



REGULAR MEETING AGENDA

**Tuesday, November 14, 2023
6:30 P.M.**

If you need any assistance due to a disability, please contact the Planning Department at least 48 hours in advance of the meeting at planning@ypsitownship.org or 734-544-4000 ext. 1.

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF THE OCTOBER 24, 2023, REGULAR MEETING MINUTES
4. APPROVAL OF AGENDA
5. PUBLIC HEARINGS
6. OLD BUSINESS
7. NEW BUSINESS
 - A. **PRELIMINARY SKETCH SITE PLAN – CALIBER COLLISION – 1133 E. MICHIGAN AVENUE – PARCEL K-11-10-125-014** – TO CONSIDER THE PRELIMINARY SKETCH SITE PLAN APPLICATION OF CALIBER COLLISION TO PERMIT THE USE OF THE EXISTING BUILDING / SITE FOR AN AUTOMOBILE COLLISION BUSINESS FOR A 3.4 ACRE PARCEL ZONED RC – REGIONAL CORRIDOR WITH A SITE TYPE C DESIGNATION.
 - B. **FINAL SITE PLAN APPROVAL EXTENSION – YPSILANTI TENNIS CLUB – 3160 W. MICHIGAN AVENUE – PARCEL K-11-18-340-001** – TO CONSIDER THE REQUEST TO EXTEND THE FINAL SITE PLAN APPROVAL GRANTED TO YPSILANTI TENNIS CLUB ON DECEMBER 14, 2022.
8. OPEN DISCUSSION FOR ISSUES NOT ON THE AGENDA
 - A. CORRESPONDENCE RECEIVED
 - B. PLANNING COMMISSION MEMBERS
 - C. MEMBERS OF THE AUDIENCE
9. TOWNSHIP BOARD REPRESENTATIVE REPORT
10. ZONING BOARD OF APPEALS REPRESENTATIVE REPORT
11. TOWNSHIP ATTORNEY REPORT
12. PLANNING DEPARTMENT REPORT
13. OTHER BUSINESS
14. ADJOURNMENT

**CHARTER TOWNSHIP OF YPSILANTI
PLANNING COMMISSION MEETING
Tuesday, October 24, 2023
6:30 pm**

COMMISSIONERS PRESENT

Bill Sinkule, Chair
Elizabeth El-Assadi, Vice-Chair
Gloria Peterson
Larry Doe
Muddasar Tawakkul
Bianca Tyson

STAFF AND CONSULTANTS

Jason Iacoangeli AICP, Planning Director
Dennis McLain, Township Attorney

i. **CALL TO ORDER/ESTABLISH QUORUM**

MOTION: Mr. Sinkule called the meeting to order at 6:30 pm.

ii. **APPROVAL OF SEPTEMBER 2023 REGULAR MEETING MINUTES**

MOTION: Mr. Tawakkul **MOVED** to approve the September 26, 2023, regular meeting minutes. The **MOTION** was **SECONDED** by Mr. Doe and **PASSED** by unanimous consent.

iii. **APPROVAL OF AGENDA**

MOTION: Ms. Peterson **MOVED** to approve the proposed agenda. The **MOTION** was **SECONDED** by Ms. El-Assadi and **PASSED** by unanimous consent.

iv. **NEW BUSINESS**

PRELIMINARY SITE PLAN – KALITTA TURBINES LLC – 2830 TYLER ROAD – PARCEL K-11-13-206-007 – TO CONSIDER THE PRELIMINARY SITE PLAN APPLICATION OF KALITTA TURBINES INC. TO PERMIT THE CONSTRUCTION OF A NEW BUILDING, PROPOSED FUTURE BUILDING, ASSOCIATED PARKING, AND SITE IMPROVEMENTS FOR A 6.0 ACRE SITE ZONED I-C – INDUSTRIAL AND COMMERCIAL

The Office of Community Standards is in receipt of a Preliminary Site Plan Application from Mr. Bedder representing Kalitta Turbines requesting authorization for the construction of a 12,000 sq. ft. storage facility, 39,600 sq. ft. future building, and the construction of the associated parking areas, driveways, utilities, storm water management system, and landscaping. This project will include a land combination of the existing warehouse / avionic repair facility located at 2850 Tyler Road with the parcel located at 2830 Tyler Road.

Mr. Iacoangeli, Planning Director, presented to the Commission the project proposal for a new industrial building that will allow for additional capacity for turbine repair for Kalitta Turbine. It was described that the parcels owned by Kalitta have been combined for this new project. Discussion was had about the new parking arrangement as the current facility does not have ample employee parking at the current site. The new parking will allow for an ADA parking space and should have the right amount of parking based on the number of employees on different shifts. The required parking is 75 spaces and the applicant is proposing 48 spaces. The applicant may need to include additional parking with the future building will be constructed. Mr. Iacoangeli also mentioned that at this time YCUA has not signed off on the preliminary plan but Kalitta is continuing to work with Scott Westover to get the water main plans approved.

Mr. Iacoangeli was asked about what Kalitta Turbines and what their business entails and how many employees they have at their facility.

Mr. Iacoangeli stated that the applicant could answer this question better he introduced Mr. Peter Bedder with Kalitta. Mr. Bedder related that the business is a Turbine repair company that has clients from all over the world. He related that they have two shifts and around 151 employees.

Mr. Bedder explained the need to relocate the landscaping to different areas around the site and to keep landscape islands out of the parking field as it will be used for loading and unloading. Mr. Bedder will show the loading and unloading in the next set of plans.

MOTION: Mr. Tawakkul **MOVED** to approve the site plan approval for the construction of a new industrial building to be located at 2830 Tyler Road, Parcel K-11-13-206-007, with the following conditions:

1. Applicant shall address all outstanding comments from reviewing agencies prior to Final Site Plan Approval.
2. Applicant shall obtain all applicable internal and outside agency permits prior to construction.
3. The applicant shall provide additional landscaping on surrounding property to accommodate for the deficiency in parking lot landscaping.
4. Applicant will notate the loading and unloading zones on the Final Site Plans.

The **MOTION** was **SECONDED** by Mr. Doe

Roll Call Vote: Ms. El-Assadi (Yes); Mr. Tawakkul (Yes); Ms. Tyson (Yes); Mr. Doe (Yes); Ms. Peterson (Yes); Mr. Sinkule (Yes).

v. **OLD BUSINESS**

None

vi. **OPEN DISCUSSIONS FOR ISSUES NOT ON AGENDA**

- **Correspondence received**

None to Report.

- **Planning Commission members**

Questions about the remaining meeting for the rest of 2023.

- **Members of the audience**

None to Report.

vii. **TOWNSHIP BOARD REPRESENTATIVE REPORT**

None to Report

viii. **ZONING BOARD OF APPEALS REPRESENTATIVE REPORT**

None to Report.

ix. **TOWNSHIP ATTORNEY REPORT**

None to Report.

x. **PLANNING DEPARTMENT REPORT**

Mr. Iacoangeli said that he feels that the Planning Commission will meet at least one more time this year, maybe even two meetings.

xi. **OTHER BUSINESS**

None to Report.

xii. **ADJOURNMENT**

MOTION: Ms. El-Assadi **MOVED** to adjourn at 7:35 pm. The **MOTION** was **PASSED** by unanimous consent.



**Staff Report
Caliber Collision
1133 E. Michigan Avenue, Ypsilanti, MI 48198
Preliminary Sketch Site Plan**

November 14, 2023

Applicant: Bret Flory

Project Name: Caliber Collision

Plan Date: 08-24-2023

Location: 1133 E. Michigan Avenue, Ypsilanti, MI 48198 Parcel #K-11-10-125-014

Zoning: RC – Regional Corridor – Site Type C

Action Requested: Preliminary Sketch Plan Approval

CASE LOCATION AND SUMMARY

The Office of Community Standards is in receipt of a Preliminary Sketch Plan Application from Mr. Flory representing Caliber Collision requesting authorization for the use of the existing building located at 1133 E. Michigan Avenue for a Caliber Collision. Caliber Collision is a national brand which offers collision repair, auto repair, glass repair, and other automotive services.

CROSS REFERENCES

- Article 5, District Regulations
- Article 9, Site Plan Review
- Article 11, Specific Provisions
- Article 12, Access, Parking, Loading
- Article 13, Site Design Standards
- Article 16, Nonconformities

SUBJECT SITE USE, ZONING AND COMPREHENSIVE PLAN

The Charter Township of Ypsilanti 2040 Master Plan designates this site for Mixed Use Corridors, a designation intended to be developed transportation arteries, with a mixture of residential, commercial, office and employment uses. Regional Mixed-Use Corridors areas are located along the busiest corridors, which support a high volume of both local and regional traffic. This area may include large national chains, regional retailers and auto oriented uses that draw customers both regionally and locally. Compared to Neighborhood Mixed-Use Corridors areas they are high intensity and feature the largest scale of commercial development.

Township Supervisor
Brenda L. Stumbo
Township Clerk
Heather Jarrell Roe
Township Treasurer
Stan Eldridge



**YPSILANTI
TOWNSHIP**
— PLANNING & ZONING DEPARTMENT —

Trustees
John Newman II
Gloria Peterson
Debbie Swanson
Ryan Hunter

1133 E. Michigan Avenue, Ypsilanti, MI 48198 – Aerial Photograph 2020





ADJACENT USES, ZONING AND COMPREHENSIVE PLAN

<i>Direction</i>	<i>Use</i>	<i>Zoning</i>	<i>Master Plan</i>
North	Vacant	RC – Regional Corridor	Neighborhood Preservation
South	Industrial / Automotive	RC – Regional Corridor	Mixed Use Corridors
East	Commercial	RC – Regional Corridor	Mixed Use Corridors
West	Commercial	RC – Regional Corridor	Mixed Use Corridors

SITE PLAN REVIEW

Per Sec. 903. – Site Plan Review Process of the Township Zoning Ordinance, A change in use for a site that does not comply with current design standards (such as landscaping, signage, lighting, or drainage) requires a Sketch Plan Review / Planning Commission review.

NATURAL FEATURES

Topography: The subject parcel is relatively flat.

Woodlands: The site has woodlands on the northern portion of the property.

Wetlands: There are no wetlands on the subject property. According to FEMA MAP 26161C0430E, Dated April 3, 2012, the site is in an area of minimal flood hazard.

Soils: Unknown

LAND USE

Currently, the RC – Regional Corridor Zoning District does not allow for major automotive repair businesses. 1133 E. Michigan Avenue has an extensive history of special land use approvals for similar businesses. Below I have put together a timeline of approvals:

- **June 26, 2001** – The Planning Commission granted KD Michaels a Special Conditional Use Permit for a vehicle sales and service facility.



- **September 10, 2002** – The Planning Commission granted KD Michaels a Special Conditional Use Permit to operate an auto body collision shop as an accessory use to the RV Dealership.
- **March 27, 2007** – The Planning Commission granted KD Michaels a Special Conditional Use Permit to allow for the sale of new and used tractor trailer trucks as opposed to RV's.

Caliber Collision will extend the historical use of the property without the sale and new and used automobiles. It is of the Planning Department's opinion that Caliber Collision will be less intense of a use due to the lack of automobile sales. The Planning Department also thinks this use is appropriate for this location.

NONCONFORMITIES

Sec. 1604. – Nonconforming Structures & Sec. 1605. – Nonconforming Uses of Land

1133 E. Michigan Avenue is a Class B Nonconforming Structure. Per Sec. 1604, No such structure may be enlarged or altered in a way that increases its nonconformity, except as provided herein. Such structures may be enlarged or altered in a manner that does not increase its nonconformity.

Collision repair is no longer permitted in the RC – Regional Corridor Zoning District. This property has a history of past approvals which allows this use to continue. The use cannot be enlarged, and additional structures cannot be constructed in association with the nonconforming land use.

Items to be addressed: No items to be addressed. The applicant is not proposing any enlargement or alteration of the existing building.

HEIGHT, BULK, DENSITY AND AREA

Sec. 502. – Applicability and Organization:

1. Applicability:
 - a. Any new use or expansion of existing use that requires site plan review shall comply with the requirements of this Article and other applicable requirements of this Ordinance.
 - b. The requirements of this Article shall not apply to:
 - i. Continuation of a permitted use within an existing structure.
 - ii. Changes of use with existing structures that do not require increased parking.
 - iii. Normal repair and maintenance of existing structures that do not increase its size or parking demand.



Items to be addressed: The applicant is reusing an existing building that was constructed prior to the adoption of the current zoning ordinance. The applicant is not increasing the size of the building or the size of the parking lot.

PARKING AND LOADING

Sec. 1205, 1206, and 1207 of the Township Zoning Ordinance require all developments in the Township to have adequate parking accommodation for employees and members of the public.

Sec. 1205, 1206, and 1207

	Required	Provided
Industrial or research establishments and related accessory offices: Five (5) plus one (1) for every one and a half (1.5) employees in the largest working shift, or one (1) for every five hundred-fifty (550) square feet of usable floor space, whichever is greater.	21,033 sq. ft. (Existing Building) 21,033/550 = 38 Parking Spaces. The parking lot is existing. No expansions are proposed.	124 spaces
Barrier Free	5	0
Loading	1	1
Bicycle Facility	1	0
Total	40	125

Items to be addressed: The Planning Department will require that the applicant paint / restripe the existing parking lot. The applicant will be required to have a minimum of 5 barrier free parking spaces near the front entrance of the building with the required signage. The applicant will be required to provide one (1) bicycle rack.



LANDSCAPE REQUIREMENTS

Sec. 1301. – Landscape Requirements

	Required	Provided	Compliance
Street Yard Landscaping: 1 Large deciduous tree per 40ft of frontage, 1 ornamental tree per 100 ft of frontage, 1 shrub per 10 ft. of frontage.	7.5 Large Trees required. 3 Ornamental Trees Required. Continuous 3' hedge required.	8 Deciduous Trees (6 existing, 2 proposed) 3 Ornamental Trees (2 existing, 1 proposed) Shrubs provided.	Complies
Parking Lot Perimeter: 1 large deciduous tree per 2,000 sq/ft of pavement and 1 per 40 lineal feet.	Pavement Area: 29,859 sq. ft. 15 Trees Required	15 Trees Provided along perimeter of lot (13 existing trees + 2 proposed)	Complies
General Landscaping: 1 tree per 1,000 sq. ft. of lawn area plus 1 shrub per 500 sq. ft. of lawn area.	Lawn Area = 18,383 18 Trees 37 Shrubs	18+ trees Provided. 44 Shrubs Provided.	Complies
Parking Lot: 1 large tree per 2000 sq. ft. of pavement area.	15 trees required.	15 trees provided (13 existing, 2 proposed)	Complies

Items to be addressed: None.

DUMPSTER ENCLOSURE

Sec. 1302. – Trash and Recycling Receptacles

Items to be addressed: Applicant has included a dumpster enclosure on the plans dated 08-24-2023.

EXTERIOR LIGHTING

Sec. 1303. - Exterior Lighting

Items to be addressed: The applicant will be utilizing the existing lighting on site. The Planning Department will require that all lights be properly shielded to avoid projecting light onto adjacent properties.



ELEVATIONS

Sec. 1306. – Building Design Requirements

Items to be addressed: The applicant is not proposing any major modifications to the elevations of the building. The Planning Department requires that the applicant re-paint or clean the front façade of the building to remove the old sign outline.

FENCING

Sec. 1157. – Outdoor storage and contractors/landscapers' yard

Items to be addressed: There is an existing wooden privacy fence which screens the rear of the property from the public right-of-way. The applicant is proposing a chain-link fence with inserted strips of metal.

Per Sec. 1157. "Wire fences with inserted strips of metal, plastic and similar materials shall not be substituted for the required screening. The screen shall not be less than the maximum height of the product being stored."

The applicant will need to repair / replace the existing wooden privacy fence with a new wooden privacy fence or replace the existing wooden privacy fence with a masonry wall.

RECOMMENDATIONS

The Charter Township of Ypsilanti Planning Department finds this land use to be compatible and appropriate for the site located at 1133 E. Michigan Avenue, Ypsilanti, MI 48198.

The Planning Department recommends approval of the Caliber Collision Preliminary Sketch Plan with the following items to be conditions of approval to be submitted as part of the final site plan:

1. *Provide required bicycle parking.*
2. *Provide new fence plans that are permitted per the Township Zoning Ordinance.*
3. *Ensure that all existing lights are appropriately shielded.*
4. *Repaint the front façade to ensure the previous sign outline is not present.*
5. *Restripe the parking lot.*
6. *Address all outstanding comments as provided in the letters attached to the Director's Report.*
7. *The applicant shall provide a sidewalk connect from Michigan Ave internal to their site. The applicant shall also verify the existing sidewalk along Michigan*



Ave, any barrier-free parking spaces and access aisles, and any existing on-site sidewalks are compliant.

8. *The applicant shall provide the location of all barrier-free parking spaces on the plans. Based on the number of parking spaces provided, the applicant will need to provide five (5) barrier-free parking spaces, including one (1) van-accessible space, are required to be provided.*
9. *Any other conditions based upon Planning Commission discussion.*

SUGGESTED MOTIONS

The following suggested motions and conditions are provided to assist the Planning Commission in making the most appropriate motion for this application. The Commission may utilize, add, or reject any conditions suggested herein, as they deem appropriate.

Motion to table:

*“I move to table the request for **preliminary sketch site plan** of Caliber Collision to permit the use of the existing building / site for an automobile collision business for a 3.4-acre site zoned RC – Regional Corridor with a Site Type C Designation, located at 1133 E. Michigan Avenue, Ypsilanti, MI 48198, Parcel K-11-10-125-014 to consider comments presented by the Planning Commission during the discussion of the project.”*

Motion to approve.

*“I move to approve the **preliminary sketch site plan** of Caliber Collision to permit the use of the existing building / site for an automobile collision business for a 3.4-acre site zoned RC – Regional Corridor with a Site Type C Designation, located at 1133 E. Michigan Avenue, Ypsilanti, MI 48198, Parcel K-11-10-125-014, with the following conditions:*

1. *The applicant shall address all outstanding comments from reviewing agencies prior to Final Site Plan approval.*
2. *The applicant shall obtain all applicable internal and outside agency permits prior to construction.*
3. *The applicant shall provide the required bicycle parking.*
4. *The applicant shall provide the Planning Department with revised fence plans that are permitted per the Township Zoning Ordinance.*
5. *The applicant shall ensure that all existing light fixtures are functioning and properly shielded.*
6. *The applicant shall repaint the front façade of the building.*



7. *The applicant shall repaint / restripe the parking lot.*
8. *The applicant shall provide the location of all barrier-free parking spaces on the final site plan. The applicant shall provide a minimum of five (5) barrier-free parking spaces, including one (1) van-accessible space, as required by the Township Zoning Ordinance.*
9. *The applicant shall provide a sidewalk connect from Michigan Ave internal to their site. The applicant shall also verify the existing sidewalk along Michigan Ave, any barrier-free parking spaces and access aisles, and any existing on-site sidewalks are compliant.*
10. Caliber Collision will enter into a development agreement pursuant to the Final Site Plan Approval with the Township.
11. *Any other conditions based upon Planning Commission Discussion.*

Motion to deny:

*“I move to deny the **preliminary sketch site plan** of Caliber Collision to permit the use of the existing building / site for an automobile collision business for a 3.4-acre site zoned RC – Regional Corridor with a Site Type C Designation, located at 1133 E. Michigan Avenue, Ypsilanti, MI 48198, Parcel K-11-10-125-014 due to the following reasons:”*

Respectfully submitted,

Fletcher Reyher, Planning & Development Coordinator
Charter Township of Ypsilanti Planning Department

Planning Director's Report

Project Name: Caliber Collision

Location: 1133 E. Michigan Avenue, Ypsilanti, MI 48198

Date: 10-30-2023

- | | |
|---|---|
| <input type="checkbox"/> Full Preliminary Site Plan Review #
<input checked="" type="checkbox"/> Sketch Preliminary Site Plan Review # 1
<input type="checkbox"/> Administrative Preliminary Site Plan Review #
<input type="checkbox"/> Detailed Engineering/Final Site Plan Review #
<input type="checkbox"/> Special Use Permit
<input type="checkbox"/> Public Hearing | <input type="checkbox"/> Rezoning
<input type="checkbox"/> Tentative Preliminary Plat
<input type="checkbox"/> Final Preliminary Plat
<input type="checkbox"/> Final Plat Process
<input type="checkbox"/> Planned Development Stage I
<input type="checkbox"/> Planned Development Stage II |
|---|---|

Contact / Reviewer	Consultants, Departments, & Agencies	Approved	Approved with Conditions	Denied	N/A	See email/letter attached or comments below
Jason Iacoangeli, Planning Director	Township Planning Department	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See comments below
Carlisle/Wortman Associates	Planning Consultant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
OHM / Stantec	Engineering Consultant	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See letter dated 10-23-2023
Steven Wallgren, Fire Marshal	Township Fire Department	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See letter dated 10-24-2023
Dave Bellers, Building Official	Township Building Department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Brian McCleery, Deputy Assessor	Township Assessing Department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Scott Westover, Engineering Manager	Ypsilanti Community Utilities Authority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See email dated 10-23-2023
Gary Streight, Project Manager	Washtenaw County Road Commission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Theresa Marsik, Stormwater Engineer	Washtenaw County Water Resources Commission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
James Drury, Permit Agent	Michigan Department of Transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Planning Director's Recommended Action:

At this time, Caliber Collision is eligible for Preliminary Sketch Plan consideration by the Planning Commission. This project is being placed on the Planning Commission Agenda for Tuesday, December 12, 2023, at the regularly scheduled meeting. It would be the Planning Department's recommendation that the Planning Commission grant Preliminary Sketch Plan approval as this project meets the conditions of the Township Zoning Ordinance for a project of this type. The approval should be contingent of the applicant addressing the remaining outside agency comments as required as part of the Final Site Plan / Detailed Engineering Design. OHM and the Ypsilanti Township Fire Department have significant comments that will need to be addressed during the time of Final Site Plan review. The applicant will need to provide existing storm water management calculations, following the current Washtenaw County Water Resources Commissioner's (WCWRC) Standards, on the plans to verify if the existing basin is adequately sized. The applicant shall also re-establish the existing basin. In addition, the change in occupancy type will require an automatic sprinkler system and required fire hydrant coverage per the Ypsilanti Township Fire Department's letter.

October 23, 2023

Mr. Jason Iacoangeli
Township Planning Director
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: Caliber Collision
Sketch Plan Review #1

Dear Mr. Iacoangeli:

We have completed the first sketch plan review of the plans dated October 9, 2023 and stamped received by OHM Advisors on October 10, 2023.

At this time, the plans are recommended for approval for the Planning Commission's consideration, contingent on the following comments being addressed. Preliminary detailed engineering comments have been provided to the applicant as a courtesy and shall be addressed prior to submitting detailed engineering plans for review. It shall be noted that additional detailed engineering comments may be generated as a result of additional information being provided.

A brief description of the project has been provided below (Section A), followed by our comments (Section B and C) and a list of anticipated required permits and approvals (Section D). Comments in Section C are detailed in nature, do not influence the overall site layout, and can be addressed during the detailed engineering drawing submittal.

A. PROJECT AND SITE DESCRIPTION

The applicant is proposing to renovate the existing building located at 1133 E Michigan Ave for use as an auto body paint and repair shop. The site is currently zone RC and is approximately 3.42 acres.

It appears that the existing building is serviced by connection to the existing 12-inch water main and the existing 12-inch sanitary sewer along the north side of E Michigan Ave. The stormwater runoff is captured by an existing on-site detention basin and underground conveyance system. It currently appears that changes to the utilities (water, sanitary, storm) are not being proposed at this time.

B. SITE PLAN COMMENTS

Stormwater Management

1. The applicant shall provide the existing stormwater management calculations, following the current Washtenaw County Water Resources Commissioner's (WCWRC) Standards, on the plans to verify if the existing basin is adequately sized. The applicant shall also provide water quality measures on-site where feasible. The applicant shall also re-establish the existing basin as it currently appears to be overgrown and less functional.



Paving and Grading

2. The applicant shall provide truck turning templates (fire truck, garbage truck, delivery truck, etc.) on the plans for review to ensure sufficient space for accessibility has been provided. The applicant shall clarify if a loading zone will be provided. If so, its location shall be provided on the plans.
3. The applicant shall provide the location of all barrier-free parking spaces on the plans. Based on the number of parking spaces provided, it appears that a minimum of five (5) barrier-free spaces, including one (1) van-accessible space, are required to be provided.
4. The applicant shall provide a sidewalk connection from Michigan Ave internal to their site. The applicant shall also verify the existing sidewalk along Michigan Ave, any barrier-free parking spaces and access aisles, and any existing on-site sidewalk are compliant. Anything out of compliance will need to be removed and replaced. The applicant shall note the cross-slope shall not exceed 2%, per ADA Standards.

C. PRELIMINARY DETAILED ENGINEERING PLAN COMMENTS

The following comments shall be addressed by the applicant during the detailed engineering drawing submittal, and do not affect the recommendation for approval to the Township of Ypsilanti Planning Commission. It should be noted that this is not an all-inclusive list and additional comments may be generated as new information is presented.

1. The applicant shall provide spot elevations at all four (4) corners of all existing and proposed ramps and level landings, barrier-free parking spaces and access aisles, and along both sides of all sidewalk at 50-foot intervals. The applicant shall note that the cross-slope shall not exceed 2%.
2. The applicant shall provide a topographical survey for the existing site within the plan set, including the location of all existing utilities (water, sanitary, storm), including hydrants.
3. The applicant shall provide a maintenance schedule for all permanent soil erosion and stormwater management activities both during and after construction. The schedule shall include the frequency of activities as well as the party responsible.
4. The applicant shall provide a soil erosion and sedimentation control (SESC) plan sheet within the plan set. The applicant shall also provide the Ypsilanti Township SESC detail sheet. The detail sheet can be obtained by emailing stacie.monte@ohm-advisors.com.
5. The applicant shall provide a Certificate of Outlet, signed and sealed by a registered engineer in the State of Michigan, on the plans.
6. The applicant shall provide a stormwater narrative clarifying the existing stormwater management, including the ultimate outlet and how stormwater is managed around the building (i.e. roof drains).
7. The applicant shall provide the name, location, and easement layout of the nearby County Drain on the plans.
8. The applicant shall clarify if the existing parking lot will be redone. If so, a cross-section, if applicable, shall be provided on the plans.
9. Since there are more than three (3) plan sheets, the applicant shall provide a cover sheet with a sheet index, location map, parcel information, design engineer and applicant contact information, legal description, etc. The applicant shall also provide a project narrative on the cover sheet clarifying all proposed work and if any changes to the utilities (water, sanitary, storm) are being made.



10. The applicant shall note that the plans must be signed and sealed by a registered engineer in the State of Michigan.
11. The applicant shall note that a minimum of two (2) benchmarks shall be provided on the plans, per Township Standards.

D. REQUIRED PERMITS & APPROVALS

The following outside agency reviews and permits will be required for the project. Copies of any correspondence between the applicant and the review agencies, as well as the permit or waiver, shall be sent to both the Township and OHM Advisors (email: stacie.monte@ohm-advisors.com).

- ▶ **Ypsilanti Community Utilities Authority (YCUA):** Review and approval of any water main and sanitary sewer improvements will be required.
- ▶ **Ypsilanti Township Fire Department:** Review and approval is required.
- ▶ **Washtenaw County Water Resources Commissioner's Office (WCWRC):** Review and approval may be required.
- ▶ **Washtenaw County Road Commission (WCRC):** Review and approval may be required.
- ▶ **Michigan Department of Transportation (MDOT):** Review and approval of all proposed work within the Michigan Ave ROW will be required.
- ▶ **Michigan Department of Environment, Great Lakes & Energy (EGLE):** An EGLE Act 399 and Part 41 permit will be required for construction of all public water main and sanitary sewer systems improvements.
- ▶ **Ypsilanti Township Office of Community Standards:** A Soil Erosion and Sedimentation Control permit shall be secured from the Ypsilanti Township Office of Community Standards.
- ▶ The Township's Planner will inspect the landscaping for this site.
- ▶ If dewatering should be needed, the contractor/applicant shall be responsible for obtaining necessary approvals from the Township and the Township Engineer, permission from all impacted adjacent properties and/or permits from MDOT, WCWRC's Office, or the WCRC.
- ▶ Record plans shall be provided to the Township Engineer following the completion of construction.

Should you have any questions regarding this matter, please contact this office at (734) 466-4580.

Sincerely,
OHM Advisors

Matthew D. Parks, P.E.

Stacie L. Monte

MDP/SLM

cc: Fletcher Reyher, Township Staff Planner
Doug Winters, Township Attorney
Steven Wallgren, Township Fire Marshall
File

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CHARTER TOWNSHIP OF YPSILANTI FIRE DEPARTMENT

BUREAU OF FIRE PREVENTION

222 South Ford Boulevard, Ypsilanti, MI 48198



October 24, 2023

Jason Iacoangeli, Planning Director
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: Preliminary (non-residential) Site Plan Review #1

Project Name:	Caliber Collision
Project Location:	1133 E. Michigan Ave. Ypsilanti, MI 48198
Plan Date:	10/2/2023
Project #:	23590
Applicable Codes:	IFC 2018
Architects:	Bret Flory
Architects Address:	1913 Gardengrove Ct. Plano, TX 75075

Status of Review

Status of review: Approved Conditionally (see comments)

Pages Sketch plan, Conceptual Elevation and Conceptual Floor plan - A were reviewed.

Site Coverage - Hydrants - Suppression

Comments: Your intended use of this building is a **Group S-1** which is a change in occupancy type and will require an automatic sprinkler system because the fire area is greater than 12,000 sq ft.

My understanding is the construction type of the building is a II-B which fire flow calculations requires 3 hydrants, one of which will have to be no closer than 30' and no further than 100' from the FDC.

Site Coverage - Access

Comments: Site access complies with IFC 2018.

A handwritten signature in black ink, appearing to read "Steve Wallgren".

Steve Wallgren, Fire Marshal
Charter Township of Ypsilanti Fire Department
CFPS, CFI I

RE: 1133 E. Michigan Ave - Caliber Collision - Sketch Plan Review #1

Scott Westover <SWestover@ycua.org>

Mon 10/23/2023 3:30 PM

To:Fletcher Reyher <freyher@ypsitownship.org>

Cc:Jason Iacoangeli <jjacoangeli@ypsitownship.org>;Luke Blackburn <LBlackburn@ycua.org>;Sean Knapp <SKnapp@ycua.org>

No water or sanitary work is proposed. YCUA has no comments or concerns with the project.

SCOTT WESTOVER | Director of Engineering

Telephone: (734) 484-4600 ext. 220

swestover@ycua.org

Ypsilanti Community Utilities Authority

2777 State Road | Ypsilanti, Michigan USA 48198-9112

www.ycua.org

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From: Fletcher Reyher <freyher@ypsitownship.org>

Sent: Tuesday, October 10, 2023 2:18 PM

To: Matt Parks <matt.parks@ohm-advisors.com>; Stacie Monte <stacie.monte@ohm-advisors.com>; Steven Wallgren <swallgren@ypsitownship.org>; Scott Westover <SWestover@ycua.org>

Cc: Jason Iacoangeli <jjacoangeli@ypsitownship.org>; Lauren Doppke <ldoppke@ypsitownship.org>; Brenda Stumbo <bstumbo@ypsitownship.org>; Stan Eldridge <seldridge@ypsitownship.org>; Heather Jarrell Roe <hjarrellroe@ypsitownship.org>; McLain <mcwinlaw@gmail.com>; Brian McCleery <bmcclery@ypsitownship.org>; Dave Bellers <dbellers@ypsitownship.org>

Subject: 1133 E. Michigan Ave - Caliber Collision - Sketch Plan Review #1

Good morning, everyone,

Please use this email as a formal transmittal of the **Caliber Collision Sketch Plan #1 to be located at 1133 E. Michigan Avenue, Ypsilanti, MI 48198, Parcel K-11-10-125-014.** The plan and application are attached to this email. This building has been historically used for vehicle repair and vehicle sales. Caliber Collision will be a continuation of previous Special Land Use approvals without the sale of vehicles. We kindly request that you have all of your review comments back to the Planning Department on or before **Tuesday, October 24th, 2023,** at the close of business.

If you have any questions about the project, please do not hesitate to contact the Planning Department.

Thank you,

Fin/Slat '1000'TM

Beautiful Performance at a Beautiful Price

What separates FIN/SLAT '1000' from ordinary slats?

Warranty

No other fence company backs its products as well as Master Halco. Fin/Slat '1000' has a 15-year limited warranty so you'll never have to worry about your purchase decision.

Privacy

Exclusive, patented slats offer an unprecedented degree of privacy to your chain-link fence system.

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Manufactured using high density virgin polyethylene and ultraviolet inhibitors, Fin/Slat '1000' is designed to stand up to years of outdoor exposure, enhancing the value of your property for years to come.

Easy Installation

The self-locking slats can be installed by hand or by using an installation tool included for additional ease.

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Fin/Slat '1000' is available in beige, rustic brown, snow white, black, redwood, sky blue, forest green, cape cod gray and royal blue. Variety coupled with the strength and security make Fin/Slat '1000' the ideal choice for residential, commercial and industrial applications.

Specifications subject to change without notice.



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Customer Service Department:
1-888-MH-FENCE (toll-free)
4000 W Metropolitan Dr., Orange, CA 92868
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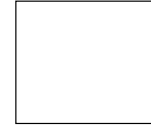
FIN/SLAT '1000' is available in the following colors*:



Beige



Rustic Brown



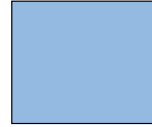
Snow White



Black



Redwood



Sky Blue



Forest Green



Cape Cod Gray

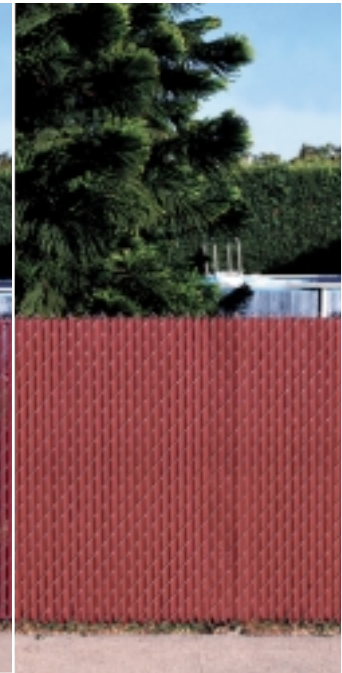


Royal Blue

* Due to manufacturing variances and limitations of the production process, actual slat colors may vary from this brochure.



Ordinary Slats



Fin/Slat '1000'

Fin/Slat '1000' is available from:



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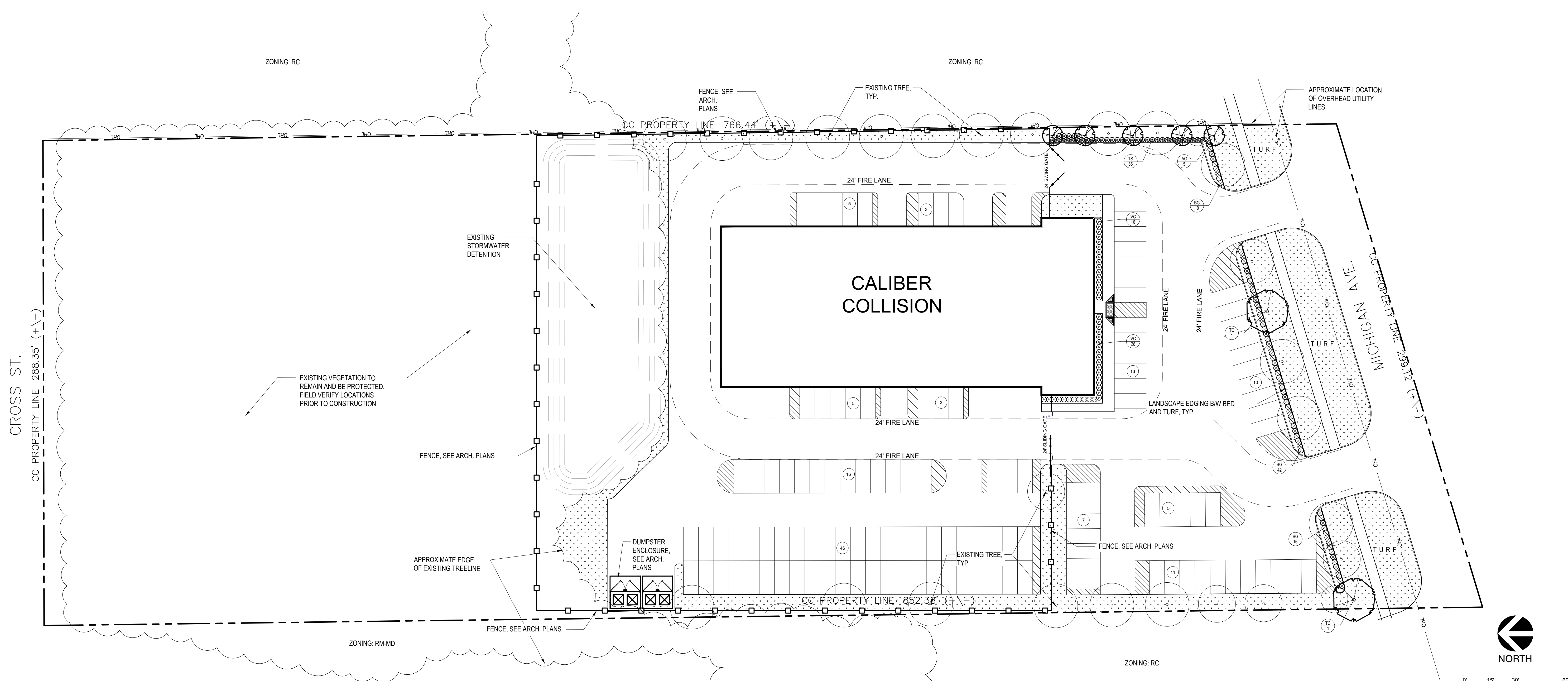
Project Name
Caliber Collision
1133 E. Michigan Ave.
Ypsilanti, MI

LANDSCAPE PLAN

Date	Comment

Project Number
Date **10/09/2023**
Drawn By **SS**
Checked By **SS/RM**

LP-1



LANDSCAPE CALCULATIONS

ZONING: YPSILANTI TOWNSHIP, MI RC (REGIONAL CORRIDOR)

GENERAL LANDSCAPE
1 TREE PER 1000 SF OF LAWN AREA, 1 SHRUB PER 500 SF OF LAWN AREA
LAWN AREA: +/- 18,383 SF
TREES REQUIRED: 18 18+ TREES PROVIDED (EXISTING TREES MEET REQ'T)
SHRUBS REQUIRED: 37 44 SHRUBS PROVIDED

STREET YARD LANDSCAPING (299.12 LF OF FRONTAGE ALONG MICHIGAN AVE.)
1 LG TREE PER 40 LF, 1 ORNAMENTAL TREE PER 100 LF, 3' HT. CONTINUOUS HEDGE

LARGE TREES REQ'D: 7.5 8 LARGE TREES PROVIDED (6 EXISTING + 2 PROPOSED)
ORNAMENTAL TREES REQ'D: 3 3 ORNAMENTAL TREES PROVIDED (2 EXISTING + 1 PROPOSED)
CONTINUOUS 3' HT. HEDGE REQ'D SHRUBS PROVIDED AS REQUIRED

PARKING LOT LANDSCAPING
1 LG. TREE PER 2000 SF OF PAVEMENT AREA (IN PUBLIC PARKING AREA)
PARKING LOT PAVEMENT AREA: 29,859 SF
TREES REQUIRED: 15 15 TREES PROVIDED ALONG PERIMETER OF LOT
(13 EXISTING + 2 PROPOSED)

PARKING LOT PERIMETER LANDSCAPING
1 LG. TREE PER 40 LF OF PARKING (IN PUBLIC PARKING AREA)
TREES REQUIRED: 15 15 TREES PROVIDED
(13 EXISTING + 2 PROPOSED)

SCREENING BETWEEN LAND USES
NORTH
288.35 LF: ADJACENT TO R.O.W. (EXISTING WOODED LOT PRESERVED: NO ADDITIONAL SCREEN REQUIRED)

EAST
366.44 LF: ADJACENT TO RC/RESIDENTIAL (EXISTING WOODED LOT PRESERVED: NO ADDITIONAL SCREEN REQUIRED)
230 LF: ADJACENT TO RC/RETAIL (TYPE 3 SCREENING REQ'D; OPAQUE FENCE PROVIDED AT REAR OF LOT)
108 LF: ADJACENT TO RC/RETAIL (TYPE 3 SCREENING REQUIRED: 1 LG EG TREE/10 LF + 1 NARROW EG TREE/3 LF)
LARGE EVERGREEN TREES REQ'D: 11 0 LARGE EVERGREEN TREES PROVIDED*
*DUE TO OVERHEAD UTILITIES AND LIMITED SPACE, ORN. TREES ARE USED WHERE POSSIBLE.
NARROW EVERGREEN TREES REQ'D: 36 36 NARROW EVERGREEN TREES PROVIDED

SOUTH
299.12 LF: ADJACENT TO R.O.W., STREET YARD LANDSCAPE REQUIRED

WEST:
442 LF: ADJACENT TO R-MD; (EXISTING WOODED LOT PRESERVED: NO ADDITIONAL SCREEN REQUIRED)
410.38 LF: ADJACENT TO RC/AUTOMOTIVE (NO SCREENING REQUIRED)

PLANTING SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	MIN. SIZE	QTY.	REMARKS
TREES						
	AG	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2.5' cal	5	Specimen, multi-stem, 3-5 stems
	TS	Thuja occidentalis 'Smaragd'	Smaragd Arborvitae	5' ht.	36	Matched, spaced 3' o.c.
	TC	Tilia cordata 'Green Spire'	Little Leaf Linden	2.5' cal	0	Matched specimen
SHRUBS/PERENNIALS/GROUND COVER						
	BG	Buxus x 'Green Velvet'	Green Velvet Boxwood	24" ht	68	Full, shear to hedge, spaced 3' o.c.
	VC	Viburnum carlesii 'Compacta'	Korean Spice Viburnum	24" ht.	44	Full, unsharped, spaced 3' o.c.
TURF						
		Kentucky Bluegrass blend	Kentucky Blue Grass	Sod	--	Min. 1 year old, uniform color & texture

GENERAL GRADING & PLANTING NOTES

- BY SUBMITTING A PROPOSAL FOR THE LANDSCAPE PLANTING SCOPE OF WORK, THE CONTRACTOR CONFIRMS THAT HE HAS READ AND WILL COMPLY WITH THE ASSOCIATED NOTES, SPECIFICATIONS, AND DETAILS WITH THIS PROJECT.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING VEGETATION (EXCEPT WHERE NOTED TO REMAIN).
- IN THE CONTEXT OF THESE PLANS, NOTES, AND SPECIFICATIONS, "FINISH GRADE" REFERS TO THE FINAL ELEVATION OF THE SOIL SURFACE (NOT TOP OF MULCH) AS INDICATED ON THE GRADING PLANS.
 - BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE ROUGH GRADES OF ALL LANDSCAPE AREAS ARE WITHIN +0.1' OF FINISH GRADE. SEE SPECIFICATIONS FOR MORE DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION.
 - CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT AND ON THE GRADING PLANS, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES AND ELIMINATE PONDING POTENTIAL.
 - THE LANDSCAPE CONTRACTOR SHALL DETERMINE WHETHER OR NOT THE EXPORT OF ANY SOIL WILL BE NEEDED, TAKING INTO ACCOUNT THE ROUGH GRADE PROVIDED, THE AMOUNT OF SOIL AMENDMENTS TO BE ADDED (BASED ON A SOIL TEST, PER SPECIFICATIONS), AND THE FINISH GRADES TO BE ESTABLISHED.
 - ENSURE THAT THE FINISH GRADE IN SHRUB AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 3" BELOW THE ADJACENT FINISH SURFACE, IN ORDER TO ALLOW FOR PROPER MULCH DEPTH. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS.
 - ENSURE THAT THE FINISH GRADE IN TURF AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 1" BELOW THE FINISH SURFACE OF THE WALKS. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS.
 - SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS, GEOTECHNICAL REPORT, THESE NOTES AND PLANS, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT, GENERAL CONTRACTOR, AND OWNER.
- ALL PLANT LOCATIONS ARE DIAGRAMMATIC. ACTUAL LOCATIONS SHALL BE VERIFIED WITH THE LANDSCAPE ARCHITECT OR DESIGNER PRIOR TO PLANTING. THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT ALL REQUIREMENTS OF THE PERMITTING AUTHORITY ARE MET, I.E., MINIMUM PLANT QUANTITIES, PLANTING METHODS, TREE PROTECTION METHODS, ETC.)
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DETERMINING PLANT QUANTITIES; PLANT QUANTITIES SHOWN ON LEGENDS AND CALLOUTS ARE FOR GENERAL INFORMATION ONLY. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLAN AND THE PLANT LEGEND, THE PLANT QUANTITY AS SHOWN ON THE PLAN (FOR INDIVIDUAL SYMBOLS) OR CALLOUT (FOR GROUND COVER PATTERNS) SHALL TAKE PRECEDENCE.
- NO SUBSTITUTIONS OF PLANT MATERIALS SHALL BE ALLOWED WITHOUT THE WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT.** IF SOME OF THE PLANTS ARE NOT AVAILABLE, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING (VIA PROPER CHANNELS). THE CONTRACTOR SHALL, AT A MINIMUM, PROVIDE REPRESENTATIVE PHOTOS OF ALL PLANTS PROPOSED FOR THE PROJECT. THE CONTRACTOR SHALL ALLOW THE LANDSCAPE ARCHITECT AND THE OWNER'S REPRESENTATIVE TO INSPECT, AND APPROVE OR REJECT, ALL PLANTS DELIVERED TO THE JOBSITE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR SUBMITTALS.
- THE CONTRACTOR SHALL MAINTAIN THE LANDSCAPE IN A HEALTHY CONDITION FOR 90 DAYS AFTER ACCEPTANCE BY THE OWNER. REFER TO SPECIFICATIONS FOR CONDITIONS OF ACCEPTANCE FOR THE START OF THE MAINTENANCE PERIOD, AND FOR FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD.
- THE TURF BOUNDARY SHOWN ON THESE PLANS HAS BEEN ESTIMATED BASED ON THE CURRENT PROJECT INFORMATION. CONTRACTOR SHALL ADJUST THE LIMITS OF TURF TO COVER ALL DISTURBED AREAS DURING CONSTRUCTION.
- SEE SPECIFICATIONS AND DETAILS FOR FURTHER REQUIREMENTS.

ROOT BARRIERS

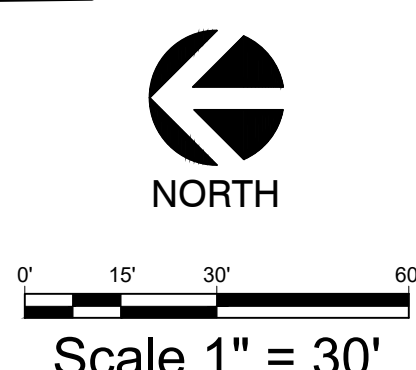
THE CONTRACTOR SHALL INSTALL ROOT BARRIERS NEAR ALL NEWLY-PLANTED TREES THAT ARE LOCATED WITHIN FIVE (5) FEET OF PAVING OR CURBS. ROOT BARRIERS SHALL BE "CENTURY" OR "DEEP-ROOT" 24" DEEP PANELS (OR EQUAL). BARRIERS SHALL BE LOCATED IMMEDIATELY ADJACENT TO HARDSCAPE. INSTALL PANELS PER MANUFACTURER'S RECOMMENDATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR USE ROOT BARRIERS OF A TYPE THAT COMPLETELY ENCLOSE THE ROOTBALL.

MULCHES

AFTER ALL PLANTING IS COMPLETE, CONTRACTOR SHALL INSTALL 3" THICK LAYER OF 1-1/2" SHREDDED WOOD MULCH, NATURAL (UNDYED), OVER LANDSCAPE FABRIC IN ALL PLANTING AREAS (EXCEPT FOR TURF AND SEEDING AREAS). CONTRACTOR SHALL SUBMIT SAMPLES OF ALL MULCHES TO LANDSCAPE ARCHITECT AND OWNER FOR APPROVAL PRIOR TO CONSTRUCTION. ABSOLUTELY NO EXPOSED GROUND SHALL BE LEFT SHOWING ANYWHERE ON THE PROJECT AFTER MULCH HAS BEEN INSTALLED (SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF THE "GENERAL GRADING AND PLANTING NOTES" AND SPECIFICATIONS).

IRRIGATION CONCEPT

- AN AUTOMATIC IRRIGATION SYSTEM SHALL BE INSTALLED AND OPERATIONAL BY THE TIME OF FINAL INSPECTION. THE ENTIRE IRRIGATION SYSTEM SHALL BE INSTALLED BY A LICENSED AND QUALIFIED IRRIGATION CONTRACTOR.
- THE IRRIGATION SYSTEM WILL OPERATE ON POTABLE WATER, AND THE SYSTEM WILL HAVE APPROPRIATE BACKFLOW PREVENTION DEVICES INSTALLED TO PREVENT CONTAMINATION OF THE POTABLE SOURCE.
- ALL NON-TURF PLANTED AREAS SHALL BE DRIP IRRIGATED. SOODED AND SEEDING AREAS SHALL BE IRRIGATED WITH SPRAY OR ROTOR HEADS AT 100% HEAD-TO-HEAD COVERAGE.
- ALL PLANTS SHARING SIMILAR HYDROZONE CHARACTERISTICS SHALL BE PLACED ON A VALVE DEDICATED TO PROVIDE THE NECESSARY WATER REQUIREMENTS SPECIFIC TO THAT HYDROZONE.
- THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED, TO THE MAXIMUM EXTENT POSSIBLE, TO CONSERVE WATER BY USING THE FOLLOWING DEVICES AND SYSTEMS: MATCHED PRECIPITATION RATE TECHNOLOGY ON ROTOR AND SPRAY HEADS (WHEREVER POSSIBLE); RAIN SENSORS, AND MULTI-PROGRAM COMPUTERIZED IRRIGATION CONTROLLERS FEATURING SENSORY INPUT CAPABILITIES.



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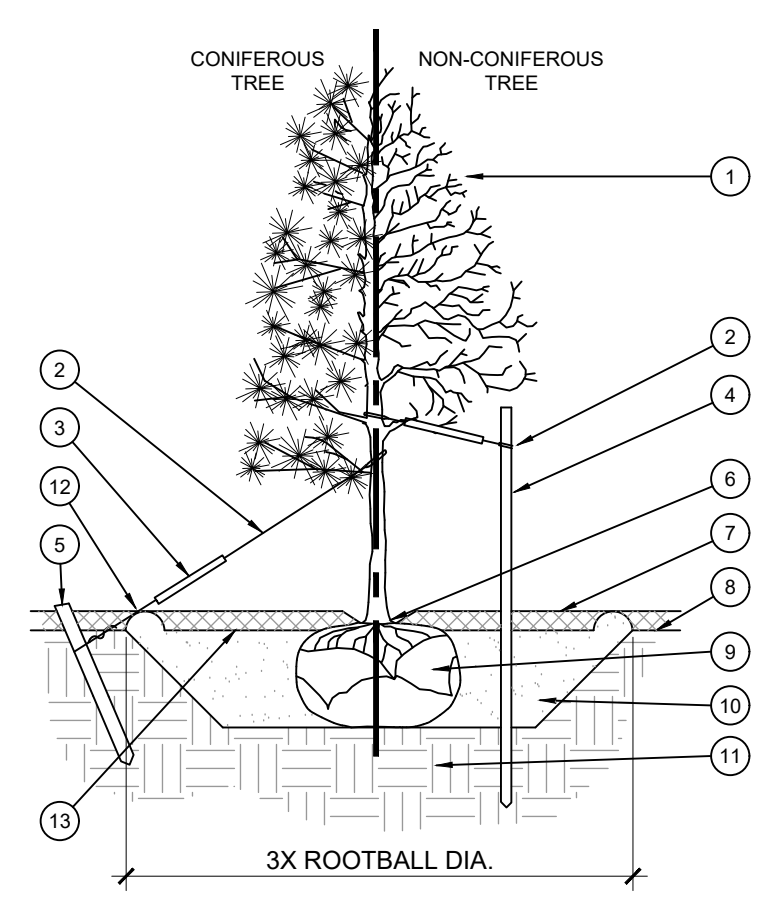


Project Name
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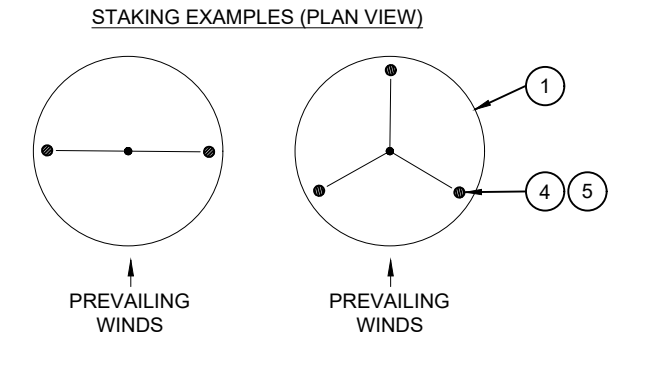
**LANDSCAPE
DETAILS**

Date Comment

Project Number
Date 10/09/2023
Drawn By SS
Checked By SS/RM

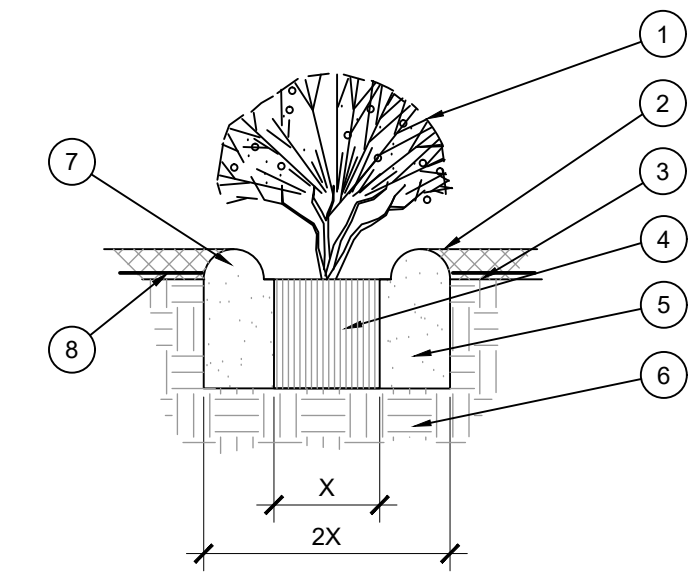


- 1 TREE CANOPY.
- 2 CINCH-TIES (24" BOX/2" CAL. TREES AND SMALLER) OR 12 GAUGE GALVANIZED WIRE WITH NYLON TREE STRAPS AT TREE AND STAKE (36" BOX/2.5" CAL. TREES AND LARGER). SECURE TIES OR STRAPS TO TRUNK JUST ABOVE LOWEST MAJOR BRANCHES.
- 3 24" X 3/4" P.V.C. MARKERS OVER WIRES.
- 4 GREEN STEEL T-POSTS. EXTEND POSTS 12" MIN. INTO UNDISTURBED SOIL.
- 5 PRESSURE-TREATED WOOD DEADMAN, TWO PER TREE (MIN.). BURY OUTSIDE OF PLANTING PIT AND 18" MIN. INTO UNDISTURBED SOIL.
- 6 TRUNK FLARE.
- 7 MULCH, TYPE AND DEPTH PER PLANS. DO NOT PLACE MULCH WITHIN 6" OF TRUNK.
- 8 FINISH GRADE.
- 9 ROOT BALL.
- 10 BACKFILL. AMEND AND FERTILIZE ONLY AS RECOMMENDED IN SOIL FERTILITY ANALYSIS.
- 11 UNDISTURBED NATIVE SOIL.
- 12 4" HIGH EARTHEN WATERING BASIN.
- 13 FINISH GRADE.



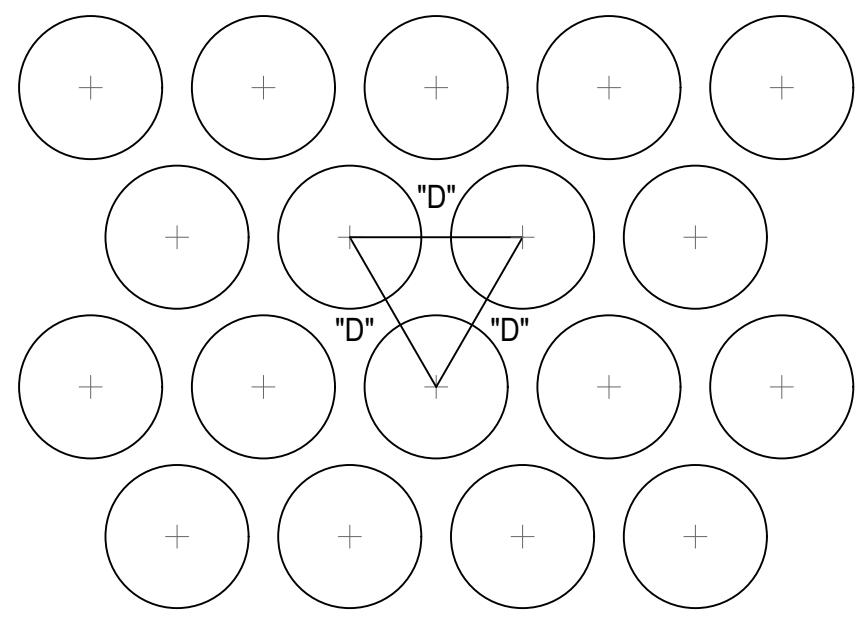
- NOTES:
1. SCARIFY SIDES OF PLANTING PIT PRIOR TO SETTING TREE.
 2. REMOVE EXCESS SOIL APPLIED ON TOP OF THE ROOTBALL THAT COVERS THE ROOT FLARE. THE PLANTING HOLE DEPTH SHALL BE SUCH THAT THE ROOTBALL RESTS ON UNDISTURBED SOIL, AND THE ROOT FLARE IS 2"-4" ABOVE FINISH GRADE.
 3. FOR BAG TREES, CUT OFF BOTTOM 1/3 OF WIRE BASKET BEFORE PLACING TREE IN HOLE. CUT OFF AND REMOVE REMAINDER OF BASKET AFTER TREE IS SET IN HOLE. REMOVE ALL NYLON TIES, TWINE, ROPE, AND OTHER PACKING MATERIAL. REMOVE AS MUCH BURLAP FROM AROUND ROOTBALL AS IS PRACTICAL.
 4. REMOVE ALL NURSERY STAKES AFTER PLANTING.
 5. FOR TREES 36" BOX/2.5" CAL. AND LARGER, USE THREE STAKES OR DEADMEN (AS APPROPRIATE), SPACED EVENLY AROUND TREE.
 6. STAKING SHALL BE TIGHT ENOUGH TO PREVENT TRUNK FROM BENDING, BUT LOOSE ENOUGH TO ALLOW SOME TRUNK MOVEMENT IN WIND.

A TREE PLANTING
SCALE: NOT TO SCALE



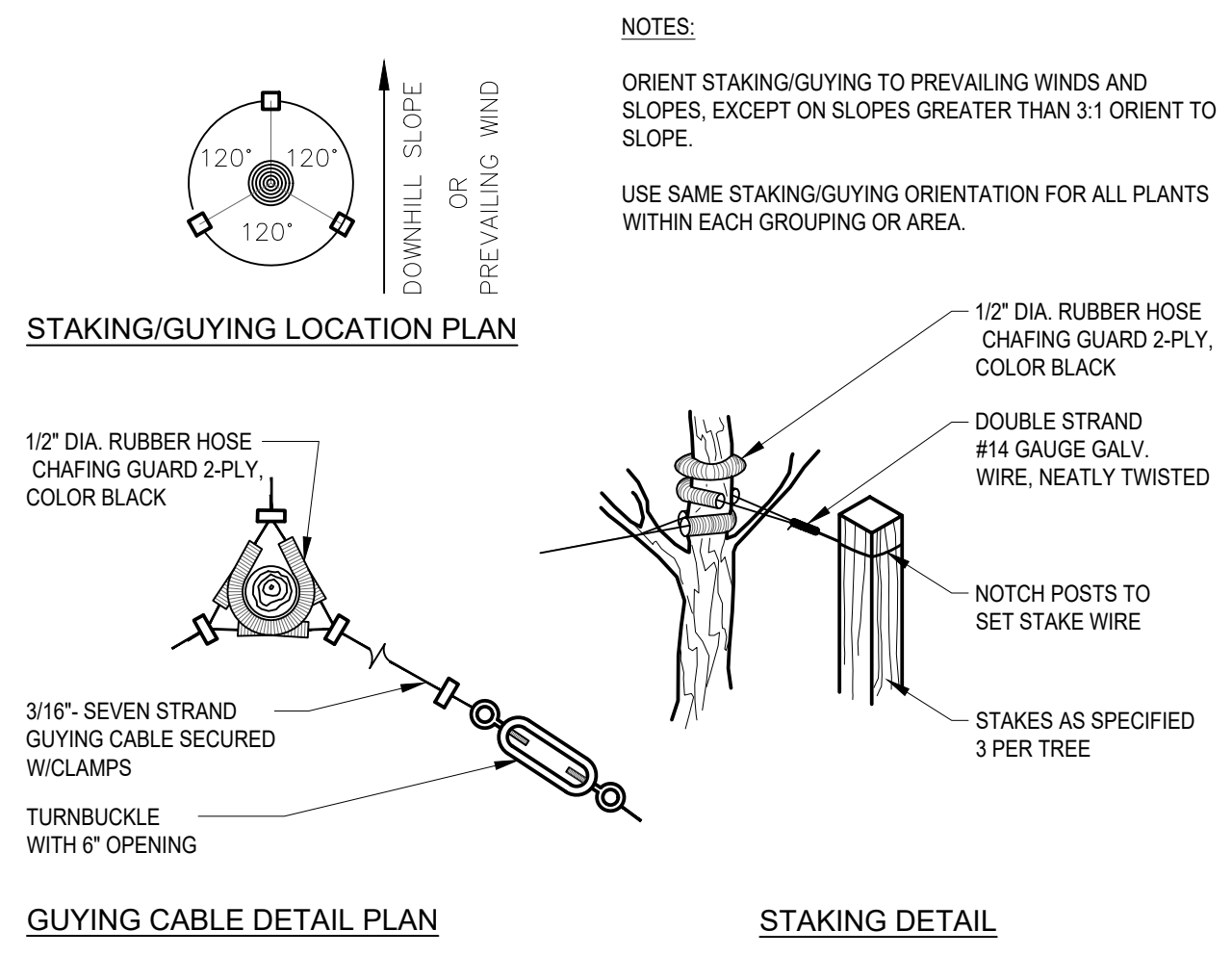
- 1 SHRUB, PERENNIAL, OR ORNAMENTAL GRASS.
- 2 MULCH, TYPE AND DEPTH PER PLANS. PLACE NO MORE THAN 1" OF MULCH WITHIN 6" OF PLANT CENTER.
- 3 FINISH GRADE.
- 4 ROOT BALL.
- 5 BACKFILL. AMEND AND FERTILIZE ONLY AS RECOMMENDED IN SOIL FERTILITY ANALYSIS.
- 6 UNDISTURBED NATIVE SOIL.
- 7 3" HIGH EARTHEN WATERING BASIN.
- 8 WEED FABRIC UNDER MULCH.

B SHRUB AND GROUNDCOVER PLANTING
SCALE: NTS



D=DIMENSION OF PLANT SPACING (SHRUB, GROUNDCOVER OR PERENNIAL) AS INDICATED ON PLANS.

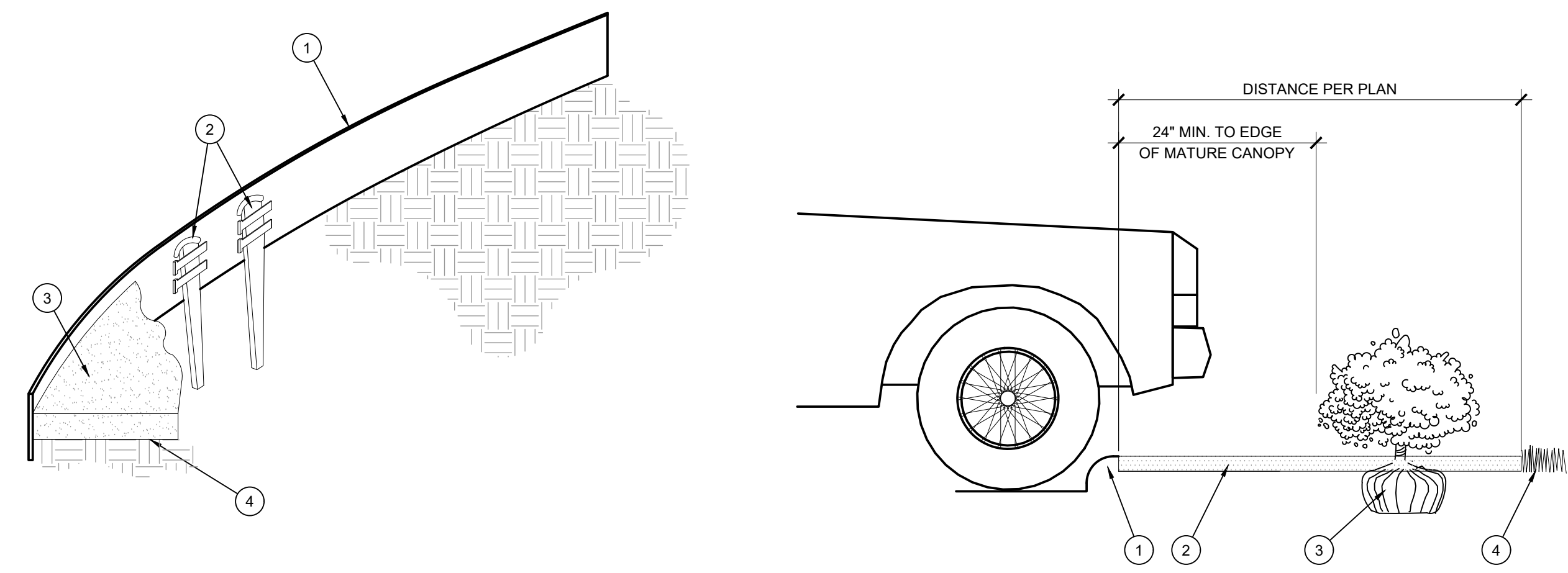
C TYPICAL PLANT SPACING
SCALE: NTS



NOTES:
ORIENT STAKING/GUYING TO PREVAILING WINDS AND SLOPES. EXCEPT ON SLOPES GREATER THAN 3:1 ORIENT TO SLOPE.
USE SAME STAKING/GUYING ORIENTATION FOR ALL PLANTS WITHIN EACH GROUPING OR AREA.

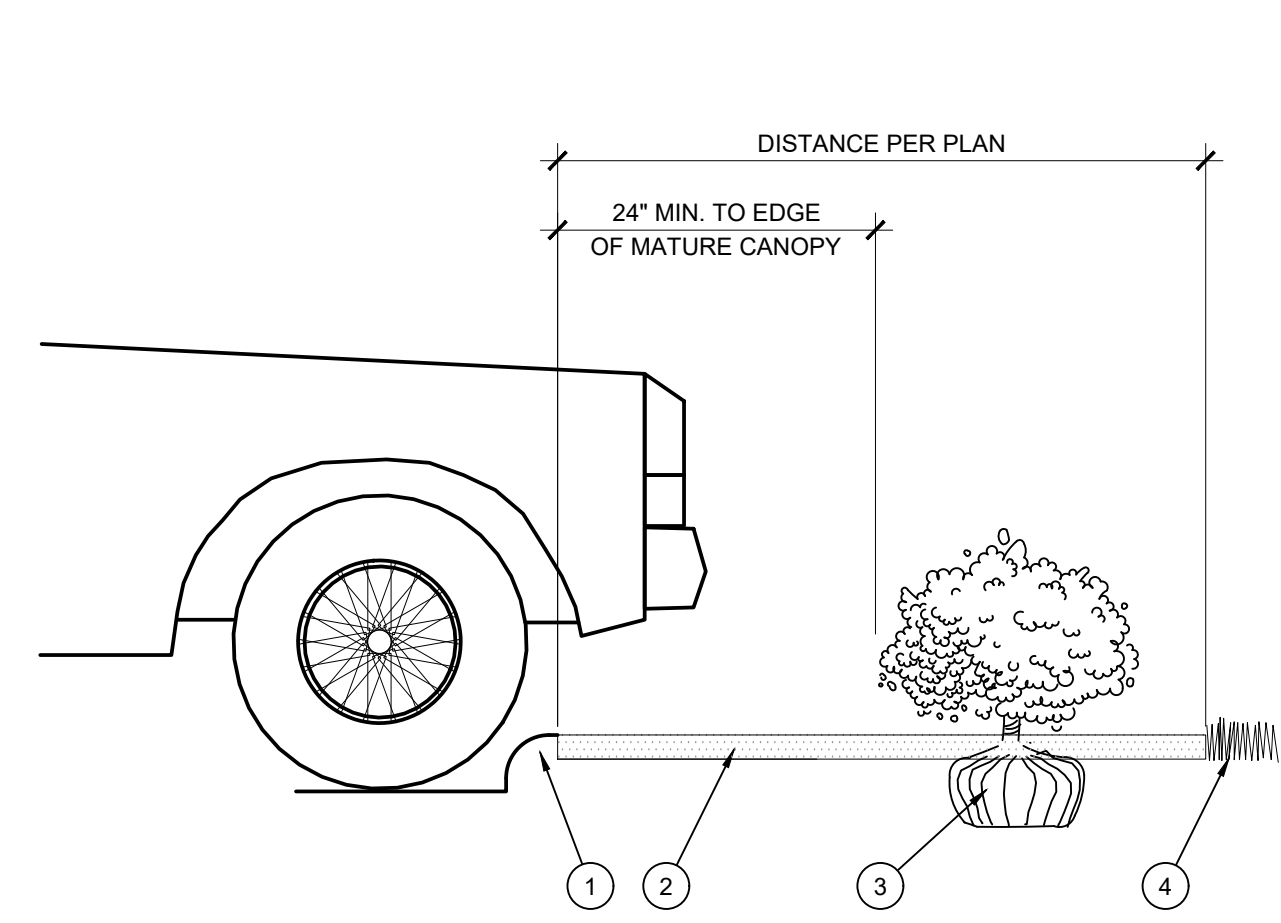
- 1/2" DIA. RUBBER HOSE CHAFING GUARD 2-PLY, COLOR BLACK
- DOUBLE STRAND #14 GAUGE GALV. WIRE, NEATLY TWISTED
- NOTCH POSTS TO SET STAKE WIRE
- STAKES AS SPECIFIED 3 PER TREE
- 3/16" SEVEN STRAND GUYING CABLE SECURED W/CLAMPS
- TURNBUCKLE WITH 6" OPENING

D TREE STAKING AND GUYING
SCALE: NTS



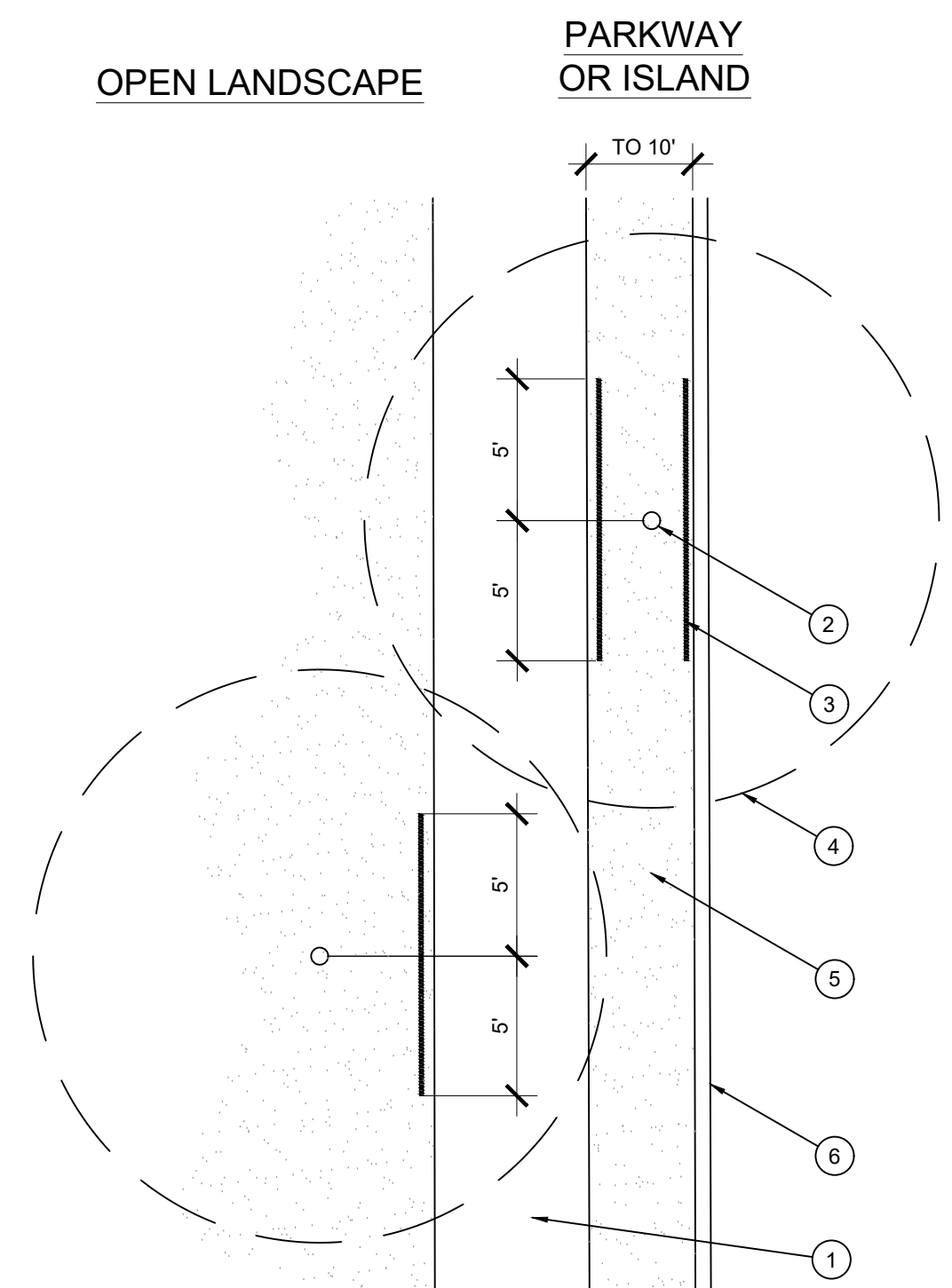
- 1 ROLLED-TOP STEEL EDGING PER PLANS.
 - 2 TAPERED STEEL STAKES.
 - 3 MULCH, TYPE AND DEPTH PER PLANS.
 - 4 FINISH GRADE.
- NOTES:
1) INSTALL EDGING SO THAT STAKES WILL BE ON INSIDE OF PLANTING BED.
2) BOTTOM OF EDGING SHALL BE BURIED A MINIMUM OF 1" BELOW FINISH GRADE.
3) TOP OF MULCH SHALL BE 1" LOWER THAN TOP OF EDGING.

E STEEL EDGING
SCALE: NOT TO SCALE



- 1 CURB.
- 2 MULCH LAYER.
- 3 PLANT.
- 4 TURF (WHERE SHOWN ON PLAN).

F PLANTING AT PARKING AREA
SCALE: NOT TO SCALE



G ROOT BARRIER - PLAN VIEW
SCALE: NOT TO SCALE

- 1 TYPICAL WALKWAY OR PAVING
- 2 TREE TRUNK
- 3 LINEAR ROOT BARRIER MATERIAL. SEE PLANTING NOTES FOR TYPE AND MANUFACTURER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- 4 TREE CANOPY
- 5 TYPICAL PLANTING AREA
- 6 TYPICAL CURB AND GUTTER

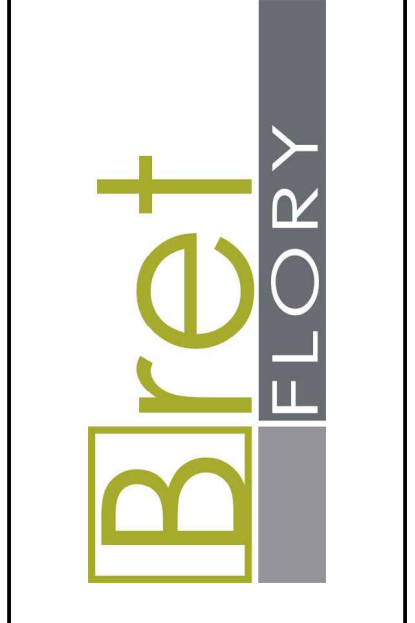
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**LANDSCAPE
SPECS**

Date	Comment

Project Number
Date **10/09/2023**
Drawn By **SS**
Checked By **SS/RM**

LP-3

PLANTING SPECIFICATIONS

GENERAL

- A. QUALIFICATIONS OF LANDSCAPE CONTRACTOR**
- ALL LANDSCAPE WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE FIRM SPECIALIZING IN LANDSCAPE PLANTING.
 - A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY THE OWNER FOR FURTHER QUALIFICATION MEASURES.
 - THE LANDSCAPE CONTRACTOR SHALL HOLD A VALID CONTRACTOR'S LICENSE ISSUED BY THE APPROPRIATE LOCAL JURISDICTION.
- B. SCOPE OF WORK**
- WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION, INSTALLATION AND COMPLETION OF ALL WORK, SPECIFIED HEREIN AND / OR SHOWN ON THE LANDSCAPE PLANS, NOTES, AND DETAILS.
 - ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS.
 - THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES (WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF ANY WORK.

PRODUCTS

- A. ALL MANUFACTURED PRODUCTS SHALL BE NEW.**
- B. CONTAINER AND BALLED-AND-BURLAPPED PLANTS:**
- FURNISH NURSERY-GROWN PLANTS COMPLYING WITH ANSI Z60.1-2014. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT. ALL PLANTS WITHIN A SPECIES SHALL HAVE SIMILAR SIZE, AND SHALL BE OF A FORM TYPICAL FOR THE SPECIES. ALL TREES SHALL BE OBTAINED FROM SOURCES WITHIN 200 MILES OF THE PROJECT SITE, AND WITH SIMILAR CLIMATIC CONDITIONS.
 - ROOT SYSTEMS SHALL BE HEALTHY, DENSELY BRANCHED ROOT SYSTEMS, NON-POT-BOUND, FREE FROM ENCIRCLING AND/OR GIRDLING ROOTS, AND FREE FROM ANY OTHER ROOT DEFECTS (SUCH AS J-SHAPED ROOTS).
 - TREES MAY BE PLANTED FROM CONTAINERS OR BALLED-AND-BURLAPPED (B&B), UNLESS SPECIFIED ON THE PLANTING LEGEND. BARE-ROOT TREES ARE NOT ACCEPTABLE.
 - ANY PLANT DEEMED UNACCEPTABLE BY THE LANDSCAPE ARCHITECT OR OWNER SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND SHALL BE REPLACED WITH AN ACCEPTABLE PLANT OF LIKE TYPE AND SIZE AT THE CONTRACTOR'S OWN EXPENSE. ANY PLANTS APPEARING TO BE UNHEALTHY, EVEN IF DETERMINED TO STILL BE ALIVE, SHALL NOT BE ACCEPTED. THE LANDSCAPE ARCHITECT AND OWNER SHALL BE THE SOLE JUDGES AS TO THE ACCEPTABILITY OF PLANT MATERIAL.
 - ALL TREES SHALL BE STANDARD IN FORM, UNLESS OTHERWISE SPECIFIED. TREES WITH CENTRAL LEADERS WILL NOT BE ACCEPTED IF LEADER IS DAMAGED OR REMOVED. PRUNE ALL DAMAGED TWIGS AFTER PLANTING.
 - CALIPER MEASUREMENTS FOR STANDARD (SINGLE TRUNK) TREES SHALL BE AS FOLLOWS: SIX INCHES ABOVE THE ROOT FLARE FOR TREES UP TO AND INCLUDING FOUR INCHES IN CALIPER, AND TWELVE INCHES ABOVE THE ROOT FLARE FOR TREES EXCEEDING FOUR INCHES IN CALIPER.
 - MULTI-TRUNK TREES SHALL BE MEASURED BY THEIR OVERALL HEIGHT, MEASURED FROM THE TOP OF THE ROOT BALL. WHERE CALIPER MEASUREMENTS ARE USED, THE CALIPER SHALL BE CALCULATED AS ONE-HALF OF THE SUM OF THE CALIPER OF THE THREE LARGEST TRUNKS.
 - ANY TREE OR SHRUB SHOWN TO HAVE EXCESS SOIL PLACED ON TOP OF THE ROOT BALL, SO THAT THE ROOT FLARE HAS BEEN COMPLETELY COVERED, SHALL BE REJECTED.
- C. SOD: PROVIDE WELL-ROOTED SOD OF THE VARIETY NOTED ON THE PLANS. SOD SHALL BE CUT FROM HEALTHY, MATURE TURF WITH SOIL THICKNESS OF 3/4" TO 1". EACH PALLET OF SOD SHALL BE ACCOMPANIED BY A CERTIFICATE FROM SUPPLIER STATING THE COMPOSITION OF THE SOD.**
- D. SEED: PROVIDE CERTIFIED BLUEGRASS/FESCUE/PERENNIAL RYE SEED MIX, APPLIED AT THE RATE OF 7 LBS/1000 SF, PLS. SEED SHALL BE FRESH, CLEAN, DRY, NEW-CROP SEED COMPLYING WITH AOSA'S "RULES FOR TESTING SEEDS" FOR PURITY AND GERMINATION TOLERANCES.**
- DELIVER SEED IN ORIGINAL, UNOPENED CONTAINERS SHOWING WEIGHT, CERTIFIED ANALYSIS, NAME, AND ADDRESS OF PRODUCER, STORE IN A DRY, ENCLOSED LOCATION.
- E. TOPSOIL: SANDY TO CLAY LOAM TOPSOIL, FREE OF STONES LARGER THAN 1/2 INCH, FOREIGN MATTER, PLANTS, ROOTS, AND SEEDS.**
- F. COMPOST: WELL-COMPOSTED, STABLE, AND WEED-FREE ORGANIC MATTER, pH RANGE OF 5.5 TO 8; MOISTURE CONTENT 35 TO 55 PERCENT BY WEIGHT; 100 PERCENT PASSING THROUGH 3/4-INCH SIEVE; SOLUBLE SALT CONTENT OF 5 TO 10 DECISIMENS/M; NOT EXCEEDING 0.5 PERCENT INERT CONTAMINANTS AND FREE OF SUBSTANCES TOXIC TO PLANTINGS. NO MANURE OR ANIMAL-BASED PRODUCTS SHALL BE USED.**
- G. FERTILIZER: GRANULAR FERTILIZER CONSISTING OF NITROGEN, PHOSPHORUS, POTASSIUM, AND OTHER NUTRIENTS IN PROPORTIONS, AMOUNTS, AND RELEASE RATES RECOMMENDED IN A SOIL REPORT FROM A QUALIFIED SOIL-TESTING AGENCY (SEE BELOW).**
- H. MULCH: SIZE AND TYPE AS INDICATED ON PLANS, FREE FROM DELETERIOUS MATERIALS AND SUITABLE AS A TOP DRESSING OF TREES AND SHRUBS.**
- I. TREE STAKING AND GUYING**
- STAKES: 6' LONG GREEN METAL T-POSTS.
 - GUY AND TIE WIRE: ASTM A 641, CLASS 1, GALVANIZED-STEEL WIRE, 2-STRAND, TWISTED, 0.106 INCH DIAMETER.
 - STRAP CHAFING GUARD: REINFORCED NYLON OR CANVAS AT LEAST 1-1/2 INCH WIDE, WITH GROMMETS TO PROTECT TREE TRUNKS FROM DAMAGE.
- J. PRE-EMERGENT HERBICIDES: ANY GRANULAR, NON-STAINING PRE-EMERGENT HERBICIDE THAT IS LABELED FOR THE SPECIFIC ORNAMENTALS OR TURF ON WHICH IT WILL BE UTILIZED. PRE-EMERGENT HERBICIDES SHALL BE APPLIED PER THE MANUFACTURER'S LABELED RATES.**
- K. MAINTENANCE EDGE AGGREGATE: ANGULAR TO SUB-ANGULAR BASALT, 3/4-INCH DIAMETER, WASHED, OR APPROVED EQUAL.**
- L. FILTER FABRIC: SYNTHETIC, NON-WOVEN GEOTEXTILE FABRIC, WEIGHING 2 TO 4 OUNCES PER SQUARE YARD WITH A MINIMUM GRAB TENSILE STRENGTH OF 35 POUNDS AND PERMEABILITY OF 0.03 CM/SEC.**

METHODS

- A. SOIL PREPARATION**
- BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE GRADE OF ALL LANDSCAPE AREAS ARE WITHIN +0.1' OF FINISH GRADE. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY SHOULD ANY DISCREPANCIES EXIST.
 - SOIL TESTING:
 - AFTER FINISH GRADES HAVE BEEN ESTABLISHED, CONTRACTOR SHALL HAVE SOIL SAMPLES FROM THE PROJECT'S LANDSCAPE AREAS TESTED BY AN ESTABLISHED SOIL TESTING LABORATORY. EACH SAMPLE SUBMITTED TO THE LAB SHALL CONTAIN NO LESS THAN ONE QUART OF SOIL, TAKEN FROM BETWEEN THE SOIL SURFACE AND 6" DEPTH. IF NO SAMPLE LOCATIONS ARE INDICATED ON THE PLANS, THE CONTRACTOR SHALL TAKE A MINIMUM OF THREE SAMPLES FROM VARIOUS REPRESENTATIVE LOCATIONS FOR TESTING.
 - THE CONTRACTOR SHALL HAVE THE SOIL TESTING LABORATORY PROVIDE RESULTS FOR THE FOLLOWING: SOIL TEXTURAL CLASS, GENERAL SOIL FERTILITY, pH, ORGANIC MATTER CONTENT, SALT (CEC), LIME, SODIUM ADSORPTION RATIO (SAR) AND BORON CONTENT.
 - THE CONTRACTOR SHALL ALSO SUBMIT THE PROJECT'S PLANT LIST TO THE LABORATORY ALONG WITH THE SOIL SAMPLES.
 - THE SOIL REPORT PRODUCED BY THE LABORATORY SHALL CONTAIN RECOMMENDATIONS FOR THE FOLLOWING (AS APPROPRIATE): SEPARATE SOIL PREPARATION AND BACKFILL MIX RECOMMENDATIONS FOR GENERAL ORNAMENTAL PLANTS, XERIC PLANTS, TURF, AND NATIVE SEED, AS WELL AS PRE-PLANT FERTILIZER APPLICATIONS AND RECOMMENDATIONS FOR ANY OTHER SOIL RELATED ISSUES. THE REPORT SHALL ALSO PROVIDE A FERTILIZER PROGRAM FOR THE ESTABLISHMENT PERIOD AND FOR LONG-TERM MAINTENANCE.

- THE CONTRACTOR SHALL INSTALL SOIL AMENDMENTS AND FERTILIZERS PER THE SOILS REPORT RECOMMENDATIONS. ANY CHANGE IN COST DUE TO THE SOIL REPORT RECOMMENDATIONS, EITHER INCREASE OR DECREASE, SHALL BE SUBMITTED TO THE OWNER WITH THE REPORT.
- FOR BIDDING PURPOSES ONLY, THE SOIL PREPARATION SHALL CONSIST OF THE FOLLOWING:
 - TREES: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF ROTOTILLING AFTER CROSS-RIPPING:
 - NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
 - 12-12-12 FERTILIZER (OR SIMILAR, ORGANIC, SLOW RELEASE) - 10 LBS. PER CU. YD.
 - "CLAY BUSTER" OR EQUAL - USE MANUFACTURER'S RECOMMENDED RATE
 - IRON SULPHATE - 2 LBS. PER CU. YD.
- IN THE CONTEXT OF THESE PLANS, NOTES, AND SPECIFICATIONS, "FINISH GRADE" REFERS TO THE FINAL ELEVATION OF THE SOIL SURFACE (NOT TOP OF MULCH) AS INDICATED ON THE GRADING PLANS.
 - BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE ROUGH GRADES OF ALL LANDSCAPE AREAS ARE WITHIN +0.1' OF FINISH GRADE. SEE SPECIFICATIONS FOR MORE DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION.
 - CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT AND ON THE GRADING PLANS, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES AND ELIMINATE PONDING POTENTIAL.
 - THE LANDSCAPE CONTRACTOR SHALL DETERMINE WHETHER OR NOT THE EXPORT OF ANY SOIL WILL BE NEEDED, TAKING INTO ACCOUNT THE ROUGH GRADE PROVIDED, THE AMOUNT OF SOIL AMENDMENTS TO BE ADDED (**BASED ON A SOIL TEST**, PER SPECIFICATIONS), AND THE FINISH GRADES TO BE ESTABLISHED.
 - ENSURE THAT THE FINISH GRADE IN SHRUB AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 3" BELOW THE ADJACENT FINISH SURFACE, IN ORDER TO ALLOW FOR PROPER MULCH DEPTH. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS.
 - ENSURE THAT THE FINISH GRADE IN TURF AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 1" BELOW THE FINISH SURFACE OF THE WALKS. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS.
 - SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS, GEOTECHNICAL REPORT, THESE NOTES AND PLANS, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT, GENERAL CONTRACTOR, AND OWNER.
- ONCE SOIL PREPARATION IS COMPLETE, THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT THERE ARE NO DEBRIS, TRASH, OR STONES LARGER THAN 1" REMAINING IN THE TOP 6" OF SOIL.

B. SUBMITTALS

- THE CONTRACTOR SHALL PROVIDE SUBMITTALS AND SAMPLES, IF REQUIRED, TO THE LANDSCAPE ARCHITECT, AND RECEIVE APPROVAL IN WRITING FOR SUCH SUBMITTALS BEFORE WORK COMMENCES.
- SUBMITTALS SHALL INCLUDE PHOTOS OF PLANTS WITH A RULER OR MEASURING STICK FOR SCALE, PHOTOS OR SAMPLES OF ANY REQUIRED MULCHES, AND SOIL TEST RESULTS AND PREPARATION RECOMMENDATIONS FROM THE TESTING LAB (INCLUDING COMPOST AND FERTILIZER RATES AND TYPES, AND OTHER AMENDMENTS FOR TREE/SHRUB, TURF, AND SEED AREAS AS MAY BE APPROPRIATE).
- SUBMITTALS SHALL ALSO INCLUDE MANUFACTURER CUT SHEETS FOR PLANTING ACCESSORIES SUCH AS TREE STAKES AND TIES, EDGING, AND LANDSCAPE FABRICS (IF ANY).
- WHERE MULTIPLE ITEMS ARE SHOWN ON A PAGE, THE CONTRACTOR SHALL CLEARLY INDICATE THE ITEM BEING CONSIDERED.

C. GENERAL PLANTING

- REMOVE ALL NURSERY TAGS AND STAKES FROM PLANTS.
- EXCEPT IN AREAS TO BE PLANTED WITH ORNAMENTAL GRASSES, APPLY PRE-EMERGENT HERBICIDES AT THE MANUFACTURER'S RECOMMENDED RATE.
- TRENCHING NEAR EXISTING TREES:
 - CONTRACTOR SHALL NOT DISTURB ROOTS 1-1/2" AND LARGER IN DIAMETER WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES, AND SHALL EXERCISE ALL POSSIBLE CARE AND PRECAUTIONS TO AVOID INJURY TO TREE ROOTS, TRUNKS, AND BRANCHES. THE CRZ IS DEFINED AS A CIRCULAR AREA EXTENDING OUTWARD FROM THE TREE TRUNK, WITH A RADIUS EQUAL TO 1' FOR EVERY 1" OF TRUNK DIAMETER-AT-BREAST-HEIGHT (4.5' ABOVE THE AVERAGE GRADE AT THE TRUNK).
 - ALL EXCAVATION WITHIN THE CRZ SHALL BE PERFORMED USING HAND TOOLS. NO MACHINE EXCAVATION OR TRENCHING OF ANY KIND SHALL BE ALLOWED WITHIN THE CRZ.
 - ALTER ALIGNMENT OF PIPE TO AVOID TREE ROOTS 1-1/2" AND LARGER IN DIAMETER. WHERE TREE ROOTS 1-1/2" AND LARGER IN DIAMETER ARE ENCOUNTERED IN THE FIELD, TUNNEL UNDER SUCH ROOTS. WRAP EXPOSED ROOTS WITH SEVERAL LAYERS OF BURLAP AND KEEP MOIST. CLOSE ALL TRENCHES WITHIN THE CANOPY DRIP LINES WITHIN 24 HOURS.
 - ALL SEVERED ROOTS SHALL BE HAND PRUNED WITH SHARP TOOLS AND ALLOWED TO AIR-DRY. DO NOT USE ANY SORT OF SEALERS OR WOUND PAINTS.

D. TREE PLANTING

- TREE PLANTING HOLES SHALL BE EXCAVATED TO MINIMUM WIDTH OF TWO TIMES THE WIDTH OF THE ROOTBALL, AND TO A DEPTH EQUAL TO THE DEPTH OF THE ROOTBALL LESS TWO TO FOUR INCHES.
- SCARIFY THE SIDES AND BOTTOM OF THE PLANTING HOLE PRIOR TO THE PLACEMENT OF THE TREE. REMOVE ANY GLAZING THAT MAY HAVE BEEN CAUSED DURING THE EXCAVATION OF THE HOLE.
- FOR CONTAINER AND BOX TREES, TO REMOVE ANY POTENTIALLY GIRDLING ROOTS AND OTHER ROOT DEFECTS, THE CONTRACTOR SHALL SHAVE A 1" LAYER OFF OF THE SIDES AND BOTTOM OF THE ROOTBALL OF ALL TREES JUST BEFORE PLACING INTO THE PLANTING PIT. DO NOT "TEASE" ROOTS OUT FROM THE ROOTBALL.
- INSTALL THE TREE ON UNDISTURBED SUBGRADE SO THAT THE TOP OF THE ROOTBALL IS TWO TO FOUR INCHES ABOVE THE SURROUNDING GRADE.
- BACKFILL THE TREE HOLE UTILIZING THE EXISTING TOPSOIL FROM ON-SITE. ROCKS LARGER THAN 1" DIA. AND ALL OTHER DEBRIS SHALL BE REMOVED FROM THE SOIL PRIOR TO THE BACKFILL. SHOULD ADDITIONAL SOIL BE REQUIRED TO ACCOMPLISH THIS TASK, USE STORED TOPSOIL FROM ON-SITE OR IMPORT ADDITIONAL TOPSOIL FROM OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IMPORTED TOPSOIL SHALL BE OF SIMILAR TEXTURAL CLASS AND COMPOSITION IN THE ON-SITE SOIL.
- TREES SHALL NOT BE STAKED UNLESS LOCAL CONDITIONS (SUCH AS HEAVY WINDS OR SLOPES) REQUIRE STAKES TO KEEP TREES UPRIGHT. SHOULD STAKING BE REQUIRED, THE TOTAL NUMBER OF TREE STAKES (BEYOND THE MINIMUMS LISTED BELOW) WILL BE LEFT TO THE LANDSCAPE CONTRACTOR'S DISCRETION. SHOULD ANY TREES FALL OR LEAN, THE LANDSCAPE CONTRACTOR SHALL STRAIGHTEN THE TREE, OR REPLACE IT SHOULD IT BECOME DAMAGED. TREE STAKING SHALL ADHERE TO THE FOLLOWING GUIDELINES:

a. 1'-2" TREES	TWO STAKES PER TREE
b. 2'-1/2"-4" TREES	THREE STAKES PER TREE
c. TREES OVER 4" CALIPER	GUY AS NEEDED
d. MULTI-TRUNK TREES	THREE STAKES PER TREE MINIMUM, QUANTITY AND POSITIONS AS NEEDED TO STABILIZE THE TREE
- UPON COMPLETION OF PLANTING, CONSTRUCT AN EARTH WATERING BASIN AROUND THE TREE. COVER THE INTERIOR OF THE TREE RING WITH MULCH (TYPE AND DEPTH PER PLANS).

E. SODDING

- SOD VARIETY TO BE AS SPECIFIED ON THE LANDSCAPE PLAN.
- LAY SOD WITHIN 24 HOURS FROM THE TIME OF STRIPPING. DO NOT LAY IF THE GROUND IS FROZEN.
- LAY THE SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD STRIPS - DO NOT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES.
- ROLL THE SOD TO ENSURE GOOD CONTACT OF THE SOD'S ROOT SYSTEM WITH THE SOIL UNDERNEATH.

- WATER THE SOD THOROUGHLY WITH A FINE SPRAY IMMEDIATELY AFTER PLANTING TO OBTAIN AT LEAST SIX INCHES OF PENETRATION INTO THE SOIL BELOW THE SOD.

F. MULCH

- INSTALL MULCH TOPDRESSING, TYPE AND DEPTH PER MULCH NOTE, IN ALL PLANTING AREAS AND TREE RINGS.
- DO NOT INSTALL MULCH WITHIN 6" OF TREE ROOT FLARE AND WITHIN 24" OF HABITABLE STRUCTURES, EXCEPT AS MAY BE NOTED ON THESE PLANS. MULCH COVER WITHIN 6" OF CONCRETE WALKS AND CURBS SHALL NOT PROTRUDE ABOVE THE FINISH SURFACE OF THE WALKS AND CURBS. MULCH COVER WITHIN 12" OF WALLS SHALL BE AT LEAST 3" LOWER THAN THE TOP OF WALL.

G. CLEAN UP

- DURING LANDSCAPE PREPARATION AND PLANTING, KEEP ALL PAVEMENT CLEAN AND ALL WORK AREAS IN A NEAT, ORDERLY CONDITION.
- LEGALLY DISPOSE ALL EXCAVATED MATERIALS OFF THE PROJECT SITE.

H. INSPECTION AND ACCEPTANCE

- UPON COMPLETION OF THE WORK, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE LANDSCAPE CONTRACTOR SHALL THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY.
- WHEN THE INSPECTED PLANTING WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, THE LANDSCAPE CONTRACTOR SHALL REPLACE AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S SATISFACTION WITHIN 24 HOURS.
- THE LANDSCAPE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE LANDSCAPE WORK HAS BEEN RE-INSPECTED BY THE OWNER AND FOUND TO BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE.

I. LANDSCAPE MAINTENANCE

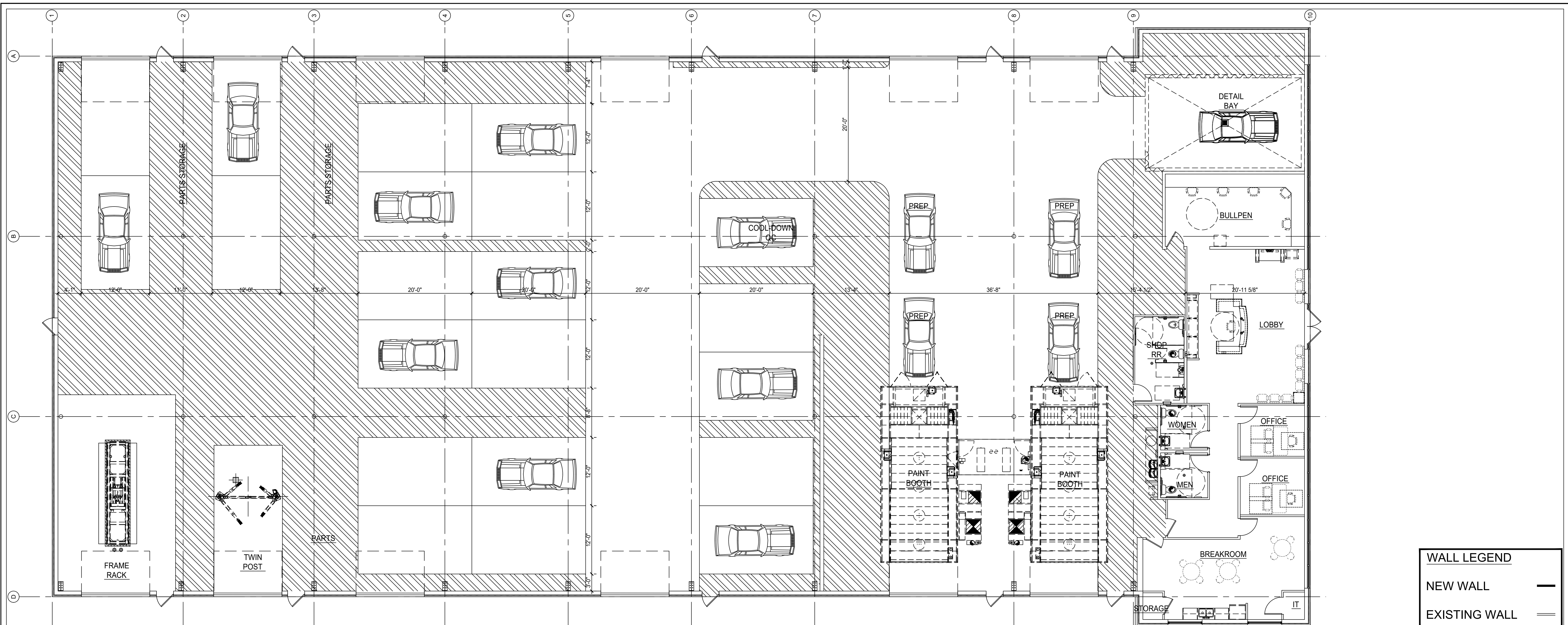
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK SHOWN ON THESE PLANS FOR 90 DAYS BEYOND FINAL ACCEPTANCE OF ALL LANDSCAPE WORK BY THE OWNER. LANDSCAPE MAINTENANCE SHALL INCLUDE WEEKLY SITE VISITS FOR THE FOLLOWING ACTIONS (AS APPROPRIATE): PROPER PRUNING, RESTAKING OF TREES, RESETTING OF PLANTS THAT HAVE SETTLED, MOWING AND AERATION OF LAWNS, WEEDING, RESEEDING AREAS WHICH HAVE NOT GERMINATED WELL, TREATING FOR INSECTS AND DISEASES, REPLACEMENT OF MULCH, REMOVAL OF LITTER, REPAIRS TO THE IRRIGATION SYSTEM DUE TO FAULTY PARTS AND/OR WORKMANSHIP, AND THE APPROPRIATE WATERING OF ALL PLANTINGS. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN PROPER WORKING ORDER, WITH SCHEDULING ADJUSTMENTS BY SEASON TO MAXIMIZE WATER CONSERVATION.
- SHOULD SEEDING AND/OR SODDED AREAS NOT BE COVERED BY AN AUTOMATIC IRRIGATION SYSTEM, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING THESE AREAS AND OBTAINING A FULL, HEALTHY STAND OF PLANTS AT NO ADDITIONAL COST TO THE OWNER.
- TO ACHIEVE FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD, ALL OF THE FOLLOWING CONDITIONS MUST OCCUR:
 - THE LANDSCAPE CONTRACTOR SHALL SHOW ACTIVE, HEALTHY GROWTH (WITH EXCEPTIONS MADE FOR SEASONAL DORMANCY). ALL PLANTS NOT MEETING THIS CONDITION SHALL BE REJECTED AND REPLACED BY HEALTHY PLANT MATERIAL PRIOR TO FINAL ACCEPTANCE.
 - ALL HARDSCAPE SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE.
 - SODDED AREAS MUST BE ACTIVELY GROWING AND MUST REACH A MINIMUM HEIGHT OF 1 1/2" INCHES BEFORE FIRST MOWING. HYDROMULCHED AREAS SHALL SHOW ACTIVE, HEALTHY GROWTH. BARE AREAS LARGER THAN TWELVE SQUARE INCHES MUST BE RESEEDDED OR RESEEDDED (AS APPROPRIATE) PRIOR TO FINAL ACCEPTANCE. ALL SODDED TURF SHALL BE NEATLY MOWED.

J. WARRANTY PERIOD, PLANT GUARANTEE AND REPLACEMENTS

- THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL TREES, SHRUBS, PERENNIALS, SOD, AND IRRIGATION SYSTEMS FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE OWNER'S FINAL ACCEPTANCE (90 DAYS FOR ANNUAL PLANTS). THE CONTRACTOR SHALL REPLACE, AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER, ANY PLANTS WHICH DIE IN THAT TIME, OR REPAIR ANY PORTIONS OF THE IRRIGATION SYSTEM WHICH OPERATE IMPROPERLY.
- AFTER THE INITIAL MAINTENANCE PERIOD AND DURING THE GUARANTEE PERIOD, THE LANDSCAPE CONTRACTOR SHALL ONLY BE RESPONSIBLE FOR REPLACEMENT OF PLANTS WHEN PLANT DEATH CANNOT BE ATTRIBUTED DIRECTLY TO OVERWATERING OR OTHER DAMAGE BY HUMAN ACTIONS.

K. PROVIDE A MINIMUM OF (2) COPIES OF RECORD DRAWINGS TO THE OWNER UPON COMPLETION OF WORK. A RECORD DRAWING IS A RECORD OF ALL CHANGES THAT OCCURRED IN THE FIELD AND THAT ARE DOCUMENTED THROUGH CHANGE ORDERS, ADDENDA, OR CONTRACTOR/CONSULTANT DRAWING MARKUPS.

3.



WALL LEGEND	
NEW WALL	—
EXISTING WALL	≡

BUILDING DATA	
OFFICE	= 1,960 SQ. FT.
SHOP AREA	= 19,073 SQ. FT.
TOTAL AREA	= 21,033 SQ. FT.

STALL DATA	
TOTAL TECH STALLS	= 20
TOTAL TECHS	= 20/2 = 10

Bret
FLORY

BRET FLORY, NCARB
1913 GARDENGROVE COURT
PLANO, TEXAS 75075
PH: 972.467.9749

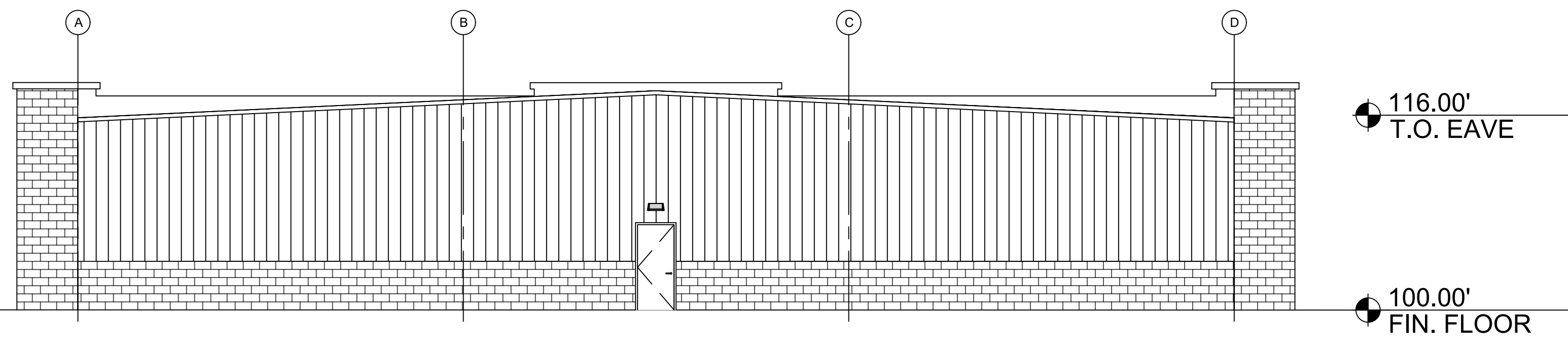
CALIBER COLLISION

CONCEPTUAL FLOOR PLAN - A

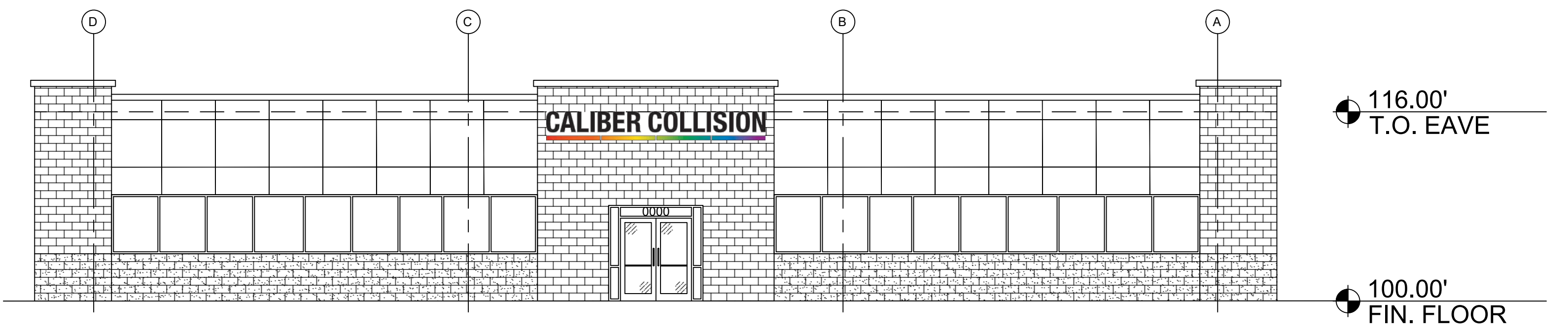
1133 E. MICHIGAN AVE
YPSILANTI, MI

DRAWN: CVO PROJECT #: 23590 DATE: 23.10.02

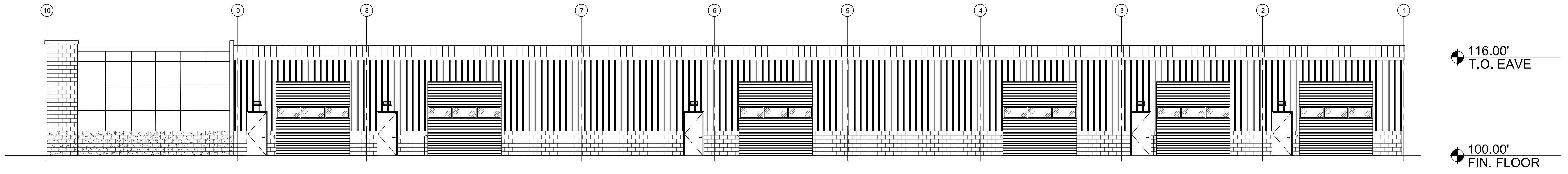
1 FLOOR PLAN
1/8" = 1'-0"



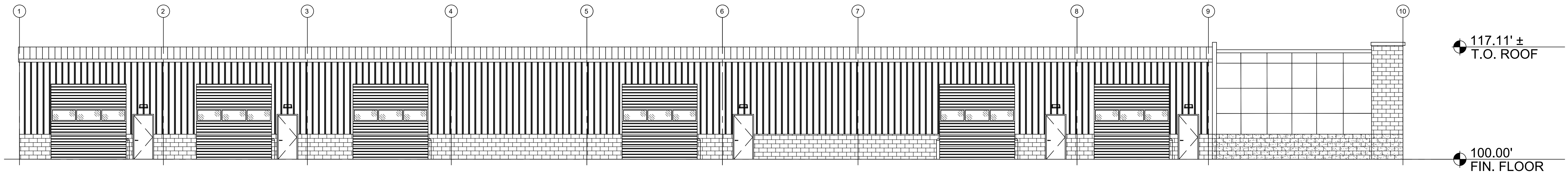
1 REAR ELEVATION
1/8" = 1'-0"




1 FRONT ELEVATION
1/8" = 1'-0"

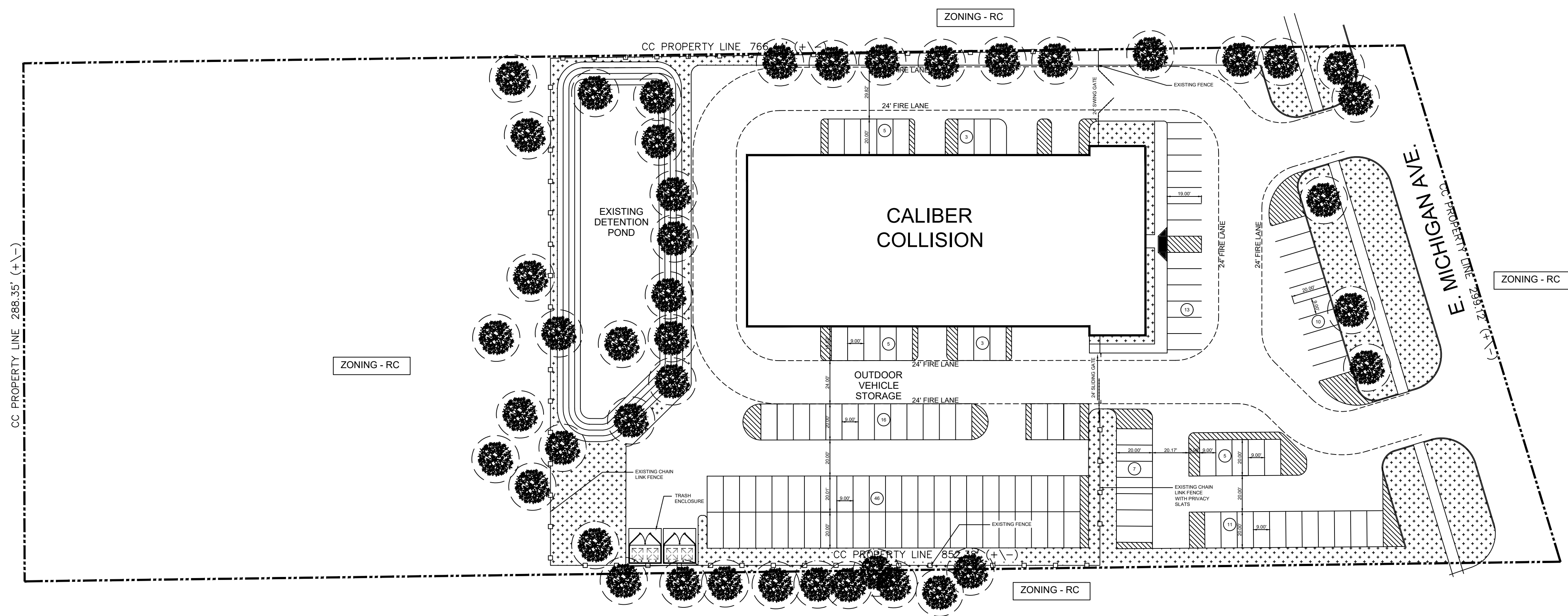


1 RIGHT ELEVATION
1/8" = 1'-0"



1 LEFT ELEVATION
1/8" = 1'-0"

		BRET FLORY, NCARB 1913 GARDENGROVE COURT PLANO, TEXAS 75075 PH: 972.467.9749
<h2>CALIBER COLLISION</h2>		
<h3>CONCEPTUAL ELEVATIONS</h3>		
1133 E. MICHIGAN AVE. YPSILANTI, MI		
DRAWN: CVO	PROJECT #: 23590	DATE: 23.09.29



SITE DATA	
OFFICE SQ. FT.	= 1,960 SQ. FT. ±
SHOP FLOOR SQ.FT.	= 19,073 SQ. FT. ±
TOTAL BUILDING SQ.FT.	= 21,033 SQ. FT. ±
ACREAGE TOTAL	= 3.42
PARCEL CONTROL NUMBER: K-11-10-125-014	

FLOOD ZONE 'X' (OUTSIDE 500 YEAR PLAIN)		
SETBACKS:		
FRONT: XX'	REAR: XX'	SIDES: XX'
PROPOSED HEIGHT	=	N/A (EXIST.)
MAX. HEIGHT	=	26'-2"
ZONING	RC (Regional Corridor)	
USE	AUTO REPAIR	
WATER	(UTILITY DISTRICT)	
SEWER	(UTILITY DISTRICT)	

PARKING CALCULATIONS	
SERVICE BAYS @ 2:1 SBAY	= 20
EMPLOYEE @ 1:1 EE	= 15
CITY TOTAL REQUIRED	= 35
TOTAL PARKING SHOWN	= 124

BICYCLE CALCULATIONS	
OFFICE @ 5% OF 10	= X
SHOP @ 5% OF 47	= X
CITY TOTAL REQUIRED	= X
TOTAL BICYCLE SHOWN	= X

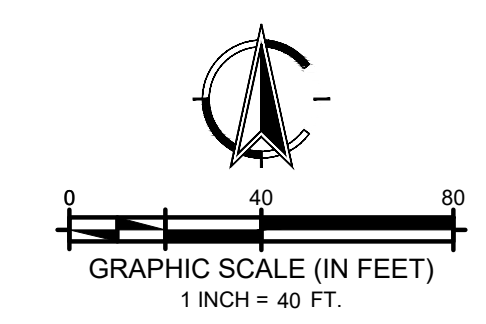
Bret
FLORY

BRET FLORY, NCARB
1913 GARDENGROVE COURT
PLANO, TEXAS 75075
PH: 972.467.9749

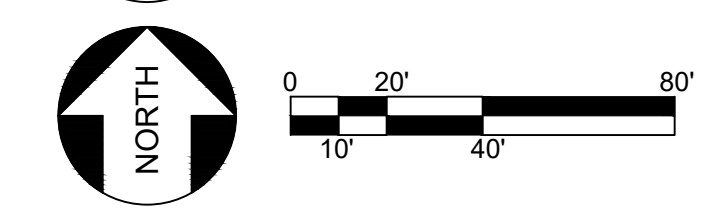
CALIBER COLLISION

SKETCH PLAN

1133 E. MICHIGAN AVE.
YPSILANTI, MI



1 SITE PLAN
1" = 40'-0"



DRAWN: CVO	PROJECT #: SCHEM	DATE: 23.10.06
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Fin/Slat '1000'[™]

by MASTER HALCO

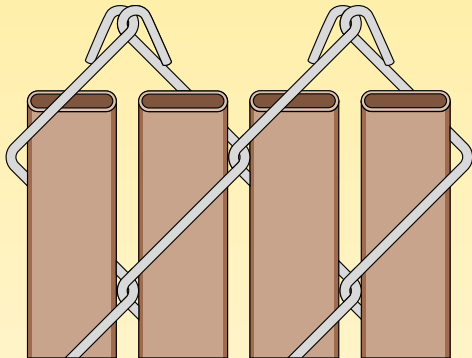
You'll See The Difference

What does Fin/Slat '1000' have to offer you that no other ordinary slat manufacturer can? More personal privacy.

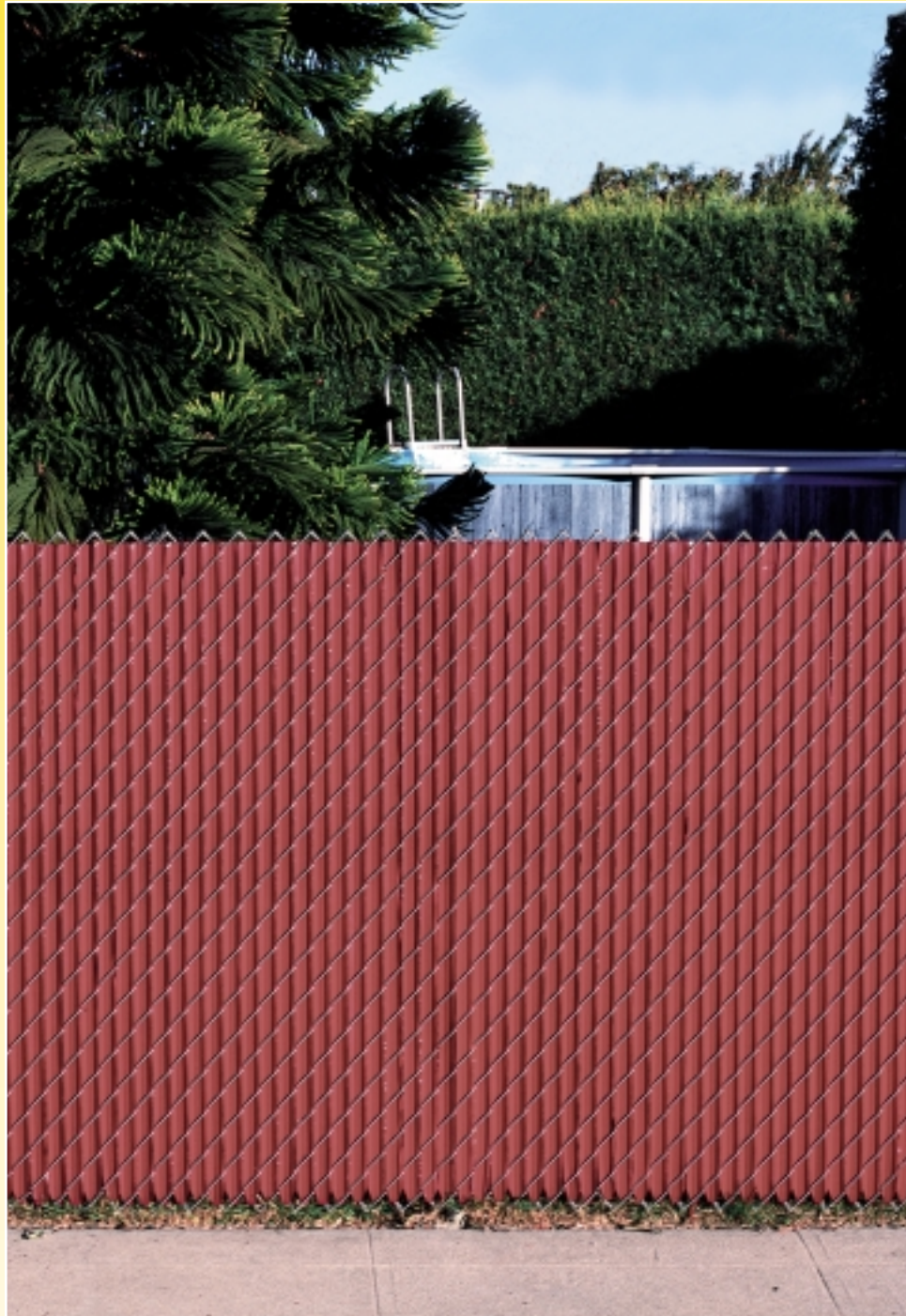
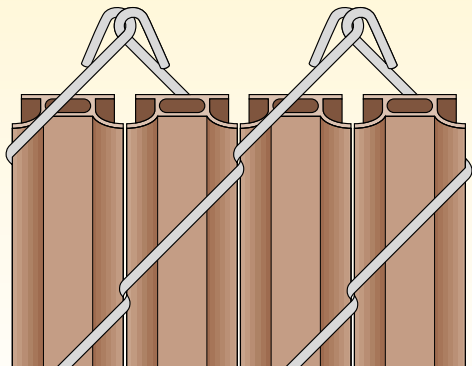
Fin/Slat '1000', self-locking privacy slats are engineered to provide maximum density resulting in an unprecedented degree of privacy and style.

If you're looking for privacy and style for your fence, Fin/Slat '1000' is the obvious choice.

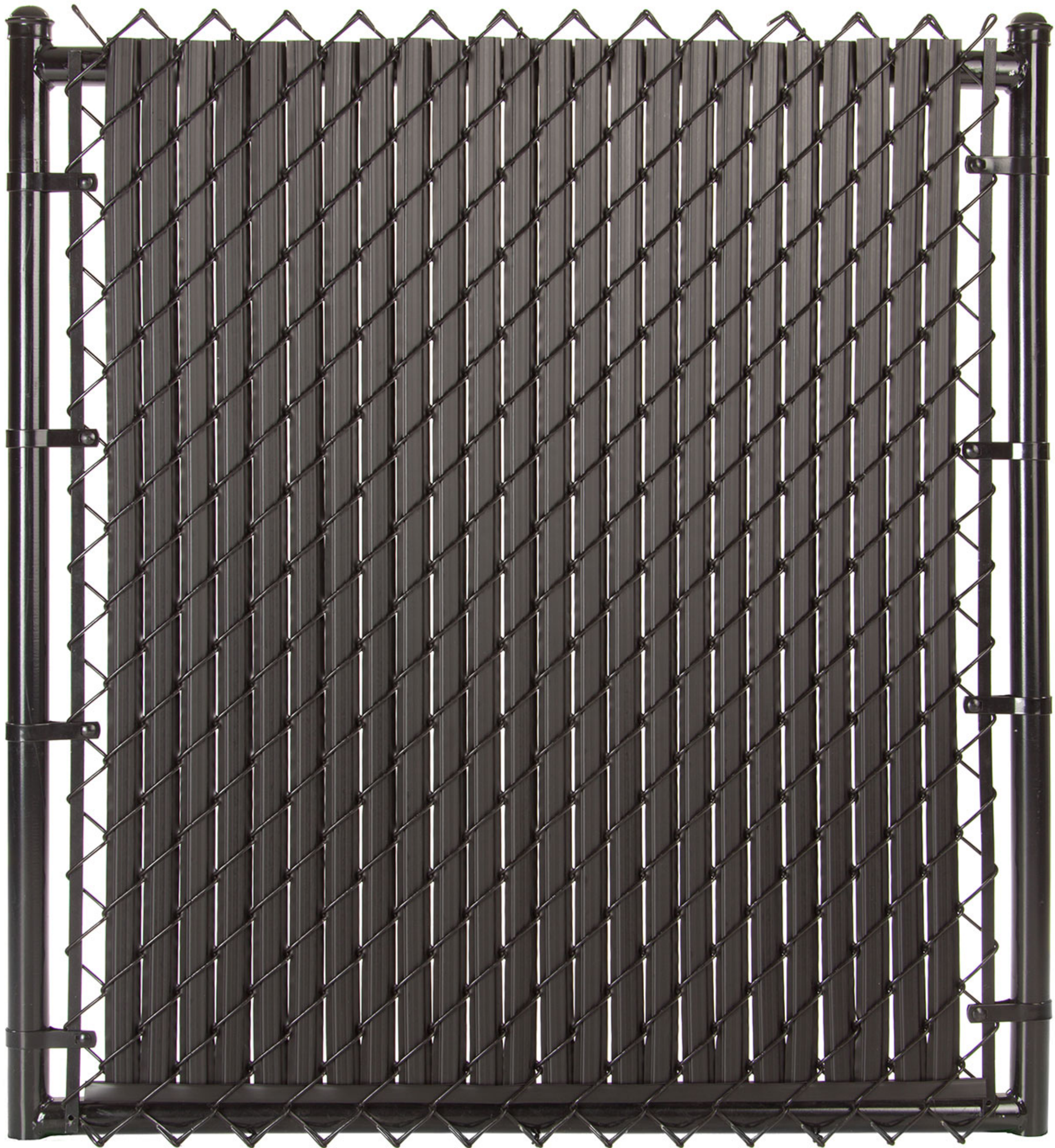
Ordinary Slats



Fin/Slat '1000'



Fencing Without Boundaries.[™]



CALIBER COLLISION



Jason Iacoangeli

Planning Director
Ypsilanti Township
7200 S. Huron River Dr
Ypsilanti, MI 48197

RE: Caliber Collision at 1133 E. Michigan Avenue

September 8, 2023

Mr. Jason Iacoangeli,

This letter is to address any environmental concerns about the operation of the paint booth at the Caliber Collision located at 1133 E. Michigan Avenue, Ypsilanti, MI. We will install a Saicozero paint booth and mixing room. This booth has a 4 stage regenerative wet filtration system that recycles and purifies the air to outperform the Environmental Protection Agency's standard by over 99%. The EPA standard for Auto and Light Duty Truck Surface Coating is NESHAP (National Emission Standards for Hazardous Air Pollutants).

Enclosed is an emissions report that details a study that was performed comparing the performance and VOC emissions of the Saicozero paint booth to a standard paint booth with 2 stage dry filtration and a standard paint booth with an activated dry carbon filter. The 2 stage dry filtration paint booth is the standard paint booth used by the vast majority of collision repair facilities across the country. The 2 stage dry filter system meets the EPA air quality standards as well as the state air quality standards in all 50 states. The results show the Saicozero booth emits 99% less emissions than the 2 stage dry filter system, therefore outperforming the EPA NESHAP standard by over 99%. The Saicozero booth can be ordered with an additional activated dry carbon filter reducing its emissions to zero. We will add the additional dry carbon filter to achieve zero emissions at this location.

Also attached is a Floor Plan Exhibit showing that the aggregate area of the two paint booths and the mixing room are 6.2% of the floor area of the entire shop space. The paint booths are listed equipment that meet all federal, state and local code requirements.

The paint booths are only a small percentage of the overall use of the facility. This unique, technologically advanced paint booth surpasses the highest standards set forth by all regulatory agencies involved.

As a multi-state/multi-operator of Body Shops, Caliber Collision is well versed in the procedures and requirements to divert any operational hazards. All products used, services rendered, and disposals of waste are highly regulated to prevent unwanted affects. All products and equipment are designed

CALIBER COLLISION



to ensure compliance. Laws and limitations are monitored and enforced so that any employee, clientele and passerby may be assured of a safe environment.

Sincerely,



Derrick Stowers
VP of Facilities and Construction

Enclosures:

- a.) Saicozero emissions report
- b.) Floor Plan Exhibit



VOC COMPARATIVE ANALYSIS

LESS EMISSIONS
LESS OPERATING COSTS
MORE EFFICIENCY

30 NOVEMBER 2021

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EXECUTIVE SUMMARY

This is a comparative analysis of the VOC emissions of spray booths with Saicozero regenerative filtration and spray booths with conventional dry filtration¹. The data presented in this report was gathered from a Saicozero spray booth with regenerative filtration, a spray booth with 600 kg (1323 lbs) activated carbon filtration and a spray booth with only dry filtration².

To provide a complete comparative analysis, the spray booths included in this study all have an authorized airflow of 38,000 m³/h (24,720 cfm) and “standard” useful dimensions of: length 7 meters (26’ 25”); width 4 meters (13’ 12”); height 3.1 meters (10’ 17”).

The data was collected from the exhaust duct of each booth to examine the VOC emissions into the atmosphere. All of the sampling was conducted during the paint phase over a one-hour period.

The conclusions of this report show that the VOC emissions of a booth with Saicozero regenerative filtration, compared to a spray booth with 600 kg (1323 lbs) activated carbon dry filtration and a spray booth with only dry filtration, are 80% and 99% lower respectively.

This analysis also shows that VOC emissions into the atmosphere of a spray booth with regenerative filtration are far below the limits imposed by the US Environmental Protection Agency (EPA), which, as a consequence of there not yet being in place the wide-spread implementation of an economic and eco-efficient system, are arguably quite high. The conclusions of this report suggest that Saicozero’s regenerative filtration system has the potential of setting a new standard for spray booth VOC emissions.

TECHNICAL AND CONSUMPTION CHARACTERISTICS OF THE SPRAY BOOTHS

Table 1. Technical and consumption characteristics of spray booths with different filtration systems

FEATURES	REGENERATIVE FILTRATION	CONVENTIONAL DRY FILTRATION	CONSUMPTION REDUCTIONS OF THE REGENERATIVE FILTRATION
Useful dimensions (L x W x H)	7 x 4 x 3,1 m (26’ 25” x 13’ 12” x 10’ 17”)	7 x 4 x 3,1 m (26’ 25” x 13’ 12” x 10’ 17”)	
Air capacity	38,000 m ³ /h (24720 cfm)	38,000 m ³ /h (24720 cfm)	
Ventilation power	18 kW (24 hp)	30 kW (40 hp)	-40%
Heating during paint phase ³	0	280000 kcal/h (1110387 btu/h)	-100%

Spray booths with these dimensions were chosen as they are considered of a “standard” size for a European body shop that primarily refinishes cars.

Conventional dry filtration refers to the two booths with activated carbon and with only filtration, as their technical and consumption characteristics are the same.

This table shows that comparing three spray booths with the same dimensions and air capacity, but with different filtration systems, the spray booth with regenerative filtration consumes 40% less in ventilation power and 100% less in heating power during paint phase than the spray booths with conventional dry filtration.

¹ Conventional dry filtration: 600 kg (1323 lbs) activated carbon filtration OR only dry filtration

² Due to the European General Data Protection Regulation (GDPR) privacy law, information regarding the name and location of the body shops from where the data was collected cannot be disclosed in this report.

³ Outside temperature 32 °F, for lower temperatures the savings are greater.

SAICOZERO 4-STAGE REGENERATIVE FILTRATION

A filtration system in which all of the circulating air is purified through a filtration unit that is constantly lubricated with a mineral oil solution that traps both dust and chemical compounds, collecting them into an easily disposable solid compound. The filtering section allows for the continuous and efficient separation of dust and VOCs from the air that is regenerated.

1. PRE-FILTERS PAINTSTOP MULTI-LAYER

High efficiency filters made of polyester fiber, treated with adhesive gel. These filter are placed in the regenerator.

Fiber	Synthetic
Thickness	10 mm
Weight	150 g/m ²
Fire resistance	Auto-testing.
Filtration level	92%
Heat resistance	150°C

2. COLUMBUS FILTERS

Structure	Kraft paper
Thickness	mm 60
Weight efficiency	96–98%
Initial pressure drop	Pa 4-30
Final pressure drop	Pa 150
Maximum temperature	200°C
Fire classification	F1/200
Maximum unit accumulation of under-grill filters	g/m ² 3400
Maximum total accumulation of under-grill filters	g 32300

3. ALVEOLAR FILTERS WITH OILY SOLUTION

Alveolar filters, which are 50 mm thick, are constantly humidified with an odorless and non-toxic oily solution that retains all pollutants and purifies the air.

Technical features of the oily solution:

Composition: Mineral oil
Color: Trasparent
Odor: Odorless

Hazards identification:

It does not contain dangerous substances. No danger is found in normal use.

Toxicological information:

It does not contain any component belonging to risk categories indicated by the EEC.

Disposal:

Do not disperse in the environment. Dispose of together with non-toxic mineral oils according to current regulations.

Maintenance:

Check the oil every 600 hours and restore if necessary.

4. CEILING FILTERS

High efficiency filters made of polyester fiber, treated with adhesive gel. These filters are positioned on the air outlet side.

Fiber	Synthetic
Thickness	25 mm
Weight	660 g/m ²
Fire resistance	Auto-testing.
Filtration level	97%
Heat resistance	150°C

600 KG ACTIVATED CARBON DRY FILTRATION

A conventional filtration system with 600 kg of activated carbon filters.

1. PAINTSTOP FILTERS

High efficiency filters made of polyester fiber, treated with adhesive gel. These filter are placed under the grills.

Fiber	Glass
Thickness	60 mm
Weight	160 g/m ²
Fire resistance	F1 self-extinguish
Filtration level	92%
Heat resistance	150°C
Build-up	32000 gr/m ²
Initial resistance	3.3 mm H ₂ O
Final resistance	15.3 mm H ₂ O

2. POCKET FILTERS

High efficiency filters made of polyester fiber, treated with adhesive gel. These filters are positioned on the air outlet side.

Efficiency class	g4 - en779:2012
Frame	ABS
Filter media	Polyester
Initial pressure drop	30 Pa
Final pressure drop	250 Pa
Max temperature	100°C

3. 600 KG ACTIVATED CARBON

Ingredients:

CAS 7440-44-0 - Carbon - 100%

Quantity:

600 kg (1323 lbs)

Odor	Odorless
Appearance	Black solid
pH-value	6.0 – 9.0

Melting/Freezing point	3652 – 3697°C
Boiling point/Boiling range	Decomposes

ONLY DRY FILTRATION

2. PAINTSTOP FILTERS

High efficiency filters made of polyester fiber, treated with adhesive gel. These filter are placed under the grills.

Fiber	Glass
Thickness	60 mm
Weight	160 g/m ²
Fire resistance	F1 self-extinguish
Filtration level	92%
Heat resistance	150°C
Build-up	32000 gr/m ²
Initial resistance	3.3 mm H ₂ O
Final resistance	15.3 mm H ₂ O

2. POCKET FILTERS

High efficiency filters made of polyester fiber, treated with adhesive gel. These filters are positioned on the air outlet side.

Efficiency class	g4 - en779:2012
Frame	ABS
Filter media	Polyester
Initial pressure drop	30 Pa
Final pressure drop	250 Pa
Max temperature	100°C

FIELD SAMPLE COLLECTION

The samples of this study were collected from three spray booths: one with Saicozero regenerative filtration (spray booth A), one with activated carbon dry filtration (spray booth B) and one with only dry filtration (spray booth C).

All of the booths were installed between the years 2011 and 2019 and are still in use to date. The samples were collected in 2021, each over a 90-minute period.

The sampling points were located in the exhaust ducts of the spray booths to examine the emissions of VOC into the atmosphere. At the time of sample collection, the measured temperature inside the booths was between 64–72°F and the relative humidity was between 40–60%.

All of the data was collected during the paint phase. Two layers of waterborne base coat of a solid color and one layer of clear coating were applied to an entire vehicle with a length of ± 4.5 meters during the 90-minute period.

Table 2. Characteristics of the exhaust duct and physical parameters of the emissions of the spray booth with regenerative filtration

SPRAY BOOTH A			
Emission point		Physical parameters of the emissions	
Height of the exhaust duct	10.0 m	Temperature at the sampling point	24°C
Height of the sampling point	6.5 m	Free oxygen concentration	19–20%
Direction of the outlet	Vertical	Sample flow	5.0 l/min
Diameter of the exhaust duct	0.50 x 0.50 m	Air speed at the sampling point	10.95 m/s
Area of the exhaust duct	0.25 m ²	Measured air flow inside the booth during sampling	9856 m ³ /h
Type of sampling flange (A, B, C, D)	B	Nozzle diameter used for the dust components	11.0
Methodological scope		UNI EN 16911-1	
Analytical method		UNI EN 12619-13526	
Brand and serial number of the analyzers ⁴		P.C.F. ELETTRONICA MOD 2001/C	
Date of last calibration of the analyzers		March 11 2021	

⁴ It is necessary to provide this indication if the analytical methods allow to choose between several measurement principles.

Table 3. Characteristics of the exhaust duct and physical parameters of the emissions of the spray booth with activated carbon dry filtration

SPRAY BOOTH B			
Emission point		Physical parameters of the emissions	
Height of the exhaust duct	11.0 m	Temperature at the sampling point	22°C
Height of the sampling point	7.0 m	Free oxygen concentration	19–20%
Direction of the outlet	Vertical	Sample flow	5.0 l/min
Diameter of the exhaust duct	1.0 x 1.0 m	Air speed at the sampling point	9.97 m/s
Area of the exhaust duct	1.0 m ²	Measured air flow inside the booth during sampling	35,907 m ³ /h
Type of sampling flange (A, B, C, D)	B	Nozzle diameter used for the dust components	11.0
Methodological scope		UNI EN 16911-1	
Analytical method		UNI EN 12619-13526	
Brand and serial number of the analyzers		P.C.F. ELETTRONICA MOD 2001/C	
Date of last calibration of the analyzers		March 11 2021	

Table 4. Characteristics of the exhaust duct and physical parameters of the emissions of the spray booth with only dry filtration

SPRAY BOOTH C			
Emission point		Physical parameters of the emissions	
Height of the exhaust duct	8.5 m	Temperature at the sampling point	22°C
Height of the sampling point	6.0 m	Free oxygen concentration	19–20%
Direction of the outlet	Vertical	Sample flow	5.0 l/min
Diameter of the exhaust duct	1.0 x 1.0 m	Air speed at the sampling point	10.40 m/s
Area of the exhaust duct	1.0 m ²	Measured air flow inside the booth during sampling	37450 m ³ /h
Type of sampling flange (A, B, C, D)	B	Nozzle diameter used for the dust components	11.0
Methodological scope		UNI EN 16911-1	
Analytical method		UNI EN 12619-13526	
Brand and serial number of the analyzers		P.C.F. ELETTRONICA MOD 2001/C	
Date of last calibration of the analyzers		March 11 2021	

Table 5. Sampling criteria

SAMPLING CRITERIA	
Emission level	Constant
Emission trend	Continuous
Booth management	Constant
Booth run	Continuous
Emission class	I
Number of samples per booth	≥ 3
Time period of sampling (min)	90

PAINTING PRODUCTS USED DURING THE SAMPLING PERIOD

A vehicle with a length of ± 4.5 meters was painted in each of the booths during the 90-min sampling period. Two layers of waterborne base coat of a solid color and one layer of clear coating were applied to the whole vehicle.

Concentration of VOC components in the waterborne paint used: ± 18%

Concentration of VOC components in the clear coating used: ± 42%

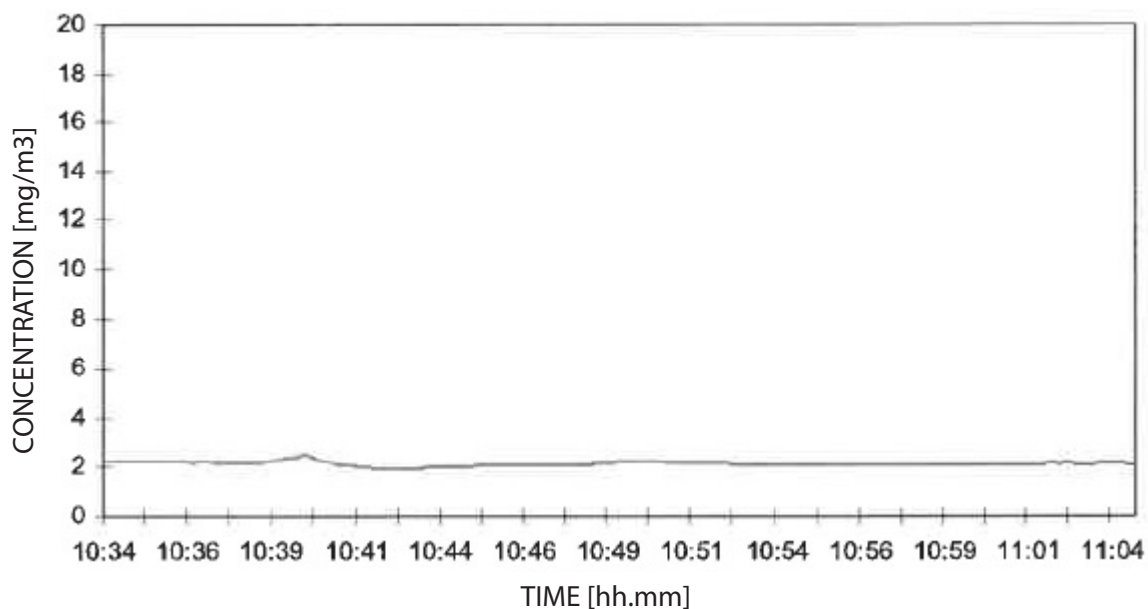
SAMPLE RESULTS⁵

Table 6. Results of the emission samples of spray booth with regenerative filtration

VOC EMISSIONS SPRAY BOOTH A	
Date	May 14 2021
Total duration time for sampling	90 minutes
Duration time for each sample	30 minutes
Time start	10:34 am
Time end	12:06 pm
Measured air flow	9,856 m ³ /h (5801 cfm)
Sample 1	2.10 mg/m ³
Sample 2	2.30 mg/m ³
Sample 3	2.60 mg/m ³
Average VOC concentration	2.33 mg/m ³
Standard deviation	0.25
Coefficient of variation	0.11

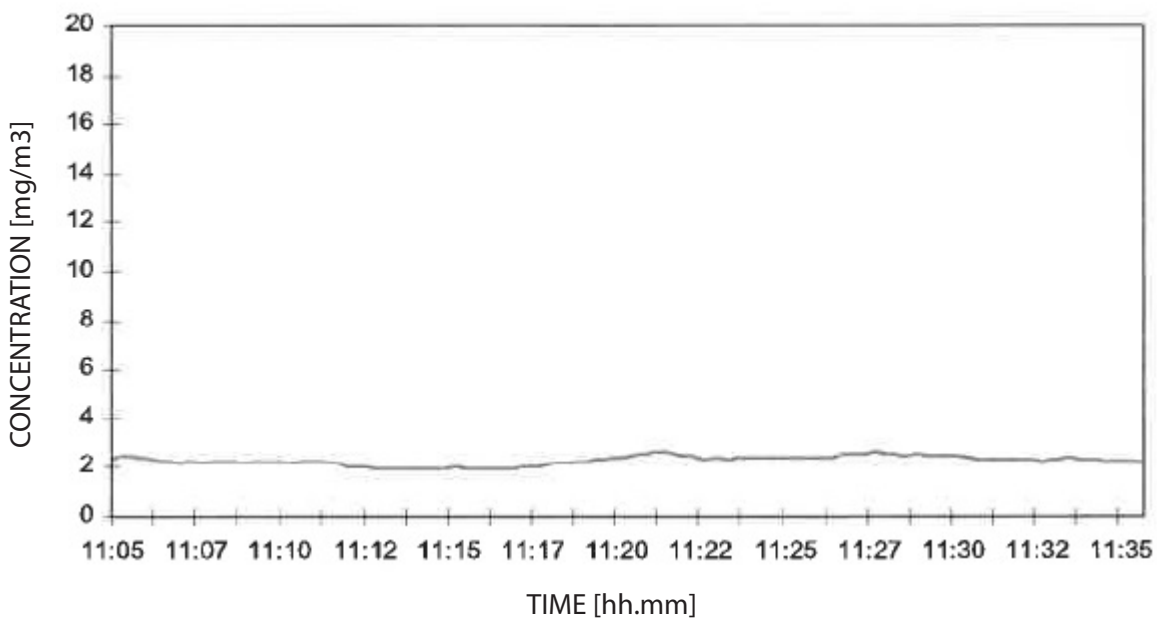
⁵ Since the tests were done in Europe, the official measurements were measured using the metric system.

SAMPLE 1



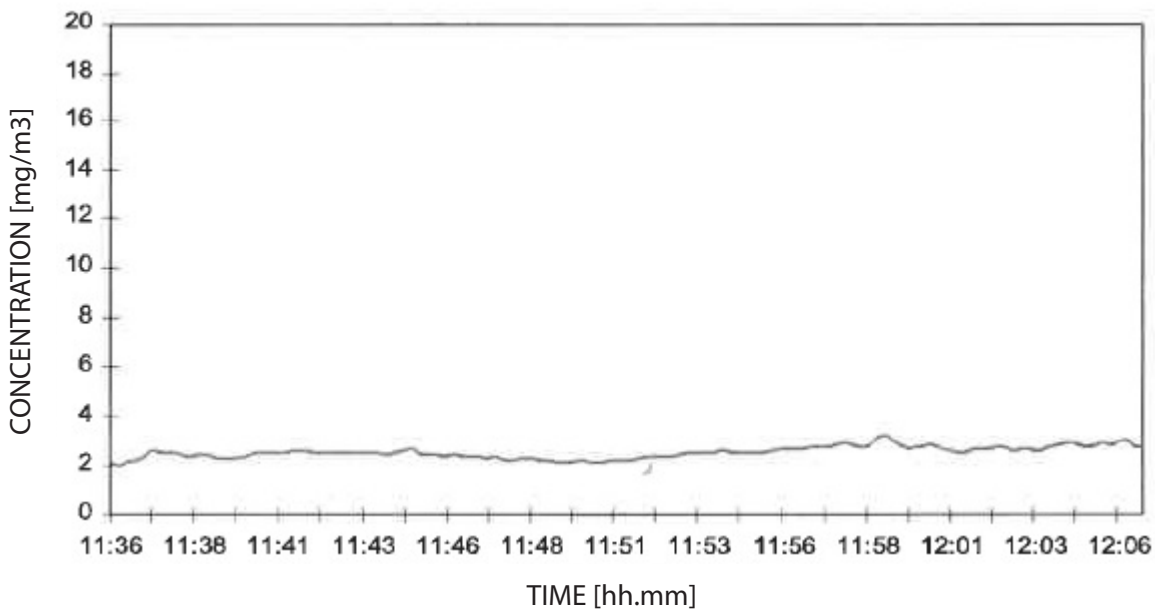
Graph 1. Results of Sample 1 of spray booth A

SAMPLE 2



Graph 2. Results of Sample 2 of spray booth A.

SAMPLE 3

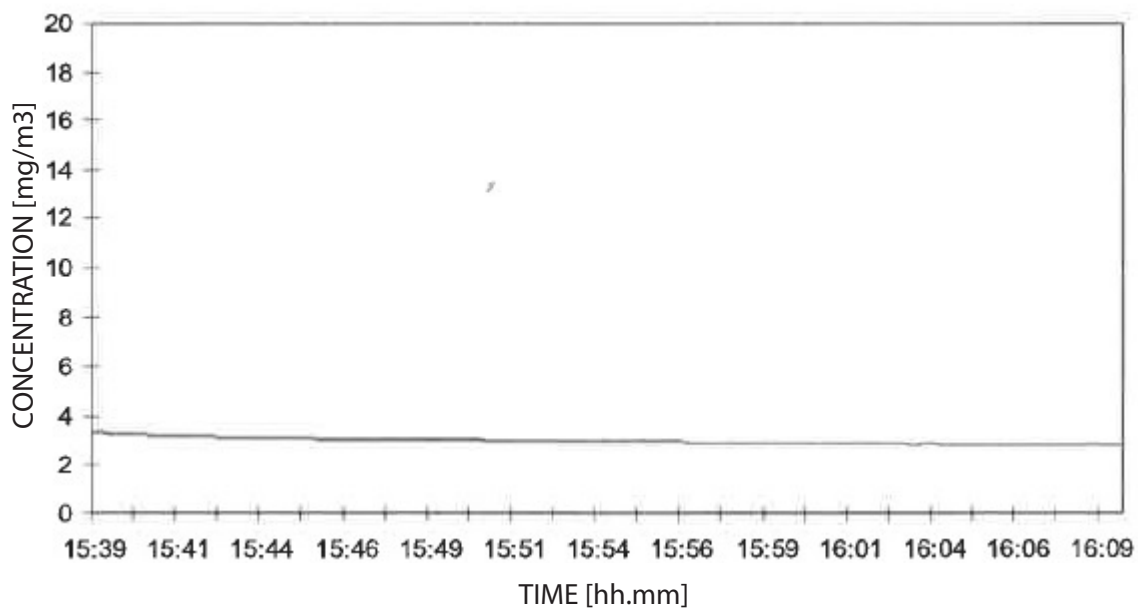


Graph 3. Results of Sample 3 of spray booth A.

Table 7. Results of the emission samples of the spray booth with activated carbon dry filtration

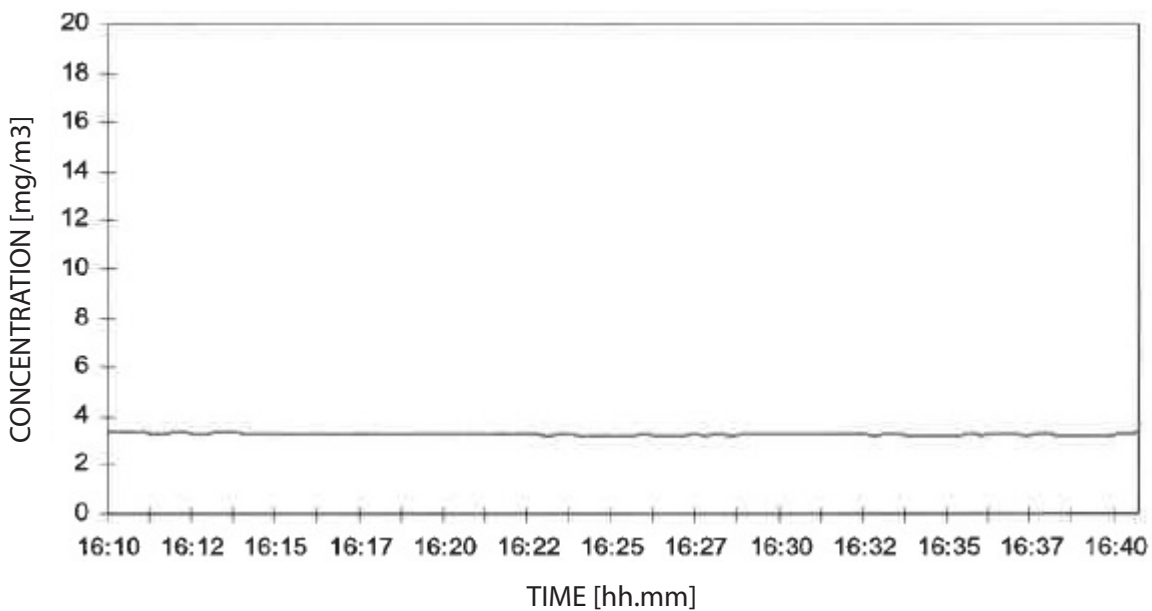
VOC EMISSIONS SPRAY BOOTH B	
Date	May 14 2021
Total duration time for sampling	90 minutes
Duration time for each sample	30 minutes
Start time	3:39 pm
End time	5:11 pm
Measured air flow	35907 m3/h (21134 cfm)
Sample 1	3.00 mg/m3
Sample 2	3.30 mg/m3
Sample 3	3.60 mg/m3
Average VOC concentration	3.30 mg/m3
Standard deviation	0.30
Coefficient of variation	0.11

SAMPLE 1



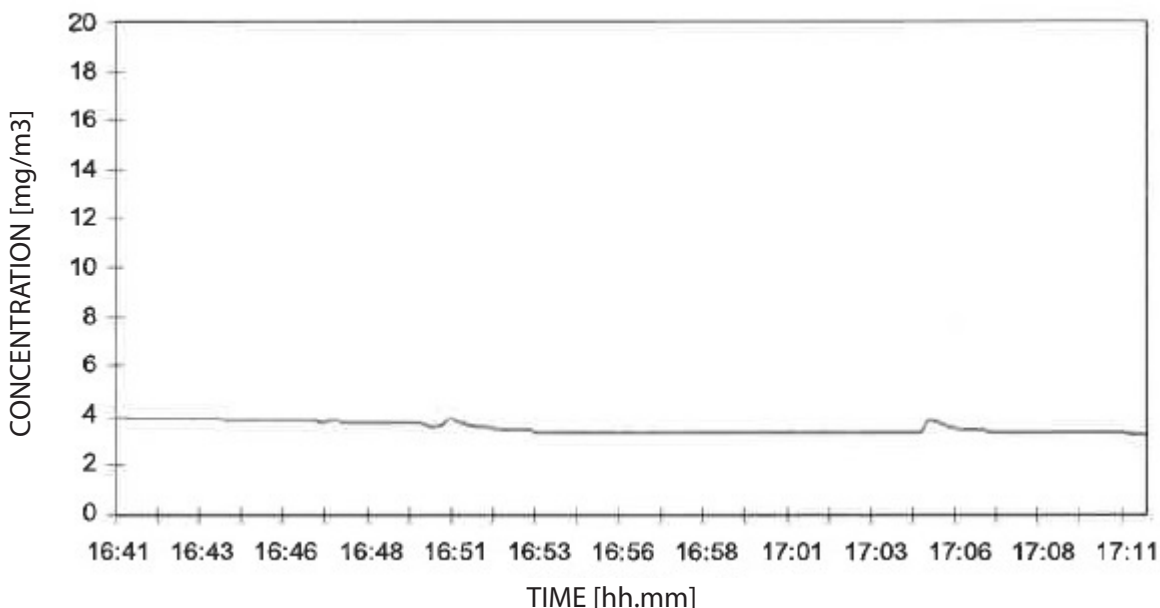
Graph 4. Results of Sample 1 of spray booth B.

SAMPLE 2



Graph 5. Results of Sample 2 of spray booth B.

SAMPLE 3

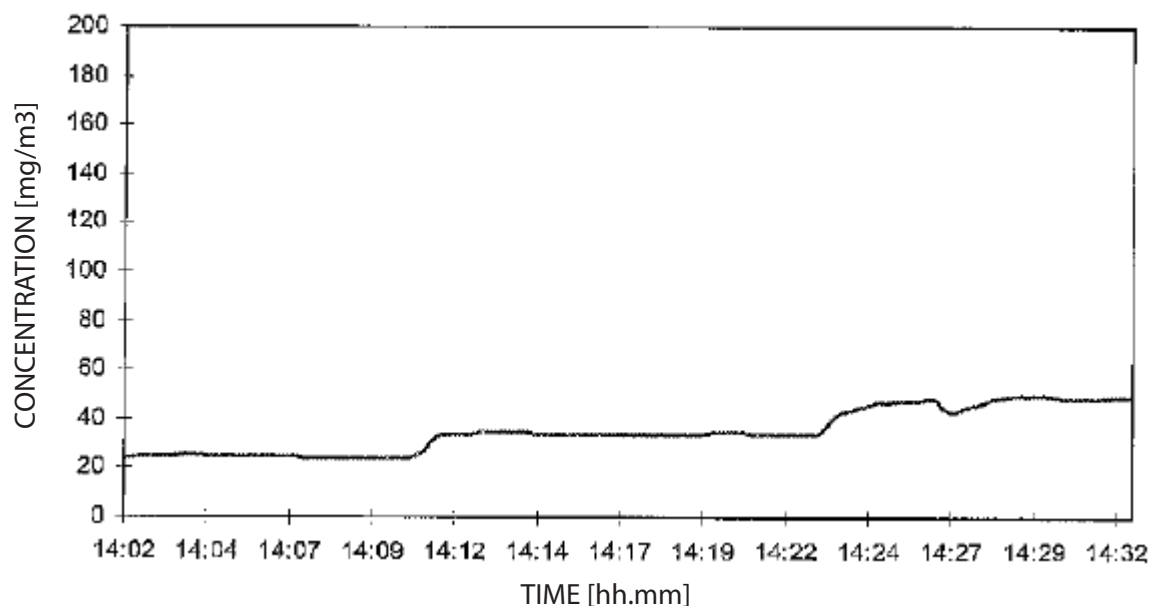


Graph 6. Results of Sample 3 of spray booth B.

Table 8. Results of the emission samples of the spray booth with only dry filtration

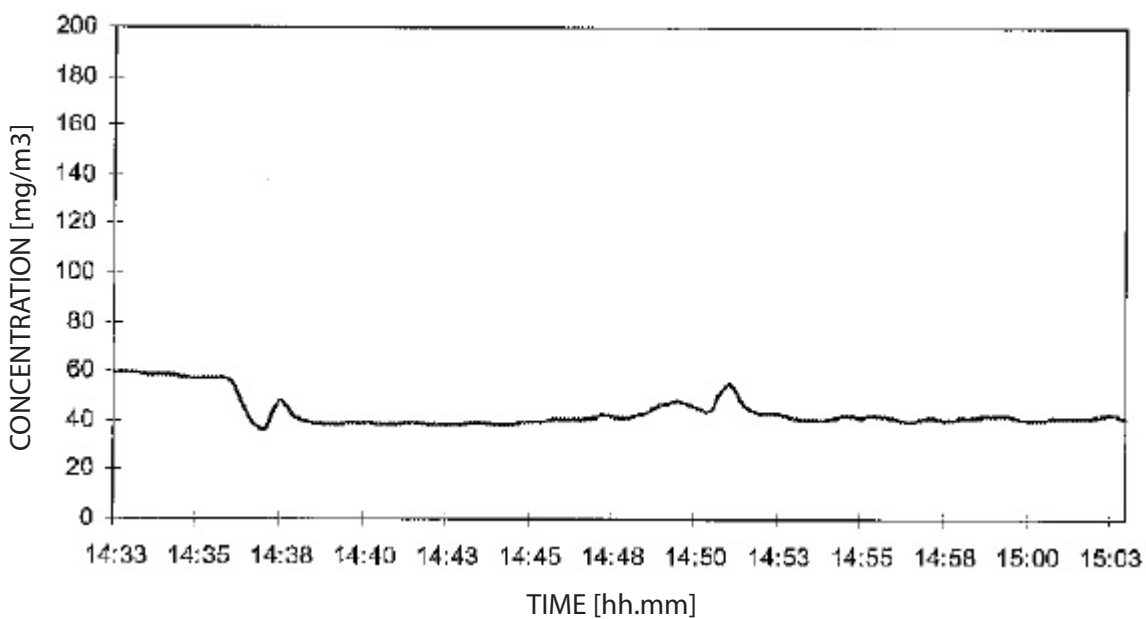
VOC EMISSIONS SPRAY BOOTH C	
Date	May 7 2021
Total duration time for sampling	90 minutes
Duration time for each sample	30 minutes
Start time	2:02 pm
End time	3:34 pm
Measured air flow	37450 m3/h (22042 cfm)
Sample 1	35.2 mg/m3
Sample 2	43.6 mg/m3
Sample 3	70.6 mg/m3
Average VOC concentration	49.8 mg/m3
Standard deviation	18.50
Coefficient of variation	0.37

SAMPLE 1



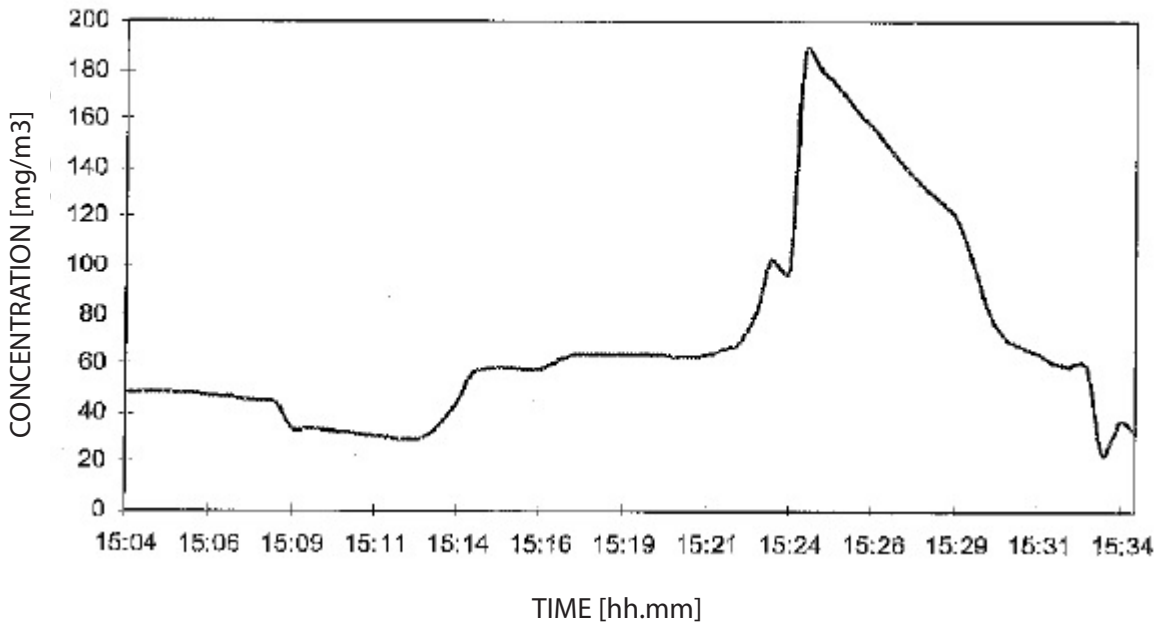
Graph 7. Results of Sample 1 of spray booth C.

SAMPLE 2



Graph 8. Results of Sample 2 of spray booth C.

SAMPLE 3



Graph 9. Results of Sample 3 of spray booth C.

Table 9. Comparison of the VOC emissions of spray booths A, B and C.

FEATURE	SPRAY BOOTH A	SPRAY BOOTH B	SPRAY BOOTH C	EMISSION REDUCTIONS OF SPRAY BOOTH A
Measured airflow	9856 m3/h	35907 m3/h	37450 m3/h	
Average VOC concentration	2.33 mg/m3	3.30 mg/m3	49.8 mg/m3	
Approximate amount of VOC emissions over one hour during paint phase	$9856 * 2.33$ = 22,964.48 mg = 22.97 g	$35907 * 3.30$ = 118,493.10 mg = 118.50 g	$37450 * 49.8$ = 1,865,010.00 mg = 1,865.00 g	about - 80% compared to spray booth B about - 99% compared to spray booth C

Table 9 shows that, given the results of the samples, spray booth A emits 80% less VOCs compared to spray booth B and 99% less VOCs compared to spray booth C.

The concentration of VOCs emitted by spray booth A is lower, and, given the less amount of airflow exiting the booth, the total amount of VOC compounds emitted into the atmosphere is significantly lower.

LIMITATIONS

The main limitation of this study was not having access to the exact amount of waterborne base coat and clear coating applied during the sampling period. This would have allowed for a more precise measurement of the relative emissions of each booth. However, it was ensured that during the 90 minute sampling period two layers of waterborne base coat of a solid color (with a concentration of VOC of $\pm 18\%$) and one layer of clear coating (with a concentration of $\pm 42\%$) were applied to an entire vehicle with a length of ± 4 meters. It can therefore be assumed that the results offer an accurate comparison of the relative emissions of each booth.

CONCLUSION

This study compared the VOC emissions of three spray booths with the same technical and dimensional characteristics but with different filtration systems: one with Saicozero regenerative filtration, one with 600 kg activated carbon dry filtration and one with only dry filtration.

The results of this study show that the spray booth with Saicozero regenerative filtration emits about 80% less than the booth with activated carbon dry filtration and about 99% less than the booth with only dry filtration.



Charter Township of Ypsilanti
Office of Community Standards
7200 S. Huron Drive, Ypsilanti, MI 48197
Phone: (734) 485-3943
Website: <https://vtown.org>

NO TREE AFFIDAVIT APPLICATION

I. PROJECT LOCATION

Address: 1133 E Michigan Ave. City: Ypsilanti State: MI Zip: 48198
Parcel ID #: K-11- 10-125-014 Zoning RC Acres: 3.42
Name of Project/Proposed Development: Caliber Collision

II. APPLICANT INFORMATION

Applicant: Bret Flory Phone: 972-467-9749
Address: 1255 W 15th St Suite 125 City: Plano State: TX Zip: 75075
Fax: _____ Email: _____
Builder/Contractor (if different than applicant): _____ Phone: _____
Address: _____ City: _____ State: _____ Zip: _____
Fax: _____ Email: _____

III. APPLICANT SIGNATURE

By signing and dating this affidavit, the applicant hereby swears the following:

- The applicant desires to conduct the following activity: Renovate existing facility to an auto Body Paint & Repair Shop with an estimated construction starting date of 01 / 29 / 2024 on property within the Charter Township of Ypsilanti, described in *I. Project Location*
- The Applicant has obtained and examined a copy of the Ypsilanti Township Woodlands Protection Ordinance (attached)
- That said property does not contain any historic trees, specimen trees, endangered species of plant life, or significant tree over 36" in diameter, measured at chest height.
- That said property does not contain a canopy cover of at least ten thousand (10,000) square feet formed by trees, a majority of which having a diameter of eight (8) inches or greater.
- That said property does not contain any primary or secondary linkage strips.
- That said property does not contain any trees, at least 8" in diameter) that are located within 20 feet of the edge of a roadway.

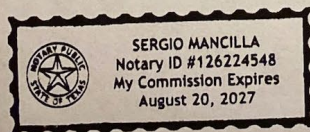
Based on checking all the above, the applicant believes that said property does not come with the regulatory provision of the Ypsilanti Township Woodlands Protection Ordinance

Bret Flory Bret Flory 10/9/23
Applicant Signature Print Name Date

STATE OF Texas)
) ss.
COUNTY OF Collin)

The foregoing instrument was acknowledged before me this 9th day of October,
2023, by Bret Flory of _____

Corporation, on behalf of the corporation.



Sergio Mancilla
_____, Notary Public
Collin County, Texas Acting in _____
Collin County, Texas
My Commission Expires: August 20, 2027

SITE PLAN REVIEW APPLICATION

I. APPLICATION/DEVELOPMENT TYPE

Development:

- Subdivision
- Multi-family/Condominium
- Site Condominium
- Planned Development
- Non-residential

Application:

- Administrative Site Plan Review
- Sketch Site Plan Review
- Full Site Plan Review
- Revisions to approved plan
- Tentative Preliminary Plat
- Final Preliminary Plat
- Final Plat Process
- Stage I (for Planned Development)
- Stage II (for Planned Development)

II. PROJECT LOCATION

Address: 1133 E Michigan Ave City: Ypsilanti State: MI Zip: 48198

Parcel ID #: K-11- 10-125-014 Zoning RC-Regional Corridor

Lot Number: _____ Subdivision: _____

Property dimensions: _____ Acreage: 3.42

Name of project/Proposed development: Caliber Collision

Legal description of Property:

PART OF THE NE 1/4 OF SEC 10, T3S, R7E, YPSILANTI TWP, WASH CO, MI, DESC AS: BEG AT N 1/4 SEC 10: TH S 89-59-30 E 808.42 FT;
TH S 00-58-36 E 292.58 FT TO POB; TH S 89-59-30 E 288.22 FT, TH S 00-57-00 E 473.86 FT, TH S 73-18-58 W ALG C/L MICH AVE 299.12 FT;
TH N 00-58-36 W 559.80 TO POB. 3.42 ACRES (SPLIT ON 09/10/2001 FROM K -11-10-125-008 & K -11-10-125-009)

Describe Proposed Project (including buildings/ structures/ # units):

Auto Body Paint and Repair Shop

III. APPLICANT INFORMATION

Applicant: Bret Flory Phone: _____

Address: 1913 Gardengrove Ct City: Plano State: TX Zip: 75075

Fax: _____ Email: bflory@crossarchitects.com

Property owner (if different than applicant): Chess Properties LLC Phone: 586-634-5016

Address: 1661 E Wattles Road City: Troy State: MI Zip: 48085

Fax: _____ Email: todd@tricotruck.com

Engineer: _____ Phone: _____

Address: _____ City: _____ State: _____ Zip: _____

Fax: _____ Email: _____

**SITE PLAN REVIEW
 APPLICATION**

VI. SCHEDULE OF FEES

Preliminary Site Plan Review		
	Non-refundable fee	Refundable deposit
Full	\$500	Less than one (1) acre: \$2,000 One (1) acre to five acres: \$4,000 Over five (5) acres to ten (10) acres: \$5,500 Greater than ten (10) acres: \$5,500 + \$50 per acre over ten (10) acres
Sketch	\$500	Less than one (1) acre: \$1,500 One (1) acre to five acres: \$2,000 Over five (5) acres to ten (10) acres: \$2,500 Greater than ten (10) acres: 25,500 + \$50 per acre over ten (10) acres
Administrative	\$100	Less than one (1) acre: \$1,000 One (1) acre to five acres: \$1,200 Over five (5) acres to ten (10) acres: \$1,500 Greater than ten (10) acres: \$1,500 + \$50 per acre over ten (10) acres
Planned Development Stage I and Rezoning	\$1,500 + \$20 per acre	Less than one (1) acre: \$3,000 One (1) acre to five acres: \$4,000 Over five (5) acres to ten (10) acres: \$5,500 Greater than ten (10) acres: \$5,500 + \$50 per acre over ten (10) acres
Final Site Plan Review		
	Non-refundable fee	Refundable deposit
Full	\$500	Less than one (1) acre: \$3,000 One (1) acre to five acres: \$4,000 Over five (5) acres to ten (10) acres: \$5,500 Greater than ten (10) acres: \$5,500 + \$50 per acre over ten (10) acres
Sketch	\$500	Less than one (1) acre: \$1,500 One (1) acre to five acres: \$2,000 Over five (5) acres to ten (10) acres: \$2,500 Greater than ten (10) acres: \$2,500 + \$50 per acre over ten (10) acres
Administrative	\$100	Less than one (1) acre: \$1,000 One (1) acre to five acres: \$1,200 Over five (5) acres to ten (10) acres: \$1,500 Greater than ten (10) acres: \$1,500 + \$50 per acre over ten (10) acres
Planned Development Stage I and Rezoning	\$1,500 + \$20 per acre	Less than one (1) acre: \$3,000 One (1) acre to five acres: \$4,000 Over five (5) acres to ten (10) acres: \$5,500 Greater than ten (10) acres: \$5,500 + \$50 per acre over ten (10) acres

\$ 2,500 FEE TOTAL

V. APPLICANT SIGNATURE



 Applicant Signature

Bret Flory

 Print Name

9/28/23

 Date

Charter Township of Ypsilanti

Office of Community Standards

7200 S. Huron Drive, Ypsilanti, MI 48197

Phone: (734) 485-3943

Website: <https://ytown.org>

**SITE PLAN REVIEW
APPLICATION**

Site Plan Review applications	
<input checked="" type="checkbox"/> The application is filled out in its entirety and includes the signature of the applicant and, if different than the applicant, the property owner.	<input checked="" type="checkbox"/> Proposed Plans
<input checked="" type="checkbox"/> Fees	<input checked="" type="checkbox"/> One (1) signed and sealed copies (24"x36") of the proposed plan
<input checked="" type="checkbox"/> Check made out to Ypsilanti Township with appropriate fees. <i>Please note: The same preliminary site plan review fee will be charged for each subsequent submittal</i>	<input checked="" type="checkbox"/> One (1) copy (11"x17") of the proposed plan
<input type="checkbox"/> Fees paid separately to Ypsilanti Community Utilities Authority	<input checked="" type="checkbox"/> One (1) PDF digital copy of the proposed plan
<input type="checkbox"/> Fees paid separately to Washtenaw County Road Commission and Water Resources Commissioner's Office	<input checked="" type="checkbox"/> All contents detailed on the next pages for administrative, sketch, and full site plans.
<input type="checkbox"/> Additional Documents:	
<input type="checkbox"/> Woodland Protection application or the No Tree Affidavit, if applicable	
<input type="checkbox"/> Traffic Impact Questionnaire	
<input type="checkbox"/> Appropriate application and plans submitted to the Washtenaw County Road Commission and Water Resources Commissioner's Office	

Charter Township of Ypsilanti**Office of Community Standards**

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APPLICATION**

Administrative Site Plan Review
Application Form: The application form shall contain the following information:
Name and address of the applicant and property owner
Address and common description of property and complete legal description
Dimensions of land and total acreage
Zoning on the site and all adjacent properties
Description of proposed project or use, type of building or structures, and name of proposed development, if applicable
Name and address of firm or individual who prepared site plan
Proof of property ownership
Site Plan Descriptive and Identification Data:
Site plans shall consist of an overall plan for the entire development, drawn to an engineer's scale of not less than 1 inch = 50 feet for property less than three acres, or one inch = 100 feet for property three acres or more in size. Sheet size shall be at least 24 × 36 inches. If a large development is shown in sections on multiple sheets, then one overall composite sheet shall be included
Written project description, including proposed use, building(s) and site improvement
Title block with sheet number/title; name, address and telephone number of the applicant and firm or individual who prepared the plans; and date(s) of submission and any revisions (month, day, year)
Scale and north-point
Legal and common description of property
Zoning classification of petitioner's parcel and all abutting parcels
Net acreage (minus rights-of-way) and total acreage
Site Analysis:
Environmental impact analysis and natural features protection documentation meeting the requirements of Chapter 26 of the Municipal Code, Environment
Survey of existing lot lines, building lines, structures, parking areas and other improvements on the site and within 100 feet of the site
Inventory of the location, sizes, and types of existing trees, hedgerows and landmark trees as required by the township woodlands ordinance and the general location of all other existing plant materials
Location of existing drainage courses, floodplains, lakes and streams, and wetlands with elevations
Surface drainage flows including high points, low points and swales
All existing easements
Existing roadways and driveways within 250 feet of the site
Existing sidewalks and nonmotorized pathways
Site Plan:
Proposed lot lines, lot dimensions, property lines and setback dimensions
Structures, and other improvements
Proposed easements
Location of trash and recycling receptacle(s) and transformer pad(s) and method of screening
Extent of any outdoor sales or display area

Charter Township of Ypsilanti**Office of Community Standards**

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Phone: (734) 485-3943

Website: <https://ytown.org>**SITE PLAN REVIEW
APPLICATION**

Access and Circulation:
Dimensions, curve radii and centerlines of existing and proposed access points, roads and road rights-of-way or access easements
Dimensions of parking spaces, islands, circulation aisles and loading zones
Calculations for required number of parking and loading spaces
Designation of fire lanes
Location of existing and proposed sidewalks/pathways within the site or right-of-way
Location, height, and outside dimensions of all storage areas and facilities
Landscape Plans:
Location, sizes, and types of existing trees as required by the township woodlands ordinance and the general location of all other existing plant materials, with an identification of materials to be removed and preserved
The location of existing and proposed lawns and landscaped areas
Building and Structure Details:
Location, height, and outside dimensions of all proposed buildings or structures
Location, size, height, and lighting of all proposed site and wall signs
Location, size, height and material of construction for all obscuring wall(s) or berm(s) with cross-sections, where required
Drainage, Soil Erosion and Sedimentation Control:
Location and size of existing and proposed storm sewers
Stormwater retention and detention ponds, including grading, side slopes, depth, high water elevation, volume and outfalls
Stormwater drainage and retention/detention calculations
Indication of site grading, drainage patterns and stormwater management measures, including sediment control and temperature regulation
Soil erosion and sedimentation control measures
Lighting Plan:
Location of all freestanding, building-mounted and canopy light fixtures on the site plan and building elevations
Specifications and details for the type of fixture being proposed including the total lumen output, type of lamp and method of shielding
Use of the fixture proposed

Sketch Plan Review
Application Form: The application form shall contain the following information:
Name and address of the applicant and property owner
Address and common description of property and complete legal description
Dimensions of land and total acreage
Zoning on the site and all adjacent properties
Description of proposed project or use, type of building or structures, and name of proposed development, if applicable
Name and address of firm or individual who prepared site plan
Proof of property ownership

Charter Township of Ypsilanti**Office of Community Standards**

7200 S. Huron Drive, Ypsilanti, MI 48197

Phone: (734) 485-3943

Website: <https://ytown.org>**SITE PLAN REVIEW
APPLICATION**

Site Plan Descriptive and Identification Data:
Site plans shall consist of an overall plan for the entire development, drawn to an engineer's scale of not less than 1 inch = 50 feet for property less than three acres, or one inch = 100 feet for property three acres or more in size. Sheet size shall be at least 24 × 36 inches. If a large development is shown in sections on multiple sheets, then one overall composite sheet shall be included
Written project description, including proposed use, building(s) and site improvements
Title block with sheet number/title; name, address and telephone number of the applicant and firm or individual who prepared the plans; and date(s) of submission and any revisions (month, day, year);
Scale and north-point
Legal and common description of property
Zoning classification of petitioner's parcel and all abutting parcels
Net acreage (minus rights-of-way) and total acreage
Site Analysis:
Environmental impact analysis and natural features protection documentation meeting the requirements of Chapter 26 of the Municipal Code, Environment
Survey of existing lot lines, building lines, structures, parking areas and other improvements on the site and within 100 feet of the site
Inventory of the location, sizes, and types of existing trees, hedgerows and landmark trees as required by the township woodlands ordinance and the general location of all other existing plant materials
Location of existing drainage courses, floodplains, lakes and streams, and wetlands with elevations
Surface drainage flows including high points, low points and swales
All existing easements
Existing roadways and driveways within 250 feet of the site
Existing sidewalks and nonmotorized pathways
Site Plan:
Proposed lot lines, lot dimensions, property lines and setback dimensions
Structures, and other improvements
Proposed easements
Location of trash and recycling receptacle(s) and transformer pad(s) and method of screening
Extent of any outdoor sales or display area
Access and Circulation:
Dimensions, curve radii and centerlines of existing and proposed access points, roads and road rights-of-way or access easements
Dimensions of parking spaces, islands, circulation aisles and loading zones
Calculations for required number of parking and loading spaces
Designation of fire lanes
Location of existing and proposed sidewalks/pathways within the site or right-of-way
Location, height, and outside dimensions of all storage areas and facilities
Landscape Plans:
Location, sizes, and types of existing trees as required by the township woodlands ordinance and the general location of all other existing plant materials, with an identification of materials to be removed and preserved
The location of existing and proposed lawns and landscaped areas

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APPLICATION**

Building and Structure Details:
Location, height, and outside dimensions of all proposed buildings or structures
Location, size, height, and lighting of all proposed site and wall signs
Location, size, height and material of construction for all obscuring wall(s) or berm(s) with cross-sections, where required
Drainage, Soil Erosion and Sedimentation Control:
Location and size of existing and proposed storm sewers
Stormwater retention and detention ponds, including grading, side slopes, depth, high water elevation, volume and outfalls
Stormwater drainage and retention/detention calculations
Indication of site grading, drainage patterns and stormwater management measures, including sediment control and temperature regulation
Soil erosion and sedimentation control measures
Lighting Plan:
Location of all freestanding, building-mounted and canopy light fixtures on the site plan and building elevations
Specifications and details for the type of fixture being proposed including the total lumen output, type of lamp and method of shielding
Use of the fixture proposed

Full Site Plan Review
Application Form: The application form shall contain the following information:
Name and address of the applicant and property owner
Address and common description of property and complete legal description
Dimensions of land and total acreage
Zoning on the site and all adjacent properties
Description of proposed project or use, type of building or structures, and name of proposed development, if applicable
Name and address of firm or individual who prepared site plan
Proof of property ownership

Continue to next page

Charter Township of Ypsilanti**Office of Community Standards**

7200 S. Huron Drive, Ypsilanti, MI 48197

Phone: (734) 485-3943

Website: <https://ytown.org>**SITE PLAN REVIEW
APPLICATION**

Site Plan Descriptive and Identification Data:
Site plans shall consist of an overall plan for the entire development, drawn to an engineer's scale of not less than 1 inch = 50 feet for property less than three acres, or one inch = 100 feet for property three acres or more in size. Sheet size shall be at least 24 × 36 inches. If a large development is shown in sections on multiple sheets, then one overall composite sheet shall be included
Location map drawn to a separate scale with north-point, showing surrounding land, water features, zoning and streets within a quarter mile
Identification and seal of architect, engineer, land surveyor, or landscape architect who prepared drawings
Proximity to section corner and major thoroughfares
Written project description, including proposed use, building(s) and site improvements
Title block with sheet number/title; name, address and telephone number of the applicant and firm or individual who prepared the plans; and date(s) of submission and any revisions (month, day, year)
Scale and north-point
Legal and common description of property
Zoning classification of petitioner's parcel and all abutting parcels
Net acreage (minus rights-of-way) and total acreage
Location map drawn to a separate scale with north-point, showing surrounding land, water features, zoning and streets within a quarter mile
Identification and seal of architect, engineer, land surveyor, or landscape architect who prepared drawings
Proximity to section corner and major thoroughfares
Site Analysis:
An aerial photograph of the entire development area with all environmental features labeled on the photo in a "bubbled" fashion to include woodlands, wetlands, groundwater recharge areas, drains, creeks, surface water, severe changes in topography, erodible soils, and floodplains. Sheet size of the aerial photograph shall be at least 24 × 36 inches
Survey of on parcels more than one acre, topography on the site and within 100 feet of site at two-foot contour intervals, referenced to a U.S.G.S. benchmark
Surrounding land uses and zoning
Soils and water table
Cultural resources and indication of human activities, such as paths
Environmental impact analysis and natural features protection documentation meeting the requirements of Chapter 26 of the Municipal Code, Environment
Survey of existing lot lines, building lines, structures, parking areas and other improvements on the site and within 100 feet of the site
Inventory of the location, sizes, and types of existing trees, hedgerows and landmark trees as required by the township woodlands ordinance and the general location of all other existing plant materials
Location of existing drainage courses, floodplains, lakes and streams, and wetlands with elevations
Surface drainage flows including high points, low points and swales
All existing easements
Existing roadways and driveways within 250 feet of the site
Existing sidewalks and nonmotorized pathways

Charter Township of Ypsilanti**Office of Community Standards**

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Website: <https://ytown.org>**SITE PLAN REVIEW
APPLICATION**

Site Plan:
Proposed lot lines, lot dimensions, property lines and setback dimensions
Structures, and other improvements
Location of exterior lighting (site and building lighting) in accordance with site lighting standards
Proposed easements
Location of trash and recycling receptacle(s) and transformer pad(s) and method of screening
Extent of any outdoor sales or display area
Access and Circulation:
Dimensions, curve radii and centerlines of existing and proposed access points, roads and road rights-of-way or access easements
Dimensions of parking spaces, islands, circulation aisles and loading zones
Calculations for required number of parking and loading spaces
Designation of fire lanes
Location of existing and proposed sidewalks/pathways within the site or right-of-way
Location, height, and outside dimensions of all storage areas and facilities
Opposing driveways and intersections within 250 feet of site
Cross section details of proposed roads, driveways, parking lots, sidewalks and nonmotorized paths illustrating materials and thickness
Dimensions of acceleration, deceleration, and passing lanes
Traffic regulatory signs and pavement markings
Landscape Plans:
Location, sizes, and types of existing trees as required by the township woodlands ordinance and the general location of all other existing plant materials, with an identification of materials to be removed and preserved
The location of existing and proposed lawns and landscaped areas
Description of methods to preserve existing plant materials
Planting plan, including location and type of all proposed shrubs, trees, and other live plant material
Planting list for proposed landscape materials with caliper size or height of material, method of installation, botanical and common names, and quantity
Proposed dates of plant installation
Landscape maintenance schedule
Building and Structure Details:
Location, height, and outside dimensions of all proposed buildings or structures
Location, size, height, and lighting of all proposed site and wall signs
Location, size, height and material of construction for all obscuring wall(s) or berm(s) with cross-sections, where required
Building floor plans and total floor area
Details on accessory structures and any screening
Building facade elevations for all sides, drawn at an appropriate scale
Description of exterior building materials and colors (samples may be required)

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APPLICATION**

Drainage, Soil Erosion and Sedimentation Control:
Location and size of existing and proposed storm sewers
Stormwater retention and detention ponds, including grading, side slopes, depth, high water elevation, volume and outfalls
Stormwater drainage and retention/detention calculations
Indication of site grading, drainage patterns and stormwater management measures, including sediment control and temperature regulation
Soil erosion and sedimentation control measures
Information Concerning Utilities:
Location of sanitary sewers and septic systems, existing and proposed
Location and size of existing and proposed water mains, well sites, water service and fire hydrants
Location of existing and proposed gas, electric and telephone lines, above and below ground
Location of transformers and utility boxes
Assessment of potential impacts from the use, processing, or movement of hazardous materials or chemicals, if applicable
Lighting Plan:
Location of all freestanding, building-mounted and canopy light fixtures on the site plan and building elevations
Specifications and details for the type of fixture being proposed including the total lumen output, type of lamp and method of shielding
Use of the fixture proposed
Photometric grid overlaid on the proposed site plan indicating the overall light intensity throughout the site (in foot-candles)
Additional Information Required for Residential Development:
The number and location of each type of residential unit (one bedroom units, two bedroom units, etc.)
Density calculations by type of residential unit (dwelling units per acre)
Garage and/or carport locations and details, if proposed;
Mailbox cluster location and design, if required by post master
Location, dimensions, floor plans and elevations of common building(s) (e.g., recreation, laundry, etc.), if applicable
Swimming pool fencing detail, including height and type of fence, if applicable
Location and size of recreation and open space areas
Indication of type of recreation facilities proposed for recreation area
Where the site is located within 500 feet of the I-94 right-of-way, delineate that area of the site with sound levels of 61 dBA or greater



150 N. First Street
Suite 100
Brighton, MI 48116
(810) 220-0296

October 30, 2023

Ypsilanti Township
Mr. Jason Iacoangeli, Planning Director
7200 S. Huron River Drive
Ypsilanti, MI 48197

Dear Mr. Iacoangeli,

In regard to our current Final Site Plan Approval, granted 12/14/2022 for our upcoming Ypsilanti Tennis Club project to be located at 3160 W. Michigan Avenue, please accept our request for a one-year extension of our approval.

Should you have any questions or concerns, please do not hesitate to contact us.

Best regards,

A handwritten signature in black ink, appearing to read "M. Vetter", with a long horizontal flourish extending to the right.

Matt Vetter
President
Schafer Construction, Inc.
Direct: (248) 767-0512
mvetter@schaferconstruction.net

Acting as Agent of Property Owner:
Miodrag Rakic
7751 Whirlaway Drive
Saline, MI 48176

CHARTER TOWNSHIP
OF YPSILANTI
PLANNING COMMISSION

**SALLY RICHIE, CHAIR
BILL SINKULE, VICE CHAIR
LARRY KREIG, SECRETARY
ELIZABETH EL-ASSADI
MUDDASAR TAWAKKUL
GLORIA PETERSON
LARRY DOE**

MARCH 23, 2021

Regular Meeting – 6:30 p.m.

**Meeting being held via Zoom. Please go
to www.ytown.org for more information.**

CHARTER TOWNSHIP OF YPSILANTI

PLANNING COMMISSION

7200 S. Huron River Drive, Ypsilanti, MI 48197

REGULAR MEETING AGENDA

TUESDAY, March 23, 2021

6:30 P.M.

Due to the COVID-19 pandemic, Ypsilanti Township will be conducting this public meeting virtually pursuant to the State of Michigan Open Meetings Act.

To view and/or participate in the public meeting, please visit www.ytown.org.

To provide input or ask questions regarding business that will be considered at the meeting, please email planning@ytown.org or call 734-485-3943. If you need any assistance due to a disability please contact the Planning Department at least 48 hours in advance of the meeting at planning@ytown.org or 734-485-3943.

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF THE TUESDAY, FEBRUARY 9, 2021 REGULAR MEETING MINUTES
4. APPROVAL OF AGENDA
5. PUBLIC HEARINGS AND PLAN REVIEW
6. OLD BUSINESS
7. NEW BUSINESS
 - A. **YPSILANTI TENNIS CLUB – 3160 W. MICHIGAN – FULL SITE PLAN** – TO CONSIDER A FULL SITE PLAN FOR CONSTRUCTION OF A 39,700 S.F. TENNIS TRAINING FACILITY CONSISTING OF FIVE INDOOR AND SIX OUTDOOR TENNIS COURTS, ALONG WITH SUPPORT AREAS WITH LOCKERS, SHOWERS, SHOPS AND EXERCISE AREAS. LOCATED AT 3160 W. MICHIGAN AVE PARCEL K-11-18-340-001.
 - B. **ANN ARBOR MARIOTT – PROPOSED BANQUET FACILITY** – 1275 S. HURON ST. – TO CONSIDER A SKETCH SITE PLAN TO CONSTRUCT A ONE-STORY 4,970 S.F. BANQUET FACILITY ON A SLAB ADJACENT TO THE HOTEL. LOCATED AT 1275 S. HURON ST. PARCEL K-11-38-150-007
 - C. **2020 PLANNING COMMISSION REPORT TO THE BOARD** – TO CONSIDER SUBMITTING TO THE TOWNSHIP BOARD OF TRUSTEES THE PROVIDED 2020 PLANNING COMMISSION REPORT PURSUANT TO SECTION 19(2) OF THE MICHIGAN PLANNING ENABLING ACT, PA 33 OF 2008 AND SECTION 3C OF THE ADOPTED PLANNING COMMISSION BY-LAWS.

8. OPEN DISCUSSION FOR ISSUES NOT ON THE AGENDA
 - A. CORRESPONDENCE RECEIVED
 - B. PLANNING COMMISSION MEMBERS
 - C. MEMBERS OF THE AUDIENCE
9. TOWNSHIP BOARD REPRESENTATIVE REPORT
10. ZONING BOARD OF APPEALS REPRESENTATIVE REPORT
11. TOWNSHIP ATTORNEY REPORT
12. PLANNING DEPARTMENT REPORT
13. OTHER BUSINESS
14. ADJOURNMENT

THERE IS NO WORK SESSION

CHARTER TOWNSHIP OF YPSILANTI

OFFICE OF COMMUNITY STANDARDS

Building Safety • Planning & Zoning • Ordinance Enforcement

**Charter Township of Ypsilanti
Public Meeting Notice
Planning Commission Regular Meeting
March 23, 2021 6:30pm**

PLEASE TAKE NOTICE that the Charter Township of Ypsilanti Planning Commission will hold a Regular Meeting scheduled for March 23, 2021 at 6:30pm. This meeting will be conducted virtually (online and/or by phone), due to health concerns surrounding Coronavirus/COVID-19 pursuant to the State of Michigan Open Meetings Act.

Public comment will be handled by the “Raise Hand” method as instructed below within Participant Controls.

If you need any assistance due to a disability please contact the Planning Department at least 48 hours in advance of the meeting at planning@ytown.org or 734-485-3943.

Meeting Information:

When: Mar 23, 2021 06:30 PM Eastern Time (US and Canada)
Topic: Planning Commission 03-23-21

Please click the link below to join the webinar:

<https://ytown.zoom.us/j/95909493790?pwd=QSs1cnhaai8yTHZxaEc4WnJuYWlsZz09>

Passcode: 650541

Or iPhone one-tap :

US: +19292056099,,95909493790# or +13017158592,,95909493790#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 929 205 6099 or +1 301 715 8592 or +1 312 626 6799 or +1 669 900 6833 or +1 253 215 8782 or +1 346 248 7799

Webinar ID: 959 0949 3790

International numbers available: <https://ytown.zoom.us/j/95909493790>

Zoom Instructions for Participants

To join the conference by phone:

1. On your phone, dial the teleconferencing number provided above.
2. Enter the Meeting ID number (also provided above) when prompted using your touch- tone (DTMF) keypad.

Before a videoconference:

1. You will need a computer, tablet, or smartphone with speaker or headphones. You will have the opportunity to check your audio immediately upon joining a meeting.
2. Details, phone numbers, and links to videoconference or conference call is provided below. The details include a link to “Join via computer” as well as phone numbers for a conference call option. It will also include the 9-digit Meeting ID.

To join the videoconference:

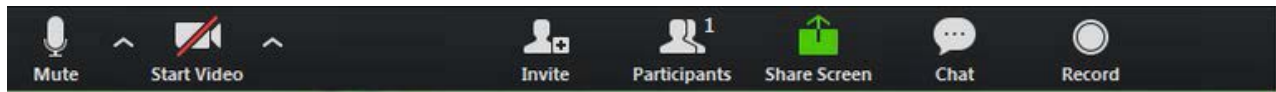
1. At the start time of your meeting, enter the link to join via computer. You may be instructed to download the Zoom application.
2. You have an opportunity to test your audio at this point by clicking on “Test Computer Audio.” Once you are satisfied that your audio works, click on “Join audio by computer.”

You may also join a meeting without the link by going to join.zoom.us on any browser and entering the Meeting ID provided.

If you are having trouble hearing the meeting, you can join via telephone while remaining on the video conference:

1. On your phone, dial the teleconferencing number.
2. Enter the Meeting ID number (also provided above) when prompted using your touch- tone (DTMF) keypad.
3. If you have already joined the meeting via computer, you will have the option to enter your 2- digit participant ID to be associated with your computer.

Participant controls in the lower left corner of the Zoom screen:



Using the icons in the lower left corner of the Zoom screen, you can:

- Mute/Unmute your microphone (far left)
- Turn on/off camera (“Start/Stop Video”)
- Invite other participants
- View Participant list – opens a pop-out screen that includes a “Raise Hand” icon that you may use to raise a virtual hand during Call to the Public
- Change your screen name that is seen in the participant list and video window
- Share your screen

Somewhere (usually upper right corner on your computer screen) on your Zoom screen you will also see a choice to toggle between “speaker” and “gallery” view. “Speaker view” shows the active speaker. “Gallery view” tiles all of the meeting participants.

If you have any further questions or concerns, please email or call the Planning Department at planning@ytown.org or 734-485-3943.

**CHARTER TOWNSHIP OF YPSILANTI
PLANNING COMMISSION
MINUTES OF THE FEBRUARY 9, 2021 REGULAR MEETING**

Chair Sally Richie called the meeting to order at 6:29pm via Zoom due to COVID-19.

Commissioners Present: Chair Sally Richie and Commissioners Stan Eldridge, Larry Doe, Bill Sinkule, Laurence Krieg, Elizabeth El-Assadi, and Muddasar Tawakkul.

Commissioners Absent: None

Others in Attendance: Heather Jarrell Roe, Ypsilanti Township Clerk; Jason Iacoangeli, Planning Director; Belinda Kingsley, Planning & Development; Rois Savidis, owner of Crazy Crab; Todd Ballou, Focus Design, Architect for Crazy Crab; Elliott Smith, OHM; Brenda Stumbo, Township Supervisor; Gloria Peterson, Township Board of Trustees; Debbie Swanson, Township Board of Trustees; Michelle Towler, OCS Clerk.

1. CALL TO ORDER

2. ROLL CALL

3. APPROVAL OF THE NOVEMBER 24, 2020 REGULAR MEETING MINUTES

A motion was made by Commissioner Krieg, supported by Commissioner El-Assadi to approve the Minutes of the November 24, 2020 Regular Meeting. The motion carried unanimously.

4. APPROVAL OF AGENDA

A motion was made by Commissioner Eldridge, supported by Commissioner El-Assadi to approve the agenda. The motion carried unanimously.

5. PUBLIC HEARINGS AND PLAN REVIEW

None

6. OLD BUSINESS

None

7. NEW BUSINESS

A. CRAZY CRAB RESTAURANT AND BAR – 2800 WASHTENAW AVE – SKETCH SITE

PLAN- To consider a Sketch Plan for the change in use of the old Big Boy Restaurant

to a Crazy Crab Restaurant with alcohol sales. Located at 2800 Washtenaw Ave. Parcels K-11-06-325-009 and K-11-06-325-014.

Jason Iacoangeli, Planning Director stated this is a project for a change in use for a building located at 2800 Washtenaw formerly known as the Big Boy restaurant and the new use being proposed is Crazy Crab restaurant, which is going to be a restaurant with the sale of alcohol. The Township Zoning Ordinance requires a change in use to go through a Sketch Plan review, which is basically the same as an Administrative Site plan except it gets sent to the Planning Commission for approval instead having the Planning Director approve the plan.

These folks have done a good job putting together a site plan that was reviewed by the Township's consultants. The zoning for the Big Boy restaurant is B3, and the zoning for this project will not change. The sidewalk improvement was placed in front of this location as a part of Ypsilanti Township's effort to put sidewalk down Washtenaw as part of the Re-Imagine Washtenaw program. Some of the exterior improvements that the owners are proposing are rearranging parking, to accommodate a new loading area; fix the dumpster enclosure; upgrade the lighting on site and; plant some new landscaping. They will not be changing façade but they will be proposing new signage and understand that it is under a separate permit.

Todd Billou with Focus Design the Architect for the project. He is ok with the request to remove one parking space on NW corner of parking lot because it appears to be too narrow/short. The Architect and Property Owner have agreed to put in bumper blocks at the 11 parking spaces, to make the sidewalk wide enough to be in compliance with the Township Code.

Elliot Smith with OHM, Ypsilanti Township's engineering firm, spoke concerning the parking space removal and the concrete/asphalt dumpster pad. He was satisfied with the Architects answers.

Commissioner Sinkule requested security cameras that continually record and the footage will be provided to Washtenaw County Sheriff's Department, if needed.

Rois Savidis, Property Owner of 2800 Washtenaw stated that they do have 3 security cameras and will provide any footage to WCSD as needed.

Commissioner Eldridge asked if the PO would be willing to upgrade the security cameras if necessary, and work with OCS to make sure they are what is needed. The PO stated he would.

Commissioner Eldridge also asked if they were going to be able to see the plans for updates to the interior. Mr. Iacoangeli, Planning Director stated that those plans will be handled by the Building Department at Ypsilanti Township.

Mr. Savidis, spoke of the Crazy Crabs ownership and also spoke about the lease agreement between him and the Crazy Crab regarding the liquor license. Mr. Savidis stated that the liquor license will remain in Ypsilanti Township, and they have a clause in their contract with Crazy Crab stating that the license will remain with the building. If Crazy Crab were to cease to operate in this location Mr. Savidis will buy the license back.

The liquor license transfer to Crazy Crab will need to go through the Ypsilanti Township Liquor License Board.

A motion was made by Commissioner Krieg, supported by Commissioner El-Assadi to approve the Crazy Crab restaurant and bar at 2800 Washtenaw Avenue Sketch/Site plan for change in use of the old Big Boy restaurant to a Crazy Crab restaurant with alcohol sales with the following conditions;

That one parking space be removed from the NW corner of the parking lot.

Security cameras be approved by the Director of Community Services and be able to store 45 days of video that can be provided to law enforcement upon request.

Parcels K-11-06-325-009 and K-11-06-325-014. The motion carried as follows;

**Sinkule: Yes Krieg: Yes Doe: Yes El-Assadi: Yes Richie: Yes
Tawakkul: Yes Eldridge: Yes**

B. NOTICE OF A TERMINATION OF FARMLAND PROTECTION AGREEMENT for the property at located at 7200 Bunton Rd. also known as Parcels K-11-34-100-009 and K-11-35-100-008 to receive comments from the Planning Commission.

Heather Roe, Ypsilanti Township Clerk, stated that the Property Owner's entered into Public Act 116, which is a tax exemption for farmland owners. Ypsilanti Township's Board signed off on this in 2009, it was good for 10 years, expiring in 2019. The Property Owners filed for a Farmland Exemption Act which is similar to PA116. The termination of the Farmland Exemption Act is very similar to terminating a PA116. Through the termination of this, the Planning Commission is being asked to provide comment on this.

Commissioner Richie asked why the Property Owners are looking to do this, Clerk Roe stated that she believes that they intend to sell the property.

Further discussion regarding what Clerk Roe needs as far as letters or comments to address the termination of the Farmland Exemption Act.

Commissioner Sinkule asked how large the parcels were, Clerk Roe stated that the property is between 52 and 56 acres. He also asked if the plan was to develop this land or keep it agricultural. Our Master Plan states that due to the limited amount of agricultural land in Ypsilanti Township, our goal is to keep as rural as possible.

Mr. Iacoangeli stated that the parcel is part of the rural preservation area, the parcel is zoned R3, single family residential.

Commissioner Doe asked if the Property Owners will have to pay back the taxes exempted for the past 2 years. Clerk Roe, stated yes, she believes they will.

Commissioner Krieg accessed the Master Plan and stated that the parcel is zoned open space/rural/residential.

Mr. Iacoangeli offered to draft a letter on the Planning Commissions behalf of the taking into consideration of Ypsilanti Township Master Plan in regards to the removal of the Farmland Exemption, and other comments from the Commissioners. This letter will be provided to Clerk Roe.

C. 2021 YPSILANTI TOWNSHIP MEETING SCHEDULE - REVIEW AND APPROVAL

A motion was made by Commissioner Eldridge, supported by Commissioner El-Assadi to approve the meeting schedule. The motion carried unanimously.

Chair Richie asked about a listing of current Township Projects that have been started, Mr. Iacoangeli stated that report should be provided by the next Planning Commission meeting.

D. ELECTION OF OFFICERS FOR 2021

A motion was made by Commissioner Eldridge, supported by Commissioner Tawakkul to approve that Planning Commission's 2020 Officers continue their same roles in 2021. The motion carried unanimously.

8. OPEN DISCUSSION FOR ISSUES NOT ON THE AGENDA

A. CORRESPONDENCE RECEIVED

Mr. Iacoangeli forwarded along a Master Plan draft from the City of Ypsilanti, and it is available for review and comment until 3/18/21.

Ms. Kingsley forwarded upcoming ZBA actions for the City of Ypsilanti, for the Planning Commission's review.

B. PLANNING COMMISSION MEMBERS

Chair Richie asked, if Gault Village for sale? Mr. Iacoangeli stated it is now on the market and being actively marketed.

C. MEMBERS OF THE AUDIENCE

None

9. TOWNSHIP BOARD REPRESENTATIVE REPORT

None

10. ZONING BOARD OF APPEALS REPRESENTATIVE REPORT

None

11. TOWNSHIP ATTORNEY REPORT

None

12. PLANNING DEPARTMENT REPORT

West Michigan Avenue Tennis facility plans came in for conditional rezoning and will be eligible to go in front of the Planning Commission for preliminary site plan approval sometime in March. All signs point to a busier 2021 than 2020.

13. OTHER BUSINESS

None

A motion was made by Commissioner El-Assadi, supported by Commissioner Sinkule to adjourn the meeting. The motion carried unanimously.

The meeting was adjourned at approximately 7:22pm

CHARTER TOWNSHIP OF YPSILANTI

OFFICE OF COMMUNITY STANDARDS

Building Safety • Planning & Zoning • Ordinance Enforcement

Staff Report Ypsilanti Tennis Facility 3160 W. Michigan Avenue Preliminary Site Plan and Special Land Use Review

March 16, 2021

CASE LOCATION AND SUMMARY

The Office of Community Standards is in receipt of a preliminary site plan and special land use application from Miodrag Rakic to construct an indoor and outdoor tennis facility located at 3160 W. Michigan Avenue, K-11-18-340-001 and subject parcels.

APPLICANT

Miodrag Rakic
7751 Whirlaway Drive
Saline, MI 48176

CROSS REFERENCES

Zoning Ordinance citations:

- Article XI, Section 1100, B-3 General Business District (Conditional Zoning)
- Article XXI, Section 2115, Site Plan Review
- Article XXI, Section 2119, Special Land Uses

ANALYSIS

The plan has been reviewed by Township staff and consultants in accordance with our procedures.

Planning Consultants (Carlisle/Wortman Associates): CWA reviewed the preliminary site plan and special land use permit in their letter dated February 9, 2021 and recommended that the Planning Commission consider the following as conditions of the Site Plan and Special Land Use approval:

1. Tree Mitigation recommendation to the Township Board of Trustees.
2. Architectural Materials waiver from Planning Commission.
3. Site Plan approval with the condition of a height variance from the Zoning Board of Appeals.

Engineering Consultants (OHM): The Township Engineer recommended approval for this stage of the process in their September 23, 2020 review letter.

Ypsilanti Community Utilities Authority: YCUA reviewing agent Scott Westover recommended preliminary approval of the plans in a letter dated March 19, 2020.

Ypsilanti Township Fire Department: YTFD reviewing agent Dan Kimball recommended conditional approval in a letter dated September 23, 2020.

Washtenaw County Water Resources Commission: WCWRC reviewing agent Theresa Marsik offered comments in a letter dated October 5, 2020.

Michigan Department of Transportation: MDOT reviewing agent George Seif approved the preliminary plan September 9, 2020.

Suggested motions: *The following suggested motions and conditions are provided to assist the Planning Commission in making the most appropriate motion for this application. The Commission may utilize, add or reject any conditions suggested herein, as they deem appropriate.*

Special Land Use Permit

Motion to table:

*“I move to table the request for **special land use permit** approval of the Ypsilanti Tennis Facility, an Outdoor Recreational Use located at 3160 W. Michigan Avenue, K-11-18-340-001, to consider the comments presented by the Planning Commission during discussion of the project”*

Motion to approve:

*“I move to approve the request for a **special land use permit** for the Ypsilanti Tennis Facility, an Outdoor Recreational Use, located at 3160 W. Michigan Avenue, parcel K-11-18-340-001, with the following conditions:*

1. *Applicant shall address remaining review comments from consultants, agencies, and departments.*
2. *Variance for Building Height to be considered and approved by the Ypsilanti Township Zoning Board of Appeals to accommodate the additional height of the tennis facility.*
3. *A waiver for the trees is granted by the Township Board of Trustees or the applicant will pay into the Township Tree Fund or provide the required trees on site per ordinance standards.*
4. *Applicant shall obtain all applicable agency permits.*
5. _____”

Motion to deny:

*“I move to deny the request for **special land use permit** approval for the Ypsilanti Tennis Facility, an Outdoor Recreational Use, located at 3160 W. Michigan Avenue, parcel K-11-18-340-001, due to the following reasons:*

1. _____
2. _____”

Preliminary Site Plan

Motion to table:

“I move to table the request for **preliminary site plan** approval for the Ypsilanti Tennis Facility located at 3160 W. Michigan Avenue, parcel K-11-18-340-001, to consider the comments presented by the Planning Commission during discussion of the project”

Motion to approve:

“I move to approve the request for a **preliminary site plan** for the Ypsilanti Tennis Facility located at 3160 W. Michigan Avenue, parcel K-11-18-340-001 with the following conditions:

1. Applicant shall address remaining review comments from consultants, agencies, and departments.
2. Variance for Building Height to be considered and approved by the Ypsilanti Township Zoning Board of Appeals to accommodate the additional height of the tennis facility.
3. A waiver for the trees is granted by the Township Board of Trustees or the applicant will pay into the Township Tree Fund or provide the required trees on site per ordinance standards.
4. Building Materials shall be allowed to deviate from the standards of Section 2125 as the proposed architecture of the facility meets the spirit of the ordinance.
5. Applicant shall obtain all applicable agency permits.
6. _____”

Motion to deny:

“I move to deny the request for **preliminary site plan** approval for the Ypsilanti Tennis Facility located at 3160 W. Michigan Avenue, parcel K-11-18-340-001, due to the following reasons:

1. _____
2. _____”

Respectfully submitted,

Jason Iacoangeli

Jason Iacoangeli, AICP
Planning Director



Carlisle | Wortman
ASSOCIATES, INC.

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

Date: November 15, 2019
March 16, 2020
September 18, 2020
February 9, 2021

**Preliminary Site Plan and Special Use Review
For
Ypsilanti Charter Township, Michigan**

Applicant: Miodrag Rakic
Project Name: Ypsilanti Tennis Club
Plan Date: September 7, 2020
Location: 3160 W. Michigan Avenue
Zoning: B-3, General Business
Action Requested: Preliminary Site Plan and Special Use Approval

PROJECT AND SITE DESCRIPTION

An application has been submitted for an indoor and outdoor tennis facility at 3160 W. Michigan Avenue. The 20.57-acre site is currently vacant and heavily wooded. The proposed facility includes:

- A 39,700 sq/ft indoor tennis facility:
 - Five (5) courts
 - Two gyms
 - Proshop
 - Retail area
 - Men's and women's locker rooms
 - Men's and women's backrooms
- Six (6) outdoor tennis courts
- A 98-space parking lot
- Other site improvements such as landscaping and lighting

The indoor tennis facility is a permitted use, but the outdoor tennis courts require a special use. Outdoor recreation requires a special use due to their potential impact upon adjacent properties, principally impacts of noise and light.

The site was conditionally rezoned in 2018 from RM-2, Multiple Family Residential to B-3, General Business. As part of the rezoning the Developer voluntarily offered the following:

1. No automotive/transportation uses being allowed as referenced in Section 306 of the current Zoning Ordinance.
2. Limit the northern side (phase 1) to a tennis training and match play facility.
3. Limit the southern side (phase 2) to use for Retail shops, offices and restaurants.
4. The conditional rezoning shall be subject to Developer obtaining final site plan approval and beginning construction for phase one within 2 years and phase two within 15 years. These deadlines maybe extended with Township Planning Commission approval.

As noted in the conditions, Phase 1 of development of this site is the tennis facility. The tennis facility is located in the rear of the site. Future development will be reviewed as part of phase 2 of the site buildout. Phase 2 is located adjacent to Michigan Avenue.

Location of Subject Property:

An aerial photo is shown below depicting the site located at 3160 W. Michigan Avenue.



Surrounding Property Details:

Direction	Zoning	Use
North	RM-3, Multiple Family Residential	I-94 and Multiple Family Residential
East/South	R-1, Single Family Residential	I-94/Michigan Avenue interchange, vacant, and Single Family Residential
West	Pittsfield Township	Multiple Family Residential

Size of Site:

The total area of the subject site is 20.57 acres

Current Use of Site:

The site is currently vacant

Proposed Use of Site:

Indoor and outdoor tennis facility

MASTER PLAN

The draft future land use plan designates the proposed site as a Neighborhood Transition District. Neighborhood transition districts include multiple family housing, commercial and office uses, but can also include single-family homes and institutional/civic uses and spaces compatible with the existing areas. The districts are intended to serve as a transition from Neighborhood Preservation Areas and to more intense uses. The use is consistent with the Master Plan's future land use goals as this use, as it adjacent to existing multiple family and I-94.

Items to be Addressed: None

NATURAL RESOURCES

Topography: Elevation of the site decreases from I-94 (eastern property line) to the southwest corner of the site by nearly twenty (20) feet.

Woodlands: The site has a significant amount of woodland area. The applicant indicated that they surveyed approximately 650 trees on site that are 8 inches or above. The landscape calculations on sheet L-3 indicate only 342 trees are being removed. As set forth in section 24-67(4), the applicant is seeking a reduction of required mitigation from the Planning Commission:

In instances where 100 percent tree replacement, is not feasible as provided in this section, the Planning Commission may allow reduction of the replacement trees to not less than 30 percent for industrial and business properties and not less than 50 percent replacement for residential properties.

The applicant is seeking approval to reduce the required mitigation. In addition, the applicant is note providing tree replacement for trees located in areas of development. This subtraction allowance is not permitted in the woodland ordinance.

The Planning Commission can grant up to a 30% reduction. This would reduce the requirement from 342 trees to 239 trees. The applicant is proposing to provide 120 trees in for mitigation. The applicant is seeking relief for the remaining 119 required trees. Appeals and relief from the woodland ordinance is set forth in 24-72-Appeals;

Sec. 24-72. - Appeals.

If a person subject to regulation under this article disagrees with an official interpretation of a certain provision of this article, they may appeal the interpretation to the township board. The request for appeal shall be in letter form to the township board submitted to the attention of the township clerk. The township board shall consider the matter of the appeal at a regular scheduled board meeting. The township board may refer the matter to the planning commission for their review and recommendation. In any case, the decision of the township board shall be final.

Ultimately the final board to consider relief/appeal is the Township Board. Please note that if the Township Board does not grant the relief/appeal, the applicant shall either pay into the Township Tree Fund or provide the required trees on site.

Wetlands: The applicant submitted a wetland report from December 2018, which identified an EGLE regulated watercourse and wetland on site. The applicant has obtained a EGLE wetland permit.

The applicant’s wetland report notes a required 50-foot undisturbed open space setback from any any watercourse. The applicant has placed all site improvements outside of the 50-foot setback.

Items to be Addressed: *If the Planning Commission permits the 30% reduction the applicant is required to provide replacement for 119 additional trees. The applicant is seeking relief from the Township Board.*

HEIGHT, BULK, DENSITY AND AREA

Bulk requirements are set forth in Sec 306.

		Required / Allowed	Provided	Complies with Ordinance
Setback	Front (I-94)	20 feet	45 feet	Compiles

	Front (Michigan Ave)	20 feet	+500 feet	Complies
	Side (west)	0-10 feet	+250 feet	Complies
	Watercourse	50 feet	73-feet for outdoor tennis courts 75-feet for detention pond	Complies
Building Height (Feet)		25 feet	+/- 29 feet as measured in the zoning ordinance	Does not comply
Building Height (Stories)		2	1 story with mezzanine	Complies

The applicant is required to obtain a variance for building height. The maximum building height of 25-feet cannot accommodate the required height for an indoor tennis facility.

Items to be Addressed: Obtain a variance from the Zoning Board of Appeals.

SITE ACCESS, CIRCULATION, AND TRAFFIC IMPACTS

The site will be accessed by the existing curb cut on Michigan Avenue, which currently serves the existing gas station. The tennis facility will be served with a long drive that bisects the site. There is an additional road that runs parallel to Michigan and I-94.

Township Engineer and Fire Department to review circulation and turning radii.

Items to be Addressed: Township Engineer and Fire Department to review site circulation.

NON-MOTORIZED ACCESS

The applicant has provided an internal pedestrian circulation including access from Michigan Avenue.

Items to be Addressed: None

PARKING AND LOADING

Section 13.06.G of the Zoning Ordinance requires:

Parking

	Required	Provided
--	-----------------	-----------------

Tennis Facility : 6 spaces per court	11 courts x 6 = 66 spaces	98
Retail: 1 per 250 sq.ft	840 sq.ft / 250 = 4 spaces	
Gyms/Athletic Facilities: 1 per maximum occupancy plus 1 per employee	18 + 10 employees = 28 spaces	
Barrier Free	3	4
Total	98 spaces	98 spaces

All parking spaces comply with size.

Items to be Addressed: None

LIGHTING

A lighting plan is provided on sheet E-1. A total of forty-eight (48) light fixtures are shown on site. Twenty-eight (28) are pole parking lot/drive aisle lights. Twelve (12) are building lights. Eight (8) are pole lights for the outdoor tennis courts.

Photometric levels and light fixture meet ordinance requirements.

Items to be Addressed: None

LANDSCAPING AND OPEN SPACE STANDARDS AND REQUIREMENTS

	Required	Provided	Complies
Plan prepared and stamped by registered Landscape Architect	Plan prepared and stamped by registered Landscape Architect		
General: 1 tree per 1000 sf of lawn area and 1 shrub per 500 sf of lawn area	32,752 sf of lawn = 33 trees and 66 shrubs		
Street Yard Landscaping: 1 large dec tree per 40 lf of frontage, 1 orn tree per 100 lf of frontage, 1 shrub per 10 lf of frontage	1,832 lf = 46 dec trees, 19 orn and 184 shrubs		

Parking Lot: 1 large dec tree per 3000 sf of pavement	100,600 / 3000 = 34 trees		
Detention Pond: 1 dec or evg tree and 10 shrubs per 50 lf of top of bank	1,250 lf = 25 trees and 250 shrubs		
Total	157 trees and 500 shrubs + tree mitigation trees	157 trees and 500 shrubs	Compliant
Tree Mitigation: 1 to 1 replacement	342 x .3 reduction by the PC = 239 trees	120	Deficient by 119 trees

Items to be Addressed: *Planning Commission to consider 30% relief, and Township Board to consider appeal/relief.*

FLOOR PLANS AND ELEVATIONS

Floor plans and elevations have been provided on sheets A-3 and A-4. The structure is comprised of modular brick and metal roof (on the south elevation, facing Michigan Avenue). The three other elevations are proposed with three rows of CMU, and steel panels above. As set forth in Section 2125 Exterior Wall Design, when building walls are 100 feet or greater in length, design variations must be applied to assure that the building is not monotonous in appearance. Such variations include but are not limited to the following:

- a) Recess and projections along the building facade. Variations in depth should be a minimum of ten feet.
- b) Architectural details or features.
- c) Enhanced ornamentation around building entryways.
- d) Landscaping.
- e) Streetscape elements.
- f) Variations in building height.

In addition, as set in Section 2125, all walls exposed to public view from adjacent residential, office, or business districts, or from a street, shall be constructed of not less than 75 percent masonry or stone, not to include unfinished concrete block. Metals, if utilized, shall be ribbed panels or other decorative finish in suitable colors.

We note that section 2125.5 , permits the Planning Commission to approve deviations:

When a particular building design and the materials or combination of materials proposed to be used in exterior walls are found by the planning commission, after consultation and review by an appropriate design professional, to be in keeping with the intent and purpose of this section, but which may differ from the strict application of the schedule regulating material use of this section (e.g., use of new materials not covered

in the Building Wall Materials Schedule), the planning commission may waive the requirements of this section pertaining to materials. When a waiver is requested under this subsection, the proposed building design and materials schedule shall be accompanied by a written design statement which shall describe how the selected wall materials and material combinations will be consistent with and enhance the building design.

The northern and eastern elevations, which are front and visible with I-94, do not meet the architectural requirements. The applicant is seeking a waiver from the architectural requirements for those two elevations.

Items to be Addressed: *Planning Commission to consider the architectural material waiver*

DUMPSTER ENCLOSER AND OTHER FEATURES

The site plan contains a trash enclosure northwest of the building. The applicant proposes to screen trash enclosure with masonry screening.

Items to be Addressed: *None.*

STORMWATER AND UTILITIES

We defer to the Washtenaw County Water Resource Commission, Township Engineer and YUCA regarding stormwater and utilities.

We defer to the appropriate agencies for further comment of stormwater and utilities.

SPECIAL USE

The outdoor tennis facility requires a special use.

Special Land Use Standards

The Planning Commission shall review the particular circumstances and facts of each proposed use in terms of the following standards and required findings, and with respect to any additional standards set forth in the ordinance. The Planning Commission shall find and report adequate data, information, and evidence showing that the proposed use meets all required standards and:

1. Will be harmonious, and in accordance with the objectives, intent, and purpose of this ordinance.
2. Will be compatible with a natural environment and existing and future land uses in the vicinity.
3. Will be compatible with the township master plans.

4. Will be served adequately by essential public facilities and services, such as highways, streets, police and fire protection, drainage ways and structures, refuse disposal, or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide adequately for such services.
5. Will not be detrimental, hazardous, or disturbing to existing or future neighboring uses, persons, property, or the public welfare.
6. Will not create additional requirements at public costs for public facilities and services that will be detrimental to the economic welfare of the community.

The Planning Commission is to consider the reduction in tree mitigation and relief from architectural material requirements, and the Zoning Board of Appeals is to consider the variance for height relief.

Exclusive of those issues that will be determined by those boards, we find that the special uses standards have been met:

1. The applicant has designed the project to minimize impact upon site natural features including onsite wetlands.
2. The development is consistent with the township master plan.
3. The use is harmonious and in accordance with the objectives, intent, and purpose of this ordinance.
4. The use can be served by essential public facilities and services.
5. The use is consistent and complementary to existing and future neighboring uses.
6. The use contributes to the economic welfare of the community.

The Planning Commission has the authority to approve, approve with conditions or deny the application for a special land use. In granting a special land use permit, the Planning Commission shall impose any conditions it deems necessary to achieve the objective and standards of this ordinance and identify said conditions in a motion.

Items to be Addressed: None

RECOMMENDATIONS

Planning Commission is to consider the reduction in tree mitigation and relief from architectural material requirements. If the Planning Commission grants the tree mitigation and architectural material waivers, we recommend preliminary site plan and conditional use approval with the condition that the applicant obtain a building height variance from the Zoning Board of Appeals, and a tree mitigation relief/appeal from the Township Board. Please note that if the Township Board does not grant the relief/appeal, the applicant shall either pay into the Township Tree Fund or provide the required trees on site.



CARLISLE/WORTMAN ASSOC., INC.

Benjamin R. Carlisle, AICP, LEED AP

Principal

Ypsilanti Tennis Club
February 9, 2021

September 23, 2020

Mr. Jason Iacoangeli
Township Planning Director
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: **Ypsilanti Tennis Club**
Site Plan Review #3

Dear Mr. Iacoangeli,

We have completed the third site plan review of the plans dated November 5, 2019, with a revision date of September 7, 2020, and stamped received by OHM Advisors on September 9, 2020.

At this time, the plans are recommended for preliminary site plan approval.

A brief description of the project has been provided below (Section A), followed by our comments (Section B and C) and a list of anticipated required permits and approvals (Section D). Comments in Section C are detailed in nature, do not influence the overall site layout, and can be addressed during the detailed engineering drawing submittal.

A. PROJECT AND SITE DESCRIPTION

The applicant is proposing a tennis training facility consisting of five indoor and six outdoor tennis courts. The proposed building facility will be 7,800 square feet in area and consists of lockers, showers, shops, and exercise areas. In order to enter the site, traffic will traverse through an existing shared access approach on the north side of Michigan Avenue.

The applicant is proposing to be serviced with public water and public sewer by connection to existing water and sanitary main, via means of trench excavation. The proposed sanitary service will connect to an existing sanitary main on the west side of the site through existing wetlands. To provide a water main loop for the development, the applicant is proposing to connect to an existing 30-inch watermain on the west side of the site, then will perform a secondary connection to an existing 12-inch watermain along Michigan Avenue.

Stormwater management is being proposed through one proposed detention basin, located west of the center of the site. Stormwater will be conveyed to the detention basin by traditional underground storm sewer infrastructure then will discharge to the western existing wetlands.

B. PRELIMINARY SITE PLAN COMMENTS:

Stormwater Management

1. The applicant shall provide stormwater calculations per the Washtenaw County Water Resources Commissioner's (WCWRC) office standards in order to ensure that the proposed detention pond is properly sized. Additionally, it is recommended that the applicant size the proposed detention pond for the two future development areas on site (.84 acres and 3.05 acres). All Drainage Area Plan C-factor



calculations shall be provided on the plan set for verification purposes. The applicant shall also account for any offsite drainage in the drainage area map and corresponding calculations that would potentially flow onto the site. Additionally, stormwater calculations shall include a proposed outlet control structure with accompanied sizing, quantity, and elevation of orifices. This additional verification is being requested because the proposed pond is shown with limited space to expand in the event the pond's capacity needs to be increased. It is noted that the applicant has provided stormwater calculations (Sheet C3); however, these calculations need to reflect the new rules per the Washtenaw County Water Resources Commissioner's (WCWRC) standards. Calculations shall include appropriate rational method variables, NCRS variables, soil types and runoff coefficients for review, in addition to the WCWRC worksheets. The applicant shall note that the proposed stormwater management system is under the jurisdiction of WCWRC and not EGLE. **The comment is not fully addressed; however, the applicant has demonstrated ample space and an appropriate infiltration rate for managing the site's stormwater. The applicant shall address the previous comments during the detailed engineering submittal.**

Sanitary Utilities

2. The applicant shall demonstrate how future proposed lots will be served by sanitary sewer. If multiple uses are to connect to the proposed sewer lead, then a public sewer by be required by YCUA and a Part 41 permit will be needed by EGLE. **Comment addressed.**

Paving and Grading

3. The applicant shall dimension all proposed barrier free parking spaces and their adjoining access aisles. The applicant shall also include ADA handicap markings and signage on all applicable plan sheets. The applicant shall dimension all individual proposed barrier-free parking spaces and individual proposed access aisles. This can, however, be done during detailed engineering as the applicant is demonstrating ample space for required ADA dimensions. **Comment addressed.**

General

4. The applicant shall note that 96 parking spaces are depicted on the plans, 85 proposed spaces are noted, and the allowable total spaces for the zoning is 92 parking spaces. The applicant shall review and revise accordingly to meet Township allowance. **Comment addressed.**
5. The applicant shall provide verification that the existing gas line traversing through the property is dead and that no easements exist. If the gas line is confirmed to be dead, the applicant shall note removal of the utility if within the influence of the proposed pond or proposed outdoor courts. **Comment addressed.**
6. For the shared approach off of Michigan Avenue, the applicant shall provide a shared access agreement with the neighboring west property owner. **Comment addressed.**

C. PRELIMINARY DETAILED ENGINEERING PLAN COMMENTS

The following comments shall be addressed by the applicant during the detailed engineering drawing submittal, and do not affect the recommendation for approval to the Township of Ypsilanti Planning Commission. It should be noted that this is not an all-inclusive list and additional comments may be generated as new information is presented.



General Utility Comments

1. The applicant shall provide pipe profiles, including diameters, materials, lengths, and slopes, for all proposed utilities (water, sanitary, storm) on the plans. The applicant shall also indicate the hydraulic grade line in all proposed storm sewer profiles.
2. It is recommended the applicant provide a quantity list on the cover sheet for all proposed water, sanitary, and storm sewer utilities.
3. The applicant shall provide all proposed utility crossings and service crossings in water main, sanitary sewer, and storm sewer profiles.
4. The applicant shall delineate the type of PVC proposed for the proposed sanitary service.
5. A copy of all existing and proposed easement documentation (water and sanitary) shall be provided for project records prior to final approval being recommended.
6. The applicant shall include the Charter Township of Ypsilanti Utility Detail Sheets within the plan set.

Stormwater Management

7. The applicant shall include a stormwater narrative and a description of best management practices (BMPs) within the site plan. In addition, the applicant shall clarify the stormwater management strategy if this project is to be phased.
8. The applicant shall provide C-factor calculations for the proposed Drainage Area Map.
9. The applicant shall provide a detail of the proposed Stormceptor unit and provide a maintenance schedule for the unit.
10. The applicant shall provide an Engineer's Certificate of Outlet for the proposed stormwater outlet.

Paving and Grading

11. The applicant shall delineate all ramps and level landings on all applicable plan sheets. The applicant shall note that all proposed sidewalks and ramps shall be designed and constructed in compliance with the current ADA guidelines and regulations. An ADA compliant detail (e.g. updated MDOT R-28-J) and proposed detailed sidewalk grading shall be provided on the plans for all proposed sidewalks and ramps. Spot elevations will also be required at all four (4) corners of ramps, ADA spaces, and at fifty (50) foot intervals along all proposed sidewalks and pathways. The applicant shall revise accordingly.
12. Spot elevations or curb profiles for the proposed curb are recommended to be provided on the plan set to ensure a minimum slope of 1% shall be maintained for stormwater conveyance purposes.
13. The applicant shall provide a cross-section and concrete mix for the concrete being proposed for the dumpster enclosure. Per the Township Ordinances, the applicant shall note that a minimum width of 16-ft for dumpster/compactor pads is required.

General Comments

14. The applicant shall delineate the proposed types of fencing and fence heights around the proposed outdoor tennis courts and around the proposed detention pond.



15. The applicant shall update the Michigan Department of Transportation (MDOT) contact information on the Cover Sheet.
16. The applicant shall note and update compliance with EGLE requirements as it relates to the water main and sanitary connection within the wetlands on the west side of the site.
17. The applicant shall clarify the description of the proposed Straw Mulch (Sheet C-4.1). The applicant shall also delineate the locations where Rolled Erosion Control blankets will be placed within the site.
18. The applicant shall provide contours and an SESC legend for proposed measures within the Soil Erosion Plan. In addition, the applicant shall delineate the proposed construction staging area and provide inlet filter sacks in existing and proposed catch basins and inlets.
19. The applicant shall provide an Engineer's Estimate of probable cost for the project with the final detailed engineering submittal.

D. REQUIRED PERMITS & APPROVALS

The following outside agency reviews and permits will be required for the project. Copies of any correspondence between the applicant and the review agencies, as well as the permit or waiver, shall be sent to both the Township and OHM Advisors (email: elliott.smith@ohm-advisors.com).

- ▶ **Ypsilanti Township Board of Trustees (BOT):** After approval of the site plan by the Township Planning Commission, detailed engineering drawings are required and approvals from all applicable agencies will be required for BOT approval.
- ▶ **Ypsilanti Community Utilities Authority (YCUA):** will require review and approval for the proposed water main, water service and sanitary service. *YCUA letter sent March 19, 2020.*
- ▶ **Ypsilanti Township Fire Department:** Review and approval is required. *Fire Department letter sent March 16, 2020.*
- ▶ **Washtenaw County Water Resources Commissioner's Office (WCWRC):** Review and approval is required.
- ▶ **Michigan Department of Transportation (MDOT):** Review and approval may be required for any work within the Michigan Avenue right-of-way.
- ▶ **Michigan Department of Environment, Great Lakes & Energy (EGLE):** An EGLE Act 399 and ACT 41 permit will be required for construction of all public water main and sanitary sewer systems improvements.
- ▶ **Michigan Department of Environment, Great Lakes & Energy (EGLE):** An EGLE permit will be required for any work and/or stormwater discharge into the wetlands.
- ▶ **Ypsilanti Township Office of Community Standards:** A Soil Erosion and Sedimentation Control permit shall be secured from the Ypsilanti Township Office of Community Standards.
- ▶ The Township's Planner will inspect the landscaping for this site.
- ▶ If dewatering should be needed, the contractor/applicant shall be responsible for obtaining necessary approvals from the Township and the Township Engineer, permission from all impacted adjacent properties and/or permits from MDOT or the WCRC.
- ▶ Record plans shall be provided to the Township Engineer following the completion of construction.

Should you have any questions regarding this matter, please contact this office at (734) 466-4580.



Sincerely,
OHM Advisors

Matthew D. Parks, P.E.

Elliot R. Smith

MDP/ERS

cc: Mike Radzik, Township Community Standards Director
Charlotte Wilson, Township Planning & Development Coordinator
Tammie Keen, Township Community Standards Executive Coordinator
Doug Winters, Township Attorney
File

P:\0000_0100\SITE_YpsilantiTwp\2018\0098181150_3160_WMichigan_Tennis_Facility\MUNI\01_SITE\SP-3\3160 W
Michigan_Tennis Facility_SP3_2020-09-23.docx



EVAN N. PRATT, P.E.

WATER RESOURCES COMMISSIONER
705 North Zeeb Road
P.O. Box 8645
Ann Arbor, MI 48107-8645

email: drains@washtenaw.org
<https://www.washtenaw.org/drains>

HARRY SHEEHAN
Chief Deputy Water Resources Commissioner

SCOTT MILLER, P.E.
Deputy Water Resources Commissioner

Telephone 734.222.6860
Fax 734.222.6803

October 5, 2020

Mr. Haris Hakim , P.E.
CJP Engineering & Design LLC
328763 Northwestern Hwy
Suite 225
Southfield, MI 48034

RE: Ypsilanti Tennis Club
Ypsilanti Township
WCWRC Project No. 5923

Dear Mr. Hakim:

This office has reviewed the site plans for the above referenced project to be located in Ypsilanti Township. These plans have a date of September 7, 2020, and were received on September 8, 2020. As a result of our review, we would like to offer the following comments:

1. The calculation worksheets W1 through W13 should be included on the plans. They are referenced on sheet C-3 as attached, but were not included with the submittal.
2. The calculated volumes for first flush and bankfull on sheet C-3 are incorrect.
3. A distinct sediment forebay, at least five percent of the 100-year storm event volume, will be required for the detention basin. The forebay should also include a sediment depth marker. Alternatively, information regarding mechanical pre-treatment, if proposed, should be included in the plans.
4. On worksheet W11, credit is applied for both the quantity which infiltrates in 6 hours as well as the surface storage between the bottom of the basin and the lowest outlet elevation as long as that volume drains within 72 hours. If this exceeds the required 100 year volume, no controlled outlet is required, only an emergency overflow channel, approximately 0.25 to 0.5 feet above the 100-year storm volume elevation, with an unimpeded route to a receiving channel should be included in the detention basin design. This can be achieved with an outlet structure with no holes with the top of the structure elevation set at the appropriate elevation.
5. Sheet C-1 incorrectly shows a flared end section within the detention basin for the pipe connecting the basin to the wetland. There should be an outlet structure as detailed in the comment above.-**REPEAT COMMENT**

6. The engineer's certificate of outlet, accompanied by corresponding calculations and documentation, should be submitted to our office for review. **-REPEAT COMMENT**
7. A storm water narrative should be prepared and submitted to our office for review. **-REPEAT COMMENT**
8. An anti-seep collar should be included on the outlet pipe from the basin. **-REPEAT COMMENT**
9. Contours at one-foot intervals or less shall be included on the grading plan for the entire site. **-REPEAT COMMENT**
10. A long-term storm water maintenance plan, including budget and responsible party, should be designed and included on the plans. Please see the Appendix of the WCWRC Rules for an example.
11. Inspection of the infiltration basins following storms of 1 inch or more should be included in the long-term maintenance plan. **-REPEAT COMMENT**
12. Provide a planting plan for Stormwater areas. All disturbed soil in stormwater systems must be planted with perennial plantings to provide for permanent soil stabilization as called for in the soil erosion control permit. **-REPEAT COMMENT**
13. Within areas above the first flush elevation of the proposed stormwater system, seeding and/or live plantings are allowed. Only native seeds (as defined by Michigan Flora, michiganflora.net) are allowed for permanent soil stabilization. Annual seeds are allowed in an amount necessary to temporarily stabilize the limits of disturbance. **-REPEAT COMMENT**
14. Below the first flush elevation within the stormwater feature, live plantings must cover the entire area. The first flush elevation should be noted on the details. Native plants are preferred. Cultivars and non-native perennials are allowable if approved by WCWRC. Plants listed on the WCWRC Rain Garden Plant List are acceptable. Invasive species are not allowed (see the City of Ann Arbor's invasive species list). **-REPEAT COMMENT**
15. Plantings should be locally adapted and appropriate to the hydric conditions proposed. For more information on individual species, see "Plants for Stormwater Design: Species Selection for the Upper Midwest" by Daniel Shaw & Rusty Schmidt. **-REPEAT COMMENT**
16. Plantings should be spaced according to each species size and growth potential to allow for sufficient coverage as required by the soil erosion permit. **-REPEAT COMMENT**

17. The maintenance plan for the detention pond should include a note to indicate that no chemicals are allowed in stormwater features or buffer zones with the following exception: invasive species may be treated with chemicals by a certified applicator. Mowing is only allowed twice per year. - **REPEAT COMMENT**
18. Soils within infiltration stormwater systems must be amended with a composted organic material. Soils must be free of construction debris and subsoils. A recommended soil blend includes 20 to 30 percent compost. - **REPEAT COMMENT**
19. Please see the attached invoice for the current fees. The invoice does not include any outstanding balances. Please remit these fees upon receipt of the accompanying invoice. As requested, the invoice is being submitted directly to Ypsilanti Sports Center LLC.

At your convenience please send us a complete set of revised plans and the additional information requested above so that we may continue our review. If you have any questions, please contact our office.

Sincerely,



Janine Hutchinson, P.E.
Stormwater Engineer
(approval\Ypsilanti Tennis Club Rev3)

cc: Miodrag Rakic, Ypsilanti Sports Center LLC
Michael Radzik, , Ypsilanti Township Office of Community Standards
Jason Iacoangeli, Ypsilanti Township Planning Director
Doug Winters, McLain and Winters



YPSILANTI COMMUNITY UTILITIES AUTHORITY

2777 STATE ROAD
YPSILANTI, MICHIGAN 48198-9112
TELEPHONE: 734-484-4600
WEBSITE: www.ycua.org

March 19, 2020

VIA ELECTRONIC MAIL

Mr. Jason Iacoangeli, Planning Director
Office of Community Standards
CHARTER TOWNSHIP OF YPSILANTI
7200 S. Huron River Drive
Ypsilanti, MI 48197

Re: Preliminary (non-residential) Site Plan Review #2
Ypsilanti Tennis Facility
3160 W. Michigan Avenue, Charter Township of Ypsilanti (Plan Date: 03-02-2020)

Dear Mr. Iacoangeli:

In response to the memorandum from your office dated March 6, 2020, we have reviewed the referenced plans with regards to water supply and wastewater system design. The plans are acceptable to the Authority for this stage of review. However, the following comments need to be addressed by the Applicant and/or the Applicant's design engineer prior to Detailed Engineering plans being deemed acceptable to the Authority.

1. Easements are shown over portions of the proposed water main and sanitary sewer – it is unclear if the intent is to have part of the utilities be public (owned and operated by the Authority) and part of them private (owned and operated by the property owner). It is recommended all water main and sanitary sewer be public and dedicated to the the Authority.
2. Confirmation needs to be provided that the proposed water main and sanitary sewer will be sufficiently large enough and deep enough to serve the future development area. The Applicant is encouraged to consider installing pipe toward future development area to avoid potential disruption to use of the currently proposed facility during future construction. This applies more to the sanitary sewer than the water main.
3. Suggested water main alignment revisions are noted on a redlined copy of plan sheet C-2. It appears needed hydrant coverage can be provided with less pipe than currently proposed.
4. The existing water main connection near the northwest corner of the site is believed to be a 12" diameter ductile iron pipe with a blind flange on the end with no isolation valve between the blind flange and 36" diameter pipe that runs south-to-north along the west property line. Connection to this flanged outlet will need to be made via live tap as the 36" diameter pipe cannot be taken out of service.

Mr. Jason Iacoangeli
CHARTER TOWNSHIP OF YPSILANTI
March 19, 2020
Page 2

Enclosed is an Estimate of Costs – Application for Services, dated March 19, 2020 indicating connection fees for the proposed building. Please note that the total cash price for connection fees, **\$148,412.75 plus the construction phase escrow deposit, Authority administration fee, and record plan guarantee**, must be paid to the Authority by the Applicant, with a receipt delivered to the Township, before either the building or soil and grading permit is issued. The construction phase escrow deposit and associated fees and deposits and the entity responsible for maintaining those accounts will be determined during the Detailed Engineering phase of the project in conjunction with your office and the Township Engineer. Should there be any questions please contact this office.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott D. Westover".

SCOTT D. WESTOVER, P.E., Engineering Manager
Ypsilanti Community Utilities Authority

cc: Mr. Jeff Castro, Mr. Mike Shaffer, File
Mr. Mike Radzik, Ms. Charlotte Wilson, Charter Township of Ypsilanti
Mr. Eric Copeland, Mr. Dan Kimball, Township Fire Department
Mr. Doug Winters, Esq., Township Legal Counsel
Mr. Matt Parks, P.E., Township Engineer
Mr. Gary Streight, P.E., WCRC
Ms. Theresa Marsik, P.E., WCWRC
Mr. Miodrag Rakic, Applicant
Mr. Fareed Mojaradi, Applicant's designer

CHARTER TOWNSHIP OF YPSILANTI FIRE DEPARTMENT

BUREAU OF FIRE PREVENTION

222 South Ford Boulevard, Ypsilanti, MI 48198



September 23, 2020

Jason Iacoangeli, Planning Director
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: Preliminary (non-residential) Site Plan Review #3
Project Name: Ypsilanti Tennis Club
Project Location: 3160 W. Michigan
Plan Date: 11/5/2019
Plan Revision Date: 9/7/2020
Project Number: 2019-16
Applicable Codes: IFC 2012
Contractor: Atelier Architect, Inc.
Contractor Address: 1368 Cole St. Birmingham, Michigan 48322

Status of Review

Status of review: Approved Conditionally (see comments)

Pages T-1 and SP-1 were reviewed.

Site Coverage - Hydrants

Comments: meets IFC 2012 hydrant coverage.

Site Coverage - Access

Comments: The template dimensions used on sheet T-1 for the fire truck need to be 48' long and 9' 6" wide.

Sincerely,

A handwritten signature in black ink that reads "Dan Kimball". The signature is written in a cursive style and is positioned above a horizontal line.

Dan Kimball, Fire Marshal
Charter Township of Ypsilanti Fire Department
CFPS, CFI II, CFPE



**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
WATER RESOURCES DIVISION
PERMIT**

Issued To:

**Miodrag Rakic
7751 Whirlaway Drive
Saline, Michigan 48176**

**Permit No: WRP021324 v.1
Submission No.: HNV-35ME-3XE5G
Site Name: 81-3160 West Michigan Avenue-Ypsilanti
Issued: March 13, 2020
Revised:
Expires: March 13, 2025**

This permit is being issued by the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division, under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); specifically:

- | | |
|--|---|
| <input type="checkbox"/> Part 301, Inland Lakes and Streams | <input type="checkbox"/> Part 323, Shorelands Protection and Management |
| <input checked="" type="checkbox"/> Part 303, Wetlands Protection | <input type="checkbox"/> Part 325, Great Lakes Submerged Lands |
| <input type="checkbox"/> Part 315, Dam Safety | <input type="checkbox"/> Part 353, Sand Dunes Protection and Management |
| <input type="checkbox"/> Part 31, Water Resources Protection (Floodplain Regulatory Authority) | |

Permission is hereby granted, based on permittee assurance of adherence to State of Michigan requirements and permit conditions, to:

Authorized Activity:

Construct a storm water pond in upland that will discharge directly to wetland from a 12-inch diameter outlet pipe. Place approximately 2 cubic yards of riprap in wetland for the construction of the storm water outfall structure. Install 244 feet of 10-inch diameter sanitary sewer line within wetland by open trench methods. Install 180 feet of 12-inch diameter watermain within wetland by open trench methods.

All work shall be completed in accordance with the approved plans dated March 13, 2020 and the specifications of this permit.

**Waterbody Affected: wetland
Property Location: Washtenaw County, Ypsilanti Township, Town 03S, Range 07E, Section 18**

Authority granted by this permit is subject to the following limitations:

- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
- B. The permittee, in exercising the authority granted by this permit, shall not cause unlawful pollution as defined by Part 31 of the NREPA.

**EGLE-WRD
WRP021324 v1.0
Approved
Issued On:03/13/2020
Expires On:03/13/2025**

- C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
- D. All work shall be completed in accordance with the approved plans and specifications submitted with the application and/or plans and specifications attached to this permit.
- E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved.
- F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with 2013 PA 174 (Act 174) and comply with each of the requirements of Act 174.
- G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits, or complying with other state statutes.
- H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
- I. Permittee shall notify EGLE within one week after the completion of the activity authorized by this permit by completing and forwarding the attached preaddressed postcard to the office addressed thereon.
- J. This permit shall not be assigned or transferred without the written approval of EGLE.
- K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific state act, federal act, and/or rule under which this permit is granted.
- L. All dredged or excavated materials shall be disposed of in an upland site (outside of floodplains, unless exempt under Part 31 of the NREPA, and wetlands).
- M. In issuing this permit, EGLE has relied on the information and data that the permittee has provided in connection with the submitted application for permit. If, subsequent to the issuance of a permit, such information and data prove to be false, incomplete, or inaccurate, EGLE may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
- N. The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents, and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representative of the permittee, undertaken in connection with this permit. The permittee's obligation to indemnify the State of Michigan applies only if the state: (1) provides the permittee or its designated representative written notice of the claim or cause of action within 30 days after it is received by the state, and (2) consents to the permittee's participation in the proceeding on the claim or cause of action. It does not apply to contested case proceedings under the Administrative Procedures Act, 1969 PA 306, as amended, challenging the permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.
- O. Noncompliance with these terms and conditions and/or the initiation of other regulated activities not specifically authorized shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, EGLE may initiate criminal and/or civil proceedings as may be deemed necessary to correct project deficiencies, protect natural resource values, and secure compliance with statutes.
- P. If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity from EGLE. Such revision request shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by EGLE prior to being implemented.
- Q. This permit may be transferred to another person upon written approval of EGLE. The permittee must submit a written request to EGLE to transfer the permit to the new owner. The new owner must also submit a written request to EGLE to accept transfer. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties that includes all the above information may be provided to EGLE. EGLE will review the request and, if approved, will provide written notification to the new owner.
- R. Prior to initiating permitted construction, the permittee is required to provide a copy of the permit to the contractor(s) for review. The property owner, contractor(s), and any agent involved in exercising the permit are held responsible to ensure that the project is constructed in accordance with all drawings and specifications. The contractor is required to provide a copy of the permit to all subcontractors doing work authorized by the permit.

- S. Construction must be undertaken and completed during the dry period of the wetland. If the area does not dry out, construction shall be done on equipment mats to prevent compaction of the soil.
- T. Authority granted by this permit does not waive permit requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits from the County Enforcing Agent (CEA).
- U. Authority granted by this permit does not waive permit requirements under the authority of Part 305, Natural Rivers, of the NREPA. A Natural Rivers Zoning Permit may be required for construction, land alteration, streambank stabilization, or vegetation removal along or near a natural river.
- V. The permittee is cautioned that grade changes resulting in increased runoff onto adjacent property is subject to civil damage litigation.
- W. Unless specifically stated in this permit, construction pads, haul roads, temporary structures, or other structural appurtenances to be placed in a wetland or on bottomland of the water body are not authorized and shall not be constructed unless authorized by a separate permit or permit revision granted in accordance with the applicable law.
- X. For projects with potential impacts to fish spawning or migration, no work shall occur within fish spawning or migration timelines (i.e., windows) unless otherwise approved in writing by the Michigan Department of Natural Resources, Fisheries Division.
- Y. Work to be done under authority of this permit is further subject to the following special instructions and specifications:
1. Prior to the initiation of any permitted construction activities, a sedimentation barrier shall be constructed immediately down gradient of the construction site. Sedimentation barriers shall be specifically designed to handle the sediment type, load, water depth, and flow conditions of each construction site throughout the anticipated time of construction and unstable site conditions. The sedimentation barrier shall be maintained in good working order throughout the duration of the project. Upon project completion, the accumulated materials shall be removed and disposed of at an upland (non-wetland, non-floodplain) site and stabilized with seed and mulch. The sedimentation barrier shall then be removed in its entirety and the area restored to its original configuration and cover.
 2. All raw areas in uplands resulting from the permitted construction activity shall be effectively stabilized with sod and/or seed and mulch (or other technology specified by this permit or project plans) in a sufficient quantity and manner to prevent erosion and any potential siltation to surface waters or wetlands. Temporary stabilization measures shall be installed before or upon commencement of the permitted activity, and shall be maintained until permanent measures are in place. Permanent measures shall be in place within five (5) days of achieving final grade.
 3. Prior to the initiation of any permitted construction activity, a sedimentation barrier shall be installed along the entire route of the disturbed wetland area and maintained in good working order until permanent stabilization and re-vegetation of all disturbed areas has occurred. The sedimentation barrier shall be removed after re-vegetation.
 4. All dredge/excavated spoils including organic and inorganic soils, vegetation, and other material removed shall be placed on upland (non-wetland, non-floodplain), prepared for stabilization, and stabilized with sod and/or seed and mulch in such a manner to prevent and ensure against erosion of any material into any waterbody, wetland, or floodplain.
 5. All fill shall consist of clean, washed rock or stone that is free of fines, other soil materials, any contaminants, or pollutants.
 6. No fill, excess soil, or other material shall be placed in the 100-year floodplain, any wetland or surface water area not specifically authorized by this permit, its plans, and specifications.

7. Construction must be undertaken and completed during the dry period of the wetland, or when frozen.
8. If the area does not dry out or freeze, construction shall be done on equipment mats to prevent compaction of the soil.
9. Upon completion of the project, the disturbed wetland areas shall be restored to the original contour elevation, revegetated and reseeded with species native to Michigan appropriate to the site, and mulched to prevent erosion.
10. Trench excavation shall be restored to pre-existing grade by backfilling the trench so native soils are replaced in reverse order of excavation, replacing the topsoil at the surface.
11. Authority granted by this permit does not waive permit or program requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA or the need to acquire applicable permits from the CEA. To locate the Soil Erosion Program Administrator for your county, visit www.mi.gov/eglestormwater and select "Soil Erosion and Sedimentation Control Program" under "Related Links."
12. The authority to conduct the activity as authorized by this permit is granted solely under the provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state, or federal approval or authorization necessary to conduct the activity.
13. This permit does not authorize or sanction work that has been completed in violation of applicable federal, state, or local statutes.
14. The permit placard shall be kept posted at the work site in a prominent location at all times for the duration of the project or until permit expiration.
15. This permit is being issued for the maximum time allowed and no extensions of this permit will be granted. Initiation of the construction work authorized by this permit indicates the permittee's acceptance of this condition. The permit, when signed by EGLE, will be for a five-year period beginning on the date of issuance. If the project is not completed by the expiration date, a new permit must be sought.



Issued By: _____

Melissa Letosky
Jackson District Office
Water Resources Division
517-416-7001

cc: Ypsilanti Township Clerk
Ypsilanti Township Planning & Zoning
Mr. Fareed Mojaradi, Atelier Architect, Inc.

Review Summary

Review	Reviewer	Status	Review Comments
Traffic and Safety	Laurent Fournier	Denied	Duplicate review -JGD
Traffic and Safety	Laurent Fournier	Approved	Preliminary plans approved. Final plan will need to include right turn lane width+pavement markings.
Operations	George Seif	Approved	<p>Preliminary plan approved, will review final plans once submitted.</p> <p>Some initial comments include:</p> <ol style="list-style-type: none">1. Move existing storm structures on US-12 to new curb line.2. Dimension width of right turn lane.3. will need to include all details for road, sidewalk, driveway opening, curb and gutter sections and included associated MDOT standard plans.4. Will need to complete form 2484.

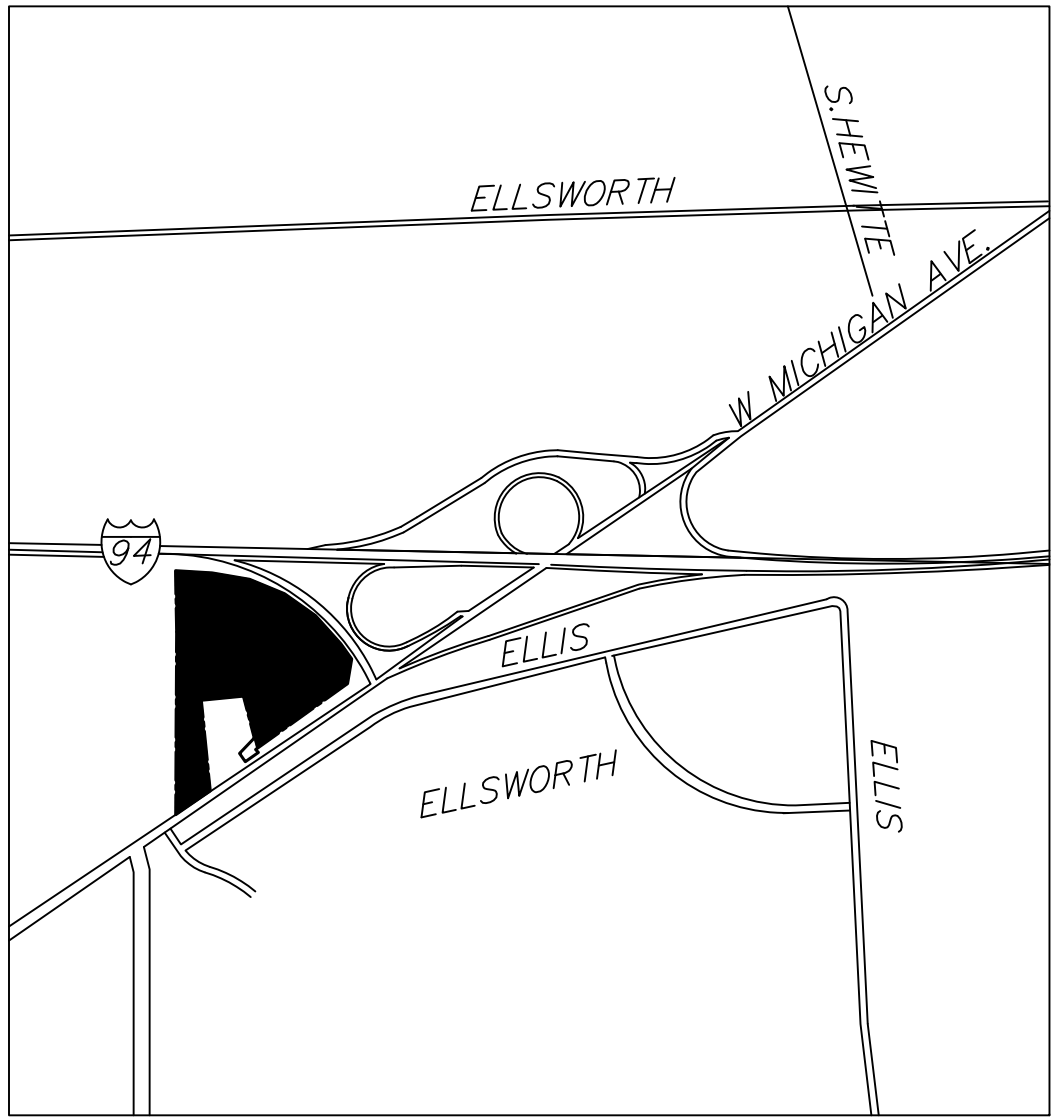
YPSILANTI TENNIS CLUB SITE PLAN APPROVAL 3160 W. MICHIGAN YPSILANTI MICHIGAN. 48197

ZONING DATA:

ZONING REGULATION:	ALLOWED	PROPOSED
ZONING: ADJACENT ZONING: PROPOSED LAND USE: GROSS SITE AREA: MINIMUM LOT AREA: MINIMUM FRONT SETBACK: MINIMUM SIDE SETBACK: MINIMUM REAR SETBACK: MAXIMUM BUILDING HEIGHT: MAXIMUM PERCENTAGE OF BUILDING AREA TO LOT AREA: REQUIRED OPEN SPACE: BUILDING AREA: BUILDING TYPE: 6 SPACES PER COURT Retail: 1 per 250 sq.ft Athletic Facilities: MAXIMUM OCCUPANCY: NUMBER OF EMPLOYEES: TOTAL SPACES:	RM-2 MULTIPLE-FAMILY RESIDENTIAL DISTRICT B-3 GENERAL BUSINESS DISTRICT, R-1 ONE FAMILY RESIDENTIAL DISTRICT 20.57 ACRES 21,780 S.F. MINIMUM 90 FEET WIDE 20 FEET 0-10 FEET MAXIMUM WEST PROPERTY LINE 20 FEET 25 FEET OR 2 STORIES 200% NONE 6X 11 = 66 840 sq.ft / 250 = 4 spaces 1 per maximum occupancy plus 1 per employee 18 SPACES 10 SPACES 98	B-3 GENERAL BUSINESS DISTRICT TENNIS TRAINING FACILITY 486,480 S.F. 1,068 L.F. FRONTAGE 36-8" FEET OR 2 STORIES, VARIANCE REQUIRED 39,700 sq/ft INDOOR TENNIS FACILITY

PROJECT DESCRIPTION:

Proposed project will be a tennis training facility consisting of five indoor and six out door tennis courts. The facility has 7,800 square feet of support areas consisting of lockers, showers, shops and exercise areas. The storm water management of the site will be facilitated by a detention pond. Two separate areas will remain for future developments.



LOCATION MAP
NO SCALE

PROPERTY DESCRIPTION:

Part of the West 1/2 of Section 18, T.3S., R.7E., Ypsilanti Township, Washtenaw County, Michigan, more particularly described as beginning at the East 1/4 corner of Section 13, T.3S., R.6E., Pittsfield Township, Washtenaw County, Michigan; thence North 1 degree 03 minutes 30 seconds West 376.14 feet; thence South 86 degrees 30 minutes 42 seconds East 227.36 feet; thence South 80 degrees 16 minutes 38 seconds East 234.84 feet; thence South 67 degrees 30 minutes 30 seconds East 234.84 feet; thence South 54 degrees 44 minutes 22 seconds East 234.84 feet; thence South 41 degrees 58 minutes 14 seconds East 234.84 feet; thence South 35 degrees 35 minutes 69 seconds East 114.86 feet; thence South 9 degrees 24 minutes 51 seconds West 155.56 feet; thence South 54 degrees 24 minutes 51 seconds West to the West line of Lot 11 of the Elmfield Gardens Subdivision; thence Southeasterly 25.00 feet along said West line; thence South 54 degrees 24 minutes 51 seconds West 100.00 feet; thence North 34 degrees 23 minutes 00 seconds West 52.92 feet; thence North 43 degrees 35 minutes 30 seconds East 131.69 feet; thence North 14 degrees 38 minutes 30 seconds West 267.84 feet; thence South 34 degrees 24 minutes 00 seconds West 261.48 feet; thence South 5 degrees 36 minutes 00 seconds East to the North line of US-12; thence Southwesterly along said North line to the West line of Section 18; thence along said Section line to the Point of Beginning; and excepting therefrom as a permanent right of way easement the East 15 feet of the West 17.5 feet of the above described parcel.

Parcel Number: K -11-18-340-001 ALSO KNOWN AS 3160 WEST MICHIGAN

PLAN DISTRIBUTION LIST:

AGENCY:	DEPARTMENT:	CONTACT:	TELEPHONE:	E-MAIL
CHARTER TOWNSHIP OF YPSILANTI	OFFICE OF COMMUNITY STANDARDS	MICHAEL RADZIK	(734) 485 - 3943	mradzik@ytown.org
CHARTER TOWNSHIP OF YPSILANTI	OFFICE OF COMMUNITY STANDARDS	CHARLOTTE WILSON	(734) 485 - 3943	cwilson@ytown.org
OHM ADVISORS		MATT PARKS, P.E.	(734) 466 - 4579	matt.parks@ohm-advisors.com
CHARTER TOWNSHIP OF YPSILANTI	FIRE DEPARTMENT	CHIEF DAN KIMBAL	(734) 544 - 4225	dkimbal@ytown.org
YPSILANTI COMMUNITIES UTILITIES AUTHORITY	ENGINEERING	SCOTT D. WESTOVER P.E.	(734) 484 - 4600 - ext. 220	swestover@cua.org
MICHIGAN DEPARTMENT OF TRANSPORTATION	ENGINEERING	PATRICK Mc MURPHY	(810) 225 - 2626	ramirez@michigan.gov
WASHTENAW COUNTY WATER RESOURCE COMMISSION	STORM WATER	JANINE HUTCHINSON, P.E.	(734) 222 - 6860	hutchinsonj@washtenaw.org
MICHIGAN DEPT, of ENVIRONMENT, GREAT LAKES, and ENERGY	WATER RESOURCES DIVISION, JACKSON DISTRICT OFFICE	MELISSA LETOSKY	(517) 416 -7001	LetoskyM@michigan.gov

DRAWING INDEX:

- COVER SHEET
- SURVEY-1
- SURVEY-2
- SP-1 SITE PLAN
- SP-2 SITE DETAILS
- L-1 LANDSCAPE PLAN
- L-2 TREE MITIGATION PLAN
- L-3 TREE CHART
- L-4 LANDSCAPE CALCATIONS AND MATERIALS
- C-1 GRADING PLAN
- C-2 SITE UTILITY PLAN
- C-3 DRAINAGE AREA PLAN
- C-3.1 STORM WATER WORK SHEETS
- C-4 SOIL EROSION PLAN
- C-4.1 SOIL EROSION DETAILS AND SPECIFICATIONS
- YPSILANTI TWP. SOIL EROSION CONTROL DETAILS
- E-1 PHOTOMRITIC SITE PLAN
- T-1 TRUCK MANEUVERING DIAGRAM
- A-1 FIRST FLOOR PLAN
- A-2 SECOND FLOOR PLAN
- A-3 BUILDING ELEVATIONS
- A-4 BUILDING ELEVATIONS

PETITIONER ,OWNER OF RECORD:

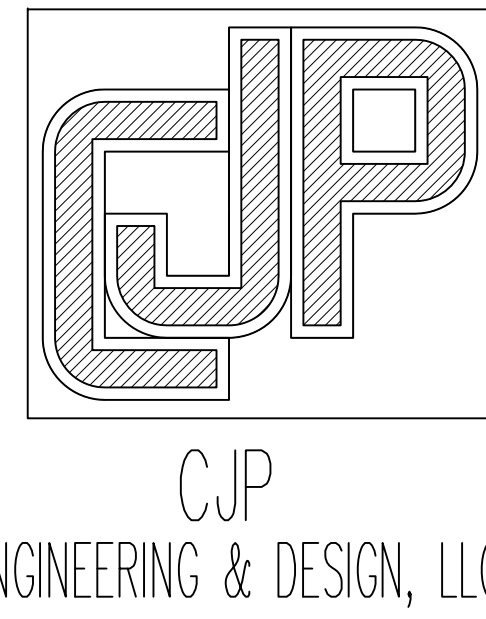
MIODRAG RAKIC
7751 Whirlaway Dr
Saline , MI 48176

ARCHITECT:



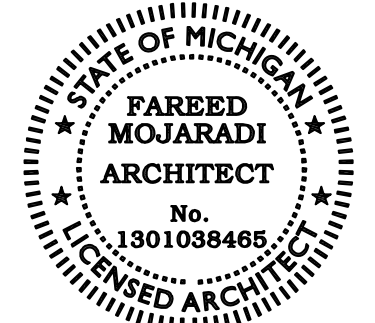
Atelier Architect, Inc.
1368 COLE ST.
BIRMINGHAM MICHIGAN 48322
PHONE: 248-790-1639
EMAIL : mojaradifareed@gmail.com

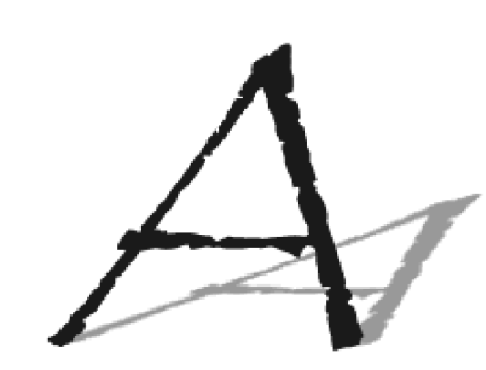
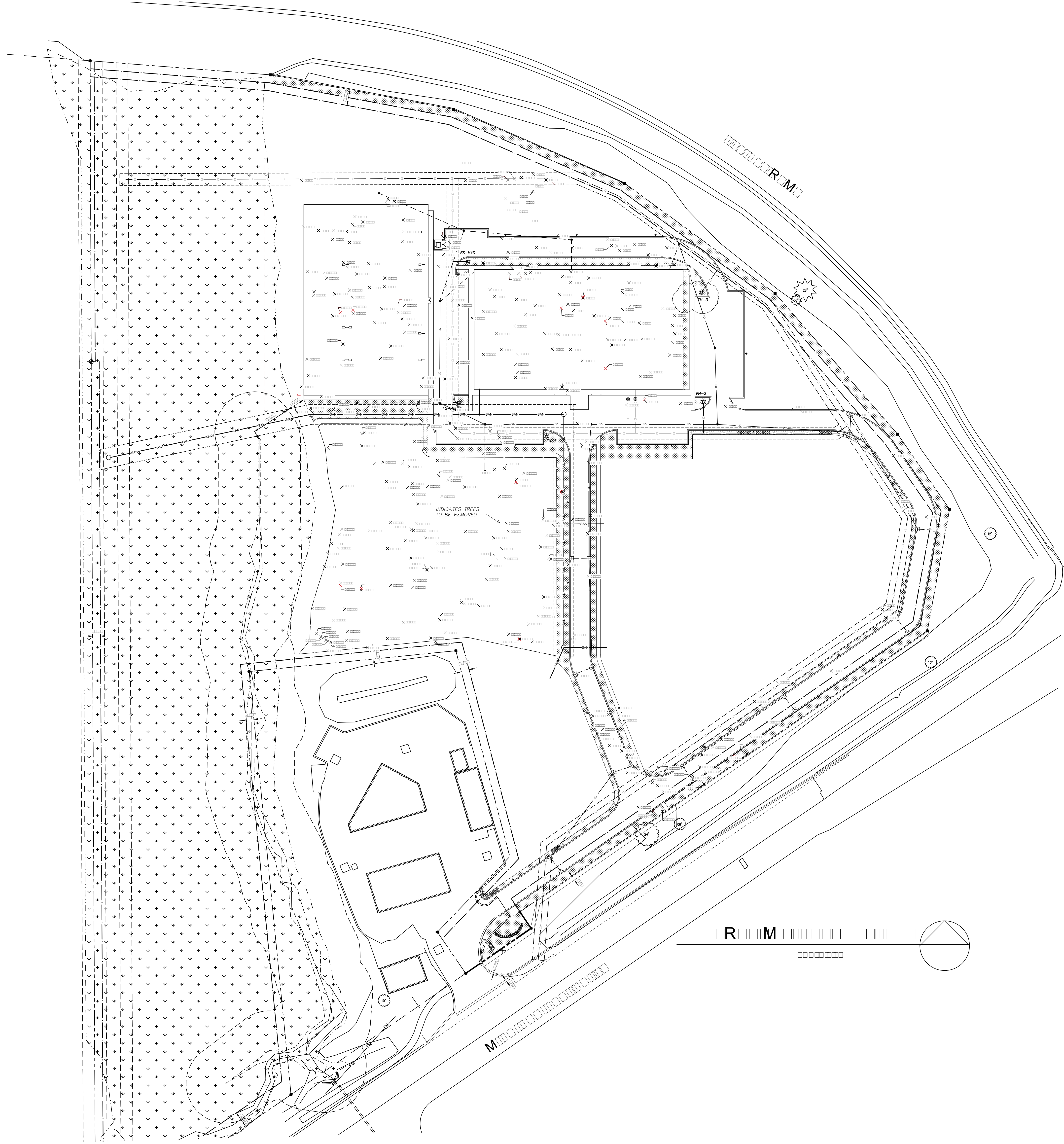
ENGINEER:



28763 NORTHWESTERN HWY
SUITE 225
SOUTHFIELD, MI 48034
Office (248)747-4562
Fax (248)297-6121
Cell (248)376-5006
harishakim@yahoo.com

SUBMITTAL:	DATE:
1st PRELIMINARY SITE PLAN APPROVAL	11/05/2019
2nd PRELIMINARY SITE PLAN APPROVAL	01/17/2020
3rd PRELIMINARY SITE PLAN APPROVAL	09/07/2020
4th PRELIMINARY SITE PLAN APPROVAL	01/21/2021





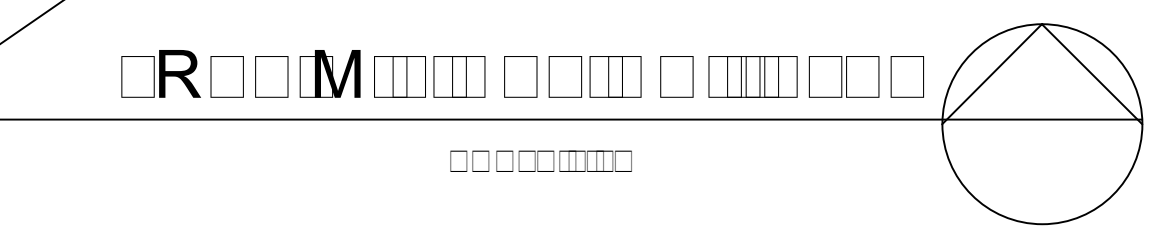
Atelier Architect, P.C.

11111111111111111111 Rd
 11111111111111111111 M
 11111111111111111111
 11111111111111111111

11111111111111111111
 YPSILANTI TWP. TENNIS FACILITY

11111111111111111111
 2019-16

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 11111111111111111111
 11111111111111111111
 11111111111111111111
 11111111111111111111



11111111111111111111
 TREE MITIGATION PLAN

11111111111111111111 D
 SITE PLAN APPR. 11/05/2019
 REVISION 1 01/17/2020



CHARTER TOWNSHIP OF YPSILANTI

OFFICE OF COMMUNITY STANDARDS

Building Safety • Planning & Zoning • Ordinance Enforcement

**Staff Report
Marriot Banquet Facility
1275 S. Huron
Sketch Site Plan Approval**

March 18, 2021

CASE LOCATION AND SUMMARY

The Office of Community Standards is in receipt of a sketch site plan from Steven Brooks and Kolbrook Design to construct a banquet facility located at 1275 South Huron, K-11-38-150-007 and subject parcels.

APPLICANT

Steven Brooks / Kolbrook Design
828 Davis St. Suite #300
Evanston IL, 60201

CROSS REFERENCES

Zoning Ordinance citations:

- Article XI, Section 1100, B-3 General Business District
- Article XXI, Section 2115, Site Plan Review

ANALYSIS

The plan has been reviewed by Township staff and consultants in accordance with our procedures.

Planning Consultants (Carlisle/Wortman Associates): CWA reviewed the sketch site plan in their letter dated February 10, 2021, and the plan is recommended for approval subject to the applicant addressing the following items:

1. Replace light fixture to be compliant with ordinance requirements

Engineering Consultants (OHM): The Township Engineer recommended sketch plan approval at this stage of the process in their March 18, 2021 review letter. Elliot Smith will need additional engineering details included in the detailed engineering plans with regard to the site improvements proposed including the new fire hydrant and cross section for the access road.

Ypsilanti Community Utilities Authority: YCUA reviewing agent Scott Westover recommends “relocating the existing hydrant to the end of the water main and installing a new hydrant along the currently looped portion of the water main. Or connect the existing dead ends to complete the loop” in an email to the Planning Department on March 17, 2021.

Ypsilanti Township Fire Department: YTFD Fire Marshall Dan Kimball recommended approval subject to conditions in a letter dated March 18, 2021.

Washtenaw County Water Resources Commission: WCWRC reviewing agent Theresa Marsik has no comments as a storm water permit will not be necessary for this project.

Washtenaw County Road Commission: WCRC reviewing agent Gary Streight has no comments as the Marriot is located off a Private Access Drive off South Huron.

Suggested motions: *The following suggested motions and conditions are provided to assist the Planning Commission in making the most appropriate motion for this application. The Commission may utilize, add or reject any conditions suggested herein, as they deem appropriate.*

Sketch Plan Approval

Motion to table:

*“I move to table the request for **sketch site plan** approval for Marriott Banquet Facility located at 1275 South Huron, parcel K-11-38-150-007 ,to consider the comments presented by the Planning Commission during discussion of the project”*

Motion to approve:

*“I move to approve the request for a **sketch site plan** the Marriott Banquet Facility located at 1275 South Huron, parcel K-11-38-150-007, with the following conditions:*

- 1. Applicant shall address the remaining review comments from consultants, agencies, and departments.*
- 2. Applicant shall obtain all applicable agency permits.*
- 3. Applicant will supply a set of detailed engineering plans satisfying the conditions of the Planning Department.*
- 4. _____”*

Motion to deny:

*“I move to deny the request for **sketch site plan** approval for the Marriott Banquet Facility located at 1275 South Huron, parcel K-11-38-150-007 and subject parcels, due to the following reasons:*

- 1. _____*
- 2. _____”*

Respectfully submitted,

Jason Iacoangeli

Jason Iacoangeli, AICP
Planning Director



Carlisle | Wortman
ASSOCIATES, INC.

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

Date: March 5, 2021

**Sketch Site Plan
For
Ypsilanti Charter Township, Michigan**

GENERAL INFORMATION

Applicant: Marriot
Project Name: Banquet Facility
Plan Date: February 10, 2021
Location: 1275 S. Huron
Zoning: B-2, Community Business
Action Requested: Sketch Site Plan Approval

PROJECT AND SITE DESCRIPTION

A plan has been submitted for a proposed event/banquet facility at the existing Marriot hotel. The 1-story, 4,900 sq/ft building is located to the rear (golf course/lake side) of the hotel. The building is free-standing and will not be physically connected to the hotel. The area of the site where the building is proposed is used for a large tent for outdoor events.

As set forth in Table 2115.1: Table of Eligible Uses and Required Review Process, this application is reviewed as a Sketch Plan.

Marriot
March 5, 2021

Location of Subject Property:



Detailed Location of Subject Property:



Location of proposed event/banquet. Currently used for tent for outdoor events

NATURAL RESOURCES & UTILITIES

The area of the site of the proposed building has already been graded.

Items to be Addressed: None

HEIGHT, BULK, DENSITY AND AREA

Bulk requirements are set forth in Sec 2001.

		Required / Allowed	Provided	Complies with Ordinance
Setback	Front	20 feet	+ 20 feet	Complies
	Side	0 feet	+0 feet	Complies
	Side	0 feet	+0 feet	Complies
	Rear	0 feet	+ 20 feet	Complies
Building Height (Feet)		30 feet	23 feet	Does not comply
Building Height (Stories)		3	1 story	Complies

Meets all bulk requirements.

Items to be Addressed: None

LOADING AREA

Existing loading for the Marriott facility can accommodate the new building..

Items to be Addressed: None

PARKING

Existing parking for the Marriott facility can accommodate the new building.

Items to be Addressed: None.

EXTERIOR LIGHTING

The applicant is adding a series of wall sconces to the building. Exterior lighting shall be fully shielded and directed downward, and shall utilize full cutoff housings, louvers, glare shields, optics, reflectors or other measures to prevent off-site glare and minimize light pollution. The sconces are not fully shield.

Items to be Addressed: Replace light fixture to be compliant with ordinance requirements.

LANDSCAPE STANDARDS

The applicant is not proposing any new landscaping.

Items to be Addressed: None

BUILDING ELEVATIONS AND FLOOR PLAN

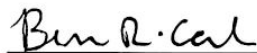
The applicant has provided building elevations. The building is a mix of metal and glass.

Items to be Addressed: None.

RECOMMENDATIONS FOR SITE PLAN

We recommend sketch site plan approval with the condition that the applicant:

1. Replace light fixture to be compliant with ordinance requirements.



CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, AICP, LEED AP
Principal

March 18, 2021

Mr. Jason Iacoangeli
Township Planning Director
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: 1275 S Huron St - Ann Arbor Marriott Ypsilanti at Eagle Crest - Banquet Facility
Sketch Site Plan Review #2

Dear Mr. Iacoangeli:

The first review letter for the 1275 S Huron Street Banquet Facility project was issued March 11, 2020. We have completed the second sketch site plan review of the plans with a latest revision date of March 15, 2021 and stamped received by OHM Advisors on March 16, 2021.

The project was originally submitted for a sketch site plan process; however, during review it was discovered that in order for the applicant to meet Township Engineering and Fire Department requirements, a hydrant and additional distribution watermain would be required. Proposing public utilities results in a traditional site plan process. For the requirements to be met, the applicant will need to go through detailed engineering review after being granted approval from the Planning Commission.

There are outstanding issues with the proposed utilities as highlighted in comment 5; however, this conflict does not impact the overall site layout. This comment is significant, but addressable, and will need to be sorted out between the applicant, Fire Department, YCUA, and OHM prior to submitting for detailed engineering review.

At this time the plans may be considered for the Planning Commission's consideration. Preliminary detailed engineering comments have been provided in coincidence with the original sketch site plan review comments. These comments do not influence the overall site layout and will be addressed during the detailed engineering plan review. It should be noted that this is not an all-inclusive list and additional comments may be generated as new information is presented during detailed engineering.

A brief description of the project has been provided below (Section A), followed by our comments (Section B), and a list of anticipated required permits and approvals (Section C).

A. PROJECT AND SITE DESCRIPTION

The applicant is proposing a banquet facility at the existing Marriott hotel located at 1275 South Huron Street. The proposed improvements include the construction of a banquet facility addition to the existing hotel, an extension of the existing gravel service road, and a new sidewalk on the east side of the proposed building. The applicant is proposing new watermain and a new hydrant on the southwest side of the building. No sanitary or storm improvements are being proposed.



B. SKETCH SITE PLAN COMMENTS

Paving and Grading

1. The applicant shall provide the existing gravel service road's cross-section and provide a geotechnical report of the road that ensures the surface can support an imposed load of a fire apparatus weighing up to 75,000 pounds. Additionally, the service road shall provide a minimum unobstructed width of 26-feet for emergency traffic to utilize. The applicant has addressed the comment by providing a minimum unobstructed width of 26-feet for the service road. The applicant has also noted that cross-section details will be provided during the detailed engineering review phase of the project.
2. The applicant shall provide a cross-section detail for all proposed concrete pavement and proposed gravel service road extensions. The applicant has noted that cross-section details will be provided during the detailed engineering review phase of the project.
3. The applicant shall provide a narrative for removal of the existing concrete slab at the location of the proposed banquet facility. Additionally, the applicant shall provide a foundation detail for the Township's review and approval. The applicant has sufficiently addressed the comment.
4. The applicant shall provide a grading plan sheet within the plan set showing both existing and proposed elevations specifically around the area of the proposed construction activity. The applicant has not addressed the comment.

Utilities

5. If applicable, the applicant shall provide a narrative of any proposed utilities as it currently appears as there will be no utility work to the site. The applicant is currently proposing additional watermain and a new hydrant. The applicant shall note that no more than one (1) hydrant will be allowed to be installed on a dead-end water main line per Ypsilanti Township standards. The applicant shall also provide the diameter and material type of the proposed water main. If the diameter is 8" or greater, the applicant shall include a profile view of the proposed water main within the plan set. The applicant shall revise accordingly. Our office would recommend having a sit-down meeting with the Design Engineer to review the options prior to submitting for detailed engineering.

General

6. The applicant shall provide a dumpster wall enclosure and detail for the proposed trash dumpster as delineated within the Township Ordinance (Section 2107). The applicant has noted that the existing trash dumpster shall remain on site and an additional trash dumpster is no longer proposed at this time. The applicant has sufficiently addressed the comment.
7. All Soil Erosion and Sediment Control (SESC) measures shall be provided (i.e. silt fence, inlet protection) on an SESC plan sheet. Additionally, the applicant shall include the Ypsilanti Township SESC Details sheet within the plan set. The sheet has been enclosed with this letter for the applicant's benefit. The applicant has noted that SESC measures will be provided during the detailed engineering review phase of the project.
8. The applicant shall include a cover sheet that includes contact information for the applicant, owner, and engineer. The applicant has addressed the cover sheet comment; however, the plans are not signed and sealed by a Professional Engineer licensed in the State of Michigan. The applicant shall revise accordingly.



9. The applicant shall provide MISS DIG information on all applicable sheets within in the plan set. The applicant has not addressed the comment.
10. Prior to a preconstruction meeting taking place, the applicant shall provide an engineer's estimate of probable cost for the project. The applicant has noted compliance with the comment.
11. It is recognized that the latest plan set submission provided sheets that are not on a 24"x36" dimension (or equivalent dimension) and this nontypical dimensioning appears to be influencing the scale. The applicant shall revise accordingly and provide an appropriate plan set with the next submission.

C. **REQUIRED PERMITS & APPROVALS**

The following outside agency reviews and permits will be required for the project. Copies of any correspondence between the applicant and the review agencies, as well as the permit or waiver, shall be sent to both the Township and OHM Advisors (email: elliott.smith@ohm-advisors.com).

- ▶ **Ypsilanti Township Board of Trustees (BOT):** After approval of the site plan by the Township Planning Commission, approvals from all applicable agencies will be required for BOT approval.
- ▶ **Ypsilanti Township Fire Department:** Review and approval is required.
- ▶ **Ypsilanti Community Utilities Authority (YCUA):** Review and approval for the proposed water main and proposed hydrant is required.
- ▶ **Michigan Department of Environment, Great Lakes & Energy (EGLE):** An EGLE Act 399 permit will be required for construction of all public water main system improvements.
- ▶ **Ypsilanti Township Office of Community Standards:** A Soil Erosion and Sedimentation Control permit shall be secured from the Ypsilanti Township Office of Community Standards.
- ▶ The Township's Planner will inspect the landscaping for this site.
- ▶ If dewatering should be needed, the contractor/applicant shall be responsible for obtaining necessary approvals from the Township and the Township Engineer, permission from all impacted adjacent properties and/or permits from MDOT, WCWRC's Office, or the WCRC.
- ▶ Record plans shall be provided to the Township Engineer following the completion of construction.

Should you have any questions regarding this matter, please contact this office at (734) 466-4580.

Sincerely,
OHM Advisors

Matthew D. Parks, P.E.

Elliot R. Smith

MDP/ERS/ams

cc: Mike Radzik, Township Community Standards Director
Belinda Kingsley, Township Planning and Development Coordinator
Doug Winters, Township Attorney
Dan Kimball, Township Fire Marshall
File

CHARTER TOWNSHIP OF YPSILANTI FIRE DEPARTMENT

BUREAU OF FIRE PREVENTION

222 South Ford Boulevard, Ypsilanti, MI 48198



8, 2021

Jason Iacoangeli
Township Planning Director
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: Sketch Site Plan # 2
Project Name: Ann Arbor Marriott Banquet Facility
Project Location: 1275 S. Huron St. Ypsilanti, Michigan 48197
Plan Date:
Revision Date: 3/15/2021
Job No: 1658.002
Applicable Codes: IFC 2018
Architect: Kolbrook Design
Architect Address: 828 Davis St. Suite 300 Evanston, IL 60201

Status of Review

Status of review:

Site Coverage - Hydrants

Comments: Meets IFC 2018 requirements.

Site Coverage - Access

Comments: Meets IFC 2018 requirements. Will need to confirm the measurements on turnaround and a detailed cross section on weight requirements with Detailed Engineering submittal.

Interior

Comments: No interior prints were supplied. Will be looking forward to reviewing Fire Suppression System, Fire Alarm System, number of exits, and travel distances to exits.

Respectfully submitted,

A handwritten signature in black ink that reads "Dan Kimball". The signature is written in a cursive style and is positioned above a horizontal line.

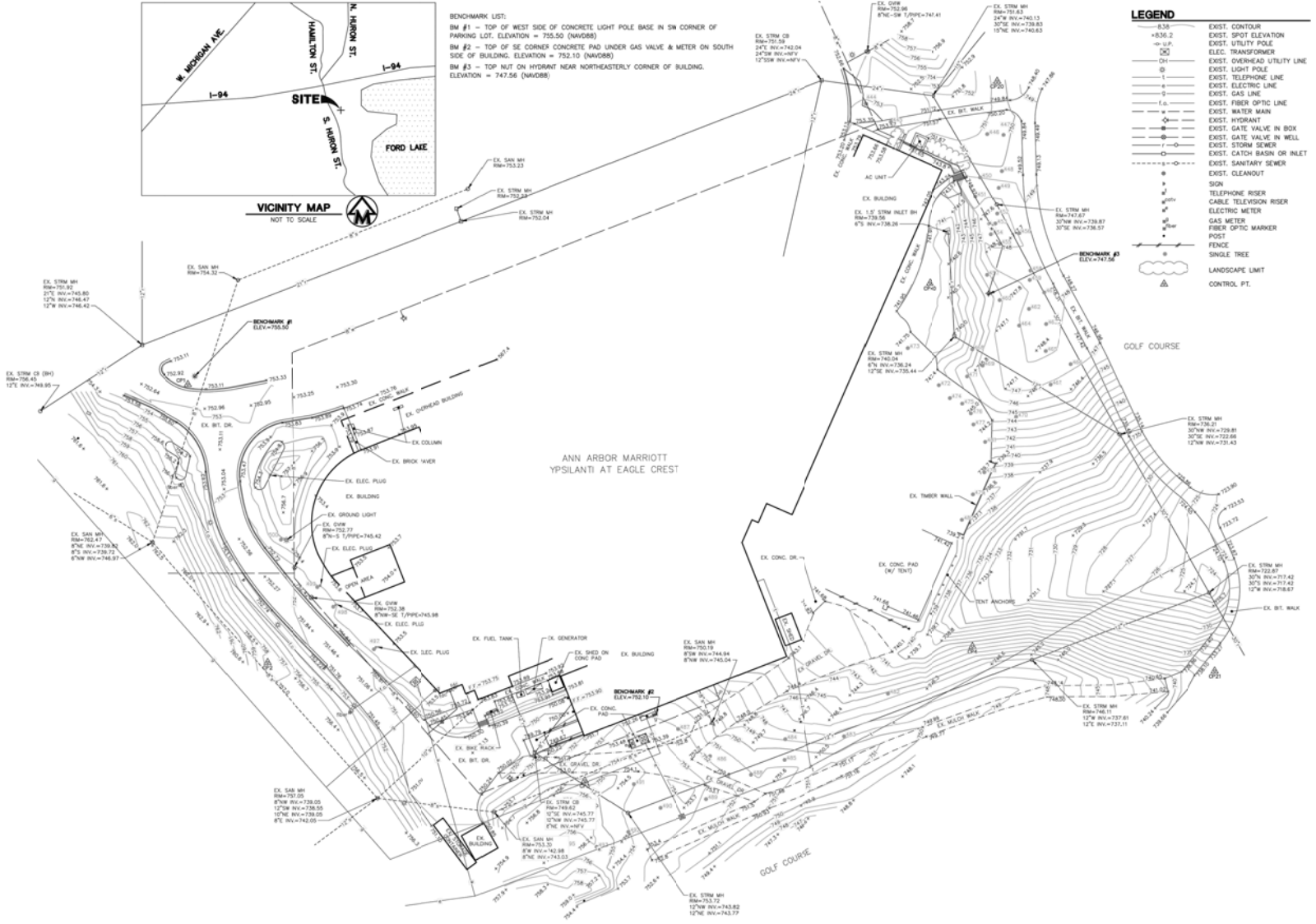
Dan Kimball, Fire Marshal
Charter Township of Ypsilanti Fire Department
CFPS, CFI II, CFPE



BENCHMARK LIST:
 BM #1 - TOP OF WEST SIDE OF CONCRETE LIGHT POLE BASE IN SW CORNER OF PARKING LOT. ELEVATION = 755.50 (NAVD88)
 BM #2 - TOP OF SE CORNER CONCRETE PAD UNDER GAS VALVE & METER ON SOUTH SIDE OF BUILDING. ELEVATION = 752.10 (NAVD88)
 BM #3 - TOP NUT ON HYDRANT NEAR NORTHEASTERN CORNER OF BUILDING. ELEVATION = 747.56 (NAVD88)

LEGEND

---	EXIST. CONTOUR
+856.2	EXIST. SPOT ELEVATION
---U-P---	EXIST. UTILITY POLE
⊠	ELEC. TRANSFORMER
OH	EXIST. OVERHEAD UTILITY LINE
⊘	EXIST. LIGHT POLE
—T—	EXIST. TELEPHONE LINE
—E—	EXIST. ELECTRIC LINE
—G—	EXIST. GAS LINE
—F—	EXIST. FIBER OPTIC LINE
—W—	EXIST. WATER MAIN
⊙	EXIST. HYDRANT
⊚	EXIST. GATE VALVE IN BOX
⊚	EXIST. GATE VALVE IN WELL
—S—	EXIST. STORM SEWER
—C—	EXIST. CATCH BASIN OR INLET
—SS—	EXIST. SANITARY SEWER
⊖	EXIST. CLEANOUT
⊕	SION
⊕	TELEPHONE RISER
⊕	CABLE TELEVISION RISER
⊕	ELECTRIC METER
⊕	GAS METER
⊕	FIBER OPTIC MARKER POST
⊕	FENCE
⊕	SINGLE TREE
⊕	LANDSCAPE LIMIT
⊕	CONTROL PT.



1 EXISTING TOPOGRAPHIC PLAN
SCALE: 1"=30'-0"

kolbrook design
 4000 S. WINDY HILL
 ANN ARBOR, MI 48106
 TEL: 734.769.8000
 FAX: 734.769.8001
 WWW.KOLBROOKDESIGN.COM

TRINITY COMPANIES
 3020 WALDEN ST.
 CANTON, OHIO 44705
 OFFICE: 330.201.2537 FAX: 330.201.3789

Professional Engineer
 Professional Landscaper
 Professional Surveyor
 Professional Architect
 Professional Engineer
 Professional Surveyor
 Professional Engineer
 Professional Surveyor
 Professional Engineer
 Professional Surveyor

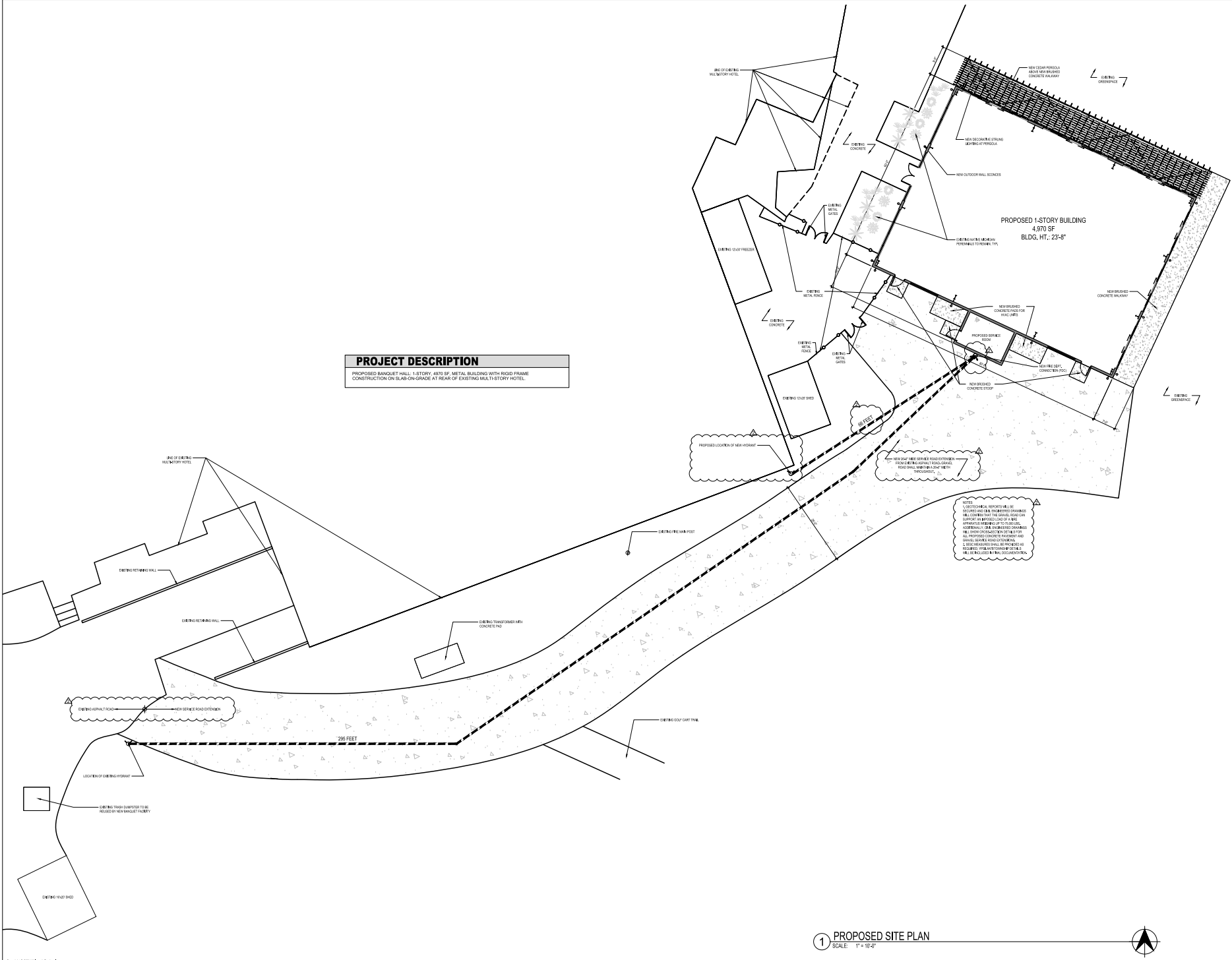
**ANN ARBOR MARRIOTT
PROPOSED BANQUET FACILITY**
 1275 S. Highways St.
 Ypsilanti, MI 48197

Revision Table

Rev.	Date	Description
1	11/14/2013	FOR CLIENT REVIEW
2	11/15/2013	FOR CLIENT REVIEW
3	11/20/2013	FOR CLIENT REVIEW
4	11/20/2013	FOR CLIENT REVIEW
5	11/20/2013	FOR CLIENT REVIEW
6	11/20/2013	FOR CLIENT REVIEW
7	11/20/2013	FOR CLIENT REVIEW
8	11/20/2013	FOR CLIENT REVIEW
9	11/20/2013	FOR CLIENT REVIEW
10	11/20/2013	FOR CLIENT REVIEW
11	11/20/2013	FOR CLIENT REVIEW
12	11/20/2013	FOR CLIENT REVIEW
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14	11/20/2013	FOR CLIENT REVIEW
15	11/20/2013	FOR CLIENT REVIEW
16	11/20/2013	FOR CLIENT REVIEW
17	11/20/2013	FOR CLIENT REVIEW
18	11/20/2013	FOR CLIENT REVIEW
19	11/20/2013	FOR CLIENT REVIEW
20	11/20/2013	FOR CLIENT REVIEW

Drawn By: [Name]
 Checked By: [Name]
 Date: 11/14/2013
 Title: EXISTING TOPOGRAPHIC PLAN

Sheet No: **SP-101**



PROJECT DESCRIPTION
 PROPOSED BANQUET HALL, 1-STORY, 4970 SF, METAL BUILDING WITH ROOF FRAME CONSTRUCTION ON SLAB-ON-GRADE AT REAR OF EXISTING MULTI-STORY HOTEL.



Trinity Companies
 3000 N. ZEEB ST.
 ANN ARBOR, MI 48106
 OFFICE: 734.769.2457 FAX: 734.663.1700

Chief Engineer
 Landscape Architect
 Senior Architect
 MEP Engineer
 Civil Engineer



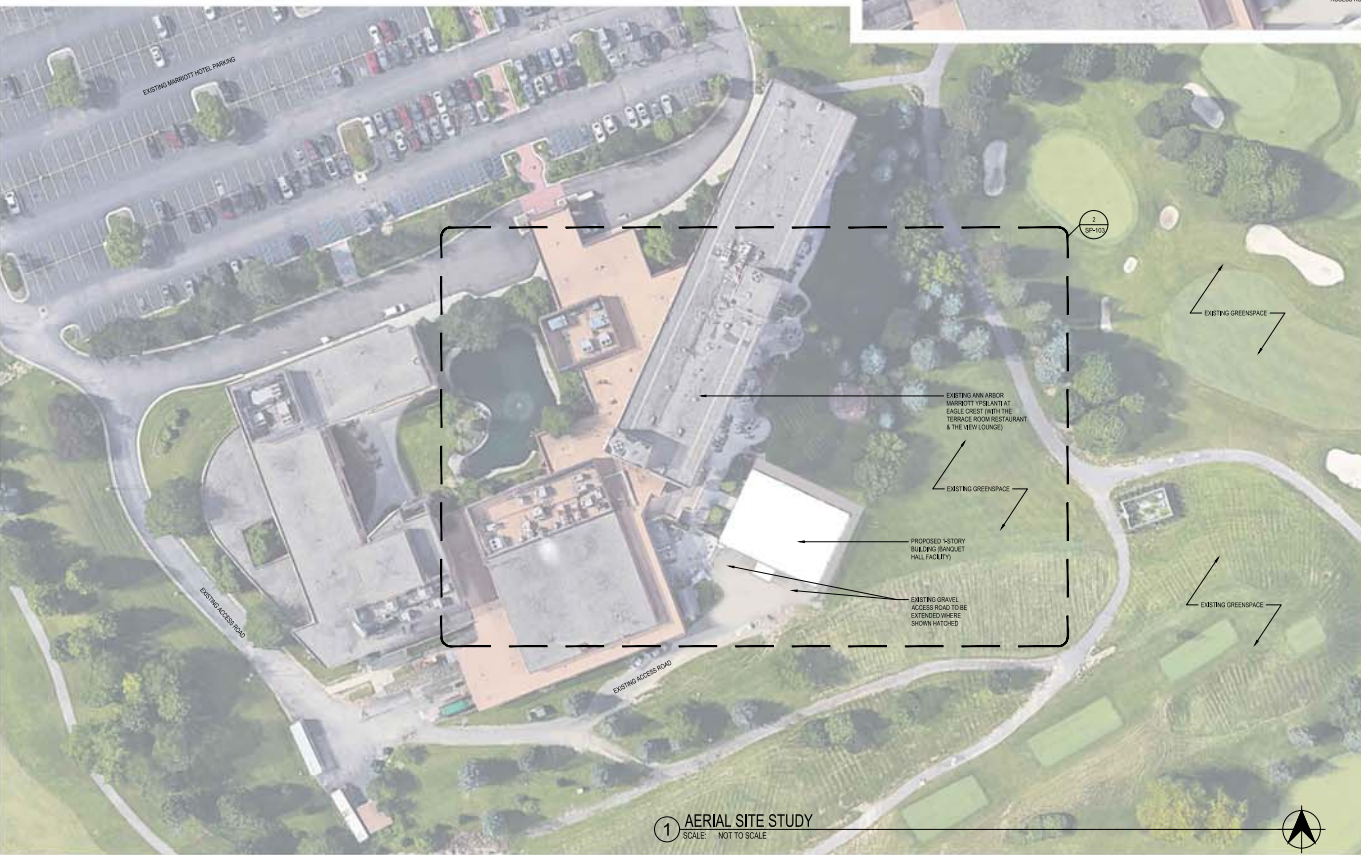
**ANN ARBOR MARRIOTT
 PROPOSED BANQUET FACILITY**
 1275 S. HURON ST.
 Ypsilanti, MI 48197

Revision	Date
FOR CLIENT REVIEW	11/20/2023
FOR CLIENT REVIEW	11/14/2023
FOR CLIENT REVIEW	11/10/2023
FOR CLIENT REVIEW	11/05/2023
FOR REVIEW	10/20/2023
FOR OWNER REVIEW	09/15/2023
FOR REVIEW	09/15/2023
FOR REVIEW	08/20/2023
FOR REVIEW	08/15/2023

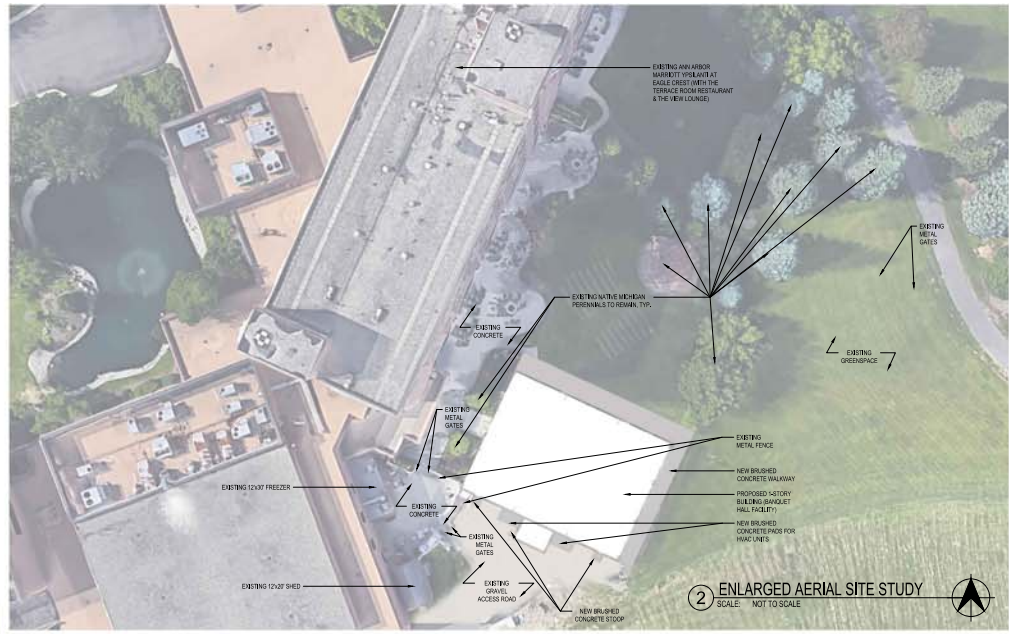
Drawn By: CT, CS, RM
 Checked By: SC
 Date: 11/20/23

PROPOSED SITE PLAN

Sheet No: **SP-102**



1 AERIAL SITE STUDY
SCALE: NOT TO SCALE



2 ENLARGED AERIAL SITE STUDY
SCALE: NOT TO SCALE

SPACE INTERNALLY LEFT BLANK FOR CITY APPROVAL STAMPS

kolbrook design
 1000 W. WALKER ST. SUITE 100
 ANN ARBOR, MI 48103
 OFFICE: 313.467.3781 | FAX: 313.467.3789
 LICENSED DESIGN PROFESSIONAL #164-000065

Client/Owner: **TRINITY COMPANIES**
 3000 KALE ST. SUITE 4000
 CANTON CENTER, MI 48103
 OFFICE: 313.307.2517 | FAX: 313.307.1790

Architect/Engineer: **STEVEN W. BROOKS ARCHITECT**
 1301 W. GORHAM ST. SUITE 100
 ANN ARBOR, MI 48103
 LICENSED ARCHITECT #1301600005

Project Name: **ANN ARBOR MARRIOTT PROPOSED BANQUET FACILITY**
 1275 S. Highways St.
 Ypsilanti, MI 48197

Revision	Description	Date
1	FOR CLIENT RELEASE	12/15/2023
2	FOR CLIENT RELEASE	11/04/2023
3	FOR CLIENT RELEASE	11/01/2023
4	FOR CLIENT RELEASE	11/20/2023
5	FOR PERMITS	09/20/2023
6	FOR PERMITS	09/15/2023
7	FOR PERMITS	09/15/2023
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38	FOR PERMITS	09/15/2023
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46	FOR PERMITS	09/15/2023
47	FOR PERMITS	09/15/2023
48	FOR PERMITS	09/15/2023
49	FOR PERMITS	09/15/2023
50	FOR PERMITS	09/15/2023

Drawn By: CT, CS, WB
 Checked By: SW
 Date: 11/15/23

AERIAL SITE STUDY

Sheet No. **SP-104**

GENERAL

- 1. COORDINATE WITH ALL DRAWINGS FOR INFORMATION RELATED TO STRUCTURAL WORK. ANY CHANGES TO THE BUILDING STRUCTURAL SYSTEM SHALL BE REDESIGNED BY OR REVIEWED BY INHS ENGINEERING. ALL CHANGES MUST HAVE PRIOR AUTHORIZATION OF THE OWNER AND HIS ENGINEERING.

DESIGN LOADS

Table with 2 columns: Load Type and Value. Includes Floor Live Load (100 PSF), Roof Snow Load (P=20.0 PSF), Wind Design Data (V=115 MPH), etc.

COMPONENT AND CLADDING U/LT

Table with 2 columns: Component and Value. Includes Wind Area (10 SF), Wind Zone 1 (-28.9 PSF), etc.

Table with 2 columns: Component and Value. Includes Earthquake Design Data (Risk Category II), Seismic Importance Factor (1.0), etc.

- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND MAINTENANCE OF ALL TEMPORARY NEEDLING, UNDERPINNING, SHORING, OR BRACING OF EXISTING STRUCTURE.

FOUNDATIONS

- 1. FOUNDATION BEARING CAPACITY IS 3000 PSF (ASSUMED) ON ENHANCED FILL OR COMPACTED NATIVE SOILS. FROST DEPTH IS 3'-6".

CAST-IN-PLACE CONCRETE

- 1. CAST IN PLACE CONCRETE SHALL CONFORM TO THE LATEST ACI 318 & 350 CODE, STANDARDS AND ACI 301 STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE, EXCEPT AS NOTED HEREIN.

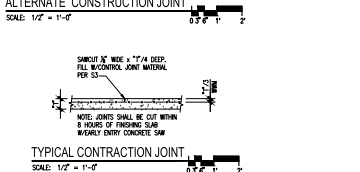
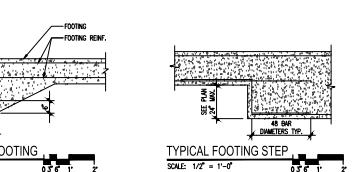
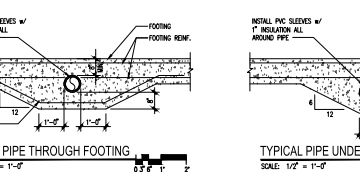
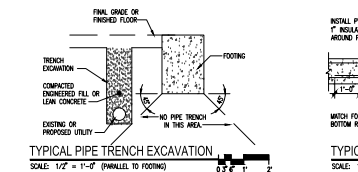
- 10. CONCRETE SHALL BE DISCHARGED AT THE SITE WITHIN 1 1/2 HOURS AFTER WATER HAS BEEN ADDED TO THE CEMENT AND AGGREGATES. ADDITION OF WATER TO THE MIX AT THE PROJECT SITE WILL NOT BE PERMITTED. ALL WATER MUST BE ADDED AT THE BATCH PLANT. SLUMP MAY BE ADJUSTED ONLY THROUGH THE USE OF ADDITIONAL WATER REDUCING ADMIXTURE OR HIGH RANGE WATER REDUCING ADMIXTURE.

- 14. OPENINGS SHALL NOT BE PROVIDED IN FRAMED SLABS, BEAMS, COLUMNS, OR WALLS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS, OR APPROVED IN WRITING PRIOR TO PLACING CONCRETE. CUTTING HOLES THROUGH BEAMS OR COLUMNS SHALL NOT BE PERMITTED. CUTTING HOLES LARGER THAN 10" SQUARE OR ROUND THROUGH SLABS SHALL NOT BE PERMITTED.

- 20. DETERMINE SIZE AND LOCATION OF MECHANICAL EQUIPMENT AND MAKE PROVISIONS FOR BOLTS, SHELTERS, PADS, ETC. IN ACCORDANCE WITH THE MANUFACTURER'S CERTIFIED DRAWINGS. THIS WORK SHALL BE COORDINATED WITH THE TRADES INVOLVED FOR ANY CONCRETE PLACEMENT.

Table: MINIMUM LAP SPICE AND ANCHORAGE DIMENSION TABLE #1. Columns: BAR SIZE, LAP, ANCHORAGE. Rows: #4, #5, #6, #8.

- 1. WHEN LAPPING TWO DIFFERENT SIZE BARS, USE THE LARGER OF THE LAP DIMENSION OF THE SMALLER BAR OR THE ANCHORAGE DIMENSION OF THE LARGER BAR.



STRUCTURAL STEEL

- 1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE REQUIREMENTS OF AISC SPECIFICATIONS (A50) AND CODES OF STANDARD PRACTICE, AWS D1.1 (STRUCTURAL WELDING CODE - STEEL), AND THE CONTRACT DOCUMENTS.

- 1. THE PRE-ENGINEERED METAL BUILDING (PEMB) SHALL BE DESIGNED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL BUILDING CODES. DESIGN CRITERIA SHOWN IN THE GENERAL NOTES ARE COURTESY ONLY AND DO NOT RELIEVE THE MANUFACTURER FROM ADHERING TO THE APPLICABLE BUILDING CODES.

SOILS AND FOUNDATIONS

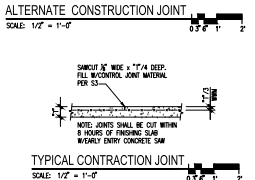
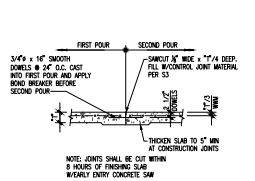
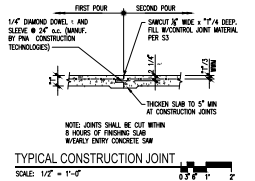
- SHALLOW FOUNDATIONS: INSPECT SOILS BELOW FOOTINGS FOR ADEQUATE BEARING CAPACITY AND CONSISTENCY WITH GEOTECHNICAL REPORTS. INSPECT BROWNS, OR UNSATURATED MATERIAL AND PREPARATION OF SUBGRADE PRIOR TO ELECTRODES OF CONTROLLED FILL / CONTINUOUS.

CAST-IN-PLACE CONCRETE

- REINFORCEMENT INSTALLATION: VERIFY THAT ALL REINFORCING BARS ARE FREE OF OIL OR OTHER DELETERIOUS MATERIALS. VERIFY THAT BARS ARE PROPERLY TIED AND SUPPORTED ON CHAIRS OR BOLTERS. / PERIODIC.

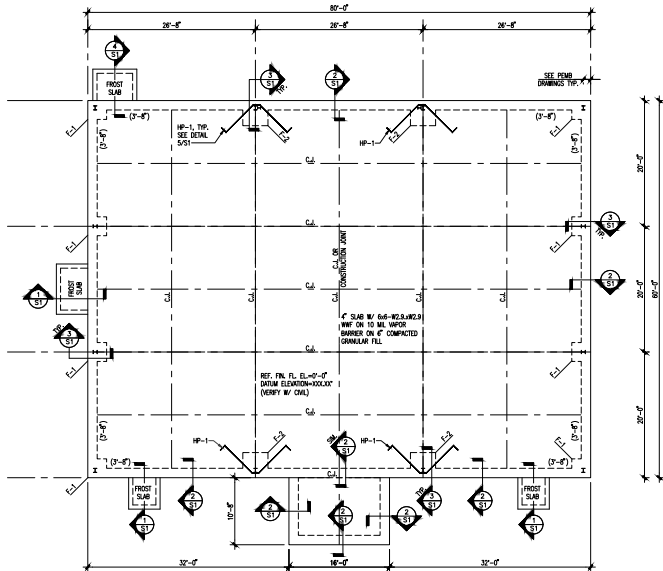
WELDING

- WELDING: VISUALLY INSPECT ALL WELDS. INSPECT PRE-HEAT, POST-HEAT AND SURFACE PREPARATION BEFORE PROCEEDING. VERIFY SIZE AND LENGTH OF FILL METS. / PERIODIC.



ANN ARBOR MARRIOTT PROPOSED BANQUET FACILITY

Table with 3 columns: Description, Date, and Status. Lists revision dates for client review and final printing.

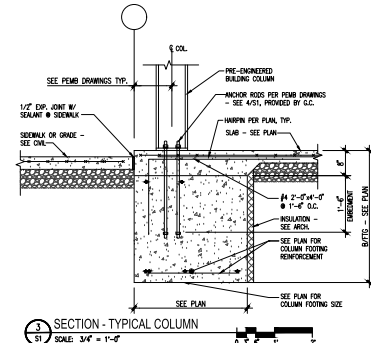
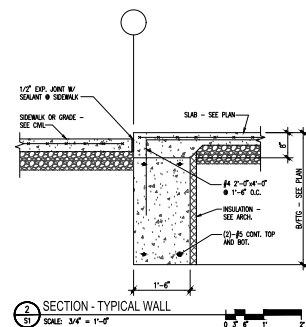
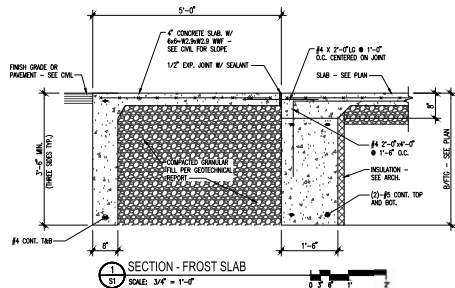
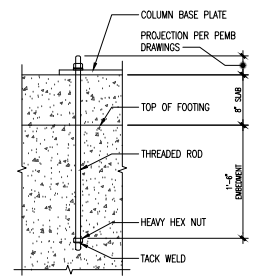
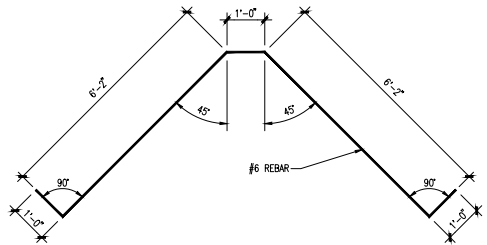


- NOTES:
- C.J. = CONTRACTION JOINT - SEE TYPICAL DETAIL THIS SHEET
 - FOUNDATION DESIGN IS SUBJECT TO CHANGE AFTER FINAL PRE-ENGINEERED METAL BUILDING DRAWINGS AND REVISIONS ARE RECEIVED BY WIG ENGINEERING. FOUNDATION CONSTRUCTION SHALL NOT BEGAIN PROCEED TO CONSTRUCTION THAT DESIGN WILL NOT CHANGE.
 - SUITABILITY OF SOILS AND BEARING CAPACITY SHALL BE FIELD VERIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO FOUNDATION CONSTRUCTION.
 - (1'-0") - INDICATES MINIMUM BOTTOM OF FOOTING DEPTH FROM FINISHED FLOOR.
 - COORDINATE FROST SLAB LOCATIONS WITH ARCHITECTURAL DRAWINGS.

MARK	SIZE	REINFORCING	REMARKS
F-1	3'-0" x 2'-0" x 4'-0" SEE PLAN	(2) - #5 E.W. BOT.	-
F-2	4'-0" x 4'-0" x 4'-0" SEE PLAN	(6) - #5 E.W. BOT.	-

WALL FOOTING REINFORCEMENT TO RUN CONTINUOUS THRU COLUMN PERISFOOTINGS AND NOW AROUND CORNERS MIN. 4# BAR DIAMETERS.

FOOTING STEP



ANN ARBOR MARRIOTT
PROPOSED BANQUET FACILITY
1075 S. Haven St.
Ypsilanti, MI 48197

Revision	Date
FOR CLIENT REVIEW	10/01/2010
FOR CLIENT REVIEW	11/04/2010
FOR CLIENT REVIEW	11/10/2010
FOR CLIENT REVIEW	11/20/2010
FOR PERMIT	12/10/2010
FOR PRICING	01/19/2011

Drawn By: JMS
Checked By: JMS
Sheet No:
FOUNDATION PLAN AND DETAILS
Sheet No:
S1

RE: Sketch Plan Review #1 - Ann Arbor Marriott Ypsilanti at Eagle Crest - Banquet Facility

From : Theresa M. Marsik <marsikt@washtenaw.org>

Wed, Mar 10, 2021 02:58 PM

Subject : RE: Sketch Plan Review #1 - Ann Arbor Marriott Ypsilanti at Eagle Crest - Banquet Facility

 3 attachments

To : 'Belinda Kingsley' <bkingsley@ytown.org>, Elliot Smith <Elliot.Smith@ohm-advisors.com>, Daniel Kimball <dkimball@ytown.org>

Cc : Michael Radzik <mradzik@ytown.org>, Brenda Stumbo <bstumbo@ytown.org>, Jason Iacoangeli <jiacoangeli@ytown.org>

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Belinda,

I copied Elliot Smith on my e-mail to the applicant back in January. As noted in that e-mail, since the proposed building footprint is essentially the same as the existing concrete pad area (runoff from which was previously incorporated in the stormwater management plan), our office will not require additional stormwater management for the proposed building. Therefore, our office will not need to be involved in the plan review process for this project.

Thanks,

Theresa



How did we do?

Please take a moment to complete an online evaluation

<https://www.surveymonkey.com/r/WCWRCsurvey>

Visit us [online](#) or follow the Water Resources Commissioner's Office on [Facebook](#).

Flooding or drainage concerns? [Report your problem online.](#)

From: Belinda Kingsley <bkingsley@ytown.org>

Sent: Wednesday, March 10, 2021 1:38 PM

To: Elliot Smith <Elliot.Smith@ohm-advisors.com>; Daniel Kimball <dkimball@ytown.org>; Theresa M. Marsik <marsikt@washtenaw.org>

Cc: Michael Radzik <mradzik@ytown.org>; Brenda Stumbo <bstumbo@ytown.org>; Jason Iacoangeli <jiacangeli@ytown.org>

Subject: Sketch Plan Review #1 - Ann Arbor Marriott Ypsilanti at Eagle Crest - Banquet Facility

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good Afternoon,

Although the review comments for the Marriott Banquet Facility are technically not due until March 18th, we would like to get them back sooner if possible. The Marriott managers are anxious to get their project going in time to take advantage of the seasonal bookings. We have agreed to place them on the March 23rd Planning Commission agenda, assuming the reviews are favorable.

Please feel free to contact us if you have questions.

Thank you,

Belinda Kingsley

Belinda Kingsley
Planning & Development Coordinator
Office of Community Standards
734-485-3943

From: "Jason Iacoangeli" <jiacoangeli@ytown.org>
To: "Benjamin Carlisle" <bcarlisle@cwaplan.com>, "Elliot Smith" <Elliot.Smith@ohm-advisors.com>, "marsikt" <marsikt@washtenaw.org>, "Scott Westover" <SWestover@ycua.org>, "Daniel Kimball" <dkimball@ytown.org>, "Dave Bellers" <dbellers@ytown.org>
Cc: "Michael Radzik" <mradzik@ytown.org>, "Belinda Kingsley" <bkingsley@ytown.org>, "Brenda Stumbo" <bstumbo@ytown.org>
Sent: Thursday, March 4, 2021 11:47:43 AM
Subject: Sketch Plan Review #1 - Ann Arbor Marriott Ypsilanti at Eagle Crest - Banquet Facility

Good Morning,

Please use this email as a formal transmittal for **Sketch Plan** review for the new Ann Arbor Marriott at Eagle Crest Banquet Facility. We would ask that you return your comments back to the Planning Department by the close of business on Thursday, March 18th. If you have any questions about this project please feel free to contact me.

Hope everyone has a good rest of the week.

Thanks, Jason I.

Jason Iacoangeli, AICP
Planning Director

[Charter Township of Ypsilanti](#)

7200 S. Huron River Drive | Ypsilanti, MI 48197
(734) 544-3667

The Ypsilanti Township Civic Center and Community Center are closed to public walk-ins until further notice. We encourage Township business to take place via phone, email or online at <https://ytown.org>. Appointments must be made for Township business that must be done in-person. Visit <https://ytown.org> to find the correct department's email or phone to schedule your appointment.



March 15, 2021

Jason Iacoangeli

Township Planning Director

Charter Township of Ypsilanti

7200 S. Huron River drive

Ypsilanti, MI 48197

Office: (734) 544-3667

jiacoangeli@ytown.org

Re: Banquet Facility
1275 S. Huron St. – Ann Arbor Marriott Ypsilanti at Eagle Crest
Sketch Site Plan Review Corrections #1
Kolbrook Project No. 1658.002

Mr. Iacoangeli:

Please find below responses to the building permit review comments dated 3/11/2021 for the proposed Banquet Facility at 1275 S. Huron St. – Ann Arbor Marriott Ypsilanti at Eagle Crest (Sketch Site Plan Review Corrections #1). Listed below for your convenience is each comment made, as well as comment responses.

Planning Consultant (Carlisle / Wortman Associates):

1. The applicant is adding a series of wall sconces to the building. Exterior lighting shall be fully shielded and directed downward, and shall utilize full cutoff housings, louvers, glare shields, optics, reflectors or other measures to prevent off-site glare and minimize light pollution. The sconces are not fully shield.

Items to be Addressed: Replace light fixture to be compliant with ordinance requirements..

- Will comply. See cut sheet, sheet SP-103

Township Planning Department:

Paving & Grading

2. The applicant shall provide the existing gravel service road's cross-section and provide a geotechnical report of the road that ensures the surface can support an imposed load of a fire apparatus weighing up to 75,000 pounds. Additionally, the service road shall provide a minimum unobstructed width of 26-feet for emergency traffic to utilize.
 - Will comply. Civil dwgs. to show cross-section & geotechnical report to be provided. See sheet SP-102 for service road revision.
3. The applicant shall provide a cross-section detail for all proposed concrete pavement and proposed gravel service road extensions.
 - Will comply. Civil dwgs. to show cross-section & geotechnical report to be provided.

Banquet Facility
1275 S. Huron St. – Ann Arbor Marriott Ypsilanti at Eagle Crest
Sketch Site Plan Review Corrections #1
Kolbrook Project No. 1658.002
March 15, 2021

4. The applicant shall provide a narrative for removal of the existing concrete slab at the location of the proposed banquet facility. Additionally, the applicant shall provide a foundation detail for the Township's review and approval.
 - Will comply. New foundation detail to be provided. See cover sheet G-000 for existing concrete slab removal narrative.

Utilities

5. If applicable, the applicant shall provide a narrative of any proposed utilities as it currently appears as there will be on utility work to the site.
 - Will comply. See cover sheet G-000 for utility narrative.
6. The applicant shall provide a dumpster wall enclosure and detail for the proposed trash dumpster as delineated within the Township Ordinance (Section 2107).
 - Existing dumpster(s) to be used.
7. All Soil Erosion and Sediment Control (SESC) measures shall be provided (i.e., silt fence, inlet protection) on an SESC plan sheet. Additionally, the applicant shall include the Ypsilanti Township SESC Details sheet with the plan set. The sheet has been enclosed with this letter for the applicant's benefit.
 - Will comply. SESC measures shall be provided.
8. The applicant shall include a cover sheet that includes contact information for the applicant, owner, and engineer.
 - Will comply. See cover sheet G-000.
9. The applicant shall provide MISS DIG information on all applicable sheets within the plan set.
 - Will comply. See cover sheet G-000.
10. Prior to a preconstruction meeting taking place, the applicant shall provide an engineer's estimate of probable cost for the project.
 - Will comply.

Banquet Facility
1275 S. Huron St. – Ann Arbor Marriott Ypsilanti at Eagle Crest
Sketch Site Plan Review Corrections #1
Kolbrook Project No. 1658.002
March 15, 2021

Ypsilanti fire Dept. (Bureau of Fire Prevention):

Site Coverage - Hydrants:

1. IFC 2018 requires a hydrant no closer than 40 feet and no farther than 100 feet from an FDC (507.5.1.1).
 - Will comply. Refer to sheet SP-102.

Site Coverage - Access:

2. **503.2.3 Surface:** Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.
 - Will comply.
3. **503.2.5 Dead Ends:** Dead end fire apparatus access roads in excess of 150 feet (45 720 mm) in length shall be provided with an approved area for turning around fire apparatus.
 - Will comply. Refer to sheet SP-102.
4. **503.3 Marking:** Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING – FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.
 - Will comply. Fire lane shall be designated where required by fire code official.
5. **D102.1 Access and Loading:** Facilities, buildings, or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete, or other approved driving surface capable of supporting the imposed load of fire apparatus weighing up to 75,000 pounds (34 050kg).
 - Will comply. Refer to sheet SP-102.
6. **D105.2 Width:** Aerial fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7925 mm), exclusive of shoulders, in the immediate vicinity of the building or portion thereof.
 - Will comply. Refer to sheet SP-102.

Respectfully,



Steven Kolber, AIA
President/Principal
Kolbrook Design, INC.
skolber@kolbrook.com

CHARTER TOWNSHIP OF YPSILANTI

OFFICE OF COMMUNITY STANDARDS

Building Safety • Planning & Zoning • Ordinance Enforcement

Planning Commission Annual Report Calendar Year 2020

Pursuant to Section 19(2) of the Michigan Planning Enabling Act, PA 33 of 2008, the Township Planning Commission shall make an annual written report to the legislative body concerning its operations and the status of planning activities, including recommendations regarding actions by the legislative body related to planning and development.

The following information has been compiled as a roster of Planning Commission members' attendance and a summary of items presented to and acted upon by the Planning Commission.

Action Items: Overall, the Commission held 10 meetings and considered 15 action items in 2020, 7 less items more than in 2019. This report includes a breakdown of each meeting by date, applicant, action requested and action taken.

Upcoming items: The Township expects to see increased development opportunities including an assisted care facility on Munger Road, expansion of the Marriott events center, redevelopment of a previous Brownfield site, a tennis-sports facility, redevelopment of Gault Village, Zoning Ordinance rewrite, and other new single-family and multiple-family residential developments.

2020 Planning Commission Action Summary

Date	Applicant	Proposed Location	Request	Outcome/Action
January 14	Staff	N/A	Zoning Ordinance Amendment Discussion – Medical Marijuana	Public Hearing to be scheduled for next meeting
January 28	Staff	N/A	Non-Motorized Plan	Recommended approval
February 11	Group 10 Management – Jack Knowles	2169 Washtenaw	Public Hearing – Preliminary site plan approval and SCU approval	Approved with conditions
	Staff	N/A	Zoning Ordinance Text Amendment – Medical Marijuana	Approved
	Andy Andre	460 and 350 Joe Hall Drive	Preliminary Site Plan Approval	Approved with conditions
February 25	No Meeting			
March 24	No Meeting			
April 14	No Meeting			
April 28	Sunco Properties LLC	2380 E Michigan	Public Hearing – Preliminary site plan approval and SCU approval	Approved with conditions
	American Center for Mobility	2801 Airport Dr	Preliminary Site Plan Amendment and SCU	Tabled
	Staff	N/A	Zoning Ordinance Amendment – Religious Land Use and Institutionalized Persons Act	Approved
May 12	No Meeting			
May 26	SE Michigan Land Holdings LLC	6601 Tuttle Hill	Extension of Earth Balancing and Excavation Permit – Creekside Village North	Approved with conditions
June 9	No Meeting			
June 23	No Meeting			
July 14	LaFontaine Dealership	444 and 550 James L Hart Parkway	Public Hearing – Preliminary Site Plan Approval and SCU	Approved with conditions
July 28	Scott Chatfield	2002 E Michigan	Public Hearing – Preliminary Site Plan Approval and SCU	Approved with conditions
September 8	R&L Carriers	1441 Russell St	Public Hearing – Request for Conditional Rezone of 8.24 Acre Parcel and Preliminary Site Plan	Tabled
	Ypsi Arbor	2562 E Michigan	Request for Waiver for Exterior Building Materials	Approved
September 26	No Meeting			
October 13	No Meeting			
October 27	R&L Carriers	1441 Russell	Request to Rezone 8.24 Acre Parcel and Preliminary Site Plan	Approved
November 10	No Meeting			
November 24	Mr. Smith	2594 Eastlawn	Public Hearing – Architectural Deviation Request	Approved
December 8	No Meeting			
December 22	No Meeting			

2020 Planning Commission Attendance

Name	2020 Planning Commission Attendance																								Meetings Attended	Meetings Absent	Total Meetings	Attendance Percentage
	Jan-21	Jan-20	Feb-20	Feb-20	Mar-20	Apr-20	Apr-20	May-20	May-20	Jun-20	Jun-20	Jul-20	Jul-20	Aug-20	Aug-20	Sep-20	Sep-20	Oct-20	Oct-20	Nov-20	Nov-21	Dec-21	Dec-21					
Sally Richie	P	P	A	NM	NM	NM	P	NM	P	NM	NM	P	P	NM	NM	P	NM	NM	P	NM	P	NM	NM	9	1	10	90%	
Bill Sinkule	P	P	P	NM	NM	NM	P	NM	P	NM	NM	P	P	NM	NM	P	NM	NM	P	NM	P	NM	NM	10	0	10	100%	
Laurence Krieg	P	P	P	NM	NM	NM	P	NM	P	NM	NM	P	P	NM	NM	P	NM	NM	P	NM	P	NM	NM	10	0	10	100%	
Elizabeth El-Assadi		P	P	NM	NM	NM	P	NM	P	NM	NM	P	A	NM	NM	P	NM	NM	P	NM	P	NM	NM	8	1	9	89%	
Stan Eldridge	P	P	P	NM	NM	NM	P	NM	P	NM	NM	P	P	NM	NM	P	NM	NM	P	NM	A	NM	NM	9	1	10	90%	
Gloria Peterson	P	P	P	NM	NM	NM	A	NM	P	NM	NM	P	P	NM	NM	A	NM	NM	P	NM	P	NM	NM	8	2	10	80%	
Muddasar Tawakkul	P	P	P	NM	NM	NM	P	NM	P	NM	NM	P	P	NM	NM	P	NM	NM	P	NM	A	NM	NM	9	1	10	90%	
Jason Iacoangeli	P	R	R	NM	NM	NM	R	NM	R	NM	NM	R	R	NM	NM	R	NM	NM	R	NM	R	NM	NM	1	0	1	100%	

P = Present
 A = Absent
 NM = No Meeting
 R = Resigned

ARTICLE IX. – SITE PLAN REVIEW

Sec. 901. – Intent:

The site plan review procedures and standards set forth herein provide a consistent and uniform method for review of proposed development plans, to ensure full compliance with the standards contained in this Section, other applicable local Ordinances, standard engineering practices, and county, state, and federal rules, and laws. The procedures set forth herein are further intended to:

1. Achieve efficient use of the land;
2. Protect natural resources;
3. Minimize adverse impacts on adjoining or nearby properties;
4. Encourage a harmonious relationship of buildings and uses both within a site and in relation to adjacent uses;
5. Encourage innovative design solutions;
6. Achieve innovative storm water management solutions;
7. Provide a mechanism for review of new development and redevelopment or reuse of existing sites to ensure compliance with current standards; and,
8. Encourage cooperation and consultation between the Township and the applicant to facilitate development in accordance with the Township's land use objectives.

Sec. 902. - Site plan review applicability and type:

A building permit shall not be issued until a site plan or sketch plan is approved in accordance with the procedures and standards set forth herein and all necessary review, inspection, and permit fees have been fully paid. The extent of site plan review for various types of projects is classified into the types below:

1. *Exempt*: Select projects, such as single-family homes on an individual lot, are exempt from site plan review given their relatively low level of impact on adjacent land uses and given that compliance with applicable building and fire code and zoning regulations can be addressed during the building permit review process.
2. *Site plan*: The most involved process for larger and more intense projects, including most new developments and major expansions.
3. *Sketch plan*: Smaller scale projects and expansions or changes in use to existing sites are permitted to provide less detailed information than a site plan review. The level of information is intended to be proportionate to the extent of the change and yet insure adequate review for compliance with applicable standards. Sketch plans shall still undergo a formal review by the Planning Commission.
4. *Administrative review*: Select smaller scale projects and expansions or changes in use to existing sites, which are required to provide a sketch plan, do not require review by the Planning Commission ; but instead, shall undergo a formal review for approval by the Township.
5. *Site condominiums and planned developments*: Site plans for site condominiums and planned

developments shall follow the procedure as provided in Section 701, Site Condominium Review and Article 6, respectively. Plats for subdivisions shall follow the procedures of the Township Subdivision Regulations Ordinance and the Michigan Land Division Act, Public Act 288 of 1967, as amended (MCL 560.293, et. seq.). Site condominiums shall be required to meet the same design standards as subdivision plats, in accordance with this Ordinance, subdivision regulations Ordinance and all other applicable Township regulations.

6. *Multiple-family and condominiums:* Site plans for multiple-family and condominium developments shall require the review and approval of both preliminary and final plans by the Township Board, upon recommendation by the Planning Commission.

Sec. 903. – Site plan review process:

1. The Township Zoning Administrator shall have the authority to determine the required review process based on the Table of Eligible Uses and Required Review Process. The Township Zoning Administrator may seek the review and comments of applicable Township staff and/or consultants and reserve the right to refer the matter to the Planning Commission if desired.
2. Table of Eligible Uses and Required Review Process.

SITUATION/USE	REQUIRED REVIEW			
	Site Plan ¹	Sketch Plan PC Rev. ¹	Admin. Review ²	Exempt ³
NEW DEVELOPMENT:				
Construction of one (1) single-family dwelling unit on one (1) lot in a residential zoning district.				✓
Construction of more than one (1) principal residential building on a single lot, such as site condominiums.	✓			
Construction of any multiple-family residential or non-residential principal building.	✓			
Any use or development for which the submission of a site plan is required by any provision of this Ordinance.	✓			
Any use in an RM, MH, PD, NB, GB, NC, RC, I-T, L-M, I-C, B, FS, IRO, I or P district.	✓			
Establishment of special land uses in all zoning districts, except where specifically noted elsewhere in this table.	✓			
Construction of essential public service buildings and storage areas.	✓			
Public/private parks.		✓ ⁴		
Golf Courses.	✓			

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SITUATION/USE	REQUIRED REVIEW			
	Site Plan ¹	Sketch Plan PC Rev. ¹	Admin. Review ²	Exempt ³
Minor changes during construction such as changes in landscape species to a similar variety, realignment of a driveway or road due to an unanticipated and documented constraint during construction, or to improve safety or protect natural features as required by outside agencies.			✓	
Construction of cellular and similar communication towers ⁶ .	✓			
Co-location of new antennas on an existing approved tower ⁶ .			✓	
Installation of new antennas on an existing building ⁶ , light poles, or other structures		✓		
EXPANSIONS:				
Expansion of one (1) single-family dwelling unit on one (1) lot in a residential zoning district.				✓
An increase in the floor area up to one thousand (1,000) square feet or ten percent (10%) of the existing floor area, whichever is less, provided the site will not require any significant change to existing site improvement such as parking, landscaping, lighting, signs, or sidewalks, as determined by the Township.		✓		
An increase in the floor area greater than that specified above.	✓			
An increase in parking or loading area of up to ten percent (10%) or six thousand (6,000) square feet of pavement area without any building changes.			✓ ⁴	
An increase in parking or loading area over ten percent (10%) or six thousand (6,000) square feet of pavement area.		✓ ⁴		
Construction of any multiple-family residential or non-single-family residential accessory building, provided the site will not require any significant changes to the existing site improvements such as parking, landscaping, lighting, signs, or sidewalks.			✓	
Changes to building height that do not add additional floor area nor exceed the maximum height requirements of the district.			✓	
CHANGES IN USE:				
Any change in the use of land or a building to a more intensive use, in terms of parking needs, noise, traffic volumes, and similar impacts, as determined by the Township.	✓			

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SITUATION/USE	REQUIRED REVIEW			
	Site Plan ¹	Sketch Plan PC Rev. ¹	Admin. Review ²	Exempt ³
A change in use for a site that does not comply with current site design standards (such as landscaping, signage, lighting, or drainage). See Article 16 for regulations on nonconforming uses.		✓		
A change in use to a similar or less intense use provided the site shall not require any significant changes in the existing site facilities such as parking, landscaping, lighting, signs, bike paths or sidewalks.			✓	
A change to an outdoor recreational use and park that are permitted uses.			✓	
Minor changes required by outside governmental agencies during construction as determined by the Zoning Administrator			✓	
A change from a nonconforming use, building or site, to a more conforming situation, provided the site shall not require any significant changes in the existing site facilities such as parking, landscaping, lighting, signs, bike paths or sidewalks. See Article 16 for regulations on nonconforming uses.		✓		
OTHER TYPES OF PROJECTS:				
Accessory open-air businesses.		✓		
Accessory buildings and structures constructed or erected accessory to a permitted single-family dwelling unit; and those up to one hundred (100) square feet in area in other districts.				✓
Accessory keeping of animals.				✓
Architectural changes to a non-single-family residential structure (an elevation plan describing changes and construction materials is required).			✓	
Bike path, pathway or sidewalk construction or relocation.			✓ ⁴	
Construction of an entrance feature associated with a non-single-family residential use (walls, landscaping, etc.).		✓		
Fences associated with a non-single-family residential use, installed, or improved.			✓ ⁴	
Grading, excavation, filling, soil removal, creation of ponds or clearing of trees within an area up to one hundred (100) square feet, provided such activity is normally and customarily incidental to single-family uses on the site.				✓ ^{4,5}
Grading, excavation, filling, soil removal, creation of ponds or clearing of trees other than that specified above.		✓ ^{4,5}		

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SITUATION/USE	REQUIRED REVIEW			
	Site Plan ¹	Sketch Plan PC Rev. ¹	Admin. Review ²	Exempt ³
Home occupation. (see Section 1102, Home occupations)			✓	
Internal construction or change in the floor plan that does not increase gross floor area, increase the intensity of use, or affect parking requirements on a site which meets all site design standards of the Ordinance.				✓
Landscape changes to similar species and that are consistent with the standards of this Ordinance.			✓	
Modifications to upgrade a non-single-family residential building to improve barrier-free design, or to comply with the Americans with Disabilities Act or other federal, state or county regulations.			✓	
Parking lot improvements provided the total number of spaces shall remain constant.			✓ ⁴	
Residential care facilities licensed by the state that require special land use approval.		✓		
Sign relocation or replacement provided it meets the dimensional and location standards of this Ordinance.				✓
Site improvements such as installation of walls, fences, lighting or curbing consistent with Ordinance standards.			✓	
Utility system improvements.				✓ ^{4,5}
Building-mounted solar energy equipment.			✓	
Ground-mounted solar energy collector system.	✓			
Waste receptacle relocation to a more inconspicuous location or installation of screening around the waste receptacle.			✓	

Footnotes:

1. Requires review and approval by the Planning Commission.
2. The Township Zoning Administrator has authority for approval. If the modifications are not deemed minor, then normal site plan review by the Planning Commission shall be required. Planning Commission review shall be required for all site plans that involve a request for a variance, a special conditional use, or discretionary decisions.
3. A building permit, plot plan, grading and engineering review is still required.
4. Construction, grading, drainage, and erosion control plans must be approved by the Township engineer.

5. See also the Earth Balancing and Excavation and Soil Erosion and Sedimentation Control Ordinances, Articles 2 and 6, respectively, Chapter 24 of the Charter Township of Ypsilanti Code of Ordinances.
6. See Section 1144, Wireless communication towers and antennas.

Sec. 904. - Planning Commission site plan review procedures and requirements:

Site plans and sketch plans must be submitted in accordance with the following procedures and requirements. Plans are reviewed and approved following a process of pre-conceptual review, preliminary site plan review by the Planning Commission and final site plan review by the Township, unless final site plan is specifically designated for review and approval by the Planning Commission or Township Board.

1. *Applicant attendance:* The application shall be submitted by the owner of an interest in the land for which site plan approval is sought, or the designated agent of said owner. The applicant or a designated representative must be present at all scheduled review meetings or consideration of the plan shall be tabled due to lack of representation. Absence at two (2) consecutive meetings without prior notice to the Township shall result in denial of the application. The Township may recommend to the Planning Commission chairperson that the applicant's architect or engineer be required to be present at the meeting in order to address technical matters related to the application.
2. *Pre-application meeting:* The applicant shall schedule a meeting with the Township to discuss the project, submittal requirements and review procedures. The purpose of this meeting is to discuss applicable standards and technical issues, and to determine the appropriate type of review process based on Section 903, Site plan review process. If the project is determined to be eligible for administrative approval, the procedures of Section 908, Administrative plan review, shall be followed; in other cases, the process shall proceed as described in Sections 905, 906 and 907.

Sec. 905. - Preliminary site plan:

1. *Submittal:* The applicant shall submit the required number of plans as set forth on the Township application to the Township no more than thirty (30) business days prior to the Planning Commission meeting that the site plan is tentatively scheduled for. Submittal requirements include:
 - A. A complete application supplied by the Township.
 - B. A complete site plan or sketch plan that includes the information listed in Section 910, Submittal requirements.
 - C. Any additional information the Zoning Administrator or Planning Commission finds necessary to make the determinations required herein.
2. *Technical (staff) reviews:* The Township shall forward the application and site plan(s) to the Township planning, traffic and engineering consultants, and the fire chief. All reviews shall be submitted back to the Township.
3. *Planning Commission consideration of preliminary site plan:* Following technical review and comment, and compliance with administrative procedures, the site plan shall be placed on the agenda of the Planning Commission. The Planning Commission shall review the application for site plan approval, together with the reports and recommendations from staff, consultants, and

other reviewing agencies, as appropriate. The Planning Commission shall then make a determination based on the requirements and standards of this Section. The Planning Commission is authorized to postpone, grant approval, approval subject to revisions or denial as follows:

- A. Postpone: The application may be postponed if it is determined to be incomplete, the applicant has not fully responded to deficiencies identified in the technical review, or that revisions are necessary to bring the site plan into compliance with applicable standards and regulations. The application shall be postponed if an Ordinance interpretation or variance is needed from the Zoning Board of Appeals, until such time as the interpretation and variance has been granted by the Zoning Board of Appeals. The Planning Commission shall direct the applicant to prepare additional information, revise the site plan or direct the Township staff to conduct additional analysis. The applicant shall be required to prepare revised plans accompanied by a complete list of all changes, certified as such by the applicant's design professional. Full sets of plans must be resubmitted. Amended plans or other material which show a diligent effort to address all reasons for tabling shall be placed on the agenda of the Planning Commission for further review and action.
 - B. Approval: Upon determination that all requirements for site plan approval, as set forth herein, are met and a recommendation for approval has been forwarded to the Planning Commission by all reviewing agencies of the Township, approval shall be granted subject to the applicant providing copies of all required outside agency approvals. In those instances where approval authority is vested with the Township Board, a recommendation shall be made by the Planning Commission to the Township Board.
 - C. Approval subject to revisions: Upon determination that a site plan is in compliance except for minor revisions, said revisions shall be identified and the applicant shall be given the opportunity to correct the site plan prior to applying for final site plan approval. The applicant shall submit with the final site plan a complete list of all changes, certified by the applicant's design professional, to the Zoning Administrator for final approval after said revisions have been completed. At its discretion, the Planning Commission may require the right to review the revised final site plan.
 - D. Denial of approval: Upon determination that a site plan does not comply with standards and regulations set forth in this Section, requires extensive revision in order to comply with said standards and regulations, or the applicant has not satisfactorily addressed all reasons for site plan postponement, site plan approval shall be denied. The applicant must revise the plans and resubmit if the applicant is still interested in pursuing the project. A re-submittal shall be considered a new site plan and be required to re-initiate the full site plan review process.
4. *Variance requests:* When the applicant intends to seek a variance from the Zoning Board of Appeals for the subject request, the applicant shall first receive consideration of the preliminary site plan from the Planning Commission, then obtain the necessary variances, and then come back to the Planning Commission for site plan approval. Site plan approval cannot be granted until any necessary variances have been granted by the Zoning Board of Appeals.
 5. *Effect of preliminary site plan review action:* Any preliminary site plan approved under this provision shall expire after one (1) year from the date of such approval. If the submission of a final site plan has not commenced within one (1) year of preliminary site plan or sketch plan approval by the Planning Commission or the Township Board, preliminary site plan approval becomes null and void and a new application for site plan or sketch plan review shall be required. The applicant

may request a one (1) year extension by the Planning Commission, provided a written request is received before the expiration date and the site plan complies with current standards (i.e.; any amendments to this Ordinance since the site plan was approved). This limitation shall not apply to preliminary PD site plans accompanying approved PD rezoning's.

Sec. 906. - Final site plans:

1. *Application and fee for a final site plan:* Following approval of the preliminary site plan, an application for final site plan review shall be filed with the Township Zoning Administrator, including the number of copies specified on the application of the proposed final site plan as well as other data, exhibits, and information hereinafter required. An application for final site plan review shall be accompanied by the required fees.
2. *Required data for a final site plan:* An application for approval of a final site plan shall provide the information required for a final site plan as set forth in Section 910, Submittal requirements, and include approval from: the Washtenaw County Road Commission or the Michigan Department of Transportation, whichever is applicable; Washtenaw County Water Resource Commissioner; Ypsilanti Community Utilities Authority; and the Michigan Department of Environmental Quality Land and Water Quality Division, and any other applicable local, state or federal agency.
3. *Final site plans (detailed construction and engineering plans):* Except where otherwise set forth in this Section, final site plan approval may be given administratively when all conditions set forth herein for final site plans are met. The Planning Commission may, at the time of preliminary site plan approval, require final site plan approval by the Planning Commission as well. The Township Zoning Administrator shall grant final site plan approval where the following requirements are met:
 - A. That all local, county and state requirements as may apply to the proposed use are met and all necessary agency permits are obtained. Copies of applications and approvals from all applicable outside agencies shall accompany submission of the application and final site plan to the Township.
 - B. All applicable engineering requirements are met. Complete engineering plans shall be submitted for approval by the Township Engineer.
 - C. The design shown on the final site plan remains unchanged from the approved preliminary site plan. If the Zoning Administrator determines that the final site plan does not comply with the conditions of preliminary site plan approval or that required engineering plan revisions alter the site plan configuration approved by the Planning Commission, the applicant shall be required to revise the site plan and engineering plans and resubmit the site plan to the body that approved the site plan for review and approval as an amended site plan.
4. *Final site approval:* Final site plan approval, except as specifically permitted in subsection A below, shall not be given until all the above requirements are met. No work shall commence on any site, except as specifically permitted herein, or any buildings requiring site plan approval and no permits shall be issued until after final site plan approval is granted.
 - A. Upon request, the Township may permit, when justifiable conditions are found to exist, and after preliminary site plan approval has been given, the movement of soil on the site, prior to final site plan approval, provided:
 - (1) A grading and soil erosion and sedimentation control plan, drawn to local specifications

and when necessary to county specifications, has been reviewed and approved.

- (2) A soil erosion permit, when required, has been secured.

Sec. 907. - Completion of site design in accordance with approved final site plan:

1. *Permits:* Following approval of the final site plan or sketch plan and final approval of the engineering plans by the Township Engineer and the Zoning Administrator, a building permit may be obtained. It shall be the responsibility of the applicant to obtain all other applicable Township, utility, county, or state permits prior to issuance of a building permit.
2. *Expiration:* The approval of any final site plan under this provision, other than subdivisions (subdivision shall follow the procedures of the Land Division Act) shall expire one (1) year after the date of such approval, unless actual construction and development have been commenced in accordance with said site plan prior thereto. The applicant may request a one (1) year extension by the Planning Commission, provided a written request is received before the expiration date and the site plan complies with current standards (i.e., any amendments to this Ordinance since the site plan was approved). If such construction and development is commenced within said one (1) year period, then such approval shall continue for a period of five (5) years from the date thereof. However, that a lapse of more than one (1) year in continuous substantial construction and development does not occur, in which event, said approval shall expire. The Township Building Official shall not issue a building permit for any type of construction on the basis of the approved site plan after such approval has expired unless such plan has received an extension from the Planning Commission or Township Board. Fees for review of expired site plan may be waived or reduced in those instances where no substantial change in conditions of the site plan nor of abutting uses has taken place. In those instances where conditions have changed, the fee for review of expired site plans shall be the same as for the initial submittal.
3. It shall be the responsibility of the owner of a property for which final site plan approval has been granted to maintain the property in accordance with the approved site design on a continuing basis until the property is razed, or until new zoning regulations supersede the regulations upon which site approval was based, or until a new site design approval is sought. Such maintenance shall include all building and site elements depicted on the site plan including parking configuration, lighting, and landscaping. Any property owner who fails to maintain a site as approved shall be deemed in violation of the applicable use provisions of this Section and shall be subject to penalties.
4. A development agreement with suitable guarantee may be required by the Township to assure compliance with an approved final site plan.

Sec. 908. - Administrative plan review:

For uses and projects eligible for administrative review, as identified in the Table of Eligible Uses and Required Review Process, the following procedure shall apply:

1. *Submittal requirements:* The applicant shall submit to the Township the required number of plans as set forth on the Township application that contains the information listed in Section 910, Submittal requirements.
2. *Review:* The Township shall review and either approve the sketch plan, approve the sketch plan

with a condition that certain revisions be made, or deny the sketch plan.

3. *Appeal*: Either the Township or the applicant shall have the option to request sketch plan review by the Planning Commission.
4. *Issuance of building permit*: A building permit shall be issued following review and approval of any engineering or construction plans by the Building Department and Township engineer, as appropriate.

Sec. 909. - Multiple-family and condominiums approval:

Site plans for multiple-family and condominium developments shall require the review and approval of both preliminary and final plans by the Township Board, upon recommendation by the Planning Commission. The Planning Commission shall make a recommendation to the Township Board to approve, approve with conditions or deny the preliminary site plan. Following receipt of the Planning Commission's recommendation, the preliminary site plan shall be considered by the Township Board. The Planning Commission shall make a recommendation to the Township Board to approve, approve with conditions or deny the final site plan. Following receipt of the Planning Commission's recommendation, the final site plan shall be considered by the Township Board.

Sec. 910. - Submittal requirements:

The following information shall be included with and as part of the site plan(s) or sketch plan(s) submitted for review. Each category of site plan items shall be included on a separate sheet. Applications considered to be incomplete by the Zoning Administrator may not be reviewed by the Planning Commission.

SITE PLAN DATA	Required for:			
	Pre-concept	Sketch Plan	Prelim. Site Plan	Final Site Plan
A. Application Form:				
Name and address of the applicant and property owner;	✓	✓	✓	✓
Address and common description of property and complete legal description;	-	✓	✓	✓
Dimensions of land and total acreage;	✓	✓	✓	✓
Zoning on the site and all adjacent properties;	✓	✓	✓	✓
Description of proposed project or use, type of building or structures, and name of proposed development, if applicable;	✓	✓	✓	✓
Name and address of firm or individual who prepared site plan; and	✓	✓	✓	✓

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SITE PLAN DATA	Required for:			
	Pre-concept	Sketch Plan	Prelim. Site Plan	Final Site Plan
Proof of property ownership.	✓	✓	✓	✓
B. Site Plan Descriptive and Identification Data:				
Site plans shall consist of an overall plan for the entire development, drawn to an engineer's scale of not less than one (1) inch = fifty (50) feet for property less than three (3) acres, or one (1) inch = one hundred (100) feet for property three (3) acres or more in size. Sheet size shall be at least twenty-four (24) × thirty-six (36) inches. If a large development is shown in Sections on multiple sheets, then one (1) overall composite sheet shall be included;	✓	✓	✓	✓
Written project description, including proposed use, building(s) and site improvements;	-	✓	✓	✓
Title block with sheet number/title; name, address and telephone number of the applicant and firm or individual who prepared the plans; and date(s) of submission and any revisions (month, day, year);	✓	✓	✓	✓
Scale and north-point;	✓	✓	✓	✓
Location map drawn to a separate scale with north-point, showing surrounding land, water features, zoning, and streets within a quarter mile;	✓	✓	✓	✓
Legal and common description of property;	-	✓	✓	✓
Identification and seal of architect, engineer, land surveyor, or landscape architect who prepared drawings;	-	-	✓	✓
Zoning classification of petitioner's parcel and all abutting parcels;	✓	✓	✓	✓
Proximity to Section corner and major thoroughfares; and	-	-	✓	✓
Net acreage (minus rights-of-way) and total acreage.	✓	✓	✓	✓
C. Site Analysis:				
An aerial photograph of the entire development area with all environmental features labeled on the photo in a "bubbled" fashion to include woodlands, wetlands, groundwater recharge areas, drains, creeks, surface water, severe changes in topography, erodible soils, and floodplains. Sheet size of the aerial photograph shall be at least twenty-four (24) × thirty-six (36) inches;	✓			
Environmental impact analysis and natural features protection documentation meeting the requirements of Chapter 26 of the Municipal Code, Environment;	-	✓	✓	✓

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SITE PLAN DATA	Required for:			
	Pre-concept	Sketch Plan	Prelim. Site Plan	Final Site Plan
Survey of existing lot lines, building lines, structures, parking areas and other improvements on the site and within one hundred (100) feet of the site;	-	✓	✓	✓
Survey of on parcels more than one (1) acre, topography on the site and within one hundred (100) feet of site at two (2) foot contour intervals, referenced to a U.S.G.S. benchmark;	-	-	✓	✓
Surrounding land uses and zoning;	-	-	✓	✓
Inventory of the location, sizes, and types of existing trees, hedgerows and landmark trees as required by the Township Woodlands Ordinance and the general location of all other existing plant materials;	-	✓	✓	✓
Location of existing drainage courses, floodplains, lakes and streams, and wetlands with elevations;	-	✓	✓	✓
Surface drainage flows including high points, low points, and swales;	-	✓	✓	✓
Soils and water table;	-	-	✓	✓
All existing easements;	-	✓	✓	✓
Existing roadways and driveways within two hundred-fifty (250) feet of the site;	-	✓	✓	✓
Existing sidewalks and nonmotorized pathways; and	-	✓	✓	✓
Cultural resources and indication of human activities, such as paths.	-	-	✓	✓
D. Site Plan:				
Proposed lot lines, lot dimensions, property lines and setback dimensions;	✓	✓	✓	✓
Structures, and other improvements;	✓	✓	✓	✓
Proposed easements;	-	✓	✓	✓
Location of exterior lighting (site and building lighting) in accordance with Section 1303, Exterior lighting;	-	-	✓	✓
Location of trash and recycling receptacle(s) and transformer pad(s) and method of screening; and	-	✓	✓	✓
Extent of any outdoor sales or display area.	-	✓	✓	✓
E. Access and Circulation:				

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SITE PLAN DATA	Required for:			
	Pre-concept	Sketch Plan	Prelim. Site Plan	Final Site Plan
Dimensions, curve radii and centerlines of existing and proposed access points, roads and road rights-of-way or access easements;	-	✓		✓
Opposing driveways and intersections within two hundred-fifty (250) feet of site;	-	✓	✓	✓
Location of proposed roads, driveways, parking lots, sidewalks, and non-motorized pathways;			✓	
Cross Section details of proposed roads, driveways, parking lots, sidewalks and nonmotorized paths illustrating materials and thickness;	-	-		✓
Dimensions of acceleration, deceleration, and passing lanes;	-	-		✓
Dimensions of parking spaces, islands, circulation aisles and loading zones;	-	✓	✓	✓
Calculations for required number of parking and loading spaces;	-	✓	✓	✓
Designation of fire lanes;	-	✓	✓	✓
Traffic regulatory signs and pavement markings;	-	-		✓
Location of existing and proposed sidewalks/pathways within the site or right-of-way; and	-	✓	✓	✓
Location, height, and outside dimensions of all storage areas and facilities.	-	✓	✓	✓
F. Landscape Plans:				
Location, sizes, and types of existing trees as required by the Township Woodlands Ordinance, Article 3 of Chapter 24 of the Charter Township of Ypsilanti Code of Ordinances, and the general location of all other existing plant materials, with an identification of materials to be removed and preserved;	-	✓	✓	✓
Description of methods to preserve existing plant materials;	-	-	✓	✓
The location of existing and proposed lawns and landscaped areas;	✓	✓	✓	✓
Planting plan, including location and type of all proposed shrubs, trees, and other live plant material;	-	-	✓	✓
Planting list for proposed landscape materials with caliper size or height of material, method of installation, botanical and common names, and quantity;	-	-	✓	✓

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SITE PLAN DATA	Required for:			
	Pre-concept	Sketch Plan	Prelim. Site Plan	Final Site Plan
Irrigation system plan for watering and draining landscape areas;				✓
Sections, elevations, plans, and details of landscape elements, such as berms, walls, ponds, retaining walls, and tree wells;				✓
Proposed means of protecting existing plant material during construction;				✓
Proposed dates of plant installation; and				✓
Landscape maintenance schedule.	-	-		✓
G. Building and Structure Details:				
Location, height, and outside dimensions of all proposed buildings or structures;	-	✓	✓	✓
Building floor plans and total floor area;	-	-	✓	✓
Details on accessory structures and any screening;	-	-	✓	✓
Location, size, height, and lighting of all proposed site and wall signs;	-	✓	✓	✓
Location, size, height, and material of construction for all obscuring wall(s) or berm(s) with cross-Sections, where required;	-	✓	✓	✓
Building facade elevations for all sides, drawn at an appropriate scale; and	option	-	✓	✓
Description of exterior building materials and colors (samples may be required).	-	-	✓	✓
H. Drainage, Soil Erosion and Sedimentation Control:				
Location of existing and proposed storm sewers;	-	✓	✓	✓
Size of existing and proposed storm sewers;		✓		✓
Stormwater retention and detention ponds, including grading, side slopes, depth, high water elevation, volume, and outfalls;	-	✓		✓
Stormwater drainage and retention/detention calculations;	-	✓	✓	✓
Indication of site grading, drainage patterns and stormwater management measures, including sediment control and temperature regulation; and	-	✓	✓	✓
Soil erosion and sedimentation control measures.	-	✓	✓	✓

SITE PLAN DATA	Required for:			
	Pre-concept	Sketch Plan	Prelim. Site Plan	Final Site Plan
I. Information Concerning Utilities:				
Location of sanitary sewers and septic systems, existing and proposed;	-	-	✓	✓
Location and size of existing and proposed water mains, well sites, water service and fire hydrants;	-	-	✓	✓
Location of existing and proposed gas, electric and telephone lines, above and below ground;	-	-	✓	✓
Location of transformers and utility boxes; and	-	-	✓	✓
Assessment of potential impacts from the use, processing, or movement of hazardous materials or chemicals, if applicable.	-	-	✓	✓
J. Lighting Plan				
Location of all freestanding, building-mounted and canopy light fixtures on the site plan and building elevations;	-	✓	✓	✓
Photometric grid overlaid on the proposed site plan indicating the overall light intensity throughout the site (in foot-candles);	-	-		✓
Specifications and details for the type of fixture being proposed including the total lumen output, type of lamp and method of shielding; and	-	✓	✓	✓
Use of the fixture proposed.	-	✓	✓	✓
K. Additional Information Required for Residential Development				
The number and location of each type of residential unit (one (1) bedroom units, two (2) bedroom units, etc.);	✓	-	✓	✓
Density calculations by type of residential unit (dwelling units per acre);	✓	-	✓	✓
Garage and/or carport locations and details, if proposed;	-	-	✓	✓
Mailbox cluster location and design, if required by postmaster;	-	-		✓
Location, dimensions, floor plans and elevations of common building(s) (e.g., recreation, laundry, etc.), if applicable;	-	-	✓	✓
Swimming pool fencing detail, including height and type of fence, if applicable;	-	-	✓	✓
Location and size of recreation and open space areas;	-	-	✓	✓

Article 9 – Site Plan Review

SITE PLAN DATA	Required for:			
	Pre-concept	Sketch Plan	Prelim. Site Plan	Final Site Plan
Indication of type of recreation facilities proposed for recreation area; and	-	-	✓	✓
Where the site is located within five hundred (500) feet of the I-94 right-of-way, delineate that area of the site with sound levels of sixty-one (61) dBA or greater.	-	-	✓	✓
L. Outside Agency Reviews				
Preliminary Review; and	-	-	✓	-
Permits	-	-	-	✓
M. Additional Study (as required by the Zoning Administrator)				
Traffic impact study in compliance with Article 4, Traffic impact study of Chapter 24 of the Charter Township of Ypsilanti Code of Ordinances;				As required by Zoning Administrator after review of the standards set forth in Section 911. Any proposal requesting a density bonus shall be required to submit a traffic impact study
Environmental assessment in compliance with Section 1403.3; Natural features impact statement;				As required by Zoning Administrator after review of the standards set forth in Section 911
Noise study showing compliance with Section 1400.6;				As required by Zoning Administrator after review of the standards set forth in Section 911
Additional study as required by Zoning Administrator				As required by Zoning Administrator after review of the standards set forth in Section 911

Sec. 911. - Standards for site plan review:

1. *Compliance with all Regulations:* In reviewing the site plan, the Zoning Administrator shall not place an application on the Planning Commission agenda until they have determined that the proposed plan complies with all applicable regulations of this Ordinance.
2. *Standards:* In consideration of each site plan, the Township Planning Commission shall determine the following:
 - A. The proposed use will not be injurious to the general health, safety, welfare, and character of the Township and surrounding neighborhood.
 - B. The proposed development is consistent with the Township Master Plan.
 - C. There is a proper relationship between public thoroughfares and proposed service drives,

driveways, and parking areas.

- D. The proposed development provides for proper development of roads, easements, and public utilities.
- E. Building placement and orientation provides a strong visual and functional relationship with its site, adjacent sites, and nearby thoroughfares. Such placement and orientation are consistent within sites and to adjacent sites to provide distinct building groups which exhibit similar orientation, scale, and proportion.
- F. Site access and circulation shall be designed to ensure the safe and convenient movement of vehicles, bicycles, pedestrians, and transit, where applicable. Where possible, separation of pedestrian and vehicular traffic shall be provided to avoid conflicts and unsafe conditions.
- G. Internal circulation shall be arranged to provide a practical means of emergency personnel and vehicle access to all sides of a building.
- H. Site planning and design of specific improvements will accomplish the preservation and protection of existing natural resources and features such as lakes, ponds, streams, wetlands, floodplains, steep slopes, groundwater, trees, and wooded areas, including understory trees.
- I. The proposed development will utilize the natural topography to the maximum extent possible, minimizing the amount of cutting, filling, and grading required, and preventing soil erosion or sedimentation.
- J. The design of storm sewers, stormwater facilities, roads, parking lots, driveways, water mains, sanitary sewers, and other site improvements meets the design and construction standards of the Township and other appropriate agencies.
- K. A stormwater management system and facility will preserve the natural drainage characteristics and enhance the aesthetics of the site to the maximum extent possible and will not substantially reduce or increase the natural retention or storage capacity of any wetland, water body, or water course, or cause alterations which could increase flooding or water pollution on- or off-site. The Washtenaw County Water Resources Commissioner Rules shall be used for the review and approval of all stormwater management systems.
- L. Wastewater treatment systems, including on-site septic systems, shall be located to minimize any potential degradation of surface water or ground water quality, and be designed in accordance with applicable Township, County, and/or State standards.
- M. Sites which include storage of hazardous waste, fuels, salt, or chemicals will be designed to prevent spills and discharges of pollution materials to the surface or the air, or to the ground, groundwater, or nearby water bodies, with a specific plan to achieve such objectives being incorporated as part of the site plan.
- N. Landscaping, including grass, trees, shrubs, and other vegetation, is provided to maintain and improve the aesthetic quality of the site and area.
- O. The site plan complies with all Township Ordinances and any other applicable laws.

Sec. 912. - Site plan completion guarantee:

1. Prior to the issuance of any building permit for any building, and prior to signing of the final plat by the Township Clerk in a platted subdivision, or prior to the issuance of any building permit for

any building in a site condominium project, or prior to issuance of a certificate of occupancy for any other development which requires site plan review under this Ordinance, the applicant for same shall provide to the Township the completion guarantee, as set forth in Section 3.06, Performance guarantee.

Sec. 913. - Certification of compliance:

1. *Zoning Compliance Permit:* A zoning compliance permit, as set forth in Section 301, Duties of the Zoning Administrator, shall be required prior to issuance of a certificate of occupancy or building permit.
2. *Requirements:* When the appropriate permits are issued, the applicant may begin site work. In any development where individual lots do not front on an existing improved public or private street no building construction permit(s) shall be issued until the Zoning Administrator certifies the following minimum standards are met. Each phase of an approved project shall meet these requirements:
 - A. All interior public and private streets, including curb and gutter where applicable, shall be complete through the base course of pavement. Modifications to the requirement may be permitted by the Township Board based upon a recommendation by the Township Engineer when paving may not be possible due to weather.
 - B. All site mass grading and balancing shall be complete and certified by the developer's engineer and approved by the Township Engineer to be in compliance with the approved site plan.
 - C. All facilities for the detention and/or retention of stormwater shall be substantially complete in a state which is ready to be energized and placed online.
 - D. The installation of all franchised utilities shall be substantially complete, ready to be energized and placed online.
 - E. All underground water mains, sanitary and storm sewers shall have passed their certified acceptance tests. The water and wastewater system shall be certified as operational by the Ypsilanti Community Utilities Authority.
 - F. Each individual lot or building site shall have a sign clearly showing the lot number and address of the lot or building site. Temporary street name signs with contrasting letters at least six (6) inches high shall be erected at every intersection. All required traffic control signs shall be installed.
 - G. In single-family residential developments the applicant may apply for permission to erect a temporary sales trailer and/or construct up to three (3) model homes prior to completion of the above requirements. No occupancy of said models shall be permitted until the above conditions are met. Permits for models may be issued subject to the following conditions:
 - (1) The lots must be contiguous to each other, and one (1) lot must abut an existing public or private street. The first model shall be located on the lot abutting the street, and subsequent models shall abut a lot for which a permit has previously been issued under this Section.
 - (2) If the remaining two (2) lots do not abut an existing public or private street, they must be served by an access road of sufficient width and structure to accommodate fire apparatus.

Such access road shall be within fifty (50) feet of each structure.

(3) The Fire Department shall approve the access and determine that a sufficient water supply exists to permit firefighting and rescue operations.

(4) Sales trailers shall meet all the requirements of Section 805, Temporary structures.

Sec. 914. - Revocation and abandonment:

1. *Revocation:* The Township Planning Commission may, upon hearing, revoke approval of a site plan if the Commission determines that any information on the approved site plan is in error or the site plan is not in compliance with approved plans. Upon revocation, work on the affected part of the development, or on the entire development, as determined by the Township Planning Commission, shall cease. The Township Planning Commission may direct the Township Zoning Administrator to issue a stop work order to enforce its determination. Upon revocation, the Township Planning Commission may require the applicant to amend the site plan in a manner appropriate to reflect the corrected information. Any work so suspended shall not be resumed until an amended site plan is approved by the Township Planning Commission.
2. *Abandonment:*
 - A. Abandonment of preliminary site plan: An approved preliminary site plan for which a final Site plan has not been submitted as required under Section 906, final site plans, within one (1) year from the date of preliminary site plan approval shall be considered abandoned, unless an extension of approval has not been requested within a one (1) year period from the date of a final site plan approval, shall be considered abandoned.
 - B. Abandonment of final site plan: An approved final site plan, upon which construction does not commence and an extension of approval has not been requested within a one (1) year period from the date of a final site plan approval, shall be considered abandoned.

Sec. 915. - Development agreement:

The Township Planning Commission may as a condition of final site plan approval, require the proprietor and/or developer to enter into a Development Agreement with the Township. Such agreement shall set forth and define the responsibilities of the proprietor and the Township, as set forth in Section 305, Development agreement.

Planning Director's Report

Project Name: Ypsilanti Tennis Facility +

Location: 3160 West Michigan Avenue, Ypsilanti, MI 48197

Date: 12-15-2022

- | | |
|---|---|
| <input type="checkbox"/> Full Preliminary Site Plan Review #
<input type="checkbox"/> Sketch Preliminary Site Plan Review #
<input type="checkbox"/> Administrative Preliminary Site Plan Review #
<input checked="" type="checkbox"/> Detailed Engineering/Final Site Plan Review # 3
<input type="checkbox"/> Special Use Permit
<input type="checkbox"/> Public Hearing | <input type="checkbox"/> Rezoning
<input type="checkbox"/> Tentative Preliminary Plat
<input type="checkbox"/> Final Preliminary Plat
<input type="checkbox"/> Final Plat Process
<input type="checkbox"/> Planned Development Stage I
<input type="checkbox"/> Planned Development Stage II |
|---|---|

Contact / Reviewer	Consultants, Departments, & Agencies	Approved	Approved with Conditions	Denied	N/A	See email/letter attached or comments below
Jason Iacoangeli, Planning Director	Township Planning Department	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Directors Comments Below
Carlisle/Wortman Associates	Planning Consultant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
OHM / Stantec	Engineering Consultant	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See letter dated 12-14-2022
Steven Wallgren, Fire Marshal	Township Fire Department	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See letter dated 12-12-2022
Dave Bellers, Building Official	Township Building Department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Brian McCleery, Deputy Assessor	Township Assessing Department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Scott Westover, Engineering Manager	Ypsilanti Community Utilities Authority	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See letter dated 12-13-2022
Gary Streight, Project Manager	Washtenaw County Road Commission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Theresa Marsik, Stormwater Engineer	Washtenaw County Water Resources Commission	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See letter dated 12-13-2022
James Drury, Permit Agent	Michigan Department of Transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Planning Director's Recommended Action:

At this time, the Final Site Plan / Detailed Engineering Drawings for the Ypsilanti Tennis Facility are approved subject to conditions mentioned in the attached review letters. The applicant has completed all of the requirements for the agencies listed above, with some outstanding comments from OHM and YCUA that need to be addressed prior to the Pre-Construction meeting. The Applicant will need to secure applicable outside agency permits (EGLE Act 399 and Part 41 / Drain Use Permit) and SESC Permit from the Township prior to scheduling a pre-construction meeting. Please forward all obtained agency permits to the Planning Department. The Applicant will be required to provide these agencies with the required plan set, fees, and bonds in order to obtain permits that will be required at the time of pre-construction. The Planning Department will require one (1) paper Final Plan Set that can be stamped. We will also need one digital copy in the form of a PDF. The applicant is asked to give notice to this office no less than three (3) weeks prior to scheduling a pre-construction meeting.



ARCHITECTS. ENGINEERS. PLANNERS.

December 14, 2022

Mr. Jason Iacoangeli
Township Planning Director
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: **Ypsilanti Tennis Club**
Detailed Engineering Review #3

Dear Mr. Iacoangeli,

We have completed the third detailed engineering review of the plans dated April 7, 2022, a revision date of November 22, 2022, and received by OHM Advisors on November 29, 2022.

A brief description of the project has been provided below, followed by our comments and a list of anticipated required permits and approvals

At this time, the plans are recommended for approval. The applicant shall address the below comments prior to scheduling a preconstruction meeting.

PROJECT AND SITE DESCRIPTION

The applicant is proposing a tennis training facility consisting of five indoor and six outdoor tennis courts. The proposed building facility will be 39,800 square feet in area and consists of lockers, showers, shops, and exercise areas. In order to enter the site, traffic will traverse through an existing shared access approach on the north side of Michigan Avenue.

The applicant is proposing to be serviced with public water and public sewer by connection to existing water and sanitary main, via means of open trench excavation. The proposed sanitary service will connect to an existing sanitary main on the west side of the site through existing wetlands. To provide a water main loop for the development, the applicant is proposing to connect to an existing 30-inch watermain on the west side of the site, then will perform a secondary connection to an existing 12-inch watermain along Michigan Avenue.

Stormwater management is being proposed through one proposed detention basin, located west of the center of the site. Stormwater will be conveyed to the detention basin by traditional underground storm sewer infrastructure then will discharge to the western existing wetland area.

A. DETAILED ENGINEERING PLAN COMMENTS

Paving and Grading

1. The applicant shall delineate all ramps and level landings on all applicable plan sheets. The applicant shall note that all proposed sidewalks and ramps shall be designed and constructed in compliance with the current ADA guidelines and regulations. Spot elevations will also be required at all four (4) corners of ramps, ADA spaces, and at fifty (50) foot intervals along all proposed sidewalks and pathways. The applicant shall revise accordingly. The applicant has not sufficiently addressed the requirement. The proposed level landing just south of the proposed site entry crosswalk has a cross slope of a level landing



that exceeds compliance. Additionally, spot elevations at all four corners of the proposed handicap parking spaces shall be provided to ensure ADA compliance. The applicant shall revise accordingly prior to scheduling a preconstruction meeting

General Comments

2. The applicant shall delineate the proposed types of fencing and fence heights around the proposed outdoor tennis courts. Additionally, the applicant shall provide the proposed fencing on the plans. The applicant has not sufficiently addressed the comment. Sheet 2 notes a Wall Detail on Sheet 15 is provided; however, the detail was not located. The applicant shall revise accordingly.

B. REQUIRED PERMITS & APPROVALS

The following outside agency reviews and permits will be required for the project. Copies of any correspondence between the applicant and the review agencies, as well as the permit or waiver, shall be sent to both the Township and OHM Advisors (email: matt.parks@ohm-advisors.com).

- ▶ **Ypsilanti Township Board of Trustees (BOT):** After approval of the site plan by the Township Planning Commission, detailed engineering drawings are required and approvals from all applicable agencies will be required for BOT approval.
- ▶ **Ypsilanti Community Utilities Authority (YCUA):** will require review and approval for the proposed water and sanitary utilities.
- ▶ **Ypsilanti Township Fire Department:** Review and approval is required.
- ▶ **Washtenaw County Water Resources Commissioner's Office (WCWRC):** Review and approval will be required by the Township.
- ▶ **Michigan Department of Environment, Great Lakes & Energy (EGLE):** An EGLE Act 399 and Part 41 permit will be required for construction of all public water main and sanitary sewer systems improvements.
- ▶ **Michigan Department of Environment, Great Lakes & Energy (EGLE):** An EGLE permit will be required for any work and/or stormwater discharge into the wetlands.
- ▶ **Ypsilanti Township Office of Community Standards:** A Soil Erosion and Sedimentation Control permit shall be secured from the Ypsilanti Township Office of Community Standards.
- ▶ The Township's Planner will inspect the landscaping for this site.
- ▶ If dewatering should be needed, the contractor/applicant shall be responsible for obtaining necessary approvals from the Township and the Township Engineer, permission from all impacted adjacent properties and/or permits from MDOT, WCWRC's Office, or the WCRC.
- ▶ Record plans shall be provided to the Township Engineer following the completion of construction.

Should you have any questions regarding this matter, please contact this office at (734) 466-4580.

Sincerely,
OHM Advisors

Matthew D. Parks, P.E.

Elliot R. Smith, P.E.

MDP/ERS

cc: Amy Steffens, Township Planning & Development Coordinator
Fletcher Reyher, Township Staff Planner



File

P:\0000_0100\SITE_YpsilantiTwp\2018\0098181150_3160_WMichigan_Tennis_Facility\MUNI\02_DET ENG\Review #3\3160 W
Michigan_Tennis Facility_DE_3.docx

CHARTER TOWNSHIP OF YPSILANTI FIRE DEPARTMENT

BUREAU OF FIRE PREVENTION

222 South Ford Boulevard, Ypsilanti, MI 48198



December 12, 2022

Jason Iacoangeli, Planning Director
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: Detailed Engineering Review #3
Project Name: Tennis Facility
Project Location: 3160 W. Michigan Ave. Ypsilanti, MI 48197
Plan Date: 4/7/2022
Plan revision Date: 11/22/2022
Project Number: 21-291
Applicable Codes: IFC 2018
Engineer: Greentech Engineering Inc.
Engineer Address: 51147 Pontiac Trail, Wixom, MI 48393

Status of Review

Status of review: Approved as Submitted

All pages were reviewed.

Site Coverage - Access

Comments: Complies with IFC 2018

Sincerely,

A handwritten signature in black ink that reads "Steve Wallgren". The signature is written in a cursive style.

Steve Wallgren, Fire Marshal
Charter Township of Ypsilanti Fire Department
CFPS, CFI I



YPSILANTI COMMUNITY UTILITIES AUTHORITY

2777 STATE ROAD
YPSILANTI, MICHIGAN 48198-9112
TELEPHONE: 734-484-4600
WEBSITE: www.ycua.org

December 13, 2022

VIA ELECTRONIC MAIL

Mr. Jason Iacoangeli, Planning Director
Office of Community Standards
CHARTER TOWNSHIP OF YPSILANTI
7200 S. Huron River Drive
Ypsilanti, MI 48197

Re: Detailed Engineering Review #3
Ypsilanti Tennis Facility
3160 W. Michigan Avenue, Charter Township of Ypsilanti (Plan Date: 11-22-2022)

Dear Mr. Iacoangeli:

In response to the electronic mail message from your office dated November 29, 2022, we have reviewed the referenced plans with regards to water supply and wastewater system design. The plans are acceptable to YCUA pending resolution of the following comments.

1. There are discrepancies, albeit small, between the lengths of proposed water main shown in the plan view on sheet 5 and profile views.
2. The profile views of the proposed water main appear to show valves that are not shown in the plan views.
3. The proposed water main lengths shown in the plan view on sheet 5 shall also be shown on the plan views presented on the sheets showing the profile views.
4. The profile views of the proposed water main need to clearly delineate the size of the proposed pipe as there is no discernible difference between the 8" diameter pipe and the 12" diameter pipe.

Once the comments are satisfactorily addressed, the plans will be acceptable to be submitted for both the Act 399 water supply and Part 41 sanitary sewer construction permits. Preparation of the Permit Applications for review and signature/approval by the YCUA is the responsibility of the Applicant or the Applicant's design engineer. It is our understanding that the Michigan Department of Environment, Great Lakes, and Energy is still accepting plans electronically for the Act 399 water supply permitting process and via the MiWaters website for the Part 41 sanitary sewer permitting process.

As noted in the March 19, 2020, letter from this office, connection fees apply for the proposed building. A copy of the Estimate of Costs – Application for Services, also dated March 19, 2020, has been enclosed for reference. Please note that the total cash price for connection fees, **\$148,412.75 plus the construction phase escrow deposit, Authority administration fee, and**

Mr. Jason Iacoangeli
CHARTER TOWNSHIP OF YPSILANTI
December 13, 2022
Page 2

record plan guarantee, must be paid to the Authority by the Applicant, with a receipt delivered to the Township, before either the building or soil and grading permit is issued. The construction phase escrow deposit and associated fees and deposits and the entity responsible for maintaining those accounts will be determined during the Detailed Engineering phase of the project in conjunction with your office and the Township Engineer. Should there be any questions please contact this office.

Sincerely,



SDW Digital Signature

SCOTT D. WESTOVER, P.E., Engineering Manager
Ypsilanti Community Utilities Authority

cc: Mr. Luke Blackburn, Mr. Mike Shaffer, File, YCUA
Ms. Amy Steffens, Mr. Fletcher Reyher, Charter Township of Ypsilanti
Mr. Eric Copeland, Mr. Steve Wallgren, Township Fire Department
Mr. Matt Parks, P.E., Township Engineer
Mr. Gary Streight, P.E., WCRC
Ms. Theresa Marsik, P.E., WCWRC
Mr. Miodrag Rakic, Applicant
Mr. Dan LeClair, P.E., Applicant's design engineer



EVAN N. PRATT, P.E.

Water Resources Commissioner

705 N Zeeb Road
Ann Arbor, MI 48103
734-222-6860

Drains@washtenaw.org

Harry Sheehan
Chief Deputy Water Resources Commissioner

Scott Miller P.E.
Deputy Water Resources Commissioner

Theo Eggermont
Public Works Director

December 13, 2022

Luke Wenger, P.E.
GreenTech Engineering, Inc.
51147 W. Pontiac Trail
Wixom, Michigan 48393

RE: Ypsilanti Tennis Club
Ypsilanti Township, Michigan
WCWRC Project No. 5923

Dear Mr. Wenger:

This office has reviewed the construction plans for the above-referenced project to be located in Ypsilanti Township. These plans have a job number of 21-291, a date of November 22, 2022, and were received on November 29, 2022. As a result of our review, we would like to offer the following comments:

1. The design plans are technically correct and do not require revisions at this time. An approval letter will be issued upon payment of the attached invoice.
2. Please see the attached invoice for the current fees and remit these fees upon receipt. As requested, the invoice is being submitted directly to Ypsilanti Sports Center LLC.

If you have any questions, please contact our office.

Sincerely,

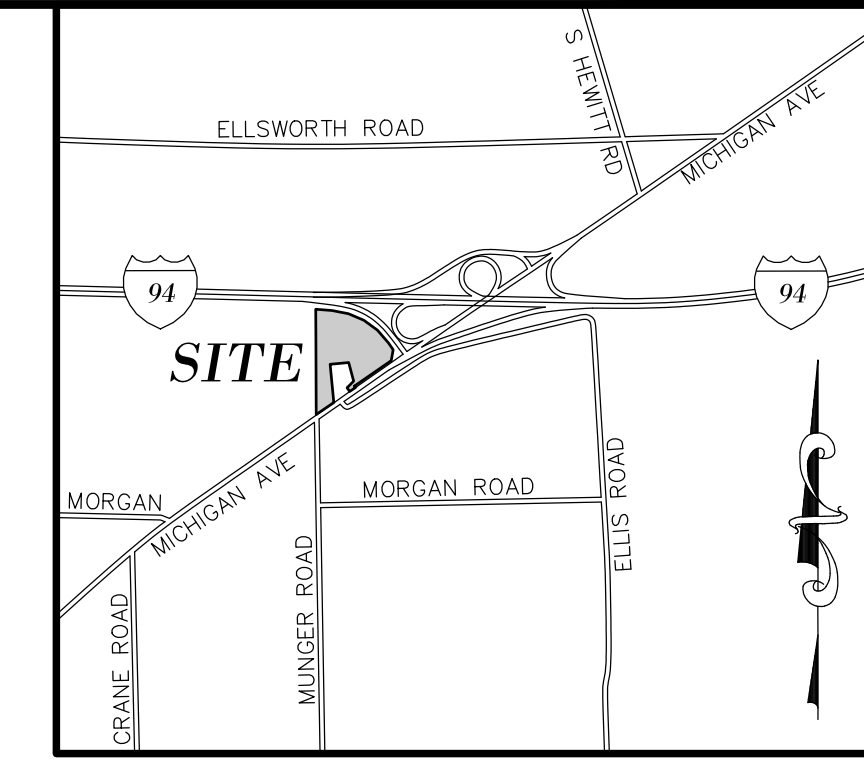
A handwritten signature in blue ink that reads "Theresa M. Marsik".

Theresa M. Marsik, P.E.
Stormwater Engineer
(approval\ypsilanti tennis club rev9)

cc: Miodrag Rakic, Ypsilanti Sports Center LLC
Jason Iacoangeli, Ypsilanti Township Planning Director
Belinda Kingsley, Office of Community Standards
Doug Winters, McLain and Winters
Elliot Smith, P.E., Ypsilanti Township Engineer (OHM)
John Tanner, P.E., Ypsilanti Township Engineer (OHM)

CONSTRUCTION PLANS for TENNIS FACILITY

PARCEL K-11-18-340-001
YPSILANTI TOWNSHIP,
WASHTENAW COUNTY, MICHIGAN



LOCATION MAP N.T.S.

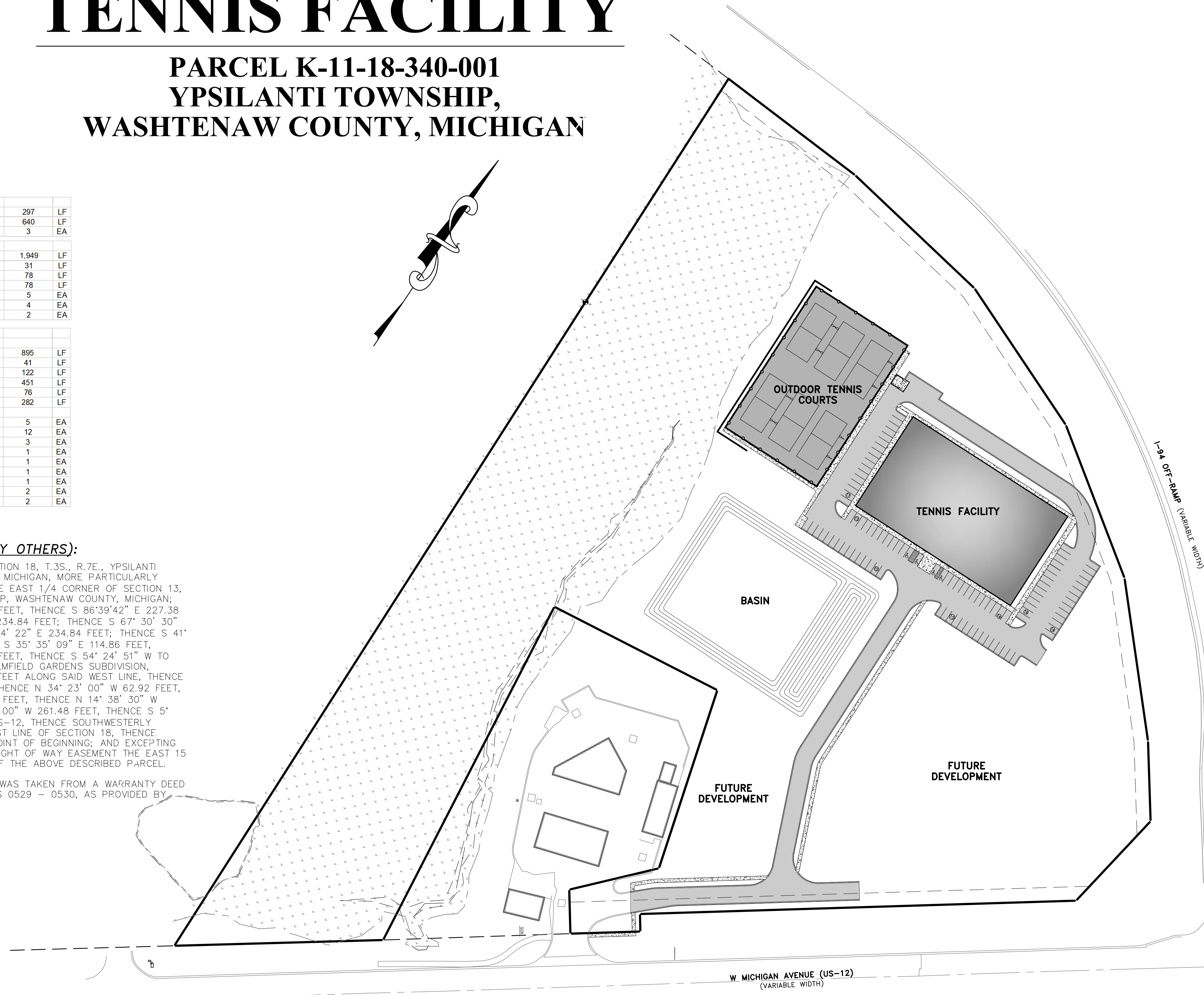
QUANTITIES LIST:

Sanitary Sewer		
6" PVC Sanitary Sewer Lead	297	LF
10" PVC Sanitary Sewer Main	640	LF
4" Manhole	3	EA
Water Main		
12" D.I.W.M.	1,949	LF
8" D.I.W.M.	31	LF
2" Type K Copper Water Lead	78	LF
6" Ductile Fire Suppression Lead	78	LF
Hydrant	5	EA
12" Gate Valve	4	EA
8" Gate Valve	2	EA
Storm Sewer		
Storm Pipe		
12" CL-IV	895	LF
15" CL-IV	41	LF
18" CL-IV	122	LF
21" CL-IV	451	LF
24" CL-IV	76	LF
30" CL-IV	282	LF
Storm Structures		
2" Inlet	5	EA
4" Catch Basin	12	EA
5" Catch Basin	3	EA
4" Manhole	1	EA
12" End Section	1	EA
15" End Section	1	EA
24" End Section	1	EA
30" End Section	2	EA
OCS Structure	2	EA

LEGAL DESCRIPTION (BY OTHERS):

PART OF THE WEST 1/2 OF SECTION 18, T.3S., R.7E., YPSILANTI TOWNSHIP, WASHTENAW COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS BEGINNING AT THE EAST 1/4 CORNER OF SECTION 13, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN; THENCE N 1° 03' 30" W 378.14 FEET, THENCE S 86° 39' 42" E 227.38 FEET, THENCE S 80° 16' 38" E 234.84 FEET; THENCE S 67° 30' 30" E 234.84 FEET; THENCE S 54° 44' 22" E 234.84 FEET; THENCE S 41° 58' 14" E 234.84 FEET; THENCE S 35° 35' 09" E 114.86 FEET, THENCE S 9° 24' 51" W 155.56 FEET, THENCE S 54° 24' 51" W TO THE WEST LINE OF LOT 11 OF ELMFIELD GARDENS SUBDIVISION, THENCE SOUTHEASTERLY 25.00 FEET ALONG SAID WEST LINE, THENCE S 54° 24' 51" W 100.00 FEET, THENCE N 34° 23' 00" W 62.92 FEET, THENCE N 43° 39' 30" E 131.69 FEET, THENCE N 14° 38' 30" W 267.84 FEET, THENCE S 84° 24' 00" W 261.48 FEET, THENCE S 5° 36' 00" E TO NORTH LINE OF US-12, THENCE SOUTHWESTERLY ALONG SAID NORTH LINE TO WEST LINE OF SECTION 18, THENCE ALONG SAID SECTION LINE TO POINT OF BEGINNING; AND EXCEPTING THEREFROM AS A PERMANENT RIGHT OF WAY EASEMENT THE EAST 15 FEET OF THE WEST 47.5 FEET OF THE ABOVE DESCRIBED PARCEL.

NOTE: THE ABOVE DESCRIPTION WAS TAKEN FROM A WARRANTY DEED RECORDED IN LIBER 3718, PAGES 0529 - 0530, AS PROVIDED BY THE CLIENT.



SHEET INDEX:

- 1 COVER SHEET
- 2 DIMENSION & PAVING PLAN
- 3 EXISTING CONDITIONS & DEMO PLAN
- 4 GRADING PLAN
- 5 UTILITY PLAN
- 6 SOIL EROSION & SEDIMENTATION CONTROL PLAN
- 7 SANITARY PLAN/PROFILE
- 8-9 STORM SEWER PLAN/PROFILES
- 10-11 WATER MAIN PLAN/PROFILES
- 12 DRAINAGE AREA PLAN
- 13 BASIN CALCULATIONS
- 14 STORM WATER CALCULATIONS
- 15 ADA GRADING DETAILS
- 16 FIRE TRUCK CIRCULATION PLAN
- 17 SITE DETAILS

- L-1 LANDSCAPE PLAN
- L-2 LANDSCAPE DETAILS
- L-3 WOODLAND PLAN
- L-4 TREE LIST
- L-5 STORMWATER PLAN
- 1 OF 1 PHOTOMETRIC PLAN

YPSILANTI TOWNSHIP STANDARD DETAILS:

- STANDARD SANITARY SEWER DETAILS
- STANDARD SANITARY SEWER DETAILS
- STANDARD WATER MAIN DETAILS
- STANDARD WATER MAIN DETAILS
- STANDARD WATER MAIN DETAILS
- STANDARD WATER MAIN DETAILS
- STANDARD WATER MAIN DETAILS
- STANDARD STORM SEWER DETAILS
- STANDARD STORM SEWER DETAILS
- SOIL EROSION CONTROL DETAILS

APPLICANT/OWNER:

MIDRAG RAKIC
7751 WHIRLAWAY DR
SALINE, MI 48176

SURVEYOR/ENGINEER:

GREENTECH ENGINEERING, INC.
51147 W. PONTIAC TRAIL
WIXOM, MI 48393
PHONE: (248) 668-0700
FAX: (248) 668-0701
CONTACT: DAN LECLAIR, P.E.

LANDSCAPE ARCHITECT:

ALLEN DESIGN
ATTN: JIM ALLEN
557 CARPENTER
NORTHVILLE, MI 48167
(248) 467-4668
jca@wideopenwest.com

GREENTECH ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS
51147 Pontiac Trail, Wixom, MI 48393
Phone: (248) 668-0700 Fax: (248) 668-0701

RESIDENTIAL: Subdivisions, Multi-Family, Site Planning, Surveying, Boundary, Easement, Land Surveying
COMMERCIAL: Site Planning, Industrial, Multi-Unit, Land Surveying
SURVEYING: Boundary, Easement, Topographic, Precipitation, Construction Staking

811
Know what's below
Call before you dig.

CLIENT: SCHAFER CONSTRUCTION

COVER SHEET

PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
SECTION: 18 TOWNSHIP: 3 S RANGE: 7 E
YPSILANTI TOWNSHIP
WASHTENAW COUNTY
MICHIGAN

REVISED

2022-6-10 PER YOUA & WCMRC REVIEW
2022-11-22 PER YOUA, OHM & WCMRC REVIEW
2023-2-6 PER YOUA, OHM & EGLE REVIEW

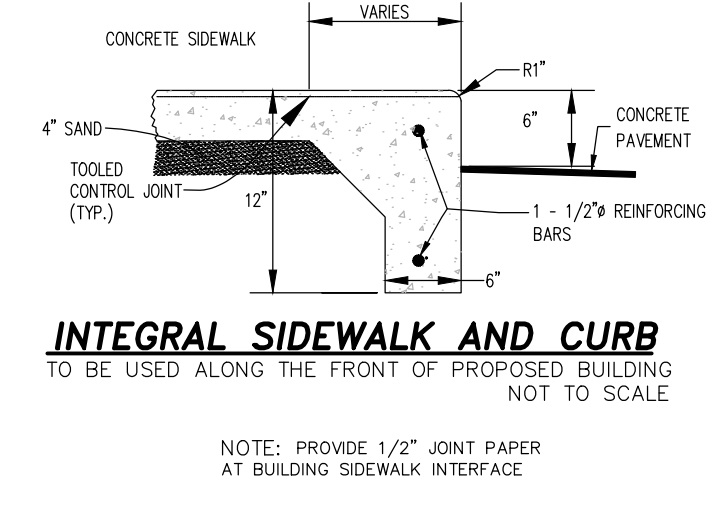
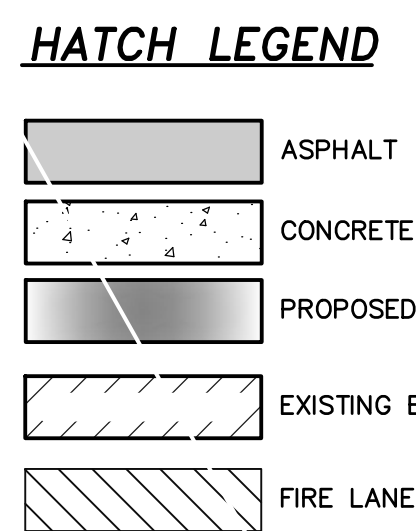
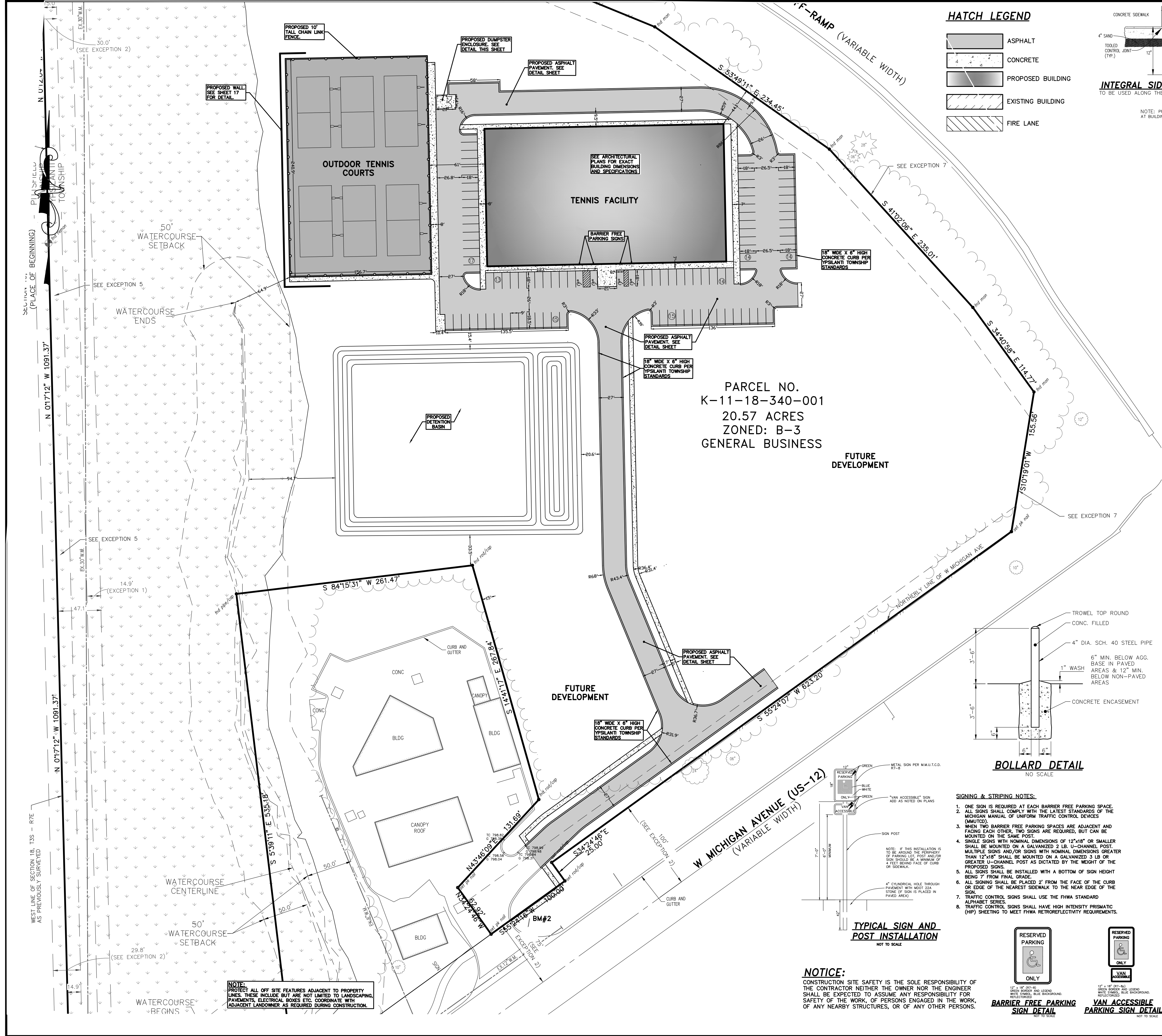
DATE: 4-7-2022
DRAWN BY: LW
CHECKED BY: DJL

FBK: --
CHF: --

SCALE HOR 1" = 80 FT.
VER 1" = -- FT.

1
21-291





SITE ADDRESS
3160 W. MICHIGAN AVENUE, YPSILANTI, MI 48197

CURRENT ZONING:
b-3, GENERAL BUSINESS

SITE AREA:
TOTAL SITE AREA: 20.57 ACRES

BUILDING SETBACKS:

FRONT (L-94)
REQUIRED: 20 FEET
PROVIDED: 45 FEET

FRONT (MICHIGAN AVE)
REQUIRED: 20 FEET
PROVIDED: +500 FEET

SIDES:
REQUIRED: 10 FEET (EACH SIDE)
PROVIDED: +250 FEET

WATERCOURSE:
REQUIRED: 50 FEET
PROVIDED: 65 FEET FOR TENNIS COURTS
82 FEET FOR DETENTION POND

BUILDING HEIGHT:
MAXIMUM BUILDING HEIGHT ALLOWED: 25 FEET
PROPOSED BUILDING HEIGHT: 29 FEET

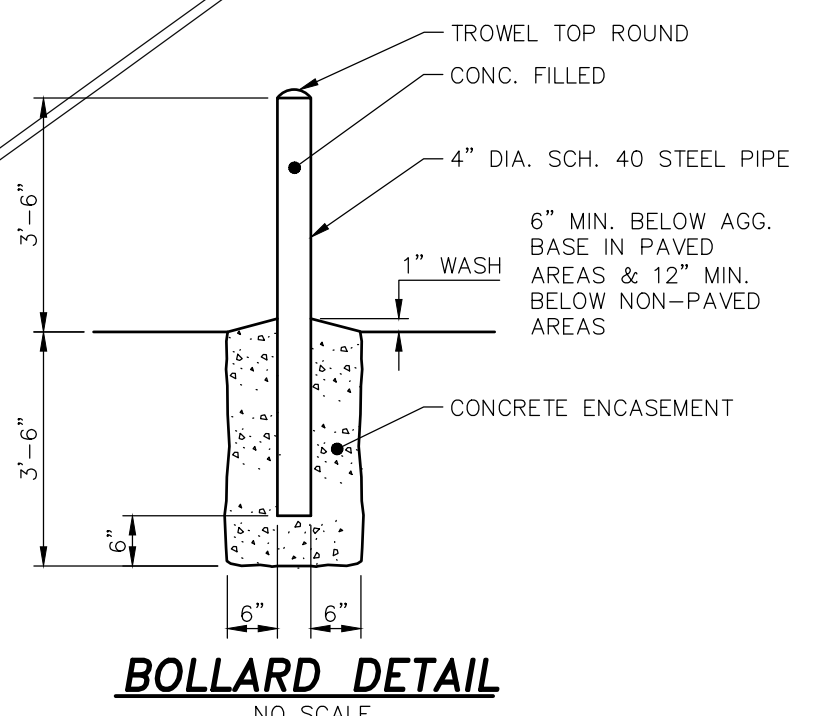
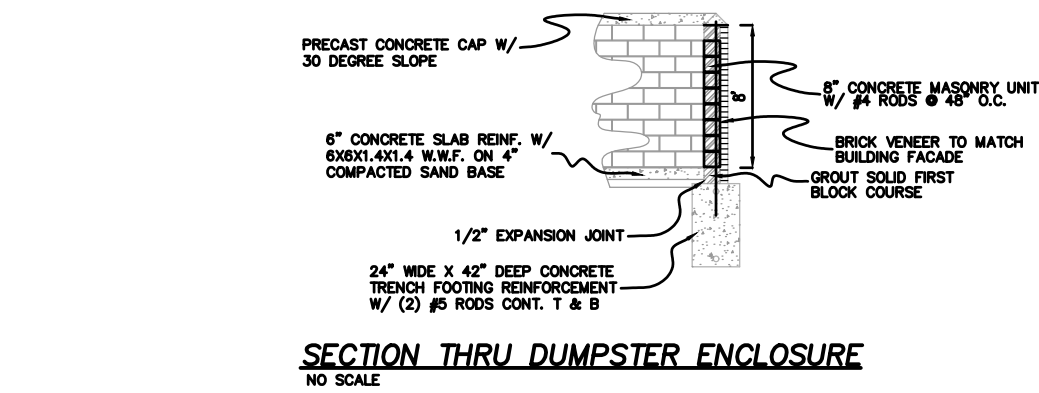
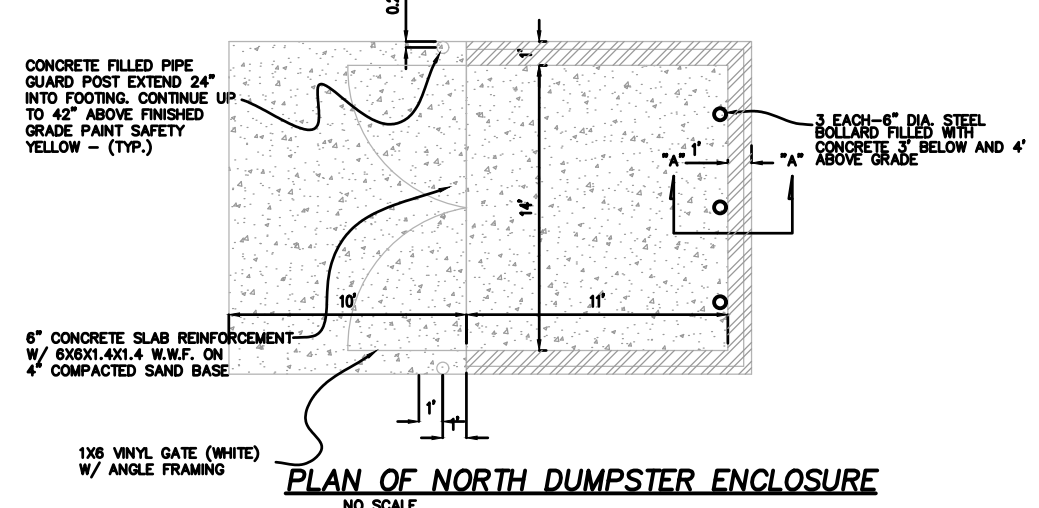
*VARIANCE FOR BUILDING HEIGHT REQUESTED.

NOTICE:
THIS SITE WILL BE DESIGNED TO MEET THE REQUIREMENTS OF THE WASHTENAW COUNTY STORMWATER ORDINANCE.

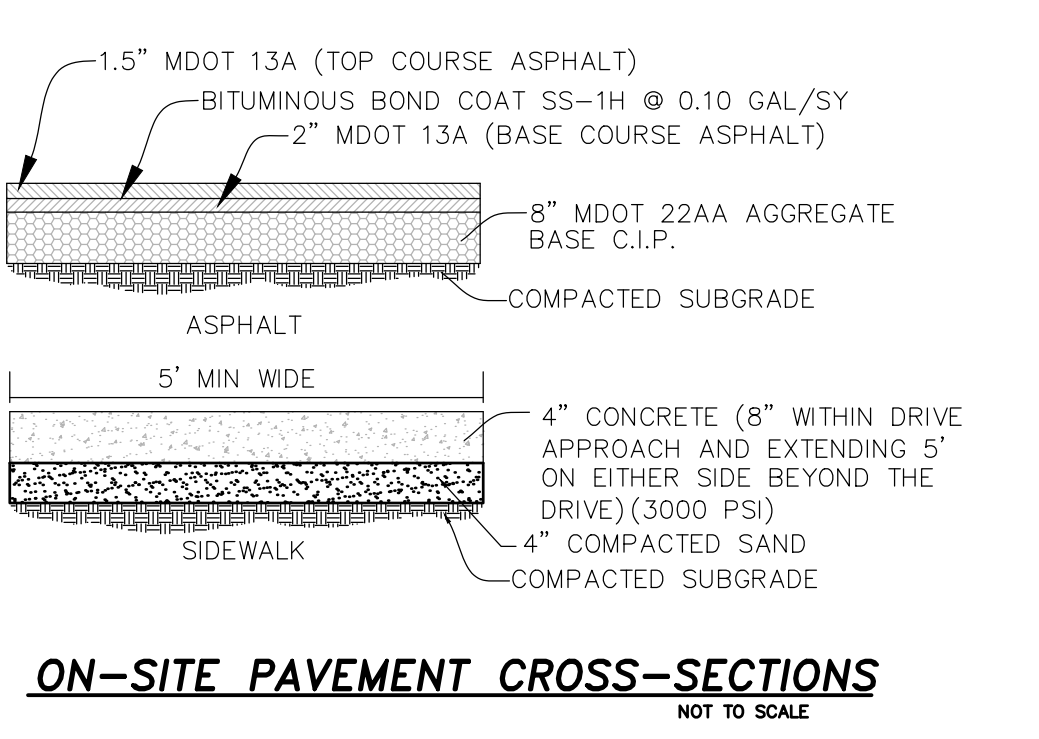
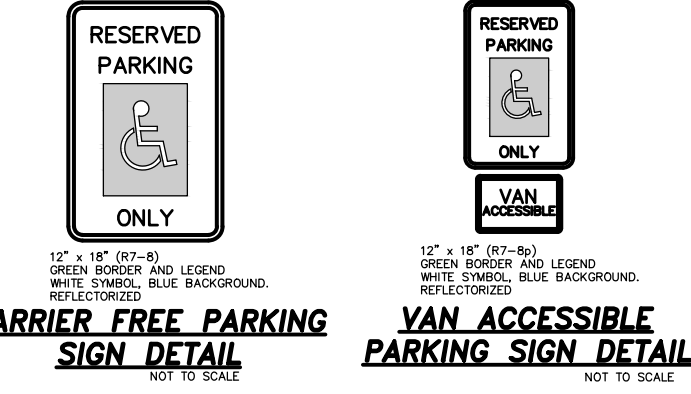
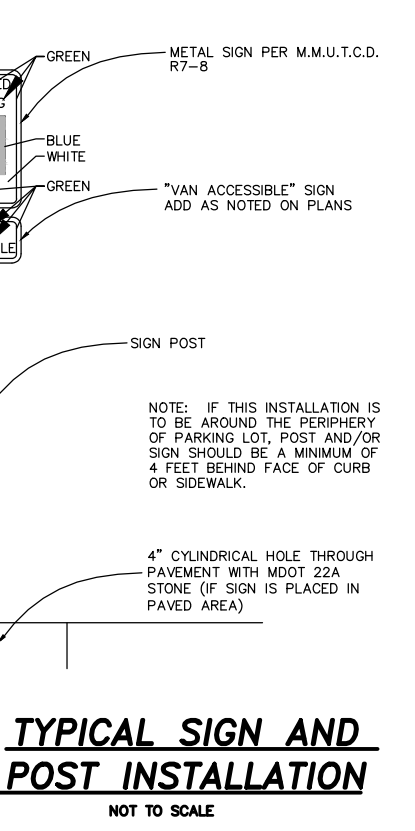
GENERAL NOTES:
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

- ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH WASHTENAW COUNTY AND YPSILANTI TOWNSHIP CURRENT STANDARDS AND SPECIFICATIONS.
- ALL ON SITE SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH MMUTCD. PARKING STALL STRIPING SHALL BE 4" WIDE (SINGLE) AND YELLOW.

PARKING TABLE		
	REQUIRED	PROVIDED
TENNIS FACILITY: 6 SPACES PER COURT	11 COURTS X 6 = 66 SPACES	98
RETAIL: 1 PER 250 SQFT	840 SQFT / 250 SQFT = 4 SPACES	
GYMS/ATHLETIC FACILITIES: 1 PER MAXIMUM OCCUPANCY PLUS 1 PER EMPLOYEE	18+10 EMPLOYEES = 28 SPACES	
BARRIER FREE	3	4
TOTAL	101 SPACES	102 SPACES



- SIGNING & STRIPING NOTES:**
- ONE SIGN IS REQUIRED AT EACH BARRIER FREE PARKING SPACE.
 - ALL SIGNS SHALL COMPLY WITH THE LATEST STANDARDS OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).
 - WHEN TWO BARRIER FREE PARKING SPACES ARE ADJACENT AND FACING EACH OTHER, TWO SIGNS ARE REQUIRED, BUT CAN BE MOUNTED ON THE SAME POST.
 - SINGLE SIGNS WITH NOMINAL DIMENSIONS OF 12"x18" OR SMALLER SHALL BE MOUNTED ON A GALVANIZED 2 LB. U-CHANNEL POST. MULTIPLE SIGNS AND/OR SIGNS WITH NOMINAL DIMENSIONS GREATER THAN 12"x18" SHALL BE MOUNTED ON A GALVANIZED 3 LB OR GREATER U-CHANNEL POST AS DICTATED BY THE WEIGHT OF THE PROPOSED SIGNS.
 - ALL SIGNS SHALL BE INSTALLED WITH A BOTTOM OF SIGN HEIGHT BEING 7" FROM FINAL GRADE.
 - ALL SIGNING SHALL BE PLACED 2' FROM THE FACE OF THE CURB OR EDGE OF THE NEAREST SIDEWALK TO THE NEAR EDGE OF THE SIGN.
 - TRAFFIC CONTROL SIGNS SHALL USE THE FHWA STANDARD ALPHABET SERIES.
 - TRAFFIC CONTROL SIGNS SHALL HAVE HIGH INTENSITY PRISMATIC (HIP) SHEETING TO MEET FHWA RETROREFLECTIVITY REQUIREMENTS.



NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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Know what's below
Call before you dig.

CLIENT: SCHAFFER CONSTRUCTION

SITE / DIMENSION PLAN

PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
RANGE: 7 E.
SECTION: 18
TOWNSHIP: 3 S
YPSILANTI TOWNSHIP
WASHTENAW COUNTY
MICHIGAN

REVISED	
2022-6-10	PER YOUNG & WICKREW REVIEW
2022-11-22	PER YOUNG, OHM & WICKREW REVIEW
2023-2-8	PER YOUNG, OHM & EGLE REVIEW

DATE: 4-7-2022

DRAWN BY: LW

CHECKED BY: DJL

SCALE: 1"=50 FT.
VER: 1"=1 FT.

2

21-291

BENCHMARK:

BM 1
SET NAIL IN NORTH FACE OF POWER POLE, NORTHERLY LINE OF MICHIGAN AVE (US -21), SOUTHWEST OF DRIVE. ELEVATION: 793.27 (NAVD 88)

BM 2
SET 'X' IN EASTERLY FLANGE BOLT OF HYDRANT, NORTHERLY LINE OF MICHIGAN AVE (US -21), NORTHWEST OF DRIVE. ELEVATION: 796.97 (NAVD 88)

LEGAL DESCRIPTION (BY OTHERS):

PART OF THE WEST 1/2 OF SECTION 18, T.35., R.7E., YPSILANTI TOWNSHIP, WASHTENAW COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS BEGINNING AT THE EAST 1/4 CORNER OF SECTION 13, T.35., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN; THENCE N 1° 03' 30" W 378.14 FEET, THENCE S 86°39'42" E 227.38 FEET, THENCE S 80° 16' 38" E 234.84 FEET; THENCE S 67° 30' 30" E 234.84 FEET; THENCE S 54° 44' 22" E 234.84 FEET; THENCE S 41° 58' 14" E 234.84 FEET; THENCE S 35° 35' 09" E 114.86 FEET, THENCE S 9° 24' 51" W 155.56 FEET, THENCE S 54° 24' 51" W TO THE WEST LINE OF LOT 11 OF ELMFIELD GARDENS SUBDIVISION, THENCE SOUTHEASTERLY 25.00 FEET ALONG SAID WEST LINE, THENCE S 54° 24' 51" W 100.00 FEET, THENCE N 34° 23' 00" W 62.92 FEET, THENCE N 43° 39' 30" E 131.69 FEET, THENCE N 14° 38' 30" W 267.84 FEET, THENCE S 84° 24' 00" W 261.48 FEET, THENCE S 5° 36' 00" E TO NORTH LINE OF US-12, THENCE SOUTHWESTERLY ALONG SAID NORTH LINE TO WEST LINE OF SECTION 18, THENCE ALONG SAID SECTION LINE TO POINT OF BEGINNING, AND EXCEPTING THEREFROM AS A PERMANENT RIGHT OF WAY EASEMENT THE EAST 15 FEET OF THE WEST 47.5 FEET OF THE ABOVE DESCRIBED PARCEL.

NOTE: THE ABOVE DESCRIPTION WAS TAKEN FROM A WARRANTY DEED RECORDED IN LIBER 3718, PAGES 0529 - 0530, AS PROVIDED BY THE CLIENT.

NOTES:

- 1) THE LOCATION OF UTILITIES DEPICTED ON THIS DRAWING WERE DETERMINED FROM ON-SITE OBSERVATION AND FROM RECORDS PROVIDED BY OTHERS. SOME UTILITIES MAY NOT BE SHOWN, BUT ARE PRESENT. UTILITIES MAY NOT BE IN THE EXACT POSITION SHOWN. BEFORE CONSTRUCTION OR ANY SUBSURFACE WORK CONTACT MISS DIG AND EXERCISE CAUTION.
- 2) FLEIS AND VANDENBRINK ENGINEERING, INC. HAS NOT REVIEWED THIS PROJECT FOR ENVIRONMENTAL CONCERNS, OR SOIL CONTENT.
- 3) THE WETLAND LINE DEPICTED ON THIS DRAWING IS ACCORDING TO FLAGS LOCATED BY FLEIS AND VANDENBRINK ENGINEERING, INC. AS PLACED BY MARX WETLANDS, LLC, DECEMBER, 2018.
- 4) THE CONTOURS DEPICTED ON THIS DRAWING WERE GENERATED FROM A TOPOGRAPHIC SURVEY COMPLETED BY FLEIS AND VANDENBRINK ENGINEERING, INC. CONTOUR INTERVAL = 1'
- 5) BEARINGS ARE BASED ON: N 001°7'12" W ON THE WEST LINE OF SECTION 18, T35 - R7E PER AN ALTA / ACSM SURVEY PREPARED BY BARTON AND KING ENGINEERS, DATED OCTOBER, 2001.
- 6) THE VERTICAL DATUM USED FOR THIS PROJECT IS: NAVD 88
- 7) THE EASEMENT(S) DEPICTED ON THIS DRAWING WERE TAKEN FROM DOCUMENTS PROVIDED BY THE CLIENT. NO TITLE POLICY HAS BEEN PROVIDED TO FLEIS AND VANDENBRINK, ENGINEERING, INC. AT THIS TIME.
- 8) ACCORDING TO THE CONDITIONAL REZONING AGREEMENT, THE SUBJECT PROPERTY IS CONDITIONALLY REZONED TO B-3, GENERAL BUSINESS, TO DEVELOP THE PROPERTY FOR INTENDED USE, ACCORDING TO THE DOCUMENT PROVIDED BY THE CLIENT.
- 9) ACCORDING TO FEMA FLOOD INSURANCE RATE MAP, COMMUNITY PANEL 26161C0406E, EFFECTIVE MARCH 3, 2012, THE SUBJECT PROPERTY IS LOCATED WITHIN FLOOD ZONE 'X' WHICH IS DESCRIBED AS AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.
- 11) THE TREE SURVEY LOCATIONS AND TAG NUMBERS DEPICTED ON THIS DRAWING WERE PROVIDED BY MARX WETLANDS, LLC. THE TREES DEPICTED ON THIS DRAWING WITH SIZE AND NO TAG NUMBER WERE FIELD LOCATED BY FLEIS AND VANDENBRINK ENGINEERING, INC. AND WERE NOT LOCATED AS PART OF THE TREE SURVEY COMPLETED BY MARX WETLANDS, LLC.
- 12) ANY ELECTRONIC REPRODUCTION OF THIS SURVEY SHOWING A COPY OF THE SIGNATURE AND IMPRESSION OF A PROFESSIONAL SURVEYOR'S SEAL IS PROVIDED FOR COURTESY PURPOSES ONLY AND SHALL NOT BE CONSIDERED AS THE ACTUAL SURVEY DOCUMENT. FLEIS & VANDENBRINK ENGINEERING, INC. IS NOT RESPONSIBLE FOR ANY UNAUTHORIZED USE, MISUSE OR COPY OF THIS DOCUMENT. THE ORIGINAL OF THIS DOCUMENT SHOWS THE RAISED STAMP AND HAS BEEN SIGNED USING BLUE INK.

EXCEPTIONS

- EXCEPTION 1 - LIBER 2008, PAGES 723 THRU 727: A 15 FOOT WIDE EASEMENT TO THE YPSILANTI COMMUNITY UTILITIES AUTHORITY TO CONSTRUCT, MAINTAIN, OPERATE AND REPAIR UNDERGROUND PIPELINES. (PLOTTED ON DRAWING)
 - EXCEPTION 2 - LIBER 1523, PAGES 921 THRU 922: AN ADDITIONAL 25 FOOT (75 FOOT TOTAL) RIGHT OF WAY INCLUSIVE OF LOTS 7 THRU 10 AND AN ADDITIONAL 50 FOOT (100 FOOT TOTAL) RIGHT OF WAY INCLUSIVE OF LOTS 11 THRU 24 OF "ELMFIELD GARDENS SUBDIVISION". (PLOTTED ON DRAWING)
 - EXCEPTION 3 - LIBER 1352, PAGES 644 THRU 646: A 30 FOOT WIDE EASEMENT TO HURON UTILITIES ASSOCIATION TO CONSTRUCT, MAINTAIN AND REPAIR UNDERGROUND PIPE LINES OR MAINS FOR THE PURPOSE OF CONVEYING SEWAGE. (PLOTTED ON DRAWING)
 - EXCEPTION 4 - LIBER 266, PAGES 546 THRU 548: A 100 FOOT WIDE RELEASE OF RIGHT OF WAY TO THE STATE OF MICHIGAN. SAID 100 FOOT RIGHT OF WAY HAS BEEN WIDENED AND IS NO LONGER 100 FOOT ALONG THE NORTHERLY LINE OF WEST MICHIGAN AVENUE.
 - EXCEPTION 5 - LIBER 594, PAGE 546: A BLANKET EASEMENT TO THE DETROIT EDISON COMPANY TO CONSTRUCT, OPERATE AND MAINTAIN UTILITY LINES IN A NORTHERLY AND SOUTHERLY DIRECTION OVER AND ACROSS THE SUBJECT PROPERTY.
 - EXCEPTION 6 - LIBER 337, PAGES 385 THRU 386: A BLANKET TO WASHTENAW GAS COMPANY TO CONSTRUCT, OPERATE AND MAINTAIN GAS PIPE LINES WITHIN THE SUBJECT PROPERTY.
 - EXCEPTION 7 - LIBER 1520, PAGES 965 THRU 966: LIMITED ACCESS RIGHT OF WAY.
- NOTE: THE ABOVE EXCEPTIONS WERE PROVIDED BY THE CLIENT.

SOILS INFORMATION:

- Gf - GILFORD SANDY LOAM, TILL PLAIN, 0 TO 2 PERCENT SLOPES
- Hn - HOUGHTON MUCK, DISINTEGRATION MORAIN, 0 TO 2 PERCENT SLOPES
- Osc - OSHTEMO LOAMY SAND, 6 TO 12 PERCENT SLOPES
- Pe - PEWAMO CLAY LOAM, 0 TO 2 PERCENT SLOPES
- Spb - SPIONKS LOAMY SAND, 0 TO 2 PERCENT SLOPES

FLOOD HAZARD STATEMENT:

THIS PROPERTY IS LOCATED WITHIN A FEMA DESIGNATED ZONE X FLOOD HAZARD AREA AS SHOWN ON NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FOR MICHIGAN FLOOD INSURANCE RATE MAP (FIRM) #26161C0406E (COMMUNITY ID NO. 260623 - CHARTER TOWNSHIP OF PITTSFIELD, MI) WITH AN EFFECTIVE DATE OF APRIL 3, 2012. THIS STATEMENT IS BASED ON THE RESULTS OF GRAPHIC PLOTTING ONTO THE ABOVE NAMED MAP AND PANEL, WHICH IS THE CURRENT MAP FOR THE COMMUNITY IN WHICH THE PROPERTY IS LOCATED. ZONE "X" INDICATES AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.

NOTICE:

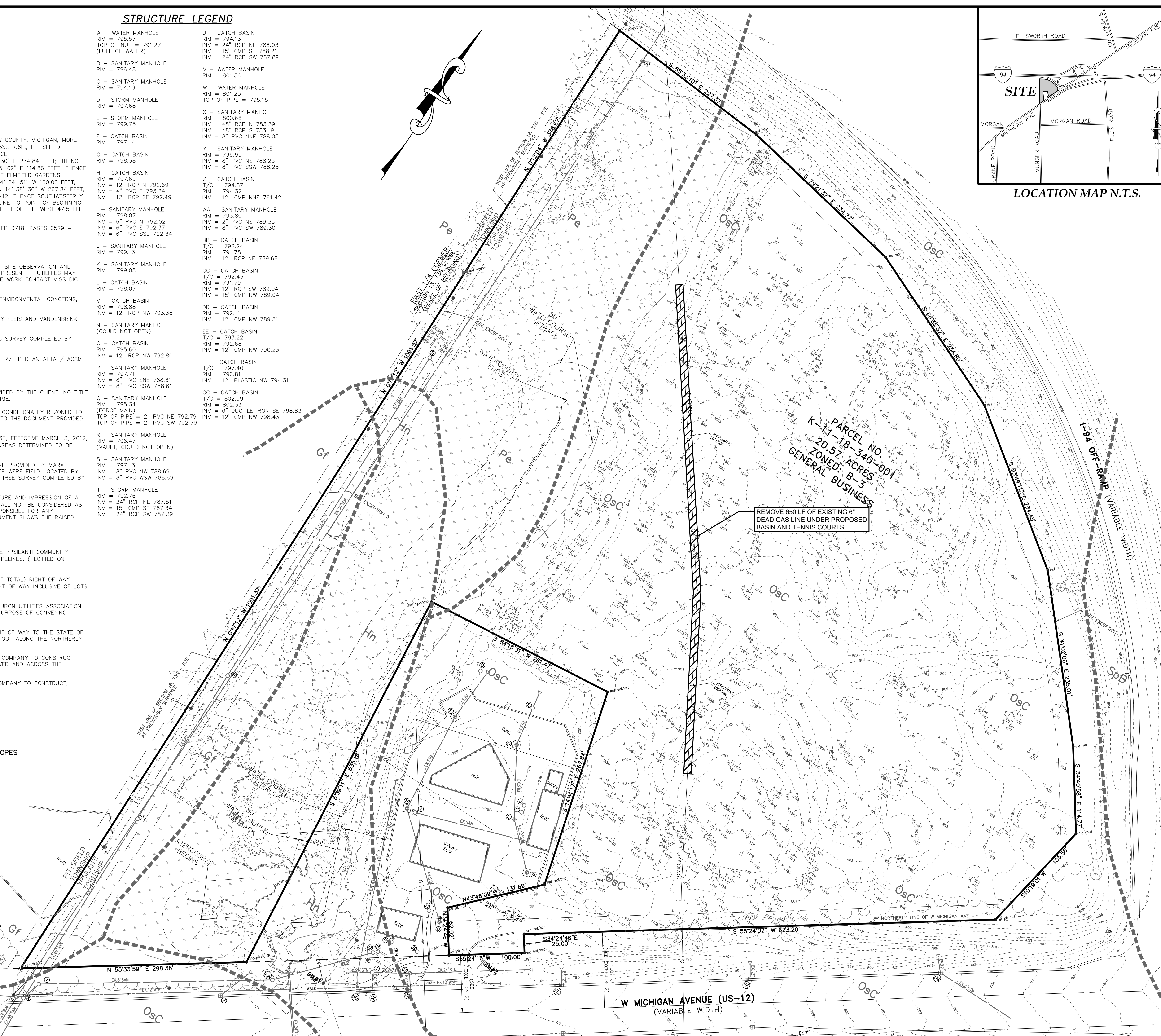
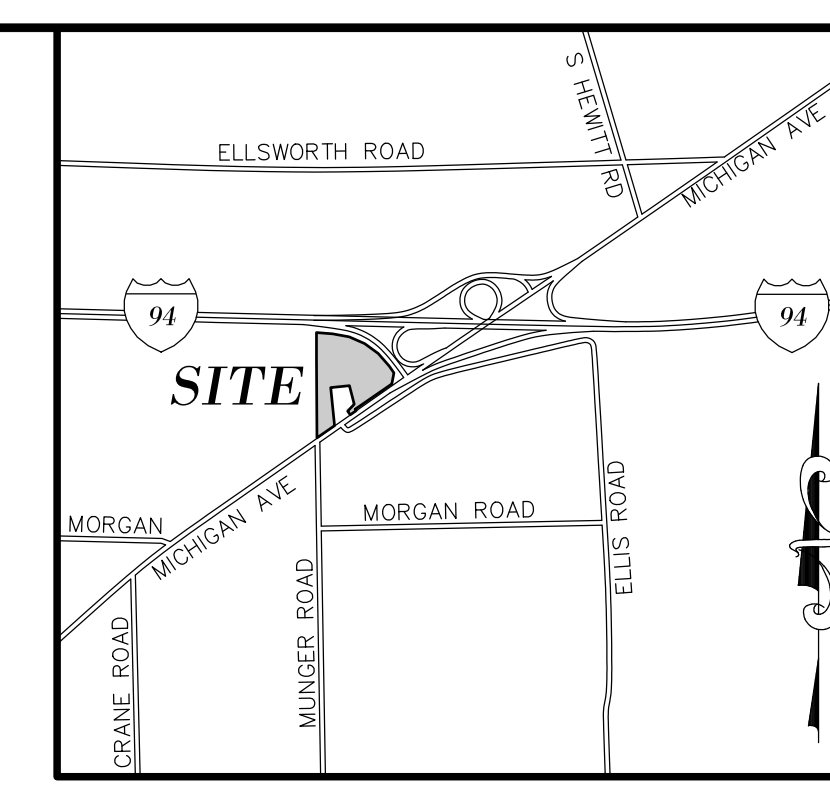
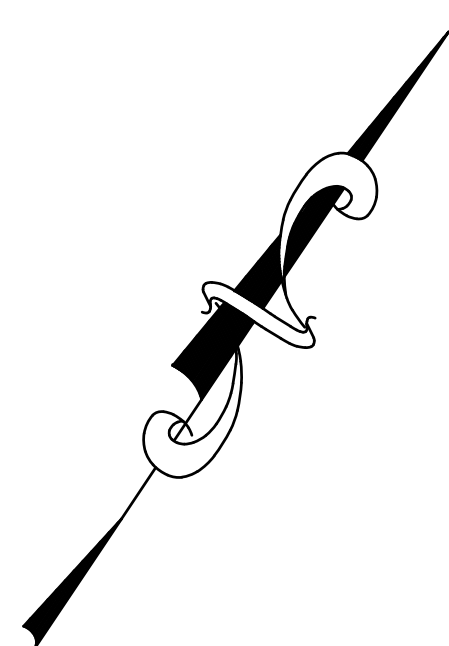
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR THE SAFETY OF PERSONS ENGAGED IN THE WORK OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

NOTE:

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.

STRUCTURE LEGEND

- A - WATER MANHOLE
RIM = 794.13
TOP OF NUT = 791.27
(FULL OF WATER)
- B - SANITARY MANHOLE
RIM = 796.48
- C - SANITARY MANHOLE
RIM = 794.10
- D - STORM MANHOLE
RIM = 797.68
- E - STORM MANHOLE
RIM = 799.75
- F - CATCH BASIN
RIM = 797.14
- G - CATCH BASIN
RIM = 798.38
- H - CATCH BASIN
RIM = 797.69
INV = 12" RCP N 792.69
INV = 4" PVC E 793.24
INV = 12" RCP SE 792.49
- I - SANITARY MANHOLE
RIM = 798.07
INV = 6" PVC N 792.52
INV = 6" PVC E 792.37
INV = 6" PVC SSE 792.34
- J - SANITARY MANHOLE
RIM = 799.13
- K - SANITARY MANHOLE
RIM = 799.08
- L - CATCH BASIN
RIM = 798.07
- M - CATCH BASIN
RIM = 798.88
INV = 12" RCP NW 793.38
- N - SANITARY MANHOLE
(COULD NOT OPEN)
- O - CATCH BASIN
RIM = 795.60
INV = 12" RCP NW 792.80
- P - SANITARY MANHOLE
RIM = 797.71
INV = 8" PVC ENE 788.61
INV = 8" PVC SSW 788.61
- Q - SANITARY MANHOLE
RIM = 795.24
(FORCE MAIN)
TOP OF PIPE = 2" PVC NE 792.79
TOP OF PIPE = 2" PVC SW 792.79
- R - SANITARY MANHOLE
RIM = 796.47
(VAULT, COULD NOT OPEN)
- S - SANITARY MANHOLE
RIM = 797.13
INV = 8" PVC NW 788.69
INV = 8" PVC WSW 788.69
- T - STORM MANHOLE
RIM = 792.76
INV = 24" RCP NE 787.51
INV = 15" CMP SE 787.34
INV = 24" RCP SW 787.39
- U - CATCH BASIN
RIM = 794.32
INV = 24" RCP NE 788.03
INV = 15" CMP SE 788.21
INV = 24" RCP SW 787.89
- V - WATER MANHOLE
RIM = 801.56
- W - WATER MANHOLE
RIM = 801.23
TOP OF PIPE = 795.15
- X - SANITARY MANHOLE
RIM = 800.68
INV = 48" RCP N 783.39
INV = 48" RCP S 783.19
INV = 8" PVC NNE 788.05
- Y - SANITARY MANHOLE
RIM = 799.95
INV = 8" PVC NE 788.25
INV = 8" PVC SSW 788.25
- Z - CATCH BASIN
RIM = 794.87
INV = 4" PVC E 793.24
INV = 12" RCP SE 792.49
- AA - SANITARY MANHOLE
RIM = 793.80
INV = 2" PVC NE 789.35
INV = 8" PVC SW 789.30
- BB - CATCH BASIN
T/C = 792.24
RIM = 791.78
INV = 12" RCP NE 789.68
- CC - CATCH BASIN
T/C = 792.43
RIM = 791.79
INV = 12" RCP SW 789.04
INV = 15" CMP NW 789.04
- DD - CATCH BASIN
RIM = 792.11
INV = 12" CMP NW 789.31
- EE - CATCH BASIN
T/C = 793.22
RIM = 792.68
INV = 12" CMP NW 790.23
- FF - CATCH BASIN
RIM = 796.81
INV = 12" PLASTIC NW 794.31
- GG - CATCH BASIN
T/C = 802.99
RIM = 802.33
INV = 6" DUCTILE IRON SE 798.83
INV = 12" CMP NW 798.43



RESIDENTIAL
Subdivisions
Multi-Family
COMMERCIAL
Site Planning
Industrial/Multi-Unit
Land Surveying
SURVEYING
Boundary Surveys
Topographic Surveys
Project Setbacks
Construction Staking

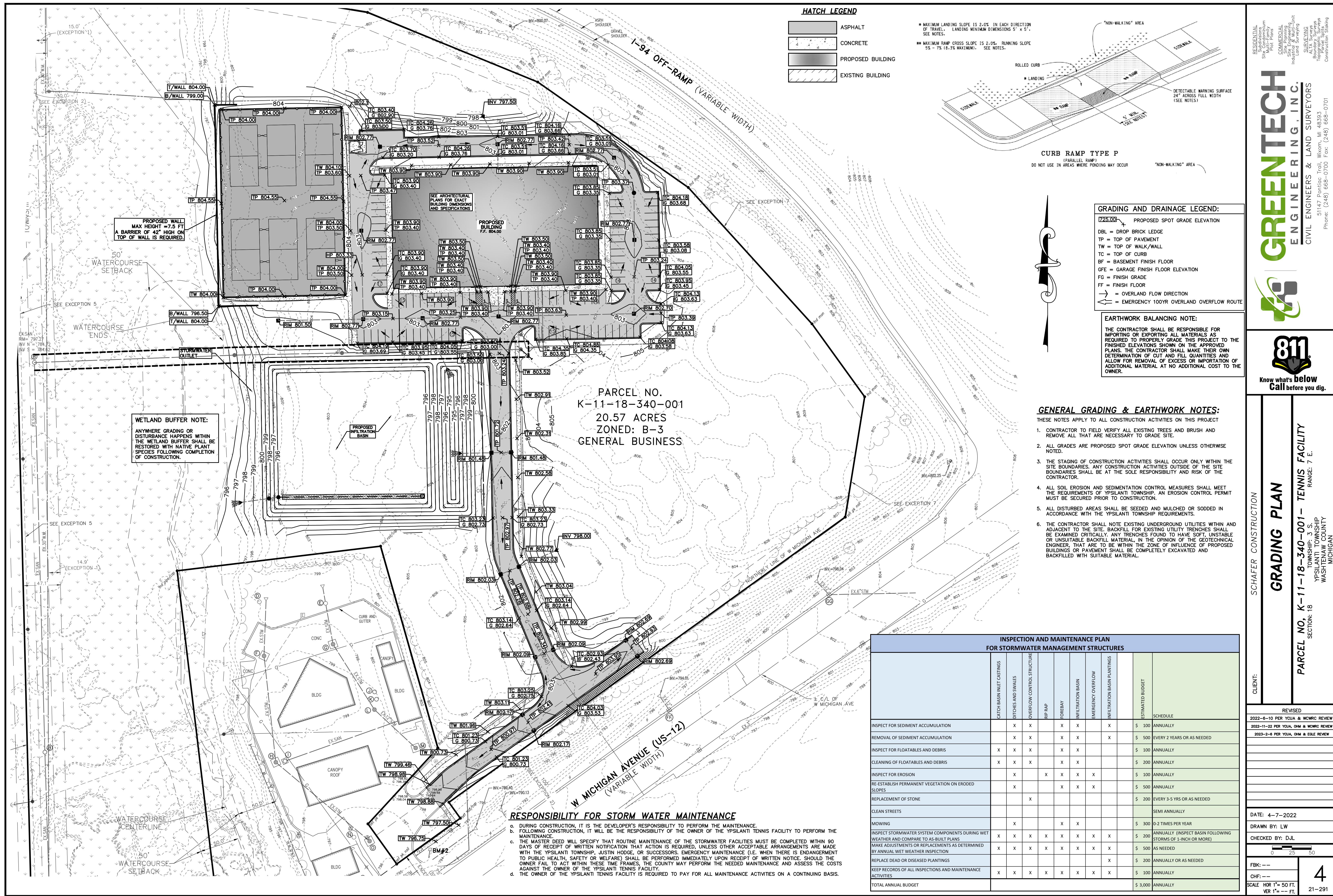
GREENTECH
ENGINEERING, INC.
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Phone: (248) 668-0700 Fax: (248) 668-0701

811
Know what's below
Call before you dig.

CLIENT: SCHAFER CONSTRUCTION
EXISTING CONDITIONS & DEMO PLAN
PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
SECTION: 18
TOWNSHIP: 3 S
COUNTY: WASHTENAW COUNTY, MICHIGAN

REVISED
2022-6-10 PER YOJA & WCMRC REVIEW
2022-11-22 PER YOJA, CHM & WCMRC REVIEW
2023-2-6 PER YOJA, CHM & EGLE REVIEW

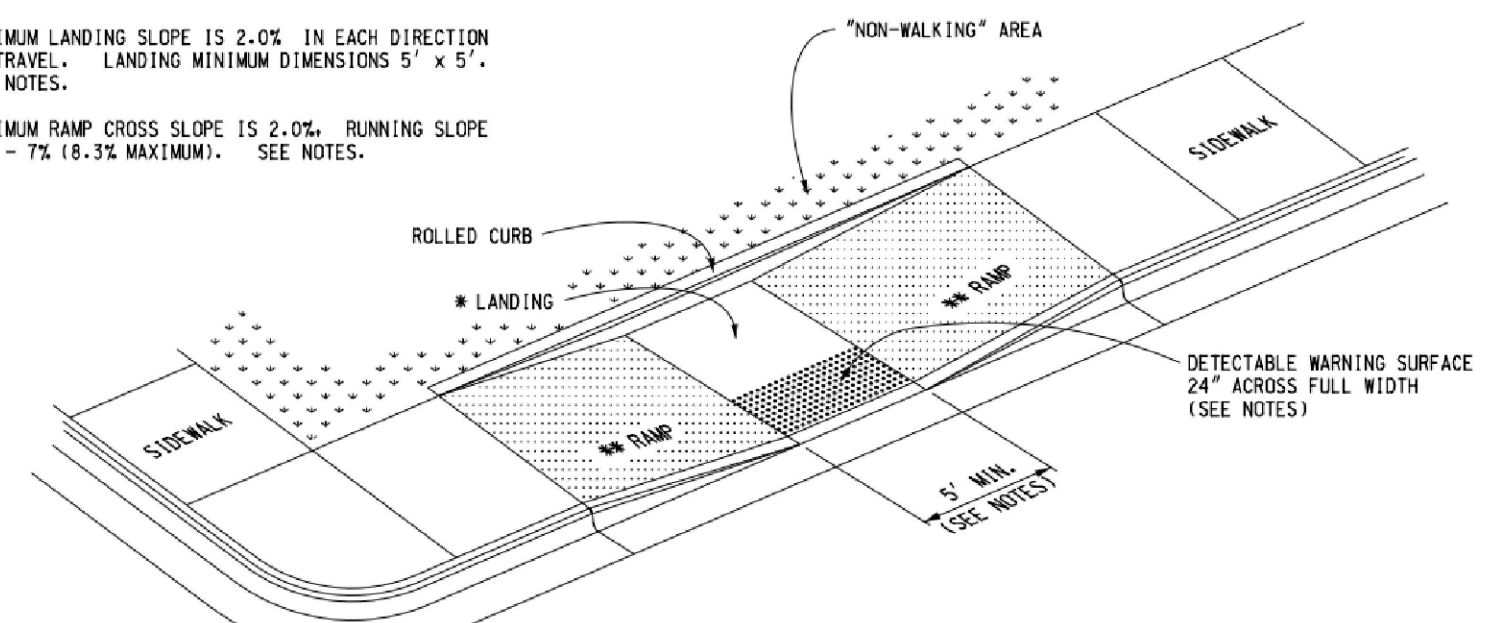
DATE: 4-7-2022
DRAWN BY: LW
CHECKED BY: DJL
FBK: --
CHF: --
SCALE: HOR 1"=60 FT.
VER 1"=1 FT.
3
21-291



HATCH LEGEND

- ASPHALT
- CONCRETE
- PROPOSED BUILDING
- EXISTING BUILDING

- * MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.
- ** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 0% - 7% (10-3% MAXIMUM). SEE NOTES.



CURB RAMP TYPE P
(PARALLEL RAMP)
DO NOT USE IN AREAS WHERE PONDING MAY OCCUR

GRADING AND DRAINAGE LEGEND:

- PROPOSED SPOT GRADE ELEVATION
- DBL = DROP BRICK LEDGE
- TP = TOP OF PAVEMENT
- TW = TOP OF WALK/WALL
- TC = TOP OF CURB
- BF = BASEMENT FINISH FLOOR
- GFE = GARAGE FINISH FLOOR ELEVATION
- FG = FINISH GRADE
- FF = FINISH FLOOR
- OVERLAND FLOW DIRECTION
- EMERGENCY 100YR OVERLAND OVERFLOW ROUTE

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

PARCEL NO.
K-11-18-340-001
20.57 ACRES
ZONED: B-3
GENERAL BUSINESS

WETLAND BUFFER NOTE:
ANYWHERE GRADING OR DISTURBANCE HAPPENS WITHIN THE WETLAND BUFFER SHALL BE RESTORED WITH NATIVE PLANT SPECIES FOLLOWING COMPLETION OF CONSTRUCTION.

GENERAL GRADING & EARTHWORK NOTES:

- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT
- CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE SITE.
 - ALL GRADES ARE PROPOSED SPOT GRADE ELEVATION UNLESS OTHERWISE NOTED.
 - THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES SHALL BE AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR.
 - ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF YPSILANTI TOWNSHIP. AN EROSION CONTROL PERMIT MUST BE SECURED PRIOR TO CONSTRUCTION.
 - ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SOODED IN ACCORDANCE WITH THE YPSILANTI TOWNSHIP REQUIREMENTS.
 - THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THAT ARE TO BE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.

RESPONSIBILITY FOR STORM WATER MAINTENANCE

- DURING CONSTRUCTION, IT IS THE DEVELOPER'S RESPONSIBILITY TO PERFORM THE MAINTENANCE.
- FOLLOWING CONSTRUCTION, IT WILL BE THE RESPONSIBILITY OF THE OWNER OF THE YPSILANTI TENNIS FACILITY TO PERFORM THE MAINTENANCE.
- THE MASTER DEED WILL SPECIFY THAT ROUTINE MAINTENANCE OF THE STORMWATER FACILITIES MUST BE COMPLETED WITHIN 90 DAYS OF RECEIPT OF WRITTEN NOTIFICATION THAT ACTION IS REQUIRED, UNLESS OTHER ACCEPTABLE ARRANGEMENTS ARE MADE WITH THE YPSILANTI TOWNSHIP, JUSTIN HODGE, OR SUCCESSORS. EMERGENCY MAINTENANCE (I.E. WHEN THERE IS ENDANGERMENT TO PUBLIC HEALTH, SAFETY OR WELFARE) SHALL BE PERFORMED IMMEDIATELY UPON RECEIPT OF WRITTEN NOTICE. SHOULD THE OWNER FAIL TO ACT WITHIN THESE TIME FRAMES, THE COUNTY MAY PERFORM THE NEEDED MAINTENANCE AND ASSESS THE COSTS AGAINST THE OWNER OF THE YPSILANTI TENNIS FACILITY.
- THE OWNER OF THE YPSILANTI TENNIS FACILITY IS REQUIRED TO PAY FOR ALL MAINTENANCE ACTIVITIES ON A CONTINUING BASIS.

INSPECTION AND MAINTENANCE PLAN FOR STORMWATER MANAGEMENT STRUCTURES

	CATCH BASIN INLET CASTINGS	DITCHES AND SWALES	OVERFLOW CONTROL STRUCTURE	RIP RAP	FOREBAY	INFILTRATION BASIN	EMERGENCY OVERFLOW	INFILTRATION BASIN PLANTINGS	ESTIMATED BUDGET	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION	X	X	X	X	X	X	X	X	\$ 100	ANNUALLY
REMOVAL OF SEDIMENT ACCUMULATION		X	X		X	X	X	X	\$ 500	EVERY 2 YEARS OR AS NEEDED
INSPECT FOR FLOATABLES AND DEBRIS	X	X	X		X	X			\$ 100	ANNUALLY
CLEANING OF FLOATABLES AND DEBRIS	X	X	X		X	X			\$ 200	ANNUALLY
INSPECT FOR EROSION		X		X	X	X	X		\$ 100	ANNUALLY
RE-ESTABLISH PERMANENT VEGETATION ON ERODED SLOPES		X			X	X	X		\$ 500	ANNUALLY
REPLACEMENT OF STONE			X						\$ 200	EVERY 3-5 YRS OR AS NEEDED
CLEAN STREETS										SEMI ANNUALLY
MOWING		X			X	X			\$ 300	D-2 TIMES PER YEAR
INSPECT STORMWATER SYSTEM COMPONENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS	X	X	X	X	X	X	X	X	\$ 200	ANNUALLY (INSPECT BASIN FOLLOWING STORMS OF 1-INCH OR MORE)
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY ANNUAL WET WEATHER INSPECTION	X	X	X	X	X	X	X	X	\$ 500	AS NEEDED
REPLACE DEAD OR DISEASED PLANTINGS							X		\$ 200	ANNUALLY OR AS NEEDED
KEEP RECORDS OF ALL INSPECTIONS AND MAINTENANCE ACTIVITIES	X	X	X	X	X	X	X	X	\$ 100	ANNUALLY
TOTAL ANNUAL BUDGET									\$ 3,000	ANNUALLY

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SCHAFER CONSTRUCTION

GRADING PLAN

CLIENT:

PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
SECTION: 18 TOWNSHIP: 3 S
YPSILANTI TOWNSHIP
WASHINGTON COUNTY
MICHIGAN

REVISED

2022-6-10 PER YJUA & WCMRC REVIEW
2022-11-22 PER YJUA, CHM & WCMRC REVIEW
2023-2-6 PER YJUA, CHM & EGLE REVIEW

DATE:

4-7-2022

DRAWN BY:

LW

CHECKED BY:

DJL

SCALE:

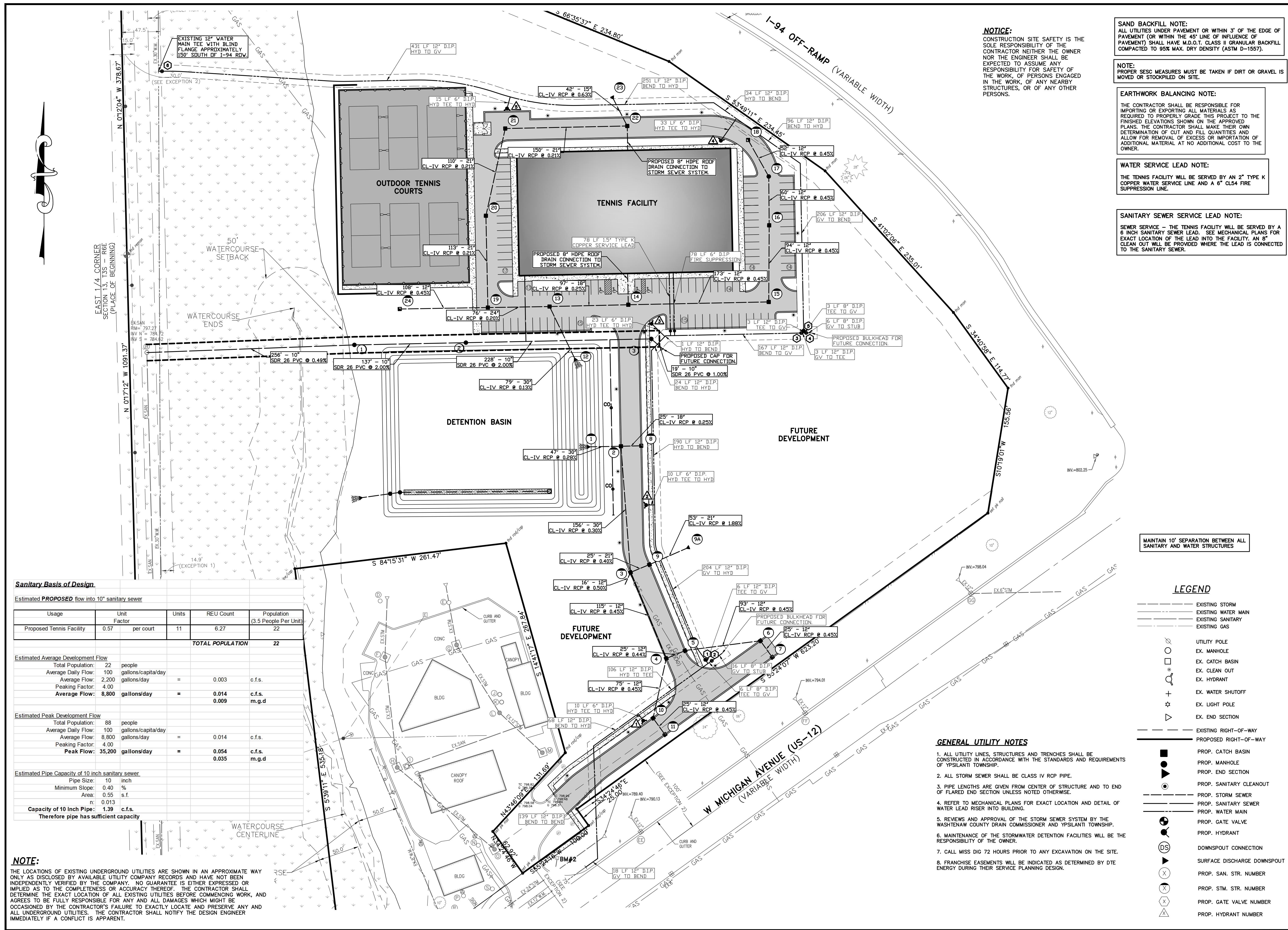
HOR 1" = 50 FT.
VER 1" = 10 FT.

FBK: ---

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PAGE:

21-291



NOTICE:
 CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

SAND BACKFILL NOTE:
 ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45' LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).

NOTE:
 PROPER SECC MEASURES MUST BE TAKEN IF DIRT OR GRAVEL IS MOVED OR STOCKPILED ON SITE.

EARTHWORK BALANCING NOTE:
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

WATER SERVICE LEAD NOTE:
 THE TENNIS FACILITY WILL BE SERVED BY AN 2" TYPE K COPPER WATER SERVICE LINE AND A 6" CL54 FIRE SUPPRESSION LINE.

SANITARY SEWER SERVICE LEAD NOTE:
 SEWER SERVICE - THE TENNIS FACILITY WILL BE SERVED BY A 8 INCH SANITARY SEWER LEAD. SEE MECHANICAL PLANS FOR EXACT LOCATION OF THE LEAD INTO THE FACILITY. AN 8" CLEAN OUT WILL BE PROVIDED WHERE THE LEAD IS CONNECTED TO THE SANITARY SEWER.

MAINTAIN 10' SEPARATION BETWEEN ALL SANITARY AND WATER STRUCTURES

LEGEND

- EXISTING STORM
- EXISTING WATER MAIN
- EXISTING SANITARY
- EXISTING GAS
- UTILITY POLE
- EX. MANHOLE
- EX. CATCH BASIN
- EX. CLEAN OUT
- EX. HYDRANT
- + EX. WATER SHUTOFF
- ☆ EX. LIGHT POLE
- ▽ EX. END SECTION
- - - EXISTING RIGHT-OF-WAY
- - - PROPOSED RIGHT-OF-WAY
- PROP. CATCH BASIN
- PROP. MANHOLE
- ▲ PROP. END SECTION
- PROP. SANITARY CLEANOUT
- PROP. STORM SEWER
- PROP. SANITARY SEWER
- PROP. WATER MAIN
- PROP. GATE VALVE
- PROP. HYDRANT
- PROP. DOWNSPOUT CONNECTION
- PROP. SURFACE DISCHARGE DOWNSPOUT
- PROP. SAN. STR. NUMBER
- PROP. STM. STR. NUMBER
- PROP. GATE VALVE NUMBER
- PROP. HYDRANT NUMBER

GENERAL UTILITY NOTES

1. ALL UTILITY LINES, STRUCTURES AND TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF YPSILANTI TOWNSHIP.
2. ALL STORM SEWER SHALL BE CLASS IV RCP PIPE.
3. PIPE LENGTHS ARE GIVEN FROM CENTER OF STRUCTURE AND TO END OF FLARED END SECTION UNLESS NOTED OTHERWISE.
4. REFER TO MECHANICAL PLANS FOR EXACT LOCATION AND DETAIL OF WATER LEAD RISER INTO BUILDING.
5. REVIEWS AND APPROVAL OF THE STORM SEWER SYSTEM BY THE WASHTENAW COUNTY DRAIN COMMISSIONER AND YPSILANTI TOWNSHIP.
6. MAINTENANCE OF THE STORMWATER DETENTION FACILITIES WILL BE THE RESPONSIBILITY OF THE OWNER.
7. CALL MISS DIG 72 HOURS PRIOR TO ANY EXCAVATION ON THE SITE.
8. FRANCHISE EASEMENTS WILL BE INDICATED AS DETERMINED BY DTE ENERGY DURING THEIR SERVICE PLANNING DESIGN.

Sanitary Basis of Design

Estimated PROPOSED flow into 10" sanitary sewer

Usage	Unit Factor	Units	REU Count	Population (3.5 People Per Unit)
Proposed Tennis Facility	0.57	per court	11	6.27
TOTAL POPULATION				22

Estimated Average Development Flow				
Total Population:	22	people		
Average Daily Flow:	100	gallons/capita/day	=	0.003 c.f.s.
Average Flow:	2,200	gallons/day		
Peaking Factor:	4.00			
Average Flow:	8,800	gallons/day	=	0.014 c.f.s.
				0.009 m.g.d

Estimated Peak Development Flow				
Total Population:	88	people		
Average Daily Flow:	100	gallons/capita/day	=	0.014 c.f.s.
Average Flow:	8,800	gallons/day		
Peaking Factor:	4.00			
Peak Flow:	35,200	gallons/day	=	0.054 c.f.s.
				0.035 m.g.d

Estimated Pipe Capacity of 10 inch sanitary sewer				
Pipe Size:	10	inch		
Minimum Slope:	0.40	%		
Area:	0.55	s.f.		
n:	0.013			
Capacity of 10 Inch Pipe:	1.39	c.f.s.		

Therefore pipe has sufficient capacity

NOTE:
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UTILITY PLAN

PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
 RANGE: 7 E.
 TOWNSHIP: 3 S
 YPSILANTI TOWNSHIP
 WASHTENAW COUNTY
 MICHIGAN

SECTION: 18

REVISED

2022-6-10	PER YOJA & WCMRC REVIEW
2022-11-22	PER YOJA, OHM & WCMRC REVIEW
2023-2-6	PER YOJA, OHM & EGLE REVIEW

DATE: 4-7-2022

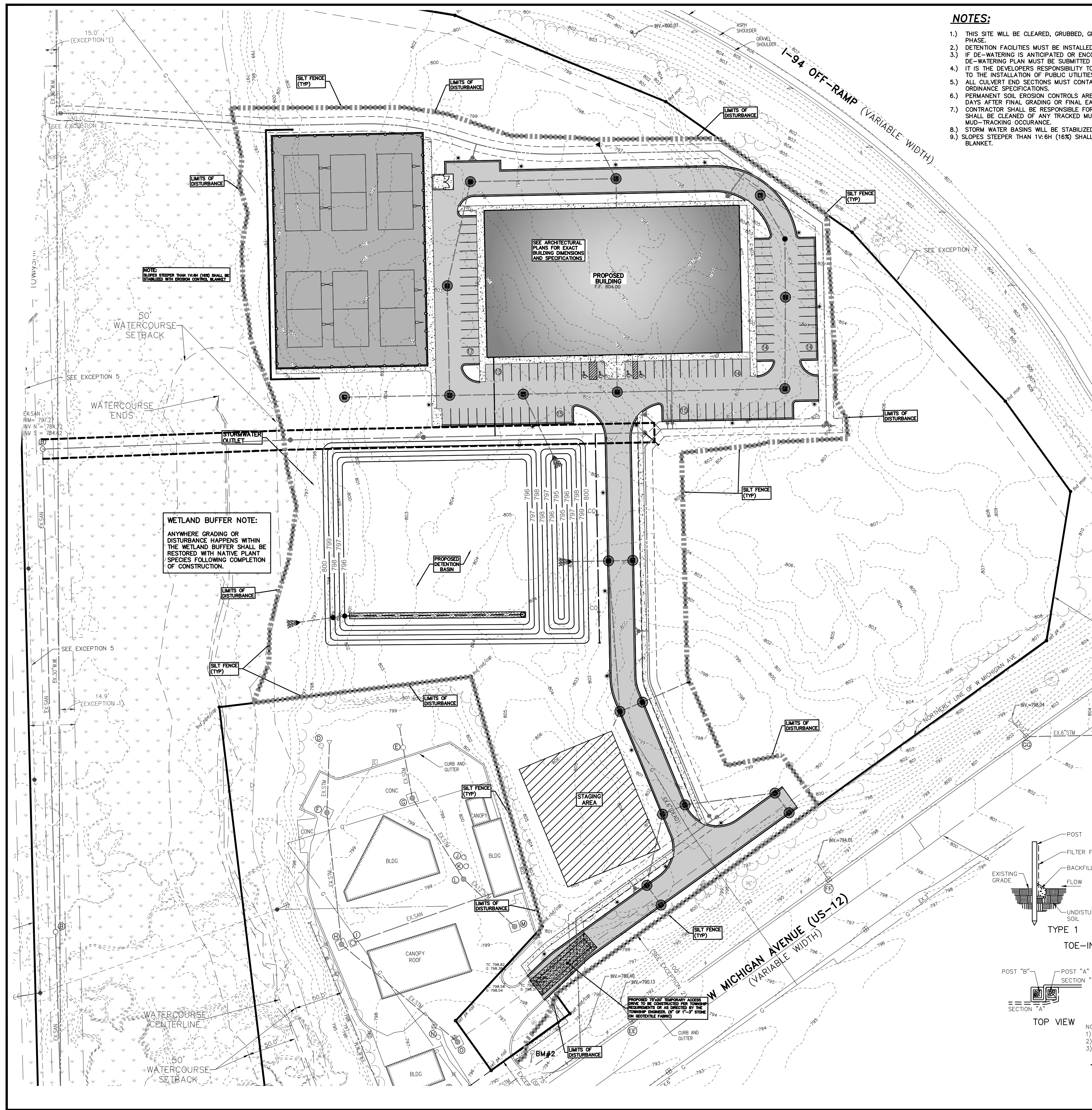
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CHECKED BY: DJL

SCALE: HOR 1"=50 FT.
 VER 1"=1 FT.

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21-291



NOTES:

- 1.) THIS SITE WILL BE CLEARED, GRUBBED, GRADED & LAND BALANCED IN ONE (1) PHASE.
- 2.) DETENTION FACILITIES MUST BE INSTALLED PRIOR TO ISSUANCE OF BUILDING PERMITS.
- 3.) IF DE-WATERING IS ANTICIPATED OR ENCOUNTERED DURING CONSTRUCTION, A DE-WATERING PLAN MUST BE SUBMITTED TO THE ENGINEERING DIVISION FOR REVIEW.
- 4.) IT IS THE DEVELOPER'S RESPONSIBILITY TO GRADE AND STABILIZE DISTURBANCE DUE TO THE INSTALLATION OF PUBLIC UTILITIES.
- 5.) ALL CULVERT END SECTIONS MUST CONTAIN GROUTED RIP-RAP IN ACCORDANCE WITH ORDINANCE SPECIFICATIONS.
- 6.) PERMANENT SOIL EROSION CONTROLS ARE REQUIRED TO BE INSTALLED WITHIN FIVE (5) DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGE.
- 7.) CONTRACTOR SHALL BE RESPONSIBLE FOR THE INTERNAL AND EXTERNAL STREETS SHALL BE CLEANED OF ANY TRACKED MUD IMMEDIATELY FOLLOWING EACH MUD-TRACKING OCCURRENCE.
- 8.) STORM WATER BASINS WILL BE STABILIZED PRIOR TO DIRECTING FLOW TO THE BASIN.
- 9.) SLOPES STEEPER THAN 1V:6H (16%) SHALL BE STABILIZED WITH EROSION CONTROL BLANKET.

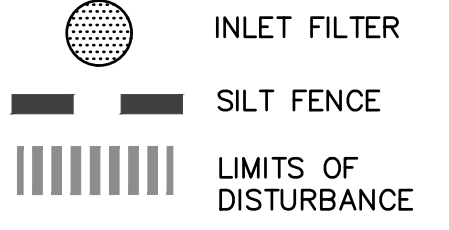
TIMING AND SEQUENCE OF CONSTRUCTION:

1. SOIL EROSION AND SEDIMENTATION CONTROL PRE-GRADING MEETING.
 2. INSTALL SILT FENCE AND MUD TRACKING MAT.
 3. INSTALL STORM SEWER SYSTEM WITH INLET FILTER CONTROLS.
 4. PERFORM MASS GRADING AND PROOF ROLLING.
 5. INSTALL OTHER UTILITIES.
 6. INSTALL CURBING AND SUB-BASE OF AREAS TO BE PAVED, THEN INSTALL BASE COURSE OF ASPHALT.
 7. FINAL GRADE SITE AND REDISTRIBUTE TOPSOIL. STABILIZE ALL DISTURBED WITH SOD, HYDROSEED APPLICATION, OR SEEDING UNDER A CRIMPED STRAW MULCH. PROVIDE LANDSCAPING AND SIGNAGE.
 8. INSTALL WEAR COURSE STRIPE PAVEMENTS.
 9. MONITOR AND MAINTAIN ALL EROSION CONTROLS THROUGH CONSTRUCTION SEQUENCE.
- NOTE: SCHEDULE SUBJECT TO TOWNSHIP APPROVAL AND WEATHER.

CLEANING SCHEDULE:

OPERATIONS TO BE PERFORMED BY CONTRACTOR	DAILY	WEEKLY	AS NEEDED
SCRAPE, CLEAN OR SWEET STREETS	X		X
DUST CONTROL MEASURES		X	X
INLET FILTERS		X	X
SILT FENCE		X	X

SOIL EROSION LEGEND



LIMITS OF DISTURBANCE
TOTAL AREA OF DISTURBANCE = 8.22 AC±

DISTURBED AREA NOTE:
ALL DISTURBED AREAS WILL BE STABILIZED WITHIN 30 DAYS OF GRADING

MAINTENANCE REQUIREMENTS (EROSION CONTROL)

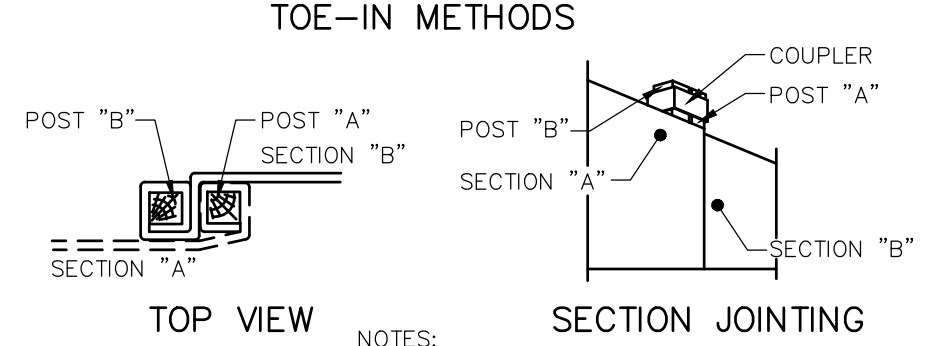
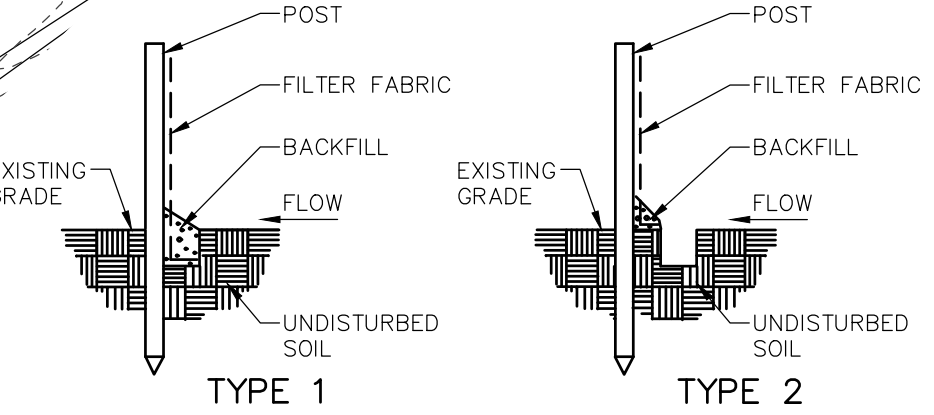
INSPECTION & MAINTENANCE OF SOIL EROSION CONTROL MEASURES TO BE CONDUCTED ON A WEEKLY BASIS OR AS INDICATED BELOW, WHICHEVER IS SOONER.

SILT FENCES:
SILT FENCES SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND SEVERAL TIMES DURING PROLONGED RAINFALLS. IF THE FENCE IS SAGGING OR THE SOIL HAS REACHED ONE HALF THE HEIGHT OF THE FABRIC, THE SOIL BEHIND THE FABRIC MUST BE REMOVED AND DISPOSED OF IN A STABLE UPLAND SITE. THE SOIL CAN BE ADDED TO THE SPOIL PILE. IF THE FABRIC IS BEING UNDERCUT (I.E. IF THE WATER IS SEEPING UNDER THE FENCE), THE FENCE SHOULD BE REMOVED AND REINSTALLED FOLLOWING THE GIVEN PROCEDURES. FABRIC WHICH DECOMPOSES OR OTHERWISE BECOMES INEFFECTIVE SHOULD BE REMOVED AND SAVED WITH NEW FILTER FABRIC IMMEDIATELY. FILTER FENCES SHOULD BE REMOVED ONCE VEGETATION IS WELL ESTABLISHED AND THE UP-SLOPE IS FULLY STABILIZED OR UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

INLET FILTERS:
INLET FILTERS SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND SEVERAL TIMES DURING PROLONGED RAINFALLS. IF THE INLET FILTER IS DAMAGED OR THE SOIL HAS REACHED ONE HALF THE HEIGHT OF THE FABRIC, THE SOIL WITHIN THE FABRIC MUST BE REMOVED AND DISPOSED OF IN A STABLE UPLAND SITE. THE SOIL CAN BE ADDED TO THE SPOIL PILE. IF THE INLET FILTER IS BEING DAMAGED, THE FILTER FABRIC SHOULD BE REMOVED AND REINSTALLED PER WASHTEAW COUNTY, YPSILANTI TOWNSHIP OR AS DIRECTED BY THE CITY ENGINEER. INLET FILTERS SHOULD BE REMOVED ONCE VEGETATION IS WELL ESTABLISHED AND THE UP-SLOPE IS FULLY STABILIZED OR UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

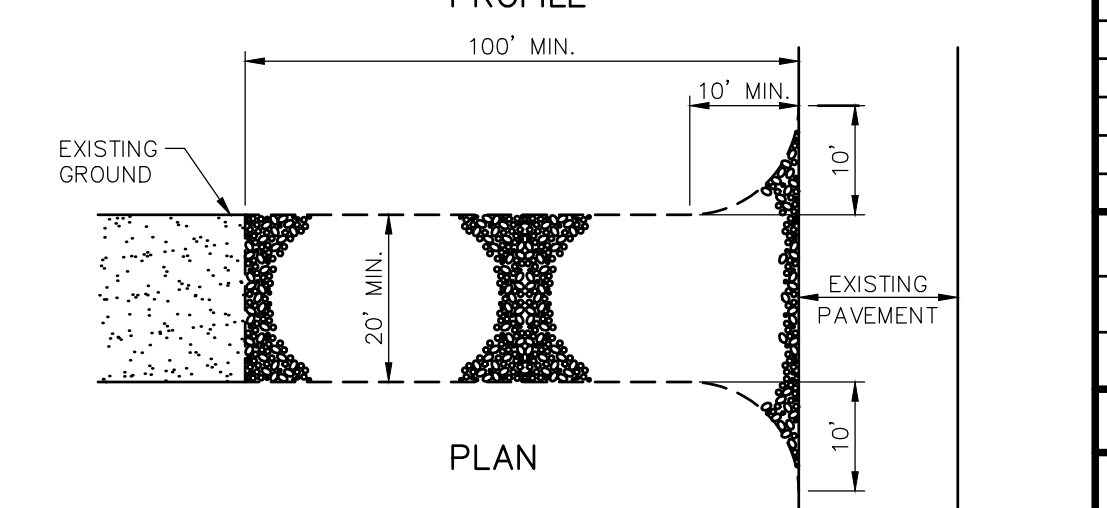
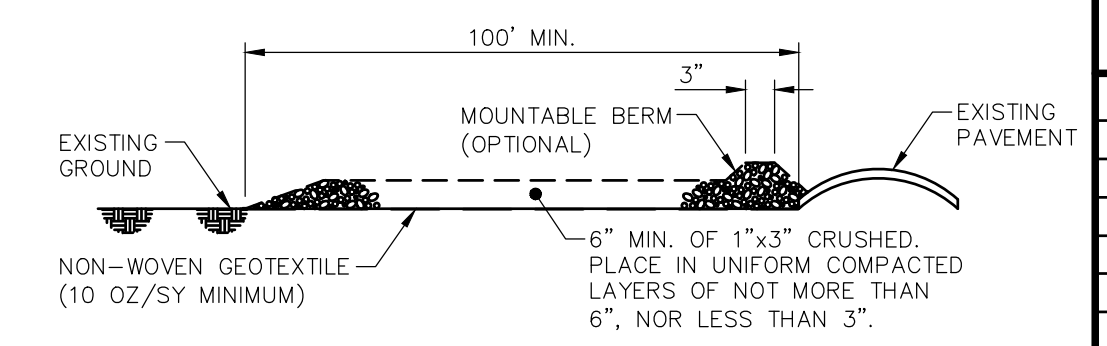
ACCESS ROADS (HAUL ROADS):
PROPER MAINTENANCE MAY INCLUDE ADDING ADDITIONAL LAYERS OF STONE WHEN THE ORIGINAL STONE BECOMES COVERED WITH MUD. AFTER EACH STORM EVENT, INSPECT THE ROAD FOR EROSION AND MAKE ANY NECESSARY REPAIRS. IT IS ALSO IMPORTANT TO CHECK AND MAINTAIN ANY BMP'S WHICH ARE USED IN CONJUNCTION WITH THIS BMP, ESPECIALLY THOSE FOR DRAINAGE. ALL SEDIMENT DROPPED OR ERODED ONTO PUBLIC RIGHT-OF-WAYS SHOULD BE REMOVED IMMEDIATELY BY SWEEPING.

SEEDING, SODDING & MULCHING:
SEED, SODDED OR MULCHED AREAS SHOULD BE CHECKED FOLLOWING EACH RAIN TO ENSURE THE MATERIAL IS STAYING IN PLACE. ADDITIONAL TACKLING MATERIALS OR NETTING MAY NEED TO BE APPLIED TO HOLD THE AFOREMENTIONED MATERIALS IN PLACE. MAINTENANCE PROCEDURES SHOULD ALSO BE FOLLOWED FOR THE BMP'S WHICH WERE IMPLEMENTED TO KEEP ERODED SOIL OR CONCENTRATED RUNOFF AWAY FROM THESE TARGET AREAS. SHALL BE COMPLETED WITHIN 5 DAYS OF FINAL GRADING OR WHENEVER DISTURBED AREAS HAVE REMAINED UNCHANGED FOR GREATER THAN 30 DAYS OR GREATER. 3"-4" OF TOPSOIL REQUIRED.



- NOTES:
1) 6" MIN. ANCHOR TRENCH
2) STAKES AT 6' MAX SPACING
3) DRIVE STAKES MIN. 1' INTO GROUND

SILT FENCE
NO SCALE



GRAVEL ACCESS DRIVE
NO SCALE

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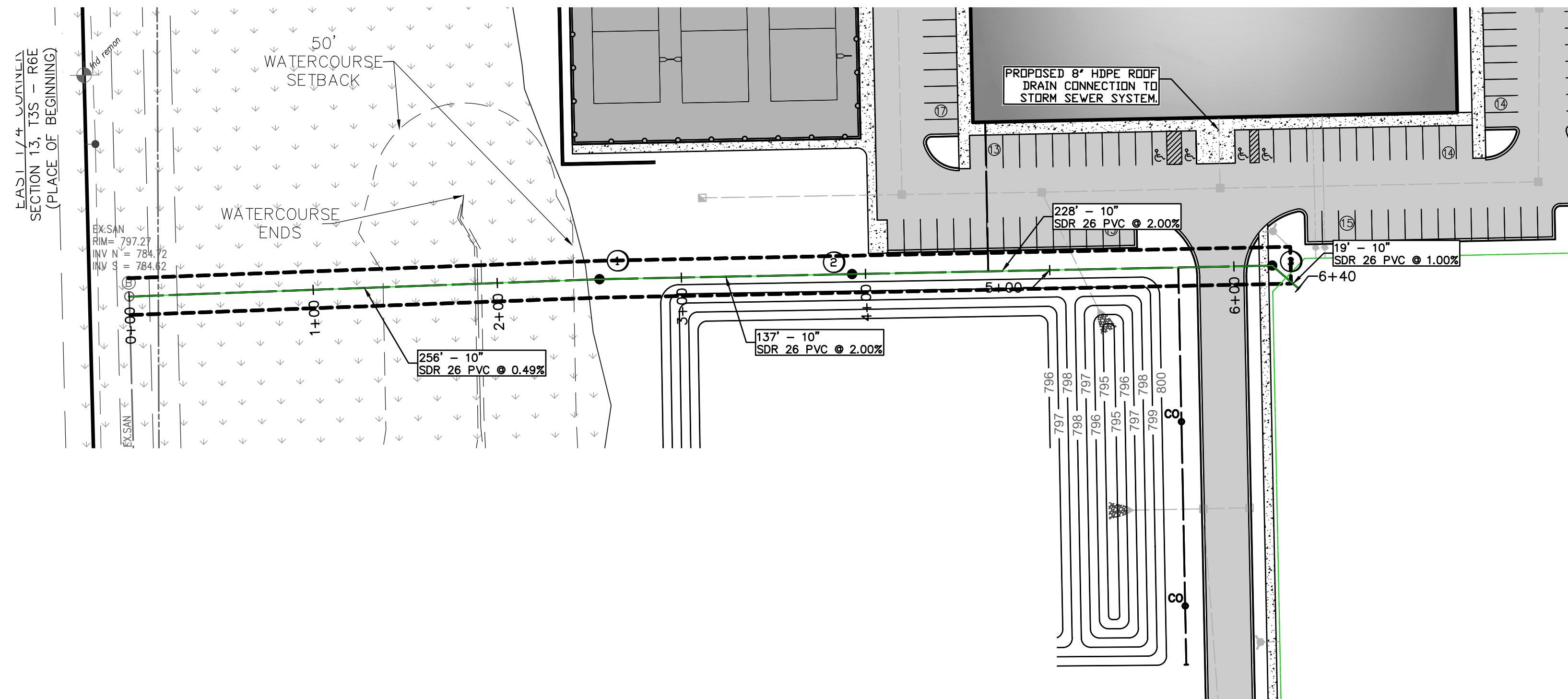
CLIENT: SCHAFFER CONSTRUCTION
SOIL EROSION & SEDIMENTATION CONTROL PLAN
PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
SECTION: 18
TOWNSHIP: 3 S
COUNTY: WASHINGTON COUNTY MICHIGAN
RANGE: 7 E.

REVISED

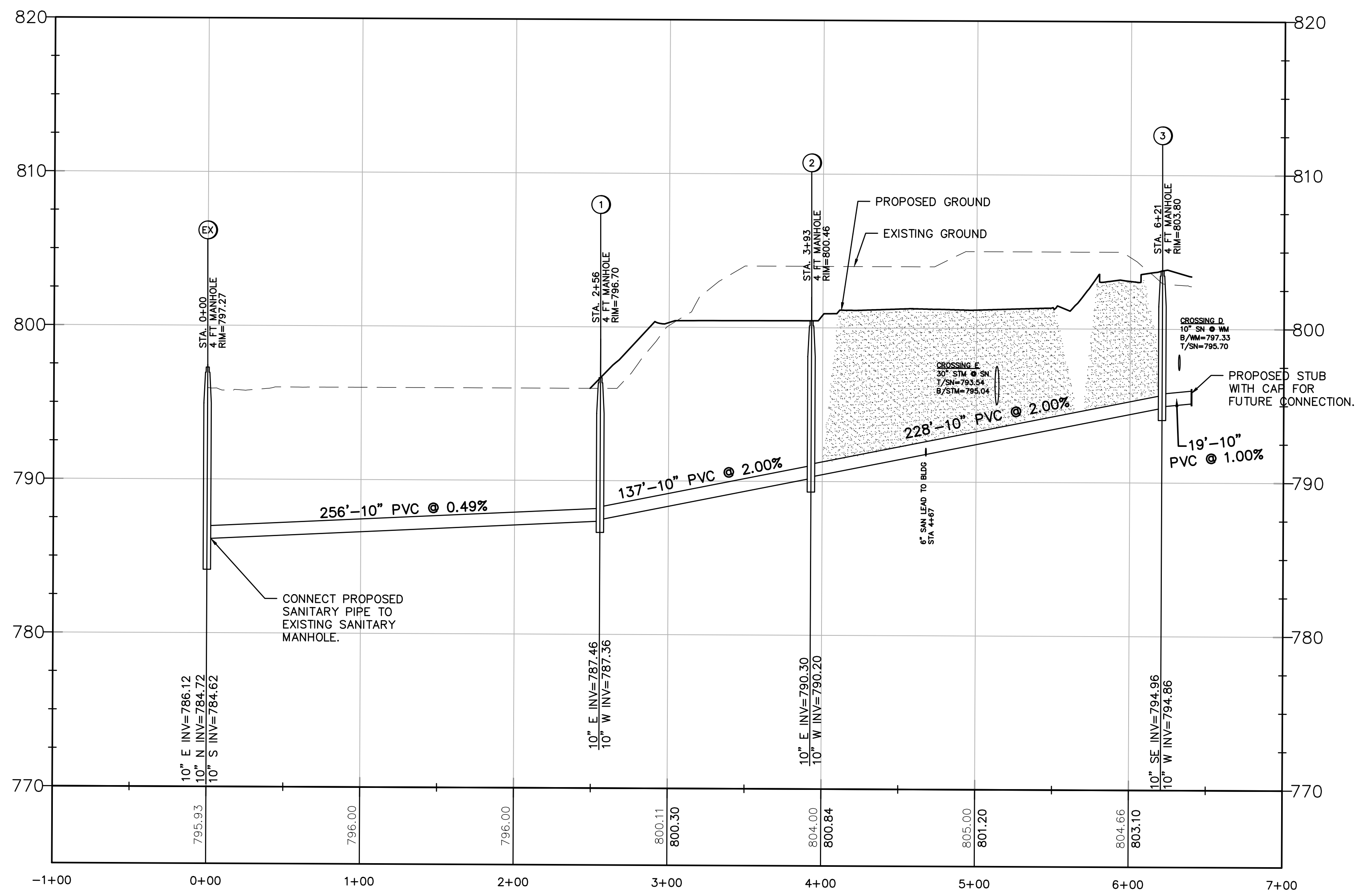
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FBK: --
CHP: --
SCALE: HOR 1" = 50 FT.
VER 1" = 1' FT.

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21-291



SN Stub-EX PROFILE



Sanitary Lead Data

Building #	Finish Grade	Upstream Manhole	Downstream Manhole	Downstream Manhole Invert	Distance to Downstream Manhole	Lead Slope %	Invert of Main at Lead	Invert of Lead at Manhole	Lead Length	Riser	Lead Invert at Bldg	Main Line Slope
BLDG	804.00	2	1	787.46	74	1.00%	788.94	789.27	63.50	9.7	799.56	2.00%
FUT	804.00	3	2	790.30	177.15	1.00%	793.84	794.18	221.60	3.7	800.09	2.00%

UTILITY CROSSING INFORMATION

D	TOP OF SAN = 795.7 BOTTOM OF WM = 797.33
E	TOP OF SAN = 793.54 BOTTOM OF ST = 795.04

MINIMUM ALLOWABLE SLOPE FOR THE 6-INCH SANITARY LEAD SHALL BE 1.0%.

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45' LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).

MAINTAIN 10' SEPARATION BETWEEN ALL SANITARY AND WATER STRUCTURES

NOTE:
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CLIENT: SCHAFER CONSTRUCTION
SANITARY PROFILE
PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
SECTION: 18
TOWNSHIP: 3 S
COUNTY: WASHTENAW COUNTY
MICHIGAN

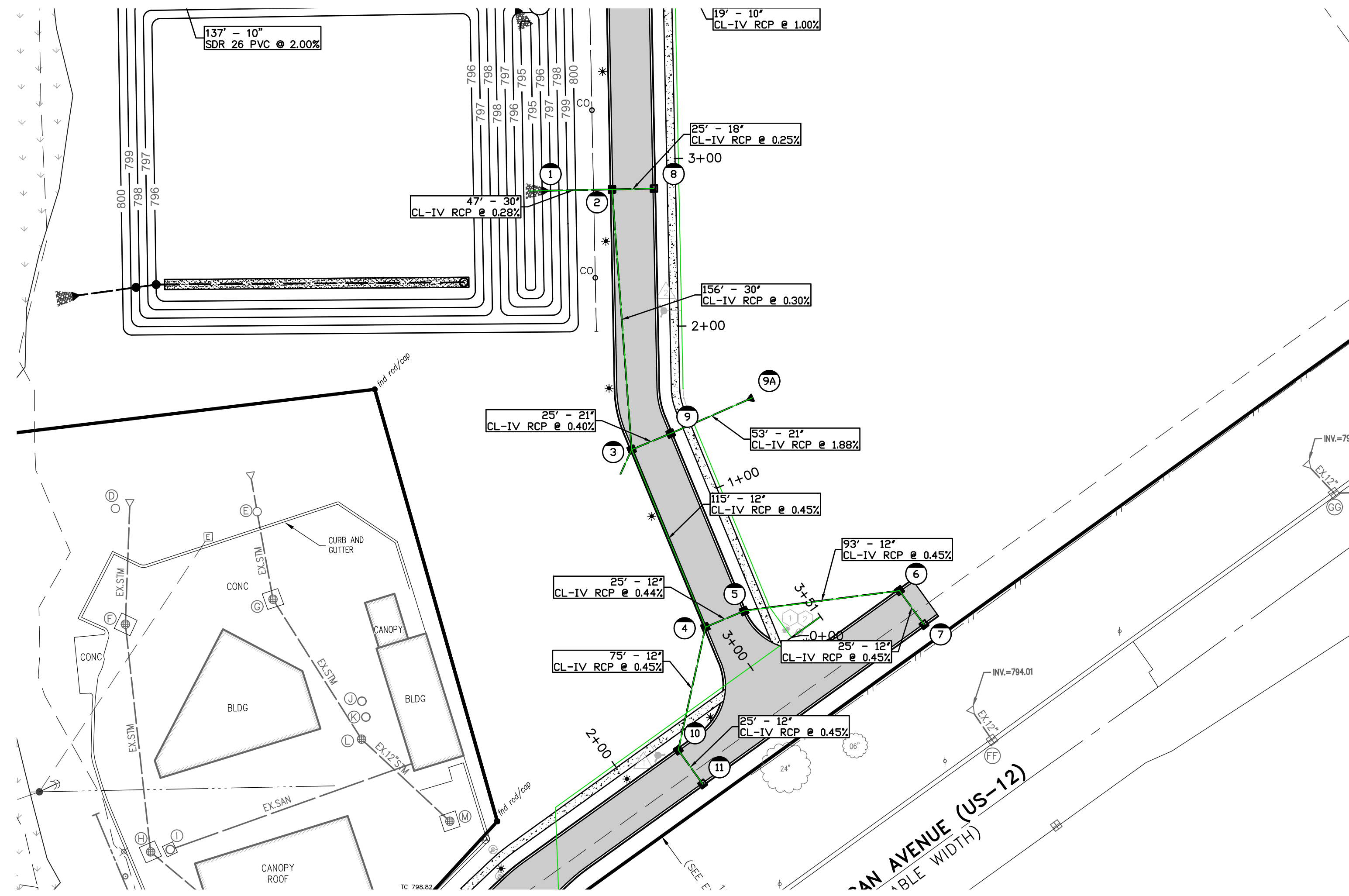
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2022-6-10 PER YOJA & WCMRC REVIEW
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2023-2-9 PER YOJA, OHM & EBLE REVIEW

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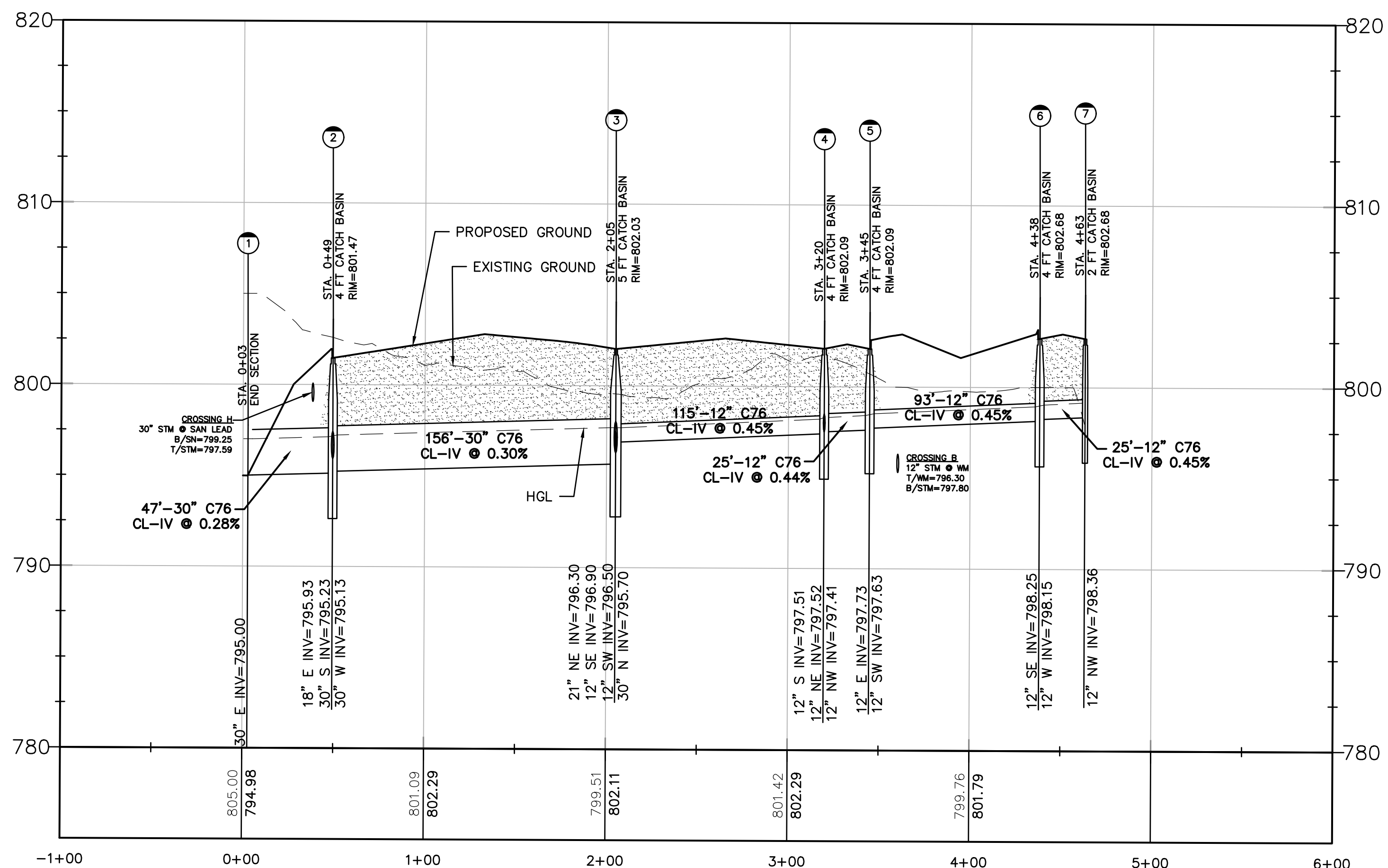
FBK: --
CHF: --

SCALE: HOR 1"=50 FT.
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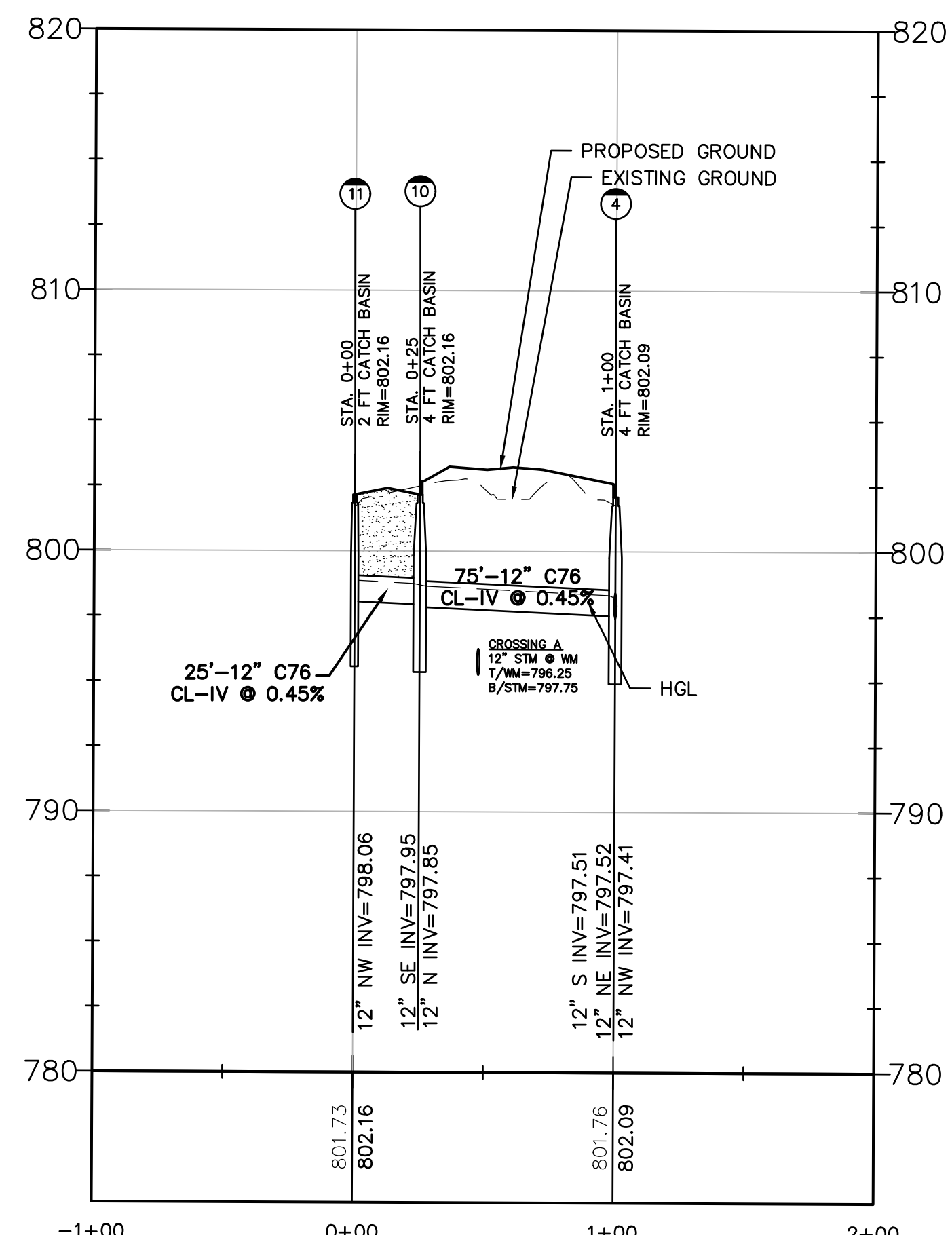
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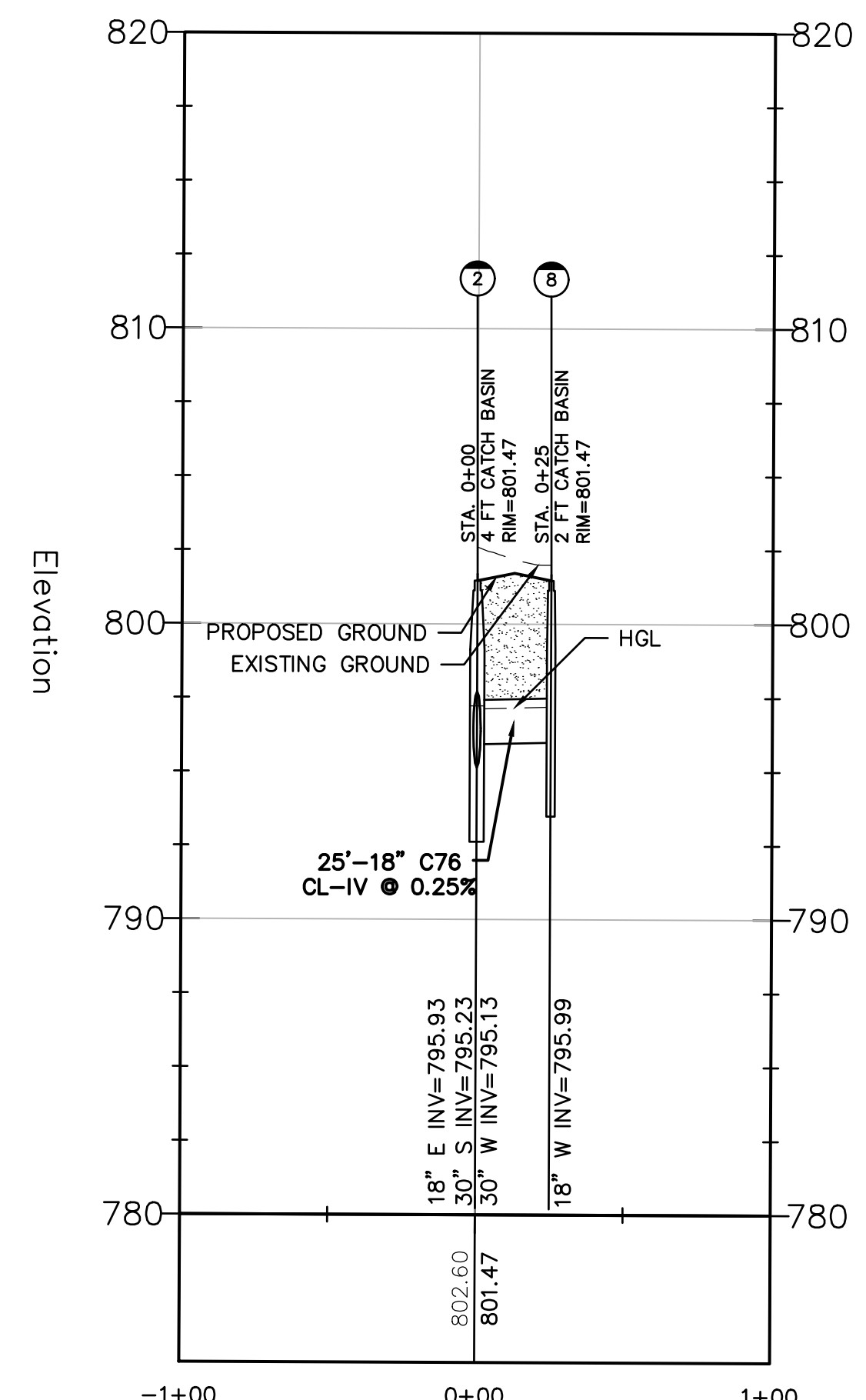
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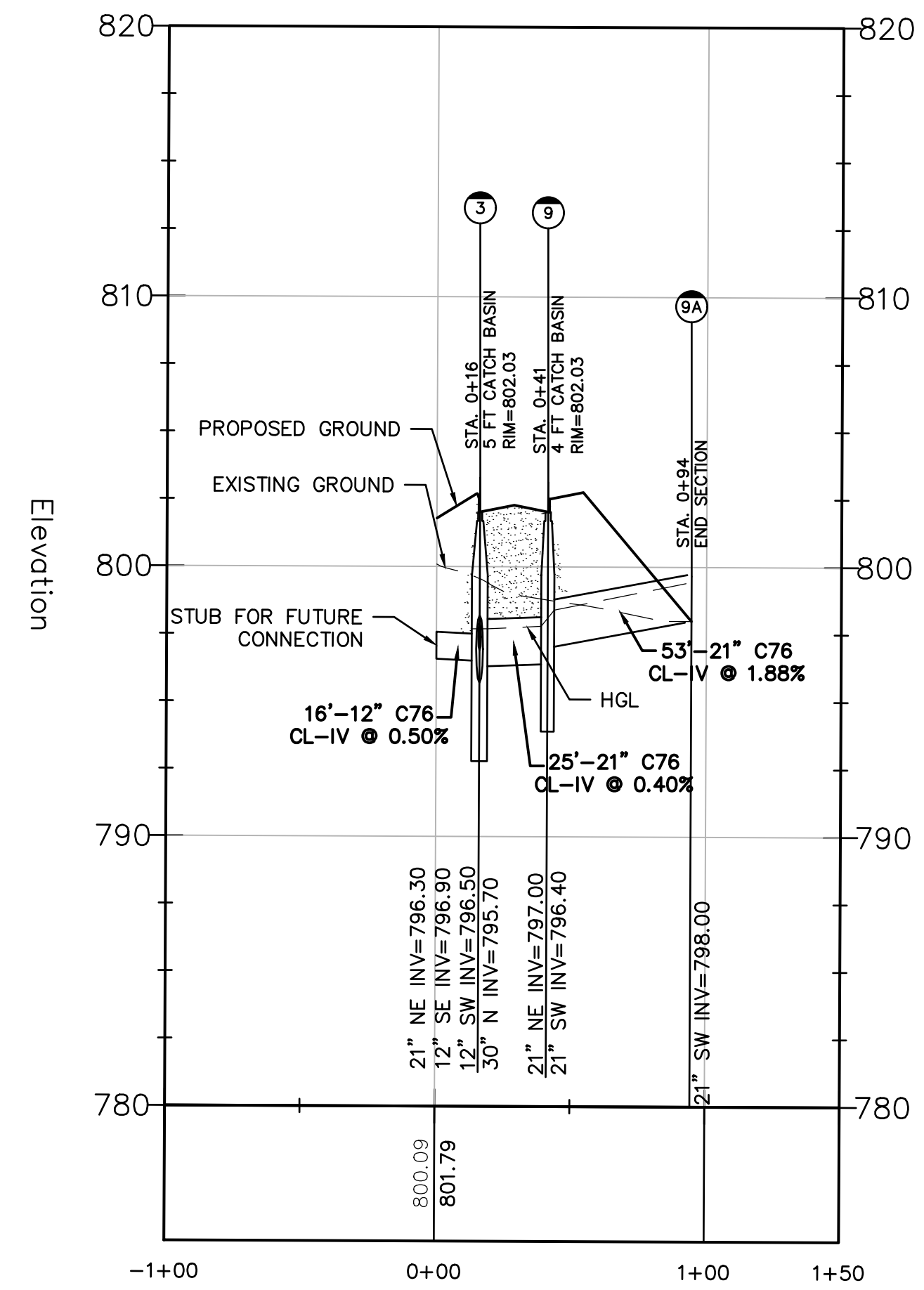
ST 11-4 PROFILE



ST 2-8 PROFILE



ST 3-9A PROFILE



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UTILITY CROSSING INFORMATION	
A	TOP OF WM = 796.25 BOTTOM OF ST = 797.75
B	TOP OF WM = 796.3 BOTTOM OF ST = 797.8
H	TOP OF ST = 797.59 BOTTOM OF SAN = 799.25

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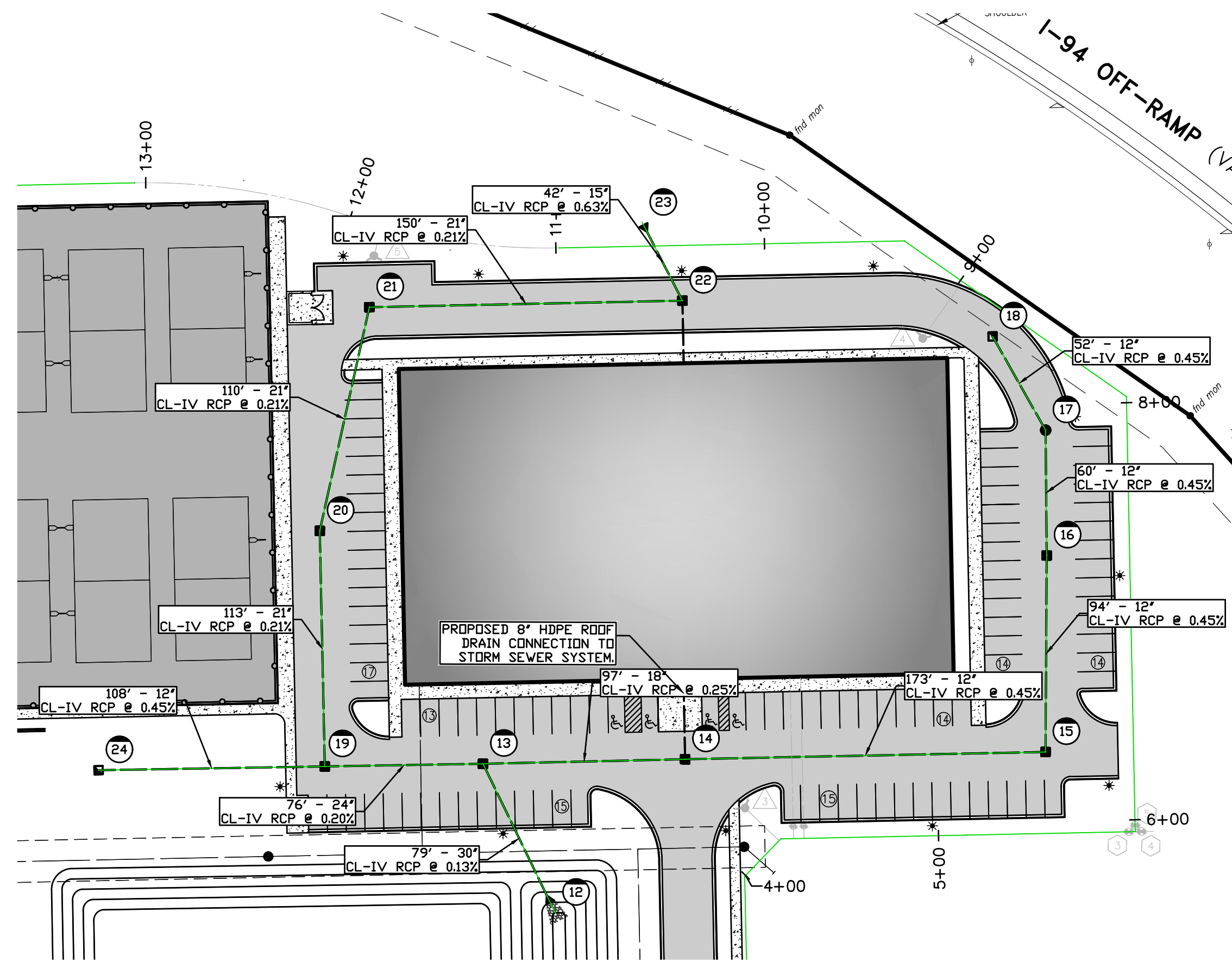
STORM PROFILES

PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
SECTION: 18
TOWNSHIP: 3 S
YPSILANTI TOWNSHIP
WASHINGTON COUNTY
MICHIGAN

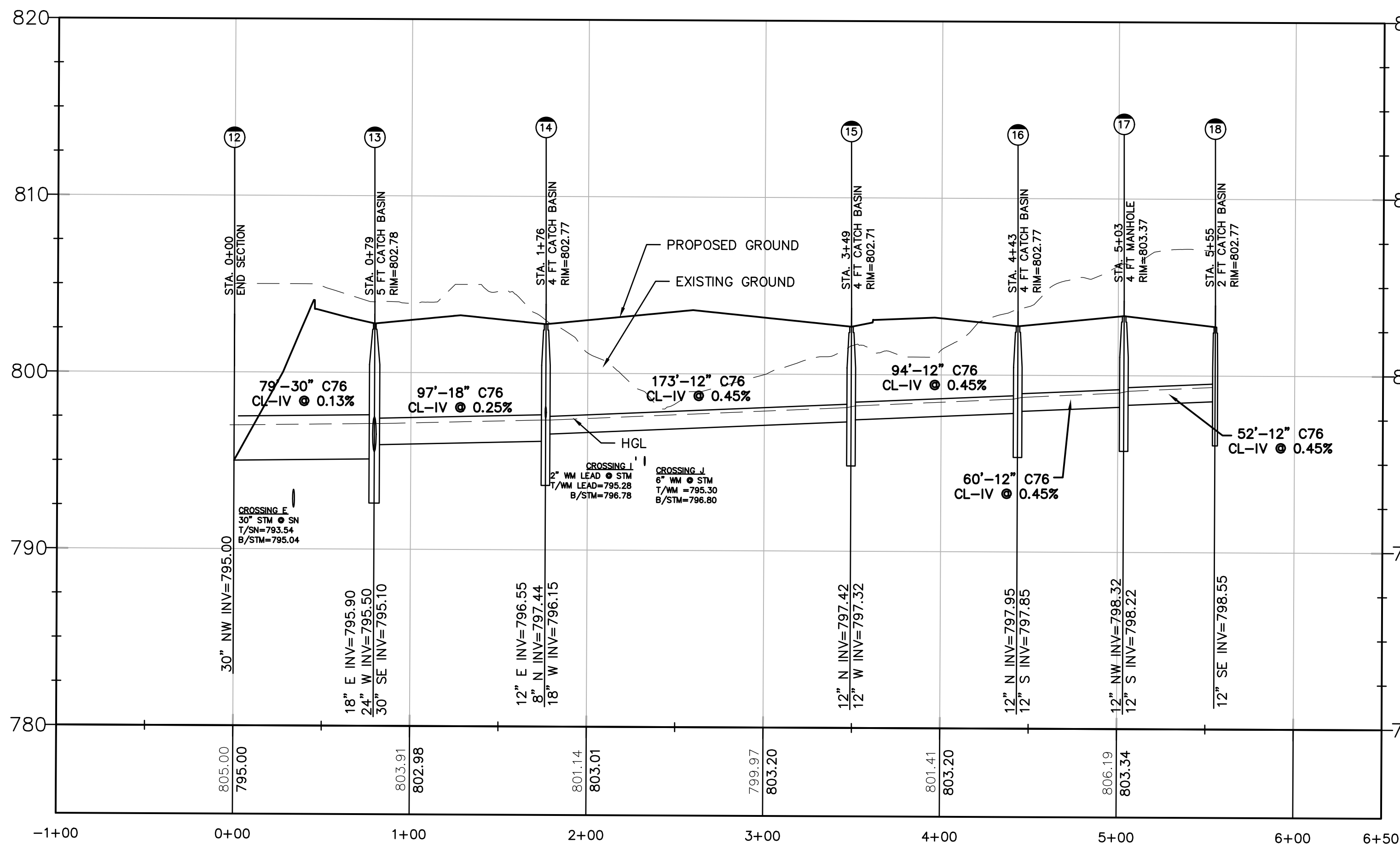
REVISED
2022-6-10 PER YOJA & WCMRC REVIEW
2022-11-22 PER YOJA, OHM & WCMRC REVIEW
2023-2-8 PER YOJA, OHM & EGLE REVIEW

DATE: 4-7-2022
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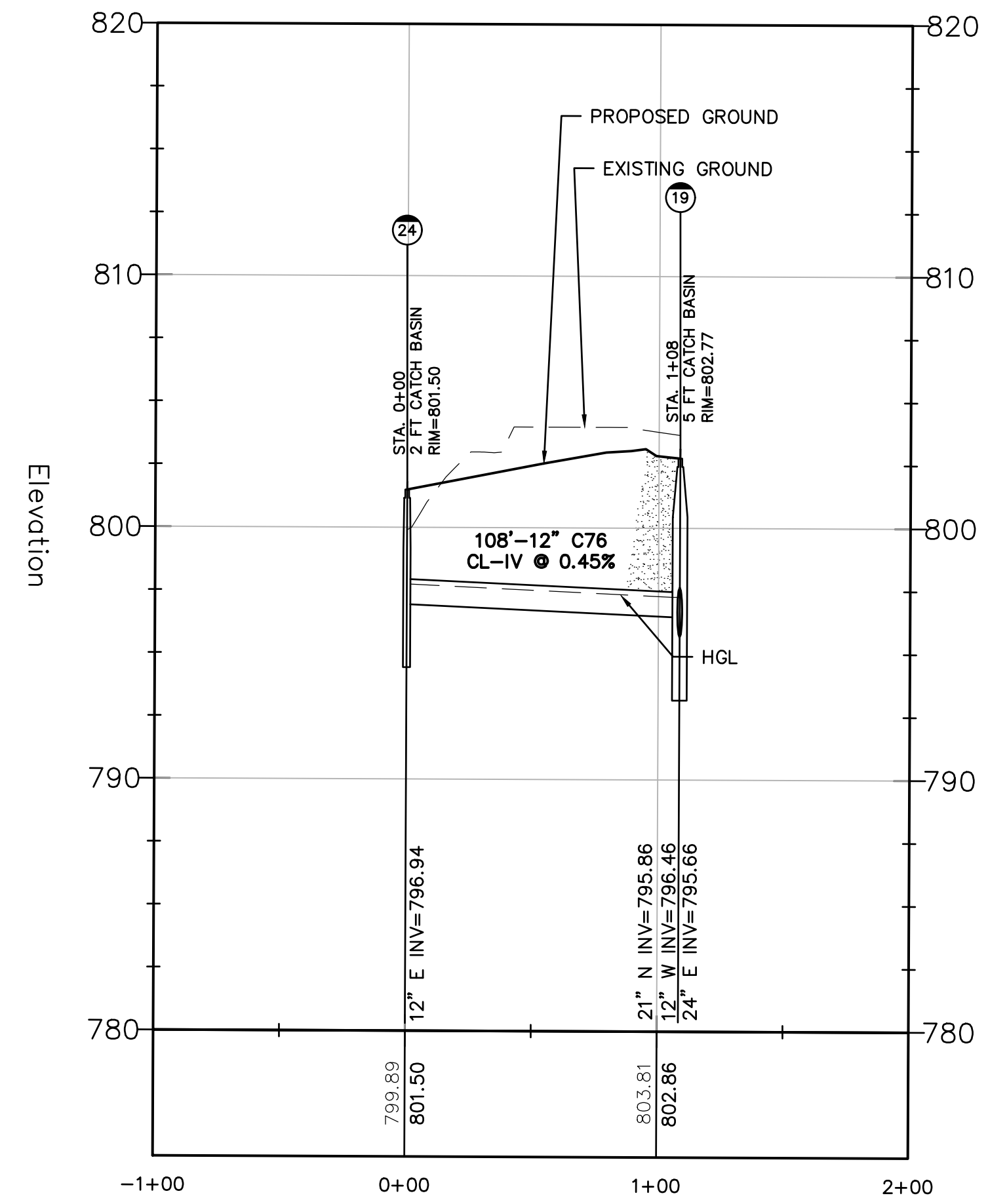
SCALE: HOR 1"=50 FT.
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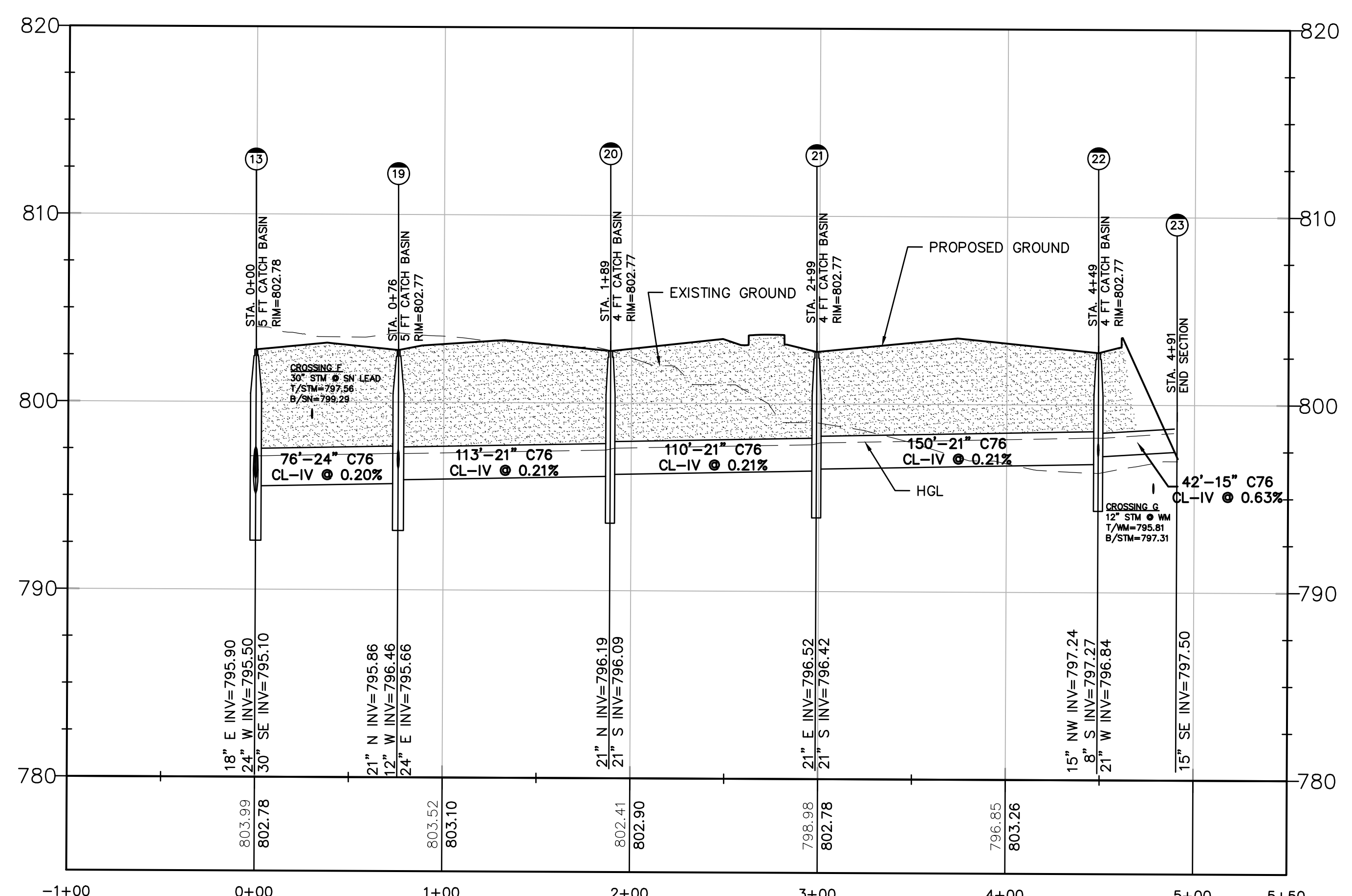
ST 18-12 PROFILE



ST 24-19 PROFILE



ST 23-13 PROFILE



SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45' LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).

MAINTAIN 10' SEPARATION BETWEEN ALL SANITARY AND WATER STRUCTURES

NOTE:
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UTILITY CROSSING INFORMATION	
E	TOP OF SAN = 793.54 BOTTOM OF ST = 795.04
F	TOP OF ST = 797.56 BOTTOM OF SAN = 799.29
G	TOP OF WM = 795.81 BOTTOM OF ST = 797.31
I	TOP OF WM = 795.28 BOTTOM OF ST = 796.78
J	TOP OF WM = 795.3 BOTTOM OF ST = 796.8

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MAINTAIN 10' SEPARATION BETWEEN ALL SANITARY AND WATER STRUCTURES

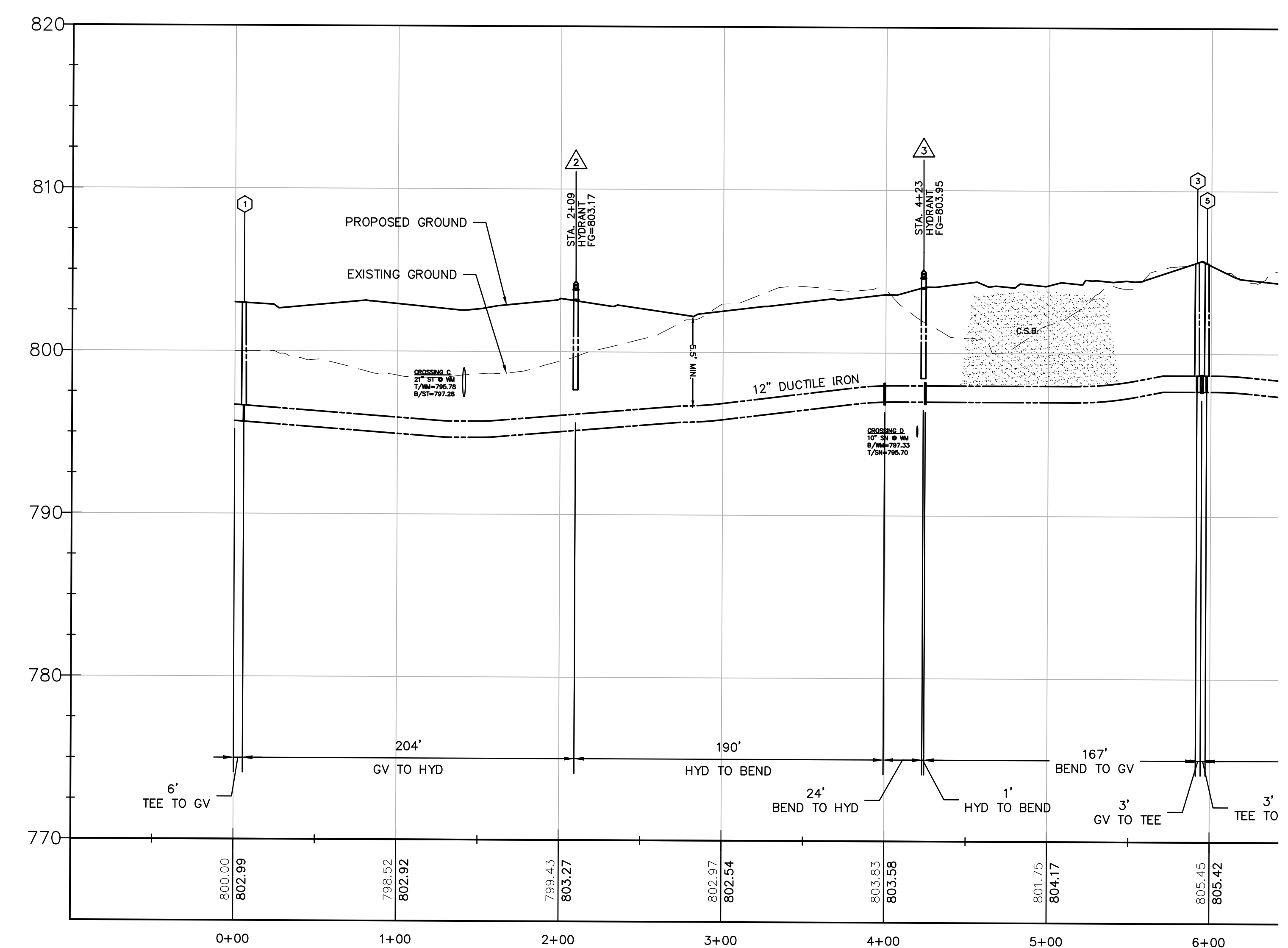
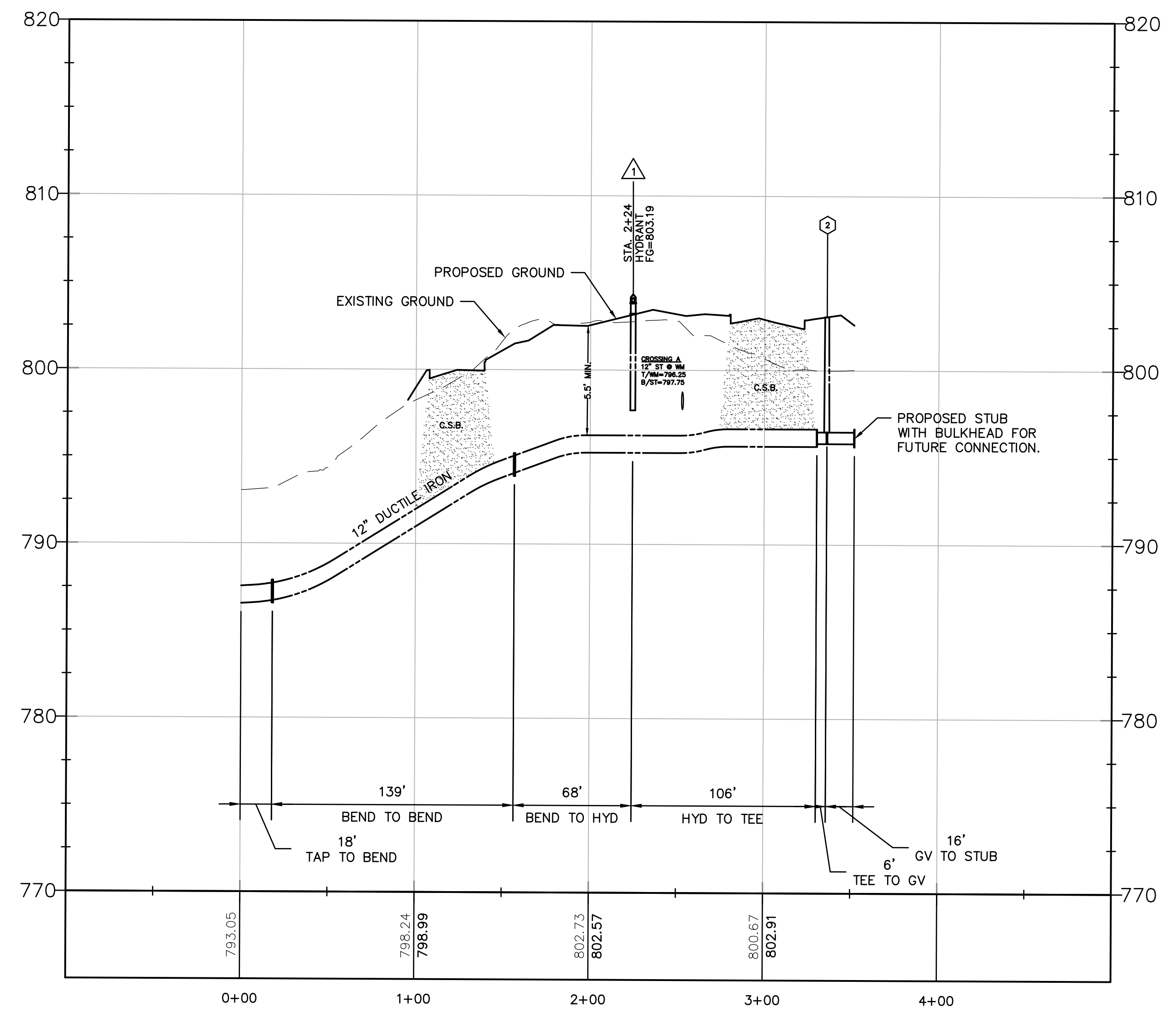
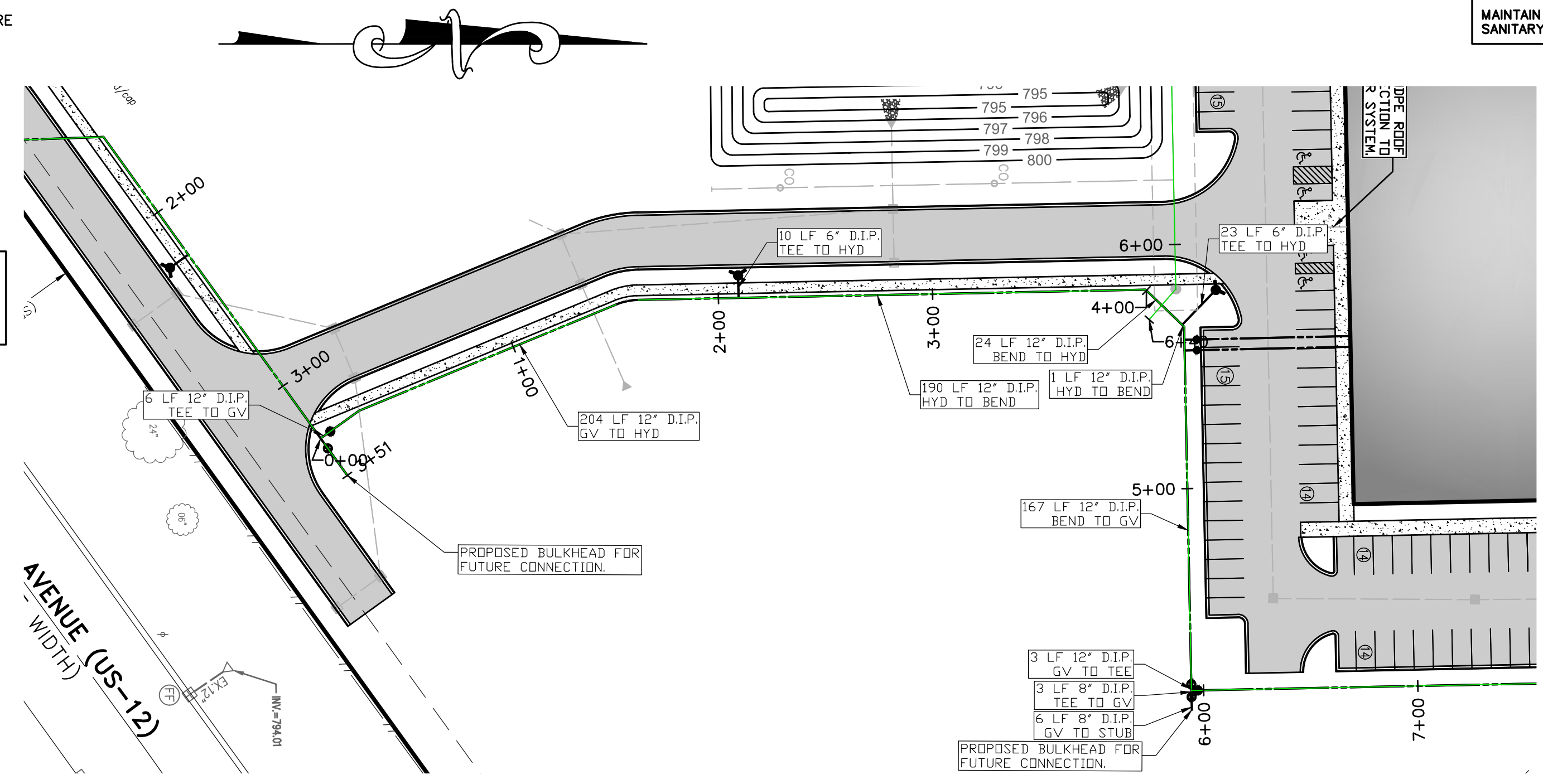
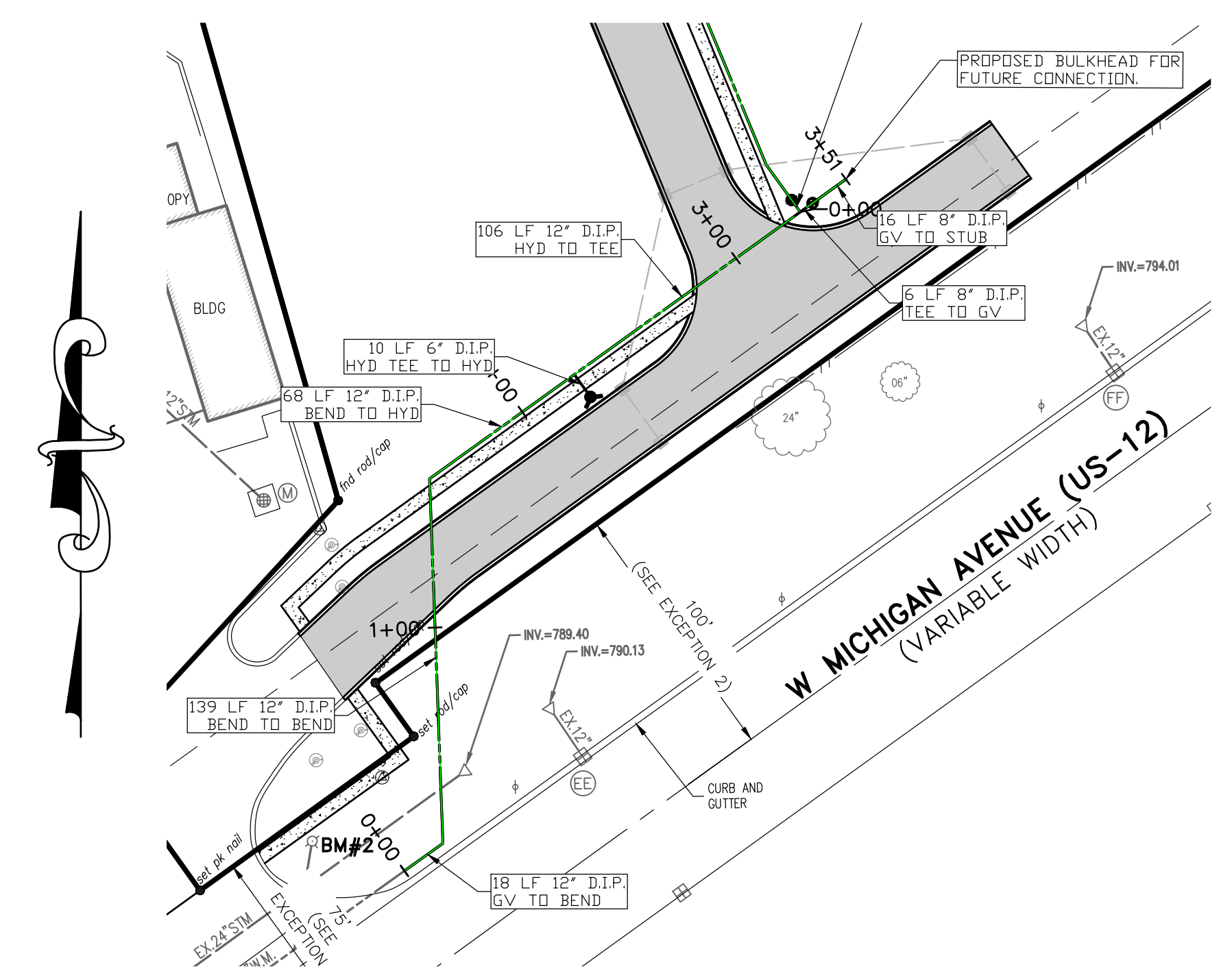
NOTICE:
 CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

UTILITY CROSSING INFORMATION	
A	TOP OF WM = 796.25 BOTTOM OF ST = 797.75
C	TOP OF WM = 795.78 BOTTOM OF ST = 797.28
D	TOP OF SAN = 795.7 BOTTOM OF WM = 797.33

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WATER SERVICE LEAD NOTE:
 THE TENNIS FACILITY WILL BE SERVED BY AN 2" TYPE K COPPER WATER SERVICE LINE AND A 6" CL54 FIRE SUPPRESSION LINE.

WATER VALVE NOTE:
 ALL VALVES SHALL BE INSTALLED IN A THREE-PIECE, ADJUSTABLE VALVE BOX WITH THE FOLLOWING EXCEPTIONS: VALVES SHALL BE INSTALLED IN WELLS, WITH TYPE 1 ADAPTOR BY ADAPTOR, INC., WHERE THE VALVE WILL BE LOCATED WITHIN EXISTING OR PROPOSED (1:1) INFLUENCE OF THE ROAD, OR THE VALVE IS LOCATED ON A WATER MAIN LARGER THAN 16" DIAMETER, OR THE VALVE IS PART OF A TAPPING VALVE CONNECTING TO AN EXISTING WATER MAIN REQUIRING TAPPING VALVES TO BE IN WELLS.



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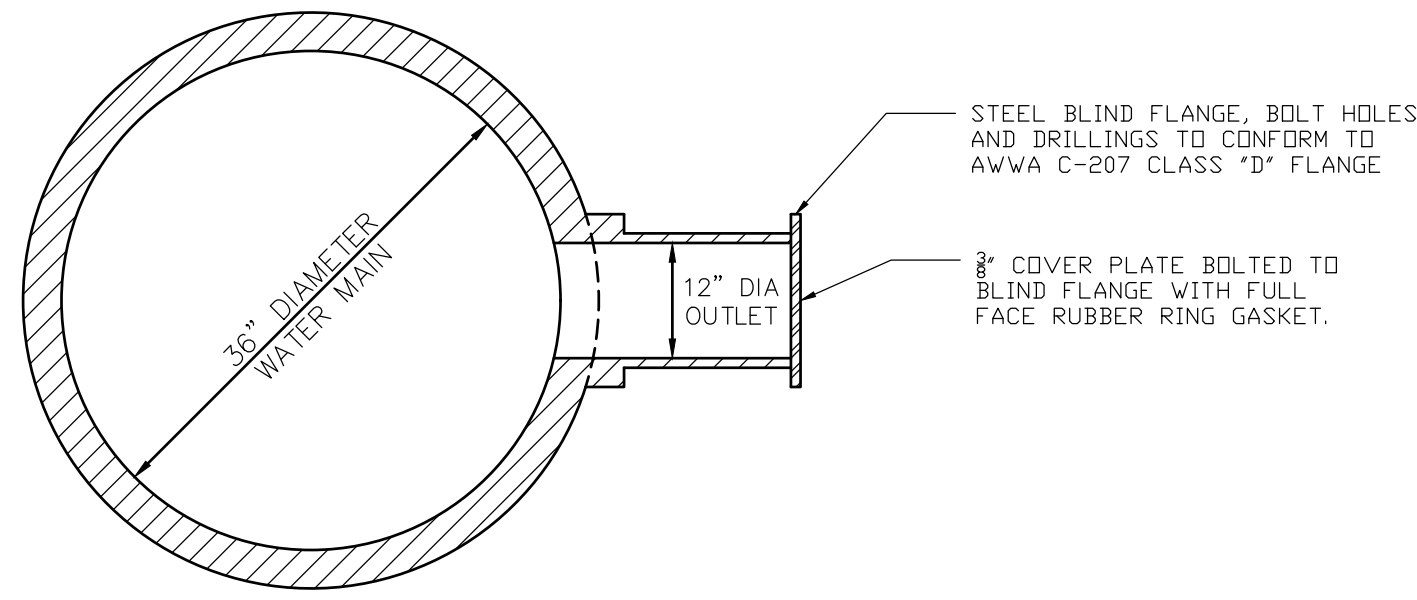


CLIENT: SCHAFER CONSTRUCTION
WATERMAIN PROFILE
 PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
 SECTION: 18 RANGE: 7 E.
 TOWNSHIP: 3 S
 YPSILANTI TOWNSHIP
 WASHINGTON COUNTY
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TYPICAL OUTLET DETAIL FOR EXISTING BLIND TAP

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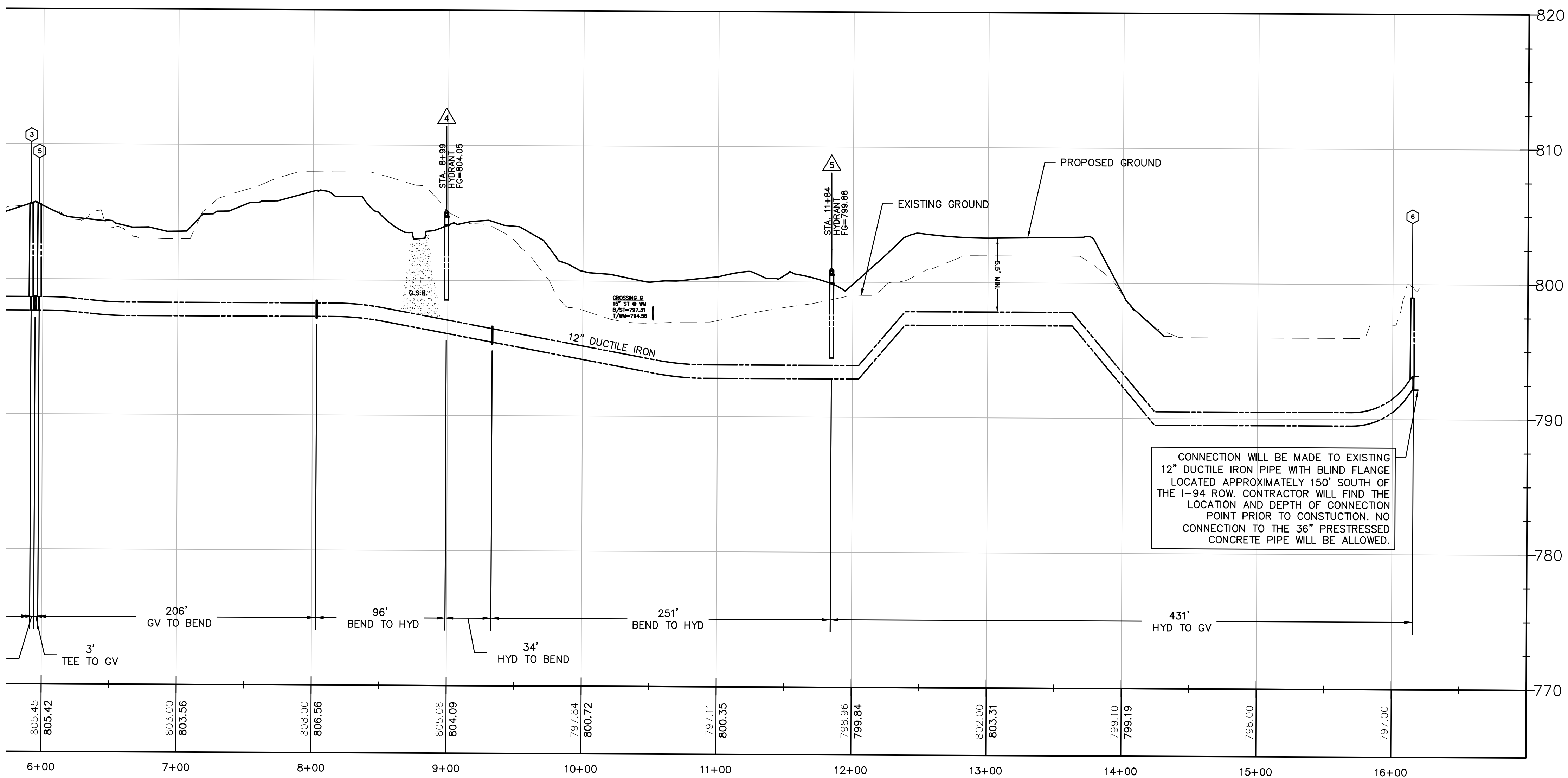
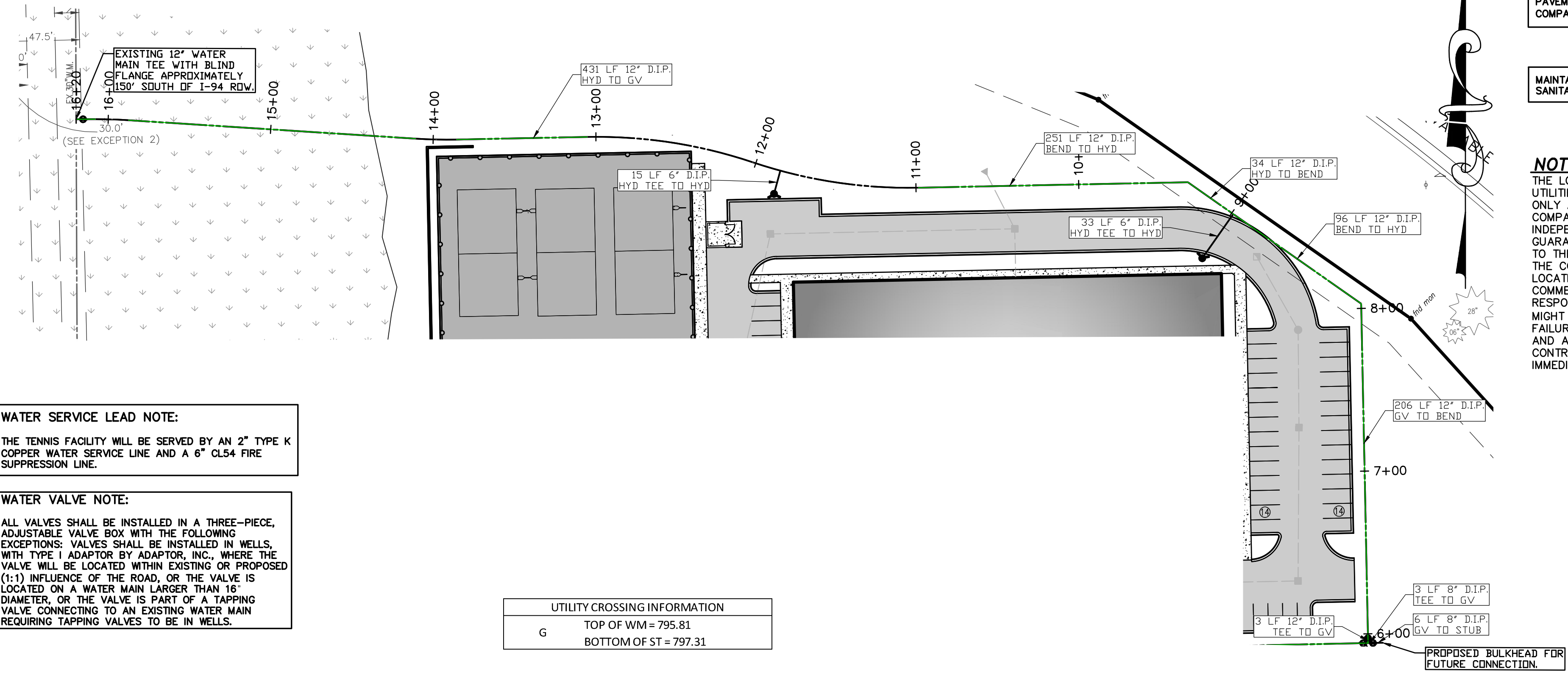
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UTILITY CROSSING INFORMATION	
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CONNECTION WILL BE MADE TO EXISTING 12" DUCTILE IRON PIPE WITH BLIND FLANGE LOCATED APPROXIMATELY 150' SOUTH OF THE I-94 ROW. CONTRACTOR WILL FIND THE LOCATION AND DEPTH OF CONNECTION POINT PRIOR TO CONSTRUCTION. NO CONNECTION TO THE 36" PRESTRESSED CONCRETE PIPE WILL BE ALLOWED.

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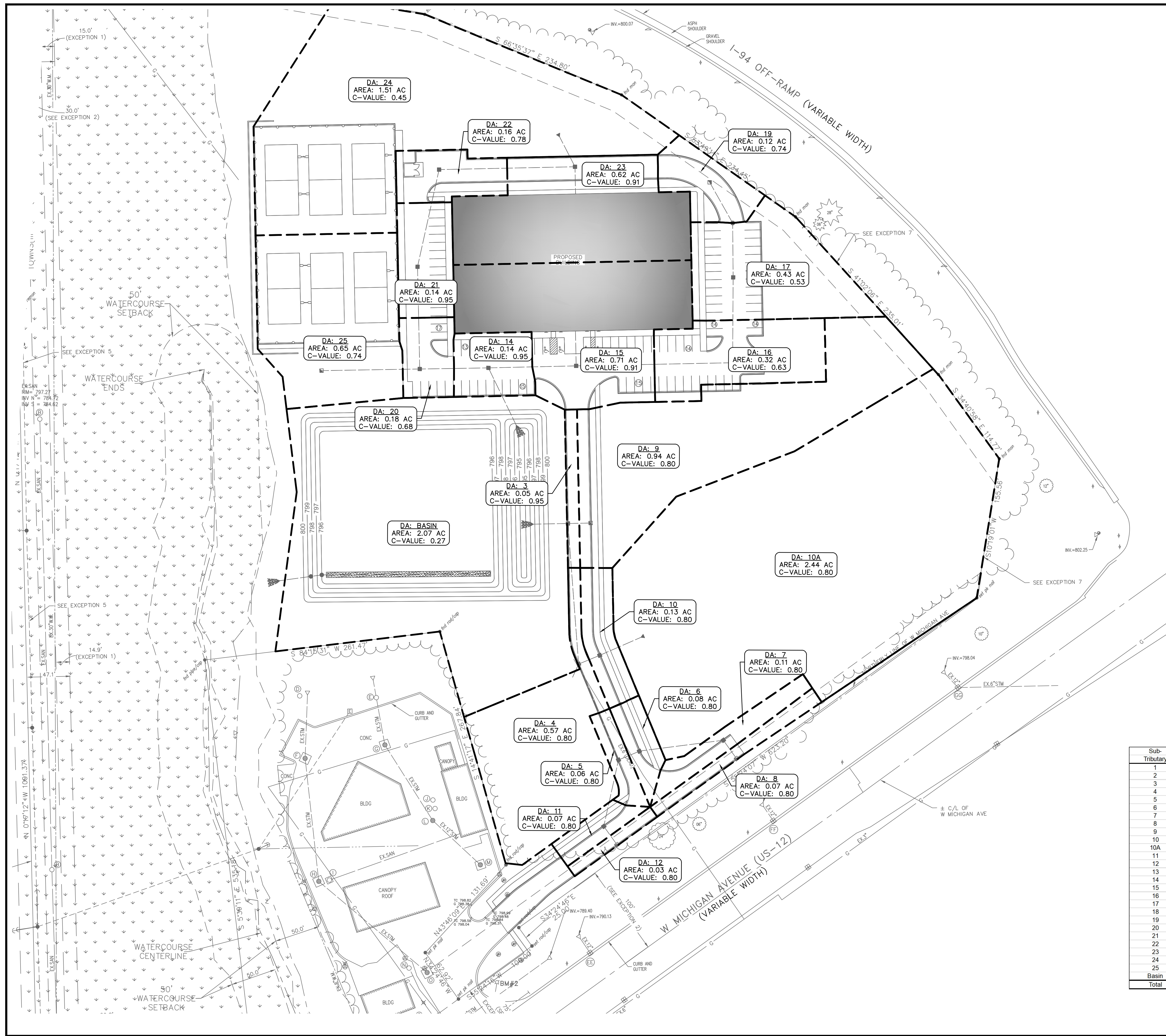


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WATERMAIN PROFILE
 PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
 SECTION: 18 TOWNSHIP: 3 S RANGE: 7 E
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FBK: --
 CHF: --
 SCALE: HOR 1"=50 FT.
 VER 1"=5 FT.



Sub-Tributary	Tributary Area (Acre)	Impervious (C=0.95)	PerVIOUS (C=0.25)	Perm Water (C=1)	Composite C'
1	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00
3	0.05	0.05	0.00	0.00	0.95
4	0.57	0.45	0.12	0.00	0.80
5	0.06	0.05	0.01	0.00	0.80
6	0.08	0.06	0.02	0.00	0.80
7	0.11	0.09	0.02	0.00	0.80
8	0.07	0.06	0.02	0.00	0.80
9	0.94	0.74	0.20	0.00	0.80
10	0.13	0.10	0.03	0.00	0.80
10A	2.44	1.92	0.52	0.00	0.80
11	0.07	0.05	0.01	0.00	0.80
12	0.03	0.03	0.00	0.00	0.95
13	0.00	0.00	0.00	0.00	0.00
14	0.14	0.14	0.00	0.00	0.95
15	0.71	0.67	0.04	0.00	0.91
16	0.32	0.17	0.15	0.00	0.63
17	0.43	0.17	0.26	0.00	0.53
18	0.00	0.00	0.00	0.00	0.00
19	0.12	0.08	0.04	0.00	0.74
20	0.18	0.11	0.07	0.00	0.68
21	0.14	0.14	0.00	0.00	0.95
22	0.16	0.12	0.04	0.00	0.78
23	0.62	0.58	0.04	0.00	0.91
24	1.51	0.43	1.08	0.00	0.45
25	0.65	0.45	0.20	0.00	0.74
Basin	2.07	0.00	2.02	0.05	0.27
Total	11.60	6.68	4.87	0.05	0.66

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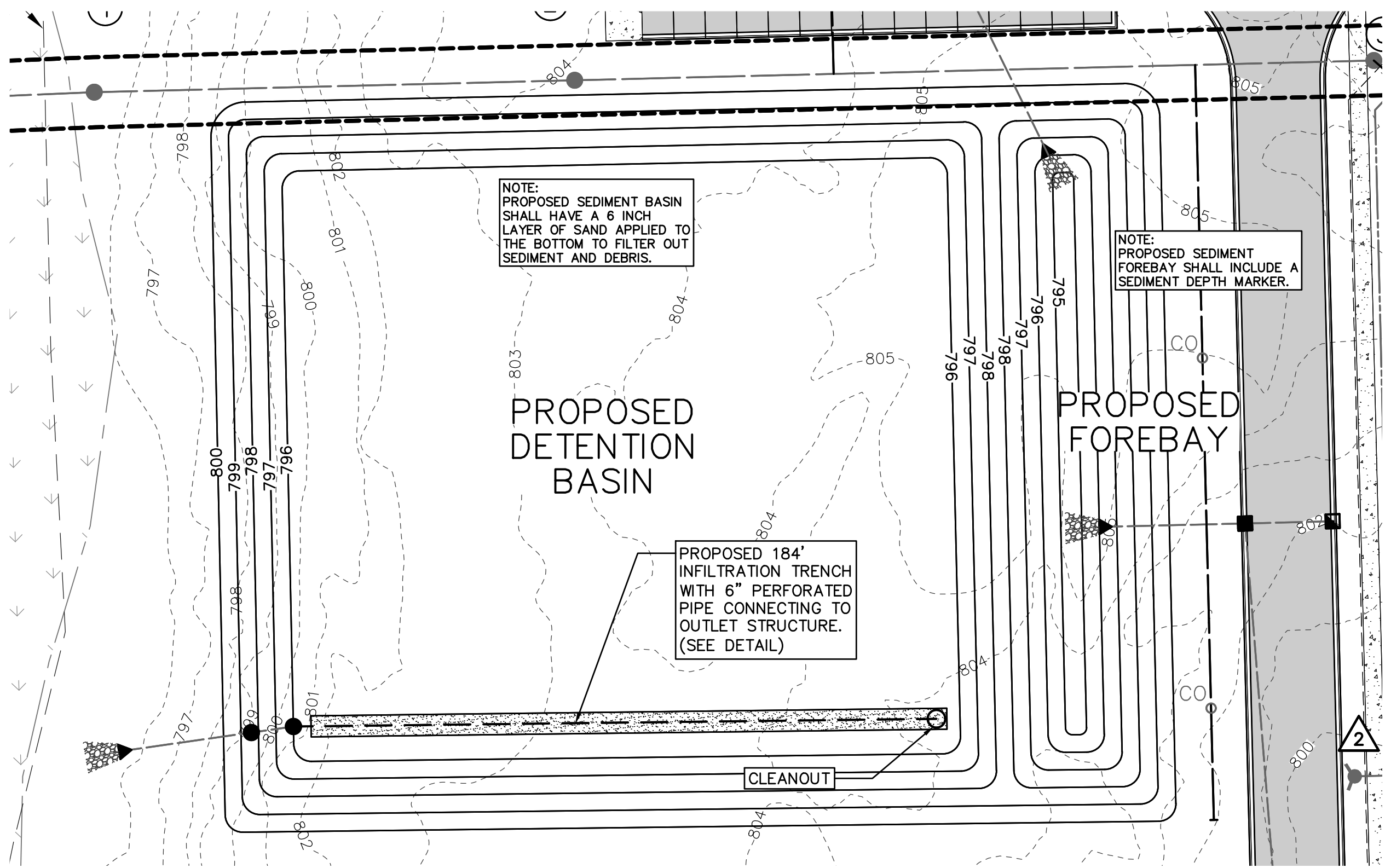
CLIENT: SCHAFFER CONSTRUCTION
DRAINAGE AREA PLAN
 PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
 SECTION: 18 TOWNSHIP: 3 S YPSILANTI TOWNSHIP WASHINGTON COUNTY MICHIGAN
 RANGE: 7 E.

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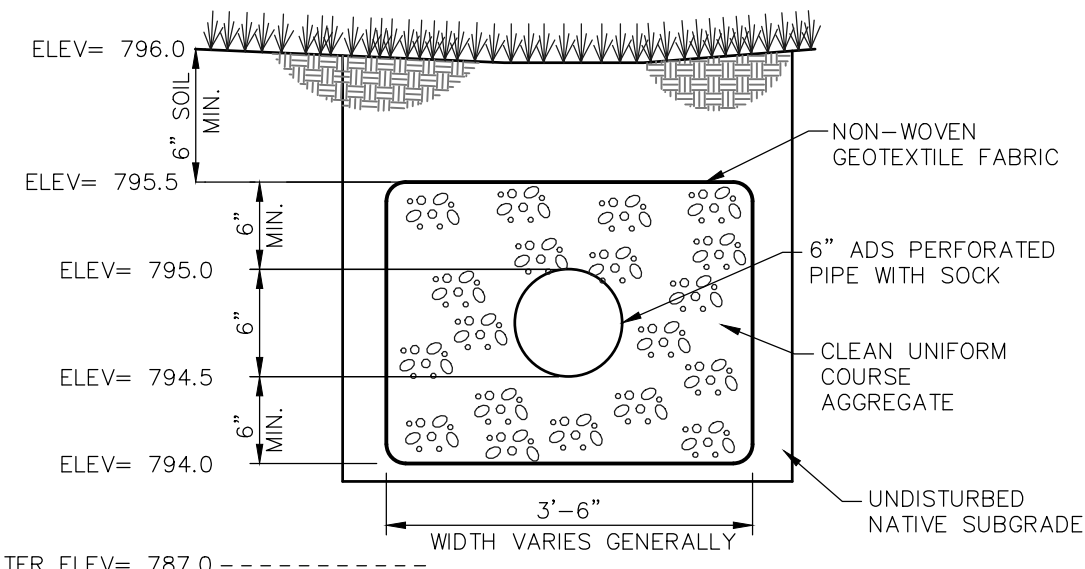
FBK: --
 CHF: --
 SCALE: HOR 1" = 50 FT.
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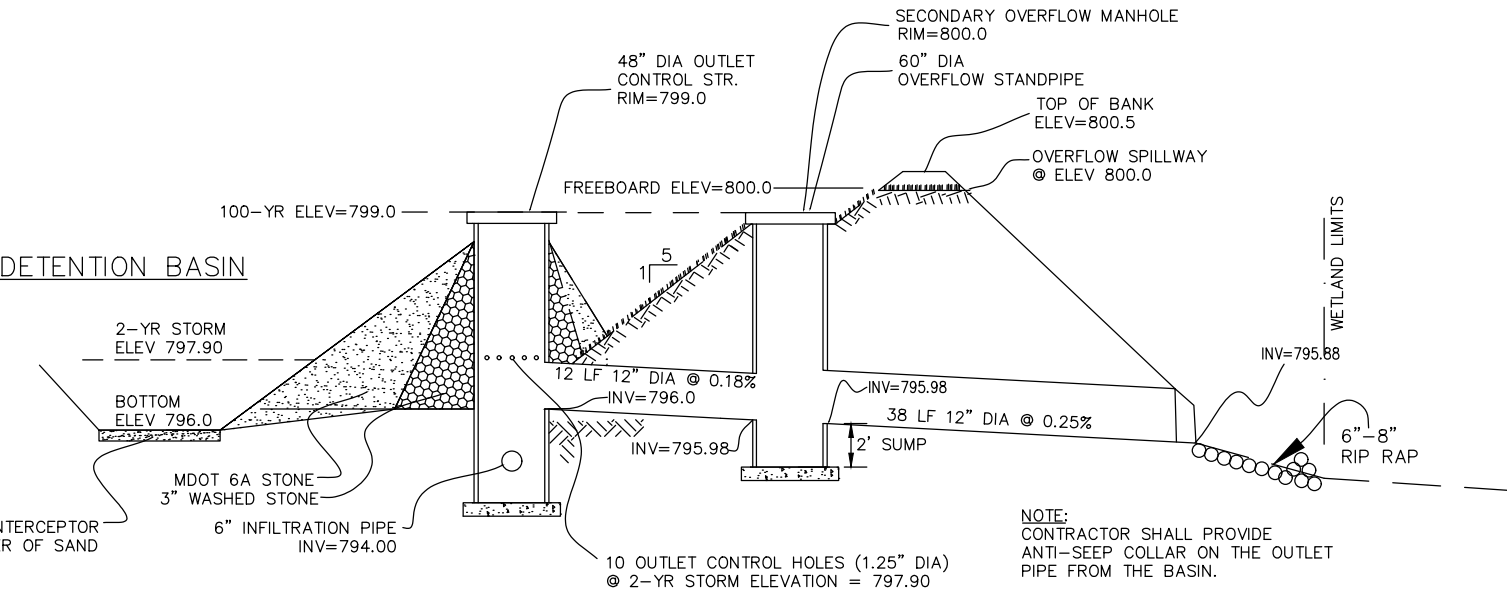


DETENTION BASIN DATA:

FREEBOARD ELEVATION	= 800.0
100 YR ELEVATION	= 799.0
BOTTOM ELEVATION	= 796.0
VOLUME REQUIRED	= 164,440 CF
TOTAL VOLUME PROVIDED	= 180,543 CF
INFILTRATION VOLUME PROVIDED	= 130,651 CF
DETENTION VOLUME PROVIDED	= 49,892 CF



INFILTRATION TRENCH CROSS-SECTION
NO SCALE



DETENTION BASIN OUTLET SECTION
NOT TO SCALE

DETENTION BASIN SIZING CALCULATIONS:

DETENTION AREA

W1 - WORKSHEET 1. DETERMINING POST DEVELOPMENT COVER TYPES, AREAS, CURVE NUMBERS AND RUNOFF COEFFICIENTS

TOTAL BASIN TRIBUTARY AREA = 11.91 AC
 TOTAL SELF-CREDITING BMP'S AREA = 0 AC
 TOTAL BASIN TRIBUTARY AREA EXCLUDING "SELF-CREDITING" BMP'S = 11.91 AC

RATIONAL METHOD VARIABLES

STR.	TRIBUTARY AREA	PERVIOUS				NEW DEVELOPMENT				COMPOSITE COEFFICIENT
		PERVIOUS AREA (AC)	IMPERVIOUS ROADWAY AREA (AC)	IMPERVIOUS SIDEWALK AREA (AC)	IMPERVIOUS BLDG & DRIVE AREA (AC)	NEW LAWN (<8% C=0.25)	UNDISTURBED (C=0.35)	POND AREA (C=1.00)	"C"	
1	6.95	2.17	3.07	1.94	0.22	0.91	2.17	0.00	1.71	0.74
2	4.95	1.15	3.80	1.27	1.27	1.27	1.15	0.00	0.00	0.79
SUM	11.91	3.32	6.88	3.21	1.49	2.18	3.32	0.00	1.71	0.76

TOTAL BASIN TRIBUTARY AREA = 11.91 AC
 TOTAL SELF-CREDITING BMP'S AREA = 0 AC
 TOTAL BASIN TRIBUTARY AREA EXCLUDING "SELF-CREDITING" BMP'S = 11.91 AC

NRCS VARIABLES (PERVIOUS)

SUB-TRIBUTARY AREA	TRIBUTARY AREA (AC)	PERVIOUS				NEW DEVELOPMENT				COMPOSITE COEFFICIENT
		PERVIOUS AREA (AC)	IMPERVIOUS ROADWAY AREA (AC)	IMPERVIOUS SIDEWALK AREA (AC)	IMPERVIOUS BLDG & DRIVE AREA (AC)	NEW LAWN (N=61)	UNDISTURBED (N=60)	POND AREA (N=98)	"C"	
1	6.95	2.17	3.07	1.94	0.22	0.91	2.17	0.00	1.71	61
2	4.95	1.15	3.80	1.27	1.27	1.27	1.15	0.00	0.00	61
SUM	11.91	3.32	6.88	3.21	1.49	2.18	3.32	0.00	1.71	61

TOTAL - Σ (C) (Area) = 203
 AREA TOTAL - Σ (AC) = 3.3
 WEIGHTED C - Σ (C) (Area) / Σ (AC) = 61

NRCS VARIABLES (IMPERVIOUS)

SUB-TRIBUTARY AREA	TRIBUTARY AREA (AC)	PERVIOUS				NEW DEVELOPMENT				COMPOSITE COEFFICIENT
		PERVIOUS AREA (AC)	IMPERVIOUS ROADWAY AREA (AC)	IMPERVIOUS SIDEWALK AREA (AC)	IMPERVIOUS BLDG & DRIVE AREA (AC)	NEW LAWN (N=61)	UNDISTURBED (N=60)	POND AREA (N=98)	"C"	
1	6.95	2.17	4.78	1.94	0.22	0.91	2.17	0.00	1.71	98
2	4.95	1.15	3.80	1.27	1.27	1.27	1.15	0.00	0.00	98
SUM	11.91	3.32	8.58	3.21	1.49	2.18	3.32	0.00	1.71	98

TOTAL - Σ (C) (Area) = 841
 AREA TOTAL - Σ (AC) = 8.58
 WEIGHTED C - Σ (C) (Area) / Σ (AC) = 98

W2 - STANDARD METHOD RUNOFF VOLUME CALCULATIONS

FIRST FLUSH VOLUME CALCULATIONS (Vff)

TRIBUTARY AREA (ac) = 11.91 AC
 Runoff Coefficient "C" = 0.76

Vff = (1") (1/12") (43560 sf / 1 ac) * A * C = 32933 CF

W3 - STANDARD METHOD RUNOFF VOLUME CALCULATIONS

PRE-DEVELOPMENT BANK FULL RUNOFF CALCULATIONS (Vbf-pre)

A.	2-YR / 24 HOUR STORM EVENT	P=	2.35 "
B.	PRE-DEVELOPMENT CURVE NO.	CN=	58
C.	S= 1000/CN - 10	S=	7.2
D.	Q = (P-0.25)^2 / (P+0.85)	Q=	0.10
E.	TOTAL SITE AREA (Excluding "Self-Crediting BMP's")	AREA=	11.91 AC
F.	Vbf-pre = Q (L/12) Area	Vbf-pre =	4317 CF

W5 - STANDARD METHOD RUNOFF VOLUME CALCULATIONS

"Impervious Cover" Post-Development Bankfull Runoff Calculations (Vbf-post)

A.	2-YR / 24 HOUR STORM EVENT	P=	2.35 "
B.	IMPERVIOUS COVER CURVE NO. (FR: WS1)	CN=	98
C.	S= 1000/CN - 10	S=	0.2
D.	Q = (P-0.25)^2 / (P+0.85)	Q=	2.12
E.	IMPERVIOUS COVER AREA (FR: WS1)	AREA=	8.58 AC
F.	Vbf-imp-post = Q (L/12) Area	Vbf-imp-post =	66097 CF

W7 - STANDARD METHOD RUNOFF VOLUME CALCULATIONS

"Impervious Cover" Post-Development 300-year Runoff Calculations (V100-imp-post)

A.	100-YR STORM EVENT	P=	5.11 "
B.	IMPERVIOUS COVER CURVE NO. (FR: WS1)	CN=	98
C.	S= 1000/CN - 10	S=	0.2
D.	Q = (P-0.25)^2 / (P+0.85)	Q=	4.87
E.	IMPERVIOUS COVER AREA (FR: WS1)	AREA=	8.58 AC
F.	V100-imp-post = Q (L/12) Area	V100-imp-post =	151809 CF

W4 - STANDARD METHOD RUNOFF VOLUME CALCULATIONS

"Pervious Cover" Post-Development Bankfull Runoff Calculations (Vbf-per-post)

A.	2-YR / 24 HOUR STORM EVENT	P=	2.35 "
B.	PERVIOUS COVER CURVE NO. (FR: WS1)	CN=	61
C.	S= 1000/CN - 10	S=	6.4
D.	Q = (P-0.25)^2 / (P+0.85)	Q=	0.15
E.	PERVIOUS COVER AREA (FR: WS1)	AREA=	2.98 AC
F.	Vbf-per-post = Q (L/12) Area	Vbf-per-post =	1665 CF

W6 - STANDARD METHOD RUNOFF VOLUME CALCULATIONS

"Pervious Cover" Post-Development 100-YR Runoff Calculations (V100-per-post)

A.	100-YR STORM EVENT	P=	5.11 "
B.	PERVIOUS COVER CURVE NO. (FR: WS1)	CN=	61
C.	S= 1000/CN - 10	S=	6.4
D.	Q = (P-0.25)^2 / (P+0.85)	Q=	1.44
E.	PERVIOUS COVER AREA (FR: WS1)	AREA=	3.32 AC
F.	V100-per-post = Q (L/12) Area	V100-per-post =	17322 CF

W8 - STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Determine Time of Concentration for Applicable Flow Types (Tc-hrs)

Flow Type	K	Elevation		Change in Elevation	Length (ft)	Slope % (S)	S^0.5	V=K*S^0.5 Tc=L/(v*3600)
		Upper	Lower					
Sheet Flow	0.48	804	797.5	6.5	277	2.3	1.53	0.7
Waterway	1.2	797.5	797.17	0.3	33	1.0	1.00	1.2
Waterway	1.2	797.17	796.81	0.4	150	0.2	0.49	0.6
Waterway	1.2	796.81	796.6	0.2	110	0.2	0.44	0.5
Waterway	1.2	796.6	796.39	0.2	113	0.2	0.43	0.5
Waterway	1.2	796.39	795.1	1.3	76	1.7	1.30	1.6
Waterway	1.2	795.1	795	0.1	74	0.1	0.37	0.4

Total Time of Concentration (Tc-hrs) = 0.36
 Tc (min) = 22

W9 - STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Runoff Summary & Onsite Infiltration Requirement

A. Runoff Summary from Previous Worksheets

- First Flush volume (Vff)	32933 cf
- Pre-Development Bankfull Runoff Volume (Vbf-pre)	4317 cf
- Pervious Cover Post-Development Bankfull Volume (Vbf-per-post)	1855 cf
- Impervious Cover Post-Development Bankfull Volume (Vbf-imp-post)	66097 cf
- Total Post Development Bank Full Volume Required	Vbf = 67952 cf
- Pervious Cover Post-Development 100-yr Volume (V100-per-post)	17322 cf
- Impervious Cover Post-Development 100-yr Volume (V100-imp-post)	151809 cf
- Total Post Development 100-yr Volume Required	V100 = 169130 cf

B. Determine Onsite Infiltration Requirement

Subtract Pre-Development Bankfull from the Post-Development Bankfull Volume	
Total Post-Development Bankfull Volume (Bbf-post)	67952 cf
Pre-Development Bankfull Runoff Volume (Vbf-pre)	4317 cf
Bankfull Volume Difference	63635 cf
On-Site Infiltration Volume Required (Vinf)	Vinf = 63635 cf

W10 - STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Detention/Retention Requirement

A. Qp= 238.6 C^0.82	549 cfs/in-mi^2
peak of the unit hydrograph	
B. Total Site Area (ac) excluding "Self-Crediting" BMP's	11.91 AC
C. Q100=Q100-per + Q100-imp	Q100= 6.31 in
D. Peak Flow (PF) = Qp(cfs/in-mi^2) * Q100(in) * Area (ac) / 640	PF= 64 cfs
E. Δ = PF (cfs) - 0.15 * Area (ac)	Δ = 62.6 cfs
F. Vdet= Δ(cfs)/PF(cfs) * V10(d)	Vdet = 164440 cf
Non-penalty Total Detention Volume Required Vdet=	164440 cf
The total required detention volume =	33789 cf

W11 - Applicable BMPs and Associated Volume Credits

Proposed BMP	Area (sf)	Storage Volume (cf)	Ave Design Infiltration Rate (in/hr)	Infiltration Volume During Storm (cf)	Total Volume Reduction (cf)
Porous Pavement w/ infiltration bed					
Infiltration Basin	32180	61463.8	4.3	69187	130651
Subsurface Infiltration Bed					
Infiltration Trench					
Rain Garden/Bioretention					
Dry Well					
Bioswale					
Vegetated Filter Strip					
Green Roof					

Total Volume Reduction Credit by Proposed Structural BMPs (ft3) = 130,651
 Runoff Volume Infiltration Requirement (Vinf) from Worksheet 9 = 63,635
 Runoff Volume Credit (ft3) = 67,016

W13 - Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary	
Minimum Onsite Infiltration Requirement, Vinf	63,635 ft ³
Designed/Provided Infiltration Volume	130,651 ft ³
% Minimum Required Infiltration Provided	205 %
Total Calculated Detention Volume, Vdet	164,440 ft ³
Net Required Detention Volume (Vdet - Designed/Provided Infiltration Volume)	33,789 ft ³

Detention Volume Provided

100-YR DETENTION VOLUME

ELEVATION	AREA	AVG. AREA	HEIGHT	BASIN VOLUME	STORAGE VOLUME
796.0	32,202	34,050	1.0	34,050	0
797.0	35,897	37,636	0.9	67,922	0
797.9	39,375	39,573	0.1	71,879	3,957
798.0	39,770	45,935	1.0	117,814	49,892
799.0	52,099				
800.0	FREEBOARD				

FOREBAY VOLUME

ELEVATION	AREA	AVG. AREA	HEIGHT	CUMULATIVE VOLUME
795.0	482	1,155	1.0	0
796.0	1,828	3,251	1.0	0
797.0	4,673	5,756	1.0	5,756
798.0	6,838			

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SCHAFFER CONSTRUCTION
DRAINAGE PLAN
PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
 SECTION: 18
 TOWNSHIP: 3 S
 YPSILANTI TOWNSHIP
 WASHINGTON COUNTY
 MICHIGAN
 RANGE: 7 E.

REVISED
 2022-6-10 PER YCUA & WCMRC REVIEW
 2022-11-22 PER YCUA, OHM & WCMRC REVIEW
 2023-2-8 PER YCUA, OHM & EGLE REVIEW

DATE: 4-7-2022
 DRAWN BY: LW
 CHECKED BY: DJL

SCALE: HOR 1" = 50 FT.
 VER 1" = 10 FT.

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STORM STRUCTURE TABLE

STRUCTURE TABLE			
STRUCTURE NAME:	TOP	PIPES IN:	PIPES OUT
1	-	30" REINFORCED CONCRETE PIPE INV IN =795.00	
2	801.47	18" REINFORCED CONCRETE PIPE INV IN =795.93 30" REINFORCED CONCRETE PIPE INV IN =795.23	30" REINFORCED CONCRETE PIPE INV OUT =795.13
3	802.03	21" REINFORCED CONCRETE PIPE INV IN =796.30 12" REINFORCED CONCRETE PIPE INV IN =796.90 12" REINFORCED CONCRETE PIPE INV IN =796.50	30" REINFORCED CONCRETE PIPE INV OUT =795.70
4	802.09	12" REINFORCED CONCRETE PIPE INV IN =797.51 12" REINFORCED CONCRETE PIPE INV IN =797.52	12" REINFORCED CONCRETE PIPE INV OUT =797.41
5	802.09	12" REINFORCED CONCRETE PIPE INV IN =797.73	12" REINFORCED CONCRETE PIPE INV OUT =797.63
6	802.68	12" REINFORCED CONCRETE PIPE INV IN =798.25	12" REINFORCED CONCRETE PIPE INV OUT =798.15
7	802.68		12" REINFORCED CONCRETE PIPE INV OUT =798.36
8	801.47		18" REINFORCED CONCRETE PIPE INV OUT =795.99
9A	-		21" REINFORCED CONCRETE PIPE INV OUT =798.00
9	802.03	21" REINFORCED CONCRETE PIPE INV IN =797.00	21" REINFORCED CONCRETE PIPE INV OUT =796.40
10	802.16	12" REINFORCED CONCRETE PIPE INV IN =797.95	12" REINFORCED CONCRETE PIPE INV OUT =797.85
11	802.16		12" REINFORCED CONCRETE PIPE INV OUT =798.06
12	-	30" REINFORCED CONCRETE PIPE INV IN =795.00	
13	802.78	18" REINFORCED CONCRETE PIPE INV IN =795.90 24" REINFORCED CONCRETE PIPE INV IN =795.50	30" REINFORCED CONCRETE PIPE INV OUT =795.10
14	802.77	12" REINFORCED CONCRETE PIPE INV IN =796.55 8" CORRUGATED HDPE PIPE INV IN =797.44	18" REINFORCED CONCRETE PIPE INV OUT =796.15
15	802.71	12" REINFORCED CONCRETE PIPE INV IN =797.42	12" REINFORCED CONCRETE PIPE INV OUT =797.32
16	802.77	12" REINFORCED CONCRETE PIPE INV IN =797.95	12" REINFORCED CONCRETE PIPE INV OUT =797.85
17	803.37	12" REINFORCED CONCRETE PIPE INV IN =798.32	12" REINFORCED CONCRETE PIPE INV OUT =798.22
18	802.77		12" REINFORCED CONCRETE PIPE INV OUT =798.55
19	802.77	21" REINFORCED CONCRETE PIPE INV IN =795.86 12" REINFORCED CONCRETE PIPE INV IN =796.46	24" REINFORCED CONCRETE PIPE INV OUT =795.66
20	802.77	21" REINFORCED CONCRETE PIPE INV IN =796.19	21" REINFORCED CONCRETE PIPE INV OUT =796.09
21	802.77	21" REINFORCED CONCRETE PIPE INV IN =796.52	21" REINFORCED CONCRETE PIPE INV OUT =796.42
22	802.77	15" REINFORCED CONCRETE PIPE INV IN =797.24 8" CORRUGATED HDPE PIPE INV IN =797.27	21" REINFORCED CONCRETE PIPE INV OUT =796.84
23	-		15" REINFORCED CONCRETE PIPE INV OUT =797.50
24	801.50		12" REINFORCED CONCRETE PIPE INV OUT =796.94

BASIN OUTLET PIPE CALCULATIONS

OUTLET SIZING FOR ONE-STAGE OUTLET
RELEASE FROM DETENTION BASIN
OVER A PERIOD OF AT LEAST 24 HOURS

CALCULATE AVERAGE RELEASE RATE WHICH WILL SATISFY THIS REQUIREMENT:

ONE STAGE OUTLET VOLUME= 33789 cf
Qave = Vt,ff / 86,400 sec = 0.38 cfs

PLACE LOWEST OPENINGS IN RISER PIPE AT TOP OF INFILTRATION STORAGE
BOTTOM STORAGE ELEVATION: Zo = 797.90
100 YR STORAGE ELEVATION: Zff = 799.00

CALCULATE AVERAGE HEAD:
Have = 0.667 * (Zff - Zo) = 0.736249 ft

DETERMINE ORIFICE AREA NEEDED BASED ON THE ORIFICE EQUATION:
A = Qave / 0.62 * sqrt (2 * g * Have) = 0.0893 ft²

DETERMINE # OF ORIFI REQUIRED BASED ON AN ORIFICE DIAMETER OF:
= 1.25 inch

REQUIRED # OF ORIFI: = 10

CALCULATE ACTUAL AVERAGE RELEASE RATE:
Qave = 0.62 * A * SQRT (2 * g * have) = 0.3636 cfs

CALCULATE ACTUAL HOLDING TIME:
T = Vt,ff / Qave = 25.8 hours

Size the Standpipe Outlet

Outlet Pipe Diameter = 12 INCH
100-yr Outlet Flow = 1.79 CFS

Minimum Slope (ft/ft) = [(Qave * n) / (1.486 X Aout * R^{2/3})]²
R=A/P= 0.25 ft
n= 0.011
Aout= 0.785 sf
= 0.18 %

USE A 12 INCH PIPE AT 0.18 SLOPE

Check Velocity at full pipe flow condition against maximum allowable closed conduit velocity
V = Qavg ff / Aout = 2.3 ft/sec < 8 ft/sec ... OK.

SIZE THE STANDPIPE
SIZE THE OUTLET STANDPIPE TO ACCOMMODATE ALLOWABLE 100 YR DISCHARGE FLOW IN THE EVENT THAT THE OUTLET RESTRICTORS GET CLOGGED

HYDRAULIC HEAD OVER STRUCTURE WALL = 0.15 ft

100 YR ALLOWABLE DISCHARGE = 1.8 cfs

CALCULATE WEIR LENGTH USING WEIR EQUATION:
C=3.0
L= Q / (3.0 * H^{3/2}) = 10.3 ft

STANDPIPE DIAMETER = D=L/3.14 = 3.3
USE A 4' DIAMETER OVERFLOW STRUCTURE

SIZE THE OVERFLOW STANDPIPE
SIZE THE OVERFLOW STANDPIPE TO ACCOMMODATE 10 YR STORM FLOW IN THE EVENT THAT THE OUTLET RESTRICTOR GETS CLOGGED

HYDRAULIC HEAD OVER STRUCTURE WALLS = 0.8 ft

10 YEAR FLOW FROM CALC 'S: = 30.3 cfs

CALCULATE WEIR LENGTH USING WEIR EQUATION:
C=3.0
L= Q / (3.0 * H^{3/2}) = 14.1 ft

STANDPIPE DIAMETER = D=L/3.14 = 4.5
USE A 5' DIAMETER OVERFLOW STRUCTURE

OVERFLOW STRUCTURE OUTLET PIPE SIZE AND SLOPE
SIZE THE OVERFLOW OUTLET PIPE TO CONVEY THE TEN YEAR FLOW INTO THE WETLAND.

Riser Outlet Pipe Slope

Outlet Pipe Diameter = 12 INCH
100-yr Outlet Flow = 1.79 CFS

Minimum Slope (ft/ft) = [(Qave * n) / (1.486 X Aout * R^{2/3})]²
R=A/P= 0.25 ft
n= 0.013
Aout= 0.785 sf
= 0.25 %

USE A 12 INCH PIPE AT 0.25 SLOPE

Check Velocity at full pipe flow condition against maximum allowable closed conduit velocity
V = Q10 / Aout = 2.3 ft/sec < 8 ft/sec ... OK.

FROM	TO	Area (Acre)	C	Equiv. Area	Total Area	Time (min)	I (IN/HR)	Add'l Q	Q=CIA (C.F.S.)	Capacity (C.F.S.)	Dia of Pipe (in)	Length (ft)	Slope (%)	Min HG based on "Q" (%)	HG for 2.5 FPS	Actual HG (%)	Vel. Flow Full	Time of Flow (min)	H.G. Elev		RIM ELEV.		INVERT ELEV.		Drop (ft)	HG COVER TO RIM		COVER	
																			Upper End	Lower End	Upper End	Lower End	Upper End	Lower End		Upper End	Lower End	Upper End	Lower End
7	6	0.07	0.80	0.06	0.06	15.00	4.35		0.26	2.39	12	25.0	0.45	0.01	0.30	0.45	3.0	0.1	799.16	799.05	802.68	802.68	798.36	798.25	0.10	3.5	3.6	3.24	3.35
6	5	0.11	0.80	0.09	0.15	15.10	4.34		0.64	2.39	12	93.0	0.45	0.03	0.30	0.45	3.0	0.5	798.95	798.53	802.68	802.09	798.15	797.73	0.10	3.7	3.8	3.45	3.28
5	4	0.08	0.80	0.06	0.21	15.60	4.28		0.91	2.39	12	25.0	0.45	0.06	0.30	0.45	3.0	0.1	798.43	798.32	802.09	802.09	797.63	797.52	0.10	3.7	3.8	3.38	3.49
4	3	0.06	0.80	0.05	0.26	15.70	4.26	0.38	1.50	2.39	12	115.0	0.45	0.18	0.30	0.45	3.0	0.6	798.22	797.70	802.09	802.03	797.42	796.90		3.9	4.3	3.59	4.05
3	2	0.57	0.80	0.46	0.72	16.30	4.19	8.94	12.35	22.47	30	156.0	0.30	0.09	0.09	0.30	4.6	0.6	797.70	797.23	802.03	801.47	795.70	795.23	0.10	4.3	4.2	3.62	3.53
2	1	0.05	0.95	0.05	0.77	16.90	4.13	3.27	15.84	21.70	30	46.6	0.28	0.15	0.09	0.28	4.4	0.2	797.13	797.00	801.47	795.00	795.13	795.00	0.10	4.3	-2.0	3.63	-2.71
8	2	0.94	0.80	0.75	0.75	15.00	4.35		3.27	5.25	18	25.0	0.25	0.10	0.18	0.25	3.0	0.1	797.19	797.13	801.47	801.47	795.99	795.93		4.3	4.3	3.85	3.91
9A	9	2.44	0.80	1.95	1.95	15.00	4.35		8.50	21.75	21	53.0	1.88	0.29	0.14	1.88	9.0	0.1	799.40	798.40	798.00	802.03	798.00	797.00	0.60	-1.4	3.6	-1.89	3.14
9	3	0.13	0.80	0.10	2.05	15.10	4.34		8.94	10.02	21	25.0	0.40	0.32	0.14	0.40	4.2	0.1	797.80	797.70	802.03	802.03	796.40	796.30		4.2	4.3	3.74	3.84
11	10	0.03	0.95	0.03	0.03	15.00	4.35		0.14	2.39	12	25.0	0.45	0.00	0.30	0.45	3.0	0.1	798.87	798.75	802.16	802.16	798.07	797.95	0.10	3.3	3.4	3.01	3.12
10	4	0.07	0.80	0.05	0.09	15.10	4.34		0.38	2.39	12	75.0	0.45	0.01	0.30	0.45	3.0	0.4	798.65	798.32	802.16	802.09	797.85	797.52	0.10	3.5	3.8	3.22	3.49
18	17	0.12	0.74	0.09	0.09	15.00	4.35		0.37	2.39	12	52.0	0.45	0.01	0.30	0.45	3.0	0.3	799.35	799.12	802.77	803.37	798.55	798.32	0.10	3.4	4.3	3.14	3.97
17	16	0.00	0.00	0.00	0.09	15.30	4.31		0.37	2.39	12	60.0	0.45	0.01	0.30	0.45	3.0	0.3	799.02	798.75	803.37	802.77	798.22	797.95	0.10	4.4	4.0	4.07	3.74
16	15	0.43	0.53	0.23	0.32	15.60	4.28		1.36	2.39	12	94.0	0.45	0.15	0.30	0.45	3.0	0.5	798.65	798.22	802.77	802.70	797.85	797.42	0.10	4.1	4.5	3.84	4.19
15	14	0.32	0.63	0.20	0.52	16.10	4.22		2.20	2.39	12	173.0	0.45	0.38	0.30	0.45	3.0	0.9	798.12	797.35	802.70	802.77	797.32	796.55		4.6	5.4	4.29	5.14
14	13	0.71	0.91	0.64	1.16	17.00	4.11		4.85	5.25	18	97.0	0.25	0.21	0.18	0.25	3.0	0.5	797.35	797.10	802.77	802.77	796.15	795.90		5.4	5.7	5.00	5.24
13	12	0.14	0.95	0.13	1.29	17.50	4.06	9.04	14.43	14.79	30	79.4	0.13	0.12	0.09	0.13	3.0	0.4	797.10	797.00	802.77	795.00	795.10	795.00		5.7	-2.0	4.96	-2.71
23	22	1.51	0.45	0.68	0.68	15.00	4.35		2.95	5.13	15	42.0	0.63	0.21	0.23	0.63	4.2	0.2	798.503	798.238	797.50	802.77	797.50	797.24		-1.0	4.5	-1.36	4.18
22	21	0.62	0.91	0.56	1.24	15.20	4.32		5.37	7.26	21	150.0	0.21	0.11	0.14	0.21	3.0	0.8	798.238	797.923	802.77	802.77	796.84	796.52	0.10	4.5	4.8	4.04	4.35
21	20	0.16	0.78	0.12	1.36	16.00	4.23		5.89	7.26	21	110.0	0.21	0.14	0.14	0.21	3.0	0.6	797.823	797.592	802.77	802.77	796.42	796.19	0.10	4.9	5.2	4.45	4.68
20	19	0.14	0.95	0.14	1.50	16.60	4.16		6.46	7.26	21	113.0	0.21	0.17	0.14	0.21	3.0	0.6	797.492	797.255	802.77	802.77	796.09	795.86		5.3	5.5	4.78	5.02
19	13	0.18	0.68	0.12	1.62	17.20	4.09	2.08	9.04	10.12	24	76.0	0.20	0.16	0.12	0.20	3.2	0.4	797.255	797.103	802.77	802.77	795.66	795.50		5.5	5.7	4.95	5.10
24	19	0.65	0.74	0.48	0.48	15.00	4.35		2.08	2.39	12	108.0	0.45	0.34	0.30	0.45	3.0	0.6	797.74	797.26	801.50	802.77	796.94	796.46		3.8	5.5	3.48	5.23

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DRAINAGE PLAN

PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
SECTION: 18
TOWNSHIP: 3 S
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MICHIGAN

REVISED

2022-6-10 PER YOUNG & MICHELS REVIEW
2022-11-22 PER YOUNG, OHM & MICHELS REVIEW
2023-2-6 PER YOUNG, OHM & MICHELS REVIEW

DATE: 4-7-2022

DRAWN BY: LW

CHECKED BY: DJL

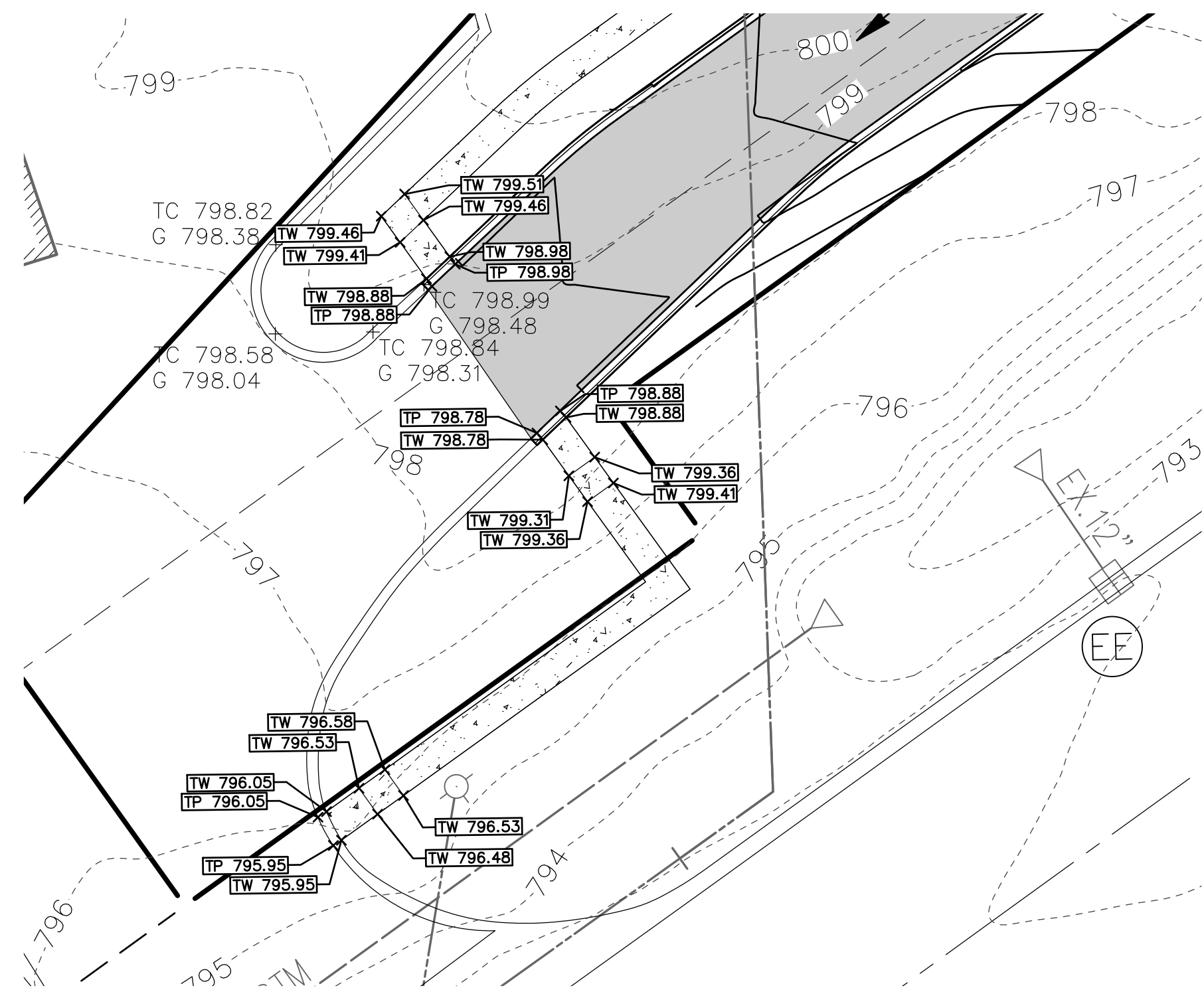
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CHF: --

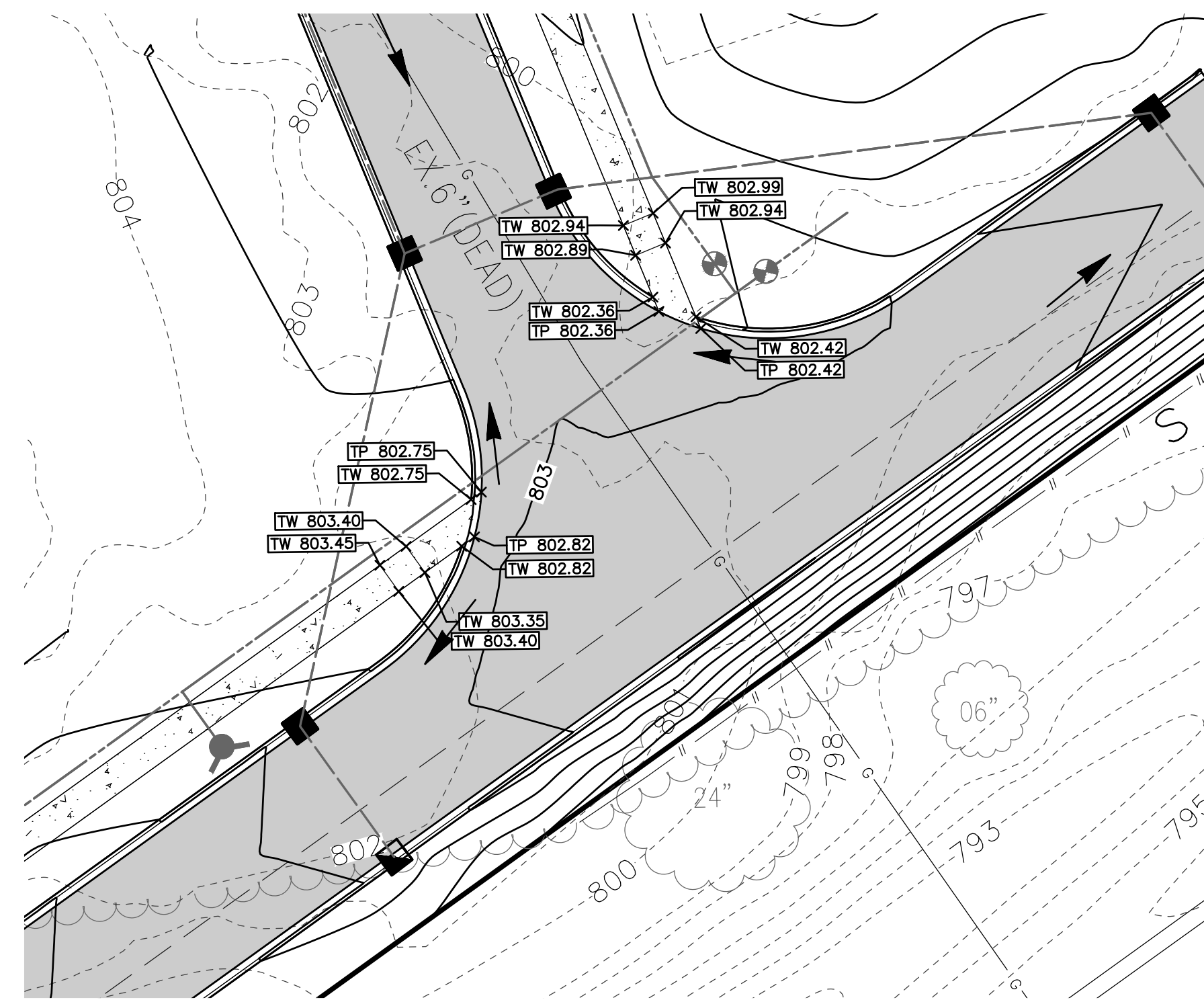
SCALE: HOR 1" = 40' - FT.
VER 1" = 4' - FT.

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21-291



SOUTHWEST CORNER OF PROPERTY AT SITE ENTRANCE

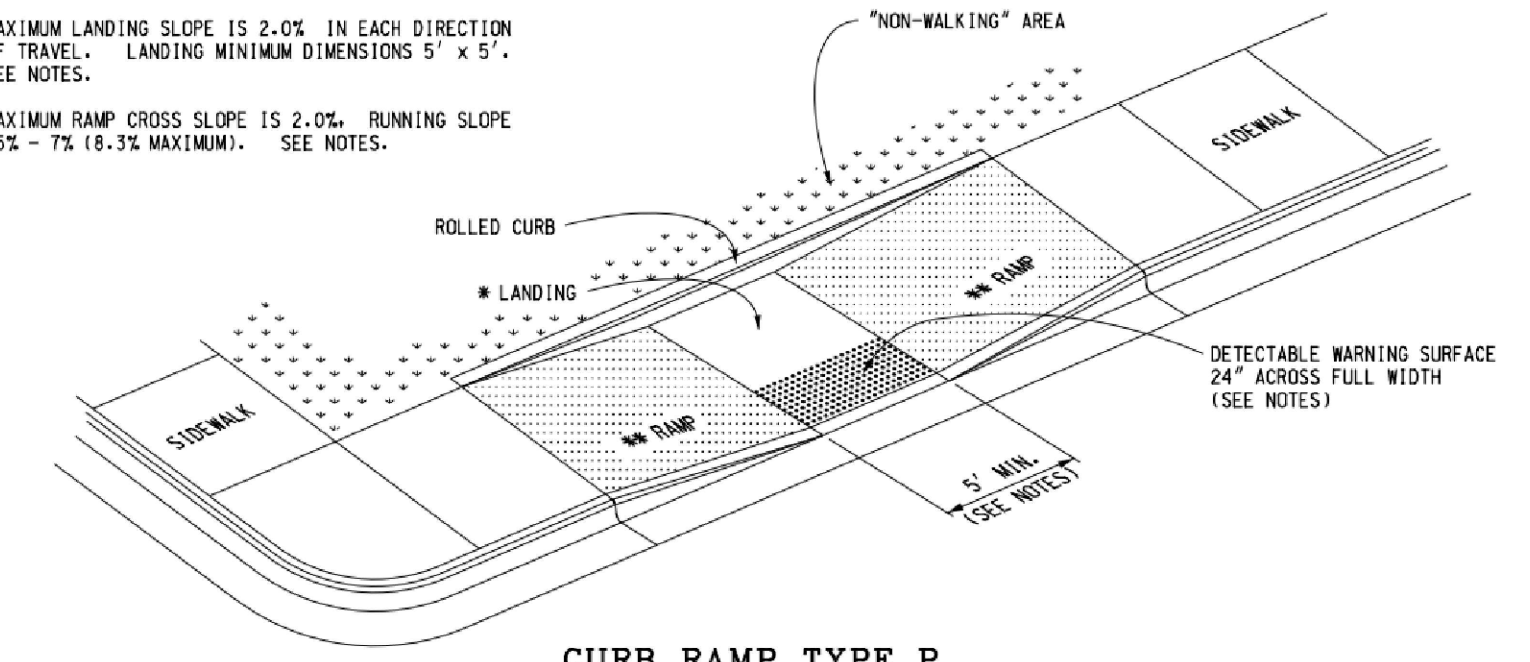


INTERSECTION EAST OF ENTRANCE ALONG THE SOUTH PROPERTY LINE

HATCH LEGEND

- ASPHALT
- CONCRETE
- PROPOSED BUILDING
- EXISTING BUILDING

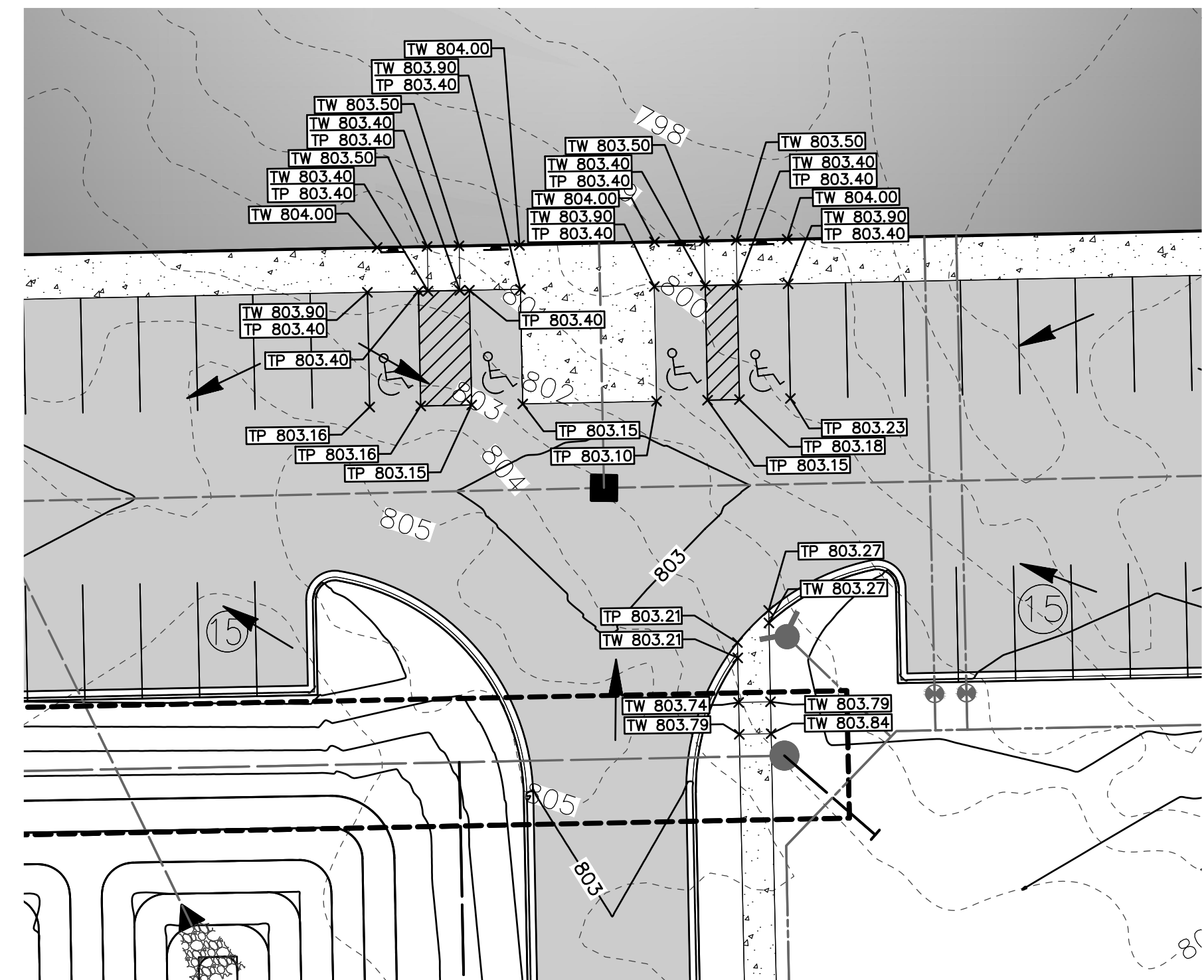
MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5' X 5'. SEE NOTES.
 MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (6.3% MAXIMUM). SEE NOTES.



CURB RAMP TYPE P
(PARALLEL RAMP)
DO NOT USE IN AREAS WHERE PONDING MAY OCCUR

GRADING AND DRAINAGE LEGEND:

- PROPOSED SPOT GRADE ELEVATION
- DBL = DROP BRICK LEDGE
- TP = TOP OF PAVEMENT
- TW = TOP OF WALK/WALL
- TC = TOP OF CURB
- BF = BASEMENT FINISH FLOOR
- GFE = GARAGE FINISH FLOOR ELEVATION
- FG = FINISH GRADE
- FF = FINISH FLOOR
- = OVERLAND FLOW DIRECTION
- ← = EMERGENCY 100YR OVERLAND OVERFLOW ROUTE



INTERSECTION SOUTH OF THE TENNIS FACILITY MAIN ENTRANCE

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 CIVIL ENGINEERS & LAND SURVEYORS
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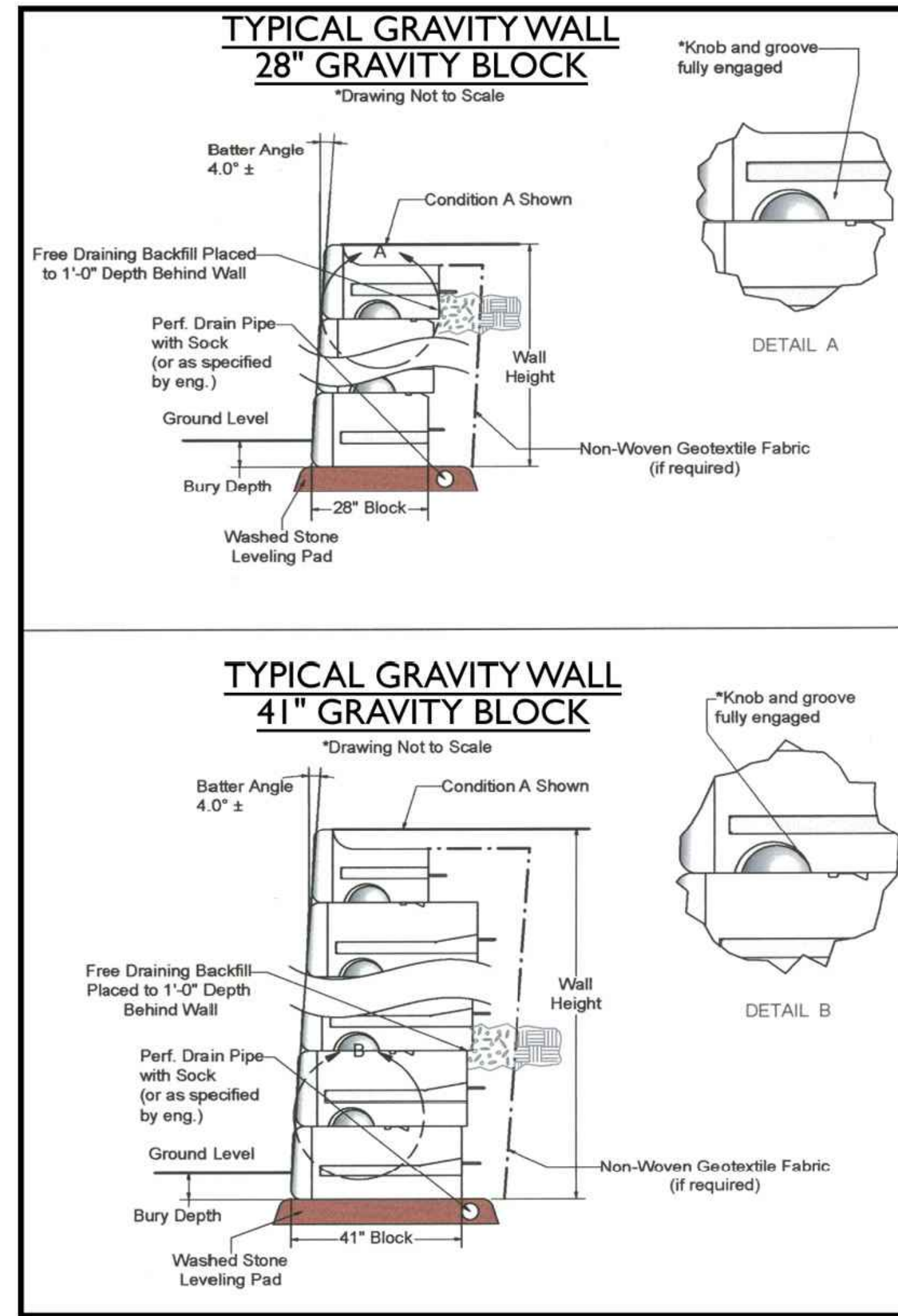
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CLIENT: SCHAFER CONSTRUCTION
ADA RAMP DETAILS
 PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
 SECTION: 18 TOWNSHIP: 3 S RANGE: 7 E
 YPSILANTI TOWNSHIP WASHINGTON COUNTY MICHIGAN

REVISED
 2022-6-10 PER YOUA & WCNRC REVIEW
 2022-11-22 PER YOUA, OHM & WCNRC REVIEW
 2023-2-6 PER YOUA, OHM & EGLE REVIEW

DATE: 4-7-2022
 DRAWN BY: LW
 CHECKED BY: DJL

 FBK: --
 CHF: --
 SCALE HOR 1" = 50 FT.
 VER 1" = -- FT.
15
 21-291



28" Middle Block Calculations for SRWall

Concrete (143pcf)
 Volume (Vc) --> 11.40 cf (from block specifications charts)
 Center of Gravity (COGc) --> 14.18 in (from block specifications charts)
 Total Weight (Pc) --> 1630 lbs
 $P_c = (11.40 \text{ ft}^3)(143 \text{ lbs/ft}^3) = 1630 \text{ lbs}$

Soil (100pcf)
 Volume (Vs) --> 0.77 cf
 $V_s = [0.5(3.2 \text{ in})(23 \text{ in})(18 \text{ in})] \times [(1 \text{ ft}^3) / (1728 \text{ in}^3)] \times 2 \text{ sides} = 0.77 \text{ cf}$
 Center of Gravity (COGg) --> 7.67 in
 $\text{COG}_g = (23 \text{ in})(1/3) = 7.67 \text{ in}$
 Total Weight (Ps) --> 77 lbs
 $P_s = (0.77 \text{ ft}^3)(100 \text{ lbs/ft}^3) = 77 \text{ lbs}$

Force Calculations
 $\sum F_x = 0$
 $\sum F_y = P - P_c - P_s = 0$
 $P = (1630 \text{ lbs}) + (77 \text{ lbs}) = 1707 \text{ lbs}$
 $P = 1707 \text{ lbs}$

$\sum M_a = P_c(\text{COG}_c) + P_s(\text{COG}_g) - P(\text{COG}) = 0$
 $\text{COG} = [(1630 \text{ lbs})(14.18 \text{ in}) + (77 \text{ lbs})(7.67 \text{ in})] / [1707 \text{ lbs}] = \text{COG}$
 $\text{COG} = [(23113.4 \text{ lb-in}) + (590.59 \text{ lb-in})] / [1707 \text{ lbs}] = 13.89 \text{ in}$
SRWall COG = (27.75 in) - (13.89 in) = 13.86 in

For SRWall data, center of gravity = 13.86 inches from the front face

	DRAWN: 09/22/2024 CHECKED: 09/22/2024 Redi-Rock International 28" Middle Calcs TITLE: 28" Middle Calcs DATE: 09/22/2024 DRAWN BY: LW CHECKED BY: DJL SCALE: HOR 1" = 10 FT, VER 1" = 4 FT SHEET 1 OF 1
--	---

41" Middle Block Calculations for SRWall

Concrete (143pcf)
 Volume (Vc) --> 16.44 cf (from block specifications charts)
 Center of Gravity (COGc) --> 20.92 in (from block specifications charts)
 Total Weight (Pc) --> 2351 lbs
 $P_c = (16.44 \text{ ft}^3)(143 \text{ lbs/ft}^3) = 2351 \text{ lbs}$

Soil (100pcf)
 Volume (Vs) --> 1.88 cf
 $V_s = [0.5(5 \text{ in})(36 \text{ in})(18 \text{ in})] \times [(1 \text{ ft}^3) / (1728 \text{ in}^3)] \times 2 \text{ sides} = 1.88 \text{ cf}$
 Center of Gravity (COGg) --> 12.00 in
 $\text{COG}_g = (36 \text{ in})(1/3) = 12.00 \text{ in}$
 Total Weight (Ps) --> 188 lbs
 $P_s = (1.88 \text{ ft}^3)(100 \text{ lbs/ft}^3) = 188 \text{ lbs}$

Force Calculations
 $\sum F_x = 0$
 $\sum F_y = P - P_c - P_s = 0$
 $P = (2351 \text{ lbs}) + (188 \text{ lbs}) = 2539 \text{ lbs}$
 $P = 2539 \text{ lbs}$

$\sum M_a = P_c(\text{COG}_c) + P_s(\text{COG}_g) - P(\text{COG}) = 0$
 $\text{COG} = [(2351 \text{ lbs})(20.92 \text{ in}) + (188 \text{ lbs})(12.00 \text{ in})] / [2539 \text{ lbs}] = \text{COG}$
 $\text{COG} = [(49182.92 \text{ lb-in}) + (2256 \text{ lb-in})] / [2539 \text{ lbs}] = 20.26 \text{ in}$
SRWall COG = (40.75 in) - (20.26 in) = 20.49 in

For SRWall data, center of gravity = 20.49 inches from the front face

	DRAWN: 09/22/2024 CHECKED: 09/22/2024 Redi-Rock International 41" Middle Calcs TITLE: 41" Middle Calcs DATE: 09/22/2024 DRAWN BY: LW CHECKED BY: DJL SCALE: HOR 1" = 10 FT, VER 1" = 4 FT SHEET 1 OF 1
--	---

NOTE:
 CONTRACTOR/OWNER MAY CHOOSE AN ALTERNATIVE MATERIAL FOR RETAINING WALL.
 ALTERNATIVE WALL MATERIALS TO BE APPROVED BY DESIGN ENGINEER AND SYLVAN TOWNSHIP PRIOR TO CONSTRUCTION.

RESIDENTIAL: Subdivisions, Multi-Family
 COMMERCIAL: Site Planning, Industrial, Marine, Land Surveying
 SURVEYING: Boundary, Topographic, Construction Staking

GREENTECH

ENGINEERING, INC.

CIVIL ENGINEERS & LAND SURVEYORS
 51147 Pontiac Trail, Wixom, MI 48393
 Phone: (248) 668-0700 Fax: (248) 668-0701

Know what's below
Call before you dig.

CLIENT: SCHAFER CONSTRUCTION

SITE DETAILS

PARCEL NO. K-11-18-340-001 - TENNIS FACILITY
 SECTION: 18 TOWNSHIP: 3 S RANGE: 7 E
 YPSILANTI TOWNSHIP
 WASHINGTON COUNTY
 MICHIGAN

REVISED

2022-6-10 PER YOUA & WCMRC REVIEW
 2022-11-22 PER YOUA, OHM & WCMRC REVIEW
 2023-2-8 PER YOUA, OHM & EGE REVIEW

DATE: 4-7-2022
 DRAWN BY: LW
 CHECKED BY: DJL

FBK: --
 CHF: --

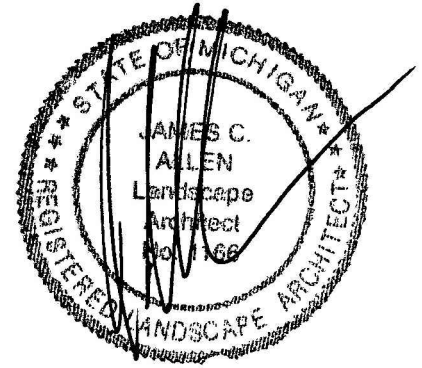
17

SCALE: HOR 1" = 10 FT, VER 1" = 4 FT
 21-291

Landscape Summary

General Landscaping	
Lawn Area	
Trees Required	48 Trees (48,350 / 1,000)
Trees Provided	48 Trees
Shrubs Required	97 Shrubs (48,350 / 500)
Shrubs Provided	97 Shrubs
Street Yard Landscaping	
I-94 Off Ramp Frontage	1,282 l.f.
Less Preserved Frontage	1,140 l.f.
Net Frontage	142 l.f.
Trees Required	4 Trees (142 / 40)
Trees Provided	4 Trees
Ornamental Trees Required	1 Tree (142 / 100)
Ornamental Trees Provided	1 Tree
Shrubs Required	36 Shrubs (142 / 10)
Shrubs Provided	36 Shrubs
Michigan Ave. Frontage	
Less Preserved Frontage	1,019 l.f.
Net Frontage	597 l.f.
Trees Required	11 Trees (422 / 40)
Trees Provided	11 Trees
Ornamental Trees Required	4 Trees (422 / 100)
Ornamental Trees Provided	4 Trees
Shrubs Required	42 Shrubs (422 / 10)
Shrubs Provided	42 Shrubs
Detention Pond	
Top of Bank Length	912 l.f.
Trees Required	18 Trees (912 / 50)
Trees Provided	18 Trees
Shrubs Required	182 Shrubs (912 / 50) x 10
Shrubs Provided	182 Shrubs
Parking Lot	
Parking Lot Area	26,693 s.f.
Trees Required	9 Trees (26,693 / 3,000)
Trees Provided	9 Trees
Woodland Replacement	
Required Replacement	445 Trees
30% Replacement	134 Trees
Replacement Provided	134 Trees

Seal:



Title:

Landscape Plan

Project:

Tennis Facility
 Ypsilanti Township, Michigan

Prepared for:

Greentech Engineering
 51147 Pontiac Trail
 Wixom, Michigan 48393
 248.668.0700

Revision:

Issued:

Revision	Issued
Review	April 6, 2022
Revised	June 7, 2022
Revised	November 22, 2022

Job Number:

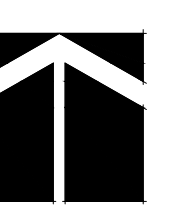
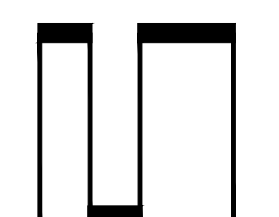
22-030

Drawn By:

jca

Checked By:

jca



1"=60'

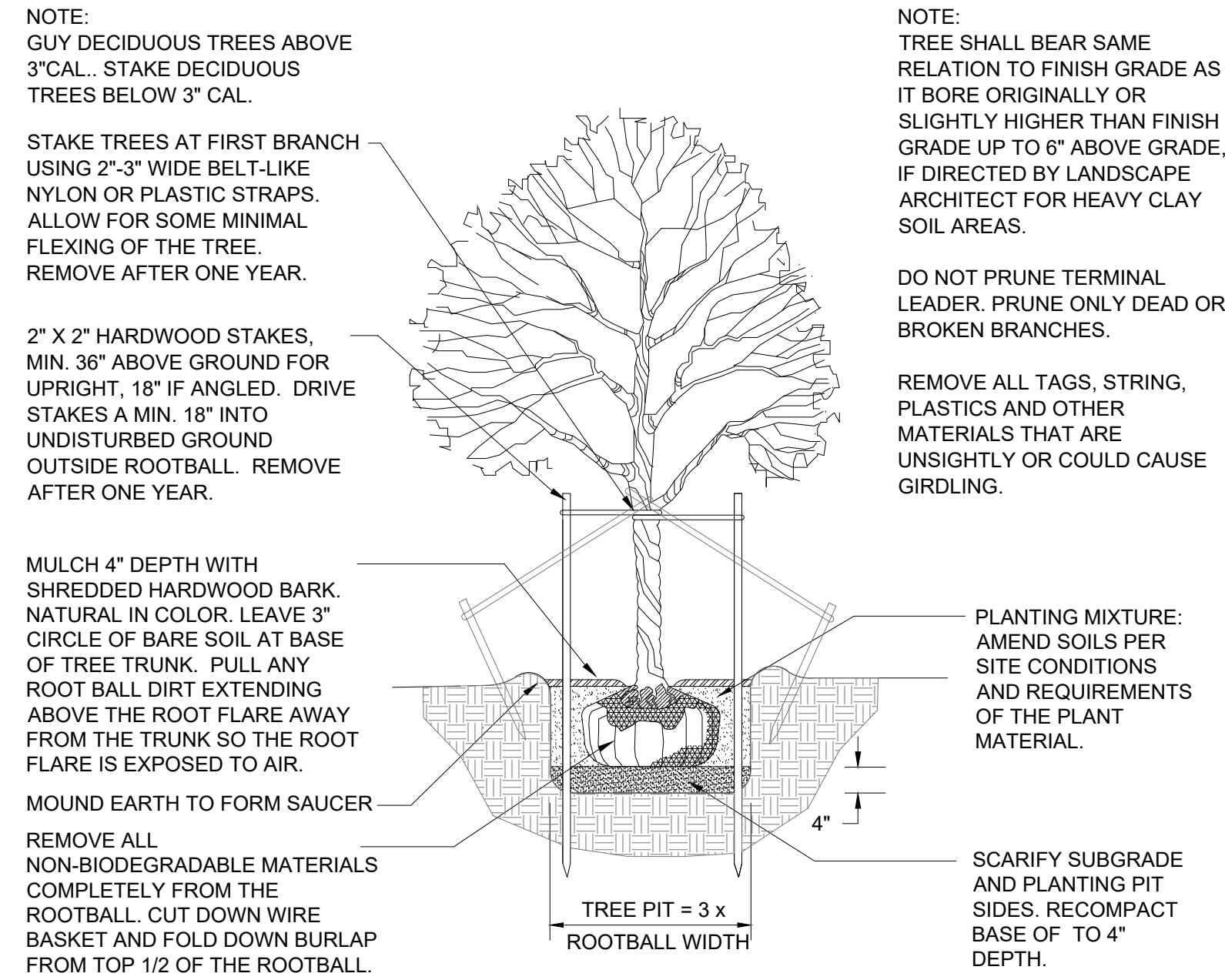
Sheet No.

L-1

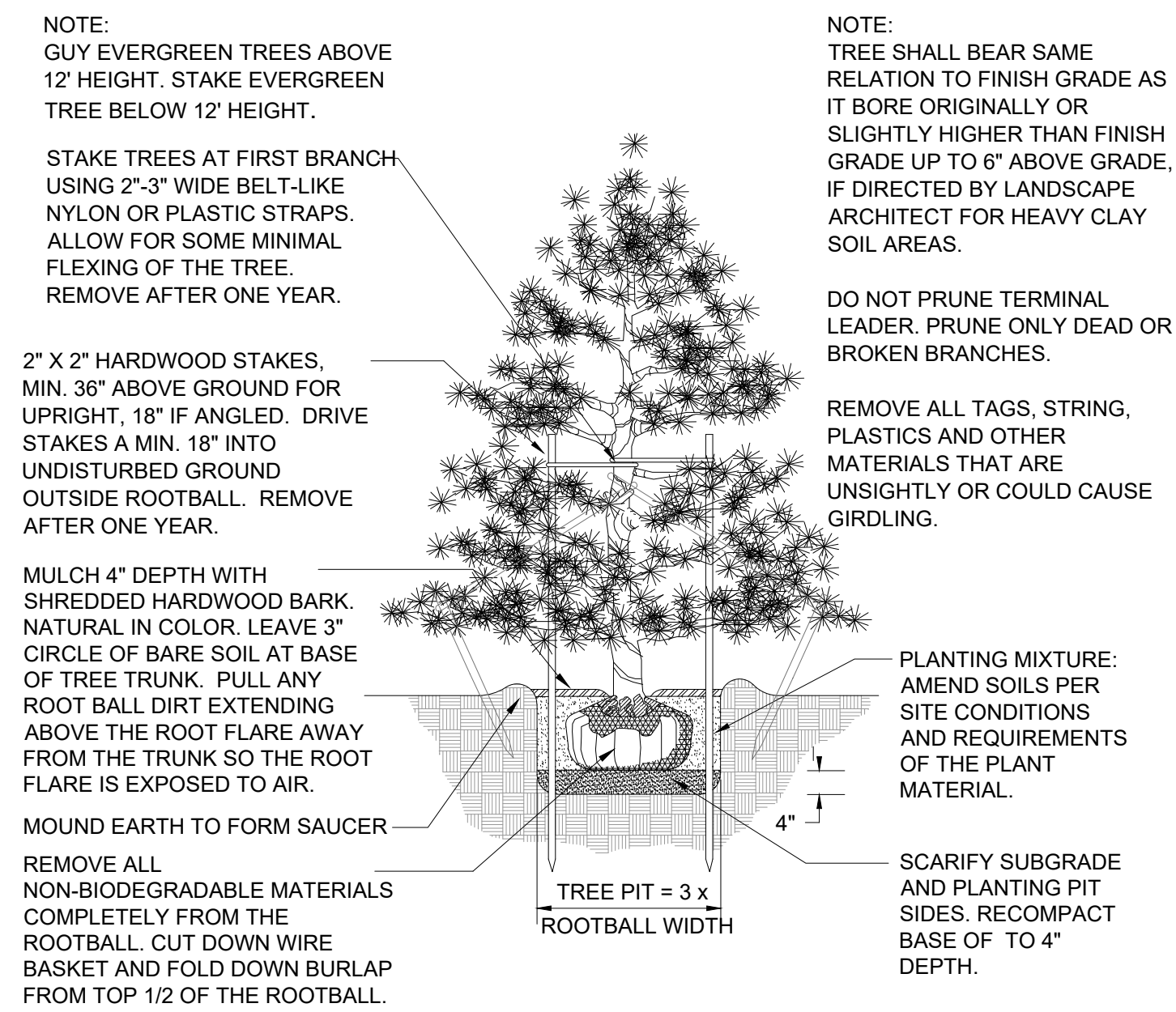
Plant List

sym.	qty.	botanical name	common name	caliper	spacing	root	height
General Landscaping							
BXG	50	Buxus 'Green Mountain'	Green Mountain Boxwood		as shown	cont	24"
HPG	35	Hydrangea paniculata 'Little Quickfire'	Little Quickfire Panicle Hydrangea		as shown	cont	30"
PAG	30	Picea abies	Norway Spruce		as shown	B&B	6'
PER	18	Picea glauca 'Densata'	Black Hills Spruce		as shown	B&B	6'
POG	12	Physocarpus opulifolius 'Summer Wine'	Summer Wine Ninebark		as shown	cont	30"
	48	Trees Provided					
	97	Shrubs Provided					
Street Yard Landscaping							
AFS	11	Acer x. freemanii 'Autumn Blaze'	Autumn Blaze Maple	2.5"	as shown	B&B	
MPS	5	Malus 'Profusion'	Profusion Crab	2.0"	as shown	B&B	
PAS	4	Picea abies	Norway Spruce		as shown	B&B	6'
POS	36	Physocarpus opulifolius 'Summer Wine'	Summer Wine Ninebark		as shown	cont	30"
	15	Trees Provided					
	5	Ornamental Trees Provided					
	78	Shrubs Provided					
Detention Pond							
ARD	6	Acer rubrum 'October Glory'	October Glory Red Maple	2.5"	as shown	B&B	
CAD	53	Cornus amomum	Silky Dogwood		as shown	cont	30"
CRD	60	Cornus racemosa	Gray Dogwood		as shown	cont	30"
CSD	69	Cornus sericea	Red-osier Dogwood		as shown	cont	30"
LTD	6	Liriodendron tulipifera	Tulip Tree	2.5"	as shown	B&B	
QMD	6	Quercus macrocarpa	Burr Oak	2.5"	as shown	B&B	
	182	Shrubs Provided					
	18	Trees Provided					
Parking Lot							
GTP	3	Gleditsia triacanthos var. inermis	Honey Locust	2.5"	as shown	B&B	
LTP	2	Liriodendron tulipifera	Tulip Tree	2.5"	as shown	B&B	
TCP	4	Tilia cordata 'Greenspire'	Greenspire Linden	2.5"	as shown	B&B	
	9	Trees Provided					
Woodland Replacement							
ASR	21	Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple	2.0"	as shown	B&B	
GTR	16	Gleditsia triacanthos var. inermis	Honey Locust	2.5"	as shown	B&B	
LTR	28	Liriodendron tulipifera	Tulip Tree	2.0"	as shown	B&B	
PAR	21	Picea abies	Norway Spruce		as shown	B&B	6'
PER	27	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	2.0"	as shown	B&B	
PSR	14	Picea glauca 'Densata'	Black Hills Spruce		as shown	B&B	6'
PSR	7	Pinus strobus	White Pine		as shown	B&B	6'
	134	Trees Provided					
Detention Pond							
ARD	6	Acer rubrum 'October Glory'	October Glory Red Maple	3.0"	as shown	B&B	
CAD	50	Cornus amomum	Silky Dogwood		as shown	cont	36"
CRD	60	Cornus racemosa	Gray Dogwood		as shown	cont	36"
CSD	72	Cornus sericea	Red-osier Dogwood		as shown	cont	36"
LTD	6	Liriodendron tulipifera	Tulip Tree	3.0"	as shown	B&B	
QMB	6	Quercus macrocarpa	Burr Oak	3.0"	as shown	B&B	
	182	Shrubs Provided					
	18	Trees Provided					

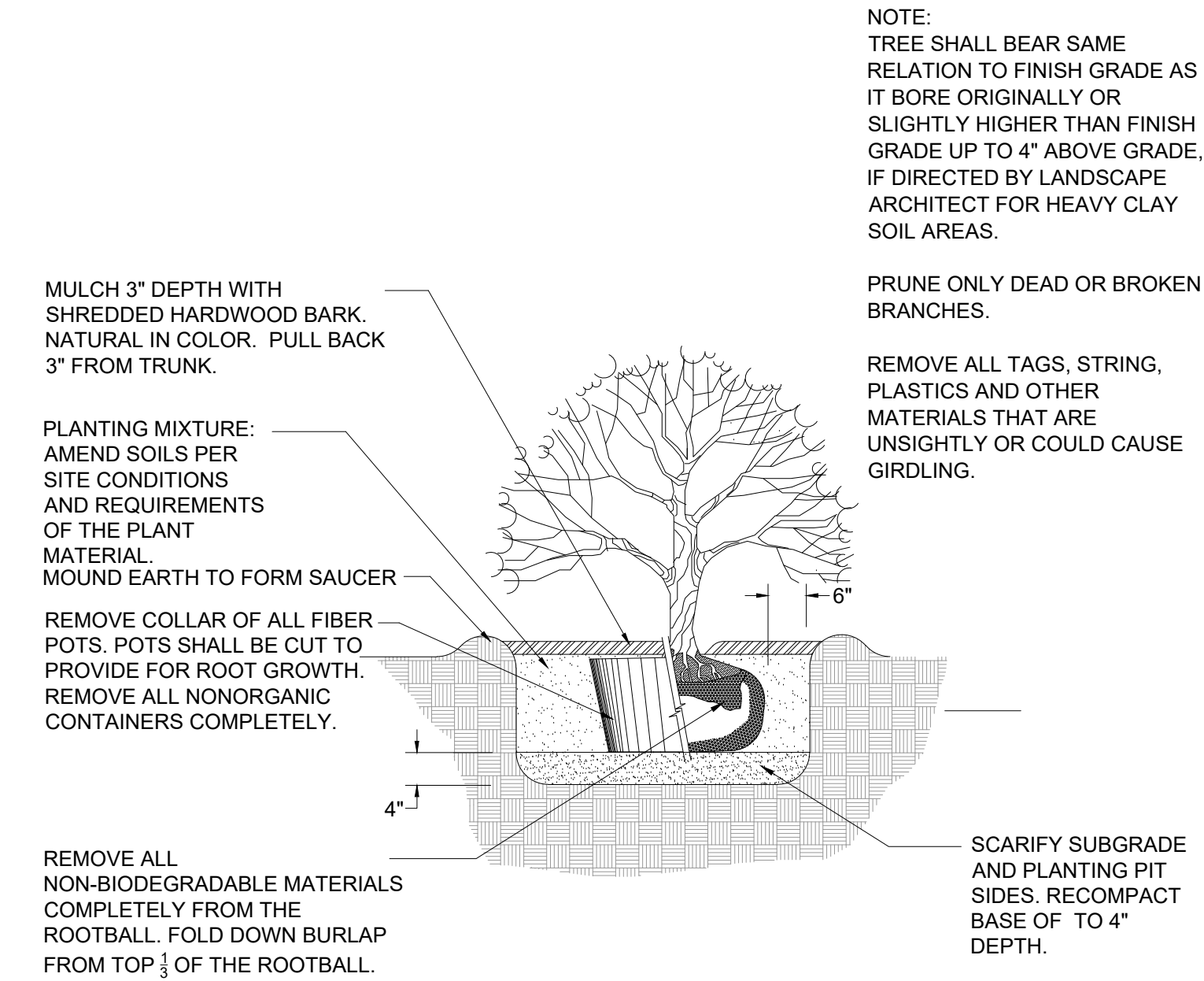




DECIDUOUS TREE PLANTING DETAIL



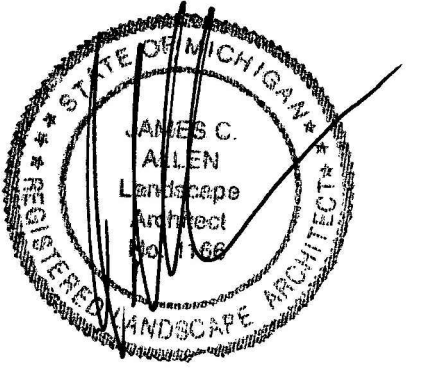
EVERGREEN TREE PLANTING DETAIL



SHRUB PLANTING DETAIL

NOT TO SCALE

Seal: _____



Title: _____

Landscape Details

Project: _____

Tennis Facility
 Ypsilanti Township, Michigan

Prepared for: _____

Greentech Engineering
 51147 Pontiac Trail
 Wixom, Michigan 48393
 248.668.0700

Revision: _____ Issued: _____

Revision	April 6, 2022
Revised	June 7, 2022
Revised	November 22, 2022

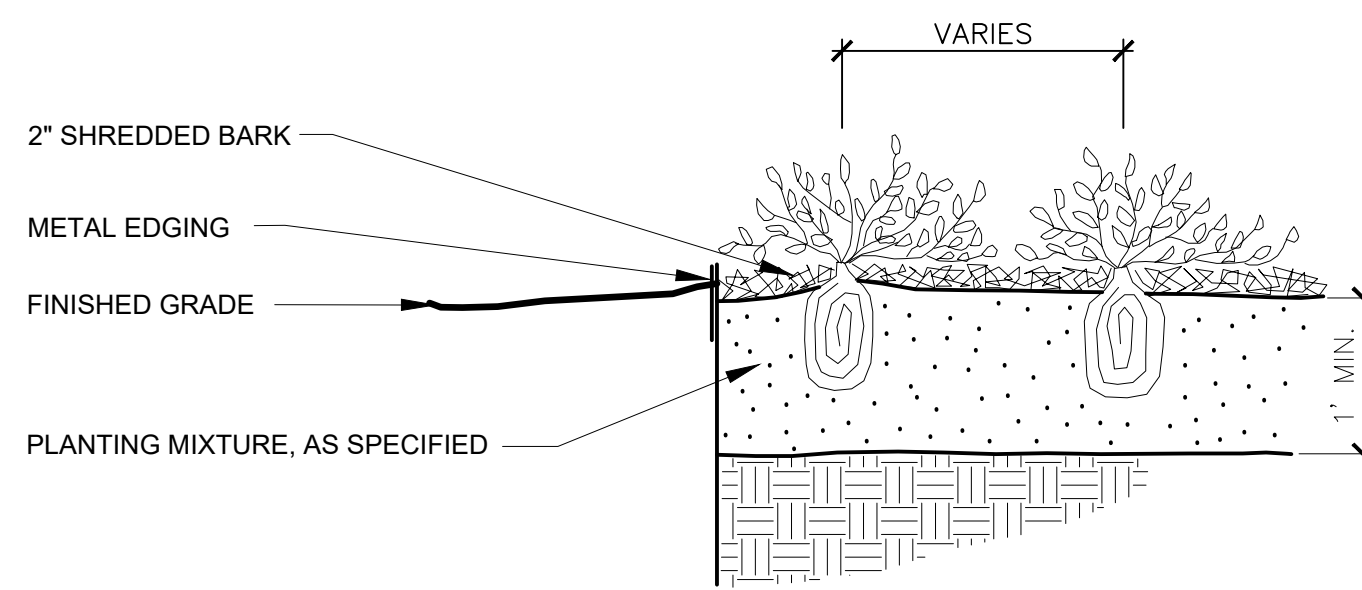
Job Number: _____

22-030

Drawn By: _____ Checked By: _____

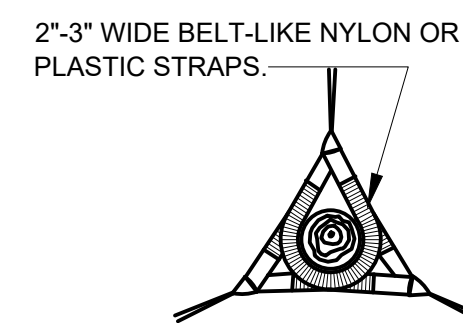
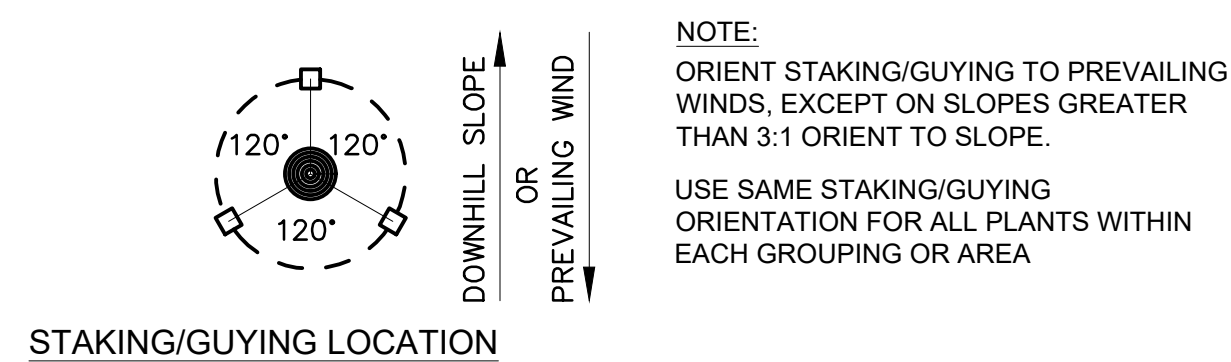
jca jca

Sheet No. _____

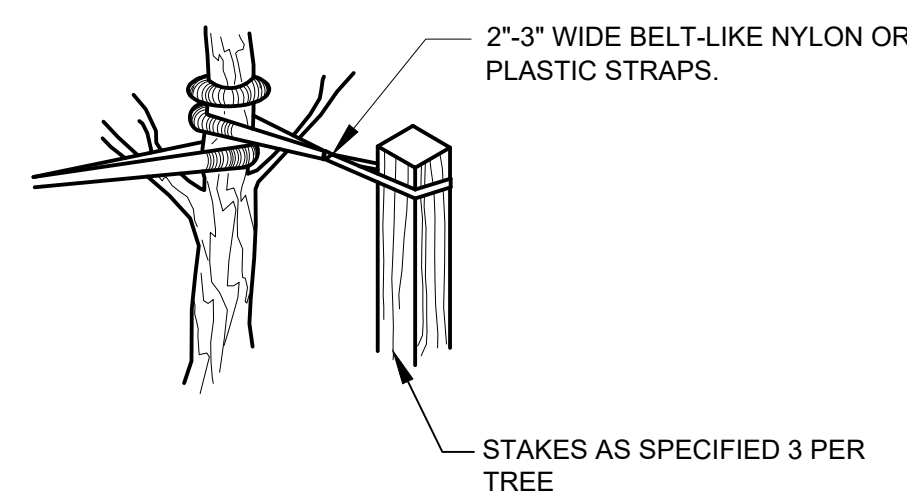


PERENNIAL PLANTING DETAIL

Not to scale



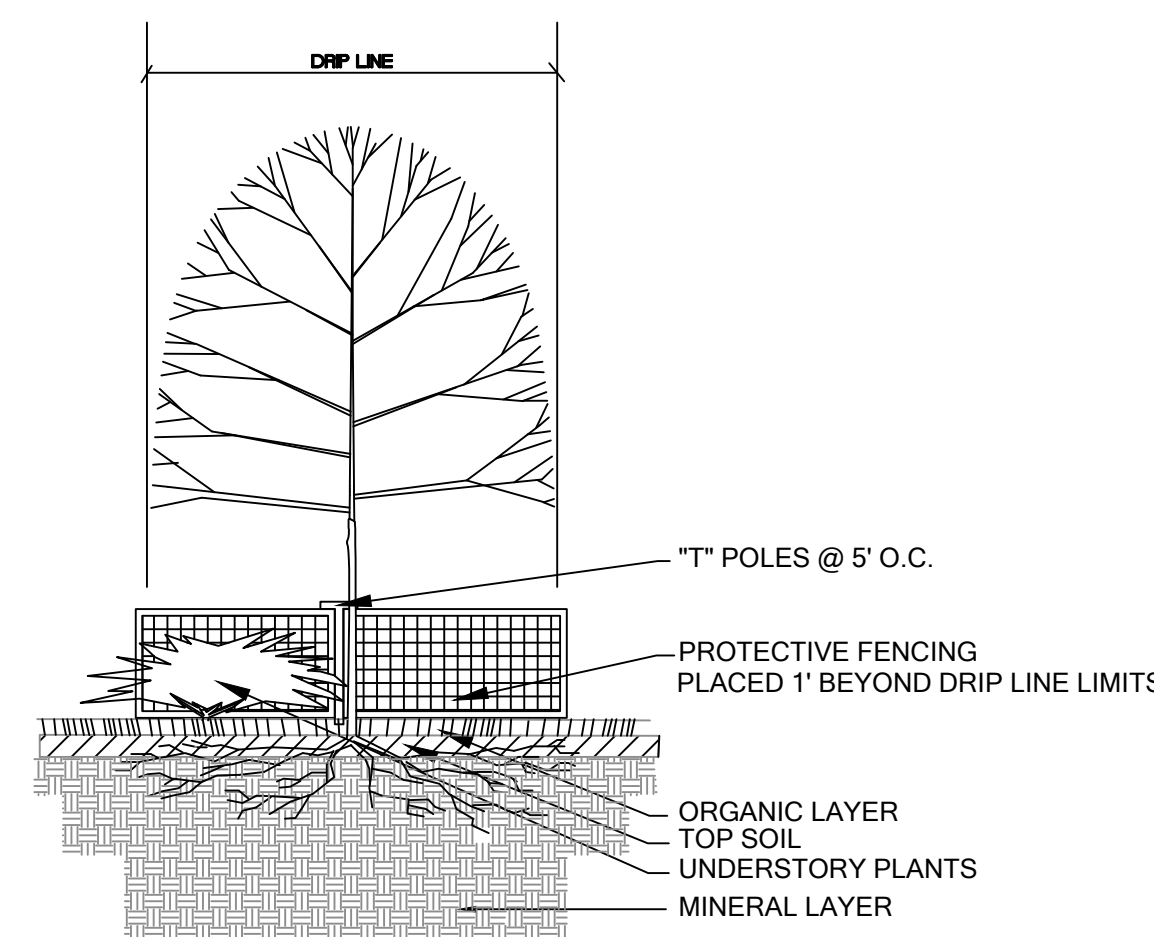
GUYING DETAIL



STAKING DETAIL

TREE STAKING DETAIL

Not to scale



1. Either Plastic or Wood Orange Snow Fencing Shall be Installed at or Beyond the Dripline. Unless More Substantial Fencing is Required.
2. Stakes Shall be Metal "T" Poles Spaced no Further than 5' on Center.
3. Fencing Shall not be Installed Closer to the Tree than the Dripline of Those Trees to be Saved. Special Circumstances Shall be Reviewed by the Township.
4. Fencing Shall be Erected Prior to Construction. The Township Shall be Notified Once the Fencing is Installed for Inspection.
5. Under no Circumstances Shall the Protective Fencing be Removed Without Proper Approval from the Township.
6. No Person Shall Conduct any Activity Within Areas Proposed to Remain. This Shall Include, but not Limited to:
 - a. No Solvents or Chemicals Within Protected Areas.
 - b. No Building Materials or Construction Equipment Within Protected Areas.
 - c. No Grade Changes, Including Fill, Within Protected Areas.
 - d. No Removal of Vegetation from the Ground Up Without Permission from the Proper Reviewing Authority, Including the Woodlands Review Board.
 - e. Any Required Swale Needs to be Directed Around the Protected Areas. Instances Where Swales are Approved Through a Protected Area, the Swales Need to be HAND DUG. Machinery of Any Kind is Prohibited.
7. Regulated Woodland or Regulated Trees Adjacent to the Property are Also Required to be Protected Whether or not they are Shown on the Plan.

TREE PROTECTION FENCING

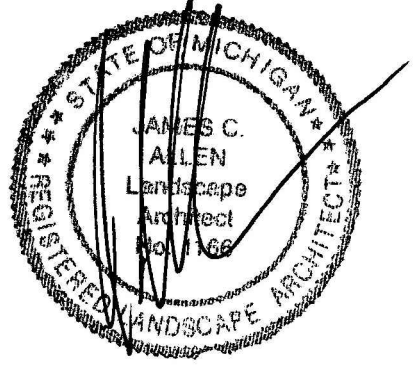


Tree Summary

Total Trees	658 Trees
Less Poor Trees	39 Trees
Net Regulated Trees	629 Trees
Total Regulated Trees Removed	445 Trees
Replacement Required	445 Trees

* X * Denotes Removed Tree

Seal: _____



Title: **Woodland Plan**

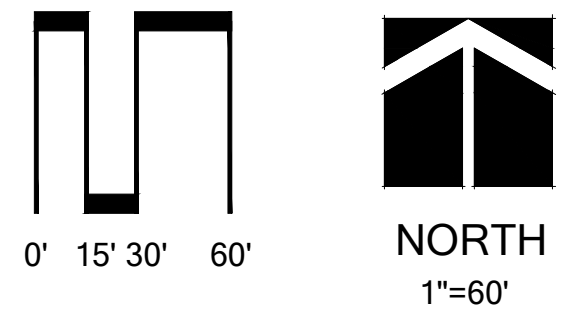
Project: **Tennis Facility
 Ypsilanti Township, Michigan**

Prepared for: **Greentech Engineering
 51147 Pontiac Trail
 Wixom, Michigan 48393
 248.668.0700**

Revision:	Issued:
Revised	April 6, 2022
Revised	June 7, 2022
Revised	November 22, 2022

Job Number: **22-030**

Drawn By: **jca** Checked By: **jca**



Sheet No. _____

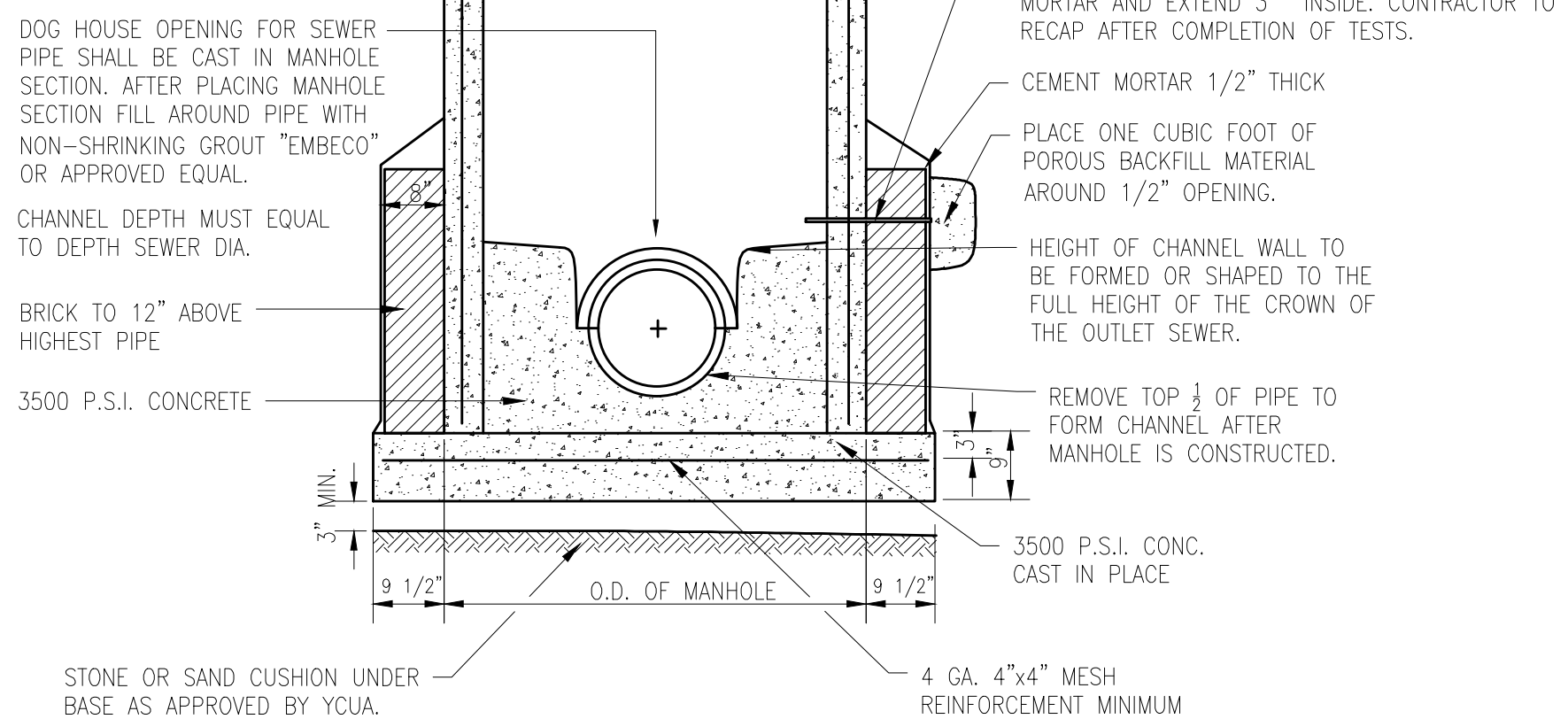


Tree List

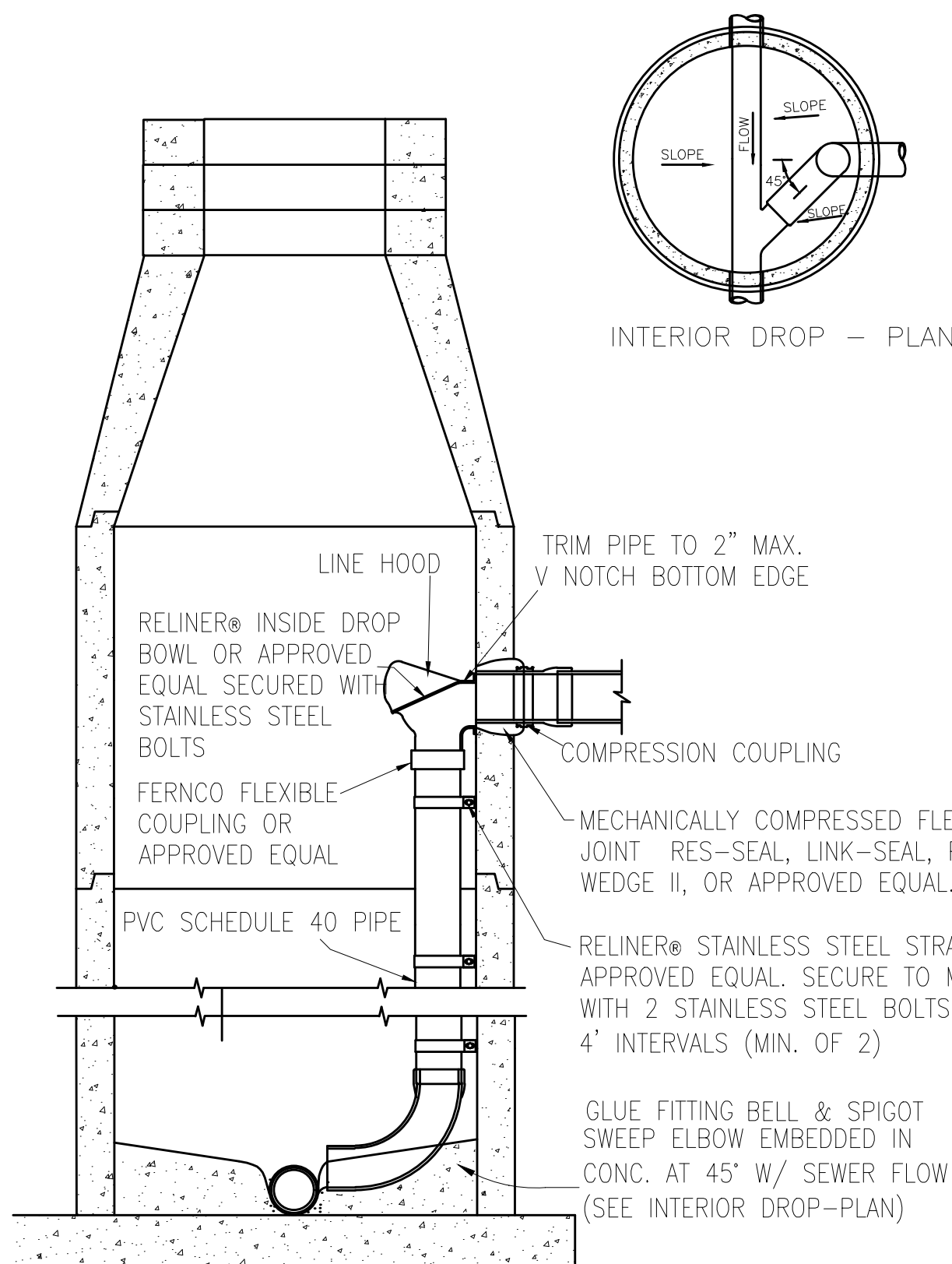
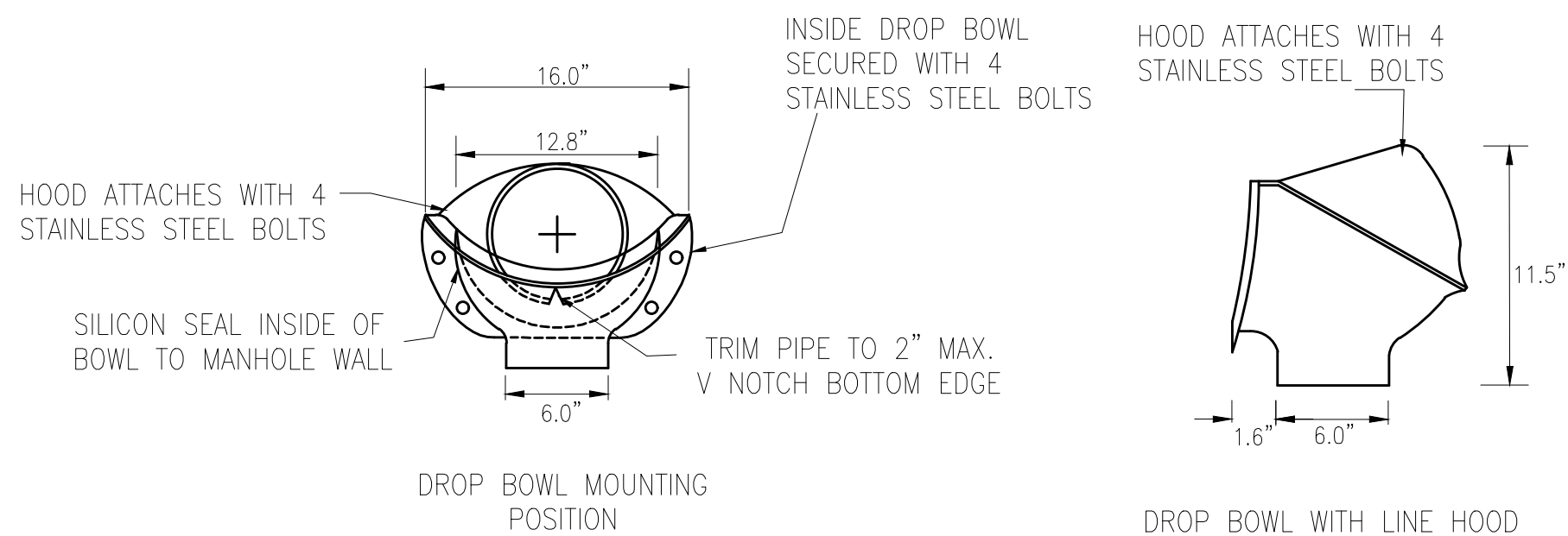
Tree Tag #	Botanical Name	Common Name	Size DBH" (Inches)	Tree Health Condition	Status	Replacement	Comments
739	Quercus velutina	Black Oak	20.0	Good	Remove	1	
740	Prunus serotina	Black Cherry	9.8	Fair	Remove	1	Leaning tree
741	Prunus serotina	Black Cherry	11.0	Poor	Save	1	Extensive inner bark rot and decay
742	Prunus serotina	Black Cherry	9.2	Poor	Save	1	Extensive decay and inner bark rot
743	Populus deltoides	Cottonwood	26.0	Good	Remove	1	
744	Quercus ellipsoidalis	Hill's Oak	10.5	Good	Remove	1	
745	Prunus serotina	Black Cherry	16.0	Fair	Remove	1	Inner bark rot
746	Quercus ellipsoidalis	Hill's Oak	9.5	Fair	Save		dead lower branches
747	Quercus ellipsoidalis	Hill's Oak	10.5	Fair	Save		dead lower branches
748	Quercus ellipsoidalis	Hill's Oak	8.0	Good	Save		
749	Quercus velutina	Black Oak	15.7	Good	Save		
750	Quercus velutina	Black Oak	20.5	Good	Save		
751	Quercus ellipsoidalis	Hill's Oak	10.0	Good	Save		
752	Quercus rubra	Red Oak	13.7	Good	Save		
753	Quercus rubra	Red Oak	13.0	Good	Save		
754	Quercus rubra	Red Oak	13.0	Good	Save		
755	Quercus rubra	Red Oak	8.0	Good	Save		
756	Acer saccharum	Silver Maple	14.5	Good	Save		
757	Quercus velutina	Black Oak	18.5	Good	Save		
758	Quercus velutina	Black Oak	9.2	Good	Save		
759	Quercus velutina	Black Oak	10.5	Good	Save		
760	Quercus ellipsoidalis	Hill's Oak	13.4	Good	Save		
761	Quercus ellipsoidalis	Hill's Oak	16.0	Good	Save		
762	Quercus ellipsoidalis	Hill's Oak	16.0	Good	Save		
763	Quercus ellipsoidalis	Hill's Oak	8.0	Good	Save		
764	Quercus ellipsoidalis	Hill's Oak	17.7	Good	Save		
765	Quercus ellipsoidalis	Hill's Oak	12.0	Good	Save		
766	Quercus ellipsoidalis	Hill's Oak	14.0	Good	Save		
767	Prunus serotina	Black Cherry	13.0	Fair	Remove	1	Leaning tree
768	Prunus serotina	Black Cherry	8.0	Fair	Remove	1	Inner bark rot
769	Prunus serotina	Black Cherry	8.8	Fair	Remove	1	Inner bark rot
770	Prunus serotina	Black Cherry	11.2	Fair	Remove	1	Leaning tree
771	Prunus serotina	Black Cherry	6.5	Fair	Remove	1	Inner bark rot
772	Prunus serotina	Black Cherry	8.7	Fair	Remove	1	Inner bark rot
773	Prunus serotina	Black Cherry	8.5	Fair	Remove	1	Inner bark rot and decay
774	Prunus serotina	Black Cherry	12.0	Poor	Remove	1	27'-12" DBH; inner bark rot
775	Quercus ellipsoidalis	Hill's Oak	9.0	Good	Remove	1	
776	Prunus serotina	Black Cherry	10.0	Poor	Remove	1	
777	Quercus ellipsoidalis	Hill's Oak	11.0	Good	Remove	1	
778	Quercus ellipsoidalis	Hill's Oak	14.5	Excellent	Remove	1	
779	Acer negundo	Box-elder	8.0	Fair	Remove	1	Leaning tree
780	Prunus serotina	Black Cherry	12.0	Good	Remove	1	
781	Rhamnus coccifera	Common Buckthorn	9.0	Fair	Remove	1	dead lower branches
782	Prunus serotina	Black Cherry	11.5	Good	Remove	1	dead lower branches
783	Prunus serotina	Black Cherry	10.0	Fair	Remove	1	Inner bark rot
784	Prunus serotina	Black Cherry	10.0	Fair	Remove	1	Inner bark rot
785	Prunus serotina	Black Cherry	8.0	Fair	Remove	1	Inner bark rot
786	Prunus serotina	Black Cherry	8.0	Fair	Remove	1	Inner bark rot
787	Prunus serotina	Black Cherry	8.5	Fair	Remove	1	27'-8" DBH
788	Prunus serotina	Black Cherry	9.5	Fair	Remove	1	31'-9.5" DBH
790	Prunus serotina	Black Cherry	8.9	Good	Remove	1	
791	Prunus serotina	Black Cherry	9.0	Good	Remove	1	
792	Prunus serotina	Black Cherry	11.0	Fair	Remove	1	Inner bark rot
793	Prunus serotina	Black Cherry	8.4	Fair	Remove	1	Inner bark rot
794	Prunus serotina	Black Cherry	10.0	Fair	Remove	1	Inner bark rot
796	Prunus serotina	Black Cherry	14.0	Good	Save		21'-13" DBH
797	Acer saccharum	Silver Maple	15.0	Good	Remove	1	Inner bark rot
798	Prunus serotina	Black Cherry	22.5	Fair	Save		
799	Quercus velutina	Black Oak	15.5	Good	Remove	1	
800	Quercus alba	White Oak	12.0	Good	Remove	1	
801	Quercus rubra	Red Oak	21.5	Excellent	Remove	1	
802	Acer saccharum	Silver Maple	27.0	Good	Remove	1	Fused trunk measurement
803	Prunus serotina	Black Cherry	12.0	Good	Remove	1	
804	Prunus serotina	Black Cherry	12.0	Good	Remove	1	
805	Prunus serotina	Black Cherry	8.5	Poor	Remove	1	Extensive inner bark rot
806	Prunus serotina	Black Cherry	17.5	Good	Remove	1	
807	Prunus serotina	Black Cherry	13.0	Good	Remove	1	31'-10" DBH
808	Quercus ellipsoidalis	Hill's Oak	13.0	Good	Remove	1	
809	Ulmus americana	American Elm	14.5	Fair	Remove	1	
810	Acer rubrum	Red Maple	12.5	Good	Remove	1	
811	Prunus serotina	Black Cherry	15.5	Fair	Remove	1	21'-13" DBH
812	Prunus serotina	Black Cherry	11.7	Good	Remove	1	
813	Prunus serotina	Black Cherry	9.5	Fair	Remove	1	21'-8" DBH; inner bark rot; vines
814	Quercus ellipsoidalis	Hill's Oak	12.0	Fair	Remove	1	Dead lower branches
815	Ulmus americana	American Elm	9.5	Fair	Remove	1	31'-9", 9", 8", 8" DBH; structural defects
816	Prunus serotina	Black Cherry	9.0	Fair	Remove	1	21'-8" DBH
817	Prunus serotina	Black Cherry	8.0	Fair	Remove	1	Leaning tree
818	Prunus serotina	Black Cherry	13.5	Fair	Remove	1	Dead lower branches
819	Prunus serotina	Black Cherry	6.5	Fair	Remove	1	Inner bark rot
820	Prunus serotina	Black Cherry	18.5	Poor	Remove	1	Inner bark rot; dead limb
821	Prunus serotina	Black Cherry	20.0	Poor	Remove	1	Inner bark rot; dead limb
822	Prunus serotina	Black Cherry	15.0	Good	Remove	1	
824	Quercus velutina	Black Oak	9.0	Good	Remove	1	
825	Quercus velutina	Black Oak	9.0	Good	Remove	1	
826	Quercus velutina	Black Oak	9.0	Good	Remove	1	
827	Quercus rubra	Red Oak	8.0	Good	Save		
828	Quercus ellipsoidalis	Hill's Oak	15.5	Good	Save		
829	Quercus ellipsoidalis	Hill's Oak	10.5	Good	Save		
830	Quercus ellipsoidalis	Hill's Oak	16.5	Good	Save		
831	Quercus ellipsoidalis	Hill's Oak	9.5	Good	Save		
832	Quercus ellipsoidalis	Hill's Oak	11.2	Good	Remove	1	
833	Prunus serotina	Black Cherry	20.0	Fair	Remove	1	Split top
834	Quercus velutina	Black Oak	6.0	Good	Remove	1	
835	Prunus serotina	Black Cherry	17.5	Good	Remove	1	
836	Quercus ellipsoidalis	Hill's Oak	12.0	Good	Remove	1	
837	Quercus ellipsoidalis	Hill's Oak	13.5	Good	Remove	1	
838	Quercus ellipsoidalis	Hill's Oak	8.5	Good	Remove	1	
839	Quercus ellipsoidalis	Hill's Oak	10.0	Good	Remove	1	
840	Quercus ellipsoidalis	Hill's Oak	17.0	Good	Remove	1	
841	Quercus ellipsoidalis	Hill's Oak	8.0	Good	Remove	1	
842	Quercus ellipsoidalis	Hill's Oak	12.0	Good	Remove	1	
844	Quercus velutina	Black Oak	8.5	Good	Remove	1	
845	Populus deltoides	Cottonwood	12.0	Good	Remove	1	
846	Quercus ellipsoidalis	Hill's Oak	10.0	Good	Remove	1	
847	Quercus ellipsoidalis	Hill's Oak	8.5	Good	Remove	1	
848	Quercus velutina	Black Oak	8.0	Good	Remove	1	
849	Quercus alba	White Oak	9.5	Good	Remove	1	
851	Quercus alba	White Oak	12.0	Good	Remove	1	
852	Quercus alba	White Oak	13.6	Good	Remove	1	
853	Quercus ellipsoidalis	Hill's Oak	19.0	Good	Remove	1	
854	Quercus velutina	Black Oak	11.7	Good	Remove	1	
855	Quercus velutina	Black Oak	13.0	Good	Remove	1	
856	Quercus rubra	Red Oak	15.0	Good	Remove	1	
857	Quercus rubra	Red Oak	12.5	Good	Save		
858	Quercus velutina	Black Oak	12.5	Good	Remove	1	
859	Quercus velutina	Black Oak	19.0	Good	Remove	1	
860	Quercus velutina	Black Oak	14.5	Good	Remove	1	
861	Quercus velutina	Black Oak	20.5	Good	Remove	1	
862	Quercus velutina	Black Oak	10.8	Good	Remove	1	
863	Prunus serotina	Black Cherry	16.0	Good	Remove	1	
864	Quercus velutina	Black Oak	20.0	Good	Remove	1	
865	Quercus alba	White Oak	10.5	Good	Remove	1	
866	Quercus alba	White Oak	9.0	Good	Remove	1	
867	Prunus serotina	Black Cherry	9.0	Good	Remove	1	21'-11" DBH
868	Prunus serotina	Black Cherry	9.0	Good	Remove	1	
869	Quercus velutina	Black Oak	14.5	Good	Remove	1	
870	Quercus velutina	Black Oak	18.0	Good	Remove	1	
871	Prunus serotina	Black Cherry	10.7	Good	Remove	1	
872	Quercus velutina	Black Oak	13.2	Good	Remove	1	
873	Quercus velutina	Black Oak	6.0	Good	Remove	1	
874	Quercus velutina	Black Oak	20.0	Good	Save		
875	Prunus serotina	Black Cherry	21.0	Good	Save		21'-12" DBH
876	Quercus velutina	Black Oak	9.0	Good	Save		
877	Populus deltoides	Cottonwood	24.0	Good	Save		
878	Acer negundo	Box-elder	8.5	Good	Save		Leaning tree
879	Populus deltoides	Cottonwood	21.0	Good	Save		Fused trunk measurement; inner bark rot
880	Rhamnus coccifera	Common Buckthorn	13.0	Fair	Save		Fused trunk measurement; inner bark rot
881	Acer negundo	Box-elder	10.5	Good	Save		Leaning tree
882	Populus deltoides	Cottonwood	13.3	Good	Save		Leaning tree
883	Populus deltoides	Cottonwood	19.0	Good	Save		Leaning tree
884	Populus deltoides	Cottonwood	30.0	Good	Save		Leaning tree
885	Populus deltoides	Cottonwood	15.5	Good	Save		Leaning tree
886	Populus deltoides	Cottonwood	19.0	Good	Save		Leaning tree
887	Populus deltoides	Cottonwood	28.0	Good	Save		Leaning tree
888	Populus deltoides	Cottonwood	19.5	Good	Save		Leaning tree
889	Acer negundo	Box-elder	13.2	Good	Save		Leaning tree
890	Prunus serotina	Black Cherry	14.5	Good	Save		Inner bark rot
891	Ulmus americana	American Elm	17.5	Poor	Save		dead lower branches
893	Acer negundo	Box-elder	8.6	Poor	Save		Inner bark rot
894	Acer negundo	Box-elder	10.5	Poor	Save		Inner bark rot
895	Melus speciosus	Apple/Crabapple	8.5	Fair	Save		Inner bark rot
896	Prunus serotina	Black Cherry	21.0	Fair	Save		21'-16" DBH; inner bark rot
897	Quercus velutina	Black Oak	15.5	Good	Remove	1	Inner bark rot; leaning tree
898	Prunus serotina	Black Cherry	14.5	Fair	Remove	1	
901	Acer negundo	Box-elder	19.0	Poor	Remove	1	Inner bark rot
902	Prunus serotina	Black Cherry	12.5	Fair	Remove	1	21'-30" DBH; inner bark rot
903	Prunus serotina	Black Cherry	13.0	Fair	Remove	1	Inner bark rot
904	Quercus ellipsoidalis	Hill's Oak	17.0	Good	Remove	1	

Tree Tag #	Botanical Name	Common Name	Size DBH" (Inches)	Tree Health Condition	Status	Replacement	Comments
905	Quercus ellipsoidalis	Hill's Oak	15.7	Good	Remove	1	
906	Prunus serotina	Black Cherry	11.0	Good	Remove	1	
907	Quercus velutina	Black Oak	11.0	Poor	Save		Extensive inner bark rot and decay
908	Quercus ellipsoidalis	Hill's Oak	15.5	Good	Remove	1	
909	Quercus alba	White Oak	9.0	Good	Remove	1	
910	Quercus alba	White Oak	9.0	Good	Remove	1	
911	Quercus alba	White Oak	11.0	Good	Remove	1	21'-10.5" DBH
912	Acer platanoides	Norway Maple	8.7	Good	Remove	1	
913	Ulmus americana	American Elm	10.5	Fair	Save		
914	Acer negundo	Box-elder	9.0	Fair	Save		
915	Morus alba	White Mulberry	17.5	Good	Save		
916	Morus alba	White Mulberry	17.5	Good	Save		Surface canker
917	Acer negundo	Box-elder	10.5	Poor	Save		Inner bark rot and decay
918	Quercus velutina	Black Oak	12.0	Good	Save		
919	Populus deltoides	Cottonwood	13.0	Good	Save		
920	Quercus ellipsoidalis	Hill's Oak	9.2	Good	Save		
921	Acer negundo	Box-elder	12.0	Fair	Save		21'-8" DBH; inner bark rot
922	Quercus velutina	Black Oak	8.5	Poor	Save		Inner bark rot
923	Acer negundo	Box-elder	15.5	Fair	Save		Inner bark rot
924	Populus deltoides	Cottonwood	17.0	Good	Save		
925	Ulmus americana	American Elm	11.2	Good	Save		
926	Acer negundo	Box-elder	11.0	Fair	Save		21'-9"
927	Acer negundo	Box-elder	11.0	Fair	Save		21'-9"
928	Acer negundo	Box-elder	24.0	Poor	Save		
929	Ulmus americana	American Elm	10.0	Fair	Save		
930	Ulmus americana	American Elm	8.0	Good	Save		
931	Prunus serotina	Black Cherry	8.5	Good	Save		Leaning tree
932	Quercus velutina	Black Oak	8.2	Good	Save		
933	Quercus ellipsoidalis	Hill's Oak	15.0	Good	Save		
934	Ulmus americana	American Elm	16.2	Fair	Save		
935	Ulmus americana	American Elm	14.8	Fair	Save		8 Trunks (8T): 9", 9", 13.8", 11", 11.5", 11", 12" DBH
936	Ulmus americana	American Elm	16.5	Good	Save		
937	Ulmus americana	American Elm	13.0	Good	Save		
938	Ulmus americana	American Elm	1				

DOG HOUSE CUT OUT SIZES	
SEWER SIZE	MAX. CUT OUT SIZE
8" THRU 10"	17 1/2"
12" THRU 15"	20"

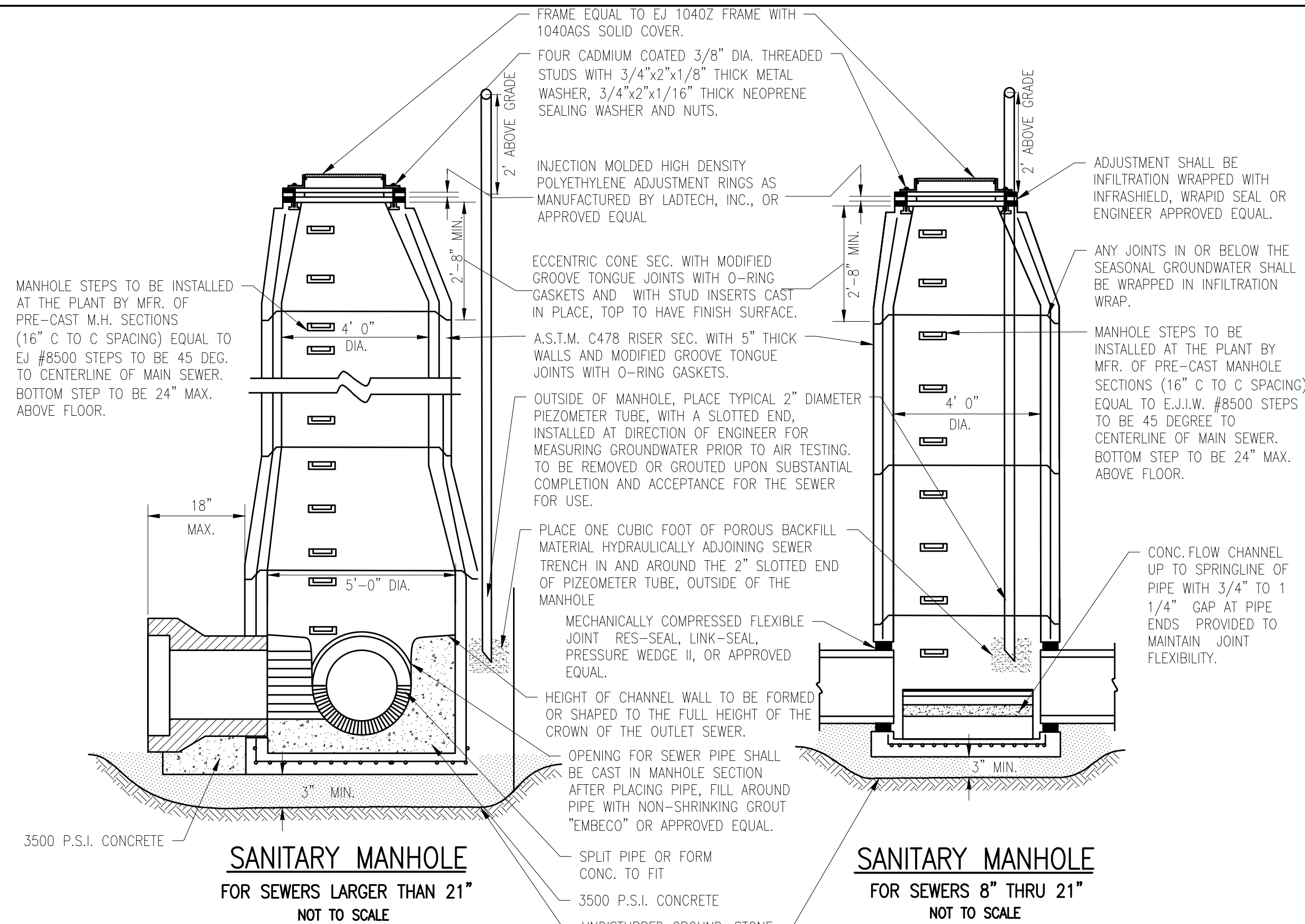


SANITARY MANHOLE
ON EXISTING SEWERS 8" THRU 42"
NOT TO SCALE



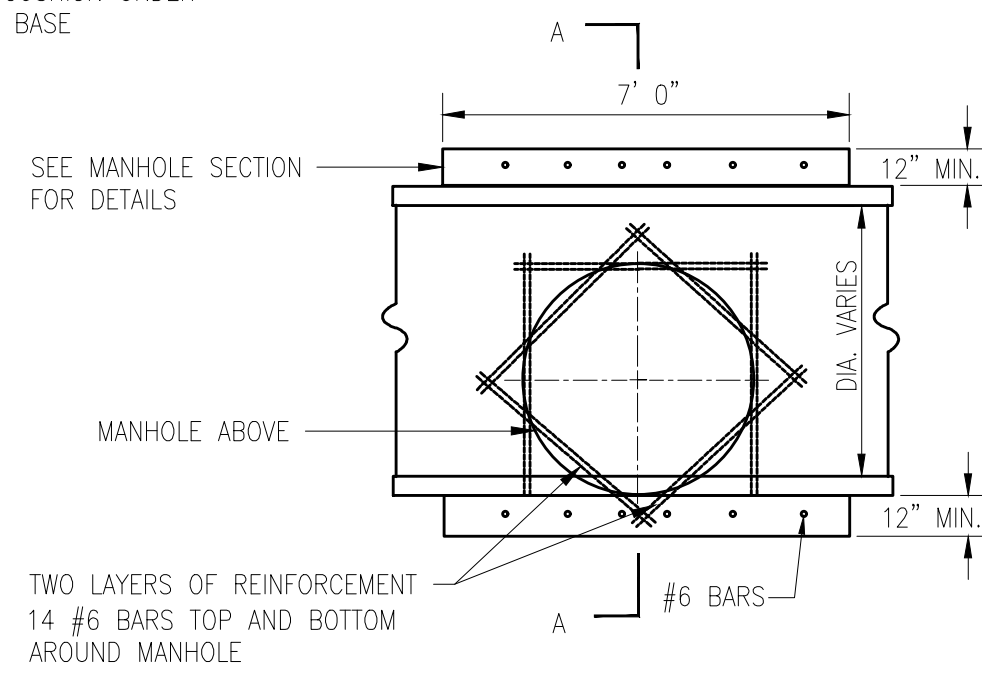
INTERIOR DROP CONNECTION
NOT TO SCALE

DIA. OF SEWER	DIA. OF DROP CONNECTION
4"	4"
6"	4"
8"	6"
10"	8"

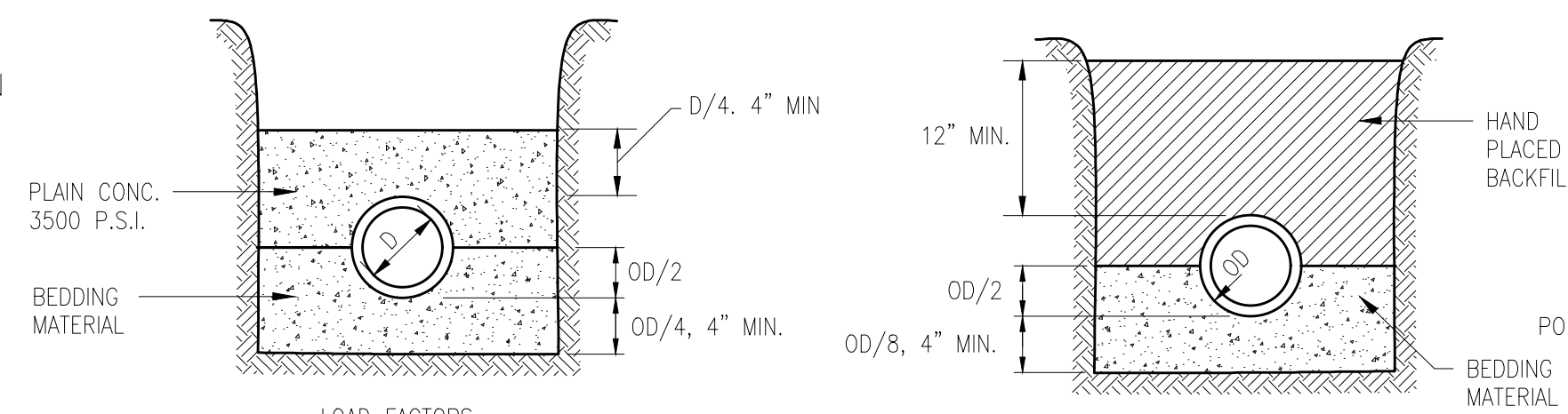


SANITARY MANHOLE
FOR SEWERS LARGER THAN 21"
NOT TO SCALE

SANITARY MANHOLE
FOR SEWERS 8" THRU 21"
NOT TO SCALE

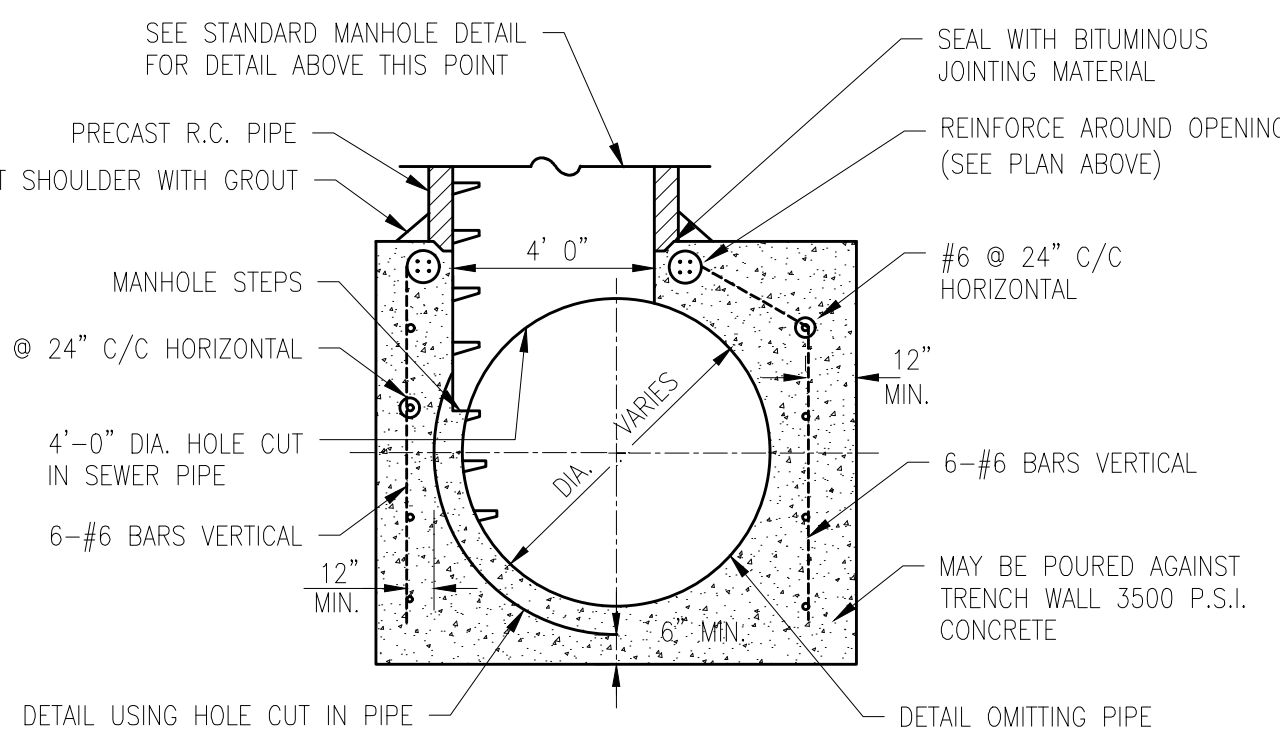


MANHOLE PLAN
48" & LARGER SEWERS
NOT TO SCALE

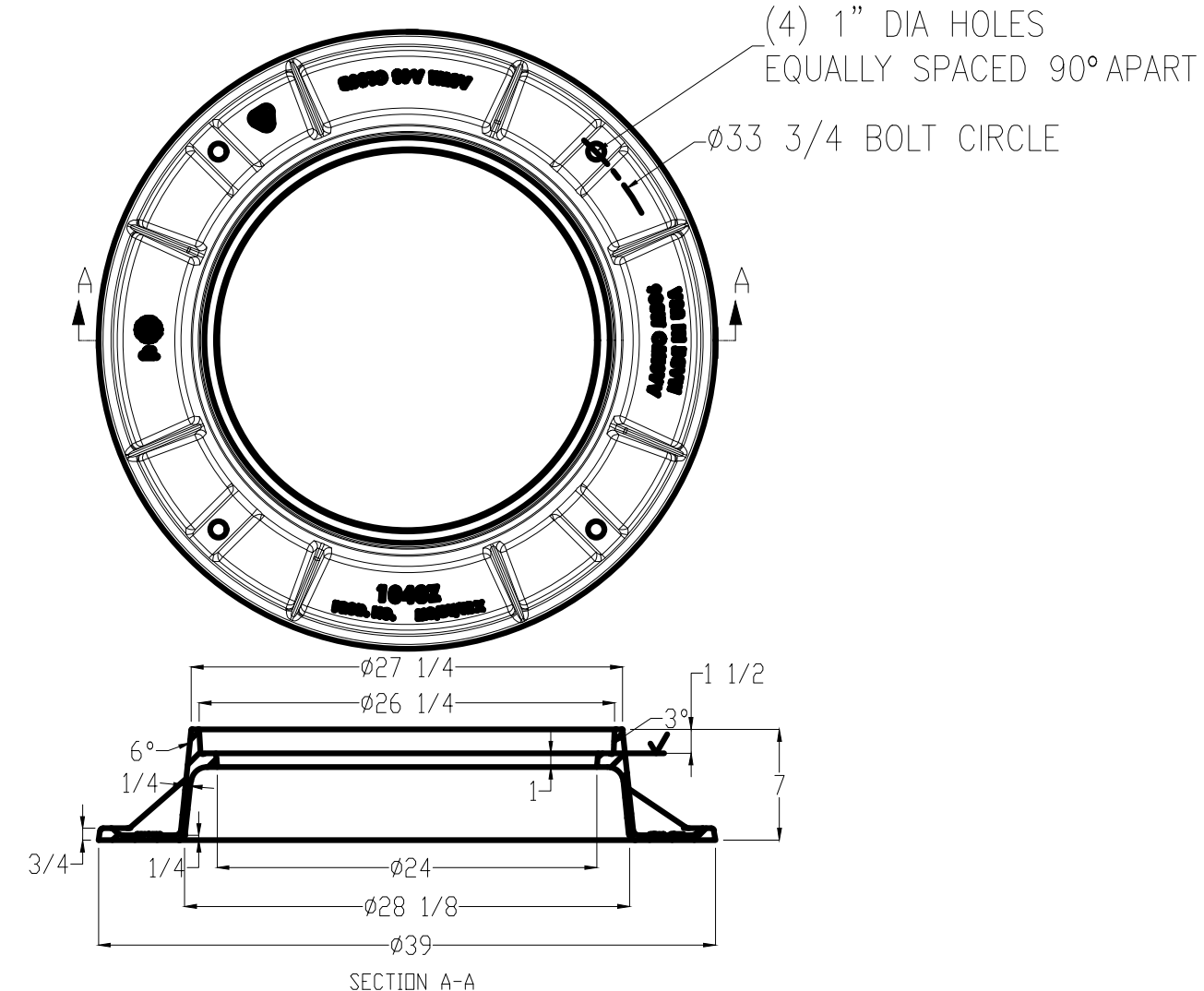


MAX. WIDTH OF TRENCH 12" ABOVE TOP OF PIPE
6" THRU 12" PIPE 30" WIDE
15" THRU 36" PIPE - OD+16"
42" THRU 60" PIPE - OD+20"
OVER 60" PIPE OUTSIDE DIA. OF PIPE+24"
MIN. WIDTH OF TRENCH 12" ABOVE THE TOP OF THE PIPE SHALL BE 6" ON EACH SIDE OF PIPE.

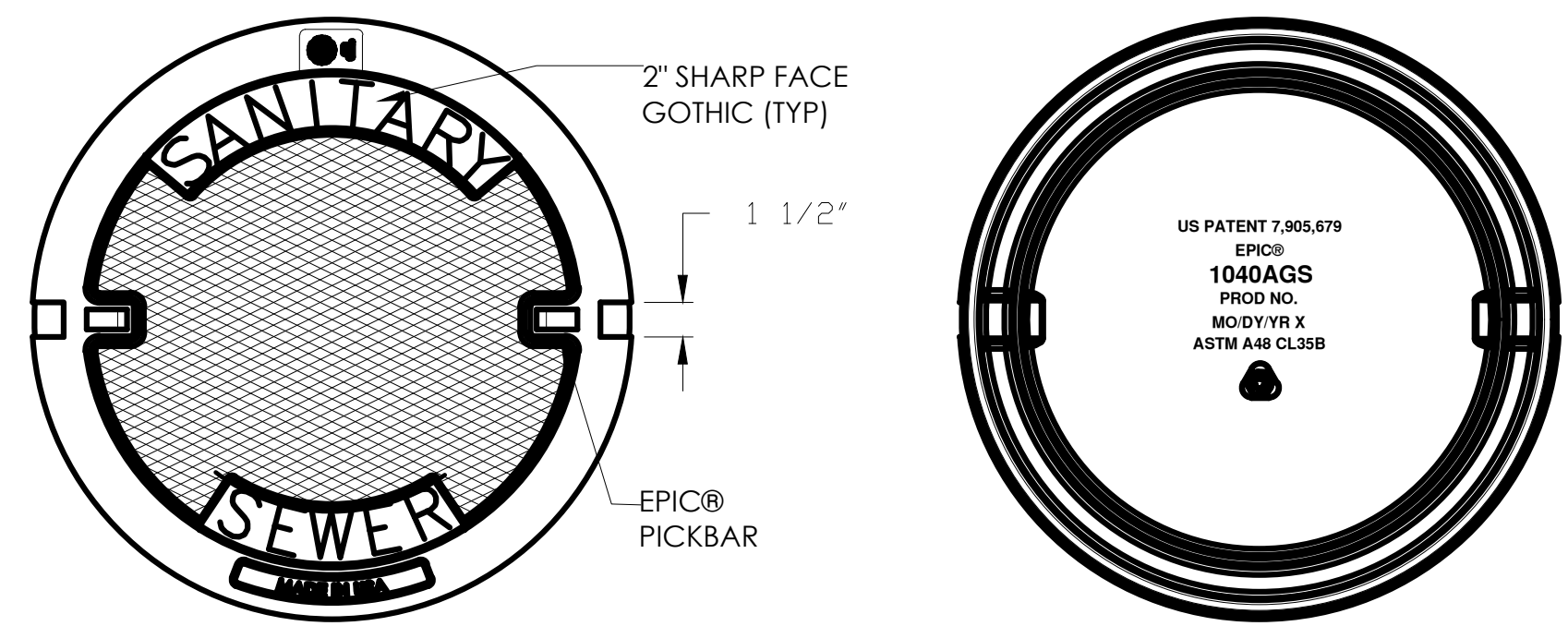
PIPE BEDDING DETAILS



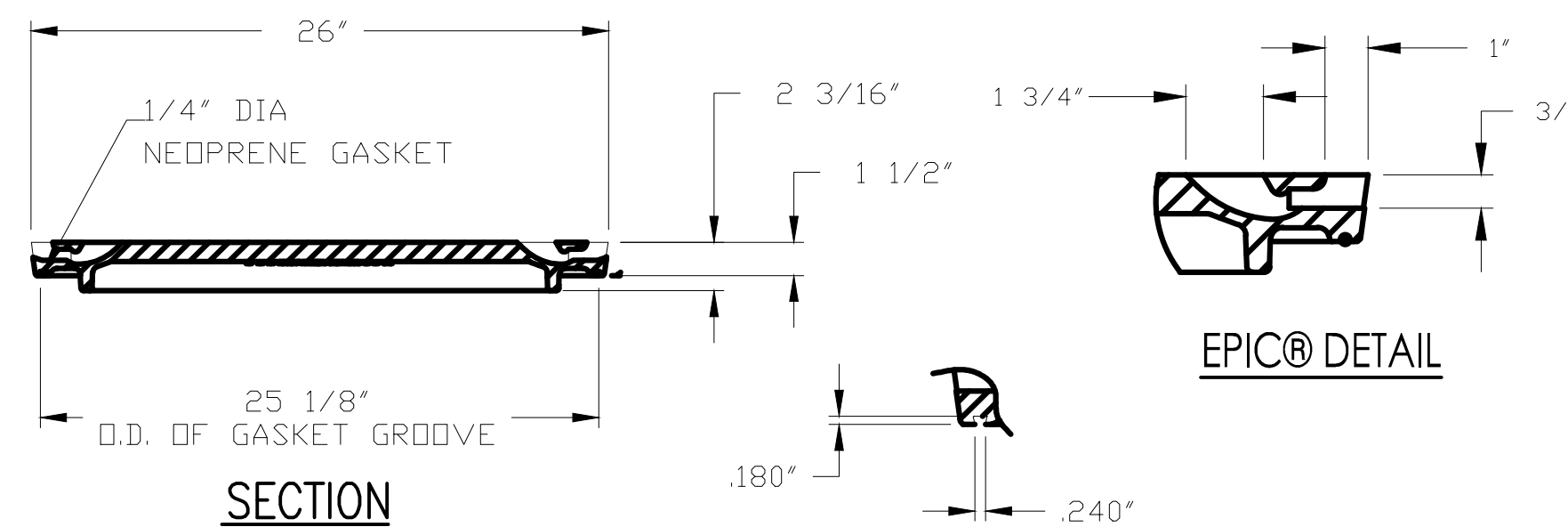
MANHOLE SECTION
48" & LARGER SEWERS
NOT TO SCALE



1040Z FRAME



BOTTOM VIEW



1040 AGS COVER



Know what's below.
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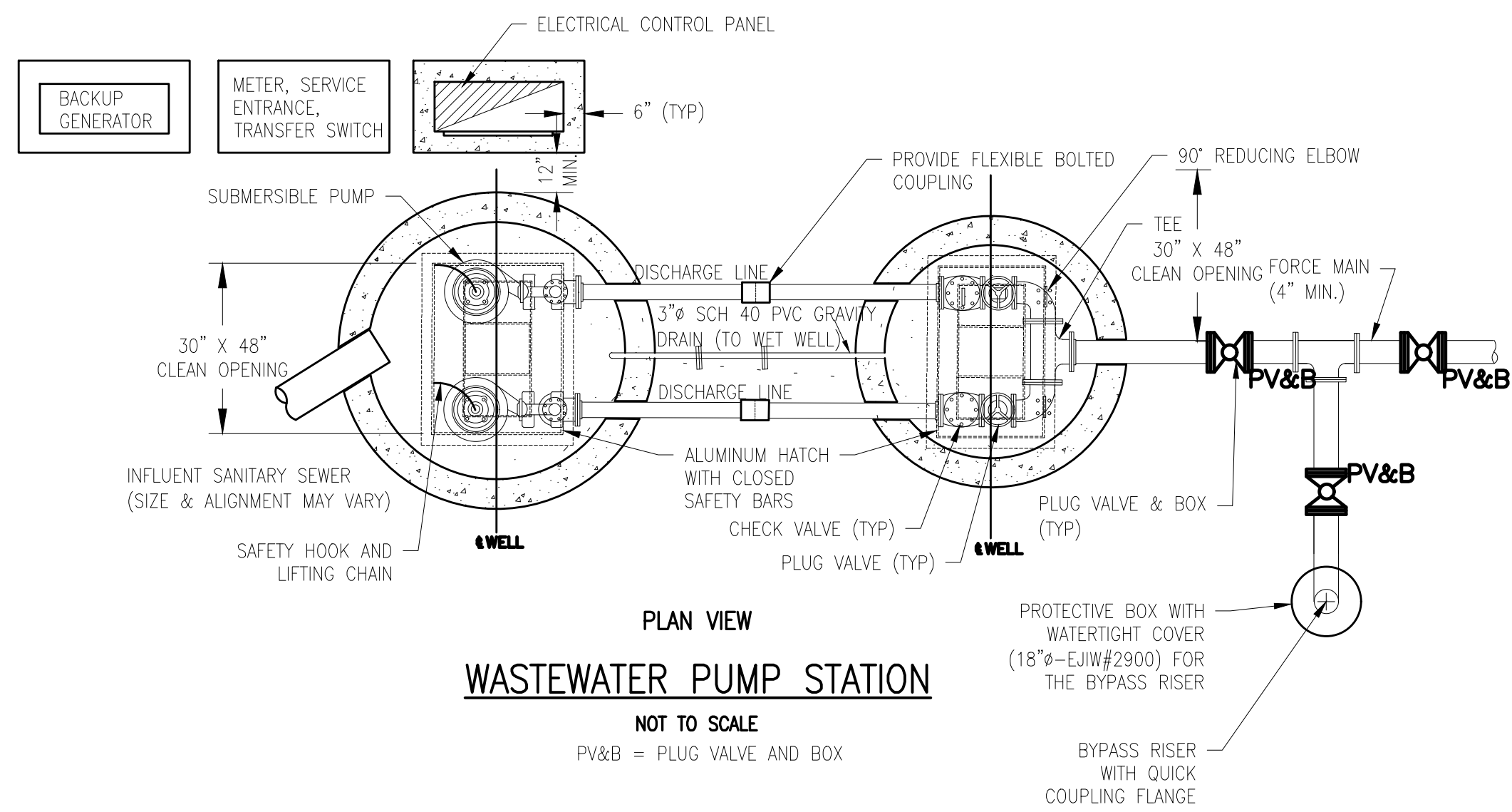
STANDARD SANITARY
SEWER DETAILS

YPSILANTI COMMUNITY UTILITIES AUTHORITY
2777 STATE ROAD
YPSILANTI, MICHIGAN 48198-9112
(734) 484-4800
FAX: (734) 544-7221
WWW.YCUA.ORG

YCUA
ENVIRONMENTAL LEADERS

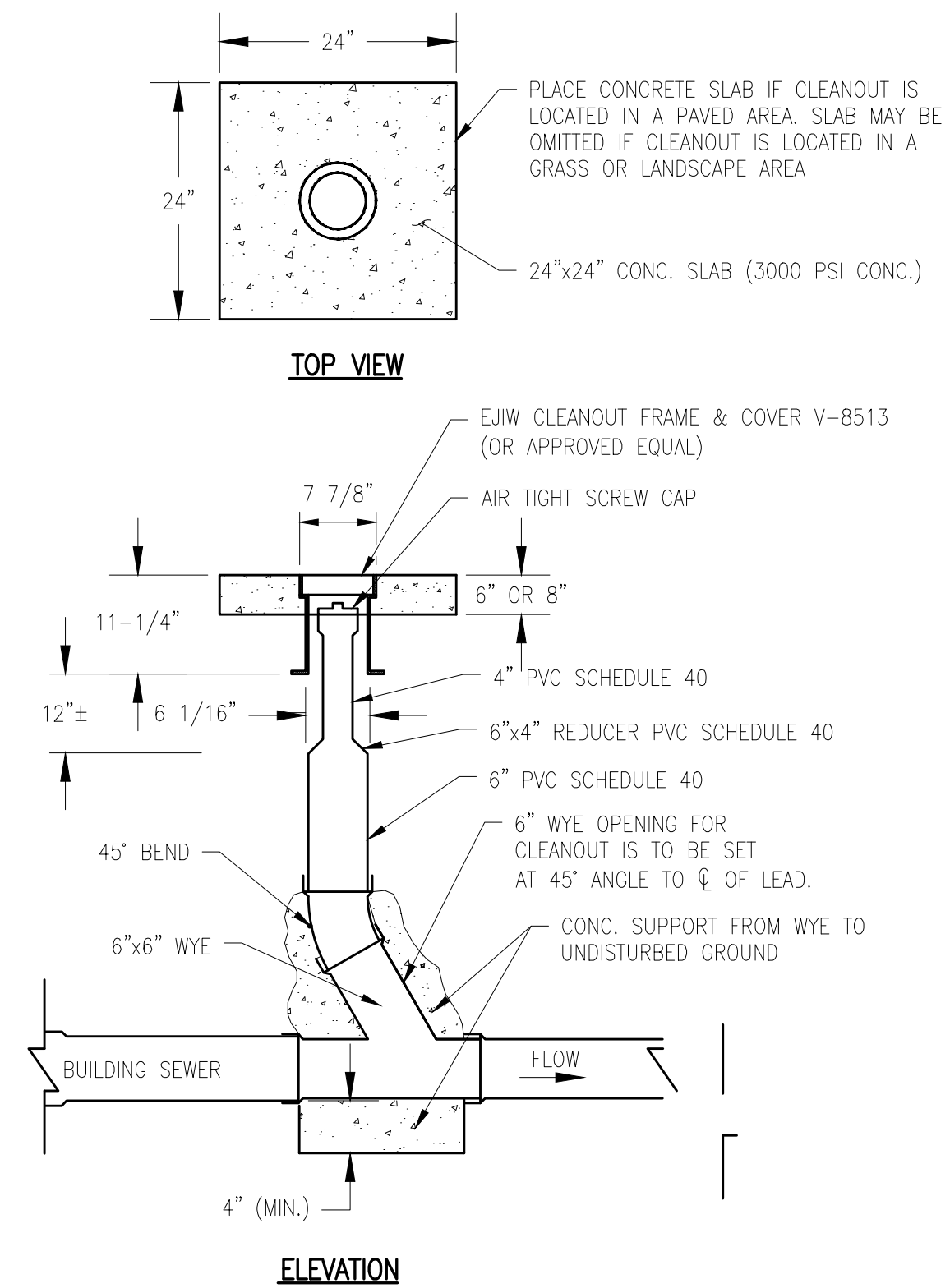
DATE	SCALE	SHEET
10/25/19	NO SCALE	

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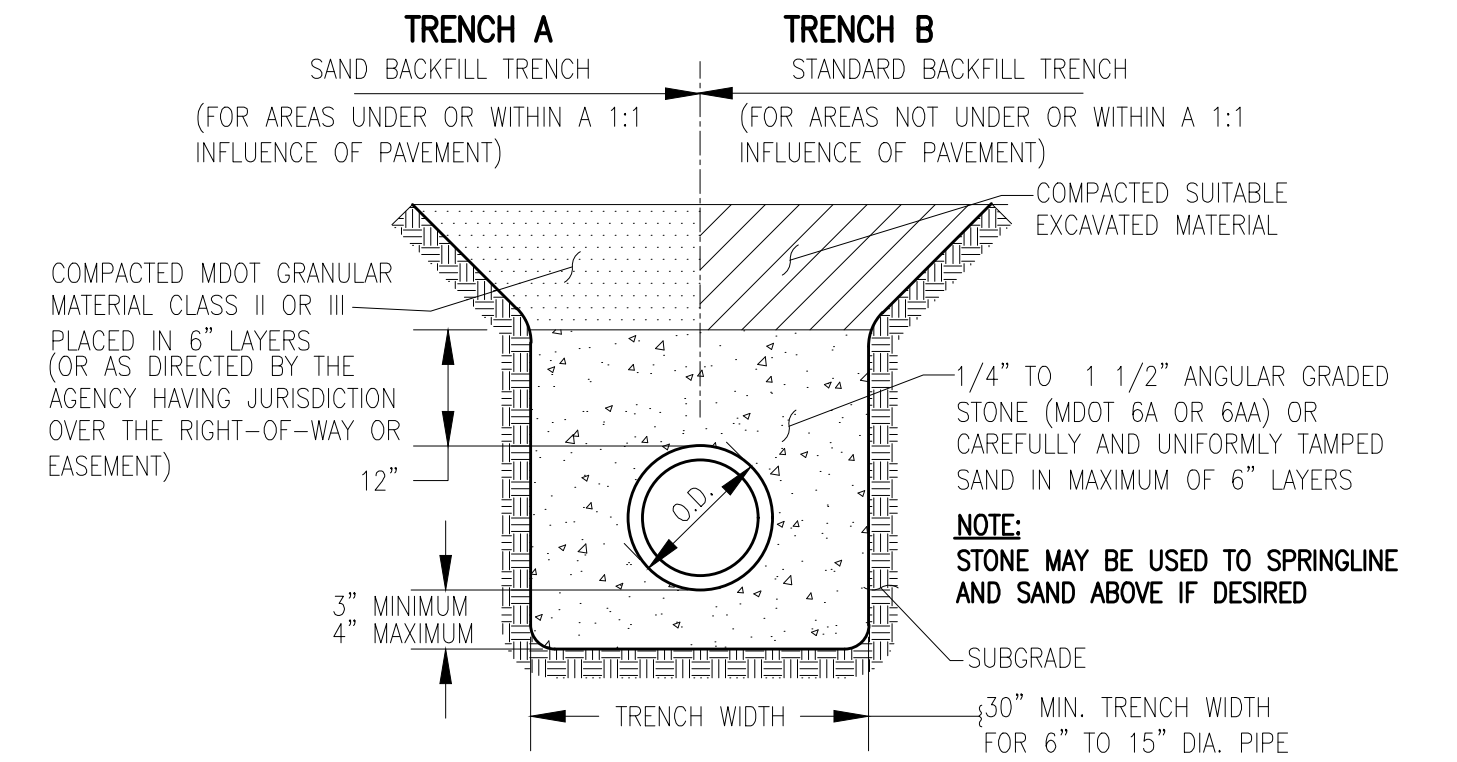
WASTEWATER PUMP STATION

NOT TO SCALE
PV&B = PLUG VALVE AND BOX



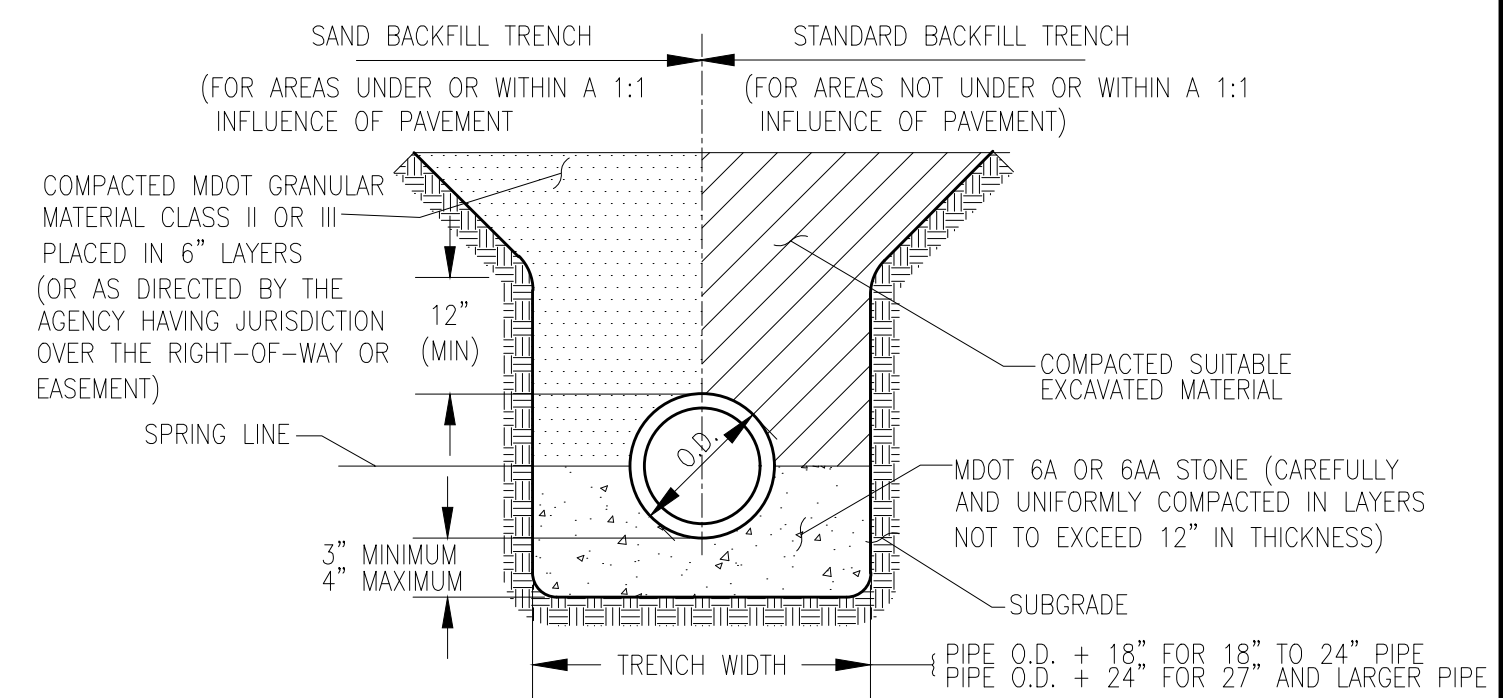
SANITARY SEWER CLEANOUT

NOT TO SCALE



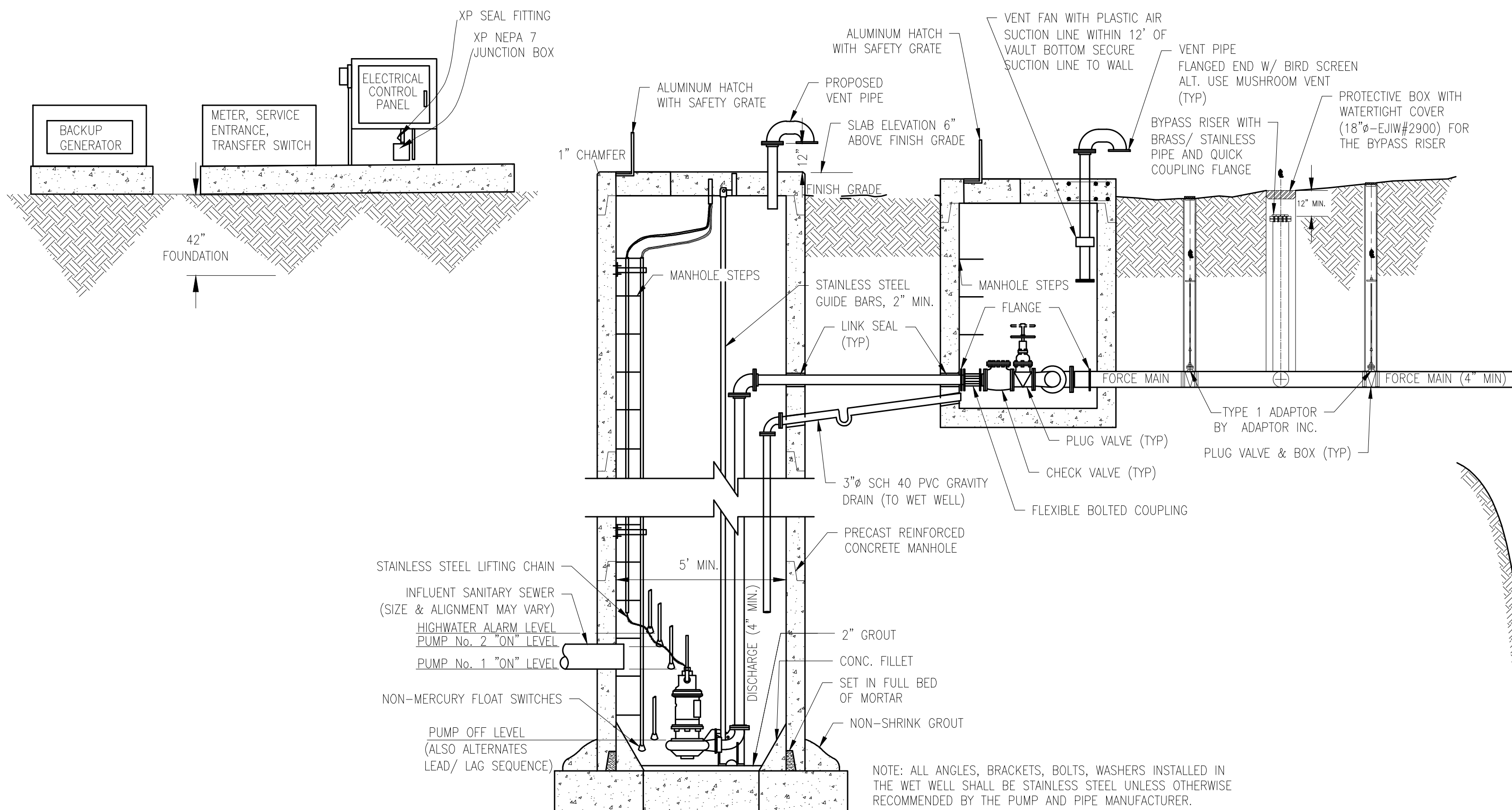
**FLEXIBLE PIPE (8" TO 15" DIA SOLID WALL PVC PIPE)
STANDARD BEDDING AND TRENCH BACKFILL DETAIL**

NOT TO SCALE



**RIGID PIPE (18" DIAMETER AND LARGER) STANDARD
BEDDING AND TRENCH BACKFILL DETAIL**

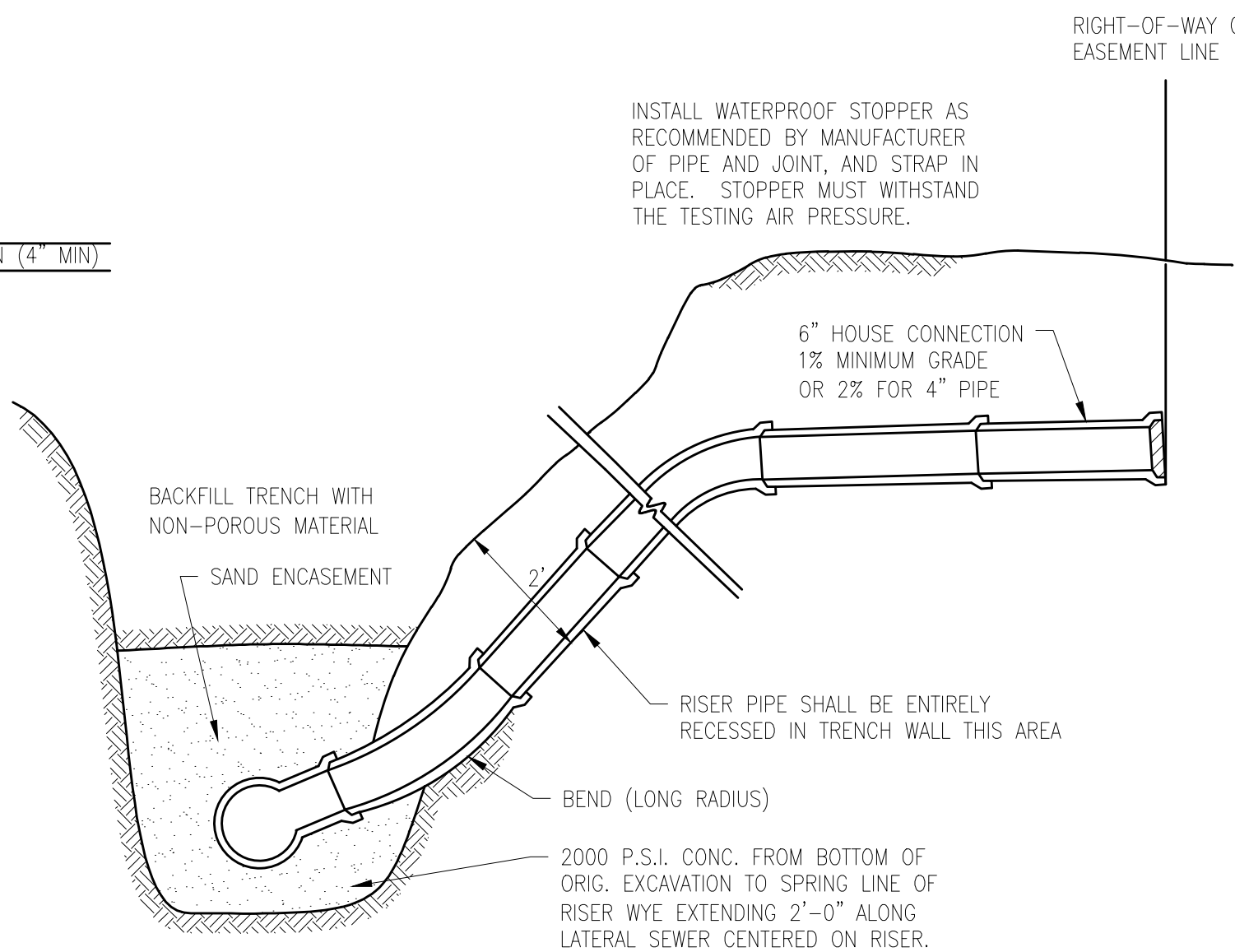
NOT TO SCALE



WASTEWATER PUMP STATION

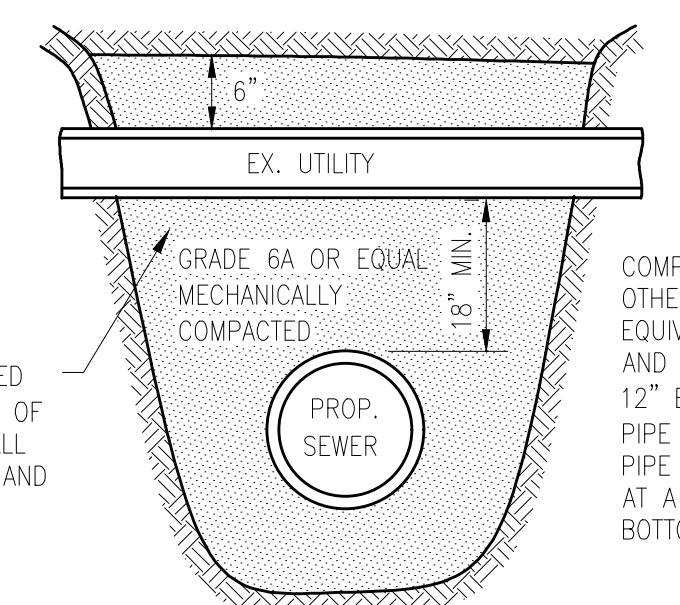
NOT TO SCALE

DETAILS ARE FOR LAYOUT AND GENERALITIES ONLY. THE SPECIFIC COMPONENTS AND EXACT DETAILS MUST BE IDENTIFIED OR CREATED ON A CASE BY CASE BASIS THROUGH A DETAILED SUBMITTAL REVIEW PROCESS.



BUILDING SEWER

NOT TO SCALE



STANDARD PIPE SUPPORT

SANITARY OR STORM
NOT TO SCALE

WHERE DET. "D" BEDDING IS SPECIFIED FOR NEW UTILITY A 6" MIN. LAYER OF MECHANICALLY COMPACTED SAND SHALL BE MAINTAINED BETWEEN EX. UTILITY AND TOP OF CONC. ENCASUREMENT.



Know what's below.
Call before you dig.



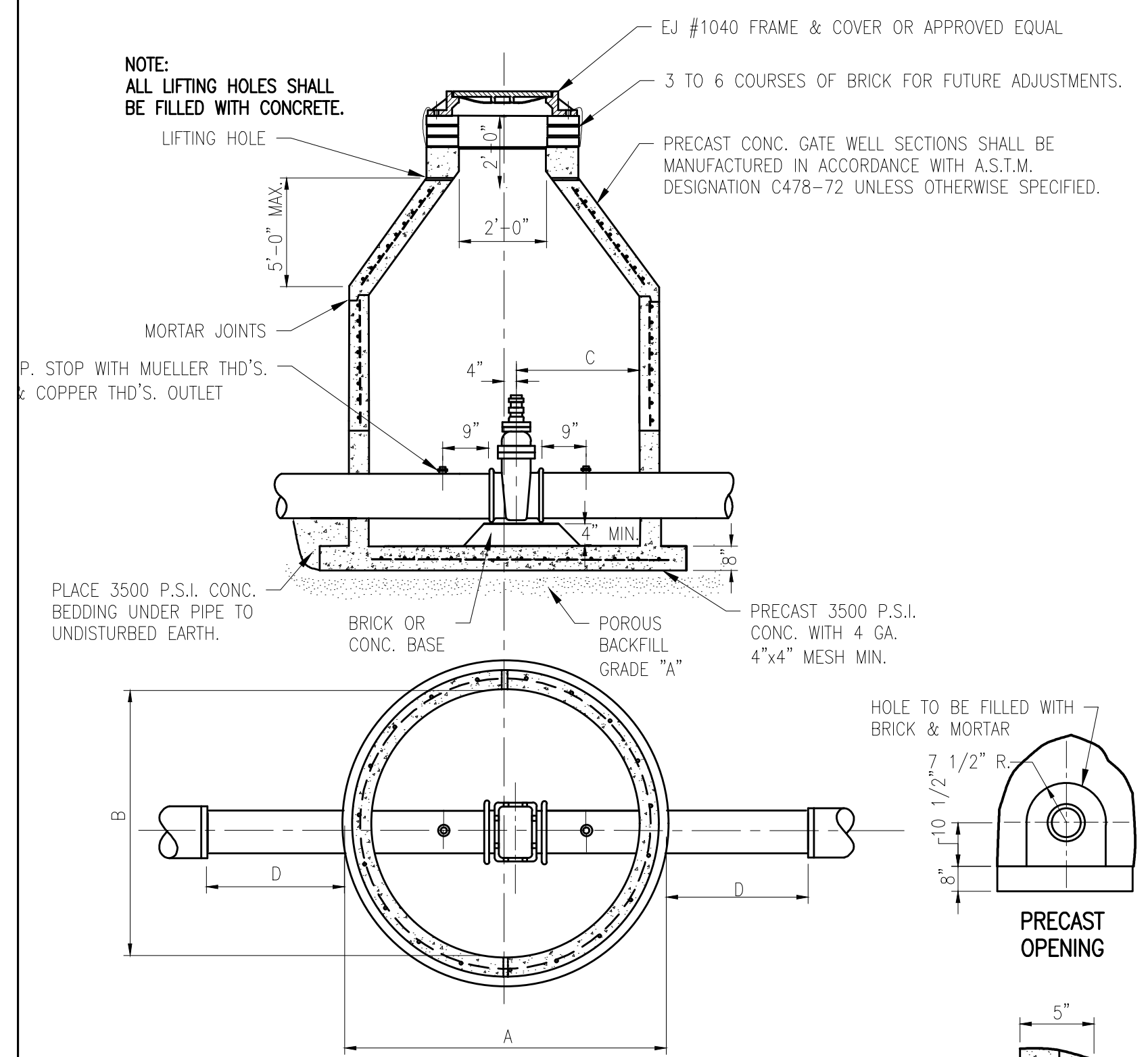
REVISIONS

**STANDARD SANITARY
SEWER DETAILS**

YPSILANTI COMMUNITY UTILITIES AUTHORITY
2777 STATE ROAD
YPSILANTI, MICHIGAN 48198-9112
(734) 484-4800
FAX: (734) 544-7221
WWW.YCUA.ORG

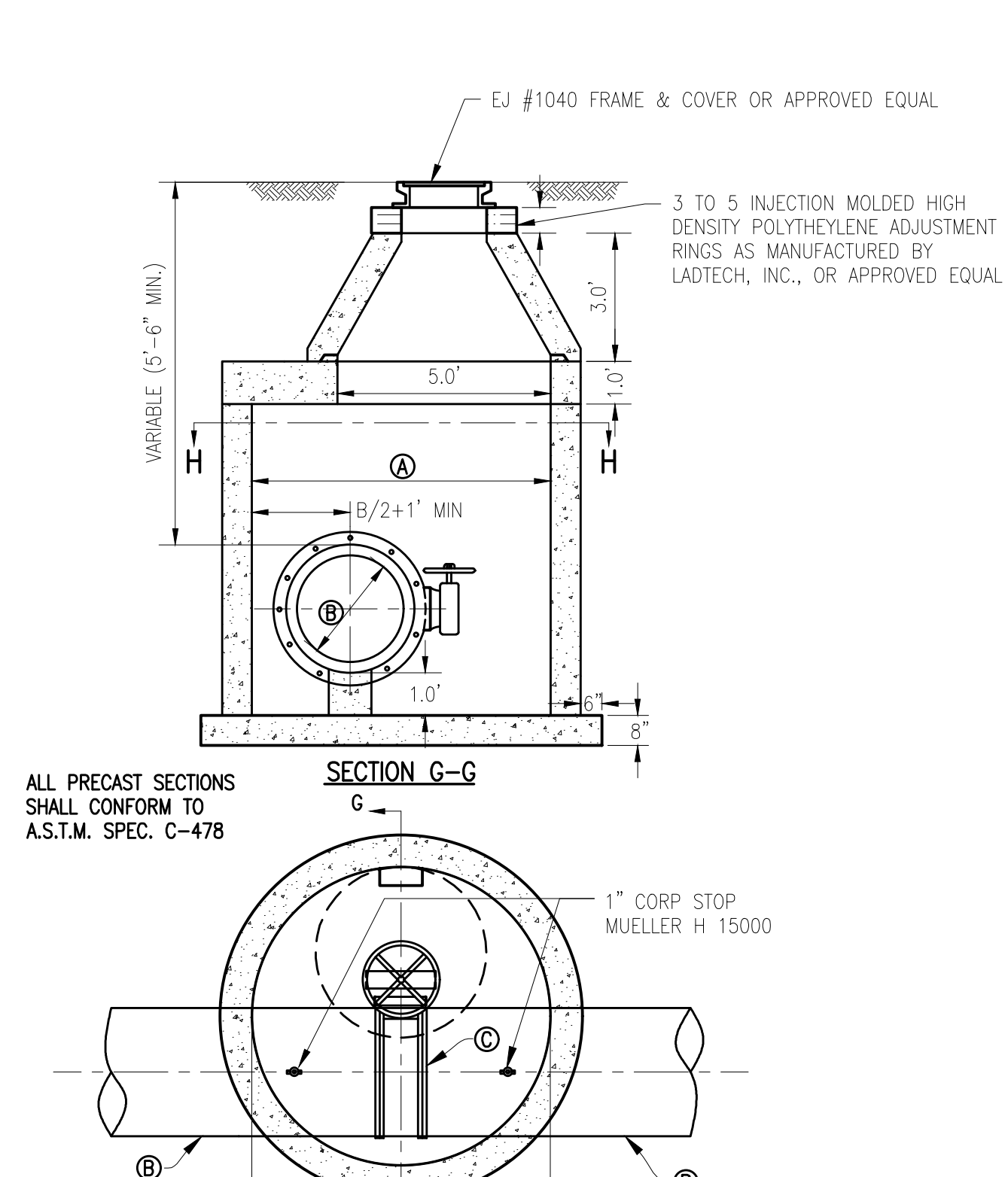
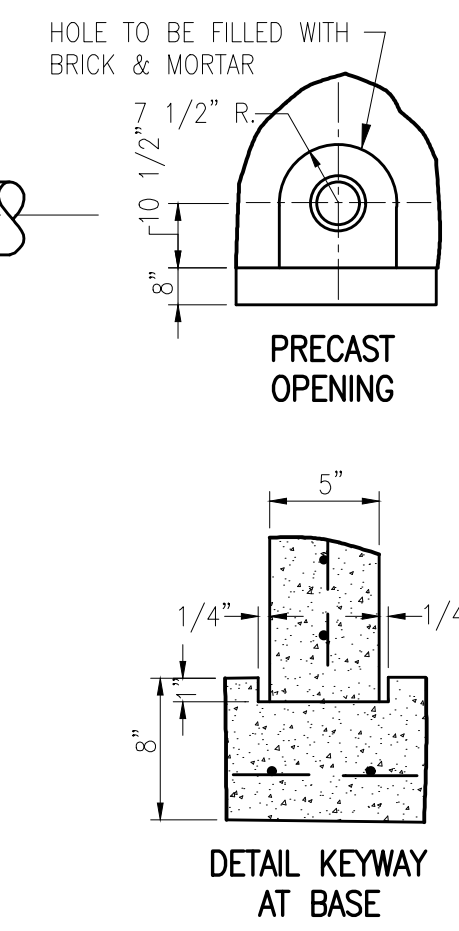
DATE	SCALE	SHEET
10/25/19	NO SCALE	

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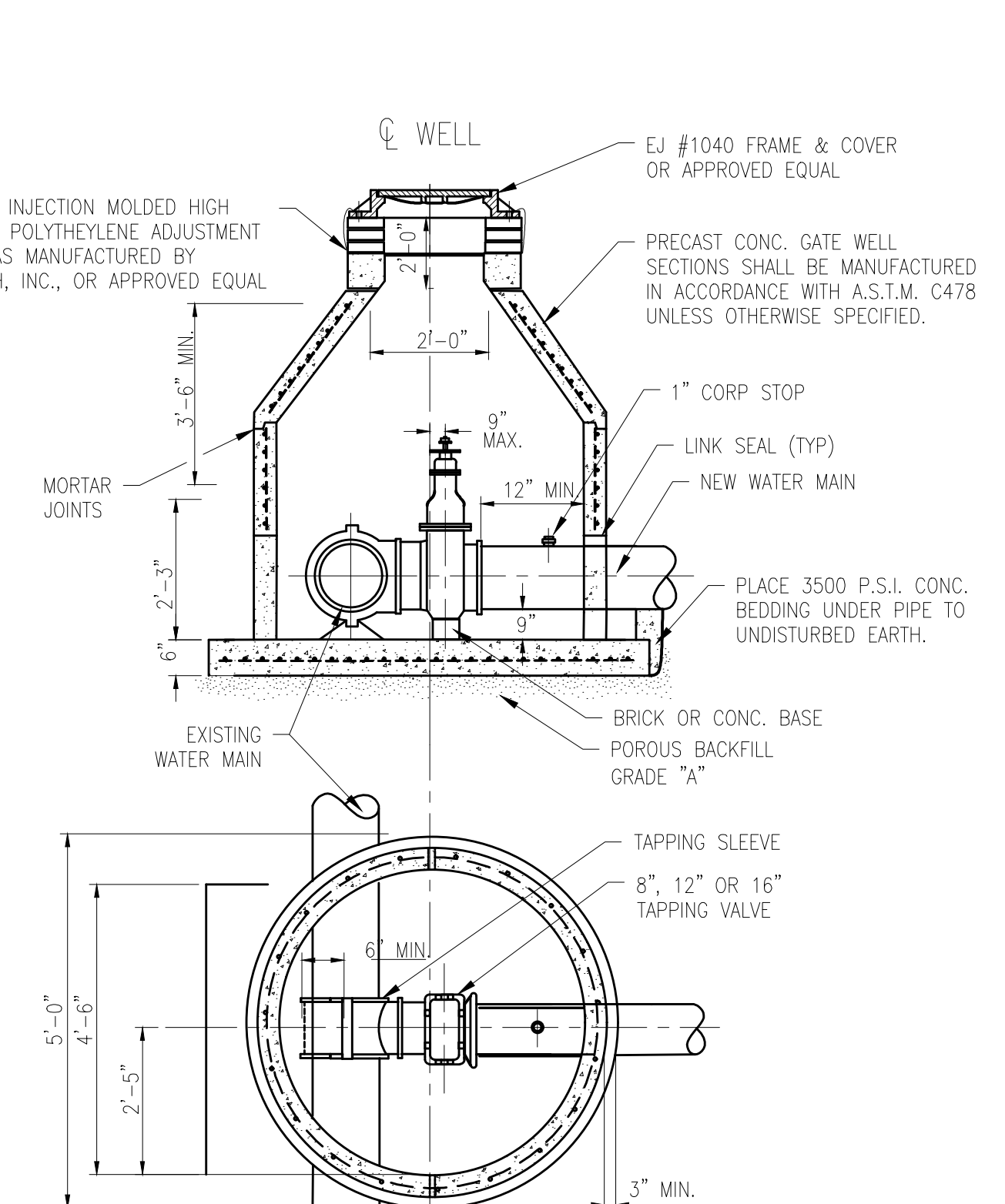
SIZE	A	B	C	D
8"	5'-0"	4'-0"	2'-2"	—
12"	5'-6"	4'-6"	2'-5"	—
16"	6'-0"	5'-6"	2'-8"	3'-0" MIN. * 13'-0" MAX.

STANDARD PRECAST GATE VALVE & WELL (CONCENTRIC)

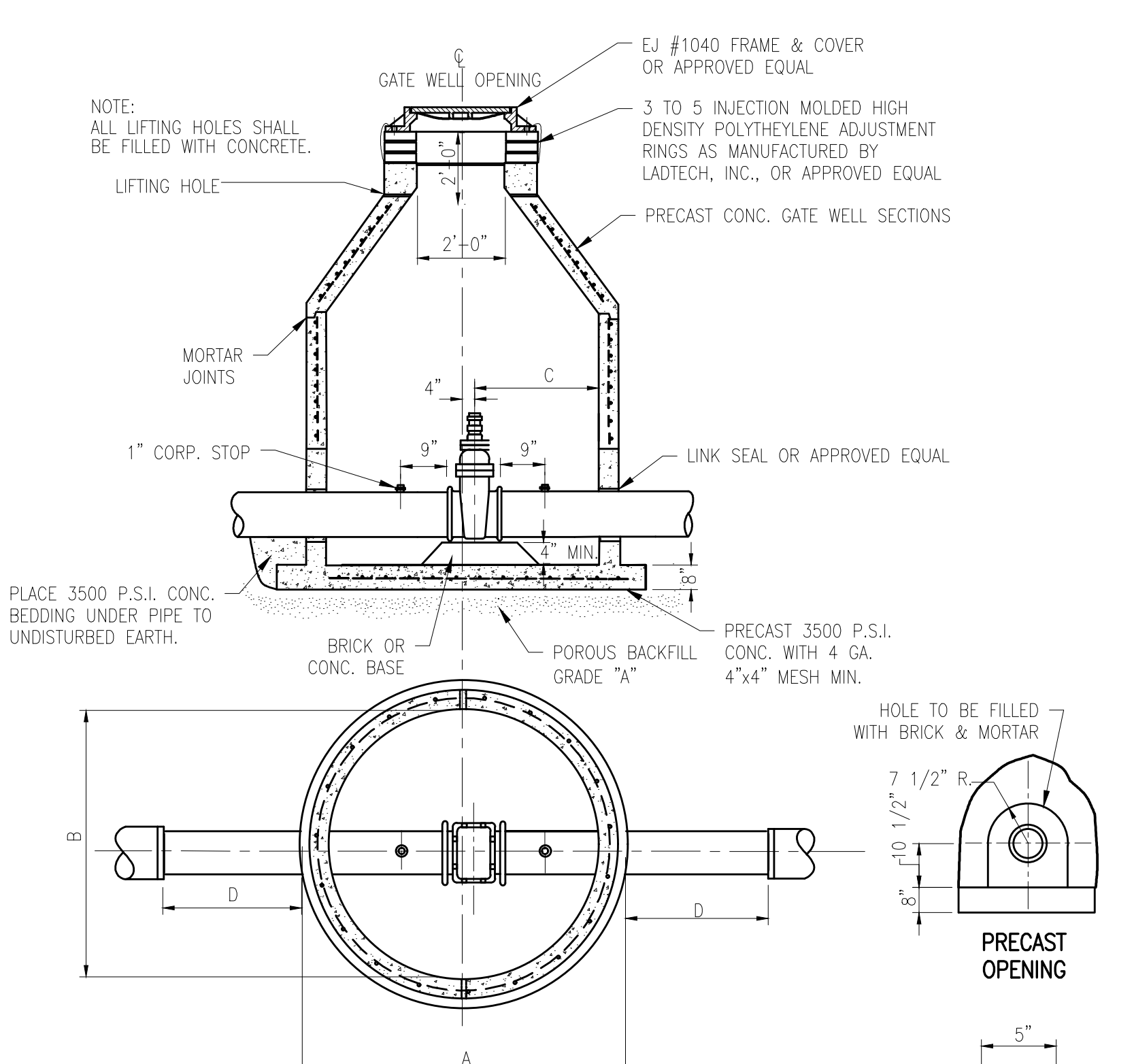


A	B
DIA WELL	DIA MAIN
7'-0"	20"
7'-0"	24"
8'-0"	30"
8'-0"	36"

BUTTERFLY VALVE AND WELL (CONCENTRIC) NOT TO SCALE

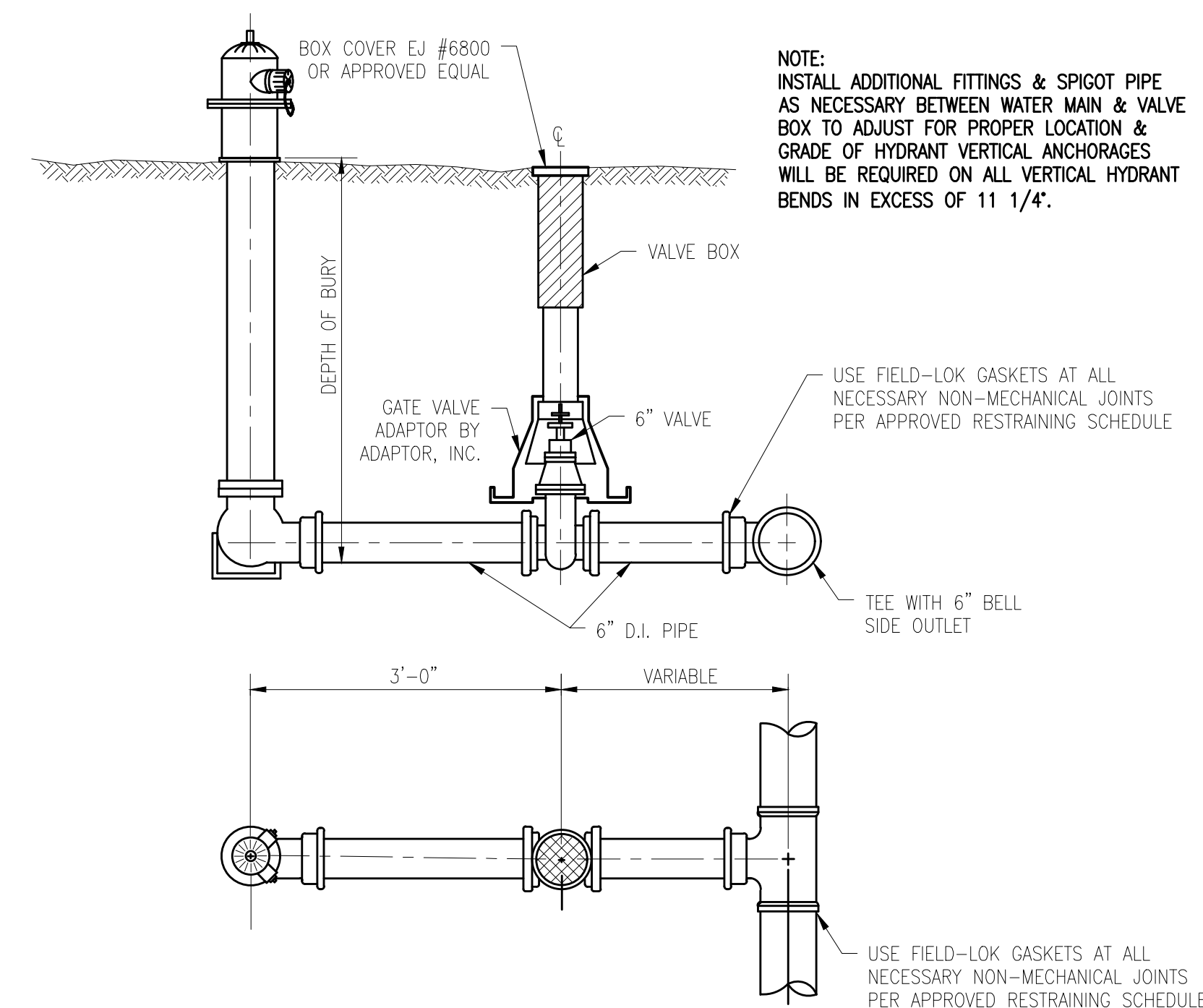


TAPPING SLEEVE, VALVE & WELL (CONCENTRIC) NOT TO SCALE

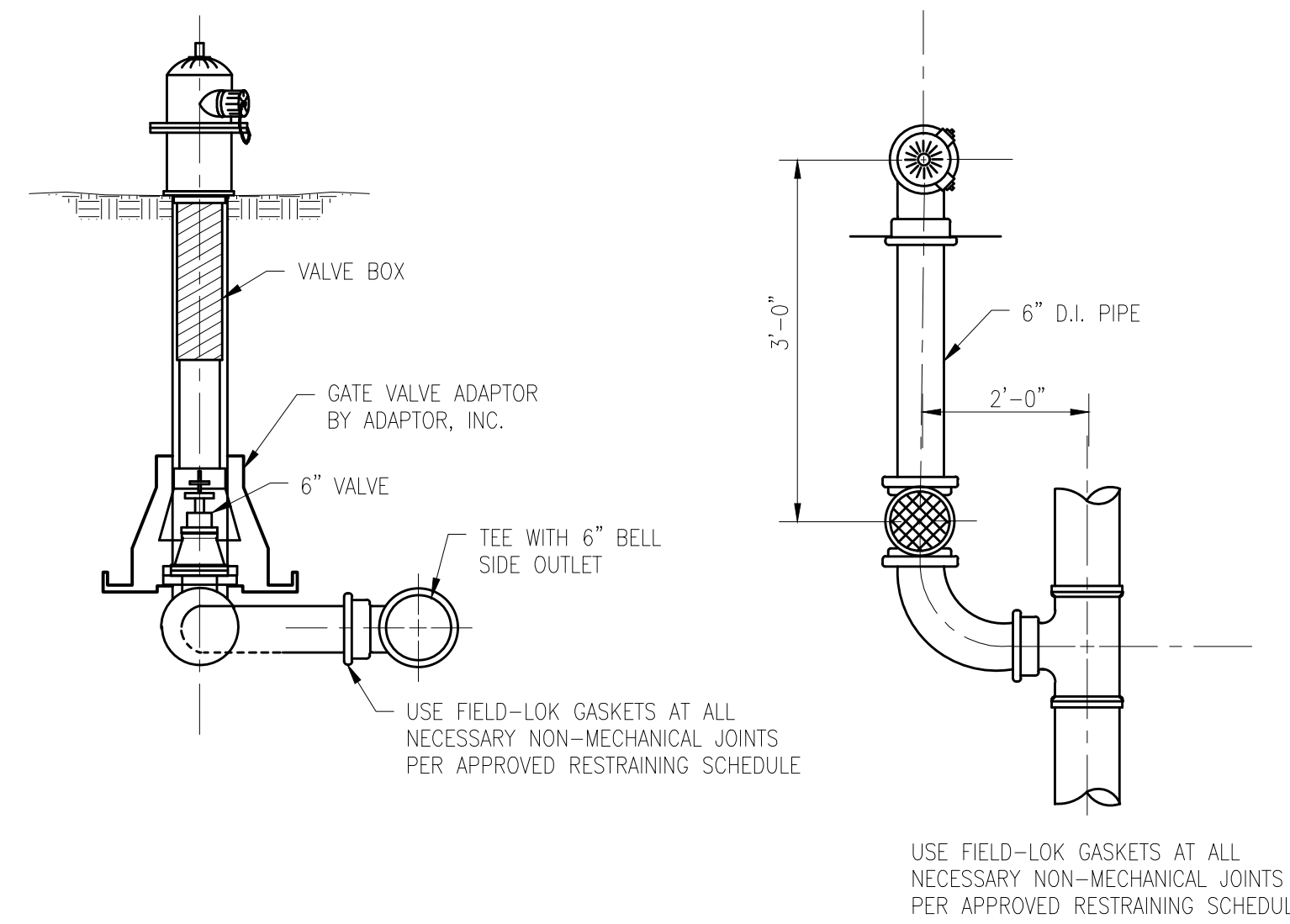


WM	A	B	C	D
8"	5'-0"	4'-0"	2'-2"	—
12"	5'-6"	4'-6"	2'-5"	—
16"	6'-0"	5'-6"	2'-8"	3'-0" MIN. * 13'-0" MAX.

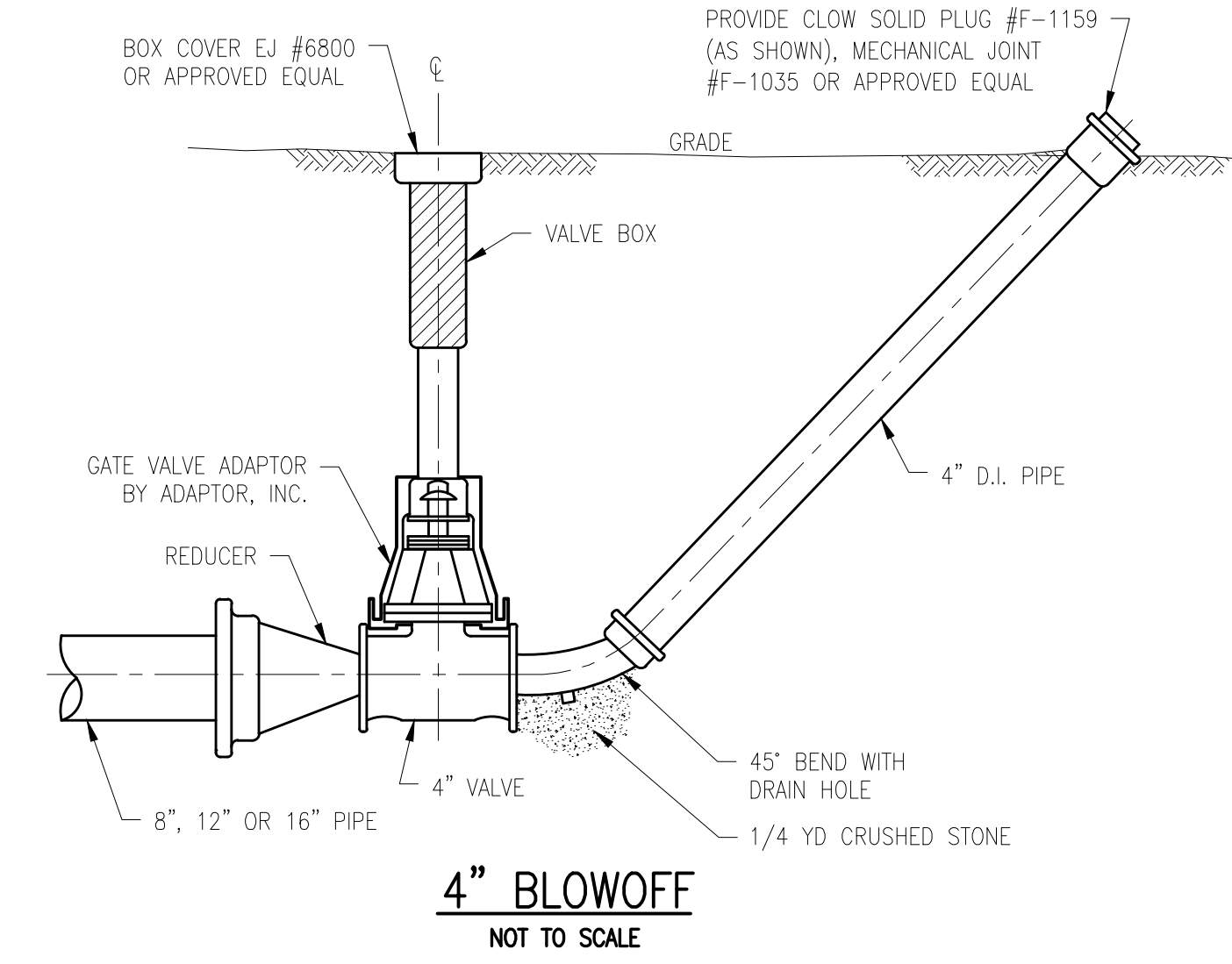
GATE VALVE & WELL (CONCENTRIC) NOT TO SCALE



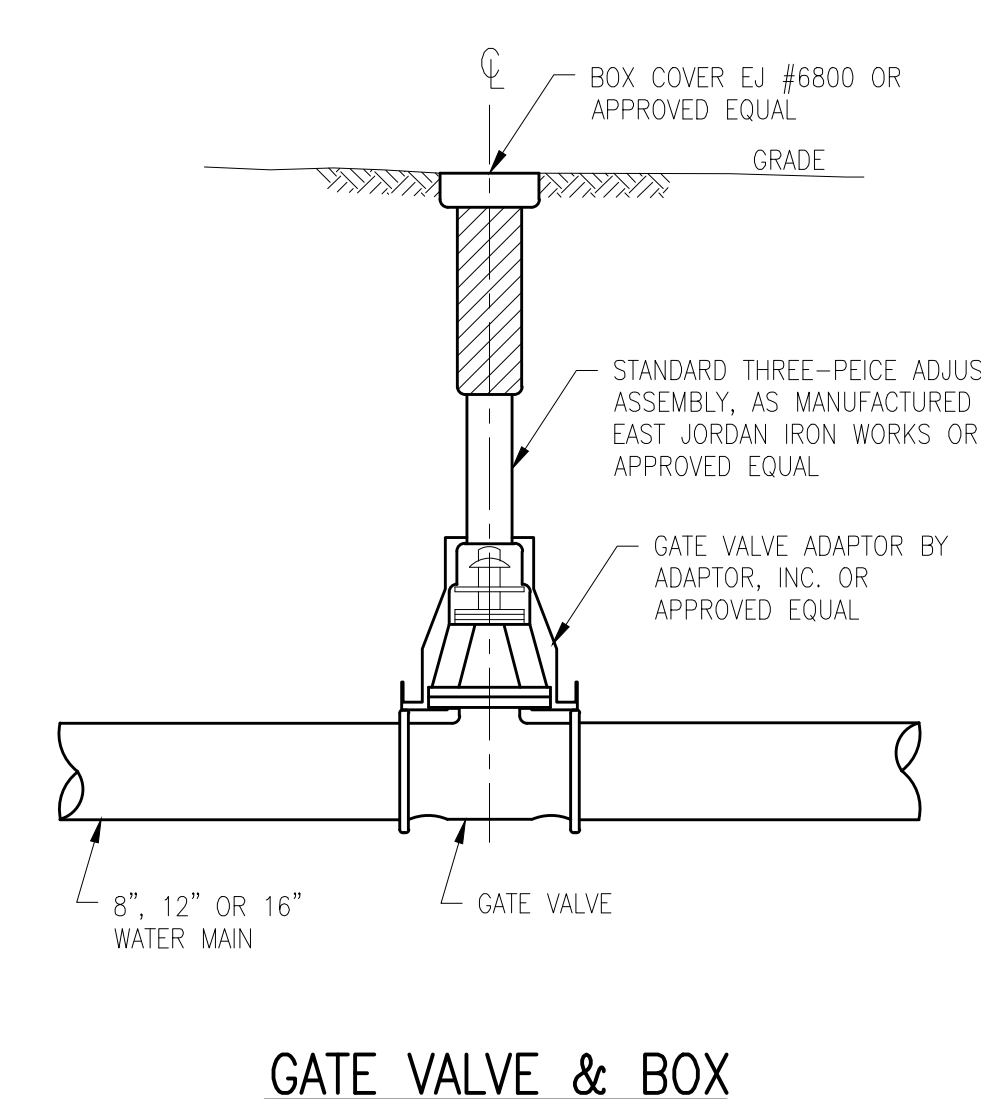
STANDARD HYDRANT SETTING NOT TO SCALE



CLOSE COUPLE HYDRANT SETTING NOT TO SCALE



4" BLOWOFF NOT TO SCALE



GATE VALVE & BOX NOT TO SCALE

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



REVISIONS

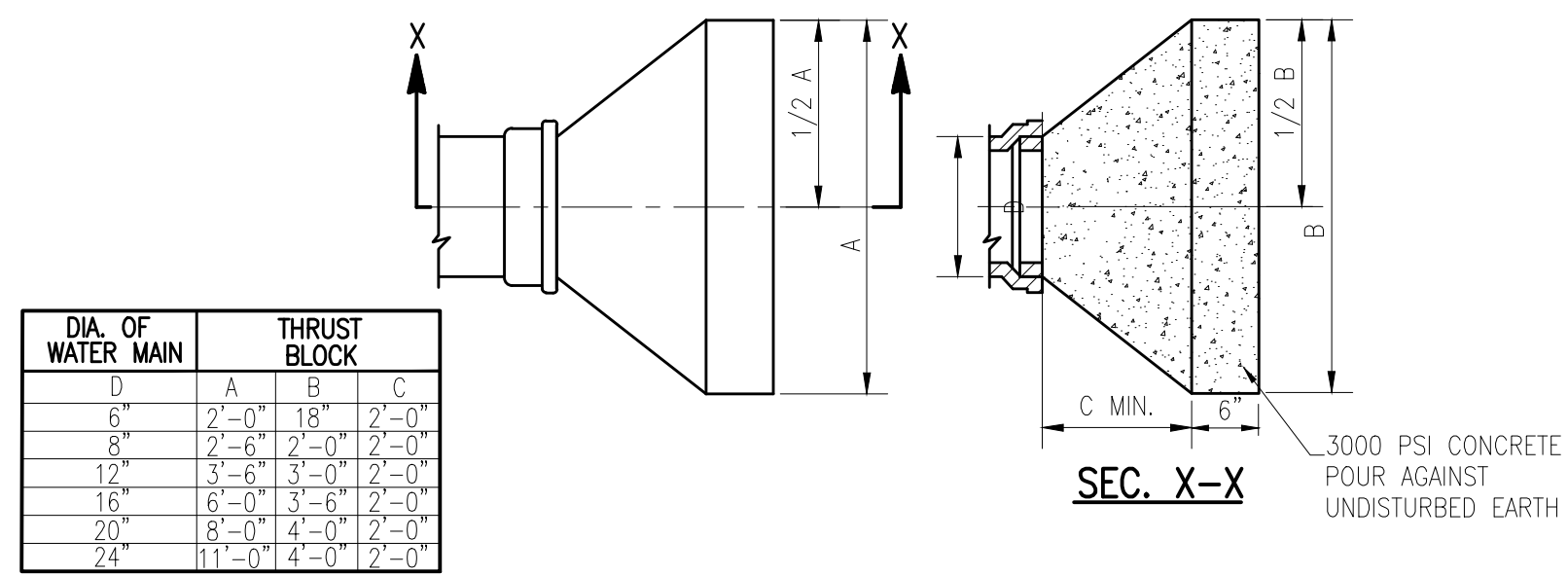
STANDARD WATER MAIN DETAILS

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2777 STATE ROAD
YPSILANTI, MICHIGAN 48198-9112
(734) 484-4800
FAX: (734) 544-7221
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YCAU
ENVIRONMENTAL LEADERS

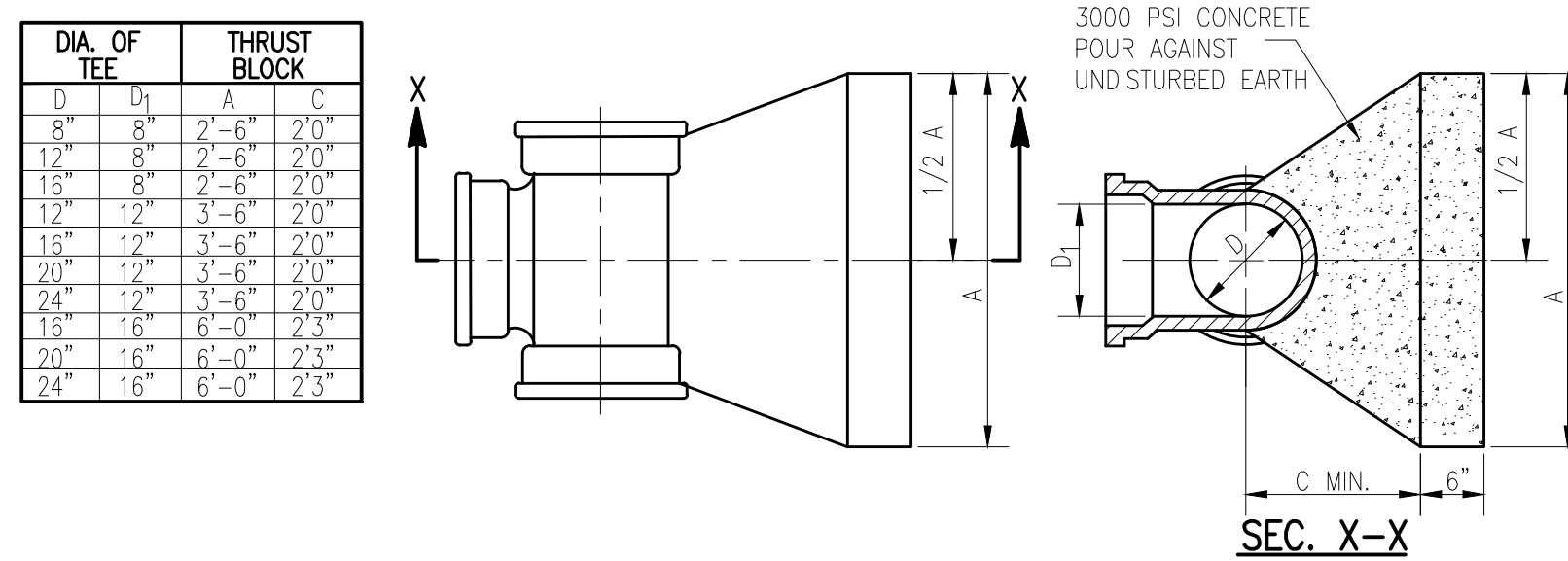
DATE	SCALE	SHEET
09/25/19	NO SCALE	

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DIA. OF WATER MAIN		THRUST BLOCK	
D	A	B	C
8"	2'-0"	18"	2'-0"
12"	2'-6"	2'-0"	2'-0"
16"	3'-0"	3'-0"	2'-0"
20"	3'-6"	3'-6"	2'-0"
24"	4'-0"	4'-0"	2'-0"

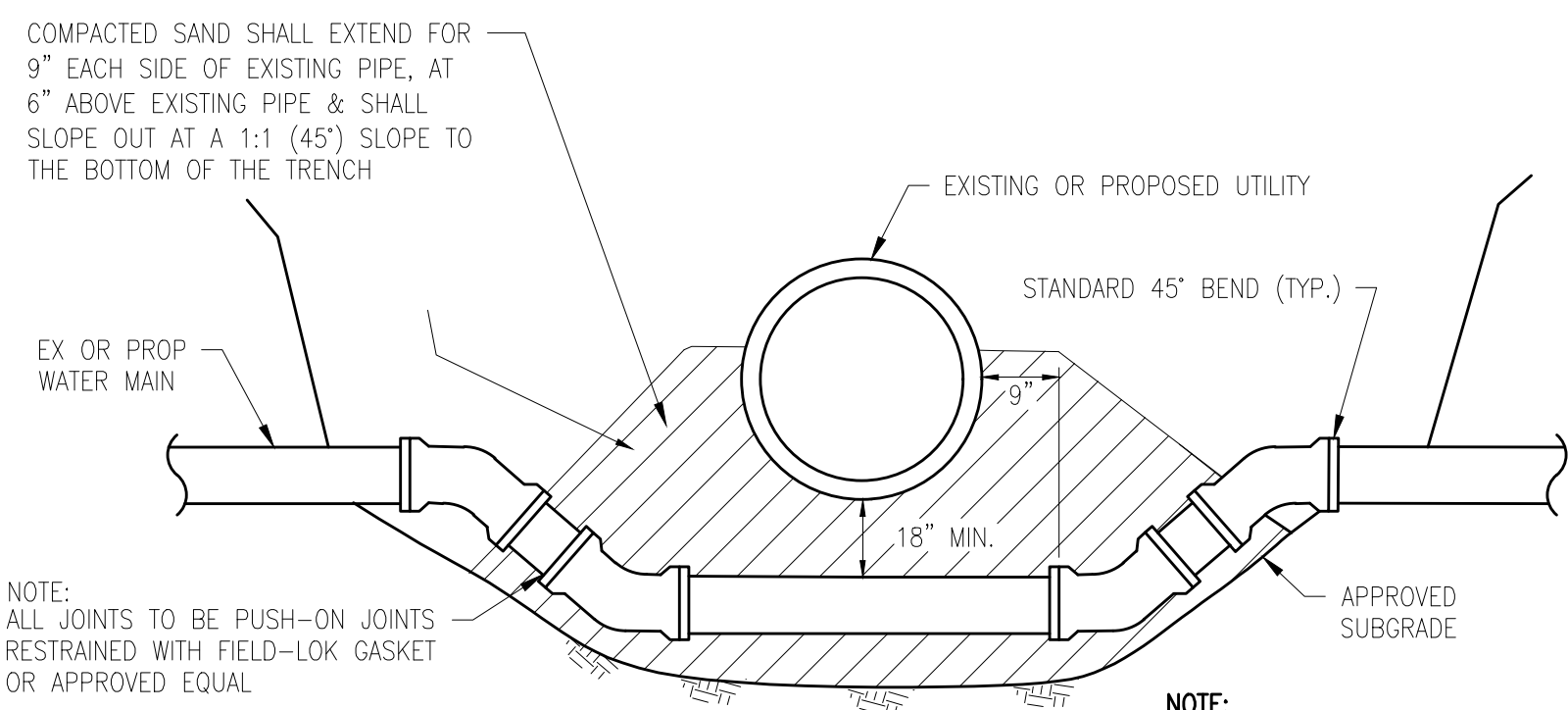
THRUST BLOCK AT PLUG OR HYDRANT SHOE
NOT TO SCALE



DIA. OF TEE		THRUST BLOCK	
D	D1	A	C
8"	8"	2'-6"	2'-0"
12"	8"	2'-6"	2'-0"
16"	8"	2'-6"	2'-0"
20"	12"	3'-6"	2'-0"
24"	12"	3'-6"	2'-0"
16"	12"	3'-6"	2'-0"
18"	16"	6'-0"	2'-3"
20"	16"	6'-0"	2'-3"
24"	16"	6'-0"	2'-3"

THRUST BLOCK AT TAPPING SLEEVE TEE
NOT TO SCALE

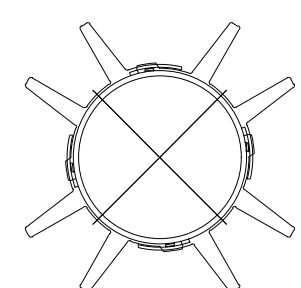
NOTE: CONCRETE THRUST BLOCKS WILL NOT BE PERMITTED EXCEPT BEHIND HYDRANT SHOES AND TAPPING SLEEVES. USE OF CONCRETE THRUST BLOCKS IN OTHER LOCATIONS WILL NOT BE PERMITTED WITHOUT THE WRITTEN APPROVAL OF YCUA. ALL OTHER VERTICAL AND HORIZONTAL BENDS SHALL BE RESTRAINED WITH FIELD-LOK GASKETS OR APPROVED MECHANICAL JOINTS.



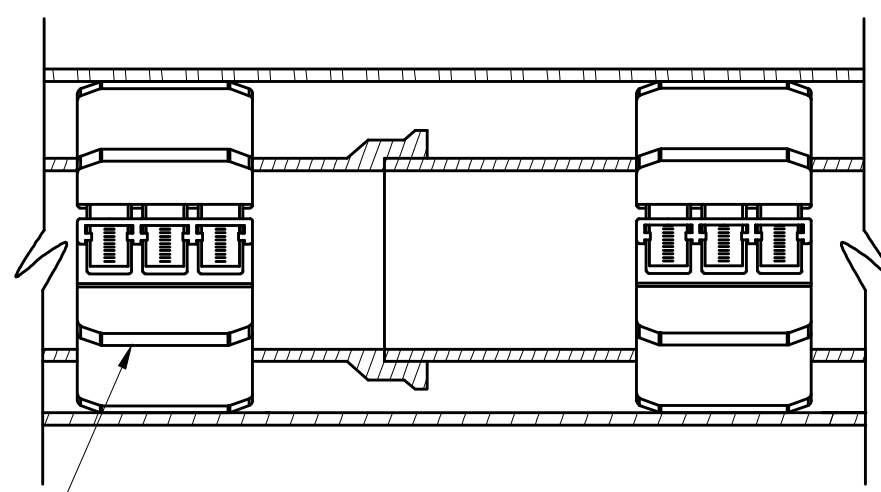
WATER MAIN LOWERING
NOT TO SCALE

NOTE: ALL JOINTS TO BE PUSH-ON JOINTS RESTRAINED WITH FIELD-LOK GASKET OR APPROVED EQUAL

NOTE: FOR BEDDING OF WATER MAIN SEE STANDARD PIPE SUPPORT DETAIL



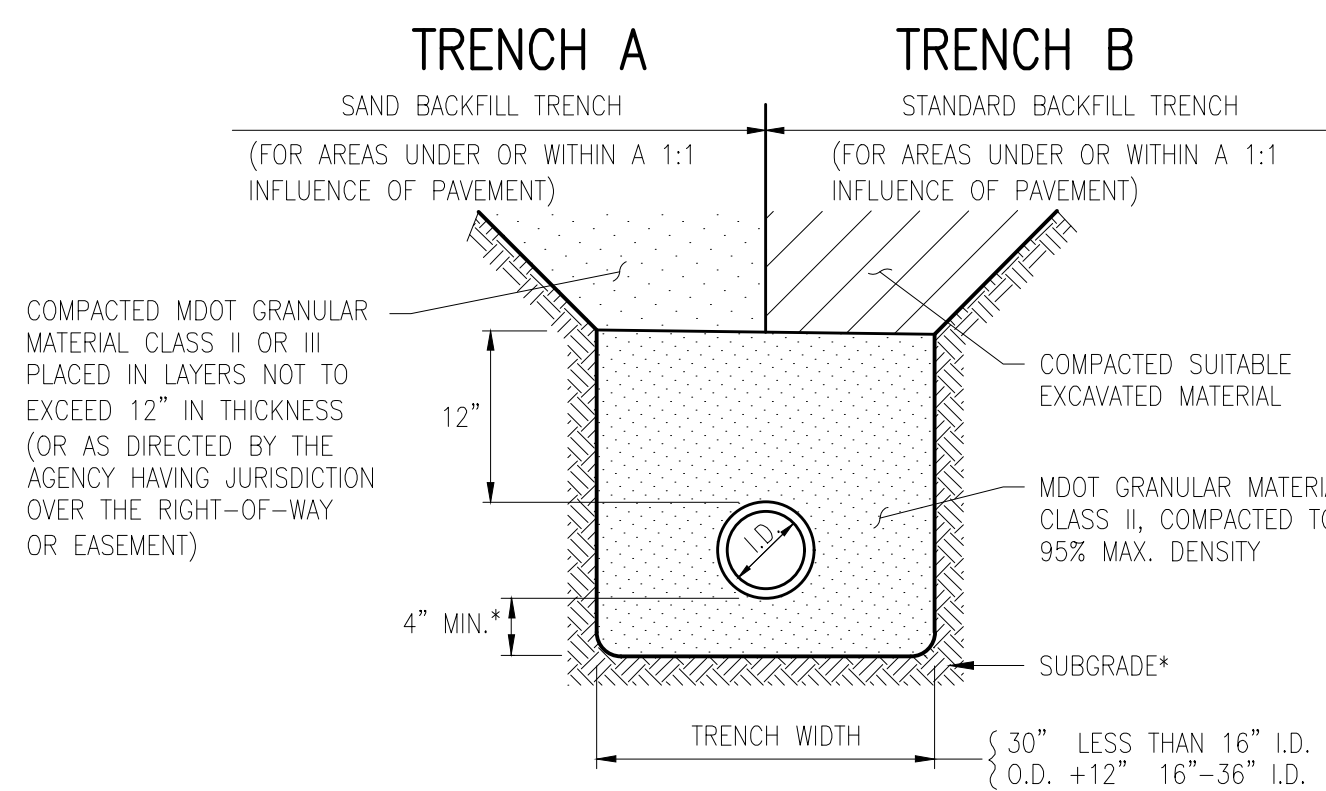
SPACER END VIEW
NOT TO SCALE



STANDARD CASING SECTION
NOT TO SCALE

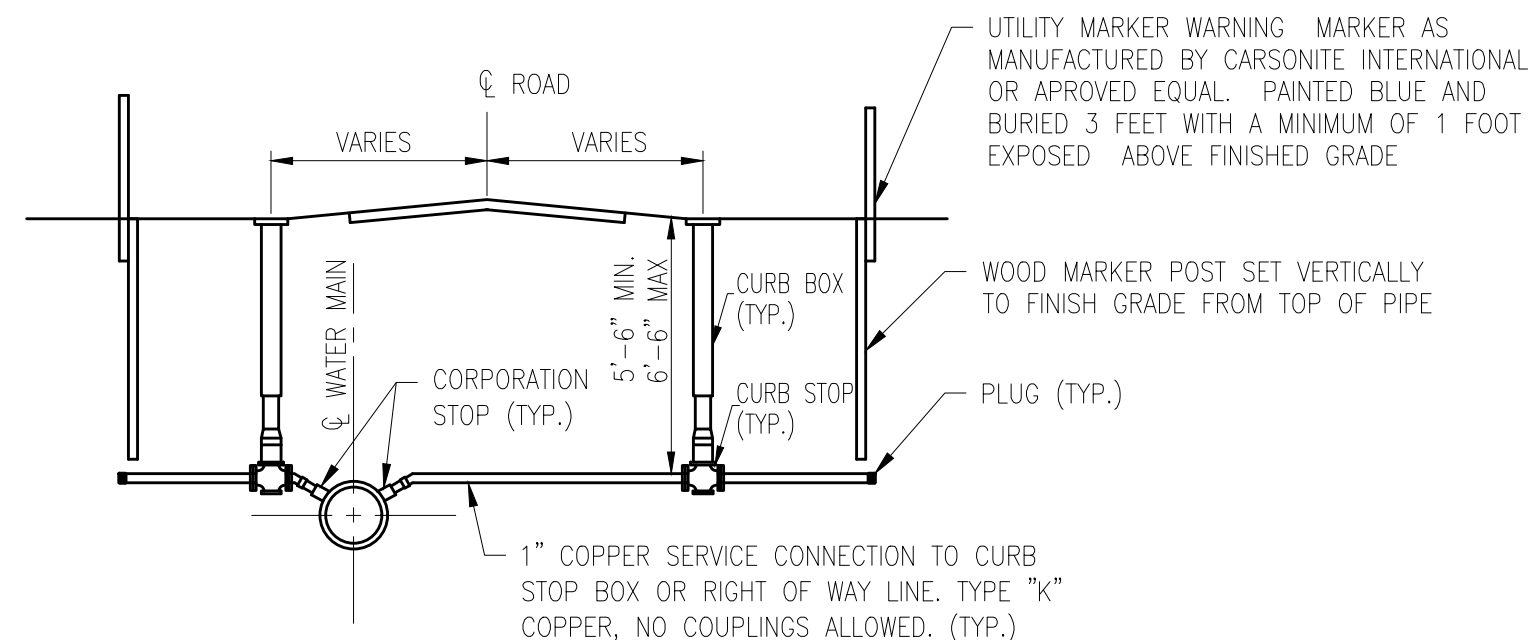
NOTES:

- SPACERS FOR PLACEMENT IN THE ANNULAR SPACE BETWEEN THE CARRIER PIPE AND A CASING PIPE SHALL BE RANGER II AS MANUFACTURED BY PSI OR APPROVED EQUAL.
- END SEALS SHALL BE MODEL C RUBBER SEAL WITH STAINLESS STEEL BANDS AS MANUFACTURED BY PSI OR APPROVED EQUAL.

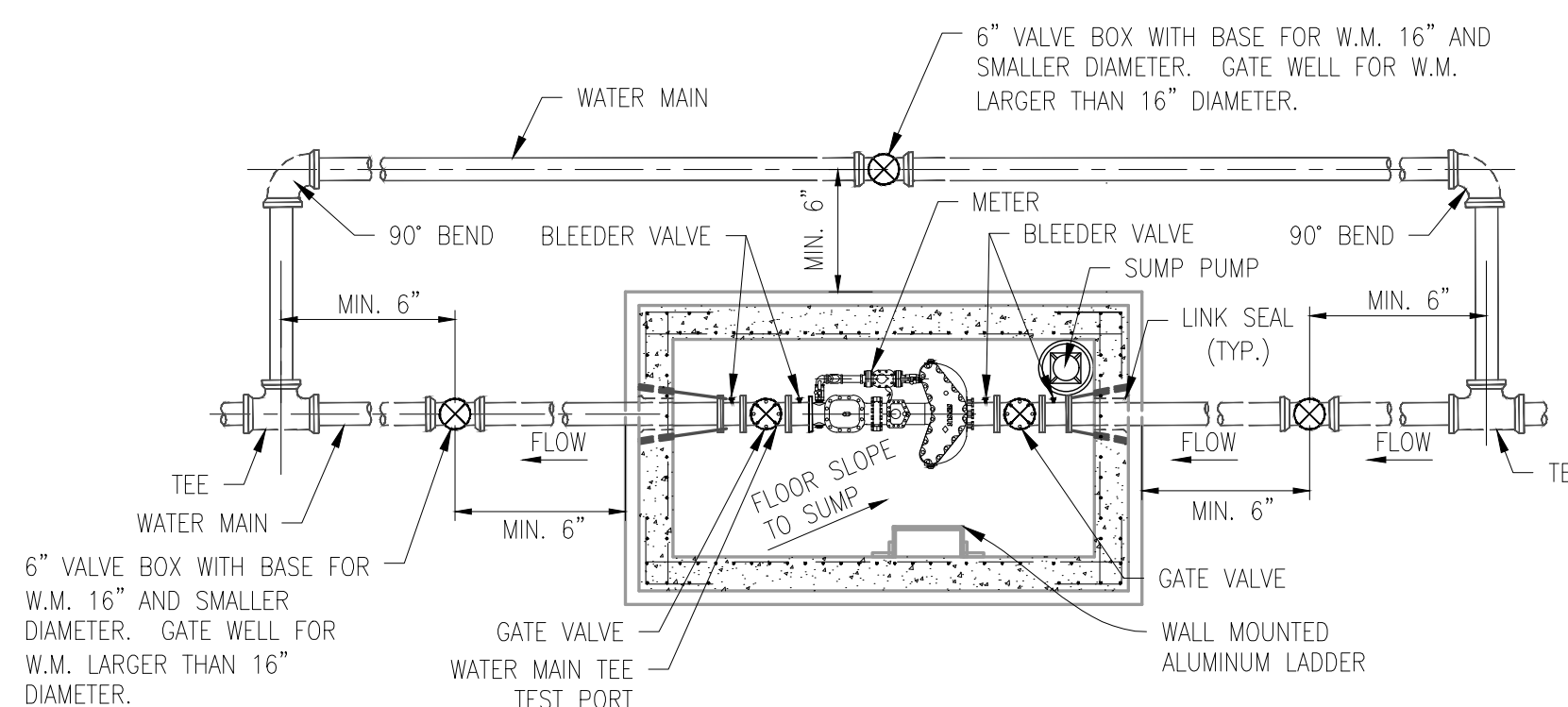


BEDDING AND TRENCH BACKFILL DETAIL FOR WATER MAIN
NOT TO SCALE

NOTE: IF THE EXISTING SUBGRADE MATERIAL MEETS THE REQUIREMENTS FOR MDOT GRANULAR MATERIAL CLASS II (MINIMUM 4" THICK), THEN THE WATER MAIN MAY BE LAID DIRECTLY ON THE COMPACTED EXISTING SUBGRADE MATERIAL.



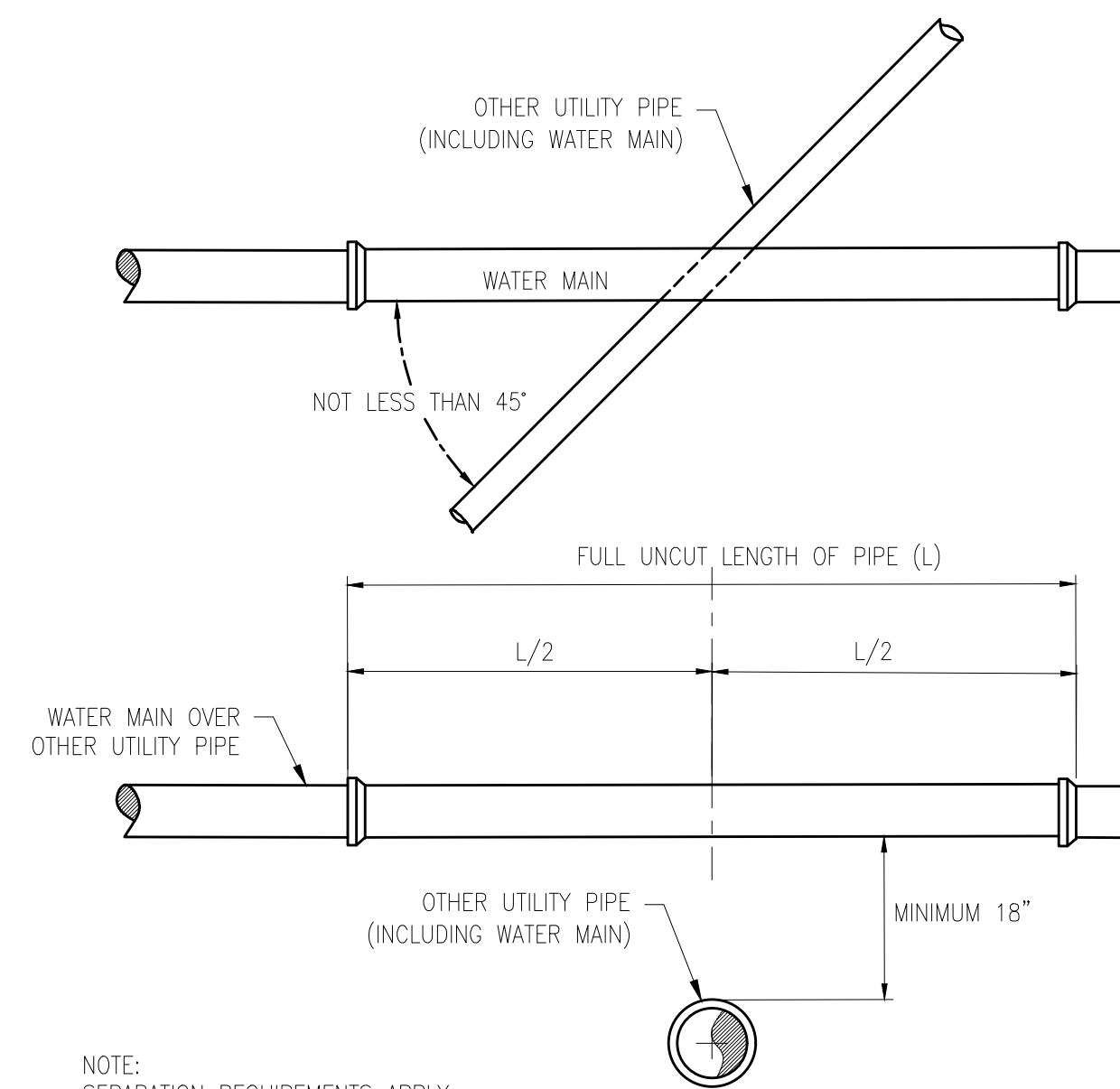
TYPICAL WATER SERVICE
NOT TO SCALE



MASTER METER VAULT CONFIGURATION (WITHOUT COVER)
NOT TO SCALE

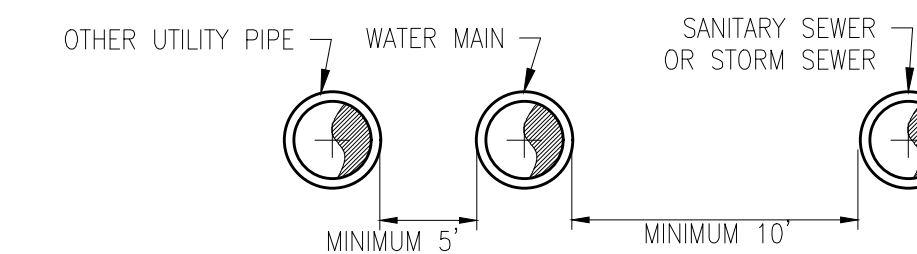
NOTES:

- WHERE POSSIBLE THE METER VAULT SHALL BE LOCATED AWAY FROM TRAFFIC AREAS, ROADS, PARKING LOTS, ETC.
- THE ACCESS HATCH SHALL BE SIZED LARGE ENOUGH TO ACCOMMODATE REMOVAL OF THE LARGEST METER OR THE LARGEST APPURTENANCE FOR MAINTENANCE PURPOSES. THE HATCH SHALL BE MANUFACTURED BY THE BILCO COMPANY. METER VAULT HATCH SHALL BE WATER TIGHT.
- THE METER VAULT FLOOR SHALL BE SLOPED TO THE SUMP.
- ELECTRICAL SERVICE SHALL BE SUPPLIED TO THE VAULT.



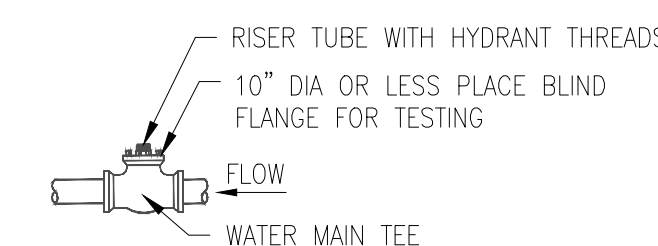
NOTE: SEPARATION REQUIREMENTS APPLY REGARDLESS OF VERTICAL ALIGNMENTS OF UTILITIES

VERTICAL SEPARATION



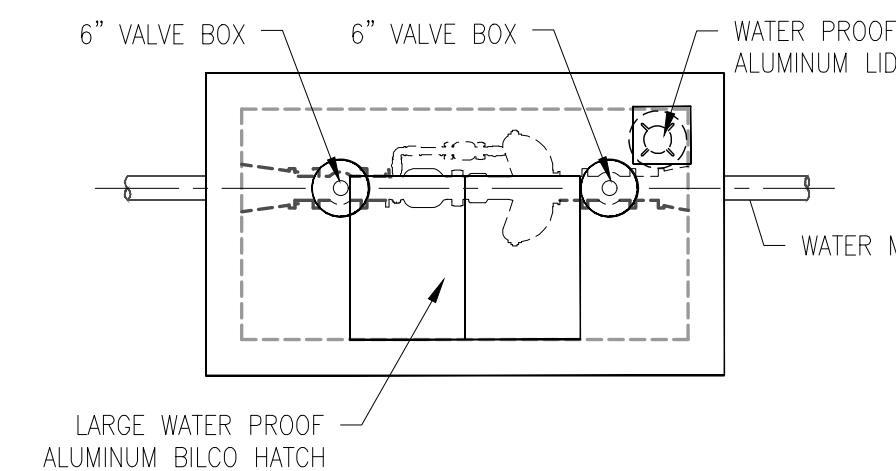
HORIZONTAL SEPARATION

WATER MAIN CROSSING OTHER UTILITIES
NOT TO SCALE



TEST PORT

PIPE DIA	TEST PORT SIZE
6"	6"
8"	8"
10"	10"
12"	10"
16"	10"



MASTER METER VAULT CONFIGURATION WITH COVER
NOT TO SCALE

NO TRANSITION COUPLINGS IN VAULT
ALL FLANGED CONNECTIONS IN VAULT
WALL MOUNTED ALUMINUM LADDER SHALL BE
EQUIPPED WITH LADDER UP SAFETY POST, BILCO
OR APPROVED EQUAL



Know what's below.
Call before you dig.



REVISIONS

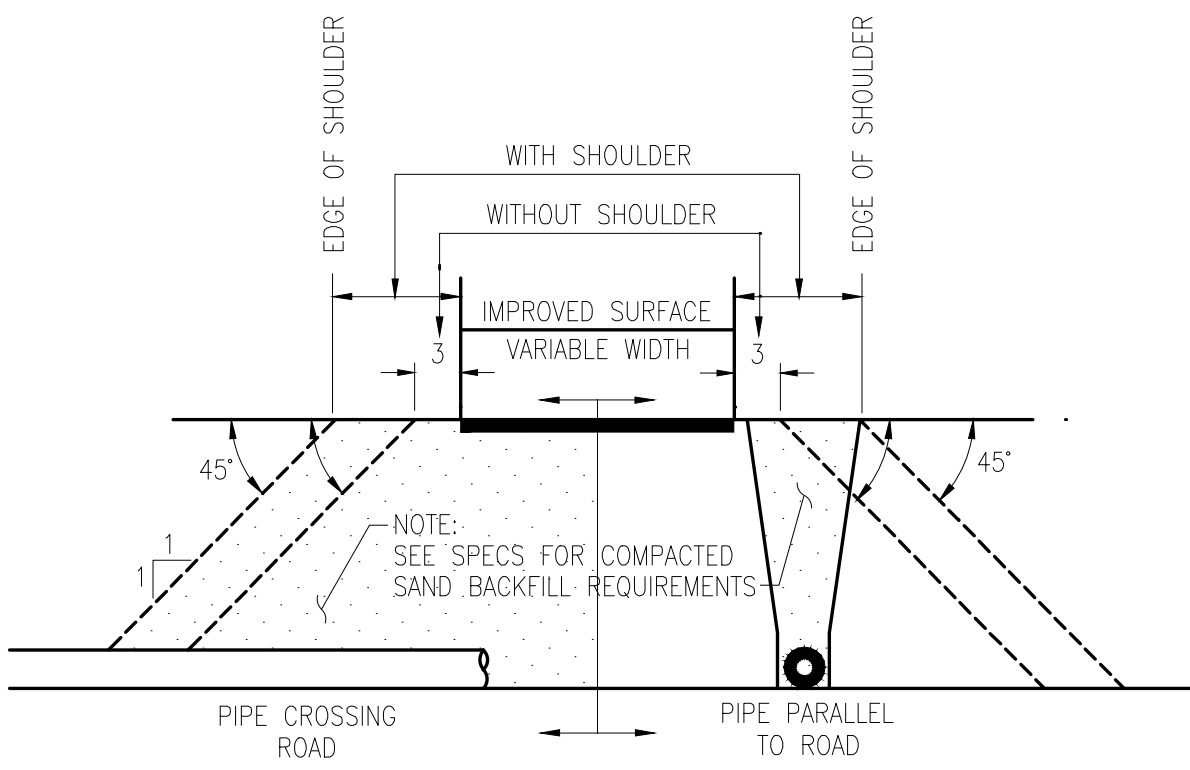
STANDARD WATER MAIN DETAILS

YPSILANTI COMMUNITY UTILITIES AUTHORITY
2777 STATE ROAD
YPSILANTI, MICHIGAN 48198-9112
(734) 484-4800
FAX: (734) 544-7221
WWW.YCUA.ORG

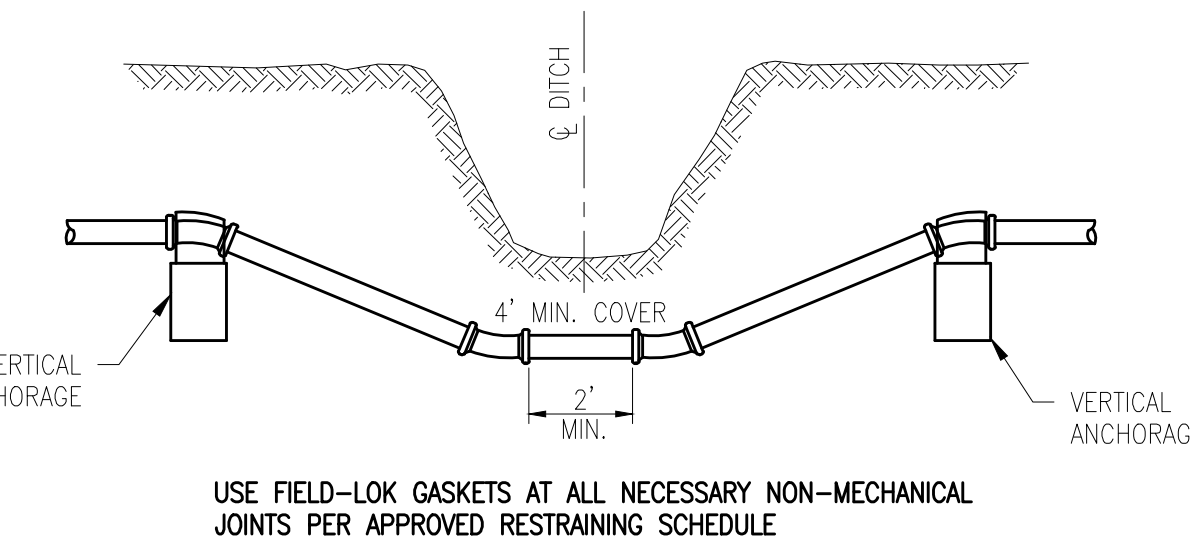
YCUA
ENVIRONMENTAL LEADERS

DATE	SCALE	SHEET
09/25/19	NO SCALE	

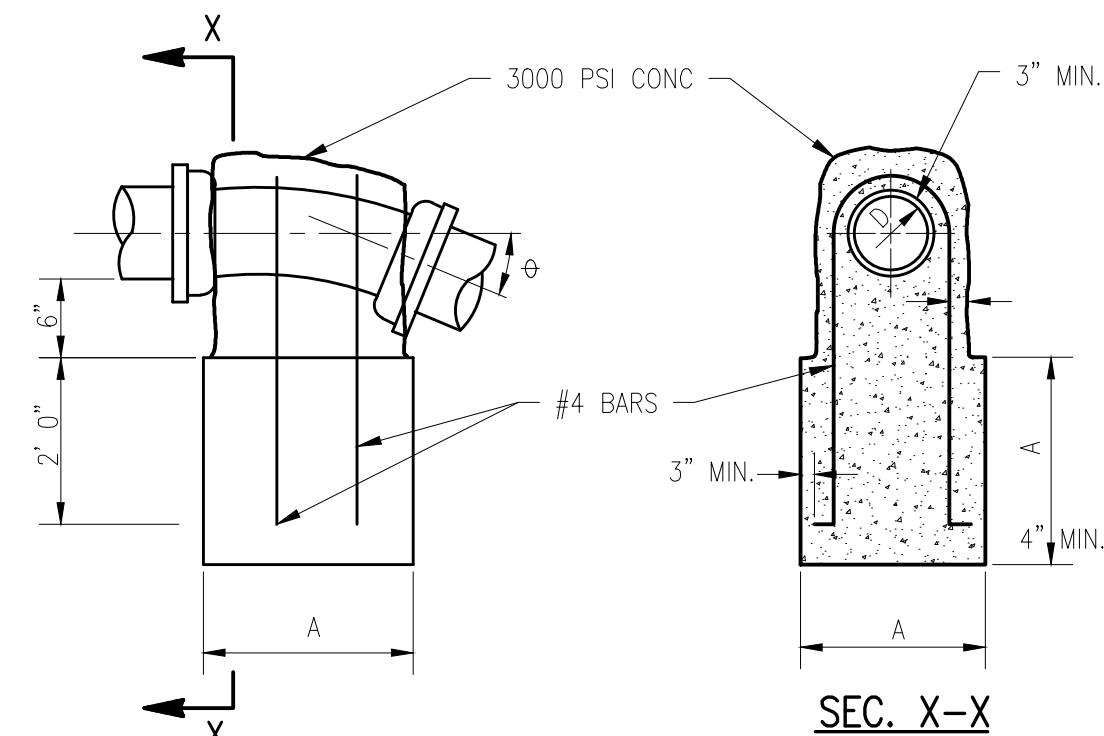
TRACER WIRE DETAILS



**BACKFILL IN THE AREA OF STREETS, ALLEYS
SIDEWALKS, DRIVES & PARKING LOTS**
NOT TO SCALE



STANDARD DITCH CROSSING
NOT TO SCALE



DETAIL OF VERTICAL ANCHORAGE
NOT TO SCALE

DIA. OF WATER MAIN	BEND	A	NUMBER OF BARS
6"	22 1/2°	2'-0"	2
6"	45°	3'-3"	2
8"	22 1/2°	3'-3"	2
8"	45°	4'-0"	3
12"	11 1/4°	3'-3"	2
12"	22 1/2°	4'-0"	3
16"	11 1/4°	3'-3"	2
16"	22 1/2°	4'-0"	3
20"	11 1/4°	4'-0"	2
20"	22 1/2°	5'-0"	3
24"	11 1/4°	4'-0"	2
24"	22 1/2°	5'-0"	3

PIPE RESTRAINT SCHEDULE

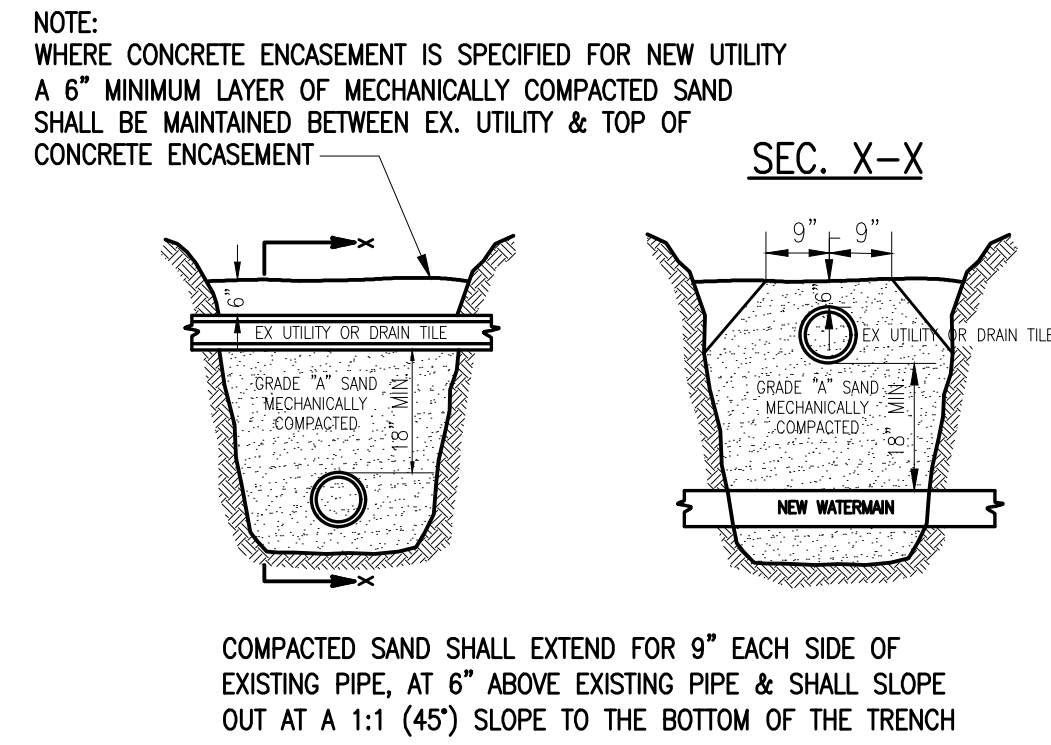
THE FOLLOWING TABLE IS A JOINT RESTRAINT SCHEDULE (DIPRA) FOR GROUND-BURIED DUCTILE IRON OR PVC PIPE. LENGTHS OF PIPE RESTRAINT ARE GIVEN IN FEET.

PIPE DIAMETER	TEES, 90° PLUGS	45° BENDS	22 1/2° BENDS	REDUCERS
6"	40	25	25	30
8"	55	25	25	30
12"	80	35	25	55
16"	100	40	25	60
24"	135	56	25	65

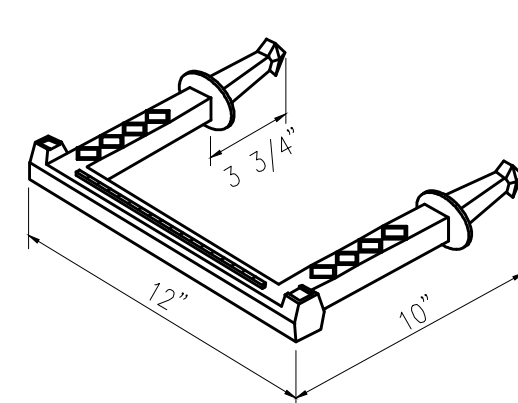
BASED UPON

INTERNAL PRESSURE: 180
PIPE DEPTH: 5
BEDDING CLASS: TYPE 4
SOIL TYPE: GOOD SAND
SAFETY FACTOR: 2

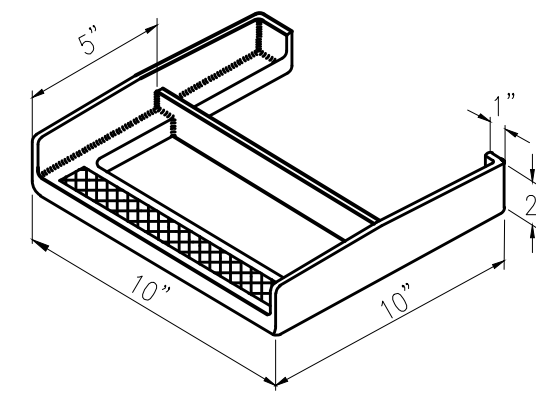
- IF PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE SHALL BE USED. THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE PLUS WATER HAMMER).
- FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED PROPORTIONALLY. THE VALUES PROVIDED OF RESTRAINT LENGTH ARE IN EACH DIRECTION FROM THE POINT OF DEFLECTION OR TERMINATION EXCEPT FOR TEES, AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE STEM.
- IF TIE RODS ARE USED, USE FOUR RODS MINIMUM AND ADD 1/8 INCH TO BAR DIAMETER AS CORROSION ALLOWANCE. SIZE REDUCTION IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.
- MANUFACTURER'S RESTRAINT SCHEDULE AND SPECIFIC SITE CONDITIONS MAY MODIFY THE ABOVE SCHEDULE. ANY ALTERNATIVE SCHEDULE SHALL BE SUBMITTED TO YCUA FOR APPROVAL.



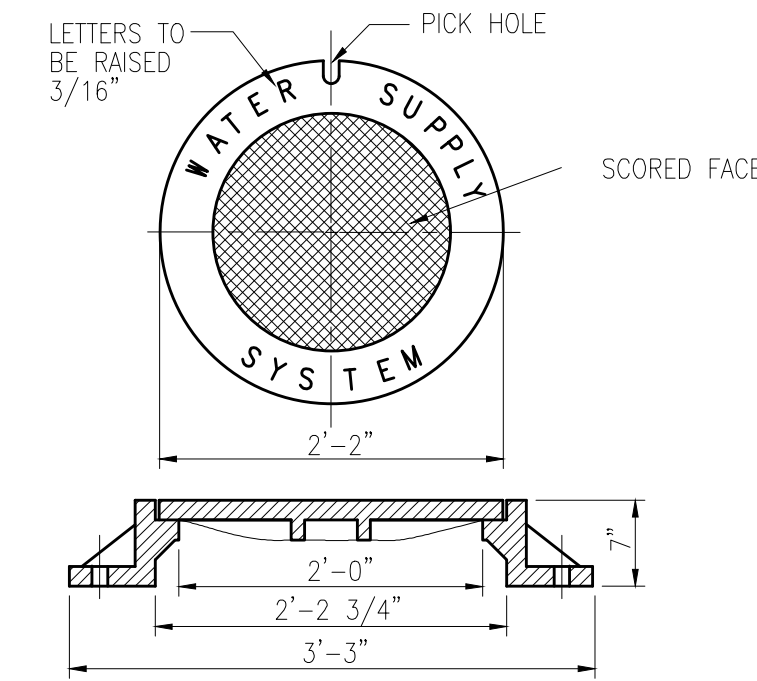
STANDARD PIPE SUPPORT
NOT TO SCALE



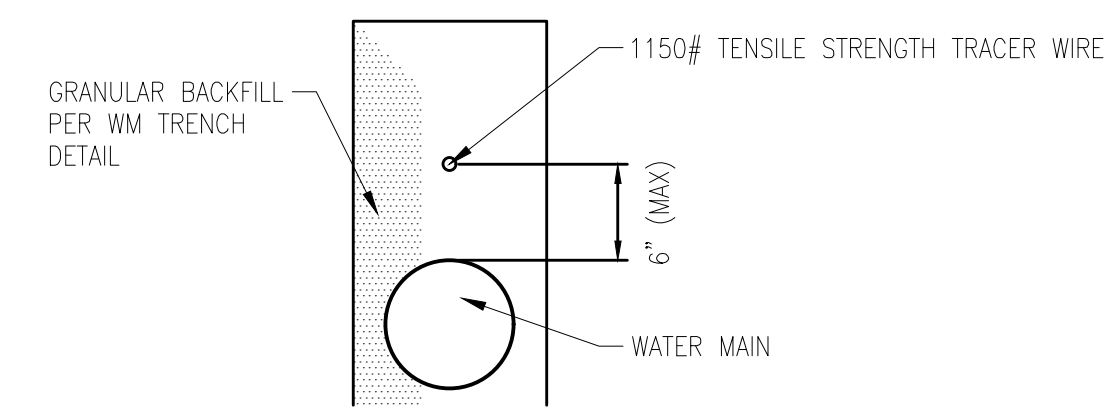
MANHOLE STEP
M.A. PSI-375
USE AS REQUIRED



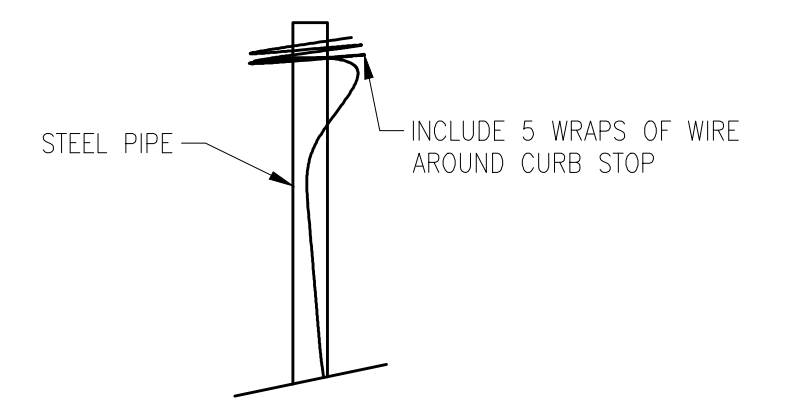
STANDARD MANHOLE STEP
EJ 8500
USE AS REQUIRED



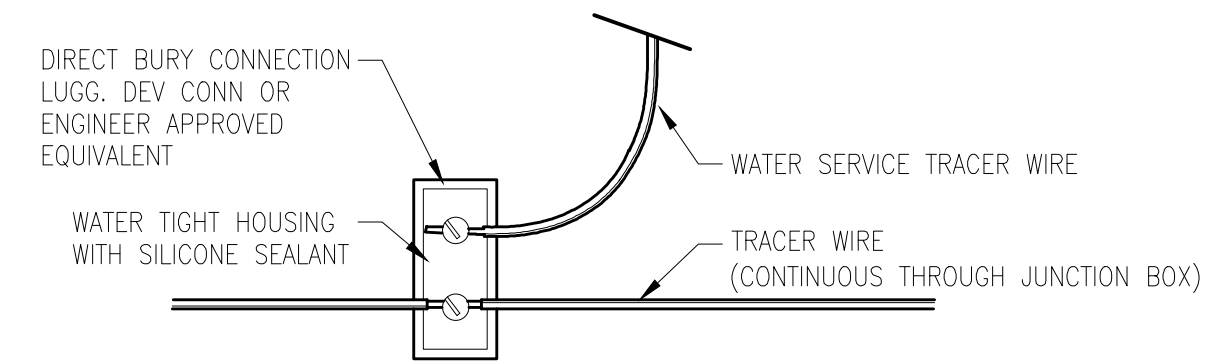
STANDARD FRAME & COVER
EJ #1040
USE AS REQUIRED



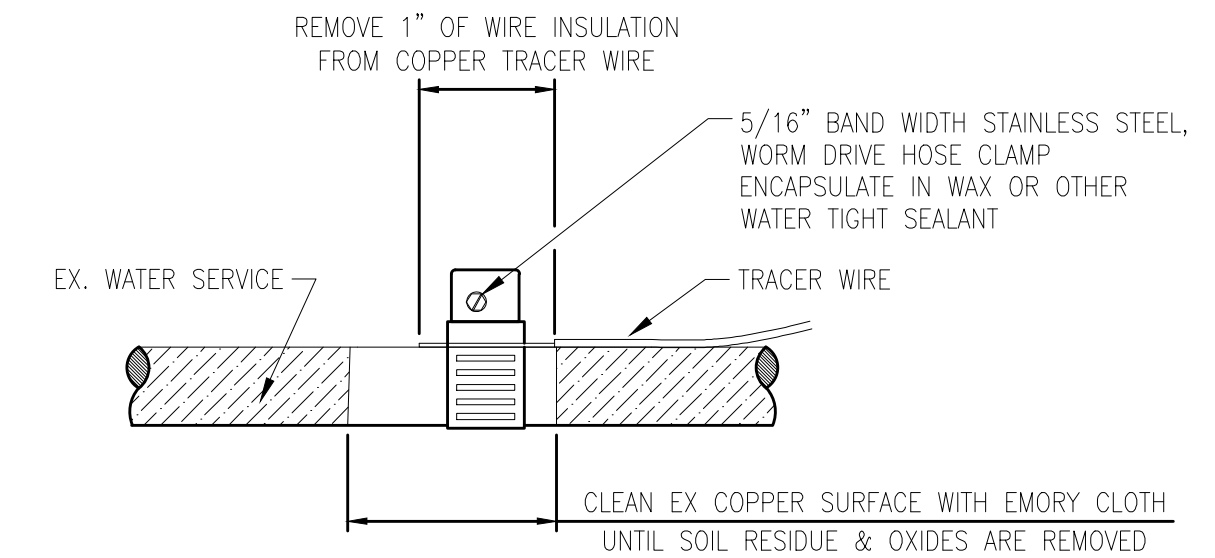
OPEN CUT MAIN LINE TRENCH
NOT TO SCALE



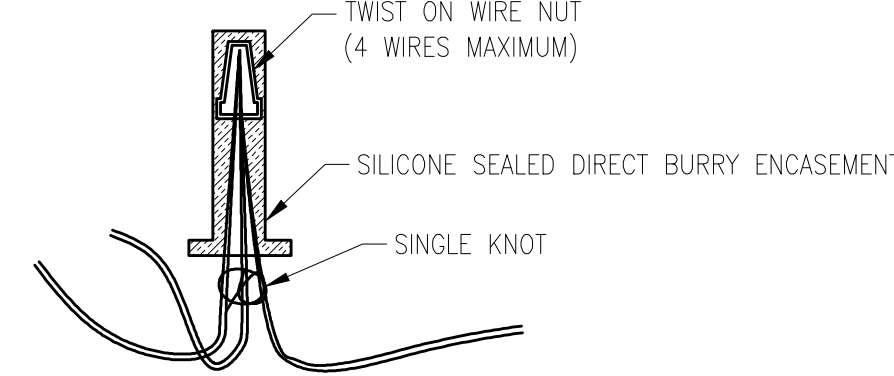
CURB BOX WIRE COIL
NOT TO SCALE



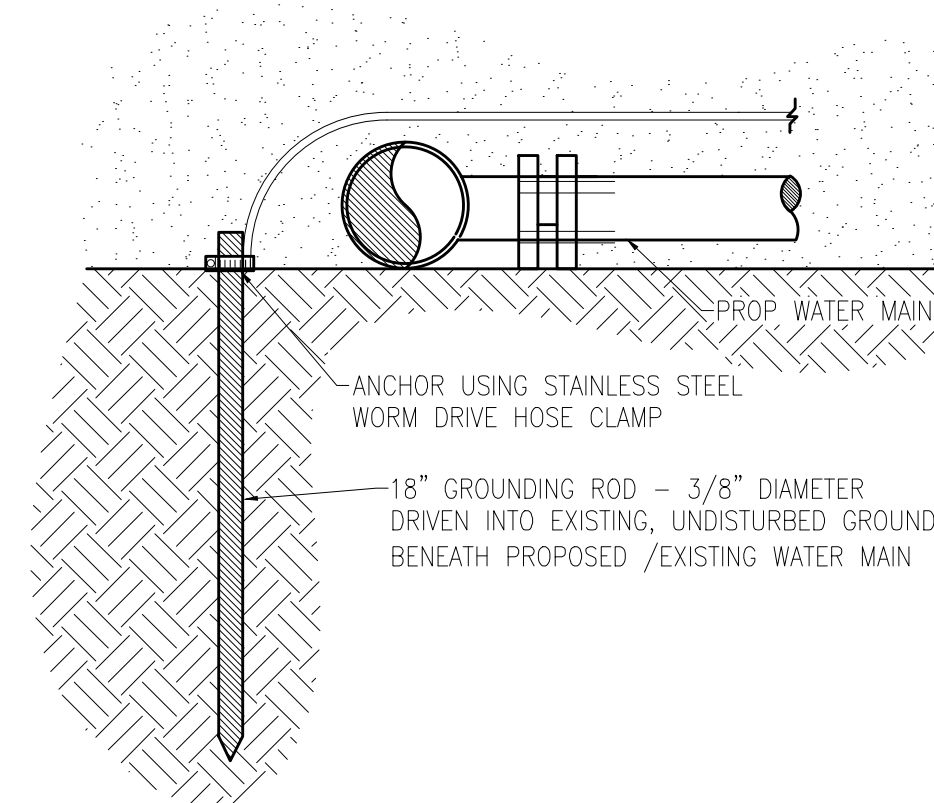
MAIN LINE JUNCTION BOX
NOT TO SCALE



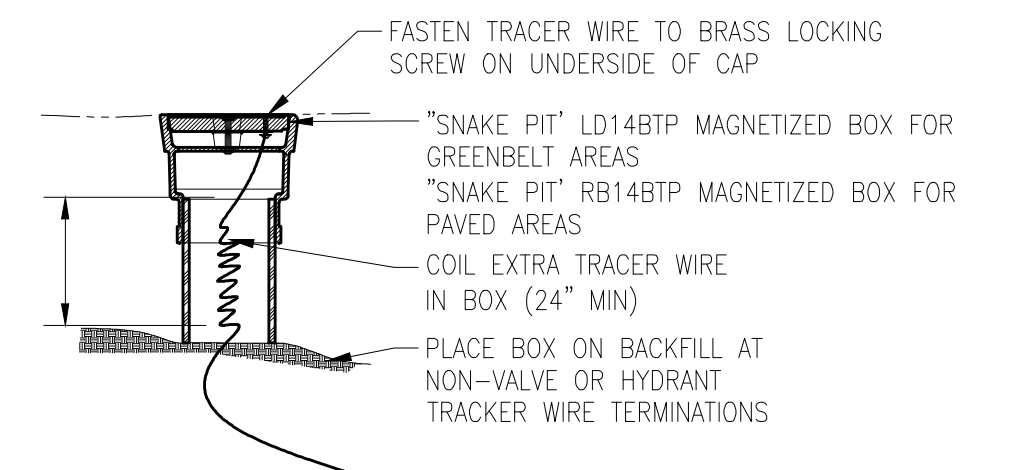
WATER SERVICE TERMINATION
NOT TO SCALE



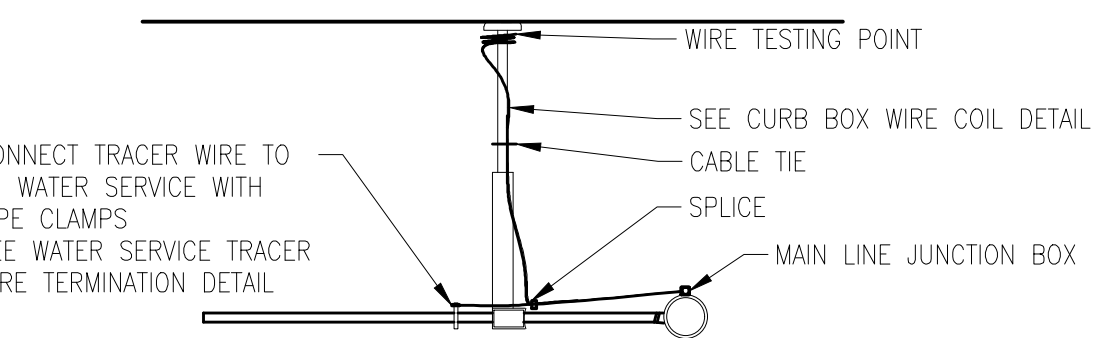
SPLICE CONNECTOR
NOT TO SCALE



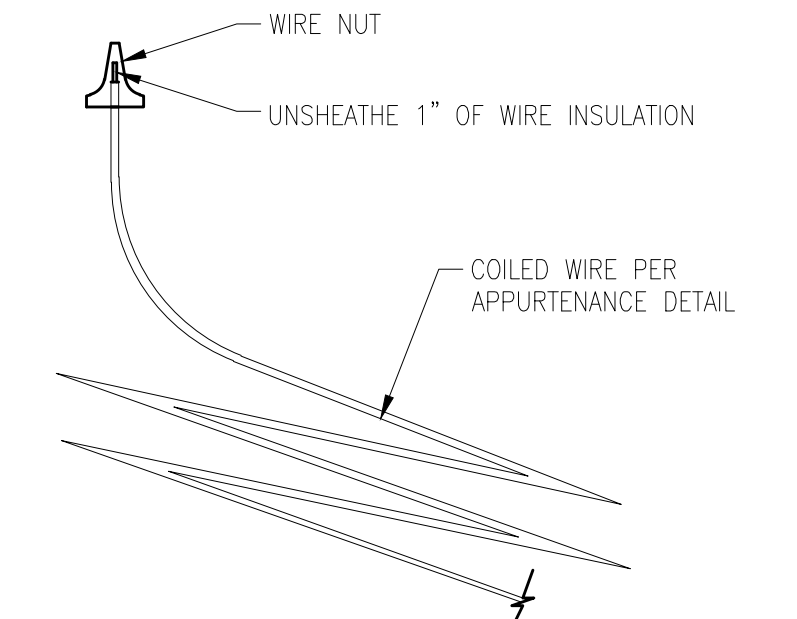
GROUNDING ROD TERMINATION
NOT TO SCALE



TRACER WIRE TEST POINT
NOT TO SCALE



CURB STOP CONNECTION
NOT TO SCALE



WIRE TESTING POINT
NOT TO SCALE



Know what's below.
Call before you dig.



REVISIONS

STANDARD WATER MAIN DETAILS

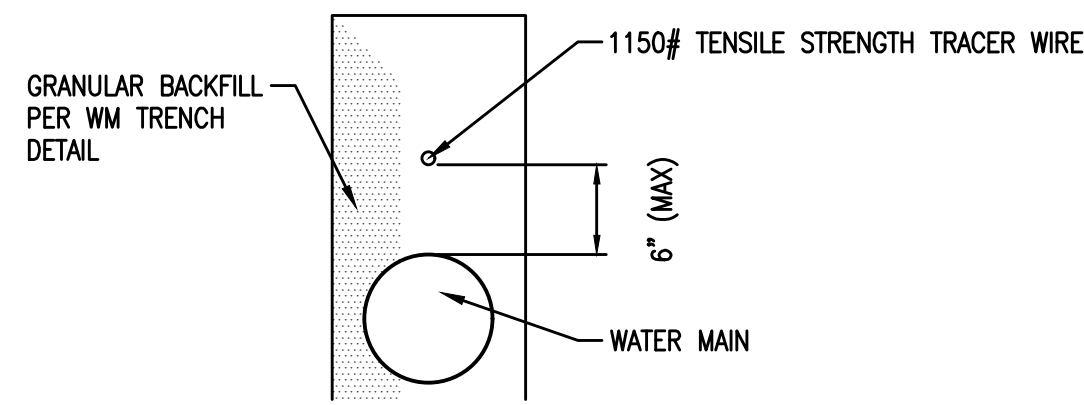
YPSILANTI COMMUNITY UTILITIES AUTHORITY
2777 STATE ROAD
YPSILANTI, MICHIGAN 48198-9112
(734) 484-4800
FAX: (734) 544-7221
WWW.YCUA.ORG

YCUA
ENVIRONMENTAL LEADERS

DATE	SCALE	SHEET
09/25/19	NO SCALE	

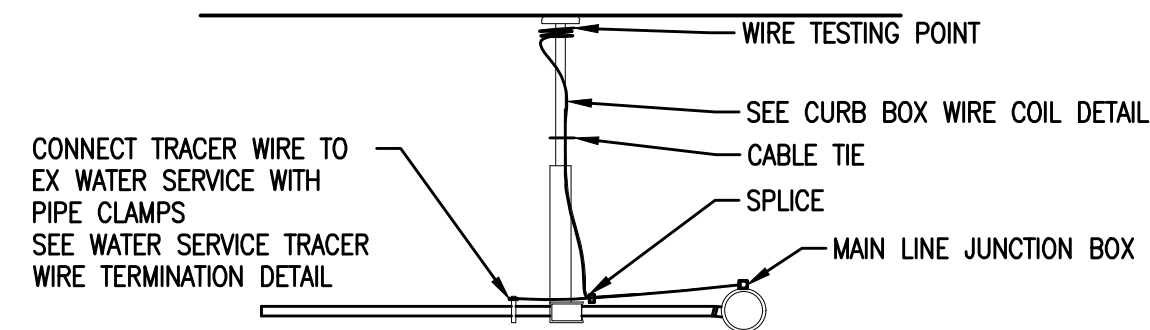
ALL DRAWINGS AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF YCUA AND THE SAME MAY NOT BE DUPLICATED, DISTRIBUTED, OR DISCLOSED WITHOUT PRIOR WRITTEN CONSENT OF YCUA.

TRACER WIRE SHALL BE INCLUDED WITH ALL PVC WATER MAIN INSTALLATIONS



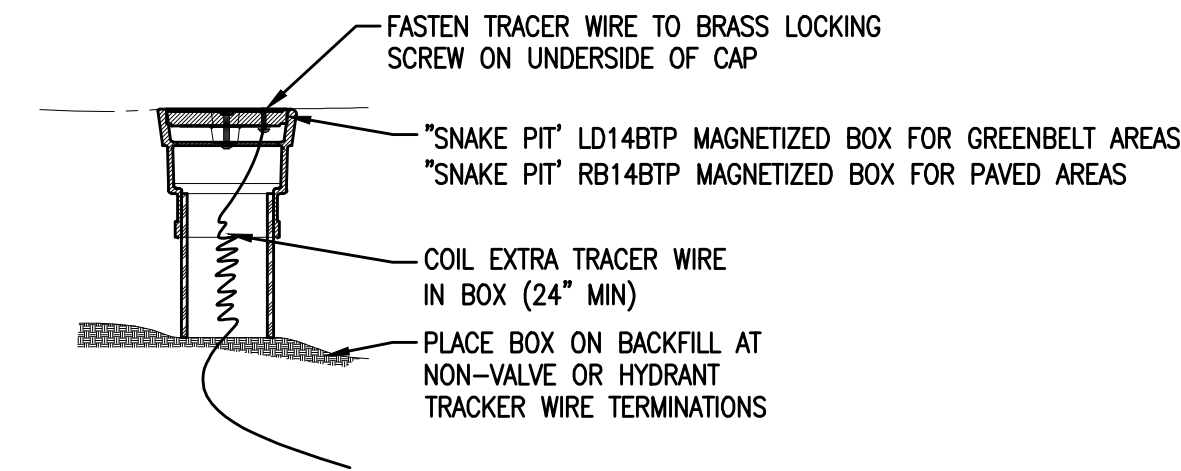
OPEN CUT MAIN LINE TRENCH

N.T.S.



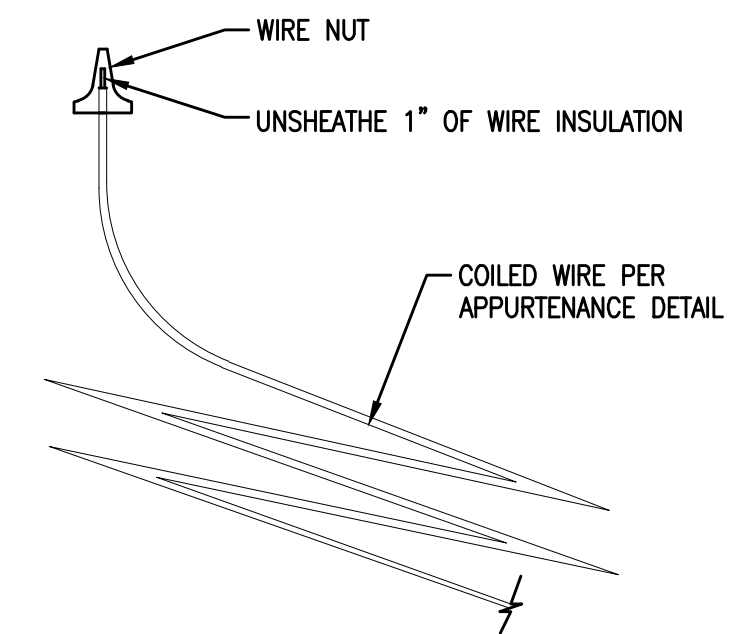
CURB STOP CONNECTION

N.T.S.



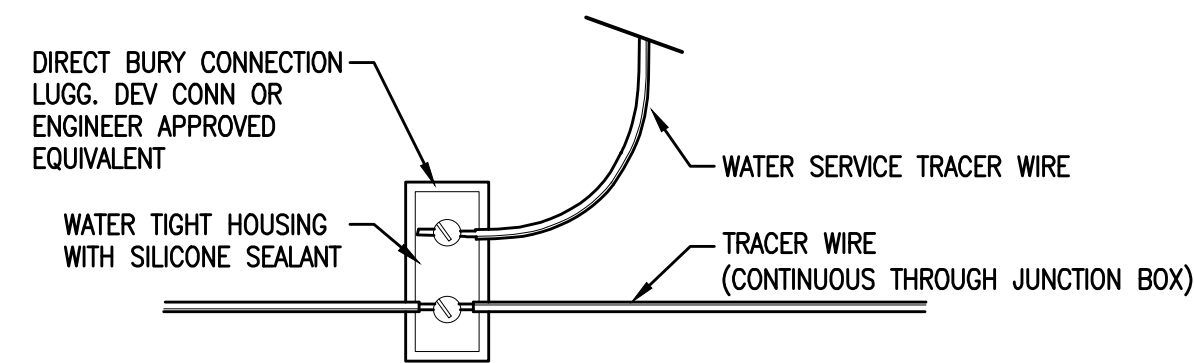
TRACER WIRE TEST POINT

N.T.S.



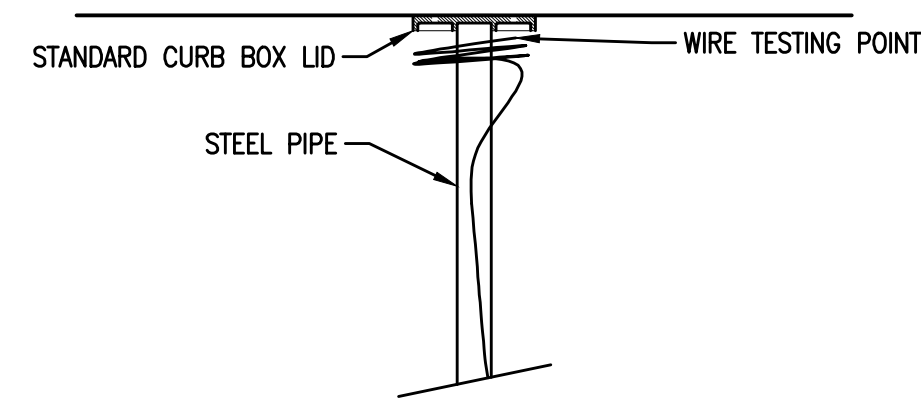
WIRE TESTING POINT

N.T.S.



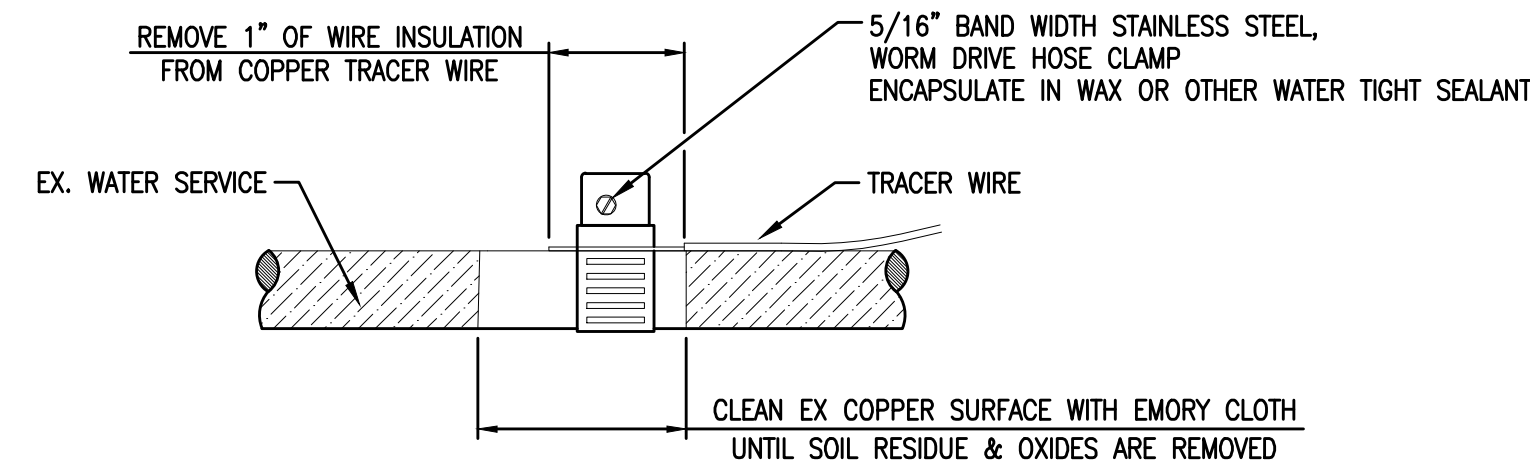
MAIN LINE JUNCTION BOX

N.T.S.



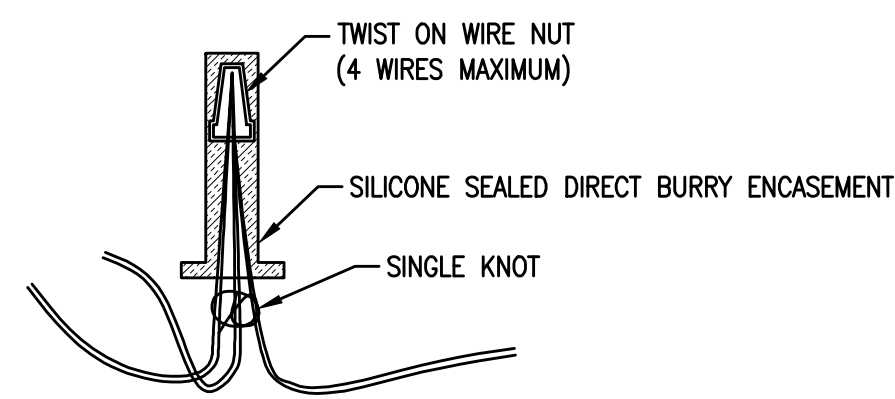
CURB BOX WIRE COIL

N.T.S.



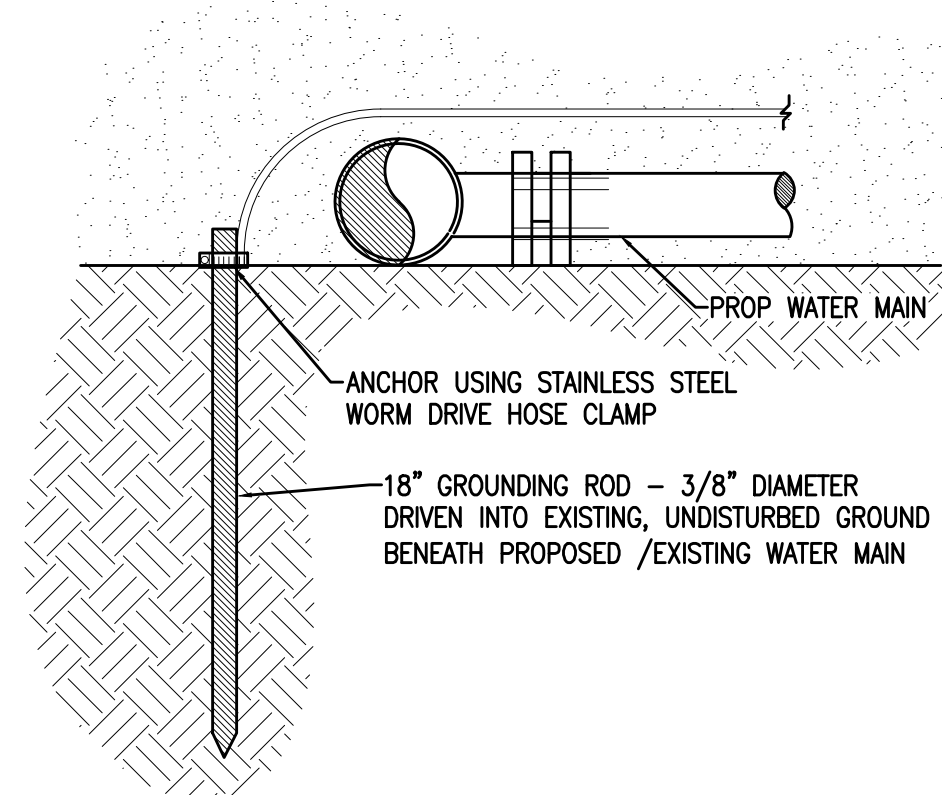
WATER SERVICE TERMINATION

N.T.S.



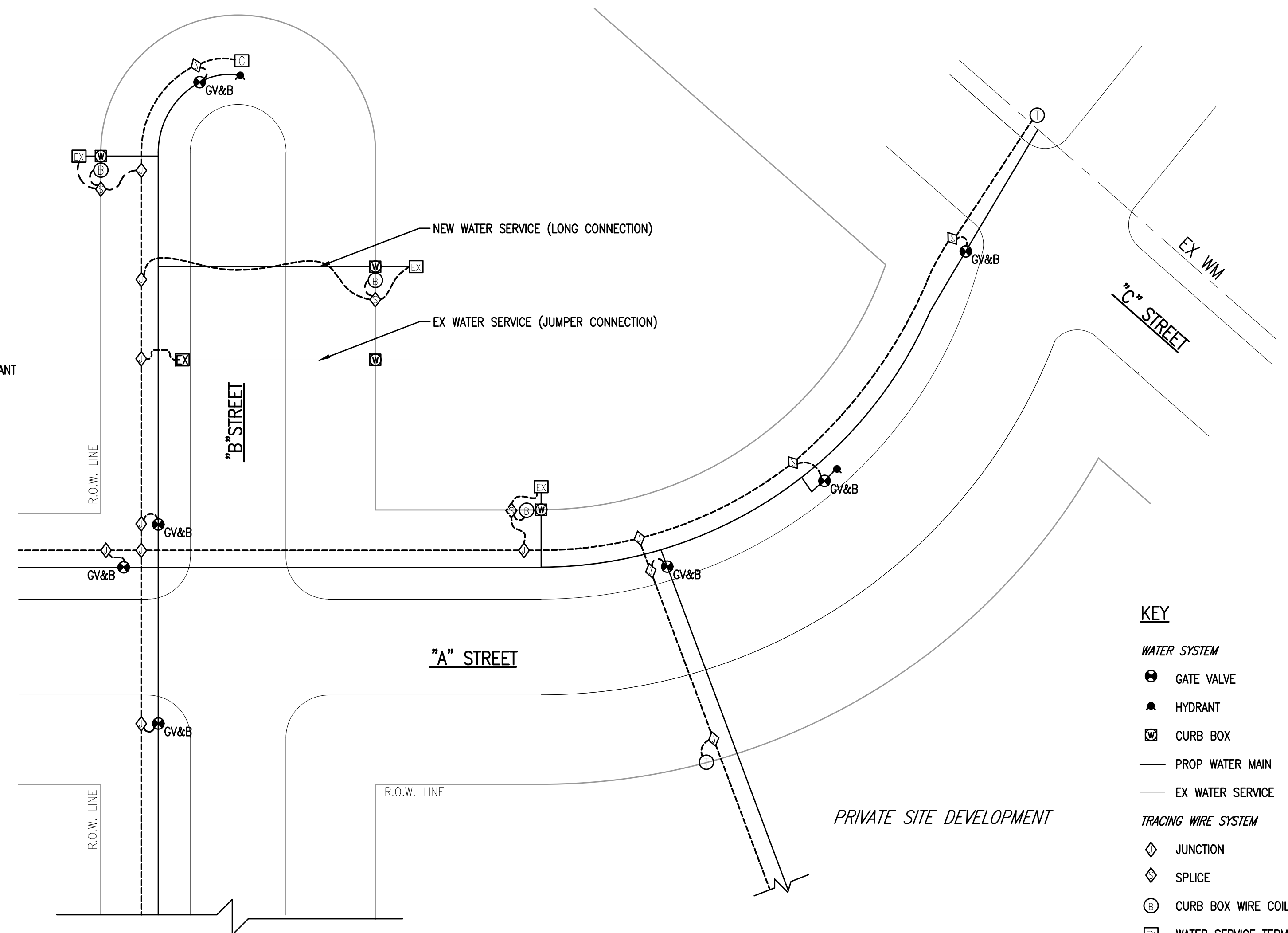
SPLICE CONNECTOR

N.T.S.



GROUNDING ROD TERMINATION

N.T.S.



KEY

- WATER SYSTEM
- GATE VALVE
- ▲ HYDRANT
- ◻ CURB BOX
- PROP WATER MAIN
- EX WATER SERVICE
- TRACING WIRE SYSTEM
- ◇ JUNCTION
- ◇ SPLICE
- ⊙ CURB BOX WIRE COIL
- ◻ WATER SERVICE TERMINATION
- TEST POINT
- ◻ GROUNDING ROD TERMINATION
- TRACING WIRE

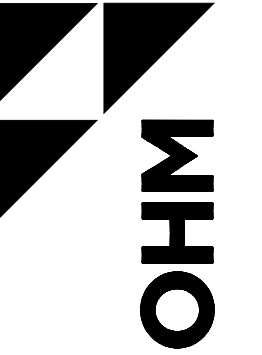
TRACER WIRE SYSTEM SCHEMATIC



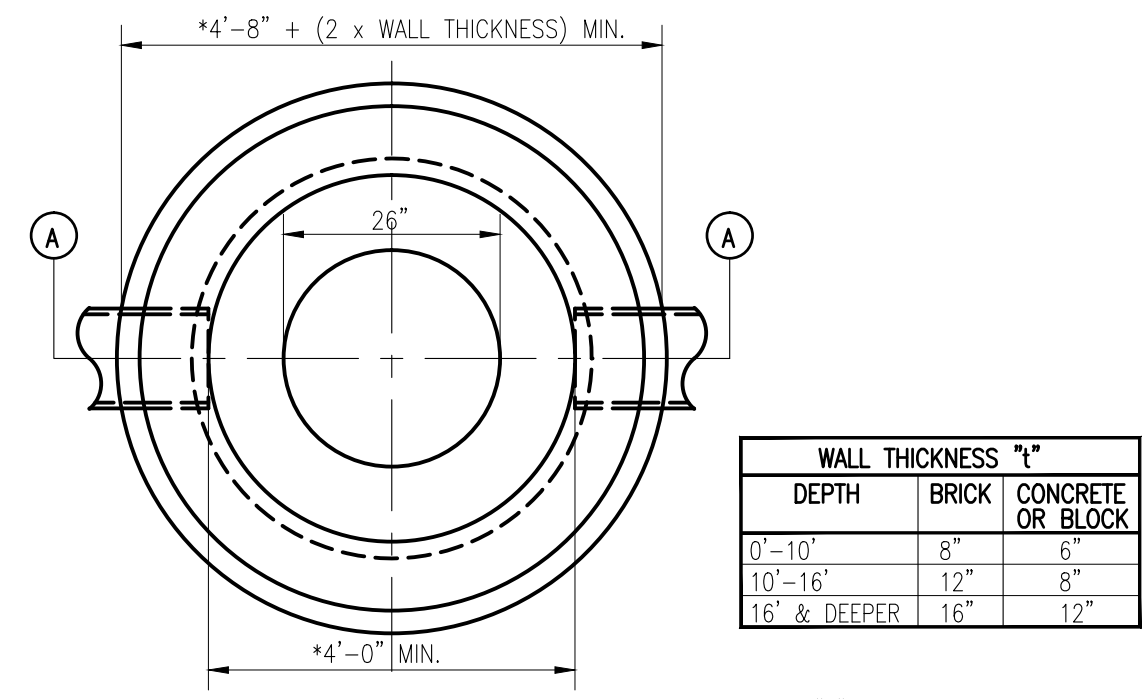
Know what's below.
Call before you dig.

REVISIONS	STANDARD WATER MAIN DETAILS	YPSILANTI COMMUNITY UTILITIES AUTHORITY	
		2777 STATE ROAD YPSILANTI, MICHIGAN 48198-9112 (734) 484-4600 FAX: (734) 544-7221 WWW.YCUA.ORG	ENVIRONMENTAL LEADERS
		DATE	SCALE
		07/24/18	NO SCALE
			SHEET

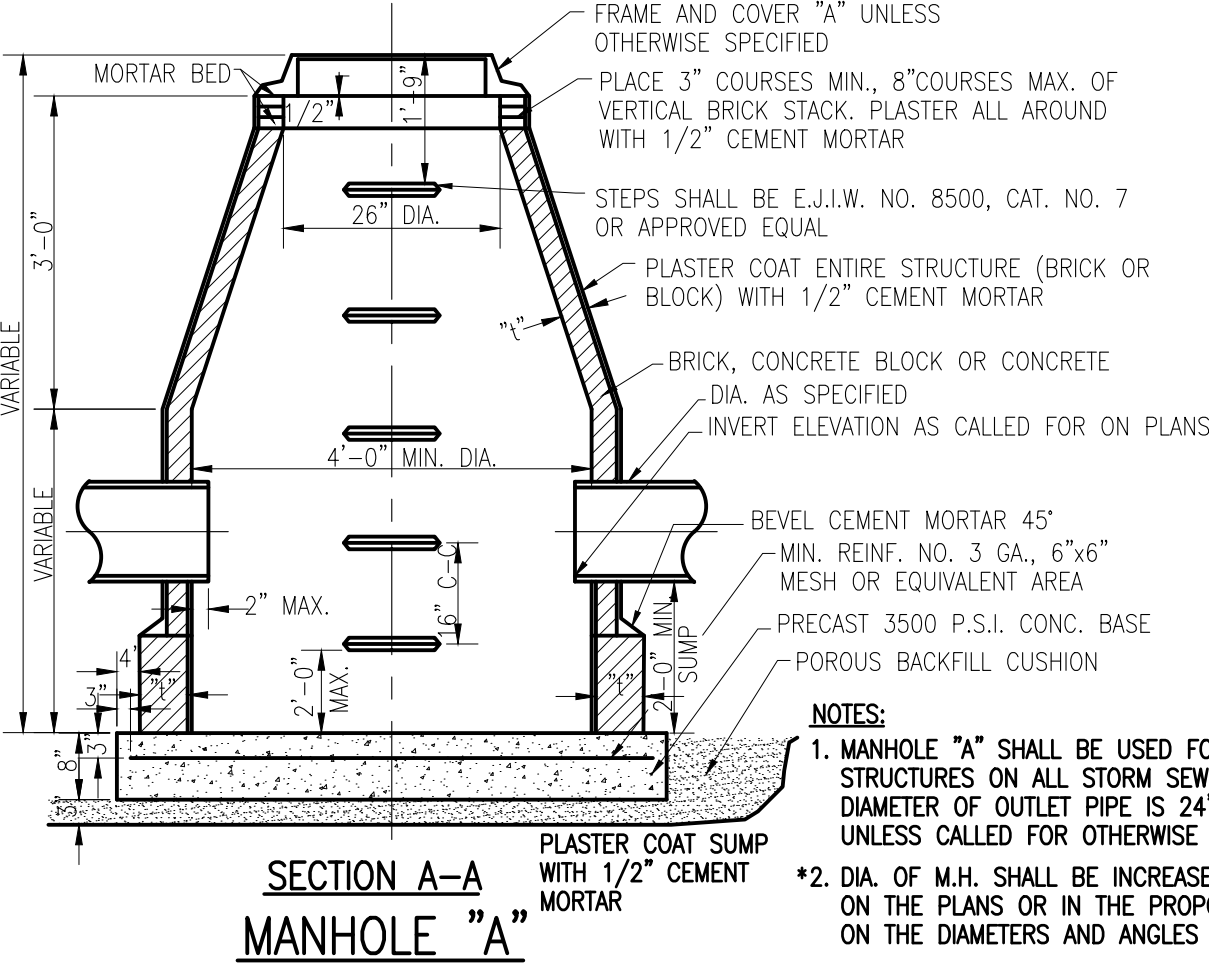
ALL DRAWINGS AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF YCUA AND THE SAME MAY NOT BE DUPLICATED, DISTRIBUTED, OR DISCLOSED WITHOUT PRIOR WRITTEN CONSENT OF YCUA.



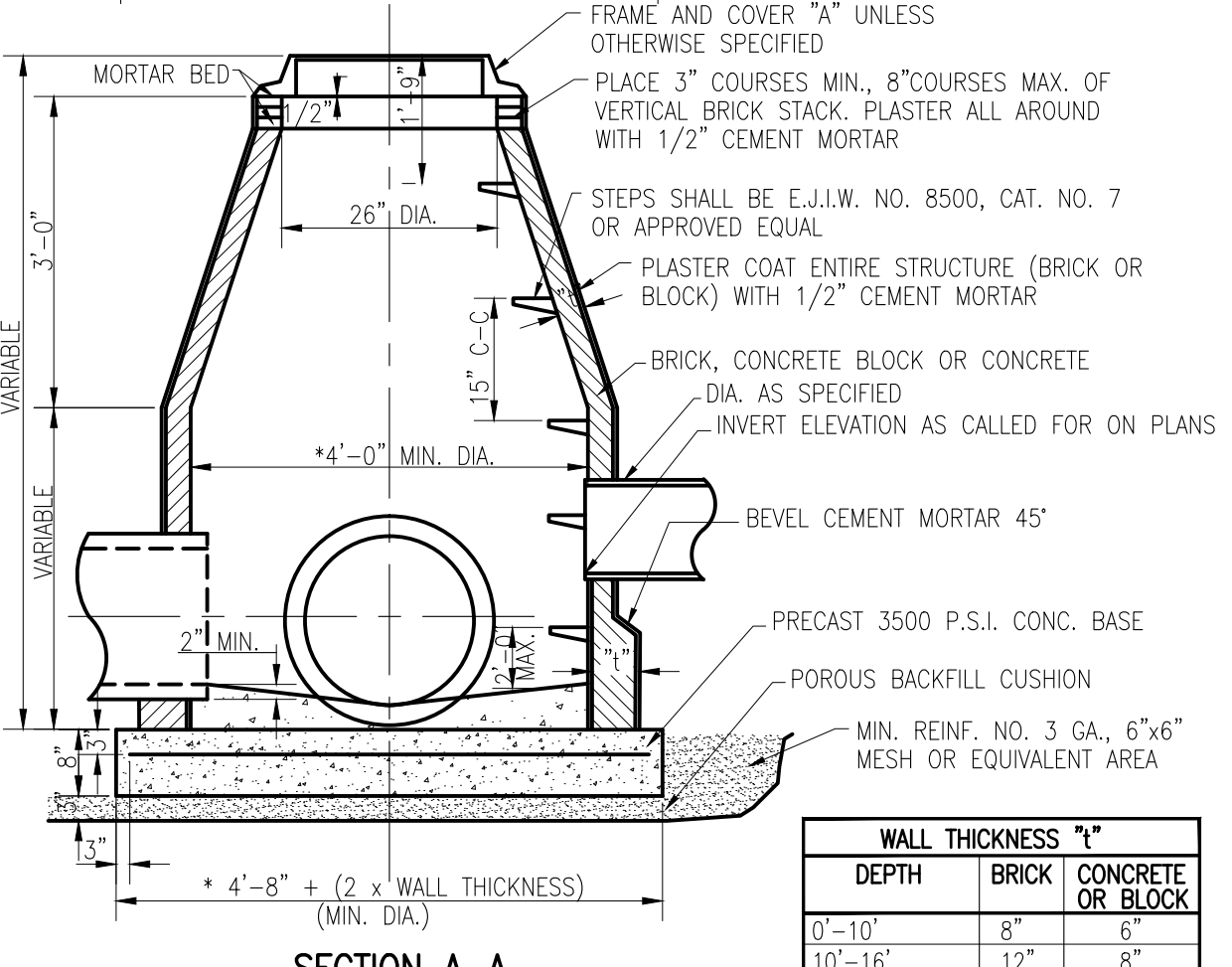
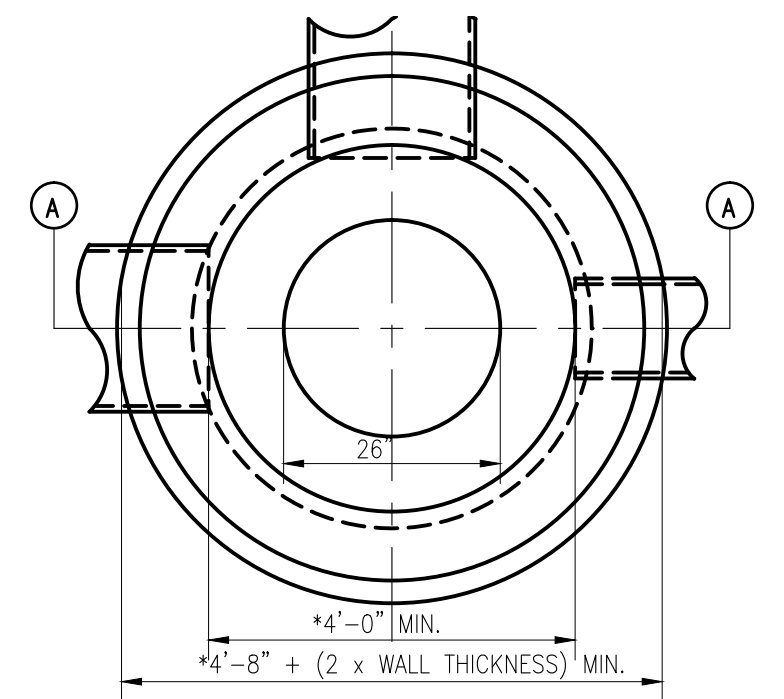
DATE	CADD	ENG./ARCH	SECTION	TOWN	RANGE	COUNTY	CITY/TOWNSHIP	SCALE	VERT. DATUM	JOB #



DEPTH	BRICK	CONCRETE OR BLOCK
0'-10"	8"	6"
10'-16"	12"	8"
16' & DEEPER	16"	12"

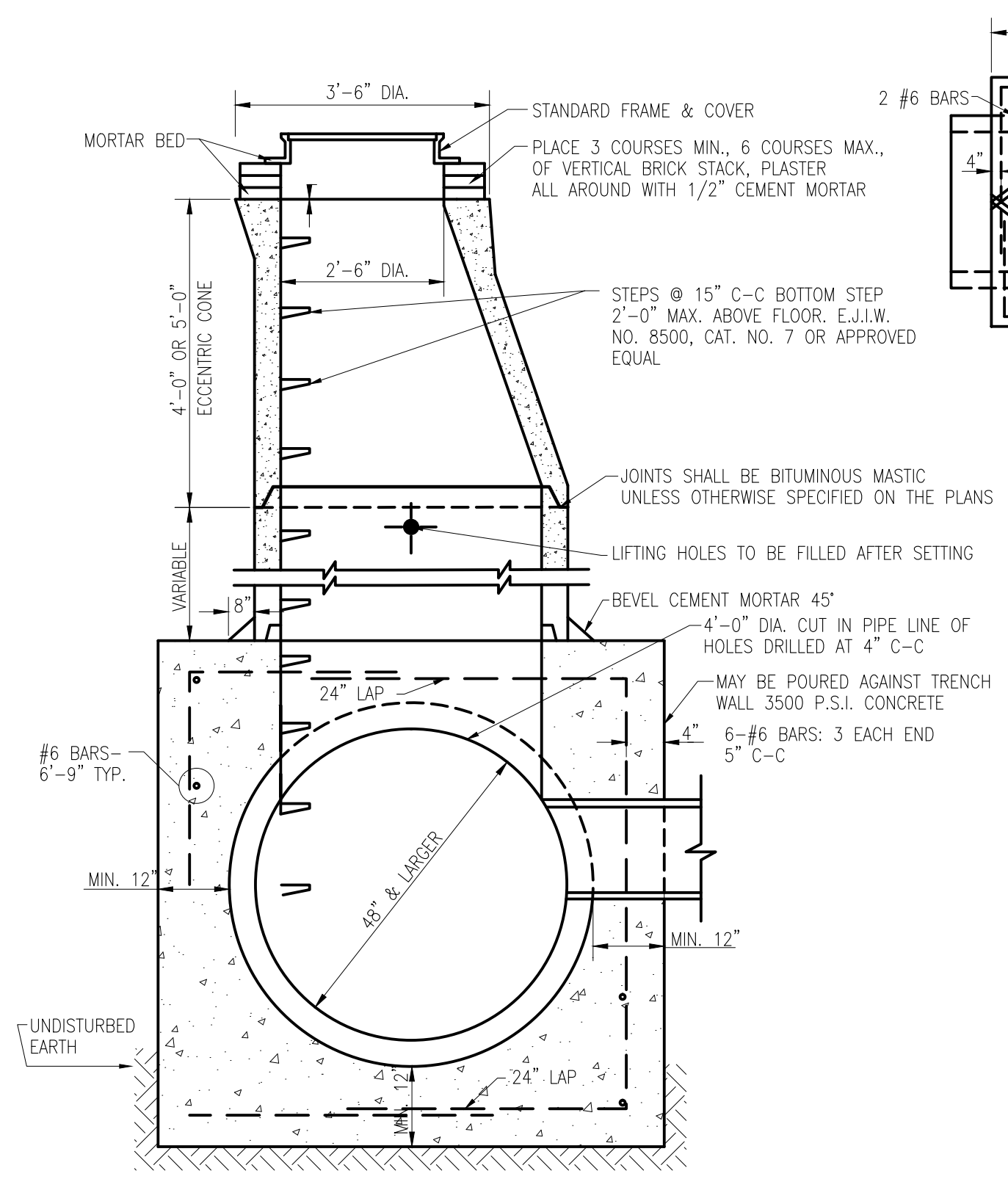


- NOTES:**
- MANHOLE "A" SHALL BE USED FOR MANHOLE STRUCTURES ON ALL STORM SEWERS WHERE THE DIAMETER OF OUTLET PIPE IS 24" OR SMALLER, UNLESS CALLED FOR OTHERWISE ON THE PLANS.
 - DIA. OF M.H. SHALL BE INCREASED AS SHOWN ON THE PLANS OR IN THE PROPOSAL DEPENDING ON THE DIAMETERS AND ANGLES OF THE SEWERS.

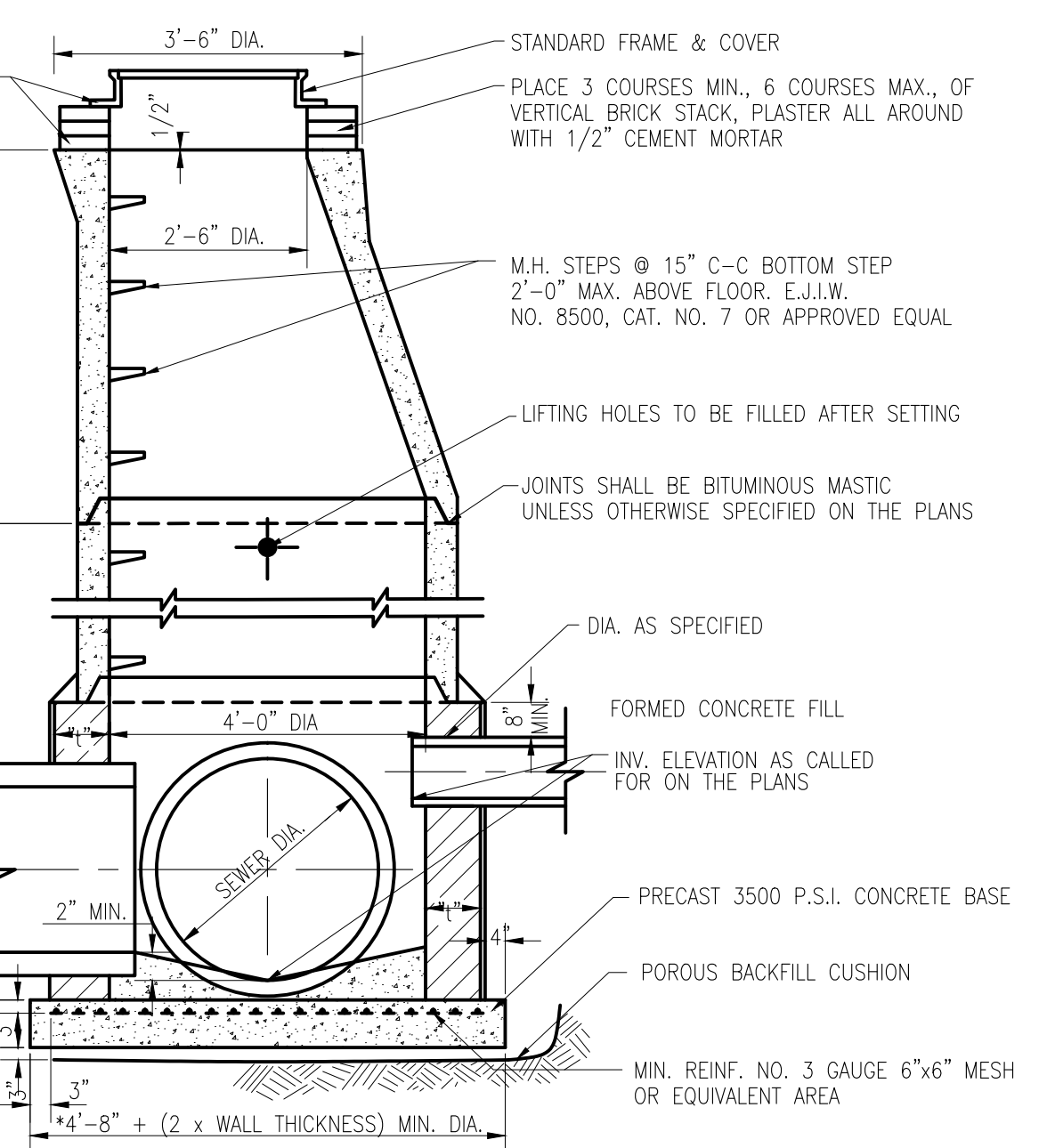
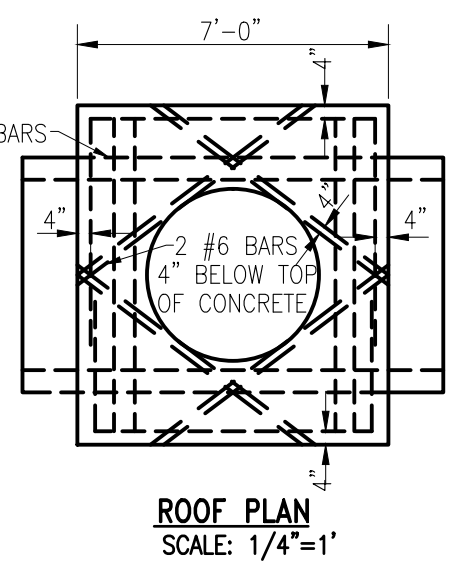


- NOTES:**
- MANHOLE "B" SHALL BE USED FOR MANHOLE STRUCTURES ON ALL STORM SEWERS WHERE THE DIAMETER OF OUTLET PIPE IS 24" OR SMALLER, UNLESS CALLED FOR OTHERWISE ON THE PLANS.
 - DIA. OF M.H. SHALL BE INCREASED AS SHOWN ON THE PLANS OR IN THE PROPOSAL DEPENDING ON THE DIAMETERS AND ANGLES OF THE SEWERS.

DEPTH	BRICK	CONCRETE OR BLOCK
0'-10"	8"	6"
10'-16"	12"	8"
16' & DEEPER	16"	12"

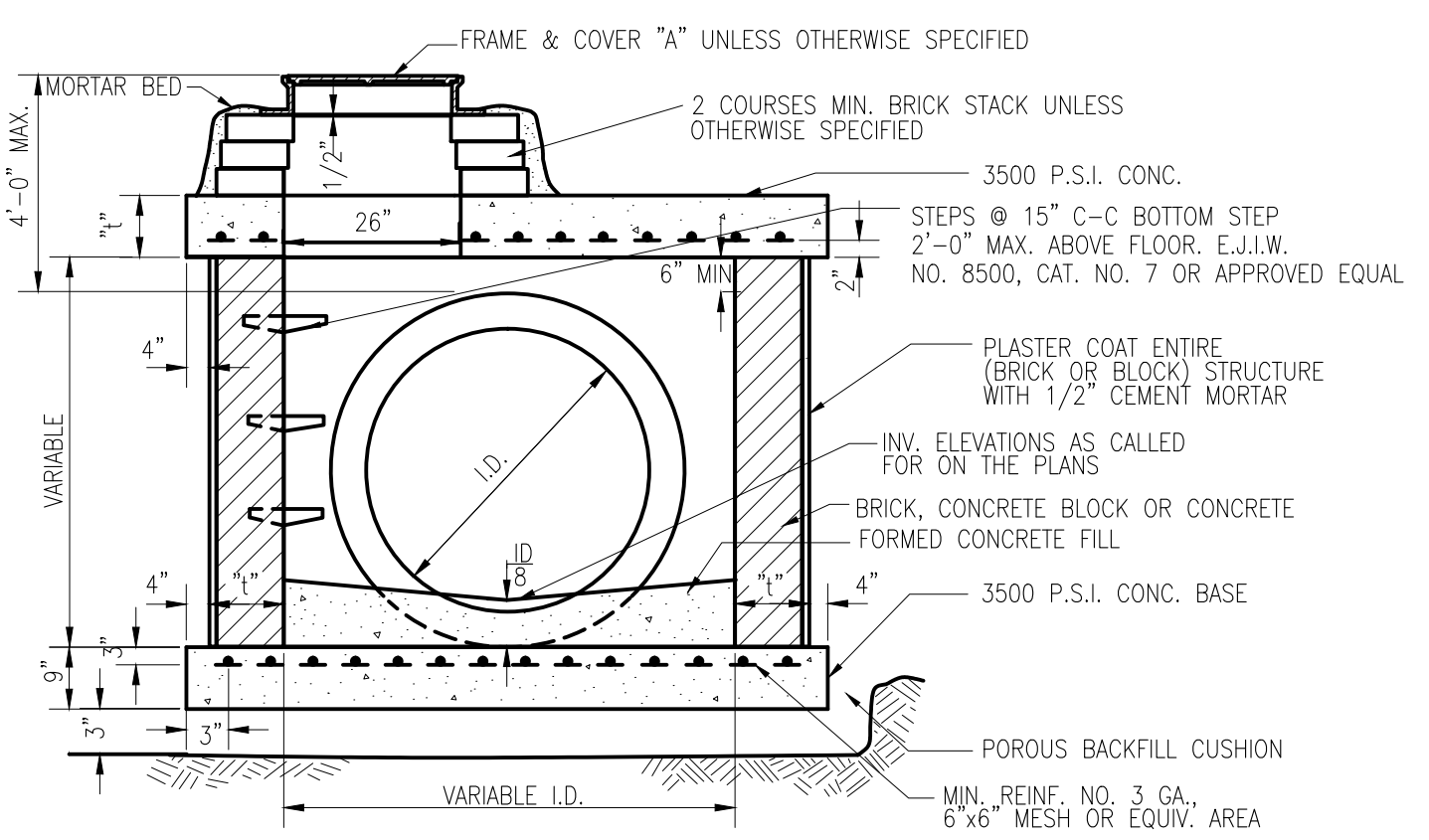
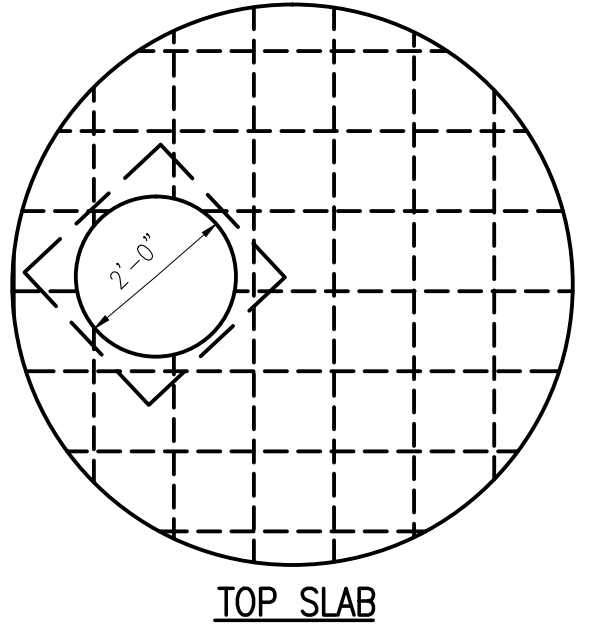


- NOTES:**
- MANHOLE "C" SHALL BE USED FOR MANHOLE STRUCTURES ON ALL STORM SEWERS WHERE 48" OR LARGER DIA. PIPES INTERSECT.
 - PRECAST UNITS SHALL MEET THE REQUIREMENTS SPECIFIED BY A.S.T.M. C-478-68.



DEPTH	BRICK	CONCRETE OR BLOCK
0'-10"	8"	6"
10'-16"	12"	8"
16' & DEEPER	16"	12"

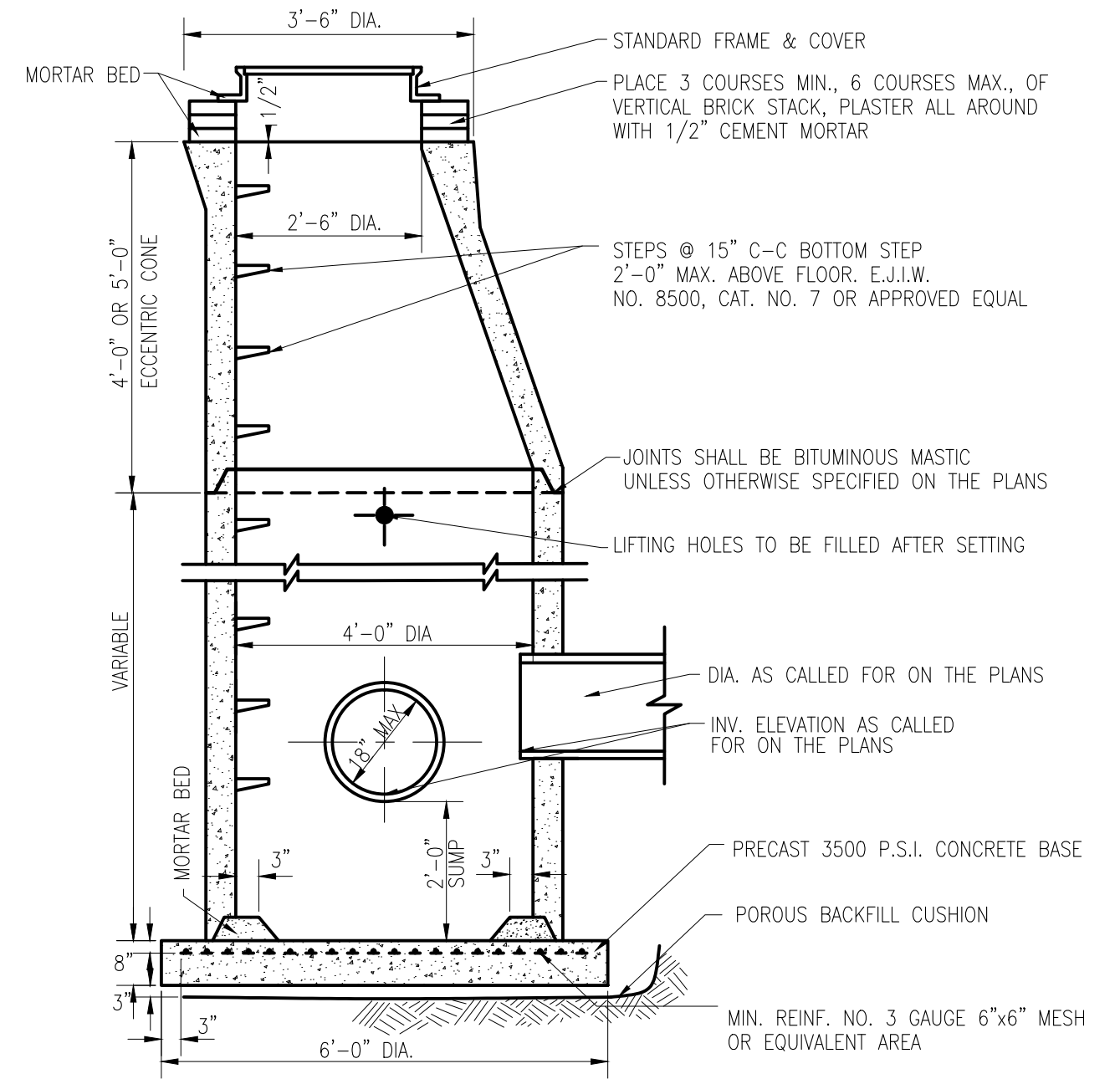
- NOTES:**
- THIS MANHOLE SHALL BE USED ONLY WHEN MEETING CONDITIONS STATED IN THE "GENERAL MANHOLE NOTES", ITEM NO. 2A
 - PRECAST UNITS SHALL MEET REQUIREMENTS SPECIFIED BY A.S.T.M. C-478-68.
 - DIAMETER OF MANHOLE SHALL BE INCREASED AS SHOWN ON PLANS OR IN THE PROPOSAL, DEPENDING ON THE DIAMETERS AND ANGLES OF THE SEWERS.



OUTLET I.D.	M.H. D	TOP SLAB T	WALLS T	REINFORCING STEEL (SLAB)
24" OR LESS	4'-0"	9"	8"	3/4" @ 9" EACH WAY
30"	4'-0"	9"	8"	3/4" @ 9" EACH WAY
36"	4'-0"	9"	12"	3/4" @ 9" EACH WAY
42"	4'-0"	10"	12"	3/4" @ 9" EACH WAY
48"	4'-0"	11"	12"	7/8" @ 9" EACH WAY
54"	4'-0"	11"	12"	7/8" @ 9" EACH WAY

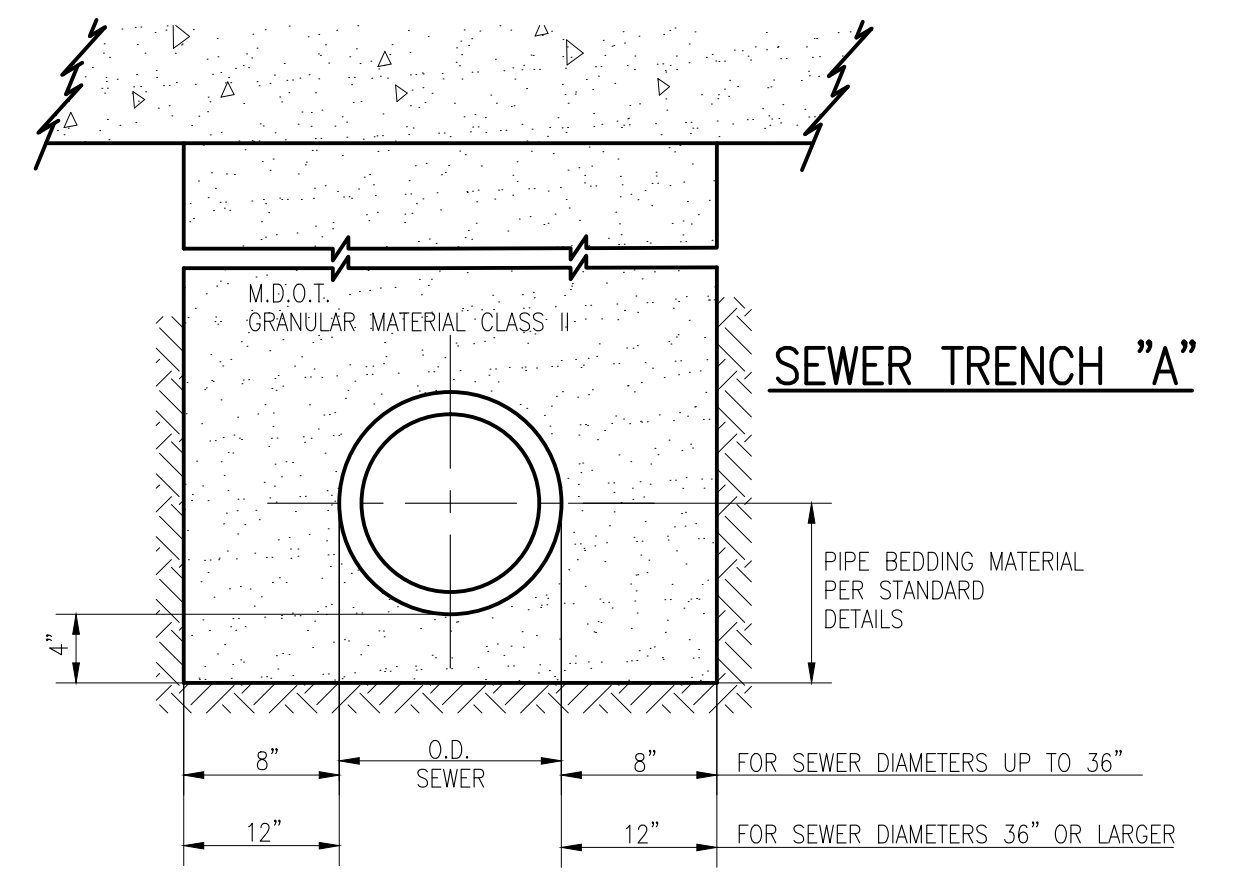
M.H. D	TOP SLAB T	WALLS T	REINFORCING STEEL (SLAB)
7'-0"	12"	12"	7/8" @ 9" EACH WAY
8'-0"	12"	12"	1" @ 9" EACH WAY

- NOTES:**
- DIA. SHALL BE INCREASED AS SHOWN ON PLANS OR IN THE PROPOSAL DEPENDING ON THE ANGLE OF THE SEWERS.
 - M.H. "D" SHALL BE USED WHERE THE DEPTH OF COVER FROM THE TOP OF CASTING TO THE TOP OF SEWER IS LESS THAN 4'-0". M.H. "D" SHALL BE CONSTRUCTED WITH A 2' SUMP WHERE DIAMETER OF OUTLET SEWER IS 24" OR LESS.

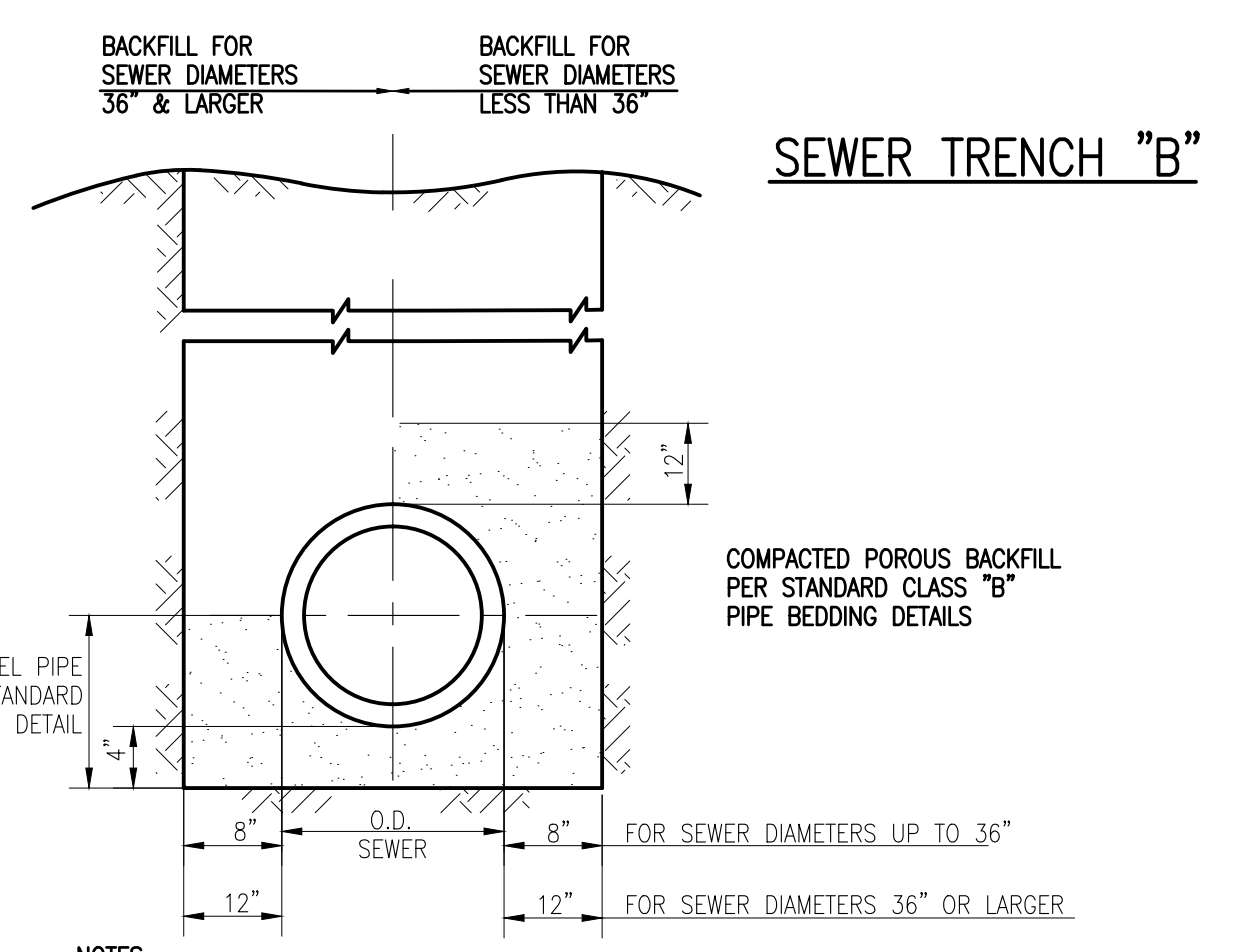


- NOTES:**
- THIS MANHOLE SHALL BE USED ONLY WHEN MEETING CONDITIONS STATED IN THE "GENERAL MANHOLE NOTES", ITEM NO. 2A
 - PRECAST UNITS SHALL MEET THE REQUIREMENTS SPECIFIED BY A.S.T.M. C-478-68.

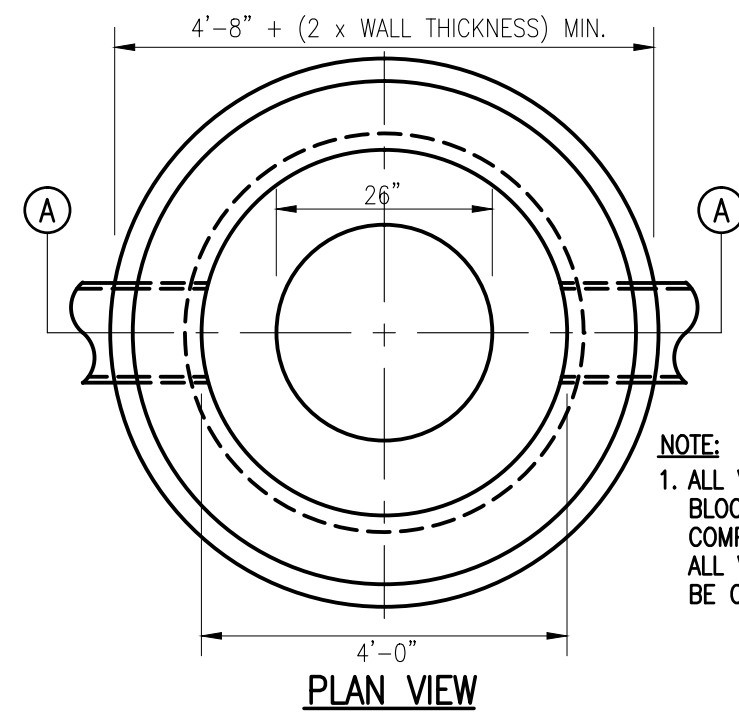
- GENERAL NOTES FOR STORM SEWER MANHOLES**
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE TOWNSHIP OF YPSILANTI AND YCUA.
 - CONTRACTOR SHALL CONSTRUCT MANHOLES WITH PRECAST REINFORCED CONCRETE UNITS ("E", "F", AND "I") IN LIEU OF CONCRETE, BRICK AND BLOCK MANHOLES ("A" AND "B") IN ACCORDANCE WITH THE FOLLOWING CONDITIONS:
 - MAXIMUM DIAMETER OF SEWER OUTLET IN ANY PRECAST UNIT SHALL BE 18" (MANHOLE "E" ONLY).
 - NO OPENINGS SHALL BE MADE IN PRECAST UNITS WHICH WOULD LEAVE LESS THAN 24" OF UNDISTURBED PRECAST PIPE OR WOULD REMOVE MORE THAN 30% OF THE CIRCUMFERENCE ALONG ANY HORIZONTAL PLANE.
 - STRUCTURES FOR SEWERS LARGER THAN 18", OR THOSE NOT MEETING THE OPENING REQUIREMENTS, SHALL BE BUILT OF BLOCK OR BRICK UP TO A MINIMUM OF 8" ABOVE THE TOP OF SEWER, WITH PRECAST UNITS BEING USED ABOVE THIS POINT. WHERE PRECAST UNITS REST ON THE BLOCK OR BRICK, THE GROOVE IN THE PRECAST UNIT SHALL BE FILLED WITH MORTAR.
 - OPENINGS FOR THE OUTLET SEWER SHALL BE PRECAST WITH A DIAMETER OF 3 INCHES LARGER THAN THE OUTSIDE DIAMETER OF THE OUTLET PIPE. ALL OTHER OPENINGS SHALL BE MADE IN THE FIELD AFTER MANHOLE HAS BEEN CONSTRUCTED.
 - ALL VERTICAL OPENINGS IN CONCRETE BLOCK STRUCTURE WALLS SHALL BE COMPLETELY FILLED WITH MORTAR. ALL VERTICAL WALL JOINTS SHALL BE CEMENT POINTED.
 - A "POURED 3500 P.S.I. CONCRETE BASE" WITHOUT STEEL REINFORCEMENT MAY BE SUBSTITUTED FOR PRECAST BASE WHEN APPROVED BY THE TOWNSHIP ENGINEER. A POROUS BACKFILL CUSHION WILL NOT BE REQUIRED UNDER THE POURED BASE UNLESS CONTRACTOR HAS EXCAVATED BELOW THE REQUIRED ELEVATION, AT WHICH TIME THE ENGINEER WILL DECIDE AS TO THE MERITS OF INCREASING THE THICKNESS OF THE CONCRETE BASE OR THE USE OF A POROUS BACKFILL CUSHION.
 - WHERE UNSTABLE GROUND CONDITIONS ARE ENCOUNTERED, SLAG OR STONE BEDDING SHALL BE USED AS DIRECTED BY THE ENGINEER IN ORDER TO PROVIDE A STABLE FOUNDATION FOR PIPE AND MANHOLES.
 - ALL PIPES ENTERING OR LEAVING A MANHOLE SHALL BE ADEQUATELY SUPPORTED BY POURING 2500 P.S.I. CONCRETE FILL FROM UNDISTURBED EARTH TO SPRINGLINE.
 - WHEREVER EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES AT 4" CENTER TO CENTER AROUND PERIPHERY OR OPENING TO CREATE A PLANE OF WEAKNESS BEFORE BREAKING SECTION OUT.



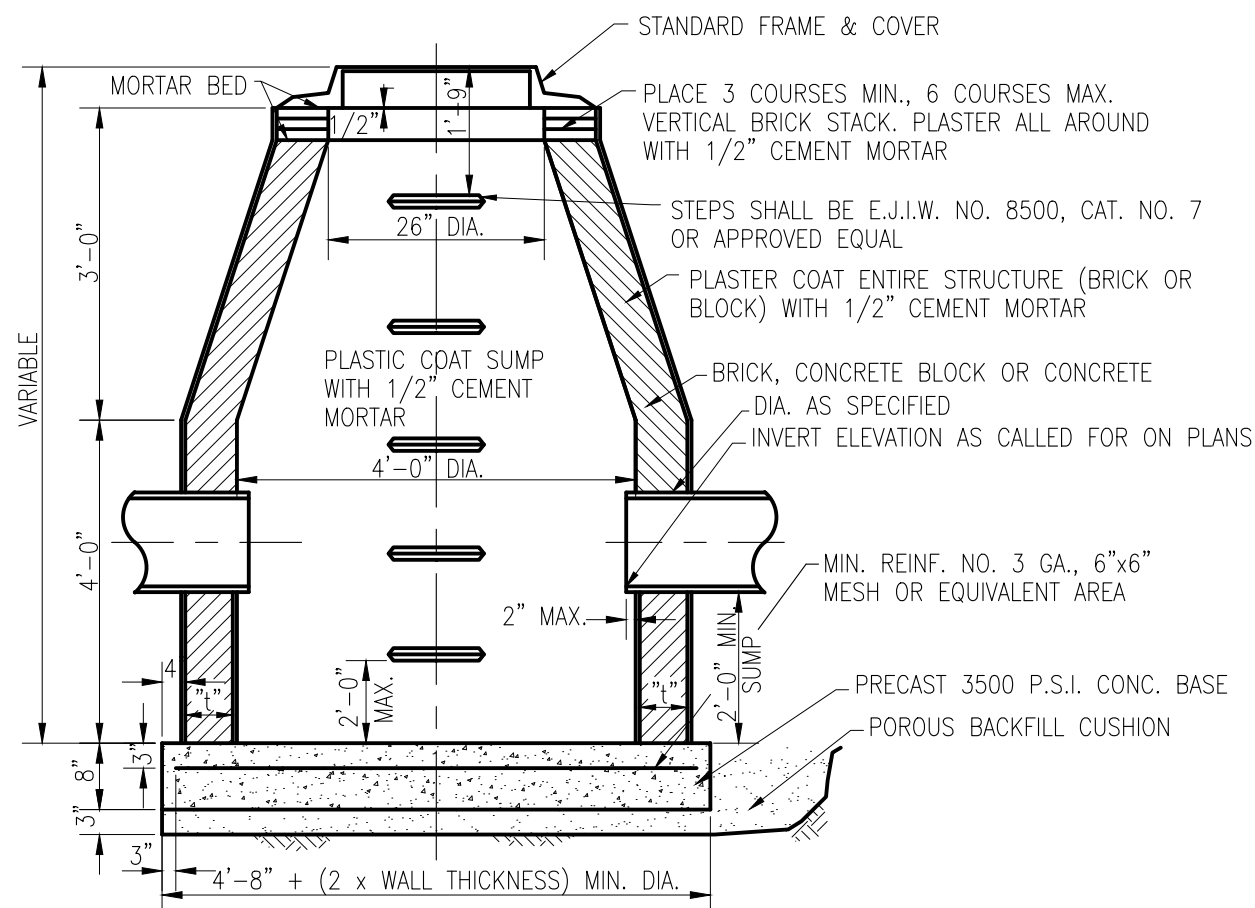
- NOTES:**
- TRENCH "A" SHALL BE USED UNDER ROAD SURFACES, PAVEMENT, SIDEWALK, CURB, AGGREGATE & PAVED DRIVES AND WHERE THE EDGE OF TRENCH IS WITHIN 3 FEET OF THE PAVEMENT
 - GRANULAR MATERIAL SHALL BE PLACED BY THE "CONTROLLED DENSITY METHOD" OR OTHER MEANS HAVING APPROVAL OF THE ENGINEER AND IS TO BE COMPACTED TO 95% OF MAXIMUM UNIT WEIGHT



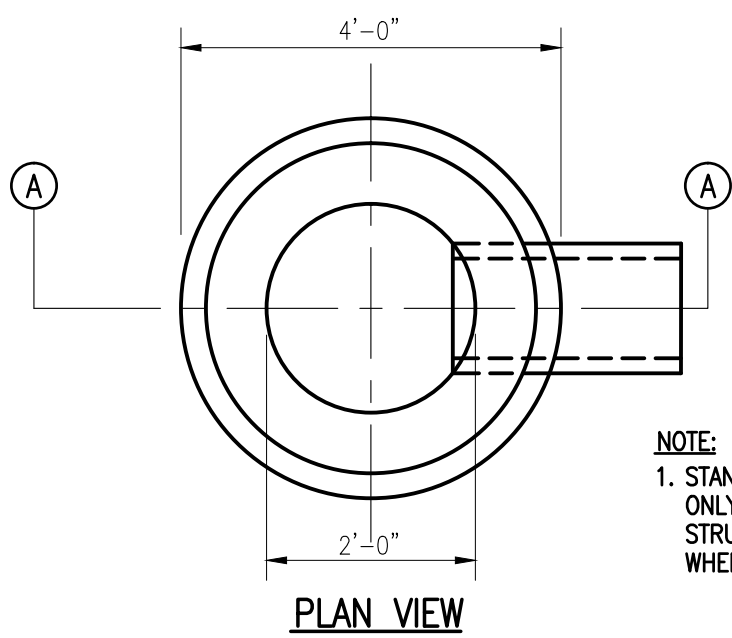
- NOTES:**
- SUITABLE EXCAVATED BACKFILL MATERIAL SHALL BE PLACED IN ONE FOOT LAYERS AND COMPACTED BY MECHANICAL TAMPING OR OTHER EFFECTIVE MEANS HAVING APPROVAL OF THE ENGINEER, TO A DENSITY EQUIVALENT TO THE UNDISTURBED ADJACENT SOIL
 - TRENCH "B" SHALL BE USED UNDER CONDITIONS OTHER THAN SPECIFIED FOR TRENCH "A"



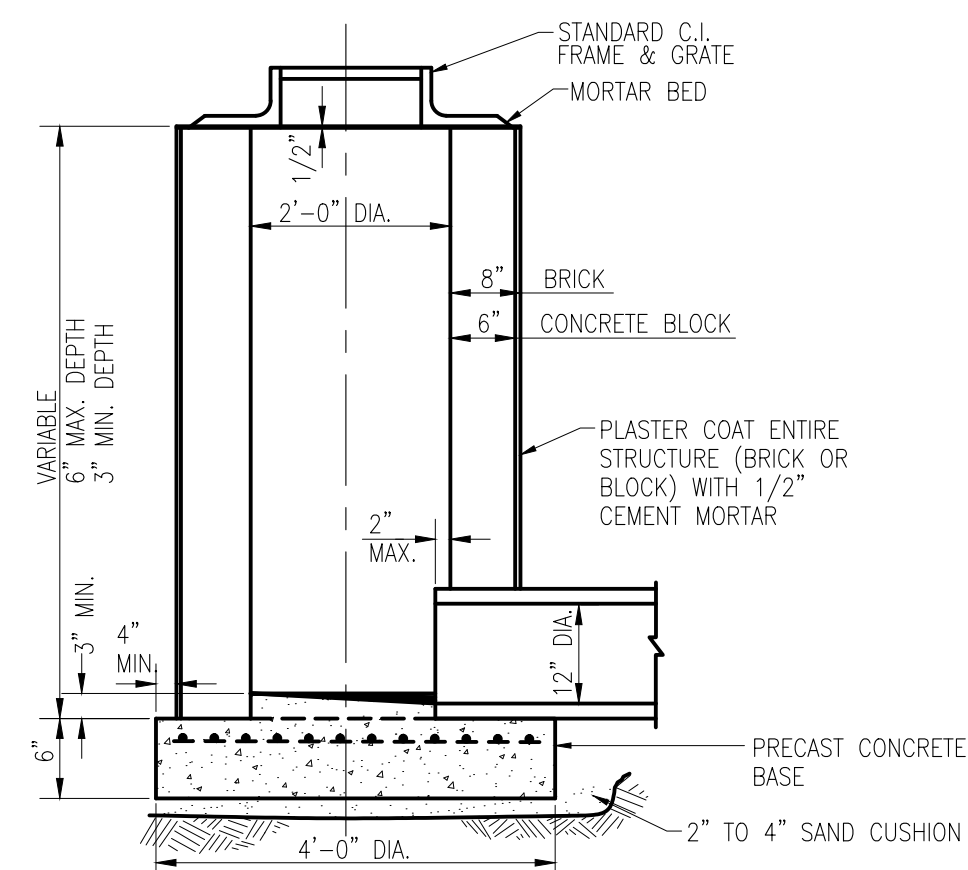
NOTE:
1. ALL VERTICAL HOLES IN CONCRETE BLOCK STRUCTURE WALL SHALL BE COMPLETELY FILLED WITH MORTAR. ALL VERTICAL WALL JOINTS SHALL BE CEMENT POINTED.



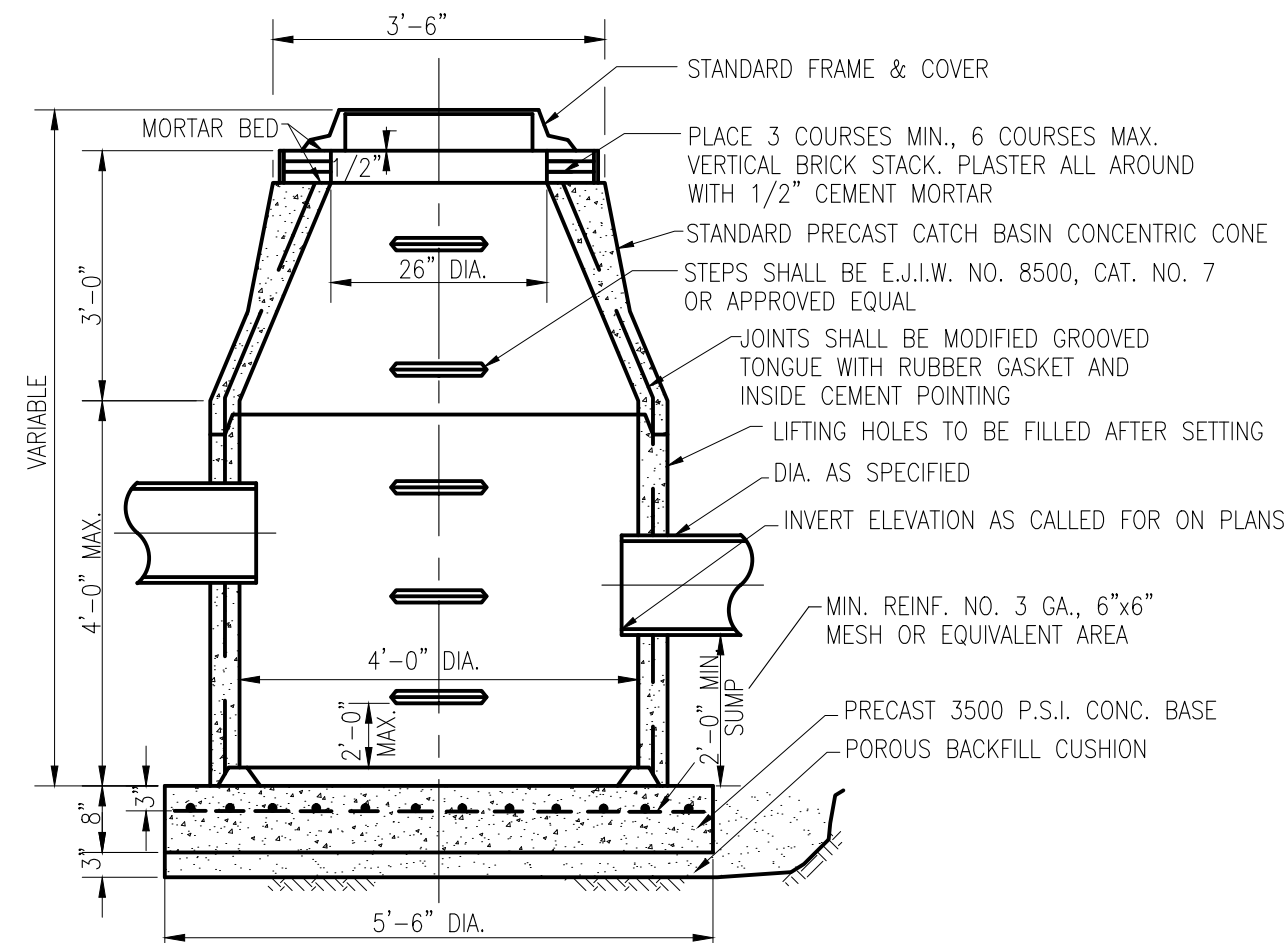
**SECTION A-A
CATCH BASIN "A"**



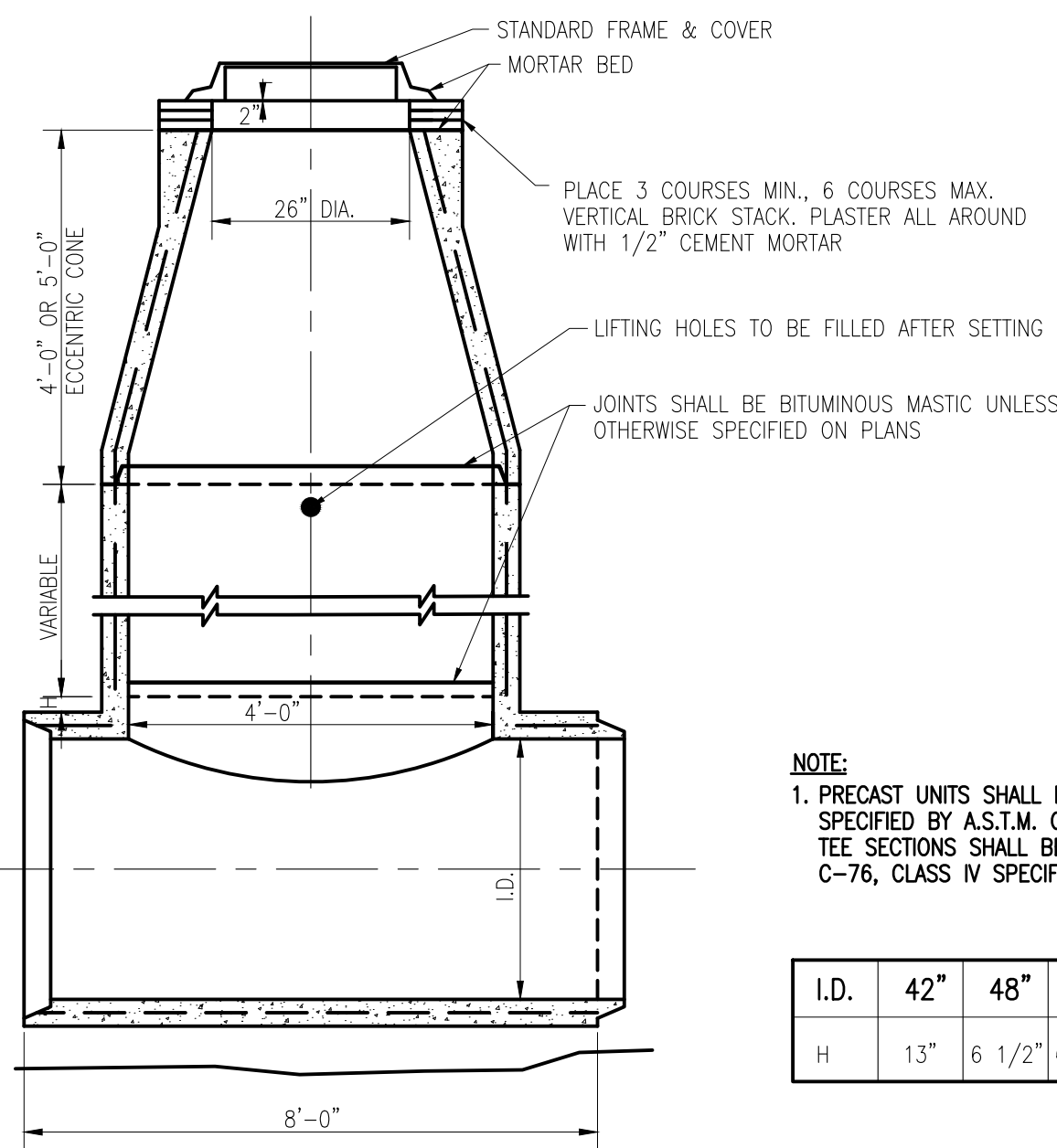
NOTE:
1. STANDARD INLET WILL BE USED ONLY WHEN OUTLETTING TO A STRUCTURE HAVING A SUMP OR WHEN OUTLETTING TO A DITCH



**SECTION A-A
STANDARD INLET**

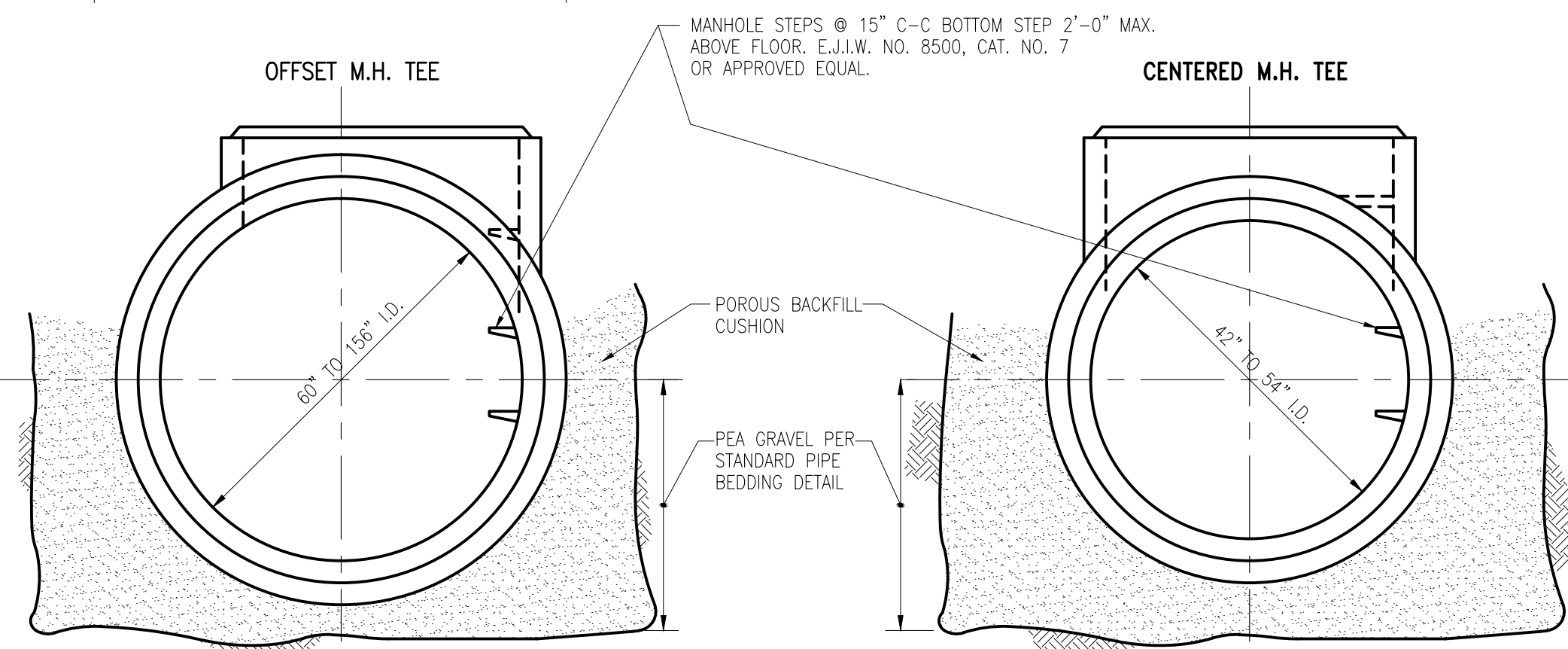


**CROSS-SECTION
CATCH BASIN "B"**

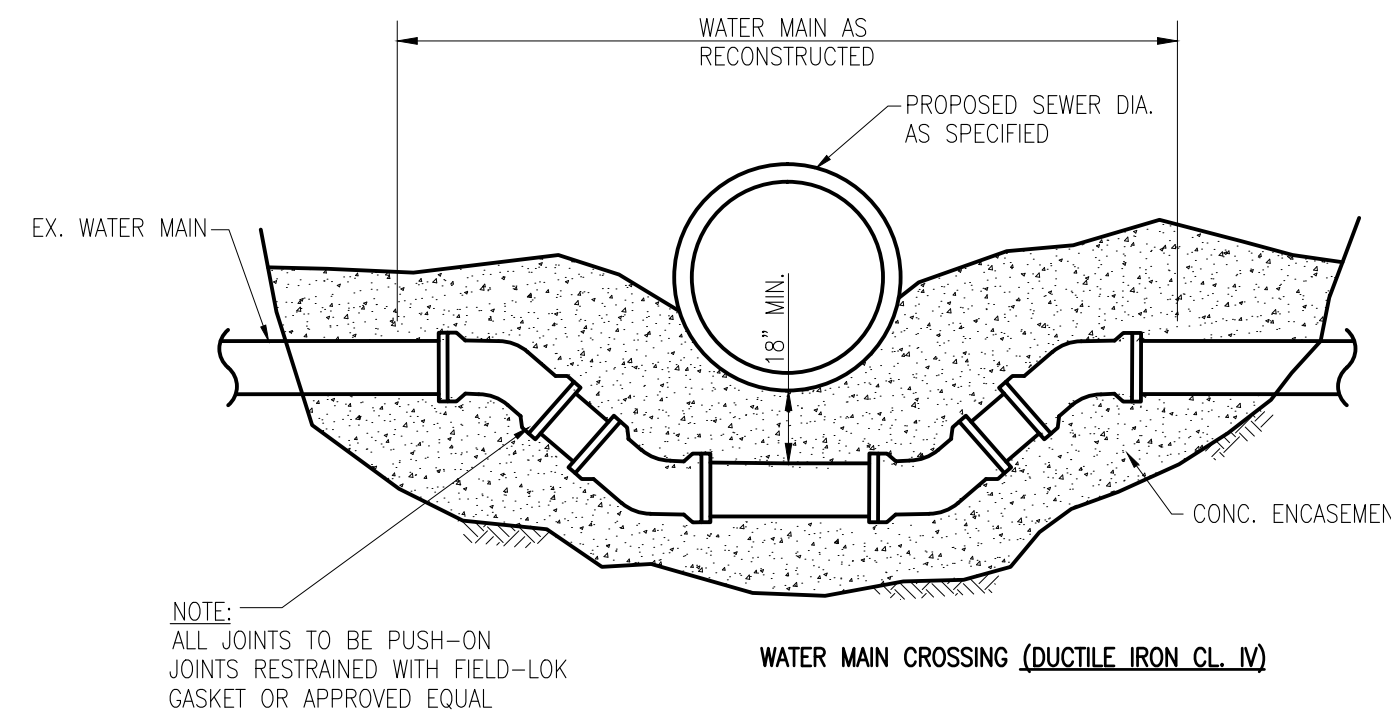


NOTE:
1. PRECAST UNITS SHALL MEET THE REQUIREMENTS SPECIFIED BY A.S.T.M. C-478-68. ALL MANHOLE TEE SECTIONS SHALL BE REINFORCED TO A.S.T.M. C-76, CLASS IV SPECIFICATIONS

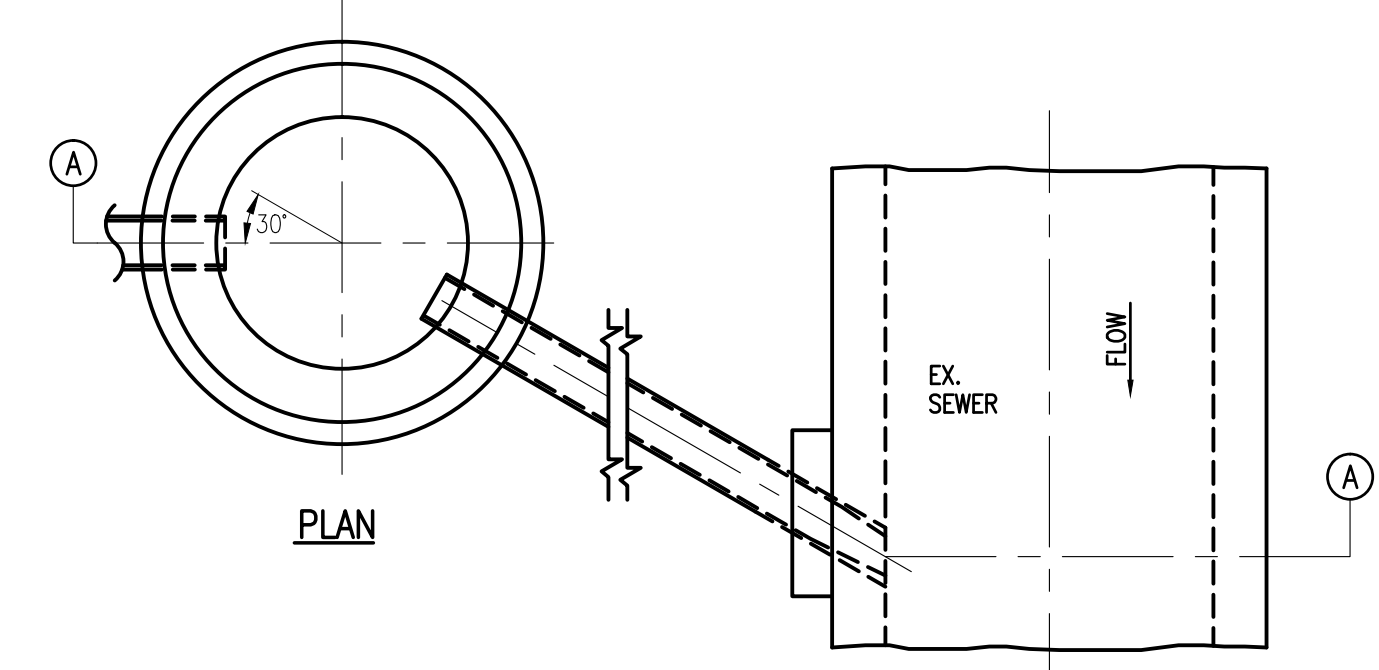
H DIMENSION	
I.D.	42" 48" 54" 60" 66" 72" 78" 84" OVER 84"
H	13" 6 1/2" 6 1/2" 1" 1 3/4" 2 1/2" 4" 6" 7"



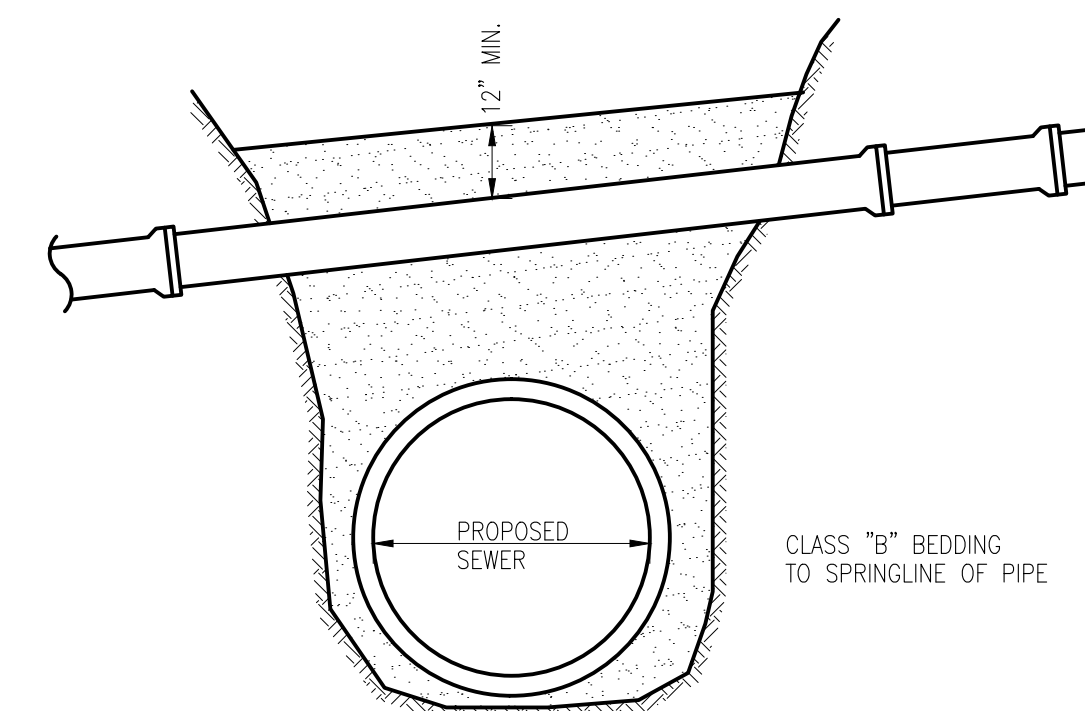
PRECAST MANHOLE "T"



WATER MAIN CROSSING

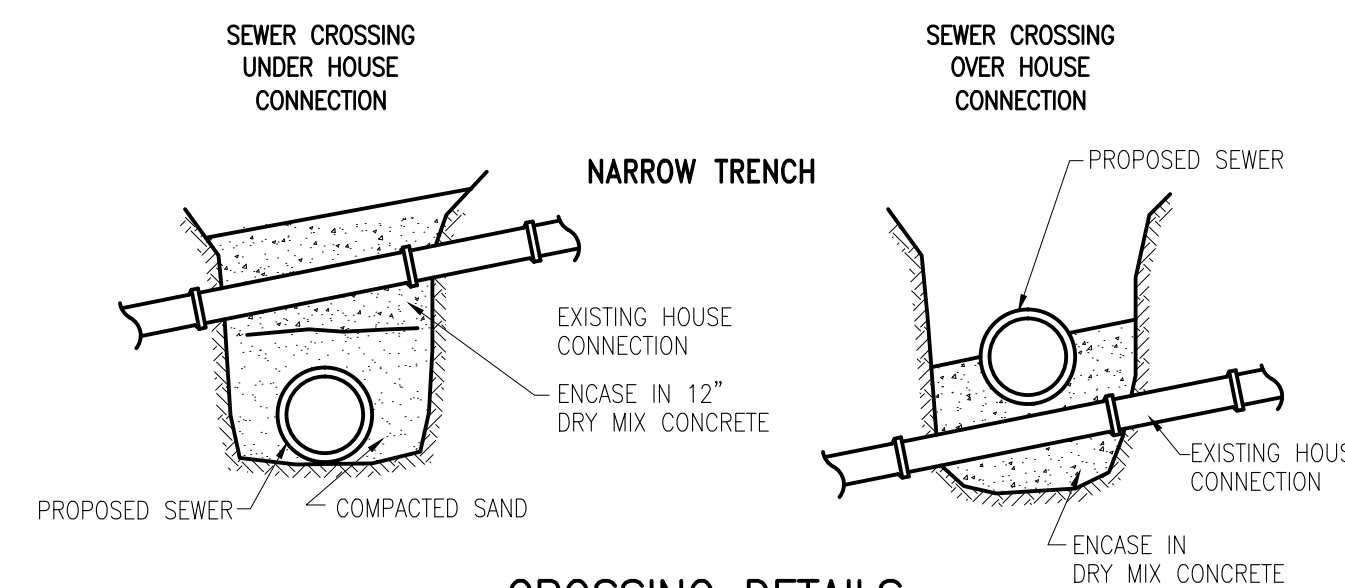


**SECTION A-A
TYPICAL CONNECTIONS TO EXISTING SEWERS**



HOUSE CONNECTION CROSSING

NOTE:
1. M.D.O.T. GRANULAR MATERIAL CLASS II PLACED IN 6" LAYERS AND COMPACTED TO A MINIMUM OF 95% OF ITS MAXIMUM UNIT WEIGHT TO A HEIGHT OF 12" ABOVE THE TOP OF THE SEWER LEAD.



CROSSING DETAILS

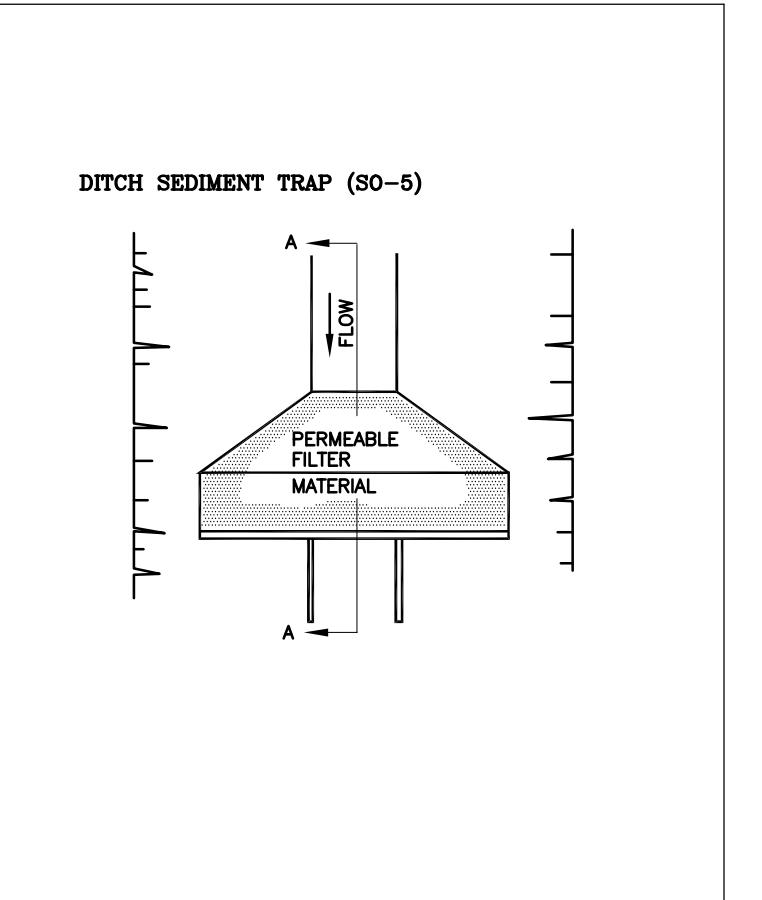
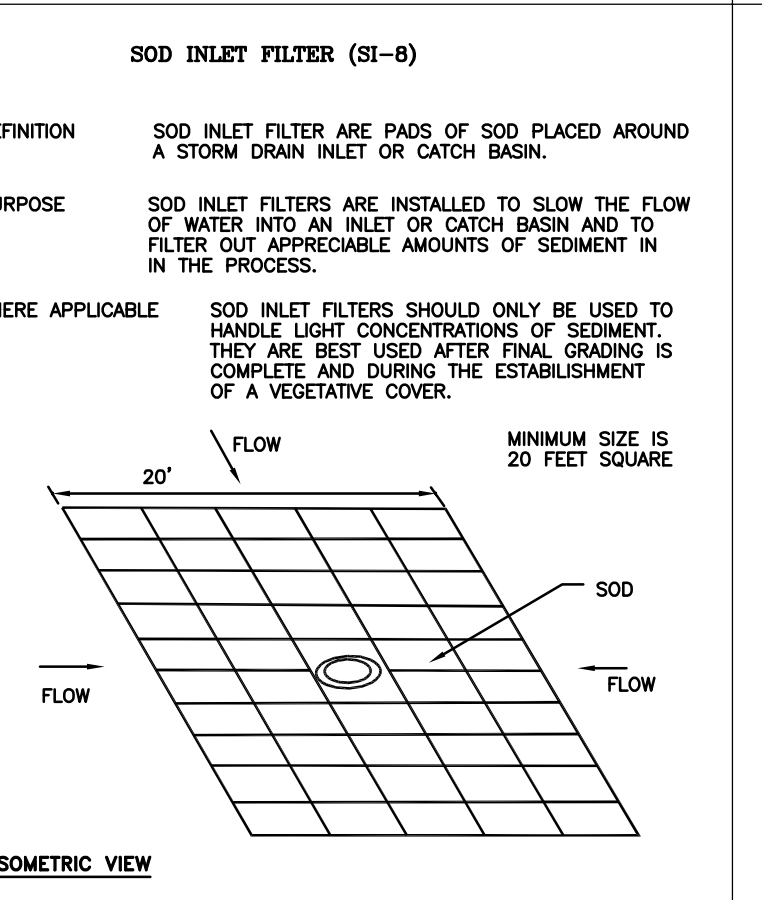
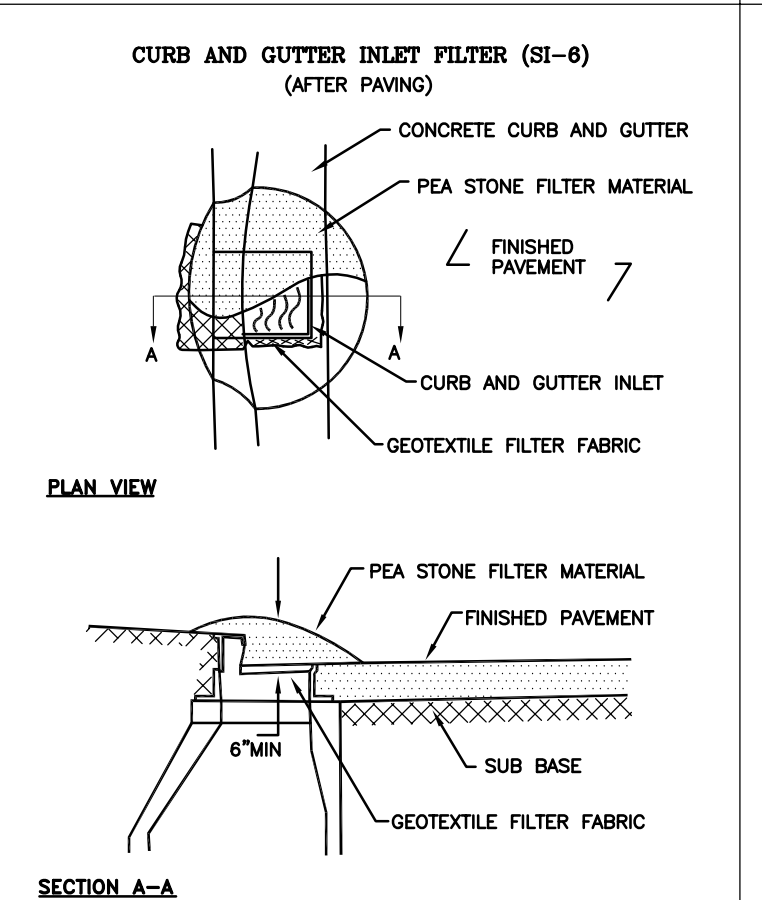
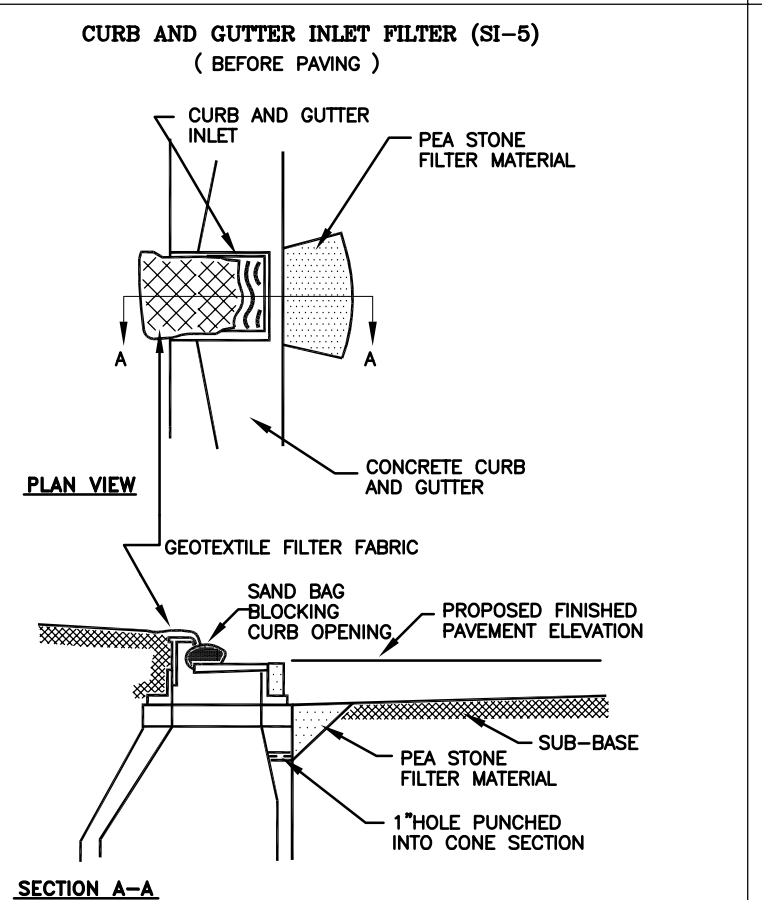
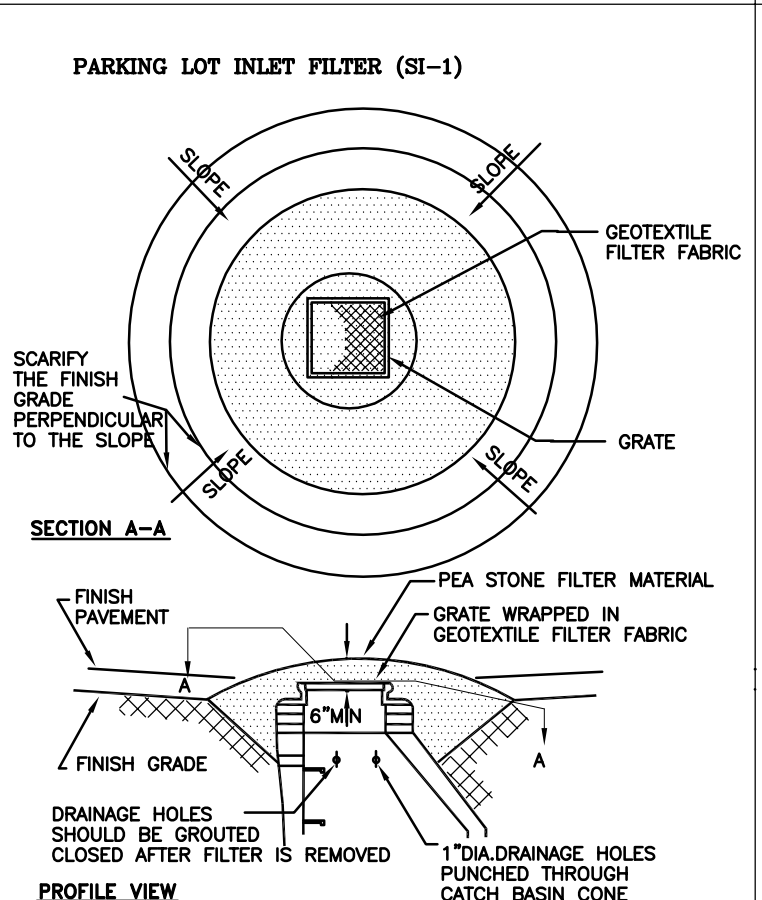
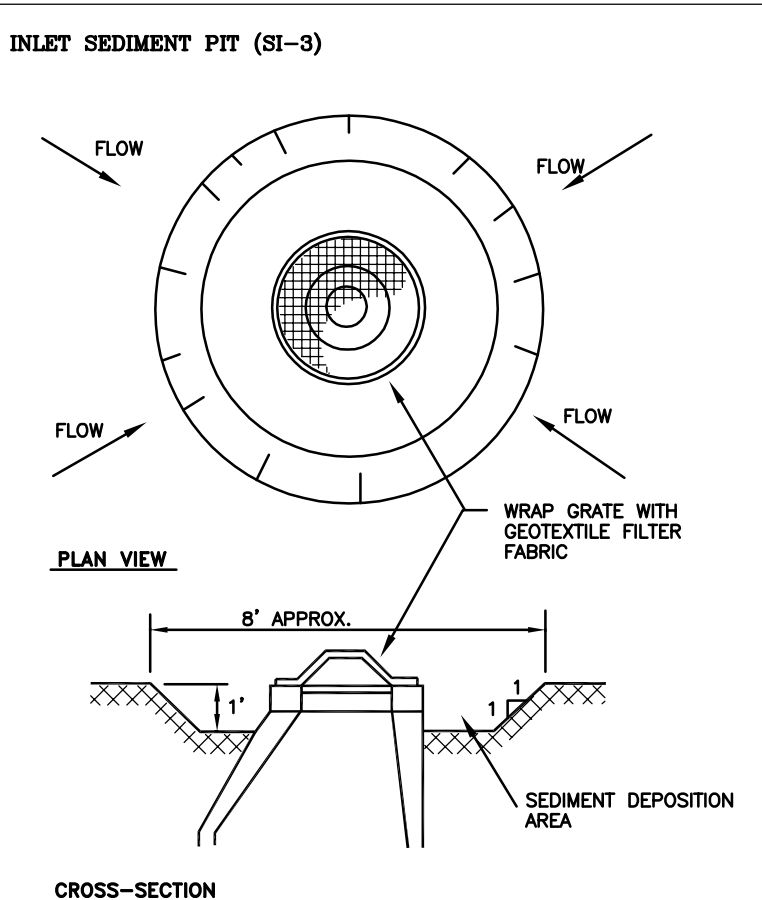
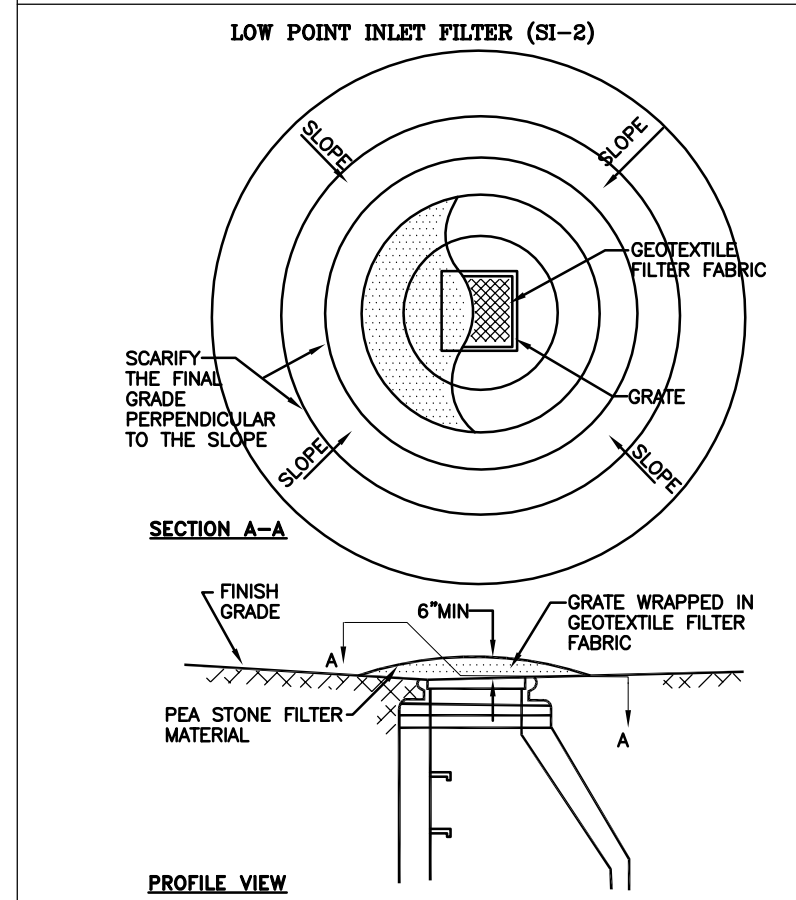
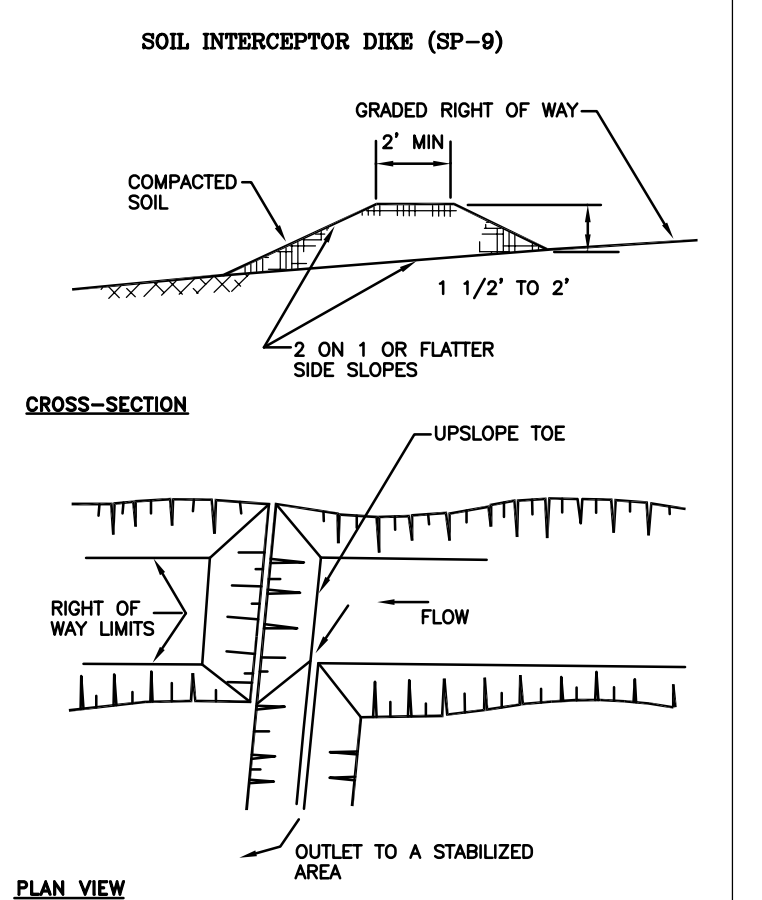
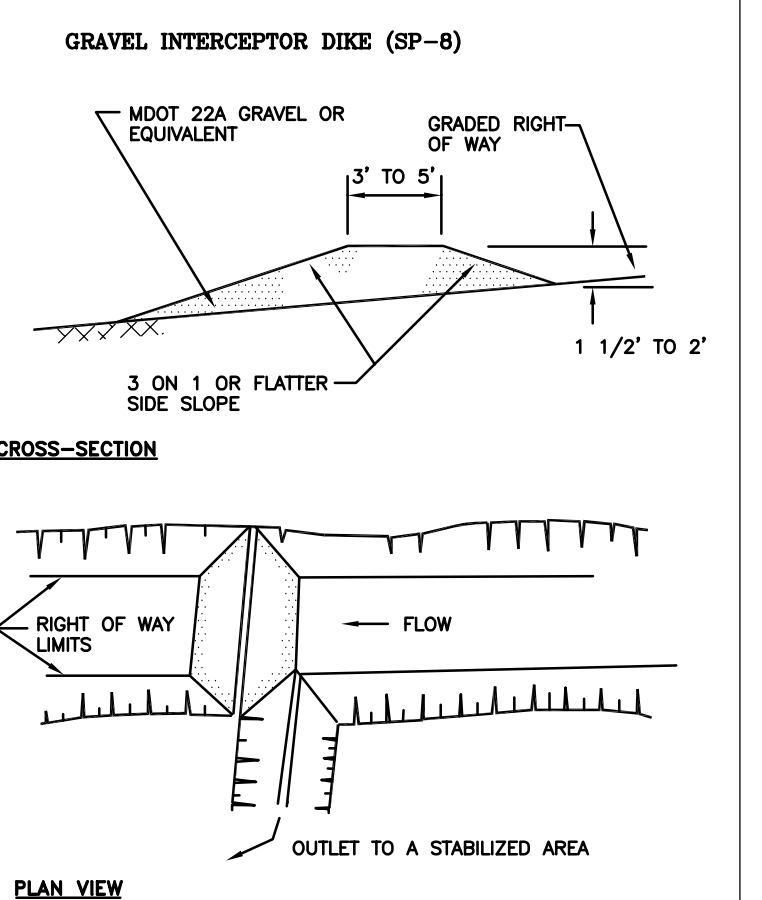
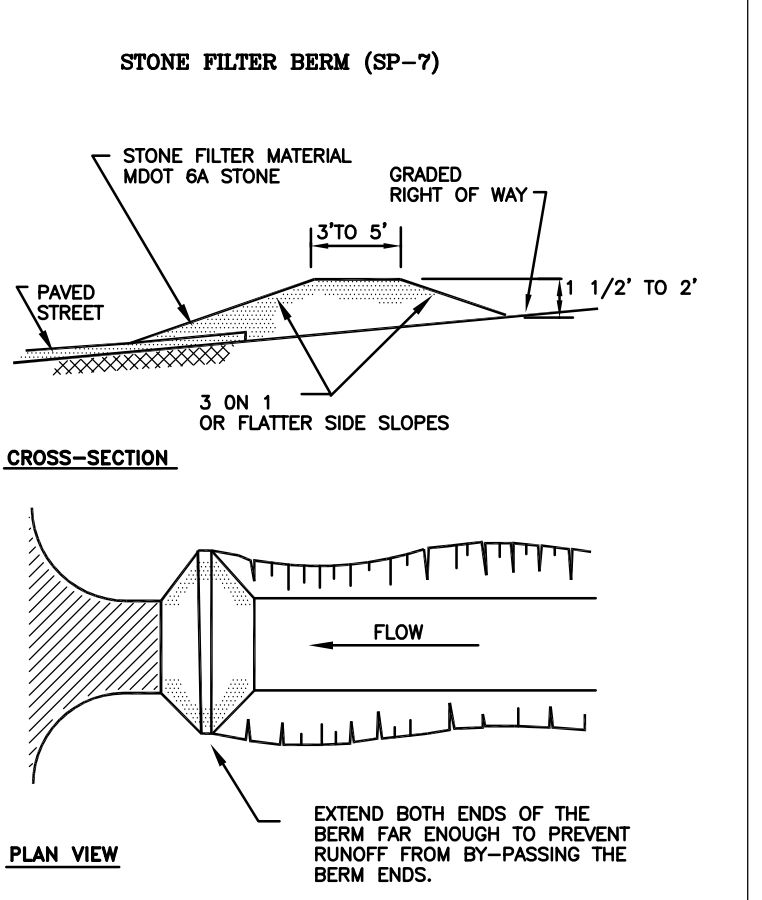
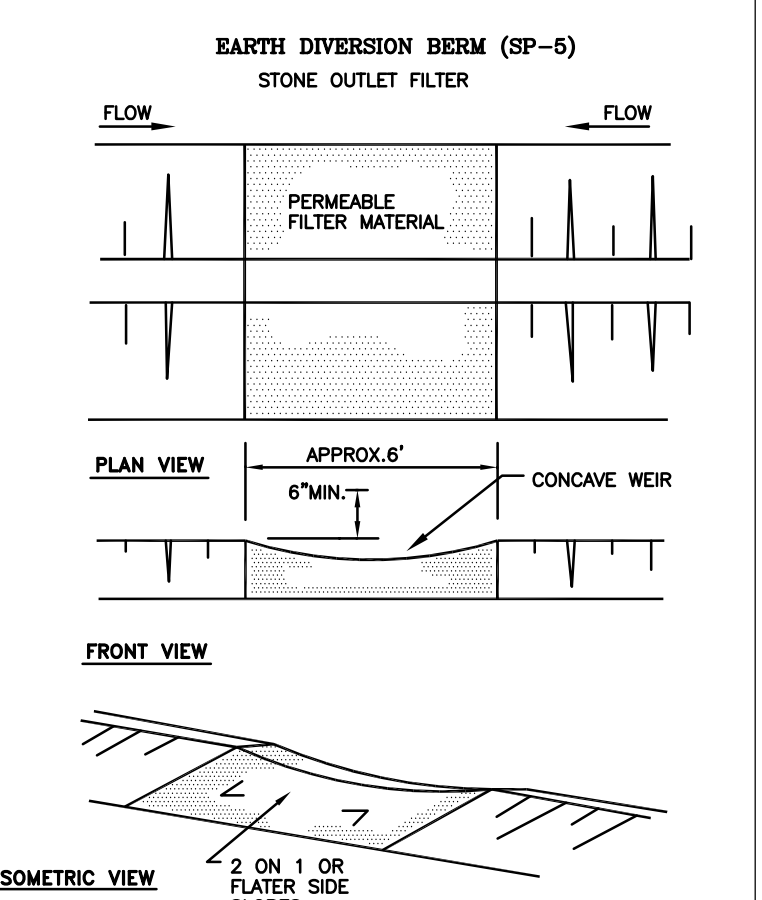
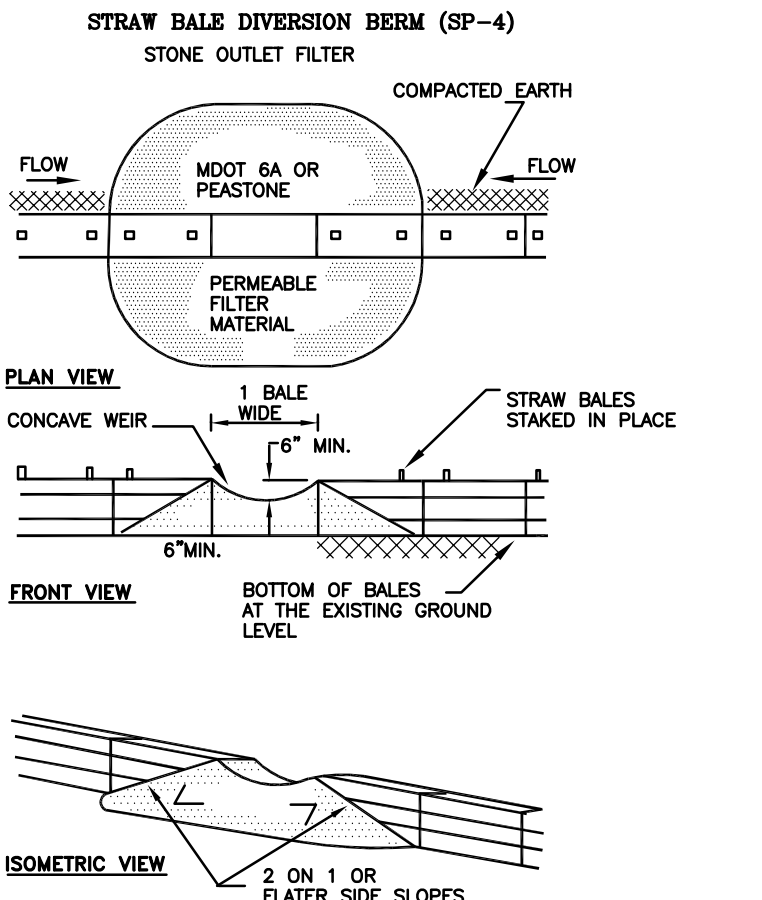
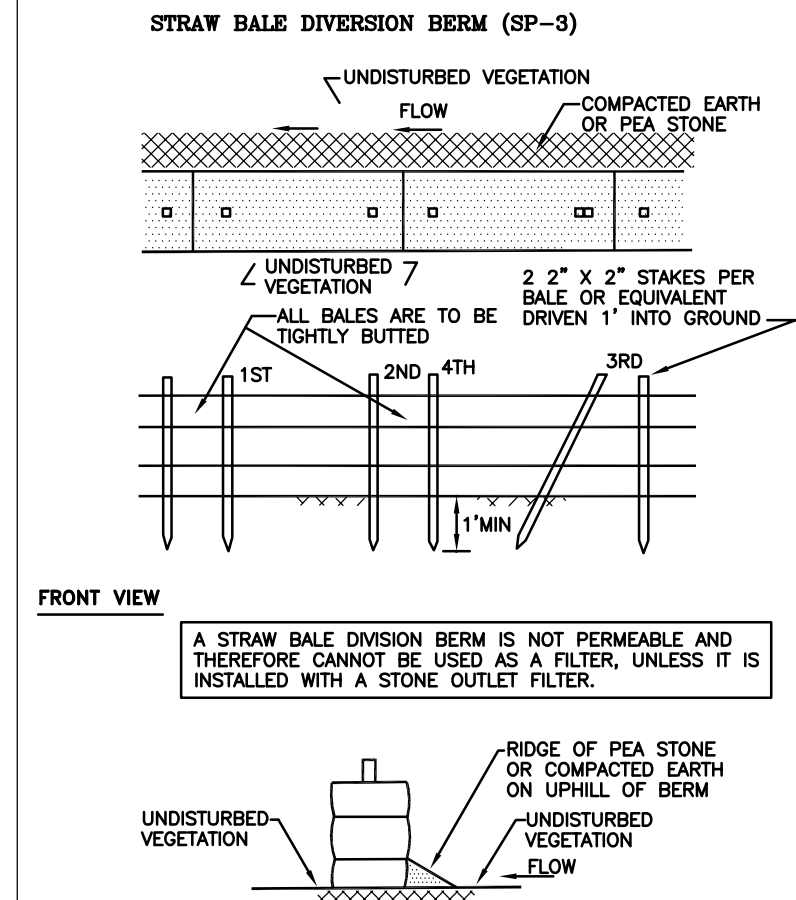
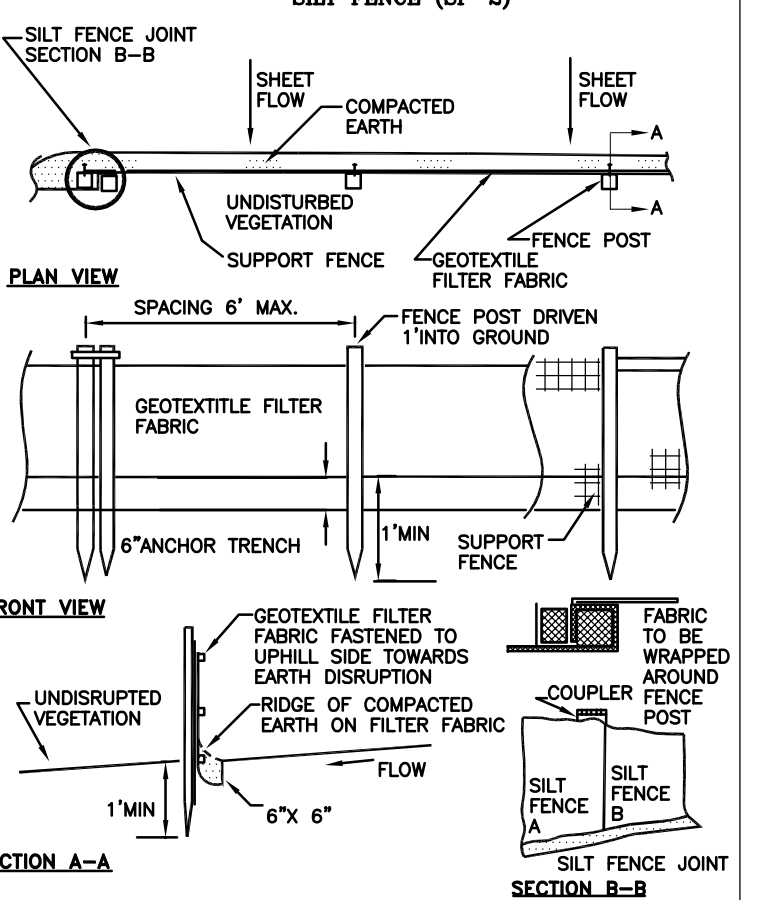
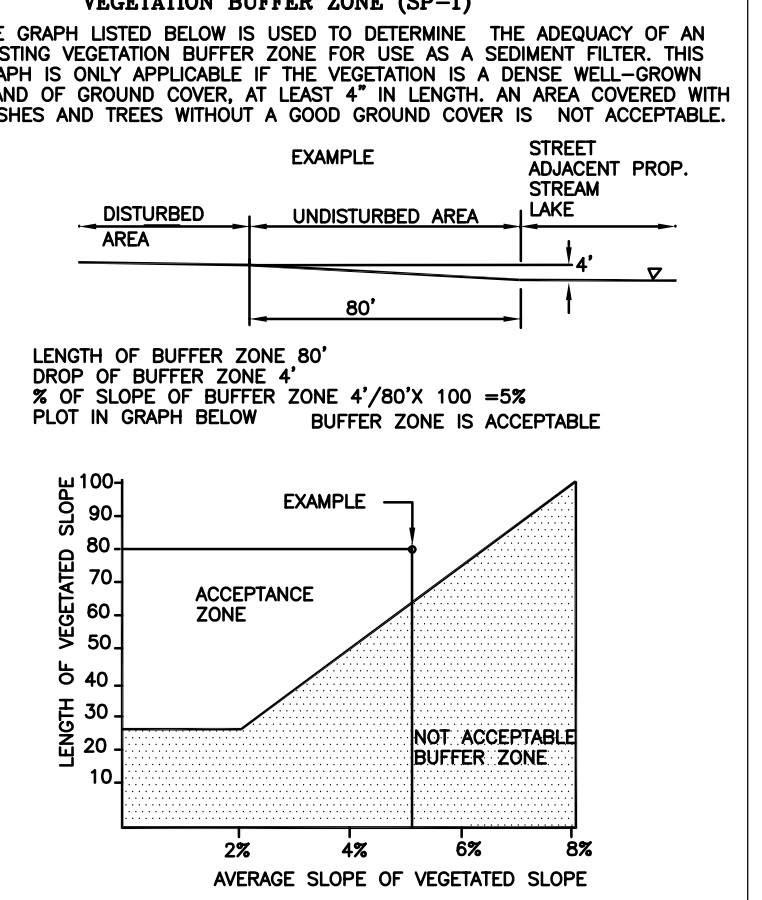
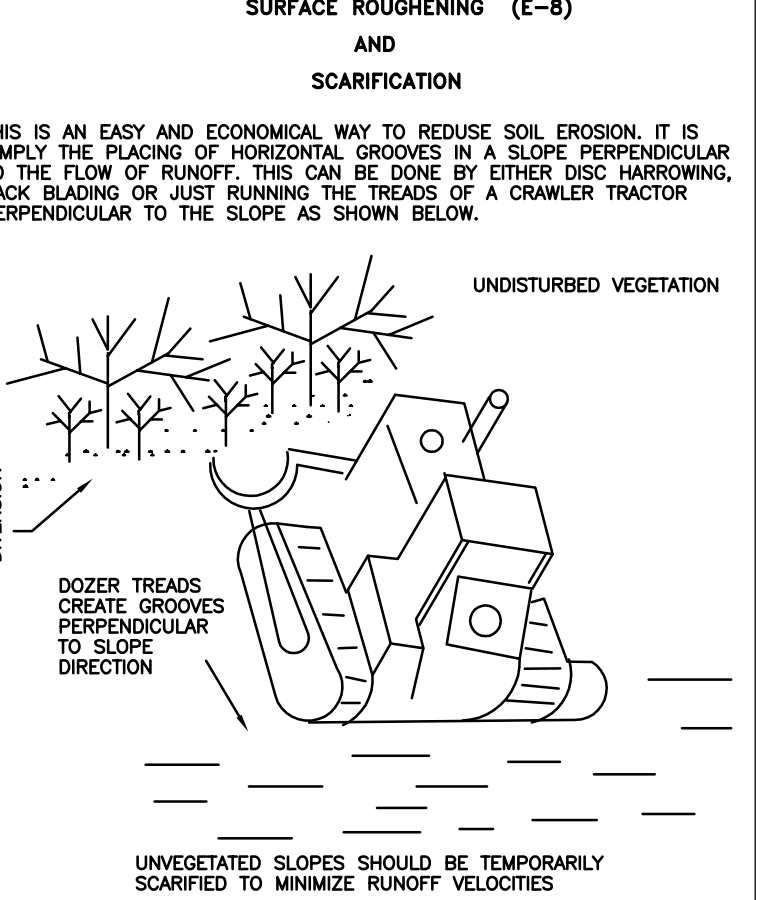
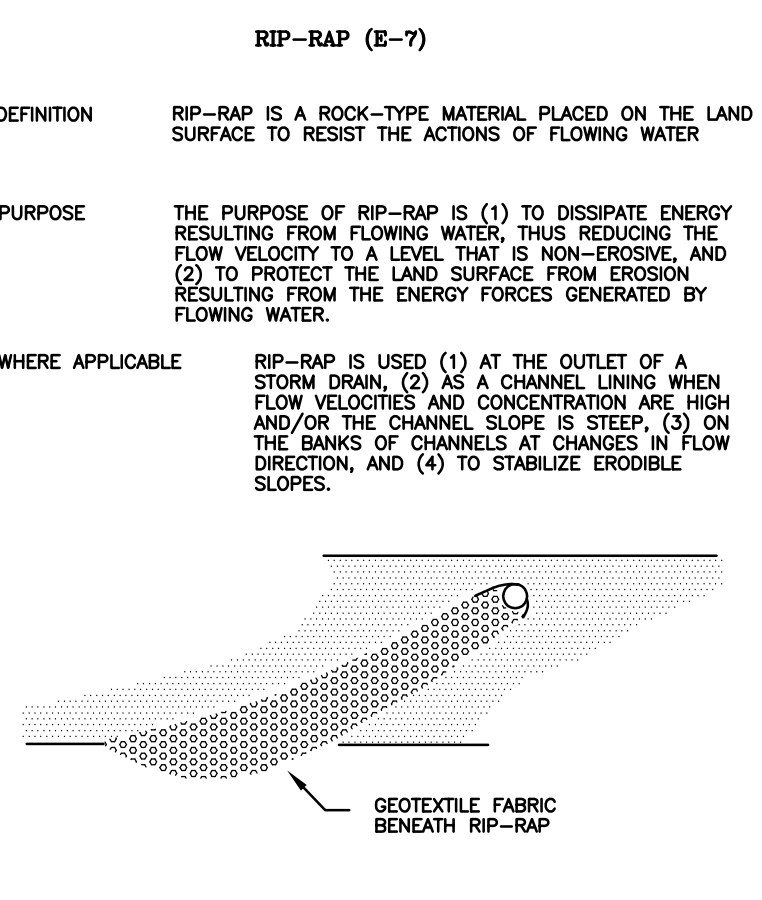
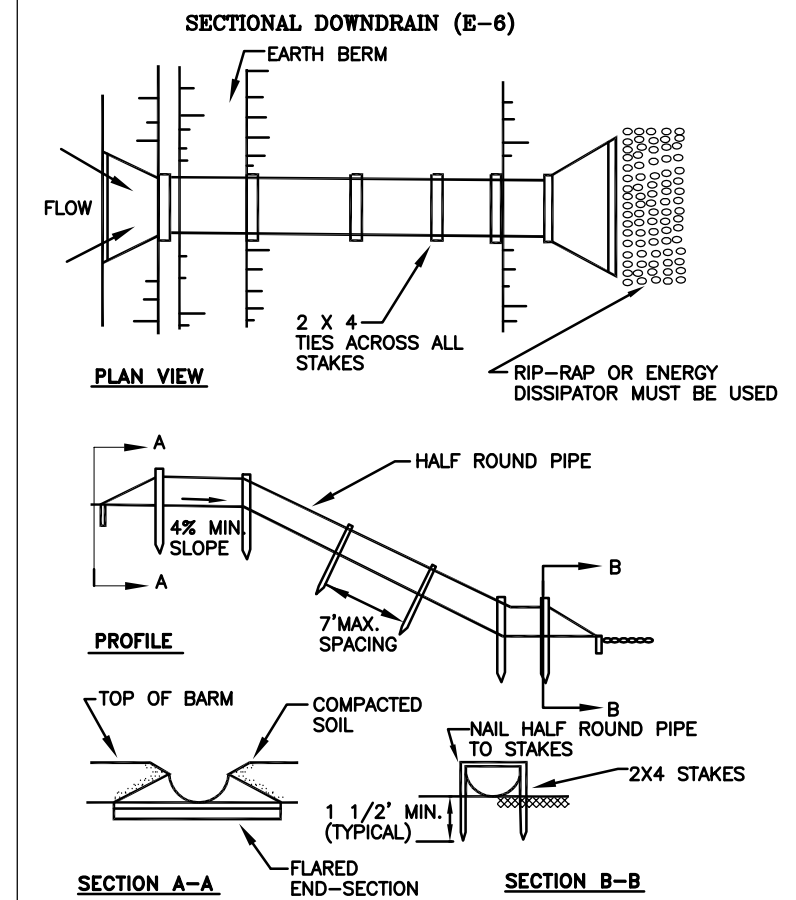
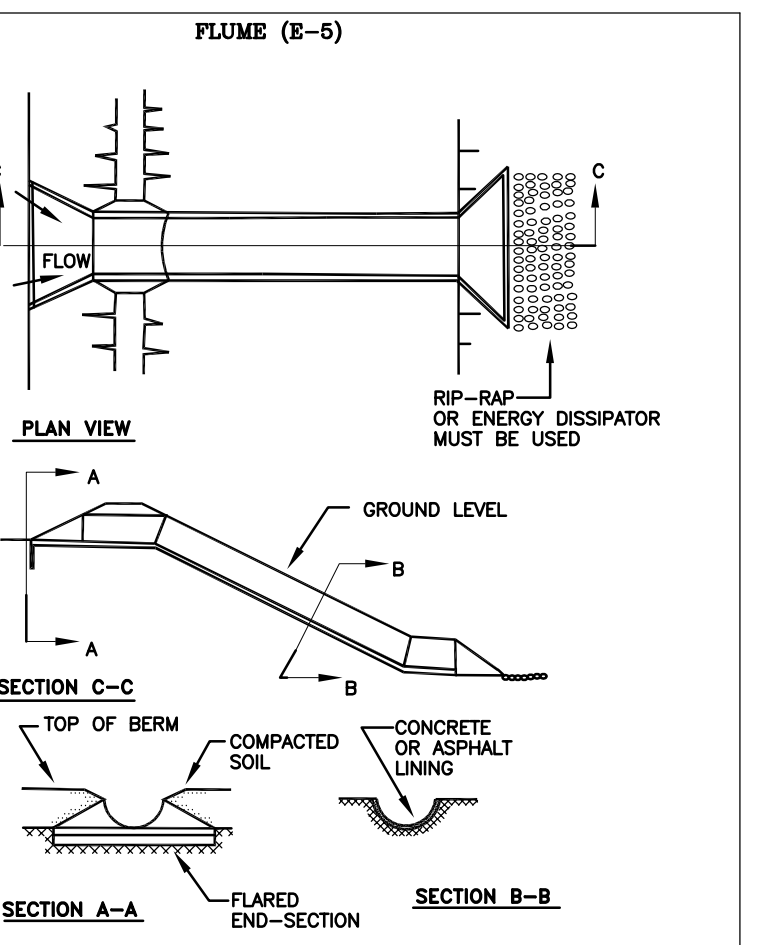
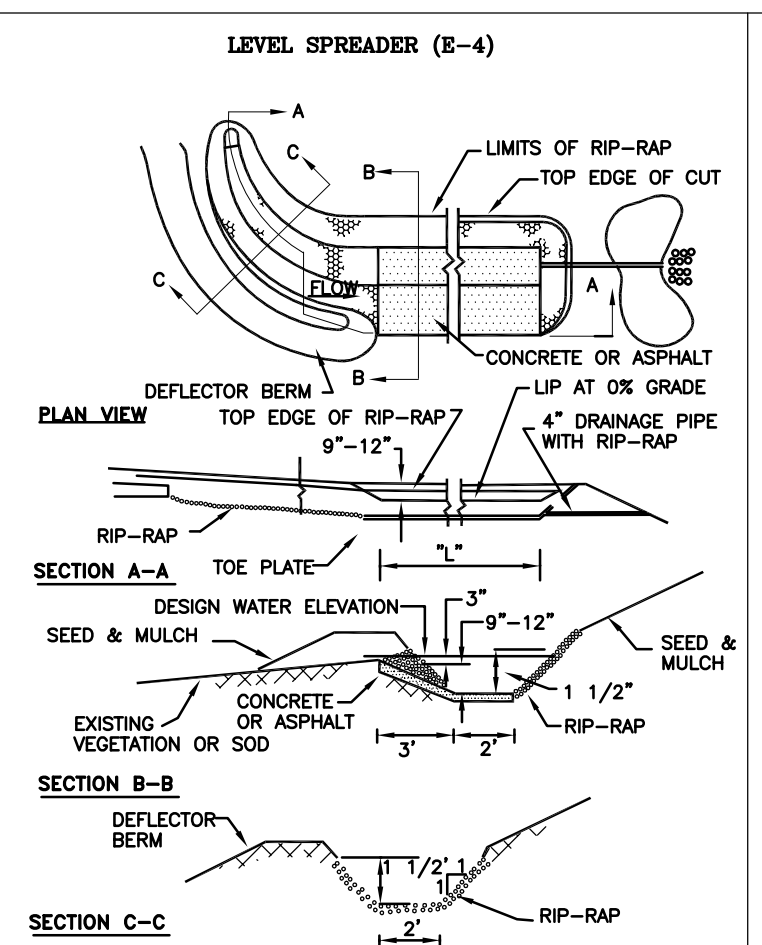
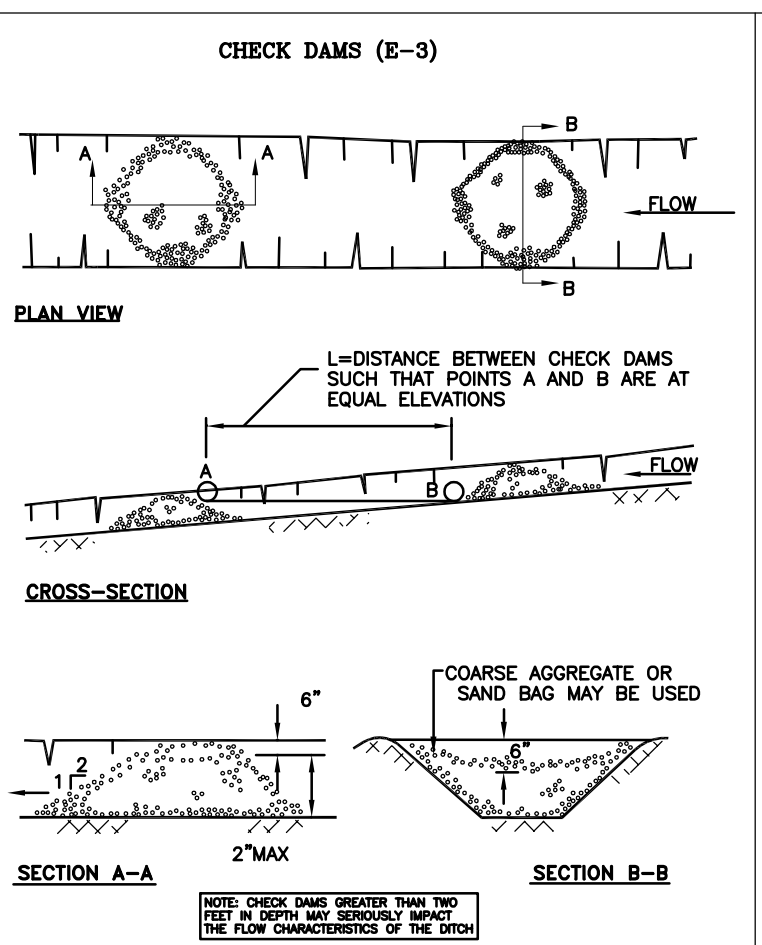
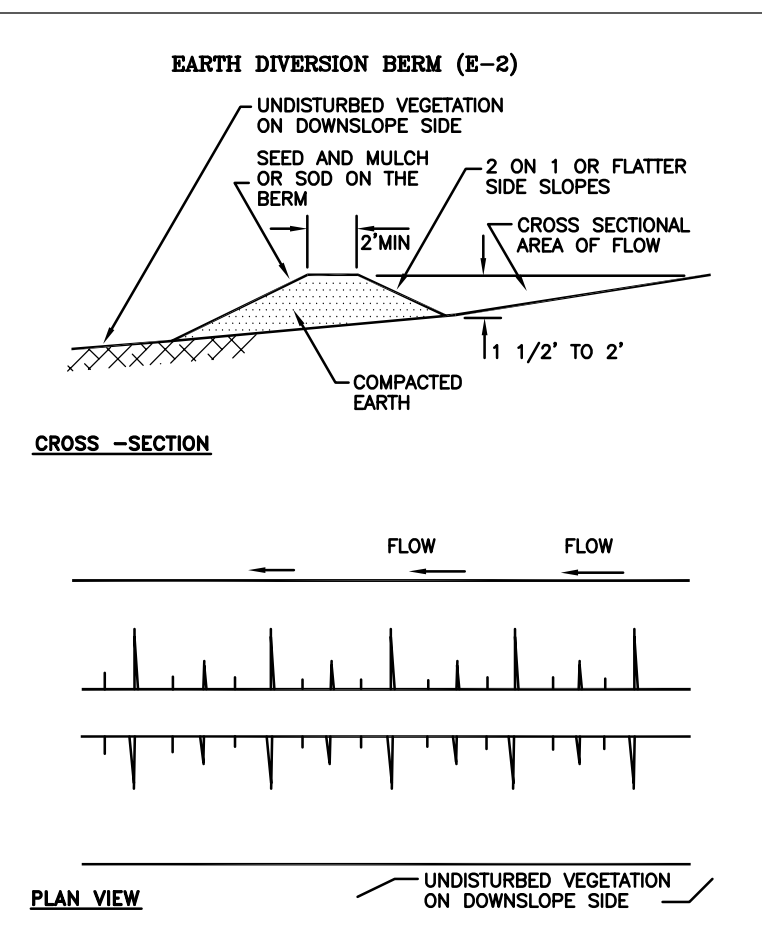
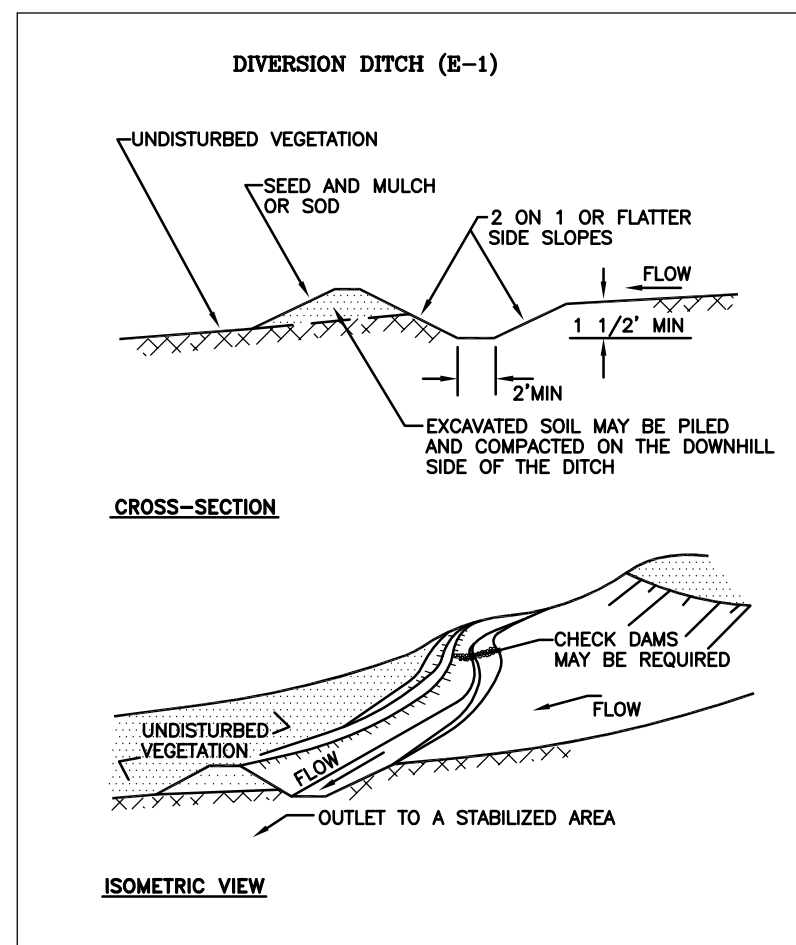
NOTE:
1. WHEN UNSTABLE GROUND CONDITIONS ARE ENCOUNTERED STONE, SLAG OR DRY MIX CONCRETE SHALL BE USED TO BACKFILL THE TRENCH TO A HEIGHT 12" ABOVE THE TOP OF THE SEWER LEAD.

DATE	CADD	ENG. ARCH	PROJ. MGR	SECTION	TOWN	RANGE	COUNTY	CITY/TOWNSHIP	H:	SCALE	V:	JOB #	VERT. DATUM

RULE 323.1703
SOIL EROSION AND SEDIMENTATION CONTROL PLAN REQUIREMENTS.

A PERSON SHALL PREPARE A SOIL EROSION AND SEDIMENTATION CONTROL PLAN FOR ANY EARTH CHANGE IDENTIFIED IN R 323.1704. A PERSON SHALL DESIGN THE PLAN TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND SEDIMENTATION AND SHALL IDENTIFY FACTORS THAT MAY CONTRIBUTE TO SOIL EROSION OR SEDIMENTATION, OR BOTH. THE PLAN SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL OF THE FOLLOWING:

- (A) A MAP OR MAPS AT A SCALE OF NOT MORE THAN 200 FEET TO THE INCH OR AS OTHERWISE DETERMINED BY THE COUNTY OR LOCAL ENFORCING AGENCY. A MAP SHALL INCLUDE A LEGAL DESCRIPTION AND SITE LOCATION SKETCH THAT INCLUDES THE PROXIMITY OF ANY PROPOSED EARTH CHANGE TO LAKES OR STREAMS, OR BOTH; PREDOMINANT LAND FEATURES; AND CONTOUR INTERVALS OR SLOPE DESCRIPTION.
- (B) A SOILS SURVEY OR A WRITTEN DESCRIPTION OF THE SOIL TYPES OF THE EXPOSED LAND AREA CONTEMPLATED FOR THE EARTH CHANGES.
- (C) DETAILS FOR PROPOSED EARTH CHANGES, INCLUDING ALL OF THE FOLLOWING:
 - (i) A DESCRIPTION AND THE LOCATION OF THE PHYSICAL LIMITS OF EACH PROPOSED EARTH CHANGE.
 - (ii) A DESCRIPTION AND THE LOCATION OF ALL EXISTING AND PROPOSED ON-SITE DRAINAGE AND DEWATERING FACILITIES.
 - (iii) THE TIMING SEQUENCE OF EACH PROPOSED EARTH CHANGE.
 - (iv) THE LOCATION AND DESCRIPTION FOR INSTALLING AND REMOVING ALL PROPOSED TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES.
 - (v) A DESCRIPTION AND THE LOCATION OF ALL PROPOSED PERMANENT SOIL EROSION AND SEDIMENTATION MEASURES.
 - (v) A PROGRAM PROPOSAL FOR THE CONTINUED MAINTENANCE OF ALL PERMANENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES THAT REMAIN AFTER PROJECT COMPLETION, INCLUDING THE DESIGNATION OF THE PERSON RESPONSIBLE FOR THE MAINTENANCE. MAINTENANCE RESPONSIBILITIES SHALL BECOME A PART OF ANY SALES OR EXCHANGE AGREEMENT FOR THE LAND ON WHICH THE PERMANENT SOIL EROSION CONTROL MEASURES ARE LOCATED.



REVISIONS:	ISSUE NO.	BID DATE
	B.G. DRN.	DATE
	TOPO DRN.	DESIGN
	PROFILE DRN.	ENG. DRN.
	APPROVED	SCALE
	V:	
	H: NTS	

YPSILANTI TOWNSHIP
TOWNSHIP STANDARD
SOIL EROSION CONTROL DETAILS

ORCHARD, HILTZ & McCLIMENT, INC.

3400 Plymouth Road
Livonia, MI 48150
(734) 522-6711
(734) 522-6427 FAX

CLIENT: YPSILANTI TOWNSHIP