



REGULAR MEETING AGENDA

**Tuesday, September 10, 2024
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 AUGUST 27, 2024, REGULAR MEETING MINUTES
4. APPROVAL OF AGENDA
5. PUBLIC HEARINGS
 - A. **SITE TYPE CHANGE – WHITE WATER CAR WASH – 2675 WASHTENAW AVENUE – PACEL K-11-06-304-004** – TO CONSIDER A SITE TYPE CHANGE FROM “A” TO “C” WITHIN THE RC, REGIONAL CORRIDOR ZONING CLASSIFICATION.
6. OLD BUSINESS
7. NEW BUSINESS
 - A. **SITE TYPE CHANGE – WHITE WATER CAR WASH – 2675 WASHTENAW AVENUE – PACEL K-11-06-304-004** – TO CONSIDER A SITE TYPE CHANGE FROM “A” TO “C” WITHIN THE RC, REGIONAL CORRIDOR ZONING CLASSIFICATION.
 - B. **SPECIAL LAND USE – WHITE WATER CAR WASH – 2675 WASHTENAW AVENUE – PACEL K-11-06-304-004** – TO CONSIDER THE SPECIAL CONDITIONAL USE PERMIT APPLICATION OF EROP, LLC TO PERMIT THE CONSTRUCTION OF A 6,820 SQ. FT. CAR WASH FOR A 1.55-ACRE SITE ZONED RC, REGIONAL CORRIDOR, WITH A PROPOSED SITE TYPE C DESIGNATION.
 - C. **PRELIMINARY SITE PLAN – WHITE WATER CAR WASH – 2675 WASHTENAW AVENUE – PACEL K-11-06-304-004** – TO CONSIDER THE PRELIMINARY SITE PLAN APPLICATION OF EROP, LLC TO PERMIT THE CONSTRUCTION OF A 6,820 SQ. FT. CAR WASH FOR A 1.55-ACRE SITE ZONED RC, REGIONAL CORRIDOR, WITH A PROPOSED SITE TYPE C DESIGNATION.
8. OPEN DISCUSSION FOR ISSUES NOT ON THE AGENDA
 - A. CORRESPONDENCE RECEIVED
 - B. PLANNING COMMISSION MEMBERS
 - C. MEMBERS OF THE AUDIENCE

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

9. TOWNSHIP BOARD REPRESENTATIVE REPORT

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



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

Trustees
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Gloria Peterson
Debbie Swanson
Ryan Hunter

Dear Planning Commission Members,

Please be advised that the minutes for the August 27, 2024, meeting are still in preparation. They will be included in the next Planning Commission packet for your review and approval.

Thank you for your understanding.

Planning Department Report

Project Name: White Water Car Wash

Location: 2675 Washtenaw Avenue, Ypsilanti, MI 48197

Date: 07-01-2024

- | | |
|--|---|
| <input checked="" type="checkbox"/> Full Preliminary Site Plan Review # 2
<input type="checkbox"/> Sketch Preliminary Site Plan Review #
<input type="checkbox"/> Administrative Preliminary Site Plan Review #
<input type="checkbox"/> Detailed Engineering/Final Site Plan Review #
<input checked="" 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
Planning Department	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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See letter dated 06-28-2024
OHM / Stantec	Engineering Consultant	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See letter dated 06-25-2024
Steven Wallgren, Fire Marshal	Township Fire Department	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See letter dated 06-20-2024
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 06-25-2024
Gary Streight, Project Manager	Washtenaw County Road Commission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See email dated 06-27-2024
Theresa Marsik, Stormwater Engineer	Washtenaw County Water Resources Commission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See letter dated 06-12-2024
James Drury, Permit Agent	Michigan Department of Transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Planning Department Recommended Action:

The White Water Car Wash is eligible for Preliminary Site Plan and Special Land Use Consideration by the Planning Commission. This project is scheduled for the Planning Commission meeting on Tuesday, July 23, 2024, for the required Public Hearing and Preliminary Site Plan review. It would be the Planning Department's recommendation that the Planning Commission grant Preliminary Site Plan and Special Land Use approval if the applicant addresses the remaining comments and concerns from Planning & Zoning and outside reviewing agencies.



**Staff Report
White Water Car Wash
2675 Washtenaw Avenue
Preliminary Site Plan and Special Land Use**

September 10, 2024

Applicant: EROP, LLC

Project Name: White-Water Car Wash

Plan Date: June 11, 2024

Location: 2675 Washtenaw Avenue, Ypsilanti, MI 48197, Parcel K-11-06-304-004

Zoning: RC, Regional Corridor with a Site Type A Designation

Action Requested: Preliminary Site Plan & Special Land Use Approval

CASE LOCATION AND SUMMARY

The Office of Community Standards is in receipt of a Preliminary Site Plan and Special Land Use Application from White-Water representative, EROP, LLC, for a proposed 6,820 sq. ft. tunnel car wash with two pay stations and 18 vacuum stations / parking spaces. The parking lot will also offer five (5) employee parking spaces. A Public Hearing to consider the Special Land Use application was conducted at the July 23, 2024, regularly scheduled Planning Commission Meeting.

The subject site is zoned RC, Regional Corridor with a Site Type A Designation. The applicant is requesting that the Planning Commission consider modifying the Regulating Plan, and designating this parcel as a Site Type C, which permits vehicle washes as a Special Land Use. A Public Hearing to consider the change to Site Type C will be considered at this meeting.

On September 4, 2024, the applicant attended a Zoning Board of Appeals meeting to request a variance from the transparency requirements outlined in Article 5 – Sec. 507.E. The transparency percentage on the Washtenaw Avenue façade did not meet the required standard. The ZBA postponed their decision, allowing the applicant to revise their plans. The applicant has since updated their proposal to comply with the transparency requirements, thus a variance is no longer needed.

SUBJECT SITE USE, ZONING AND COMPREHENSIVE PLAN

The Charter Township of Ypsilanti 2040 Master Plan designates this site as Regional Mixed-Use Corridor. 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.

2675 Washtenaw Avenue – Aerial Photograph – 2023



ANALYSIS

The plans have been reviewed by Township Staff and Consultants in accordance with our procedures.

Planning Consultants (Carlisle/Wortman Associates):

Carlisle Wortman Associates, Inc. reviewed the Preliminary Site Plan and Special Land Use submittal and has recommended multiple items to be discussed with the Planning Commission. The discussion items are listed below:



Special Land Use

1. Planning Commission to determine if the project meets the ordinance criteria for Special Land Use approval.

Change in Site Type

1. Planning Commission to evaluate change in the Regulating Plan from Site Type A to Site Type C, per ordinance criteria.
2. Applicant to consider dedicating an easement within the 14-feet of the “future” right-of-way for installation of future streetscape improvements in front of the property.

Natural Features

1. Applicant to provide survey information on existing “protected” trees, and protected trees shown as preserved in resubmission for review at Final Site Plan stage.
2. Planning Commission considers condition of approval that any trees identified as “protected” in tree survey are shown as preserved on the Final Site Plan.
 - a. Stonefield Response: An updated survey has been obtained identifying all protected trees. No protected trees will be removed.

Site Access, Circulation, Traffic

1. Defer site driveway locations to Township Engineer.
 - a. Stonefield Response: Site driveways on Boston Avenue to be reviewed in coordination with the County Road Commission.
2. Applicant confirms that 36’ knee wall is opaque; detail of knee wall added to Final Site Plan.
 - a. Stonefield Response: Noted. Detail to be provided in Final Site Plan.
3. Modify architectural plans to be consistent with opaque knee wall (as specified on Site Plan).
 - a. Stonefield Response: Architectural elevations are consistent with the civil site plan. A decorative fence is proposed overtop the retaining wall along Washtenaw Avenue to meet the streetscape design intent and provide fall protection. The opaque wall is provided along Boston Avenue where the



grade change does not provide the adequate screening. Wall detail to be provided in Final Site Plan.

Screening and Landscaping

1. Add 13 more shrubs to plans along Boston Ave. frontage; or Planning Commission to consider waiving/modifying this standard due to site constraints.
 - a. Stonefield Response: 13 additional shrubs have been added along Boston Avenue to the landscaping plan. See sheet C-9.
2. Planning Commission to consider proposed modification of screening between land uses (or no narrow evergreens).
3. Applicant to consider native alternative to English Laurel.
 - a. Stonefield Response: English Laurel has been replaced with the native species *Ilex verticillata*.

Lighting

1. Planning Commission to consider suggestions that reduce the lighting levels at the vacuum stations to be more consistent with the other areas of the site.

Elevations and Floor Plans

1. Add more glazing on Washtenaw Avenue façade or applicant seeks variance.
 - a. Stonefield Response: Plans on meeting transparency requirements for Washtenaw Avenue façade.

Engineering Consultants (OHM):

The Township Engineer recommended approval in their letter dated June 25, 2024. OHM has provided preliminary detailed engineering comments that will be addressed at the time of Final Site Plan and Detailed Engineering.

Ypsilanti Community Utilities Authority (YCUA):

YCUA reviewing agent Scott Westover has recommended approval in his letter dated June 25, 2024.

Ypsilanti Township Fire Department:

YTFD Fire Marshall Steve Wallgren has recommended approval in a letter dated June 20, 2024.

Washtenaw County Water Resources Commission:

Reviewing agent Theresa Marsik has asked the applicant to address 22 items in a letter dated June 12, 2024.

Washtenaw County Road Commission:



WCRC Project Manager Gary Straight shared comments with the Planning Department on June 27, 2024.

SUGGESTED MOTIONS:

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

Site Type Change:

Motion to Postpone:

“I move to postpone the Site Type change from “A” to “C” at the property located at 2675 Washtenaw Avenue, Ypsilanti, MI 48197, Parcel K-11-06-304-004, to give the applicant time to address the comments made at this evening’s meeting and resubmit, and/or provide additional information, as discussed tonight.”

Motion to Approve:

“I move to approve the Site Type change from “A” to “C” at the property located at 2675 Washtenaw Avenue, Ypsilanti, MI 48197, Parcel K-11-06-304-004,” as the proposal meets the criteria in Article 5, Form Based Districts, of the Zoning Ordinance. This approval only applies to the current development proposal associated with the request for a Site Type Change.

Motion to Deny:

“I move to deny the Site Type change from “A” to “C” at the property located at 2675 Washtenaw Avenue, Ypsilanti, MI 48197, Parcel K-11-06-304-004, for the following reasons:”

1. _____
2. _____
3. _____

Special Land Use:

Motion to Postpone:

“I move to postpone the special land use permit submitted by EROP, LLC to permit the construction of a 6,820 sq. ft. tunnel carwash with two pay stations and 18 vacuum stations at the property located at 2675 Washtenaw Avenue, Ypsilanti, MI 48197, Parcel K-11-06-304-004, to give the applicant time to address the comments made at this



evening’s meeting and resubmit, and/or provide additional information, as discussed tonight.”

Motion to Approve:

“I move to approve the Special Land Use Permit submitted by EROP, LLC to permit the construction of a 6,820 sq. ft. tunnel carwash with two pay stations and 18 vacuum stations at the property located at 2675 Washtenaw Avenue, Ypsilanti, MI 48197, Parcel K-11-06-304-004, as the proposal meets the criteria in Article 10, Special Land Use 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. Any other conditions based upon Planning Commission discussion.

Motion to Deny:

“I move to deny the Special Land Use Permit submitted by EROP, LLC to permit the construction of a 6,820 sq. ft. tunnel carwash with two pay stations and 18 vacuum stations at the property located at 2675 Washtenaw Avenue, Ypsilanti, MI 48197, Parcel K-11-06-304-004, due to the following reasons:”

1. _____
2. _____
3. _____

Preliminary Site Plan:

Motion to Postpone:

“I move to postpone the request for Preliminary Site Plan approval, submitted by EROP, LLC for the construction of a 6,820 sq. ft. tunnel carwash with two pay stations and 18 vacuum stations at the property located at 2675 Washtenaw Avenue, Ypsilanti, MI 48197, Parcel K-11-06-304-004, to give the applicant time to address the comments made at this evening’s meeting and resubmit, and/or provide additional information, as discussed tonight.”

Motion to Approve:

I move to approve the Preliminary Site Plan submitted by EROP, LLC to permit the construction of a 6,820 sq. ft. tunnel carwash with two pay stations and 18 vacuum

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Township Clerk
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— PLANNING & ZONING DEPARTMENT —

Trustees
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stations at the property located at 2675 Washtenaw Avenue, Ypsilanti, MI 48197, Parcel K-11-06-304-004, 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. Any other conditions based upon Planning Commission discussion.

Motion to Deny:

“I move to deny the request for Preliminary Site Plan approval, submitted by EROP, LLC to permit the construction of a 6,820 sq. ft. tunnel carwash with two pay stations and 18 vacuum stations at the property located at 2675 Washtenaw Avenue, Ypsilanti, MI 48197, Parcel K-11-06-304-004, due to the following reasons:”

1. _____
2. _____
3. _____

Respectfully submitted,

Fletcher Reyher

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



Carlisle | Wortman
ASSOCIATES, INC.

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

Date: May 15, 2024

Rev.: June 28, 2024

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

Applicant:	EROP LLC
Project Name:	Whitewater Car Wash
Plan Date:	April 18, 2024
Latest Revision:	June 11, 2024
Location:	South side of Washtenaw Ave., between N. Hewitt and Golfside. Parcel abuts Northlawn Ave. to the south and Boston Ave. to the west.
Zoning:	RC, Regional Corridor – Form Based District
Action Requested:	Preliminary Site Plan and Special Use Approval

PROJECT AND SITE DESCRIPTION

The applicant is proposing to build a 6,820 s.f. tunnel car wash with two pay stations and 18 vacuum stations/parking spaces. The parking lot will also offer five (5) employee parking spaces.

Access to the site occurs off of a side road (Boston Ave.), which has not been fully developed as a public road, and is not a through road between Washtenaw Ave. and Northlawn Ave. to the south. It essentially functions as a shared driveway to this site and the adjacent sites on the west side of the road.

The subject site is zoned RC, Regional Corridor, which is a Form Based District. The site is categorized as a Site Type A on the Regulating Plan. The applicant is requesting that the Planning Commission consider modifying the Regulating Plan, and designating this parcel as a Site Type C, which permits vehicle washes as a Special Land Use. An aerial of the proposed site is shown below.

Benjamin R. Carlisle, President Douglas J. Lewan, Executive Vice President John L. Enos, Vice President
David Scurto, Principal Sally M. Elmiger, Principal R. Donald Wortman, Principal
Paul Montagno, Principal Megan Masson-Minock, Principal Laura Kreps, Senior Associate
Richard K. Carlisle, Past President/Senior Principal

Figure 1: Subject Site



Source: Nearmap (Captured April 8, 2024)

Size of Subject Site:
 1.55 acres (67,384 s.f.)

Current Use of Subject Site:
 Vacant (Previous put-put golf course)

Table 1: Adjacent Zoning and Existing Land Uses

Direction	Zoning	Use
North	North Side of Washtenaw Ave.: RC, Regional Corridor (Form Based District)	Commercial (Auto Repair)
South	South Side of Northlawn Ave.: RM-LD – Multiple Family Low Density	Residential
East	North: RC, Regional Corridor (Form Based District), and South: NB, Neighborhood Business	Commercial (Auto Repair) & Vacant
West	North: RC, Regional Corridor (Form Based District), and South: NB, Neighborhood Business	Commercial (Retail, Restaurant) & Vacant

MASTER PLAN

The site is designated as Regional Mixed Use Corridor. Regional Mixed-Use Corridors are located along the busiest corridors, which support a high volume of both local and regional traffic. This area may include auto-oriented uses that draw customers both regionally and locally. Compared to the Neighborhood Mixed-Use corridors, this area is intended for higher-intensity and the largest scale of commercial development. While an auto wash is not specifically listed in the Master Plan's Regional Corridor description, it does list auto-oriented commercial facilities. An auto wash could be considered consistent with this description, as it could serve the regional market and local neighborhoods.

Applicable design concepts included the Master Plan include:

- *Large parking lots shall be screened landscaped, and provided with pedestrian connections and other design amenities to break up excessive pavement and reduce visual impact of parking areas.*
- *Architectural design must create an interesting visual experience for both sidewalk users and automobiles.*
- *Ensure appropriate transition to adjacent neighborhoods.*

We find that the site design considerations are addressed in the site plan. However, the architectural design does not, in our opinion, create an interesting visual experience for sidewalk users or automobiles. Please see additional comments in the "Floor Plans and Elevations" section of this review.

CHANGE IN SITE TYPE

Sheet C-3 indicates that the applicant would like to change the Site Type under the Form Based Code from Site Type A to Site Type C. A Site Type "A" does not permit a vehicle wash use, nor does it allow a Building Form B (as proposed in this application). If the Site Type were changed to "C," then a vehicle wash could be considered as a Special Land Use, and Building Form B would also be allowed.

Site Types are determined by street orientation, lot size, lot configuration, location, and relationship to neighboring sites. Changing Site Types is a change to the Form Based Regulating Plan (Sec. 502(5)). This change can be reviewed and approved by the Planning Commission after conducting a public hearing.

Descriptions of Site Type A and Site Type C are provided below:

Site Type A:

Site Type A is composed of lots one-half (0.5) acre or smaller and is reserved primarily for residential use and for smaller non-residential use which is compatible with a residential setting. Site Type A is generally located in areas which serve as a transition between the street and neighboring residential areas. Site Type A lots are typically mid-block and not located on a corner. The building form selected for these sites must consider both the front elevation that fronts on the street but also the rear/side elevation that is adjacent to residential in order to maintain compatibility with adjacent uses. These sites are intended for small sized neighborhood residential, commercial/office, or mixed-use sites.

Site Type C:

The sites in Site Type C are mostly larger than one (1) acre in area. Site Type C size and character may vary based on the unique characteristic of each parcel. This category can

include free standing single-use or mixed-use developments that are designed to serve a broader community-wide market. These sites are intended for community commercial/office, multiple family residential, and mixed-use sites.

In considering a Site Type change to the Regulating Plan, Sec. 502(5) states that the Planning Commission shall consider the following criteria. We have listed the criteria below, and provided an evaluation after each:

A. The applicant's property cannot be used for the purpose permitted in the form-based district (In this case, Regional Corridor).

CWA Comments: While we can't confirm that all of the permitted uses allowed on Site Type A are unfeasible on the subject site, the frontage on Washtenaw Ave. makes a vehicle-oriented commercial use logical. However, given the desired character of this corridor, a new vehicle-oriented use would need to be designed so that it "fits" into the mix of pedestrian and vehicular facilities. The relatively small lot size and frontage along Washtenaw Ave. makes it unlikely that a residential use would occupy this site. Lastly, the project is expanding the size of the site so that it meets the "larger than one acre" characteristic of Site Type C.

B. Area has been added to or deleted from the subject property in question, requiring the modification.

CWA Comments: The Regulating Plan only identifies the small portion of this site along Washtenaw Ave. as a Site Type "A." The remaining portion (to the south) is not designated any site type on the Regulating Plan. The proposed project site is 1.55 acres in size, which is consistent with the size range in Site Type C.

C. The proposed modification and resulting development will not alter the essential character of the area.

CWA Comments: The business to the east (R&J Auto Repair) has vehicle parking in front of the building, and the building is setback relatively far from Washtenaw Ave. (approx. 100 feet). The building to the west (Fish Doctor's Aquarium Shop) is located closer to Washtenaw Ave. (approx. 30 feet), and has one parking space in front of the building. Two other nearby buildings (Wendy's to west and Taco Bell to east) are both set back approximately 45 feet from the front property line, and don't have parking directly in front of the building.

The Form Based Code design standards bring buildings closer to the road and sidewalk, and eliminate parking in front to give more emphasis to pedestrian facilities and comfort. The proposed site plan locates the front of the building 10-feet from the "future" Washtenaw Ave. right-of-way line, and does not locate any vehicular parking or maneuvering in front of the building. This layout of this site will alter the existing character of the area, but in a positive way by helping to establish the character envisioned by the Form Based Code.

D. The proposed modification meets the intent of the district.

CWA Comments: The intent of the Regional Corridor District is described as follows:

Regional: 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.

This site is located along one of the larger corridors in the Township. The vehicle wash is an auto-oriented use that would draw both local and regional customers.

E. Existing streets have been improved and/or new streets constructed that may result in the modification of a specific site type.

CWA Comments: As part of this project, Boston Ave. will be improved, as shown on the plans. In their most recent narrative, the applicant states that the Road Commission will retain jurisdiction over Boston Ave., and that any improvements to this road will be made to the Road Commission's standards. We consider the access to this site from Boston Ave. beneficial, as this use will not require another curb-cut along Washtenaw Ave.

F. Modification to the Regulating Plan is in conformance to the Master Plan and Placemaking Plan.

CWA Comments: As described in the "Master Plan" section in this review, we consider the proposed use to be consistent with the Regional Mixed-Use Corridor designation.

The "Reimagine Washtenaw Corridor Improvement Study" (or placemaking plan for Washtenaw Ave.) includes a Future Public Access Plan showing planned future right-of-way widths along Washtenaw Ave. On the Future Public Access Plan, the future right-of-way in front of this site is shown as 108-foot wide. The most recent site plan identifies the "future" right-of-way line, and sets the building back 10-feet from this line. Another part of the Improvement Study is to install wider sidewalks along this side of Washtenaw, in front of this property. The site plans show installation of an 8-foot-wide sidewalk in the "future" right-of-way (or the additional 14-feet along Washtenaw Ave.). For future planning and improvements, would the applicant be willing to dedicate a public sidewalk easement for the 14-feet to the Township for streetscape improvements in the future?

We find the proposal meets the criteria to modify the Regulating Plan from Site Type A to Site Type C, with the outstanding issues mentioned here to be addressed.

Items to be Addressed: 1) Planning Commission to evaluate change in Regulating Plan from Site Type A to Site Type C, per ordinance criteria. 2) Applicant to consider dedicating an easement within the 14-feet of the "future" right-of-way for installation of future streetscape improvements in front of the property.

NATURAL FEATURES

Topography: The site was previously used as a put-put golf course, and was fully graded to accommodate this use with artificial hills and water features. The existing parking lot at the back of the site slopes down from north to south into a swale along Northlawn Ave.

The proposed grading will work with the existing topography, and grade the site from Washtenaw Ave. on the north end, to a rain garden and underground stormwater chamber system on the south end of the site. However, given the length of the building (190 feet long), the design installs a 3-foot tall retaining wall, with a 36" high knee wall on top along the north and west side of the vehicle lanes into the car wash building.

Woodlands:

Our previous review memo asked the applicant to confirm that the existing trees (shown on the aerial photograph of the site) do not meet the minimum size to be classified as “protected” trees by the ordinance. The applicant’s response memo states that if any “protected” trees are identified by a surveyor, then they will remain and be protected. The details about the trees will be provided with the next submission. If protected trees are not being disturbed by the project, then there will not be any mitigation requirements. We will evaluate the new survey information once provided. The Planning Commission could consider conditioning any approval on any trees identified as “protected” to be preserved and this is reflected on the Final Site Plan.

Items to be Addressed: 1) Applicant to provide survey information on existing “protected” trees, and protected trees shown as preserved in resubmission for review at Final Site Plan stage. 2) Planning Commission considers condition of approval that any trees identified as “protected” in tree survey are shown as preserved on the Final Site Plan.

AREA, WIDTH, HEIGHT, SETBACKS

The remainder of this review assumes a Site Type C, with Building Form B.

Table 2. Bulk Requirements

	Required / Allowed	Provided	Complies with Ordinance
Min. Lot Area	Site Type C: Larger than 1 acre	67,384 s.f. (1.55 ac.)	Complies
Front Build-to-Line (Washtenaw Ave.)	10-foot to 30-foot build-to-line; 75% of the building must meet the required build-to line.	Building located 10 feet from the “Future” Washtenaw Ave. ROW.	Complies
Side Setback – East Property Line	5 feet	5 feet	Building Complies
Side Setback – West Property Line	5 feet	44.6 feet	Building Complies
Rear Setback	10 feet	230.6 feet	Building Complies
Impervious Surface	80% maximum	56%	Complies
Building Height	Minimum: 1 story/14 feet Maximum: 3 stories/ 38 feet	1 story Building: 18 feet Parapet: 29 feet	Complies See Below

	Required / Allowed	Provided	Complies with Ordinance
Parking	Located in side or rear yard; if abutting a required “build-to” line, screened with a minimum 30-inch masonry wall on the required build-to line, or within 5 feet of the required building line.	Parking is located in the rear yard.	Complies

Table 3. Bulk Requirements for Vehicle Wash Operations

Requirements of 1129, Specific Use Provisions for Vehicle Wash Operations			
	Required / Allowed	Provided	Complies with Ordinance
Min. Front Yard	50 feet; however, the Form Based Code requirements supersede this requirement	10 feet	Complies
Wash facilities within completely enclosed building	--	--	Complies
Vacuuming and drying areas may be outside, but no closer than 25-feet from residential district	25-feet from south property line (along Northlawn Ave.)	96.7 feet	Complies
Stacking/Parking complies with Sec. 1205 and 1118	See Parking Section of this review		
Stacking/Parking hard-surfaced and dust free	--	Proposing concrete pavement	Complies

Building Height

When measuring the building height dimension using the ordinance definitions, this building is 18-feet tall. The front parapet is an additional 12-feet above the roof. This tall parapet will span the front façade, and wrap the east and west sides for approximately 24-feet. The building height is much taller than the two properties to the west, and the vehicle repair building to the east; however, it appears to be consistent with the new Taco Bell restaurant further east. The building height complies with the ordinance. Also, given the width of Washtenaw Ave., the added height will coordinate better with this large corridor.

Items to be Addressed: None.

PARKING, LOADING

The ordinance requires a vehicle wash use to meet the minimum parking space requirement in Sec. 1205, *Access, Parking and Loading Requirements*, as well as the drive-through requirements in Sec. 1118, *Drive-In and Drive-Through Facilities*.

Table 4. Parking and Stacking Spaces

Requirements	Required	Provided	Complies with Ordinance
Parking Spaces	1 space for each employee or 5 employees = 5 spaces	5 spaces	Complies
Stacking Spaces	Entry per lane: 8 spaces Exit per lane: 2 spaces	West Entry Lane: 9 spaces East Entry Lane: 7 spaces Exit: 2	See Below
Stacking Space Dimensions	12' x 20'	10' x 15'	See Below
Barrier-Free Spaces	2 spaces	2 spaces	Complies
Loading spaces	1 space	0 spaces	See Below
Bicycle parking	2 spaces	4 spaces	Complies

Stacking Spaces

The vehicle symbols shown on the plans have lengthened to 20-feet long in the stacking lanes, meeting this requirement. are only 15-feet long, while a stacking space minimum is 20-feet long. The stacking lanes are approximately 140-feet long before cars must make the turn into the wash tunnel. The west lane accommodates nine (9), 20-foot-long stacking spaces, and the east lane accommodates seven (7), 20-foot-long stacking spaces. Given that the total of the two lanes accommodates 16 stacking spaces we think the project meets ordinance requirements.

Also, the ordinance requires stacking spaces to be 12-feet wide. The proposed stacking lanes have been widened to 12 to 14-feet wide, meeting this requirement.

Parking Lot Design

The proposed employee parking spaces meet the dimensional requirements in the ordinance. The proposed vacuum stations exceed the minimum width by 4-feet, giving users enough space to keep their doors open to vacuum the inside. Maneuvering lanes in the parking/vacuum station area also meet ordinance requirements.

Loading Space

One 10' x 25' loading space has been added to the plans, directly behind the back end of the building at the second overhead exit door. The applicant's narrative states that a box-type truck or Amazon van will deliver materials to the site. Sheet C-13, *Truck Turning Analysis*, shows that this type of vehicle will be able to maneuver and fit into the proposed loading zone.

Items to be Addressed: None.

SITE ACCESS, CIRCULATION, TRAFFIC

Boston Ave. – Public Road Right-of-Way

As mentioned above, the applicant states that the Road Commission will retain jurisdiction of Boston Ave. as a public road. Boston Ave. currently serves the subject site and the three parcels on the west side of the street. The plans show improvements to this roadway, up to the southerly access driveway on the subject site. These improvements will be evaluated by the Road Commission during Final Site Plan review.

Stacking Lanes

Vehicles for this use enter the car wash stacking lanes from a two-way driveway off of Boston Ave. Given that the site driveway is off of this side road vs. Washtenaw Ave., stacking will not interfere with traffic on Washtenaw. We defer the location of this driveway to the Township Engineer.

Vehicles stack into two lanes, which are located on the west side of the site. Sec. 1118 states that multi-lane drive-throughs shall be located in a manner that will be the least visible from a public thoroughfare. Building Form B standards (Sec. 503(4), Building Form Types) also states that parking abutting the required build-to line adjacent to the right-of-way shall be screened with a minimum 30" tall masonry wall, and landscape treatment added between the wall and build-to line. The site plan shows a 36" tall knee (screen) wall along the property lines abutting Boston Ave. and Washtenaw Ave., meeting this requirement. We assume that the applicant is proposing an opaque, masonry knee wall that will screen the drive-through lanes. The applicant should confirm this, and add details of the knee wall to the Final Site plan. Also, the architectural plans show a metal railing (vs. "knee wall") that will not obstruct views of the stacking lanes from the road or sidewalk. The architectural plans should be modified to include the 36" knee wall specified on the site plan.

The location of the lanes does not interfere with vehicular circulation on the rest of the site, or parking maneuvers. There is an "escape" lane just to the east of the stacking lanes that would allow a car to exit the wash building before being washed. We consider this circulation system acceptable.

Vacuum Station Access

A second driveway allowing vehicles into and out of the site is located further south. This driveway allows customers to enter the site and use the vacuum stations only. It also allows washed vehicles to exit the site. If a person vacuums their car first, they need to exit the site, and re-enter using the southerly driveway. We aren't concerned about these maneuvers given that Boston Ave. will most likely have very low traffic. We defer the location of this second driveway to the Township Engineer.

Sidewalks

The plans show an 8-foot-wide sidewalk along Washtenaw Ave., 13-feet from the curb. As requested, the safety path location was shifted away from the curb. See our comments below regarding a landscaped separation between the safety path and curb/travel lanes, for a more consistent design along the street.

The Form Based Districts require pedestrian pathways between the site and the road right-of-way. Stairs have been added between the safety path along Washtenaw Ave. and the pedestrian access door on the west side (near the front) of the building.

Items to be Addressed: 1) Defer site driveway locations to Township Engineer. 2) Applicant confirms that 36" knee wall is opaque; detail of wall added to Final Site Plan. 3) Modify architectural plans to be consistent with opaque knee wall (as specified on Site Plan).

SCREENING & LANDSCAPING

Table 5. Landscaping

	Required	Provided	Complies with Ordinance
General Landscaping: <ul style="list-style-type: none"> • 1 tree per 1,000 s.f. lawn • 1 shrub per 500 s.f. lawn 	5,276 s.f. lawn = 6 trees and 11 shrubs	6 trees and 11 shrubs	Complies
Street Yard Landscaping: <ul style="list-style-type: none"> • 1 large deciduous tree per 40 l.f. of frontage • 1 ornamental tree per 100 l.f. of frontage • 1 shrub per 10 l.f. of frontage 	<u>Washtenaw Ave.:</u> 107 L.F. / 40 = 3 trees 107 l.f. / 100 = 1 ornamental tree 107 l.f. / 10 = 11 shrubs <u>Boston Ave.:</u> 295 l.f. / 40 = 8 trees 295 l.f. / 100 = 3 ornamental trees l.f. / 10 = 30 shrubs	<u>Washtenaw Ave.:</u> 3 trees 1 ornamental tree 17 shrubs <u>Boston Ave.:</u> 8 trees 3 ornamental trees 17 shrubs on top side of retaining wall	Complies with Trees Complies with Ornamental Trees Deficient by 13 shrubs See Below
Parking Lot Landscaping: <ul style="list-style-type: none"> • 1 large deciduous tree per 2,000 s.f. of pavement • 1 large deciduous tree per 40 l.f. of parking lot perimeter 	24,709 s.f. / 2,000 s.f. = 12 interior trees 747 l.f. / 40 = 19 perimeter trees	12 interior trees and 19 perimeter trees	Complies
Stormwater Basin Landscaping: 1 tree and 10 shrubs per 50 feet of basin perimeter	278 l.f. / 50 = 6 trees and 56 shrubs	6 trees and 56 shrubs	Complies
Screening Between Land Uses: 1 lg. evergreen per 10 l.f. and 1 narrow evergreen 3 l.f. for screening between an automotive use and residential use	176 l.f. / 10 = 18 lg. evergreen trees and 176 l.f. / 3 = 59 narrow evergreen trees	18 lg. evergreen trees and 0 narrow evergreen trees	Deficient by 59 narrow evergreen trees See Below

Street Yard Landscaping – Boston Ave.

The purpose of this requirement is to beautify the site along road frontages, and create a more “pedestrian-friendly” atmosphere. Because there is a retaining wall along a portion of this frontage, plants installed on the “low” side of the wall will not accomplish the goals of this requirement. There are no plantings along the “top” side of the retaining wall along the Boston Ave. frontage. There is space on the top side of the retaining wall (on west side of the knee wall) to plant shrubs. Shrubs could also be planted in the lawn area between the two site access driveways. Note that the ordinance allows the Planning Commission to waive this standard where site constraints make conformance unreasonable.

Parking Lot Islands

Sec. 1301(3)(D) requires the following:

- 1) There shall be no more than twelve (12) parking spaces in a row without a landscape break. The plans comply with this requirement.
- 2) Parking lot end islands shall be a minimum of five (5) feet wide, and provided at the intersection of any parking aisles. The islands are the minimum dimensions, and their location complies with the ordinance.

Screening Between Land Uses

The project is an “automotive” use next to a residential use, requiring a Type 3 screen. The plans show one row of large evergreen trees along the southern boundary, and do not show any narrow evergreen trees. The Planning Commission may modify the requirements in the ordinance, where the intent of this Section can be met through reasonable alternatives. The Planning Commission will need to consider the proposed modification.

Plant Material

- 1) The shrub ‘Otto Luyken’ English Laurel has poisonous berries, and can be fatal if eaten (source: ivasiveplantatlas.org). We would suggest a native alternative of ‘Gro-Low’ Sumac that doesn’t have this characteristic, and is very hardy, tolerating urban conditions.

Trash and Recycling Containers

The dumpster is located in a “front” yard along Boston Ave. The ordinance prohibits locating a dumpster in a “required” front yard. Because this is a form-based district, the “required” front yard is 10-feet-wide. The dumpster screen is more than 20-feet from the Boston Ave. right-of-way. The landscape plan shows that the screen itself will be shielded from view of the south and west properties with landscaping.

The dumpster screen detail (shown on Sheet C-15) will be a three-sided, 6-foot-tall masonry screen made of CMU block with a brick veneer that matches the building. The gate will be made of metal.

Items to be Addressed: 1) Add 13 more shrubs to plans along Boston Ave. frontage; or Planning Commission to consider waiving/modifying this standard due to site constraints. 2) Planning Commission to consider proposed modification of screening between land uses (or no narrow evergreens). 3) Applicant to consider native alternative to English Laurel.

LIGHTING

The applicant is proposing to install six (6) single-luminaire pole-mounted fixtures, and one, double-luminaire pole-mounted fixture as site lighting. The building will be illuminated with two types of building-mounted fixtures. Lastly, the vacuum stations will have linear luminaires on the vacuums. We have the following comments:

Pole-Mounted Fixtures:

These fixtures are downward facing, and shielded. They are within the 18-foot tall height maximum.

Building-Mounted Fixtures:

These fixtures are also downward facing. However, there are 9 luminaires along the west side of the building, and 3 luminaires along the south side of the building. The applicant should confirm that these lights are only provided for security, and not to attract attention to the use. The housing around the light source will shield the light and help to direct it downward on the site.

Linear Luminaires

The “linear luminaire” is used on all 18 vacuum stations, plus there are 5 additional luminaires on the ends of the vacuum stations. An illustration of what this looks like from the manufacturer’s website is provided below:



Source: ggled.net

While the footcandle readings in the vacuum station area are within the 20-footcandle maximum, the light levels in this part of the site are substantially greater than the lighting in any other area of the site. Also, the vacuum stations are at the rear of the site, directly across the street from the residential neighborhood. We have the following comments:

- 1) On the lighting plan, linear luminaires are not proposed in the seven (7) vacuum stations along the east property line.
- 2) Lighting intended to attract attention to the use and not strictly for security purposes are prohibited. This approach to lighting the vacuum stations is most likely a typical “corporate” approach. However, the same result could be accomplished with a few overhead light fixtures. Since the vacuum stations are at the rear of the property, and will not be clearly visible from Washtenaw Ave., is it necessary to use the linear light fixtures for this site, given the possibility that they will be disturbing to neighbors?
- 2) If the linear fixtures cannot be replaced by less intrusive lighting, we suggest the possibility of removing a linear light from every other vacuum station. This way, there would only be nine (9) linear lights vs. 18, which should reduce the lighting levels so that they are not so much brighter than the surrounding area.

- 3) As requested, the applicant states that the vacuum lighting will be turned off within one hour of closing (lights off by 9pm). The lighting plan notes that all site lighting will be turned off by 9pm.

Items to be Addressed: 1) Planning Commission to consider suggestions that reduce the lighting levels at the vacuum stations to be more consistent with the other areas of the site.

ELEVATIONS AND FLOOR PLANS

Elevations and floor plans have been provided.

The floor plans show one car wash tunnel on the east side of the building. The west side of the building is occupied by two small rooms (assuming office and storage), a restroom, and an equipment area. The front, open portion of the building will accommodate vehicles making the turn into the wash tunnel.

Façade Variation:

The Form Based District architectural standards require façade variation. As requested, a color rendering has been provided.

Elevations are comprised of the following material, and help to provide façade variation as follows:

- All elevations will receive architectural concrete brick, with a pre-cast concrete horizontal sill on the east and west elevations. The sill is consistently 4-feet from grade along the east/west elevations, until the change in grade at the front of the building. The applicant's response memo and color rendering show that the sill will divide different color brick along the façades, and help to provides relief from the expanse of these long facades.
- Pillar details on all elevations provide a vertical façade articulation.
- The parapet detail on the front of the building with decorative metal panels below and EFIS cornice above identifies the "front" of the building, and provides a more prominent feature along the road. The parapet detail contains wall signs on north, east and west elevations.
- Windows and aluminum canopies over windows are provided on the west elevation as an architectural detail. The windows will be visible from Washtenaw Ave., breaking up the expanse of the west wall.
- Windows are also proposed along the east facade, which will be visible from Washtenaw Ave. This helps to break up this façade as well.

Transparency:

First floors of buildings facing a ROW are required to provide 50% transparency, and 30% along facades facing a side street or parking area.

- The façade facing Washtenaw Ave. (or "front elevation") has changed because the building is now approximately 3-feet below the Washtenaw Ave. grade. As described above, lowering this long building at the front was necessary to meet the existing grade at the rear of the site. Therefore, the windows facing Washtenaw Ave. have been significantly reduced in size. In comparison to the EFIS "tower" detail, these windows are very small, and the EFIS feature is out of proportion. Is it possible to replace the decorative metal panels with windows, so that the two features (windows and EFIS) relate better to each other?

- The first floor elevation is proposed at 444 s.f., which would require 222 s.f. of window glazing on this elevation. The proposal shows approximately 54 s.f. of window glazing. Either more glazing needs to be added to this façade, or the applicant seeks a variance.

Items to be Addressed: 1) Add more glazing to Washtenaw Ave. façade or applicant seeks a variance.

SPECIAL USE

In the Regional Corridor District, a vehicle wash requires a special use. Standards for Special Use review are set forth in Section 1003. 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 this Ordinance. The Planning Commission shall find and report adequate data, information, and evidence showing that the proposed use meets all required standards:

1. Will be harmonious, and in accordance with the objectives, intent, and purpose of this Ordinance.
2. Will be compatible with the 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.

To confirm that the proposal meets the standard that the use is not disturbing to the existing residential neighbors, we asked the applicant to provide the following information. The response memo provides requested information, as listed below:

1. Proposed hours of operation are 7:30am – 8:00pm daily.
2. Will vacuums be available when the car wash tunnel is closed for the night? The response states that vacuums will only be available during their regular hours of operation.
3. Applicant's response to linear lighting concerns raised in this review. The plans have not been modified from our previous review. In summary, the response memo states that higher light levels provide value and safety to customers, and that the southern portion of the site is densely screened from residential neighbors. They also state that all site lighting will be turned off by 9pm each night.

Regarding the other criteria, we find that the standards have been met. Our comments regarding how this proposal compares to the remaining Special Land Use standards follow:

- Washtenaw Ave. is designated as a Regional Corridor, intended to support a high volume of both local and regional traffic. This corridor type accommodates large national chains and auto-oriented uses that draw customers both regionally and locally. The proposed use is consistent with the intent of this district.
- The proposed use of the site as a vehicle wash can serve both the regional market, but also local neighborhoods, making this use consistent with the Master Plan.

- The project will redevelop the site, including sidewalk installation along the Washtenaw Ave. road frontage, landscaping, and lighting.
- With utility and other improvements, the site can adequately be served with public facilities and services
- The development of this site will not be detrimental to the future use and development of the corridor.

Items to be Addressed: 1) *Planning Commission to determine if project meets the ordinance criteria for Special Land Use approval.*

RECOMMENDATIONS

The proposal, as presented, will require one variance for front façade glazing, unless the façade design can be modified to meet the 50% glazing requirement. The Planning Commission will need to determine if the project meets the criteria for a Regulating Plan change (from Site Type A to Site Type C), and a Special Land Use. Also, the ordinance allows the Planning Commission to waive or modify several requirements, based on the existing site constraints. A summary of possible waivers/modifications and our comments is below.

Special Land Use

- 1) *Planning Commission to determine if project meets the ordinance criteria for Special Land Use approval.*

Change in Site Type

- 1) *Planning Commission to evaluate change in Regulating Plan from Site Type A to Site Type C, per ordinance criteria.*
- 2) *Applicant to consider dedicating an easement within the 14-feet of the “future” right-of-way for installation of future streetscape improvements in front of the property.*

Natural Features

- 1) *Applicant to provide survey information on existing “protected” trees, and protected trees shown as preserved in resubmission for review at Final Site Plan stage.*
- 2) *Planning Commission considers condition of approval that any trees identified as “protected” in tree survey are shown as preserved on the Final Site Plan.*

Site Access, Circulation, Traffic

- 1) *Defer site driveway locations to Township Engineer.*
- 2) *Applicant confirms that 36” knee wall is opaque; detail of knee wall added to Final Site Plan.*
- 3) *Modify architectural plans to be consistent with opaque knee wall (as specified on Site Plan).*

Screening and Landscaping

- 1) *Add 13 more shrubs to plans along Boston Ave. frontage; or Planning Commission to consider waiving/modifying this standard due to site constraints.*
- 2) *Planning Commission to consider proposed modification of screening between land uses (or no narrow evergreens).*
- 3) *Applicant to consider native alternative to English Laurel.*

Whitewater Car Wash
June 28, 2024

Lighting

- 1) *Planning Commission to consider suggestions that reduce the lighting levels at the vacuum stations to be more consistent with the other areas of the site.*

Elevations and Floor Plans

- 1) *Add more glazing to Washtenaw Ave. façade or applicant seeks a variance.*



CARLISLE/WORTMAN ASSOC., INC.

Benjamin R. Carlisle, AICP, LEED AP

Principal



June 25, 2024

Mr. Fletcher Reyher
Township Planning and Development Coordinator
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: White Water Car Wash
Site Plan Review #2

Dear Mr. Reyher:

We have completed the second site plan review of the plans dated February 7, 2024, with a latest revision date of June 11, 2024, and stamped received by OHM advisors on June 11, 2024.

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.

A brief description of the project has been provided below, followed by our comments and a list of anticipated required permits and approvals. 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 6,820 square-foot, one-story, tunnel car wash at 2675 Washtenaw Avenue. Associated parking, including 18 vacuum spaces and 5 employee spaces, and landscaping improvements are also being proposed.

The site will be serviced by connection to the existing water main and sanitary sewer within Boston Avenue, to the west of the site. Stormwater runoff will be managed by a new underground conveyance system to an underground detention basin and an above ground bioretention basin.

B. SITE PLAN COMMENTS

Utilities

1. The applicant shall provide the location of the existing water main they're proposing to connect to on the plans for reference. This office defers to YCUA on the review and approval of all water and sewer improvements.
2. The applicant shall note that trees shall not be placed directly above any existing or proposed utilities (water, sanitary, storm). It is recommended that the applicant relocate the proposed tree near the southwest corner of the car wash for ease of potential future maintenance with the nearby sanitary sewer service.



Stormwater Management

3. The applicant shall address the following regarding the Stormwater Calculations (Sheet C-18) and review and revise all calculations as needed:
 - a. Verify the Peak of the Unit Hydrograph value in Worksheet 10, as it appears the incorrect time of concentration is being used. Note that the time of concentration should be in hours.
 - b. Verify the Total Required Detention Volume in Worksheet 13.

C. PRELIMINARY DETAILED ENGINEERING 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 barrier-free parking spaces, access aisles, ramps, and level landings, as well as along both sides of all proposed sidewalk at 50-foot intervals. The applicant shall note that the cross-slope shall not exceed 2%, per ADA Standards.
2. The applicant shall provide a receiving ramp on the west side of Boston Avenue, per ADA Standards. The applicant noted in their response letter, dated June 11, 2024, that this would be within private property, and they will obtain permission from the adjacent landowner for construction.
3. The applicant shall provide structural calculations for all proposed retaining/knee walls that exceed two (2) feet in height, per Township Standards.
4. The applicant noted in their response letter, dated June 11, 2024, that they have requested the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to confirm the presence of any wetlands on-site as there appears to be a discrepancy between the National Wetlands Mapper/EGLE Wetlands Mapper and the Washtenaw County GIS. If wetlands are not present on-site, the applicant shall provide correspondence from EGLE with the next submittal for the project file. If wetlands are present on-site, the applicant shall provide all wetland boundaries on the plans for reference and note that review and permitting may be required by EGLE.
5. The applicant shall provide a stormwater narrative on the plans clarifying how the proposed stormwater runoff will be managed, as well as the ultimate outlet.
6. The applicant shall provide a Certificate of Outlet, signed and sealed by a registered engineer in the State of Michigan, on the plans.
7. The applicant shall label the existing Ypsilanti Township #02 County Drain and its easement limits (if applicable) on every plan sheet it's depicted as it does not appear to have been labeled.
8. The applicant shall provide a maintenance schedule for all proposed 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.
9. The applicant shall adjust the Drainage Area callouts (Sheet C-6) as one of them is currently cutoff.
10. The applicant shall verify the ground/rim elevation of Structure EX-1 as there appears to be a discrepancy between the profile view (Sheet C-17) and the plan view (Sheet C-5).
11. The applicant shall verify the NE invert of storm sewer manhole I1 as there appears to be a discrepancy between the Invert Table and the plan view (Sheet C-5). The applicant shall also label the structures provided in the Invert Table on the plan view and remove the structures from the Invert Table that aren't shown on the plans for clarity.
12. The applicant shall provide the location of all curb stop boxes and gate valves on the plans. The applicant shall note that curb stop boxes shall be provided within the green space where possible.
13. The applicant shall provide the size of all existing utilities (water, sanitary, storm) on the plans.
14. The applicant shall adjust the inlet filter callout near the southwest corner of the proposed car wash.
15. The applicant shall provide a quantity list for all proposed utilities (water, sanitary, storm) on the Cover Sheet, delineated by existing or proposed road right-of-way or easement, 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 all water main and sanitary sewer improvements is required.
- ▶ **Ypsilanti Township Fire Department:** Review and approval is required.
- ▶ **Washtenaw County Water Resources Commissioner's Office (WCWRC):** Review and approval is required. A drain-use permit will be required for the proposed outlet to the County Drain.
- ▶ **Michigan Department of Transportation (MDOT):** Review, approval, and permitting is required for all proposed work within the Washtenaw Avenue ROW. MDOT is currently doing a PEL Study along Washtenaw Avenue, and the "Future ROW" may or may not be needed by MDOT. Additional improvements as a result of the Study may be required along the frontage.
- ▶ **Washtenaw County Road Commission (WCRC):** Review and approval of all work proposed within the Boston Ave ROW is 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.
- ▶ **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.

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

Sincerely,
OHM Advisors



Stacie L. Monte



Matthew D. Parks, P.E.

SLM/MDP/mh

cc: Doug Winters, Township Attorney
Steven Wallgren, Township Fire Marshall
Scott Westover, P.E., YCUA
File

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CHARTER TOWNSHIP OF YPSILANTI FIRE DEPARTMENT BUREAU OF FIRE PREVENTION

222 South Ford Boulevard, Ypsilanti, MI 48198



June 20, 2024

Fletcher Reyher, development coordinator
Charter Township of Ypsilanti
7200 S. Huron River Drive
Ypsilanti, MI 48197

RE: Preliminary (non-residential) Site Plan Review #2

Project Name:	Whitewater Car Wash
Project Location:	2675 Washtenaw Ave. Ypsilanti, MI 48197
Plan revision Date:	6/11/2024
Project ID:	DET-230108.01
Engineering:	Stonefield Engineering & design
Architects Address:	607 Shelby Suite 200, Detroit, MI 48226
Applicable Codes:	IFC 2018

Status of Review

Status of review: Approved as Submitted

Site Coverage - Hydrants

Comments: Proposed Hydrant coverage is acceptable.

Site Coverage - Access

Comments: Turning templates provided on C-12 are acceptable.

Sincerely,

A handwritten signature in black ink that reads "Steve Wallgren". The signature is fluid and cursive.

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



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YPSILANTI COMMUNITY UTILITIES AUTHORITY

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

June 25, 2024

VIA ELECTRONIC MAIL

Mr. Fletcher Reyher, Planning and Development Coordinator
Office of Community Standards
CHARTER TOWNSHIP OF YPSILANTI
7200 S. Huron River Drive
Ypsilanti, MI 48197

Re: Preliminary (non-residential) Site Plan Review #1
White Water Car Wash
Charter Township of Ypsilanti (Plan Date: 06-11-2024)

Dear Mr. Reyher:

In response to the electronic mail message from your office dated June 11, 2024, we have reviewed both the referenced plans with regards to water supply and wastewater system design. The plans are acceptable to YCUA.

As noted in the May 14, 2024, letter from this office, connection fees apply to the proposed development. Please note that the total cash price for connection fees, **\$32,859.50 plus the construction phase escrow deposit, YCUA administration fee, and record plan guarantee**, must be paid to YCUA 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,



SCDW Digital Signature

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

Enclosure as noted

cc: Mr. Luke Blackburn, Mr. Sean Knapp, File, YCUA
Mr. Steve Wallgren, Township Fire Department
Mr. Matt Parks, P.E., Ms. Stacie Monte, Township Engineer
Mr. Jeff Justice, Applicant
Mr. Jonathon Cooksey, P.E., Applicant's design engineer

Mr. Fletcher Reyher
CHARTER TOWNSHIP OF YPSILANTI
June 25, 2024
Page 2

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Whitewater Car Wash - Preliminary Plan

SG

Streight, Gary <streightg@wcroads.org>

To: Fletcher Reyher

Cc: Lawrence, Callie <lawrencec@wcroads.org>

☺ ↶ ↷ ↲ ⋮
Thu 6/27/2024 3:11 PM

Fletcher,

The WCRC does not have an issue with the proposed car wash located on Boston Ave. We will require the submittal of a commercial drive permit application and associated fees. A traffic impact study, or similar analysis, may be required which will be determined at the time of application. The existing public right of way for Boston Ave. shall remain in place as there are other properties with access to the public right of way. Upon the receipt of a permit application, a full engineering review will be provided.

Gary Streight, P.E.
Senior Project Manager



Washtenaw County Road Commission
555 N. Zeeb Road, Ann Arbor, Michigan

Direct: (734) 327-6692 | Main: (734) 761-1500

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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

June 12, 2024

Mr. Eric Williams, P.E.
Stonefield Engineering
607 Shelby, Suite 200
Deroit, Michigan 48226

RE: Whitewater Car Wash –
2675 Washtenaw Avenue
Ypsilanti Township, Michigan
WCWRC Project No. 10776

Dear Mr. Williams:

On April 29, 2024, this office received site plans and a drain use permit application via e-mail for the referenced project. At that time, no initial review fee for the plan review was received by this office. Revised plans were submitted on June 10, 2024 and the initial review fees were received on June 11, 2024. The drain use permit application to tap the Ypsilanti Township Drain (YTD) #02 will be held until the site plans are further along in the review process.

This office has reviewed the site plans for the above-referenced project to be located in Ypsilanti Township. These plans have a job number of DET-230108.01 and a date of June 10, 2024. As a result of our review, we would like to offer the following comments:

1. The plans should be signed and sealed by a registered, professional engineer.
2. The engineer's certificate of outlet, accompanied by corresponding calculations and documentation, should be submitted to our office for review.
3. An infiltration testing report, meeting the reporting requirements listed in the rules of this office and signed and sealed by a licensed geotechnical engineer, should be submitted to our office for review.
4. The YTD #02 must be identified on every plan sheet where it is depicted.
5. The call outs on the grading plan (plan sheet C-4) cover up structure labels and other information. Please revise for clarity.
6. A stormwater narrative should be prepared and submitted to our office for review.
7. Per the rules of this office, the maximum allowable void ratio for coarse aggregate is 0.3. The storage volume table for the below grade detention system should be revised based on the corrected void ratio.

8. The site is covered by hydrologic soil group D/B. The curve numbers and runoff coefficients used on Worksheet W1 should be revised. As noted in Section VIII, Part H of the rules of this office, the first letter is the undrained classification which should be used for the runoff calculations.
9. The bioretention basin area up to the maximum ponding elevation should be included with the relative imperviousness calculations at a c-value of 1.0 and a CN value of 98 on Worksheet W1.
10. A post-construction cover type of Woods – Good Condition is listed on Worksheet W1. This area should be considered Open Space. The curve numbers and runoff coefficients used on Worksheet W1 should be revised
11. The post-development cover chart area used for the NRCS portion of Worksheet W1 does not match the cover chart area used in the Rational Method portion of W1.
12. Worksheet W3 should present pre-development conditions, not the current, existing conditions at the site.
13. Based on field observations made by WCWRC staff during the infiltration testing operations, it appeared unlikely that native soils meeting the minimum infiltration rate requirements were encountered and the required separation between the high groundwater level and a proposed infiltration elevation was met. Worksheet W11 includes an infiltration volume credit, but no credit is available based on the observed conditions.
14. If infiltration is not provided in the bioretention basin, the outlet structure must have an outlet orifice to ensure that the basin can drain completely. As a reminder, the minimum required detention time for the first flush storm event is 24 hours, with a maximum detention time of 72 hours for the 100-year storm event.
15. The outlet calculations were not reviewed. They will be reviewed with the next submittal, after the runoff calculations and storage volume tables have been revised.
16. A minimum freeboard of one foot is required beyond the 100-year storm volume elevation in the below-grade detention system.
17. The minimum velocity of 3 feet per second was not met within some of the storm water pipes.
18. A long-term stormwater maintenance plan, including budget and responsible party, should be designed and included with the plan set.
19. The bioretention basin area shown on the landscape plan (sheet C-9) was hatched up to what appeared to be Elevation 793 feet. The hatched area should be expanded to include both the basin and buffer areas.

20. At the time of plant and seed delivery, a WCWRC landscape reviewer must be present. The quantity and species delivered will be reviewed on site. Contact Catie Wytychak at wytychakc@washtenaw.org or (734) 222-6813 to coordinate.
21. Prior to construction, a pre-construction meeting must be held between the developer, design engineer and WCWRC. This meeting can be held in conjunction with the municipality's pre-construction meeting, if requested.
22. Please see the attached invoice for the current fees and remit these fees upon receipt. As requested, the invoice is being submitted directly to EROP, 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,



Theresa M. Marsik, P.E.
Stormwater Engineer
(permit\Whitewater Car Wash rev1)

cc: Jeff Justice, EROP, LLC
Lauren Doppke, Ypsilanti Township Planning Department
Belinda Kingsley, Ypsilanti Township Planning & Zoning Coordinator
Fletcher Reyher, Ypsilanti Township Planning & Development Coordinator
Doug Winters, McLain and Winters
Matt Parks, P.E., Ypsilanti Township Engineer (OHM)
Stacie Monte, Ypsilanti Township Engineer (OHM)

EROP LLC
 ATTN: JEFF JUSTICE
 3130 N KANDY LANE
 DECATUR IL 62526

Washtenaw County
 Remittance Slip



Invoice No. 14361
 Customer Number 10677
 Invoice Total Due \$1,523.75
 Due on 07/13/2024

Amount Enclosed	
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CATHERINE MCCLARY, CPFO, CPFIM
 WASHTENAW COUNTY TREASURER
 PO BOX 8645
 ANN ARBOR MI 48107-8645

Please make checks payable to: Washtenaw County Treasurer
 Address has changed (please update on back)

Detach and enclose this coupon with payment



Washtenaw County
 Washtenaw County Treasurer
 P.O. Box 8645
 Ann Arbor, MI 48107-8645

Invoice

Invoice Date	Invoice No.
06/13/2024	14361
Customer Number	
10677	
Invoice Total Due	
\$1,523.75	
Due Date	
07/13/2024	

EROP LLC
 ATTN: JEFF JUSTICE
 3130 N KANDY LANE
 DECATUR IL 62526

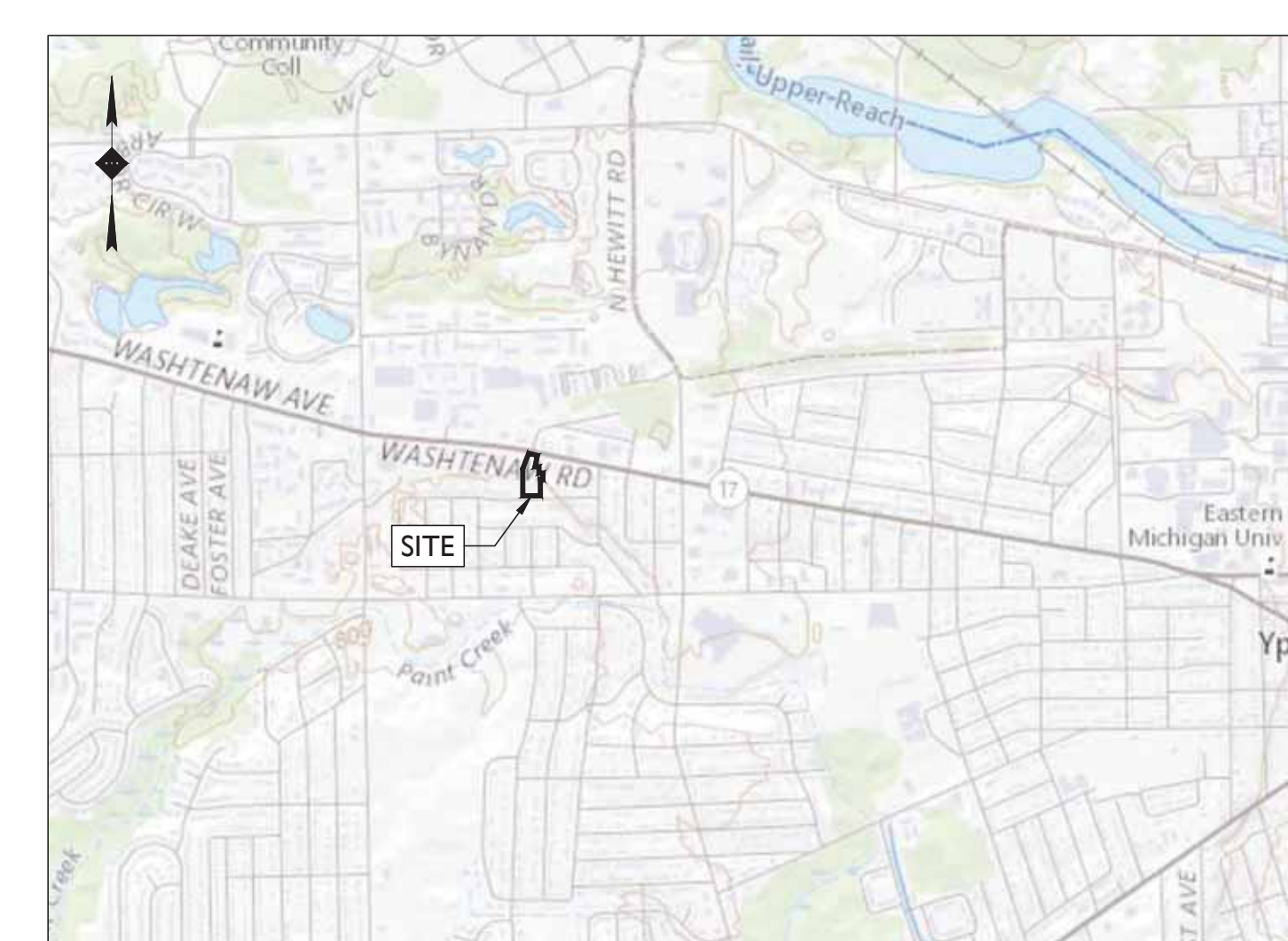
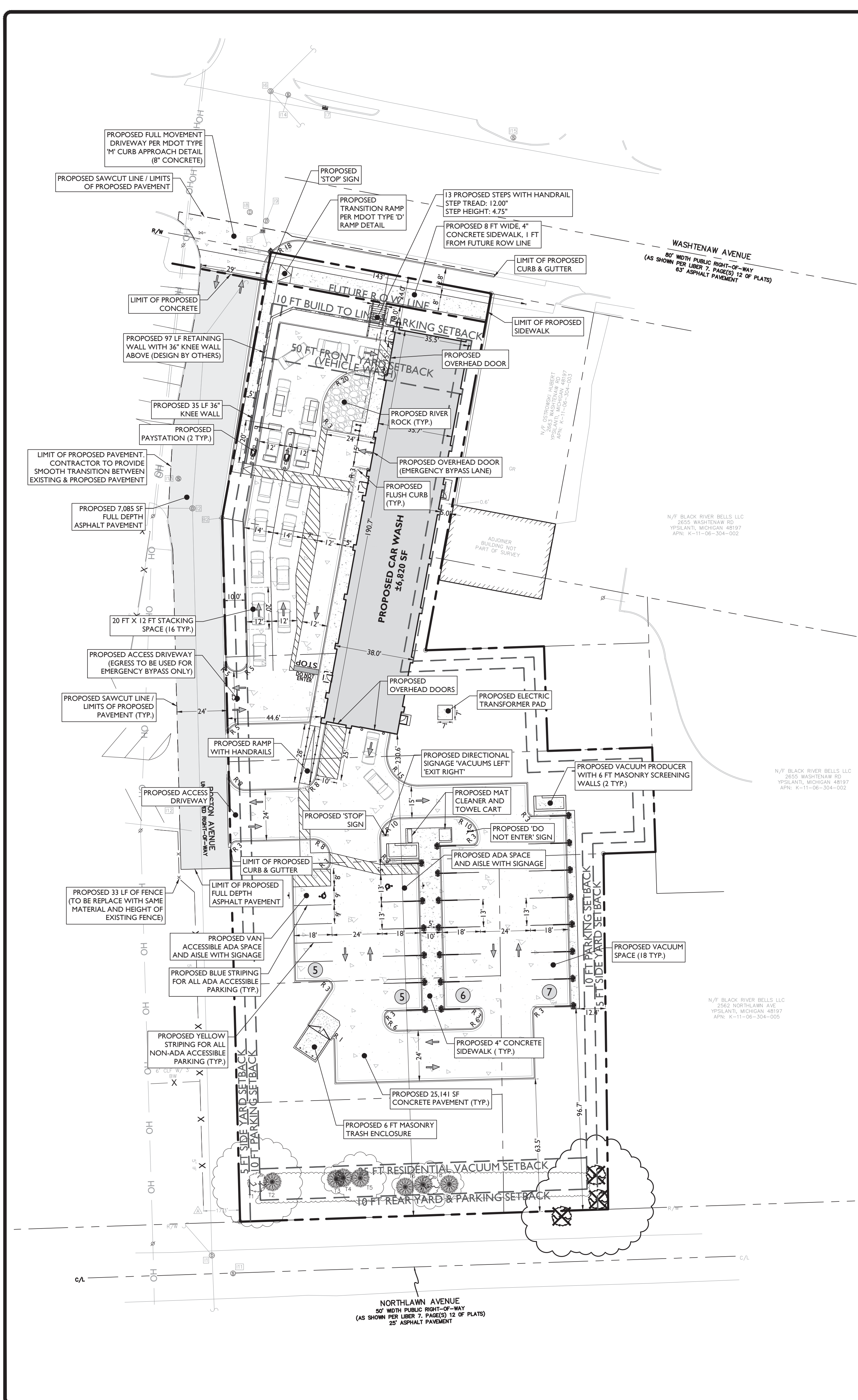
Please include invoice number on your payment.

WATER RESOURCES
 WHITEWATER CAR WASH
 WCWRC PROJECT #10776

Description	Quantity	Price	UOM	Original Bill	Adjustments	Paid	Amount Due
WO 10776 Engineering Site Inspection Fees	3.25	\$135.00	EACH	\$438.75	\$0.00	\$0.00	\$438.75
WO 10776 Engineering Review Fees INITIAL REVIEW FEES ALREADY PAID HAVE BEEN DEDUCTED FROM THIS INVOICE	11.00	\$135.00	EACH	\$1,085.00	\$0.00	\$0.00	\$1,085.00

PLEASE RETURN TOP PORTION WITH PAYMENT

Please put invoice number on your check. Make checks payable to: Washtenaw County Treasurer	Invoice Total:	\$1,523.75
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LOCATION MAP
SCALE: 1" = 2,000'±

OFF-STREET PARKING REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 1205.G.2	VEHICLE WASH: 1 SPACE PER 1 EMPLOYEE 5 EMPLOYEES = 5 SPACES	18 VACUUM SPACES + 5 EMP. SPACE 23 TOTAL SPACES
§ 1118.D.3	VEHICLE WASH STACKING: ENTRY 8 SPACES (12 FT X 20 FT) EXIT 2 SPACES (12 FT X 20 FT)	ENTRY: 16 SPACES EXIT: 2 SPACES
§ 1205.6.D	90° PARKING: 9 FT X 18 FT W/ 24 FT AISLE (1) 50° PARKING: 9 FT X 18 FT W/ 14 FT AISLE (1)	90°: 9 FT X 18 FT W/ 24 FT AISLE 50°: 9 FT X 18 FT W/ 14 FT AISLE
§ 1129.5.8	VEHICLE WASH, RESIDENTIAL SCREENING: 6 FT MASONRY WALL (2)	EXISTING / PROPOSED LANDSCAPE BUFFER
§ 1207.2.A.2	LOADING: 10 FT X 55 FT	TO OCCUR OFF HOURS

- (1) WHERE A PARKING SPACE ABUTS A 7 FT SIDEWALK OR 10 FT GREENBELT THE PARKING STALL LENGTH MAY BE REDUCED BY 2 FT
- (2) ALTERNATIVE SCREENING MATERIALS MAY BE APPROVED BY THE PLANNING COMMISSION

LAND USE AND ZONING		
PID: K-11-06-304-004		
FORM BASED DISTRICT: REGIONAL CORRIDOR (RC)		
PROPOSED SITE TYPE: C (> 1 AC)		
PERMITTED BUILDING FORM: A2, B, C		
PROPOSED USE	REQUIRED	PROPOSED
VEHICLE WASH (USE GROUP 6, BUILDING FORM B)	SPECIAL USE GROUP	
ZONING REQUIREMENT		
MINIMUM LOT AREA	1.0 AC	67,384 SF (1.55 AC)
MINIMUM LOT WIDTH	N/A	107.2 FT
MAXIMUM IMPERVIOUS SURFACE	80% (53,907 SF)	56% (37,694 SF)
MINIMUM BUILDING HEIGHT	14 FT (1 STORY)	32.0 FT (1 STORY)
MAXIMUM BUILDING HEIGHT	38 FT (3 STORIES)	32.0 FT (1 STORY)
MAXIMUM BUILD-TO LINE	10 FT (1)	10.0 FT (2)
MINIMUM SIDE YARD SETBACK	5 FT	5.0 FT
MINIMUM REAR YARD SETBACK	10 FT	230.6 FT
RESIDENTIAL VACUUM SETBACK	25 FT (3)	96.7 FT
PARKING SETBACK	10 FT	10.0 FT
MINIMUM ESCAPE LANE	12 FT	12.0 FT
MINIMUM FRONT YARD SETBACK	50 FT (4)	10.0 FT (2)(5)
MINIMUM REAR YARD GREENBELT	N/A	63.5 FT (1)

- (1) 75% OF THE BUILDING FACADE MUST MEET THE REQUIRED BUILD-TO LINE, WHILE UP TO 25% OF THE FACADE CAN BE SETBACK TO ALLOW FOR ARCHITECTURAL CONSIDERATION
- (2) MAXIMUM 10 FT BUILD TO LINE REQUIRED BY FORM BASED DISTRICT
- (3) 50 FT GREENBELT PROVIDED AT REQUEST OF CITY PLANNING DEPARTMENT
- (4) VEHICLE WASH SPECIAL USE REQUIREMENT
- (5) VACUUMING AND DRYING AREAS MAY BE LOCATED OUTSIDE THE BUILDING BUT SHALL NOT BE IN THE REQUIRED FRONT YARD AND SHALL NOT BE CLOSER THAN TWENTY-FIVE (25) FEET FROM ANY RESIDENTIAL DISTRICT.
- (6) MEASURED FROM FUTURE RIGHT OF WAY LINE

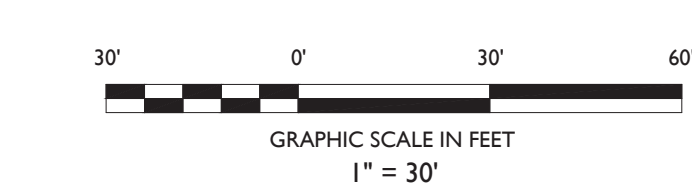
MDOT NOTES:

- ANY LANE CLOSURE ON M-17 WILL ONLY BE ALLOWED WHEN THERE IS ACTIVE WORK. PRIOR TO APPROVAL, A LANE CLOSURE REQUEST FORM NEEDS TO BE SUBMITTED FOR REVIEW AND APPROVAL.
- NO LANE CLOSURES OR WORK DURING ANY DESIGNATED STATE HOLIDAY OR SPECIAL EVENT AS DEFINED BY THE ENGINEER. LANE CLOSURES ON M-17 WILL ONLY BE PERMITTED FROM 9:00 AM TO 3:00 PM, WEEKDAYS OR 7:00 AM - 7:00 PM ON SATURDAY AND SUNDAY UNLESS DETOURED OR OTHERWISE APPROVED BY THE ENGINEER.
- TRAFFIC CONTROL:
 - LANE CLOSURE REQUEST FORM MUST BE SUBMITTED A MINIMUM 5 BUSINESS DAYS IN ADVANCE OF THE PROPOSED CLOSURE TO THE MDOT BRIGHTON TSC OPERATIONS/TRAFFIC AND SAFETY UNIT BY E-MAIL FOR REVIEW AT SEIFG@MICHIGAN.GOV.
 - DURING THE LANE CLOSURES ACCESS FOR EMERGENCY VEHICLES (FIRE, AMBULANCE, POLICE) MUST BE MAINTAINED TO ADJACENT HOMES, BUSINESSES AND SUBDIVISIONS AT ALL TIMES.
 - ALL EXISTING PAVEMENT MARKINGS THAT ARE REMOVED FOR TRAFFIC CONTROL OR OBLITERATED DURING CONSTRUCTION OPERATIONS MUST BE REPLACED WITHIN WATERBORNE FOR THE LONGITUDINAL, LANE LINES.
 - ALL EXISTING PERMANENT MDOT SIGNS DAMAGED OR LOST BY THE CONTRACTOR MUST BE REPLACED IN KIND ON NEW SUPPORTS AT THE CONTRACTORS EXPENSE.
 - ALL SIGN MATERIALS AND SUPPORTS MUST MEET NCHRP-350 CRASH WORTHY OR MASH REQUIREMENTS.
 - TEMPORARY WARNING, REGULATORY, AND GUIDE SIGNS NOT REQUIRED FOR A PARTICULAR LANE OR SHOULDER MUST BE REMOVED, COVERED OR LAID DOWN WITH THE LEG REMOVED.

SYMBOL	DESCRIPTION
---	PROPERTY LINE
- - -	SETBACK LINE
- . - . -	SAWCUT LINE
=====	PROPOSED CURB & GUTTER
=====	PROPOSED MOUNTABLE CURB & GUTTER
=====	PROPOSED FLUSH CURB
○	PROPOSED SIGNS / BOLLARDS
■	PROPOSED BUILDING
■	PROPOSED ASPHALT
■	PROPOSED CONCRETE
■	PROPOSED RIVER ROCK
■	PROPOSED RETAINING WALL WITH 36" KNEE WALL
■	PROPOSED 36" KNEE WALL
○	PROPOSED BUILDING DOORS
○	PROPOSED HANDRAILS
○	PROPOSED CHAIN-LINK FENCE
○	PROPOSED AREA LIGHT
○	PROPOSED BUILDING MOUNTED LIGHTS

GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND THE PROPOSED SCOPE OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THESE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE EXISTING SITE CONDITIONS AND THE PROPOSED WORK, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ENSURE THAT ALL REQUIRED APPROVALS HAVE BEEN OBTAINED PRIOR TO THE START OF CONSTRUCTION. COPIES OF ALL REQUIRED PERMITS AND APPROVALS SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.
- ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC, AND ITS SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES AND LIABILITIES INCLUDING ATTORNEY'S FEES ARISING OUT OF CLAIMS BY EMPLOYEES OF THE CONTRACTOR IN ADDITION TO CLAIMS CONNECTED TO THE PROJECT AS A RESULT OF NOT CARRYING THE PROPER INSURANCE FOR WORKERS COMPENSATION, LIABILITY INSURANCE, AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE.
- THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN, LLC.
- THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE PROPERTY.
- THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR UNDERMINED STRUCTURE OR SITE FEATURE THAT IS IDENTIFIED TO REMAIN ON THE PLAN SET. ALL REPAIRS SHALL USE NEW MATERIALS TO RESTORE THE FEATURE TO ITS EXISTING CONDITION AT THE CONTRACTORS EXPENSE.
- CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC, WILL REVIEW THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET.
- THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
- THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF TRAFFIC OPENING PERMITS.
- THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING CONSTRUCTION & DEMOLITION ACTIVITIES.
- SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC, BE PRESENT ON SITE AT ANY TIME DURING CONSTRUCTION, IT DOES NOT RELIEVE THE CONTRACTOR OF ANY OF THE RESPONSIBILITIES AND REQUIREMENTS LISTED IN THE NOTES WITHIN THIS PLAN SET.



REVISION	DATE	ISSUE	DESCRIPTION
1	12/07/2024	ECM	SUBMISSION FOR PRE-APPLICATION MEETING
2	04/18/2024	EM / JP	SUBMISSION FOR PRELIMINARY SITE PLAN REVIEW
3	06/11/2024	EM	REVISED PER PLANNING DEPARTMENT REVIEW #1
4	08/23/2024	MU	REVISED PER PLANNING DEPARTMENT REVIEW #2

NOT APPROVED FOR CONSTRUCTION

STONEFIELD
engineering & design

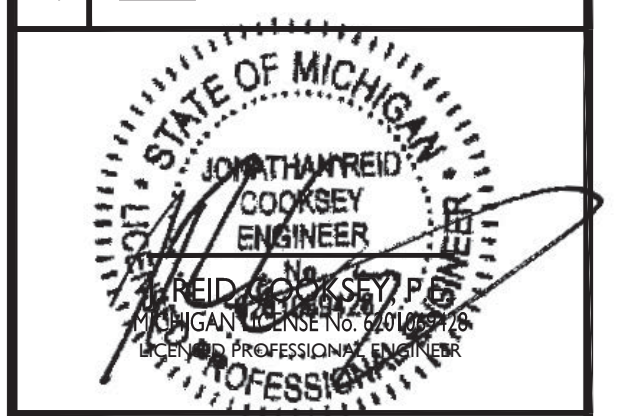
Detroit, MI • New York, NY • Boston, MA
Princeton, NJ • Tampa, FL • Rutherford, NJ
www.stonefielddesign.com

607 Shelby Suite 200, Detroit, MI 48226
Phone 248.247.1115

PROPOSED CAR WASH

WHITEWATER EXPRESS
CAR WASH

PARCEL ID: K-11-06-304-004
2675 WASHTENAW AVENUE (M-17)
CHARTER TOWNSHIP OF YPSILANTI
WASHTENAW COUNTY, MICHIGAN



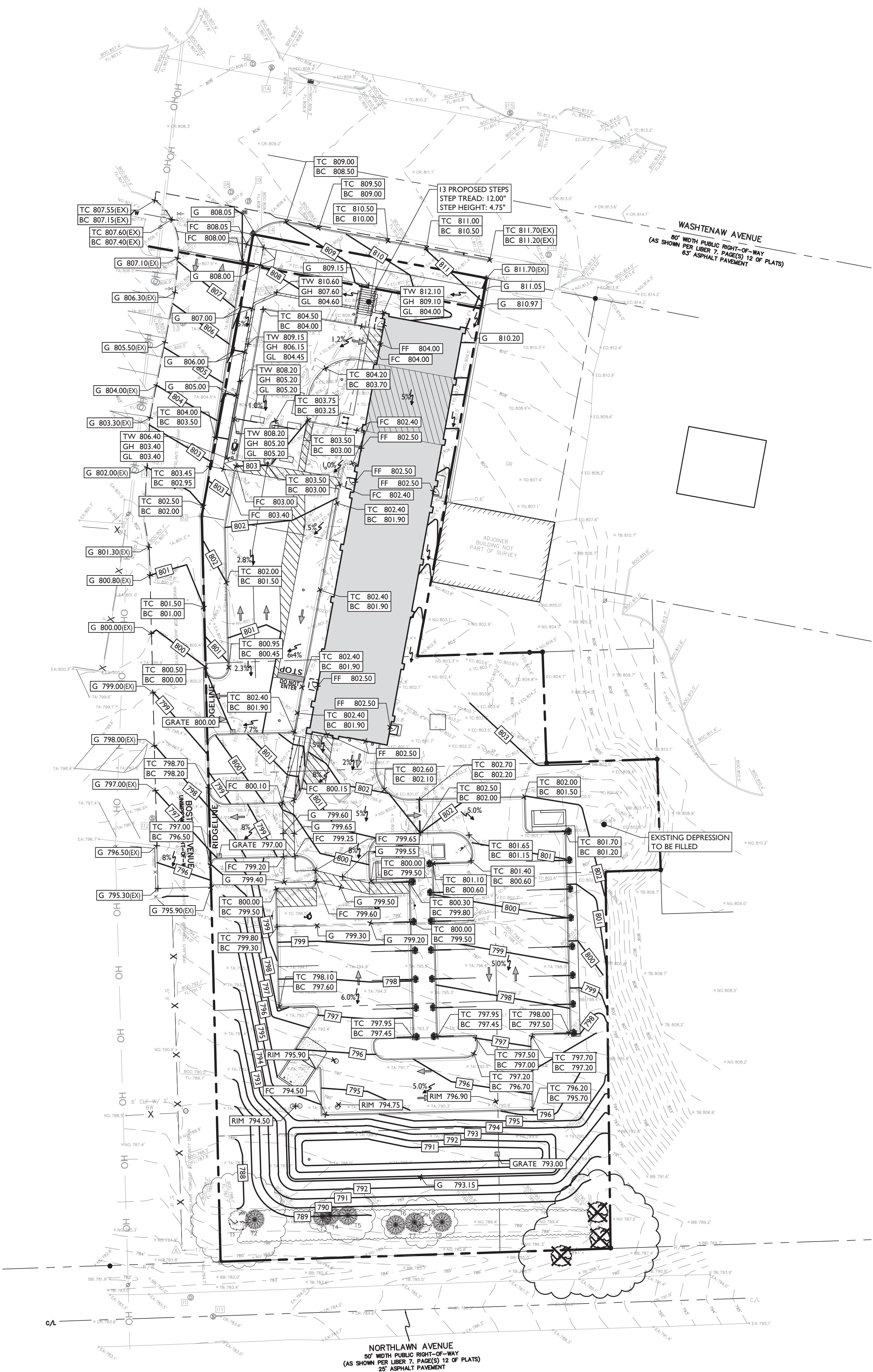
STONEFIELD
engineering & design

SCALE: 1" = 30' PROJECT ID: DET-230108.01

TITLE:
SITE PLAN

DRAWING:
C-3

NOT TO SCALE. SEE PLAN FOR DIMENSIONS. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.



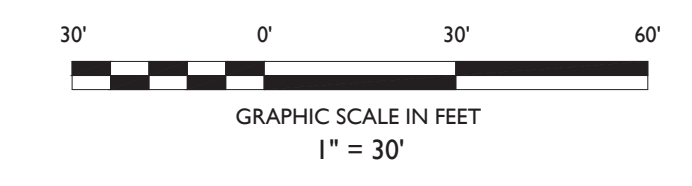
SYMBOL	DESCRIPTION
---	PROPERTY LINE
—100—	PROPOSED GRADING CONTOUR
—RIDLINELINE—	PROPOSED GRADING RIDGELINE
←	PROPOSED DIRECTION OF DRAINAGE FLOW
X G 100.00	PROPOSED GRADE SPOT SHOT
X TC 100.50 BC 100.00	PROPOSED TOP OF CURB / BOTTOM OF CURB SPOT SHOT
X FC 100.00	PROPOSED FLUSH CURB SPOT SHOT

INVERT TABLE

- 11 STORM SEWER MANHOLE
RIM ELEVATION: 783.59'
12" RCP INVERT NW: 778.4'
12" RCP INVERT NE: 778.7' (UNABLE TO DETERMINE SOURCE)
RCP INVERT N: 770.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
RCP INVERT S: 769.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 12 STORM SEWER MANHOLE
RIM ELEVATION: 802.10'
18" RCP INVERT W: 796.3'
RCP INVERT N: 792.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
RCP INVERT S: 774.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 13 STORM SEWER MANHOLE
RIM ELEVATION: 805.98'
RCP INVERT N: 787.0' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
RCP INVERT S: 786.8' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 14 CURB INLET
RIM ELEVATION: 807.65'
SUMP ELEVATION: 805.7'
UNABLE TO LOCATE PIPES, FULL OF WATER & DEBRIS
- 15 GRATED INLET
RIM ELEVATION: 808.15'
10" CMP INVERT SE: 805.1'
24" RCP INVERT N: 804.2'
- 16 STORM SEWER MANHOLE
RIM ELEVATION: 808.21'
24" RCP INVERT S: 796.8'
8" CLAY PIPE INVERT E: 802.8'
24" RCP INVERT NE: 796.6'
24" RCP INVERT SE (UNABLE TO MEASURE DUE TO DEPTH)
- 17 CURB INLET
RIM ELEVATION: 808.89'
8" CLAY PIPE INVERT W: 803.6'
- 18 STORM SEWER MANHOLE
RIM ELEVATION: 808.48'
UNABLE TO OPEN DUE TO HIGH TRAFFIC
- 19 STORM SEWER MANHOLE
RIM ELEVATION: 808.60'
UNABLE TO OPEN DUE TO HIGH TRAFFIC
- 20 STORM SEWER MANHOLE
RIM ELEVATION: 812.55'
UNABLE TO OPEN DUE TO HIGH TRAFFIC
- 21 SANITARY SEWER MANHOLE
RIM ELEVATION: 783.94'
8" CAST IRON PIPE INVERT W: 776.2'
8" CAST IRON PIPE INVERT E: 776.1'
8" CAST IRON PIPE INVERT N: 775.6'
8" CAST IRON PIPE INVERT S: 775.5'
- 22 SANITARY SEWER MANHOLE
RIM ELEVATION: 798.41'
6" CAST IRON PIPE INVERT W: 776.7'
8" CAST IRON PIPE INVERT N: 776.7'
8" CAST IRON PIPE INVERT S: 776.7'
- 23 SANITARY SEWER MANHOLE
RIM ELEVATION: 802.34'
CAST IRON PIPE INVERT N: 787.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
CAST IRON PIPE INVERT S: 787.4' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 24 SANITARY SEWER MANHOLE
RIM ELEVATION: 808.29'
8" CAST IRON PIPE INVERT NE: 799.0'
6" CAST IRON PIPE INVERT E: 799.0'
SUMP ELEVATION: 798.9'
UNABLE TO LOCATE DISCHARGE PIPE, FULL OF SEWAGE
- 25 SANITARY SEWER MANHOLE
RIM ELEVATION: 812.13'
8" CAST IRON PIPE INVERT E: 801.7'
8" CAST IRON PIPE INVERT W: 801.6'

- ### GRADING NOTES
- ALL SOIL AND MATERIAL REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL STATE AND FEDERAL REQUIREMENTS. ANY GROUNDWATER DE-WATERING PRACTICES SHALL BE PERFORMED UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS FOR THE DISCHARGE OF DE-WATERED GROUNDWATER. ALL SOIL IMPORTED TO THE SITE SHALL BE CERTIFIED CLEAN FILL. CONTRACTOR SHALL MAINTAIN RECORDS OF ALL FILL MATERIALS BROUGHT TO THE SITE.
 - THE CONTRACTOR IS REQUIRED TO PROVIDE TEMPORARY AND/OR PERMANENT SHORING WHERE REQUIRED DURING EXCAVATION ACTIVITIES INCLUDING BUT NOT LIMITED TO UTILITY TRENCHES. TO ENSURE THE STRUCTURAL INTEGRITY OF NEARBY STRUCTURES AND STABILITY OF THE SURROUNDING SOILS.
 - PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 4 INCHES TO 7 INCHES ABOVE EXISTING GRADES UNLESS OTHERWISE NOTED. THE CONTRACTOR WILL SUPPLY ALL STAKEOUT CURB GRADE SHEETS TO STONEFIELD ENGINEERING & DESIGN, LLC. FOR REVIEW AND APPROVAL PRIOR TO POURING CURBS.
 - THE CONTRACTOR IS RESPONSIBLE TO SET ALL PROPOSED UTILITY COVERS AND RESET ALL EXISTING UTILITY COVERS WITHIN THE PROJECT LIMITS TO PROPOSED GRADE IN ACCORDANCE WITH ANY APPLICABLE MUNICIPAL COUNTY, STATE AND/OR UTILITY AUTHORITY REGULATIONS.
 - MINIMUM SLOPE REQUIREMENTS TO PREVENT PONDING SHALL BE AS FOLLOWS:
 - CURB GUTTER: 0.50%
 - CONCRETE SURFACES: 1.00%
 - ASPHALT SURFACES: 1.00%
 - A MINIMUM SLOPE OF 1.00% SHALL BE PROVIDED AWAY FROM ALL BUILDINGS. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE BUILDING IS ACHIEVED AND SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IF THIS CONDITION CANNOT BE MET.
 - FOR PROJECTS WHERE BASEMENTS ARE PROPOSED, THE DEVELOPER IS RESPONSIBLE TO DETERMINE THE DEPTH TO GROUNDWATER AT THE LOCATION OF THE PROPOSED STRUCTURE. IF GROUNDWATER IS ENCOUNTERED WITHIN THE BASEMENT AREA, SPECIAL CONSTRUCTION METHODS SHALL BE UTILIZED AND REVIEWED/APPROVED BY THE CONSTRUCTION CODE OFFICIAL. IF SUMP PUMPS ARE UTILIZED, ALL DISCHARGES SHALL BE CONNECTED DIRECTLY TO THE PUBLIC STORM SEWER SYSTEM WITH APPROVAL FROM THE GOVERNING STORM SEWER SYSTEM AUTHORITY.

- ### ADA NOTES
- THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION WITHIN THE ADA PARKING SPACES AND ACCESS AISLES.
 - THE CONTRACTOR SHALL PROVIDE COMPLIANT SIGNAGE AT ALL ADA PARKING AREAS IN ACCORDANCE WITH STATE GUIDELINES.
 - THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 5.00% RUNNING SLOPE AND A MAXIMUM OF 2.00% CROSS SLOPE ALONG WALKWAYS WITHIN THE ACCESSIBLE PATH OF TRAVEL (SEE THE SITE PLAN FOR THE LOCATION OF THE ACCESSIBLE PATH). THE CONTRACTOR IS RESPONSIBLE TO ENSURE THE ACCESSIBLE PATH OF TRAVEL IS 36 INCHES WIDE OR GREATER UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
 - THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION AT ALL LANDINGS. LANDINGS INCLUDE, BUT ARE NOT LIMITED TO, THE TOP AND BOTTOM OF AN ACCESSIBLE RAMP. AT ACCESSIBLE BUILDING ENTRANCES, AT AN AREA IN FRONT OF A WALK-UP ATM, AND AT TURNING SPACES ALONG THE ACCESSIBLE PATH OF TRAVEL, THE LANDING AREA SHALL HAVE A MINIMUM CLEAR AREA OF 60 INCHES BY 60 INCHES UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
 - THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 8.33% RUNNING SLOPE AND A MAXIMUM 2.00% CROSS SLOPE ON ANY CURB RAMPS ALONG THE ACCESSIBLE PATH OF TRAVEL. WHERE PROVIDED, CURB RAMP FLARES SHALL NOT HAVE A SLOPE GREATER THAN 10.00%. IF A LANDING AREA IS PROVIDED AT THE TOP OF THE RAMP, FOR ALTERATIONS, A CURB RAMP FLARE SHALL NOT HAVE A SLOPE GREATER THAN 8.33% IF A LANDING AREA IS NOT PROVIDED AT THE TOP OF THE RAMP. CURBS RAMPS SHALL NOT RISE MORE THAN 6 INCHES IN ELEVATION WITHOUT A HANDRAIL. THE CLEAR WIDTH OF A CURB RAMP SHALL BE NO LESS THAN 36 INCHES WIDE.
 - ACCESSIBLE RAMPS WITH A RISE GREATER THAN 6 INCHES SHALL CONTAIN COMPLIANT HANDRAILS ON BOTH SIDES OF THE RAMP AND SHALL NOT RISE MORE THAN 30" IN ELEVATION WITHOUT A LANDING AREA IN BETWEEN RAMP RUNS. LANDING AREAS SHALL ALSO BE PROVIDED AT THE TOP AND BOTTOM OF THE RAMP.
 - A SLIP RESISTANT SURFACE SHALL BE CONSTRUCTED ALONG THE ACCESSIBLE PATH AND WITHIN ADA PARKING AREAS.
 - THE CONTRACTOR SHALL ENSURE A MAXIMUM OF 1/4" INCHES VERTICAL CHANGE IN LEVEL ALONG THE ACCESSIBLE PATH. WHERE A CHANGE IN LEVEL BETWEEN 1/4" INCHES AND 1/2" INCHES EXISTS, CONTRACTOR SHALL ENSURE THAT THE TOP 1/4" INCH CHANGE IN LEVEL IS BEVELED WITH A SLOPE NOT STEEPER THAN 1 UNIT VERTICAL AND 2 UNITS HORIZONTAL (2:1 SLOPE).
 - THE CONTRACTOR SHALL ENSURE THAT ANY OPENINGS (GAPS OR HORIZONTAL SEPARATION) ALONG THE ACCESSIBLE PATH SHALL NOT ALLOW PASSAGE OF A SPHERE GREATER THAN 1/4" INCH.



REVISION	DATE	ISSUE	DESCRIPTION
1	02/07/2024	ECM	SUBMISSION FOR PRE-APPLICATION MEETING
2	04/18/2024	EM / JF	SUBMISSION FOR PRELIMINARY SITE PLAN REVIEW
3	06/11/2024	EM	REVISED PER PLANNING DEPARTMENT REVIEW #1
4	08/23/2024	MU	REVISED PER PLANNING DEPARTMENT REVIEW #2

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SITE DEVELOPMENT PLANS

PARCEL ID: K-11-06-304-004
2675 WASHTENAW AVENUE (M-17)
CHARTER TOWNSHIP OF YPSILANTI
WASHTENAW COUNTY, MICHIGAN

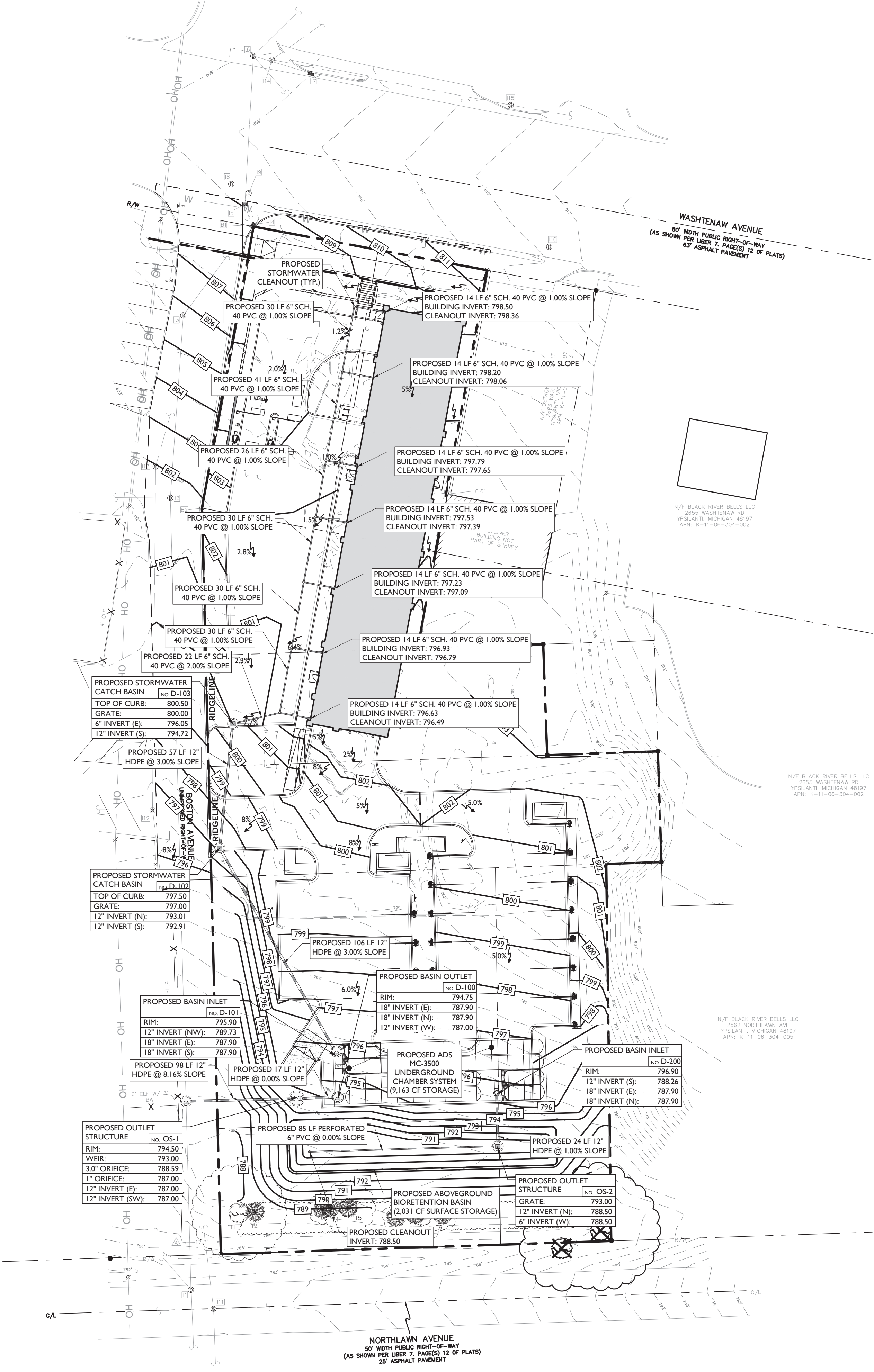


SCALE: 1" = 30' PROJECT ID: DET-230108.01

TITLE: GRADING PLAN

DRAWING: C-4

NOT TO SCALE. SEE PLANS FOR DIMENSIONS. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES STANDARD SPECIFICATIONS FOR WATER SUPPLY SYSTEMS.



SYMBOL	DESCRIPTION
---	PROPERTY LINE
---	PROPOSED GRADING CONTOUR
---	PROPOSED GRADING RIDGELINE
---	PROPOSED STORMWATER STRUCTURES
---	PROPOSED STORMWATER PIPING
---	PROPOSED UNDERGROUND OUTLET STRUCTURE

DRAINAGE AND UTILITY NOTES

- THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR STORMWATER IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING.
- CONTRACTOR SHALL START CONSTRUCTION OF STORM LINES AT THE LOWEST INVERT AND WORK UP GRADIENT.
- THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IMMEDIATELY IN WRITING.
- THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.

INVERT TABLE

11	STORM SEWER MANHOLE RIM ELEVATION: 783.59' 12" RCP INVERT NW: 778.4' 12" RCP INVERT NE: 778.7' (UNABLE TO DETERMINE SOURCE) RCP INVERT N: 770.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH) RCP INVERT S: 769.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
12	STORM SEWER MANHOLE RIM ELEVATION: 802.10' 18" RCP INVERT W: 796.3' RCP INVERT N: 782.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH) RCP INVERT S: 774.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
13	STORM SEWER MANHOLE RIM ELEVATION: 805.98' RCP INVERT N: 787.0' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH) RCP INVERT S: 786.8' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
14	CURB INLET RIM ELEVATION: 807.65' SUMP ELEVATION: 805.7' UNABLE TO LOCATE PIPES, FULL OF WATER & DEBRIS
15	GRATED INLET RIM ELEVATION: 808.15' 10" CMP INVERT SE: 805.1' 24" RCP INVERT N: 804.2'
16	STORM SEWER MANHOLE RIM ELEVATION: 808.21' 24" RCP INVERT S: 796.8' 8" CLAY PIPE INVERT E: 802.8' 24" RCP INVERT NE: 796.6' 24" RCP INVERT SE (UNABLE TO MEASURE DUE TO DEPTH)
17	CURB INLET RIM ELEVATION: 808.89' 8" CLAY PIPE INVERT W: 803.6'
18	STORM SEWER MANHOLE RIM ELEVATION: 808.48' UNABLE TO OPEN DUE TO HIGH TRAFFIC
19	STORM SEWER MANHOLE RIM ELEVATION: 808.60' UNABLE TO OPEN DUE TO HIGH TRAFFIC
110	STORM SEWER MANHOLE RIM ELEVATION: 812.55' UNABLE TO OPEN DUE TO HIGH TRAFFIC
111	SANITARY SEWER MANHOLE RIM ELEVATION: 783.94' 8" CAST IRON PIPE INVERT W: 776.2' 8" CAST IRON PIPE INVERT E: 776.1' 8" CAST IRON PIPE INVERT N: 775.6' 8" CAST IRON PIPE INVERT S: 775.5'
112	SANITARY SEWER MANHOLE RIM ELEVATION: 796.41' 6" CAST IRON PIPE INVERT W: 776.7' 8" CAST IRON PIPE INVERT N: 776.7' 8" CAST IRON PIPE INVERT S: 776.7'
113	SANITARY SEWER MANHOLE RIM ELEVATION: 802.34' CAST IRON PIPE INVERT N: 787.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH) CAST IRON PIPE INVERT S: 787.4' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
114	SANITARY SEWER MANHOLE RIM ELEVATION: 808.29' 8" CAST IRON PIPE INVERT NE: 799.0' 8" CAST IRON PIPE INVERT E: 799.0' SUMP ELEVATION: 798.9' UNABLE TO LOCATE DISCHARGE PIPE, FULL OF SEWAGE
115	SANITARY SEWER MANHOLE RIM ELEVATION: 812.13' 8" CAST IRON PIPE INVERT E: 801.7' 8" CAST IRON PIPE INVERT W: 801.6'

EXCAVATION, SOIL PREPARATION, AND DEWATERING NOTES

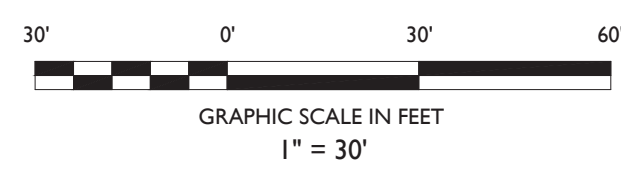
- THE CONTRACTOR IS REQUIRED TO REVIEW THE REFERENCED GEOLOGICAL DOCUMENTS PRIOR TO CONSTRUCTION. THESE DOCUMENTS SHALL BE CONSIDERED A PART OF THE PLAN SET.
- THE CONTRACTOR IS REQUIRED TO PREPARE SUBGRADE SOILS BENEATH ALL PROPOSED IMPROVEMENTS AND BACKFILL ALL EXCAVATIONS IN ACCORDANCE WITH RECOMMENDATIONS BY THE GEOLOGICAL ENGINEER OF RECORD.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHORING FOR ALL EXCAVATIONS AS REQUIRED. CONTRACTOR SHALL HAVE THE SHORING DESIGN PREPARED BY A QUALIFIED PROFESSIONAL SHORING DESIGNER. SHORING DESIGNS SHALL BE SUBMITTED TO STONEFIELD ENGINEERING & DESIGN, LLC, AND THE OWNER PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL OPEN EXCAVATIONS ARE PERFORMED AND PROTECTED IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING DESIGN AND OPERATIONS, AS REQUIRED, TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS FOR DEWATERING OPERATIONS AND GROUNDWATER DISPOSAL.

STORMWATER INFILTRATION BMP CONSTRUCTION NOTES

- PRIOR TO THE START OF CONSTRUCTION, ANY AREA DESIGNATED TO BE USED FOR AN INFILTRATION BMP (E.G. BASIN, BIORETENTION AREA, ETC.) SHALL BE FENCED OFF AND SHALL NOT BE UTILIZED AS STORAGE FOR CONSTRUCTION EQUIPMENT OR AS A STOCKPILE AREA FOR CONSTRUCTION MATERIALS. NO ACTIVITY SHALL BE PERMITTED WITHIN THE INFILTRATION BASIN AREA UNLESS RELATED TO THE CONSTRUCTION OF THE INFILTRATION BASIN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ALL SUBCONTRACTORS OF BASIN AREA RESTRICTIONS.
- THE CONTRACTOR SHALL MAKE EVERY EFFORT, WHERE PRACTICAL, TO AVOID SUBGRADE SOIL COMPACTION IN THE AREAS DESIGNATED TO BE USED FOR AN INFILTRATION BMP.
- ALL EXCAVATION WITHIN THE LIMITS OF ANY INFILTRATION BMP SHALL BE PERFORMED WITH THE LIGHTEST PRACTICAL EXCAVATION EQUIPMENT. ALL EXCAVATION EQUIPMENT SHALL BE PLACED OUTSIDE THE LIMITS OF THE BASIN WHERE FEASIBLE. THE USE OF LIGHT-WEIGHT, RUBBER-TIRED EQUIPMENT (LESS THAN 8 PSI APPLIED TO THE GROUND SURFACE) IS RECOMMENDED WITHIN THE BASIN LIMITS.
- THE SEQUENCE OF SITE CONSTRUCTION SHALL BE COORDINATED WITH BASIN CONSTRUCTION TO ADHERE TO SEQUENCING LIMITATIONS.
- DURING THE FINAL GRADING OF AN INFILTRATION BASIN, THE BOTTOM OF THE BASIN SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW AND THEN SMOOTHED OUT WITH A LEVELING DRAW OR EQUIVALENT GRADING EQUIPMENT. ALL GRADING EQUIPMENT SHALL BE LOCATED OUTSIDE OF THE BASIN BOTTOM WHERE FEASIBLE.
- FOLLOWING CONSTRUCTION OF AN INFILTRATION BASIN, SOIL INFILTRATION TESTING BY A LICENSED GEOTECHNICAL ENGINEER IS REQUIRED TO CERTIFY COMPLIANCE WITH THE DESIGN INFILTRATION RATES IN ACCORDANCE WITH APPENDIX E OF THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION'S BEST MANAGEMENT PRACTICES MANUAL, LATEST EDITION. IF THE FIELD INFILTRATION RATES ARE LOWER THAN THE RATE USED DURING DESIGN, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING IMMEDIATELY TO DETERMINE THE APPROPRIATE COURSE OF ACTION.
- THE CONTRACTOR SHALL NOTIFY THE MUNICIPALITY TO DETERMINE IF WITNESS TESTING IS REQUIRED DURING INFILTRATION BASIN EXCAVATION AND/OR SOIL INFILTRATION TESTING.

STORMWATER UNDERGROUND BMP CONSTRUCTION NOTES

- THE CONTRACTOR SHALL INSTALL AND BACKFILL THE UNDERGROUND BMP IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- UNDERGROUND BASINS SHALL UTILIZE A STONE BACKFILL WITH A MINIMUM VOID RATIO OF 40%.
- NO CONSTRUCTION LOADING OVER UNDERGROUND BASINS IS PERMITTED UNTIL BACKFILL IS COMPLETE PER THE MANUFACTURER'S SPECIFICATIONS. NO VEHICLES SHALL BE STAGED OR OPERATE FROM A FIXED POSITION OVER THE BASIN.



REVISION	DATE	ISSUE	BY	DESCRIPTION
1	02/07/2024	ECM		SUBMISSION FOR PRE-APPLICATION MEETING
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PROPOSED CAR WASH

WHITEWATER EXPRESS CAR WASH

PARCEL ID: K-11-06-304-004
2675 WASHTEENAW AVENUE (M-17)
CHARTER TOWNSHIP OF YPSILANTI
WASHTEENAW COUNTY, MICHIGAN

STATE OF MICHIGAN
JONATHAN R. COOKSEY
REGISTERED PROFESSIONAL ENGINEER
No. 11210

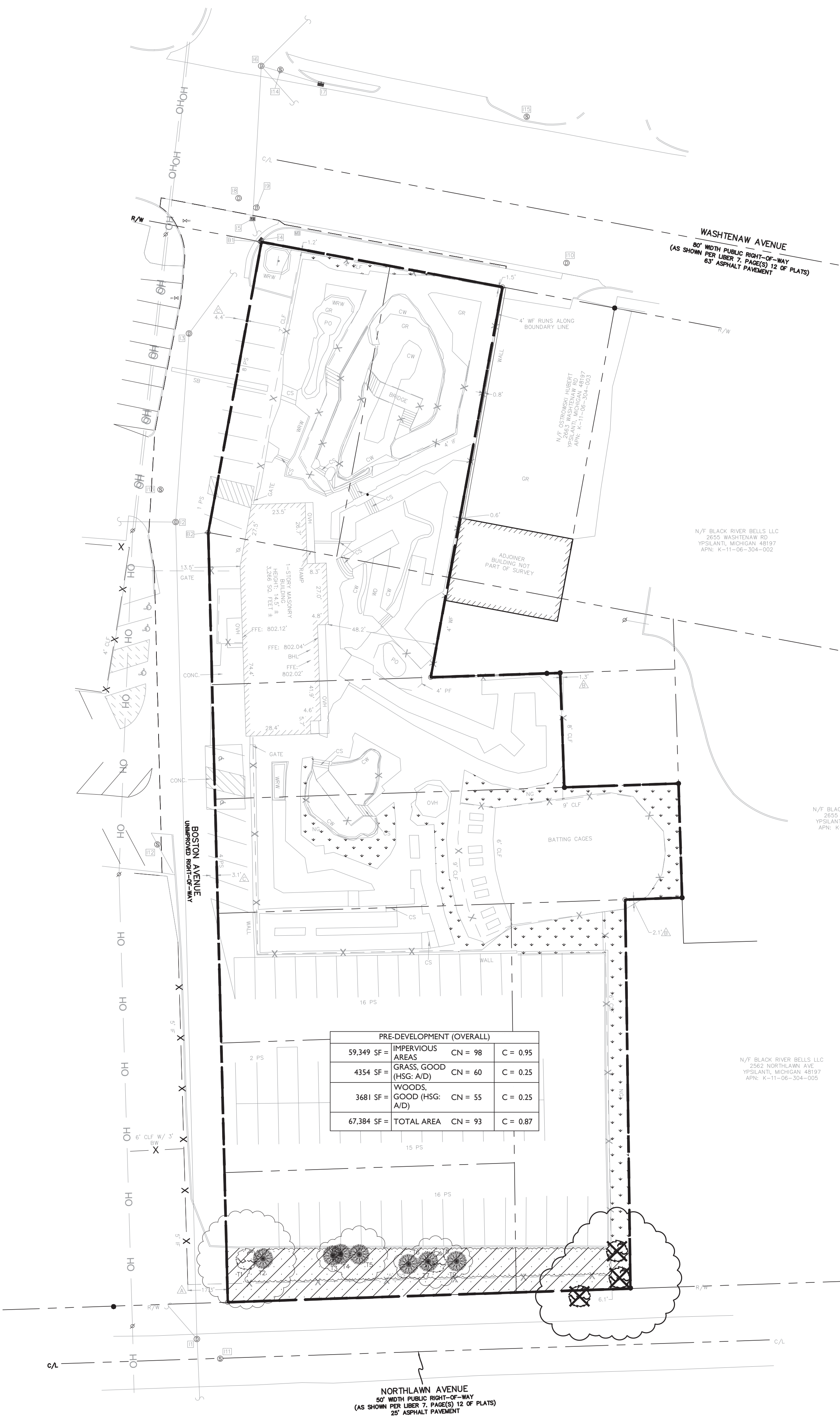
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SCALE: 1" = 30' PROJECT ID: DET-230108.01

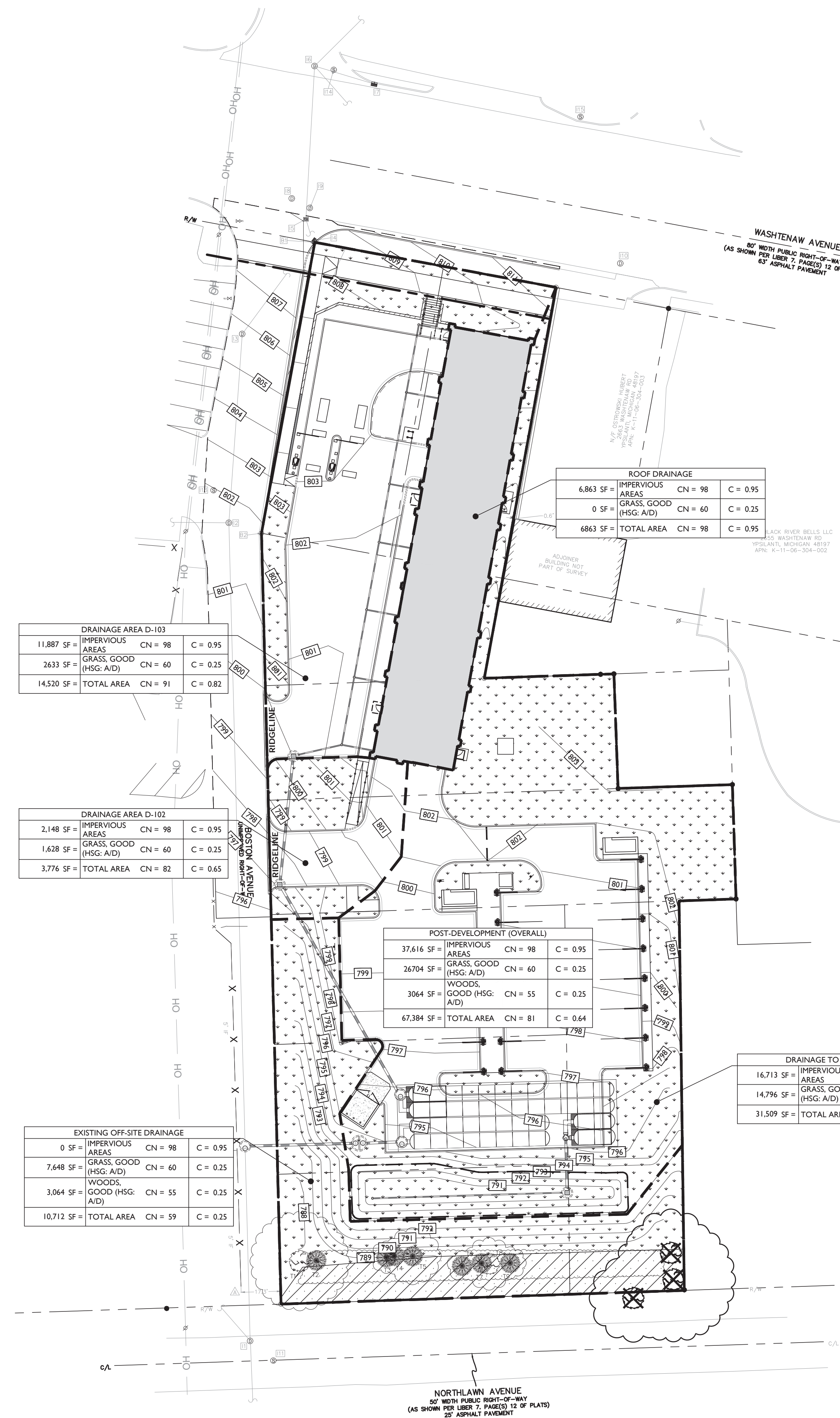
TITLE: **STORMWATER MANAGEMENT PLAN**

DRAWING: **C-5**

NOT TO SCALE. SEE PLANS FOR DIMENSIONS. WASHINGTON AVENUE, YPSILANTI, MI 48197. 2024.08.01

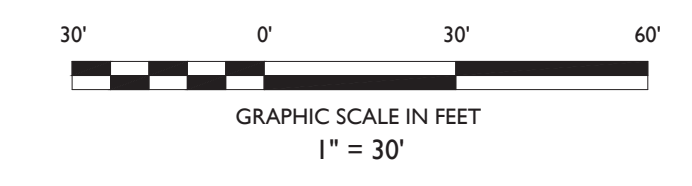


PRE-DEVELOPMENT DRAINAGE AREA MAP



POST-DEVELOPMENT DRAINAGE AREA MAP

SYMBOL	DESCRIPTION
	PROPERTY LINE
	PROPOSED GRADING CONTOUR
	PROPOSED DRAINAGE AREA
	PROPOSED STORMWATER STRUCTURES
	PROPOSED STORMWATER PIPING
	PROPOSED UNDERGROUND OUTLET STRUCTURE



REVISION	DATE	ISSUE	DESCRIPTION
4	08/23/2024	EM	REVISED PER PLANNING DEPARTMENT REVIEW #2
3	06/11/2024	EM	REVISED PER PLANNING DEPARTMENT REVIEW #1
2	04/18/2024	EM / JP	SUBMISSION FOR PRELIMINARY SITE PLAN REVIEW
1	02/07/2024	ECM	SUBMISSION FOR PRE-APPLICATION MEETING

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SITE DEVELOPMENT PLANS

PROPOSED CAR WASH

WHITEWATER EXPRESS CAR WASH

PARCEL ID: K-11-06-304-004
2675 WASHINGTON AVENUE (M-17)
CHARTER TOWNSHIP OF YPSILANTI
WASHINGTON COUNTY, MICHIGAN

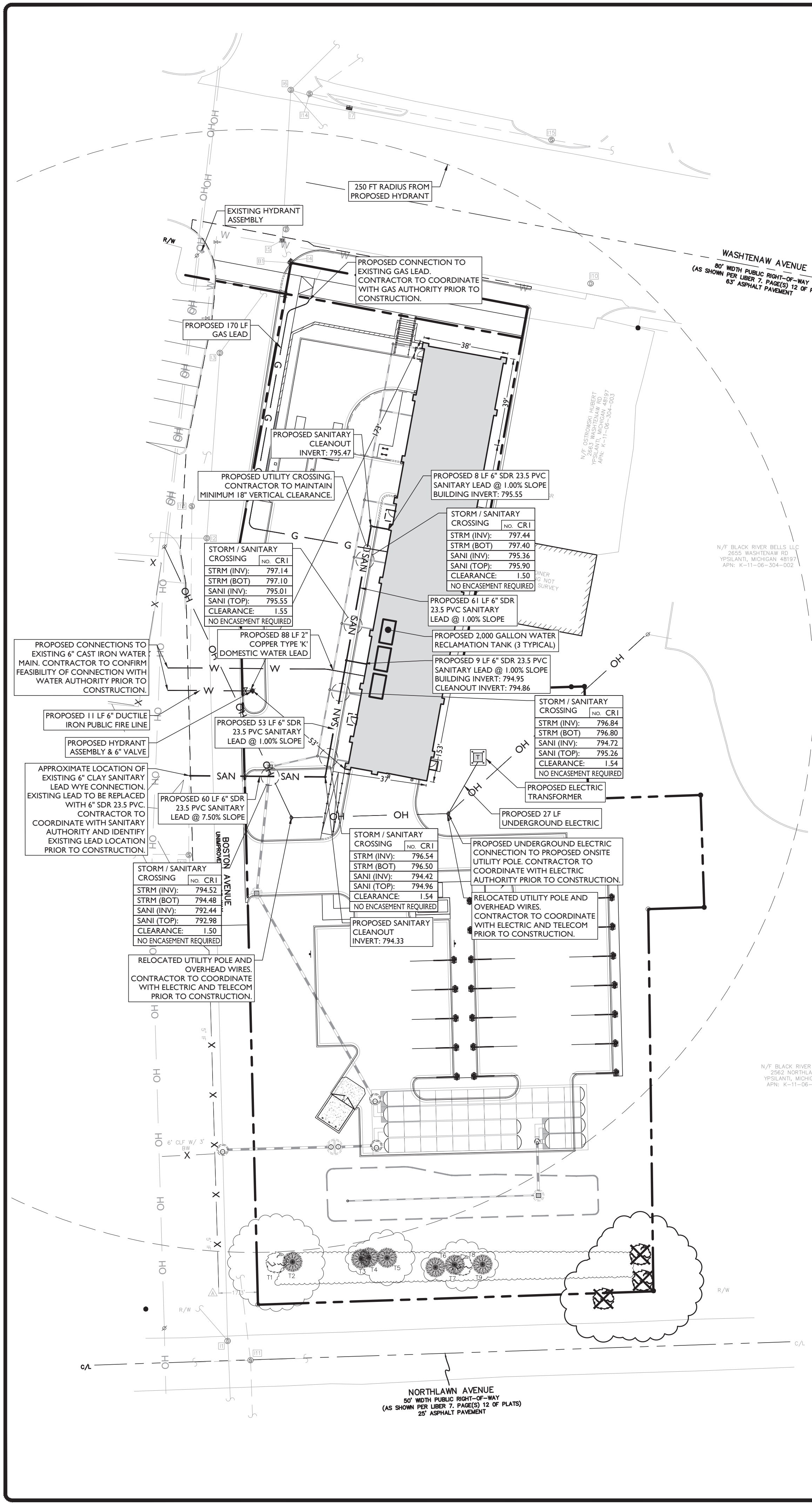
STATE OF MICHIGAN
JONATHAN REID
COOKSEY
ENGINEER

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SCALE: 1" = 30' PROJECT ID: DET-230108.01

TITLE:
DRAINAGE AREA MAPS

DRAWING:
C-6



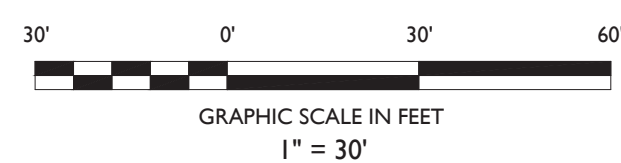
SYMBOL	DESCRIPTION
---	PROPERTY LINE
— SAN —	PROPOSED SANITARY LATERAL
— W —	PROPOSED DOMESTIC WATER SERVICE
— E —	PROPOSED ELECTRIC CONDUITS
— OH —	PROPOSED OVERHEAD WIRES
— G —	PROPOSED GAS LINE
○	PROPOSED CLEANOUT
○	PROPOSED UTILITY POLE
□	PROPOSED TRANSFORMER ON CONCRETE PAD WITH BOLLARDS

INVERT TABLE

- 11 STORM SEWER MANHOLE
RIM ELEVATION: 783.59'
12" RCP INVERT NW: 778.4'
12" RCP INVERT NE: 778.7' (UNABLE TO DETERMINE SOURCE)
RCP INVERT N: 770.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
RCP INVERT S: 769.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 12 STORM SEWER MANHOLE
RIM ELEVATION: 802.10'
18" RCP INVERT W: 796.3'
RCP INVERT N: 782.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
RCP INVERT S: 774.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 13 STORM SEWER MANHOLE
RIM ELEVATION: 805.98'
RCP INVERT N: 787.0' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
RCP INVERT S: 786.8' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 14 CURB INLET
RIM ELEVATION: 807.65'
SUMP ELEVATION: 805.7'
UNABLE TO LOCATE PIPES, FULL OF WATER & DEBRIS
- 15 GRATED INLET
RIM ELEVATION: 808.15'
10" CMP INVERT SE: 805.1'
24" RCP INVERT N: 804.2'
- 16 STORM SEWER MANHOLE
RIM ELEVATION: 808.21'
24" RCP INVERT S: 796.8'
8" CLAY PIPE INVERT E: 802.8'
24" RCP INVERT NE: 796.6'
24" RCP INVERT SE (UNABLE TO MEASURE DUE TO DEPTH)
- 17 CURB INLET
RIM ELEVATION: 808.89'
8" CLAY PIPE INVERT W: 803.6'
- 18 STORM SEWER MANHOLE
RIM ELEVATION: 808.48'
UNABLE TO OPEN DUE TO HIGH TRAFFIC
- 19 STORM SEWER MANHOLE
RIM ELEVATION: 808.60'
UNABLE TO OPEN DUE TO HIGH TRAFFIC
- 11a STORM SEWER MANHOLE
RIM ELEVATION: 812.55'
UNABLE TO OPEN DUE TO HIGH TRAFFIC
- 11b SANITARY SEWER MANHOLE
RIM ELEVATION: 783.94'
8" CAST IRON PIPE INVERT W: 776.2'
8" CAST IRON PIPE INVERT E: 776.1'
8" CAST IRON PIPE INVERT N: 775.6'
8" CAST IRON PIPE INVERT S: 775.5'
- 11c SANITARY SEWER MANHOLE
RIM ELEVATION: 796.41'
6" CAST IRON PIPE INVERT W: 776.7'
8" CAST IRON PIPE INVERT N: 776.7'
8" CAST IRON PIPE INVERT S: 776.7'
- 11d SANITARY SEWER MANHOLE
RIM ELEVATION: 802.34'
CAST IRON PIPE INVERT N: 787.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
CAST IRON PIPE INVERT S: 787.4' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 11e SANITARY SEWER MANHOLE
RIM ELEVATION: 808.29'
8" CAST IRON PIPE INVERT NE: 799.0'
6" CAST IRON PIPE INVERT E: 799.0'
SUMP ELEVATION: 798.9'
UNABLE TO LOCATE DISCHARGE PIPE, FULL OF SEWAGE
- 11f SANITARY SEWER MANHOLE
RIM ELEVATION: 812.13'
8" CAST IRON PIPE INVERT E: 801.7'
8" CAST IRON PIPE INVERT W: 801.6'

DRAINAGE AND UTILITY NOTES

1. THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IMMEDIATELY IN WRITING.
2. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN IN OPERATION ALL UTILITIES NOT DESIGNATED TO BE REMOVED.
3. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO ANY EXISTING UTILITY IDENTIFIED TO REMAIN WITHIN THE LIMITS OF THE PROPOSED WORK DURING CONSTRUCTION.
4. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET IS REQUIRED BETWEEN ANY SANITARY SEWER SERVICE AND ANY WATER LINES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASUREMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
5. ALL WATER LINES SHALL BE VERTICALLY SEPARATED ABOVE SANITARY SEWER LINES BY A MINIMUM DISTANCE OF 18 INCHES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASUREMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
6. THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR WATER AND SANITARY SEWER CONNECTION IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING.
7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING GAS, ELECTRIC AND TELECOMMUNICATION CONNECTIONS WITH THE APPROPRIATE GOVERNING AUTHORITY.
8. CONTRACTOR SHALL START CONSTRUCTION OF ANY GRAVITY SEWER AT THE LOWEST INVERT AND WORK UP-GRADE.
9. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD SET OF PLANS REFLECTING THE LOCATION OF EXISTING UTILITIES THAT HAVE BEEN CAPPED, ABANDONED, OR RELOCATED BASED ON THE DEMOLITION/REMOVAL ACTIVITIES REQUIRED IN THIS PLAN SET. THIS DOCUMENT SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.
10. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DISPLAYED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.



REVISION	DATE	ISSUE	DESCRIPTION
4	08/23/2024	MD	REVISED PER PLANNING DEPARTMENT REVIEW #2
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PROPOSED CAR WASH

WHITEWATER EXPRESS CAR WASH

PARCEL ID: K-11-06-304-004
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CHARTER TOWNSHIP OF YPSILANTI
WASHTEENAW COUNTY, MICHIGAN

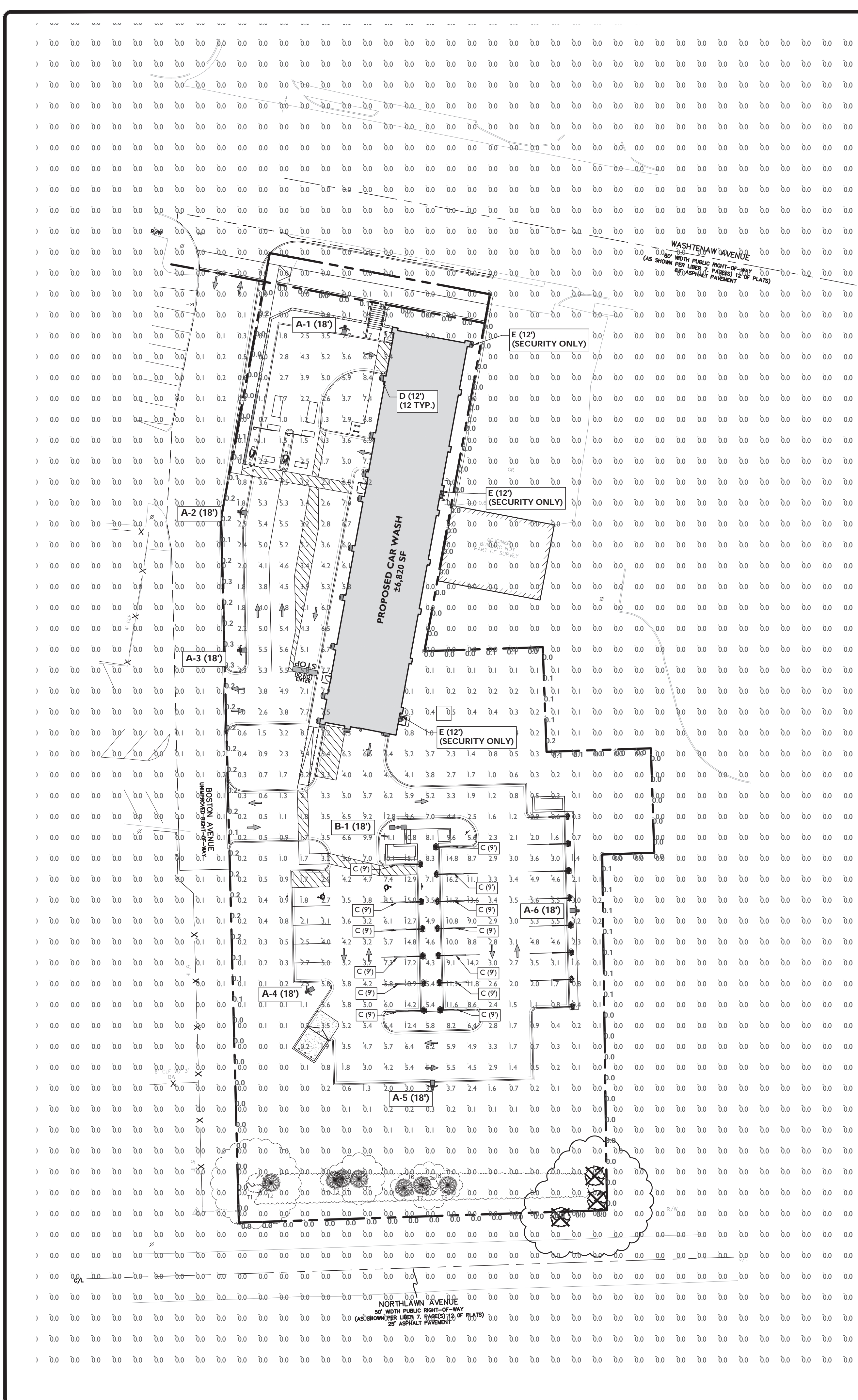


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SCALE: 1" = 30' PROJECT ID: DET-230108.01

TITLE: **UTILITY PLAN**

DRAWING: **C-7**



LIGHTING STATISTICS			
DESCRIPTION	AVERAGE	MINIMUM	MAXIMUM
OVERALL PARCEL	2.42 FC	0.0 FC	18.9 FC
PROPERTY LINE	0.06 FC	0.0 FC	0.3 FC

LIGHTING REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 1303.3(B)	MAXIMUM NON-RESIDENTIAL INTENSITY: 1.0 FT AT GROUND LEVEL	0.3 FC
§ 1303.3(B)	MAXIMUM RESIDENTIAL INTENSITY: 0.5 FC AT GROUND LEVEL	0.0 FC
§ 1303.3(B)	MAXIMUM INTENSITY: 30.0 FC ANYWHERE TO BE ILLUMINATED	18.9 FC
§ 1303.3(C)	MAXIMUM HEIGHT: 25 FT INCLUDING BASE	18 FT
§ 1303.3(C)	MAXIMUM HEIGHT ADJ. TO RESIDENTIAL 18 FT INCLUDING BASE	18 FT
§ 1303.3(D)	MINIMUM LIGHTING AT PARKING LOT: 0.4 FC	0.5 FC
§ 1303.3(E)	MAXIMUM COLOR STANDARD: 3,500 K	3,000 K

SYMBOL	DESCRIPTION
---	PROPERTY LINE
A (XX)	PROPOSED LIGHTING FIXTURE (MOUNTING HEIGHT)
+XX	PROPOSED LIGHTING INTENSITY (FOOTCANDLES)
[Symbol]	PROPOSED AREA LIGHT
[Symbol]	PROPOSED BUILDING MOUNTED LIGHT

PROPOSED LUMINAIRE SCHEDULE									
SYMBOL	LABEL	QUANTITY	SECURITY LIGHTING	DISTRIBUTION	LUMENS	LLF	MANUFACTURER	CONTROL	IES FILE
[Symbol]	A	6	MIRADA MEDIUM - MRM OUTDOOR LED AREA LIGHT - SINGLE SHIELDED, 1 @ 90°	FT	18,000 LMS	0.9	LSI	-	MRM-LED-18L-SIL-FT-30-70CRI-ILIES
[Symbol]	B	1	MIRADA MEDIUM - MRM OUTDOOR LED AREA LIGHT - DOUBLE 2 @ 180°	FT	18,000 LMS	1.0	LSI	-	MRM-LED-18L-SIL-FT-30-70CRIIES
[Symbol]	C	13	LOW-PROFILE, DRIVERLESS LINKABLE IP67 LED LINEAR LUMINAIRE (6 FT) - 9 FT A.F.G	N/A	600 LMS/FT	0.9	G & G INDUSTRIAL LIGHTING	-	GPX6-SOIES
[Symbol]	D	12	MIRANDA WALL SCENE-XWM OUTDOOR LED WALL SCENCE	TYPE II	3,000 LMS	0.9	LSI	-	XWM-2-LED-03L-30IES
[Symbol]	E	3	MIRANDA WALL SCENE-XWM OUTDOOR LED WALL SCENCE*	TYPE II	3,000 LMS	0.9	LSI	-	XWM-2-LED-03L-30IES

* FIXTURE 'E' ARE SECURITY LIGHTING ONLY. NOT INCLUDED WITHIN LIGHTING MODEL.

SECURITY CAMERAS TO BE MOUNTED ON EACH POLE 10 FT ABOVE GRADE		
POLE LABEL	NUMBER OF CAMERAS	DIRECTION OF CAMERAS
A-1		
A-2		
A-3		
A-4		
A-5		
A-6		
B-1		



FIXTURES 'A' & 'B'

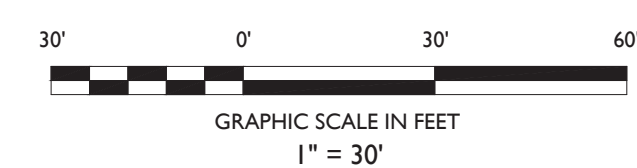


FIXTURES 'D', 'E'

SITE LIGHTING SHALL BE TURNED OFF BY 9:00 PM

GENERAL LIGHTING NOTES

- THE LIGHTING LEVELS DEPICTED WITHIN THE PLAN SET ARE CALCULATED UTILIZING DATA OBTAINED FROM THE LISTED MANUFACTURER. ACTUAL ILLUMINATION LEVELS AND PERFORMANCE OF ANY PROPOSED LIGHTING FIXTURE MAY VARY DUE TO UNCONTROLLABLE VARIABLES SUCH AS WEATHER, VOLTAGE SUPPLY, LAMP TOLERANCE, EQUIPMENT SERVICE LIFE AND OTHER VARIABLE FIELD CONDITIONS.
- WHERE APPLICABLE, THE EXISTING LIGHT LEVELS DEPICTED WITHIN THE PLAN SET SHALL BE CONSIDERED APPROXIMATE. THE EXISTING LIGHT LEVELS ARE BASED ON FIELD OBSERVATIONS AND THE MANUFACTURER'S DATA OF THE ASSUMED OR MOST SIMILAR LIGHTING FIXTURE MODEL.
- UNLESS NOTED ELSEWHERE WITHIN THIS PLAN SET, THE LIGHT LOSS FACTORS USED IN THE LIGHTING ANALYSIS ARE AS FOLLOWS:
 - LIGHT EMITTING DIODES (LED): 0.90
 - HIGH PRESSURE SODIUM: 0.72
 - METAL HALIDE: 0.72
- THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING PRIOR TO THE START OF CONSTRUCTION, OF ANY PROPOSED LIGHTING LOCATIONS THAT CONFLICT WITH EXISTING PROPOSED DRAINAGE, UTILITY, OR OTHER IMPROVEMENTS.
- THE CONTRACTOR IS RESPONSIBLE TO PREPARE A WIRING PLAN AND PROVIDE ELECTRIC SERVICE TO ALL PROPOSED LIGHTING FIXTURES. THE CONTRACTOR IS REQUIRED TO PREPARE AN AS-BUILT PLAN OF WIRING AND PROVIDE COPIES TO THE OWNER AND STONEFIELD ENGINEERING & DESIGN, LLC.



REVISIONS: 01/23/2024 (REVISED PER PLANNING DEPARTMENT REVIEW #2)
 02/22/2024 (REVISED PER PLANNING DEPARTMENT REVIEW #1)
 04/18/2024 (SUBMISSION FOR PRELIMINARY SITE PLAN REVIEW)
 02/07/2024 (SUBMISSION FOR PRE-APPLICATION MEETING)

DESCRIPTION
 BY
 DATE
 ISSUE

NOT APPROVED FOR CONSTRUCTION

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 Phone 248.247.1115

PROPOSED CAR WASH

PARCEL ID: K-11-06-304-004
 2675 WASHENAW AVENUE (M-17)
 CHARTER TOWNSHIP OF YPSILANTI
 WASHENAW COUNTY, MICHIGAN

STATE OF MICHIGAN
 JONATHAN REID
 COOKSEY
 ENGINEER
 FIELD NO. 10757
 PROFESSIONAL ENGINEER

STONEFIELD
 engineering & design

SCALE: 1" = 30' PROJECT ID: DET-230108.01

TITLE:

LIGHTING PLAN

DRAWING:

C-8



Know what's below
Call before you dig.

SYMBOL	DESCRIPTION
	PROPOSED GENERAL LANDSCAPING TREES
	PROPOSED STREET YARD TREES
	PROPOSED INTERIOR PARKING LOT TREES
	PROPOSED PARKING LOT PERIMETER TREES
	PROPOSED SCREENING TREES

NOT APPROVED FOR CONSTRUCTION

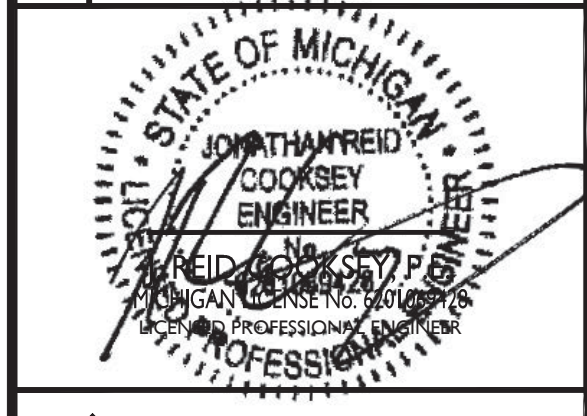
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SITE DEVELOPMENT PLANS
PROPOSED CAR WASH



PARCEL ID: K-11-06-304-004
2675 WASHTEENAW AVENUE (M-17)
CHARTER TOWNSHIP OF YPSILANTI
WASHTEENAW COUNTY, MICHIGAN



STONEFIELD
engineering & design

SCALE: 1" = 30' PROJECT ID: DET-230108.01

TITLE:
LANDSCAPING PLAN

DRAWING:
C-9

CODE SECTION	REQUIRED	PROPOSED
§ 1301.3.B.(1)	GENERAL LANDSCAPING 1 TREE PER 1,000 SF OF LAWN AREA (5,276 SF) * (1 TREE / 1,000 SF) = 6 TREES	6 TREES
§ 1301.3.B.(2)	1 SHRUB PER 500 SF OF LAWN AREA (5,276 SF) * (1 SHRUB / 500 SF) = 11 SHRUBS	11 SHRUBS
§ 1301.3.C.(1)	STREET YARD LANDSCAPING 1 DECIDUOUS TREE PER 40 LF ORNAMENTAL TREE PER 100 LF, & 1 SHRUB PER 10 LF WASHTEENAW AVENUE: 107 LF DECIDUOUS TREES: (107 LF) / (40 LF) = 3 TREES ORNAMENTAL TREES: (107 LF) / (100 LF) = 1 TREE SHRUBS: (107 LF) / (10) = 11 SHRUBS BOSTON AVENUE: 297 LF DECIDUOUS TREES: (297 LF) / (40 LF) = 7 TREES ORNAMENTAL TREES: (297 LF) / (100 LF) = 3 TREES SHRUBS: (297 LF) / (10) = 30 SHRUBS	3 TREES 1 TREE 11 SHRUBS 7 TREES 3 TREES 30 SHRUBS
§ 1301.3.D.(1)a.	INTERIOR PARKING LOT LANDSCAPING 1 TREE PER 2,000 SF OF PAVED SURFACE (24,155 SF) / (2,000 SF) = 12 TREES	12 TREES
§ 1301.3.D.(1)b.	NO MORE THAN 12 SPACES IN A ROW	COMPLIES
§ 1301.3.D.(1)c.	EACH TREE SHALL CONTAIN 150 SF OF LANDSCAPE AREA	COMPLIES
§ 1301.3.D.(1)d.	ISLANDS SHALL BE NO LESS THAN 5 FT IN ANY DIRECTION	COMPLIES
§ 1301.3.D.(2)a.	PERIMETER PARKING LOT LANDSCAPING 1 TREE PER 40 LF OF PARKING LOT PERIMETER (747 LF) / (40 LF) = 19 TREES	19 TREES
§ 1301.3.G.(5)	BIORETENTION POND LANDSCAPING: 1 DECIDUOUS TREE & 10 SHRUBS PER 30 LF TOTAL PERIMETER: 278 DECIDUOUS TREES: (278 LF) / (50 LF) = 6 TREES SHRUBS: (278 LF) / (50 LF) = 5.56 * (10) = 56 SHRUBS	6 TREES 56 SHRUBS
§ 1301.3.H.(2)	SCREENING OFFICER/TALENT/INSTITUTIONAL/SERVICE TO SINGLE FAMILY RESIDENTIAL SCREEN 2 1 LARGE EVERGREEN TREE PER 10 LF EVERGREEN TREES: (176 LF) / (10 LF) = 18 TREES	COMPLIES 18 TREES

IRRIGATION NOTE:
IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.

- LANDSCAPING NOTES**
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
 - THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED.
 - THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH.
 - THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION AREAS SHALL BE 3 FEET HORIZONTAL TO 1 FOOT VERTICAL (3:1 SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
 - THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS IN AREA OF LANDSCAPING DISTURBANCE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.
 - THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.

PLANT SCHEDULE						
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
DECIDUOUS TREES						
	ACE	9	ACER RUBRUM	RED MAPLE	2.5" - 3" CAL	B&B
	CAR	9	CARPINUS CAROLINIANA 'J.N. UPRIGHT'	FIRESPICE AMERICAN HORNBEAM	2.5" - 3" CAL	B&B
	GIN	8	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE	2.5" - 3" CAL	B&B
	GLE	13	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	SKYLINE HONEY LOCUST	2.5" - 3" CAL	B&B
	LIR	5	LIRIODENDRON TULIPIFERA	TULIP POPLAR	2.5" - 3" CAL	B&B
	QUE	5	QUERCUS PHELLOS	WILLOW OAK	2.5" - 3" CAL	B&B
EVERGREEN TREES						
	THU	21	THUJA X 'GREEN GIANT'	GREEN GIANT ARBORVITAE	7' - 8' HT	B&B
ORNAMENTAL TREES						
	COR	5	CORNUS FLORIDA	FLOWERING DOGWOOD	2.5" - 3" CAL	B&B
SHRUBS						
	HYD	15	HYDRANGEA QUERCIFOLIA 'PEE WEE'	PEE WEE OAKLEAF HYDRANGEA	24" - 36"	POT
	VER	37	ILEX VERTICILLATA 'RED SPRITE'	RED SPRITE WINTERBERRY	24" - 36"	POT
	VIB	11	VIBURNUM DENTATUM	VIBURNUM	36" - 42"	POT
BASIN SHRUBS						
	ASC	23	ASCLEPIAS INCARNATA	SWAMP MILKWEED	3 GAL.	POT
	HIB	18	HIBISCUS MOSCHEUTOS	ROSE MALLOW	3 GAL.	POT
	ITE	8	ITEA VIRGINICA 'LITTLE HENRY'	VIRGINIA SWEETSPIRE	3 GAL.	POT
	SAM	7	SAMBUCUS CANADENSIS	AMERICAN ELDERBERRY	3 GAL.	POT
EVERGREEN SHRUBS						
	ICO	45	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	36" - 42"	POT
GRASSES						
	CAL	15	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	2 GAL.	POT

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

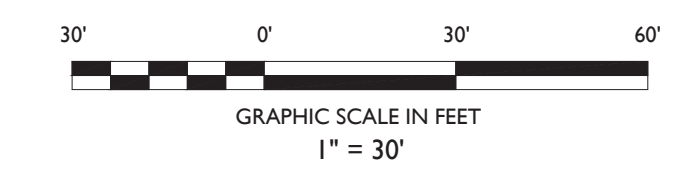
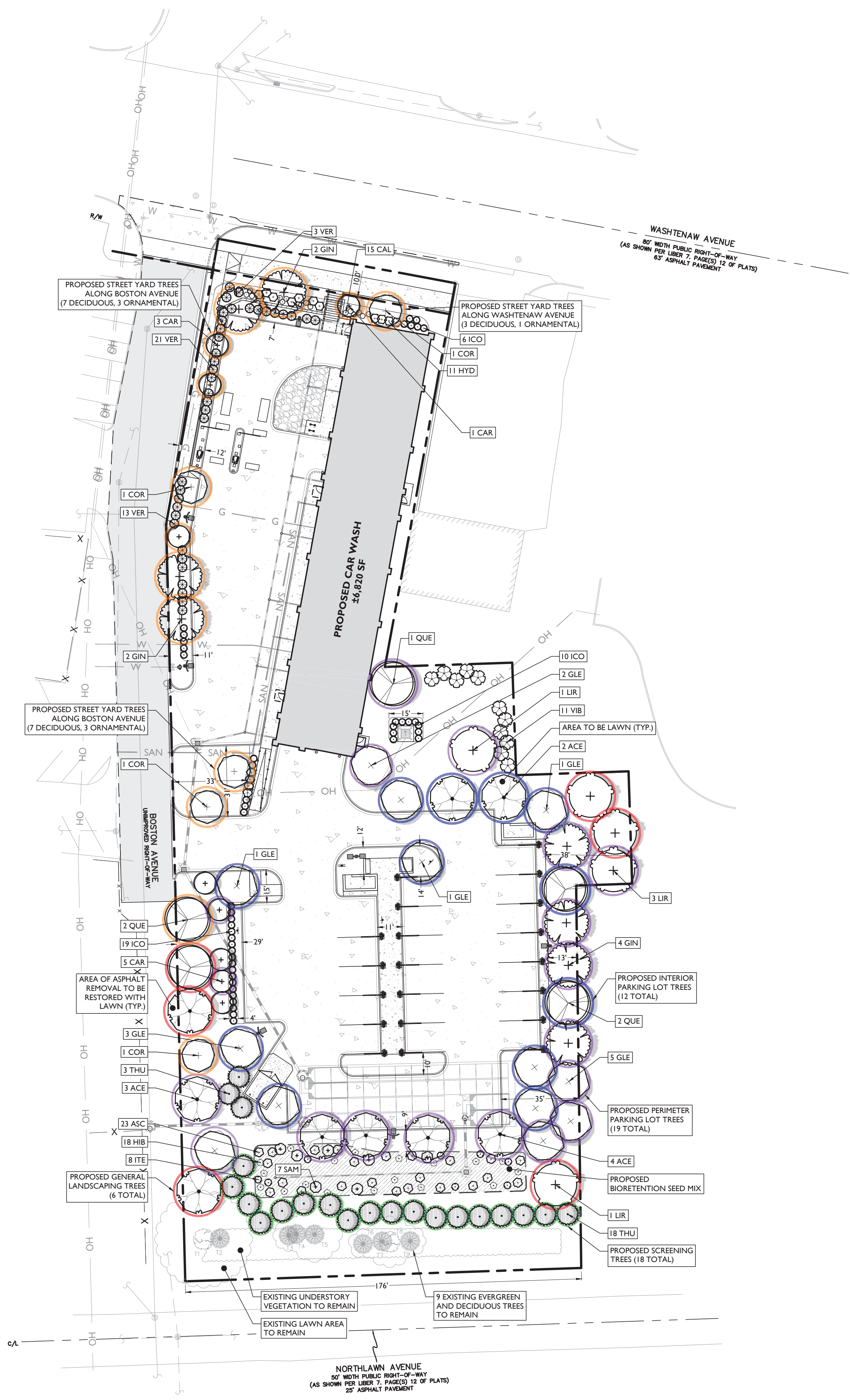
Raingarden Mix - Forbs

Scientific Name	Common Name
Anemone canadensis	Canada Anemone
Angelica atropurpurea	Angelica
Asclepias incarnata	Swamp Milkweed
Eupatorium maculatum	Joe Pye Weed
Eupatorium perfoliatum	Boneset
Helenium autumnale	Sneezeweed
Hibiscus moscheutos	Swamp Rose Mallow
Iris virginica	Southern Blue Flag
Liatris spicata	Marsh Blazing Star
Labella alphitika	Great Blue Lobelia
Rudbeckia fulgida	Sweet Black-eyed Susan
Solidago graminifolia	Grass-leaved Goldenrod
Symphitrichum purpureum	Swamp Aster
Verbena hastata	Blue Vervain
Veronica missouriensis	Ironweed

Raingarden Mix - Grasses

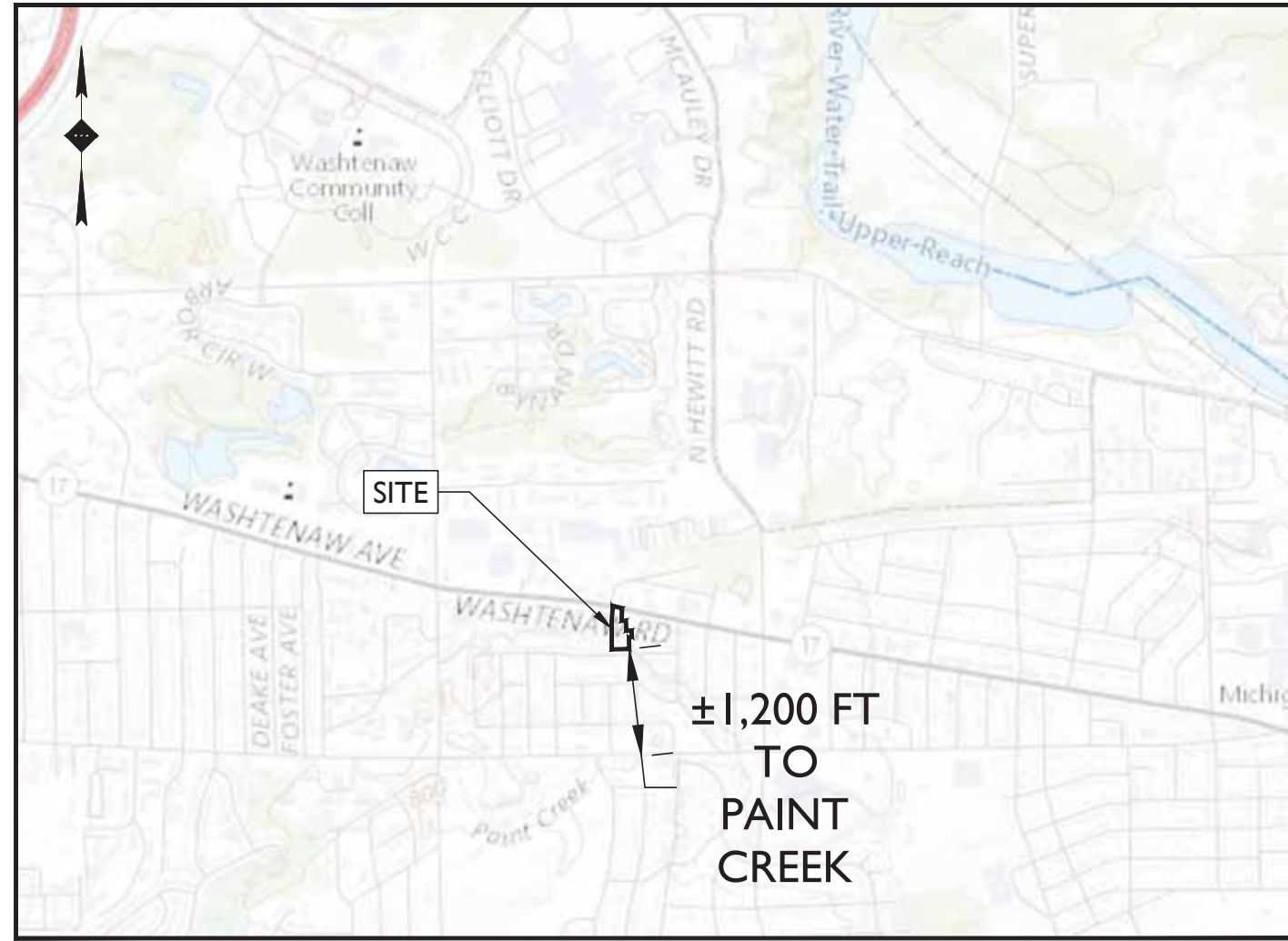
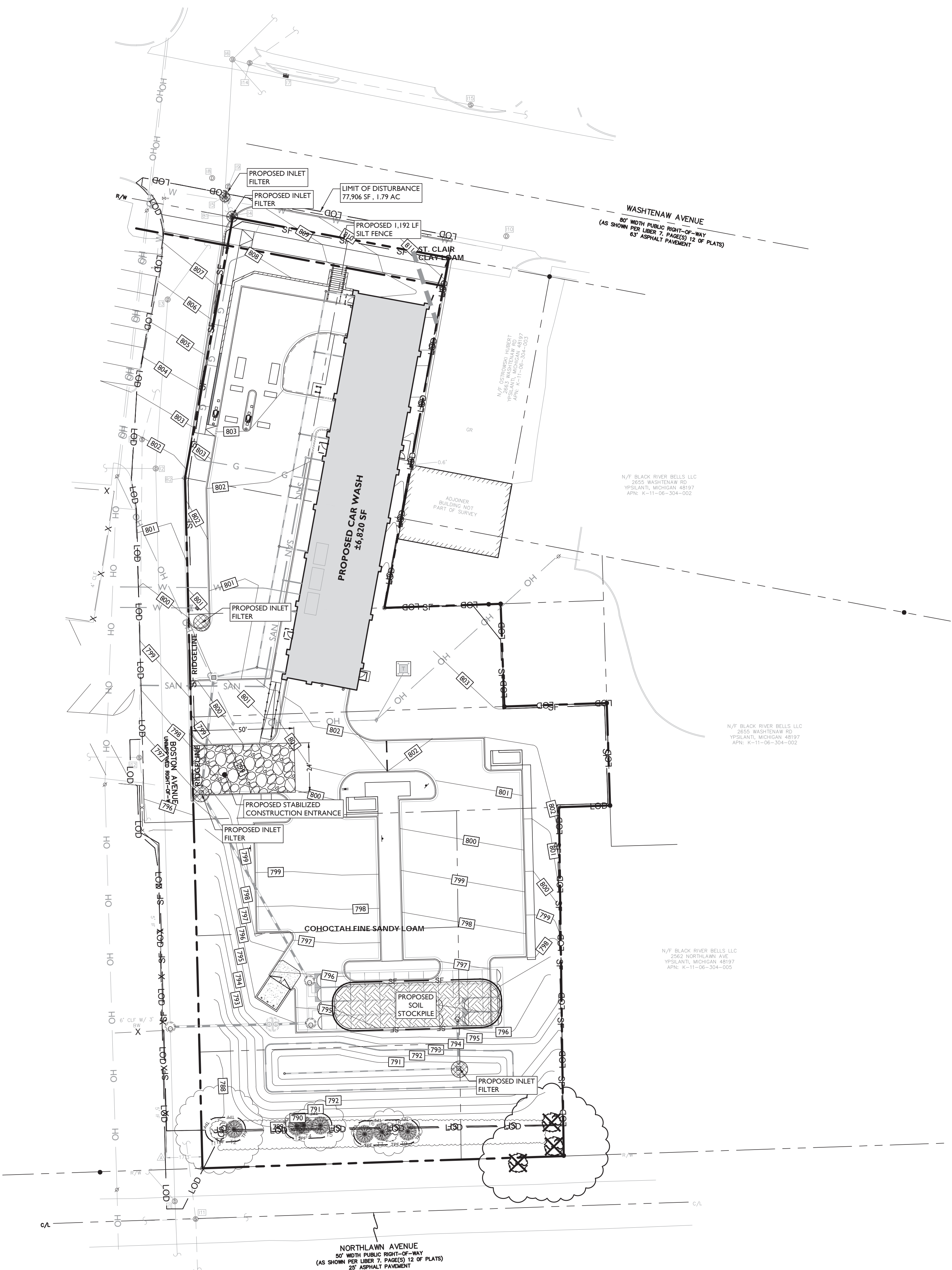
Scientific Name	Common Name
Carex spp.	Carex species
Elymus virginicus	Virginia Wild Rye
Scirpus spp.	Scirpus species
Sparganium eurycarpum	Common Bur Reed

BIORETENTION/RAIN GARDEN SEED MIX
3 O.Z./1,000 SF OR 6 LBS PER ACRE



V:\PROJECTS\2023\230108.01\230108.01_LANDSCAPING\230108.01_LANDSCAPING.dwg

NORTH PLANNING DEPARTMENT 2024-06-11 10:00 AM 2024-06-11 10:00 AM 2024-06-11 10:00 AM



LOCATION MAP
SCALE: 1" = 2,000'±

SYMBOL	DESCRIPTION
---	PROPERTY BOUNDARY
---	ADJACENT PROPERTY BOUNDARY
---	PROPOSED LIMIT OF DISTURBANCE
---	PROPOSED SILT FENCE
---	PROPOSED TREE PROTECTION FENCE
---	PROPOSED STOCKPILE & EQUIPMENT STORAGE
---	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
---	PROPOSED INLET PROTECTION FILTER

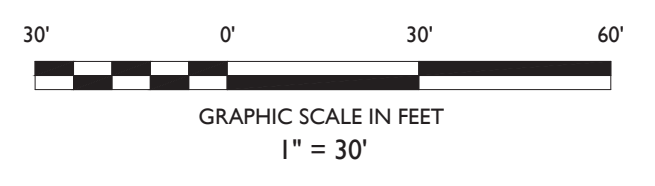
SOIL CHARACTERISTICS CHART	
TYPE OF SOIL	COHOCTAH FINE SANDY LOAM, FREQUENTLY FLOODED(CC)
PERCENT OF SITE COVERAGE	98.6%
HYDROLOGIC SOIL GROUP	A/D
DEPTH TO RESTRICTIVE LAYER	MORE THAN 80 IN
SOIL PERMEABILITY	1.98 TO 5.95 IN/HR
DEPTH TO WATER TABLE	0 TO 12 IN

SOIL CHARACTERISTICS CHART	
TYPE OF SOIL	ST. CLAIR CLAY LOAM
PERCENT OF SITE COVERAGE	0.4%
HYDROLOGIC SOIL GROUP	D
DEPTH TO RESTRICTIVE LAYER	MORE THAN 80 IN
SOIL PERMEABILITY	0.06 TO 0.20 IN / HR
DEPTH TO WATER TABLE	24 TO 36 IN

- SEQUENCE OF CONSTRUCTION
- INSTALL SILT FENCE AND CONSTRUCTION ENTRANCE (2 DAYS).
 - ROUGH GRADING AND TEMPORARY SEEDING (20 DAYS).
 - EXCAVATE AND INSTALL DRAINAGE PIPING, AND INLETS (20 DAYS).
 - INSTALL INLET FILTERS (1 DAY).
 - BUILDING CONSTRUCTION AND SITE IMPROVEMENTS (90 DAYS).
 - CONSTRUCT RIGHT OF WAY IMPROVEMENTS (2 DAYS).
 - LANDSCAPING IMPROVEMENTS AND FINAL SEEDING (7 DAYS).
 - REMOVE SOIL EROSION MEASURES (1 DAY).
- NOTE: TIME DURATIONS ARE APPROXIMATE AND ARE INTENDED TO ACT AS A GENERAL GUIDE TO THE CONSTRUCTION TIMELINE. ALL DURATIONS ARE SUBJECT TO CHANGE BY CONTRACTOR. CONTRACTOR SHALL SUBMIT CONSTRUCTION SCHEDULE TO TOWNSHIP AND ENGINEER. CONTRACTOR SHALL PHASE CONSTRUCTION ACCORDINGLY.

Know what's below
Call before you dig.

- SOIL EROSION AND SEDIMENT CONTROL NOTES
- THE CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
 - THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL AIR QUALITY STANDARDS.
 - THE CONTRACTOR IS RESPONSIBLE TO INSPECT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER A PRECIPITATION EVENT GREATER THAN 1 INCH. THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG ON SITE AND DOCUMENT CORRECTIVE ACTION TAKEN THROUGHOUT THE COURSE OF CONSTRUCTION AS REQUIRED.



REVISION	DATE	ISSUE	DESCRIPTION
1	02/07/2024	1	SUBMISSION FOR PRE-APPLICATION MEETING
2	04/18/2024	2	SUBMISSION FOR PRELIMINARY SITE PLAN REVIEW
3	06/11/2024	3	REVISION PER PLANNING DEPARTMENT REVIEW #1
4	08/23/2024	4	REVISION PER PLANNING DEPARTMENT REVIEW #2

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SITE DEVELOPMENT PLANS

PROPOSED CAR WASH

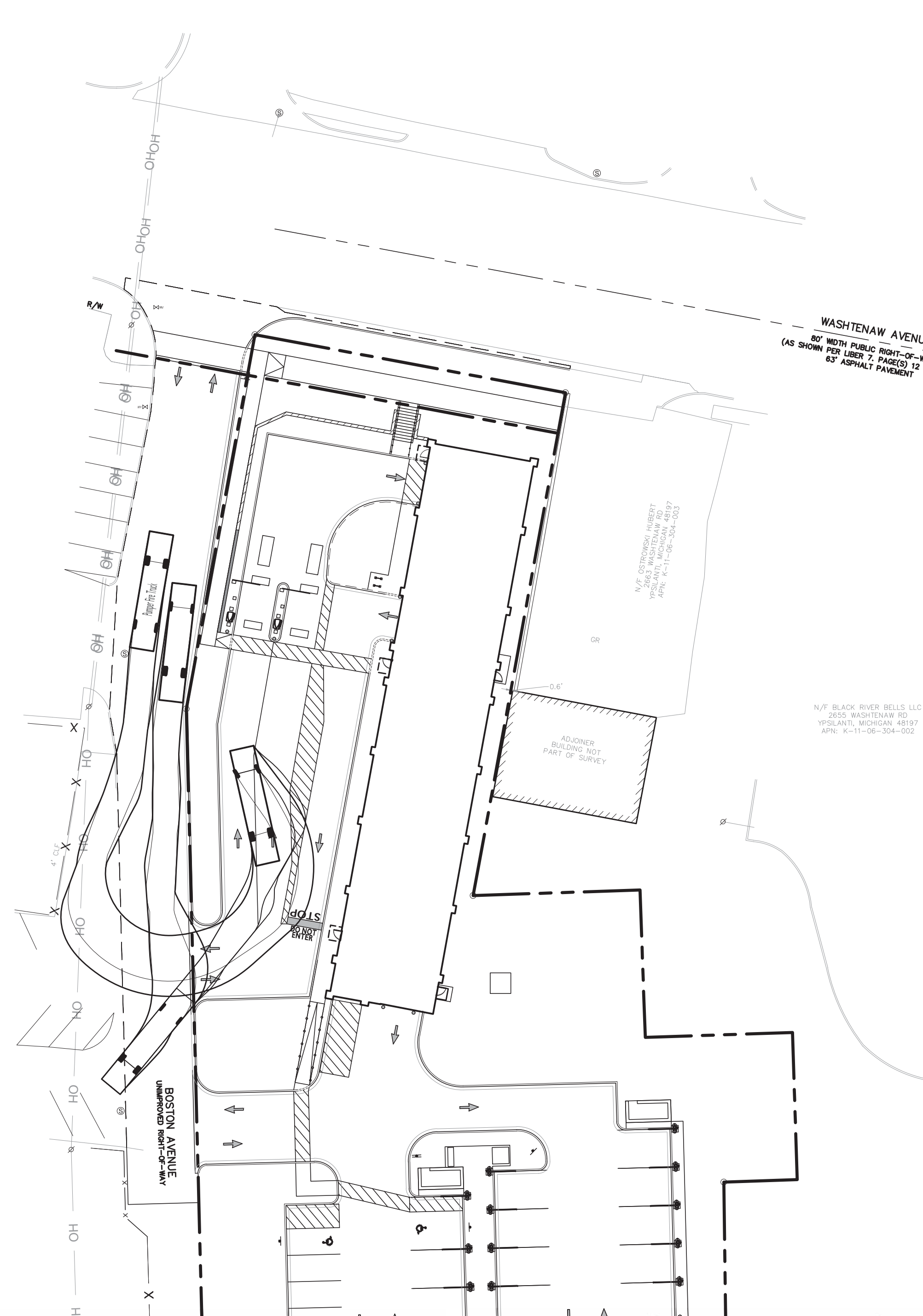
PARCEL ID: K-11-06-304-004
2675 WASHTENAW AVENUE (M-17)
CHARTER TOWNSHIP OF YPSILANTI
WASHTENAW COUNTY, MICHIGAN

JONATHAN REID COOKSEY
ENGINEER

SCALE: 1" = 30' PROJECT ID: DET-230108.01

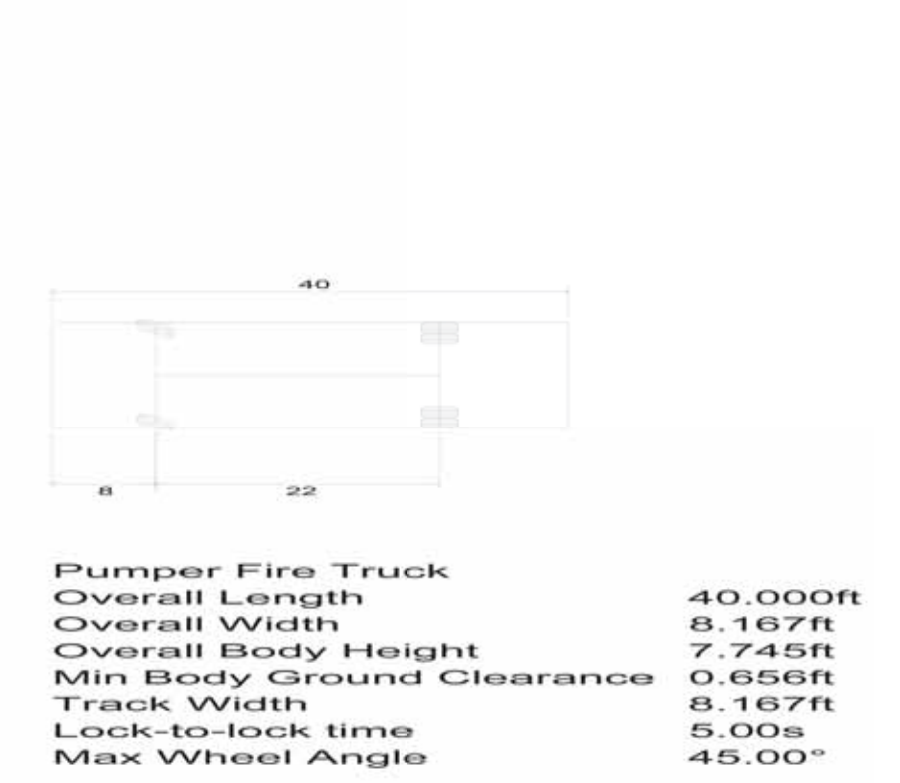
TITLE:
SOIL EROSION & SEDIMENT CONTROL PLAN

DRAWING:
C11



Vehicle Tracking Vehicle Details Ref:

Vehicle Name:	Pumper Fire Truck
Type:	Rigid vehicle
Category:	(Unspecified)
Classification:	(Unspecified)
Source:	NCHRP Report 659
Description:	Design Vehicle: Maximum wheel angle based on E-CONE Fire Truck.
Notes:	
Unit 1 Name:	Pumper Fire Truck

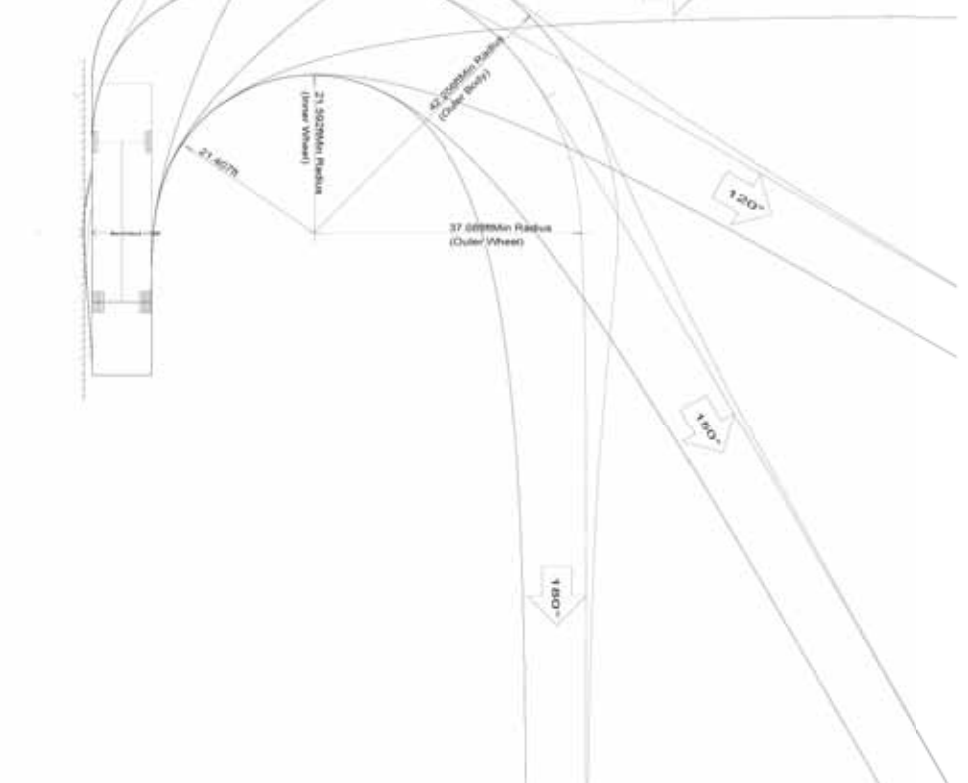


Every Effort Has Been Made To Ensure The Accuracy Of This Information
Please Check Data From Your Own Sources

PUMPER FIRE TRUCK
 Overall Length 40.000ft
 Overall Width 8.167ft
 Overall Body Height 7.745ft
 Min Body Ground Clearance 0.656ft
 Track Width 8.167ft
 Lock-to-lock time 5.00s
 Max Wheel Angle 45.00°

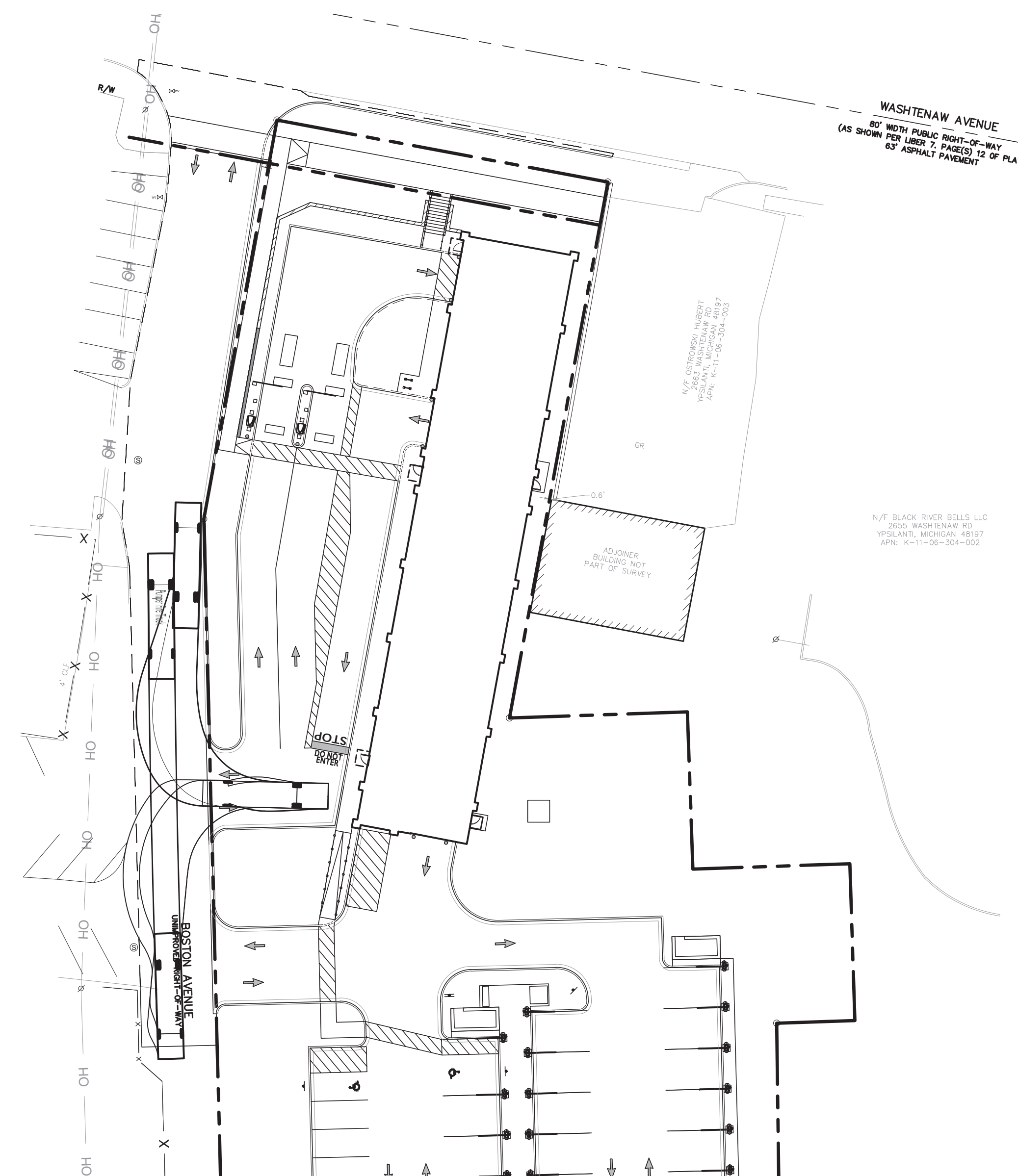
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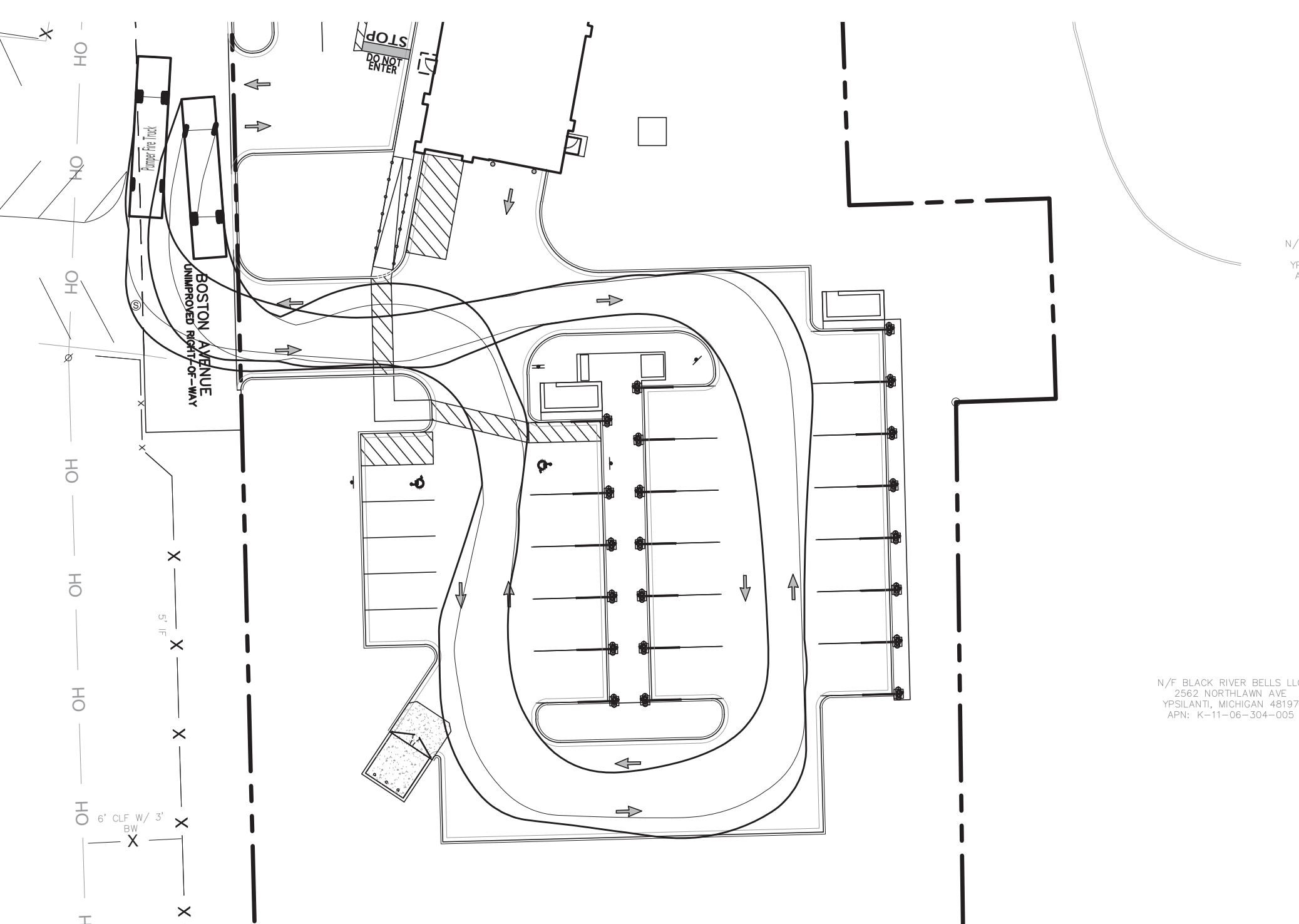


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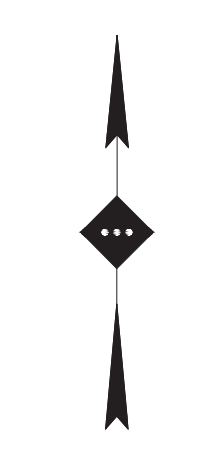
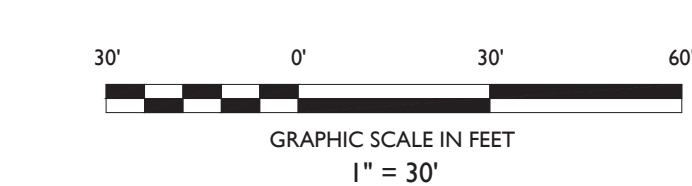
FIRE TRUCK TURNING ANALYSIS - BUILDING ACCESS



FIRE TRUCK TURNING ANALYSIS - BOSTON AVENUE



FIRE TRUCK TURNING ANALYSIS - PARKING ACCESS



ISSUE	DATE	BY	DESCRIPTION
4	08/23/2024	MU	REVISED PER PLANNING DEPARTMENT REVIEW #2
3	06/11/2024	EM	REVISED PER PLANNING DEPARTMENT REVIEW #1
2	04/18/2024	EM/JF	SUBMISSION FOR PRELIMINARY SITE PLAN REVIEW
1	02/07/2024	ECM	SUBMISSION FOR PRE-APPLICATION MEETING

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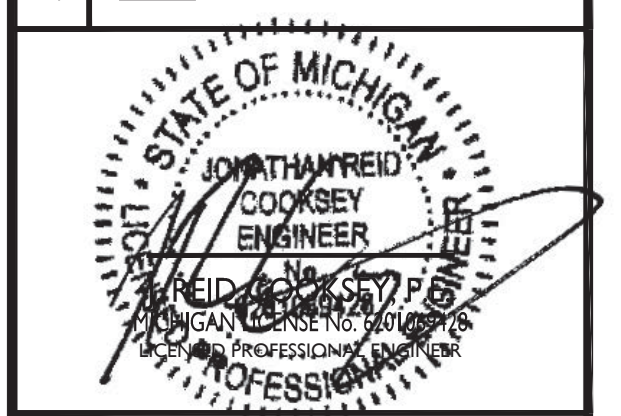
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Phone 248.247.1115

SITE DEVELOPMENT PLANS

PROPOSED CAR WASH

WHITEWATER EXPRESS CAR WASH

PARCEL ID: K-11-06-304-004
2675 WASHTENAW AVENUE (M-17)
CHARTER TOWNSHIP OF YPSILANTI
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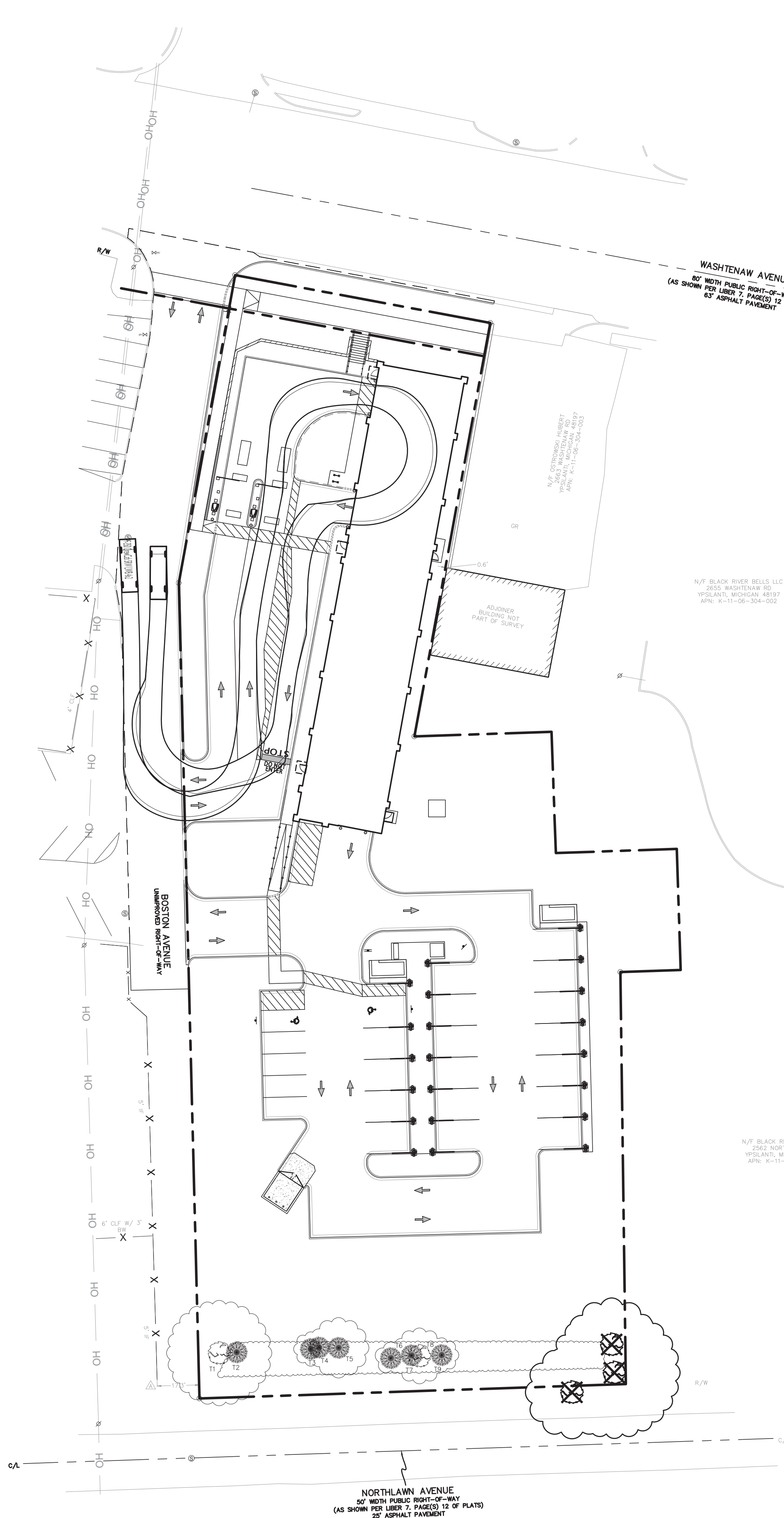
SCALE: 1" = 30' PROJECT ID: DET-230108.01

TITLE:
TRUCK TURNING ANALYSIS

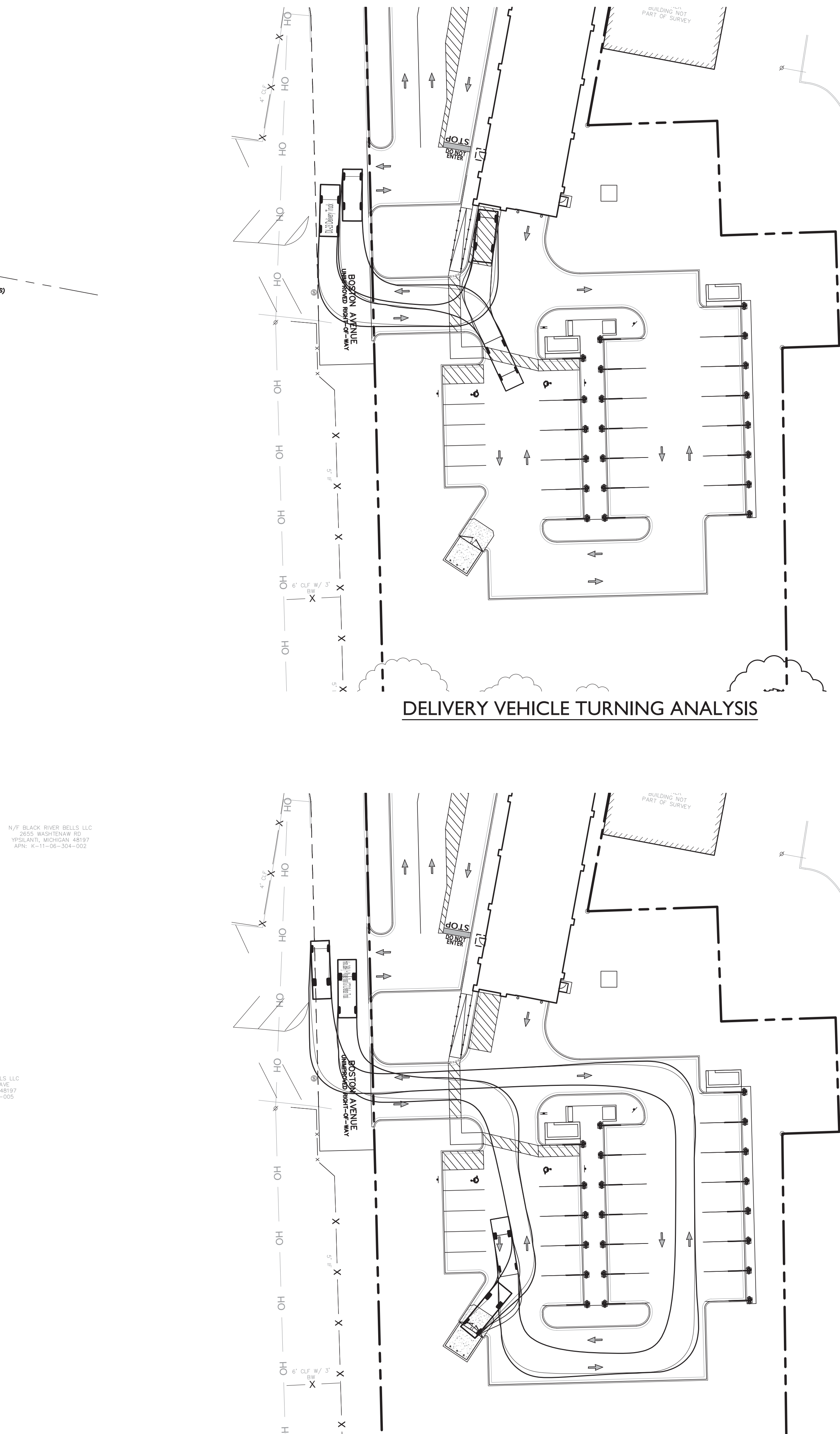
DRAWING:
C-12

V:\2023\DET-230108\01\DEP\LOC\304\304 WASHTENAW AVENUE - YPSILANTI.MIC\CD\03\030108.DWG

NORTH LANE TRUCK TURNING ANALYSIS (SEE PLAT 12 OF PLATS) 25' ASPHALT PAVEMENT



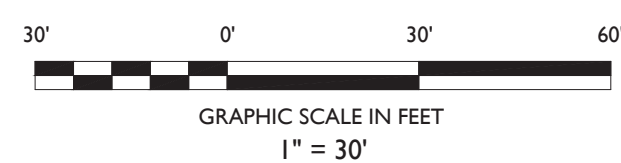
EMERGENCY BYPASS LANE TRUCK TURNING ANALYSIS



DELIVERY VEHICLE TURNING ANALYSIS



REFUSE VEHICLE TURNING ANALYSIS



ISSUE	DATE	BY	DESCRIPTION
1	02/07/2024	ECM	SUBMISSION FOR PRE-APPLICATION MEETING
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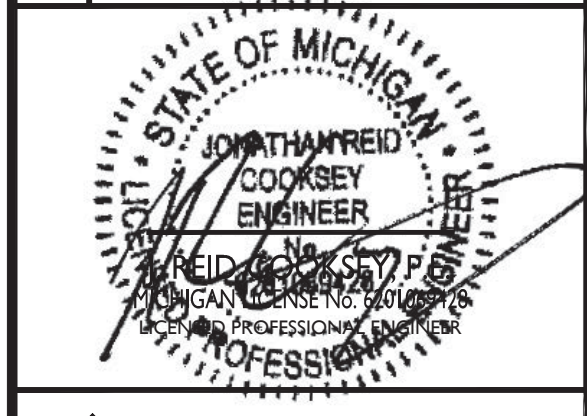
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Phone 248.247.1115

PROPOSED CAR WASH

WHITEWATER EXPRESS CAR WASH

PARCEL ID: K-11-06-304-004
2675 WASHTEENAW AVENUE (M-17)
CHARTER TOWNSHIP OF YPSILANTI
WASHTEENAW COUNTY, MICHIGAN



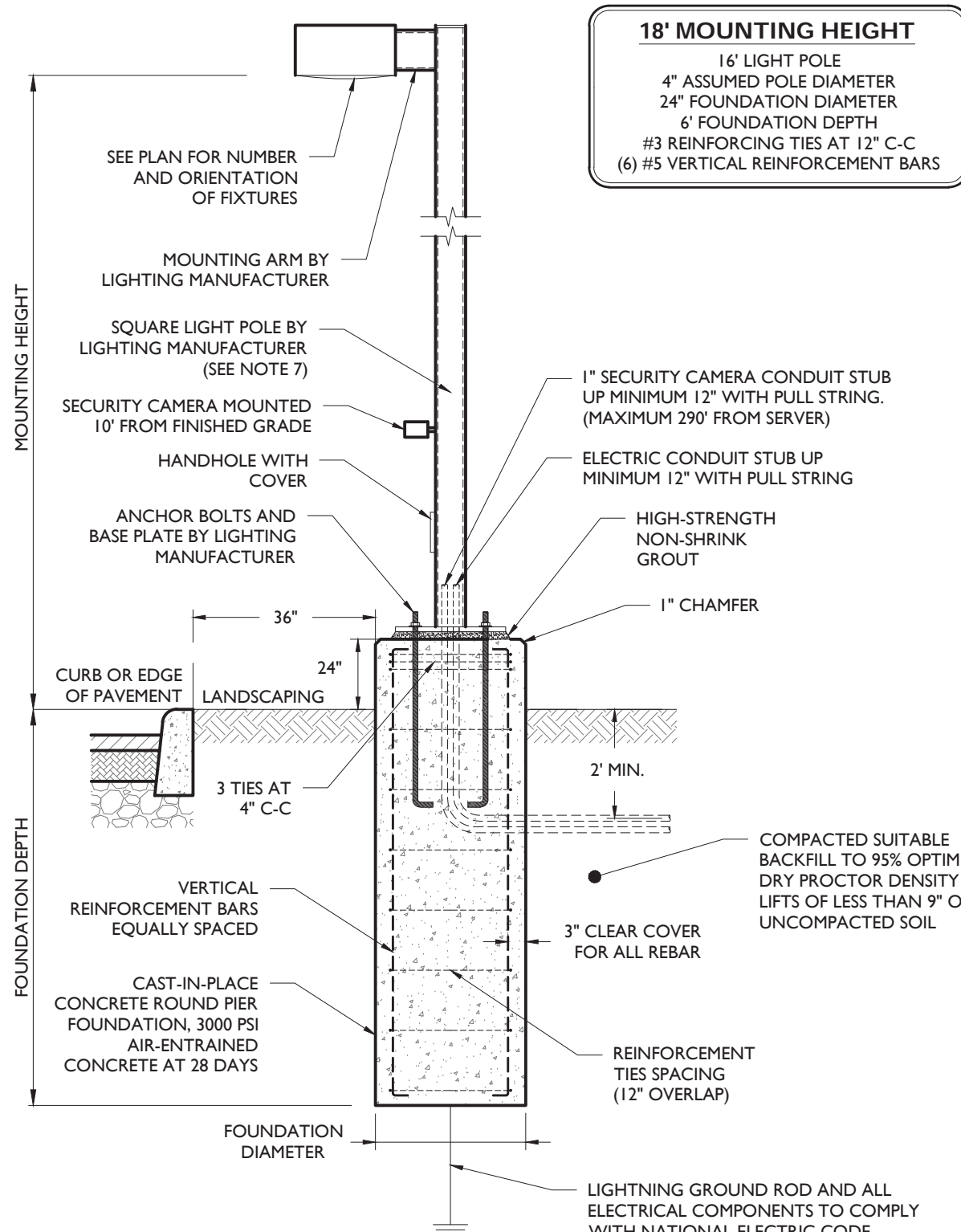
STONEFIELD
engineering & design

SCALE: 1" = 30' PROJECT ID: DET-230108.01

TITLE:
TRUCK TURNING ANALYSIS

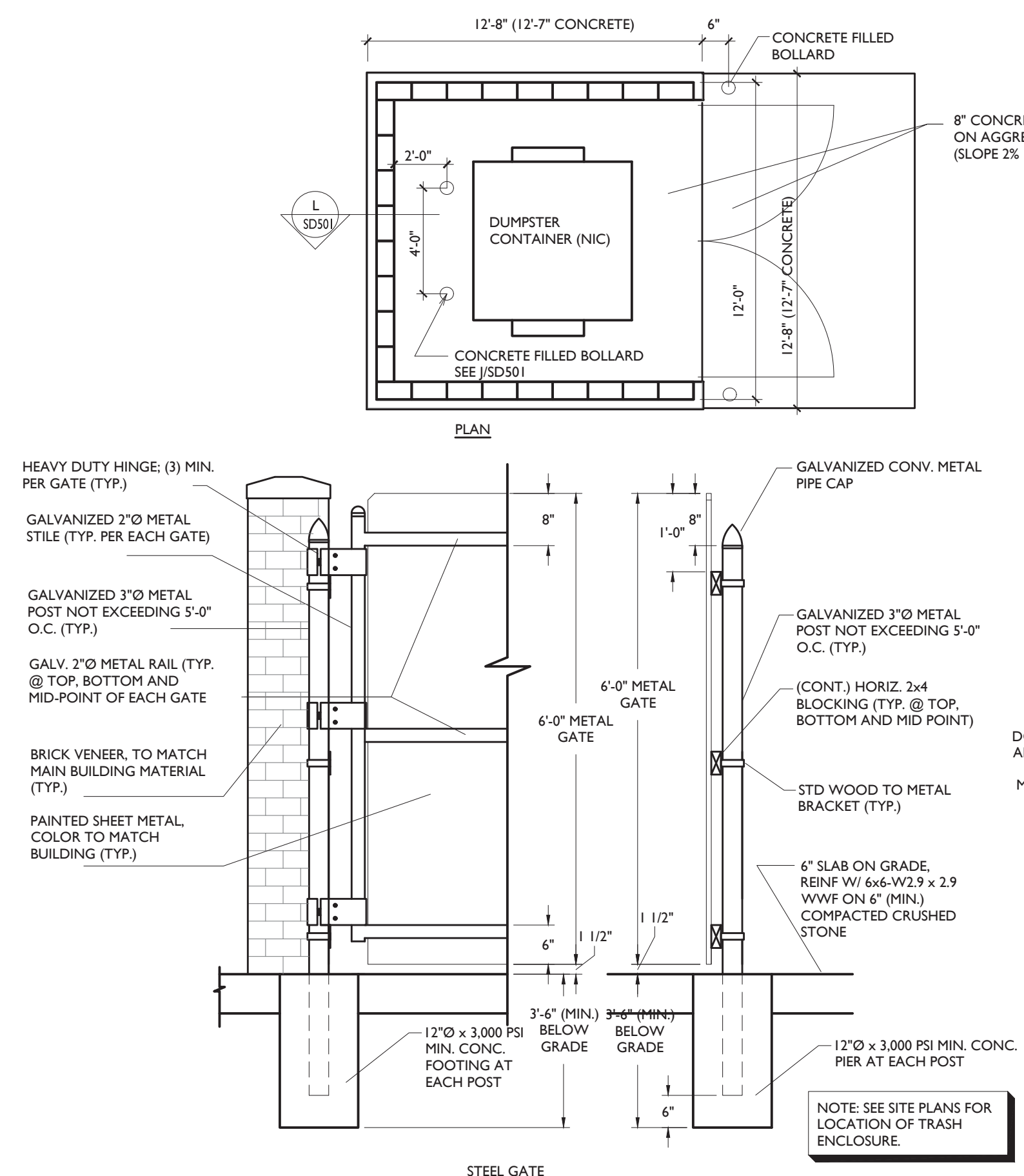
DRAWING:

C-13



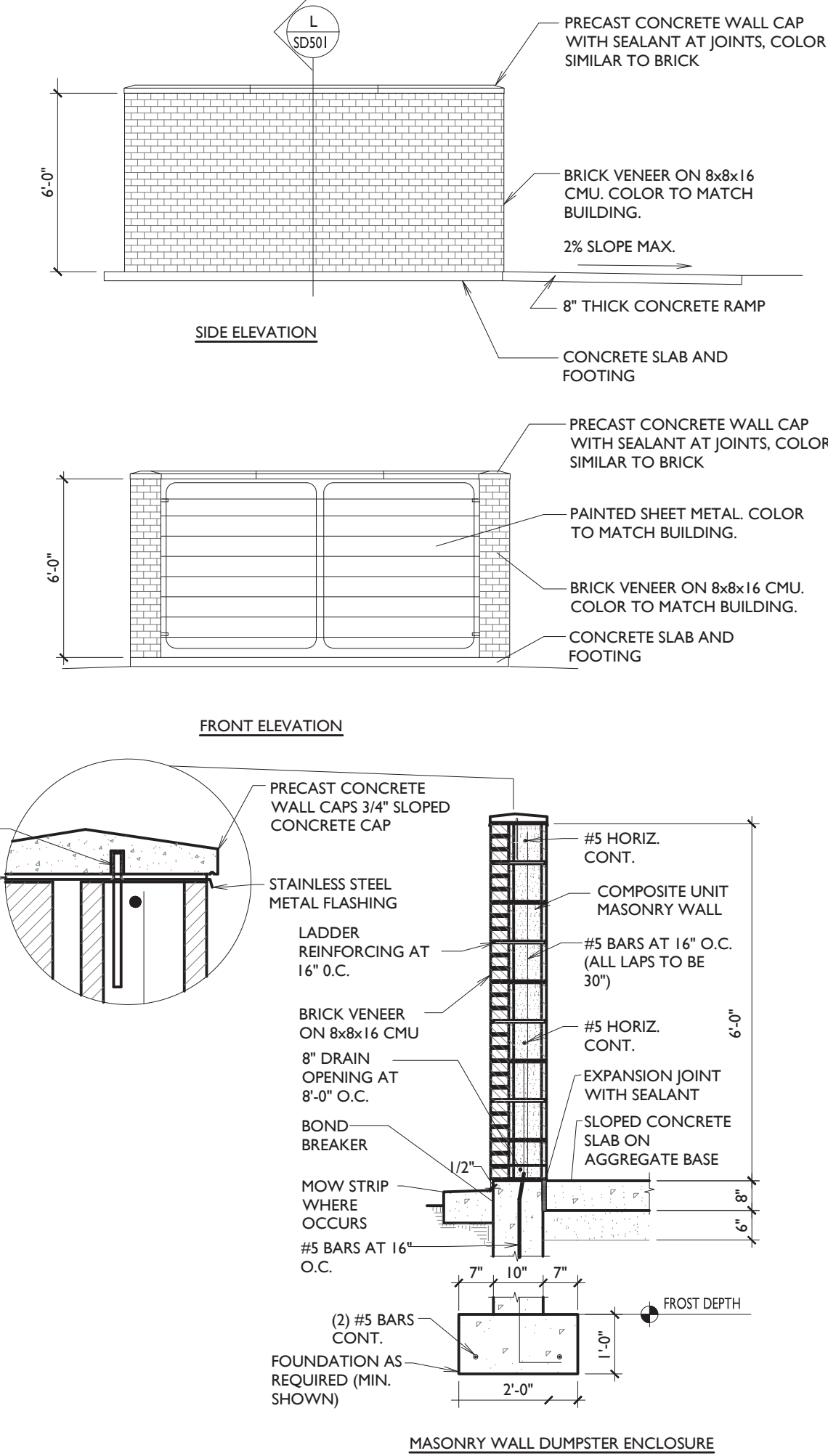
LIGHT POLE INSTALLATION
NOT TO SCALE

- NOTES:
- MINIMUM SOIL BEARING PRESSURE OF 1500 PSF, SOIL FRICTION ANGLE OF 30 DEGREES, AND SOIL DRY UNIT WEIGHT OF 120 PCF SHALL BE CONFIRMED IN THE FIELD BY A QUALIFIED PROFESSIONAL.
 - CAST-IN-PLACE CONCRETE SHALL BE CONSOLIDATED USING VIBRATOR.
 - ALL REBAR TO BE NEW GRADE 60 STEEL.
 - PRE-CAST PIERS ACCEPTABLE UPON WRITTEN APPROVAL OF SHOP DRAWING BY ENGINEER.
 - CONCRETE TO BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO INSTALLING LIGHT POLE. POURED CONCRETE MIX REQUIRED TO OBTAIN 80% OF DESIGN STRENGTH PRIOR TO INSTALLING LIGHT POLE.
 - CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" (WITHIN 1" TOLERANCE).
 - POLE SHALL BE RATED FOR 10 MPH HIGHER THAN MAXIMUM WIND SPEED 33FT ABOVE GROUND FOR THE AREA BASED ON ANSI/ASCE 7-93.
 - POUR TO BE TERMINATED AT A FORM.
 - WORK SHALL CONFORM TO ACI BEST PRACTICES FOR APPROPRIATE TEMPERATURE AND WEATHER CONDITIONS.
 - CONTRACTOR TO TEMPORARILY SUPPORT ADJACENT SOIL AND STRUCTURES DURING EXCAVATION IF REQUIRED.



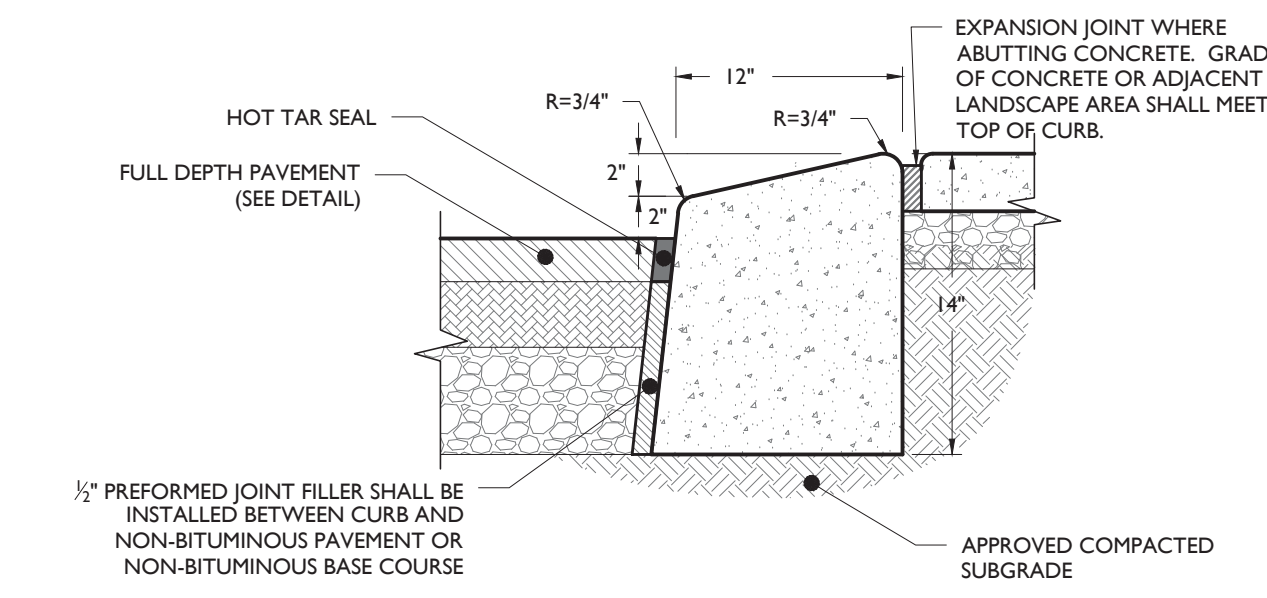
TRASH / RECYCLE ENCLOSURE DETAIL
NOT TO SCALE

- NOTE:
BLOCK COLOR TO MATCH BUILDING OR AS SPECIFIED BY OWNER



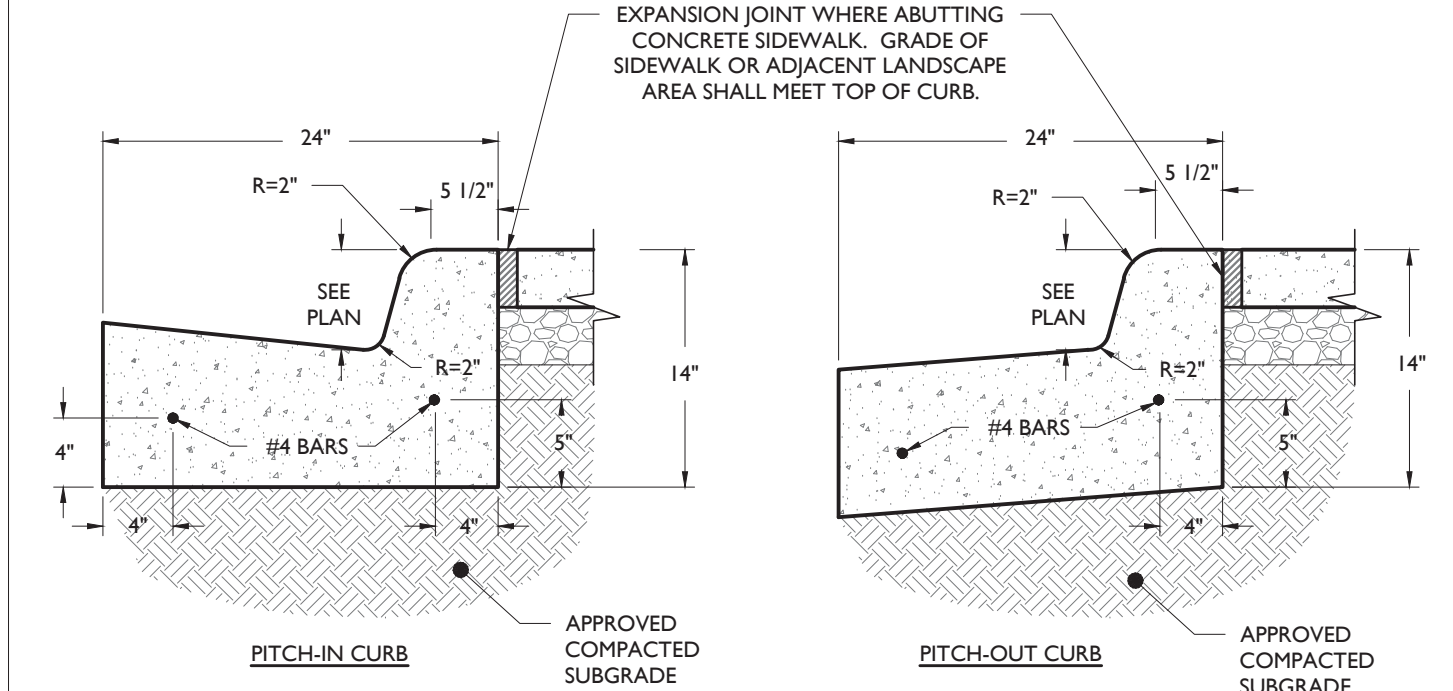
MASONRY WALL DUMPSTER ENCLOSURE

- MINIMUM PIPE COVER SHALL BE AS FOLLOW:
 • ELECTRIC SERVICE - PER APPLICABLE UTILITY AUTHORITY
 • GAS SERVICE - PER APPLICABLE UTILITY AUTHORITY
 • SEWER SERVICE - 36" MINIMUM
 • WATER LEAD - 48" MINIMUM
 • WATER MAIN - 72" MINIMUM



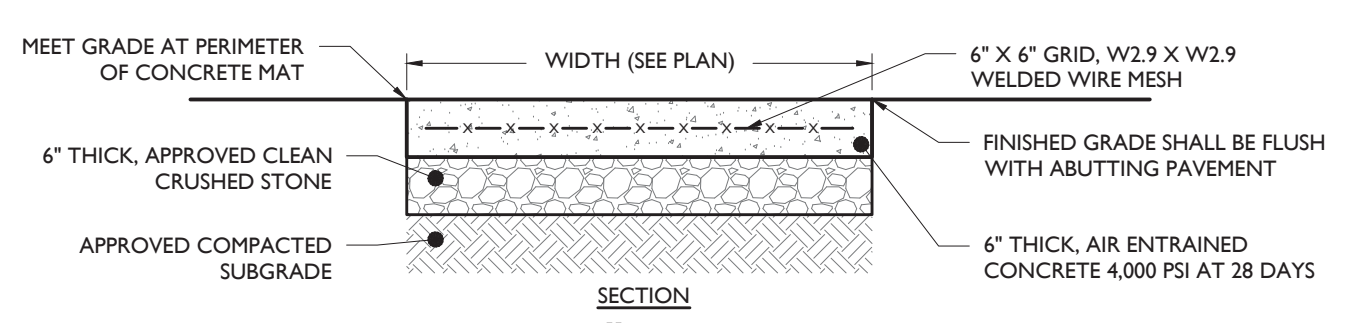
MOUNTABLE CONCRETE CURB
NOT TO SCALE

- NOTES:
- CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.
 - TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/2" FROM SURFACE.
 - HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.
 - 18" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.



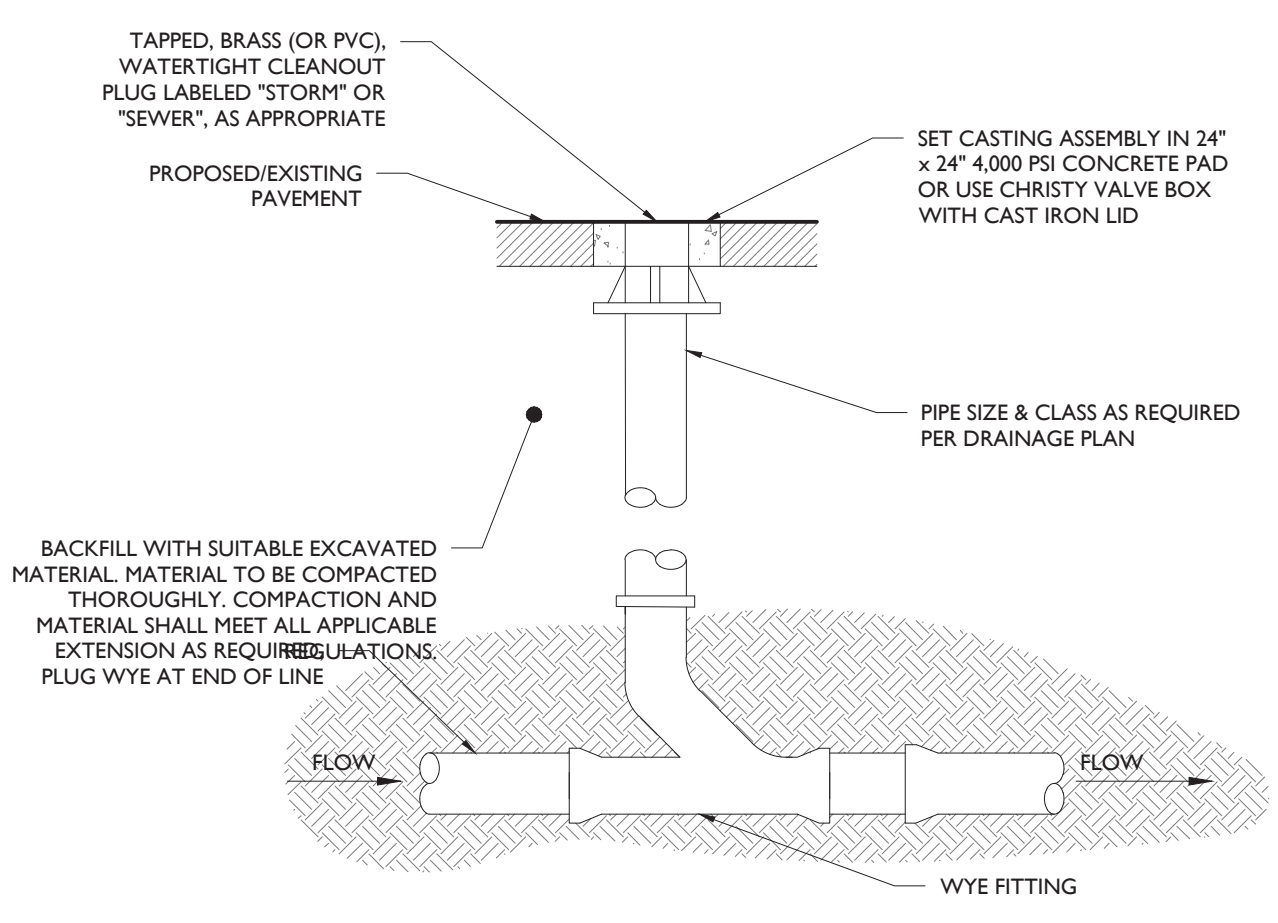
CONCRETE CURB AND GUTTER DETAIL
NOT TO SCALE

- NOTES:
- CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.
 - TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/2" FROM SURFACE.
 - HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.
 - 14" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.



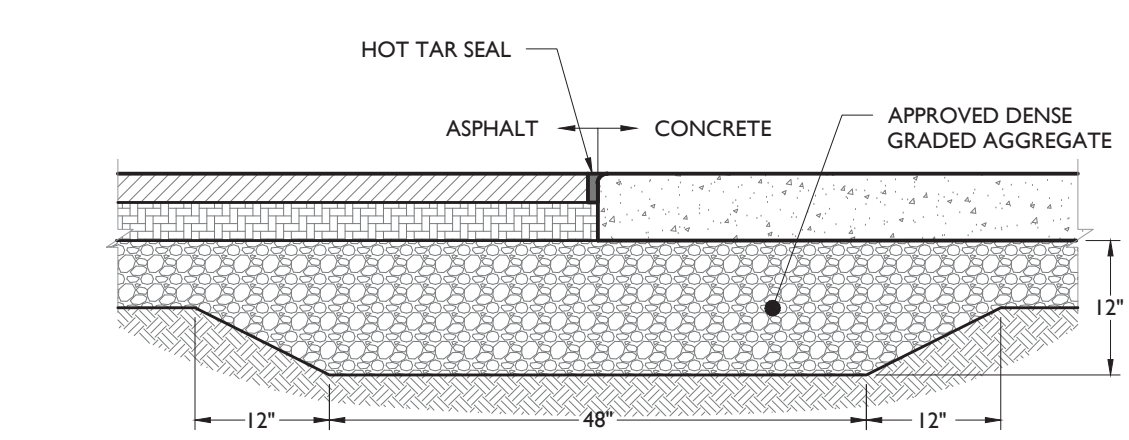
REINFORCED 6" CONCRETE MAT (FOR TRANSFORMER PAD AND TRASH MATS)

- NOTES:
- 1/2" EXPANSION JOINTS WITH WATER SEAL SHALL BE PROVIDED AT 12' INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/4" FROM THE SURFACE. LONGITUDINAL REBAR TO BE CUT AT EXPANSION JOINTS.
 - 1" DEEP BY 1/2" WIDE, TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT MID-POINT BETWEEN EXPANSION JOINTS OR 6' INTERVALS MAX.
 - CONCRETE SHALL RECEIVE BROOM FINISH.
 - ALL EXPOSED CORNERS TO HAVE 12" CHAMFER.

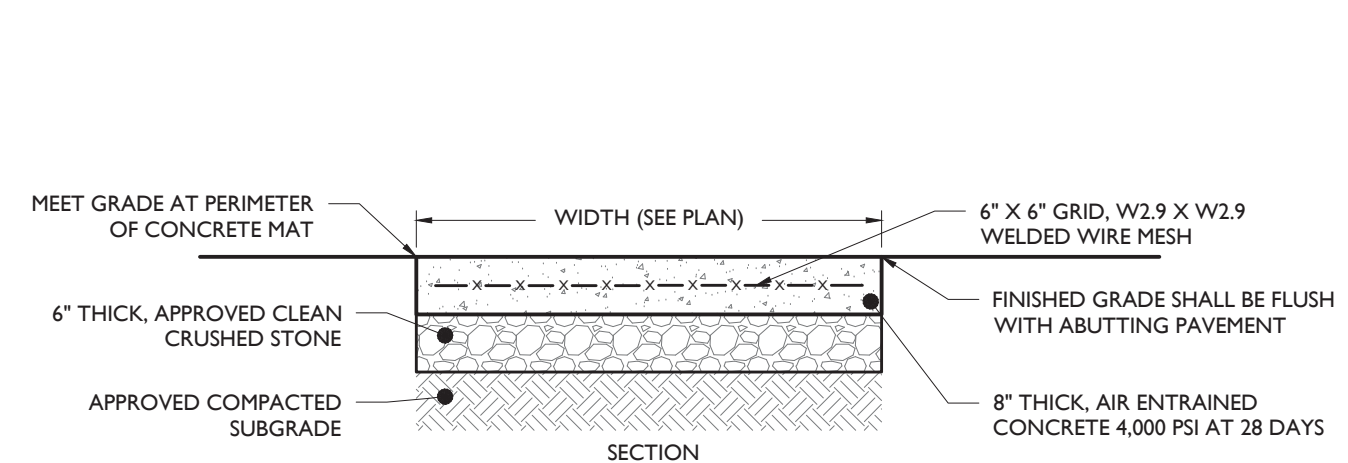


HARDSCAPE CLEAN-OUT
NOT TO SCALE

- TAPPED, BRASS (OR PVC), WATERTIGHT CLEANOUT PLUG LABELED "STORM" OR "SEWER", AS APPROPRIATE.
 SET CASTING ASSEMBLY IN 24" x 24" 4000 PSI CONCRETE PAD OR USE CHRISTY VALVE BOX WITH CAST IRON LID.
 PIPE SIZE & CLASS AS REQUIRED PER DRAINAGE PLAN.
 BACKFILL WITH SUITABLE EXCAVATED MATERIAL TO BE COMPACTED THOROUGHLY. COMPACTION AND MATERIAL SHALL MEET ALL APPLICABLE EXTENSION AS REQUIRE REGULATIONS. PLUG WYE AT END OF LINE.

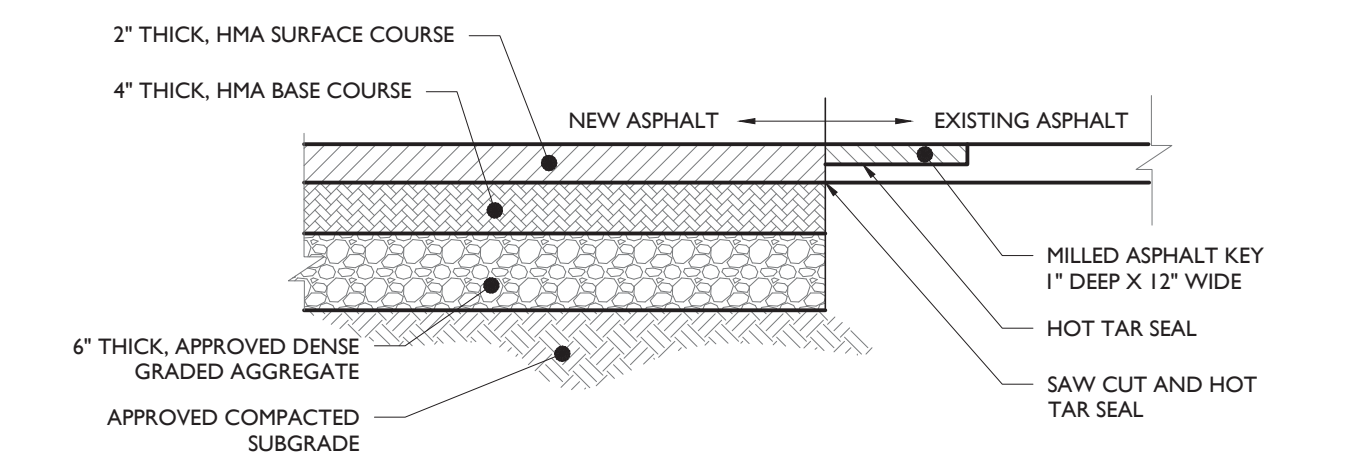


CONCRETE TO ASPHALT TRANSITION DETAIL
NOT TO SCALE



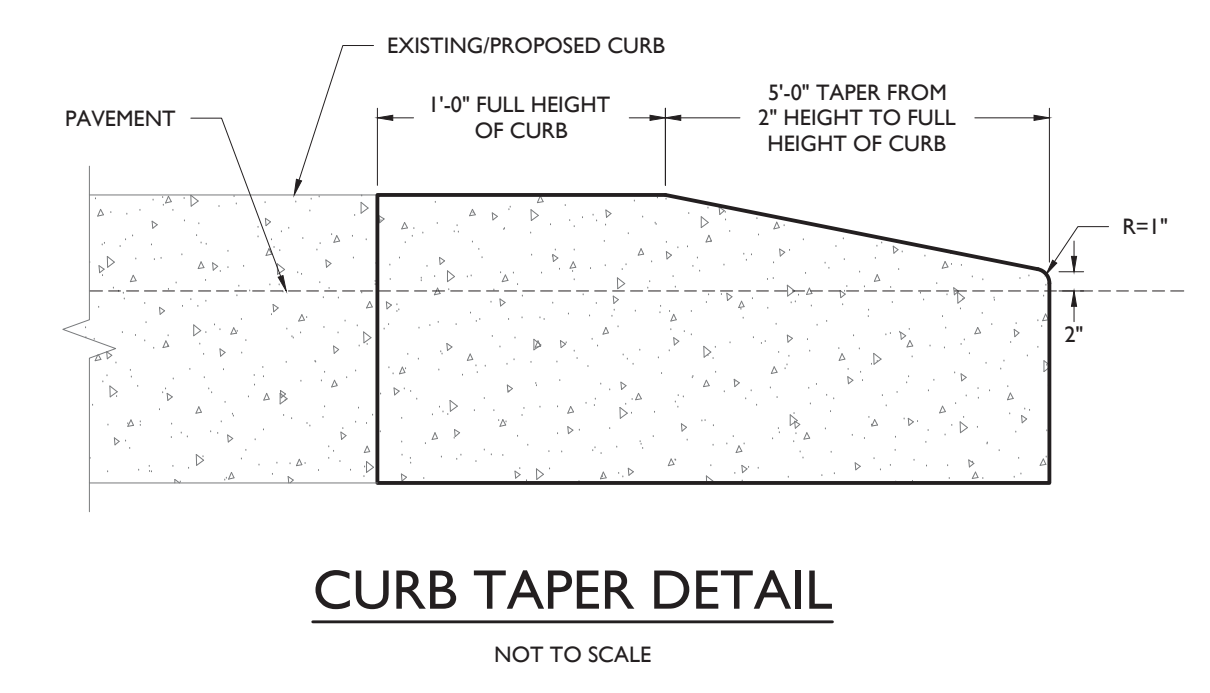
REINFORCED 8" CONCRETE PAVEMENT

- NOTES:
- 1/2" EXPANSION JOINTS WITH WATER SEAL SHALL BE PROVIDED AT 12' INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED 1/4" FROM THE SURFACE. LONGITUDINAL REBAR TO BE CUT AT EXPANSION JOINTS.
 - 1" DEEP BY 1/2" WIDE, TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT MID-POINT BETWEEN EXPANSION JOINTS OR 6' INTERVALS MAX.
 - CONCRETE SHALL RECEIVE BROOM FINISH.
 - ALL EXPOSED CORNERS TO HAVE 12" CHAMFER.

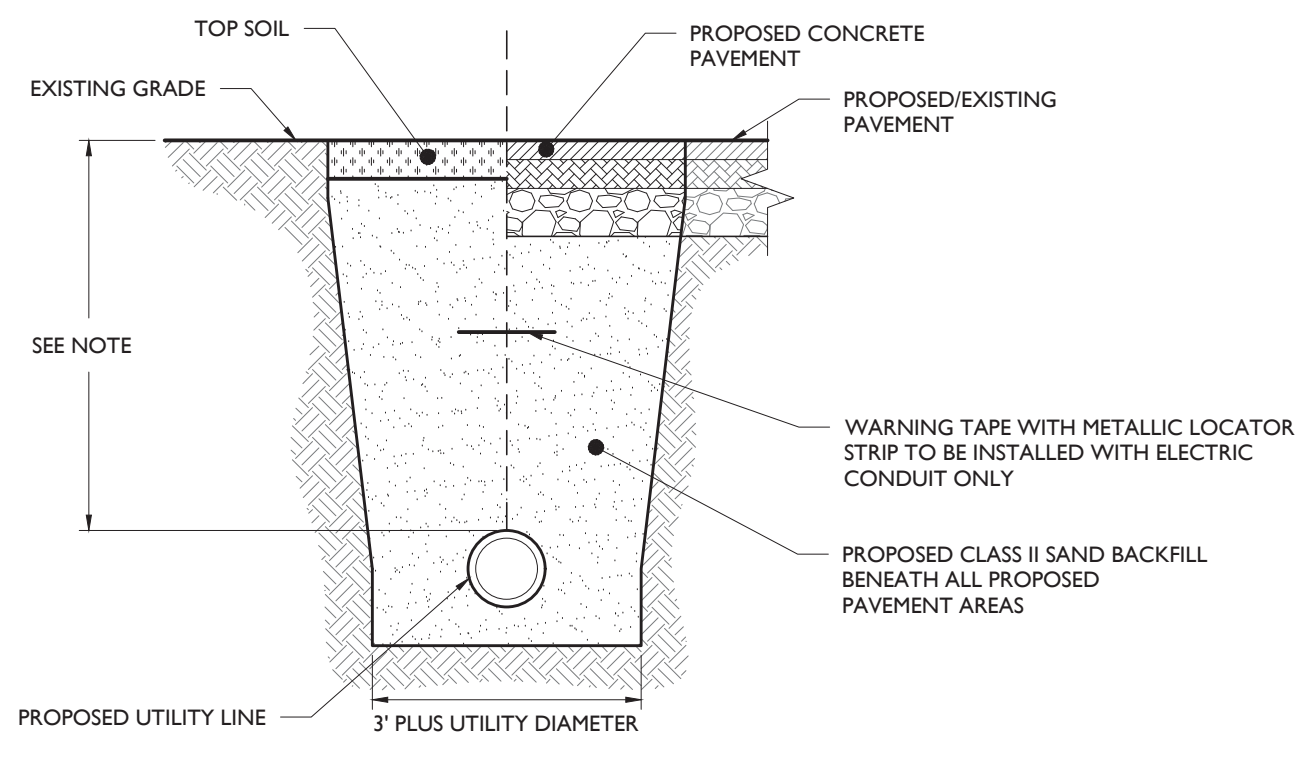


FULL DEPTH ASPHALT PAVEMENT DETAIL
NOT TO SCALE

- NOTE:
HMA MIX AND DENSE GRADED AGGREGATE SHALL CONFORM TO STATE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.



CURB TAPER DETAIL
NOT TO SCALE



UTILITY TRENCH DETAIL
NOT TO SCALE

- NOTE:
MINIMUM PIPE COVER SHALL BE AS FOLLOW:
 • ELECTRIC SERVICE - PER APPLICABLE UTILITY AUTHORITY
 • GAS SERVICE - PER APPLICABLE UTILITY AUTHORITY
 • SEWER SERVICE - 36" MINIMUM
 • WATER LEAD - 48" MINIMUM
 • WATER MAIN - 72" MINIMUM

4

3

7

4

5

6

8

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10

REVISION	DATE	ISSUE	DESCRIPTION
4	08/23/2024	IMU	REVISED PER PLANNING DEPARTMENT REVIEW #2
3	06/11/2024	EM	REVISED PER PLANNING DEPARTMENT REVIEW #1
2	04/18/2024	EM / JP	SUBMISSION FOR PRELIMINARY SITE PLAN REVIEW
1	02/07/2024	ECM	SUBMISSION FOR PRE-APPLICATION MEETING

NOT APPROVED FOR CONSTRUCTION

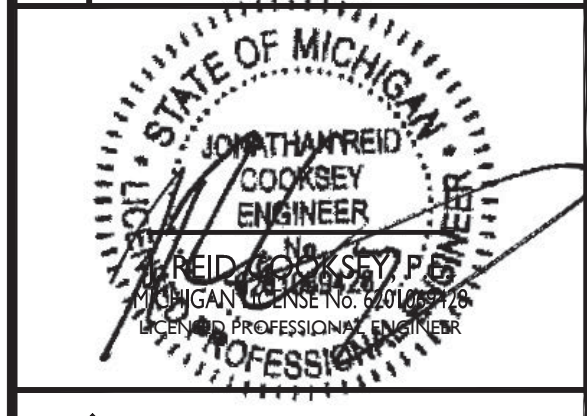
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 Phone 248.247.1115

PROPOSED CAR WASH



PARCEL ID: K-11-06-304-004
 2675 WASHINGTON AVENUE (M-17)
 CHARTER TOWNSHIP OF YPSILANTI
 WASHINGTON COUNTY, MICHIGAN



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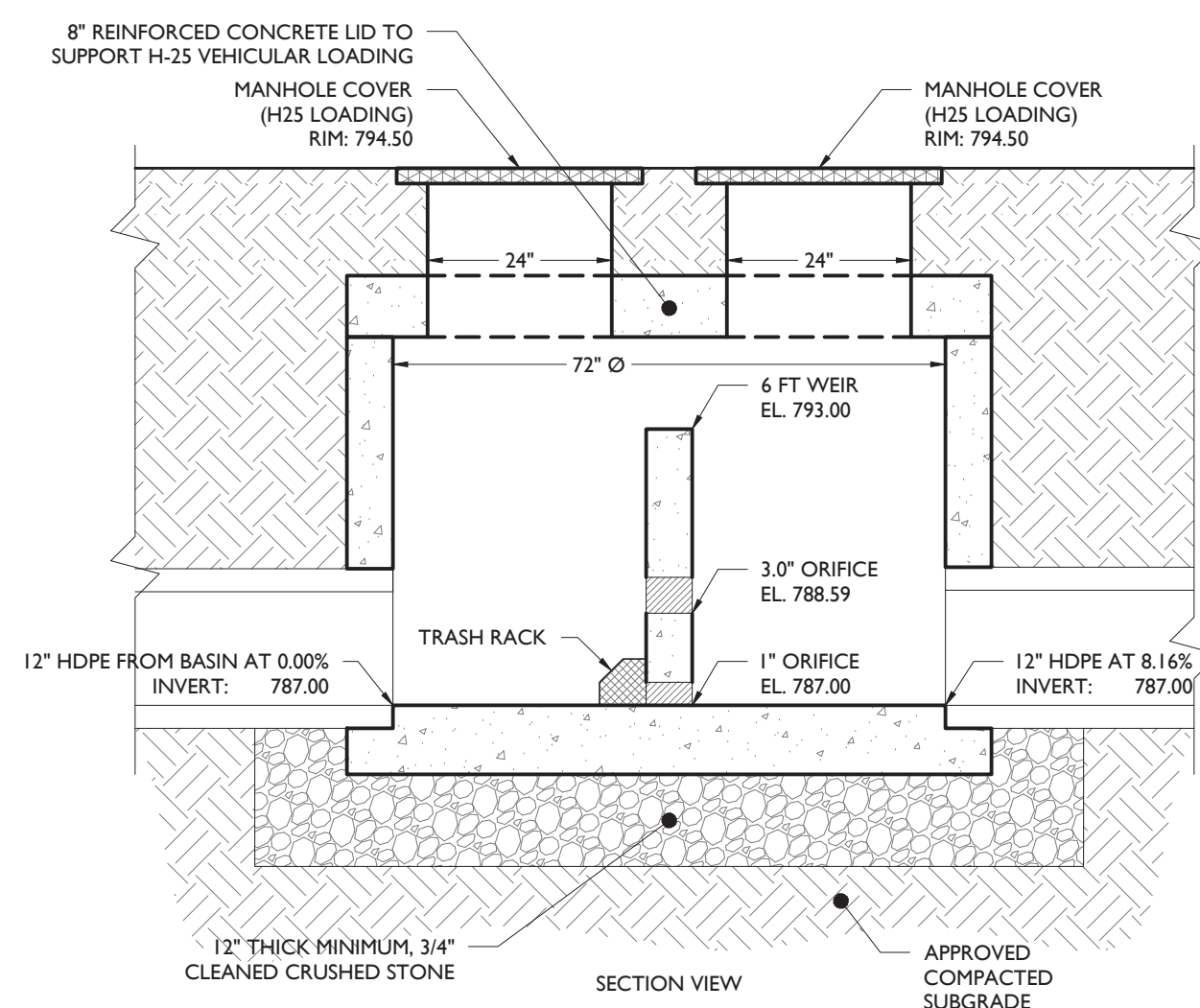
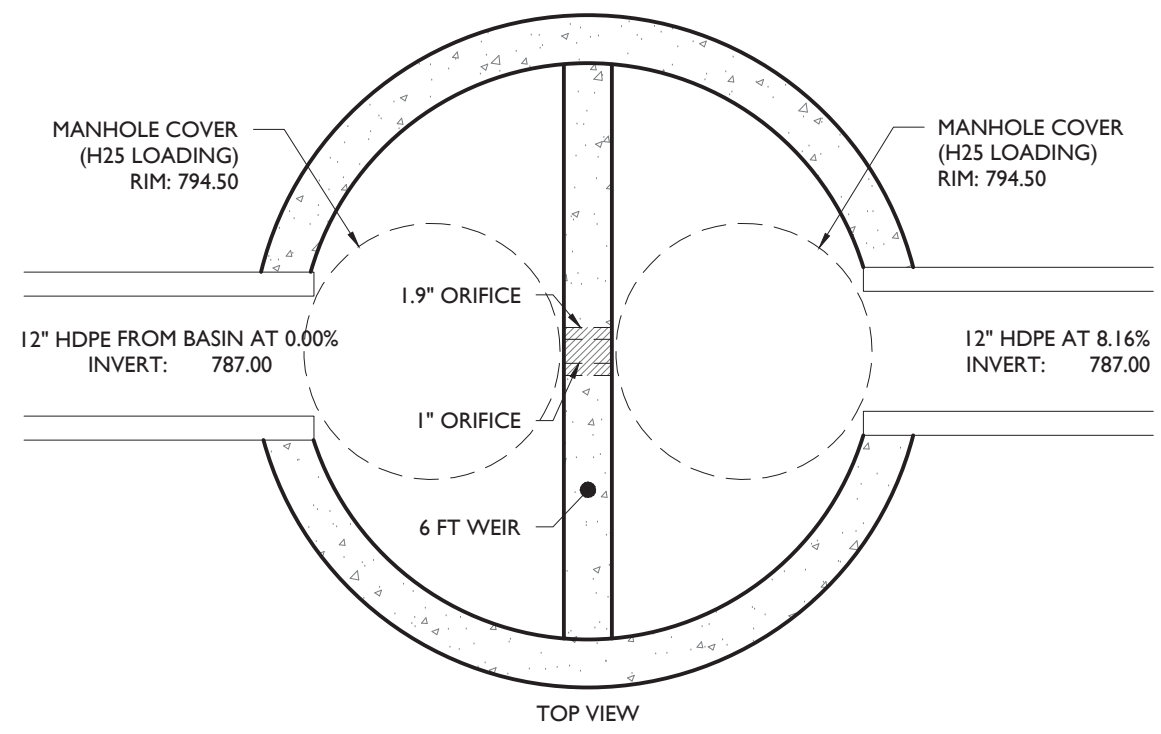
SCALE: AS SHOWN PROJECT ID: DET-230108.01

TITLE:
CONSTRUCTION DETAILS

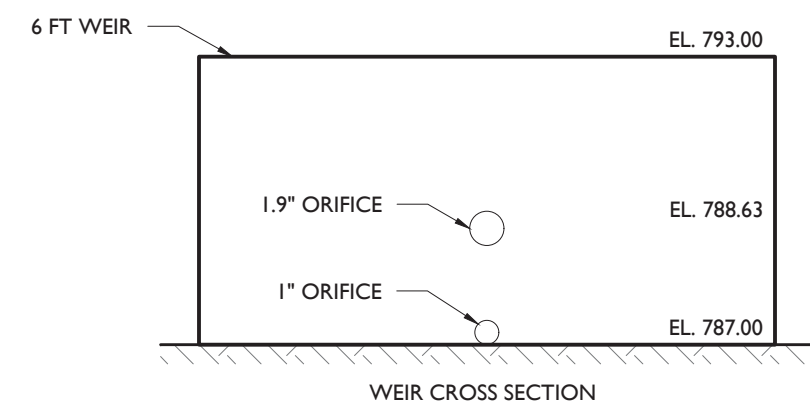
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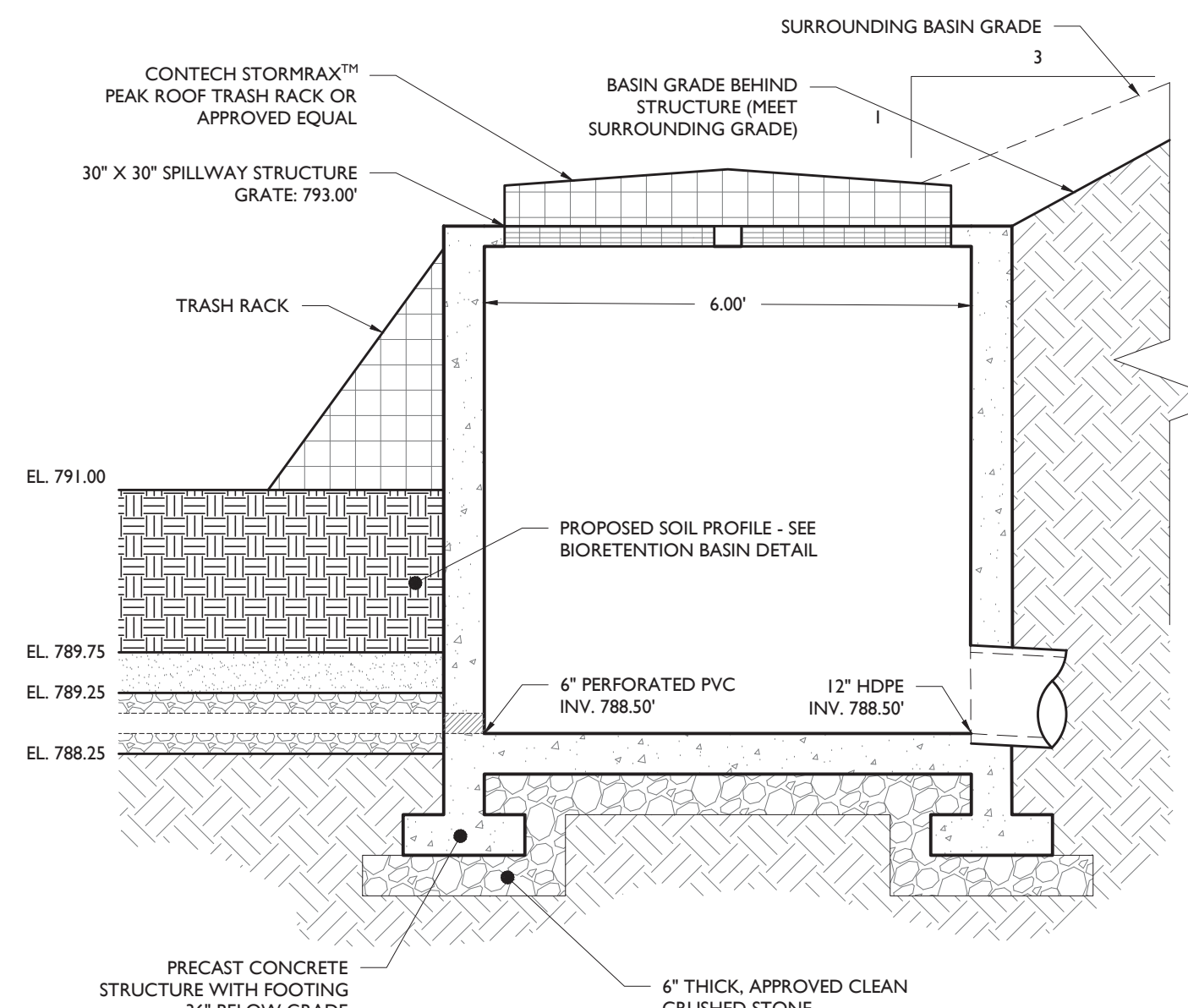
V:\072023\DET-230108-01-PROP-LOC-345 WASHINGTON AVENUE - YPSILANTI, MI\CAD\DWG\DET-230108-01-PROP-LOC-345 WASHINGTON AVENUE.dwg



UNDERGROUND OUTLET STRUCTURE (OS-1) DETAIL
SCALE: 1" = 2'



- NOTE:
1. STRUCTURE SHALL SUPPORT H2S LOADING.
2. STRUCTURE TO BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE.
3. ALL JOINTS TO BE WATER-TIGHT.
4. TRASH RACKS CONSTRUCTED OF NON-CORROSIVE MATERIALS TO BE PROVIDED.



BIORETENTION AREA ABOVE-GROUND OUTLET
STRUCTURE (OS-2) DETAIL
SCALE: 1" = 2'

Project: Ypsilanti

Chamber Model -	MC-3500
Units -	Imperial
Number of Chambers -	44
Number of End Caps -	12
Void in the stone (porosity) -	40%
Base of Stone Elevation -	787.00
Amount of Stone Above Chambers -	12
Amount of Stone Below Chambers -	9
Area of system -	2797

1st Min. Area - 2376 sf min. area

StormTech MC-3500 Cumulative Storage Volumes

Height of System (inches)	Incremental Chamber (cubic feet)	Incremental Single End Cap (cubic feet)	Incremental Chambers (cubic feet)	Incremental End Cap (cubic feet)	Incremental Stone (cubic feet)	Incremental Ch. EC and Stone (cubic feet)	Cumulative System (cubic feet)	Elevation (feet)
86	0.00	0.00	0.00	0.00	93.22	93.22	9162.74	792.50
85	0.00	0.00	0.00	0.00	93.22	93.22	9069.52	792.42
84	0.00	0.00	0.00	0.00	93.22	93.22	8976.31	792.33
83	0.00	0.00	0.00	0.00	93.22	93.22	8883.09	792.25
82	0.00	0.00	0.00	0.00	93.22	93.22	8789.87	792.17
81	0.00	0.00	0.00	0.00	93.22	93.22	8696.65	792.08
80	0.00	0.00	0.00	0.00	93.22	93.22	8603.43	792.00
79	0.00	0.00	0.00	0.00	93.22	93.22	8510.21	791.92
78	0.00	0.00	0.00	0.00	93.22	93.22	8416.99	791.83
77	0.00	0.00	0.00	0.00	93.22	93.22	8323.77	791.75
76	0.00	0.00	0.00	0.00	93.22	93.22	8230.55	791.67
75	0.00	0.00	0.00	0.00	93.22	93.22	8137.33	791.58
74	0.06	0.00	2.56	0.00	93.22	94.78	8044.12	791.50
73	0.19	0.02	8.54	0.29	89.69	98.52	7949.36	791.42
72	0.29	0.04	12.93	0.45	87.86	101.25	7860.85	791.33
71	0.40	0.05	17.76	0.62	85.87	104.25	7774.60	791.25
70	0.69	0.07	26.24	0.81	83.80	111.85	7694.35	791.17
69	1.03	0.09	45.25	1.06	74.70	121.00	7533.50	791.08
68	1.25	0.11	54.98	1.29	70.71	126.98	7412.50	791.00
67	1.42	0.13	62.28	1.52	67.58	131.68	7285.52	790.92
66	1.57	0.14	69.22	1.73	64.84	135.79	7158.85	790.83
65	1.71	0.16	75.11	1.95	62.39	139.46	7018.08	790.75
64	1.83	0.18	80.45	2.18	60.17	142.80	6878.60	790.67
63	1.94	0.20	85.26	2.41	58.15	145.82	6735.80	790.58
62	2.04	0.22	89.80	2.62	56.25	148.67	6589.98	790.50
61	2.13	0.23	93.93	2.82	54.52	151.27	6441.31	790.42
60	2.22	0.25	97.87	3.01	52.87	153.74	6290.04	790.33
59	2.31	0.27	101.50	3.19	51.34	156.03	6136.30	790.25
58	2.38	0.28	104.93	3.36	49.90	158.19	5980.27	790.17
57	2.46	0.29	108.20	3.53	48.53	160.26	5822.08	790.08
56	2.53	0.31	111.24	3.69	47.25	162.18	5661.82	790.00
55	2.59	0.32	114.12	3.85	46.03	164.01	5499.64	789.92
54	2.66	0.33	116.77	4.01	44.87	165.75	5335.54	789.83
53	2.72	0.35	119.46	4.16	43.77	167.40	5169.89	789.75
52	2.77	0.36	121.94	4.32	42.72	168.97	5002.50	789.67
51	2.82	0.37	124.28	4.47	41.72	170.47	4833.52	789.58
50	2.86	0.38	126.54	4.61	40.77	171.90	4663.05	789.50
49	2.92	0.40	128.66	4.75	39.85	173.27	4491.15	789.42
48	2.97	0.41	130.68	4.89	38.99	174.56	4317.89	789.33
47	3.01	0.42	132.56	5.02	38.19	175.76	4143.33	789.25
46	3.05	0.42	134.34	5.16	37.42	176.89	3967.56	789.17
45	3.09	0.44	136.15	5.28	36.65	177.88	3790.65	789.08
44	3.13	0.45	137.74	5.41	35.96	178.71	3612.57	789.00
43	3.17	0.46	139.29	5.53	35.29	180.11	3433.46	788.92
42	3.20	0.47	140.78	5.65	34.65	181.07	3253.35	788.83
41	3.23	0.48	142.17	5.76	34.05	181.98	3072.27	788.75
40	3.26	0.49	143.50	5.87	33.47	182.84	2890.30	788.67
39	3.29	0.50	144.77	5.98	32.92	183.67	2707.45	788.58
38	3.32	0.51	146.00	6.08	32.39	184.46	2523.79	788.50
37	3.34	0.51	147.14	6.17	31.89	185.21	2339.33	788.42
36	3.37	0.52	148.22	6.27	31.42	185.91	2154.12	788.33
35	3.39	0.53	149.27	6.35	30.97	186.59	1968.21	788.25
34	3.41	0.54	150.24	6.44	30.55	187.23	1781.61	788.17
33	3.44	0.54	151.23	6.52	30.12	187.87	1594.39	788.08
32	3.46	0.55	152.14	6.59	29.73	188.46	1406.52	788.00
31	3.48	0.56	153.06	6.66	29.33	189.05	1218.06	787.92
30	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
29	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
28	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
27	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
26	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
25	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
24	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
23	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
22	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
21	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
20	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
19	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
18	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
17	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
16	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
15	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
14	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
13	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
12	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
11	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
10	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
9	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
8	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
7	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
6	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
5	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
4	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
3	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
2	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83
1	3.51	0.56	154.22	6.74	28.94	189.64	1029.01	787.83

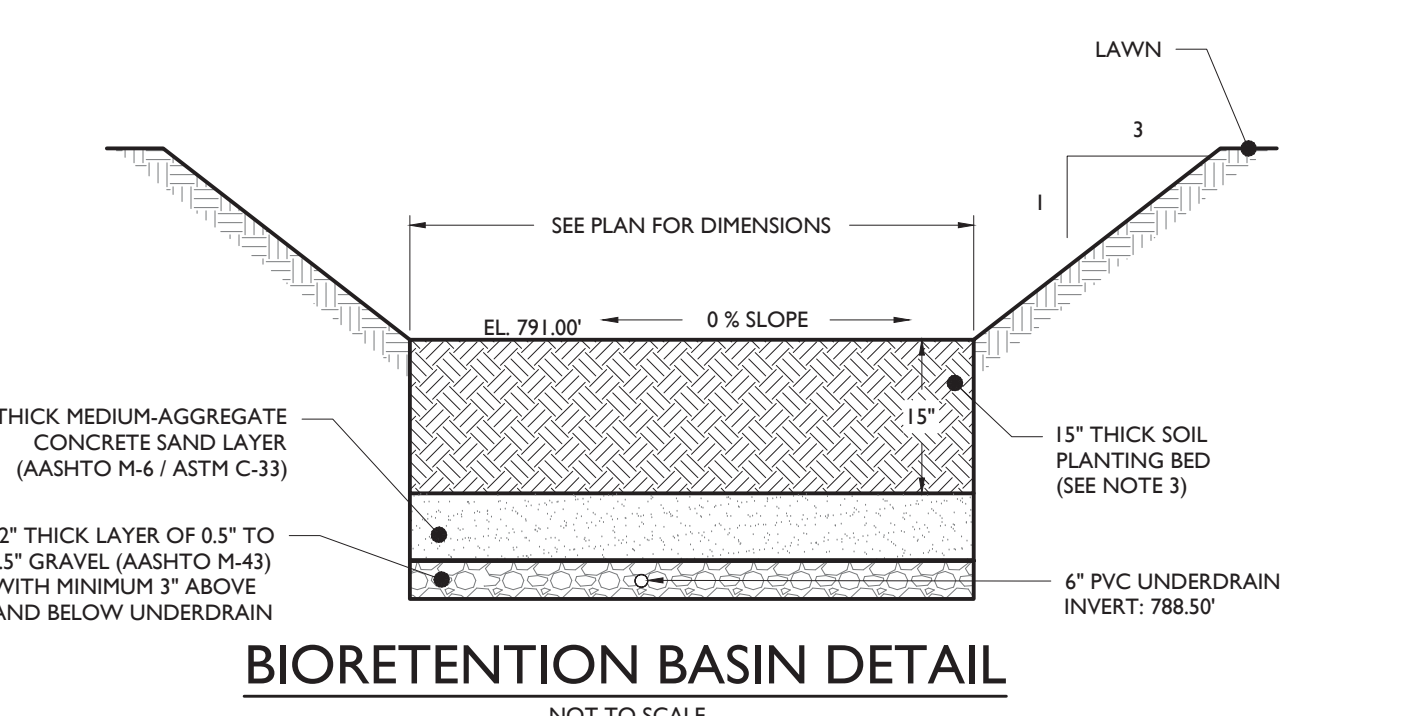
ADS STAGE STORAGE TABLE

STORMWATER SYSTEM DESIGN (10-YEAR STORM)

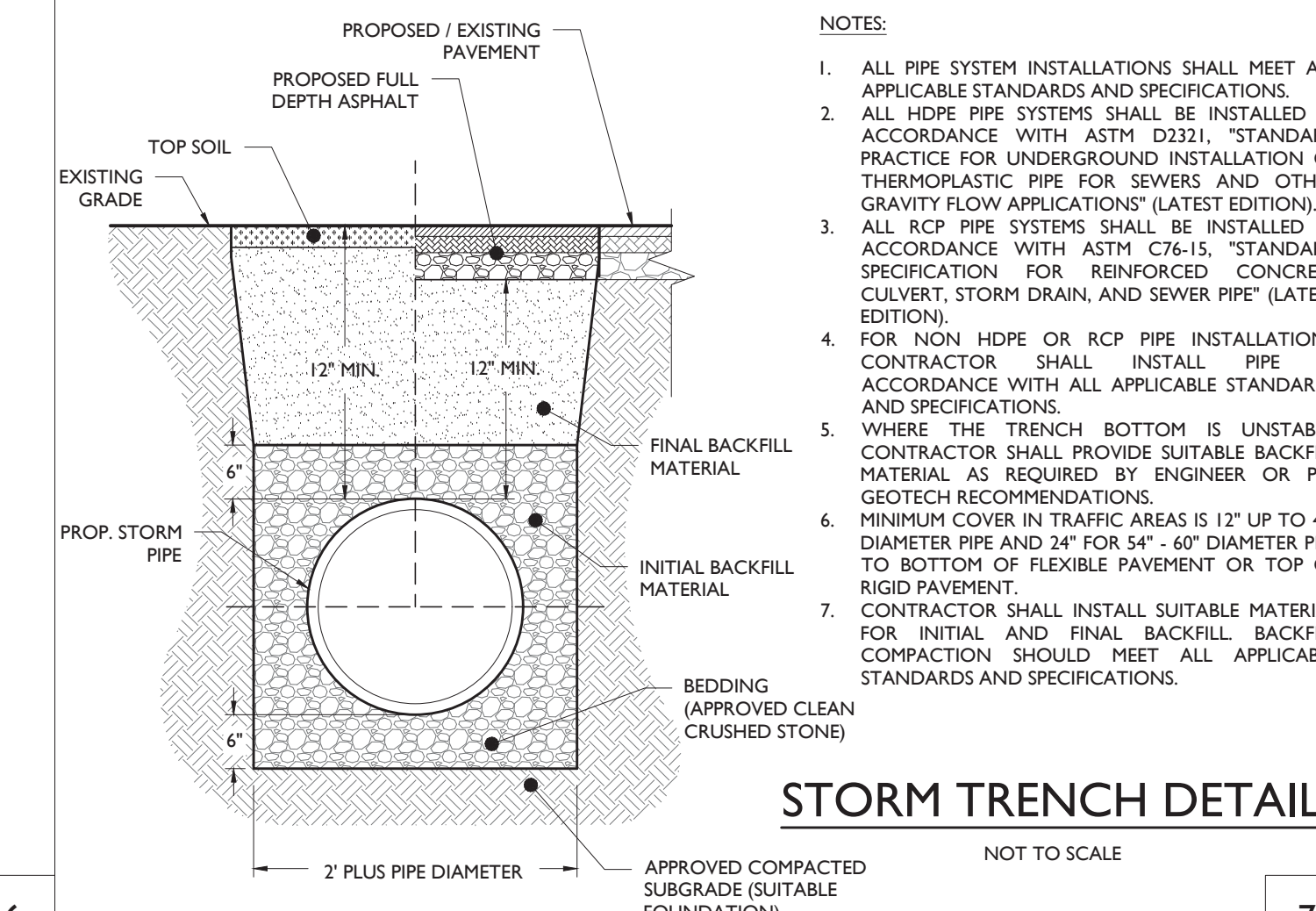
Line #	Line ID	Rim Elevation Downstream (FT)	Rim Elevation Upstream (FT)	Invert Downstream (FT)	Invert Upstream (FT)	Pipe Size (IN)	Pipe Length (FT)	Pipe Slope (%)	Flow Rate (CFS)	Pipe Capacity (CFS)	Velocity Downstream (FPS)	HGL Downstream (FT)	HGL Upstream (FT)	Drainage Area (AC)	Runoff Coefficient	Time of Concentration (MIN)	Rainfall Intensity (IN/HR)
1	EX-1 TO OS-1	783.50	794.50	779.00	787.00	12	98	8.16	0.22	10.18	0.28	780.00	787.19	0.00	0.00	15.00	4.02
2	D-200 TO OS-2	796.90	793.00	788.26	788.50	12	24	1.00	1.80	3.56	2.29	789.26	789.29	0.72	0.62	15.00	4.02
3	D-101 TO D-102	795.90	797.00	789.73	792.91	12	106	3.00	1.91	6.17	2.44	790.73	793.50	0.09	0.65	15.30	4.02
4	D-102 TO D-103	797.00	800.00	793.01	794.72	12	57	3.00	1.69	6.17	4.44	793.50	795.27	0.33	0.82	15.10	4.02
5	D-103 TO CLEANOUT	800.00	801.45	796.05	796.49	6	22	2.00	0.61	0.79	4.46	796.38	796.89	0.16	0.95	15.00	4.02

* jLine contains hyd. jump

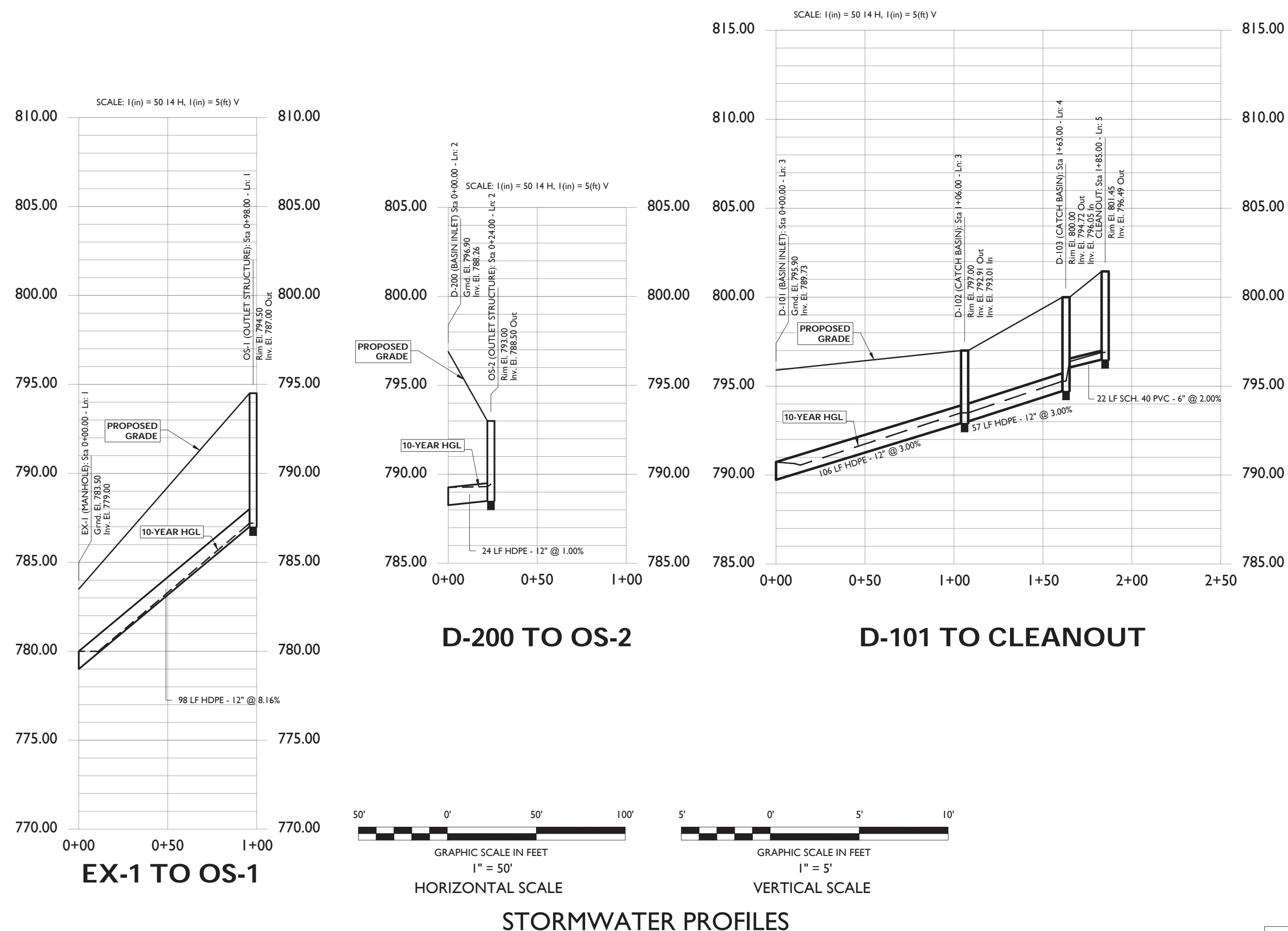
STORMWATER CONVEYANCE CALCULATIONS



- NOTES:
1. BIORETENTION AREA CONSTRUCTION MUST NOT COMPACT SOILS BELOW SOIL BED BOTTOM.
2. THE PLANTING SOIL BED SHALL CONSIST OF THE FOLLOWING MIX: 85%-95% SANDS WITH <25% OF THE SANDS CLASSIFIED AS FINE OR VERY FINE, <15% SILT AND CLAY WITH 2%-5% CLAY CONTENT. THE MIX SHALL BE AMENDED WITH 5%-7% ORGANICS. pH LEVELS SHALL RANGE FROM 5.5 TO 6.5. THE SOIL MIX MUST BE CERTIFIED BY EITHER THE VENDOR OR A LICENSED PROFESSIONAL ENGINEER DURING ONSITE MIXING.
3. THE PLANTING SOIL BED SHALL BE PLACED IN 12" TO 18" LIFTS.
4. REFER TO THE LANDSCAPING PLANS FOR BIORETENTION AREA PLANTINGS.



- NOTES:
1. ALL PIPE SYSTEM INSTALLATIONS SHALL MEET ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
2. ALL HDPE PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS" (LATEST EDITION).
3. ALL RCP PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C76-15, "STANDARD SPECIFICATION FOR REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE" (LATEST EDITION).
4. FOR NON HDPE OR RCP PIPE INSTALLATIONS, CONTRACTOR SHALL INSTALL PIPE IN ACCORDANCE WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
5. WHERE THE TRENCH BOTTOM IS UNSTABLE, CONTRACTOR SHALL PROVIDE SUITABLE BACKFILL MATERIAL AS REQUIRED BY ENGINEER OR PER GEOTECH RECOMMENDATIONS.
6. MINIMUM COVER IN TRAFFIC AREAS IS 12" UP TO 48" DIAMETER PIPE AND 24" FOR 54" - 60" DIAMETER PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT.
7. CONTRACTOR SHALL INSTALL SUITABLE MATERIAL FOR INITIAL AND FINAL BACKFILL. BACKFILL COMPACTION SHOULD MEET ALL APPLICABLE STANDARDS AND SPECIFICATIONS.



REVISION	DATE	ISSUE	BY	DESCRIPTION
4	08/23/2024	MU		REVISED PER PLANNING DEPARTMENT REVIEW #2
3	06/11/2024	EM		REVISED PER PLANNING DEPARTMENT REVIEW #1
2	04/18/2024	EM/JF		SUBMISSION FOR PRELIMINARY SITE PLAN REVIEW
1	02/07/2024	ECM		SUBMISSION FOR PRE-APPLICATION MEETING

NOT APPROVED FOR CONSTRUCTION

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Phone: 248.247.1115

PROPOSED CAR WASH

WHITEWATER EXPRESS CAR WASH

PARCEL ID: K-11-06-304-004
2675 WASHTEWAW AVENUE (M-17)
CHARTER TOWNSHIP OF YPSILANTI
WASHTEWAW COUNTY, MICHIGAN

STATE OF MICHIGAN
JONATHAN R. COOKSEY
REGISTERED PROFESSIONAL ENGINEER

STONEFIELD
engineering & design

SCALE: AS SHOWN PROJECT ID: DET-230108.01

TITLE: CONSTRUCTION DETAILS

DRAWING: C-17

WASHTENAW COUNTY STORMWATER CALCULATIONS
(Based on Washtenaw County Stormwater Management Regulations)

Project: 2675 WASHTENAW AVENUE Designer: ECM Date: 05/30/24

W1. DETERMINING POST-DEVELOPMENT COVER TYPES, AREAS, CURVE NUMBERS, AND RUNOFF COEFFICIENTS

RATIONAL METHOD VARIABLES (REQUIRED FOR FIRST FLUSH RUNOFF CALCULATIONS)

Cover Type (Post-Development)	Area (SF)	C-Value*	Weighted Value
Building / Roof	6,863	0.95	6,520
Pavement / Hardscape	30,753	0.95	29,215
Open Space	26,704	0.25	6,676
Woods (Good)	3,064	0.25	766
Subtotals	67,384		43,177

*C-values obtained from Washtenaw County Water Resources Commission

Composite C Value, C: 0.64

Site Area, A: 1.55 AC

NRCS VARIABLES (REQUIRED FOR BANKFULL & 100-YEAR RUNOFF CALCULATIONS)

Cover Type (Pre-Development)	Soil Type	Area (SF)	Curve Number (CN)	Weighted Value
Paved Parking Lots, Roofs, Driveways	A / D	59,349	98.0	5,816,202
Fully Developed Open Space (Good Condition)	A / D	4,354	60.0	261,240
Woods (Good)	A / D	3,681	55.0	202,455
Subtotals		67,384		6,279,897

Composite CN Value, CN: 93.20

Cover Type (Post-Development)	Soil Type	Area (SF)	Curve Number (CN)	Weighted Value
Paved Parking Lots, Roofs, Driveways	A / D	37,616	98.0	3,686,368
Fully Developed Open Space (Good Condition)	A / D	30,753	60.0	1,845,180
Woods (Good)	A / D	3,064	55.0	168,520
Total		71,433		5,699,068

*Curve Numbers obtained from Washtenaw County Water Resources Commission

Composite CN Value, CN: 79.80

W2. FIRST FLUSH RUNOFF CALCULATION (V_{ff})

V_{ff} = (1 IN) * (1 FT / 12 IN) * (43,560 SF) * A * C

Site Area, A: 1.55 AC

First Flush Runoff Volume, V_{ff}: 3,598 CF

W3. PRE-DEVELOPMENT BANKFULL RUNOFF CALCULATION (V_{bf-pre})

Rainfall Value (2 Year / 24 Hour Storm Event), P: 2.35 IN

S = (1000 / CN) - 10

Function of Watershed Soil & Conditions, S: 0.73

Runoff, Q: 1.66 IN

Total Site Area: 67,384 SF

Pre-Development Bankfull Volume, V_{bf-pre}: 9,296 CF

Pre-Development Bankfull Volume, V_{bf-pre}: 9,296 CF

Pre-Development Bankfull Volume, V_{bf-pre}: 9,296 CF

Pre-Development Bankfull Volume, V_{bf-pre}: 9,296 CF

Pre-Development Bankfull Volume, V_{bf-pre}: 9,296 CF

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Pre-Development Bankfull Volume, V_{bf-pre}: 9,296 CF

Pre-Development Bankfull Volume, V_{bf-pre}: 9,296 CF

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Pre-Development Bankfull Volume, V_{bf-pre}: 9,296 CF

Pre-Development Bankfull Volume, V_{bf-pre}: 9,296 CF

Pre-Development Bankfull Volume, V_{bf-pre}: 9,296 CF

W8. TIME OF CONCENTRATION FOR APPLICABLE FLOW TYPES (T_chrs)

Flow Type	K	HEIGHT (H)	LENGTH (L)	SLOPE% (S * 100%)	S ^{0.5}	V _{avg} (S ^{0.5})	T _c = L/(V _{avg} *600) (hr)
Sheet Flow	0.48	3	150	2.00	1.41	0.68	0.061
Sheet Flow	0.48	1.9	52	3.65	1.91	0.92	0.016
Pipe Channel	1.2	2.49	83	3.00	1.73	2.08	0.011
Pipe Channel	1.2	1.55	106	1.46	1.21	1.45	0.020

T_c = 0.109

If T_c < 15 minutes use minimum T_c Below
Minimum T_c: 0.25 hrs = 15 min

W9. RUNOFF SUMMARY

First Flush Runoff Volume, V_{ff}: 3,598 CF

Pre-Development Bankfull Volume, V_{bf-pre}: 9,296 CF

Pervious Cover Post Development Bankfull Volume, V_{bf-post}: 356 CF

Impervious Cover Post Development Bankfull Volume, V_{bf-imp-post}: 6,651 CF

Total Bankfull Volume (V_{bf-post}): 7,006 CF

Pervious Cover Post Development 100-Year Storm Volume, V_{100-per-post}: 3,761 CF

Impervious Cover Post Development 100-Year Storm Volume, V_{100-imp-post}: 15,275 CF

Total 100 Year Volume (V₁₀₀): 19,036 CF

Bankfull Volume Difference, V_{bf-diff}: (2,290) CF

Onsite Infiltration Requirement, V_{inf}: 3,598 CF

Onsite Infiltration Requirement, V_{inf}: 3,598 CF

Onsite Infiltration Requirement, V_{inf}: 3,598 CF

Onsite Infiltration Requirement, V_{inf}: 3,598 CF

Onsite Infiltration Requirement, V_{inf}: 3,598 CF

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Onsite Infiltration Requirement, V_{inf}: 3,598 CF

Onsite Infiltration Requirement, V_{inf}: 3,598 CF

Onsite Infiltration Requirement, V_{inf}: 3,598 CF

Onsite Infiltration Requirement, V_{inf}: 3,598 CF

C. ON-SITE DETENTION VOLUME

Required Detention Volume: 3,810 CF

Site Area, A: 1.55 AC

First Flush Volume, V_{ff}: 3,598 CF

Bankfull Volume, V_{bf}: 7,006 CF

Bankfull Detained Volume: 3,408 CF

Bankfull Detained Volume: 3,408 CF

Bankfull Detained Volume: 3,408 CF

Bankfull Detained Volume: 3,408 CF

Bankfull Detained Volume: 3,408 CF

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Bankfull Detained Volume: 3,408 CF

Bankfull Detained Volume: 3,408 CF

Bankfull Detained Elevation = 788.59

100-YR Storm Elevation = 789.09

Total Detention Volume = 9,163 CF > 3,810 CF

Basin volume obtained from ADS Stage Storage Table - See Sheet C-17

W14. OUTLET DESIGN - 2 STAGE OUTLET

Q_{allow} = (0.15)(A)

Allowable Release Rate, Q_{allow}: 0.23 CFS

A. BANKFULL DISCHARGE

Q_{min-bf} = V_{bf}/T₁₀

Minimum Bank Full Release Rate, Q_{min-bf}: 0.0394 CFS

h_{ave} = (X_{bf} - X_{bot})

Average Head, h_{ave}: 1.59 FT

A_{bf} = Q_{min-bf} / [(2 * g * h_{ave})]

A_{bf}: 0.0063 SF

Maximum # Orifices = A_{bf} / A_{orif}

Maximum # Orifices: 1.15

Orifice Size Proposed: 1.00 in (0.75" Minimum)

Proposed # Orifices: 1.00

Q_{act-bf} = 0.62 * #Orif * A_{orif} * √(2 * g * h_{ave})

Proposed Bankfull Release Rate, Q_{act-bf}: 0.0343 CFS

T_{act-bf} = V_{bf} / Q_{act-bf}

Release Time, T_{act-bf}: 27.63 Hours

B. 100-YEAR STORM DISCHARGE

Q_{bf} = [0.62 * #Orif * A_{orif} * √(2 * g * (X₁₀₀ - X_{bot}))] + [0.62 * #Orif * A_{orif} * √(2 * g * h_{ave})]

Release Rate, Q_{bf}: 0.0343 CFS

Q_{max-100} = Q_{allow} - (Q_{bf})

Maximum 100-Year Release Rate, Q_{max}: 0.1978 CFS

A_{max-100} = Q_{max-100} / [0.62 * √(2 * g * (X₁₀₀ - X_{bot}))]

Orifice Area, A_{max-100}: 0.06 SF

Maximum # Orifices = A_{max-100} / A_{orif}

Maximum # Orifices: 1.15

Orifice Size Proposed: 3.00 in (0.75" Minimum)

Proposed # Orifices: 1.00

Q_{act-100} = Q_{bf} + 0.62 * #Orif * A_{orif} * √(2 * g * (X₁₀₀ - X_{bot}))

Proposed 100-Year Release Rate, Q_{act-100}: 0.21 CFS

h_{both-ave} = (X₁₀₀ - X_{bot}) + (X_{bf} - X_{bot})

Total Head, h_{both-ave}: 2.09 FT

Q_{both} = 0.62 * #Orif * A_{orif} * √(2 * g * h_{both-ave})

Both Release Rate, Q_{both}: 0.35 CFS

h_{100-ave} = (X₁₀₀ - X_{bot})

100-Year Orifice Total Head, h_{100-ave}: 0.50 FT

TITLE COMMITMENT INFORMATION

THE PROPERTY HEREON DESCRIBED IS THE SAME AS THE PERTINENT PROPERTY AS DESCRIBED IN FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT FILE NO.: VT414851, DATED FEBRUARY 16, 2023 AT 8:00 A.M. (LAST REVISED MARCH 30, 2023 12:44 P.M.)

LEGAL DESCRIPTION

THE LAND IS DESCRIBED AS FOLLOWS: LAND SITUATED IN THE TOWNSHIP OF YPSILANTI, COUNTY OF WASHTENAW, STATE OF MICHIGAN, MORE PARTICULARLY DESCRIBED AS: LOT(S) 172 THROUGH 180, OF "FAIRVIEW HEIGHTS", ACCORDING TO THE PLAT THEREOF RECORDED IN LIBER 7, PAGE(S) 12 OF PLATS, WASHTENAW COUNTY RECORDS, EXCEPT THE EAST 50 FEET OF LOT 175; AND EXCEPT THAT PART OF LOT 174 DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF LOT 172; THENCE SOUTHEAST ALONG THE SOUTHWEST SIDE LINE OF LOTS 171 AND 170 TO THE NORTHEAST CORNER OF LOT 174; THENCE SOUTH ALONG THE EAST SIDE LINE OF LOT 174 TO THE SOUTHEAST CORNER OF LOT 174; THENCE WEST ALONG THE SOUTH LINE OF LOT 174 TO A POINT WHERE THE SOUTH-EAST SIDE LINE OF LOT 172 EXTENDED SOUTH-EAST WOULD INTERSECT THE SOUTH SIDE LINE OF LOT 174; THENCE NORTHERLY TO THE PLACE OF BEGINNING.

NOTES CORRESPONDING TO SCHEDULE B

17 EASEMENTS, SETBACK LINES, AS SHOWN ON THE RECORDED PLAT. (AFFECTS, CONTAINS NO PLOTTABLE EASEMENT ITEMS)

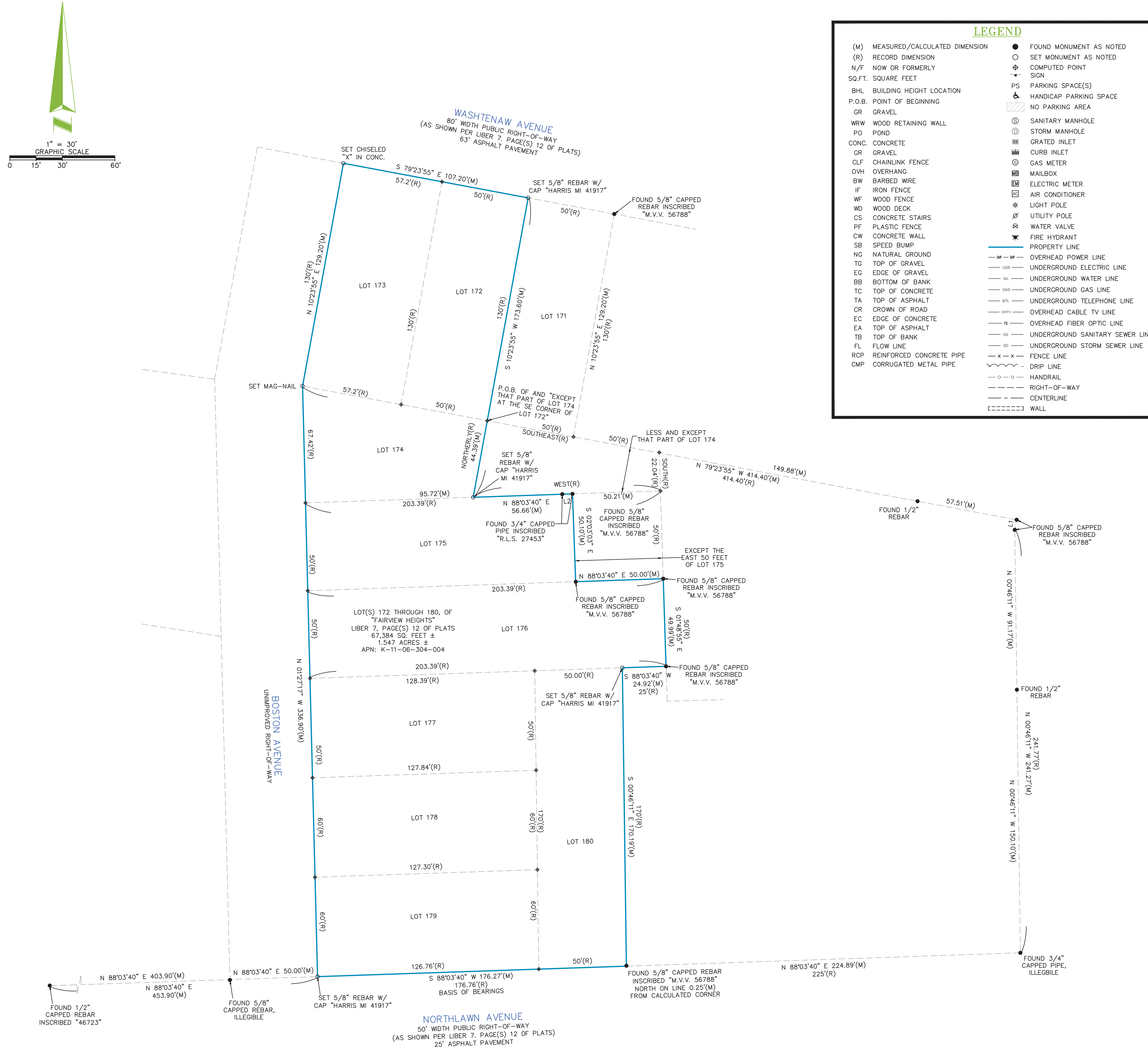
GENERAL NOTES

- 1. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN LOCATED BY FIELD MEASUREMENTS, UTILITY MAP DRAWINGS, AND MICHIGAN 811 DIG UTILITY LOCATE REQUEST. BLEW AND ASSOCIATES MAKES NO WARRANTY TO THE EXACT LOCATION OF ANY UNDERGROUND UTILITIES SHOWN OR NOT SHOWN ON THIS DRAWING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ANY AND ALL UTILITIES PRIOR TO CONSTRUCTION. TICKET NUMBER: 2023040601662-000
COMPANY: ANV ARBOR CITY FIBER OPTICS (734) 794-6350
AT&T TELEPHONE (800) 778-9140
COMCAST CABLE TV (855) 962-8525
COMCAST FIBER OPTICS (855) 962-8525
DTE ENERGY (ELECTRIC) (313) 407-5364
DTE ENERGY (GAS) (248) 318-7839
METRO FIBERNET, LLC FIBER OPTICS (800) 778-9140
WASHTENAW COUNTY ROAD COMMISSION ELECTRIC (734) 327-6671
YPSILANTI COMMUNITY UTILITIES AUTHORITY POTABLE WATER (734) 323-1699
YPSILANTI COMMUNITY UTILITIES AUTHORITY SANITARY SEWER (734) 323-1699
2. ALL STATEMENTS WITHIN THE CERTIFICATION, AND OTHER REFERENCES LOCATED ELSEWHERE HEREON, RELATED TO: UTILITIES, IMPROVEMENTS, STRUCTURES, BUILDINGS, PARTY WALLS, PARKING, EASEMENTS, SERVITUDES, AND SIGNIFICANT OBSERVATIONS ARE BASED SOLELY ON ABOVE GROUND, VISIBLE EVIDENCE, UNLESS ANOTHER SOURCE OF INFORMATION IS SPECIFICALLY REFERENCED HEREON.
3. THIS SURVEY MEETS OR EXCEEDS THE SURVEY STANDARDS/STANDARDS OF CARE AS SET FORTH IN SECTION 3 OF THE 2021 ALTA/NSPS SURVEY REQUIREMENTS.
4. THE SUBJECT PROPERTY HAS INDIRECT ACCESS TO WASHTENAW AVENUE, A DEDICATED PUBLIC STREET OR HIGHWAY.
5. THERE WAS NO VISIBLE EVIDENCE OF ANY DELINEATED WETLAND AREAS, PER THE U.S. FISH & WILDLIFE SERVICE NATIONAL WETLANDS INVENTORY WEBSITE. NO MARKERS FROM A FIELD DELINEATION OF WETLANDS CONDUCTED BY A QUALIFIED SPECIALIST WERE OBSERVED DURING THE COURSE OF THE ALTA SURVEY.
6. THE PARCELS CONTAINED IN THE LEGAL DESCRIPTION ARE CONTIGUOUS WITHOUT ANY GAPS, OR OVERLAPS.
7. BUILDING AREAS SHOWN HEREON ARE FOR THE FOOTPRINT OF THE BUILDING ONLY.
8. IN REGARD TO TABLE A ITEM 17, THERE WERE NO KNOWN PROPOSED CHANGES IN RIGHT OF WAY LINES, RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS EXCEPT AS SHOWN HEREON.
9. NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL SEAL OF A LICENSED SURVEYOR. ADDITIONS AND DELETIONS TO SURVEY MAPS, SKETCHES, OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
10. THE NEAREST INTERSECTING STREET IS THE INTERSECTION OF WASHTENAW AVENUE AND BOSTON AVENUE, WHICH IS APPROXIMATELY 70' FROM THE NORTHWEST CORNER OF THE SUBJECT PROPERTY.
11. THE DISTANCES SHOWN HEREON ARE UNITS OF GROUND MEASUREMENTS.
12. ELEVATIONS ESTABLISHED WITH OPS STATIC OBSERVATIONS UTILIZING ONLINE POSITIONING USER SERVICE (OPUS) FOR POST PROCESSING WITH ORIGINATING BENCHMARK: PID: A45188, VERTICAL DATUM BASED UPON NORTH AMERICAN VERTICAL DATUM (NAVD88) IN US SURVEY FEET. CONTOURS SHOWN ARE 1' INTERVALS.
PID: A45188
PUBLISHED ELEVATION: 845.67'
MONUMENT DESCRIPTION: STEEL ROD IMBEDDED IN MONUMENT
13. THERE IS NO EVIDENCE OF ANY DELINEATED WETLAND AREAS, PER THE U.S. FISH & WILDLIFE SERVICE NATIONAL WETLANDS INVENTORY WEBSITE. NO MARKERS FROM A FIELD DELINEATION OF WETLANDS CONDUCTED BY A QUALIFIED SPECIALIST WERE OBSERVED DURING THE COURSE OF THE ALTA SURVEY.

SIGNIFICANT OBSERVATIONS

- FENCE APPEARS TO EXTEND BEYOND THE WEST PROPERTY LINE BY AS MUCH AS 17.3'.
FENCE APPEARS TO EXTEND BEYOND THE EAST PROPERTY LINE BY AS MUCH AS 21'.
PARKING STRIPES APPEARS TO EXTEND BEYOND THE WEST PROPERTY LINE BY AS MUCH AS 4.4'.

BOUNDARY DETAIL



LEGEND

Table with two columns: Symbol and Description. Includes items like (M) MEASURED/CALCULATED DIMENSION, (R) RECORD DIMENSION, FOUND MONUMENT AS NOTED, etc.

LINE TABLE

Table with 3 columns: LINE, BEARING, DISTANCE. Contains data for L1 and L2.

VICINITY MAP (NOT TO SCALE) showing site location relative to Boston Ave, Washtenaw Ave, and Northlawn Ave. Includes LAND AREA (67,384± SQUARE FEET) and PARKING (REGULAR=73, HANDICAP=2, TOTAL=75).

FLOOD INFORMATION. FLOOD NOTE: BASED ON MAPS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AVAILABLE ONLINE AT WWW.MSC.FEMA.GOV. AND BY GRAPHIC PLOTTING ONLY. THIS PROPERTY IS LOCATED IN ZONE "X" ON FLOOD INSURANCE RATE MAP NUMBER 26161C0264E, WHICH BEARS AN EFFECTIVE DATE OF 04/03/2012 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.

BEARING BASIS. THE BASIS OF BEARING FOR THIS SURVEY IS GRID NORTH PER MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD83-2011, AS MEASURED ALONG THE SOUTH LINE OF THE SUBJECT PROPERTY, ALSO BEING THE NORTH RIGHT-OF-WAY LINE OF NORTHLAWN AVENUE, WHICH BEARS S 88°03'40" W PER GPS COORDINATE OBSERVATIONS. LATITUDE: 42°14'55.4708" LONGITUDE: -83°39'14.3503" CONVERGENCE ANGLE: 0°29'05.9997"

ALTA/NSPS LAND TITLE SURVEY. AEI JOB #476480 - TASK 2. PUTTERZ. 2675 WASHTENAW AVENUE. WASHTENAW COUNTY YPSILANTI, MICHIGAN 48197



COORDINATED BY: AEI CONSULTANTS. 2500 CAMINO DIABLO, WALNUT CREEK, CA, 94597. TELEPHONE: 925.746.6000. EMAIL: SURVEYS@AEICONCONSULTANTS.COM

SURVEYOR'S CERTIFICATE. THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6A, 6B, 7A, 7B1, 7C, 8, 9, 11B, 13, 14, 16, AND 17 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON 07/18/2024. DATE OF PLAT OR MAP: 07/19/2024.

PRELIMINARY. RONALD R. HARRIS. PROFESSIONAL LAND SURVEYOR NO.: 4001041917. STATE OF MICHIGAN.

Table with 4 columns: DATE, REVISION HISTORY, BY, SURVEYOR JOB NUMBER. Includes revision history and job number 23-1796.02.

SURVEYED BY: BLEW & ASSOCIATES, P.A. 3825 N SHILOH DRIVE, FAYETTEVILLE, AR 72703. SURVEY@BLEWINC.COM

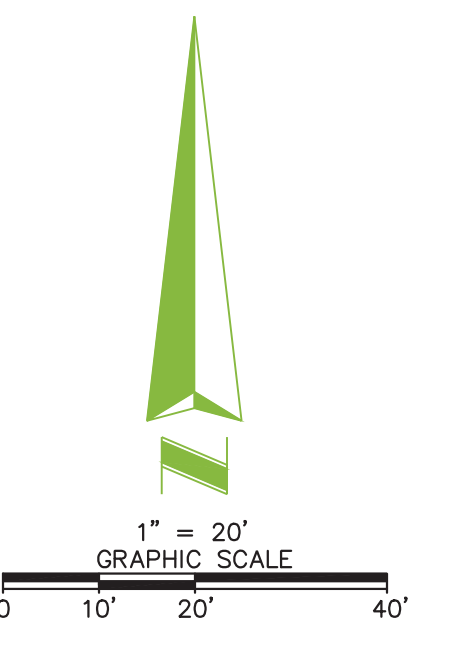
APPROVED BY: LT

TEMPORARY BENCHMARK TABLE

- 81 SET CHISELED "X" IN CONCRETE
ELEVATION: 808.16'
NORTHING: 273922.86
EASTING: 13316364.27
- 82 SET MAG-NAIL
ELEVATION: 801.64'
NORTHING: 273795.81
EASTING: 13316340.93

TREE TABLE

TREE ID#	TRUNK DIAMETER	CANOPY RADIUS	TYPE
T1	18"	24'	BRADFORD PEAR
T2	10"	6'	PINE
T3	12"	7'	RED CEDAR
T4	12"	7'	RED CEDAR
T5	18"	13'	DOUBLE RED CEDAR
T6	14"	6'	DOUBLE RED CEDAR
T7	14"	6'	RED CEDAR
T8	16"	12'	WHITE MULBERRY
T9	14"	7'	RED CEDAR
T10	60"	30'	COTTONWOOD (DEAD)
T11	14"	20'	COTTONWOOD (DEAD)
T12	32"	20'	COTTONWOOD (DEAD)



INVERT TABLE

- 11 STORM SEWER MANHOLE
RIM ELEVATION: 783.59'
12" RCP INVERT NW: 778.4'
12" RCP INVERT NE: 778.7' (UNABLE TO DETERMINE SOURCE)
RCP INVERT N: 770.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
RCP INVERT S: 769.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 12 STORM SEWER MANHOLE
RIM ELEVATION: 802.10'
18" RCP INVERT W: 796.3'
RCP INVERT N: 782.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
RCP INVERT S: 774.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 13 STORM SEWER MANHOLE
RIM ELEVATION: 805.98'
RCP INVERT N: 787.0' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
RCP INVERT S: 786.8' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 14 CURB INLET
RIM ELEVATION: 807.65'
SUMP ELEVATION: 805.7'
UNABLE TO LOCATE PIPES, FULL OF WATER & DEBRIS
- 15 GRATED INLET
RIM ELEVATION: 808.15'
10" CMP INVERT SE: 805.1'
24" RCP INVERT N: 804.2'
- 16 STORM SEWER MANHOLE
RIM ELEVATION: 808.21'
24" RCP INVERT S: 796.8'
8" CLAY PIPE INVERT E: 802.8'
24" RCP INVERT NE: 796.6'
24" RCP INVERT SE (UNABLE TO MEASURE DUE TO DEPTH)
- 17 CURB INLET
RIM ELEVATION: 808.89'
8" CLAY PIPE INVERT W: 803.6'
- 18 STORM SEWER MANHOLE
RIM ELEVATION: 808.48'
UNABLE TO OPEN DUE TO HIGH TRAFFIC
- 19 STORM SEWER MANHOLE
RIM ELEVATION: 808.60'
UNABLE TO OPEN DUE TO HIGH TRAFFIC
- 20 STORM SEWER MANHOLE
RIM ELEVATION: 812.55'
UNABLE TO OPEN DUE TO HIGH TRAFFIC
- 21 SANITARY SEWER MANHOLE
RIM ELEVATION: 783.94'
8" CAST IRON PIPE INVERT W: 776.2'
8" CAST IRON PIPE INVERT E: 776.1'
8" CAST IRON PIPE INVERT N: 775.6'
8" CAST IRON PIPE INVERT S: 775.5'
- 22 SANITARY SEWER MANHOLE
RIM ELEVATION: 796.41'
6" CAST IRON PIPE INVERT W: 776.7'
8" CAST IRON PIPE INVERT N: 776.7'
8" CAST IRON PIPE INVERT S: 776.7'
- 23 SANITARY SEWER MANHOLE
RIM ELEVATION: 802.34'
CAST IRON PIPE INVERT N: 787.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
CAST IRON PIPE INVERT S: 787.4' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 24 SANITARY SEWER MANHOLE
RIM ELEVATION: 808.29'
8" CAST IRON PIPE INVERT NE: 799.0'
6" CAST IRON PIPE INVERT E: 799.0'
SUMP ELEVATION: 798.9'
UNABLE TO LOCATE DISCHARGE PIPE, FULL OF SEWAGE
- 25 SANITARY SEWER MANHOLE
RIM ELEVATION: 812.13'
8" CAST IRON PIPE INVERT E: 801.7'
8" CAST IRON PIPE INVERT W: 801.6'

LEGEND

- (M) MEASURED/CALCULATED DIMENSION
- (R) RECORD DIMENSION
- N/F NOW OR FORMERLY
- SQ.FT. SQUARE FEET
- BHL BUILDING HEIGHT LOCATION
- P.O.B. POINT OF BEGINNING
- GR GRAVEL
- WRW WOOD RETAINING WALL
- PO POND
- CONC. CONCRETE
- GR GRAVEL
- CLF CHAINLINK FENCE
- OVH OVERHANG
- BW BARBED WIRE
- IF IRON FENCE
- WF WOOD FENCE
- WD WOOD DECK
- CS CONCRETE STAIRS
- PF PLASTIC FENCE
- CW CONCRETE WALL
- SB SPEED BUMP
- NG NATURAL GROUND
- TC TOP OF CONCRETE
- TA TOP OF ASPHALT
- CR CROWN OF ROAD
- EC EDGE OF CONCRETE
- EA TOP OF ASPHALT
- TB TOP OF BANK
- FL FLOW LINE
- RCP REINFORCED CONCRETE PIPE
- CMP CORRUGATED METAL PIPE
- FOUND MONUMENT AS NOTED
- SET MONUMENT AS NOTED
- ⊕ COMPUTED POINT
- ⊙ SIGN
- PS PARKING SPACE(S)
- ♿ HANDICAP PARKING SPACE
- ⊘ NO PARKING AREA
- ⊙ SANITARY MANHOLE
- ⊙ STORM MANHOLE
- ⊙ GRATED INLET
- ⊙ CURB INLET
- ⊙ GAS METER
- ⊙ MAILBOX
- ⊙ ELECTRIC METER
- ⊙ AIR CONDITIONER
- ⊙ LIGHT POLE
- ⊙ UTILITY POLE
- ⊙ WATER VALVE
- ⊙ FIRE HYDRANT
- PROPERTY LINE
- DP— OVERHEAD POWER LINE
- UG— UNDERGROUND ELECTRIC LINE
- WL— UNDERGROUND WATER LINE
- UG— UNDERGROUND GAS LINE
- UT— UNDERGROUND TELEPHONE LINE
- OHT— OVERHEAD CABLE TV LINE
- RO— OVERHEAD FIBER OPTIC LINE
- SS— UNDERGROUND SANITARY SEWER LINE
- SD— UNDERGROUND STORM SEWER LINE
- X—X— FENCE LINE
- DRIP LINE
- HANDRAIL
- --- RIGHT-OF-WAY
- --- CENTERLINE
- ⊘ WALL

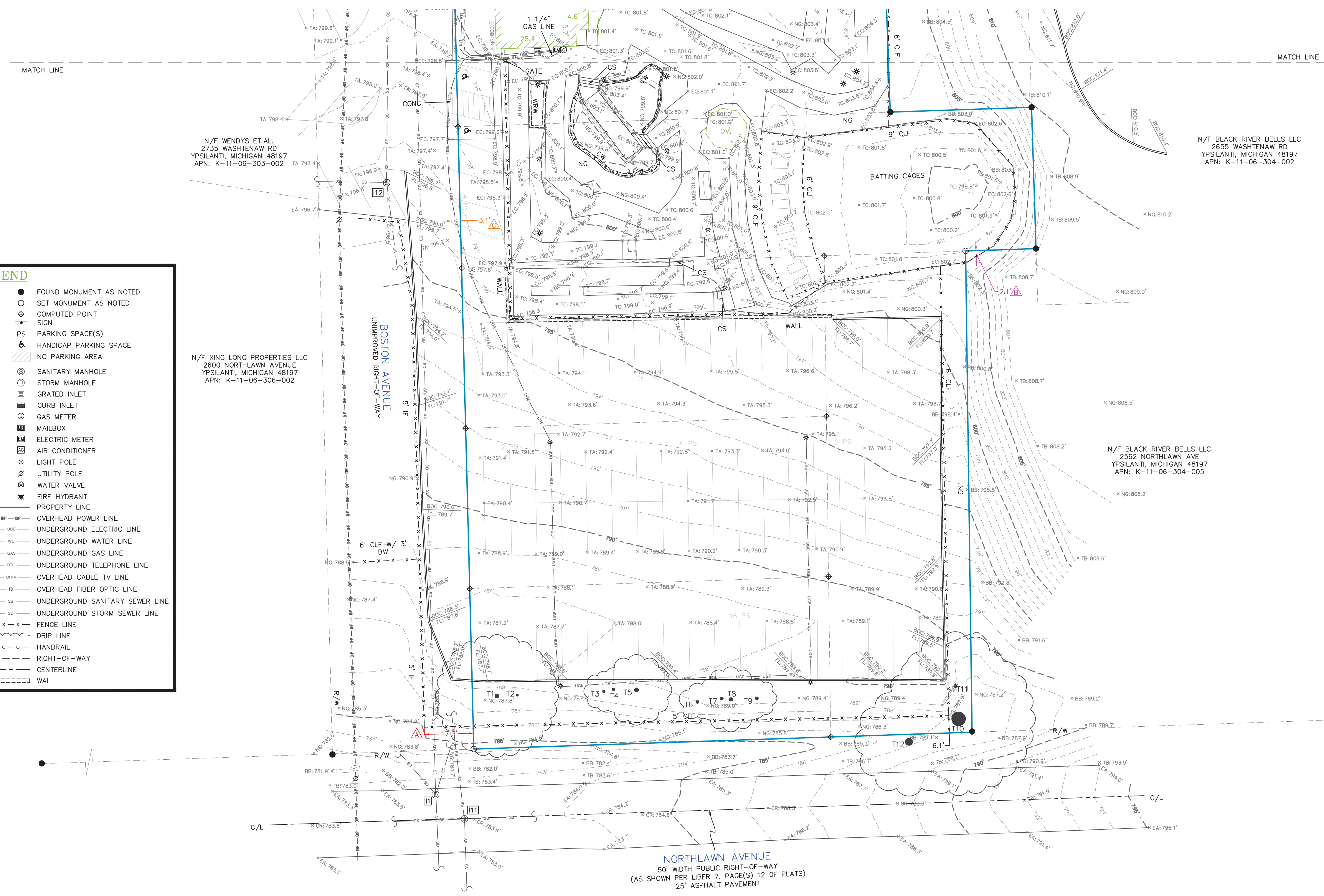
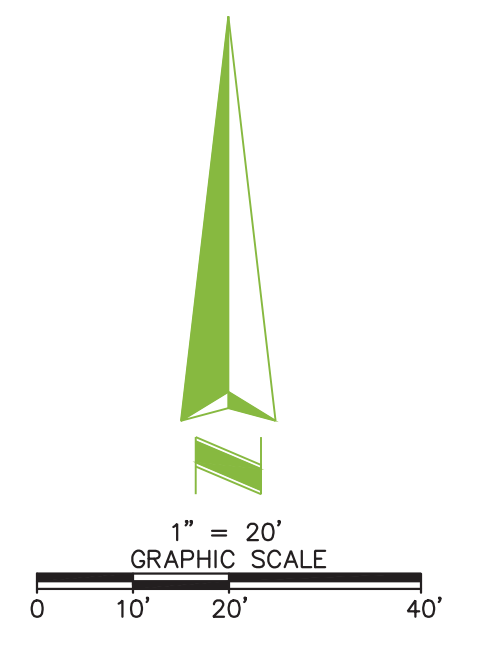


SURVEYED BY:
BLEW & ASSOCIATES, P.A.
3825 N SHILOH DRIVE
FAYETTEVILLE, AR 72703.
SURVEY@BLEWINC.COM

COORDINATED BY:
AEI Consultants
TELEPHONE: 925.746.6000
EMAIL: SURVEYS@AEICONSULTANTS.COM

DATE	REVISION HISTORY	BY	SURVEYOR JOB NUMBER: 23-1796.02
			SCALE: 1" = 20'
			DRAWN BY: PAM
			APPROVED BY: LT

AEI JOB #476480 - TASK 2
PUTTERZ
2675 WASHTENAW AVENUE
WASHTENAW COUNTY YPSILANTI, MICHIGAN 48197



LEGEND

(M) MEASURED/CALCULATED DIMENSION	● FOUND MONUMENT AS NOTED
(R) RECORD DIMENSION	○ SET MONUMENT AS NOTED
N/F NOW OR FORMERLY	⊕ COMPUTED POINT
SQ.FT. SQUARE FEET	⊙ SIGN
BHL BUILDING HEIGHT LOCATION	PS PARKING SPACE(S)
P.O.B. POINT OF BEGINNING	♿ HANDICAP PARKING SPACE
GR GRAVEL	⊘ NO PARKING AREA
WRW WOOD RETAINING WALL	⊙ SANITARY MANHOLE
PO POND	⊙ STORM MANHOLE
CONC. CONCRETE	⊙ GRATED INLET
GR GRAVEL	⊙ CURB INLET
CLF CHAINLINK FENCE	⊙ GAS METER
OVH OVERHANG	⊙ MAILBOX
BW BARBED WIRE	⊙ ELECTRIC METER
IF IRON FENCE	⊙ AIR CONDITIONER
WF WOOD FENCE	⊙ LIGHT POLE
WD WOOD DECK	⊙ UTILITY POLE
CS CONCRETE STAIRS	⊙ WATER VALVE
PF PLASTIC FENCE	⊙ FIRE HYDRANT
CW CONCRETE WALL	—●— PROPERTY LINE
SB SPEED BUMP	—●— OVERHEAD POWER LINE
NG NATURAL GROUND	—●— UNDERGROUND ELECTRIC LINE
TC TOP OF GRAVEL	—●— UNDERGROUND WATER LINE
EG EDGE OF GRAVEL	—●— UNDERGROUND GAS LINE
BB BOTTOM OF BANK	—●— UNDERGROUND TELEPHONE LINE
TOP OF CONCRETE	—●— OVERHEAD CABLE TV LINE
TA CROWN OF ASPHALT	—●— OVERHEAD FIBER OPTIC LINE
CR CROWN OF ROAD	—●— UNDERGROUND SANITARY SEWER LINE
EC EDGE OF CONCRETE	—●— UNDERGROUND STORM SEWER LINE
EA TOP OF ASPHALT	—●— FENCE LINE
TB TOP OF ASPHALT	—●— DRIP LINE
FL FLOW LINE	—●— HANDRAIL
RCP REINFORCED CONCRETE PIPE	—●— RIGHT-OF-WAY
CMP CORRUGATED METAL PIPE	—●— CENTERLINE
	—●— WALL

N/F WENDYS ET AL.
2735 WASHENAW RD
YPSILANTI, MICHIGAN 48197
APN: K-11-06-303-002

N/F XING LONG PROPERTIES LLC
2600 NORTHLAWN AVENUE
YPSILANTI, MICHIGAN 48197
APN: K-11-06-306-002

N/F BLACK RIVER BELLS LLC
2655 WASHENAW RD
YPSILANTI, MICHIGAN 48197
APN: K-11-06-304-002

N/F BLACK RIVER BELLS LLC
2562 NORTHLAWN AVE
YPSILANTI, MICHIGAN 48197
APN: K-11-06-304-005

INVERT TABLE

- 11 STORM SEWER MANHOLE
RIM ELEVATION: 783.59'
12" RCP INVERT NW: 778.4'
12" RCP INVERT NE: 778.7' (UNABLE TO DETERMINE SOURCE)
RCP INVERT N: 770.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
RCP INVERT S: 769.6' (UNABLE TO DETERMINE PIPE SIZE DUE TO DEPTH)
- 12 STORM SEWER MANHOLE
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UNABLE TO LOCATE DISCHARGE PIPE, FULL OF SEWAGE
- 25 SANITARY SEWER MANHOLE
RIM ELEVATION: 812.13'
8" CAST IRON PIPE INVERT E: 801.7'
8" CAST IRON PIPE INVERT W: 801.6'

TEMPORARY BENCHMARK TABLE

- 1 SET CHISELED "X" IN CONCRETE
ELEVATION: 808.16'
NORTHING: 273922.86
EASTING: 13316364.27
- 2 SET MAG-NAIL
ELEVATION: 801.64'
NORTHING: 273795.81
EASTING: 13316340.93

TREE TABLE

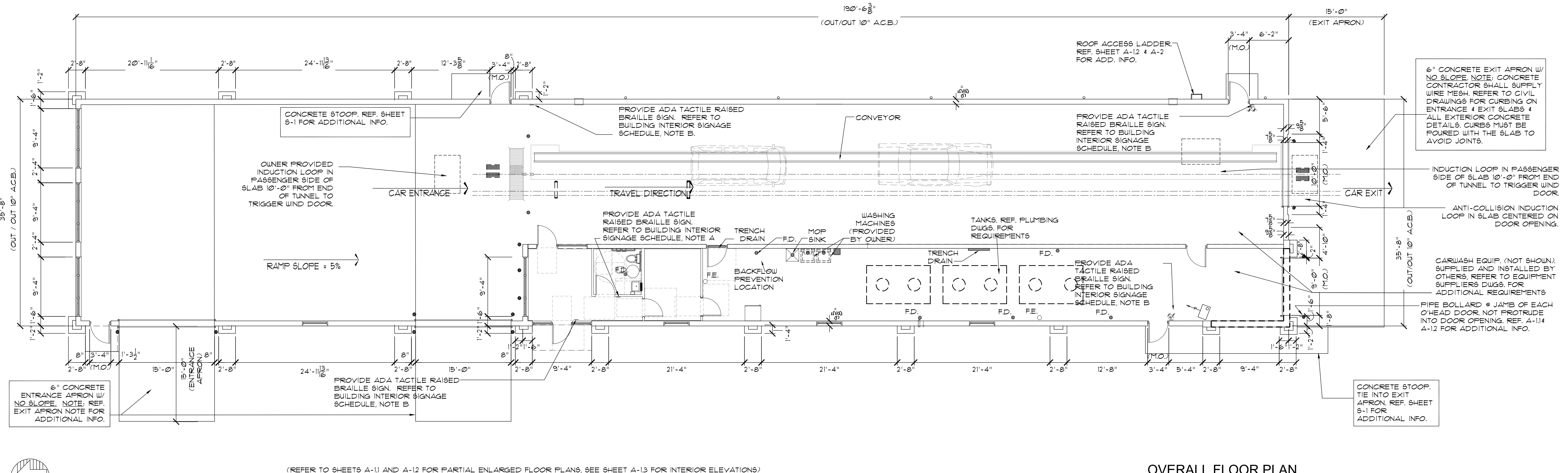
TREE ID#	TRUNK DIAMETER	CANOPY RADIUS	TYPE
T1	18"	24'	BRADFORD PEAR
T2	10"	6'	PINE
T3	12"	7'	RED CEDAR
T4	12"	7'	RED CEDAR
T5	18"	13'	DOUBLE RED CEDAR
T6	14"	6'	DOUBLE RED CEDAR
T7	14"	6'	RED CEDAR
T8	16"	12'	WHITE MULBERRY
T9	14"	7'	RED CEDAR
T10	60"	30'	COTTONWOOD (DEAD)
T11	14"	20'	COTTONWOOD (DEAD)
T12	32"	20'	COTTONWOOD (DEAD)

SURVEYED BY:
BLEW & ASSOCIATES, P.A.
3825 N SHILOH DRIVE
FAYETTEVILLE, AR 72703.
SURVEY@BLEWINC.COM

COORDINATED BY:
AEI Consultants
TELEPHONE: 925.746.6000
EMAIL: SURVEYS@AEICONSULTANTS.COM

ALTA/NSPS LAND TITLE SURVEY
AEI JOB #476480 - TASK 2
PUTTERZ
2675 WASHENAW AVENUE
WASHENAW COUNTY YPSILANTI, MICHIGAN 48197

DATE	REVISION HISTORY	BY	SURVEYOR JOB NUMBER: 23-1796.02
			SCALE: 1" = 20'
			DRAWN BY: PAM
			APPROVED BY: LT



OVERALL FLOOR PLAN
6859.47 SQ. FT.

SCALE: 1/8" = 1'-0"
(REFER TO SHEETS A-11 AND A-12 FOR PARTIAL ENLARGED FLOOR PLANS, SEE SHEET A-13 FOR INTERIOR ELEVATIONS)

GENERAL FLOOR PLAN NOTES:

- ALL DIMENSIONS ARE TAKEN TO FACE OF A.C.B. (ARCHITECTURAL CONCRETE BRICK), CMU, OR STUD UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL LOCATE ALL CUT A.C.B.'s (ARCHITECTURAL CONCRETE BRICKS) BEHIND PILASTERS TO ALLOW FOR APPROPRIATE ALIGNMENT OF THE 8" AND 10" A.C.B.'s
- CONTRACTOR SHALL PROVIDE AND INSTALL FIRE TREATED WOOD SUPPORT BLOCKING OR 16 GA STEEL PLATE BLOCKING IN ALL WALLS RECEIVING ANCHORS OF CASEWORK, SHELVING, GRAB BARS AND THE LIKE. REFER TO PLANS AND COORDINATE W/ OWNER PRIOR TO CONCEALING WALLS. ADDITIONALLY, COORDINATE WITH ALL OTHER TRADES TO DETERMINE LOCATIONS OF ADDITIONAL STEEL STUDS.
- NEW TOILET ROOM SHALL BE CONSTRUCTED IN ACCORDANCE WITH 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (ADAAG) INCLUDING BUT NOT LIMITED TO GRAB BARS, FIXTURE HEIGHTS, CLEAR FLOOR ACCESS, AND 60" DIAMETER TURN AROUND.
- CONTRACTOR SHALL INSTALL NEW GYPSUM BOARD INSTALLATIONS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR LOCATING GYPSUM BOARD CONTROL AND EXPANSION JOINTS. EXPANSION JOINTS SHALL NOT EXCEED 30'-0" O.C.
- ALL INTERIOR WALLS (EXCEPT PLUMBING WALLS) SHALL BE ASSUMED TO BE 3 5/8" STEEL STUDS (NON COMBUSTIBLE) @ 16" O.C. WITH 5/8" WATER RESISTANT GYP. BD. EACH SIDE UNLESS OTHERWISE NOTED. PLUMBING WALLS SHALL BE 6" STEEL STUDS.
- ALL DOORS SHALL BE EQUIPPED WITH LEVER STYLE LATCH (UNLESS NOTED OTHERWISE) IN ACCORDANCE WITH ADAAG (ACCESSIBILITY) GUIDELINES. ALL LOCK SETS SHALL BE PUSH BUTTON TYPE LOCKING MECHANISMS OR EQUIVALENT. INTERIOR KEYED LOCKS ARE NOT ALLOWED.
- CONTRACTORS SHALL COORDINATE THEIR RESPECTIVE WORK WITH OTHER TRADES AND SHALL PROVIDE REQUIRED SUB SLAB PIPING, CONDUIT, PLUMBING, PIPE SLEEVES, FLOOR DRAINS AND THE LIKE AS REQUIRED PRIOR TO POURING NEW INTERIOR CONCRETE SLAB.
- ALL WOOD BLOCKING AND/OR FLYWOOD/OSB INSTALLED IN CONCEALED PLACES SHALL BE OF THE FRUW TYPE (FIRE TREATED).
- ALL NEW INSULATION SHALL HAVE A MAXIMUM FLAME SPREAD OF 25. SMOKE DEVELOPMENT RATINGS FOR ALL NEW INSULATION SHALL NOT EXCEED 450 (TYP.).
- TENANT SHALL FURNISH BOTTLED WATER IN LIEU OF A WATER COOLER.
- FIRE EXTINGUISHERS:
 - PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED ON SITE FOR THE DURATION OF CONSTRUCTION. EXTINGUISHERS SHALL BEAR THE LABEL OF AN APPROVED AGENCY.
 - PERMANENT FIRE EXTINGUISHER (F.E.) PORTABLE FIRE EXTINGUISHER(S) SHALL BE PROVIDED ON SITE ON A PERMANENT BASIS, BEARING THE LABEL OF AN APPROVED AGENCY. EXTINGUISHER(S) SHALL BE WALL HUNG W/ MFR'S STANDARD WALL BRACKET. LOCATIONS INDICATED ON PLANS ARE SCHEMATIC AND SUBJECT TO CHANGE PER LOCAL AUTHORITY'S REQUIREMENTS/DIRECTION.
 - THE MAXIMUM TRAVEL DISTANCE TO A PERMANENT FIRE EXTINGUISHER SHALL NOT EXCEED 75 FEET. ADDITIONALLY, FIRE EXTINGUISHERS SHALL BE LOCATED WHERE THEY WILL BE READILY ACCESSIBLE AND IMMEDIATELY AVAILABLE FOR USE AND SHALL NOT BE OBSTRUCTED OR OBSCURED FROM VIEW. THESE LOCATIONS SHALL BE AMONG NORMAL PATHS OF TRAVEL.
- TEMPERED SAFETY GLAZING SHALL BE PROVIDED IN ACCORDANCE WITH CODE INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - WITHIN 24 INCH ARC ALONG THE VERTICAL EDGE OF A DOOR.
 - IN ANY GLASS PANEL THAT IS 18 INCHES OR LESS ABOVE AN ADJACENT WALKING SURFACE AND IS (9) SQUARE FEET OR LARGER IN AREA.
- ANY TRANSACTION AND/OR SERVICE COUNTERS USED FOR TRANSACTION OF SELLING MERCHANDISE, MAKING PAYMENTS OR OTHER SIMILAR TYPES OF TRANSACTIONS SHALL HAVE A 3'-0" (MINIMUM) SECTION OF 6AID COUNTER NOT EXCEEDING 2'-10" AFF. FOR USE BY THE PHYSICALLY DISABLED.
- ALL INTERIOR FINISHES SHALL COMPLY WITH THE MICHIGAN BUILDING CODE (MBC) FOR FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS FOR (B) BUSINESS USE GROUP AS FOLLOWS:
 - CORRIDORS = "B" FLAME SPREAD OF 26-75+ SMOKE DEVELOPMENT = 0-450
 - ENCLOSED ROOMS/SPACES = "C" FLAME SPREAD OF 76-200+ SMOKE DEVELOPMENT = 0-450
- ALL CAR WASH EQUIPMENT SHOWN IN ARCHITECTURAL PLANS AND/OR NOTED IN WASH BAY AND MECHANICAL ROOM SHOULD BE CONSIDERED SCHEMATIC AND ONLY FOR REFERENCE. CONTRACTOR SHALL REFER TO AND COORDINATE WITH CAR WASH EQUIPMENT DRAWINGS FURNISHED BY OTHERS FOR FINAL EQUIPMENT LAYOUT.

BUILDING INTERIOR SIGNAGE SCHEDULE:
PROVIDE THE FOLLOWING INTERIOR SIGNAGE:

- TOILET ROOM: PROVIDE ADA TACTILE RAISED BRAILLE UNISEX RESTROOM SIGN, ADJACENT TO DOOR. REFER TO DETAIL ON SHEET G-2.
- BUILDING EGRESS (EXIT) DOORS: PROVIDE ADA TACTILE RAISED BRAILLE SIGN STATING "EXIT" AND COMPLYING WITH ICC A117.1 ADJACENT TO EACH BUILDING EXIT DOOR. REFER DETAIL ON SHEET G-2.

REVISION	DATE

4/17/2024
PLANNING SUBMISSION

PROJECT NUMBER
2675 Washtenaw Ave.

DRAWN BY: REB

Whitewater Carwash
2675 Washtenaw Ave.
Ypsilanti, MI 48846

Overall Floor Plan

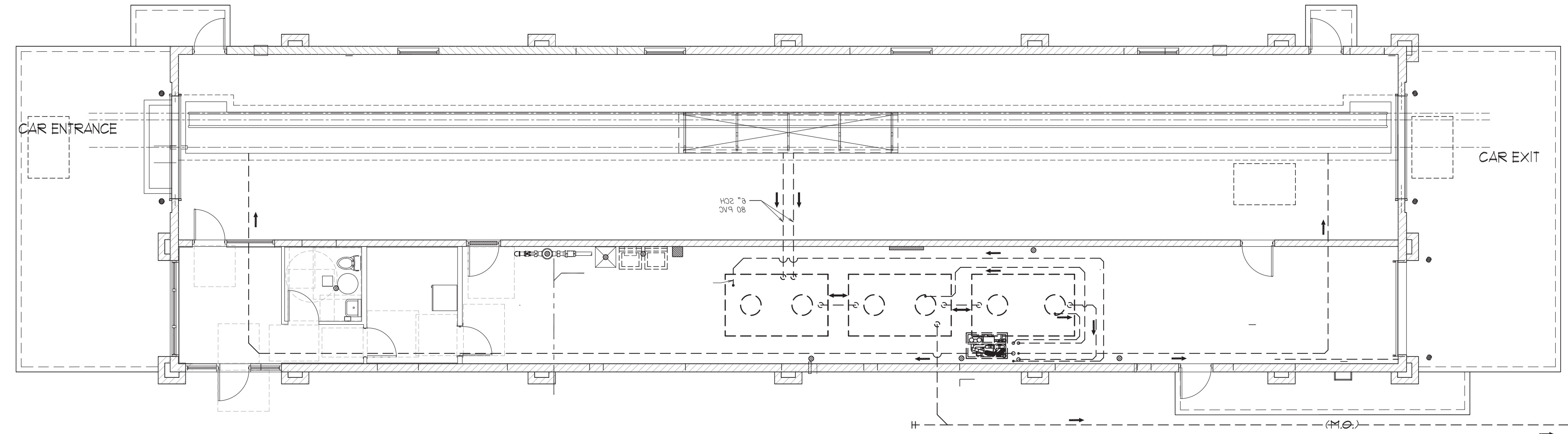
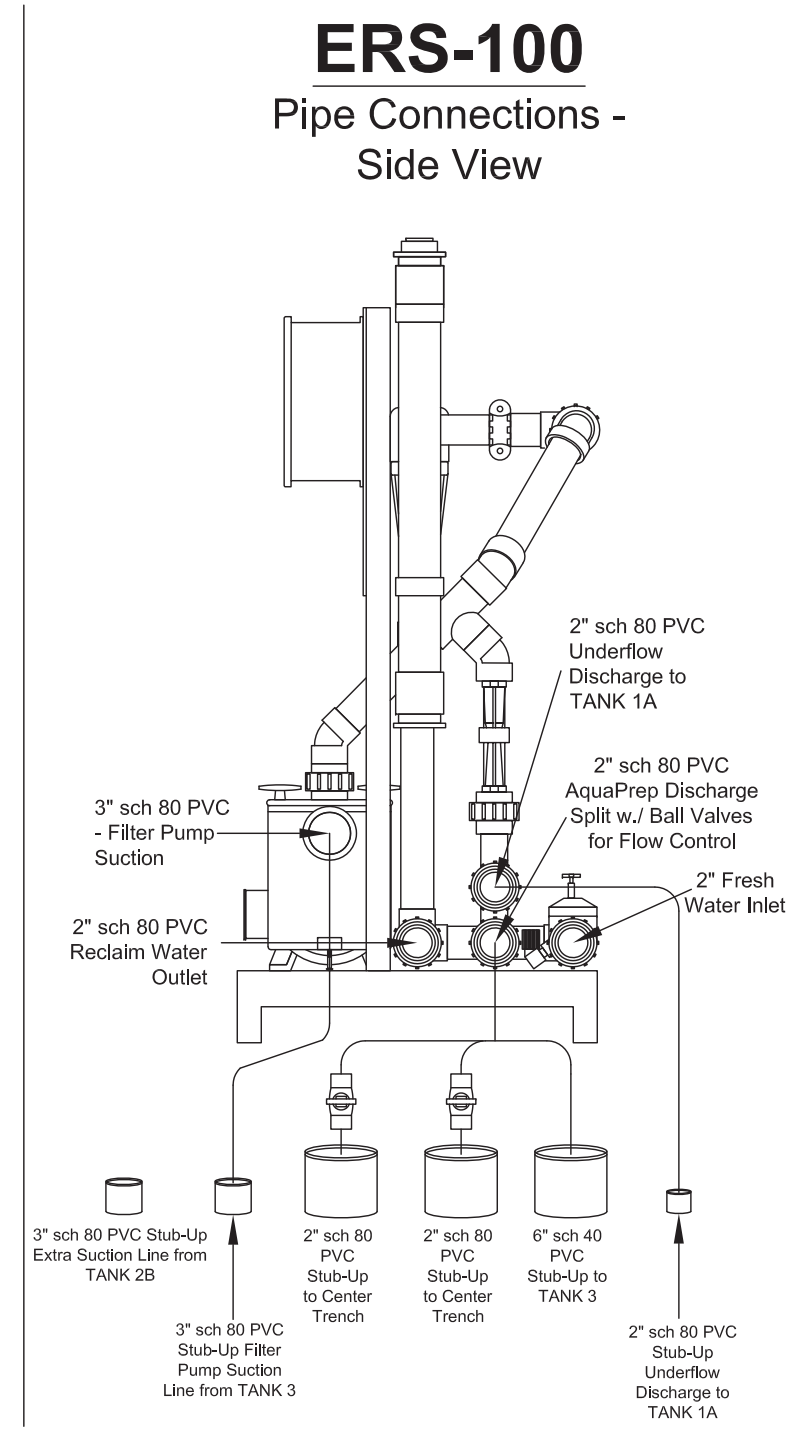
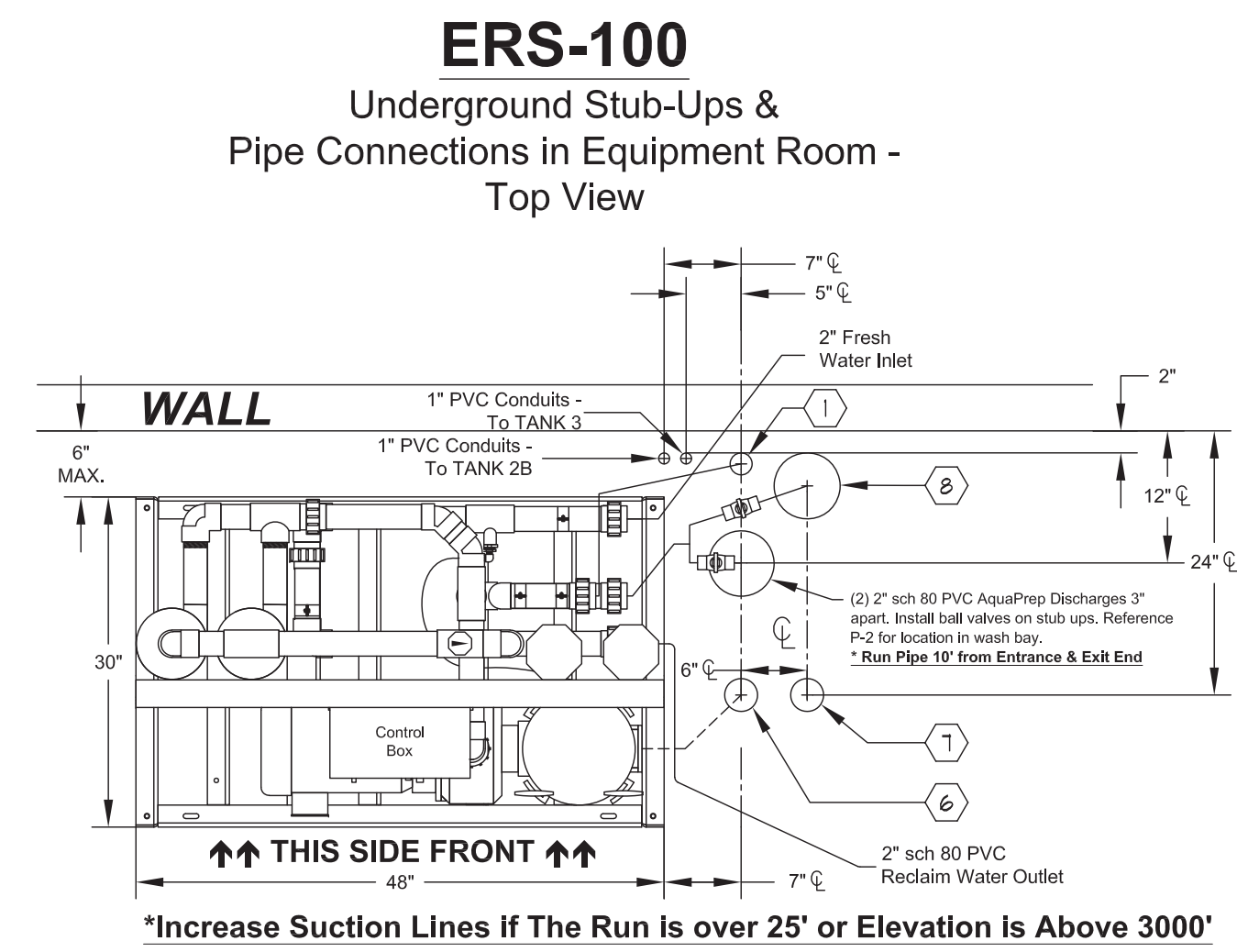
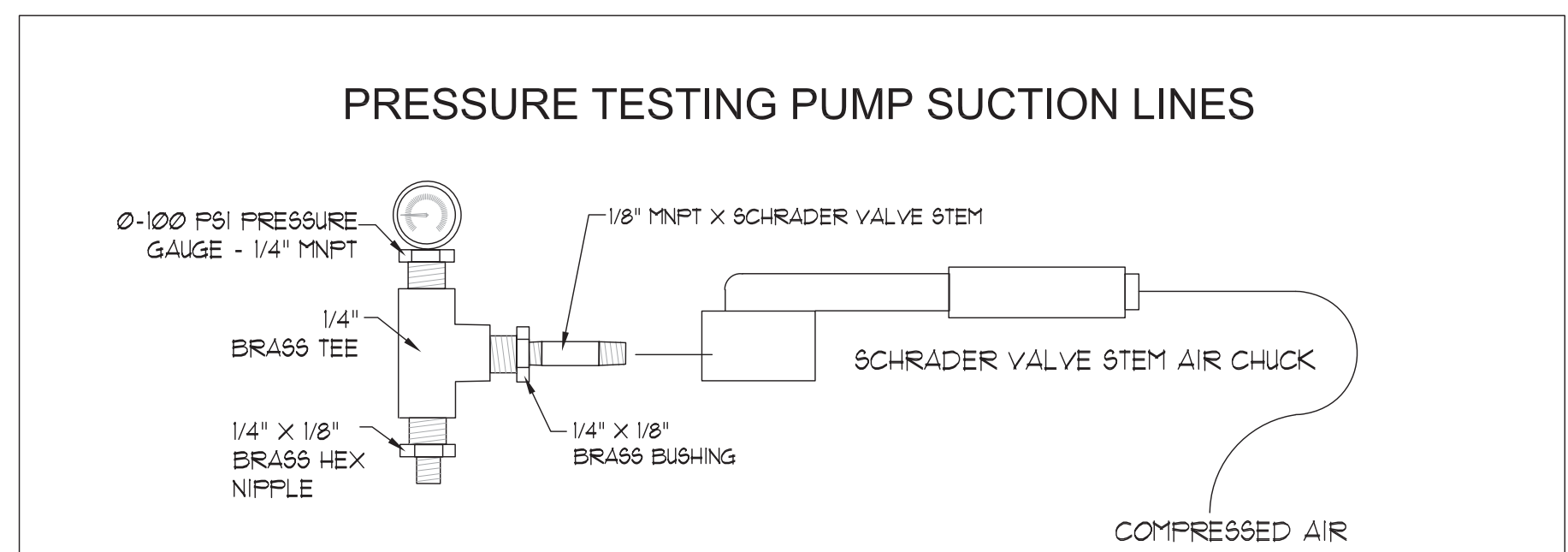


CAR WASH





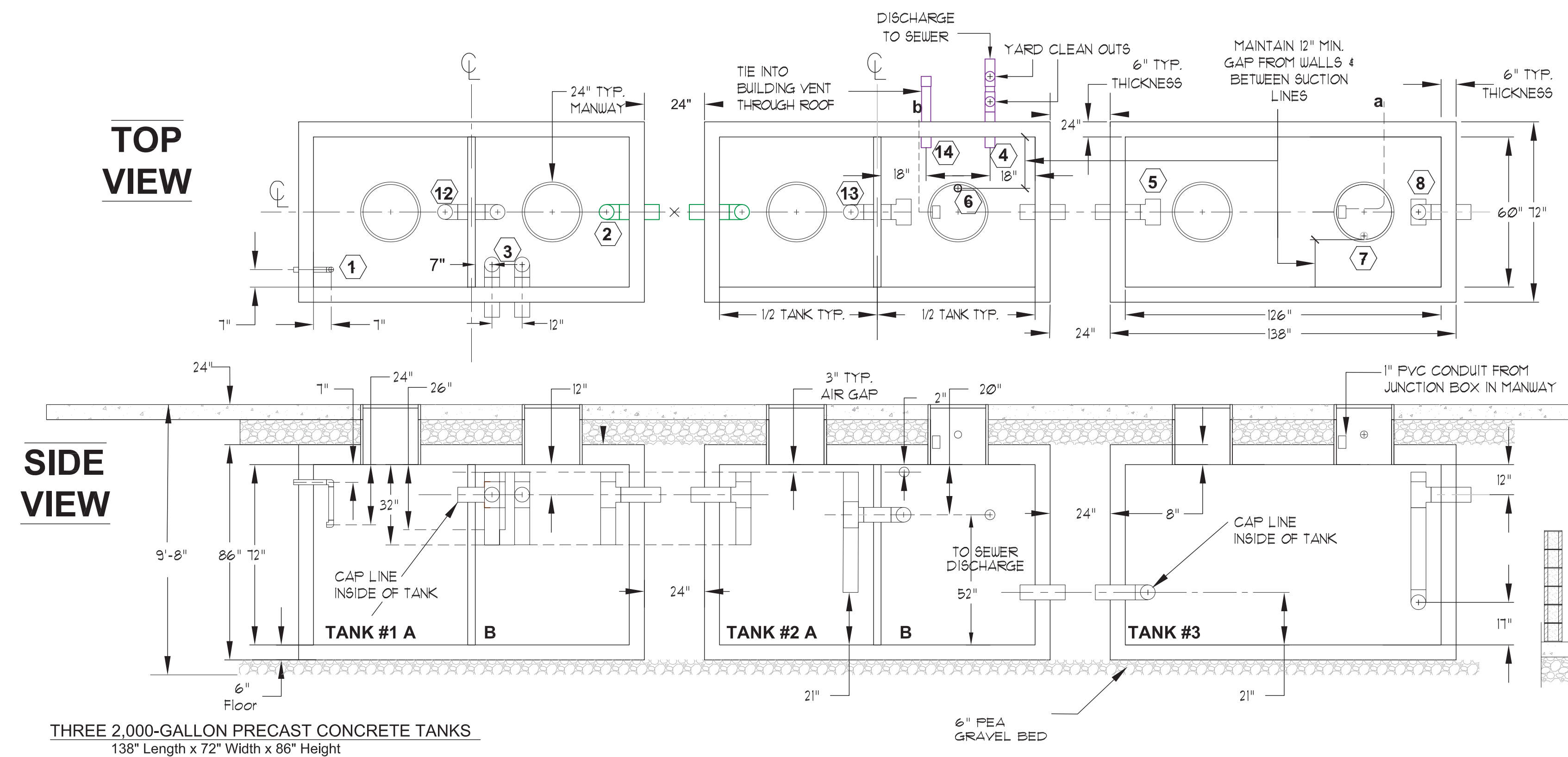
103 WIND HAVEN DR, STE 101
NICHOLASVILLE KY 40356
859.523.1500



RECLAIM SYSTEM PLAN
SCALE: 1/8" = 1'-0"

PLUMBER TO BE ON SITE DURING TANK INSTALLATION TO INSTALL CONNECTING PIPES.
ALL TANK HOLES TO HAVE RUBBER BOOTS IN CONCRETE TO ACCEPT APPROPRIATE PIPE SIZE.

Three 2,000 Gallon Precast Concrete Tanks

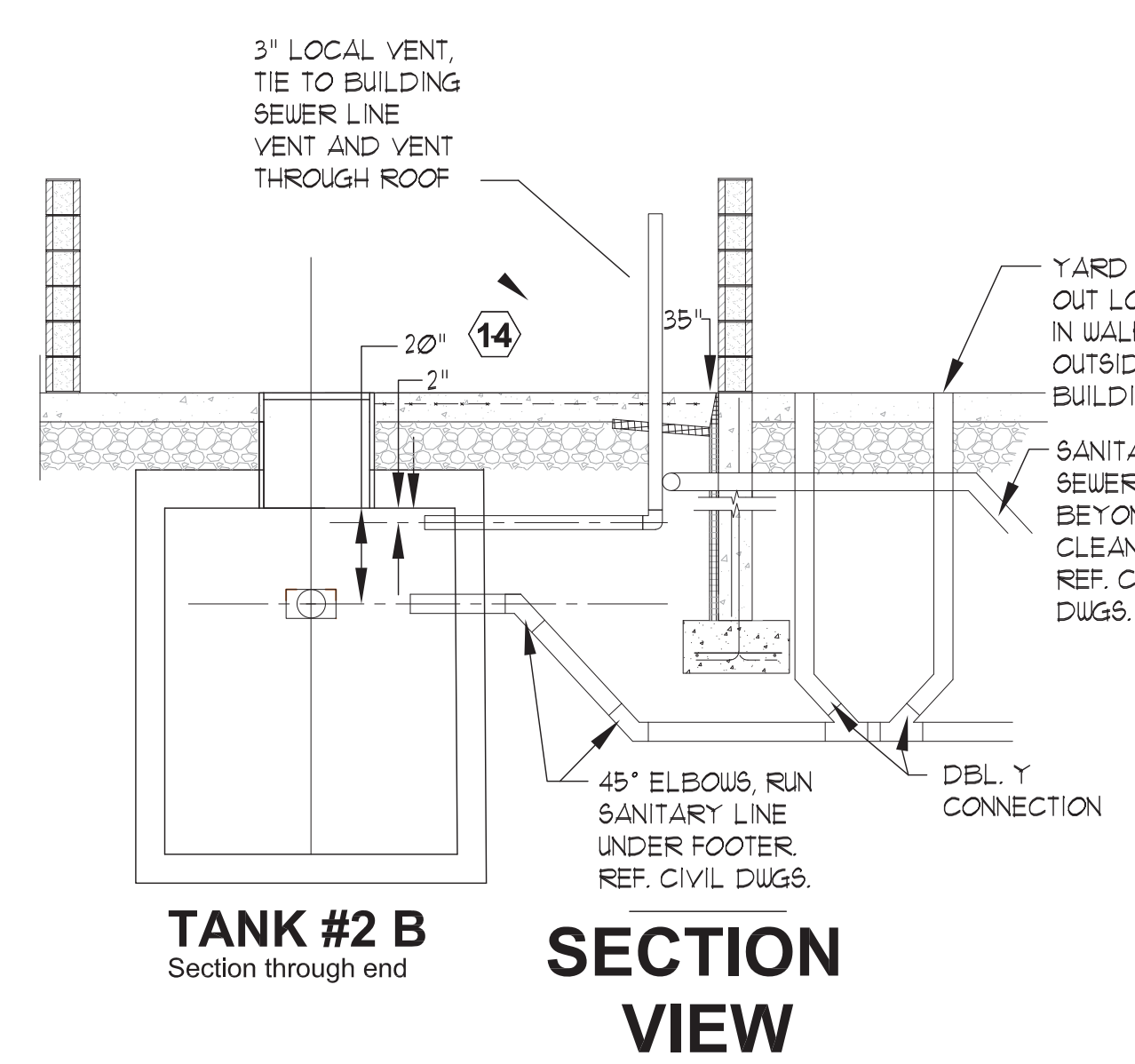


THREE 2,000-GALLON PRECAST CONCRETE TANKS
138" Length x 72" Width x 86" Height

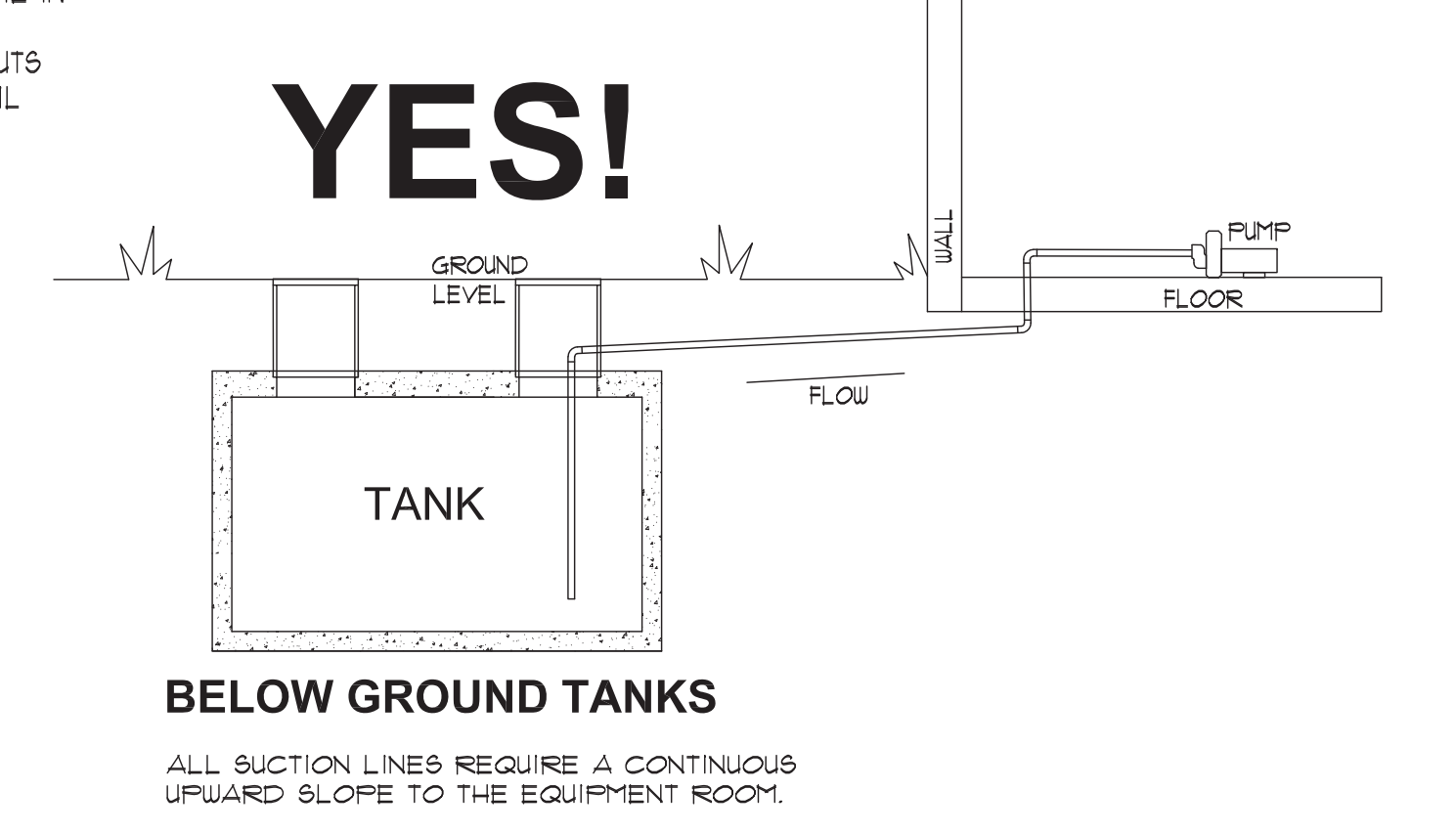
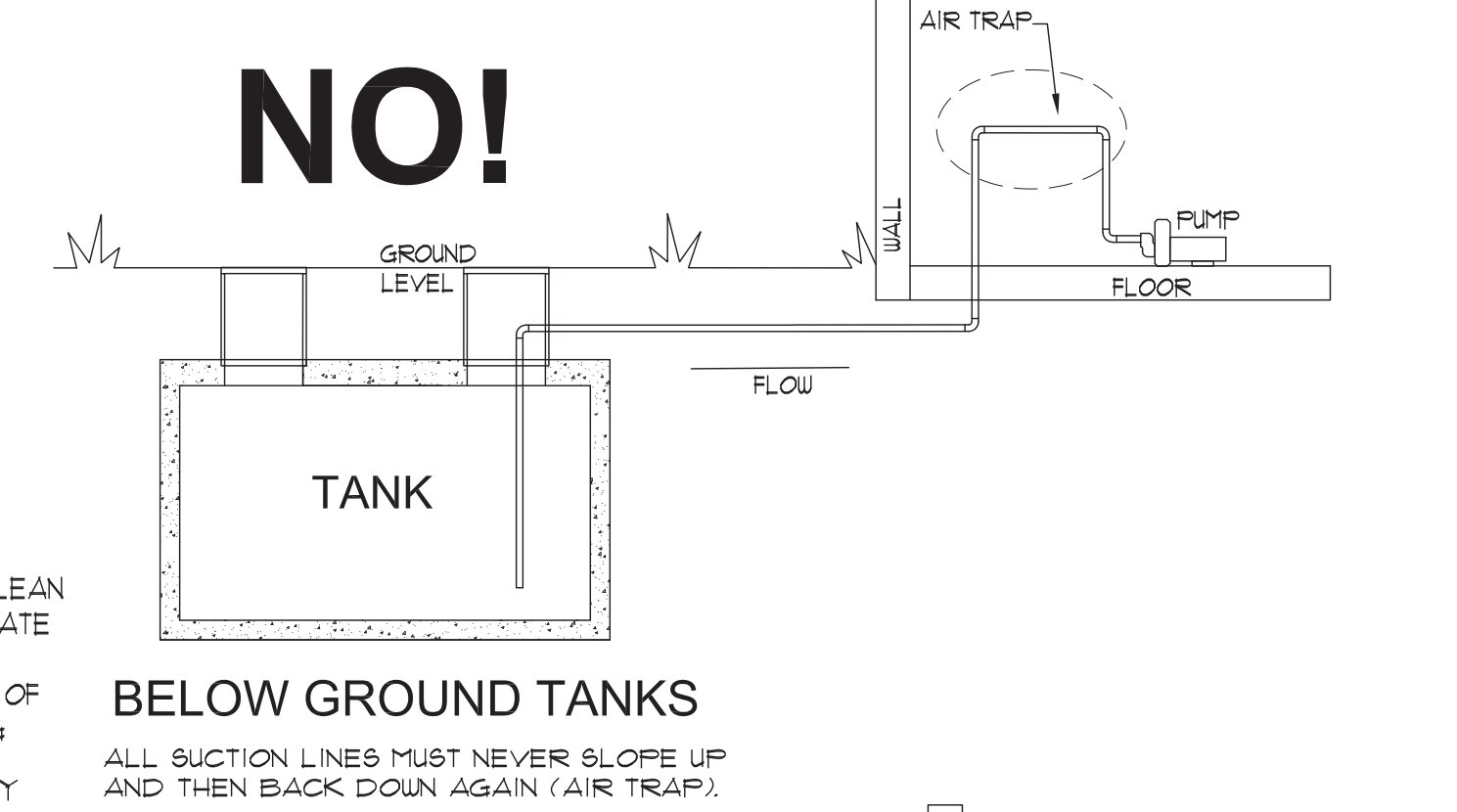
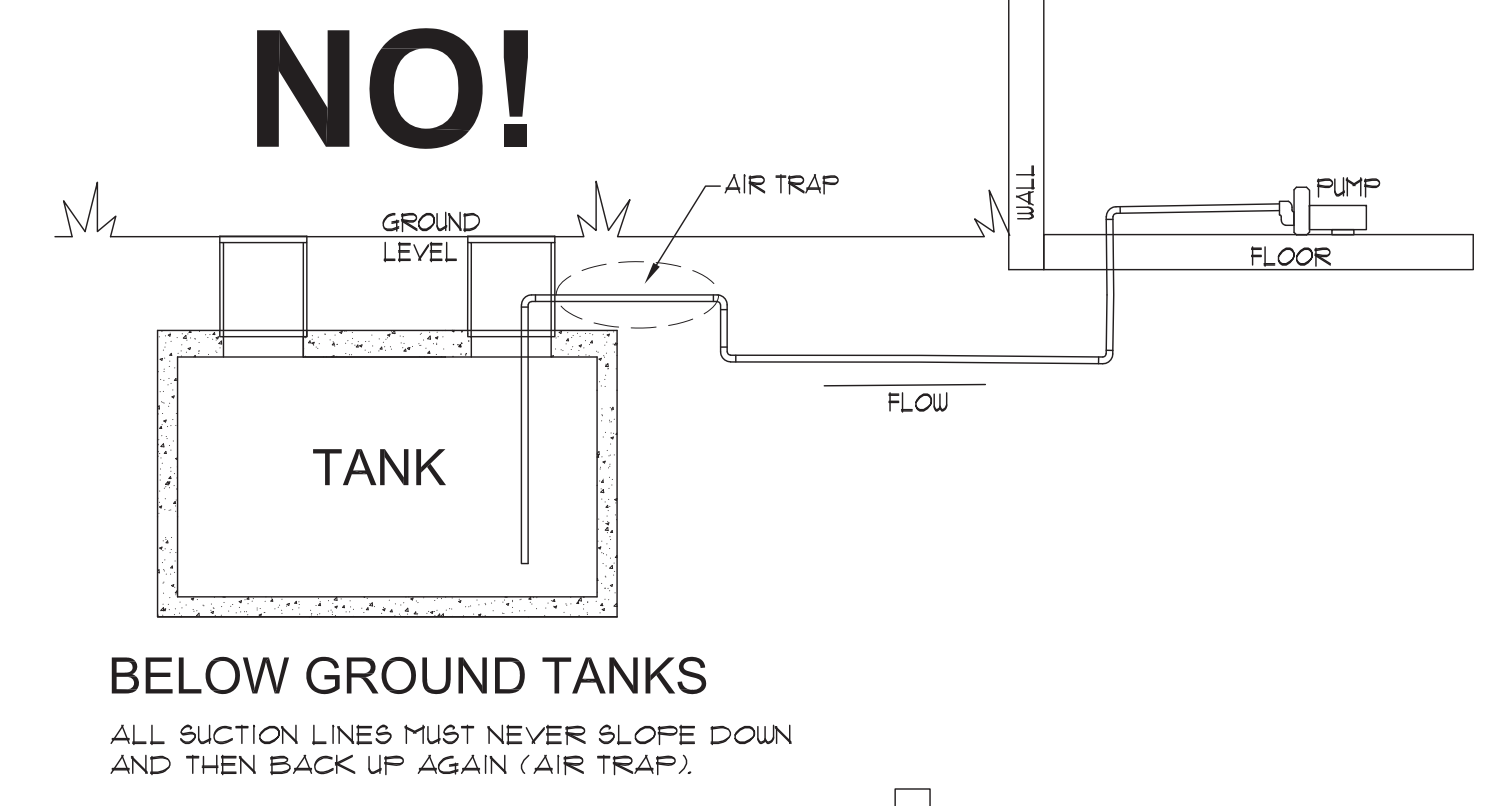
- NOTES:
- ALL UNDERGROUND PLUMBING 4 TANKS BY OTHER.
 - ACTUAL TANK DIMENSIONS MAY VARY.
 - PLUMBING SHOULD BE PLACED AS SHOWN REGARDLESS OF WHAT TANKS ARE USED.
 - ALL PIPES MUST BE SET BELOW FROST LINE.
 - SUCTION LINES MUST BE SCH 80 PVC.
 - DO NOT INSTALL SCREENS ON FOOT VALVE.
 - ALL TANK BOTTOMS SHOULD BE SAME ELEVATION.
 - CONSULT ENGINEER FOR ELEVATIONS.
- PLUMBING LEGEND
- 1 - 2" SCH 80 PVC PIPE - UNDERFLOW DISCHARGE - TO TANK 1A
 - 2 - 6" SCH 40 PVC PIPE - EXTERNAL CROSSOVER - FROM TANK 1B TO TANK 2A
 - 3 - TWO 6" SCH 40 PVC PIPES - CENTER TRENCH - TO TANK 1B
 - 4 - 6" SCH 40 PVC PIPE - DISCHARGE TO SEWER - FROM TANK 2B
 - 5 - 6" SCH 40 PVC PIPE - EXTERNAL CROSSOVER - FROM TANK 2B TO TANK 3
 - 6 - 3" SCH 80 PVC PIPE - FILTER PUMP SUCTION LINE - FROM TANK 2B
 - 7 - 3" SCH 80 PVC PIPE - EXTRA SUCTION LINE - FROM TANK 2B
 - 8 - 6" SCH 40 PVC PIPE - AQUAPREP DISCHARGE - TO TANK 3
 - 9 - 6" SCH 40 PVC PIPE - INTERNAL CROSSOVER - FROM TANK 1A TO TANK 1B
 - 10 - 6" SCH 40 PVC PIPE - INTERNAL CROSSOVER - FROM TANK 2A TO TANK 2B
 - 11 - 6" SCH 40 PVC PIPE - INTERNAL CROSSOVER - FROM TANK 2A TO TANK 2B
 - 12 - 6" SCH 40 PVC PIPE - INTERNAL CROSSOVER - FROM TANK 1A TO TANK 1B
 - 13 - 6" SCH 40 PVC PIPE - INTERNAL CROSSOVER - FROM TANK 2A TO TANK 2B
 - 14 - 3" SCH 40 PVC PIPE - LOCAL VENT - FROM TANK 2B, TIE INTO BUILDING VENT AND EXIT THROUGH ROOF

- ELECTRICAL LEGEND
- A - 1" PVC CONDUIT - LOW WATER PROTECTION FLOAT SWITCH (FS-2) - TANK 3
 - B - 1" PVC CONDUIT - FOR FUTURE USE - TANK 2B

DRAWING NOT TO SCALE



TANK #2 B
Section through end
BOTTOM OF TANK TOPS @ 32" B.F.F., TYP.

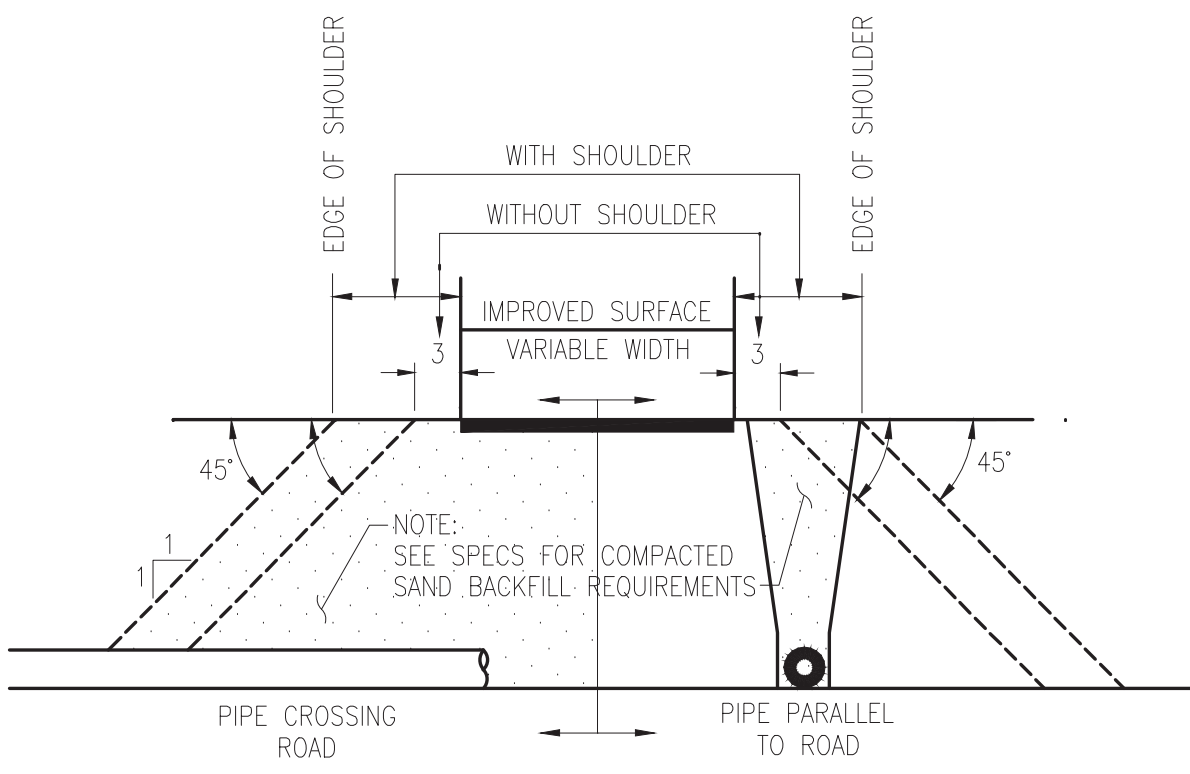


REVISION	DATE

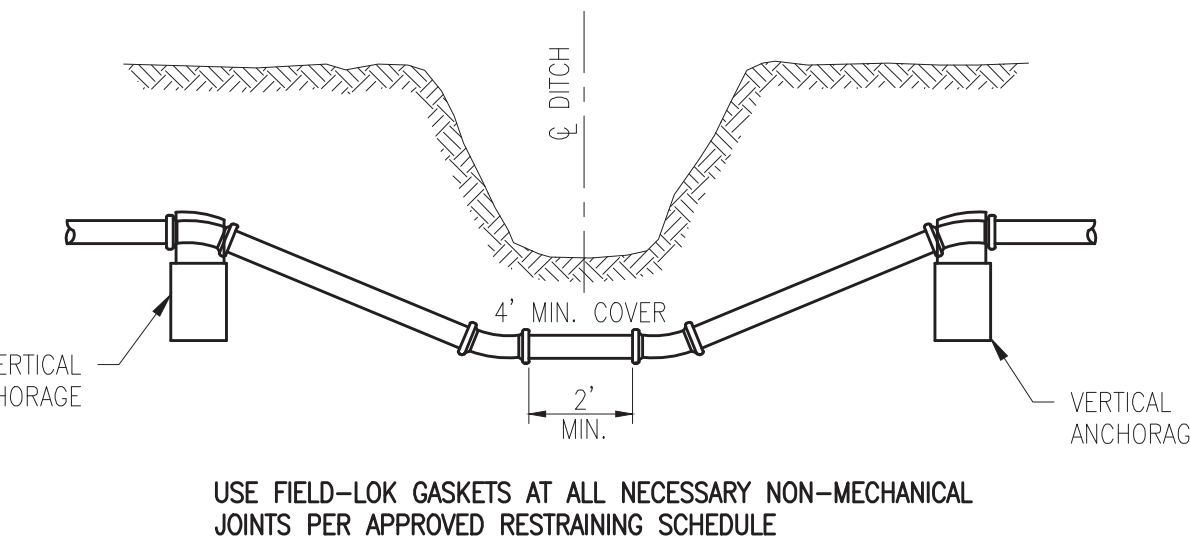
06/14/2023
Permit Set
PROJECT NUMBER
2603 S. Adams Rd.
DRAWN BY: REB

WhiteWater Carwash
2603 S. Adams Rd.
Rochester Hills, MI 48309
Tank details & Stub up locations future sys.

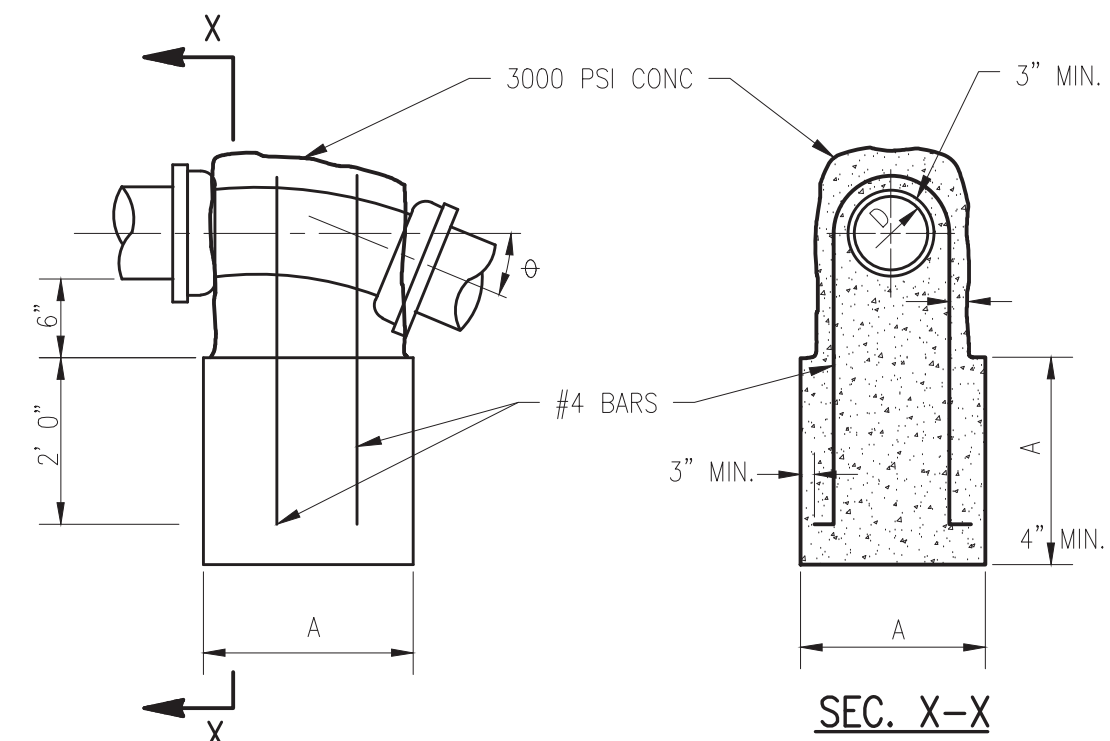
TRACER WIRE DETAILS



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

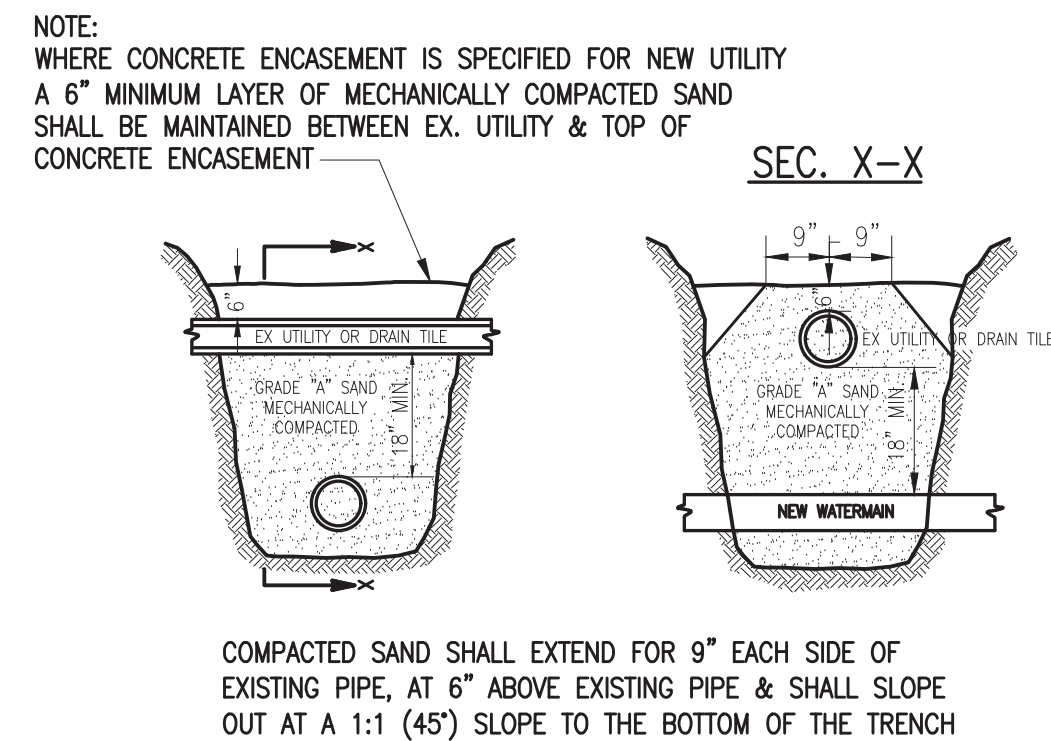
THE FOLLOWING TABLE IS A JOINT RESTRAINT SCHEDULE (DIPRA) FOR GROUND-BURIED DUCTILE IRON OR PVC PIPE. LENGTHS OF PIPE RESTRAINT ARE GIVEN IN FEET.

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

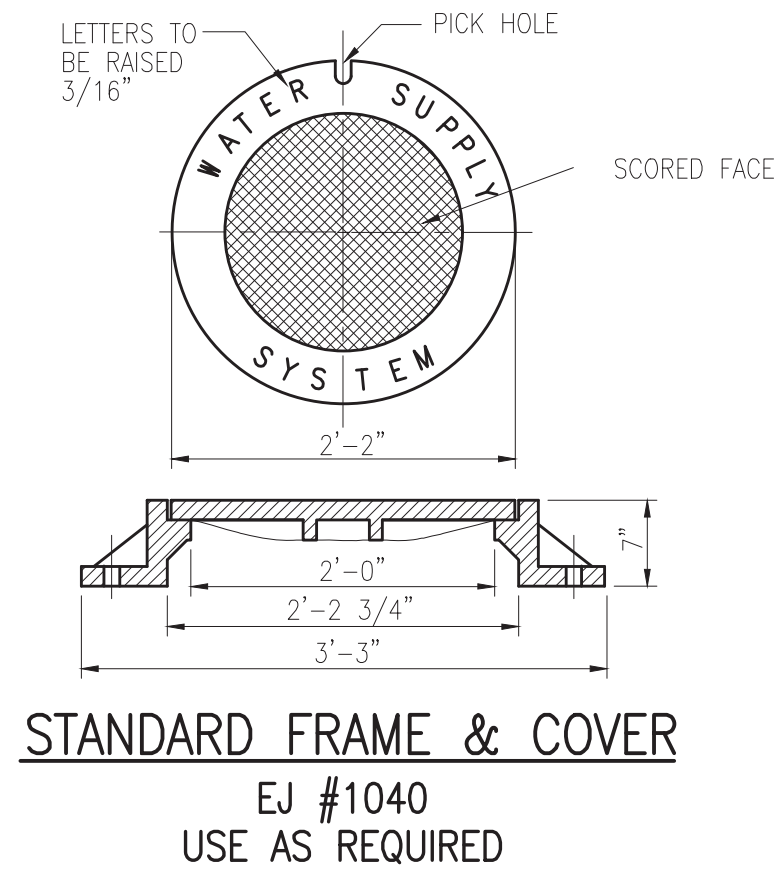
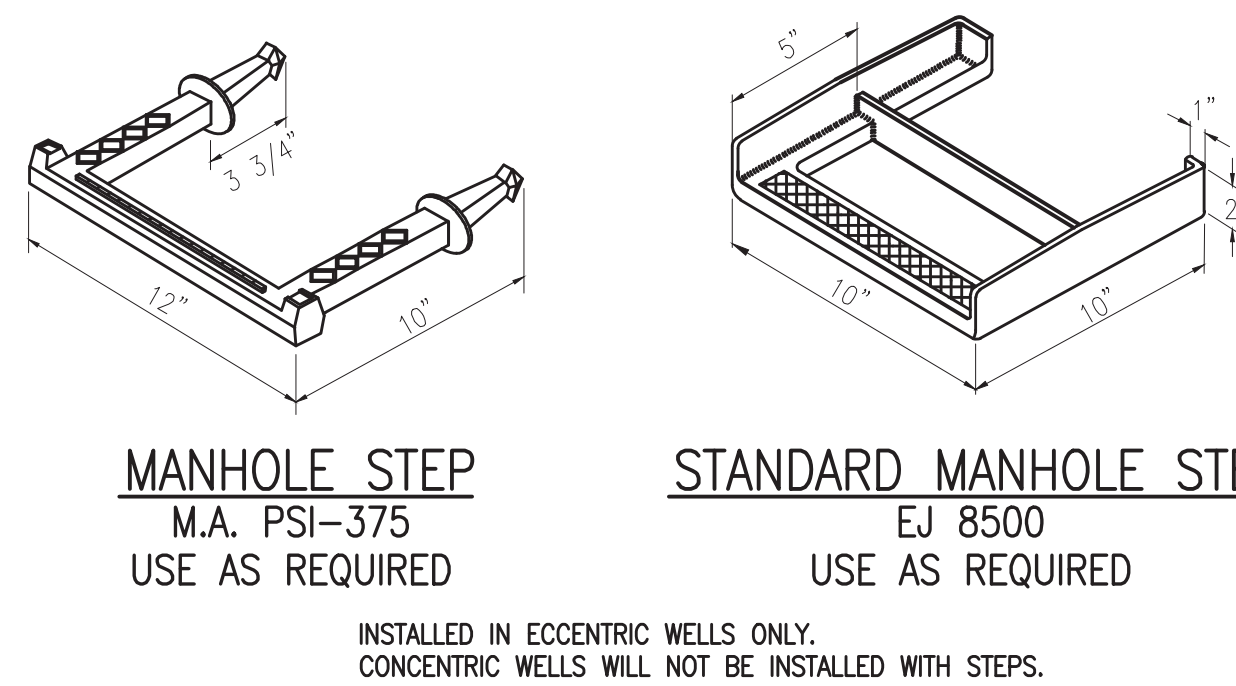
BASED UPON

INTERNAL PRESSURE: 180
PIPE DEPTH: 5
BEDDING CLASS: TYPE 4
SOIL TYPE: GOOD SAND
SAFETY FACTOR: 2

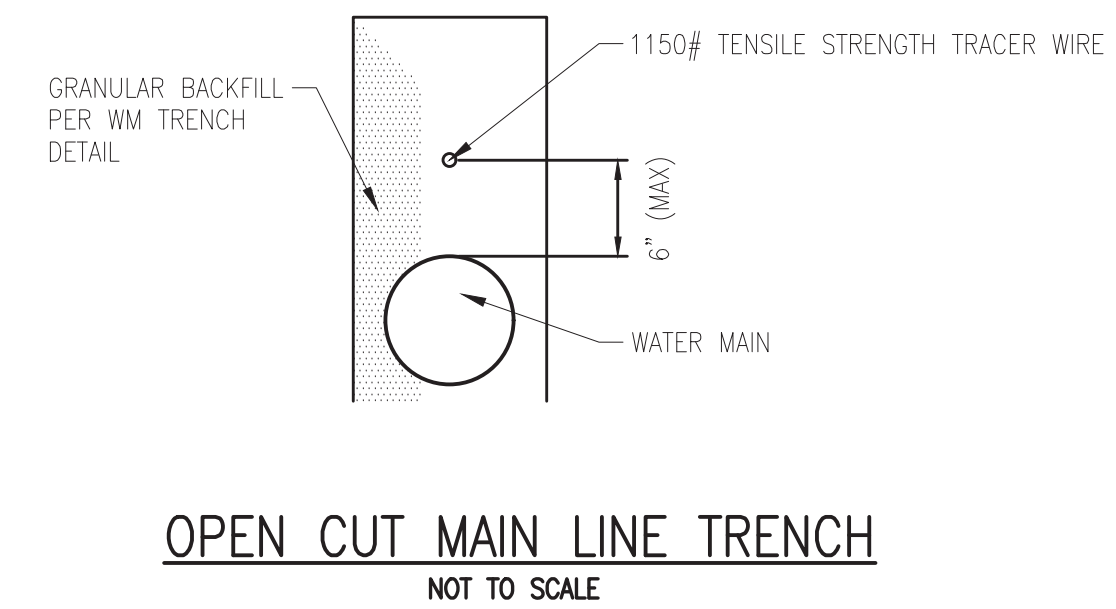
- IF PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE SHALL BE USED. THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE PLUS WATER HAMMER).
- FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED PROPORTIONALLY. THE VALUES PROVIDED OF RESTRAINT LENGTH ARE 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.



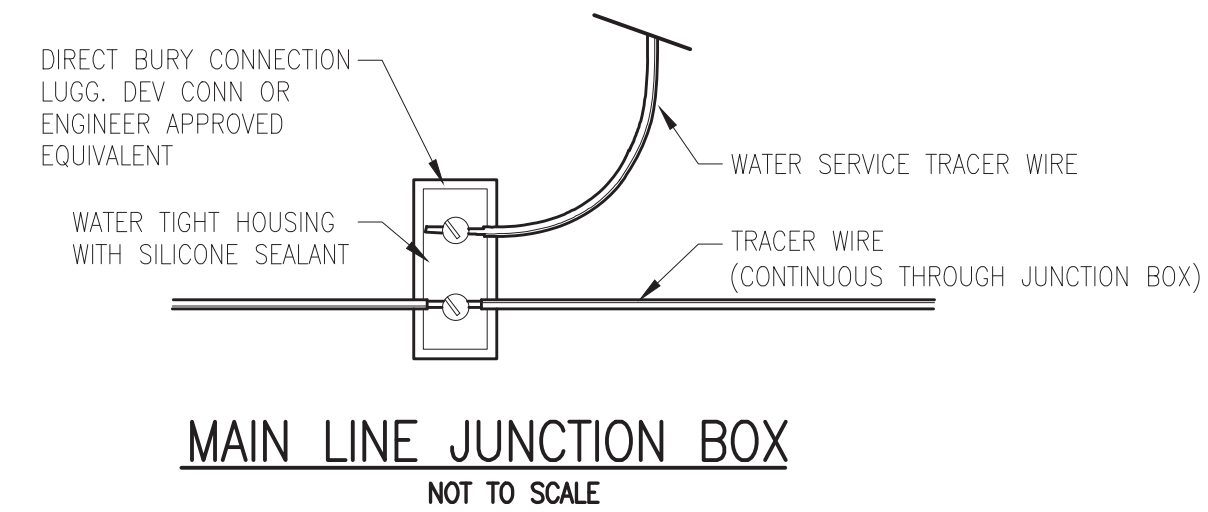
STANDARD PIPE SUPPORT
NOT TO SCALE



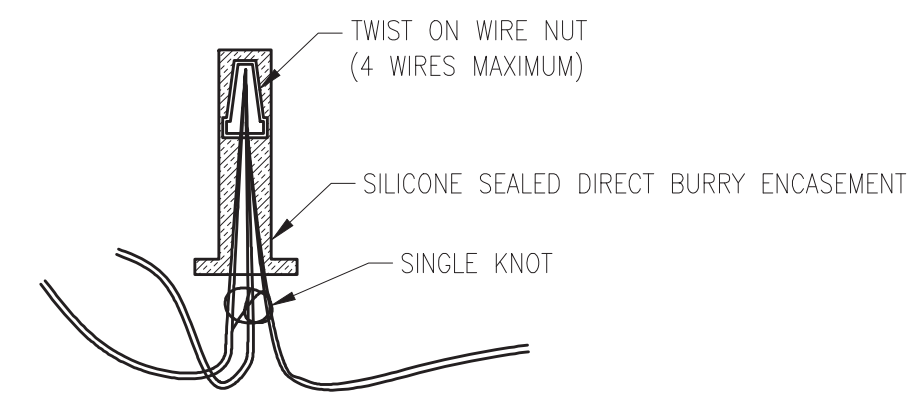
STANDARD FRAME & COVER
EJ #1040
USE AS REQUIRED



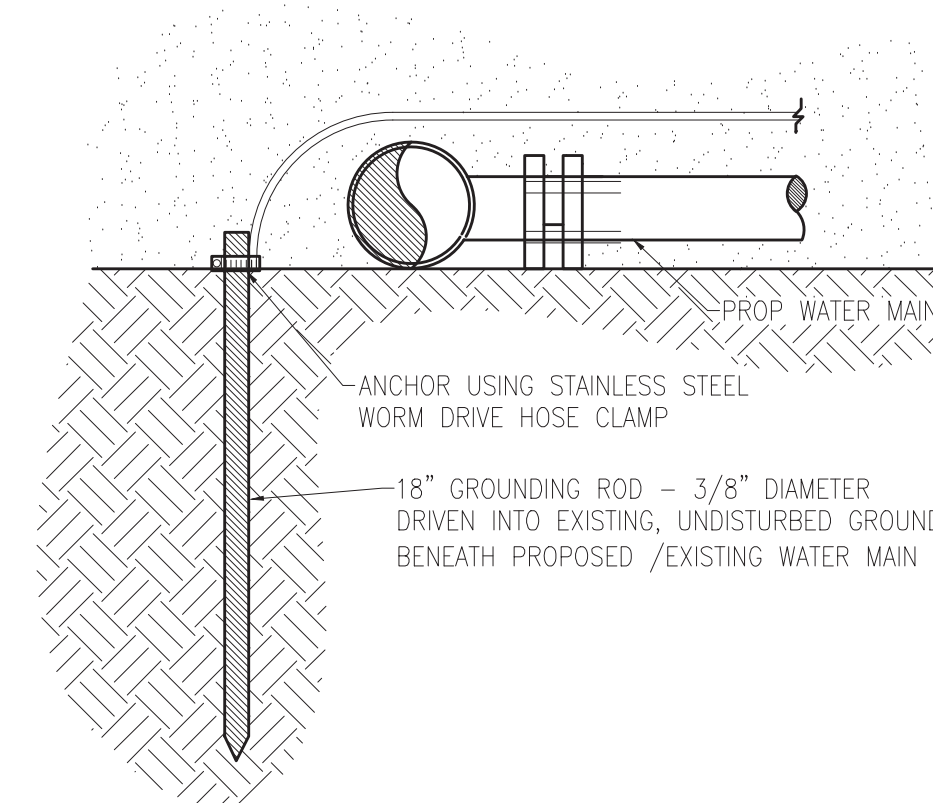
OPEN CUT MAIN LINE TRENCH
NOT TO SCALE



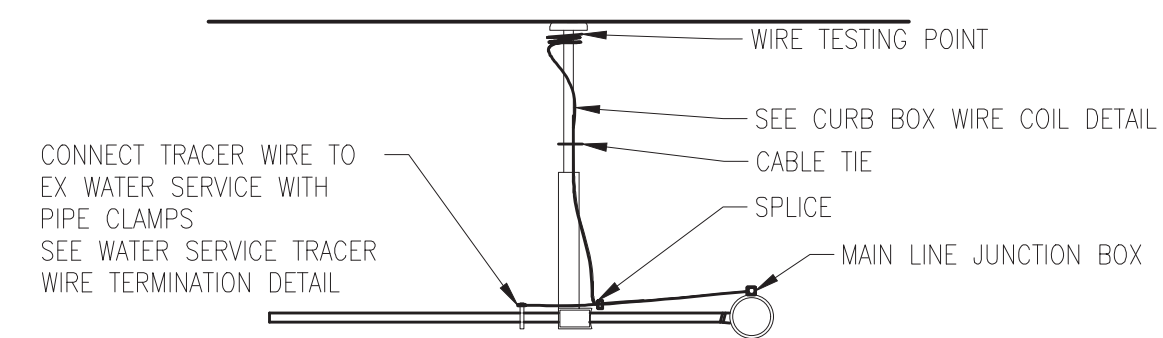
MAIN LINE JUNCTION BOX
NOT TO SCALE



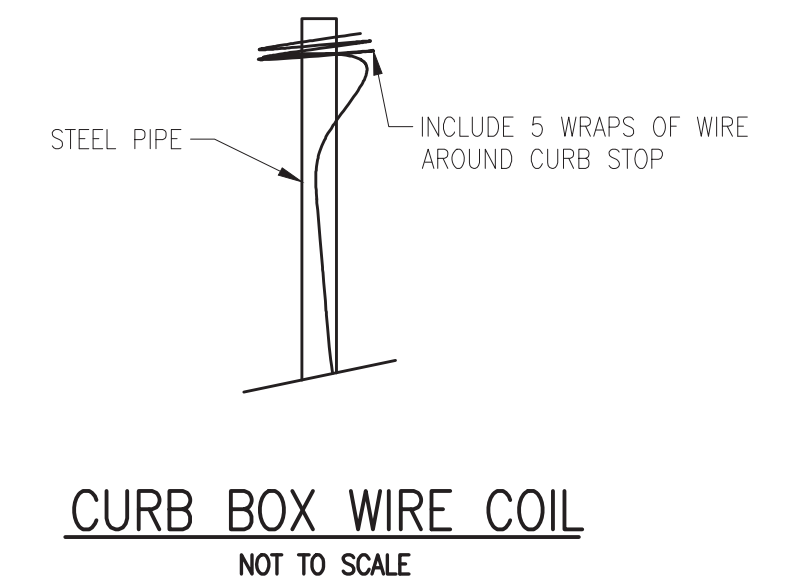
SPLICE CONNECTOR
NOT TO SCALE



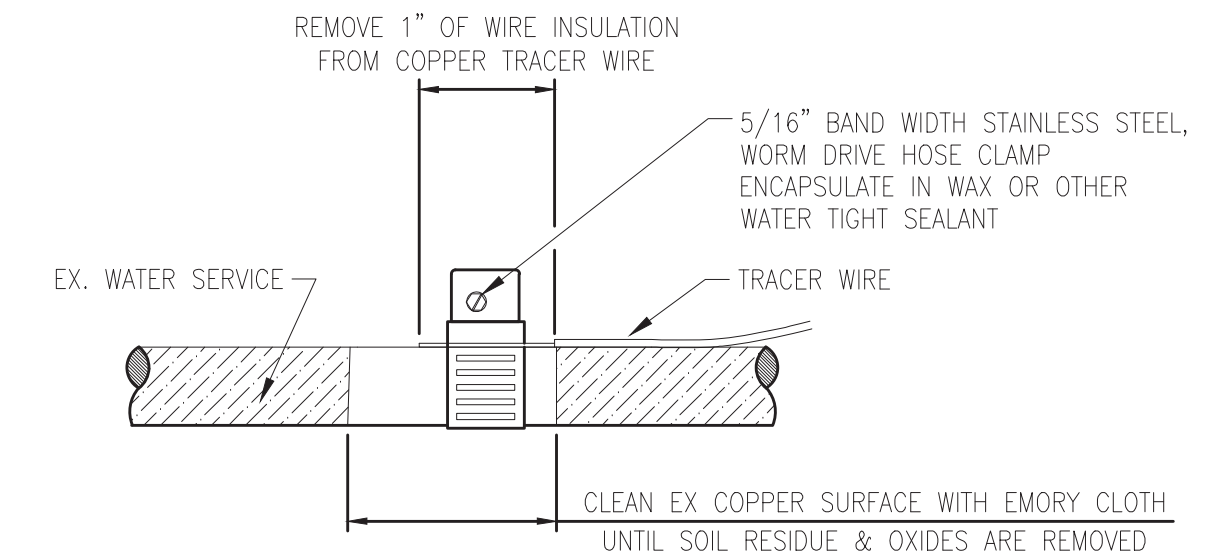
GROUNDING ROD TERMINATION
NOT TO SCALE



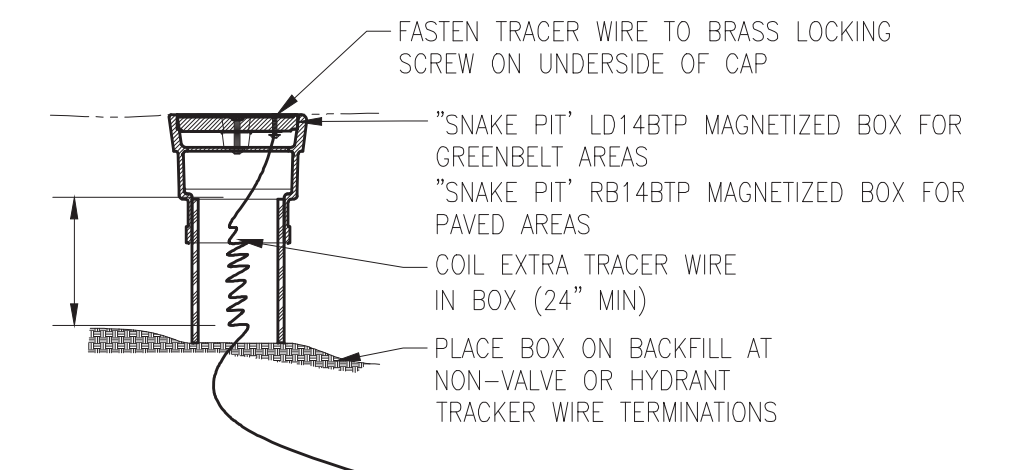
CURB STOP CONNECTION
NOT TO SCALE



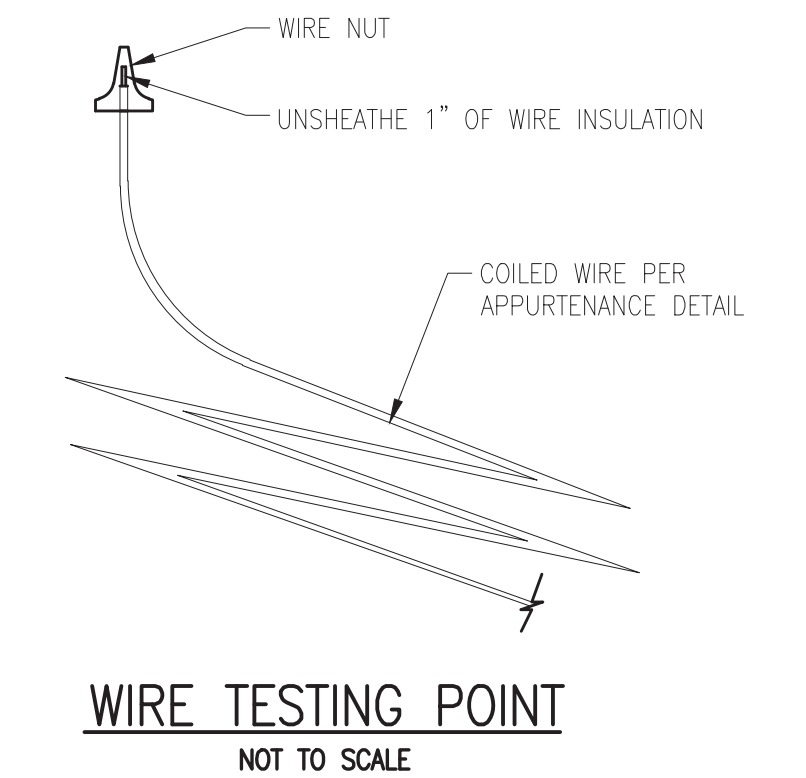
CURB BOX WIRE COIL
NOT TO SCALE



WATER SERVICE TERMINATION
NOT TO SCALE



TRACER WIRE TEST POINT
NOT TO SCALE



WIRE TESTING POINT
NOT TO SCALE



Know what's below.
Call before you dig.



REVISIONS

STANDARD WATER MAIN DETAILS

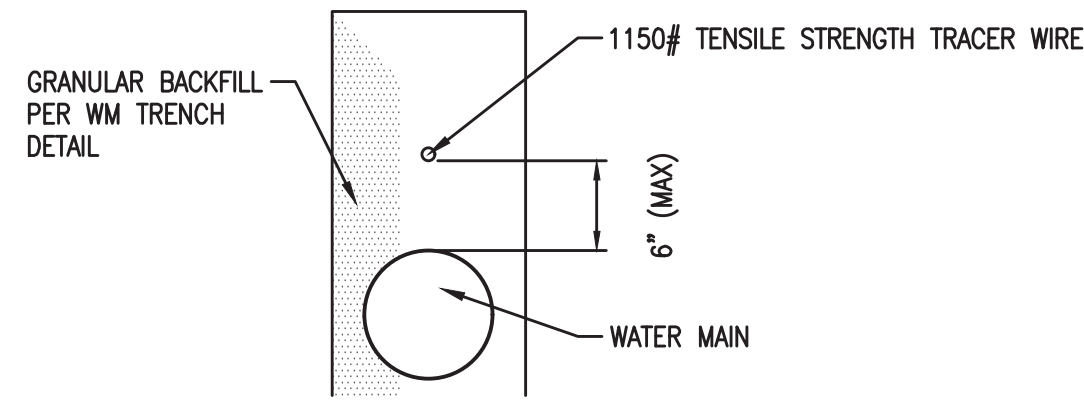
YPSILANTI COMMUNITY UTILITIES AUTHORITY
2777 STATE ROAD
YPSILANTI, MICHIGAN 48198-9112
(734) 484-4800
FAX: (734) 544-7221
WWW.YCUA.ORG

YCUA
ENVIRONMENTAL LEADERS

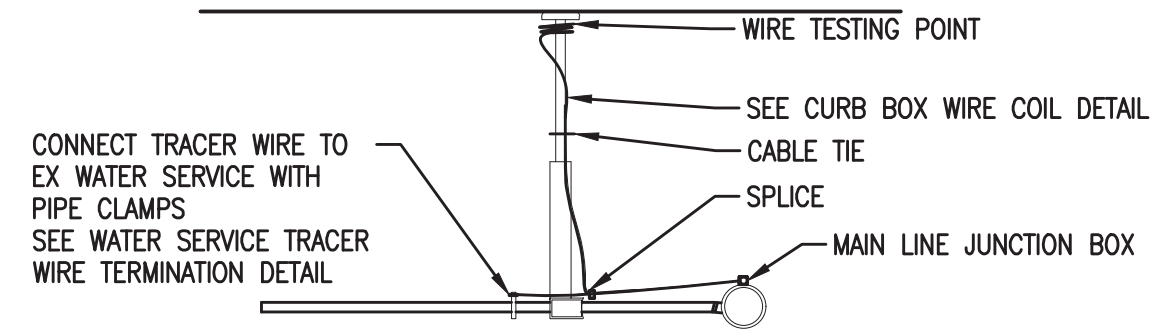
DATE	SCALE	SHEET
09/25/19	NO SCALE	

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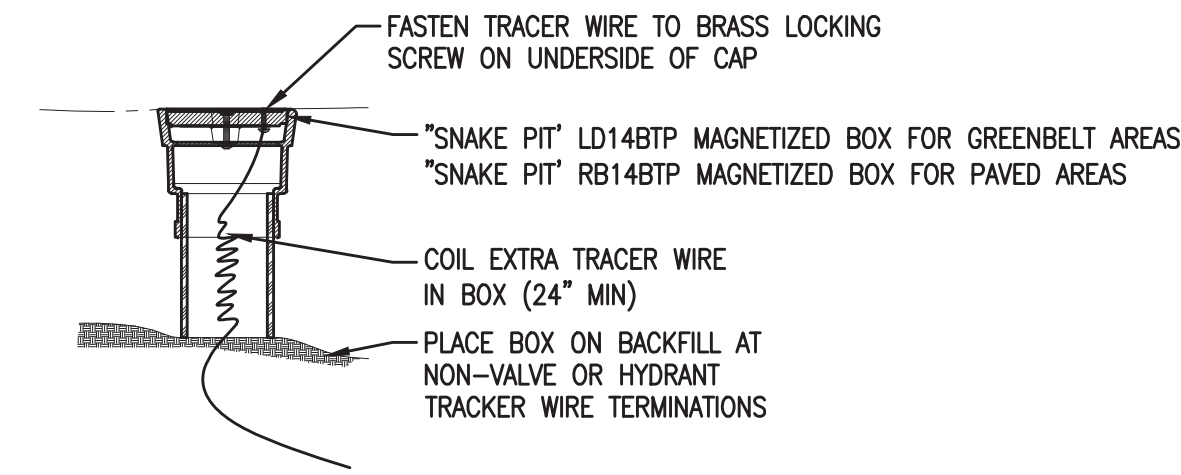
TRACER WIRE SHALL BE INCLUDED WITH ALL PVC WATER MAIN INSTALLATIONS



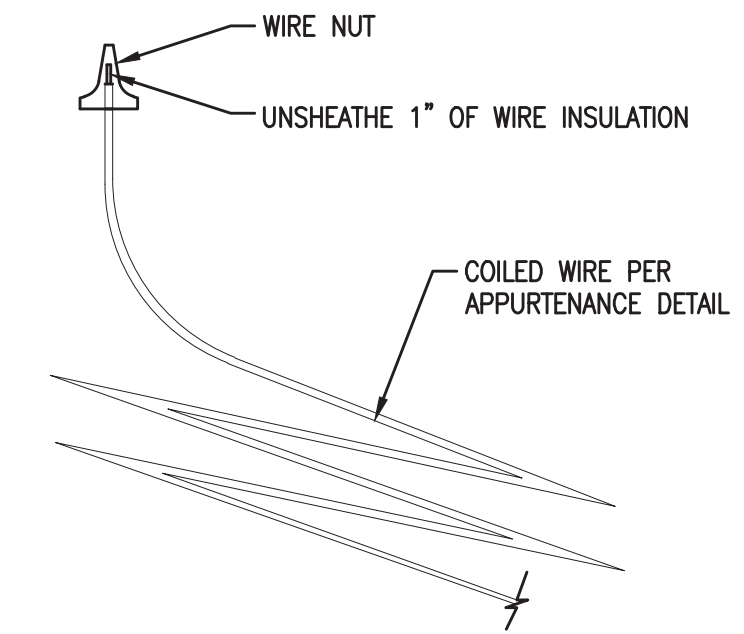
OPEN CUT MAIN LINE TRENCH
N.T.S.



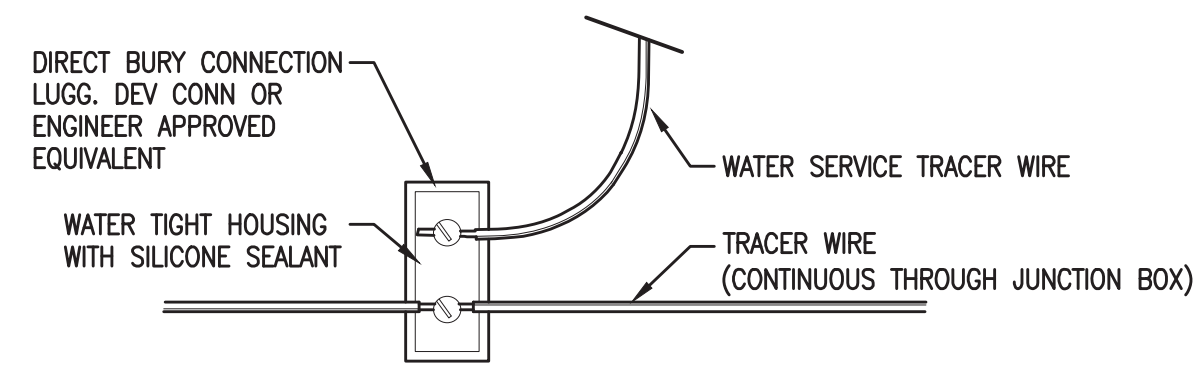
CURB STOP CONNECTION
N.T.S.



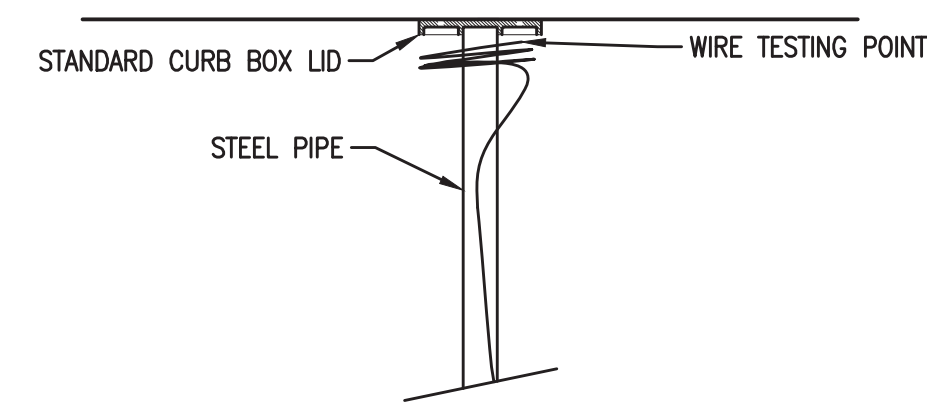
TRACER WIRE TEST POINT
N.T.S.



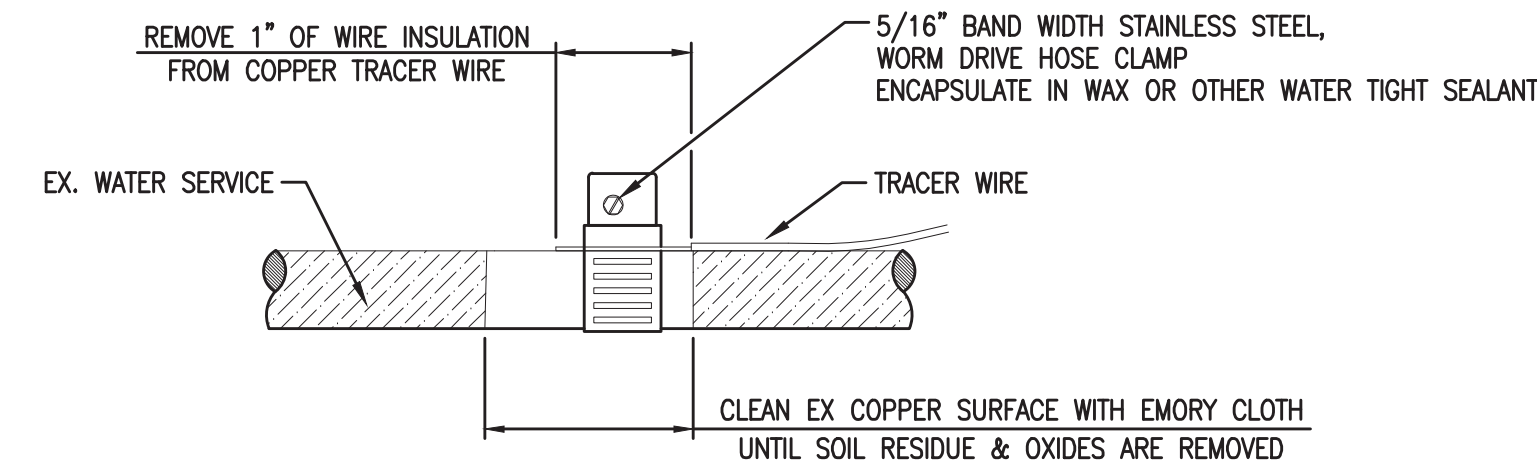
WIRE TESTING POINT
N.T.S.



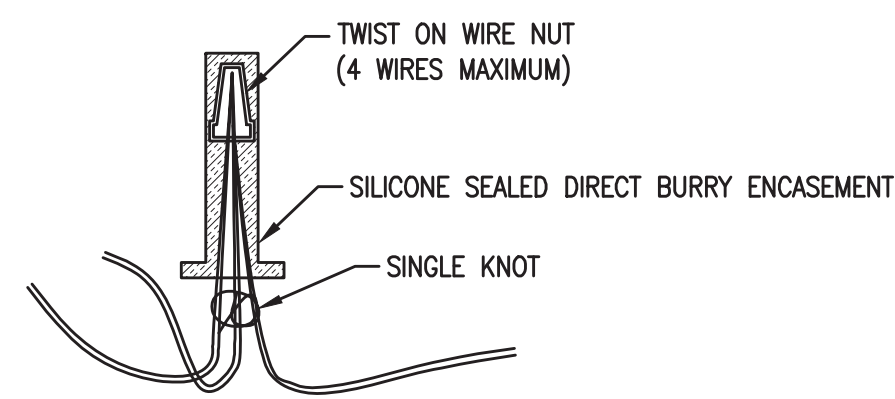
MAIN LINE JUNCTION BOX
N.T.S.



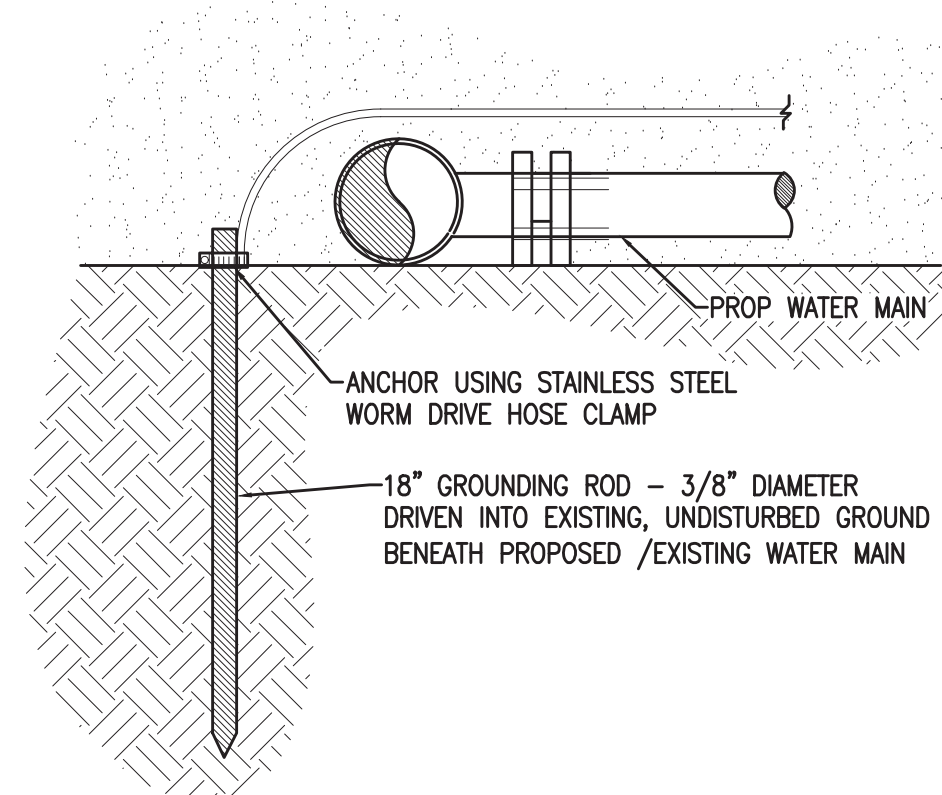
CURB BOX WIRE COIL
N.T.S.



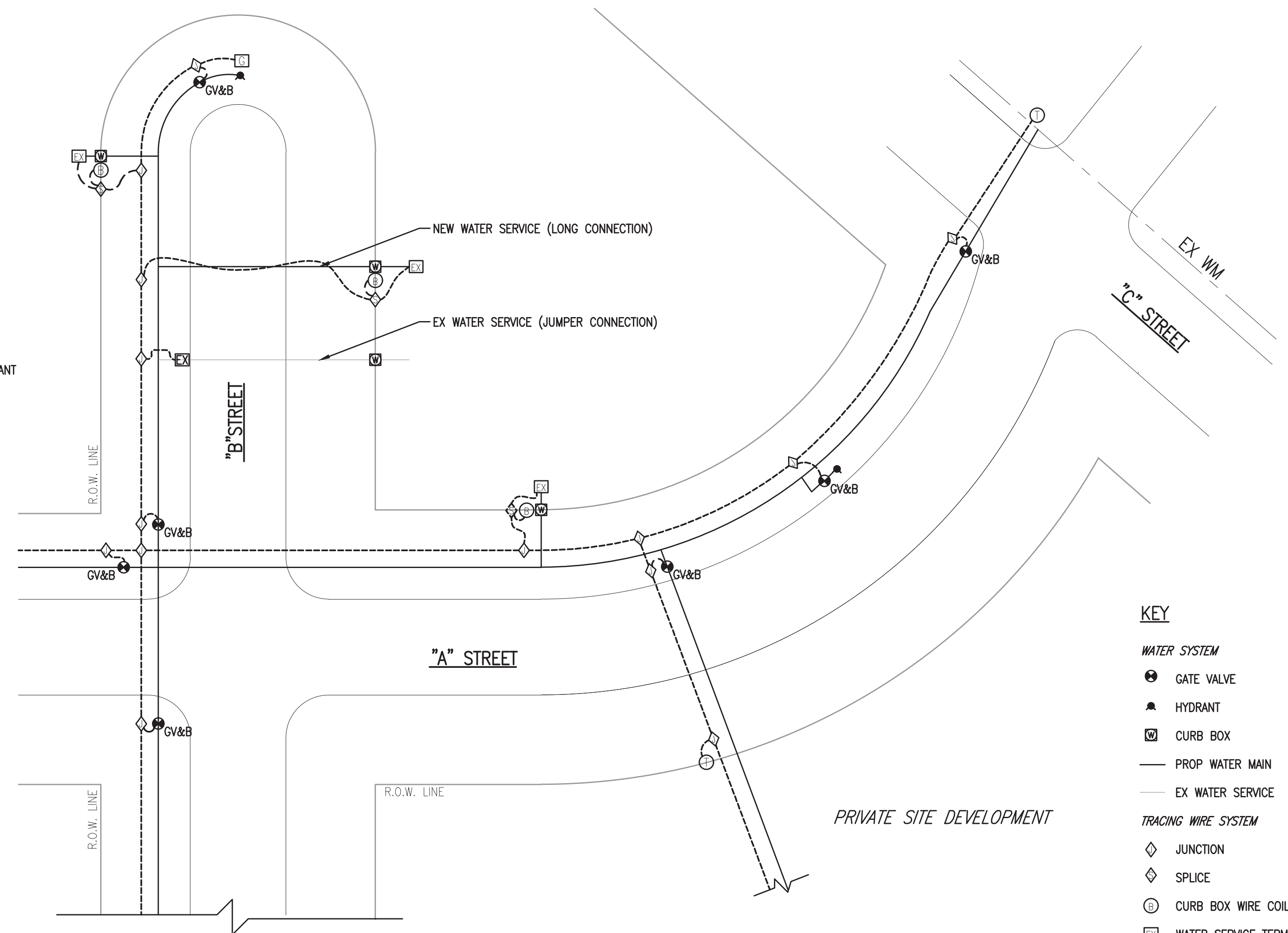
WATER SERVICE TERMINATION
N.T.S.



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

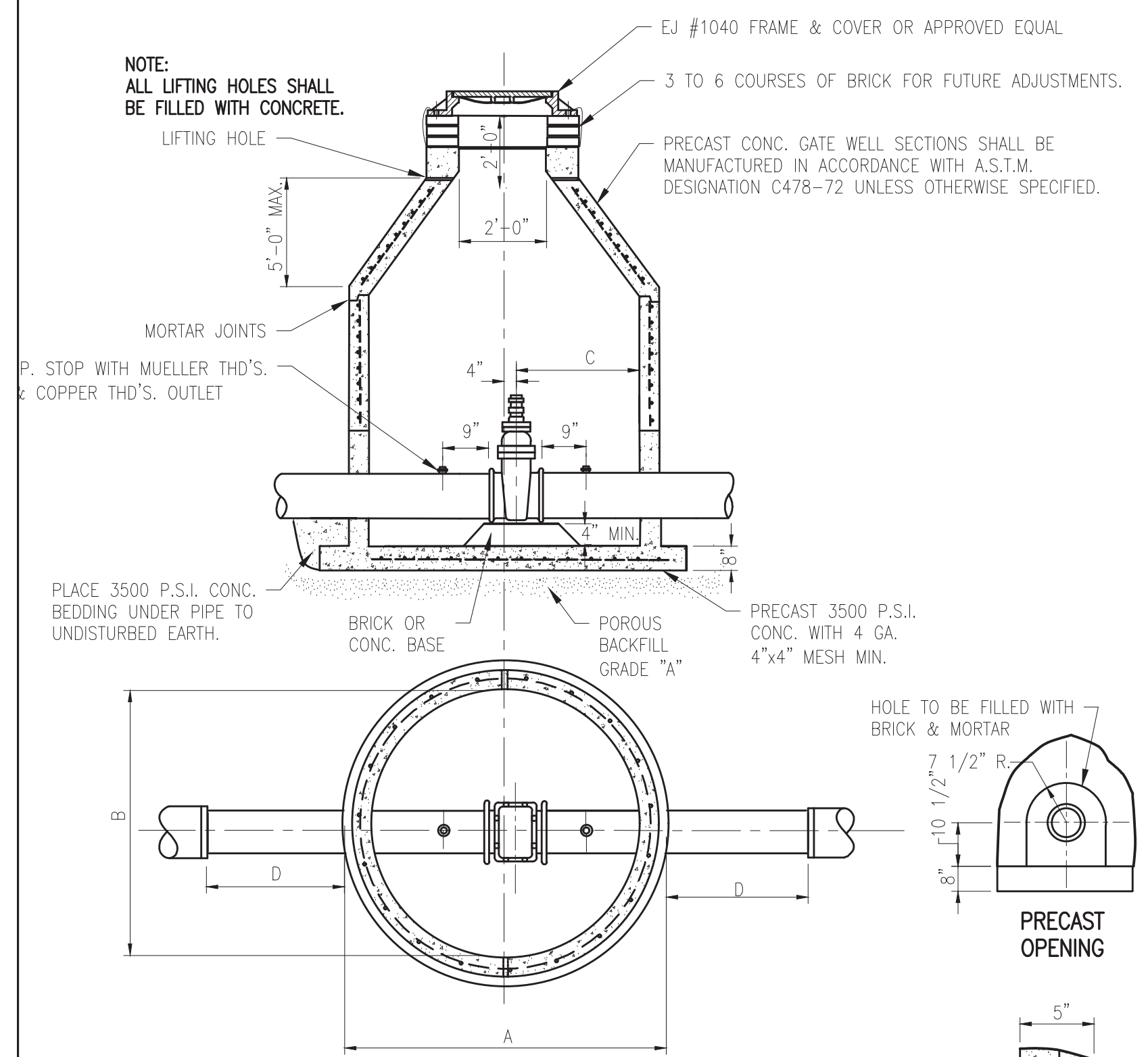
STANDARD WATER MAIN DETAILS

YPSILANTI COMMUNITY UTILITIES AUTHORITY
 2777 STATE ROAD
 YPSILANTI, MICHIGAN 48198-9112
 (734) 484-4800
 FAX: (734) 544-7221
 WWW.YCAU.ORG

YCAU
 ENVIRONMENTAL LEADERS

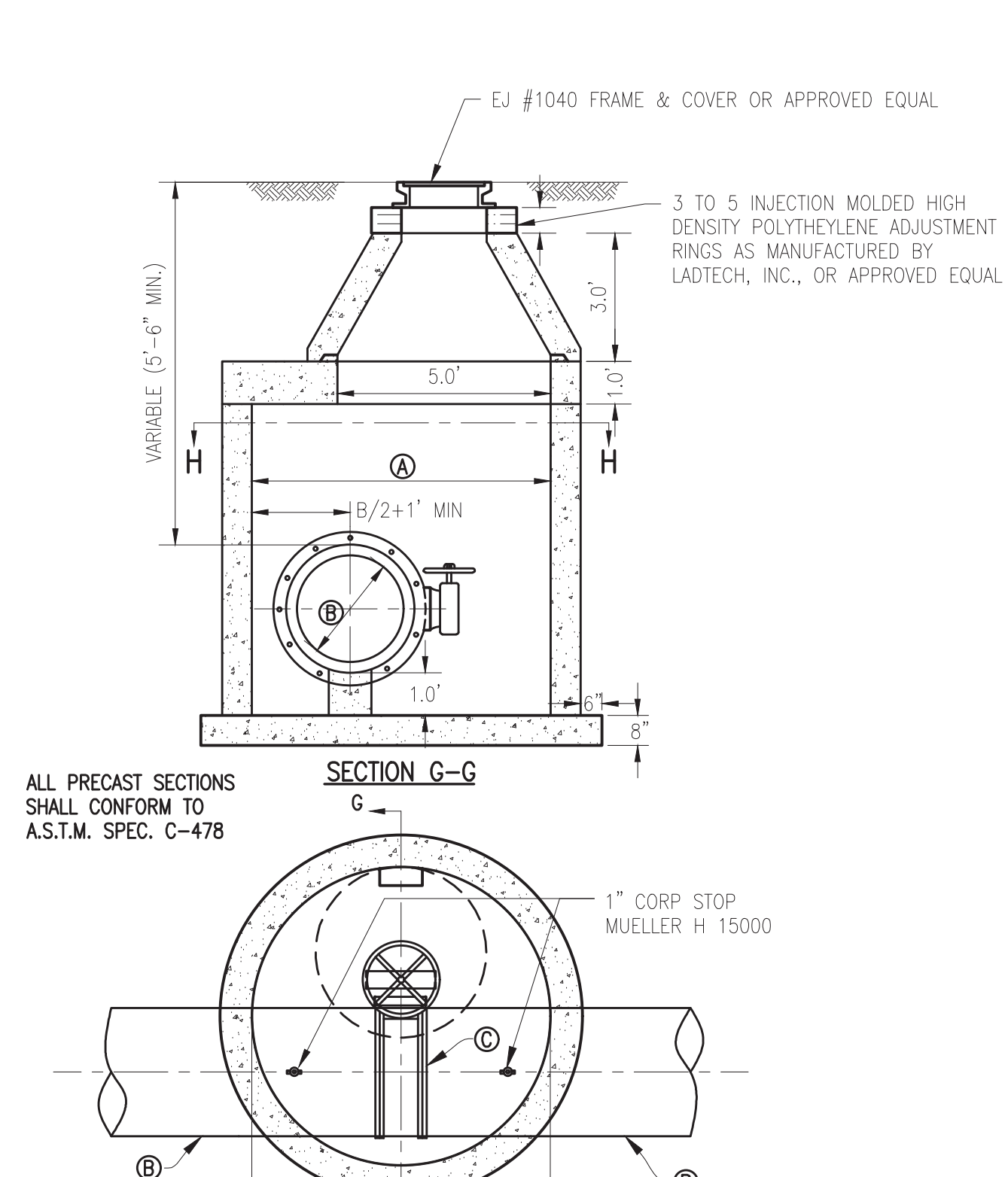
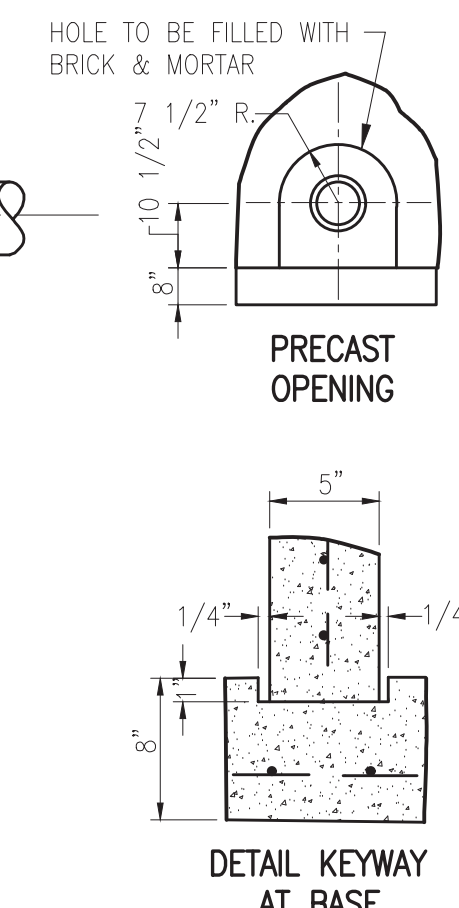
DATE	SCALE	SHEET
07/24/18	NO SCALE	

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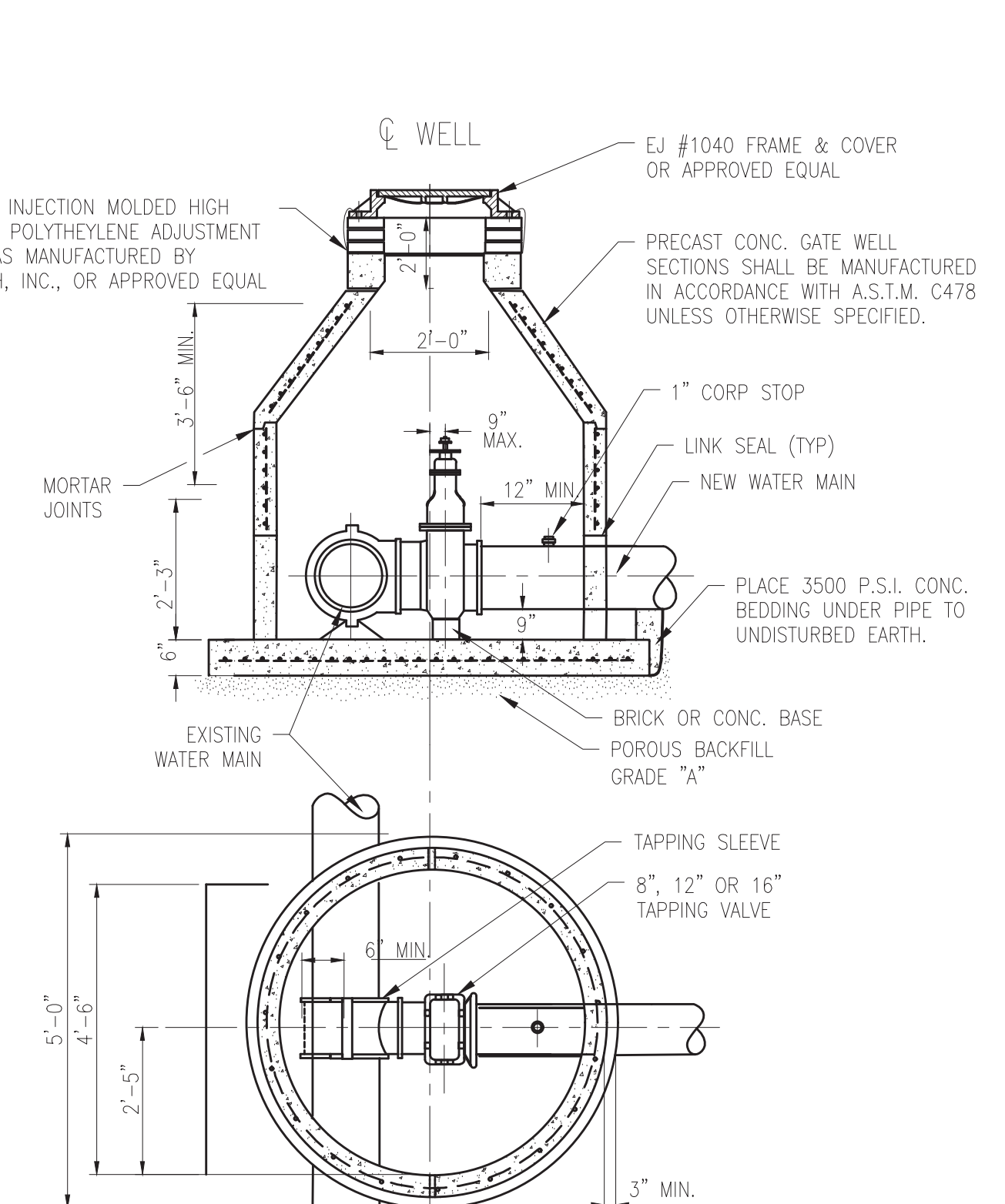
SIZE	A	B	C	D
8"	5'-0"	4'-0"	2'-2"	—
12"	5'-6"	4'-6"	2'-5"	—
16"	6'-0"	5'-6"	2'-8"	3'-0" MIN. * 13'-0" MAX.

STANDARD PRECAST GATE VALVE & WELL (CONCENTRIC)

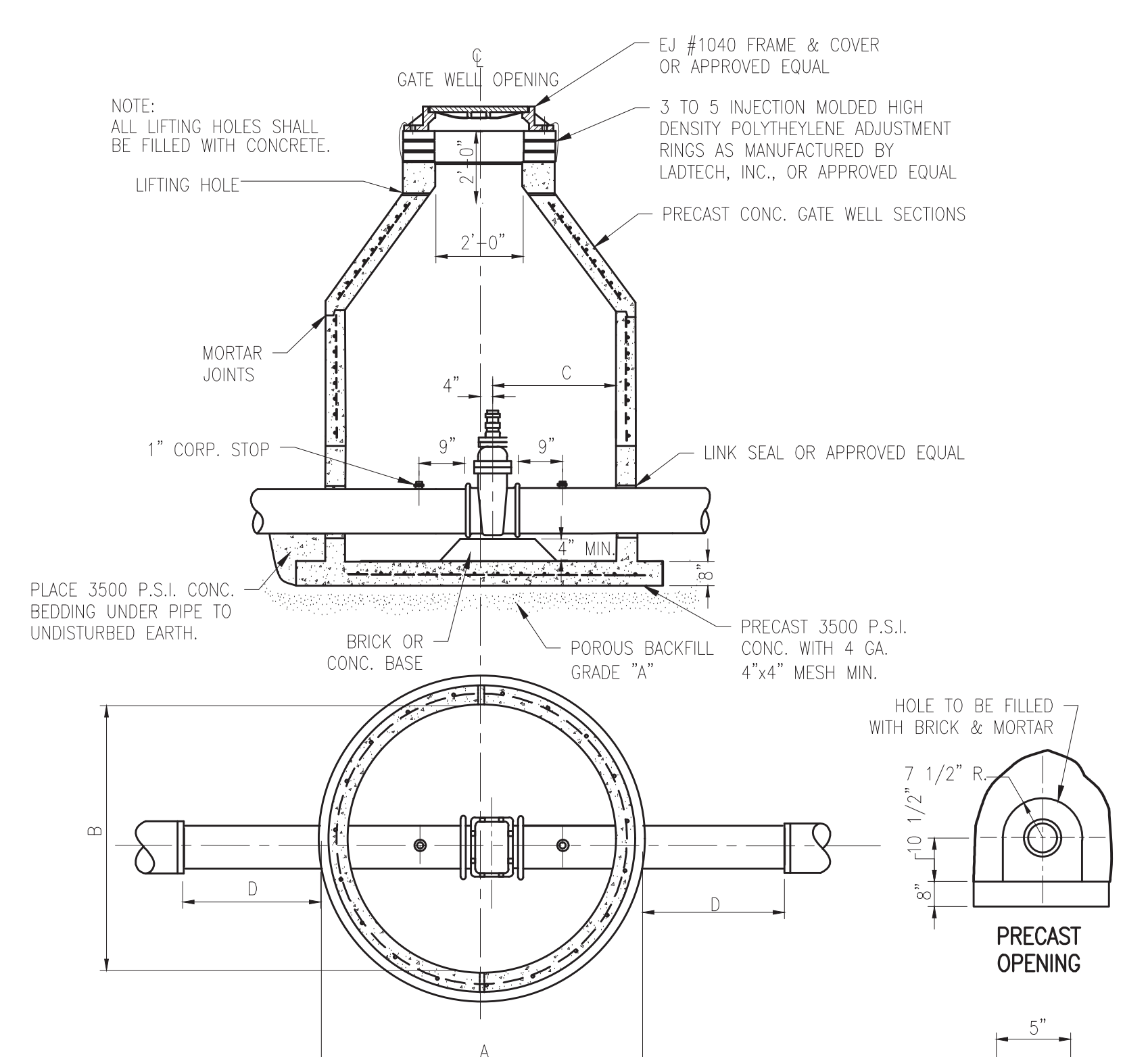


A	B
DIA WELL	DIA MAIN
7'-0"	20"
7'-0"	24"
8'-0"	30"
8'-0"	36"

BUTTERFLY VALVE AND WELL (CONCENTRIC) NOT TO SCALE

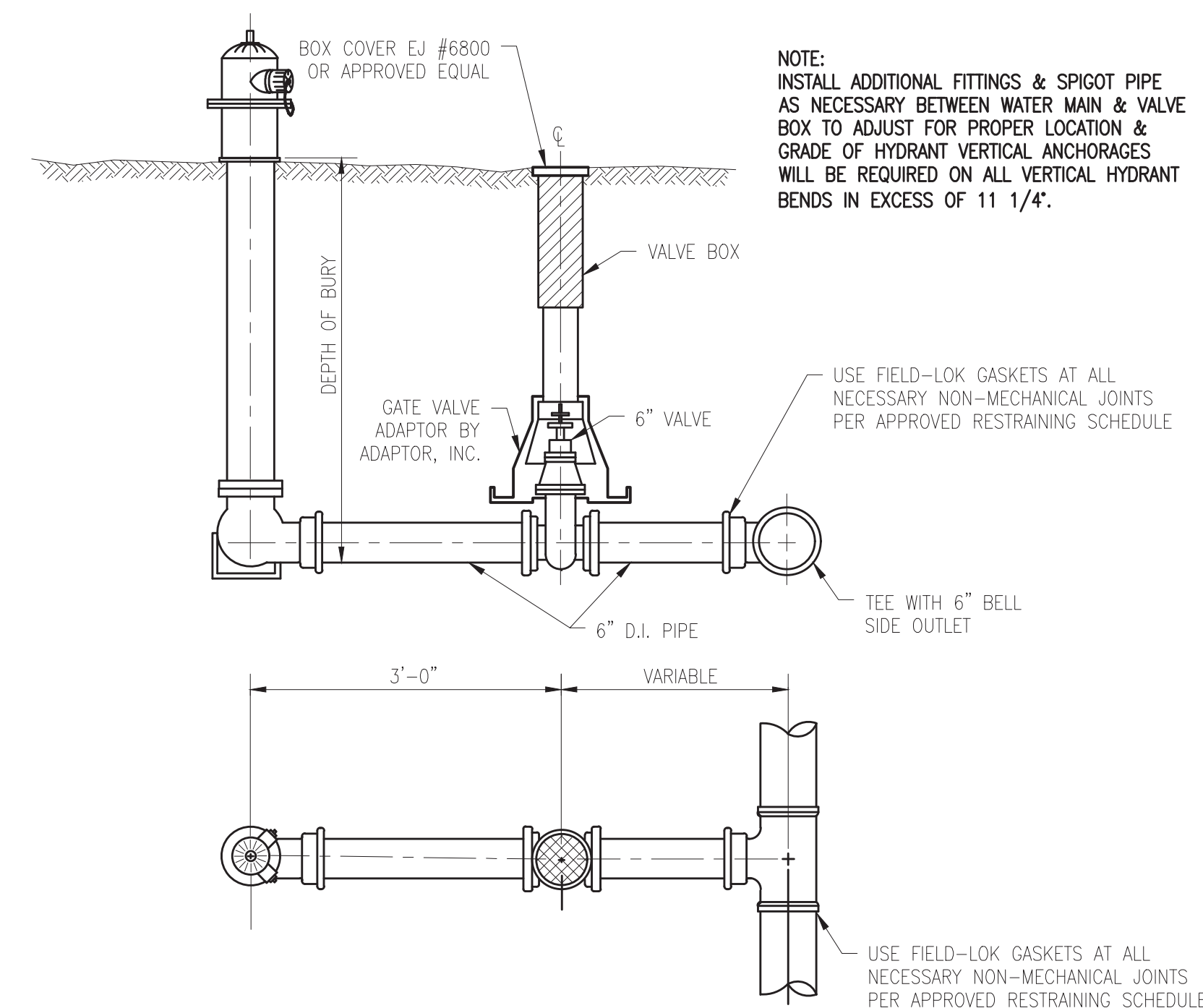


TAPPING SLEEVE, VALVE & WELL (CONCENTRIC) NOT TO SCALE

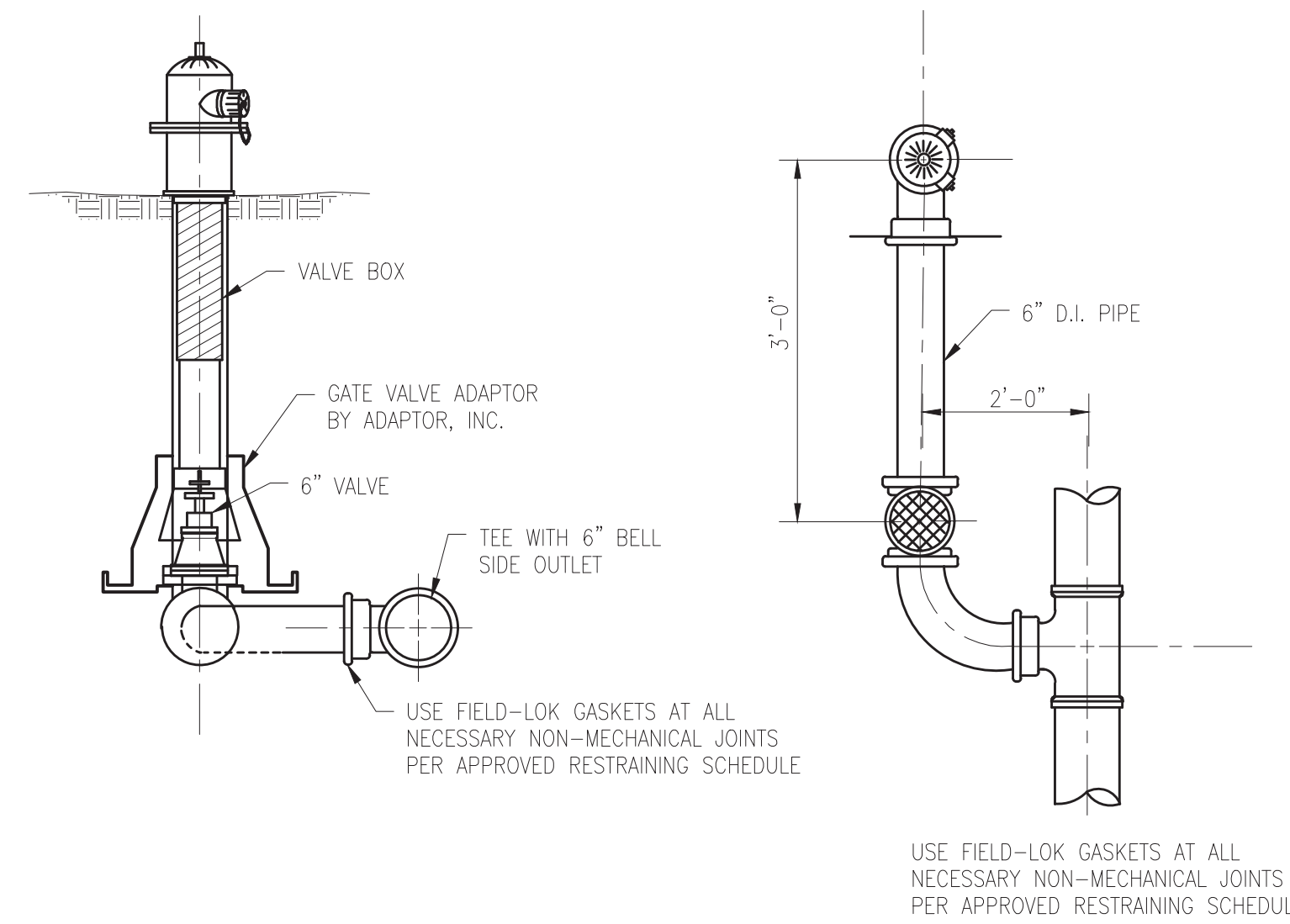


WM	A	B	C	D
8"	5'-0"	4'-0"	2'-2"	—
12"	5'-6"	4'-6"	2'-5"	—
16"	6'-0"	5'-6"	2'-8"	3'-0" MIN. * 13'-0" MAX.

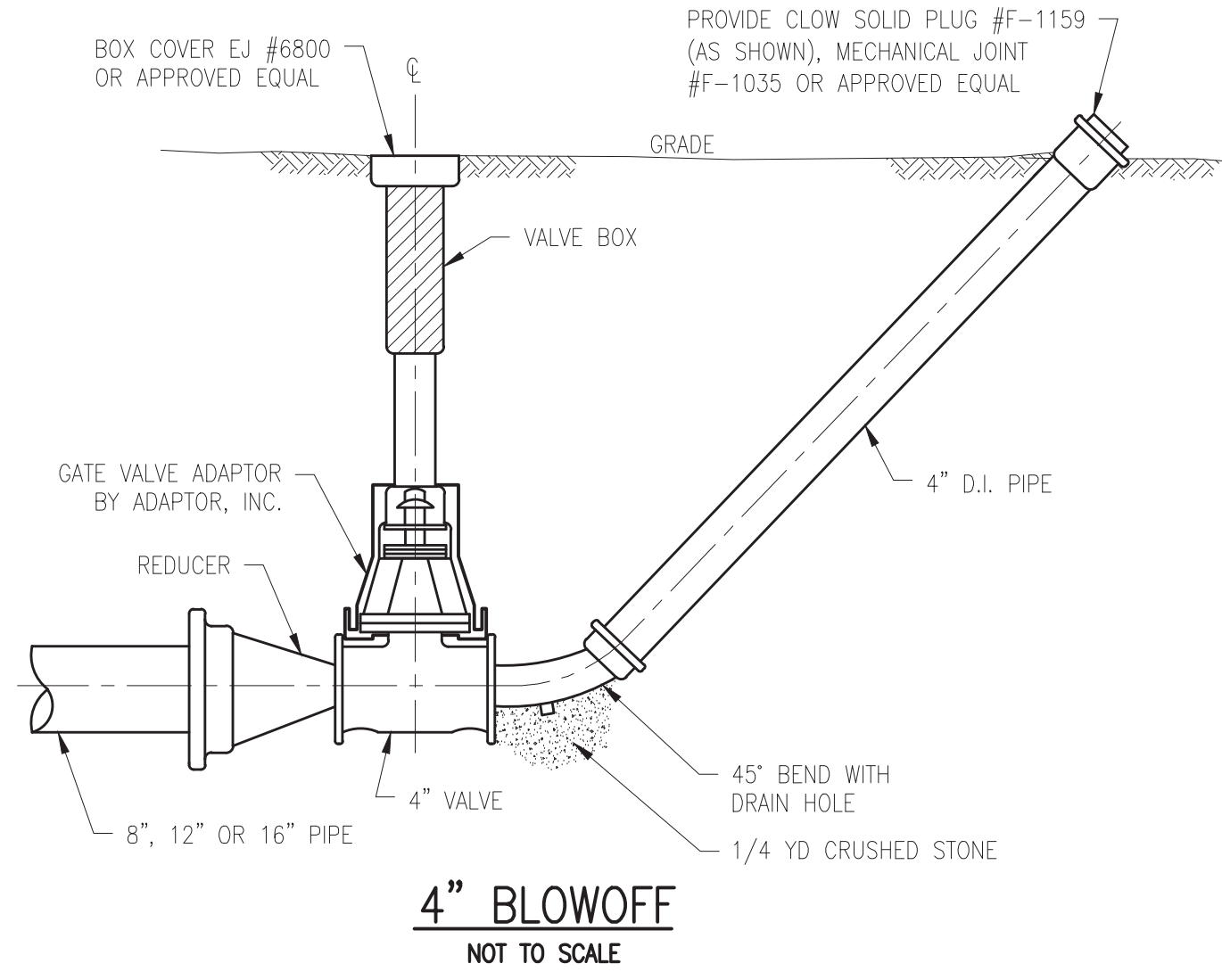
GATE VALVE & WELL (CONCENTRIC) NOT TO SCALE



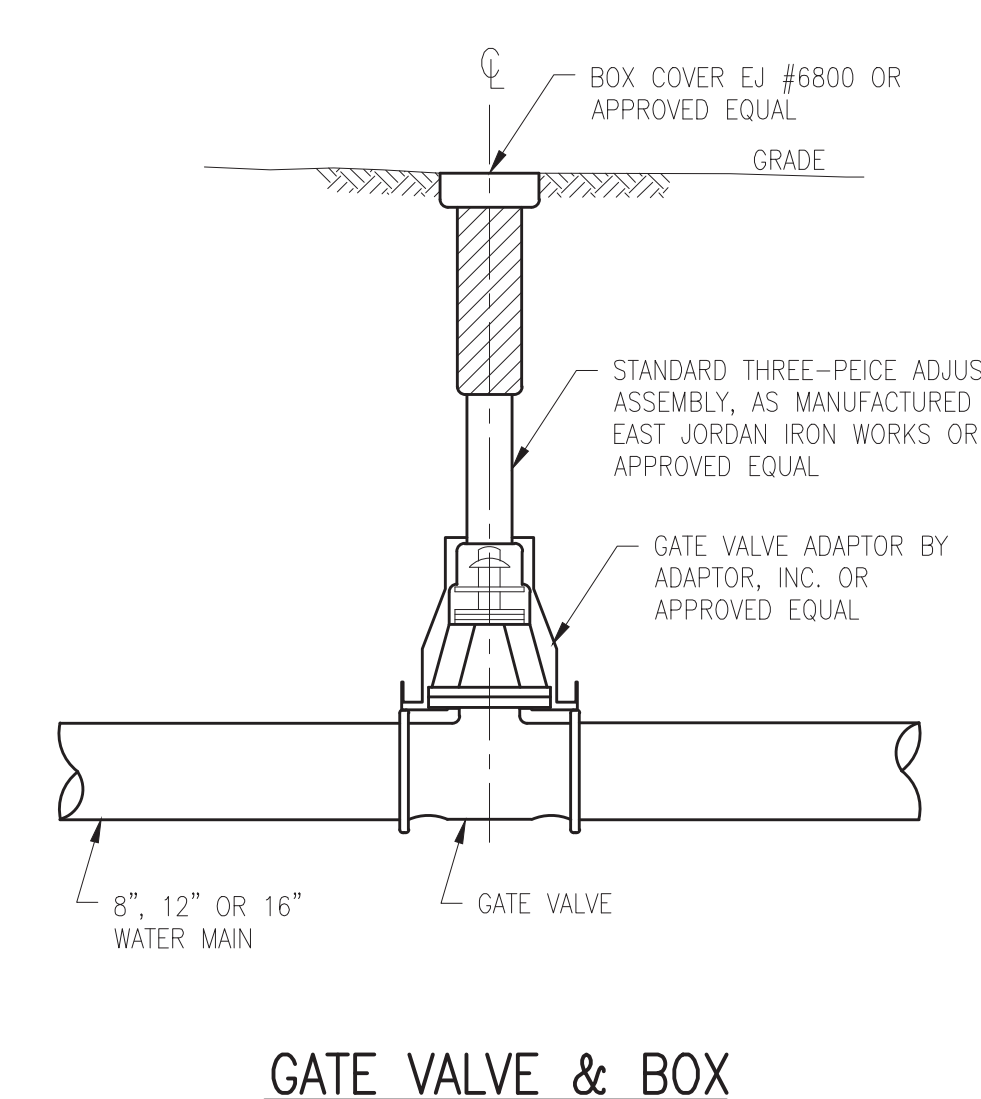
STANDARD HYDRANT SETTING NOT TO SCALE



CLOSE COUPLE HYDRANT SETTING NOT TO SCALE



4" BLOWOFF NOT TO SCALE



GATE VALVE & BOX NOT TO SCALE



Know what's below. Call before you dig.



REVISIONS

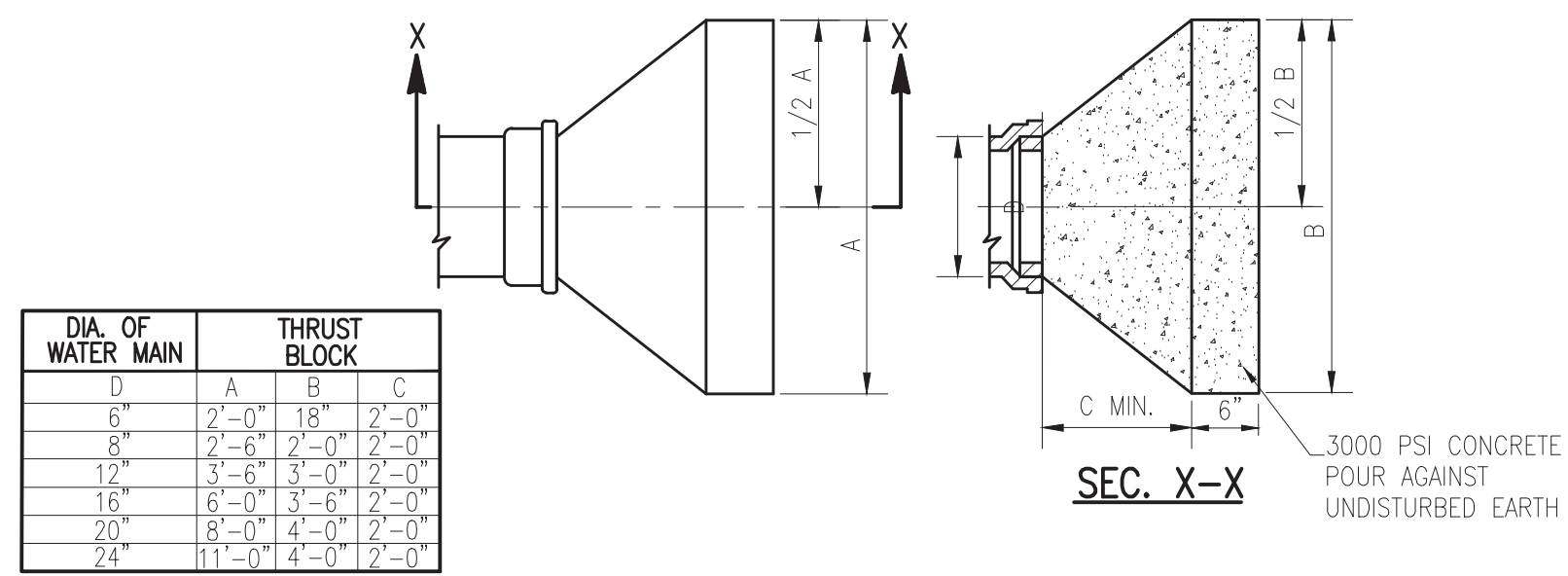
STANDARD WATER MAIN DETAILS

YPSILANTI COMMUNITY UTILITIES AUTHORITY
 2777 STATE ROAD
 YPSILANTI, MICHIGAN 48198-9112
 (734) 484-4800
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YCAU
 ENVIRONMENTAL LEADERS

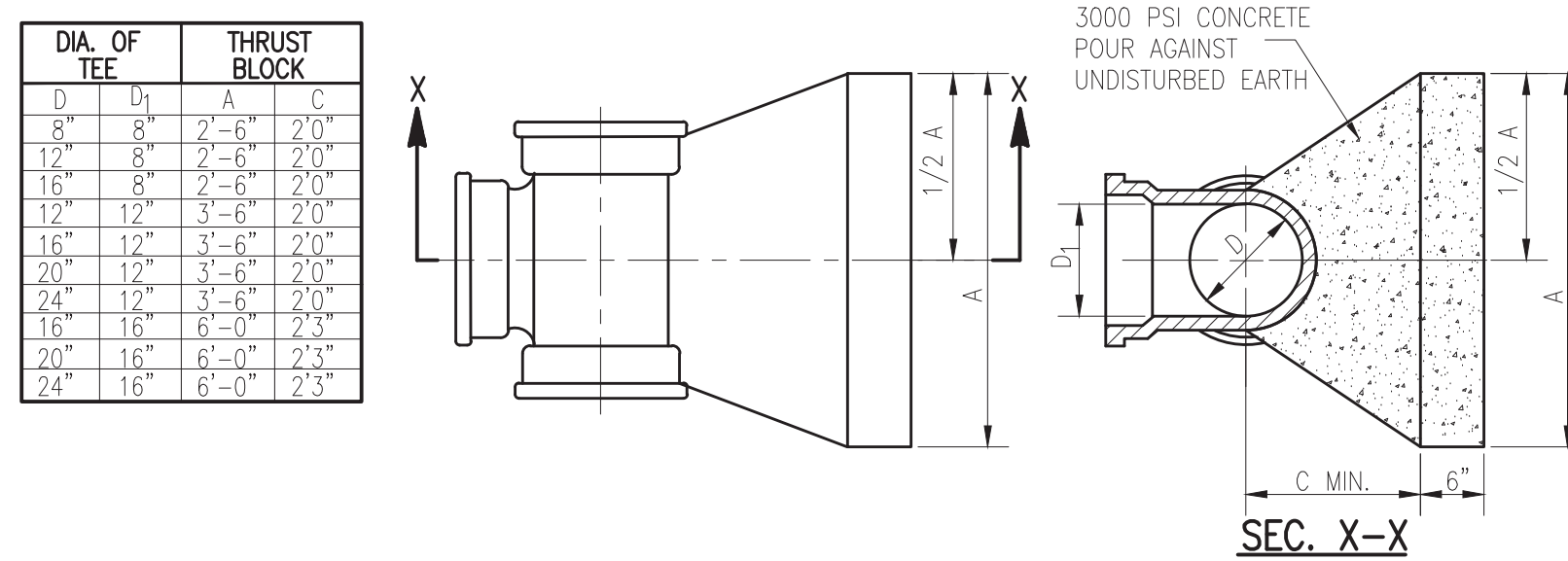
DATE	SCALE	SHEET
09/25/19	NO SCALE	

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DIA. OF WATER MAIN		THRUST BLOCK		
D	A	B	C	
8"	2'-0"	18"	2'-0"	
8"	2'-6"	2'-0"	2'-0"	
12"	3'-6"	3'-0"	2'-0"	
16"	6'-0"	3'-6"	2'-0"	
20"	8'-0"	4'-0"	2'-0"	
24"	11'-0"	4'-0"	2'-0"	

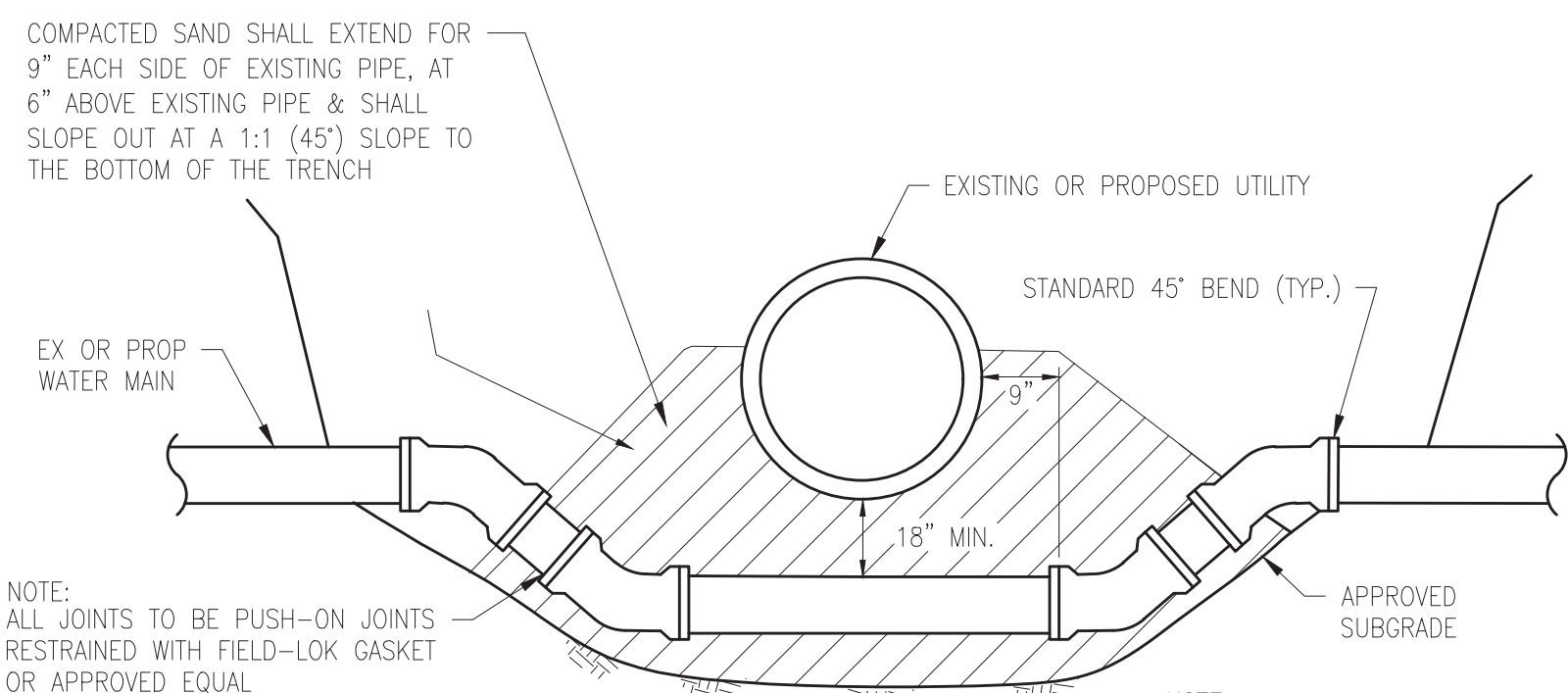
THRUST BLOCK AT PLUG OR HYDRANT SHOE
NOT TO SCALE



DIA. OF TEE		THRUST BLOCK		
D	A	B	C	
8"	2'-6"	2'-0"	2'-0"	
12"	3'-6"	2'-0"	2'-0"	
16"	6'-0"	3'-6"	2'-0"	
20"	8'-0"	4'-0"	2'-0"	
24"	11'-0"	4'-0"	2'-0"	

THRUST BLOCK AT TAPPING SLEEVE TEE
NOT TO SCALE

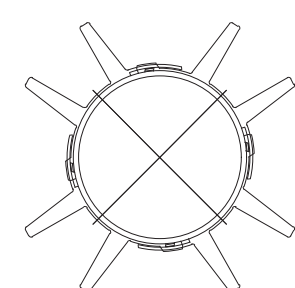
NOTE: CONCRETE THRUST BLOCKS WILL NOT BE PERMITTED EXCEPT BEHIND HYDRANT SHOES AND TAPPING SLEEVES. USE OF CONCRETE THRUST BLOCKS IN OTHER LOCATIONS WILL NOT BE PERMITTED WITHOUT THE WRITTEN APPROVAL OF YCUA. ALL OTHER VERTICAL AND HORIZONTAL BENDS SHALL BE RESTRAINED WITH FIELD-LOK GASKETS OR APPROVED MECHANICAL JOINTS.



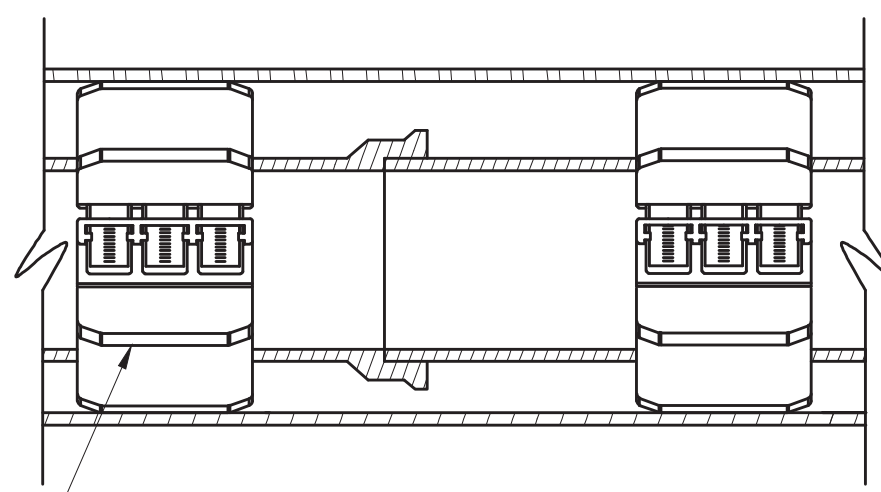
WATER MAIN LOWERING
NOT TO SCALE

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



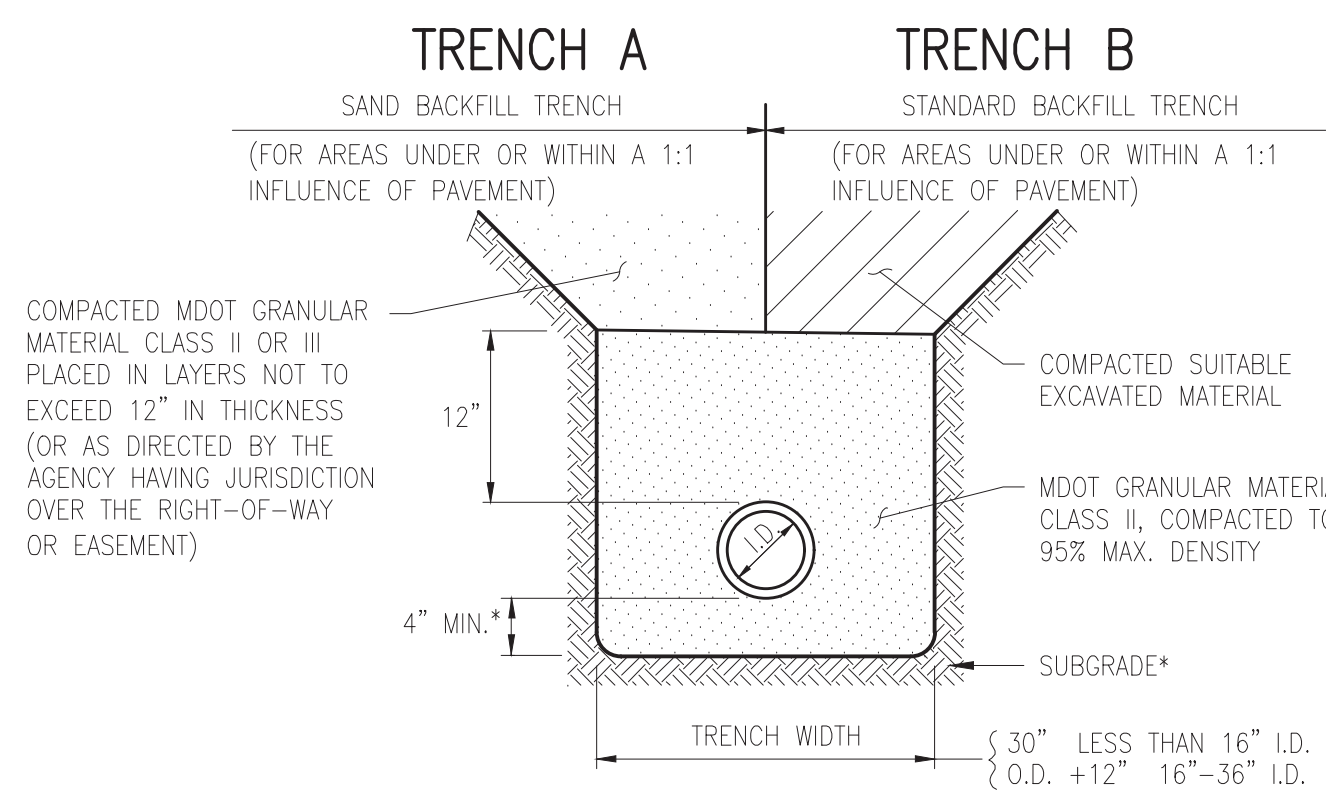
SPACER END VIEW
NOT TO SCALE



STANDARD CASING SECTION
NOT TO SCALE

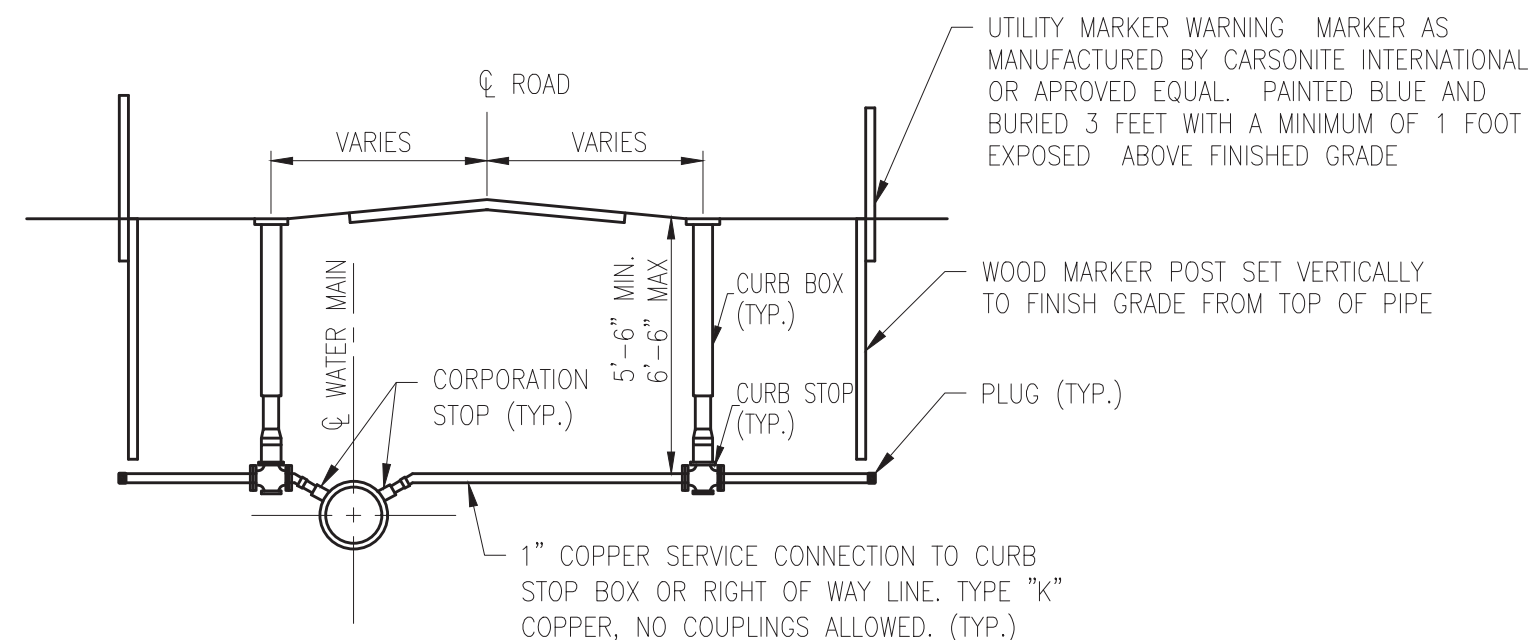
NOTES:

- 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.

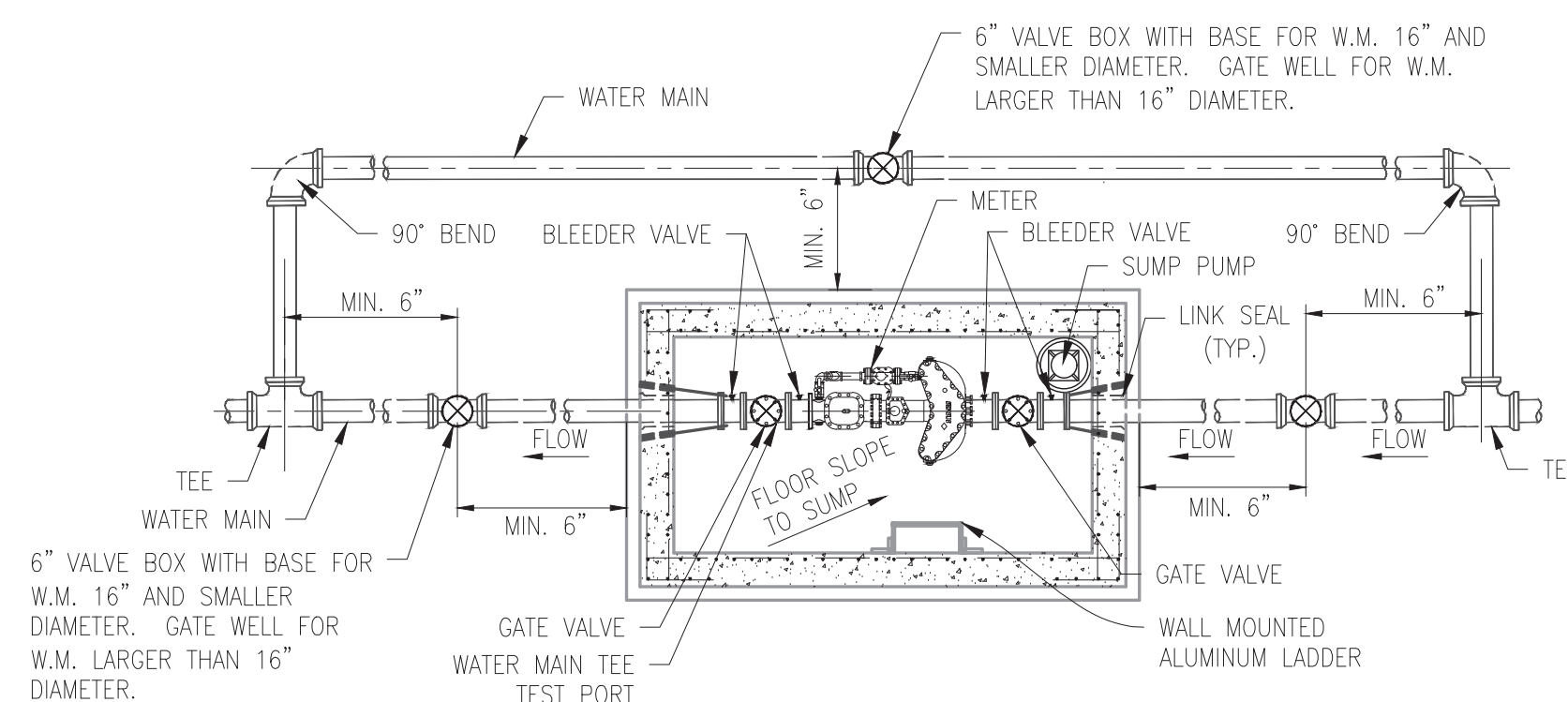


BEDDING AND TRENCH BACKFILL DETAIL FOR WATER MAIN
NOT TO SCALE

*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.



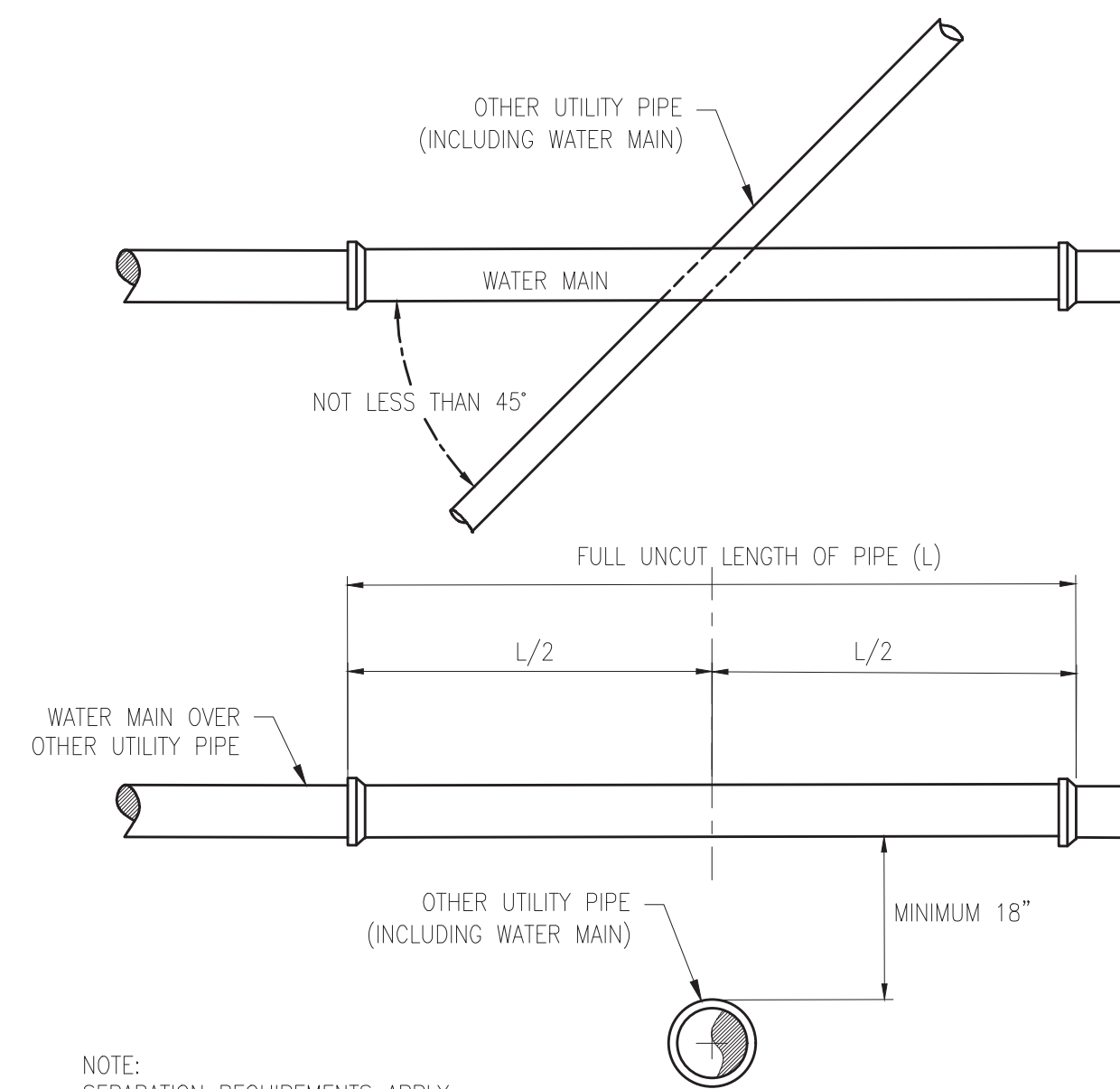
TYPICAL WATER SERVICE
NOT TO SCALE



MASTER METER VAULT CONFIGURATION (WITHOUT COVER)
NOT TO SCALE

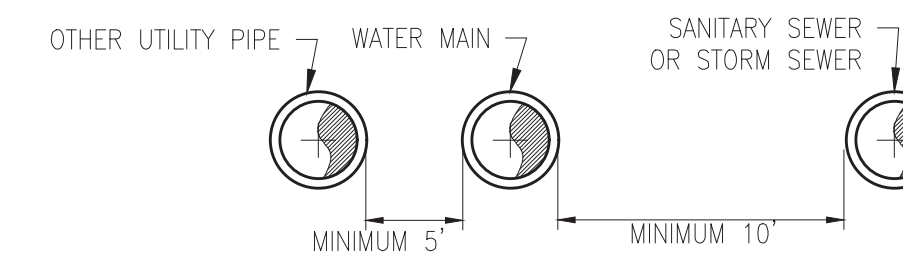
NOTES:

- 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.



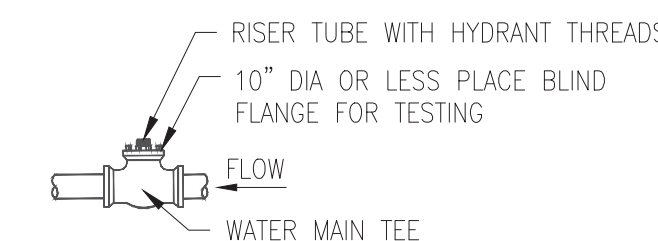
NOTE: SEPARATION REQUIREMENTS APPLY REGARDLESS OF VERTICAL ALIGNMENTS OF UTILITIES

VERTICAL SEPARATION



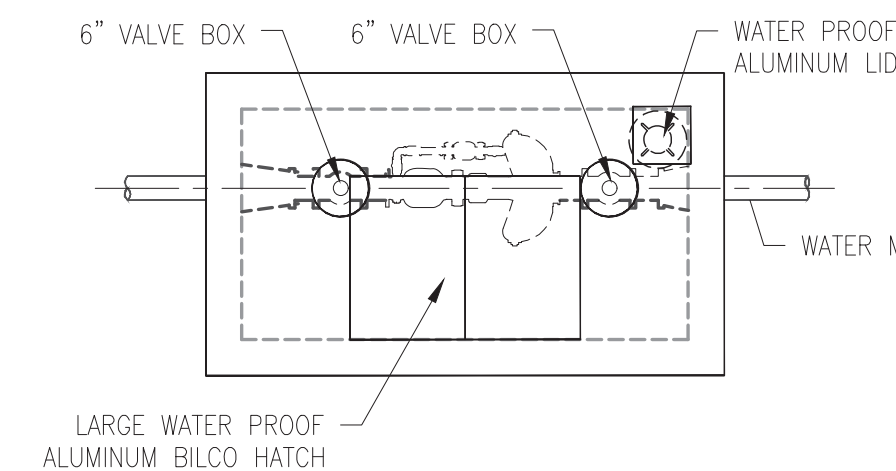
HORIZONTAL SEPARATION

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

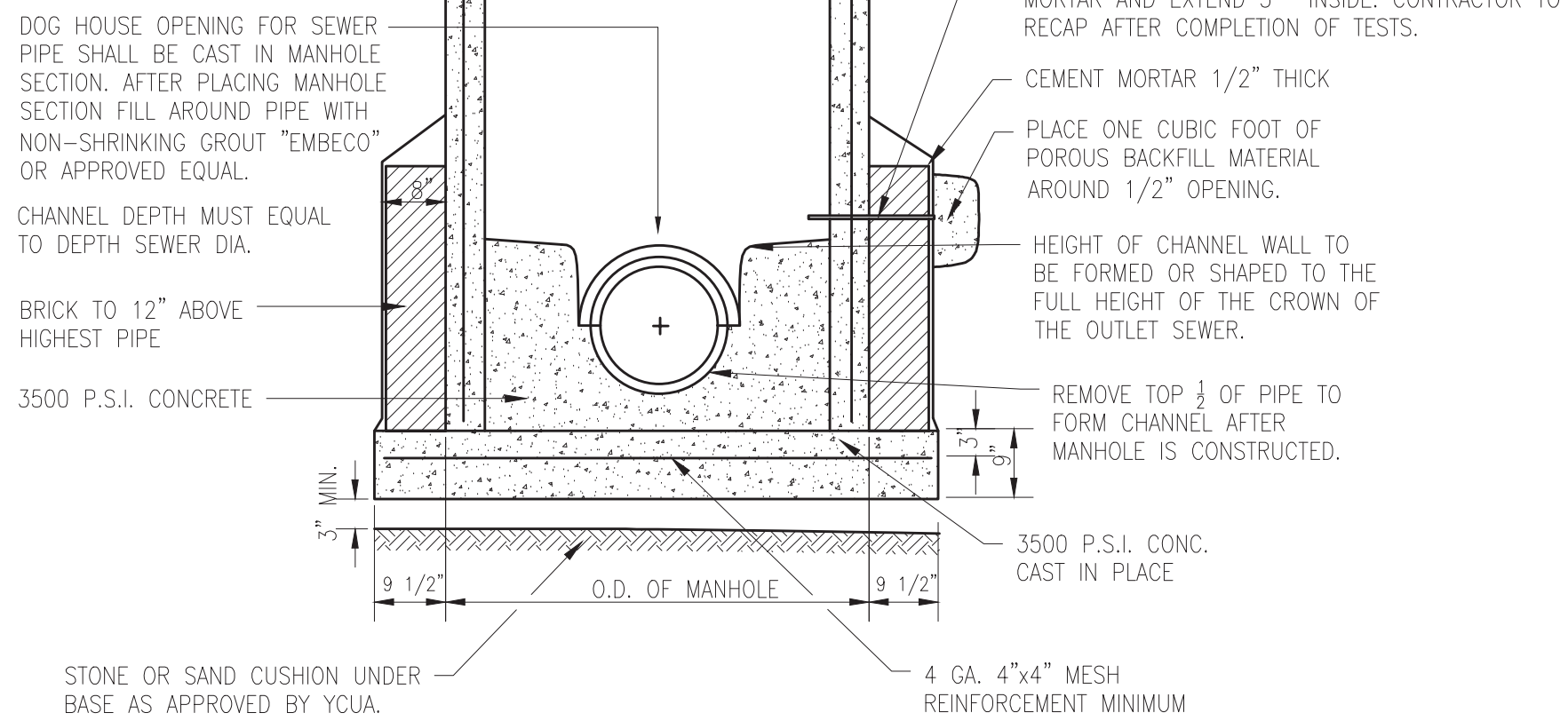
STANDARD WATER MAIN DETAILS

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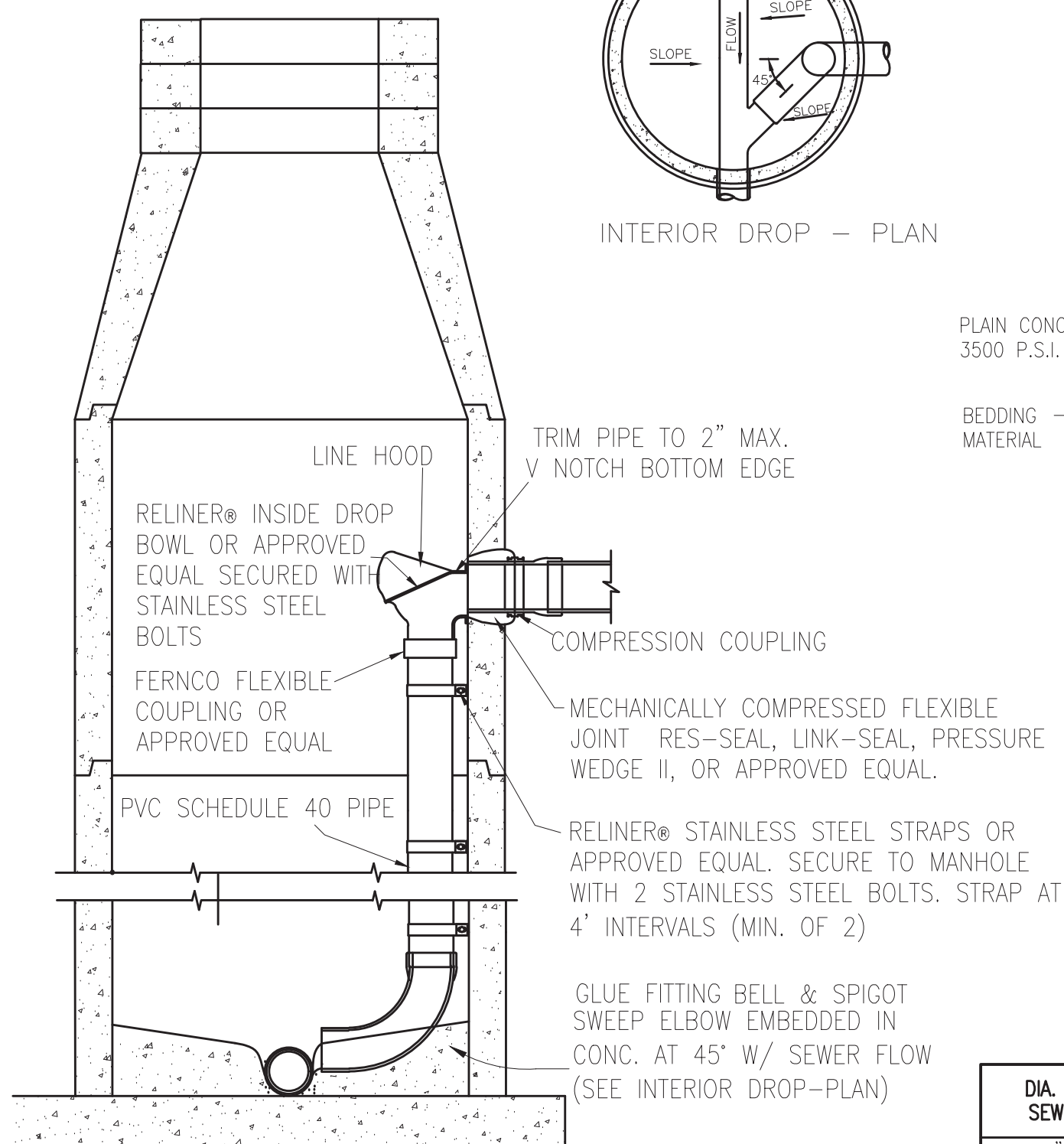
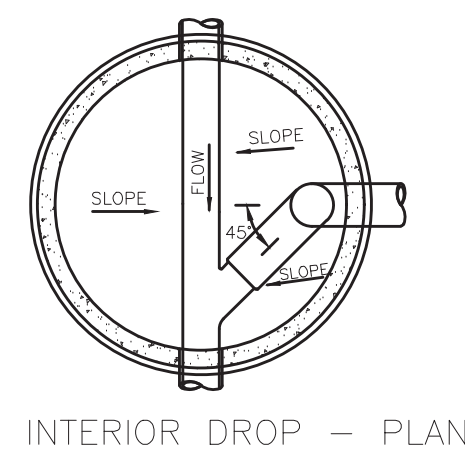
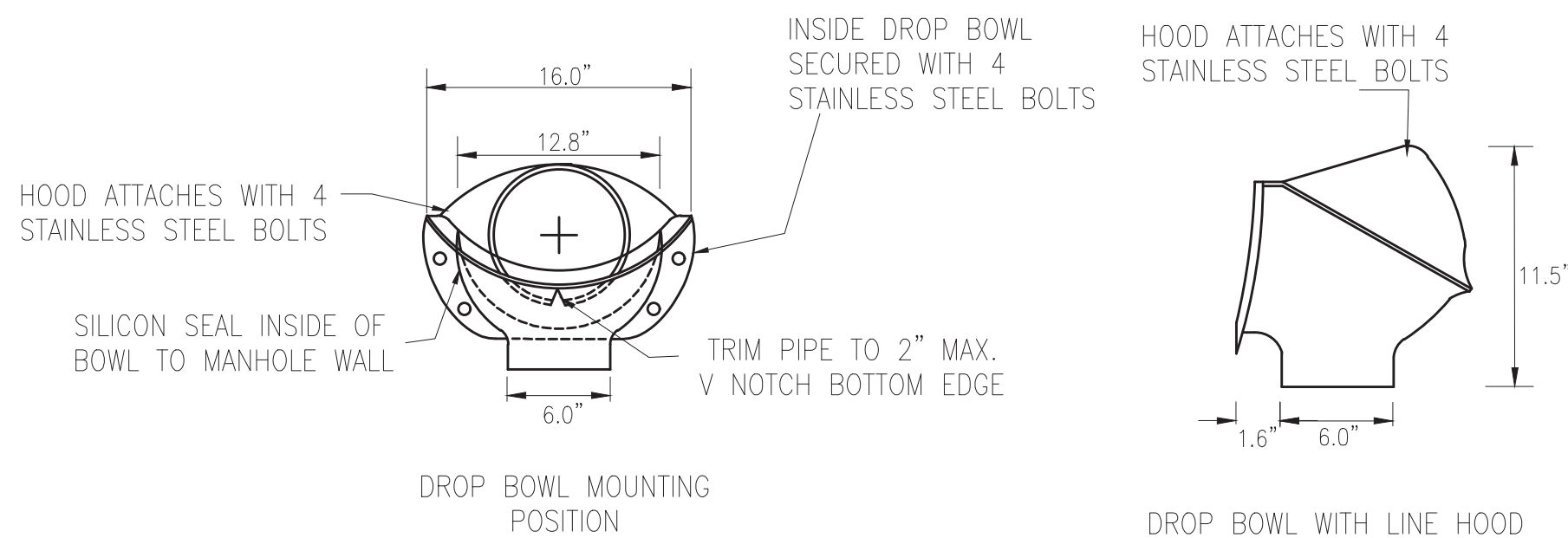
YCUA
ENVIRONMENTAL LEADERS

DATE	SCALE	SHEET
09/25/19	NO SCALE	

SEWER SIZE	MAX. CUT OUT SIZE
8" THRU 10"	17 1/2"
12" THRU 15"	20"

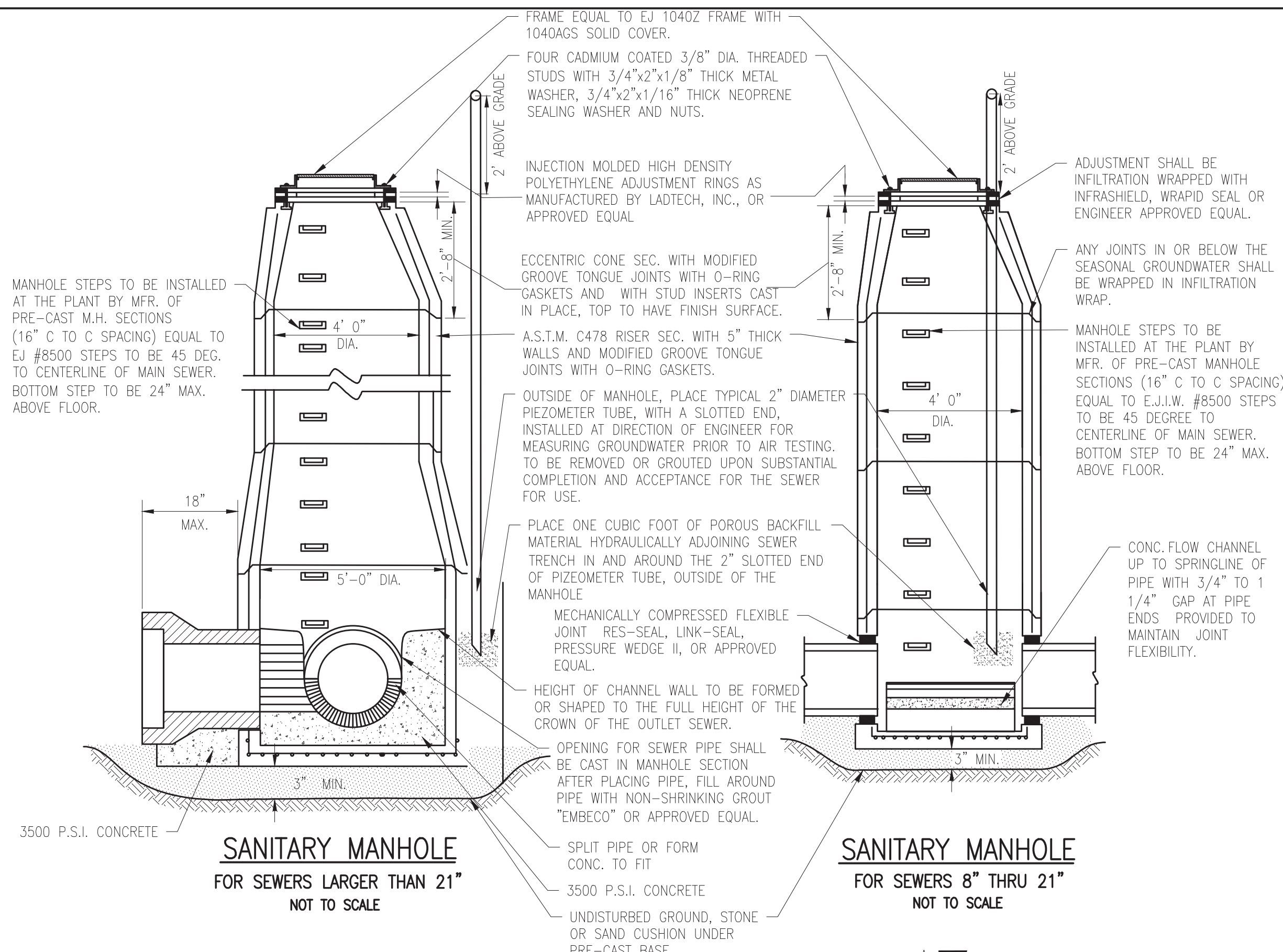


SANITARY MANHOLE
ON EXISTING SEWERS 8" THRU 42"
NOT TO SCALE



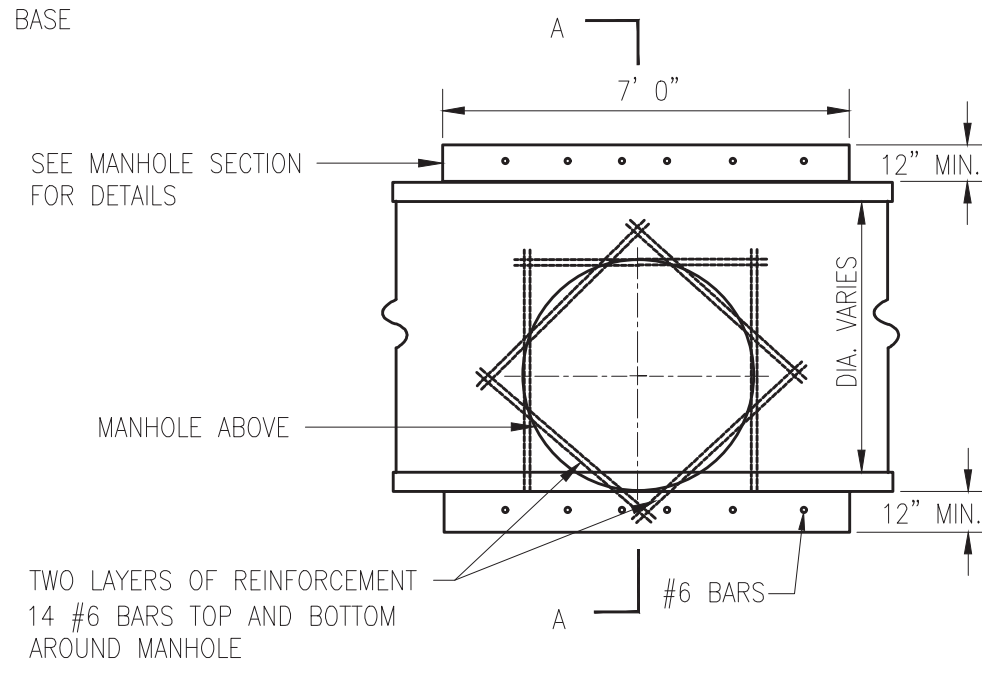
INTERIOR DROP CONNECTION
NOT TO SCALE

DIA. OF SEWER	DIA. OF DROP CONNECTION
4"	4"
6"	4"
8"	6"
10"	8"

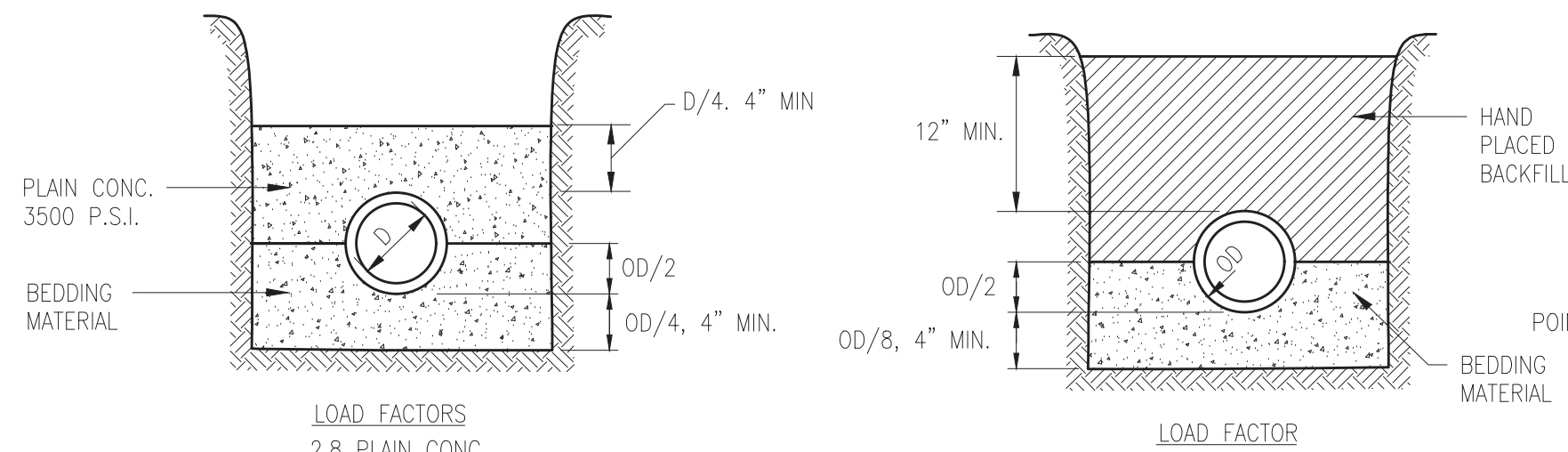


SANITARY MANHOLE
FOR SEWERS LARGER THAN 21"
NOT TO SCALE

SANITARY MANHOLE
FOR SEWERS 8" THRU 21"
NOT TO SCALE



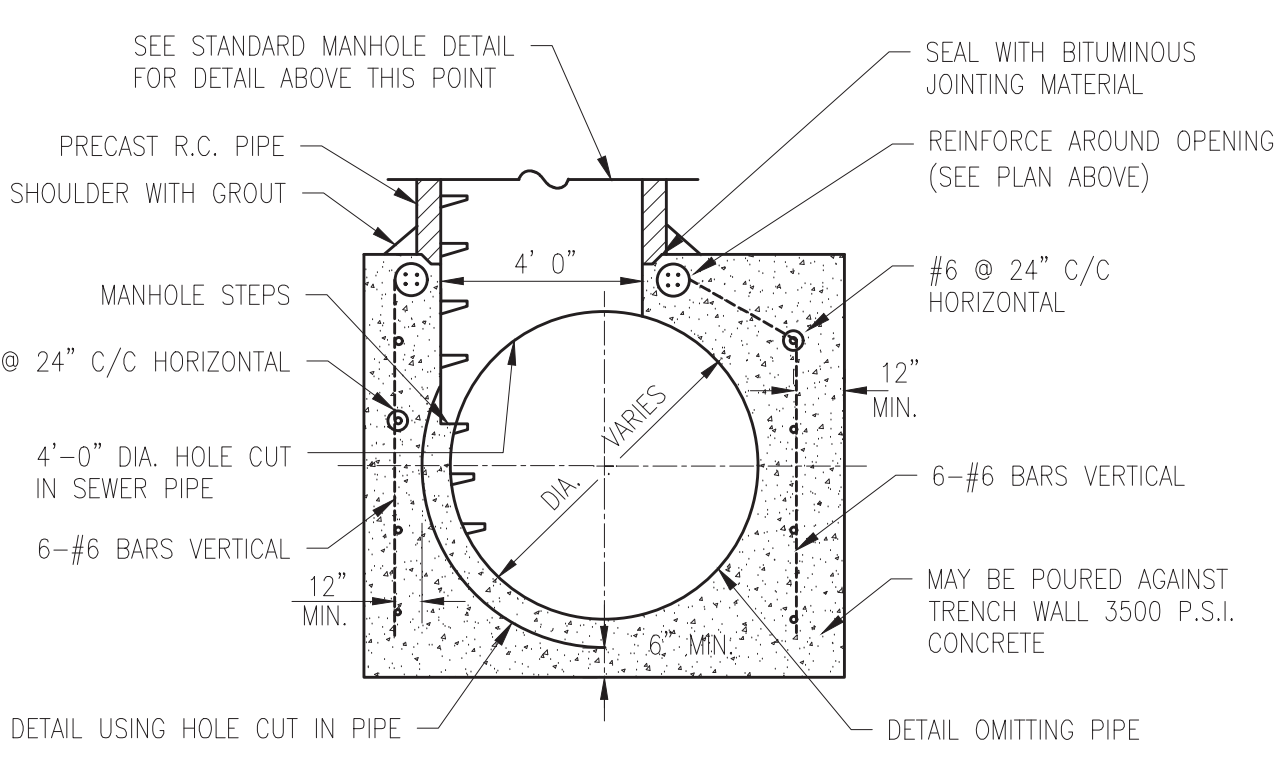
MANHOLE PLAN
48" & LARGER SEWERS
NOT TO SCALE



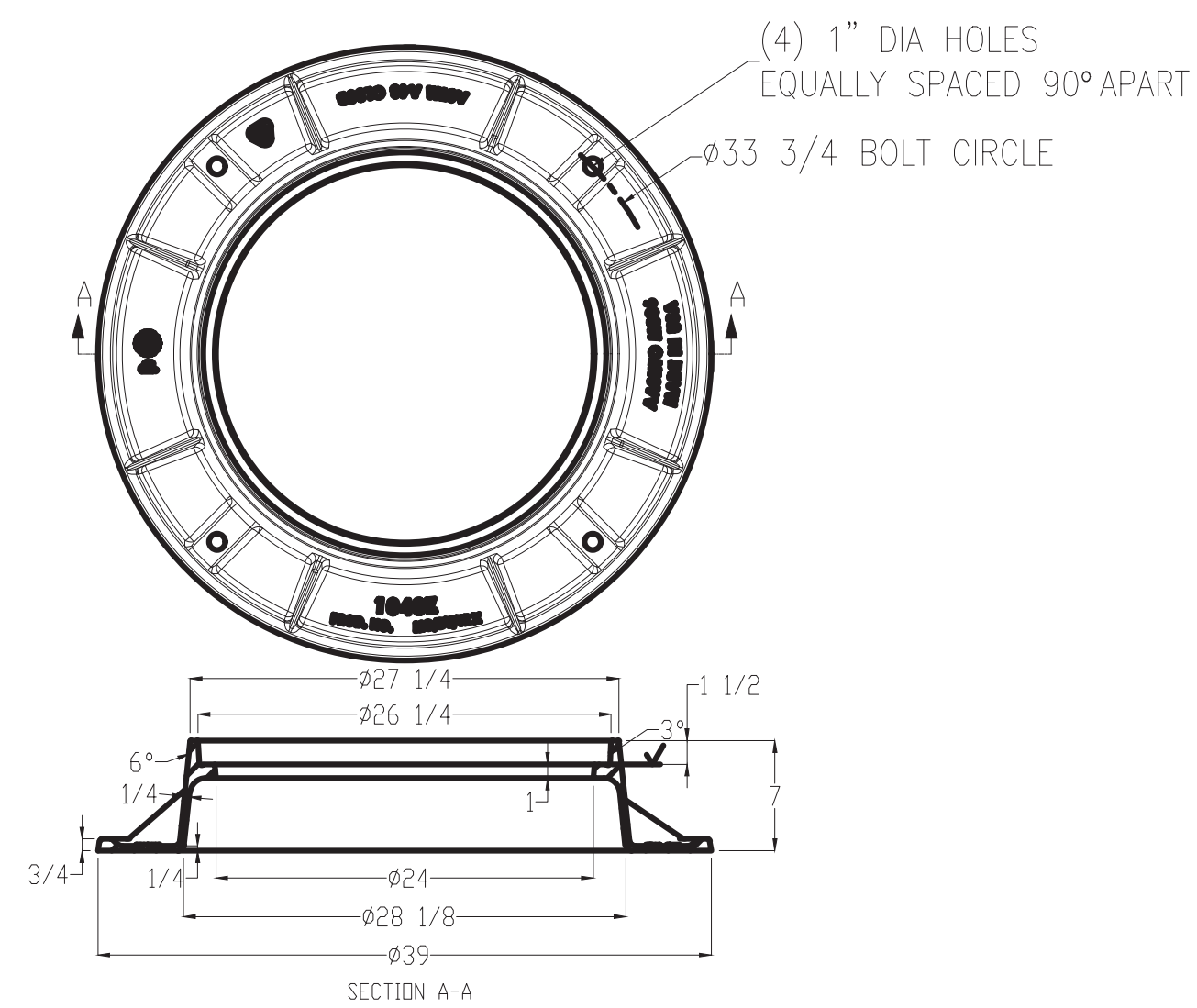
MAX. WIDTH OF TRENCH 12" ABOVE TOP OF PIPE
6" THRU 12" PIPE 30" WIDE
15" THRU 36" PIPE - OD+16"
42" THRU 60" PIPE - OD+20"
OVER 60" PIPE OUTSIDE DIA. OF PIPE+24"

MIN. WIDTH OF TRENCH 12" ABOVE THE TOP OF THE PIPE SHALL BE 6" ON EACH SIDE OF PIPE.

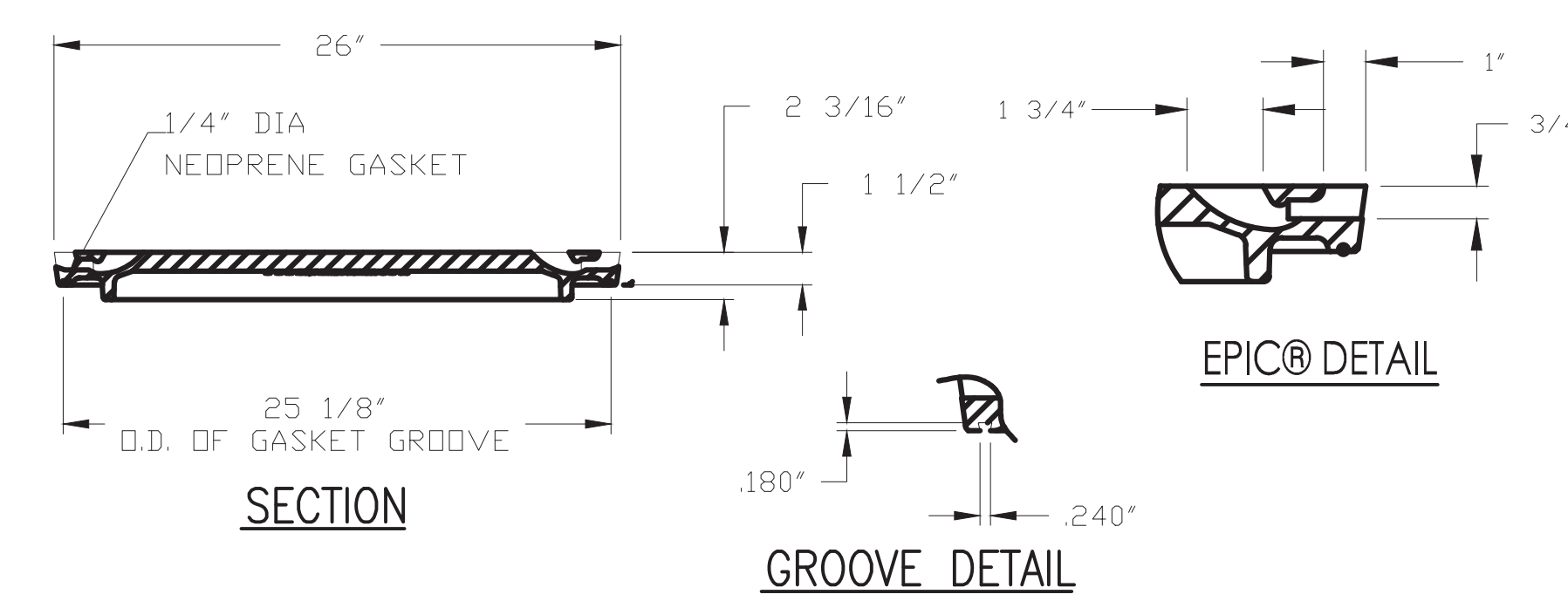
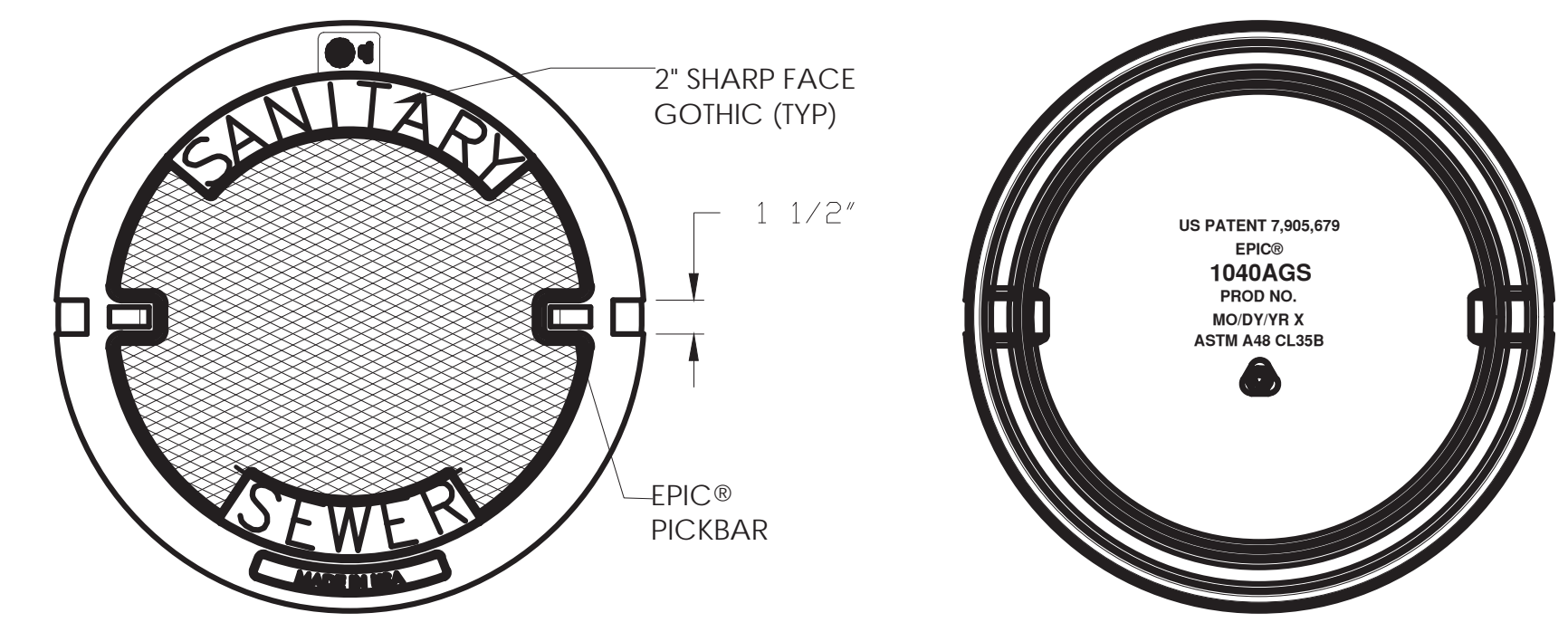
PIPE BEDDING DETAILS



MANHOLE SECTION
48" & LARGER SEWERS
NOT TO SCALE



1040Z FRAME



1040 AGS COVER



Know what's below.
Call before you dig.



REVISIONS

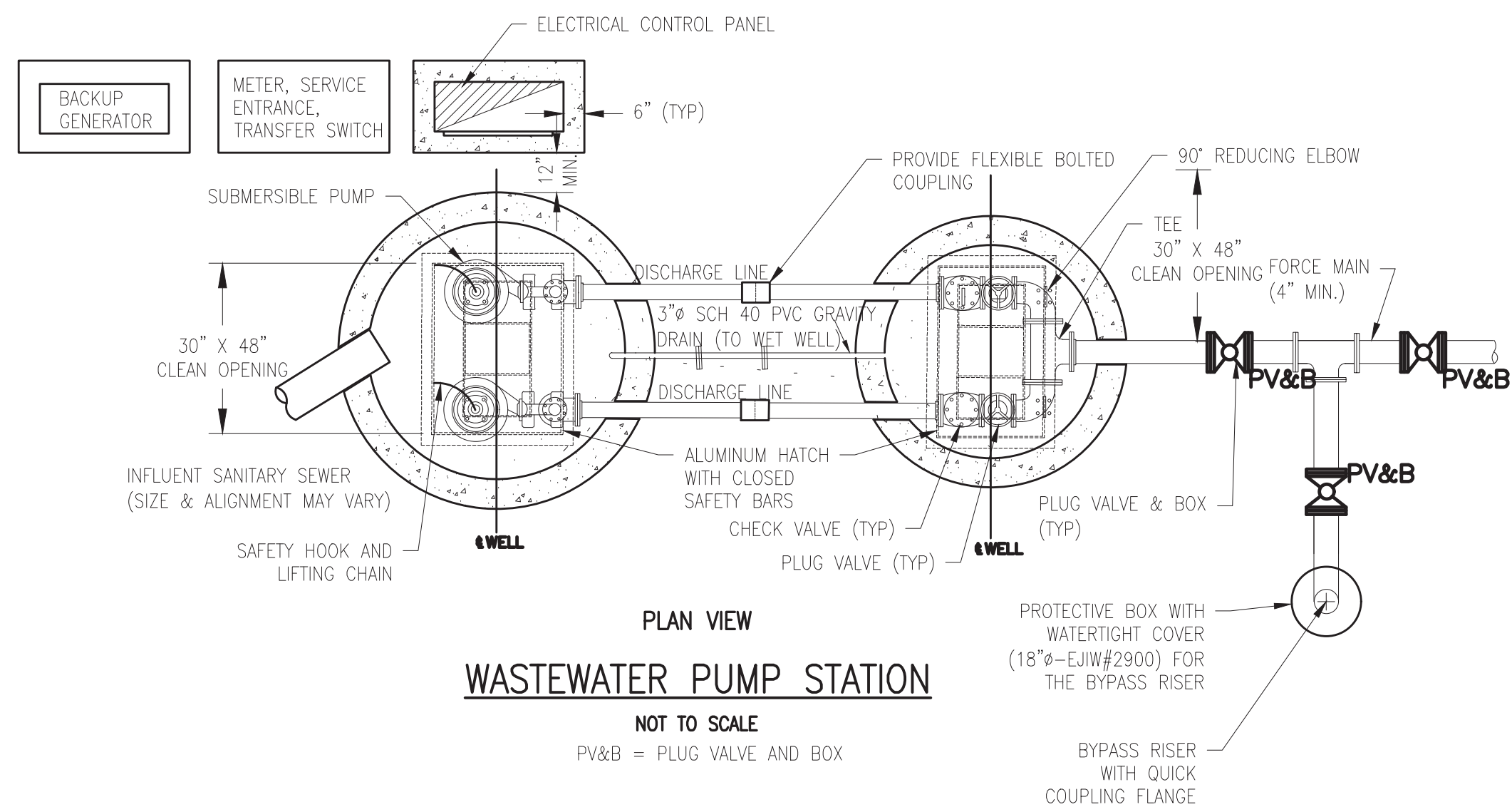
ALL DRAWINGS AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF YCUA AND THE SAME MAY NOT BE DUPLICATED, DISTRIBUTED, OR DISCLOSED WITHOUT PRIOR WRITTEN CONSENT OF YCUA.

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

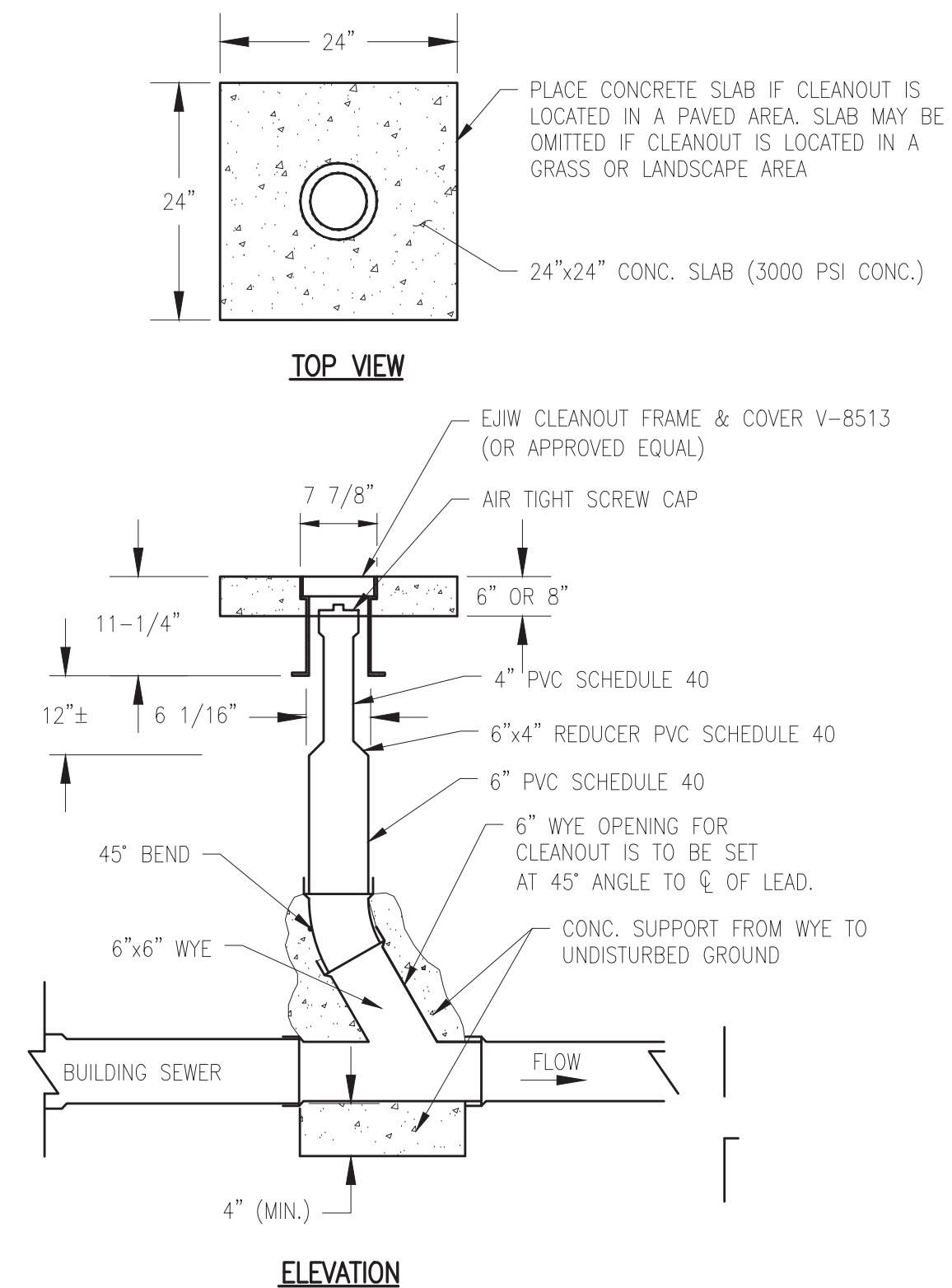
YCUA
ENVIRONMENTAL LEADERS

DATE: 10/25/19
SCALE: NO SCALE
SHEET:



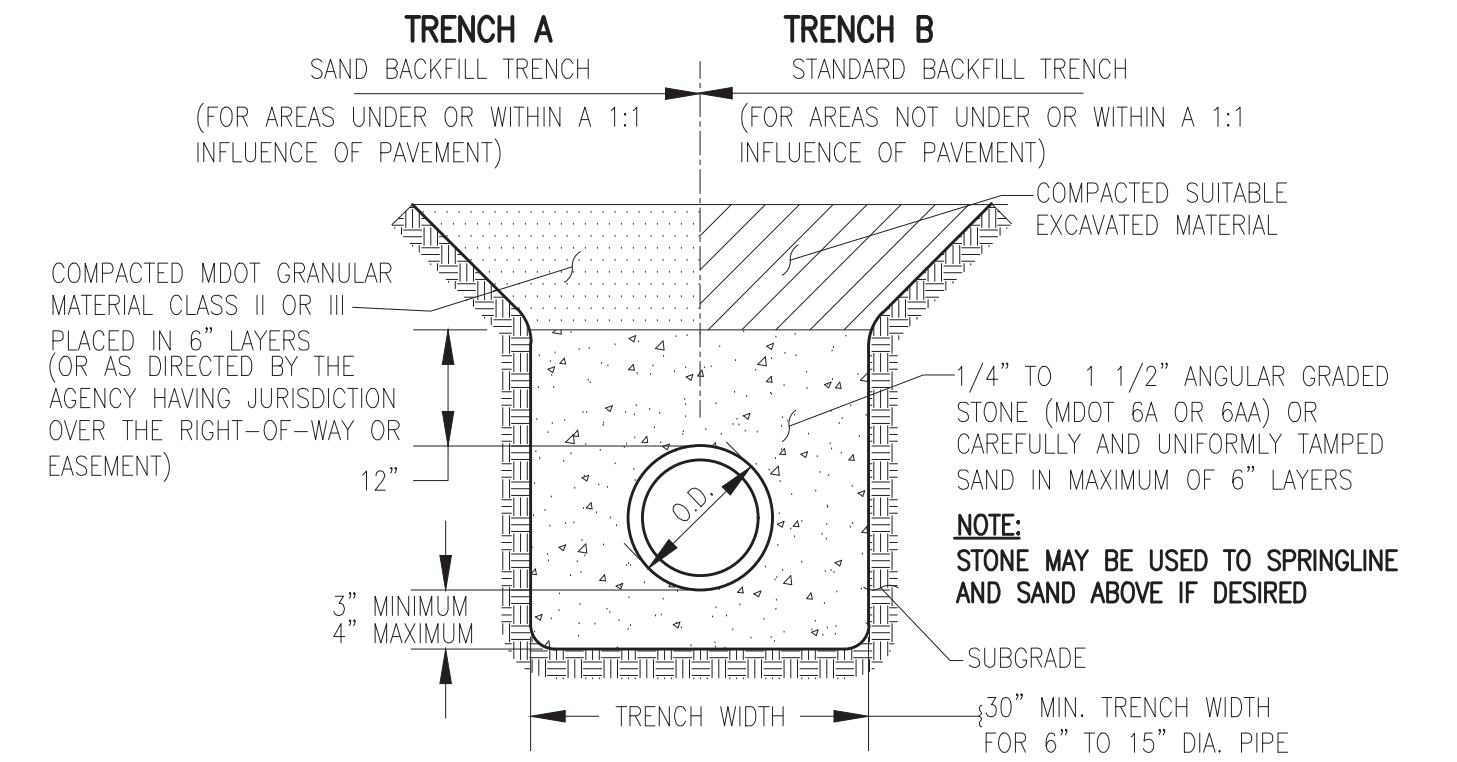
WASTEWATER PUMP STATION

NOT TO SCALE
PV&B = PLUG VALVE AND BOX



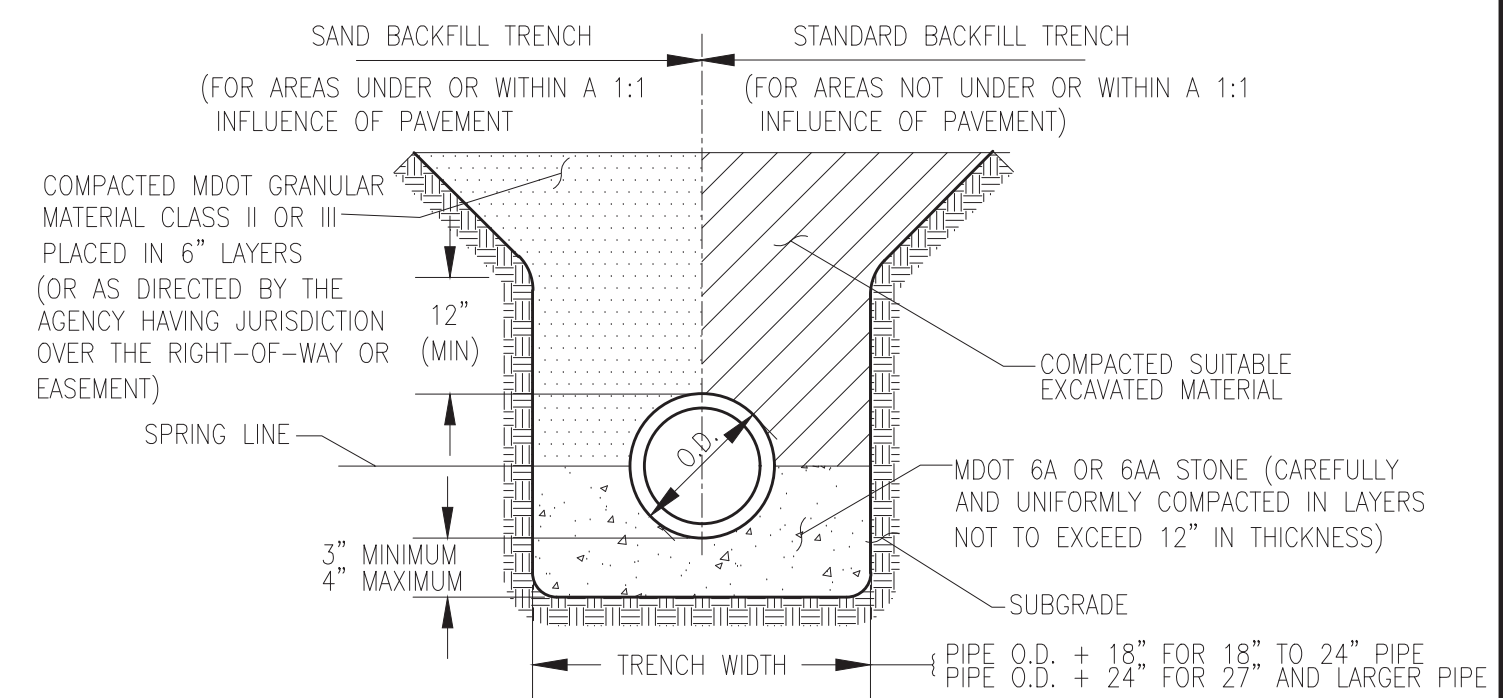
SANITARY SEWER CLEANOUT

NOT TO SCALE



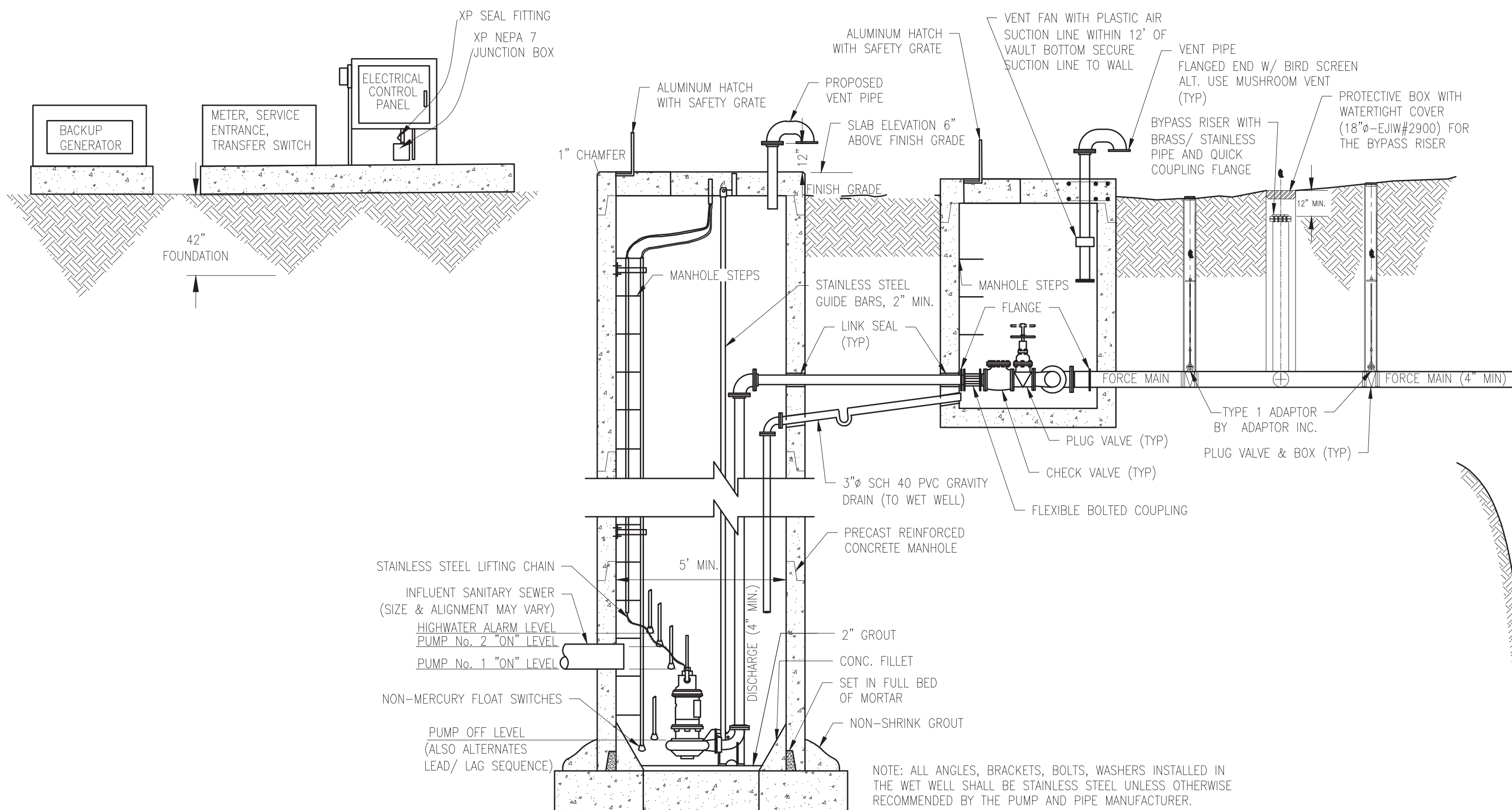
FLEXIBLE PIPE (8\"/>

NOT TO SCALE



RIGID PIPE (18\"/>

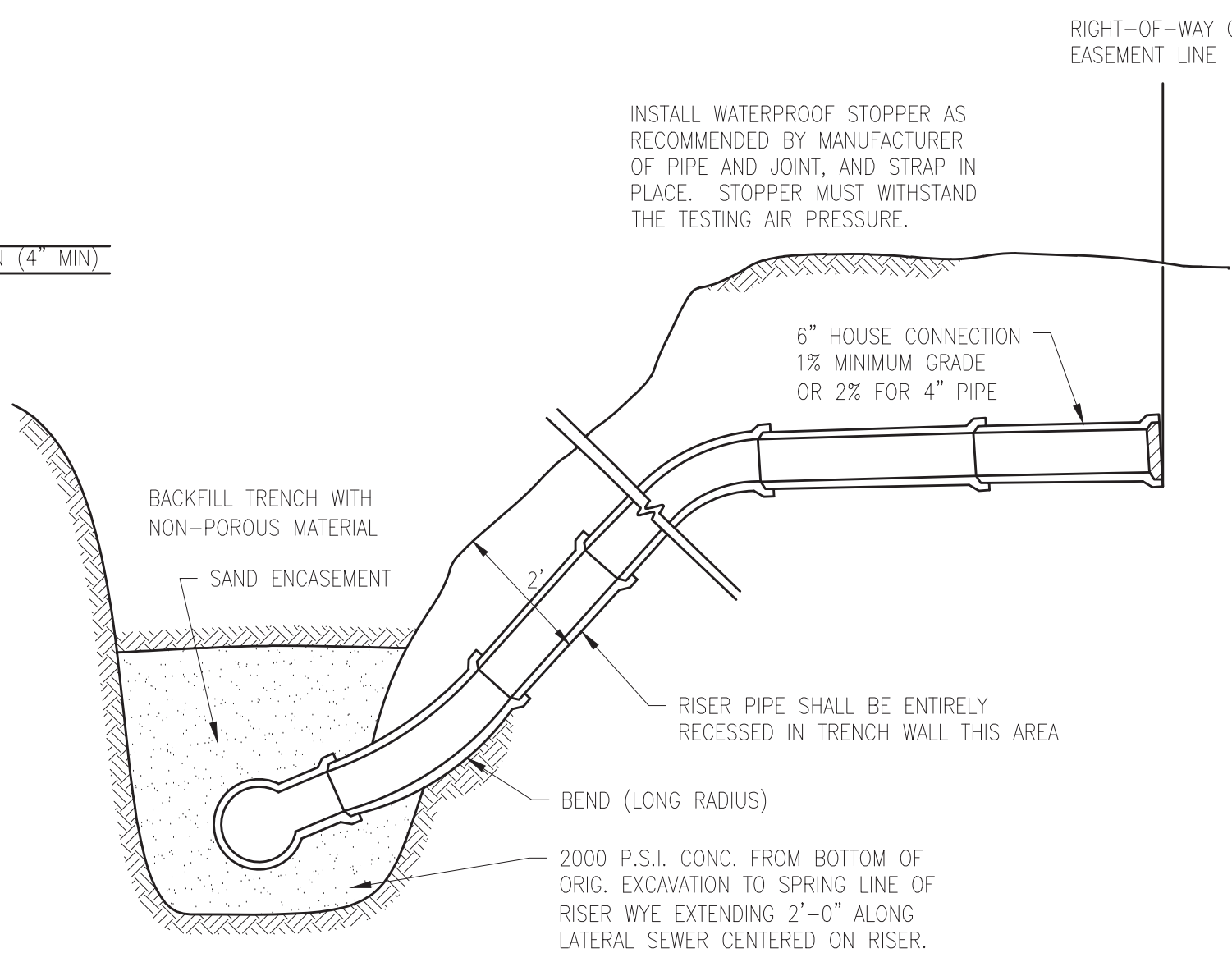
NOT TO SCALE



WASTEWATER PUMP STATION

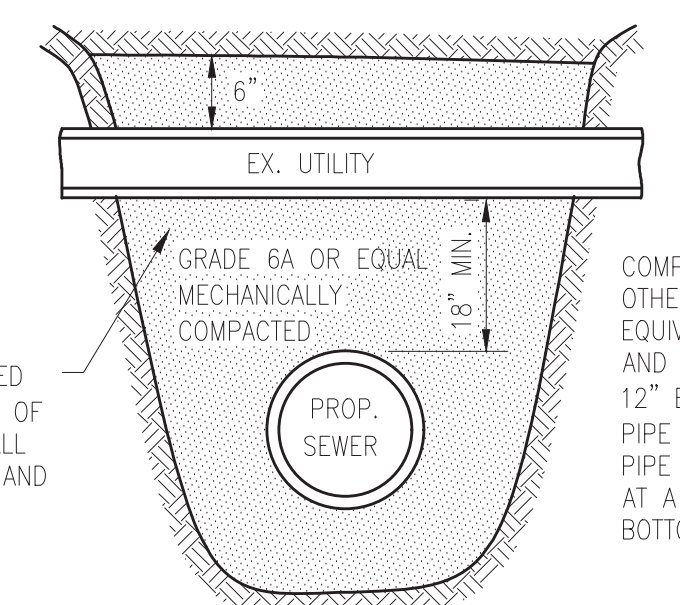
NOT TO SCALE

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. ENCASEMENT.



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	

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.



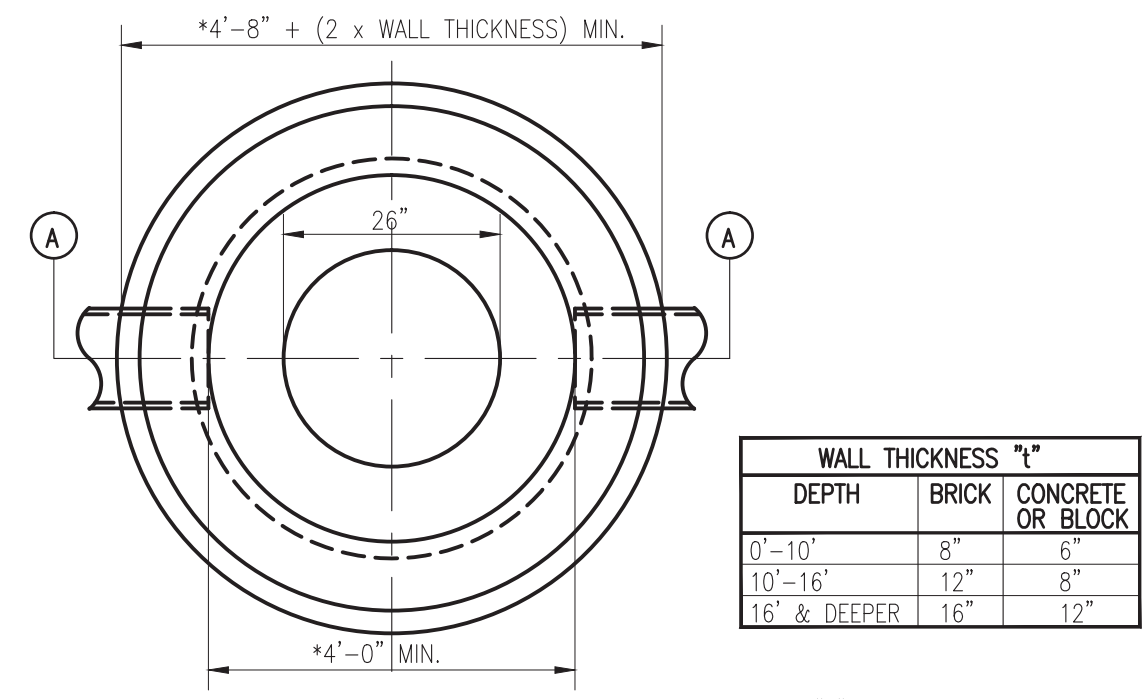
WWW.OHM-ADVISORS.COM

CITY/TOWNSHIP COUNTY RANGE TOWN SECTION PROJ. NO. ENG. ARCH. DATE

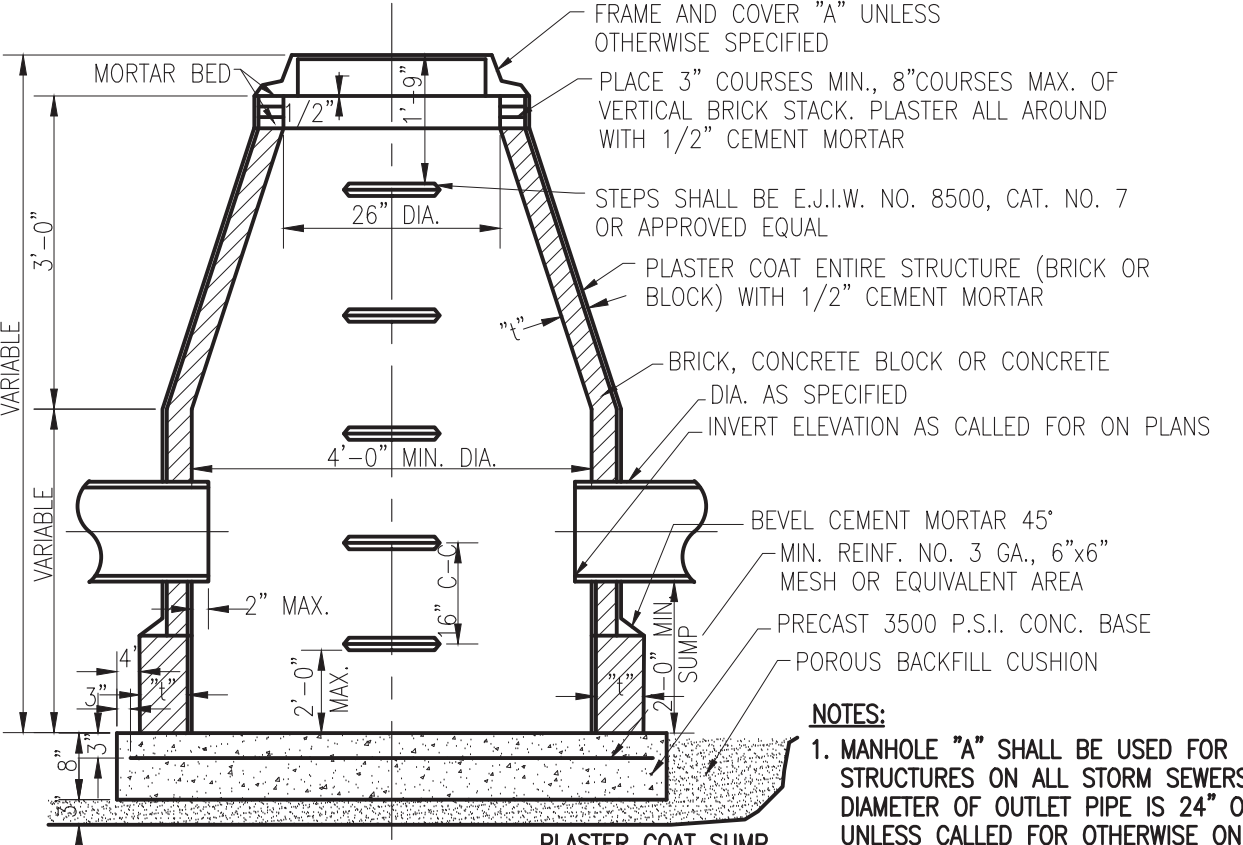
YPSILANTI TOWNSHIP / Y.C.U.A. STANDARD STORM SEWER DETAILS

SHEET

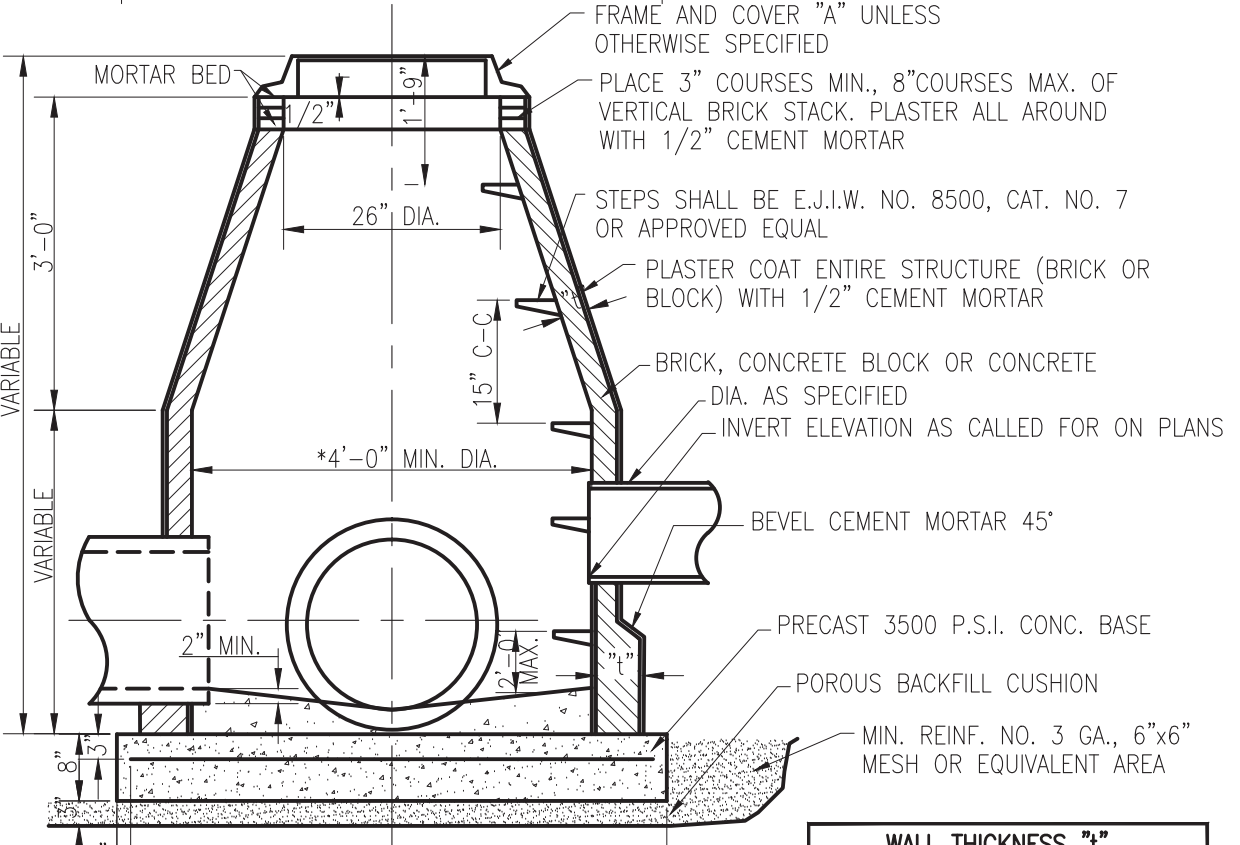
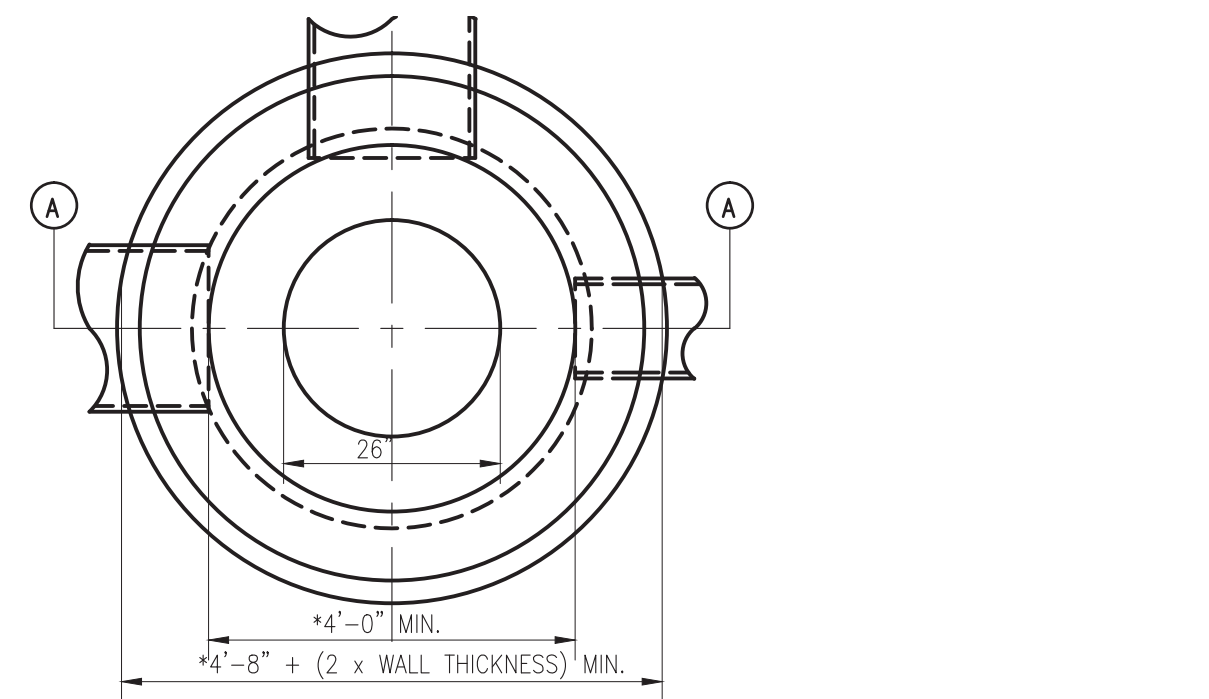
OF #



DEPTH	BRICK	CONCRETE OR BLOCK
0'-10"	8"	6"
10'-16"	12"	8"
16' & DEEPER	16"	12"

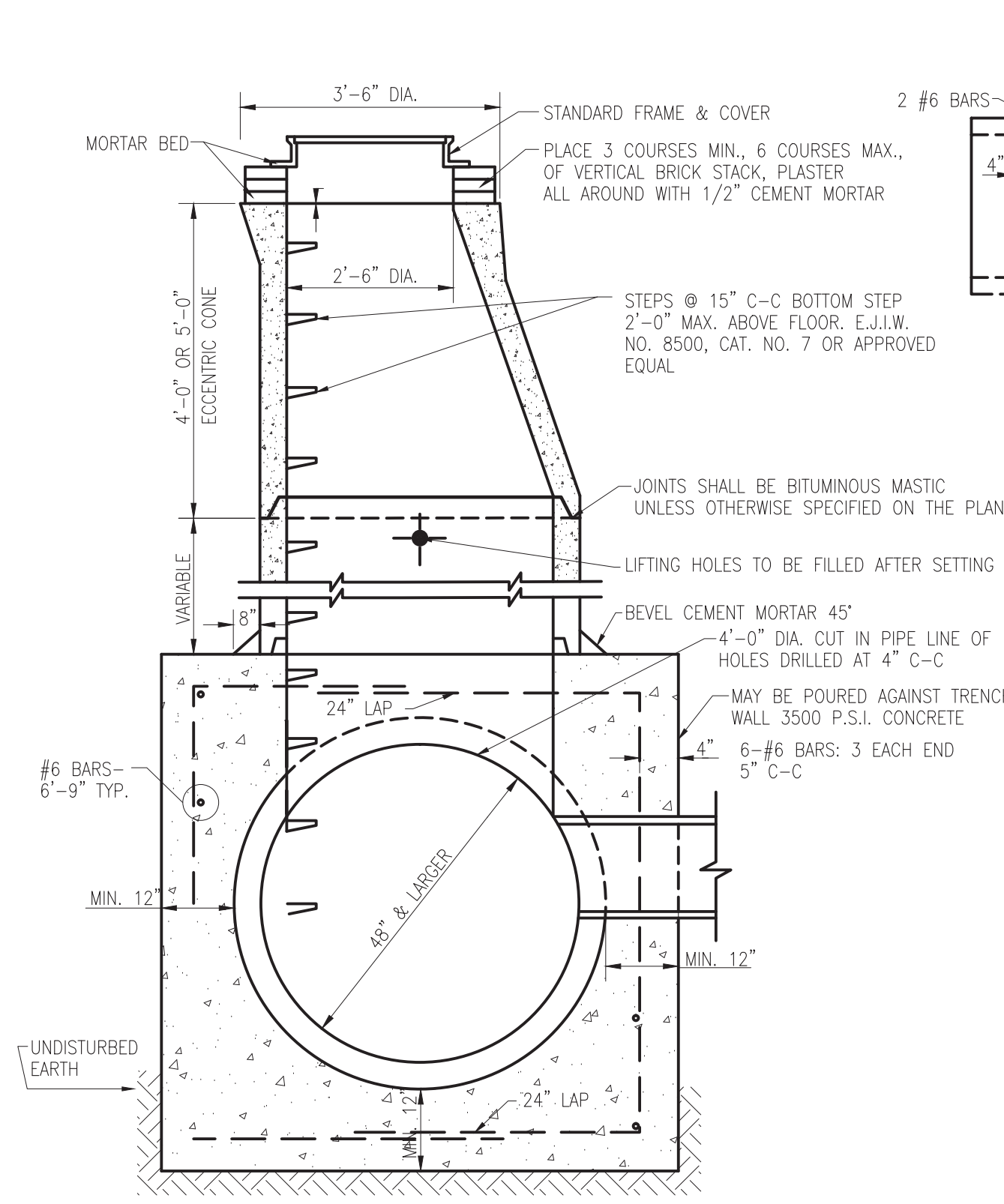


NOTES:
 1. MANHOLE "A" SHALL BE USED FOR MANHOLE STRUCTURES ON ALL STORM SEWERS WHERE THE DIAMETER OF OUTLET PIPE IS 24" OR SMALLER, UNLESS CALLED FOR OTHERWISE ON THE PLANS.
 *2. DIA. OF M.H. SHALL BE INCREASED AS SHOWN ON THE PLANS OR IN THE PROPOSAL DEPENDING ON THE DIAMETERS AND ANGLES OF THE SEWERS.



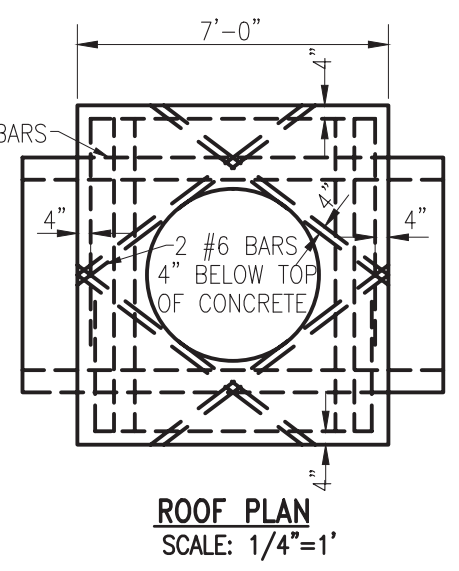
NOTES:
 1. MANHOLE "B" SHALL BE USED FOR MANHOLE STRUCTURES ON ALL STORM SEWERS WHERE THE DIAMETER OF OUTLET PIPE IS 24" OR SMALLER, UNLESS CALLED FOR OTHERWISE ON THE PLANS.
 *2. DIA. OF M.H. SHALL BE INCREASED AS SHOWN ON THE PLANS OR IN THE PROPOSAL DEPENDING ON THE DIAMETERS AND ANGLES OF THE SEWERS.

DEPTH	BRICK	CONCRETE OR BLOCK
0'-10"	8"	6"
10'-16"	12"	8"
16' & DEEPER	16"	12"



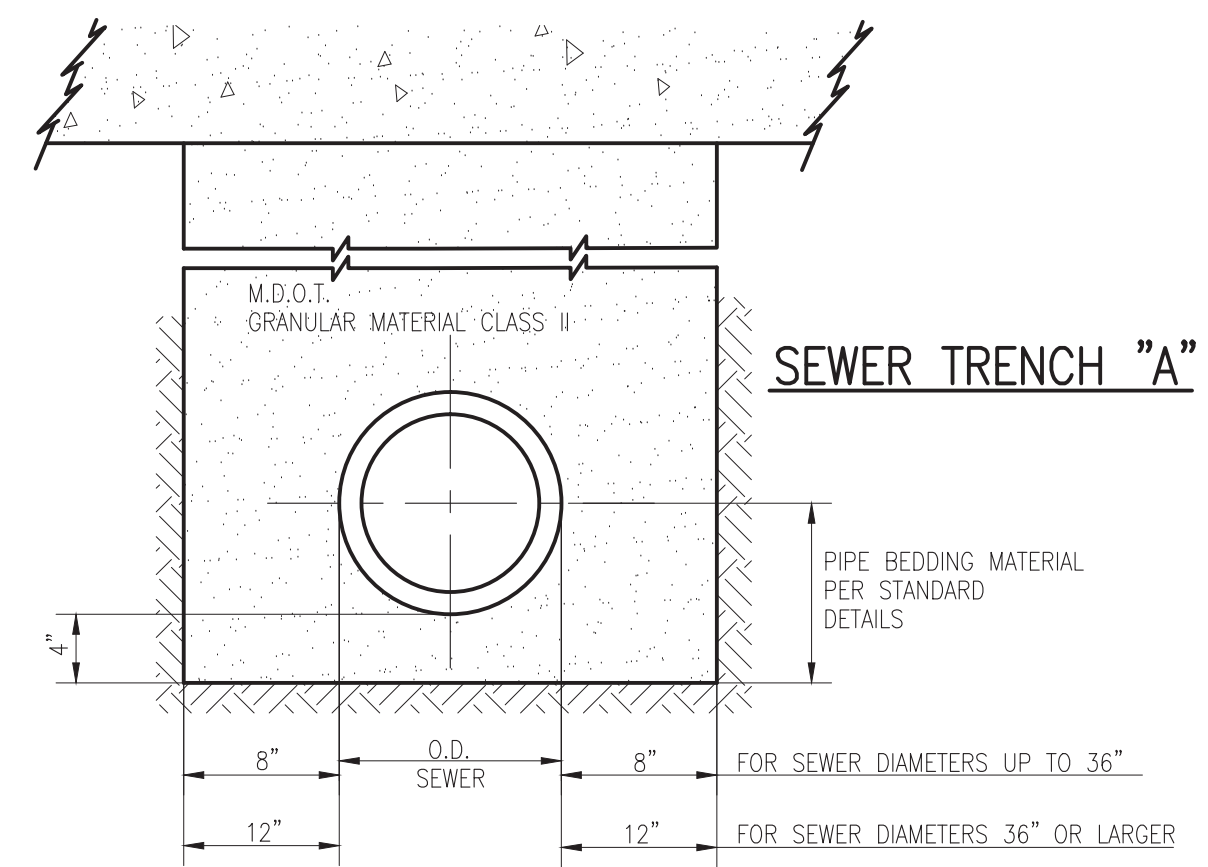
TYPICAL SECTION PRECAST MANHOLE "C"

NOTES:
 1. MANHOLE "C" SHALL BE USED FOR MANHOLE STRUCTURES ON ALL STORM SEWERS WHERE 48" OR LARGER DIA. PIPES INTERSECT.
 2. PRECAST UNITS SHALL MEET THE REQUIREMENTS SPECIFIED BY A.S.T.M. C-478-68.



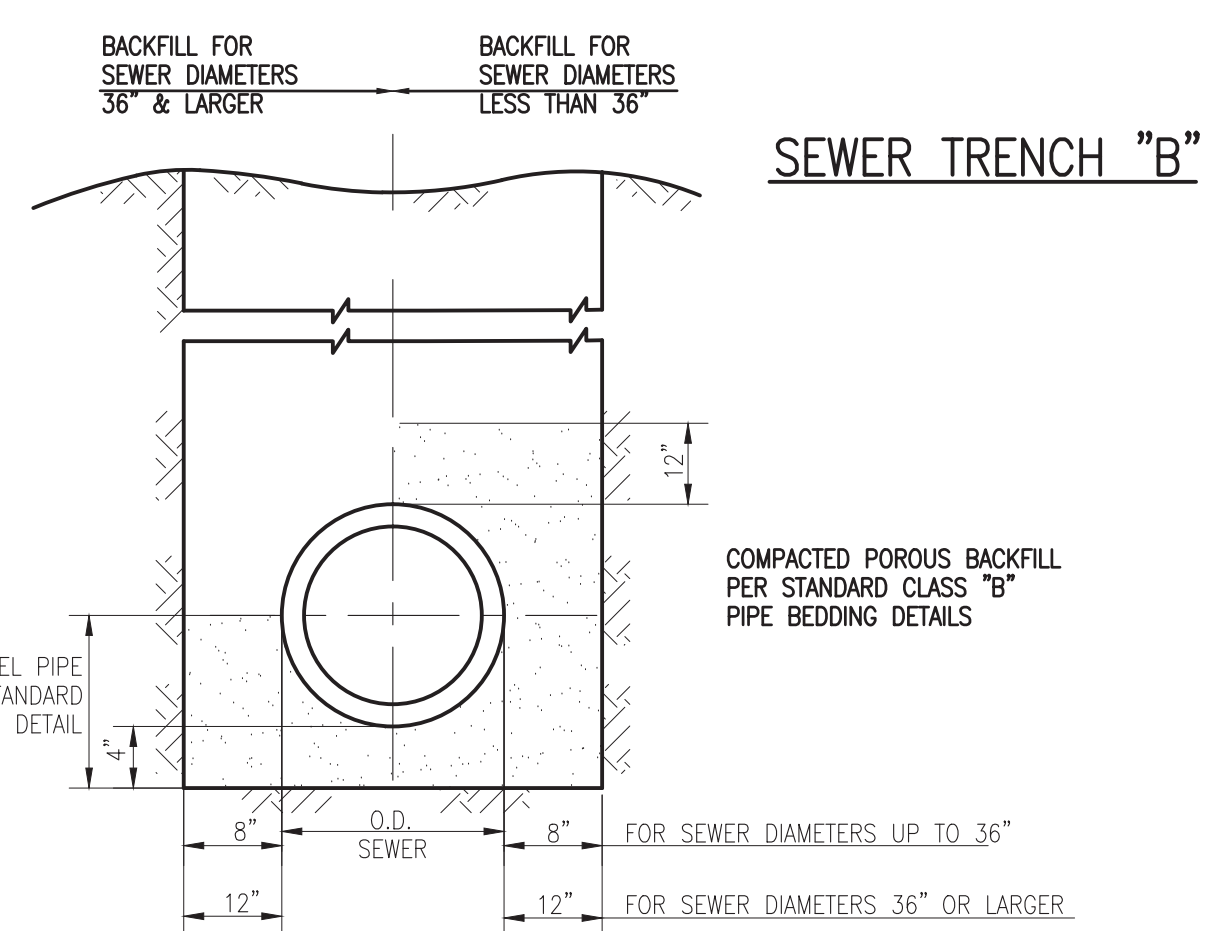
ROOF PLAN SCALE: 1/4"=1'

- 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.



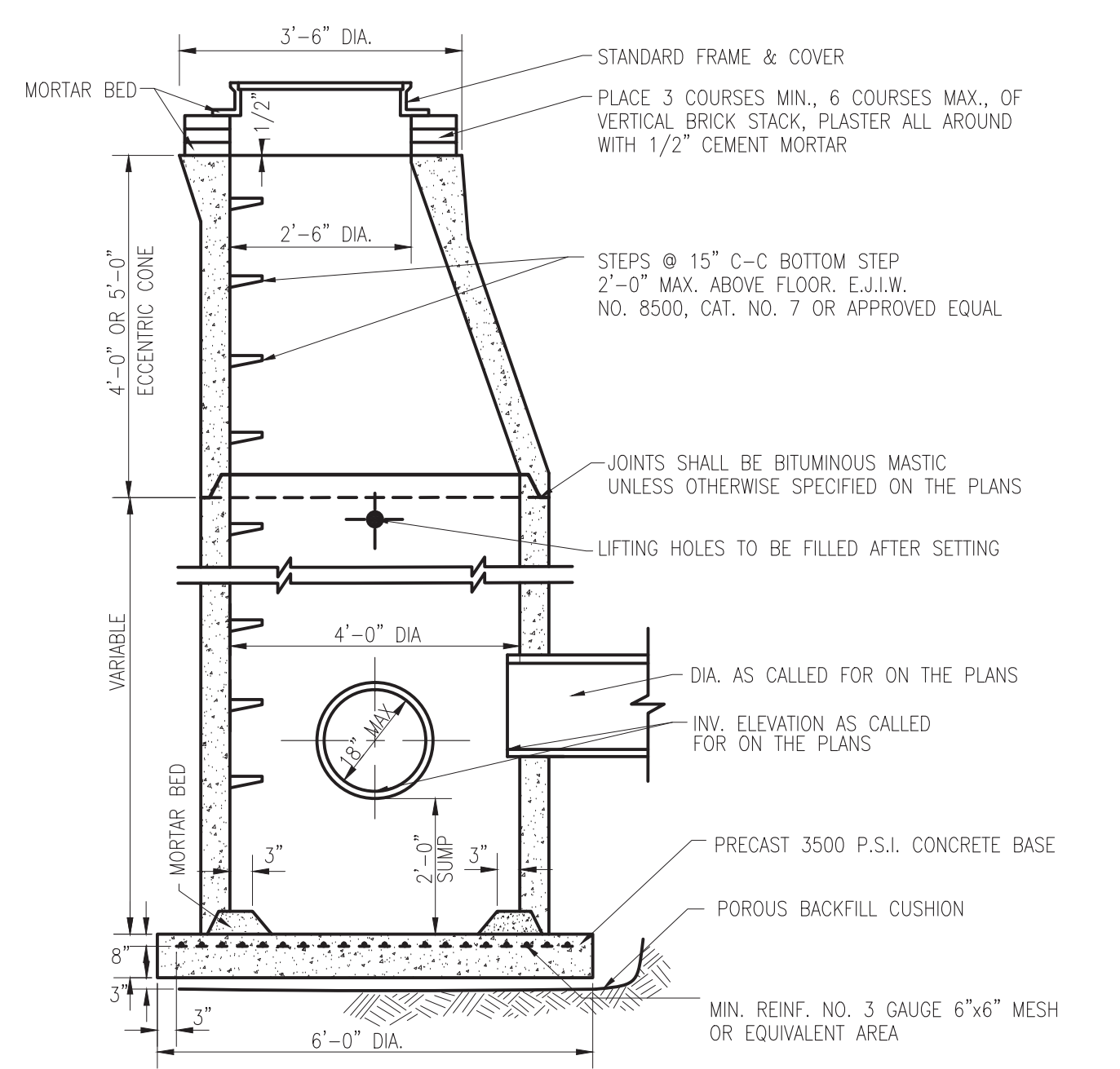
SEWER TRENCH "A"

- NOTES:**
 1. 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.
 2. 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.



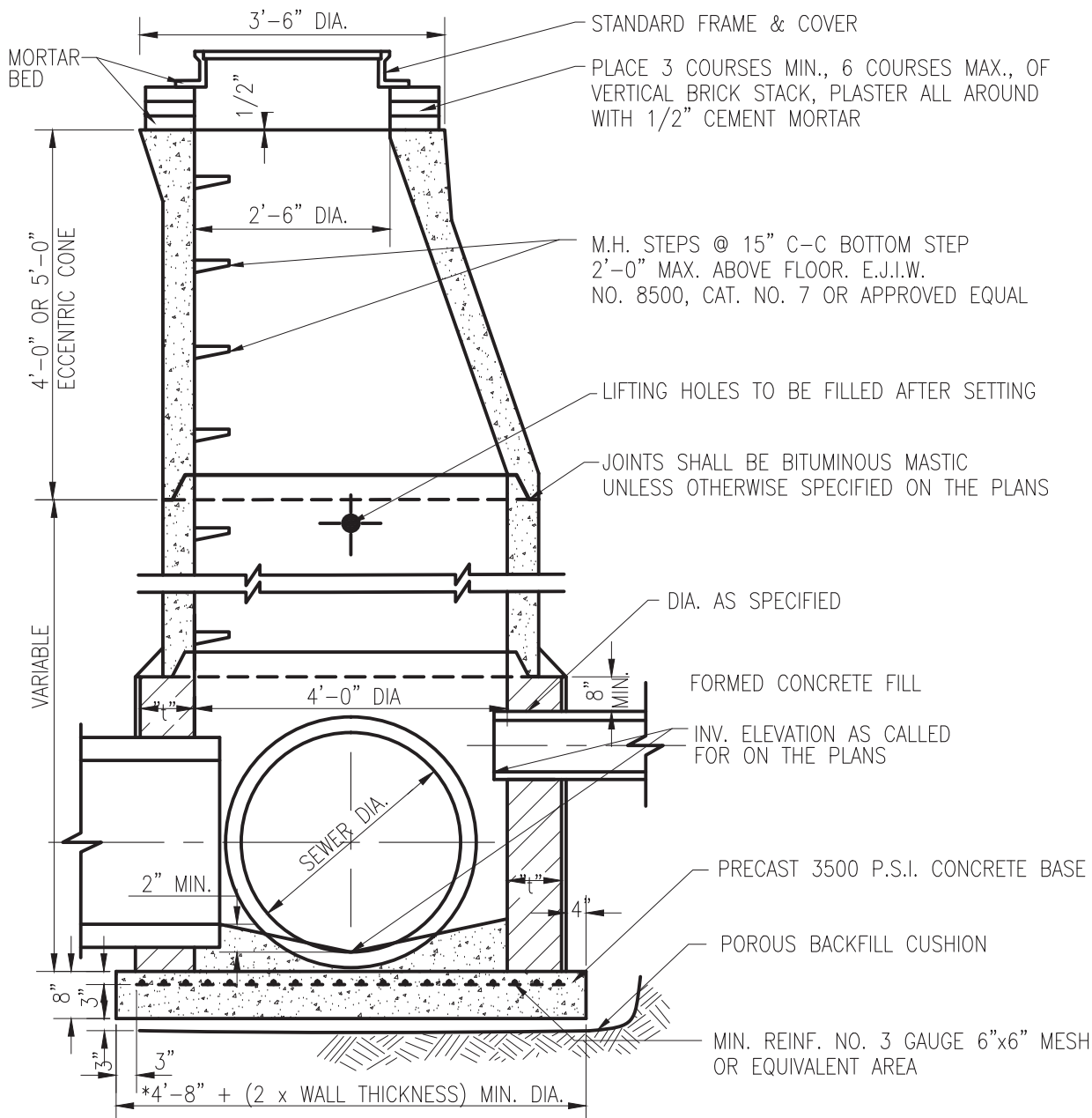
SEWER TRENCH "B"

- NOTES:**
 1. 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.
 2. TRENCH "B" SHALL BE USED UNDER CONDITIONS OTHER THAN SPECIFIED FOR TRENCH "A"



TYPICAL SECTION PRECAST MANHOLE "E"

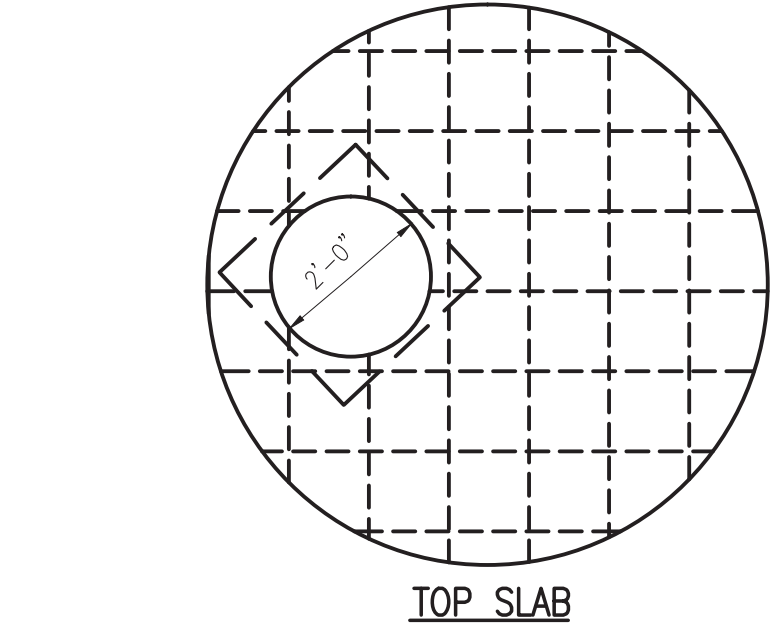
NOTES:
 1. THIS MANHOLE SHALL BE USED ONLY WHEN MEETING CONDITIONS STATED IN THE "GENERAL MANHOLE NOTES", ITEM NO. 2A
 2. PRECAST UNITS SHALL MEET THE REQUIREMENTS SPECIFIED BY A.S.T.M. C-478-68.



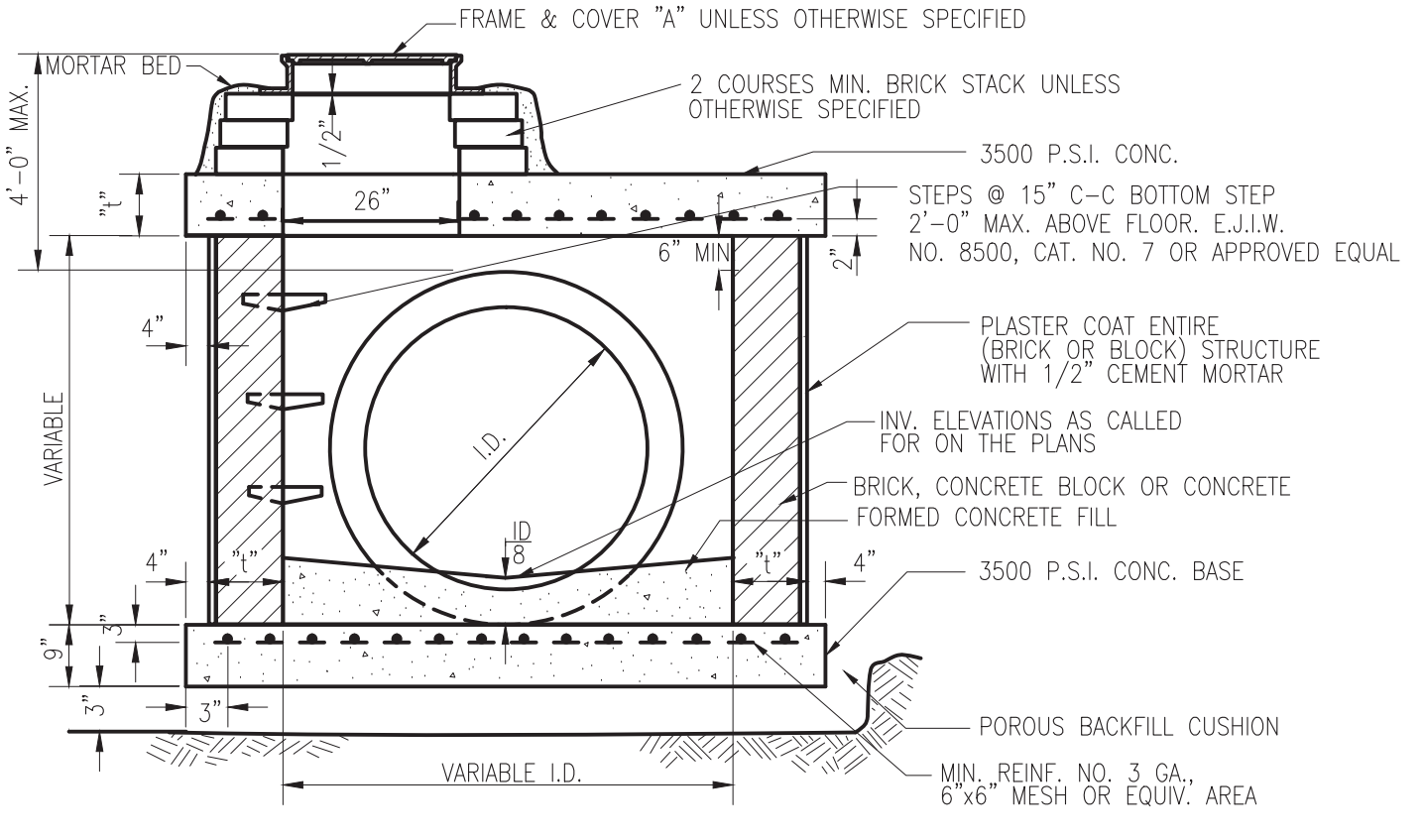
TYPICAL SECTION PRECAST MANHOLE "F"

NOTES:
 1. THIS MANHOLE SHALL BE USED ONLY WHEN MEETING CONDITIONS STATED IN THE "GENERAL MANHOLE NOTES", ITEM NO. 2A
 2. PRECAST UNITS SHALL MEET THE REQUIREMENTS SPECIFIED BY A.S.T.M. C-478-68.
 *3. DIAMETER OF MANHOLE SHALL BE INCREASED AS SHOWN ON 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"



TOP SLAB



TYPICAL SECTION MANHOLE "D"

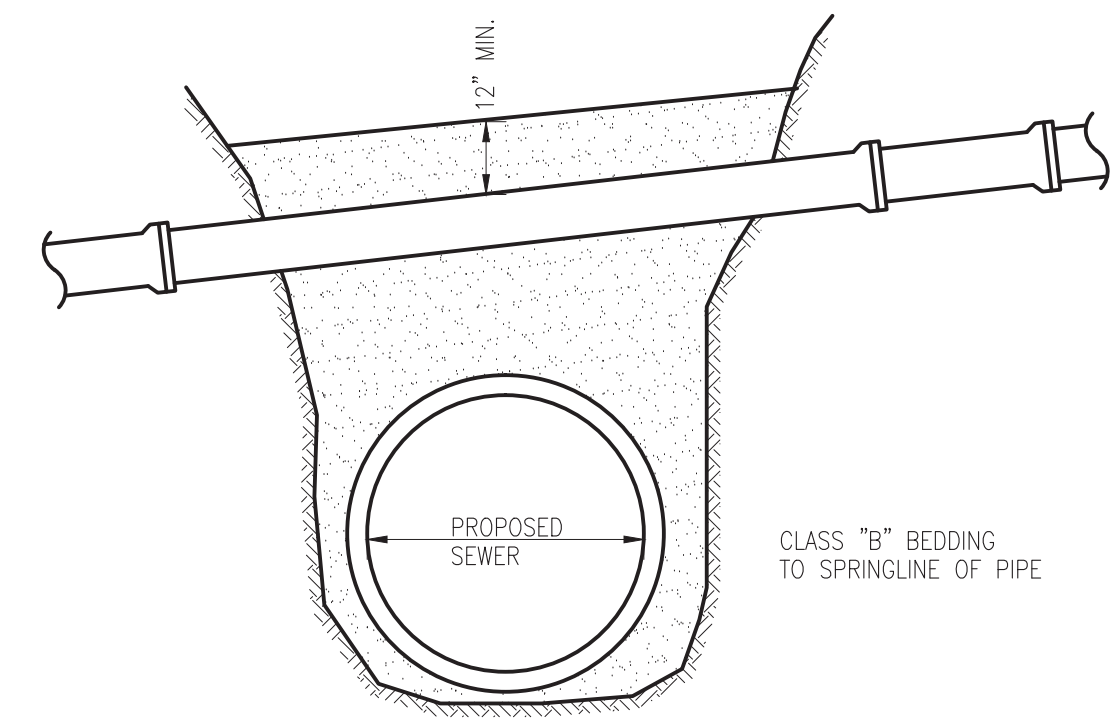
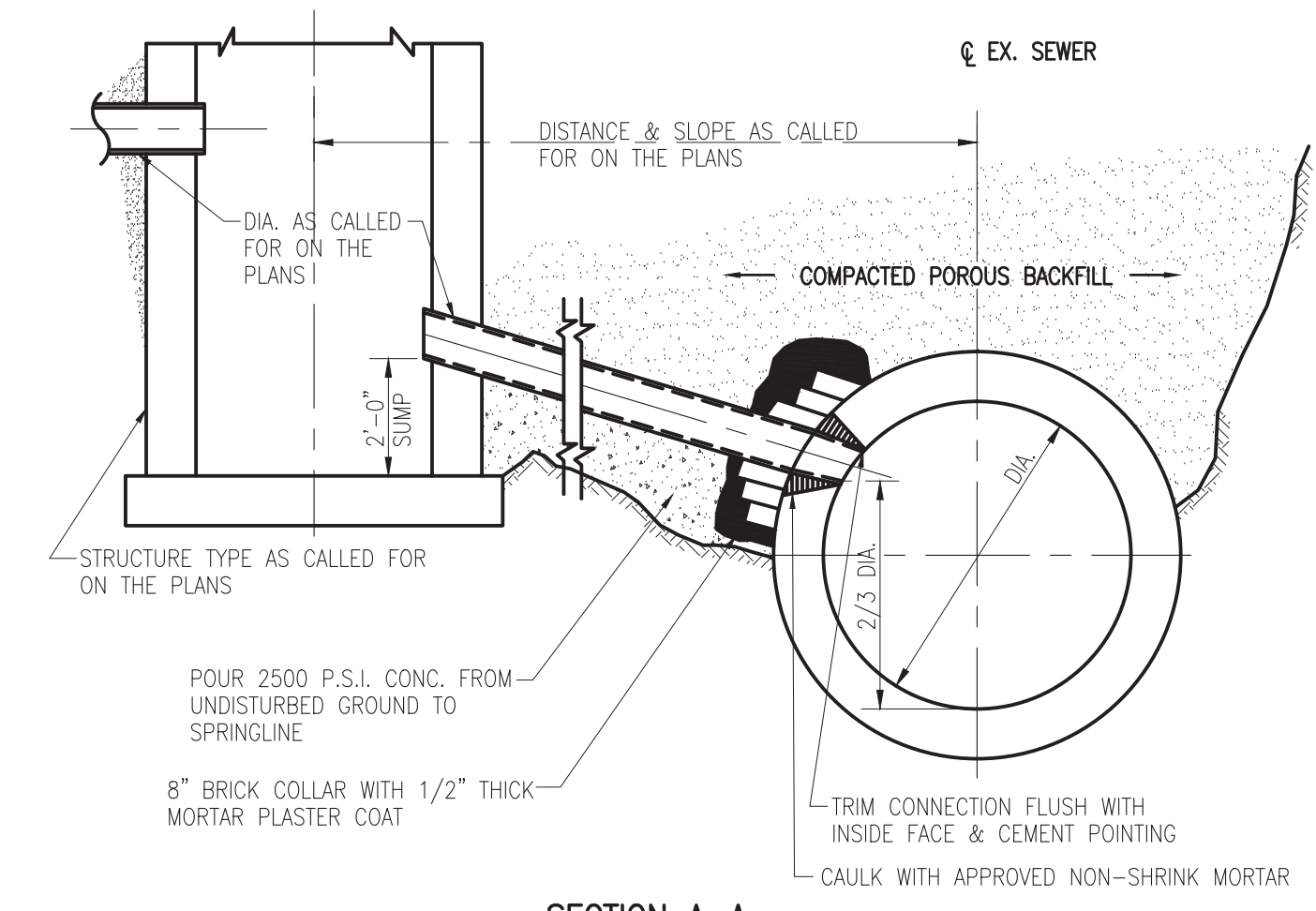
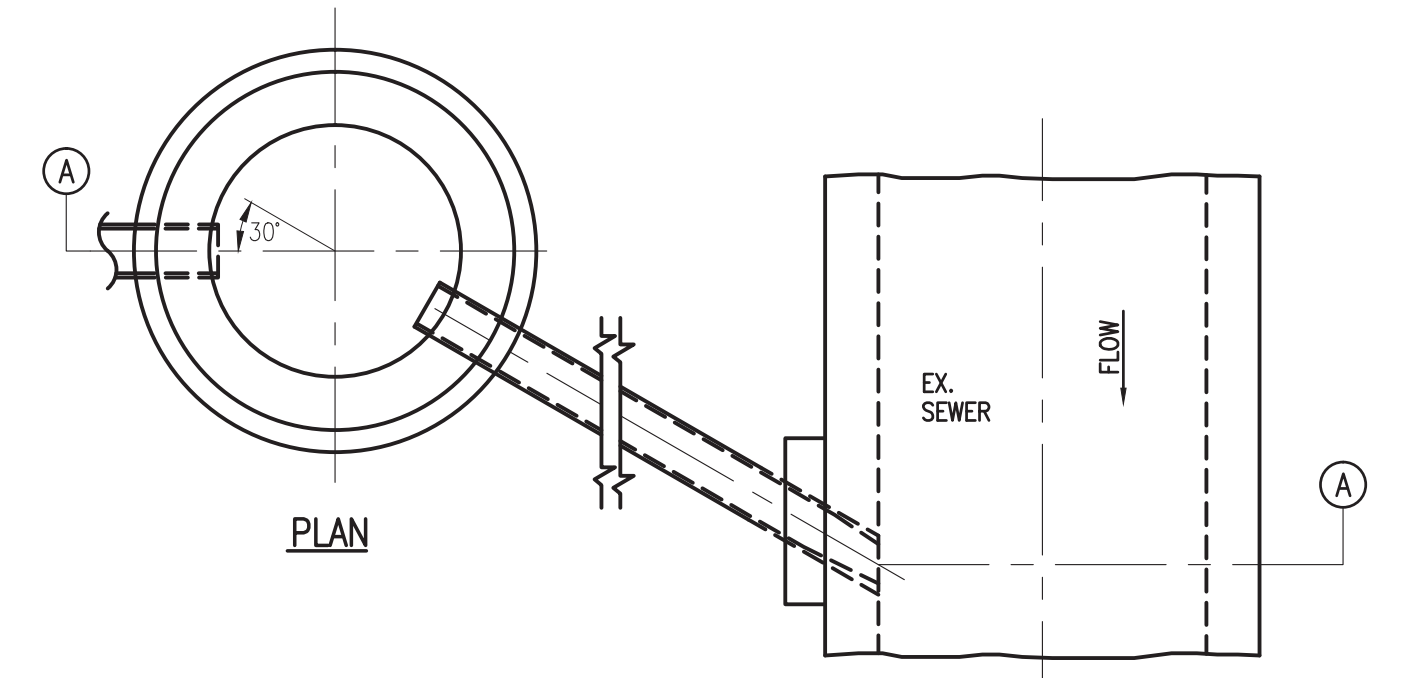
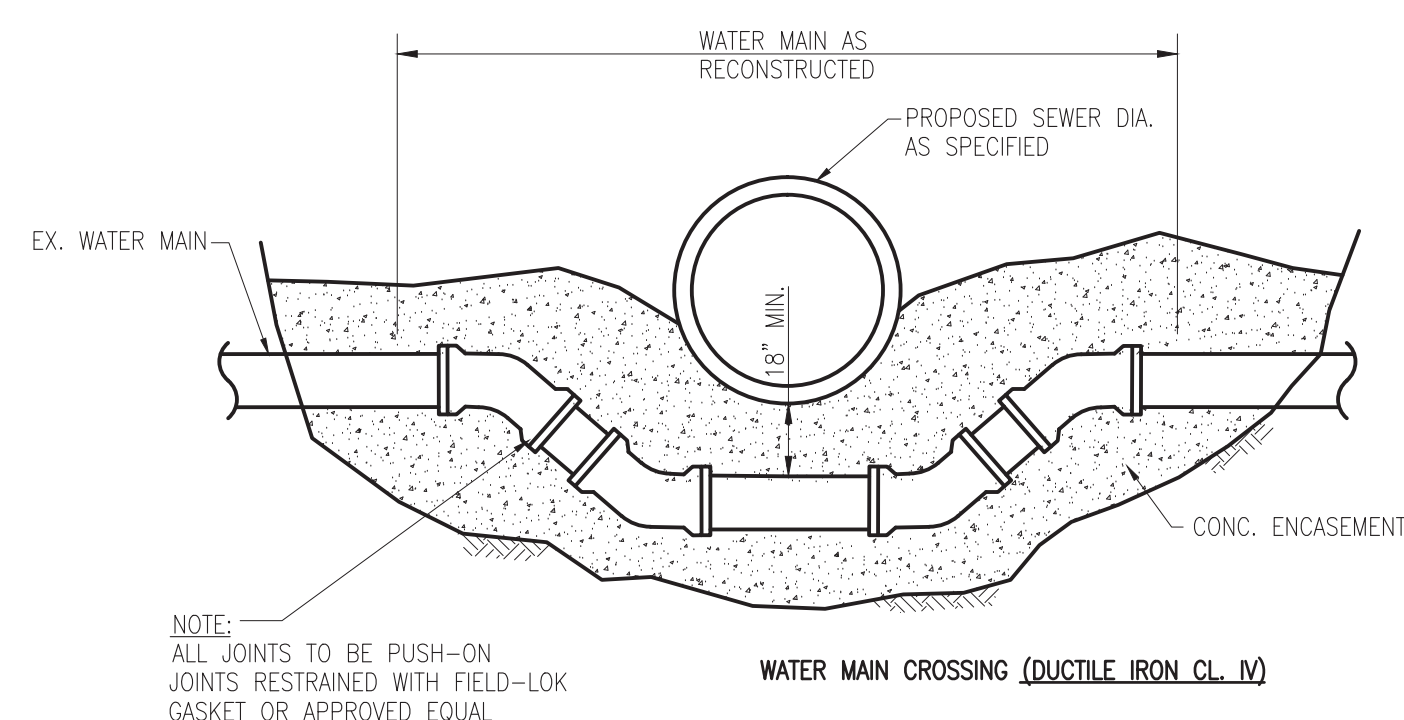
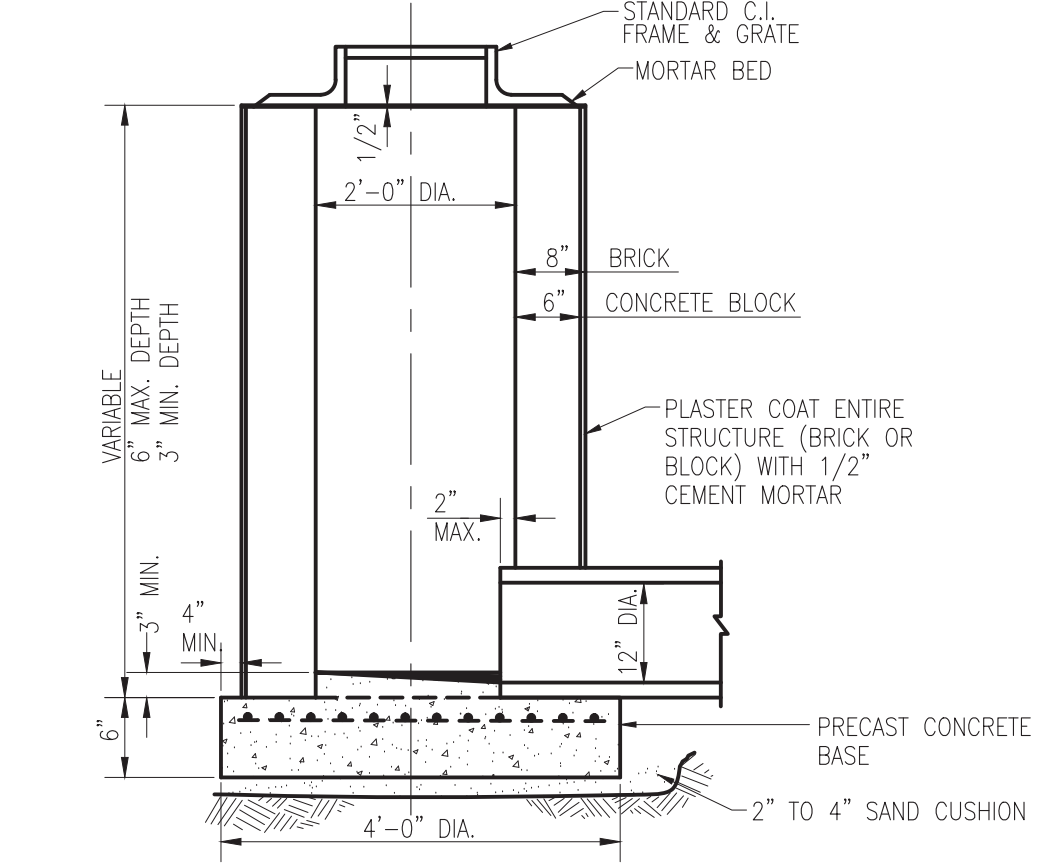
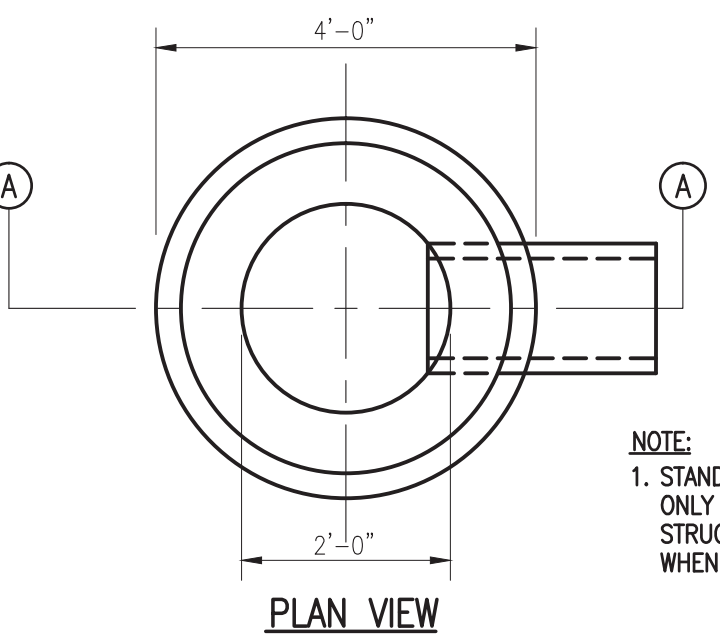
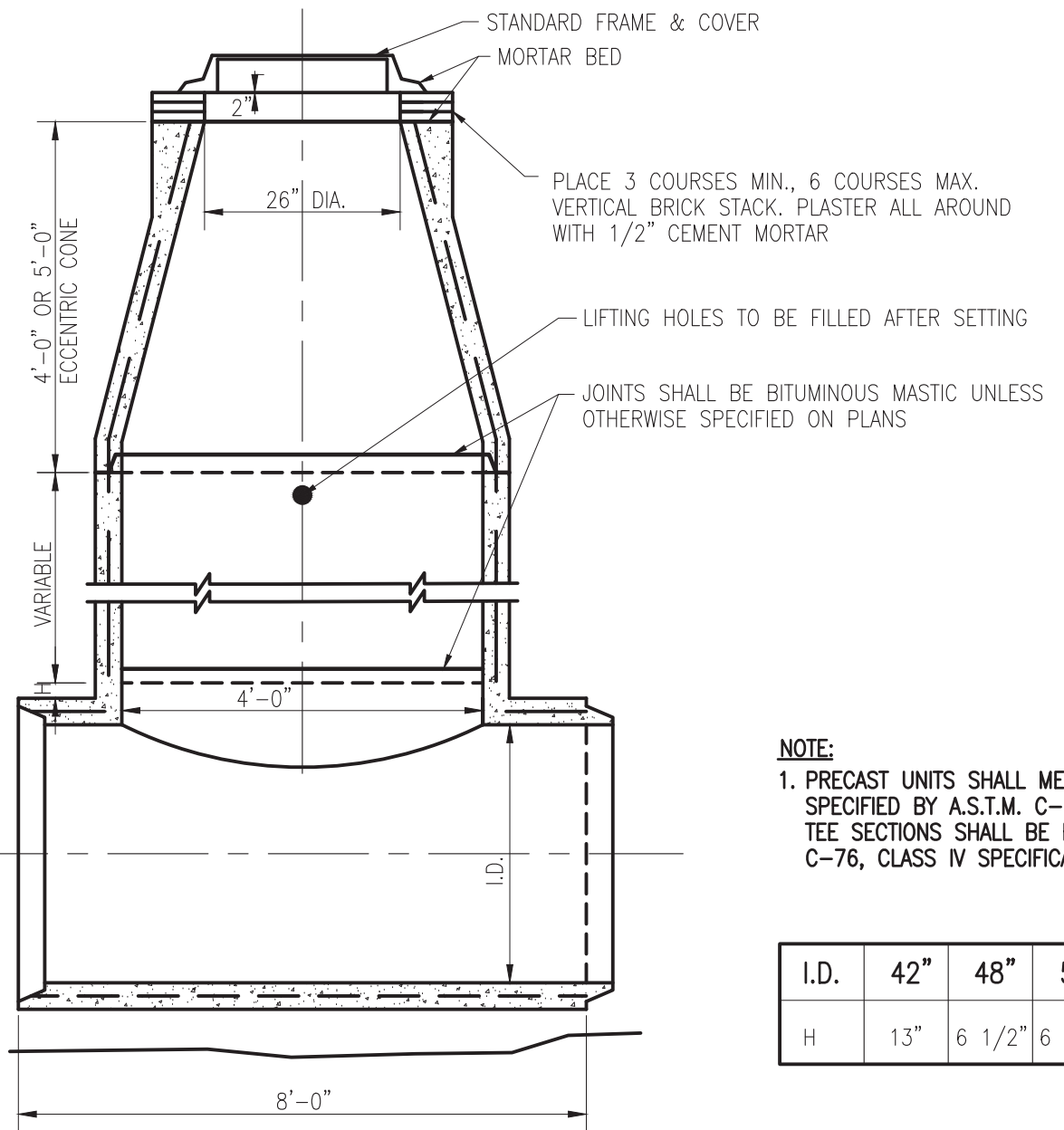
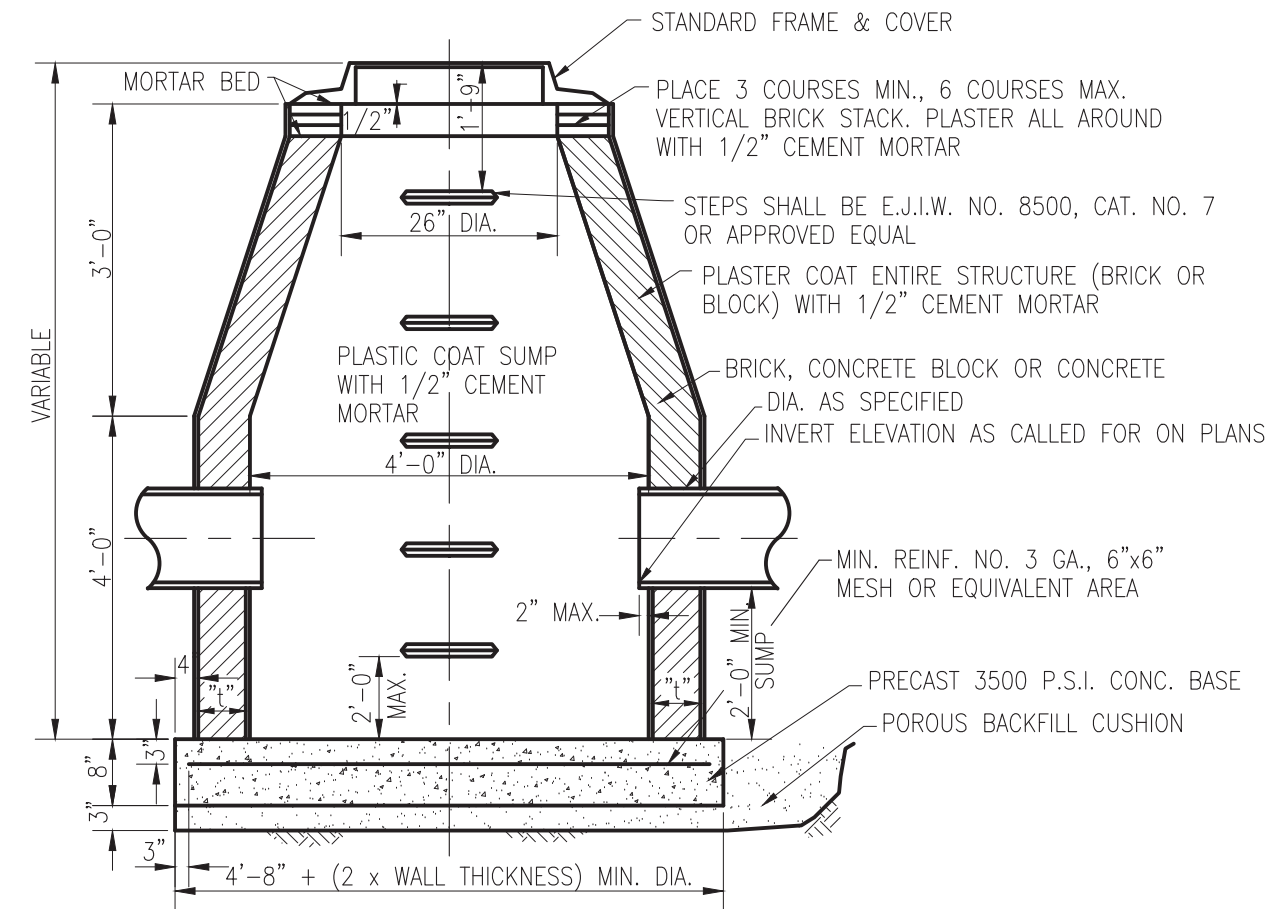
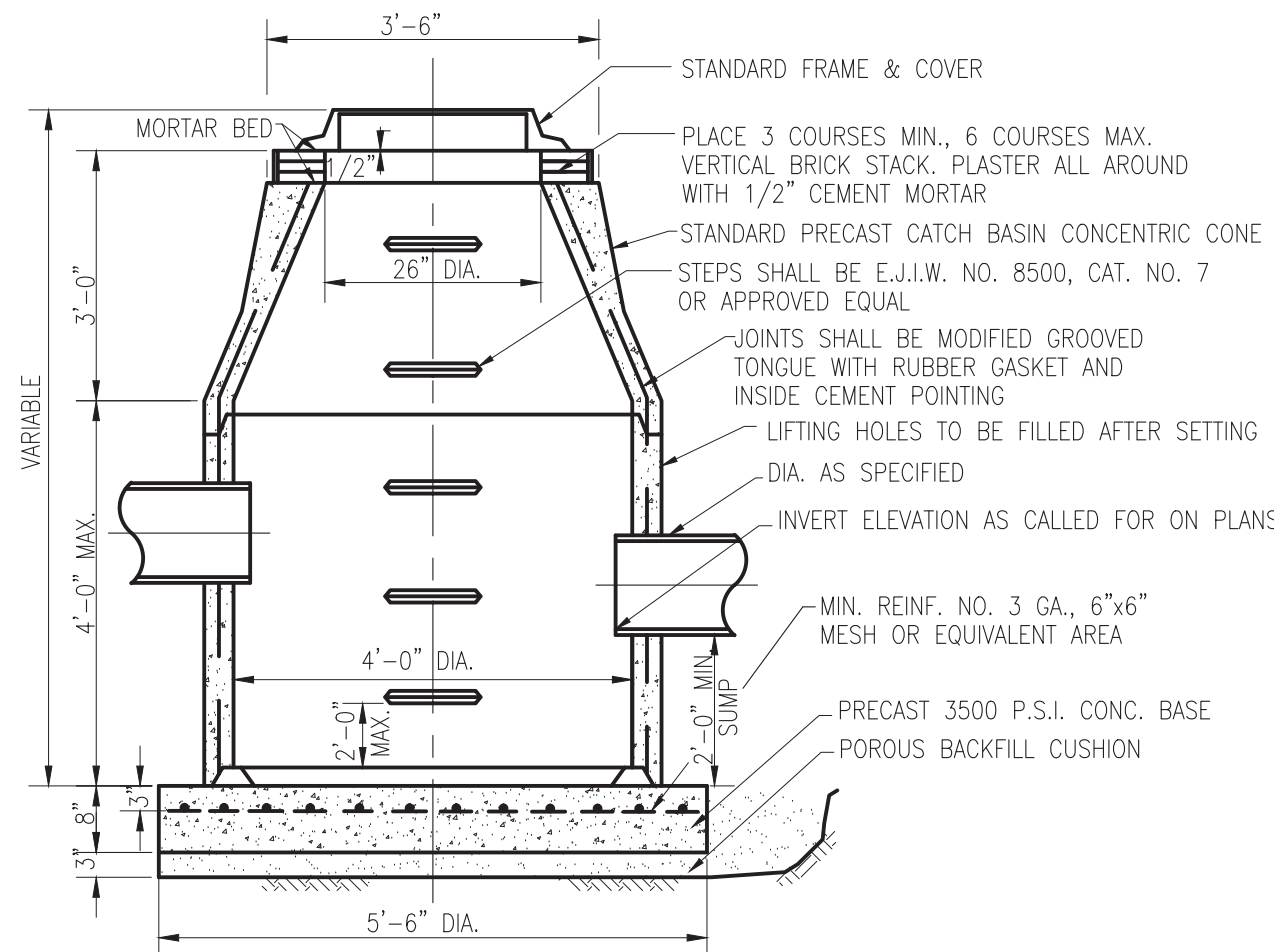
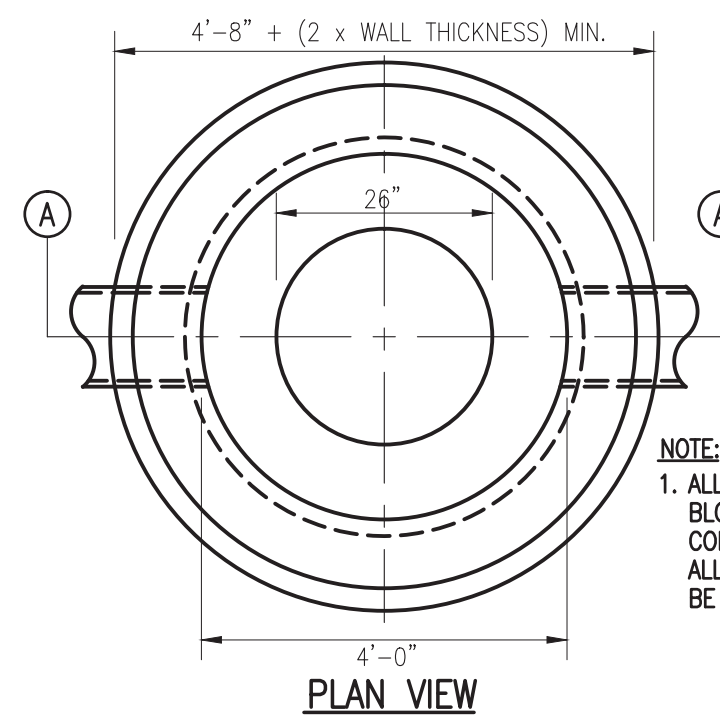
OUTLET I.D.	M.H. D	TOP SLAB T	WALLS T	REINFORCING STEEL (SLAB)
24" OR LESS	4'-0"	9"	8"	3/4" @ 9" EACH WAY
30"	4'-0"	9"	8"	3/4" @ 9" EACH WAY
36"	4'-0"	9"	12"	3/4" @ 9" EACH WAY
42"	4'-0"	10"	12"	3/4" @ 9" EACH WAY
48"	4'-0"	11"	12"	7/8" @ 9" EACH WAY
54"	4'-0"	11"	12"	7/8" @ 9" EACH WAY

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:
 *1. DIA. SHALL BE INCREASED AS SHOWN ON PLANS OR IN THE PROPOSAL DEPENDING ON THE ANGLE OF THE SEWERS.
 2. 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.

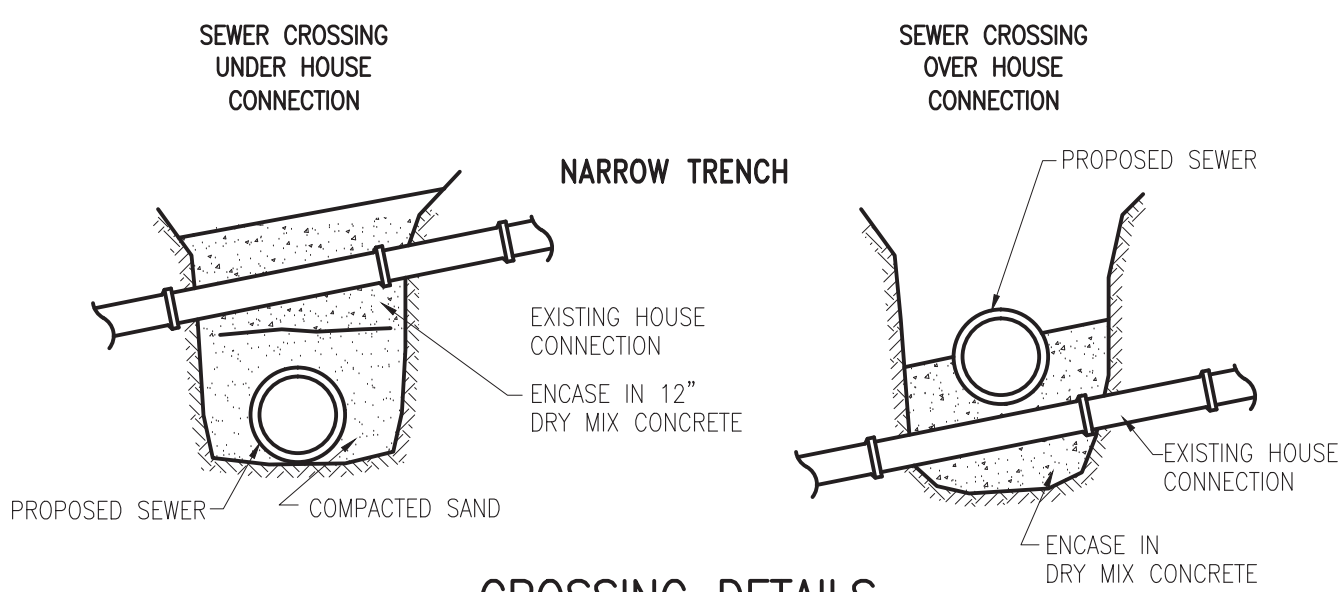
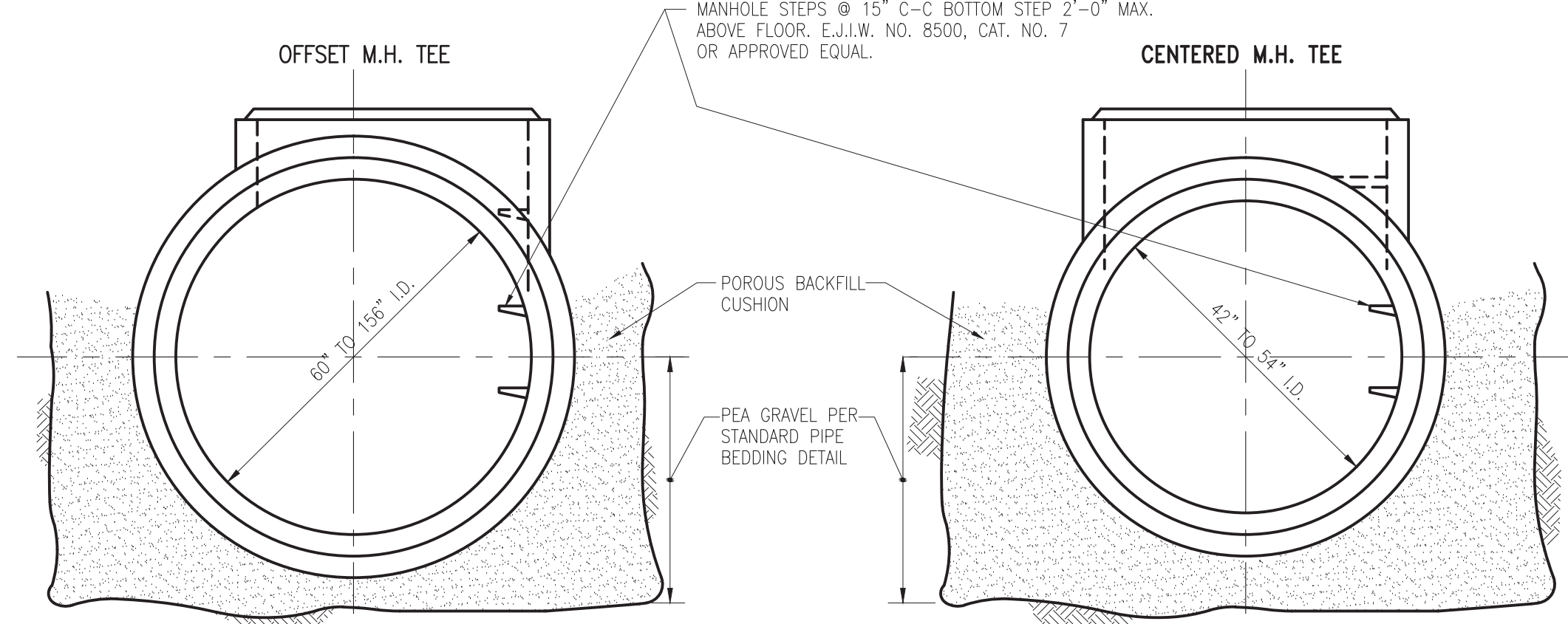
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DATE	CADD	ENG. ARCH	PROJ. MGR	SECTION	TOWN	RANGE	COUNTY	CITY/TOWNSHIP	SCALE	VERT. DATUM



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"

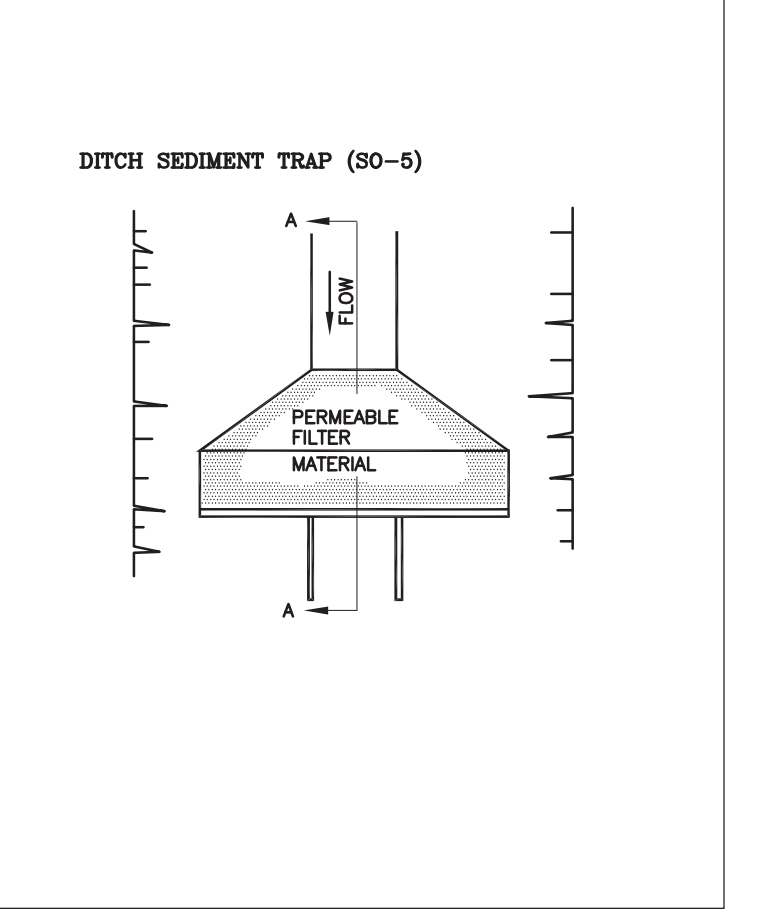
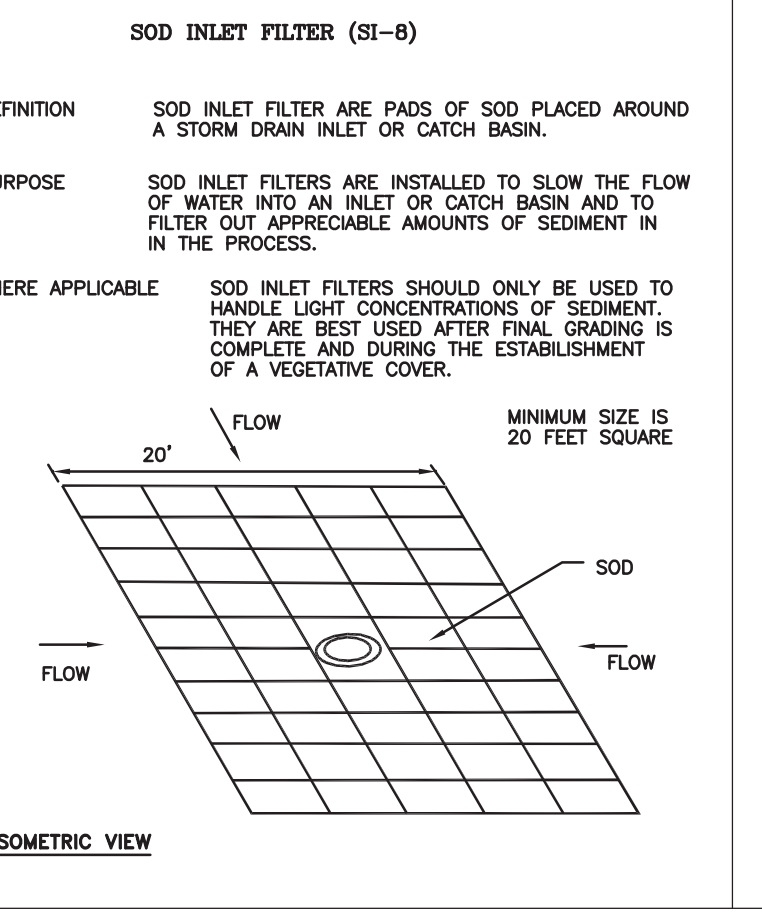
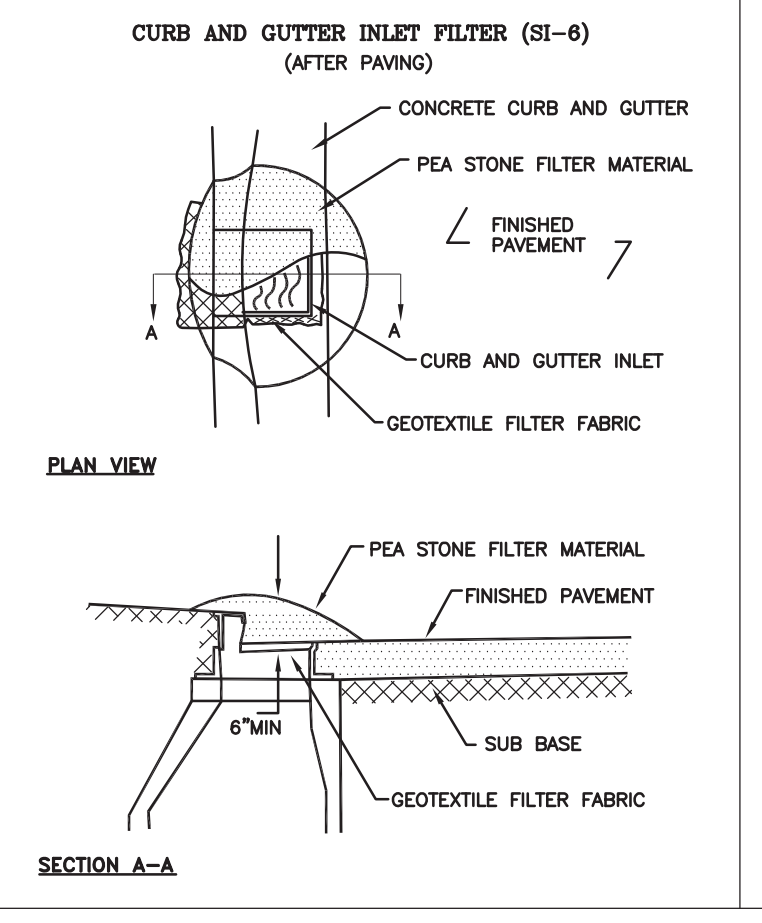
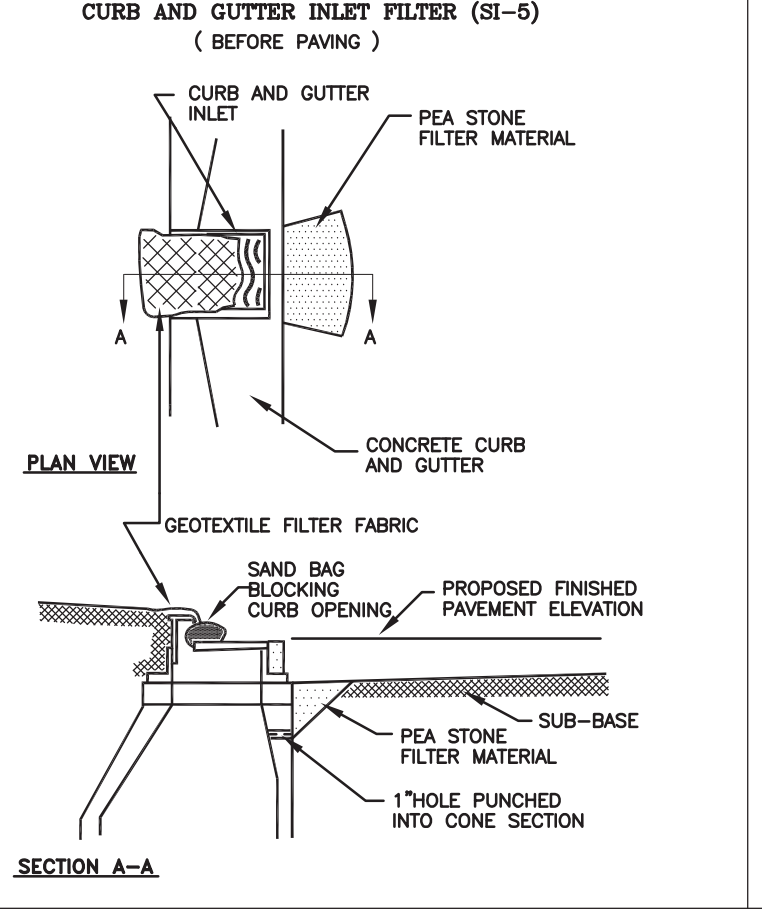
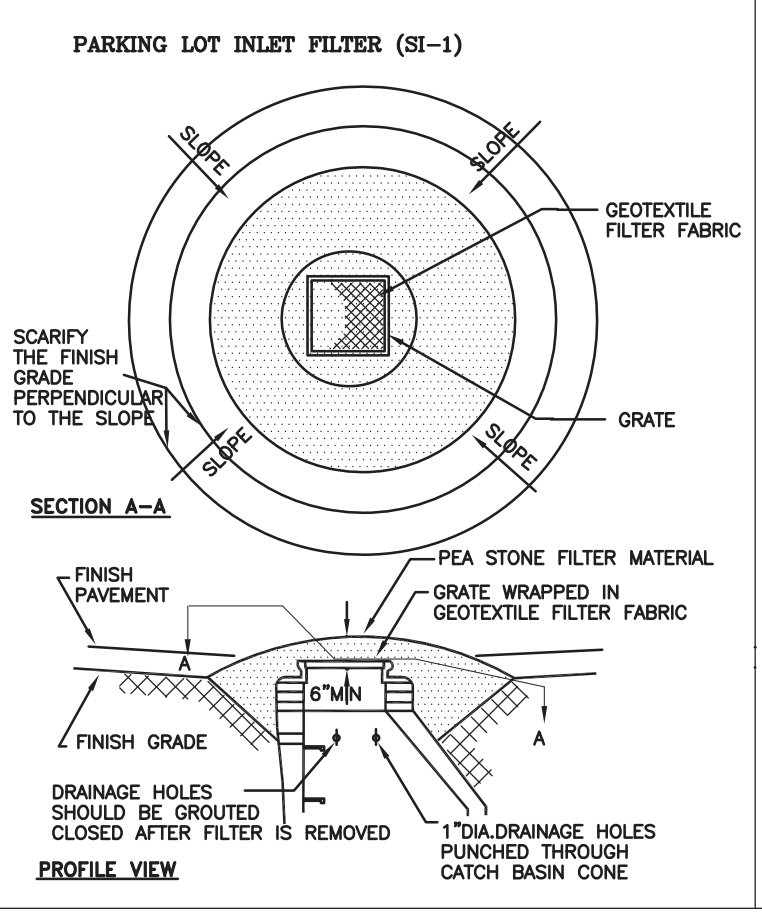
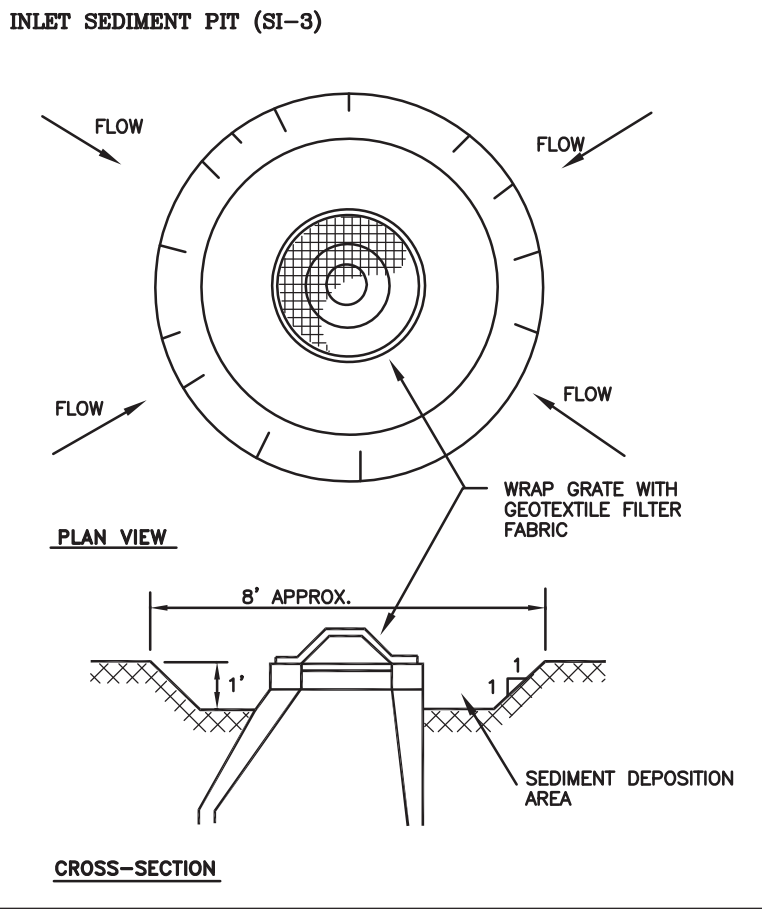
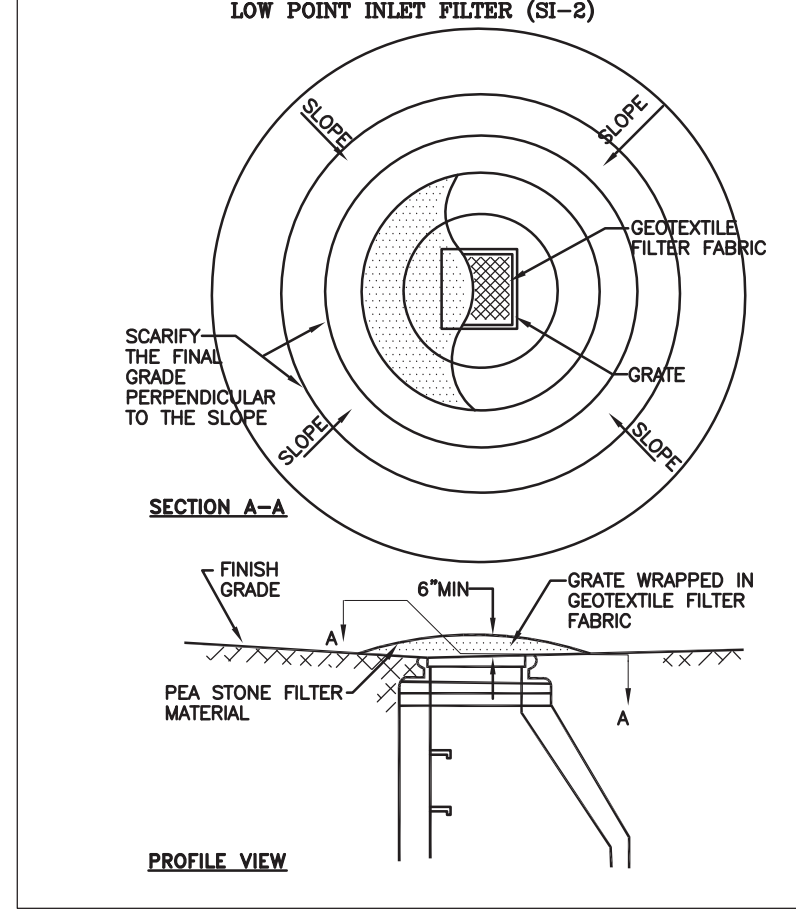
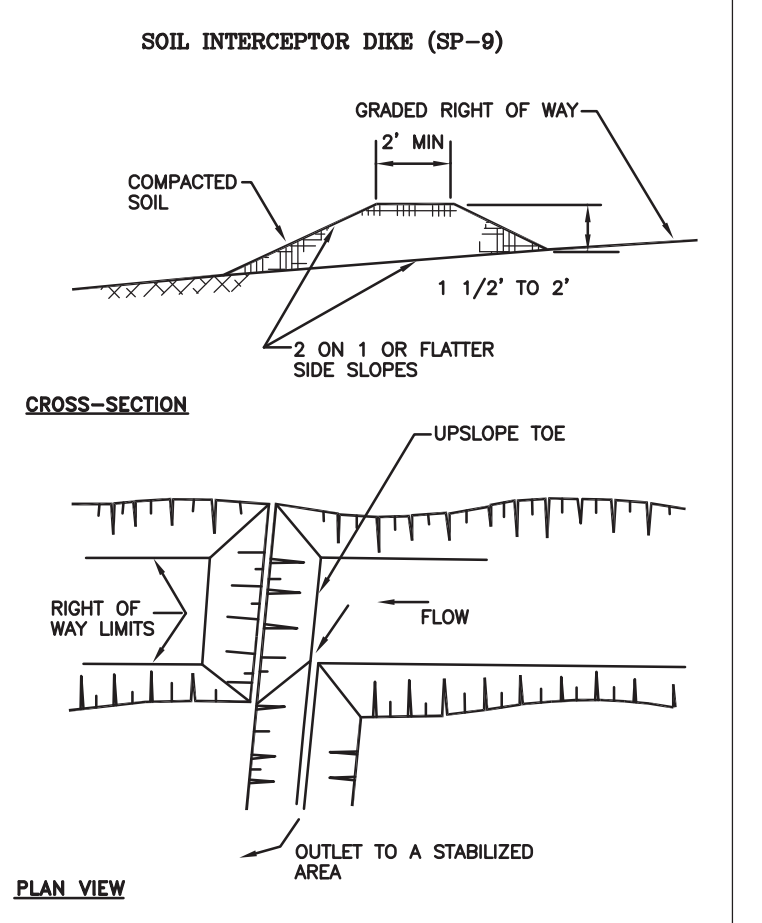
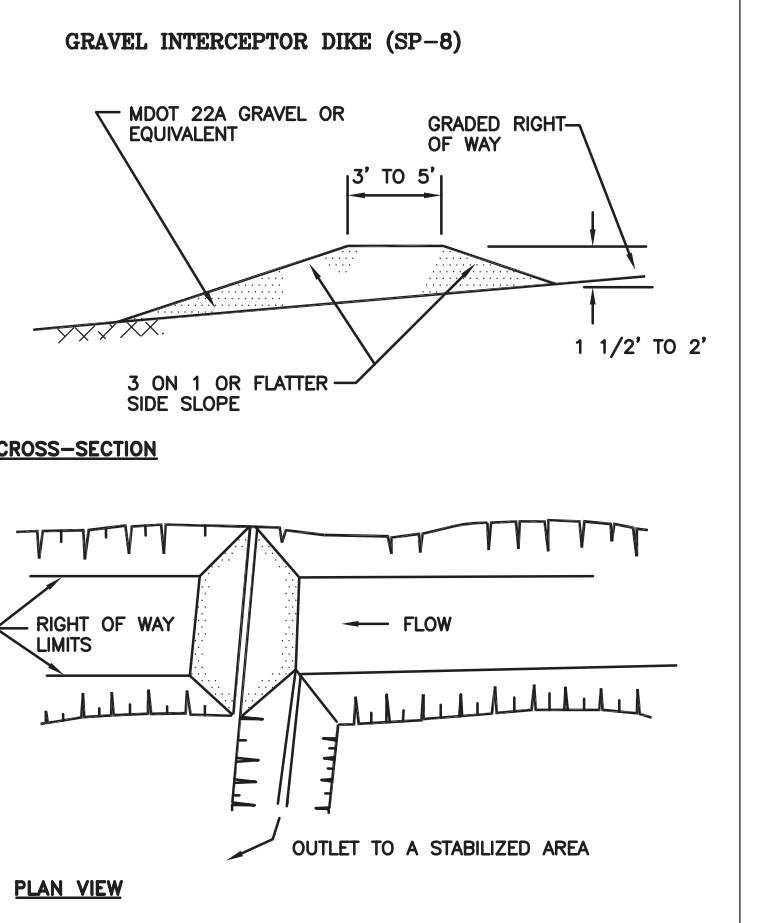
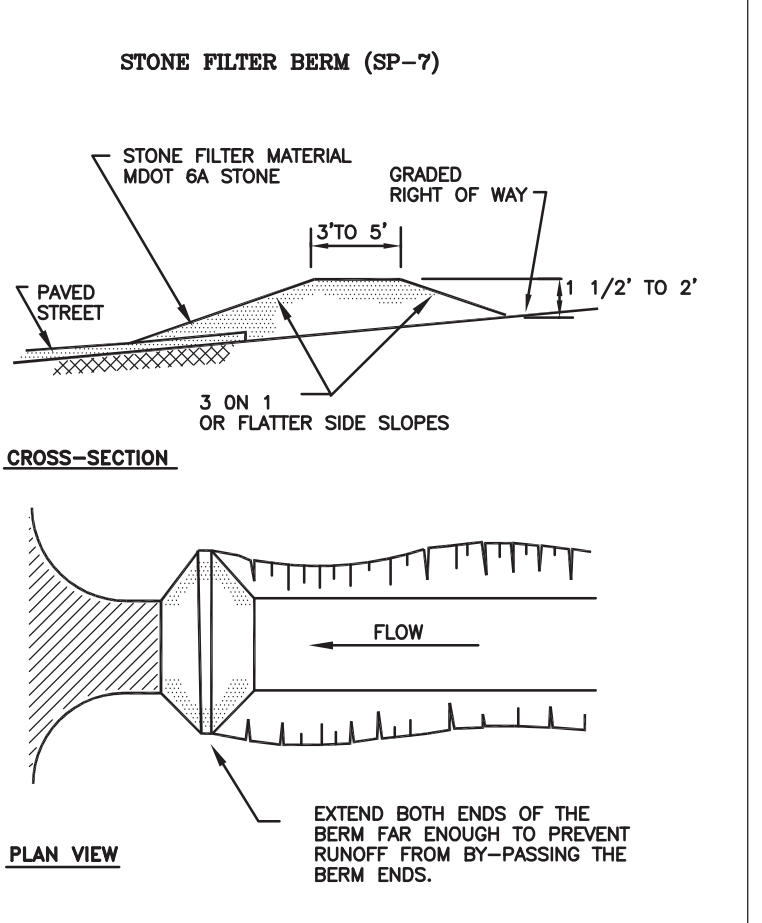
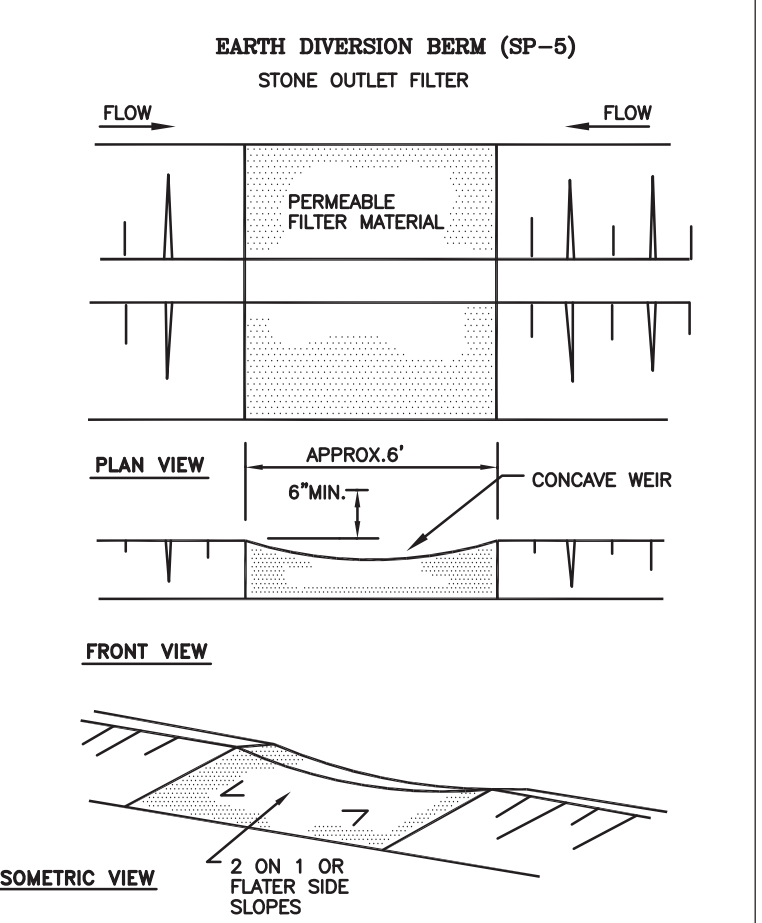
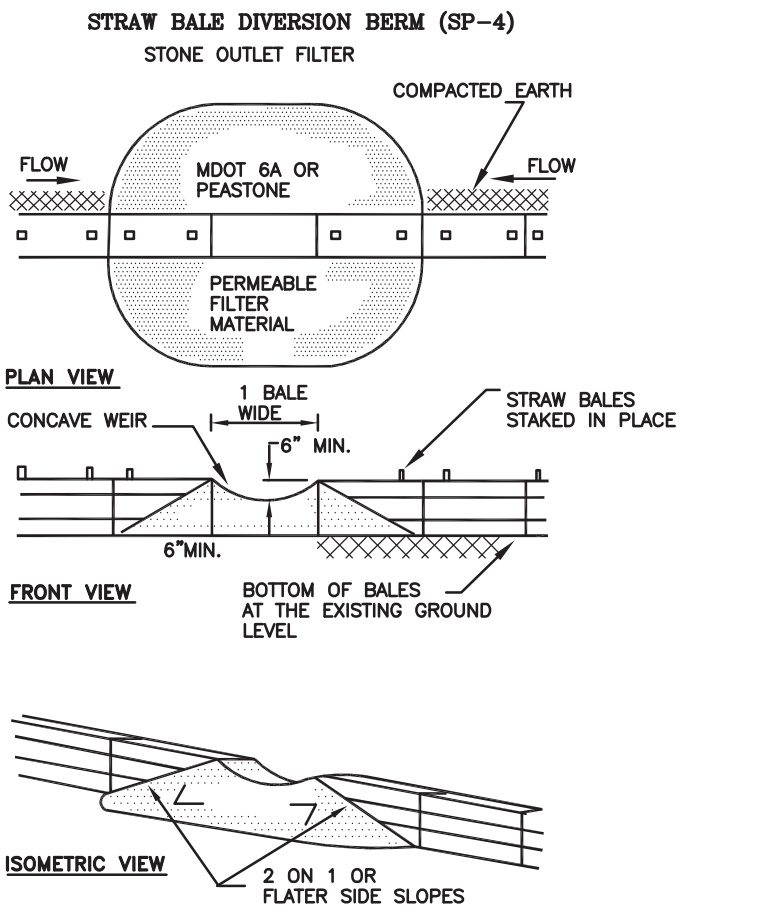
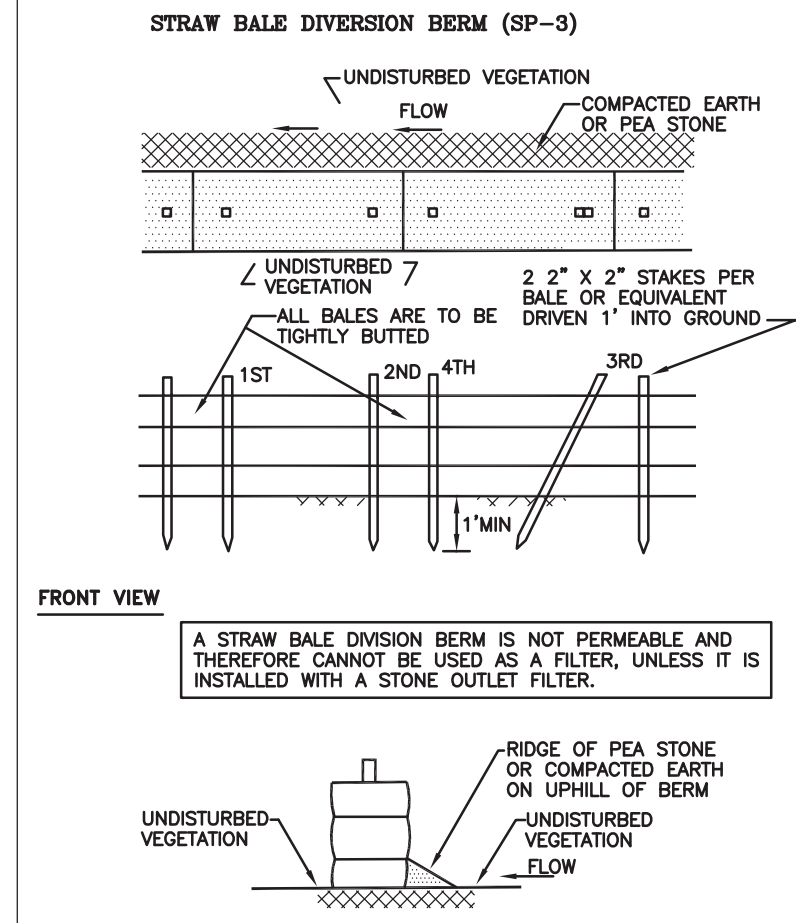
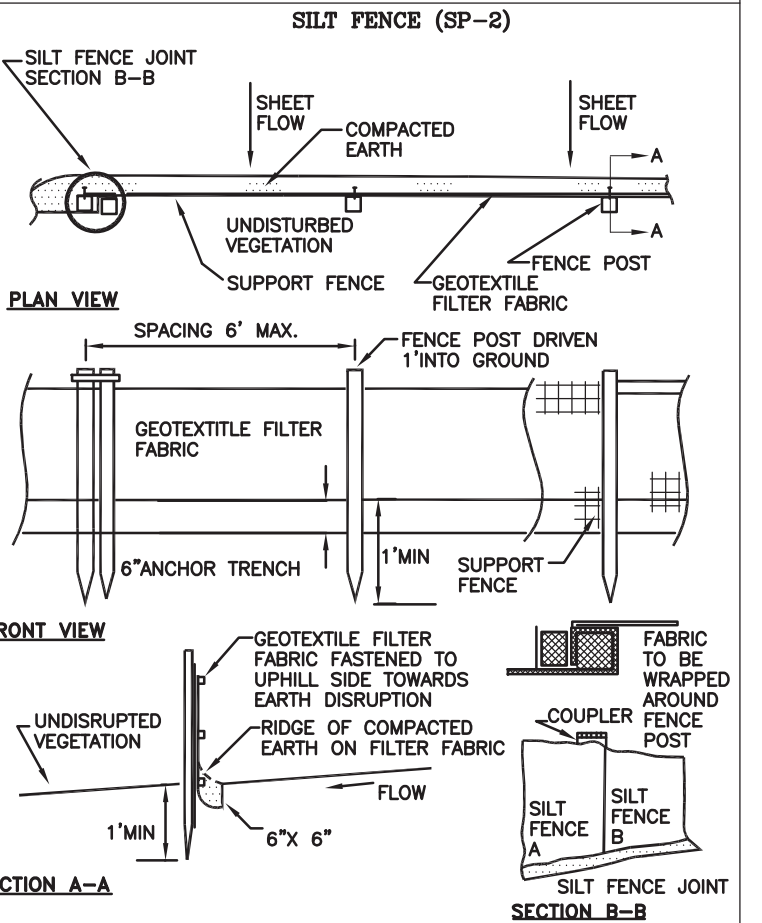
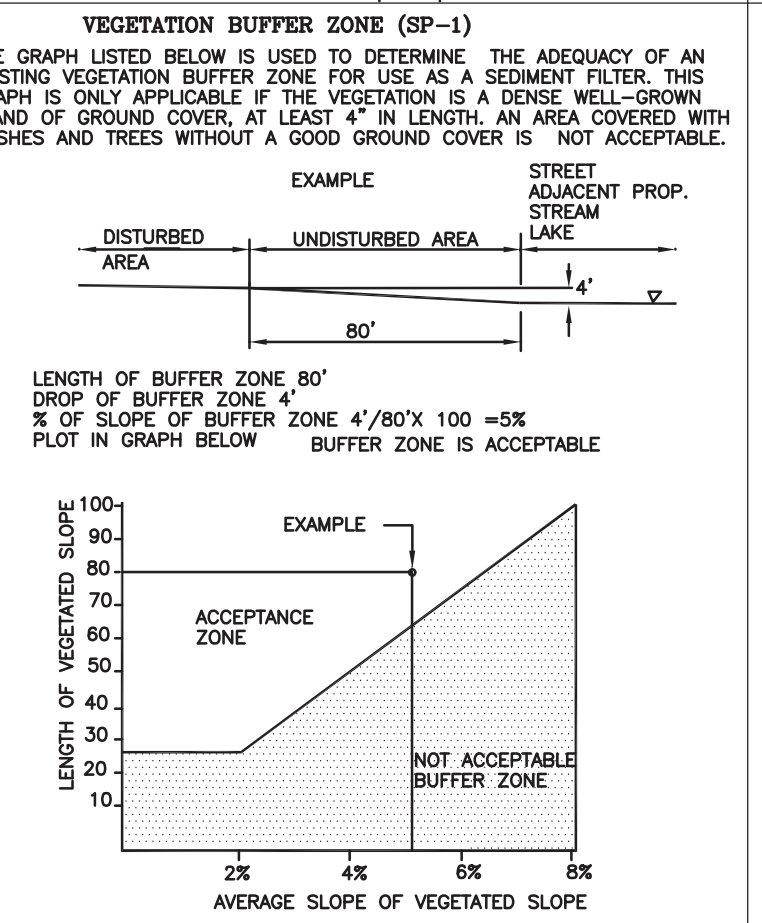
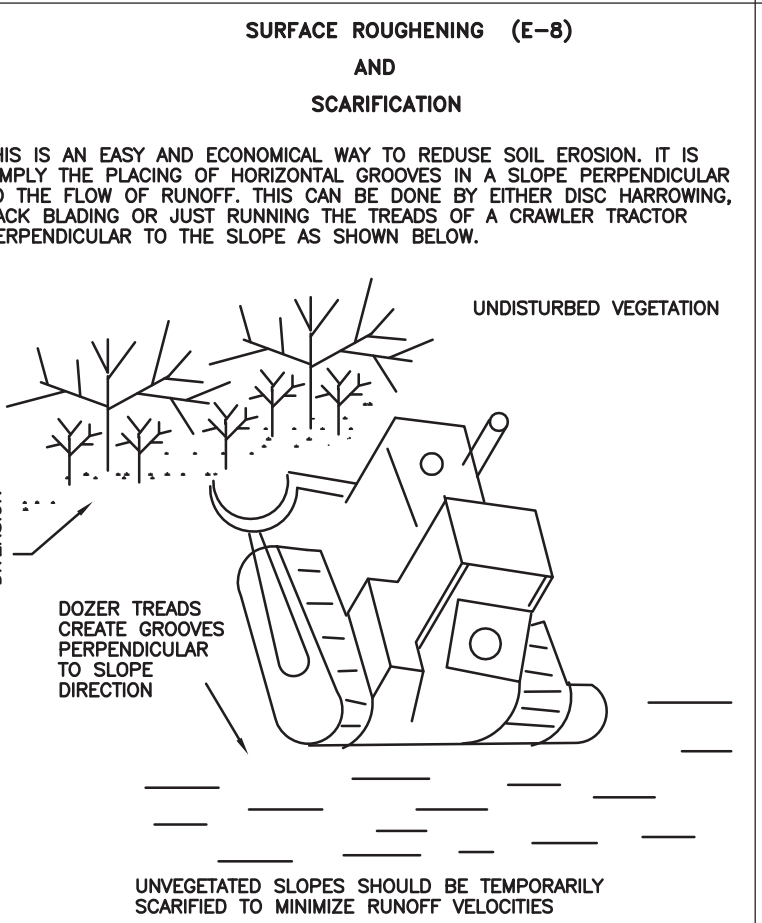
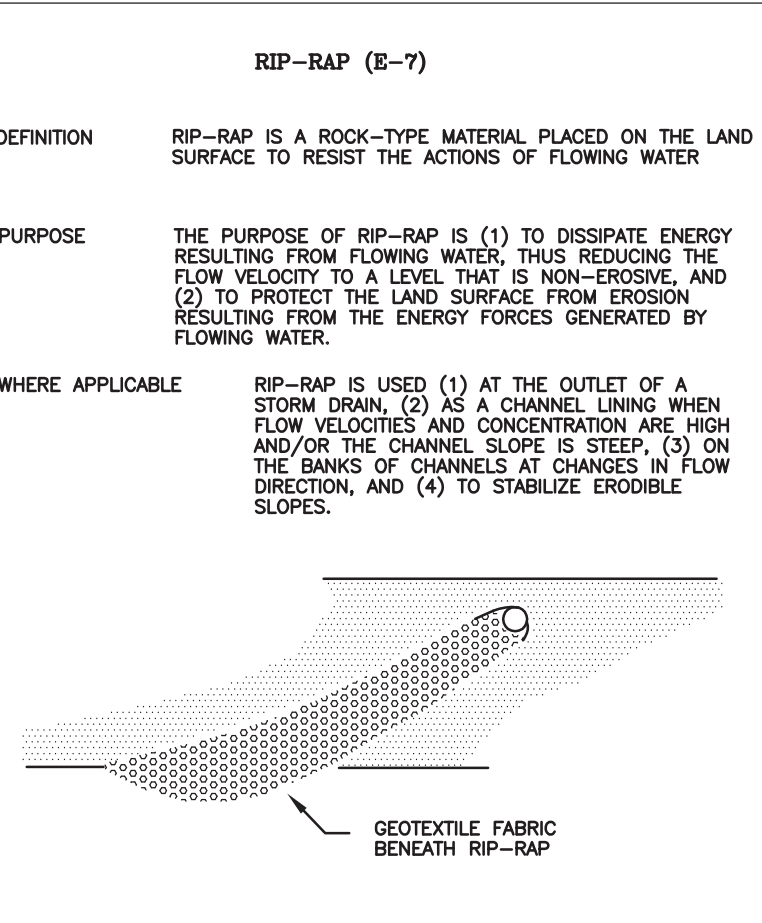
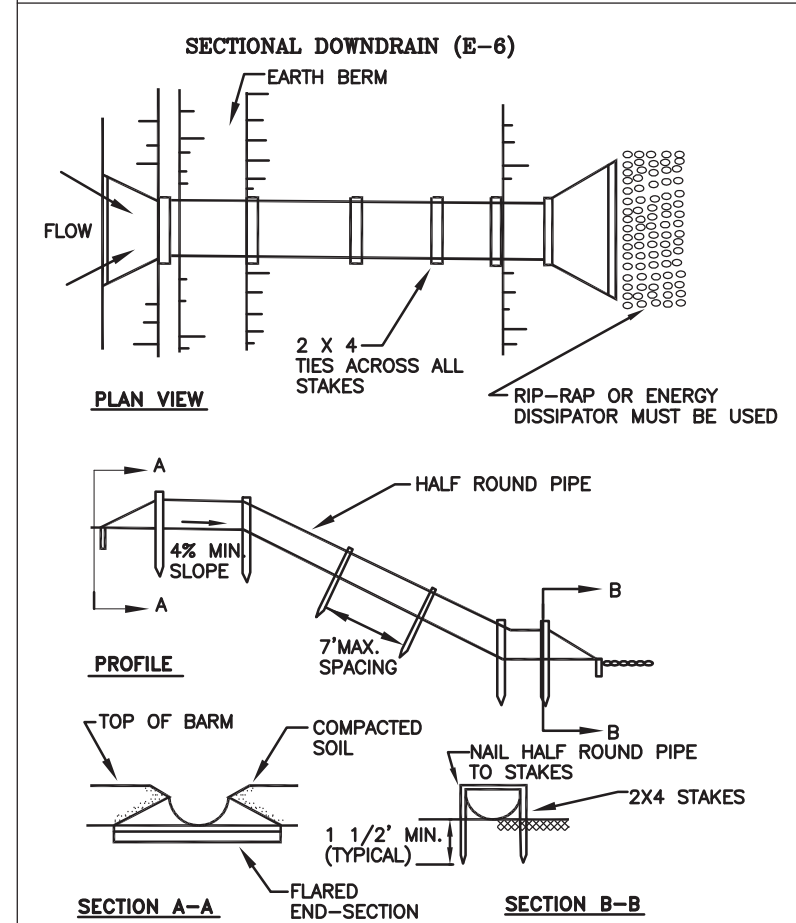
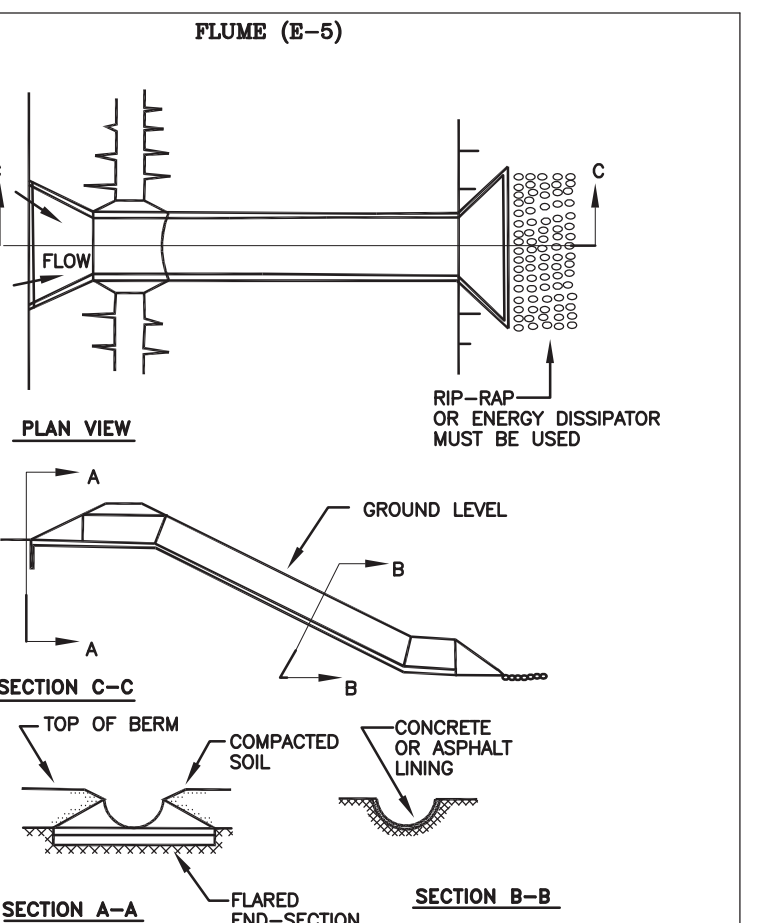
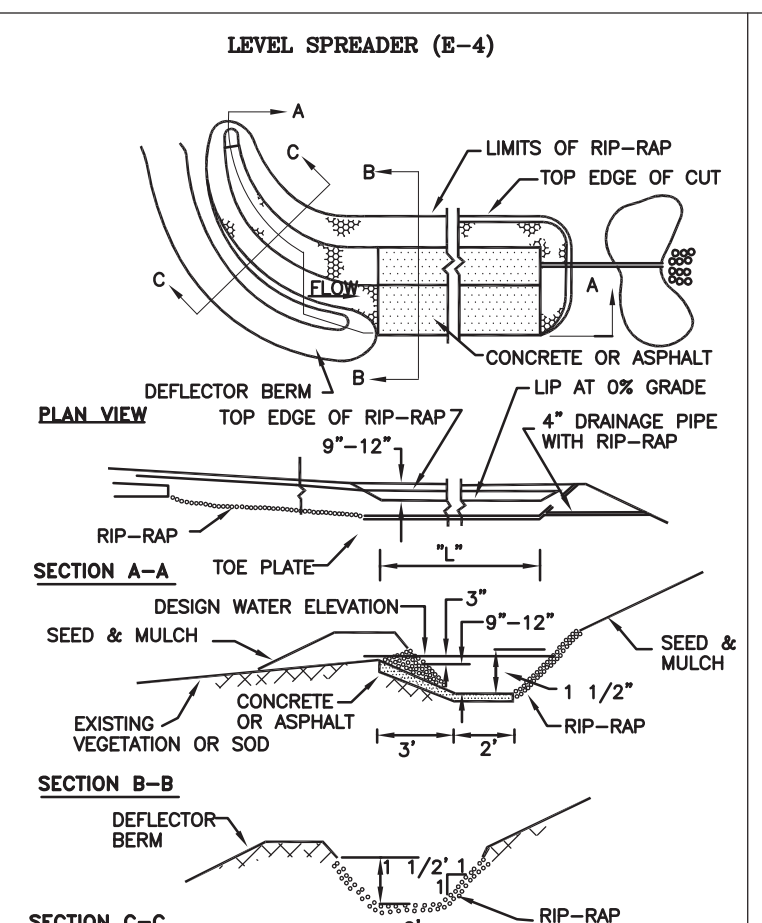
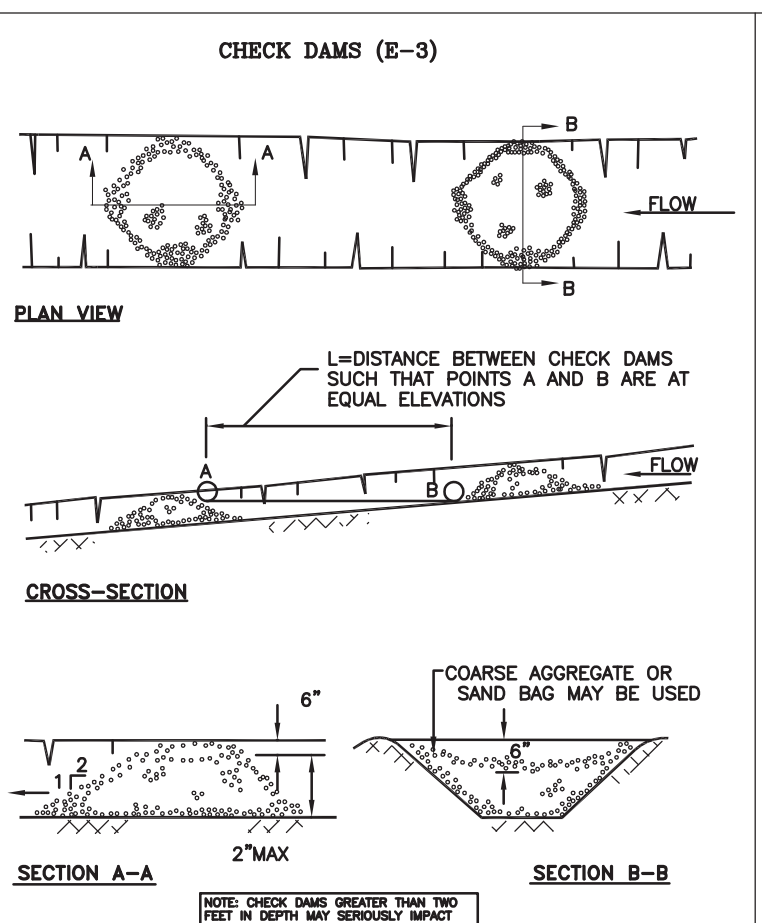
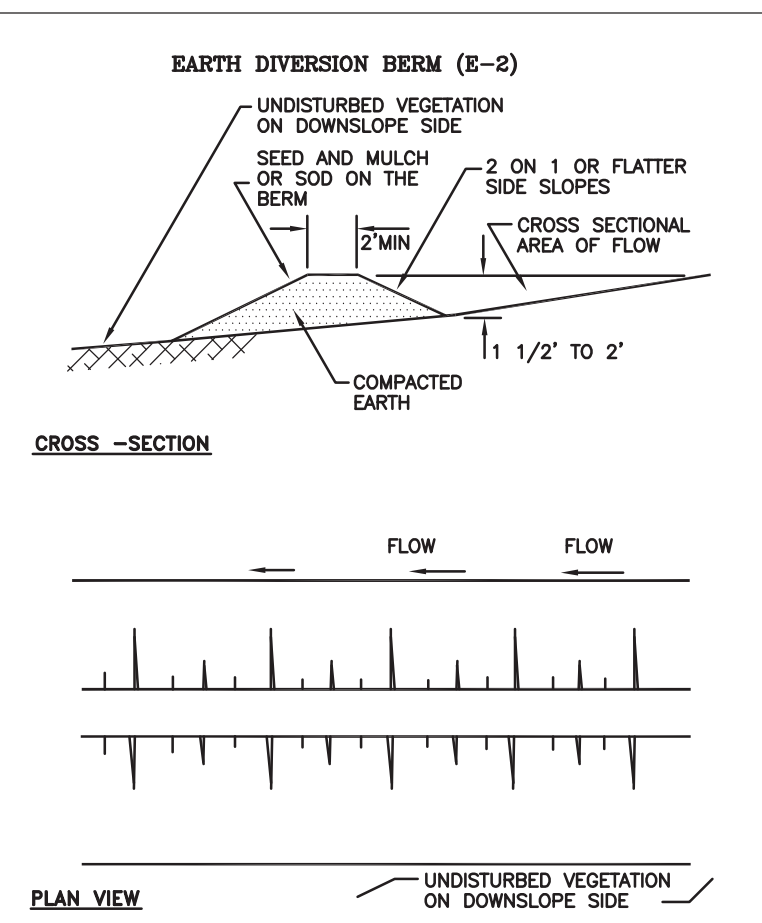
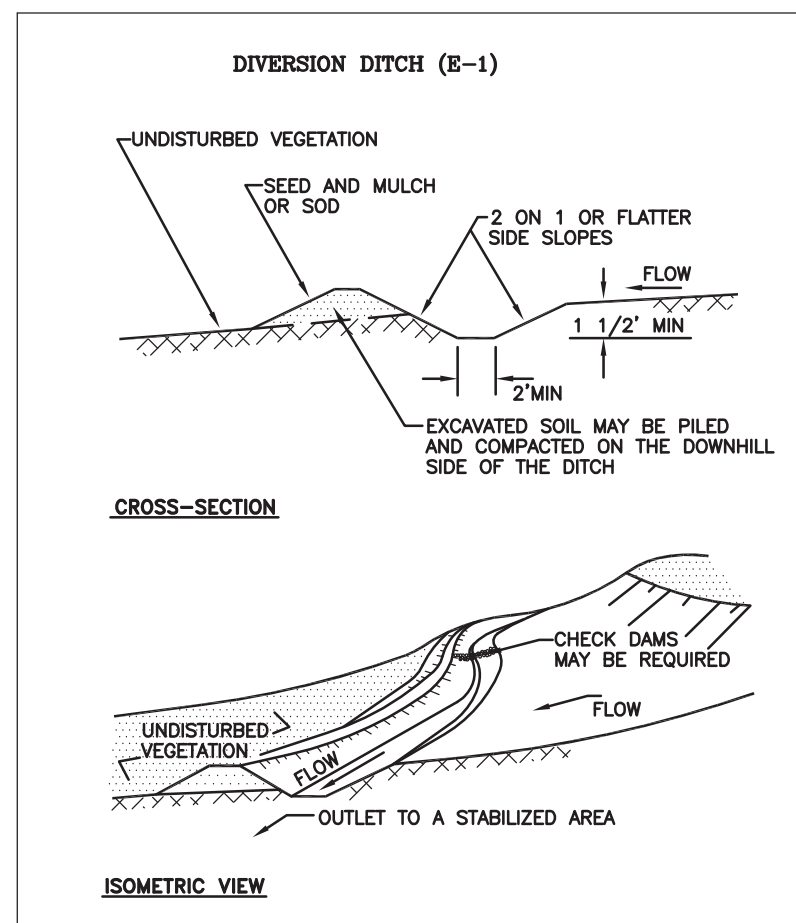


NOTE:
1. WHEN UNSTABLE GROUND CONDITIONS ARE ENCOUNTERED STONE, SLAG OR DRY MIX CONCRETE SHALL BE USED TO BACKFILL THE TRENCH TO A HEIGHT 12" ABOVE THE TOP OF THE SEWER LEAD.

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.

34000 Plymouth Road
Livonia, MI 48150
(734) 522-6711
(734) 522-6427 FAX

CLIENT: YPSILANTI TOWNSHIP

STONEFIELD

August 23, 2024

Ypsilanti Township Office of Community Standards
Tilden R. Stumbo Civic Center
7200 S. Huron River Drive
Ypsilanti, MI 48197

**RE: Full Preliminary Site Plan Review #2
Proposed Car Wash Development
Parcel ID: K-11-06-304-004
2675 Washtenaw Road
Charter Township of Ypsilanti, Washtenaw County, Michigan**

To whom it may concern:

Our office is submitting documents on behalf of the Applicant to address the comments contained within the Full Preliminary Site Plan Review #2 Letter. In addition, photos of the existing site vegetation along Northlawn Ave. have been submitted to address concerns regarding screening, noise, and lighting from adjacent residential properties. Please find the following items enclosed:

ITEM DESCRIPTION	DATED	PREPARED BY
Site Development Plans	08-23-2024	Stonefield Engineering & Design
Existing Vegetation Photos	-	EROP LLC

The following is an itemized response to the comments contained within the Full Preliminary Site Plan Review #2 Letter dated June 1, 2024:

Change in Site Type

1. Planning Commission to evaluate change in Regulating Plan from Site Type A to Site Type C, per ordinance criteria.

Stonefield Response: Noted.

2. Applicant to consider dedicating an easement within the 14-feet of the “future” right-of-way for installation of future streetscape improvements in front of the property.

Stonefield Response: MDOT does not have immediate plans for this right of way and would not like a dedication or easement at this time. Please advise if an easement should be granted to the Township / County Road Commission. Applicant is willing to provide this easement.

Natural Features

1. Applicant to provide survey information on existing “protected” trees, and protected trees shown as preserved in resubmission for review at Final Site Plan stage.

Stonefield Response: An updated survey has been obtained identifying all protected trees. No protected trees will be removed. The only tree removal in the rear area of the site is the removal of three (3) dead cotton wood trees. See Demolition Plan and Landscaping Plan.

2. Planning Commission considers condition of approval that any trees identified as “protected” in tree survey are shown as preserved on the Final Site Plan.

Stonefield Response: An updated survey has been obtained identifying all protected trees. No protected trees will be removed. The only tree removal in the rear area of the site is the removal of three (3) dead cotton wood trees. See Demolition Plan and Landscaping Plan.

Site Access, Circulation, Traffic

1. Defer site driveway locations to Township Engineer.

Stonefield Response: Site driveways on Boston Avenue to be reviewed and coordination with the Road Commission.

2. Applicant confirms that 36” knee wall is opaque; detail of wall added to Final Site Plan.

Stonefield Response: Noted. Detail to be provided in Final Site Plan.

3. Modify architectural plans to be consistent with opaque knee wall (as specified on Site Plan).

Stonefield Response: Architectural elevations are consistent with the Civil Site Plan. A decorative fence is proposed overtop the retaining wall along Washtenaw Avenue to meet the streetscape design intent and provide fall protection. The opaque wall is provided along Boston Avenue where the grade change does not provide the adequate screening. Wall detail to be provided in Final Site Plan.

Screen and Landscaping

1. Add 13 more shrubs to plans along Boston Ave. frontage; or Planning Commission to consider waiving/modifying this standard due to site constraints

Stonefield Response: 13 additional shrubs have been added along Boston Avenue to the Landscaping Plan. See Sheet C-9.

2. Planning Commission to consider proposed modification of screening between land uses (or no narrow evergreens).

Stonefield Response: Noted.

3. Applicant to consider native alternative to English Laurel.

Stonefield Response: English laurel has been replaced with the native species Ilex verticillate.

Lighting

- I. Planning Commission to consider suggestions that reduce the lighting levels at the vacuum stations to be more consistent with the other areas of the site.

Stonefield Response: Noted.

Elevations and Floor Plans

- I. Add more glazing to Washtenaw Ave. façade or applicant seeks a variance.

Stonefield Response: Applicant will be seeking a variance from the Zoning Board of Appeals at the September 9 Meeting due to site constraints.

Special Use

- I. Planning Commission to determine if project meets the ordinance criteria for Special Land Use approval.

Stonefield Response: Noted.

All comments from other agencies (i.e. Engineering, Utility, Drain, Road...) are to be addressed in Final Site Plan.

Should you have any questions regarding the submission items or responses above please do not hesitate to contact our office.

Regards,


J. Reid Cooksey, PE, LEED, AP BD+C
Stonefield Engineering and Design, LLC


Erin McMachen
Stonefield Engineering and Design, LLC

VIEW FROM SITE PARKING LOT TO NORTHLAWN AVENUE



VIEW FROM ABOVE SITE TO NORTHLAWN AVENUE



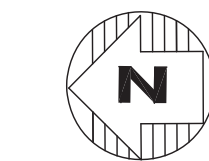
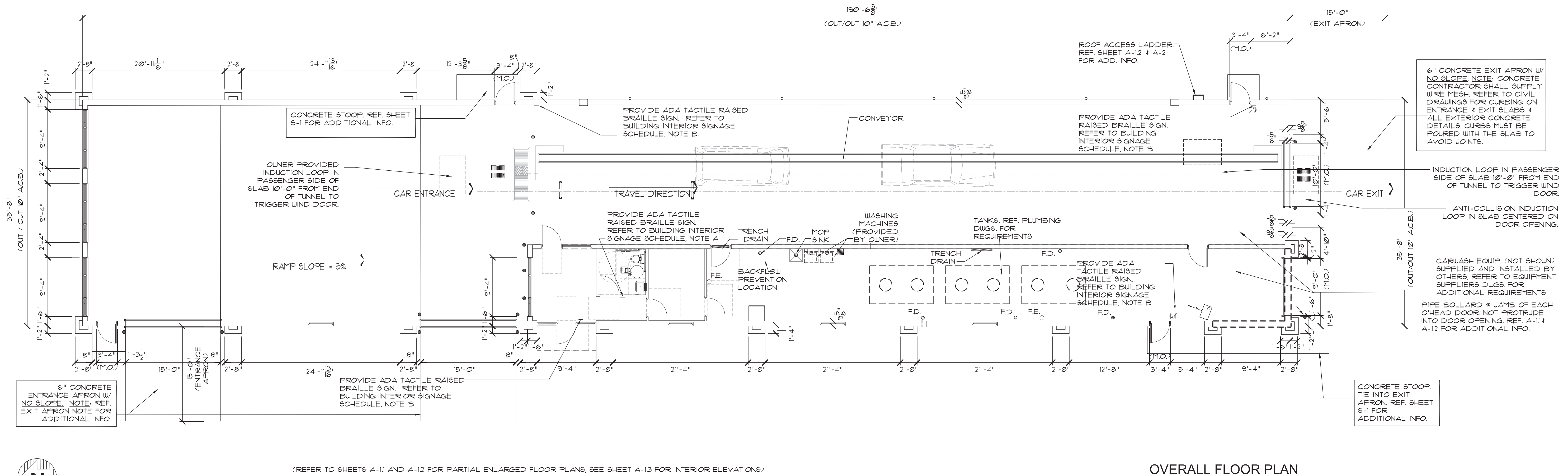
VIEW FROM NORTHLAWN AVENUE (NEAR
SOUTHWEST CORNER OF SITE) LOOKING
TOWARDS SITE

DEAD COTTONWOOD TREES
TO BE REMOVED (ALL OTHER
VEGETATION TO REMAIN)



VIEW FROM 2665
NORTHLAWN AVENUE
LOOKING TOWARDS SITE





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

(REFER TO SHEETS A-11 AND A-12 FOR PARTIAL ENLARGED FLOOR PLANS, SEE SHEET A-13 FOR INTERIOR ELEVATIONS)

OVERALL FLOOR PLAN
6859.47 SQ. FT.

GENERAL FLOOR PLAN NOTES:

1. ALL DIMENSIONS ARE TAKEN TO FACE OF A.C.B. (ARCHITECTURAL CONCRETE BRICK), CMU, OR STUD UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL LOCATE ALL CUT A.C.B.'s (ARCHITECTURAL CONCRETE BRICKS) BEHIND PILASTERS TO ALLOW FOR APPROPRIATE ALIGNMENT OF THE 8" AND 10" A.C.B.'s
3. CONTRACTOR SHALL PROVIDE AND INSTALL FIRE TREATED WOOD SUPPORT BLOCKING OR 16 GA STEEL PLATE BLOCKING IN ALL WALLS RECEIVING ANCHORS OF CASEWORK, SHELVING, GRAB BARS AND THE LIKE. REFER TO PLANS AND COORDINATE W/ OWNER PRIOR TO CONCEALING WALLS. ADDITIONALLY, COORDINATE WITH ALL OTHER TRADES TO DETERMINE LOCATIONS OF ADDITIONAL STEEL STUDS.
3. NEW TOILET ROOM SHALL BE CONSTRUCTED IN ACCORDANCE WITH 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (ADAAG) INCLUDING BUT NOT LIMITED TO GRAB BARS, FIXTURE HEIGHTS, CLEAR FLOOR ACCESS, AND 60" DIAMETER TURN AROUND.
4. CONTRACTOR SHALL INSTALL NEW GYPSUM BOARD INSTALLATIONS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR LOCATING GYPSUM BOARD CONTROL AND EXPANSION JOINTS. EXPANSION JOINTS SHALL NOT EXCEED 30'-0" O.C.
5. ALL INTERIOR WALLS (EXCEPT PLUMBING WALLS) SHALL BE ASSUMED TO BE 3 5/8" STEEL STUDS (NON COMBUSTIBLE) @ 16" O.C. WITH 5/8" WATER RESISTANT GYP. BD. EACH SIDE UNLESS OTHERWISE NOTED. PLUMBING WALLS SHALL BE 6" STEEL STUDS.
6. ALL DOORS SHALL BE EQUIPPED WITH LEVER STYLE LATCH (UNLESS NOTED OTHERWISE) IN ACCORDANCE WITH ADAAG (ACCESSIBILITY) GUIDELINES. ALL LOCK SETS SHALL BE PUSH BUTTON TYPE LOCKING MECHANISMS OR EQUIVALENT. INTERIOR KEYED LOCKS ARE NOT ALLOWED.
7. CONTRACTORS SHALL COORDINATE THEIR RESPECTIVE WORK WITH OTHER TRADES AND SHALL PROVIDE REQUIRED SUB SLAB PIPING, CONDUIT, PLUMBING, PIPE SLEEVES, FLOOR DRAINS AND THE LIKE AS REQUIRED PRIOR TO POURING NEW INTERIOR CONCRETE SLAB.
8. ALL WOOD BLOCKING AND/OR FLYWOOD/OSB INSTALLED IN CONCEALED PLACES SHALL BE OF THE FRUW TYPE (FIRE TREATED).
9. ALL NEW INSULATION SHALL HAVE A MAXIMUM FLAME SPREAD OF 25. SMOKE DEVELOPMENT RATINGS FOR ALL NEW INSULATION SHALL NOT EXCEED 450 (TYP.).
10. TENANT SHALL FURNISH BOTTLED WATER IN LIEU OF A WATER COOLER.
11. FIRE EXTINGUISHERS:
 - A. PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED ON SITE FOR THE DURATION OF CONSTRUCTION. EXTINGUISHERS SHALL BEAR THE LABEL OF AN APPROVED AGENCY.
 - B. PERMANENT FIRE EXTINGUISHER (F.E.) PORTABLE FIRE EXTINGUISHER(S) SHALL BE PROVIDED ON SITE ON A PERMANENT BASIS, BEARING THE LABEL OF AN APPROVED AGENCY. EXTINGUISHER(S) SHALL BE WALL HUNG W/ MFR'S STANDARD WALL BRACKET. LOCATIONS INDICATED ON PLANS ARE SCHEMATIC AND SUBJECT TO CHANGE PER LOCAL AUTHORITY'S REQUIREMENTS/DIRECTION.
 - C. THE MAXIMUM TRAVEL DISTANCE TO A PERMANENT FIRE EXTINGUISHER SHALL NOT EXCEED 75 FEET. ADDITIONALLY, FIRE EXTINGUISHERS SHALL BE LOCATED WHERE THEY WILL BE READILY ACCESSIBLE AND IMMEDIATELY AVAILABLE FOR USE AND SHALL NOT BE OBSTRUCTED OR OBSCURED FROM VIEW. THESE LOCATIONS SHALL BE AMONG NORMAL PATHS OF TRAVEL.
12. TEMPERED SAFETY GLAZING SHALL BE PROVIDED IN ACCORDANCE WITH CODE INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - A. WITHIN 24 INCH ARC ALONG THE VERTICAL EDGE OF A DOOR.
 - B. IN ANY GLASS PANEL THAT IS 18 INCHES OR LESS ABOVE AN ADJACENT WALKING SURFACE AND IS (9) SQUARE FEET OR LARGER IN AREA.
13. ANY TRANSACTION AND/OR SERVICE COUNTERS USED FOR TRANSACTION OF SELLING MERCHANDISE, MAKING PAYMENTS OR OTHER SIMILAR TYPES OF TRANSACTIONS SHALL HAVE A 3'-0" (MINIMUM) SECTION OF 6AID COUNTER NOT EXCEEDING 2'-10" AFF. FOR USE BY THE PHYSICALLY DISABLED.
14. ALL INTERIOR FINISHES SHALL COMPLY WITH THE MICHIGAN BUILDING CODE (MBC) FOR FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS FOR (B) BUSINESS USE GROUP AS FOLLOWS:
 - A. CORRIDORS = 75+ FLAME SPREAD OF 26-75+ SMOKE DEVELOPMENT = 0-450
 - B. ENCLOSED ROOMS/SPACES = 70+ FLAME SPREAD OF 16-200+ SMOKE DEVELOPMENT = 0-450
15. ALL CAR WASH EQUIPMENT SHOWN IN ARCHITECTURAL PLANS AND/OR NOTED IN WASH BAY AND MECHANICAL ROOM SHOULD BE CONSIDERED SCHEMATIC AND ONLY FOR REFERENCE. CONTRACTOR SHALL REFER TO AND COORDINATE WITH CAR WASH EQUIPMENT DRAWINGS FURNISHED BY OTHERS FOR FINAL EQUIPMENT LAYOUT.

BUILDING INTERIOR SIGNAGE SCHEDULE:

PROVIDE THE FOLLOWING INTERIOR SIGNAGE:

- A. TOILET ROOM: PROVIDE ADA TACTILE RAISED BRAILLE UNISEX RESTROOM SIGN, ADJACENT TO DOOR. REFER TO DETAIL ON SHEET G-2.
- B. BUILDING EGRESS (EXIT) DOORS: PROVIDE ADA TACTILE RAISED BRAILLE SIGN STATING "EXIT" AND COMPLYING WITH ICC A117.1 ADJACENT TO EACH BUILDING EXIT DOOR. REFER DETAIL ON SHEET G-2.

REVISION	DATE

4/17/2024
PLANNING SUBMISSION
PROJECT NUMBER
2675 Washtenaw Ave.
DRAWN BY: REB

Whitewater Carwash
2675 Washtenaw Ave.
Ypsilanti, MI 48846
Overall Floor Plan

SHEET NUMBER

A-1



CAR WASH

