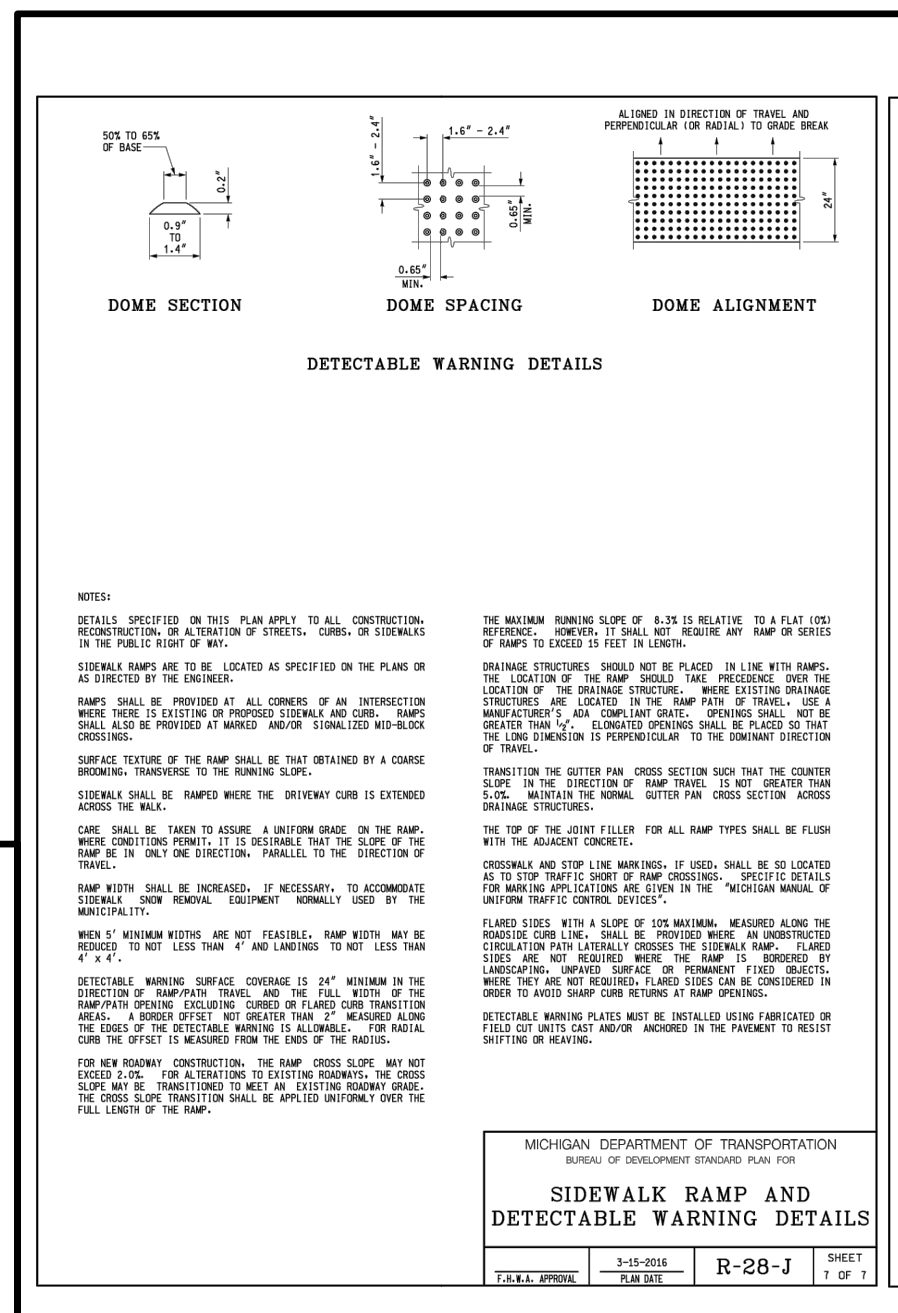
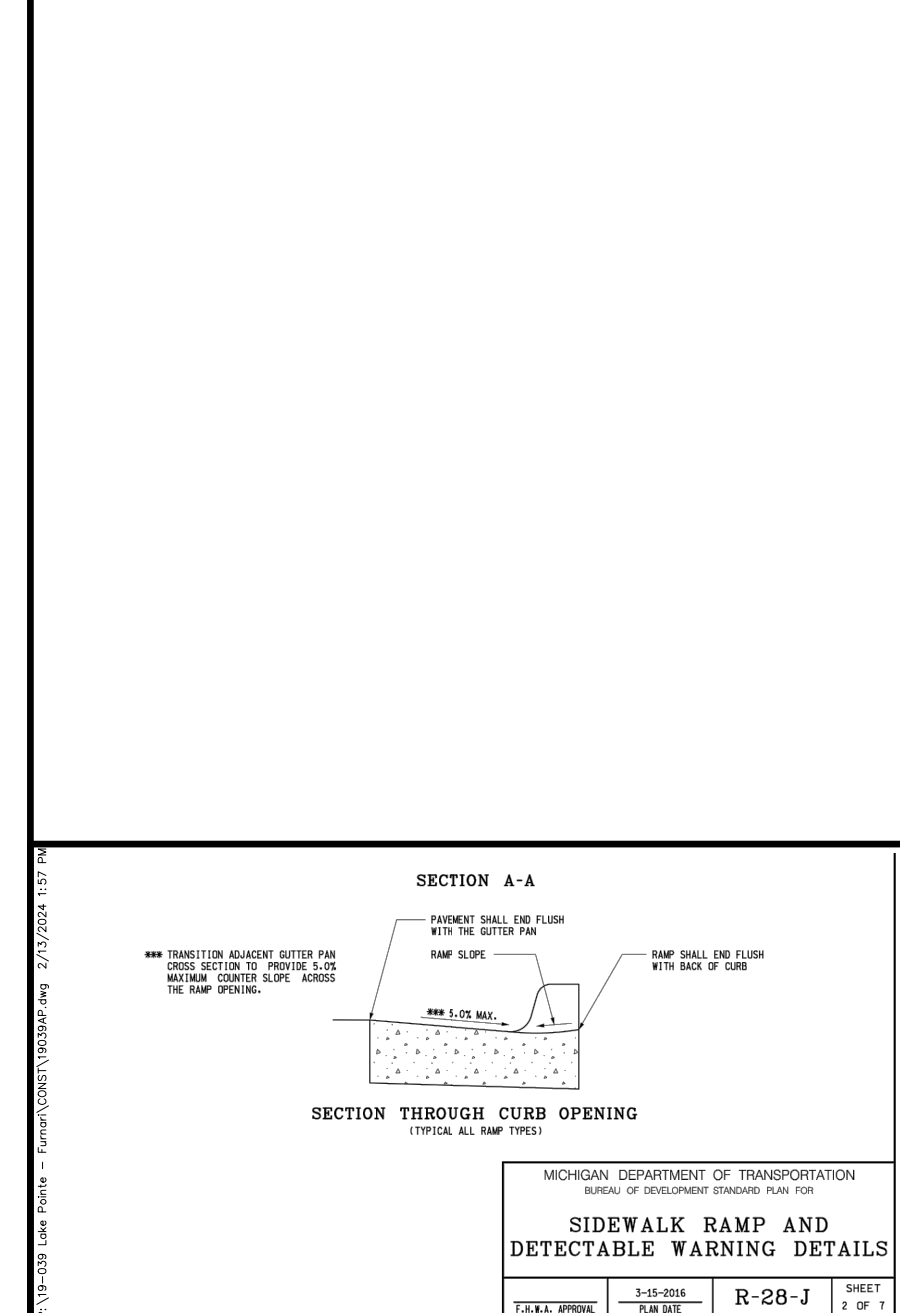
APPROACH PLAN

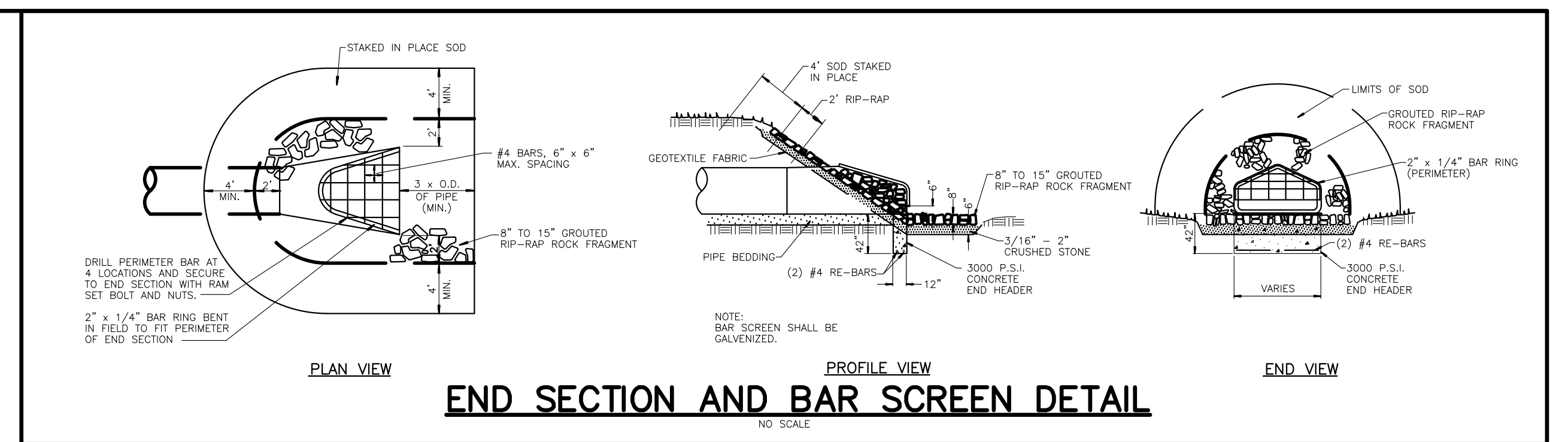
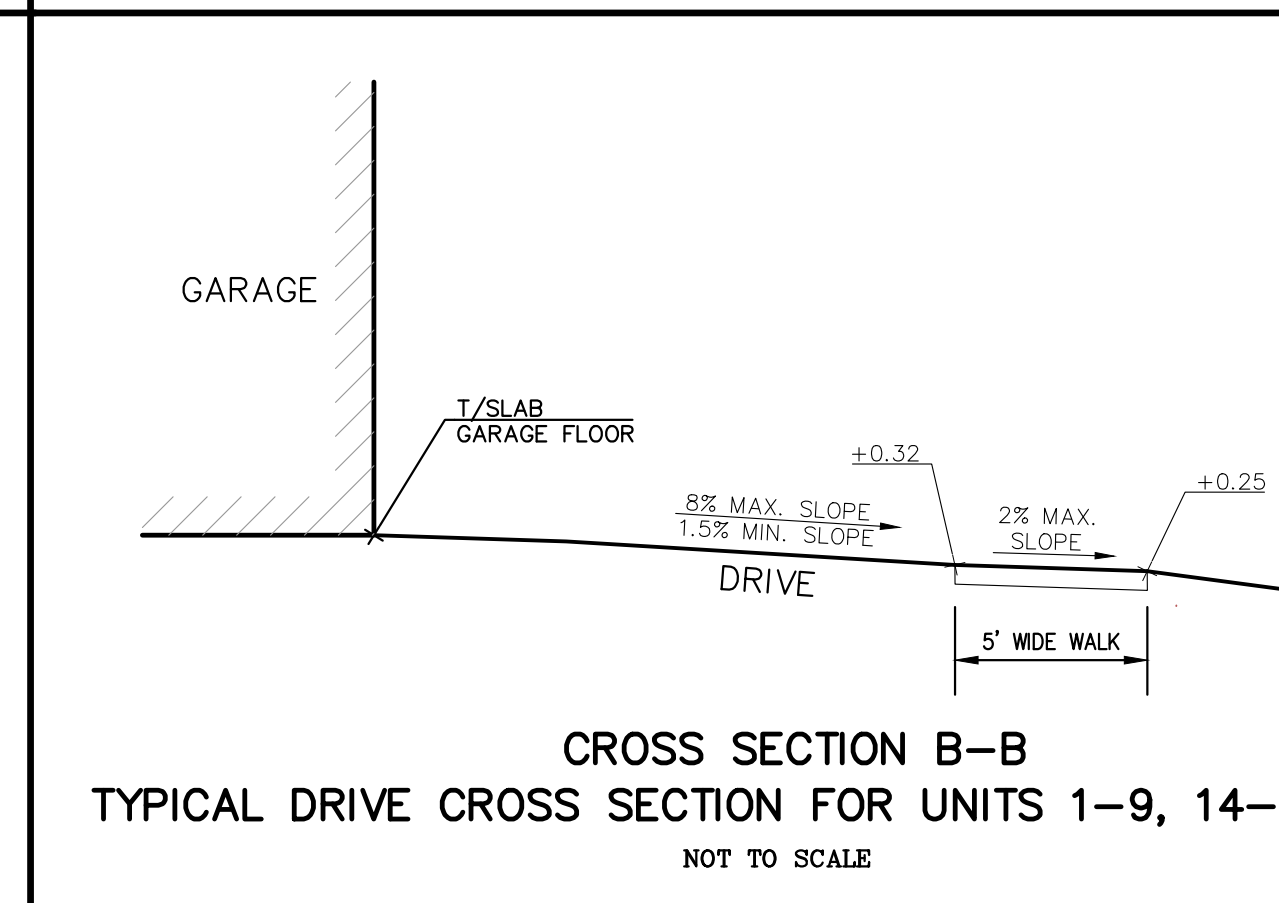
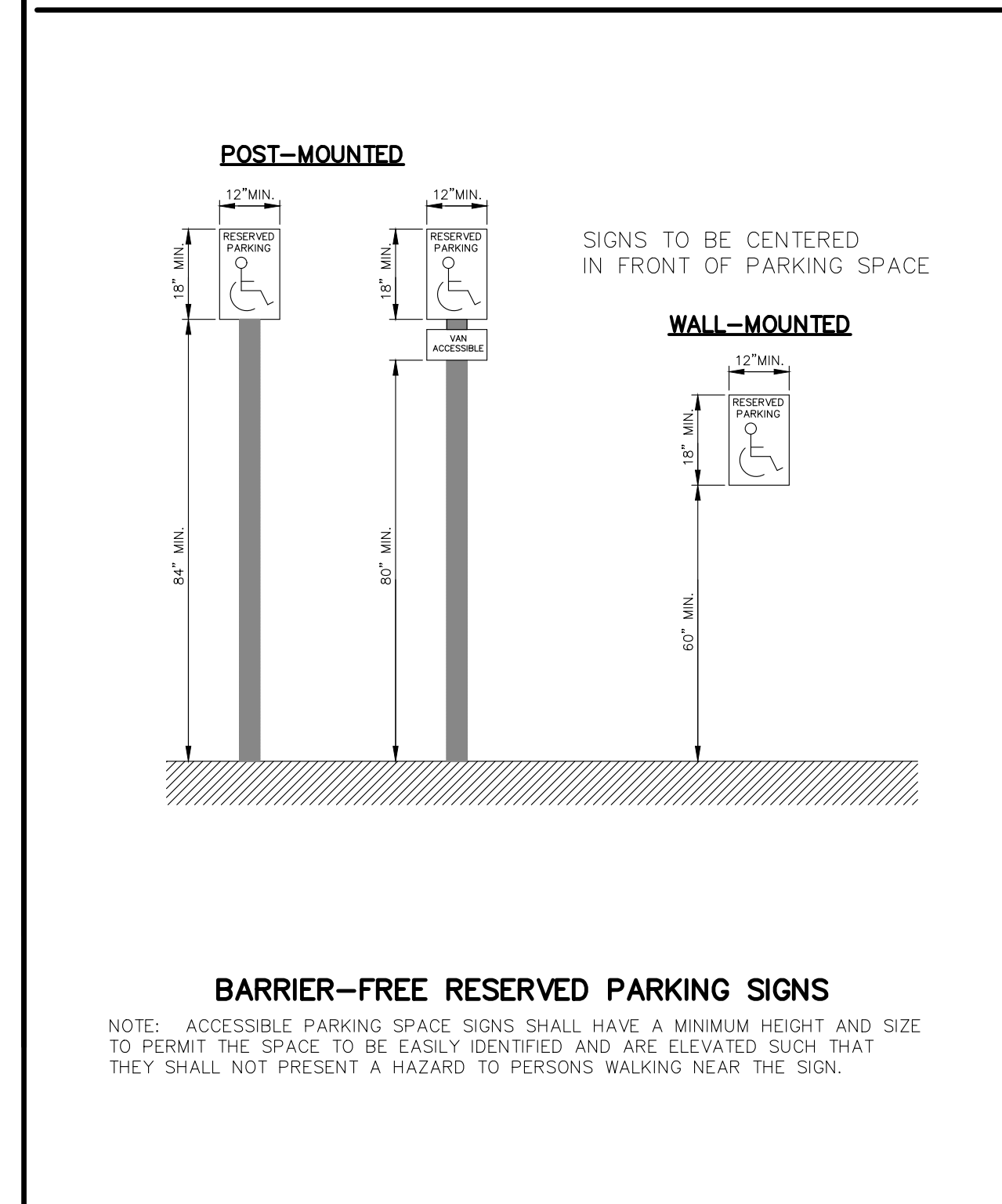
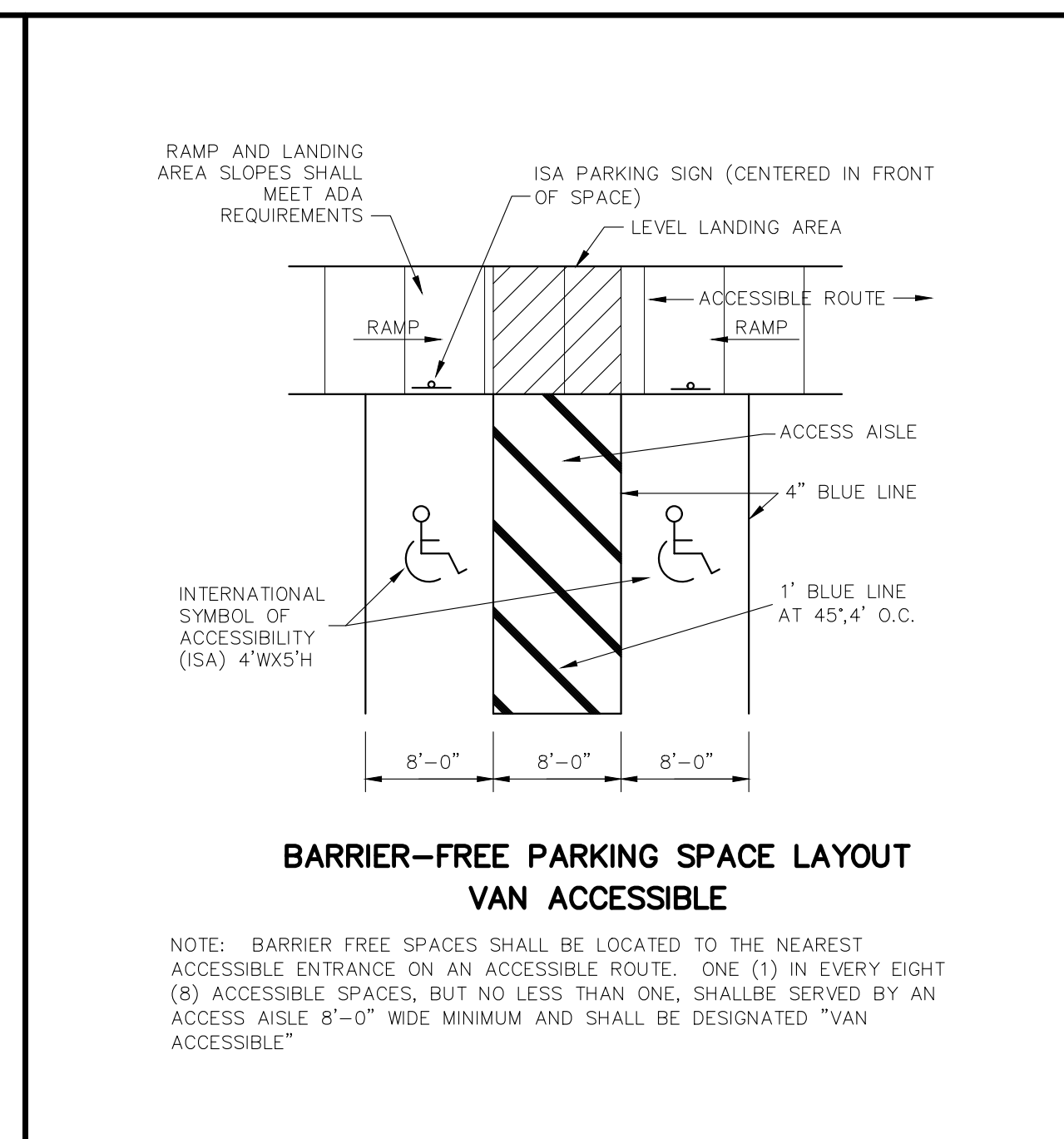
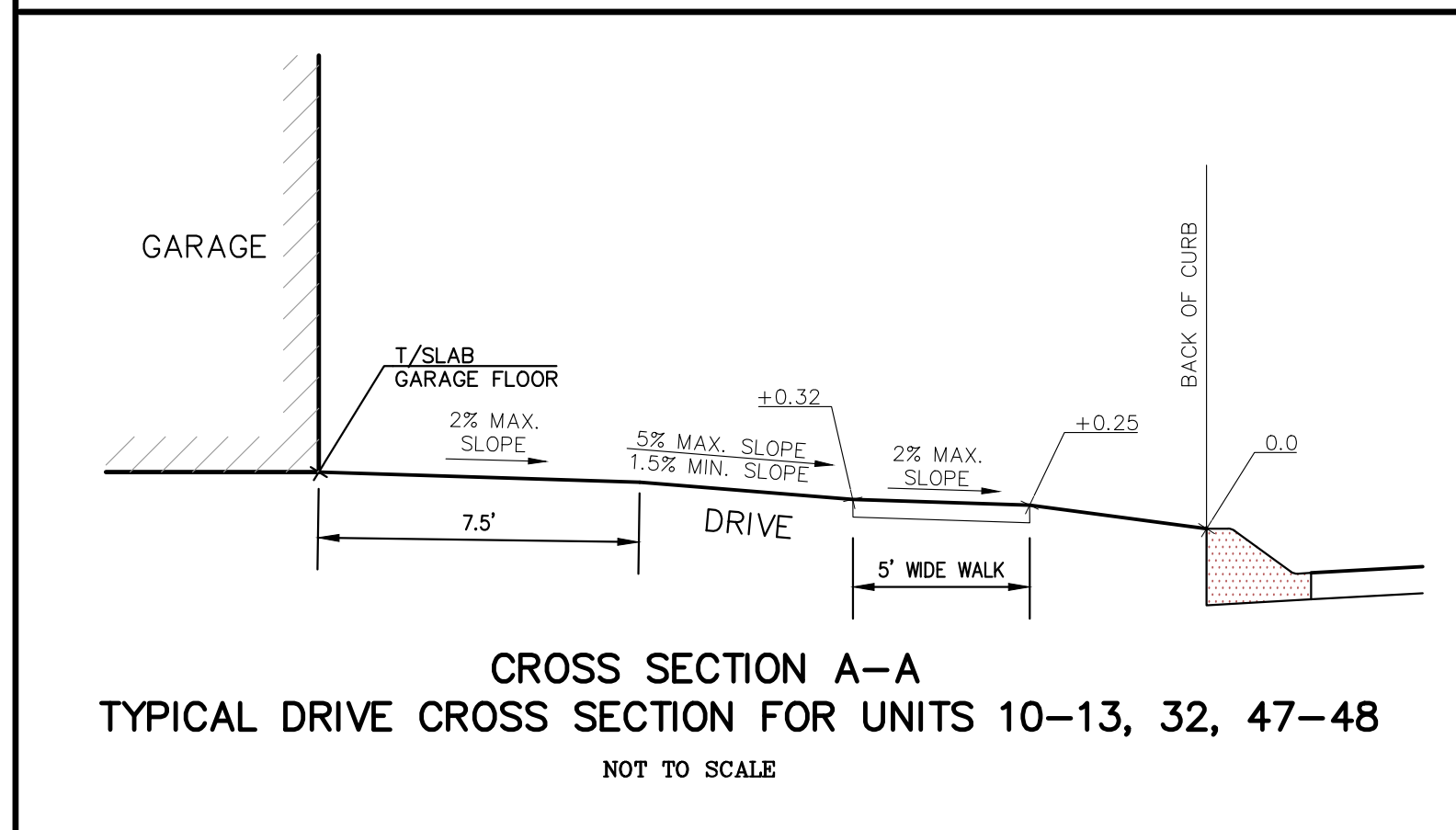
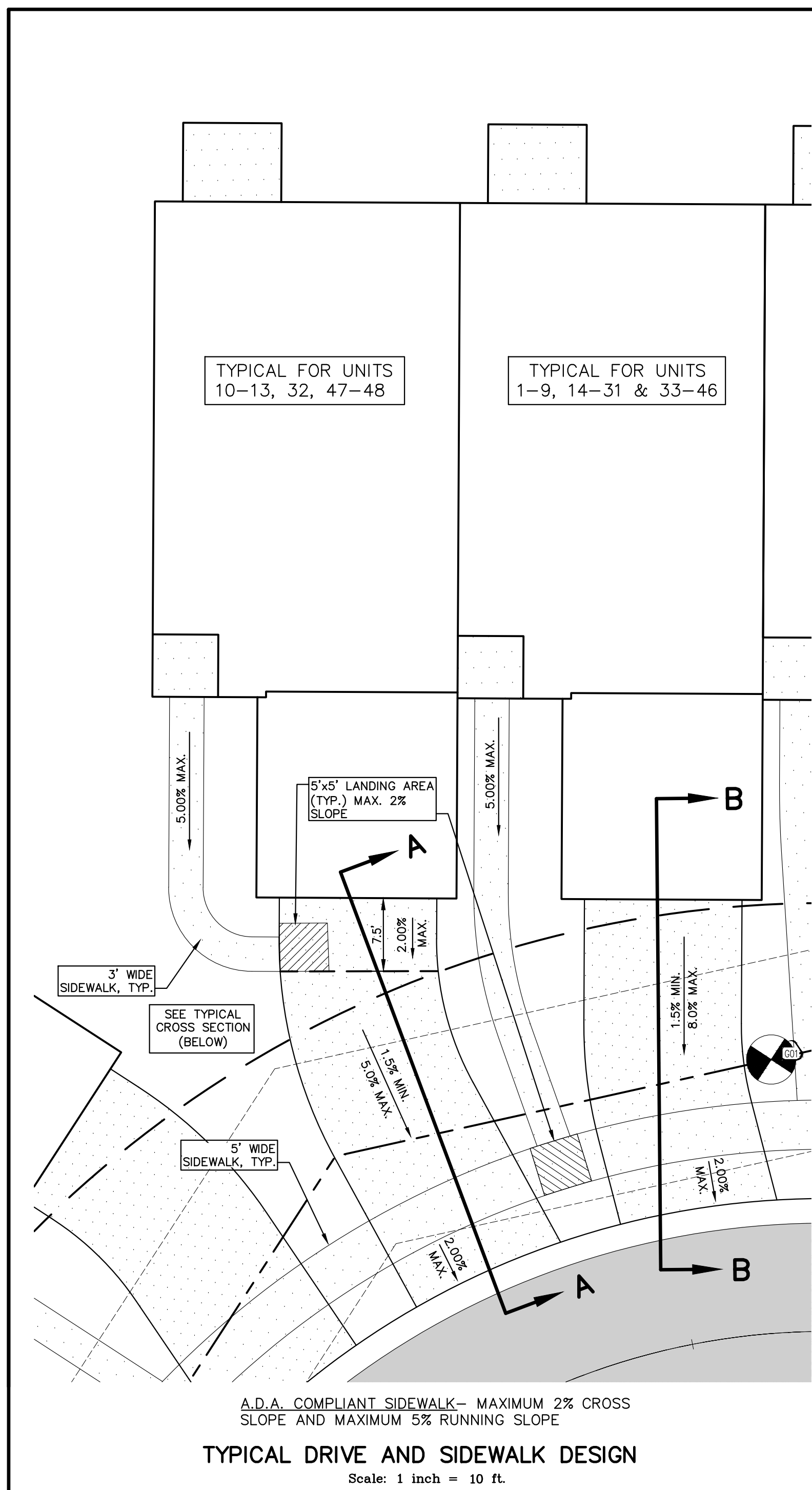
SKL SEIBER KEAST LEHNER ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48036 988.412.7050

FARMINGTON HILLS OFFICE: 38205 COUNTRY CLUB DRIVE, SUITE C8 FARMINGTON HILLS, MI 48331 248.308.3331

SHEET 17






LAKE POINTE


SECTION 36, TOWN 3 NORTH, RANGE 8 EAST

WHITE LAKE TWP., OAKLAND COUNTY, MICHIGAN

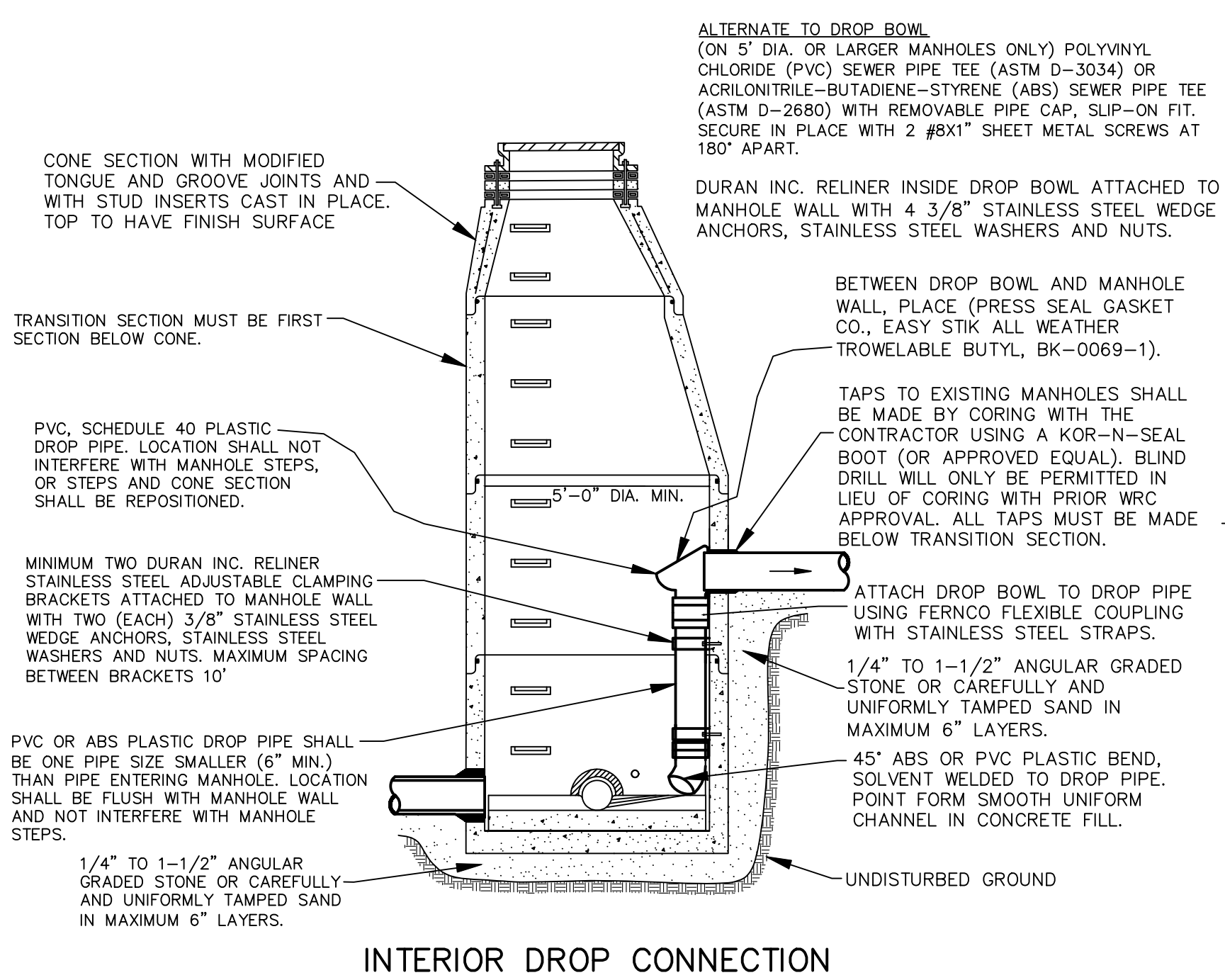
REVISIONS			UTILITY WARNING
NO.	ITEM	DATE	
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DATE: 04-08-2020 DESIGNED BY: A.A. JOB NUMBER: 19-030
 CHECKED BY: J.E. DRAWING FILE: 19030ND.dwg

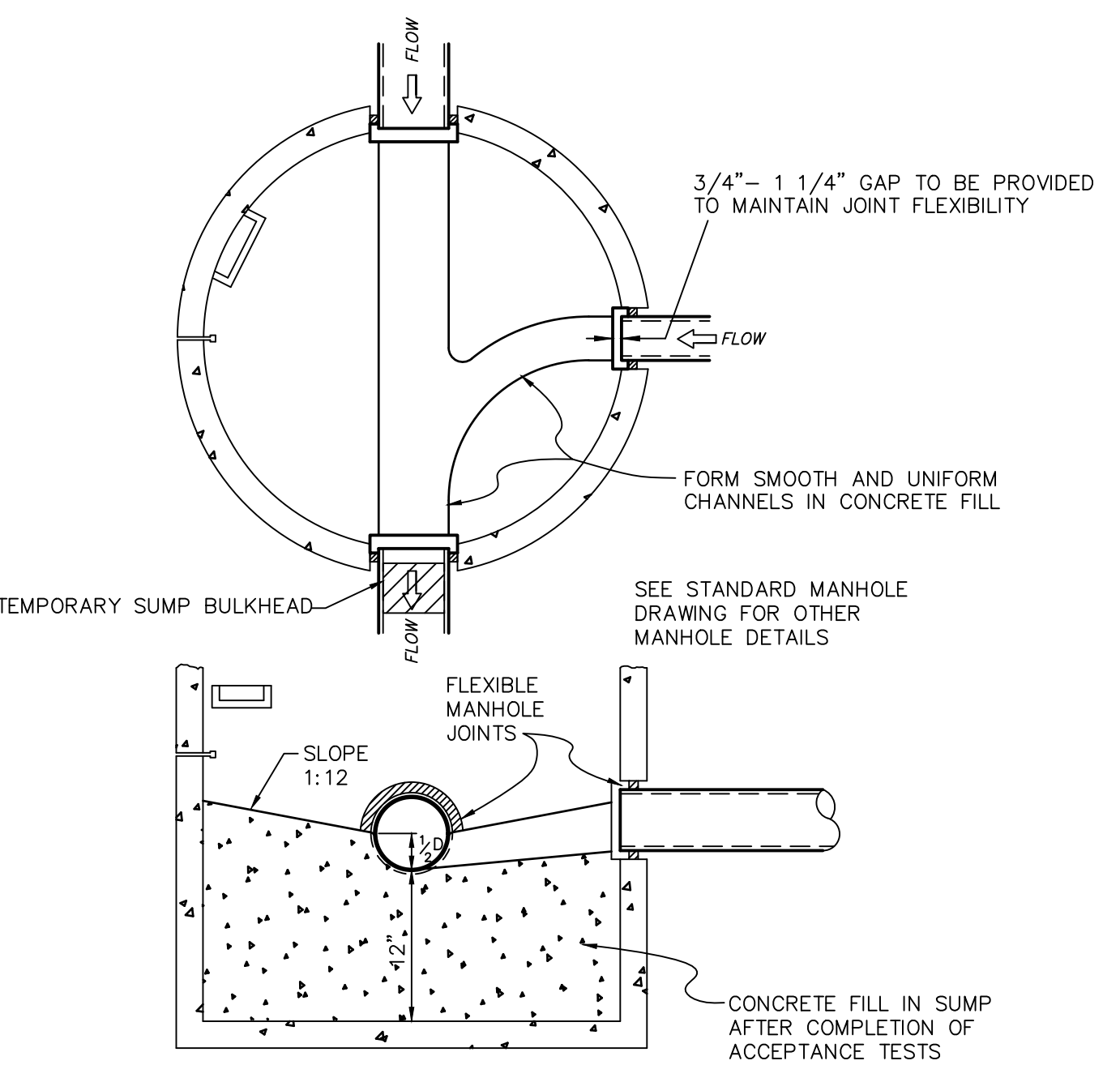
NOTES AND DETAILS

 SEIBER KEAST LEHNER ENGINEERING SURVEYING <small>CLINTON TOWNSHIP OFFICE: 1700 NINETEEN MILE ROAD, SUITE 3 CLINTON TOWNSHIP, MI 48036 588.412.7060</small>	SHEET ND2
	<small>PARRINGTON HILLS OFFICE: 38205 COUNTRY CLUB DRIVE, SUITE C8 PARRINGTON HILLS, MI 48381 248.308.3331</small>

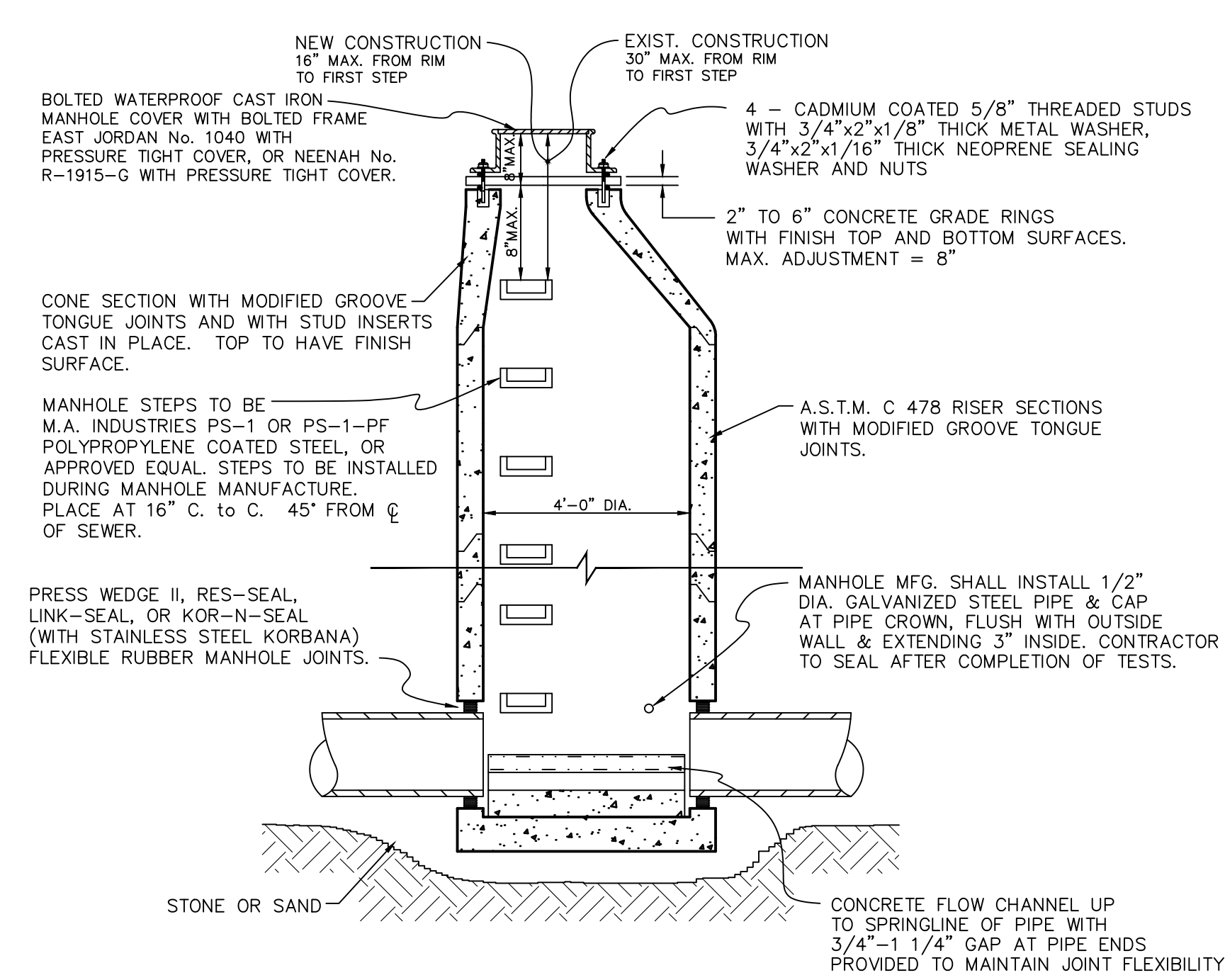
- All construction shall conform to the current standards and specifications of the local unit of government and the Oakland County Water Resources Commissioner (OCWRC). All sanitary sewer construction shall have full time inspection supervised by a professional engineer provided by or caused to be provided by the local unit of government.
- At all connections to Oakland County Water Resources Commissioner's sewers or extensions, and before start of construction, the Contractor must obtain a Sewer Inspection Permit issued by the OCWRC. Gravity sewer permit charges are \$250.00 for each connection plus \$25.00 for each manhole constructed. Pressure sewer permit charges are \$250.00 per 2460 L.F. of force main with a minimum permit fee of \$250.00. Failure to pass any test segment will result in an additional charge to the Contractor for each retest, in accordance with the above price schedule. The Contractor shall also have posted with the OCWRC a \$5,000.00 surety bond and \$500.00 cash deposit. The Contractor shall notify the local unit of government and the OCWRC (248-858-1110) 24 hours prior to the beginning of any construction. Final acceptance tests must be witnessed by County personnel and must be scheduled by Municipality or its consultant in advance with 24 hour notice at 248-858-1110.
- No sewer installation shall have an infiltration or exfiltration exceeding 100 gallons per inch diameter per mile of pipe in a 24 hour period, and no single run of sewer between manholes shall exceed 100 gallons per inch diameter per mile. Air tests in lieu of infiltration tests shall be as specified in the OCWRC "Acceptance Tests", dated September, 1972. Only pipe and pipe joints approved by the Oakland County Water Resources Commissioner may be used for sanitary sewer construction.
- Located in the first manhole upstream from the point of all connections to an existing OCWRC sewer, or extension thereto, a temporary 12-inch deep sump shall be provided in the first manhole above the connection which will be filled in after such successful completion of any acceptance test up to the standard fill provided for the flow channel. A watertight bulkhead shall be provided on the downstream of the sump manhole.
- All building leads and risers shall be 6-inch S.D.R. 23.5 ABS OR PVC pipe with chemically fused joints, or an approved equal pipe and joint. Sewer pipe wye shall contain factory installed premium joint material of an approved type compatible with that of the building lead pipe used. Building leads to be furnished with removable air tight and water-tight stoppers.
- All rigid sewer pipe shall be installed in Class "B" bedding or better. All flexible, semi-flexible or composite sewer pipe shall be installed in conformance to the Oakland County Water Resources Commissioner specifications.
- All new manholes shall have Oakland County Water Resources Commissioner approved flexible, water-tight seals where pipes pass through walls. Manholes shall be of precast sections with modified groove tongue and rubber gasket type joints. Precast manhole cone sections shall be Oakland County Water Resources Commissioner approved modified eccentric cone type. All manholes shall be provided with bolted, water-tight covers.
- At all connections to manholes on Oakland County Water Resources Commissioner's sewers or extensions thereto drop connections will be required when the difference in invert elevations exceeds 18-inches. Outside drop connections only will be approved.
- Taps to existing manholes shall be made by coring. The Contractor shall place a KOR-N-SEAL boot (or OCWRC approved equal) after coring is completed. Blind drilling will not be permitted in lieu of coring.
- New manholes constructed directly on Oakland County Water Resources Commissioner's sewers shall be provided with covers reading "Oakland County - Sanitary" in raised letters. New manholes built over an existing sanitary sewer shall have monolithic poured bottoms.
- No ground water, storm water, construction water, downspout drainage or weep tile drainage shall be allowed to enter any sanitary sewer installation.
- Prior to excavation, the Contractor shall telephone MISS DIG (647-7344) for the location of underground pipeline and cable facilities, and shall also notify representatives of other utilities located in the vicinity of the work.
- 18" minimum vertical separation and 10' minimum horizontal separation must be maintained between sanitary sewer and water main.
- Manhole frame and cover shall be as follows: East Jordan heavy manhole cover, base flange type #1040 or Neenah Foundry heavy duty #R-1642 manhole frame. Solid lid cover shall be non-rocking and marked "WHITE LAKE TOWNSHIP SEWER DEPARTMENT."



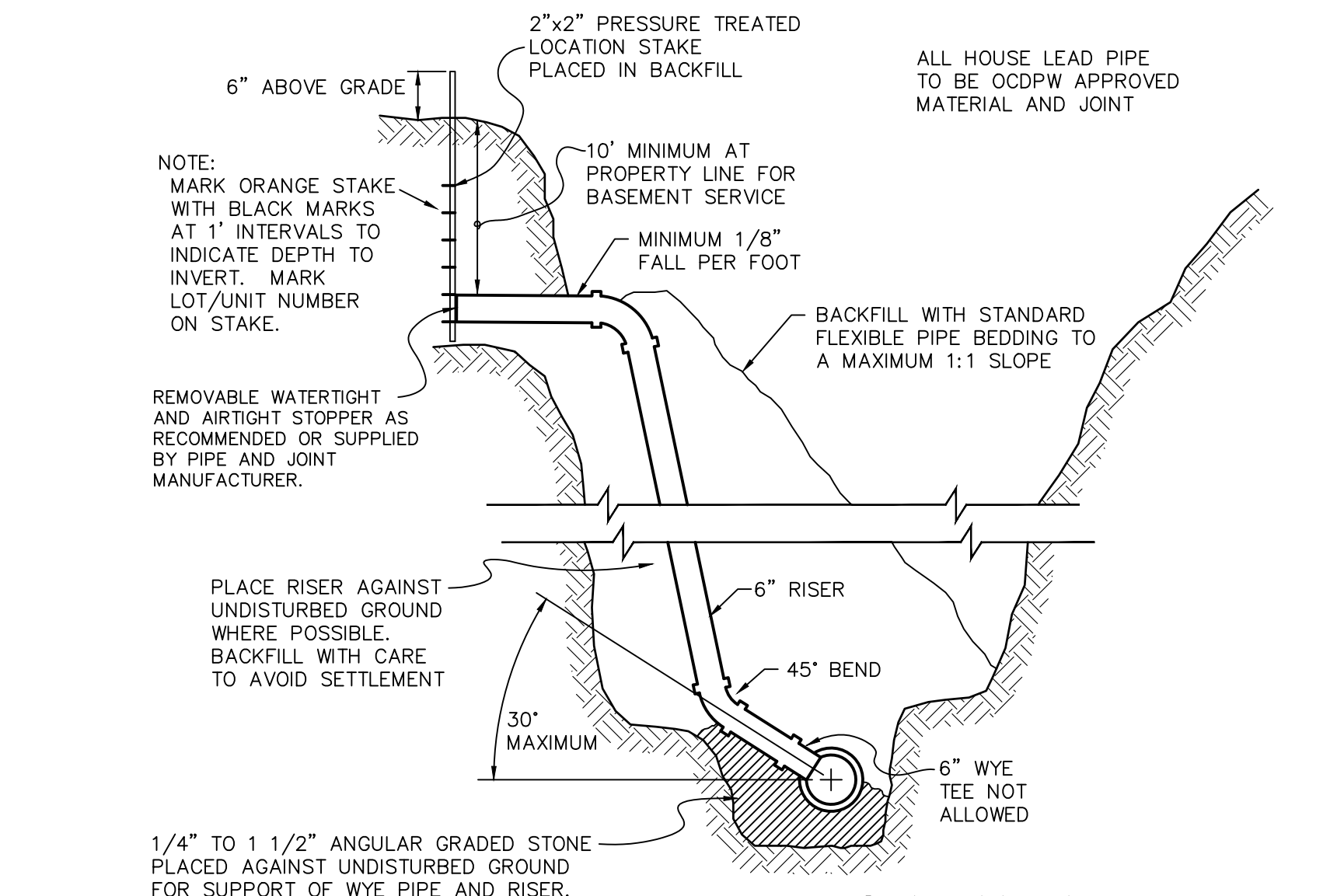
INTERIOR DROP CONNECTION



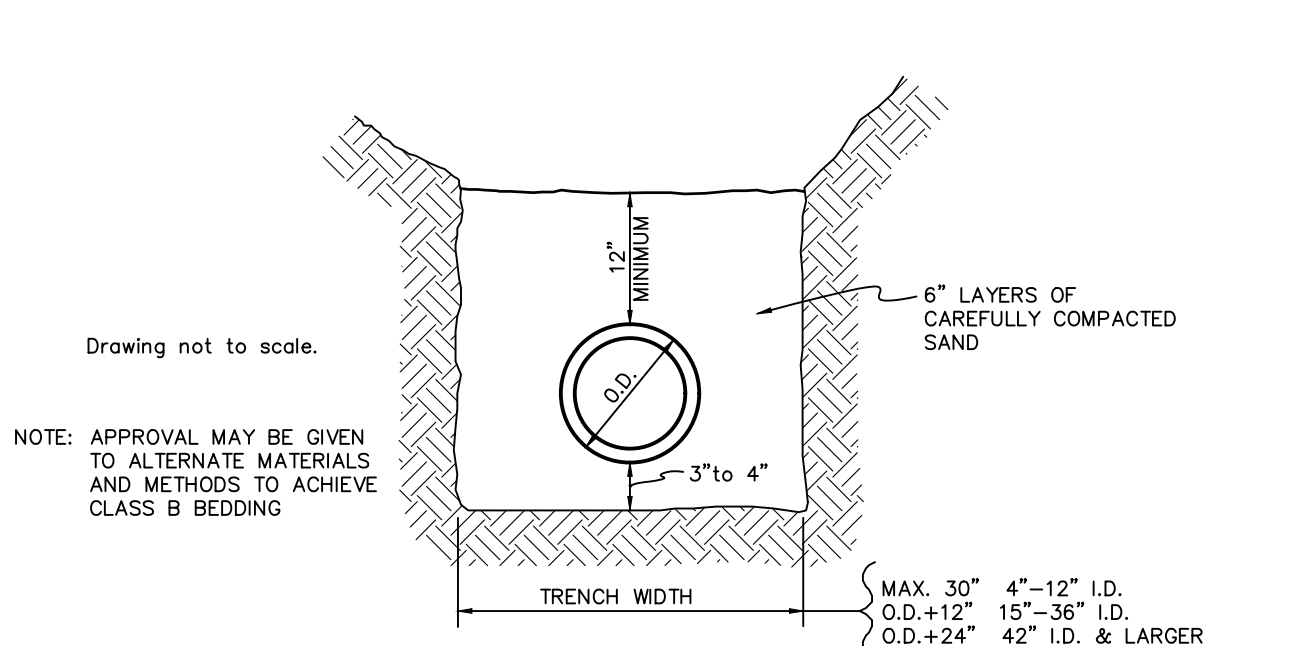
SUMP MANHOLE FOR TESTING, CLEANING, AND DEWATERING



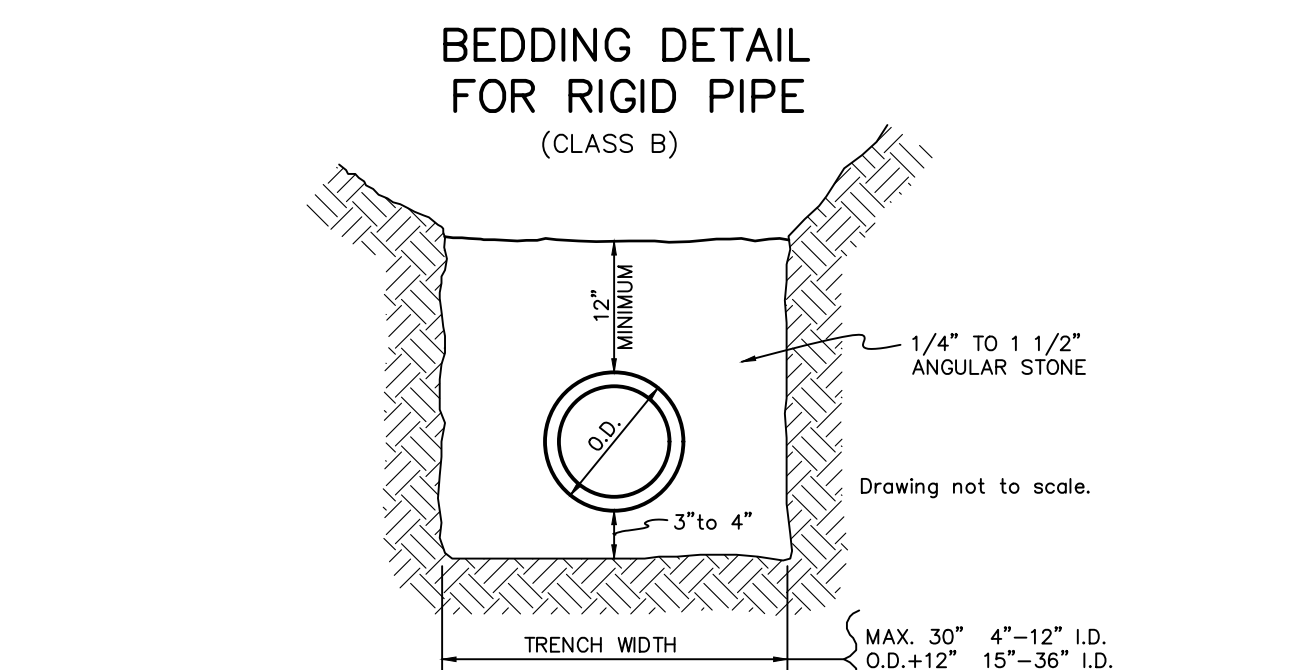
STANDARD MANHOLE ON 8" THROUGH 24" DIAMETER SEWERS



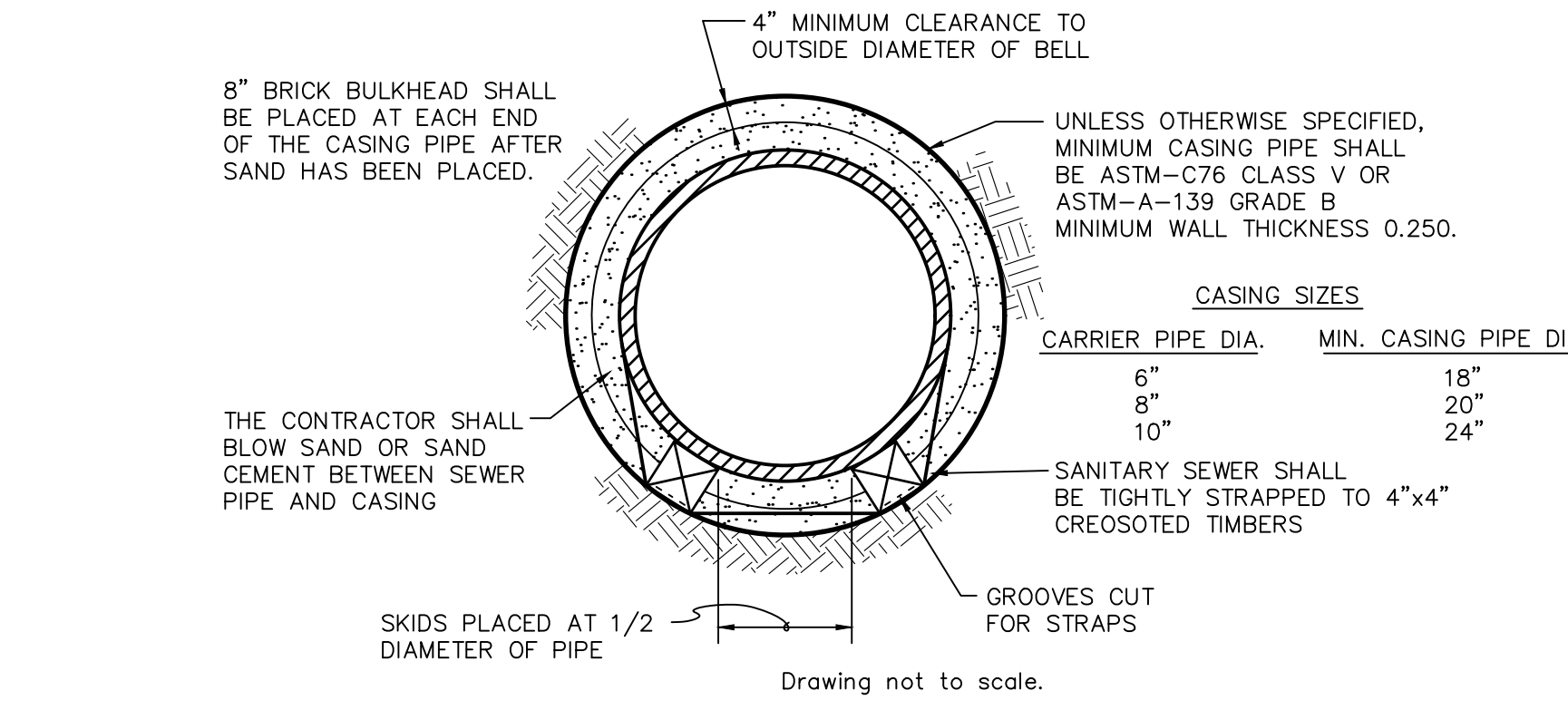
HOUSE/BUILDING LEAD DETAIL



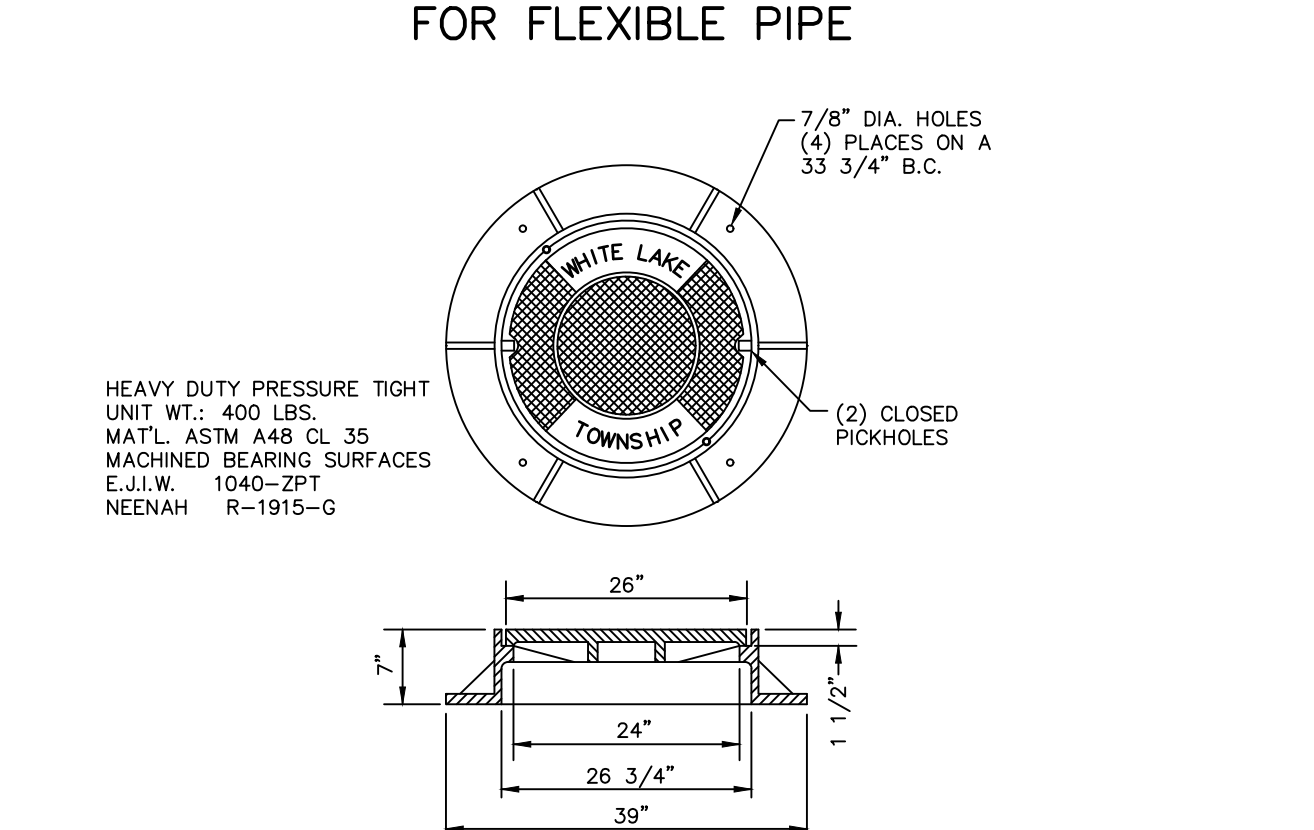
BEDDING DETAIL FOR RIGID PIPE (CLASS B)



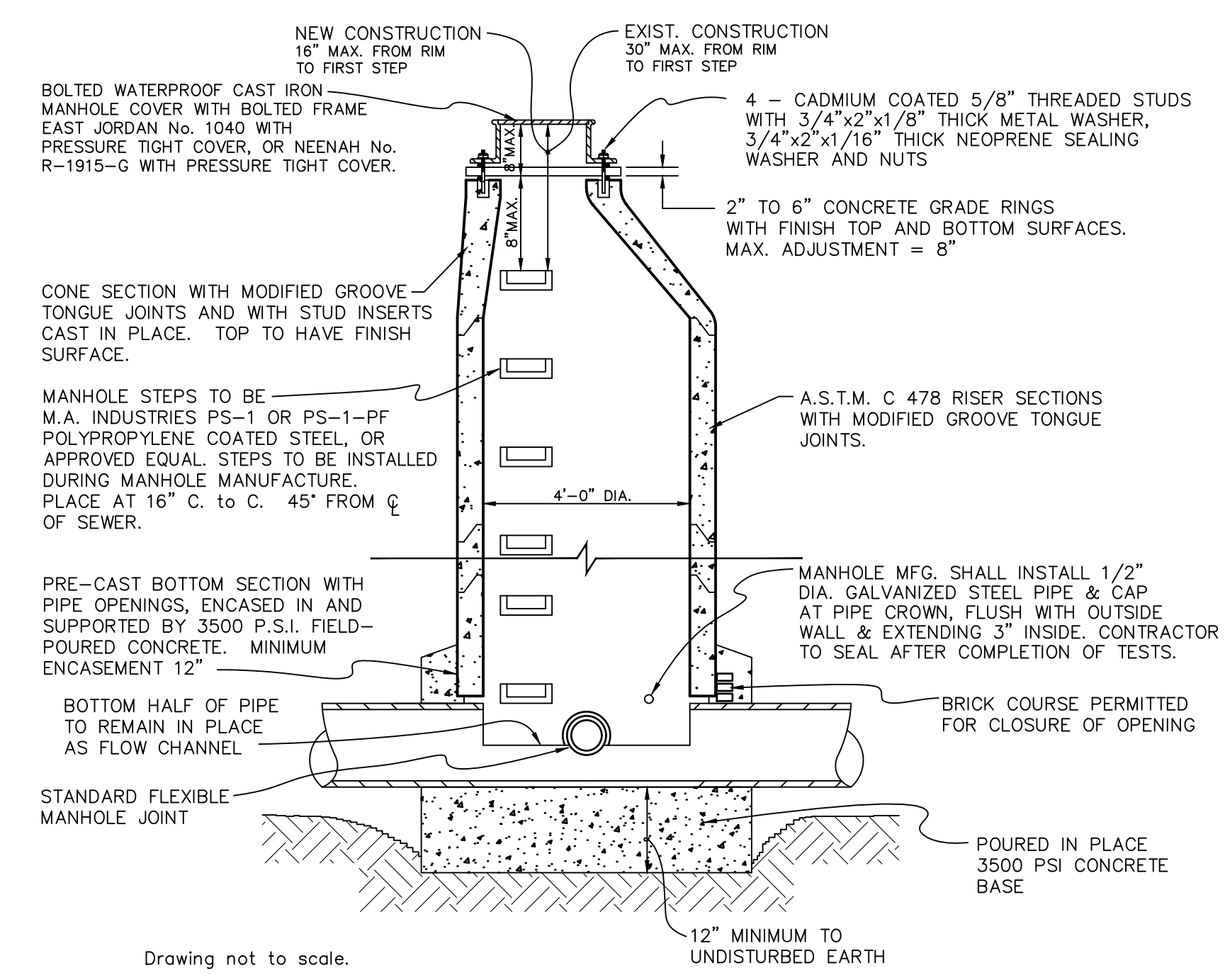
BEDDING DETAIL FOR FLEXIBLE PIPE



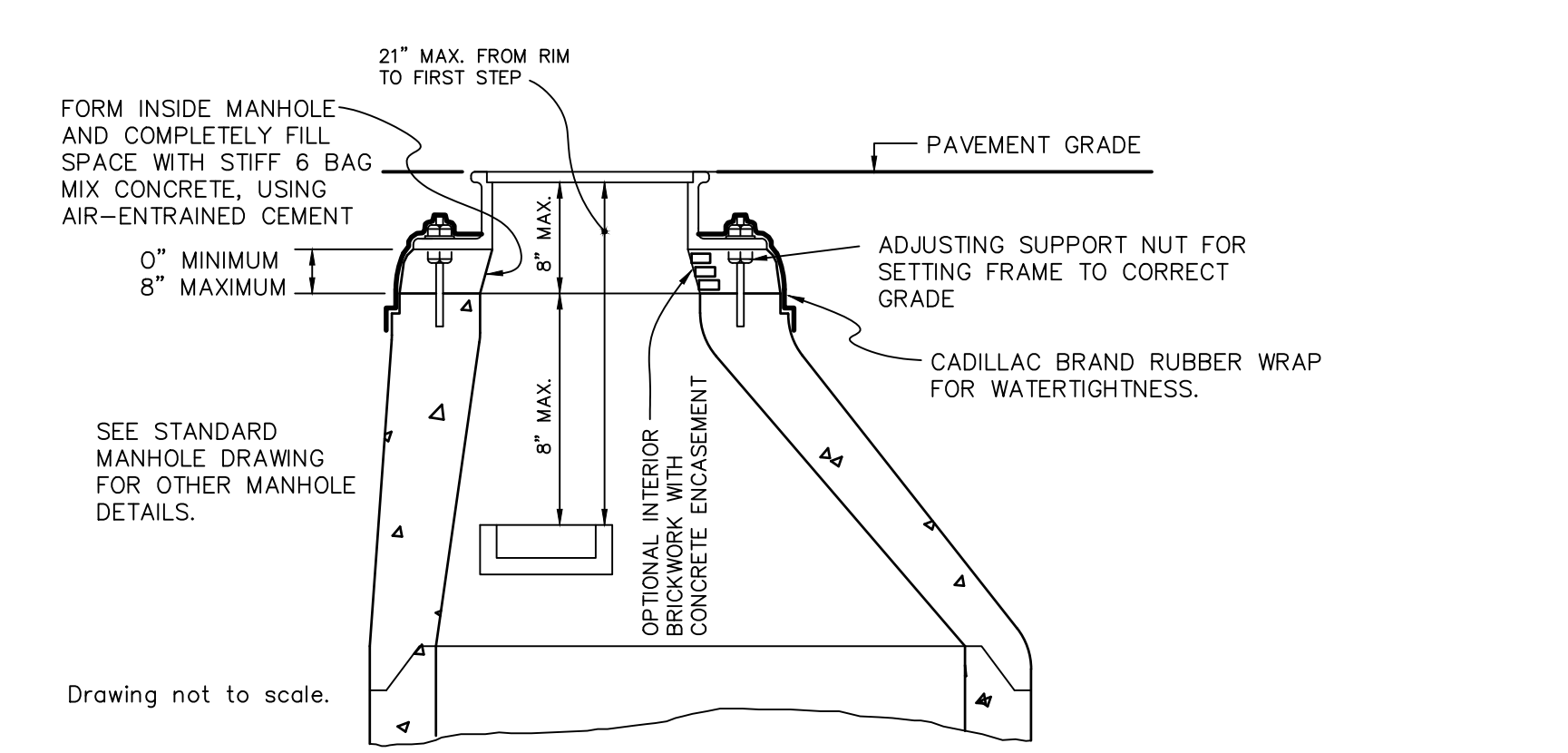
PIPE BARREL SUPPORT FOR SEWER



MANHOLE COVER & FRAME



SKETCH OF MINIMUM MANHOLE REQUIREMENTS ON MANHOLES CONSTRUCTED OVER EXISTING SEWERS



OPTIONAL CONSTRUCTION DETAILS

DRAWN: CAD DESIGN: OA CHECKED: -- SCALE: VERT. - HORZ. AS NOTED

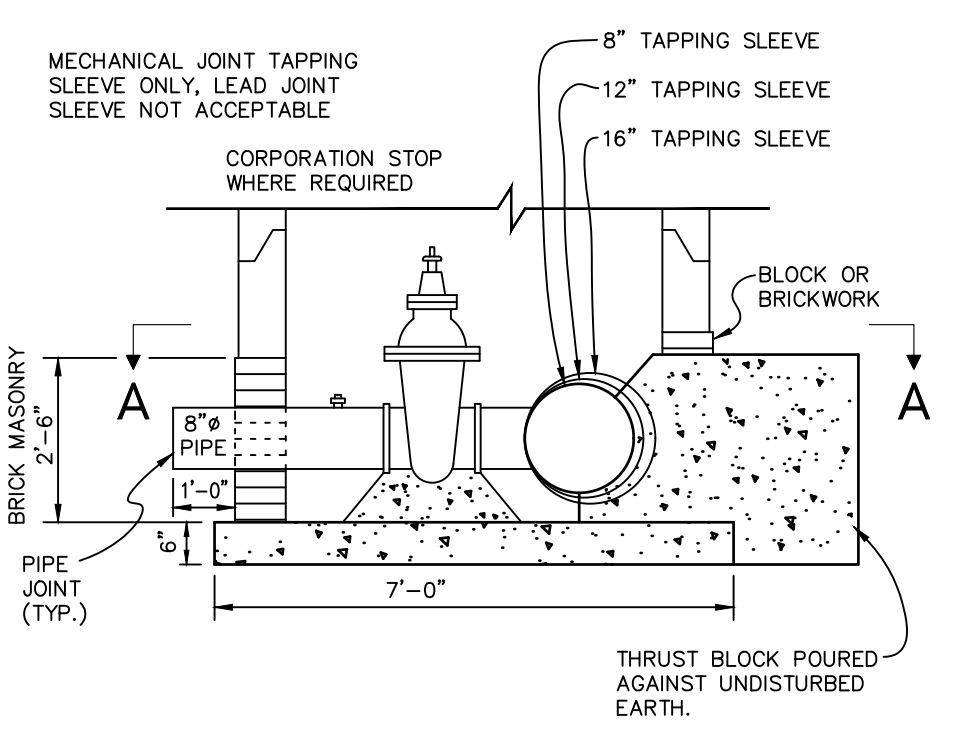
REVISIONS	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE
		FIRST ISSUE	09/11/97		OCWRC COMMENTS	11/06/15			
		UPDATED TITLE BLOCK	04/30/13						
		UPDATED NOTES	02/17/15						

Johnson & Anderson
 4494 Elizabeth Lake Road Waterford, Michigan 48328 tel (248) 681-7800 fax (248) 681-2660
 1060 W. Norton Avenue, Suite 7 Muskegon, Michigan 49441 tel (231) 780-3100 fax (231) 780-3115
 2291 Water Street, Suite 6 Port Huron, Michigan 48060 tel (810) 987-7820 fax (810) 987-7895

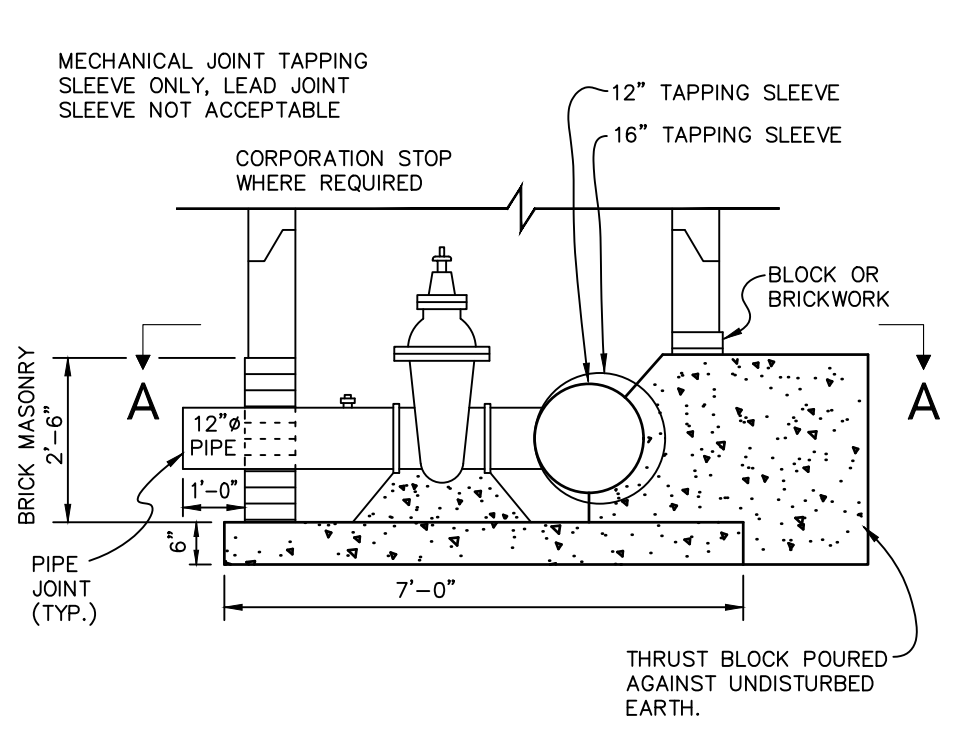
White Lake Township
 7525 Highland Road (M-59) White Lake, Michigan 48383 248-698-3300

SANITARY SEWER STANDARD DETAILS

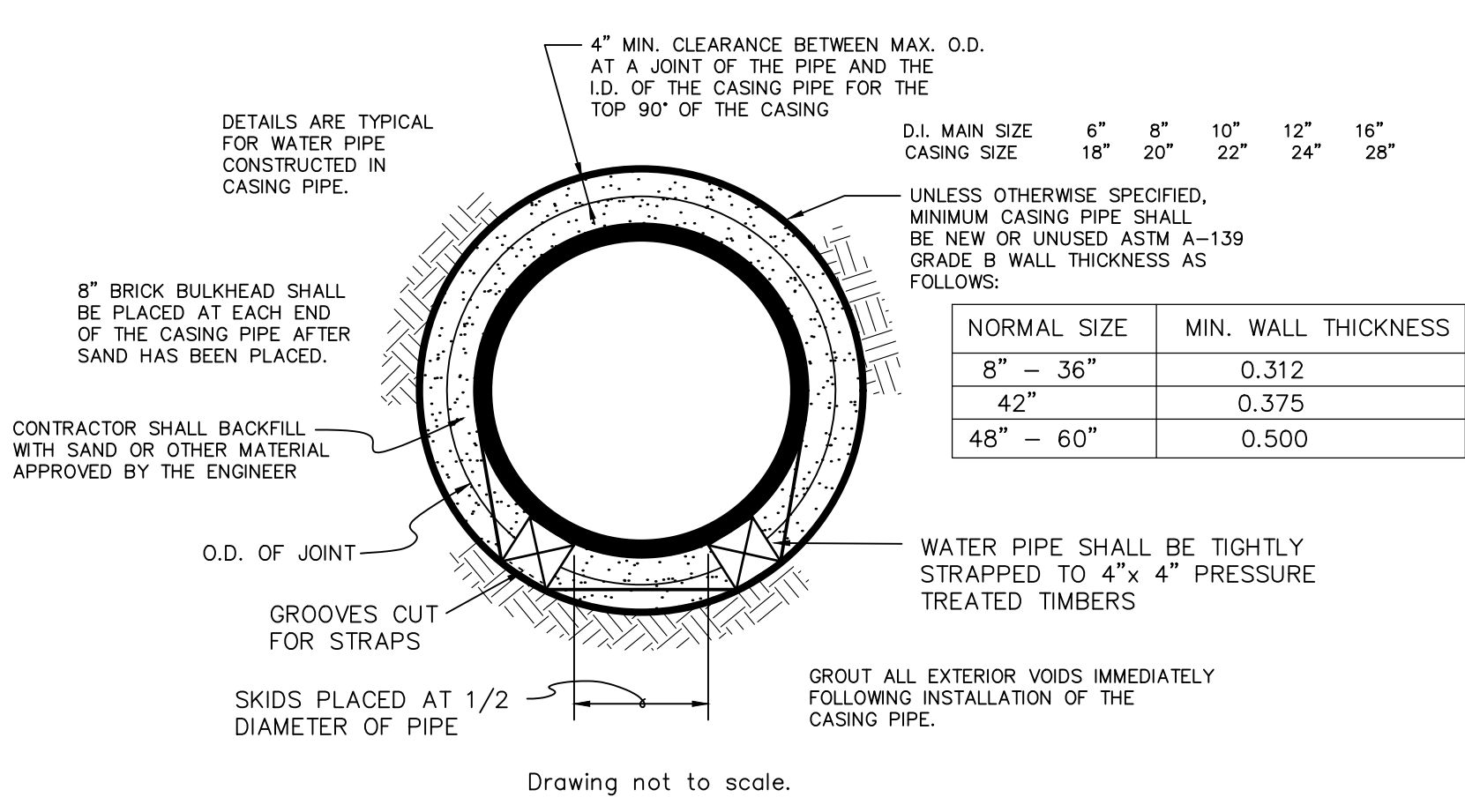
JOB NO. _____
 DATE ISSUED 09/11/97
 SHEET NO. _____



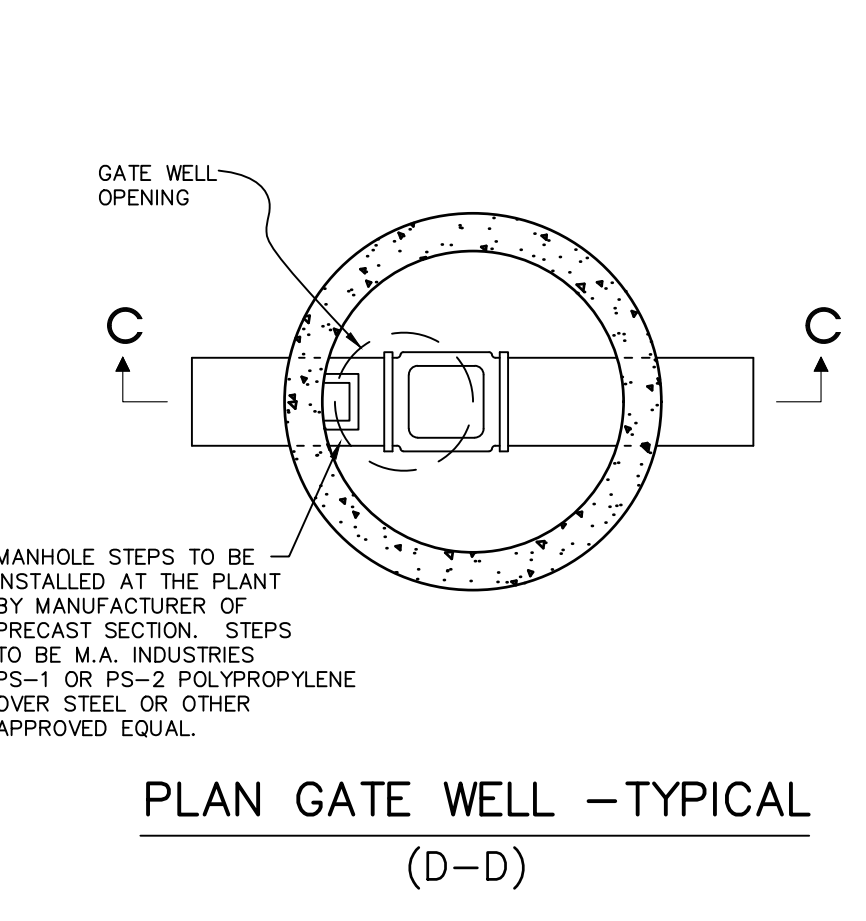
16" X 8", 12" X 8", 8" X 8" TAPPING SLEEVE, VALVE & WELL (B-B)



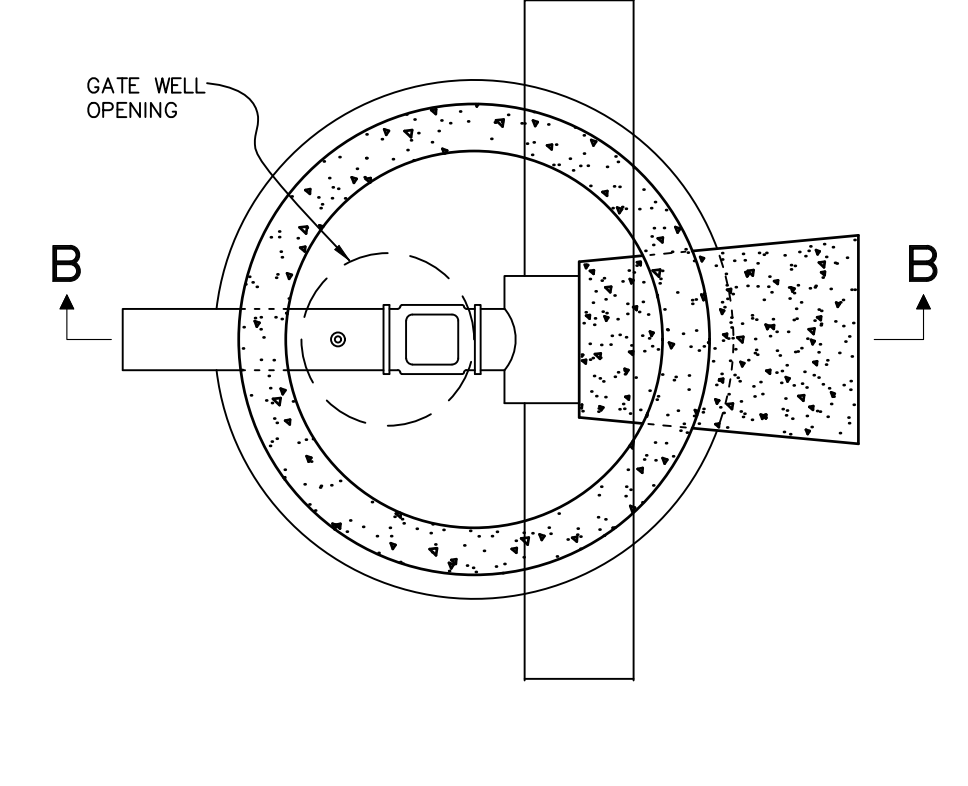
16" X 12", 12" X 12" TAPPING SLEEVE, VALVE & WELL (B-B)



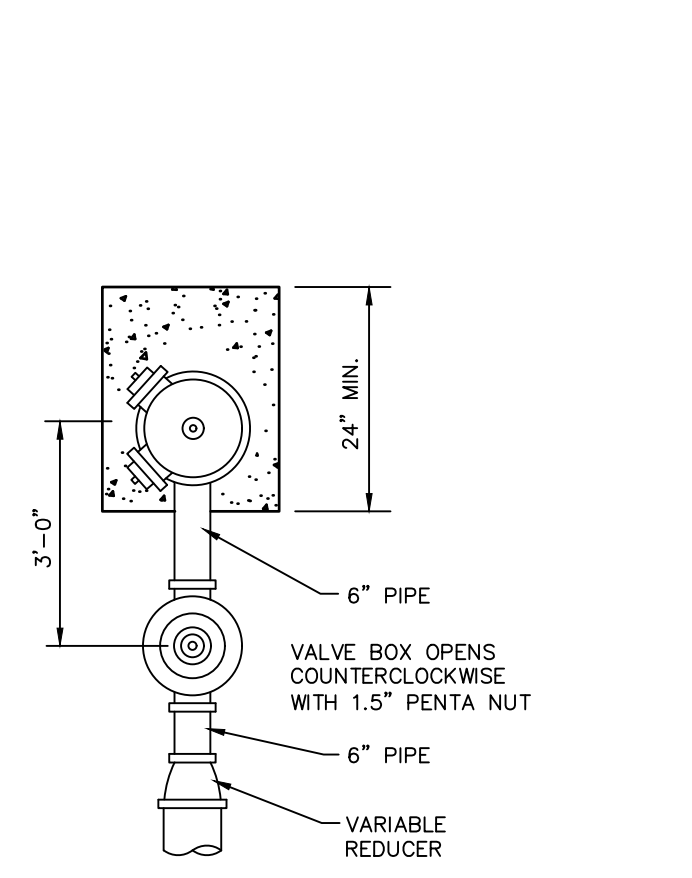
PIPE BARREL SUPPORT FOR WATER MAIN CONSTRUCTED IN CASING



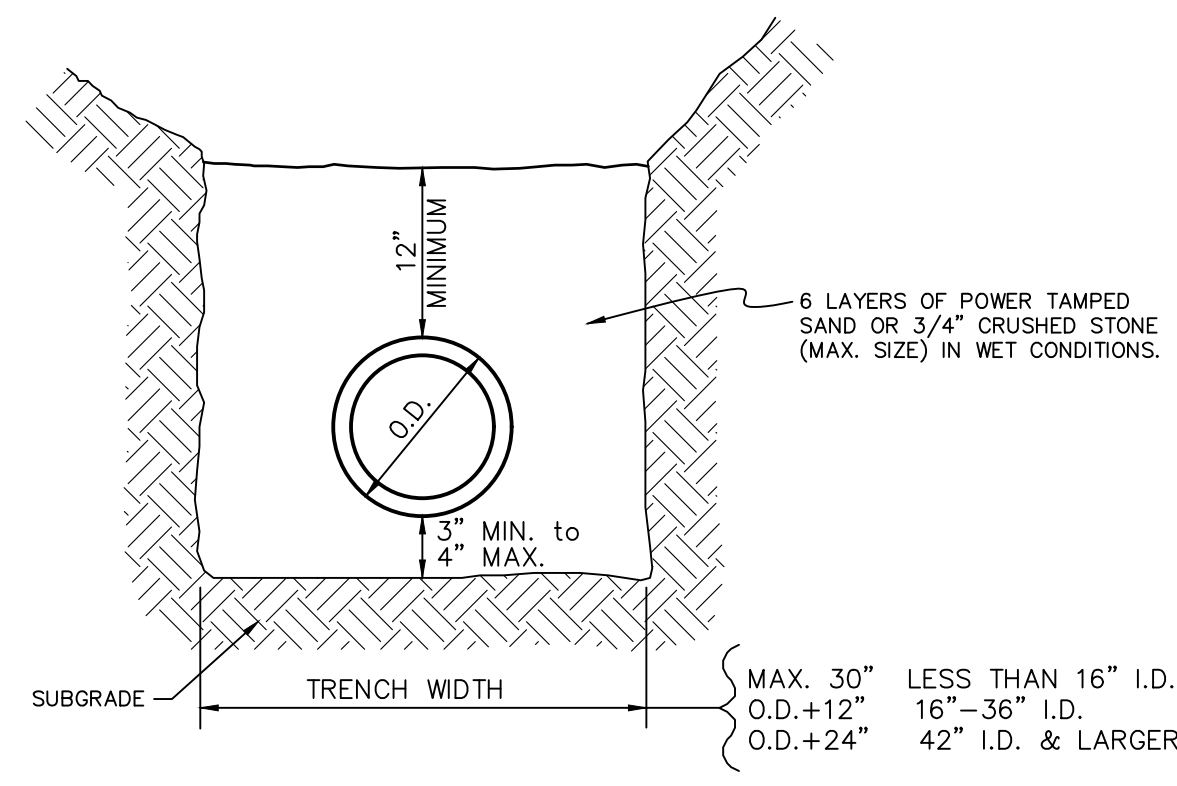
PLAN GATE WELL - TYPICAL (D-D)



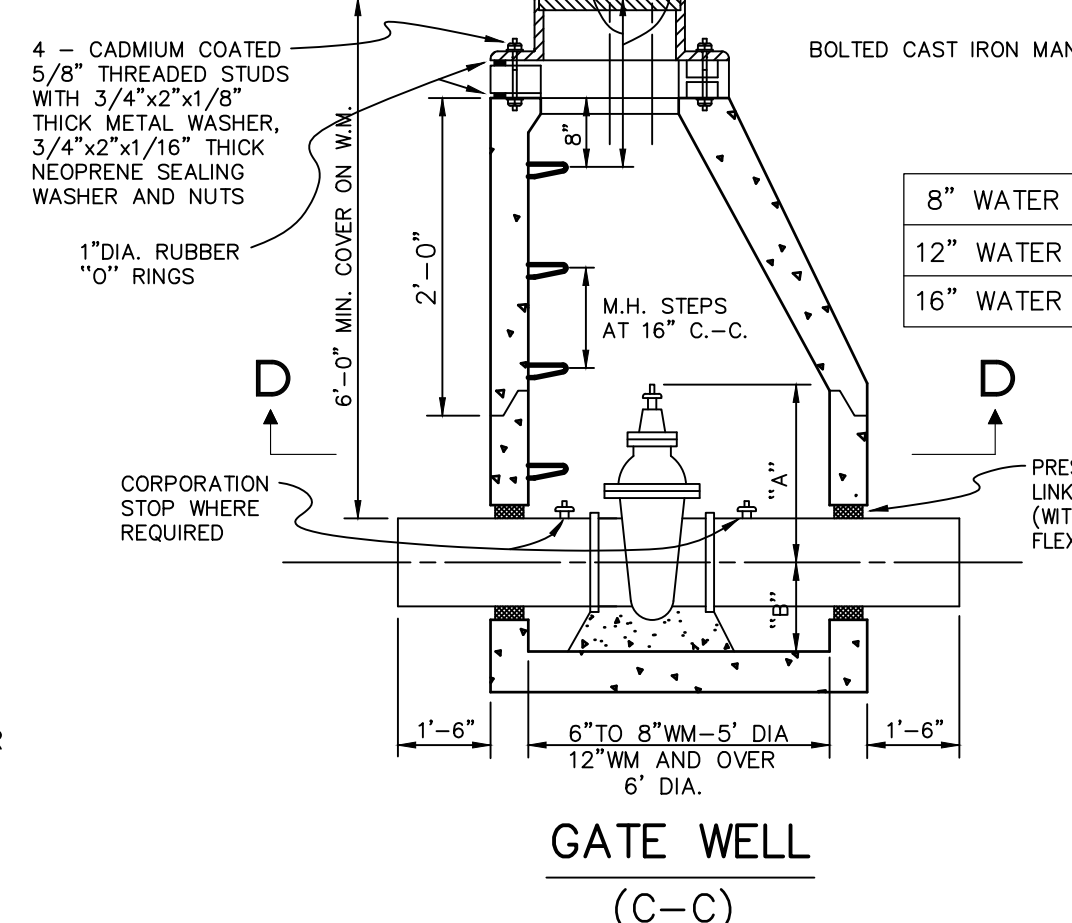
PLAN TAPPING SLEEVE, VALVE & WELL - TYPICAL (A-A)



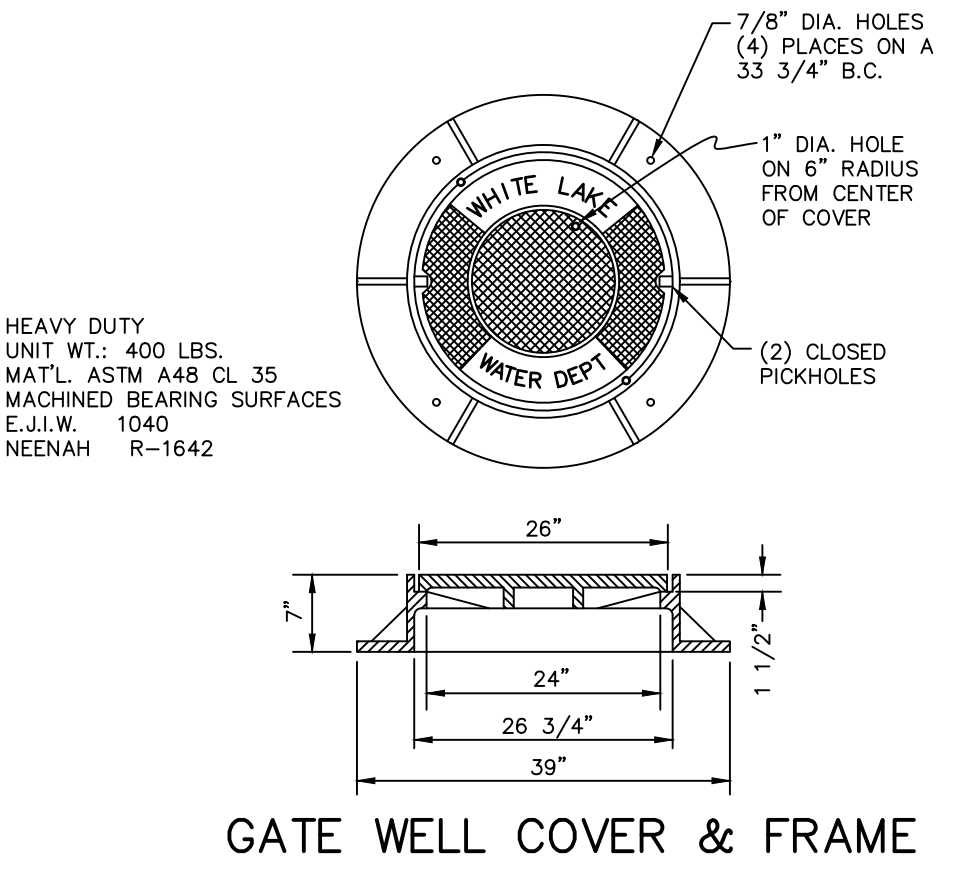
STANDARD BEDDING FOR WATER PIPE



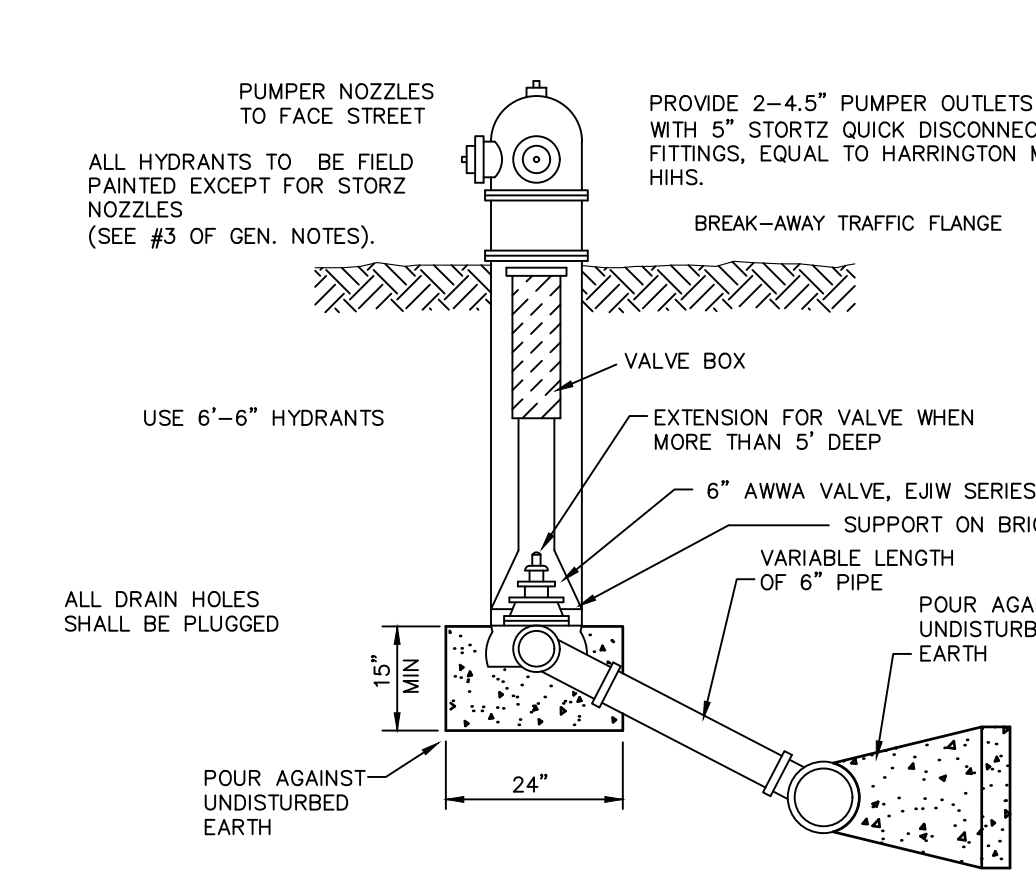
BACKFILL IN THE AREA OF STREETS, ALLEYS, SIDEWALKS, DRIVES & PARKING AREAS



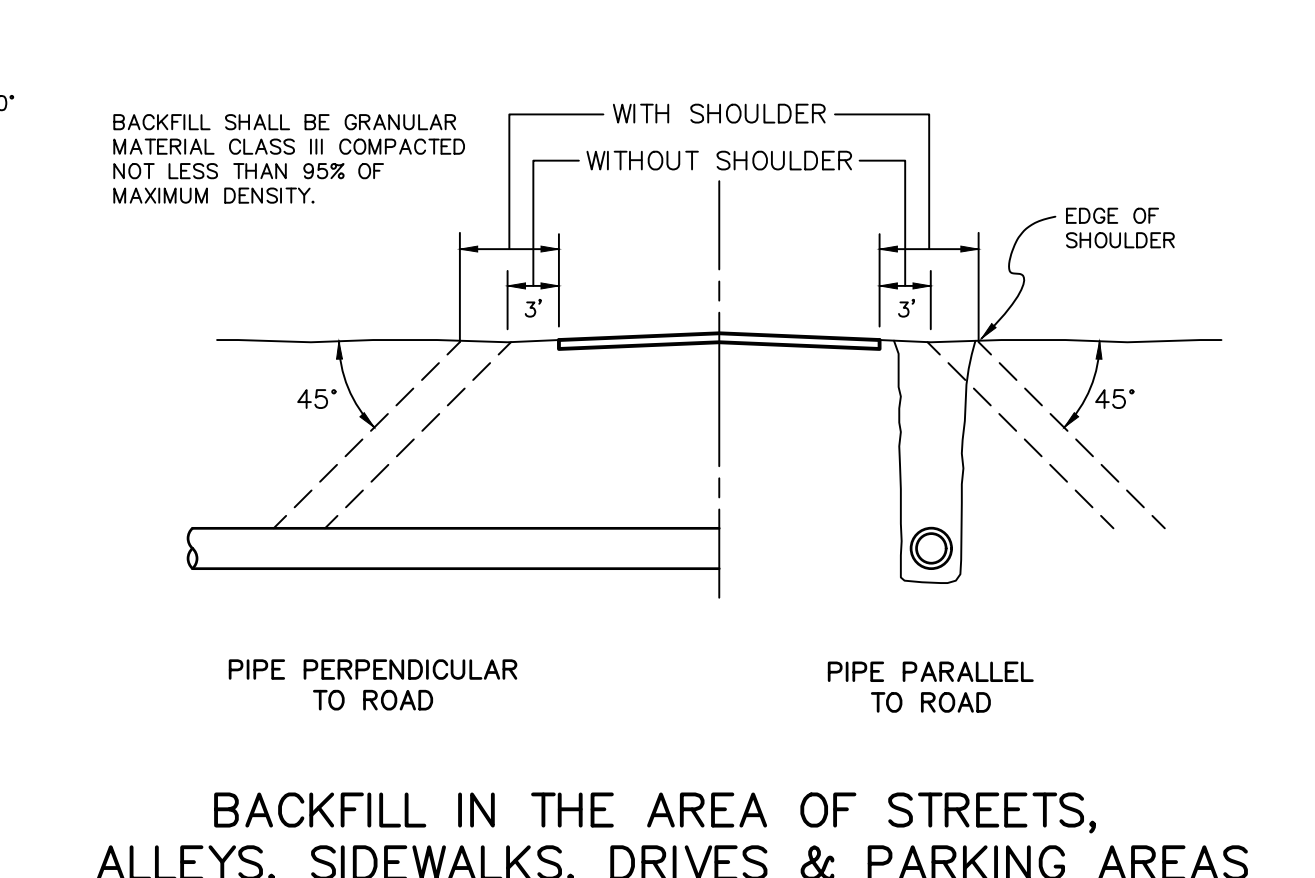
GATE WELL (C-C)



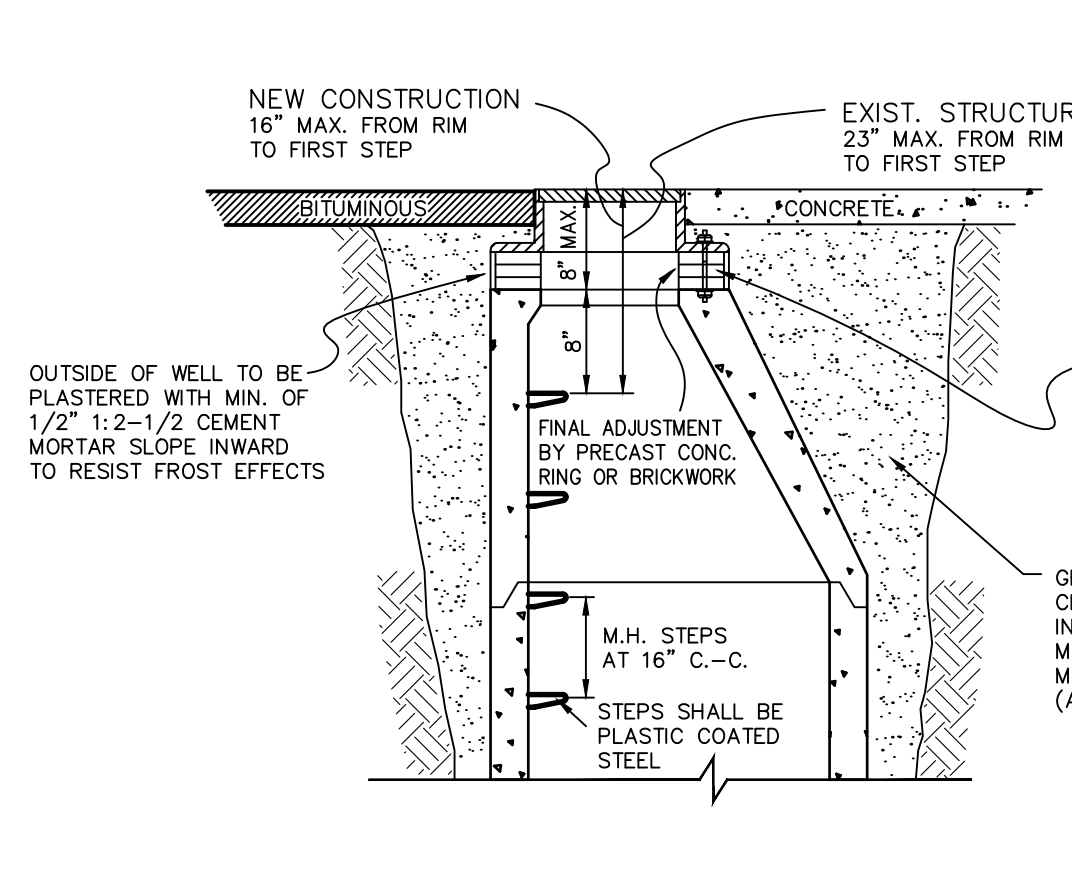
GATE WELL COVER & FRAME



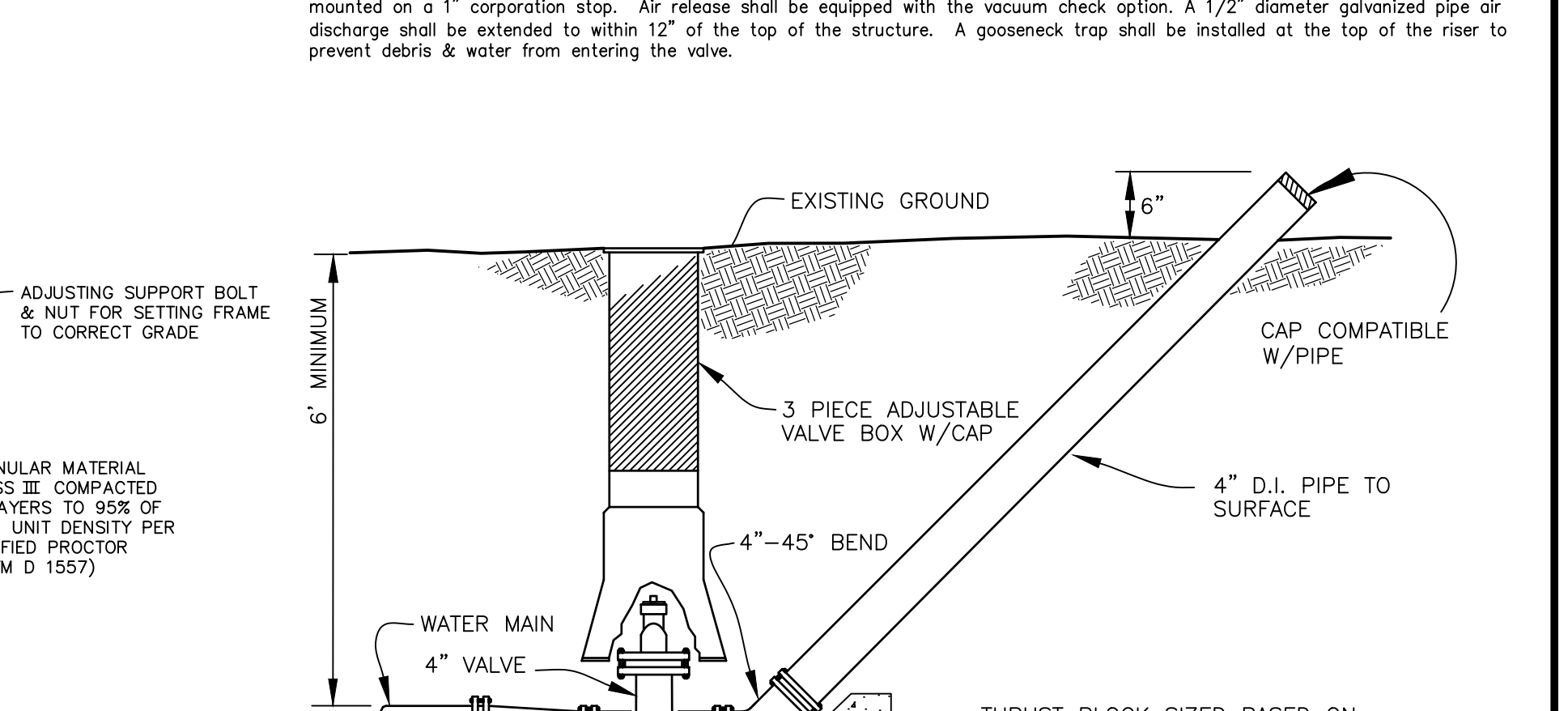
DETAIL OF HYDRANT SETTINGS



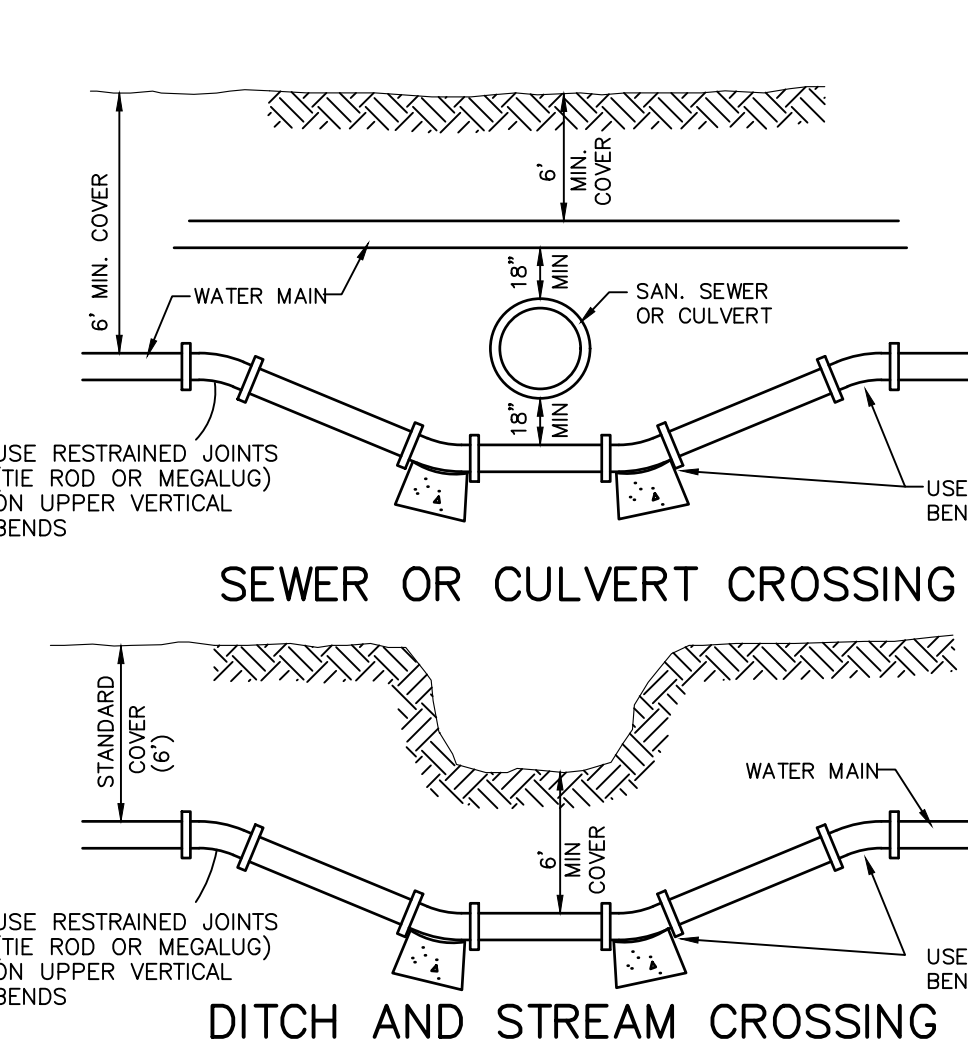
THRUST BLOCK DETAILS



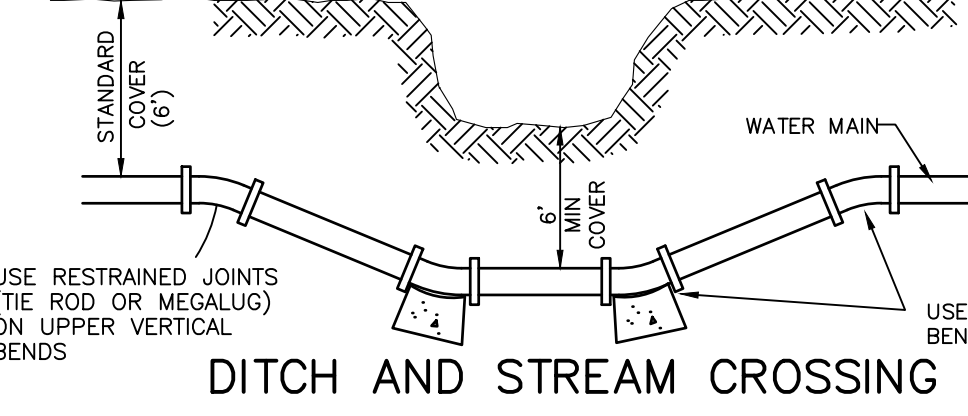
GATE WELL TOPS WITHIN PAVEMENT AREAS



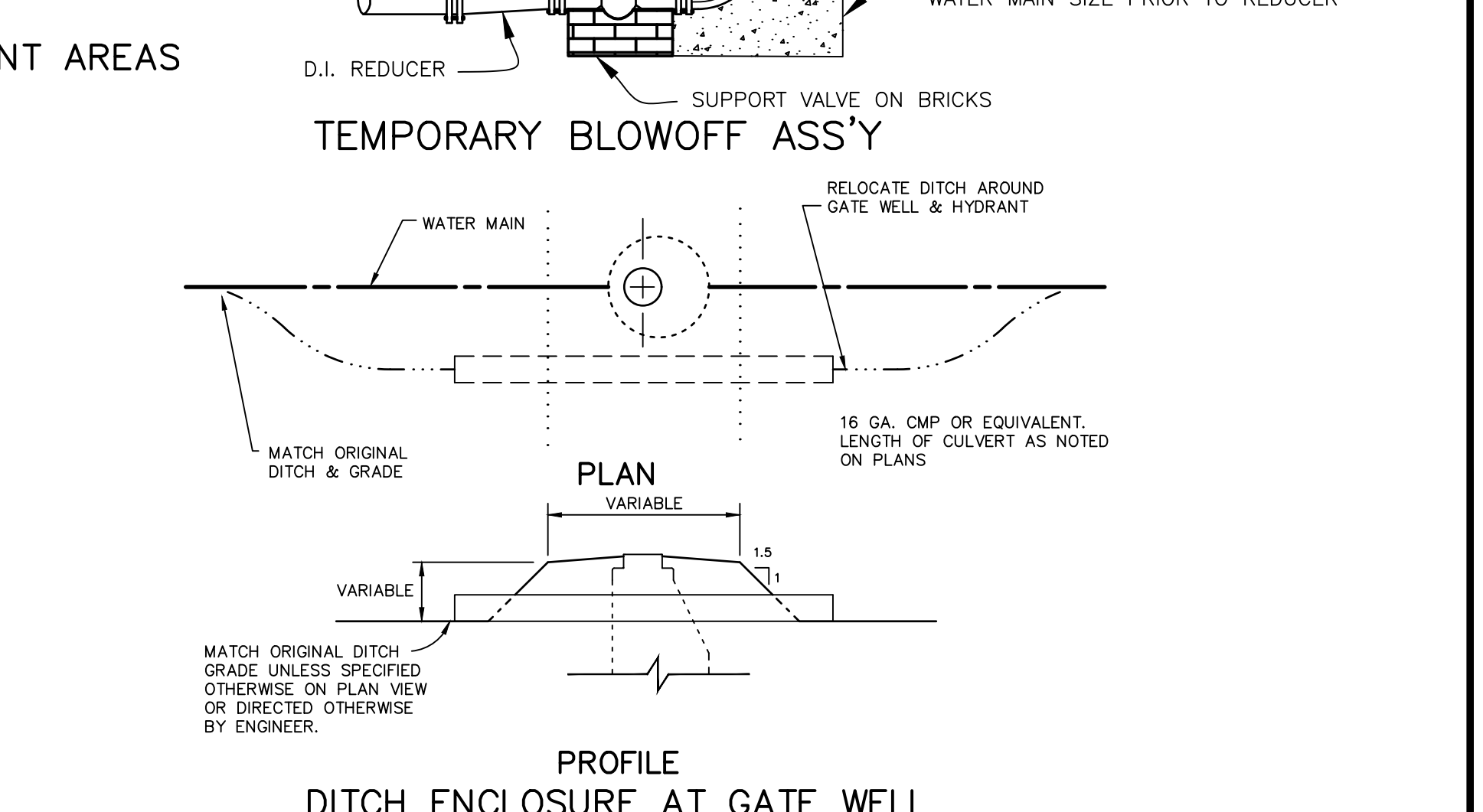
TEMPORARY BLOWOFF ASS'Y



SEWER OR CULVERT CROSSING



DITCH AND STREAM CROSSING



DITCH ENCLOSURE AT GATE WELL

- WATER MAIN NOTES**
- All construction procedures and materials used on this project shall conform to White Lake Township current standards and specifications.
 - All hydrants shall be East Jordan Iron Works 5BR-250 traffic model. Self-draining hydrants shall not be used. Valve shall have 1-1/2" pentagon nut and shall open counter-clockwise. Provide two 4.5" Storz quick connect nozzles (Harrington Integral Hydrant Storz, Model HHS) as manufactured by Harrington, Inc. of Erie, PA.
 - All hydrants shall be field painted with a heavy coat of bright safety red polyurethane or alkyl glass enamel, except for the Storz fittings and caps, which shall be left unpainted.
 - Johnson and Anderson, Inc. field personnel will affix to the fixed collar of each Storz connection 1" wide 3M Scotch reflective tape, color coded per NFPA 291 guidelines flow capacity.
 - All water mains shall be ductile iron pipe Class 54, cement lined with push on joints. Mechanical joints allowed only for tapping sleeves, hydrants & hydrant valves. Only Cor-Blue bolts shall be used for assembling mechanical joints. All bands, tees, valves and hydrant tees shall have a poured concrete thrust block as detailed on this sheet. Joints which have thrust blocks bearing on soil of questionable stability shall be fully restrained utilizing Tyler swivel ells and adapters or a system approved by the Township Engineer. HDPE pipe for directional boring, if approved by the Township Engineer, shall meet all of the requirements of the MDEQ and shall be DR9 (200 psi), and shall have two #8 tracer wires, terminated in the nearest gate well at the highest step.
 - Tapping sleeve shall be mechanical joint or approved equal. Ductile iron or Stainless steel are allowed.
 - Specifications shall include direction of operation of all valves. All valves shall be counter clockwise open.
 - All necessary easements shall be provided in the name of White Lake Township before acceptance of the water distribution system.
 - The design engineer shall furnish White Lake Township with one reproducible set of "As-Built" water main plans or an AutoCAD file upon completion of the job.
 - All required cross-connection devices shall be installed as required by the local plumbing inspector and in accordance with the standards of the Michigan Department of Public Health.
 - Gate well frame and cover shall be as follows: East Jordan heavy manhole cover, base flange type #1040 or Neenah Foundry heavy duty #1642 Manhole frame, solid lid cover shall be non-racking and marked "White Lake Water Department"
 - Gate valves shall be AWWA approved and of a double disc or resilient wedge design with push on joints, 16" gate valves may be mechanical joint provided Cor-Blue bolts are used. All gate valves with operating nuts greater than 5" below ground surface shall be provided with an extension stem. The length of the extension shall be such that it will be within 5' of the ground surface when an extension is used it shall be held in place by an extension stem guide suitably fastened to the wall of the gate well.
 - 1" corporation stops are to be placed on the main at each side of each main line gate valve and at such other locations as may be required by the engineer.
 - All pipe and fittings shall be subjected to a hydro-static pressure test of 150 PSI for a 2 hour duration; Township Engineer must be present. Maximum segment 2000 feet except that longer segments may be tested with allowable leakage based on 2000 feet.
 - 2 consecutive safe bacteria samples shall be taken from the water system approx. 24 hours apart at points established by the Township Engineer. Samples shall be taken by the Township Engineer.
 - Filling, flushing and sampling of water main can only be performed with a "Jumper" Line, the jumper shall be equipped with an approved RPZ type of backflow preventer.
 - Adjustments on gate wells shall be limited to 23" maximum from top of rim to first step in accordance with MIOSHA Rule 341.
 - All new water service lines shall have a minimum nominal size of 1". Services from 1" to 2" may be type K copper tubing or plastic DR-9 (200 PSI rated) meeting ASTM D2237-03 (Standard Specification for Polyethylene (PE) plastic tubing). ASTM Designation and pressure rating shall be stamped on the pipe by the manufacturer. Plastic pipe shall also meet AWWA C-301 Specifications. All sizes shall relate to the copper tubing outside diameter standard size (CTS). Copper pipe joints shall be flared. Fittings shall adapt to the plastic pipe with compression to iron pipe thread adapter. Plastic pipes shall be either compression style with a steel insert or may be fusion welded in the larger sizes.
 - Plastic water service pipes shall be traced with two #10 copper tracer wires or two #12 copper coated steel or stainless steel wires insulated with a minimum of 30 mils of polyethylene insulation. The tracer wires shall be terminated to supply line so as to be locatable at the building and the curb box without digging.
 - Water services sizes 3" and greater shall be Class 54 cement lined ductile iron with push on joints or HDPE DR-9 (200 PSI rated) with fusion welded joints and fittings, DIPS (Ductile Iron Pipe Size).
 - A stop box shall be installed at the property or easement line and shall be equivalent to an A.Y. McDonald Mfg. 6100 flare regular pattern ball valve. The curb box shall have a 1" riser pipe with an Erie 2-hole pattern cover equivalent to A.Y. McDonald Mfg. 5601L. Stop box shall be protected with a 2'x4' painted blue extending 4 feet above ground.
 - Standard pipe cover shall be 6'-0".
 - Air release manholes shall consist of a standard 5' diameter gate well style structure with a ValMatic Model 25C air release valve mounted on a 1" corporation stop. Air release shall be equipped with the vacuum check option. A 1/2" diameter galvanized pipe air discharge shall be extended to within 12" of the top of the structure. A goose-neck trap shall be installed at the top of the riser to prevent debris & water from entering the valve.

DRAWN: CAD DESIGN: OA CHECKED: - VERT. - SCALE: - HORZ. AS NOTED

REVISIONS	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE
	GENERAL	REVISION TO CAD	12/29/95	GW & NUT SIZE	07/23/98	CLARIFY HYD. SPEC	02/07/01	REV. HYD. THRUST, AIR REL.	03/29/04
	ADD NOTE	17	11/04/97	PIPE COVER & FLANGE TAPE	05/12/99	5-BR HYD, WS STAKE	02/27/02	HDPE, HYD, VALVES	07/18/05
	REVISE	HYD. & THRUSTING	05/18/98	ADD BLOWOFF	07/06/99	ADD NOTE 19	07/23/03	UPDATED TITLE BLOCK	04/30/13

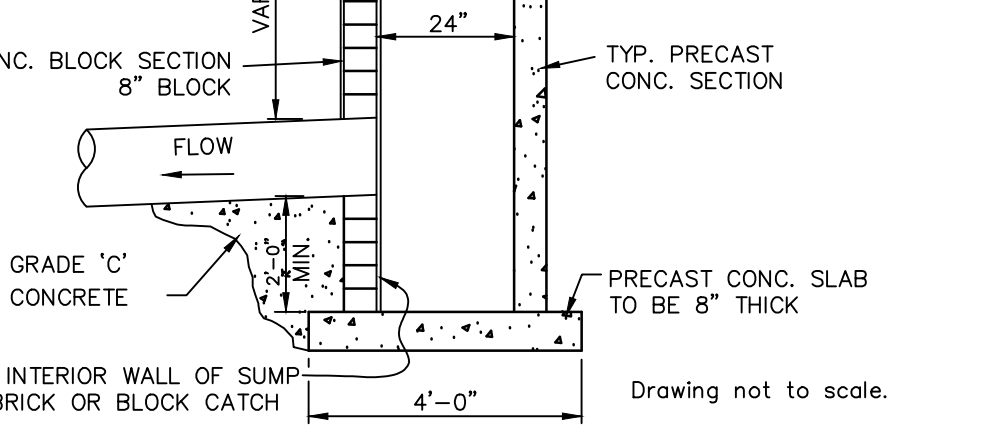
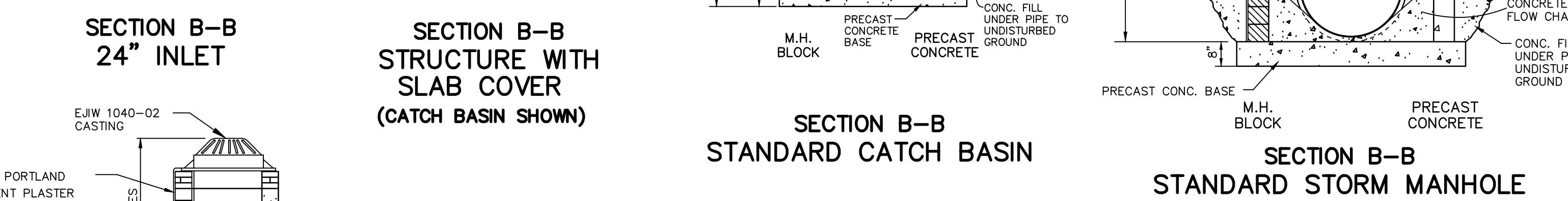
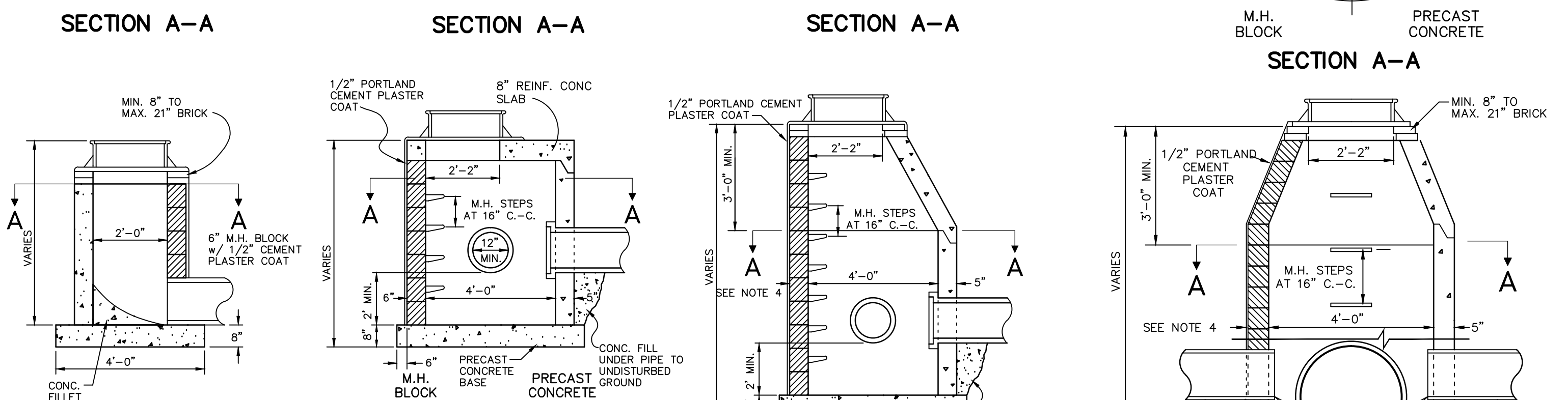
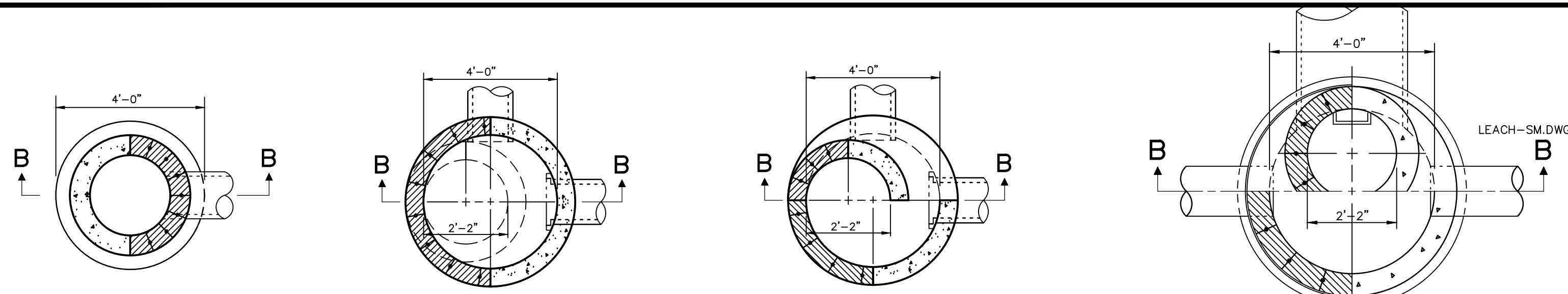
Johnson & Anderson
 4494 Elizabeth Lake Road Waterford, Michigan 48328
 1060 W. Norton Avenue, Suite 7 Muskegon, Michigan 49441
 2291 Water Street, Suite 6 Port Huron, Michigan 48060
 tel (248) 881-7800 fax (248) 881-2680 tel (231) 780-3100 fax (231) 780-3115 tel (810) 987-7820 fax (810) 987-7895

White Lake Township
 7525 Highland Road (M-59)
 White Lake, Michigan 48383
 248-698-3300

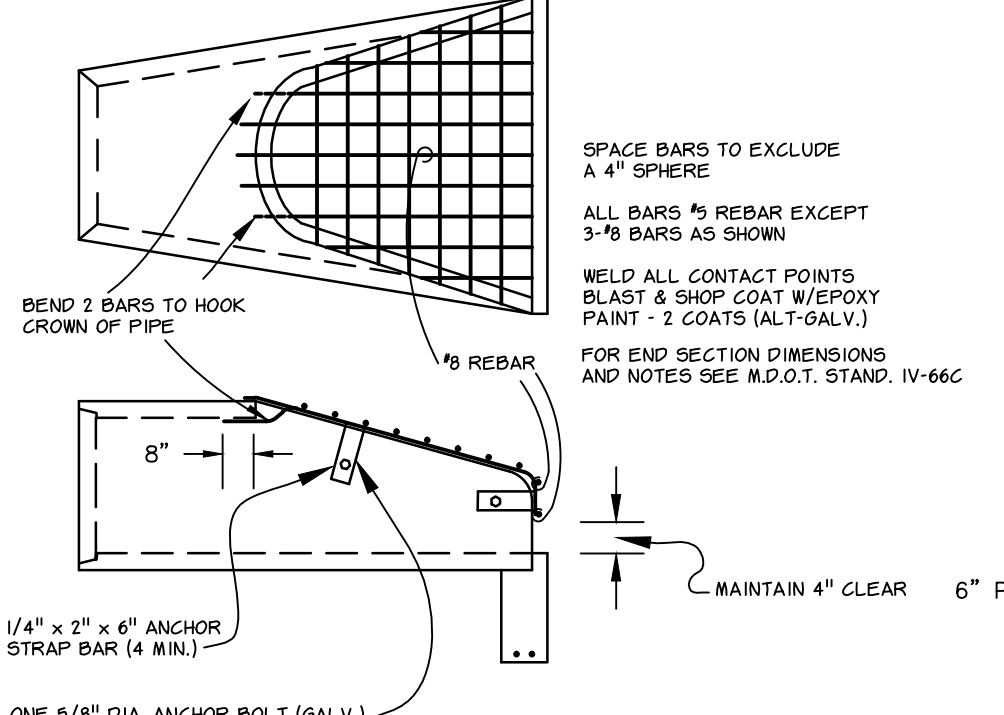


WATER MAIN STANDARD DETAILS

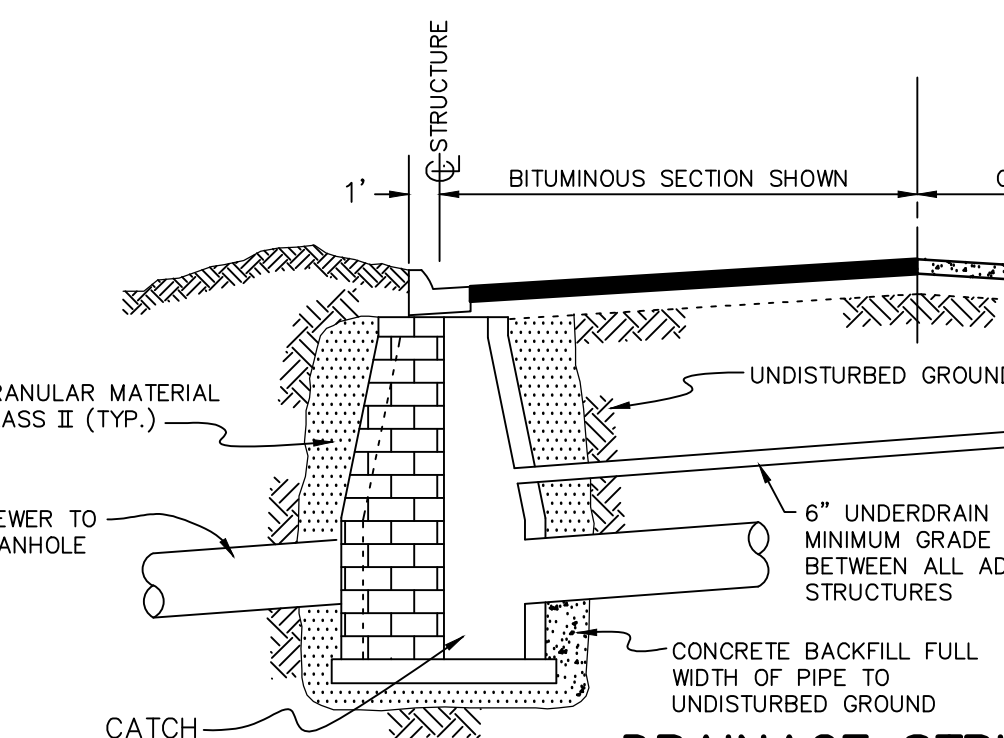
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 DATE ISSUED _____
 SHEET NO. _____



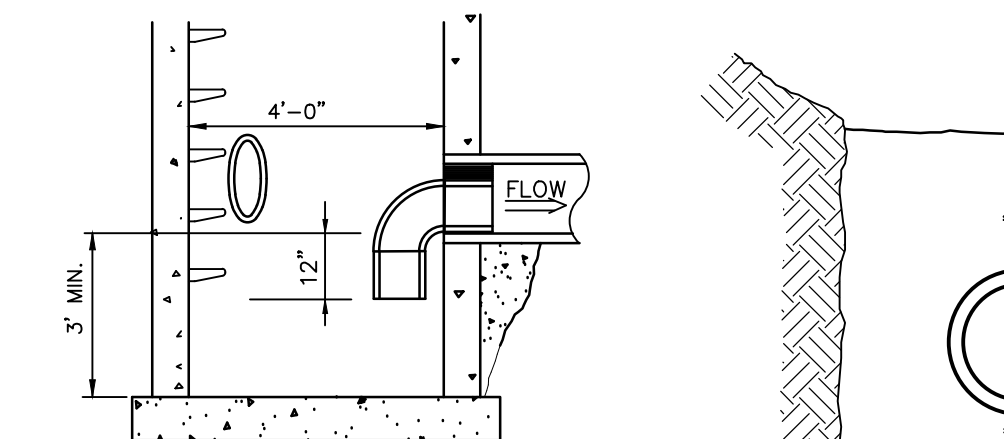
STANDARD REAR YARD CATCH BASIN



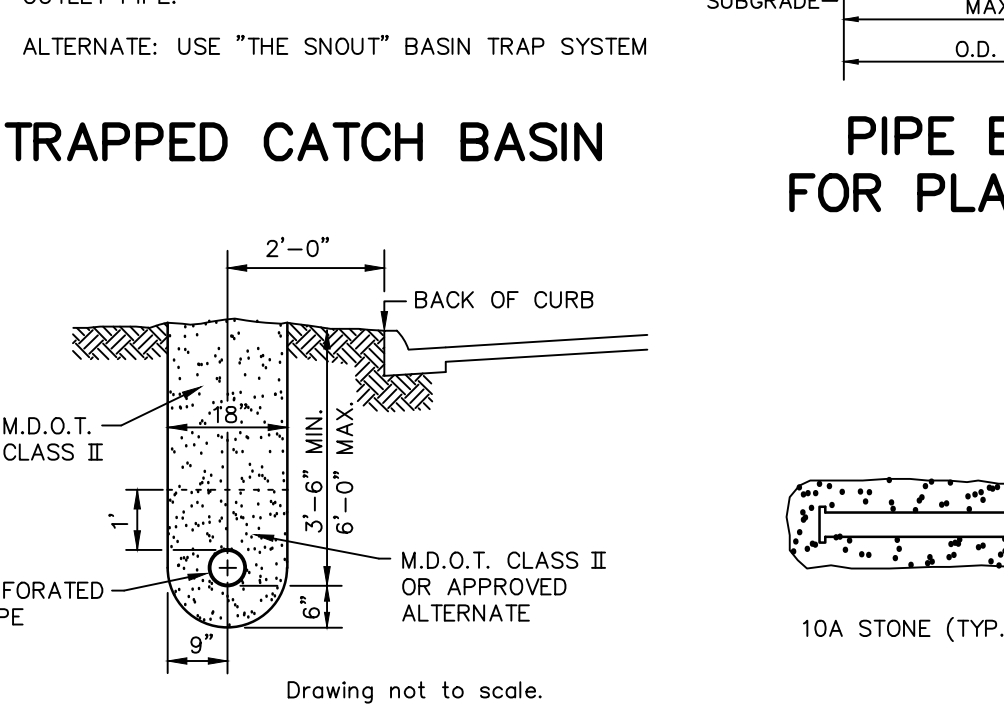
TRAPPED CATCH BASIN



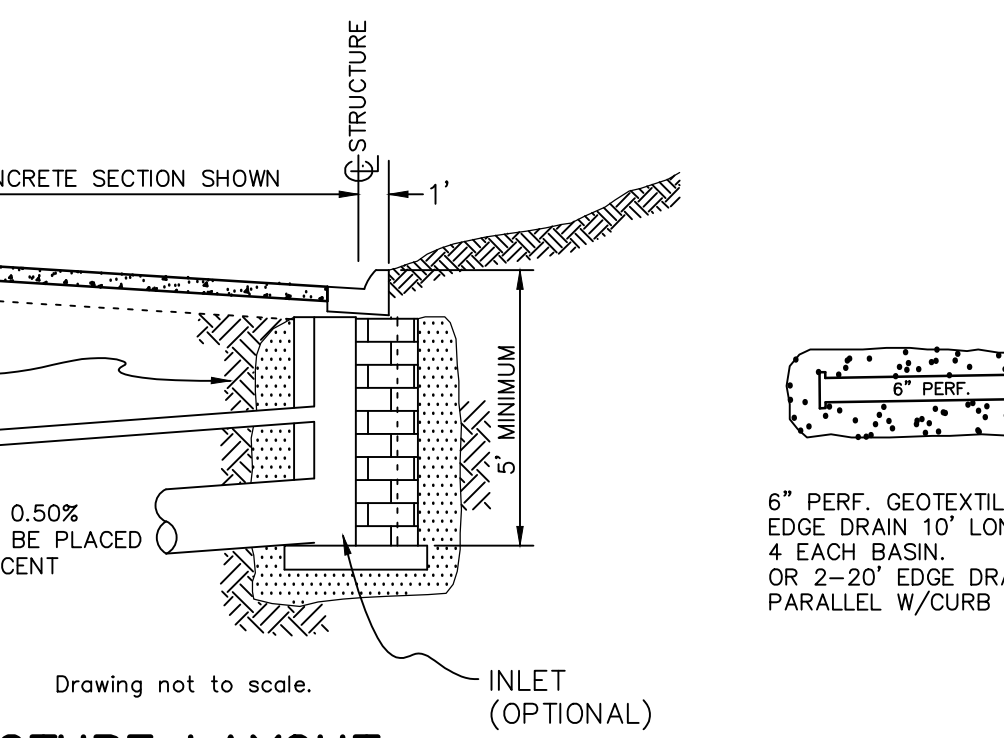
BAR SCREEN DETAIL



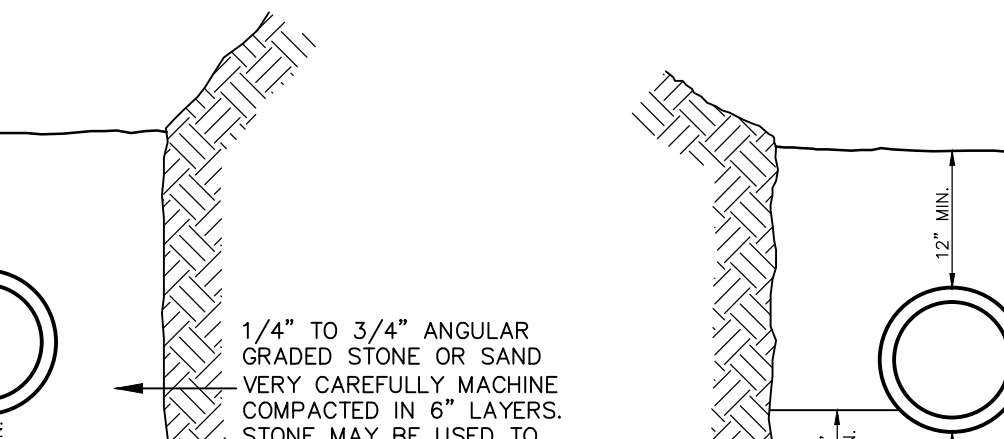
EDGE DRAIN DETAIL



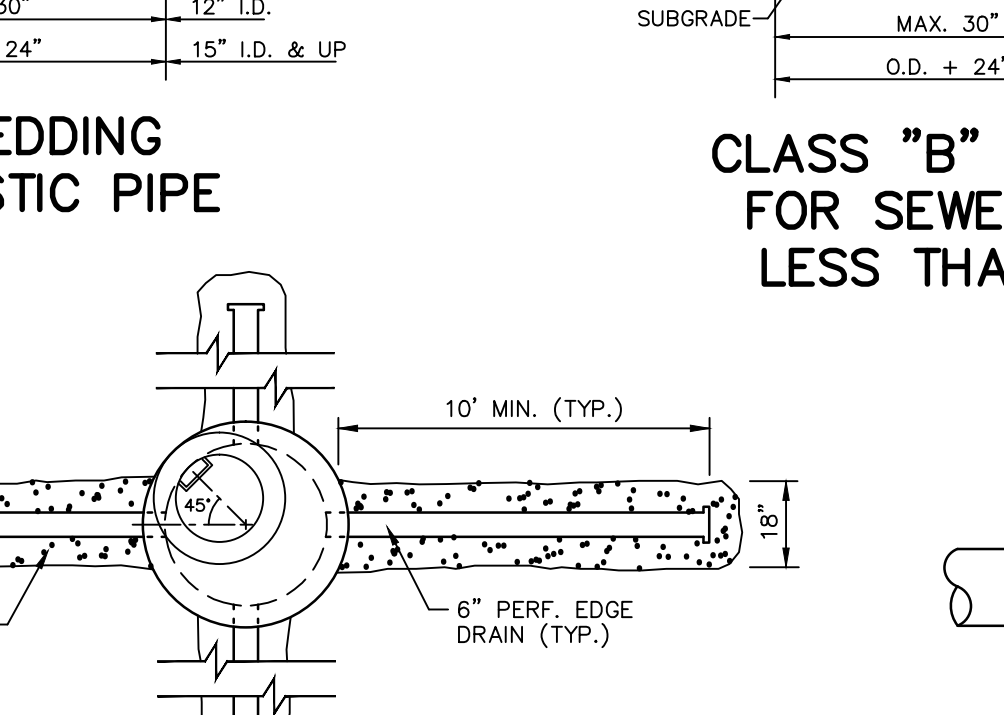
PIPE BEDDING FOR PLASTIC PIPE



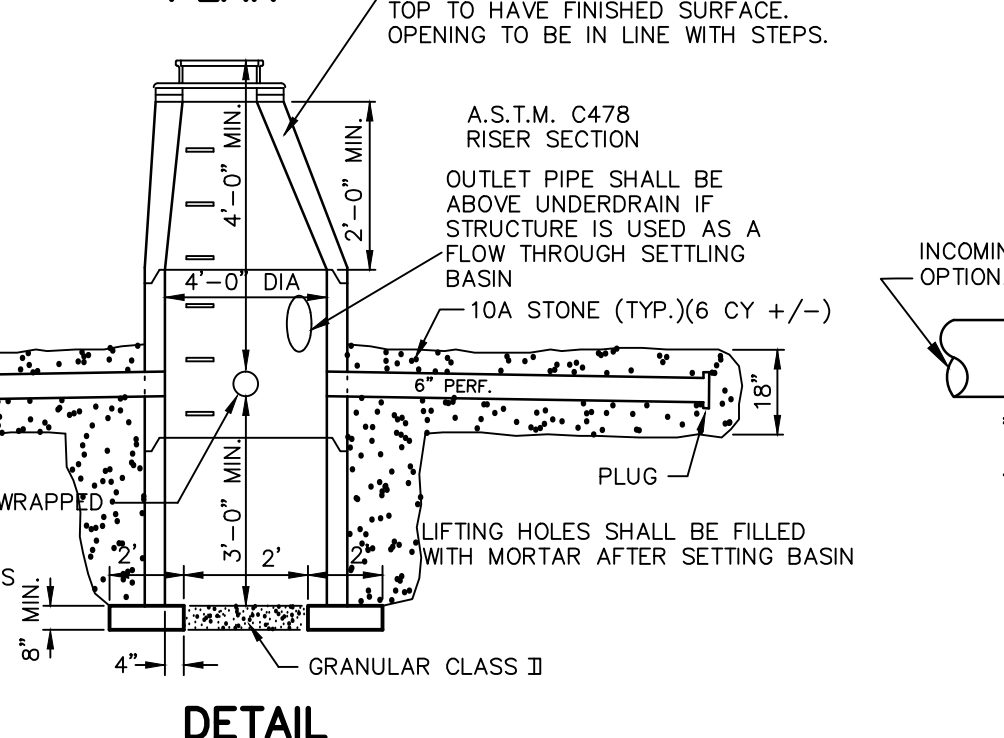
CLASS "B" BEDDING FOR SEWER PIPE LESS THAN 48"



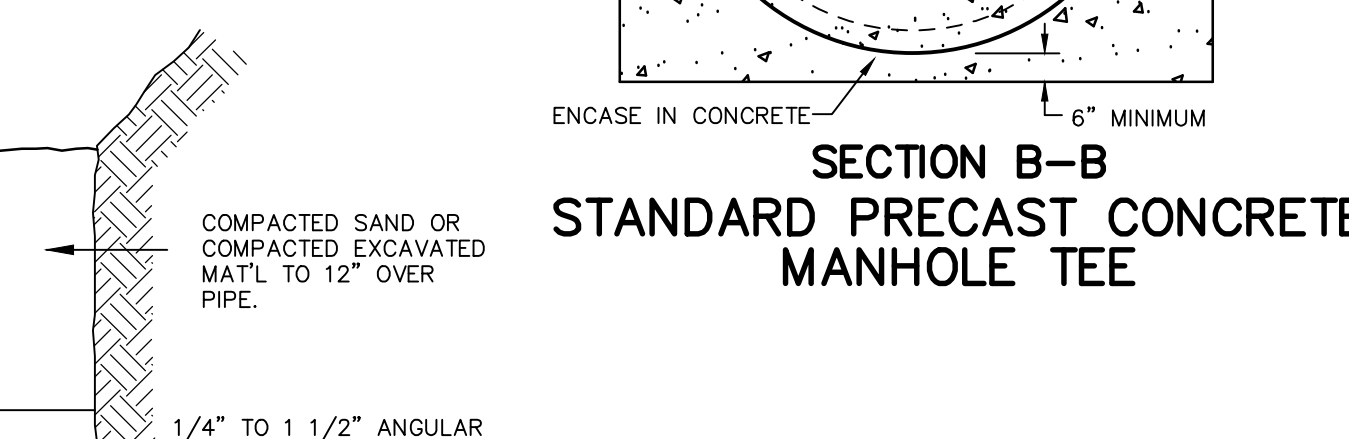
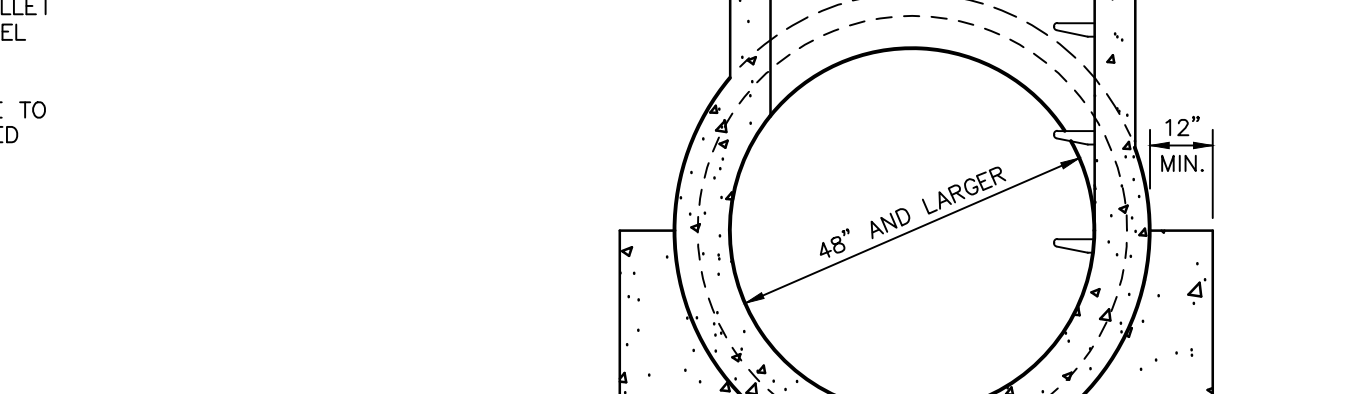
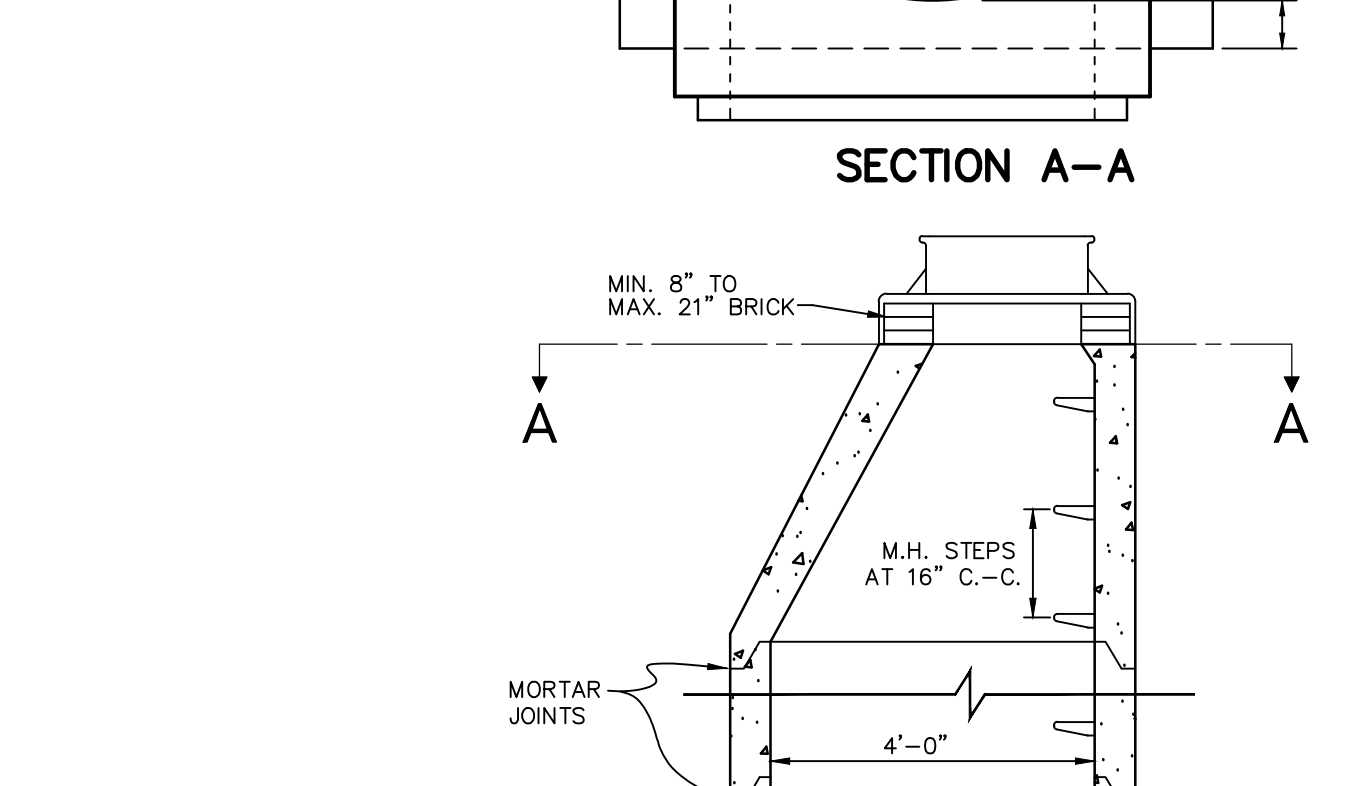
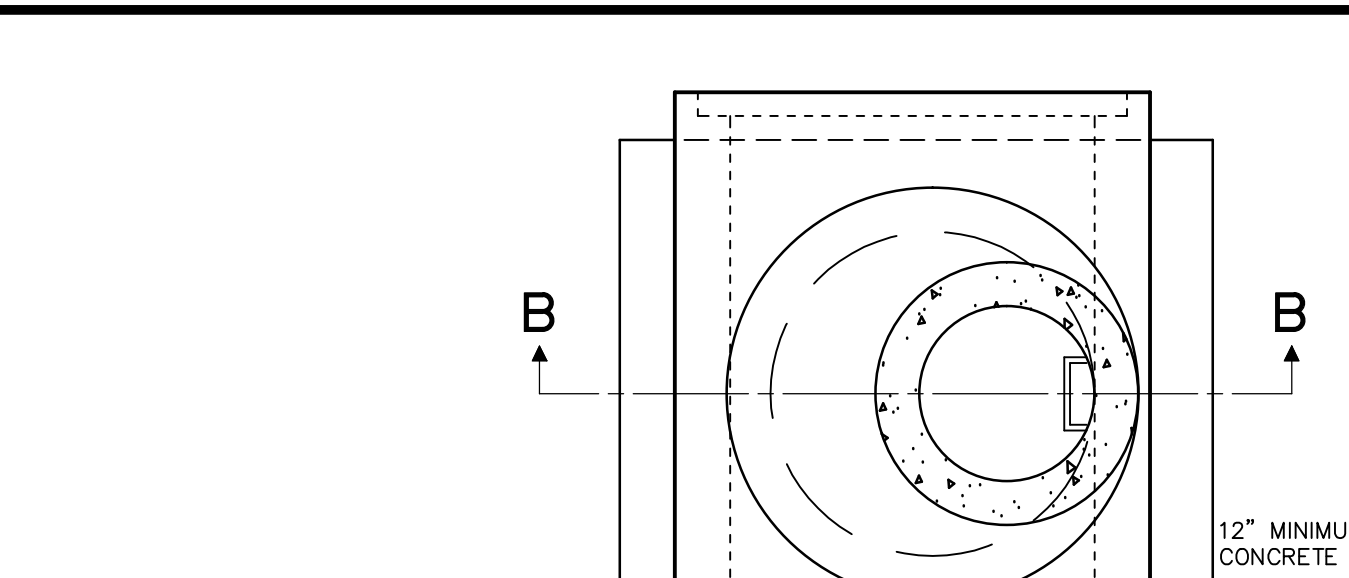
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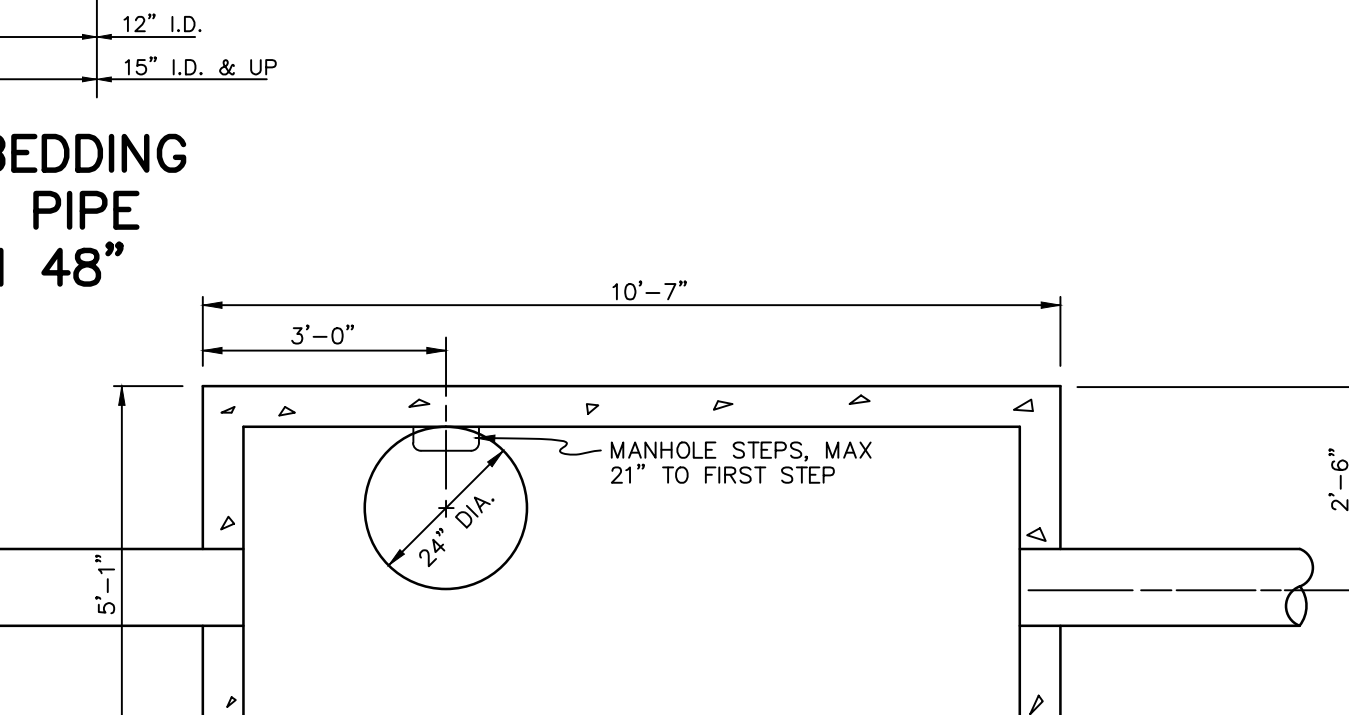
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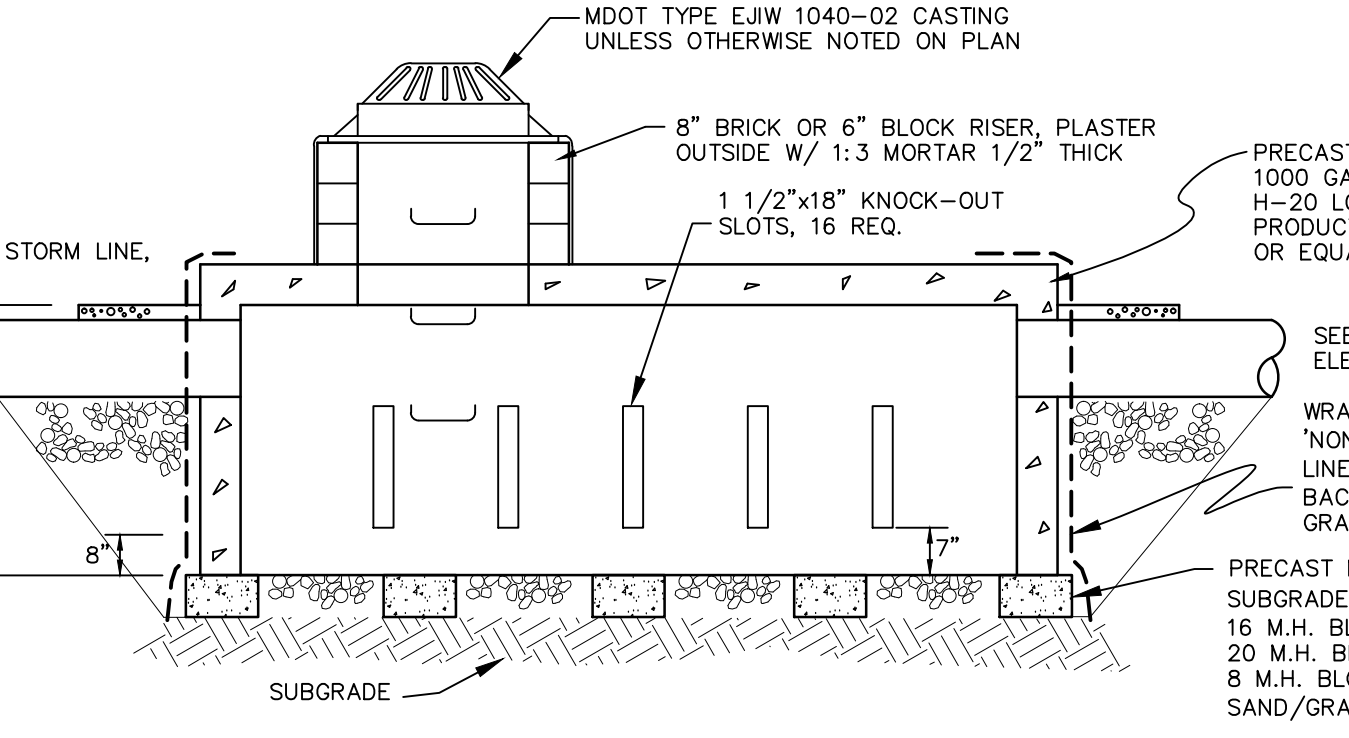
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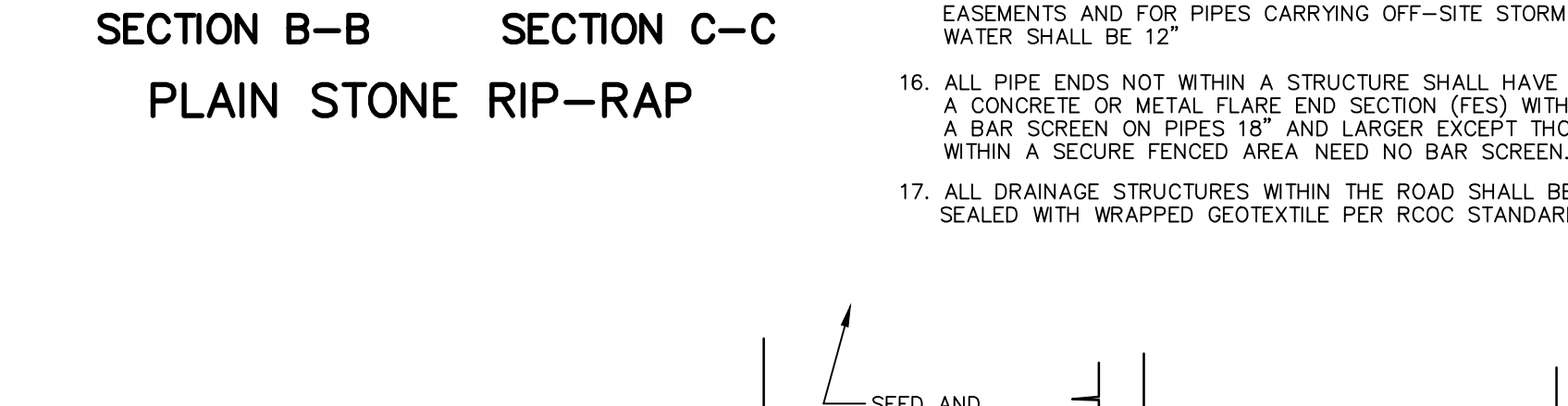
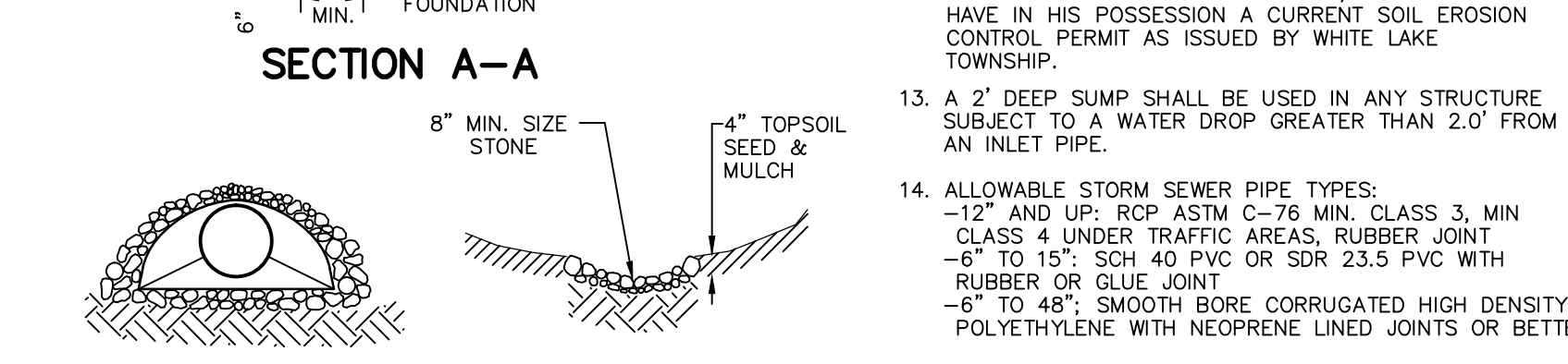
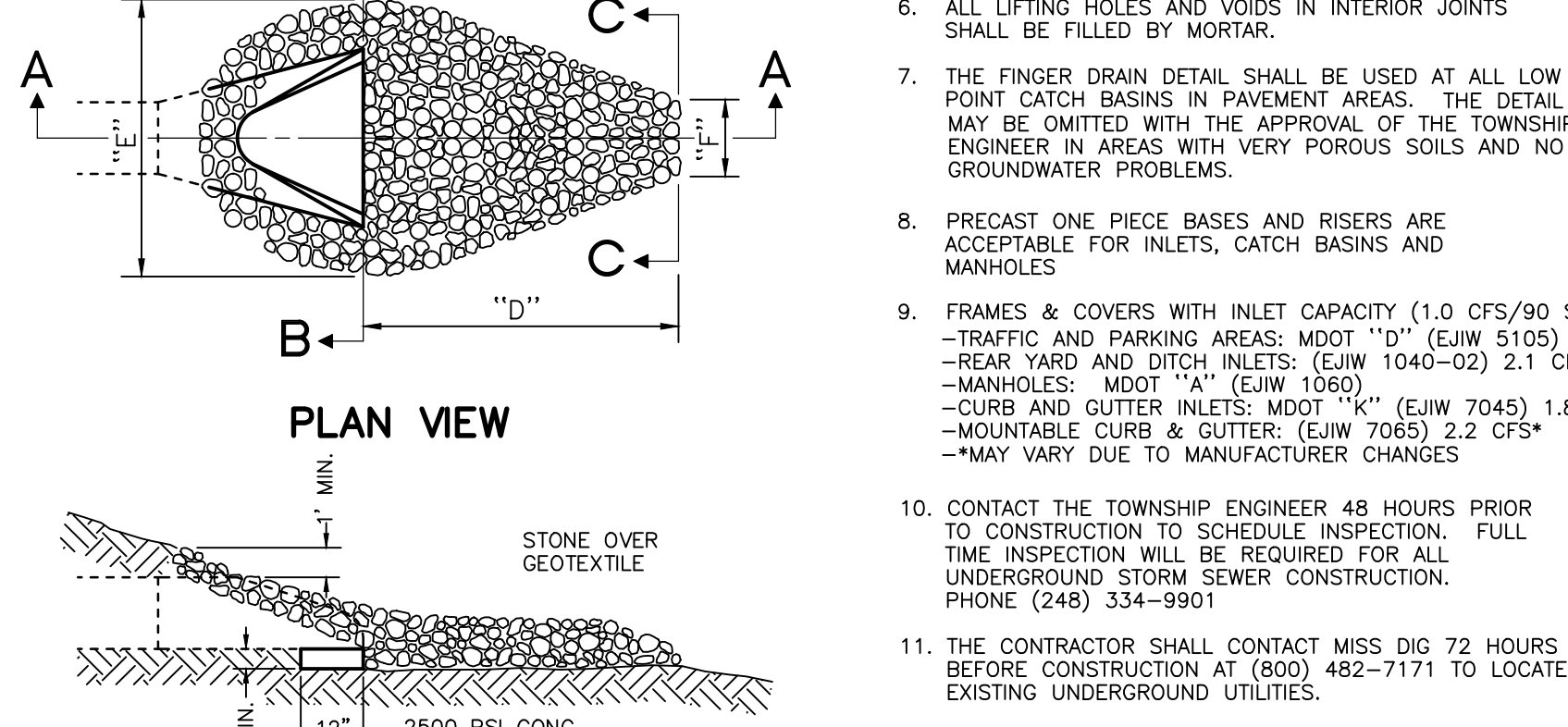
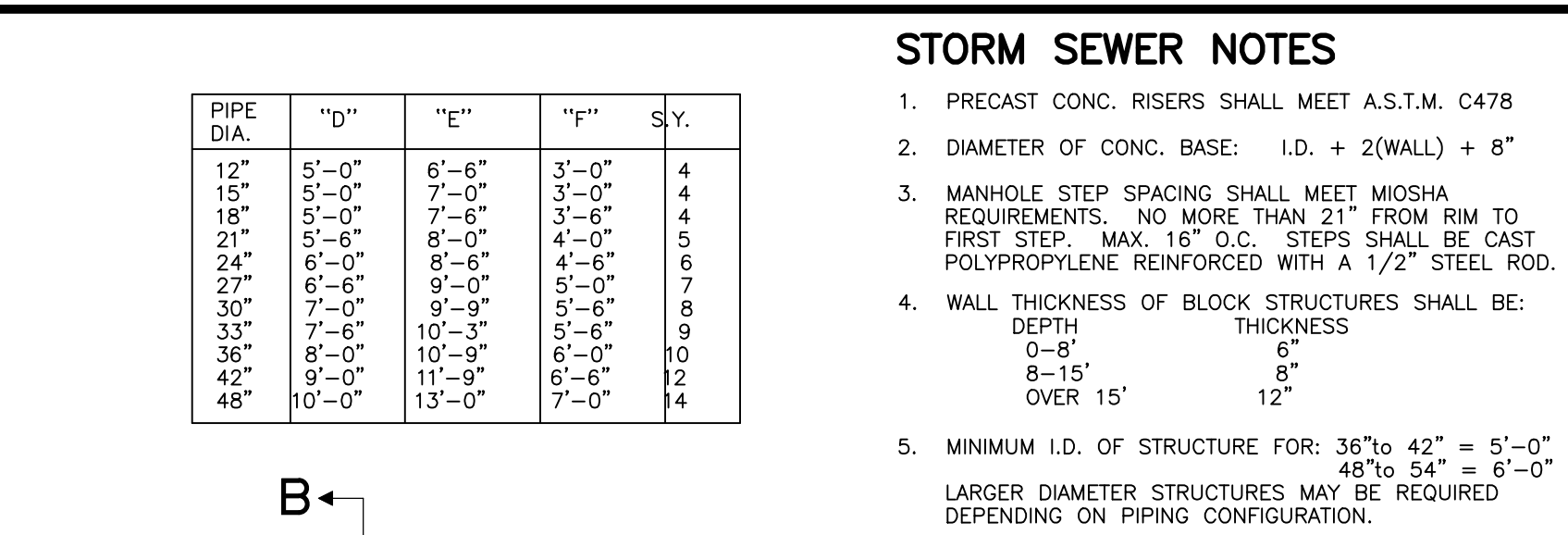
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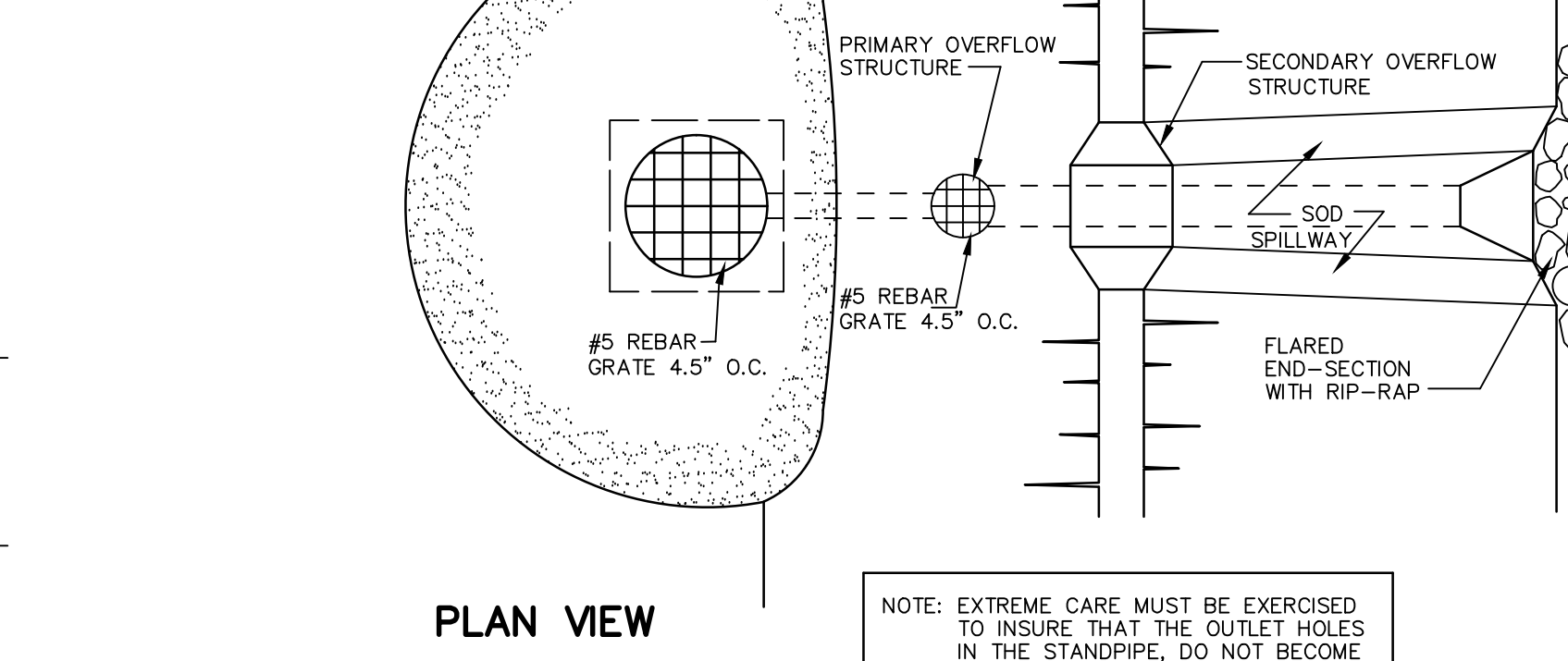
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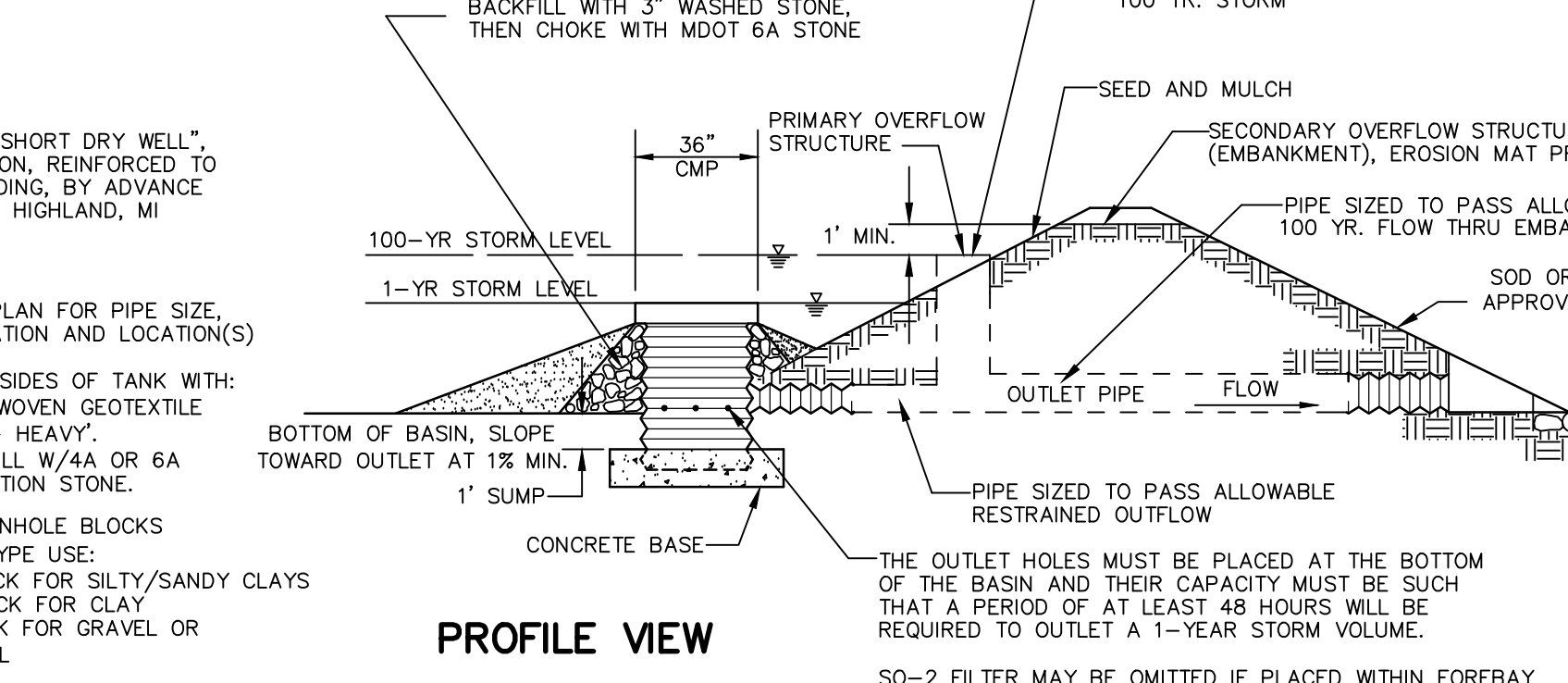
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STORM SEWER NOTES



STORM SEWER NOTES



STORM SEWER NOTES

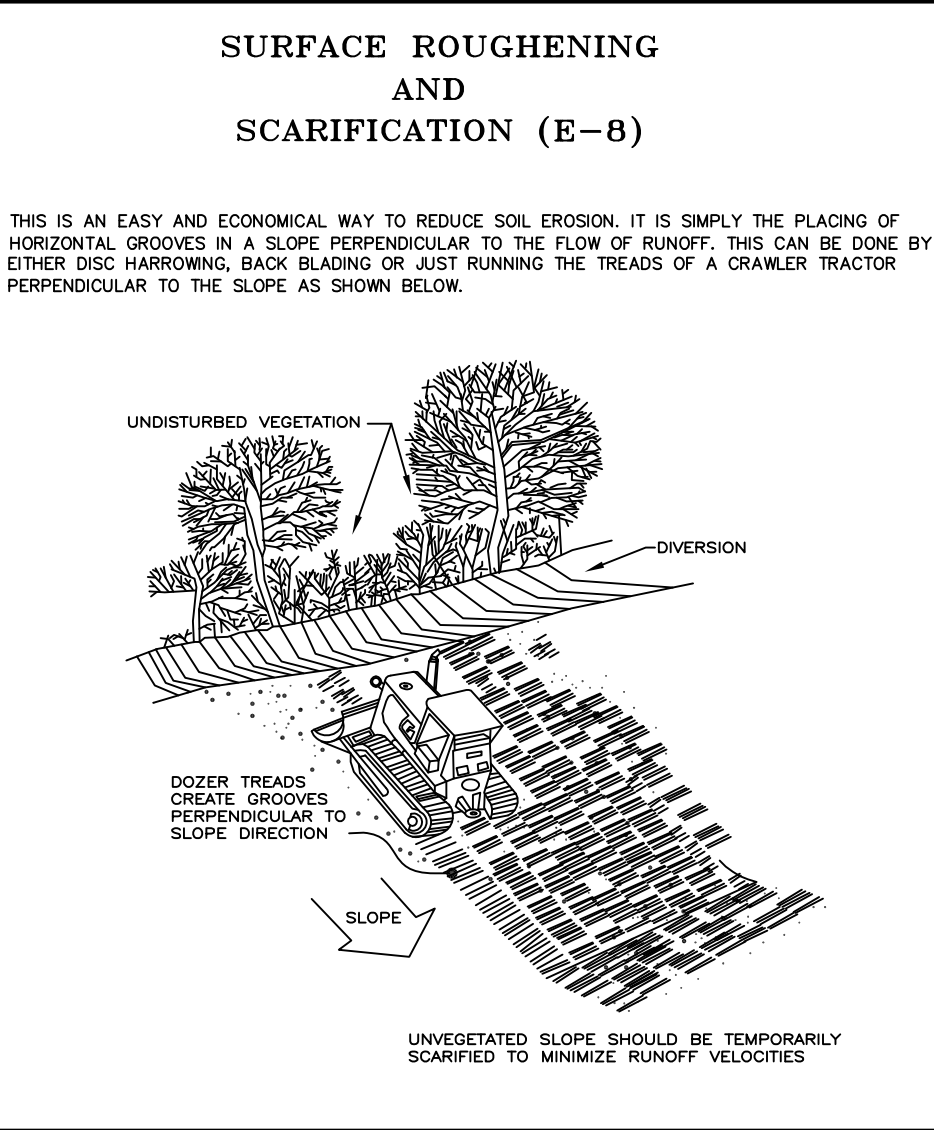
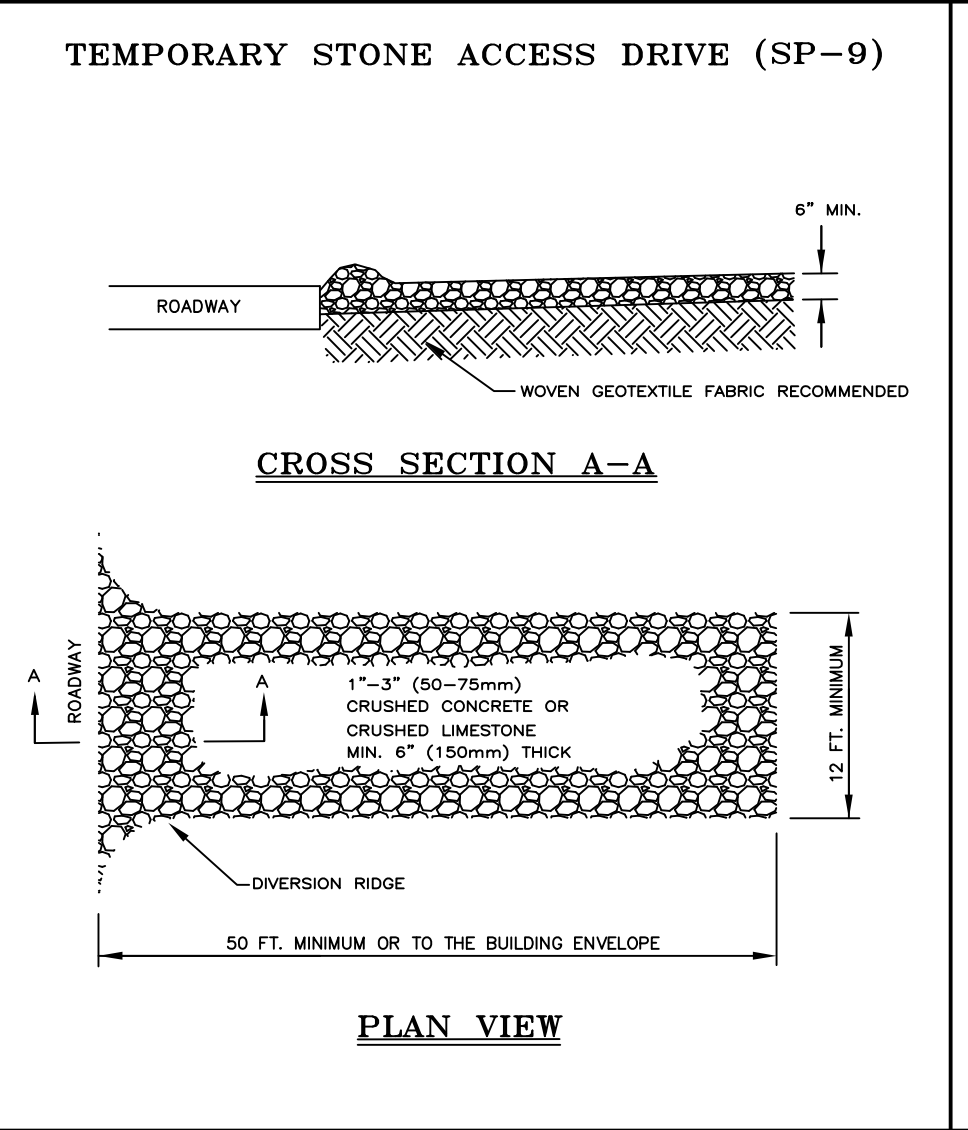
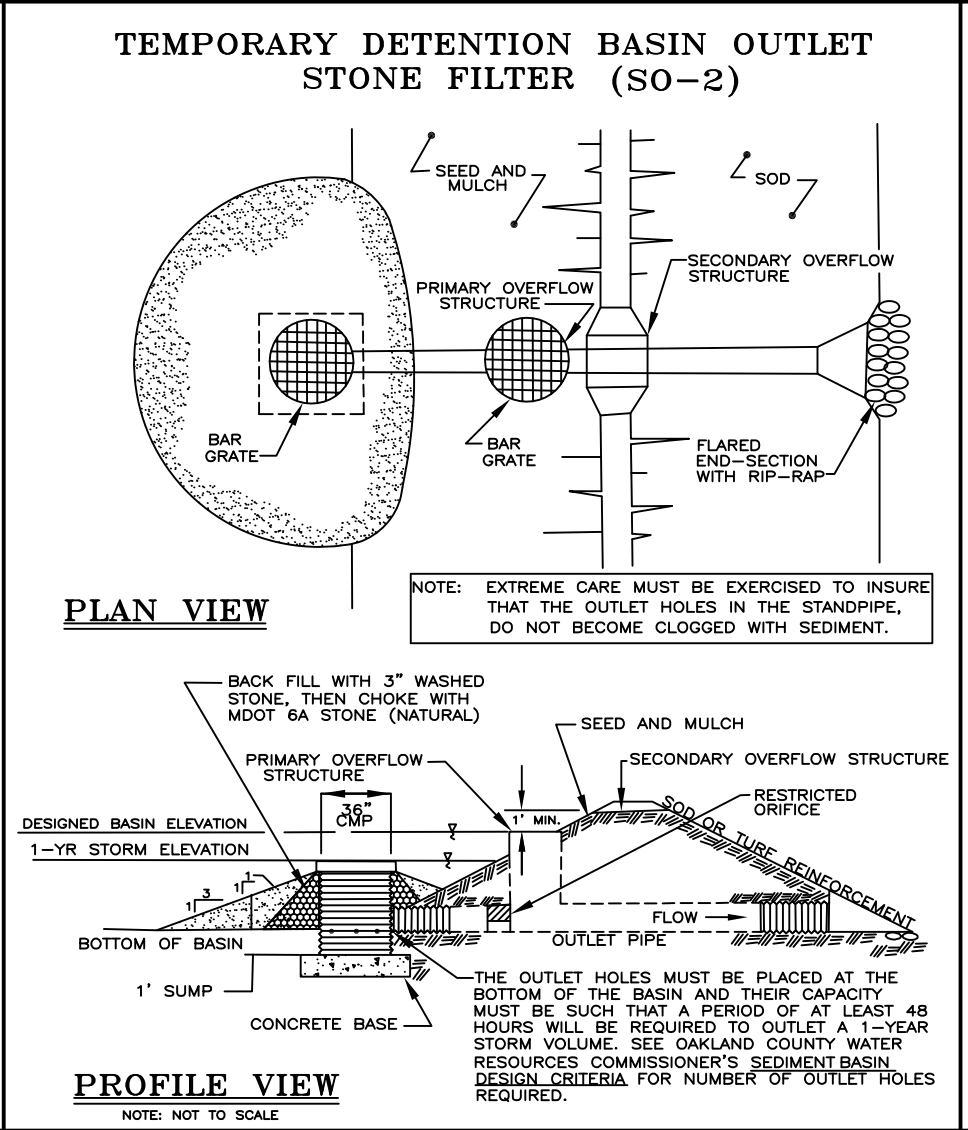
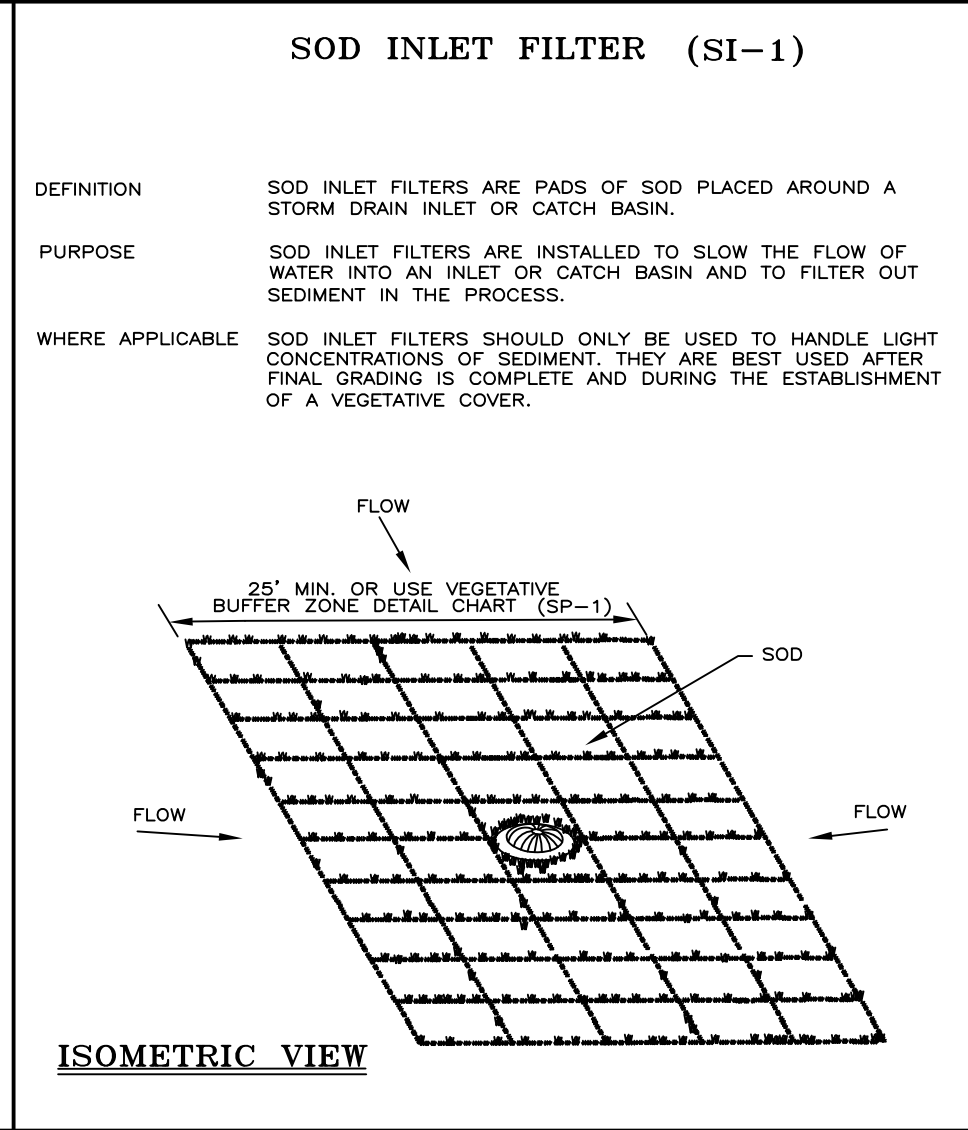
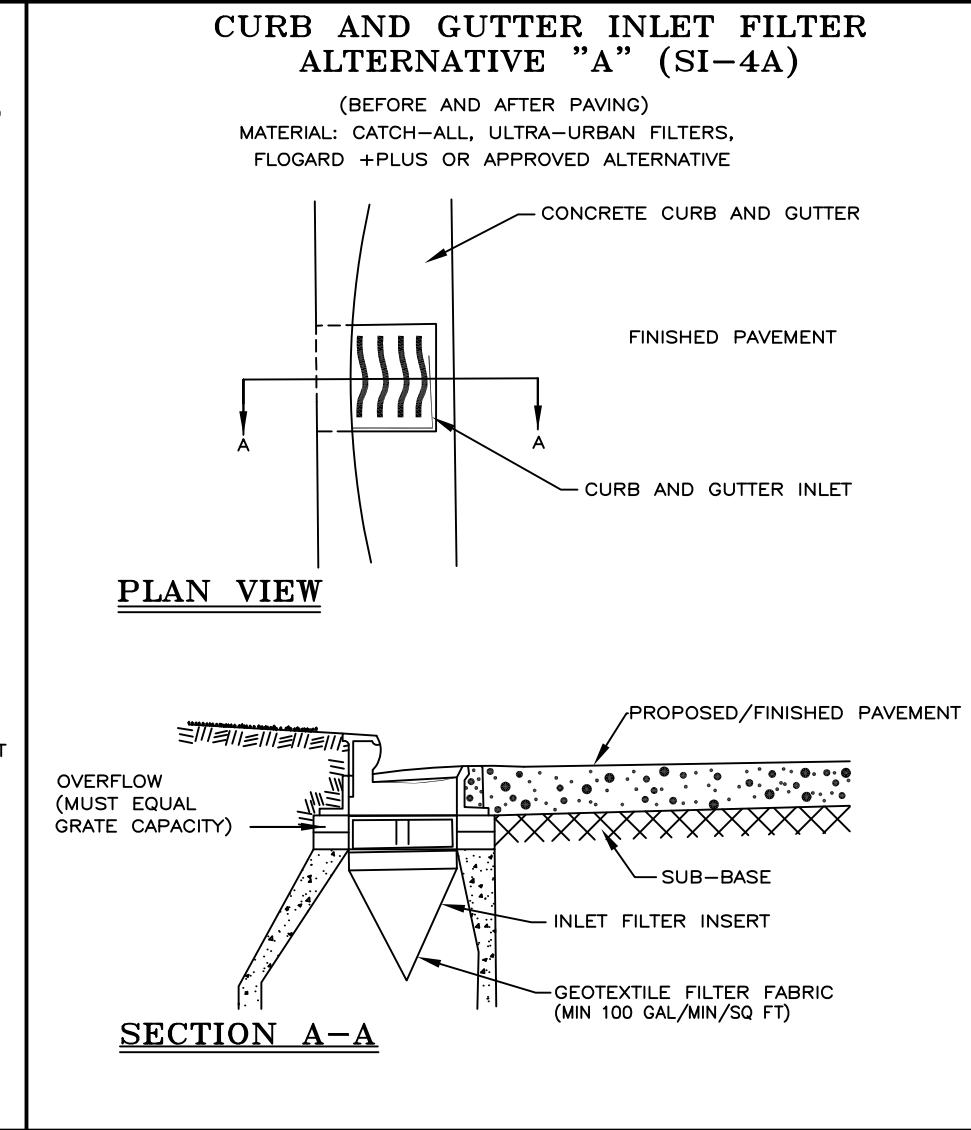
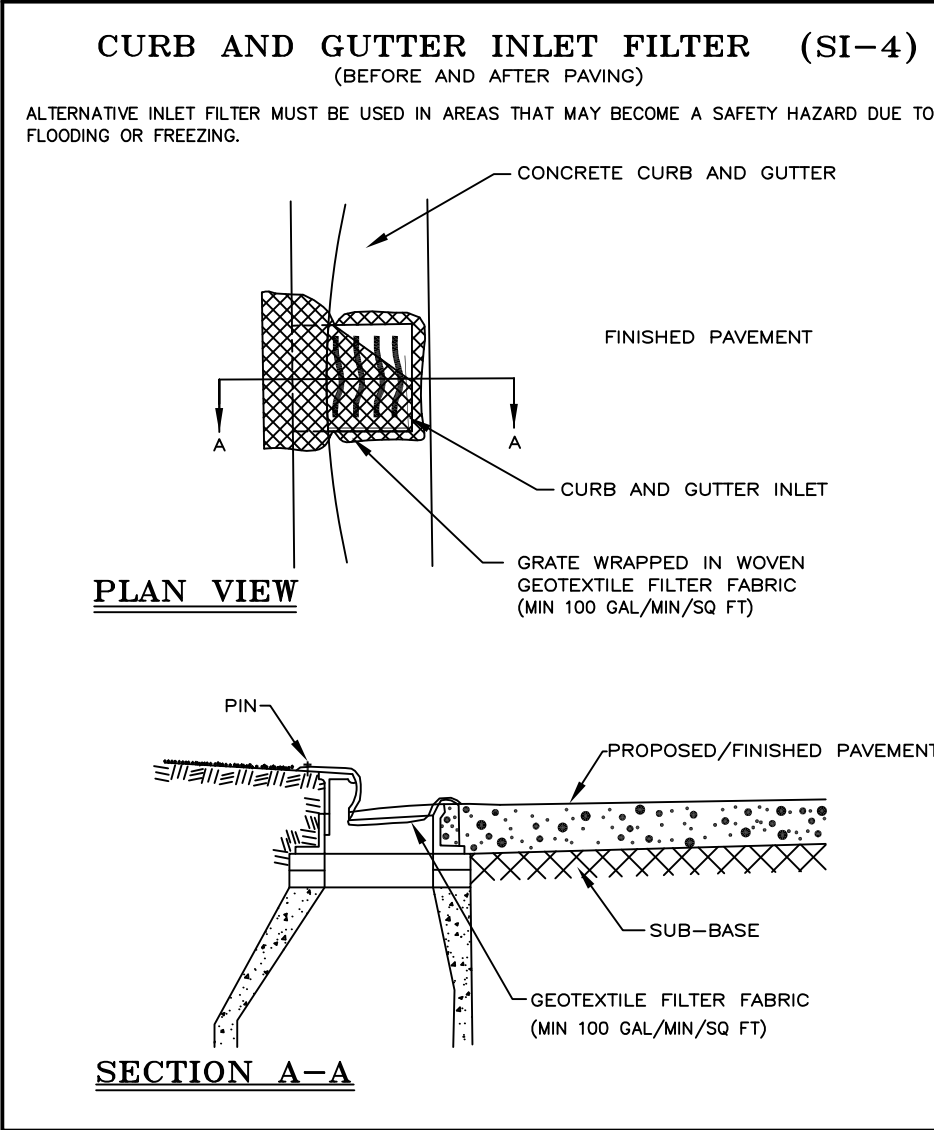
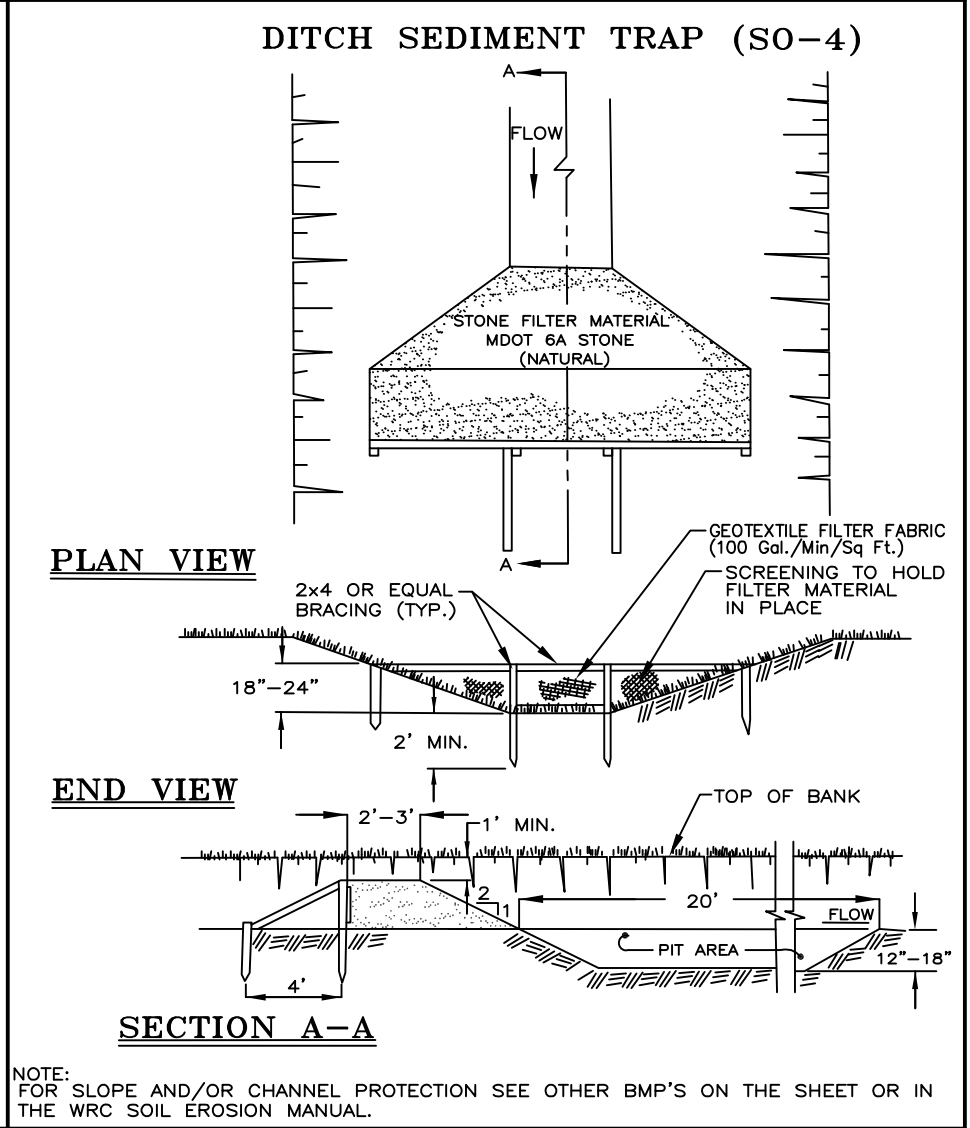
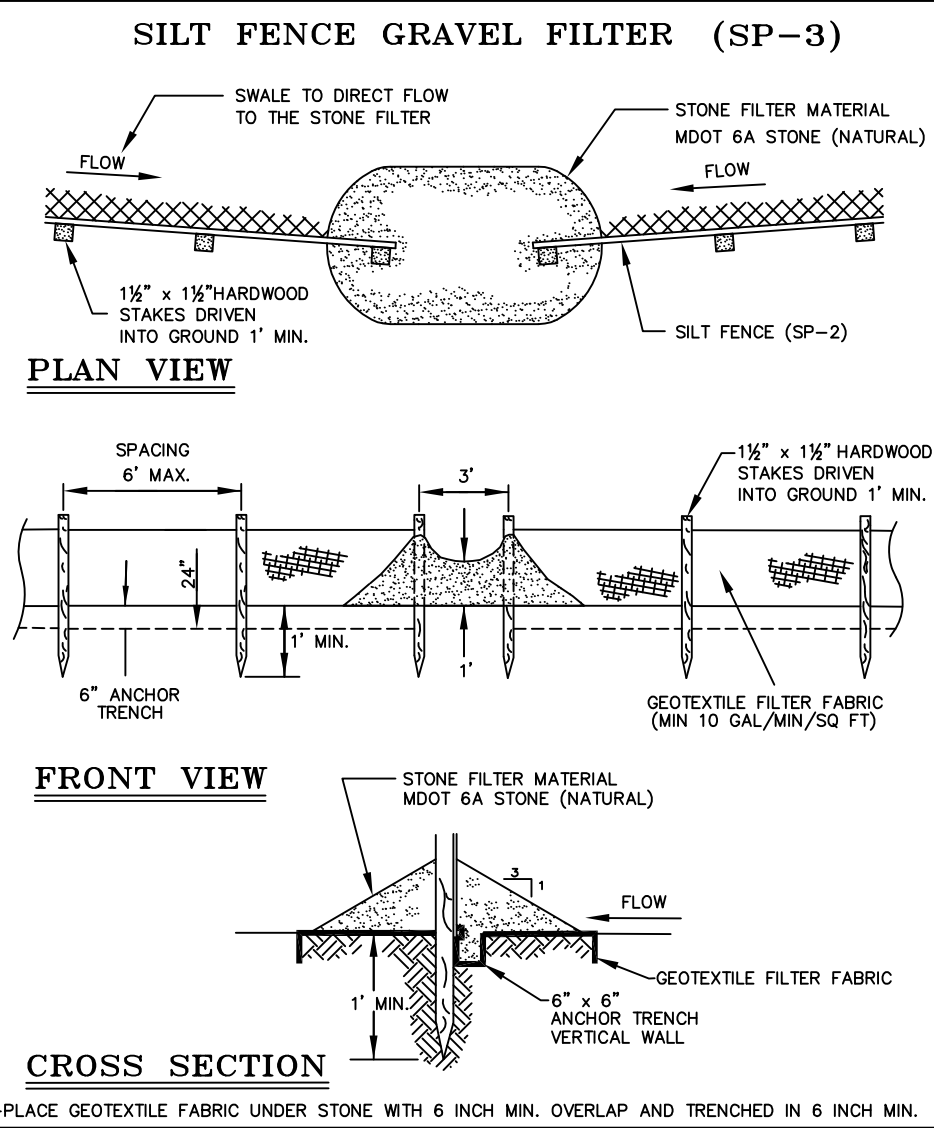
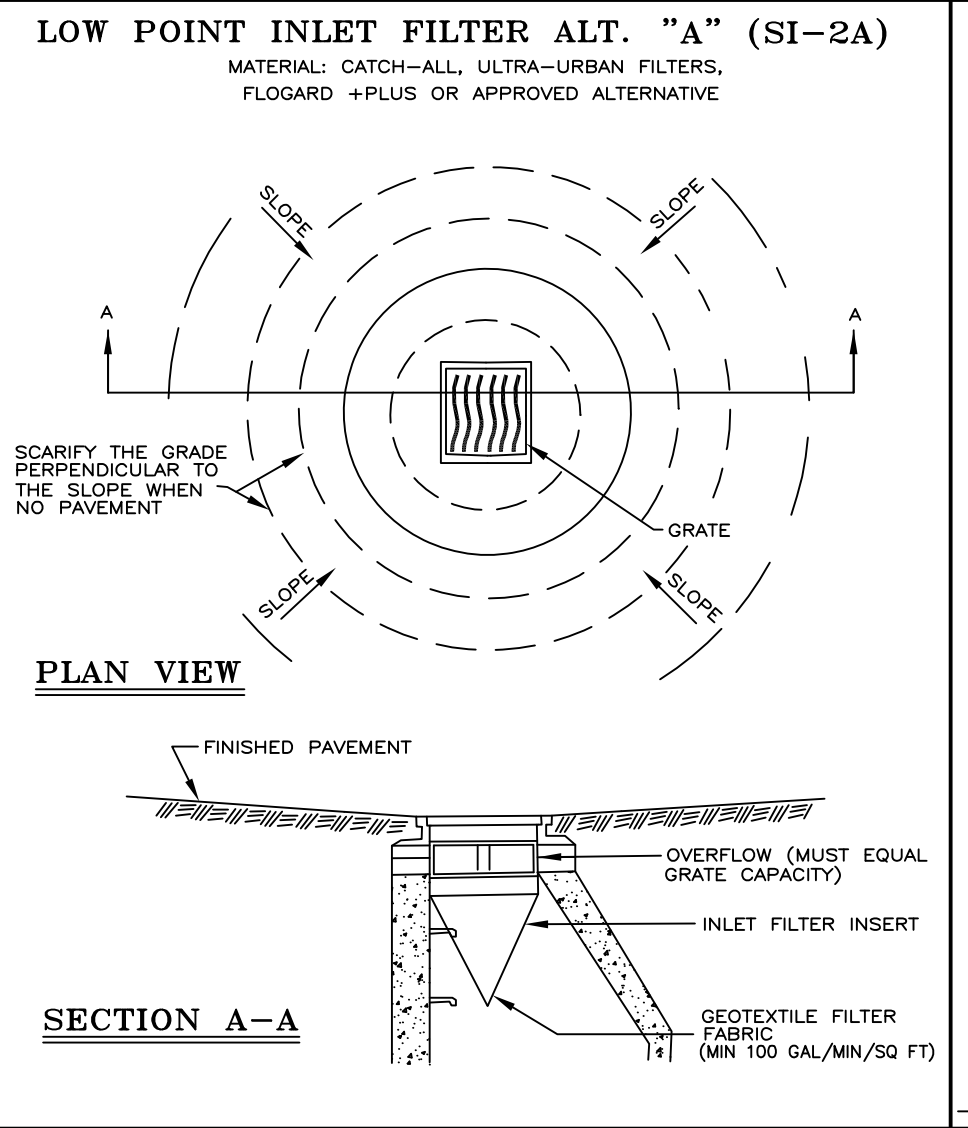
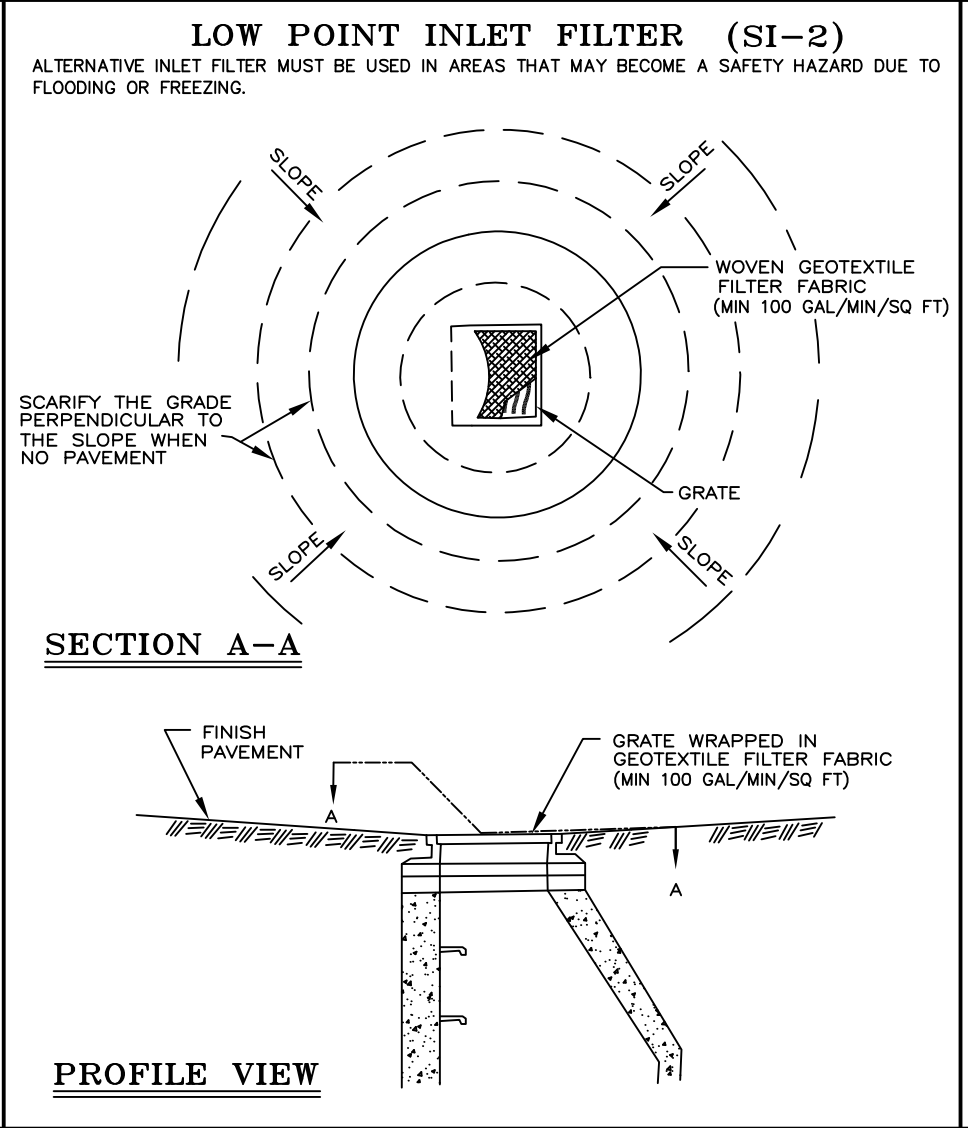
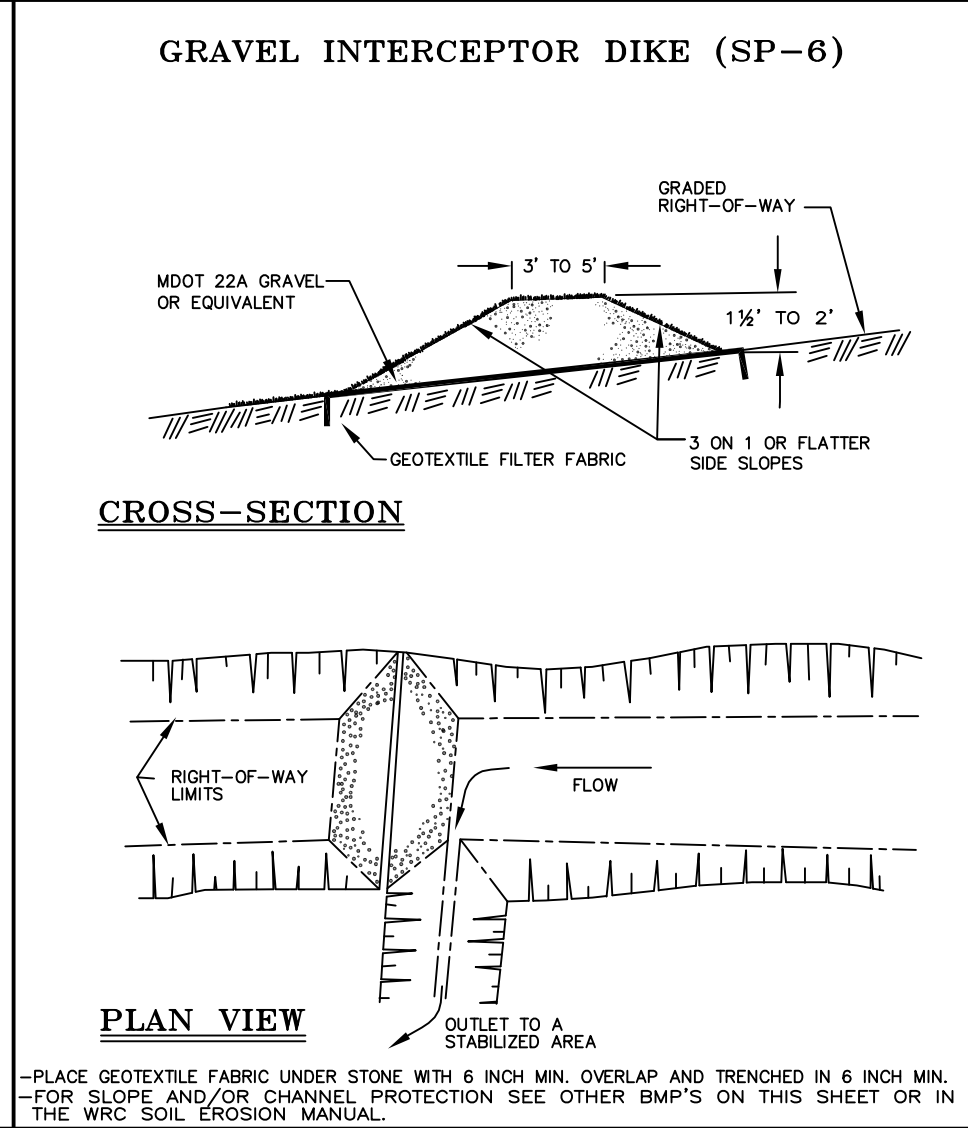
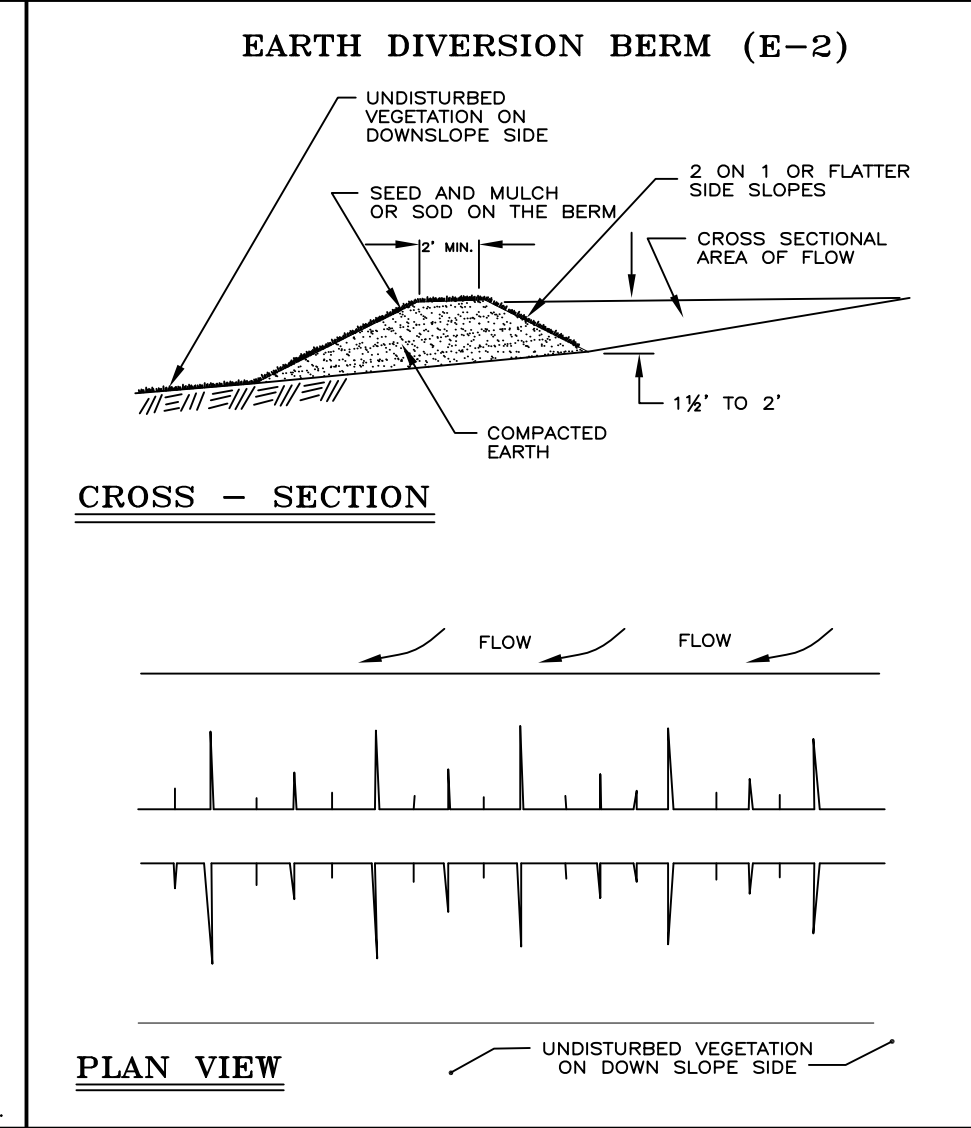
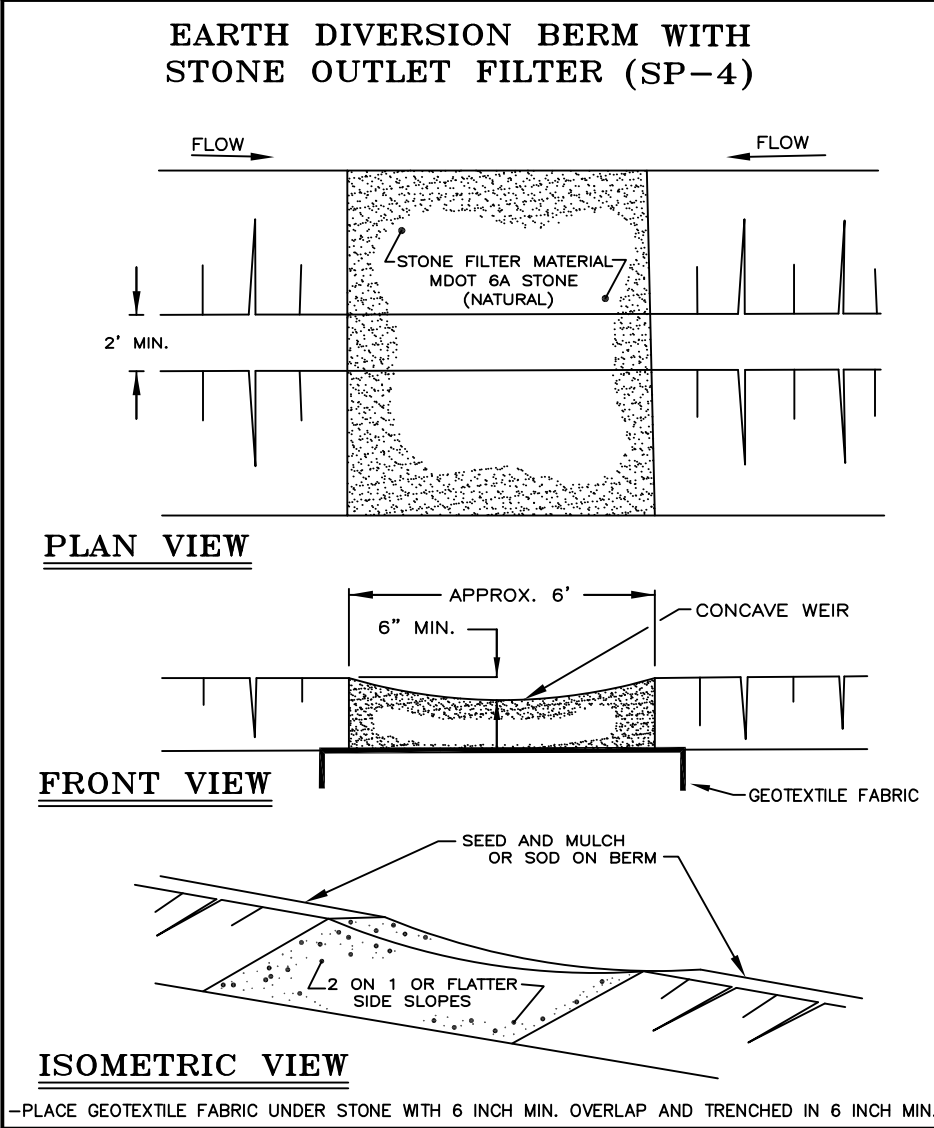
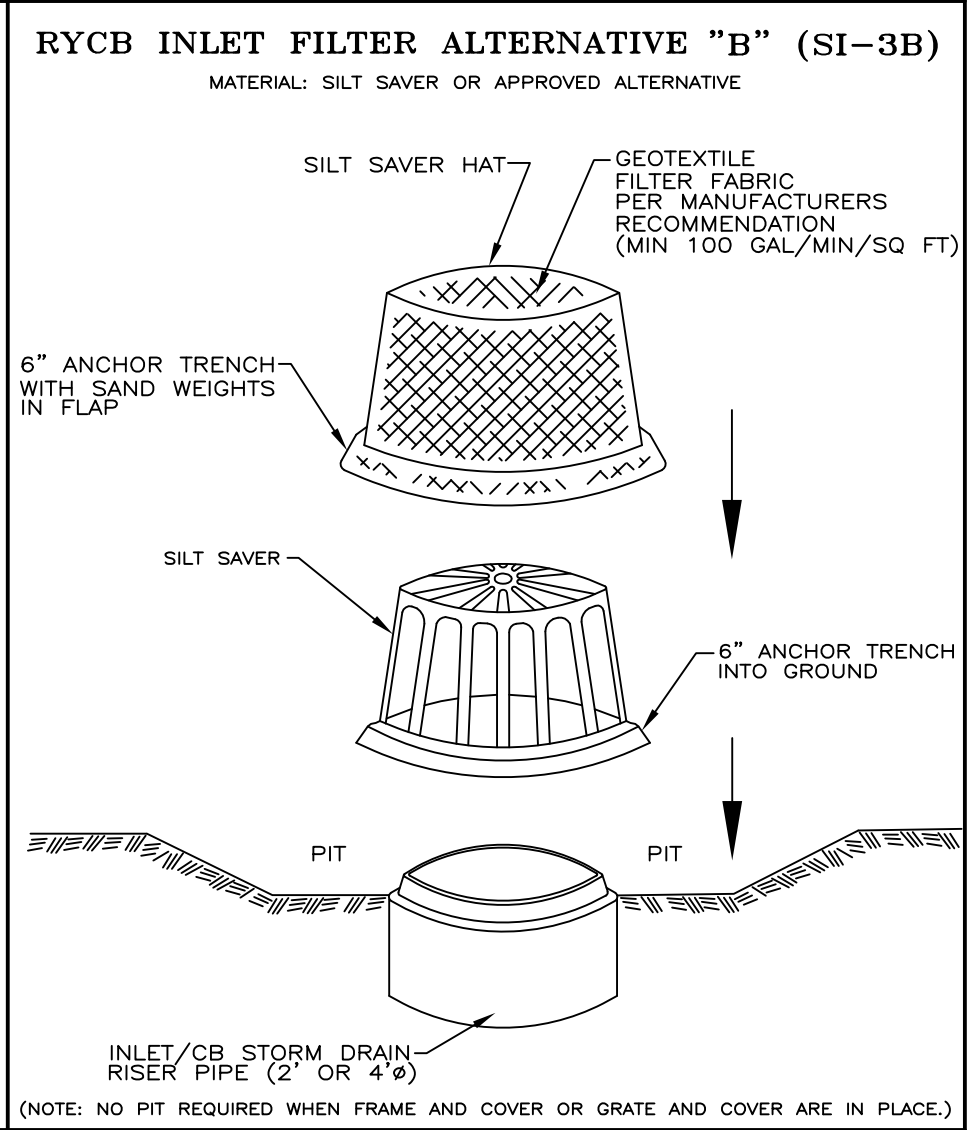
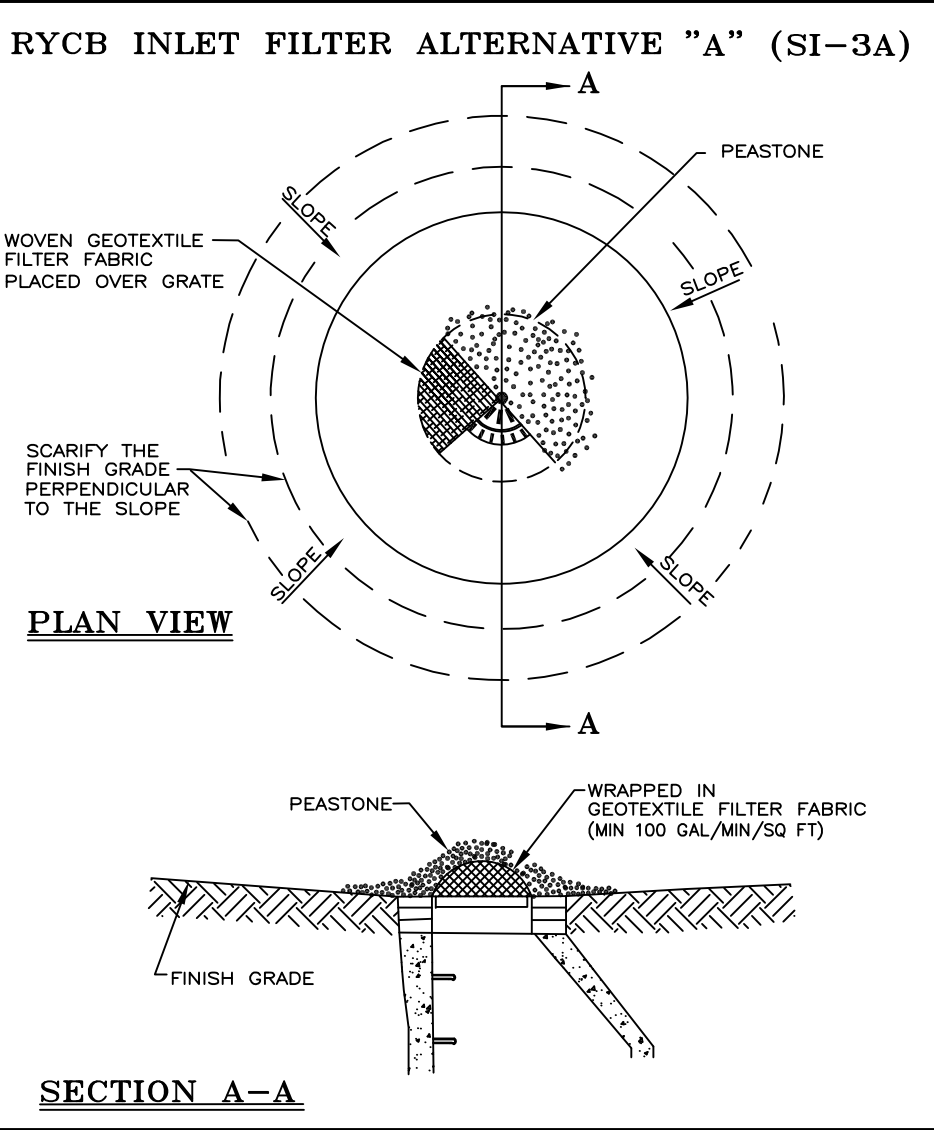
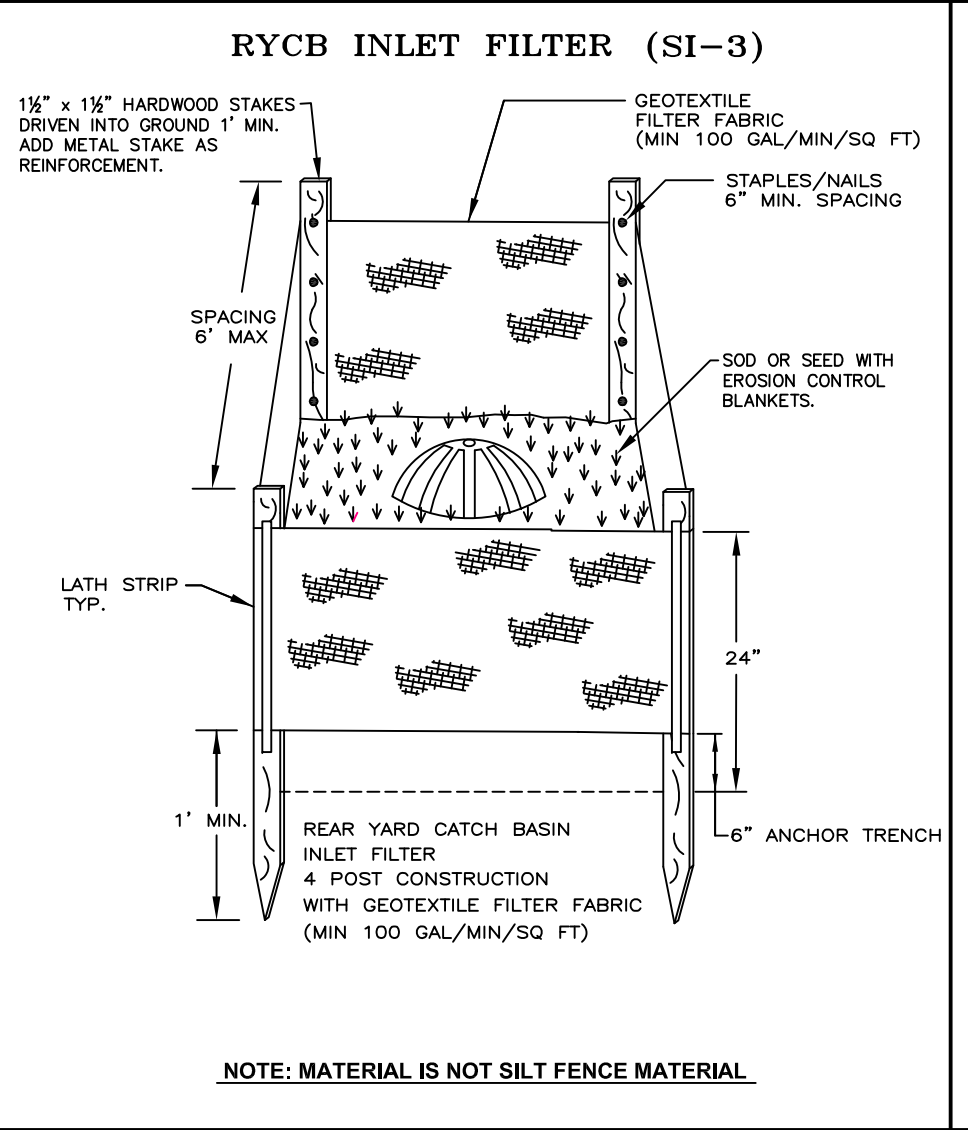
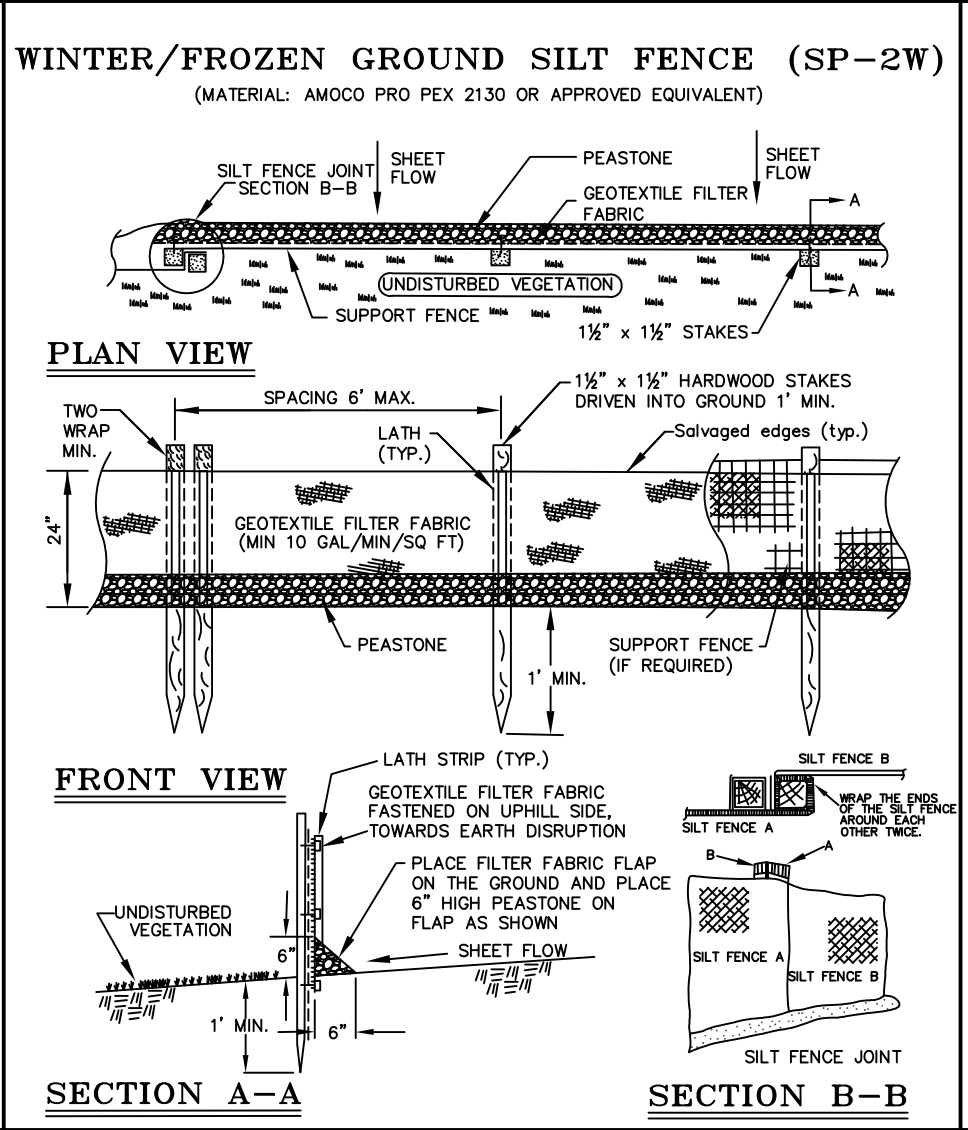
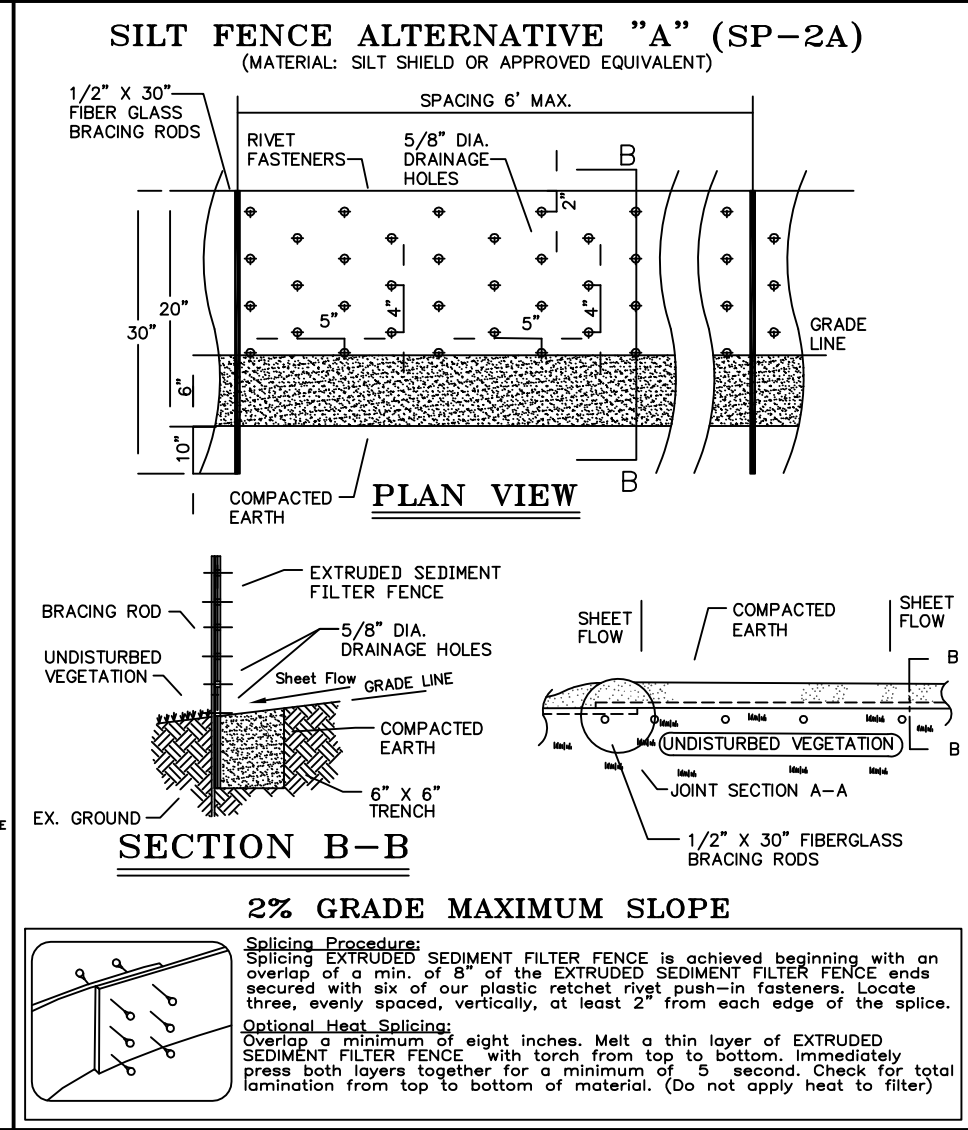
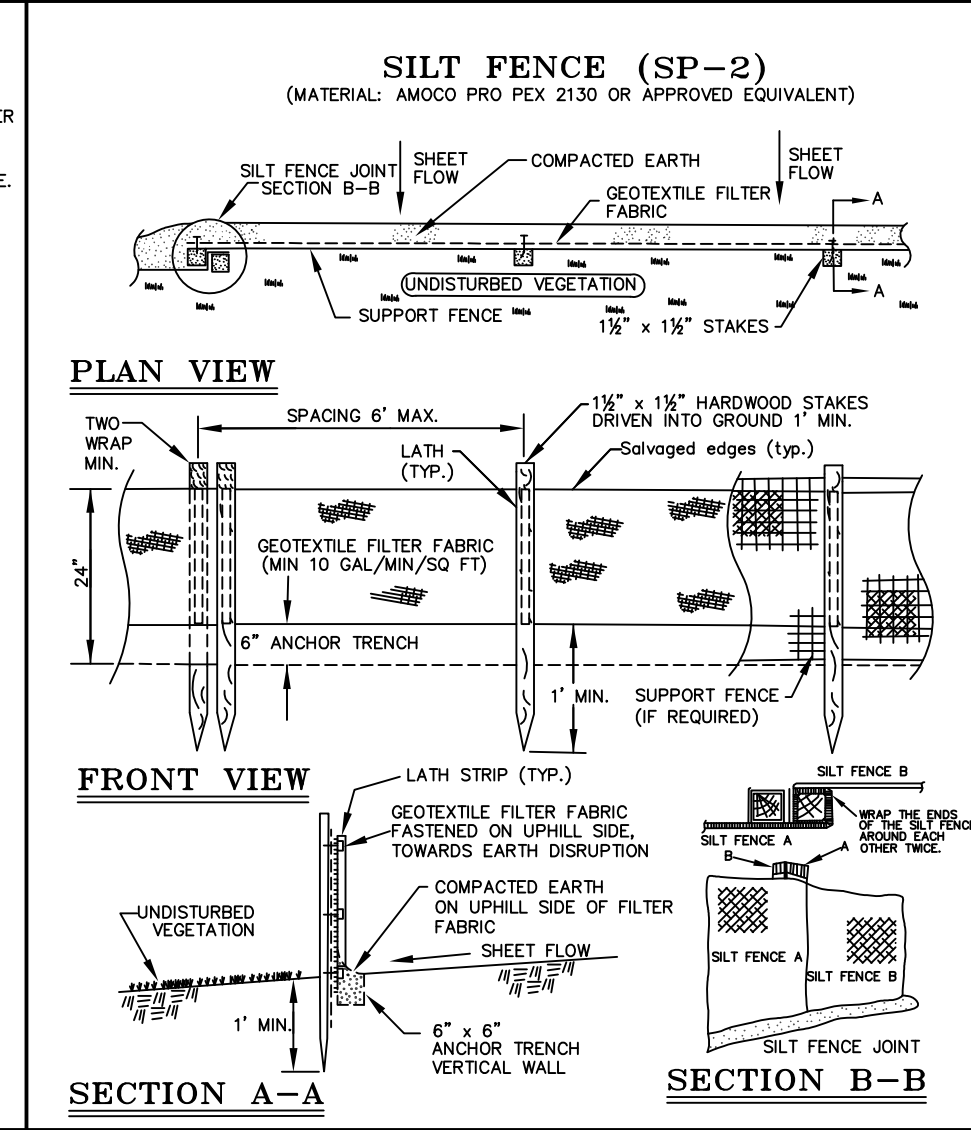
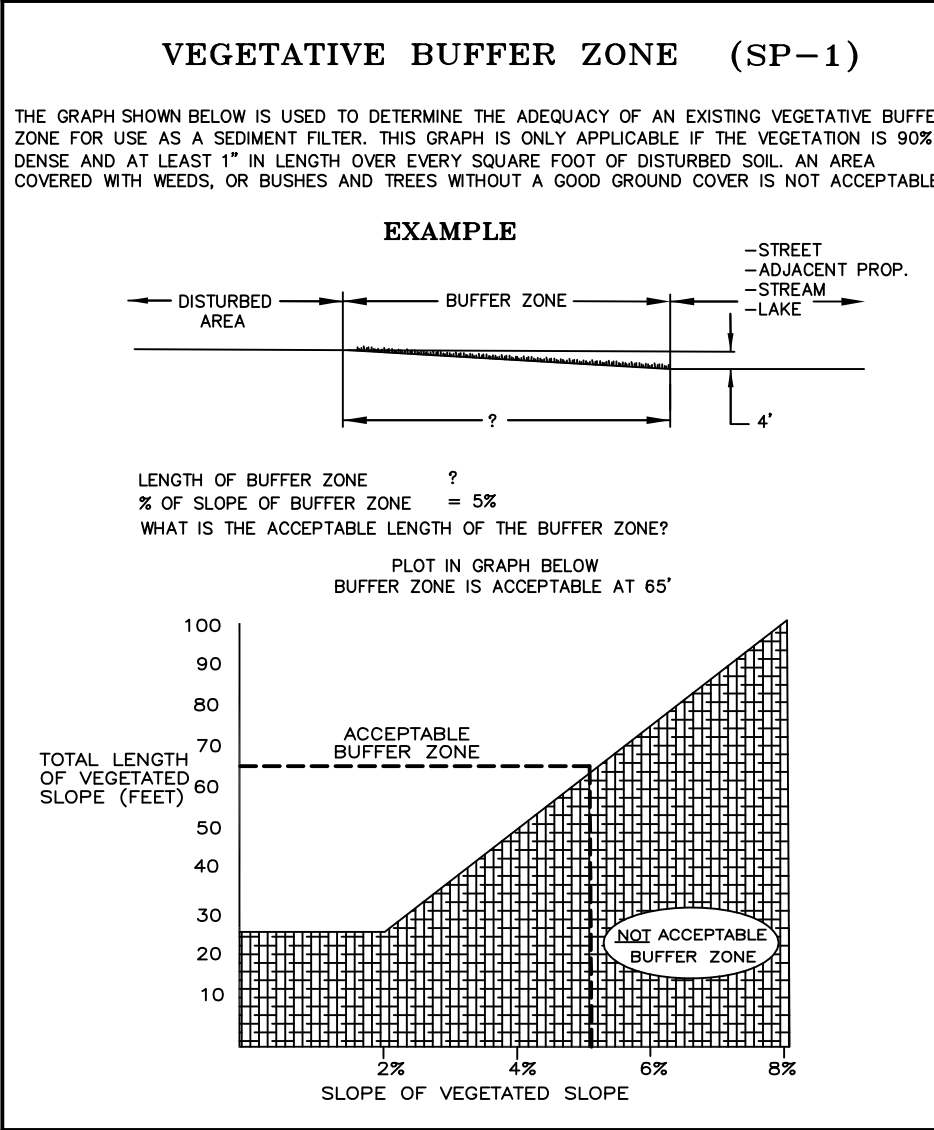
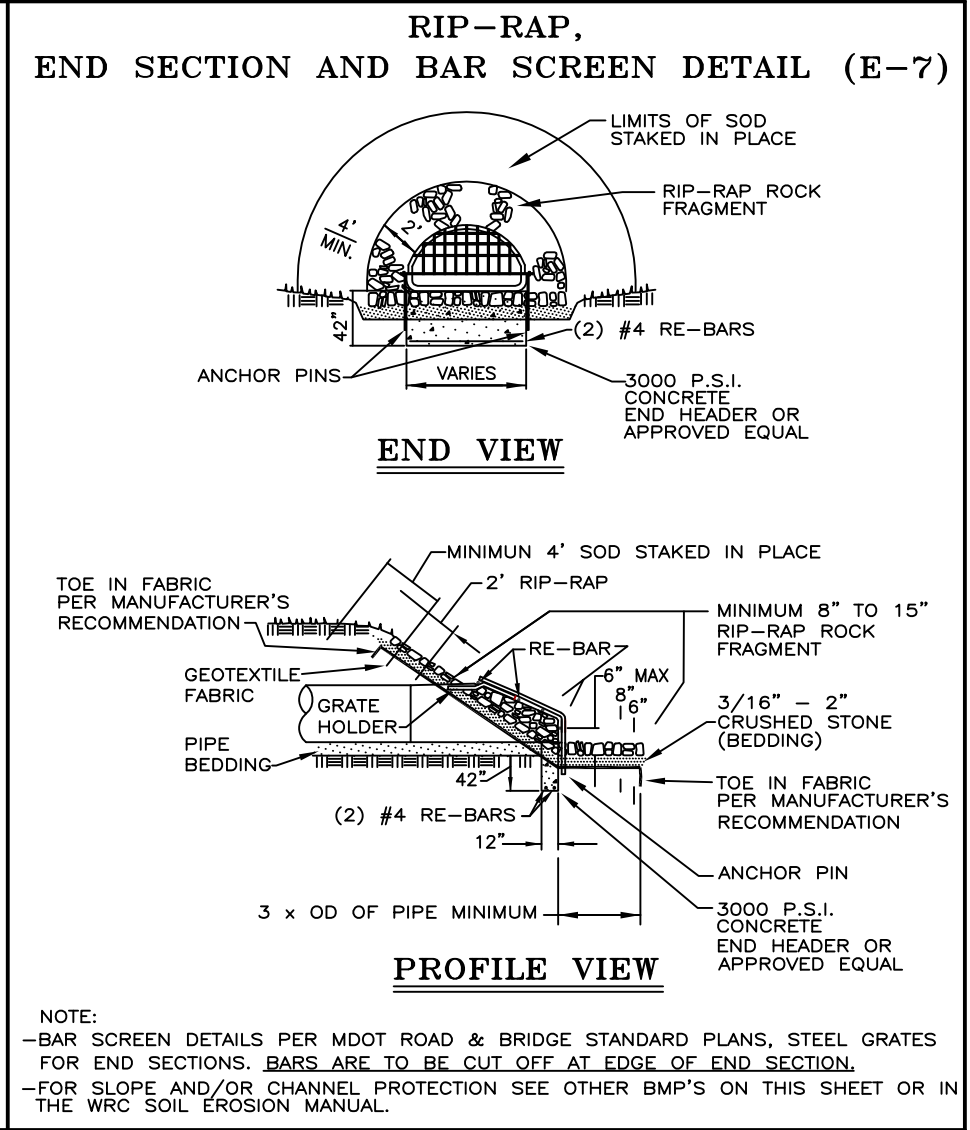
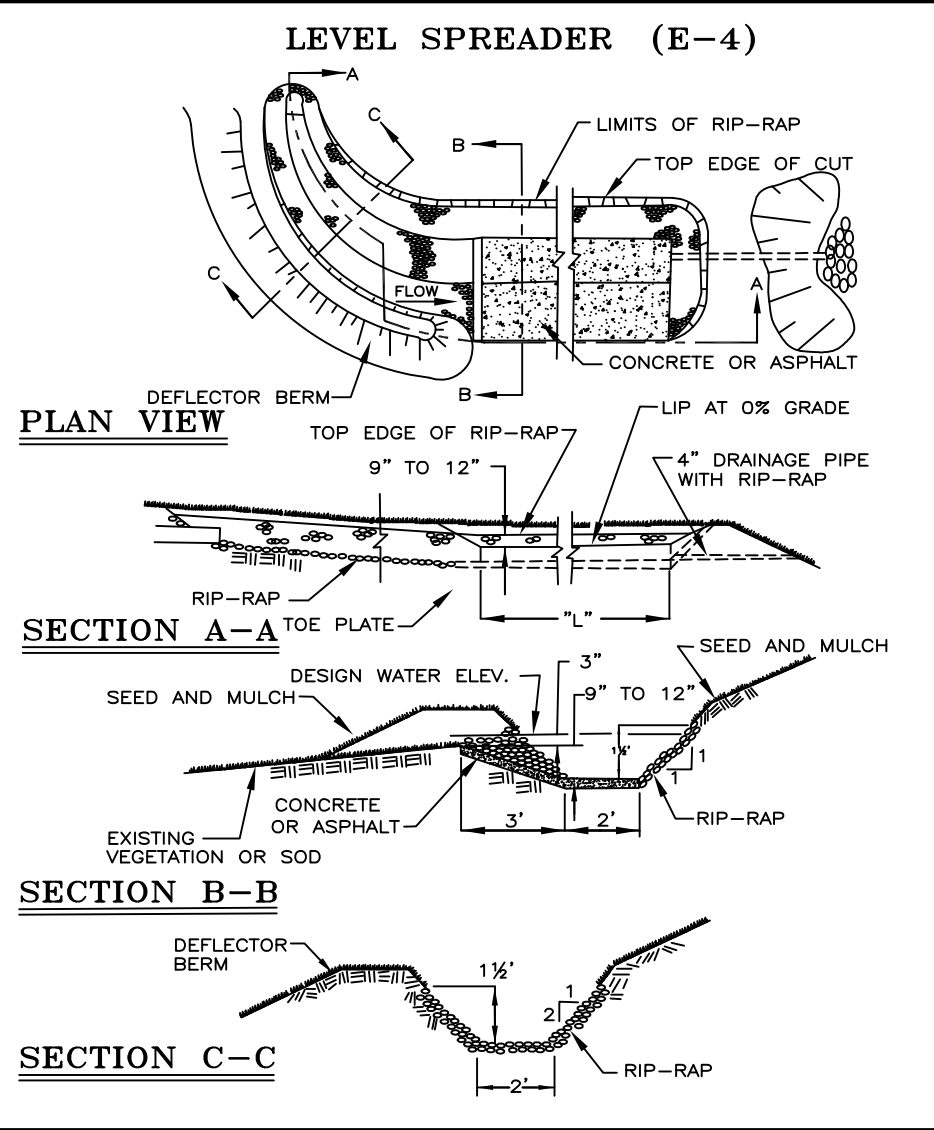
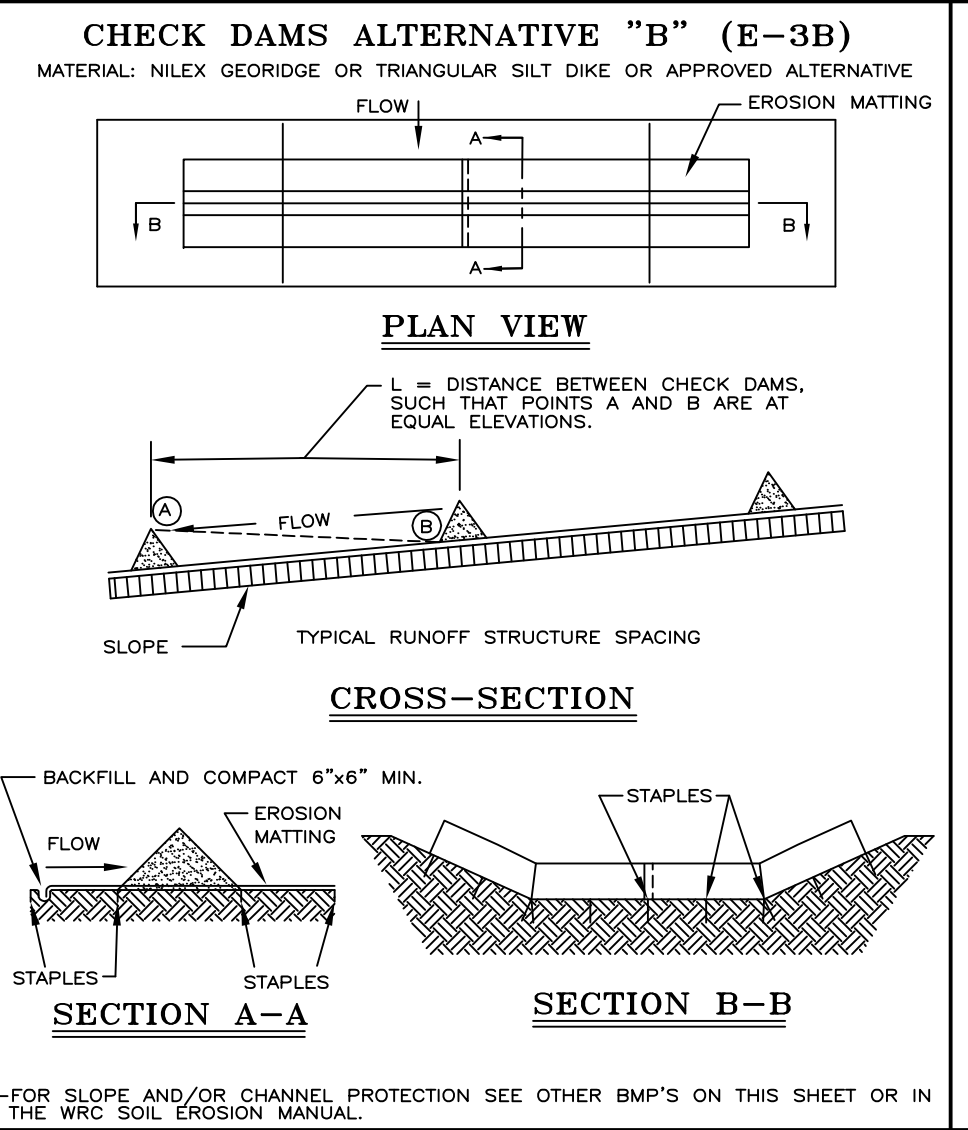
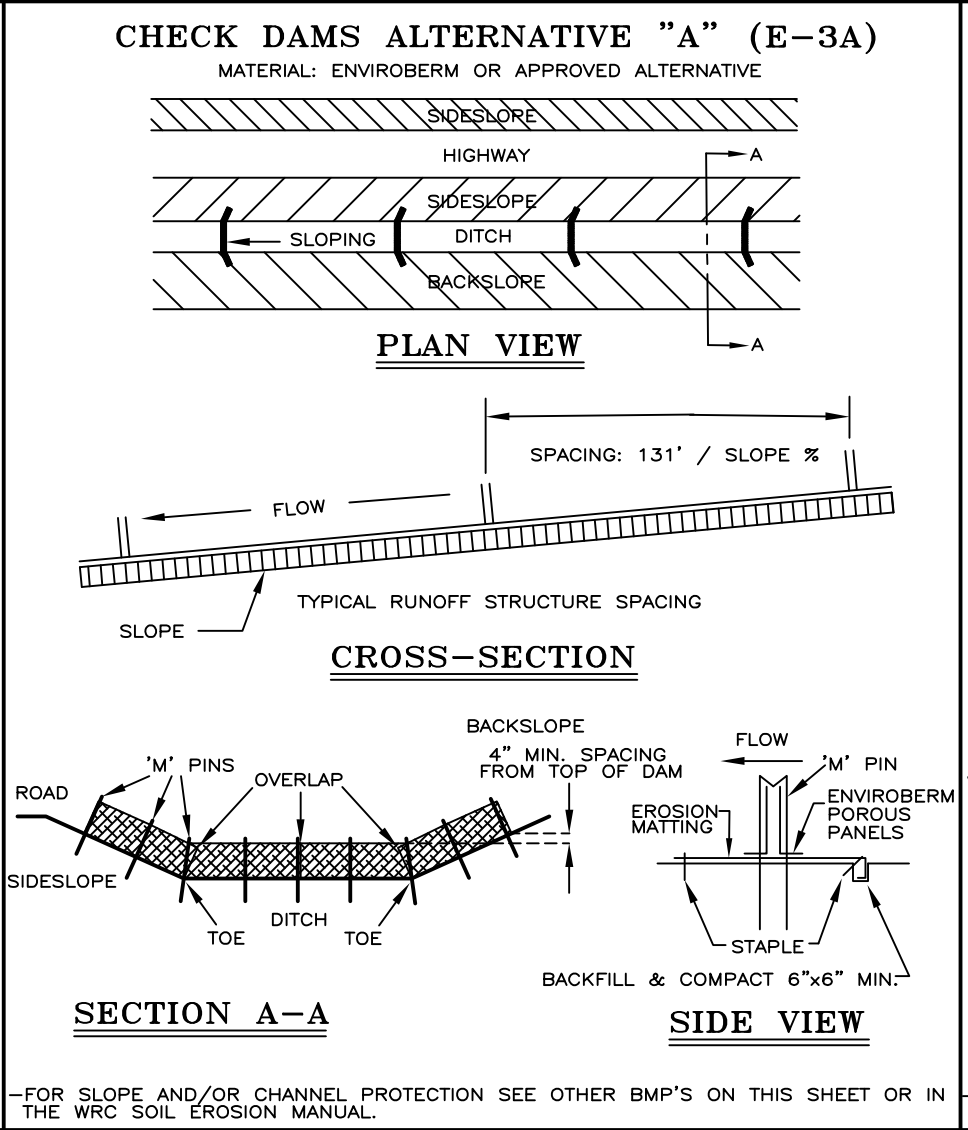
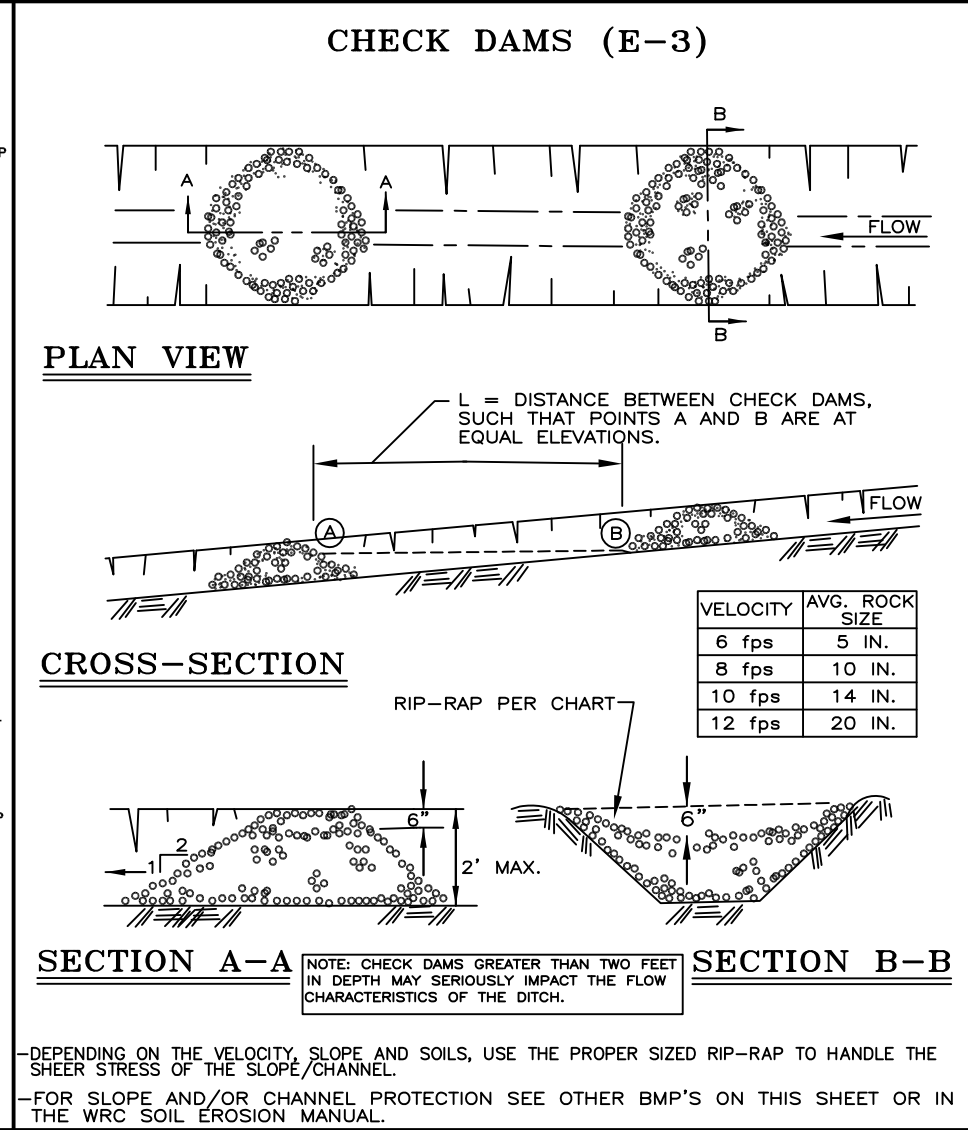
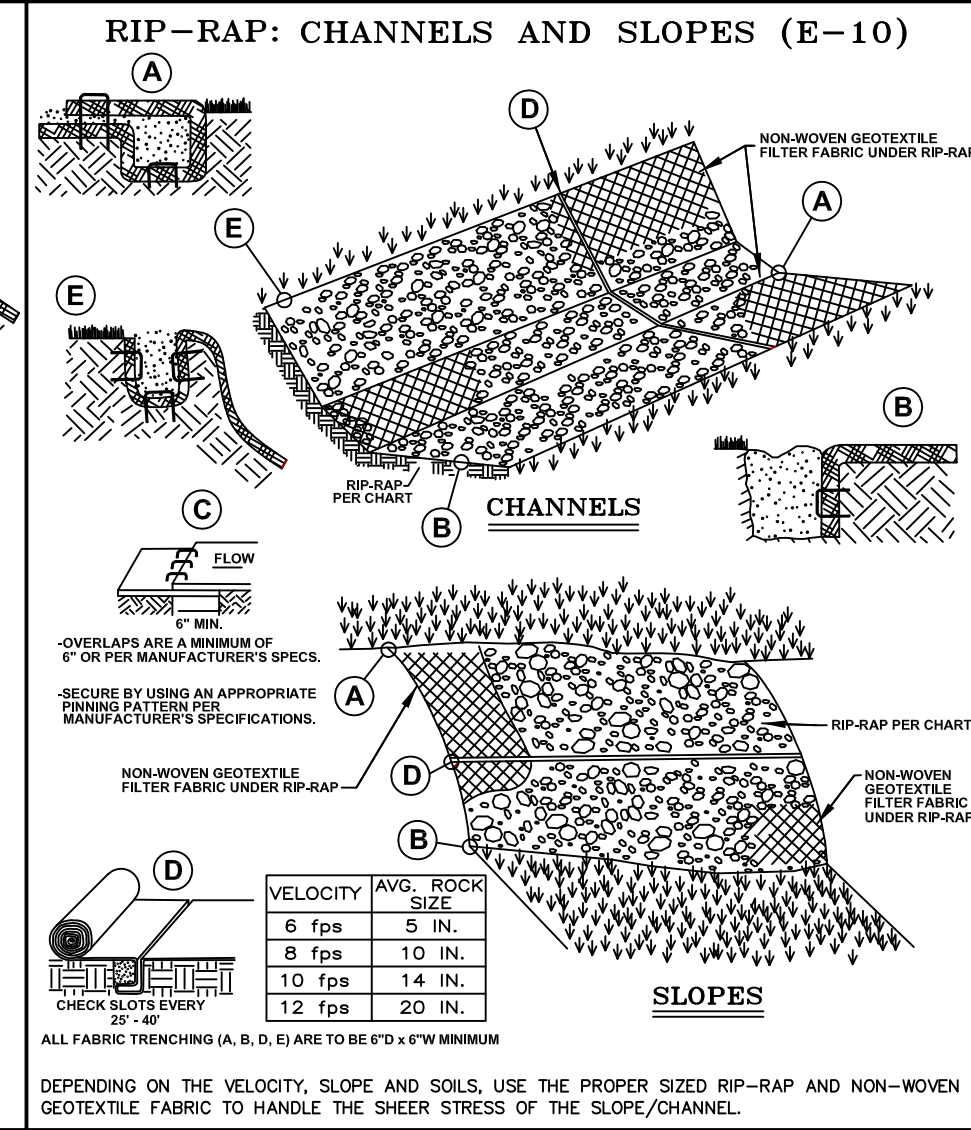
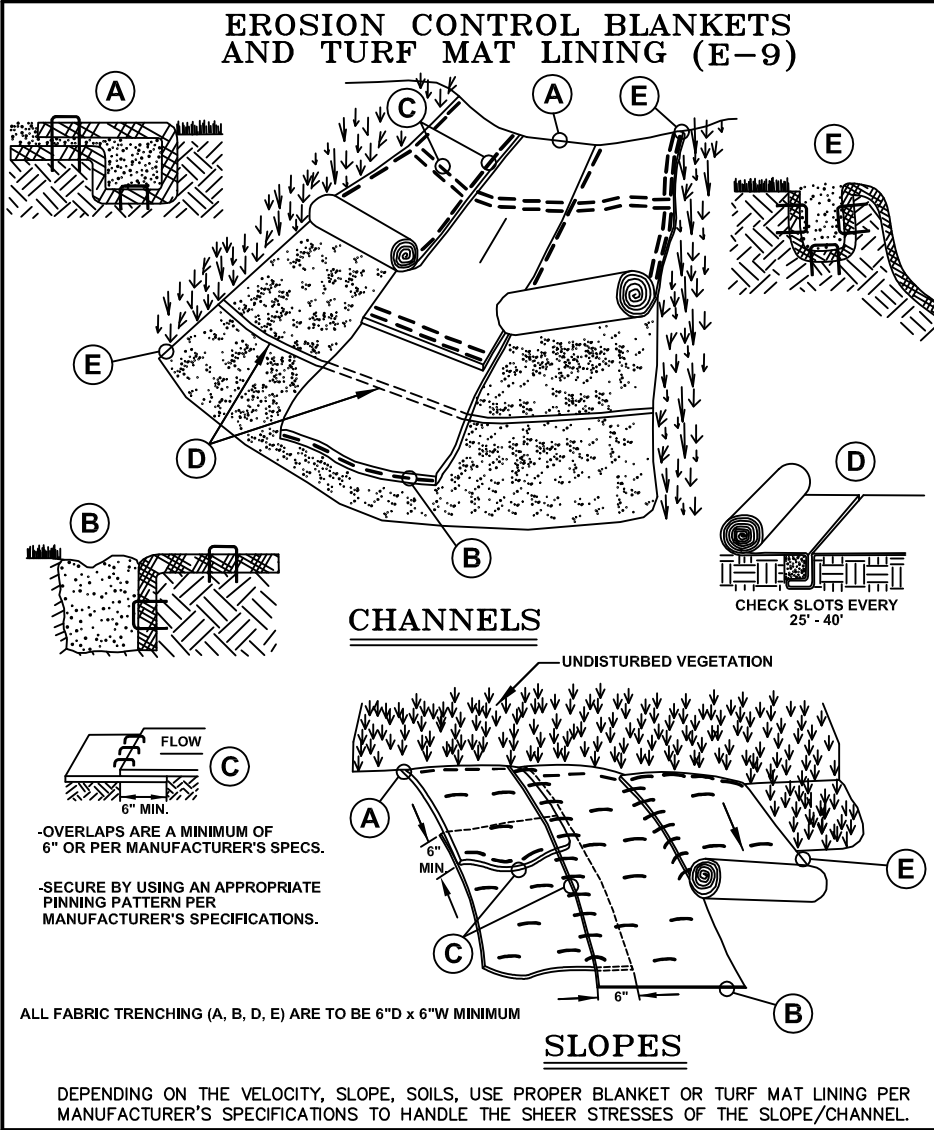
REVISIONS	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE	MARK	ADDENDUM/CHANGE ORDER	DATE
		FIRST ISSUE	08/16/95			10-03-02			06-01-07
		ADD SO-1	06-17-96			12-17-03			04/30/13
		NEW BAR GRATE	11-03-97			05-17-05			

Johnson & Anderson
 4494 Elizabeth Lake Road Waterford, Michigan 48328
 1060 W. Norton Avenue, Suite 7 Muskegon, Michigan 49441
 3910 Lapeer Road Port Huron, Michigan 48060

White Lake Township
 7525 Highland Road (M-59)
 White Lake, Michigan 48383
 248-698-3300

STORM SEWER STANDARD DETAILS

DATE ISSUED: 08/16/95
 SHEET NO.:



SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

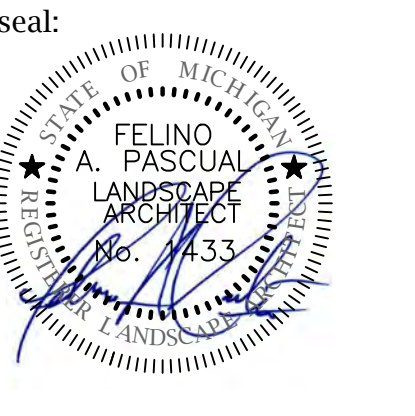
NOTE: WHILE PERFORMING WORK INVOLVING GROUNDS MAINTENANCE AND/OR THE CONSTRUCTION/MAINTENANCE OF ANY INFRASTRUCTURE, INCLUDING ROADS, WATER MAINS, SANITARY SEWERS, STORM DRAINS AND STORM WATER BEST MANAGEMENT PRACTICES (BMPs), CONTRACTORS SHALL MINIMIZE POLLUTION FROM STORM WATER RUNOFF THAT CAN AFFECT WATER QUALITY RELATED TO WORK ACTIVITIES. POLLUTANTS THAT COULD IMPAIR WATER QUALITY MAY INCLUDE FUEL, GREASE AND OIL, NUTRIENTS, BACTERIA AND PATHOGENS, LITTER AND DEBRIS, AND SOIL EROSION AND SEDIMENTATION. APPLICABLE BMPs SHALL BE IMPLEMENTED BY THE CONTRACTOR TO THE MAXIMUM EXTENT PRACTICABLE TO PROTECT WATER QUALITY AND WILDLIFE HABITAT.

REVISION BLOCK

Rev.	Date	Description
1		PROPOSED DETAIL
2		FOR CONSTRUCTION APPROVAL, NAME CHANGES
3		FOR CONSTRUCTION APPROVAL, NAME CHANGES
4		FOR CONSTRUCTION APPROVAL, NAME CHANGES

ORIG. DATE: 01/01/01
 SCALE: NONE
 DESIGNED BY: WRC
 DRAWN BY: Mapping

ONE PUBLIC WORKS DRIVE, BLDG 905 WEST WATERFORD MICHIGAN 48320-1907
 WRC WATER RESOURCES COMMISSIONER Jim Nash
 SHEET NO.: 1 of 1



client:
JMF WHITE LAKE, LLC.
 1700 W. BIG BEAVER ROAD SUITE 120
 TROY, MI 48084

project:
LAKE POINTE

project location:
 White Lake Twp., Michigan

sheet title:
OVERALL LANDSCAPE PLAN VIEW

job no./issue/revision date:

LS19.124.11	TWP.	11-12-2019
LS19.124.12	TWP.	12-27-2019
LS20.089.10	TWP.	10-14-2020
LS21.009.01	SPA	1-18-2021
LS21.009.01	SPA	2-02-2021
LS21.009.03	SPA	3-22-2021
LS23.081.08	ENG. UPDATED	8-1-2023
LS23.081.12	TWP. COMMENTS	12-3-2023
LS24.026.02	COMMENTS	2-7-2024

drawn by:
JP, DK
 checked by:
FP
 date:
1-30-2024

notice:
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 Do Not scale drawings. Use figured dimensions only.



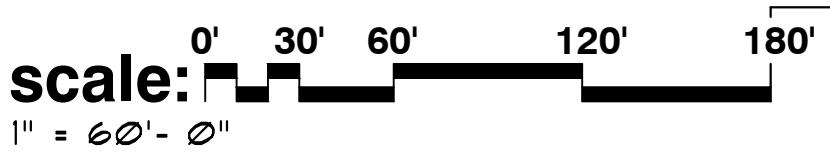
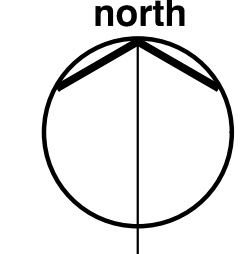
The location and elevations of existing underground utilities as shown on this drawing are only approximate. No guarantee is either expressed or implied as to the completeness of accuracy; contractor shall be exclusively responsible for determining the exact location and elevation prior to the start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

project no:
LS24.026.02

sheet no:
LS-1 of 7

overall view landscape plan for:
Lake Pointe
 a multi-family residential community
 White Lake Township, Michigan

note:
 conceptual landscape plan for graphic presentation purposes only and in no way a construction document or approved for record.



general landscape notes:

- 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 WHITE LAKE 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 HARBARK 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.
- PROVIDE FEAT SOD FOR ALL NEW AND DISTURBED LAWN AREAS 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, PINE, 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 AND/OR WITHIN 5' TO 6' OF 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.
- LANDSCAPE BEDS ADJACENT AND NEXT TO BUILDING SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND POOR SOILS A MIN. OF 12" 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 TWP. 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.
- TREES SHALL NOT BE PLANTED CLOSER THAN (4') FOUR FEET TO A PROPERTY LINE.

sheet index

LS-1 OVERALL LANDSCAPE PLAN VIEW

LS-2 GENERAL PLANTING DETAIL

LS-3 PLANT MATERIAL LIST & PLANTING DETAILS

LS-4 BUILDING FOUNDATION, CLUBHOUSE & ENTRY PLANTING DETAILS

LS-5 SITE AMENITY, PERGOLA & ENTRY SIGN DETAILS

LS-6 POOL DECK PLAN

LS-7 POOL PERGOLA \ TRELLIS ELEVATIONS & DETAILS

residential landscape requirements:

greenbelt	REQUIRED	PROVIDED
TOTAL LN.FT. OF GREENBELT FRONTAGE	825±	
ONE (1) DECIDUOUS OR EVERGREEN TREE PER 30 LN.FT. (825' LN.FT. / 30 LN.FT. = 27.5 TREES)	28	28
EIGHT (8) SHRUB PER 30 LN.FT. (825' LN.FT. / 30 LN.FT. = 27.5 X 8 = 220 SHRUBS)	190	255 (A)
interior landscape	REQUIRED	PROVIDED
TOTAL ACRES OF SITE	19.32 AC±	
ACRES OF 60' R.O.M. AREA	56 AC±	
ACRES OF INTERNAL ROAD AREA	1.31 AC±	
TOTAL ACRES OF SITE NET AREA	11.45 AC± (498,762 SQ.FT.)	
TOTAL SQ.FT. OF INTERIOR LANDSCAPING AREA (15% OF 11.45 AC± (498,762 SQ.FT.) = 74,814.3±)	74,814.3 SQ.FT.	
ONE (1) DECIDUOUS, ORNAMENTAL OR EVERGREEN TREE PER 300 SQ.FT. (74,814.3 SQ.FT. / 300 SQ.FT. = 249.4 TREES)	250	265 (B)
FIVE (5) SHRUB PER 300 SQ.FT. (74,814.3 SQ.FT. / 300 SQ.FT. = 249.4 X 5 = 1,247 SHRUBS)	1,247	478 ± (C)
residential buffer	REQUIRED	PROVIDED
TOTAL LN.FT. OF EAST PROPERTY LINE	475±	
ONE (1) DECIDUOUS OR EVERGREEN TREE PER 15 LN.FT. (475 LN.FT. / 15 LN.FT. = 31.7 TREES)	32	32
FOUR (4) SHRUB PER 15 LN.FT. (475 LN.FT. / 15 LN.FT. = 31.7 X 4 = 126.7 SHRUBS)	127	167 (B)

note:
 'A' - 65 SUPPLEMENTAL SHRUB PLANTINGS TO BE CREDITED TOWARDS INTERIOR LANDSCAPE PLANTING REQUIREMENTS
 'B' - 40 SUPPLEMENTAL SHRUB PLANTINGS TO BE CREDITED TOWARDS INTERIOR LANDSCAPE PLANTING REQUIREMENTS
 'C' - SUPPLEMENTAL PERENNIAL PLANTINGS TO BE CREDITED TOWARDS INTERIOR SHRUB LANDSCAPE PLANTING REQUIREMENTS
 620- PERENNIALS AND GRASSES
 2500- GROUND COVERS



tree cluster/grouping planting notes:

- typical 3 to 4 evergreen or canopy tree cluster grouping per same species
- maximum of 8 evergreen tree cluster grouping per same species provided
- maximum of 5 canopy tree cluster grouping per same species provided



client:
JMF WHITE LAKE, LLC.
 1700 W. BIG BEAVER ROAD SUITE 120
 TROY, MI 48084

project:
LAKE POINTE

project location:
 White Lake Twp., Michigan

Union Lake Road
 sheet title:
GENERAL LANDSCAPE PLANTING DETAIL

job no./issue/revision date:

LS19.124.11	TWP.	11-12-2019
LS19.124.12	TWP.	12-27-2019
LS20.089.10	TWP.	10-14-2020
LS21.009.01	SPA	1-18-2021
LS21.009.01	SPA	2-02-2021
LS21.009.03	SPA	3-22-2021
LS23.081.08	ENG. (UPDATED)	8-1-2023
LS23.081.12	TWP. COMMENTS	12-3-2023
LS24.026.02	COMMENTS	2-7-2024

drawn by:
JP, DK
 checked by:
FP
 date:
1-30-2024

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 1-800-482-7171
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project no:
LS24.026.02

sheet no:
LS-2 of 7



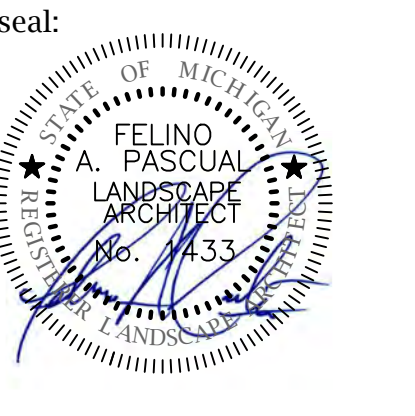
2A landscape planting details
 SCALE: 1"=40'-0"

landscape legend

- deciduous trees**
 (Maples, Celtis occidentalis, Zeikova serrata, Oaks, Lindens, Nyssa sylvatica, etc...)
- ornamental trees**
 (Eastern Redbud, Crabs, Hawthorn, Serviceberry, etc...)
- evergreen trees**
 (White Pine, Austrian Pine, Spruces)
- deciduous shrubs**
 (viburnum, forsythia, burning bush, cotoneaster dogwood, etc.)
- evergreen shrubs**
 (Junipers, yews, hollies, arborvitae, boxwood, etc.)
- perennials and/or seasonal flowers**
 (Daylily, Sedum, Ornamental Grasses, Black Eyed Susan, etc...)

tree cluster/grouping planting notes:

1. typical 3 to 4 evergreen or canopy tree cluster grouping per same species
2. maximum of 8-evergreen tree cluster grouping per same species provided
3. maximum of 5-canopy tree cluster grouping per same species provided



client:
JMF WHITE LAKE, LLC.
 1700 W. BIG BEAVER ROAD SUITE 120
 TROY, MI 48084

project:
LAKE POINTE
 project location:
 White Lake Twp., Michigan

Union Lake Road
 sheet title:
BLDG. FOUNDATION, CLUBHOUSE AND ENTRY PLANTINGS

job no./issue/revision date:

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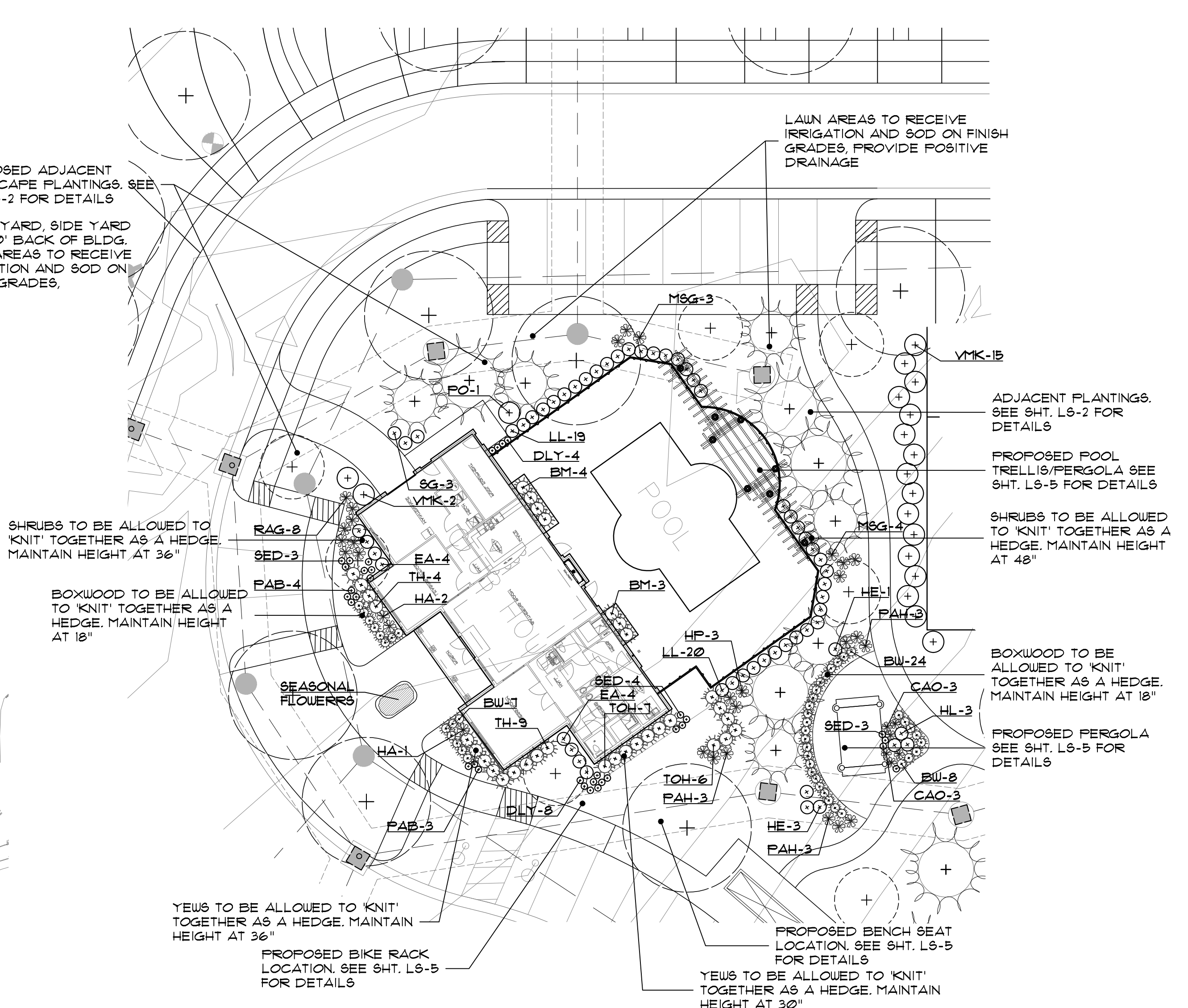
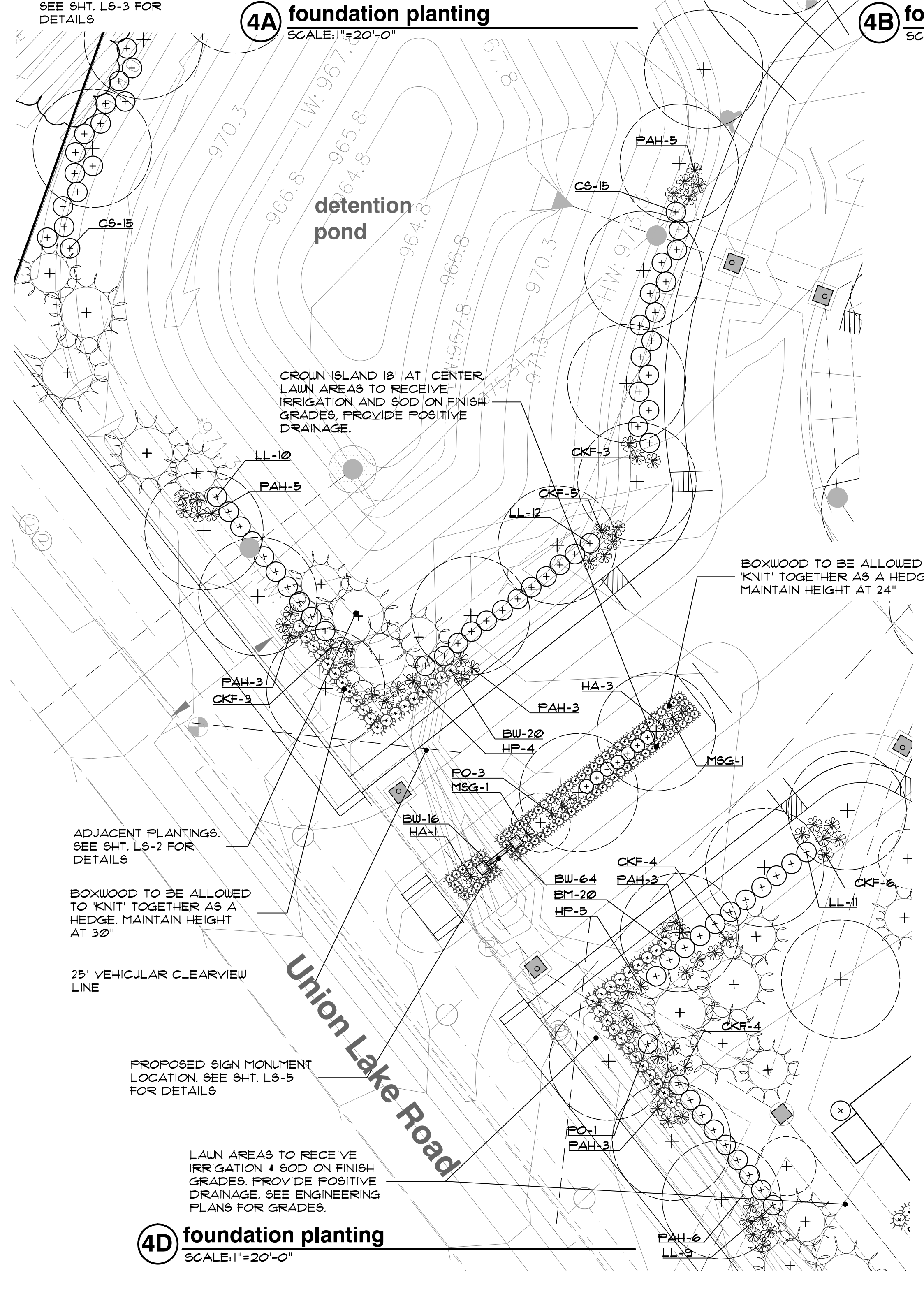
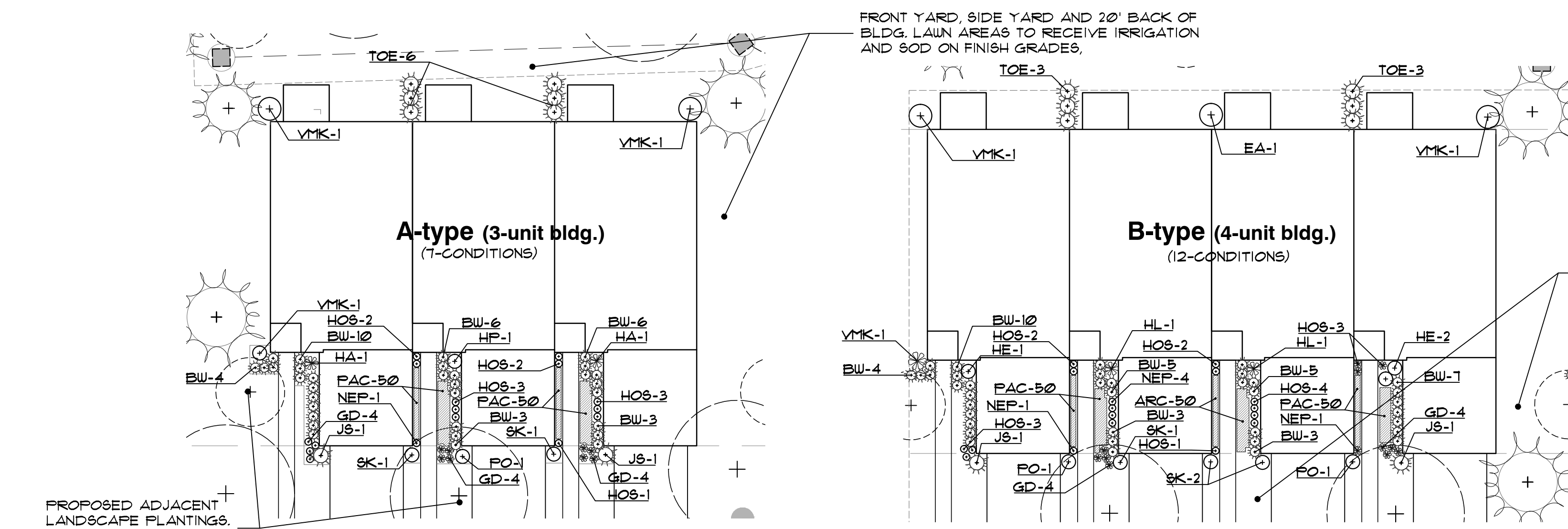
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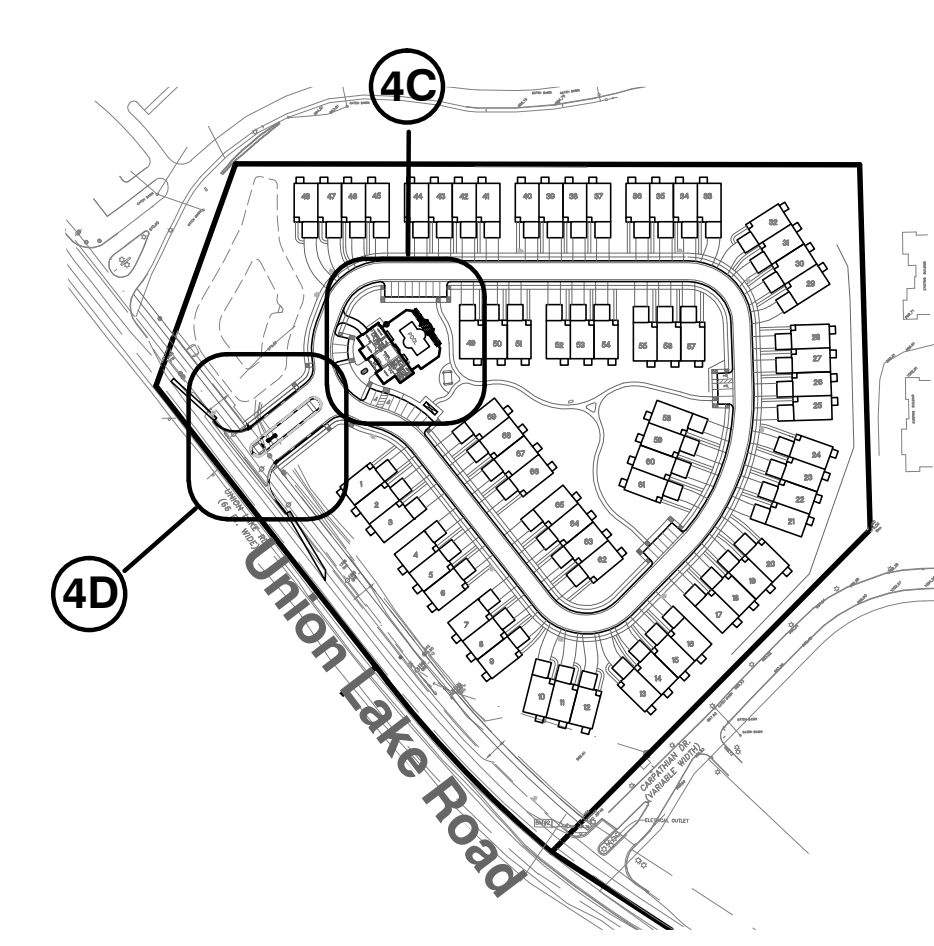
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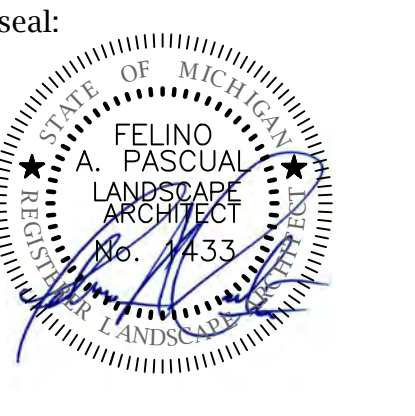
sheet no:
LS-4 of 7



plant material list

key	quant. 4A	quant. 4B	quant. 4C	quant. 4D	botanical name	common name	size	comments
SHRUBS								
SK	14	36	-	-	SYRINGA PATULA 'MISS KIM'	MISS KIM DWARF LILAC	3' BB.	
HP	1	-	3	9	HYDRANGEA PANICLE 'BOBO'	BOBO HYDRANGEA	9" CONT.	
HA	14	-	3	4	HYDRANGEA 'ANNABELLE'	ANNABELLE HYDRANGEA	9" CONT.	
HL	-	24	3	-	HYDRANGEA 'LINDSEY ANN'	LA DREAMIN HYDRANGEA	9" CONT.	
HE	-	36	4	-	HYDRANGEA M. 'GLOWING EMBERS'	GLOWING EMBERS HYDRANGEA	9" CONT.	
PO	1	24	1	4	PHYSCOCARPUS OPULIFOLIUS 'SEWARD'	SUMMER WINE NINEBARK	9" CONT.	
SG	-	-	3	-	SPIRAEA X.B. 'BUMALDA 'GOLDFLAME'	GOLDFLAME SPIRAEA	9" CONT.	
VMK	21	36	11	-	VIBURNUM X.B. 'MOHAUK'	MOHAUK VIBURNUM	3' BB	
LL	-	-	39	42	LIGUSTRUM X. VICARYI	GOLDEN VICARY PRIVET	9" CONT.	60" O.C. SPACING
EA	-	12	8	-	BUNYUS ALATUS 'COMPACTA'	DWARF WINGED BURNING BUSH	3' BB	60" O.C. SPACING
RAG	-	-	8	-	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	9" CONT.	
BW	224	444	39	100	BUXUS M. 'GREEN VELVET'	GREEN VELVET BOXWOOD	18" HIGH BB	24" O.C. SPACING
BM	-	-	1	20	BUXUS M. 'GREEN MOUNTAIN'	GREEN MOUNTAIN BOXWOOD	30" HIGH BB	32" O.C. SPACING
TH	-	-	13	-	TAXUS 'HICKSII'	HICK YEWUS	30" BB	36" O.C. SPACING
TOE	42	12	-	-	THUJA OCCIDENTALIS 'SHARAD'	EMERALD GREEN ARBORVITAE	5' BB.	36" O.C. SPACING
TOH	-	-	13	-	THUJA OCCIDENTALIS 'HELTZ'	HELTZ ARBORVITAE	9" CONT.	36" O.C. SPACING
CS	-	-	-	30	CORNUS STOLONIFERA	REDTWIG DOGWOOD	9" CONT.	60" O.C. SPACING
JS	14	24	-	-	JUNIPERUS SKYROCKET	SKYROCKET JUNIFER	5' BB	60" O.C. SPACING
PERENNIALS AND GRASSES								
NEP	1	12	-	-	NEPETA X FAASSENII 'WALKER'S LOW'	WALKER'S LOW NEPETA	4" CONT.	24" O.C. SPACING
GD	84	36	-	-	GERANIUM X. 'ROZANNE'	ROZANNE GERANIUM	32 / FLAT	12" O.C. SPACING
PAC	100	1200	-	-	FACHYSANDRA TERMINALIS	JAPANESE FACHYSANDRA	32 / FLAT	12" O.C. SPACING
DLY	-	-	12	-	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAY'LILY	4" CONT.	24" O.C. SPACING
SED	-	-	10	-	SEDUM X. 'NEON'	NEON SEDUM	4" CONT.	12" O.C. SPACING
HOS	11	180	-	-	HOSTA 'PATRIOT'	PATRIOT HOSTA	4" CONT.	24" O.C. SPACING
PAH	-	-	9	28	FENNETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	9" CONT.	36" O.C. SPACING
CKF	-	-	-	25	CALAMAGROSTIS X.A. 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	9" CONT.	36" O.C. SPACING
ARC	-	600	-	-	AUGA REPTAN 'CATLIN'S GAINT'	CATLIN'S GAINT AUGA	32 / FLAT	12" O.C. SPACING
M8G	-	-	1	2	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT JAPANESE SILVER GRASS	9" CONT.	
PAB	-	-	1	-	FENNETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	9" CONT.	36" O.C. SPACING
CAO	-	-	6	-	CALAMAGROSTIS X. ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER'S FEATHER REED GRASS	9" CONT.	36" O.C. SPACING





client:
JMF WHITE LAKE, LLC.
 1700 W. BIG BEAVER ROAD SUITE 120
 TROY, MI 48084

project:
LAKE POINTE

project location:
 White Lake Twp., Michigan

sheet title:
SITE AMENITY, PERGOLA AND ENTRY SIGN DETAILS

job no./issue/revision date:

LS19.124.11	TWP.	11-12-2019
LS19.124.12	TWP.	12-27-2019
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JP, DK
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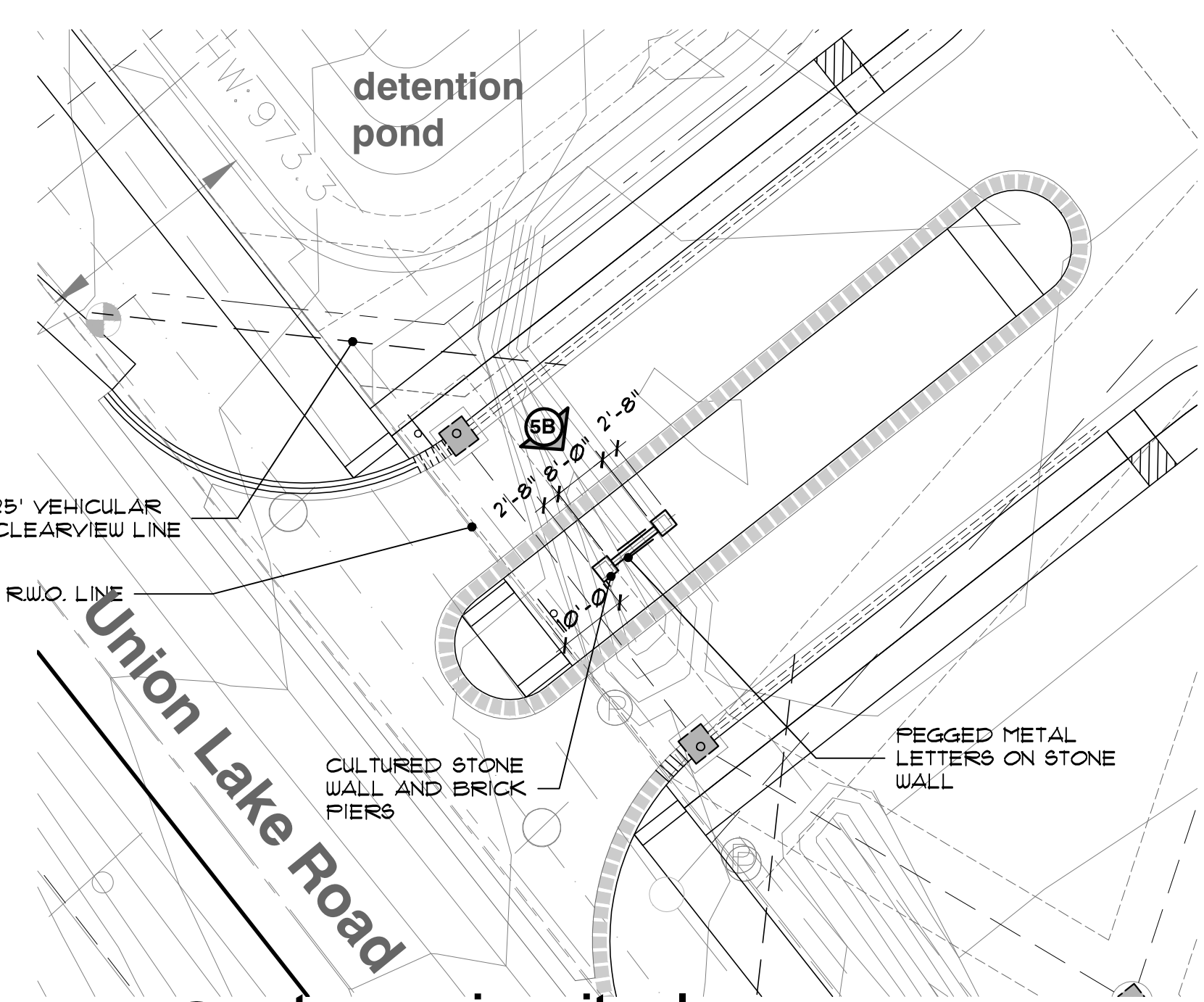
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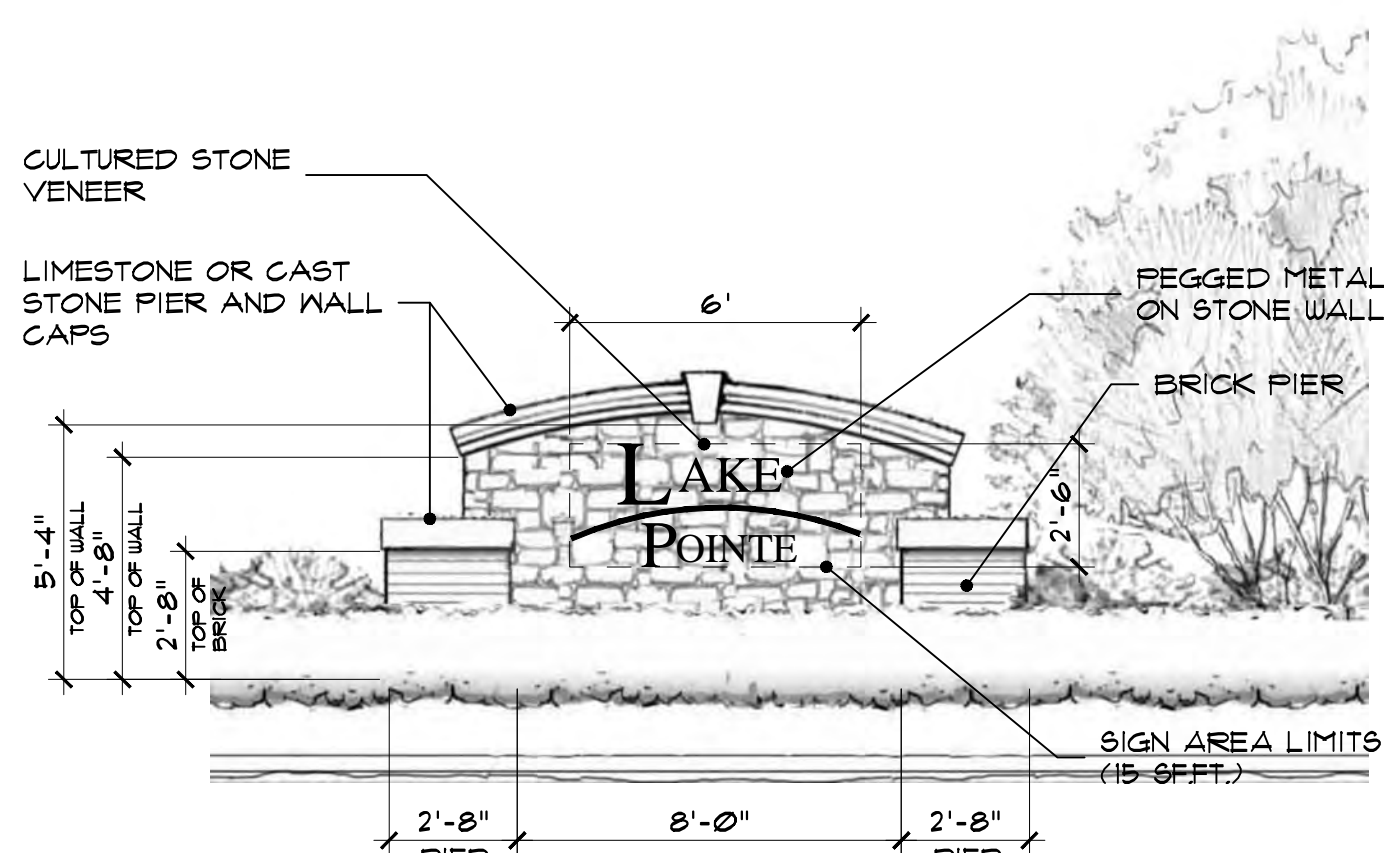
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project no:
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sheet no:
LS-5 of 7

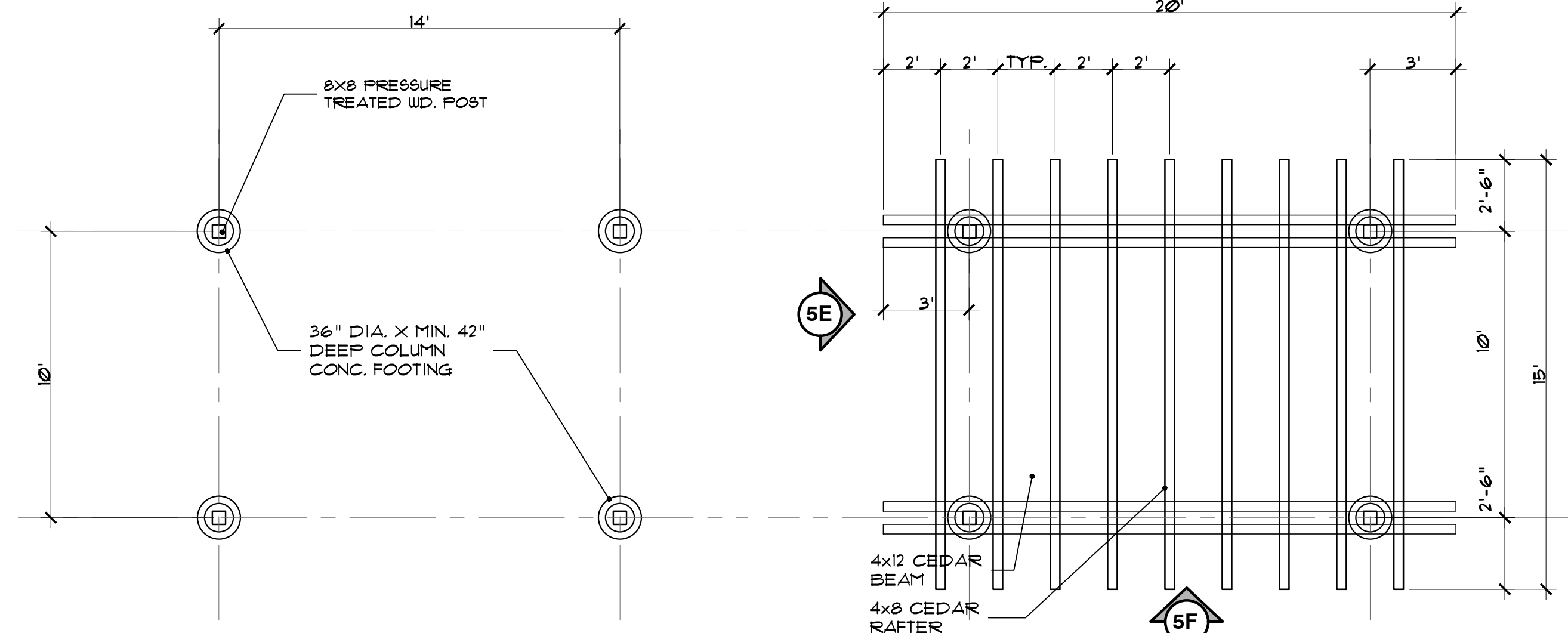


5A entrance sign site plan
 SCALE 1"=20'-0"

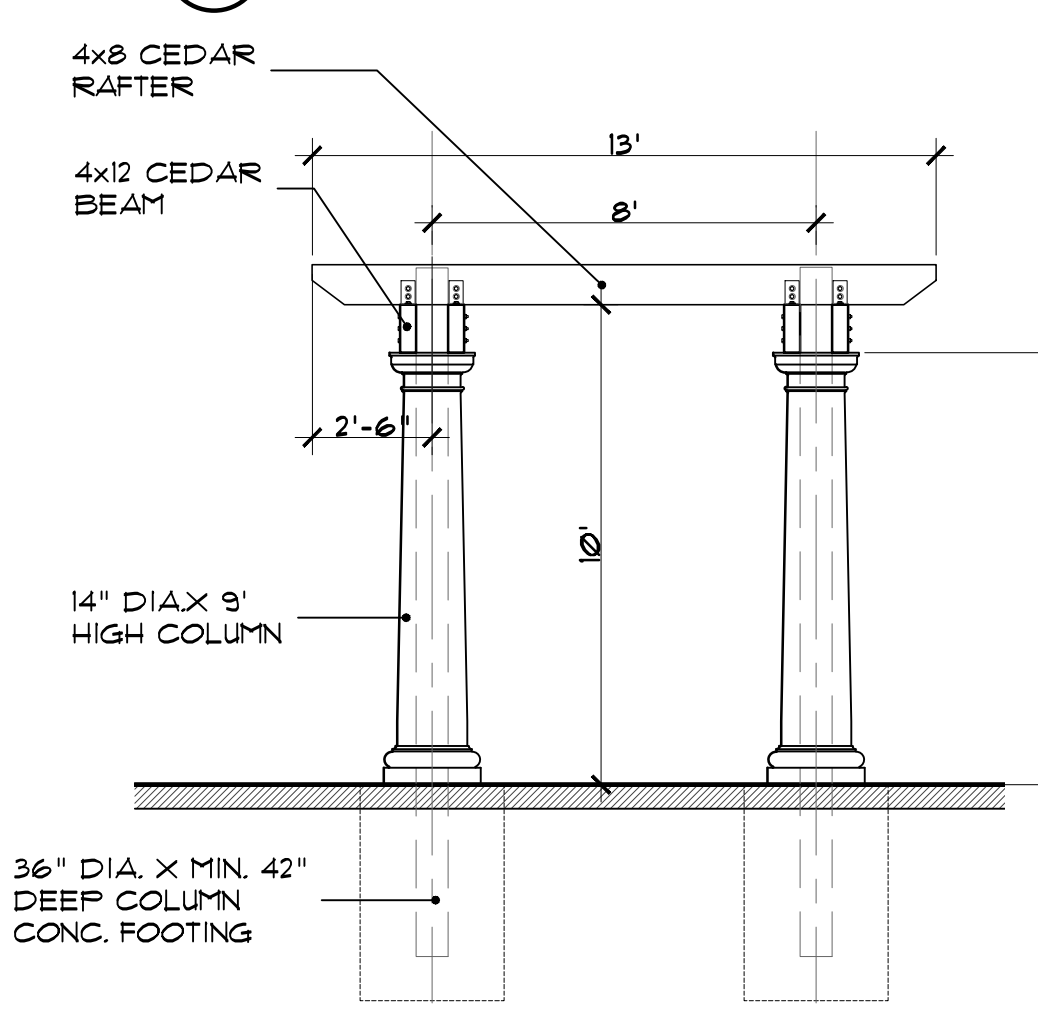


5B entrance sign elevation
 SCALE 1"=4'-0"

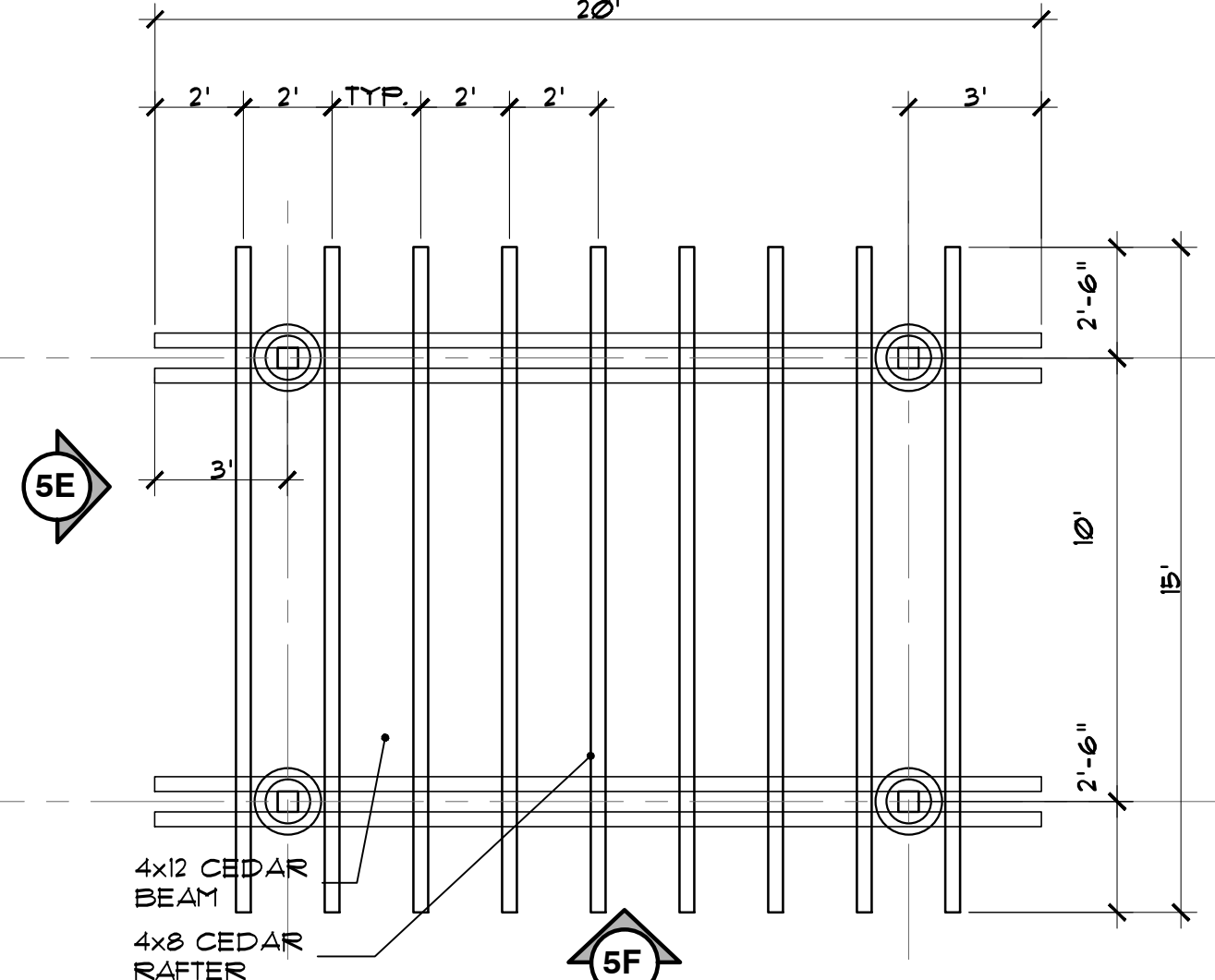
- signage monument notes:**
1. LOCATE AND STAKE ALL EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. COORDINATE ANY ADJUSTMENTS WITH ARCHITECT.
 2. ALL INFORMATION CONTAINED HEREIN IS SUBJECT TO APPROVAL, AND PERMITS PERMITS TO BE OBTAINED PRIOR TO CONSTRUCTION.
 3. SEE LANDSCAPE PLAN FOR PROPOSED PLANTINGS ADJACENT TO PROPOSED ENTRY SIGN MONUMENTS
 4. VERIFY SOIL BEARING CAPACITY PRIOR TO ENTRY SIGN MONUMENT & PIER CONSTRUCTION. IF SOIL BEARING CAPACITY FALLS BELOW STANDARD REQUIREMENTS, CONSULT STRUCTURAL ENGINEER FOR RECOMMENDATION OF FINAL ENTRY MONUMENT & PIER FOOTING DESIGN.



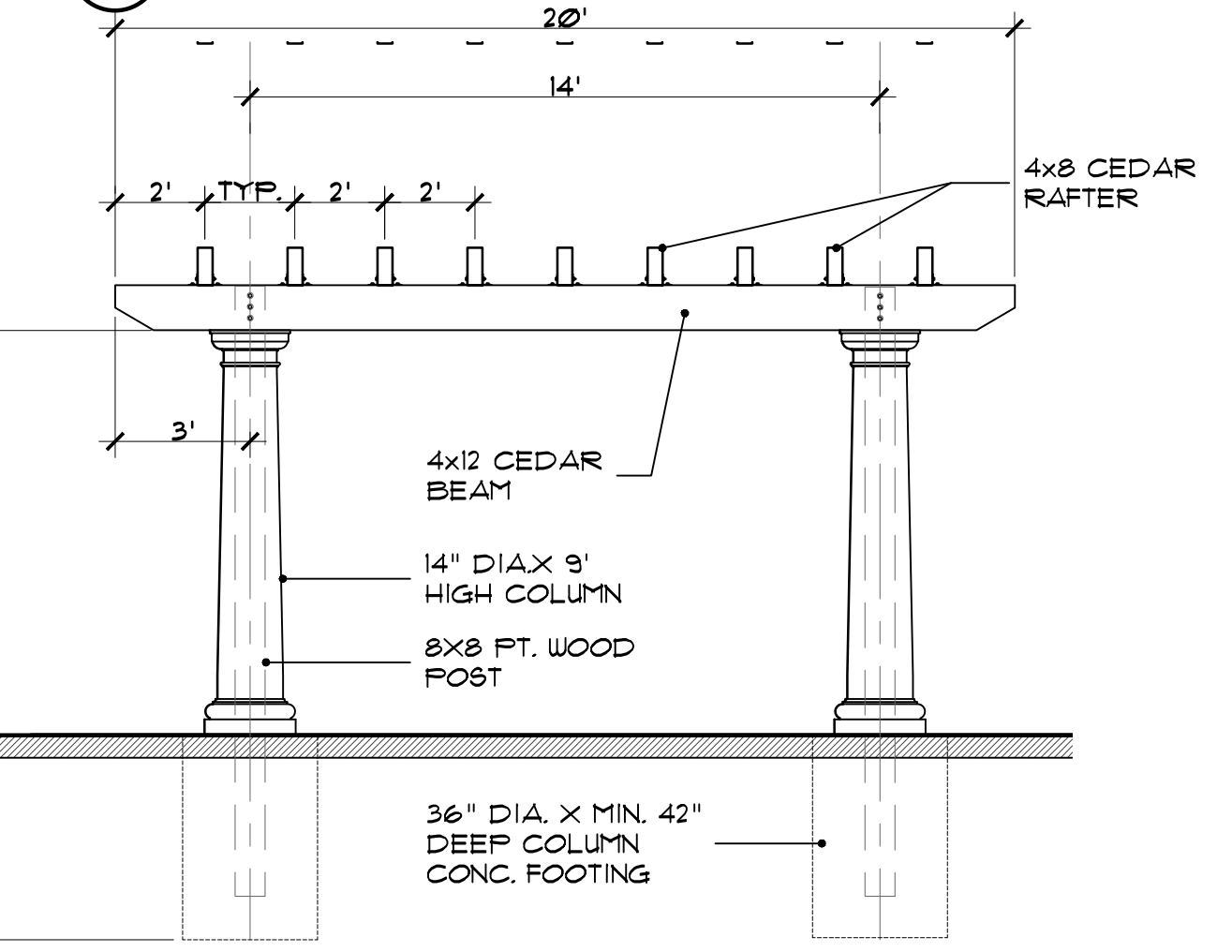
5C pergola foundation plan
 SCALE 1/4"=1'-0"



5E pergola elevation view
 SCALE 1/4"=1'-0"



5D pool trellis-pergola plan
 SCALE 1/4"=1'-0"



5F pergola elevation view
 SCALE 1/4"=1'-0"



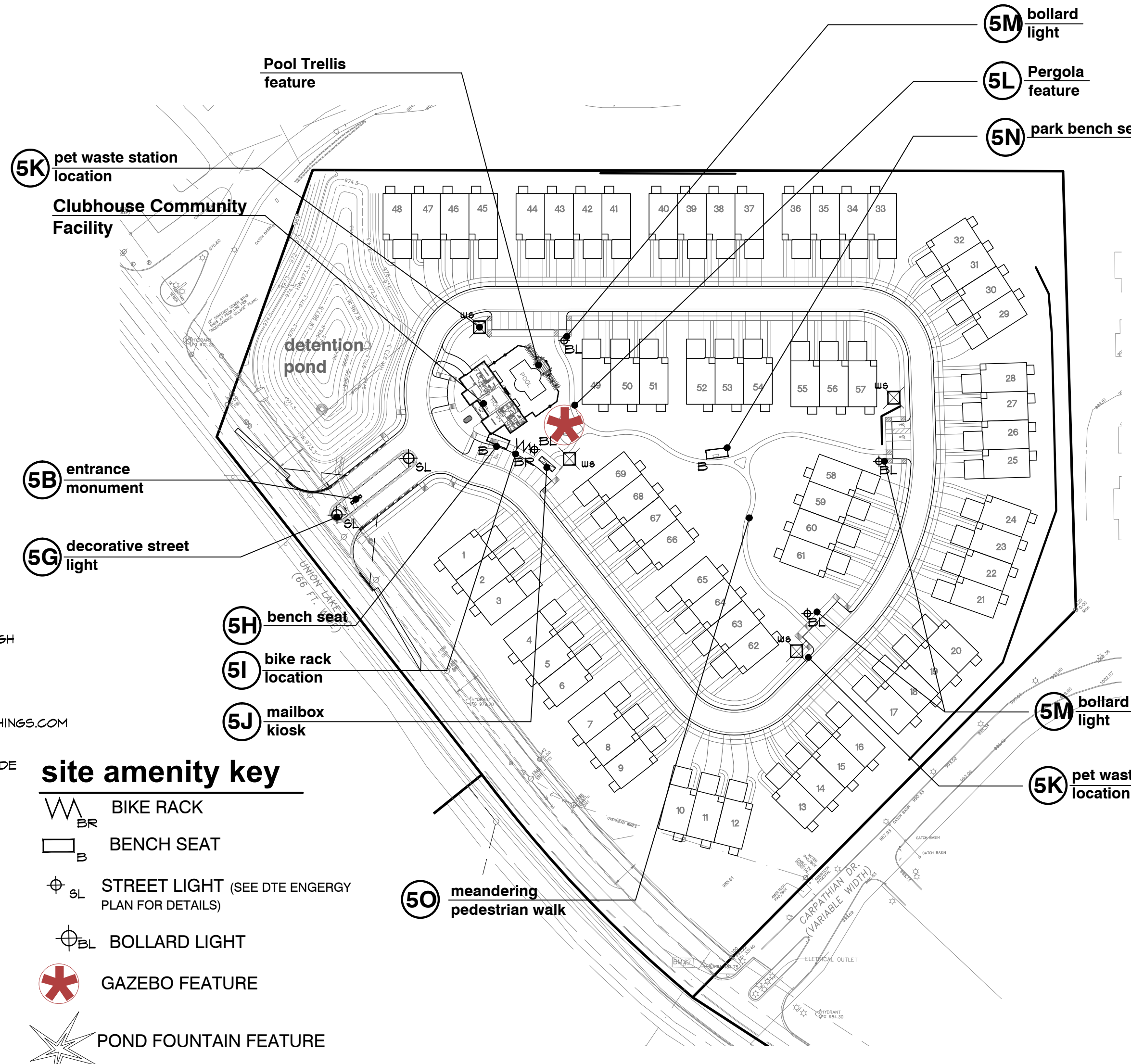
5G decorative pole & light
 (1-CONDITION)
 DTE OUTDOOR LIGHTING ACORN SERIES - 60 WATTS, LED, 4000K OR EQUAL



5H bench seat
 (1-CONDITION)
 MANUFACTURED BY ANOVA, INC.
 211 NORTH LINDBERGH BLVD. SUITE 200 ST. LOUIS, MISSOURI 63141-1804
 TOLL FREE NO. (800)231-1827 WWW.ANOVAFURNISHINGS.COM
 MODEL NO. LENC6 DESCRIPTION: 6' WIDE CONTOUR BENCH FINISH: Black



5I bicycle rack
 (1-CONDITION)
 BIKE RACK BY DUMOR INC. MODEL NO. 130-20 (8-2 SURFACE PLATE MOUNT) 2 3/8" O.D. BLACK POWDER-COATED LOOP OR EQUAL



- site amenity key**
- BR BIKE RACK
 - B BENCH SEAT
 - SL STREET LIGHT (SEE DTE ENRGY PLAN FOR DETAILS)
 - BL BOLLARD LIGHT
 - GAZEBO FEATURE
 - PF POND FOUNTAIN FEATURE

site amenity reference location map
 SCALE 100' = 1'-0"



5J mailbox kiosk
 (1-LOCATIONS)



5L pergola feature
 (1-CONDITION)
 STICK BUILT OR KIT FORM. TO BE BUILT BY MANUFACTURER STANDARDS



5N park bench seating
 (1-CONDITIONS)
 6' WIDE PARK BENCH SEAT BY DUMOR, INC. MODEL NO. 34-60D (8-1) SUPPORT: 8-1 EMBEDMENT FINISH: BLACK POWDER-COATED



5K pet waste station
 TOTAL OF 4-CONDITIONS
 BY ZERO WASTE USA 12316 WORLD TRADE DRIVE #102 SAN DIEGO, CA. 92128 PH. 800-784-2568 WWW.ZEROWASTEUSA.COM
 MODEL NO. JJB006-BLACK DESCRIPTION: ENTRY DOG WASTE STATION (73"H X 13"W) FINISH: BLACK



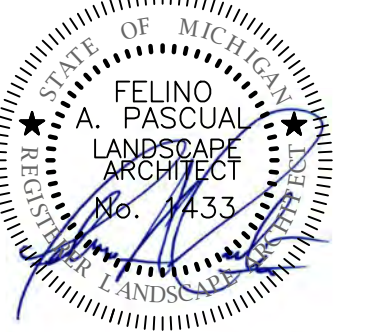
5M bollard light
 (4-CONDITIONS)
 BY LITHONIA LIGHTS OR EQUAL MODEL: DSXB LED (D-SERIES LED BOLLARD 8" DIA X 42" HGT.) OR EQUAL.
 ASYMMETRIC (12LED) 22 WATTS, 4000K



5O meandering pedestrian walk
 5' WIDE MEANDERING WALK

lighting note:
 ALL FRONT PORCH LIGHTS AND COACH LIGHTS WILL UTILIZE 75 WATT BULBS.

seal:



client:

JMF WHITE LAKE, LLC.
 1700 W. BIG BEAVER
 ROAD SUITE 120
 TROY, MI 48084

project:

**LAKE
 POINTE**

project location:

White Lake Twp.,
 Michigan

Union Lake Road

sheet title:

POOL DECK PLAN

job no./issue/revision date:

LS19.124.11	TWP.	11-12-2019
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sheet no:

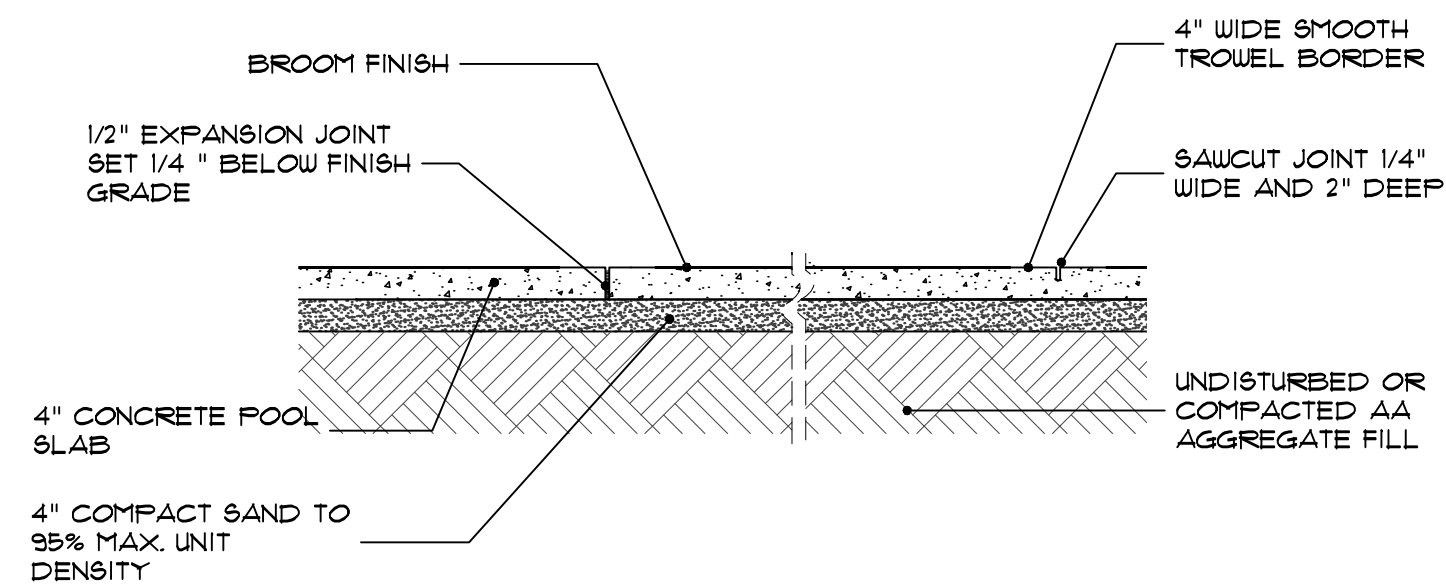
LS-6 of 7

swimming pool notes

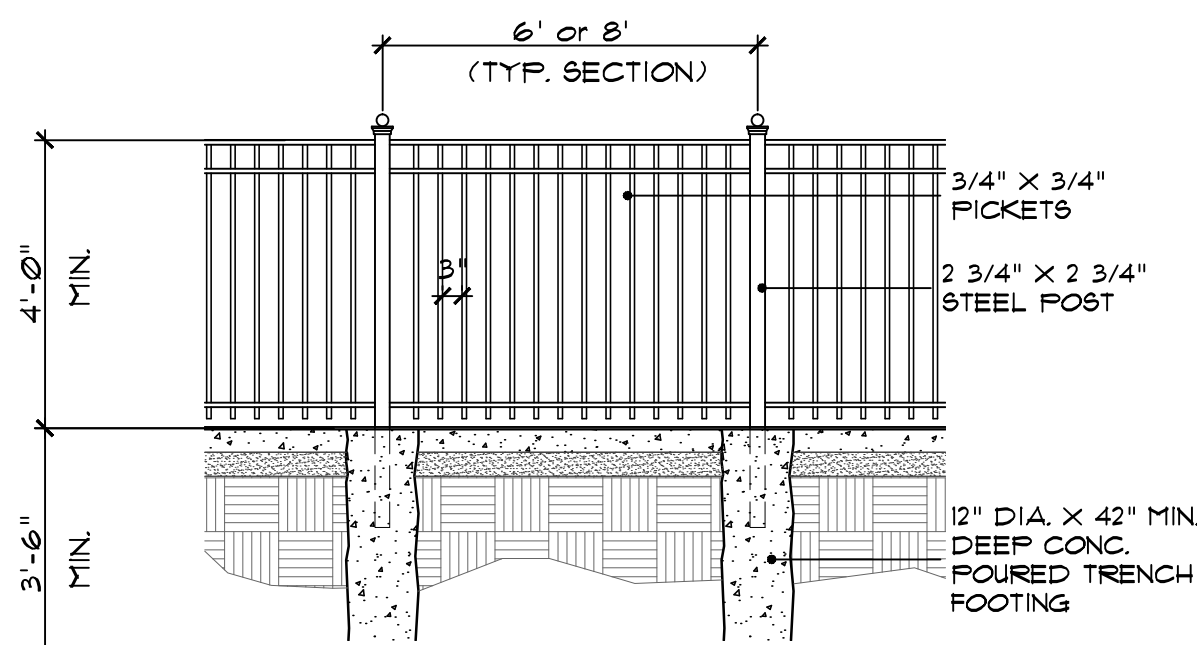
- THIS DRAWING ONLY PROVIDES THE LOCATION AND SHAPE OF THE PROPOSED SWIMMING POOL, DECK, AND / OR SPA. ALL STRUCTURAL AND ELECTRICAL REQUIREMENTS, CONSTRUCTION DETAILS, MATERIAL DETAILS, FINAL POOL FENCE LOCATION, AND OTHER RELATED INFORMATION ARE THE RESPONSIBILITY OF THE DESIGN BUILD FIRM OR CONTRACTOR.
- THE DESIGN BUILD FIRM / CONTRACTOR SHALL PREPARE DETAILED PLANS, DRAWINGS AND SPECIFICATIONS TO BE SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL. THE DESIGN BUILD FIRM / POOL CONTRACTOR SHALL BE RESPONSIBLE TO MAKE APPLICATION TO AND OBTAIN POOL CONSTRUCTION PERMITS AND APPROVALS FROM LOCAL GOVERNING MUNICIPALITIES AND THE STATE.
- CONSTRUCTION SUPERVISION AND SITE SAFETY SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR AND SHALL MEET ALL MUNICIPAL AND STATE REQUIREMENTS AND REGULATIONS.

THIS DRAWING IS NOT FOR CONSTRUCTION PURPOSES, SEE ABOVE.

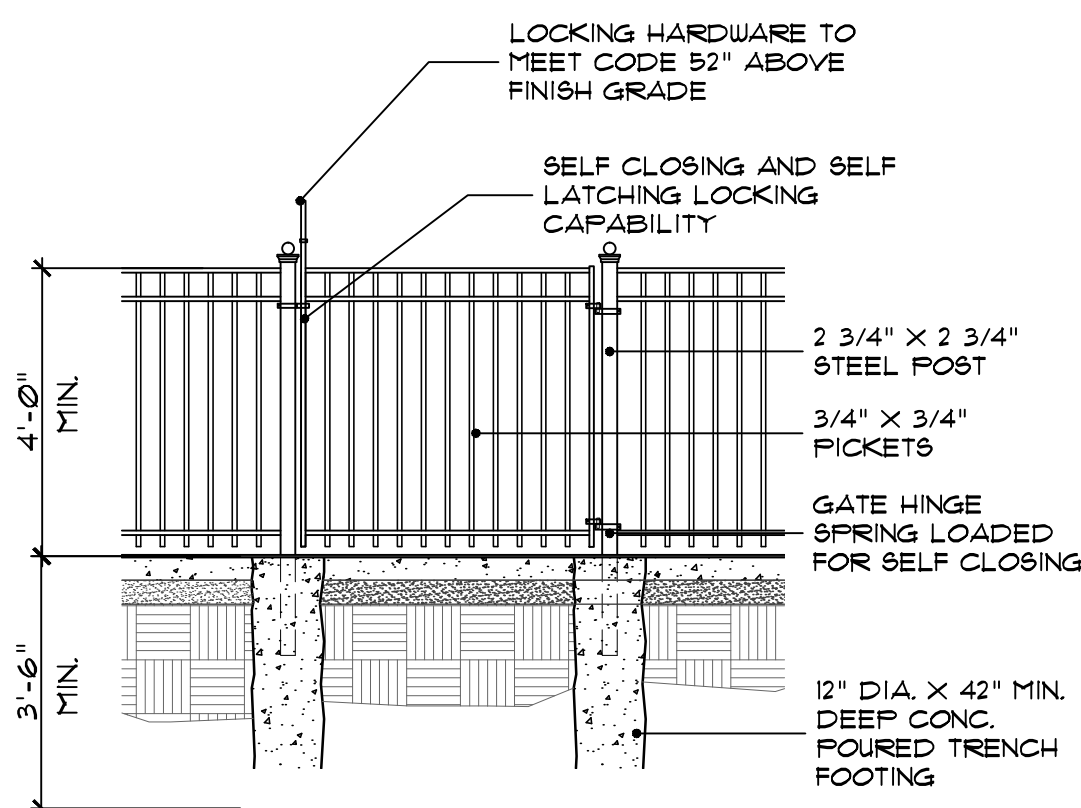
- POOL DECK TO PITCH AWAY FROM POOL AND WALLS WITH NO PUDDLING TO OCCUR



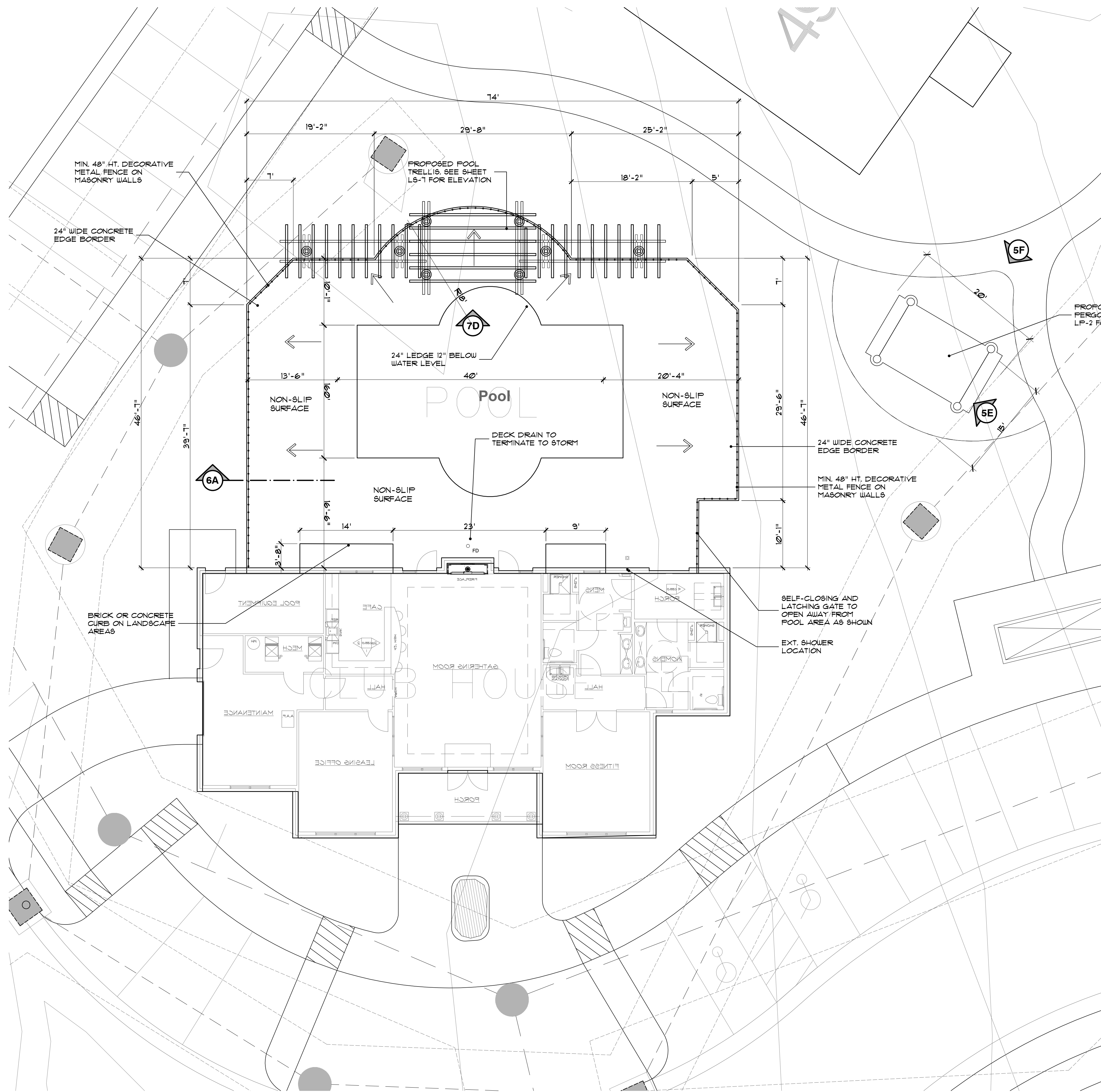
6A concrete pool deck
 SCALE: 1/2"=1'-0"



6B pool fence detail
 SCALE: 3/8"=1'-0"

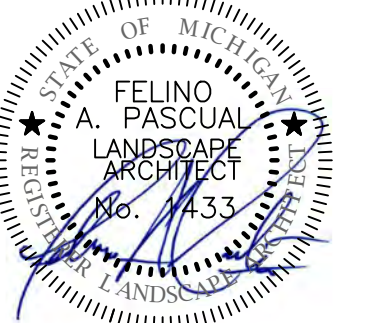


6C pool fence gate detail
 SCALE: 3/8"=1'-0"



6D pool deck plan
 SCALE: 1/8"=1'-0"

seal:



client:

**JMF WHITE LAKE,
LLC.**

1700 W. BIG BEAVER
ROAD SUITE 120
TROY, MI 48084

project:

**LAKE
POINTE**

project location:

White Lake Twp.,
Michigan

Union Lake Road

sheet title:

**POOL PERGOLA
TRELLIS ELEVATIONS
& DETAILS**

job no./issue/revision date:

LS19.124.11	TWP.	11-12-2019
LS19.124.12	TWP.	12-27-2019
LS20.089.10	TWP.	10-14-2020
LS21.009.01	SPA	1-18-2021
LS21.009.01	SPA	2-02-2021
LS21.009.03	SPA	3-22-2021
LS23.081.08	ENG. UPDATED	8-1-2023
LS23.081.12	TWP. COMMENTS	12-3-2023
LS24.026.02	TWP. COMMENTS	2-7-2024

drawn by:

JP, DK

checked by:

FP

date:

1-30-2024

notice:

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project no:

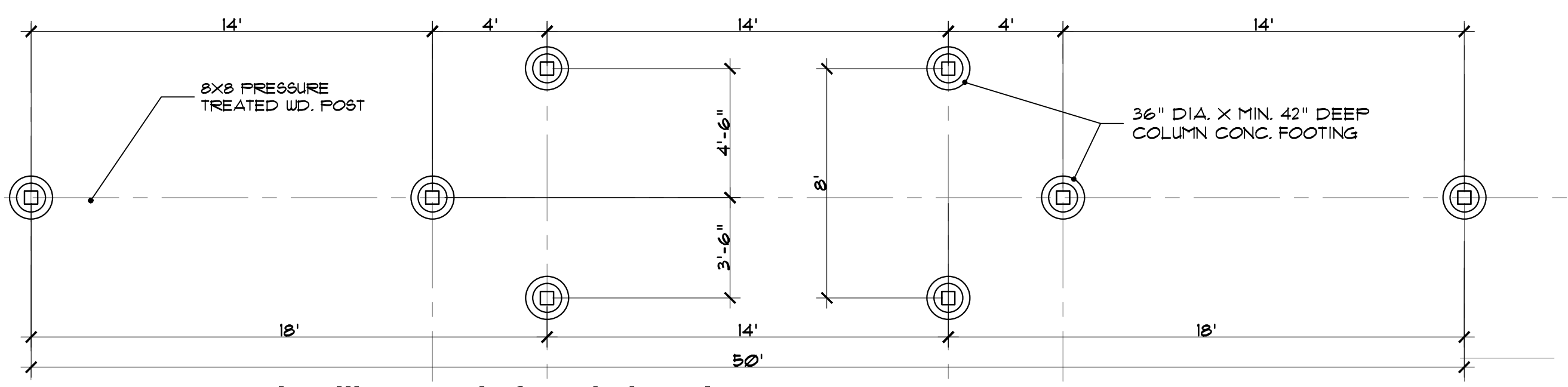
LS24.026.02

sheet no:

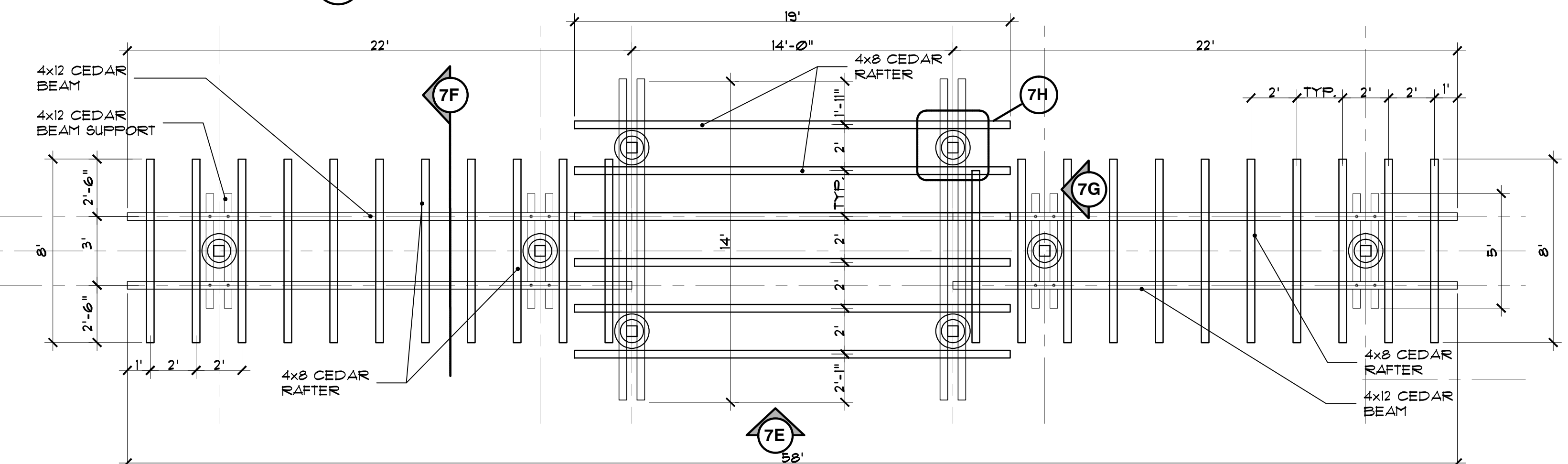
LS-7 of 7

general notes:

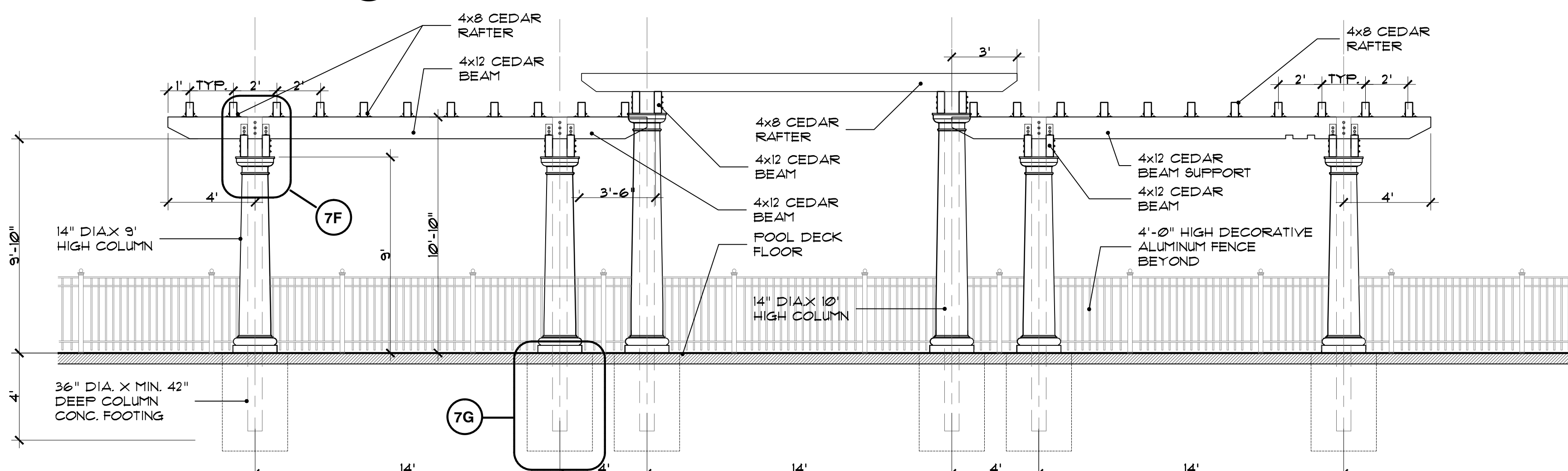
- ALL INFORMATION CONTAINED HEREIN IS SUBJECT TO APPROVAL, AND PERMITS TO BE OBTAINED PRIOR TO CONSTRUCTION FROM ALL NECESSARY AGENCIES.
- CONTRACTOR SHALL VISIT THE SITE, INSPECT EXISTING CONDITIONS, REVIEW PROPOSED PLANS AND RELATED WORK. CONTACT THE OWNER WITH ANY CONCERNS OR DISCREPANCY BETWEEN THE 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 DRAWINGS. USE FIGURED DIMENSIONS ONLY
- VERIFY SOIL BEARING CAPACITY PRIOR TO ANY POST FOOTING CONSTRUCTION. IF SOIL BEARING CAPACITY FALLS BELOW STANDARD REQUIREMENTS, CONSULT STRUCTURAL ENGINEER FOR RECOMMENDATION OF FINAL POST FOOTING DESIGN.
- ALL EXPOSED SAW CUT AREAS OF CEDAR WOOD LUMBER TO BE SEALED WITH WOOD PRESERVATIVE AS REQUIRED INCLUDING TRIMMED ENDS PER DRAWINGS.
- ALL BRACKETS, FASTENERS, COMPOSITE SCREWS, NAILS, BOLTS, SHALL BE GALVANIZED OR ZINC COATED WITH ACG AND CBA RATED FORMULATIONS.
- GRADES BY OTHERS. FINAL GRADES TO PROVIDE POSITIVE DRAINAGE
- CONSTRUCTION SUPERVISION AND SITE SAFETY SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR AND SHALL MEET ALL MUNICIPAL AND STATE REQUIREMENTS AND REGULATIONS.
- 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 STRUCTURAL ENGINEER. 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 MINIMUM 3" CONCRETE COVER FOR REINFORCEMENT BARS BELOW GRADE AND MINIMUM 2" CONCRETE COVER FOR REINFORCEMENT BARS ABOVE GRADE.



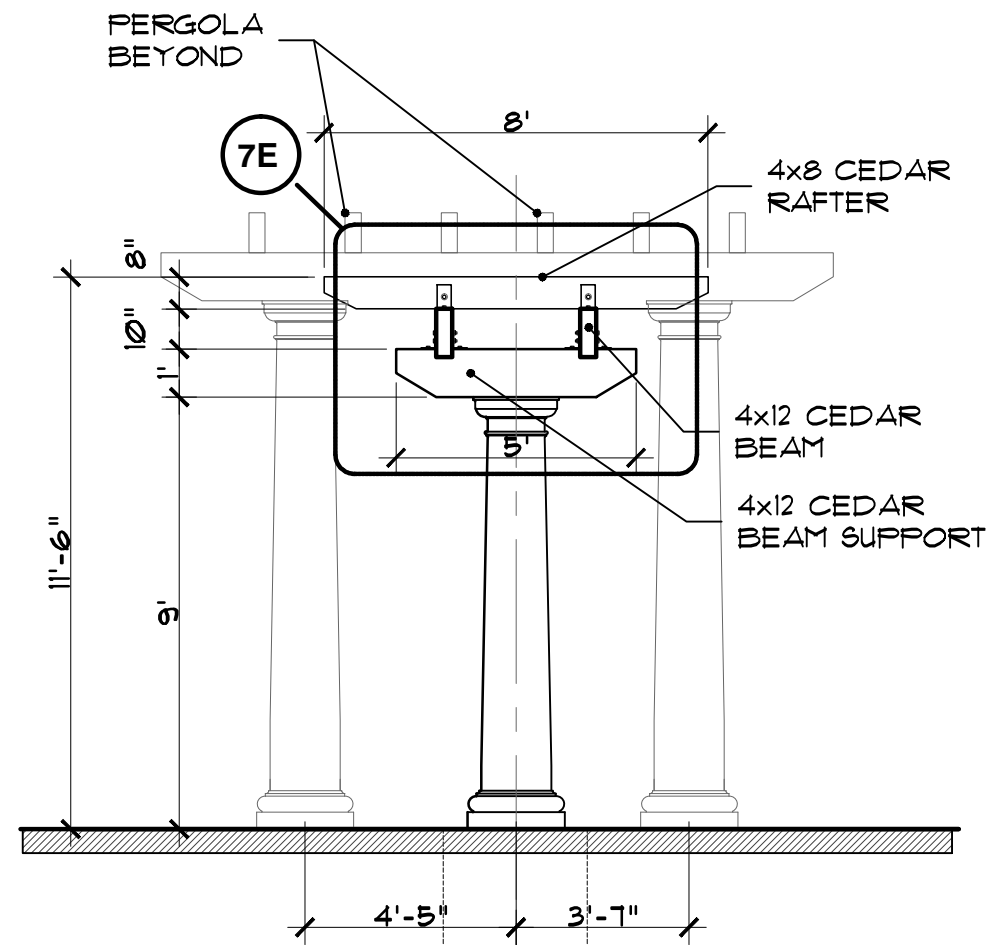
7A pool trellis-pergola foundation plan
SCALE 1/4" = 1'-0"



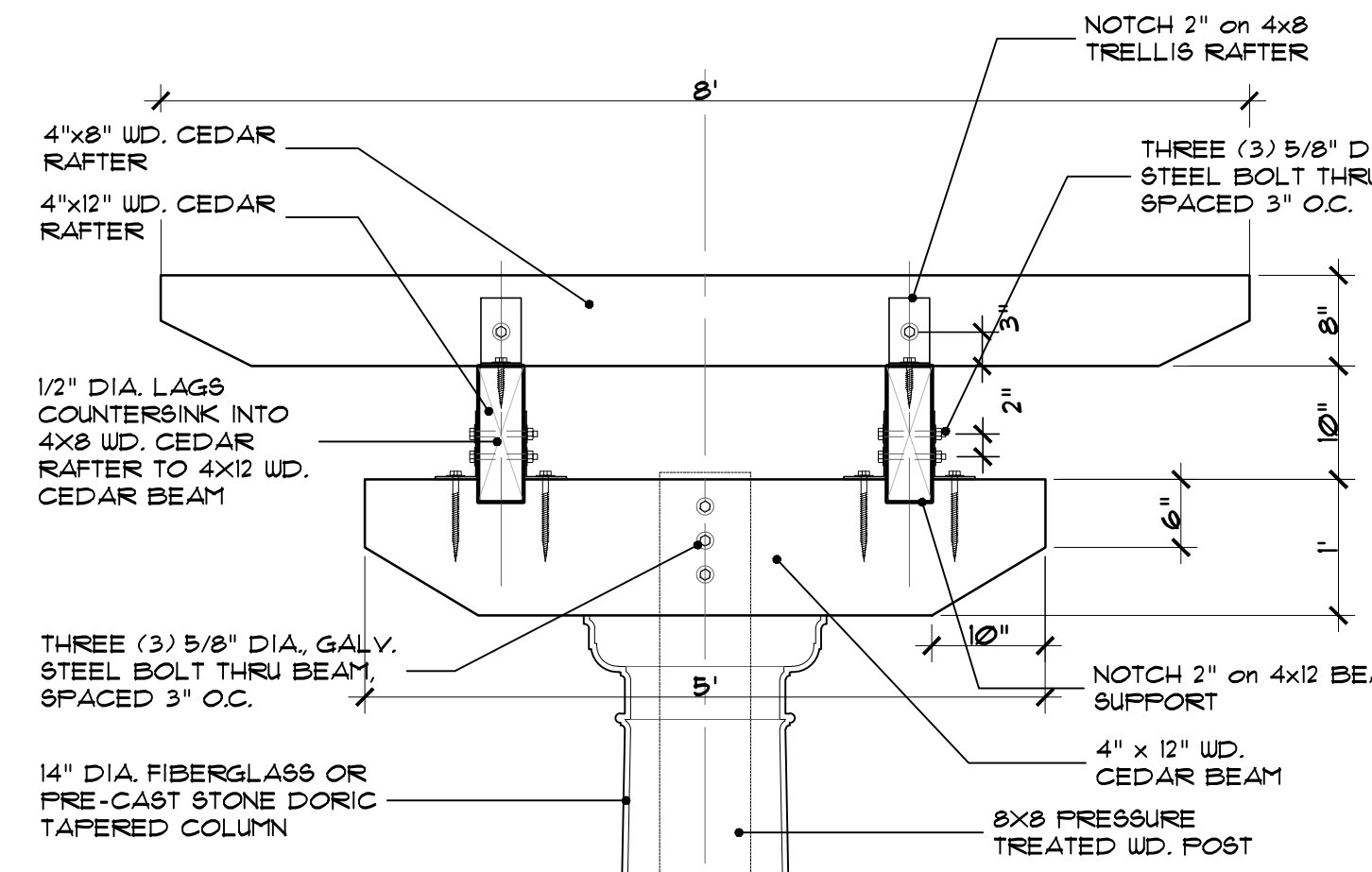
7B pool trellis-pergola plan
SCALE 1/4" = 1'-0"



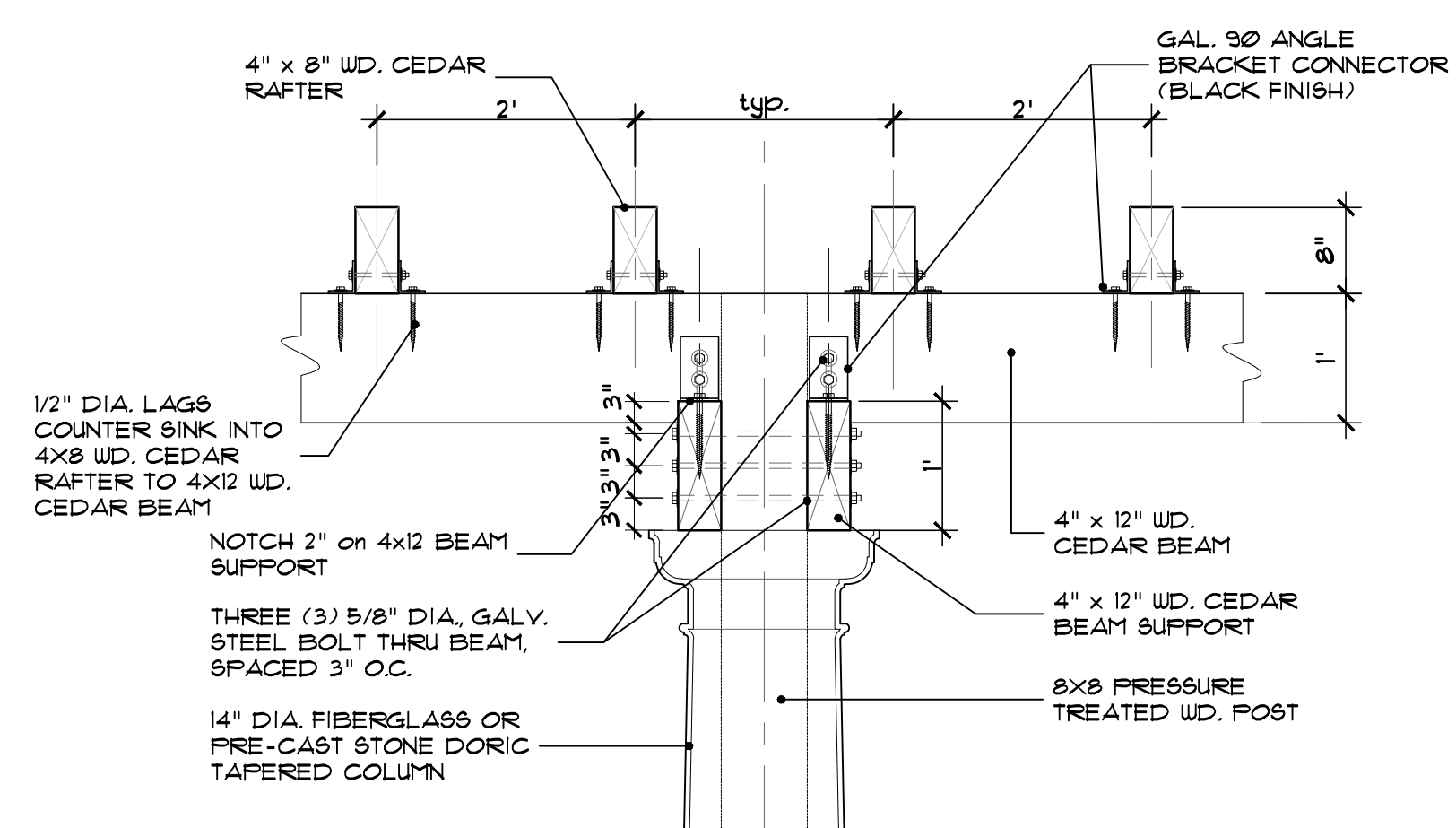
7C pool trellis-pergola elevation view
SCALE 1/4" = 1'-0"



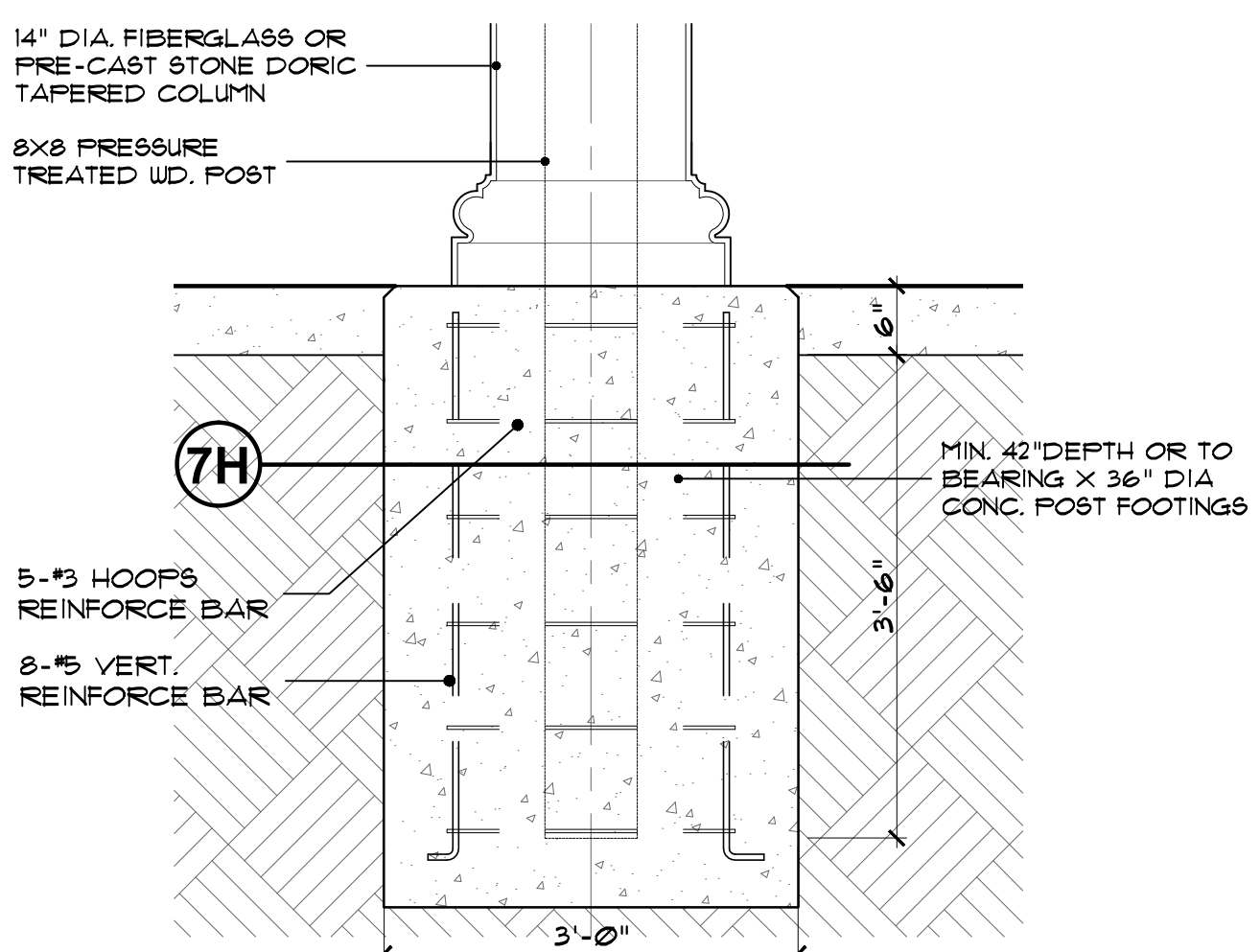
7D pool trellis-pergola elevation view
SCALE 1/4" = 1'-0"



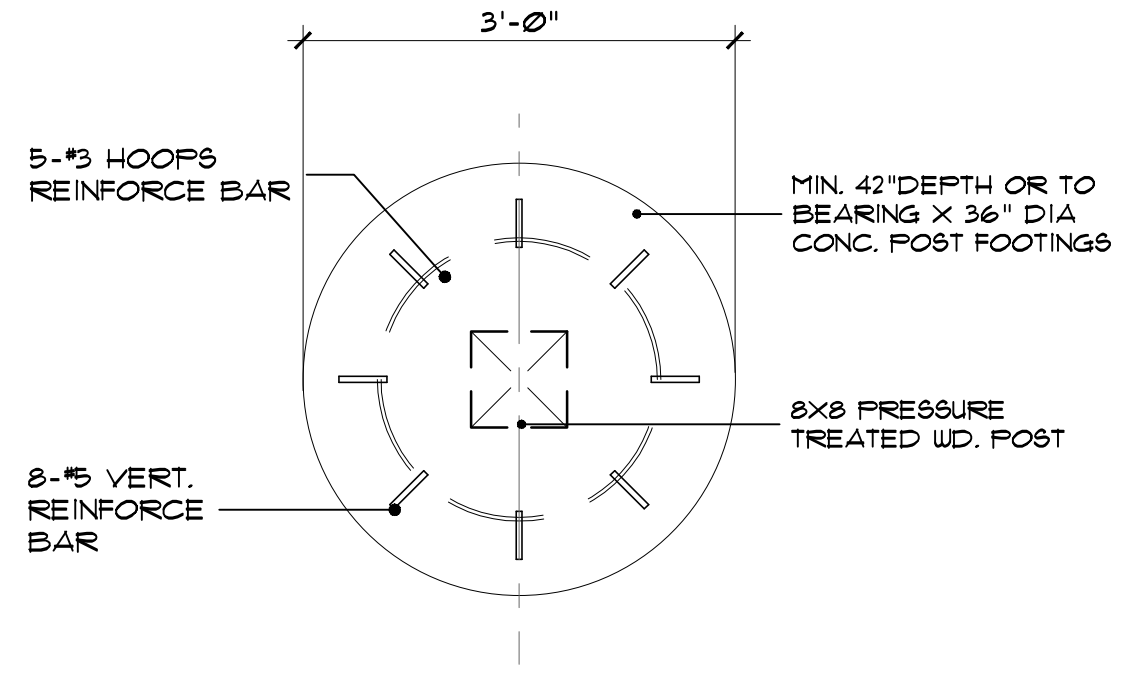
7E trellis connection detail
SCALE: 3/4" = 1'-0"



7F pergola connection detail
SCALE: 3/4" = 1'-0"



7G pergola footing detail
SCALE: 3/4" = 1'-0"



7H pergola footing detail
SCALE: 3/4" = 1'-0"

seal:
 client:
JMF WHITE LAKE, LLC.
 1700 W. BIG BEAVER ROAD SUITE 120
 TROY, MI 48084

project:
LAKE POINTE
 project location:
 White Lake Twp., Michigan

Union Lake Road
 sheet title:
IRRIGATION PLAN

job no./issue/revision date:
 LS24.026.02 2-7-2024
 LS24.026.02 irrigation 2-21-2024

drawn by:
JP, DK, PH
 checked by:
FP
 date:
2-3-2024

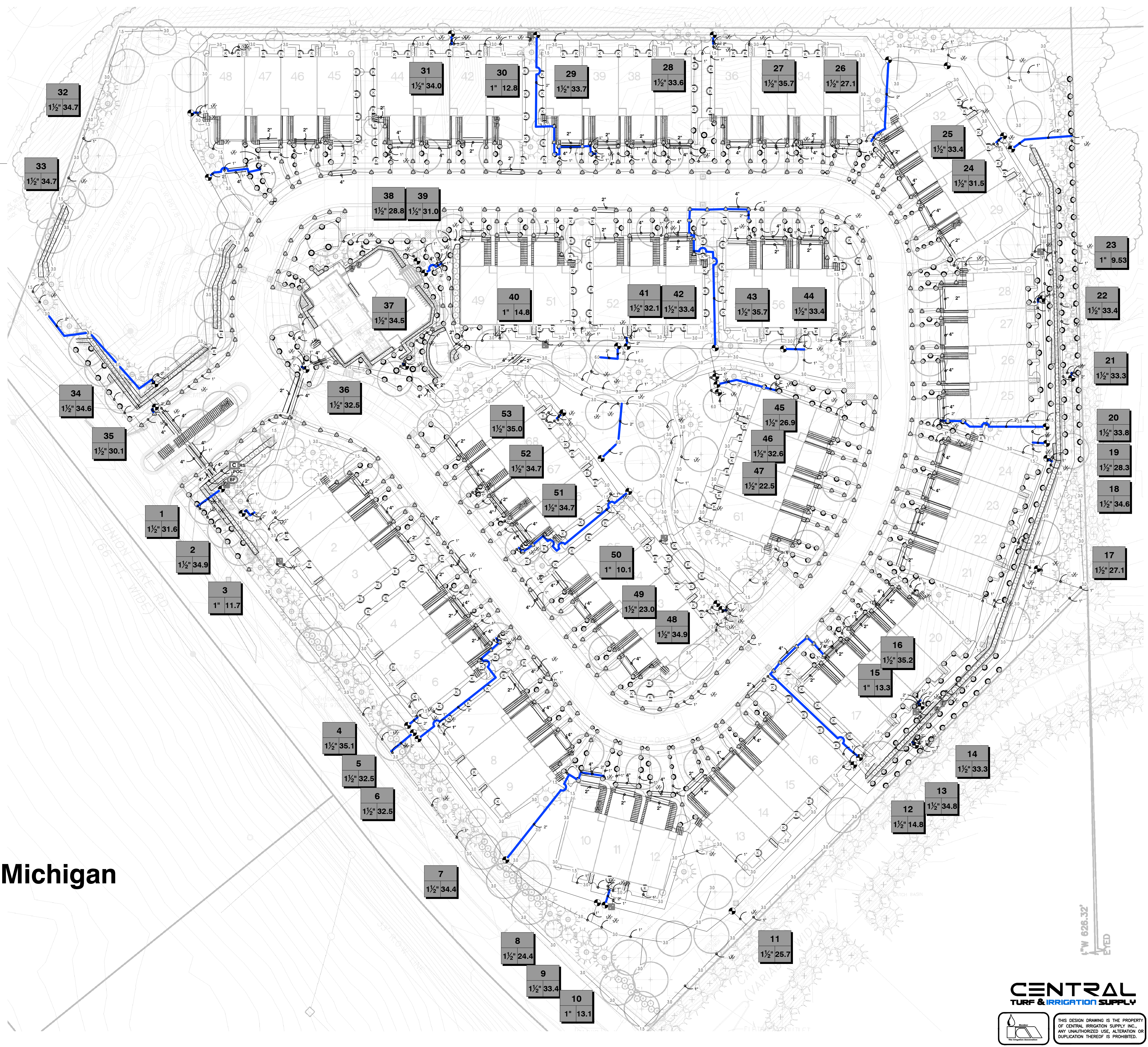
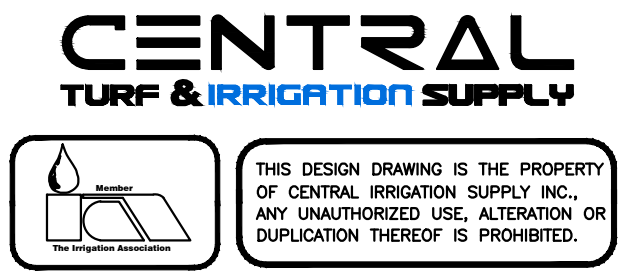
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project no:
LS24.032.02

sheet no:
IRR-1 of 4



IRRIGATION SCHEDULE

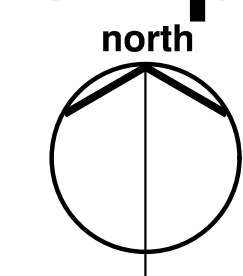
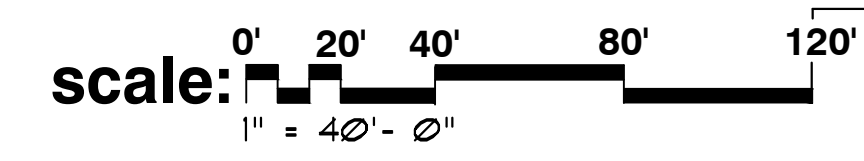
SYMBOL	MANUFACTURER/MODEL	QTY
	Rain Bird 1804 15 Strip Series	371
	Rain Bird 1804 8 Series MPR	58
	Rain Bird 1804 10 Series MPR	193
	Rain Bird 1804 12 Series MPR	25
	Rain Bird 1804 15 Series MPR	227
	Rain Bird 1804 ADJ	4
	Hunter MP2000 PROS-04-PRS40-CV	181
SYMBOL	MANUFACTURER/MODEL	QTY
1.5	Rain Bird 5004-PC 1.5	59
3.0	Rain Bird 5004-PC 3.0	184
6.0	Rain Bird 5004-PC 6.0	4
SYMBOL	MANUFACTURER/MODEL	QTY
	Rain Bird XCZ-100-IVMO 1"	7
	Flush Valve	7
	Drip Air Relief Valve	7
	Area to Receive Dripline	8,245 l.f.
	Rain Bird XFD-06-18	4,284 l.f.
SYMBOL	MANUFACTURER/MODEL	QTY
	Rain Bird IVM-PGA Globe 1-1/2"	46
	Rain Bird 44-RC 1"	1
	Febco 765 2"	1
	Rain Bird ESPLXIVM	1
	Rain Bird WR2-RC	1
	Point of Connection	1
	Irrigation Lateral Line: Polyethylene Pipe 100 PSI 1"	23,698 l.f.
	Irrigation Lateral Line: Polyethylene Pipe 100 PSI 1 1/2"	4,756 l.f.
	Irrigation Lateral Line: PVC Class 160 SDR 26 2"	1,688 l.f.
	Irrigation Mainline: PVC Class 160 SDR 26 2 1/2"	4,030 l.f.
	Pipe Sleeve: PVC Class 160 SDR 26 2"	724.4 l.f.
	Pipe Sleeve: PVC Class 160 SDR 26 4"	1,086 l.f.

Valve Callout

#	Valve Number
# #	Valve Flow
# #	Valve Size

irrigation plan for:
Lakepointe
White Lake Township, Michigan

note:
 unless noted otherwise, numerical value on landscape quantities specified on plan take precedence over graphic representation.



seal:

client:
JMF WHITE LAKE, LLC.
 1700 W. BIG BEAVER
 ROAD SUITE 120
 TROY, MI 48084

project:
**LAKE
 POINTE**

project location:
 White Lake Twp.,
 Michigan

Union Lake Road
 sheet title:
IRRIGATION PLAN

job no./issue/revision date:
 LS24.026.02
 LS24.026.02
 LS24.026.02

drawn by:
JP, DK, PH
 checked by:
FP
 date:
2-3-2024

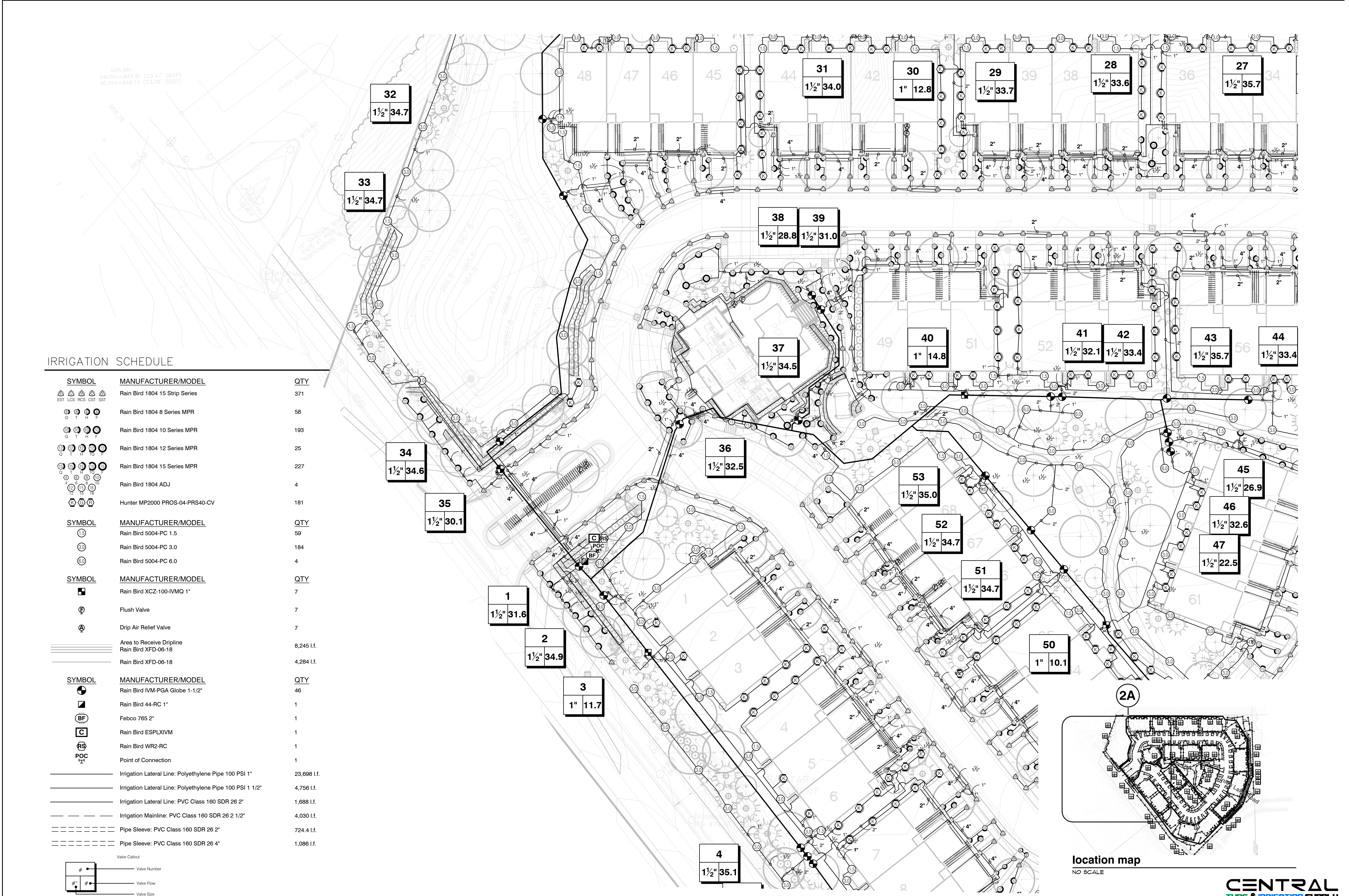
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3 WORKING DAYS
 BEFORE YOU DIG
 CALL MISS DIG
 1-800-482-7171
 For free location of public utility lines

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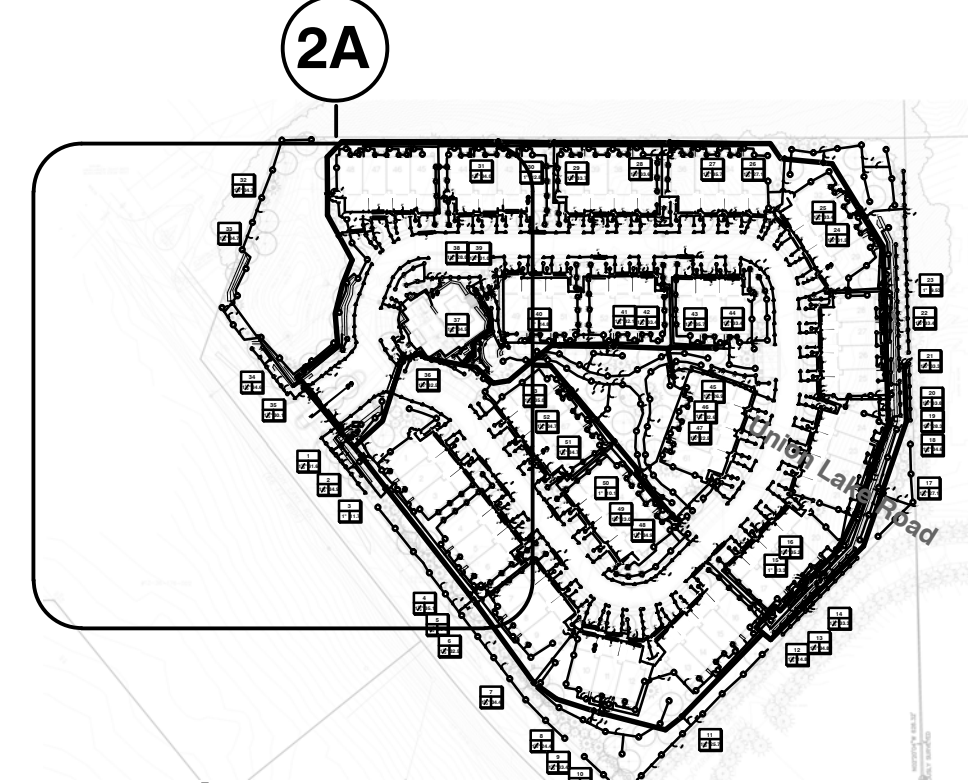
project no:
LS24.032.02
 sheet no:
IRR-2 of 4



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL	QTY
△	Rain Bird 1804 15 Strip Series	371
○	Rain Bird 1804 8 Series MPR	58
○	Rain Bird 1804 10 Series MPR	193
○	Rain Bird 1804 12 Series MPR	25
○	Rain Bird 1804 15 Series MPR	227
○	Rain Bird 1804 ADJ	4
○	Hunter MP2000 PROS-04-PRS40-CV	181
○	Rain Bird 5004-PC 1.5	59
○	Rain Bird 5004-PC 3.0	184
○	Rain Bird 5004-PC 6.0	4
■	Rain Bird XCZ-100-IVMQ 1"	7
⊕	Flush Valve	7
⊕	Drip Air Relief Valve	7
≡≡≡	Area to Receive Dripline Rain Bird XFD-06-18	8,245 l.f.
≡≡≡	Rain Bird XFD-06-18	4,284 l.f.
⊙	Rain Bird IVM-PGA Globe 1-1/2"	46
⊙	Rain Bird 44-RC 1"	1
⊙	Febco 765 2"	1
⊙	Rain Bird ESPLXIVM	1
⊙	Rain Bird WR2-RC	1
⊙	Point of Connection	1
—	Irrigation Lateral Line: Polyethylene Pipe 100 PSI 1"	23,698 l.f.
—	Irrigation Lateral Line: Polyethylene Pipe 100 PSI 1 1/2"	4,756 l.f.
—	Irrigation Lateral Line: PVC Class 160 SDR 26 2"	1,688 l.f.
—	Irrigation Mainline: PVC Class 160 SDR 26 2 1/2"	4,030 l.f.
—	Pipe Sleeve: PVC Class 160 SDR 26 2"	724.4 l.f.
—	Pipe Sleeve: PVC Class 160 SDR 26 4"	1,086 l.f.
⊙	Valve Callout	
⊙	Valve Number	
⊙	Valve Flow	
⊙	Valve Size	

2A IRRIGATION PLAN
 SCALE: 1"=30'-0"



seal:

client:
JMF WHITE LAKE, LLC.
 1700 W. BIG BEAVER
 ROAD SUITE 120
 TROY, MI 48084

project:
**LAKE
 POINTE**

project location:
 White Lake Twp. ,
 Michigan

Union Lake Road
 sheet title:
IRRIGATION PLAN

job no./issue/revision date:
 LS24.026.02 ^{UPDATES} 2-7-2024
 LS24.026.02 ^{COMMENTS} irrigation 2-21-2024

drawn by:
JP, DK, PH
 checked by:
FP
 date:
2-3-2024

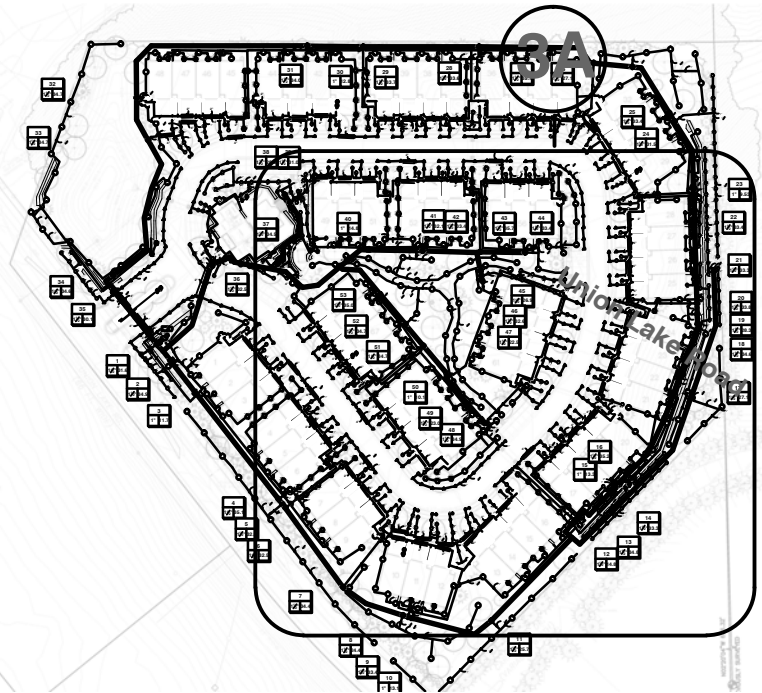
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 of construction

project no:
LS24.032.02

sheet no:
IRR-3 of 4

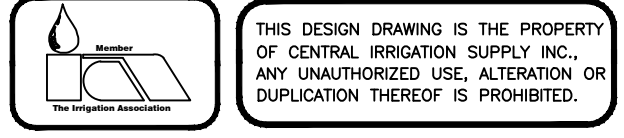


location map
 NO SCALE



3A IRRIGATION PLAN
 SCALE: 1"=30'-0"

CENTRAL
 TURF & IRRIGATION SUPPLY



seal:

client:

JMF WHITE LAKE, LLC.
 1700 W. BIG BEAVER
 ROAD SUITE 120
 TROY, MI 48084

project:

**LAKE
 POINTE**

project location:

White Lake Twp. ,
 Michigan

Union Lake Road

sheet title:

**IRRIGATION
 NOTES & DETAILS**

job no./issue/revision date:

LS24.026.02 ^{UPDATES} COMMENTS 2-7-2024
 LS24.026.02 irrigation 2-21-2024

drawn by:

JP, DK, PH

checked by:

FP

date:

2-3-2024

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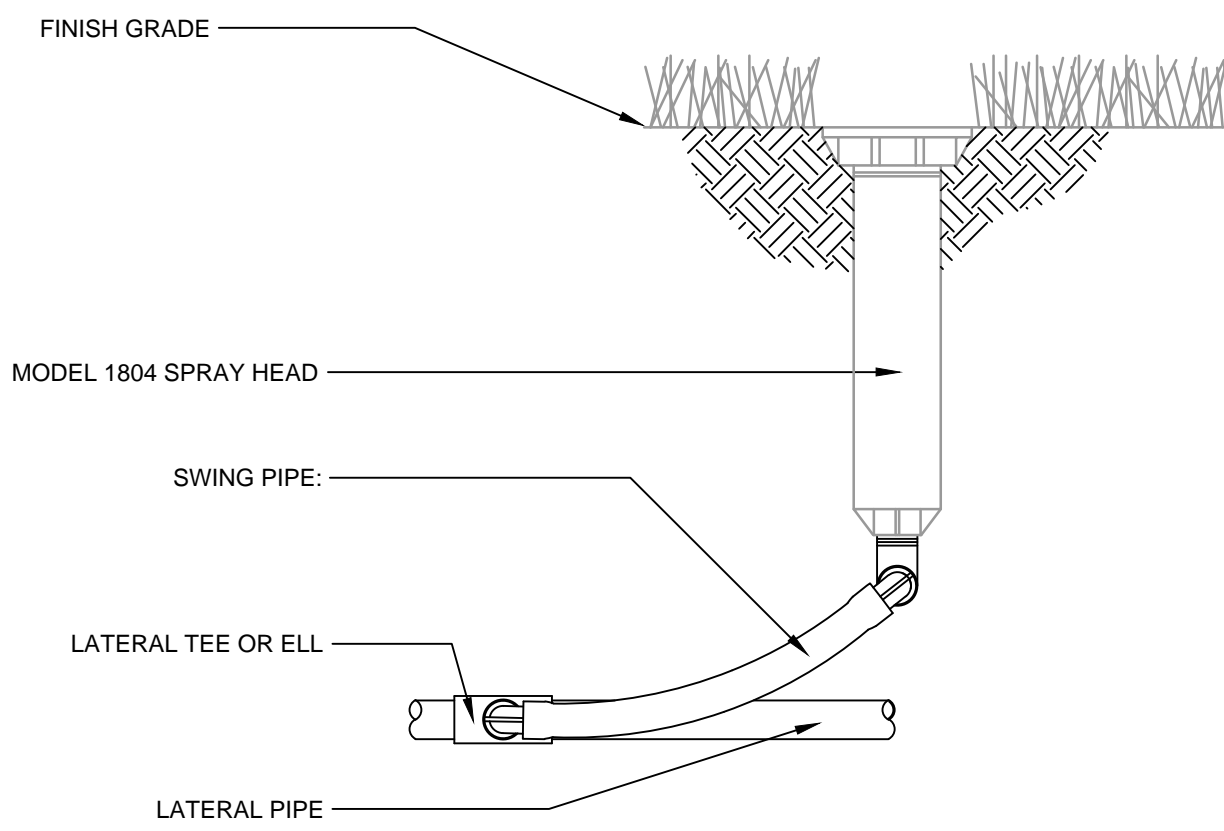
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LS24.032.02

sheet no:

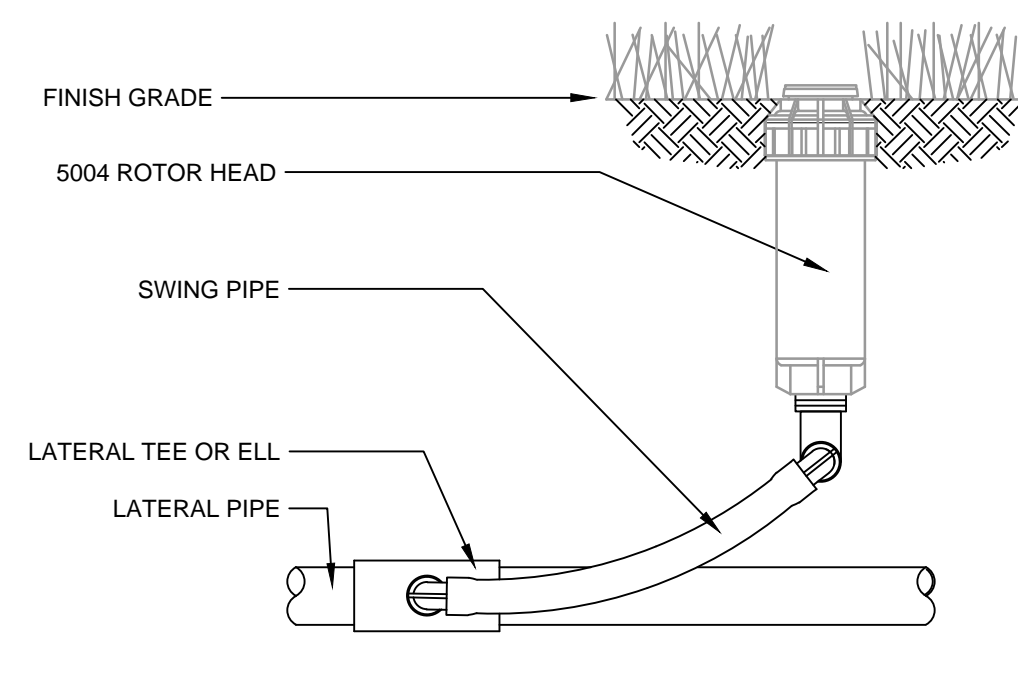
IRR-4 of 4

INSTALLATION MAY DIFFER PER LOCAL CODE



1 1804 SPRAY HEAD WITH SWING PIPE

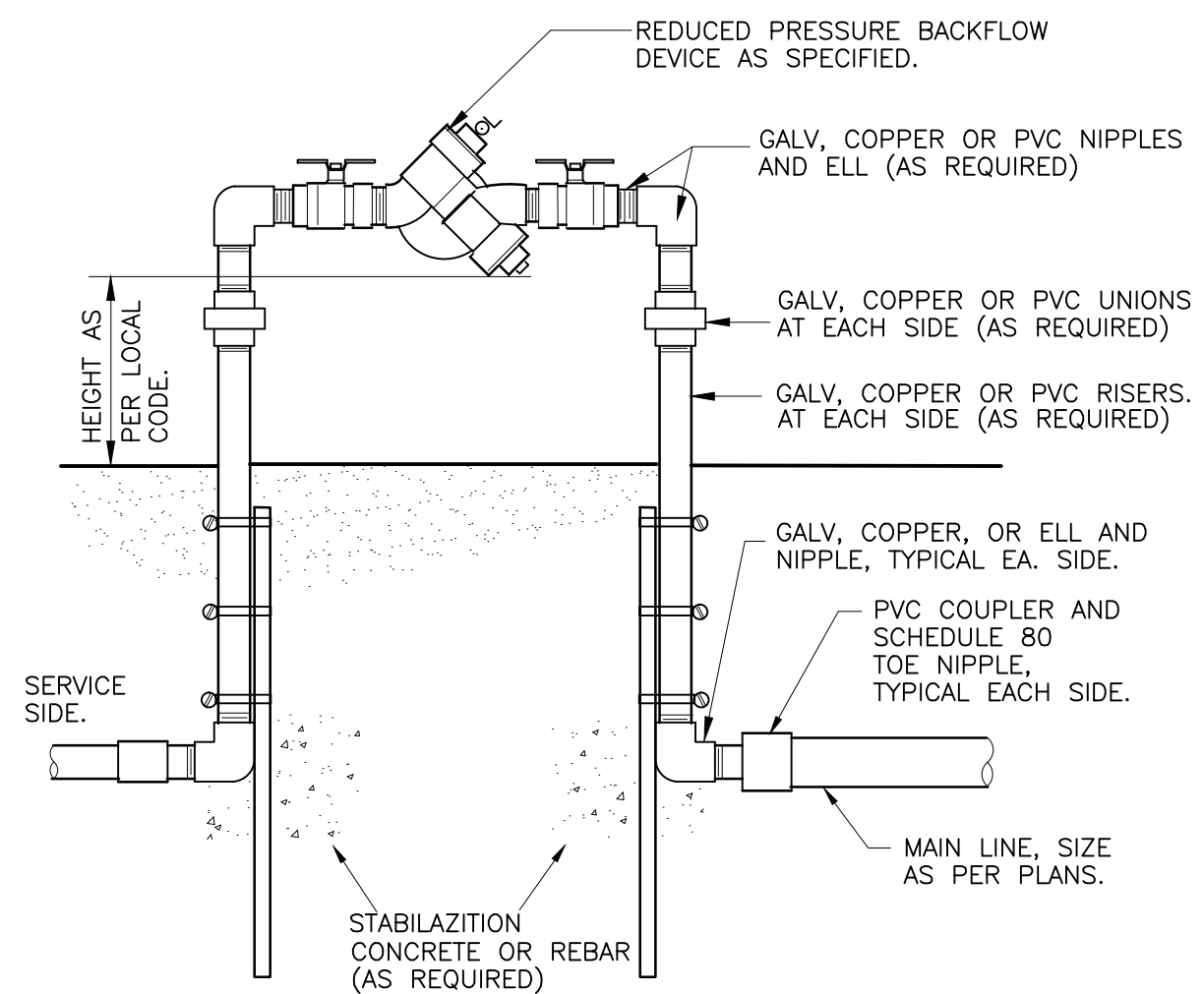
S1-SP-RAI-01



2 5004 ROTOR HEAD WITH SWING PIPE

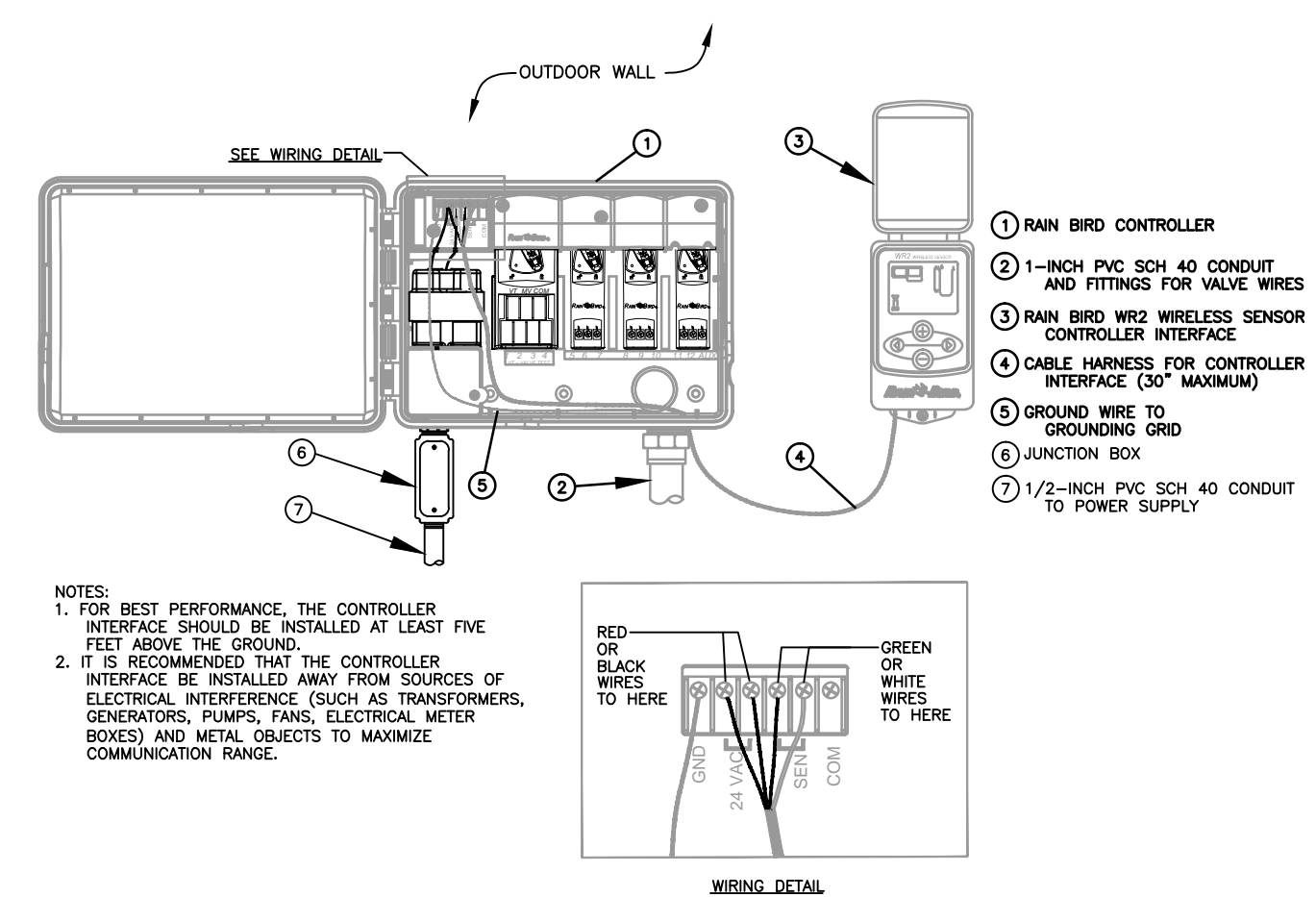
NTS

S1-RO-RAI-01



3 REDUCED PRESSURE BACKFLOW DEVICE STANDARD

S1-BA-01

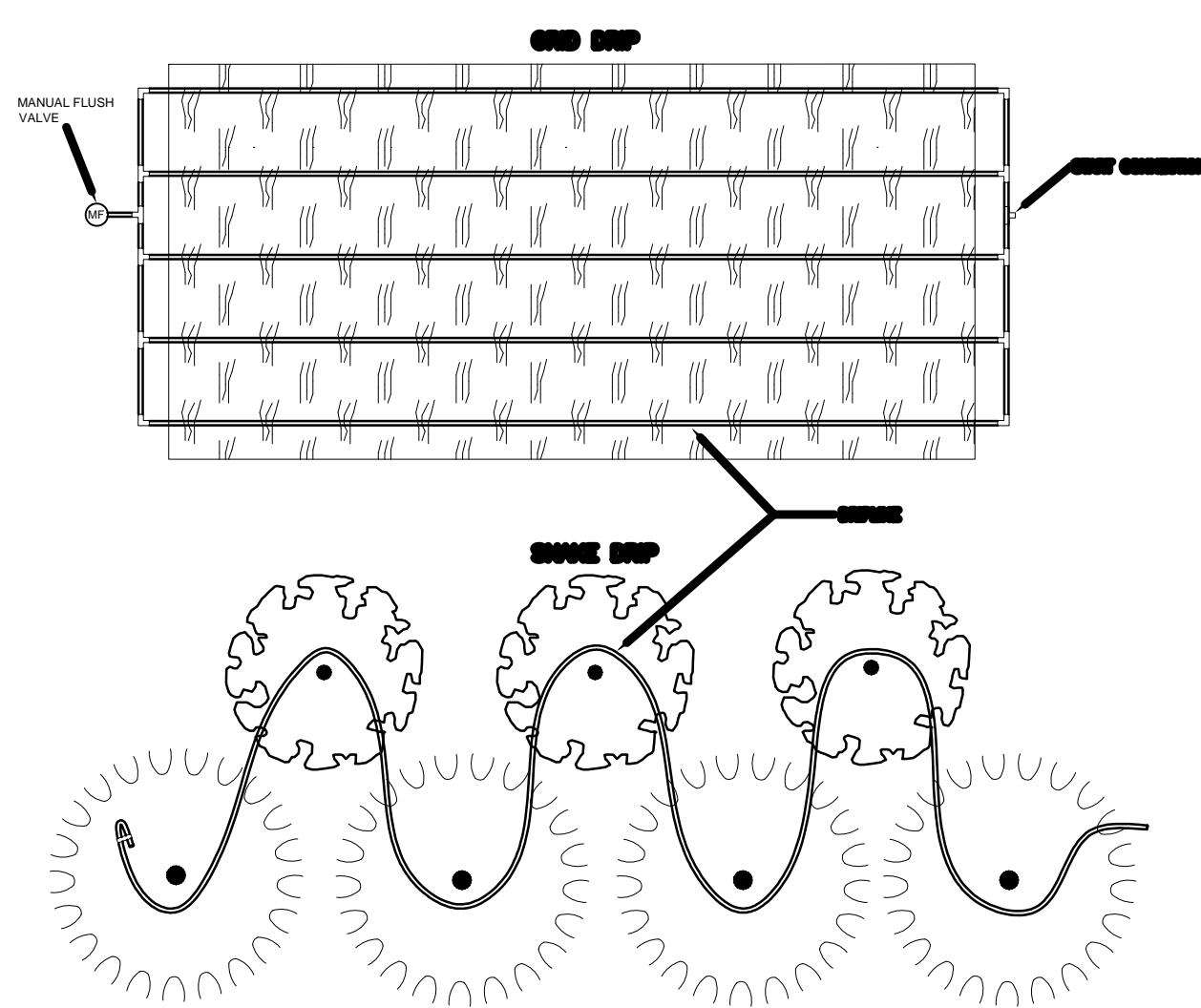


00 WR2 WIRELESS RAIN SENSOR

NTS

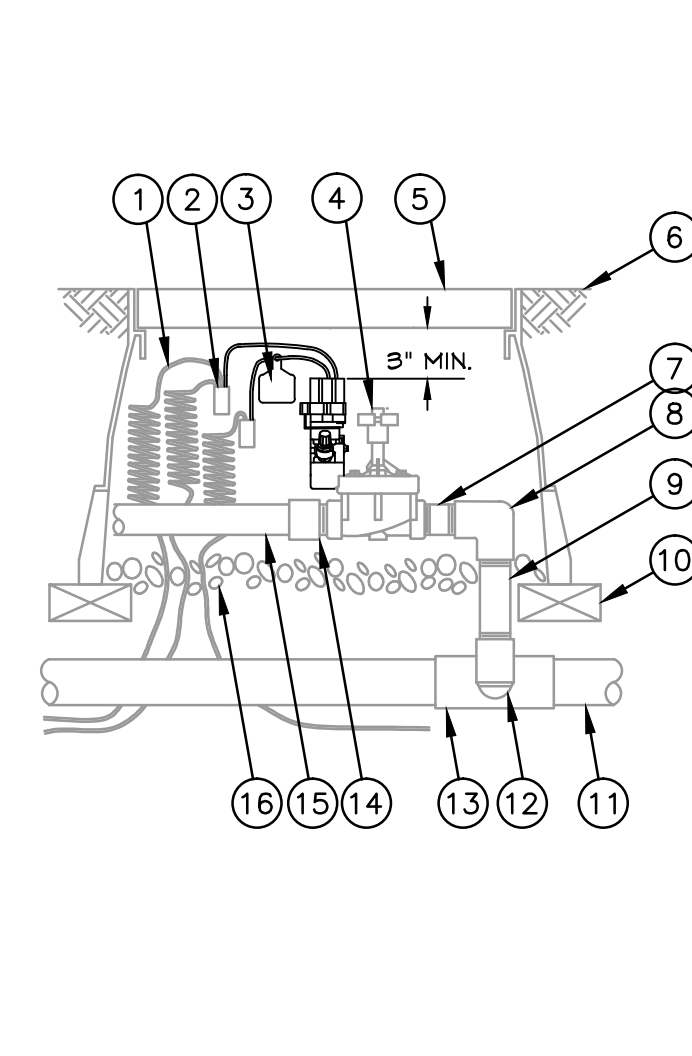
IRRIGATION SPECIFICATIONS

- IRRIGATION SYSTEM DESIGN BASED ON 75 GPM AT 69 PSI.
- IRRIGATION DESIGN IS FROM THE POINT OF CONNECTION(POC) ONLY. THE DESIGN IS BASED ON GALLONS PER MINUTE(GPM)AND POUNDS PER SQUARE INCH(PSI)FURNISHED BY OTHERS.
- IRRIGATION CONTRACTOR IS TO VERIFY POINT OF CONNECTION IN THE FIELD. INSTALLER IS TO CONFIRM THE MINIMUM DISCHARGE REQUIREMENTS OF THE POINT OF CONNECTION AS INDICATED ON THE LEGEND PRIOR TO INSTALLATION.
- THE PRESSURE REQUIREMENT AT THE POINT OF CONNECTION IS BASED ON NO MORE THAN 5 FEET OF ELEVATION CHANGE IN THE AREAS OF IRRIGATION.
- ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ACCORDING TO LOCAL BUILDING, ELECTRICAL, AND PLUMBING CODES.
- IRRIGATION CONTRACTOR WILL ARRANGE INSPECTIONS REQUIRED BY LOCAL AGENCIES AND ORDINANCES DURING THE COURSE OF CONSTRUCTION AS REQUIRED. ALL WIRING TO BE PER LOCAL CODE. BACKFLOW PREVENTION TO BE PER LOCAL CODE.
- LOCATION OF IRRIGATION COMPONENTS SHOWN ON DRAWING IS APPROXIMATE. ACTUAL PLACEMENT MAY VARY SLIGHTLY AS REQUIRED TO ACHIEVE FULL, EVEN COVERAGE.
- ALL SPRINKLER HEADS SHALL BE INSTALLED PERPENDICULAR TO FINISH GRADES. EXCEPT AS OTHERWISE INDICATED.
- INSTALL IRRIGATION MAINS WITH A MINIMUM 18" OF COVER BASED ON FINISH GRADES. INSTALL IRRIGATION LATERALS WITH MINIMUM 12" OF COVER BASED ON FINISH GRADES.
- PIPE LOCATIONS ARE DIAGRAMMATIC. VALVES AND MAINLINE SHOWN IN PAVED AREAS ARE FOR GRAPHIC CLARITY ONLY.
- THE IRRIGATION CONTRACTOR SHALL COMPLY WITH PIPE SIZES AS INDICATED.
- ALL WIRE SPLICES OR CONNECTIONS SHALL BE MADE WITH APPROVED WATERPROOF WIRE CONNECTIONS AND BE IN A VALVE OR SPLICE BOX.
- ALL CONTROL WIRING DOWNSTREAM OF THE CONTROLLER IS TO BE 2 WIRE, UL APPROVED DIRECT BURY.
- THE DESIGN IS BASED ON THE SITE INFORMATION AND/OR DRAWING SUPPLIED WITH THE DESIGN CRITERIA BEING SET (AREA TO BE IRRIGATED, EQUIPMENT MANUFACTURER AND MODEL TO BE USED, WATER SOURCE INFORMATION, ELECTRICAL POWER AVAILABILITY, ETC...). SITEONE LANDSCAPE SUPPLY BEARS NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS IN DESIGN OR INSTALLATION THAT ARISE DUE TO INACCURACIES IN THE ABOVE REFERENCED INFORMATION SUPPLIED TO SITEONE LANDSCAPE SUPPLY LANDSCAPES IN RELATION TO THIS PROJECT, UNLESS OTHERWISE NOTED.



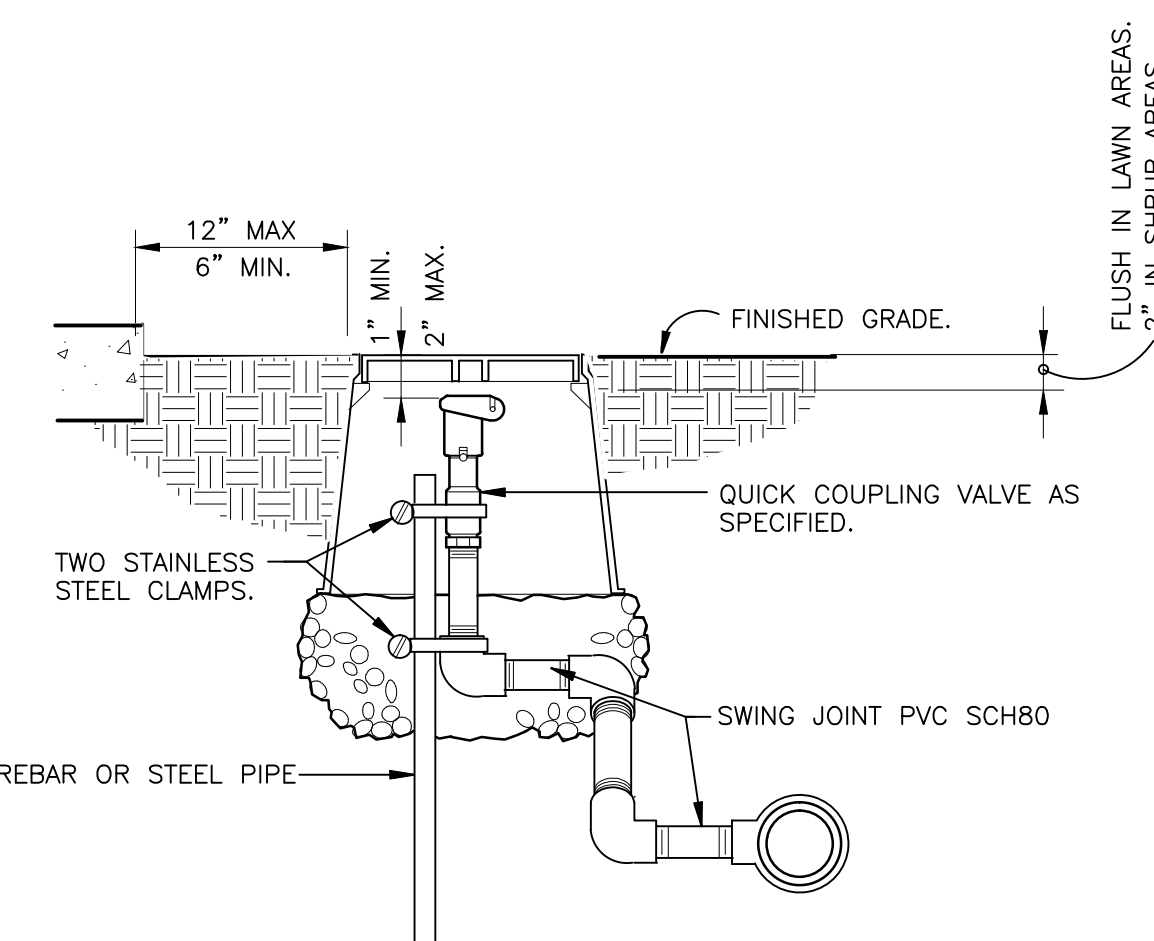
5 TYPICAL DRIP TUBING LAYOUT

NTS



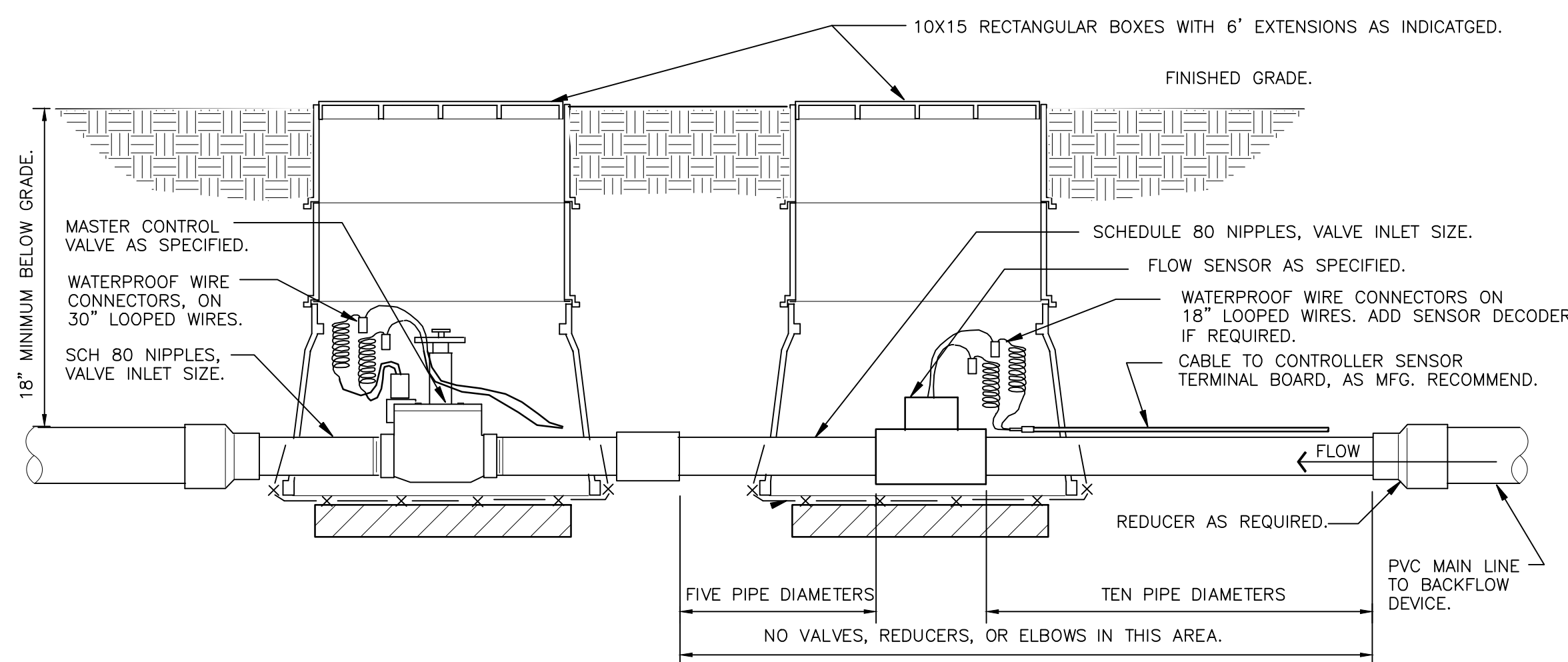
6 PEB SERIES ELECTRIC VALVE

S1-VA-RAI-03



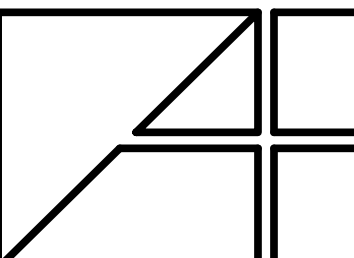
8 QUICK COUPLING VALVE IN BOX

S1-QU-01



9 MASTER VALVE/FLOW SENSOR ASSEMBLY

S1-MI-03



Alexander V. Bogaerts + Associates, P.C. • Architecture • Planning • Interior Design
 2445 Franklin Road
 Bloomfield Hills, MI 48302
 248 • 334 • 5000

TYPICAL UNIT PLANS

LAKE POINTE
 MULTIFAMILY COMMUNITY
 WHITE LAKE, MICHIGAN

CLIENT/PROJECT

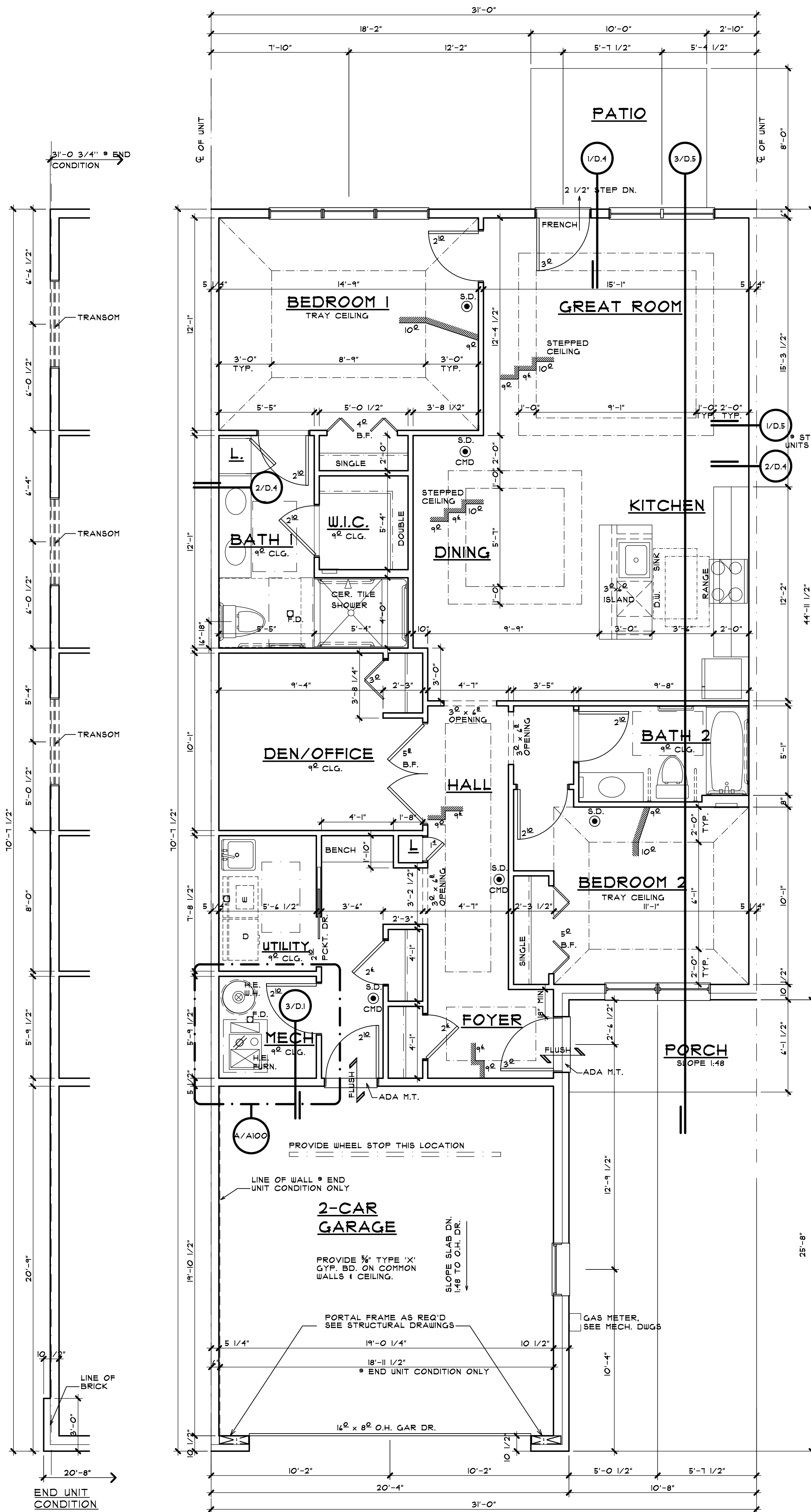
■ PRELIMINARY 06-19-19
 □ BIDS
 ■ PERMITS 06-16-21
 □ CONSTRUCTION

REVISIONS
 22-10-18 OWNER COMMENT RESPONSE
 2024 02 06

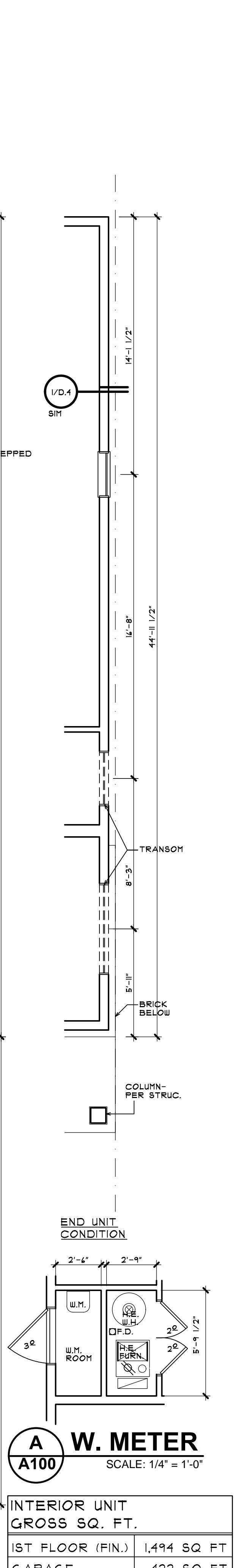
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JOB NUMBER
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A100

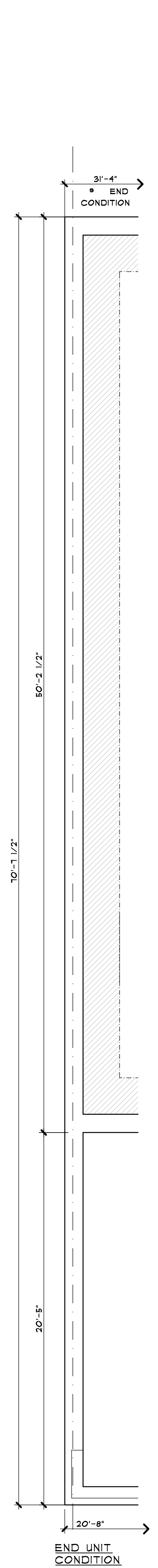


2 TYP. UNIT FIRST FLOOR PLAN
A100 SINGLE STORY DWELLING UNIT - TYPE 'B'

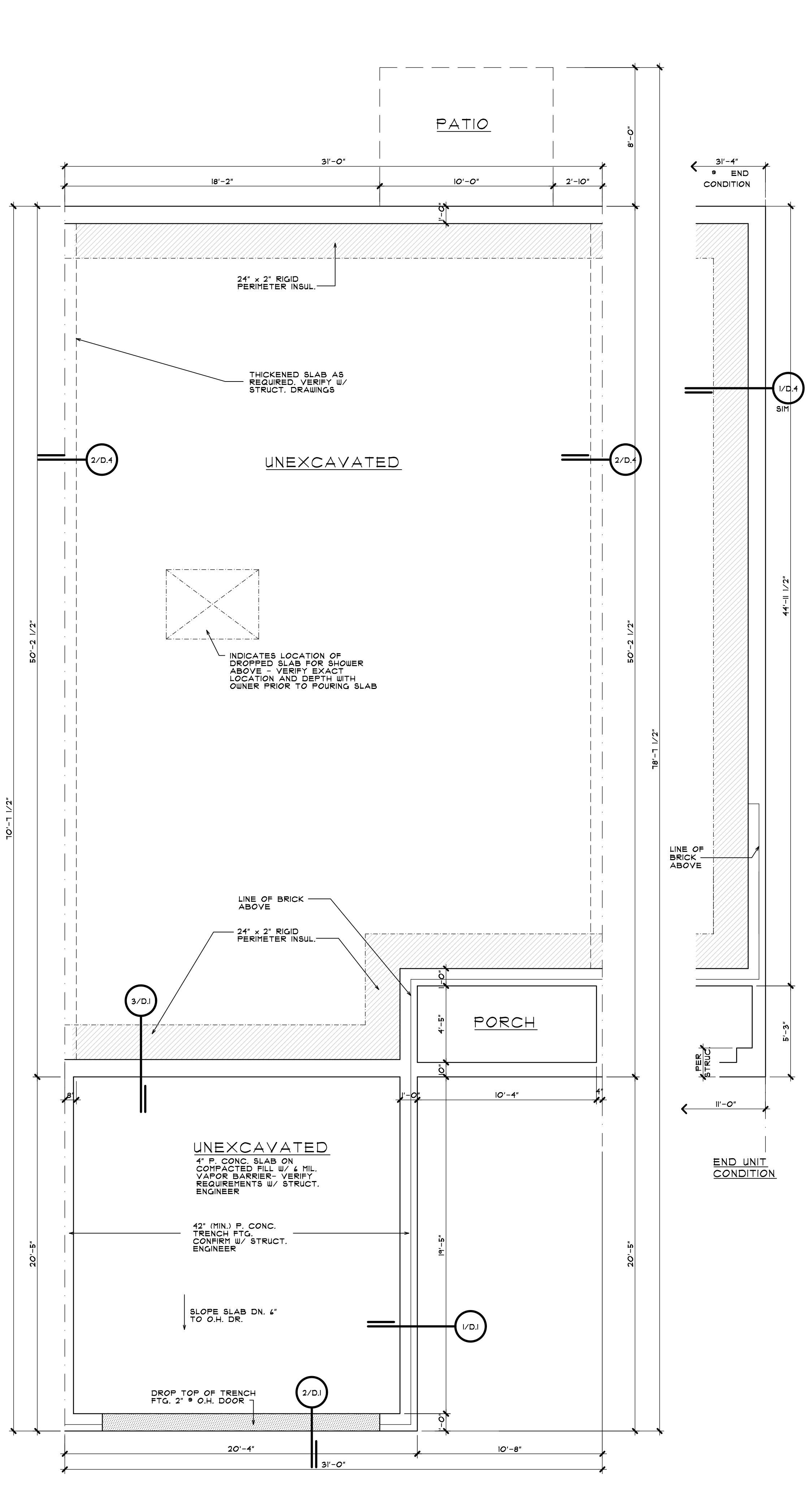


INTERIOR UNIT GROSS SQ. FT.	
1ST FLOOR (FIN.)	1,494 SQ FT
GARAGE	422 SQ FT

SCALE: 1/4" = 1'-0"



1 TYP. UNIT FOUNDATION PLAN
A100 SINGLE STORY DWELLING UNIT - TYPE 'B'



SCALE: 1/4" = 1'-0"

- NOTES**
- ALL EXTERIOR TRIM TO BE ALUMINUM UNWRAPPED OR VINYL. VERIFY EXACT LOCATIONS FOR EACH MATERIAL WITH OWNER PRIOR TO CONSTRUCTION.
 - PROVIDE PEEP HOLES AND DEAD BOLTS AT ALL FRONT ENTRY DOORS. SEE BUILDER FOR SPECIFICATIONS.
 - ALL DRYWALL TO BE PREPPED & READY TO BE PAINTED INCLUDING THE GARAGE.
 - BRICK ROWLOCK SILLS MAY BE REPLACED WITH PRECAST STONE OR CONCRETE. VERIFY WITH BUILDER PRIOR TO CONSTRUCTION.
 - NOTE: FUTURE GRAB BARS SHOWN AT WATER CLOSETS, TUBS & SHOWERS. PROVIDE BLOCKING ONLY AT TIME OF OCCUPANCY.
 - NOTE: ALL GYP. BOARD INSTALLED IN ROUGH BY ROUGH CARPENTERS MUST BE MOISTURE RESISTANT TYPE APPROVED FOR INSTALLATION DURING THE ROUGH FRAMING PROCESS.
 - NOTE: ROUGH CARPENTER TO VERIFY ALL TUB AND SHOWER SIZES PRIOR TO ROUGH IN.
 - NOTE: SEE STRUCTURAL ENGINEERING PLANS (BY OTHERS) FOR ALL STRUCTURAL INFORMATION. ALL FOUNDATION INFORMATION REGARDING BEARING CAPACITY OF SOIL CAN VARY ON A BUILDING BY BUILDING BASIS.

ALL INTERIOR PARTITION DIMENSIONS ARE 3/16" UNLESS NOTED OTHERWISE.

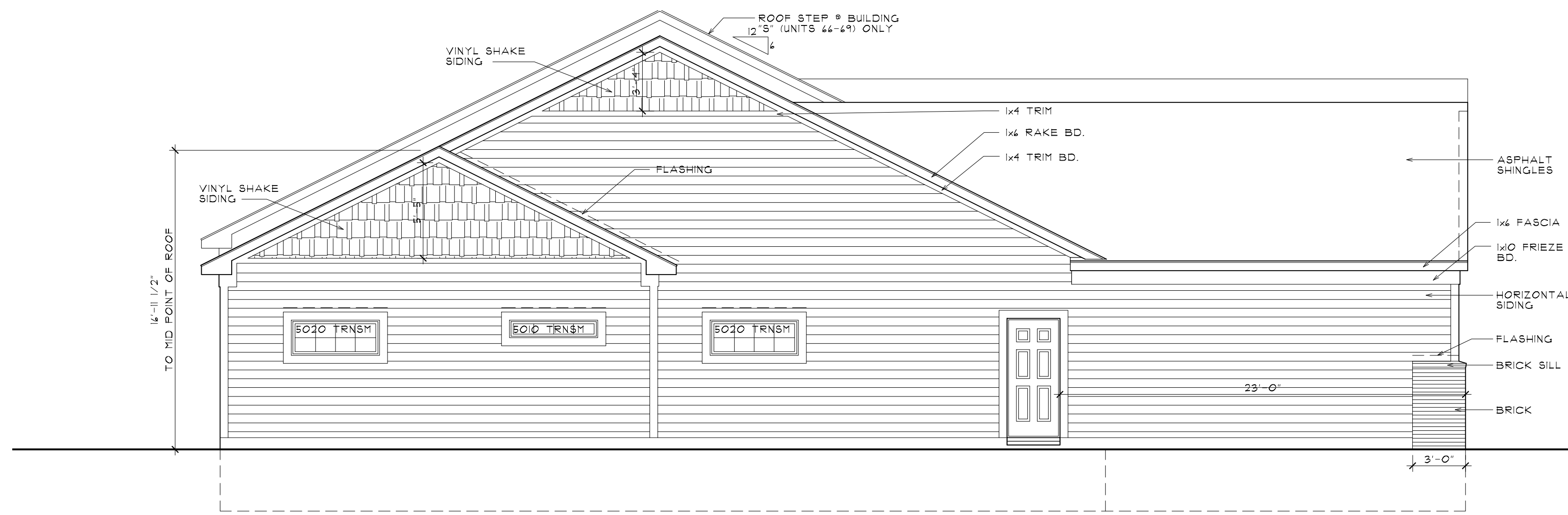
BEFORE CONSTRUCTION OBTAIN WINDOW & DOOR ROUGH OPENING SIZES FROM WINDOW/DOOR SUPPLIER.

SEE SHEETS N-1 - N-4 FOR ADDITIONAL NOTES REGARDING DRAWINGS & CONSTRUCTION.

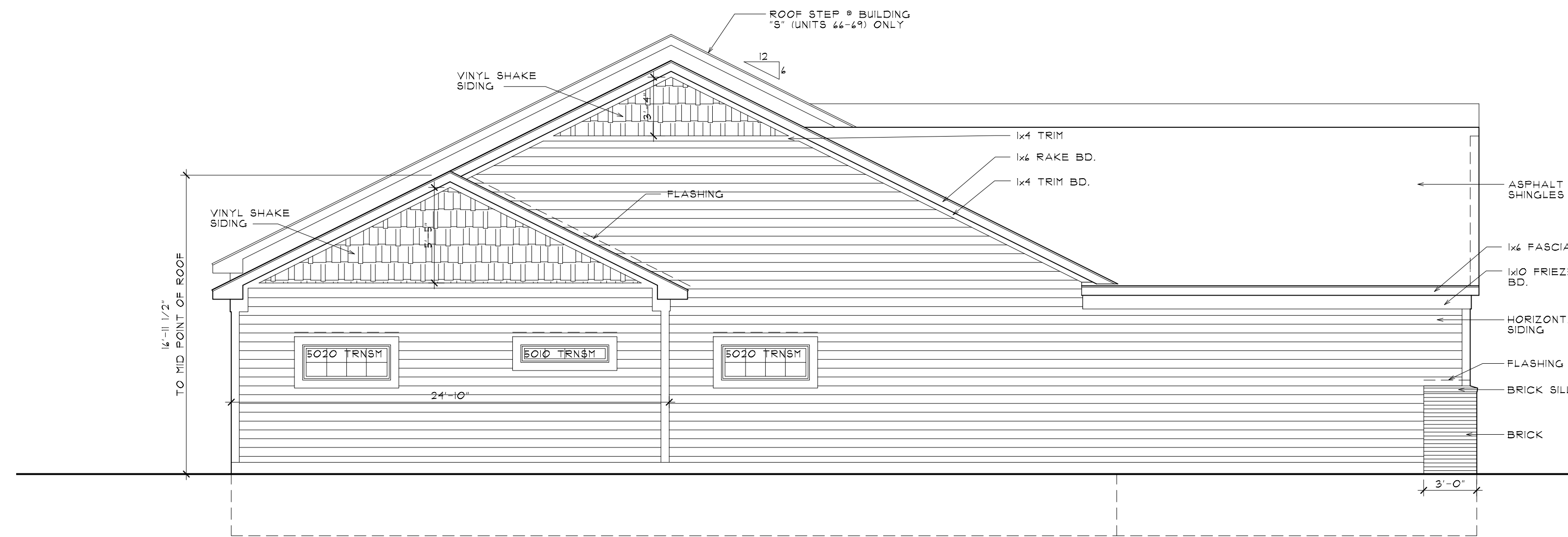
SEE SHEETS D-1 - D-4 FOR ADDITIONAL DETAILS REGARDING DRAWINGS & CONSTRUCTION.

DO NOT SCALE THESE DRAWINGS. USE CALCULATED DIMENSIONS. IF VARIATIONS OCCUR CONTACT ARCHITECT FOR CLARIFICATION.

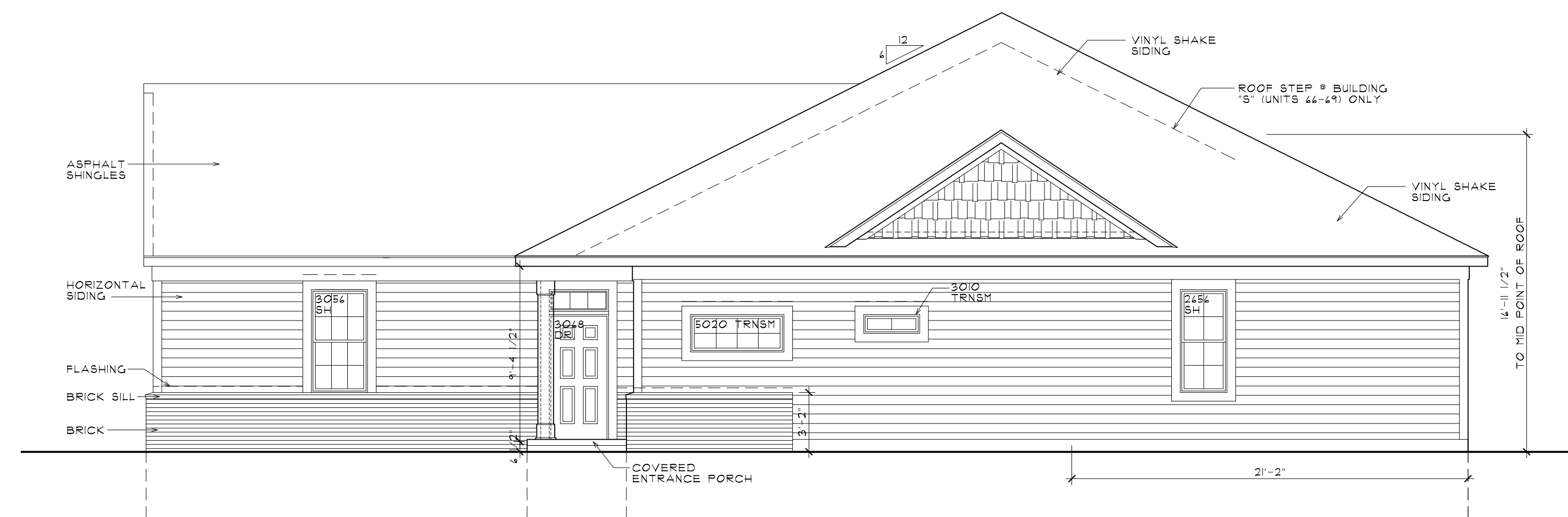
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4 TYP. LEFT SIDE ELEVATION
A101 WITH METER ROOM SCALE: 3/16" = 1'-0"



4 TYP. LEFT SIDE ELEVATION
A101 SINGLE STORY DWELLING UNIT - TYPE 'B' SCALE: 3/16" = 1'-0"



3 TYP. RIGHT SIDE ELEVATION
A101 SINGLE STORY DWELLING UNIT - TYPE 'B' SCALE: 3/16" = 1'-0"

WINDOW SILLS

IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 12" ABOVE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. GLAZING BETWEEN THE FLOOR AND 24" SHALL BE FIXED OR HAVE OPENINGS THROUGH WHICH A 4 INCH DIAMETER SPHERE CANNOT PASS.

EXCEPTIONS:
 1. WINDOWS WHOSE OPENINGS WILL NOT ALLOW A 4" DIA. SPHERE TO PASS THROUGH THE OPENING WHERE THE OPENING IS IN ITS LARGEST OPENED POSITION.
 2. OPENINGS THAT ARE PROVIDED WITH WINDOW GUARDS THAT COMPLY WITH ASTM F2090.

SEE 1/4" SCALE PLANS FOR SIDE ELEVATION SHEET A 101

PROPOSED VENT AREA: REQUIRED PER EACH UNIT

VENT AREA RATIO 1:150
 ATTIC AREA = 1488 SQ.FT. (1/150)
 VENT AREA = 9.9 SQ.FT. x 144 = 1426 SQ.IN.
 50% SOFFIT AND 50% RIDGE = 713 SQ.IN. EACH

VENT AREA PROVIDED * RIDGE

CONTINUOUS SOFFIT TYPE * 18 SQ.IN. PER FT. = X LIN.FT.
 LOUVER AT RIDGE TYPE * 54 SQ.IN. EA. = 14 UNITS
 TOTAL VENTING AT RIDGE = 756 SQ.IN.

VENT AREA PROVIDED * SOFFIT

CONTINUOUS SOFFIT TYPE * 9 SQ.IN. PER FT. = X LIN.FT.
 LOUVER TYPE 8"x 14" w/o BRICK * 54 SQ.IN. EA. = 14 UNITS
 TOTAL VENTING AT SOFFIT = 756 SQ.IN.

NOTES

ALL EXTERIOR TRIM TO BE ALUMINUM WRAPPED OR VINYL. VERIFY EXACT LOCATIONS FOR EACH MATERIAL WITH OWNER PRIOR TO CONSTRUCTION.

PROVIDE PREP HOLES AND DEAD BOLTS AT ALL FRONT ENTRY DOORS. SEE BUILDER FOR SPECIFICATIONS.

ALL DRYWALL TO BE READY TO BE PAINTED

BRICK ROWLOCK SILLS MAY BE REPLACED WITH PRECAST STONE OR CONCRETE. VERIFY WITH BUILDER PRIOR TO CONSTRUCTION.

FIXED GLASS WINDOWS IN GABLES TO HAVE OPAQUE FINISH ON INTERIOR OF GLASS SO FRAMING OF ROOF NOT VISIBLE FROM EXTERIOR.

PROVIDE RECESS LIGHT IN SOFFIT ABOVE DOOR ENTRY - CONNECT TO PHOTO CELL.

NOTE: VERIFY TYPE OF TRIM w/ OWNER PRIOR TO CONSTRUCTION. OWNER MAY CHOOSE 2x TRIM WRAPPED IN ALUMINUM OR VINYL TRIM BOARDS.

OVERHANGS & DRAINAGE

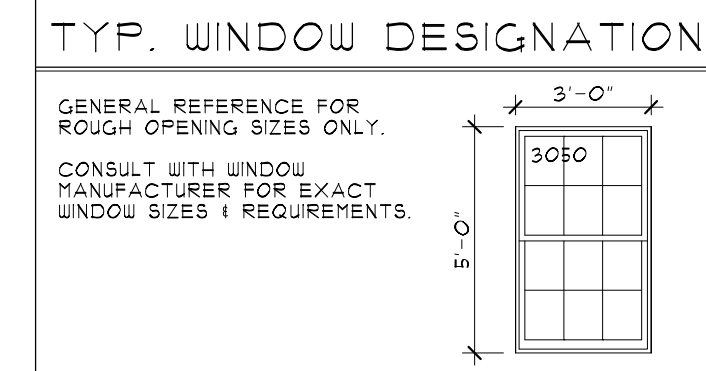
PROVIDE GUTTERS AND DOWNSPOUTS FOR DRAINAGE OF ROOF WATER. DOWNSPOUTS ARE TO BE CONNECTED TO THE STORM WATER COLLECTION SYSTEM. SEE CIVIL ENGINEERING DRAWINGS FOR CONNECTION DETAILS & LOCATIONS.

DOWNSPOUT LOCATIONS ARE T.B.D. BY BUILDER.

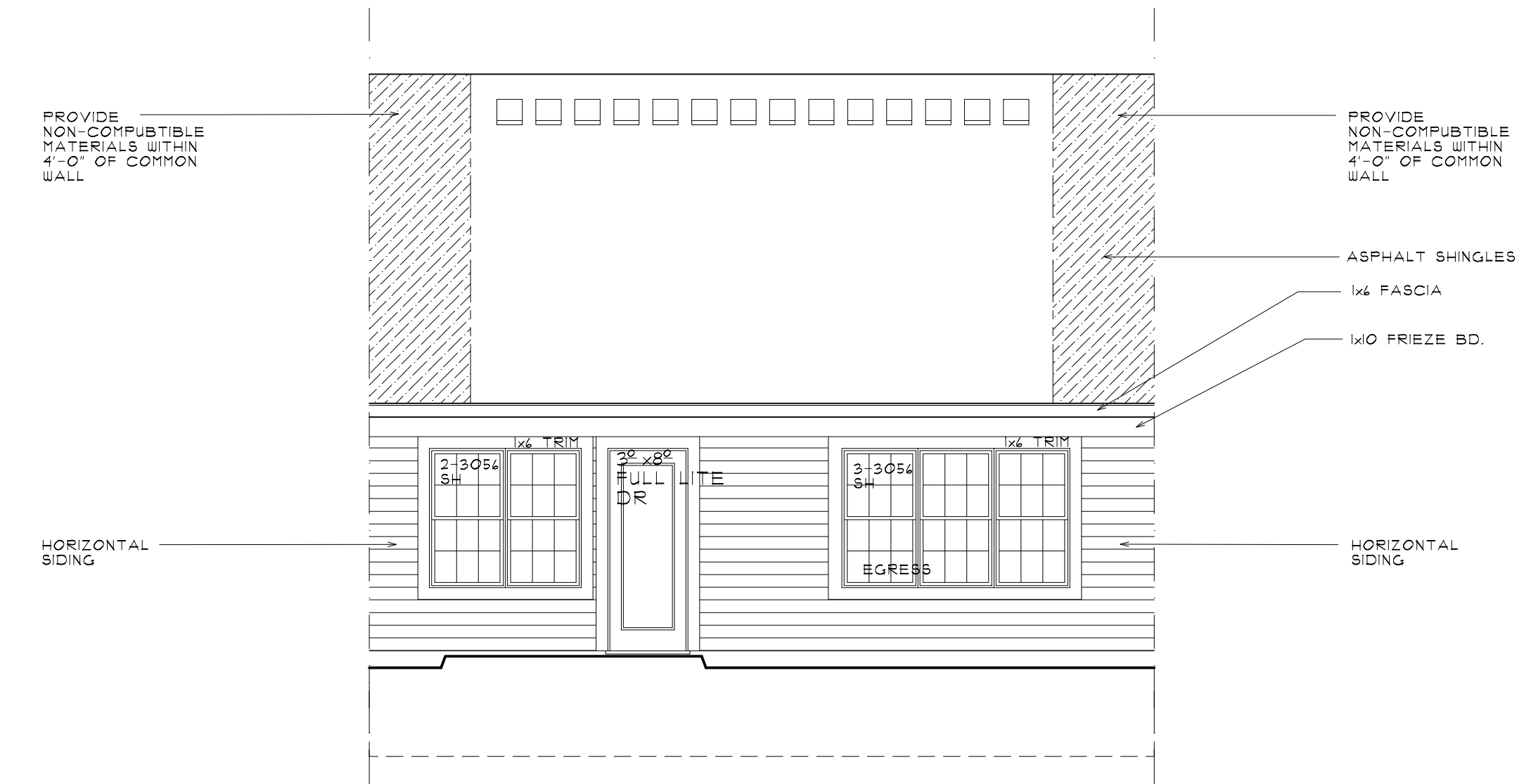
UNLESS NOTED OTHERWISE OVERHANG DIMENSIONS ARE 12" FROM FRAME. RAKE DIMENSIONS ARE 4" AT BRICK AND 1" AT SIDING.

EGRESS WINDOW

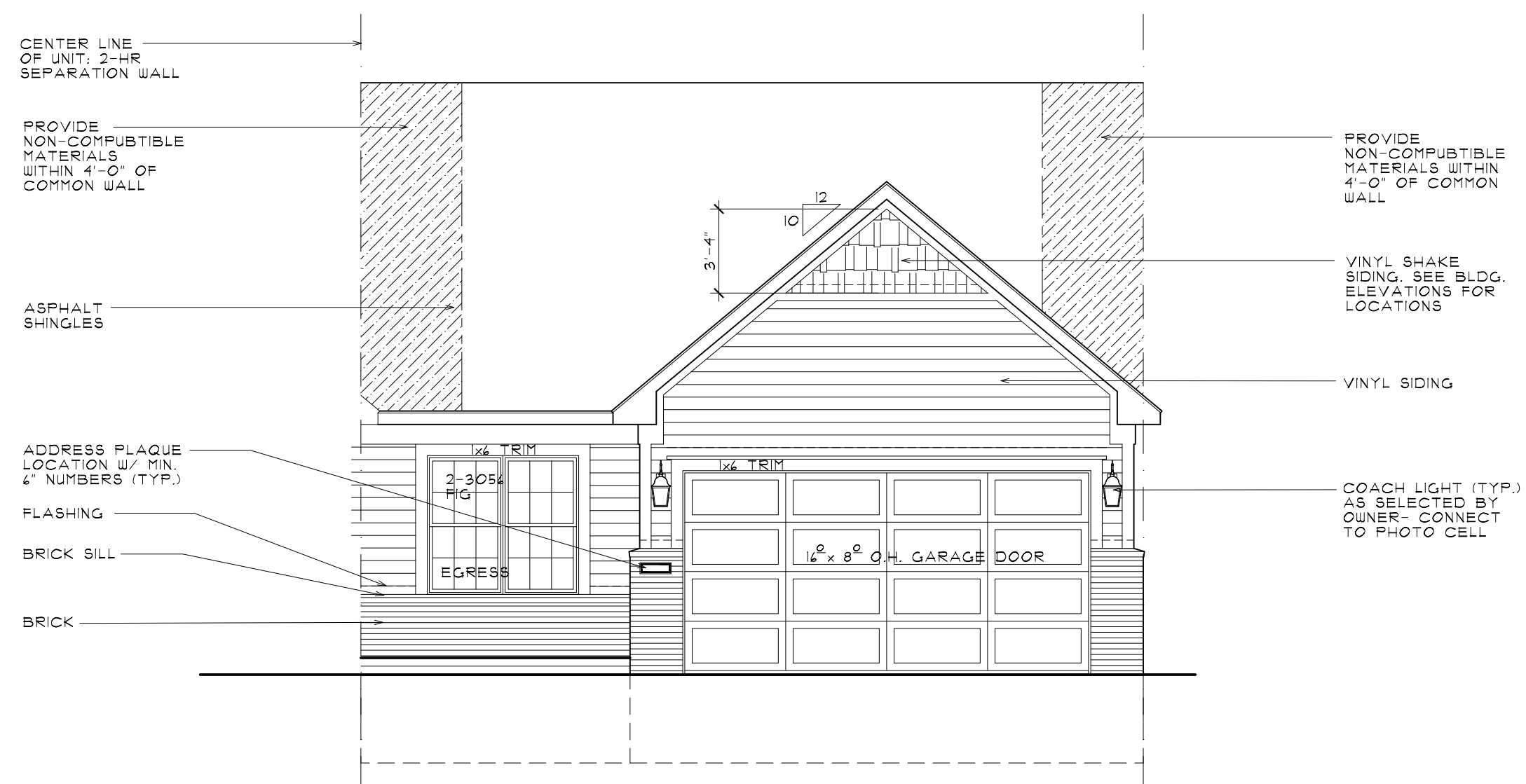
EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE WINDOW OR EXTERIOR DOOR APPROVED FOR EMERGENCY EGRESS OR RESCUE. THE UNIT(S) MUST BE OPERABLE FROM THE INSIDE TO A FULL CLEAR OPENING WITHOUT THE USE OF SEPARATE TOOLS. WHERE WINDOWS ARE PROVIDED AS A MEANS OF EGRESS OR RESCUE, THEY SHALL HAVE SILL HEIGHT OF NOT MORE THAN 44 INCHES ABOVE THE FLOOR. ALL EGRESS OR RESCUE WINDOWS FROM SLEEPING ROOMS MUST HAVE A MINIMUM NET CLEAR OPENING HEIGHT DIMENSION SHALL BE 24 INCHES AND WIDTH OF 20 INCHES.



NOTE: SEE A5-1 FOR INDIVIDUAL BUILDING COLOR SCHEME



2 TYP. REAR ELEVATION
A101 SINGLE STORY DWELLING UNIT - TYPE 'B' SCALE: 3/16" = 1'-0"



1 TYP. FRONT ELEVATION
A101 SINGLE STORY DWELLING UNIT - TYPE 'B' SCALE: 3/16" = 1'-0"

ALL INTERIOR PARTITION DIMENSIONS ARE 3 1/2" UNLESS NOTED OTHERWISE.

BEFORE CONSTRUCTION OBTAIN WINDOW & DOOR ROUGH OPENING SIZES FROM WINDOW/DOOR SUPPLIER.

SEE SHEETS N-1 - N-4 FOR ADDITIONAL DETAILS REGARDING DRAWINGS & CONSTRUCTION.

SEE SHEETS OJ-D-4 FOR ADDITIONAL NOTES REGARDING DRAWINGS & CONSTRUCTION.

DO NOT SCALE THESE DRAWINGS. USE CALCULATED DIMENSIONS. IF VARIATIONS OCCUR CONTACT ARCHITECT FOR CLARIFICATION.

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SHEET TITLE
 UNIT ELEVATIONS

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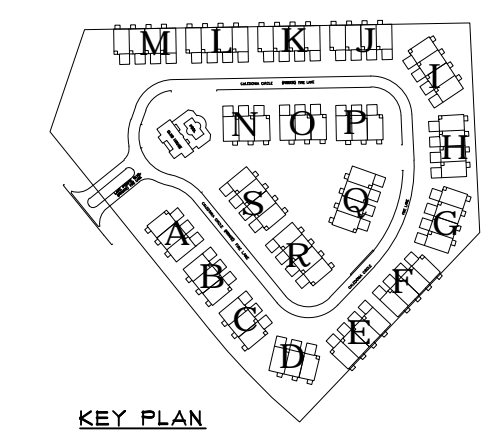
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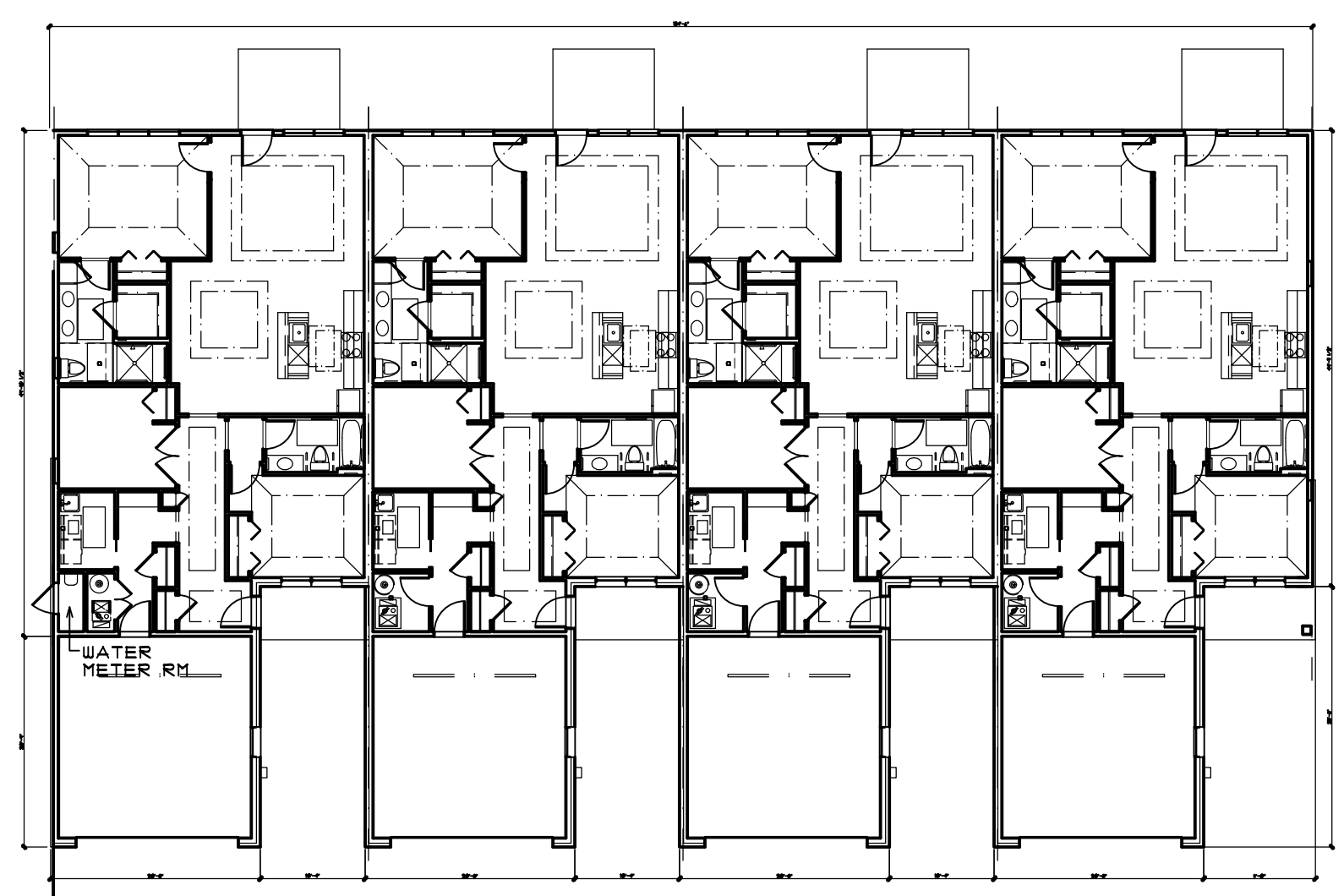
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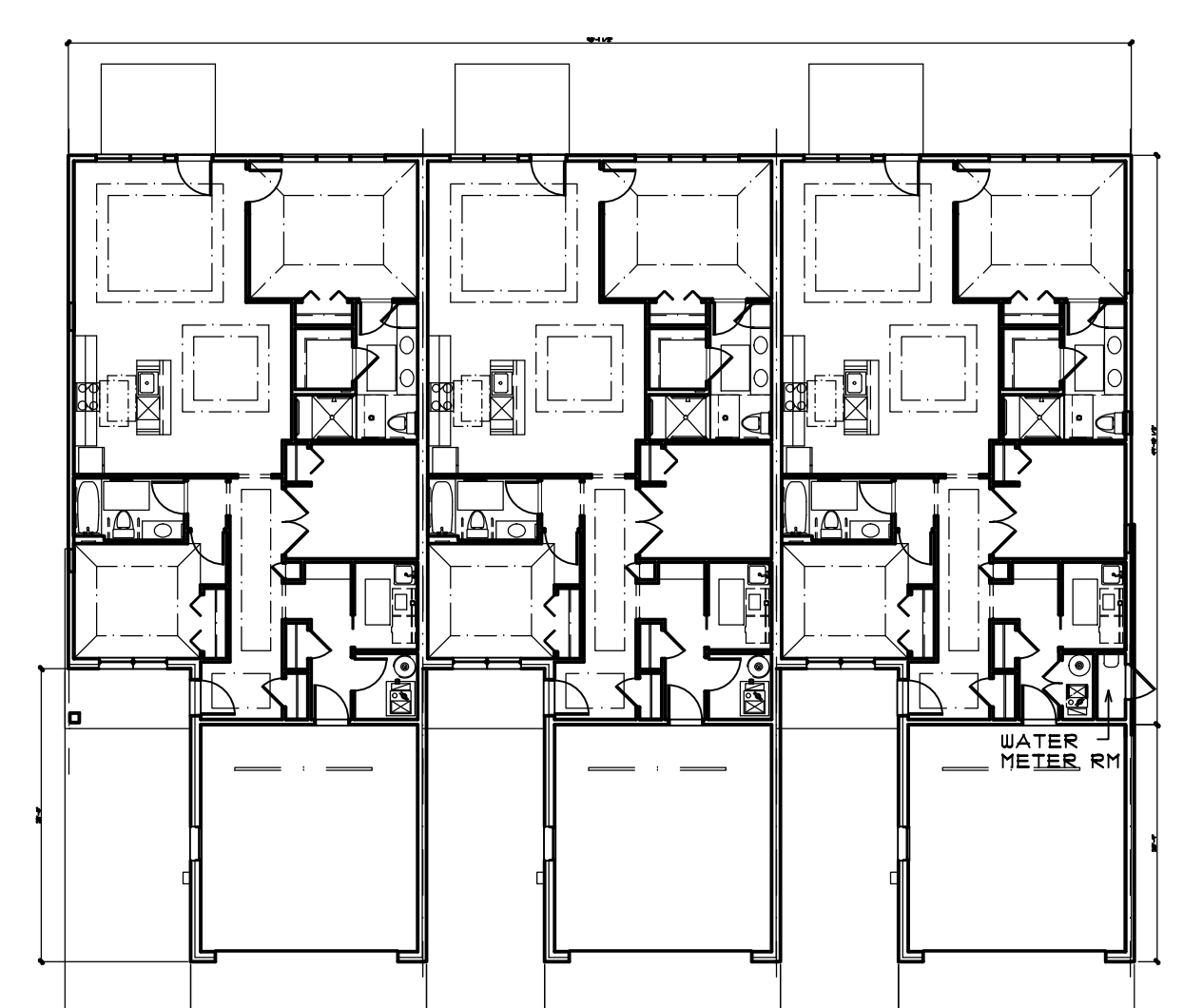
NOTE:

- REFER TO 1/4" SCALE UNIT PLANS FOR ALL NOTES, DIMENSIONS, DETAILS AND ALL ADDITIONAL INFORMATION NOT SHOWN.
- SEE STRUCTURAL ENGINEERING PLANS (BY OTHERS) FOR ALL STRUCTURAL INFORMATION. ALL FOUNDATION INFORMATION REGARDING BEARING CAPACITY OF SOIL CAN VARY ON A BUILDING BY BUILDING BASIS.
- REFER TO CIVIL ENGINEERING PLANS (BY OTHERS) FOR ADDITIONAL INFORMATION ON BUILDING STEPS & GRADING INFORMATION.

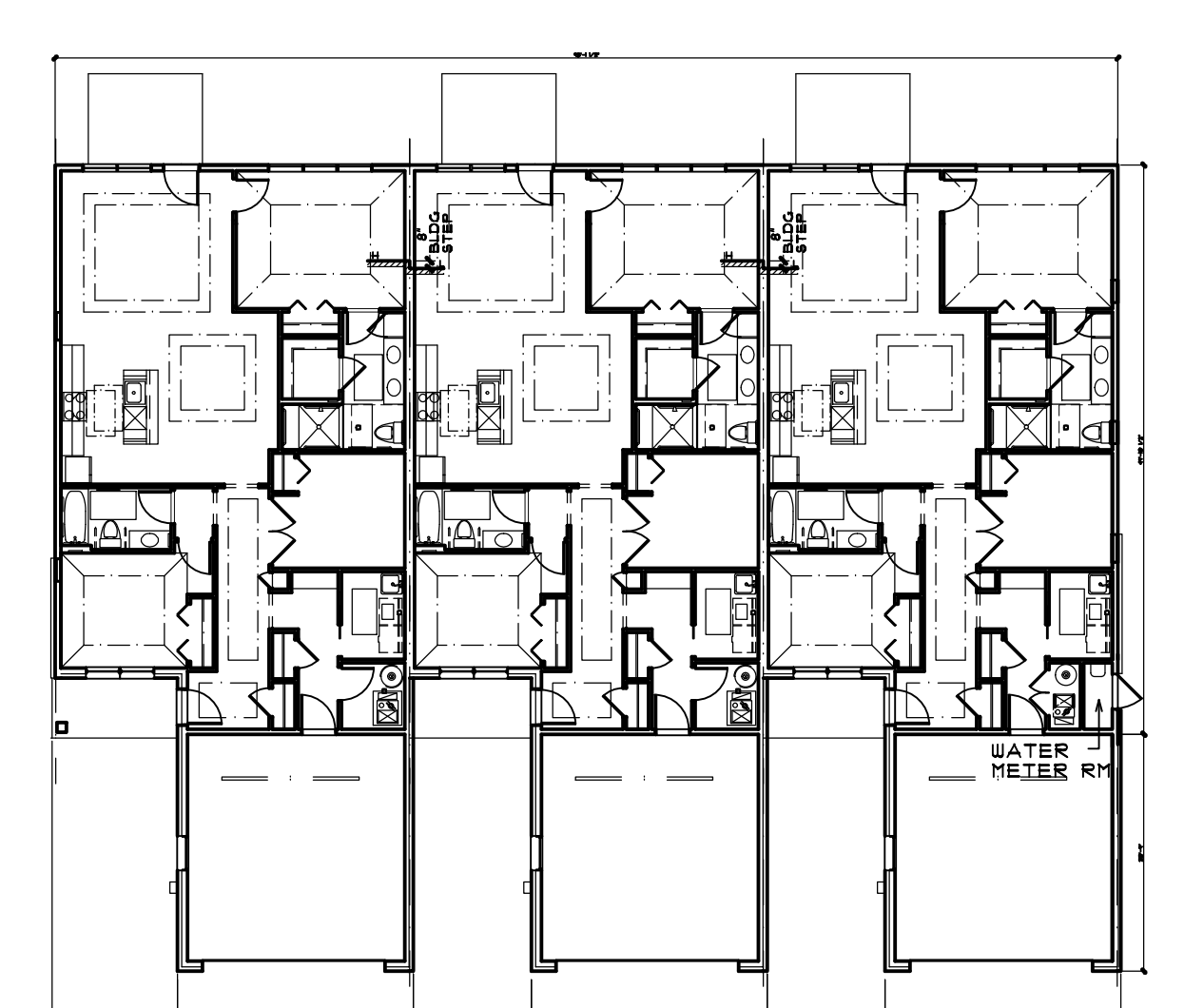
NOTE: CONFIRM WATER METER ROOM LOCATION W/ CIVIL PRIOR TO CONSTRUCTION.



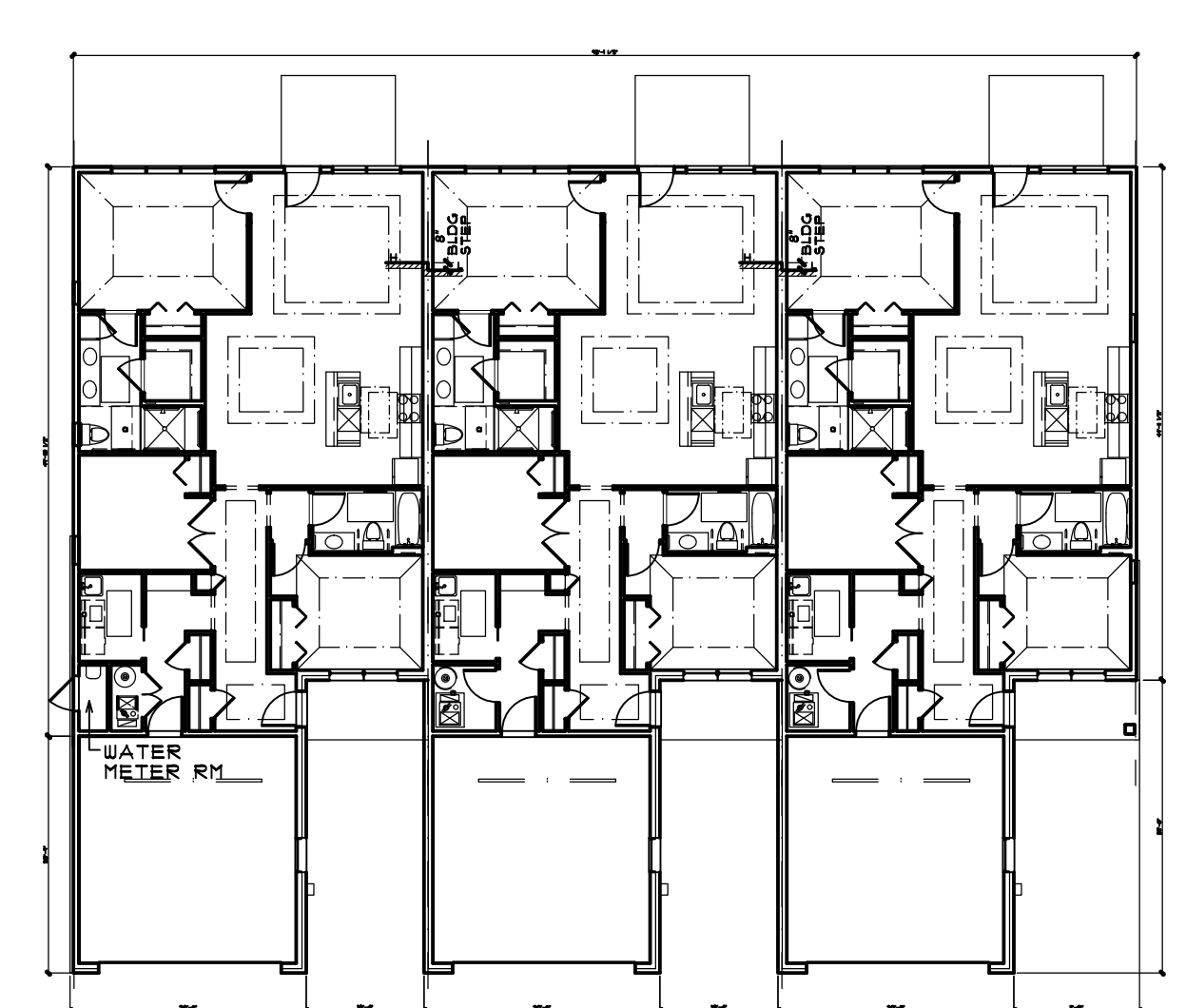
8 BLDG E (UNITS 13-16)
A200 FIRST FLOOR PLAN SCALE: 1/16" = 1'-0"



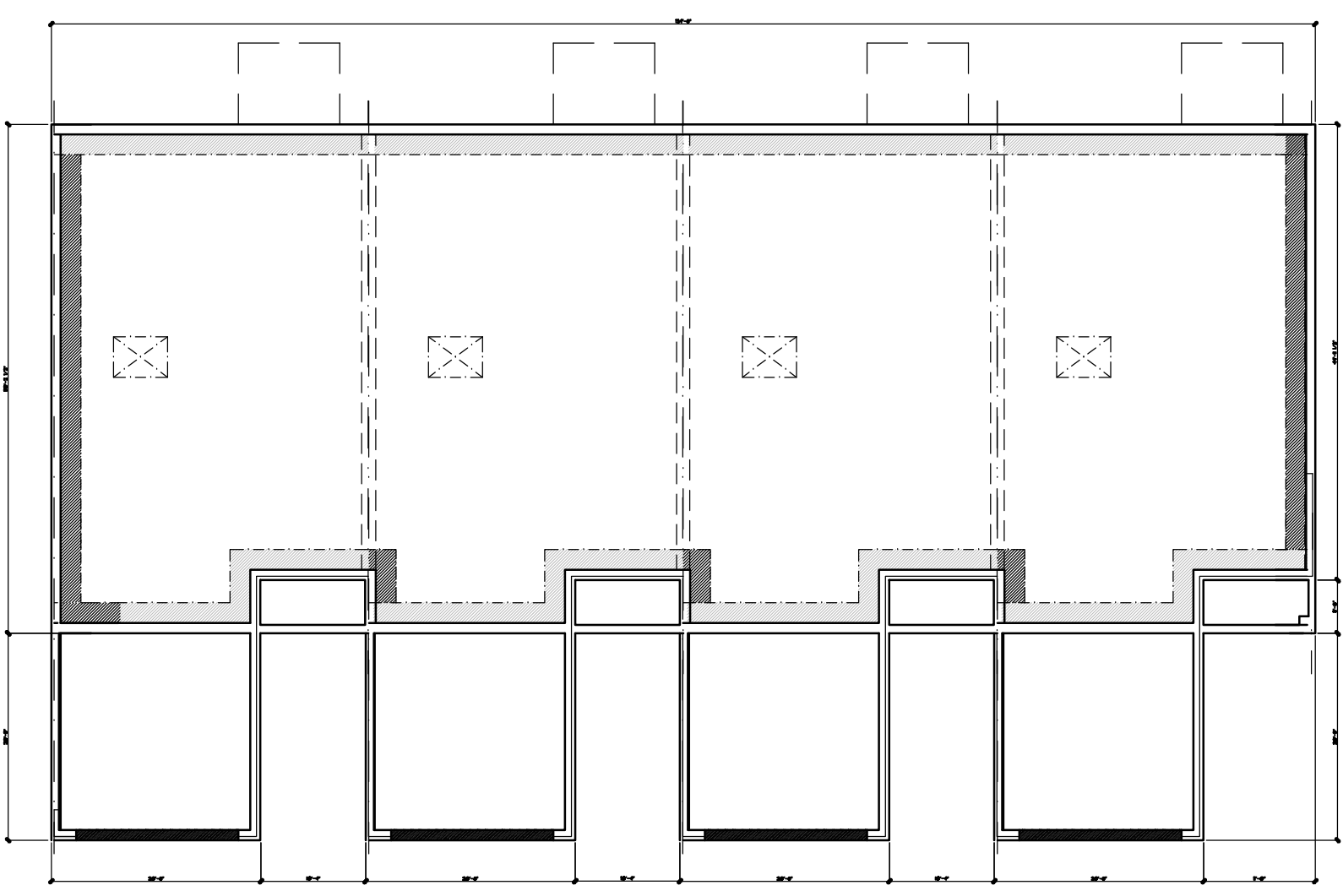
6 BLDG C,D,N,O - FIRST FLOOR PLAN
A200 (UNITS 7-9, 10-12, 49-51, 52-54) SCALE: 1/16" = 1'-0"



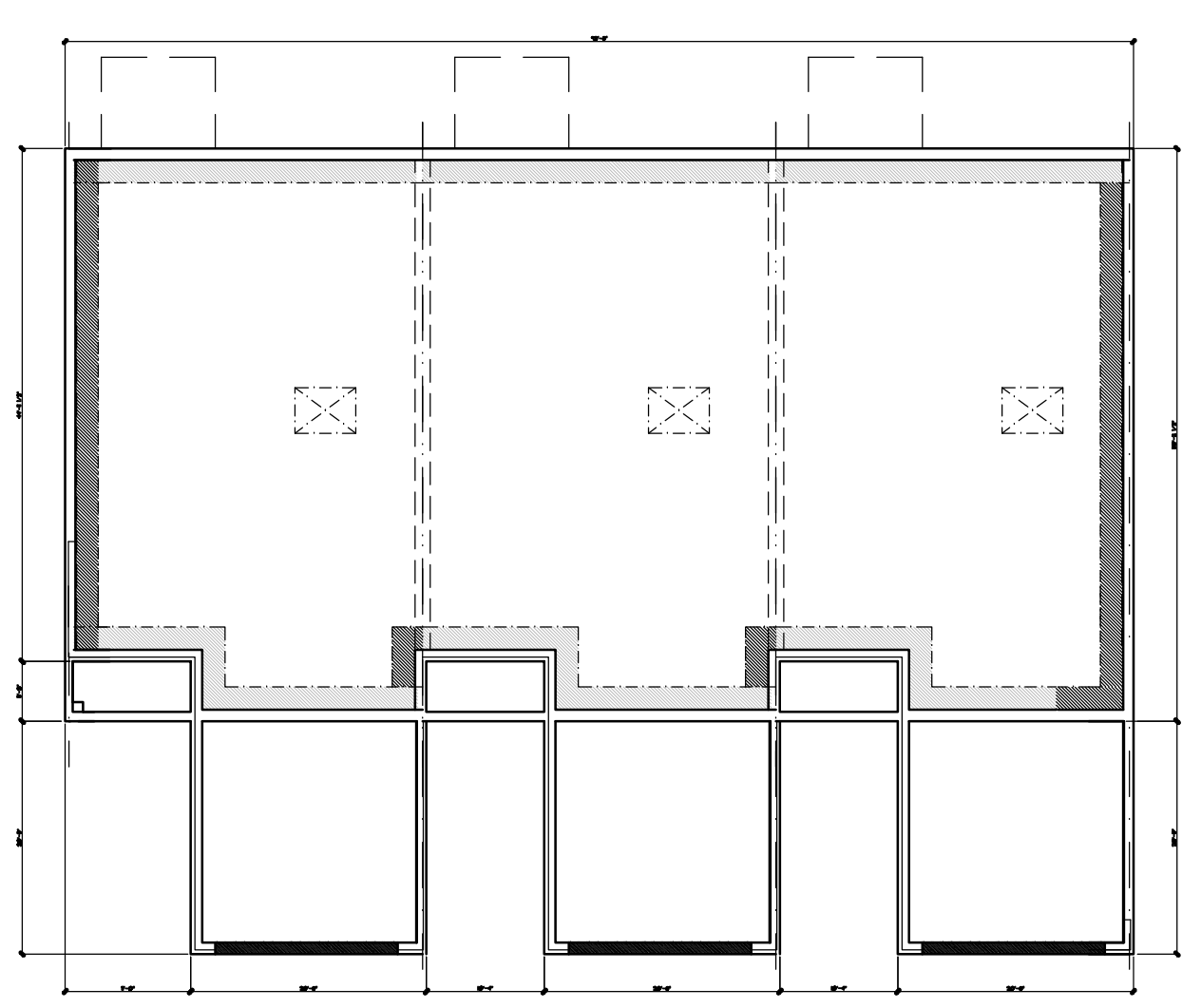
4 BLDG B (UNITS 4-6)
A200 FIRST FLOOR PLAN SCALE: 1/16" = 1'-0"



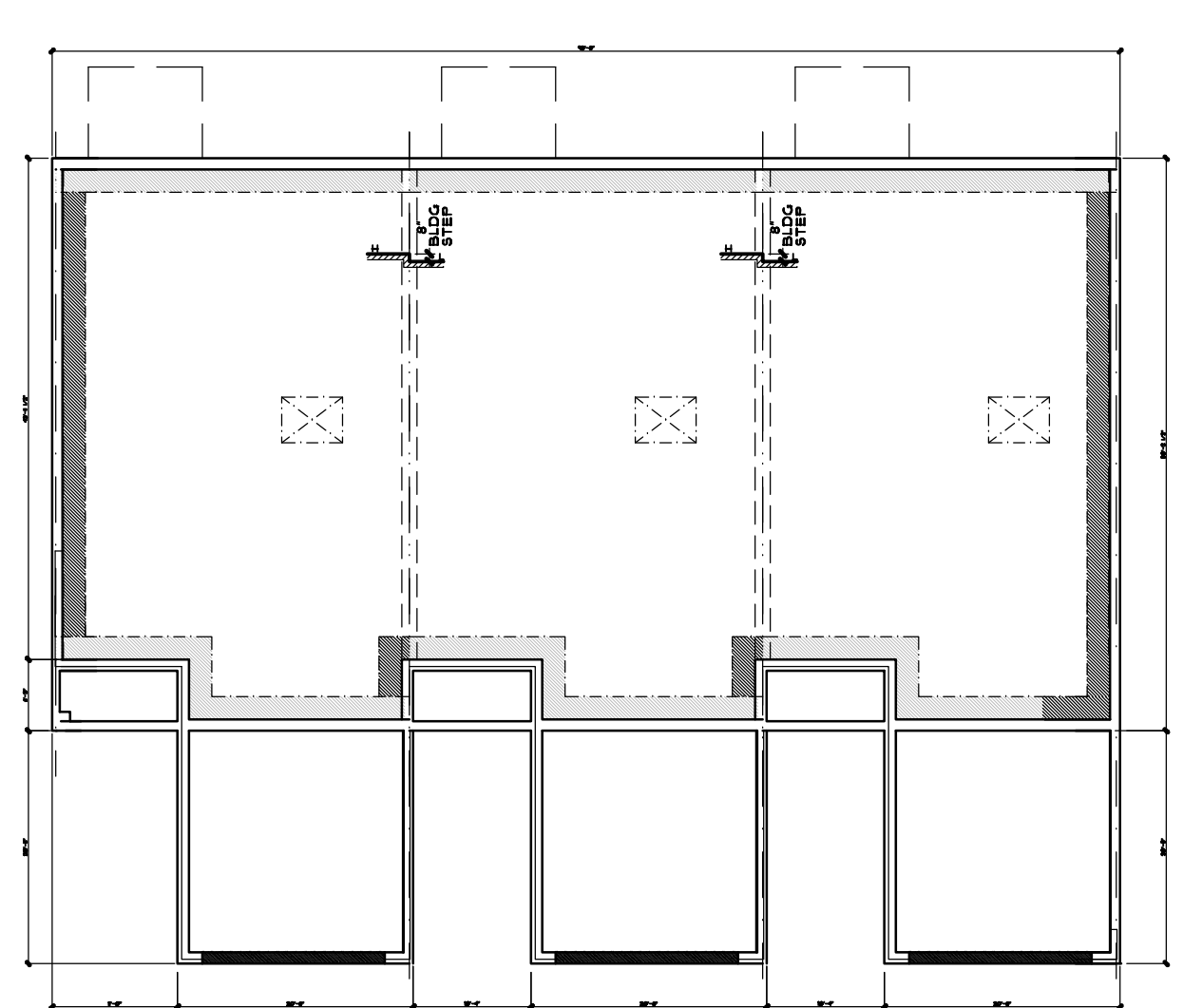
2 BLDG A (UNITS 1-3)
A200 FIRST FLOOR PLAN SCALE: 1/16" = 1'-0"



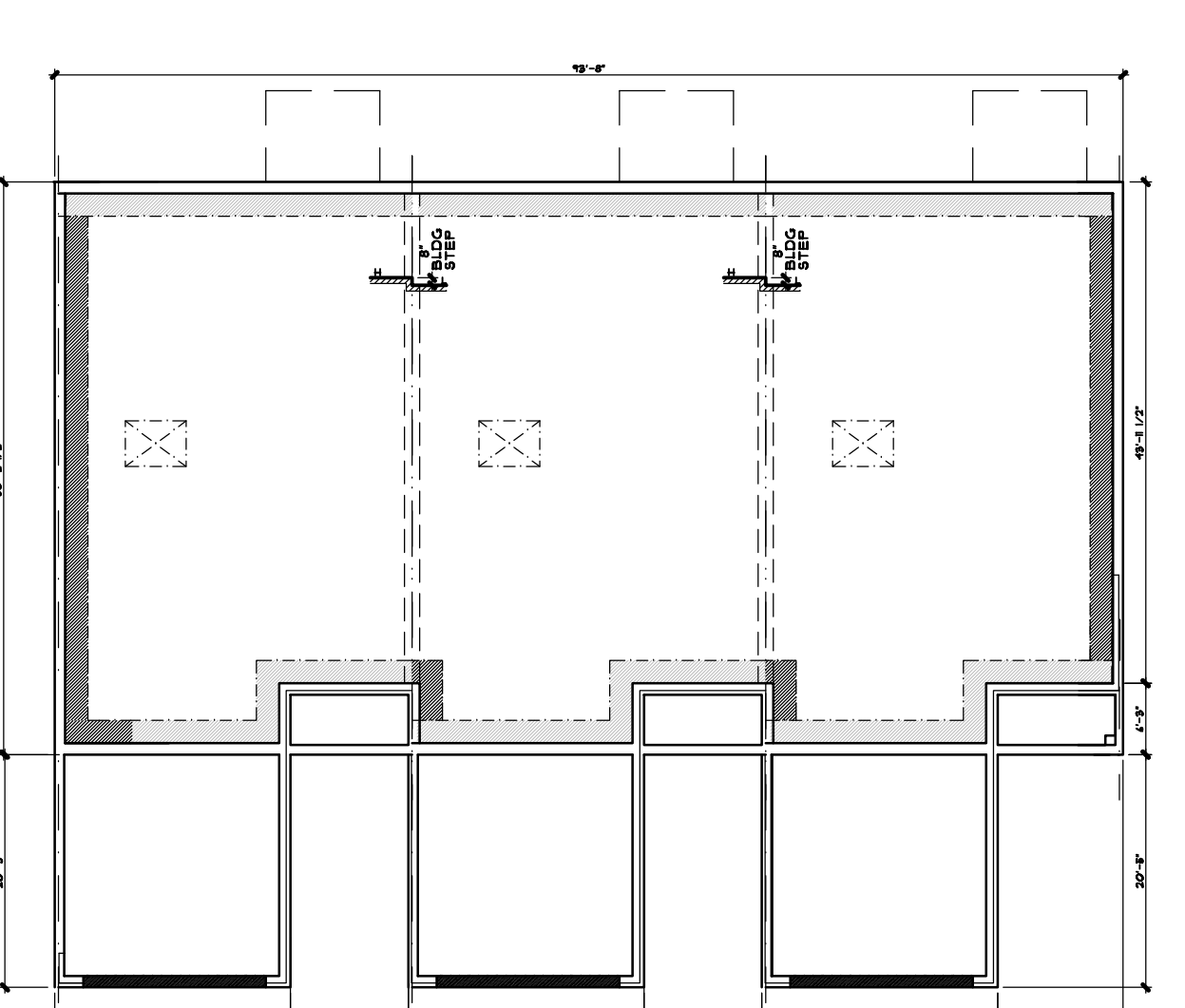
7 BLDG E (UNITS 13-16)
A200 FOUNDATION PLAN SCALE: 1/16" = 1'-0"



5 BLDG C,D,N,O - FOUNDATION PLAN
A200 (UNITS 7-9, 10-12, 49-51, 52-54) SCALE: 1/16" = 1'-0"



3 BLDG B (UNITS 4-6)
A200 FOUNDATION PLAN SCALE: 1/16" = 1'-0"



1 BLDG A (UNITS 1-3)
A200 FOUNDATION PLAN SCALE: 1/16" = 1'-0"

ALL INTERIOR PARTITION DIMENSIONS ARE 3 1/2" UNLESS NOTED OTHERWISE.

BEFORE CONSTRUCTION OBTAIN WINDOW & DOOR ROUGH OPENING SIZES FROM WINDOW/DOOR SUPPLIER.

SEE SHEETS N-1 - N-4 FOR ADDITIONAL NOTES REGARDING DRAWINGS & CONSTRUCTION.

SEE SHEETS D.J-D.4 FOR ADDITIONAL DETAILS REGARDING DRAWINGS & CONSTRUCTION.

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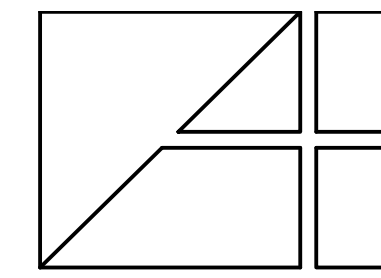
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DATE
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PERMITS
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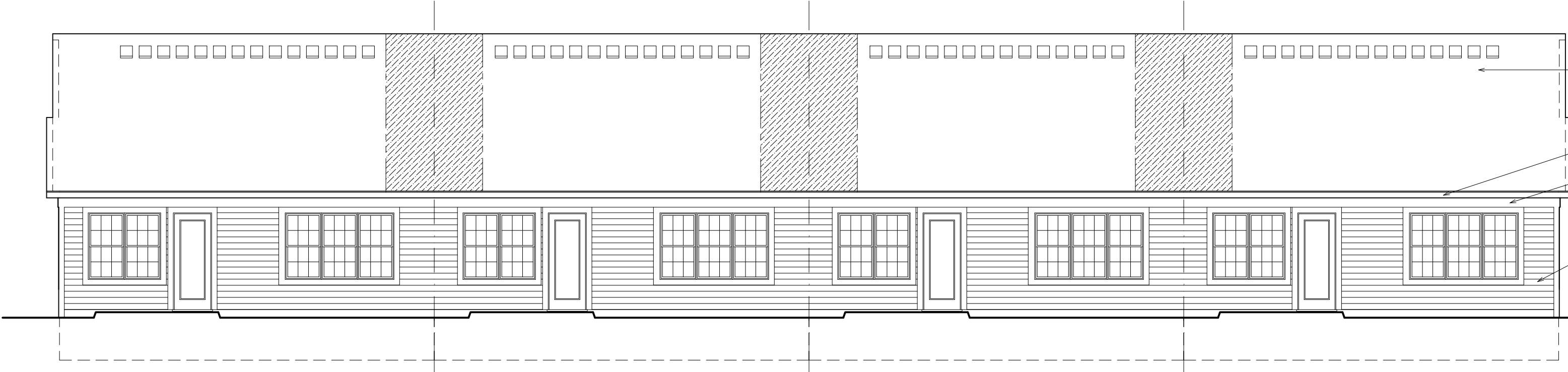
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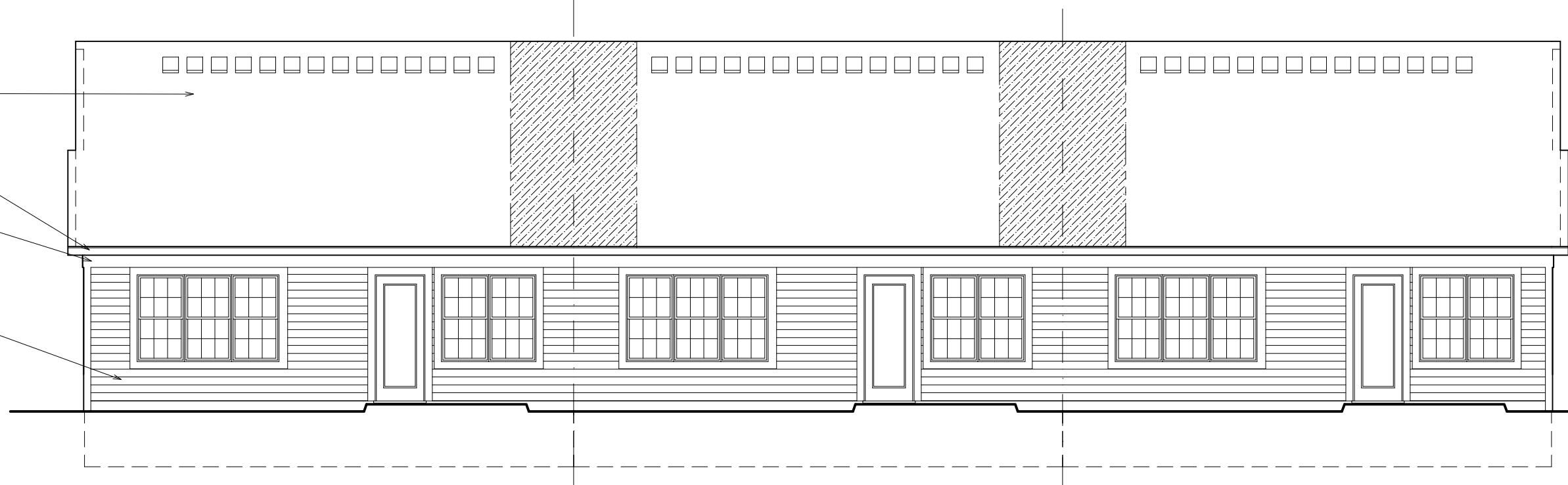
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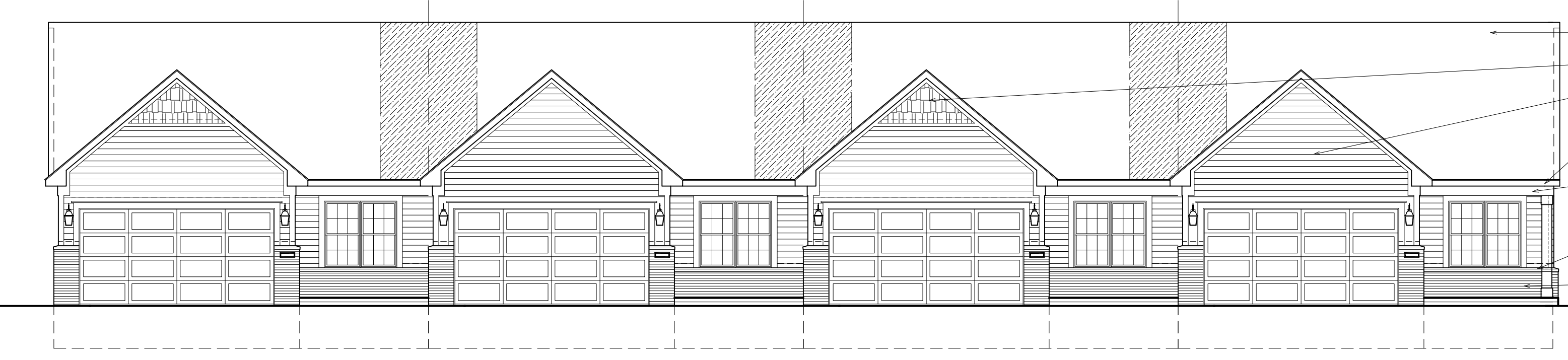
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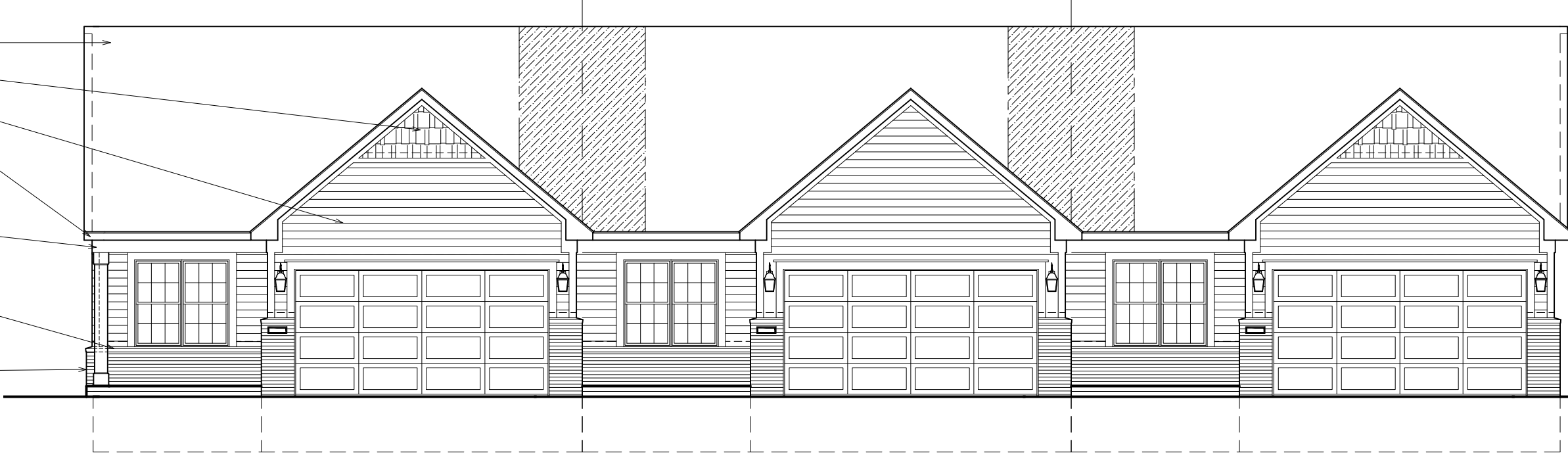
8 BUILDING E (UNITS 13-16) - REAR ELEVATION
 A201 SINGLE STORY TYPE "B" SCALE: 1/8" = 1'-0"



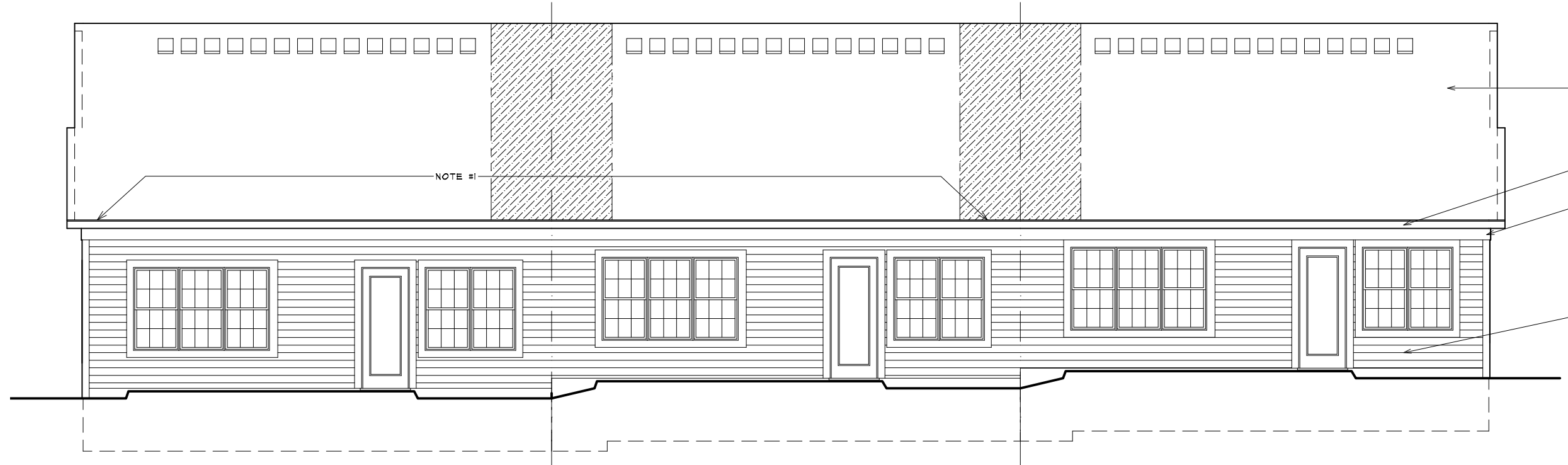
6 BUILDINGS C,D,N,O - REAR ELEVATION
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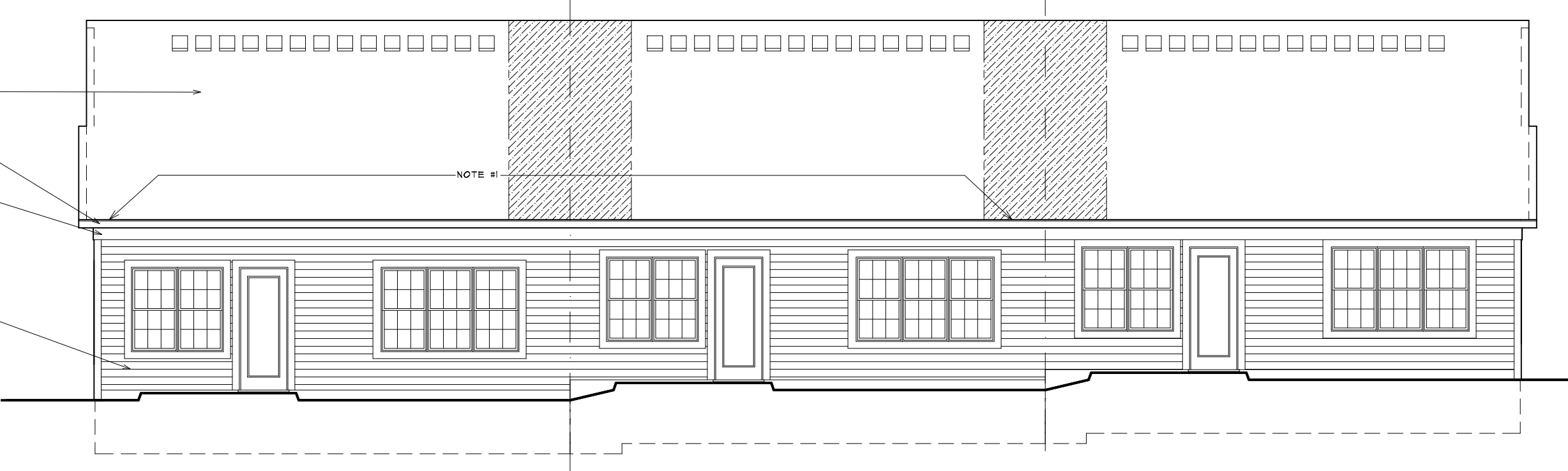
7 BUILDING E (UNITS 13-16) - FRONT ELEVATION
 A201 SINGLE STORY TYPE "B" SCALE: 1/8" = 1'-0"



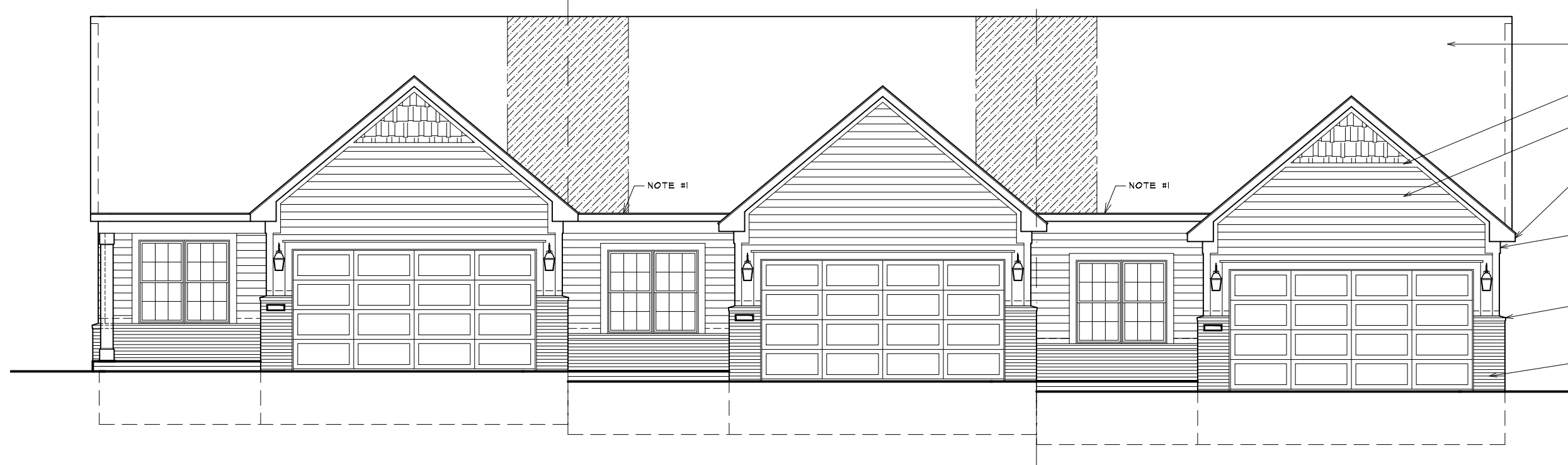
5 BUILDINGS C,D,N,O - FRONT ELEVATION
 A201 SINGLE STORY TYPE "B" - (UNITS 7-9, 10-12, 49-51, 52-54) SCALE: 1/8" = 1'-0"



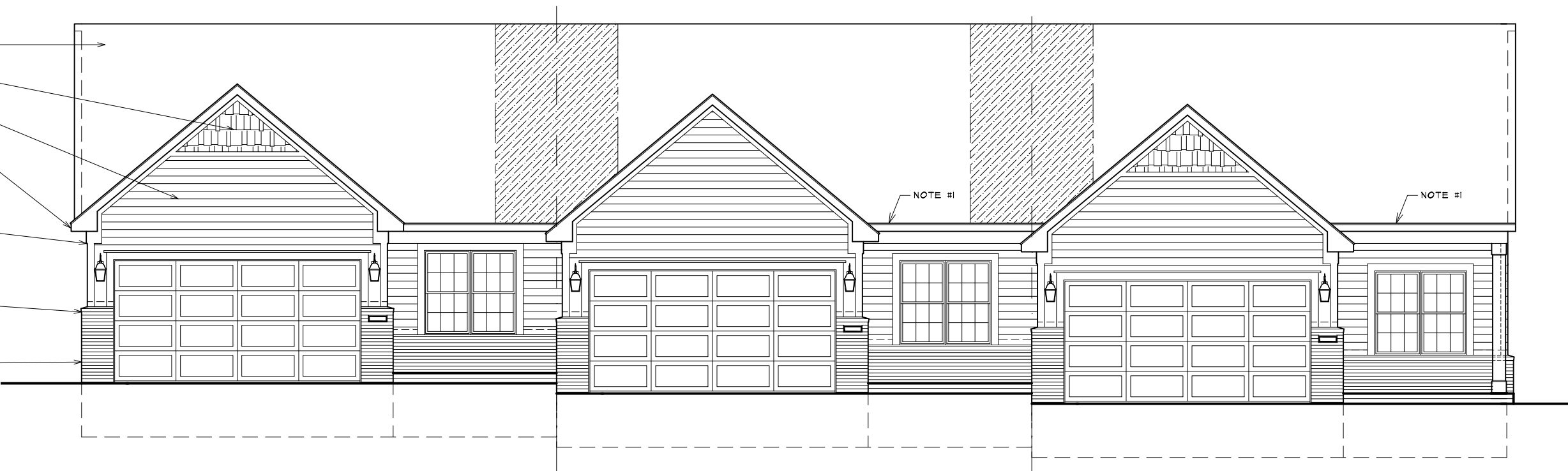
4 BUILDING B (UNITS 4-6) - REAR ELEVATION
 A201 SINGLE STORY TYPE "B" SCALE: 1/8" = 1'-0"



2 BUILDING A (UNITS 1-3) - REAR ELEVATION
 A201 SINGLE STORY TYPE "B" SCALE: 1/8" = 1'-0"



3 BUILDING B (UNITS 4-6) - FRONT ELEVATION
 A201 SINGLE STORY TYPE "B" SCALE: 1/8" = 1'-0"



1 BUILDING A (UNITS 1-3) - FRONT ELEVATION
 A201 SINGLE STORY TYPE "B" SCALE: 1/8" = 1'-0"

NOTES
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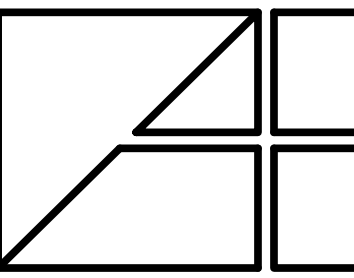
NOTE:
 REFER TO 1/4" SCALE ELEVATIONS ON SHEET A103 FOR ADDITIONAL NOTES AND DIMENSIONS. SEE SHEET S-1 FOR COLOR SCHEME OF BUILDINGS.
 NOTE #1:
 RAISE HEELS AS NECESSARY TO ELIMINATE STEP IN THE ROOF.

SEE 1/4" SCALE PLANS FOR SIDE ELEVATION SHEET A 101

NOTE: SEE A5-1 FOR INDIVIDUAL BUILDING COLOR SCHEME

ALL INTERIOR PARTITION DIMENSIONS ARE 3 1/2" UNLESS NOTED OTHERWISE.
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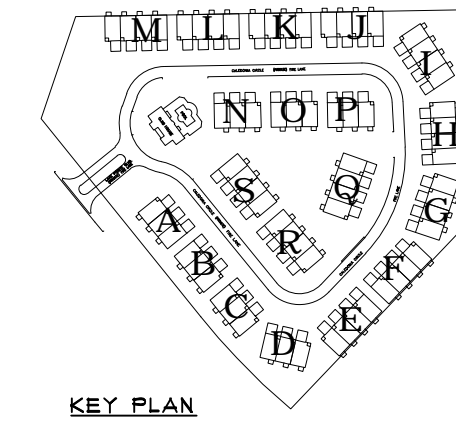
BUILDING PLANS
 SINGLE STORY TYPE "B" UNITS

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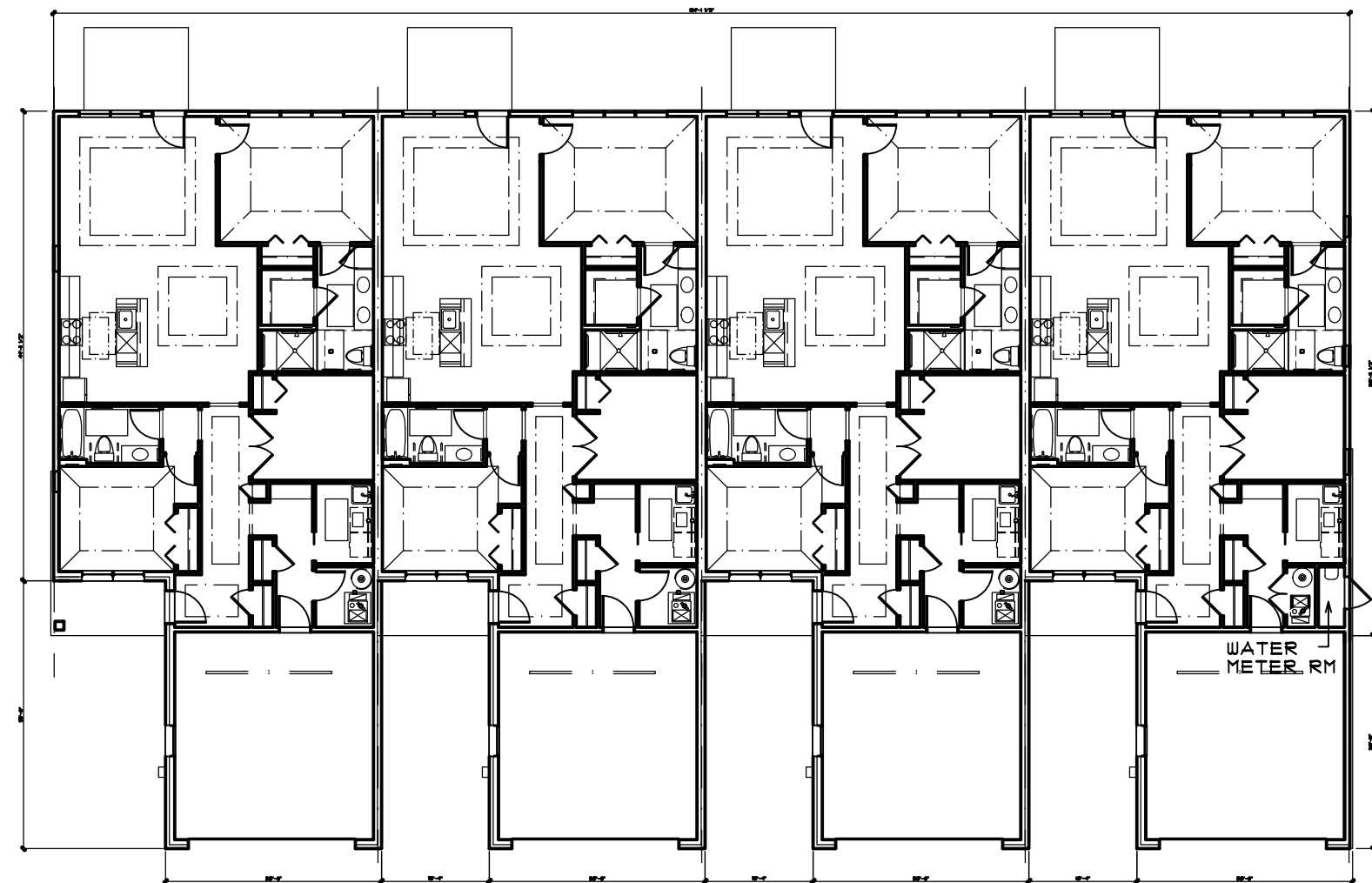
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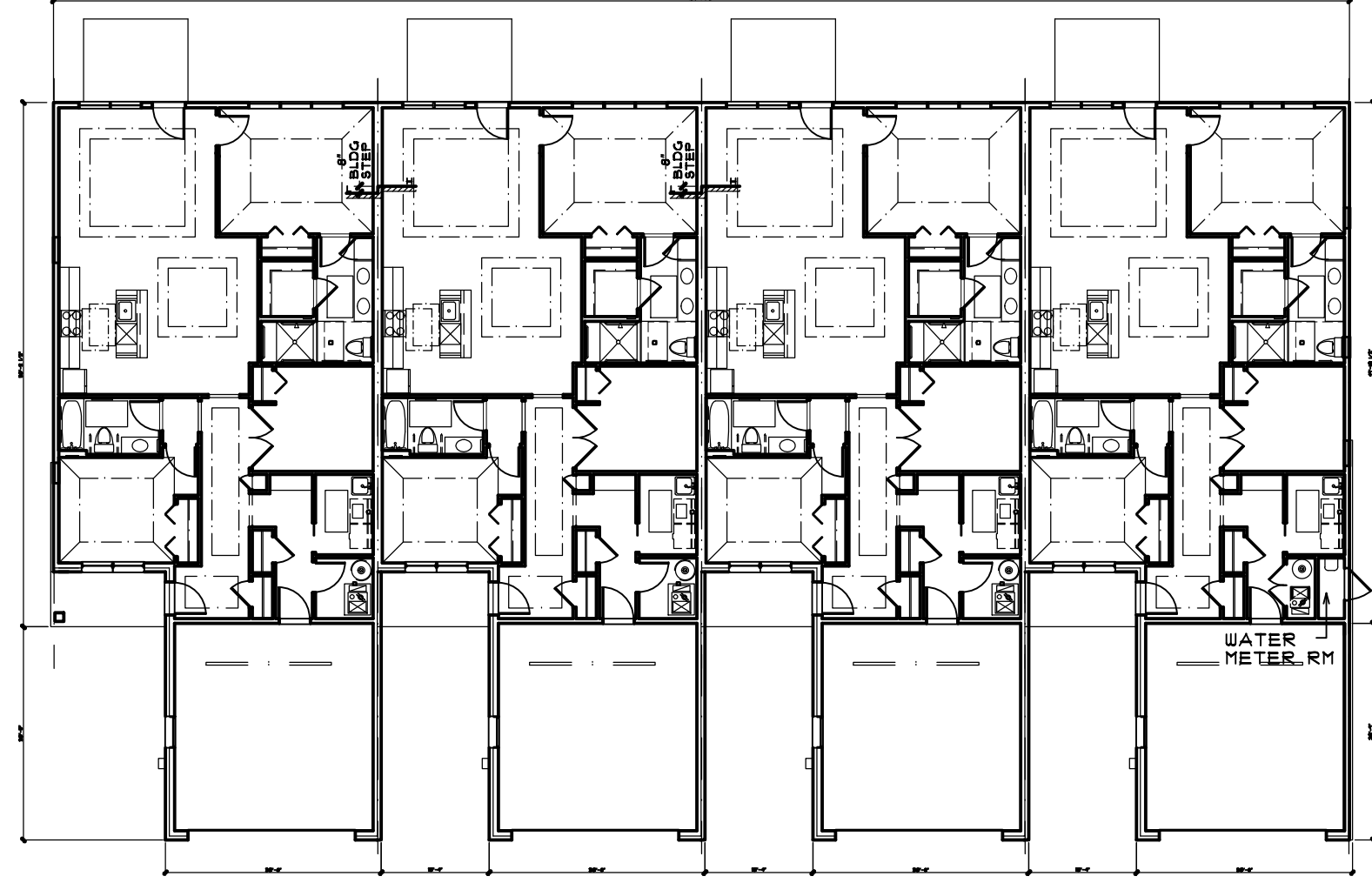


- NOTE:
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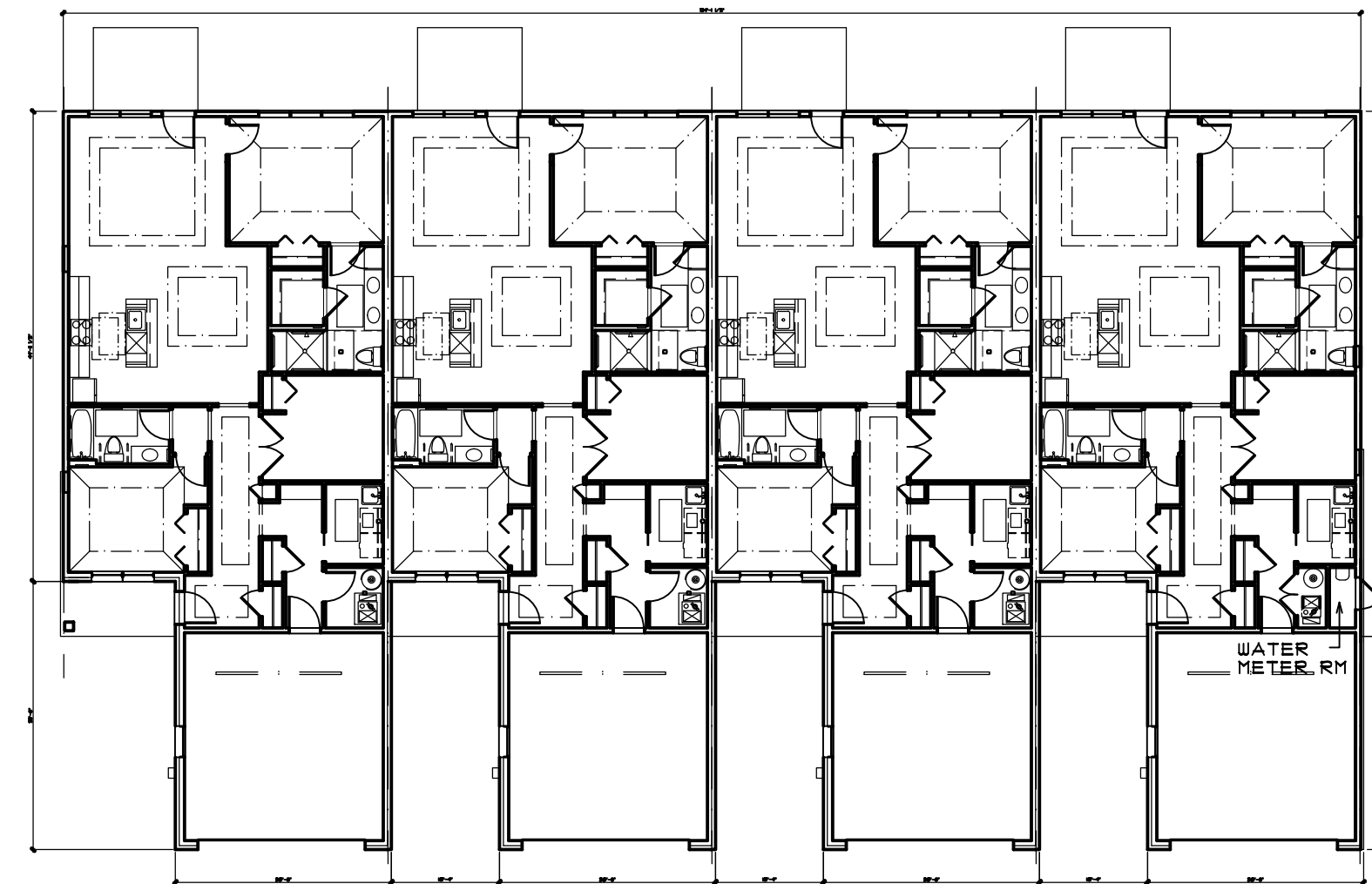
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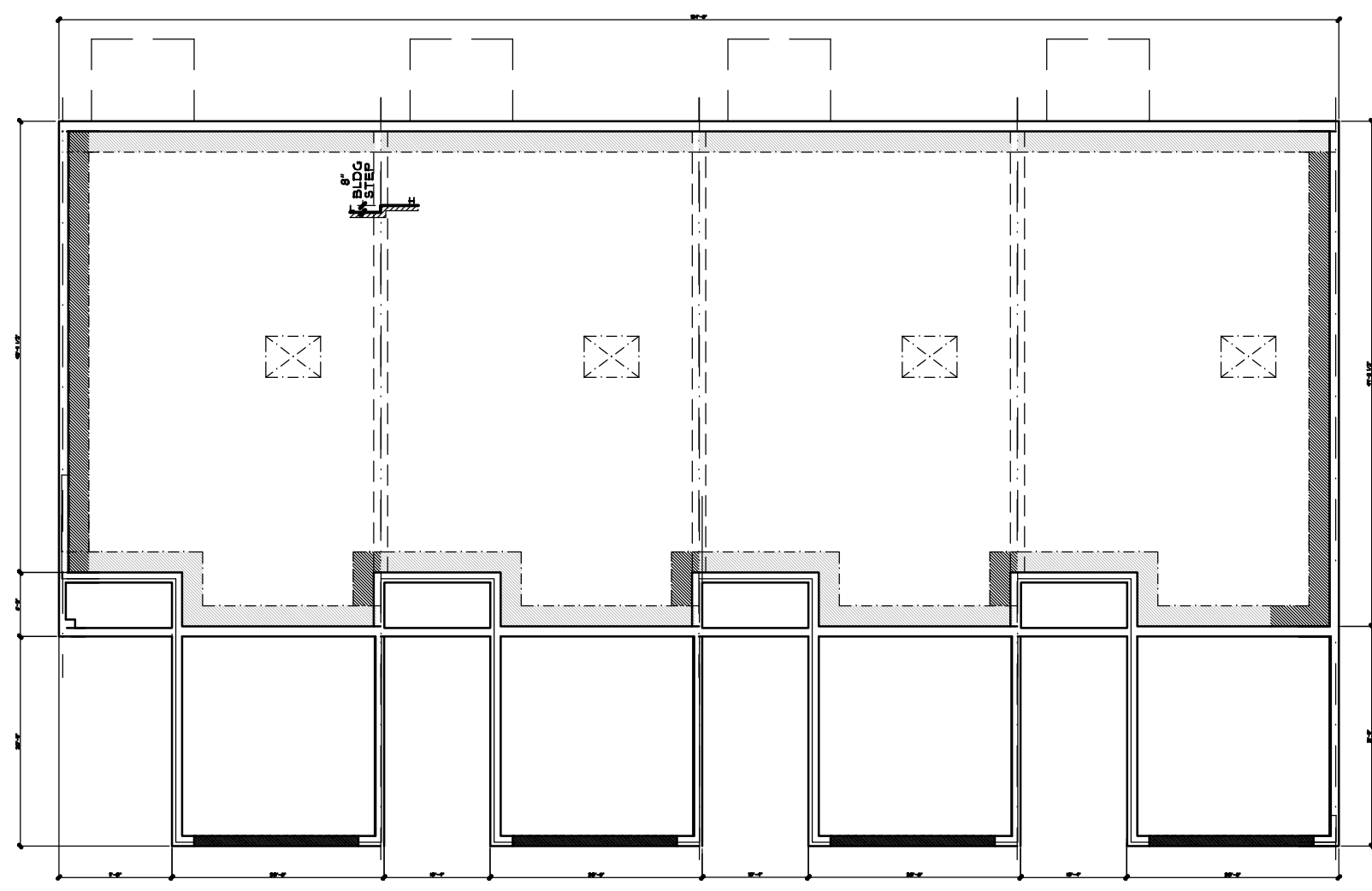
6 BLDG I - FIRST FLOOR PLAN
 A202 UNITS (29-32) SCALE: 1/16" = 1'-0"



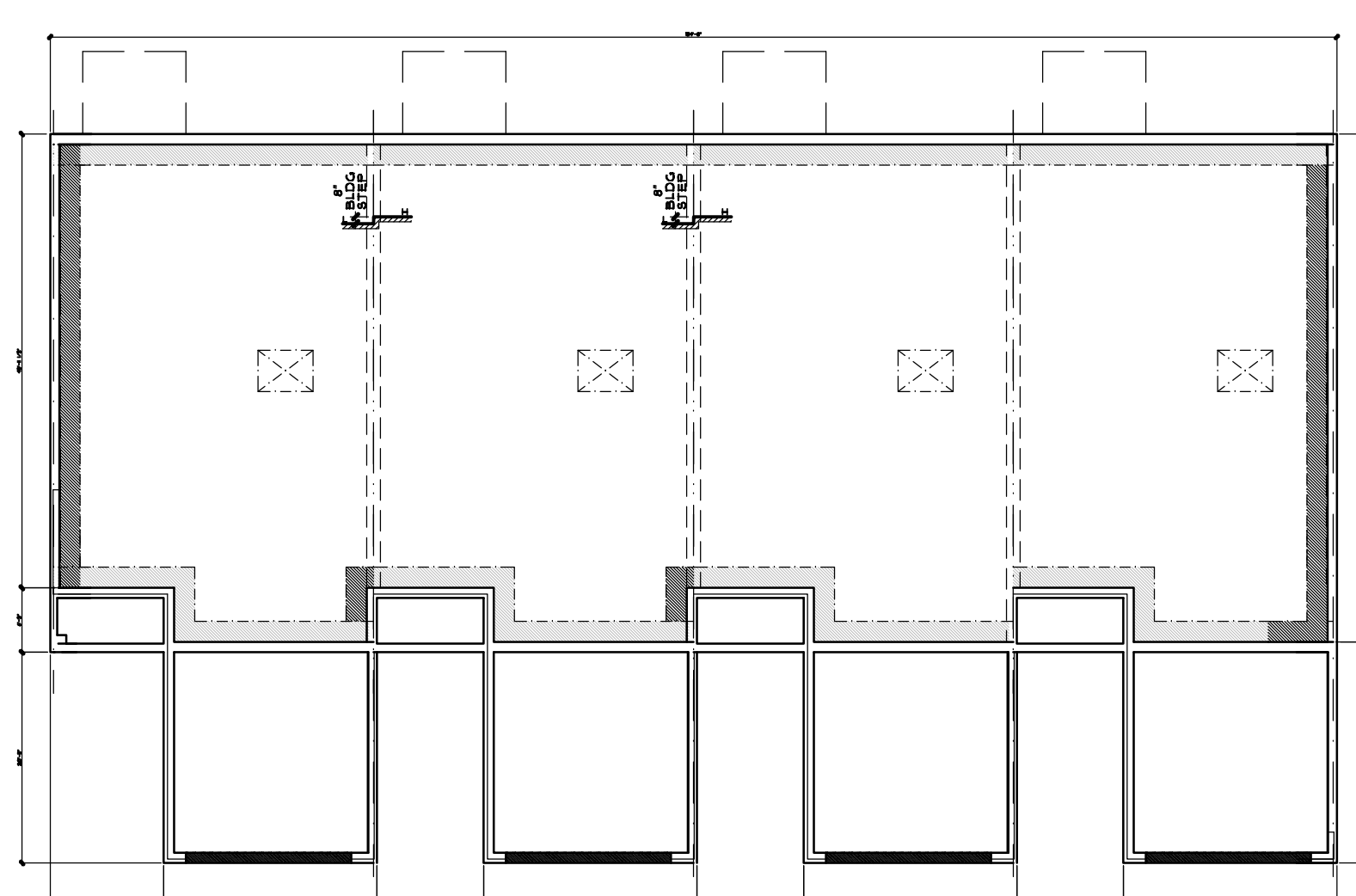
4 BLDG H - FIRST FLOOR PLAN
 A202 UNITS (25-28) SCALE: 1/16" = 1'-0"



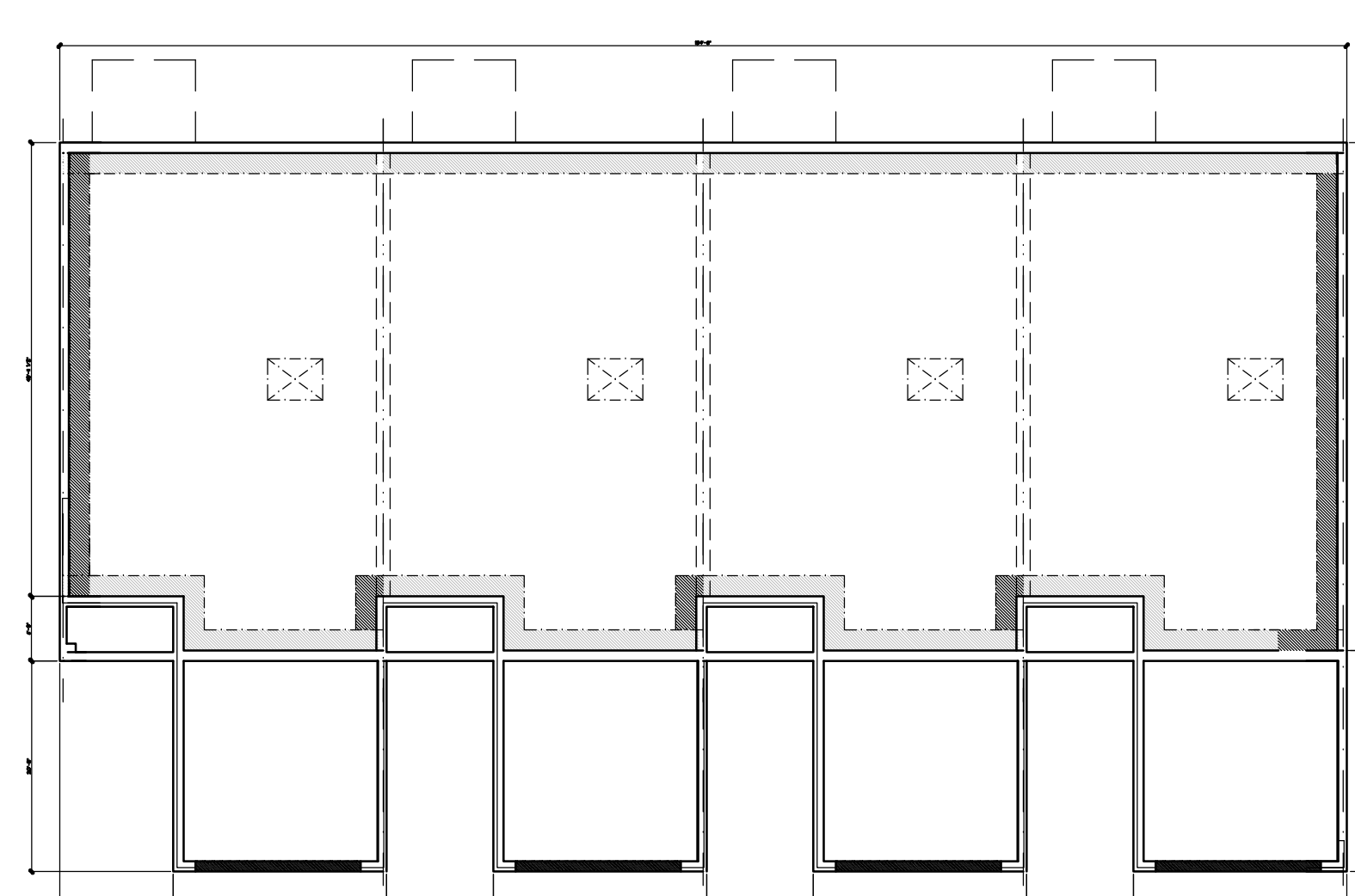
2 BLDGS F,G,K,L,M,Q - FIRST FLOOR PLAN
 A202 UNITS (17-20, 21-24, 37-40, 41-44, 45-48, 58-61) SCALE: 1/16" = 1'-0"



5 BLDG I - FOUNDATION PLAN
 A202 UNITS (29-32) SCALE: 1/16" = 1'-0"



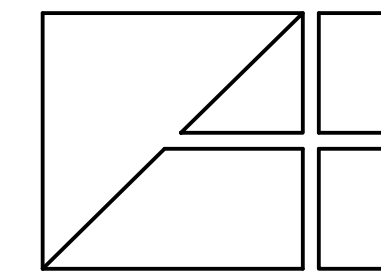
3 BLDG H - FOUNDATION PLAN
 A202 UNITS (25-28) SCALE: 1/16" = 1'-0"



1 BLDGS F,G,K,L,M,Q - FOUNDATION PLAN
 A202 UNITS (17-20, 21-24, 37-40, 41-44, 45-48, 58-61) SCALE: 1/16" = 1'-0"

ALL INTERIOR PARTITION DIMENSIONS ARE 3 1/2" UNLESS NOTED OTHERWISE.
 BEFORE CONSTRUCTION OBTAIN WINDOW & DOOR ROUGH OPENING SIZES FROM WINDOW/DOOR SUPPLIER.
 SEE SHEETS N-1 - N-4 FOR ADDITIONAL NOTES REGARDING DRAWINGS & CONSTRUCTION.
 SEE SHEETS D1-D4 FOR ADDITIONAL DETAILS REGARDING DRAWINGS & CONSTRUCTION.
 DO NOT SCALE THESE DRAWINGS. USE CALCULATED DIMENSIONS. IF VARIATIONS OCCUR CONTACT ARCHITECT FOR CLARIFICATION.

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Interior Design
 2445 Franklin Road
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 248-334-5000

SHEET TITLE
 BUILDING ELEVATIONS

CLIENT/PROJECT
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JOB NUMBER
 2216

DATE

SHEET NUMBER
A203

NOTE:
 REFER TO 1/4" SCALE ELEVATIONS ON SHEET
 A103 FOR ADDITIONAL NOTES AND DIMENSIONS.
 SEE SHEET S-1 FOR COLOR SCHEME OF BUILDINGS.

NOTE 2:
 RAISE HEELS AS NECESSARY TO ELIMINATE STEP
 IN THE ROOF.

SEE
 1" SCALE PLANS FOR SIDE
 ELEVATION SHEET A101

NOTE: SEE A3-1 FOR
 INDIVIDUAL BUILDING COLOR
 SCHEME

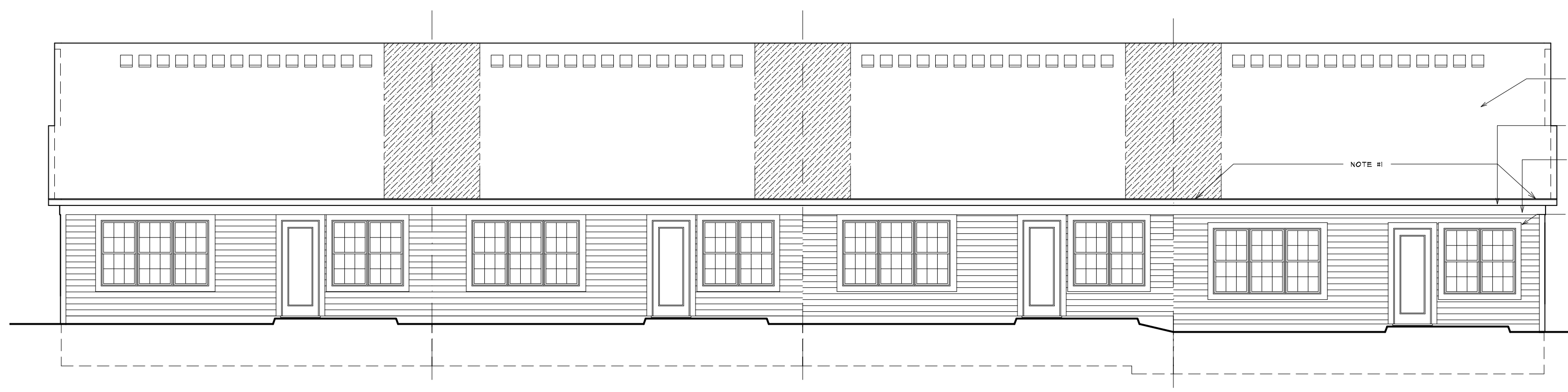
NOTES
 ALL EXTERIOR TRIM TO BE ALUMINUM WRAPPED
 OR VINYL. VERIFY EXACT LOCATIONS FOR EACH
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PROVIDE PEEP HOLES AND DEAD BOLTS AT ALL
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ALL DRYWALL TO BE READY TO BE PAINTED
 BRICK ROWLOCK SILLS MAY BE REPLACED WITH
 PRECAST STONE OR CONCRETE. VERIFY WITH
 BUILDER PRIOR TO CONSTRUCTION.

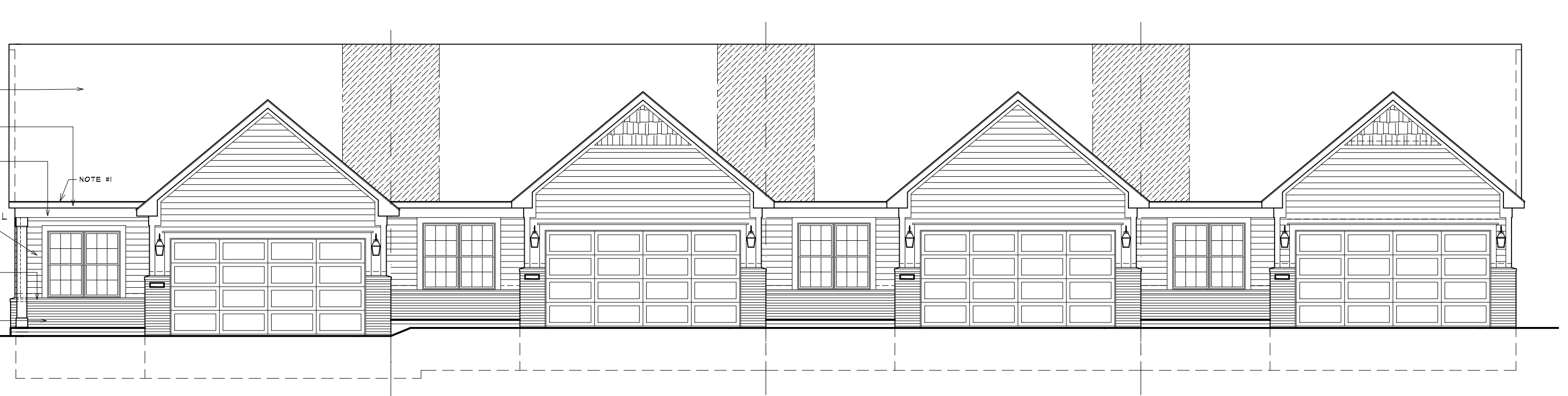
FIXED GLASS WINDOWS IN GABLES TO HAVE
 OPAQUE FINISH ON INTERIOR OF GLASS SO
 FRAMING OF ROOF NOT VISIBLE FROM EXTERIOR.

PROVIDE RECESS LIGHT IN SOFFIT ABOVE DOOR
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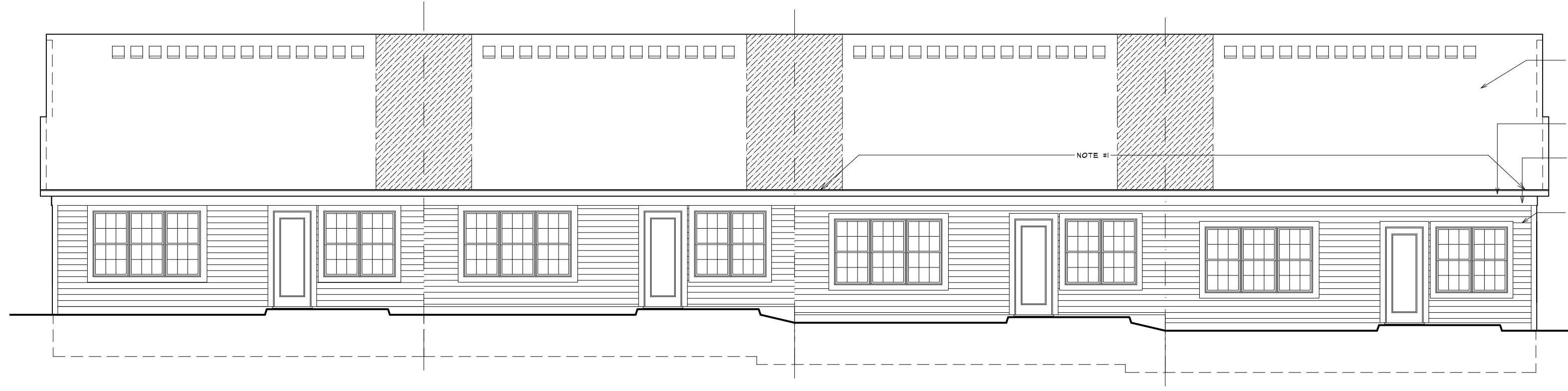
6 BUILDINGS I - REAR ELEVATION
 A203 SINGLE STORY TYPE "B" - UNITS (29-32)

SCALE: 1/8" = 1'-0"



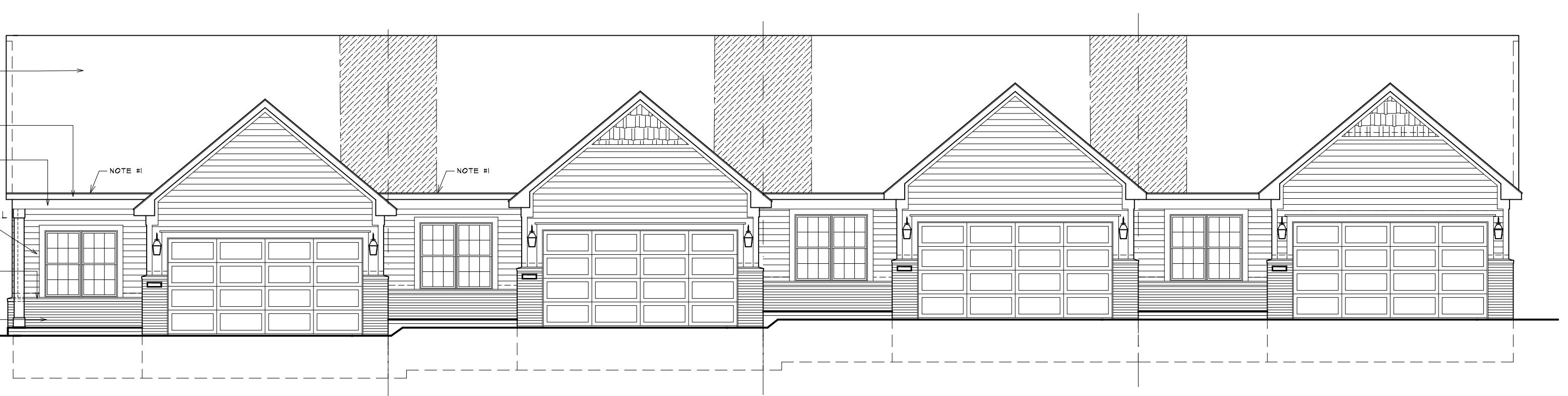
5 BUILDINGS I - FRONT ELEVATION
 A203 SINGLE STORY TYPE "B" - UNITS (29-32)

SCALE: 1/8" = 1'-0"



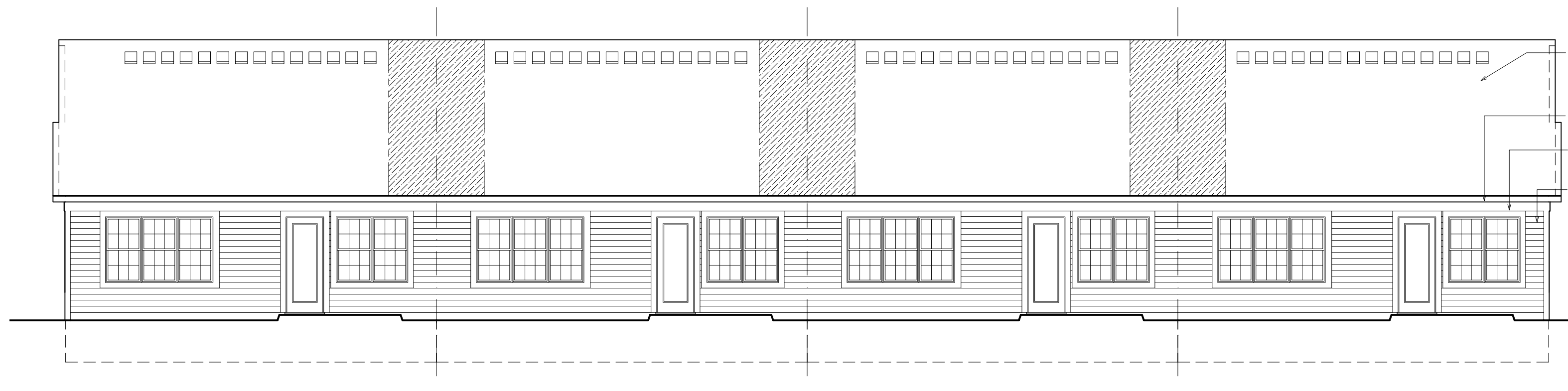
4 BUILDING H - REAR ELEVATION
 A203 SINGLE STORY TYPE "B" - UNITS (25-28)

SCALE: 1/8" = 1'-0"



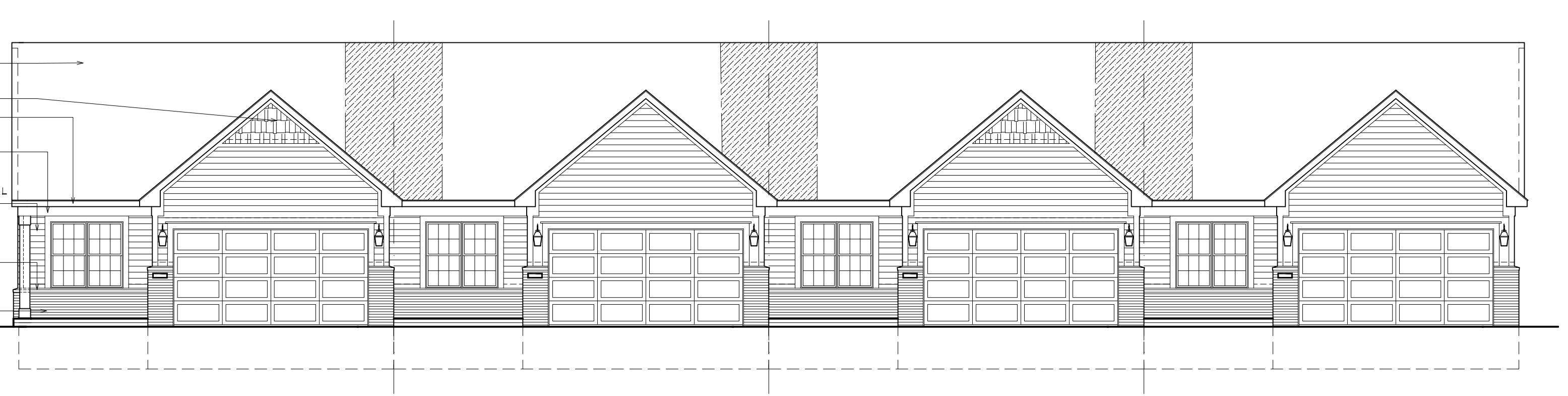
3 BUILDING H - FRONT ELEVATION
 A203 SINGLE STORY TYPE "B" - UNITS (25-28)

SCALE: 1/8" = 1'-0"



2 BUILDINGS F,G,K,L,M,Q - REAR ELEVATION
 A203 SINGLE STORY TYPE "B" - UNITS (17-20, 21-24, 37-40, 41-44, 45-48, 58-61)

SCALE: 1/8" = 1'-0"



1 BUILDINGS F,G,K,L,M,Q - FRONT ELEVATION
 A203 SINGLE STORY TYPE "B" - UNITS (17-20, 21-24, 37-40, 41-44, 45-48, 58-61)

SCALE: 1/8" = 1'-0"

ALL INTERIOR PARTITION DIMENSIONS ARE
 3 1/2" UNLESS NOTED OTHERWISE.

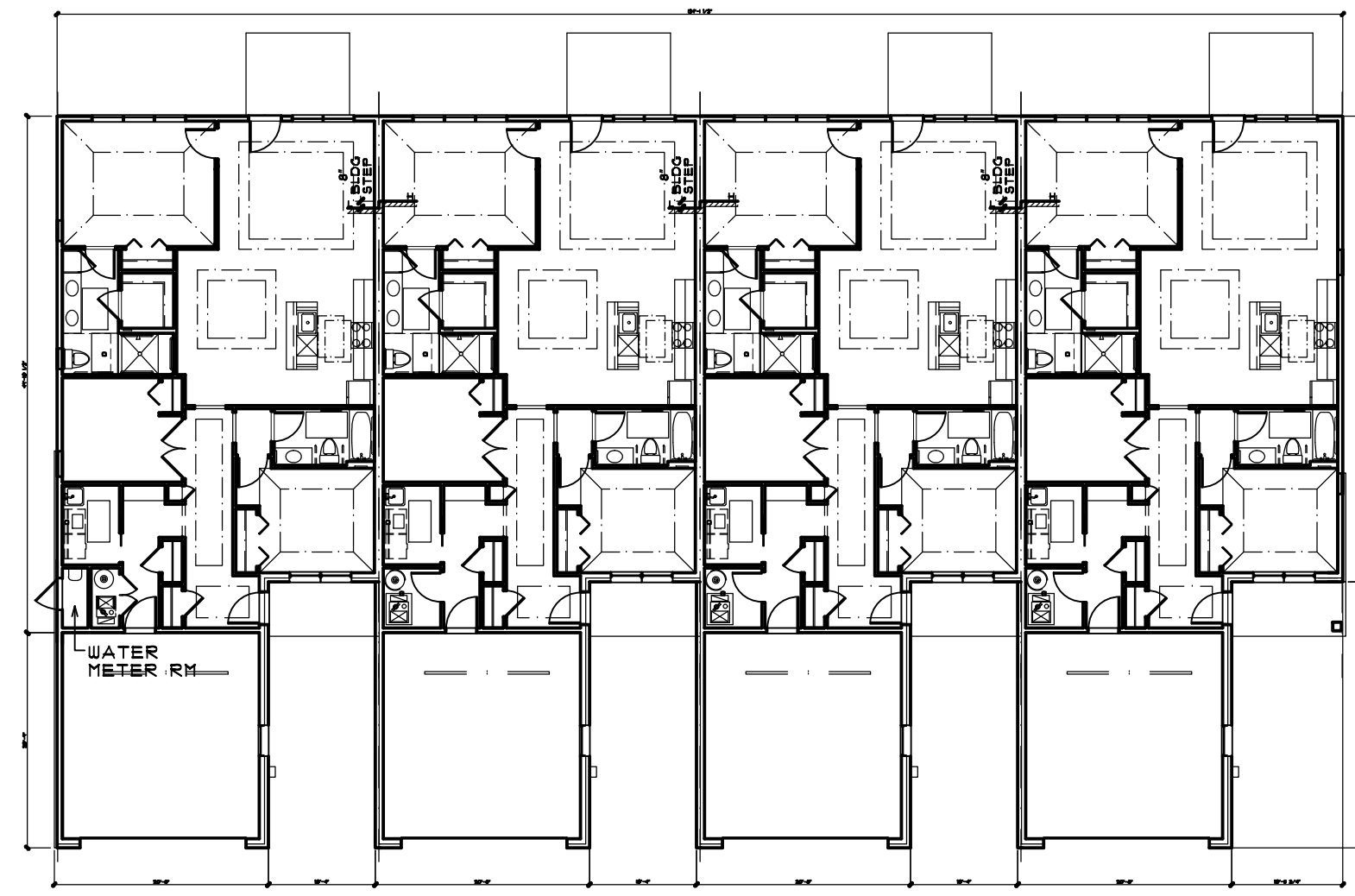
BEFORE CONSTRUCTION OBTAIN WINDOW & DOOR ROUGH
 OPENING SIZES FROM WINDOW/DOOR SUPPLIER.

SEE SHEETS N-1 - N-4 FOR ADDITIONAL DETAILS
 REGARDING DRAWINGS & CONSTRUCTION.

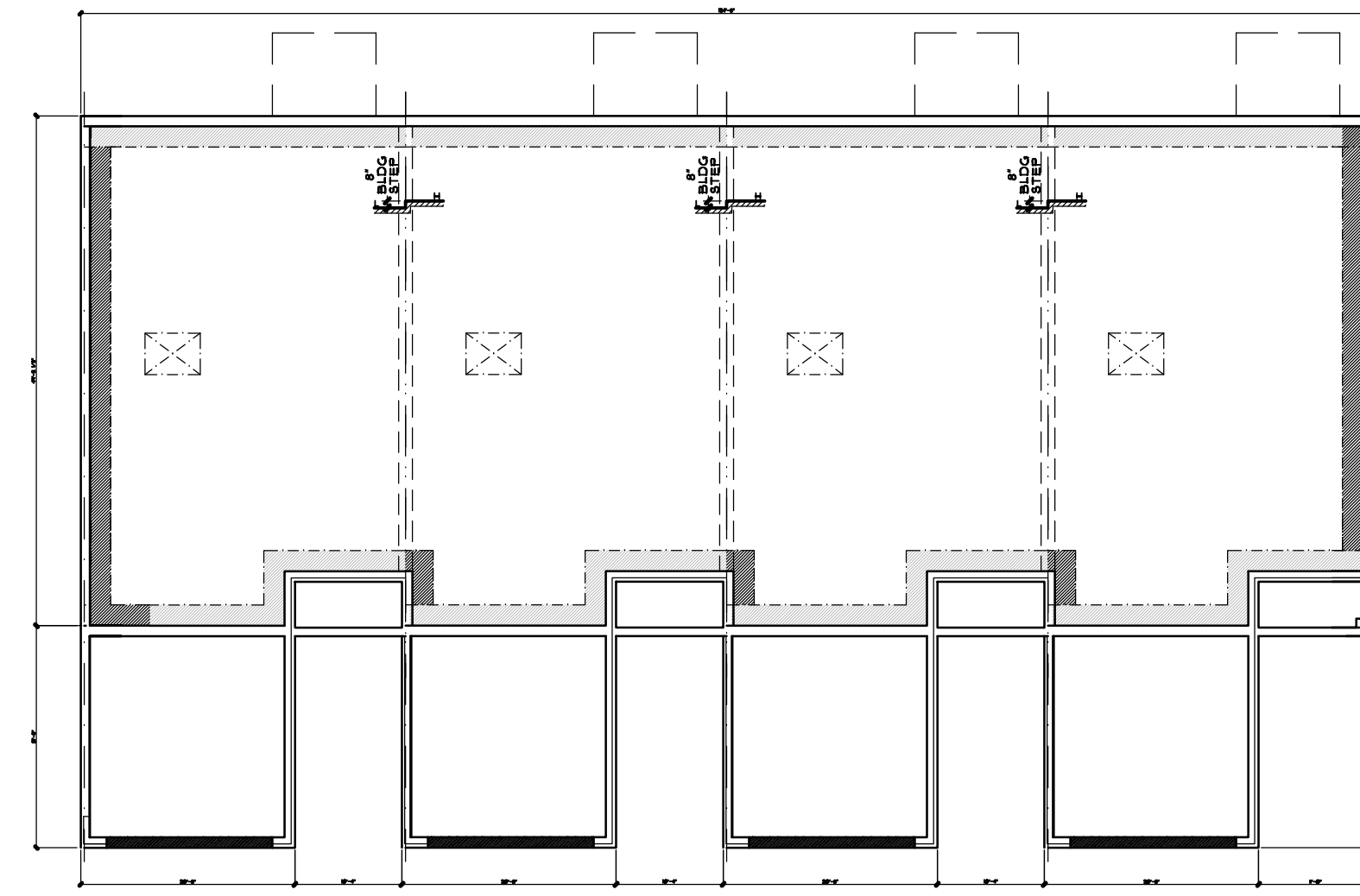
SEE SHEETS D1-D4 FOR ADDITIONAL NOTES
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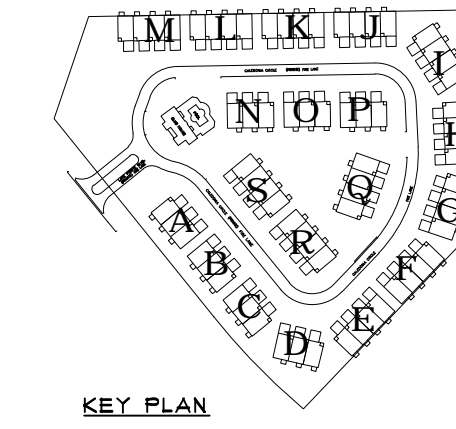
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8 BLDG S - FIRST FLOOR PLAN
A204 UNITS (66-69) SCALE: 1/16" = 1'-0"



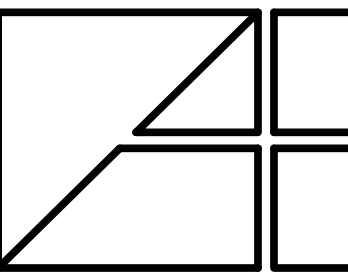
7 BLDG S - FOUNDATION PLAN
A204 UNITS (66-69) SCALE: 1/16" = 1'-0"



NOTE:

- REFER TO 1/4" SCALE UNIT PLANS FOR ALL NOTES, DIMENSIONS, DETAILS AND ALL ADDITIONAL INFORMATION NOT SHOWN.
- SEE STRUCTURAL ENGINEERING PLANS (BY OTHERS) FOR ALL STRUCTURAL INFORMATION. ALL FOUNDATION INFORMATION REGARDING BEARING CAPACITY OF SOIL CAN VARY ON A BUILDING BY BUILDING BASIS.
- REFER TO CIVIL ENGINEERING PLANS (BY OTHERS) FOR ADDITIONAL INFORMATION ON BUILDING STEPS & GRADING INFORMATION.

NOTE: CONFIRM WATER METER ROOM LOCATION W/ CIVIL PRIOR TO CONSTRUCTION.



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 LAKE POINTE
 MULTIFAMILY COMMUNITY
 WHITE LAKE, MICHIGAN

SHEET TITLE:
 BUILDING PLANS

SINGLE STORY TYPE "B" UNITS

CLIENT/PROJECT:
 LAKE POINTE
 MULTIFAMILY COMMUNITY
 WHITE LAKE, MICHIGAN

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REVISIONS
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 COMMENT RESPONSE
 2024 02 06

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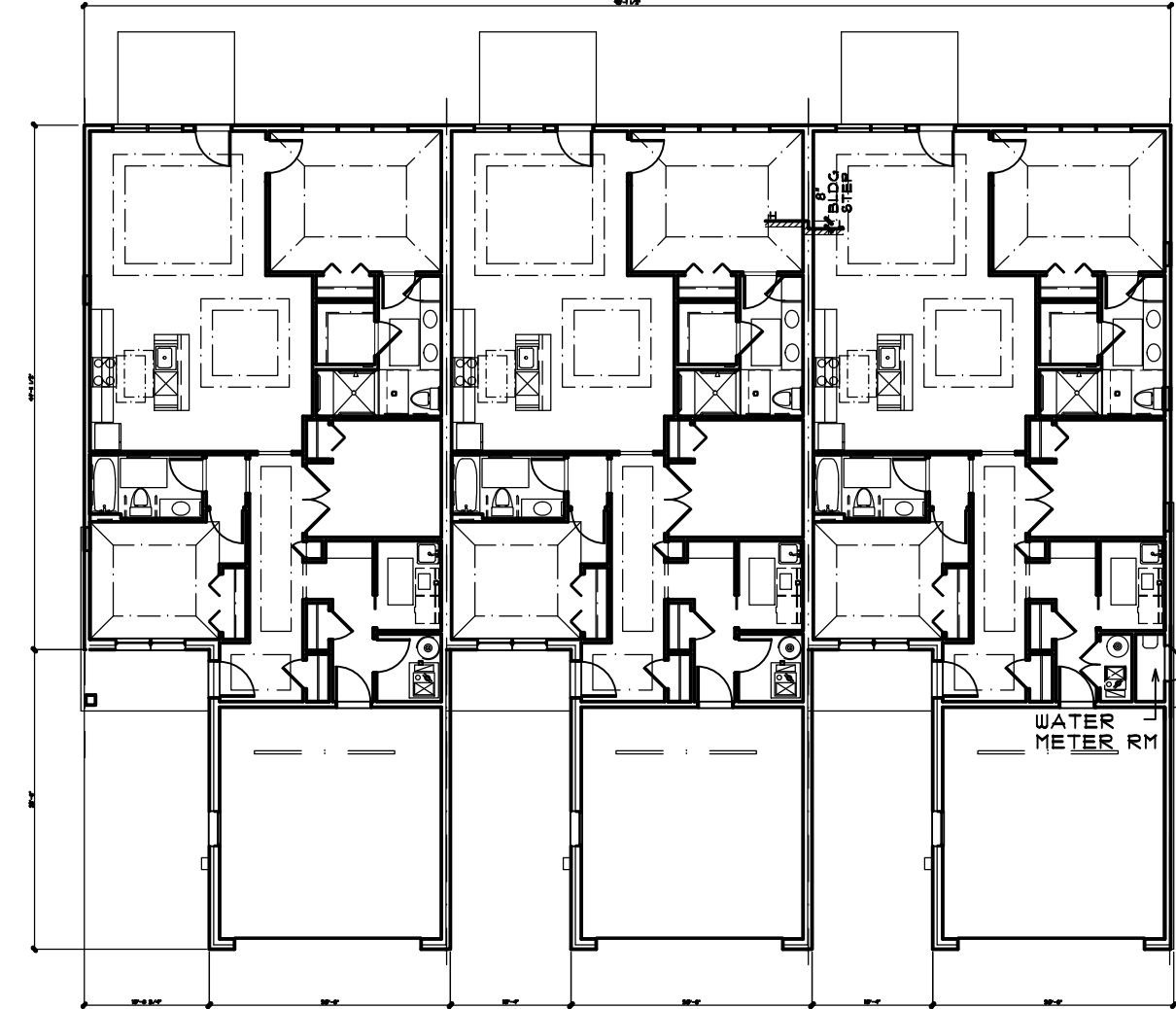
JOB NUMBER:
 2216
DATE:

SHEET NUMBER:
A204

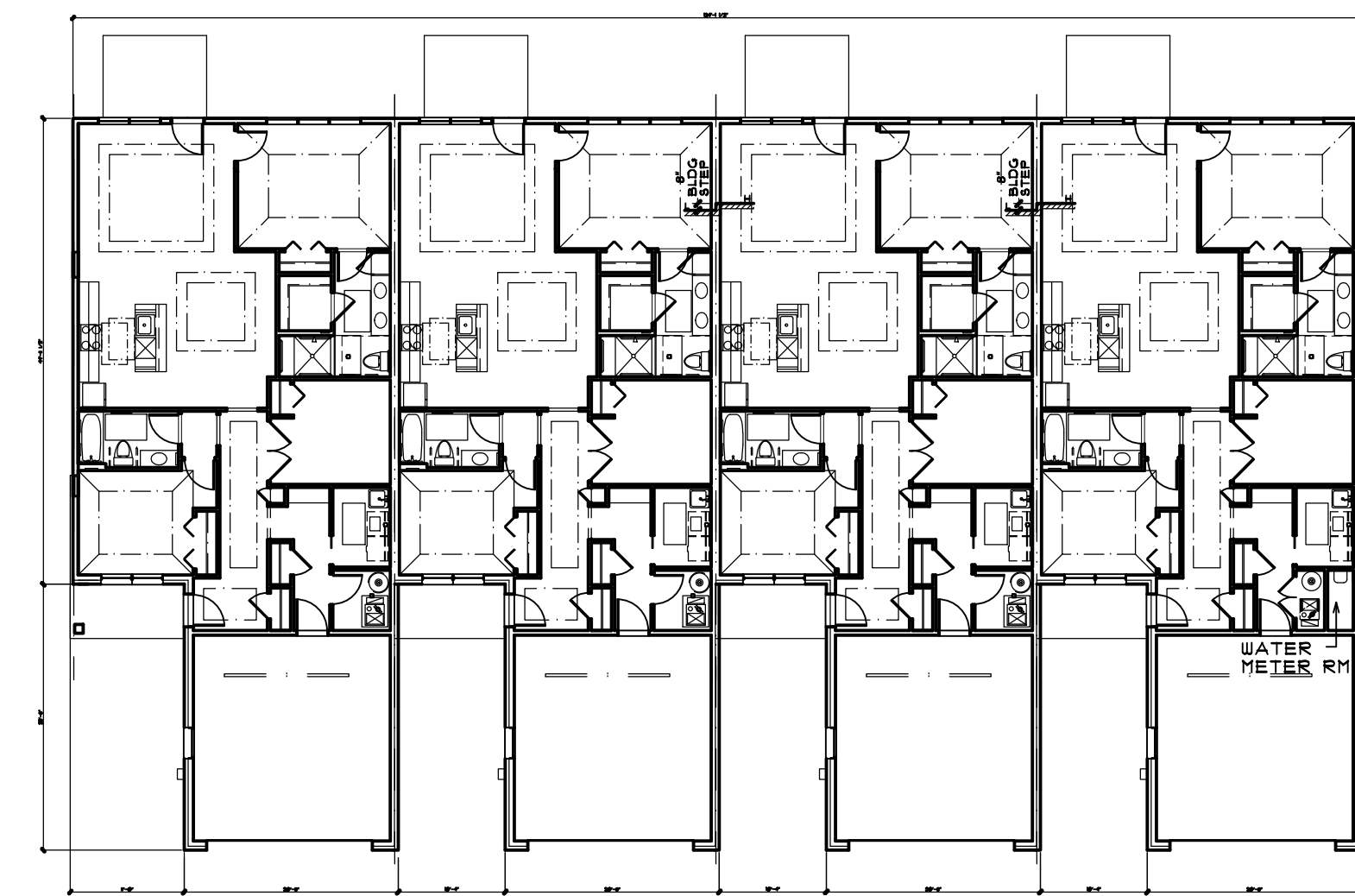
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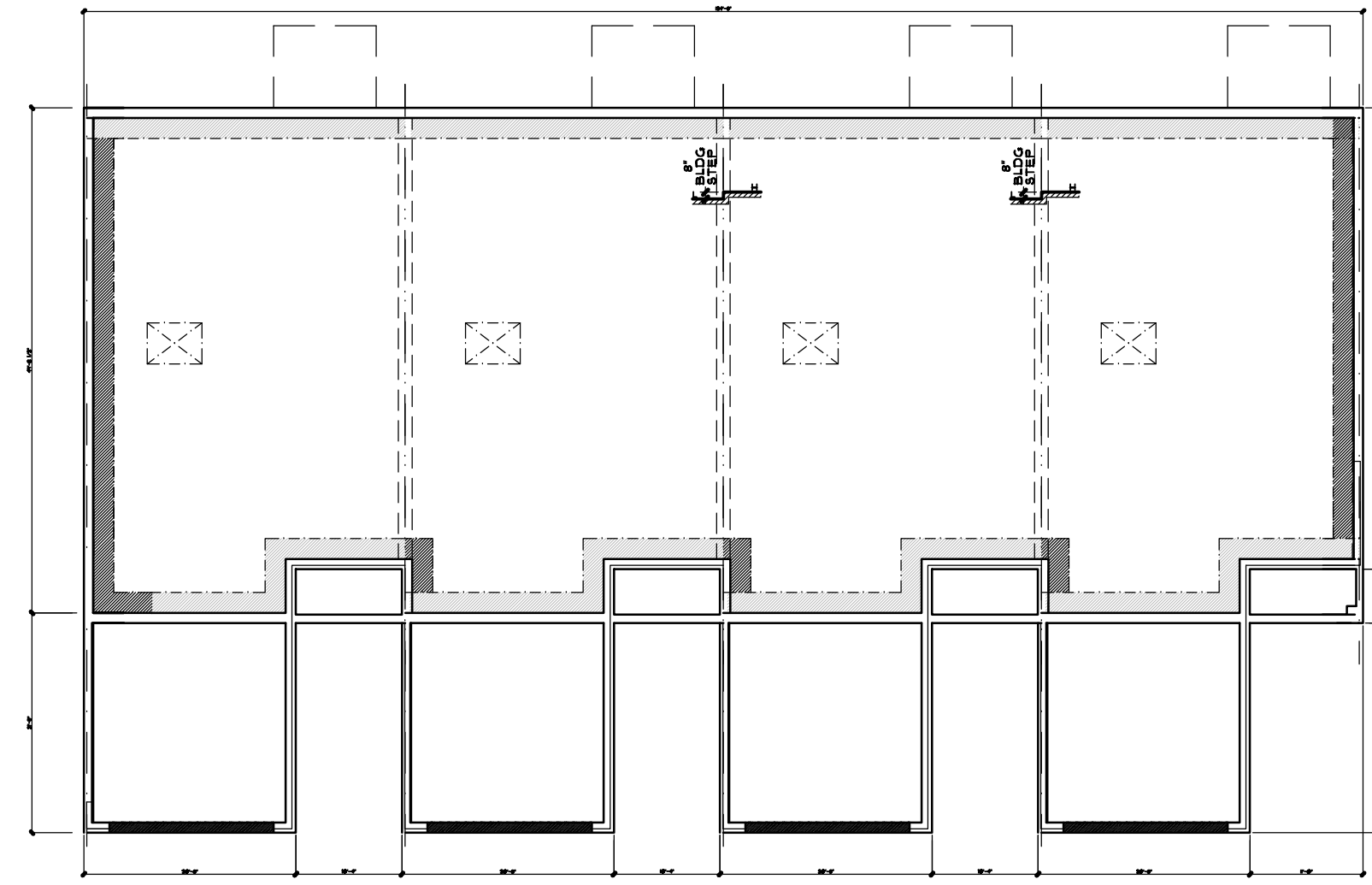
6 BLDG R - FIRST FLOOR PLAN
A204 UNITS (62-65) SCALE: 1/16" = 1'-0"



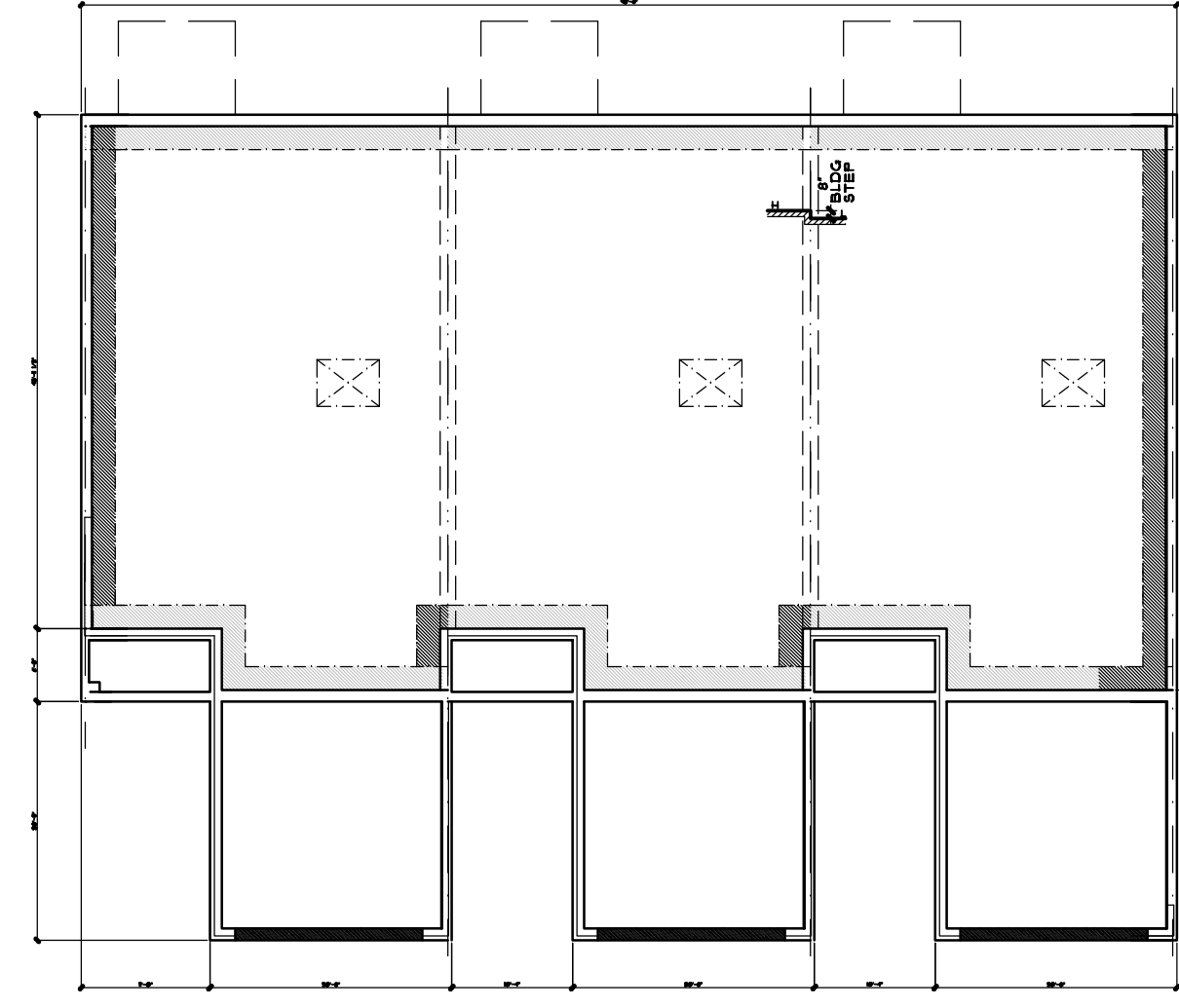
4 BLDG P - FIRST FLOOR PLAN
A204 UNITS (55-57) SCALE: 1/16" = 1'-0"



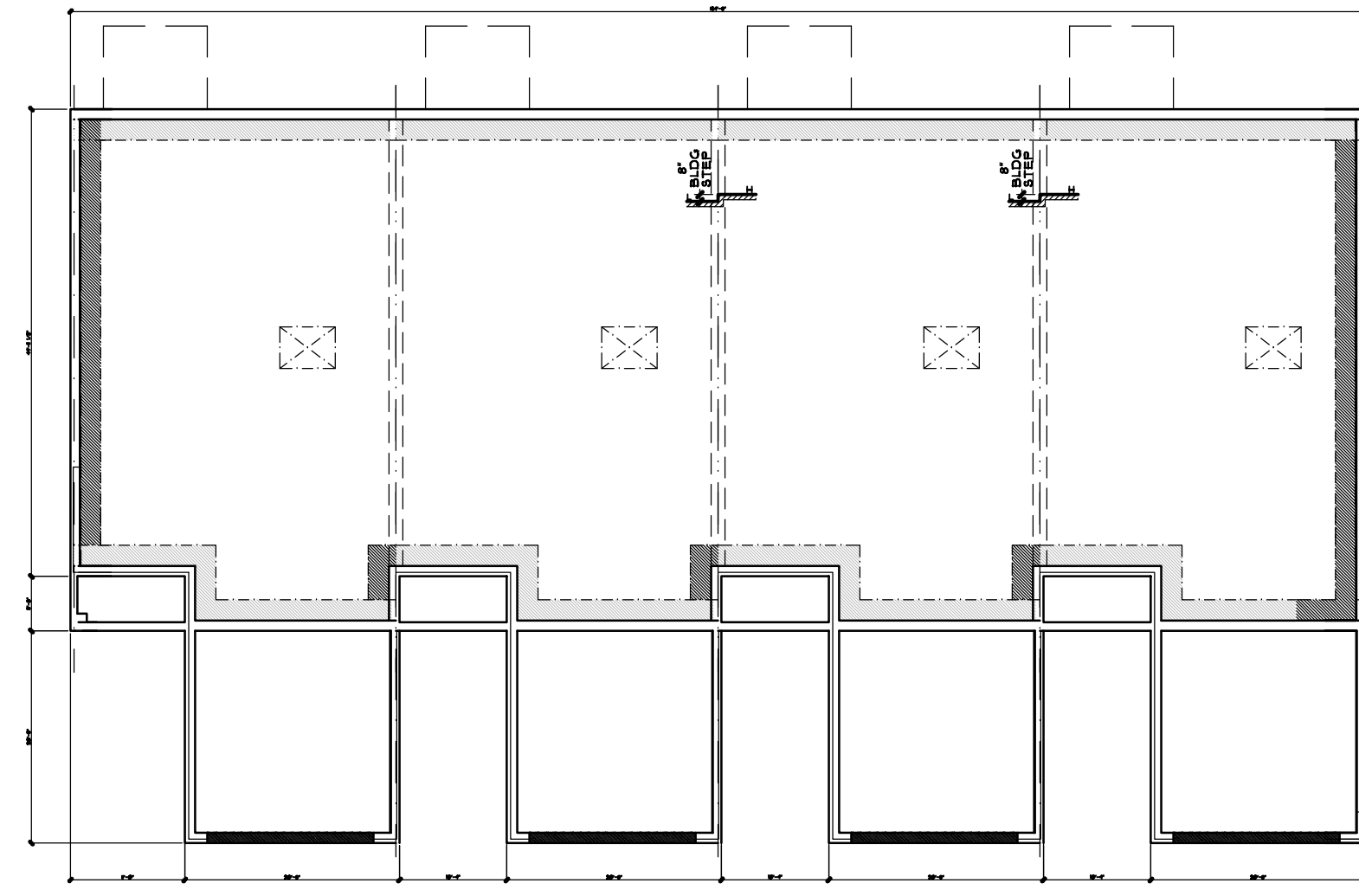
2 BLDG J - FIRST FLOOR PLAN
A204 UNITS (33-36) SCALE: 1/16" = 1'-0"



5 BLDG R - FOUNDATION PLAN
A204 UNITS (62-65) SCALE: 1/16" = 1'-0"



3 BLDG P - FOUNDATION PLAN
A204 UNITS (55-57) SCALE: 1/16" = 1'-0"



1 BLDG J - FOUNDATION PLAN
A204 UNITS (33-36) SCALE: 1/16" = 1'-0"

ALL INTERIOR PARTITION DIMENSIONS ARE 3/16" UNLESS NOTED OTHERWISE.

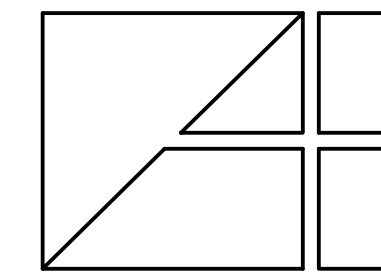
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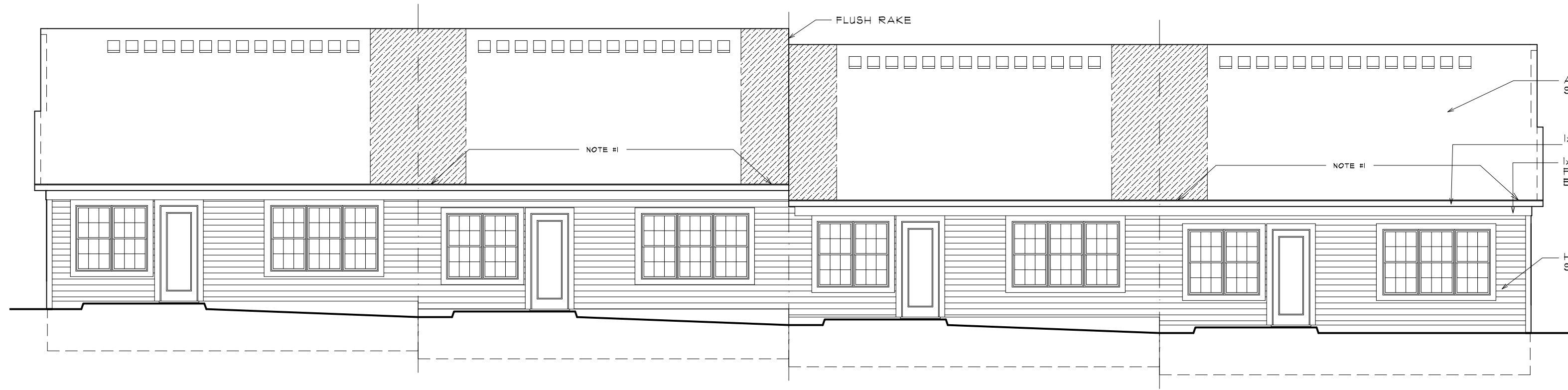
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 22-10-18 OWNER COMMENT RESPONSE
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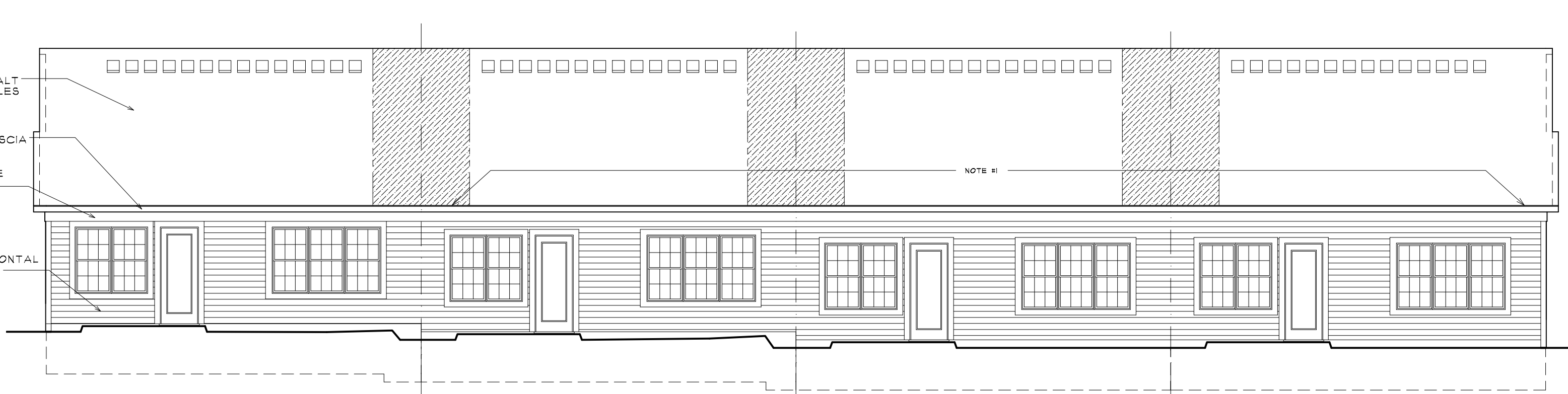
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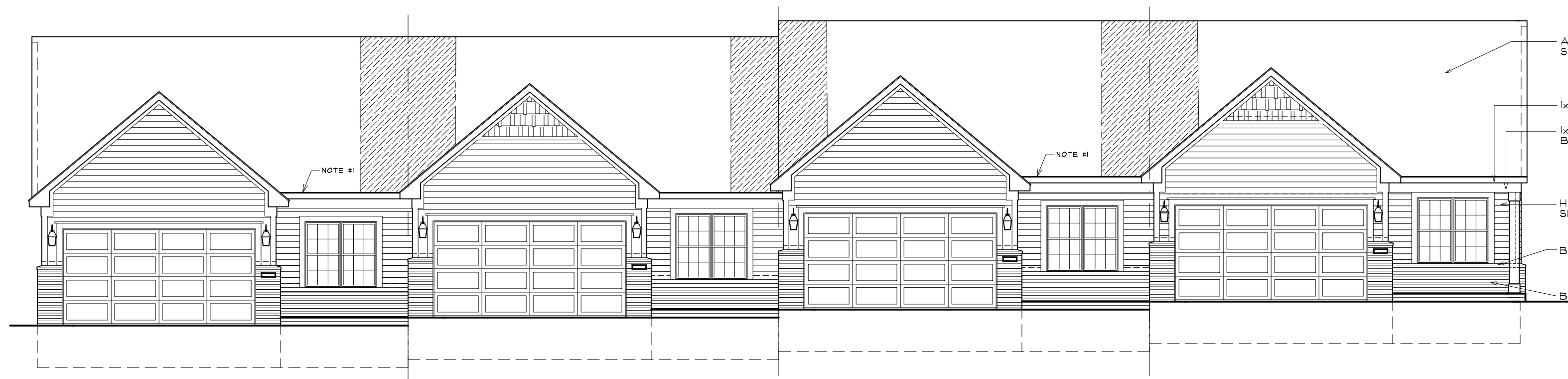
ALEXANDER V. BOGAERTS + ASSOCIATES, P.C. ■ ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN



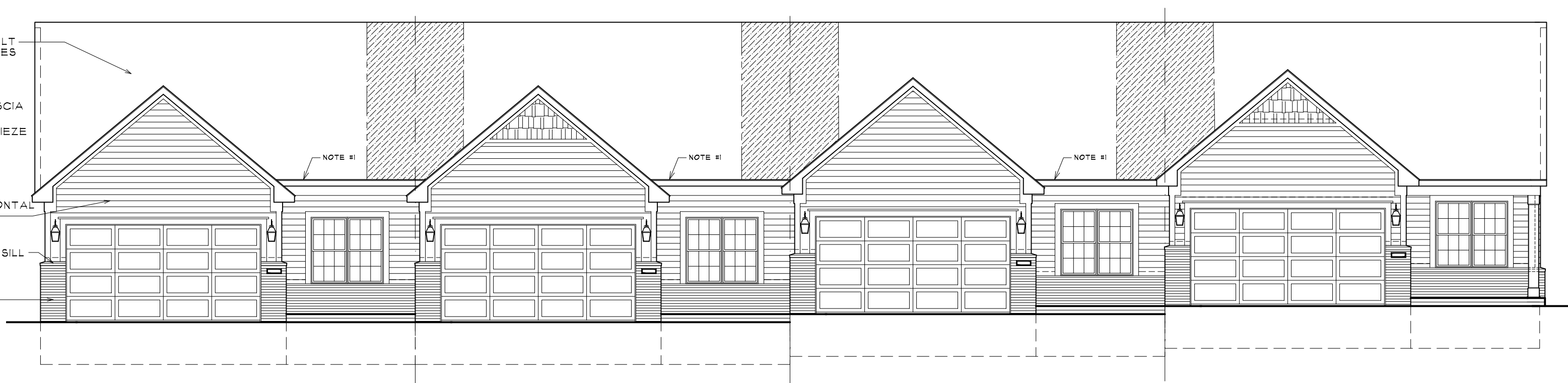
8 BUILDING S (UNITS 66-69) - REAR ELEVATION
 SINGLE STORY TYPE "B"
 SCALE: 1/8" = 1'-0"



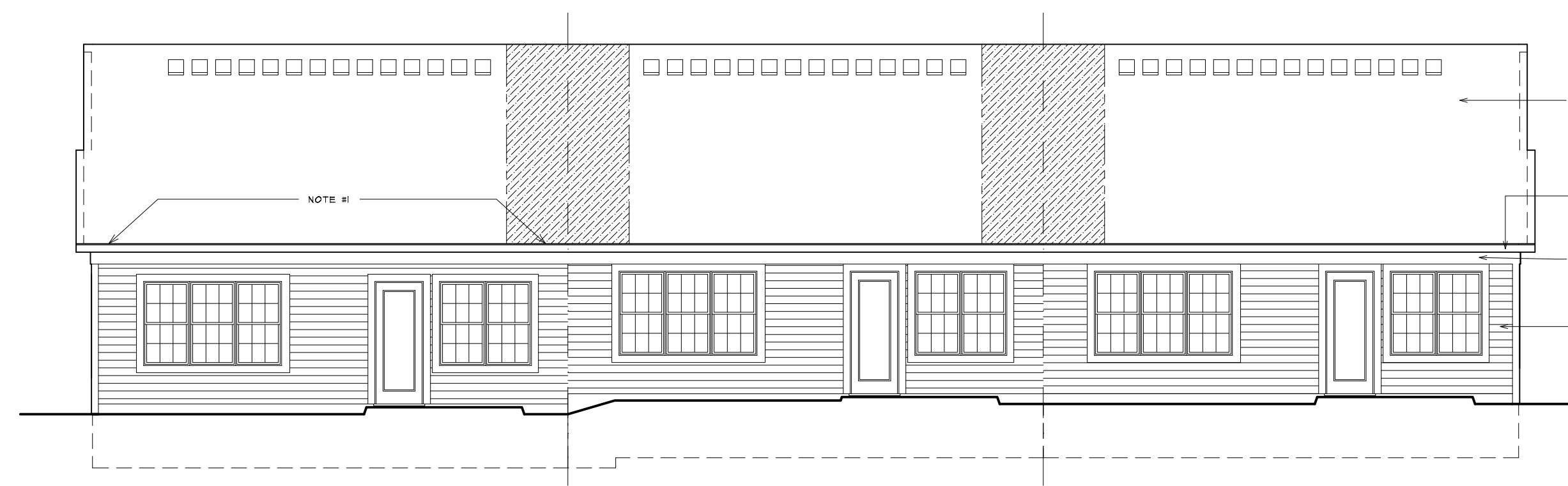
6 BUILDING R (UNITS 62-65) - REAR ELEVATION
 SINGLE STORY TYPE "B"
 SCALE: 1/8" = 1'-0"



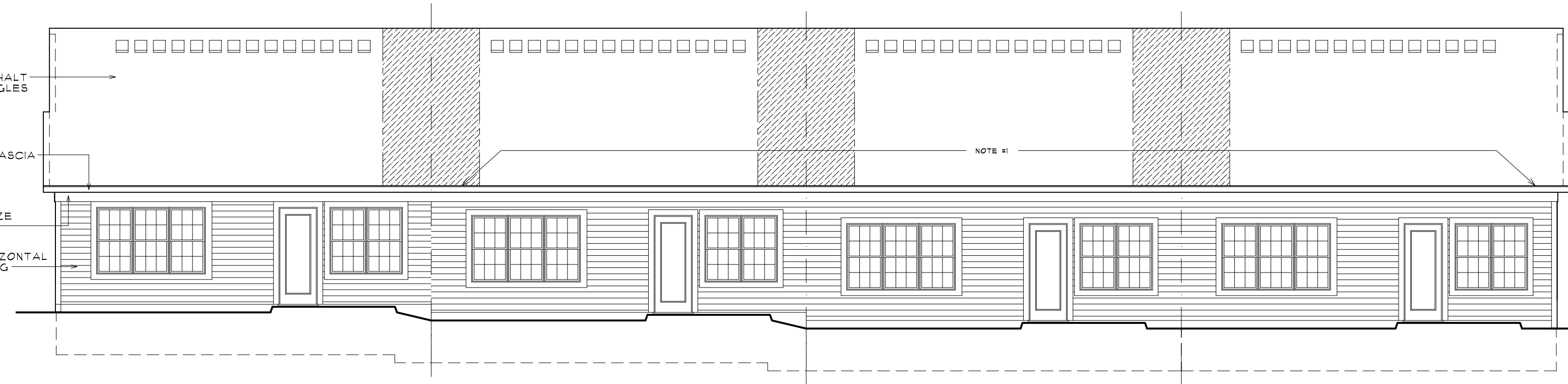
7 BUILDING S (UNITS 66-69) - FRONT ELEVATION
 SINGLE STORY TYPE "B"
 SCALE: 1/8" = 1'-0"



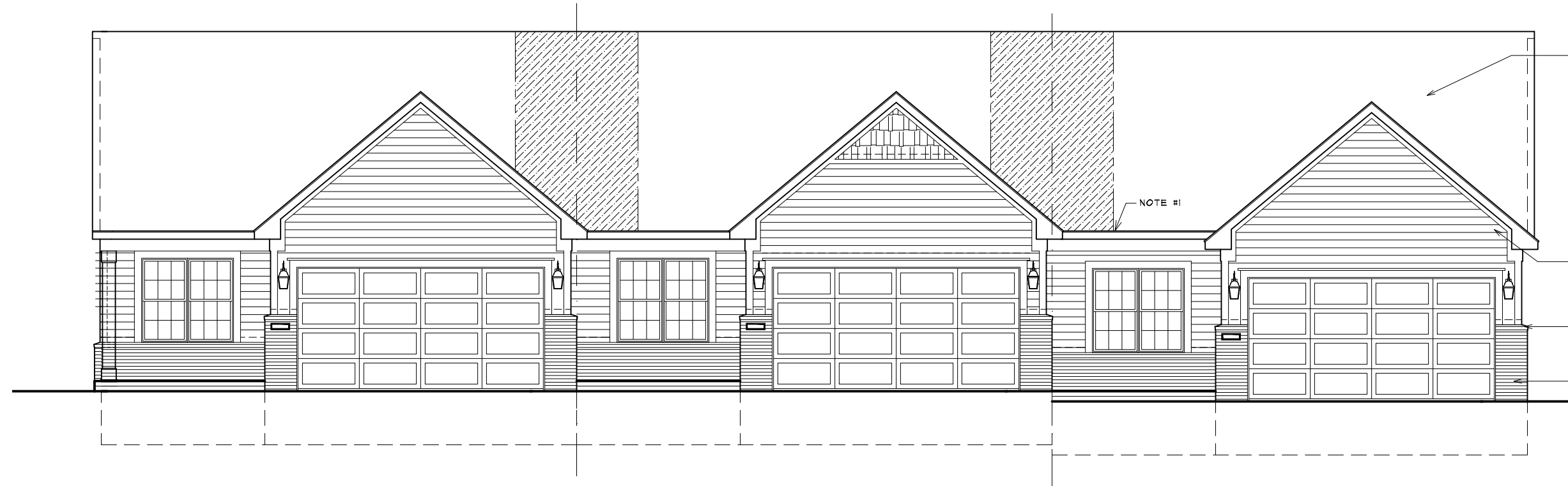
5 BUILDING R (UNITS 62-65) - FRONT ELEVATION
 SINGLE STORY TYPE "B"
 SCALE: 1/8" = 1'-0"



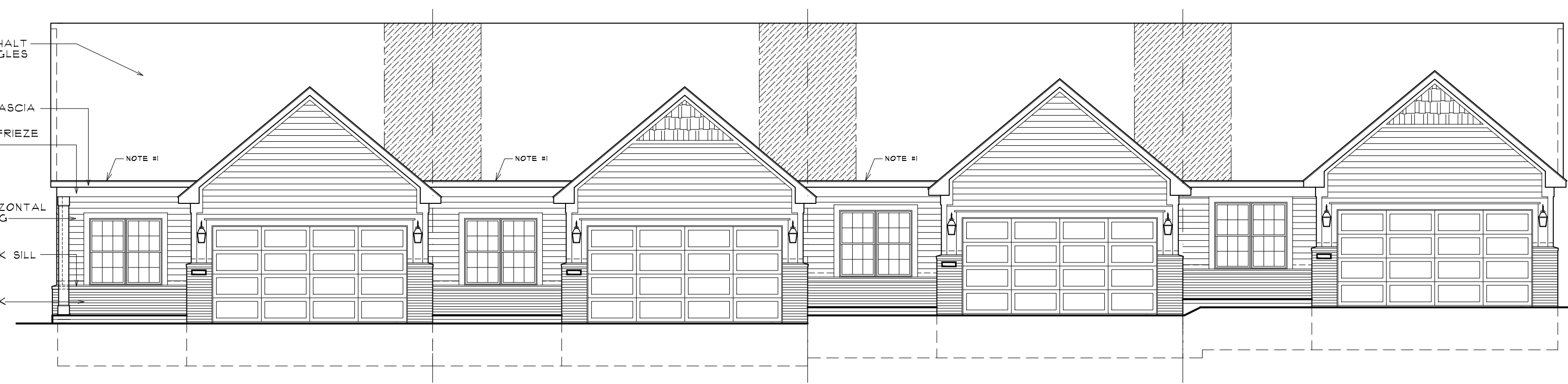
4 BUILDING P (UNITS 55-57) - REAR ELEVATION
 SINGLE STORY TYPE "B"
 SCALE: 1/8" = 1'-0"



2 BUILDING J (UNITS 33-36) - REAR ELEVATION
 SINGLE STORY TYPE "B"
 SCALE: 1/8" = 1'-0"



3 BUILDING P (UNITS 55-57) - FRONT ELEVATION
 SINGLE STORY TYPE "B"
 SCALE: 1/8" = 1'-0"



1 BUILDING J (UNITS 33-36) - FRONT ELEVATION
 SINGLE STORY TYPE "B"
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NOTES
 ALL EXTERIOR TRIM TO BE ALUMINUM WRAPPED OR VINYL. VERIFY EXACT LOCATIONS FOR EACH MATERIAL WITH OWNER PRIOR TO CONSTRUCTION.
 PROVIDE FEET HOLES AND DEAD BOLTS AT ALL FRONT ENTRY DOORS. SEE BUILDER FOR SPECIFICATIONS.
 ALL DRYWALL TO BE READY TO BE PAINTED.
 BRICK ROULOCK SILLS MAY BE REPLACED WITH PRECAST STONE OR CONCRETE. VERIFY WITH BUILDER PRIOR TO CONSTRUCTION.
 FIXED GLASS WINDOWS IN GABLES TO HAVE OPAQUE FINISH ON INTERIOR OF GLASS SO FRAMING OF ROOF NOT VISIBLE FROM EXTERIOR.
 PROVIDE RECESS LIGHT IN SOFFIT ABOVE DOOR ENTRY - CONNECT TO PHOTO CELL.

NOTE:
 REFER TO 1/4" SCALE ELEVATIONS ON SHEET A103 FOR ADDITIONAL NOTES AND DIMENSIONS. SEE SHEET S-1 FOR COLOR SCHEME OF BUILDINGS.
NOTE #1:
 RAISE HEELS AS NECESSARY TO ELIMINATE STEP IN THE ROOF.

SEE 1/4" SCALE PLANS FOR SIDE ELEVATION SHEET A 101

NOTE: SEE A-1 FOR INDIVIDUAL BUILDING COLOR SCHEME

ALL INTERIOR PARTITION DIMENSIONS ARE 3 1/2" UNLESS NOTED OTHERWISE.

BEFORE CONSTRUCTION OBTAIN WINDOW I DOOR ROUGH OPENING SIZES FROM WINDOW/DOOR SUPPLIER.

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FUNARI: LAKE POINTE
EXTERIOR MATERIALS AND FINISHES

Updated: 10-18-2022

Scheme A

Brampton Brick Crossroads Series "Whitestone", Queen Size

Variform American Herald: Board & Batten 5.5" x 1.5", Double 5" Horizontal Siding. Color: Rich Mocha

Vinyl Trim: Dover White

Variform Heritage Cedar Shake Siding: Double 5" exposure. Color: Wedgewood

Mid America Vinyl Shutters in Black #02

Front Entry Door Paint: Sandtone

Garage: Garage

Scheme B

Brampton Brick Crossroads Series "Crawford", Queen Size

Variform American Herald Board & Batten 5.5" x 1.5", Double 5" Horizontal Siding. Color: Sandy Tan

Vinyl Trim: Heritage Linen

Variform Heritage Cedar Triple 5" exposure. Color: Island Pearl

Mid America Vinyl Shutters in Midnight Blue #166

Front Entry Door Paint: Desert Tan

Garage Door: Desert Tan

Scheme C

Brampton Brick Crossroads Series "Greystone", Queen Size

Variform American Herald Board & Batten 5.5" x 1.5", Double 5" Horizontal Siding. Color: Mountain Clay

Vinyl Trim: Heritage Linen

Variform Heritage Cedar Triple 5" exposure. Color: Lakeshore Fern

Mid America Vinyl Shutters in White #01

Front Entry Door Paint: Desert Tan

Garage Door: Desert Tan

All Schemes

Roof Shingles: Certainteed "Landmark Series" Weathered Wood

Windows & Railings: Black

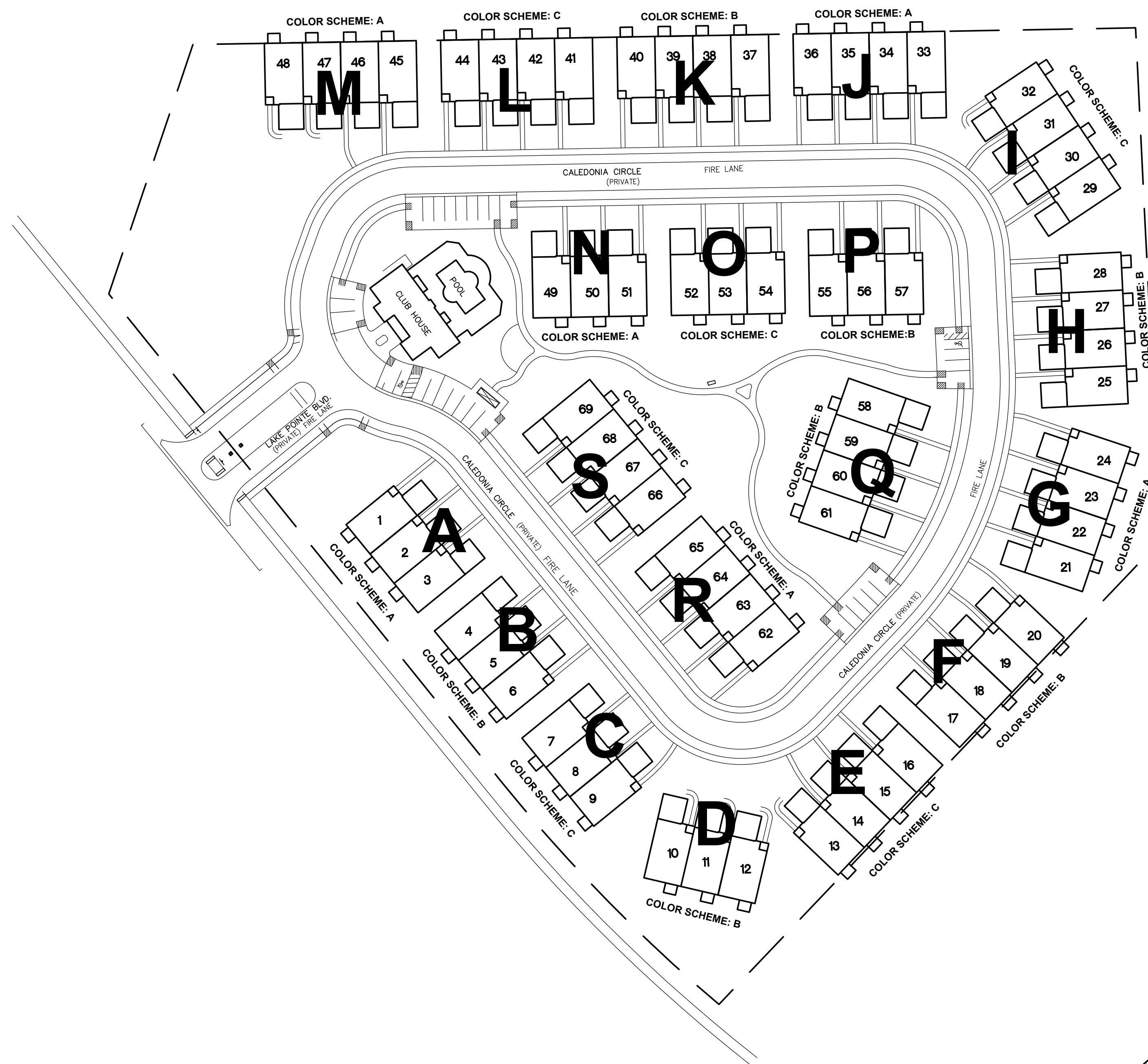
Trex Decking in Rocky Harbor. Scheme A

Trex Decking in Coastal Bluff. Scheme B & C

Note: Photos are a digital representation of specified materials. All Materials to be similar/equal. Refer to Architect's renderings and construction drawings for material locations.

2 COLOR SCHEMES

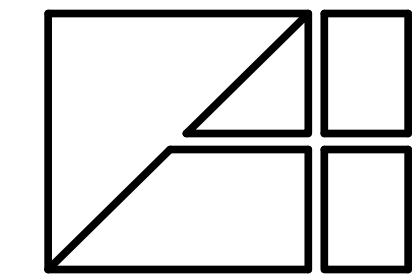
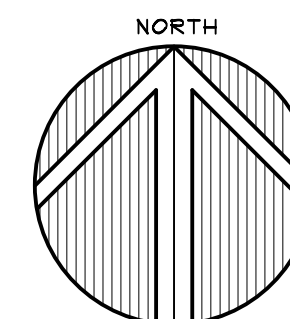
Scale: NONE



1 SITE PLAN

NOTE: SITE PLAN SHOWN FOR REFERENCE ONLY. REFER TO CIVIL ENGINEERING DRAWINGS FOR ALL ADDITIONAL INFORMATION.

Scale: NONE



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SITE PLAN

CLIENT/PROJECT
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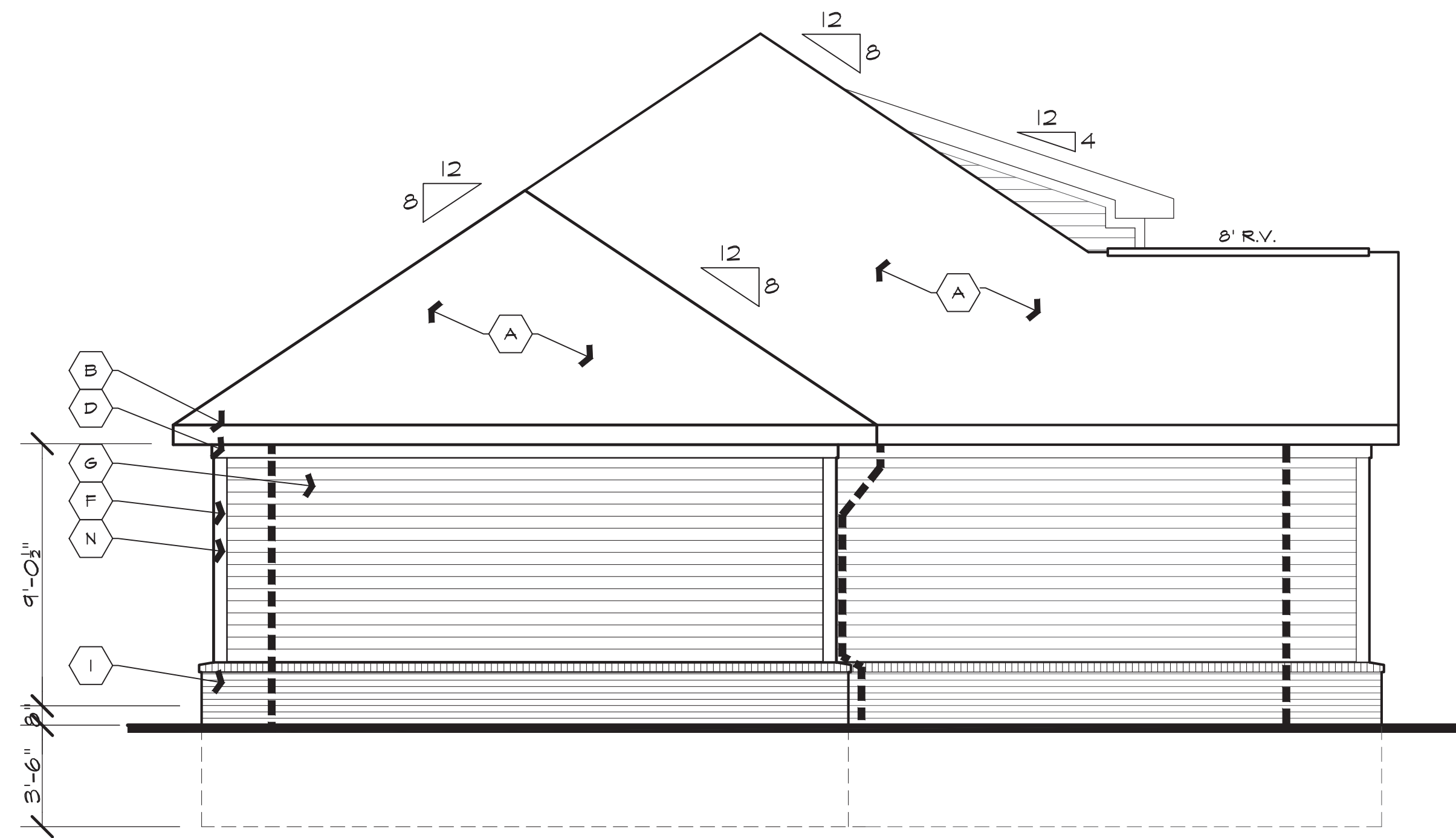
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2024 02 06

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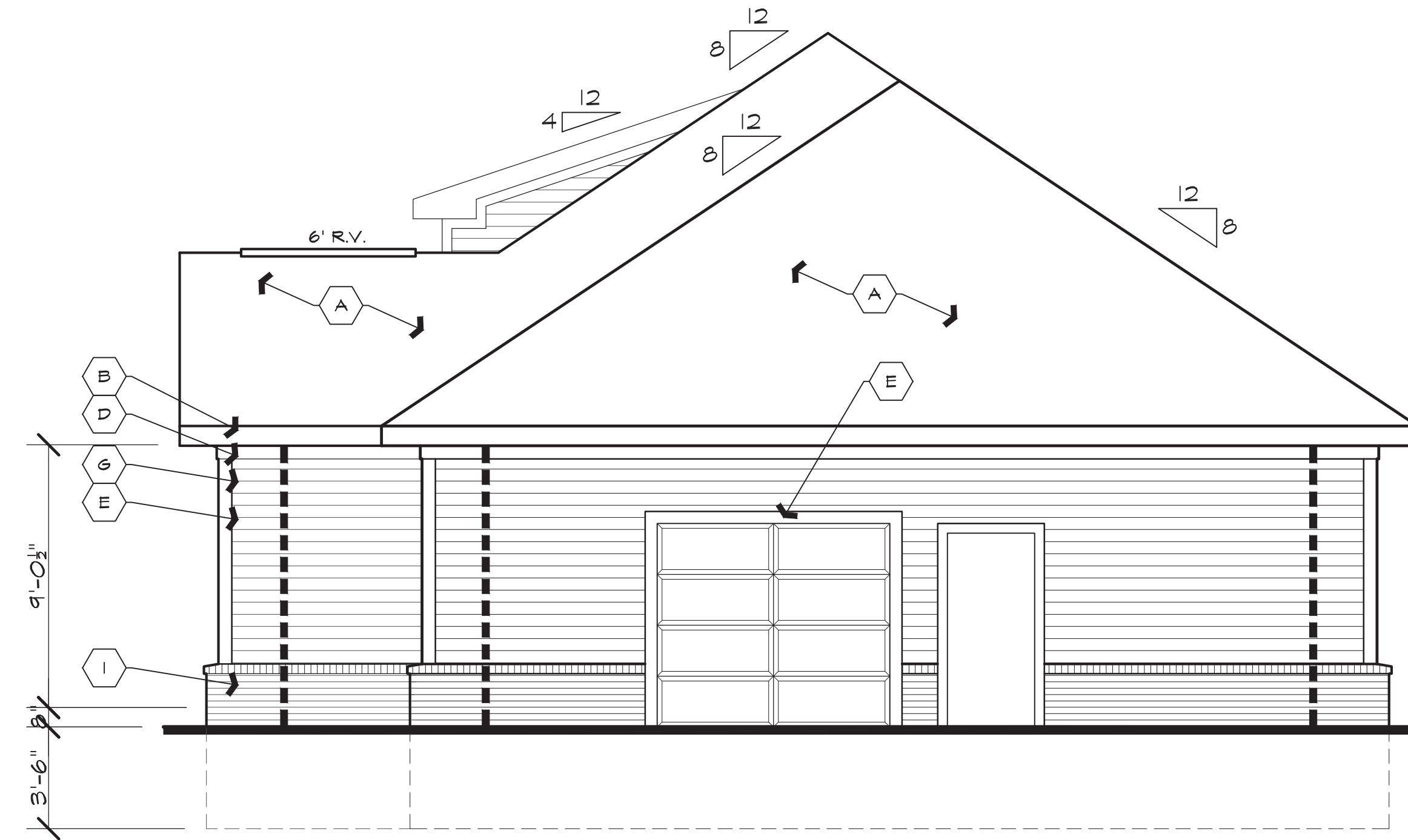
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LEFT ELEVATION
 SCALE: 1/4"=1'-0"



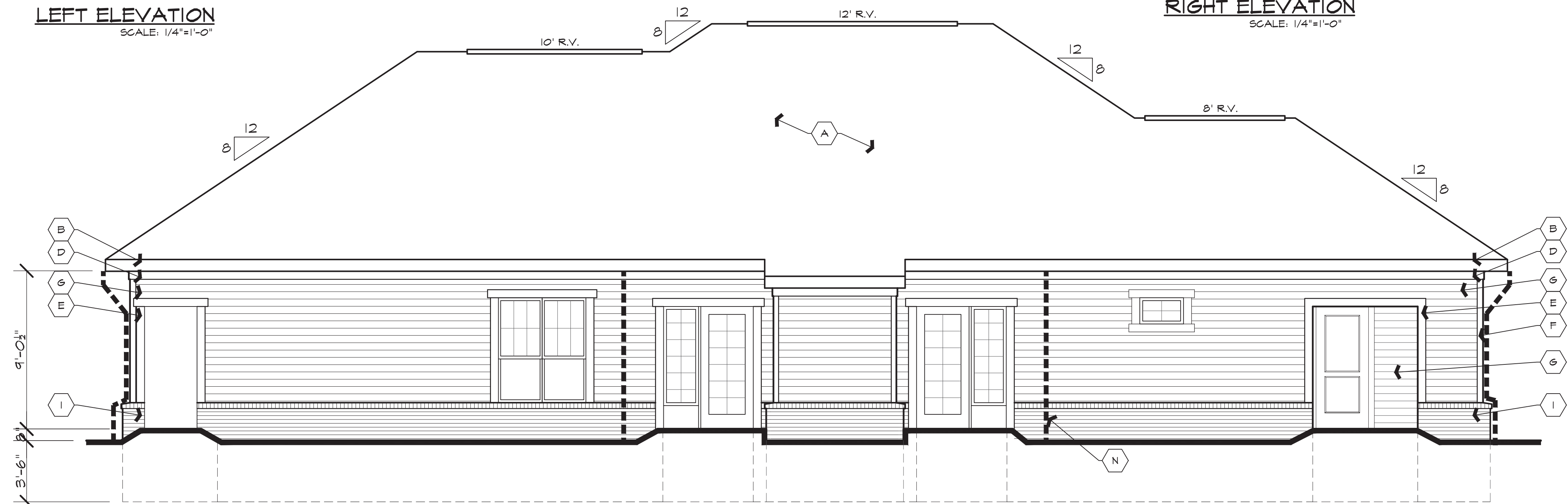
RIGHT ELEVATION
 SCALE: 1/4"=1'-0"

NOTE TO ALL CONTRACTORS :

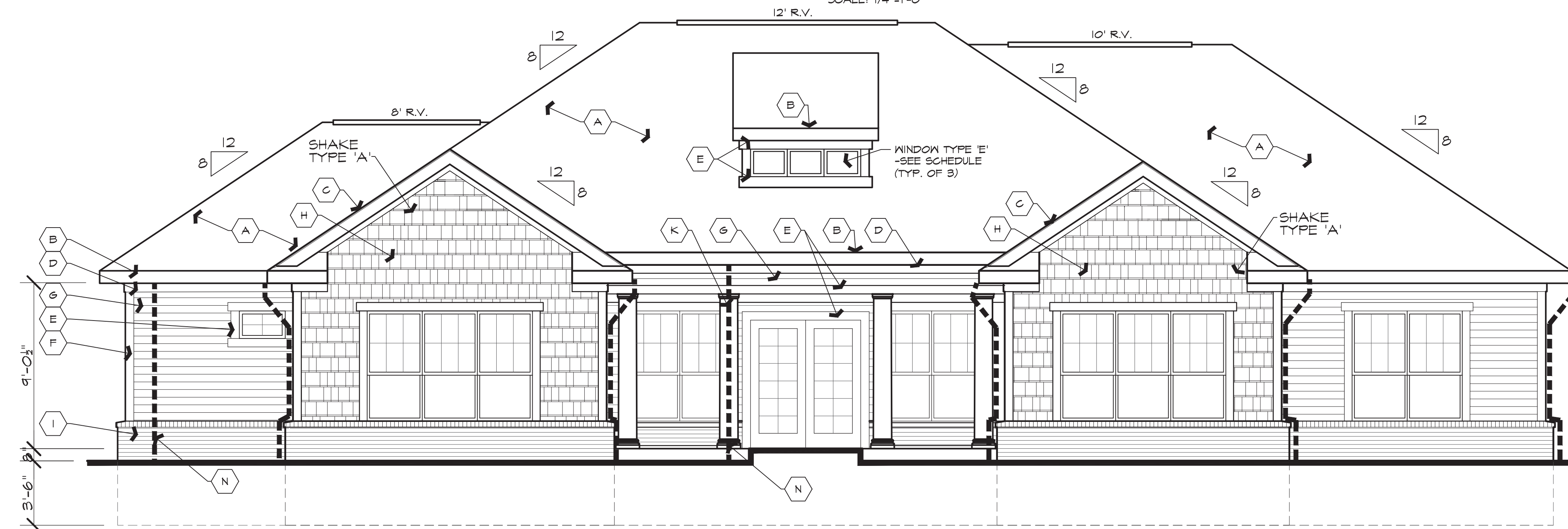
ALL CONTRACTORS SHALL VERIFY & COORDINATE ALL DIMENSIONS ON DRAWINGS, AS WELL AS REVIEW & COORDINATE PLANS W/ EXTERIOR BLDG. ELEVATIONS, SECTIONS, & DETAILS BEFORE COMMENCING WITH THE WORK. IF DIMENSIONAL ERRORS OR CONFLICTS OCCUR BETWEEN PLANS, BLDG. ELEVATIONS, SECTIONS & DETAILS IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. CONTRACTORS WHO FAIL TO VERIFY, REVIEW, & COORDINATE THE WORK, & CONTRACTORS WHO SCALE DRAWINGS TO DETERMINE PLACEMENT OF PART(S) OF THE WORK, SHALL TAKE FULL RESPONSIBILITY SHOULD THAT PORTION OF THE WORK BE IMPROPERLY LOCATED OR CONSTRUCTED.

MATERIAL LEGEND

- A ASPHALT SHINGLES
- B MET. DRIP EDGE & GUTTER ON 2x8 WD. TRIM FASCIA (ALUM. CLAD)
- C MET. DRIP EDGE ON 2x8 WD. TRIM RAKE BD. (ALUM. CLAD)
- D 1x4 WD. TRIM SUB-RAKE BD. (ALUM. CLAD)
- E 1x6 FRIEZE BD W/ ALUM WRAP
- F 1x6 VINYL TRIM
- G VINYL CORNER TRIM
- H HORIZ. VINYL SIDING
- I VINYL SHAKE SIDING
- J BRICK W/ BRICK SILL
- K 12" RD COLUMN
- L MTL FLASHING
- M ROOF JACK
- N DOWNSPOUT



REAR ELEVATION
 SCALE: 1/4"=1'-0"



FRONT ELEVATION
 SCALE: 1/4"=1'-0"

Issued For:

REVIEW
 11.11.16

REVISED
 7.10.17

REVISED PER COMMENTS
 10.12.17

REVISED
 12.4.17

Developer:

FAIRVIEW
COMPANIES
 1700 W. Big Beaver, Suite 120
 Troy, Michigan 48064

Project:

ENCORE
 at DEERHILL

Independence Township, Michigan

Sheet Title:

COMMUNITY
BUILDING
ELEVATIONS

Project Number: 16-122

Drawn: RCC

Checked: DT

Date: 9.23.16

Sheet Number:

CB4.0



INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

August 7, 2024

Sean O' Neil, Director
Community Development Department
Charter Township of White Lake
7525 Highland Road
White Lake, Michigan 48383

RE: Lake Pointe Apartment Development – Planned Development Agreement – 6th Review

DLZ Job No. 1745-0385-00

Dear Mr. O' Neil,

The applicant is proposing a 69 unit attached single family apartment development on a 13.32 acre parcel located off Union Lake Road. This is a review of the proposed PDA documents that were prepared for JMF White Lake, LLC. and were submitted to this office on July 29, 2024 via Dropbox.

The following items were submitted as part of this review:

- Draft PDA Agreement

Please note that comments from our June 27, 2024 review are in *italics*. Responses to those items are in **bold**. New comments are in standard font.

We offer the following comments for your consideration:

General

1. *We generally defer comment regarding document format and agreement language to the Township Attorney. **Comment remains.***
2. *We defer to the Township regarding item 2.4 and whether the Township does indeed waive the Traffic Impact Assessment, and Community Impact Statements. Comment partially addressed. A Traffic Impact Assessment was submitted and reviewed by Township staff and consultants. It is unknown whether a Community Impact Statement has been submitted and reviewed by the appropriate parties. Comment addressed. Design engineer has stated that a Community Impact Statement is not required by the Township. **The requirement for a Community Impact Statement***

was waived at the White Lake Township Board meeting on May 18, 2021. Comment remains as a notation.

3. *We defer to the Township with respect to whether there will be restrictions and by laws since this development is to be single family apartments. Our concern is the protection of surface drainage easements from encroachments so as surface drainage in these areas does not become impeded. Comment rescinded, design engineer has stated that this development consists only of rental properties and will thus be under the control of a single owner. **Comment remains as a notation.***
 4. *A Storm Maintenance Agreement and Lien are required as noted in our February 22, 2021 Final Engineering Review letter. The Storm Sewer and Detention Basin Easement documents were provided with this PDA review. The Maintenance Agreement will need to contain language referencing shared maintenance responsibility between Lake Pointe and West Valley as detention basin discharge from Lake Pointe will flow through West Valley’s storm sewer system. Comment remains as a notation; we recommend approval subject to preparation and approval of a joint maintenance agreement regarding the storm sewer. **Article IV Section 4.6 references the parties will enter into stormwater maintenance and easement agreements; we recommend this language be revised to match the Township standard form which is titled “storm water management facilities easement, maintenance agreement, and lien”. We also recommend the reference to item (c) be removed as the Comfort Care Senior Living facility has no connection to the Lake Pointe development.***
 5. *Item 4.11 of the agreement references the requirement to obtain an off-site easement from Independence Village in order to extend the proposed sidewalk fronting Union Lake Road. Per a Zoom meeting held with our office and the developer, as well as the developer’s engineer on May 30, 2024, the portion of sidewalk fronting Independence Village will not be done. The developer noted in this meeting that Independence Village is not willing to provide an easement document for the sidewalk extension. **We recommend this language (Article IV, Item 4.11 of Agreement) be removed from the agreement; however, we will defer to the Township Attorney regarding this item.***
-

Recommendation-

We recommend approval of the PDA subject to incorporation of the above referenced items. If you have any questions, please feel free to contact us.

Sincerely,

DLZ Michigan



Michael Leuffgen, P.E.
Department Manager



Victoria Loemker, P. E.
Senior Engineer

Cc: Andrew Littman, Community Development, *via email*
Aaron Potter, DPS Director, *via email*
Hannah Kennedy-Galley, Community Development, *via email*
Lisa Hamameh, RSJA Law, *via email*

X:\Projects\2017\1745\038500 WLT Lake Pointe\PDA Review\Submittal #6\Review.06.docx

LISA J. HAMAMEH
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rsjalaw.com



ROSATI | SCHULTZ
JOPPICH | AMTSBUECHLER

July 30, 2024

via email only: soneil@whitelaketwp.com

Sean O'Neil
Community Development Director
White Lake Township
7525 Highland Road
White Lake, Michigan 48383

**RE: 6th Review of Planned Development Agreement
Lake Pointe**

Dear Sean:

You asked that we review the proposed revised Planned Development Agreement for Lake Pointe ("Agreement") submitted by JMF White Lake, LLC ("Developer"). There were no Exhibits attached to this draft and, therefore, we defer to the Township Engineer regarding the Exhibits. Our comments regarding the Planned Development Agreement follow:

General Comments

1. As stated in previous correspondence, prior to the execution of the Agreement, the Developer must provide documentation evidencing ownership of the Property. Developer has provided an unrecorded Warranty Deed, dated March 26, 2021. The Township may want to verify it has been recorded at the Register of Deeds and there have been no ownership changes since that time by reviewing property documents or assessing records, or by requesting a title search. In addition, a company resolution authorizing the signer to execute the Agreement on behalf of the LLC is required.
2. As stated in previous correspondence, the Township should consider whether the development schedule provided in Paragraph 4.2 is acceptable. The Zoning Ordinance requires a development schedule, including any individual stages or phases, and the anticipated beginning and completion dates.
3. Paragraph 1.2 should be revised to move the last sentence after the first sentence so the events occur chronologically. Additionally, this Paragraph provides that the Final Site Plan expired on July 7, 2024. Has that been extended again?
4. Paragraph 1.5 should be revised to coincide with the Township's Zoning Ordinance, Section 6.7(E). For example, the second sentence defines "minor changes" to be limited to those provided in the ordinance, but also expands the definition to include Section

- 6.7(E)(ii and iii) which are not "minor changes" and may not be approved administratively. Additionally, Community Development Director should replace the term Planning Director.
5. While a provision was added to Paragraph 4.6 to address storm water maintenance easement in light of the shared facilities with West Valley and Comfort Care, additional discussion is needed. A meeting to discuss this issue is recommended
 6. While I recognize these are new requests, the Agreement should be revised to include the following provisions:
 - a. A breach provision to provide:
 1. Any breach of this Agreement shall constitute a nuisance *per se* which shall be abated. The parties therefore agree that, in the event of a breach of this Agreement by Developer, which is not cured in accordance with this Agreement, the Township, in addition to any other relief which it may be entitled to at law or in equity, shall be entitled under this Agreement for an order of a court of competent jurisdiction providing for relief in the form of injunctive relief or specific performance requiring abatement of the nuisance *per se*.
 2. In the event of a breach of this Agreement, the Township may notify Developer of the occurrence of the breach and issue a written notice requiring the breach be cured within thirty (30) days; provided, however, that if the breach, by its nature cannot be cured within thirty (30) days, Developer shall not be in breach hereunder if Developer commences the cure within the thirty (30) day period and diligently pursues the cure to completion.
 - b. a provision acknowledging that at the time of execution of the Agreement, the Owner will not have yet obtained engineering approvals for the Development and that additional conditions may be imposed, provided that no such conditions be inconsistent with the PD Plan or this Agreement and shall not change or eliminate any development right authorized thereby. Those conditions shall be incorporated into and made part of this Agreement automatically upon issuance of said conditions.

If you have any additional questions or would like to discuss this matter further, please call.

Very truly yours,

ROSATI SCHULTZ JOPPICH
& AMTSBUECHLER PC



Lisa J. Hamameh

cc: M. Leuffgen
V. Loekmker

PLANNED DEVELOPMENT AGREEMENT

LAKE POINTE

Entered into between:

JMF Union Lake, LLC

A Michigan limited liability company

and

Charter Township of White Lake, a Michigan Charter Township

Dated: _____, 2024

PLANNED DEVELOPMENT AGREEMENT

(Lakepoint – White Lake Township)

This Planned Development Agreement (the "Agreement") is entered into as of _____, 2024, by and among JMF Union Lake, LLC, a Michigan limited liability company, whose address is 1700 W. Big Beaver Road, Suite 120, Troy, Michigan 48084 (hereafter referred to as “Developer” or "Owner"), and Charter Township of White Lake, a Michigan Charter Township, whose address is 7525 Highland Road, White Lake, Michigan 48383 ("Township").

RECITALS

- A. Developer owns certain real property consisting of approximately 13.32 acres located in the Township on the northeast side of Union Lake Road and northwest of Carpathian Drive, which is more particularly described on **Exhibit A** attached hereto (the "Property"). The Property is zoned PD, or Planned Development by the Township.
- B. Developer desires to develop the Property as multi-family, residential housing project consisting of 69 units as depicted in the Final Site Plan prepared by Seiber, Keast Engineering, L.L.C. (Job No. 19-039, revised February 13, 2024), attached hereto as **Exhibit B** (the “Final PD Plan”), for the proposed Lake Pointe residential development (the “Project”).
- C. At a meeting held by the Township Planning Commission on January 16, 2020, the Township Planning Commission recommended approval of Developer’s revised Preliminary Site Plan, subject to conditions.
- D. At a meeting held by the Township Board on January 21, 2020, the Township Board approved the revised Preliminary Site Plan, subject to conditions.
- E. At a meeting held by the Township Board on February 16, 2021, the Township Board approved a one-year extension of the revised Preliminary Site Plan for the Project.
- F. At a meeting held by the Township Planning Commission on May 6, 2021, the Planning Commission approved the Final Site Plan, subject to conditions, and

recommended approval of the Planned Development Agreement to the Township Board.

- G. At a meeting held by the Township Board on May 18, 2021, the Township Board approved the Planned Development Agreement and waived the requirement for a community impact statement.
- H. At a meeting held by the Township Planning Commission on February 1, 2024, the Planning Commission approved an extension of the Final Site Plan until July 7, 2024.
- I. By entering into this Agreement, Owner and the Township desire to set forth the parties' obligations with respect to the Planned Development for the Property and the Project and the terms and requirements under which the Property and the Project shall be developed.

NOW, THEREFORE, in consideration of the premises and the mutual covenants of the parties described in this Agreement, the parties agree as follows:

ARTICLE I

DESCRIPTION OF THE PROJECT; PD AND PD PLANS

- 1.1. **Description of Project.** The project ("Project") covers an area comprising approximately of 13.32 acres located on the northeast side of Union Lake Road and west of Williams Lake Road. The Project will consist of 69 attached residential rental housing units. Each residence will be ranch-style dwelling with a 2-car attached garage.
- 1.2. **PD Plan Approval; Exhibits.** The revised Preliminary Site Plan prepared by Sieber, Keast Engineering, L.L.C. was approved by the Township Board on January 21, 2020, and thereafter extended for one year by the Township Board at its meeting held on February 16, 2021. On May 18, 2021, the Township Board approved the original Planned Development Agreement, which thereafter expired, and then on August __, 2024, approved this Agreement, which approval grants Developer the right to construct facilities as set forth in the Final PD Plan, subject to this Agreement and all applicable permits in the ordinary course, as the same may be modified and amended in accordance with the Township Zoning Ordinance from time to time. All exhibits attached hereto are incorporated herein and made a part hereof by reference. Thereafter, the Final Site Plan was extended by the Planning Commission to July 7, 2024.
- 1.3. **Performance Criteria.** Developer affirmatively submits that the proposed uses on the Property shall not exceed the performance criteria found in the Township Zoning Ordinance and the standards listed therein.
- 1.4. **Waivers and/or Modifications to Standard Zoning Requirements.** Except as otherwise provided in this Agreement and the Final PD Plan, Developer shall adhere to all applicable

Township ordinances, codes, rules, regulations and standards. Waivers from the Township Zoning Ordinance which the Township shall be deemed to have granted, and hereby grants, as well as modifications to standard zoning requirements which will be requested, if any, are as set forth on the Final PD Plan and this Agreement.

- 1.5. **Minor Modifications.** If, following the approval of the Final PD Plan, Developer proposes minor changes to the Final PD Plan, including changes required during final engineering review and required by other State and County regulatory agencies, such minor changes may be made subject only to "Administrative Approval". The term "Minor Changes" shall be those changes set forth in the Township Zoning Ordinance, Article 6, Section 6.7(E)(i-iii). For purposes of this Agreement, "Administrative Approval" shall mean the approval by the Planning Director of the Township, or his/her designee, or such other individual as may be designated by the Township Board, without the necessity of review by the Township Board or the Township Planning Commission or any amendment to this Agreement.

- 1.6. **Statement of Planning Objectives and Community Benefits to be Achieved by the Project.** The primary planning objectives of this development are to create alternative, high quality rental housing options that appeal to both active retirees and empty nesters who want to stay in place or be attracted to the White Lake community and to meet the needs and growing demand of younger working and professional millennials for high quality rental housing, consistent with the Master Plan objective to provide for a diversity of housing opportunities in the Township. The Project will provide more open space and less housing density than permitted under the applicable zoning ordinance and Master Plan. A substantially larger open space area is achievable because of the unique situation where the Developer also owns the West Valley development on the southwest side of Union Lake Road and can provide an integrated storm drainage system serving multiple properties. For the reasons described in paragraph 2.3 below, Developer also agreed to contribute \$15,000 for the installation of speed bumps in the neighboring Bocovina development. Developer will also contribute: (a) to the Township the sum of \$2,050 for the future installation of approximately 630 square feet of offsite concrete sidewalk along Union Lake Road to Independence Circle; and (b) the sum of \$7,500 to the Park Fund. While the density of the Project is consistent with the existing zoning, the contribution to the Park Fund will assist the Township in continuing to furnish public amenities that will serve the new residents of the Project. The Project also includes substantial on-site recreational amenities, including walking paths, seating areas and a swimming pool and clubhouse.

ARTICLE II

REQUIREMENTS FOR DEVELOPMENT

- 2.1. **Development Standards.** The Property shall be developed and improved in compliance with the following:

- (a) The Charter Township of White Lake Zoning Ordinance, as amended, and engineering design standards, except where modified by this Agreement and the Exhibits attached hereto;
 - (b) This Agreement;
 - (c) The Final PD Plan;
 - (d) The conditions set forth in Paragraph 2.3 below; and
 - (e) All applicable federal, state and county laws, rules and regulations.
- 2.2. **Effect of PD Approval.** To the extent that developing the Property in accordance with this Agreement and the PD Plan will deviate from the Zoning Ordinance or any other Township Ordinance or regulation, this Agreement and the Final PD Plan shall control. To the extent this Agreement and PD Plan attached hereto are silent on development issues, the Project shall comply with the Zoning Ordinance and other Township ordinances and regulations. All improvements constructed in accordance with this Agreement and the Final PD Plan shall be deemed to be conforming under the Zoning Ordinance and in compliance with all ordinances of the Township. The Project shall not be subject to any additional requirements contained in any amendments or additions to Zoning Ordinances adopted subsequent to the date of this Agreement which conflict with the provisions of this Agreement including the PD Plan and/or any plans which are approved pursuant to this Agreement.
- 2.3. **Conditions to Approval.** Prior to commencement of construction of the Project, Developer will: contribute the sum of up to \$15,000 to pay for speed bumps to be installed in the neighboring Bocovina residential development per a separate written agreement with the Bocovina’s homeowners association; and deliver the sum of \$2,050 to the Township for future installation of an off-site concrete sidewalk as described in paragraph 1.6 above. The purpose of the speedbumps is to both discourage cut-through traffic and reduce traffic speeds for safety of the residents. The off-site sidewalk contribution is intended to further the Township’s objective of achieving connectivity and non-motorized access throughout the Township. In addition, no bars shall be installed on the back of patios to interfere with access to the open space from the patios.
- 2.4. **Traffic Impact Assessment.** Revised traffic impact assessments dated December 2, 2019, and June 7, 2024, prepared by Fleis & Vandenbrink were received and reviewed by Township staff and consultants.

ARTICLE III

USES WITHIN THE PROJECT

- 3.1. **Approved Uses for the Project.** The Project will consist of 69 ranch-style residential units (or a density at 5.41 units per acre) in 19 buildings. Each residence shall have two bedrooms and an attached 2-car garage and each building shall contain no more than 4-attached residential dwelling units.

- 3.2. **Project Amenities.** In order to provide on-site recreational amenities to serve the residents of the Project, Developer will install a clubhouse and pool as depicted in the Final PD Plan. An open space area consisting of approximately 8.42 acres will be maintained, with walking paths, seating, a pergola structure and dog waste stations as depicted in the Final PD Plan.

ARTICLE IV

DEVELOPER'S RIGHTS AND OBLIGATIONS

- 4.1. **Right to Develop.** Developer shall have the right to develop the Property in accordance with the PD Plan and this Agreement.
- 4.2. **Development Schedule.** Developer shall commence development of the Project within 12 months from the Township's approval of this Agreement. The intent is complete the development as a single phase once commenced. The foregoing development schedule may be modified by Developer as necessary or appropriate based on the timing of State and County agency approvals, market and other conditions, with the Township's consent, which shall not be unreasonably withheld or delayed.
- 4.3. **Internal Roads in the Project.** The internal roads within the Project will be private and constructed in accordance with Final PD Plan, Township Engineering Design Standards, approved Final Engineering Plan, and RCOC Approval.
- 4.4. **Landscape Plan.** The Landscape Plans, Sheets LS-1 through LS-7, which are part of the Final PD Plan attached hereto as Exhibit B, identify the landscaping to be installed within the Project.
- 4.5. **Utilities.**
- (a) **Sanitary Sewer System.** Sanitary sewers shall be extended by the Developer to serve the Project which must connect to the Township's sanitary sewer system. Connection to the sanitary sewer system shall require payment of all applicable fees, charges, and assessments, in accordance with the Township's Ordinance. The Final PD Plan identifies the sewer lines and related sanitary sewer easements to be dedicated to the Township as depicted in the Easement for Sanitary Sewer Exhibits.
 - (b) **Water System.** Water service shall be extended by the Developer to serve the Project which must connect to the Township's water system. Connection to the water system shall require payment of all applicable fees, charges, and assessments, in accordance with the Township Ordinance. The Final PD Plan identifies the water lines and related water easements to be dedicated to the Township as depicted in the Easement for Watermain Exhibits.
- 4.6. **Storm Water Detention.** Storm water shall be conveyed by a storm sewer system to a storm water detention basin located within the Project as shown in the Final PD Plan. All such storm water drainage facilities, including the detention basin and all related improvements shall be designed in accordance with all applicable ordinances and

engineering regulations and standards as depicted in the Easement for Storm Sewer Exhibits. Prior to commencement of construction, the parties ~~(and, to the extent applicable, third parties)~~ will enter into ~~the following a separate sStormwater mMaintenance and easement aAgreements~~ utilizing standard Township agreement forms: (a) stormwater agreement for the Project; (b) stormwater agreement serving both the Project and the proposed adjacent West Valley development; and (c) a stormwater overflow easement for the Comfort Care Senior Living facility on nearby land. ~~in a form to be mutually agreed upon by the parties in the exercise of reasonable discretion.~~

- 4.7. **Signs.** The entrance signage and other directional signage for the Project shall be as depicted in the Final PD Plan. Any additional signage or modification of signage proposed to be installed will have to be approved by the Township and Developer will comply with all the sign regulations in the Township's sign ordinance.
- 4.8. **Architectural and Site Design Guidelines.** The Project shall be developed in conformance with the following architectural and site minimum standards:
- (a) **Minimum Setbacks.** Setback requirements shall be in accordance with the approved final PD Plan.
 - (b) **Exterior Materials.** The building elevations and exterior materials shall be consistent with the elevations and materials set forth in the Final PD Plan and any modifications to same will be of equal or better quality and durability and shall be approved in accordance with the Township Zoning Ordinance.
 - (c) **Driveways and Sidewalks.** Curbs, gutters and sidewalks shall be constructed of concrete and shall be in accordance with the approved Final PD Plan and approved Final Engineering Plan. Driveways shall be constructed of concrete.
- 4.9 **Permits and Authorizations.** All state, county and federal permits required for completion of the project shall be approved prior to the scheduling of a pre-construction meeting with Developer and the Township staff and consultants.
- 4.10 **Improvements and Alternations.** Developer shall not engage in any improvements or alterations on the Property, including, without limitation, site grading work or installation of utilities, until completion of the pre-construction meeting.
- 4.11 **Offsite Pathway/Sidewalk Easement.** Developer agrees that it shall obtain a fully executed offsite pathway/sidewalk easement from the adjoining owner(s) of Independence Village in such form as is approved by the Township, prior to scheduling the pre-construction meeting.

ARTICLE V

MAINTENANCE OF OPEN SPACE

- 5.1. **Common Elements and Common Facilities.** The Developer shall have the responsibility for maintaining the open space and installed landscaping located within the Project.

ARTICLE VI

TOWNSHIP'S RIGHTS AND OBLIGATIONS

- 6.1. **Permits and Authorizations.** The Township shall grant to Developer and its contractors and subcontractors all Township permits and authorizations necessary to bring and/or construct all utilities necessary to service the Property and to otherwise develop and improve the Property in accordance with the Final PD Plan, provided the Developer has first made all requisite filings and submissions for permits, complied with the requirements for said permits or authorizations submittals, and paid all required fees in accordance with the Township's Ordinances. Any applications for permits or authorizations from the Township will be processed in the customary manner. The Township shall cooperate with Developer in connection with Developer's applications for any necessary county, state, federal or utility company approvals, permits or authorizations to the extent that such applications and or discussions are consistent with the Final PD Plan and this Agreement and provided that the Township shall not be required to initiate legal proceedings or assume any financial obligations of Developer, including without limitation the payment of any compensation, cost or fee. Once appropriate approvals are granted, Developer shall be entitled to obtain a grading permit from the Township and thereafter commence grading and clearing activities.
- 6.2. **Township Action For Failure to Maintain Property.** In the event the Developer defaults in its obligation to maintain the property in a reasonable condition, using reasonable standards, and consistent with and as required under the Final PD Plan and this Agreement, the Township may serve written notice upon Developer setting forth the manner in which Developer has failed to maintain the Property, and such notice shall include a demand that deficiencies be cured within a stated reasonable time period no less than thirty (30) days, and shall set forth the date, time and place of a hearing before the Township Board for the purpose of allowing Developer to be heard as to why the Township should not proceed to perform the maintenance which has not been undertaken. In that hearing, the time for curing such deficiencies, and the hearing itself, may be extended. If, following the hearing, the Township Board shall determine that the Developer has not cured such deficiency within the time specified at the hearing, then upon five (5) days written notice to Developer, the Township shall thereupon have the power and authority, but not the obligation, to enter upon the Property or cause its agents or contractors to enter upon the Property to cure such deficiency as reasonably found by the Township to be appropriate and/or necessary, in a manner so as to reasonably minimize any interference with the residential occupancy and use the Property and the cost and expense of such curative actions, including the cost of notices by the Township and reasonable legal, planning, and engineering fees and costs incurred by the Township shall be paid by the Developer. Such amount shall constitute a lien on the Property and the Township may require such costs and expenses to be paid prior to the commencement of work. If such costs and expenses have not been paid within sixty (60) days of a billing to the Developer, all unpaid amounts may be (a) placed on a delinquent tax roll of the Township as to the Property and shall accrue interest and penalties and shall be collected as and shall be deemed delinquent real property taxes in

the discretion of the Township; or (b) assessed against the Developer and collected as special assessment on the next annual Township tax roll; or (c) collected by use of the applicable provisions of Michigan law providing for foreclosure by advertisement, the Owner having specifically granted the Township the required power of sale to do so; or (d) collected by suit against Developer. If suit is initiated, the Developer shall pay all of the Township's reasonable legal fees and costs. The selection of remedy shall be at the sole option of the Township, and election of one remedy shall not waive the use of any other remedy.

ARTICLE VII

MISCELLANEOUS PROVISIONS

- 7.1. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan.
- 7.2. **Counterparts.** This Agreement may be executed in multiple counterparts, each of which shall be deemed an original and all of which shall constitute an agreement. The signature of any party to any counterpart shall be deemed to be a signature to, and may be appended to, any other counterpart.
- 7.3. **Successors and Assigns.** The terms, provisions and conditions of this Agreement are and shall be deemed to be of benefit to the Property and shall run with and bind the Property, and shall bind and inure to the benefit of the successors and assigns of the parties to this Agreement.
- 7.4. **Amendment.** This Agreement may only be modified by written agreement of the Township and Developer or any successor in title who assumes Developer's rights and obligations hereunder.
- 7.5. **Authority.** This Agreement has been duly authorized by all necessary action of Developer and the Township, through the approval of the members of the Developer and the Township Board at a meeting in accordance with the laws of the State of Michigan, and the ordinances of the Township. By the execution of this Agreement, the parties each warrant that they have the authority to execute this Agreement and bind the Property in its respective entities to its terms and conditions.
- 7.6. **Partial Invalidity.** Invalidation of any of the provisions contained in this Agreement or the application thereof to any persons by judgment or court order shall in no way affect any of the other provisions hereof or the application thereof to any other person and the same shall remain in full force and effect.
- 7.7. **No Partnership.** None of the terms or provisions contained in this Agreement shall be deemed to create a partnership or joint venture between Developer and the Township.
- 7.8. **Incorporation of Documents.** The recitals contained in this Agreement, the introductory paragraph, and all exhibits attached to this Agreement and referred to herein shall for all

purposes be deemed to be incorporated in this Agreement by this reference and made a part of this Agreement.

- 7.9. **Integration Clause.** This Agreement is intended as the complete integration of all understandings between the parties related to the subject matter herein. No prior contemporaneous addition, deletion, or other amendment shall have any force or effect whatsoever, unless referenced in this Agreement.
- 7.10. **Recording.** This Agreement shall be executed by the parties and recorded by the Township in the office of the Oakland County Register of Deeds. All recording fees shall be paid by the Developer.
- 7.11. **Waiver.** Failure of either party to insist upon strict performance of any of the terms, conditions or covenants hereof shall not be deemed to be a waiver of any rights or remedies that such party may have hereunder, at law or in equity, and shall not be deemed a waiver of any subsequent breach or default under this Agreement. No waiver by either party of any default under this Agreement shall be affecting or binding unless made in writing and no such waiver shall be implied from any omission by the party to take an action with respect to the default. No express written waiver of any default shall affect any other default or cover any other period of time, and one or more written waivers of any default shall not be deemed to be a waiver of any subsequent default in performance of the same or any other term or provision contained in this Agreement.
- 7.12. **Violations.** Violations of the provisions of this Agreement shall be deemed to be violations of the Township Zoning Ordinance and shall entitle the Township to all rights and remedies provided by the Zoning Ordinance or any other applicable law for such violation.
- 7.13. **Acknowledgments.** The parties negotiated the terms of the Agreement and the parties agree that its terms, conditions and requirements are lawful and consistent with the intent and provisions of local ordinances, state and federal law. Developer has offered and agreed to proceed with the undertakings and obligations as set forth in this Agreement in order to protect the public health, safety, and welfare and provide material advantages and development options for Developer, all of which undertakings and obligations the parties agree are necessary in order to ensure public health, safety, and welfare, to ensure compatibility with adjacent uses of land, to promote use of the Property in a socially, environmentally, and economically desirable manner, and to achieve other reasonable and legitimate objectives of the parties, as authorized under applicable Township ordinances and the Michigan Zoning Enabling Act, MCL 125.3101, *et seq.*, as amended. It is also agreed and acknowledged that the terms, conditions, obligations, and requirements of this Agreement are dearly and substantially related to the burdens to be created by the development and use of the Property under the approved PD, and are, without exception, clearly and substantially related to the Township's legitimate interests in protecting the public health, safety and general welfare. Furthermore, the parties fully accept and agree to the final terms, conditions, requirements and obligations of the Agreement and shall not be permitted in the future to claim that the effect of the Agreement results in an unreasonable limitation upon uses of all or any portion of the Property, or claim that enforcement of the

Agreement causes an inverse condemnation, other condemnation or taking of all or any portion of the Property.

(Signatures and notarization are contained on the following pages)

JMF UNION LAKE, LLC, a Michigan limited liability company

By: _____

Printed: Michael S. Furnari

Its: Sole Member and Manager

Dated:

STATE OF MICHIGAN)
) SS
COUNTY OF OAKLAND)

The foregoing Planned Development Agreement was acknowledged before me this ____ day of _____, 2024 by Michael S. Furnari, the Sole Member and Manager of JMF Union Lake, LLC, a Michigan limited liability company, on behalf of said company.

Notary Public
Notary Public, State of Michigan, County of _
Acting in the County of _
My Commission Expires: _

CHARTER TOWNSHIP OF WHITE LAKE, a
Michigan Charter Township

By: _____

Printed: _____

Its: _____

Dated: _____

STATE OF MICHIGAN)
) SS
COUNTY OF OAKLAND)

The foregoing Planned Development Agreement was acknowledged before me this ____
day of _____, 2024 by _____, the _____ of
Charter Township of White Lake, a Michigan Charter Township, on behalf of said Charter
Township.

Notary Public
Notary Public, State of Michigan, County of _____
Acting in the County of _____
My Commission Expires: _____

Prepared by:

Alan M. Greene, Esq.
Dykema Gossett PLLC
39577 Woodward Avenue, Suite 300
Bloomfield Hills, MI 48304

When recorded, return to:

White Lake Township
c/o Township Clerk
7525 Highland Road
White Lake, MI 48383

EXHIBIT A

(Legal Description)

EXHIBIT B

(Final Site Plan)