

To: Township Board

From: Amy Steffens, AICP

Date: June 6, 2023

RE: **Site Plan Review (SPA 23-0001)** for the construction of a 22,484-square foot multi-tenant commercial building, with associated parking and site improvements. The applicant is requesting waivers to the landscaping standards and parking stall size. Site location is 7749 E M-36; TID 15-25-200-068.

## PROJECT HISTORY:

On February 28, 2023, Hamburg Township received a site plan review application for the construction of a 27,461-square foot multi-tenant commercial structure and associated parking at the site of the old Roadies restaurant that was lost to fire in 2014. This site is zoned in the Village Center district. The applicant has since reduced the size of the structure to 22,484 square feet to allow for on-site stormwater management. The existing curb cut off of M-36 will be relocated to the west by approximately 90 feet. On April 12, 2023, the Zoning Board of Appeals granted variance approval to permit a relocated driveway less than 225 feet from the commercial driveways to the east and west.

The Planning Commission considered the preliminary site plan at their May 31, 2023 meeting. Discussion was held on applicable zoning standards for this Village Center-zoned parcel: setbacks (which all comply), installation of a pedestrian pathway along M-36 (complies), and parking count (complies). The plans are deficient in required parking stall size (185 square feet provided whereas 200 square feet is required), four landscaped islands, parking area screening from M-36 and pathway, Village Center-style lighting, and lighting along pathway. The Commission granted waivers to the parking stall size and the landscaped parking islands.

Much discussion was had on staff's and Commissioner's concerns on the proposed architecture of the commercial structure. The Commission indicated that as proposed the building is not acceptable due to this site being in the gateway to the township and in the Village Center zoning district. Staff's report from May 31, 2023 provides in-depth analysis of the architecture as compared to the Village Center requirements of Section 36-73(7). The Commission made architectural approval a condition of final site plan approval.

Staff recommended to the Commission that a floating easement be considered over the property to encourage future connectivity from this property to the properties to the east and west should future redevelopment of any site occur. The easement is intended to connect uses along this portion of M-36 without having to use M-36.

After taking comment from both the applicant and staff, the Commission recommended preliminary site plan approval with the following conditions:

1. Cross access easement for the pedestrian pathway shall be submitted for township attorney approval and recorded prior to issuance of a land use permit for any site improvements.
2. A floating easement to allow cross-access across subject site from adjacent properties should the subject site be redeveloped shall be submitted for township attorney approval and recorded prior to issuance of a land use permit for any site improvements.
3. All sewer fees shall be paid in full prior to issuance of a land use permit for any site improvements.
4. Prior to issuance of a land use permit the applicant shall submit a photometric plan that shows that the intensity of light within a site does not exceed ten (10) footcandles or one (1) footcandle at any property line, except where it abuts a residentially used or zoned site whereby a maximum of 0.5 footcandles is permitted. Applicant shall propose an exterior light that is similar to the suggested Village Center lighting.
5. Final site plan shall indicate required lighting along M-36 pathway and parking area. Light fixtures to match approved Village Center fixtures and shall comply with light intensity requirements.
6. The final site plan shall note that “All lighting shall be turned off between 11:00 PM and Sunrise except when used for commercial and industrial uses, such as in sales, assembly and repair areas, where such use is open for business after 11:00 p.m. but only for so long as such use open for business. Lighting used for security between 11:00 pm and sunrise shall be controlled by a motion sensor.”
7. Prior to issuance of a land use permit the applicant shall receive approval from all required agencies including, but not limited to, Hamburg Township Fire, Utilities Department, Livingston County Drain Commissioner, MDOT, and Livingston County Water Authority.
8. A sign program meeting the standards of Section 36-479 shall be submitted for approval by the Planning Commission prior to issuance of a land use permits for signage.
9. Tree preservation location and details shall be delineated on the final site plan.
10. A change of use permit shall be issued for every occupant of the structure. At the time of permit application, a parking count shall be provided by the property owner indicating the available parking for each use.
11. Parking space size may be reduced as indicated on the site plan.
12. Final site plan shall show required screening of parking area and mechanical and electrical equipment.
13. No outside storage areas are permitted.
14. Prior to final site plan approval architecture shall be approved by the Planning Commission.
15. Shrubs shall be maintained at three feet tall and additional screening shall be provided along the east property.

#### **RECOMMENDATION:**

Staff suggests that the Township Board discuss and review the May 31, 2023 Planning Commission Staff report, the recommendations by the Hamburg Township Planning Commission and the proposed project plans and application materials. The Board should make a determination on the final site plan in terms of its own judgment on particular factors related to the individual proposal. The Board should make a determination if the project meets the site plan review standards A-L in section 36-73 (7).



### Example Approval Motion

The Township Board approves the **Preliminary Site Plan Review (SPA 23-0001)** for the construction of a 22,484-square foot multi-tenant commercial building, with associated parking and site improvements at 7749 E M-36 (TID 15-25-200-068) because with conditions one through 15, inclusive, the project does meet the site plan review standards A through L of Section 36-73(7) of the Zoning Ordinance as discussed at the June 6, 2023 Township Board meeting, at the May 31, 2023 Planning Commission meeting, and as presented in the staff report.

### **ATTACHMENTS:**

**Attachment A:** Draft May 31, 2023 Planning Commission meeting minutes (not available as of the writing of this memo)

**Attachment B:** May 31, 2023 Planning Commission Staff Report and Exhibits



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**To:** Planning Commissioners  
**From:** Amy Steffens, AICP  
Planning and Zoning Director  
**Date:** May 31, 2023

**Project address and Description:** **Site Plan Review (SPA 23-0001)** for the construction of a 27,461 multi-tenant commercial building, with associated parking and site improvements. The applicant is requesting waivers to the landscaping standards. Site location 7749 E M-36; TID 15-25-200-068.

**Owner:** Jet Set Group LLC  
**Applicant:** Nick Zander

**LOCATION:**



The subject site is a 2.0-acre parcel located on the north side of M-36, west of the Hamburg/Green Oak Township boundary. The site is currently vacant but was previously developed with a restaurant that was lost to a fire in 2014. Table 1, below, lays out the zoning districts, use, and future land use designations for immediate area.

<b>Table 1</b>	<b>Current Zoning Classification</b>	<b>Current Use of Property</b>	<b>Future Land use Designation</b>
<b>Subject Site</b>	Village Center	Vacant	South: Village Gateway District North: Industrial
<b>North</b>	Village Center	Office	Industrial
<b>South</b>	Village Center	CEI	Village Gateway District
<b>East</b>	Village Center	Office/professional	South: Village Gateway District North: Industrial
<b>West</b>	Village Center	Religious	South: Village Gateway District North: Industrial

## **PROJECT DESCRIPTION**

Site plan review application to allow construction of a 27,461-square foot multi-tenant commercial building, with associated parking and site improvements. The proposed project would relocate the existing driveway location approximately 90 feet to the west to accommodate the multi-use building on the west side of the parcel and parking on the east side. The relocated driveway will be approximately 70 feet (centerline to centerline) from the curb cut for the commercial use to the east. Section 36-339 of the Zoning Ordinance requires that the minimum spacing between two commercial driveways on the same side of the road shall be determined based upon posted speed limits along the parcel frontage. The minimum spacings are measured from centerline to centerline. The posted speed limit along this stretch of M-36 is 40 miles per hour, which requires a minimum driveway spacing of 225 feet. On April 12, 2023 the Zoning Board of Appeals granted variance approval to permit a relocated driveway to be less than 225 feet from the commercial driveways to the east and west (meeting minutes attached).

The project plans and building elevations are attached to this report for the Planning Commissions review.

**Table 2 (Section 36-186)**

	<b>Required</b>	<b>Proposed</b>	<b>Status</b>
<b>Front</b>	No more than 20 feet from front lot line. PC may permit front yard setback greater than 20 feet but not to exceed average front yard setbacks for the adjacent buildings (181 feet)	18 feet	Conforms
<b>Rear</b>	15 feet		Conforms
<b>West Side</b>	Minimum 10 feet*	22.1 feet	Conforms
<b>East Side</b>	Minimum 10 feet*	52 feet	Conforms
<b>Height</b>	2.5 stories/35 feet maximum	1 story/27.6 feet	Conforms
<b>Lot size</b>	10,600 square feet with sanitary sewer		Conforms
<b>Lot coverage</b>			
<b>Buildings</b>	50 percent	32%	Conforms

<b>Impermeable</b>	80 percent	76%	Conforms
<b>Bikepath (Section 36-187)</b>	Required in locations designated in the Hamburg Village Master Plan	8-foot along south property boundary	Conforms

<b>Table 3</b>	<b>Required</b>	<b>Proposed</b>	<b>Status</b>
<b>Section: 36-187(i): South M-ROW</b>	One canopy street tree shall be planted within five feet of the front lot line for each 40 linear feet of frontage.	5 trees	Deficient one tree
<b>North (237 linear feet)</b>	10-foot buffer zone: 1 canopy or evergreen tree or 4 shrubs for every 20 linear feet along property line rounded upward = 12 trees or 48 shrubs	12 trees, no shrubs	Conforms
<b>East (368)</b>	10-foot buffer zone: 1 canopy or evergreen tree or 4 shrubs for every 20 linear feet along property line rounded upward = 19 trees or 74 shrubs	19 trees (preserving one), no shrubs	Conforms
<b>West (368)</b>	10-foot buffer zone: 1 canopy or evergreen tree or 4 shrubs for every 20 linear feet along property line rounded upward = 19 trees or 74 shrubs	30 (preserving nine)	Conforms
<b>Section 36-283: Parking lot landscaping (26,100 square feet)</b>	One canopy tree required for each 2,000 square feet of paved driveway and parking lot surface; two tree minimum = 13 trees required within parking lot envelope, with 4 trees in landscaped islands	13 trees; no landscaped islands	No landscaped islands; waiver requested
<b>Section 36-187(i) Parking lot screening</b>	All off street parking spaces or loading areas must be screened from view of any public road or pedestrian path right-of-way, or private road or pedestrian path easement by an evergreen hedge row or masonry wall, which is consistent with building architecture and site design, at least three feet in height.	32 two-foot tall shrubs along south; none proposed along east parking area	Shrubs must be maintained at 3 feet tall; additional screening required along easter property boundary

**Sec. 36-280. Existing plant material.**

- (a) *Consideration of existing elements in the landscape design.* In instances where healthy plant material exists on a site prior to its development, the planning commission may permit substitution of such plant material in place of the requirements set forth in this section.
- (b) *Preservation of existing plant material.* Site plans shall show all existing trees which are located in the portions of the site that will be built upon or otherwise altered, and are six inches or greater in caliper, measured 12 inches above grade.
- (1) Trees shall be labeled "To Be Removed" or "To Be Saved" on the site plan. If existing plant material is labeled "To Be Saved" on the site plan, protective measures should be implemented, such as the placement of a tree guard at the dripline around each tree. No vehicle or other construction equipment shall be parked or stored within the dripline of any tree or other plant material intended to be saved.
- (2) In the event that healthy plant materials which are intended to meet the requirements of this article are cut down, damaged or destroyed during construction, said plant material shall be replaced with the same species as the damaged or removed tree or approved substitute, in accordance with the following schedule, unless otherwise approved by the zoning administrator based on consideration of the site and building configuration, available planting space, and similar considerations:

<i>Damaged Tree*</i>	<i>Replacement Tree</i>	<i>Replacement Ratio</i>
Less than 6 inches	2½ to 3 inches	1 for 1
More than 6 inches	2½ to 3 inches	1 replacement tree for each 6 inches in caliper or fraction thereof of damaged tree

**Staff analysis:** Existing plant material to be saved is not noted on the site plan; tree protection details are included in the site plan.

**Staff suggested condition:** Tree preservation details shall be delineated on the final site plan.

**Section 36-283:**

**Waivers and Modifications.** The Planning Commission may waive or modify the fencing or landscape buffering requirements upon a determination that a solid fence or landscaping buffer will not be necessary or effective for screening. In making such a determination, the following shall be considered.

1. Need for security;
2. Abutting district or existing use;
3. Extent that existing natural vegetation provides the desired screening;
4. Topography which would eliminate the benefits of required landscaping;
5. Building heights and views in relation to existing topography and vegetation as well as views from adjacent uses;

6. Similar conditions existing such that no good purpose would be served by providing the required landscaping plan.

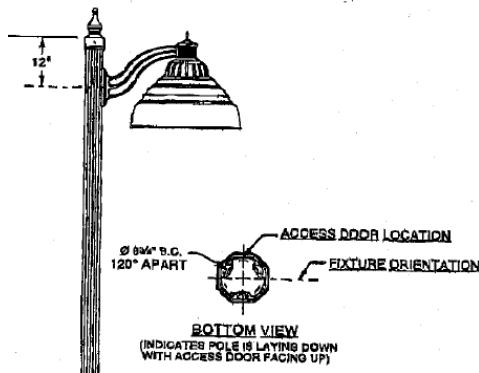
**Staff analysis:** The request for no landscaped parking islands appears to be reasonable, given that the site’s parking lot is designed to accommodate required parking, on-site stormwater management, and emergency vehicle access.

<b>LIGHTING:</b>			
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**Section 36-295:**

- 1. Exterior lighting shall be fully shielded and directed downward toward the Earths surface, away from residential uses, roads, glass, water or other reflective materials which would create excessive off-site glare or incident rays.**

The lighting plan provided is adequate to determine the conformance to the zoning ordinance requirements. However, staff would suggest that the exterior light style does not match the Village Center lighting style that has been installed in various locations throughout the Village Center, most recently at the senior living facility on the south side of M-36 (below).



**Staff Suggestion Condition:** Applicant shall propose an exterior light that is similar to the suggested Village Center lighting and shall re-submit a photometric plan prior to issuance of a land use permit that is specific to the approved lighting style.

- 2. The Zoning Administrator and/or Planning Commission may approve decorative light fixtures as an alternative to shielded fixtures when it can be proven that there will be no off-site glare and the proposed fixtures will improve the appearance of the site.**

See discussion above.

- 3. Lights on poles shall not be taller than the building whose area they illuminate nor taller than fifteen (15) feet whichever is shorter. Lights on poles may exceed fifteen (15) feet up to twenty (20) feet if the fixtures are located a minimum of seventy-five (75) feet from any planned, zoned or used residential areas.**

No light poles are proposed.

- 4. Lighting shall not be of a flashing, moving or intermittent type.**

No flashing lighting is proposed.

5. Except where used for security purposes, all outdoor lighting fixtures, existing or hereafter installed and maintained shall be turned off between 11:00 p.m. and sunrise, except when used for commercial and industrial uses, such as in sales, assembly and repair areas, where such use is open for business after 11:00 p.m. but only for so long as such use open for business. Businesses with light fixtures used for security purposes are encouraged to use a motion detection device which is directed to detect motion within the property.

**Staff Suggested Condition:** Final site plan shall note that “all outdoor lighting fixtures, existing or hereafter installed and maintained shall be turned off between 11:00 p.m. and sunrise, except when used for commercial and industrial uses, such as in sales, assembly and repair areas, where such use is open for business after 11:00 p.m. but only for so long as such use open for business.”

6. Any light fixture must be placed in such a manner that no light emitting surface is visible from any residential area or public/private roadway, walkway, trail or other public way when viewed at ground level.
7. The intensity of light within a site shall not exceed ten (10) footcandles or one (1) footcandle at any property line, except where it abuts a residentially used or zoned site whereby a maximum of 0.5 footcandles is permitted. The only exception is with gas station canopy and automobile dealership lighting, where a maximum of twenty (20) footcandles is permitted within the site but the above standards shall apply to intensity at the property line.  
See discussion above under standard one.

#### **Section 36-187(i):**

##### *Lighting.*

1. A consistent type of pedestrian scale ornamental lighting shall be provided along all sidewalks, within any off-street parking lots and along road frontages.

**Staff analysis:** The site plan does not include lighting along the pedestrian path on M-36 or within the parking lot.

**Staff suggested condition:** Final site plan shall indicate required lighting along M-36 pathway and parking area. Light fixtures to match approved Village Center fixtures and shall comply with light intensity requirements.

#### **Sec. 36-295(e). Sign Lighting Standards.**

1. Indirect illumination of signs, canopies and buildings is permitted provided a maximum 125 watt bulb is utilized and there is no glare.
2. The use of laser light source, searchlights or any similar high intensity light for outdoor advertisement or entertainment is prohibited.
3. Luminous tube and exposed bulb fluorescent lighting is prohibited as part of a sign provided the proposed luminous tube or exposed bulb fluorescent lighting is determined to be consistent with the architectural character of the building.
4. Internally illuminated signs shall have a minimum of 60% of the sign face composed of an opaque surface which allows no light to transmit through.

**Staff analysis:** No signs have been submitted for review. Any future signage shall comply with the above lighting standards.

### **Section 36-334 Parking space requirements**

The applicant proposes one parking space for every 400 square feet of floor area, which is the standard for both “Furniture and appliance stores, personal services (except beauty parlors and barbershops), household equipment or furniture repair shops, clothing or shoe repair or service shops, hardware stores” and for “general office building.” Without knowing the individual tenants, it is difficult for staff to determine if the provided parking is adequate. The applicant should be aware that for each change of use application submitted for each tenant, the parking for that user will be calculated using the standards set forth in 36-334. For example, if a restaurant use applied for a change of use, the restaurant parking requirements would be calculated at one parking space for each four-patron seats, plus one parking space for each two employees. If the sum total of every user in the commercial building exceeds the provided parking, the change of use permit application would not be approvable based on parking requirements.

**Staff suggested condition:** A change of use permit shall be required for every tenant. At the time of permit application a parking count shall be provided by the property owner indicating the available parking for each use.

### **General Parking Requirements:**

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|--|---|
| 1. Off-street parking for non-residential uses shall be located on the same lot or parcel or within three hundred (300) feet of the building it is intended to serve provided the provisions of Section 10.2.2., Collective Parking, are met.  | Conforms  |
| 2. A minimum area of 200 square feet shall be provided for each vehicle parking space and each space shall be designated and reserved for parking.   | Proposed parking space size 185 square feet; waiver requested |
| 3. A suitable means of ingress and egress shall be provided and located to minimize traffic congestion and interference with pedestrian movement. The location of all entrances and exits and directional signs, shall be approved by the Planning Commission, and where required by the Livingston County Road Commission and the Michigan Department of Transportation.  | Conforms  |
| 4. Parking areas with a capacity of four or more vehicles shall be hard surfaced (either concrete, bituminous asphalt or other stabilized engineered surface) prior to occupancy and shall provide adequate drainage facilities to dispose of all collected surface water. The requirement for paving may be waived by the Planning Commission through paragraph 10.2.1.I. | Conforms  |
| 5. Except for single-family residential lots, lighting shall be provided for use when a parking area is in operation. The installation of such lighting shall be so hooded or shielded as to reflect the light away from abutting or neighboring property.   | See photometric plan  |
| 6. When required off-street parking in a non-residential district abuts a residential district, there shall be located a landscaped buffer strip fifteen (15) feet wide and parallel to the mutual boundary. The buffer strip shall be composed of trees and/or foliage. In lieu of a buffer strip, the Planning Commission may permit or require                          | Conforms  |



<p>a solid fence or wall between six (6) and eight (8) feet in height shall be located along the mutual boundary.</p> <p>7. Federal and State requirements regarding handicapped parking and access shall apply.</p>	<p>Conforms; will be reviewed by LCBD</p>
<p><b>Staff analysis:</b> A 185-square foot parking stall is not inappropriately sized and would be an acceptable deviation from the ordinance requirement.</p> <p><b>DRIVEWAYS: COMMERCIAL Section 36-335</b></p>	
<p><b>General Standards</b></p> <p>A. Driveways shall be located so as to minimize interference with the free movement of traffic, to provide adequate sight distance, and to provide the most favorable driveway grade.</p> <p>B. Driveways, including the radii but not including right turn lanes, passing lanes and tapers, shall be located entirely within the right-of-way frontage, unless otherwise approved by Livingston County or the Michigan Department of Transportation and upon written certification from the adjacent property owner agreeing to such encroachment.</p>	<p><b>MDOT permit issued</b></p>
<p><b>SIGNS</b></p> <p><b>Section 36-478:</b></p>	
<p>The following signs are permitted in the Village Center district. However, nonresidential multi-tenant developments must create a sign program. No signage or sign program has been submitted by the applicant.</p> <p><i>Wall signs.</i> Wall signs shall be placed generally <b>within a sign band located above the store front</b> and not to exceed 80 percent of the linear frontage. Maximum size per facade is 0.75 square feet per linear foot up to 24 square feet. Letters shall not exceed 18 inches and shall be mounted flush against the wall.</p> <p><i>Awning sign.</i> Sign lettering and/or logo shall not comprise more than 20 percent or ten square feet of the exterior surface of the canopy.</p> <p><i>Projecting signs.</i> signs shall not project more than 48 inches from the building face and shall have a maximum size of five square feet per side. These signs shall have wrought iron mounting hardware.</p> <p><i>Window signs.</i> Window signs shall not exceed ten percent of the window so that visibility into and out of the window is not obscured. Window signs shall be directly applied to the window or hung inside the window, concealing all mounting hardware and equipment.</p> <p><i>Freestanding signs.</i> Freestanding signs must be ground mounted and architecturally harmonious with the character of the building. They must meet the size requirements of this chapter and be located in a landscaped area.</p> <p><i>One-day portable signs.</i> must be made of wood or decorative metal with cast iron brackets and shall be architecturally compatible with the style, composition, materials, colors, and details of the building.</p> <p><b>Staff analysis:</b> A sign program must be submitted and approved by the Commission prior to issuance of a land use permit for signage.</p>	

**Section 36-187(i) VC and VR Village Center and Village Residential Districts:** the Zoning Ordinance specifies additional Village Center district standards, below, with staff analysis for each applicable standard.

(1) Design standards. The following design standards shall apply to all site plans reviewed under article III of this chapter special uses reviewed under section 36-36 subdivision plats reviewed under the subdivision control ordinance, and condominium projects reviewed under the condominium ordinance.

a. General. The overall design and mixture of uses shall be consistent with the intent of this district. Compatibility of uses shall be determined by the following:

1. The uses shall not create noise, dust, odors, fumes or other nuisances that will have an obnoxious effect on surrounding residences.

**Staff analysis:** There is no existing adjacent residential use that would be impacted by the proposed commercial project. If adjacent lots were to be developed with residential uses in the future, staff does not find that the commercial structure would have a negative impact in terms of noise, dust, odors, fumes, or other similar nuisances.

2. Traffic volumes generated by the use shall not have a negative impact on surrounding residential character.

**Staff analysis:** The expected traffic for a commercial use is not likely to have a negative impact on surrounding residential character. The Commission could request a traffic impact analysis be submitted for final site plan review.

3. Architecture shall meet the requirements of section 36-73(7).

**Staff analysis:** see below

4. Location and use of yards shall contribute to the continuation of open space areas within the immediate vicinity.

**Staff analysis:** There is no open space in the vicinity other than the required yards on adjacent parcels.

5. Location and design of landscaping and pedestrian areas shall be compatible with and enhance the area pedestrian and open space network.

**Staff analysis:** The sidewalk and streetscape landscaping will be pedestrian in scale.

6. Location, size and types of architectural projections such as porches or awnings shall be compatible with other structures along the same block.

**Staff analysis:** See architecture discussion below.

7. Location, scale and design of signs shall be consistent with the character of other signs, street elements structures and uses located along the same street.

**Staff analysis:** No signage is proposed but a sign program will be required for Planning Commission approval.

8. Residential development shall be designed to be compatible with surrounding land uses, while providing a mixture of housing types to meet the varied needs of Township residents.

**Staff analysis:** No residential development proposed.

b. Sidewalks/pedestrian circulation.

1. Site design shall demonstrate a special sensitivity to pedestrian circulation and safety.
2. Sidewalks at least five feet wide and at least seven feet wide where abutting parking shall be provided along public streets and private roads; bike paths shall be required in locations designated in the Hamburg Village master plan or to provide linkages with existing or planned bike paths.
3. All developments shall provide pedestrian linkages between public sidewalks and the building entrances.

**Staff analysis:** An eight-foot wide paved path along M-36 will be installed.

**Staff suggested condition:** Cross access easement agreement shall be approved by the township attorney

c. Common open space. For any development which includes ten or more dwelling units, 1,500 square feet of common open space shall be provided per dwelling unit. Such open space may be counted towards meeting open space requirements for minimum lot size reductions, provided that it meets all of the following requirements:

1. Open space shall be set aside by the developer through an irrevocable conveyance that is found acceptable to the planning commission, such as:
  - (i) Recorded deed restrictions;
  - (ii) Covenants that run perpetually with the land; or
  - (iii) A conservation easement established per section 8204 of Public Act No. 451 of 1994 (MCL 324.8204).
2. The common open space shall be used for social, recreational and/or natural preservation. Common open space within the village shall be of a distinct geometric shape, generally rectilinear or square. The common open space shall include landscaping, sidewalks, pedestrian benches and pedestrian scale lamp posts. Open space at the edges of the village, as shown on the Hamburg Village master plan shall be left in a natural state, with the exception of trails or boardwalks.

**Staff analysis:** No residential uses proposed.

d. Parking/loading areas.

1. The amount of parking for nonresidential uses required under article IX of this chapter may be reduced by the planning commission by up to 50 percent upon a finding that patrons will be able to walk to the use from nearby residential areas, patrons are parked at other uses and visiting several uses, and/or on-street parking is available.

2. Off street parking lots shall be located behind the front line of the principal building. Where this is not feasible or practical, the planning commission may permit off street parking within the front yard. Parking lots must be setback from any front lot line a minimum of 20 feet.

**Staff analysis:** Proposed parking conforms to this standard.

3. All off street parking spaces or loading areas must be screened from view of any public road or pedestrian path right-of-way, or private road or pedestrian path easement by an evergreen hedge row or masonry wall, which is consistent with building architecture and site design, at least three feet in height.

**Staff analysis:** The proposed row of boxwoods would screen the parking lot from M-36, so long as the height is maintained at three feet, but additional boxwoods should be planted within the east setback to further screen parking from M-36.

4. Where parking or loading areas abut a residential use, a six-foot-tall masonry wall, which is consistent with building architecture and site design, shall be constructed between the parking lot or loading area and the adjacent residential use. The planning commission may substitute the masonry wall with one or more rows of six-foot-tall evergreens.

5. Loading/unloading from secondary streets may be permitted by the planning commission rather than the required on-site loading, upon demonstration by the applicant that through traffic flow and access to neighboring uses will not be disrupted.

**Staff analysis:** Not proposed

e. Architecture: See staff discussion of architecture under Site Plan Review Standards, below

1. Buildings shall possess architectural variety but enhance the overall cohesive and historic village character.

2. Building architecture shall meet the standards of section 36-73(7).

3. The first floor of front facades shall include at least 30 percent windows. The approximate size, shape, orientation and spacing shall match that of buildings on adjacent lots.

4. The mass and proportion of structures shall be similar to structures on adjacent lots and on the opposite site of the street. Larger buildings may be broken-up with varying building lines and rooflines to provide a series of smaller scale sections which are individually similar in mass and proportion to surrounding structures.

5. Buildings located on corner lots shall provide distinct and prominent architectural features or site elements which reflect the importance of the building's corner location and creates a positive visual landmark. An entry feature or site landmark shall be required at corners designated for such a feature in the Hamburg Village master plan. The architectural feature or site element shall be subject to planning commission approval.

On sites which contain commercial structures over 50 years old, no exterior portion of any commercial building or structure (including walls, fences, light fixtures, steps, pavement, or other appurtenant features), or aboveground utility structures shall be erected, altered, restored, moved or demolished without the review of the planning commission prior to the issuance of a land use permit. The purpose of the planning commission review is to advise on actions which may or may not be compatible with the desirable historic, architectural or cultural aspects of the district. The planning commission may consider Standards for Rehabilitation and Guidelines for Rehabilitation of Historic Buildings prepared by the U.S. Department of Interior for reviewing actions within the Old Hamburg Village. Such standards are made part of this chapter.

**Staff analysis:** Not applicable.

6. For proposed alterations to commercial structures for which site plan review is not required under article III of this chapter, the review of the planning commission shall be advisory to the zoning administrator in the issuance of a land use permit. The provisions of this section shall not be construed to prevent the ordinary maintenance or repair of any exterior feature. Further, the provisions of this section shall not prevent the construction, alteration, restoration or demolition of any feature which the building inspector certifies is required because of a threat to public safety.

f. Signs. Signs shall be designed to be compatible with the principal building's architecture and materials.

**Staff analysis:** Sign program will be required for Planning Commission approval.

g. Street and access design. Streets shall meet the following, with the acknowledgment that for any public streets, any more stringent standards of the county road commission or the Michigan Department of Transportation shall apply.

1. Access points to M-36 shall be spaced at least 500 feet apart.
2. Access points along streets or driveways intersecting with M-36 shall be setback at least 60 feet from the M-36 right-of-way line.
3. The Township may require shared access or connections between adjacent uses as a means to limit conflict points and preserve capacity along M-36.
4. The maximum length of blocks shall be 700 feet.

5. Street connections to adjacent parcels shall be provided where the master plan identifies a future street connection or there is the possibility to create future street connections. Road stubs for future connections shall be improved to the parcel line.

**Staff analysis:** No new street installation is proposed. Access will be from M-36 only.

h. Landscaping. All landscaping shall meet the minimum requirements of article VIII of this chapter. Because of the higher density of development permitted in the VC and VR districts, the following standards shall apply to frontage landscaping in place of the standards contained in article VIII of this chapter:

1. At least an 80-foot-wide landscaped greenbelt shall be provided along undeveloped areas of M-36, as designated on the Hamburg Village master plan, with at least two rows of trees spaced no greater than 25 feet on center. Trees shall be a mixture of evergreen and canopy trees meeting the minimum plant size requirements of article VIII of this chapter. Provision of this landscaped greenbelt may be counted towards the common open space requirements of subsection (c) of this section.

2. Along all road frontages, other than M-36 section identified in subsection (i)(1)h.1 of this section, one canopy street tree shall be planted within five feet of the front lot line for each 40 linear feet of frontage.

**Staff analysis:** One additional tree should be planted along the M-36 frontage in order to comply with this requirement.

i. Lighting.

1. A consistent type of pedestrian scale ornamental lighting shall be provided along all sidewalks, within any off-street parking lots and along road frontages.

**Staff analysis:** No lighting is proposed. Final site plan should indicate location and light fixture details for Commission approval.

2. Parking lot lighting shall not be greater than 20 feet in height.

(2) Approval standards. The following criteria shall be used, in addition to the standards contained in article III of this chapter or the subdivision control ordinance, as a basis upon which site plans or subdivision plats shall be reviewed and approved by the Township:

a. Compatibility with adjacent uses. The proposal shall be designed, constructed, and maintained to be compatible with permitted uses on surrounding land to the extent that is reasonably feasible, giving consideration to economic and site conditions. Consideration may be given to:

1. The location and screening of vehicular circulation and parking areas in relation to surrounding development, to the maximum extent feasible.

2. The location and screening of outdoor storage, outdoor activity and work areas, and mechanical equipment in relation to surrounding development.

3. The bulk, placement, and materials of construction of the proposed use in relation to surrounding development shall be compatible as determined by the general requirements listed in section 36-187(i)(1)a.

**Staff analysis:** With the additional screening along M-36 and the east property boundary of the parking lot, this requirement will be met, although mechanical equipment is not indicated on the site plan.

**Staff suggested condition:** Final site plan shall show location and screening of mechanical equipment.

4. Proposed site amenities.

5. The site grading and stormwater drainage plan.

b. Transportation and access. The proposed use shall be designed to minimize the impact of traffic generated by the use to the extent that is reasonably feasible, giving consideration to economic and site conditions. Consideration may be given to the following:

1. Relationship between the proposed development and existing and proposed streets.
2. Estimated traffic generated by the proposed use.
3. Location and access to on-street parking.
4. Location and access to off-street parking.
5. Provisions for vehicular traffic.
6. Continuation of the planned street network for the village.

The planning commission may require a traffic impact study for special uses.

**Staff analysis:** A roadway to the north of this site, connecting M-36 and Industrial Drive, is proposed in the Village Future Land Use plan. Staff's suggested condition of a floating easement for cross access could be used for this future connection between the two existing roadways.

c. Building architecture. In determining the appropriateness of buildings, design elements shall be evaluated in relation to existing and proposed surrounding buildings and uses. The design shall meet the standards of subsection (i)(1)g of this section

d. Emergency access. All buildings or groups of buildings shall be so arranged as to permit convenient and direct emergency vehicle access.

**Staff analysis:** Public Safety approval will be required prior to final site plan approval.

e. Health and safety concerns. Any use shall comply with applicable federal, state, county, and local health and pollution laws and regulations related to noise; dust, smoke and other air pollutants; vibration; glare and heat; fire and explosive hazards; gases; electromagnetic; radioactive materials; and toxic and hazardous materials. The planning commission may require an environmental impact study for special uses.

**Staff analysis:** No negative health or safety concerns are expected from proposed commercial development. Each tenant will require a change of use review by the township zoning administrator and fire marshal and will be reviewed in light of zoning requirements.

f. Screening. Off-street parking, outside refuse, storage areas, and mechanical and electrical equipment which are within sight of adjacent residential districts or public roads shall be adequately screened.

**Staff suggested condition:** Final site plan shall show required screening of parking area and mechanical and electrical equipment. No outside storage areas are proposed.

g. Appearance. Signs and other site features shall be designed and located on the site so that the proposed development is aesthetically pleasing and harmonious with nearby developments.

**Staff analysis:** A sign program will be required to be approved by the Commission prior to issuance of land use permits.

## **SITE PLAN REVIEW STANDARDS**

**In the review of all site plans, the Zoning Administrator and the Planning Commission shall endeavor to assure the following:**

**A. The proposed development conforms to all provisions of the Zoning Ordinances.**  
Please see the discussion of ordinance compliance for analysis on the project compliance and consistency with the intent and purpose of the Township's Zoning Ordinance.

Variances have been granted for the relocated driveway along M-36.

**B. All required information has been provided.**

The information submitted appears to be adequate to allow the Planning Commission to review and make comment on the preliminary site plan for the subject site.

**C. The movement of vehicular and pedestrian traffic within the site and in relation to access streets and sidewalks will be safe and convenient.**

Michigan Department of Transportation has approved the relocated driveway. Additionally, the proposed sidewalk along M-36 will connect with the walkway immediately in front of the commercial building.

**D. The proposed development will be harmonious with existing and future uses in the immediate area and the community.**

The proposed development will provide for a general use commercial structure, which is compatible with the zoning and the future uses of the Master Plan. However, staff has serious reservations about the architecture of the proposed building, as discussed



below, as well as providing future connectivity through this site to accommodate future redevelopment of this site.

- E. The proposed development provides the necessary infrastructure improvements, such as roads, drainage, pedestrian facilities and utilities, to serve the site, and be adequately coordinated with the current and future use of adjacent properties.**

The site is proposing on-site stormwater management, a pedestrian path, and one right-in only access point from a relocated driveway. However, a cross-access easement for the path and a floating easement for future connectivity to adjacent parcels would facilitate future connectivity and ensure that the pedestrian path remains accessible to the public.

**Staff suggested conditions:** Cross access easement for the pedestrian pathway shall be submitted for township attorney approval and recorded prior to issuance of a land use permit for any site improvements.

A floating easement to allow cross-access across subject site from adjacent properties should the subject site be redeveloped shall be submitted for township attorney approval and recorded prior to issuance of a land use permit for any site improvements.

- F. The applicable requirements of Township, County and State agencies are met regarding grading and surface drainage and for the design and construction of storm sewers, storm water holding facilities, water mains, and sanitary sewers.**

The site plan has been forwarded to the Township Engineer, Utilities Department and the Livingston County Water Authority. Prior to issuance of a building permit the applicant will need approvals from all the required local, state, and federal agencies. The Utilities Department has provided a preliminary opinion of probable cost for sewer REUs and has requested that a condition of site plan approval be as follows: *All sewer fees shall be paid in full prior to issuance of a land use permit for any site improvements.*

- G. Natural resources will be preserved to the maximum extent possible in the site design by developing in a manner which will not detrimentally affect or destroy natural features such as lakes, ponds, streams, wetlands, steep slopes, and woodlands.**

There are no natural features present on the site.

- H. The proposed development shall respect the natural topography to the maximum extent possible by minimizing the amount of cutting, filling, and grading required.**

The subject property is relatively flat and minimal grading will be required as a part of this project.

- I. The proposed development will not cause soil erosion or sedimentation.**

The LCDC will review the plans and issue a soil erosion and sedimentation control permit prior to issuance of a building permit.

- J. Landscaping, including trees, shrubs and other vegetative material is provided to maintain, improve and/or restore the aesthetic quality of the site.**

Staff finds that the provided landscaping would improve the aesthetic quality of the site.

- K. Conformance to the adopted Hamburg Township Engineering and Design Standards.**

The engineer has reviewed the plans for compliance with the Engineering and Design Standard and provided comments.

- L. All proposed commercial, office, industrial, institutional and multiple family development shall utilize quality architecture to ensure that buildings are compatible with surrounding uses, protect the investment of adjacent landowners, blend harmoniously into the streetscape and meet the objectives the Township Master Plan. New buildings, additions and renovations shall be designed to preserve or complement the design character of existing development provide visual harmony between old and new buildings, and create a positive image for the Township's various commercial shopping nodes. Commercial, office, industrial, institutional and multiple family architecture shall be reviewed by the Planning Commission under the following criteria:**

- 1. Buildings shall front towards and relate to the public street. Buildings shall be located to create a define streetscape through uniform setbacks and proper relationship to adjacent structures. Proper relationship to existing structures in the area shall be maintained through building mass, proportion, scale, roof line shapes and rhythm. Buildings within the area designated on the M-36 Corridor Plan/Master Plan as the "Hamburg Village" shall be compatible with the historic character of the unincorporated place commonly referred to as the "Old Hamburg Village."**
- 2. Building materials and colors shall relate well and be harmonious with the surrounding area. Roof shape and materials shall be architecturally compatible with adjacent buildings and enhance the predominant streetscape. For any side of a principal building facing a public or private street, at least fifty percent (50%) of the facade shall be constructed of, or covered with, the following materials:**
  - a. Brick;**
  - b. Fluted or scored concrete block;**
  - c. Cut stone;**
  - d. Vinyl siding;**
  - e. Wood siding;**
  - f. Glass; or,**
  - g. Other materials similar to the above as determined by the Planning Commission.**
- 3. Buildings shall possess architectural variety, but enhance the overall cohesive community character. Buildings shall provide architectural features, details and ornaments such as archways, colonnades, towers, cornices or peaked roof lines.**

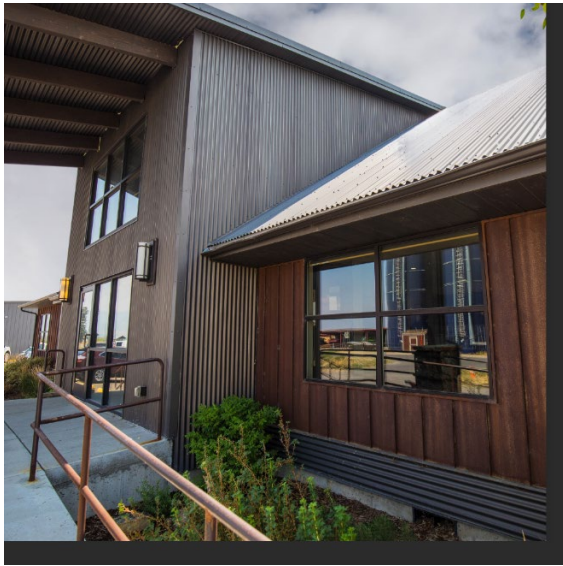
4. **Building walls over 100 feet in length shall be broken up with a combination of the following: varying building lines, windows, architectural accents and trees.**
5. **Building entrances shall utilize windows, canopies and awnings; provide unity of scale, texture, and color; and provide a sense of place.**
6. **Where the rear facade of a building will be visible from a residential zoning district, or the rear of the site will be used for public access or parking, such rear facade shall be constructed to a finished quality comparable to the front facade.**
7. **Signs, landscaping, lighting and other site elements shall be coordinated and compatible with the building design, as well as harmonious with other nearby developments. Developments shall provide site features such as decorative entry signs, ornamental lighting, pedestrian plazas and/or pedestrian furniture.**

**Staff Analysis:** The proposed multi-tenant commercial building is a 77-foot by 292-foot metal clad structure, with a 18.25-foot wall plate and a metal roof with a 2/12 pitch. Five solid overhead doors are on the east elevation and three glazed overhead doors on the south elevation along M-36. Metal canopies are located over the three overhead doors on the south elevation and over each entry door on the east elevation. A masonry facade is proposed, three feet from grade, along the south and east elevations; no finishes are proposed along the west or north elevations.

Section 36-73(7) specifies that “For any side of a principal building facing a public or private street, at least 50 percent of the facade shall be constructed of, or covered with, the following materials: brick; fluted or scored concrete block; cut stone, vinyl siding; vinyl siding; glass; or other materials similar to the above as determined by the Planning Commission.” The metal siding would need to be approved by the Commission as an acceptable substitute to the noted materials.

Additionally, building walls over 100 feet in length shall be broken up with a combination of the following: varying building lines, windows, architectural accents, and trees. The only windows on the 292-foot long east elevation are the windows on the tenant space entry doors.

The proposed elevations are uninspired and wholly inappropriate for a commercial structure along a gateway into Hamburg Township that is zoned Village Center. There are multiple ways to add interest to a metal-sided rectangular building. Height and depth articulations, additional windows, and a mix of exterior finishes would break up the expansive east elevation and add aesthetic interest to the south elevation. Staff offers the images below as examples of architectural details that could be used on the proposed building. The Commission should also consider requiring additional finishes on the south and north elevations.



### **RECOMMENDATIONS:**

Staff recommend the Planning Commission review, discuss and make a recommendation to the Township Board to either approval or denial of the Preliminary Site Plan Application (PSPA23-0001) or table the application and request any additional information deemed necessary for review.

#### Site Plan Review 23-0001 Draft Approval Motion:

The Planning Commission recommends approval of the preliminary site plan (SPA23-0001) to the Township Board with the following conditions; because as conditioned the project meets the site plan review standards A-L in section 36-73 (7) and the additional approval standards of the Village Center district under section 36-187 as discussed at tonight's meeting and as presented in the Staff Report.

The Planning Commission approves the landscaping waiver for the parking lot islands (please state the specific landscaping requirements for which a waiver is granted) because it meets the standards set forth in Section 36-283.

1. Cross access easement for the pedestrian pathway shall be submitted for township attorney approval and recorded prior to issuance of a land use permit for any site improvements.
2. A floating easement to allow cross-access across subject site from adjacent properties should the subject site be redeveloped shall be submitted for township attorney approval and recorded prior to issuance of a land use permit for any site improvements.
3. All sewer fees shall be paid in full prior to issuance of a land use permit for any site improvements.
4. Prior to issuance of a land use permit the applicant shall submit a photometric plan that shows that the intensity of light within a site does not exceed ten (10) footcandles or one (1) footcandle at any property line, except where it abuts a residentially used or zoned site whereby a maximum of 0.5 footcandles is permitted. Applicant shall propose an exterior light that is similar to the suggested Village Center lighting.

5. Final site plan shall indicate required lighting along M-36 pathway and parking area. Light fixtures to match approved Village Center fixtures and shall comply with light intensity requirements.
6. The final site plan shall note that “All lighting shall be turned off between 11:00 PM and Sunrise except when used for commercial and industrial uses, such as in sales, assembly and repair areas, where such use is open for business after 11:00 p.m. but only for so long as such use open for business. Lighting used for security between 11:00 pm and sunrise shall be controlled by a motion sensor.”
7. Prior to issuance of a land use permit the applicant shall receive approval from all required agencies including, but not limited to, Hamburg Township Fire, Utilities Department, Livingston County Drain Commissioner, MDOT, and Livingston County Water Authority.
8. A sign program meeting the standards of Section 36-479 shall be submitted for approval by the Planning Commission prior to issuance of a land use permits for signage.
9. Tree preservation location and details shall be delineated on the final site plan.
10. A change of use permit shall be issued for every occupant of the structure. At the time of permit application, a parking count shall be provided by the property owner indicating the available parking for each use.
11. All sewer fees shall be paid in full prior to issuance of a land use permit for any site improvements.
12. Final site plan shall show required screening of parking area and mechanical and electrical equipment.
13. No outside storage areas are permitted.

**EXHIBITS:**

April 2023 Zoning Board of Appeals meeting minutes

Project plans

Site plan application

Township engineer review letter

Fire marshal review letter

MDOT permit

Utilities letter

LCWA



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Supervisor Pat Hohl Clerk Mike Dolan Treasurer Jason Negri Trustees Bill Hahn, Patricia Hughes, Chuck Menzies, Cindy Michniewicz

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## ZONING BOARD OF APPEALS MEETING

Wednesday, April 12, 2023, at 7:00 PM

Hamburg Township Hall Board Room

### MINUTES

#### CALL TO ORDER

Chair Member Priebe called the meeting to order at 7:00 pm.

#### PLEDGE TO THE FLAG

#### ROLL CALL OF THE BOARD

##### Members PRESENT:

Jim Hollenbeck (Alternate)  
Jason Negri  
Joyce Priebe, Chair  
William Rill

##### ABSENT:

Craig Masserant

#### CONSENT AGENDA

**Approval Motion** made by Treasurer Member Negri, supported by Member Rill, to approve Zoning Board of Appeals Agenda for tonight, as presented.

VOTE: MOTION CARRIED UNANIMOUSLY

**GENERAL CALL TO THE PUBLIC-** no comment from public

#### NEW BUSINESS

##### a. ZBA 2023-005

Owner: William and Jennifer Griffin  
Location: 4363 Old Mill Road  
Parcel ID: 15-16-301-026



Request: Variance application to permit the construction of a covered porch with a 45-foot setback from the ordinary high-water mark of Ibis Lake (50-foot setback required, Section 36-186).

Chair Member Priebe invited the applicant up to the podium to speak. Their contractor Mike came up to represent them since they were detained. Asking for a 5-foot variance setback from the lake due to its curvature. One side of the home allows 50 feet from the water but due to how the waterbody curves, the other side is only 45 feet from the water. Other homes in the neighborhood have homes that are 25 and 30 feet from the water due to the zoning ordinance when their homes were built.

Chair Member Priebe opened the meeting to Amy Steffens, Director of Planning and Zoning. This site has a 2200 square foot home with a 340 sq ft deck in the west rear yard. This 5-foot variance is seeking to build of an unenclosed, covered porch that is only 45 feet from the water body, Ibis Lake. The Standards of Review are as follows:

- 1) **That there are exceptional or extraordinary circumstances or conditions applicable to the property involved that do not apply generally to other properties in the same district or zone.** This is a different type of parcel than the ZBA normally sees when dealing with an OHM setback. This is a small inland lake that is about 5.4 acres in size, and only a dozen houses front onto this lake. Due to the curved shoreline, staff believes there might be a condition that is applicable to this parcel that isn't applicable to other homes on this lake, where an OHM setback would apply.
- 2) **That such variance is necessary for the preservation and enjoyment of a substantial property right possessed by other property in the same zoning and vicinity. The possibility of increased financial return shall not be deemed sufficient to warrant a variance.** Granting this variance will not guarantee the preservation and enjoyment of a substantial property right, since a smaller project could be built on this parcel. Staff believes that the approximately 45 square feet of covered porch in the setback is negligible and would not be an unacceptable deviation from the ordinance.
- 3) **That the granting of such variance or modification will not be materially detrimental to the public welfare or materially detrimental to the public welfare or materially injurious to the property improvements in such zone or district in which the property is located.** This is a small inland lake that is about 5.4 acres in size, and only a dozen houses front onto this lake. There is a significant curvature to the Ibis Lake shoreline here. Staff believes that these two factors are mitigating on this property.
- 4) **That the granting of such variance will not adversely affect the purpose or objectives of the master plan of the Township.** One of the goals of the 2020 Master Plan is to "preserve, protect and enhance whenever possible, the unique and desirable natural amenities of Hamburg Township" particularly our waterfront lots. Due to this being a small inland lake with only a dozen houses situated on it, staff does not believe that granting this variance would adversely affect the master plan.
- 5) **That the condition or situation of the specific piece of property, or the intended use of the said property, for which the variance is sought, is not of so general or recurrent a nature.** Accessory structure setback zoning requirements have been previously relaxed since we recognize that many of our waterfront lots are constrained in size or by the way that they have been previously developed. However, the setback from the OHM applies to all parcels in the township and serves to protect the views from both adjacent parcels and the water.
- 6) **Granting the variance shall not permit the establishment with a district of any use which is not permitted by right within the district.** No, this site is zoned, used and developed for single family residential and will remain to be so even if granted a variance.
- 7) **The requested variance is the minimum necessary to permit reasonable use of the land.** This site is developed and used for its intended purpose as single-family residential. A covered porch that does not comply with the setback requirements of the zoning ordinance would not advance the reasonable use of the property.

Chair Member Priebe asked the ZBA Board members if they had any questions or comments before opening the Public Hearing for comment. She opened the Public Hearing to the audience. No attendees approached the podium, so she closed the hearing.

Treasurer Negri asked the contractor if there were any comments from the neighbors. Mike indicated applicants talked to their neighbors about this variance hearing, asking them to send an email or attend tonight's hearing. Amy said no emails had been received. Mike stated that the reason that this is being proposed for the home (a cement patio and a cover) is to allow the residents to watch grandchildren while in the lake.

Chair Member Priebe said she does not have any issues with the 5-foot variance. Treasurer Negri asked Amy for clarification on the allowance for variances in the floodplain area for NFIP Program. He asked if allowing this variance would impact this program certification. She said no because the ordinary high-water mark and flood elevation are two separate standards. She reminded the ZBA that the Township has never granted a variance from our flood plain standards. She stated that is what would jeopardize our flood insurance rating.

**Approval Motion** made by Member Rill, seconded by Alternative Member Hollenbeck, to approve variance application ZBA 23-005 at 4363 Old Mill Road (TID 15-16-301-026) to permit the construction of a covered porch with a 45-foot setback from the ordinary high-water mark of Ibis Lake (50-foot setback required, Section 36-186).

The variance meets variance standards one (1) through seven (7) of Section 36-137 of the Hamburg Township Zoning Ordinance, and a practical difficulty exists on the subject site when strict compliance with the Zoning Ordinance standards is applied, as discussed at the meeting this evening, and as presented in the staff report. The Board directs Staff to prepare a memorialization of the ZBA's findings for the request.

**VOTE: MOTION CARRIED UNANIMOUSLY**

**b. ZBA 2023-006**

Owner: James and Suzanne Purdy  
Location: 9155 Riverside Drive  
Parcel ID: 15-24-102-099  
Request: Variance application to permit the construction of a two-story addition to an existing dwelling. The addition will have a 5.25-foot south side yard setback (10-foot south side yard setback required, Section 36-186).

Chair Member Priebe invited the applicant to speak at the podium. The applicant, James Purdy, said they purchased the home last year. The home has been abandoned for some 15-20 years now. Currently the home is under 600 square feet in size, so they are looking to create more space. This current home is 5.5' from one side from the side property line. The parcel next door is a vacant lot.

Chair member Priebe opened the public meeting to Amy Steffens, Director of Planning and Zoning. Amy let the ZBA know that this parcel is zoned in the NR (Natural River Residential District). This parcel has different side set backs than a similarly sized lot in the Water Front Residential WFR District would. If approved, this variance request would permit the construction of a 2-story addition to an existing dwelling on the west front façade. The applicant is seeking 5.25 feet where a 10-foot side yard setback is required. The front yard setback is 25 feet, but this parcel does not have the reduced side yard setback if the parcel width is 60 feet or less that is allowed for WFR district. The NR district requires a 125-foot setback in the main stream of Huron River.

Amy read through the Standards of Review from her report. Standards of Review are as follows:



- 1) **That there are exceptional or extraordinary circumstances or conditions applicable to the property involved that do not apply generally to other properties in the same district or zone.** The township zoning ordinance treats the NR district differently because of the significance of the Huron River. One of the marked features of the NR zoning regulations is a required 125-foot setback from the mainstream of the river, which is intended to keep an open vista from the river, provide adequate space for run-off, and maintain an untouched vegetative condition along the river bank. The applicants are not requesting to move closer to the river but rather to maintain the current 5.25-foot south yard setback. Staff believes that a narrow lot such as this in the NR district deserves some relief from the 10-foot side yard setback requirement.
- 2) **That such variance is necessary for the preservation and enjoyment of a substantial property right possessed by the other property in the same zone and vicinity. The possibility of increasing financial return shall not be deemed sufficient to warrant a variance.** Granting this variance request is not necessary for the preservation and enjoyment of substantial property rights, as the site is currently zoned, developed and used for single-family residential. Staff finds this variance request could be an acceptable and minimal deviation from the zoning ordinance and would not be uncharacteristic with the adjacent properties.
- 3) **That the granting of such variance or modification will not be materially detrimental to the public welfare or materially injurious to the property or improvements in such zone or district in which the property is located.** The applicant is proposing a reasonably sized addition, whether the intent is to add to the front of the house or remove the existing structure and rebuild with the same setbacks. Given that the site is 40 feet wide, maintaining 10-foot setbacks would leave a 20-foot-wide building envelope. Staff does not find that the modest addition within the setback would be materially detrimental to the public welfare or materially injurious to adjacent properties. It appears that it will be consistent with the way adjacent lots have developed. Amy reminded the ZBA that the parcel to the south has the development rights as any other parcel in this vicinity.
- 4) **That the granting of such variance will not adversely affect the purpose or objectives of the master plan of the Township.** The Master Plan does give special consideration to the NR district because of the value of the Huron River to the township and the sensitive ecosystem supported by the river. One of the goals of the 2020 master plan is to "protect, preserve, and enhance whenever possible the unique and desirable natural amenities of Hamburg Township." The required setback regulations are designed to help maintain the character of the area.
- 5) **That the condition or situation of the specific piece of property, or the intended use of said property, for which the variance is sought is not permitted by right within the district.** The condition or situation of the specific piece of property is of a general and recurrent nature. The 10-foot side yard setbacks apply to all properties in the NR district and serve to protect aesthetic views from both adjacent parcels and the water.
- 6) **Granting the variance shall not permit the establishment with a district of any use which is not permitted by right within the district.** The site is zoned, developed, and used for single-family residential purposes. Approval of the variance request would not permit the establishment of a use not permitted by right within the district.
- 7) **The requested variance is the minimum necessary to permit reasonable use of the land.** The site currently is used for its intended purposes and therefore the proposed addition is not necessary to permit reasonable use of the land. However, staff finds that the requested variance would be an acceptable and minor deviation from the zoning ordinance requirements.

Chair Member Priebe asked the ZBA Board members if they had any questions or comments before opening the Public Hearing for comment. She opened the Public Hearing to the audience. No attendees approached the podium, so she closed the hearing.

Chair Member Priebe asked the applicant clarifying questions. The applicant said they are using the original basement footings. Amy clarified that the site plan does show the addition to the home expanding the footprint of this home laterally. After some discussion, an approval motion was presented.



Approval Motion made by Treasurer Negri, seconded by Member Rill, to approve variance application ZBA 23-006 at 9155 Riverside Drive (TID 15-24-102-099) to permit the construction of a two-story addition to an existing dwelling. The addition will have a 5.25-foot south side yard setback (10-foot south side yard setback required, Section 36-186). The variance meets variance standards one (1) through seven (7) of Section 36-137 of the Hamburg Township Zoning Ordinance, and a practical difficulty exists on the subject site when strict compliance with the Zoning Ordinance standards is applied, as discussed at the meeting this evening, and as presented in the staff report.

**VOTE: MOTION CARRIED UNANIMOUSLY**

**c. ZBA 2023-007**

Owner: Jet Set Group LLC  
Location: 7749 E M-36  
Parcel ID: 15-25-200-068  
Request: Variance application to permit the relocation of a commercial driveway that will not meet the commercial driveway spacing requirements (Section 36-339).

Chair Member Priebe invited the applicant to speak at the podium. Nick Zander explained he had filed to build a flex space unit on the site. She let them know that they had to file for a driveway variance. Their engineering team has been in contact with MDOT, and he has finally secured preliminary approval based on the engineered drawing that they submitted to Amy on April 11, 2023. MDOT will allow only right-in from M-36.

Chair member Priebe opened the public meeting to Amy Steffens, Director of Planning and Zoning. Amy read through her staff report. She said that on February 28, 2023, the applicant submitted a site plan review application for the construction of a 27,461 square-foot multi-tenant commercial structure and associated parking. This proposed project would relocate the existing driveway location approximately 90 feet to the west to accommodate the multi-use building on the west side of the parcel and parking on the east. The relocated driveway will be approximately 70 feet (centerline to centerline) from the curb cut for commercial use to the east. This report was written before MDOT gave their approval this morning so these stipulations might not be exact.

Section 36-339 of the Zoning Ordinance requires that the minimum spacing between two commercial driveways on the same side of the road shall be determined based upon posted speed limits along the parcel frontage. The posted speed limit along this stretch of M-36 is 40 miles per hour, which requires a minimum driveway spacing of 225 ft, from centerline to centerline. She then walked the ZBA Board members through the Standards of Review, according to Section 36-137 of the Hamburg Township Zoning Ordinance which are as follows:

- 1) **That there are exceptional or extraordinary circumstances or conditions applicable to the property involved that do not apply generally to other properties in the same district or zone.** The need for this variance is due to the size of the existing lot and the location of the existing driveways on the properties adjacent to the subject site. The subject site is only 237 feet wide and the location of the existing access to the parking area at 7785 M-36 is on the property boundary. No commercial access driveway on the subject site could meet the separation requirement of 225 feet or greater (Section 36-339 (a) (1)). There is no place to relocate the driveway. When the project at 7785 M-36 was approved the Township did not require an easement to allow future adjacent properties to utilize their access point on M-36. Staff will recommend to the Planning Commission that an ingress/egress easement be recorded on the subject site as a condition of the site plan approval.
- 2) **That such variance is necessary for the preservation and enjoyment of a substantial property right possessed by the other property in the same zone and vicinity. The possibility of increasing financial return**

**shall not be deemed sufficient to warrant a variance.** The proposed variance request would allow the applicant to relocate an existing driveway location for the new use on the property. There is no compliant location on this site for a driveway. While the applicant could make use of the existing driveway off M-36, staff believe that relocating the driveway to the east will make the parking area for the proposed commercial use more efficient. The variance will allow site development to be more in-line with the Village Center requirements for aesthetics and placement of building.

- 3) **That the granting of such variance or modification will not be materially detrimental to the public welfare or materially injurious to the property or improvements in such zone or district in which the property is located.** The applicant is not requesting a new curb cut but rather relocating the curb cut to make the site design for a new commercial structure more orderly. The Planning Commission will review the site design during the site plan approval. Additionally, MDOT must approve the proposed driveway location, as Mr. Zander has stated they have.
- 4) **That the granting of such variance will not adversely affect the purpose or objectives of the master plan of the Township.** The subject site is zoned Village Center (VC). Commercial uses are allowed in this zoning district. The future land use designation for the subject site is Village Gateway District on the southern portion of the parcel, and industrial uses on the north. The purpose of the Village Gateway district is "to provide for community-side retail uses while integrating with smaller scale shops." The proposed use of the site is a multi-tenant commercial building and associated parking. The existing curb cut that served the previous restaurant is approximately 200 feet from the driveway to the west and 175 feet from the driveway to the east. There is no location on this site that would comply with the 225-foot minimum driveway spacing requirement.
- 5) **That the condition or situation of the specific piece of property, or the intended use of said property, for which the variance is sought is not permitted by right within the district.** As stated above, the parcel is not able to accommodate a driveway in any location that complies with the minimum driveway spacing requirements.
- 6) **Granting the variance shall not permit the establishment with a district of any use which is not permitted by right within the district.** This site, Zoned Village Center, will be developed and used for its intended purpose with all required site plan approvals. Granting of this variance will not establish a use which is not permitted by right within this district.
- 7) **The requested variance is the minimum necessary to permit reasonable use of the land.** While the existed driveway could be utilized for a commercial use, its placement would limit the reconstruction of an orderly parking lot design that promotes ease of ingress and egress and would further the goals of the Village Center Zoning District for placement of building and aesthetics.

Chair Member Priebe asked the ZBA Board members if they had any questions or comments. Member Hollenbeck asked Amy if she approved the MDOT requirements for this site. Amy said she has no opinion one way or the other on this situation. She was glad to see that MDOT was going to allow them to relocate the driveway that made the most sense with the Village Center district. Amy said that she sent this MDOT approval onto the Township Engineer for his review of the site plan approval letter.

Chair Member Priebe opened the Public Hearing to the audience. No attendees approached the podium, so she closed the hearing. She then asked the ZBA Board Members if they had any questions or comments.

Treasurer Negri and Member Priebe said they were good with this variance. Member Negri asked if the neighboring property owners would share driveway spaces. Mr. Zander said he had tried to work with the neighbors, but there is no interest in a shared driveway.

Chair Member Priebe asked for some clarification regarding the detention pond and dumpster area in the rear of the property.



**Approval Motion** by Treasurer Member Negri, seconded by Member Rill, that the Zoning Board of Appeals approves variance request ZBA 23-007 at 7749 E. M-36 to allow the commercial driveway for this lot to be less than 225 feet from the commercial driveways to the east and the west because the variance request meets variance standards one (1) through seven (7) of Section 36-137 of the Hamburg Township Zoning Ordinance, and a practical difficulty exists on the subject site when strict compliance with the Zoning Ordinance standards is applied, as discussed at tonight meeting and as presented in the staff report.

**VOTE: MOTION CARRIED UNANIMOUSLY**

#### **APPROVAL OF THE MEETING MINUTES**

**Motion to approve** the March 8, 2023, Zoning Board of Appeals Meeting Minutes as presented. Motion made by Member Rill, seconded by Member Negri.

**VOTE: MOTION CARRIED UNANIMOUSLY**

#### **ADJOURNMENT**

Motion to adjourn at 7:45 pm.

Motion made by Member Alternative Member Hollenbeck, seconded by Member Rill.

**VOTE: MOTION CARRIED UNANIMOUSLY**

Respectfully submitted,

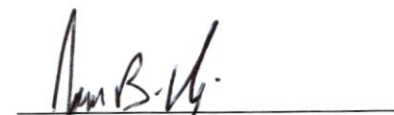
**Lisa Perschke**

*Planning/Zoning Coordinator & Recording Secretary*

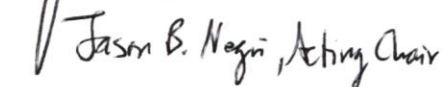
**Amy Steffens**

*Planning & Zoning Director*

The minutes were approved as presented/corrected: 5/10/2023



Joyce Priebe, Chair



Jason B. Negri, Acting Chair



SHEET INDEX	
CONTENTS	SHEET NO.
COVER AND INDEX	G1.1
LEGEND AND GENERAL NOTES	C1.1
BOUNDARY AND TOPOGRAPHIC SURVEY	C1.2
DEMOLITION PLAN	C1.3
SITE PLAN	C2.1
GRADING AND EROSION CONTROL PLAN	C3.1
UTILITY PLAN	C4.1
TURNING ROUTE PLAN	C5.1
PAVEMENT AND MISCELLANEOUS DETAILS	C6.1
TRAFFIC AND EROSION DETAILS	C6.2
WATER MAIN STANDARD DETAILS	W1-W3
SANITARY SEWER DETAILS	U1
TITLE SHEET	T1.1
BARRIER FREE STANDARDS	T1.2
FOUNDATION PLAN	A1.1
FLOOR PLAN	A1.2
EXTERIOR ELEVATIONS	A1.3
WALL SECTIONS	A1.4
REFLECTED CEILING PLAN	A1.5
NOTES	N1.1
LANDSCAPE PLAN	LA1.1
PHOTOMETRIC CALCULATIONS	1-5

The map displays the Great Lakes region, with a focus on the project site location. A yellow line traces a route from the northwest, passing through Green Bay, Wisconsin, and Milwaukee, Wisconsin, then heading east through Grand Rapids, Michigan, and Lansing, Michigan. A grey box labeled 'PROJECT SITE' is located near Lansing, Michigan. The map includes major cities such as Green Bay, Milwaukee, Chicago, Detroit, and Cleveland. It also shows Lake Michigan, Lake Huron, and Lake Erie. A scale bar in miles is provided in the top right corner.

[illegible][illegible]

**ZANDER COMPANIES  
7879 WINANS LAKE RD  
BRIGHTON, MI 48116**

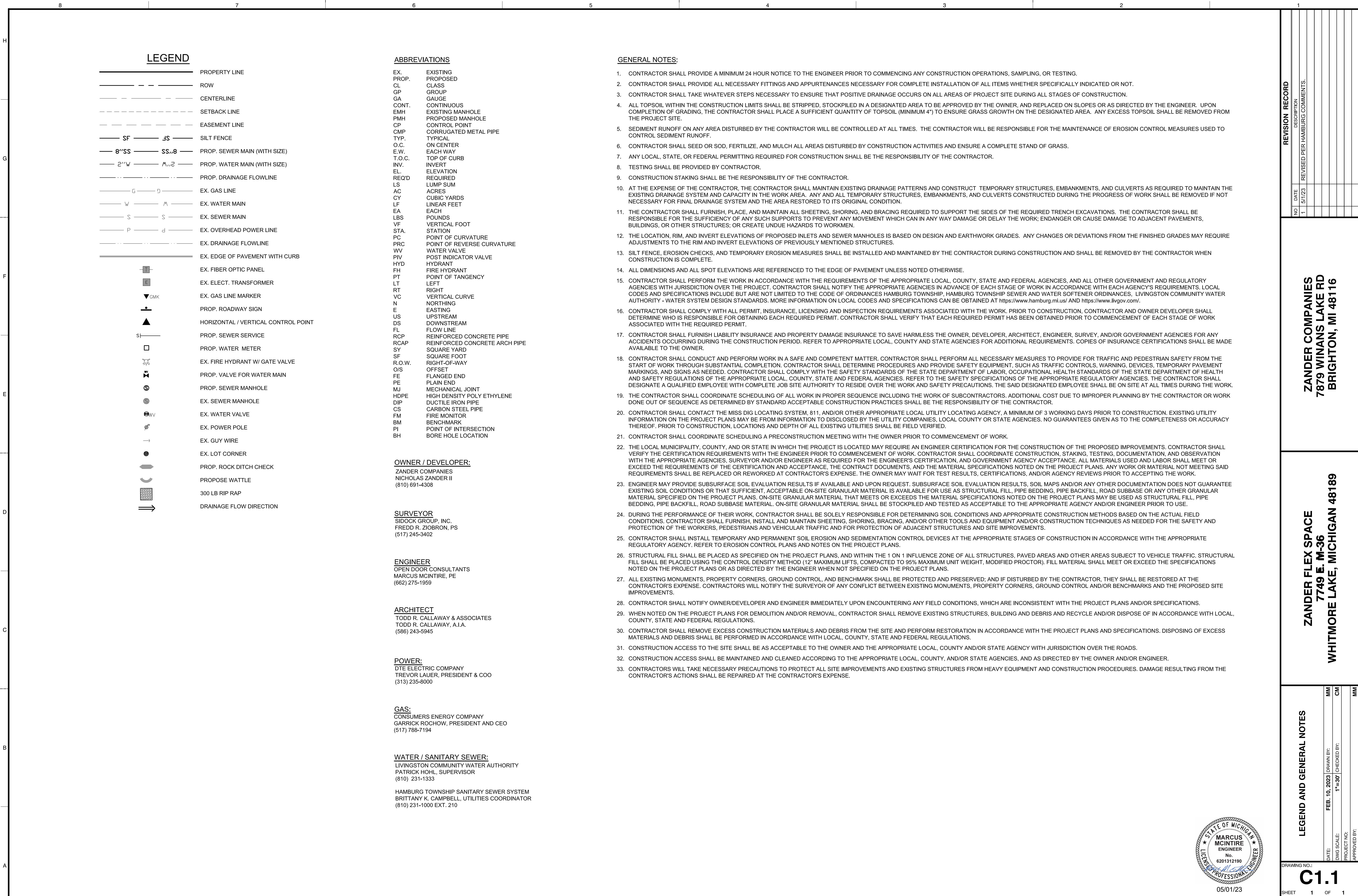
**ZANDER FLEX SPACE  
7749 E. M-36  
WHITMORE LAKE, MICHIGAN 48189**

COVER AND INDEX

DATE:	FEB. 10, 2023	DRAWN BY:	MM
DWG SCALE:	1" = 30'	CHECKED BY:	CM
PROJECT NO:			
APPROVED BY:			MM

DRAWING NO.:  
**G1.1**  
SHEET 1 OF 1





LEGEND

	PROPERTY LINE
	ROW
	CENTERLINE
	SETBACK LINE
	EASEMENT LINE
	SILT FENCE
	PROP. SEWER MAIN (WITH SIZE)
	PROP. WATER MAIN (WITH SIZE)
	PROP. DRAINAGE FLOWLINE
	EX. GAS LINE
	EX. WATER MAIN
	EX. SEWER MAIN
	EX. OVERHEAD POWER LINE
	EX. DRAINAGE FLOWLINE
	EX. EDGE OF PAVEMENT WITH CURB
	EX. FIBER OPTIC PANEL
	EX. ELECT. TRANSFORMER
	EX. GAS LINE MARKER
	PROP. ROADWAY SIGN
	HORIZONTAL / VERTICAL CONTROL POINT
	PROP. SEWER SERVICE
	PROP. WATER METER
	EX. FIRE HYDRANT W/ GATE VALVE
	PROP. VALVE FOR WATER MAIN
	PROP. SEWER MANHOLE
	EX. SEWER MANHOLE
	EX. WATER VALVE
	EX. POWER POLE
	EX. GUY WIRE
	EX. LOT CORNER
	PROP. ROCK DITCH CHECK
	PROPOSE WATTLE
	300 LB RIP RAP
	DRAINAGE FLOW DIRECTION

ABBREVIATIONS

EX.	EXISTING
PROP.	PROPOSED
CL	CLASS
GP	GROUP
GA	GAUGE
CONT.	CONTINUOUS
EMH	EXISTING MANHOLE
PMH	PROPOSED MANHOLE
CP	CONTROL POINT
CMP	CORRUGATED METAL PIPE
TYP.	TYPICAL
O.C.	ON CENTER
E.W.	EACH WAY
T.O.C.	TOP OF CURB
INV.	INVERT
EL.	ELEVATION
REQ'D	REQUIRED
LS	LUMP SUM
AC	ACRES
CY	CUBIC YARDS
LF	LINEAR FEET
EA	EACH
LBS	POUNDS
VF	VERTICAL FOOT
STA.	STATION
PC	POINT OF CURVATURE
PRC	POINT OF REVERSE CURVATURE
WV	WATER VALVE
PIV	POST INDICATOR VALVE
HYD	HYDRANT
FH	FIRE HYDRANT
PT	POINT OF TANGENCY
LT	LEFT
RT	RIGHT
VC	VERTICAL CURVE
N	NORTHING
E	EASTING
US	UPSTREAM
DS	DOWNSTREAM
FL	FLOW LINE
RCP	REINFORCED CONCRETE PIPE
RCAP	REINFORCED CONCRETE ARCH PIPE
SY	SQUARE YARD
SF	SQUARE FOOT
R.O.W.	RIGHT-OF-WAY
O/S	OFFSET
FE	FLANGED END
PE	PLAIN END
MJ	MECHANICAL JOINT
HDPE	HIGH DENSITY POLY ETHYLENE
DIP	DUCTILE IRON PIPE
CS	CARBON STEEL PIPE
FM	FIRE MONITOR
BM	BENCHMARK
PI	POINT OF INTERSECTION
BH	BORE HOLE LOCATION

OWNER / DEVELOPER:

ZANDER COMPANIES  
NICHOLAS ZANDER II  
(810) 691-4308

SURVEYOR

SIDOCK GROUP, INC.  
FREDD R. ZIOBRON, PS  
(517) 245-3402

ENGINEER

OPEN DOOR CONSULTANTS  
MARCUS MCINTIRE, PE  
(662) 275-1959

ARCHITECT

TODD R. CALLAWAY & ASSOCIATES  
TODD R. CALLAWAY, A.I.A.  
(586) 243-5945

POWER:

DTE ELECTRIC COMPANY  
TREVOR LAUER, PRESIDENT & COO  
(313) 235-8000

GAS:

CONSUMERS ENERGY COMPANY  
GARRICK ROCHOW, PRESIDENT AND CEO  
(517) 788-7194

WATER / SANITARY SEWER:

LIVINGSTON COMMUNITY WATER AUTHORITY  
PATRICK HOHL, SUPERVISOR  
(810) 231-1333

HAMBURG TOWNSHIP SANITARY SEWER SYSTEM  
BRITTANY K. CAMPBELL, UTILITIES COORDINATOR  
(810) 231-1000 EXT. 210

GENERAL NOTES:

- CONTRACTOR SHALL PROVIDE A MINIMUM 24 HOUR NOTICE TO THE ENGINEER PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS, SAMPLING, OR TESTING.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF ALL ITEMS WHETHER SPECIFICALLY INDICATED OR NOT.
- CONTRACTOR SHALL TAKE WHATEVER STEPS NECESSARY TO ENSURE THAT POSITIVE DRAINAGE OCCURS ON ALL AREAS OF PROJECT SITE DURING ALL STAGES OF CONSTRUCTION.
- ALL TOPSOIL WITHIN THE CONSTRUCTION LIMITS SHALL BE STRIPPED, STOCKPILED IN A DESIGNATED AREA TO BE APPROVED BY THE OWNER, AND REPLACED ON SLOPES OR AS DIRECTED BY THE ENGINEER. UPON COMPLETION OF GRADING, THE CONTRACTOR SHALL PLACE A SUFFICIENT QUANTITY OF TOPSOIL (MINIMUM 4") TO ENSURE GRASS GROWTH ON THE DESIGNATED AREA. ANY EXCESS TOPSOIL SHALL BE REMOVED FROM THE PROJECT SITE.
- SEDIMENT RUNOFF ON ANY AREA DISTURBED BY THE CONTRACTOR WILL BE CONTROLLED AT ALL TIMES. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE MAINTENANCE OF EROSION CONTROL MEASURES USED TO CONTROL SEDIMENT RUNOFF.
- CONTRACTOR SHALL SEED OR SOD, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES AND ENSURE A COMPLETE STAND OF GRASS.
- ANY LOCAL, STATE, OR FEDERAL PERMITTING REQUIRED FOR CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- TESTING SHALL BE PROVIDED BY CONTRACTOR.
- CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- AT THE EXPENSE OF THE CONTRACTOR, THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE PATTERNS AND CONSTRUCT TEMPORARY STRUCTURES, EMBANKMENTS, AND CULVERTS AS REQUIRED TO MAINTAIN THE EXISTING DRAINAGE SYSTEM AND CAPACITY IN THE WORK AREA. ANY AND ALL TEMPORARY STRUCTURES, EMBANKMENTS, AND CULVERTS CONSTRUCTED DURING THE PROGRESS OF WORK SHALL BE REMOVED IF NOT NECESSARY FOR FINAL DRAINAGE SYSTEM AND THE AREA RESTORED TO ITS ORIGINAL CONDITION.
- THE CONTRACTOR SHALL FURNISH, PLACE, AND MAINTAIN ALL SHEETING, SHORING, AND BRACING REQUIRED TO SUPPORT THE SIDES OF THE REQUIRED TRENCH EXCAVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUFFICIENCY OF ANY SUCH SUPPORTS TO PREVENT ANY MOVEMENT WHICH CAN IN ANY WAY DAMAGE OR DELAY THE WORK; ENDANGER OR CAUSE DAMAGE TO ADJACENT PAVEMENTS, BUILDINGS, OR OTHER STRUCTURES; OR CREATE UNDUE HAZARDS TO WORKMEN.
- THE LOCATION, RIM, AND INVERT ELEVATIONS OF PROPOSED INLETS AND SEWER MANHOLES IS BASED ON DESIGN AND EARTHWORK GRADES. ANY CHANGES OR DEVIATIONS FROM THE FINISHED GRADES MAY REQUIRE ADJUSTMENTS TO THE RIM AND INVERT ELEVATIONS OF PREVIOUSLY MENTIONED STRUCTURES.
- SILT FENCE, EROSION CHECKS, AND TEMPORARY EROSION MEASURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND SHALL BE REMOVED BY THE CONTRACTOR WHEN CONSTRUCTION IS COMPLETE.
- ALL DIMENSIONS AND ALL SPOT ELEVATIONS ARE REFERENCED TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPROPRIATE LOCAL, COUNTY, STATE AND FEDERAL AGENCIES, AND ALL OTHER GOVERNMENT AND REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT. CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCIES IN ADVANCE OF EACH STAGE OF WORK IN ACCORDANCE WITH EACH AGENCY'S REQUIREMENTS. LOCAL CODES AND SPECIFICATIONS INCLUDE BUT ARE NOT LIMITED TO THE CODE OF ORDINANCES HAMBURG TOWNSHIP, HAMBURG TOWNSHIP SEWER AND WATER SOFTENER ORDINANCES, LIVINGSTON COMMUNITY WATER AUTHORITY - WATER SYSTEM DESIGN STANDARDS. MORE INFORMATION ON LOCAL CODES AND SPECIFICATIONS CAN BE OBTAINED AT <https://www.hamburg.mi.us/> AND <https://www.livgov.com/>.
- CONTRACTOR SHALL COMPLY WITH ALL PERMIT, INSURANCE, LICENSING AND INSPECTION REQUIREMENTS ASSOCIATED WITH THE WORK. PRIOR TO CONSTRUCTION, CONTRACTOR AND OWNER DEVELOPER SHALL DETERMINE WHO IS RESPONSIBLE FOR OBTAINING EACH REQUIRED PERMIT. CONTRACTOR SHALL VERIFY THAT EACH REQUIRED PERMIT HAS BEEN OBTAINED PRIOR TO COMMENCEMENT OF EACH STAGE OF WORK ASSOCIATED WITH THE REQUIRED PERMIT.
- CONTRACTOR SHALL FURNISH LIABILITY INSURANCE AND PROPERTY DAMAGE INSURANCE TO SAVE HARMLESS THE OWNER, DEVELOPER, ARCHITECT, ENGINEER, SURVEY, AND/OR GOVERNMENT AGENCIES FOR ANY ACCIDENTS OCCURRING DURING THE CONSTRUCTION PERIOD. REFER TO APPROPRIATE LOCAL, COUNTY AND STATE AGENCIES FOR ADDITIONAL REQUIREMENTS. COPIES OF INSURANCE CERTIFICATIONS SHALL BE MADE AVAILABLE TO THE OWNER.
- CONTRACTOR SHALL CONDUCT AND PERFORM WORK IN A SAFE AND COMPETENT MATTER. CONTRACTOR SHALL PERFORM ALL NECESSARY MEASURES TO PROVIDE FOR TRAFFIC AND PEDESTRIAN SAFETY FROM THE START OF WORK THROUGH SUBSTANTIAL COMPLETION. CONTRACTOR SHALL DETERMINE PROCEDURES AND PROVIDE SAFETY EQUIPMENT, SUCH AS TRAFFIC CONTROLS, WARNING DEVICES, TEMPORARY PAVEMENT MARKINGS, AND SIGNS AS NEEDED. CONTRACTOR SHALL COMPLY WITH THE SAFETY STANDARDS OF THE STATE DEPARTMENT OF LABOR, OCCUPATIONAL HEALTH STANDARDS OF THE STATE DEPARTMENT OF HEALTH AND SAFETY REGULATIONS OF THE APPROPRIATE LOCAL, COUNTY, STATE AND FEDERAL AGENCIES. REFER TO THE SAFETY SPECIFICATIONS OF THE APPROPRIATE REGULATORY AGENCIES. THE CONTRACTOR SHALL DESIGNATE A QUALIFIED EMPLOYEE WITH COMPLETE JOB SITE AUTHORITY TO RESIDE OVER THE WORK AND SAFETY PRECAUTIONS. THE SAID DESIGNATED EMPLOYEE SHALL BE ON SITE AT ALL TIMES DURING THE WORK.
- THE CONTRACTOR SHALL COORDINATE SCHEDULING OF ALL WORK IN PROPER SEQUENCE INCLUDING THE WORK OF SUBCONTRACTORS. ADDITIONAL COST DUE TO IMPROPER PLANNING BY THE CONTRACTOR OR WORK DONE OUT OF SEQUENCE AS DETERMINED BY STANDARD ACCEPTABLE CONSTRUCTION PRACTICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL CONTACT THE MISS DIG LOCATING SYSTEM, 811, AND/OR OTHER APPROPRIATE LOCAL UTILITY LOCATING AGENCY, A MINIMUM OF 3 WORKING DAYS PRIOR TO CONSTRUCTION. EXISTING UTILITY INFORMATION ON THE PROJECT PLANS MAY BE FROM INFORMATION TO DISCLOSED BY THE UTILITY COMPANIES, LOCAL COUNTY OR STATE AGENCIES. NO GUARANTEES GIVEN AS TO THE COMPLETENESS OR ACCURACY THEREOF. PRIOR TO CONSTRUCTION, LOCATIONS AND DEPTH OF ALL EXISTING UTILITIES SHALL BE FIELD VERIFIED.
- CONTRACTOR SHALL COORDINATE SCHEDULING A PRECONSTRUCTION MEETING WITH THE OWNER PRIOR TO COMMENCEMENT OF WORK.
- THE LOCAL MUNICIPALITY, COUNTY, AND OR STATE IN WHICH THE PROJECT IS LOCATED MAY REQUIRE AN ENGINEER CERTIFICATION FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. CONTRACTOR SHALL VERIFY THE CERTIFICATION REQUIREMENTS WITH THE ENGINEER PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL COORDINATE CONSTRUCTION, STAKING, TESTING, DOCUMENTATION, AND OBSERVATION WITH THE APPROPRIATE AGENCIES. SURVEYOR AND/OR ENGINEER AS REQUIRED FOR THE ENGINEER'S CERTIFICATION, AND GOVERNMENT AGENCY ACCEPTANCE. ALL MATERIALS USED AND LABOR SHALL MEET OR EXCEED THE REQUIREMENTS OF THE CERTIFICATION AND ACCEPTANCE. THE CONTRACT DOCUMENTS, AND THE MATERIAL SPECIFICATIONS NOTED ON THE PROJECT PLANS. ANY WORK OR MATERIAL NOT MEETING SAID REQUIREMENTS SHALL BE REPLACED OR REWORKED AT CONTRACTOR'S EXPENSE. THE OWNER MAY WAIT FOR TEST RESULTS, CERTIFICATIONS, AND/OR AGENCY REVIEWS PRIOR TO ACCEPTING THE WORK.
- ENGINEER MAY PROVIDE SUBSURFACE SOIL EVALUATION RESULTS IF AVAILABLE AND UPON REQUEST. SUBSURFACE SOIL EVALUATION RESULTS, SOIL MAPS AND/OR ANY OTHER DOCUMENTATION DOES NOT GUARANTEE EXISTING SOIL CONDITIONS OR THAT SUFFICIENT, ACCEPTABLE ON-SITE GRANULAR MATERIAL IS AVAILABLE FOR USE AS STRUCTURAL FILL, PIPE BEDDING, PIPE BACKFILL, ROAD SUBBASE OR ANY OTHER GRANULAR MATERIAL SPECIFIED ON THE PROJECT PLANS. ON-SITE GRANULAR MATERIAL THAT MEETS OR EXCEEDS THE MATERIAL SPECIFICATIONS NOTED ON THE PROJECT PLANS MAY BE USED AS STRUCTURAL FILL, PIPE BEDDING, PIPE BACKFILL, ROAD SUBBASE MATERIAL. ON-SITE GRANULAR MATERIAL SHALL BE STOCKPILED AND TESTED AS ACCEPTABLE TO THE APPROPRIATE AGENCY AND/OR ENGINEER PRIOR TO USE.
- DURING THE PERFORMANCE OF THEIR WORK, CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING SOIL CONDITIONS AND APPROPRIATE CONSTRUCTION METHODS BASED ON THE ACTUAL FIELD CONDITIONS. CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN SHEETING, SHORING, BRACING, AND/OR OTHER TOOLS AND EQUIPMENT AND/OR CONSTRUCTION TECHNIQUES AS NEEDED FOR THE SAFETY AND PROTECTION OF THE WORKERS, PEDESTRIANS AND VEHICULAR TRAFFIC AND FOR PROTECTION OF ADJACENT STRUCTURES AND SITE IMPROVEMENTS.
- CONTRACTOR SHALL INSTALL TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENTATION CONTROL DEVICES AT THE APPROPRIATE STAGES OF CONSTRUCTION IN ACCORDANCE WITH THE APPROPRIATE REGULATORY AGENCY. REFER TO EROSION CONTROL PLANS AND NOTES ON THE PROJECT PLANS.
- STRUCTURAL FILL SHALL BE PLACED AS SPECIFIED ON THE PROJECT PLANS, AND WITHIN THE 1 ON 1 INFLUENCE ZONE OF ALL STRUCTURES, PAVED AREAS AND OTHER AREAS SUBJECT TO VEHICLE TRAFFIC. STRUCTURAL FILL SHALL BE PLACED USING THE CONTROL DENSITY METHOD (12' MAXIMUM LIFTS, COMPACTED TO 95% MAXIMUM UNIT WEIGHT, MODIFIED PROCTOR). FILL MATERIAL SHALL MEET OR EXCEED THE SPECIFICATIONS NOTED ON THE PROJECT PLANS OR AS DIRECTED BY THE ENGINEER WHEN NOT SPECIFIED ON THE PROJECT PLANS.
- ALL EXISTING MONUMENTS, PROPERTY CORNERS, GROUND CONTROL, AND BENCHMARK SHALL BE PROTECTED AND PRESERVED; AND IF DISTURBED BY THE CONTRACTOR, THEY SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE. CONTRACTORS WILL NOTIFY THE SURVEYOR OF ANY CONFLICT BETWEEN EXISTING MONUMENTS, PROPERTY CORNERS, GROUND CONTROL AND/OR BENCHMARKS AND THE PROPOSED SITE IMPROVEMENTS.
- CONTRACTOR SHALL NOTIFY OWNER/DEVELOPER AND ENGINEER IMMEDIATELY UPON ENCOUNTERING ANY FIELD CONDITIONS, WHICH ARE INCONSISTENT WITH THE PROJECT PLANS AND/OR SPECIFICATIONS.
- WHEN NOTED ON THE PROJECT PLANS FOR DEMOLITION AND/OR REMOVAL, CONTRACTOR SHALL REMOVE EXISTING STRUCTURES, BUILDING AND DEBRIS AND RECYCLE AND/OR DISPOSE OF IN ACCORDANCE WITH LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS.
- CONTRACTOR SHALL REMOVE EXCESS CONSTRUCTION MATERIALS AND DEBRIS FROM THE SITE AND PERFORM RESTORATION IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. DISPOSING OF EXCESS MATERIALS AND DEBRIS SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS.
- CONSTRUCTION ACCESS TO THE SITE SHALL BE AS ACCEPTABLE TO THE OWNER AND THE APPROPRIATE LOCAL, COUNTY AND/OR STATE AGENCY WITH JURISDICTION OVER THE ROADS.
- CONSTRUCTION ACCESS SHALL BE MAINTAINED AND CLEANED ACCORDING TO THE APPROPRIATE LOCAL, COUNTY, AND/OR STATE AGENCIES, AND AS DIRECTED BY THE OWNER AND/OR ENGINEER.
- CONTRACTORS WILL TAKE NECESSARY PRECAUTIONS TO PROTECT ALL SITE IMPROVEMENTS AND EXISTING STRUCTURES FROM HEAVY EQUIPMENT AND CONSTRUCTION PROCEDURES. DAMAGE RESULTING FROM THE CONTRACTOR'S ACTIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

REVISION RECORD	NO.	DATE	DESCRIPTION
	1	5/1/23	REVISED PER HAMBURG COMMENTS.

ZANDER COMPANIES  
7879 WINANS LAKE RD  
BRIGHTON, MI 48116

ZANDER FLEX SPACE  
7749 E. M-36  
WHITMORE LAKE, MICHIGAN 48189

DATE:	FEB. 10, 2023	DRAWN BY:	MM
DWG SCALE:	1"=30'	CHECKED BY:	CM
PROJECT NO.:			
APPROVED BY:	MM		

LEGEND AND GENERAL NOTES

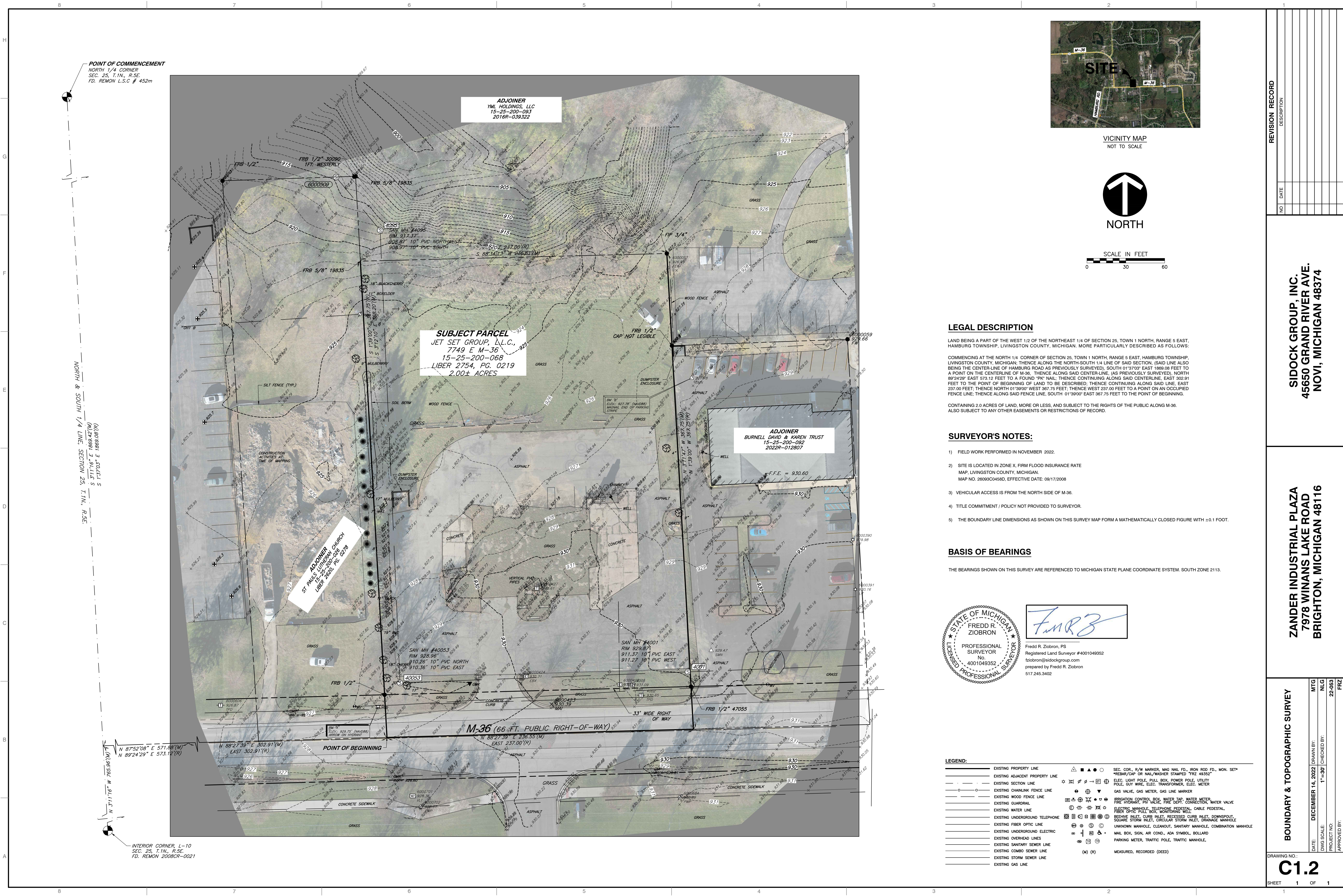
DRAWING NO.:  
**C1.1**

05/01/23

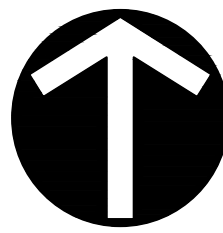
SHEET 1 OF 1



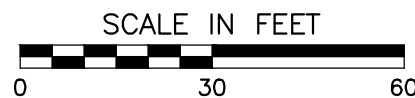




VICINITY MAP  
NOT TO SCALE



NORTH



LEGAL DESCRIPTION

LAND BEING A PART OF THE WEST 1/2 OF THE NORTHEAST 1/4 OF SECTION 25, TOWN 1 NORTH, RANGE 5 EAST, HAMBURG TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN. MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 25, TOWN 1 NORTH, RANGE 5 EAST, HAMBURG TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN; THENCE ALONG THE NORTH-SOUTH 1/4 LINE OF SAID SECTION, (SAID LINE ALSO BEING THE CENTER LINE OF HAMBURG ROAD AS PREVIOUSLY SURVEYED), SOUTH 01°37'03" EAST 1869.08 FEET TO A POINT ON THE CENTERLINE OF M-36, THENCE ALONG SAID CENTERLINE, (AS PREVIOUSLY SURVEYED), NORTH 89°24'29" EAST 573.12 FEET TO A FOUND "PK" NAIL; THENCE CONTINUING ALONG SAID CENTERLINE, EAST 302.91 FEET TO THE POINT OF BEGINNING OF LAND TO BE DESCRIBED; THENCE CONTINUING ALONG SAID LINE, EAST 237.00 FEET; THENCE NORTH 01°39'00" WEST 367.75 FEET; THENCE WEST 237.00 FEET TO A POINT ON AN OCCUPIED FENCE LINE; THENCE ALONG SAID FENCE LINE, SOUTH 01°39'00" EAST 367.75 FEET TO THE POINT OF BEGINNING.

CONTAINING 2.0 ACRES OF LAND, MORE OR LESS, AND SUBJECT TO THE RIGHTS OF THE PUBLIC ALONG M-36. ALSO SUBJECT TO ANY OTHER EASEMENTS OR RESTRICTIONS OF RECORD.

SURVEYOR'S NOTES:

- 1) FIELD WORK PERFORMED IN NOVEMBER 2022.
- 2) SITE IS LOCATED IN ZONE X, FIRM FLOOD INSURANCE RATE MAP, LIVINGSTON COUNTY, MICHIGAN. MAP NO. 26093C0458D, EFFECTIVE DATE: 09/17/2008
- 3) VEHICULAR ACCESS IS FROM THE NORTH SIDE OF M-36.
- 4) TITLE COMMITMENT / POLICY NOT PROVIDED TO SURVEYOR.
- 5) THE BOUNDARY LINE DIMENSIONS AS SHOWN ON THIS SURVEY MAP FORM A MATHEMATICALLY CLOSED FIGURE WITH ±0.1 FOOT.

BASIS OF BEARINGS

THE BEARINGS SHOWN ON THIS SURVEY ARE REFERENCED TO MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE 2113.



Fredd R. Ziobron, PS  
Registered Land Surveyor #4001049352  
ziobron@sidockgroup.com  
prepared by Fred R. Ziobron  
517.245.3402

LEGEND:

EXISTING PROPERTY LINE	SEC. COR., R/W MARKER, MAG NAIL, FD., IRON ROD FD., MON. SET*
EXISTING ADJACENT PROPERTY LINE	*REBAR/CAP OR NAIL/WASHER STAMPED "TRZ 49352"
EXISTING SECTION LINE	ELEC. LIGHT POLE, PULL BOX, POWER POLE, UTILITY POLE, GUY WIRE, ELEC. TRANSFORMER, ELEC. METER
EXISTING CHAINLINK FENCE LINE	GAS VALVE, GAS METER, GAS LINE MARKER
EXISTING WOOD FENCE LINE	IRRIGATION CONTROL BOX, WATER TAP, WATER METER, FIRE HYDRANT, FRY VALVE, FIRE DEPT. CONNECTION, WATER VALVE
EXISTING GUARDRAIL	ELECTRIC MANHOLE, TELEPHONE, PEDESTAL, CABLE PEDESTAL, FIBER OPTIC, PULL BOX, MONITORING WELL
EXISTING WATER LINE	BEDWIRE INLET, CURB INLET, RECESSED CURB INLET, DOWNSPOUT, SQUARE STORM INLET, CIRCULAR STORM INLET, DRAINAGE MANHOLE
EXISTING UNDERGROUND TELEPHONE	UNKNOWN MANHOLE, CLEANOUT, SANITARY MANHOLE, COMBINATION MANHOLE
EXISTING FIBER OPTIC LINE	MAIL BOX, SIGN, AIR COND., ADA SYMBOL, BOLLARD
EXISTING UNDERGROUND ELECTRIC	PARKING METER, TRAFFIC POLE, TRAFFIC MANHOLE,
EXISTING OVERHEAD LINES	
EXISTING SANITARY SEWER LINE	
EXISTING COMBO SEWER LINE	
EXISTING STORM SEWER LINE	
EXISTING GAS LINE	

REVISION RECORD

NO.	DATE	DESCRIPTION

SIDOCK GROUP, INC.

45650 GRAND RIVER AVE.

NOVI, MICHIGAN 48374

ZANDER INDUSTRIAL PLAZA

7978 WINANS LAKE ROAD

BRIGHTON, MICHIGAN 48116

BOUNDARY & TOPOGRAPHIC SURVEY

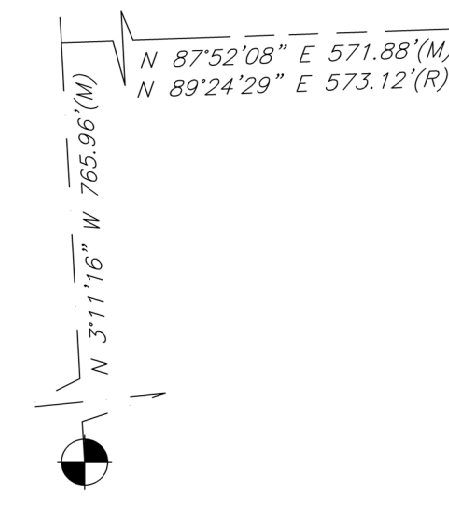
DATE:	DECEMBER 14, 2022	DRAWN BY:	MTG
DWG SCALE:	1"=30'	CHECKED BY:	NLG
PROJECT NO:	22-053	APPROVED BY:	FRZ

DRAWING NO:

C1.2

SHEET 1 OF 1





**SUBJECT PARCEL**  
JET SET GROUP, L.L.C.,  
7749 E M-36  
15-25-200-068  
LIBER 2754, PG. 0219  
2.00± ACRES

GENOA GROUP LLC  
4715-25-200-065  
ZONE VC

$$T.E. = 930.60$$


 AREA OF DEMOLITION

[illegible]

**ZANDER COMPANIES  
7879 WINANS LAKE RD  
BRIGHTON, MI 48116**

**ZANDER FLEX SPACE**  
7749 E. M-36  
**WHITMORE LAKE, MICHIGAN 48189**

## DEMOLITION PLAN

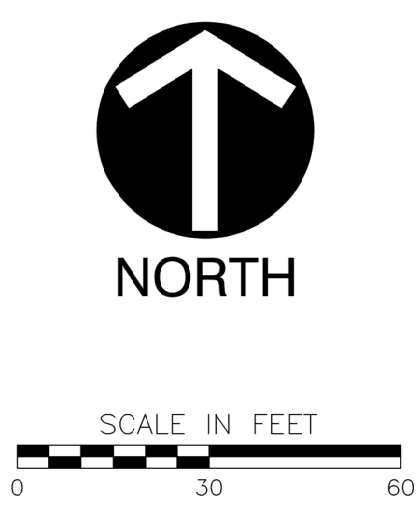
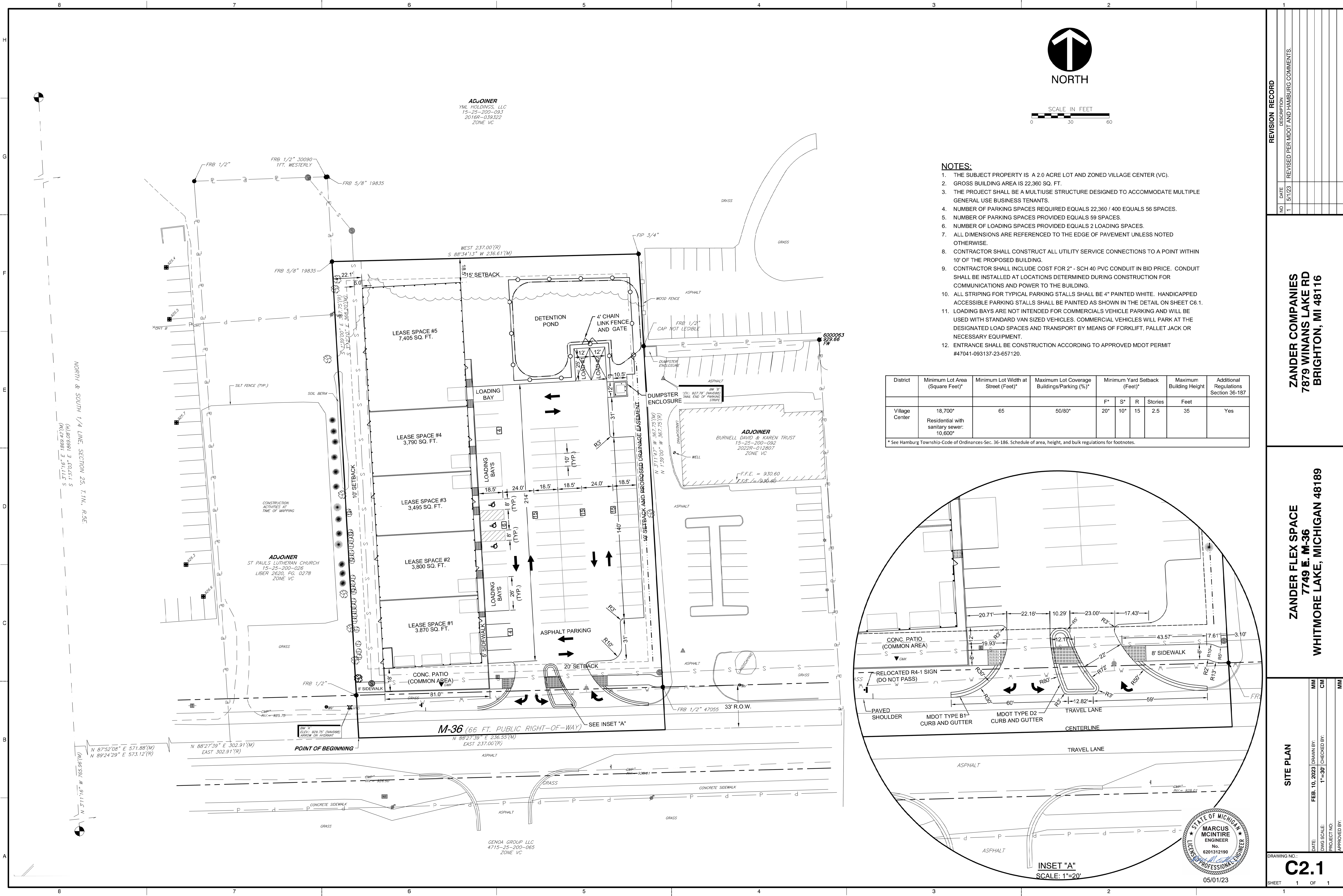
DATE:	<b>FEB. 10, 2023</b>	DRAWN BY:	MM
DWG SCALE:	<b>1"=30'</b>	CHECKED BY:	CM
PROJECT NO:			
APPROVED BY:			MM

DRAWING NO.:

## C1.3

SHEET 1 OF

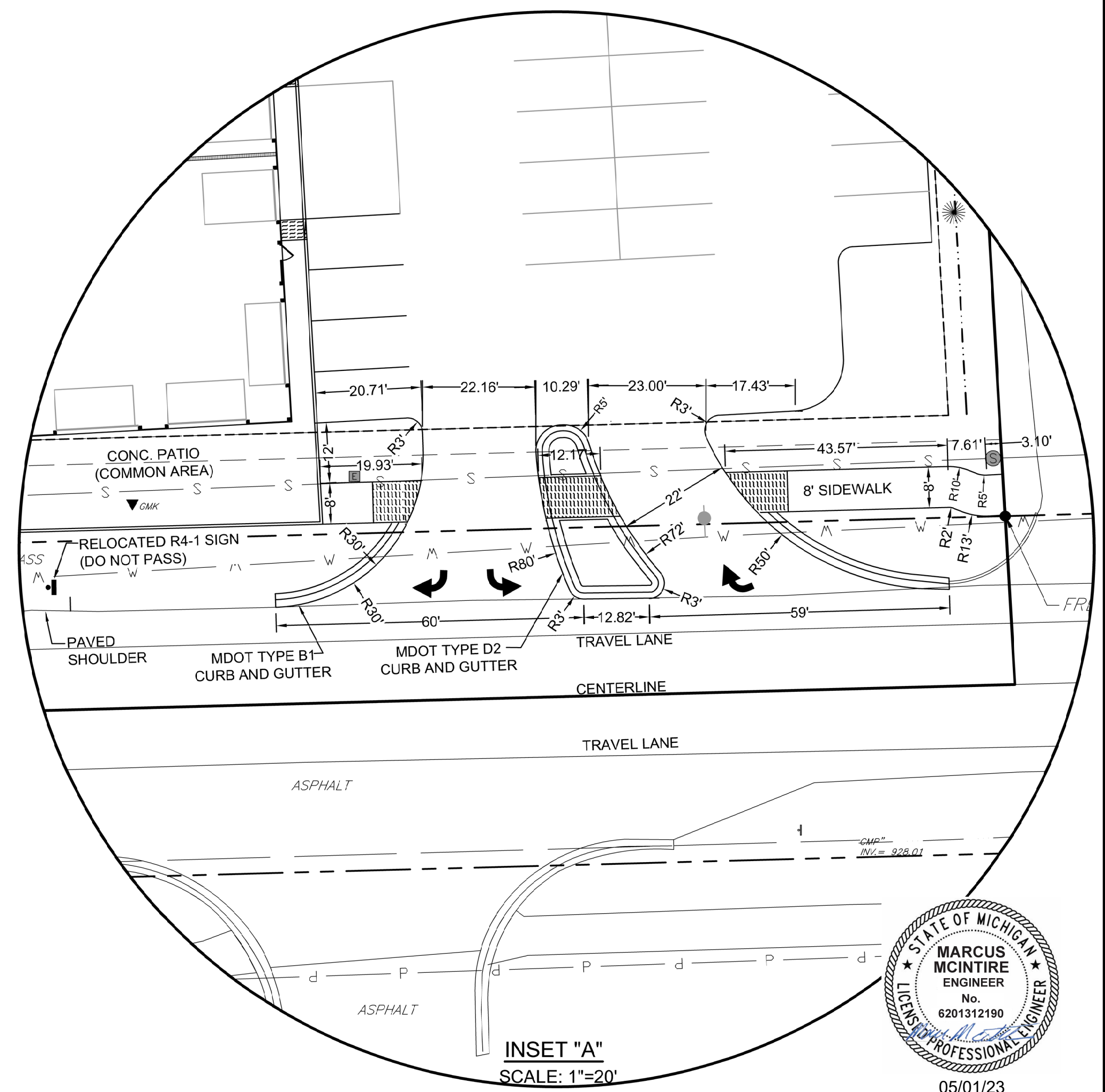




- NOTES:**
1. THE SUBJECT PROPERTY IS A 2.0 ACRE LOT AND ZONED VILLAGE CENTER (VC).
  2. GROSS BUILDING AREA IS 22,360 SQ. FT.
  3. THE PROJECT SHALL BE A MULTIUSE STRUCTURE DESIGNED TO ACCOMMODATE MULTIPLE GENERAL USE BUSINESS TENANTS.
  4. NUMBER OF PARKING SPACES REQUIRED EQUALS 22,360 / 400 EQUALS 56 SPACES.
  5. NUMBER OF PARKING SPACES PROVIDED EQUALS 59 SPACES.
  6. NUMBER OF LOADING SPACES PROVIDED EQUALS 2 LOADING SPACES.
  7. ALL DIMENSIONS ARE REFERENCED TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
  8. CONTRACTOR SHALL CONSTRUCT ALL UTILITY SERVICE CONNECTIONS TO A POINT WITHIN 10' OF THE PROPOSED BUILDING.
  9. CONTRACTOR SHALL INCLUDE COST FOR 2" - SCH 40 PVC CONDUIT IN BID PRICE. CONDUIT SHALL BE INSTALLED AT LOCATIONS DETERMINED DURING CONSTRUCTION FOR COMMUNICATIONS AND POWER TO THE BUILDING.
  10. ALL STRIPING FOR TYPICAL PARKING STALLS SHALL BE 4" PAINTED WHITE. HANDICAPPED ACCESSIBLE PARKING STALLS SHALL BE PAINTED AS SHOWN IN THE DETAIL ON SHEET C6.1.
  11. LOADING BAYS ARE NOT INTENDED FOR COMMERCIALS VEHICLE PARKING AND WILL BE USED WITH STANDARD VAN SIZED VEHICLES. COMMERCIAL VEHICLES WILL PARK AT THE DESIGNATED LOAD SPACES AND TRANSPORT BY MEANS OF FORKLIFT, PALLET JACK OR NECESSARY EQUIPMENT.
  12. ENTRANCE SHALL BE CONSTRUCTION ACCORDING TO APPROVED MDOT PERMIT #47041-093137-23-657120.

District	Minimum Lot Area (Square Feet)*	Minimum Lot Width at Street (Feet)*	Maximum Lot Coverage Buildings/Parking (%)	Minimum Yard Setback (Feet)*				Maximum Building Height	Additional Regulations Section 36-187
				F*	S*	R	Stories	Feet	
Village Center	18,700* Residential with sanitary sewer: 10,600*	65	50/80*	20*	10*	15	2.5	35	Yes

\* See Hamburg Township-Code of Ordinances-Sec. 36-186. Schedule of area, height, and bulk regulations for footnotes.



REVISION RECORD

NO.	DATE	DESCRIPTION
1	5/1/23	REVISED PER MDOT AND HAMBURG COMMENTS.

ZANDER COMPANIES

7879 WINANS LAKE RD

BRIGHTON, MI 48116

ZANDER FLEX SPACE

7749 E. M-36

WHITMORE LAKE, MICHIGAN 48189

SITE PLAN

FEB 10, 2023 [DRAWN BY: MM]

DWG SCALE: 1"=30' [CHECKED BY: CM]

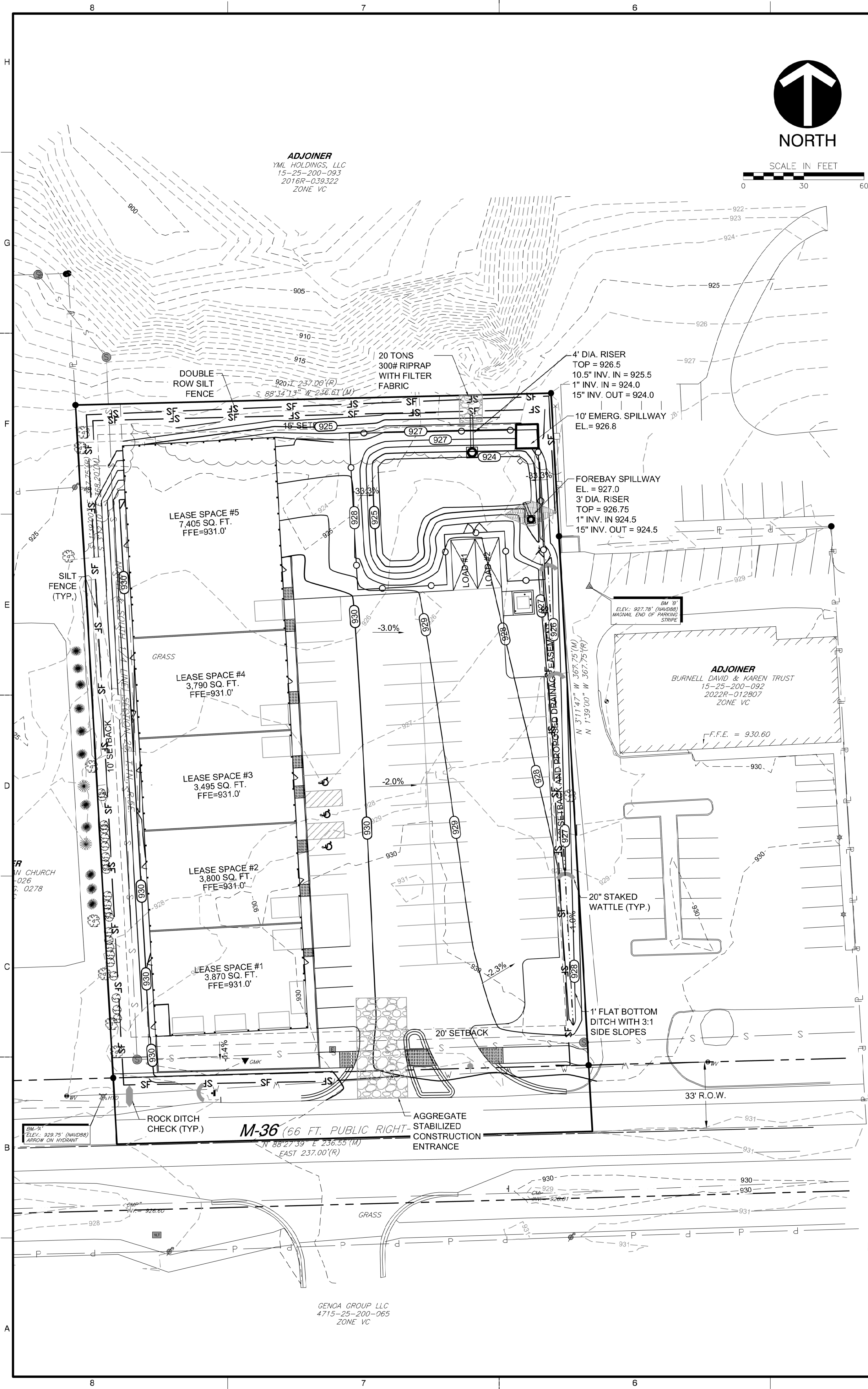
PROJECT NO: [APPROVED BY: MM]

DRAWING NO.:

C2.1

SHEET 1 OF 1





FLEX SPACE STORMWATER DETENTION DESIGN CALCULATIONS

General Information:

Off-site outlet: A wooded unnamed tributary of the Huron River directly north of subject site property line.

Upstream watershed is relatively small being on a hilltop. Approximately 0.4 acres of offsite watershed pass through the subject site from the neighboring Village Center zoned property. A combined total area of 2.4 acres passes through the site with a weighted C value of 0.79.

Preliminary calculations:

Water Quality Control (WQ)

$V_{wq} = 3,630 \times C \times A = 3630 \times 0.79 \times 2.4 = 6,882 \text{ CF}$

Channel Protection Volume Control (CPVC)

$CPVC = 4,719 \times C \times A = 4,719 \times 0.79 \times 2.4 = 8,947 \text{ CF}$

Design Calculations for Infiltration of Channel Protection Volume

For Loamy (Type C) Soils with a 0.50"/hr In-Situ Infiltration Rate:  
Max. Total Water Storage Depth = 0.50"/hr x 72 hr = 36" or 3.0 ft.  
Max. Surface Water Storage Depth = 0.5"/hr x 24 hr = 12" or 1.0 ft.  
Infiltration Depth During Storm = 0.5"/hr x 6 hr = 3" or 0.25 ft.  
Potential Soil Storage Depth = 0.5"/hr x 48 hr = 24" or 2.0 ft.  
Potential Soil Storage Depth EQV = 24"/0.25 porosity = 6" or 0.5 ft.  
- Since the soil permeability is relatively low, a combination of surface water storage & soil storage will be utilized in the bottom of the detention basin to meet the infiltration requirement.

The Detention Basin Bottom Infiltration Area Required  
(Below the basin outlet elevation)  
 $A = 8,947 \text{ C.F.} / (1 \text{ ft. Surface} + 0.25 \text{ ft. Infiltration} + 0.5 \text{ ft. Soil}) \text{ Depth}$   
 $A = 5,113 \text{ S.F. Required}$

Forebay Volume

$V_f = 15\% V_{wq} = 0.15 \times 6,882 = 1,032 \text{ CF}$

Channel Protection Rate Control (CPRC)

$CPRC = 6,897 \times C \times A = 6,897 \times 0.79 \times 2.4 = 13,077 \text{ CF}$

Detention and Flood Control Volume

$Q_{VRR} = 1.1055 - 0.206 \ln(A) = 0.8 = 1 \text{ CFS/ACRE}$

$Q_{1000} = Q_{VRR} \times A = 1 \times 2.4 = 2.4 \text{ CFS}$

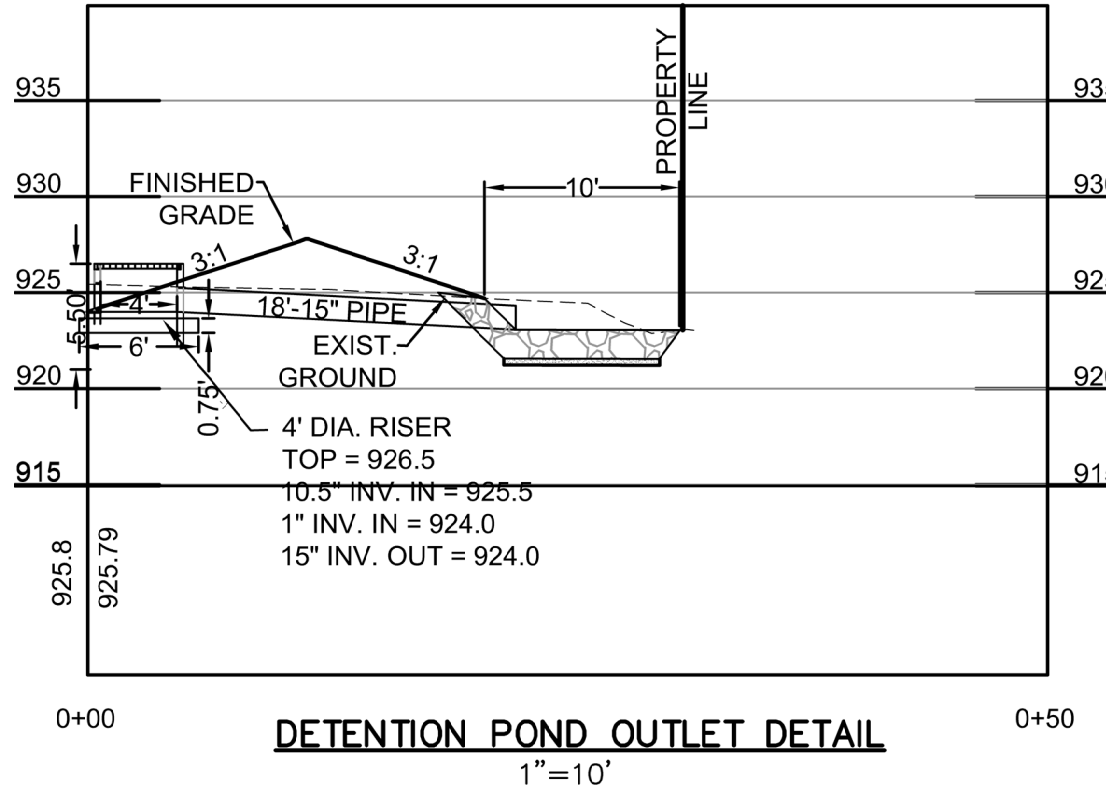
$I_{100} = 83.3 / (T_c + 9.17)^{0.81} = 83.3 / (17 + 9.17)^{0.81} = 5.92 \text{ IN/HR}$

$Q_{1000N} = C \times I_{100} \times A = 0.79 \times 5.92 \times 2.4 = 11.2 \text{ CFS}$

$R = [0.206 - 0.15 \ln(Q_{1000}/Q_{1000N})] = 0.44$

$V_{1000} = (V_{1000R} \times R) - V_{CPVC} = (35.996 \times 0.44) - 8,947 = 6,891 \text{ CF}$

$V_{ED} = 1.9"/12(43,560)(C)(A) = 13,077 \text{ CF}$



NOTES:

- ALL STORMWATER SHALL BE MANAGED ON SITE.
- SITE IMPERVIOUS AREA = 1.52 ACRES.
- SITE PERVIOUS AREA = 0.48 ACRES.
- BUILDING LOT COVERAGE = 100 X (1.52 AC / 2.00 AC) = 76%.
- TOTAL IMPERVIOUS COVERAGE = 100 X (1.52 AC / 2.00 AC) = 76%.
- RISERS STRUCTURE SHALL BE INSTALLED WITH GRATE COVERS TO PREVENT DEBRIS FROM ENTERING THE RISER.
- DETENTION POND SHALL BE ENCLOSED WITH A MIN. 4' HT. CHAIN LINK FENCE WITH 12" GATE FOR MAINTENANCE ENTRY FROM PARKING.
- DETENTION CALCULATIONS AND MODEL ARE AVAILABLE AS A SEPARATE ATTACHMENT.

PROPOSED STORM WATER RUN-OFF						
0.9	0.4	0.2	0.9	1	Total	Weighted
Pavement	Lawn	Forested	Gravel	Water	Area (Ac.)	C Factor
1.00	0.40	0.14	0.13		1.80	0.73
1.26	0.37	0.11			2.40	0.79

SUMMARY OF HYDROLOGIC INFORMATION									
Location	Drainage Area, A (acres)	Length, L (ft)	Elevation, Up (ft)	Elevation, Dn (ft)	Slope, S (%)	Soil Class.	Runoff Coeff., C	CA	K Small tributary 2.1 Waterway 1.2 Sheet flow 0.48
Description									Velocity, V=K <sup>0.5</sup> /1/2 (ft/sec)
Pre-Watershed	1.80	444	930	924	1.4%	C	0.73	1.32	0.48
Post-Watershed	2.40	519	930	924	1.2%	C	0.79	1.90	0.52
									Duration Time, t (min)
									13.3
									16.8

Pond Report

Hydroflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Saturday, 04 / 22 / 2023

Pond No. 1 - POND 2

Pond Data

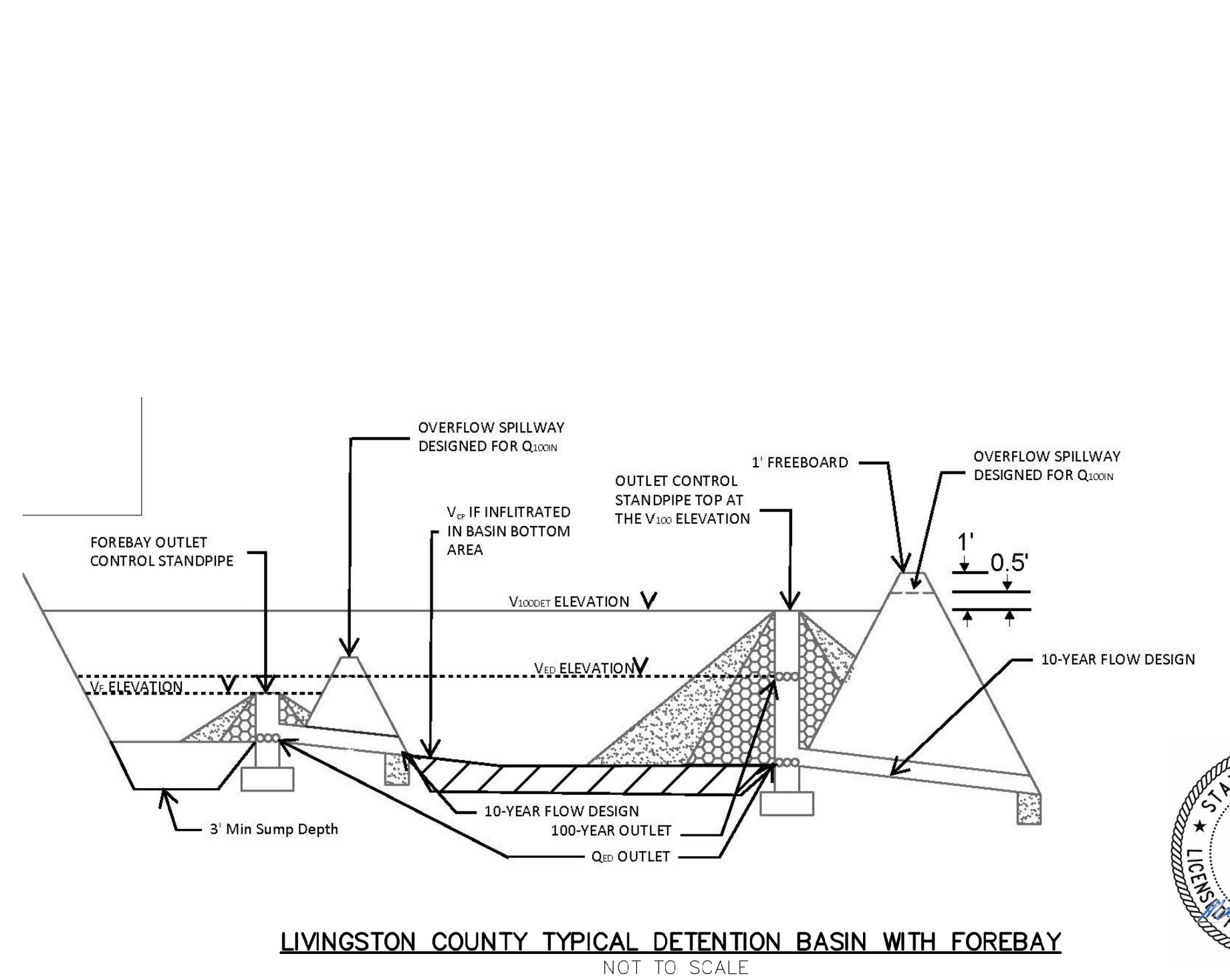
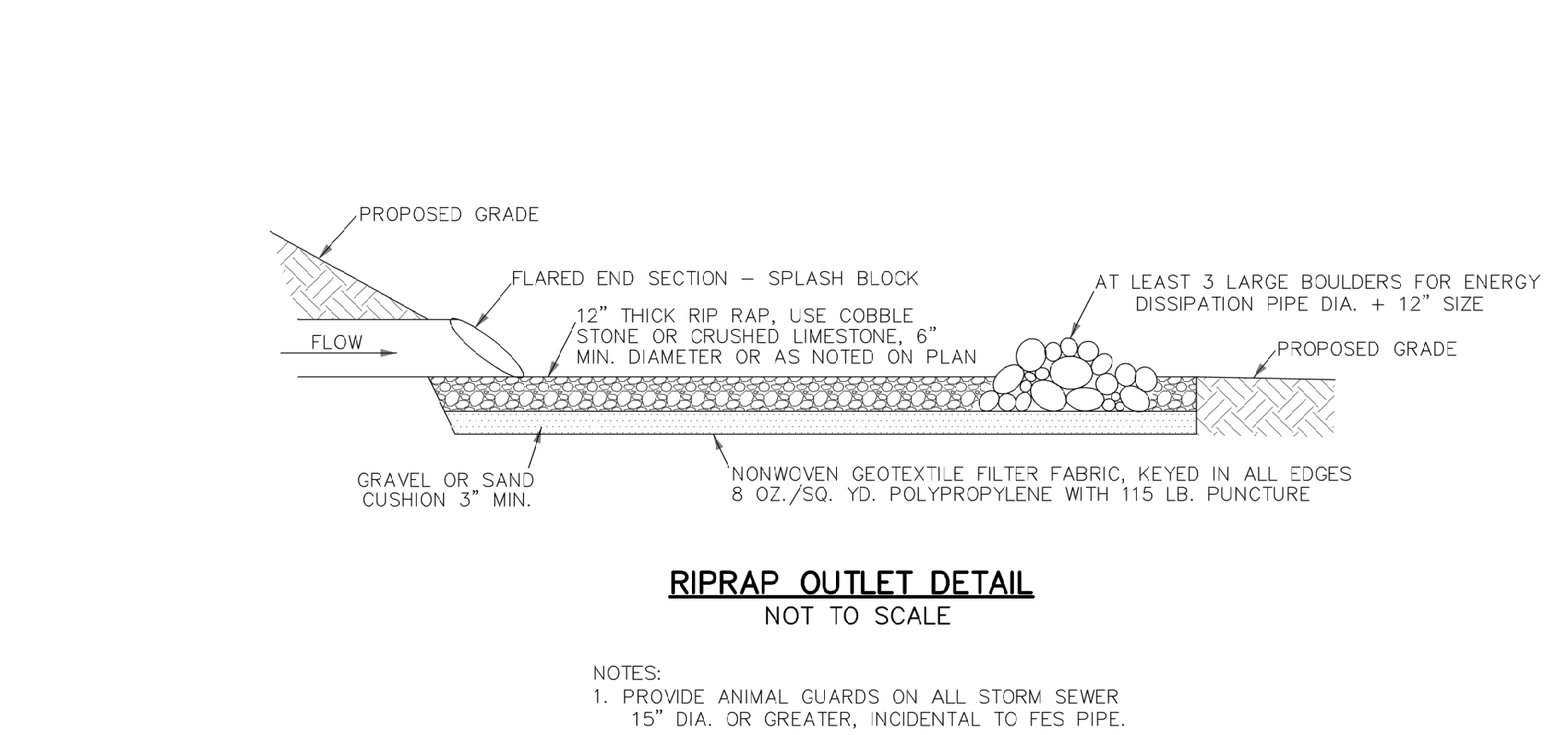
Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 924.00 ft

Stage / Storage Table				
Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	924.00	2,277	0	0
1.00	925.00	3,144	2,711	2,711
2.00	926.00	4,235	3,690	6,400
3.00	927.00	5,924	5,080	11,480
3.80	927.80	6,798	5,889	17,368

Culvert / Orifice Structures				
[A]	[B]	[C]	[PrfRsr]	
Rise (in)	= 15.00	0.08	10.00	Inactive
Span (in)	= 15.00	0.08	10.00	0.00
No. Barrels	= 1	1	1	1
Invert El. (ft)	= 924.00	924.00	925.50	0.00
Length (ft)	= 30.00	1.00	1.00	0.00
Slope (%)	= 0.50	1.00	1.00	n/a
N-Value	= 0.13	0.13	0.13	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No
				Exfil (in/hr)
				= 0.500 (by Contour)
				TW Elev. (ft)
				= 0.00

Stage / Storage / Discharge Table												
Stage ft	Storage cuft	Elevation ft	Civ A cfs	Civ B cfs	Civ C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs
0.00	0	924.00	0.00	0.00	0.00	---	0.00	0.00	---	---	0.000	---
1.00	2,711	925.00	0.00	0.00	0.00	---	0.00	0.00	---	---	0.036	---
2.00	6,400	926.00	0.84	0.00	0.82	---	0.00	0.00	---	---	0.049	---
3.00	11,480	927.00	8.25	0.00	1.58	---	6.66	2.33	---	---	0.069	---
3.80	17,368	927.80	10.44	0.00	0.59	---	9.85	26.00	---	---	0.102	---

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



REVISION RECORD

NO.	DATE	DESCRIPTION
1	5/1/23	REVISED PER HAMBURG COMMENTS.

ZANDER COMPANIES

7879 WINANS LAKE RD

BRIGHTON, MI 48116

ZANDER FLEX SPACE

7749 E. M-36

WHITMORE LAKE, MICHIGAN 48189

GRADING AND EROSION CONTROL PLAN

DRAWING NO.: C3.1

SHEET 1 OF 1

DATE: FEB 10, 2023

DRAWN BY: MM

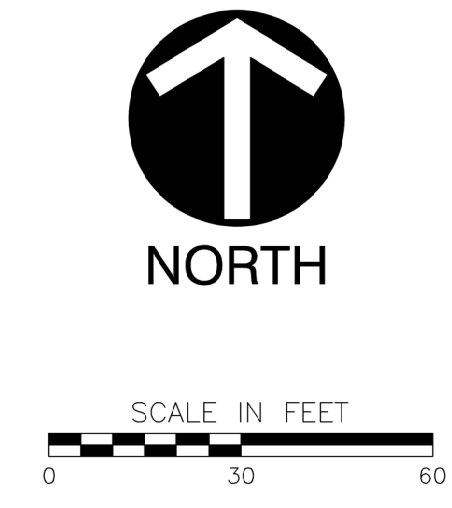
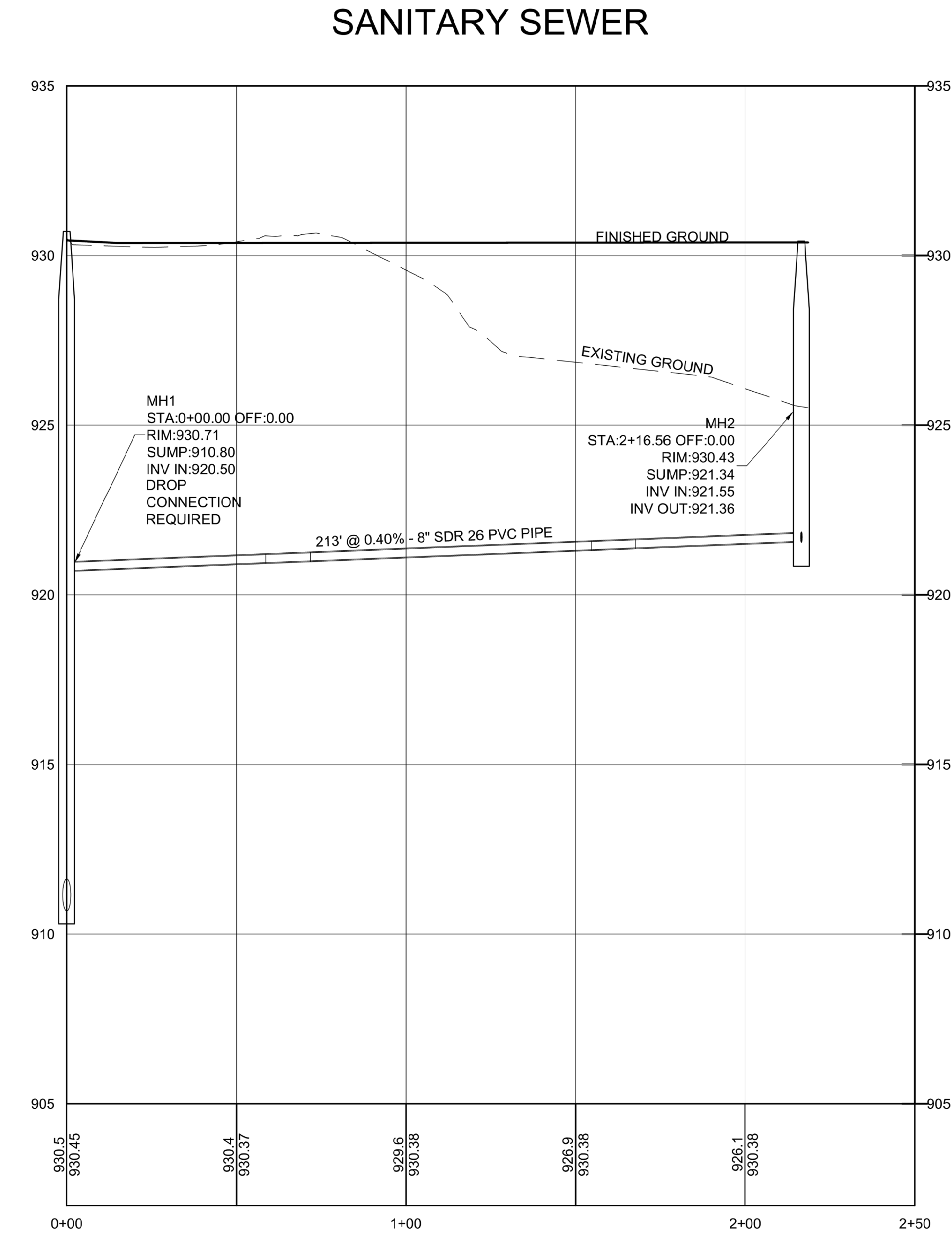
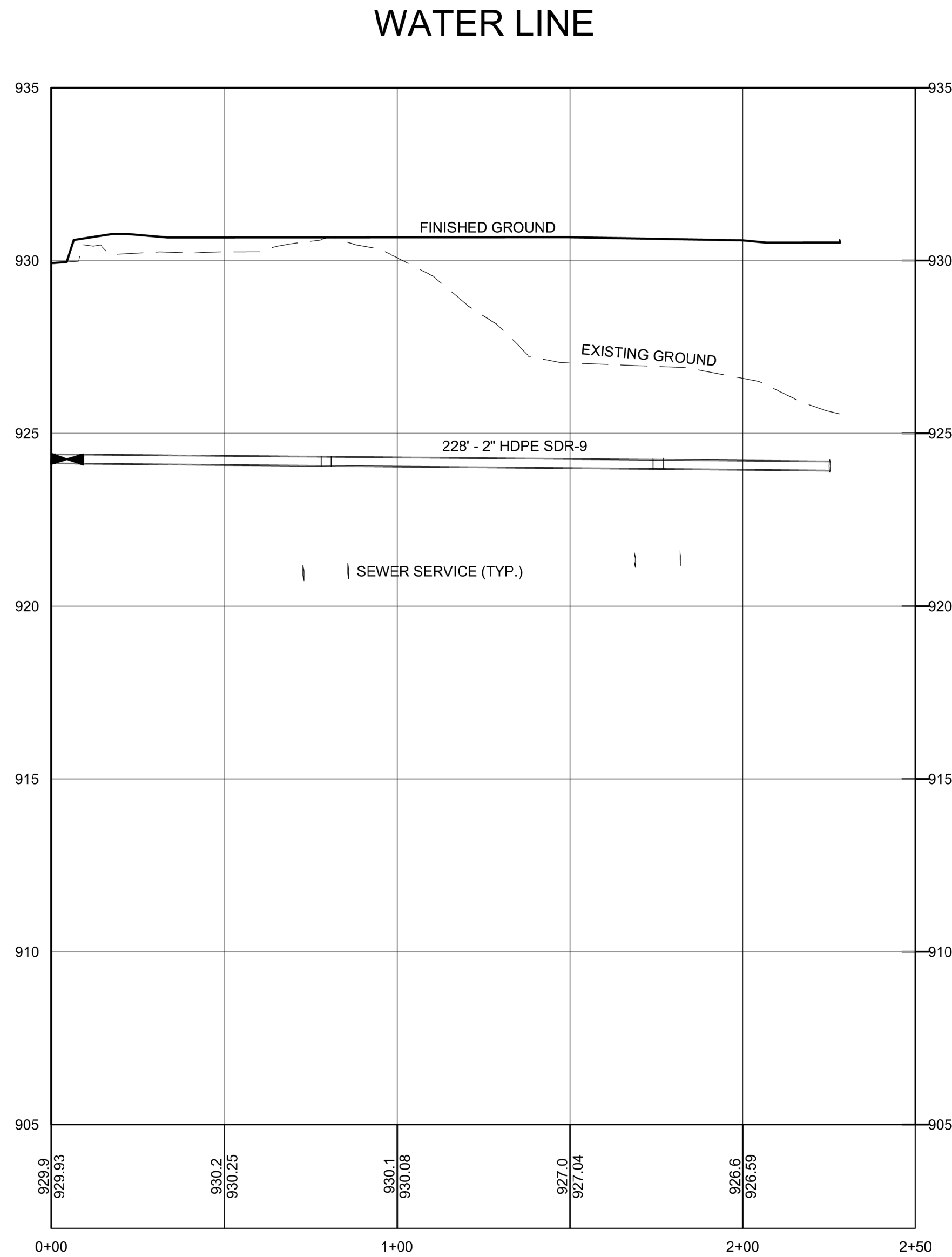
DWG SCALE: 1"=30'

CHECKED BY: CM

PROJECT NO.: 6201312190

APPROVED BY: MM





- NOTES:
1. SEE DETAILS FOR MORE INFORMATION ON SPECIFIC CONSTRUCTION REQUIREMENTS.
  2. EASEMENTS ARE PROVIDED FOR ADEQUATE ACCESS TO THE PROVIDERS AND THE TOWNSHIP.
  3. TRAFFIC RATE COVERS SHALL BE INSTALLED AT ALL BOX AND CLEANOUT LOCATIONS WITHIN TRAFFIC AREAS. SEE STANDARD DETAILS.
  4. WATER METERS SHALL BE PER LOCAL STANDARDS.
  5. WATER METER AND SHUT OFF VALVES SHALL BE LOCATED WITHIN EACH LEASE SPACE.
  6. 2" WATER SERVICE LINE SHALL INCLUDED BEDDING MATERIAL AS SHOWN IN THE DETAILS. SEE "WATER MAIN STANDARD DETAILS" SHEETS W1-W3 FOR DETAILS.

REVISION RECORD	
NO.	DATE
1	5/1/23
REVISED PER LCWA AND HAMBURG COMMENTS.	

ZANDER COMPANIES  
7879 WINANS LAKE RD  
BRIGHTON, MI 48116

ZANDER FLEX SPACE  
7749 E. M-36  
WHITMORE LAKE, MICHIGAN 48189

UTILITY PLAN

DRAWING NO.: **C4.1**

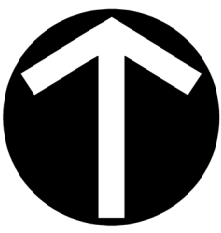
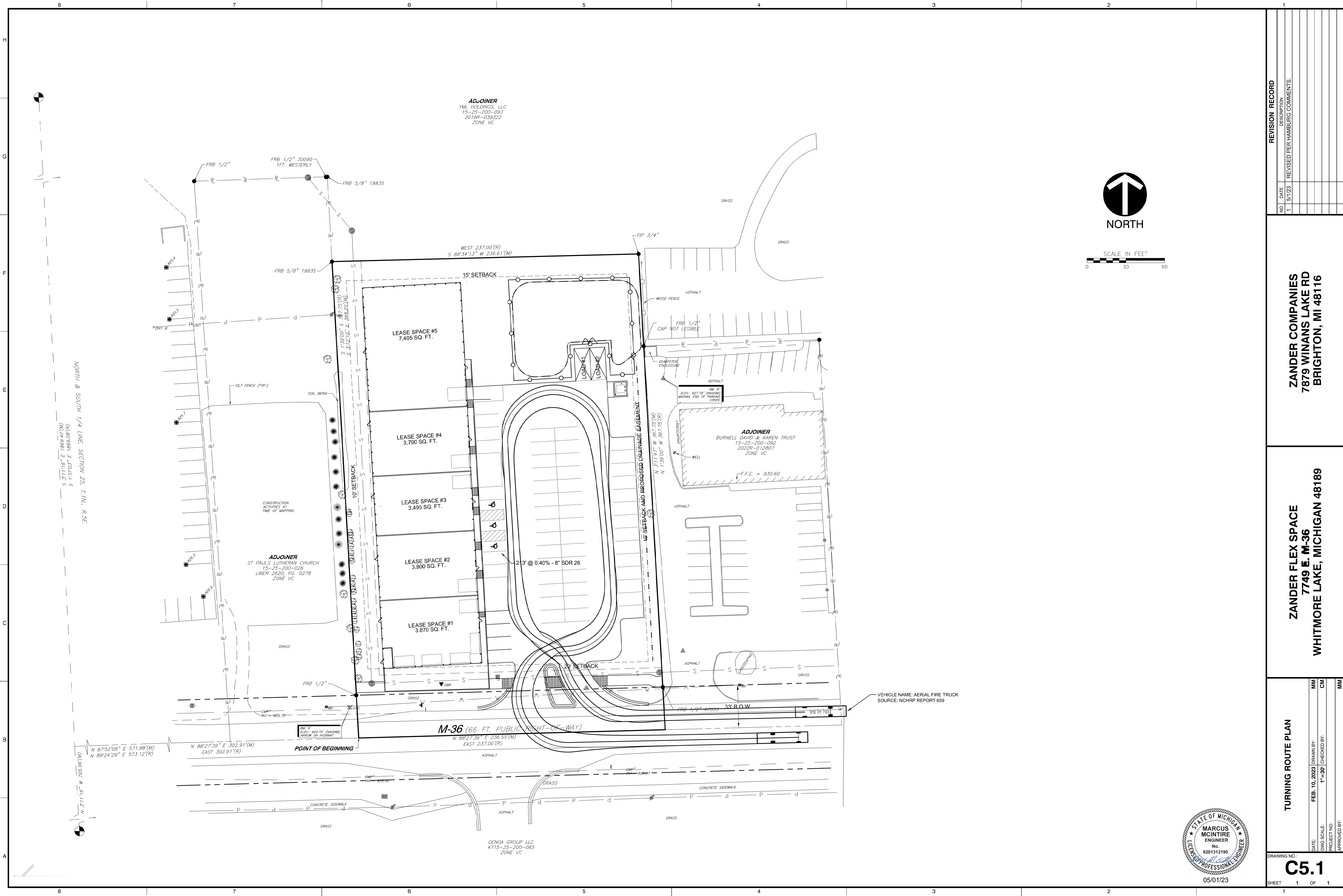
SHEET 1 OF 1

DATE: FEB 10, 2023  
DWS SCALE: 1"=30'  
PROJECT NO: 6201312190  
APPROVED BY: MM

MARCUS MCINTIRE  
ENGINEER  
No. 6201312190  
STATE OF MICHIGAN  
LICENSED PROFESSIONAL ENGINEER

05/01/23





NORTH



REVISION RECORD		
NO.	DATE	DESCRIPTION
1	5/1/23	REVISED PER HAMBURG COMMENTS.

ZANDER COMPANIES  
7879 WINANS LAKE RD  
BRIGHTON, MI 48116

ZANDER FLEX SPACE  
7749 E. M-36  
WHITMORE LAKE, MICHIGAN 48189

TURNING ROUTE PLAN

DATE:	FEB 10, 2023	DRAWN BY:	MM
DWG SCALE:	1"=30'	CHECKED BY:	CM
PROJECT NO:		APPROVED BY:	MM

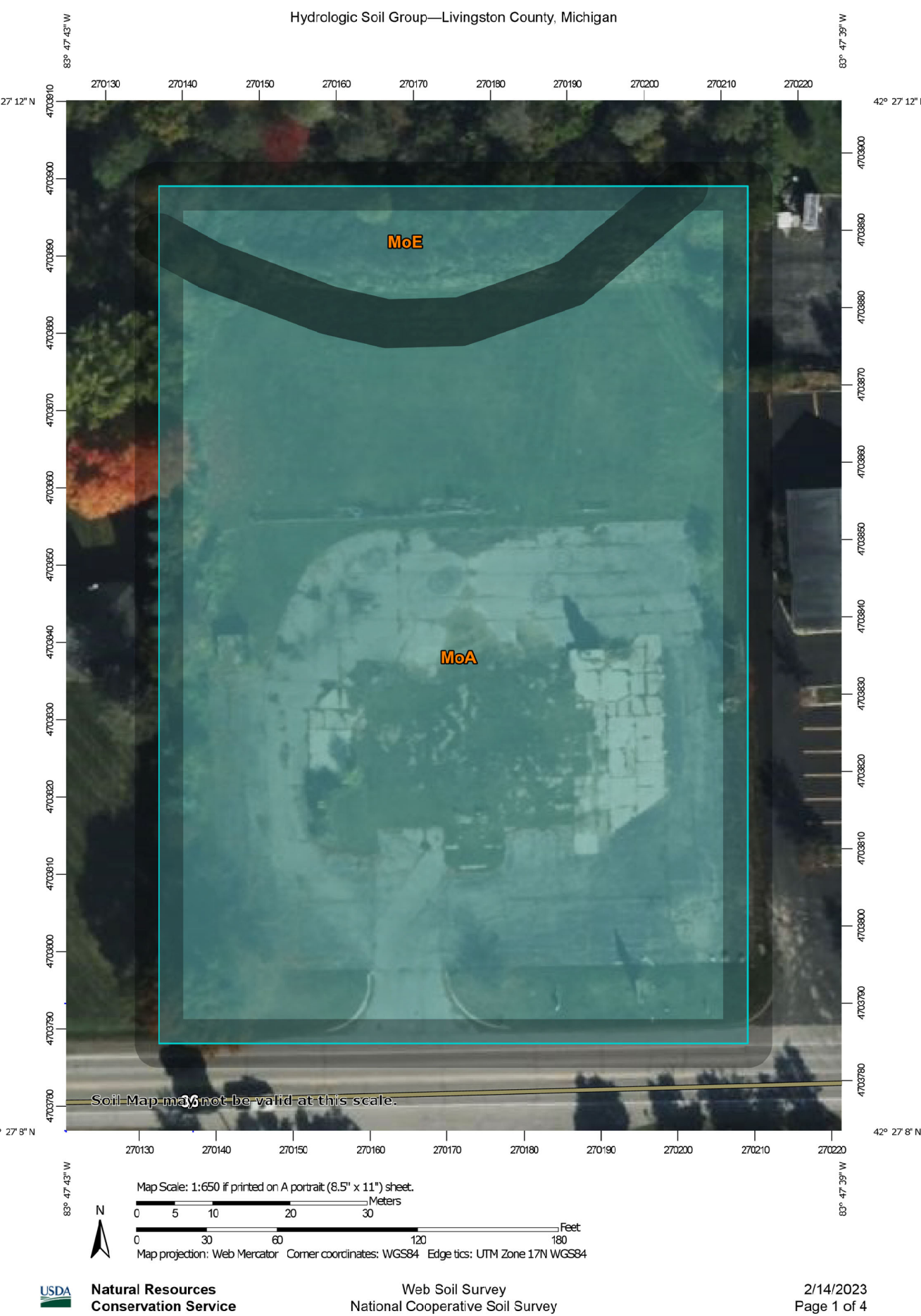
DRAWING NO.:  
**C5.1**  
SHEET 1 OF 1



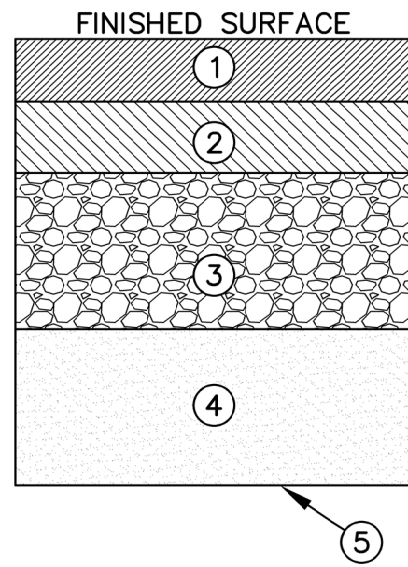
05/01/23



Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
MoA	Wawasee loam, 0 to 2 percent slopes	C	1.9	89.8%
MoE	Miami loam, 18 to 25 percent slopes	C	0.2	10.2%
Totals for Area of Interest			2.1	100.0%



SITE SOIL MAP

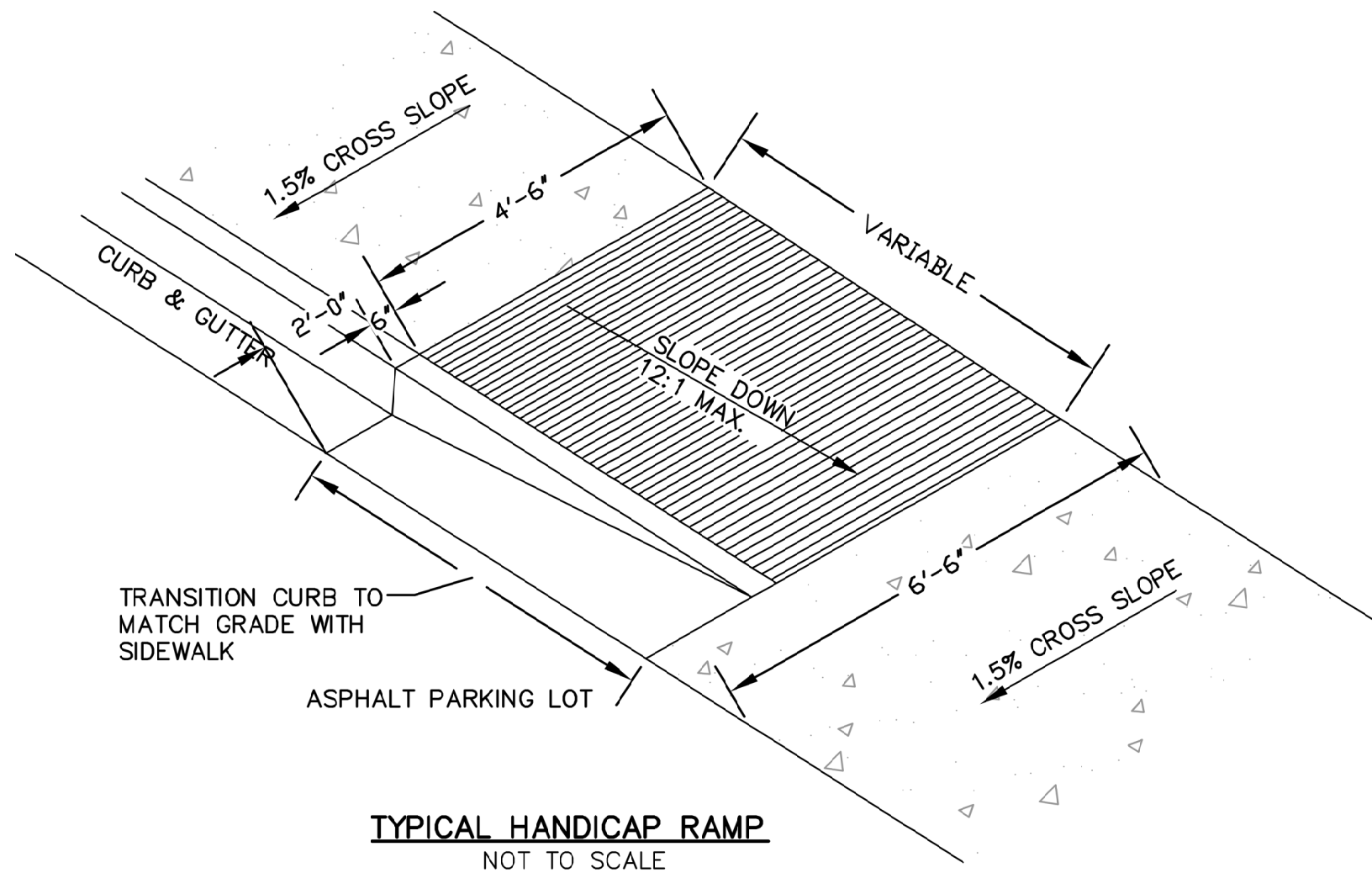


TYPICAL PARKING LOT PAVEMENT DESIGN

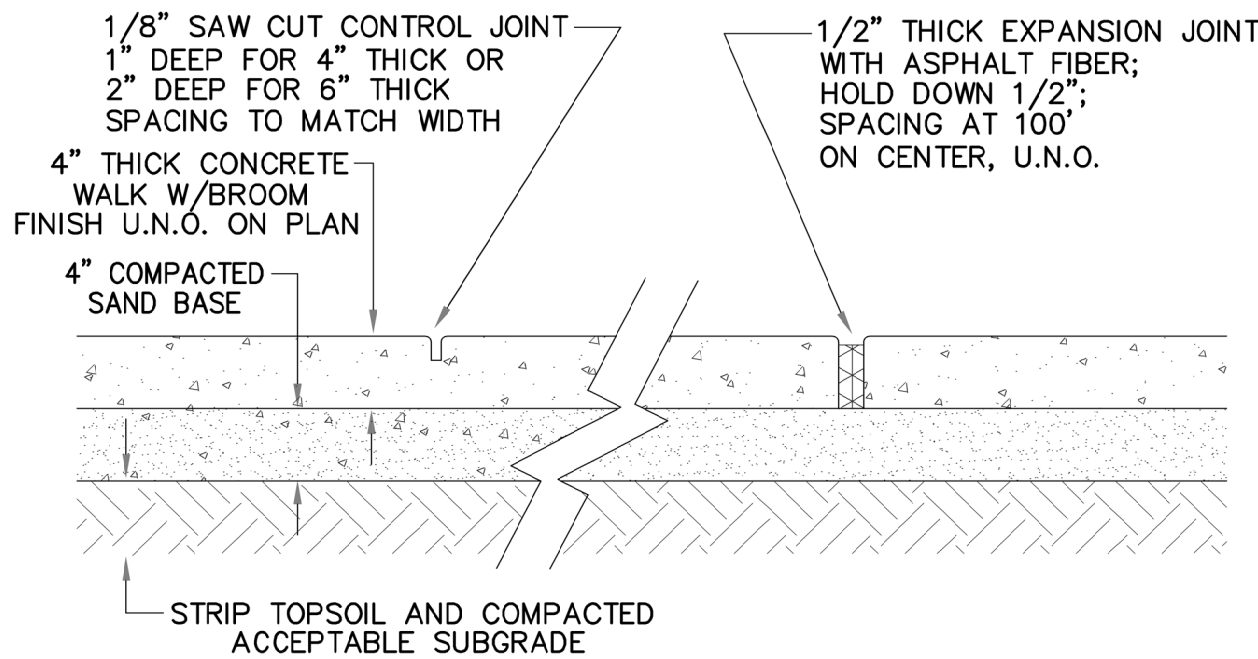
- 1.5" WEARING COURSE (MDOT 13A)
- 2.5" LEVELING COURSE (MDOT 13A)
- 8" AGGREGATE BASE (MDOT 21AA)
- 12" GRANULAR SUBBASE (MDOT, CL.II)
- 95% COMPACTED SUBGRADE

BITUMINOUS PAVING NOTES:

1. THE CONSTRUCTION SPECIFICATIONS OF THE APPROPRIATE LOCAL MUNICIPALITY ARE PART OF THIS WORK. REFER TO THE GENERAL NOTES, CONSTRUCTION NOTES, AND TYPICAL SECTION DETAILS ON THE PROJECT PLANS FOR ADDITIONAL REQUIREMENTS.
2. UNSUITABLE SOILS FOUND WITHIN THE 1' ON 1' INFLUENCE ON THE ROADWAY, SUCH AS MUCK, PEAT, TOPSOIL, MARL, SILT, OR OTHER UNSTABLE MATERIALS SHALL BE EXCAVATED AND REPLACED UP TO THE PROPOSED SUBGRADE ELEVATION WITH MDOT CLASS III GRANULAR MATERIAL COMPACTED TO 95% MAXIMUM UNIT WEIGHT, MODIFIED PROCTOR.
3. CONTRACTOR SHALL PROOF ROLL, PREPARED, SUBGRADE, AS DIRECTED BY ENGINEER. UNACCEPTABLE AREAS OF SUBGRADE SHALL BE UNDERCUT AND REPLACED AS DIRECTED BY ENGINEER.
4. OWNER/DEVELOPER MAY DELAY PLACEMENT OF THE BITUMINOUS WEARING COURSE OUTSIDE OF THE PUBLIC ROAD RIGHT OF WAY. REPAIR OF THE BITUMINOUS LEVELING COURSE MAY BE NECESSARY DUE TO ANY DELAY IN PLACEMENT OF THE BITUMINOUS WEARING COURSE. SUBSTANTIAL REPAIR TO THE BITUMINOUS LEVELING COURSE MAY BE NECESSARY IF PLACEMENT OF BITUMINOUS WEARING COURSE IS DELAYED FOR MORE THAN 12 MONTHS AFTER THE PLACEMENT OF THE BITUMINOUS LEVELING COURSE. THE BITUMINOUS LEVELING COURSE SHALL BE REPAIRED AS DIRECTED BY ENGINEER PRIOR TO PLACEMENT OF THE BITUMINOUS WEARING COURSE.

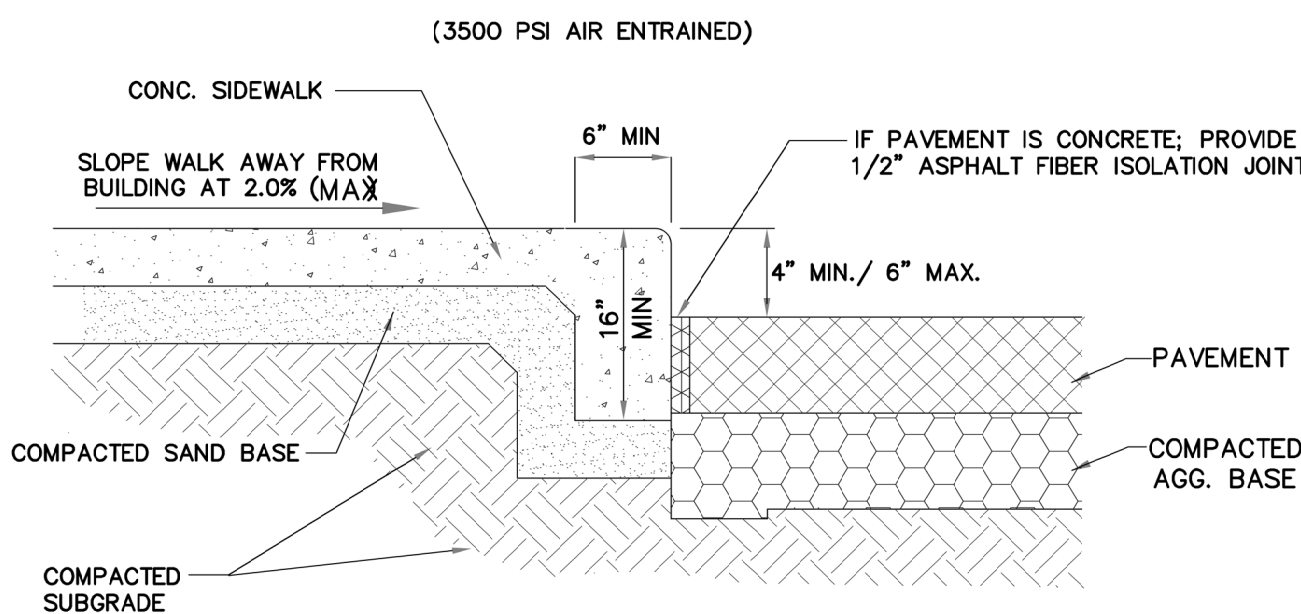


TYPICAL HANDICAP RAMP  
NOT TO SCALE

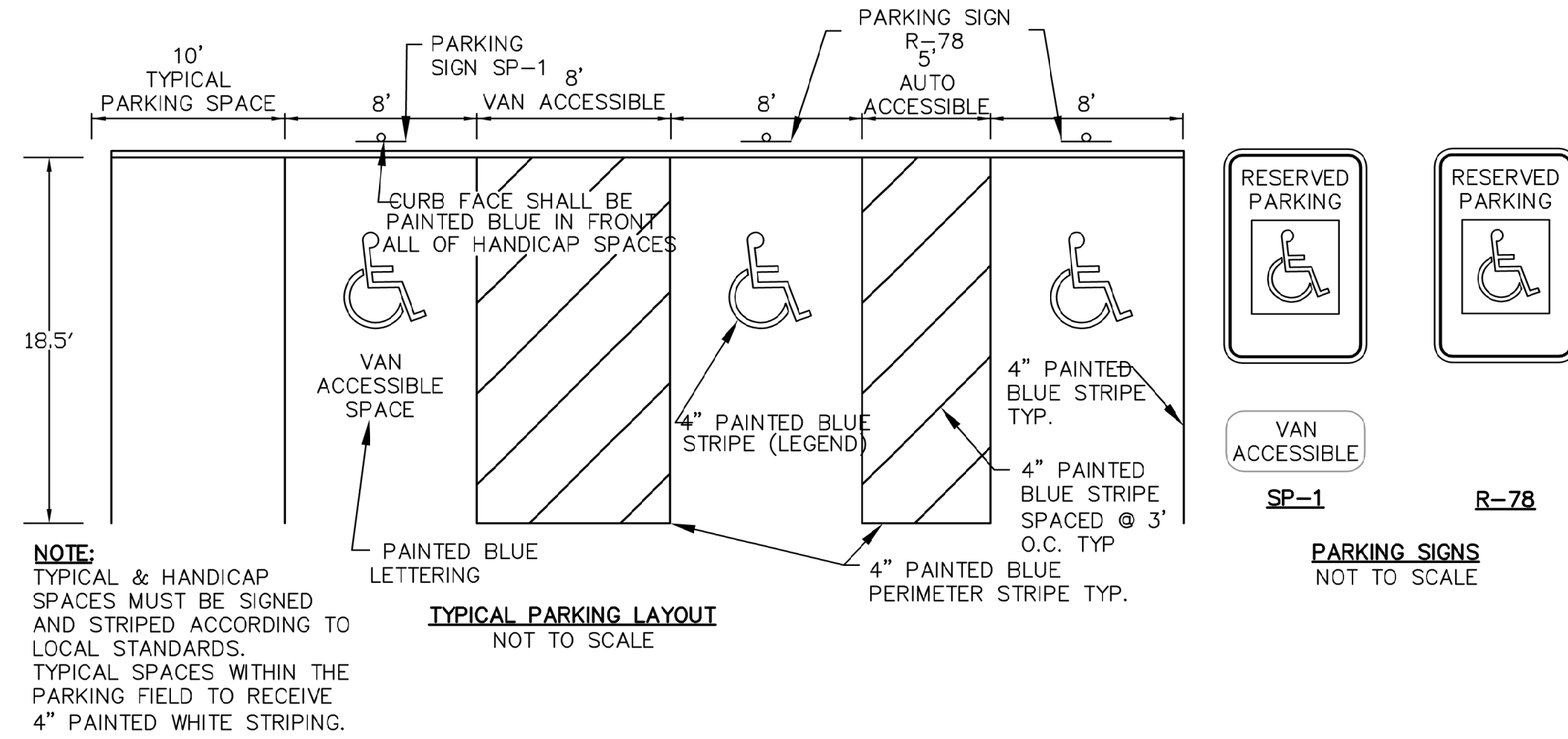


TYPICAL SIDEWALK SECTION  
NOT TO SCALE

- NOTES:
1. SEE PLAN FOR WIDTH OF SIDEWALK.
  2. PROVIDE CONCRETE TYPE PER LOCAL CODE. (3500 PSI AIR ENTRAINED)

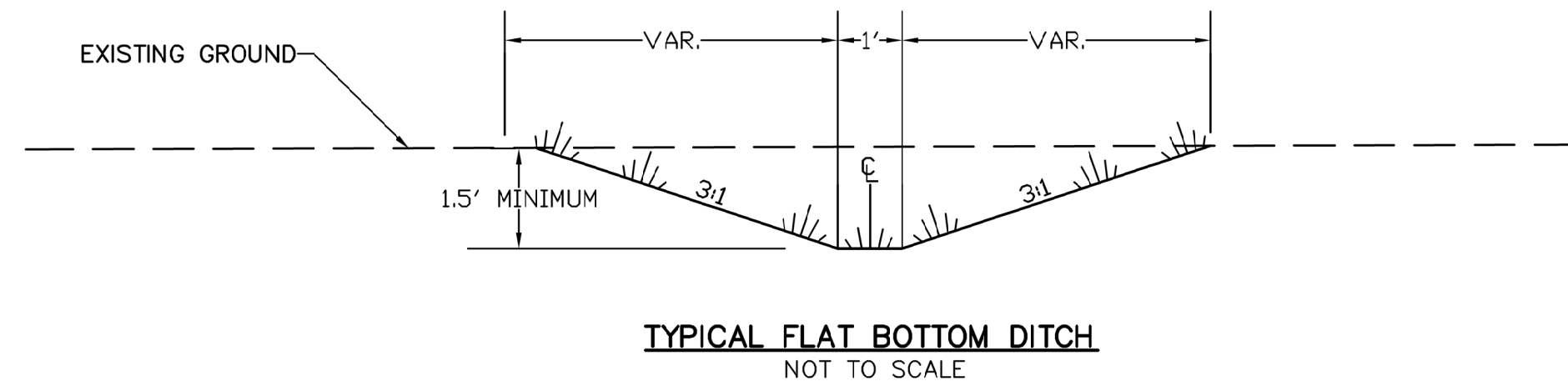


SIDEWALK WITH INTEGRAL CURB AND ISOLATION JOINT DETAIL  
NOT TO SCALE

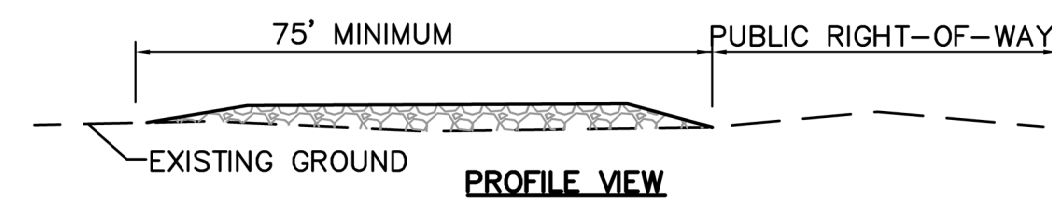


**NOTE:**  
TYPICAL & HANDICAP SPACES MUST BE SIGNED AND STRIPED ACCORDING TO LOCAL STANDARDS. TYPICAL SPACES WITHIN THE PARKING FIELD TO RECEIVE 4" PAINTED WHITE STRIPING.

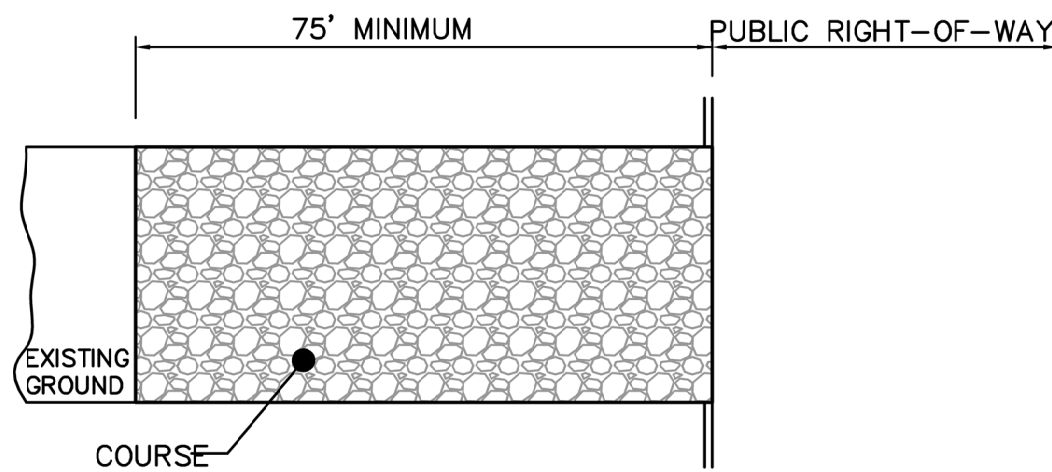
TYPICAL PARKING LAYOUT  
NOT TO SCALE



TYPICAL FLAT BOTTOM DITCH  
NOT TO SCALE



PROFILE VIEW

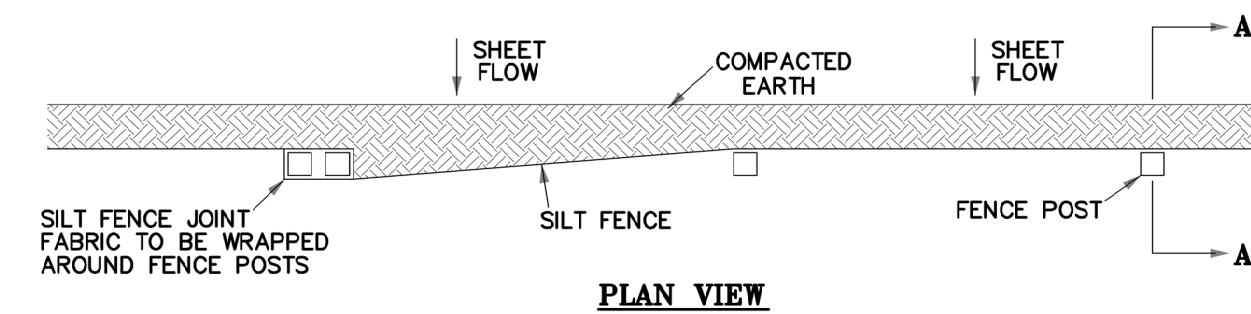


PLAN VIEW

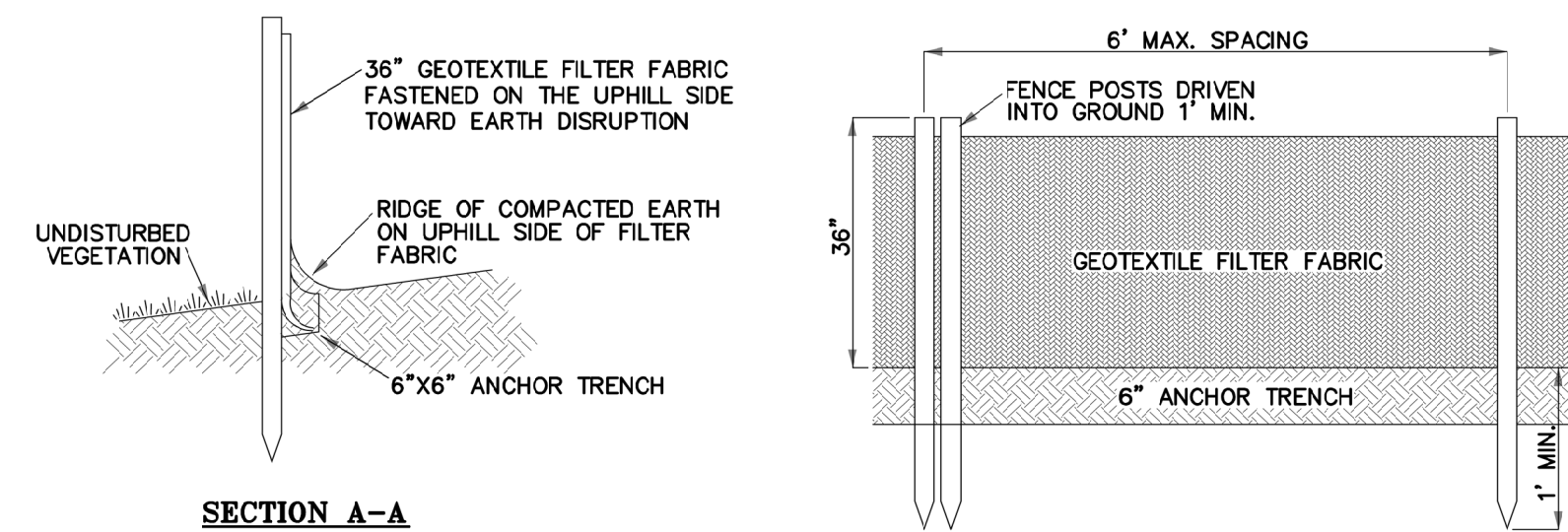
STABILIZED CONSTRUCTION ENTRANCE DETAILS  
NOT TO SCALE

CONSTRUCTION ENTRANCE NOTES:

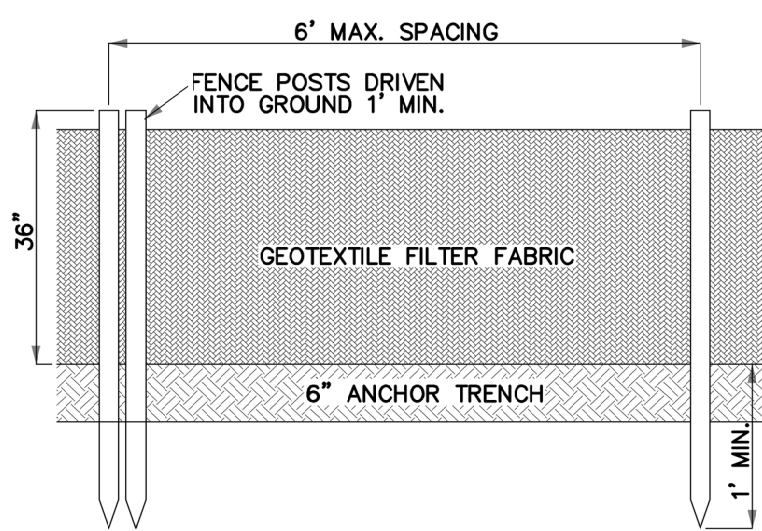
1. SEPARATION GEOTEXTILE FABRIC FOR FULL WIDTH AND LENGTH OF EXIT.
2. GRADE TO PREVENT RUN-OFF FROM LEAVING SITE
3. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY.



PLAN VIEW



SECTION A-A



FRONT VIEW

TEMPORARY SILT FENCE DETAIL

- NOTES:
1. REPAIR AND REPLACE SILT FENCE AS NEEDED, INCIDENTAL.
  2. FIELD LOCATE SILT FENCE TO FOLLOW CONSTANT CONTOUR ELEVATIONS.
  3. OVERLAP FENCES AT JOINTS.
  4. INSTALL FILTER BERM AT LOW POINTS WHERE INDICATED ON PLANS.



ZANDER COMPANIES  
7879 WINANS LAKE RD  
BRIGHTON, MI 48116

ZANDER FLEX SPACE  
9257 E. M-36  
WHITMORE LAKE, MICHIGAN 48189

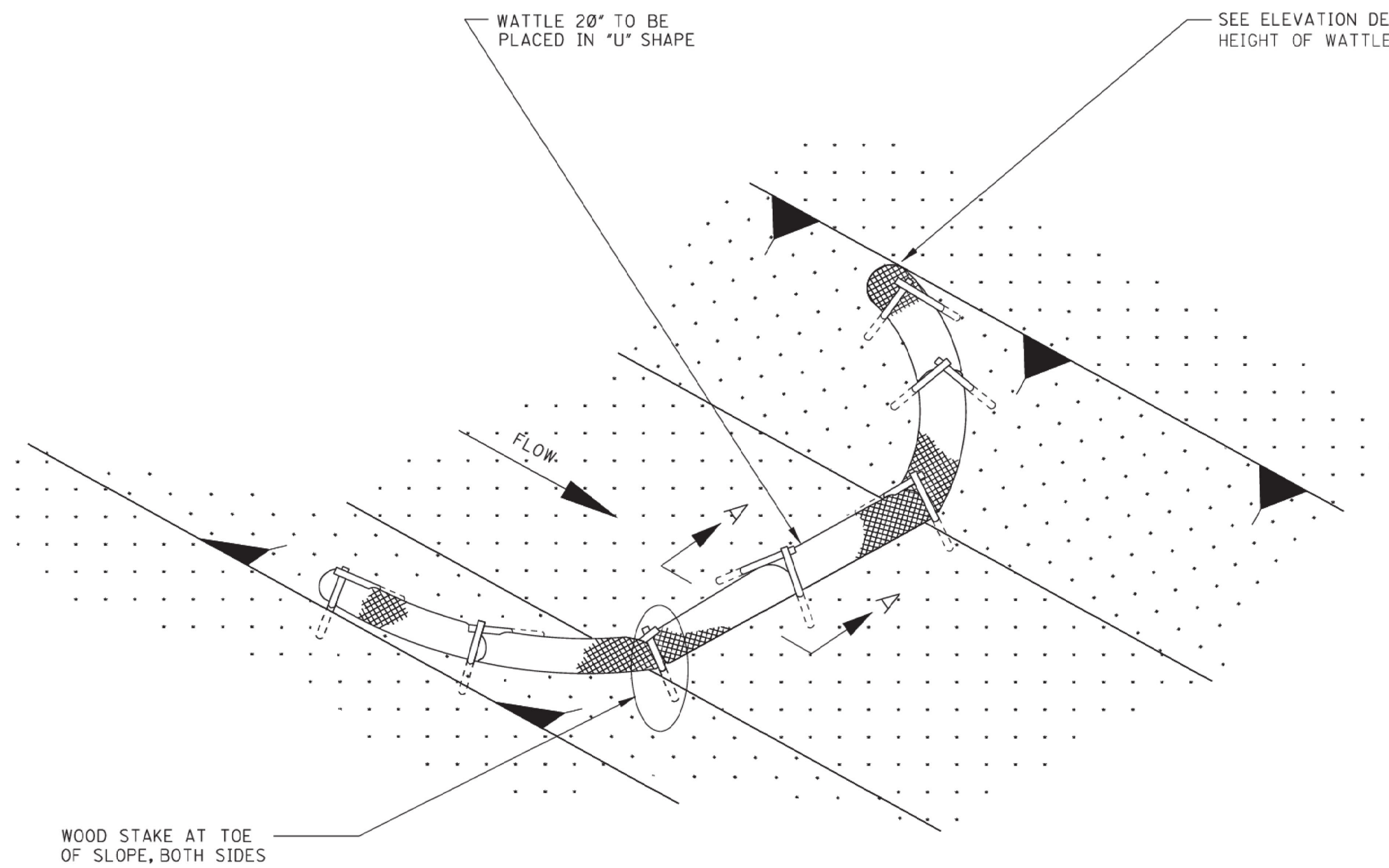
PAVEMENT AND  
MISCELLANEOUS DETAILS

DATE: FEB 10, 2023 DRAWN BY: MM  
DWG SCALE: 1"=30' CHECKED BY: CM  
PROJECT NO.: MM  
APPROVED BY: MM

DRAWING NO.:  
**C6.1**

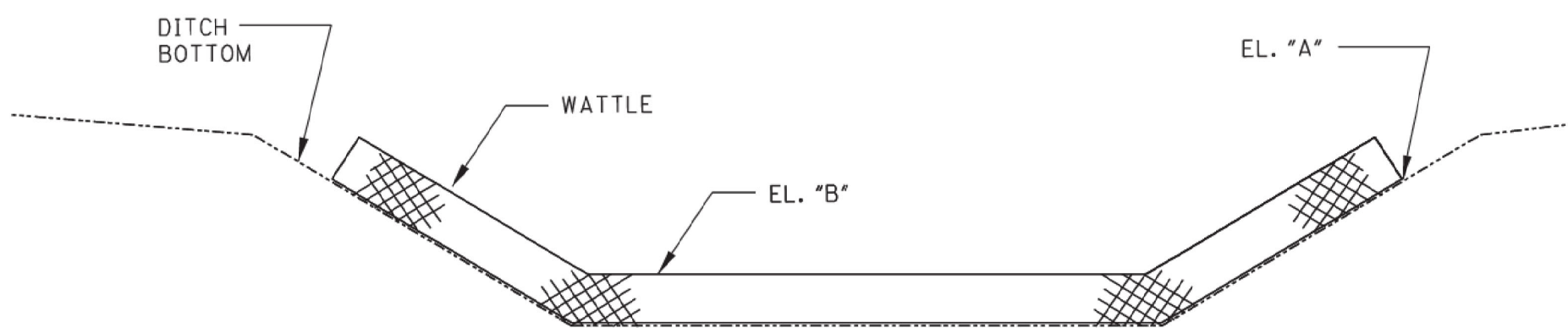
SHEET 1 OF 1



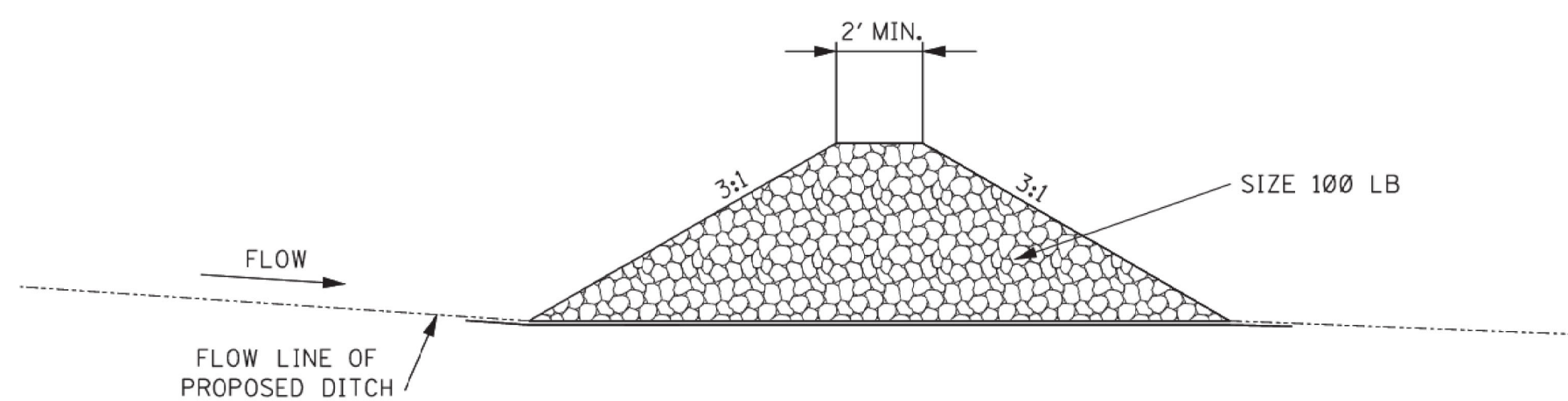


DETAIL (DITCH CHECK)

NOTE: END POINTS "A" SHALL BE HIGHER THAN FLOWLINE POINT "B".

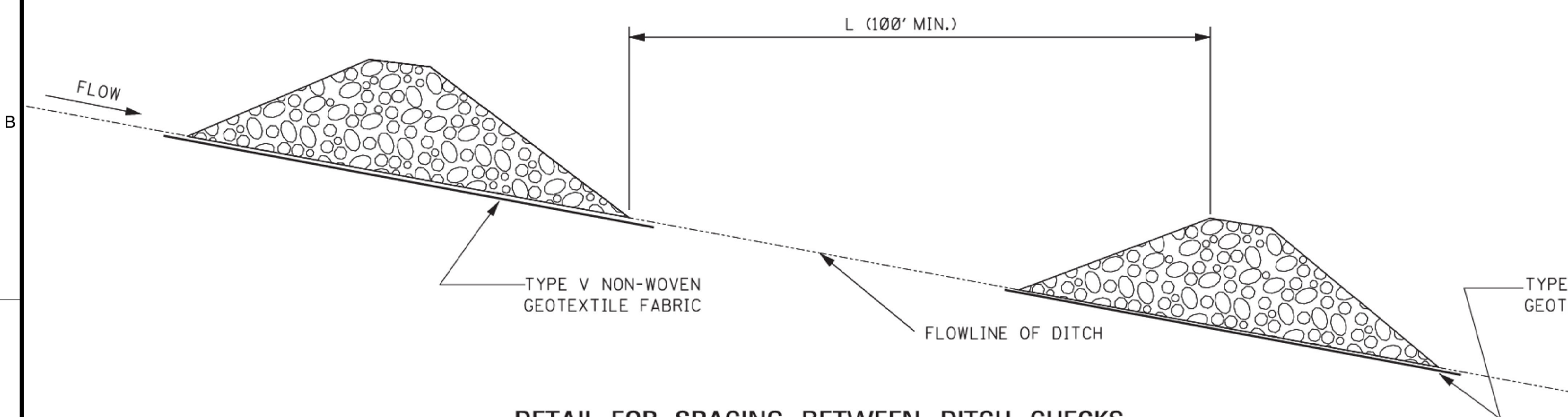


ELEVATION DETAIL

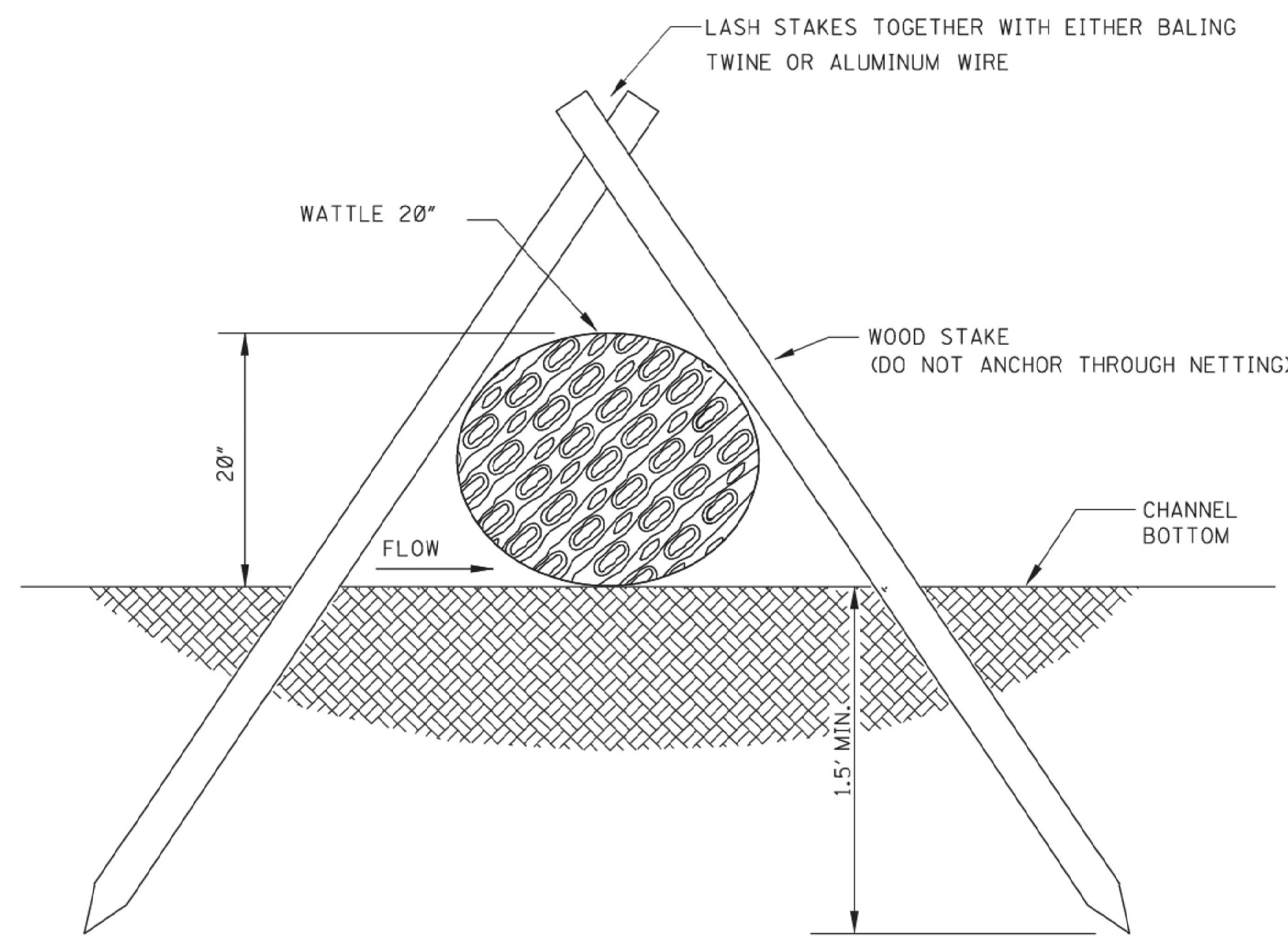


SECTION A-A

TEMPORARY ROCK DITCH CHECKS IN ROADSIDE DITCHES



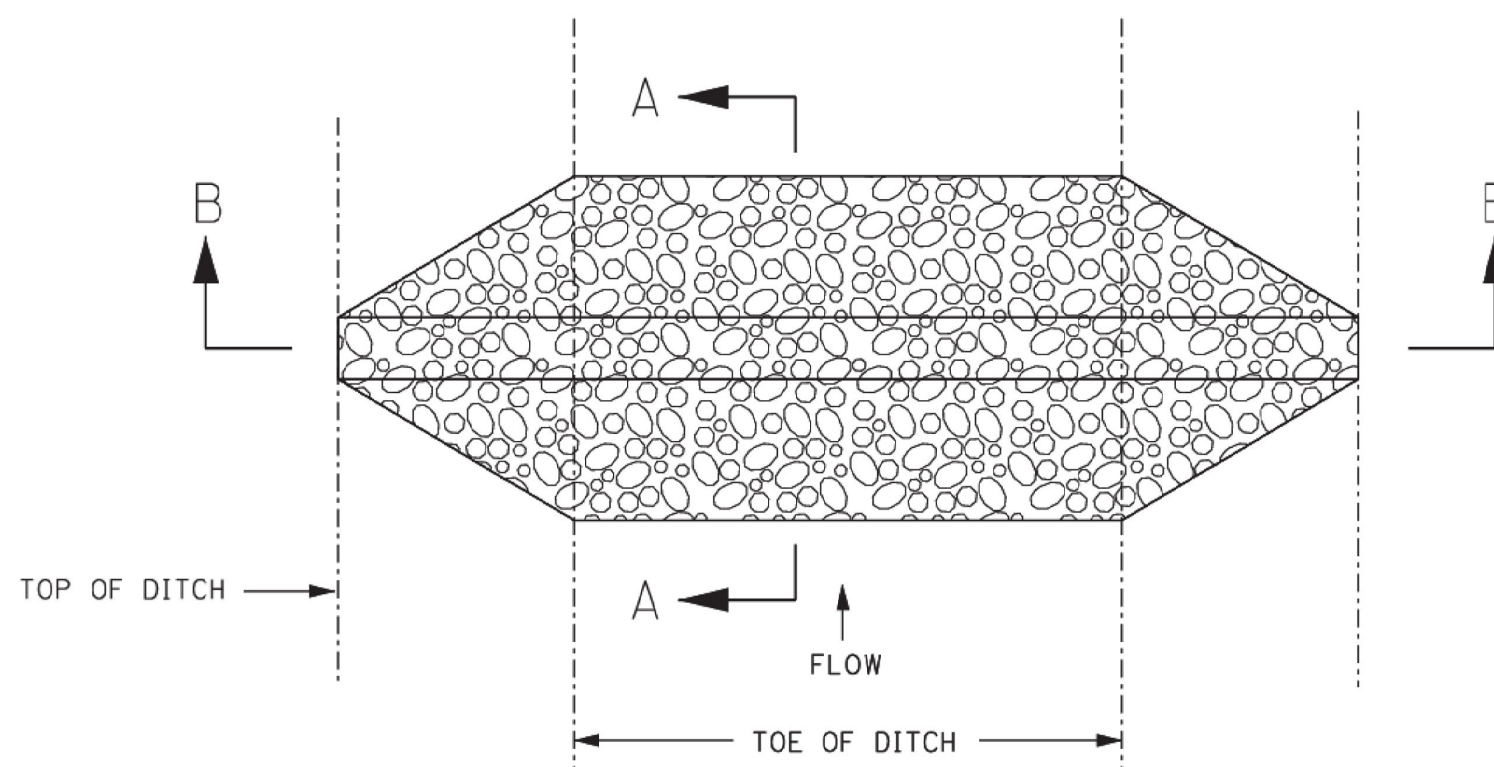
DETAIL FOR SPACING BETWEEN DITCH CHECKS



SECTION A-A

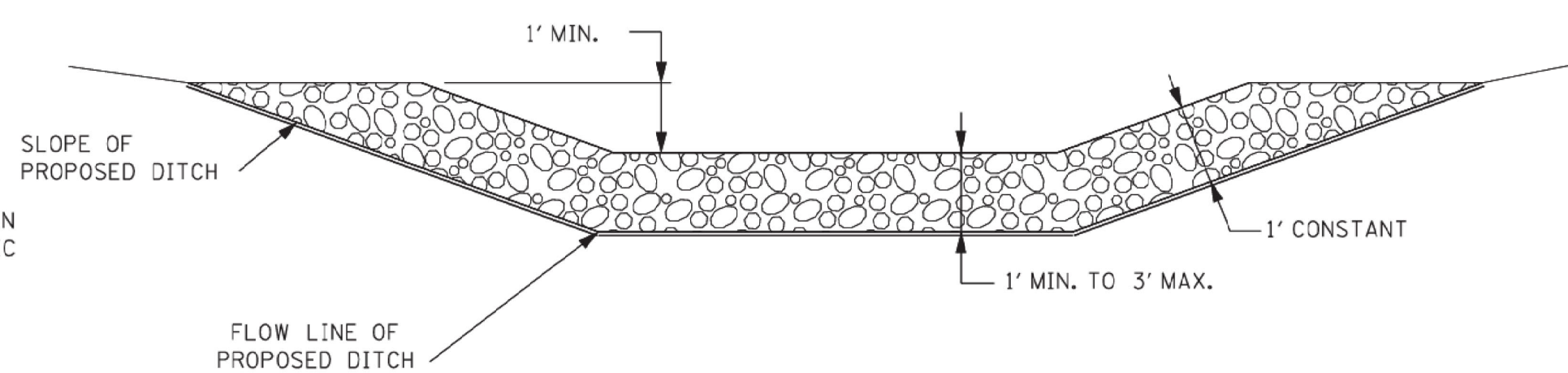
NOTES:

- WATTLE DITCH CHECKS CAN BE USED FOR VELOCITY REDUCTION AND CONTROL OF SEDIMENT TRANSPORT UNDER LOW TO MEDIUM FLOW CONDITIONS.
- THE PLACEMENT INTERVAL BETWEEN WATTLE DITCH CHECK SHALL BE 100' UNLESS SHOWN OTHERWISE ON THE PLANS OR EROSION CONTROL PLAN APPROVED BY THE ENGINEER. SEE SPACING GUIDANCE ON WK. NO. ECD-4.
- ANCHORING WOOD STAKES SHALL BE SIZED, SPACED, DRIVEN, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE CHECK. STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET. ALL NON-DEGRADABLE MATERIALS SHALL BE REMOVED WHEN NO LONGER NEEDED.
- TRENCHING OF WATTLES MAY BE NECESSARY IF PIPING BECOMES EVIDENT.
- WATTLES SHOULD NOT BE USED IN HARD BOTTOM CHANNELS.
- IN THE EVENT WATTLES CANNOT BE SECURED IN PLACE USING WOOD STAKES, SAND BAGS MAY BE USED IN LIEU OF WOOD STAKES IN ORDER TO SECURE THE WATTLES IN PLACE. IF SANDS BAGS ARE USED IN THIS APPLICATION THEY WILL NOT BE A SEPARATE PAY ITEM.

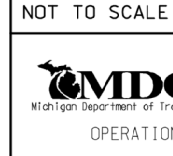
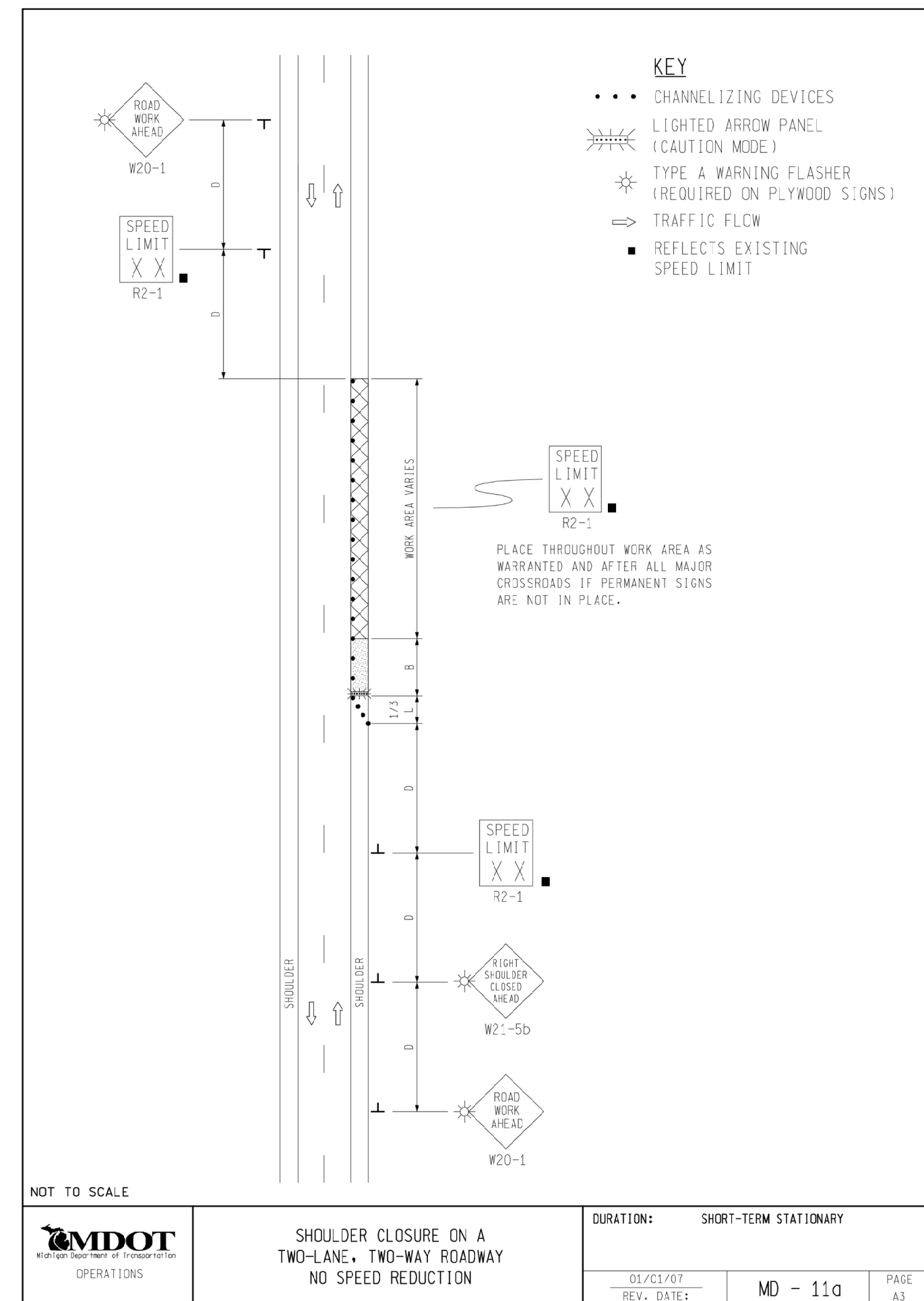


PLAN VIEW

DETAIL FOR TRAPEZOIDAL DITCH



SECTION B-B



SHOULDER CLOSURE ON A TWO-LANE, TWO-WAY ROADWAY NO SPEED REDUCTION

DURATION: SHORT-TERM STATIONARY  
01/01/07 REV. DATE: MD - 110 PAGE A3

DISTANCE BETWEEN TRAFFIC SIGNS "D"											
"D" DISTANCES	25	30	35	40	45	50	55	60	65	70	
D (FEET)	250	300	350	400	450	500	550	600	650	700	

GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE "B"											
"B" LENGTHS	25	30	35	40	45	50	55	60	65	70	
B (FEET)	50	83	132	181	230	279	329	411	476	542	

MINIMUM MERGING TAPER LENGTH "L" (FEET)											
OFFSET FEET	25	30	35	40	45	50	55	60	65	70	
8	83	120	163	213	360	400	440	480	520	560	
9	94	135	184	240	405	450	495	540	585	630	
10	104	150	204	267	450	500	550	600	650	700	
11	115	165	225	293	495	550	605	660	715	770	
12	125	180	245	320	540	600	660	720	780	840	
13	135	195	266	347	585	650	715	780	845	910	
14	146	210	286	374	630	700	770	840	910	980	
15	157	225	307	400	675	750	825	900	975	1050	

THE FORMULAS FOR THE MINIMUM LENGTH OF A MERGING TAPER IN DERIVING THE "L" VALUES SHOWN IN THE ABOVE TABLES ARE AS FOLLOWS:

"L" =  $W \times S^2$  WHERE POSTED SPEED PRIOR TO 60 THE WORK AREA IS 40 MPH OR LESS

"L" =  $W \times S$  WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 45 MPH OR GREATER

L = MINIMUM LENGTH OF MERGING TAPER  
S = POSTED SPEED LIMIT IN MPH PRIOR TO WORK AREA  
W = WIDTH OF OFFSET

TYPES OF TAPERS

UPSTREAM TAPERS  
MERGING TAPER  
SHIFTING TAPER  
SHOULDER TAPER  
TWO-WAY TRAFFIC TAPER  
DOWNSTREAM TAPERS  
(USE IS OPTIONAL)

TAPER LENGTH

L = MINIMUM  
1/2 L = MINIMUM  
1/3 L = MINIMUM  
100' = MAXIMUM  
100' = MINIMUM (PER LANE)



01/01/07 REV. DATE: MD



REVISION RECORD

DESCRIPTION

NO. DATE

ZANDER COMPANIES  
7879 WINANS LAKE RD  
BRIGHTON, MI 48116

ZANDER FLEX SPACE  
9257 E. M-36  
WHITMORE LAKE, MICHIGAN 48189

TRAFFIC AND EROSION DETAILS

DATE: FEB 10, 2023 DRAWN BY: MM  
DWG SCALE: 1"=30' CHECKED BY: CM  
PROJECT NO.: MM  
APPROVED BY: MM

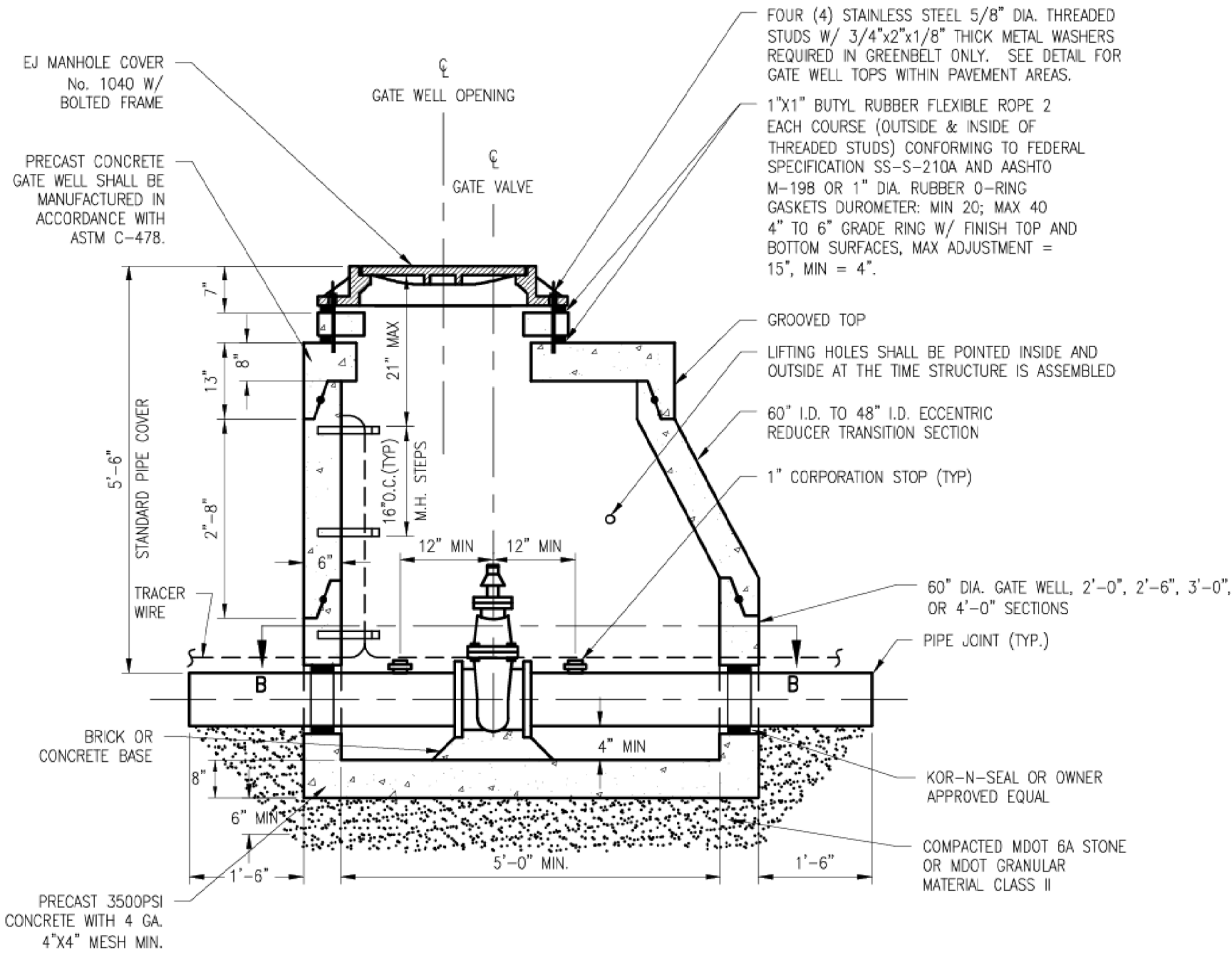
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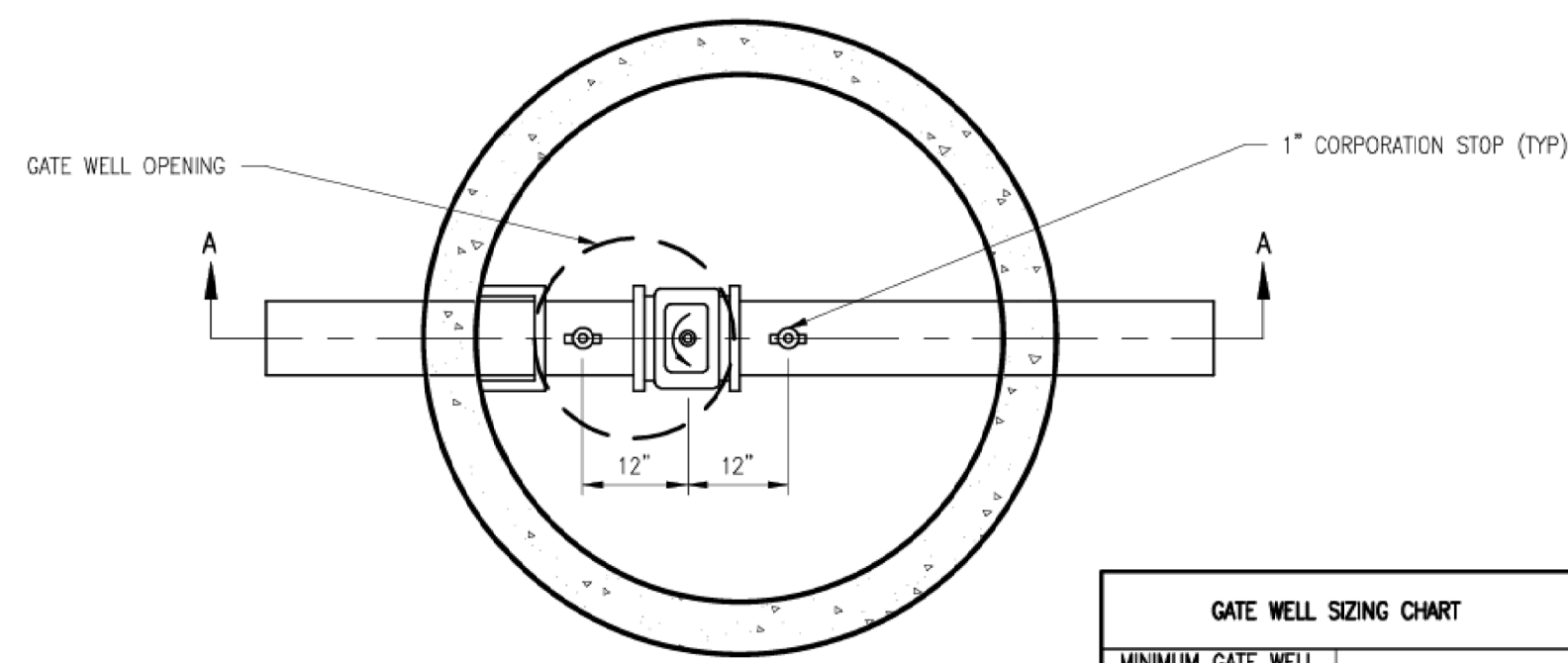
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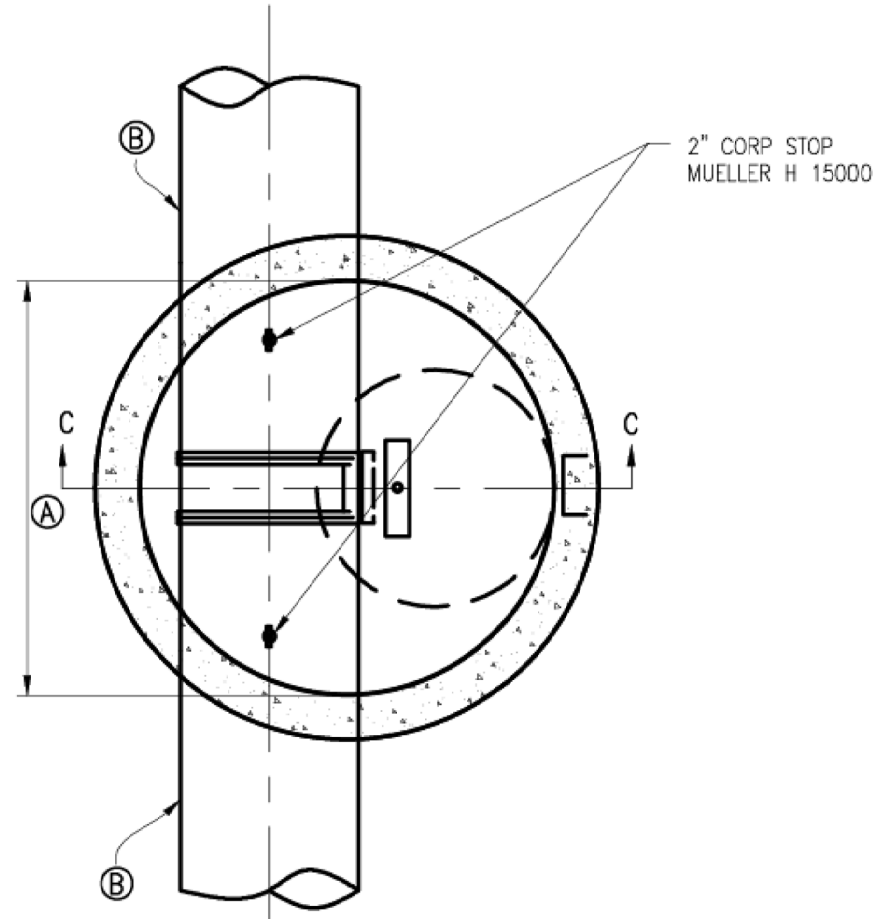
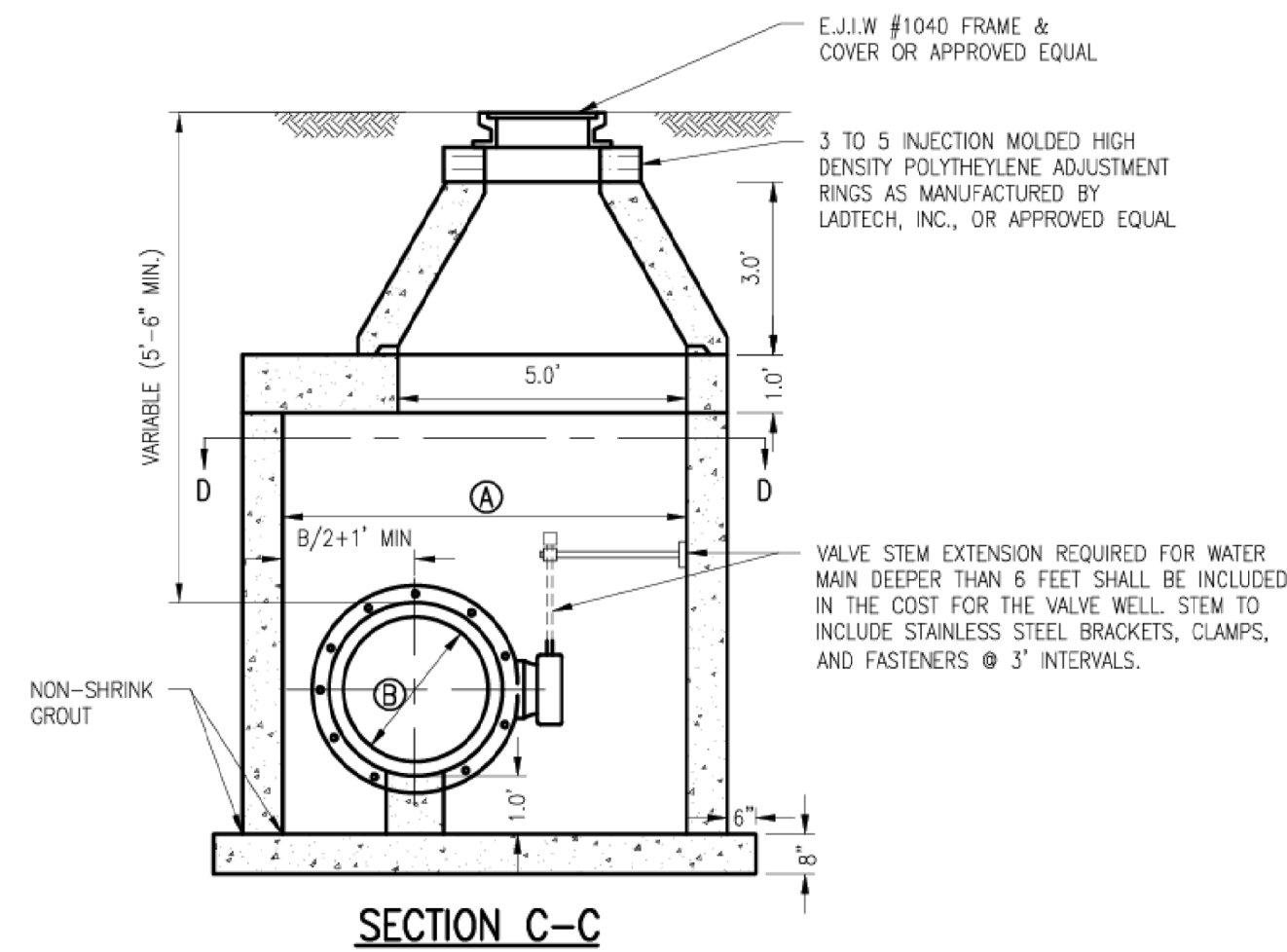


12" AND 16" GATE WELL  
(A-A)



12" AND 16" GATE WELL  
(PLAN VIEW, B-B)

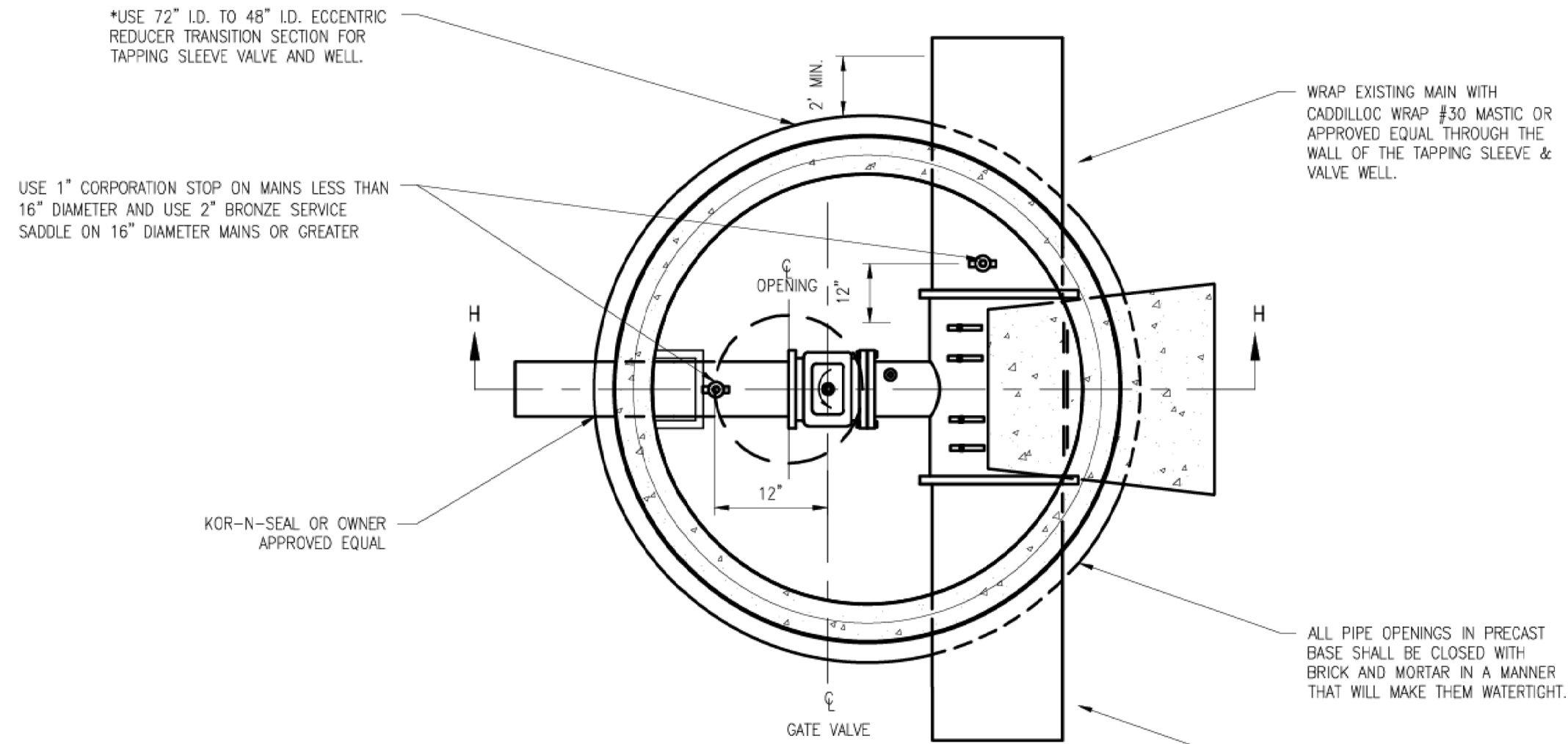
GATE WELL SIZING CHART		
MINIMUM GATE WELL INSIDE DIAMETER	WATER MAIN DIAMETER	
5"	8"-12"	
6"	16"	



SECTION D-D  
BUTTERFLY VALVE AND WELL  
(CONCENTRIC)

NOTES:  
ALL PRECAST SECTIONS SHALL CONFIRM TO A.S.T.M. SPEC. C-478

(A)	(B)
DIA WELL	DIA MAIN
7'-0"	20"

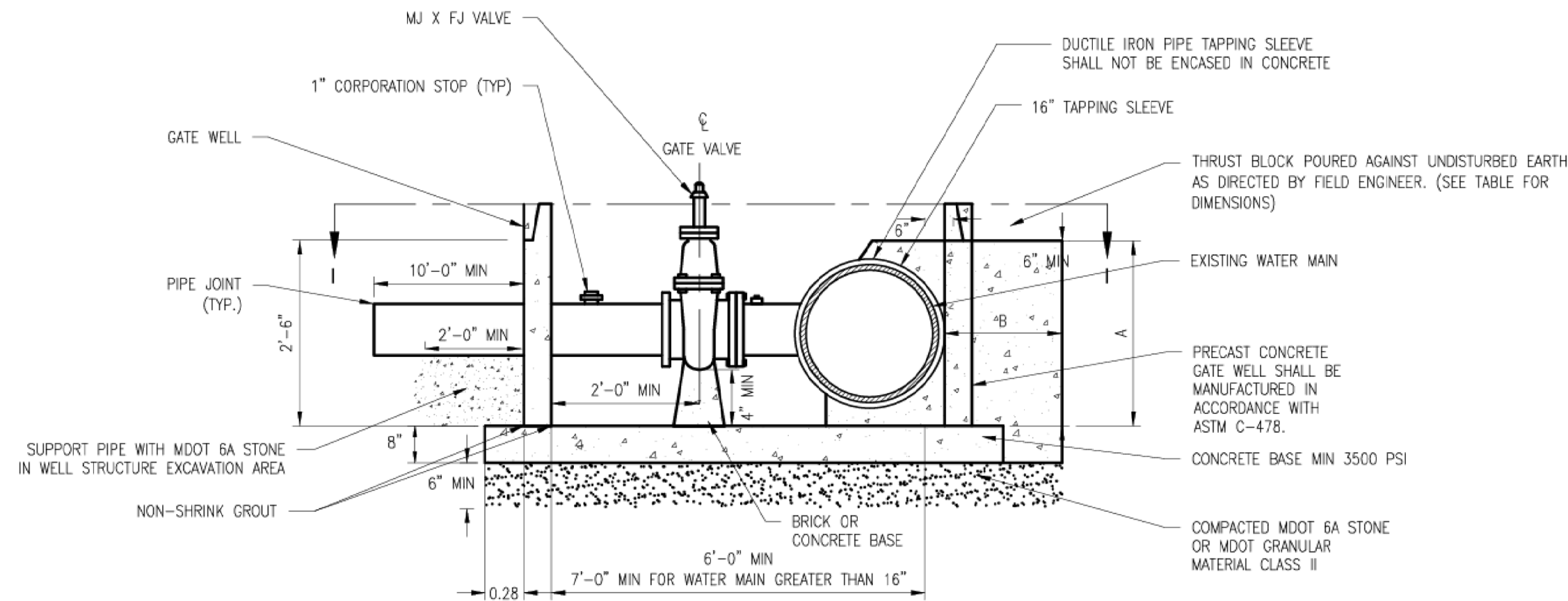


TAPPING SLEEVE VALVE & WELL TYPICAL  
(PLAN VIEW, I-I)

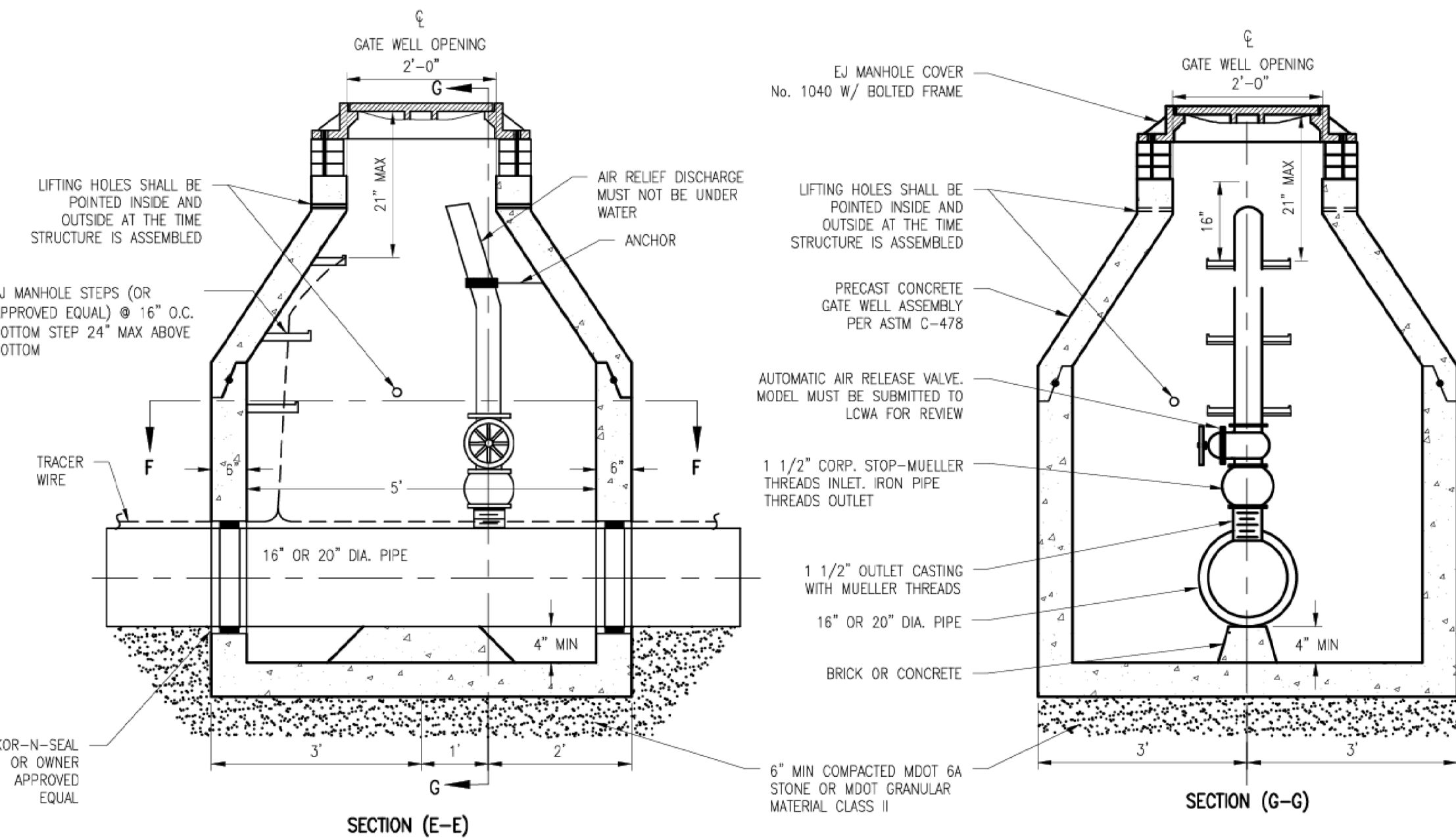
- NOTES:
- TAPPING SLEEVES SHALL BE 304 STAINLESS STEEL: JCM INDUSTRIES 459, ROMAC INDUSTRIES SST SERIES, MUELER 304 SERIES OR APPROVED EQUAL.
  - TAPPING VALVES SHALL BE FLANGED X MECHANICAL JOINT GATE VALVES. OR PROVIDE FL X MJ ADAPTER.
  - LIKE SIZE TAPPING SLEEVES CAN ONLY BE USED WHEN THE EXISTING MAIN IS DUCTILE IRON LARGER THAN 12-INCH IN DIAMETER.
  - HOPE TAPPING SLEEVES MUST BE CERTIFIED FROM THE MANUFACTURER FOR USE ON HOPE PIPE.

DIA	THRUST BLOCK	
D	A	B
8"	2'-0"	2'-1"
12"	2'-0"	2'-1"
16"	2'-0"	2'-1"
20"	4'-0"	2'-3"
24"	4'-0"	2'-3"

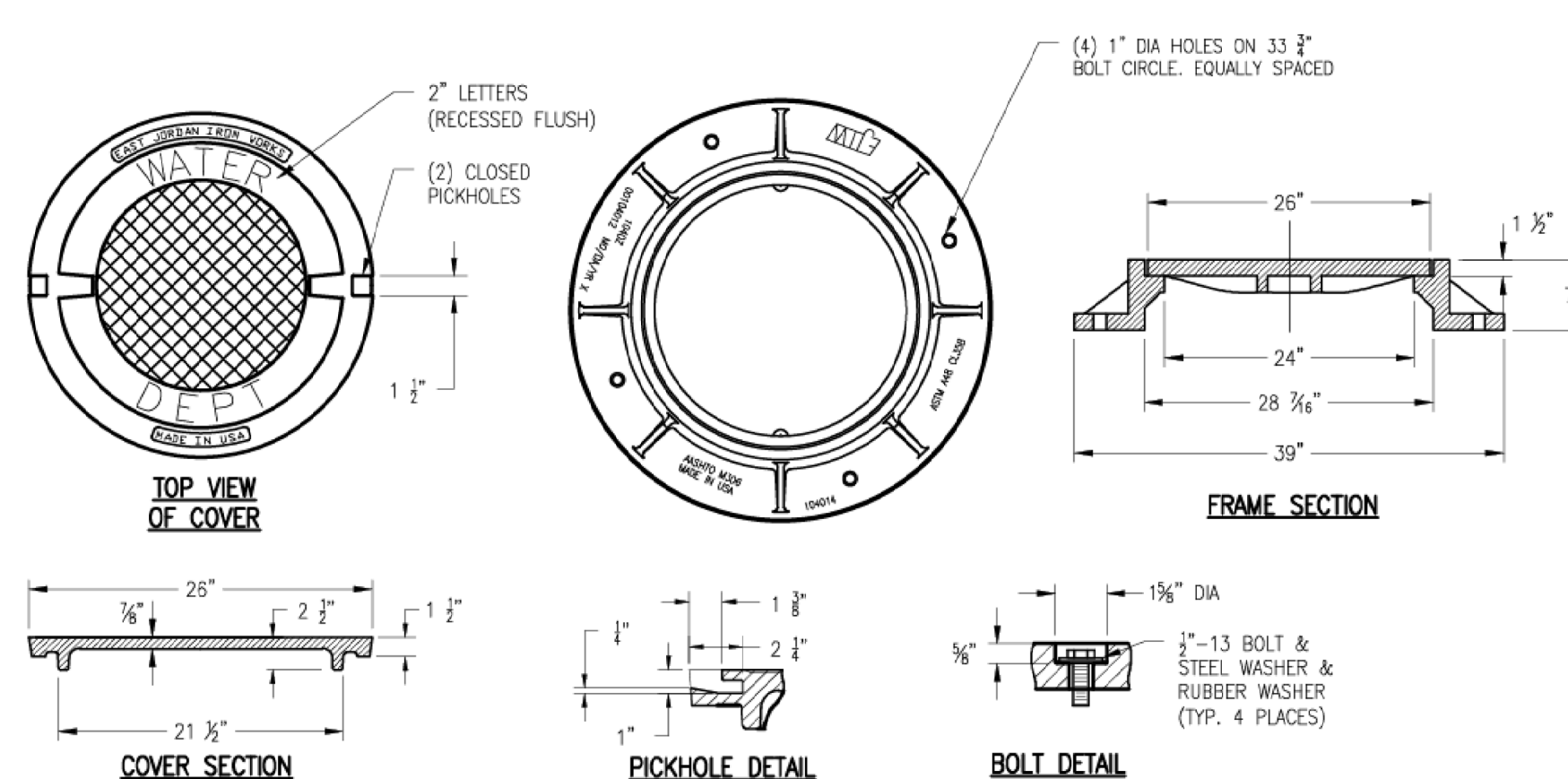
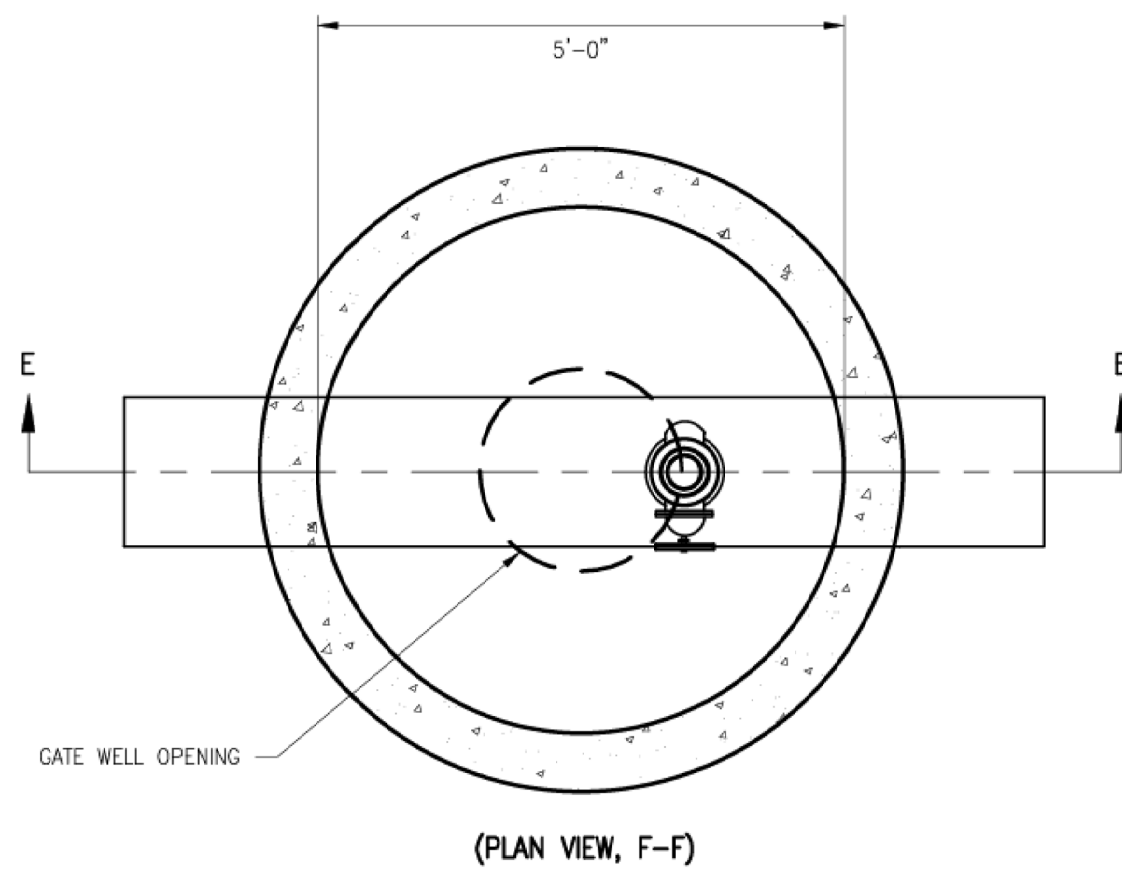
D=DIAMETER OF PIPE BEING TAPPED



DUCTILE IRON PIPE TAPPING SLEEVE, VALVE & WELL  
SECTION (H-H)



STANDARD AIR RELEASE VALVE & WELL  
FOR 16" & 20" WATER MAIN

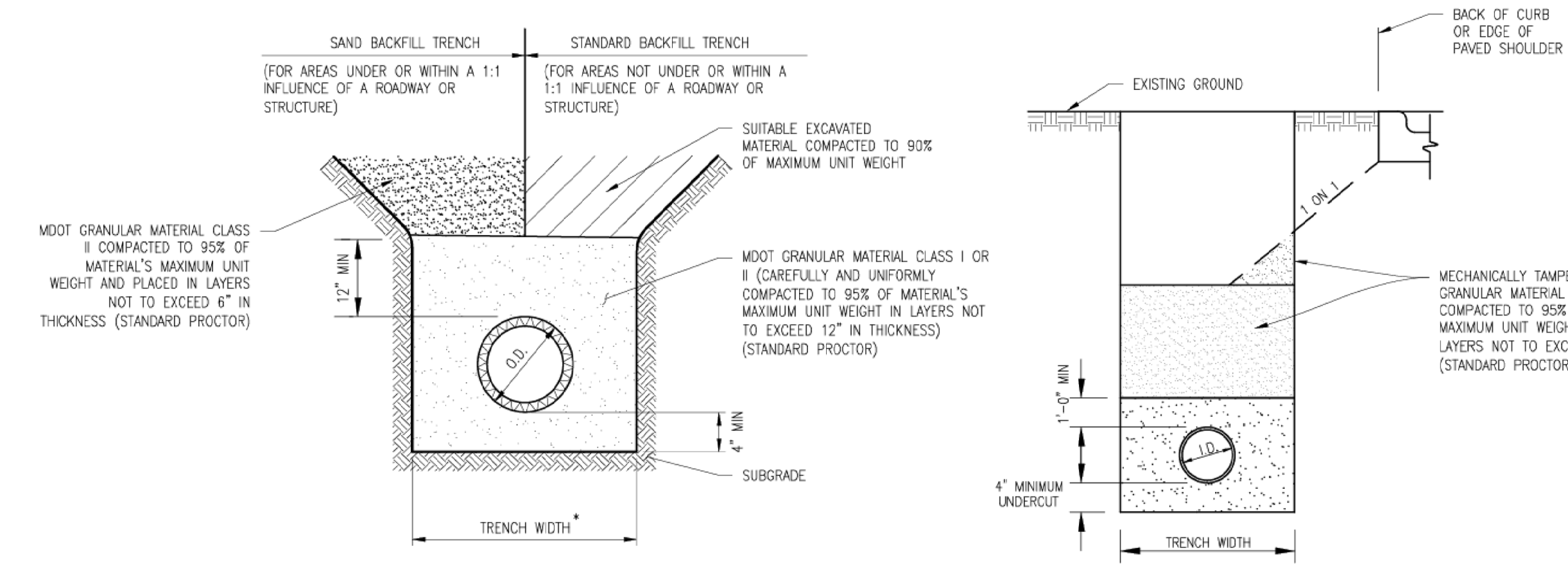
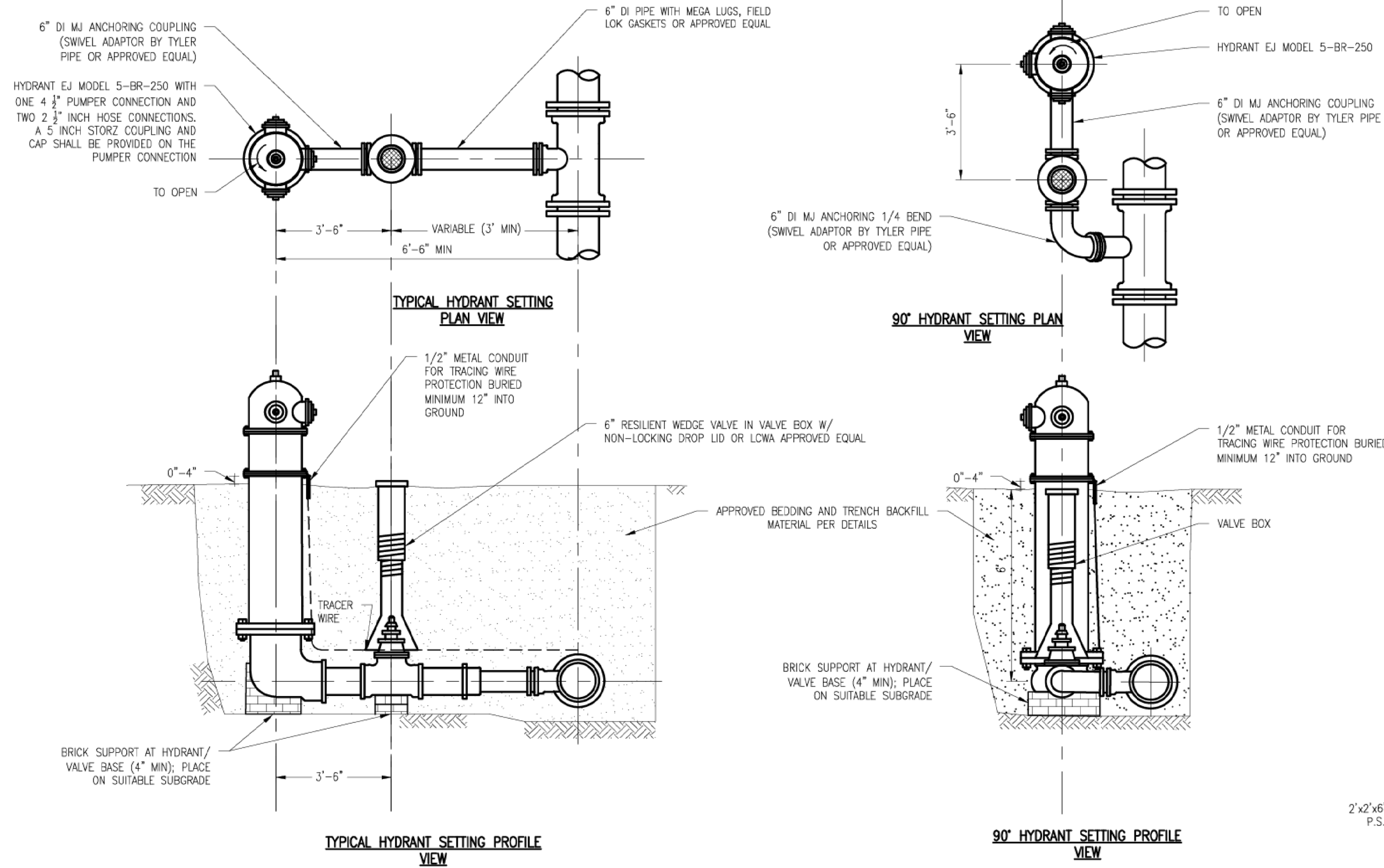


GATE WELL FRAME AND COVER

NOTE:  
CATALOG NO. 1040A  
COVER: GRAY IRON ASTM A48 CL35B  
LOAD RATING: HEAVY DUTY  
COATING: DIPPED



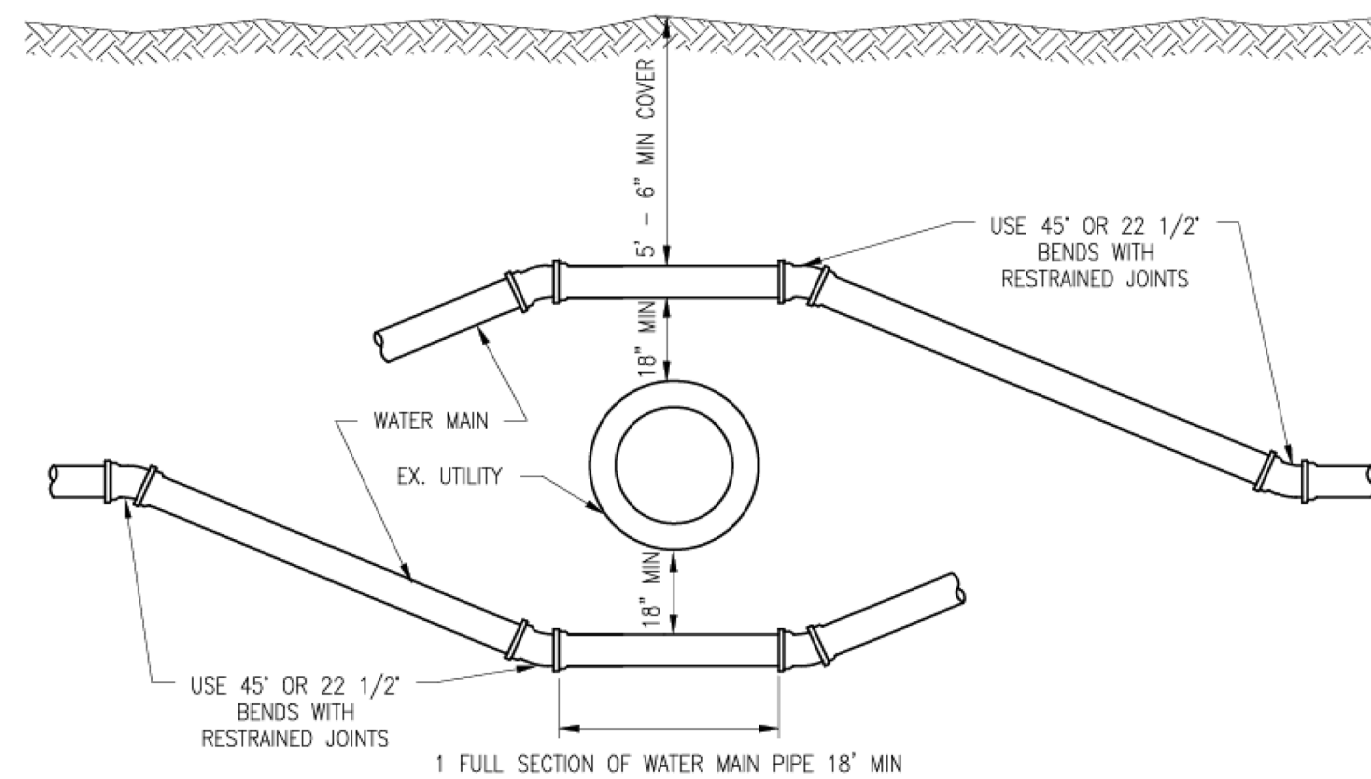
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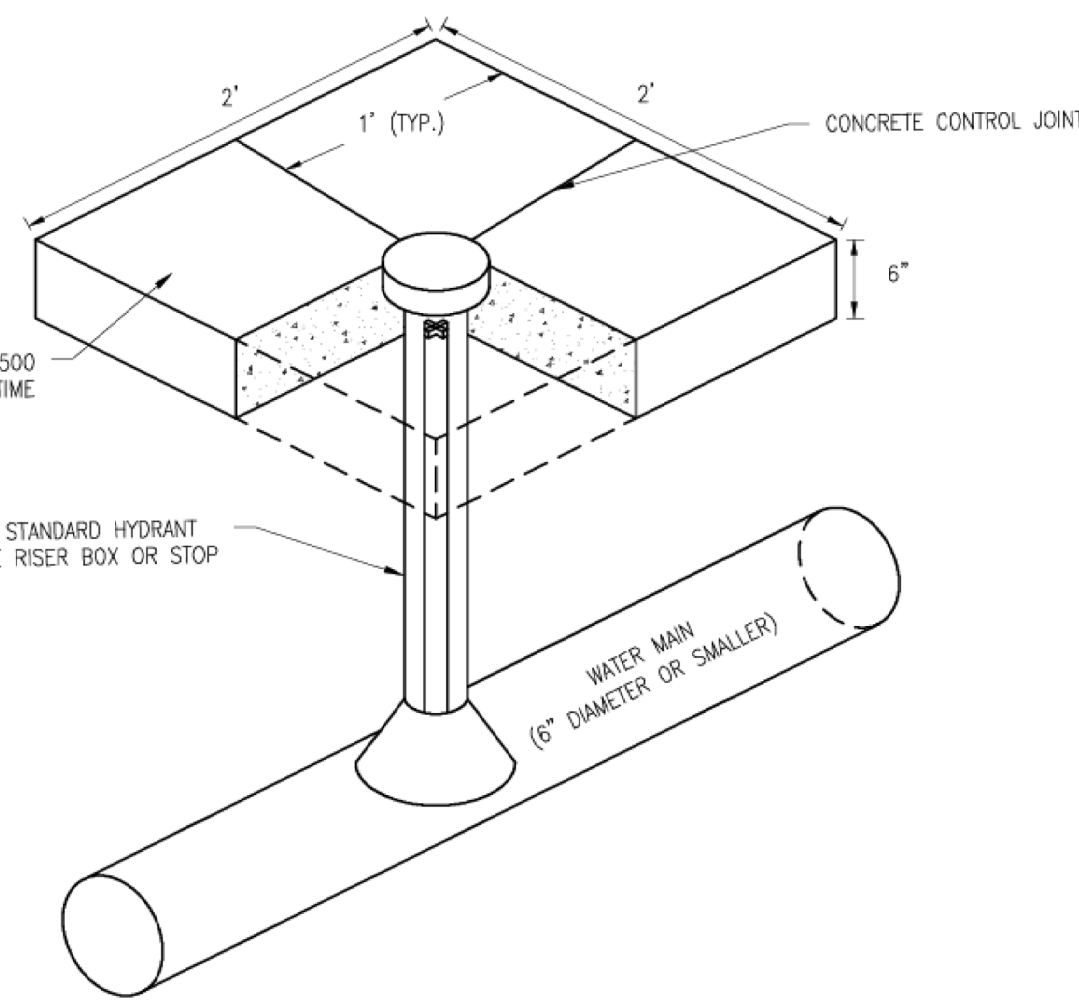
#### BEDDING AND TRENCH BACKFILL DETAILS

- NOTES:
- IF THE EXISTING SUBGRADE SOILS MEET THE REQUIREMENTS FOR MDOT GRANULAR MATERIAL CLASS II (MINIMUM 4" THICK), THEN THE WATER MAIN MAY BE LAID DIRECTLY ON THE COMPACTED NATIVE SUBGRADE SOILS.
  - FIELD CONDITIONS MAY REQUIRE UP TO 18" OF MDOT 6A STONE IN ORDER TO SECURE A FIRM TRENCH BOTTOM. ADDITIONAL DEPTH OF TRENCH UNDERCUT SHALL BE DIRECTED BY A GEOTECHNICAL ENGINEER AND SHALL BE REFILLED WITH 1" X 3" STONE.

MAXIMUM TRENCH WIDTHS*	
I.D. PIPE SIZE	TRENCH WIDTH
UP TO 12"	30"
15" TO 36"	O.D. + 12"
42" OR LARGER	O.D. + 24"

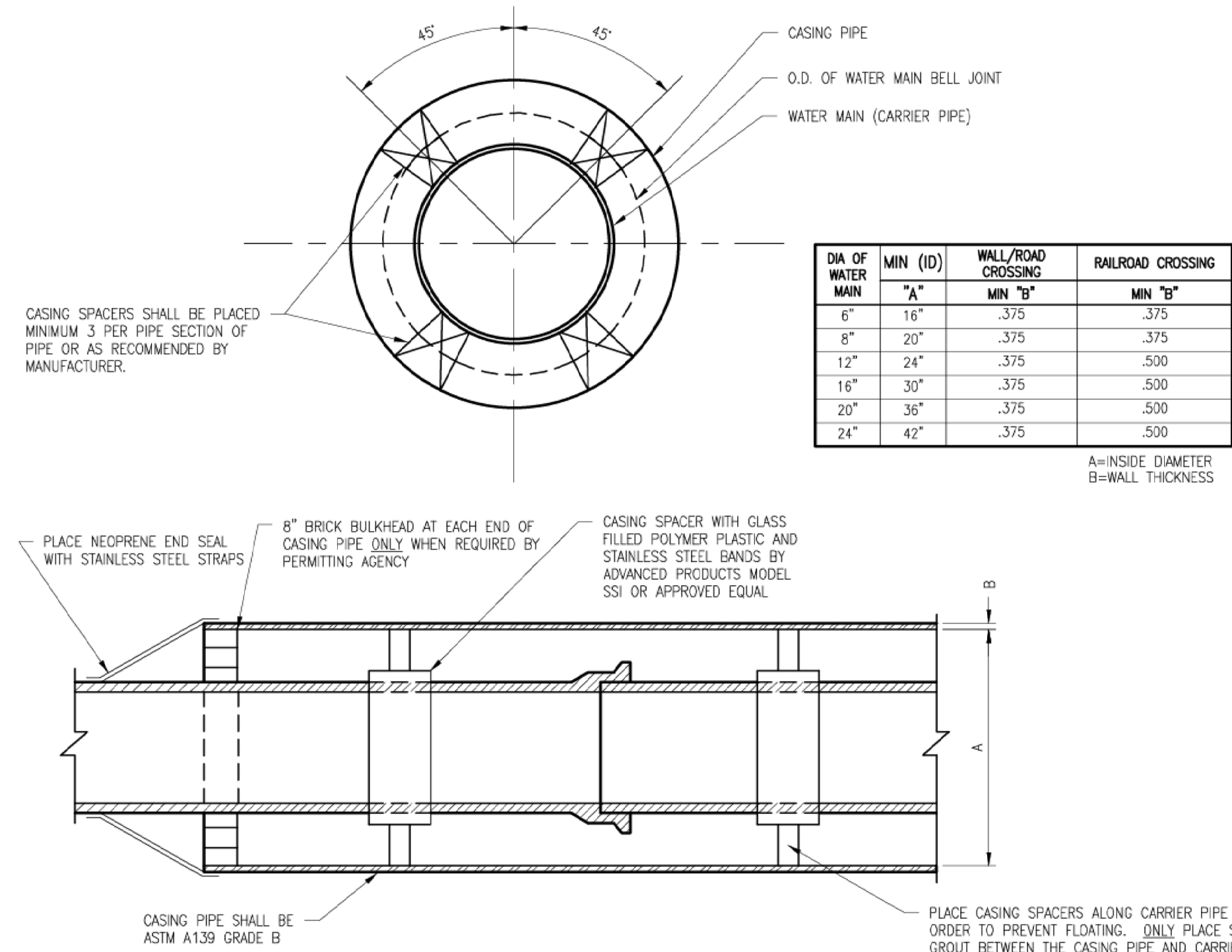
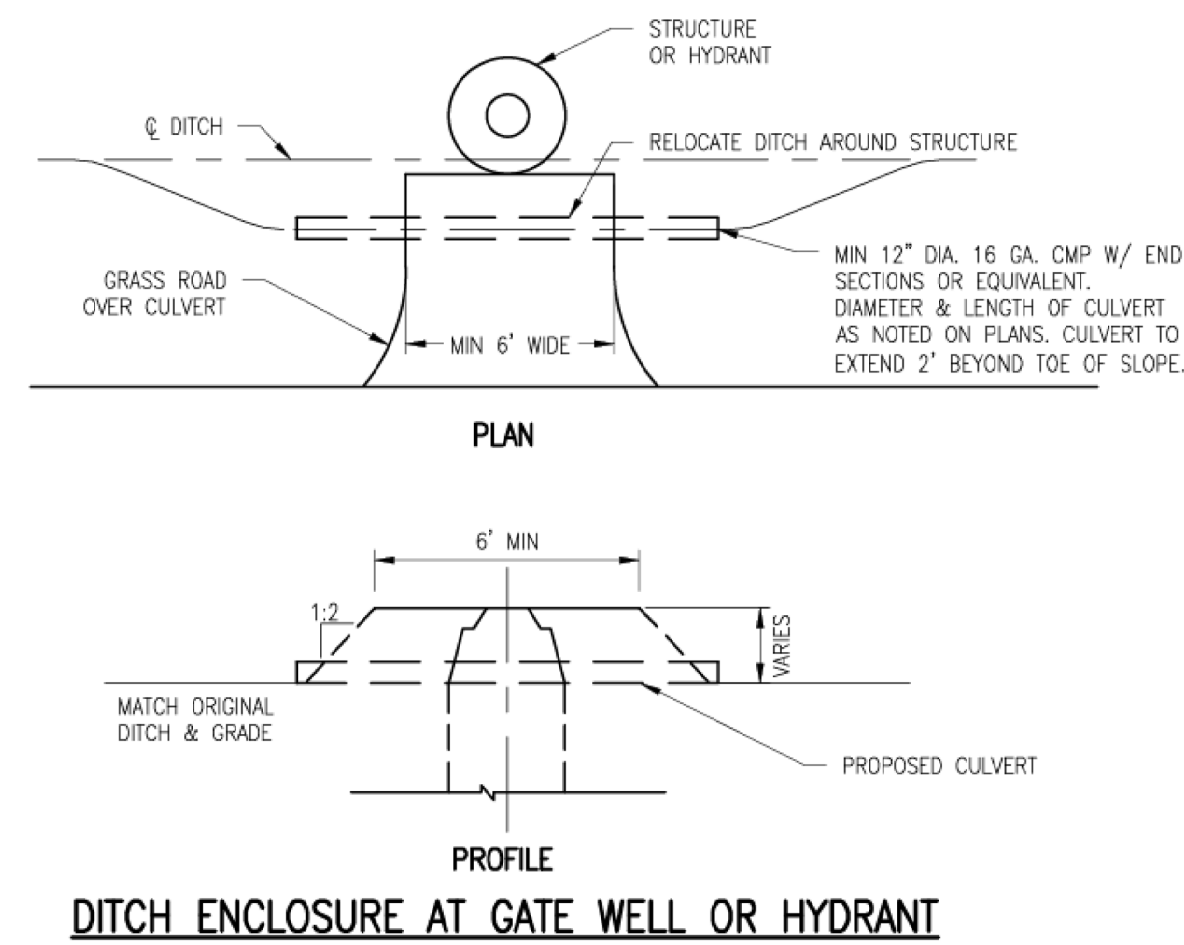
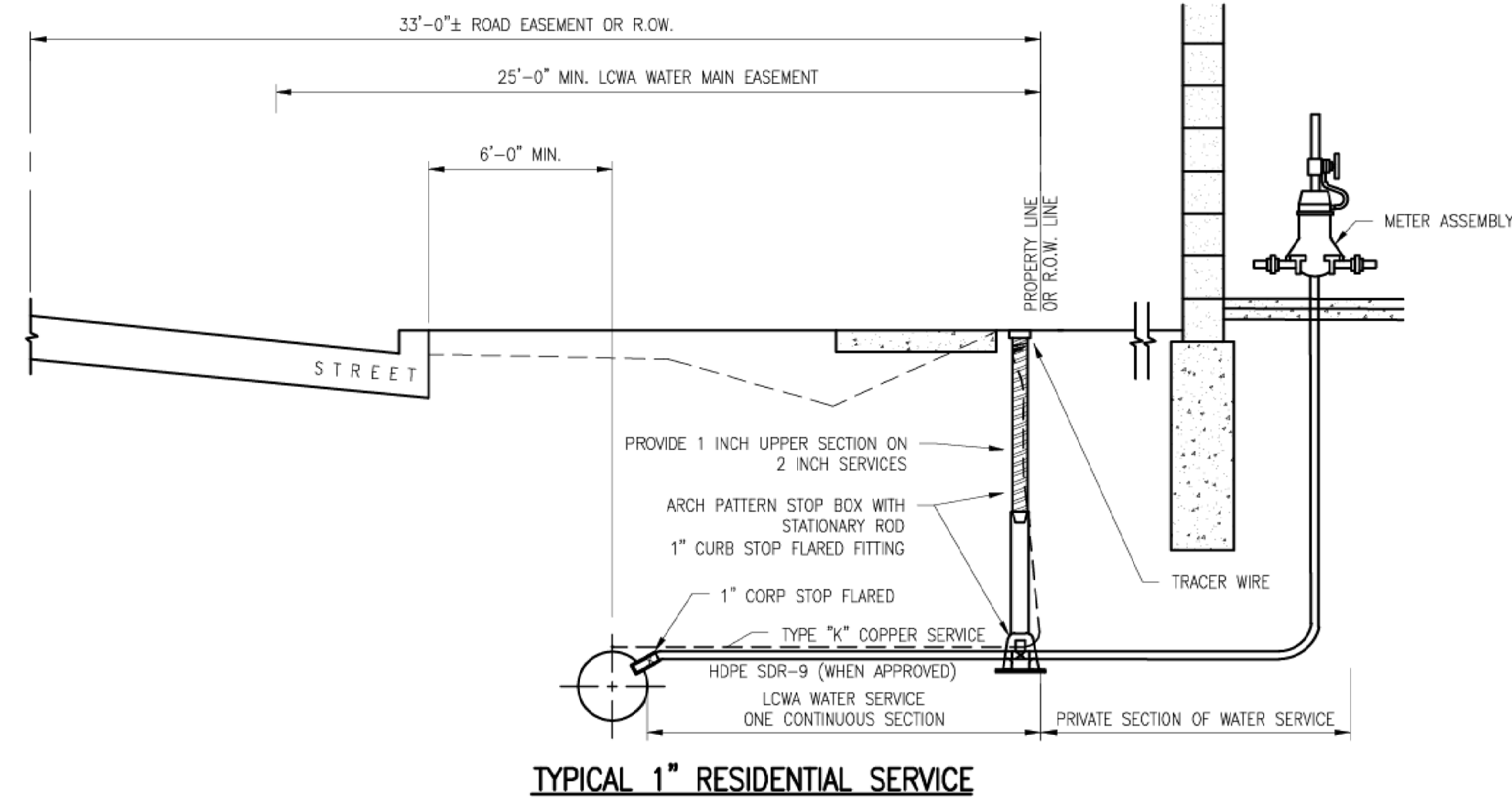


- NOTE:
- COMPACTED SAND BACKFILL SHALL EXTEND 9" EACH SIDE OF EXISTING PIPE, 12" ABOVE EXISTING PIPE AND SHALL SLOPE AT A ONE ON ONE SLOPE TO THE BOTTOM OF THE TRENCH OR TO FINAL TOP GRADE IF UNDER PAVEMENT.



#### STOP BOX IN PAVEMENT DETAIL

- NOTE:
- WHERE WATER SERVICE CORPORATION BOX FALLS WITHIN A PAVED AREA (PARKING LOT, SERVICE DRIVE AREA, ETC.) THE STOP BOX SHALL BE PLACED IN A STANDARD HYDRANT VALVE BOX. THE VALVE BOX SHALL BE CENTERED IN A 2'x2'x6" CONCRETE SLAB. CONCRETE CONTROL JOINTS SHALL BE PLACED IN SLAB AT 1' INTERVALS.



#### PIPE BARREL SUPPORT FOR WATER MAIN CONSTRUCTED IN CASING PIPE

- NOTE:
- THE CONTRACTOR SHALL SUBMIT IN WRITING THE DETAILS OF THE APPROPRIATE PIPE CASING INSTALLATION FOR THE REVIEW AND APPROVAL BY THE ENGINEER BEFORE INSTALLATION OF ANY CASING STARTS. ALTERNATE METHODS OF SUPPORTING AND MAINTAINING THE POSITION OF THE CARRIER PIPE WITH RESPECT TO THE CASING PIPE (SUPPORT TYPE AND SPACING) MAY BE CONSIDERED.

REVISIONS:

VERT. DATUM

HORIZ. DATUM

SCALE

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PROJ. NO.

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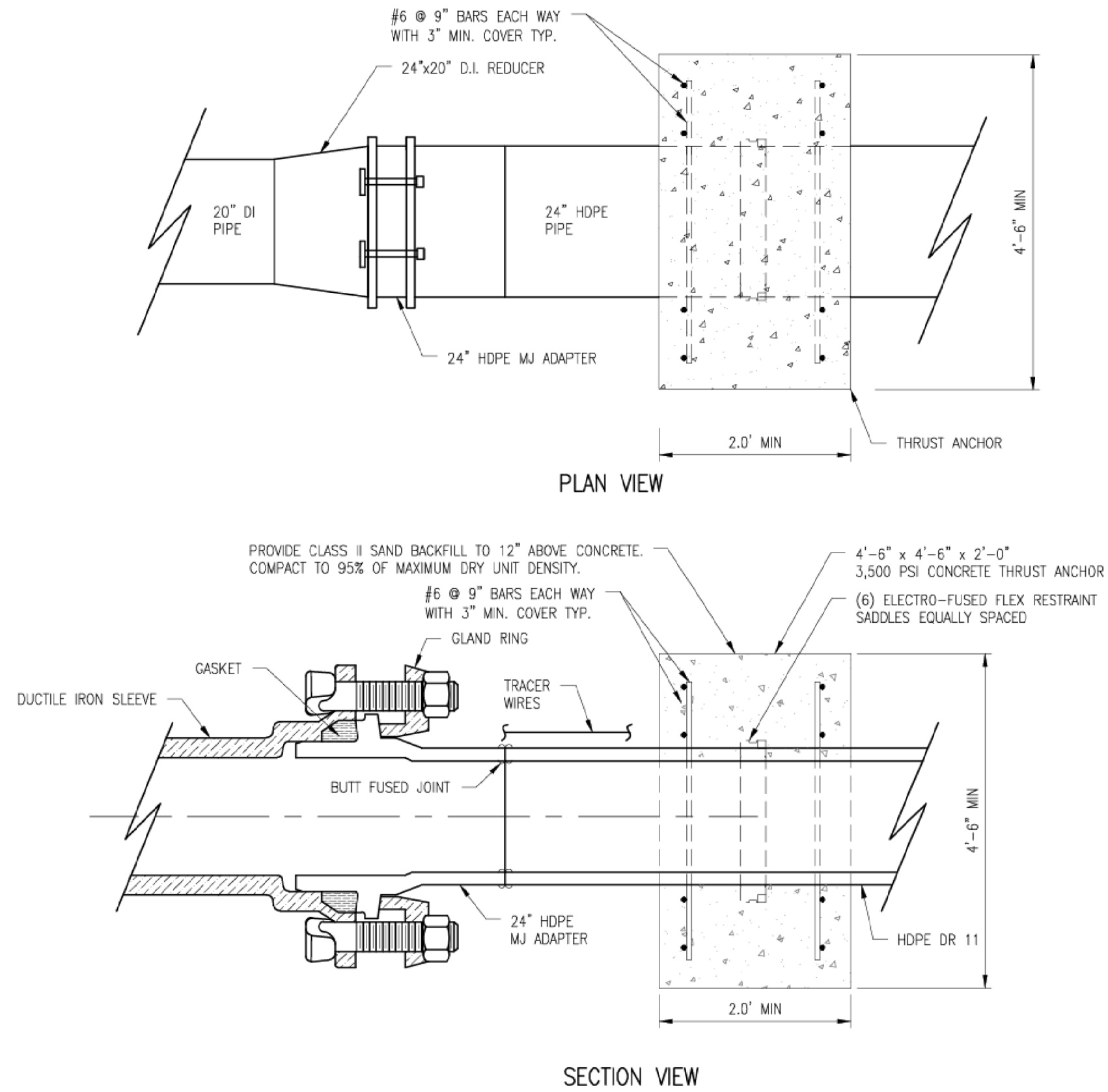
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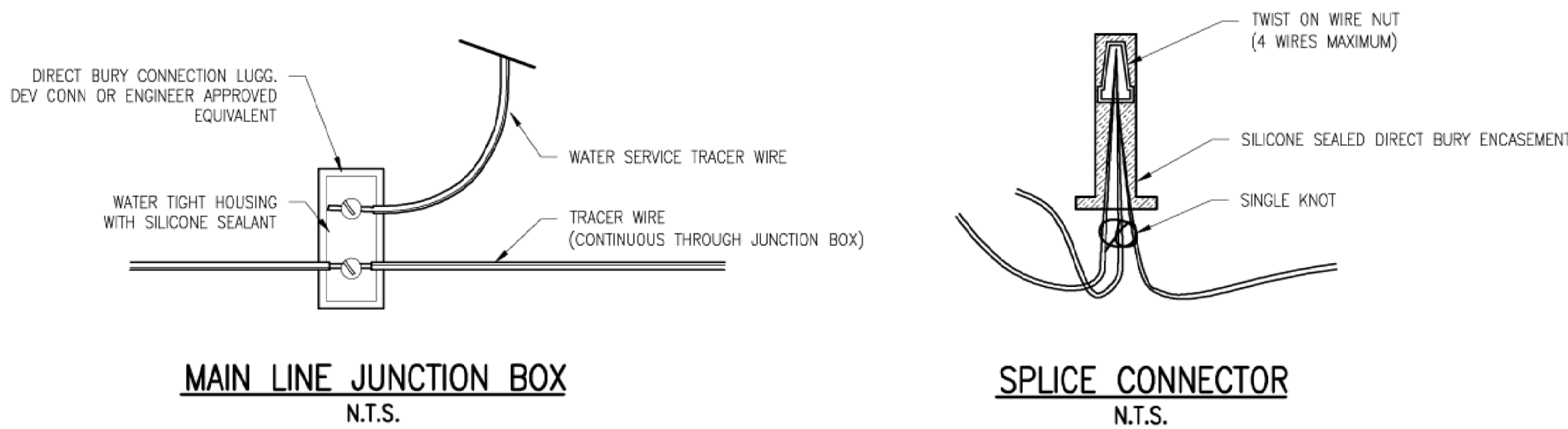
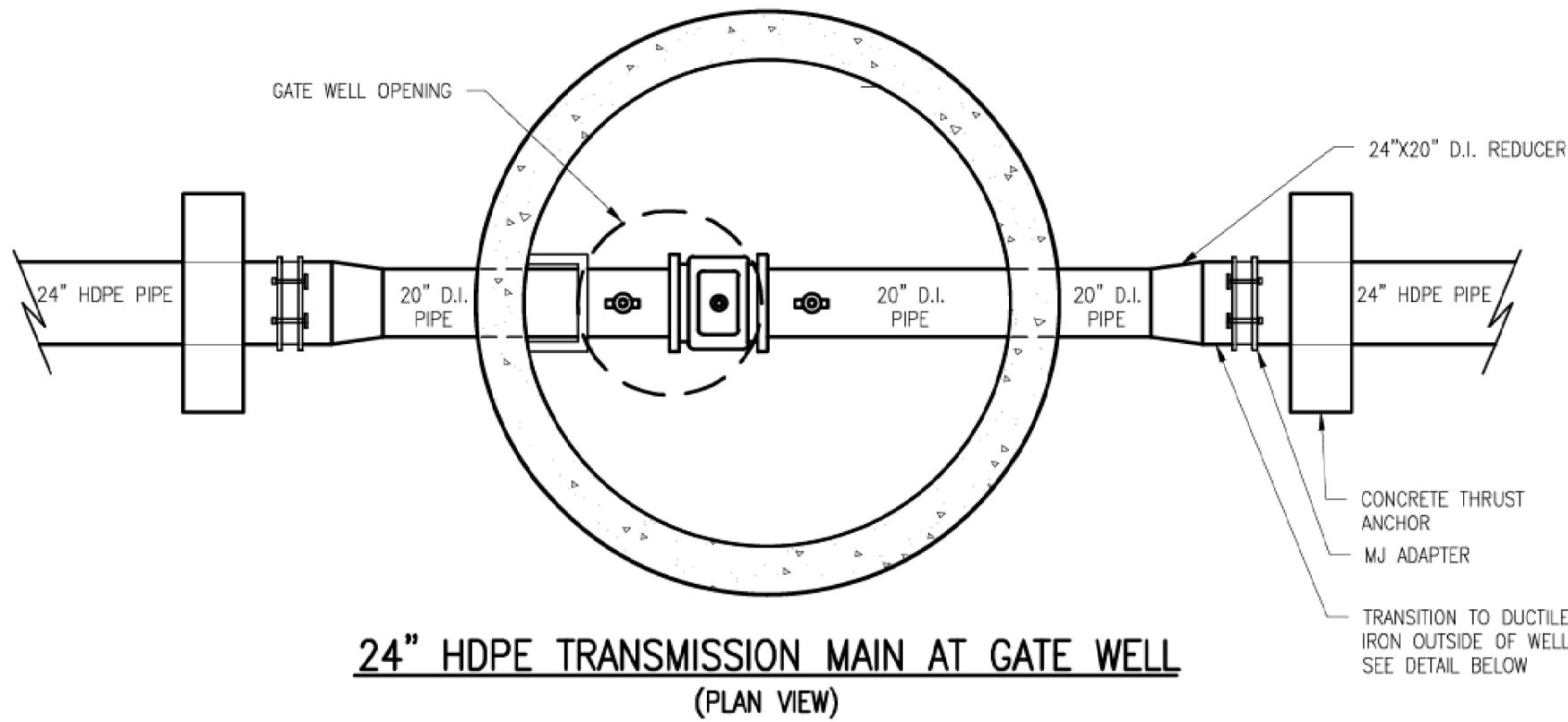


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#### HDPE TO DUCTILE IRON MJ TRANSMISSION

- NOTES:
- PROVIDE 2" MINIMUM CONCRETE COVER OVER ALL REINFORCING STEEL.
  - ADEQUATE CURING TIME OR USE OF HIGH EARLY CONCRETE TO ACHIEVE THE REQUIRED 4,000 PSI STRENGTH SHALL BE PROVIDED FOR ALL THRUST ANCHORS PRIOR TO TESTING MAIN.
  - ALL CONCRETE THRUST ANCHORS MUST BE DESIGNED FOR THE SITE SPECIFIC SOIL, GROUNDWATER AND SYSTEM PRESSURE CONDITIONS. THE DESIGN ENGINEER WILL BE REQUIRED TO SUBMIT CALCULATIONS SUPPORTING THE SIZE AND REINFORCEMENT. DIMENSIONS OF THE THRUST ANCHOR SHALL BE SPECIFIED BY THE DESIGN ENGINEER AND DESIGNED BASED ON WATER MAIN PRESSURE AND SIZE AND SOIL CONDITIONS.
  - ALL HARDWARE SHALL BE STAINLESS STEEL.
  - A MINIMUM OF 48 HOURS TIME SHALL BE PROVIDED AFTER INSTALLATION IS COMPLETE PRIOR TO CONSTRUCTING AND INSTALLING THE THRUST ANCHORS TO ALLOW HDPE PIPE TO ADJUST TO GROUND TEMPERATURE.



#### TRACER WIRE DETAIL

#### GENERAL NOTES:

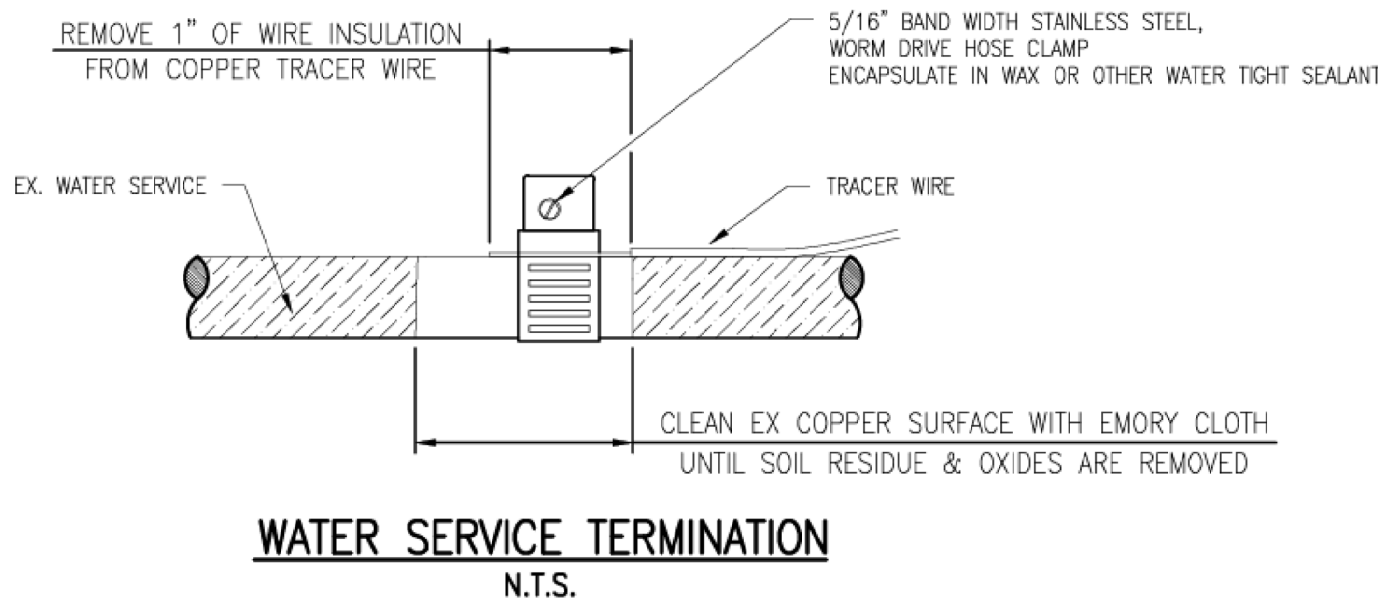
- All construction procedures and materials used on all water main projects shall conform to MDEQ, AWWA, and current LCWA Water System Design Standards.
- No installation of water main is to be attempted without the LCWA inspector being present. Unless otherwise specified on plans, top of all water mains shall be 5.5 ft. below existing or proposed ground.
- The design engineer shall furnish "record plan" water main plans upon job completion. Plans shall locate all water mains, hydrants and gate valves and wells.
- All required cross connection devices shall be installed as required by the local plumbing inspector and in accordance with the standards of the Michigan Department of Environmental Quality.
- Three (3) working days before you dig, dial MISS DIG at 1-800-482-7171.
- Contractor shall notify the LCWA Engineer (734-522-6711) 3 working days prior to start of construction and request an inspection of the job.
- All bolts on all flanged and mechanical joint fittings shall be domestic origin high strength, low alloy COR-BLUE steel bolts or approved equal. These bolts shall meet the current provisions of American National Standard ANSI/AWWA C111/A21.11 for rubber gasket joints for ductile iron pressure pipes and fittings. Bolt manufacturer's certifications of compliance must accompany each shipment.
- BACKFILL NOTE: Under road surfaces, pavement, sidewalk, curb, driveways and where the edge of the trench is within 3 (three) feet of the pavement or as called for on the plans, the trench depth shall be 4 (four) inches lower than the proposed water main elevation. The trench width shall be the outside diameter plus 12 (twelve) inches for pipe diameters up to 36 (thirty-six) inches (See Detail on Sheet 2). The trench shall be backfilled by placing granular material by the "controlled Density Method" or other means having approval of the engineer and compacting it to 95 (ninety-five) percent of its maximum unit weight.
- Tracing wire shall be provided for all water main, regardless of material. Connection is required at all services, hydrants, and gate well, with exposed wire above the ground surface. Conductivity shall be tested by the Contractor prior to the acceptance of the main. All splices shall be made using a gel-cap product which provides a water proof seal, such as 3M's Direct Bury Splice kit #P054007/09964; Snakebite Splice Connectors or approved equal.
- Where water main is located under pavement, the LCWA shall not be responsible for repairing pavement within the easement in the event that maintenance or repairs to the water main become necessary.
- All required cross connection devices shall be installed as required by the local plumbing code and in accordance with the standards of the Michigan Department of Environmental Quality Water Resources Division.
- The materials specified may only be substituted with an approved equal as determined by the LCWA Engineer. Written authorization must be obtained prior to ordering or installing the approved equal.

#### MATERIAL SUMMARY SCHEDULE

Material Schedule for Water Distribution specification section.

Item	Type	Standard	Model		
			Option A	Option B	Option C
Valves 6" to 16"	Resilient Wedge MJxMJ	AWWA C515	EJ 22000 Series	Mueller A-2361	
Valves > 16"	Butterfly	AWWA C504			
Hydrants	Traffic Model	AWWA C502	EJ 5BR-250	Approved Equal*	
Water Main 4" to 20"	Ductile Iron	AWWA C151	Ductile Iron Class 52		
Water Services	Arch Pattern Curb Boxes		Mueller Co. Model# H-10306	Ford Meter Box Co. Model # EA2 Series	
Water Services	Curb Stops (Flared Connection)	AWWA C800	Mueller Co. Model# B-252004N	Ford Meter Box Co. Copper Model # B22-444-NL B22-666-NL B22-777-NL or B44-777	HDPE Ford Meter Box # B66, or Mueller 15000 series
Water Services	Corporation Stops	AWWA C800	Mueller Model 15000N	Ford Meter Box Co. Model # F600	HDPE Ford Meter Box # F1001, or Mueller 15000 series
Water Service Piping	Copper K	ASTM B 88			
Water Service Piping	HDPE SDR-9	ASTM D3350 NSF 14/61	ADS Polyflex		
Water Service ≥ 4"	Ductile Iron	AWWA C151	Ductile Iron Class 52		
Water Main Fittings	Mechanical	AWWA C110			
Water Main Joints	Gaskets	AWWA C111			
Water Main Tapping Sleeve	304 Stainless Steel	AWWA C228-08	Mueller H304 Series	Romac SST Series	Approved Equal*
Tracer Wire	Cooper Wire		Copperhead #1256-EHS	Approved Equal*	
	Directional Drill/Pipe bursting		Copperhead SoloShotXtreme	Approved Equal*	
Tracer Wire Connections	Splicers		Copperhead Snakebite Splice Connectors	Approved Equal*	
Tracer Boxes	Junction Box		Copperhead SnakePit #CD14TP	Approved Equal*	

\*Any approved equal must be submitted in writing to the LCWA engineer.



#### WATER MAIN NOTES:

- All water mains shall be ductile iron with a minimum of Class 52 thickness per the following specification; Ductile iron pipe shall be ANSI A21.51 (AWWA-C151) std. wall thickness, double cement lined with bituminous seal coat.
- Water main cover shall be a minimum of 5.5 feet and no more than 7.5 feet.
- MEGALUG shall be placed at all valves, bends, tees, plugs, hydrants and mechanical fittings. Surrounding joints shall be restrained using U.S. Pipe Field Lok gaskets or approved equal per the joint restraining schedule or the latest edition of DIPRA's Thrust Restraint Design for Ductile Iron Pipe.

#### VALVE & SLEEVE NOTES:

- Gate Valves up to 16 inch diameter shall be resilient, wedge seated gate valve with ductile iron rubber coated wedge, non-rising stem, opening Left, bronze stem and stem nut conforming with AWWA C515, Mueller, EJ, or LCWA approved equal. Valves larger than 16 inch shall be butterfly per AWWA C504.
- All gate valves with operating nuts at a distance greater than 5.0' below ground surface shall be provided with an extension stem. The length of the extension stem shall be such that it will be within 5.0' of the ground surface, when one is used. The extension stem shall be held in place by an extension stem guide securely fastened to the wall of the gate well. The extension stem shall be mechanically attached to the operating nut. Details of extension stem and method of installation shall be approved by the engineer prior to installation.
- All precast concrete gate well sections shall be manufactured to conform with ASTM C478, (latest edition), standard specification for precast reinforced concrete manhole sections, except wall thickness, shall be as shown on these details. All joints for precast concrete gate well sections shall be "Modified Grooved Tongue" with gasket manufactured to conform with ASTM C443, (latest edition), Standard specification for Joints for circular concrete sewer and culvert pipe using rubber gaskets.
- All gate well covers shall be EJ #1040A with bolted frame and have the words "WATER" in raised letters on the frame cover, or approved equal.
- Tapping sleeve shall be flanged.

#### HYDRANT NOTES:

- All hydrants shall be EJ 5BR 250 Traffic Model or LCWA approved equal and shall conform to AWWA Spec. C-502 as amended, and shall have a minimum 6" valve opening which closes with the water pressure. Hydrants shall be traffic style with breakable flange and coupling.
- Hydrants shall be installed with restrained joints and block/brick support. Poured concrete thrust blocks shall be placed as directed by the LCWA Engineer.
- Hydrants shall have a swivel flange to allow bonnet to be turned 360 degrees without removing the bonnet and barrel flanges shall be integrally cast with the barrel. Inlet shoe shall have a bronze valve, seat which can be removed without digging.
- Inlet connection shall be 6" mechanical joint, ASA-A21-11. Stem threads shall be sealed with double "O" rings and shall be permanently lubricated with all weather grease. Hydrants shall be equipped with removable drain plug.
- Hose Connections: Two (2) 2 1/2" hose nozzles with national standard threads, one (1) 4 1/2" pumper nozzle with a 5" Harrington Integral Hydrant Storz (HHS-EJW-50-45) or approved equal. The Hydrants shall be painted red above ground and black below, with a finish coat of Glamortex 501 enamel, color 314 vermilion, or approved equal. The 2 1/2" hydrant caps shall be painted with Glamortex 501 enamel, color bright white, or approved equal. The Storz connection shall not be painted. The center flange shall have high intensity reflective tape.

#### PIPE RESTRAINT SCHEDULE

Ground buried pressure pipe – Ductile Iron Pipe

PIPE DIAMETER	Dead Ends	TEES	45° BENDS	22 ½° BENDS	REDUCERS
6	60	25	25	25	30
8	75	25	25	25	35
12	110	40	35	25	40
16	140	70	40	25	60
24	200	135	50	25	60

Lengths of pipe restraint are given in feet.

If required, pipe diameter is not listed in this table; the next largest pipe shall be used. This table is based on a test pressure of 180 PSI (operating pressure plus water hammer). For other test pressures, all values to be increased or decreased proportionally. The values provided of restraint length are in each direction from the point of deflection or termination except for tees, at which only the branch in the direction of the stem. If tie rods are used, use four rods minimum and add 1/8-inch to bar diameter as corrosion allowance. Size reduction is based upon the pipe diameter shown in this table. At a minimum, the next joint past the mechanical joint fitting shall be restrained.

Based upon:

Internal Pressure:	180
Pipe Depth:	5
Bedding Class:	Type 4
Soil Type:	Good Sand



REVISIONS:

VERT DATUM

WWD 08

SCALE

INTS

CITY/VILLAGE/COMMUNITY

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PROJ. IGR

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ENG

PROJ. NUMBER

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SHEET

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OF 3

LIVINGSTON COMMUNITY WATER AUTHORITY

WATER MAIN STANDARD DETAILS

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ABBREVIATIONS AND SYMBOLS			
ABOVE FINISHED FLOOR ACCESS DOOR ACCESS PANEL ACOUSTIC, ACOUSTICAL ACOUSTIC CEILING TILE ADDITION ADJUSTABLE ALTERNATE ALUM. ANCHOR, ANCHORABLE ANCHOR BOLT AND ANGLE ANOD. APPROVED APPROXIMATE ARCHITECT, ARCHITECTURAL AUTOMATIC ASPH. ASSEMBLY ASSISTANT AT AUXILIARY	A.F.F. A.D. A.P. ACOUS. A.C.T. ADD'L ADJ. ALT. ANCH. A.B. AND L ANOD. APPR. APPROX. ARCH. ARCHIT. AUTOM. ASPH. ASS'Y. ASSISTANT Ø AUX.	OFFICE ON CENTER OPENING OPPOSITE OPPOSITE HAND OUTSIDE DIAMETER OVER HEAD PAINTED PAIR PAPER TOWEL DISPENSER PAPER TOWEL RECEPTACLE PARTITION PAVEMENT PAVING PENT HOUSE PERFORATED PERIMETER P.H. PHYSICALLY HANDICAPPED PIECES PLASTER PLASTIC LAMINATE PLATE PLYWOOD POINT POINTS POLISH/POLISHED POLYVINYL CHLORIDE PVC POUNDS POUNDS PER SQUARE FOOT POWER PRECAST PREFABRICATED PRESSURE TREATED PROJECT PROJECTION PROPERTY QUARRY TILE Q.T.	OFF. O.C. OPENG OPP. O.H. O.D. O.H.L. PTD PR P.T.D. P.T.R. PARTN PMT PVG P.S. PERF. PERM. P.C.F. PCS PLAS. PLAM. PLYND PTD PTS POL PVC LBS. P.S.F. PWR P.C. PREFAB. P.T. PROJ. PROP. Q.T. R.C. RAD. REF. REFL. REFRIG. REIN. REIN. REIN. REV. R.H. R.H.R. R.D.W. R. R.S. R.F.G. RM. R.O. RND. R.T. SAN. S.N.D. S.N.DISP. SCHED. SEC. SECTION S.S. S.S.T. SHI SHI/TWL SHL/VG SHW S.M. S.DISP. S SPK'R SPEC. SQ. S.F. ST.STL STD STOR. STRUCT. ST.STL S.S.C. SURF. SUSP. TACK BD. TEL. EWC TEMP. TEMP.GL. THRESH. T.L.T. T.P.D. TAG TAP T.O.F. T.O.M. T.O.C. T.O.S. T.O.W. T.L. TYP. U.L. U.N.O. V.T.R. VERT. V.E.S.T. V.C.T. V.C. V.W.C. V. W.R. W.P. WT W.W.F. WN WN.CONTR. W.C. W.M. W.M. W/O WOM YD. YD. G. GA. GALV. GALVANIZED IRON GENL. G.C. GL. GR. GYPSUM H.DWR. H.C. HVAC HGT H.P. H.P.L. H.M. HORIZ. H.B. HW H.W.H. HYD. IN. OR " INFORMATION INFO. L.D. INSTAL. INSUL. INT. INVT. INVT. ELEVATION JOINT KICK PLATE KNOCK OUT PANEL LAM. L.H. L.H.R. L.T. L.T.G. L.P. L.T.W. L.L. L.C.H. L.E.V. L.O. L.P. MACHINE MANHOLE MARBLE THRESHOLD MASONRY MASONRY OPENING MAT'L MAX. MECH. MED. MET. M.E.S. MEZZ. MIN. MIR. MISC. MISC. IRON CONTRACTOR MOUNTED MULLION NAT. NOM. NOM. NORTH NOT IN CONTRACT NOT IN SCALE NUMBER

PROJECT DATA

PROJECT NAME: LEMEN ROAD INDUSTRIAL PARK

PROJECT ADDRESS:

SECTION 31, TOWN 1 NORTH,  
GREEN OAK TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

BUILDING OWNER:

RIVER RUN, LLC  
7869 WINANS LAKE ROAD  
BRIGHTON, MICHIGAN 48116

BUILDING CODES:

2015 MICHIGAN BUILDING CODE  
2015 MICHIGAN PLUMBING CODE  
2015 MICHIGAN MECHANICAL CODE  
2018 PLUMBING CODE  
2017 NATIONAL ELECTRICAL CODE

BARRIER FREE CODES:

ANSI A117.1, 2009 M.B.C.  
MICHIGAN BARRIER FREE

PROJECT TYPE: NEW CONSTRUCTION  
BUILDING USE GROUP: B  
BUILDING CONSTRUCTION TYPE: SB  
NUMBER OF FLOORS: 1

BUILDING AREA:

PROPOSED BUILDING AREA: 26,500 SQ.FT. BUILDING AREA.  
BUILDING AREA ALLOWED: 9,000 SQ.FT.  
AREA INCREASE: 9,000 X 1.75 = 15,750 SQ.FT.

TABLE 603

'B' USE GROUP = (2) STORIES AND 9,000 SQ.FT. PER FLOOR

AUTOMATIC FIRE SUPPRESSION SYSTEM AREA INCREASE: NO.  
AUTOMATIC FIRE SUPPRESSION SYSTEM HEIGHT INCREASE: NO.

TABLE 601 - FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS:

STRUCTURAL FRAME - (0) HOUR  
BEARING WALLS - (0) HOUR  
EXTERIOR WALLS - (0) HOUR  
INTERIOR WALLS - (0) HOUR  
NONBEARING INTERIOR WALLS AND PARTITIONS - (0) HOUR  
NONBEARING EXTERIOR WALLS AND PARTITIONS - (0) HOUR  
FLOOR CONSTRUCTION - (0) HOUR  
ROOF CONSTRUCTION - (0) HOUR

TABLE 803.9 INTERIOR WALL AND CEILING FINISH REQUIREMENTS

INTERIOR EXIT PASSAGEWAYS, INTERIOR EXIT RAMPS AND EXIT PASSAGEWAYS: B  
CORRIDORS AND ENCLOSURES FOR EXIT ACCESS PASSAGEWAYS: C  
ROOMS AND ENCLOSED SPACES: C

SECTION 903 AUTOMATIC SPRINKLER SYSTEMS

THE BUILDING IS NOT EQUIPPED WITH AN AUTOMATIC FIRE SUPPRESSION

SECTION 906 PORTABLE FIRE EXTINGUISHERS

PORTABLE FIRE EXTINGUISHERS SHALL BE LOCATED IN THE FOLLOWING LOCATIONS:

1. ON EACH FLOOR.  
2. MAXIMUM FLOOR AREA PER EXTINGUISHER = 11,250 SQ.FT.  
3. MAXIMUM TRAVEL DISTANCE TO AN EXTINGUISHER = 75 FEET  
4. EXTINGUISHER TYPE: 2-A  
5. WITHIN 30 FEET OF COOKING EQUIPMENT.

SECTION 907.2.1 FIRE ALARM AND DETECTION SYSTEMS

A FIRE ALARM SYSTEM IS REQUIRED FOR GROUP A OCCUPANCIES.

TABLE 1004.1.2 OCCUPANT LOAD

26,500 SQ.FT. X .85 = 22,525 SQ.FT. / 100 SQ.FT. PER PERSON = 225 PERSONS

TABLE 1021.1 MINIMUM NUMBER OF EXITS FOR OCCUPANT LOAD

ONE EXIT PER EACH USE GROUP.

SECTION 1204 TEMPERATURE CONTROL

INTERIOR SPACES INTENDED FOR HUMAN OCCUPANCY SHALL BE PROVIDED WITH ACTIVE OR PASSIVE SPACE HEATING SYSTEMS CAPABLE OF MAINTAINING A MINIMUM INDOOR TEMPERATURE OF 68 DEGREES AT A POINT 3' ABOVE THE FLOOR ON THE DESIGN HEATING DAY.

SECTION 1205 LIGHTING

1205.1 EVERY SPACE INTENDED FOR HUMAN OCCUPANCY SHALL BE PROVIDED WITH NATURAL LIGHT BY MEANS OF EXTERIOR GLAZED OPENINGS IN ACCORDANCE WITH SECTION 1205.2 OR SHALL BE PROVIDED WITH ARTIFICIAL LIGHT IN ACCORDANCE WITH SECTION 1205.3.

1205.2 THE MINIMUM NET GLAZED AREA SHALL NOT BE LESS THAN 8% OF THE FLOOR AREA OF THE ROOM SERVED.

1205.3 ARTIFICIAL LIGHT SHALL BE PROVIDED THAT IS ADEQUATE TO PROVIDE AN AVERAGE ILLUMINATION OF 10-FOOT CANDLES OVER THE AREA OF THE ROOM AT A HEIGHT OF 30 INCHES ABOVE THE FLOOR LEVEL.

CHAPTER 24 GLASS AND GLAZING

2406.4 HAZARDOUS LOCATIONS. SAFETY GLAZING SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:

1. GLAZING IN SWINGING DOORS  
2. GLAZING IN FIXED, SLIDING AND BIFOLD DOOR PANELS.  
3. GLAZING IN STORM DOORS.  
4. GLAZING IN UNFRAMED SWINGING DOORS.  
5. GLAZING IN DOORS AND ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, AND SHOWERS. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE A STANDING SURFACE.  
6. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24" ARC OF EITHER THE VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE WALKING SURFACE.

EXCEPTION #1 - PANELS WHERE THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN DOOR AND GLAZING.

EXCEPTION #2 - WHERE ACCESS THROUGH THE THE DOOR IS TO A CLOSET OR STORAGE AREA 3' OR LESS IN DEPTH.

7. EXPOSED AREA OF AN INDIVIDUAL PANEL GREATER THAN (9) SQ.FT.  
8. EXPOSED BOTTOM EDGE LESS THAN 18" ABOVE FINISH FLOOR.  
9. EXPOSED TOP EDGE GREATER THAN 36" ABOVE FIN. FLR.  
10. ONE OR MORE WALKING SURFACES WITHIN 36" HORIZ. OF THE PLANS OF THE GLAZING.  
11. GLAZING IN GUARDS AND RAILS.

SEE THIS SECTION FOR ADDITIONAL LOCATIONS AND EXCEPTIONS THAT MAY APPLY.

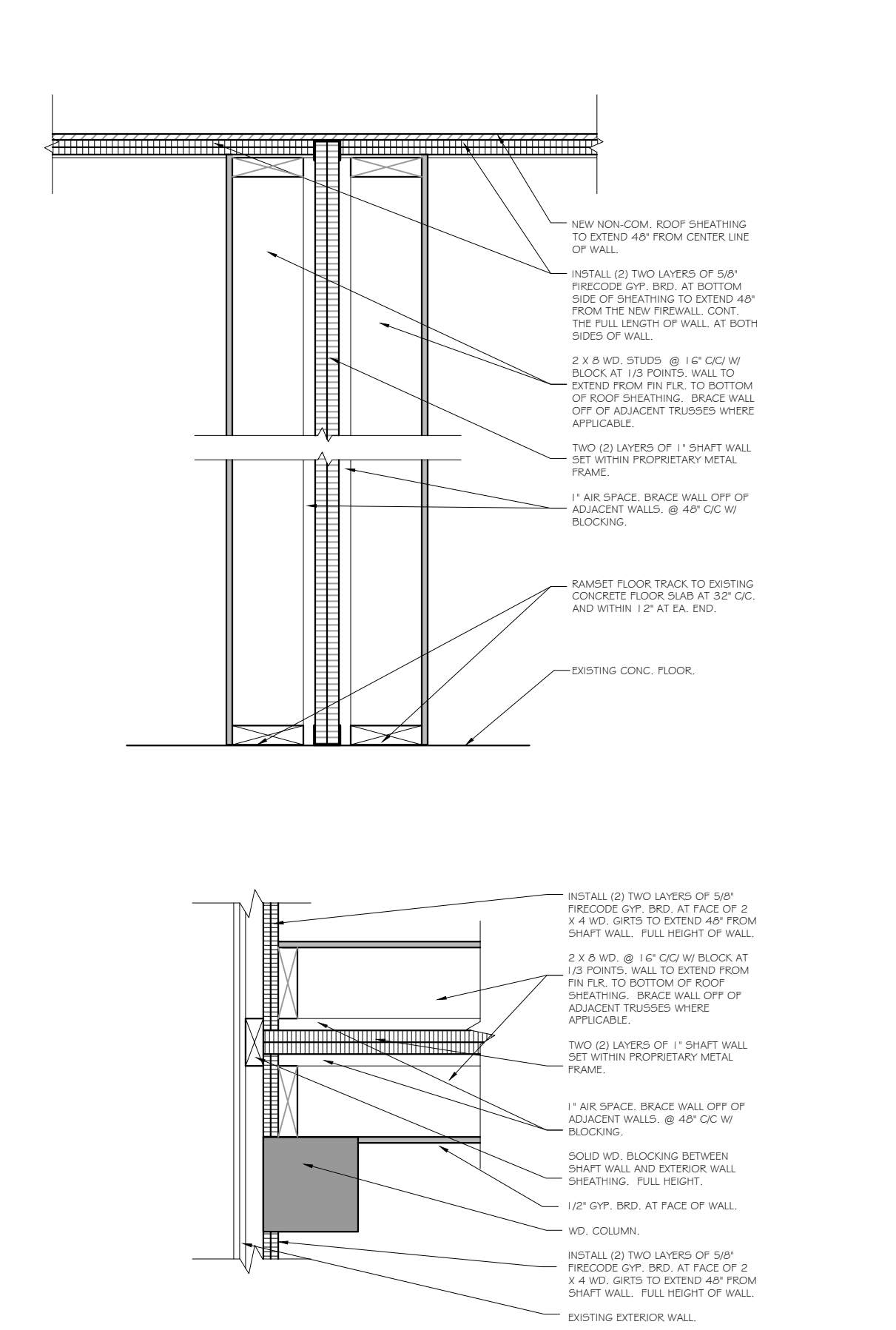
CHAPTER 33 SAFEGUARDS DURING CONSTRUCTION

THE GENERAL CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THIS SECTION OF THE BUILDING CODE AND SHALL CONFORM WITH THE SECTIONS WITHIN FOR THE SAFETY OF THE GENERAL PUBLIC AND THE WORKERS WITHIN.

REQUIRED INSPECTIONS:

- FOOTING AND FOUNDATION
- CONCRETE SLAB AND UNDER FLOOR INSPECTION
- LOWEST FLOOR ELEVATION
- FRAME INSPECTION
- LATH AND GYPSUM BOARD INSPECTION
- FIRE-RESISTANT PENETRATIONS
- ENERGY EFFICIENCY INSPECTIONS
- OTHER INSPECTIONS
- FINAL INSPECTIONS
- SPECIAL INSPECTIONS (SEE BELOW)

FIRE WALL DETAILS (2) HOUR RATED



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PROJECT NUMBER:  
CD\_202210

PROJECT ARCHITECT:  
TODD R. CALLAWAY

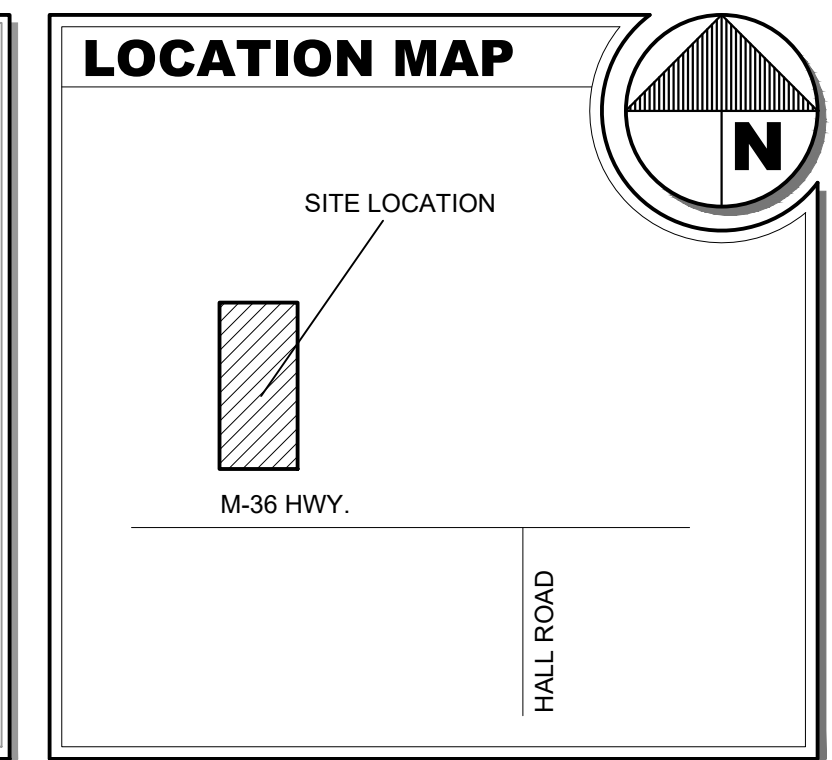
PROJECT MANAGER / DESIGNER:  
TODD R. CALLAWAY

DRAWN BY:  
TC

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NOTE:  
ALL WORK ON THIS PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE, AND LOCAL CODES; THE LATEST EDITIONS ADOPTED BY THE BUILDING AUTHORITY.

STATE OF MICHIGAN  
TODD R. CALLAWAY  
ARCHITECT  
No. 1301071969  
LICENSED ARCHITECT



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SHEET DATES / DESC.

2/25/23 PERMITS

4/30/23 PERMITS

NEW BUILDING

ZANDER FLEX SPACE

9257 E. M-36

WHITMORE LAKE, MICHIGAN

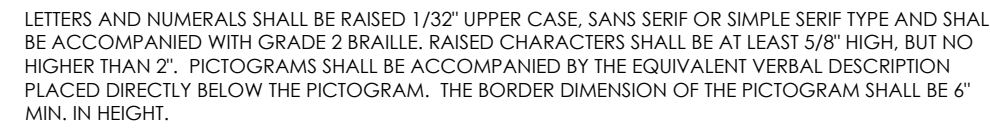
T1.1



18	SHOWER DESIGN
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INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE THE  
DARD USED TO IDENTIFY FACILITIES THAT ARE ACCESSIBLE TO  
USABLE BY PHYSICALLY DISABLED PERSONS.



THE CHARACTERS AND BACKGROUND OF SIGNS SHALL BE EGGSHELL, MATTE, OR OTHER NON-GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND-EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.

WHERE PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE TO THE LATCH SIDE OF THE DOOR, INCLUDING AT THE DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL. MOUNTING HEIGHT SHALL BE 60" ABOVE THE FINISH FLOOR TO THE CENTERLINE OF THE SIGN. MOUNTING LOCATION FOR SUCH SIGNAGE SHALL BE SO THAT A PERSON MAY APPROACH WITHIN 3' OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF A DOOR.

LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH TO HEIGHT RATION BETWEEN 3:5 AND 1:1 AND A STROKE-WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10 USING AN UPPER CASE "X" FOR MEASUREMENT. LOWER CASE LETTERS PERMITTED.



Diagram illustrating the required clearances for a wheelchair user at a sink:

- 8" MIN: Clearance from the front of the wheelchair to the sink.
- 6" MAX: Clearance from the front of the wheelchair to the sink.
- 9" MIN: Clearance from the side of the wheelchair to the sink.
- 27" MIN: Clearance from the side of the wheelchair to the sink.
- 29" MIN: Clearance from the side of the wheelchair to the sink.
- 34" MAX: Clearance from the side of the wheelchair to the sink.
- 40" MAX: Clearance from the side of the wheelchair to the sink.
- 44" MIN TO TOP OF MIRROR: Clearance from the top of the wheelchair to the top of the mirror.
- ACCESSIBLE OPERATING CONTROLS: Label pointing to the controls on the wall.
- TRUE BRO BASIN GUARD: Label pointing to the basin guard.

[illegible]

THE FRONT PARTITION AND AT LEAST ONE SIDE PARTITION SHALL PROVIDE A TOE CLEARANCE OF 9 IN. MINIMUM AFF AND EXTENDING 6 IN. BEYOND THE COMPARTMENT SIDE FACE OF THE PARTITION, EXCLUSIVE OF PARTITION SUPPORT MEMBERS. TOE CLEARANCE AT THE FRONT PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 62 IN. DEPTH WITH A WALL-HUNG WATER CLOSET, OR GREATER THAN 65 IN. IN DEPTH WITH A FLOOR-MOUNTED WATER CLOSET. TOE CLEARANCE AT THE SIDE PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 66 IN. IN WIDTH.

Diagram illustrating the clearances and dimensions for a standard toilet stall:

- FLUSH ACTIVATOR ON WIDE SIDE
- 36" MIN
- 12"
- 24" MIN
- 18"
- 42" MIN. GRAB BAR
- 56" DEEP X 60" WIDE CLEAR FLOOR SPACE AT TOILET
- 60" DIAMETER UNOBSTRUCTED TURNING SPACE
- WC
- A
- 30"
- 48"
- LAV
- CLEAR FLOOR SPACES, CLEARANCES AT FIXTURES, AND TURNING SPACES ARE PERMITTED TO OVERLAP

NOTES:

1. DOORS SHALL NOT SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE FOR ANY FIXTURE
2. A PLUMBING FIXTURE CANNOT BE IN THE MANEUVERING SPACE OF ANOTHER FIXTURE.
3. THE ACCESSIBLE FIXTURES AND CONTROLS SHALL BE ON AN ACCESSIBLE ROUTE.

30" 48" 30" 48" 30" 48" 17-19"

17-19" 9" MIN 27" MIN 36" MAX 8" MIN 6" MAX

STANDARD HEIGHT 27" MIN 36" MAX

WALL MOUNTED INSTALLATION  
ONE HIGH/ ONE LOW TO BE PROVIDED

Figure 10: Minimum Clearances for Front Approach

NOTE: DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCES FOR FRONT APPROACH

NOTE: DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCES FOR FRONT APPROACHES

The top diagram shows a person walking up a ramp. A dashed line indicates the vertical clearance from the ground to the lowest nosing of the ramp. The total vertical clearance is labeled as  $< 80"$ . The vertical clearance from the ground to the top of the ramp's nosing is labeled as  $27"$  MAX.

The bottom-left diagram, titled "LIMITS OF PROTRUDING OBJECTS", shows a person standing next to a vertical wall. A horizontal line indicates the maximum height of a protruding object, labeled as  $4"$  MAX. The vertical clearance from the ground to the top of the person's head is labeled as  $80"$  MIN.

The bottom-right diagram, titled "OBJECTS IN DETECTABLE RANGE", shows a person standing next to a vertical wall. A horizontal line indicates the maximum height of a protruding object, labeled as  $36"$  MIN CLEAR WIDTH. The vertical clearance from the ground to the top of the person's head is labeled as  $< 27"$ .

60"

THE TURNING SPACE SHALL BE A CIRCULAR SPACE WITH A 60-INCH MINIMUM DIAMETER. UNLESS OTHERWISE SPECIFIED, DOORS SHALL BE PERMITTED TO SWING INTO TURNING SPACES. FLOOR SURFACES OF A TURNING SPACE SHALL HAVE A SLOPE NOT STEEPER THAN 1:48.

The diagram illustrates two configurations for clear floor space. The top configuration shows a person in a wheelchair approaching a rectangular table from a 30-degree angle. The bottom configuration shows a person in a wheelchair approaching a rectangular table from a 48-degree angle. In both cases, the clear floor space is defined by the dimensions of the table and the approach angle.

NOTES

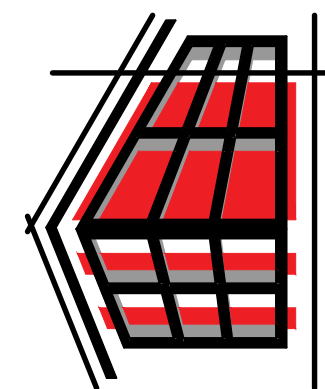
1. A CLEAR FLOOR SPACE OF AT LEAST 30" X 48" THAT ALLOWS EITHER A FORWARD OR PARALLEL APPROACH BY A PERSON USING A WHEELCHAIR SHALL BE PROVIDED AT ACCESSIBLE STORAGE FACILITIES.
2. ACCESSIBLE STORAGE SPACES SHALL BE WITHIN AT LEAST ONE OF THE REACH RANGES SHOWN IN DETAIL 16. CLOTHES RODS OR SHELVES SHALL BE A MAX. OF 54" AFF FOR THE SIDE APPROACH, WHERE THE DISTANCE FROM THE WHEELCHAIR TO THE OTHER ROD OR SHELF EXCEEDS 10'. THE HEIGHT AND DEPTH TO THE ROD OR SHELF SHALL COMPLY WITH DETAIL 15.
3. TOUCH LATCHES AND U-SHAPED PULLS ARE ACCEPTABLE TYPES OF HARDWARE.

Diagram illustrating clearances for refrigerator installation:

- Top View (Left):** Shows a refrigerator with a cooktop/range. Clearances are 30" in front and 48" on the sides.
- Top View (Right):** Shows a refrigerator with a cooktop/range. Clearances are 30" in front, 48" on the sides, and 30" behind.
- Side View (Left):** Shows a refrigerator with a cooktop/range. Clearances are 24" MAX in front and 30" in front.
- Side View (Right):** Shows a refrigerator with a cooktop/range. Clearances are 24" MAX in front and 30" in front.
- Refrigerator Elevation (Right):** Shows the refrigerator with a 54" MAX AFF (Above Front Footing) clearance and 30% OF FREEZER clearance.

The diagram illustrates two types of changes in level. On the left, a vertical drop is shown with a horizontal line at the top, a vertical line labeled '1/4" MAX' indicating the drop, and a horizontal line at the bottom. On the right, a sloped drop is shown with a horizontal line at the top, a sloped line labeled '2" MAX' indicating the drop, and a horizontal line at the bottom. The area under the sloped line is shaded with diagonal lines. Below the diagrams, the text 'CHANGES IN LEVEL' is written.

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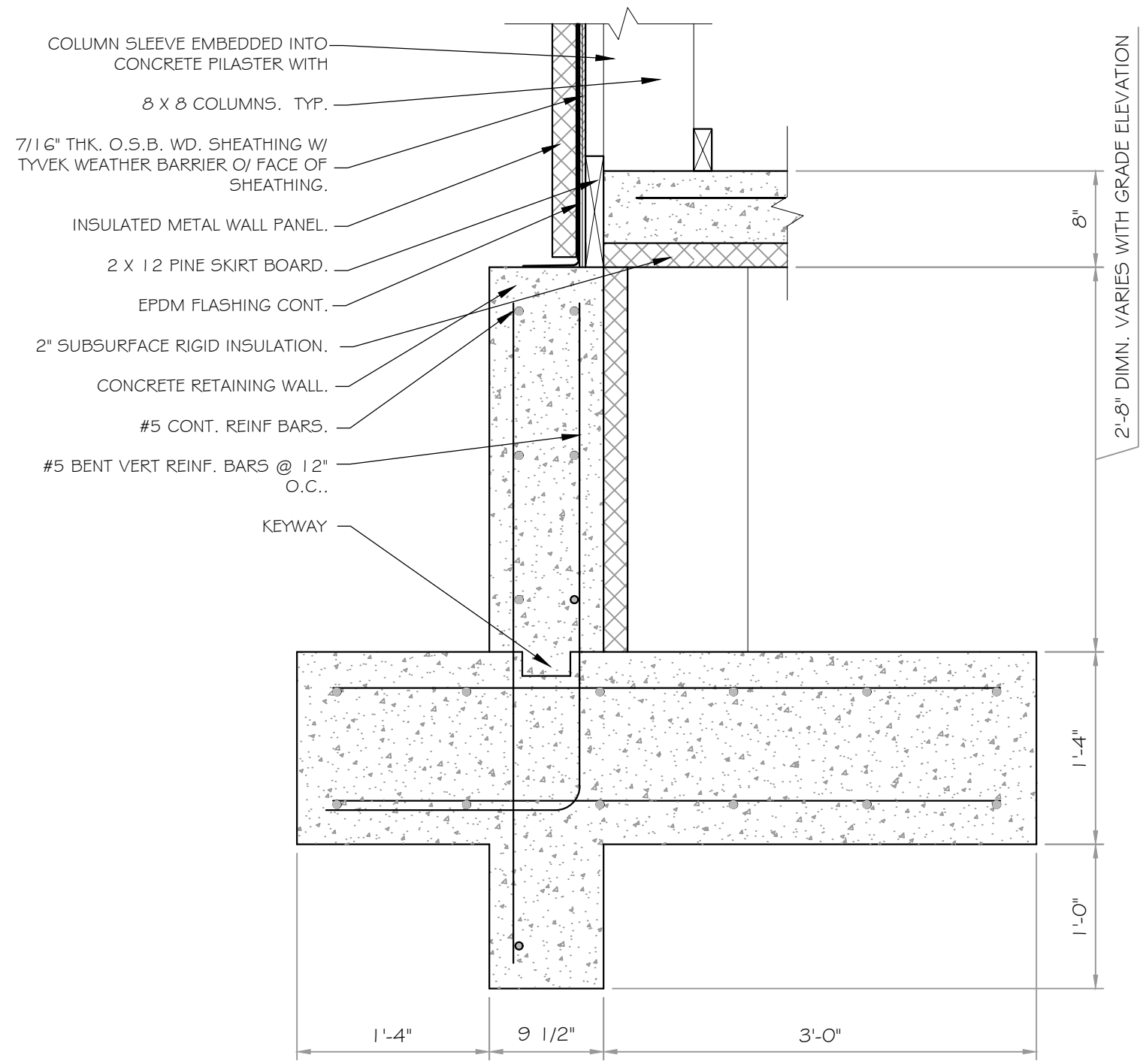
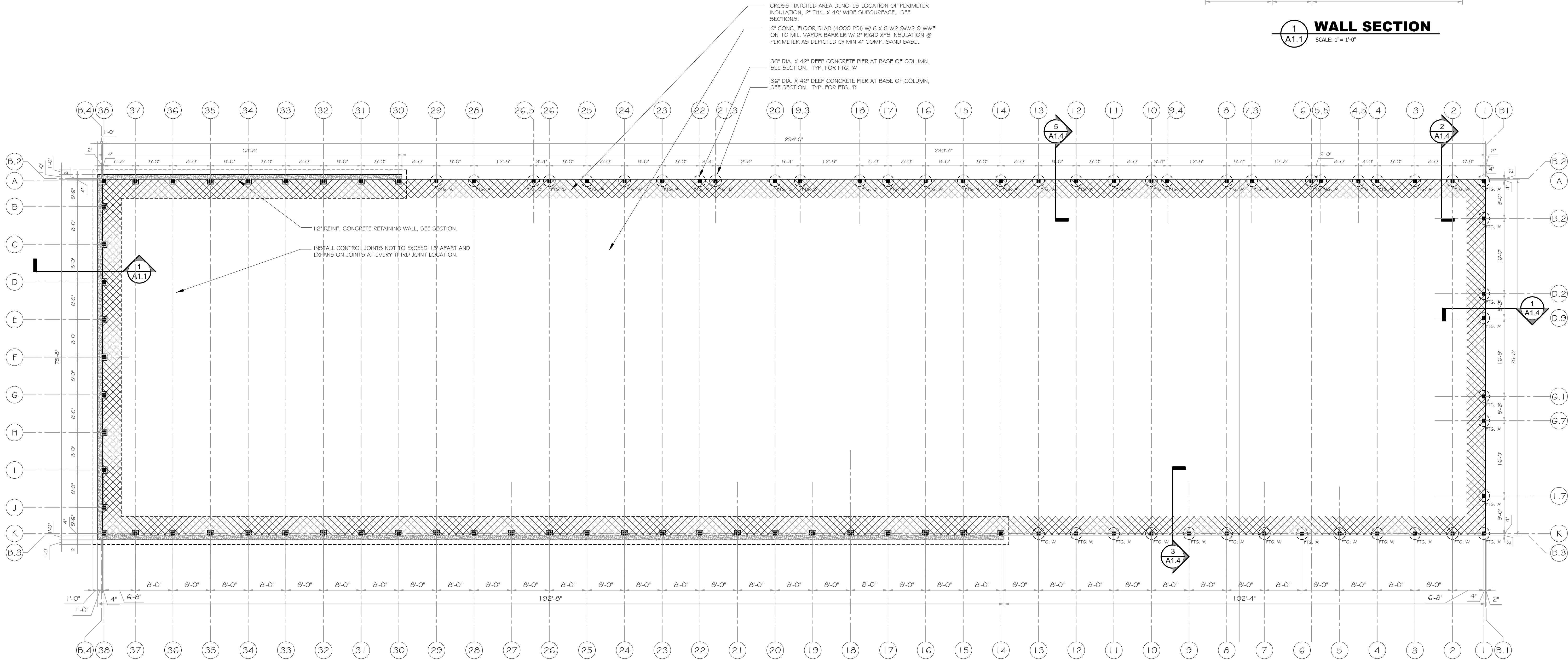
BUILDING  
ZANDER FLEX SPACE  
9257 E. M-36

NEW BUILDING

WHITMORE LAKE, MICHIGAN

## T1.2

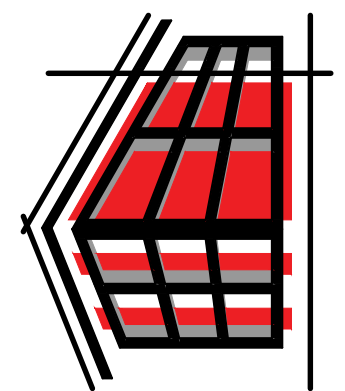




**1**  
**A1.1** **WALL SECTION**  
SCALE: 1"= 1'-0"

**FOUNDATION PLAN**  
SCALE: 3/32" = 1'-0"  
WOOD FRAMED BUILDING

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





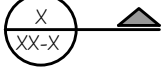




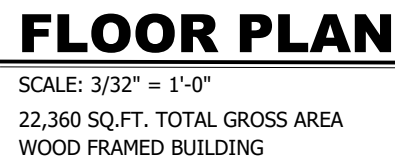
NEW BUILDING  
**ZANDER FLEX SPACE**  
**9257 E. M-36**  
WHITMORE LAKE, MICHIGAN

**A1.1**

# GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO THE START OF CONSTRUCTION. ANY CONDITIONS FOUND TO BE CONTRARY TO WHAT IS INDICATED ON THE EXISTING DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY.
2. ALL CONTRACTORS AND ANY OTHER PERSONS DOING WORK ON THIS BUILDING SHALL BE RESPONSIBLE TO BE FAMILIAR WITH THE CONTENTS OF ALL OF THE CONSTRUCTION DOCUMENTS.
3. PRIOR TO ANY WORK BEING DONE ON THIS BUILDING, MISS DG SHALL BE CONTACTED AND ALL UTILITY LINES SHALL BE LOCATED AND MARKED. ALL CONTRACTORS SHALL MARK SUCH UTILITY LINES COMING INTO THE SITE ARE TURNED OFF PRIOR TO THE START OF CONSTRUCTION.
4. PRIOR TO THE INSTALLATION OF ANY OF THE WALLS, ALL WALLS NEED TO BE LAID OUT AND ALL DIMENSIONS NEED TO BE VERIFIED AGAINST THE CONSTRUCTION DOCUMENTS PRIOR TO THEIR INSTALLATION.
5. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL THE EXISTING CONDITIONS PRIOR TO THE START OF CONSTRUCTION. THE DIMENSIONS WITHIN THESE DOCUMENTS ARE FOR ILLUSTRATIVE PURPOSES ONLY AND SHOULD NOT BE USED FOR SHOP DRAWINGS OR PREFABRICATED ITEMS. ALL PREFABRICATED ITEMS THAT ARE SENSITIVE DIMENSIONALLY NEED TO BE FIELD MEASURED BY THE MANUFACTURER OR THEIR REPRESENTATIVE.
6. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL PROVIDE DESIGNATED AREAS FOR DUMPSITER, PORTABLE TOILET AND STORAGE OF MATERIALS. THE GENERAL CONTRACTOR SHALL MAINTAIN A CLEAN WORK SITE AND ALL SUBCONTRACTORS SHALL BE RESPONSIBLE FOR MAINTAINING A CLEAN WORKSITE.
7. ALL DEMOLISHED MATERIALS SHALL BE DISPOSED OF IN A CONTRACTOR SUPPLIED DUMPSITER AND DISPOSED OF OFF-SITE.

BLOCK SYMBOLS	
DESCRIPTION OF USE	SYMBOL
WALL TAG	
DOOR NUMBER	
ROOM NUMBER	
INTERIOR ELEVATION	
WINDOW TAG	
NOTE TAG	
SECTION CUTS	
MULTIPLE INTERIOR ELEVATION TAG	
WALL MOUNTED FIRE EXTINGUISHER	











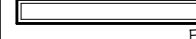










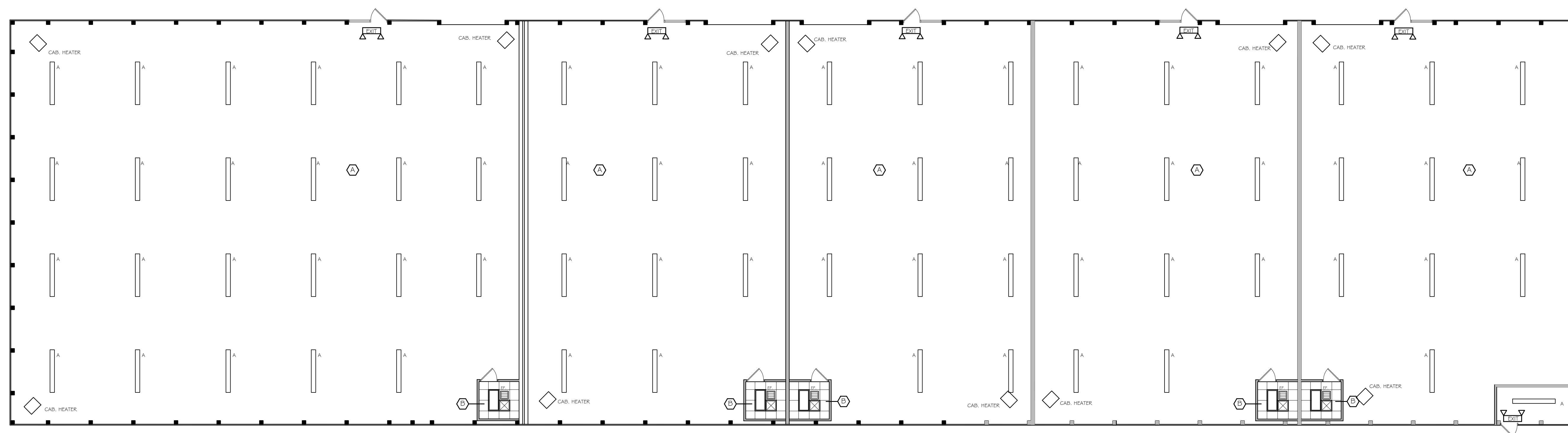






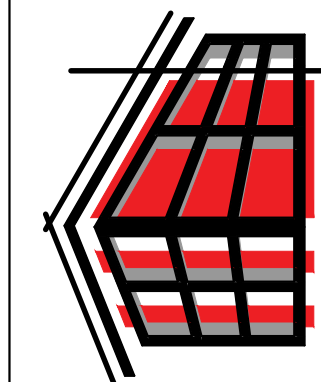
SYMBOL LEGEND	
DESCRIPTION	SYMBOL
SUPPLY AIR GRILLE.	 
LAY-IN RETURN AIR GRILLE	 (RA)  (RA)
WALL MOUNTED LIGHT SCONCE	
NEW RECESSED LED LIGHT FIXTURE.	 A
NEW RECESSED LED SHOWER LIGHT FIXTURE.	 B
NEW 1' X 8' SURFACE MOUNTED LED LIGHT FIXTURES.	 A
NEW 1' X 8' CABLE MOUNTED DECORATIVE LED LIGHT FIXTURE	 B
NEW 1' X 4' CABLE MOUNTED DECORATIVE LED LIGHT FIXTURE	
RECESSED EXHAUST FAN 175 CFM, DUCT DIRECTLY TO THE OUTSIDE.	
ILLUMINATED 'EXIT' SIGN WITH BATTERY BACKUP.	
TWO POLE SWITCH WITH OCCUPANCY SENSOR	
THREE POLE SWITCH WITH OCCUPANCY SENSOR	 3
2' X 4' LAY-IN LED LIGHT FIXTURE	

REFLECTED CEILING AND ROOF PLAN NOTES	
A	5/8" THK. FIRECODE GYP. BRD. CEILING @ 20'-0" A.F.F., PAINTED.
B	LAY-IN ACOUSTICAL TILE CEILING SET IN 15/16" METAL SUSPENDED CEILING GRID W/ 2 X 4 NON-REGULAR CEILING TILES. WHITE.



## REFLECTED CEILING PLAN

SCALE: 3/32" = 1'-0"



SHEET DATES / DESC
2/25/23 PERMITS
4/30/23 PERMITS

[illegible]

NEW BUILDING

ZANDER FLEX SPACE  
9257 E. M-36

WHITMORE LAKE MICHIGAN

## A1.5

ALL CONSTRUCTION TO COMPLY WITH THE FOLLOWING GENERAL NOTES AND / OR TO THE CURRENT MICHIGAN BUILDING CODE, AND / OR LOCAL GOVERNING CODES. IN THE EVENT OF A CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.

## SECTION 1A - GENERAL REQUIREMENTS

- 1A - GENERAL REQUIREMENTS
- 3A - CONCRETE
- 6A - ROUGH CARPENTRY
- 6B - FINISH CARPENTRY
- 6C - HARDWARE
- 8 - DOORS
- 9A - GYPSUM BOARD
- 9B - PAINTING
- 7C - INSULATION
- 8A - FINISH HARDWARE
- 8B - DOORS
- 9A - GYPSUM WALLBOARD AND CEILING BOARD
- 9B - PAINTING
- 10A - BUILDER SPECIALTIES

## SECTION 1A - GENERAL REQUIREMENTS

3. **Builder's Set:** The scope of this set of plans is to provide a "builder's set" of construction documents and general notes here-in referred to as "plans". This set of plans is sufficient to obtain a building permit. However, all materials, methods of construction necessary to complete the project are not necessarily described. The plans delineate and describe only locations, dimensions, types of materials and general methods of assembling or fastening, they are not intended to specify particular products or other methods of any specific material, product or method. The implementation of the plans requires a client's general contractor thoroughly knowledgeable with the applicable building codes and methods of construction specific to this product type and type of construction.
2. **Building Maintenance:** The exposed materials used in the construction of this project will deteriorate as the completed project ages unless properly and routinely maintained. Client's general contractor shall provide or cause the development of a comprehensive maintenance manual which shall be given to each homeowner which specifically describes required periodic inspections, maintenance, repair and replacement of building and surrounding components. Special attention shall be given to landscaping, landscape irrigation, site drainage, building water run-off control, major structural components, fire assemblies, sound barriers, waterproof wall foundations and exposed wood and metal. Adequate funds shall be allocated by those responsible for such maintenance to insure required maintenance is performed in a timely manner.
3. **Codes:** All work shall comply with the most stringent requirements of all current applicable city, county state and federal laws, rules, codes, ordinances and regulations.
4. **Permits:** The general building permits and plan check shall be secured and paid for by Client's General Contractor. All other permits shall be secured and paid for by the subcontractor directly responsible.
5. **Named Products:** The architect makes no guarantee for products identified by trade name or manufacturer. All products specified by tenant are the responsibility of the tenant.
6. **Scope:** All trades shall furnish all labor, equipment, and material and perform all work necessary, indicated, and reasonably inferred or required by any code with jurisdiction to complete their scope of work for a complete and proper finished job.
7. **Intention:** The intention of the documents is that all labor, materials, equipment and transportation shall be included in the work for complete execution of the project, the architect shall not be responsible for the means and methods of construction.
8. **Review of Drawings:** The client's general contractor shall review the full content of the plans for discrepancies and omissions prior to commencement of work. Any discrepancies or omissions in the plans shall be communicated to the architect within a reasonable time of discovery. All parties using these construction documents shall be responsible for any work not in conformance with the plans or in conflict with any code.
9. **Use of the Drawings:** Detailed large scale drawings on "A" sheets.  
Dimensions take precedence over scaled drawings.  
Details and sections on the drawings are shown of specific locations and are intended to show general requirements throughout. Details noted "typical" imply all like conditions treated similarly, unless noted otherwise. The architectural details shown are intended to further illustrate the visual design concept and the minimum recommended weather protection for this project. Building code requirements, structural details, trade association manuals and publications and product manufacturer's written instructions shall also be considered in order to complete the construction of the details, and in some cases may supersede the details. Each contractor on the job shall bring all necessary changes to the attention of the architect prior to construction. All possible field conditions and problems which may arise and are not necessarily described, field conditions encountered which require clarification shall be brought to the attention of the architect in a timely manner.
10. **Shop Drawings:** All shop drawings required by the plans shall be submitted to the architect ten (10) working days prior to fabrication for review of compliance with the design concept.
11. **Approved Drawings:** The client's general contractor shall be responsible for coordinating the work between all trades and requiring all trades to use the most current building department approved set of plans.
12. **Cutting and Patching:** All trades shall do their own cutting, fitting, patching, etc., to make the several parts come together properly and fit it to received by work of other trades.
13. **Clean-up:** All trades shall, at all times, keep the premises free from accumulation of waste materials or rubbish caused by their work. All trades shall remove all rubbish, tools, scaffolding, surplus materials and leave the job in a broom-clean condition. All fixtures, equipment, glazing, floors, etc., shall be left clean and ready for occupancy upon completion of the project.
14. **Trade Manuals and Publications:** The plans refer to various professional trade association manuals and publications. The client's general contractor and all trades shall be familiar with and refer to the trade publications in the performance of their portion of the work. Trade manuals are hereby referenced for each section of these general notes.
15. **Storage of Materials:** The client's general contractor and all trades shall be responsible for storing the materials on the site according to material suppliers of manufacturers instructions. The materials shall be kept secure and protected from moisture, pest damage and theft. Any loose standing materials stored at the site shall be the responsibility of the client's general contractor or trade who stores the damaged or lost materials.

## SECTION 3A - INTERIOR CONCRETE FLAT WORK AND NON STRUCTURAL CONCRETE

1. Scope:
  - A. Where new subsurface equipment, piping or other items are to be installed within the new lease space furnish and install all concrete, vapor barrier, sand base, formwork and other items as required to patch existing concrete floor.
  - B. The Client's General Contractor shall coordinate and verify all concrete dimensions, slope, drains and recesses with all trades prior to the placement of concrete.
2. Standards:

All work and materials shall meet the latest edition performance standards of the "American Concrete Institute" - ACI.
3. Workmanship
  - A. Concrete shall be worked in all forms, into all corners and around reinforcement.
  - B. Concrete flat work shall slope to match surrounding slabs.
4. Finishing:
  - A. All slabs shall be troweled smooth unless indicated differently within the drawings.
5. Design Mix:
  - A. Compressive strength: 4,000 psi - minimum at 28 days for all interior concrete work.
6. Application: All new slabs shall be a minimum of 4" thick, and reinf. w/ 6 x 6 1/2" x 1/2" wmm unless indicated differently within the construction documents. All new interior slabs shall be placed over a 6 mil. vapor barrier @/ min. 4" compressed sand base. Premolded expansion joints shall be placed wherever new slabs abut a vertical surface. Sawcut control joints shall not exceed 20'-0" in any vertical or horiz. direction.

SECTION 6A - ROUGH CARPENTRY:

FOR ALL NON - STRUCTURAL CARPENTRY:

- A. Laying out of work, rough trim, siding, etc.
  - B. Furnish and install all screws, nails, straps, studs, caulking, building paper and all other required items. Client's General Contractor shall be responsible for sequencing and protection of all materials.
  - C. Install all wood blocking within stud walls as required to accommodate wall hung items.
2. Framing Materials:
- A. All studs used throughout the project shall be as indicated within the construction documents. All steel studs used within exterior walls shall be galvanized w/ galvanized fasteners.
  - B. All wood blocking used within the metal stud walls shall be of fire retardant wood.
3. Framing:
- A. Blocking and Bridging: Blocking shall be located at perimeter of opening at all door openings.
  - B. All framing shall conform with Aluminum Association standards and Aluminum Sheet Metal Association.

## SECTION 6B - FINISH CARPENTRY

1. Scope:
  - A. Furnish and install all finish carpentry complete, including trim, door frames, paneling and shelving if denoted as such within the construction documents.
  - B. Installation of finish hardware, bath accessories, cabinet pulls, etc.
2. Workmanship:
  - A. All joints shall be tight and true and securely fastened. Corners shall be neatly mitered, butt-jointed, or coped, with nails set and surfaces free of foot marks.
  - B. Wood work shall be accurately squared to fit adjoining surface.
  - C. All work shall be machined or hand-sanded, sharp edges and splinters removed, and completely prepared for finished.
  - D. Full length continuous boards shall be used wherever applicable or specifically noted.
3. Fitting and Hanging Doors:
  - A. Clearance at the lock and hanging siles and at the top shall not exceed 1/8". Clearance at the bottom shall be adjusted for finish floor covering scheduled, including carpeting.
  - C. Door shall operate freely, but not loosely, without sticking or binding, without hinge bound conditions; and with all hardware properly adjusted and functioning.
4. Materials:
  - A. Interior solid core wood doors.

Doors shall be smooth grain and factory finished.

## SECTION 6C - HARDWARE

1. Scope:
- A. Door hardware shall be grade one. submit shop drawings with detailed door hardware schedule. Furnish and install all door hardware in conformance with all manufacturers recommendations and specifications.
- SECTION 8 -- DOORS
1. Scope:
- Furnish and install all doors complete as indicated on plans. the Client's General Contractor shall coordinate door supplier and Framing Contractor for installation of all doors.
2. Standards and Installation:
- Per manufacturer's installation recommendations. door assemblies shall meet or exceed the design wind pressure of the local conditions. all exterior doors shall comply with mandatory state infiltration standards.
3. Measurements: Verify all dimensions by taking field measurements prior to installation.
4. Type & Sizes: As indicated in drawings.
- A. Interior Doors: 1-3/4" thick, solid core-flush panel wood doors.

## SECTION 8 – WEATHER-STRIPPING AND THRESHOLDS

1. Doors: All doors separating conditioned space from unconditioned space shall be fully weatherstripped.
2. Thresholds: Thresholds shall be cultured marble at the transition from concrete to tile. Metal thresholds shall be installed at all entrance doors to residential units.

## SECTION 9A - GYPSUM WALLBOARD & CEILING BOARD

- Scope: Furnish and install all gypsum wallboard work complete
- Standards:
  - A. All work and materials shall meet the latest edition performance standards of the "Gypsum Association" -GA. "Recommended Specifications for the Application and Finishing of Gypsum Wallboard."
  - B. All work shall comply with code requirements.
3. Workmanship:
  - A. All joints in finished surfaces shall be taped and finished with joint cement. Reinforce all corners.
  - B. Provide metal trim at all exposed edges and external corners.
  - C. Metal trim shall be tight to wallboard edges, plumb level, and true to plane, securely attached.
  - D. Conceal exposed nail or screw heads with joint compound.
  - E. Protect all exposed wood beams, post, railings etc.
  - F. All gypsum wallboard at tubs/shower enclosures to be installed in such a manner that there are no surfaces out of alignment with adjacent surfaces and the true plane of the wall is maintained.
4. Finishes:
  - A. As selected by Client.
5. Materials:
  - A. Gypsum Wallboard and Ceiling Board: 1/2" thick throughout unless noted otherwise.
  - B. Moisture Resistant Wallboard and Ceiling Board: Use in wet areas as recommended by Gypsum Board Manufacturer.
  - C. Metal corner bead, casing and trim - galvanized and nailed.
    - (1) L-shaped trim at exposed edges typical.
    - (2) 90°, right angle corner bead at external corners.
  - D. Tape and Compound: As recommended by Gypsum Board Manufacturer for use specified.
  - E. Nailing: Per code requirements.

## SECTION 9B - PAINTING AND FINISHING

1. Scope: Provide painting work as indicated and specified, complete including preparation of surfaces other than those that are factory.
2. Workmanship:
  - A. Each coat shall be uniformly applied, well brushed out and free of brush marks, runs, sags or skips.
  - B. Paint finished shall be cut sharply to line. Protect adjacent surfaces.
  - C. Mix and apply paint and stains in accordance with the manufacturer's instructions.
  - D. Hardware shall be masked or removed prior to painting or staining.
  - E. Subcontractor will be responsible for any damage resulting from over spray, and for all necessary clean-up.
  - F. Semi-gloss paint to be roller or brush applied.
3. Preparation of Surfaces:
  - A. Surfaces shall be clean and dry, and in suitable condition for finish specified. Remove all oil, grease, bond breaking agents, dust, mill scale and efflorescence.
  - B. Cracks, holes, and knots shall be filled, sanded smooth, and sealed. Wood surfaces, except rotten wood, shall be sanded perfectly smooth. Sanding dust shall be completely removed.
4. Materials:
  - A. Submit list of materials and manufacturers for Client and Architects review.
  - B. All materials shall be delivered to the site in sealed original manufacturer's containers.
  - C. Stain shall be manufactured by "Olympic Stain" or a Client selected substitute.
  - D. Paint shall be as selected by Client.
5. Colors: To be selected by the Owner.
6. Interior Painting and Finishing:
  - A. Ceilings and Walls:
    - [1] Corridors, restrooms, mechanical rooms, satin paint u.n.o.
    - [2] All other rooms: One coat primer and one satin paint, unless noted otherwise.
  - B. Doors, frames, wood base, shelf catches: One coat primer, one coat semi-gloss enamel.
  - C. Metal surfaces: Prime and paint same as adjacent surfaces.
  - D. All exposed interior beams to be painted to match ceiling.
  - E. All exposed the sprinkler piping shall be painted OSHA Red.
  - F. All exposed water supply, sanitary and storm water piping to be painted black
  - G. Other than those colors indicated, all colors shall be selected by the Owner.
  - H. The number of coats noted above shall be considered minimum. Apply additional coats if required to provide full and even coverage throughout.

## SECTION 10 – BUILDER SPECIALTIES

1. Scope: Furnish and install complete in working order the items indicated on the drawings and as specified herein. The Client's General Contractor to verify compatibility of all adjacent finish materials with all selected fixtures and appliances.

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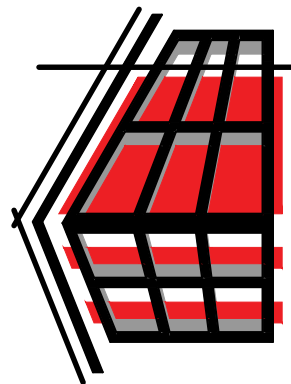
NOTE: PRODUCTS LISTED ABOVE MAY BE SUBSTITUTED WITH "AS EQUAL" PRODUCTS WITH WRITTEN APPROVAL FROM OWNER.

NOTE: PRODUCTS LISTED ABOVE SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS AND IN CONFORMANCE WITH THE 2015 MICHIGAN BUILDING CODE.

NOTE: A COMPLETE HARDWARE SPECIFICATION SHALL BE PROVIDED BY THE SUPPLIER FOR APPROVAL BY THE OWNER. ALL HARDWARE SHALL BE GRADE ONE SCHLAGE OR EQUAL. SHOP DRAWINGS SHALL INCLUDE SELECTION SAMPLES, PRODUCT DATA AND A COMPLETE SCHEDULE FOR EACH DOOR. PROVIDE A KEYING SCHEDULE FOR APPROVAL BY THE OWNER.

**TODD R. CALLAWAY & ASSOCIATES**  
ARCHITECTS - DESIGNERS

4848 Freer Street, Rochester Hills, Michigan 48306  
Ph: 586-243-5945, email: [trcallaway@hotmail.com](mailto:trcallaway@hotmail.com), [www.trcallaway.com](http://www.trcallaway.com)



SHEET DATES / DESC.

## 2/25/23 PERMITS

## 4/30/23 PERMITS



BUILDING  
ZANDER FLEX SPACE  
9257 F M-36

WHITMORE LAKE, MICHIGAN

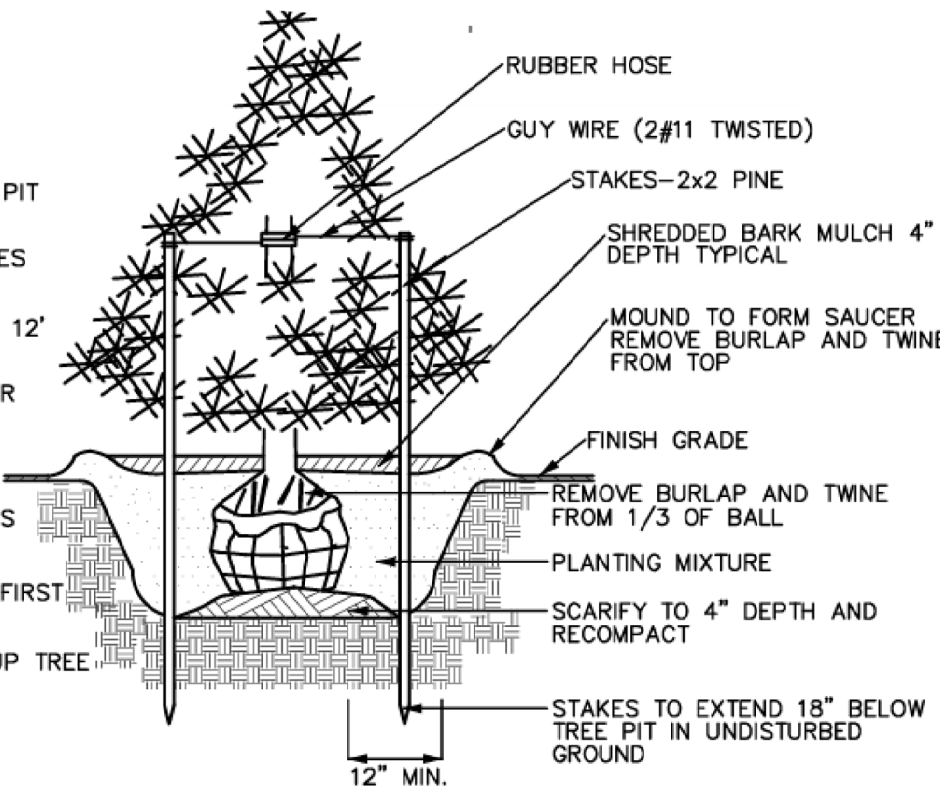
# N1.1



PLANTING SCHEDULE				
PLANT SYMBOL	COMMON NAME	SIZE (MIN)	NUMBER PROPOSED	ROOT TYPE
A	DOUGLAS FIR	6' HT.	38	BALL & BURLAP
B	EMERALD QUEEN NORWAY MAPLE	4' HT.	9	BALL & BURLAP
C	COMMON HACKBERRY	4' HT.	15	BALL & BURLAP
D	CHANTICLEER FLOWERING PEAR	1 1/2" CALIPER	4	BALL & BURLAP
E	BOXWOOD GREEN VELVET	2' HT.	73	CONTAINER

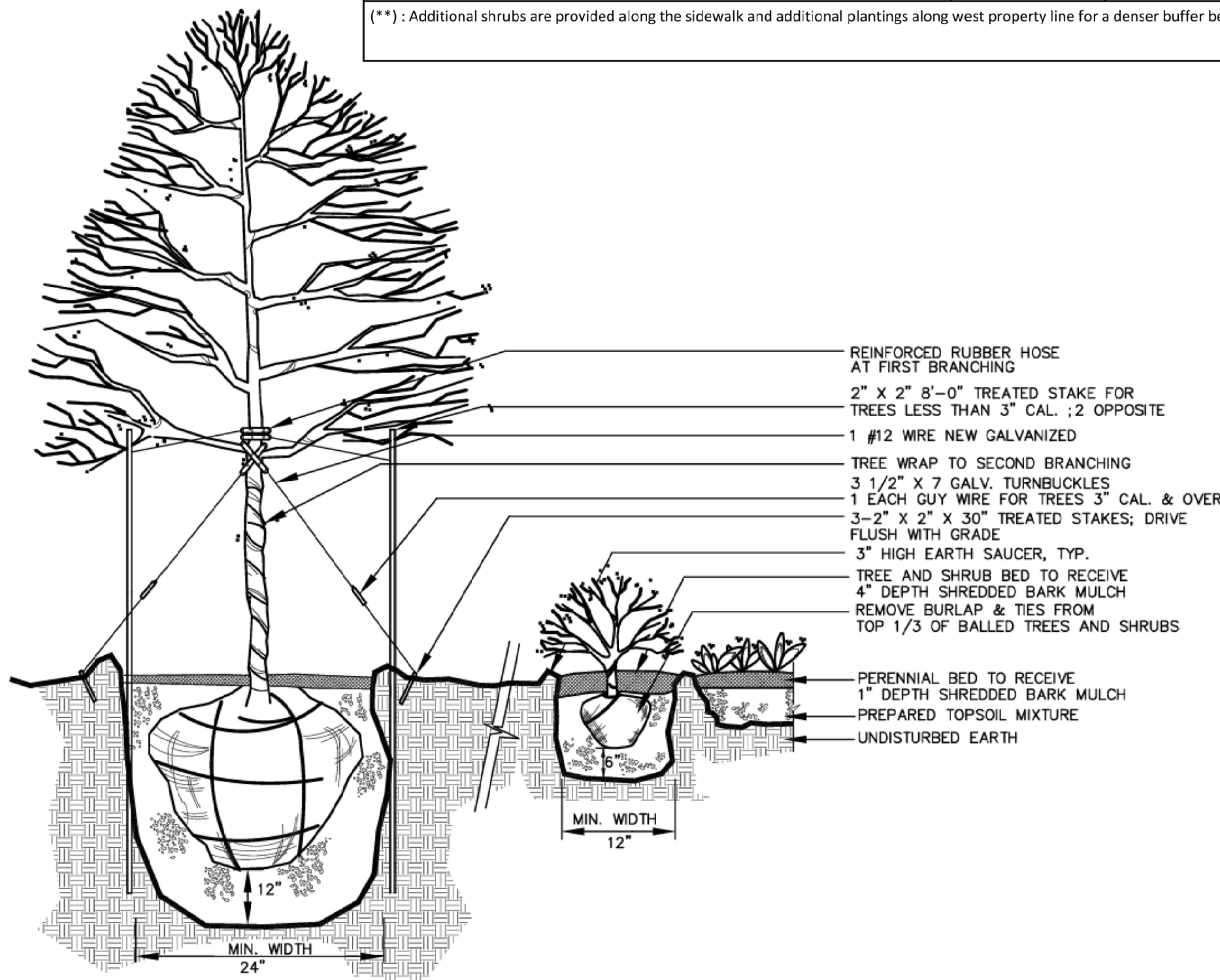
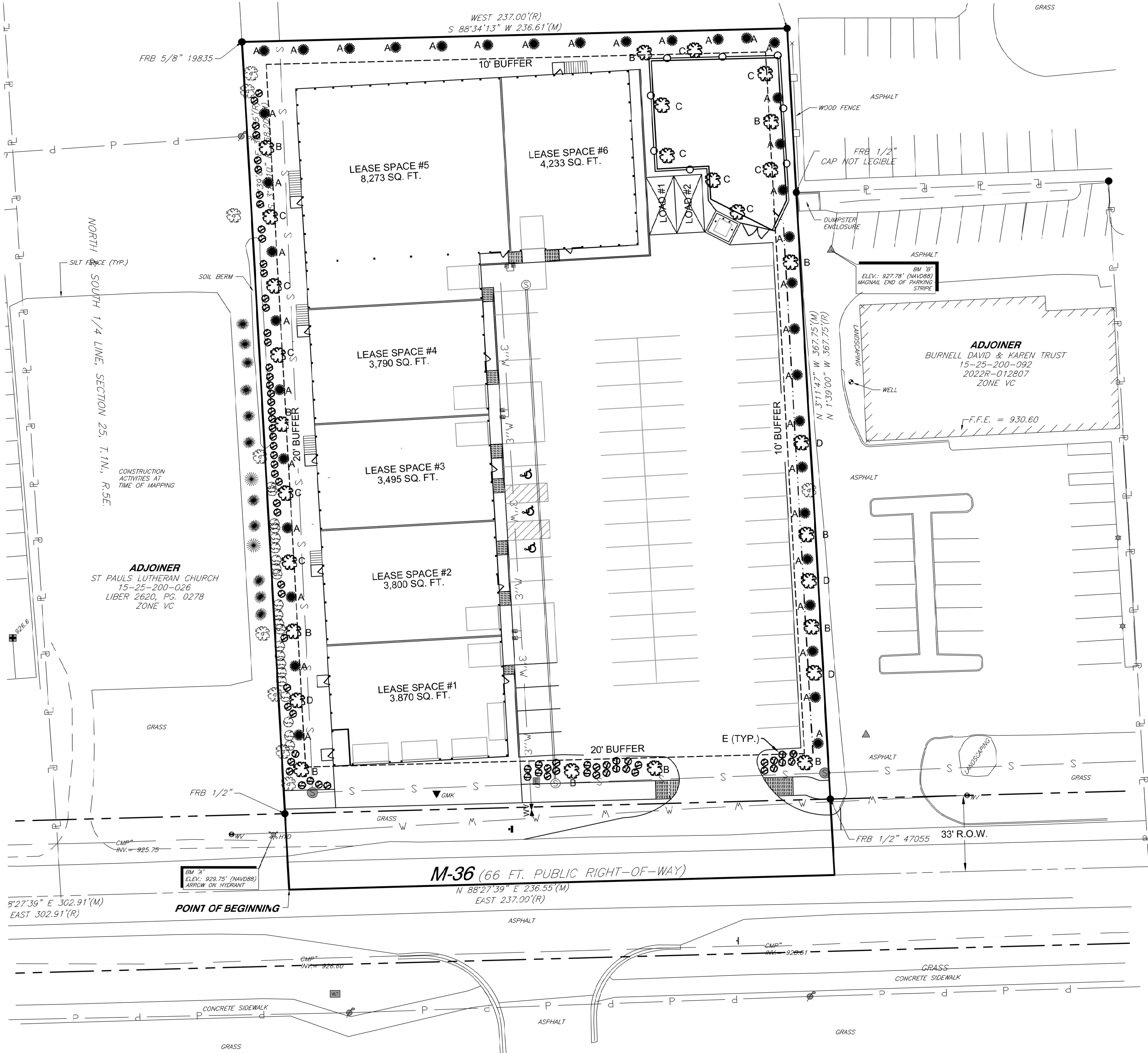
CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION  
STAKE ALL EVERGREEN TREES 12' AND UNDER  
GUY ALL EVERGREEN TREES 12' AND OVER  
NEVER CUT CENTRAL LEADER

PRUNE ONLY TO REMOVE DEAD OR BROKEN BRANCHES  
SPRAY EVERGREENS WITH ANTI-DESSICANT PRIOR TO FIRST WINTER  
SET STAYS OR GUYS 2/3 UP TREE

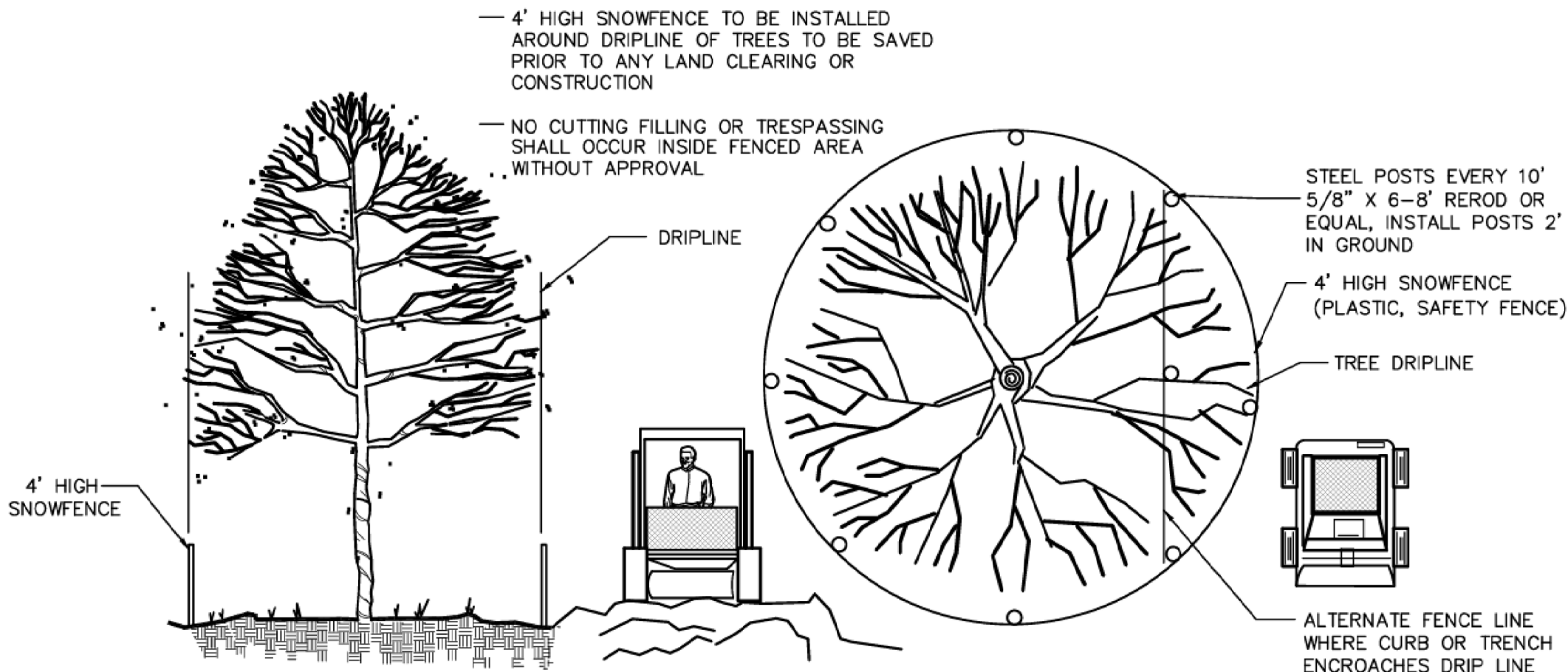


TYPICAL EVERGREEN TREE PLANTING  
NOT TO SCALE

LANDSCAPING CALCULATIONS				
EAST SIDE LOT LINE LENGTH = 368 LF.				
NORTH LOT LINE LENGTH = 237 LF.				
CATEGORY / CALCULATION	REQUIRED	EXISTING	PROPOSED	TOTAL
GENERAL SITE				
ALL UNDEVELOPED OPEN AREAS NOT PLANTED WITH TREES, ARE TO BE PLANTED WITH SOD OR HYDROSEED.				
GREENBELT				
NORTH				
1 DEC./EVERGREEN TREE OR 4 SHRUBS PER 20 LF OF REQUIRED GREENBELT				
237 / 20 =	12		12	12
SOUTH				
1 DEC./EVERGREEN TREE OR 4 SHRUBS PER 20 LF OF REQUIRED GREENBELT				
237 / 20 =	12		12	12
EAST				
1 DEC./EVERGREEN TREE OR 4 SHRUBS PER 20 LF OF REQUIRED GREENBELT				
368 / 20 =	19	1	18	19
WEST **				
1 DEC./EVERGREEN TREE OR 4 SHRUBS PER 20 LF OF REQUIRED GREENBELT				
368 / 20 =	19	9	30	39
ALL PROPOSED GREENBELT AREAS NOT PLANTED WITH SHRUBS OR TREES. SHALL BE PLANTED WITH GRASS, LANDSCAPE STONE, LANDSCAPE MULCH OR SUITABLE LANDSCAPE MATERIAL OVER THE ENTIRE GREENBELT AREA.				
PARKING LOTS				
1 DEC. PER 2,000 SF OF PAVED AREA = 26,100 / 2000 =	13		13	13
(**): Additional shrubs are provided along the sidewalk and additional plantings along west property line for a denser buffer between existing church.				



TYPICAL TREE/SHRUB/PERENNIAL PLANTING  
NOT TO SCALE



TREE PROTECTION DETAIL  
NOT TO SCALE

REVISION RECORD

DESCRIPTION

NO. DATE

ZANDER COMPANIES  
7879 WINANS LAKE RD  
BRIGHTON, MI 48116

ZANDER FLEX SPACE  
9257 E. M-36  
WHITMORE LAKE, MICHIGAN 48189

LANDSCAPE PLAN

DATE:	FEB 10, 2023	DRAWN BY:	MM
DWG SCALE:	1"=30'	CHECKED BY:	CM
PROJECT NO.:		APPROVED BY:	MM

DRAWING NO.:

LA1.1

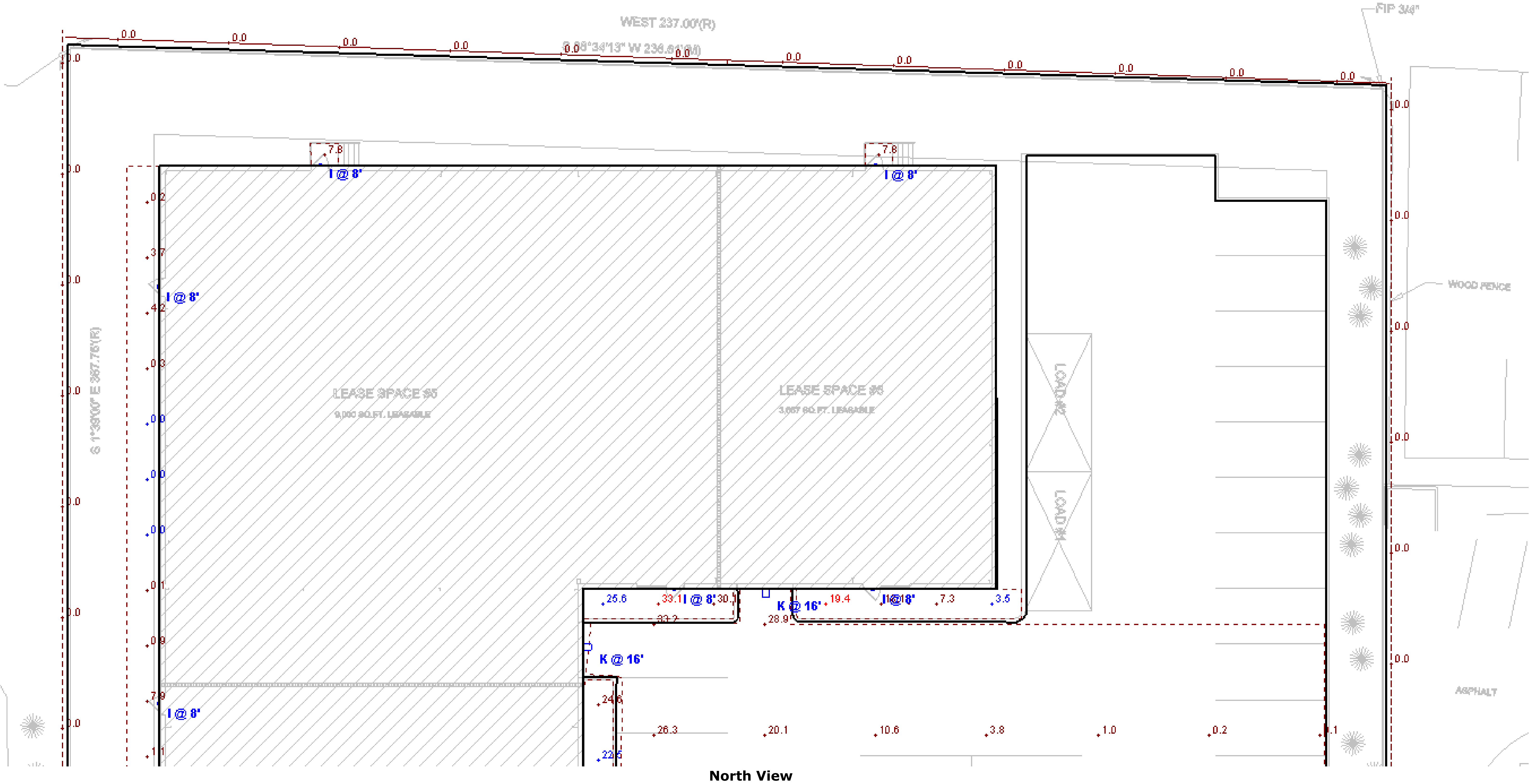
SHEET 1 OF 1

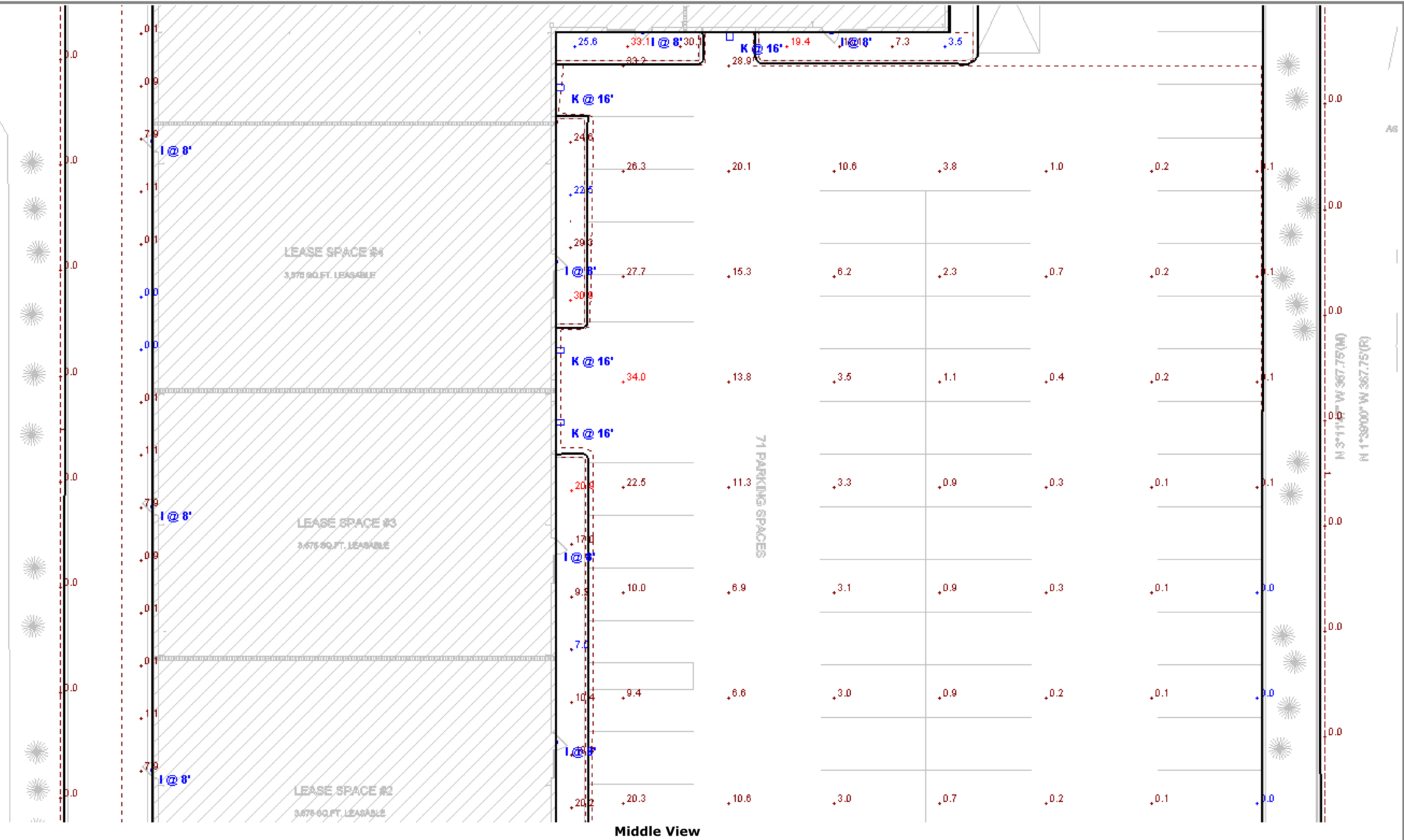




M-36 ZANDER BUILDING PHOTOMETRIC CALCULATION  
HAMBURG, MICHIGAN

Designer  
Date  
01/20/2023  
Scale  
Not to Scale  
Drawing No.  
Summary

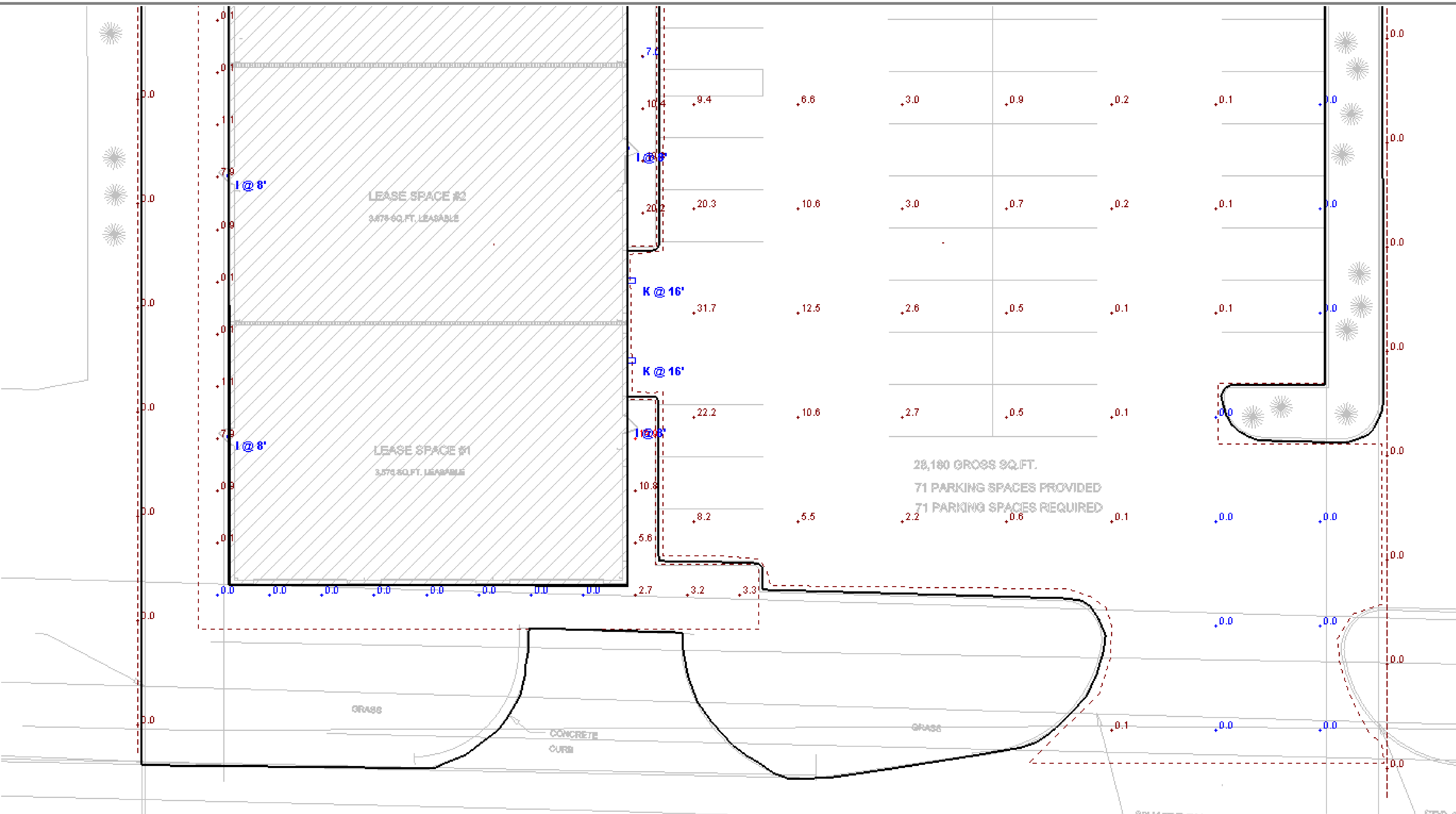




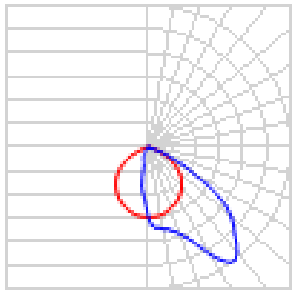
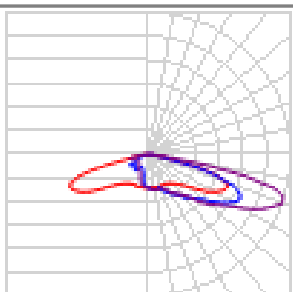


M-36 ZANDER BUILDING PHOTOMETRIC CALCULATION  
HAMBURG, MICHIGAN

Designer  
Date  
01/20/2023  
Scale  
Not to Scale  
Drawing No.  
Summary



South View

Schedule									
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lumens Per Lamp	Light Loss Factor	Wattage	Plot
<div></div>	I	13	Lithonia Lighting	WDGE1 LED P1 40K 80CRI VW	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 4000K, 80CRI, VISUAL COMFORT WIDE OPTIC	1229	0.9	10.0002	<div><p>Max: 927cd</p></div>
<div></div>	K	6	Lithonia Lighting	DSX2 LED P8 40K T4M MVOLT	DSX2 LED P8 40K T4M MVOLT	48144	0.9	431	<div><p>Max: 27398cd</p></div>

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
East Property Line Photometric Calculation	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
North Left Photometric Calculation	+	29.6 fc	33.1 fc	25.6 fc	1.3:1	1.2:1
North Property Line Photometric Calculation	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
North Right Photometric Calculation	+	12.1 fc	19.4 fc	3.5 fc	5.5:1	3.5:1
North Stairs 1	+	7.8 fc	7.8 fc	7.8 fc	1.0:1	1.0:1
North Stairs 2	+	7.8 fc	7.8 fc	7.8 fc	1.0:1	1.0:1
Parking Lot Photometric Calculation	+	5.9 fc	34.0 fc	0.0 fc	N/A	N/A
South Property Line Photometric Calculation	+	0.0 fc	0.2 fc	0.0 fc	N/A	N/A
West Bottom Photometric Calculation	+	2.2 fc	19.9 fc	0.0 fc	N/A	N/A
West Middle Photometric Calculation	+	14.9 fc	20.9 fc	7.0 fc	3.0:1	2.1:1
West Property Line Photometric Calculation	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
West Top Photometric Calculation	+	26.8 fc	30.9 fc	22.5 fc	1.4:1	1.2:1







May 16, 2023

Ms. Amy Steffens  
Planning and Zoning Director  
Hamburg Township  
P.O. Box 157  
Hamburg, MI 48139

Re: Zander Flex Space  
Site Plan Review

Dear Ms. Steffens

We have reviewed the plans for the reference project dated May 1, 2023 as prepared by Open Door Consultants along with supplemental drainage information provided May 15, 2023. We offer the following comments for your consideration.

1. There is a small typo in the Legal Description on Page 3. We assume the last line should read "South 01°39'00" East 237 Feet to the Point of Beginning". The petitioner should verify and correct.
2. The petitioner should apply for a commercial sewer connection through the Township's Utility Department. A sanitary system review will be conducted after the application.
3. The proposed pavement section is appropriate for the use.
4. The stormwater water management plan is in general conformance with the Livingston County Drain Commissioner standards.
5. We understand preliminary approval from MDOT for the driveway has been received. The petitioner should provide the final approval when received.

In summary, we have no objection to the approval of the site plan contingent on the above items.

If you have any questions, please contact me at (734) 657.4925.

Sincerely,

Ted L. Erickson, P.E.  
Principal

\\\\files\\Active\\Projects\\2023\\23001935.00\\Design\\Civil\\SitePlanReview



**INDIVIDUAL CONSTRUCTION PERMIT**  
**For Operations within State Highway Right-of-Way**

**Issued To:**  
**Zander Companies**

**7879 Winans Lake Road**  
**Brighton MI 48116**

**Contact:**  
**Marc McIntire**  
**662-275-1959(O)**  
**mmcintire151@gmail.com**

**Permit Number:** 47041-093137-23-052623  
**Permit Type:** Individual Application  
**Permit Fee:** \$90.00  
**Effective Date:** May 26, 2023 to May 25, 2024  
**Bond Numbers:** EI8449  
**Liability Insurance Expiration Date:** Jun 01, 2024

**Contractor:**  
**Zander Companies**

**7879 Winans Lake Rd**  
**Brighton MI 48116**

**Contact:**  
**Marc McIntire**

**mmcintire151@gmail.com**

**THIS PERMIT IS VALID ONLY FOR THE FOLLOWING PROPOSED OPERATIONS:**

**PURPOSE:**

The plans include removing the existing driveway and shifting it east to accommodate the new layout. The proposed drive slopes away from M-36 into the site. Additionally, the drive is located approximately at the crest of M-36 and requires no culvert, and an existing drive and utilities hamper large taper distances. Anticipated vehicles would include mostly passenger car traffic with some box trucks (26' or less) but no large truck traffic.

**STATE ROUTE:** M-36      **TOWNSHIP OF:** Hamburg      **COUNTY:** Livingston County

<b>NEAREST INTERSECTION:</b>	<b>SIDE OF ROAD:</b>	<b>DISTANCE TO NEAREST INTERSECTION:</b>	<b>(in feet)</b>				<b>DIRECTION TO NEAREST INTERSECTION:</b>
Hall Road	N S	200.00					East

<b>CONTROL SECTION:</b>	<b>MILE POINT FROM:</b>	<b>MILE POINT TO:</b>	<b>LOCATION:</b>			
			LEFT	MEDIAN	RIGHT	TRANSVERSE
47041	21.010	21.010	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**REQUISITION NUMBER:**      **WORK ORDER NUMBER:**      **MDOT JOB NUMBER:**      **ORG JOB NUMBER:**



47041-093137-23-052623 Issued To:Zander Companies

**This permit is incomplete without "General Conditions and Supplemental Specifications"**

**I certify that I accept the following:**

1. I am the legal owner of this property or facility, the owner's authorized representative, or have statutory authority to work within state highway Right-of-Way.
2. Commencement of work set forth in the permit application constitutes acceptance of the permit as issued.
3. Failure to object, **within ten (10) days** to the permit as issued constitutes acceptance of the permit as issued.
4. If this permit is accepted by either of the above methods, I will comply with the provisions of the permit.
5. I agree that Advance Notice for Permitted Activities for shall be submitted **5 days prior** to the commencement of the proposed work.

I agree that Advance Notice for Permitted Utility Tree Trimming and Tree Removal Activities shall be submitted **15 days prior** to the commencement of the proposed work for an annual permit.

## CAUTION

**Work shall NOT begin until the Advance Notice has been approved.  
Failure to submit the advance notice may result in a Stop Work Order.**

-----  
**Zander Companies**

**Pascal Bui**  
**MDOT**

**May 25, 2023**  
**Approved Date**  
-----

**TSC Contact Info**

**Brighton TSC**

**(810) 227-4681**

**THE STANDARD ATTACHMENTS, ATTACHMENTS AND SPECIAL CONDITIONS MARKED BELOW ARE A PART OF THIS PERMIT.**

**STANDARD ATTACHMENTS:**

- 1 ENVIRONMENTAL REQUIREMENTS FOR ACTIVITIES WITHIN MDOT RIGHT-OF-WAY (2486)
- 2 General Conditions (General Conditions)

**ADDITIONAL ATTACHMENTS:**

- 1 Notice to Insurance or Surety Agent BTSC.docx
- 2 6651352 Copy of Executed Bond.pdf
- 3 Site Plan Zander Flex Space REV 4-11-23-attachements.pdf
- 4 ZANDER FLEX SPACE MDOT REVIEW 3-20-23-2.pdf
- 5 ZANDER FLEX SPACE PA-08.pdf
- 6 Site Plan Zander Flex Space REV 4-11-23.pdf

**47041-093137-23-052623 Issued To:Zander Companies**

**AMENDMENT ATTACHMENTS:**

**SPECIAL CONDITIONS:**

- 1 All disturbed areas within the right of way shall be top-soiled, seeded and mulched to match existing areas per current MDOT standards and specifications.





# Hamburg Township Public Safety – Fire Division

10100 VETERANS MEMORIAL DRIVE  
P.O. BOX 157 ♦ HAMBURG, MI 48139-0157  
PHONE: 810-222-1100 ♦ FAX: 810-231-9401  
E-MAIL: [HTFD@HAMBURG.MI.US](mailto:HTFD@HAMBURG.MI.US)

## *DEPUTY FIRE CHIEF JORDAN ZERNICK* **PLAN REVIEW RESULTS**

---

**To:** Hamburg Twp. Zoning

**From:** Deputy Chief, Jordan Zernick

**CC:** Deputy Director – Fire Division Jeffrey Newton

**Subject:** Preliminary Site Plan Review – 7749 E M36

**Date:** May 24, 2023

I have completed the plan review of the Preliminary Site Plan submittal for the proposed occupancy at 7749 E M36 in Hamburg Township. The review was based on applicable Fire Codes and Hamburg Township Ordinance Requirements.

The plans are approved as submitted with the following requirements, revisions and clarification:

1. Building shall be required to have a 3200 series. Each tenant space shall be equipped with its own 3200 series Knox Box.
2. Intended use of each tenant space shall be provided for the purpose of building plan review. Proper fire protection requirements can not be determined without knowing the intended use of the space.
3. Fire Hydrant to be placed at the North end of the parking lot due to the lack of access to the northern portion of the building because of the detention pond. Fire hydrant shall meet the standards set forth by the Livingston Community Water Authority (LCWA).
4. If Fire Alarm or suppression is deemed to be required, plans shall be submitted directly to the Hamburg Township Fire Department for review.
5. It is requested that each individual tenant space be individually addressed.
6. Any alterations to these submitted plans shall require the submittal of As Built plans. Plans shall be submitted directly to the Hamburg Township Fire Department prior to the issuance of Certificate of Occupancy.
7. All tenant spaces shall be addressed with the standards established by the 2018 edition of the International Fire Code.
8. Architectural Building plans shall be submitted for review by the Fire Department.



# Hamburg Township Public Safety – Fire Division

10100 VETERANS MEMORIAL DRIVE  
P.O. BOX 157 ♦ HAMBURG, MI 48139-0157  
PHONE: 810-222-1100 ♦ FAX: 810-231-9401  
E-MAIL: [HTFD@HAMBURG.MI.US](mailto:HTFD@HAMBURG.MI.US)

## *DEPUTY FIRE CHIEF JORDAN ZERNICK* **PLAN REVIEW RESULTS**

This approval is subject to field inspection. This approval shall be valid for one year. If construction has not begun within 12 months of the date on this letter the plans must be resubmitted for approval. This approval does not exempt the project from complying with all applicable codes. Additional submittals and approvals may be required.

A handwritten signature in blue ink, appearing to read 'J Zernick'.

Deputy Chief Jordan Zernick



FAX (810) 231-4295  
TELEPHONE: (810) 231-1000



P.O. Box 157  
10405 Merrill Road  
Hamburg, MI 48139

## Preliminary Opinion of Probable Cost

Project 7749 E. M36  
Community Hamburg Township  
Section  
Basis for Estimate ☒ Conceptual (04/19/2023)  
☐ Preliminary  
☐ Final  
Date 4/19/23  
By BKC

### Determination of Residential Equivalent Units (REUs) per Twp. Ordinance

Item	Unit ID	Sq Ft	REU Usage Factor		REUs
1	Roadies Road House Saloon				
	Tax Parcel I.D. No. 15-25-200-068				
	Proposed Flex Space Bldg. Estimated Uses:				
2	Barber/Beauty Shop w/ 10 chairs/booths	3,000	1.00/shop + 0.10/chair, booth		2.00
3	Day Care Center	4,000	1.00/premise + 0.25/1000 ft <sup>2</sup>		2.00
4	Office Building (general)	3,000	0.40/1000 ft <sup>2</sup>		1.20
5	Office Building (medical, dental, clinic, etc.) with five (5) exam rooms	3,000	1.0 + 0.5 per exam room		3.50
6	Restaurants (meals and bar) - multiple	5,000	2.50/1000 ft <sup>2</sup> **		10.00
7	Retail Store (calculated w/ 5 stores)	5,000	1.00/premise + 0.10/ft <sup>2</sup>		1.50
8	Warehouse or Storage Building	4,000	0.10/1000 ft <sup>2</sup>		0.40
	Total Square Footage:	27,000			
	Total REUs				20.60
9	Connection Fee Based on Adjusted REU Total			\$7,500.00	\$154,500.00
10	Current REUs (capital fees paid in full)				5.40
11	Connection Fee Based on Initial REU Total			\$7,500.00	\$40,500.00
12	Additional Total Cost				\$114,000.00

\*\* For Restaurants - excluding restrooms, public areas not in regular use and unfinished areas. Only calculated REUs using 4,000 sq. ft. for this conceptual REU review.



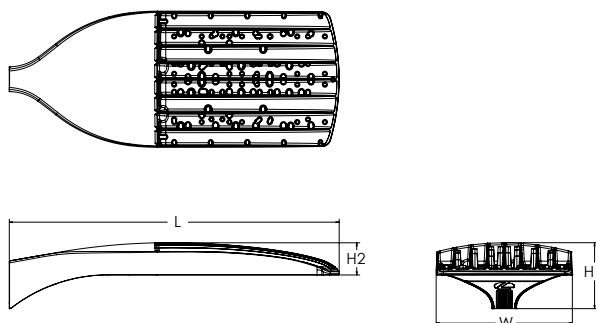
# D-Series Size 2 LED Area Luminaire



d#series

## Specifications

EPA:	1.06 ft <sup>2</sup> (0.10 m <sup>2</sup> )
Length:	40.59" (103.1 cm)
Width:	16.76" (42.6 cm)
Height H1:	8.11" (20.6 cm)
Height H2:	3.96" (10.1 cm)
Weight:	46 lbs (20.9 kg)



Catalog

Number

Notes

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Hit the Tab key or mouse over the page to see all interactive elements.

## Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of up to 80% vs. 1000W HID and expected service life of over 100,000 hours.

## Ordering Information

**EXAMPLE:** DSX2 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX2 LED						
Series	LEDs	Color temperature <sup>2</sup>	Color Rendering Index <sup>2</sup>	Distribution	Voltage	Mounting
DSX2 LED	<b>Forward optics</b>	(this section 70CRI only)		AFR Automotive front row	TSM Type V medium	<b>MVOLT</b> (120V-277V) <sup>4</sup> <b>HVOLT</b> (347V-480V) <sup>5,6</sup> <b>XVOLT</b> (277V - 480V) <sup>7,8</sup> <b>Shipped included</b> <b>SPA</b> Square pole mounting (#8 drilling) <b>RPA</b> Round pole mounting (#8 drilling) <b>SPA5</b> Square pole mounting #5 drilling <sup>9</sup> <b>RPA5</b> Round pole mounting #5 drilling <sup>9</sup> <b>SPA8N</b> Square narrow pole mounting #8 drilling <b>WBA</b> Wall bracket <sup>10</sup> <b>MA</b> Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)
	P1 P5	30K 3000K	70CRI	T1S Type I short	TSLG Type V low glare	
	P2 P6	40K 4000K	70CRI	T2M Type II medium	T5W Type V wide	
	P3 P7	50K 5000K	70CRI	T3M Type III medium	BLC3 Type III backlight control <sup>3</sup>	
	P4 P8	(this section 80CRI only, extended lead times apply)	80CRI	T3LG Type III low glare <sup>3</sup>	BLC4 Type IV backlight control <sup>3</sup>	
	<b>Rotated optics</b>			T4M Type IV medium	LCCO Left corner cutoff <sup>3</sup>	
	P10 <sup>1</sup> P13 <sup>1</sup>	27K 2700K		T4LG Type IV low glare <sup>3</sup>	RCCO Right corner cutoff <sup>3</sup>	
	P11 <sup>1</sup> P14 <sup>1</sup>	30K 3000K		TFTM Forward throw medium		
	P12 <sup>1</sup>	35K 3500K				
		40K 4000K				
		50K 5000K				

Control options	Other options	Finish (required)
<b>Shipped installed</b> <b>NLTAIR2 PIRHN</b> nLight AIR gen 2 enabled with bi-level motion / ambient senso, 8-40' mounting height, ambient sensor enabled at 2fc. <sup>11, 12, 20, 21</sup> <b>PIR</b> High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc. <sup>13, 20, 21</sup> <b>PER</b> NEMA twist-lock receptacle only (controls ordered separate) <sup>14</sup> <b>PER5</b> Five-pin receptacle only (controls ordered separate) <sup>14, 21</sup>	<b>Shipped installed</b> <b>SPD20KV</b> 20KV surge protection <b>HS</b> Houseside shield (black finish standard) <sup>22</sup> <b>L90</b> Left rotated optics <sup>1</sup> <b>R90</b> Right rotated optics <sup>1</sup> <b>CCE</b> Coastal Construction <sup>23</sup> <b>HA</b> 50°C ambient operation <sup>24</sup> <b>Shipped separately</b> <b>EGSR</b> External Glare Shield (reversible, field install required, matches housing finish) <b>BSDB</b> Bird Spikes (field install required)	<b>DDBXD</b> Dark Bronze <b>DBLXD</b> Black <b>DNAXD</b> Natural Aluminum <b>DWHXD</b> White <b>DDBTXD</b> Textured dark bronze <b>DBLTXD</b> Textured black <b>DNATXD</b> Textured natural aluminum <b>DWHGXD</b> Textured white



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One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • [www.lithonia.com](http://www.lithonia.com)  
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DSX2-LED  
 Rev. 03/15/23  
 Page 1 of 10





# WDGE1 LED

## Architectural Wall Sconce



Catalog  
Number

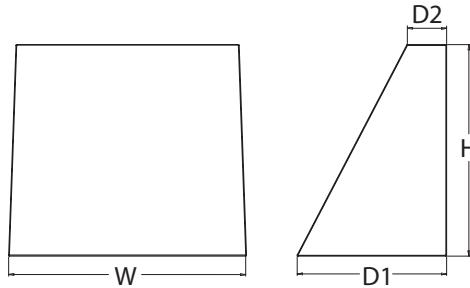
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### Specifications

**Depth (D1):** 5.5"  
**Depth (D2):** 1.5"  
**Height:** 8"  
**Width:** 9"  
**Weight:** 9 lbs  
 (without options)



### Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

### WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

### Ordering Information

**EXAMPLE:** WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P1	27K 2700K	80CRI	VF Visual comfort forward throw	MVOLT 347 <sup>2</sup>	<b>Shipped included</b> SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only) <sup>5</sup>  <b>Shipped separately</b> AWS 3/8inch Architectural wall spacer PBBW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available.
	P2	30K 3000K	90CRI	VW Visual comfort wide		
		35K 3500K				
		40K 4000K				
		50K <sup>1</sup> 5000K				

Options	Finish
<b>E4WH<sup>3</sup></b> Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min) <b>PE<sup>4</sup></b> Photocell, Button Type <b>DS</b> Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details) <b>DMG</b> 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately) <b>BCE</b> Bottom conduit entry for back box (PBBW). Total of 4 entry points. <b>BAA</b> Buy America(n) Act Compliant	<b>DDBXD</b> Dark bronze <b>DBLXD</b> Black <b>DNAXD</b> Natural aluminum <b>DWHXD</b> White <b>DSSXD</b> Sandstone  <b>DDBTXD</b> Textured dark bronze <b>DBLTXD</b> Textured black <b>DNATXD</b> Textured natural aluminum <b>DWHGXD</b> Textured white <b>DSSTXD</b> Textured sandstone

### Accessories

Ordered and shipped separately.

WDGEAWS DDBXD WDGE 3/8inch Architectural Wall Spacer (specify finish)  
 WDGE1PBBW DDBXD U WDGE1 surface-mounted back box (specify finish)

### NOTES

- 50K not available in 90CRI.
- 347V not available with E4WH, DS or PE.
- E4WH not available with PE or DS.
- PE not available with DS.
- Not qualified for DLC. Not available with E4WH.



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WDGE1 LED  
 Rev. 11/21/22