

**LEGAL DESCRIPTION:**

**LEGAL DESCRIPTIONS SUBSEQUENT TO SURVEY**

**PARCEL No. 30-006-016-100-019 11.728± Acres**

Land in the City of Hillsdale, County of Hillsdale and State of Michigan, described as follows:  
 Commencing at the North 1/4 corner of Section 16, Town 6 South, Range 3 West, City of Hillsdale, Hillsdale County, Michigan, said point distant 2613.53 feet S89°53'21"W to the Northwest 1/4 of said Section 16;  
 thence N89°52'01"E 105.15 feet to a point on the Westerly line of Hillsdale County Railroad (49.5-foot wide 1/2 Right-of-Way), said point distant 2503.54 feet N89°52'01"E to the Northeast Corner of said Section 16;  
 thence S02°36'14"W 159.56 feet (recorded as S02°39'18"W 160.19 feet) along said Westerly line of said Hillsdale County Railroad to the **PLACE OF BEGINNING**;  
 thence continuing S02°36'14"W (recorded as S02°39'18"W) 135.38 feet along said Westerly line of Hillsdale County Railroad to a point on the nominal centerline of West Moore Road (33-foot wide 1/2 Right-of-Way);  
 thence along the nominal centerline of said West Moore Road the following two courses:  
 1) Southerly 66.37 feet along the arc of a 182.71-foot radius curve the left, through a central angle of 20°48'49" and having a chord bearing S07°44'06"W 66.01 feet and  
 2) Southerly 433.95 feet (recorded as 434.22 feet) along the arc of a 3679.51-foot radius compound curve to the left, through a central angle of 06°45'26" (recorded as 06°45'41") and having a chord bearing S06°03'01"E 433.70 feet (recorded as S06°03'09"E 433.96 feet);  
 thence S70°28'08"W 420.63 feet (recorded as S70°28'11"W 421.26 feet) to the Easterly line of West Carleton Road a.k.a. M-99 (75-foot wide 1/2 Right-of-Way);  
 thence along said Easterly line of West Carleton Road the following two courses:  
 1) N40°16'15"W 843.16 feet and  
 2) Northwesterly 164.77 feet (recorded as 165.79 feet) along the arc of a 7564.44-foot radius curve to the right, through a central angle of 01°14'53" (recorded as 01°15'21") and having a chord bearing N39°38'49"W 164.76 feet (recorded as N39°38'35"W 165.79 feet);  
 thence N89°52'01"E 1015.90 feet (recorded as N89°53'09"E 1017.22) to the Place of Beginning.  
 Be a part of the Northeast 1/4 and Northwest 1/4 of Section 16, Town 6 South, Range 3 West, City of Hillsdale, Hillsdale County, Michigan. Containing 11.728 acres of land, more or less. Subject to the rights of the public over the Easterly 33 feet thereof, as occupied by West Moore Road (33-foot wide 1/2 Right-of-Way), also subject to and together with all easement and restrictions of record, if any.

**PARCEL No. 30-006-016-100-023 2.982± Acres**

Land in the City of Hillsdale, County of Hillsdale and State of Michigan, described as follows:  
 Commencing at the North 1/4 corner of Section 16, Town 6 South, Range 3 West, City of Hillsdale, Hillsdale County, Michigan, said point distant 2613.53 feet S89°53'21"W to the Northwest 1/4 of said Section 16;  
 thence N89°52'01"E 105.15 feet to a point on the Westerly line of Hillsdale County Railroad (49.5-foot wide 1/2 Right-of-Way), said point distant 2503.54 feet N89°52'01"E to the Northeast Corner of said Section 16;  
 thence S02°36'14"W 159.56 feet (recorded as S02°39'18"W 160.19 feet) along said Westerly line of Hillsdale County Railroad;  
 thence continuing S02°36'14"W (recorded as S02°39'18"W) 135.38 feet along said Westerly line of Hillsdale County Railroad;  
 thence along the nominal centerline of West Moore Road (33-foot wide 1/2 Right-of-Way) the following four courses:  
 1) Southerly 66.37 feet along the arc of a 182.71-foot radius curve the left, through a central angle of 20°48'49" and having a chord bearing S07°44'06"W 66.01 feet;  
 2) Southerly 433.95 feet (recorded as 434.22 feet) along the arc of a 3679.51-foot radius compound curve to the left, through a central angle of 06°45'26" (recorded as 06°45'41") and having a chord bearing S06°03'01"E 433.70 feet (recorded as S06°03'09"E 433.96 feet) to the **PLACE OF BEGINNING**;  
 3) continuing Southerly 330.54 feet (recorded as 330.27 feet) along the arc of a 3679.51-foot radius curve to the left, through a central angle of 05°08'49" (recorded as 05°08'34") and having a chord bearing S12°00'09"E 330.43 feet (recorded as S12°00'17"E 330.19 feet) and  
 4) Southerly 140.31 feet (recorded as 140.69 feet) along the arc of a 270.55-foot radius curve to the right, through a central angle of 29°42'51" (recorded as 29°47'38") and having a chord bearing S00°05'56"W 138.74 feet (recorded as S00°19'15"W 139.11 feet);  
 thence N83°37'54"W (recorded as N83°39'40"W) 214.13 feet to the Easterly line of West Carleton Road a.k.a. M-99 (75-foot wide 1/2 Right-of-Way);  
 thence N40°16'15"W 232.66 feet along said Easterly line of West Carleton Road;  
 thence N70°28'08"E 420.63 feet (recorded as N70°28'11"E 421.26 feet) to the Place of Beginning. Be a part of the Northeast 1/4 and Northwest 1/4 of Section 16, Town 6 South, Range 3 West, City of Hillsdale, Hillsdale County, Michigan. Containing 2.982 acres of land, more or less. Subject to the rights of the public over the Easterly 33 feet thereof, as occupied by West Moore Road (33-foot wide 1/2 Right-of-Way), also subject to and together with all easement and restrictions of record, if any.

Refer to the current policy for title insurance for proof of ownership and all encumbrances affecting title to the described above parcel.

**PROPOSED PARCELS**

**PARCEL "A" 7.776± Acres  
(Part of Parcel No. 30-006-016-100-023)**

Land in the City of Hillsdale, County of Hillsdale and State of Michigan, described as follows:  
 Commencing at the North 1/4 corner of Section 16, Town 6 South, Range 3 West, City of Hillsdale, Hillsdale County, Michigan, said point distant 2613.53 feet S89°53'21"W to the Northwest 1/4 of said Section 16;  
 thence N89°52'01"E 105.15 feet to a point on the Westerly line of Hillsdale County Railroad (49.5-foot wide 1/2 Right-of-Way), said point distant 2503.54 feet N89°52'01"E to the Northeast Corner of said Section 16;  
 thence S02°36'14"W (recorded as S02°39'18"W) 294.94 feet along said Westerly line of Hillsdale County Railroad to a point on the nominal centerline of West Moore Road (33-foot wide 1/2 Right-of-Way);  
 thence along the nominal centerline of West Moore Road the following four courses:  
 1) Southerly 66.37 feet along the arc of a 182.71-foot radius curve the left, through a central angle of 20°48'49" and having a chord bearing S07°44'06"W 66.01 feet and  
 2) Southerly 433.70 feet along the arc of a 3679.51-foot radius compound curve to the left, through a central angle of 06°54'33" and having a chord bearing S06°07'36"E 443.44 feet to the **PLACE OF BEGINNING**;  
 3) continuing Southerly 320.78 feet along the arc of a 3679.51-foot radius curve to the left, through a central angle of 04°59'42" and having a chord bearing S12°04'42"E 320.68 feet and  
 4) Southerly 140.31 feet (recorded as 140.69 feet) along the arc of a 270.55-foot radius curve to the right, through a central angle of 29°42'51" (recorded as 29°47'38") and having a chord bearing S00°05'56"W 138.74 feet (recorded as S00°19'15"W 139.11 feet);  
 thence N83°37'54"W (recorded as N83°39'40"W) 214.13 feet to the Easterly line of West Carleton Road a.k.a. M-99 (75-foot wide 1/2 Right-of-Way);  
 thence N40°16'15"W 232.66 feet along said Easterly line of West Carleton Road;  
 thence N49°43'45"E 388.39 feet to the Place of Beginning.  
 Being a part of the Northeast 1/4 and Northwest 1/4 of Section 16, Town 6 South, Range 3 West, City of Hillsdale, Hillsdale County, Michigan. Containing 2.234 acres of land, more or less. Subject to the rights of the public over the Easterly 33 feet thereof, as occupied by West Moore Road (33-foot wide 1/2 Right-of-Way), also subject to and together with all easement and restrictions of record, if any.

**PARCEL "B" 4.698± Acres  
(Part of Parcel No. 30-006-016-100-018 & 100-023)**

Land in the City of Hillsdale, County of Hillsdale and State of Michigan, described as follows:  
 Commencing at the North 1/4 corner of Section 16, Town 6 South, Range 3 West, City of Hillsdale, Hillsdale County, Michigan, said point distant 2613.53 feet S89°53'21"W to the Northwest 1/4 of said Section 16;  
 thence N89°52'01"E 105.15 feet to a point on the Westerly line of Hillsdale County Railroad (49.5-foot wide 1/2 Right-of-Way), said point distant 2503.54 feet N89°52'01"E to the Northeast Corner of said Section 16;  
 thence S02°36'14"W (recorded as S02°39'18"W) 294.94 feet along said Westerly line of said Hillsdale County Railroad to a point on the nominal centerline of West Moore Road (33-foot wide 1/2 Right-of-Way);  
 thence along the nominal centerline of said West Moore Road the following two courses:  
 1) Southerly 66.37 feet along the arc of a 182.71-foot radius curve the left, through a central angle of 20°48'49" and having a chord bearing S07°44'06"W 66.01 feet and  
 2) Southerly 26.46 feet along the arc of a 3679.51-foot radius compound curve to the left, through a central angle of 00°24'43" and having a chord bearing S02°52'40"E 26.46 feet to the **PLACE OF BEGINNING**;  
 thence continuing Southerly 417.24 feet along the arc of a 3679.51-foot radius curve to the left, through a central angle of 06°29'50" and having a chord bearing S06°19'57"E 417.02 feet;  
 thence S49°43'45"W 550.00 feet to the Easterly line of West Carleton Road a.k.a. M-99 (75-foot wide 1/2 Right-of-Way);  
 thence N40°16'15"W 400.00 feet along said Easterly line of West Carleton Road;  
 thence N49°43'45"E 550.00 feet;  
 thence N86°54'58"E 89.38 feet to the Place of Beginning.  
 Being a part of the Northeast 1/4 and Northwest 1/4 of Section 16, Town 6 South, Range 3 West, City of Hillsdale, Hillsdale County, Michigan. Containing 4.698 acres of land, more or less. Subject to the rights of the public over the Easterly 33 feet thereof, as occupied by West Moore Road (33-foot wide 1/2 Right-of-Way), also subject to and together with all easement and restrictions of record, if any.

**PARCEL "C" 7.776± Acres  
(Part of Parcel No. 30-006-016-100-018)**

Land in the City of Hillsdale, County of Hillsdale and State of Michigan, described as follows:  
 Commencing at the North 1/4 corner of Section 16, Town 6 South, Range 3 West, City of Hillsdale, Hillsdale County, Michigan, said point distant 2613.53 feet S89°53'21"W to the Northwest 1/4 of said Section 16;  
 thence N89°52'01"E 105.15 feet to a point on the Westerly line of Hillsdale County Railroad (49.5-foot wide 1/2 Right-of-Way), said point distant 2503.54 feet N89°52'01"E to the Northeast Corner of said Section 16;  
 thence S02°36'14"W 159.56 feet (recorded as S02°39'18"W 160.19 feet) along said Westerly line of said Hillsdale County Railroad to the **PLACE OF BEGINNING**;  
 thence continuing S02°36'14"W (recorded as S02°39'18"W) 135.38 feet along said Westerly line of Hillsdale County Railroad to a point on the nominal centerline of West Moore Road (33-foot wide 1/2 Right-of-Way);  
 thence along the nominal centerline of said West Moore Road the following two courses:  
 1) Southerly 66.37 feet along the arc of a 182.71-foot radius curve the left, through a central angle of 20°48'49" and having a chord bearing S07°44'06"W 66.01 feet and  
 2) Southerly 26.46 feet along the arc of a 3679.51-foot radius compound curve to the left, through a central angle of 00°24'43" and having a chord bearing S02°52'40"E 26.46 feet;  
 thence S49°43'45"W 550.00 feet to the Easterly line of West Carleton Road a.k.a. M-99 (75-foot wide 1/2 Right-of-Way);  
 thence along said Easterly line of West Carleton Road the following two courses:  
 1) N40°16'15"W 890.50 feet and  
 2) Northwesterly 164.77 feet (recorded as 165.79 feet) along the arc of a 7564.44-foot radius curve to the right, through a central angle of 01°14'53" (recorded as 01°15'21") and having a chord bearing N39°38'49"W 164.76 feet (recorded as N39°38'35"W 165.79 feet);  
 thence N89°52'01"E 1015.90 feet (recorded as N89°53'09"E 1017.22) to the Place of Beginning.  
 Being a part of the Northeast 1/4 and Northwest 1/4 of Section 16, Town 6 South, Range 3 West, City of Hillsdale, Hillsdale County, Michigan. Containing 7.776 acres of land, more or less. Subject to the rights of the public over the Easterly 33 feet thereof, as occupied by West Moore Road (33-foot wide 1/2 Right-of-Way), also subject to and together with all easement and restrictions of record, if any.

**BENCHMARK**  
 DATUM BASED ON NGS OPUS SOLUTION REPORT,  
 DATED NOVEMBER 8, 2023 AT 7:08 AM

BENCHMARK #200  
 SOUTHEASTERLY CORNER OF CONCRETE PAD,  
 LOCATED WLY SIDE OF W. CARLTON (M-99) AND  
 160± FEET SOUTHERLY OF DEALERSHIP'S  
 ENTRANCE.  
 ELEVATION = 1106.39 (NAVD 88)

BENCHMARK #201  
 NORTHWESTERLY BOLT ON TRAFFIC POLE, LOCATED  
 AT INTERSECTION, NLY OF W. CARLTON RD (M-99)  
 AND WLY OF MOORE ROAD,  
 ELEVATION = 1084.02 (NAVD 88)

BENCHMARK #202  
 RAILROAD SPIKE IN THE WEST SIDE OF AN UTILITY  
 POLE, LOCATED EASTERLY SIDE OF MOORE ROAD  
 AND 360± FEET NORTH OF #3883 ENTRANCE.  
 ELEVATION = 1076.98 (NAVD 88)

**ENGINEER/SURVEYOR**  
**DESINE INC.**  
 2183 PLESS DRIVE  
 BRIGHTON, MICHIGAN 48114  
 PHONE: (810) 227-9533

**DEVELOPER / APPLICANT**  
**ALDI Inc.**  
 2625 N. STOCKBRIDGE ROAD  
 WEBBERVILLE, MICHIGAN 48892  
 PHONE: (517) 521-3907

**ARCHITECT**  
**MOSURE L.L.C.**  
 2221 SCHROCK ROAD  
 COLUMBUS, OH 43229-1547  
 PHONE: (614) 898-7100

# SITE PLAN

FOR

# ALDI #143

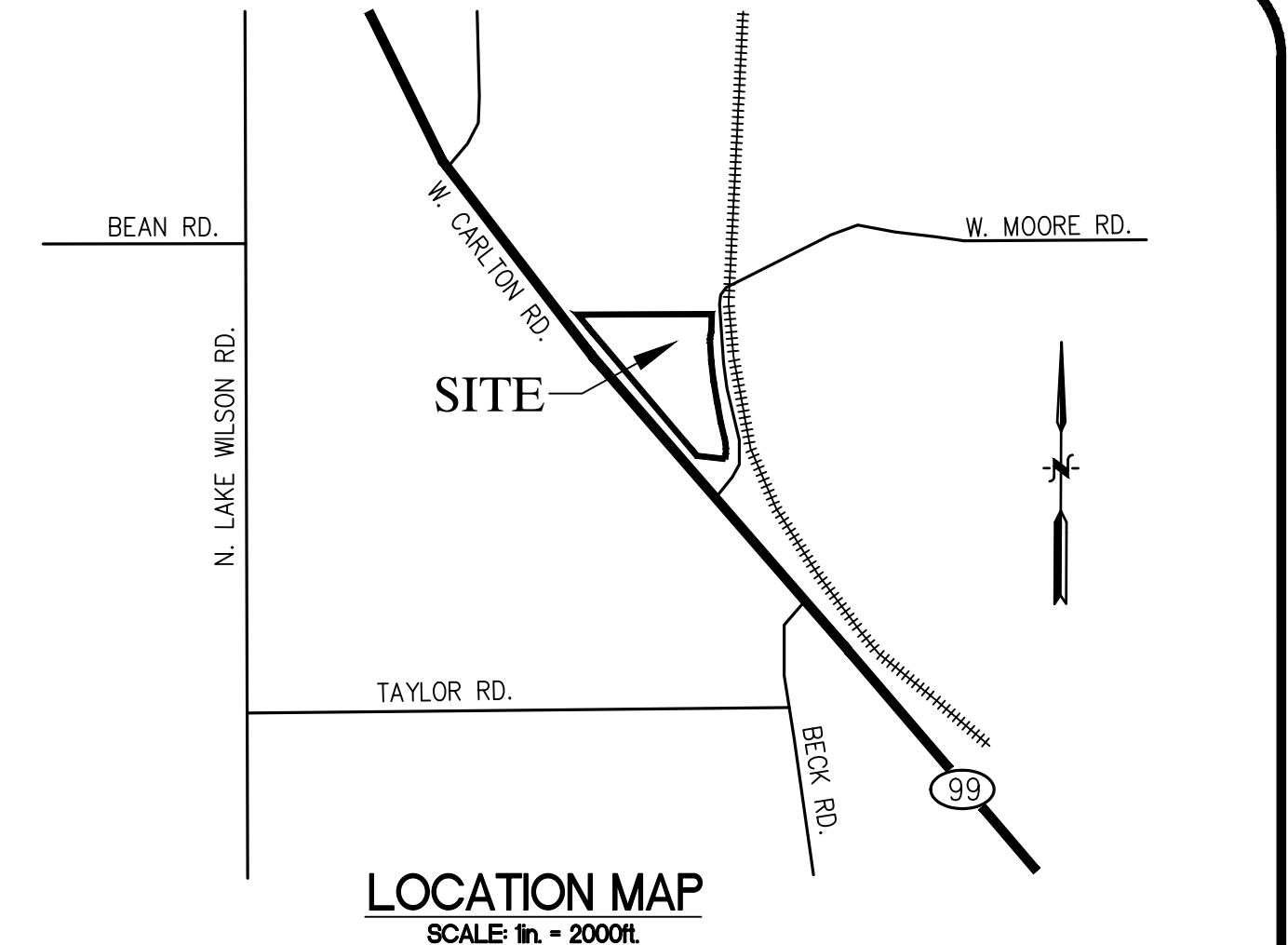
3891 W. CARLETON ROAD HILLSDALE, MICHIGAN 49242  
 A PART OF N 1/2 OF SECTION 16, T6S, R3W  
 CITY OF HILLSDALE, HILLSDALE COUNTY, MICHIGAN



AERIAL PHOTOGRAPH  
 NOT TO SCALE

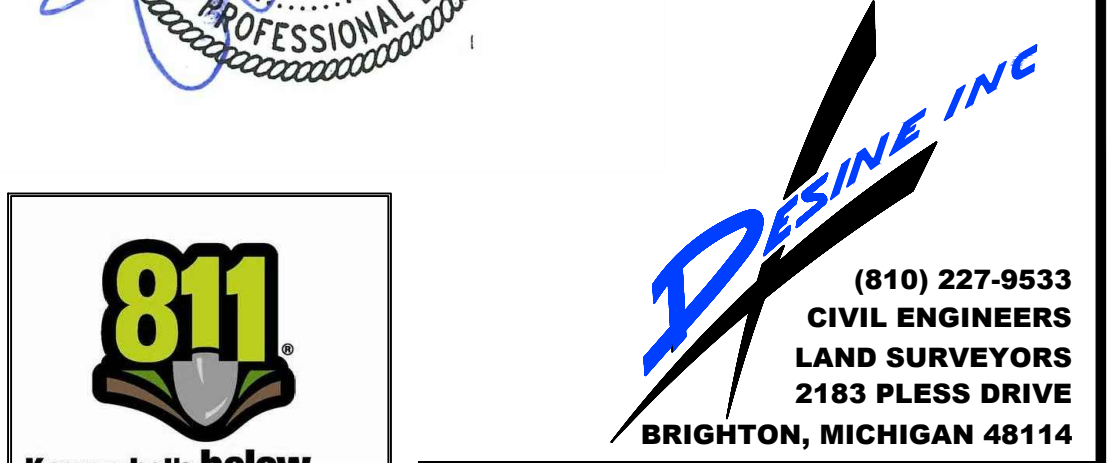
AERIAL PHOTOGRAPHY BY:

Aerial photographic underlay is an unrectified image and is oriented to the engineering line work with reasonable accuracy and precision, and may not accurately depict current site conditions.



**SHEET INDEX**

- EX1 EXISTING CONDITIONS & DEMOLITION PLAN
- SP1 SITE PLAN
- UT1 UTILITY PLAN
- UT2 ROOF DRAIN & UNDERDRAIN PLAN & DETAILS
- UT3 SANITARY SEWER PLAN & PROFILE
- UT4 WATER MAIN PLAN & PROFILE
- GR1 GRADING & PAVING PLAN WEST
- GR2 GRADING & PAVING PLAN EAST
- GR3 GRADING DETAILS
- SE1 SOIL EROSION & SEDIMENTATION CONTROL PLAN
- SE2 SOIL EROSION & SEDIMENTATION CONTROL NOTES & DETAILS
- WS1 WATERSHED PLAN
- WS2 STORM WATER MANAGEMENT CALCULATIONS
- LA1 LANDSCAPE PLAN
- LA2 LANDSCAPE NOTES & DETAILS
- LT1 SITE LIGHTING PLAN
- LT2 SITE LIGHTING DETAILS
- DT1 SITE PAVEMENT NOTES & DETAILS
- DT2 SIGNAGE & PAVEMENT MARKING PLAN
- DT3 SIGNAGE DETAILS
- DT4 SANITARY SEWER NOTES & DETAILS
- DT5 WATER MAIN NOTES & DETAILS
- DT6 STORM SEWER NOTES & DETAILS
- A-131 BUILDING FLOOR PLAN/OPERATIONS PLAN
- A-201 EXTERIOR ELEVATIONS
- A-508 EXTERIOR DETAILS

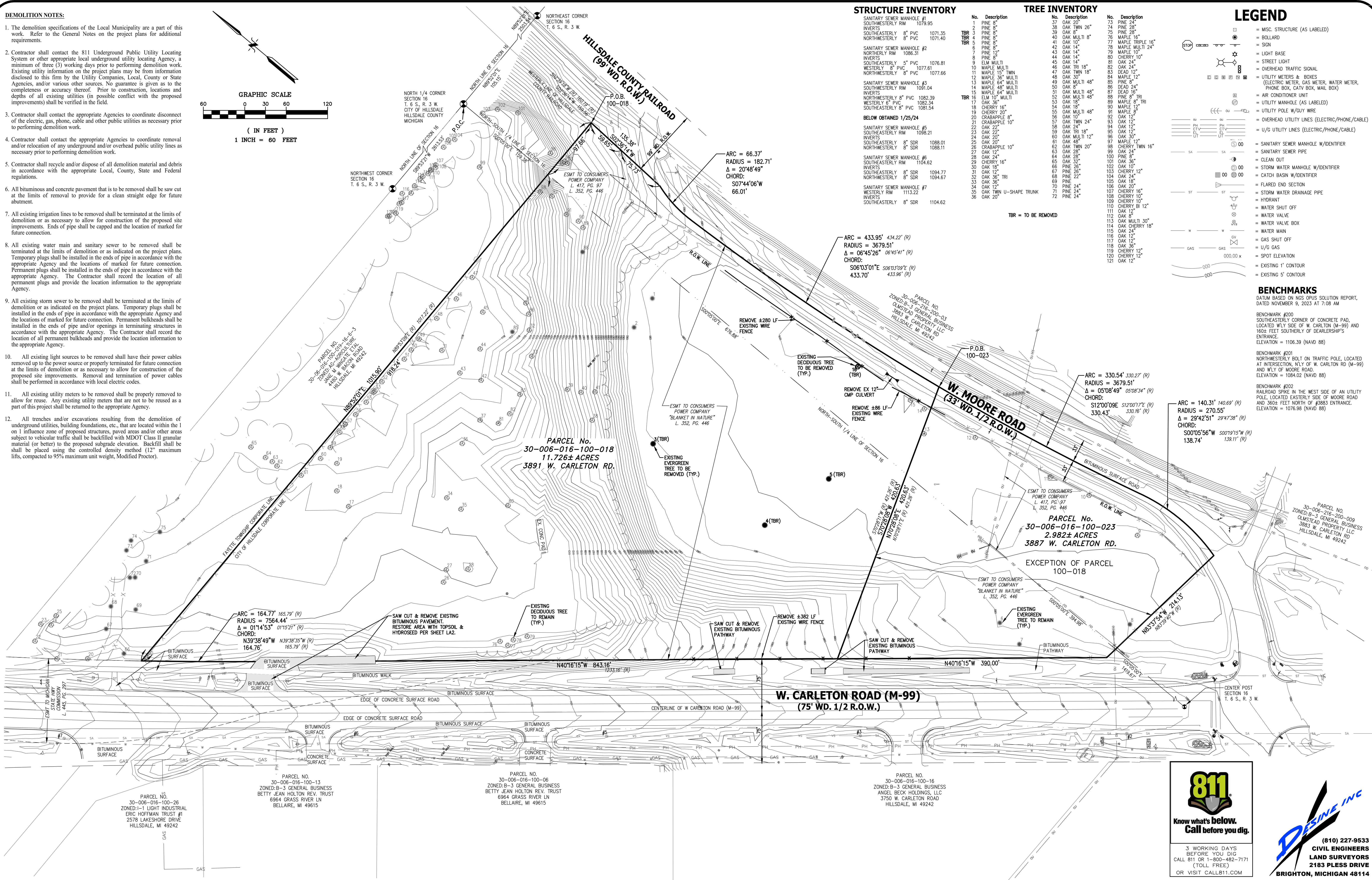
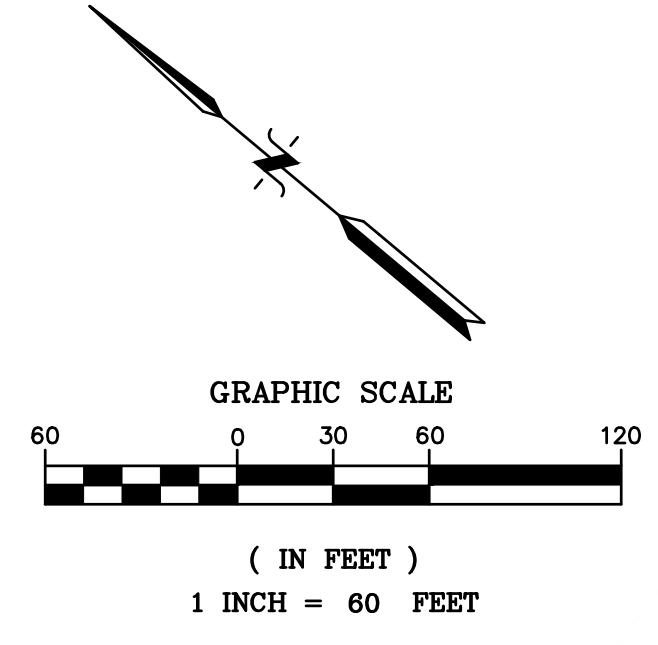


 Know what's below. Call before you dig. 3 WORKING DAYS BEFORE YOU DIG CALL 811 OR 1-800-482-7171 (TOLL FREE) OR VISIT CALL811.COM	REVISED 04-02-2024	SCALE: N/A PROJECT No.: 9234510 DWG NAME: 4510 CVV PRINT: APR. 02, 2024

**DESINE INC.**  
 (810) 227-9533  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 2183 PLESS DRIVE  
 BRIGHTON, MICHIGAN 48114

**DEMOLITION NOTES:**

- The demolition specifications of the Local Municipality are a part of this work. Refer to the General Notes on the project plans for additional requirements.
- Contractor shall contact the 811 Underground Public Utility Locating System or other appropriate local underground utility locating Agency, a minimum of three (3) working days prior to performing demolition work. Existing utility information on the project plans may be from information disclosed to this firm by the Utility Companies, Local, County or State Agencies, and/or various other sources. No guarantee is given as to the completeness or accuracy thereof. Prior to construction, locations and depths of all existing utilities (in possible conflict with the proposed improvements) shall be verified in the field.
- Contractor shall contact the appropriate Agencies to coordinate disconnect of the electric, gas, phone, cable and other public utilities as necessary prior to performing demolition work.
- Contractor shall contact the appropriate Agencies to coordinate removal and/or relocation of any underground and/or overhead public utility lines as necessary prior to performing demolition work.
- Contractor shall recycle and/or dispose of all demolition material and debris in accordance with the appropriate Local, County, State and Federal regulations.
- All bituminous and concrete pavement that is to be removed shall be saw cut at the limits of removal to provide for a clean straight edge for future abutment.
- All existing irrigation lines to be removed shall be terminated at the limits of demolition or as necessary to allow for construction of the proposed site improvements. Ends of pipe shall be capped and the location of marked for future connection.
- All existing water main and sanitary sewer to be removed shall be terminated at the limits of demolition or as indicated on the project plans. Temporary plugs shall be installed in the ends of pipe in accordance with the appropriate Agency and the locations of marked for future connection. Permanent plugs shall be installed in the ends of pipe in accordance with the appropriate Agency. The Contractor shall record the location of all permanent plugs and provide the location information to the appropriate Agency.
- All existing storm sewer to be removed shall be terminated at the limits of demolition or as indicated on the project plans. Temporary plugs shall be installed in the ends of pipe in accordance with the appropriate Agency and the locations of marked for future connection. Permanent bulkheads shall be installed in the ends of pipe and/or openings in terminating structures in accordance with the appropriate Agency. The Contractor shall record the location of all permanent bulkheads and provide the location information to the appropriate Agency.
- All existing light sources to be removed shall have their power cables removed up to the power source or properly terminated for future connection at the limits of demolition or as necessary to allow for construction of the proposed site improvements. Removal and termination of power cables shall be performed in accordance with local electric codes.
- All existing utility meters to be removed shall be properly removed to allow for reuse. Any existing utility meters that are not to be reused as a part of this project shall be returned to the appropriate Agency.
- All trenches and/or excavations resulting from the demolition of underground utilities, building foundations, etc. that are located within the 1 on 1 influence zone of proposed structures, paved areas and/or other areas subject to vehicular traffic shall be backfilled with MDOT Class II granular material (or better) to the proposed subgrade elevation. Backfill shall be placed using the controlled density method (12" maximum lifts, compacted to 95% maximum unit weight, Modified Proctor).



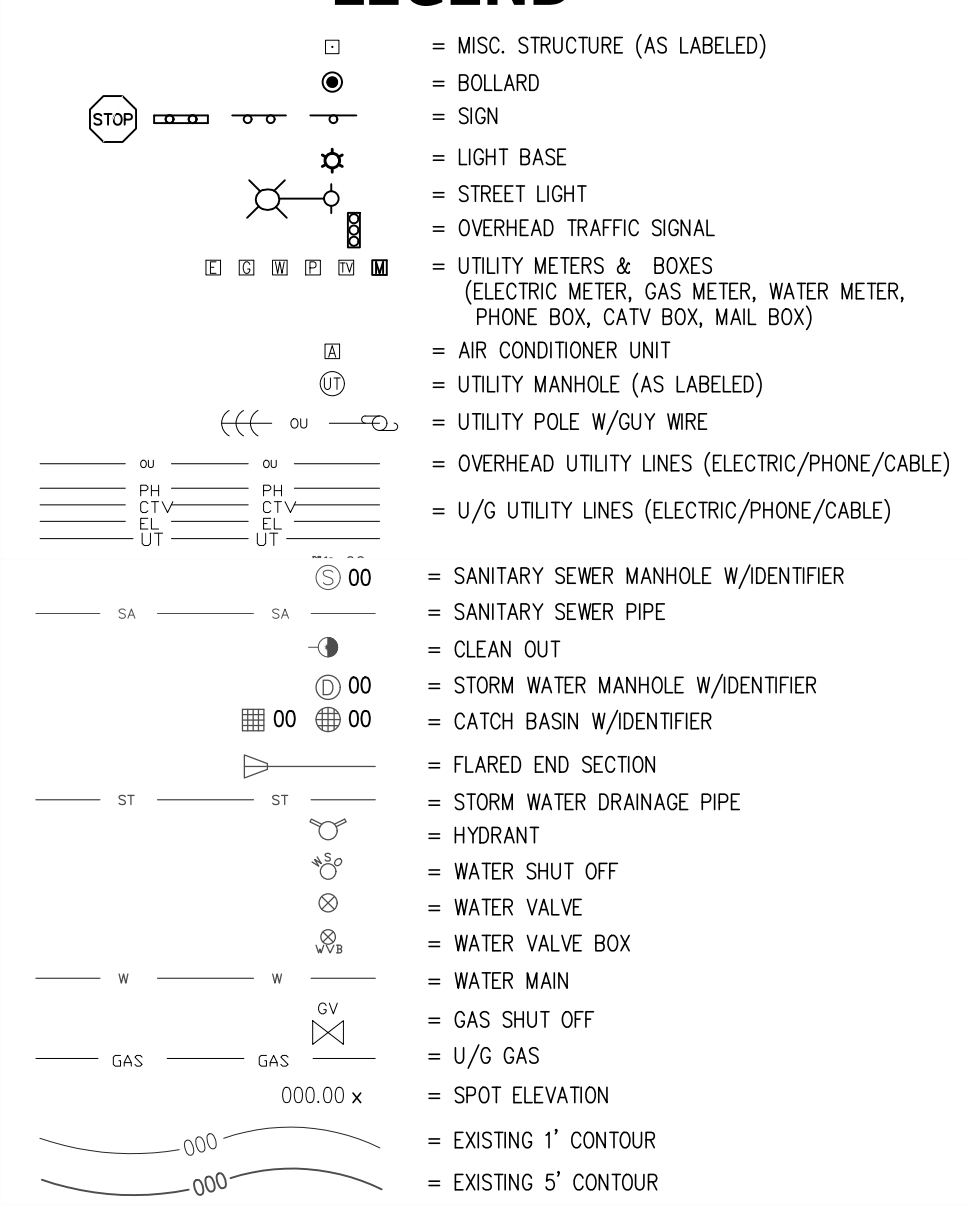
**STRUCTURE INVENTORY**

No.	Description
1	PINE 6"
2	PINE 6"
3	PINE 8"
4	PINE 8"
5	PINE 8"
6	PINE 8"
7	PINE 12"
8	PINE 6"
9	ELM MULTI
10	MAPLE MULTI
11	MAPLE 15" TWIN
12	MAPLE 36" MULTI
13	MAPLE 64" MULTI
14	MAPLE 48" MULTI
15	MAPLE 64" MULTI
16	ELM 10" MULTI
17	OAK 36"
18	CHERRY 16"
19	CHERRY 20"
20	CRABAPPLE 8"
21	CRABAPPLE 10"
22	OAK 22"
23	OAK 22"
24	OAK 20"
25	OAK 20"
26	CRABAPPLE 10"
27	OAK 12"
28	OAK 24"
29	CHERRY 16"
30	OAK 18"
31	OAK 12"
32	OAK 18" TRI
33	OAK 36"
34	OAK 12"
35	OAK TWIN U-SHAPE TRUNK
36	OAK 20"

**TREE INVENTORY**

No.	Description
37	OAK 20"
38	OAK TWIN 26"
39	OAK 6"
40	OAK MULTI 6"
41	OAK 10"
42	OAK 14"
43	OAK 14"
44	OAK 14"
45	OAK 14"
46	OAK TRI 18"
47	OAK TWIN 18"
48	OAK 30"
49	OAK 30"
50	OAK 6"
51	OAK MULTI 48"
52	OAK MULTI 48"
53	OAK 18"
54	OAK 18"
55	OAK MULTI 48"
56	OAK 10"
57	OAK TWIN 24"
58	OAK 24"
59	OAK TRI 18"
60	OAK MULTI 12"
61	OAK 48"
62	OAK TWIN 20"
63	OAK 28"
64	OAK 28"
65	OAK 32"
66	PINE 26"
67	PINE 26"
68	PINE 22"
69	PINE 24"
70	PINE 24"
71	PINE 24"
72	PINE 24"

**LEGEND**



**BENCHMARKS**

- DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED NOVEMBER 9, 2023 AT 7:08 AM
- BENCHMARK #200:** SOUTHEASTERLY CORNER OF CONCRETE PAD, LOCATED W/1/2 SIDE OF W. CARLETON (M-99) AND 1600 FEET SOUTHERLY OF DEALERSHIP'S ENTRANCE. ELEVATION = 1106.39 (NAVD 88)
  - BENCHMARK #201:** NORTHWESTERLY BOLT ON TRAFFIC POLE, LOCATED AT INTERSECTION, N/1/2 OF W. CARLETON (M-99) AND W/1/2 OF MOORE ROAD. ELEVATION = 1084.02 (NAVD 88)
  - BENCHMARK #202:** RAILROAD SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED EASTERLY SIDE OF MOORE ROAD AND 3600 FEET NORTH OF #3883 ENTRANCE. ELEVATION = 1076.68 (NAVD 88)

DESIGN-CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED PER CITY REVIEW COMMENTS			
CHECK: CAG						

ALDI #143  
HILLSDALE, MICHIGAN

EXISTING CONDITIONS  
AND DEMOLITION PLAN

CLIENT: ALDI, Inc.  
2625 N. STOCKBRIDGE ROAD  
WEBBERVILLE, MICHIGAN 48892  
(517) 521-3907

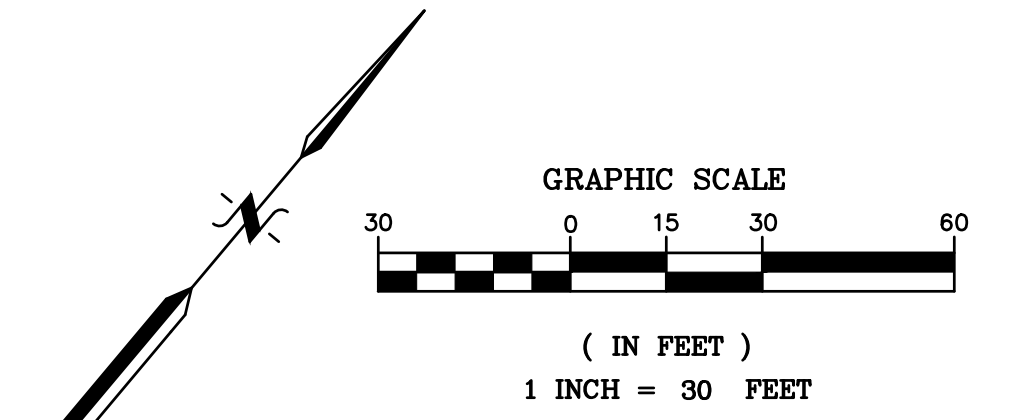
SCALE: 1"=60'  
PROJECT NO.: 9234510  
DWG NAME: 4510 EX  
ISSUED: APR. 02, 2024

**811**  
Know what's below.  
Call before you dig.  
3 WORKING DAYS BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171 (TOLL FREE)  
OR VISIT CALL811.COM

**DESIGN INC**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESS DRIVE  
BRIGHTON, MICHIGAN 48114

**EX1**

PROPOSED  
PARCEL C  
±7.78 AC.



**LEGEND**

- = MISC. STRUCTURE (AS LABELED)
- = BOLLARD
- = SIGN
- = LIGHT BASE
- = STREET LIGHT
- = OVERHEAD TRAFFIC SIGNAL
- = UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX)
- = AIR CONDITIONER UNIT
- = UTILITY MANHOLE (AS LABELED)
- = UTILITY POLE W/GUY WIRE
- = OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
- = U/G UTILITY LINES (ELECTRIC/PHONE/CABLE)
- = DECIDUOUS TREE W/IDENTIFIER
- = CONIFEROUS TREE W/IDENTIFIER
- = DECIDUOUS SHRUB
- = EXISTING TREE DRIP LINE
- = FENCE (CHAIN LINK UNLESS OTHERWISE STATED)
- = GUARD RAIL
- = EDGE OF GRAVEL
- = CONCRETE CURB (UNLESS OTHERWISE STATED)
- = SANITARY SEWER MANHOLE W/IDENTIFIER
- = SANITARY SEWER PIPE
- = CLEAN OUT
- = STORM WATER MANHOLE W/IDENTIFIER
- = CATCH BASIN W/IDENTIFIER
- = FLARED END SECTION
- = STORM WATER DRAINAGE PIPE
- = HYDRANT
- = WATER SHUT OFF
- = WATER VALVE
- = WATER VALVE BOX
- = WATER MAIN
- = GAS SHUT OFF
- = U/G GAS
- = PROPOSED LIGHT POLE
- = PROPOSED SANITARY SEWER
- = PROPOSED WATER MAIN
- = PROPOSED STORM SEWER
- = PROPOSED STORM STRUCTURES
- = PROPOSED CURB AND GUTTER
- = PROPOSED CONCRETE WALK
- = PROPOSED STANDARD DUTY CONCRETE PAVEMENT
- = PROPOSED STANDARD DUTY BITUMINOUS PAVEMENT
- = PROPOSED HEAVY DUTY BITUMINOUS PAVEMENT

**SITE DATA:**  
 PARCEL #: 30-006-016-100-018 & 30-006-016-100-023  
 EXISTING ADDRESS: 3887 & 3891 W. CARLETON RD.  
 PROPOSED ADDRESS: TBD  
 OVERALL SITE AREA: ± 14.71 AC.  
 PROPOSED PARCEL B SITE AREA: ± 4.70 AC.  
 ZONING: B-3 - GENERAL BUSINESS  
 EXISTING USE: VACANT  
 PROPOSED USE: RETAIL COMMERCIAL  
 PROPOSED LOT COVERAGE: 9.8%  
 PAVED PARKING AREA: 51,362 SQ. FT.  
 CONCRETE LOADING AREA: 1,639 SQ. FT.  
 PRIVATE CONCRETE SIDEWALK AREA: 3,713 SQ. FT.  
 PUBLIC SIDEWALK AREA: 2,504 SQ. FT.

**PARKING CALCULATIONS:**  
 MINIMUM REQUIRED = 1 SPACE PER 200 SF. UFA  
 = 12,946 SF/200 SF. PER SPACE  
 = 65 SPACES  
 MAXIMUM ALLOWABLE = 1 SPACE PER 150 SF. UFA  
 = 12,946 SF/150 SF. PER SPACE  
 = 86 SPACES  
 PROPOSED = 86 SPACES

- SITE DEVELOPMENT NOTES:**
- The proposed ALDI building shall be fire suppressed. A Knox Box shall be provided on the exterior building wall at the front entrance in accordance with the Local Fire Department requirements.
  - All proposed sidewalks shall be constructed in accordance with the proposed grades and dimensions provided on the Civil Construction Plans. Any conflict and/or discrepancy between the Civil Construction Plans and the Building Plans shall immediately be brought to the attention of ALDI Inc. and the Engineer of Record.
  - All barrier free sidewalk ramps shall be constructed with detectable warnings in accordance with MDOT Standard Plan R-28, latest revision.
  - All proposed sidewalks, barrier free parking spaces and barrier free routes shall be constructed in accordance with the Civil Construction Plans and current ADA standards and specifications. All sidewalks, barrier free parking spaces and barrier free routes shall be subject to an as-built survey following construction. Any sidewalks, barrier free parking spaces and/or barrier free routes that do not meet the requirements of the Civil Construction Plans and current ADA standards and specifications shall be repaired and/or replaced at the Contractor's expense.
  - The Contractor shall coordinate all site work with their Subcontractor(s), the appropriate Utility Providers and the public utility work to ensure that all public utility work is performed in a timely manner and in a proper sequence in accordance with standard acceptable construction practices and to ensure that all public utility work is completed prior to the scheduled GC turn over date.
  - The Contractor shall coordinate all site work with their Subcontractor(s), the Sign Contractor(s), and the sign work to ensure that all sign work is performed in a timely manner and in a proper sequence in accordance with standard acceptable construction practices and to ensure that all sign work is completed prior to the scheduled GC turn over date.
  - The Contractor shall maintain the project site during the construction period. Maintenance shall include, but is not limited to, routine sweeping of the parking area, routine mowing of the lawn areas and removal of trash on an as-needed basis and/or as directed by ALDI Inc.
  - Proposed Parcels A, B and C shall be created from parent parcels 30-006-016-100-018 and 30-006-016-100-023 through land division and boundary adjustment in accordance with the City of Hillsdale requirements for land divisions and boundary adjustments.

**BENCHMARK**  
 DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED NOVEMBER 9, 2023 AT 7:08 AM

BENCHMARK #200  
 SOUTHEASTERN CORNER OF CONCRETE PAD, LOCATED WLY SIDE OF W. CARLETON (M-99) AND 160± FEET SOUTHERLY OF DEALERSHIP'S ENTRANCE.  
 ELEVATION = 1106.39 (NAVD 88)

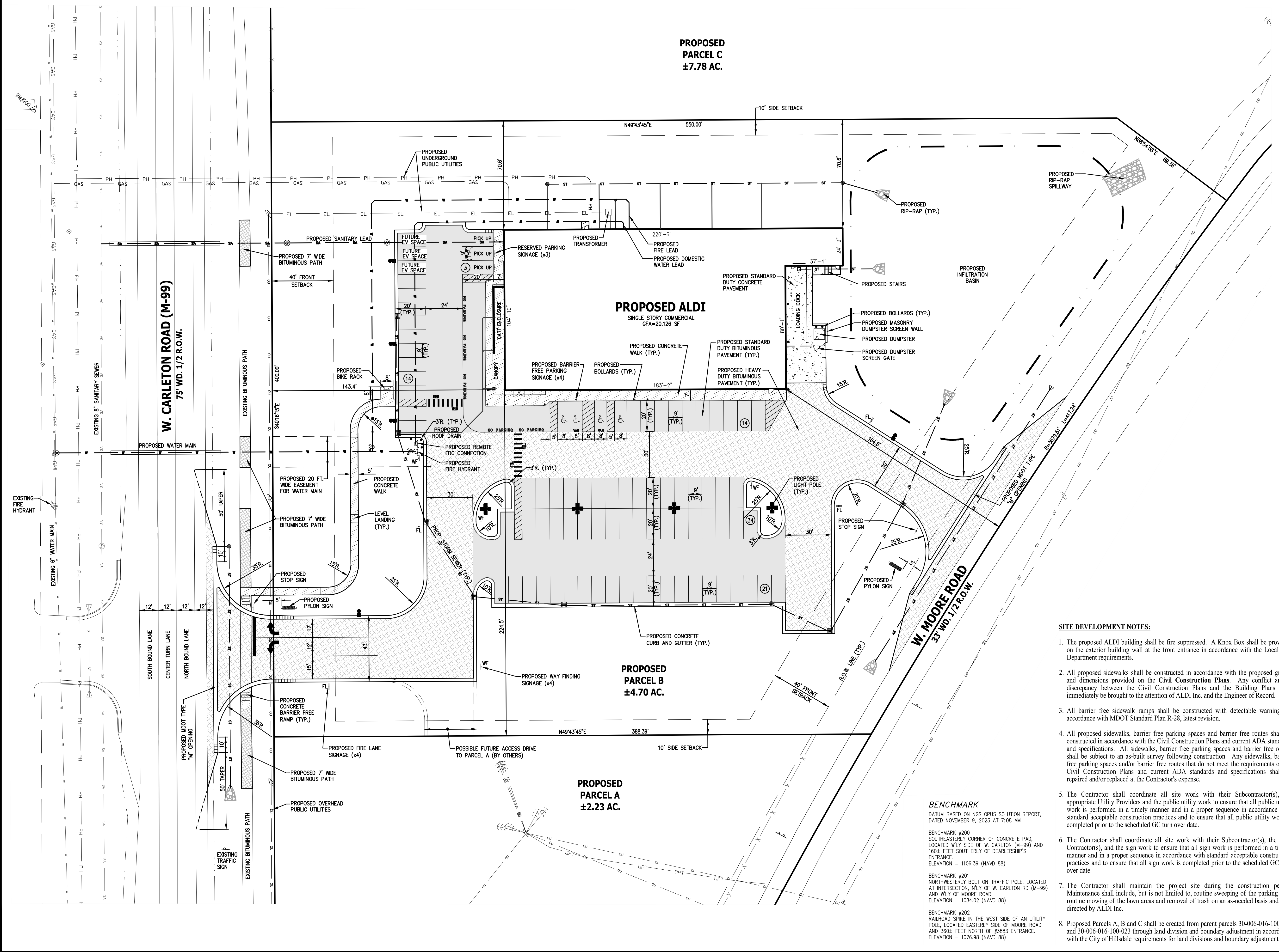
BENCHMARK #201  
 NORTHWESTERLY BOLT ON TRAFFIC POLE, LOCATED AT INTERSECTION, NLY SIDE OF W. CARLETON RD (M-99) AND WLY OF MOORE ROAD.  
 ELEVATION = 1084.02 (NAVD 88)

BENCHMARK #202  
 RAILROAD SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED EASTERLY SIDE OF MOORE ROAD AND 360± FEET NORTH OF #3883 ENTRANCE.  
 ELEVATION = 1076.98 (NAVD 88)

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

3 WORKING DAYS BEFORE YOU DIG  
 CALL 811 OR 1-800-482-7171 (TOLL FREE)  
 OR VISIT CALL811.COM

**DESIGN INC.**  
 (810) 227-9533  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 2183 PLESS DRIVE  
 BRIGHTON, MICHIGAN 48114



DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED PER CITY REVIEW COMMENTS			
CHECK: CAG						

ALDI #143  
 HILLSDALE, MICHIGAN

SITE PLAN

CLIENT: ALDI Inc.  
 2625 N. STOCKBRIDGE ROAD  
 WEBBERVILLE, MICHIGAN 48892  
 (517) 521-3907

SCALE: 1"=30'  
 PROJECT No.: 9234510  
 DWG NAME: 4510.SP  
 ISSUED: APR. 02, 2024

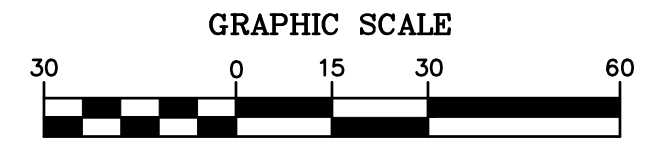
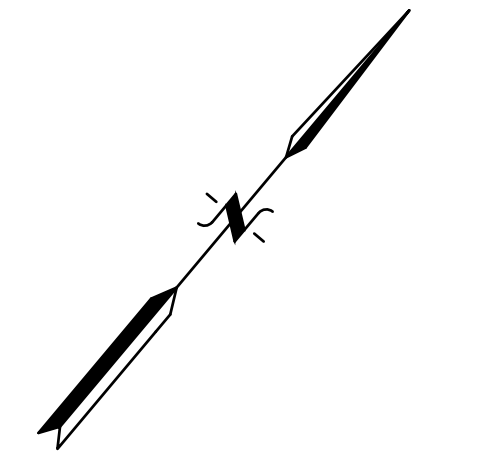
SP1

**EXISTING STRUCTURE INVENTORY**

SANTARY SEWER MANHOLE #1		BELOW OBTAINED 1/25/24	
SOUTHWESTERLY RIM	1079.95	SANTARY SEWER MANHOLE #5	1088.21
SOUTHEASTERLY 8" PVC	1071.35	SOUTHWESTERLY 8" SDR	1088.01
NORTHWESTERLY 8" PVC	1071.40	NORTHWESTERLY 8" SDR	1088.11
SANTARY SEWER MANHOLE #2		SANTARY SEWER MANHOLE #6	
NORTHERLY RIM	1086.31	SOUTHWESTERLY RIM	1104.62
SOUTHEASTERLY 5" PVC	1076.81	SOUTHWESTERLY 8" SDR	1094.77
WESTERLY 8" PVC	1077.61	NORTHWESTERLY 8" SDR	1094.67
NORTHWESTERLY 8" PVC	1077.66	SANTARY SEWER MANHOLE #7	
SANTARY SEWER MANHOLE #3		SANTARY SEWER MANHOLE #8	
SOUTHWESTERLY RIM	1091.04	SOUTHWESTERLY RIM	1113.22
SOUTHEASTERLY 8" PVC	1082.39	NORTHWESTERLY 8" SDR	1104.62
WESTERLY 6" PVC	1082.34	SANTARY SEWER MANHOLE #9	
SOUTHEASTERLY 8" PVC	1081.54	SANTARY SEWER MANHOLE #10	

**UTILITY CROSSING INFORMATION**

- |  |  |   |
|--|--|---|
| 1) WATER LEAD CROSSING GAS SERVICE<br>6" WL T/PIPE-1077.50                     | 7) GAS LEAD CROSSING FDC LEAD<br>4" FDC T/PIPE-1078.00                         | 13) SANTARY LEAD CROSSING FIRE LEAD<br>1.25" SAN LEAD INV-1079.75                           |
| 2) WATER LEAD CROSSING ROOF DRAIN<br>6" RD INV-1079.31<br>6" WL T/PIPE-1077.00 | 8) ROOF DRAIN CROSSING FDC LEAD<br>6" RD INV-1079.44<br>4" FDC T/PIPE-1077.50  | 14) FDC LEAD CROSSING SANTARY LEAD<br>4" FDC LEAD T/PIPE-1078.50<br>6" SAN LEAD INV-1076.92 |
| 3) WATER LEAD CROSSING PHONE SERVICE<br>6" WL T/PIPE-1077.00                   | 9) PHONE SERVICE CROSSING FDC LEAD<br>4" FDC T/PIPE-1077.50                    | 15) ROOF DRAIN CROSSING FDC LEAD<br>6" RD INV-1078.33<br>4" FDC T/PIPE-1076.50              |
| 4) WATER LEAD CROSSING ROOF DRAIN<br>6" RD INV-1078.82<br>6" WL T/PIPE-1077.00 | 10) ROOF DRAIN CROSSING FDC LEAD<br>6" RD INV-1078.95<br>4" FDC T/PIPE-1077.40 | 16) WATER MAIN CROSSING STORM SEWER<br>12" STM INV-1077.78<br>6" WM T/PIPE-1076.00          |
| 5) ELECTRIC SERVICE CROSSING ROOF DRAIN<br>6" RD INV-1079.39                   | 11) ELECTRIC SERVICE CROSSING FDC LEAD<br>4" FDC T/PIPE-1078.00                |   |
| 6) ELECTRIC SERVICE CROSSING ROOF DRAIN<br>6" RD INV-1078.90                   | 12) WATER LEAD CROSSING FDC LEAD<br>4" FDC T/PIPE-1078.00                      |   |



( IN FEET )  
1 INCH = 30 FEET

**LEGEND**

- [Symbol] = MISC. STRUCTURE (AS LABELED)
- [Symbol] = BOLLARD
- [Symbol] = SIGN
- [Symbol] = LIGHT BASE
- [Symbol] = STREET LIGHT
- [Symbol] = OVERHEAD TRAFFIC SIGNAL
- [Symbol] = UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX)
- [Symbol] = AIR CONDITIONER UNIT
- [Symbol] = UTILITY MANHOLE (AS LABELED)
- [Symbol] = UTILITY POLE W/GUY WIRE
- [Symbol] = OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
- [Symbol] = U/G UTILITY LINES (ELECTRIC/PHONE/CABLE)
- [Symbol] = U/G GAS
- [Symbol] = U/G WATER
- [Symbol] = U/G SANITARY SEWER
- [Symbol] = U/G STORM SEWER
- [Symbol] = U/G STORM STRUCTURES
- [Symbol] = SANITARY SEWER MANHOLE W/IDENTIFIER
- [Symbol] = SANITARY SEWER PIPE
- [Symbol] = CLEAN OUT
- [Symbol] = STORM WATER MANHOLE W/IDENTIFIER
- [Symbol] = CATCH BASIN W/IDENTIFIER
- [Symbol] = FLARED END SECTION
- [Symbol] = STORM WATER DRAINAGE PIPE
- [Symbol] = HYDRANT
- [Symbol] = WATER SHUT OFF
- [Symbol] = WATER VALVE
- [Symbol] = WATER VALVE BOX
- [Symbol] = WATER MAIN
- [Symbol] = GAS SHUT OFF
- [Symbol] = U/G GAS
- [Symbol] = PROPOSED LIGHT POLE
- [Symbol] = PROPOSED SANITARY SEWER
- [Symbol] = PROPOSED WATER MAIN
- [Symbol] = PROPOSED STORM SEWER
- [Symbol] = PROPOSED STORM STRUCTURES

**UTILITY STRUCTURE CASTING SCHEDULE**

STORM MANHOLE (MH):	EJ 1040Z-A-STORM
B2 CURB LINE CATCH BASIN (CB):	EJ 7085Z-M1
D2 CURB LINE CATCH BASIN (CB):	EJ 7045Z-M1-7060T1
F4 CURB LINE CATCH BASIN (CB):	EJ 7045Z-M1-7050T1
PAVEMENT AREA CATCH BASIN (CB):	EJ 1040Z-M1
ON-SITE YARD BASIN (YB):	EJ 1040Z-N
M-99 ROW YARD BASIN (YB):	EJ 6508-O
TRUCK WELL INLET (CB):	NEENAH R-3210-Q OR EJ V5662 FRAME & V5662-80 GRATE
STORM SEWER CLEAN OUT	EJ 1578Z-A
SANITARY MANHOLE (MH):	EJ 1045Z-1040AGS
SANITARY CLEAN OUT	EJ 1578Z-A-SEWER

**UTILITY PROVIDERS**

ELECTRIC:	CITY OF HILLSDALE BPU
GAS:	MICHIGAN GAS UTILITIES
PHONE:	AT&T
SANITARY:	CITY OF HILLSDALE
WATER:	CITY OF HILLSDALE
STORM:	PRIVATE

**UTILITY NOTES:**

- The Contractor shall field locate the existing water main at the proposed tap location prior to commencement of the proposed water main work. Verify the existing water main pipe material, diameter and top of pipe elevation. Contact Engineer of Record if conflict exists.
- The Contractor shall field locate the existing sanitary sewer at the proposed connection location prior to commencement of the proposed sanitary sewer work. Verify the existing sanitary sewer main pipe material, diameter and invert elevation. Contact Engineer of Record if conflict exists.
- The Contractor shall field locate all existing underground utilities at all proposed utility crossing locations and at any potential conflict points prior to performing any proposed site work associated with the crossing(s) and/or potential conflict(s). Contact Engineer of Record if conflict exists.
- The Contractor shall furnish and install (4) 4" PVC conduit for electric service from the transformer to the building tie in location and shall furnish and install (1) 4" PVC conduit for phone service from the road right of way to the building tie in location. The Contractor shall verify the underground public utility routes and conduit sizes with the appropriate utility providers prior to installation of the conduit. The Contractor shall install all necessary conduit for the underground public utility services prior to placement of any proposed sidewalks, curb and gutter and bituminous and/or concrete pavement.

**BENCHMARK**

DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED NOVEMBER 9, 2023 AT 7:08 AM

BENCHMARK #200  
SOUTHEASTERLY CORNER OF CONCRETE PAD, LOCATED WLY SIDE OF W. CARLTON RD (M-99) AND 160± FEET SOUTHERLY OF DEARLESHIP'S ENTRANCE. ELEVATION = 1106.39 (NAVD 88)

BENCHMARK #201  
NORTHWESTERLY BOLT ON TRAFFIC POLE, LOCATED AT INTERSECTION, NLY OF W. CARLTON RD (M-99) AND WLY OF MOORE ROAD. ELEVATION = 1084.02 (NAVD 88)

BENCHMARK #202  
RAILROAD SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED EASTERLY SIDE OF MOORE ROAD AND 360± FEET NORTH OF #3883 ENTRANCE. ELEVATION = 1076.98 (NAVD 88)

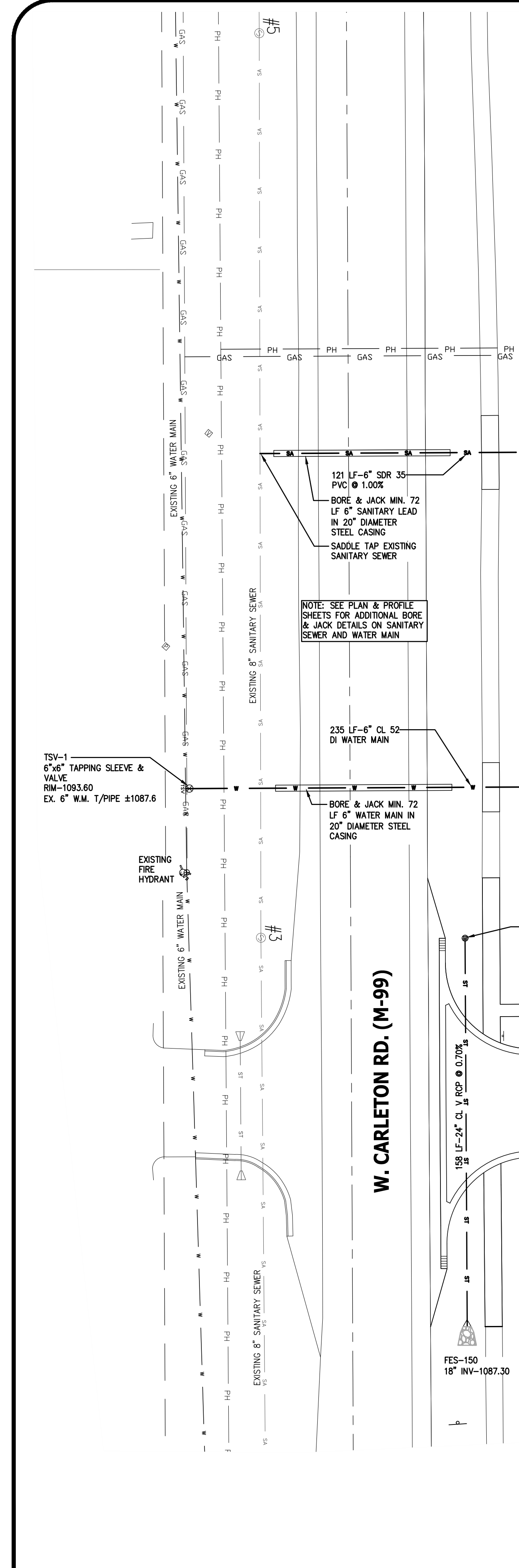
**811**  
Know what's below.  
Call before you dig.

3 WORKING DAYS BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171  
(TOLL FREE)  
OR VISIT CALL811.COM

**DESIGN INC.**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESS DRIVE  
BRIGHTON, MICHIGAN 48114

**WATER MAIN MATERIAL QUANTITY LIST**

ITEM DESCRIPTION	AMOUNT	UNITS
1.5" CORPORATION STOP	1	EACH
1.5" CURB STOP WITH BOX	1	EACH
1.5" SDR 9 CTS PE WATER SERVICE	19	LF
4" PVC C900 FDC LEAD	282	LF
4" PVC C900 45 BEND	4	EACH
4" CHECK VALVE	1	EACH
REMOTE FDC ASSEMBLY	1	EACH
6" PVC C900 WATER LEAD	331	LF
6" PVC C900 45 BEND	4	EACH
6" D.I. TO PVC COUPLER	1	EACH
6" CL 52 D.I. WATER MAIN	248	LF
6" CL 52 D.I. 45 BEND	2	EACH
6"x6"x6" CL 52 D.I. TEE	1	EACH
6" GATE VALVE & BOX WITH COVER	2	EACH
6"x6" TAPPING SLEEVE & VALVE IN BOX	1	EACH
8" PVC C900 CARRIER PIPE	72	LF
20" STEEL CASING PIPE	72	LF
FIRE HYDRANT ASSEMBLY	1	EACH



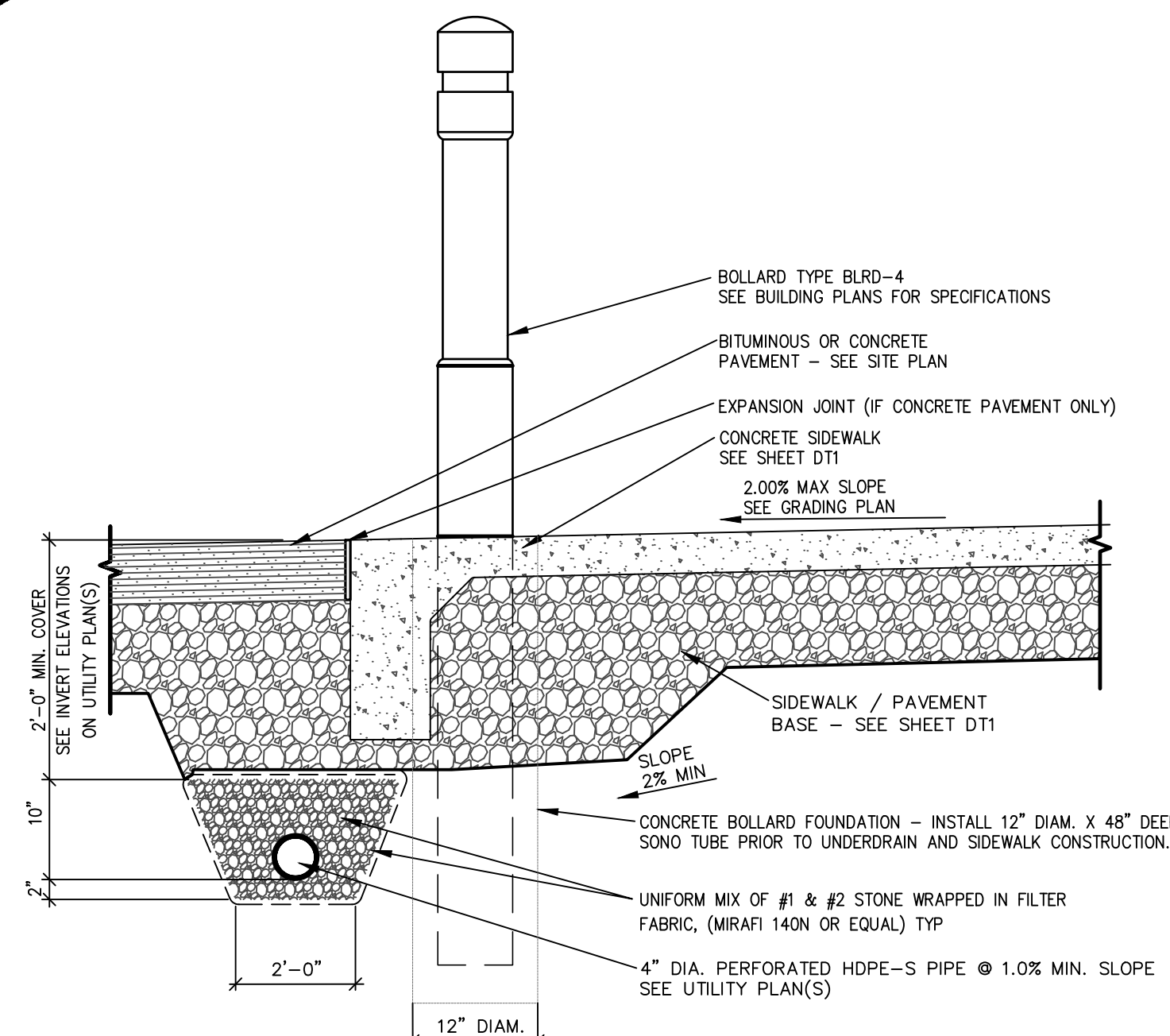
DESIGN-CAG	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED PER CITY REVIEW COMMENTS
CHECK: CAG			

REVISION #	DATE	REVISION-DESCRIPTION

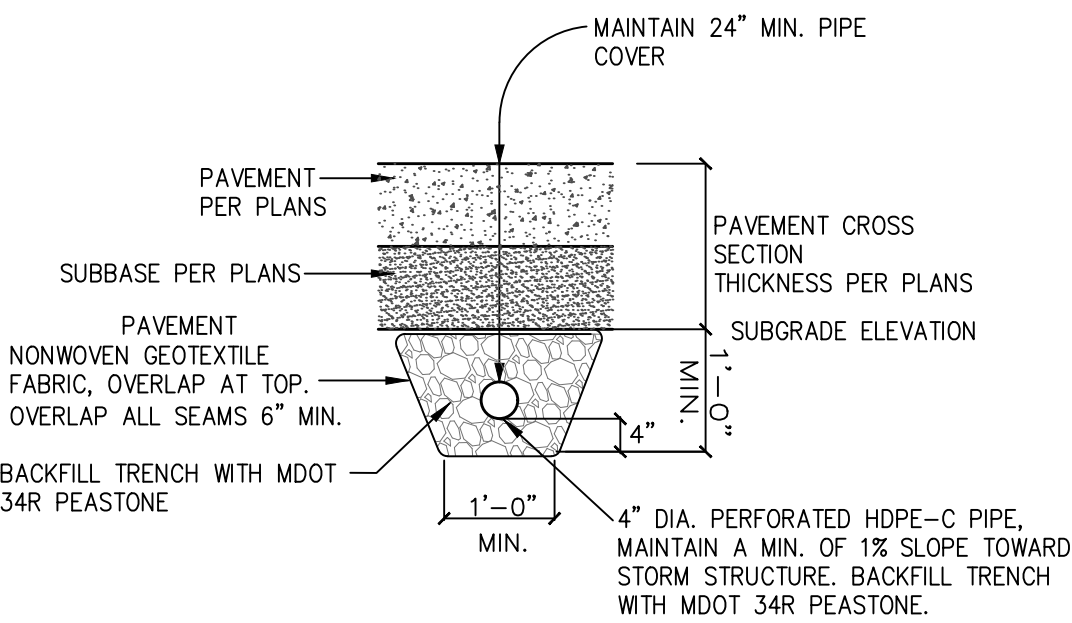
**ALDI #143**  
**HILLSDALE, MICHIGAN**

**UTILITY PLAN**

CLIENT: ALDI, Inc. 2625 N. STOCKBRIDGE ROAD WEBBERVILLE, MICHIGAN 48892 (517) 521-3907	SCALE: 1"=30' PROJECT No.: 9234510 DWG NAME: 4510 UT ISSUED: APR. 02, 2024	UT1
--	---	-----



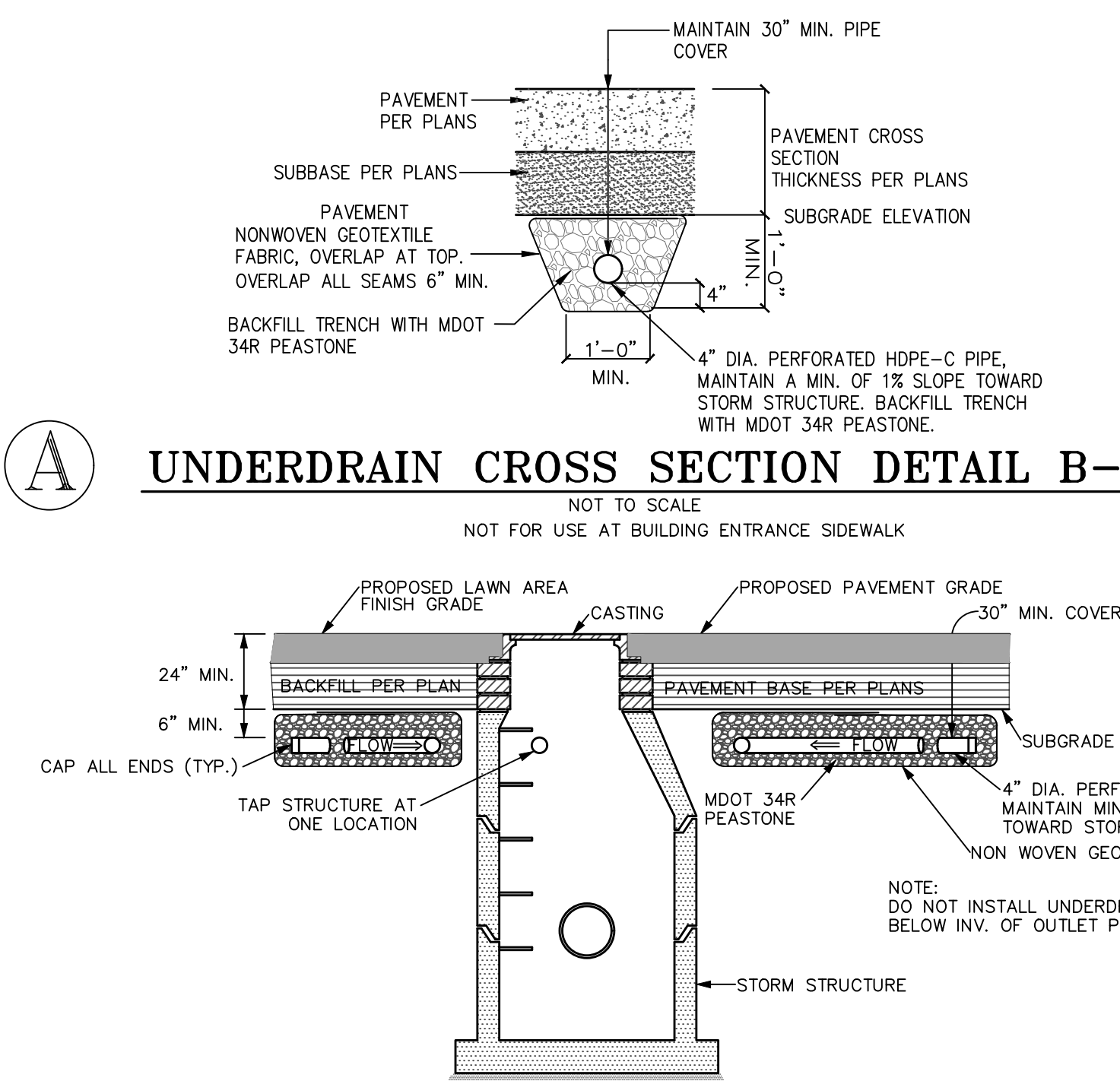
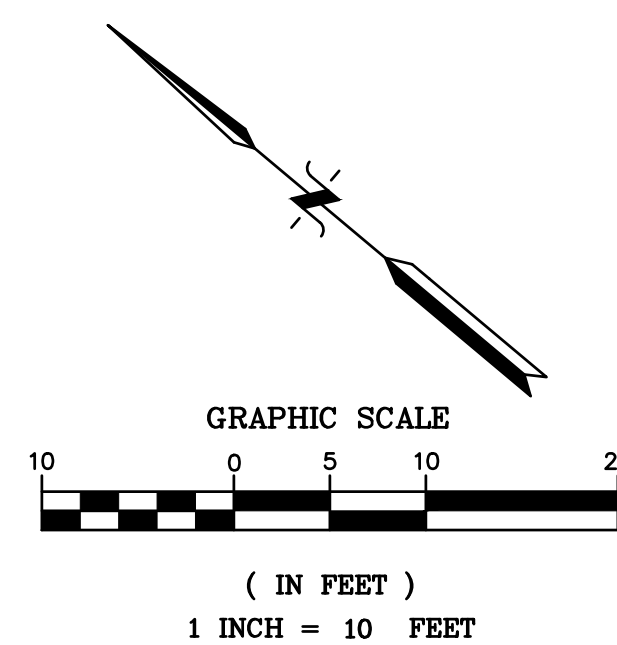
**C SIDEWALK UNDERDRAIN DETAIL**  
NOT TO SCALE  
FOR USE AT BUILDING ENTRANCE AREA ONLY



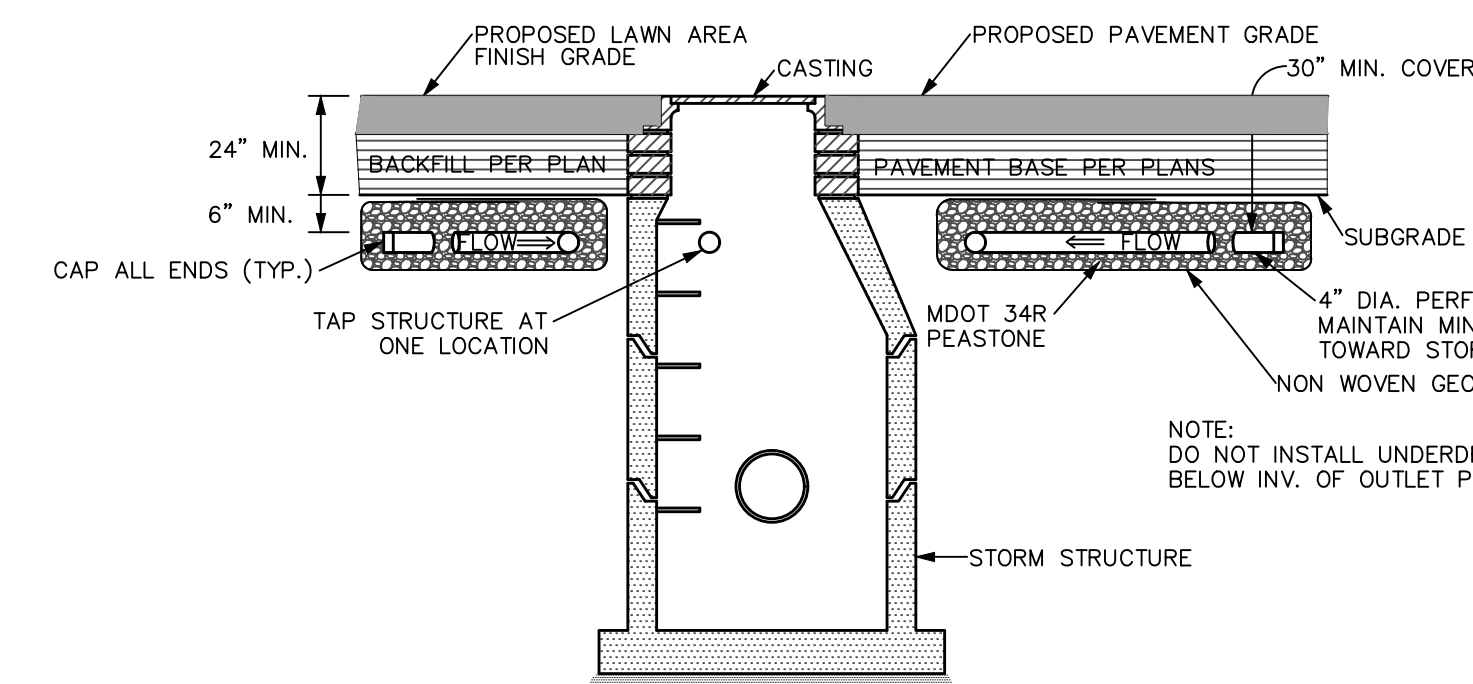
**B TRUCK WELL PAVEMENT UNDERDRAIN CROSS SECTION DETAIL**  
NOT TO SCALE  
NOT FOR USE AT BUILDING ENTRANCE SIDEWALK

**TRUCK WELL PAVEMENT UNDERDRAIN NOTES (B):**

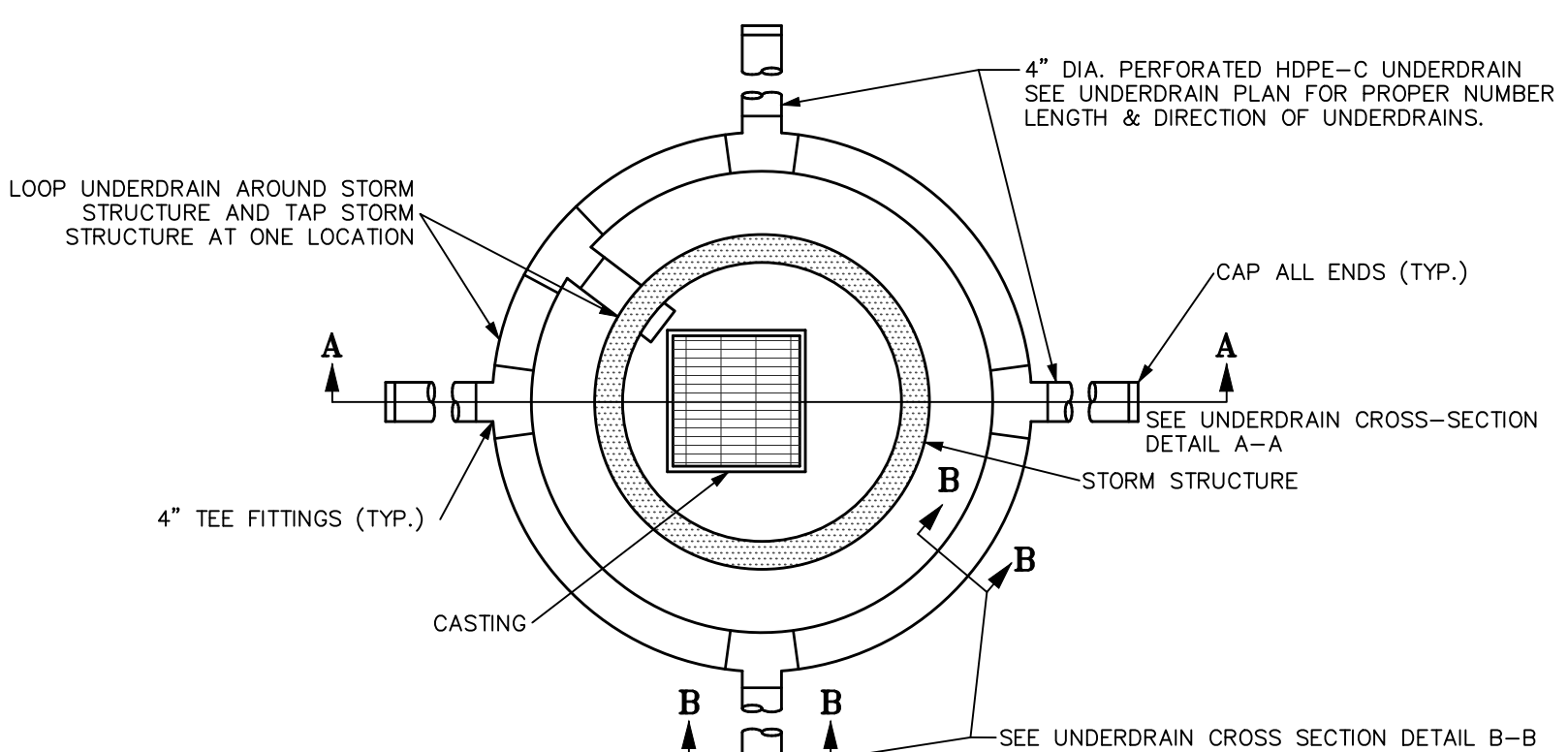
1. Install the appropriate number of underdrains at the length and direction shown and/or specified on the Project Plans. Maintain a minimum pipe slope of 1.0% down gradient toward the storm structure and a minimum of 24" of pipe cover.
2. Backfill all underdrain trenches up to the proposed pavement subgrade elevation with MDOT 34R peastone.
3. Wrap all underdrain trenches with nonwoven geotextile fabric. Overlap fabric at top of trench the entire width of trench. Overlap all fabric seams a minimum of 6".
4. Provide all underdrain fittings and caps incidental to underdrain work.
5. Contractor shall take caution and perform the necessary measures to protect underdrain during pavement subgrade preparation and throughout the site construction process. Any and all damage to underdrain pipe, trench and/or fabric surround shall be repaired immediately incidental to underdrain work.
6. Pavement Underdrain Details provided on this sheet are not for use at the main building entrance. See the Perforated Underdrain Detail on the Project Plans for building entrance underdrain specifications.



**A UNDERDRAIN CROSS SECTION DETAIL B-B**  
NOT TO SCALE  
NOT FOR USE AT BUILDING ENTRANCE SIDEWALK



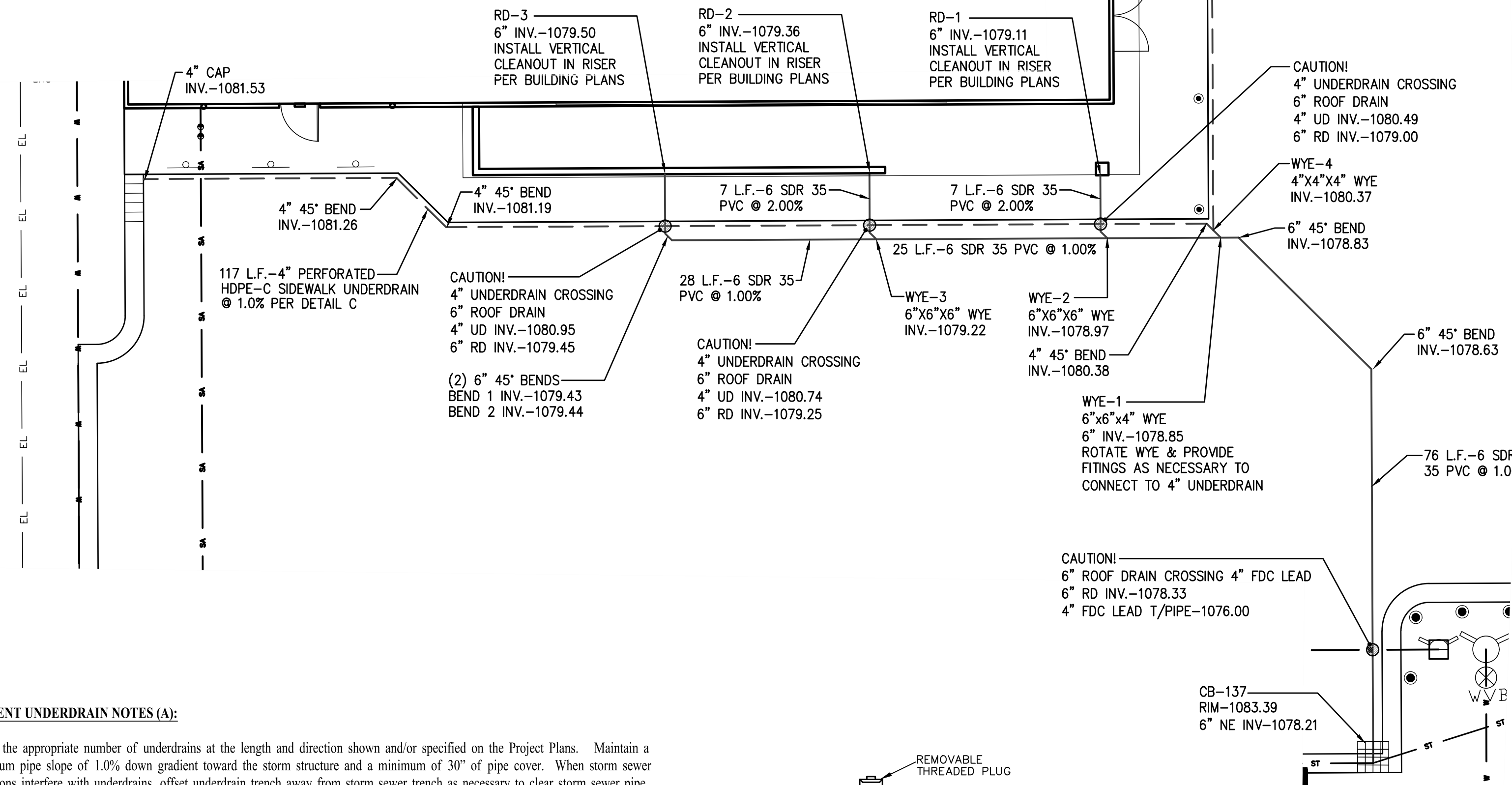
**A UNDERDRAIN CROSS SECTION DETAIL A-A**  
NOT TO SCALE  
NOT FOR USE AT BUILDING ENTRANCE SIDEWALK



**A UNDERDRAIN CONNECTION TO STORM STRUCTURE DETAIL**  
NOT TO SCALE

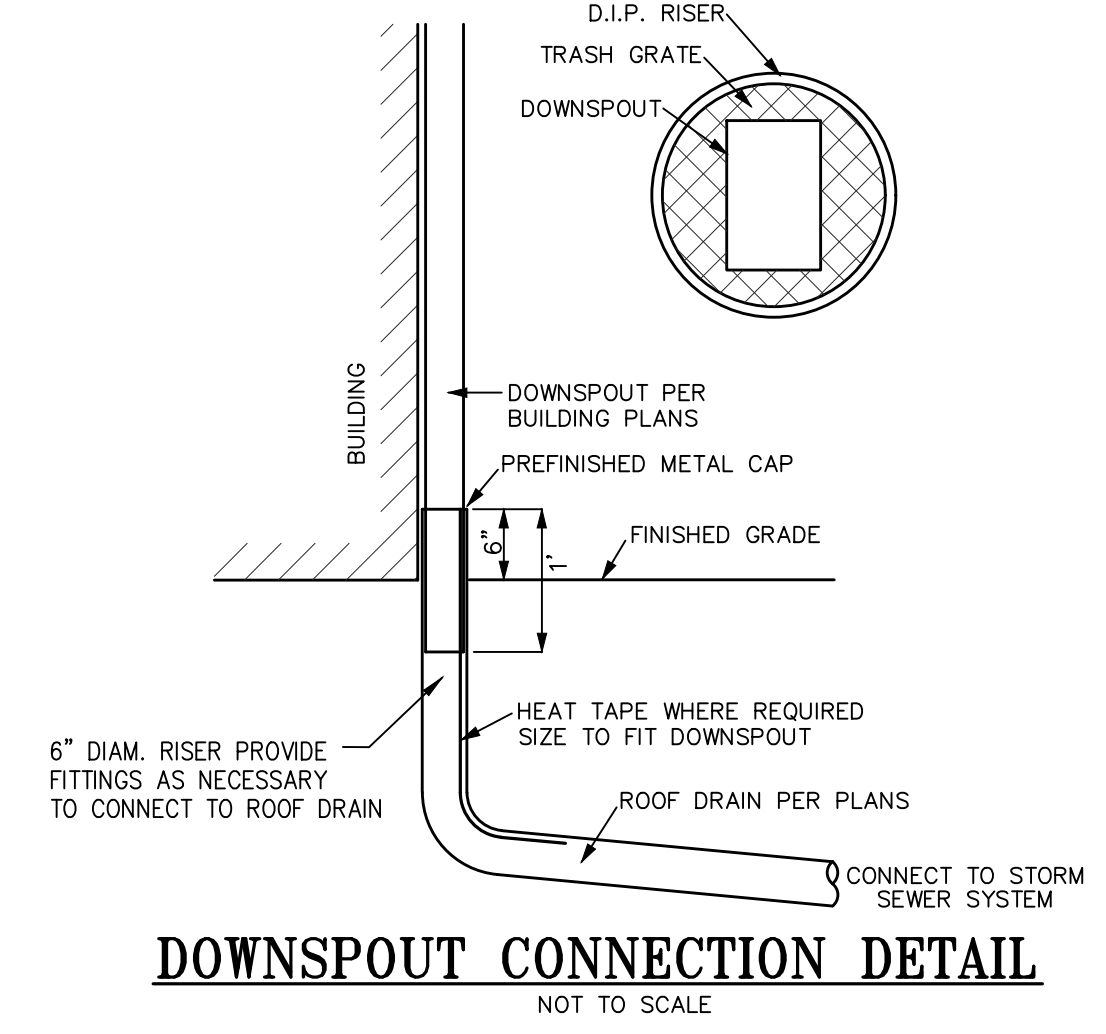
**PAVEMENT UNDERDRAIN NOTES (A):**

1. Install the appropriate number of underdrains at the length and direction shown and/or specified on the Project Plans. Maintain a minimum pipe slope of 1.0% down gradient toward the storm structure and a minimum of 30" of pipe cover. When storm sewer elevations interfere with underdrains, offset underdrain trench away from storm sewer trench as necessary to clear storm sewer pipe. Maintain proposed direction and location of underdrain to the greatest extent feasible.
2. Loop underdrain around the storm structure in a donut configuration and tap the storm structure at a single location. When storm sewer elevations interfere with underdrain loop, utilize 1/2 to 3/4 loop as necessary to clear storm sewer. Multiple taps shall only be performed when storm sewer interference does not allow for a single tap. Locate tap(s) so as not to interfere with storm structure steps. Install a Kor-N-Seal Pipe to Manhole Connector at all tap locations. All Kor-N-Seal Pipe to Manhole Connectors shall include stainless steel or other non-corrosive bands, clamps and hardware and shall be installed in accordance with the manufacturer's standards and specifications.
3. Backfill all underdrain trenches up to the proposed pavement subgrade elevation with MDOT 34R peastone. When underdrain is located in lawn area, backfill trench to a minimum of 6" above top of underdrain pipe.
4. Wrap all underdrain trenches with nonwoven geotextile fabric. Overlap fabric at top of trench the entire width of trench. Overlap all fabric seams a minimum of 6".
5. Provide all underdrain fittings and caps incidental to underdrain work.
6. Contractor shall take caution and perform the necessary measures to protect underdrain during pavement subgrade preparation and throughout the site construction process. Any and all damage to underdrain pipe, trench and/or fabric surround shall be repaired immediately incidental to underdrain work.
7. Pavement Underdrain Details provided on this sheet are not for use at the main building entrance. See the Perforated Underdrain Detail on the Project Plans for building entrance underdrain specifications.

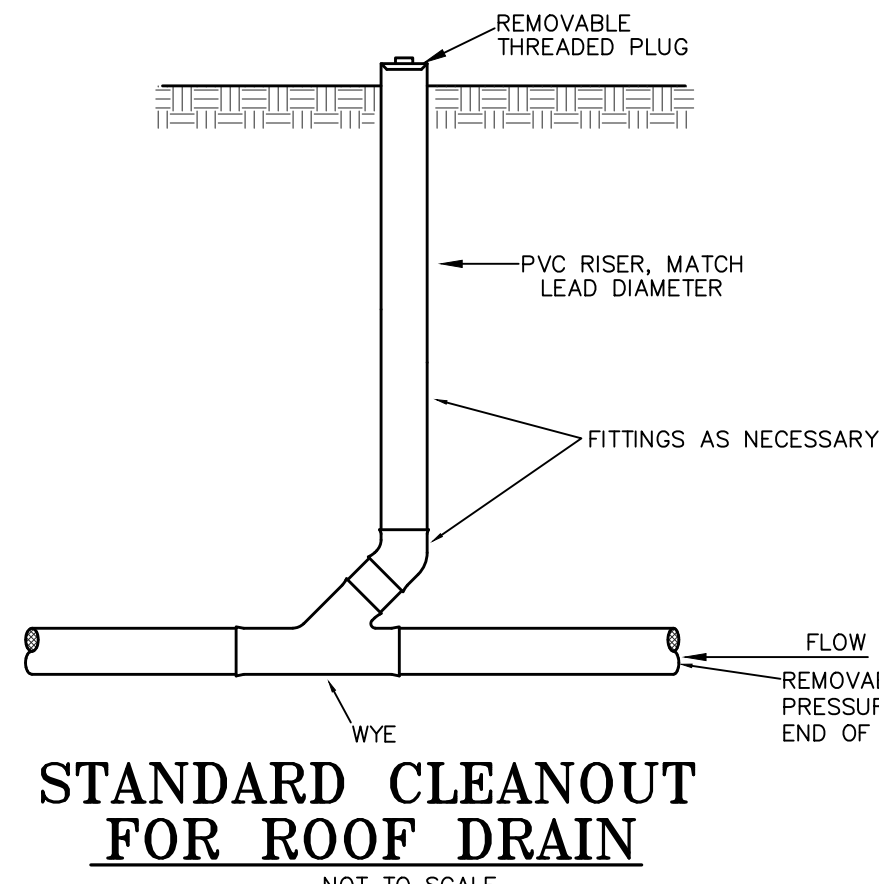


**LEGEND**

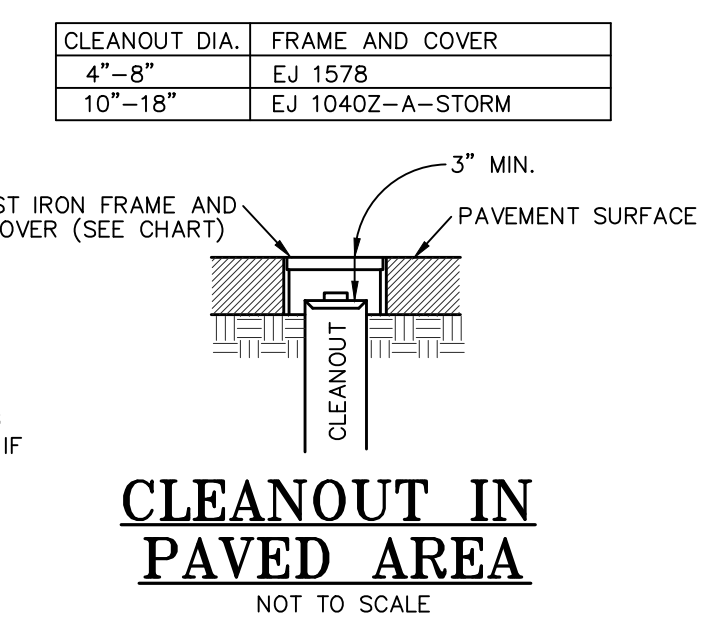
[Symbol]	UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX)
[Symbol]	AIR CONDITIONER UNIT
[Symbol]	UTILITY MANHOLE (AS LABELED)
[Symbol]	UTILITY POLE W/GUY WIRE
[Symbol]	OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
[Symbol]	SANITARY SEWER PIPE
[Symbol]	SANITARY SEWER MANHOLE W/IDENTIFIER
[Symbol]	CLEAN OUT
[Symbol]	STORM WATER MANHOLE W/IDENTIFIER
[Symbol]	CATCH BASIN W/IDENTIFIER
[Symbol]	FLARED END SECTION
[Symbol]	STORM WATER DRAINAGE PIPE
[Symbol]	HYDRANT
[Symbol]	WATER SHUT OFF
[Symbol]	WATER VALVE
[Symbol]	WATER VALVE BOX
[Symbol]	WATER MAIN
[Symbol]	GAS SHUT OFF
[Symbol]	U/G GAS
[Symbol]	PROPOSED SANITARY SEWER
[Symbol]	PROPOSED WATER MAIN
[Symbol]	PROPOSED STORM SEWER
[Symbol]	PROPOSED STORM STRUCTURES



**DOWNSPOUT CONNECTION DETAIL**  
NOT TO SCALE



**STANDARD CLEANOUT FOR ROOF DRAIN**  
NOT TO SCALE



**CLEANOUT IN PAVED AREA**  
NOT TO SCALE

**BENCHMARK**

DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED NOVEMBER 9, 2023 AT 7:08 AM

BENCHMARK #200  
SOUTHEASTERLY CORNER OF CONCRETE PAD, LOCATED WLY SIDE OF W. CARLTON (M-99) AND 160+ FEET SOUTHERLY OF DEARLESHIP'S ENTRANCE.  
ELEVATION = 1106.39 (NAVD 88)

BENCHMARK #201  
NORTHWESTERLY BOLT ON TRAFFIC POLE, LOCATED AT INTERSECTION, NLY OF W. CARLTON RD (M-99) AND WLY OF MOORE ROAD.  
ELEVATION = 1084.02 (NAVD 88)

BENCHMARK #202  
RAILROAD SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED EASTERLY SIDE OF MOORE ROAD AND 360+ FEET NORTH OF #3883 ENTRANCE.  
ELEVATION = 1076.98 (NAVD 88)

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

3 WORKING DAYS BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171 (TOLL FREE)  
OR VISIT CALL811.COM

**DESIGN INC**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESS DRIVE  
BRIGHTON, MICHIGAN 48114

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED PER CITY REVIEW COMMENTS
CHECK: CAG			

REVISION #	DATE	REVISION-DESCRIPTION

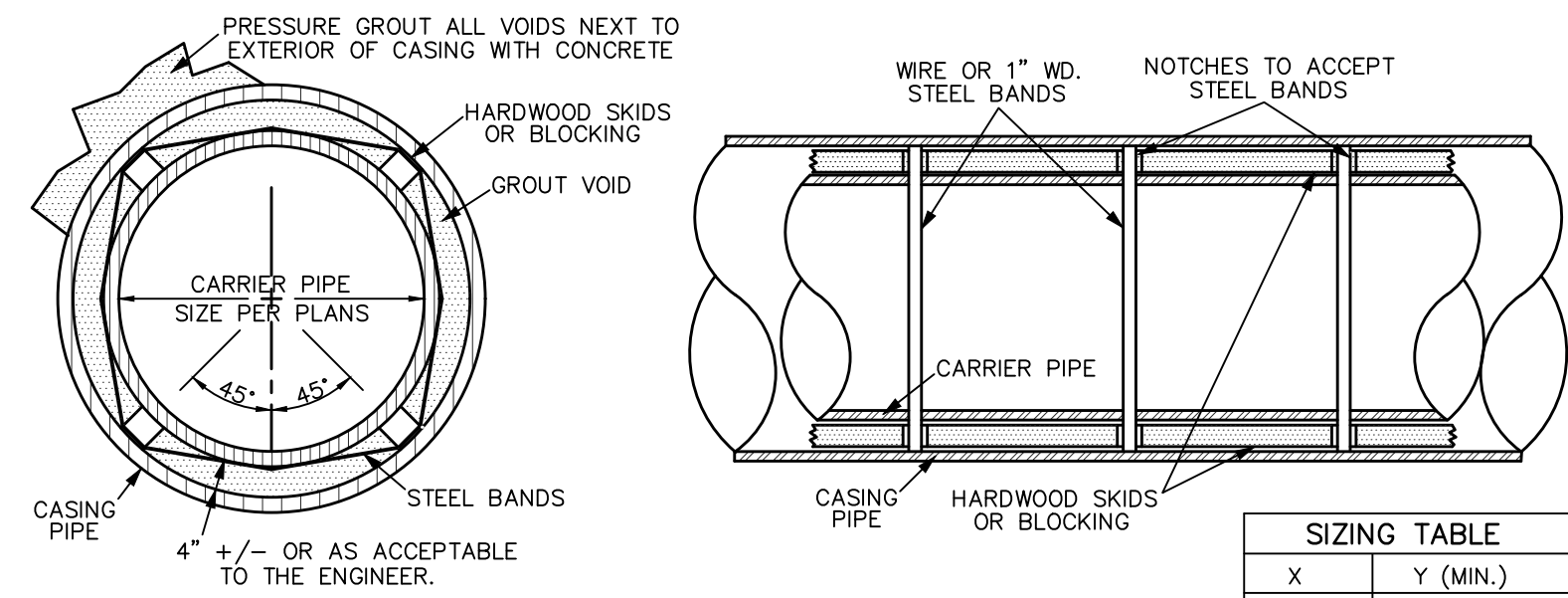
ALDI #143  
HILLSDALE, MICHIGAN

ROOF DRAIN & UNDERDRAIN  
PLAN & DETAILS

CLIENT:  
ALDI, Inc.  
2625 N. STOCKBRIDGE ROAD  
WEBBERVILLE, MICHIGAN 48892  
(517) 521-3907

SCALE: 1"=10'  
PROJECT No.: 9234510  
DWG NAME: 4510-UT2  
ISSUED: APR. 02, 2024

**UT2**



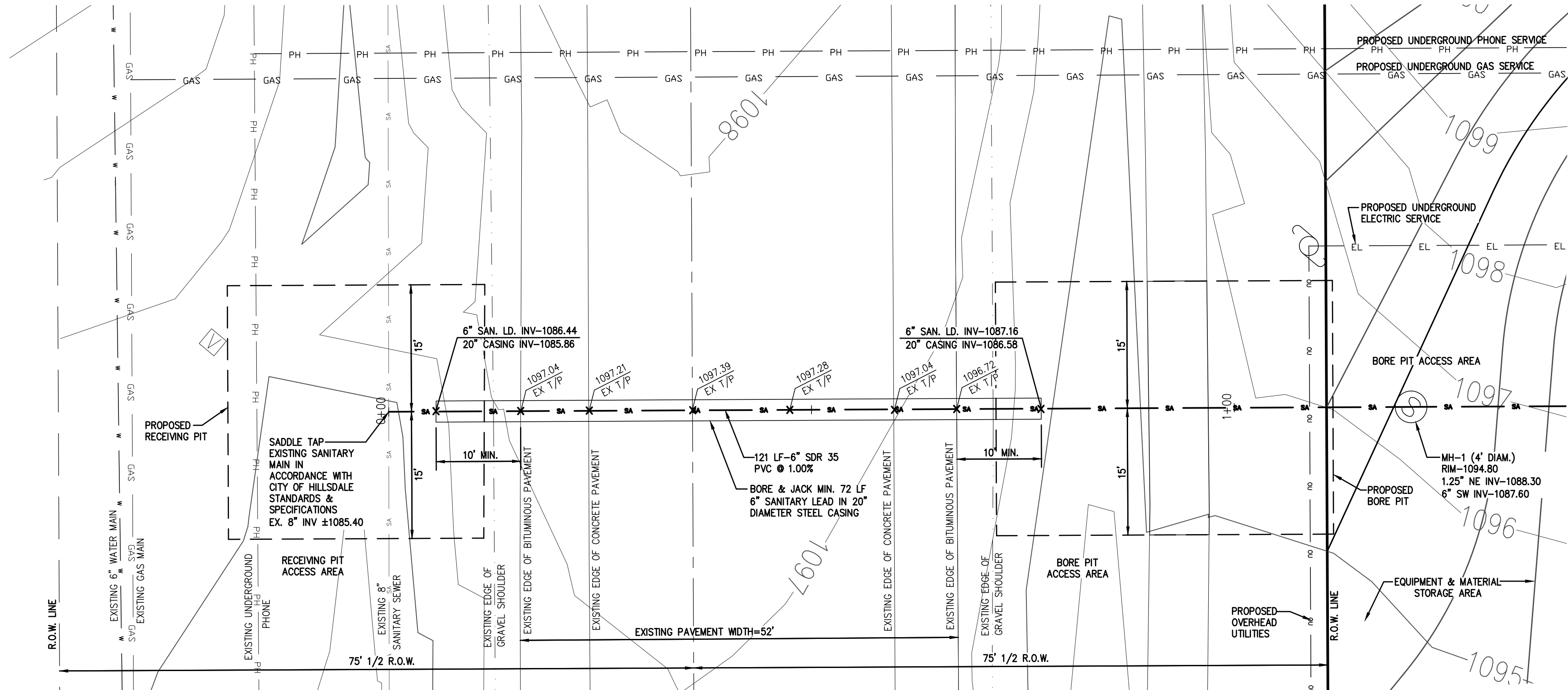
**PIPE BORING**  
NOT TO SCALE

X	Y (MIN.)
6" - 8"	20"
10" - 12"	24"
14" - 16"	30"
18" - 21"	36"
24"	42"

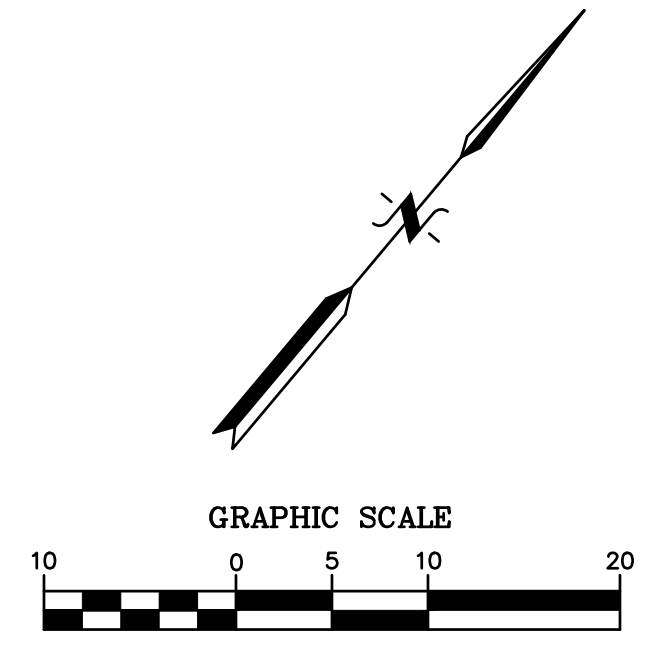
X = CARRIER PIPE DIAMETER  
Y = CASING PIPE DIAMETER

**BORE & JACK NOTES:**

- The bore and jack work shall be performed under the direct supervision of the City of Hillsdale Board of Public Utilities. The Contractor shall contact the City of Hillsdale Board of Public Utilities to schedule inspection prior to performing work.
- The Geotechnical Evaluation Report for the project site dated February 15, 2024, as prepared by Testing Engineers & Consultants, Inc and the Geotechnical Utility Crossing Recommendations, as prepared by Driesenga & Associates, Inc. are a part of this work. The General Contractor, Earthwork Subcontractor, Underground Subcontractor and Bore & Jack Subcontractor shall obtain, review, and become familiar with the Geotechnical Evaluation Report and the Geotechnical Utility Crossing Recommendations.
- Bore pit and receiving pit side and rear embankments shall be sloped in accordance with MIOSHA standards and specifications but not to exceed 1' V : 1' H. Sheeting shall be required at the front face of the bore pit, where unstable soil conditions are encountered and where site conditions do not allow for sloped embankments. Sheeting shall be specified by a qualified structural engineer retained by the Contractor for the specific site conditions.
- Unless approved otherwise by the City of Hillsdale Board of Public Utilities, based on soil conditions, the auger shall not protrude the casing pipe.

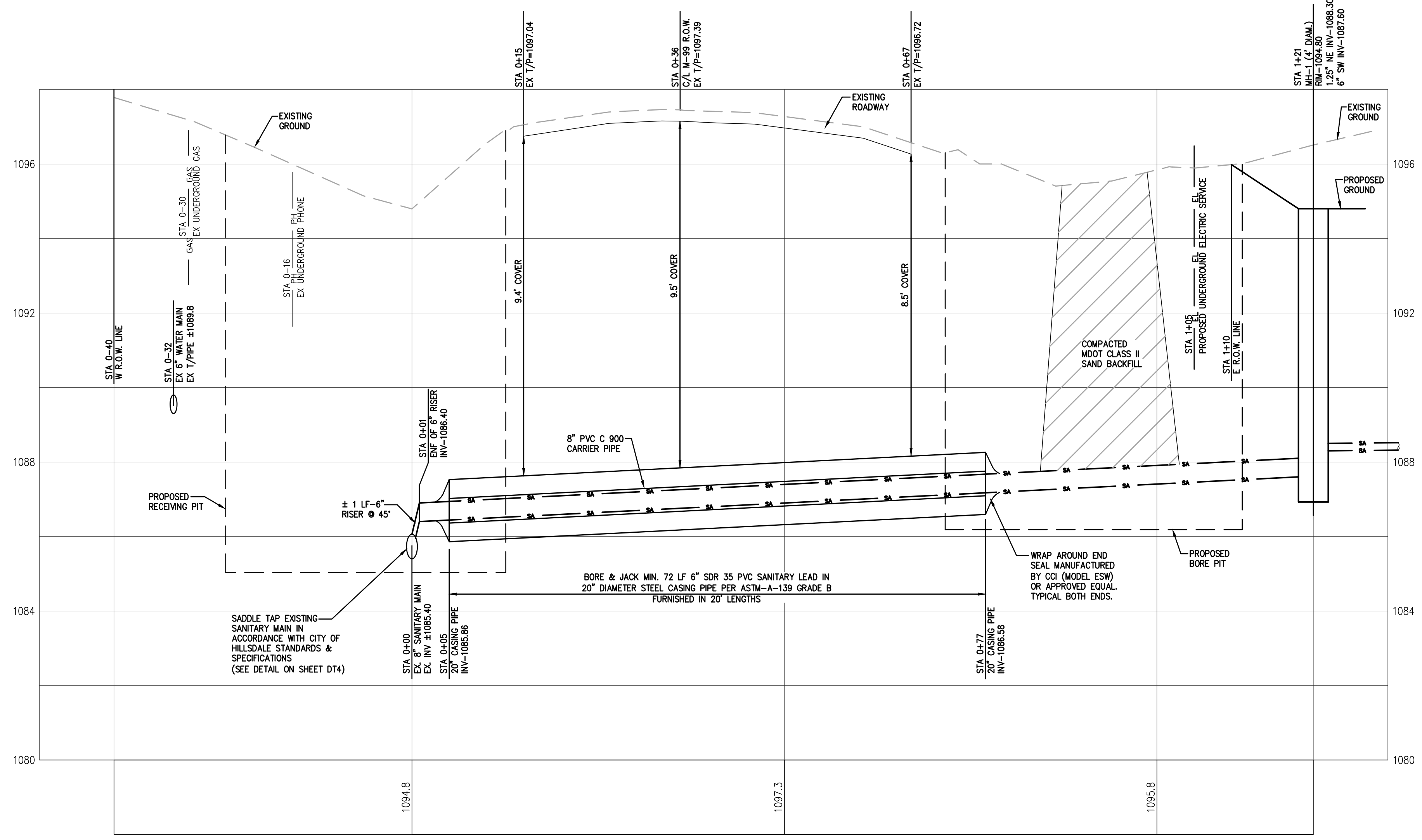


**SANITARY LEAD BORE & JACK PLAN VIEW**  
SCALE: 1"=10'



**LEGEND**

- [Symbol] = MISC. STRUCTURE (AS LABELED)
- [Symbol] = BOLLARD
- [Symbol] = SIGN
- [Symbol] = LIGHT BASE
- [Symbol] = STREET LIGHT
- [Symbol] = OVERHEAD TRAFFIC SIGNAL
- [Symbol] = UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX)
- [Symbol] = AIR CONDITIONER UNIT
- [Symbol] = UTILITY MANHOLE (AS LABELED)
- [Symbol] = UTILITY POLE W/GUY WIRE
- [Symbol] = OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
- [Symbol] = U/G UTILITY LINES (ELECTRIC/PHONE/CABLE)
- [Symbol] = SANITARY SEWER MANHOLE W/IDENTIFIER
- [Symbol] = SANITARY SEWER PIPE
- [Symbol] = CLEAN OUT
- [Symbol] = STORM WATER MANHOLE W/IDENTIFIER
- [Symbol] = CATCH BASIN W/IDENTIFIER
- [Symbol] = FLARED END SECTION
- [Symbol] = STORM WATER DRAINAGE PIPE
- [Symbol] = HYDRANT
- [Symbol] = WATER SHUT OFF
- [Symbol] = WATER VALVE
- [Symbol] = WATER VALVE BOX
- [Symbol] = WATER MAIN
- [Symbol] = GAS SHUT OFF
- [Symbol] = U/G GAS
- [Symbol] = PROPOSED LIGHT POLE
- [Symbol] = PROPOSED SANITARY SEWER
- [Symbol] = PROPOSED WATER MAIN
- [Symbol] = PROPOSED STORM SEWER
- [Symbol] = PROPOSED STORM STRUCTURES



**SANITARY LEAD BORE & JACK PROFILE**  
SCALE: HOR. 1"=10' / VERT. 1"=2'

**BENCHMARK**  
DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED NOVEMBER 9, 2023 AT 7:08 AM

BENCHMARK #200  
SOUTHEASTERLY CORNER OF CONCRETE PAD, LOCATED W/LY SIDE OF W. CARLTON (M-99) AND 160± FEET SOUTHERLY OF DEARLESHIP'S ENTRANCE.  
ELEVATION = 1106.39 (NAVD 88)

BENCHMARK #201  
NORTHWESTERLY BOLT ON TRAFFIC POLE, LOCATED AT INTERSECTION, N/LY OF W. CARLTON RD (M-99) AND W/LY OF MOORE ROAD.  
ELEVATION = 1084.02 (NAVD 88)

BENCHMARK #202  
RAILROAD SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED EASTERLY SIDE OF MOORE ROAD AND 360± FEET NORTH OF #3883 ENTRANCE.  
ELEVATION = 1076.98 (NAVD 88)

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

3 WORKING DAYS BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171 (TOLL FREE)  
OR VISIT CALL811.COM

**DESIGN INC**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESS DRIVE  
BRIGHTON, MICHIGAN 48114

DESIGN-CAG	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED PER CITY REVIEW COMMENTS
CHECK: CAG			

REVISION #	DATE	REVISION-DESCRIPTION

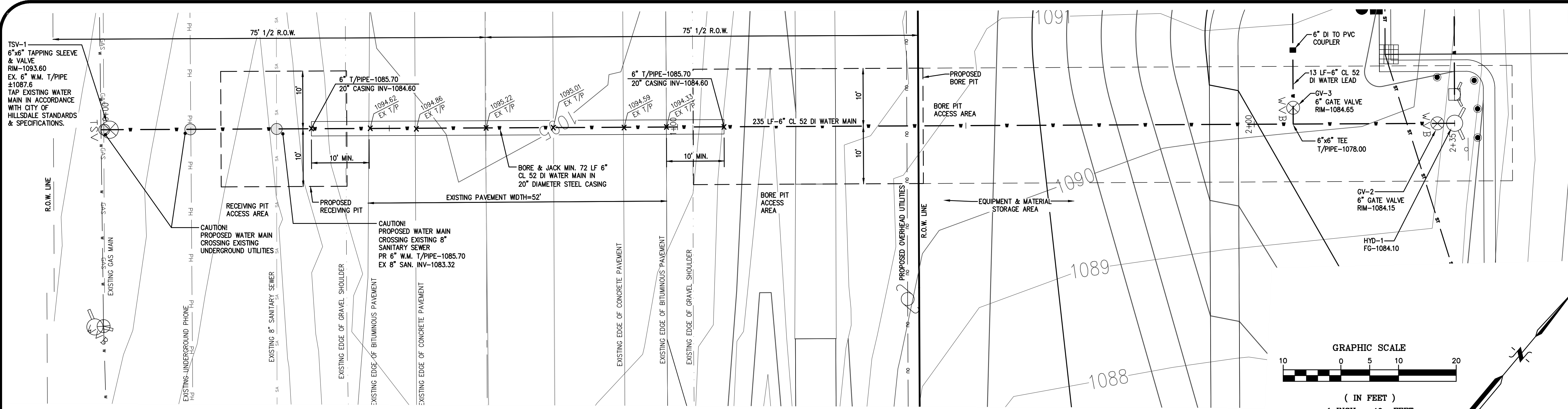
ALDI #143  
HILLSDALE, MICHIGAN

SANITARY SEWER  
PLAN & PROFILE

CLIENT:  
ALDI, Inc.  
2625 N. STOCKBRIDGE ROAD  
WEBBERVILLE, MICHIGAN 48892  
(517) 521-3907

SCALE: 1"=10'  
PROJECT No.: 9234510  
DWG NAME: 4510 UT  
ISSUED: APR. 02, 2024

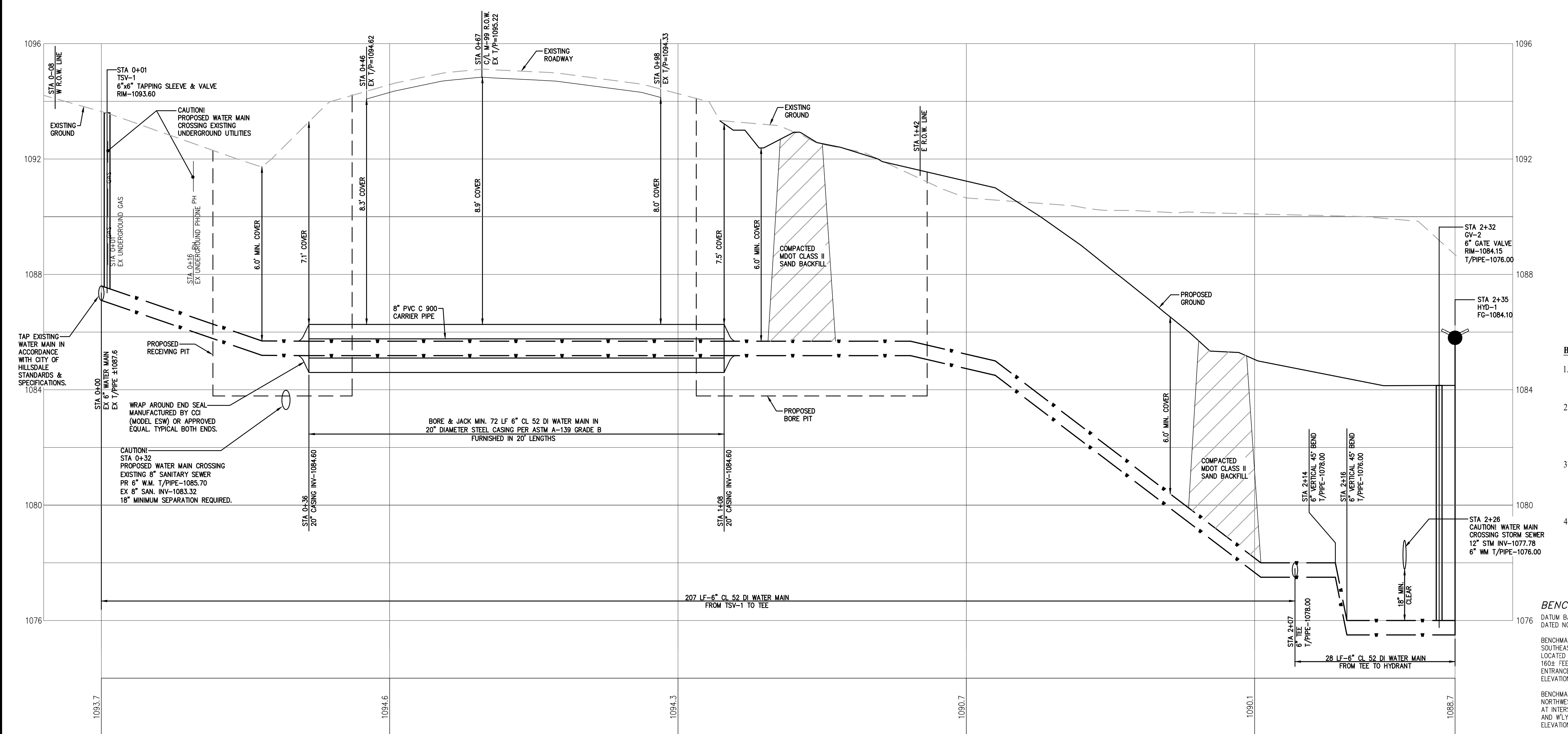
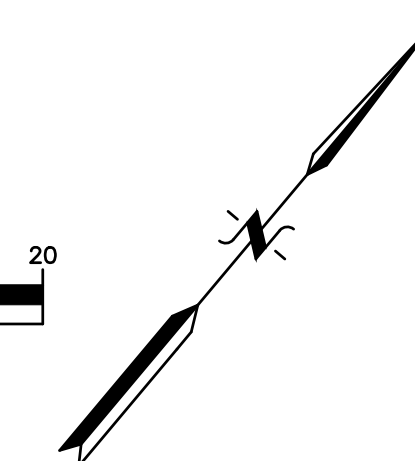
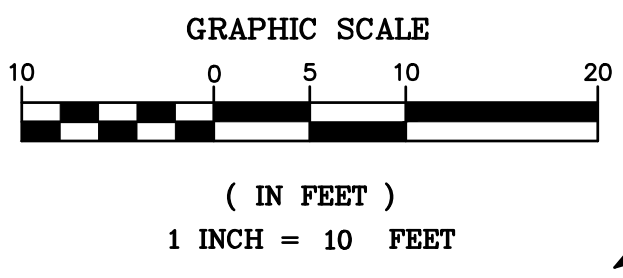
**UT3**



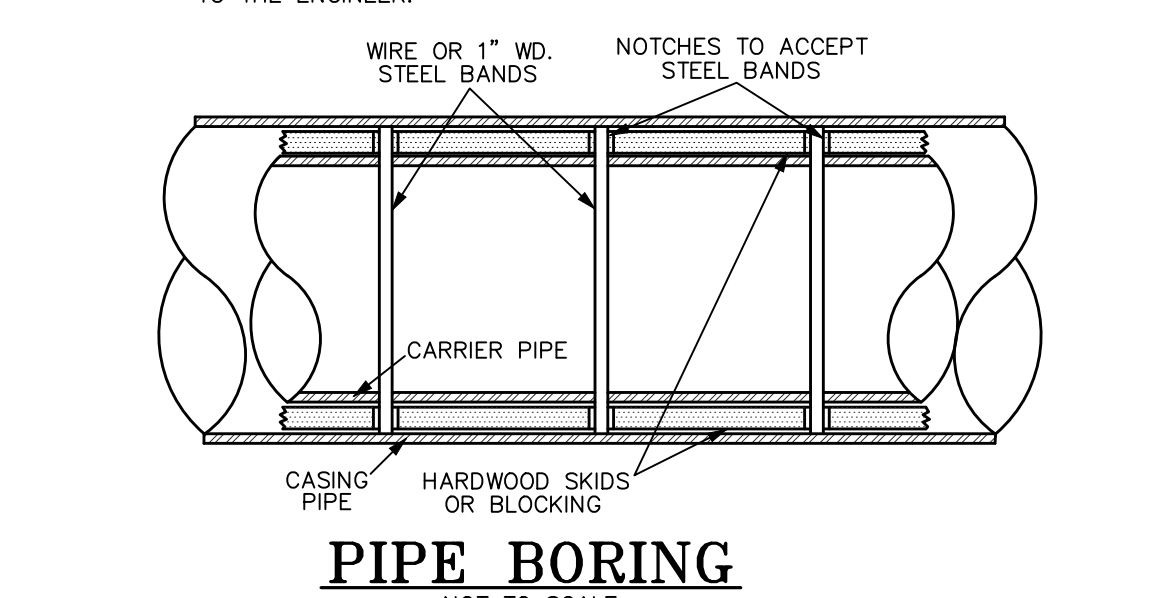
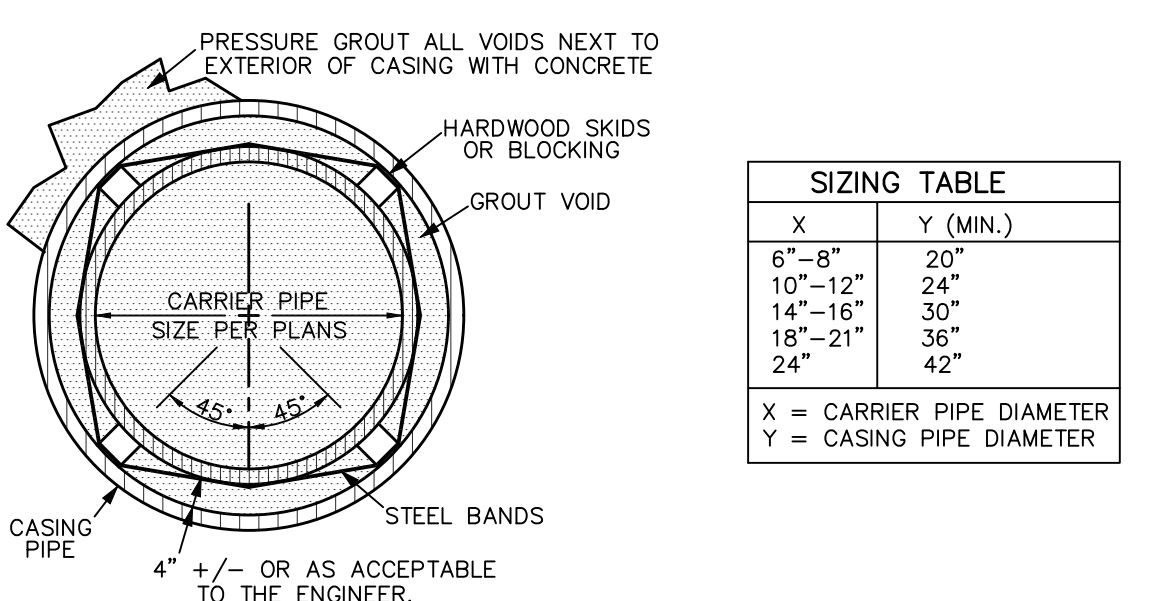
**WATER MAIN BORE & JACK PLAN VIEW**  
SCALE: 1"=10'

**LEGEND**

- = MISC. STRUCTURE (AS LABELED)
- = BOLLARD
- = SIGN
- = LIGHT BASE
- = OVERHEAD TRAFFIC SIGNAL
- = STREET LIGHT
- = OVERHEAD TRAFFIC SIGNAL (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATY BOX, MAIL BOX)
- = AIR CONDITIONER UNIT
- = UTILITY MANHOLE (AS LABELED)
- = UTILITY POLE W/GUY WIRE
- = OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
- = U/G UTILITY LINES (ELECTRIC/PHONE/CABLE)
- = SANITARY SEWER MANHOLE W/IDENTIFIER
- = SANITARY SEWER PIPE
- = CLEAN OUT
- = STORM WATER MANHOLE W/IDENTIFIER
- = CATCH BASIN W/IDENTIFIER
- = FLARED END SECTION
- = STORM WATER DRAINAGE PIPE
- = HYDRANT
- = WATER SHUT OFF
- = WATER VALVE
- = WATER VALVE BOX
- = WATER MAIN
- = GAS SHUT OFF
- = U/G GAS
- = PROPOSED LIGHT POLE
- = PROPOSED SANITARY SEWER
- = PROPOSED WATER MAIN
- = PROPOSED STORM SEWER
- = PROPOSED STORM STRUCTURES



**WATER MAIN BORE & JACK PROFILE**  
SCALE: HOR. 1"=10' / VERT. 1"=2'



- BORE & JACK NOTES:**
- The bore and jack work shall be performed under the direct supervision of the City of Hillsdale Board of Public Utilities. The Contractor shall contact the City of Hillsdale Board of Public Utilities to schedule inspection prior to performing work.
  - The Geotechnical Evaluation Report for the project site dated February 15, 2024, as prepared by Testing Engineers & Consultants, Inc and the Geotechnical Utility Crossing Recommendations, as prepared by Driesenga & Associates, Inc are a part of this work. The General Contractor, Earthwork Subcontractor, Underground Subcontractor and Bore & Jack Subcontractor shall obtain, review, and become familiar with the Geotechnical Evaluation Report and the Geotechnical Utility Crossing Recommendations.
  - Bore pit and receiving pit side and rear embankments shall be sloped in accordance with MIOSHA standards and specifications but not to exceed 1' V : 1' H. Sheeting shall be required at the front face of the bore pit, where unstable soil conditions are encountered and where site conditions do not allow for sloped embankments. Sheeting shall be specified by a qualified structural engineer retained by the Contractor for the specific site conditions.
  - Unless approved otherwise by the City of Hillsdale Board of Public Utilities, based on soil conditions, the auger shall not protrude the casing pipe.

**BENCHMARK**  
DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED NOVEMBER 9, 2023 AT 7:08 AM

BENCHMARK #200  
SOUTHEASTERLY CORNER OF CONCRETE PAD, LOCATED WLY SIDE OF W. CARLTON (M-99) AND 160± FEET SOUTHERLY OF DEARLESHIP'S ENTRANCE  
ELEVATION = 1106.39 (NAVD 88)

BENCHMARK #201  
NORTHWESTERLY BOLT ON TRAFFIC POLE, LOCATED AT INTERSECTION, NLY OF W. CARLTON (M-99) AND WLY OF MOORE ROAD.  
ELEVATION = 1084.02 (NAVD 88)

BENCHMARK #202  
RAILROAD SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED EASTERLY SIDE OF MOORE ROAD AND 360± FEET NORTH OF #3883 ENTRANCE.  
ELEVATION = 1076.98 (NAVD 88)

**811**

Know what's below.  
Call before you dig.

3 WORKING DAYS  
BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171  
(TOLL FREE)  
OR VISIT CALL811.COM

**DESIGN INC**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESS DRIVE  
BRIGHTON, MICHIGAN 48114

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED PER CITY REVIEW COMMENTS			
CHECK: CAG						

ALDI #143  
HILLSDALE, MICHIGAN

WATER MAIN  
PLAN & PROFILE

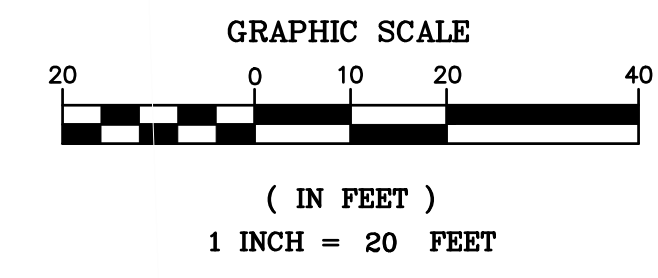
CLIENT:  
ALDI, Inc.  
2625 N. STOCKBRIDGE ROAD  
WEBBERVILLE, MICHIGAN 48892  
(517) 521-3907

SCALE: 1"=10'  
PROJECT No.: 9234510  
DWG NAME: 4510 UT4  
ISSUED: APR. 02, 2024

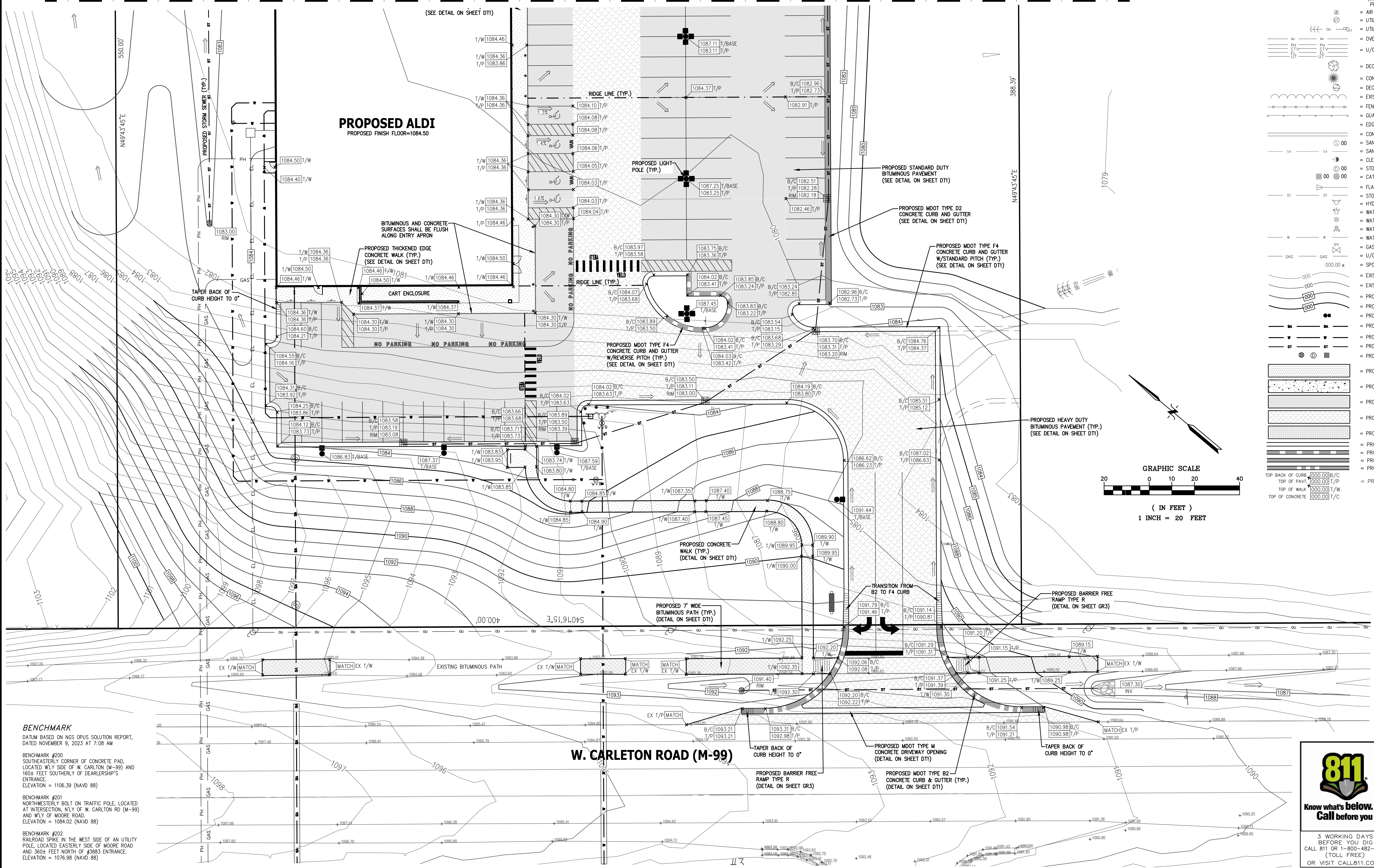
UT4

**LEGEND**

- = MISC. STRUCTURE (AS LABELED)
- = BOLLARD
- = SIGN
- = LIGHT BASE
- = STREET LIGHT
- = OVERHEAD TRAFFIC SIGNAL
- = UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX)
- = AIR CONDITIONER UNIT
- = UTILITY MANHOLE (AS LABELED)
- = UTILITY POLE W/GUY WIRE
- = OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
- = U/G UTILITY LINES (ELECTRIC/PHONE/CABLE)
- = DECIDUOUS TREE W/IDENTIFIER
- = CONIFEROUS TREE W/IDENTIFIER
- = DECIDUOUS SHRUB
- = EXISTING TREE DRIP LINE
- = FENCE (CHAIN LINK UNLESS OTHERWISE STATED)
- = GUARD RAIL
- = EDGE OF GRAVEL
- = CONCRETE CURB (UNLESS OTHERWISE STATED)
- = SANITARY SEWER MANHOLE W/IDENTIFIER
- = CLEAN OUT
- = STORM WATER MANHOLE W/IDENTIFIER
- = CATCH BASIN W/IDENTIFIER
- = FLARED END SECTION
- = STORM WATER DRAINAGE PIPE
- = HYDRANT
- = WATER SHUT OFF
- = WATER VALVE
- = WATER VALVE BOX
- = WATER MAIN
- = GAS SHUT OFF
- = U/G GAS
- = SPOT ELEVATION
- = EXISTING 1' CONTOUR
- = EXISTING 5' CONTOUR
- = PROPOSED 1' CONTOUR
- = PROPOSED 5' CONTOUR
- = PROPOSED LIGHT POLE
- = PROPOSED SANITARY SEWER
- = PROPOSED WATER MAIN
- = PROPOSED STORM SEWER
- = PROPOSED STORM STRUCTURES
- = PROPOSED CONCRETE WALK
- = PROPOSED STANDARD DUTY CONCRETE PAVEMENT
- = PROPOSED STANDARD DUTY BITUMINOUS PAVEMENT
- = PROPOSED HEAVY DUTY BITUMINOUS PAVEMENT
- = PROPOSED BITUMINOUS PATH
- = PROPOSED CONCRETE CURB & GUTTER W/STD. PITCH
- = PROPOSED CONCRETE CURB & GUTTER W/REV. PITCH
- = PROPOSED MDOT D2 CONCRETE CURB & GUTTER
- = PROPOSED MDOT B2 CONCRETE CURB & GUTTER
- = PROPOSED SPOT ELEVATIONS



**MATCH LINE - SEE SHEET GR2**



**BENCHMARK**  
 DATUM BASED ON NCS OPUS SOLUTION REPORT, DATED NOVEMBER 9, 2023 AT 7:08 AM

BENCHMARK #200  
 SOUTHEASTLY CORNER OF CONCRETE PAD, LOCATED WLY SIDE OF W. CARLTON (M-99) AND 160± FEET SOUTHERLY OF DEALERSHIP'S ENTRANCE.  
 ELEVATION = 1106.39 (NAVD 88)

BENCHMARK #201  
 NORTHWESTLY BOLT ON TRAFFIC POLE, LOCATED AT INTERSECTION, NLY OF W. CARLTON RD (M-99) AND WLY OF MOORE ROAD.  
 ELEVATION = 1084.02 (NAVD 88)

BENCHMARK #202  
 RAILROAD SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED EASTERLY SIDE OF MOORE ROAD AND 360± FEET NORTH OF #3883 ENTRANCE.  
 ELEVATION = 1076.98 (NAVD 88)

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

3 WORKING DAYS BEFORE YOU DIG  
 CALL 811 OR 1-800-482-7171 (TOLL FREE)  
 OR VISIT CALL811.COM

**DESIGN INC.**  
 (810) 227-9533  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 2183 PLESS DRIVE  
 BRIGHTON, MICHIGAN 48114

DESIGN-CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED PER CITY REVIEW COMMENTS			
CHECK: CAG						

**ALDI #143**  
**HILLSDALE, MICHIGAN**

**GRADING & PAVING PLAN**  
**WEST**

CLIENT:  
 ALDI, Inc.  
 2625 N. STOCKBRIDGE ROAD  
 WEBBERVILLE, MICHIGAN 48892  
 (517) 521-3907

SCALE: 1"=20'  
 PROJECT No.: 9234510  
 DWG NAME: 4510 GR1  
 ISSUED: APR. 02, 2024

**GR1**

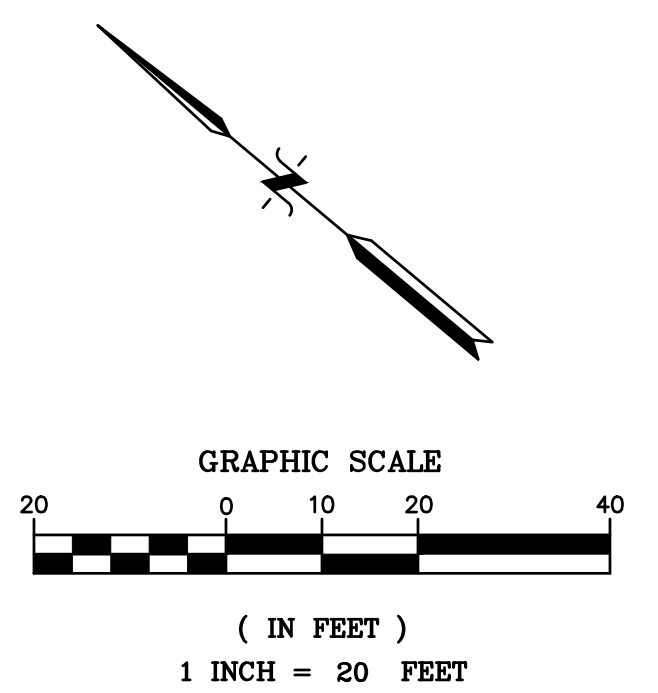


**BENCHMARK**  
 DATUM BASED ON NOS OPUS SOLUTION REPORT,  
 DATED NOVEMBER 9, 2023 AT 7:08 AM

BENCHMARK #200  
 SOUTHEASTERLY CORNER OF CONCRETE PAD,  
 LOCATED WLY SIDE OF W. CARLTON (M-99) AND  
 160± FEET SOUTHERLY OF DEALERSHIP'S  
 ENTRANCE.  
 ELEVATION = 1106.39 (NAVD 88)

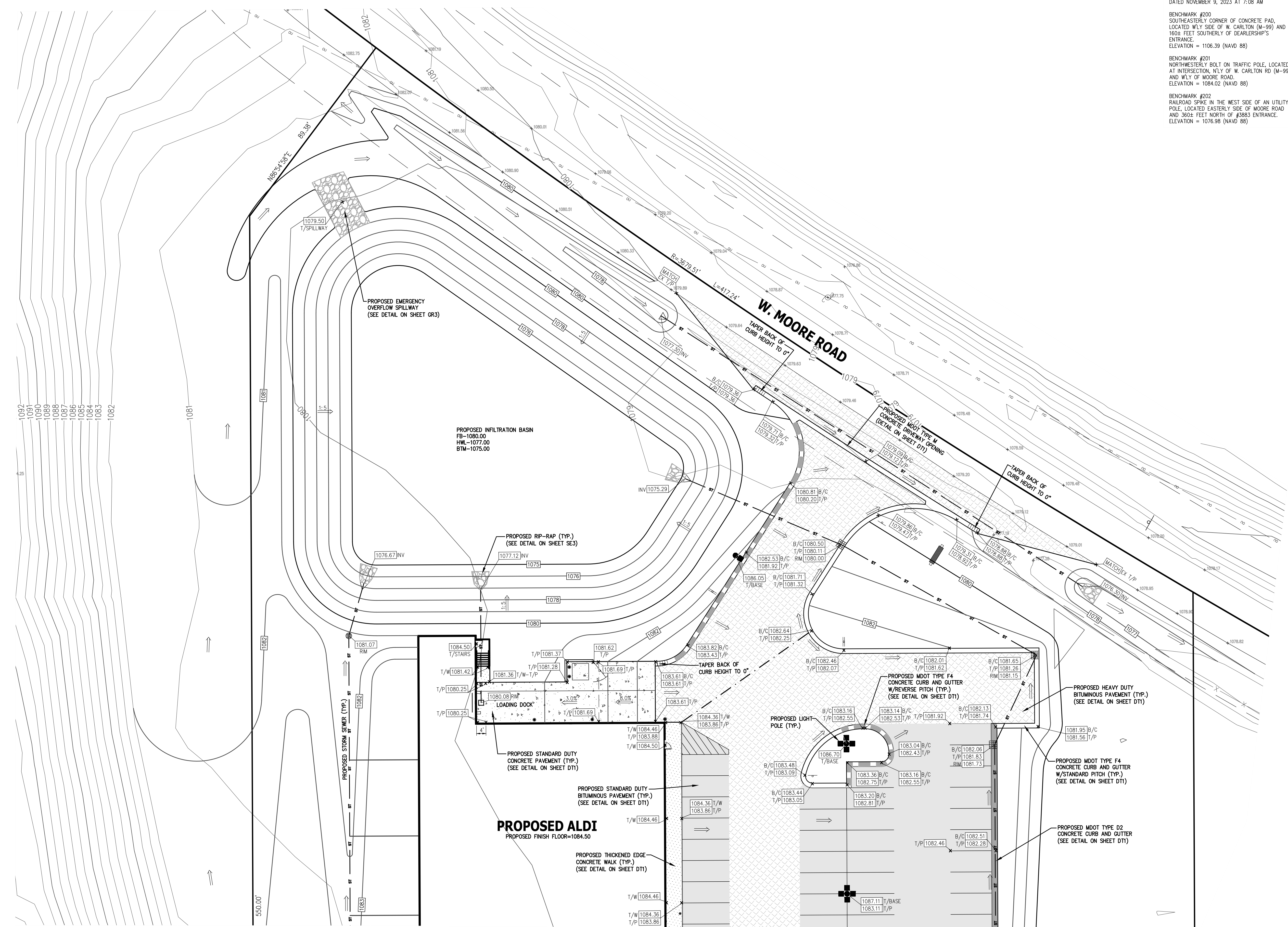
BENCHMARK #201  
 NORTHWESTERLY BOLT ON TRAFFIC POLE, LOCATED  
 AT INTERSECTION, NLY OF W. CARLTON RD (M-99)  
 AND WLY OF MOORE ROAD.  
 ELEVATION = 1084.02 (NAVD 88)

BENCHMARK #202  
 RAILROAD SPIKE IN THE WEST SIDE OF AN UTILITY  
 POLE, LOCATED EASTERLY SIDE OF MOORE ROAD  
 AND 360± FEET NORTH OF #3883 ENTRANCE.  
 ELEVATION = 1076.98 (NAVD 88)



**LEGEND**

- = MISC. STRUCTURE (AS LABELED)
- = BOLLARD
- = SIGN
- = LIGHT BASE
- = STREET LIGHT
- = OVERHEAD TRAFFIC SIGNAL
- = UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX)
- = AIR CONDITIONER UNIT
- = UTILITY MANHOLE (AS LABELED)
- = UTILITY POLE W/GUY WIRE
- = OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
- = U/G UTILITY LINES (ELECTRIC/PHONE/CABLE)
- = DECIDUOUS TREE W/IDENTIFIER
- = CONIFEROUS TREE W/IDENTIFIER
- = DECIDUOUS SHRUB
- = EXISTING TREE DRIP LINE
- = FENCE (CHAIN LINK UNLESS OTHERWISE STATED)
- = GUARD RAIL
- = EDGE OF GRAVEL
- = CONCRETE CURB (UNLESS OTHERWISE STATED)
- = SANITARY SEWER MANHOLE W/IDENTIFIER
- = SANITARY SEWER PIPE
- = CLEAN OUT
- = STORM WATER MANHOLE W/IDENTIFIER
- = CATCH BASIN W/IDENTIFIER
- = FLARED END SECTION
- = STORM WATER DRAINAGE PIPE
- = HYDRANT
- = WATER SHUT OFF
- = WATER VALVE
- = WATER VALVE BOX
- = WATER MAIN
- = GAS SHUT OFF
- = U/G GAS
- = SPOT ELEVATION
- = EXISTING 1' CONTOUR
- = EXISTING 5' CONTOUR
- = PROPOSED 1' CONTOUR
- = PROPOSED 5' CONTOUR
- = PROPOSED LIGHT POLE
- = PROPOSED SANITARY SEWER
- = PROPOSED WATER MAIN
- = PROPOSED STORM SEWER
- = PROPOSED STORM STRUCTURES
- = PROPOSED CONCRETE WALK
- = PROPOSED STANDARD DUTY CONCRETE PAVEMENT
- = PROPOSED STANDARD DUTY BITUMINOUS PAVEMENT
- = PROPOSED HEAVY DUTY BITUMINOUS PAVEMENT
- = PROPOSED BITUMINOUS PATH
- = PROPOSED CONCRETE CURB & GUTTER W/STD. PITCH
- = PROPOSED CONCRETE CURB & GUTTER W/REVERSE PITCH
- = PROPOSED MDOT D2 CONCRETE CURB & GUTTER
- = PROPOSED MDOT B2 CONCRETE CURB & GUTTER
- = PROPOSED SPOT ELEVATIONS



**MATCH LINE - SEE SHEET GR1**

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.						
CHECK: CAG						

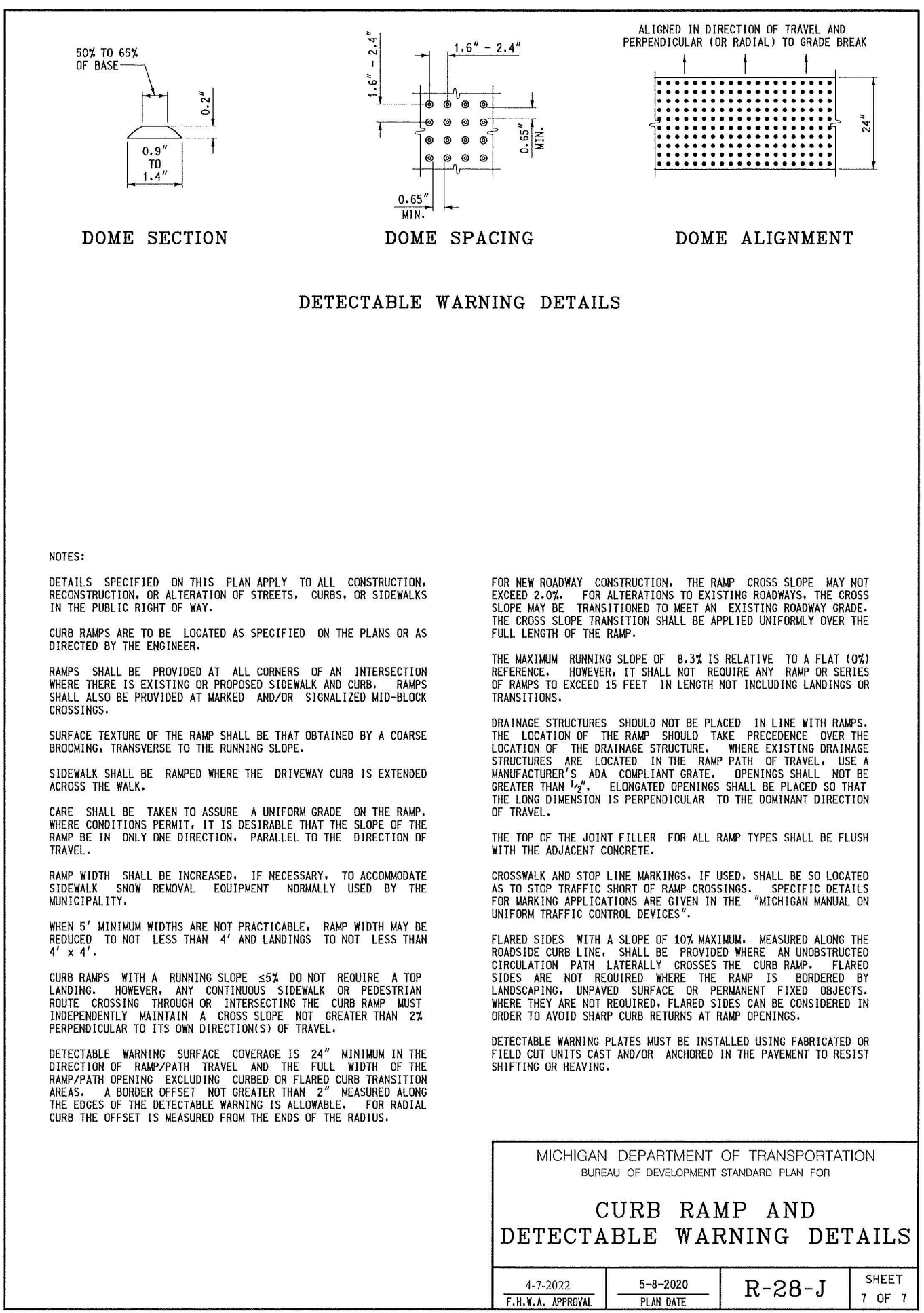
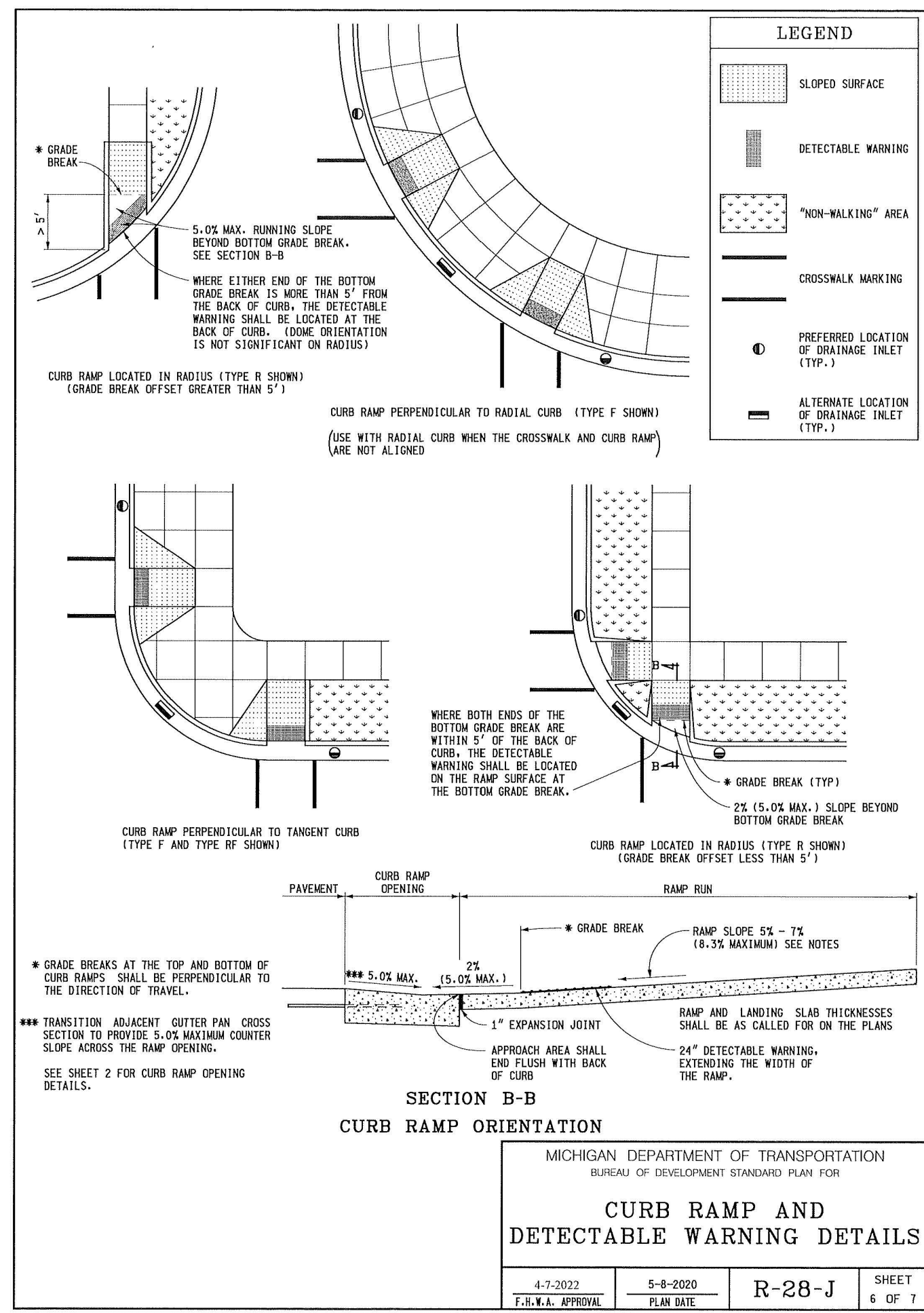
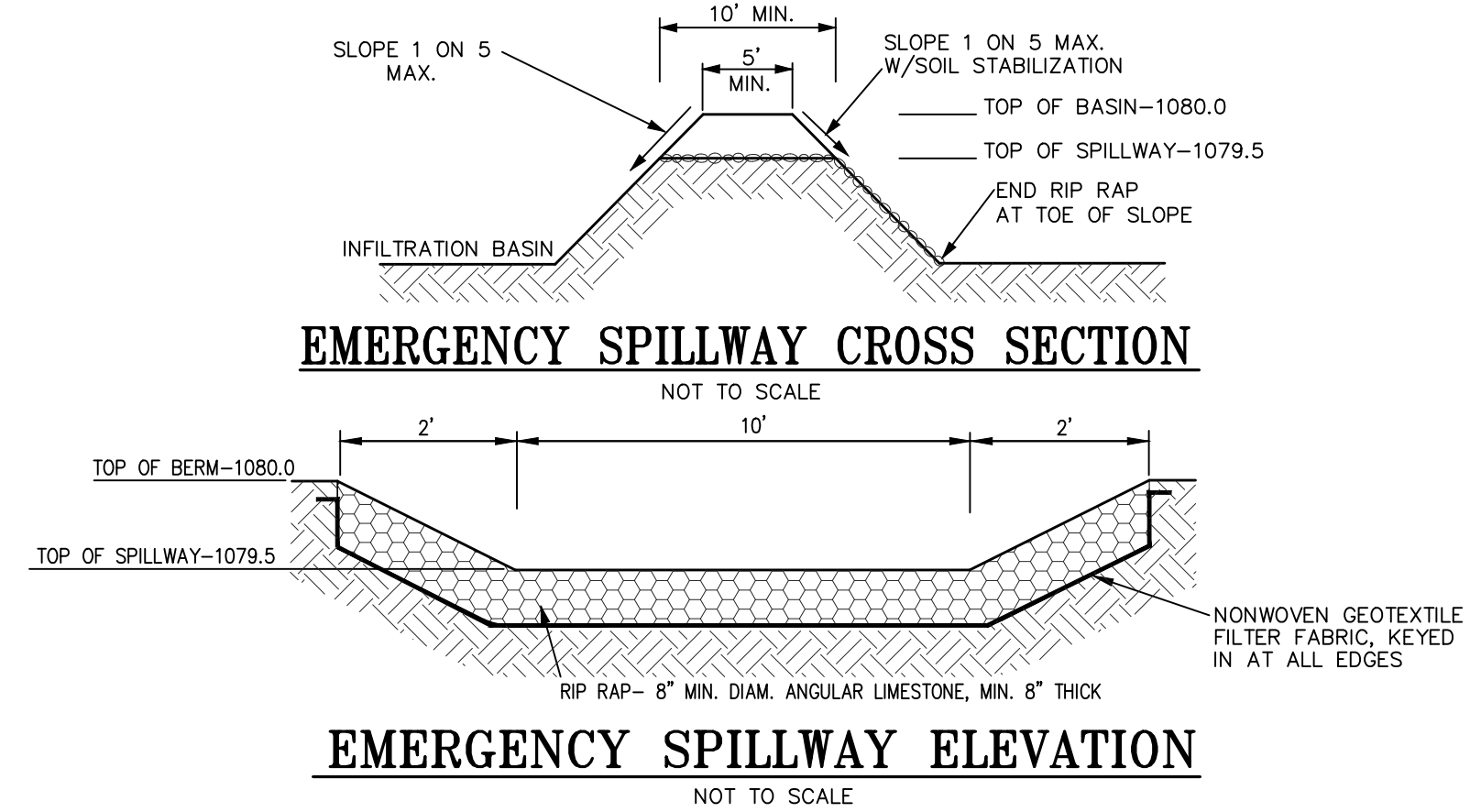
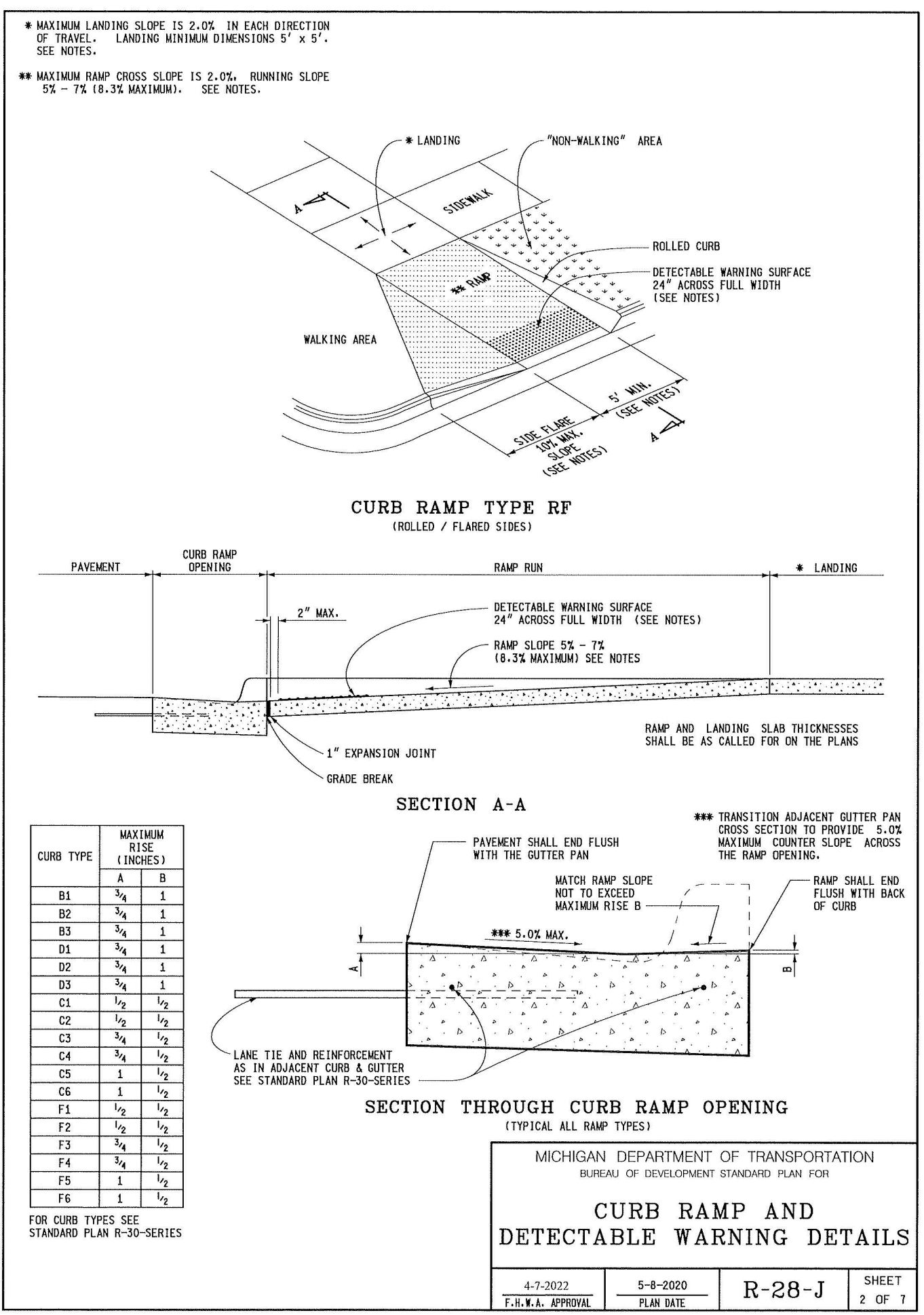
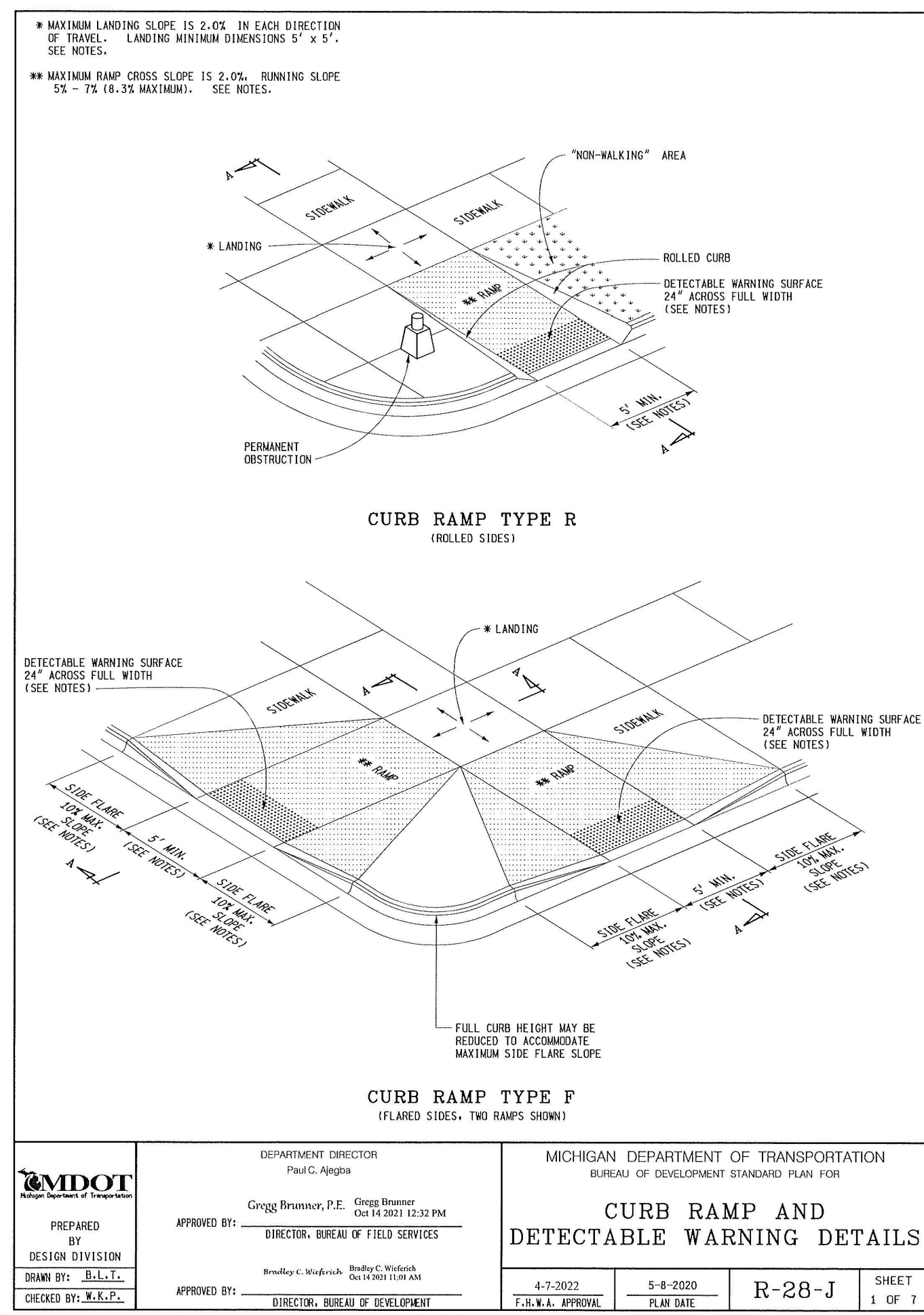
**ALDI #143**  
**HILLSDALE, MICHIGAN**

**GRADING & PAVING PLAN**  
**EAST**

CLIENT:  
 ALDI, Inc.  
 2625 N. STOCKBRIDGE ROAD  
 WEBBERVILLE, MICHIGAN 48892  
 (517) 521-3907

SCALE: 1"=20'  
 PROJECT No.: 9234510  
 DWG NAME: 4510 GR1  
 ISSUED: APR. 02, 2024

**GR2**



DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.			
CHECK: CAG			

REVISION #	DATE	REVISION-DESCRIPTION

ALDI #143  
HILLSDALE, MICHIGAN

GRADING DETAILS

CLIENT:  
ALDI, Inc.

2625 N. STOCKBRIDGE ROAD  
WEBBERVILLE, MICHIGAN 48892  
(517) 521-3907

SCALE: N/A

PROJECT No.: 9234510

DWG NAME: 4510 GR3

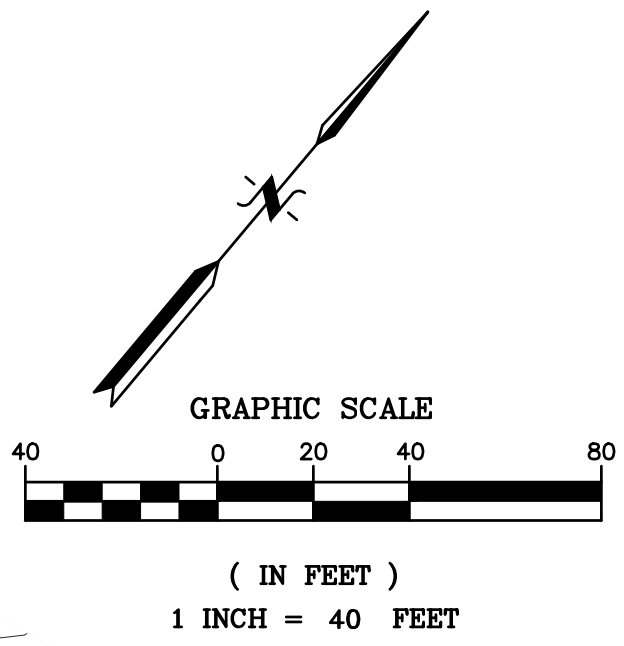
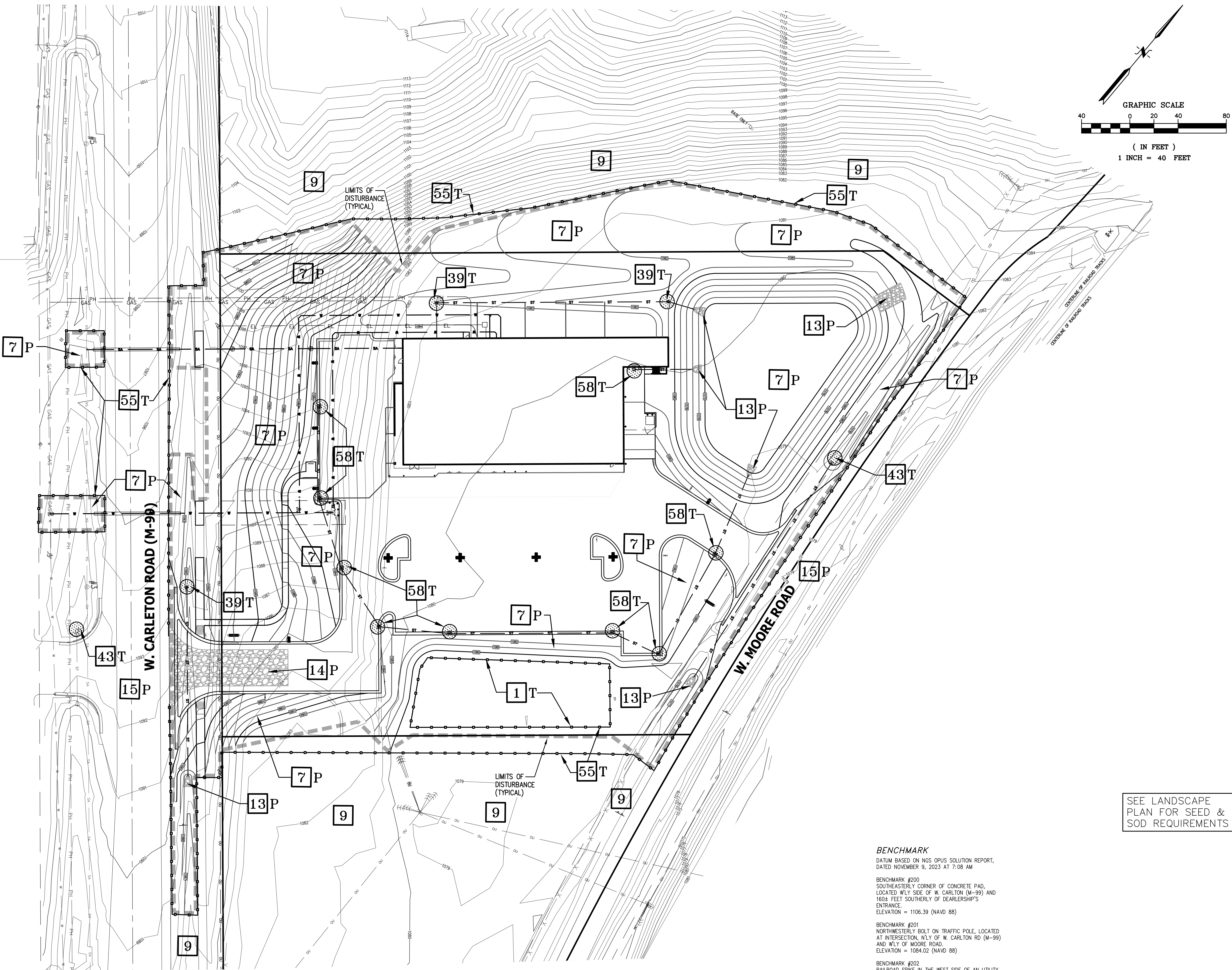
ISSUED: APR. 02, 2024

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

3 WORKING DAYS BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171 (TOLL FREE)  
OR VISIT CALL811.COM

DESIGN, INC.  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESSY DRIVE  
BRIGHTON, MICHIGAN 48114

GR3



### LEGEND

	= MISC. STRUCTURE (AS LABELED)
	= BOLLARD
	= SIGN
	= LIGHT BASE
	= STREET LIGHT
	= OVERHEAD TRAFFIC SIGNAL
	= UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX)
	= AIR CONDITIONER UNIT
	= UTILITY MANHOLE (AS LABELED)
	= UTILITY POLE W/ GUY WIRE
	= OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
	= U/G UTILITY LINES (ELECTRIC/PHONE/CABLE)
	= SANITARY SEWER PIPE W/ IDENTIFIER
	= SANITARY SEWER PIPE
	= CLEAN OUT
	= STORM WATER MANHOLE W/ IDENTIFIER
	= CATCH BASIN W/ IDENTIFIER
	= FLARED END SECTION
	= STORM WATER DRAINAGE PIPE
	= HYDRANT
	= WATER SHUT OFF
	= WATER VALVE
	= WATER VALVE BOX
	= WATER MAIN
	= GAS SHUT OFF
	= U/G GAS
	= SPOT ELEVATION
	= EXISTING 1' CONTOUR
	= EXISTING 5' CONTOUR
	= PROPOSED 1' CONTOUR
	= PROPOSED 5' CONTOUR
	= PROPOSED LIGHT POLE
	= PROPOSED SANITARY SEWER
	= PROPOSED WATER MAIN
	= PROPOSED STORM SEWER
	= PROPOSED STORM STRUCTURES

### SOIL EROSION CONTROL MEASURES

1	SHIPPING & STOCKPILING TISSUE	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION. STOCKPILE SHOULD BE TEMPORARILY SEEDED.
7	SEEDING WITH MULCH AND/OR MATING	FACILITATES ESTABLISHMENT OF VEGETATIVE COVER. EFFECTIVE FOR DRAMATICUMS WITH LOW VELOCITY. EASILY PLACED IN SMALL QUANTITIES BY INEXPERIENCED PERSONNEL. SHOULD INCLUDE PRESEEDED TOPSOIL (PT).
9	VEGETATIVE BUFFER STRIP	SLOWS RUNOFF VELOCITY. FILTERS SEDIMENT FROM RUNOFF. REDUCES VOLUME OF RUNOFF ON SLOPES.
13	SPRIP, RUBBLE CARBONS	USED WHERE VEGETATION IS NOT EARLY ESTABLISHED. EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATION. FORMS RUNOFF TO INTRINSIC SOIL. DISSIPATES ENERGY FLOW AT SYSTEM OUTLETS.
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, THUS MINIMIZING EROSION. PERMITS CONSTRUCTION TRAFFIC IN ADVERSE WEATHER. MAY BE USED AS PART OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS.
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF. VOLUME AND VELOCITY. IRREGULAR SURFACE WILL HELP SLOW VELOCITY.
39	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF. MAY USE FILTER CLOTH OVER INLET.
43	COLLECTOR SEDIMENT TRAP	EASY TO INSTALL AT INLET. KEEPS COLLECTOR CLEAN AND FREE FLOWING. MAY BE CONSTRUCTED OF LUMBER OR LOGS.
55	GEOTEXTILE SILT FENCE	USES GEOTEXTILE AND POSTS OR POLES. MAY BE CONSTRUCTED OR PREPACKAGED. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.
58	TRAIL SEDIMENT FILTER	USES PREPACKAGED GEOTEXTILE SACKS. FILTERS SEDIMENT FROM RUNOFF AT CATCH BASIN INLET. EASY TO INSTALL AND MAINTAIN.

SEE LANDSCAPE PLAN FOR SEED & SOD REQUIREMENTS

**BENCHMARK**  
 DATUM BASED ON MGS OPUS SOLUTION REPORT, DATED NOVEMBER 9, 2023 AT 7:08 AM

BENCHMARK #200  
 SOUTHEASTERLY CORNER OF CONCRETE PAD, LOCATED W/LY SIDE OF W. CARLTON (M-99) AND 160± FEET SOUTHERLY OF DEALERSHIP'S ENTRANCE. ELEVATION = 1106.39 (NAVD 88)

BENCHMARK #201  
 NORTHWESTERLY BOLT ON TRAFFIC POLE, LOCATED AT INTERSECTION, N/LY OF W. CARLTON RD (M-99) AND W/LY OF MOORE ROAD. ELEVATION = 1084.02 (NAVD 88)

BENCHMARK #202  
 RAILROAD SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED EASTERLY SIDE OF MOORE ROAD AND 360± FEET NORTH OF #3883 ENTRANCE. ELEVATION = 1076.98 (NAVD 88)

**TOTAL DISTURBANCE AREA = 5.7 AC.**

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

3 WORKING DAYS BEFORE YOU DIG  
 CALL 811 OR 1-800-482-7171 (TOLL FREE)  
 OR VISIT CALL811.COM

**DESIGN INC**  
 (810) 227-9533  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 2183 PLESS DRIVE  
 BRIGHTON, MICHIGAN 48114

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED PER CITY REVIEW COMMENTS			
CHECK: CAG						

ALDI #143  
 HILLSDALE, MICHIGAN

SOIL EROSION &  
 SEDIMENTATION CONTROL  
 PLAN

CLIENT:  
 ALDI, Inc.  
 2625 N. STOCKBRIDGE ROAD  
 WEBBERVILLE, MICHIGAN 48892  
 (517) 521-3907

SCALE: 1"=40'  
 PROJECT No.: 9234510  
 DWG NAME: 4510-SE1  
 ISSUED: APR. 02, 2024

**SE1**

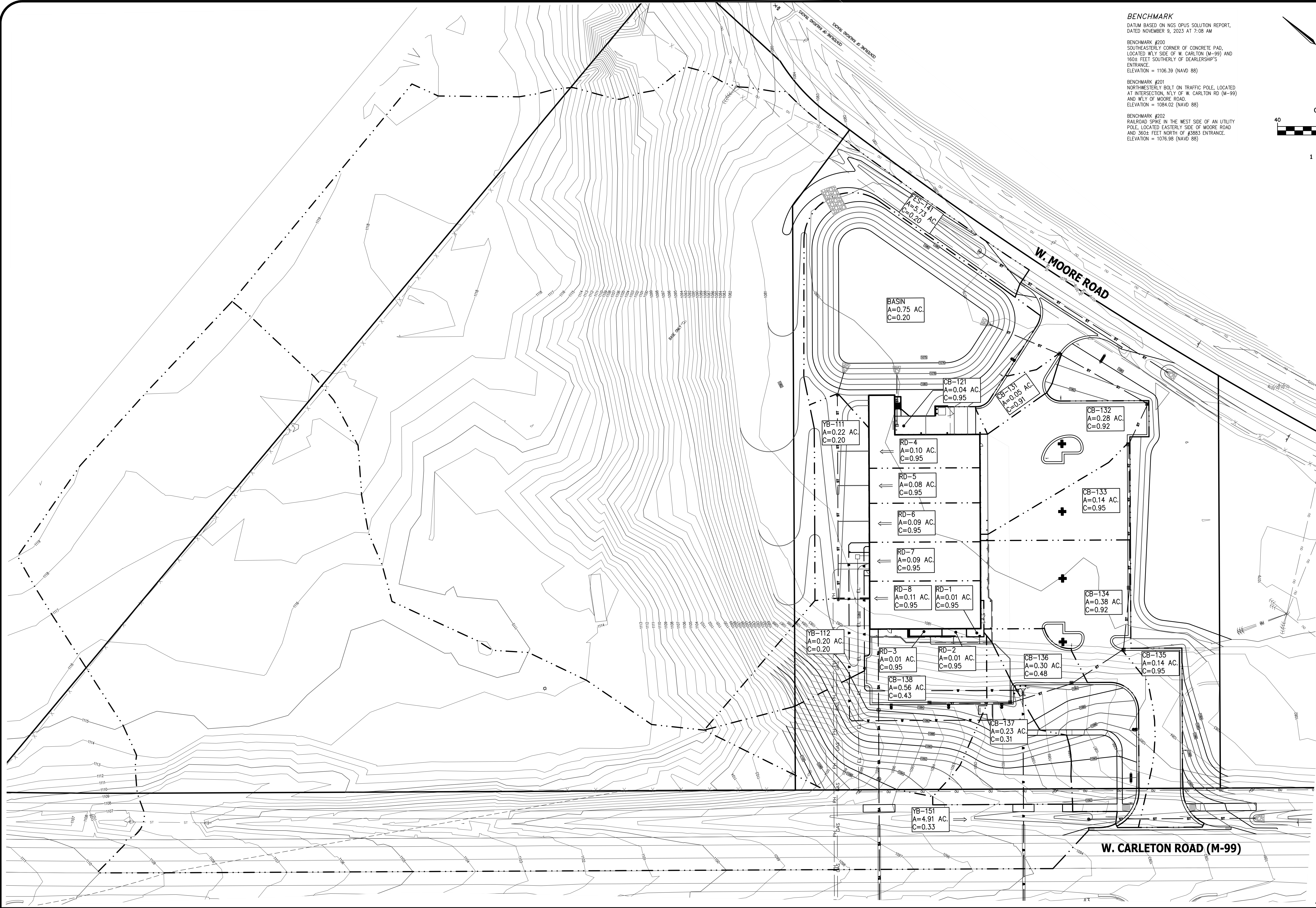
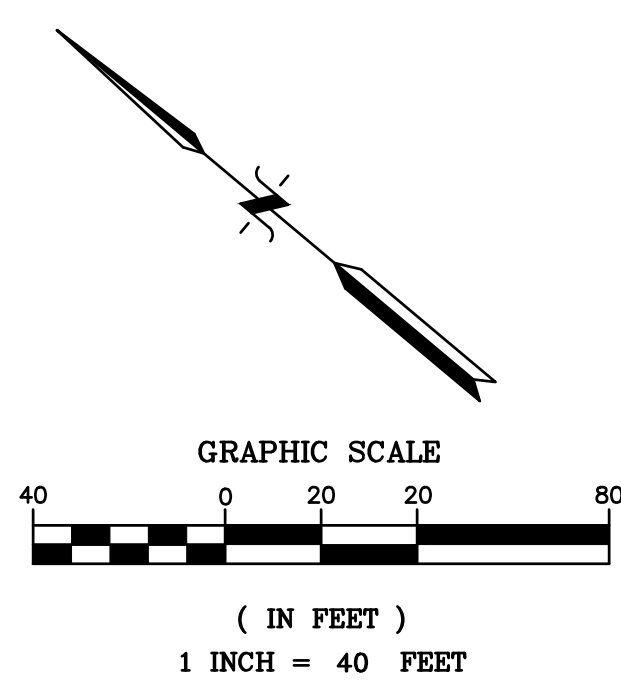


**BENCHMARK**  
 DATUM BASED ON NGS OPUS SOLUTION REPORT,  
 DATED NOVEMBER 9, 2023 AT 7:08 AM

BENCHMARK #200  
 SOUTHEASTERN CORNER OF CONCRETE PAD,  
 LOCATED WLY SIDE OF W. CARLTON (M-99) AND  
 160± FEET SOUTHERLY OF DEALERSHIP'S  
 ENTRANCE.  
 ELEVATION = 1106.39 (NAVD 88)

BENCHMARK #201  
 NORTHWESTERLY BOLT ON TRAFFIC POLE, LOCATED  
 AT INTERSECTION WLY OF W. CARLTON RD (M-99)  
 AND WLY OF MOORE ROAD.  
 ELEVATION = 1084.02 (NAVD 88)

BENCHMARK #202  
 RAILROAD SPIKE IN THE WEST SIDE OF AN UTILITY  
 POLE, LOCATED EASTERLY SIDE OF MOORE ROAD  
 AND 362± FEET NORTH OF #3083 ENTRANCE.  
 ELEVATION = 1076.98 (NAVD 88)



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

3 WORKING DAYS  
 BEFORE YOU DIG  
 CALL 811 OR 1-800-482-7171  
 (TOLL FREE)  
 OR VISIT CALL811.COM

**DESIGN INC**

(810) 227-9533  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 2183 PLESS DRIVE  
 BRIGHTON, MICHIGAN 48114

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.						
CHECK: CAG						

ALDI #143  
 HILLSDALE, MICHIGAN

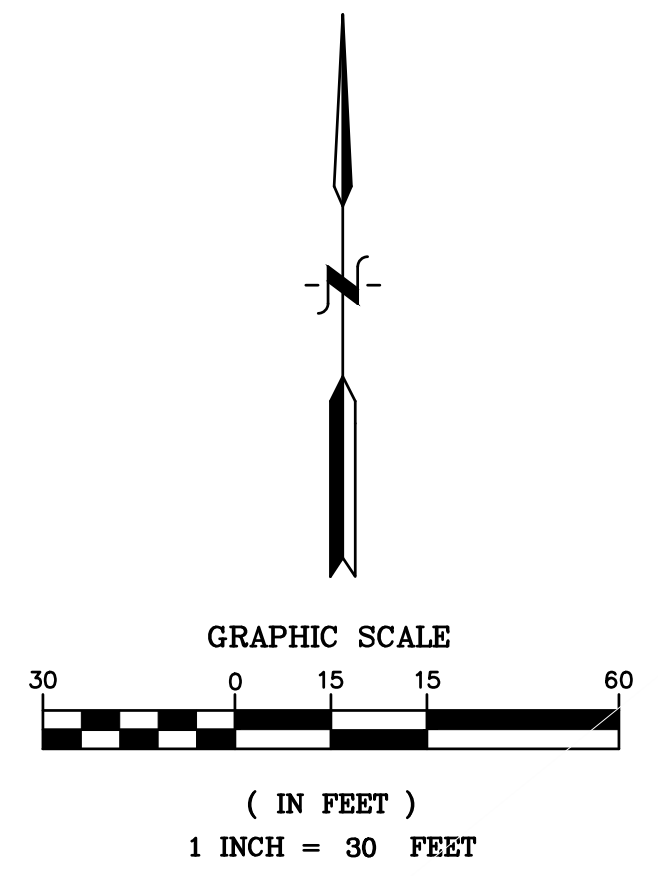
WATERSHED PLAN

CLIENT:  
 ALDI, Inc.  
 2625 N. STOCKBRIDGE ROAD  
 WEBBERVILLE, MICHIGAN 48892  
 (517) 521-3907

SCALE: 1"=40'  
 PROJECT No.: 9234510  
 DWG NAME: 4510 WS1  
 ISSUED: APR. 02, 2024

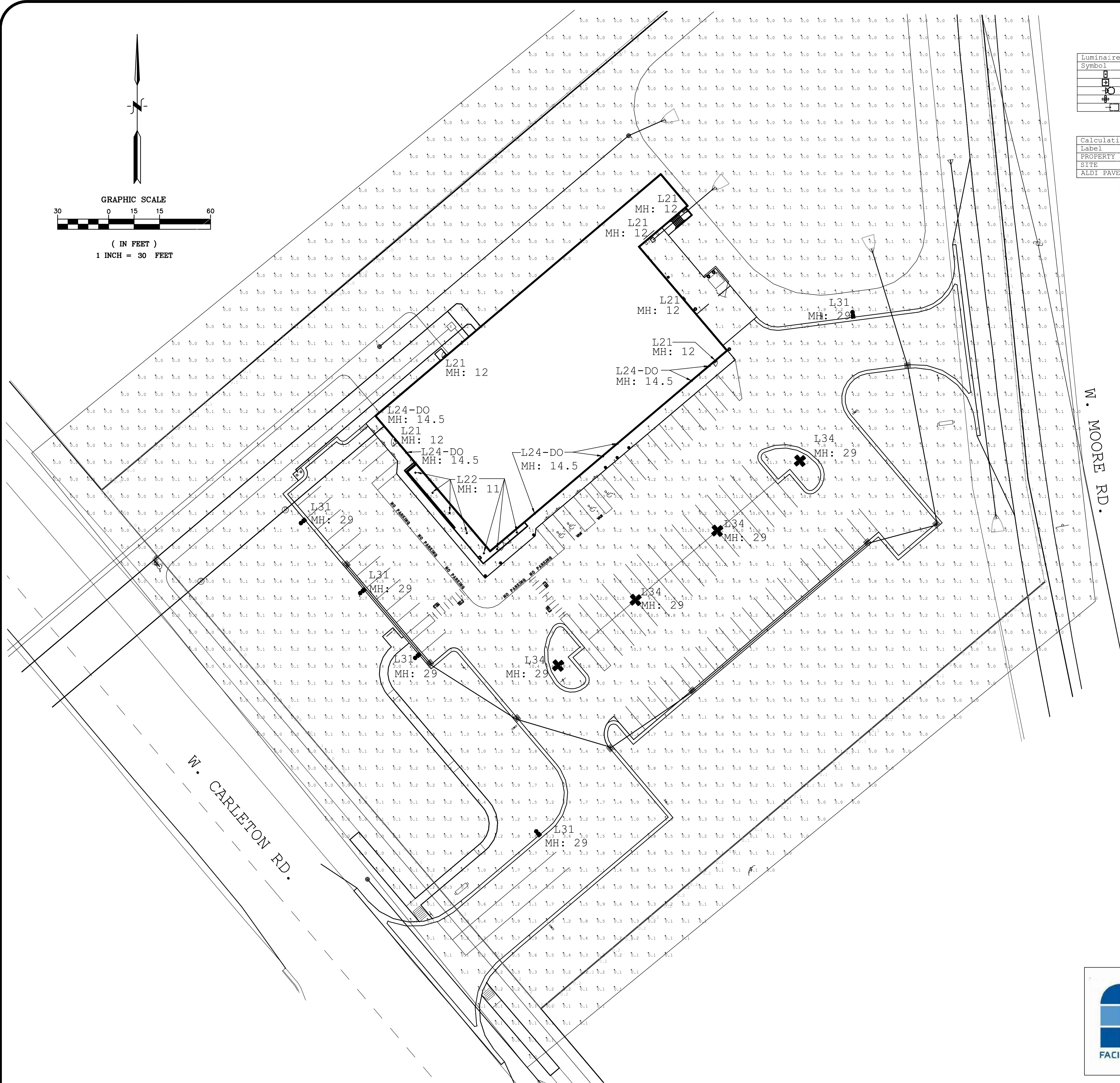
**WS1**





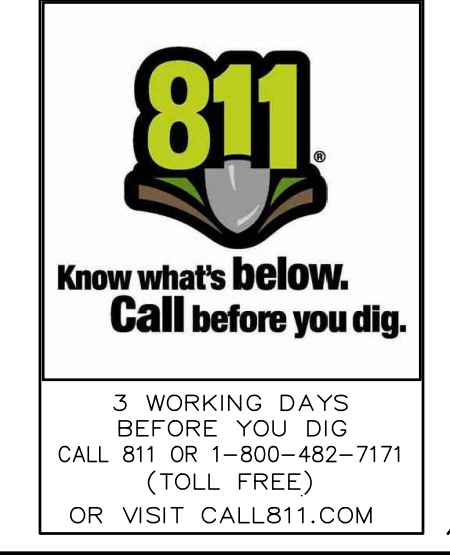
Symbol	Qty	Label	Arrangement	Description	Tag
	6	L21	Single	LWPC26SN-UD-M1	LED WALL PACK
	7	L22	Single	ECLS010A5SM73011RM GRAY	CANOPY LIGHT
	7	L24-DO	Single	4423BA-17-30K	WALL SCONCE DOWN ONLY
	4	L34	4 @ 90 Degrees	EACL010F4AF750NDD1 ALUM	LED AREA LIGHT ON 25' POLE + 4' BASE (29' MOUNTING)
	5	L31	Single	EACL010F4AF750NDD1 ALUM	LED AREA LIGHT ON 25' POLE + 4' BASE (29' MOUNTING)

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PROPERTY LINE	Illuminance	Fc	0.06	0.3	0.0	N.A.	N.A.
SITE	Illuminance	Fc	1.42	21.0	0.0	N.A.	N.A.
ALDI PAVEMENT	Illuminance	Fc	5.13	12.2	0.3	17.10	40.67



**SITE LIGHTING NOTES:**

- CAUTION!  
This site contains existing underground public and private utilities. See the project plans for locations of the known existing and proposed underground utility locations. Existing utility information provided on the project plans may be from information disclosed to this firm by the Utility Companies, Local, County or State Agencies, and/or various other sources. No guarantee is given as to the completeness or accuracy thereof. The Site Electrical Contractor shall contact the 811 Underground Public Utility Locating System or other appropriate local underground utility locating Agency, a minimum of three (3) working days prior to performing the site electrical work. The Site Electrical Contractor shall field locate all potential utility conflicts and take the necessary precautions to avoid damage to the existing underground utilities. Any damage to the existing utilities as a result of the site electrical work shall be immediately brought to the attention of the General Contractor and shall be repaired as acceptable to the Owner, the General Contractor and the Appropriate Utility Provider. If the existing site conditions create a conflict and/or prevent the Site Electrical Contractor from performing the site electrical work, then contact the Engineer of Record.
- Contact the ALDI National Account Lighting Distributor to order fixtures, mounting accessories and pole(s):  
Daniel Thomas  
National Accounts - Inside Sales  
Facilities Solutions Group  
Office: 214-351-6266 Ext. 10609  
[daniel.thomas@fsg.com](mailto:daniel.thomas@fsg.com)



DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.						
CHECK: CAG						

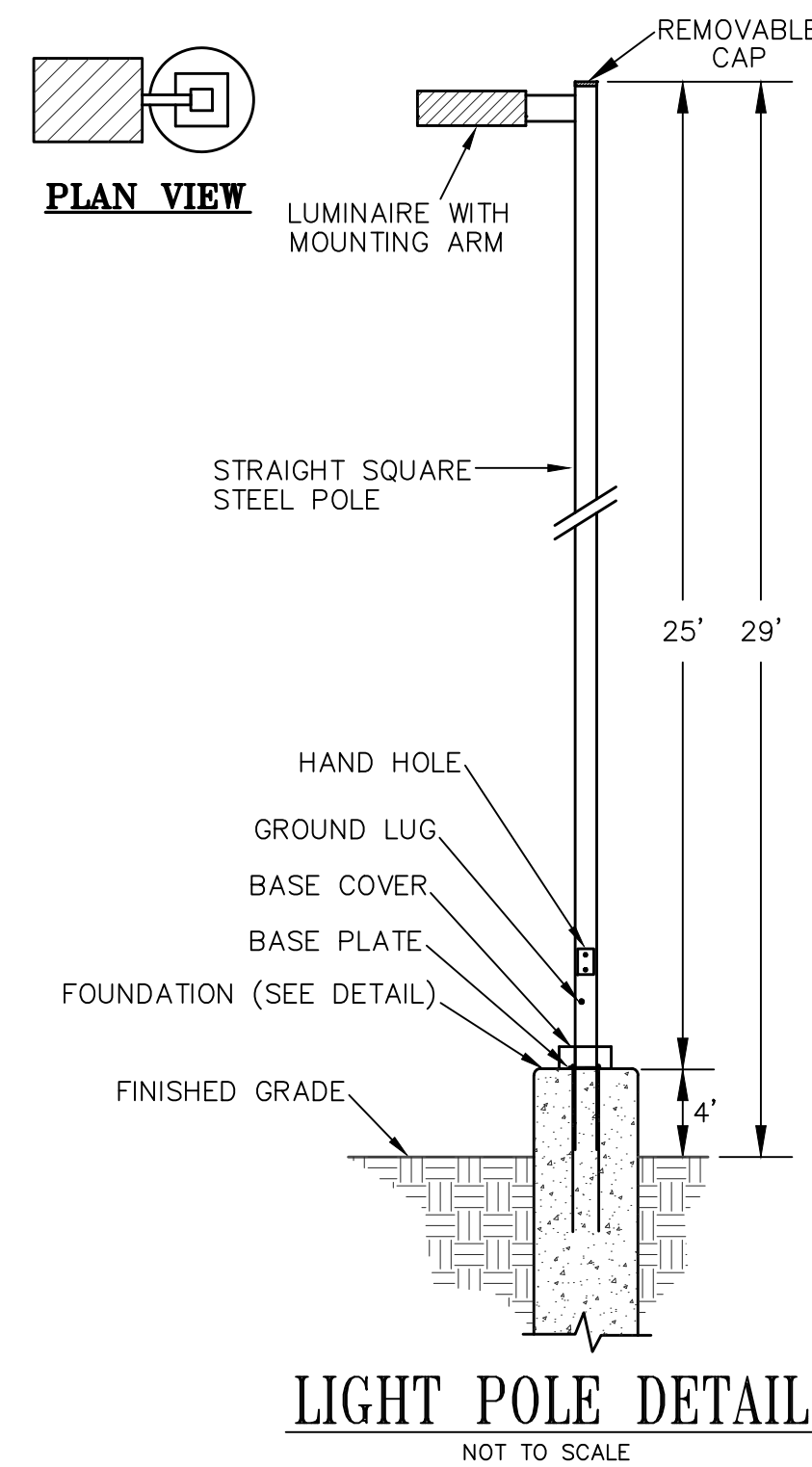
ALDI #143  
HILLSDALE, MICHIGAN

SITE LIGHTING PLAN

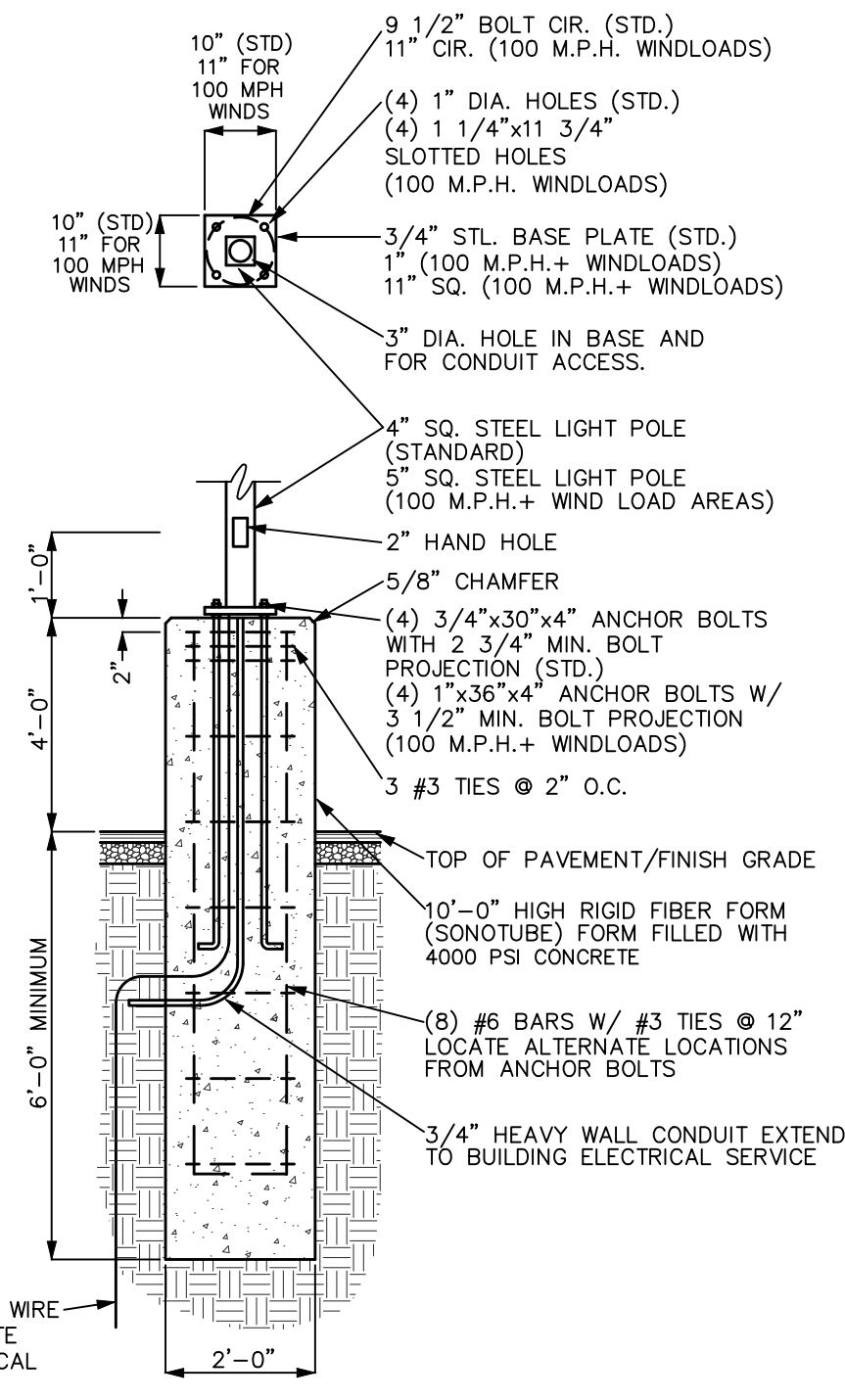
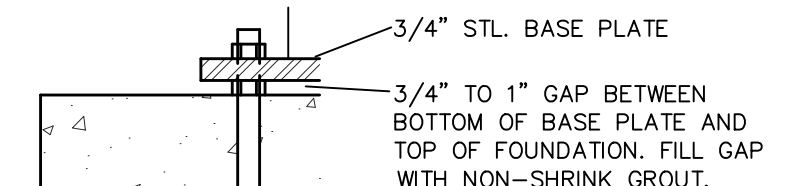
CLIENT:  
ALDI, Inc.  
2625 N. STOCKBRIDGE ROAD  
WEBBERVILLE, MICHIGAN 48892  
(517) 521-3907

SCALE: 1"=30'  
PROJECT No.: 9234510  
DWG NAME: 4510 LT  
ISSUED: APR. 02, 2024

LT1



**LIGHT POLE DETAIL**  
NOT TO SCALE



**ALDI LIGHT POLE BASE STANDARD DETAIL**  
NOT TO SCALE

- LIGHT POLE BASE NOTES:**
- FOUNDATION SHOWN IS A TYPICAL DESIGN. WIND LOADS MORE THAN 100 MPH AND/OR UNSTABLE SOIL CONDITIONS MAY REQUIRE AN ALTERNATE DESIGN. VERIFY CONDITION OF SOILS WITH SOILS REPORT.
  - FOUNDATIONS SHALL EXTEND BELOW FROST DEPTH PER LOCAL CODES.
  - CONCRETE SHALL HAVE MIN 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
  - SEE SITE LIGHTING ELECTRICAL PLAN WITHIN ARCHITECTURAL PLANS FOR ADDITIONAL REQUIREMENTS.
  - VERIFY BASE PLATE BOLT PATTERN WITH POLE MANUFACTURER AND / OR SUPPLIER PRIOR TO CONSTRUCTION.

**FSC** Project Name: ALDI  
Manufacturer: GE CURRENT  
Model Number: EWLS02440AF740N3CBDBKZ

Type: **L21**

**EWLS L Series**  
LED Wall Pack

The Evolve® LED L Series Wall Pack (EWLS), The Evolve LED L-Series Wall Pack, EWLS, is a designed replacement for 50W to 250W HID, while offering significant energy savings in a long life LED wall pack. Two-screw housing design enables a fast and simplified installation. The low-watt Egress package is designed to meet recommended illuminance requirements for egress applications such as side and rear exit doors in commercial buildings. Available with Emergency Battery Backup option.

LUMEN CODES	DISTRIBUTION	25,000 HR	50,000 HR	60,000 HR
A2, B2	AF	L99	L99	L99
C2, D2	AF	L94	L87	L85

**Luminaire Ambient Temperature Factor**

AMBIENT TEMP (°C)	INITIAL FLUX FACTOR	AMBIENT TEMP (°C)	INITIAL FLUX FACTOR
10	1.02	30	0.99
20	1.01	40	0.98
25	1.00	50	0.97

**Optical System**

Lumens: 1700 - 2000  
Distribution: Asymmetric Forward  
Efficacy: 107-148 LPW  
CCT: 2700, 3000K, 4000K, 5000K  
CRI: >70

**Electrical**

Input Voltage: 120-277V & 347V  
Input Frequency: 50/60Hz  
Power Factor: > 90% at rated watts  
Total Harmonic Distortion: < 20% at rated watts

**Surge Protection**

Surge Protection: 10kV/5KA (Standard)  
3kV/15KA (EMBB)

**Emergency Battery Backup**

Provides reliable emergency operations when there is a loss to normal power, supported by Independent Secondary Battery.

- Hold-Up Time: 90 minutes @ 1400 lumens
- Meet egress light level and uniformity requirements
- Not available in 347V
- Operating Temperature (for EMBB models) 0° to 50°C

Warranty: 5 Year (Standard)

Prepared By: FSG June 15, 2023 128 David Burrough | david.burrough@fsg.com Index 7

**FSC** Project Name: ALDI  
Manufacturer: GE CURRENT  
Model Number: EAACL010FAAF750ND01  
Notes: Finish will be Silver

Type: **L31**

**EAACL® Series**  
LED Area Light/Compact Low Wattage

Current's EAL Series of Area Light luminaires offer a wide range of optical patterns, color temperatures, lumen packages, and mounting configurations to optimize area light applications, as well as provide versatility in lighting design within the same form factor.

LUMEN CODES	25,000 HR	50,000 HR	60,000 HR
A2, A3, A4, B2, B3, B4, C2, C3, C4, D2, D3, D4, E2, E3, E4, F2, F3, F4	L94	L90	L88
H2, H3, H4	L97	L96	L94

**Luminaire Ambient Temperature Factor**

AMBIENT TEMP (°C)	INITIAL FLUX FACTOR	AMBIENT TEMP (°C)	INITIAL FLUX FACTOR
10	1.02	30	0.99
20	1.01	40	0.98
25	1.00	50	0.97

**Optical System**

Lumens: 2900 - 20,400  
Distribution: Asymmetric Forward Type IV, Asymmetric Wide Type III, Asymmetric Backward/Recessed Type II  
Efficacy: 123 - 143 LPW  
CCT: 3000K, 4000K, 5000K  
CRI: >70

**Electrical**

Input Voltage: 120-277V & 347-480V  
Input Frequency: 50/60Hz  
Power Factor: > 90% at rated watts  
Total Harmonic Distortion: < 20% at rated watts

**Surge Protection**

Surge Protection: 10kV/5KA (Standard)  
3kV/15KA (EMBB)

**Warranty**

5 Year (Standard)

Prepared By: FSG June 15, 2023 151 David Burrough | david.burrough@fsg.com Index 7

**FSC** Project Name: ALDI  
Manufacturer: GE CURRENT  
Model Number: 4424BA-17-3K

Type: **L24**

**4424**  
120V  
3\"/>

The Outdoor LED Cylinder Family features wet location rated wall mount style cylinders with down light and up & down light options. Choose from energy efficient 13W or 17W AC modules, with finishes available in white, black, brushed nickel, or oil-rubbed bronze. Features Triac dimming down to 5%, using most standard dimmers. Utilizes AC circuit on board technology for cooler operating temperature and extended lifetime.

LUMEN CODES	DISTRIBUTION	25,000 HR	50,000 HR	60,000 HR
A2, B2	AF	L99	L99	L99
C2, D2	AF	L94	L87	L85

**Luminaire Ambient Temperature Factor**

AMBIENT TEMP (°C)	INITIAL FLUX FACTOR	AMBIENT TEMP (°C)	INITIAL FLUX FACTOR
10	1.02	30	0.99
20	1.01	40	0.98
25	1.00	50	0.97

**Optical System**

Lumens: 3,600 - 7,100  
Distribution: Symmetric Medium  
Efficacy: 119 - 138 LPW  
CCT: 3000K, 4000K, 5000K  
CRI: >70

**Electrical**

Input Voltage: 120-277V & 347V  
Input Frequency: 50/60Hz  
Power Factor: > 90% at rated watts  
Total Harmonic Distortion: < 20% at rated watts  
Surge Protection: Standard Surge: 6kV/3kA

**Warranty**

5 Year (Standard)

Prepared By: FSG June 15, 2023 144 David Burrough | david.burrough@fsg.com Index 7

**FSC** Project Name: ALDI  
Manufacturer: GE CURRENT  
Model Number: ECLS010A5SM73011RMWHTE

Type: **L22**

**ECLS Soffit**  
LED Canopy Light

The Evolve® Canopy LED Soffit (ECLS) offers energy efficiency and quality of light in a sleek, low-profile look and style. The ECLS features a diffused aperture which spreads the source lumens for even light distribution and low glare. To be used for wet/dry deck applications only (enclosed canopy or soffit).

LUMEN CODES	25,000 HR	50,000 HR	60,000 HR
A5	L96	L93	L91
B5	L95	L93	L92

**Luminaire Ambient Temperature Factor**

AMBIENT TEMP (°C)	INITIAL FLUX FACTOR	AMBIENT TEMP (°C)	INITIAL FLUX FACTOR
10	1.02	30	0.99
20	1.01	40	0.98
25	1.00	50	0.97

**Optical System**

Lumens: 3,600 - 7,100  
Distribution: Symmetric Medium  
Efficacy: 119 - 138 LPW  
CCT: 3000K, 4000K, 5000K  
CRI: >70

**Electrical**

Input Voltage: 120-277V & 347V  
Input Frequency: 50/60Hz  
Power Factor: > 90% at rated watts  
Total Harmonic Distortion: < 20% at rated watts  
Surge Protection: Standard Surge: 6kV/3kA

**Warranty**

5 Year (Standard)

Prepared By: FSG June 15, 2023 153 David Burrough | david.burrough@fsg.com Index 7

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.						
CHECK: CAG						

ALDI #143  
HILLSDALE, MICHIGAN

SITE LIGHTING DETAILS

CLIENT: ALDI, Inc.  
2625 N. STOCKBRIDGE ROAD  
WEBBERVILLE, MICHIGAN 48892  
(517) 521-3907

SCALE: N/A  
PROJECT NO: 9234510  
DWG NAME: 4510 LT  
ISSUED: APR. 02, 2024

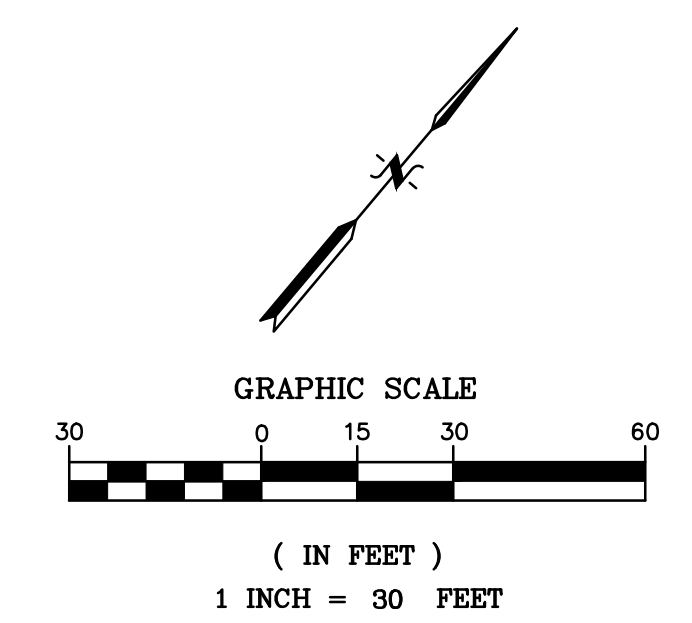
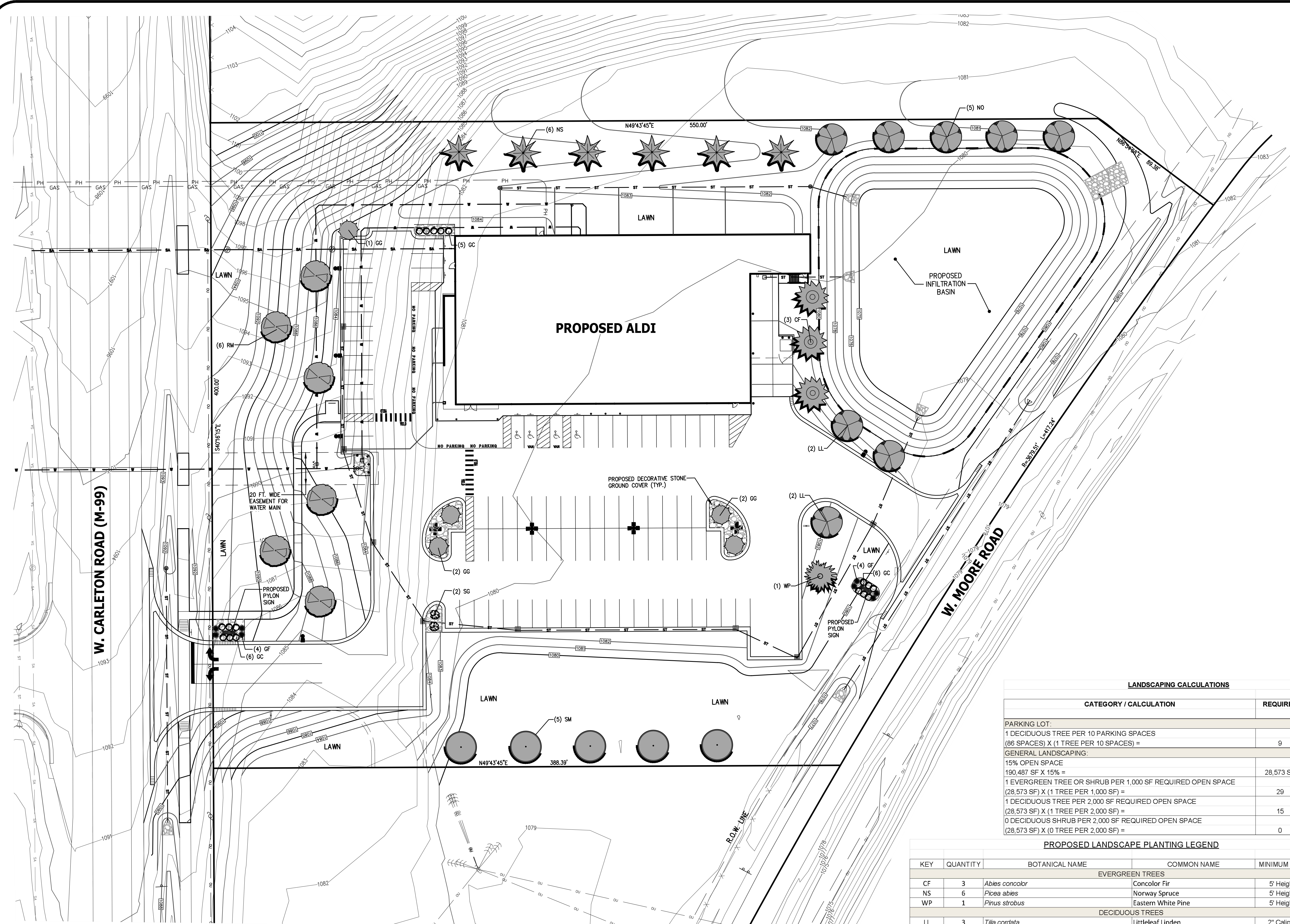
**LT2**

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

3 WORKING DAYS BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171 (TOLL FREE)  
OR VISIT CALL811.COM

**DESIGN, INC.**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESS DRIVE  
BRIGHTON, MICHIGAN 48114





- ### LEGEND
- = MISC. STRUCTURE (AS LABELED)
  - = BOLLARD
  - = SIGN
  - = LIGHT BASE
  - = STREET LIGHT
  - = OVERHEAD TRAFFIC SIGNAL
  - = UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX)
  - = AIR CONDITIONER UNIT
  - = UTILITY MANHOLE (AS LABELED)
  - = UTILITY POLE W/GUY WIRE
  - = OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
  - = U/G UTILITY LINES (ELECTRIC/PHONE/CABLE)
  - = DECIDUOUS TREE W/IDENTIFIER
  - = CONIFEROUS TREE W/IDENTIFIER
  - = DECIDUOUS SHRUB
  - = EXISTING TREE DRIP LINE
  - = FENCE (CHAIN LINK UNLESS OTHERWISE STATED)
  - = GUARD RAIL
  - = EDGE OF GRAVEL
  - = CONCRETE CURB (UNLESS OTHERWISE STATED)
  - = SANITARY SEWER MANHOLE W/IDENTIFIER
  - = SANITARY SEWER PIPE
  - = CLEAN OUT
  - = STORM WATER MANHOLE W/IDENTIFIER
  - = CATCH BASIN W/IDENTIFIER
  - = FLARED END SECTION
  - = STORM WATER DRAINAGE PIPE
  - = HYDRANT
  - = WATER SHUT OFF
  - = WATER VALVE
  - = WATER VALVE BOX
  - = WATER MAIN
  - = GAS SHUT OFF
  - = U/G GAS
  - = SPOT ELEVATION
  - = EXISTING 1' CONTOUR
  - = EXISTING 5' CONTOUR
  - = PROPOSED 1' CONTOUR
  - = PROPOSED 5' CONTOUR
  - = PROPOSED LIGHT POLE
  - = PROPOSED SANITARY SEWER
  - = PROPOSED WATER MAIN
  - = PROPOSED STORM SEWER
  - = PROPOSED STORM STRUCTURES
  - = PROPOSED CURB AND GUTTER

#### LANDSCAPING CALCULATIONS

CATEGORY / CALCULATION	REQUIRED	PROPOSED
<b>PARKING LOT:</b>		
1 DECIDUOUS TREE PER 10 PARKING SPACES (86 SPACES) X (1 TREE PER 10 SPACES) =	9	9
<b>GENERAL LANDSCAPING:</b>		
15% OPEN SPACE 190,487 SF X 15% =	28,573 SF	85,667 SF
1 EVERGREEN TREE OR SHRUB PER 1,000 SF REQUIRED OPEN SPACE (28,573 SF) X (1 TREE PER 1,000 SF) =	29	29
1 DECIDUOUS TREE PER 2,000 SF REQUIRED OPEN SPACE (28,573 SF) X (1 TREE PER 2,000 SF) =	15	15
0 DECIDUOUS SHRUB PER 2,000 SF REQUIRED OPEN SPACE (28,573 SF) X (0 TREE PER 2,000 SF) =	0	8

#### PROPOSED LANDSCAPE PLANTING LEGEND

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE	ROOT
EVERGREEN TREES					
CF	3	<i>Abies concolor</i>	Concolor Fir	5' Height	B & B
NS	6	<i>Picea abies</i>	Norway Spruce	5' Height	B & B
WP	1	<i>Pinus strobus</i>	Eastern White Pine	5' Height	B & B
DECIDUOUS TREES					
LL	3	<i>Tilia cordata</i>	Littleleaf Linden	2" Caliper	B & B
NO	5	<i>Quercus rubra</i>	Northern Red Oak	2" Caliper	B & B
RM	6	<i>Acer rubrum</i>	Red Maple	2" Caliper	B & B
SM	5	<i>Acer saccharum 'Legacy'</i>	Legacy Sugar Maple	2" Caliper	B & B
ORNAMENTAL TREES					
GG	5	<i>Ginkgo biloba 'Goldspire'</i>	Goldspire Ginkgo	1.5" Caliper	B & B
EVERGREEN SHRUBS					
GC	17	<i>Juniperus communis 'Gold Cone'</i>	Gold Cone Juniper	2' Height	Container
SG	2	<i>Juniperus pfitzeriana 'Sea Green'</i>	Sea Green Juniper	2' Height	Container
DECIDUOUS SHRUBS					
GF	8	<i>Potentilla fruticosa 'Goldfinger'</i>	Goldfinger Potentilla	2' Height	Container

**NOTES:**  
 1. SEE THE SOIL EROSION AND SEDIMENTATION CONTROL PLAN, SHEET SE1, FOR LIMITS OF SOD AND HYDRO-SEED FOR ESTABLISHING LAWN AREAS.

**811**  
 Know what's below.  
 Call before you dig.  
 3 WORKING DAYS BEFORE YOU DIG  
 CALL 811 OR 1-800-482-7171 (TOLL FREE)  
 OR VISIT CALL811.COM

**DESIGN INC.**  
 (810) 227-9533  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 2183 PLESS DRIVE  
 BRIGHTON, MICHIGAN 48114

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED PER CITY REVIEW COMMENTS			
CHECK: CAG						

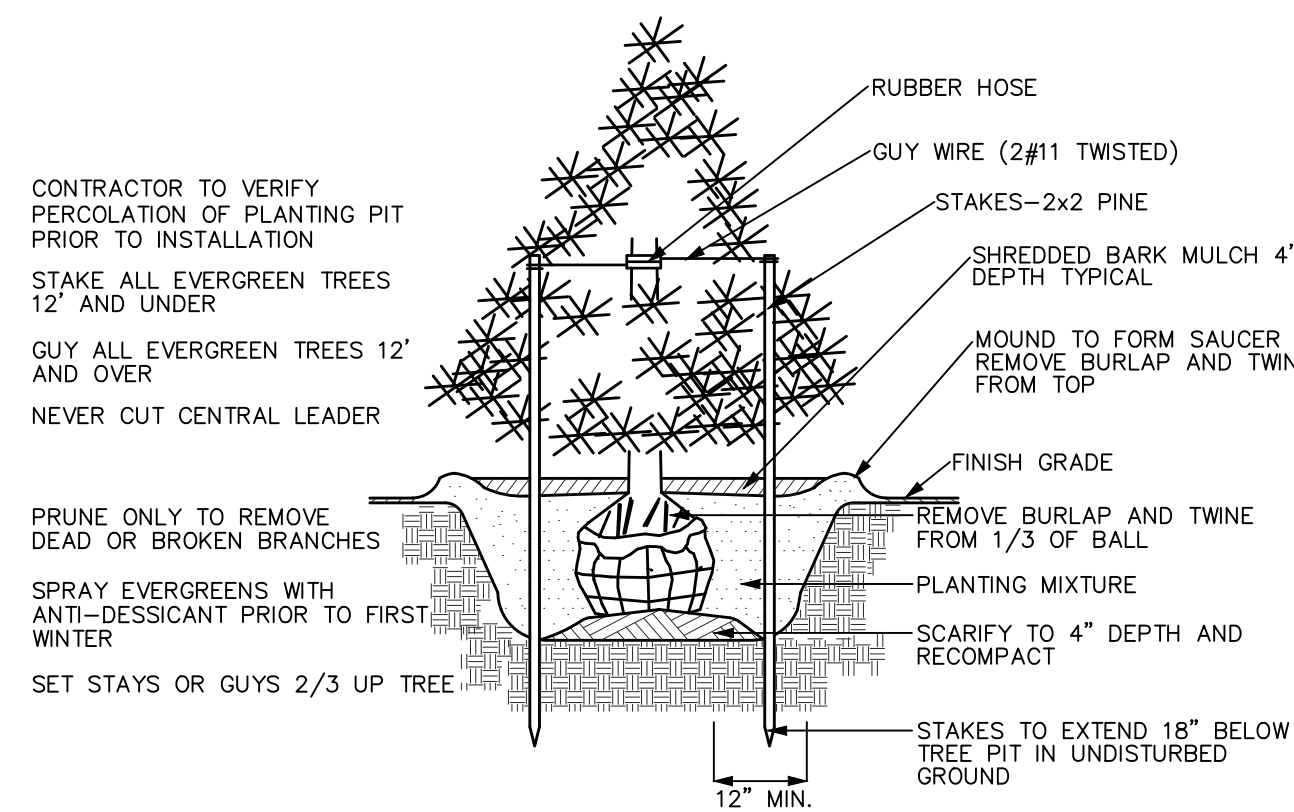
**ALDI #143  
 HILLSDALE, MICHIGAN**

**LANDSCAPE PLAN**

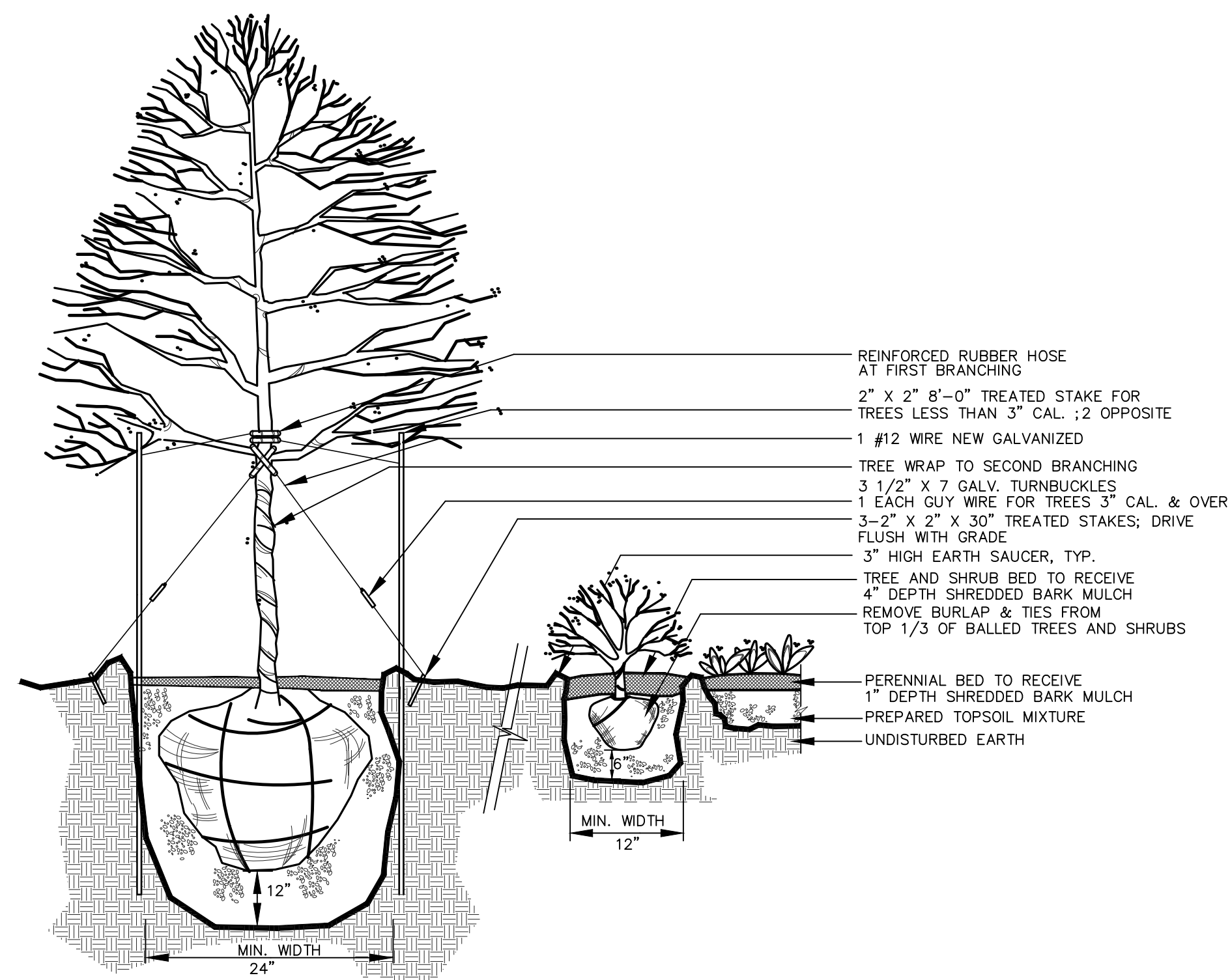
CLIENT:  
 ALDI INC  
 2625 N. STOCKBRIDGE ROAD  
 WEBBERVILLE, MICHIGAN, 48892  
 (517) 521-3907

SCALE: 1in = 30ft  
 PROJECT No.: 9234510  
 DWG NAME: 4510 LA  
 ISSUED: APR. 02, 2024

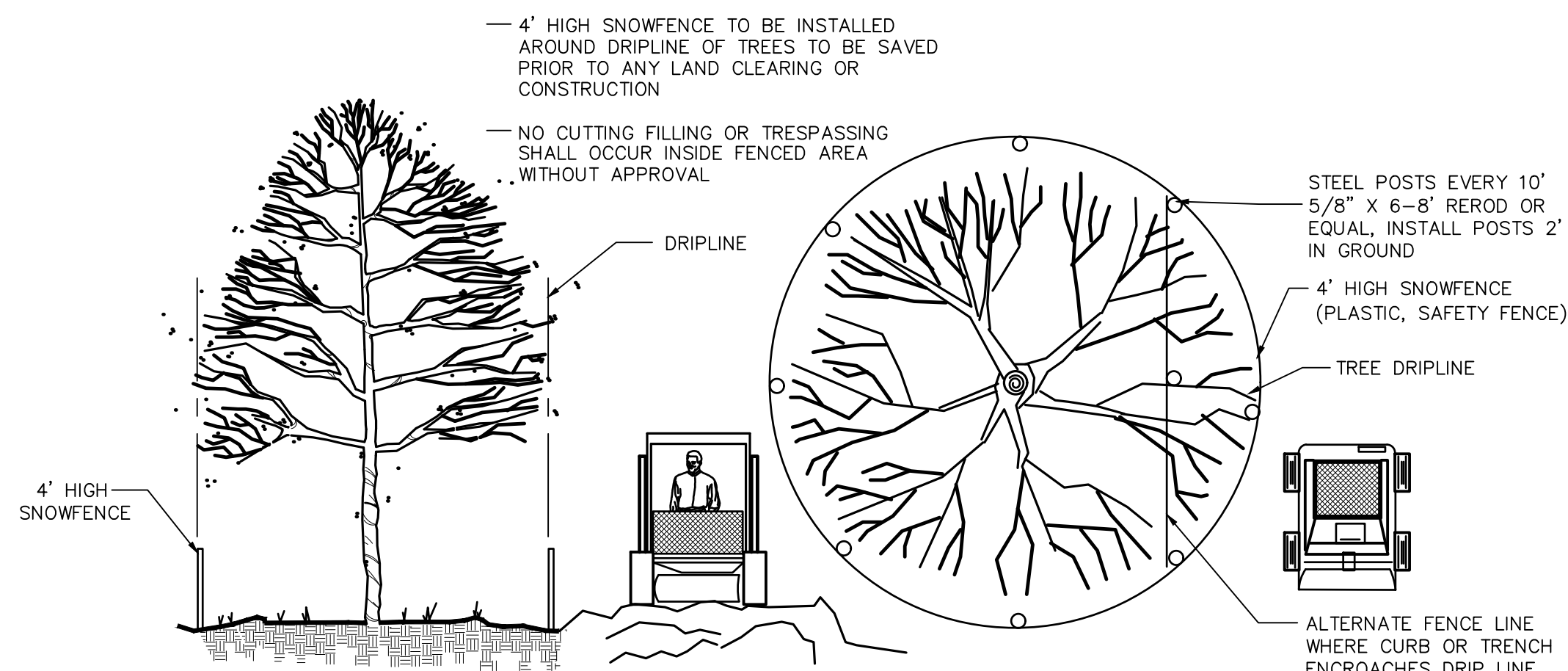
LA1



**TYPICAL EVERGREEN TREE PLANTING**  
NOT TO SCALE



**TYPICAL TREE/SHRUB/PERENNIAL PLANTING**  
NOT TO SCALE



**TREE PROTECTION DETAIL**  
NOT TO SCALE

**LANDSCAPING NOTES:**

- All minimum planting sizes specified on the Project Plans shall be at the time of planting.
- All landscape materials shall be as specified on the Project Plans or approved equal. Substitutions shall not be made without prior written approval from the Project Engineer and receipt of the Owner's Authorization.
- All plant material shall be free of disease and insects and shall conform to the American Standard of Nursery Stock of the American Association of Nurserymen.
- All landscape plantings shall be planted and maintained in a healthy condition and shall be guaranteed by the Landscape Contractor and/or Supplier for a minimum period of 1 year from the time of planting. Any plantings that die or become diseased during the guarantee period shall be removed and replaced by the Landscape Contractor and/or Supplier at no cost to the Owner.
- Excavations for container or balled plantings shall be no deeper than the root ball or container and shall be at least twice the diameter of the root ball or container.
- Excavations for bare root plantings shall be no deeper than the longest roots and shall be at least twice the diameter of the root spread.
- The sides of planting excavations in heavy and/or wet soils shall be scarified with a fork, pick or shovel to eliminate glazing.
- Landscape planting backfill shall consist of a prepared mixture of peat moss, composted manure and topsoil or suitable excavated native soil material mixed with the appropriate soil conditioners that are compatible with the native soil and plant species. The type and mixture ratio of soil conditioners shall be in accordance with the Landscape Supplier's recommendations.
- The Landscape Contractor shall stake and reinforce all trees to prevent wind damage. The Landscape Contractor shall remove all tree reinforcement and stakes upon expiration of the guarantee period.
- Perennials shall be planted on a 3" minimum bed of prepared peat moss, composted manure and topsoil mixture.
- Landscape beds shall be separated from lawn areas with landscape edging. Landscape edging shall be black heavy-duty polyethylene type with UV protection and a double V-tip bottom edge to prevent frost heave. Landscape edging shall be staked in accordance with the Manufacturer's recommendations to prevent frost heave. Landscape edging shall be installed in strict accordance with the Manufacturer's specifications and recommendations.
- Decorative stone ground cover, where specified on the project plans, shall be 2" to 4" diameter washed river rock placed 4" deep.
- Mulch ground cover, where specified on the project plans, shall be bark mulch, consisting of 50% shredded bark and 50% wood chips, 3/4 to 2 inch in size, uniformly mixed and free of elm wood. Bark mulch shall be placed uniformly throughout the landscape bed, 3" deep within tree and shrub beds and 1" deep within perennial beds.
- Ground cover within landscape beds shall be placed over a landscape fabric weed barrier. Landscape fabric shall be non-woven, 4 oz. per sq. yd. minimum weight, with UV protection. Landscape fabric shall be installed in strict accordance with the Manufacturer's specifications and recommendations. Landscape fabric shall not be installed over or within 12 inches of perennial plantings.
- Lawn areas shall be established with 3" minimum depth of prepared topsoil and hydroseeded. The Landscape Contractor shall guarantee all lawn areas for a minimum period of 1 year from time of seeding. All lawn areas that do not take root or die during the guarantee period shall be re-hydroseeded as appropriate by the Landscape Contractor at no cost to the Owner. All lawn areas that become diseased during the guarantee period shall be removed and re-hydroseeded as appropriate by the Landscape Contractor at no cost to the Owner.
- Topsoil shall be a dark, organic, natural surface soil free of clay lumps, peat, muck, subsoil, noxious weeds and other foreign material such as roots, sticks and rocks over 1/2" diameter. Topsoil shall not be frozen or muddy. All earthen areas to receive topsoil shall be finish graded and properly trimmed. Topsoil shall be spread on the prepared areas to a depth of 3 inches. After spreading, any large clods and lumps of topsoil shall be broken up and pulverized. Stones and rocks over 1/2" in diameter, roots, litter and all foreign matter shall be raked up and disposed of by the Landscape Contractor. Seed and mulch shall be placed within 5 days of topsoil placement.
- Seed mixture for lawn areas shall consist of 10% Kentucky Blue Grass, 20% Perennial Rye Grass, 30% Hard Fescue and 40% Creeping Red Fescue. Hydroseed shall be placed within 5 days of topsoil placement and shall be placed to provide complete and uniform coverage. Fertilizer shall be placed at 80 pounds per acre, hydro mulch at 1,200 pounds per acre and water at 500 gallons per acre unless otherwise specified by the Seed Distributor/Manufacturer. All over spray areas shall be properly cleaned and restored at no expense to the contract.
- Storm water seed mixture for storm water management basins shall be Stormwater Seed Mix by Cardno Native Plant Nursery or approved equal. Seed mixture shall be applied at 32.97 pounds per acre unless otherwise specified by the Manufacturer. Fertilizer and mulch shall be placed in accordance with the Manufacturer's specifications.
- Seed and mulch may be substituted for hydroseed when authorized by the Owner. Seed mixtures shall meet the requirements for lawn areas as outlined above. Seed shall be uniformly applied at a rate of 220 lbs per acre unless otherwise recommended by the Seed Distributor/Manufacturer. Seed mixture shall be fertilized. Fertilizer shall be uniformly applied at of 240 pounds per acre of chemical fertilizer nutrients in equal portions (10-10-10) of Nitrogen, Phosphoric Acid and Potash.
- All seeded areas with a slope less than 1:4 shall be stabilized with straw mulch placed at 2 tons per acre unless otherwise recommended by the seed Distributor/Manufacturer. Erosion control blankets shall be substituted for straw mulch in roadway greenbelts, lawn areas adjacent to heavy traffic, lawn areas subject to high winds, slopes of 1:4 or greater and within ditches, swales and other areas exposed to concentrated overland storm water flow. Erosion control blankets shall consist of 100% straw fiber matrix with photodegradable polypropylene netting and have a 12-month minimum longevity rating. Erosion control blankets shall be pinned with biodegradable pins and shall be installed in accordance with the Manufacturer's recommendations.
- Sod shall only be utilized where specified on the project plans. (Sod may be substituted for hydroseed when required by the Municipality or if necessary for site stabilization late in the growing season. Sod shall not be substituted without receipt of the Owner's Authorization.) Sod shall be a drought tolerant species consisting primarily of Fine Leafed Fescues including Red Fescue, Chewings Fescue and Hard Fescue with Kentucky Bluegrass filler for hardness. Sod shall be placed on a prepared subgrade. Subgrade shall be finish graded and filled to a depth of 4" to 6". All foreign material, roots, sticks, large soil clumps and rocks over 2" diameter shall be removed from the subgrade. Sod shall not be placed on frozen or saturated subgrade. Fertilizer, lime and/or compost shall be placed over the prepared subgrade in accordance with the Sod Supplier/Manufacturer's recommendations. Sod shall be placed in accordance with the Sod Supplier/Manufacturer's recommendations. Sod shall be installed with biodegradable stakes on slopes of 1:4 or greater and within ditches, swales and other areas exposed to concentrated overland storm water flow. All sod shall be planted and maintained in a healthy condition and shall be guaranteed by the Landscape Contractor and/or Supplier for a minimum period of 1 year from the time of planting. Any sod that dies or become diseased during the guarantee period shall be removed and replaced by the Landscape Contractor and/or Supplier at no cost to the Owner.
- The Landscape Contractor shall be responsible for watering non-irrigated plantings and sod during dry weather conditions throughout the 1-year guarantee period as necessary to promote growth and establishment. All proposed trees shall be watered with Treegator watering bags, or equivalent. Install one (1) watering bag on each newly planted tree in accordance with the manufacturer's specifications. Refill water bags every 5 to 7 days or as needed during non-winter seasons.
- The Contractor shall maintain the lawn areas during the construction period. Maintenance shall include, but is not limited to, routine mowing and removal of trash and debris on an as needed basis and/or as directed by ALDI Inc.
- Existing on-site trees and/or shrubs that are to be preserved shall be trimmed / pruned as directed by ALDI Inc.

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

3 WORKING DAYS BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171 (TOLL FREE)  
OR VISIT CALL811.COM

**DESIGN INC.**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESS DRIVE  
BRIGHTON, MICHIGAN 48114

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.						
CHECK: CAG						

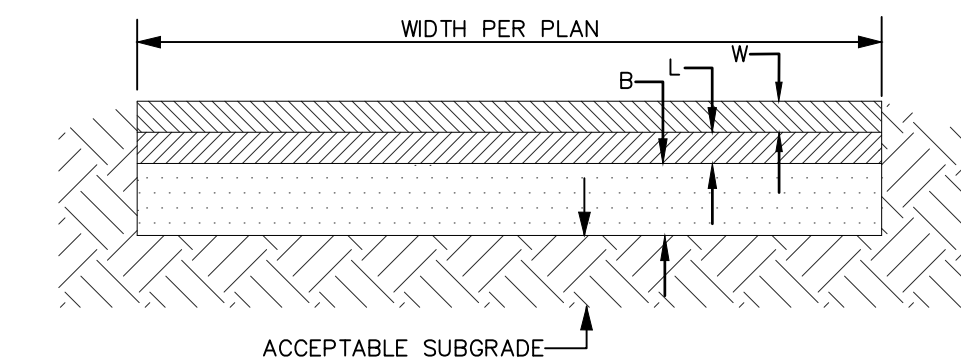
ALDI #143  
HILLSDALE, MICHIGAN

LANDSCAPE NOTES  
& DETAILS

CLIENT: ALDI INC  
2625 N. STOCKBRIDGE ROAD  
WEBBERVILLE, MICHIGAN, 48892  
(517) 521-3907

SCALE: N/A  
PROJECT No.: 9234510  
DWG NAME: 4510 LA  
ISSUED: APR. 02, 2024

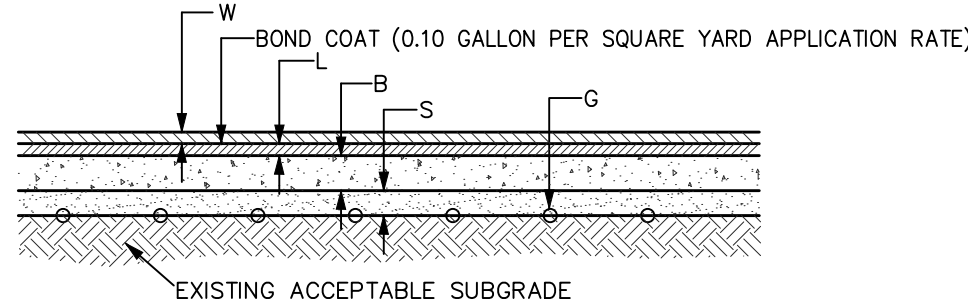
LA2



### BIKE PATH CROSS-SECTION

NOT TO SCALE  
NOTE: SCHEDULE PATH AFTER ALL UNDERGROUND

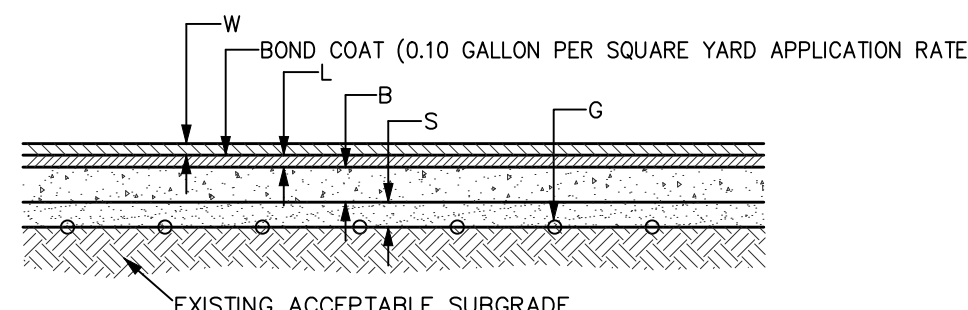
KEY	DESCRIPTION	MATERIAL SPECIFICATION	MINIMUM COMPACTED THICKNESS
W	WEARING COURSE	MDOT 36A	1.5"
L	LEVELING COURSE	MDOT 13A	1.5"
B	AGGREGATE BASE	MDOT 21AA	6"
S	GRANULAR SUBBASE	N/A	N/A
G	GEOGRID	N/A	N/A



### STANDARD DUTY BITUMINOUS PAVEMENT CROSS SECTION

NOT TO SCALE

KEY	DESCRIPTION	MATERIAL SPECIFICATION	MINIMUM COMPACTED THICKNESS
W	WEARING COURSE	MDOT 4E3	1.5"
L	LEVELING COURSE	MDOT 13A	1.5"
B	AGGREGATE BASE	MDOT 21AA	8"
S	GRANULAR SUBBASE	MDOT CLASS II	12"
G	GEOGRID	N/A	N/A



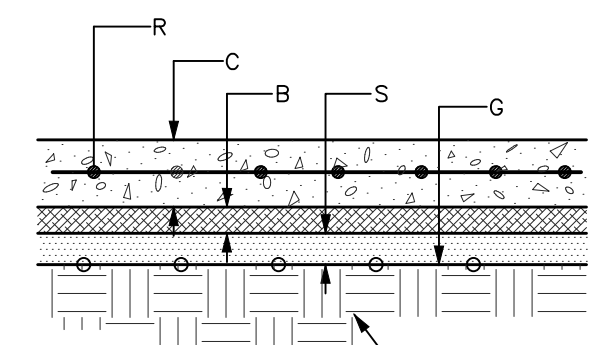
### HEAVY DUTY BITUMINOUS PAVEMENT CROSS SECTION

NOT TO SCALE

KEY	DESCRIPTION	MATERIAL SPECIFICATION	MINIMUM COMPACTED THICKNESS
W	WEARING COURSE	MDOT 4E3	2.5"
L	LEVELING COURSE	MDOT 13A	1.5"
B	AGGREGATE BASE	MDOT 21AA	8"
S	GRANULAR SUBBASE	MDOT CLASS II	12"
G	GEOGRID	N/A	N/A

#### BITUMINOUS PAVEMENT CROSS SECTION NOTES:

- The construction specifications of the Local Municipality are a part of this work. Refer to the General Notes and the Bituminous Pavement Cross Section Details on the Project Plans for additional requirements. Construction of the bituminous pavement cross section is subject to inspection by the ALDI Representative and/or Project Engineer. The Contractor shall be responsible for contacting the ALDI Representative at each stage of construction of the bituminous pavement cross section to schedule the necessary inspections.
- The Geotechnical Evaluation Report for the project site is a part of this work. The General Contractor, Earthwork Subcontractor, and Bituminous Pavement Subcontractor shall obtain, review, and become familiar with the Geotechnical Evaluation Report.
- The bituminous pavement cross section specifications are based on typical weather conditions during the June through September Construction Season. If the bituminous parking area and/or bituminous driveways are to be constructed during any other time of the year and/or if weather conditions are unseasonably wet, then modifications to the bituminous pavement cross section specifications may be necessary. If either of these conditions exists, then contact the Material Testing Engineer and/or the Project Engineer for additional requirements.
- The existing subgrade soils shall be prepared in accordance with the Geotechnical Evaluation Report. Unstable soils found within the 1 on 1 influence zone of the proposed pavement areas, such as muck, peat, topsoil, marl, silt or other unstable materials shall be excavated and replaced with structural fill. Structural fill shall be MDOT Class II granular material placed in accordance with the General Notes on the Project Plans and the Geotechnical Evaluation Report.
- The bituminous pavement subgrade shall be prepared and proof rolled in accordance with the Geotechnical Evaluation Report. The Material Testing Engineer and/or the Project Engineer shall observe the subgrade proof roll. Areas of subgrade that do not pass a proof roll inspection shall be undercut in accordance with the Subgrade Undercut Notes and Details on the Project Plans. Alternative means of subgrade stabilization may be considered when recommended by the Material Testing Engineer. Alternative methods shall not be performed without receipt of the Owner's Authorization.
- The bituminous pavement granular subbase material shall be MDOT Class II sand. No granular subbase material substitutions shall be permitted without prior written approval of the Project Engineer and receipt of the Owner's Authorization. The granular subbase shall be compacted to a minimum of 95% of the maximum unit weight, Modified Proctor.
- The bituminous pavement aggregate base material shall be MDOT 21AA crushed angular limestone or crushed angular natural stone aggregate material. Crushed concrete shall NOT be utilized for the standard or heavy duty bituminous pavement aggregate base. No aggregate base material substitutions shall be permitted without prior written approval of the Project Engineer and receipt of the Owner's Authorization. The aggregate base shall be compacted to a minimum of 95% of the maximum unit weight, Modified Proctor.
- The bituminous pavement leveling course material shall be MDOT 13A bituminous material placed in 1 lift. The bituminous pavement wearing course material shall be MDOT 4E3 bituminous material placed in 1 lift. The bituminous pavement leveling and wearing courses shall NOT be combined into a single course. No bituminous material substitutions shall be permitted without prior written approval of the Project Engineer and receipt of the Owner's Authorization. Compaction of the leveling course shall be achieved prior to placement of the wearing course. Any sediment, silt, debris and other foreign materials that accumulate on the leveling course shall be removed prior to placement of the wearing course. The bond coat shall be sprayed on the leveling course within 24 hours of placement of the wearing course. The bituminous pavement material shall be compacted to a minimum of 95% of the 50-blows Marshall Density.
- Placement of the bituminous pavement leveling course and bituminous pavement wearing course shall be performed in two separate mobilizations. Placement of the bituminous pavement wearing course shall be postponed as directed by the General Contractor and/or the Owner until the majority of the construction activities are complete. Repair of the bituminous leveling course may be necessary due to construction traffic and/or any delay in placement of the bituminous wearing course. The bituminous leveling course shall be repaired as directed by Material Testing Engineer and/or Owner prior to placement of the bituminous wearing course.
- Bituminous mix designs shall be developed in accordance with the MDOT HMA Production Manual. The Contractor shall submit the bituminous pavement mix designs to the Material Testing Engineer for review and approval a minimum of 3 business days prior to use. Bituminous pavement work shall not commence without receipt of the Material Testing Engineer's approval of the bituminous mix designs. The bituminous pavement mix design shall be a virgin mix. RAP mixtures shall not be utilized without prior written approval of the Material Testing Engineer and receipt of the Owner's authorization. RAP mixtures, if authorized, shall be designed and produced in accordance with MDOT Tier I or Tier II RAP Mixture Specifications. In no instance shall MDOT Tier III or non-MDOT RAP mixtures be permitted or utilized.



### STANDARD DUTY CONCRETE PAVEMENT CROSS-SECTION

NOT TO SCALE

KEY	DESCRIPTION	MATERIAL SPEC.	MIN. THICKNESS
R	REINFORCEMENT	WWF 6X6	W4.0 X W4.0
C	CONCRETE	MDOT P1-1A - 6 SACK	6"
B	AGGREGATE BASE	N/A	N/A
S	GRANULAR SUBBASE	MDOT CLASS II	6"
G	GEOGRID	N/A	N/A

#### CONCRETE PAVEMENT CROSS SECTION NOTES:

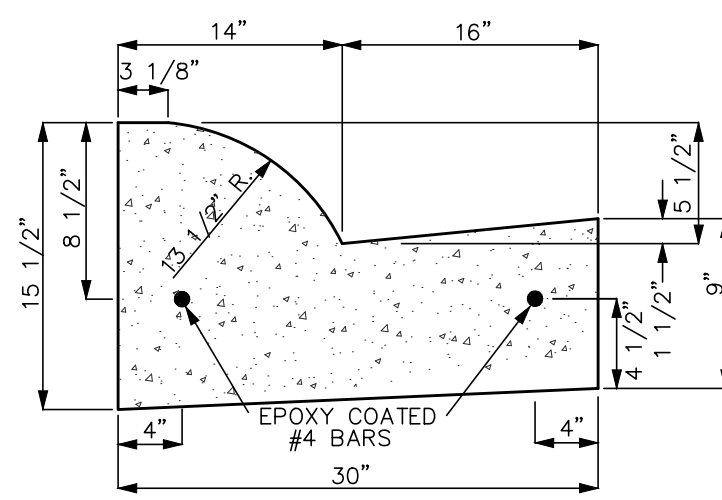
- The construction specifications of the Local Municipality are a part of this work. Refer to the General Notes and the Heavy Duty Concrete Pavement Cross Section Detail on the Project Plans for additional requirements. Construction of the concrete pavement cross section is subject to inspection by the ALDI Representative and/or Project Engineer. The Contractor shall be responsible for contacting the ALDI Representative at each stage of construction of the concrete pavement cross section to schedule the necessary inspections.
- The Geotechnical Evaluation Report for the project site, is a part of this work. The General Contractor, Earthwork Subcontractor and Concrete Pavement Subcontractor shall obtain, review and become familiar with the Geotechnical Evaluation Report.
- The concrete pavement cross section specifications are based on typical weather conditions during the June through September Construction Season. If the concrete pavement areas are to be constructed during any other time of the year and/or if weather conditions are unseasonably wet, then modifications to the concrete pavement cross section specifications may be necessary. If either of these conditions exists, then contact the Material Testing Engineer and/or the Project Engineer for additional requirements.
- The existing subgrade soils shall be prepared in accordance with the Geotechnical Evaluation Report. Unstable soils found within the 1 on 1 influence zone of the proposed pavement areas, such as muck, peat, topsoil, marl, silt or other unstable materials shall be excavated and replaced with structural fill. Structural fill shall be MDOT Class II granular material placed in accordance with the General Notes on the Project Plans and the Geotechnical Evaluation Report.
- The concrete pavement subgrade shall be prepared and proof rolled in accordance with the Geotechnical Evaluation Report. The Material Testing Engineer and/or the Project Engineer shall observe the subgrade proof roll. Areas of subgrade that do not pass a proof roll inspection shall be undercut in accordance with the Subgrade Undercut Notes and Details on the Project Plans. Alternative means of subgrade stabilization may be considered when recommended by the Material Testing Engineer. Alternative methods shall not be performed without receipt of the Owner's Authorization.
- The concrete pavement compacted subbase material shall be MDOT Class II granular material. No subbase material substitutions shall be permitted without prior written approval of the Project Engineer and receipt of the Owner's Authorization. The subbase shall be compacted to a minimum of 95% of the maximum unit weight, Modified Proctor.
- Concrete material shall be MDOT P1 (I-A) 6.0 sack concrete pavement mixture with a minimum 28-day design compressive strength of 4,000 PSI and 6.5% (+/-1.5%) entrained air. The Contractor shall submit concrete mix design and aggregate mechanical analysis report to the Material Testing Engineer for review and approval prior to use.
- Standard Duty Concrete Pavement shall be reinforced with Welded Wire Fabric WWF 6 x6, W4.0xW4.0, placed at mid-depth of the concrete. See Structural Plans and Details within the Building Plans for additional requirements.
- Install transverse contraction joints and longitudinal contraction joints at the locations specified on the Project Structural Plans. Joints shall be 2" deep, unless noted otherwise on the Project Structural Plans. Tool joints in fresh concrete or saw cut within 4 hours after placement with soft cut saws.
- Provide 1" asphalt fiber control joint between concrete pavement and all other concrete structures such as concrete building foundations, concrete curb and concrete sidewalks.
- The Concrete Pavement shall not be exposed to vehicular traffic until the concrete has reached at least 75% of the design flexural strength.

#### PAVEMENT SUBGRADE UNDERCUT NOTES:

- Areas of pavement subgrade that do not pass a proof roll inspection shall be undercut when directed by the Material Testing Engineer and/or Project Engineer. All undercut work shall be witnessed and field measured by the Material Testing Engineer and/or Project Engineer. Copies of the field notes depicting the field measurements of the undercut areas shall be provided to the General Contractor and/or Earthwork Subcontractor and ALDI Inc.
- Undercut areas shall be excavated to a depth of 12" below the proposed subgrade elevation using an Excavator or Backhoe with a Smooth Edged Ditching Bucket so as not to scarify the underlying soils. Undercut areas shall remain free of all construction traffic and equipment to avoid rutting and/or tracking of the underlying soils.
- Mirafi HP 570 Woven Geotextile Fabric (or approved equal) shall be placed over all 12" undercut areas per the Manufacturer's specifications. Overlap all seams a minimum of 12" unless specified otherwise by the Manufacturer.
- Backfill the undercut areas with 1" x 3" minimum size crushed angular limestone up to the proposed subgrade elevation. Crushed concrete material shall NOT be substituted for crushed limestone material. The backfill material shall be spread with a Wide Track Dozer to minimize loading on the underlying soils. Static roll the backfill material with a large smooth drum roller.
- Construct the appropriate Bituminous or Concrete Pavement Cross Section over the undercut areas per the Project Plans.
- The General Contractor and/or Earthwork Subcontractor shall provide ALDI Inc with unit pricing to perform subgrade undercut work per square yard (SY) of undercut area. Undercut Unit Pricing SHALL include excavation, loading, hauling and offsite disposal of excess spoils, placement of geotextile fabric and backfill including all labor, equipment and materials necessary to complete pavement subgrade undercut work as specified on the Project Plans.

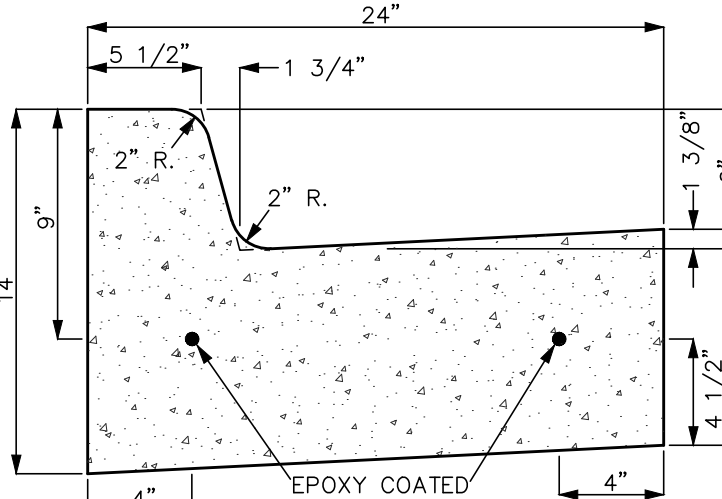
### MDOT TYPE D2 CURB

NOT TO SCALE



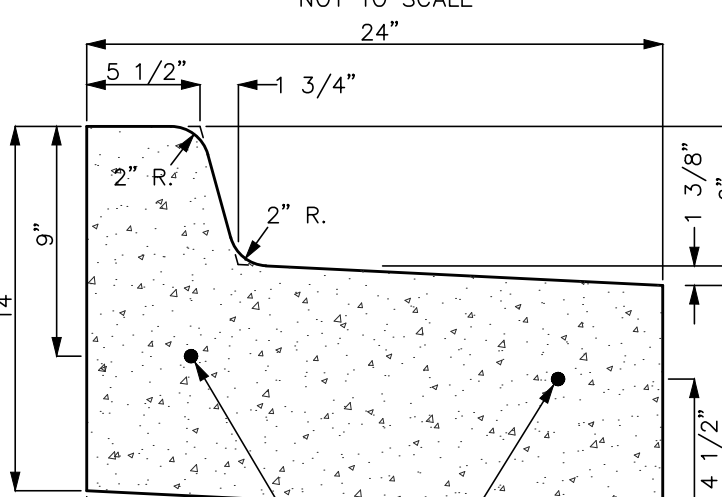
### MDOT TYPE B2 CURB

NOT TO SCALE



### MDOT TYPE F4 CURB

NOT TO SCALE

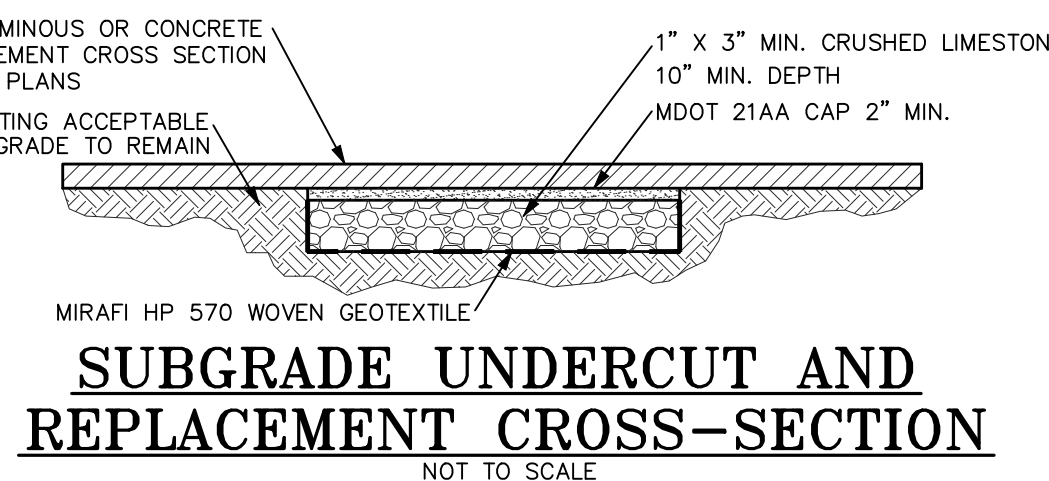


### MDOT TYPE F4 CURB REVERSE PITCH

NOT TO SCALE

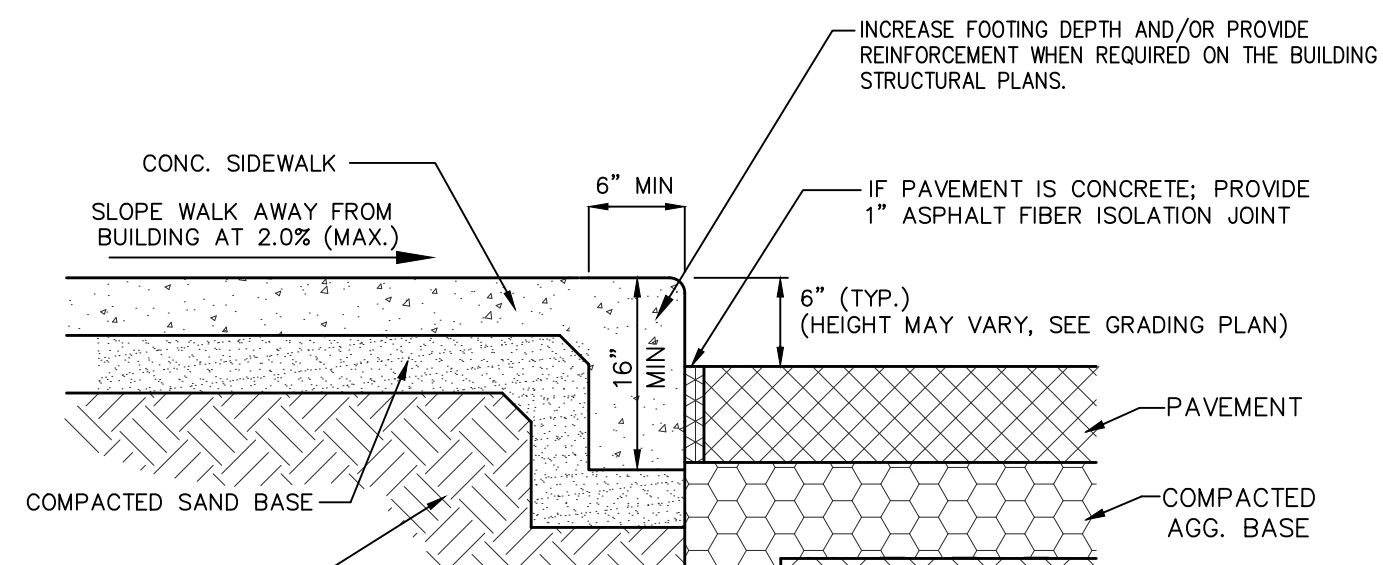
#### CONCRETE CURB NOTES:

- Refer to the project plans for the proposed locations of the specific curb types.
- The construction specifications of the appropriate Local Municipality are a part of this work. Refer to the General Notes and Curb Cross Section Details on the project plans for additional requirements.
- Extend the base and/or subbase material of the appropriate adjacent pavement cross-section horizontally to 1 foot behind the back of curb. Concrete curb shall be constructed on no less than 6" of combined depth of compacted base/subbase material.
- Concrete material shall be MDOT P1 (I-A) 6.0 sack concrete pavement mixture with a minimum 28 day design compressive strength of 4,000 PSI and 6.5% (+/-1.5%) entrained air. Contractor shall submit concrete mix design and aggregate mechanical analysis report to the Local Municipality and Engineer for review and approval prior to use.
- Install transverse contraction control joints in concrete curb with 1" minimum depth at 10' on center. Tool joints in fresh concrete or saw cut within 8 hours.
- Install transverse expansion control joints in concrete curb as follows: 400' maximum on center, at spring points of intersecting streets and within 10' on each side of catch basins. Transverse expansion control joints shall be 1" thick asphalt fiber joint filler matching entire curb cross section.
- Provide 1" asphalt fiber control joint between back of curb and all other concrete structures, such as concrete sidewalks and concrete driveways.
- Curb Contractor shall provide final adjustment of catch basin castings in curb line. Castings shall be tucked into structure water tight with concrete or mortar inside and outside of casting.
- Install curb cuts for all existing and proposed sidewalks and pedestrian ramps in accordance with the American Disabilities Act and the Barrier Free Design Requirements of the appropriate Local, County and/or State Agency. Refer to MDOT Standard Plan R-28, latest revision. Install curb cuts for all existing and proposed vehicular ramps and drives as noted on the project plans.



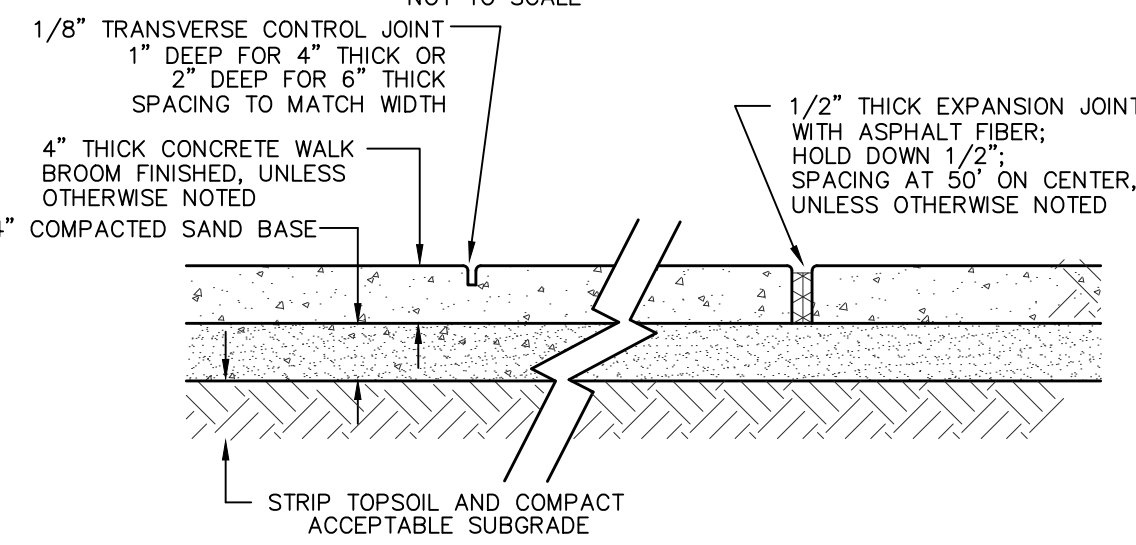
### SUBGRADE UNDERCUT AND REPLACEMENT CROSS-SECTION

NOT TO SCALE



### SIDEWALK WITH INTEGRAL CURB & ISOLATION JOINT DETAIL

NOT TO SCALE

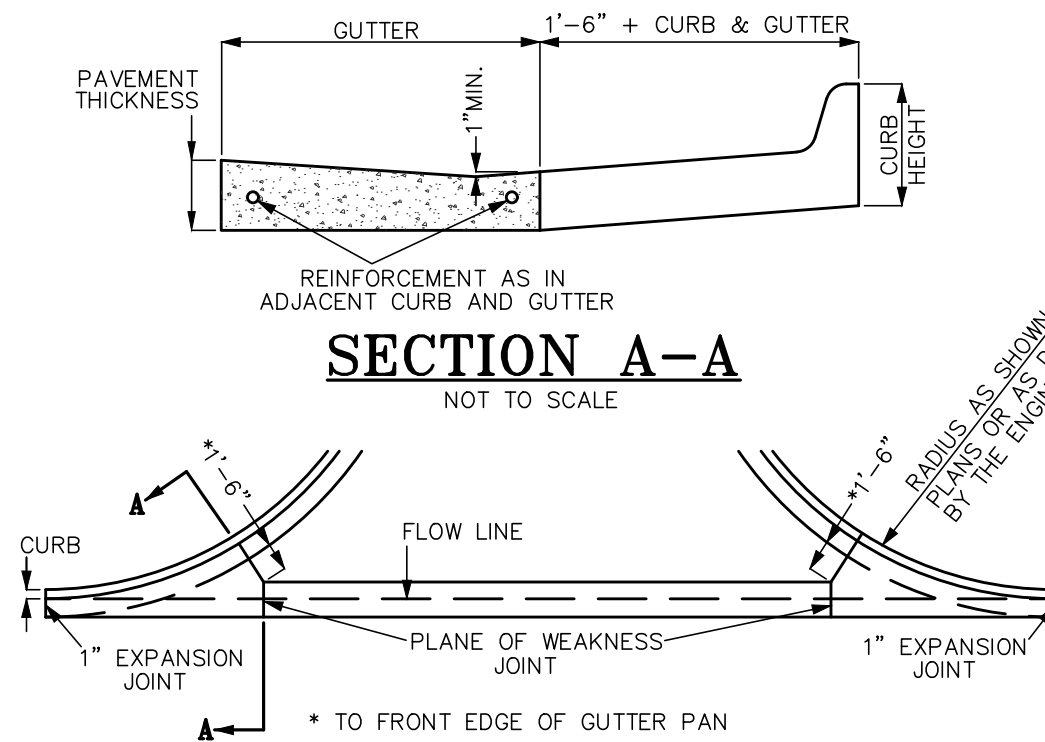


### SIDEWALK CROSS SECTION

NOT TO SCALE

#### SIDEWALK CROSS SECTION NOTES:

- The construction specifications of the Local Municipality are a part of this work. Refer to the General Notes and the Sidewalk Cross Section Details on the Project Plans for additional requirements.
- Sidewalk widths may vary. Refer to the Civil Construction Plans for the proposed sidewalk width at each location. Increase sidewalks to 6" minimum thickness at driveways and other areas exposed to vehicular traffic. Provide frost footings, increased depth integral curb footings and/or reinforcement in sidewalks adjacent to the building in accordance with the Project Structural Plans within the Building Plans.
- The existing subgrade soils shall be prepared prior to placement of the granular subbase. Unstable soils found within the 1 on 1 influence zone of the proposed sidewalk areas, such as muck, peat, topsoil, marl, silt or other unstable materials shall be excavated and replaced with structural fill. Structural fill shall be MDOT Class II granular material placed in accordance with the General Notes on the Project Plans.
- The sidewalk compacted subbase material shall be MDOT Class II sand. No subbase material substitutions shall be permitted without prior written approval of the Project Engineer and receipt of the Owner's Authorization. The subbase shall be compacted to a minimum of 95% of the maximum unit weight, modified proctor.
- Concrete material shall be MDOT P1 (I-A) 6.0 sack concrete pavement mixture with a minimum 28-day design compressive strength of 4,000 PSI and 6.5% (+/-1.5%) entrained air. The Contractor shall submit the concrete mix design and aggregate mechanical analysis report to the Material Testing Engineer and/or Project Engineer for review and approval prior to use.
- Install transverse contraction control joints in accordance with the Sidewalk Cross Section Detail. Space contraction control joints to match sidewalk width, but no greater than 10' on center. Tool joints in fresh concrete or saw cut within 8 hours.
- Install transverse expansion control joints in accordance with the Sidewalk Cross Section Detail. Space expansion control joints at 50 feet on center maximum. Transverse expansion control joints shall be 1/2" thick asphalt fiber joint filler matching entire sidewalk cross section.
- Provide 1" asphalt fiber control joint between concrete sidewalks and all other concrete structures, such as concrete building foundations, concrete curb and concrete driveways.
- Construct all Barrier Free Sidewalk Ramps in accordance with the American Disabilities Act and the Barrier Free Design Requirements of the appropriate Local, County or State Agency with jurisdiction over the project. Refer to MDOT Standard Plan R-28, latest revision.
- The Concrete Pavement shall not be exposed to vehicular traffic until the concrete has reached at least 75% of the design flexural strength.



### CONCRETE DRIVEWAY OPENING MDOT DETAIL "M"

NOT TO SCALE

#### GENERAL NOTES:

- Contractor shall perform the work in accordance with the requirements of the appropriate Local, County and State 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.
- 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 the each required permit has been obtained prior to commencement of the stage of work associated with the required permit(s).
- Contractor shall furnish liability insurance and property damage insurance to save harmless the Owner, Developer, Architect, Engineer, Surveyor and Government Agencies for any accident occurring during the construction period. Refer to the appropriate Local, County and State Agencies for additional requirements. Copies of insurance certifications shall be made available to the Owner/Developer.
- Contractor shall conduct and perform work in a safe and competent manner. Contractor shall perform all necessary measures to provide for traffic and pedestrian safety from the start of work and 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, the 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 over the work and safety precautions; said designated employee shall be on site at all times during the work.
- Contractor shall coordinate scheduling of all work in the proper sequence, including work by Subcontractors. Additional costs due to improper planning by Contractor or work done out of sequence as determined by standard acceptable construction practices, shall be Contractor's responsibility.
- Contractor shall contact the 811 Underground Public Utility Locating System or other appropriate local underground utility locating Agency, a minimum of three (3) working days prior to construction. Existing utility information on the project plans may be from information disclosed to this firm by the Utility Companies, Local, County or State Agencies, and/or various other sources. No guarantee is given as to the completeness or accuracy thereof. Prior to construction, locations and depths of all existing utilities (in possible conflict with the proposed improvements) shall be verified in the field.
- Contractor shall coordinate scheduling a Pre-Construction Meeting with Engineer prior to commencement of work.
- The Local Municipality, County and/or State in which the project is located may require an Engineer's Certification of construction if the proposed site improvements. Contractor shall verify the certification requirements with Engineer prior to commencement of work. Contractor shall coordinate construction staking, testing, documentation submittal and observation with the appropriate Agency, Surveyor and/or Engineer as required for Engineer's Certification and Government Agency Acceptance. All materials used and work done shall meet or exceed the requirements of certification and acceptance, the contract documents and the material specifications noted on the project plans. Any materials used or work done that does not meet said requirements, contract documents and/or specifications shall be replaced and/or redone at Contractor's expense. The Owner/Developer may wait for test results, certifications and/or Agency reviews prior to accepting work.
- Engineer may provide subsurface soil evaluation results, if available, to Contractor upon request. Subsurface soil evaluation results, soils 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 use as 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 and/or 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 Agencies. Refer to Soil Erosion and Sedimentation 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, including future building expansion areas, paved areas, including banked parking areas, and other areas subject to vehicular traffic and/or significant loading. Structural fill shall be placed using the controlled density method (12" maximum lifts, compacted to 95% maximum unit weight, modified proctor). Structural fill material shall meet or exceed the specifications of MDOT granular material unless noted otherwise on the project plans.
- All existing monuments, property corners, ground control and benchmarks shall be protected and preserved; and if disturbed by Contractor, shall be restored at Contractor's expense. Contractor shall notify Surveyor of any conflicts 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 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 located as acceptable to the Owner/Developer and to the appropriate Local, County and/or State Agency with jurisdiction over the road(s) providing access to the site. Construction access shall be maintained and cleaned in accordance with the appropriate Local, County and/or State Agencies and as directed by Owner/Developer and/or Engineer.
- Contractor shall take necessary precautions to protect all site improvements from heavy equipment and construction procedures. Damage resulting from Contractor actions shall be repaired at Contractor's expense.

**811**  
Know what's BELOW.  
Call before you dig.  
3 WORKING DAYS  
BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171  
(TOLL FREE)  
OR VISIT CALL811.COM

(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLYWOOD DRIVE  
BRIGHTON, MICHIGAN 48114

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED GENERAL NOTES
CHECK: CAG			

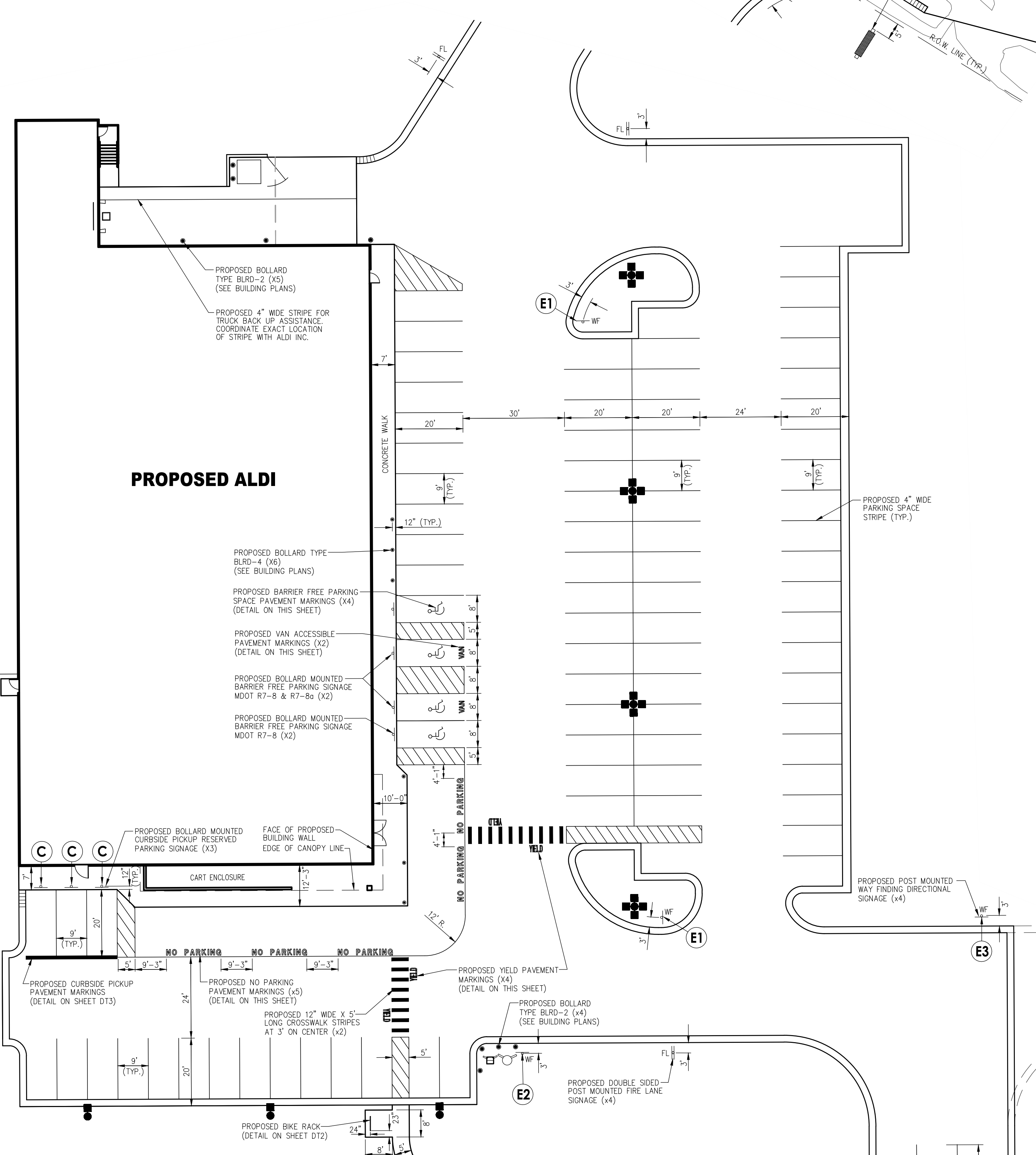
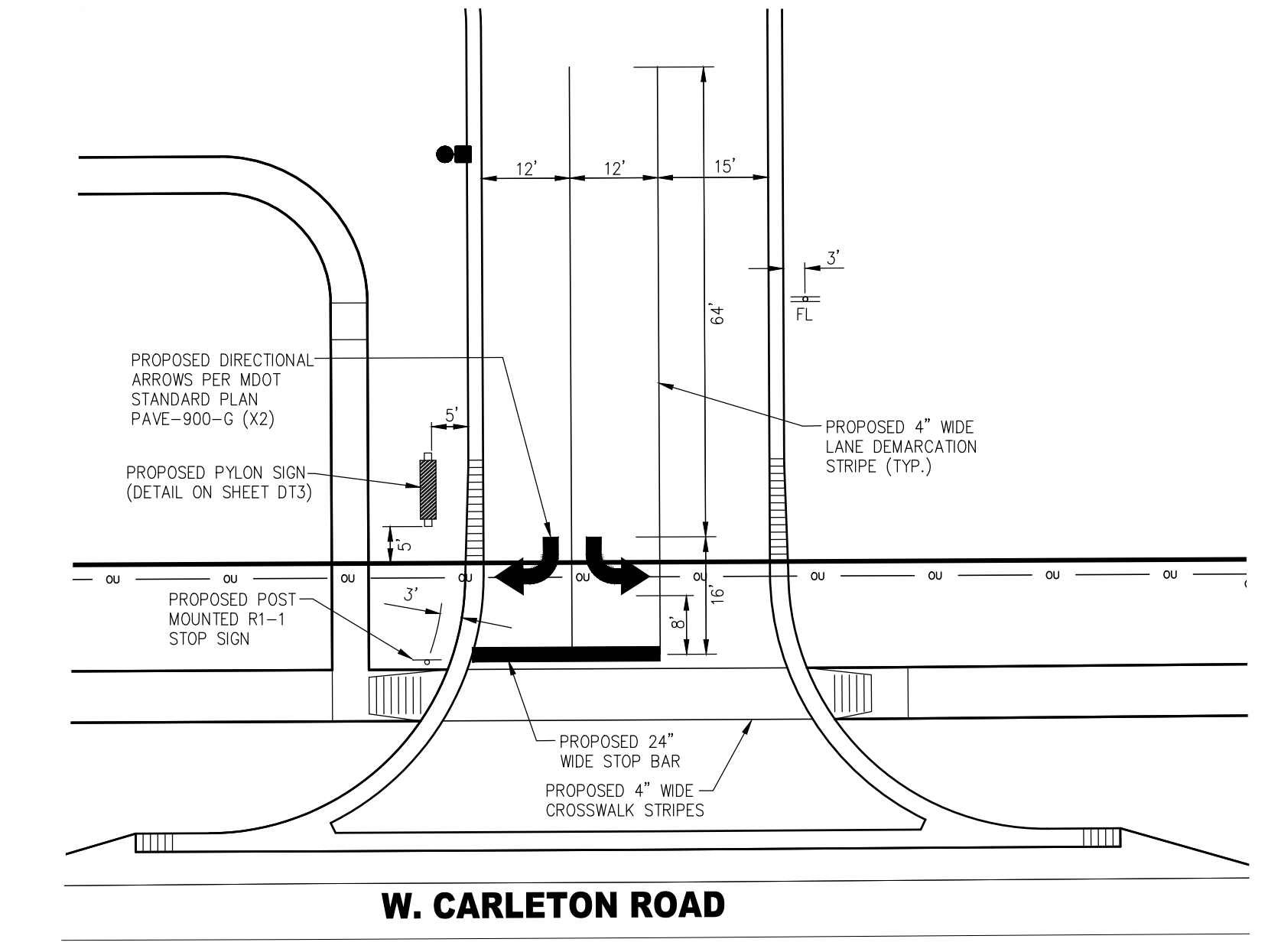
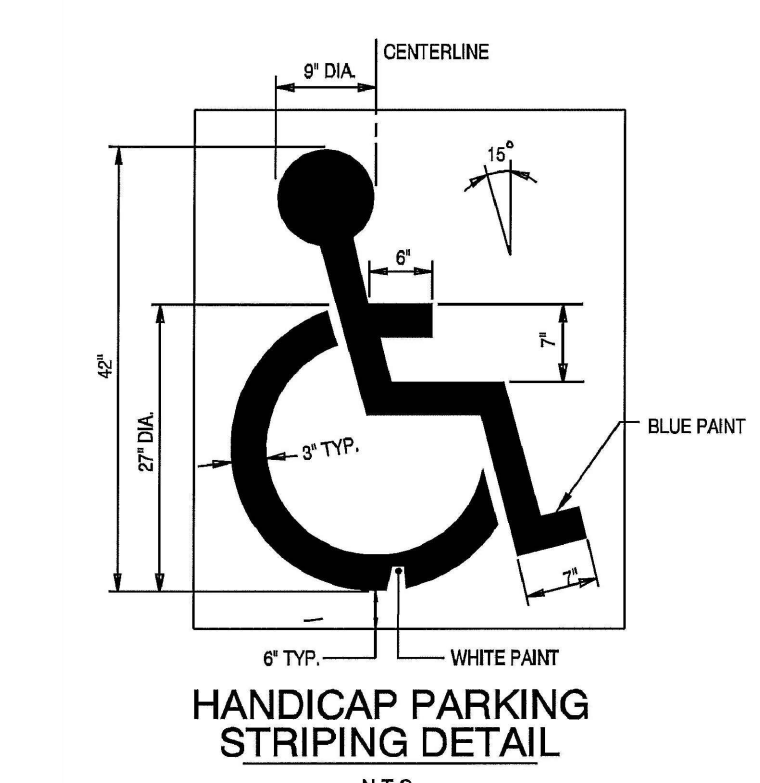
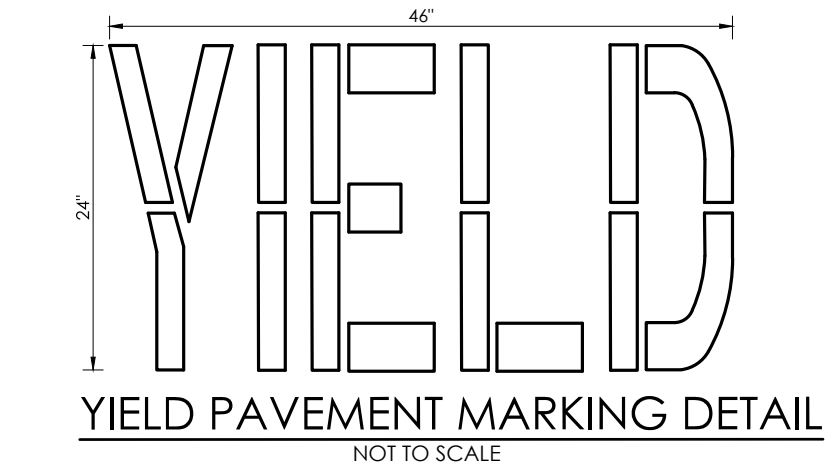
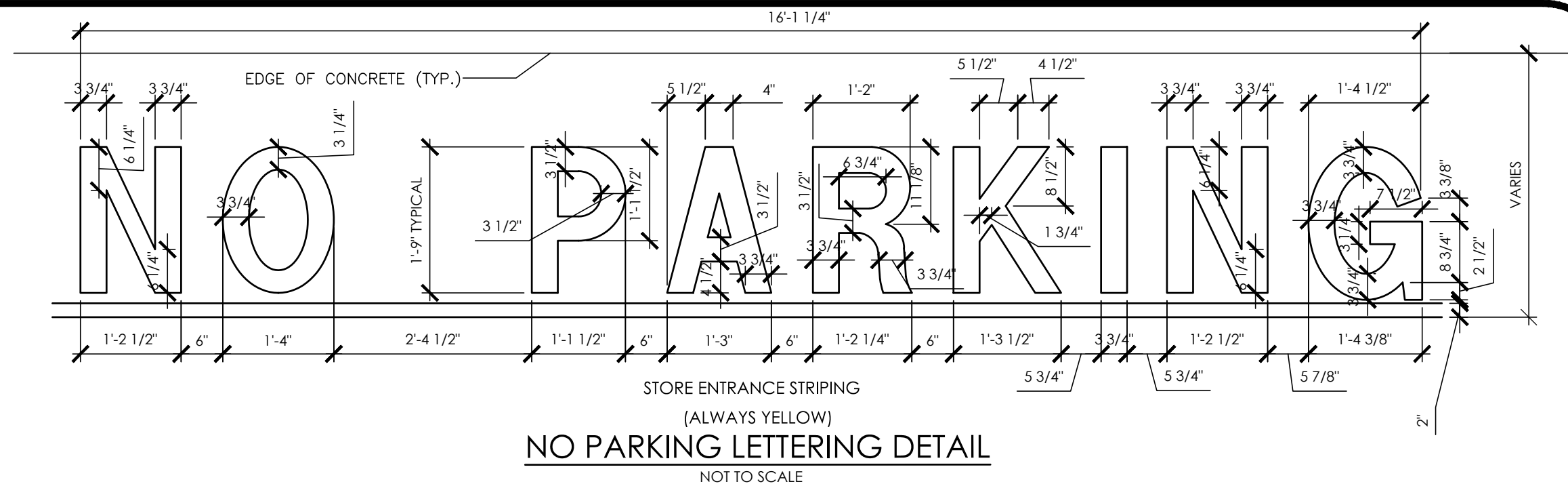
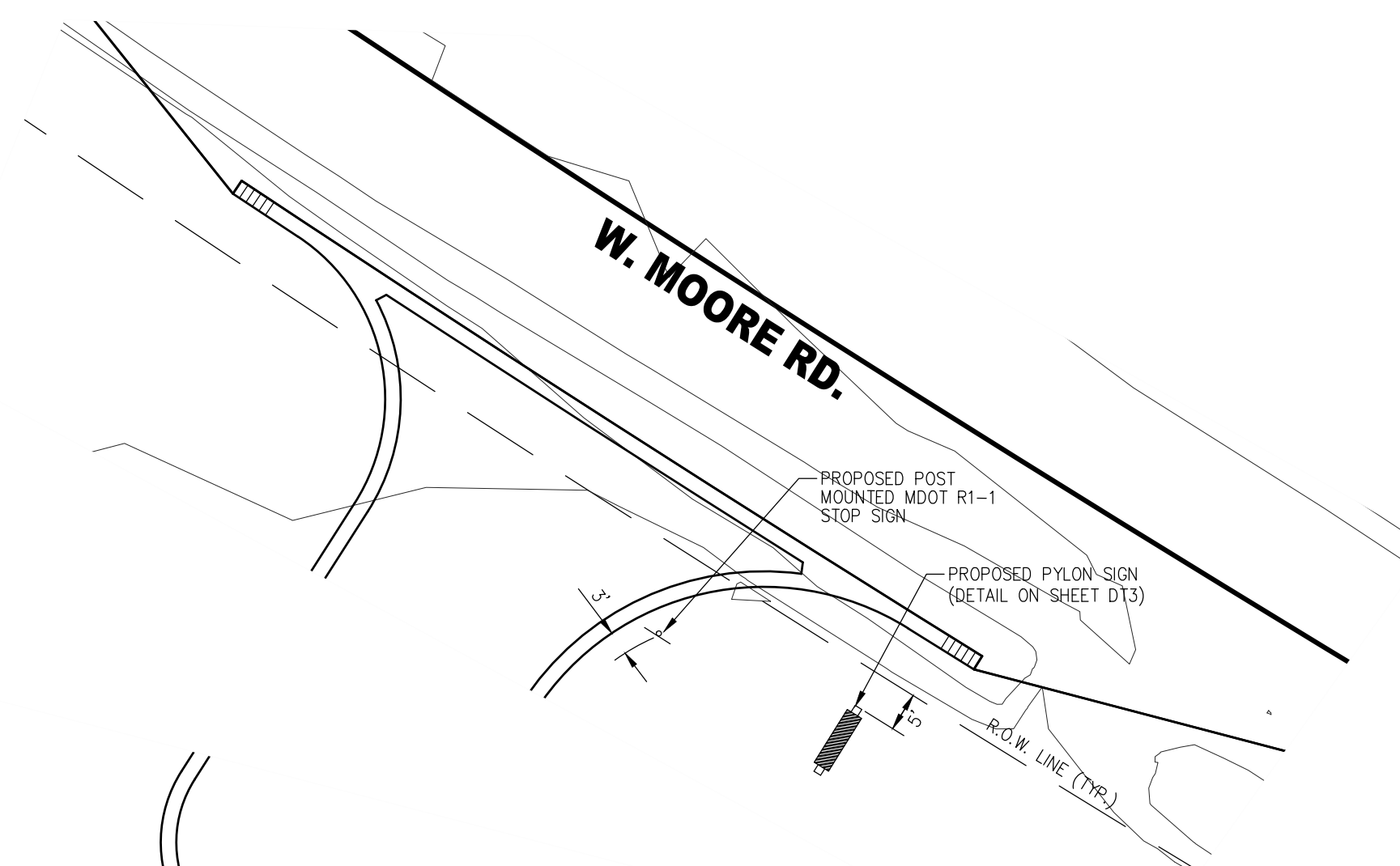
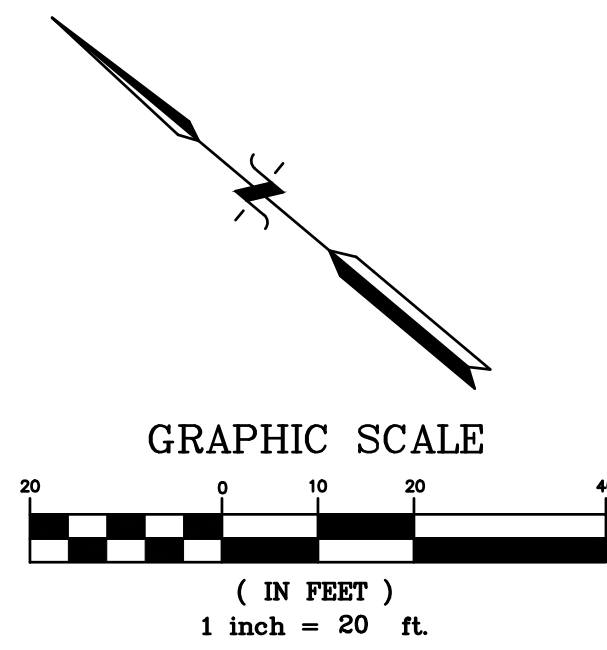
REVISION #	DATE	REVISION-DESCRIPTION

ALDI #143  
HILLSDALE, MICHIGAN

SITE PAVEMENT  
NOTES & DETAILS

CLIENT: ALDI INC	SCALE: N/A
2625 N. STOCKBRIDGE ROAD WEBBERVILLE, MICHIGAN, 48892 (517) 521-3907	PROJECT NO.: 9234510
	DWG NAME: 4510 DT1
	ISSUED: APR. 02, 2024

**DT1**



- SIGNAGE AND PAVEMENT MARKING NOTES:**
- Pavement markings shall be in accordance with the type, color, size and locations shown on the plans. If the information on the plans is not complete and the authority having jurisdiction does not have specific requirements, then use the following: Paint shall be supplied in accordance with AASHTO: M 248 latest addition. Colors shall be as follows: (YELLOW- parking stalls, loading zones, parking islands, no parking zones and fire lanes) (WHITE - stop bars, pedestrian crossings, lane demarcations, directional arrows and lettering) (BLUE - handicap parking stalls and symbols). Stripe widths shall be as follows: (4\" - parking spaces, driveway lanes, barrier free loading zones and no parking zones) (12\" - crosswalks) (24\" - stop bars).
  - The pavement shall be clean and free of dirt, dust, moisture, oils and other foreign materials at time of marking application. Any existing pavement markings shall be removed or blacked out as acceptable to ALDI Inc., unless paints are compatible and overlay identically. The surface of the pavement prior to application shall be a minimum of 45 degrees F and rising unless the Manufacturer's recommendations are greater.
  - The signage shall be in accordance with the type, color, size and locations shown on the plans and in accordance with AASHTO M268. The signage shall be provided in accordance with the Local Municipality and the Michigan Manual of Uniform Traffic Devices latest edition. ALDI curbside pickup reserved parking signage (C) and ALDI directional way finding signage (E1-E3) shall be Owner supplied, GC installed.
  - Posts, brackets and frames shall be steel per ASTM A-36, A-242, A-441, A-572, A588, Grade 50 and hot dip galvanized in accordance with ASTM A123. All cutting, drilling and/or other pole modifications shall be painted with galvanizing paint. All mounting hardware shall be stainless steel.
  - Sign post footings shall be provided when specified on the project plans. Sign post footings shall be a minimum of 3'-6\" deep and 8\" in diameter unless poor soils or frost conditions require greater depth and/or diameter. Sign posts shall be kept plumb, 6 inches off the bottom of footing excavation and centered as 3000-psi concrete is placed under and around the sign post. The overall sign and post system should be able to withstand 33 pounds per square foot. Signs shall not be mounted on posts until after concrete has cured for a minimum of seven days or 7/8 strength is achieved.
  - Sign posts shall be installed in pipe bollards where specified on the project plans. Pipe bollards shall be 6\" diameter schedule 40 steel pipe. Pipe bollards shall be filled with concrete that is rounded at the top of the bollard. Pipe bollard footings shall be a minimum of 3'-8\" deep and 18\" in diameter unless poor soils or frost conditions require greater depth and/or diameter. Embed the bollard into the concrete footing a minimum of 3 feet below proposed finish grade. Bollards and sign posts shall be kept plumb while concrete cures. Signs shall not be mounted on posts until after concrete has cured for a minimum of seven days or 7/8 strength is achieved. Bollards for curbside pickup reserved parking space signage shall be painted ALDI custom blue. Bollards located within the main parking area shall be painted traffic yellow. Bollards located within the sidewalk adjacent to the building shall be painted slate grey.
  - Signs shall be mounted on flex-bollards where specified on the project plans. Flex-bollards shall be Owner supplied, GC installed.
  - All barrier free striping and signage shall meet the Americans with Disabilities Act (ADA) requirements.
  - All Fire Lane signs shall have a Red Border and Red Letters on White Background. All Fire Lane signs shall be Reflective. Fire lane striping and signage shall meet the requirements of the Local Building Inspector and Fire Department.
  - Mounting Height shall be the minimum height of the bottom of the sign above finish grade. When signs are located downhill from the roadway, driveway and/or parking area, then the Mounting Height shall be the height of the bottom of the sign above the top of pavement finish grade at the nearest edge of pavement adjacent to the sign.
  - All Traffic Control and Fire Lane signs shall be installed at 3 feet behind the back of curb (and/or edge of pavement) to the centerline of the sign post unless noted otherwise on the project plans.
  - The Contractor(s) and/or Subcontractor(s) responsible for installation of the sign posts shall contact the 811 Public Underground Utility Locating System a minimum of three (3) working days prior to installation of the signposts. Install the sign posts in the locations specified on the project plans. When underground utilities conflict with the proposed sign post locations, field adjust the sign locations the minimum amount necessary to safely clear the underground utilities. Maintain a minimum of 2 feet of clearance between the edge of sign and the back of curb and/or edge of sidewalk.

**SIGN SCHEDULE**

SIGN	KEY	SIZE (W x H)	MOUNTING TYPE	MOUNTING HEIGHT	QUANTITY
	R7-8	12' x 18'	BOLLARD MOUNTED	6'-8"	4
			FLEX BOLLARD MOUNTED		0
	R7-8a	12' x 6'	BOLLARD MOUNTED	6'-0"	2
			FLEX BOLLARD MOUNTED		0
	R1-1	18' x 18'	POST MOUNTED	6'-8"	2
	FL	12' x 18'	POST MOUNTED	6'-8"	8
RESERVED PARKING	C	12' x 30'	BOLLARD MOUNTED	4'-6"	3
DIRECTIONAL STRAIGHT	E1	12' x 18'	POST MOUNTED	4'-6"	2
DIRECTIONAL RIGHT	E2	12' x 18'	POST MOUNTED	4'-6"	1
DIRECTIONAL LEFT	E3	12' x 18'	POST MOUNTED	4'-6"	1

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED PER CITY REVIEW COMMENTS			
CHECK: CAG						

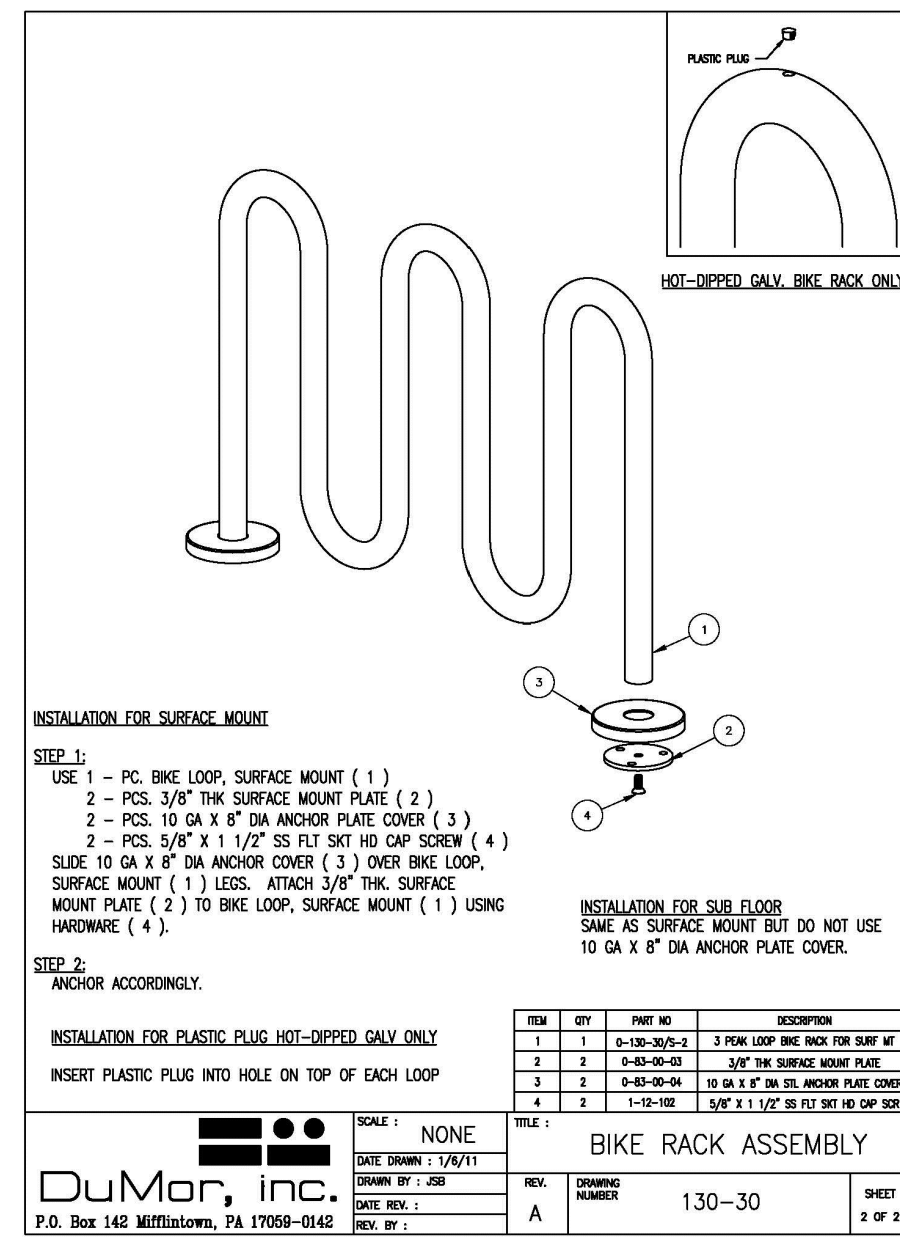
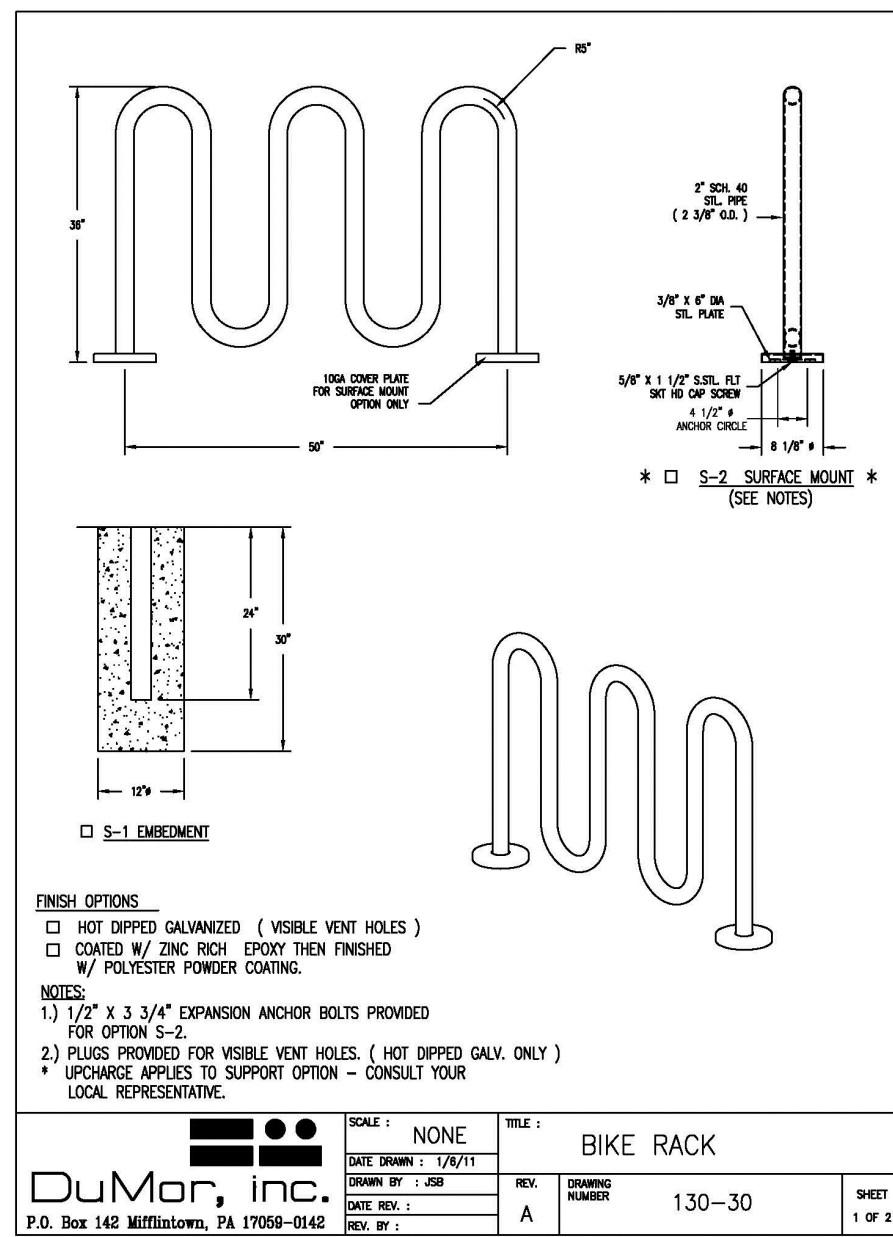
ALDI #143  
HILLSDALE, MICHIGAN

SIGNAGE &  
PAVEMENT MARKING  
PLAN

CLIENT:  
ALDI Inc.  
2625 N. STOCKBRIDGE RD.  
WEBBERVILLE, MICHIGAN 48892  
(517) 521-3907

SCALE: 1"=20'  
PROJECT No.: 9234510  
DWG NAME: 4510 DT2-3  
ISSUED: APR. 02, 2024

DT2



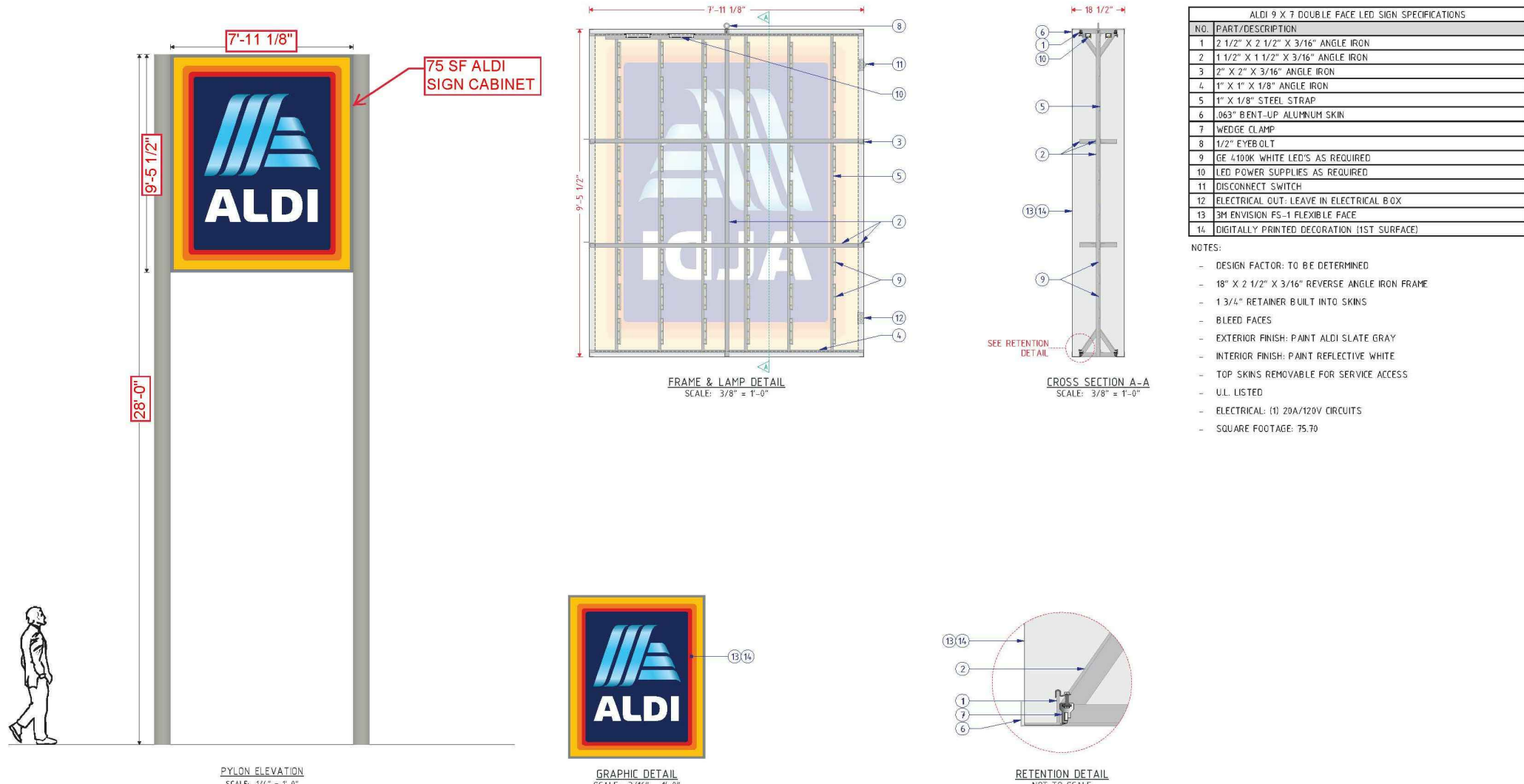
**BIKE RACK DETAIL**  
NOT TO SCALE

**3.2 WALL SIGNS**

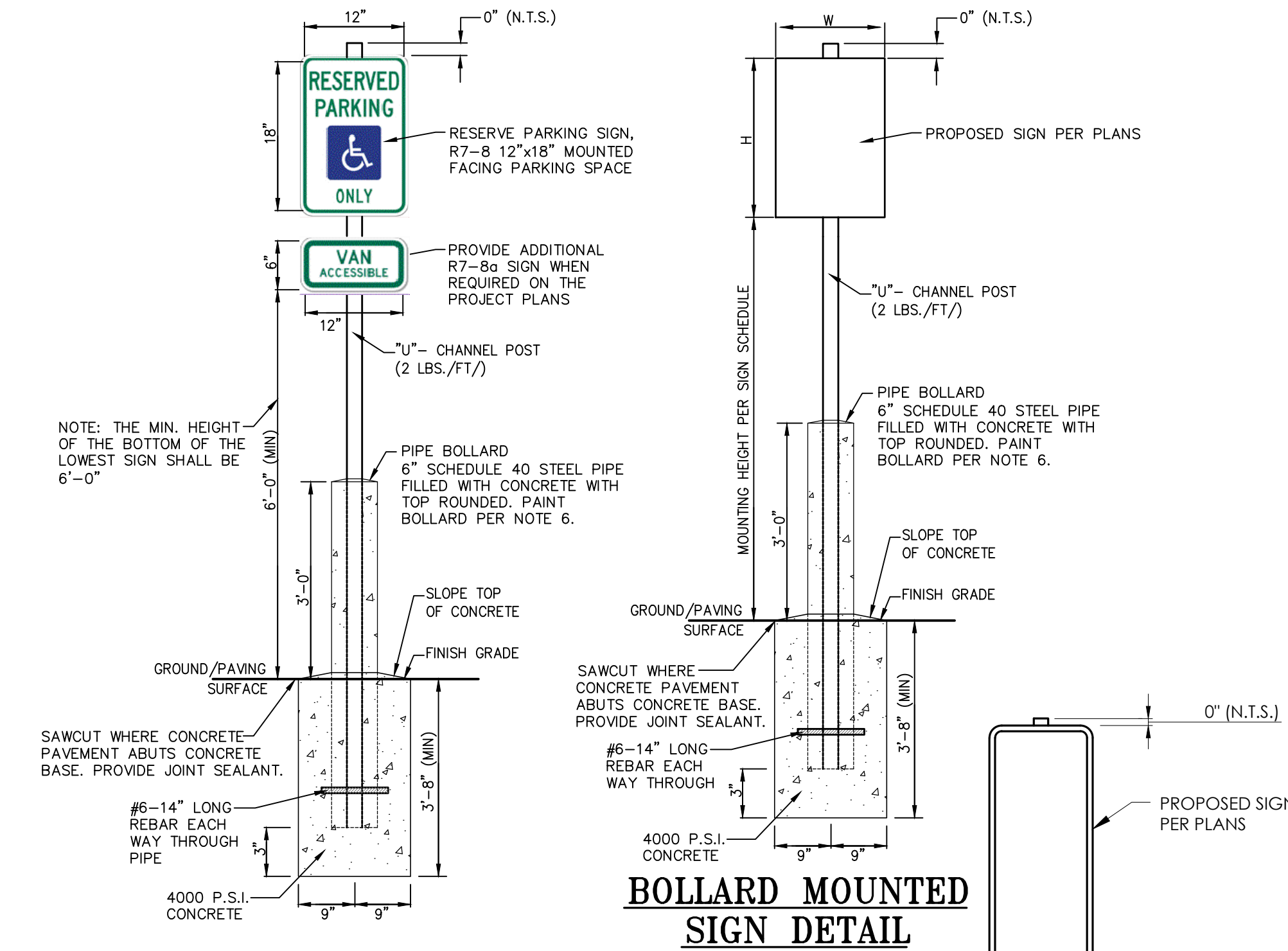


**WALL SIGN CABINET DETAIL**  
NOT TO SCALE

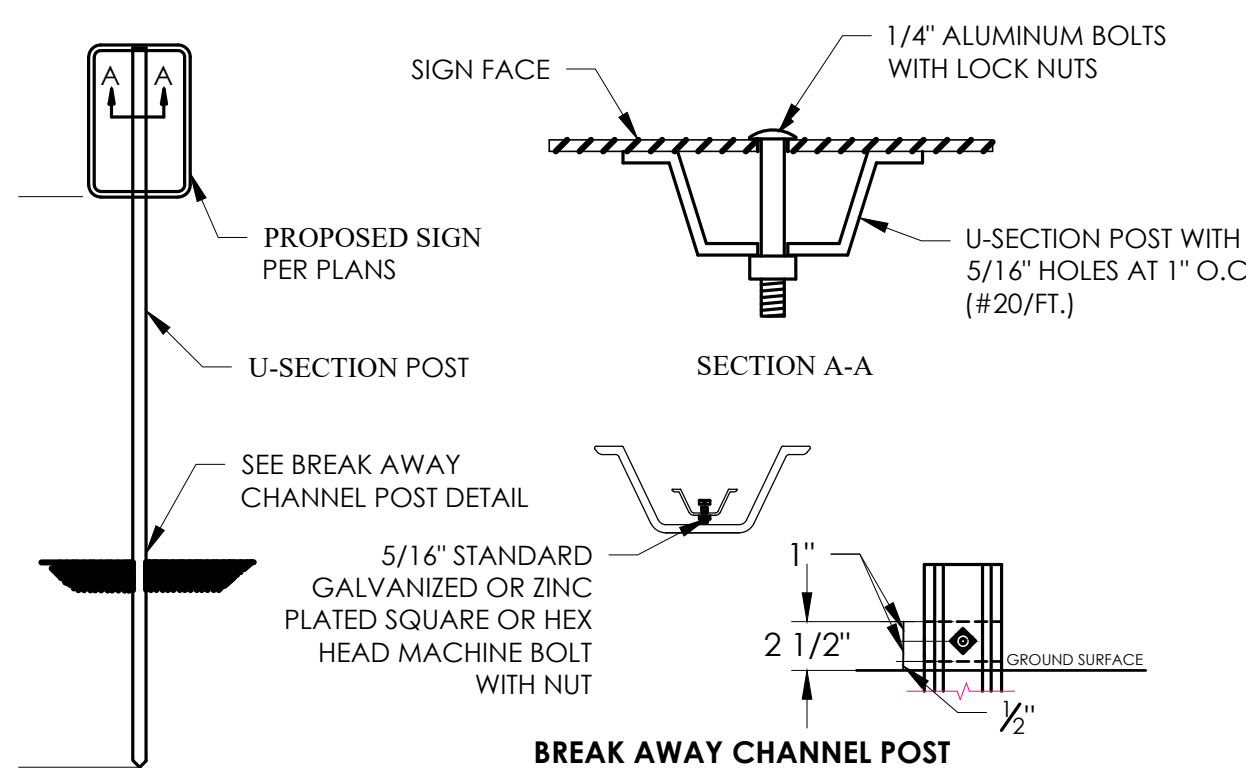
**1.2 PYLON SIGNS**



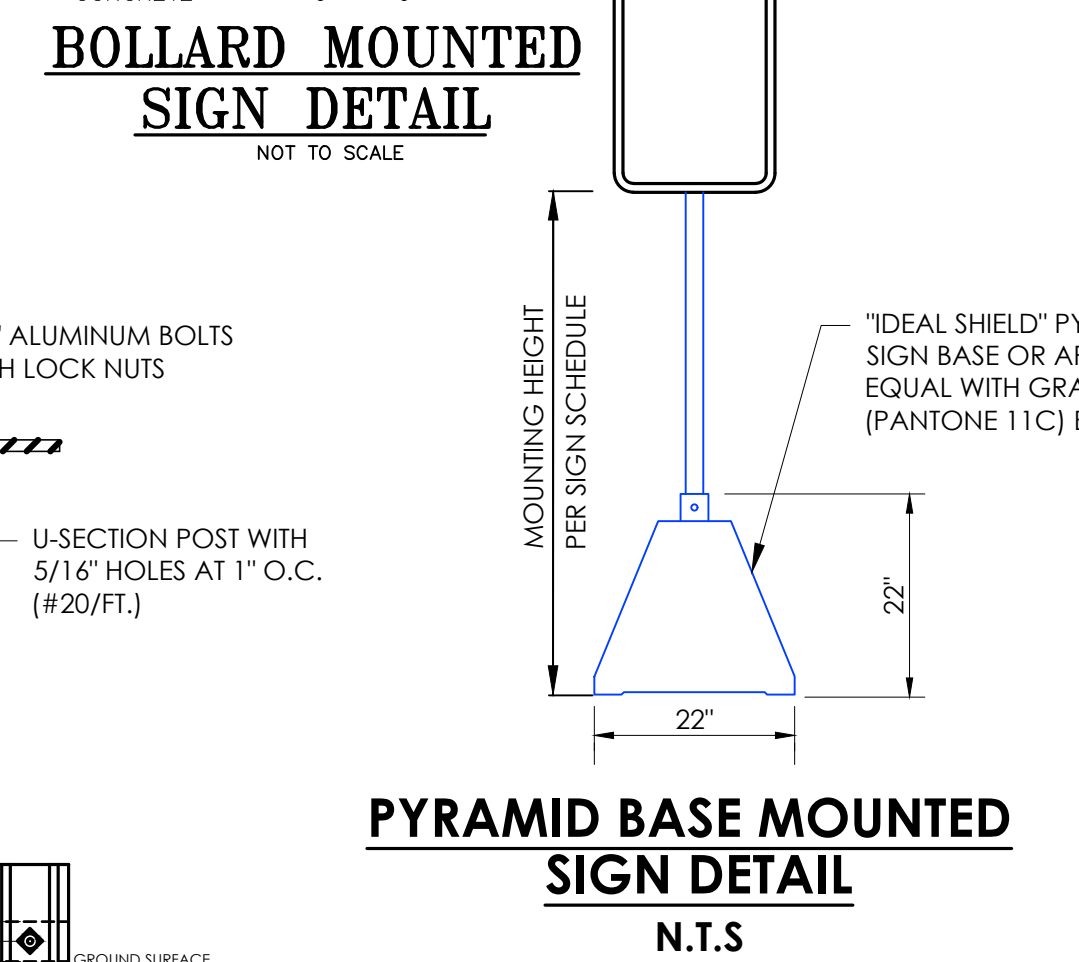
**PYLON SIGN DETAIL**  
NOT TO SCALE



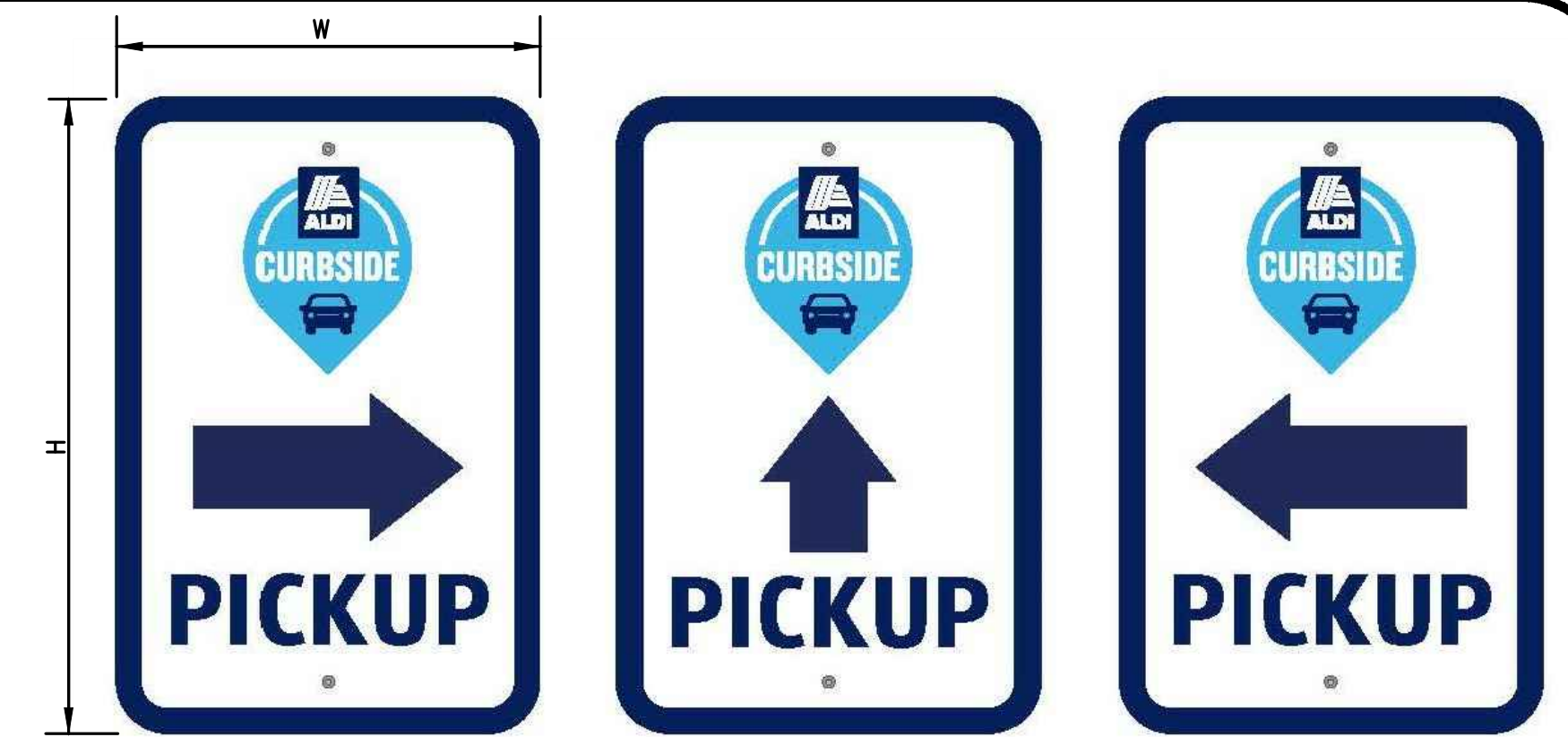
**BARRIER FREE PARKING SIGN DETAIL**  
NOT TO SCALE



**POST MOUNTED SIGN DETAIL**  
N.T.S.



**PYRAMID BASE MOUNTED SIGN DETAIL**  
N.T.S.

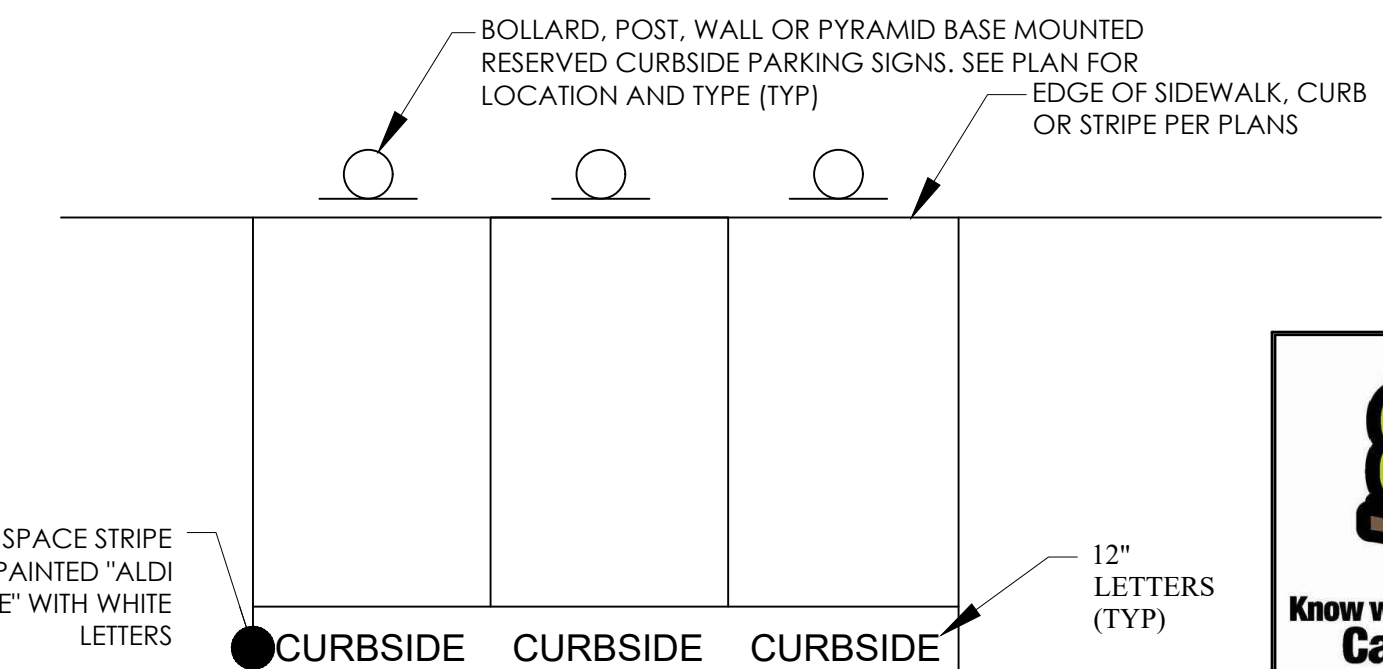


**E2 E1 E3**  
**WAYFINDING DIRECTIONAL SIGN DETAILS**  
N.T.S.

- WAYFINDING DIRECTIONAL SIGN NOTES:**
- Wayfinding directional signs to be provided by ALDI Inc. Coordinate sign order with ALDI Construction Manager. Order Signage without ALDI Logo when specified on the project plans.
  - See Sign Schedule on project plans for proposed mounting height, mounting type and sign dimensions. Mount sign facing oncoming traffic per plans.
  - Mount sign on bollard and/or post where specified on the project plans. See details on this sheet.
  - Pyramidal sign base shall only be utilized where specified on the project plans.

**C CURBSIDE PICKUP SPACE SIGN DETAILS**  
N.T.S.

- CURBSIDE PICKUP SPACE SIGN NOTES:**
- Reserved pickup parking space signs to be provided by ALDI Inc. Coordinate sign order with ALDI Construction Manager. Order signage without ALDI Logo when specified on the project plans.
  - See Sign Schedule on project plans for proposed mounting height, mounting type and sign dimensions. Mount sign facing parking space.
  - Mount sign on bollard and/or post where specified on the project plans. See details on this sheet.
  - Pyramidal sign base shall only be utilized where specified on the project plans.



**CURBSIDE PICKUP PAVEMENT MARKING DETAIL**  
N.T.S.

**ALDI BLUE CUSTOM COLOR:**

CCE COLORANT	OZ	32	64	128
L1-BLUE	-	63	1	1
R3-MAGENTA	-	5	1	1
Y3-DEEP GOLD	-	1	1	-

- ARIAL BOLD FONT SHALL BE USED FOR NUMBERS AND LETTERS
- PAINT SHALL BE SHERWIN WILLIAMS "PRO-PARK" WATERBORNE TRAFFIC MARKING PAINT OR AS APPROVED BY ALDI CM.
- SURFACE PREPARATION SHALL COMPLY WITH MANUFACTURERS REQUIREMENTS.
- SIGNS, NUMBERS AND WORDING TO BE PLACED CENTERED

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

3 WORKING DAYS BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171 (TOLL FREE)  
OR VISIT CALL811.COM

**DESIGN INC**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESS DRIVE  
BRIGHTON, MICHIGAN 48114

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.						
CHECK: CAG						

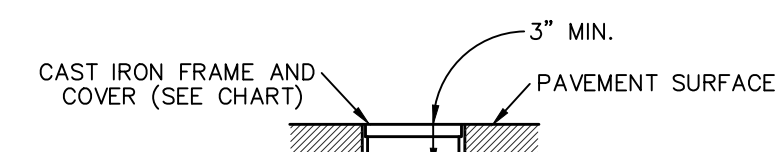
ALDI #143  
HILLSDALE, MICHIGAN

**SIGNAGE DETAILS**

CLIENT:	ALDI Inc.
2625 N. STOCKBRIDGE RD. WEBBERVILLE, MICHIGAN 48892 (517) 521-3907	
SCALE:	N/A
PROJECT No.:	9234510
DWG NAME:	4510 DT2-3
ISSUED:	APR. 02, 2024

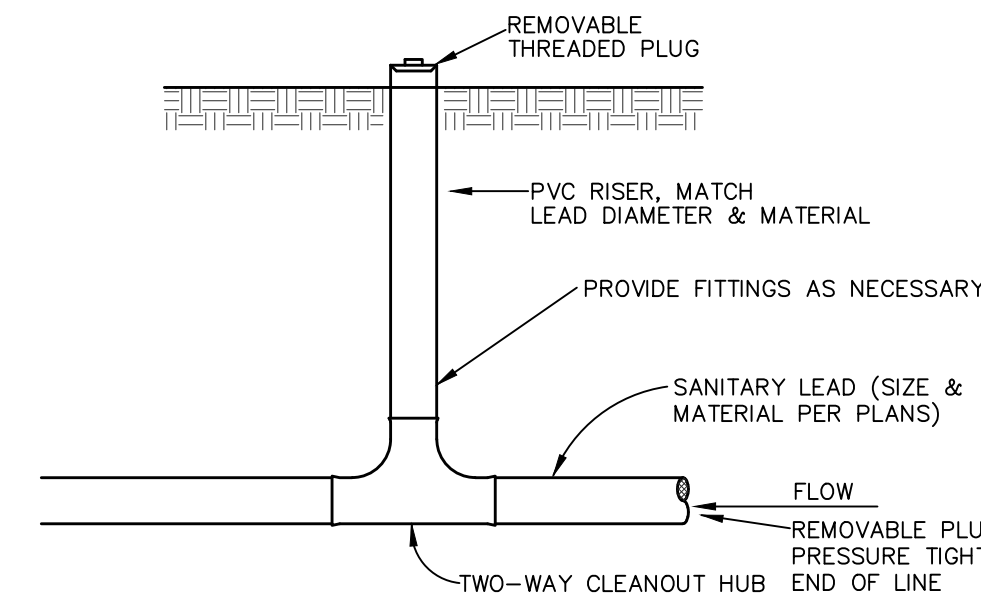
**DT3**

CLEANOUT DIA.	FRAME AND COVER
4"-8"	EJW 1578
10"-18"	EJW 10402-A--SANITARY



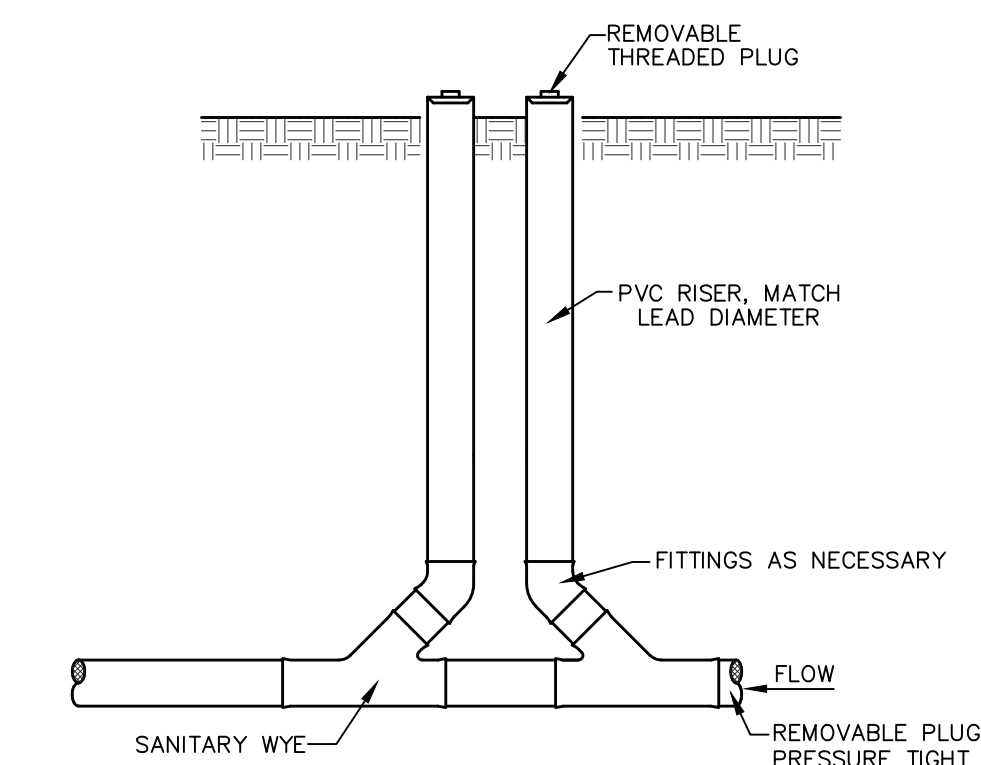
### CLEANOUT IN PAVED AREA

NOT TO SCALE



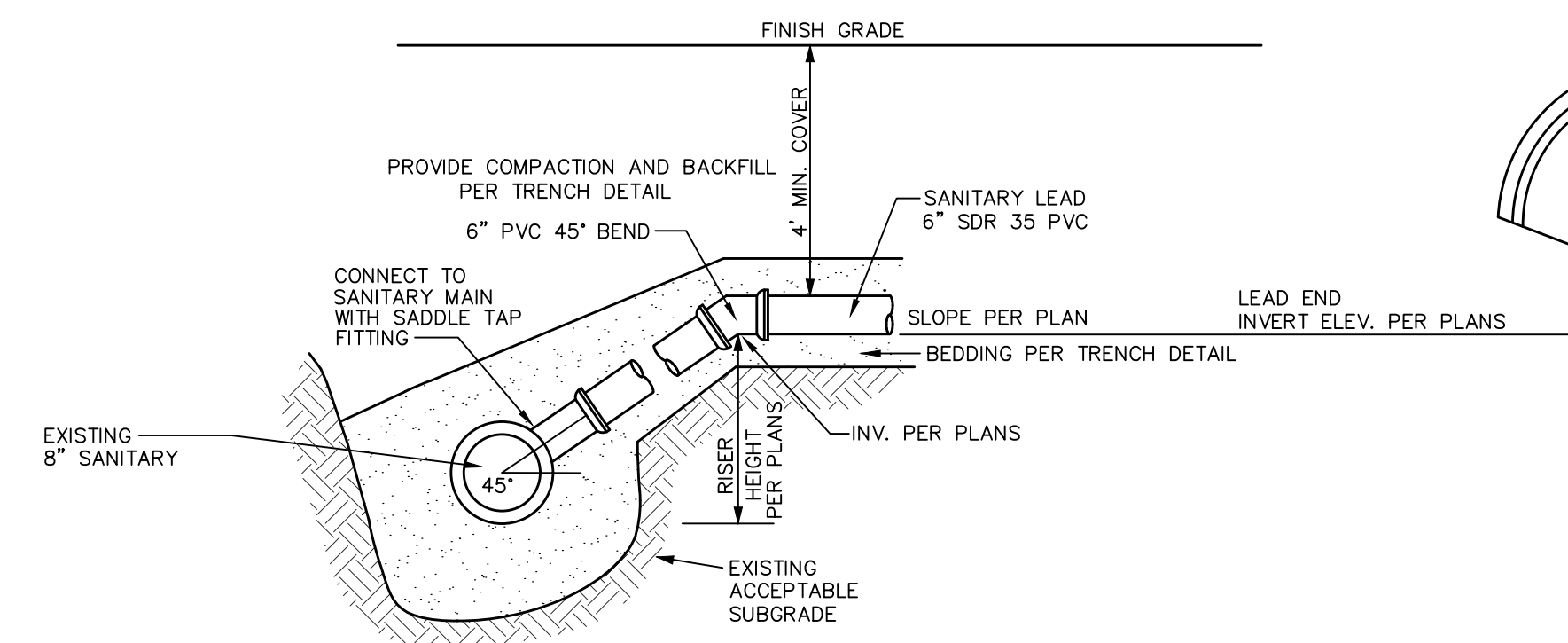
### TWO-WAY CLEANOUT FOR SANITARY LEAD

NOT TO SCALE



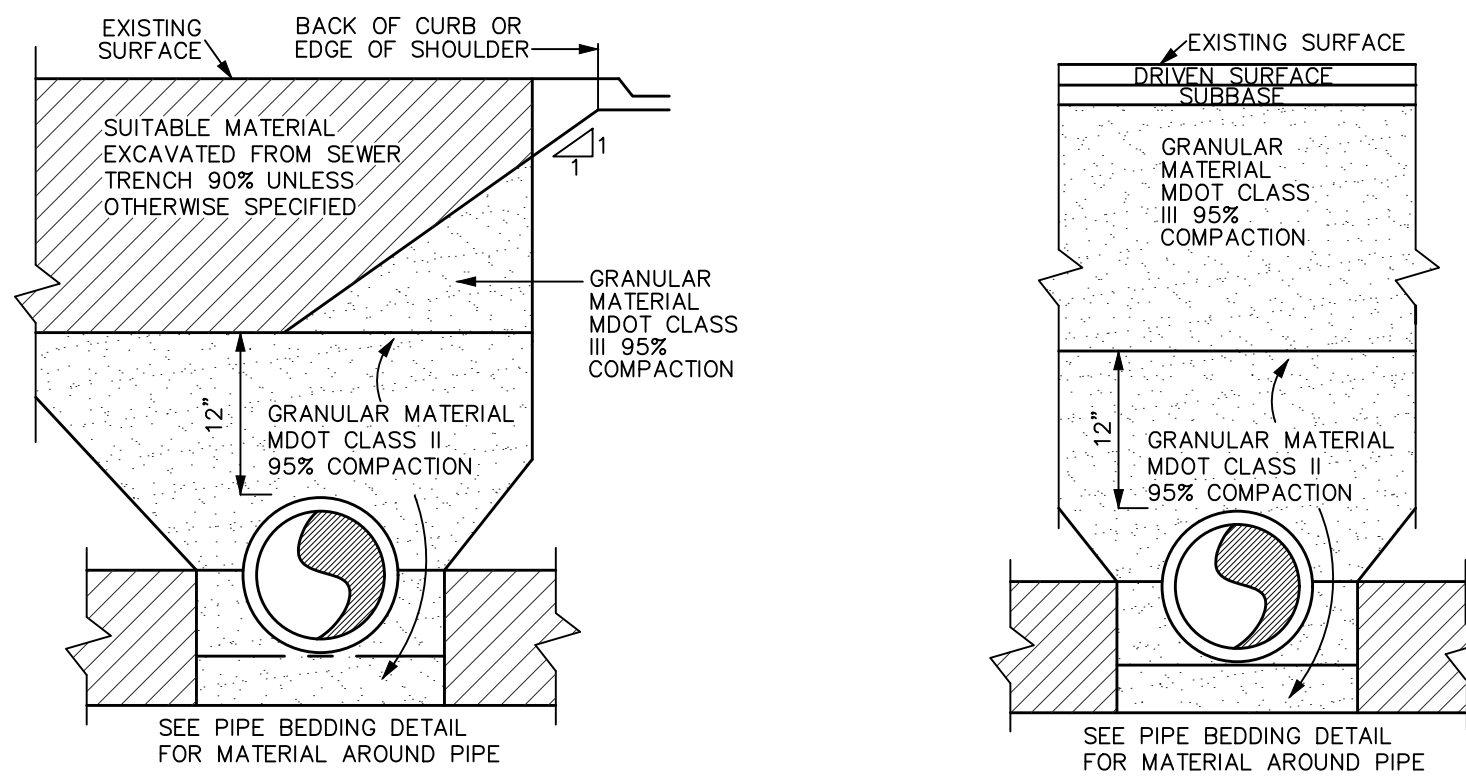
### STANDARD CLEANOUT FOR SANITARY LEAD

NOT TO SCALE



### SANITARY LEAD FOR SEWER SERVICE

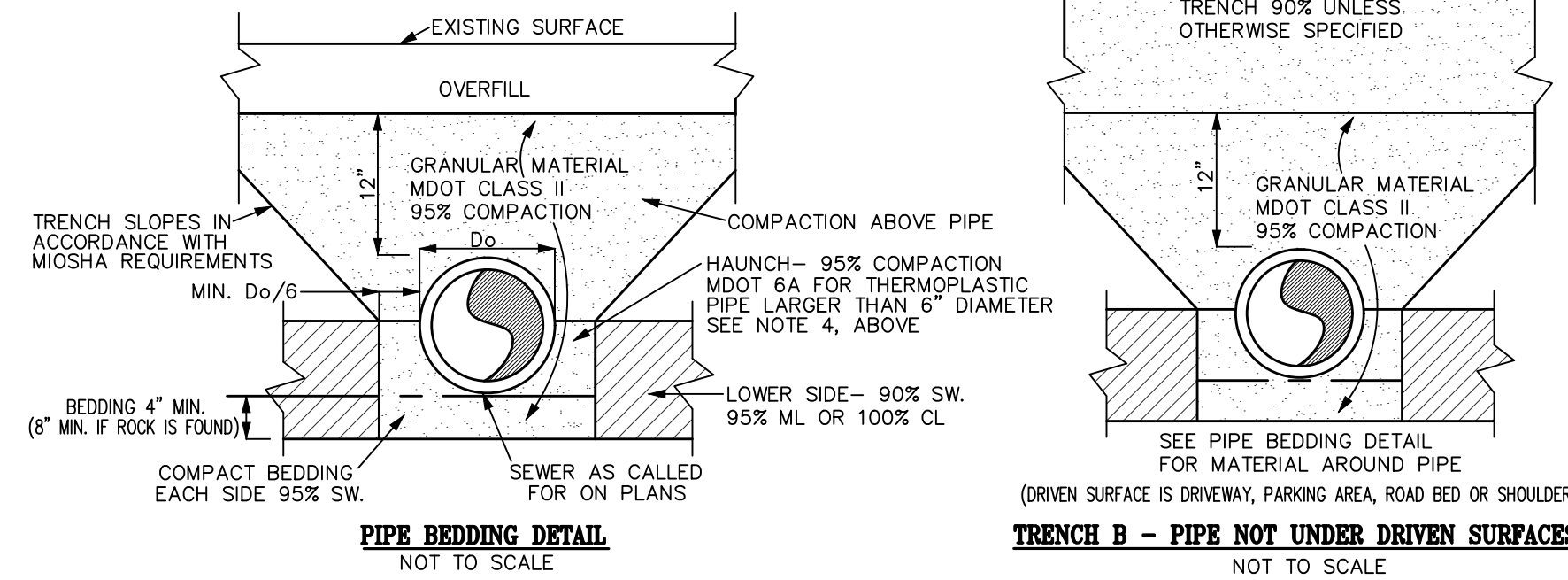
NOT TO SCALE



### TRENCH A - PIPE UNDER OR WITHIN INFLUENCE OF DRIVEN SURFACE

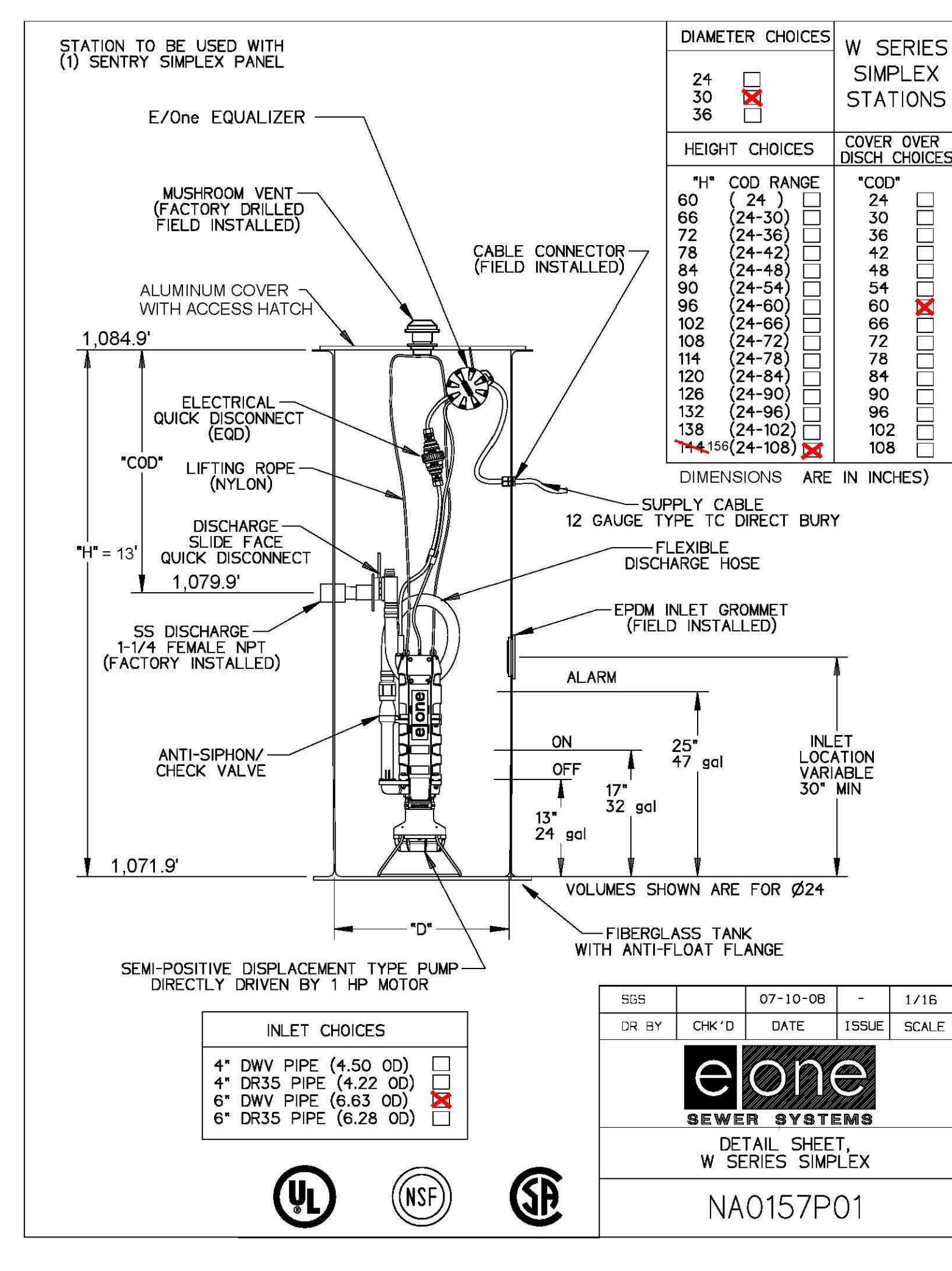
NOT TO SCALE

- NOTES:
1. COMPACTION PRESENTED AS STANDARD PROCTOR VALUES.
  2. SOIL TYPES AASHTO DESIG. GRAVEL SANDY (SW) A1, A3 SANDY SILTY (ML) A2, A4 SILTY CLAY (CL) A5, A6, A7
  3. SOIL IN HAUNCH AND LOWER SIDE ZONES OUTSIDE OF Do/6 FROM SPRING LINE SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS THE SOIL IN THE OVERFILL ZONE.
  4. MATERIALS AROUND THERMO. PLASTIC PIPE WITH DIAMETER 6 INCHES SHALL PASS 0.5 INCH SIEVE. MATERIALS AROUND OTHER PIPES SHALL PASS 1.5 INCH SIEVE.



### TRENCH DETAILS

NOT TO SCALE



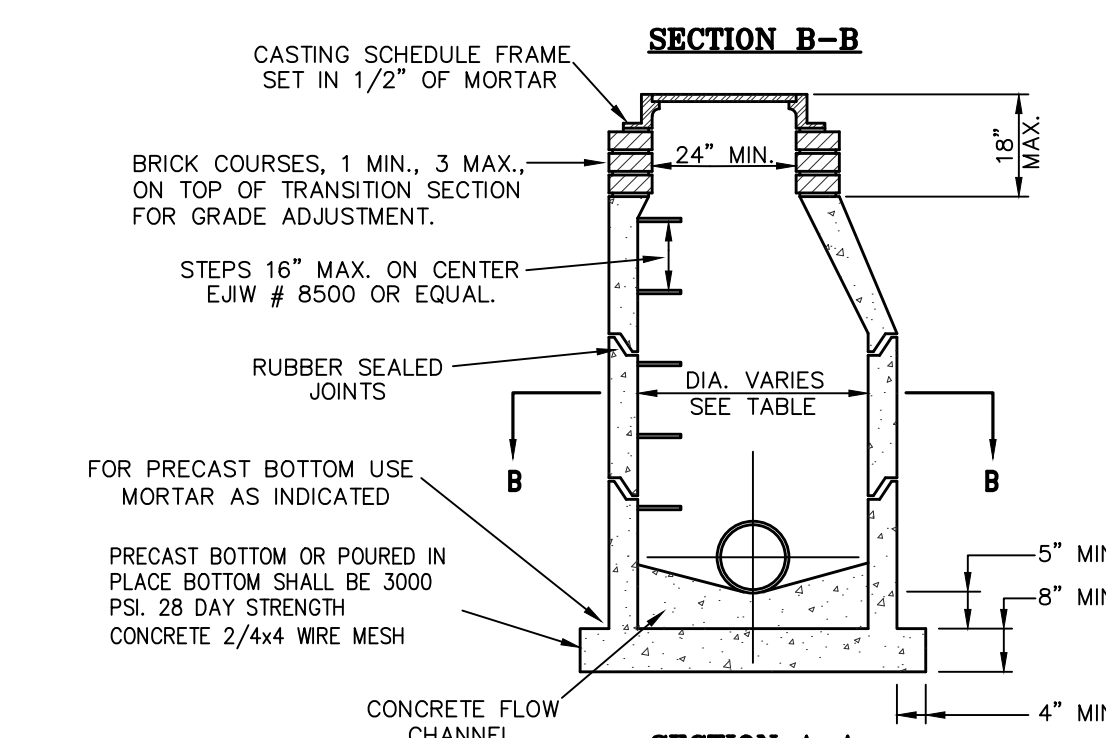
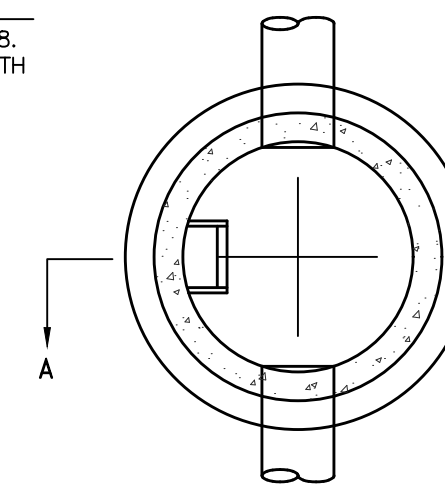
### GRINDER PUMP DISTRIBUTOR:

Joseph Moore, P.E.  
Dubois-Cooper Associates  
905 Penniman Avenue  
Plymouth, Michigan 48170  
P: 734-455-6700, Ext. 3  
E: [jmoore@duboiscooper.com](mailto:jmoore@duboiscooper.com)

### PRE-CAST CONCRETE MANHOLE

1. SECTIONS SHALL MEET ASTM C478.
2. ALL JOINTS MADE WATERTIGHT WITH RUBBER GASKET JOINTS.
3. CONE TO BE ECCENTRIC TYPE.

PIPE SIZE	MANHOLE DIA.
12"-24"	4'-0" MIN.
30"-36"	5'-0" MIN.
42"-48"	6'-0" MIN.



### SEWER MANHOLE

NOT TO SCALE

### SANITARY SEWER LEAD NOTES:

1. The Local Plumbing Code and sanitary sewer specifications of the Local Municipality are a part of this work. Refer to the General Notes on the project plans for additional information and requirements.
2. Gravity Sanitary Sewer Leads shall be PVC pipe conforming to ASTM D3034, maximum SDR of 35. Pipe joints shall be push on bell-and-spigot type joints conforming to ASTM D3212 with factory installed flexible elastomeric gaskets conforming to ASTM F477. Solvent cemented joints shall only be used when noted on the project plans for specific applications and shall conform to ASTM D2855. Provide pipe diameter and slope per project plans.
3. Pressure Pipe Sanitary Sewer Leads shall be 200 PSI SDR 21 PVC pipe conforming to ASTM D2241 and ASTM D1784 cell class 12454. Pipe joints shall be push on bell-and-spigot type joints conforming to ASTM D3139 with factory installed flexible elastomeric gaskets conforming to ASTM F477. Solvent cemented joints shall only be used when noted on the project plans for specific applications and shall conform to ASTM D2855. Provide pipe diameter per plans.
4. Connect sanitary sewer leads to the sanitary main in the locations shown on the project plans. For new sanitary sewer main, install a wye fitting rotated upward at 45 degrees to the sanitary main as shown in the sanitary lead detail. Install wye fittings so that the wye branches out away from the sanitary main opposite of the direction of flow. For existing sanitary sewer main, tap main and install a saddle with stainless steel clamps and hardware in accordance with the Local Code. For connection to a new sanitary sewer structure, provide water tight factory installed rubber boot connector within the structure. For connection to an existing sanitary sewer structure, core drill the manhole wall and install a resilient boot. Connections to sanitary structures shall be at the invert elevation noted on the project plans. When proposed invert is not noted on the project plans, install sanitary lead invert 0.10' minimum, 2.0' maximum above the downstream sewer main invert.
5. Install a 45 degree riser at the connection to the sanitary sewer main per the project plans or as the site conditions allow. The invert elevation at the 45 degree bend located at the end of the riser shall be 6" minimum above the sanitary sewer main invert.
6. Contractor shall field locate all existing utilities prior to work. Contractor shall provide all bends and fittings as needed, incidental to work, to install the sanitary sewer leads and to provide the required clearance between the sanitary sewer leads and all existing and proposed utilities while maintaining the proposed minimum pipe slope and proposed lead end invert elevation. Contractor shall notify the Engineer immediately of any utility crossing conflicts.
7. Provide 4.0' minimum cover from the top of the sanitary sewer lead pipe to the proposed finished grade when site conditions allow. When pipe cover is less than 4.0', install 2" thick 24" wide Styrofoam insulation centered over pipe at 12" above top of pipe or as required by Local Code. Backfill all sanitary sewer leads in accordance with the trench details on the project plans.

### GRAVITY SANITARY SEWER NOTES:

1. The sanitary sewer specifications of the Local Municipality are a part of this work. Refer to the General Notes on the project plans for additional information and requirements.
2. Sanitary sewer work shall include clearing of vegetation and tree stumps, stripping and stockpiling of topsoil for reuse, excavation of pipe trench, placement of pipe bedding, placement of pipe and structures including castings, connection to existing structures, tuck pointing of structures, backfill of pipe trench, compaction of backfill, finish grading, adjustment of castings to match finish grade, testing of sanitary sewer, topsoil placement, seed & mulch, site cleanup and restoration, and other work as shown on the project plans and specifications.
3. Existing and proposed grades shown in profile view on the project plans may be in relation to the centerline of road or item other than the centerline of the pipe. The pipe lengths and grades shown in profile view on the project plans may not be to scale.
4. RCSP when shown on the project plans shall be reinforced concrete sewer pipe and shall conform to the specifications for reinforced concrete pipe per ASTM C76. RCSP pipe joints shall be Modified Groove Tongue (MGT) type joints with a compression type rubber gasket snapped into a groove cast into the tongue. Rubber gaskets shall conform to ASTM C433. Modified groove or bell end pipe shall be made smooth and shall not have more than a three (3) degree slope tapered to fit the rubber gasket to tolerances as determined by the gasket manufacturer. MGT joints shall be lubricated and coupled in accordance with the manufacturer's specifications. Saw cut pipes to length for connection to structures as needed. When pipe class is not shown on the project plans, provide the following:  

Pipe cover to proposed grade:	0 to 4 feet	Class V
	4.1 to 10 feet	Class III*
	10.1 to 18 feet	Class IV
	18.1 feet and greater	Class V
5. PVC when shown on the project plans shall be polyvinyl chloride gravity pipe and shall conform to the specifications for polyvinyl chloride gravity pipe per ASTM D3034, maximum SDR of 26. PVC pipe joints shall be push on bell-and-spigot type joints conforming to ASTM D3212 with factory installed flexible elastomeric gaskets conforming to ASTM F477. Solvent cemented joints shall only be used when noted on the project plans for specific applications and shall conform to ASTM D2855. Tamp backfill at the spring line of PVC pipe. Saw cut pipes to length for connection to structures and fittings as needed.
6. ABS or PVC Truss Pipe when shown on the project plans shall conform to the specifications for truss pipe per ASTM D2680. ABS Truss Pipe joints shall consist of ABS plastic couplings solvent cemented to the pipe ends and shall conform to ASTM D2855. PVC Truss Pipe joints shall be bell-and-spigot type joints conforming to ASTM D3212 with factory installed flexible elastomeric gaskets conforming to ASTM F477. PVC Truss Pipe joints shall be lubricated and coupled in accordance with the manufacturer's specifications. Tamp backfill at the spring line of truss pipe. Saw cut pipes to length for connection to structures and fittings as needed.
7. Sanitary structures shall be pre-cast reinforced concrete and shall conform to the specifications for pre-cast reinforced concrete structures per ASTM C478. Sanitary structure joints shall be Modified Groove Tongue (MGT) type joints with a compression type rubber gasket snapped into a groove cast into the tongue. Rubber gaskets shall conform to ASTM C433. Pipe openings in pre-cast structures shall be water tight factory installed rubber boot connectors. Sewer pipe shall be clamped to the rubber boot with stainless steel clamps and hardware in accordance with the manufacturer's specifications. All temporary openings in sanitary structures shall be pointed up watertight with cement mortar.
8. Provide sanitary structure castings as noted on the project plans. When casting type is not noted on the project plans, provide East Jordan 1040 or Neenah R-1916 F1 with solid self sealing cover or equivalent OR as directed by the Municipality. Sanitary structure castings shall be coated with water based asphaltic paint by the manufacturer. Final casting grade adjustments shall be made with pre-cast reinforced concrete grade rings sealed with rubber "O" ring gaskets or brick and mortar pointed up and sealed water tight with cement mortar. Castings shall be secured to the pre-cast structure with a minimum of four (4) 5/8" diameter cadmium coated bolts or threaded studs with neoprene flat washers and cadmium coated nuts.
9. Connections to existing manholes shall be performed by core drilling the manhole wall and installing a resilient boot. Star drilling the opening shall ONLY be performed when core drilling is not possible. Provide a smooth hand-troweled mortared finish in the star drilled opening for installation of a resilient boot.
10. Backfill all sanitary sewer in accordance with the Pipe Trench details provided on the project plans. Provide pipe bedding that meets or exceeds both the specifications of the Pipe Trench details on the project plans and the recommendation of the pipe manufacturer, incidental to work.
11. Install removable plugs in sanitary sewer stubs as acceptable to Engineer and Municipality, incidental to work. Mark the end of all sanitary sewer stubs with a 2" x 4" wooden stake extending a minimum of 12" above finish grade, incidental to work.
12. Install sanitary sewer service leads in accordance with the project plans. Detailed graphic representation of the sanitary lead connection to the sanitary main may not be shown in the plan and/or profile views. Contractor shall provide the necessary fittings for connection of the sanitary lead to the sanitary main in accordance with the Municipality and the Project Plans, incidental to work. See the Gravity Sanitary Sewer Service Lead Notes and Details on the project plans for additional requirements.
13. Contractor shall provide testing of the sanitary sewer in accordance with the Local Municipality requirements.

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

3 WORKING DAYS BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171 (TOLL FREE)  
OR VISIT CALL811.COM

**DESIGN INC.**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESS DRIVE  
BRIGHTON, MICHIGAN 48114

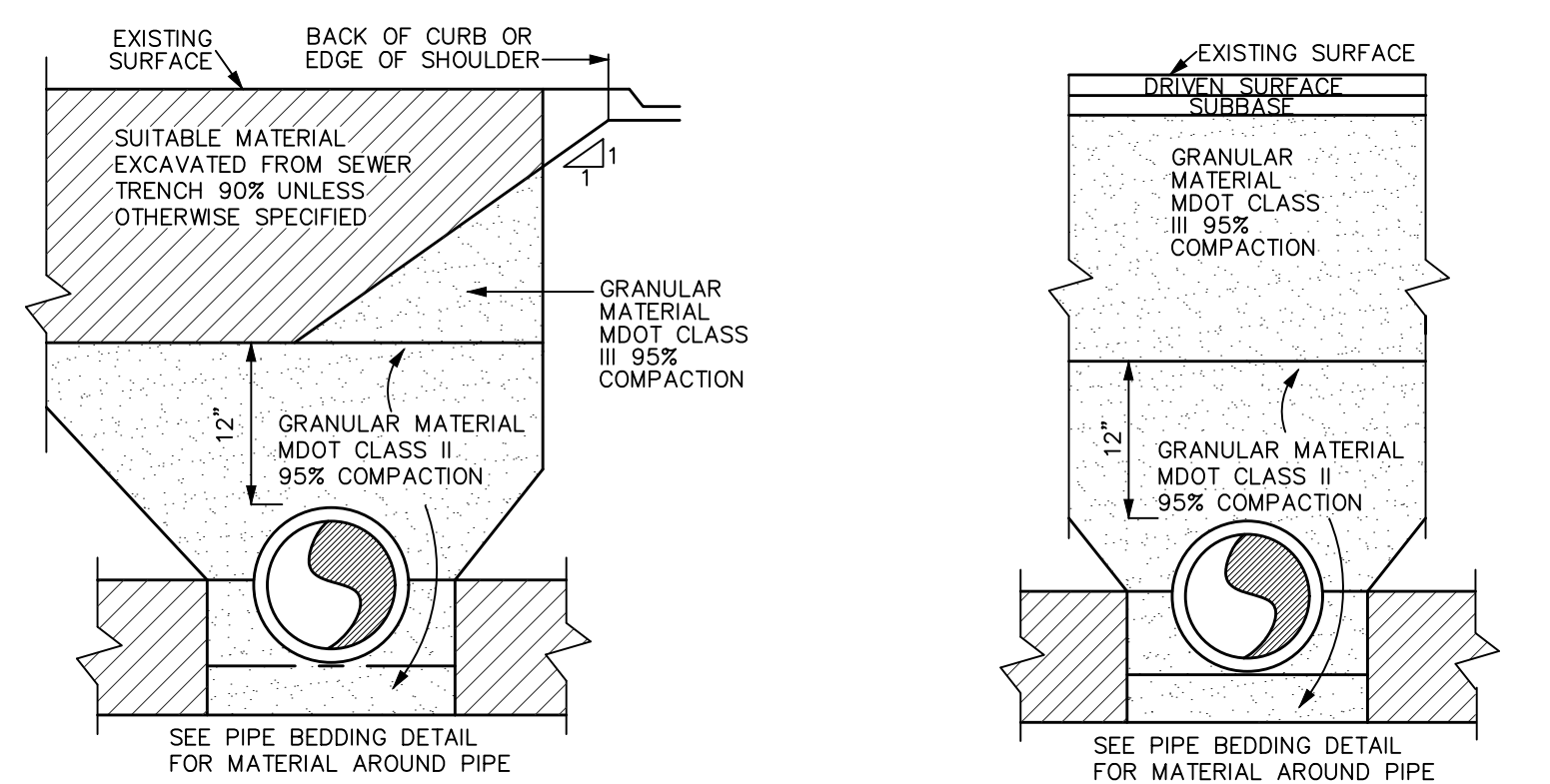
DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.						
CHECK: CAG						

ALDI #143  
HILLSDALE, MICHIGAN

### SANITARY SEWER NOTES & DETAILS

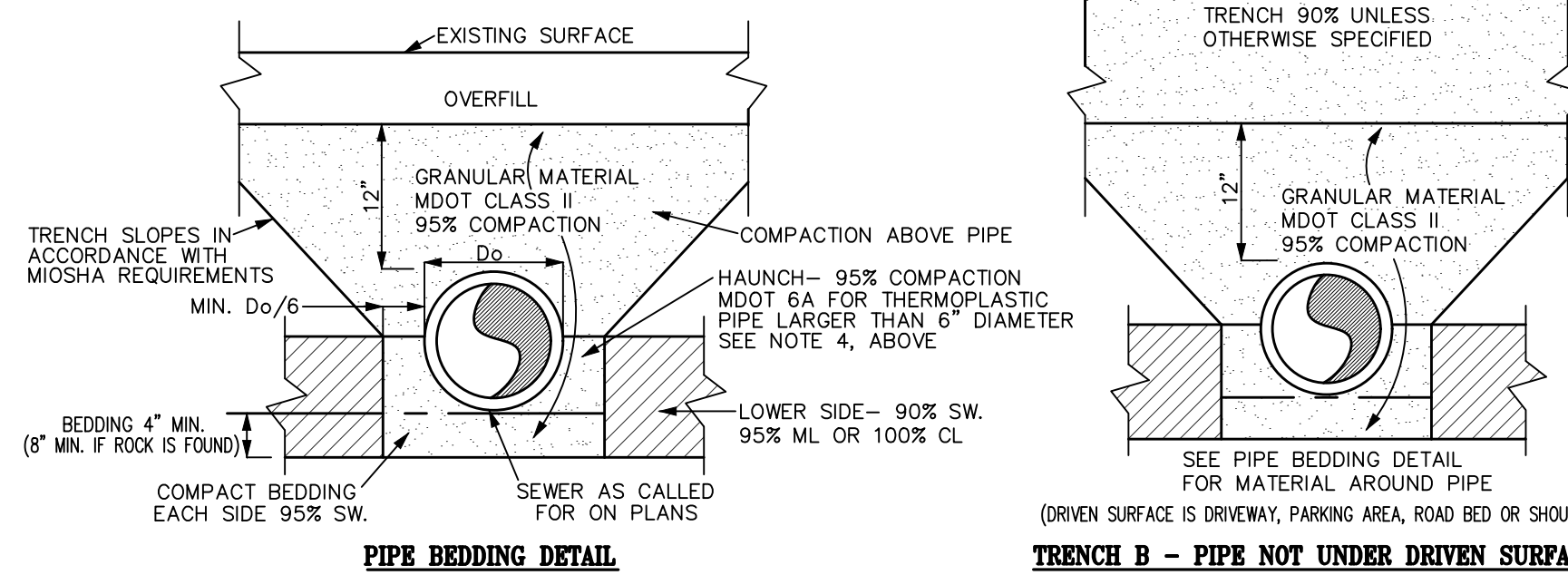
CLIENT: ALDI Inc. 2625 N. STOCKBRIDGE RD. WEBBERVILLE, MICHIGAN 48892 (517) 521-3907	SCALE: N/A PROJECT No.: 9234510 DWG NAME: 4510 DT4 ISSUED: APR. 02, 2024
--	---

**DT4**



**TRENCH A - PIPE UNDER OR WITHIN INFLUENCE OF DRIVEN SURFACE**  
NOT TO SCALE

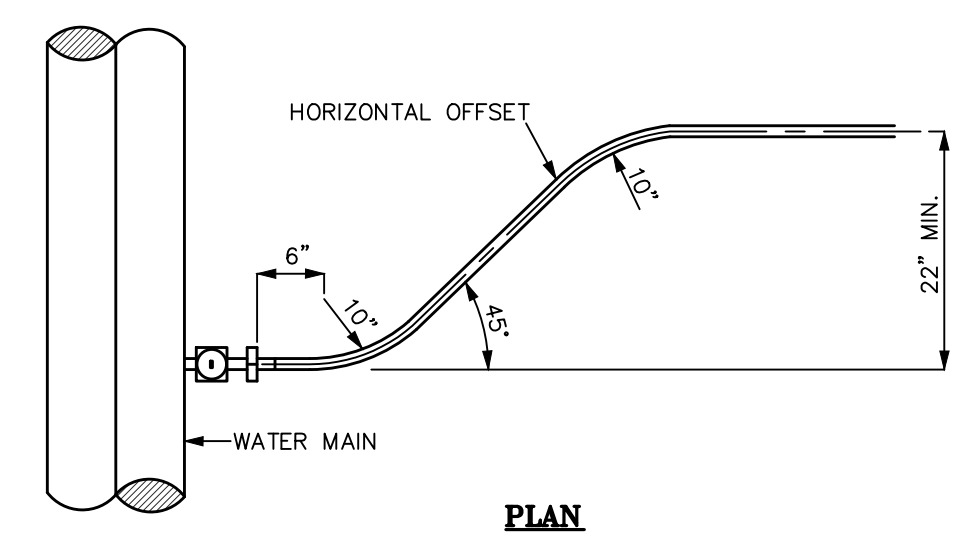
- NOTES:**
1. COMPACTION PRESENTED AS STANDARD PROCTOR VALUES.
  2. SOIL TYPES AASHTO DESIG. GRAVEL SANDY (SW) A1, A3 SANDY SILTY (ML) A2, A4 SILTY CLAY (CL) A5, A6, A7
  3. SOIL IN HAUNCH AND LOWER SIDE ZONES OUTSIDE OF  $D_o/6$  FROM SPRING LINE SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS THE SOIL IN THE OVERFILL ZONE.
  4. MATERIALS AROUND THERMO. PLASTIC PIPE WITH DIAMETER 6 INCHES SHALL PASS 0.5 INCH SIEVE. MATERIALS AROUND OTHER PIPES SHALL PASS 1.5 INCH SIEVE.



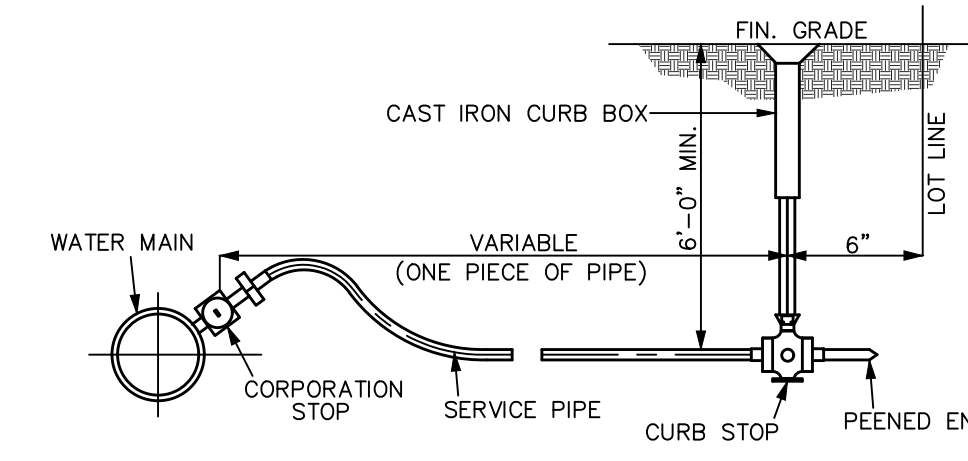
**TRENCH B - PIPE NOT UNDER DRIVEN SURFACES**  
NOT TO SCALE

**TRENCH DETAILS**  
NOT TO SCALE

SERVICE PIPE	CORP. STOP	CURB STOP	SERVICE BOX
1"	1"	1"	2 1/2"
1 1/2"	1 1/4" X 1 1/2"	1 1/2"	3"
2"	1 1/2" X 2"	2"	3"
1 1/4"	1 1/4"	1 1/4"	3"



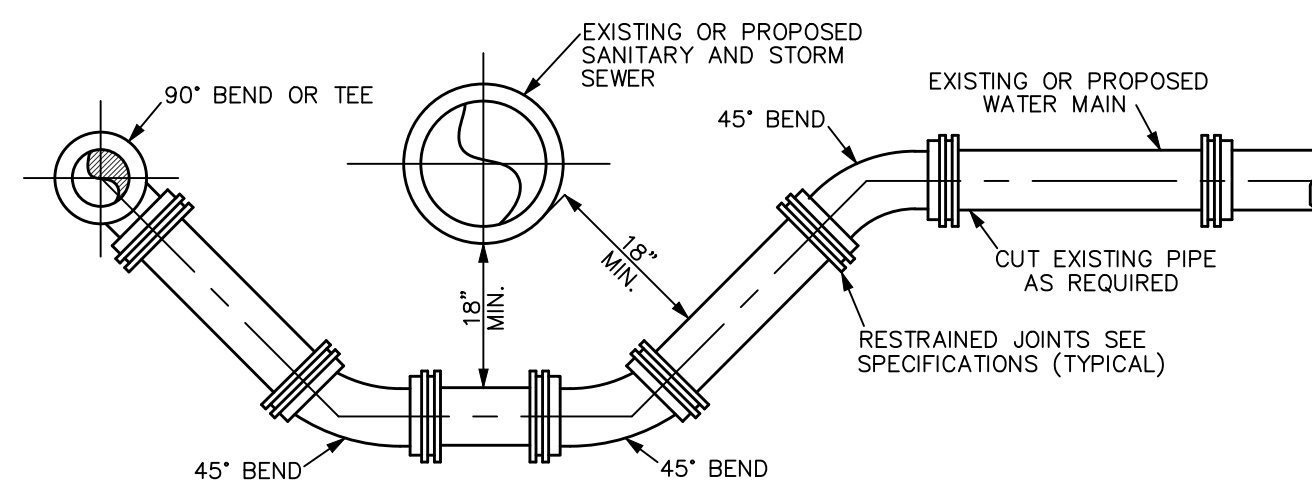
**PLAN**



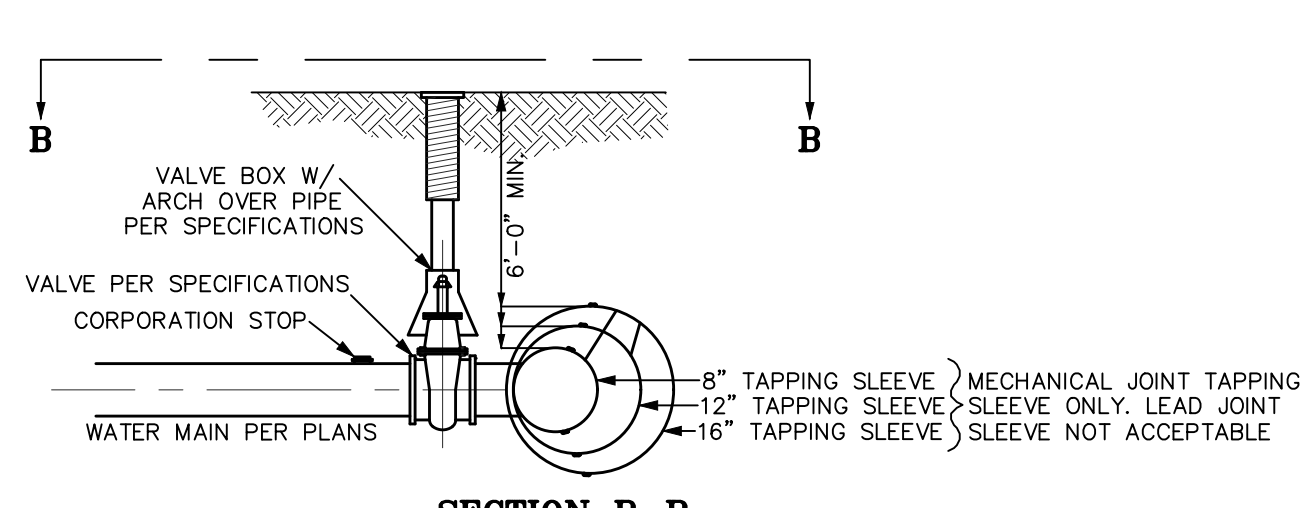
**SECTION**

**WATER SERVICE CONNECTION**  
NOT TO SCALE

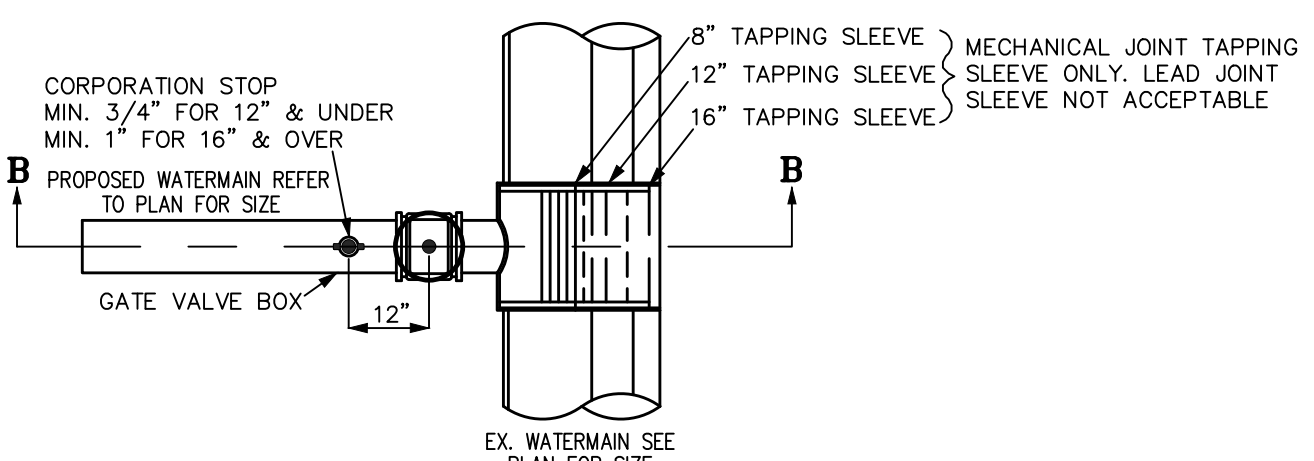
- NOTES:**
1. FURNISH LARGER DIAMETER SERVICE WHEN SHOWN ON PLANS.
  2. CURB BOX SHALL BE 6" MIN. DISTANCE FROM ALL OTHER UTILITIES.



**WATER MAIN RELOCATION AT SEWER CROSSING**  
NOT TO SCALE



**TAPPING SLEEVE, VALVE & WELL**  
NOT TO SCALE

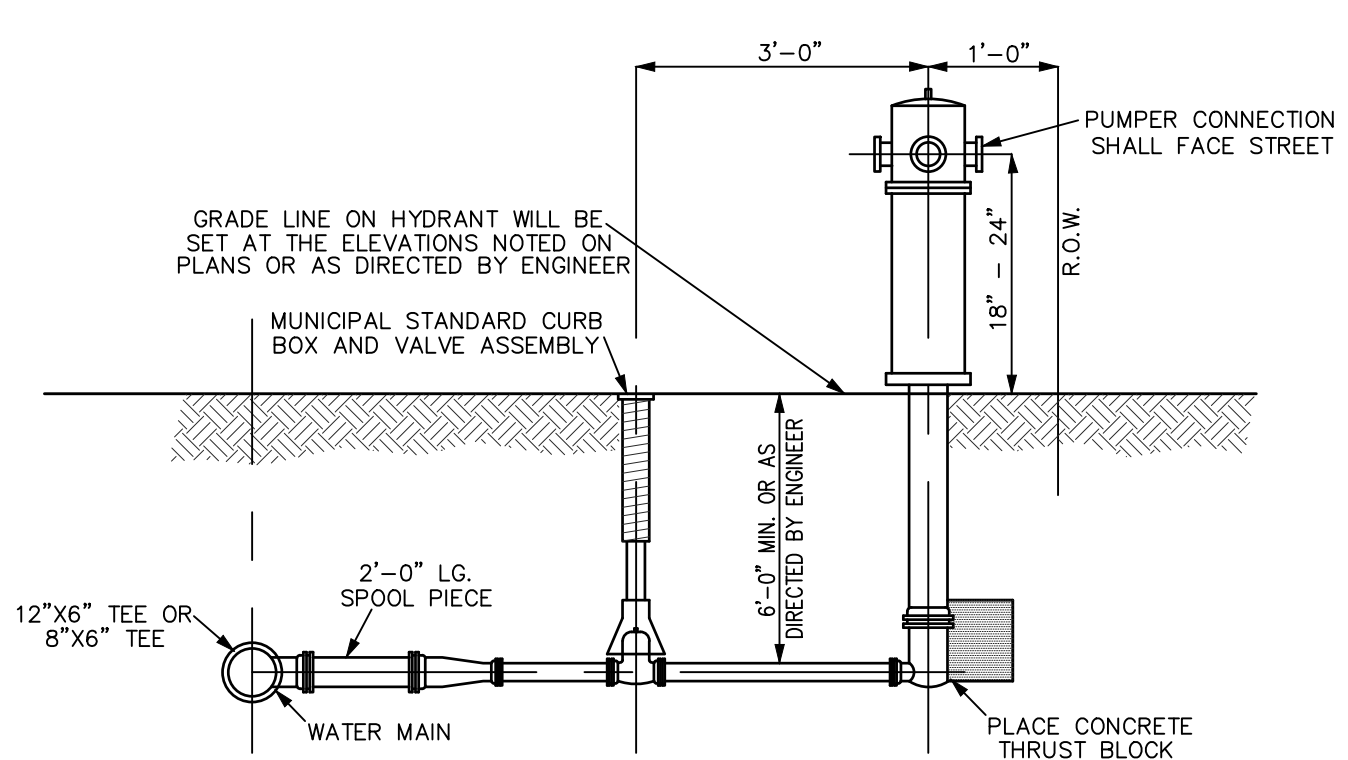


**PLAN TAPPING SLEEVE**  
NOT TO SCALE

- NOTES:**
1. SIZE OF TAPPING SLEEVE MAY VARY AS NECESSARY TO MATCH SIZES OF EXISTING AND PROPOSED WATERMAIN. REFER TO SIZES SHOWN ON PLAN.
  2. ALL JOINTS TO BE RESTRAINED PER MUNICIPAL STANDARDS OR TO MANUFACTURER'S SPECIFICATION, WHICHEVER IS GREATER.

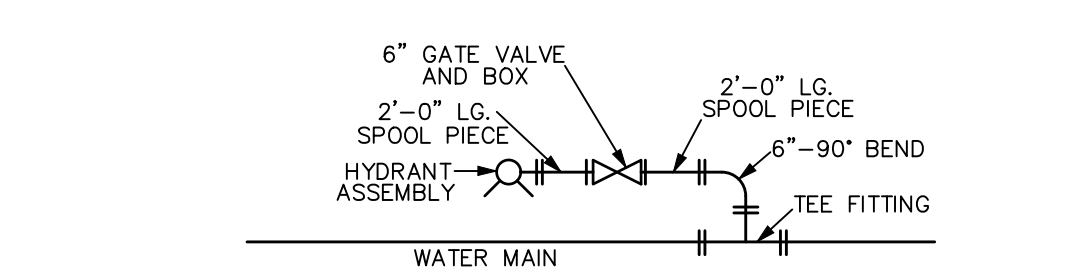
**WATER MAIN NOTES:**

1. The water main specifications of the Local Municipality are a part of this work. Refer to the General Notes on the project plans for additional information and requirements.
2. Water main work shall include excavation of pipe trench, placement of pipe bedding, placement of pipe, fittings, valves, hydrants and structures including castings, connection to existing water main, tuck pointing of structures, backfill of pipe trench, compaction of backfill, finish grading, adjustment of valves, hydrants and castings to match proposed finish grade, flushing, testing and chlorination of water main, site cleanup and restoration, and other work as shown on the project plans and specifications.
3. Existing and proposed grades shown in profile view on the project plans may be in relation to the centerline of road or item other than the centerline of pipe. The pipe lengths and grades shown in profile view on the project plans may not be to scale.
4. DIP when shown on the project plans shall be ductile iron pipe conforming to ANSI A21.51 (AWWA - C151). DIP shall have a cement lining and an exterior bituminous coating conforming to ANSI A21.4 (AWWA - C104). DIP shall be class 52 furnished in 18 or 20 foot lengths unless noted otherwise on the project plans. Pipe shall withstand a working pressure of 125 psi plus a 100 psi surge pressure. Provide polyethylene wrap when required by the Local Municipality.
5. Ductile iron or cast iron fittings shall conform to ANSI specification A21.10 for a working pressure of 125 psi and be of the mechanical joint type. Plugs, where shown on the plans, shall be solid mechanical joint plug type. Mechanical joints shall conform to ANSI specification A21.11. All nuts and bolts shall be Cor-Blue or Stainless Steel or equal, as approved by the Local Municipality.
6. DIP pipe push on joints shall conform to AWWA C111. Push-on joints shall consist of a molded rubber gasket to affect the joint seal. A rubber gasket and sufficient lubricant to assemble the joints shall be furnished with each joint. The lubricant shall have deleterious effect on the color, taste, or odor of potable water and shall not be corrosive to either the pipe or gasket. Pipe furnished with push-on type joints shall be equal in strength and leak tightness to pipe furnished with mechanical joints as specified when installed under identical conditions, and shall meet all other requirements of these specifications. In addition to the above mentioned requirements, the gasket and lubricant shall conform to the latest revision of the ANSI specification A21.11.
7. PVC pressure pipe water main when shown on the project plans shall be Polyvinyl Chloride Pressure Pipe conforming to ANSI/AWWA C900 or ANSI/AWWA C905. PVC water main shall be manufactured from compounds conforming to PVC cell classification of 12454 as defined in ASTM D1784. PVC C900 and C905 pipe shall conform to DR18. Pipe shall be furnished in twenty-foot lengths. PVC pipe shall incorporate a formed bell complete with a single rubber gasket conforming to ASTM F477. Joints shall be designed to meet the zero leakage test requirements of ASTM D3139. Pipe shall be marked per AWWA C900 or AWWA C905, and shall include as a minimum:  
Nominal size  
PVC  
Dimension Ratio, Standard Dimension Ratio or Schedule  
AWWA pressure class or rating  
AWWA Standard designation number  
NSF-61 mark verifying suitability for potable water service  
Extrusion production-record code (if applicable)  
Trademark or trade name  
Cell Classification 12454 and/or PVC material code 1120 may also be included.
8. Restrainted Joint PVC pipe shall utilize either JM Eagle, Eagle Loc 900 restrainted joint system or CertainTeed Certa-Lok restrainted joint system. Fittings to be used with PVC pipe shall conform to ANSI/AWWA C110/A21.10 for full body ductile iron fittings and ANSI/AWWA C153/A21.55 for compact ductile iron fittings and be of the mechanical joint type.
9. Mechanical restraint devices for PVC pipe shall consist of multiple gripping wedges incorporated into a follower gland meeting the applicable requirements of ANSI/AWWA C110/A21.10. Twist off nuts shall be used to insure proper actuating of the restraining device. Restrainted mechanical joints for PVC pipe shall be Megalug, Series 2000PV by EBAA Iron, or approved equal. Bolts and nuts for buried service shall be made of non-corrosive, high-strength, low-alloy steel having the characteristics specified in ANSI/AWWA C111/A21.11.
10. PVC Pressure pipe water main shall be installed with tracer wires in accordance with the Local Municipality.
11. Type K Copper when shown on the project plans shall be Type K soft temper copper water tube with flared joints for underground service conforming to ASTM B88.
12. CTS PE when shown on the project plans shall be SDR 9 CTS Polyethylene Pipe for use with potable water distribution. CTS PE pipe shall be installed with tracer wire in accordance with the Local Municipality.
13. Gate valves shall be resilient seated type unless otherwise noted. Resilient seated gate valves shall have a cast or ductile iron body and bonnet. Valves shall have a minimum non-shock W.O.G. working pressure of 200 psi. The wedge shall be ductile iron encased in a bonded-in-place styrene-butadiene elastomer covering to form resilient seating surfaces. Stem shall be bronze of non-rising design with double O-ring packing. Resilient seated gate valves shall be manufactured by Waterous, American Flow Control or Clow.
14. Swing Check Valves shall have a cast or ductile iron body and bolted cap with a minimum non-shock W.O.G. working pressure of 150 psi. Seats shall be bronze and shall be in the valve body. The disc shall be bronze or cast iron with permanently rolled in bronze faces. The disc hinge pin shall be aluminum bronze or stainless steel riding in bronze bushings, one on each side of the valve. Valves shall have ANSI 125-pound standard drill flat faced flanges unless otherwise specified or shown on the Plans. Valves shall have outside weighted arm.
15. Valve boxes shall be 5 1/4" valve boxes of cast iron construct iron. They shall be of three-piece, screw type adjustment design. All valve boxes shall be installed flush with the top of the proposed site grade. Covers shall be designed to be removed easily to provide access to the valve. The base shall not rest upon the valve assembly. All valve boxes shall be Tyler Pipe 6860 Item D with a number 6 base.
16. Fire hydrants shall conform to AWWA C502. Hydrants shall be compression type to close with the pressure. They shall have a 5 1/4" valve opening and 6" mechanical joint inlet. Hydrants shall have two 2 1/2" hose connections and one 5" Stortz fitting pumper connection. Fire hydrants shall have inside barrel dimension of not less than 6" I.D. from top to bottom. The 1 1/8" pentagon operating nut shall open left (counter clockwise). All nozzles shall be on a removable head with a flange so that they may be rotated by changing the position of the flange. Hydrant shall be fully bronze mounted, including top of the operating stem where it passes through the double O-ring seal in the bronze packing gland. The forged operating stem in the base and the valve seat shall also be of bronze. The molded valve shall be of composition rubber and the cast iron valve clamps shall be packed with O-ring seals and held tight to the stem by a threaded bronze hex retainer ring and threaded bronze locknut, anchored with set screws. Hydrant shall be designed for 250 psi working pressure and tested to 300 psi. Those portions of the hydrant above grade shall have two coats of red enamel. All unpainted surfaces shall have two coats of coal tar pitch varnish. The hydrants shall be East Jordan Part #59971D HYD 6-0" Bury, MJ Connection, Open Left, 2 drains tapped and plugged, 1HS AWWA Standard, C502 or similar approved by the Local Municipality. All fire hydrant assemblies shall be equipped with a gate valve and box.
17. Tapping sleeves, when specified, shall be full length of heavy-duty stainless steel construction designed for use with the type of pipe to be tapped. Tapping sleeve body shall be 18-8 type 304 stainless steel. Flange shall be C8 cast stainless steel. Gasket shall be full circumferential SBR compound for water service. Tapping sleeve shall contain a test plug to assure seal prior to tapping. Tapping sleeves shall be JCM Industries, type 432; Romac Industries type SST; or equal. Tapping valves shall meet the specification for gate valves except that the valve shall have a flange compatible with the tapping sleeve. Tapping valves shall be Waterous resilient wedge or equal.
18. Water service leads shall be installed in accordance with the project plans. Service leads 2" diameter or less shall include a corporation stop, curb stop and curb box. 1 inch to 2 inch curb stops for service connections shall be Ford Type B44 pack joint for Copper or Plastic CTS, Minneapolis Patter or equal as approved by the Local Municipality. All parts shall be cast from bronze and compression connections on both ends. All curb boxes shall be two piece Minneapolis pattern, adjustable with pent. All curb boxes shall be coated inside and out with a tar base enamel.
19. Connect to existing water mains in accordance with the project plans. Provide all materials and labor required for a complete watertight connection, incidental to work. Taps to existing water main shall be performed under pressure and without interruption of service.
20. The Contractor shall furnish and place horizontal and/or vertical thrust blocks at all plugs, caps, tees and fittings whether or not indicated on the drawings unless otherwise specified. All thrust blocks of any nature shall be approved by the Inspector or Local Municipality Representative prior to backfilling.
21. Backfill all water main in accordance with the Pipe Trench details provided on the project plans. Provide pipe bedding that meets or exceeds both the specifications of the Pipe Trench details on the project plans and the recommendation of the pipe manufacturer, incidental to work. Provide 6'-0" minimum cover for all water main.
22. Provide 10' minimum horizontal separation and 1.5' minimum vertical separation between water main and both sanitary sewer and storm sewer.
23. Contractor shall flush, test and chlorinate the water main in accordance with the Local Municipality. Contractor shall follow AWWA C600 standards for pressure testing and AWWA C651 standards for disinfection and flushing prior to placing water main into use.

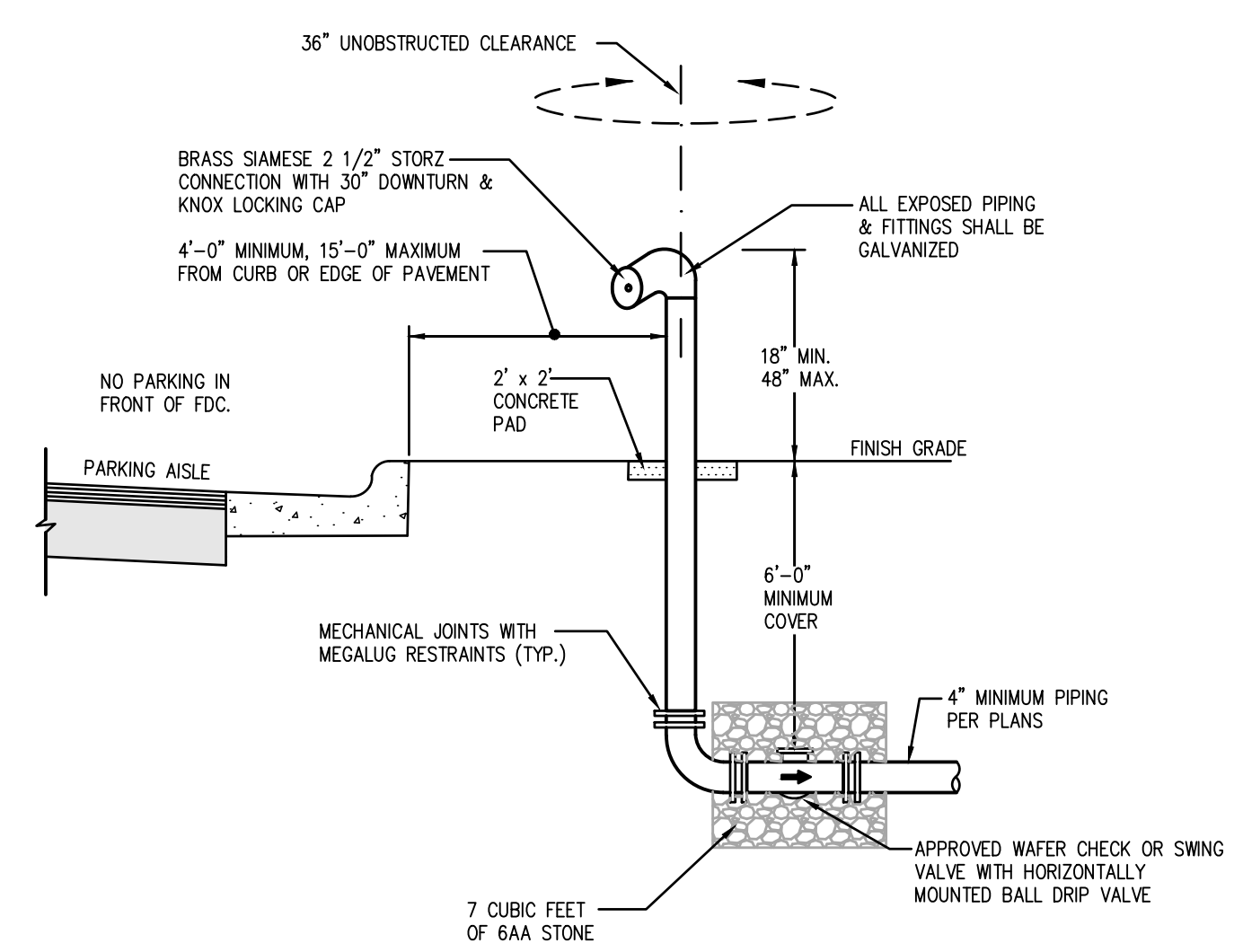


**STANDARD FIRE HYDRANT**  
NOT TO SCALE

- NOTES:**
1. PROVIDE JOINT RESTRAINT FOR ALL JOINTS.
  2. HYDRANT SHALL HAVE TWO (2) COATS OF FIRST QUALITY METAL PROTECTIVE PAINT. COLOR TO MATCH MUNICIPAL STANDARD.
  3. DRAIN HOLES MUST BE PLUGGED.



**SCHEMATIC OF HYDRANT PARALLEL TO WATER MAIN**  
NOT TO SCALE



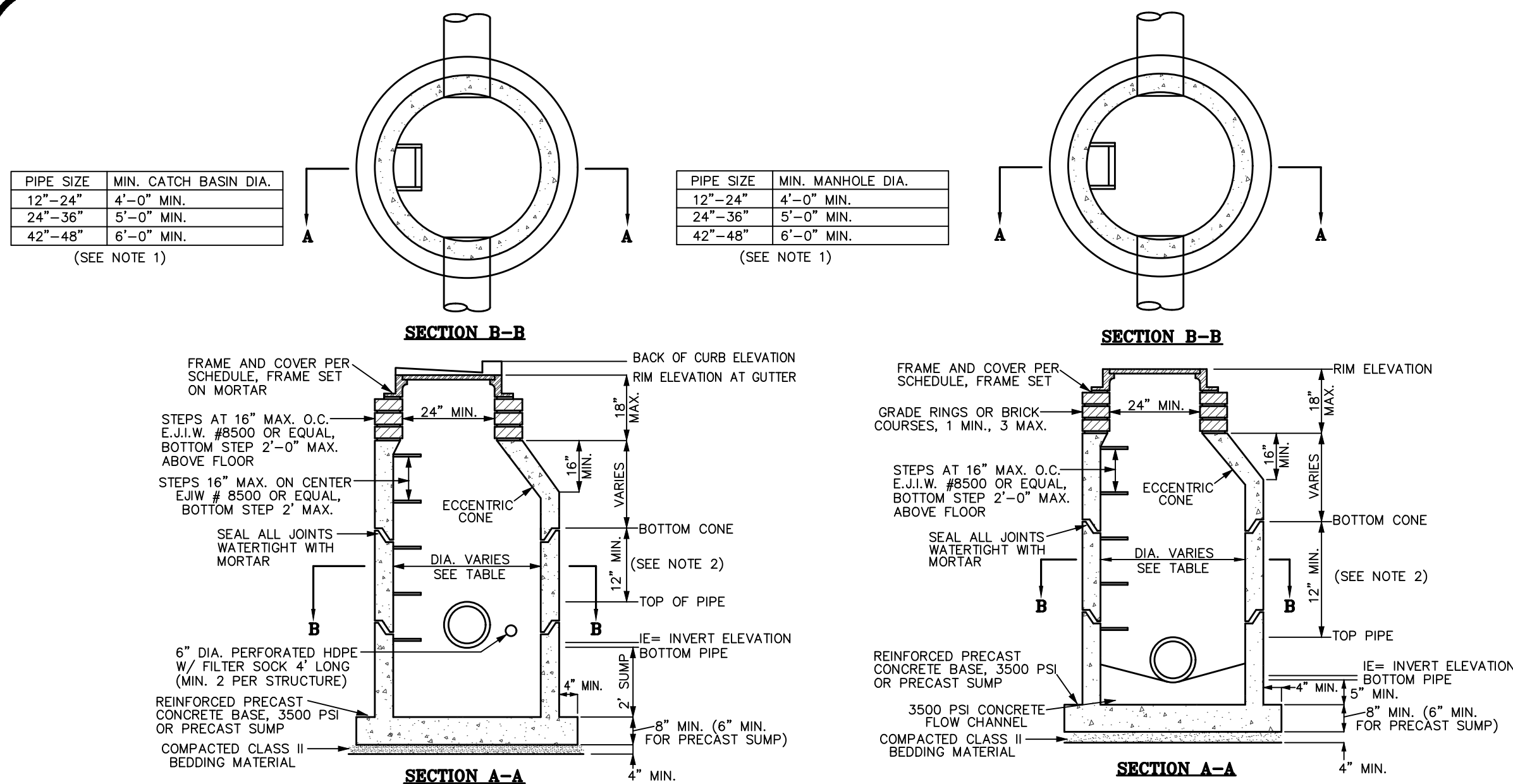
**REMOTE FDC DETAIL**  
NOT TO SCALE

DESIGN: CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.	1	04-02-24	REVISED PER CITY REVIEW COMMENTS			
CHECK: CAG						

ALDI #143  
HILLSDALE, MICHIGAN

**WATER MAIN NOTES & DETAILS**

CLIENT: ALDI Inc. 2625 N. STOCKBRIDGE RD. WEBBERVILLE, MICHIGAN 48892 (517) 521-3907	SCALE: N/A PROJECT No.: 9234510 DWG NAME: 4510 DT5 ISSUED: APR. 02, 2024	811 Know what's below. Call before you dig. 3 WORKING DAYS BEFORE YOU DIG CALL 811 OR 1-800-482-7171 (TOLL FREE) OR VISIT CALL811.COM	<b>DESIGN INC.</b> (810) 227-9533 CIVIL ENGINEERS LAND SURVEYORS 2183 PLESS DRIVE BRIGHTON, MICHIGAN 48114	<b>DT5</b>
--	---	--	---	------------

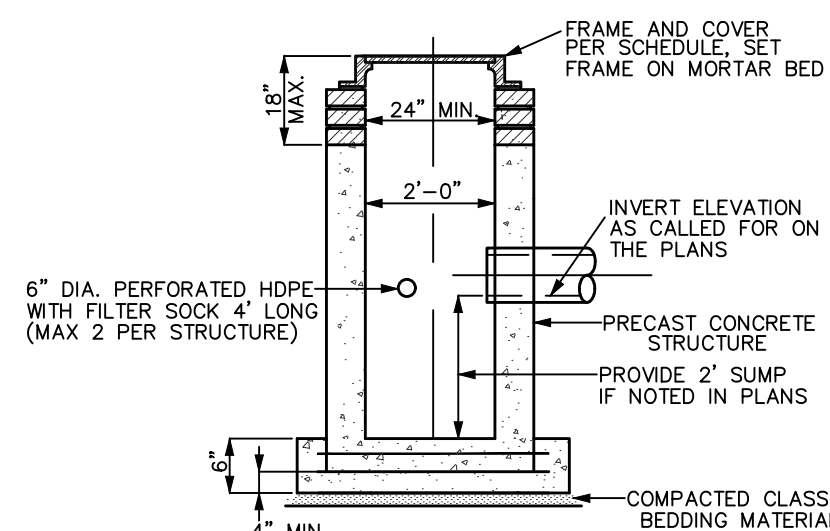


**STORM STRUCTURE "A" STANDARD CATCH BASIN**  
NOT TO SCALE

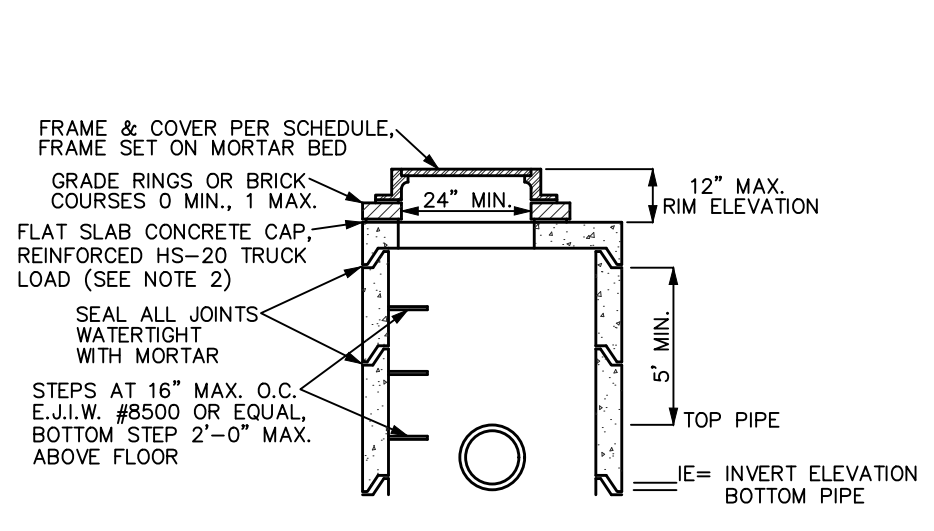
- NOTES:**
- FURNISH LARGER STRUCTURE DIAMETER AS NEEDED TO MAINTAIN 6" MIN CLEAR BETWEEN PIPE OPENINGS.
  - FURNISH LOW PROFILE STRUCTURE ONLY WHEN NECESSARY TO MAINTAIN PROPER CLEARANCE ABOVE PIPES.

**STORM STRUCTURE "B" STANDARD MANHOLE**  
NOT TO SCALE

- NOTES:**
- FURNISH LARGER STRUCTURE DIAMETER AS NEEDED TO MAINTAIN 6" MIN CLEAR BETWEEN PIPE OPENINGS.
  - FURNISH LOW PROFILE STRUCTURE ONLY WHEN NECESSARY TO MAINTAIN PROPER CLEARANCE ABOVE PIPES.

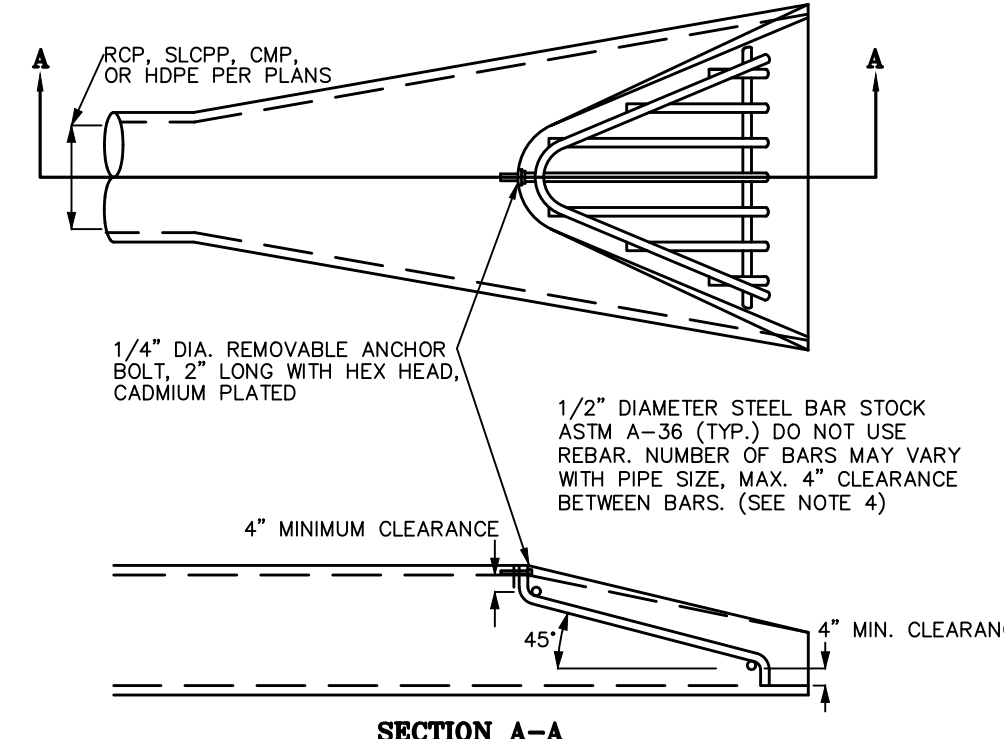


**2' DIA. STORM INLET STRUCTURE**  
NOT TO SCALE



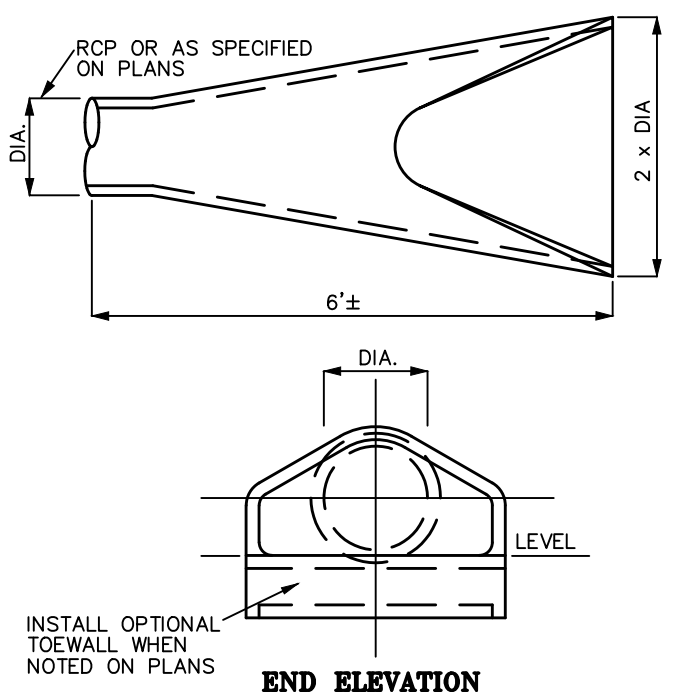
**LOW PROFILE STORM STRUCTURE**  
NOT TO SCALE

- NOTES:**
- CONTRACTOR/MANUFACTURER SHALL DETERMINE WHEN LOW PROFILE STRUCTURES ARE NECESSARY AND PROVIDE INCIDENTAL TO WORK.
  - CLEARANCE FROM TOP OF PIPE TO BOTTOM OF FLAT SLAB CONCRETE CAP SHALL BE 5" MINIMUM. CONTRACTOR SHALL PROVIDE SPECIAL MATERIALS AND LABOR INCLUDING LOW PROFILE CASTINGS AND REDUCED THICKNESS FLAT SLAB CONCRETE CAPS (6" MINIMUM THICKNESS) REINFORCED FOR HS-20 TRUCK LOADS AS NEEDED TO PROVIDE 5" MINIMUM CLEARANCE INCIDENTAL TO WORK.
  - SEE STORM STRUCTURE "A" AND "B" DETAILS FOR ADDITIONAL REQUIREMENTS INCLUDING SUMP/FLOW CHANNEL SPECIFICATIONS.



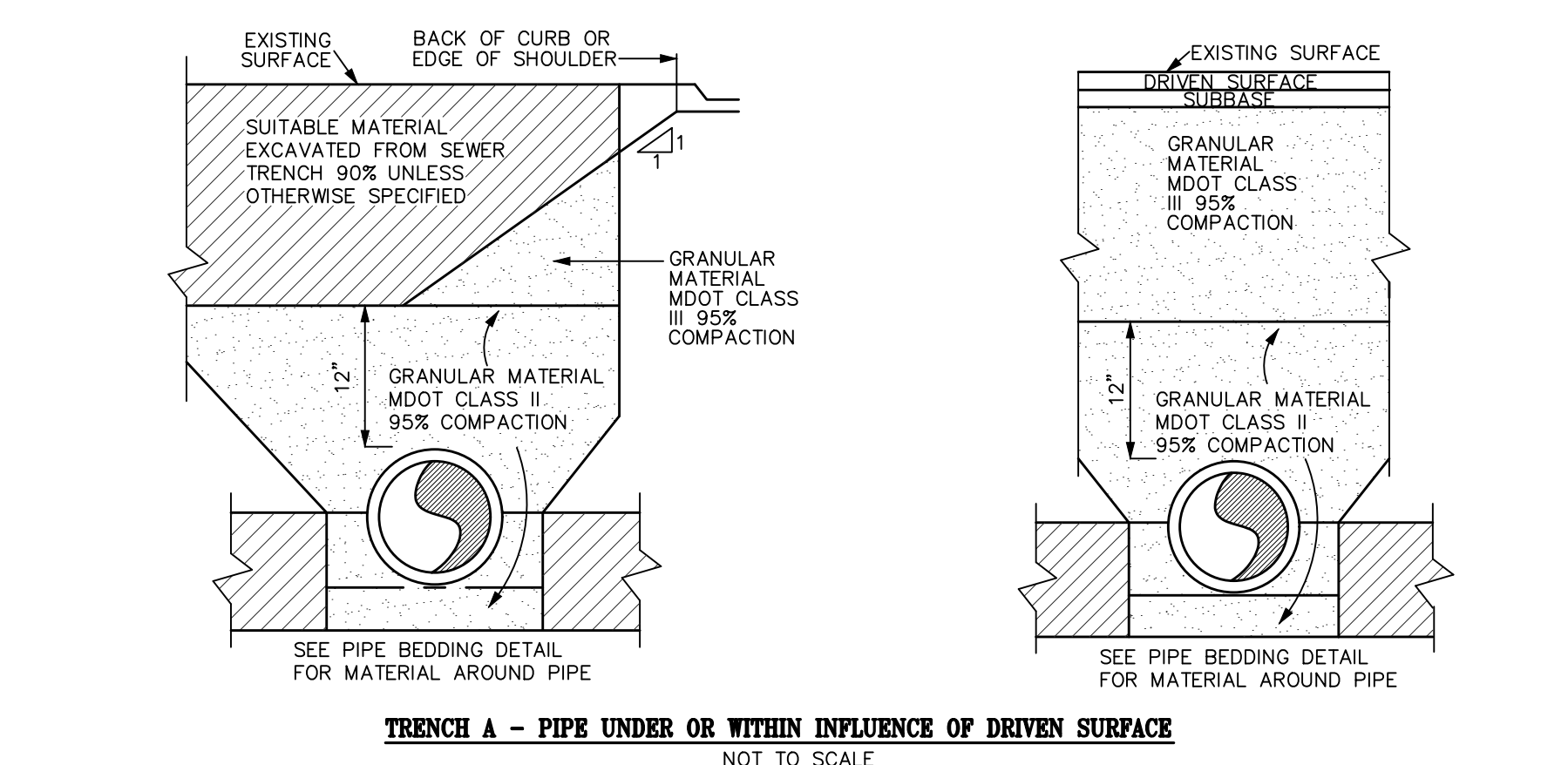
**ANIMAL GUARD**  
NOT TO SCALE

- NOTES:**
- ANIMAL GUARD REQUIRED ON ALL FLARED END SECTIONS OF 15" DIAMETER PIPE OR GREATER.
  - CONTRACTOR MAY SUBSTITUTE ALTERNATE GRATING LAYOUT AS APPROVED BY OWNER/ENGINEER/AGENCY PRIOR TO INSTALLATION.
  - DETAIL SHOWN FOR RCP FLARED END SECTION. PROVIDE SIMILAR ANIMAL GUARD FOR FLARED END SECTIONS ON CMP, HDPE, AND SLOPP.
  - WELD ALL CONNECTIONS FULL STRENGTH PER AMERICAN WELDING SOCIETY STANDARDS.



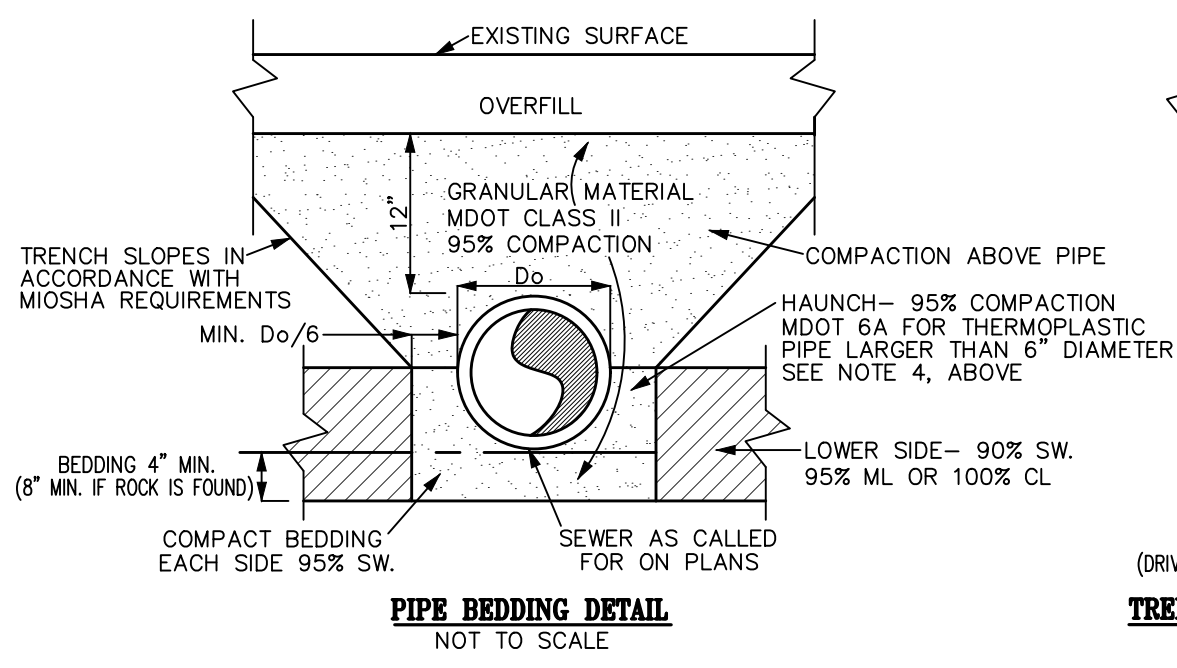
**FLARED END SECTION**  
NOT TO SCALE

- NOTES:**
- RCP FLARED END SECTION SHOWN. PROVIDE SIMILAR FLARED END SECTION FOR CMP, SLOPP OR HDPE PIPE.
  - PROVIDE RIP-RAP PER RIP-RAP DETAILS FOR ALL OUTLET FLARED END SECTIONS.
  - INSTALL FLARED END SECTION WITH INVERT ELEVATION LEVEL AS VIEWED FROM END.

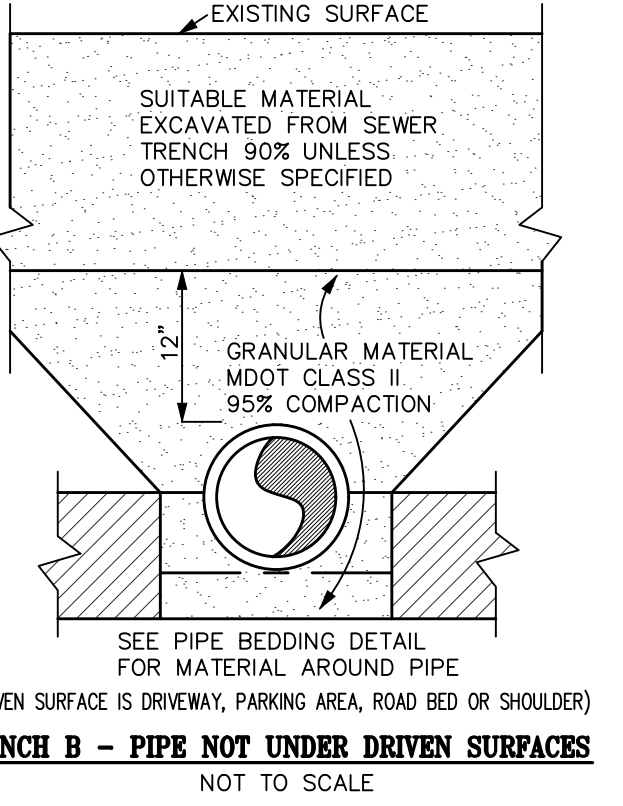


**TRENCH A - PIPE UNDER OR WITHIN INFLUENCE OF DRIVEN SURFACE**  
NOT TO SCALE

- NOTES:**
- COMPACTION PRESENTED AS STANDARD PROCTOR VALUES.
  - SOIL TYPES AASHTO DESIG.  
GRAVEL SANDY (SW) A1, A3  
SANDY SILTY (ML) A2, A4  
SILTY CLAY (CL) A5, A6, A7
  - SOIL IN HAUNCH AND LOWER SIDE ZONES OUTSIDE OF D<sub>o</sub>/6 FROM SPRING LINE SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS THE SOIL IN THE OVERFILL ZONE.
  - MATERIALS AROUND THERMO PLASTIC PIPE WITH DIAMETER 6 INCHES SHALL PASS 0.5 INCH SIEVE. MATERIALS AROUND OTHER PIPES SHALL PASS 1.5 INCH SIEVE.

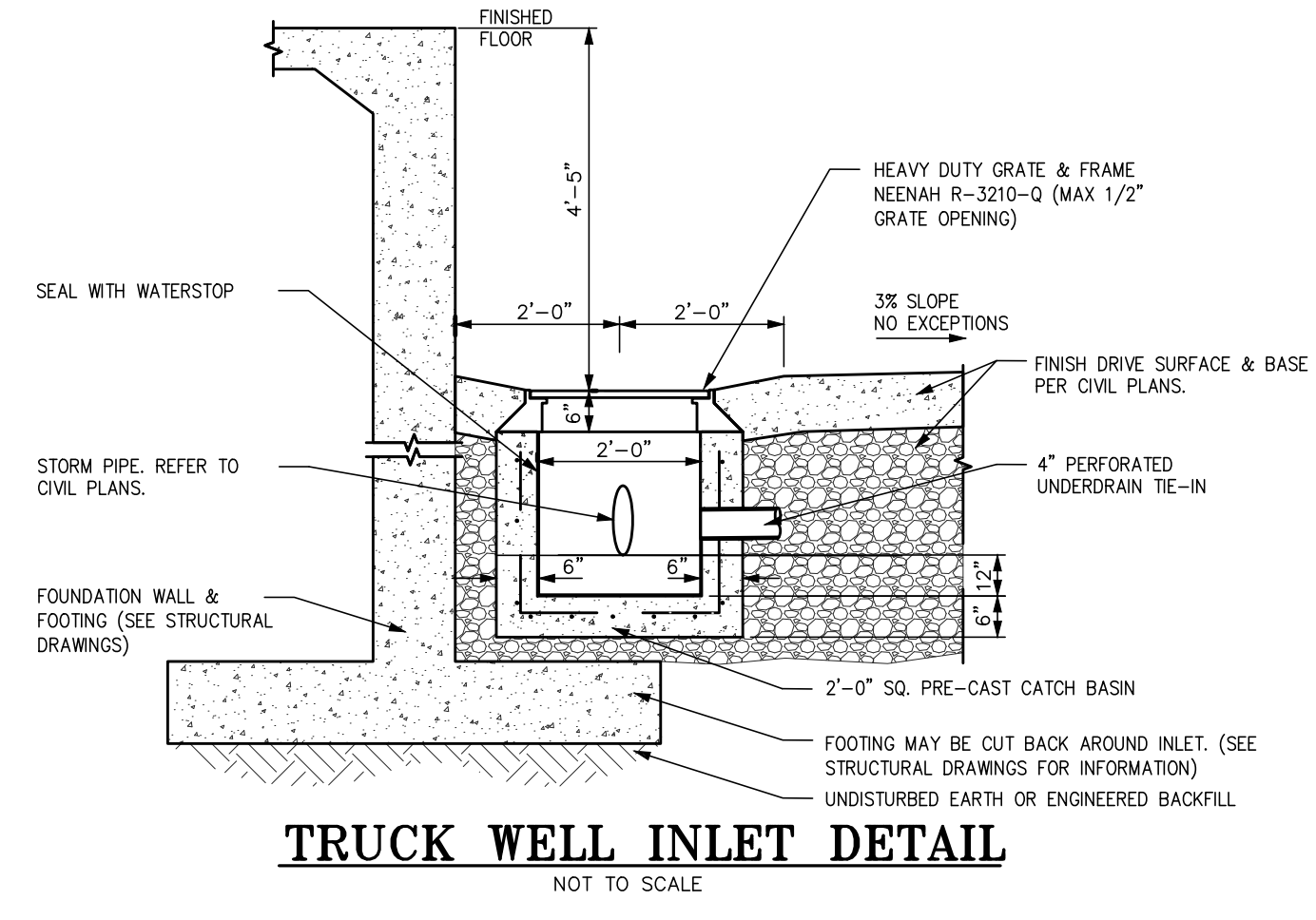


**PIPE BEDDING DETAIL**  
NOT TO SCALE



**TRENCH B - PIPE NOT UNDER DRIVEN SURFACES**  
NOT TO SCALE

**TRENCH DETAILS**  
NOT TO SCALE



**TRUCK WELL INLET DETAIL**  
NOT TO SCALE

**STORM SEWER NOTES:**

- The storm sewer and stormwater management specifications of the Local Municipality are a part of this work. Refer to the General Notes on the project plans for additional information and requirements.
- Storm sewer work shall include clearing of vegetation and tree stumps, stripping and stockpiling of topsoil for reuse, excavation of pipe trench, placement of pipe bedding, placement of pipe and structures including castings, connection to existing structures, tuck pointing of structures, backfill of pipe trench, compaction of backfill, finish grading to provide positive drainage to structures, adjustment of castings to match finish grade, topsoil placement, seed & mulch, site cleanup and restoration, and other storm sewer related work as shown on the project plans and specifications.
- Existing and proposed grades shown in profile view, when provided on the project plans, may be in relation to the centerline of road or item other than the centerline of pipe. The pipe lengths and grades shown in profile view on the project plans may not be to scale.
- RCP when shown on the project plans shall be reinforced concrete pipe and shall conform to the specifications for reinforced concrete pipe per ASTM C76. RCP pipe joints shall be bell-and-spigot with rubber gaskets conforming to ASTM C433. Non-gasketed joints shall only be utilized when authorized by the Owner, Engineer AND Municipality. Non-gasketed joints of pipe having a diameter of 30 inches or greater shall be tuck-pointed on the inside with cement mortar after the backfill process is complete. Install reinforced concrete end sections incidental to work. Saw cut pipes to length as needed. When pipe class is not shown on the project plans, provide the following:  
Pipe cover to proposed grade: 0 to 4 feet Class V  
4.1 to 10 feet Class III\*  
10.1 to 18 feet Class IV  
18.1 feet and greater Class V  
\* Use Class IV under paved surfaces
- CMP when shown on the project plans shall be corrugated metal pipe and shall conform to the specifications for corrugated metal pipe per AASHTO Designation M36. CMP shall be 16-gage steel minimum for 24 inch diameter or smaller and 14-gage steel minimum for 30 inch diameter or greater. Install galvanized steel end sections and connection bands, incidental to work. Connection bands for CMP pipe joints located under paved surfaces shall be gasketed couplers. Saw cut pipes to length as needed.
- HDPE - Type S when shown on the project plans shall be high density polyethylene pipe with a smooth interior and shall conform to the specifications for high density polyethylene pipe per AASHTO Designation M252 Type S for pipes of 3" to 10" diameter and per AASHTO Designation M294 Type S for pipes of 12" to 60" diameter. HDPE - Type S pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477. Tamp backfill at spring line of HDPE - Type S pipe. Install high density polyethylene end sections incidental to work. Saw cut pipes to length as needed.
- HDPE - Type C when shown on the project plans shall be high density polyethylene pipe with a corrugated interior and shall conform to the specifications for high density polyethylene pipe per AASHTO Designation M252 for pipes of 3" to 10" diameter and per AASHTO Designation M294 for pipes of 12" to 60" diameter. HDPE - Type C pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477. Tamp backfill at spring line of HDPE - Type C pipe. Install high density polyethylene end sections incidental to work. Saw cut pipes to length as needed.
- CPVC when shown on the project plans shall be corrugated polyvinyl chloride pipe and shall conform to the specifications for corrugated polyvinyl chloride pipe per ASTM F794 and F949. CPVC pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477. Tamp backfill at spring line of CPVC pipe. Install high density polyethylene end sections incidental to work. Saw cut pipes to length as needed.
- PVC when shown on the project plans shall be polyvinyl chloride pipe and shall conform to the specifications for polyvinyl chloride pipe per ASTM D2751, maximum SDR of 26. PVC pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477 or solvent welded type conforming to ASTM D2564. Tamp backfill at spring line of PVC pipe. Saw cut pipes to length as needed.
- Concrete storm structures shall be pre-cast and shall conform to the specification of pre-cast concrete structures per ASTM C478. Joints of concrete storm structure sections shall be bell-and-spigot with rubber gaskets conforming to ASTM C433. Brick, concrete block or cast in place storm structures may be substituted for pre-cast storm structures ONLY when authorized by the Owner, Engineer AND Municipality; refer to MDT standard plan R-1, latest revision. All pipe openings in pre-cast structures shall be factory installed and shall include a rubber boot resilient pipe to manhole connector conforming to ASTM C1478-07. All clamps, bands and hardware shall be stainless steel or other non-corrosive material. Provide the appropriate adapter(s) as necessary for corrugated pipe. Pipe to storm structure connections shall be performed in accordance with the rubber boot connector manufacturer's recommendations. All temporary openings and seams in storm structures shall be tuck-pointed watertight with cement mortar. Refer to MDT standard plan R-2, latest revision, for alternate on-line storm structure details when pipe exceeds 42 inch diameter.
- Tap existing structures as acceptable to the Engineer and Municipality, incidental to work. All temporary openings in storm structures shall be tuck-pointed watertight with cement mortar.
- Backfill all storm sewer in accordance with the Pipe Trench details provided on the project plans. Provide pipe bedding that meets or exceeds both the specifications of the Pipe Trench details on the project plans and the recommendation of the pipe manufacturer, incidental to work.
- When edge drains and/or under drains are shown on the project plans, connection to storm structures is incidental to work. During storm sewer construction, install 10 linear feet of edge drain and/or under drain from the storm structures in each specified direction and install temporary cap at end. Complete installation of edge drain following preparation of the subgrade when under paved surface or following finish grade when not under paved surface.
- Install removable plugs in storm sewer stubs as acceptable to Engineer and Municipality, incidental to work. Mark the end of all storm sewer stubs with a 2" x 4" wooden stake extending a minimum of 12" above finish grade, incidental to work.
- Storm structure castings shall be coated with water based asphaltic paint by the manufacturer. Seams and temporary openings between storm structures and castings shall be tuck-pointed water tight with cement mortar. Coordinate correct curb box / hood / "T" back as needed to match curb profile. See casting schedule on project plans for additional requirements.
- Provide 3.5' minimum cover from the top of pipe of all roof drain pipes to the proposed finish grade when site conditions allow. When pipe cover is less than 3.5', install 2" thick by 24" wide Styrofoam insulation centered over the top of pipe at 12" above top of pipe or as required by the Local Municipality.

**811**  
Know what's below.  
Call before you dig.  
3 WORKING DAYS BEFORE YOU DIG  
CALL 811 OR 1-800-482-7171 (TOLL FREE)  
OR VISIT CALL811.COM

**DESIGN INC.**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESS DRIVE  
BRIGHTON, MICHIGAN 48114

DESIGN-CAG	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: L.F.						
CHECK: CAG						

ALDI #143  
HILLSDALE, MICHIGAN

**STORM SEWER NOTES & DETAILS**

CLIENT: ALDI INC	SCALE: N/A
2625 N. STOCKBRIDGE ROAD WEBBERVILLE, MICHIGAN, 48892 (517) 521-3907	PROJECT No.: 9234510 DWG NAME: 4510 DT6 ISSUED: APR. 02, 2024

**DT6**



# V9.0 PROTOTYPING FOR CONSTRUCTION

SIDE DOCK AREA SUMMARY		
OCCUPANCY USE	ROOM NAME	SQUARE FOOTAGE
MERCANTILE (M)	SALES / VESTIBULE	12,657
	UNISEX 2	79
	UNISEX 1	78
	HALL	132
SUBTOTAL (MERCANTILE)		12,946
BUSINESS (B)	OFFICE	243
	BREAK ROOM	277
	eCOMMERCE	298
SUBTOTAL (BUSINESS)		818

SIDE DOCK AREA SUMMARY		
OCCUPANCY USE	ROOM NAME	SQUARE FOOTAGE
STORAGE / STOCK (S-2)	BACKROOM	2,771
	COOLER	1,439
	FREEZER	674
	UTILITY ROOM	218
SUBTOTAL (STORAGE / STOCK)		5,102
SUBTOTAL (OCCUPANCIES)		18,866
EXTERIOR / INTERIOR WALLS / UNOCCUPIED SPACE		1,260
BUILDING SQUARE FOOTAGE		20,126
EXTERIOR CANOPY		650
TOTAL SQUARE FOOTAGE (INCLUDING CANOPY)		20,776

SIDE DOCK OPERATIONS DATA		
ITEM	LINEAR FOOTAGE OF BASE (PRODUCE INCLUDED)	V9.0 PROTOTYPE
		816'-0"
		54
	104'-10" x 183'-2"	
	75'-1" x 164'-0"	
	120'	
	4	
	12	
	16	
	12	
	82	

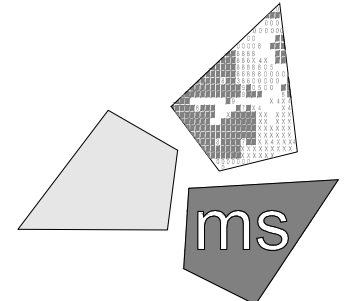
- NOTES:**
- THIS DRAWING IS FOR GENERAL FIXTURING LAYOUT AND REFERENCE TO EQUIPMENT ONLY. ALL INFORMATION IS FOR ALDI OPERATIONAL USE ONLY AND SHALL NOT BE USED FOR CONSTRUCTION OR BIDDING PURPOSES.
  - ALL DIMENSIONS TO WALLS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE.
  - THIS FACILITY DOES NOT CONTAIN A BAKERY, A BUTCHER, A DELI OR FISH COUNTER.
  - ALL FOOD IS PREPACKAGED. THERE IS NO ON SITE FOOD PREPARATION.
  - GONDOLA LOCATIONS ARE MEASURED FROM THE FACE OF THE STAINLESS STEEL PRICE TAG MOLDING (SSPTM).

Issued:	Date:
Concept No. 3	02/20/24

Revisions:	Date:

**DO NOT SCALE PLANS**

Copying, Printing, Software and other processes required to produce these prints can stretch or shrink the actual paper or layout. Therefore, scaling of this drawing may be inaccurate. Contact us consultants with any need for additional dimensions or clarifications.



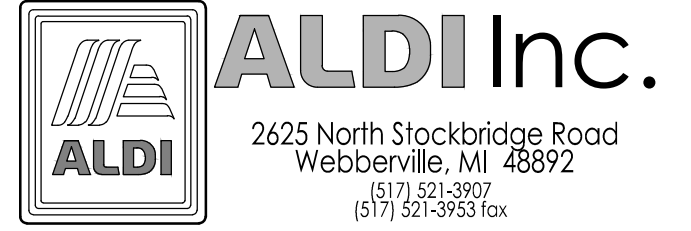
**Mosure L.L.C.**  
engineers, architects, planners  
2221 Schrock Road  
Columbus, Ohio 43229-1547  
phone 614.898.7100  
fax 614.898.7570

DRAWN BY: JRC

REVIEWED BY: TJG

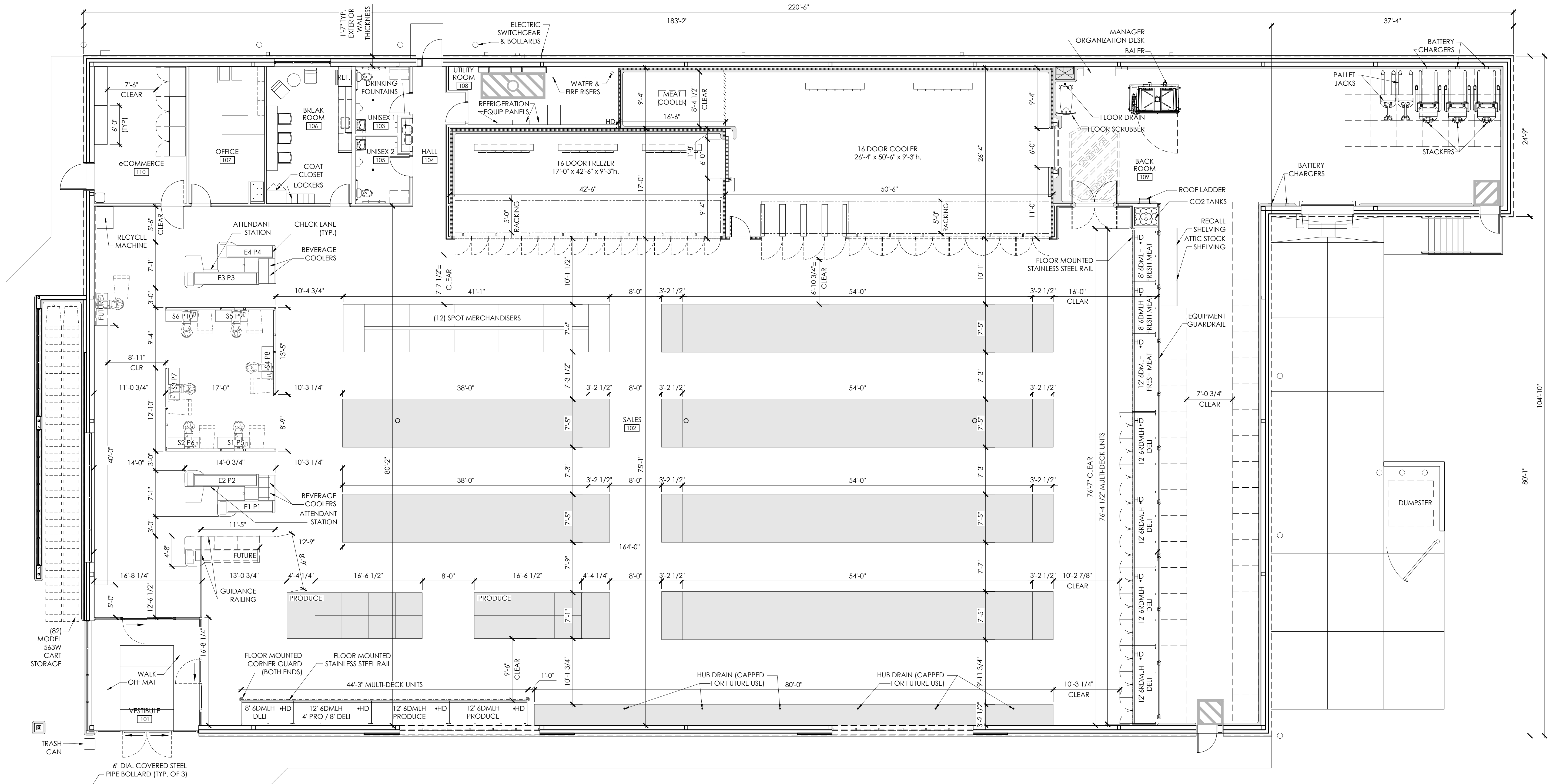


PROFESSIONAL OF RECORD:  
SANDIPAN ADITYA No. 1301072475  
EXP. DATE: 10/04/2025



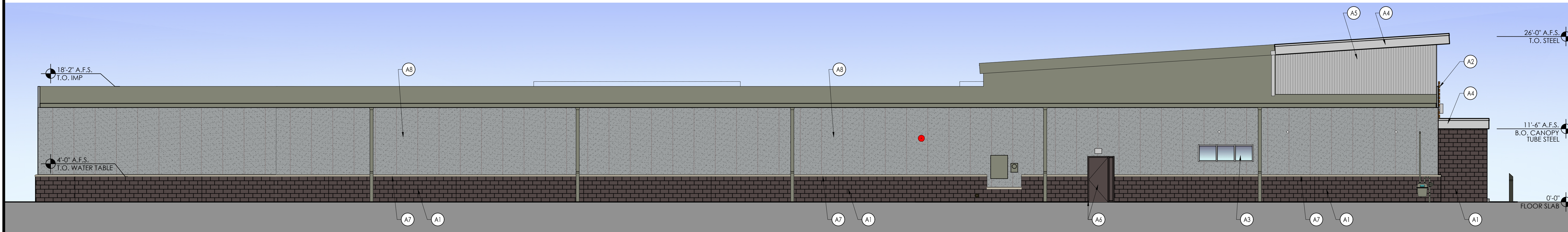
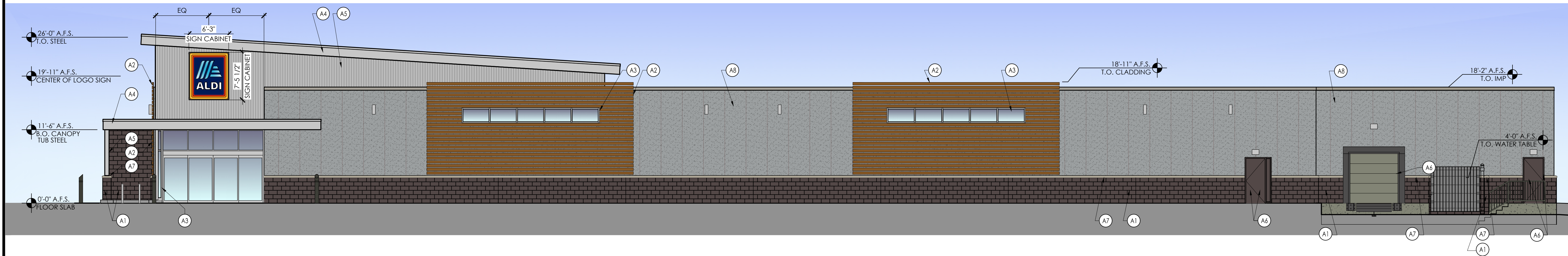
ALDI Inc. Store #: XX  
Hillsdale, MI  
Project Address  
Hillsdale, MI 49242  
Hillsdale County  
Project Name & Location:

Operations Plan	
Drawing Name:	Prototype: V9.0 Project No. 40496-70
Type:	Ground Up
Scale: As Noted	XXX A131 Drawing No.



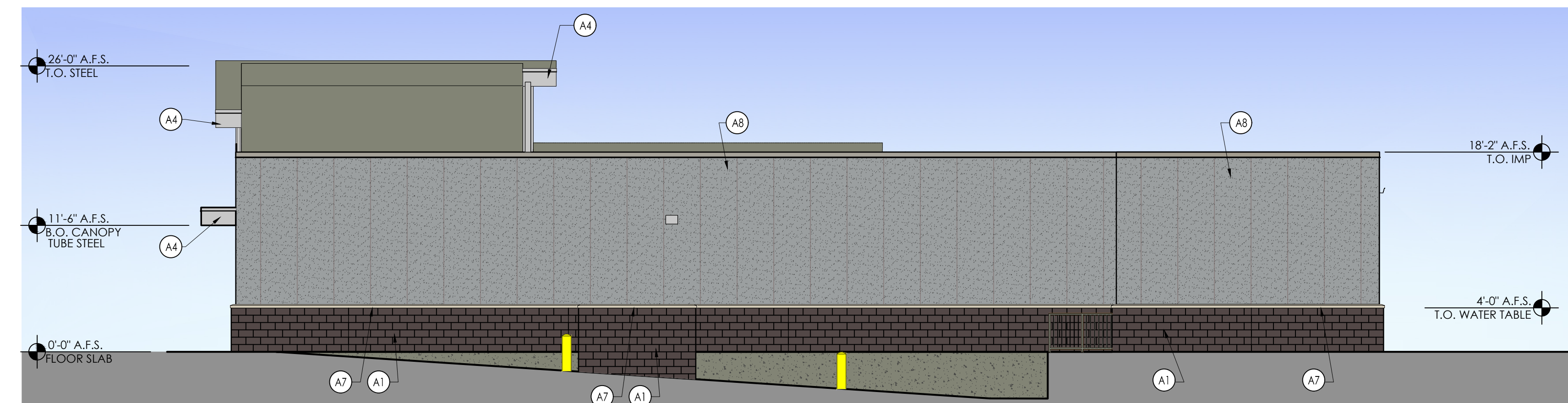
**1 Operations Plan**  
SCALE: 1/8" = 1'-0"  
NORTH

# V9.0 PROTOTYPE - NOT FOR CONSTRUCTION



## MATERIAL LEGEND

<b>A1</b> SPEC BRICK CHESAPEAKE BLEND SMOOTH	<b>A2</b> EXTRUDED ALUMINUM PLANKS - LIGHT NATIONAL WALNUT	<b>A3</b> ALUMINUM STOREFRONT - CLEAR ANODIZED ALUMINUM
<b>A4</b> LAMINATORS INC - BRIGHT SILVER ALUMINUM COMPOSITE PANEL	<b>A5</b> FIRESTONE - SILVER METALLIC	<b>A6</b> EXTERIOR PAINT SHERWIN WILLIAMS - #9575 METROPOLIS
<b>A7</b> CAST STONE WATER TABLE TANNERSTONE AG-1	<b>A8</b> GRANITE GREY	



SIGNAGE			
DESCRIPTION	QUANTITY	SQ. FT. PER SIGN	TOTALS
TOWER SIGN	2	46.6	93.2
TOTAL SIGNAGE			93.2

SIGNAGE IS SHOWN FOR REFERENCE ONLY AND SHALL BE UNDER SEPARATE PERMIT SUBMITTAL

Issued:	Date:
Concept No. 3	02/20/24
Revisions:	Date:

**DO NOT SCALE PLANS**  
Copying, Printing, Software and other processes required to produce these prints can stretch or shrink the actual paper or layout. Therefore, scaling of this drawing may be inaccurate. Contact ms consultants with any need for additional dimensions or clarifications.

**Mosure L.L.C.**  
engineers, architects, planners  
2221 Schrock Road  
Columbus, Ohio 43229-1547  
phone 614.898.7100  
fax 614.898.7570

DRAWN BY: JRC  
REVIEWED BY: TJG

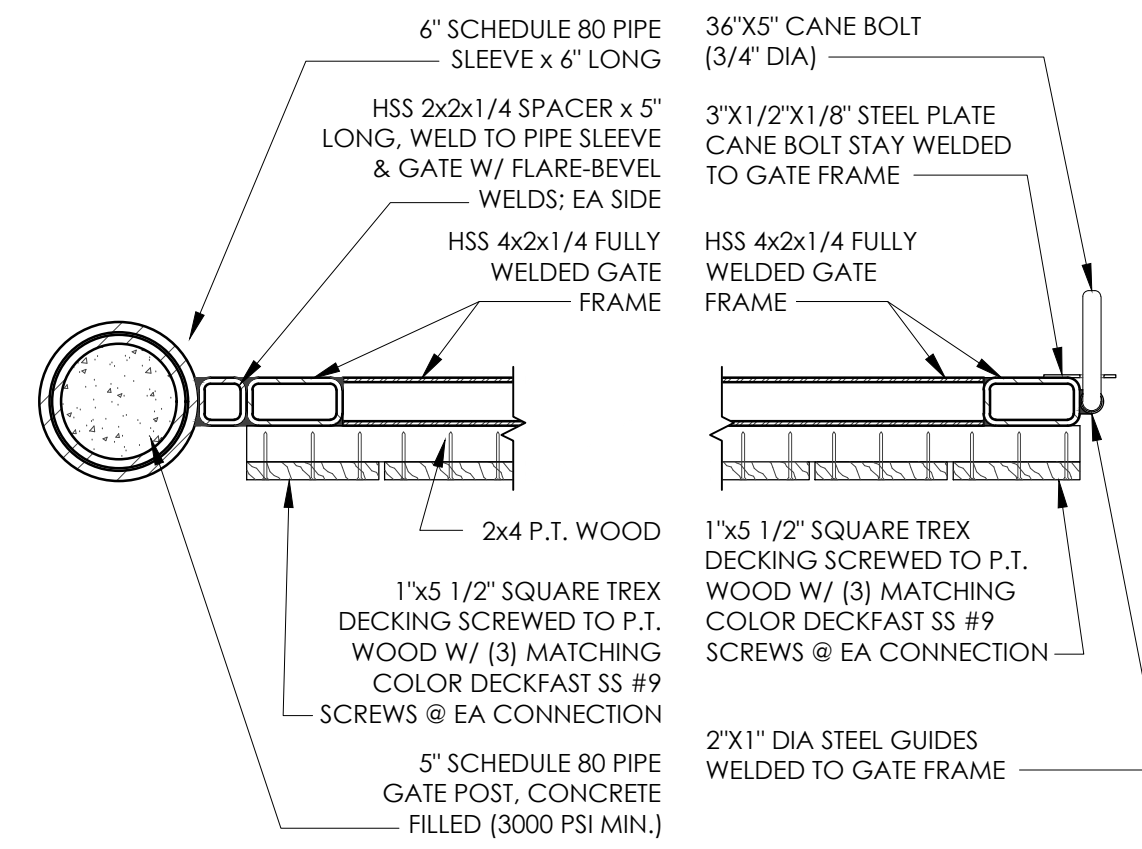
Seal  
STATE OF MICHIGAN  
SANDIPAN ADITYA  
ARCHITECT  
No. 1301072475  
PROFESSIONAL OF RECORD:  
SANDIPAN ADITYA No. 1301072475  
EXP. DATE: 10/04/2025

**ALDI Inc.**  
2625 North Stockbridge Road  
Webberville, MI 48892  
(517) 521-9907  
(517) 521-3953 fax

ALDI Inc. Store #: XX  
Hillsdale, MI  
Project Address  
Hillsdale, MI 49242  
Hillsdale County  
Project Name & Location:

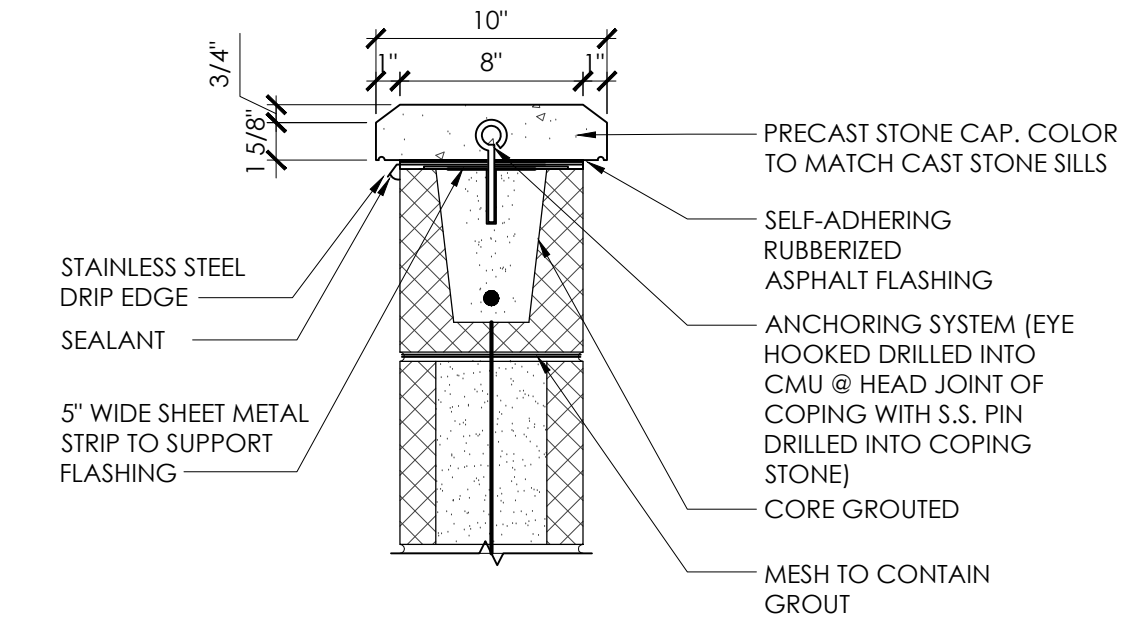
Exterior Elevations  
Drawing Name:  
Prototype: V9.0  
Type: Ground Up  
Scale: As Noted  
Project No. 40496-70  
A-201  
Drawing No.

# V9.0 PROTOTYPE - NOT FOR CONSTRUCTION



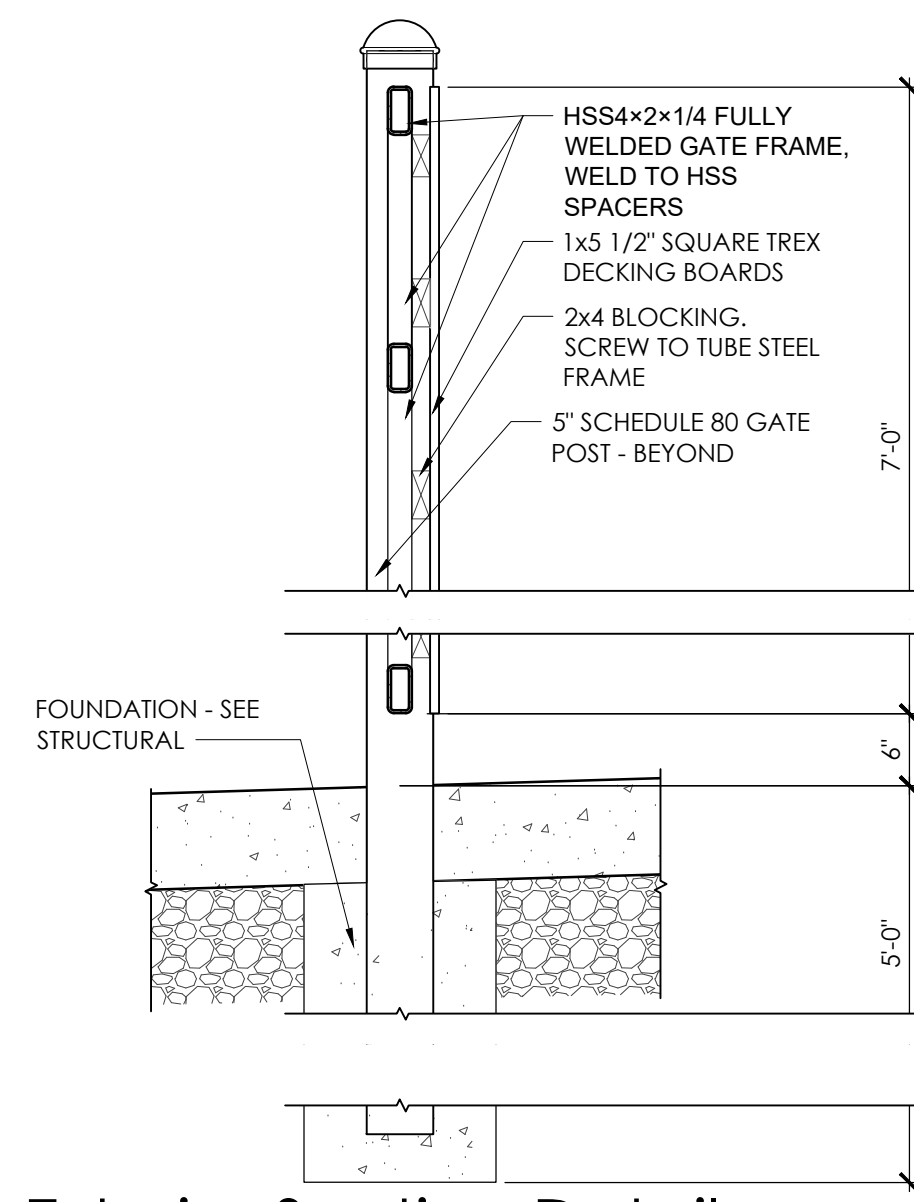
**B3** Exterior Plan Detail - Dumpster Gate

SCALE: 1 1/2" = 1'-0"



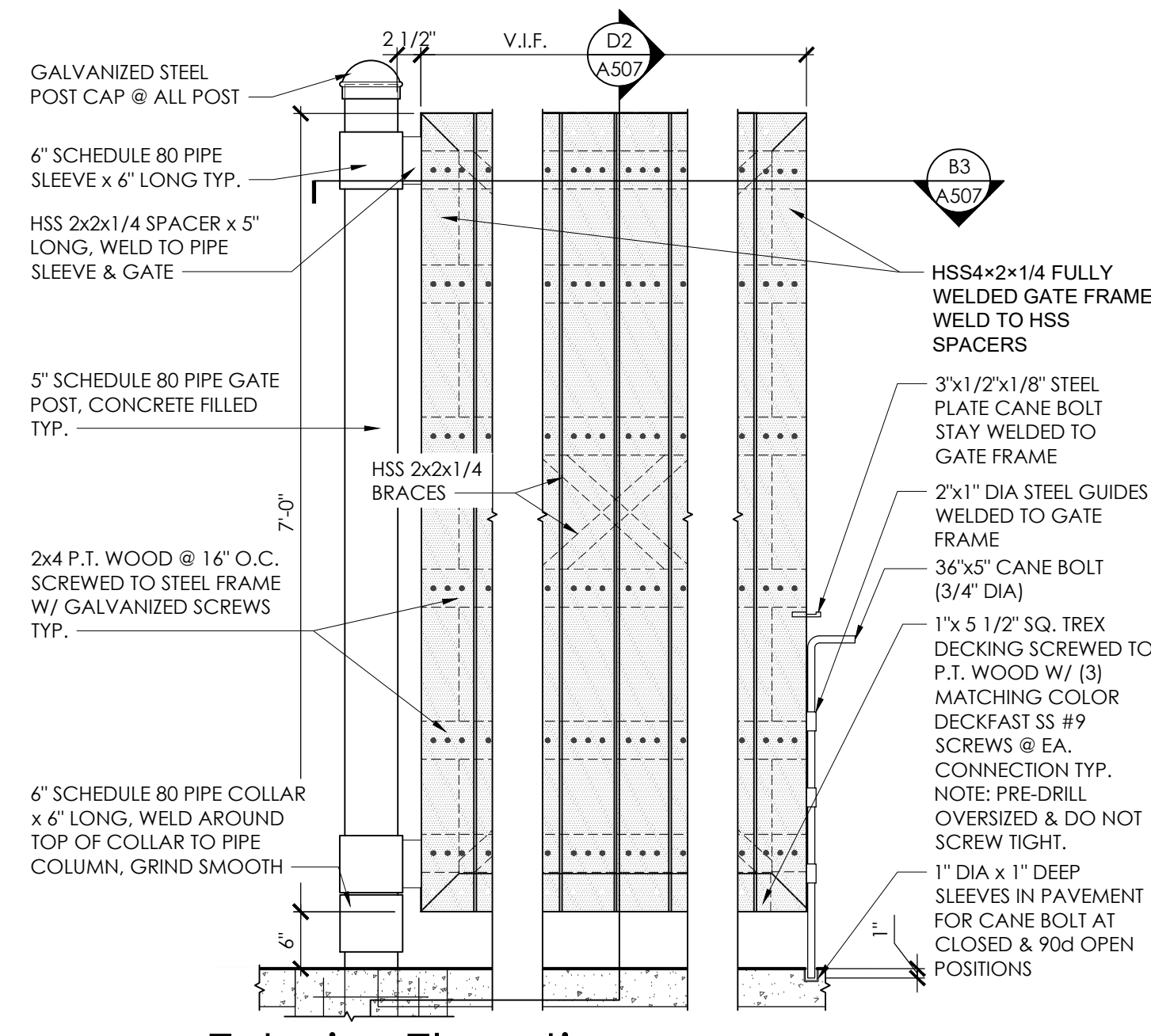
**A3** Dock Screening Section Detail

SCALE: 1 1/2" = 1'-0"



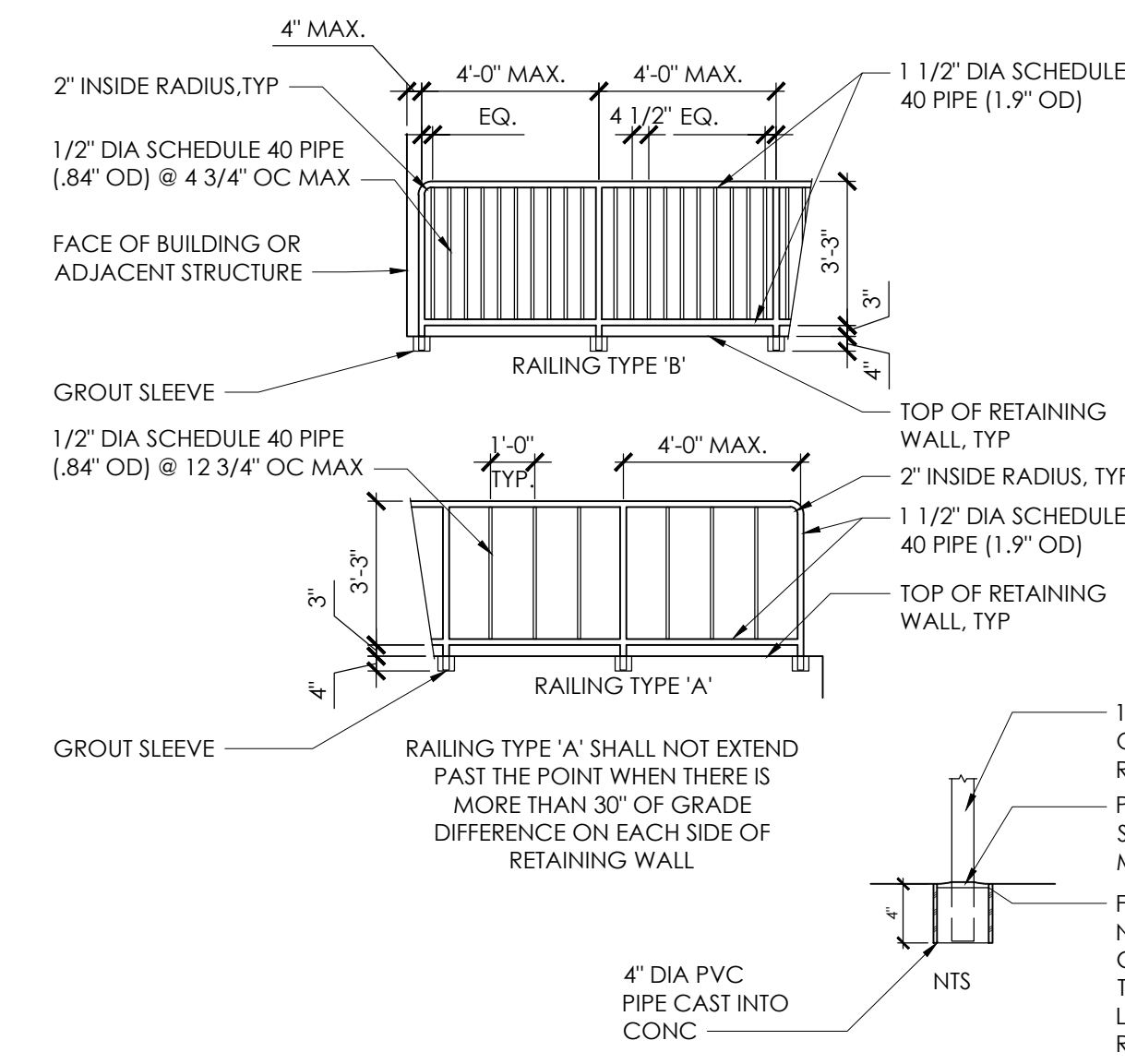
**D2** Exterior Section Detail - Dumpster Post

SCALE: 3/4" = 1'-0"



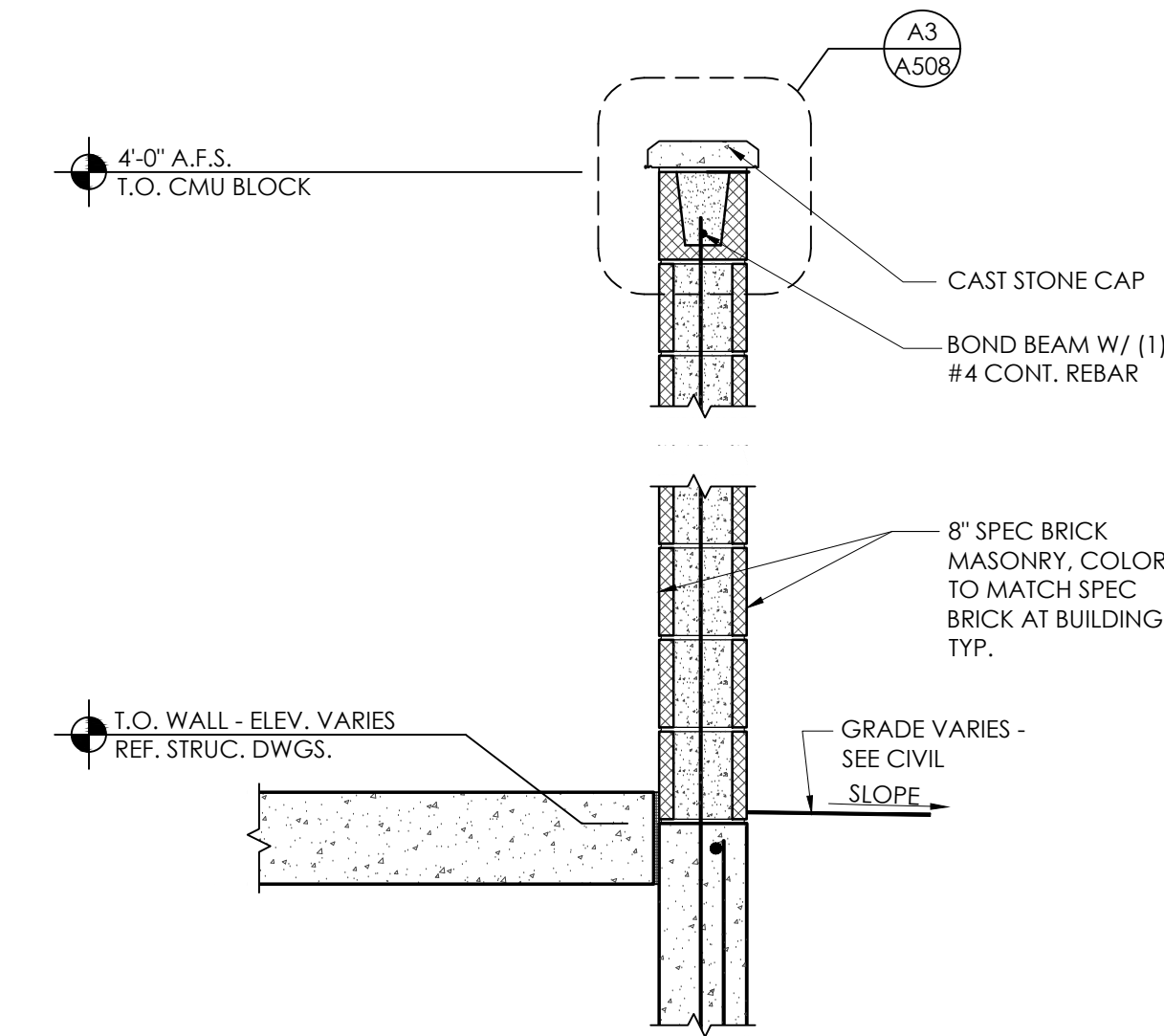
**C2** Exterior Elevation - Dumpster Gate

SCALE: 3/4" = 1'-0"



**B2** Exterior Detail - Railing Types

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



**A2** Dock Screening Section

SCALE: 3/4" = 1'-0"

Issued: \_\_\_\_\_ Date: \_\_\_\_\_

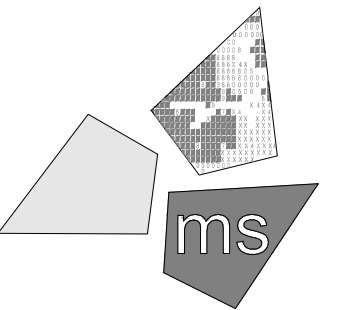
Concept No. 3 \_\_\_\_\_ 02/20/24

Revisions: \_\_\_\_\_ Date: \_\_\_\_\_

3

**DO NOT SCALE PLANS**

Copying, Printing, Software and other processes required to produce these prints can stretch or shrink the actual paper or layout. Therefore, scaling of this drawing may be inaccurate. Contact ms consultants with any need for additional dimensions or clarifications.



**Mosure L.L.C.**

engineers, architects, planners  
2221 Schrock Road  
Columbus, Ohio 43229-1547  
phone 614.898.7100  
fax 614.898.7570

DRAWN BY: JRC

REVIEWED BY: TJG

Seal



PROFESSIONAL OF RECORD:  
SANDIPAN ADITYA No. 1301072475  
EXP. DATE: 10/04/2025



ALDI Inc. Store #: XX  
Hillsdale, MI  
Project Address  
Hillsdale, MI 49242  
Hillsdale County  
Project Name & Location:

Exterior  
Details

Drawing Name:

Prototype: V9.0 Project No. 40496-70

Type: Ground Up

XXX A508

Scale: As Noted Drawing No.

D

C

B

A