Bethel TOWNSHIP
MIAMI COUNTY - OHIO

**BETHEL TOWNSHIP TRUSTEES**
**BETHEL TOWNSHIP ZONING DEPARTMENT**
**8735 SOUTH SECOND STREET -- BRANDT, TIPP CITY, OHIO 45371**
**PHONE: 937.845.8472 FAX: 937.845.7316**

# APPLICATION FOR A ZONING CERTIFICATE

**App. No.: ZC -63 -26**

## SECTION I: PROPERTY INFORMATION

| | | | |
|---|---|---|---|
| Property Address: 4021 East U.S. Route 40 | | | Acreage: 14.71 |
| Section: 25 | Town: 2 | Range: 9 | Parcel: A01 - 005500 |
| Subdivision Name and Lot No.: n/a | | | Zoning District: I-1 / R1-AAA |

## SECTION II: APPLICANT INFORMATION

| | *Name* | *Address, City, State, Zip Code* | *Phone & Email* |
|---|---|---|---|
| *Applicant:* | Keating Muething & Klekamp PLL; c/o Thomas M. Tepe, Jr., Esq. | 1 East Fourth Street, Suite 1400 Cincinnati, Ohio 45202 | (513) 579-6400 ttepe@kmklaw.com |
| *Property Owner:* | Eetsabarn LLC; c/o Jason McCoy | P.O. Box 147 Tipp City, Ohio 45371 | (937) 776-2631 eetsabarn@gmail.com |
| *Contractor:* | Choice One Engineering; c/o Jeff Puthoff, P.E. | 2633 Campbell Road Sidney, Ohio 45365 | (937) 497-0200 jsp@choiceoneengineering.com |

## SECTION III: PROJECT INFORMATION (CHECK ALL THAT APPLY)

**RESIDENTIAL / AGRICULTURAL**

- ☐ NEW CONSTRUCTION
- ☐ SINGLE FAMILY DWELLING
- ☐ MULTI-FAMILY DWELLING
- ☐ BASEMENT FINISHING
- ☐ ADDITION
- ☐ SHED / GARAGE
- ☐ DECK
- ☐ POOL
- ☐ FENCE
- ☐ DEMOLITION
- ☐ HOME OCCUPATION
- ☐ TEMPORARY USE
- ☐ FREE STANDING SIGN
- ☐ TEMPORARY SIGN
- ☐ OTHER _____
- ☐ ACCESSORY STRUCTURE CHANGE of USE from _____ to _____

**COMMERCIAL/INDUSTRIAL**

- ☒ NEW CONSTRUCTION
- ☐ ADDITION
- ☒ BUSINESS
- ☐ OFFICE
- ☒ NEW USE
- ☐ DEMOLITION
- ☒ WAREHOUSE
- ☐ FENCE
- ☐ TEMPORARY USE
- ☐ FREE STANDING SIGN
- ☐ WALL SIGN
- ☐ TEMPORARY SIGN
- ☐ OTHER _____
- ☐ CHANGE of USE from _____ to _____

**EXPLAIN REQUESTED USE IN DETAIL**

Please include a narrative state explaining the economic, noise, glare, odor, and water run-off effects on adjoining properties and the general compatibility with adjacent and other properties in the area.

See attached Statement in Support

Contractor/Applicant 09/09/2026 Date — Owner or Authorized Rep 9-9-26 Date

**Please Note:** This application, if approved, must further be submitted to the Miami County Building Regulations Dept for the applicable building permits. Permits are mandatory before construction begins within Bethel Township, Miami County. A copy of all zoning certificates received by the Miami County Building Regulations Dept. shall be signed, dated, and returned to the Bethel Township Zoning Department. **ALL PROJECTS AND USES ARE SUBJECT TO COMPLIANCE INSPECTION.**

## SECTION IV: WATER AND SANITARY INFORMATION

PUBLIC WATER AVAILABLE? (Y) N PUBLIC SEWER AVAILABLE? (Y) N HYDRANTS WITHIN 500'? (Y) N

SANITATION TO BE APPROVED BY:

☐ MIAMI COUNTY HEALTH DEPT. ☐ OHIO E.P.A. ☐ OTHER _____

**Continued on Next Page**

**SECTION V: ATTACH SKECTCH OF PROPERTY/PROJECT**

Attach a plan, to scale, for the proposed use showing the location of building, parking and loading areas, traffic access and circulation drives, open space, landscaping, utilities, drainage, signs, yards, refuse and service areas, and other pertinent details. Please note that the Zoning Administrator may request additional information as needed on a case by case basis.

See attached Site Plan

**SECTION VI: PROJECT DIMENSIONS & MISCELLANEOUS INFORMATION**

| | | | | | |
|---|---|---|---|---|---|
| Primary road frontage: | U.S. Rte. 40 | Secondary road frontage: | Wildcat Rd. | Lot size: | 14.71 |
| Lot width: | 882' | Lot depth: | 686' | Right-of-way depth: | 32' |
| Front yard setback: | 58' | Rear yard setback: | 46' | Side yard setback: | 56' |
| Building stories: | 1 | Building height: | <40' | Building width: | 80', 90', 134', 160' |
| First floor area (sq ft): | 105,792 sq. ft. | Second floor area (sq ft): | 0 sq. ft. | Total floor area (sq ft): | 105,792 sq. ft. |
| Finished Basement? | YES or (NO) | Finished basement floor area: | 0' | Fence length (ft): | 0' |
| Number of parking spaces: | 133 | Number of truck/vehicle docks: | 1 | Estimated cost of project: | $5,500,000.00 |

**SECTION VII: TOWNSHIP ADMINISTRATIVE ACTION**

| | |
|---|---|
| Reviewed by: ARTHUR MANGLEN | Fee: $10579.20 CASH or Check#: 148305 |
| Decision date: | APPROVED or DENIED (circle one) by: |
| Reason for Approval or Denial: | |

KMK | Law

**Thomas M. Tepe Jr.**
Partner
D: 513.639.3947
ttepe@kmklaw.com

September 9, 2026

Mr. Arthur Franklin
Planning & Zoning Director
Bethel Township
8735 South Second Street
Tipp City, Ohio 45371

Re: Statement in Support of Application for a Zoning Certificate for 4021 East U.S. Route 40, Tipp City, Ohio 45371

Dear Mr. Franklin:

This law firm represents Eetsabarn LLC ("Eetsabarn") regarding its proposed use of the property located at 4021 East U.S. Route 40, Tipp City, Ohio 45371 (the "Property").[1] Under Section 2.07 of the Bethel Township Zoning Resolution, Miami County, Ohio (the "Resolution" or the "BTZR"), Eetsabarn requests a zoning certificate to permit its use of the Property as a multi-structure contractor's yard (the "Proposed Use") and for the physical improvements described below (the "Development") (collectively, the "Project"). Because the Proposed Use is permitted as of right under the Resolution and the Development complies with all applicable zoning restrictions, Eetsabarn respectfully requests that a zoning certificate be issued for the Project.

## I. STATEMENT OF FACTS

The Property is a 14.7140-acre undeveloped tract at the northeast corner of U.S. Route 40 and Wildcat Road, with approximately 1,600 feet of cumulative frontage. Its western 4.92 acres are zoned for residential uses (R-1AA and R-1AAA), and the remainder is zoned Light Industrial (I-1). Existing water and sanitary sewer lines in the public right-of-way are available for connection to the Property. A fire hydrant serving the Property is located at the intersection of U.S. Route 40 and Wildcat Road.

The Property currently contains a thirty-seven-foot-wide natural buffer along its northern boundary and a seventy-five-foot-wide natural buffer along the boundary between its residential and industrial portions. The Development provides, in large part, for the preservation of those buffers.

[1] Miami County Auditor Parcel No. A01-005500.

The Development consists of a sixteen-building commercial park located solely on the I-1 portions of the Property, together with a retention basin on the residentially zoned portions, which are the only improvements presently proposed on such portions of the Property.[2] Each building will have a wall height between sixteen and eighteen feet and a total height not exceeding forty feet.[3] Each structure will be set back at least thirty feet from every other structure. The Development's minimum front and rear setbacks are fifty-eight and forty-six feet, respectively, and its eastern and western side-lot-line setbacks are fifty-six and ninety-two feet, respectively.[4] In total, the Development will have an impervious surface ratio ("ISR") of 0.84 on the I-1 portions of the Property.

To support the Proposed Use, Eetsabarn intends to develop the Property as a commercial park and lease the structures to contractors providing services to residential, commercial, and industrial customers in Bethel Township and beyond, with space to warehouse the materials and equipment used in those businesses. Eetsabarn has not yet identified prospective tenants but anticipates leasing to a broad array of contractors such as plumbers, electricians, carpenters, and HVAC technicians.[5] In the immediate term, Eetsabarn will lease at least one structure to an affiliated entity, Snow Xcellence, LLC, which provides snow-removal services to commercial, industrial, and institutional customers on a contract basis.

Given the Development's scale, Eetsabarn intends to develop the Project in multiple phases, as shown on the site plan submitted with this application. Phase I will include site clearing and grading, paving along the Development's western and southern portions, and construction of its three southernmost buildings. Phase II focuses on the middle of the Development and includes three 5,040-square-foot structures and four 7,504-square-foot structures. Phase III centers on the northern portion and will include the final three structures, each being 7,504 square feet. If Eetsabarn receives the requested zoning certificate, it expects to begin site preparation in fall 2026 and construction the following spring. Each phase is expected to take approximately two years, and Eetsabarn intends to construct the phases consecutively.[6]

## II. THE PROJECT IS PERMITTED AS OF RIGHT

Those facts provide the foundation for the legal analysis that follows. Review of this application is limited to determining whether the Project conforms to the applicable provisions of the Resolution. BTZR § 2.07(D)(2). If it does, Eetsabarn is entitled by law to a zoning certificate authorizing it to develop the Property in accordance with the submitted site plan and to carry out the Proposed Use. Based on the facts above and the submitted site plan, the Project is permitted as

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[2] Although the site plan depicts additional parking facilities on the residentially zoned portions of the Property, this application seeks approval only for the retention basin on those portions. Eetsabarn is not seeking approval for the depicted parking or any other improvements on the residentially zoned portions.

[3] This is a conservative maximum estimate. Eetsabarn anticipates that no building in the Development will exceed thirty feet in height.

[4] The western side-lot-line setback is measured from the boundary between the Light Industrial and residentially zoned portions of the Property, rather than from the Property's frontage on Wildcat Road.

[5] Eetsabarn acknowledges that each lessee must obtain a separate zoning certificate for its particular use of the Property.

[6] The total building area across all phases will be 105,792 square feet.

of right under the Resolution. Accordingly, Eetsabarn requests issuance of a zoning certificate for the Project.

### a. THE PROPOSED USE IS PERMITTED AS OF RIGHT

The Proposed Use has two components. Its principal component is a permitted use in the Light Industrial district. Its accessory component is likewise permitted because it is customarily found in connection with and incidental to the principal component. The proposed retention facilities are, likewise, permitted on the Property's residential portion.

#### *i. The principal component of the Proposed Use is permitted by right*

Section 12.02 of the Resolution lists the principally permitted uses for properties subject to I-1 zoning. The list includes "Building and Trades, Contractor's Yards, Utility Storage Yards." Although the Resolution does not define that category in detail, its ordinary meaning encompasses storage and staging areas used by construction companies and trades, facilities for contractors, and utility providers.

The principal component of the Proposed Use fits within that permitted category. Eetsabarn intends to lease the structures to contractors and trade workers as operations centers for their businesses. The structures will provide locations to assemble workers, stage equipment and materials, and dispatch crews and equipment to off-site jobs. Thus, the Property will be used by the parties contemplated by Section 12.02—builders, trade workers, and contractors—for the purposes identified there: assembly and staging. The principal component of the Proposed Use is therefore permitted as of right.

#### *ii. The retention basin is outside the Township's zoning authority*

That conclusion also applies to Eetsabarn's request to construct a retention basin on the residentially zoned portions of the Property. Under Ohio law, townships may exercise only the zoning powers delegated to them by Chapter 519 of the Revised Code, and only within the limits that Chapter imposes.[7] R.C. 519.02 prescribes the scope of that authority. It authorizes townships to regulate the location, size, mass, and use of "buildings and structures," as well as landscaping and architectural standards. R.C. 519.02 does not empower townships to establish zoning regulations for infrastructure that is neither a building nor a structure. A retention basin is neither. Accordingly, the Township may neither regulate Eetsabarn's proposed construction of its stormwater management system nor deny the requested zoning certificate based on the location or purpose of the detention facilities.[8]

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[7] Tuber v. Perkins, 6 Ohio St.2d 155, 157 (1966); Yorkavitz v. Bd. of Twp. Tr. of Columbia Twp., 166 Ohio St. 349, 351 (1957).

[8] Eetsabarn acknowledges that Article 39 of the Resolution imposes requirements on retention basins and will construct the retention basin in compliance with those requirements. Nothing in this application is intended to suggest that retention basins cannot be regulated, only that a retention basin is neither a building nor a structure subject to township zoning authority under R.C. 519.02.

*iii. The accessory component of the Proposed Use is customarily found in connection with, and incidental to, the principal component*

As an accessory component of the Proposed Use, Eetsabarn requests approval to use the Property to warehouse equipment and materials used by the intended occupants in plying their respective trades. Section 12.03 of the Resolution provides that uses customarily found in connection with, and incidental to, a property's principal use "are permitted as accessory uses" in the Light Industrial district.

The accessory element of the Proposed Use fits within this framework. Contractors and tradespeople routinely keep the materials, equipment, and tools needed to serve customers and respond to jobs without repeated trips to retailers or tool and equipment rental providers. For example, a plumber may keep fittings of various sizes, pipe glue, and a dizzying array of wrenches on standby to allow quick turnarounds on emergencies. Snow removal companies keep mountains of salt on hand to ensure that they are able to fulfill their contractual obligations come winter. Builders keep hand and power tools on standby to mitigate surprises encountered on job sites. This ordinary practice shows that warehousing is customarily found in connection with the principal component of the Proposed Use.

The warehousing is also incidental to the principal component. Eetsabarn does not intend to lease space solely to warehouse goods for businesses whose operations centers are located elsewhere. Instead, the warehouse space will support occupants' operations from the Property by allowing them to assemble crews, stage materials and equipment, and dispatch them to job sites. Because the warehousing directly supports—and is subordinate to—the contractor-yard operations, the accessory component of the Proposed Use is permitted under the Resolution.

**b. THE DEVELOPMENT COMPLIES WITH ALL APPLICABLE ZONING RESTRICTIONS**

Because the Proposed Use is permitted, the remaining question is whether the physical Development complies with the Resolution's dimensional, landscaping, and buffering requirements. It does.

The Development's multiple principal structures do not prevent approval. Ordinarily, a property may contain a single principal structure and be devoted to a single principal use. BTZR § 30.19. But properties in industrial districts, including the I-1 district, may contain "more than one (1) principal use building ***, provided that the required yard setbacks are provided around the group of buildings *** and if all applicable separation requirements are met[.]" BTZR § 30.19(B). The number of principal structures therefore does not make the Development noncompliant with the Resolution.

The Development also satisfies the applicable dimensional requirements for I-1 districts. The following table, based on Section 12.05 of the Resolution and the recitation of facts above, demonstrates that compliance:

| | Permitted | Proposed |
|---|---|---|
| Lot Area | 2 acres min. | 14.7140 acres |

| | | |
|---|---|---|
| ISR | 0.85 max. | 0.84 |
| Lot Width | 200 feet min. | 882 feet |
| Frontage | 200 feet min. | 1,600 feet |
| Front Yard Setback | 25 feet min. | 58 feet |
| Side Yard Setback | 20 feet min. | 56 feet / 92 feet |
| Rear Yard Setback | 15 feet min. | 46 feet |
| Building Height | 45 feet max. | < 40 feet |

The Development also satisfies the applicable landscape and buffering requirements. BTZR § 38.03(E)(2) recognizes "natural vegetation" as an acceptable screening and buffering material. When an industrial property abuts a residential tract—as the I-1 portion of the Property abuts the Property's residential portion—BTZR § 38.03(E)(5) requires a minimum forty-foot screen. The Resolution otherwise requires a minimum fifteen-foot landscape buffer between adjacent parcels. BTZR § 38.03(A)(7).

The Development meets those requirements. As shown on the site plan, the existing vegetation line separating the Property's residential and industrial portions is seventy-five feet wide, nearly twice the required forty-foot screen. The natural barrier along the northern boundary is thirty-seven feet deep, exceeding the fifteen-foot buffer requirement. Eetsabarn will establish the required landscape buffer along the eastern and southern boundaries and the interior landscaping required by the Resolution.

## III. EETSABARN REQUESTS ISSUANCE OF A ZONING CERTIFICATE

Because the Proposed Use is permitted as of right and the Development complies with the Resolution's applicable dimensional, landscaping, buffering, and other requirements, the Project qualifies for a zoning certificate. Eetsabarn therefore respectfully requests issuance of a zoning certificate for the Project in accordance with the submitted site plan.

Respectfully submitted,

KEATING MUETHING & KLEKAMP PLL

By: _____
Thomas M. Tepe Jr.
Partner

cc: Mr. Jason McCoy, Principal, Eetsabarn LLC
Mr. Alexander C. Johnson, Esq., Keating Muething & Klekamp PLL

15959856.v1

RETENTION POND - SECTION 39

# EETSABARN SITE PLAN

## BETHEL TOWNSHIP
## MIAMI COUNTY COUNTY, OHIO




VICINITY MAP




### INDEX OF SHEETS


| | |
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### 2023 SPECIFICATIONS

THE CONSTRUCTION STANDARDS AND DRAWINGS OF THE BETHEL TOWNSHIP AND THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND GENERAL NOTES LISTED IN THE PLAN, SHALL GOVERN THIS IMPROVEMENT. THE MOST RESTRICTIVE SHALL APPLY.

### PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF NEW BUILDINGS, ASSOCIATED DRIVES, AND PARKING FOR THE EETSABARN SITE PLAN, LOCATED ON US-40 WITHIN BETHEL TOWNSHIP, MIAMI COUNTY, OHIO. SITE WORK TO INCLUDE STORM SEWER, SITE GRADING, PAVEMENT WORK, AND BUILDING CONSTRUCTION.

### EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA = 10.09 ACRES

ESTIMATED CONTRACTOR EARTH DISTURBED AREA = 0.10 ACRES

NOTICE OF INTENT (NOI) EARTH DISTURBED AREA = 10.19 ACRES

**UNDERGROUND UTILITIES**
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811. 8-1-1. or 1-800-362-2764
(Non-members must be called directly)

| STANDARD CONSTRUCTION DRAWINGS | ODOT STANDARD CONSTRUCTION DRAWINGS | |
|---|---|---|
| | HW-2.1 | 07-15-2022 |
| | ODOT SUPPLEMENTAL SPECIFICATIONS | |
| | 800 | 07-17-2026 |
| | 832 | 07-17-2026 |


ChoiceOne Engineering

2633 CAMPBELL ROAD • SIDNEY, OHIO 45365 • 937.497.0200
6279 TRI-RIDGE BOULEVARD, SUITE 100 • LOVELAND, OHIO 45140 • 513.239.8554

www.CHOICEONEENGINEERING.com


SEPTEMBER 08, 2026

STATE OF OHIO — JEFFREY S. PUTHOFF 61619 — REGISTERED PROFESSIONAL ENGINEER

JEFFREY S. PUTHOFF, P.E.
P.E.-#61619

Approved _____
Date _____ TOWNSHIP ADMINISTRATOR

CHOICE ONE ENGINEERING RELEASE FOR AGENCY REVIEW SEPTEMBER 08, 2026

ChoiceOne Engineering

EETSABARN SITE PLAN

REVISIONS:

FILE NAME: TITLE
DRAWN BY: DMR
CHECKED BY: JSP
PROJECT No.: MIA-BET-2601
SHEET NUMBER: 1 OF 18

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## ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON NAVD 88 (ODOT VRS GEOID 18).

## SPECIFICATIONS

ALL CONSTRUCTION METHODS, MATERIALS, AND SPECIFICATIONS SHALL COMPLY WITH THE LATEST VERSION OF THE ODOT CONSTRUCTION STANDARDS AND SPECIFICATIONS (INCLUDING CURRENT SUPPLEMENTAL SPECIFICATIONS 800 AND 832), WHICHEVER IS MORE RESTRICTIVE AS DETERMINED BY BETHEL TOWNSHIP.

## CAD FILE DISCLAIMER

THE CAD FILE ASSOCIATED WITH THESE CONSTRUCTION PLANS IS A NON-CERTIFIED DOCUMENT. ANY USE OF THE INFORMATION OBTAINED OR DERIVED FROM THE ASSOCIATED CAD FILE WILL BE AT THE RECEIVING PARTY/USER'S RISK. CHOICE ONE ENGINEERING CORP. OFFERS NO WARRANTY AS TO THE ACCURACY OF THE INFORMATION IN THE CAD FILE OR THAT REVISIONS HAVE BEEN ISSUED AFTER THE CAD DRAWING WAS RELEASED. RECEIVING PARTIES/USERS SHALL HOLD HARMLESS TO THE MAXIMUM EXTENT ALLOWED BY LAW CHOICE ONE ENGINEERING CORP. FROM ANY USE OF THE CAD FILE BY THE RECEIVING PARTY/USER. IN ALL CIRCUMSTANCES, AND AT ALL TIMES, THE PUBLISHED PAPER AND/OR PDF DRAWINGS FOR THE PROJECT SHALL SUPERSEDE THE CAD FILES. IN THE CASE OF AN INCONSISTENCY BETWEEN THE PUBLISHED PAPER/PDF DRAWINGS AND THE ASSOCIATED CAD FILE, THE PUBLISHED PAPER/PDF DRAWINGS SHALL GOVERN THE PROJECT AND ALL WORK.

## MODIFICATIONS

ANY MODIFICATIONS TO THE SPECIFICATIONS OR CHANGES TO THE WORK AS SHOWN ON THE PLANS MUST HAVE PRIOR WRITTEN APPROVAL FROM THE OWNER.

## OWNER COORDINATION NOTES

THE CONTRACTOR SHALL COORDINATE THE PROPOSED WORK WITH THE OWNER'S REPRESENTATIVE PRIOR TO PERFORMING ANY WORK ON SITE. IF THE CONTRACTOR IS TO ENGAGE IN ANY OPERATIONS THAT AFFECT THE EXISTING FACILITY OPERATIONS, THE CONTRACTOR SHALL COORDINATE THE SCHEDULING OF SUCH ACTIVITIES WITH THE OWNER'S REPRESENTATIVE PRIOR TO PERFORMING ANY SUCH OPERATIONS OR ACTIVITIES.

THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SUPPORT, BRACING, AND OTHER DEVICES AS MAY BE REQUIRED OR AS DIRECTED BY OWNER'S REPRESENTATIVE OR THE ENGINEER TO PROTECT THE SAFETY OF THE PUBLIC, ADJACENT STRUCTURES, ROADWAY AND/OR UTILITIES. ALL WORK TO BE COORDINATED WITH THE OWNER'S REPRESENTATIVE.

THE LOCATION OF MATERIALS STORED ON SITE MUST RECEIVE THE APPROVAL OF THE OWNER. IN GENERAL, MATERIALS SHOULD BE STORED SO AS TO MINIMIZE THE INCONVENIENCE TO THE OWNER.

## SCOPE & INTERPRETATION OF CONTRACT DRAWINGS

THE INTENT OF THESE DRAWINGS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK BY THE CONTRACTOR. PERFORMANCE BY THE CONTRACTOR SHALL BE REQUIRED TO THE EXTENT CONSISTENT WITH THE CONTRACT DOCUMENTS AND REASONABLY INFERABLE FROM THEM AS BEING NECESSARY TO PRODUCE THE INTENDED RESULTS.

IN THE CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER DOCUMENT, THE BETTER QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE OWNER'S REPRESENTATIVE'S INTERPRETATION.

CONTRACTOR'S LUMP SUM BID PRICE SHALL INCLUDE ALL ITEMS AND OPERATIONS NEEDED, REQUIRED AND NECESSARY FOR THE PROPER EXECUTION OF THE PROJECT AND TO COMPLETE ALL WORK.

## GENERAL CONTRACTOR ON-SITE RESPONSIBILITIES

1. THE CONTRACTOR IS REQUIRED TO HAVE SOMEONE ON SITE TO SUPERVISE THE SUBCONTRACTOR FOR QUALITY CONTROL AND TO PROVIDE ANY NECESSARY ASSISTANCE TO ENSURE QUALITY WORK. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTOR'S OVERALL LUMP SUM BID FOR THE PROJECT.
2. THE TRACKING OR SPILLAGE OF MUD, DIRT, OR DEBRIS OFF SITE IS PROHIBITED. ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR
3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.

## GENERAL NOTES FOR CIVIL WORK

1. CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT FOR THE PROPOSED PROJECT AND PERFORM ALL GEOTECHNICAL WORK IN ACCORDANCE WITH THIS REPORT
2. CONTRACTOR TO REFER TO ODOT SPECIFICATION, ITEM 659 FOR SEEDING AND MULCHING, CLASS 1 LAWN TYPE, UNLESS OTHERWISE SPECIFIED. CONTRACTOR WILL NOT SEED ANY AREA UNTIL OWNER HAS INSPECTED FINAL TOPSOIL GRADING.
3. TOPSOIL SHALL BE REMOVED FROM ALL DISTURBED AREAS AND AREAS TO BE EXCAVATED OR EMBANKED. ALL DISTURBED AREAS AND NON-PAVEMENT AREAS SHALL HAVE A MINIMUM OF 6" OF TOP SOIL PLACED AND BE SEEDED & MULCHED, CLASS 1 LAWN TYPE, PER ODOT ITEM 659.
4. ALL DISTURBED LAWN AREAS SHALL BE GRADED TO DRAIN TO THE NEAREST INLET STRUCTURE.
5. CONTRACTOR SHALL USE PROPER EROSION CONTROL TECHNIQUES TO MAINTAIN GRADE PRIOR TO SEEDING.
6. CONTRACTOR TO CLEAR THE AREA AS SHOWN ON THE PLANS AND/OR AS NEEDED TO WORK ON THIS PROJECT. UNLESS STATED ELSEWHERE IN THE PLANS, CLEARING AND GRUBBING IS TO BE KEPT TO A MINIMUM IN ORDER TO PRESERVE THE WOODED AREAS.
7. ALL EMBANKMENT SHALL BE COMPACTED TO A MINIMUM OF 100% STANDARD PROCTOR OR AS DETERMINED BY THE OWNER. TESTING MAY BE REQUIRED BY THE OWNER.
8. CONTRACTOR TO BE RESPONSIBLE FOR ANY PERMITS OR FEES THAT MAY BE NECESSARY FOR THE COMPLETION OF THE SITE WORK.
9. ALL WORK SHALL CONFORM WITH ALL FEDERAL, STATE, AND LOCAL ADA REGULATIONS AND STANDARDS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND IS TO INCLUDE SUCH COSTS AS A PART OF THE LUMP SUM PRICE ON THE PROJECT.
11. THE CONTRACTOR IS TO VISIT AND INVESTIGATE THE PROJECT SITE, PRIOR TO BIDDING, IN ORDER TO DETERMINE THE EXISTING GROUND AND SITE CONDITIONS. FOR SOIL TYPE AND GROUND WATER TABLE, THE CONTRACTOR IS ENCOURAGED TO UTILIZE ANY AVAILABLE DATA TO ESTIMATE GROUND CONDITIONS. SHOULD THE BIDDING CONTRACTOR REQUIRE ADDITIONAL TEST HOLES PRIOR TO BIDDING IN ORDER TO DETERMINE OR VALIDATE GROUND CONDITIONS, THIS CAN BE COMPLETED AT THE DISCRETION OF THE OWNER. NO TEST HOLES ARE TO BE DUG WITHOUT CONTACTING THE OWNER'S REPRESENTATIVE PRIOR TO EXCAVATION AND WITHOUT RECEIVING WRITTEN APPROVAL FROM THE OWNER'S REPRESENTATIVE TO DO SO.
12. IF EXCAVATED MATERIALS ARE FOUND TO BE CONTAMINATED, REMEDIATION WILL BE AT THE OWNER'S EXPENSE PRIOR TO REMOVAL FROM THE SITE OR DISPOSAL ON SITE BY THE CONTRACTOR. THIS PROCESS WILL BE COORDINATED BETWEEN THE OWNER AND CONTRACTOR.
13. TRENCH EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH THE BID SPECIFICATIONS AND ALL APPLICABLE SAFETY RULES AND REGULATIONS. IN ADDITION, THE OWNER MAY HAVE ADDITIONAL REQUIREMENTS FOR EXCAVATION AND TRENCHING ON OWNER PROPERTY THAT MAY BE MORE STRINGENT THAN CURRENT LOCAL OR OSHA REQUIREMENTS. IN THIS CASE, THE OWNER'S REQUIREMENTS ARE TO BE FOLLOWED UNLESS THIS ACTION WOULD BE CONSIDERED NON-COMPLIANT WITH CURRENT GOVERNING CODES OR REGULATIONS AS DEFINED BY LOCAL OR GOVERNING AUTHORITIES. WHERE A NON-COMPLIANCE ISSUE IS NOTED, THE CONTRACTOR IS TO MAKE THE OWNER AND ENGINEER AWARE OF THE GOVERNING CODE.
14. CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ALL FENCES, LAWN DECORATIONS, TREES, SHRUBS, PLANTING, VEGETATION ETC. WHICH IS DAMAGED, DISTURBED OR REMOVED DURING CONSTRUCTION.

## MAINTAINING TRAFFIC

MAINTAIN TRAFFIC IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS ITEM 614, THE APPROVED ODOT MR-505 PERMIT, AND ALL OTHER APPLICABLE ODOT REQUIREMENTS. IN THE EVENT OF A CONFLICT BETWEEN THESE PLANS, NOTES, DETAILS, SPECIFICATIONS, OR STANDARD DRAWINGS AND THE APPROVED ODOT MR-505 PERMIT, THE MR-505 PERMIT REQUIREMENTS SHALL GOVERN. ADDITIONALLY, THE FOLLOWING REQUIREMENTS SHALL APPLY:

1. EXCAVATIONS WITHIN PUBLIC RIGHT-OF-WAY LIMITS SHALL BE CLOSED AT TIMES WHEN WORK IS NOT BEING PERFORMED.
2. LOCAL TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT DURING THE TIME THAT AN APPROVED CLOSURE AND DETOUR IS ALLOWED BY THE GOVERNING AUTHORITY.
3. ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING NECESSARY TRAFFIC CONTROL DEVICES AND PAVEMENT REPAIR MATERIALS TO MAINTAIN THE SAFETY OF THE TRAVELED PAVEMENT.
5. NO SHUT DOWN OF ANY OWNER FACILITY DRIVE, ROADWAY OR PARKING LOT WILL BE ALLOWED WITHOUT WRITTEN CONSENT FROM THE OWNER. ALL OWNER ROADWAYS MUST HAVE AT LEAST ONE LANE OPEN AT ALL TIMES. NO STAGING OF TRUCKS OUTSIDE OF CONSTRUCTION LIMITS WILL BE PERMITTED WITHOUT CONSENT FROM THE OWNER.

## INSTALLATION & COMPLIANCE

ALL UTILITIES MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH THE STANDARDS OF THE GOVERNING AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE INSTALLATION OF GAS, ELECTRIC, TELEPHONE, CABLE, FIBER OPTIC, AND ANY OTHER UTILITIES. BEFORE INSTALLATION, UTILITY COMPANIES MUST BE CONTACTED TO ENSURE COMPLIANCE WITH THEIR STANDARDS. ADDITIONALLY, THE CONTRACTOR MUST VERIFY UTILITY SIZES, ROUTES, ENTRY POINTS, AND INVERTS WITH ARCHITECTURAL AND/OR MEP PLANS BEFORE BEGINNING CONSTRUCTION.

## UTILITY LOCATIONS & VERIFICATION

UNDERGROUND UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE, AND THE CONTRACTOR MUST VERIFY THEM IN THE FIELD. THESE LOCATIONS ARE BASED ON UTILITY OWNERS' DATA AS PER SECTION 153.64 ORC, FIELD SURVEY INFORMATION AND EXISTING DRAWINGS, BUT ACCURACY IS NOT GUARANTEED. CHOICE ONE ENGINEERING CORPORATION HAS NOT PHYSICALLY VERIFIED THE UNDERGROUND UTILITIES. BEFORE CONSTRUCTION BEGINS, CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITY MARKING SERVICE TO AVOID CONFLICTS, AND VERIFY ALL GRADES, ELEVATIONS, AND UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

## UTILITY COORDINATION & NOTIFICATION

THE CONTRACTOR MUST CONTACT OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764) AT LEAST 48 HOURS BEFORE CONSTRUCTION.

IF ANY CONFLICTS WITH EXISTING UTILITIES ARISE, THE CONTRACTOR MUST NOTIFY AND COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES. PUBLIC SERVICE CORPORATIONS MUST BE INFORMED AT LEAST 7 DAYS BEFORE BREAKING GROUND IF THEIR INFRASTRUCTURE MAY BE AFFECTED. PRIVATE UTILITY WORK MUST BE COORDINATED WITH THE OWNERS UNLESS OTHERWISE STATED IN THE PLANS. IF CONSTRUCTION ACTIVITIES IMPACT FACILITY OPERATIONS, THE CONTRACTOR MUST COORDINATE SCHEDULING WITH THE OWNER'S REPRESENTATIVE.

## UTILITY OWNERSHIP

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

STREETS AND STORM SEWER
ODOT DISTRICT 7
1001 ST. MARYS AVENUE
SIDNEY, OHIO 45365
(937) 497-6847
ATTN: IAN GRIEVE

WATER AND SANITARY
MIAMI COUNTY
2200 N. COUNTY ROAD 25A
TROY, OHIO 45373
(937) 440-5653
ATTN: PAUL HUELSKAMP

ELECTRIC
AES OHIO
1900 DRYDEN ROAD
DAYTON, OHIO 45439
(937) 331-4791
ATTN: HEATHER SEESING

ELECTRIC
PIONEER RURAL ELECTRIC COOP
344 W. US ROUTE 36
PIQUA, OHIO 45356
(937) 773-2523
ATTN: JEFF DIETZ

CABLE
CHARTER COMMUNICATIONS
3691 TURNER ROAD
DAYTON, OHIO 45415
(937) 426-4828
ATTN: RHONDA HEBERT

TELEPHONE
AT&T
7201 FAR HILLS AVENUE
CENTERVILLE, OHIO 45459
(937) 296-3568
ATTN: HOWARD LAUDERMILK

CABLE
FRONTIER COMMUNICATION
226 N. MAIN STREET
CELINA, OHIO 45822
(260) 715-5906
ATTN: ANDREW MEGGITT

## DAMAGE & RESPONSIBILITY

THE CONTRACTOR IS RESPONSIBLE FOR ANY UTILITY DAMAGE UNLESS IT IS CLEARLY THE UTILITY COMPANY'S RESPONSIBILITY. THE CONTRACTOR MUST REPAIR OR COORDINATE THE REPAIR/REPLACEMENT WITH THE UTILITY OWNER TO ENSURE PROPER FUNCTION AND COMPLIANCE WITH PROJECT REQUIREMENTS.

## UTILITY CROSSINGS & ADJUSTMENTS

WHERE PLANS PROPOSE A CONDUIT TO BE CONNECTED TO, OR CROSS AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE, SIZE AND GRADE BEFORE LAYING THE PROPOSED CONDUIT OR ORDERING MATERIALS.

IF IT IS DETERMINED THAT THE ELEVATION OR SIZE OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR SIZE OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE OWNER & ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

ANY NECESSARY ADJUSTMENTS FOR UTILITY CROSSINGS AND CONNECTIONS SHALL BE INCLUDED IN THE CONTRACTOR'S LUMP SUM BID.

## REVIEW OF DRAINAGE FACILITIES

BEFORE FINAL ACCEPTANCE BY THE OWNER, REPRESENTATIVES OF THE OWNER, AND THE CONTRACTOR, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. ALL EXISTING SEWERS INSPECTED BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO PRE-EXISTING CONDITION OF THE SEWER. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF BETHEL TOWNSHIP AND/OR OWNER.

ALL NEW CONDUITS, UNDERDRAINS (INCLUDING THE STONE BACKFILL ABOVE THE UNDERDRAIN PIPING), INLETS, CATCH BASINS, MANHOLES, SWALES/DITCHES, AND DETENTION/RETENTION BASINS CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER (INCLUDING SEDIMENT), IN CLEAN CONDITION, AND FUNCTIONING AS INTENDED BEFORE PROJECT ACCEPTANCE BY THE OWNER.

## DRAINAGE & STORM SEWER CONNECTIONS

EXISTING DRAINAGE TILES MUST BE REROUTED AND/OR CONNECTED TO THE PROPOSED STORM SEWER, AND ANY DAMAGED TILES MUST BE REPLACED TO THEIR ORIGINAL OR BETTER CONDITION. ANY PREVIOUSLY UNRECORDED DRAINAGE TILES ENCOUNTERED MUST BE REPORTED TO THE OWNER, RECORDED IN THE RECORD DRAWINGS AND INSPECTED BY BETHEL TOWNSHIP BEFORE BEING COVERED. ANY FIELD OR STORM DRAINS ENCOUNTERED DURING CONSTRUCTION MUST HAVE UNOBSTRUCTED OUTLETS OR BE PROPERLY PLUGGED AS DIRECTED. CONNECTIONS BETWEEN INTERSECTING DRAIN TILES AND THE PROPOSED STORM SEWER MUST USE MANUFACTURED TEES UNLESS OTHERWISE APPROVED BY BETHEL TOWNSHIP. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTORS OVERALL LUMP SUM BID.

## STORM SEWER INSTALLATION

THIS WORK CONSISTS OF CONSTRUCTING STORM SEWER. THE CONTRACTOR SHALL PROVIDE ALL TOOLS AND EQUIPMENT REQUIRED FOR INSTALLING THESE ITEMS. THE WORK ALSO INCLUDES FURNISHING ALL MATERIALS, EXCAVATING, BEDDING, LAYING PIPE, JOINTING, BACKFILLING, REMOVAL AND RESTORATION OF DISTURBED FACILITIES AND SURFACES, CURB REPAIR, SIDEWALK REPAIR, PAVEMENT REPAIR (I.E. PAVEMENT IN STREETS, ALLEYS AND DRIVEWAYS), DISPOSAL OF ALL SURPLUS EXCAVATION AND DISCARDED MATERIALS, AND OTHER WORK NECESSARY TO COMPLETE THE ITEMS. THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD LOCATE ALL EXISTING STORM SEWER, AND OTHER UTILITIES, PRIOR TO INSTALLING THE PROPOSED STORM SEWER SYSTEM. THE EXISTING STORM SEWER AND LATERALS SHOWN ON THE PLANS ARE IN THE APPROXIMATE LOCATION AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE PROPOSED TIE-INS TO THE EXISTING STORM PRIOR TO ANY STORM SEWER CONSTRUCTION. ALL TIE-INS SHALL BE THROUGH PREMANUFACTURED TEES OR HOLES INSTALLED USING A CORING MACHINE. PIPE MAY BE ANY OF THE PIPE TYPES LISTED BELOW UNLESS OTHERWISE SPECIFIED ON THE PLANS.

| TYPES OF PIPE PERMITTED | ODOT MATERIAL NUMBERS |
|---|---|
| CORRUGATED POLYETHYLENE SMOOTH-LINED PIPE (CPSLP) | 707.33 |
| POLYPROPYLENE CORRUGATED DOUBLE WALL PIPE (PCDWP) | 707.65 |
| POLYVINYL CHLORIDE SOLID WALL PIPE (SDR-35) | 707.45 |
| REINFORCED CONCRETE PIPE | 706.02 |

## STORM/SANITARY CONDUITS/STRUCTURES & RELATED WORK

THIS ITEM OF WORK SHALL CONSIST OF THE WORK AS DESCRIBED IN OHIO DEPARTMENT OF TRANSPORTATION ITEM 611, PIPE CULVERTS, SEWERS, DRAINS, AND DRAINAGE STRUCTURES, EXCEPT AS HEREIN MODIFIED.

THE INSTALLATION OF ALL STORM SEWER, SANITARY SEWER, AND ALL CORRESPONDING STRUCTURES SHALL BE PER MANUFACTURER'S RECOMMENDATIONS OR AS NOTED ON THE PLANS. CONTRACTOR IS RESPONSIBLE TO ENSURE ALL WORK IS PERFORMED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR AS NOTED ON THE PLANS. CONTRACTOR SHALL ALSO ENSURE THAT ALL ITEMS ARE FULLY AND PROPERLY FUNCTIONAL, AND TO A QUALITY ACCEPTABLE TO THE OWNER.

ALL PIPE CULVERTS, CONDUITS, SEWERS, DRAINS, AND DRAINAGE STRUCTURES (CATCH BASINS, YARD DRAINS, MANHOLES, ETC.) SHALL MEET THE MATERIAL REQUIREMENTS OF THIS ITEM. THE FOLLOWING ITEMS WILL NOT BE REQUIRED UNLESS OTHERWISE NOTED: 1) INSTALLATION PLAN, 2) CONSTRUCTION INSPECTION FORMS, 3) PERFORMANCE INSPECTIONS AND REPORTS, 4) CONDUIT AND DRAINAGE STRUCTURE EVALUATIONS.

THE CONTRACTOR SHALL ENSURE THE CONDUIT BEDDING AND BACKFILL COMPACTION DENSITY MEETS ASTM D698 (98% STANDARD PROCTOR). TESTING MAY BE REQUIRED IF DEEMED NECESSARY BY THE OWNER OR THE OWNER'S REPRESENTATIVE.

## CLEAN WATER NOTE

ROOF DRAINS, FOUNDATION DRAINS, AND ALL OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SYSTEM ARE PROHIBITED.

## DEWATERING AND BY-PASS PUMPING

ANY DEWATERING, COFFERDAMS, OR PUMPING NECESSARY FOR THE CONSTRUCTION OF ANY ITEMS SHALL BE INCIDENTAL TO THOSE PARTICULAR CONSTRUCTION ITEMS AND SHALL BE INCLUDED IN THE CONTRACTOR'S OVERALL LUMP SUM BID FOR THE PROJECT.

## RESTORATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY DISTURBED AND/OR DAMAGED AREAS, INCLUDING PAVEMENT, TO CONDITIONS EQUAL TO OR BETTER THAN CONDITIONS PRIOR TO CONSTRUCTION OR TO THE SATISFACTION OF THE OWNER.

THE CONTRACTOR WILL REPLACE ALL DAMAGED OR REMOVED DRIVES AND PAVEMENT WITH THE REQUIRED THICKNESS SHOWN ON THE PLANS OR MATCH EXISTING IF GREATER.

## ASPHALT PAVEMENT SAWCUT AND REPLACEMENT NOTE

ANY EXISTING PAVEMENT THAT IS TO BE REMOVED SHALL BE SAWCUT FULL DEPTH AND RESTORED TO MATCH THE EXISTING PAVEMENT CROSS SECTION UNLESS OTHERWISE NOTED IN THE PLANS.

MORE THAN ONE SAWCUT MAY BE NECESSARY TO ENSURE A CLEAN CUT. JUST PRIOR TO ASPHALT OR CONCRETE PLACEMENT, CLEAN THE VERTICAL SURFACE FROM FOREIGN MATERIAL AND APPLY A THICK, UNIFORM COATING OF 702.01 PG BINDER, 702.09 HOT APPLIED ASPHALTIC JOINT ADHESIVE, OR 702.13 SBR ASPHALT EMULSION TO PROVIDE 100% COVERAGE AS PER 401.08. AFTER THE ASPHALT WORK IS COMPLETED, THE TRANSVERSE JOINTS SHALL BE SEALED WITH 702.01 PG BINDER.

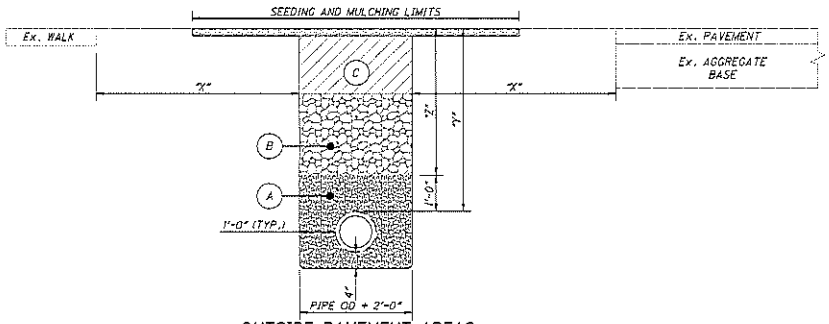
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EETSABARN SITE PLAN
BETHEL TOWNSHIP
GENERAL NOTES

REVISIONS:

FILE NAME: GENERAL NOTES
DRAWN BY: DMR
CHECKED BY: JSP
PROJECT No.: MIA-BET-2601
DATE: 09-08-2026
SHEET NUMBER: 2 OF 18

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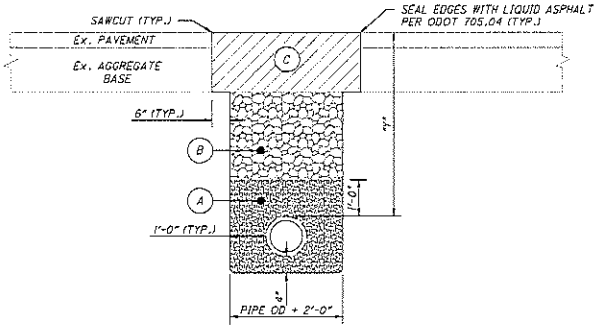



## OUTSIDE PAVEMENT AREAS

"X"= DISTANCE FROM EDGE OF TRENCH TO EDGE OF CLOSEST PROPOSED OR EXISTING PAVEMENT, CURB, DRIVEWAYS, ALLEYS, STONE AREA OR WALKS.

"Z"= DISTANCE FROM TOP OF BEDDING TO FINISH SURFACE.

"Y"= DEPTH OF COVER FOR PROPOSED CONDUIT
WATER MAINS.....4'-6" MIN. (REFER TO PROFILE)
STORM SEWERS.....2'-0" MIN. (REFER TO PROFILE)
SANITARY SEWERS.....4'-0" MIN. (REFER TO PROFILE)




## IN PAVEMENT AREAS

### NOTES

(A) BEDDING SHALL BE PER ODOT 703.11 "STRUCTURAL BACKFILL FOR 611 BEDDING AND BACKFILL" TYPE 3 (#57 OR #67 AGGREGATE), OR OTHER APPROVED EQUIVALENT BY THE MUNICIPALITY. THERE SHALL BE 4" MIN. BEDDING BELOW THE PIPE. THE FOLLOWING BEDDING MATERIAL SHALL BE USED PER PROPOSED CONDUIT:

- WATER MAIN, WATER SERVICES, FIRE HYDRANTS AND APPURTENANCES - SHALL BE NATURAL CRUSHED STONE OR NATURAL GRAVEL.
- STORM AND SANITARY SEWERS - SHALL BE CRUSHED LIMESTONE OR NATURAL CRUSHED STONE.

(B) STRUCTURAL BACKFILL - DENSITY TEST TO 95% OF ASTM D698 STANDARD PROCTOR CURVE MAY BE REQUIRED BY MUNICIPALITY TO BE COMPLETED BY A CERTIFIED COMMERCIAL TESTING LABORATORY.

FOR "OUTSIDE PAVEMENT AREAS":
ALL TRENCHES WHERE "X" IS GREATER THAN "Z", THE BACKFILL MATERIAL SHALL BE COMPACTED NATIVE MATERIAL IN 12" MAXIMUM LIFTS OR AS APPROVED BY THE MUNICIPALITY. NO MATERIAL SHALL BE USED FOR BACKFILLING THAT CONTAINS STONE, ROCKS, ETC., GREATER THAN 3" DIAMETER.

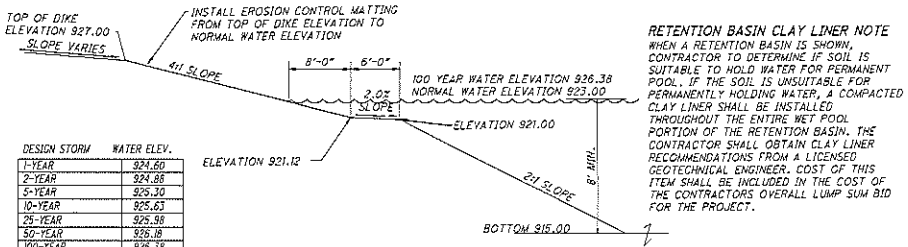
ALL TRENCHES WHERE "Z" IS GREATER THAN "X", THE BACKFILL MATERIAL SHALL BE ODOT ITEM 703.11, TYPE 1 (#304 AGGREGATE). THE AGGREGATE SHALL BE COMPACTED IN 12" MAXIMUM LIFTS AND BE USED UNTIL THE BACKFILL HEIGHT RESULTS IN "X" BEING GREATER THAN "Z" AT WHICH TIME NATIVE BACKFILL CAN BE USED.

FOR "IN PAVEMENT AREAS":
ALL TRENCHES SHALL HAVE ODOT ITEM 703.11, TYPE 1 (#304 AGGREGATE) BACKFILL PLACED FROM THE TOP OF THE BEDDING TO THE BOTTOM OF THE ROADWAY BASE.

(C) ALL "OUTSIDE PAVEMENT AREAS" SHALL RECEIVE A MIN. OF 6" OF TOPSOIL OVER THE COMPACTED MATERIAL AND THEN SEEDED PER ODOT 659. ALL "IN PAVEMENT AREAS" SHALL FOLLOW THE CORRESPONDING PAVEMENT COMPOSITION PROVIDED IN THE HATCH LEGEND. THE TRENCH DETAIL SHOWS THE PAVEMENT REPAIR LIMITS. ANY PAVEMENT REPAIR BEYOND THIS WILL BE AT THE COST OF THE CONTRACTOR.

## TRENCH DETAIL

NTS



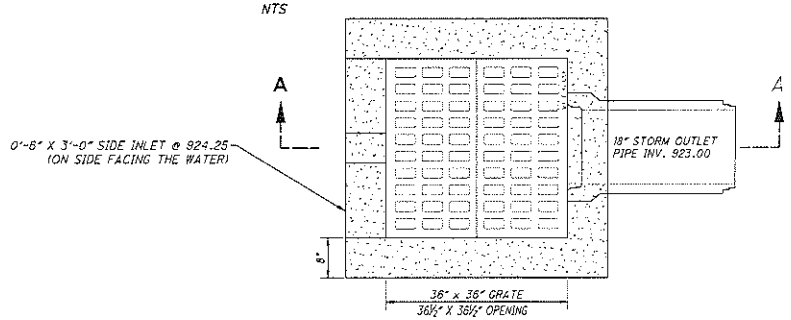

| DESIGN STORM | WATER ELEV. |
|---|---|
| 1-YEAR | 924.60 |
| 2-YEAR | 924.86 |
| 5-YEAR | 925.30 |
| 10-YEAR | 925.63 |
| 25-YEAR | 925.98 |
| 50-YEAR | 926.18 |
| 100-YEAR | 926.38 |

### RETENTION BASIN CLAY LINER NOTE

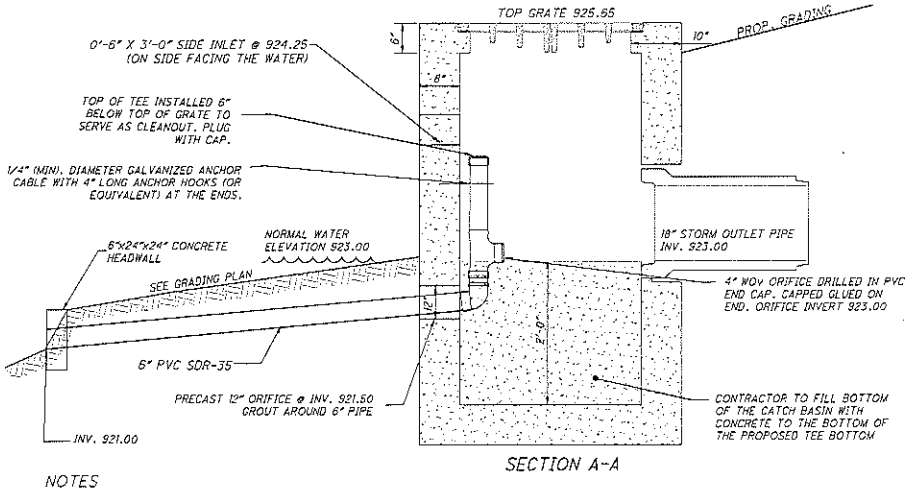
WHEN A RETENTION BASIN IS SHOWN, CONTRACTOR TO DETERMINE IF SOIL IS SUITABLE TO HOLD WATER FOR PERMANENT POOL. IF THE SOIL IS UNSUITABLE FOR PERMANENTLY HOLDING WATER, A COMPACTED CLAY LINER SHALL BE INSTALLED THROUGHOUT THE ENTIRE WET POOL PORTION OF THE RETENTION BASIN. THE CONTRACTOR SHALL OBTAIN CLAY LINER RECOMMENDATIONS FROM A LICENSED GEOTECHNICAL ENGINEER. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTORS OVERALL LUMP SUM BID FOR THE PROJECT.

## TYPICAL RETENTION BASIN DETAIL

NTS




## PLAN VIEW




## SECTION A-A

### NOTES

A. GRATE SHALL BE NEENAH CATALOG NO. R-3437 (TYPE C GRATE) OR EQUIVALENT. CONTRACTOR SHALL FASTEN/BOLT DOWN GRATE TO STRUCTURE TO ENSURE GRATE IS SECURELY FASTENED IN PLACE.

B. PRECAST STRUCTURE CONSTRUCTION IS REQUIRED, UNLESS OTHERWISE APPROVED, AND CONCRETE SHALL MEET THE REQUIREMENTS OF 706.13. CAST-IN-PLACE CONCRETE IN THE FIELD WILL BE ALLOWED FOR SUMP ELIMINATION/ANTI-FLOATATION.

## 2-3 CATCH BASIN (RETENTION BASIN) OUTLET STRUCTURE WITH 36" GRATE

NTS

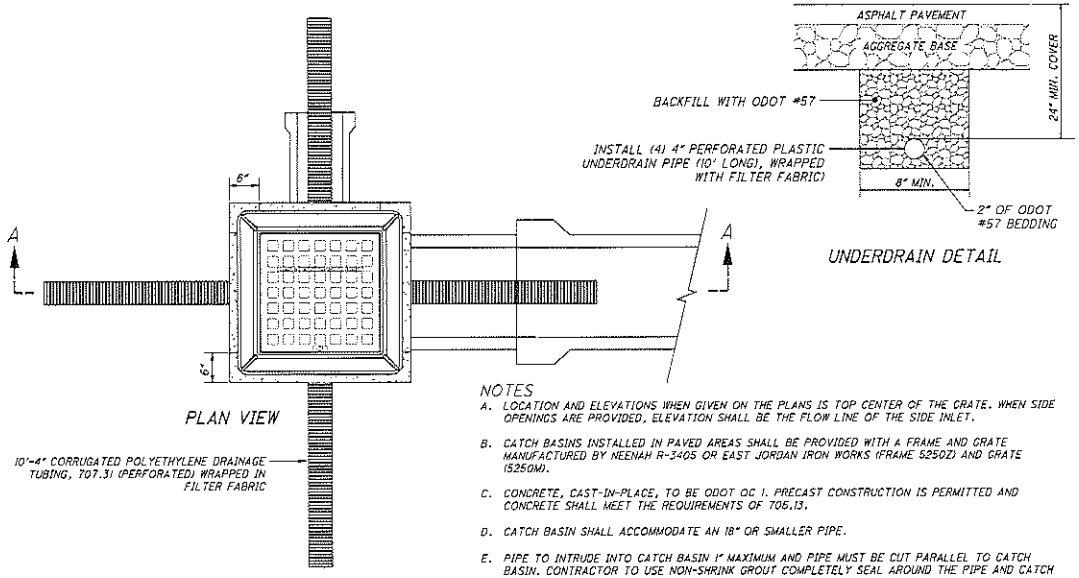

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# EETSABARN SITE PLAN
# BETHEL TOWNSHIP
# GENERAL DETAILS

REVISIONS:

FILE NAME: GENERAL DETAILS
DRAWN BY: DMR
CHECKED BY: JSP
PROJECT No.: MIA-BET-2601
DATE: 09-08-2025
SHEET NUMBER: 3 OF 18


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NOTES

A. LOCATION AND ELEVATIONS WHEN GIVEN ON THE PLANS IS TOP CENTER OF THE GRATE. WHEN SIDE OPENINGS ARE PROVIDED, ELEVATION SHALL BE THE FLOW LINE OF THE SIDE INLET.

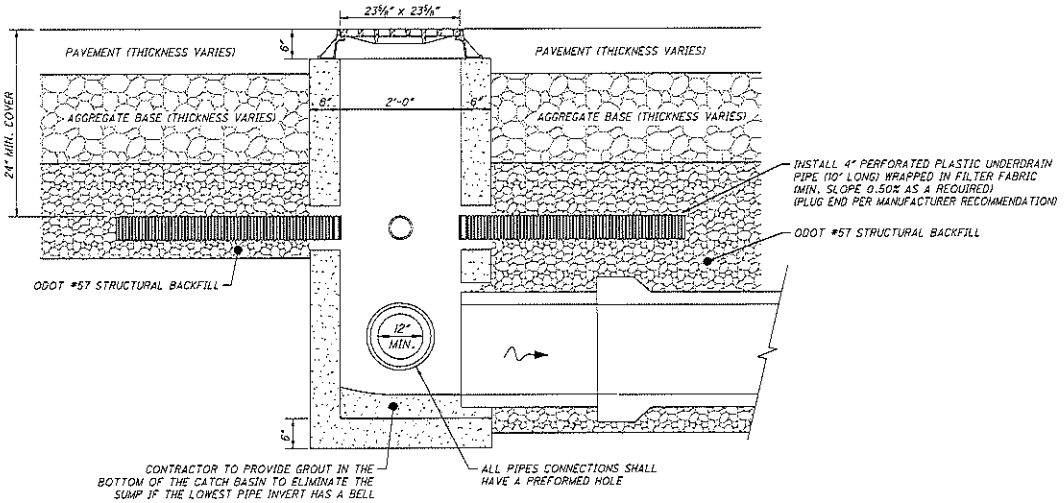
B. CATCH BASINS INSTALLED IN PAVED AREAS SHALL BE PROVIDED WITH A FRAME AND GRATE MANUFACTURED BY NEENAH R-3405 OR EAST JORDAN IRON WORKS (FRAME 5250Z) AND GRATE (5250M).

C. CONCRETE, CAST-IN-PLACE, TO BE ODOT QC 1. PRECAST CONSTRUCTION IS PERMITTED AND CONCRETE SHALL MEET THE REQUIREMENTS OF 706.13.

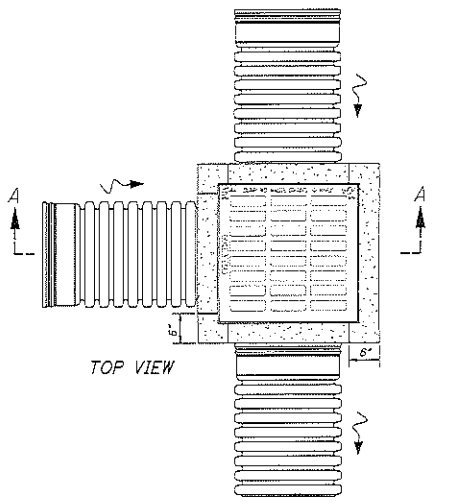
D. CATCH BASIN SHALL ACCOMMODATE AN 18" OR SMALLER PIPE.

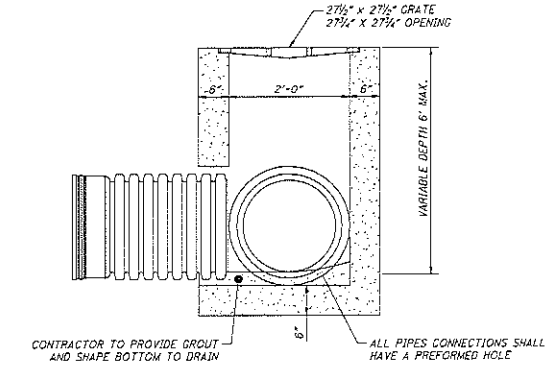
E. PIPE TO INTRUDE INTO CATCH BASIN 1" MAXIMUM AND PIPE MUST BE CUT PARALLEL TO CATCH BASIN. CONTRACTOR TO USE NON-SHRINK GROUT COMPLETELY SEAL AROUND THE PIPE AND CATCH BASIN.

F. THE CONTRACTOR SHALL ENSURE THE FRAME IS SECURELY BOLTED/FASTENED TO THE CATCH BASIN DURING INSTALLATION IN ALL PAVED AREAS (GRAVEL, ASPHALT AND CONCRETE).




## 2-2C CATCH BASIN (PAVED AREAS, WITH UNDERDRAINS)




SECTION A-A

NOTES

A. LOCATION AND ELEVATIONS WHEN GIVEN ON THE PLANS IS TOP CENTER OF THE GRATE. WHEN SIDE OPENINGS ARE PROVIDED, ELEVATION SHALL BE THE FLOW LINE OF THE SIDE INLET.

B. CATCH BASINS INSTALLED IN NON-PAVED AREAS SHALL BE PROVIDED WITH A RECESSED GRATE MANUFACTURED BY NEENAH CATALOG NO. R-4859-C (TYPE A) OR EAST JORDAN IRON WORKS 5110 (TYPE M3) OR EQUIVALENT.

C. CONCRETE, CAST-IN-PLACE, TO BE ODOT QC 1. PRECAST CONSTRUCTION IS PERMITTED AND CONCRETE SHALL MEET THE REQUIREMENTS OF 706.13.

D. GRATE ELEVATION TO BE PLACED 4" - 6" BELOW THE NORMAL DITCH LINE RETURNING TO NORMAL 10'-0" ON EACH SIDE OF STRUCTURE.

E. CATCH BASIN SHALL ACCOMMODATE AN 18" OR SMALLER PIPE.

F. PIPE TO INTRUDE INTO CATCH BASIN 1" MAXIMUM AND PIPE MUST BE CUT PARALLEL TO CATCH BASIN. CONTRACTOR TO USE NON-SHRINK GROUT COMPLETELY SEAL AROUND THE PIPE AND CATCH BASIN.

## 2-2B CATCH BASIN (NON-PAVED AREAS)

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EETSABARN SITE PLAN
BETHEL TOWNSHIP
GENERAL DETAILS

REVISIONS:

FILE NAME: GENERAL DETAILS
DRAWN BY: DMP
CHECKED BY: JSP
PROJECT NO.: MIA-BET-2601
DATE: 05-05-2026
SHEET NUMBER: 4 OF 18

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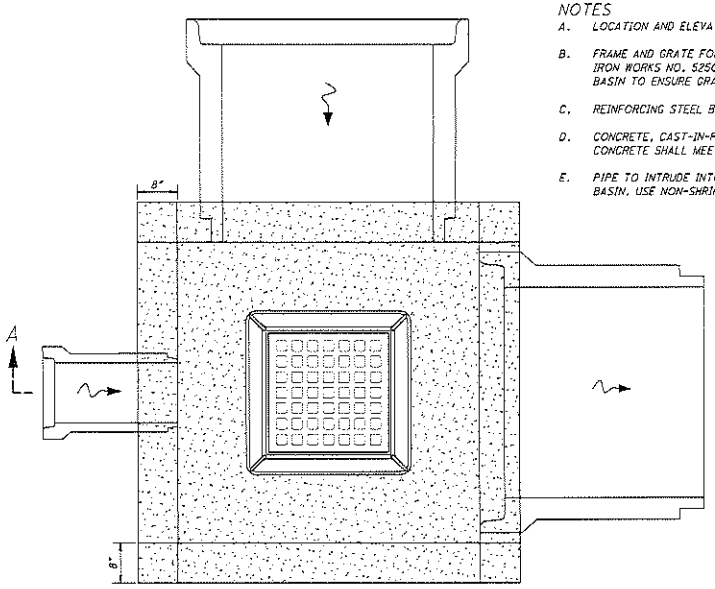
A. LOCATION AND ELEVATIONS WHEN GIVEN ON THE PLANS IS TOP CENTER OF THE GRATE.

B. FRAME AND GRATE FOR PAVED AREAS SHALL BE NEENAH CATALOG NO. R-3405 OR EAST JORDAN IRON WORKS NO. 5250 OR EQUIVALENT. CONTRACTOR SHALL FASTEN/BOLT DOWN GRATE TO BASIN TO ENSURE GRATE IS SECURELY FASTENED IN PLACE.

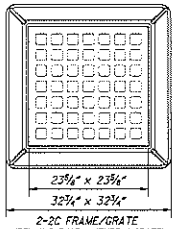
C. REINFORCING STEEL BAR # AND SPACING IN TOP SLAB SHALL FOLLOW ODOT SCD CB-1.2/1.3.

D. CONCRETE, CAST-IN-PLACE, TO BE ODOT QC 1. PRECAST CONSTRUCTION IS PERMITTED AND CONCRETE SHALL MEET THE REQUIREMENTS OF 706.13.

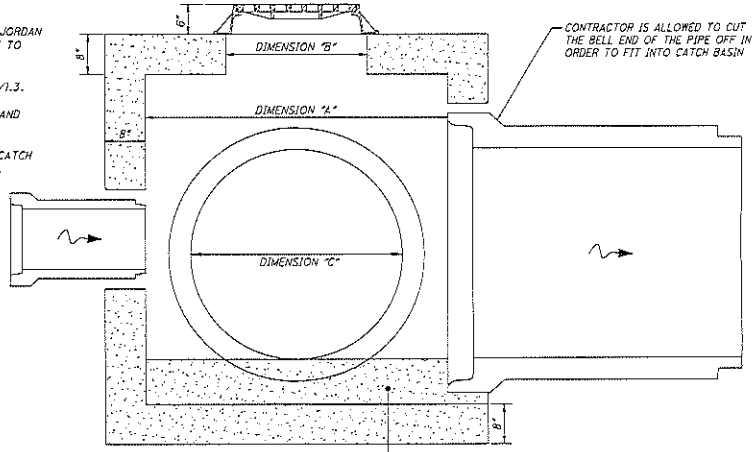
E. PIPE TO INTRUDE INTO CATCH BASIN 1" MAXIMUM AND PIPE MUST BE CUT PARALLEL TO CATCH BASIN. USE NON-SHRINK GROUT AROUND PIPE TO SEAL BETWEEN PIPE AND CATCH BASIN.




PLAN VIEW



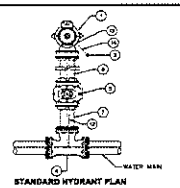

2-2C FRAME/GRATE
NEENAH R-3405-H (TYPE H GRATE)
EJIW NO. 5250 (TYPE H GRATE)




SECTION A-A

| CB SIZE | DIMENSION "A" | DIMENSION "B" | DIMENSION "C" |
|---|---|---|---|
| 2-3 | 3'-0" x 3'-0" | 2'-0" x 2'-0" (2-2C GRATE) | 12" - 24" |
| 2-4 | 4'-0" x 4'-0" | 2'-0" x 2'-0" (2-2C GRATE) | 12" - 36" |

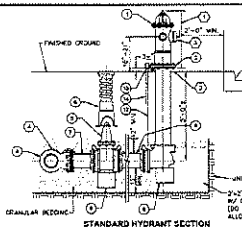
## 2-3, 2-4 CATCH BASINS WITH A 2-2C GRATE (PAVED AREAS)




STANDARD HYDRANT PLAN

MATERIAL LEGEND

| NO. | DESCRIPTION |
|---|---|
| 1 | 6" HYDRANT, CITY OF TROY SERVICE AREA, AMERICAN DARLING B-84-B WITH 6" MJ CITY/CLARK COUNTY SERVICE AREA, |
| 2 | 6"x6" MJ TEE |
| 3 | 6"x6" MJ CAST IRON F-4100 MJ-1.25 PIPE, CUT TO LENGTH |
| 4 | 6" MJ GATE VALVE AND BOX |
| 5 | 6" MJ CAST IRON F-4100 MJ-1.25 PIPE, CUT TO LENGTH |
| 6 | 6" MJ 90° BEND |
| 7 | 6" MJ GATE VALVE, IN ACCORDANCE WITH TROY AWWA SPECIFICATIONS |
| 8 | 6" MJ CAST IRON F-4100 MJ-1.25 PIPE, CUT TO LENGTH |




STANDARD HYDRANT SECTION

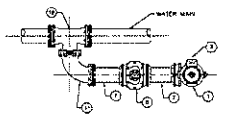
FIRE HYDRANT KEY NOTES

| NO. | DESCRIPTION |
|---|---|
| 1 | HYDRANT BARREL SHALL BE YELLOW WITH WHITE TOP |
| 2 | 6" MJ CAST IRON TEE WITH 6x6 MJ TO GRADE GATE VALVE AND BOX, SEE DETAIL ON THIS SHEET |
| 3 | 6" MJ CAST IRON 90° BEND |
| 4 | 6" MJ GATE VALVE IN ACCORDANCE WITH TROY AWWA SPECIFICATIONS |
| 5 | HYDRANT BRANCH SHALL BE PLACED IN SERVICE IN TO BE BAGGED AT TOP OF HYDRANT |
| 6 | 6" MJ CAST IRON F-4100 MJ-1.25 PIPE, CUT TO LENGTH |
| 7 | HYDRANT DRAIN SHALL BE FACTORY CONNECTED TO BE PLUGGED |

NOTES

A. SEE SWG 800-6 FOR FIRE HYDRANT MATERIAL SPECIFICATIONS.

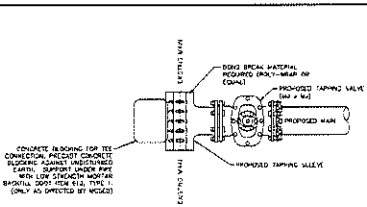
B. SEE SWG 800-7 FOR FIRE HYDRANT INSTALLATION NOTES.




ROTATED HYDRANT BRANCH DETAIL
*TO BE UTILIZED IN SPECIAL CASES ONLY, AND MUST BE APPROVED FOR USE BY MCGEE

FIRE HYDRANT MATERIAL SPECIFICATIONS

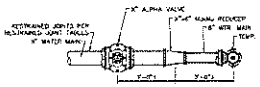
1. FIRE HYDRANTS YELLOW AMERICAN DARLING B-84-B FOR THE CITY OF TROY SERVICE AREA; MUELLER SUPER CENTURION 250 FOR THE CITY OF TIPP CITY/CLARK COUNTY SERVICE AREA. CONFORMING TO AWWA C-509 TO OPEN; SELF-DRAINING; BREAK FLANGES 3" ABOVE GRADE.
2. TRAFFIC BREAK FEATURE TO BE ACHIEVED FOR 360° ROTATION OF NOZZLE SECTION AND INCORPORATE THE USE OF A 2-PIECE SQUARE ROD AND SINGLE CAST-IRON ROD COUPLING SECURED WITH STAINLESS STEEL COUPLING PINS.
3. THE HYDRANT SHALL HAVE A TRAVEL STOP NUT IN THE TOP OF THE HYDRANT TO LIMIT THE TRAVEL OF THE HYDRANT ROD. HYDRANT DESIGNS THAT ALLOW THE VALVE BOTTOM TO STOP AGAINST THE SHOE OR EMPLOY A STOP IN THE DRAIN MECHANISM RESULTING IN A BENDING MOMENT IN THE ROD ASSEMBLY ARE NOT ALLOWED.
4. HYDRANT UPPER AND LOWER BARRELS AND BASE SHALL BE MADE OF DUCTILE IRON.
5. HYDRANT TO BE CERTIFIED TO NSF/ANSI STANDARD 61 AND NSF/ANSI 372.
6. THE HYDRANTS SHALL INCORPORATE A DRAINING SYSTEM CONSTRUCTED ENTIRELY OF BRONZE AND POSITIVELY ACTIVATED BY THE COMPRESSION OF AN E-COATED STAINLESS STEEL SPRING.
7. HYDRANT DRAINS SHALL CLOSE COMPLETELY AFTER NO MORE THAN 1 TURNS OF THE OPERATING NUT.
8. THERE SHALL BE A MINIMUM OF TWO INTERNAL DRAIN PORTS IN THE HYDRANT SEAT AND FOUR OUTLETS IN THE HYDRANT DRAIN RING ENABLING WATER TO FILL EXTERIOR OF THE HYDRANT.
9. HYDRANTS EMPLOYING SLIDING-STYLE DRAINS ARE NOT PERMITTED.
10. ALL PUMPER AND HOSE NOZZLES SHALL BE RETAINED BY A SINGLE-PIECE THREADED DUCTILE IRON RETAINING COLLAR. THREADED-IN NOZZLES AND NOZZLES USING SET SCREWS OR WEDGE PINS ARE NOT ALLOWED.
11. CITY OF TROY SERVICE AREA FIRE HYDRANTS SHALL HAVE 2EA. 2-1/2" HOSE NOZZLES WITH DANTON THREADS AND 1EA. 4-1/2" PUMPER NOZZLE WITH 5" STORZ NST NATIONAL THREAD. THE CITY OF TIPP CITY /CLARK COUNTY SERVICE AREA FIRE HYDRANTS SHALL HAVE 2EA 2-1/2" HOSE NOZZLES WITH NATIONAL STANDARD THREAD CONNECTIONS AND 1" STORZ CONNECTION.
12. THE OPERATION NUT AND NOZZLE CAP NUTS SHALL BE 1-1/2" NST PENTAGON, AND SHALL OPEN IN THE COUNTER CLOCKWISE DIRECTION. HYDRANT OPERATION NUT SHALL BE SUPPLIED WITH A GREASE ZERK FOR LUBRICATION PURPOSES.
13. HYDRANTS SHALL BE YELLOW IN COLOR WITH A WHITE BONNET CAP. ALL BOLTING ABOVE AND BELOW GRADE SHALL BE TYPE 304 STAINLESS STEEL.
14. FIRE HYDRANT BASE INLET SHALL INCORPORATE A STAR-FIT DESIGN REQUIRING THE USE OF ONLY ONE TYPE 304 STAINLESS STEEL FASTENER FLANGE OR MECHANICAL JOINT RESTRAINERS USING MULTIPLE FASTENERS OR WEDGE BOLTS IS NOT PERMITTED.
    - HYDRANT BASE SHALL BE AMERICAN FLOW CONTROL ALPHA 9L BASE W/ 6" ALPHA VALVE, OR APPROVED EQUAL
    - RESTRAINT ACCESSORIES SHALL BE FACTORY INSTALLED




TAPPING SLEEVE AND VALVE DETAIL

TAPPING SLEEVE AND VALVE NOTES:

1. TAPPING SLEEVE SHALL BE 16-8 STAINLESS STEEL DESIGNED FOR USE ON THE CLASS OF PIPE BEING TAPPED INCLUDING PIPE MATERIALS CAST IRON, DUCTILE IRON, STEEL, PVC, HDPE AND ASBESTOS CEMENT PIPE MATERIALS WITH NO SPECIAL SPRINGS OR MANDRELS REQUIRED.
2. TAPPING SLEEVE SHALL HAVE MECHANICAL JOINT (MJ) OUTLET.
3. THE TAPPING SLEEVE SHALL HAVE A RANGE OF 10 0.8" (NINE TENTHS OF AN INCH)
4. THE TAPPING SLEEVE SHALL BE TESTED AND SHOWN TO BE ABLE TO ACCOMMODATE A SIMULATED 360 DEGREE PARTIAL SEAM BREAK TEST, PERFORMED AT 1.2 TIMES RATED PRESSURE ON A TEST PIPE OUTFITTED WITH A 1/8" WIDE 2/16" DEEP HYDROSTATICALLY PRESSURIZED GROOVE.
5. SLEEVE SHALL BE RATED AT 175 PSI MAXIMUM WORKING PRESSURE AND SHALL HAVE NSF-61 APPROVED NBR RUBBER GASKET. NUTS, BOLTS AND WASHERS SHALL BE TYPE 304 STAINLESS STEEL. DOUBLE COATED WITH A FLUOROPOLYMER COATING TO PREVENT GALLING.
6. SLEEVES SHALL BE TOTAL PIPING SOLUTIONS TRIPLE TAP OR APPROVED EQUIVALENT.




WATER MAIN DEAD END DETAIL

| | | | |
|---|---|---|---|
| FIRE HYDRANT DETAILS | REVISIONS: | DATE APPROVED: | FILE NO. 800-7 |
| FIRE HYDRANT MATERIAL SPECIFICATIONS | REVISIONS: | DATE APPROVED: | FILE NO. 800-8 |
| TAPPING SLEEVE AND VALVE AND WATER MAIN DEAD END DETAILS | REVISIONS: | DATE APPROVED: | FILE NO. 800-11 |

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EETSABARN SITE PLAN
BETHEL TOWNSHIP
GENERAL DETAILS

REVISIONS:

FILE NAME: GENERAL DETAILS
DRAWN BY: DMR
CHECKED BY: JSP
PROJECT NO.: MIA-BET-2601
DATE: 09-08-2026
SHEET NUMBER: 5 OF 18

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## TRACER WIRE NOTES

**NOTES**

TRACER WIRE IS REQUIRED ON ALL WATER MAIN, REGARDLESS OF PIPE MATERIAL. TRACER WIRE SHALL BE INSTALLED ON ALL NON WATER MAINS, HYDRANT LEADS, AND SERVICE LINES, THIS SPECIFICATION FOLLOWS THE TECHNICAL REQUIREMENTS NECESSARY TO ENSURE PROPER INSTALLATION OF TRACER WIRE AND REDUCE COMPONENTS FOR THE PURPOSES OF LOCATING UNDERGROUND WATER UTILITIES. IT WILL ENSURE THAT THE FIRST STEP IN PREVENTING UNDERGROUND UTILITY ASSETS IS INSTALLING A QUALITY, RELIABLE LOCATING SYSTEM.

**MATERIALS**

GENERAL
- ALL SYSTEM COMPONENTS, INCLUDING TRACER WIRE, CONNECTORS, GROUND RODS, AND ACCESS POINTS, SHALL BE COMPATIBLE TO COMMENCE AND/OR MAINTAIN A QUALITY UTILITY LOCATING SYSTEM FOR CONVENIENCE, COMMERCIAL PARTS ARE LISTED
- ALL TRACER WIRE SHALL HAVE HDPE INSULATION 14 GA SOLID WIRE, BLUE-COLOR CODED.

TRACER WIRE
- DIRECT BURY NON-METALLIC – TRACER WIRE SHALL BE COPPERHEAD COPPER-CLAD STEEL 12-AWG HIGH STRENGTH, HIGH CARBON WITH MINIMUM 450 LB. BREAK LOAD, MINIMUM 30 MIL HDPE INSULATION THICKNESS.
- DIRECTIONAL DRILLING/BORING – TRACER WIRE SHALL BE COPPERHEAD COPPER-CLAD STEEL 10-AWG EXTRA HIGH STRENGTH WITH MINIMUM 1,150 LB. BREAK LOAD, MINIMUM 45 MIL HDPE INSULATION THICKNESS.

CONNECTORS
- ALL MARKING TRACER WIRES SHALL BE INTERCONNECTED AT INTERSECTIONS, AT MARKING TEES AND MARKING CROSSES. AT TEES, THE THREE WIRES SHALL BE JOINED USING A SINGLE, SPLIT-WAY CONNECTOR, LOCKING CONNECTOR (LOCKSEAL) AT CROSSES, THE FOUR WIRES SHALL BE JOINED USING TWO, SINGLE-WAY COMPRESSION CONNECTORS, LOCKING CONNECTORS (LOCKSEAL) WITH A SHORT JUMPER WIRE BETWEEN THEM.
- DIRECT BURY WIRE CONNECTIONS SHALL INCLUDE: SINGLE-WAY LOCKABLE COPPERHEAD SNAKEBITE/LOCKING CONNECTORS (LSC12SBC) AND COMPRESSION MAINLINE-TO-SERVICE CONNECTORS (CMS-121) WITH A MINIMUM 30-YEAR, MANUFACTURER GUARANTEE FOR USE IN UNDERGROUND TRACER WIRE INSTALLATION CONNECTORS SHALL BE WATERTIGHT, SILICONE FILLED TO SEAL OUT MOISTURE AND CORROSION AND SHALL BE INSTALLED IN A MANNER AS TO PREVENT ANY UNINSULATED WIRE EXPOSURE.
- NON-LOCKING, FRICTION FIT OR TAPED CONNECTORS ARE PROHIBITED.

GROUNDING
- TRACER WIRE SHALL BE PROPERLY GROUNDED AT ALL DEAD-ENDS/CUTOFFS.
- GROUNDING OF TRACER WIRE SHALL BE ACHIEVED BY USING A 1.5-LB. DRIVE-IN, MAGNESIUM COPPERCLAD GROUND ROD (AMG-121 WITH A MINIMUM 30-FEET, #12 HDPE INSULATED COPPER-CLAD STEEL WIRE CONNECTED TO THE ROD SPECIFICALLY MANUFACTURED FOR THIS PURPOSE.

TERMINATION/ACCESS
- ALL TRACER WIRE TERMINATION POINTS SHALL PROVIDE A DIRECT CONNECTION POINT TO THE TRACER WAY BY A UTILITY LOCATE TRANSMITTER (ABOVE GROUND ON AT GRADE) SPECIFICALLY MANUFACTURED FOR LIGHT DUTY, CONCRETE/ASPHALT, OR ROADWAY APPLICATIONS.
- ALL AT-GRADE ACCESS POINTS SHALL BE APPROPRIATELY IDENTIFIED WITH INSCRIPTION ON THE CAP AND BE COLOR CODED BLUE.
- ALL TWO-TERMINAL TRACER WIRE ACCESS POINTS SHALL INCLUDE A MANUALLY INTERRUPTIBLE CONDUCTIVE/CONNECTIVE LINK BETWEEN THE TERMINAL FOR THE TRACER WIRE CONNECTION AND THE TERMINAL FOR THE GROUND ROD WIRE CONNECTION.
- ALL THREE-TERMINAL TRACER WIRE ACCESS POINTS SHALL HAVE EXTERNAL DIRECT CONNECTION POINTS TO BOTH THE TRACER WIRE AND GROUND ROD WIRE FROM TOP OF LID.
- ALL AT-GRADE ACCESS POINTS SHALL INCLUDE AN ENCAPSULATED MAGNET MOLDED INTO THE TOP PORTION OF THE BOXE, TO ALLOW FOR DETECTION BY A FERROUS METAL DETECTOR.
- ALL AT-GRADE ACCESS POINTS SHALL BE SUPPLIED WITH ANTI-CORROSION WAX/GEL TO PROTECT WIRES
- SERVICE LATERALS ON PUBLIC PROPERTY – TRACER WIRE SHALL BE ACCESIBLE FROM THE CURB BOX. R-E TRACER WIRE SHALL TERMINATE AT THE CURB BOX OR MAY BE EXTENDED ONTO PRIVATE PROPERTY WITH APPROVAL OF THE MCSD.
- SERVICE LATERALS ON PRIVATE PROPERTY – TRACER WIRE SHALL TERMINATE AT AN APPROVED COMPREHEAD SINGLE-TERMINAL ACCESS POINT (WHEN GROUNDING IS NOT REQUIRED) ADJACENT TO OR NEAR THE BUILDING LATERAL FROM DIRECTLY ABOVE WHERE THE UTILITY ENTERS THE BUILDING OR AT A TWO-TERMINAL ACCESS POINT WHEN GROUNDING IS REQUIRED, LOCATED WITHIN TWO GREAT FEET OF THE BUILDING BEING SERVED BY THE UTILITY
- HYDRANTS – TRACER WIRE SHALL TERMINATE AT AN APPROVED ABOVE-GRADE COPPERHEAD CANNA ACCESS POINT PROPERLY ATTACHED TO THE HYDRANT-GRADE FLANGE (12-IN-FLANGE-328 FOR HYDRANTS WITH 5/8" BOLTS, AND 12-IN-FLANGE-329 FOR HYDRANTS WITH 3/4"BOLTS), FITTING WITH TAPE OR PLASTIC TIES SHALL NOT BE ACCEPTABLE. TRACER WAY ALSO TERMINATE AT AN APPROVED ASPHALT COPPERHEAD SNAKEBITE LIVE DUTY (LSDA12-SW) LITE DUTY ADJUSTABLE (LSDA12CT-ADJ-SW) LITE DUTY II, FLOW (LSDA12T-SW), OR CONCRETE/ASPHALT WAY (LSDA12PW-SW) ACCESS POINT.
- LONG-RUNS – RUNS LONGER THAN 2,500 LINEAR FEET, WITHOUT SERVICE LATERALS OR HYDRANTS – TRACER WIRE ACCESS SHALL BE PROVIDED UTILIZING AN APPROVED AT-GRADE COMPREHEAD TRANSMITTER ACCESS POINT AND SPLICED AT DEAD-ENDS UTILIZING A DRIVE-IN MAGNESIUM COPPERCLAD GROUND ROD (AMG-12).

**INSTALLATION**

GENERAL
- TRACER WIRE INSTALLATION SHALL BE PERFORMED IN SUCH A MANNER THAT ALLOWS PROPER ACCESS FOR CONNECTION OF LINE TRACING EQUIPMENT, PROPER LOCATING OF WIRE WITHOUT LOSS OR DETERMINATION OF SIGNAL CAUSED BY WIRE THAN ONE WIRE BEING INSTALLED IN CLOSE PROXIMITY TO ONE ANOTHER
- TRACER WIRE SPLICING SHALL BE INSTALLED AS A SINGLE CONTINUOUS WIRE, EXCEPT WHERE USING APPROVED CONNECTORS. NO LOOPING OR COILING OF WIRE IS ALLOWED
- ANY BREAK OF THE TRACER WIRE OCCURRING DURING INSTALLATION SHALL BE IMMEDIATELY REPAIRED BY REMOVING THE DAMAGED WIRE AND INSTALLING A NEW SPLICED OF WIRE WITH APPROVED CONNECTORS. TAPING AND/OR SPRAY COATING SHALL NOT BE ALLOWED
- TRACER WIRE SHALL BE INSTALLED AT THE BOTTOM HALF OF THE PIPE AND SECURED (TAPED/TIED) AT 5-FOOT INTERVALS.
- MARKING TRACER WIRE SHALL NOT BE CONNECTED TO EXISTING CONDUCTIVE METAL PIPELINE AS A MARKING (GROUNDED) CAVITY USING AN APPROVED WATERPROOF CONNECTOR TO A GROUND ROD DRIVEN INTO VIRGIN SOIL BENEATH AND IN LINE WITH THE UTILITY.
- ALL SERVICE LATERAL TRACER WIRE SHALL BE A SINGLE WIRE, CONNECTED TO THE MAINLINE TRACER WIRE USING A THREE-WAY MAINLINE-TO-SERVICE CONNECTOR, INSTALLED WITHOUT CUTTING/SPLICING THE MAINLINE TRACER WIRE.
- IN OCCURRENCES WHERE AN EXISTING TRACER WIRE IS ENCOUNTERED ON AN EXISTING UTILITY THAT IS BEING EXTENDED OR TIED INTO, THE NEW TRACER WIRE AND EXISTING TRACER WIRE SHALL BE CONNECTED USING APPROVED CONNECTORS.
- ONE FOOT OF EXCESS/SLACK WIRE IS REQUIRED IN ALL TRACER WIRE ACCESS POINTS AFTER MEETING FINAL ELEVATION.
- TRACER WIRE SHALL BE PROPERLY GROUNDED AS SPECIFIED.
- AT ALL MARKING DEAD-ENDS, TRACER WIRE SHALL GO TO GROUND USING AN APPROVED CONNECTION TO A DRIVE-IN MAGNESIUM GROUND ROD.
- WHEN GROUNDING THE TRACER WIRE AT DEAD-ENDS/CUTSOFF, THE GROUND ROD SHALL BE DRIVEN INTO VIRGIN SOIL DIRECTLY BENEATH AND IN LINE WITH THE UTILITY
- GROUND ROD WIRE SHALL BE CONNECTED TO THE GROUND ROD TERMINAL ON THE TWO-TERMINAL SNAKEBITE ACCESS POINT LID OR TO THE BOTTOM TERMINAL ON THE TWO-TERMINAL CORNA ACCESS POINT
- WHERE THE GROUND ROD WIRE WILL BE CONNECTED TO A TRACER WIRE ACCESS POINT, ONE FOOT OF EXCESS/SLACK WIRE IS REQUIRED AFTER MEETING FINAL ELEVATION.

WATER SYSTEM
- A MARKING TRACED WIRE SHALL BE INSTALLED, WITH ALL SERVICE LATERAL TRACER WIRES PROPERLY CONNECTED TO THE MARKING TRACER WIRE, TO PROVIDE TRACING/LOCATING CAPABILITIES FROM A SINGLE CONNECTION POINT
- LAY MARKING TRACER WIRE CONTINUOUSLY, NO-PASSING AROUND THE OUTSIDE OF VALVES AND FITTINGS ON THE NORTH OF EAST SIDE.
- TRACER WIRE ON ALL MAIN SERVICE LATERALS SHALL TERMINATE AT AN APPROVED TRACER WIRE ACCESS POINT, COLOR CODED BLUE AND LOCATED DIRECTLY ABOVE THE SERVICE LATERAL AT THE EDGE OF ROAD NIGHT-OF-WAY.
- TRACER WIRE ACCESS POINTS WILL BE INSTALLED AT ALL FIRE HYDRANTS
- ALL CONDUCTIVE AND NON-CONDUCTIVE SERVICE LINES SHALL INCLUDE TRACER WIRE

**PROHIBITED PRODUCTS AND METHODS**

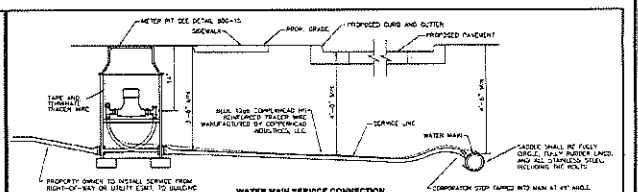
THE FOLLOWING PRODUCTS AND METHODS SHALL NOT BE ALLOWED ON CONSTRUCTION:
- UNINSULATED TRACER WIRE
- STAINLESS STEEL TRACER WIRE
- TRACER WIRE INSULATIONS OTHER THAN HDPE
- NON-CONDUCTIVE FRICTION FIT OR TAPED CONNECTORS
- GRASS OR COPPER GROUND RODS
- WIRE CONNECTIONS UTILIZING TAPING OR SPRAY-ON WATERPROOFING
- LOOPED WIRE OR CONTINUOUS WIRE INSTALLATIONS THAT HAVE MORE THAN ONE WIRE RUN (AND SEE-BY-SIDE OR IN CLOSE PROXIMITY TO ONE ANOTHER
- TRACER WIRE WRAPPED AROUND THE CORRESPONDING UTILITY
- DIRECT CONTACTS WITH TRACER WIRE CONNECTION LUGS
- WIRE TERMINATIONS WITHIN THE ROADWAY IN VALVE BOXES, CLEANOUTS, MANHOLES, ETC.
- CONNECTING TRACER WIRE TO EXISTING CONDUCTIVE UTILITIES

**TESTING**

ALL NEW TRACER WIRE INSTALLATIONS SHALL BE LOCATED USING TYPICAL LOW FREQUENCY (512 HZ) LINE TRACING EQUIPMENT APPROVED BY THE MCSD OR DESIGNEE, AS APPLICABLE, PRIOR TO ACCEPTANCE OF THE MCSD. THIS MUST-CASTING SHALL BE PERFORMED UPON COMPLETION OF ROUGH GRADING AND PRIOR TO PAVING, AGGREGATE, OR ANY OTHER PRODUCT. CONTINUITY TESTING IN LIEU OF ACTUAL LINE TRACING SHALL NOT BE ACCEPTED

## TRACER WIRE NOTES (CONT.)

## WATER SERVICE CONNECTION DETAIL




**WATER MAIN SERVICE CONNECTION**

**MATERIAL NOTES**

A. MINIMUM 3/4" WATER SERVICE SHALL BE COPPER-TUBE SIZE (CTS) SDR-9 OR APPROVED MATERIAL BY THE UTILITY DIRECTOR

B. TAPPING SADDLE SHALL BE 18-8 STAINLESS STEEL DESIGNED FOR USE ON THE CLASS OF PIPE BEING TAPPED INCLUDING PVC MATERIALS (AWS, IRON, DUCTILE IRON, STEEL, PVC, HDPE, AND ASBESTOS CEMENT PIPE MATERIALS WITH NO SPECIAL SPACERS OR WASHERS REQUIRED. TAPPING SLEEVE SHALL HAVE A RANGE UP TO 0.9" THICKNESS OF AN HDPE. THE TAPPED SERVICE SHALL BE TESTED AND SHOWN TO BE WATERTIGHT AT THE MANUFACTURER'S FACILITY. TESTING PERFORMED AT THE MANUFACTURER'S FACILITY SHALL BE SUBMITTED WITH A 1/4" HOLE DRILLED THROUGH HYDROSTATICALLY-PRESSURIZED GROOVE SLEEVE SHALL BE RATED AT 150 PSI MINIMUM WORKING PRESSURE AT APPROVED TEMPERATURE RANGES. ALL NUTS AND BOLTS SHALL BE TYPE 304 STAINLESS STEEL. DOUBLE FLAT WASHERS SHALL BE USED UNDER ALL NUTS. TAPPING SADDLE SHALL BE PRESENT. SADDLE SHALL BE SECURED WITH 404 OR 406 DOUBLE STAINLESS STEEL STRAPS OR APPROVED EQUAL.

C. THE CORPORATION STOP SHALL BE FULL-PORT BALL VALVES WITH COMPRESSION STYLE CONNECTIONS. CORP STOP SHALL BE FORD FB1000-4-Q OR APPROVED EQUAL

D. SERVICE LINE RUNS SHALL BE CONTINUOUS AND WITHOUT JOINTS OR COUPLINGS BETWEEN CORP STOP, CURB BOX AND METER.

E. WATER SERVICE SHALL BE TAPPED NO CLOSER THAN 3 FEET FROM A BELL JOIN ON THE WATER MAIN.

F. WATER SERVICE SHALL BE A MINIMUM OF 18" MEASURED HORIZONTALLY FROM THE SEWER LATERAL AND SHALL BE A MINIMUM OF 18" ABOVE THE CROWN OF THE SANITARY SEWER MAIN WHERE THE WATER SERVICE CROSSES THE SEWER MAIN




**APPROVED FORD PARTS**

| | 3/4" | 1" |
|---|---|---|
| CORPORATION STOP | FB1000-4 | FB1000-6 |
| CURB STOP | B44-444W-G | B44-666W-G |

## TYPICAL 2", 3", 4", AND 6" METER PIT INSTALLATION

**METER PIT NOTES**

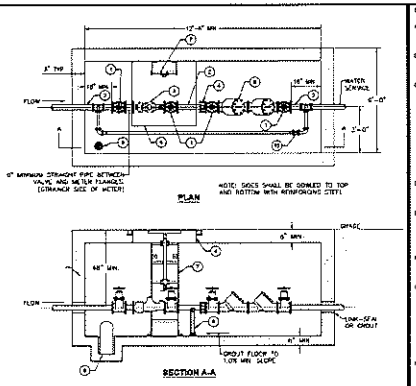
1. METER PIT SHALL BE PRECAST CONCRETE STRUCTURE.
2. CONCRETE REINFORCEMENT OF BOX SHALL BE PROVIDED BY PRECAST MANUFACTURER. REINFORCEMENT DESIGN SHALL BE APPROVED BY THE METER, AS REQUIRED
3. FULL PORT BALL VALVES SHALL BE IN ACCORDANCE WITH THE TABLE BELOW
4. THE METER SHALL REFLECT ALL PIPING FROM WATER MAIN TO BUILDING PRIOR TO BACKFILLING
5. GROUNDING ELECTRIC TO METER SHALL BE PROHIBITED, DUE TO INCREASED CORROSION OF LINE AND FITTINGS.
6. THE VAULT SHALL BE BACKFILLED WITH 6" OF CLEAN FINE SEA AGGREGATE MATERIAL
7. THE METER PIT SHALL HAVE SUFFICIENT DRAINAGE TO PREVENT STANDING WATER

**METER INSTALLATION NOTES**

1. TO ENSURE THAT METER IS COMPATIBLE WITH THE MCSD'S READ SYSTEM, IT SHALL BE FROM THE WATER DEPARTMENT AND MADE FOR AT THE SAME TIME AS OTHER ACCESS AND TAPPING TEES.
2. MCSD PERSONNEL WILL INSTALL THE METER ONLY AFTER ALL OTHER PLUMBING REQUIREMENTS ARE MET.
3. METER SPECIALS ARE TO BE CONFIRMED WITH THE WATER DEPARTMENT

**MATERIAL LEGEND**

| NO. | DESCRIPTION |
|---|---|
| 1 | GATE VALVE, FLWFL |
| 2 | BOX TO SUIT METER, CROSS MCSD MANUFACTURED TO LENGTH. WITHIN PIT |
| 3 | SENSUS (SUN-I (C1) COMPOUND METER PROVIDED BY MCSD |
| 4 | FLANGED COUPLING ADAPTER |
| 5 | BACKFLOW PREVENTER |
| 6 | WATTS "LG" ACCESS WATCH, BLOG MODEL #LG-2AL OR APPROVED EQUAL |
| 7 | ALUMINUM LADDER, OSHA APPROVED HALLIGAN SERIES L-10 W/ SERIES L-11 SAFETY POST, OR APPROVED EQUAL |
| 8 | DRAIN OR SUMP PIT IF GRAVITY DRAIN IS NOT POSSIBLE, DISCHARGE PIPE TO DRAIN TO PUBLIC STORM SEWER |
| 9 | PIPE SUPPORT, GALVANIZED PIPE STEEL, MASONRY SUPPORT, OR APPROVED EQUAL |
| 10 | 4" GATE VALVE, RISING STEM ASSY |




## MISCELLANEOUS SANITARY SEWER NOTES

**GENERAL NOTES**

A. NO WORK SHALL BE APPROVED OR ACCEPTED BY THE MCSD UNLESS 2 WORKING DAYS NOTICE OF COMMENCING WORK IS GIVEN TO THE MCSD

B. ROOF DRAINS, FOUNDATION DRAINS, AND ALL OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.

C. WHEN A SANITARY SEWER EXTENSION IS TO TAKE PLACE, THE CONSTRUCTION MANHOLE OR FIRST EXISTING MANHOLE IN THE SEWER COLLECTION SYSTEM SHALL BE PLUGGED AT CONSTRUCTION DESIGN IF THE SEWER IS SMALLER OR EQUAL TO 12" DIAMETER, IT SHALL BE PLUGGED BY PLACING A ROLL-UP SEWER BAG APPROXIMATELY 6" INTO THE SEWER PIPE. SIZES LARGER THAN 12" WILL BE PLUGGED BY OTHER APPROVED METHODS. NO PLUGS SHALL BE REMOVED UNTIL CONSTRUCTION IS COMPLETED AND ON, IS THOROUGHLY AND THEN ONLY AS DIRECTED BY THE MCSD.

D. WHEN A CASING OF OTHER PUBLIC PROPERTY IS ENCOUNTERED, IT SHALL BE MCSD PROPERTY, UNLESS OTHERWISE DIRECTED.

E. ALL NEW OR RELOCATED SANITARY SEWER SHALL RECEIVE A PRIVATE (UNINSTALL (PRE) APPROVAL FROM THE DEPA PRIOR TO CONSTRUCTION. THE DEVELOPER IS REQUIRED TO PAY ALL APPLICABLE FEES TO OBTAIN THIS APPROVAL

F. THE ENDS OF ALL SERVICE LINES OR TEES SHALL BE ACCURATELY LOCATED, MARKED, AND GIVEN TO THE MCSD WITHIN 10 DAYS OF INSTALLATION

G. IF AN EXISTING BUILDING IS REQUIRED TO BE DEMOLISHED, THE CONTRACTOR SHALL COORDINATE THE ABANDONMENT OF ALL SANITARY SEWER LATERALS SERVICING THE BUILDING WITH THE MCSD. THE MCSD WILL REQUIRE EACH LATERAL TO HAVE A CLEANOUT A THE R/W (MARKED 3 FT BELOW THE SURFACE) AND THE LATERAL TO BE TELEVISED. ALL ABANDONMENT WORK, REQUIRED BY THE MCSD, WILL BE AT THE CONTRACTOR OF OWNER'S EXPENSE.

H. GRAVITY SANITARY SEWERS AND FORCEMAINS SHALL BE LAID WITH AT LEAST 10 FOOT HORIZONTAL SEPARATION FROM ANY WATER MAIN.

**SANITARY SEWER PIPE INSTALLATION**

A. THE LAYING OF THE PIPE SHALL COMMENCE AT THE LOWEST POINT, WITH THE BELL END LAID UPGRADE. THE PIPE SHALL BE CENTERED IN THE TRENCH AND ALL PIPE SHALL BE LAID WITH ENDS ADJUTING AND TRUE TO LINE AND GRADE

B. LASER SHALL BE USED INSIDE THE PIPE WHENEVER POSSIBLE UNLESS OTHERWISE APPROVED.

**CONSTRUCTION LAYOUT STAKING**

A. PROVIDE STAKES FOR EACH SANITARY SEWER MANHOLE CHISED TO THE INVERT AT A 25 FOOT OFFSET WITH APPROXIMATE TOP OF 100 ELEVATION.

B. PROVIDE A 45A AT THE END OF EACH PROPOSED SANITARY SEWER LATERAL MARKED WITH THE FINISH GRADE ELEVATION.

**SANITARY SEWER EASEMENTS**

IF A SANITARY SEWER SHALL RUN OFFSITE (MEANING NOT ALONG A ROADWAY) IT SHALL BE INSTALLED WITHIN A MINIMUM 20'-0" SANITARY SEWER EASEMENT. IN ADDITION, A 10'-0" GRAVEL DRIVE SHALL BE INSTALLED ALONG THE SEWER AS ACCESS FOR MAINTENANCE.

**CONSTRUCTION INSPECTION**

THE MCSD RESERVES THE RIGHT TO DIE ENSTL AND CHECK THE INSTALLATION FOR ALIGNMENT, GRADE, AND TIGHTNESS DURING THE INSTALLATION OF ANY COMPONENT OF THE SANITARY SEWER COLLECTION/TRANSPORTATION SYSTEM BY MEANS OF PHOTOGRAPHY, TELEVISION, OR OTHER APPROPRIATE MEANS. THE CONTRACTOR SHALL COORDINATE WITH THE MCSD ABOUT THE TIMING OF CONSTRUCTION AND TO SCHEDULE INSPECTORS.

**SEWER TELEVISING REQUIREMENTS**

BEFORE FINAL ACCEPTANCE BY THE MCSD, ALL GRAVITY SANITARY SEWERS SHALL BE THOROUGHLY CLEANED OF ALL FOREIGN MATERIAL BY HYDRO JETTING AFTER CLEANING WORK HAS BEEN PERFORMED THE CONTRACTOR SHALL TELEVISE THE SEWER. THE JETTING AND TELEVISING SHALL BE PERFORMED BY THE SAME DAY, IF THIS DOESN'T HAPPEN THE CONTRACTOR WILL BE REQUIRED TO RECLEANSE THE WORK SO IT CAN BE FILMED ON THE SAME DAY. THE CONTRACTOR SHALL USE A PAN AND TILT TYPE CAMERA THAT MUST ALLOW THE EASY SYNCHRONIZING OF EACH JOINT AND EACH LATERAL CONNECTION TO BE VIEWED. THE CONTRACTOR SHALL COMPLETE THE TELEVISING PER SEC-7.

**SANITARY SEWER DEDICATION/ACCEPTANCE**

ONCE CONSTRUCTION OF THE SANITARY SEWER IS COMPLETE, ALL TELEVISING WORK HAS BEEN REVIEWED, AND ALL TESTING HAS BEEN PASSED, THE INSPECTORS WILL NOTIFY THE MCSED ENGINEER AND THE SEWER SYSTEM WILL BE PLACED WITH SEWAGE

## PIPE MATERIAL SPECIFICATIONS

**MATERIAL SPECIFICATIONS**

SANITARY SEWERS SHALL CONFORM TO THE DEPA "TEN STATES STANDARDS" LATEST EDITION.

A. GRAVITY SANITARY SEWERS

POLYVINYL CHLORIDE PIPE (PVC) – PIPE AND FITTINGS SHALL CONFORM TO ASTM D3034 (SDR-35 FOR DEPTH OF 8'6-FEET AND SDR-26 FOR DEPTH 513 FEET. PIPE JOINTS AND GASKETS SHALL CONFORM TO ASTM D3212 AND F477 RESPECTIVELY. A MANUFACTURER'S CERTIFICATION THAT THE PRODUCT WAS MANUFACTURED, TESTED, AND SUPPLIED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE FURNISHED UPON REQUEST TO THE MCSED. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION FROM THE MANUFACTURER. THE SEWER PIPE SHALL BE INSTALLED PER THE TRENCH DETAIL PROVIDED IN THE PLANS.

DUCTILE IRON PIPE (DIP) – PIPE AND FITTINGS SHALL CONFORM TO ASTM C151/A21.51. ALL DIPTING HIVE JOINTS SHALL CONFORM TO ANSA D111. THE PIPE SHALL BE LINED, A PROTECTIO AC CLEANING EPOXY LINING. A MANUFACTURER'S CERTIFICATION THAT THE PRODUCT WAS MANUFACTURED, TESTED, AND SUPPLIED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE FURNISHED UPON REQUEST TO THE MCSED. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION FROM THE MANUFACTURER. THE SEWER PIPE SHALL BE INSTALLED PER THE TRENCH DETAIL PROVIDED IN THE PLANS.

HIGH DENSITY POLYPROPYLENE (HDPE) – PIPE SHALL CONFORM TO ASTM F2306 FOR ALL DEPTHS. PIPE JOINTS AND GASKETS SHALL CONFORM TO ASTM D3212 AND ASTM F477 RESPECTIVELY. A MANUFACTURER'S CERTIFICATION THAT THE PRODUCT WAS MANUFACTURED, TESTED, AND SUPPLIED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE FURNISHED UPON REQUEST TO THE MCSED. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION FROM THE MANUFACTURER. THE SEWER PIPE SHALL BE INSTALLED PER THE TRENCH DETAIL PROVIDED IN THE PLANS.

(GRAVITY SANITARY SEWERS CONT.)

POLYVINYL CHLORIDE PIPE (PVC) AWWA C-900 FOR ALL AREAS WHERE THE GRAVITY SEWER WILL CONVEY SEWAGE THROUGH A PRIVATE WELL SANITARY ISOLATION RADIUS. PIPE AND FITTINGS SHALL CONFORM TO ASTM D1784. PIPE JOINTS AND GASKETS SHALL CONFORM TO ASTM D3139 AND F477 RESPECTIVELY. A MANUFACTURER'S CERTIFICATION THAT THE PRODUCT WAS MANUFACTURED, TESTED, AND SUPPLIED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE FURNISHED UPON REQUEST TO THE MCSED. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION FROM THE MANUFACTURER. THE SEWER PIPE SHALL BE INSTALLED PER THE TRENCH DETAIL PROVIDED IN THE PLANS.

B. FORCEMAIN

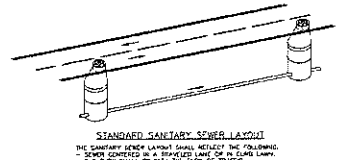
SHALL BE EITHER POLYVINYL CHLORIDE PIPE (PVC) SDR-21 CONFORMING TO ASTM D2241, ASTM D1784 AND ASTM F679 OR HDPE DR-11 PIPE CONFORMING TO AWWA C906, ASTM F714 AND ASTM D3035. A MANUFACTURER'S CERTIFICATION THAT THE PRODUCT WAS MANUFACTURED, TESTED, AND SUPPLIED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE FURNISHED UPON REQUEST TO THE MCSED. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION FROM THE MANUFACTURER.

N. SANITARY SEWER LATERAL CONNECTIONS

ALL SANITARY LATERAL PIPE AND FITTING MATERIAL SHALL MATCH THE MAIN SANITARY SEWER MATERIAL. INC LATERALS SHALL BE A MINIMUM OF 4" IN DIAMETER, UNLESS OTHERWISE CALLED OUT IN THE PLANS. ALL LATERALS SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLANS

C. FERROMAN

SHALL BE EITHER POLYVINYL CHLORIDE PIPE (PVC) SDR-21 CONFORMING TO ASTM D2241, ASTM D1784 AND ASTM F679 OR HDPE DR-11 PIPE CONFORMING TO AWWA C906, ASTM F714 AND ASTM D3035. A MANUFACTURER'S CERTIFICATION THAT THE PRODUCT WAS MANUFACTURED, TESTED, AND SUPPLIED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE FURNISHED UPON REQUEST TO THE MCSED. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION FROM THE MANUFACTURER.



STANDARD SANITARY SEWER LAYOUT

THE SANITARY SEWER LAYOUT SHALL MEET/EET THE FOLLOWING:
- SEWER CENTERED IN A STRAIGHT LINE OR IN CURB LINES.
- THE FLOW SHALL GO WITH THE FLOW OF TRAFFIC
- THE MANHOLE LID PLACED ON THE CURB SIDE OF THE STRUCTURE

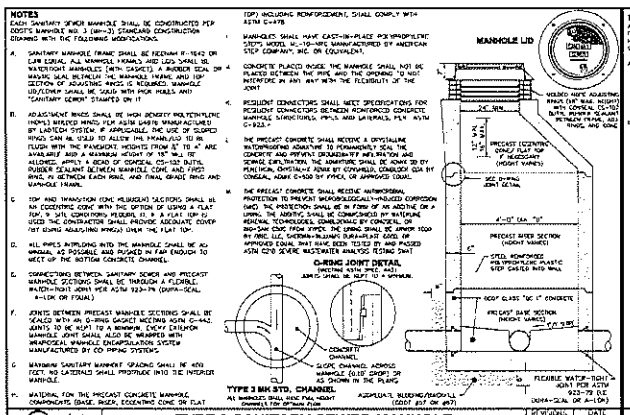

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# EETSABARN SITE PLAN
# BETHEL TOWNSHIP
# GENERAL DETAILS

REVISIONS:

FILE NAME: GENERAL DETAILS
DRAWN BY: DMR
CHECKED BY: JSP
PROJECT No.: MIA-BET-2601
DATE: 09-08-2026
SHEET NUMBER: 6 OF 18

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NOTES

EACH SANITARY SEWER MANHOLE SHALL BE CONSTRUCTED PER ODOT'S MANHOLE NO. 3 (MH-3) STANDARD CONSTRUCTION DRAWING WITH THE FOLLOWING MODIFICATIONS.

A. SANITARY MANHOLE FRAME SHALL BE NEENAH R-1642 OR EJIW 5208A1. ALL MANHOLE COVERS AND LIDS SHALL BE WATERTIGHT MANHOLES (WITH GASKETS). A RUBBER SEAL OR A MASTIC SEAL BETWEEN THE MANHOLE FRAME AND TOP SECTION OF ADJUSTING RINGS IS REQUIRED. MANHOLE LID/COVER SHALL BE SOLID WITH PICK HOLES AND "SANITARY SEWER" STAMPED ON IT.

B. ADJUSTMENT RINGS SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) MOLDED RINGS, FLH ASTM D4976 (MANUFACTURED BY LANTECH SYSTEM, IF APPLICABLE). THE USE OF SLOPED RINGS CAN BE USED TO ALLOW THE MANHOLE TO BE FLUSH WITH THE PAVEMENT. HEIGHTS FROM ½" TO 4" ARE AVAILABLE AND A MAXIMUM HEIGHT OF 18" WILL BE ALLOWED. APPLY A BEAD OF CONSEAL CS-103 BUTYL RUBBER SEALANT BETWEEN MANHOLE CONE AND FIRST RING, IN BETWEEN EACH RISE AND FINAL GRADE RING AND MANHOLE FRAME.

C. TOP AND TRANSITION CONE (ECCENTRIC) SECTIONS SHALL BE AN ECCENTRIC CONE WITH THE OPTION OF USING A FLAT TOP, IF SITE CONDITIONS REQUIRE IT. IF A FLAT TOP IS USED THE CONSTRUCTOR SHALL PROVIDE ADEQUATE COVER (BY USING ADJUSTING RINGS) OVER THE FLAT TOP.

D. ALL PIPES INTRUDING INTO THE MANHOLE SHALL BE AS ORIGINAL AS POSSIBLE AND PLACED IN FAR ENOUGH TO MEET UP THE BOTTOM CONCRETE CHANNEL.

E. CONNECTIONS BETWEEN SANITARY SEWER AND PRECAST MANHOLE SECTIONS SHALL BE THROUGH A FLEXIBLE, WATER-TIGHT JOINT PER ASTM C923-94 (CORA-SEAL, A-LOK OR EQUAL)

F. JOINTS BETWEEN PRECAST MANHOLE SECTIONS SHALL BE SEALED WITH AN O-RING GASKET MEETING ASTM C-443. JOINTS TO BE KEPT TO A MINIMUM. EVERY EXTERIOR MANHOLE JOINT SHALL ALSO BE WRAPPED WITH WRAPCOAL MANHOLE ENCAPSULATION SYSTEM MANUFACTURED BY CPI PIPING SYSTEMS.

G. MAXIMUM SANITARY MANHOLE SPACING SHALL BE 400 FEET, NO LATERALS SHALL PENETRATE INTO THE INTERIOR MANHOLE.

H. MATERIAL FOR THE PRECAST CONCRETE MANHOLE COMPONENTS (BASE, RISER, ECCENTRIC CONE OR FLAT TOP) INCLUDING REINFORCEMENT, SHALL COMPLY WITH ASTM C-478.

MANHOLES SHALL HAVE CAST-IN-PLACE POLYPROPYLENE STEPS, MODEL NO.-10-MPS MANUFACTURED BY AMERICAN STEP COMPANY, INC. OR EQUIVALENT.

CONCRETE PLACED INSIDE THE MANHOLE SHALL NOT BE PLACED BETWEEN THE PIPE AND THE OPENING TO NOT INTERFERE IN ANY WAY WITH THE FLEXIBILITY OF THE JOINT

I. RESILIENT CONNECTORS SHALL MEET SPECIFICATIONS FOR RESILIENT CONNECTORS BETWEEN REINFORCED CONCRETE MANHOLE STRUCTURALS, PIPES, AND LATERALS, PER ASTM C-923.*

J. THE PRECAST CONCRETE SHALL RECEIVE A CRYSTALLINE WATERPROOFING ADMIXTURE TO PERMANENTLY SEAL THE CONCRETE AND PREVENT DETERIORATION AND CORROSION AND SEWAGE EXFILTRATION. THE ADMIXTURE SHALL BE XYPEX 20 BY PENETRON INTERNATIONAL, KONA BY CONVERSEAL, OR EQUAL.

K. THE PRECAST CONCRETE SHALL RECEIVE ANTIMICROBIAL PROTECTION TO PREVENT MICROBIOLOGICALLY-INDUCED CORROSION (MIC). THE PROTECTION SHALL BE IN FORM OF AN ADDITIVE OR A LINING. THE ADDITIVE SHALL BE CONCRETE-INTEGRAL PENETRATING, HOMOGENEOUS, DISTRIBUTED BY CONCRETE, OR NON-LEACHING FROM XYPEX. THE LINING SHALL BE MINIMUM 1000 BY PERMA LINE, SPECIALTY LINING, DURABILITE 6000, OR APPROVED EQUAL THAT HAVE BEEN TESTED BY AND PASSED ASTM G210 SEWER WASTEWATER ANALYSIS TESTING (WAT

L. MATERIAL FOR THE PRECAST CONCRETE MANHOLE COMPONENTS (BASE, RISER, ECCENTRIC CONE OR FLAT TOP) INCLUDING REINFORCEMENT, SHALL COMPLY WITH ASTM C-478.

MANHOLES SHALL HAVE CAST-IN-PLACE POLYPROPYLENE STEPS, MODEL NO.-10-MPS MANUFACTURED BY AMERICAN STEP COMPANY, INC. OR EQUIVALENT.

CONCRETE PLACED INSIDE THE MANHOLE SHALL NOT BE PLACED BETWEEN THE PIPE AND THE OPENING TO NOT INTERFERE IN ANY WAY WITH THE FLEXIBILITY OF THE JOINT

I. RESILIENT CONNECTORS SHALL MEET SPECIFICATIONS FOR RESILIENT CONNECTORS BETWEEN REINFORCED CONCRETE MANHOLE STRUCTURALS, PIPES, AND LATERALS, PER ASTM C-923.*

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K. THE PRECAST CONCRETE SHALL RECEIVE ANTIMICROBIAL PROTECTION TO PREVENT MICROBIOLOGICALLY-INDUCED CORROSION (MIC). THE PROTECTION SHALL BE IN FORM OF AN ADDITIVE OR A LINING. THE ADDITIVE SHALL BE COMMENCED BY PENETRON, KEMENTAL TECHNOLOGIES, DEMILIMINATED BY CONCRETE, OR NON-LEACHING FROM XYPEX. THE LINING SHALL BE MINIMUM 1000 BY PERMA LINE, SPECIALTY LINING, DURABILITE 6000, OR APPROVED EQUAL THAT HAVE BEEN TESTED BY AND PASSED ASTM G210 SEWER WASTEWATER ANALYSIS TESTING (WAT

**TYPE 3 SANITARY SEWER MANHOLE**

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**SANITARY MANHOLE VACUUM TESTING**

ALL MANHOLES SHALL BE VACUUM TESTED USING THE FOLLOWING PROCEDURES PER ASTM C-1244. THE TEST HEAD SHALL BE PLACED AT THE INSIDE OF THE TOP CONE SECTION OF THE MANHOLE AND THE SEAL INFLATED.

A. PREPARATION OF THE MANHOLE
1. ALL LIFT HOLES SHALL BE PLUGGED
2. ALL PIPES ENTERING THE MANHOLE SHALL BE TEMPORARILY PLUGGED, TAKING CARE TO SECURELY BRACE THE PIPES AND PLUGS TO PREVENT THEM FROM BEING DRAWN INTO THE MANHOLE.

B. PROCEDURE
1. THE TEST HEAD SHALL BE PLACED AT THE TOP OF THE MANHOLE IN THE CASTING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. A VACUUM OF 10 IN. OF MERCURY (4.9 PSI) SHALL BE DRAWN ON THE MANHOLE. ONCE AT VACUUM PRESSURE THE VALVE ON THE VACUUM LINE OF THE TEST HEAD CLOSED, AND THE VACUUM PUMP SHUT OFF. THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9 IN. OF MERCURY (4.4 PSI)
3. THE MANHOLE SHALL PASS IF THE TIME FOR THE VACUUM READING TO DROP FROM 10 IN. OF MERCURY TO 9 IN. OF MERCURY (4.4 PSI) MEETS OR EXCEEDS THE VALUES INDICATED ON THE BELOW TABLE.
4. IF THE MANHOLE FAILS THE INITIAL TEST, THE CONTRACTOR SHALL COORDINATE WITH MODOT INSPECTIONS ON THE NECESSARY REPAIRS TO BE MADE. THE MANHOLE SHALL THEN BE RETESTED UNTIL A SATISFACTORY TEST IS OBTAINED.

| DIAMETER (INCHES) | |
|---|---|
| DEPTH (FEET) | 48 |
| 8 | 60 |
| 10 | 75 |
| 12 | 90 |
| 14 | 105 |
| 16 | 120 |
| 18 | 135 |
| 20 | 150 |
| 22 | 165 |
| 24 | 180 |
| 26 | 195 |
| 28 | 210 |
| 30 | 225 |

**SANITARY SEWER LOW PRESSURE AIR TEST**

ALL SANITARY SEWER MAINS SHALL BE LOW PRESSURE AIR TESTED USING THE FOLLOWING PROCEDURES FROM ASTM F-1417.

A. AFTER BACKFILLING, THE AIR TEST SHALL BE CONDUCTED BETWEEN TWO CONSECUTIVE MANHOLES. ALL PIPE OUTLETS SHALL BE PLUGGED IN THE SECTION BEING TESTED WITH SUITABLE TEST PLUGS. ONE OF THE PLUGS USED AT A MANHOLE SHALL BE TAPPED AND EQUIPED FOR AN AIR INLET CONNECTION FOR FILLING THE LINE FROM THE AIR COMPRESSOR. AIR SHALL BE SLOWLY FED INTO THE TEST SECTION UNTIL THE INTERNAL PRESSURE REACHES 4 PSI (9 FT THE PIPE IS BELOW EXISTING GROUNDWATER LEVEL). THE AIR TEST PRESSURE SHALL BE INCREASED TO EFFECT THE 0.43 PSI/FOOT OF WATER HEIGHT. IF THE HEIGHT OF GROUNDWATER IS 2 FEET OR MORE ABOVE THE TOP OF THE SEWER MAIN AT THE UPSTREAM END OF THE AIR PRESSURE, INCREASED FOR THE TEST IS GREATER THAN 9 PSI, THE AIR TEST IMPACTIVE SHALL NOT BE USED

B. UNTIL THE AIR PRESSURE REACHES A 4 PSI MINIMUM, WAIT AT LEAST 2 MINUTES TO ALLOW THE AIR PRESSURE TO STABILIZE. WHEN THE PRESSURE HAS STABILIZED AND IS BETWEEN 3.5 TO 4.0 PSI, THE AIR SUPPLY SHALL BE DISCONNECTED AND THE PRESSURE ADJUSTED TO 3.5 PSI AND THE TIMING SHALL BEGIN WITH A STOP WATCH. THE STOP WATCH SHALL BE ALLOWED TO RUN UNTIL THE PRESSURE HAS DROPPED 1.0 PSIG. IF THE TIME SHOWN ON THE STOP WATCH IS GREATER THAN THE SPECIFIED MINIMUM TIME, THE SECTION SHALL BE CONSIDERED TO HAVE PASSED THE TEST. TIME SHALL INTERPOLATED FROM THE FIGURES LISTED BELOW

| PIPE DIA. (INCHES) | MIN. TIME (MIN) | SPECIFIED MINIMUM FOR LENGTH (L) SHOWN (MIN SEC) | | | | | |
|---|---|---|---|---|---|---|---|
| | | 100 FT | 150 FT | 200 FT | 250 FT | 300 FT | 350 FT |
| 4 | 0.340 | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 |
| 6 | 0.850 | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 |
| 8 | 1.496 | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 |
| 10 | 2.336 | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 |
| 12 | 3.118 | 11:22 | 11:26 | 11:26 | 11:26 | 11:26 | 11:26 |
| 15 | 4.913 | 11:26 | 11:26 | 11:26 | 11:26 | 11:26 | 11:26 |
| 18 | 7.402 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 |
| 21 | 10.078 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 |
| 24 | 12.936 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 |

**SANITARY SEWER DEFLECTION TEST**

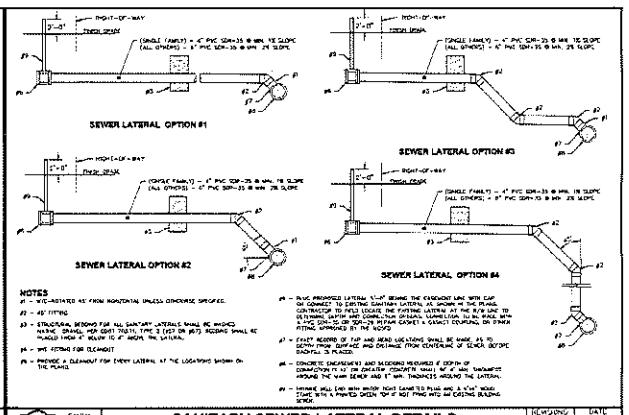
A. DEFLECTION TESTS SHALL BE PERFORMED BY THE CONTRACTOR ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM.

B. NO PIPE SHALL EXCEED A DEFLECTION OF 5 PERCENT. ANY SANITARY SEWER FAILING THE MANDREL TEST SHALL BE REMOVED, AND RE-LAID IF THE PIPE IS NOT DAMAGED, OR REPLACED WITH AN ACCEPTABLE NON-TYPE SECTION AT THE CONTRACTOR'S EXPENSE.

C. THE MAND SHALL BE CYLINDRICAL AND SHALL HAVE THE DEFLECTION TEST SHALL HAVE A DIAMETER NOT LESS THAN 95 PERCENT OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS MANUFACTURED. THE PIPE SHALL BE MEASURED IN COMPLIANCE WITH ASTM D-2122 STANDARD TEST METHOD OF DETERMINING DIMENSIONS OF THERMOPLASTIC PIPE AND FITTINGS. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.

**MANHOLE AND PIPE TESTING NOTES**

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NOTES

#1 - W/C-ROTATED 45° FROM HORIZONTAL UNLESS OTHERWISE SPECIFIED.

#2 - 45° FITTING

#3 - STRUCTURAL BEDDING FOR ALL SANITARY LATERALS SHALL BE MODOT'S MINIMUM HIGH (DOT ITEM) TYPE 3 (SEE DR #57) BEDDING SHALL BE PLACED FROM 6" BELOW TO 6" ABOVE THE LATERAL

#4 - WYE FITTING FOR CLEANOUT

#5 - PROVIDE A CLEANOUT FOR EVERY LATERAL AT THE LOCATIONS SHOWN ON THE PLANS

#6 - BLUE PREMOLDED LATERAL 1½"-4" BEHIND THE EASEMENT LINE WITH CAP OR CONNECT TO EXISTING SANITARY LATERAL AS SHOWN IN THE PLANS. CONTRACTOR TO FIELD LOCATE THE EXISTING LATERAL AT THE R/W LINE TO ESTABLISH THE CONNECTION POINT. SEE DETAILS "CONNECTION TO ALL PIPES WITH MATERIAL OTHER THAN PVC" AND "TYPICAL GASKET & CONNECT COUPLING ON SEWER FITTING SPONGED BY THE WOOD"

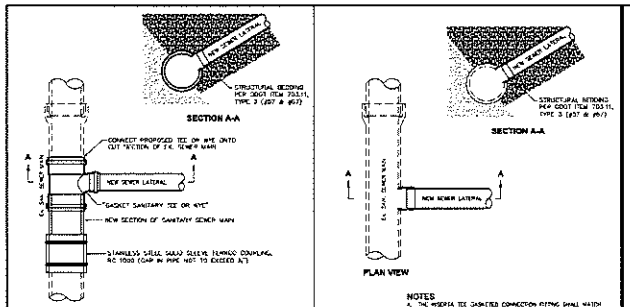
#7 - EXACT RECORD OF TAP AND DEAD LOCATIONS SHALL BE MADE AS TO DEPTH FROM SURFACE AND DISTANCE FROM CENTERLINE OF LENGTH (BOTTOM BACKFILL 24 PLACES).

#8 - CONCRETE ENCASEMENT AND BEDDING REQUIRED IF DEPTH OF COVER/DEPTH IS 10' OR GREATER (CONCRETE SHALL BE 4" MIN THICKNESS AROUND THE WYE SEWER AND 6" MIN. THICKNESS AROUND THE LATERAL

#9 - MANHOLE WALL AND MAIN WATER TIGHT SEAL TO PLUG AND A 4"x4" WOOD STAKE WITH A PAINTED GREEN TOP AT NOT FENCE INTO AN EXISTING BUILDING WITH

**SANITARY SEWER LATERAL DETAILS**

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NOTES

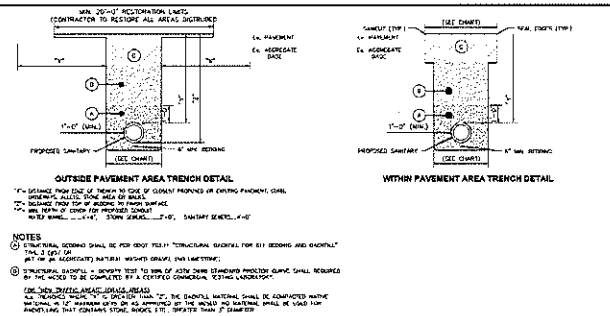
ANY SANITARY SEWER DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION. ALL REPAIRS SHALL BE NOTED ON THE AS-BUILT DRAWINGS AND SHALL BE INSPECTED BY THE INSPECTOR BEFORE THEY ARE COVERED.

**CUT-IN-TEE OR WYE SEWER LATERAL CONNECTION DETAIL**

**INSERTA TEE - SEWER LATERAL CONNECTION DETAIL**

**SEWER LATERAL CONNECTION DETAILS**

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NOTES

(A) STRUCTURAL BEDDING SHALL BE PER ODOT 703.17 "STRUCTURAL BACKFILL FOR BIT BEDDING AND BACKFILL" TYPE 3 (SEE DR #57) (NOT ON AN AGGREGATE) MATERIAL WEIGHT GRAVEL AND LIMESTONE;

(B) STRUCTURAL BACKFILL = DENSITY TEST TO 98% OF ASTM D698 STANDARD PROCTOR (SAME SHALL BE REQUIRED BY THE MODOT TO BE COMPLETE BY A CERTIFIED COMMERCIAL TESTING LABORATORY.

B.1 ONLY WHERE TRAFFIC AREAS / ROADS AREAS

B.2 TRENCHES WIDER "X" IS GREATER THAN "Z", THE BACKFILL MATERIAL SHALL BE COMPACTED WITH MATERIAL IN 12" MAXIMUM LIFTS OR AS OTHERWISE APPROVED BY THE MODOT NO MATERIAL SHALL BE USED FOR BACKFILLING THAT CONTAINS STONE, RUBBLE ETC. GREATER THAN 3" DIAMETER

B.3 TRENCHES WHERE "X" IS GREATER THAN "Z", THE BACKFILL MATERIAL SHALL BE ODOT ITEM 703.17, TYPE 7 (LEAN AGGREGATE). THE AGGREGATE SHALL BE COMPACTED IN 8" MAXIMUM LIFTS AND BE USED UNTIL THE MINIMUM HEIGHT RESULTS IN "Y" BEING GREATER THAN "Z" AT WHICH TIME NATIVE BACKFILL CAN BE USED

FOR UNPAVED AREAS / ROADS - ASPHALT, CONCRETE PAVEMENTS

B.4 TRENCH BACKFILL IN GRAVEL ITEM 703.17, TYPE 5 (LEAN AGGREGATE). THE AGGREGATE SHALL BE COMPACTED IN 8" MAXIMUM LIFTS UNLESS OTHERWISE SPECIFIED BY THE MODOT.

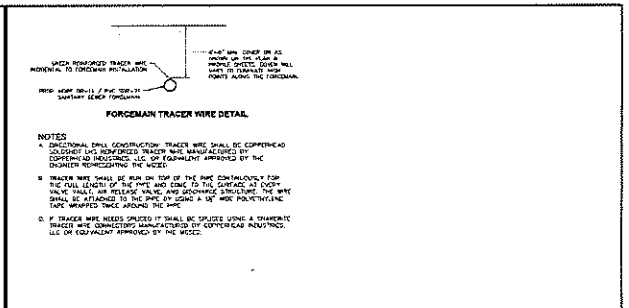
C. INSERTA TEE'S SHALL BE USED WHENEVER POSSIBLE AND BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

TRENCH WIDTH/DEPTH CHART

| TRENCH WIDTH | TYPICAL WIDTH (TYP.) | PAYMENT REQUIREMENTS (TYP.) |
|---|---|---|
| "X" < "Z" | MIN. 30" - 4'-0" | TRENCH WIDTH = X + 24" |
| "X" = "Z" | PIPE OD + 8'-0" | TRENCH WIDTH = X + 24" |
| "X" > "Z" | PIPE OD + 8'-0" | TRENCH WIDTH = X + 24" |
| "X" > "Z" | PIPE OD + 8'-0" | TRENCH WIDTH = X + 24" |

**SANITARY SEWER TRENCH NOTES AND DETAILS**

| REVISIONS | DATE APPROVED: | PAGE No. |
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NOTES

A. DIRECTIONAL DRILL CONSTRUCTION TRACER WIRE SHALL BE COPPERHEAD SOLIDSHOT 14G REINFORCED TRACER WIRE MANUFACTURED BY COPPERHEAD INDUSTRIES, LLC OR EQUIVALENT APPROVED BY THE ENGINEER REPRESENTING THE MODOT.

B. TRACER WIRE SHALL BE RUN ON TOP OF THE PIPE CONTINUOUSLY FOR THE FULL LENGTH OF THE PIPE AND COME TO THE SURFACE AT EVERY VALVE VAULT, AIR RELEASE VALVE, AND BLOWOFF STRUCTURE. THE WIRE SHALL BE ATTACHED TO THE PIPE BY USING A 12" WIDE POLYETHYLENE TAPE WRAPPED TWICE AROUND THE PIPE.

C. IF TRACER WIRE NEEDS SPLICED IT SHALL BE SPLICED USING A 3M/MODOT TRACER WIRE CONNECTORS MANUFACTURED BY COPPERHEAD INDUSTRIES, LLC OR EQUIVALENT APPROVED BY THE MODOT.

**TRACER WIRE DETAILS**

| REVISIONS | DATE APPROVED: | PAGE No. |
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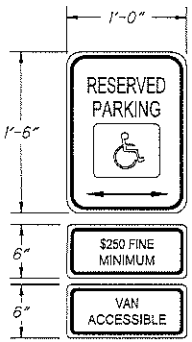
**EETSABARN SITE PLAN**
**BETHEL TOWNSHIP**
**GENERAL DETAILS**

REVISIONS:

FILE NAME: GENERAL DETAILS
DRAWN BY: DMP
CHECKED BY: JSP
PROJECT No.: MIA-DET-2601
DATE: 09-08-2026
SHEET NUMBER: 7 OF 18

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| NUMBER OF PARKING SPACE REQUIREMENTS | |
|---|---|
| TOTAL NUMBER OF PARKING SPACES PROVIDED | MINIMUM NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES |
| 1 TO 25 | 1 |
| 26 TO 50 | 2 |
| 51 TO 75 | 3 |
| 76 TO 100 | 4 |
| 101 TO 150 | 5 |
| 151 TO 200 | 6 |
| 201 TO 300 | 7 |
| 301 TO 400 | 8 |
| 401 TO 500 | 9 |
| 501 TO 1000 | 2 PERCENT OF TOTAL |
| 1001 AND OVER | 20, PLUS 1 FOR EACH 100, OR FRACTION THEREOF, OVER 1000 |
| NOTE: ONE OUT OF EVERY (6) ACCESSIBLE PARKING SPACES, BUT NOT LESS THAN ONE, IS REQUIRED TO BE VAN ACCESSIBLE | |




NOTES

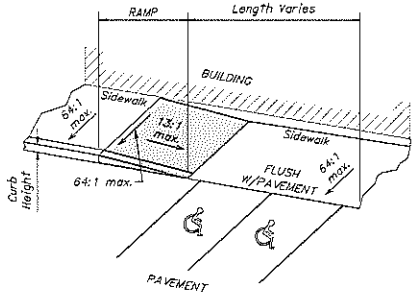
A. SIGNS: "RESERVED PARKING" SIGN (USDOT STANDARD R7-8 SIGN). THIS IS A STANDARD SIGN AND MAY BE ORDERED FROM ANY TRAFFIC SIGN SUPPLIER BY NUMBER. THE SIGN MUST BE SUPPLEMENTED WITH A "$250 FINE MINIMUM" SIGN (USDOT STANDARD R7-8Bb SIGN) AND A "VAN ACCESSIBLE" SIGN (USDOT STANDARD R7-8c SIGN) AS APPLICABLE. CONFIRM WITH LOCAL REGULATIONS.

B. A U.S. DEPARTMENT OF TRANSPORTATION R7-8 (RESERVED PARKING) AND SUPPLEMENTAL SIGNS AS NOTED ABOVE MUST BE MOUNTED ON A PERMANENT POST SO THAT THE LOWER EDGE OF THE BOTTOM MOST SIGN IS AT LEAST FIVE FEET ABOVE THE PAVEMENT/GROUND. THE POST MUST BE MOUNTED IN THE CENTER OF THE ADA ACCESSIBLE PARKING SPACE, NO MORE THAN FIVE FEET FROM THE FRONT OF THE PARKING SPACE. ONE SIGN REQUIRED FOR EACH ACCESSIBLE PARKING SPACE. ALL WORK SHALL CONFORM WITH ALL FEDERAL, STATE AND LOCAL AMERICANS WITH DISABILITIES ACT (ADA) REGULATIONS AND STANDARDS AND LOCAL ACCESSIBILITY CODE.

C. ALL HANDICAP PARKING SPACES MUST ALSO HAVE A PAINTED INTERNATIONAL SYMBOL OF ACCESSIBILITY CENTERED IN THE PARKING STALL.

## A.D.A. RESERVED PARKING SIGN

NTS

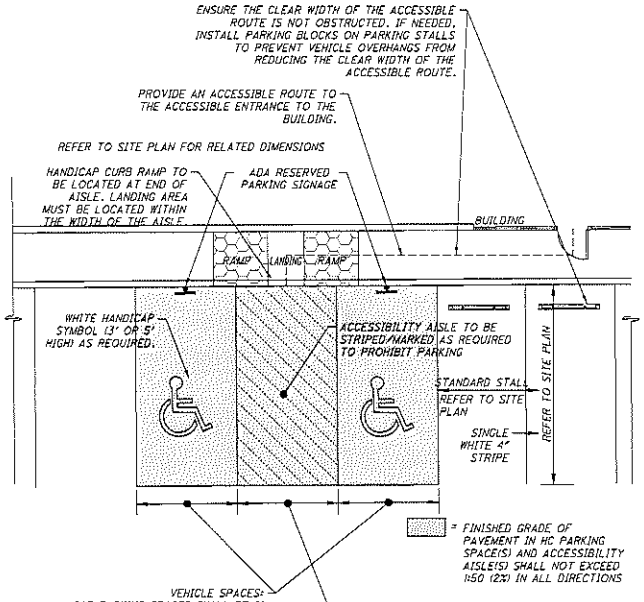



## TYPICAL INLINE HANDICAP RAMP DETAIL WITH SIDEWALK END DETAIL

NTS

NOTE

ADJUST AS NEEDED PER SITE CONDITIONS/REQUIREMENTS WITHIN ALLOWABLE MINIMUM WIDTHS AND MAXIMUM SLOPES ALLOWED PER ADA REGULATIONS AND STANDARDS. SEE ODOT DRAWING SERIES BP-7.1 FOR CURB RAMP DETAILS. ALL WORK TO BE PER APPROVED AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS AND LOCAL ACCESSIBILITY CODE AND PER ODOT'S BP-7.1 DRAWING SERIES.




NOTES:

THE MINIMUM COMBINED WIDTH FOR A VAN PARKING SPACE AND ACCESSIBILITY AISLE IS 16' WIDE.

THE MINIMUM COMBINED WIDTH FOR A CAR PARKING SPACE AND ACCESSIBILITY AISLE IS 13' WIDE.

## TYPICAL HANDICAP PARKING SPACE AND STRIPING PLAN

(FOR REFERENCE ONLY) - NTS

### SITE ACCESSIBILITY NOTES

A. REFER TO SITE PLAN FOR EXACT LOCATION OF HANDICAP PARKING, ACCESSIBILITY AISLES, WALKWAYS AND RAMPS.

B. ALL WALKWAYS, RAMPS, AND HANDICAP PARKING SIGNAGE, ETC. SHALL COMPLY WITH AND MEET APPROVED AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS AND LOCAL ACCESSIBILITY CODE.

C. ONE OUT OF EVERY SIX (6) ACCESSIBLE PARKING SPACES, BUT NOT LESS THAN ONE, IS REQUIRED TO BE VAN ACCESSIBLE.

D. ACCESSIBLE RAMPS: REFER TO SITE PLAN FOR TYPE/STYLE OF HANDICAP RAMP(S).

E. FINISHED GRADES OF PAVEMENT IN HC PARKING AND ACCESSIBILITY AISLE SHALL NOT EXCEED 1:50 SLOPE IN ANY DIRECTION.

### HANDICAP ACCESSIBILITY ROUTE NOTES

ALL ACCESSIBILITY ROUTES SHALL COMPLY WITH AND MEET APPROVED AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS AND LOCAL ACCESSIBILITY CODE.

A. ACCESSIBLE ROUTES MUST CONNECT HC PARKING SPACES TO ACCESSIBLE ENTRANCES.

B. ACCESSIBLE ROUTES SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING COMPONENTS: WALKING SURFACES WITH A RUNNING SLOPE NOT STEEPER THAN 1:20, RAMPS AND CURB RAMPS EXCLUDING THE FLARED SIDES. ALL COMPONENTS OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH THE APPLICABLE ADA REQUIREMENTS.

C. THE PREFERRED LOCATION FOR ACCESSIBLE ROUTES IS IN FRONT OF THE PARKED VEHICLES.

D. HC PARKING ACCESS AISLES MUST JOIN TO AN ACCESSIBLE ROUTE.

E. WHEN ACCESSIBLE ROUTES CROSS VEHICULAR TRAVEL LANES, MARK THE CROSSINGS TO ENHANCE PEDESTRIAN SAFETY.

F. ENSURE THE CLEAR WIDTH OF THE ACCESSIBLE ROUTE IS NOT OBSTRUCTED. IF NEEDED, INSTALL PARKING BLOCKS ON PARKING STALLS TO PREVENT VEHICLE OVERHANGS FROM REDUCING THE CLEAR WIDTH OF THE ACCESSIBLE ROUTE.

### HANDICAP RAMP GENERAL NOTES

ALL RAMPS SHALL COMPLY WITH AND MEET APPROVED AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS AND LOCAL ACCESSIBILITY CODE.

RAMPS:

A. SLOPE: RAMP RUNS SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 1:12.

B. CROSS SLOPE: CROSS SLOPE OF RAMP RUNS SHALL NOT BE STEEPER THAN 64:1.

C. CLEAR WIDTH: THE CLEAR WIDTH OF A RAMP RUN AND, WHERE HANDRAILS ARE PROVIDED, THE CLEAR WIDTH BETWEEN HANDRAILS SHALL BE 36" MINIMUM.

D. RISE: THE RISE FOR ANY RAMP RUN SHALL BE 30" MAXIMUM.

E. HANDRAILS: RAMP RUNS WITH A RISE GREATER THAN 6" SHALL HAVE ADA COMPLIANT HANDRAILS.

F. EDGE PROTECTION: ADA COMPLIANT EDGE PROTECTION SHALL BE PROVIDED ON EACH SIDE OF RAMP RUNS AND AT EACH RAMP LANDING.

RAMP LANDINGS:

A. RAMPS SHALL HAVE LANDINGS AT THE TOP AND BOTTOM OF EACH RAMP RUN.

B. SLOPE: LANDINGS SHALL BE RELATIVITY LEVEL WITH SLOPES NOT STEEPER THAN 64:1 IN ANY DIRECTION.

C. WIDTH: THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING.

D. LENGTH: THE LANDING CLEAR LENGTH SHALL BE 60" LONG MINIMUM.

E. CHANGE IN DIRECTION: RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS SHALL HAVE A CLEAR LANDING 60" X 60" MINIMUM.

### HANDICAP CURB RAMP NOTES:

ALL RAMPS SHALL COMPLY WITH AND MEET APPROVED AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS AND LOCAL ACCESSIBILITY CODE.

A. SLOPE: RAMP SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 1:12.

B. COUNTER SLOPE: COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 1:20. THE ADJACENT SURFACES AT TRANSITIONS AT CURB RAMPS TO WALKS, GUTTERS, AND STREETS SHALL BE AT THE SAME LEVEL. THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, LANDING, OR BLENDED TRANSITIONS SHALL BE 20:1 OR FLATTER.

C. SIDES OF CURB RAMPS: WHERE PROVIDED, CURB RAMP FLARES SHALL NOT BE STEEPER THAN 10:1.

D. LANDINGS: LANDINGS SHALL BE PROVIDED AT THE TOPS OF CURB RAMPS. RAMP LANDINGS SHALL BE 4' MIN. X 4' MIN. (5'X5' PREFERRED) WITH A 64:1 OR FLATTER CROSS SLOPE AND RUNNING SLOPE. WHILE RAMPS MAY BE SKEWED TO THE CROSSWALK, THE ENTIRE LOWER LANDING AREA MUST FALL WITHIN THE CROSS WALK THAT THE RAMP SERVES AND CANNOT BE LOCATED IN THE TRAVELED LANE OF OPPOSING TRAFFIC. THE BOTTOM EDGE OF THE RAMP SHALL CHANGE PLANES PERPENDICULAR TO THE LANDING. THE EDGE OF THE CURB SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT AND GUTTER AND SURFACE SLOPES THAT MEET GRADE BREAKS SHALL ALSO BE FLUSH.

E. LOCATION: CURB RAMPS AND THE FLARED SIDES OF CURB RAMPS SHALL BE LOCATED SO THAT THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC LANES, PARKING SPACES, OR PARKING ACCESS AISLES. CURB RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.

F. DIAGONAL CURB RAMPS: DIAGONAL OR CORNER TYPE CURB RAMPS WITH RETURNED CURBS OR OTHER WELL-DEFINED EDGES SHALL HAVE THE EDGES PARALLEL TO THE DIRECTION OF PEDESTRIAN FLOW. THE BOTTOM OF DIAGONAL CURB RAMPS SHALL HAVE A CLEAR SPACE 48 INCHES MINIMUM OUTSIDE ACTIVE TRAFFIC LANES OF THE ROADWAY. DIAGONAL CURB RAMPS PROVIDED AT MARKED CROSSINGS SHALL PROVIDE THE 48 INCHES MINIMUM CLEAR SPACE WITHIN THE MARKINGS. DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 24 INCHES LONG MINIMUM LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING.

G. ISLANDS: RAISED ISLANDS IN CROSSINGS SHALL BE CUT THROUGH LEVEL WITH THE STREET OR HAVE CURB RAMPS AT BOTH SIDES. EACH CURB RAMP SHALL HAVE A LEVEL AREA 48 INCHES LONG MINIMUM BY 36 INCHES WIDE MINIMUM (48" PREFERRED) AT THE TOP OF THE CURB RAMP IN THE PART OF THE ISLAND INTERSECTED BY THE CROSSINGS. EACH 48 INCH MINIMUM BY 36 INCH MINIMUM (48" PREFERRED) AREA SHALL BE ORIENTED SO THAT THE 48 INCH MINIMUM LENGTH IS IN THE DIRECTION OF THE RUNNING SLOPE OF THE CURB RAMP IT SERVES. THE 48 INCH MINIMUM BY 36 INCH MINIMUM (48" PREFERRED) AREAS AND THE ACCESSIBLE ROUTE SHALL BE PERMITTED TO OVERLAP.

H. DRAINAGE: CONTRACTOR IS TO ENSURE THE BASE OF EACH CONSTRUCTED CURB RAMP ALLOWS FOR PROPER DRAINAGE, WITHOUT EXCEEDING ALLOWABLE CROSS SLOPE OR RAMP VERTICAL CHANGE IN LEVEL EXCEEDING ½" BETWEEN THE 1) PAVEMENT AND GUTTER, AND 2) GUTTER AND RAMP, ARE NOT ALLOWED.

I. SURFACE TEXTURE: TEXTURE CONCRETE SURFACES BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES TO BE ROUGHER THAN THE ADJACENT WALK.

J. JOINTS: PROVIDE EXPANSION JOINTS IN THE CURB RAMP AS EXTENSIONS OF WALK JOINTS AND CONSISTENT WITH ITEM 608.03 REQUIREMENTS FOR A NEW CONCRETE WALK. PROVIDE A 1/2" ITEM 705.03 EXPANSION JOINT FILLER AROUND THE EDGE OF RAMPS BUILT IN EXISTING CONCRETE WALKS. LINES SHOWN ON THIS DRAWING INDICATE THE RAMP EDGES AND SLOPE CHANGES, AND DO NOT NECESSARILY INDICATE JOINT LINES.

K. EXISTING SIDEWALKS: IN EXISTING SIDEWALKS, WHERE THE MAXIMUM RAMP SLOPE (1:12) IS NOT FEASIBLE DUE TO SITE CONSTRAINTS (E.G. UTILITY POLES OR VAULTS, RIGHT-OF-WAY LIMITS) IT MAY BE REDUCED AS FOLLOWS:

10:1 FOR A MAX. RISE OF 6",
8:1 FOR A MAX. RISE OF 3",
6:1 OVER A MAX. RUN OF 2'-0" FOR HISTORIC AREAS WHERE A FLATTER SLOPE IS NOT FEASIBLE.

TO PREVENT CHASING THE GRADE INDEFINITELY, THE TRANSITION FROM EXISTING SIDEWALK TO THE SHADED CURB RAMP AREA IS NOT REQUIRED TO EXCEED 15 FEET IN LENGTH.

### DETECTABLE WARNINGS, IF REQUIRED:

A. INSTALL DETECTABLE WARNING ON CURB RAMP WITH APPROVED MATERIALS. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP (EXCLUSIVE OF FLARED SIDES) AND SHALL EXTEND EITHER THE FULL DEPTH OF THE CURB RAMP OR 24 INCHES DEEP MINIMUM MEASURED FROM THE BACK OF THE CURB ON THE RAMP SURFACE.

B. INSTALL ALL PROPRIETARY PRODUCTS AS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

C. THE DEPTH OF CONCRETE UNDERNEATH DETECTABLE WARNING PRODUCTS SHALL BE A MINIMUM OF 4" THICK.

D. COLOR OF DETECTABLE WARNINGS SHOULD CONTRAST WITH SURROUNDING CONCRETE WALK AND RAMP (BLACK IS NOT AN ACCEPTABLE COLOR).

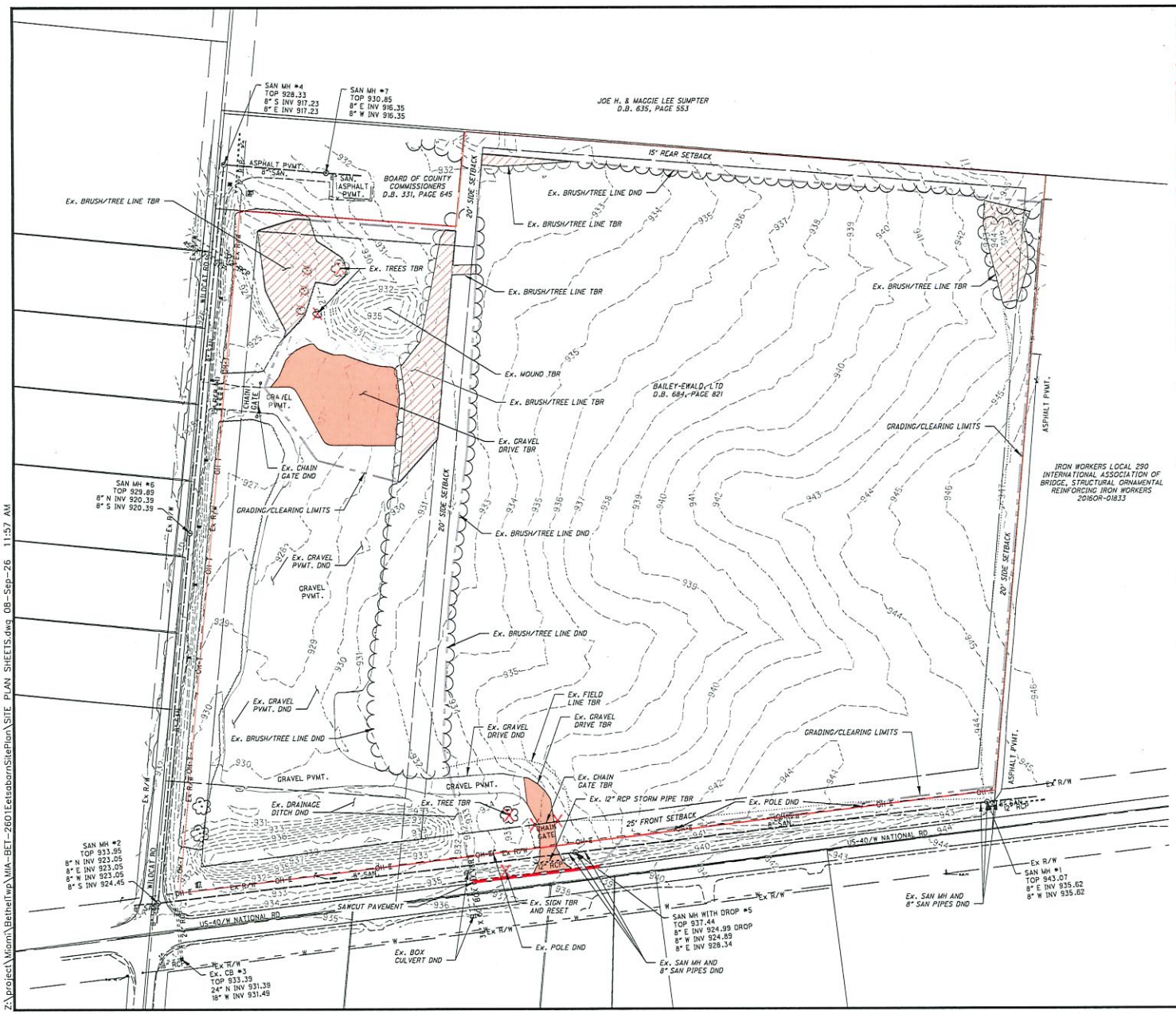

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EETSABARN SITE PLAN
BETHEL TOWNSHIP
GENERAL DETAILS

REVISIONS:

FILE NAME: GENERAL DETAILS
DRAWN BY: DMR
CHECKED BY: JSP
PROJECT NO.: MIA-BET-2601
DATE: 09-08-2026
SHEET NUMBER: 8 OF 18


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**DEMOLITION LEGEND:**

*(DND) = DO NOT DISTURB (EXISTING ITEMS)*

*(TBR) = TO BE REMOVED (EXISTING ITEMS)*

*EXISTING ITEMS TO BE REMOVED*

*REMOVE PAVEMENT AS NEEDED BASED ON ACTUAL CONSTRUCTION REQUIREMENTS*

*CLEAR BRUSH/TREE LINE TO EXTENTS SHOWN*

*SAWCUT PAVEMENT. NOTE 5 THIS SHEET*

*GRADING/CLEARING LIMITS*

**EXISTING CONDITIONS NOTE:**

*THERE MAY BE OTHER UNKNOWN UNDERGROUND UTILITIES, SERVICES OR ITEMS WHICH MAY BE LOCATED WITHIN THE SITE AND MAY REQUIRE REMOVAL OR REROUTING IN ORDER TO PERFORM THE PROPOSED PROJECT. CONTRACTOR TO VERIFY EXACT LOCATION, DEPTH AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY OF ANY UTILITY CONFLICTS, UNKNOWN UNDERGROUND UTILITIES, OR ANY OTHER ITEMS WHICH ARE ENCOUNTERED AND WORK WITH THE OWNER TO DECIDE HOW THESE ITEMS SHOULD BE HANDLED.*

**DEMOLITION GENERAL NOTES:**

1. *DEMOLITION OF ALL ITEMS TO BE PER ALL FEDERAL, STATE AND LOCAL CODES, REGULATIONS AND STANDARDS. ALL DEMOLITION PERMITS TO BE OBTAINED PRIOR TO DEMOLITION.*
2. *PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY WITH OWNER ALL ITEMS TO BE SALVAGED. ALL ITEMS DESIGNATED FOR SALVAGE BY THE OWNER SHALL BE REMOVED CAREFULLY AND REMAIN THE PROPERTY OF THE OWNER. ALL OTHER TO BE REMOVED AND ARE UNWANTED BY THE OWNER SHALL BE REMOVED FROM THE SITE AND SHALL BECOME THE CONTRACTOR'S PROPERTY FOR PROPER DISPOSAL OFF-SITE, UNLESS OTHERWISE NOTED.*
3. *CONTRACTOR TO REMOVE AND DISPOSE OF ALL EXISTING ITEMS WITHIN THE PROJECT LIMITS/AREA AS NEEDED TO CONSTRUCT THE PROPOSED PROJECT AND AS DIRECTED BY THE OWNER. THIS SHALL INCLUDE, BUT IS NOT LIMITED TO, EXISTING ASPHALT PAVEMENT, CONCRETE PAVEMENT, WALK, CURB, PARKING BLOCKS, STEPS, RETAINING WALLS, CATCH BASINS, MANHOLES, PIPING, VALVES, POSTS, FENCE, LIGHT POLES, ELECTRIC POLES, POLE BASES, TREES, STUMPS, LANDSCAPING, ETC. THIS WORK SHALL INCLUDE COMPLETE REMOVAL OF ALL EXISTING FOUNDATIONS, FOOTINGS, UNDERGROUND PORTIONS OF, ETC. FOR ALL ITEMS TO BE REMOVED/DEMOLISHED.*
4. *CONTRACTOR TO VERIFY THE EXACT ITEMS TO BE REMOVED OR ABANDONED IN PLACE AND THE APPROPRIATE TIMING TO DO SO WITH THE OWNER PRIOR TO THEIR REMOVAL OR ABANDONMENT. CERTAIN SERVICES MAY NEED TO BE KEPT IN OPERATION AS LONG AS POSSIBLE OR REPLACED WITH TEMPORARY SERVICES. OWNER TO DETERMINE TIMING AND NEED FOR ANY TEMPORARY SERVICES.*
5. *ANY PAVEMENT INDICATED TO BE REMOVED AND ABUTTING EXISTING PAVEMENT TO REMAIN SHALL BE SAWCUT TO FULL DEPTH TO PROVIDE A CLEAN STRAIGHT EDGE.*

| | |
|---|---|
| *BENCHMARK #1* | *ELEV. 942.92* |
| *BOLT AT TIP ARROW TOP FLANGE FIRE HYDRANT SOUTH SIDE US 40 AT SOUTH EAST CORNER OF THE PROPERTY* | |
| *BENCHMARK #2* | *ELEV. 936.11* |
| *BOLT AT TIP ARROW TOP FLANGE FIRE HYDRANT AT THE SOUTH WEST CORNER OF US 40 AND WILDCAT RD* | |

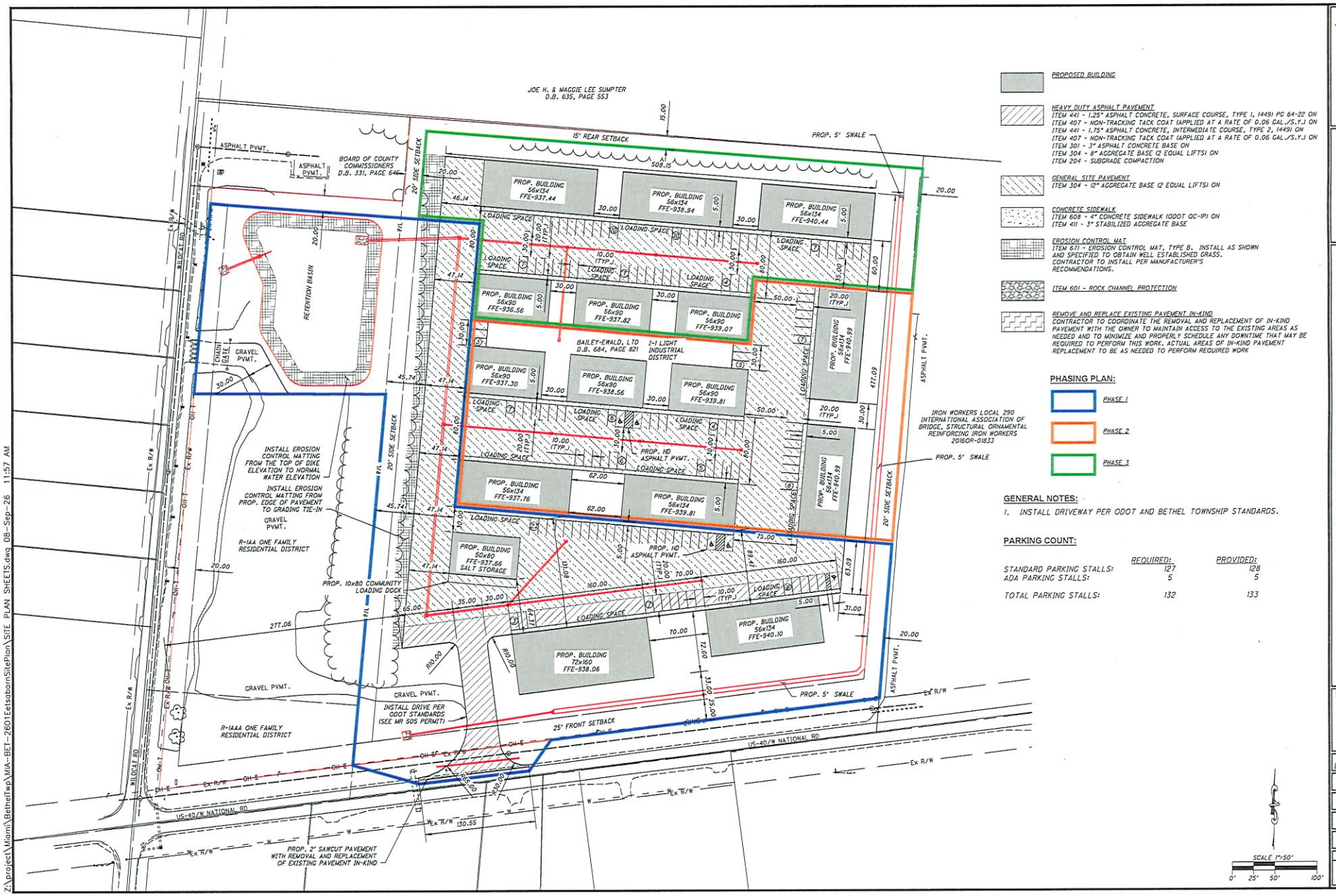

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# EETSABARN SITE PLAN
## BETHEL TOWNSHIP
## DEMOLITION PLAN

REVISIONS:

| | |
|---|---|
| FILE NAME | DEMOLITION PLAN |
| DRAWN BY | DMR |
| CHECKED BY | JSP |
| PROJECT No. | MIA-BET-2601 |
| DATE | 09-08-2026 |
| SHEET NUMBER | 9 OF 18 |

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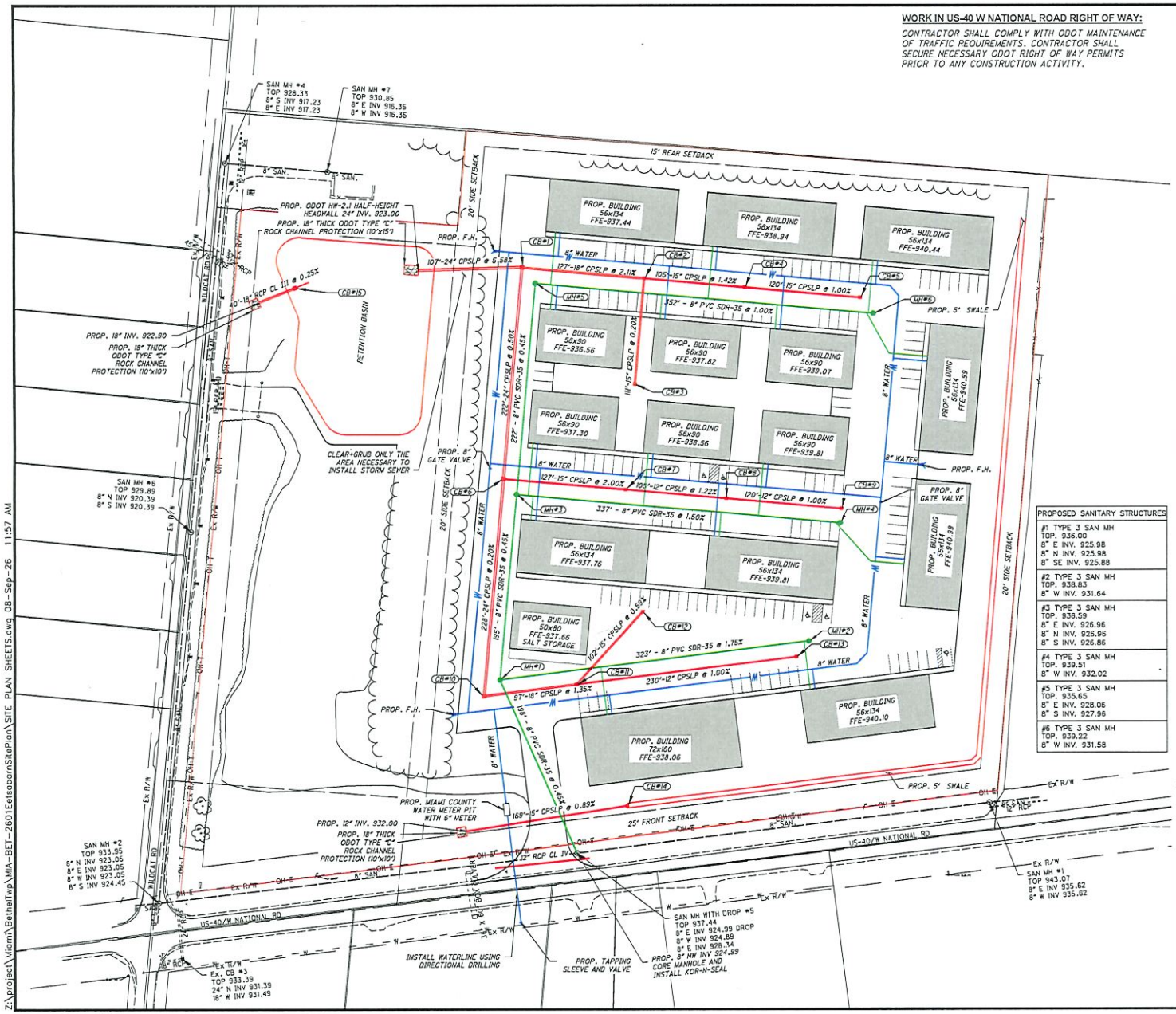

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# EETSABARN SITE PLAN
# BETHEL TOWNSHIP
## DIMENSIONING AND PAVEMENT PLAN

REVISIONS:

FILE NAME: DIMENSION PLAN
DRAWN BY: DMR
CHECKED BY: JSP
PROJECT No.: MIA-BET-2601
DATE: 09-08-2026
SHEET NUMBER: 10 OF 18

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**WORK IN US-40 W NATIONAL ROAD RIGHT OF WAY:**

*CONTRACTOR SHALL COMPLY WITH ODOT MAINTENANCE OF TRAFFIC REQUIREMENTS. CONTRACTOR SHALL SECURE NECESSARY ODOT RIGHT OF WAY PERMITS PRIOR TO ANY CONSTRUCTION ACTIVITY.*

**EXISTING UTILITIES NOTES:**

1. *CONTRACTOR TO FIELD VERIFY EXACT LOCATION, DEPTH AND SIZE OF ALL UTILITIES PRIOR TO PERFORMING ANY PROPOSED CONSTRUCTION WORK AND ENSURE THAT ALL EXISTING STORM, SANITARY OR WATER LINES DISCOVERED/ENCOUNTERED DURING CONSTRUCTION - AND ARE TO REMAIN IN SERVICE - ARE REROUTED AS NEEDED TO CONNECT INTO THE PROPOSED OR EXISTING ASSOCIATED UTILITY.*
2. *CONTRACTOR TO BE AWARE ADDITIONAL UTILITY INVESTIGATION MAY BE NEEDED ONCE WORK HAS BEGUN. THIS WORK MAY ALSO REQUIRE THE CONTRACTOR TO INSPECT THE LINES BY OTHER METHODS SUCH AS DYE TESTING OR CAMERA/VIDEO TO FIND THE ORIGIN AND LOCATION OF THE LINE.*
3. *CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY OF ANY CONFLICTS, UNKNOWN UNDERGROUND UTILITIES OR OTHER ITEMS WHICH ARE ENCOUNTERED PRIOR TO INSTALLATION OF ANY PROPOSED WORK AND COORDINATE WITH THE OWNER TO DECIDE HOW THESE ITEMS SHOULD BE HANDLED.*
4. *ALL WORK TO BE PER AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND TO BE WITNESSED BY THE OWNER'S REPRESENTATIVE. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTOR'S OVERALL LUMP SUM BID FOR THE PROJECT.*

**ELECTRICAL/MECHANICAL NOTE:**

*CONTRACTOR SHALL REFER TO THE ELECTRICAL/MECHANICAL DRAWINGS FOR DEMOLITION AND/OR INSTALLATION INFO. OF ALL EXISTING AND PROPOSED ELECTRICAL/MECHANICAL ITEMS FOR THE SITE AND/OR HOW THESE ITEMS ARE TO BE HANDLED AND ADDRESSED.*

**PROPOSED BUILDING DOWNSPOUT/ROOF DRAIN NOTE:**

*THE CONTRACTOR SHALL CONNECT ALL DOWNSPOUTS AND ROOF DRAINS AS SHOWN ON THE SITE PLAN TO THE CLOSEST STORM PIPE OR CATCH BASIN USING CPSLP, PVC SDR-35 SEWER, OR APPROVED EQUAL. SEE PROPOSED BUILDING PLANS FOR LOCATION OF DOWNSPOUTS AND/OR ROOF DRAINS.*

**STORM SEWER UNDER BUILDING NOTE:**

*ANY STORM SEWER PIPING OR STRUCTURES THAT ARE TO BE INSTALLED UNDER AN EXISTING OR PROPOSED BUILDING SHALL CONSIST OF MATERIALS/TYPES THAT MEET OR EXCEED ALL BUILDING CODE REQUIREMENTS. CONTRACTOR SHALL INSTALL & TEST ALL PIPING AND/OR STRUCTURES AS REQUIRED BY ALL BUILDING CODE REQUIREMENTS. SEE PLUMBING PLANS AS APPLICABLE.*

**GAS, ELECTRIC, COMMUNICATION CONFLICT NOTE:**

*CONTRACTOR TO LOWER/DIP THESE UTILITIES AS NEEDED TO AVOID CONFLICTS WITH ANY PROPOSED OR EXISTING SANITARY OR STORM OR WATER LINES THEY MAY CONFLICT WITH. IF THESE UTILITY LINES CONFLICT WITH ANY PROPOSED OR EXISTING WATERLINES THEN CONTRACTOR TO DETERMINE WHETHER TO LOWER/DIP THE WATERLINE OR LOWER/DIP THE GAS/ELECTRIC/COMMUNICATION LINE(S). CONTRACTOR MAY NEED TO CONSULT WITH AND OBTAIN OWNER'S APPROVAL AS TO WHICH UTILITY WILL BE LOWERED PRIOR TO PERFORMING THIS WORK. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTOR'S OVERALL LUMP SUM BID FOR THE PROJECT.*

**PROPOSED SANITARY STRUCTURES**

| |
|---|
| #1 TYPE 3 SAN MH<br>TOP. 936.00<br>8" E INV. 925.98<br>8" N INV. 925.98<br>8" SE INV. 925.88 |
| #2 TYPE 3 SAN MH<br>TOP. 938.83<br>8" W INV. 931.64 |
| #3 TYPE 3 SAN MH<br>TOP. 936.59<br>8" E INV. 926.96<br>8" N INV. 926.96<br>8" S INV. 926.86 |
| #4 TYPE 3 SAN MH<br>TOP. 939.51<br>8" W INV. 932.02 |
| #5 TYPE 3 SAN MH<br>TOP. 935.65<br>8" E INV. 928.06<br>8" S INV. 927.96 |
| #6 TYPE 3 SAN MH<br>TOP. 939.22<br>8" W INV. 931.58 |

**PROPOSED STORM STRUCTURES**

| |
|---|
| #1 TYPE 2-3 CB<br>TOP 934.94<br>18" E INV. 929.49<br>24" S INV. 928.99<br>24" W INV. 928.99 |
| #2 TYPE 2-2C CB<br>TOP 936.27<br>18" W INV. 932.18<br>15" E INV. 932.43<br>15" S INV. 932.43 |
| #3 TYPE 2-2B CB<br>TOP 936.10<br>15" N INV. 932.65 |
| #4 TYPE 2-2C CB<br>TOP 937.37<br>15" E INV. 933.92<br>15" W INV. 933.92 |
| #5 TYPE 2-2C CB<br>TOP 938.62<br>15" W INV. 935.12 |
| #6 TYPE 2-3 CB<br>TOP 935.68<br>24" N INV. 930.09<br>15" E INV. 930.84<br>24" S INV. 930.09 |
| #7 TYPE 2-2C CB<br>TOP 937.01<br>12" E INV. 933.63<br>15" W INV. 933.38 |
| #8 TYPE 2-2C CB<br>TOP 938.11<br>12" E INV. 934.91<br>12" W INV. 934.91 |
| #9 TYPE 2-2C CB<br>TOP 939.36<br>12" W INV. 936.11 |

**PROPOSED STORM STRUCTURES**

| |
|---|
| #10 TYPE 2-3 CB<br>TOP 935.09<br>24" N INV. 930.55<br>18" E INV. 931.05 |
| #11 TYPE 2-2C CB<br>TOP 936.06<br>12" E INV. 932.86<br>18" W INV. 932.36<br>15" NE INV. 932.61 |
| #12 TYPE 2-2C CB<br>TOP 936.66<br>15" SW INV. 933.21 |
| #13 TYPE 2-2C CB<br>TOP 938.36<br>12" W INV. 935.16 |
| #14 TYPE 2-2B CB<br>TOP 935.84<br>15" W INV. 933.50 |
| #15 TYPE 2-3 CB<br>TOP 925.65<br>18" W INV. 923.00<br>8" NE INV. 921.75 |

REFER TO OUTLET STRUCTURE DETAIL

SCALE 1"=50'
0' 25' 50' 100'

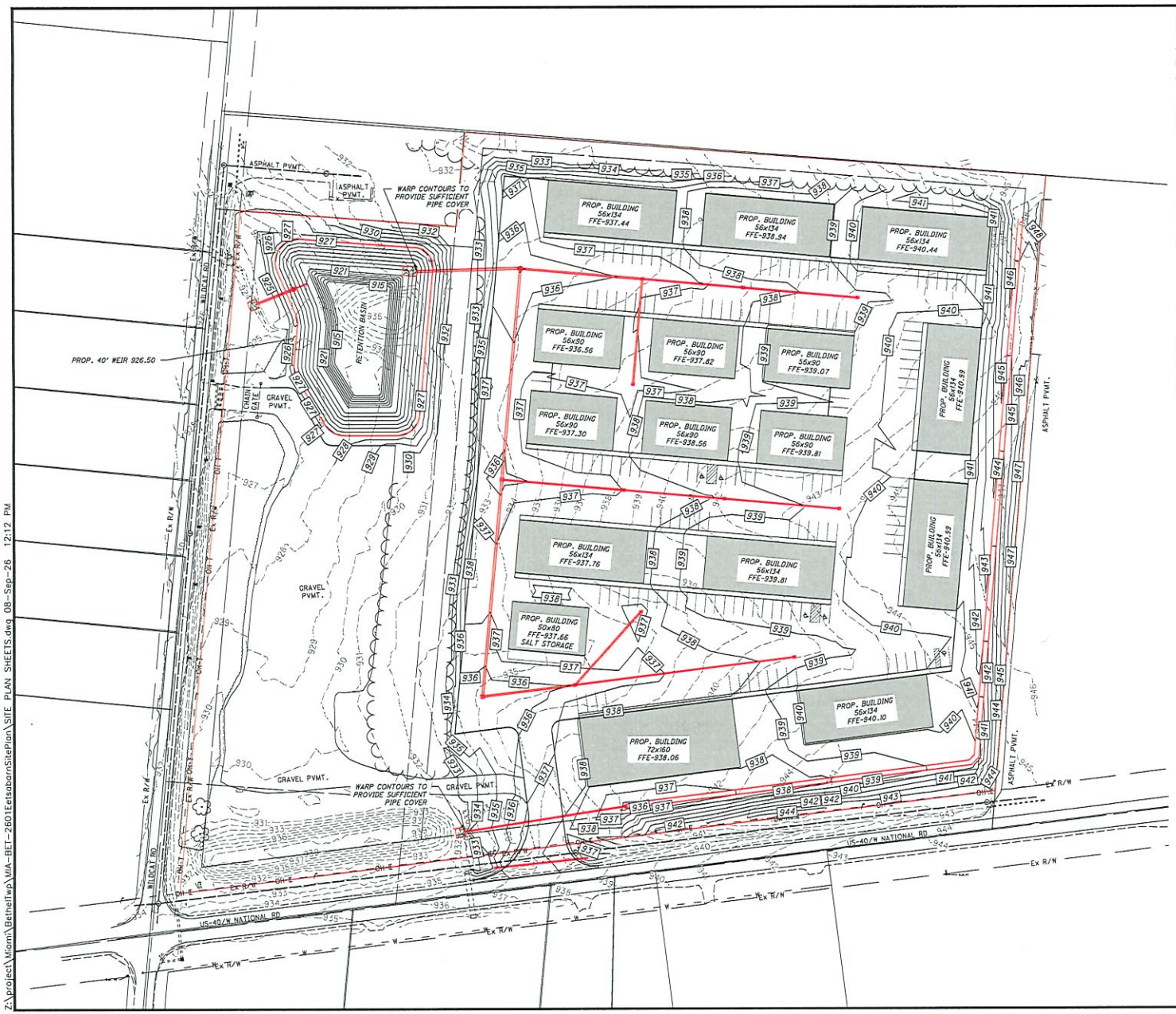
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# EETSABARN SITE PLAN
# BETHEL TOWNSHIP
# UTILITY PLAN

REVISIONS:

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| FILE NAME: UTILITY PLAN |
| DRAWN BY: DMR |
| CHECKED BY: JSP |
| PROJECT No.: MIA-BET-2601 |
| DATE: 09-08-2026 |
| SHEET NUMBER: 11 OF 18 |

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**LEGEND:**

- 830 — EXISTING CONTOURS
- 830 — PROPOSED CONTOURS
- PROPOSED STORM SEWER
- PROPOSED EDGE OF PAVEMENT

**GRADING GENERAL NOTES:**

1. CONTRACTOR SHALL ENSURE A SMOOTH TRANSITION IS PROVIDED WHERE PROPOSED AND EXISTING GRADES MEET THROUGHOUT THE SITE WITH SPECIAL ATTENTION GIVEN TO AREAS WHERE NEW PAVEMENT ABUTS EXISTING PAVEMENT. EXISTING PAVEMENT AT TRANSITION SHALL BE SAWCUT TO PROVIDE A CLEAN EDGE. ALL EX. PAVEMENT ELEVATIONS GIVEN ARE APPROXIMATED AND SHALL BE FIELD VERIFIED PRIOR TO THE CONSTRUCTION OF PROPOSED WORK.
2. CONTRACTOR SHALL ENSURE PROPER GRADING AND DRAINAGE IS PROVIDED FOR ALL AREAS WITHIN THE SITE TO DRAIN TO EXISTING OR PROPOSED STORM SYSTEMS OR SWALES.
3. CONTRACTOR SHALL ENSURE THAT DRAINAGE IS DIRECTED AWAY FROM ANY BUILDINGS/STRUCTURES. THIS SHALL INCLUDE ALL TEMPORARY GRADING AS NEEDED DURING THE COURSE OF CONSTRUCTION INCLUDING INSTALLING TEMPORARY DRAINAGE SWALES AND INSTALLING TEMPORARY STORM SEWER, CATCH BASINS, INLETS, ETC.
4. CONTOURS TO BE WARPED AT ALL RETENTION/DETENTION BASIN PIPE OUTLETS/OUTFALLS, HEADWALLS, AND OUTLET STRUCTURES TO ENSURE PROPER COVER (MIN 1.5').

**GRADING LIMITS NOTE:**

CONTRACTOR SHALL VERIFY THE FOLLOWING WITH THE CONSTRUCTION MANAGER AND OWNER'S REPRESENTATIVE:

1. AREAS WHERE GRADING OPERATIONS ARE TO TAKE PLACE.
2. GRADING TIE-IN POINTS TO EXISTING GRADES.

SCALE 1"=50'
0' 25' 50' 100'

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# EETSABARN SITE PLAN
## BETHEL TOWNSHIP
## GRADING AND EROSION CONTROL PLAN

REVISIONS:

| | |
|---|---|
| FILE NAME | GRADING PLAN |
| DRAWN BY | DMR |
| CHECKED BY | JSP |
| PROJECT No. | MIA-BET-2601 |
| DATE | 09-08-2026 |
| SHEET NUMBER | 12 OF 18 |

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# EETSABARN SITE PLAN- SWPPP

## BETHEL TOWNSHIP
## BETHEL TOWNSHIP TOWNSHIP
## MIAMI COUNTY COUNTY, OHIO


| | |
|---|---|
| SWPPP TITLE SHEET | 13 |
| SWPPP GENERAL EROSION CONTROL NOTES AND DETAILS | 14-16 |
| SWPPP SITE EROSION CONTROL PLAN | 17 |





VICINITY MAP




### SWPPP NOTE
THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED FOR EETSABARN, LLC FOR THE PERFORMANCE OF EETSABARN BUILDINGS IN MIAMI COUNTY, OHIO. ALL WORK SHALL BE PER AND COMPLY WITH THE OEPA CONSTRUCTION SITE STORM WATER GENERAL PERMIT, PERMIT #OHC000006. THIS INCLUDES FILING A CO-PERMITTEE NOI FORM WITH THE OEPA FOR ALL OPERATORS ENGAGED IN SITE WORK ON THE SITE. CONTRACTOR SHALL FOLLOW THE SPECIFICATIONS, INSTALLATION, MAINTENANCE AND REQUIREMENTS OF ODOT'S CURRENT SUPPLEMENTAL SPECIFICATION 832 "TEMPORARY SEDIMENT AND EROSION CONTROL." COMPLIANCE WITH SUPPLEMENTAL SPECIFICATION 832 SHALL INCLUDE THE STANDARD CONSTRUCTION DRAWING REFERENCES LISTED IN SECTION 832.03, BUT SHALL NOT INCLUDE SECTION 832.11 "INSPECTIONS AND SWPPP UPDATES." ALL INSPECTIONS AND SWPPP UPDATES SHALL BE PER THE OEPA CONSTRUCTION SITE STORM WATER GENERAL PERMIT, PERMIT #OHC000006. ALL WORK SHALL ALSO BE PER THE CURRENT ODOT CMS 107.19. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH LOCAL STORMWATER AND EROSION CONTROL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH AND INSTALLING ALL ITEMS NOTED AND AS REQUIRED BY OEPA AND LOCAL AUTHORITIES FOR MEETING ALL STORM WATER POLLUTION PREVENTION REQUIREMENTS. EETSABARN, LLC AND THE SELECTED CONTRACTOR SHALL BE THE RESPONSIBLE PARTY IN CHARGE OF THE SWPPP AND ASSOCIATED BMP'S.

### SITE DATA
LOCATION SOIL TYPES_____MIAMIAN SILT LOAM, MILLSDALE SILTY CLAY LOAM
PROJECT EARTH DISTURBED AREA_____10.09 ACRES
CONTRACTOR EARTH DISTURBED AREA_____0.10 ACRES
TOTAL EARTH DISTURBED AREA_____10.19 ACRES
PROPOSED IMPERVIOUS AREA ADDED:_____6.24 ACRES
PRE-CONSTRUCTION Rv:____0.00
POST-CONSTRUCTION Rv:____0.79
DESCRIPTION OF PRIOR LAND USE_____AGRICULTURAL LAND
EXISTING QUALITY OF DISCHARGE FROM SITE___UNTREATED PERVIOUS RUNOFF
IMMEDIATE RECEIVING WATERS:_____ON-SITE RETENTION BASIN
SUBSEQUENT RECEIVING WATERS:_____EXISTING DRAINAGE DITCH
LATITUDE 39.896712° LONGITUDE -84.142712°

### WATERS EDGE NOTE
ALL MATERIAL AND EQUIPMENT STAGING OR STORAGE AREAS, DEWATERING AREAS, CONCRETE TRUCK WASH OUT AREAS, CONSTRUCTION ACCESS LOCATIONS, AND VEHICLE FUELING AND REFUELING LOCATIONS MUST BE LOCATED A MINIMUM OF 100' FROM ANY CREEK/RIVER/STREAM WATERS EDGE.

### CLEAN STORM SYSTEM NOTE
IMMEDIATELY PRIOR TO FINAL COMPLETION OF THE PROJECT, CONTRACTOR SHALL ENSURE THE ENTIRE STORM SYSTEM, INCLUDING BUT NOT LIMITED TO, THE DETENTION/RETENTION BASIN(S), CATCH BASINS, MANHOLES, PIPING, UNDERDRAINS AND UNDERDRAIN TRENCHES ARE FREE FROM SEDIMENTATION AND OTHER POLLUTANTS AND FOREIGN MATERIALS AND ARE TO BE CLEANED AS NEEDED TO ENSURE MAXIMUM STORMWATER QUALITY AND FULL FUNCTIONALITY.

### OFFSITE CONSTRUCTION ACTIVITIES
IT IS EXPECTED ALL CONSTRUCTION ACTIVITIES WILL TAKE PLACE ON SITE.

### SPILL REPORTING REQUIREMENTS
IN THE EVENT OF A SMALL RELEASE (LESS THAN 25 GALLONS) OF PETROLEUM WASTE, SPECIAL HANDING PROCEDURES MUST BE USED. IN THE EVENT OF A LARGE RELEASE (25 GALLONS OR MORE) OF PETROLEUM WASTE, YOU MUST CONTACT THE OHIO EPA (AT 1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) WITHIN 30 MINUTES OF A SPILL OF 25 OR MORE GALLONS.

### VEHICLE FUELING
VEHICLE FUELING AND MAINTENANCE WILL BE PERFORMED VIA A SMALL REFUEL TANK ON THE BACK OF A PICK-UP TRUCK.

### OPEN BURNING NOTE
OPEN BURNING IS NOT PERMITTED IN THE CORPORATION LIMIT.

### CONTACT INFORMATION
FACILITY SITE LOCATION: NORTHEAST OF THE INTERSECTION OF US-40 AND WILDCAT ROAD, BETHEL TOWNSHIP, MIAMI COUNTY, OHIO
OWNER: EETSABARN, LLC, JASON MCCOY, (937) 776-2631, PO BOX 147, TIPP CITY, OH 45371, MCCOY.JASON@GMAIL.COM, EETSABARN@GMAIL.COM
SWPPP CONTACT/CONTRACTOR CONTACT - TBD

### SWPPP AND INSPECTION REPORTS LOCATION
NOTE: THE SWPPP AND INSPECTION REPORTS WILL BE KEPT ON-SITE IN THE JOB TRAILER/FOREMAN'S PICK-UP.

### WASTE DISPOSAL NOTE
CONTAINERS (e.g. DUMPSTERS, DRUMS) MUST BE AVAILABLE FOR THE DISPOSAL OF DEBRIS, TRASH, HAZARDOUS MATERIAL AND PETROLEUM WASTES. ALL CONTAINERS MUST BE COVERED AND LEAK-PROOF.

### CLEAN HARD FILL NOTE
NO CLEAN CONSTRUCTION WASTES SHALL BE DISPOSED OF INTO THE PROPERTY.

### FUELING AND STAGING NOTE
CONTRACTOR'S STAGING AND STORAGE AREA WILL BE LOCATED WITHIN CONSTRUCTION LIMITS OF THE PROJECT. FUEL TANKS AND OTHER HAZARDOUS MATERIALS TO BE SAFELY STORED, PROTECTED, AND PROPERLY HANDLED BY CONTRACTOR. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE NO POLLUTANTS FROM THE STAGING/STORAGE AREA LEAVE THE SITE OR ENTER ADJACENT SURFACE WATERS OR THE STORM SYSTEM. CONTRACTOR SHALL CLEAN UP AND PROPERLY DISPOSE OF ANY WASTE MATERIALS.

### SOIL STOCKPILE NOTE
CONTRACTOR'S SHALL LOCATE SOIL STOCKPILE AREAS WITHIN THE PROJECT AREA SO AS NOT TO BE WITHIN THE IMMEDIATE PROXIMITY OF ANY SURFACE WATERS OR STORM INLET STRUCTURES. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE NO POLLUTANTS FROM THE STOCKPILE AREA LEAVE THE SITE OR ENTER ADJACENT SURFACE WATERS OR THE STORM SYSTEM. THESE MEASURES MAY INCLUDE BUT SHALL NOT BE LIMITED TO INSTALLING FILTER FABRIC FENCE AROUND STOCKPILE, TEMPORARILY COVERING THE STOCKPILE AND/OR TEMPORARILY SEEDING THE STOCKPILE.

### DEWATERING NOTE
PUMPING OF SEDIMENT LADEN WATER FROM TRENCHES OR ANY OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, DITCH OR STREAM CORRIDORS, ANY WETLANDS OR STORM SEWERS IS PROHIBITED. ALL SUCH WATER SHALL BE PROPERLY FILTERED OR SETTLED TO REMOVE SOIL PARTICLES PRIOR TO ITS RELEASE. IF AN AREA OF THE SITE OR TRENCH NEEDS DEWATERED, IT SHOULD BE PUMPED FROM A SUMP PIT WITH A SOCK FILTER OR OTHER TYPE OF FILTERING DEVICE ON THE DISCHARGE OF THE HOSE. DO NOT ALLOW DISCHARGED WATER TO PASS OVER DISTURBED GROUND. IF THE DISCHARGE WATER IS BEING PUMPED INTO A SEDIMENT POND THEN NO FILTER IS REQUIRED AT THE END OF THE HOSE. IF THE GROUNDWATER MUST BE LOWERED, THE WATER MAY BE FREELY DISCHARGED AS LONG AS THE WATER REMAINS CLEAN. DO NOT CO-MINGLE CLEAN GROUND WATER WITH SEDIMENT LADEN WATER OR DISCHARGE IT BY ALLOWING IT TO PASS OVER DISTURBED GROUND.

### LOG/DOCUMENTATION SHEETS
AS PART OF THE SWPPP, THE CONTRACTOR SHALL MAINTAIN LOG/DOCUMENTATION SHEETS FOR THE FOLLOWING:
1) A SIGNATURE LOG CONTAINING THE SIGNATURES OF ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED IN THE IMPLEMENTATION OF THE SWPPP AS PROOF ACKNOWLEDGING THAT THEY REVIEWED AND UNDERSTAND THE CONDITIONS AND RESPONSIBILITIES OF THE SWPPP.
2) A GRADING AND STABILIZATION LOG DOCUMENTING THE PROJECTS GRADING AND STABILIZATION ACTIVITIES AND
3) A SWPPP AMENDMENT LOG DOCUMENTING CHANGES/AMENDMENTS TO THE SWPPP, WHICH OCCUR AFTER CONSTRUCTION ACTIVITIES COMMENCE.

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**SEPTEMBER 08, 2026**

### PROJECT DESCRIPTION
THIS PROJECT CONSISTS OF THE CONSTRUCTION OF NEW BUILDINGS, ASSOCIATED DRIVES, AND PARKING FOR THE EETSABARN SITE PLAN, LOCATED ON US-40 WITHIN BETHEL TOWNSHIP, MIAMI COUNTY, OHIO. SITE WORK TO INCLUDE STORM SEWER, SITE GRADING, PAVEMENT WORK AND BUILDING CONSTRUCTION.

### PROJECT WORK CONSTRUCTION DATES
START: OCTOBER 2026
ESTIMATED COMPLETION: JULY 2027

### EROSION CONTROL NOTES
A. INSTALL AND MAINTAIN FILTER FABRIC FENCE AND INLET PROTECTION WHERE SHOWN AND AS NEEDED TO MINIMIZE SEDIMENT LADEN WATER FROM LEAVING THE SITE OR ENTERING ANY STORM SYSTEM, ADJACENT DITCHES, STREAMS ETC. IF STORMWATER RUNOFF CONTAINING SEDIMENTS IS FOUND TO BE LEAVING THE PROJECT SITE IN AN AREA WHERE NO BMP/CONTROL MEASURE IS SHOWN OR IN PLACE, CONTRACTOR SHALL IMMEDIATELY INSTALL THE APPROPRIATE BMP/CONTROL MEASURE AS NEEDED TO REMEDY THE SITUATION (TYP. INLET PROTECTION, FILTER FABRIC FENCE, ETC.).

B. INSTALL INLET PROTECTION ON ALL STORM INLET STRUCTURES (YARD DRAINS, CATCH BASINS, MANHOLES WITH GRATED LIDS, ETC.) AND TO ANY EXISTING STORM STRUCTURES WITHIN THE PROJECT AREA WHICH MAY RECEIVE RUNOFF FROM THE CONSTRUCTION SITE AS NEEDED. INLET PROTECTION MAY CONSIST OF DEVICES SUCH AS SEDCAGE (WWW.SEDCATCH.COM), DANDY BAGS, SEDIGUARD FILTERS, FLEXSTORM INLET FILTERS, SEDIMENT FENCE OR OTHER DEVICES WHICH ARE EFFECTIVE AT MINIMIZING THE AMOUNT OF SEDIMENT ENTERING THE STRUCTURE.

C. CONTRACTOR IS RESPONSIBLE FOR IMMEDIATELY CLEANING UP ANY MUD, DIRT AND DEBRIS WHICH IS TRACKED OR SPILLED ONTO THE ROADWAYS.

D. PRE CONSTRUCTION - CONTRACTOR IS RESPONSIBLE TO INSTALL A CONSTRUCTION ENTRANCE AS NEEDED TO MINIMIZE ANY MUD, DIRT AND DEBRIS TRACKED ONTO THE ROADWAYS.

E. DURING CONSTRUCTION - THE CONTRACTOR MUST MAINTAIN EROSION CONTROL UNTIL AREA IS STABILIZED INCLUDING TEMPORARY SEEDING AS NEEDED. CONTRACTOR SHALL TEMPORARYILY SEED ALL CRITICAL EXPOSED SLOPES TO MINIMIZE SEDIMENT RUNOFF.

F. FINAL/POST CONSTRUCTION - CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. CONTRACTOR SHALL ENSURE GRASS IS PERMANENTLY AND PROPERLY ESTABLISHED IN ALL AREAS WHERE GRASS IS SPECIFIED. ALL SEDIMENT AND EROSION CONTROL STRUCTURES, INCLUDING SEDIMENT FENCE, SHALL REMAIN IN PLACE UNTIL GRASS IS IN PLACE AND SITE IS STABILIZED. ONCE SITE IS STABILIZED AND ALL CONSTRUCTION IS COMPLETE, ALL SEDIMENT FENCE, INLET PROTECTION AND ANY OTHER TEMPORARY BMP'S SHALL BE REMOVED FROM THE SITE.

### BMP NOTES
FOR ALL BMP'S INSTALLED, ENSURE THAT THE PONDING OF WATER BEHIND THE BMP WILL NOT DAMAGE PROPERTY OR POSE A SAFETY THREAT. IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL MEASURE/BMP HAS BEEN USED INAPPROPRIATELY, THE CONTRACTOR MUST REPLACE AND ADJUST THE CONTROL/BMP TO MEET SITE CONDITIONS AS REQUIRED. THE CONTRACTOR SHALL ADJUST THE SWPPP AND ITS CONTROLS/BMPS AND THEIR QUANTITIES TO MEET FIELD CONDITIONS AND THE OHIO EPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION ACTIVITIES GENERAL PERMIT.

### MAINTENANCE NOTE
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE ALL TEMPORARY AND PERMANENT CONTROL PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED IN A FUNCTIONAL CONDITION UNTIL ALL UP-SLOPE AREAS THEY CONTROL ARE PERMANENTLY STABILIZED. THE SWP3 SHALL BE DESIGNED TO MINIMIZE MAINTENANCE REQUIREMENTS. THE APPLICANT SHALL PROVIDE A DESCRIPTION OF MAINTENANCE PROCEDURES NEEDED TO ENSURE THE CONTINUED PERFORMANCE OF CONTROL PRACTICES.

### SWPPP AND INSPECTION AVAILABILITY AND UPDATES NOTE
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE THE IMMEDIATE AVAILABILITY OF THE SWPPP AND INSPECTION REPORTS ON-SITE. THE CONTRACTOR SHALL ALSO BE SOLELY RESPONSIBLE TO PERFORM AND DOCUMENT ALL REQUIRED SWPPP INSPECTIONS AND ALL UPDATES AND AMENDMENTS TO THE SWPPP.

### DOCUMENTATION AND GOVERNMENT INSPECTION NOTE
CONTRACTOR(S) SHALL PROVIDE THE OWNER'S REPRESENTATIVE A WRITTEN COPY OF THEIR CO-PERMITTEE APPLICATION AND ANY OTHER DOCUMENTATION THE CONTRACTOR(S) MAY SEND OR RECEIVE FROM THE OEPA OR ANY OTHER GOVERNING AUTHORITIES.

IF AN INSPECTOR OR REPRESENTATIVE FROM THE OEPA OR ANY OTHER GOVERNING AUTHORITY IS ON-SITE, THE CONTRACTOR SHALL IMMEDIATELY CONTACT AND NOTIFY THE OWNER'S REPRESENTATIVE.

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EETSABARN SITE PLAN- SWPPP

REVISIONS:

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|---|---|
| FILE NAME | SWPPP COVER |
| DRAWN BY | DMR |
| CHECKED BY | JSP |
| PROJECT No. | MIA-BET-2601 |
| SHEET NUMBER | 13 OF 18 |

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## IMPLEMENTATION SCHEDULE (EROSION CONSTRUCTION SEQUENCE)

THE CONTRACTOR OR ITS APPOINTED REPRESENTATIVES WILL ASSUME RESPONSIBILITY FOR INSTALLATION, INSPECTION AND MAINTENANCE OF ALL SOIL EROSION CONTROL MEASURES DURING CONSTRUCTION. THE INSTALLATION OF THE SOIL EROSION CONTROL MEASURES WILL BE COMPLETED, AS FOLLOWS:

A. PRIOR TO ANY GRADING OR EARTHWORK:
A-1. SILT FENCE AND INLET PROTECTION (ON CV. STORM STRUCTURES) TO BE INSTALLED AS SHOWN ON SWPPP
A-2. INSTALL CONSTRUCTION ENTRANCE(S) IF NEEDED AS SHOWN ON SWPPP. INSTALLATION OF ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES, E.G. ROCK CHECK DAMS, DIVERSIONS, SEDIMENT BASIN, ETC.
B. PERFORM ROUGH GRADING, INSTALL UTILITIES, BUILDINGS, PAVEMENT
B-1. CLEAN AND GRUB AREA AS NEEDED
D-2. PERFORM SITE GRADING, INSTALL BUILDINGS
B-3. INSTALL SANITARY, STORM, WATER LINES. OTHER UTILITIES, GRAVEL BASE, AND CURB AND GUTTER, AS PER PLANS. INSTALL INLET PROTECTION ON ALL PROPOSED STORM INLET STRUCTURES AS INDICATED ON THE PLANS AS SOON AS THEY ARE INSTALLED.
B-4 PERFORM TEMPORARY SEEDING AS NEEDED ON ANY DISTURBED AREAS PER THE TIME REQUIREMENTS FOR TEMPORARY SEEDING SPECIFIED ON THIS DRAWING.
B-5 INSTALL PAVEMENT.
C. PERFORM FINAL GRADING
C-1. PLACE TOPSOIL AND PERFORM FINAL RAKING AND GRADING ON ALL DISTURBED AREAS.
C-2. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED (SEEDED AND/OR MULCHED).
D-3. CLEAN UP SITE, AND ONCE SITE HAS REACHED FINAL STABILIZATION REMOVE ALL TEMPORARY BMPS.
NOTES: A) CARE WILL BE TAKEN NOT TO DISTURB ANY EXISTING NATURAL VEGETATION NOT INVOLVED IN THE CONSTRUCTION PROCESS, WHENEVER POSSIBLE. B) TIMELY INSPECTIONS OF THE EROSION CONTROL MEASURES WILL BE MADE, BY THE CONTRACTOR, EVERY 7 DAYS, AND/OR AFTER ANY RAINFALL OF AT LEAST 1/2" IN A 24-HOUR PERIOD. REPORTS MUST BE KEPT ON-SITE AND SUPPLIED TO THE GOVERNING AUTHORITY IF REQUESTED.

## INSPECTION SCHEDULE

A. THE SITE WILL BE INSPECTED PER OHIO EPA PERMIT NO. OHC000005

PART III.D.2.7
INSPECTIONS. THE PERMITTEE SHALL ASSIGN QUALIFIED INSPECTION PERSONNEL TO CONDUCT INSPECTIONS TO ENSURE THAT THE CONTROL PRACTICES ARE FUNCTIONAL AND TO EVALUATE WHETHER THE SWP3 IS ADEQUATE AND PROPERLY IMPLEMENTED IN ACCORDANCE WITH THE SCHEDULE PROPOSED IN PART III.D.2.6 OF THE OHC000005 PERMIT OR WHETHER ADDITIONAL CONTROL MEASURES ARE REQUIRED. AT A MINIMUM, PROCEDURES IN A SWP3 SHALL PROVIDE THAT ALL CONTROLS ON THE SITE ARE INSPECTED:
* AFTER ANY STORM EVENT GREATER THAN ONE-HALF INCH OF RAIN PER 24-HOUR PERIOD BY THE END OF THE NEXT CALENDAR DAY, EXCLUDING WEEKENDS AND HOLIDAYS UNLESS WORK IS SCHEDULED, AND
* ONCE EVERY SEVEN CALENDAR DAYS.

THE INSPECTION FREQUENCY MAY BE REDUCED TO AT LEAST ONCE EVERY MONTH FOR DORMANT SITES IF:
* THE ENTIRE SITE IS TEMPORARILY STABILIZED OR
* RUNOFF IS UNLIKELY DUE TO WEATHER CONDITIONS FOR EXTENDED PERIODS OF TIME (E.G. SITE IS COVERED WITH SNOW, ICE, OR THE GROUND IS FROZEN).

THE BEGINNING AND ENDING DATES OF ANY REDUCED INSPECTION FREQUENCY SHALL BE DOCUMENTED IN THE SWP3. ONCE A DEFINABLE AREA HAS ACHIEVED FINAL STABILIZATION, THE AREA MAY BE REMOVED ON THE SWP3 AND NO FURTHER INSPECTION REQUIREMENTS SHALL APPLY TO THAT PORTION OF THE SITE.

FOLLOWING EACH INSPECTION, A CHECKLIST MUST BE COMPLETED AND SIGNED BY THE QUALIFIED INSPECTION PERSONNEL REPRESENTATIVE, AT A MINIMUM, THE INSPECTION REPORT SHALL INCLUDE:
i. THE INSPECTION DATE;
ii. NAMES, TITLES, AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION;
iii. WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION (OR SINCE COMMENCEMENT OF CONSTRUCTION ACTIVITY IF THE FIRST INSPECTION) INCLUDING A BEST ESTIMATE OF THE BEGINNING OF EACH STORM EVENT, DURATION OF EACH STORM EVENT, APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT (IN INCHES), AND WHETHER ANY DISCHARGES OCCURRED;
iv. WEATHER INFORMATION AND A DESCRIPTION OF ANY DISCHARGES OCCURRING AT THE TIME OF THE INSPECTION;
v. LOCATIONS OF DISCHARGES OF SEDIMENT FROM OTHER AREAS OF THE SITE;
vi. LOCATIONS OF BMPS THAT NEED TO BE MAINTAINED;
vii. LOCATIONS OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION;
viii. LOCATIONS WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION; AND
ix. CORRECTIVE ACTION OBTAINED INCLUDING ANY CHANGES TO THE SWP3 NECESSARY AND IMPLEMENTATION DATES.

DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF OR THE POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE SWP3 SHALL BE OBSERVED TO ENSURE THAT THOSE ARE OPERATING CORRECTLY. DISCHARGE LOCATIONS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE VEHICLE TRACKING.

THE PERMITTEE SHALL MAINTAIN FOR THREE YEARS FOLLOWING THE SUBMITTAL OF A NOTICE OF TERMINATION FORM, A RECORD SUMMARIZING THE RESULTS OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE SWP3 AND A CERTIFICATION AS TO WHETHER THE FACILITY IS IN COMPLIANCE WITH THE SWP3 AND THE PERMIT AND IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE. THE RECORD AND CERTIFICATION SHALL BE SIGNED IN ACCORDANCE WITH PART V.G. OF THIS PERMIT.

i. WHEN PRACTICES REQUIRE REPAIR OR MAINTENANCE, IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE IS IN NEED OF REPAIR OR MAINTENANCE, WITH THE EXCEPTION OF A SEDIMENT SETTLING POND, IT SHALL BE REPAIRED OR MAINTAINED WITHIN 3 DAYS OF THE INSPECTION. SEDIMENT SETTLING PONDS SHALL BE REPAIRED OR MAINTAINED WITHIN 10 DAYS OF THE INSPECTION.

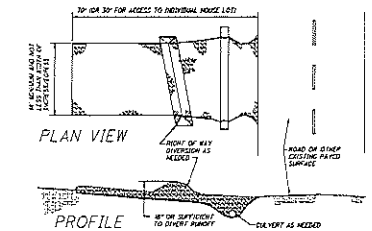
ii. WHEN PRACTICES FAIL TO PROVIDE THEIR INTENDED FUNCTION, IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE FAILS TO PERFORM ITS INTENDED FUNCTION AND THAT ANOTHER, MORE APPROPRIATE CONTROL PRACTICE IS REQUIRED, THE SWP3 SHALL BE AMENDED AND THE NEW CONTROL PRACTICE SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.

iii. WHEN PRACTICES DEPICTED ON THE SWP3 ARE NOT INSTALLED, IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE HAS NOT BEEN IMPLEMENTED IN ACCORDANCE WITH THE SCHEDULE CONTAINED IN PART III.D.2.6 OF THIS PERMIT, THE CONTROL PRACTICE SHALL BE IMPLEMENTED WITHIN 10 DAYS FROM THE DATE OF THE INSPECTION. IF THE INSPECTION REVEALS THAT THE PLANNED CONTROL PRACTICE IS NOT NEEDED, THE RECORD SHALL CONTAIN A STATEMENT OF EXPLANATION AS TO WHY THE CONTROL PRACTICE IS NOT NEEDED.

B. VEGETATIVE PLANTINGS - SEVERE CUTTINGS WILL BE CLEANED DURING MOWER OR EVERY FALL.
C. REPAIRS - ANY EROSION CONTROL MEASURES, STRUCTURAL MEASURES, OR OTHER RELATED ITEMS IN NEED OF REPAIR WILL BE MADE WITHIN 7 DAYS.
D. MOWING - DRAINAGE WAYS, DITCHES, AND OTHER AREAS THAT SUPPORT A DESIGNED FLOW OF WATER WILL BE MOWED REGULARLY TO MAINTAIN THAT FLOW.
E. FERTILIZATION - SEEDED AREAS WHERE THE SEED HAS NOT PRODUCED A GOOD COVER WILL BE INSPECTED AND FERTILIZED AS NECESSARY.

## CONSTRUCTION ENTRANCE

A. STONE SIZE - 2" STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
B. LENGTH - THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS, BUT NOT LESS THAN 50' EXCEPT ON SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES.
C. THICKNESS - THE STONE LAYER SHALL BE AT LEAST 6" THICK.
D. WIDTH - THE ENTRANCE SHALL BE AT LEAST 10' WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
E. BEDDING - A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF AT LEAST 200 LBS, AND A MULLEN BURST STRENGTH OF AT LEAST 190 LBS.
F. USE OF A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE, IF NEEDED, TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE FROM BEING DIRECTED OUT ONTO PAVED SURFACES OF DRIVE IS PLACED ACROSS A DITCH.
G. WATER BAR - A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE, IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES OF DRIVE IS PLACED ON A SLOPE.
H. MAINTENANCE - TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND, MUD SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
I. CONSTRUCTION ENTRANCE SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFFSITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
J. CONSTRUCTION ENTRANCES ARE INSTALLED TO MINIMIZE OFFSITE TRACKING OF SEDIMENTS. A STONE ACCESS DRIVE SHOULD BE INSTALLED AT EVERY POINT WHERE VEHICLES ENTER OR EXIT THE SITE. EVERY INDIVIDUAL LOT SHOULD ALSO HAVE ITS OWN DRIVE ONCE CONSTRUCTION ON THE LOT BEGINS.
NOTE - ALTERNATIVE STABILIZATION METHODS FOR CONSTRUCTION ENTRANCE(S)(EXIT SUCH AS MANUFACTURED STEEL PLATES, OHIO PLATES, ETC. OR STEEL PIPES-SPATIONS WILL ALSO BE CONSIDERED BUT WILL REQUIRE PRIOTEN APPROVAL FROM THE OWNER PRIOR TO THE USE OF SUCH ALTERNATIVE METHODS AS ON-SITE CONSTRUCTION ENTRANCES/EXIT. ANY PROPOSED ALTERNATIVE METHODS SHALL BE SHOWN TO EFFECTIVELY REMOVE MUD AND DEBRIS FROM VEHICLE WHEELS PRIOR TO ENTERING THE SITE.




CONSTRUCTION ENTRANCE DETAIL

## NON-SEDIMENT POLLUTION CONTROL

A. CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, SHALL BE MADE AWARE OF THE FOLLOWING GENERAL GUIDELINES:

DISPOSAL AND HANDLING OF HAZARDOUS AND OTHER CONSTRUCTION WASTE

DO:
* PREVENT SPILLS
* USE PRODUCTS UP
* FOLLOW LABEL DIRECTIONS FOR DISPOSAL
* REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH
* RECYCLE WASTE WHENEVER POSSIBLE

DON'T
* DON'T POUR INTO WATERWAYS, STORM DRAINS, OR ONTO THE GROUND
* DON'T POUR DOWN THE SINK, FLOOR DRAIN, OR SEPTIC TANKS
* DON'T BURY CHEMICALS OR CONTAINERS
* DON'T BURN CHEMICALS OR CONTAINERS
* DON'T MIX CHEMICALS TOGETHER

B. CONTAINERS SHALL BE PROVIDED FOR COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM, AND ANY HAZARDOUS MATERIALS TO BE USED ON SITE. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL.

C. NO WASTE MATERIALS SHALL BE BURIED ON SITE. SITE PERSONNEL, INCLUDING SUBCONTRACTORS, SHALL BE NOTIFIED THAT NO CONSTRUCTION-RELATED MATERIALS ARE TO BE BURIED ON SITE.

D. MIXING, PUMPING, TRANSFERRING, OR OTHERWISE HANDLING CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE CURING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH, OR STORM DRAIN.

E. EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES, OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS.

F. CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE. A SUMP OR PIT SHALL BE CONSTRUCTED IF NEEDED TO CONTAIN CONCRETE WASH WATER.

G. IF HAZARDOUS SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL. SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST OR KITTY LITTER AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS WASTE SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. CONTACT OHIO EPA (1-800-282-9378).

H. SPILLS OF 25 GAL. OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO OHIO EPA (1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MIN. OF THE DISCOVERY OF THE RELEASE.

I. STREETS NEED TO BE SWEPT AS OFTEN AS NECESSARY TO KEEP THEM CLEAN AND FREE FROM SEDIMENT. SEDIMENT TO BE SWEPT BACK ONTO THE LOT - NOT DOWN THE STORM SEWER.

J. STOCKPILES OF SOIL AND OTHER MATERIALS SHALL BE STORED AWAY FROM WATERCOURSES, DITCHES, OR STORM DRAINS, AND SHALL HAVE EROSION CONTROL MATERIALS PLACED AROUND THEM.

K. ALL STREAM CROSSINGS SHALL BE CONSTRUCTED ENTIRELY OF NON-ERODIBLE MATERIAL.

## PROCESS WASTEWATER/LEACHATE MANAGEMENT NOTE

ALL PROCESS WASTEWATERS (e.g., EQUIPMENT WASHING), LEACHATE ASSOCIATED WITH ON-SITE WASTE DISPOSAL, AND CONCRETE WASH-OUT(S) MUST BE COLLECTED AND DISPOSED OF PROPERLY (e.g. TO A PUBLICLY-OWNED TREATMENT WORKS). THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT ONLY AUTHORIZES THE DISCHARGE OF STORM WATER AND FLOCCULATION UNCONTAMINATED NON-STORM WATERS. THE DISCHARGE OF NON-STORM WATERS TO WATERS OF THE STATE MAY BE IN VIOLATION OF LOCAL, STATE, AND FEDERAL LAWS OR REGULATIONS.

## HANDLING OF TOXIC OR HAZARDOUS MATERIALS NOTE

NO SOLID, SANITARY, OR TOXIC WASTE IS TO BE DISPOSED OF ON THE PROJECT SITE. RECYCLING OF USED OR UNUSED HAZARDOUS MATERIALS SHALL NOT OCCUR ON SITE EITHER. AREAS DESIGNATED FOR CEMENT TRUCK WASHOUTS, AND VEHICLE FUELING SHALL NOT TAKE PLACE ON PARKING LOT BASE.

## CONSTRUCTION CHEMICAL COMPOUNDS NOTE

NO MIXING OR STORAGE OF CHEMICAL COMPOUNDS SUCH AS FERTILIZERS, LIME, ASPHALT, OR CONCRETE ARE PERMITTED TO TAKE PLACE ON-SITE. ALL MIXING SHALL TAKE PLACE BEFORE ENTERING THE SITE.

## CONSTRUCTION & DEMOLITION DEBRIS NOTE

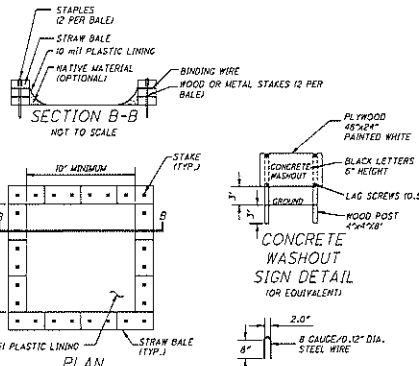
ALL CONSTRUCTION AND DEMOLITION DEBRIS (CDD) WASTE SHALL BE DISPOSED OF IN AN OHIO EPA APPROVED CDD LANDFILL AS REQUIRED BY OHIO REVISED CODE (ORC) 3714. MATERIALS WHICH CONTAIN ASBESTOS MUST COMPLY WITH AIR POLLUTION REGULATIONS (SEE OHIO ADMINISTRATIVE CODE 3745-20).

## CONTAMINATED SOILS NOTE

SOILS CONTAMINATED BY METHODLOW OR OTHER CHEMICAL SPILLS SHALL BE HANDLED AND DISPOSED OF PROPERLY. ALL CONTAMINATED SOILS MUST BE TREATED AND/OR DISPOSED OF IN AN OHIO EPA APPROVED SOLID WASTE MANAGEMENT FACILITY OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITY (TSDF). IF CONTAMINATION HAPPENS TO OCCUR, TARPS ARE TO BE USED TO PREVENT STORM WATER FROM COMING INTO CONTACT WITH THE MATERIAL.

## CONCRETE WASHOUT NOTE

CONCRETE WASHOUT OPERATIONS SHALL TAKE PLACE WITHIN THE PROPOSED PROJECT AREA UTILIZING THE CONTRACTOR'S PORTABLE CONCRETE WASHOUT CONTAINER OR WITHIN A BERMED/CONTAINED AREA. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE WASHOUT MATERIAL DOES NOT LEAVE THE WASHOUT AREA OR ENTER THE STORM SYSTEM. CONTRACTOR SHALL CLEAN UP AND PROPERLY DISPOSE OF ALL LEFTOVER WASHOUT MATERIAL.




CONCRETE WASHOUT DETAIL

## DUST CONTROL

DUST CONTROL SHALL BE PROVIDED AS NEEDED TO PREVENT SEDIMENT FROM BECOMING AIRBORNE. MEASURES SHALL INCLUDE WATERING VIA A WATER TRUCK OR OTHER WATERING DEVICE AS NEEDED TO REDUCE AND/OR ELIMINATE AIRBORNE DUST CREATED BY CONSTRUCTION AND CONSTRUCTION RELATED ACTIVITIES.

## CONSTRUCTION OF A FILTER BARRIER (SILT FENCE)

A. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.

B. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.

C. TO PREVENT WATER PONDED BY THE SILT FENCE FROM FLOWING AROUND THE ENDS, EACH END SHALL BE CONSTRUCTED UPSLOPE SO THAT THE ENDS ARE AT A HIGHER ELEVATION.

D. WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.

E. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5' (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.

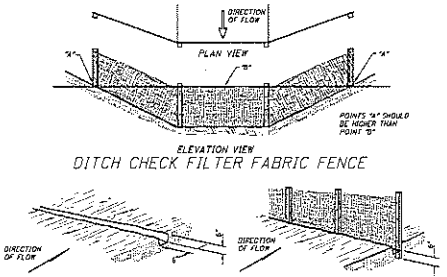
F. THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF X" ABOVE THE ORIGINAL GROUND SURFACE.

G. THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MINIMUM OF 8" DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.

H. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8" OF CLOTH IS BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 8" DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.

I. SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.

J. MAINTENANCE - SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. ALL THE GAPS AND YEARS IN THE FENCE MUST BE ELIMINATED AND REPAIRED. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IF ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED.




FILTER FABRIC FENCE DETAIL

## CRITERIA FOR SILT FENCE MATERIAL

A. FENCE POSTS - THE LENGTH SHALL BE A MINIMUM OF 48" LONG. WOOD POSTS WILL BE 2"x2"-0" HARDWOOD OF SOUND QUALITY. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 5'. POSTS/SUPPORT STAKES SHALL BE DRIVEN A MINIMUM OF 18" INTO THE GROUND.

B. SILT FENCE FABRIC SHALL CONFORM TO THE AASHTO SILT FENCE SPECIFICATION 1004 AND SHALL HAVE A MINIMUM 100# GRAB TENSILE. SILT FENCE SHALL ALSO CONFORM TO THE MOST RECENT ODOT STANDARD FOR SEDIMENT/SILT FENCE (TABLE 712.09-1)

C. SILT FENCE SHALL BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

## PERMANENT STABILIZATION

ALL AREAS AT FINAL GRADE MUST BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF REACHING FINAL GRADE. THIS IS USUALLY ACCOMPLISHED BY USING SEED AND MULCH, BUT SPECIAL MEASURES ARE SOMETIMES REQUIRED. THIS IS PARTICULARLY TRUE IN DRAINAGE DITCHES/SWALES, LOW AREAS, DETENTION POND BOTTOMS AND SIDES OR ON STEEP SLOPES. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, THE INSTALLATION OF EROSION CONTROL BLANKETS AND/OR MATTING, ADDITION OF TOPSOIL, OR ROCK RIP-RAP. CONTRACTOR SHALL UTILIZE THESE AND ANY OTHER SPECIAL MEASURES AS NEEDED TO PERMANENTLY STABILIZE THE SITE. PERMANENT SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 AND AUGUST 1 TO SEPTEMBER 30. DORMANT SEEDING CAN BE DONE FROM NOVEMBER 20 TO MARCH 15. AT ALL OTHER TIMES OF THE YEAR, THE AREA SHOULD BE TEMPORARILY STABILIZED UNTIL A PERMANENT SEEDING CAN BE APPLIED.

| AREA REQUIRING PERMANENT STABILIZATION | TIME FRAME TO APPLY EROSION CONTROLS |
|---|---|
| ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE. | WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE. |
| ANY AREAS WITHIN 50' OF A SURFACE WATER OF THE STATE (STREAM, WATERWAY, WATER BODY, ETC.) AND AT FINAL GRADE | WITHIN 2 DAYS OF REACHING FINAL GRADE |
| ANY OTHER AREAS AT FINAL GRADE. | WITHIN 7 DAYS OF REACHING FINAL GRADE WITHIN THAT AREA. |

## SOILS EXPOSED NOTE

CONTRACTOR SHALL PLAN AND IMPLEMENT CONSTRUCTION AND GRADING ACTIVITIES TO MINIMIZE THE AMOUNT OF SOIL EXPOSED DURING CONSTRUCTION ACTIVITIES.

| TEMPORARY SEEDING SPECIES SELECTION | | | |
|---|---|---|---|
| SEEDING DATES | SPECIES | LB./1000 SQ. FT. | PER ACRE |
| MARCH 1 TO AUGUST 15 | OATS | 3 | 4 BUSHELS |
| | TALL FESCUE | 1 | 40 LBS. |
| | ANNUAL RYEGRASS | 1 | 40 LBS. |
| | PERENNIAL RYEGRASS | 1 | 40 LBS. |
| | TALL FESCUE | 1 | 40 LBS. |
| | ANNUAL RYEGRASS | 1 | 40 LBS. |
| AUGUST 16 TO NOVEMBER 1 | RYE | 3 | 3 BUSHELS |
| | TALL FESCUE | 1 | 40 LBS. |
| | ANNUAL RYEGRASS | 1 | 40 LBS. |
| | WHEAT | 1 | 2 BUSHELS |
| | TALL FESCUE | 1 | 40 LBS. |
| | ANNUAL RYEGRASS | 1 | 40 LBS. |
| | PERENNIAL RYEGRASS | 1 | 40 LBS. |
| | TALL FESCUE | 1 | 40 LBS. |
| | ANNUAL RYEGRASS | 1 | 40 LBS. |
| NOVEMBER 1 TO SPRING SEEDING | USE MULCH ONLY, SODDING PRACTICES OR DORMANT SEEDING | | |

NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.

## SPECIFICATIONS FOR TEMPORARY SEEDING

A. TO MINIMIZE COSTS OF TEMPORARY STABILIZATION, LEAVE NATURAL COVER IN PLACE FOR AS LONG AS POSSIBLE. ONLY DISTURB AREAS YOU INTEND TO WORK WITHIN THE NEXT 14 DAYS.

B. STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE.

C. THE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. HOWEVER, TEMPORARY SEEDING SHALL NOT BE POSTPONED IF IDEAL SEEDBED PREPARATION IS NOT POSSIBLE.

D. SOIL AMENDMENTS - APPLICATIONS OF TEMPORARY VEGETATION SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION WHICH MAY REQUIRE THE USE OF SOIL AMENDMENTS. SOIL TESTS SHOULD BE TAKEN ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.

E. SEEDING METHOD - SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY PLACED USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

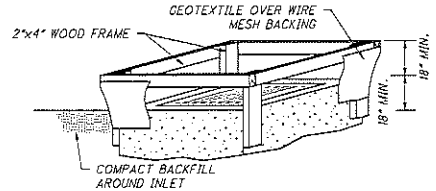
## MULCHING TEMPORARY SEEDING

A. APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES AND WITH FAVORABLE SOIL CONDITIONS AND ON VERY FLAT AREAS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION.

B. MATERIALS:
- STRAW - IF STRAW IS USED, IT SHALL BE UNROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 2 TONS/ACRE OR 90 LBS./1,000 SQ. FT. (TWO TO THREE BALES). THE MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQ. FT. SECTIONS AND SPREAD TWO 45 LBS. BALES OF STRAW IN EACH SECTION.
- HYDROSEEDERS - IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2,000 LB/AC. OR 46 LBS./1,000 SQ. FT.
- OTHER - OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TONS/AC.
- STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER. ANCHORING METHODS:
  - MECHANICAL - A DISK, CRIMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNC

## INLET PROTECTION FOR STORM STRUCTURES W/ GRATE

INLET PROTECTION MAY CONSIST OF SEDIMENT FENCE AND/OR DEVICES SUCH AS FLEX STORM INLET FILTERS, SEDCAGE (WWW.SEDCATCH.COM), DANDY BAGS, SEDIGUARD FILTERS, OR OTHER DEVICES (ALTERNATE PRODUCTS WHOSE PERFORMANCE IS EQUAL TO OR EXCEEDS THOSE LISTED) WHICH ARE EFFECTIVE AT MINIMIZING THE AMOUNT OF SEDIMENT ENTERING THE STRUCTURE . INSTALL INLET PROTECTION ON ALL PROPOSED YARD DRAINS, CATCH BASINS AND MANHOLES WITH GRATED LIDS AND TO ALL EXISTING STORM STRUCTURES WITH GRATED LIDS WITHIN THE PROJECT AREA WHICH MAY RECEIVE RUNOFF FROM THE CONSTRUCTION SITE.




NOTES

A. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.

B. THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH OF AT LEAST 18".

C. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2" BY 4" CONSTRUCTION GRADE LUMBER. THE 2" BY 4" POST SHALL BE DRIVEN 1' INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2" BY 4" FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6" BELOW ADJACENT ROAD, IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.

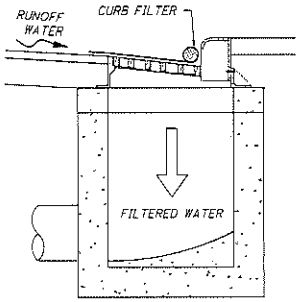
D. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.

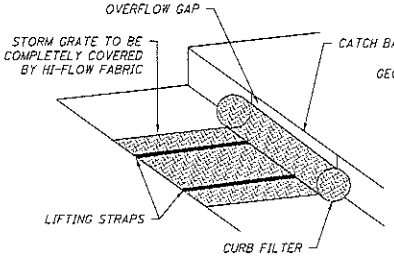
E. GEOTEXTILE SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18" BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAY ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.

F. BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6" LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.

G. A COMPACTED EARTH DIKE OR A CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION, AND IF RUNOFF BY PASSING THE INLET WILL NOT FLOW TO A SETTING POND, THE TOP OF EARTH DIKES SHALL BE AT LEAST 6" HIGHER THAN THE TOP OF THE FRAME.

## INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS




NOTES

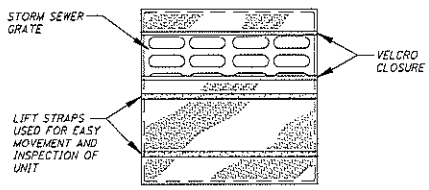
A. DANDY CURB BAG, SEDIGUARDS, OR ALTERNATE PRODUCT WHOSE PERFORMANCE IS EQUAL TO OR EXCEEDS THOSE LISTED MAY BE USED.

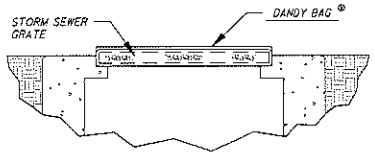
B. REMOVE SEDIMENT FROM CURB INLET PROTECTION BEFORE IT HINDERS THE FILTERING CAPACITY.
- DANDY CURB BAG: LIFT GRATE AND REMOVE DANDY BAG, CLEAN ACCUMULATED SEDIMENT AND REPLACE BAG AS REQUIRED BY MANUFACTURER.
- SEDIGUARD: CLEAN SEDIGUARD ONCE IT IS DRY WITH A STIFF BROOM AFTER EVERY RAIN.
- ALTERNATE PRODUCTS: CLEAN AS REQUIRED PER MANUFACTURER'S RECCOMENDATIONS

C. INLET PROTECTION SHOULD NEVER INTERFERE WITH SAFETY OF ACTIVE TRAFFIC.

**CURB INLET SEDIMENT FILTER DETAIL**

DANDY BAG®




**DETAIL OF INLET SEDIMENT CONTROL DEVICE**

DANDY BAG® SPECIFICATIONS

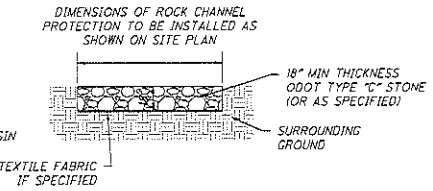
NOTE: THE DANDY BAG® WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

HI-FLOW DANDY BAG® (SAFETY ORANGE)

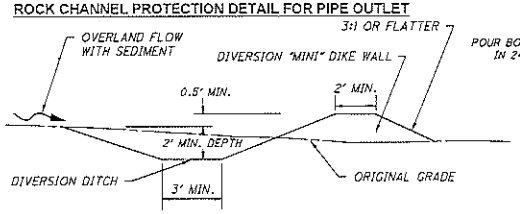
| Mechanical Properties | Test Method | Units | MARV |
|---|---|---|---|
| Grab Tensile Strength | ASTM D 4632 | kN (lbs) | 1.62 (365) X 0.88 (200) |
| Grab Tensile Elongation | ASTM D 4632 | % | 24 X 10 |
| Puncture Strength | ASTM D 4833 | kN (lbs) | 0.40 (90) |
| Mullen Burst Strength | ASTM D 3786 | kPa (psi) | 3097 (450) |
| Trapezoid Tear Strength | ASTM D 4533 | kN (lbs) | 0.51 (115) X 0.33 (75) |
| UV Resistance | ASTM D 4355 | % | 90 |
| Apparent Opening Size | ASTM D 4751 | Mm (US Std Sieve) | 0.425 (40) |
| Flow Rate | ASTM D 4491 | L/min/m²(gal/min/ft²) | 3907 (96) |
| Permittivity | ASTM D 4491 | Sec⁻¹ | 2.1 |

*Note: All Dandy Bags® can be ordered with optional oil absorbant pillows

**INLET PROTECTION - DANDY BAG**




**ROCK CHANNEL PROTECTION DETAIL FOR PIPE OUTLET**

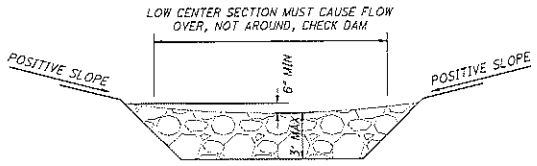



NOTES

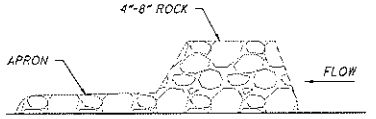
A. BERM CAN BE CONSTRUCTED AS DITCH OR DIKE WALL

B. PLACE DITCH ON A GRADE TO DRAIN TO SEDIMENT BASIN.

**CROSS SECTION OF A DIVERSION BERM**




**CROSS SECTION**




**PROFILE**

NOTES

A. THE CHECK DAM SHALL BE CONSTRUCTED OF 4-6 INCH DIAMETER STONE, PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL. ODOT TYPE D STONE IS ACCEPTABLE, BUT SHOULD BE UNDERLAIN WITH A GRAVEL FILTER CONSISTING OF ODOT No. 3 OR 4 OR SUITABLE FILTER FABRIC.

B. MAXIMUM HEIGHT OF CHECK DAM SHALL NOT EXCEED 3.0 FEET.

C. THE MIDPOINT OF THE ROCK CHECK DAM SHALL BE A MINIMUM OF 6 INCHES LOWER THAN THE SIDES IN ORDER TO DIRECT ACROSS THE CENTER AND AWAY FROM THE CHANNEL SIDES.

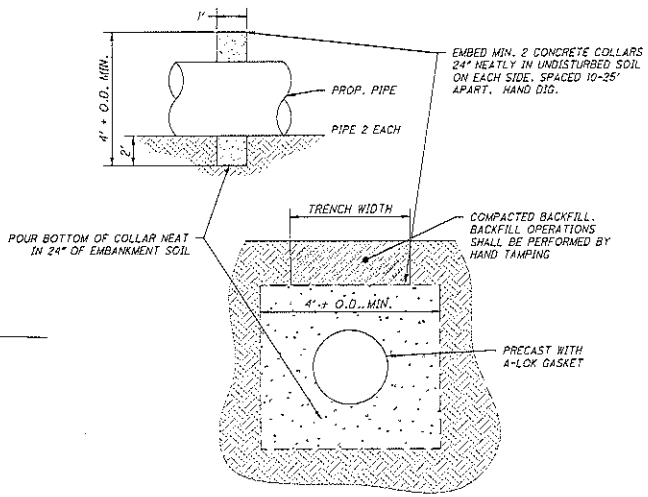
D. THE BASE OF THE CHECK DAM SHALL BE ENTRENCHED APPROXIMATELY 6 INCHES.

E. A STONE APRON SHALL BE CONSTRUCTED IMMEDIATELY DOWNSTREAM OF THE CHECK DAM TO PREVENT FLOWS FROM UNDERCUTTING THE STRUCTURE. THE APRON SHOULD BE 6 INCHES THICK AND ITS LENGTH TWO TIMES THE HEIGHT OF THE DAM.

F. STONE PLACEMENT SHALL BE PERFORMED EITHER BY HAND OR MECHANICALLY AS LONG AS THE CENTER OF CHECK DAM IS LOWER THAN THE SIDES AND EXTENDS ACROSS ENTIRE CHANNEL.

G. SIDE SLOPES SHALL BE A MINIMUM OF 2:1.

**DITCH ROCK CHECK DAM**




ANTI-SEEP COLLAR

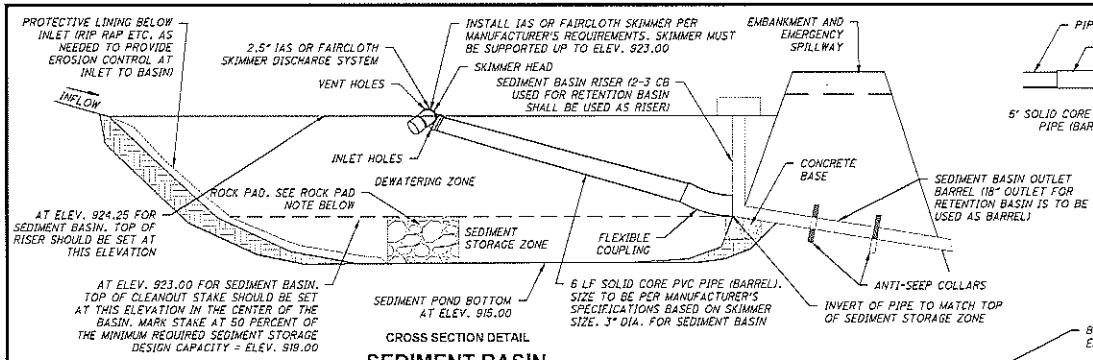

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EETSABARN SITE PLAN
BETHEL TOWNSHIP
SWPPP - EROSION CONTROL NOTES AND DETAILS

REVISIONS:

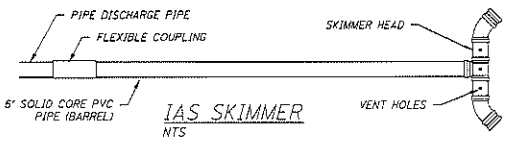
FILE NAME: SWPPP NOTES 2
DRAWN BY: DMP
CHECKED BY: JSP
PROJECT No.: MIA-BET-2601
DATE: 09-08-2026
SHEET NUMBER: 15 OF 18


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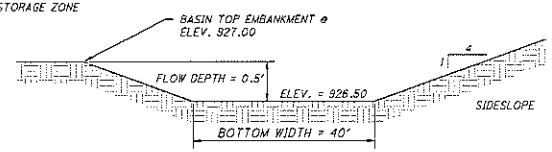



CROSS SECTION DETAIL

## SEDIMENT BASIN

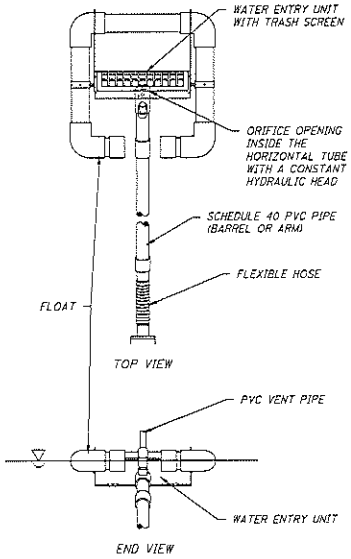



IAS SKIMMER
NTS




CROSS SECTION

EMERGENCY SPILLWAY
NTS




FAIRCLOTH SKIMMER
NTS

### NOTES

A. SEDIMENT BASINS SHALL BE CONSTRUCTED AND OPERATIONAL BEFORE UPSLOPE LAND DISTURBANCE BEGINS.

B. SITE PREPARATION -THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED AS NEEDED TO FACILITATE SEDIMENT CLEANOUT. GULLIES AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. THE SURFACE OF THE FOUNDATION AREA WILL BE THOROUGHLY SCARIFIED BEFORE PLACEMENT OF THE EMBANKMENT MATERIAL.

C. EMBANKMENT -THE FILL MATERIAL SHALL BE FREE OF ALL SOD, ROOTS, FROZEN SOIL, STONES OVER 6 IN. IN DIAMETER, AND OTHER OBJECTIONABLE MATERIAL. THE PLACING AND SPREADING OF THE FILL MATERIAL SHALL BE STARTED AT THE LOWEST POINT OF THE FOUNDATION AND THE FILL SHALL BE BROUGHT UP IN APPROXIMATELY 6 IN. HORIZONTAL LAYERS OR OF SUCH THICKNESS THAT THE REQUIRED COMPACTION CAN BE OBTAINED WITH THE EQUIPMENT USED. CONSTRUCTION EQUIPMENT SHALL BE OPERATED OVER EACH LAYER IN A WAY THAT WILL RESULT IN THE REQUIRED COMPACTION. SPECIAL EQUIPMENT SHALL BE USED WHEN THE REQUIRED COMPACTION CANNOT BE OBTAINED WITHOUT IT. THE MOISTURE CONTENT OF FILL MATERIAL SHALL BE SUCH THAT THE REQUIRED DEGREE OF COMPACTION CAN BE OBTAINED WITH THE EQUIPMENT USED. THE EMBANKMENTS OF THE SEDIMENT BASIN AND THE AREAS THAT LIE DOWNSTREAM OF THE POND MUST BE STABILIZED.

D. PIPE SPILLWAY -THE PIPE CONDUIT BARREL SHALL BE PLACED ON A FIRM FOUNDATION TO THE LINES AND GRADES SHOWN ON THE PLANS. CONNECTIONS BETWEEN THE RISER AND BARREL, THE ANTI-SEEP COLLARS AND BARREL AND ALL PIPE JOINTS SHALL BE WATERTIGHT. SELECTED BACKFILL MATERIAL SHALL BE PLACED AROUND THE CONDUIT IN LAYERS AND EACH LAYER SHALL BE COMPACTED TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. ALL COMPACTION WITHIN 2 FT. OF THE PIPE SPILLWAY WILL BE ACCOMPLISHED WITH HAND-OPERATED TAMPING EQUIPMENT.

E. RISER PIPE BASE -THE RISER PIPE SHALL BE SET A MINIMUM OF 6 IN. IN THE CONCRETE BASE.

F. TRASH RACKS -THE TOP OF THE RISER SHALL BE FITTED WITH TRASH RACKS FIRMLY FASTENED TO THE RISER PIPE.

G. SEED AND MULCH -THE SEDIMENT BASIN SHALL BE STABILIZED IMMEDIATELY FOLLOWING ITS CONSTRUCTION. IN NO CASE SHALL THE EMBANKMENT OR EMERGENCY SPILLWAY REMAIN BARE FOR MORE THAN 7 DAYS.

H. SEDIMENT CLEANOUT - ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT STORAGE ZONE ONCE IT EXCEEDS 50 PERCENT OF THE MINIMUM REQUIRED SEDIMENT STORAGE DESIGN CAPACITY AND PRIOR TO THE CONVERSION TO THE POST-CONSTRUCTION PRACTICE UNLESS SUITABLE STORAGE IS DEMONSTRATED BASED UPON OVER-DESIGN. THIS ELEVATION SHALL BE MARKED ON A CLEANOUT STAKE NEAR THE CENTER OF THE BASIN. SEDIMENT REMOVED FROM THE BASIN SHALL BE PLACED SO THAT IT WILL NOT ERODE.

I. FINAL REMOVAL - SEDIMENT BASINS SHALL BE REMOVED AFTER THE UPSTREAM DRAINAGE AREA IS STABILIZED OR AS INDICATED IN THE PLANS. DEWATERING AND REMOVAL SHALL NOT CAUSE SEDIMENT TO BE DISCHARGED. THE SEDIMENT BASIN SITE AND SEDIMENT REMOVED FROM THE BASIN SHALL BE STABILIZED.

### OPERATIONS AND MAINTENANCE

SEDIMENT BASINS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT.
NECESSARY ACTIVITIES ARE SHOWN AS FOLLOWS:

A. ESTABLISH VEGETATIVE COVER AND FERTILIZE AS NECESSARY TO MAINTAIN A VIGOROUS COVER IN AND AROUND THE SEDIMENT BASIN.

B. REMOVE UNDESIRABLE VEGETATION PERIODICALLY TO PREVENT GROWTH OF TREES AND SHRUBS ON THE EMBANKMENT AND SPILLWAY AREAS.

C. PROMPTLY REPAIR ERODED AREAS. REESTABLISH VEGETATIVE COVER IMMEDIATELY WHERE SCOUR EROSION HAS REMOVED ESTABLISHED SEEDING.

D. PROMPTLY REMOVE ANY BURROWING RODENTS THAT MAY INVADE AREAS OF THE EMBANKMENT.

E. REMOVE TRASH AND DEBRIS THAT MAY BLOCK SPILLWAYS AND ACCUMULATE IN THE POND.

F. CHECK SPILLWAY OUTLETS AND POINTS OF INFLOW TO ENSURE DRAINAGE IS NOT CAUSING EROSION AND THAT OUTLETS ARE NOT CLOGGED. REPLACE DISPLACED RIPRAP IMMEDIATELY.

### ROCK PAD NOTE

IT IS VERY IMPORTANT THAT A ROCK PAD BE CONSTRUCTED TO THE HEIGHT OF THE TOP OF THE SEDIMENT STORAGE ZONE. IF THIS IS NOT DONE OR IF THE PAD IS NOT BUILT TO THE SAME HEIGHT AS THE TOP OF THE SEDIMENT STORAGE ZONE, THE SKIMMER WILL NOT FUNCTION PROPERLY .

WHEN COMPLETE THE IAS FLEXIBLE COUPLING SHOULD BE LYING FLAT ON THE ROCK PAD. THE UNIT WILL BE TOUCHING AT TWO POINTS: THE TOP OF THE BARREL/MIDDLE OF THE SKIMMER HEAD AND THE POINT AT WHICH THE BARREL IS ATTACHED TO THE IAS FLEXIBLE COUPLING. SEE MANUFACTURER'S ASSEMBLY INSTRUCTIONS.

### SEDIMENT BASIN CALCULATIONS

REQUIRED SEDIMENT STORAGE VOLUME = 37 C.Y./ACRE * 8.19 ACRES = 303 C.Y.
TOP OF SEDIMENT STORAGE ZONE ELEVATION = 923.00 (3,121 C.Y.). SET CLEANOUT STAKE AT THIS ELEVATION.
REQUIRED DEWATERING ZONE VOLUME = 67 C.Y./ACRE * 8.19 ACRES = 549 C.Y.
DEWATERING ZONE VOLUME (BETWEEN 923.00 AND 924.25) = 883 C.Y.
TOTAL BASIN VOLUME REQUIRED TO TOP OF DEWATERING ZONE = 303 C.Y. + 549 C.Y. = 852 C.Y.
TOP OF DEWATERING ZONE ELEVATION = 924.25 (4,004 C.Y.)
TOTAL SEDIMENT BASIN VOLUME PROVIDED TO ELEV. 927.00 = 6,399 C.Y.
RISER AND BARREL: PROPOSED 18" RETENTION OUTLET AND 2-3 CB ARE TO BE USED AS OUTLET FOR SEDIMENT BASIN.
EMERGENCY SPILLWAY: EMERGENCY SPILLWAY TO BE TRAPEZOIDAL WITH A BOTTOM WIDTH OF 40'.
DEWATERING TIME : 2.38 DAYS
549 C.Y. * 27 = 14,823 C.F. VOLUME TO BE DEWATERED
USING A FAIRCLOTH/IAS WATER QUALITY SKIMMER WITH A 2.5" SKIMMER SIZE, IT DISCHARGES 6,234 CF PER 24 HOURS
THEREFORE IT WILL TAKE 2.38 DAYS TO DEWATER THIS SEDIMENT BASIN.

### SEDIMENT BASIN CONVERT TO SITE RETENTION BASIN NOTE

UPON COMPLETION OF THE PROJECT, IF THE SEDIMENT BASIN IS TO SERVE AND FUNCTION AS A SITE DETENTION/RETENTION BASIN, ALL SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASIN WHICH IS ABOVE ITS PROPOSED FINAL SURFACE GRADES THROUGHOUT THE BASIN AND ALSO AS NEEDED TO PLACE ANY REQUIRED TOPSOIL. UPON PROJECT COMPLETION AND FINAL CLEANING, THE SEDIMENT BASIN SHOULD BE ESTABLISHED TO ITS PROPOSED RETENTION/DETENTION BASIN DESIGN INCLUDING CAPACITY, GRADES, AND OUTLETS.

### TYPICAL MAINTENANCE ACTIVITIES FOR RETENTION BASINS

POTENTIAL POLLUTANT SOURCES POST CONSTRUCTION THAT SHOULD BE MONITORED INCLUDE: TRASH, FERTILIZERS, GRAINS, HERBICIDES, PESTICIDES, LAWN TREATMENT APPLICATIONS ALONG WITH ASSORTED FUELS, OILS, GREASE, HYDRAULIC FLUID, AND OTHER VEHICULAR FLUIDS ASSOCIATED WITH TRAFFIC THROUGHOUT THE DEVELOPED SITE.

MONTHLY: MOW EMBANKMENT AND CLEAN TRASH AND DEBRIS FROM OUTLET STRUCTURE. ADDRESS ANY ACCUMULATION OF HYDROCARBONS.

ANNUALLY: INSPECT EMBANKMENT AND OUTLET STRUCTURE FOR DAMAGE AND PROPER FLOW. REMOVE WOODY VEGETATION AND FIX ANY ERODING AREAS. MONITOR SEDIMENT ACCUMULATIONS IN MAIN POOL.

SEMI-ANNUALLY: INSPECT WETLAND AREAS FOR INVASIVE PLANS

15-20 YEARS: MONITOR SEDIMENT ACCUMULATIONS IN THE MAIN POOL AND CLEAN AS POND BECOMES EUTROPHIC OR POOL VOLUME IS REDUCED SIGNIFICANTLY.

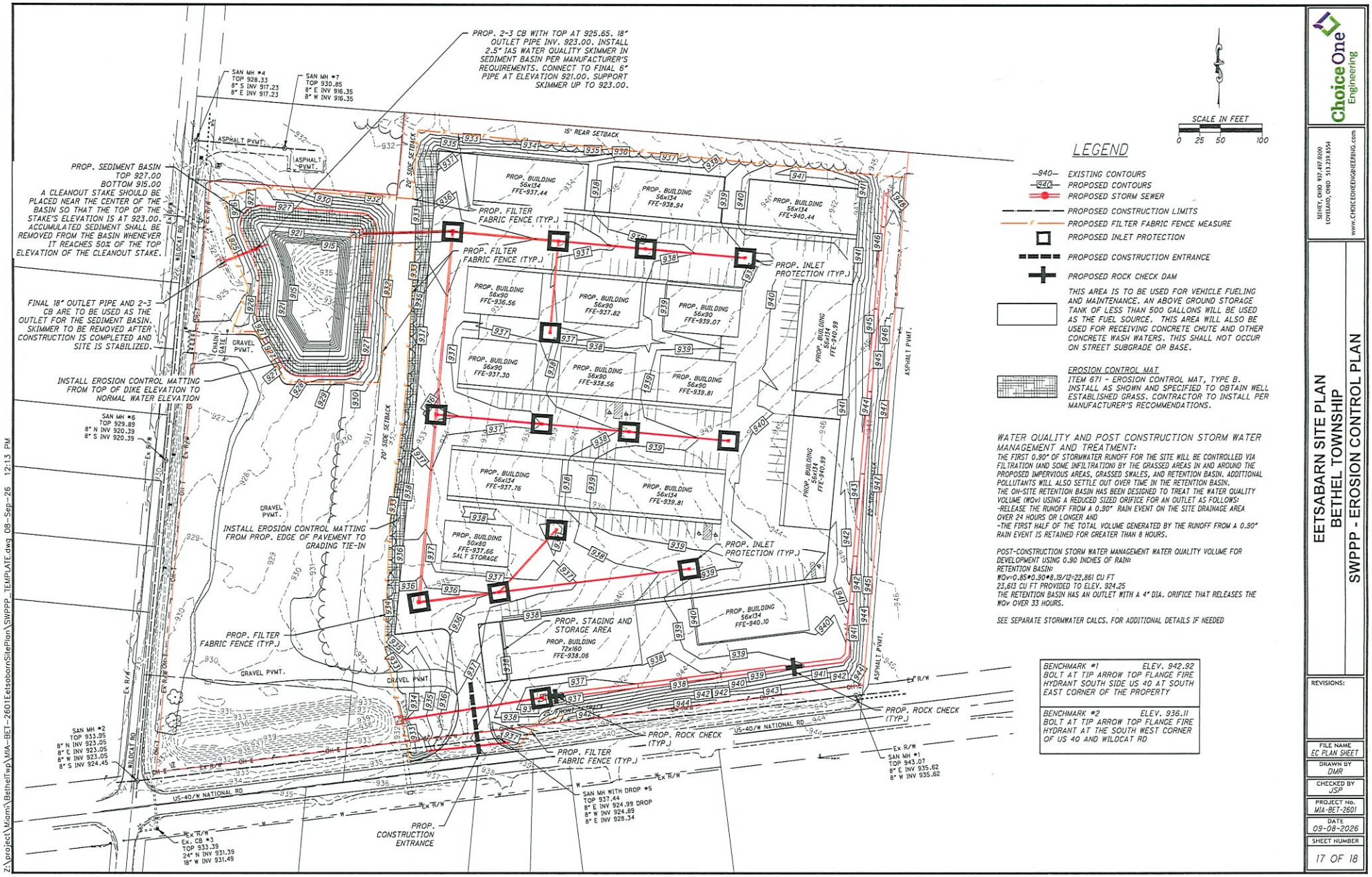

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EETSABARN SITE PLAN
BETHEL TOWNSHIP
SWPPP - EROSION CONTROL NOTES AND DETAILS

REVISIONS:

FILE NAME: SWPPP NOTES 3
DRAWN BY: DMR
CHECKED BY: JSP
PROJECT NO.: MIA-BET-2601
DATE: 09-08-2026
SHEET NUMBER: 15 OF 18

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## LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED STORM SEWER
- PROPOSED CONSTRUCTION LIMITS
- PROPOSED FILTER FABRIC FENCE MEASURE
- PROPOSED INLET PROTECTION
- PROPOSED CONSTRUCTION ENTRANCE
- PROPOSED ROCK CHECK DAM

THIS AREA IS TO BE USED FOR VEHICLE FUELING AND MAINTENANCE. AN ABOVE GROUND STORAGE TANK OF LESS THAN 500 GALLONS WILL BE USED AS THE FUEL SOURCE. THIS AREA WILL ALSO BE USED FOR RECEIVING CONCRETE CHUTE AND OTHER CONCRETE WASH WATERS. THIS SHALL NOT OCCUR ON STREET SUBGRADE OR BASE.

EROSION CONTROL MAT

ITEM 671 - EROSION CONTROL MAT, TYPE B. INSTALL AS SHOWN AND SPECIFIED TO OBTAIN WELL ESTABLISHED GRASS. CONTRACTOR TO INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

### WATER QUALITY AND POST CONSTRUCTION STORM WATER MANAGEMENT AND TREATMENT:

THE FIRST 0.90" OF STORMWATER RUNOFF FOR THE SITE WILL BE CONTROLLED VIA FILTRATION (AND SOME INFILTRATION) BY THE GRASSED AREAS IN AND AROUND THE PROPOSED IMPERVIOUS AREAS, GRASSED SWALES, AND RETENTION BASIN. ADDITIONAL POLLUTANTS WILL ALSO SETTLE OUT OVER TIME IN THE RETENTION BASIN.
THE ON-SITE RETENTION BASIN HAS BEEN DESIGNED TO TREAT THE WATER QUALITY VOLUME (WQv) USING A REDUCED SIZED ORIFICE FOR AN OUTLET AS FOLLOWS:
-RELEASE THE RUNOFF FROM A 0.90" RAIN EVENT ON THE SITE DRAINAGE AREA OVER 24 HOURS OR LONGER AND
-THE FIRST HALF OF THE TOTAL VOLUME GENERATED BY THE RUNOFF FROM A 0.90" RAIN EVENT IS RETAINED FOR GREATER THAN 8 HOURS.

POST-CONSTRUCTION STORM WATER MANAGEMENT WATER QUALITY VOLUME FOR DEVELOPMENT USING 0.90 INCHES OF RAIN:
RETENTION BASIN:
WQv=0.85*0.90*8.19/12=22,861 CU FT
23,613 CU FT PROVIDED TO ELEV. 924.25
THE RETENTION BASIN HAS AN OUTLET WITH A 4" DIA. ORIFICE THAT RELEASES THE WQv OVER 33 HOURS.

SEE SEPARATE STORMWATER CALCS. FOR ADDITIONAL DETAILS IF NEEDED

| | |
|---|---|
| BENCHMARK #1<br>BOLT AT TIP ARROW TOP FLANGE FIRE HYDRANT SOUTH SIDE US 40 AT SOUTH EAST CORNER OF THE PROPERTY | ELEV. 942.92 |
| BENCHMARK #2<br>BOLT AT TIP ARROW TOP FLANGE FIRE HYDRANT AT THE SOUTH WEST CORNER OF US 40 AND WILDCAT RD | ELEV. 936.11 |

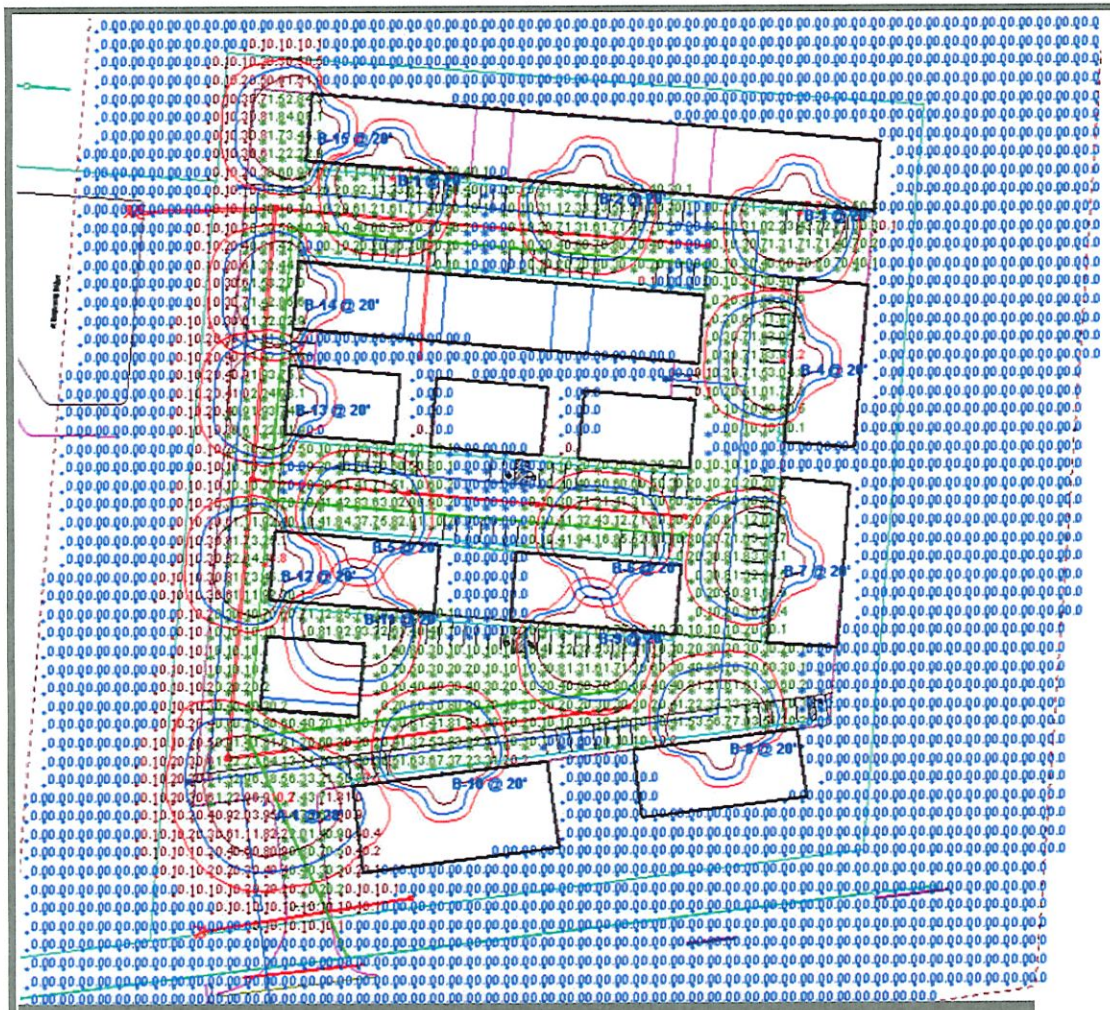
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# EETSABARN SITE PLAN
## BETHEL TOWNSHIP
## SWPPP - EROSION CONTROL PLAN

REVISIONS:

FILE NAME: EC PLAN SHEET
DRAWN BY: DMR
CHECKED BY: JSP
PROJECT No.: MIA-BET-2601
DATE: 09-08-2026
SHEET NUMBER: 17 OF 18

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**Luminaire Locations**

| No. | Label | MH |
|---|---|---|
| 1 | A | 28.00 |
| 1 | B | 20.00 |
| 2 | B | 20.00 |
| 3 | B | 20.00 |
| 4 | B | 20.00 |
| 5 | B | 20.00 |
| 6 | B | 20.00 |
| 7 | B | 20.00 |
| 8 | B | 20.00 |
| 9 | B | 20.00 |
| 10 | B | 20.00 |
| 11 | B | 20.00 |
| 12 | B | 20.00 |
| 13 | B | 20.00 |
| 14 | B | 20.00 |
| 15 | B | 20.00 |

**Schedule**

| Symbol | Label | Image | QTY | Catalog Number | Description | Number Lamps | Lumens per Lamp | LLF | Wattage |
|---|---|---|---|---|---|---|---|---|---|
| | A |  | 1 | AREAFLD6AS300UNHDS C2ADJBZ | Outdoor Pole/Arm-Mounted Area and Roadway Luminaires./ Architectural Flood and Spot Luminaires | 1 | 40136 | 0.9 | 301 |
| | B |  | 15 | WDGE4 LED P2 40K 70CRI RFT | WDGE4 LED WITH P2 - PERFORMANCE PACKAGE, 4000K, 70CRI, FORWARD THROW OPTIC | 1 | 16134 | 0.95 | 109.02 |

**Statistics**

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|---|---|---|---|---|---|---|
| Calc Zone #1 | + | 0.3 fc | 10.2 fc | 0.0 fc | N/A | N/A |
| Section 1 | × | 1.4 fc | 8.8 fc | 0.0 fc | N/A | N/A |
| Section 2 | × | 1.0 fc | 8.2 fc | 0.0 fc | N/A | N/A |
| Section 3 | × | 1.1 fc | 7.7 fc | 0.0 fc | N/A | N/A |

EETSA BARN SITE PLAN

**Designer**
BMW
**Date**
09/03/2026
**Scale**
Not to Scale
**Drawing No.**

**Summary**