

NO.	DATE	DESCRIPTION
1	1/20/19	ISSUED FOR PERMITS
2	1/20/19	REVISIONS
3	1/20/19	REVISIONS
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16	1/20/19	REVISIONS
17	1/20/19	REVISIONS
18	1/20/19	REVISIONS
19	1/20/19	REVISIONS
20	1/20/19	REVISIONS



**LEGEND**

● IRON FOUND	● BRASS PLUG SET	● SEC. CORNER FOUND
○ IRON SET	● MONUMENT FOUND	● RECORDED
● NAIL FOUND	● MONUMENT SET	● MEASURED
○ NAIL & CAP SET		○ CALCULATED

**EXISTING**

- ELEC.—PHONE OR CABLE TV, CH. LINE, POLE & GUY WIRE
- UG-CATV—UNDERGROUND CABLE TV, CATV PEDESTAL
- ELEC.—U.G. CABLE, PEDESTAL & MANHOLE
- ELEC.—ELEC. U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS—GAS MAIN, VALVE & GAS LINE MARKER
- WATER—WATER MAIN, HYD. GATE VALVE, TAPPING SLAVE & VALVE
- SEWER—SANITARY SEWER, CLEANOUT & MANHOLE
- COMB.—COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST—POST INDICATOR VALVE
- WATER—WATER VALVE, HYDRANT VALVE, BOG, SERVICE SHUTOFF
- MANG.—MANGROVE, TRANSDUCER, PROTRUSION CONTROL VALVE
- UNIDENT.—UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONC.—CONCRETE
- ASPH.—ASPHALT
- GRAVEL—GRAVEL SHOULDER
- METALD—METALD

**PROPOSED**

- ELEC.—ELEC. U.G. CABLE, PEDESTAL & MANHOLE
- ELEC.—ELEC. U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS—GAS MAIN, VALVE & GAS LINE MARKER
- WATER—WATER MAIN, HYD. GATE VALVE, TAPPING SLAVE & VALVE
- SEWER—SANITARY SEWER, CLEANOUT & MANHOLE
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**CAUTION!**  
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BIRMINGHAM, MICHIGAN 48009

**STORMWATER MAINTENANCE PLAN**  
**MMG-PLYMOUTH MIXED USE DEVELOPMENT**  
PART OF THE SE 1/4 OF SECTION 14, T. 2S., R. 6E.,  
CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

DES.	GMB	DN.	SUR.	GWC	P.M.	JPB

ORIGINAL ISSUE DATE: JANUARY 31, 2019  
PEA JOB NO. 2017-435  
SCALE: 1" = 30'  
DRAWING NUMBER: **C-7.0**

**LEGAL DESCRIPTION**  
A parcel of land being a part of the Southeast 1/4 of Section 14, T.2N., R.6E., City of Ann Arbor, Washtenaw County, State of Michigan, being more particularly described as follows:  
COMMENCING at the South 1/4 corner of Section 14, T.2N., R.6E., City of Ann Arbor, Washtenaw County, State of Michigan; thence N00°05'50"E, 810.08 feet along the north and south quarter line of said Section 14 to the centerline of Plymouth Road (width varies); thence N70°54'30"E, 348.47 feet along said centerline; thence N00°05'30"E, 347.77 feet to the POINT-OF-BEGINNING; thence N00°05'30"E, 299.23 feet; thence N70°54'30"E, 641.13 feet to the west line of US-23; thence the following three (3) courses and distances along said west line of US-23: 1) S41°20'20"W, 258.00 feet; 2) S19°06'20"E, 295.01 feet; and 3) S25°53'40"W, 266.44 feet to the centerline of said Plymouth Road; thence S70°54'30"W, 30.12 feet along said centerline; thence N19°05'30"W, 243.00 feet; thence 180.12 feet along a non-tangential curve to the left, having a radius of 108.00 feet, a central angle of 84°56'44", and chord bearing N51°31'58"W, 145.85 feet; thence 200.28 feet along a non-tangential curve to the left, having a radius of 500.00 feet, a central angle of 22°57'00", and chord bearing S64°30'30"W, 198.94 feet to the POINT-OF-BEGINNING. Containing 4.514 acres of land, more or less.

**BENCHMARKS**  
(GPS DERIVED - NAVD88)  
BM #300  
ARROW ON HYDRANT ON THE EAST SIDE OF THE ENTRANCE DRIVE OFF OF PLYMOUTH ROAD 190 FEET NORTH OF THE NORTH CURB OF PLYMOUTH ROAD.  
ELEV. - 916.25  
BM #301  
ARROW ON HYDRANT ON THE NORTHEASTERLY SIDE OF THE ENTRANCE DRIVE OFF OF PLYMOUTH ROAD 380 FEET NORTH OF THE NORTH CURB OF PLYMOUTH ROAD.  
ELEV. - 919.26

**FLOODPLAIN NOTE:**  
THE SUBJECT PARCEL LIES WITHIN AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN (ZONE 'X') PER FEMA FLOOD INSURANCE RATE MAP NUMBER 26125C0262E, DATED APRIL 3, 2012

TASKS	STORM SEWER SYSTEM	CATCH BASIN SUMP	CATCH BASIN INLET CASTINGS	CHANNELS & DITCHES	DEFLECTION SYSTEM AND BLENDES	OUTLET CONTROL STRUCTURE	SCHEDULE
Install & maintain soil erosion control measures		X	X	X	X		Per plans or as required
Inspect for accumulated sediment	X	X	X	X	X	X	Weekly or after rain event
Removal of accumulated sediment > 1' deep	X	X		X	X		As required
Inspect for erosion				X	X	X	Weekly or after rain event
Reestablish permanent & temporary controls			X	X	X	X	As required
Inspect for floatables and debris	X	X		X	X	X	Weekly or after rain event
Remove floatables and debris	X	X		X	X	X	As required
Mowing				X			As required
Certified Stormwater Manager inspections	X	X	X	X	X	X	Weekly or after rain event
Professional engineer, reporting to developer, construction observations	X	X	X	X	X	X	As required
Modifications per engineering recommendation	X	X	X	X	X	X	Monthly
Certified Stormwater Manager maintenance and inspection records							Weekly
Street Sweeping							Weekly or as needed
Inspect storm water system and components during wet weather and compare to as-built plans (by professional engineer, reporting to maintenance financing company)	X	X	X	X	X	X	Annually
Make adjustments or replacements as determined by annual wet weather inspection.	X	X	X	X	X	X	As required

TASKS	STORM SEWER SYSTEM	CATCH BASIN SUMP	CATCH BASIN INLET CASTINGS	CHANNELS & DITCHES	DEFLECTION SYSTEM AND BLENDES	OUTLET CONTROL STRUCTURE	SCHEDULE	ESTIMATED ANNUAL BUDGET			SECC TASKS
								1st year	2nd year	3rd year	
Inspect for accumulated sediment	X	X	X	X	X	X	Annually	\$100	\$100	\$100	X
Removal of accumulated sediment > 1' deep	X	X		X	X		5 years or as required	\$300	\$100	\$0	X
Inspection for erosion				X	X	X	Annually	\$125	\$100	\$100	X
Reestablish permanent controls, eroded areas				X	X		As required	\$250	\$100	\$100	X
Inspect for floatables and debris	X	X	X	X	X	X	Annually	\$75	\$75	\$100	
Remove floatables and debris	X	X	X	X	X	X	Annually	\$150	\$50	\$0	
Mowing				X	X		As required	\$2,500	\$1,750	\$300	
Vegetation and animal control				X	X		As required, or as required	\$50	\$50	\$100	
Clean Streets							As required	\$250	\$250	\$250	X
Inspect storm water system and components during wet weather and compare to as-built plans (by professional engineer, reporting to maintenance financing company)	X	X	X	X	X	X	Annually	\$75	\$75	\$100	
Keep records of all inspections and maintenance activities and report to maintenance financing provider.							Annually	\$0	\$0	\$0	
Keep records of all costs for inspections, maintenance and repairs. Report to maintenance financing provider.							Annually	\$0	\$0	\$0	
Professional engineer, emergency observations							As required	\$0	\$250	\$0	
<b>Total Budget:</b>								\$4,175	\$3,200	\$1,450	
<b>SECC Budget:</b>								\$1,025	\$650	\$550	X

NOT FOR CONSTRUCTION

**GENERAL NOTES:**

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ANN ARBOR.
2. ALL NECESSARY PERMITS, TESTING, BONDS AND INSURANCES ETC., SHALL BE PAID FOR BY THE CONTRACTOR. THE OWNER SHALL PAY FOR ALL CITY INSURANCE FEES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING THE PERIODS OF CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO THE JOB.
4. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT MISS DIG (811) TO VERIFY THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES AND SHALL NOTIFY OTHER REPRESENTATIVES OF OTHER UTILITIES IN THE VICINITY OF THE WORK.
5. ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION, SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR.
6. MANHOLE, CATCH BASIN, GATE VALVES AND HYDRANT FINISH GRADES MUST BE CLOSELY CHECKED AND APPROVED BY THE ENGINEER BEFORE THE CONTRACTOR'S WORK IS CONSIDERED COMPLETE.
7. CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF-SITE ANY TREES, BRUSH, STUMPS, TRASH OR OTHER UNWANTED DEBRIS AT THE OWNER'S DIRECTION, INCLUDING OLD BUILDING FOUNDATIONS AND FLOORS. BURNING OF TRASH, STUMPS OR OTHER DEBRIS SHALL NOT BE PERMITTED.
8. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADING, LIGHTS AND TRAFFIC CONTROL DEVICES TO PROTECT THE WORK AND SAFELY CONTAIN TRAFFIC IN ACCORDANCE WITH "MMUTCD".
9. ALL EXCAVATIONS SHALL BE SLOPED, SHORED OR BRACED IN ACCORDANCE WITH MI-OSHA REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE AN ADEQUATELY CONSTRUCTED AND BRACED SHORING SYSTEM FOR EMPLOYEES WORKING IN AN EXCAVATION THAT MAY EXPOSE EMPLOYEES TO THE DANGER OF MOVING GROUND.
10. ALL REFERENCES TO M.D.O.T. SPECIFICATIONS ARE TO BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

**PAVING NOTES:**

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ANN ARBOR.
2. IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.
3. SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED TO REPLACE MATERIALS SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL CONDITIONS. ANY EXCAVATIONS THAT MAY BE REQUIRED BELOW THE TOPSOIL IN FILL SECTIONS OR BELOW SUBGRADE IN CUT SECTIONS, WILL BE CLASSIFIED AS SUBGRADE UNDERCUTTING.
4. SUBGRADE UNDERCUTTING SHALL BE PERFORMED WHERE NECESSARY AND THE EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ANY SUBGRADE UNDERCUTTING SHALL BE BACKFILLED WITH SAND OR OTHER SIMILAR APPROVED MATERIAL. BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM UNIT WEIGHT (PER ASTM D-1557) UNLESS OTHERWISE SPECIFIED.
5. BACKFILL UNDER PAVED AREAS SHALL BE AS SPECIFIED ON DETAILS.
6. ANY SUB-GRADE WATERING REQUIRED TO ACHIEVE REQUIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB.

**GENERAL UTILITY NOTES:**

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF ANN ARBOR AND WASTENAW COUNTY.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND/OR OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF UNDERGROUND UTILITIES, WHICH MIGHT AFFECT THIS JOB.
3. ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY-FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH SAND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
4. WHENEVER EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES 4" CENTER TO CENTER, AROUND PERIPHERY OF OPENING TO CREATE A PLANE OF WEAKNESS JOINT BEFORE BREAKING SECTION OUT.
5. EXACT GRADES AND DEPTHS OF UTILITIES ARE TO BE CHECKED CLOSELY WITH THE FIELD ENGINEER PRIOR TO INSTALLATION.
6. REFER TO CITY OF ANN ARBOR STANDARD DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

**STORM SEWER NOTES:**

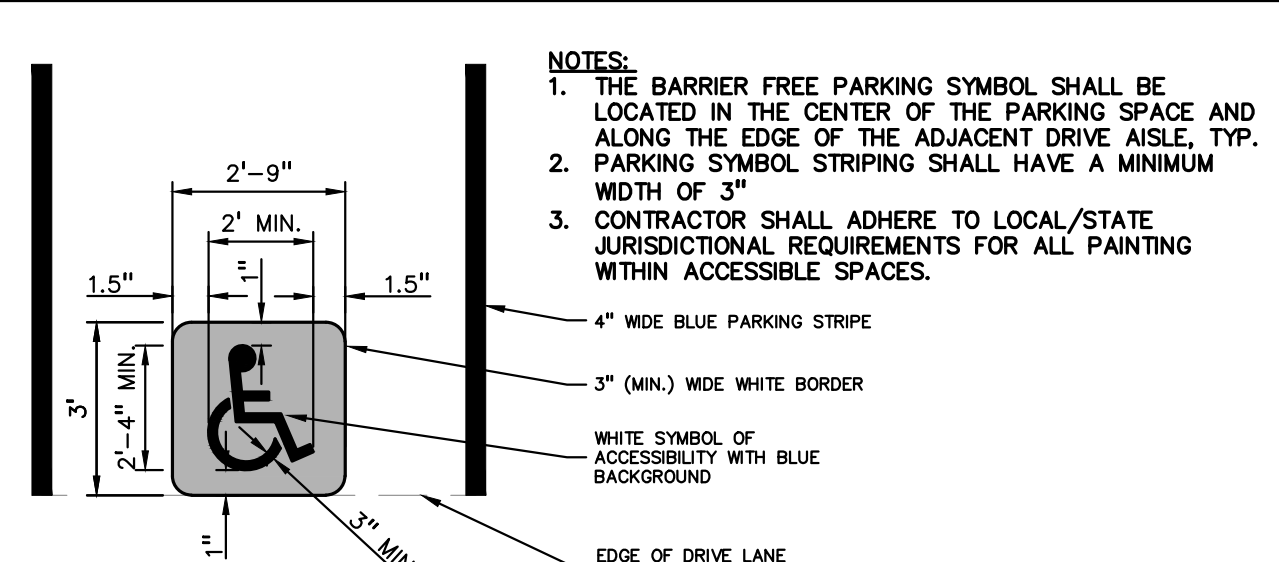
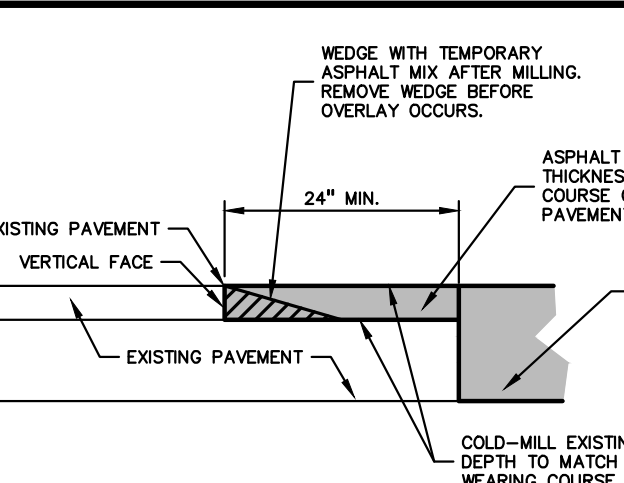
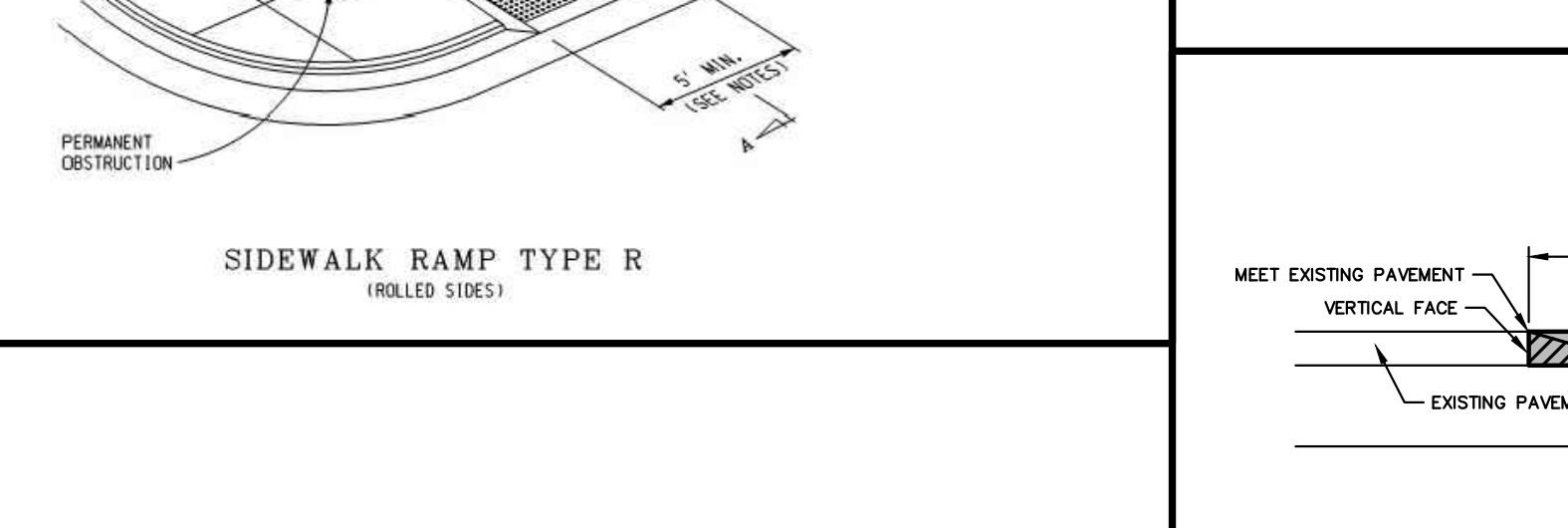
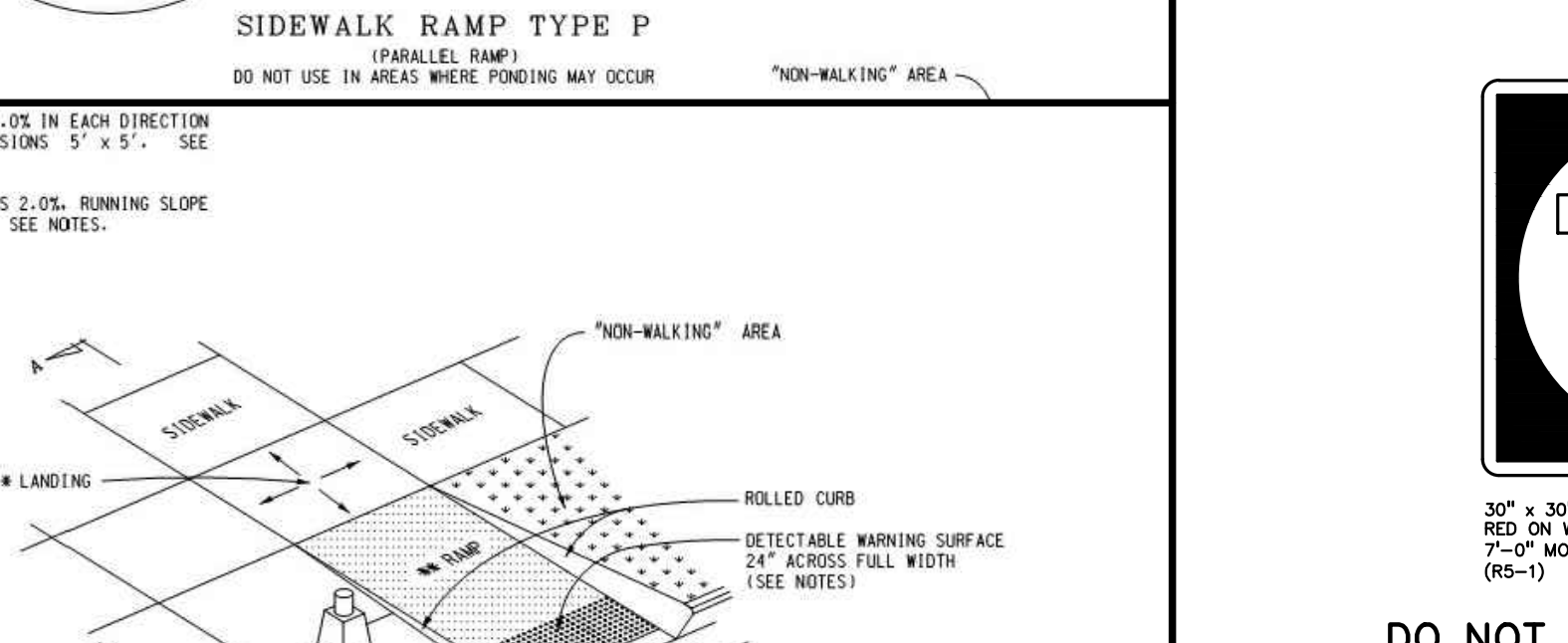
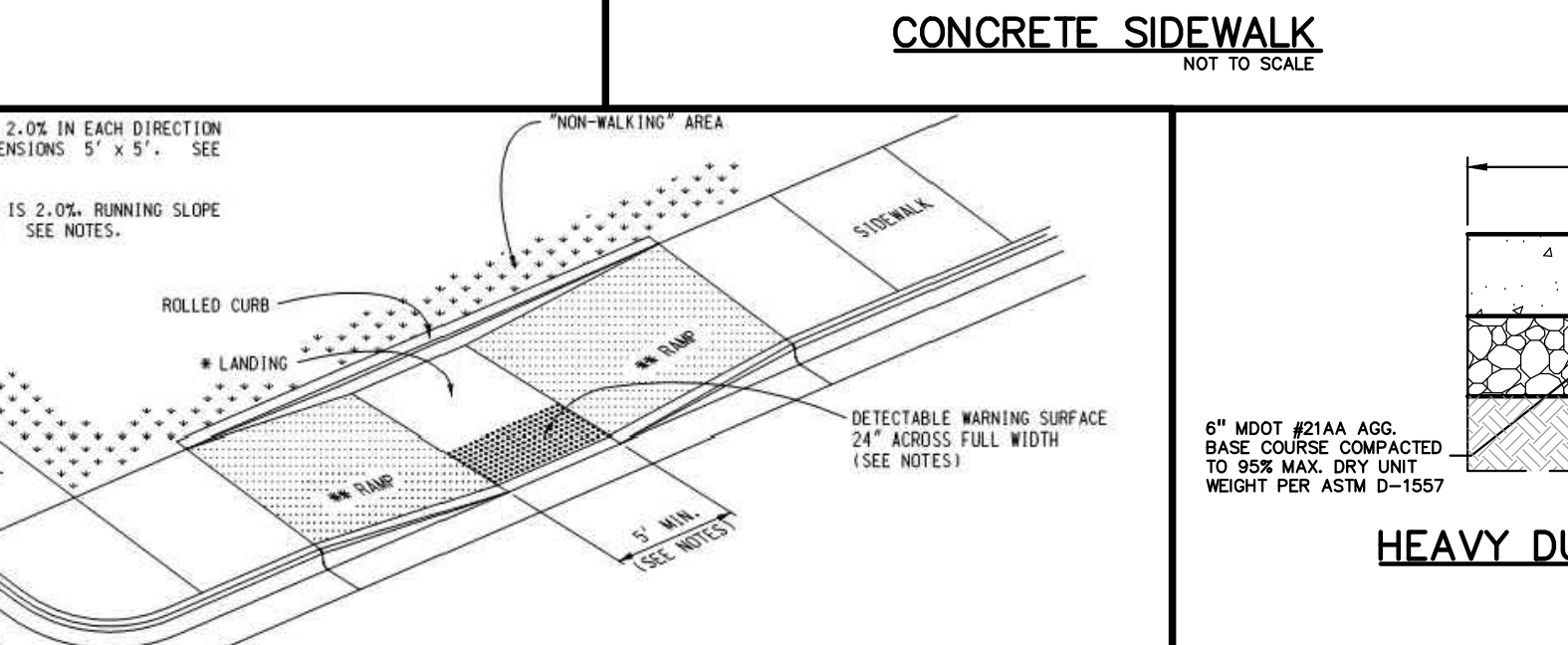
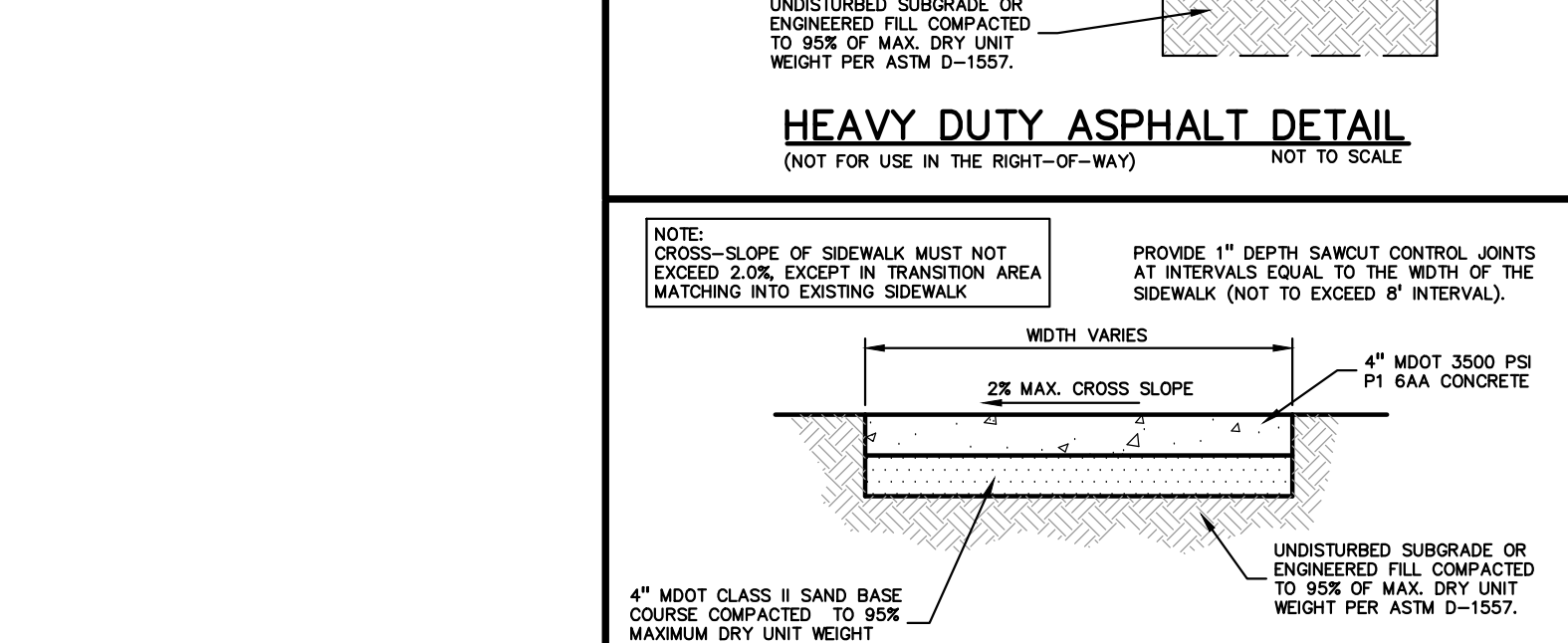
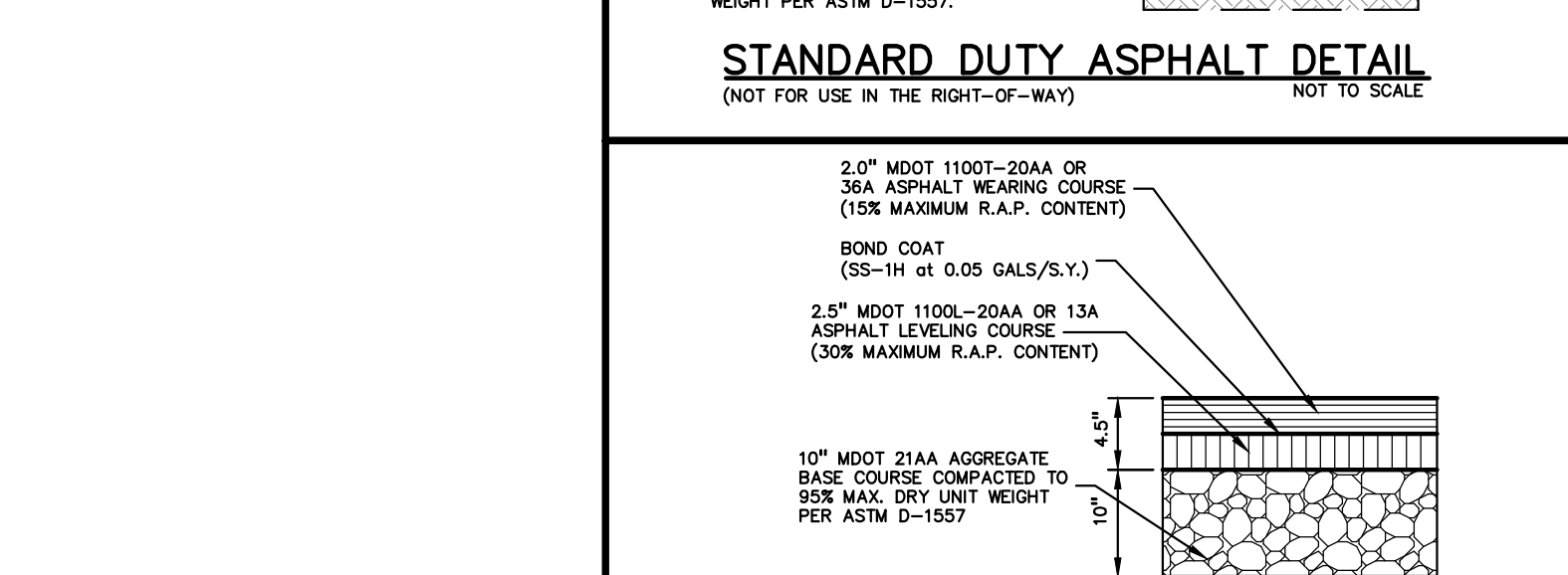
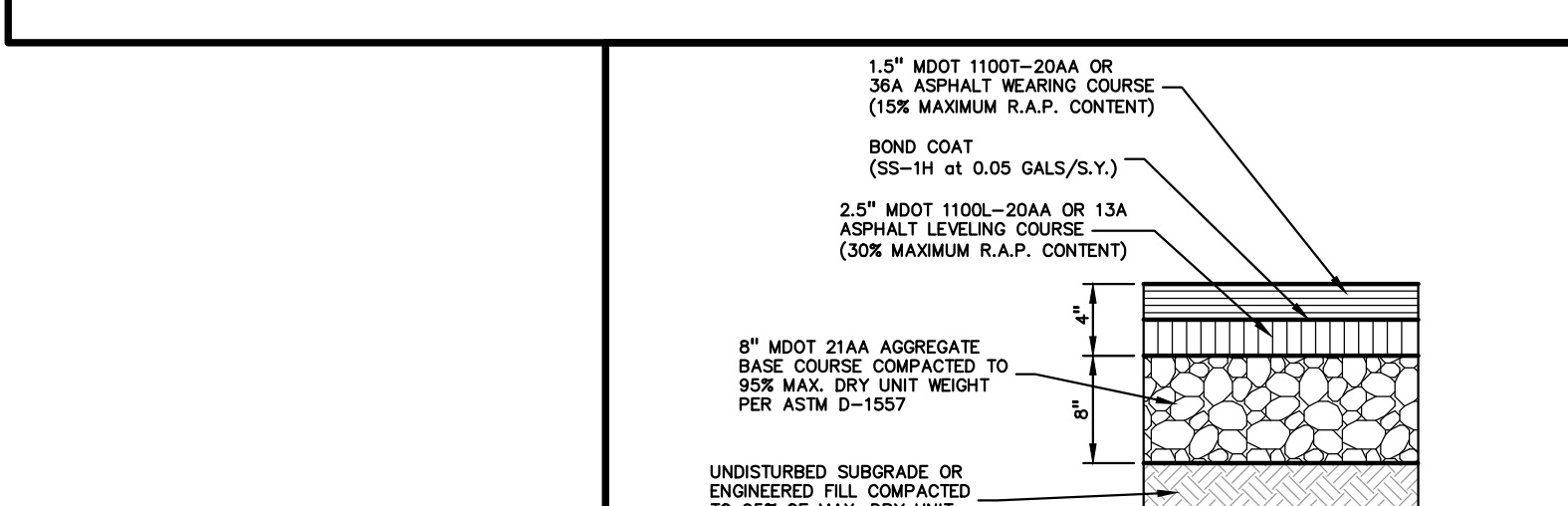
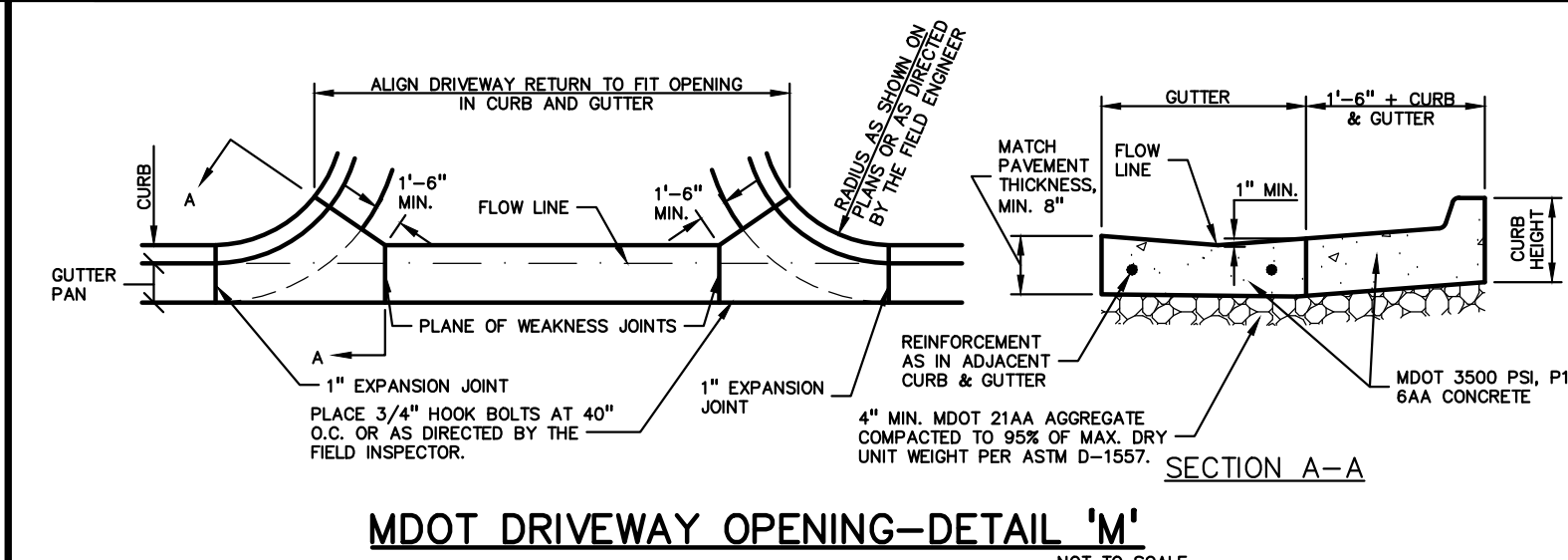
1. ALL STORM SEWER 12" AND LARGER SHALL BE RCP CLASS IV UNLESS OTHERWISE NOTED. REFER TO CITY STANDARD DETAILS SHEETS FOR STANDARD BEDDING DETAILS.
2. JOINTS FOR ALL STORM SEWER 12" AND LARGER SHALL BE MODIFIED TONGUE AND GROOVE JOINT WITH RUBBER GASKETS UNLESS SPECIFIED OTHERWISE (ASTM C-443).
3. ALL STORM SEWER LEADS SHALL BE CONSTRUCTED OF PVC SCHEDULE 40 PIPE WITH GLEUED JOINTS, UNLESS OTHERWISE NOTED. REFER TO DETAILS ON SHEET AA-3 FOR BEDDING DETAILS.
4. REFER TO CITY OF ANN ARBOR STANDARD DETAIL SHEETS FOR ADDITIONAL INFORMATION.

**WATER MAIN NOTES:**

1. ALL WATER MAIN SHALL BE INSTALLED WITH A MINIMUM COVER OF 5.5' BELOW FINISH GRADE. WHEN WATER MAINS MUST DIP TO PASS UNDER A STORM SEWER OR SANITARY SEWER, THE SECTIONS WHICH ARE DEEPER THAN NORMAL SHALL BE KEPT TO A MINIMUM LENGTH BY THE USE OF VERTICAL TWENTY TWO AND A HALF (22.5) DEGREE BENDS, PROPERLY ANCHORED.
2. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ANN ARBOR.
3. ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY-FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH SAND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
4. ALL TEES, BENDS, CONNECTIONS, ETC. ARE CONSIDERED INCIDENTAL TO THE JOB.
5. PHYSICAL CONNECTIONS SHALL NOT BE MADE BETWEEN EXISTING AND NEW WATER MAINS UNTIL TESTING IS SATISFACTORILY COMPLETED.
6. MAINTAIN 10' HORIZONTAL CLEARANCE BETWEEN OUTER EDGE OF WATERMAIN AND ANY SANITARY SEWER OR STRUCTURE.
7. ALL WATER MAIN SHALL BE DUCTILE IRON CLASS 54 WITH POLYETHYLENE WRAP.
8. REFER TO CITY OF ANN ARBOR STANDARD DETAIL SHEETS FOR ADDITIONAL INFORMATION.

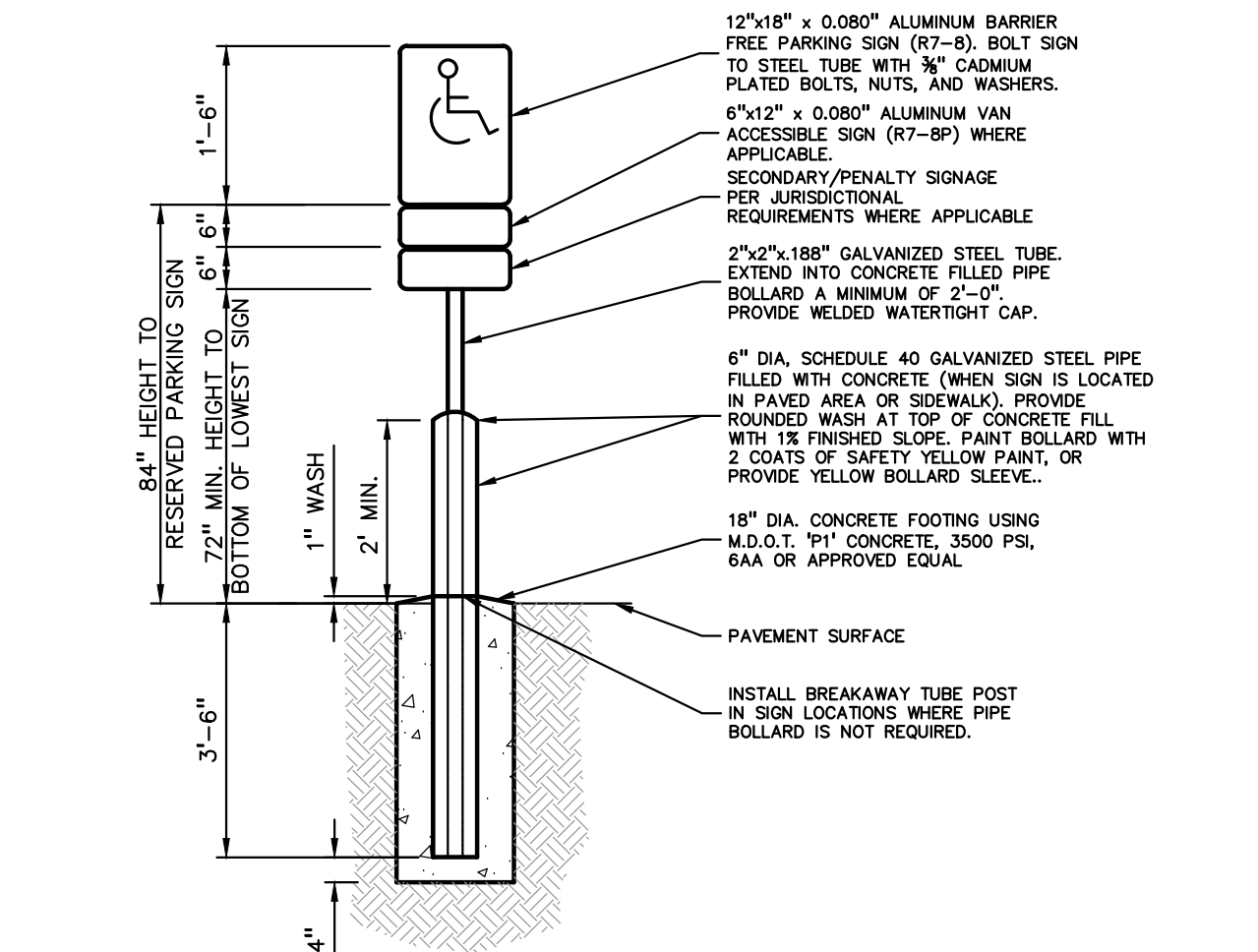
**SANITARY SEWER NOTES:**

1. DOWNSPOUTS, WEEP TILE, FOOTING DRAINS OR ANY CONDUIT THAT CARRIES STORM OR GROUND WATER SHALL NOT BE ALLOWED TO DISCHARGE INTO A SANITARY SEWER.
2. ALL SANITARY LEADS SHALL BE CONSTRUCTED OF PVC SDR 23.5 AT 1.00% MINIMUM SLOPE.
3. ALL SANITARY SEWER 8" AND LARGER SHALL BE CONSTRUCTED OF PVC TRUSS PIPE.
4. JOINTS FOR P.V.C. SOLID WALL PIPE SHALL BE ELASTOMERIC (RUBBER GASKET) AS SPECIFIED IN A.S.T.M. DESIGNATION D-3212.
5. REFER TO CITY OF ANN ARBOR STANDARD DETAILS SHEETS FOR PIPE BEDDING DETAILS.
6. REFER TO CITY OF ANN ARBOR STANDARD DETAIL SHEETS FOR ADDITIONAL INFORMATION.

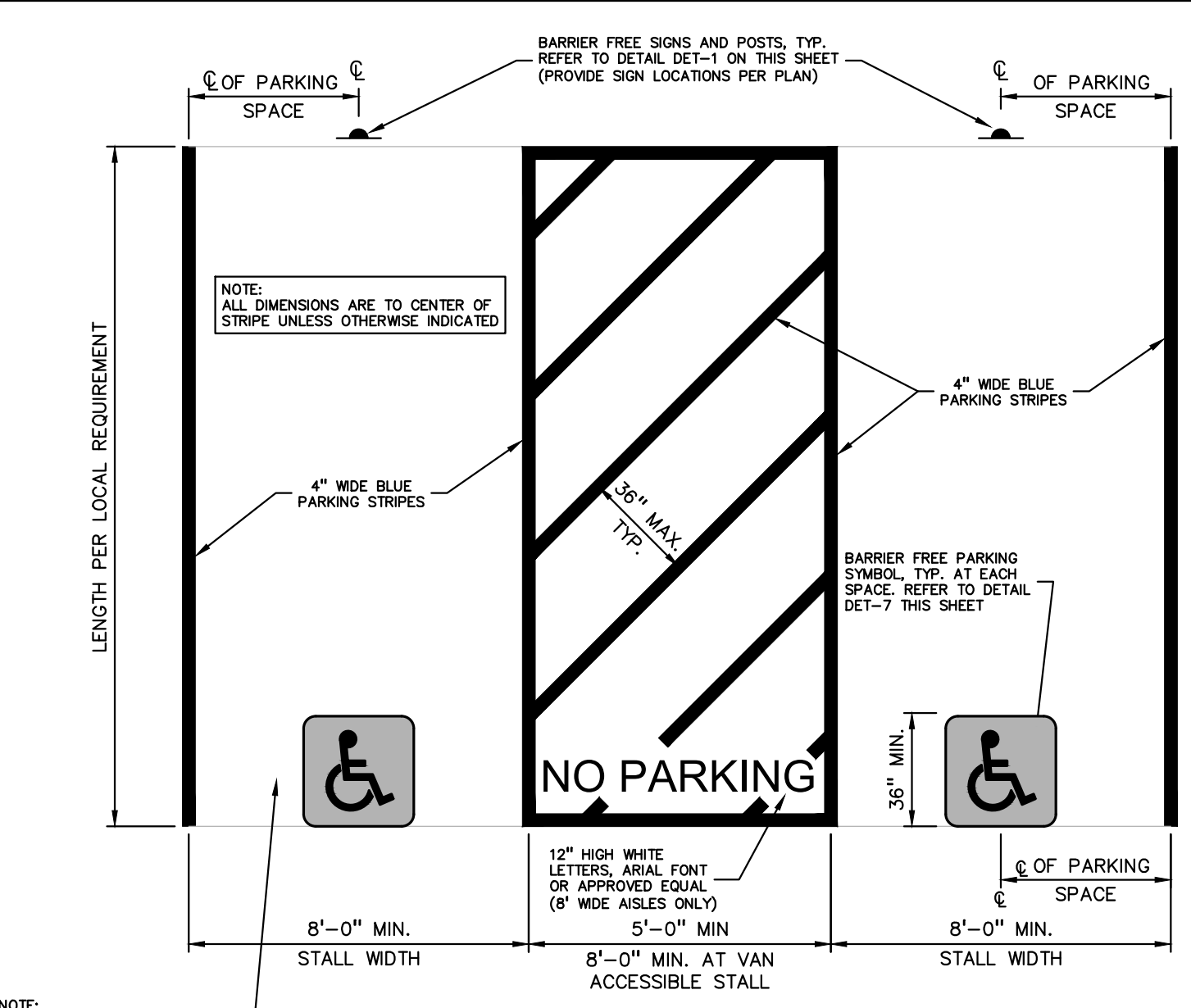


**BARRIER FREE PARKING SYMBOL DETAIL (INTERNATIONAL SYMBOL OF ACCESSIBILITY)**

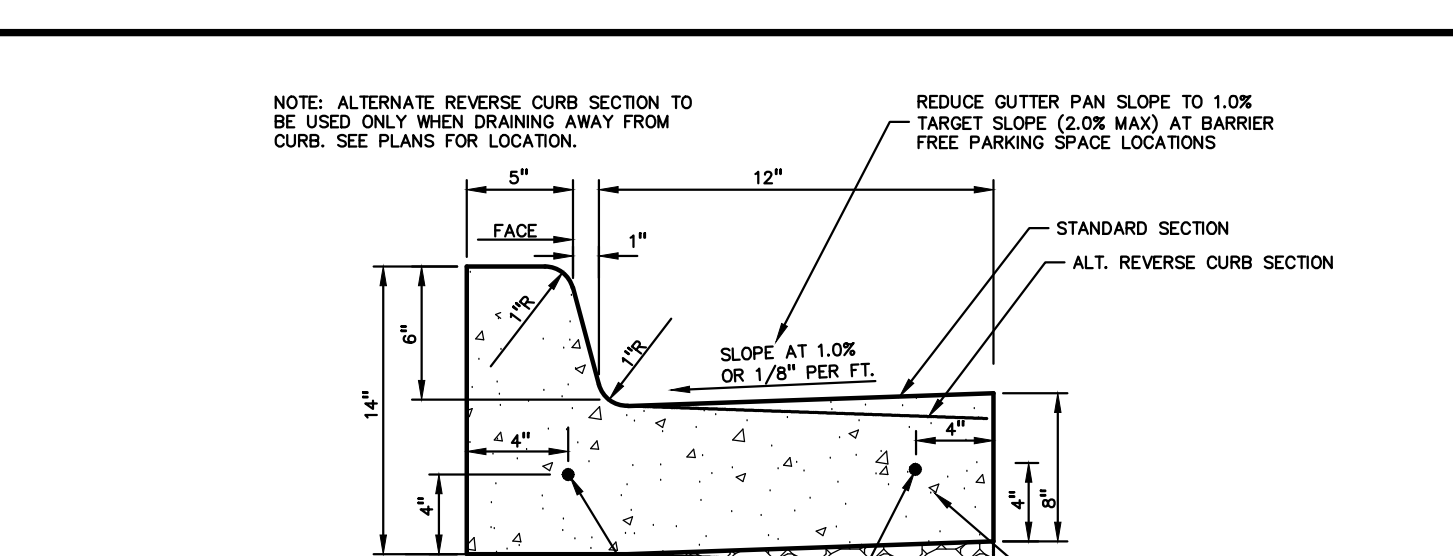
- BARRIER FREE SIGN NOTES:**
1. ONE SIGN IS REQUIRED AT EACH BARRIER FREE PARKING SPACE.
  2. ALL SIGNS SHALL COMPLY WITH THE LATEST STANDARDS OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).
  3. WHEN TWO BARRIER FREE PARKING SPACES ARE ADJACENT AND FACING EACH OTHER, TWO SIGNS ARE REQUIRED, BUT CAN BE MOUNTED ON THE SAME POST.
  4. SIGN POSTS SHALL BE 2" NOM. SQUARE 14-GAUGE GALVANIZED STEEL PIPE WITH 7/16" HOLES AT 1" CENTERS. POSTS SHALL TELESCOPE INSIDE ANCHOR POSTS A MINIMUM OF 12".
  5. ANCHOR POSTS SHALL BE 2.25" NOM. SQUARE 12-GAUGE GALVANIZED STEEL POST, A MINIMUM OF 3 FEET LONG.
  6. IF THESE NOTES AND DETAILS CONFLICT WITH LOCAL CODES AND ORDINANCES, THE STRICTER REQUIREMENT SHOULD BE USED.
  7. ALTERNATE MATERIALS MAY BE USED IF IN COMPLIANCE WITH A.D.A. GUIDELINES AND LOCAL REQUIREMENTS.



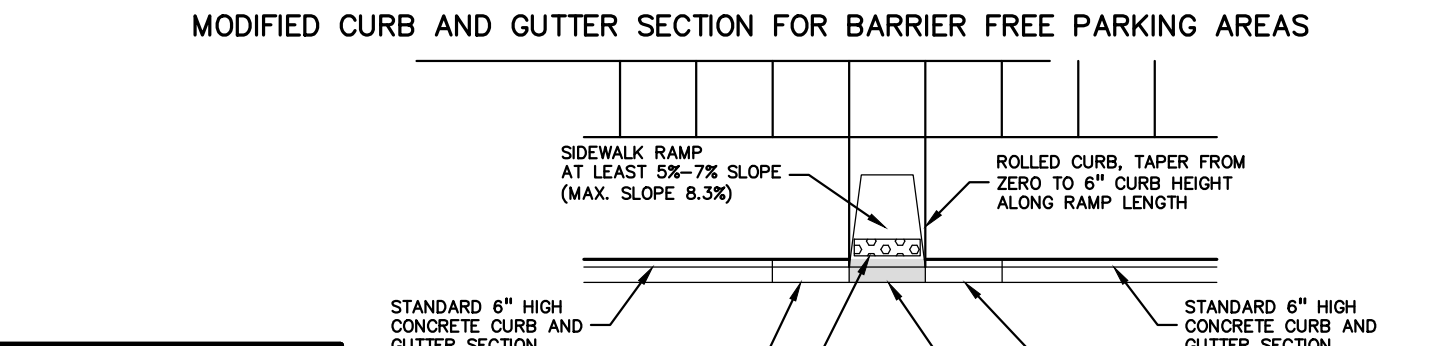
**BARRIER FREE SIGN AND POST DETAIL**



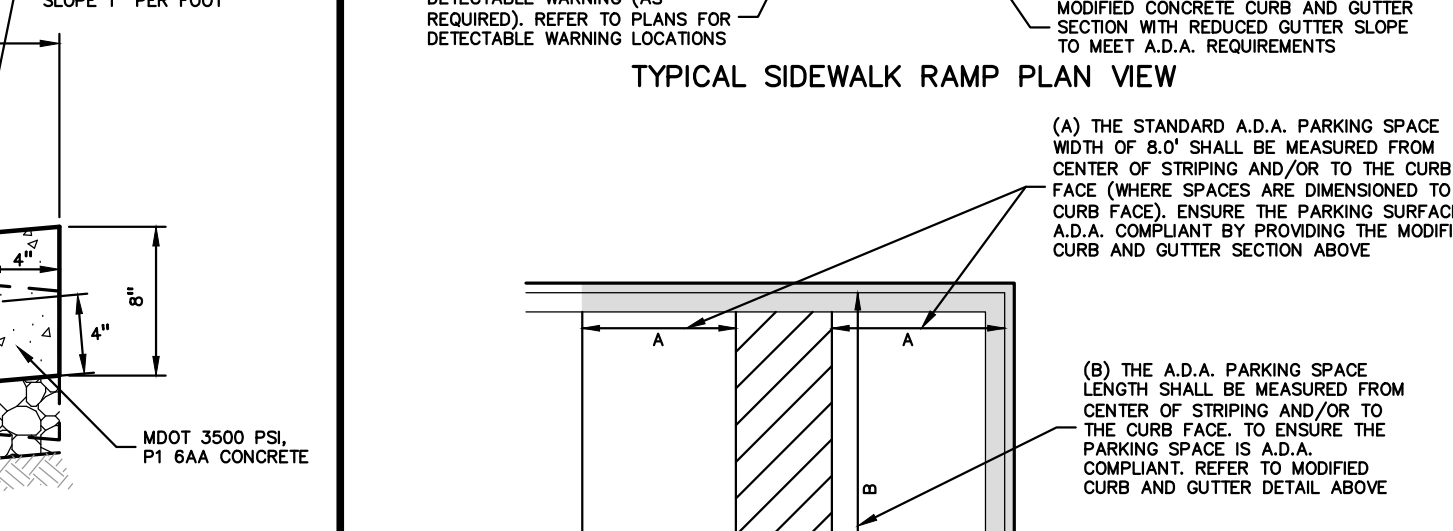
**ALTERNATE BARRIER FREE PARKING STALL DETAIL**



**MODIFIED CURB AND GUTTER SECTION FOR BARRIER FREE PARKING AREAS**

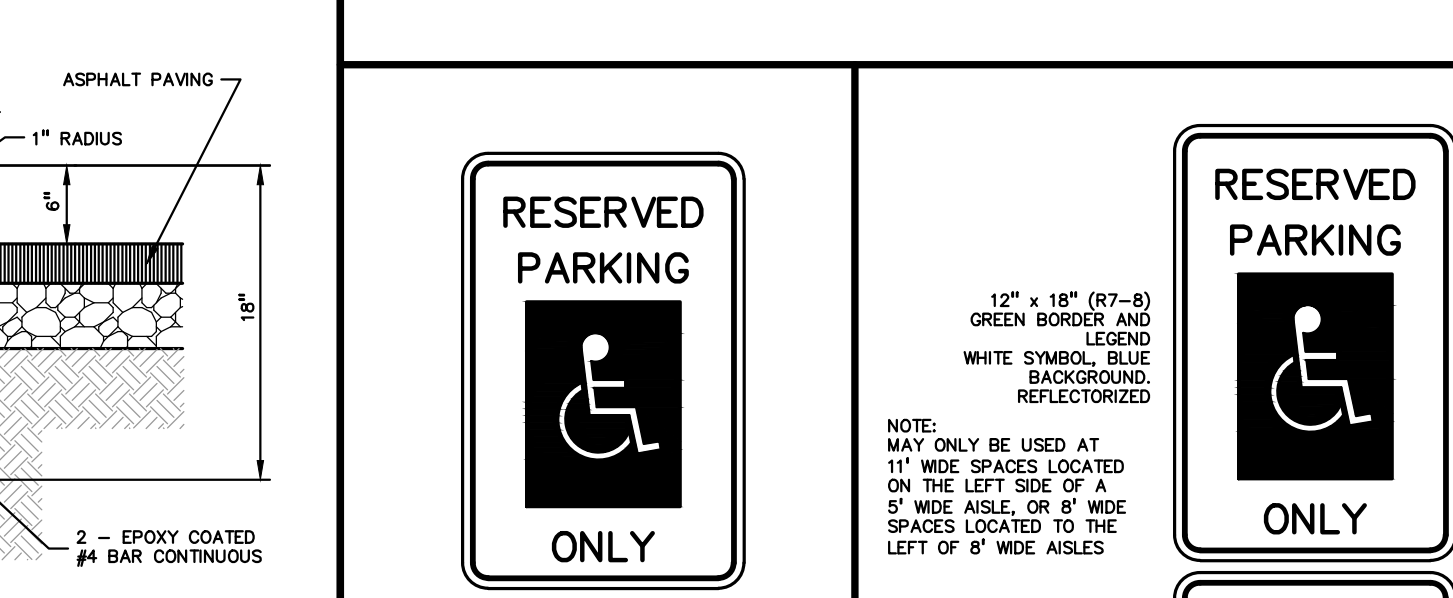


**TYPICAL SIDEWALK RAMP PLAN VIEW**



**TYPICAL BARRIER FREE PARKING SPACES**

**MODIFIED 18"x6" CONCRETE CURB AND GUTTER DETAIL TO BE USED IN BARRIER FREE AREAS**



**NOT FOR CONSTRUCTION**

NO.	DATE	DESCRIPTION
1		INITIAL SHEET
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**CAUTION!**  
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MARKUS MANAGEMENT GROUP, LLC  
2211 E. MERRILL STREET  
BIRMINGHAM, MICHIGAN 48009

NOTES AND DETAILS  
MMG-PLYMOUTH MIXED USE DEVELOPMENT  
PART OF THE SE 1/4 OF SECTION 14, T. 25, R. 6E,  
CITY OF ANN ARBOR, WASHENAW COUNTY, MICHIGAN

DES. GMB DN. SUR. GWC P.M. JPB  
GMB DN. GMB SUR. GWC P.M. JPB

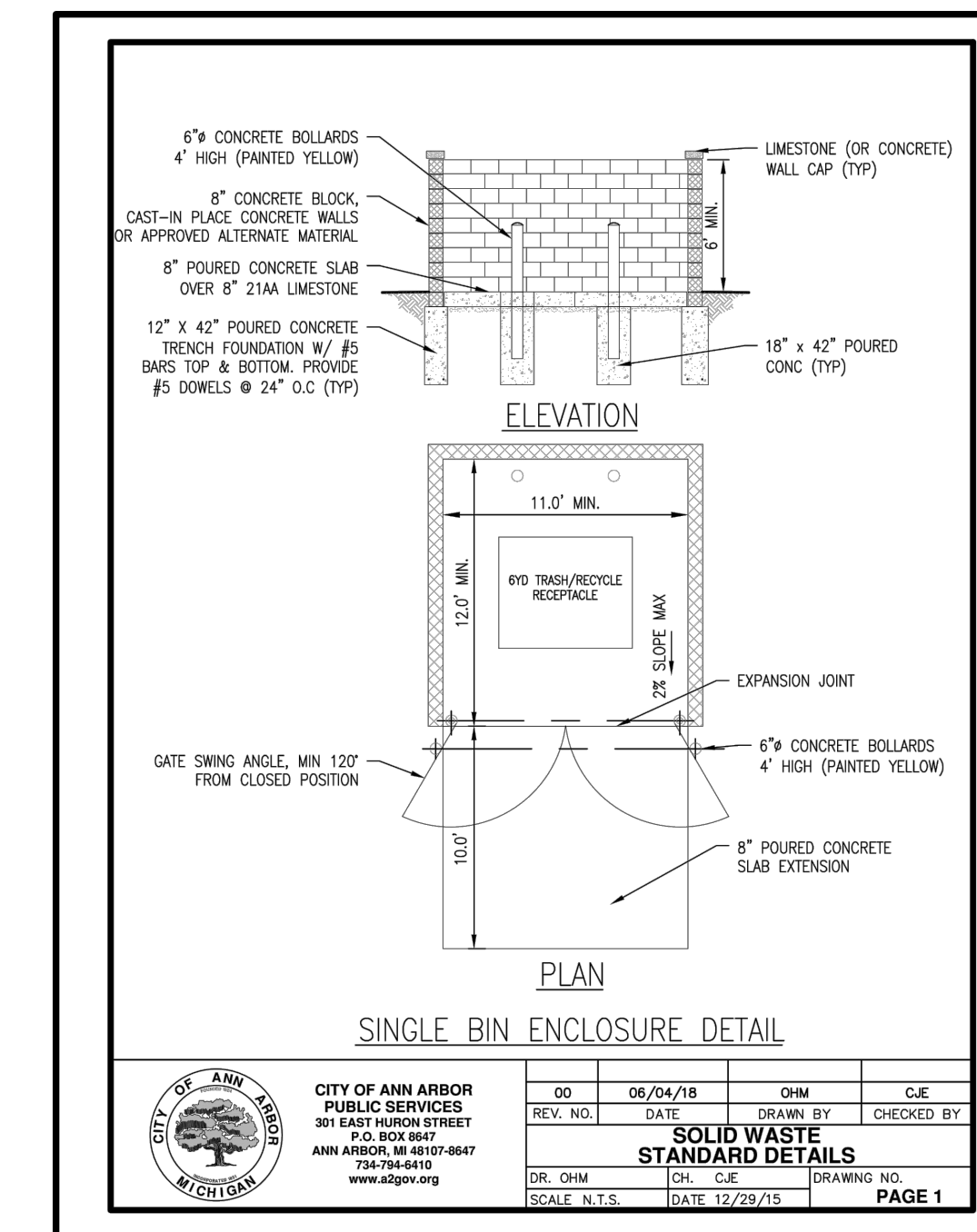
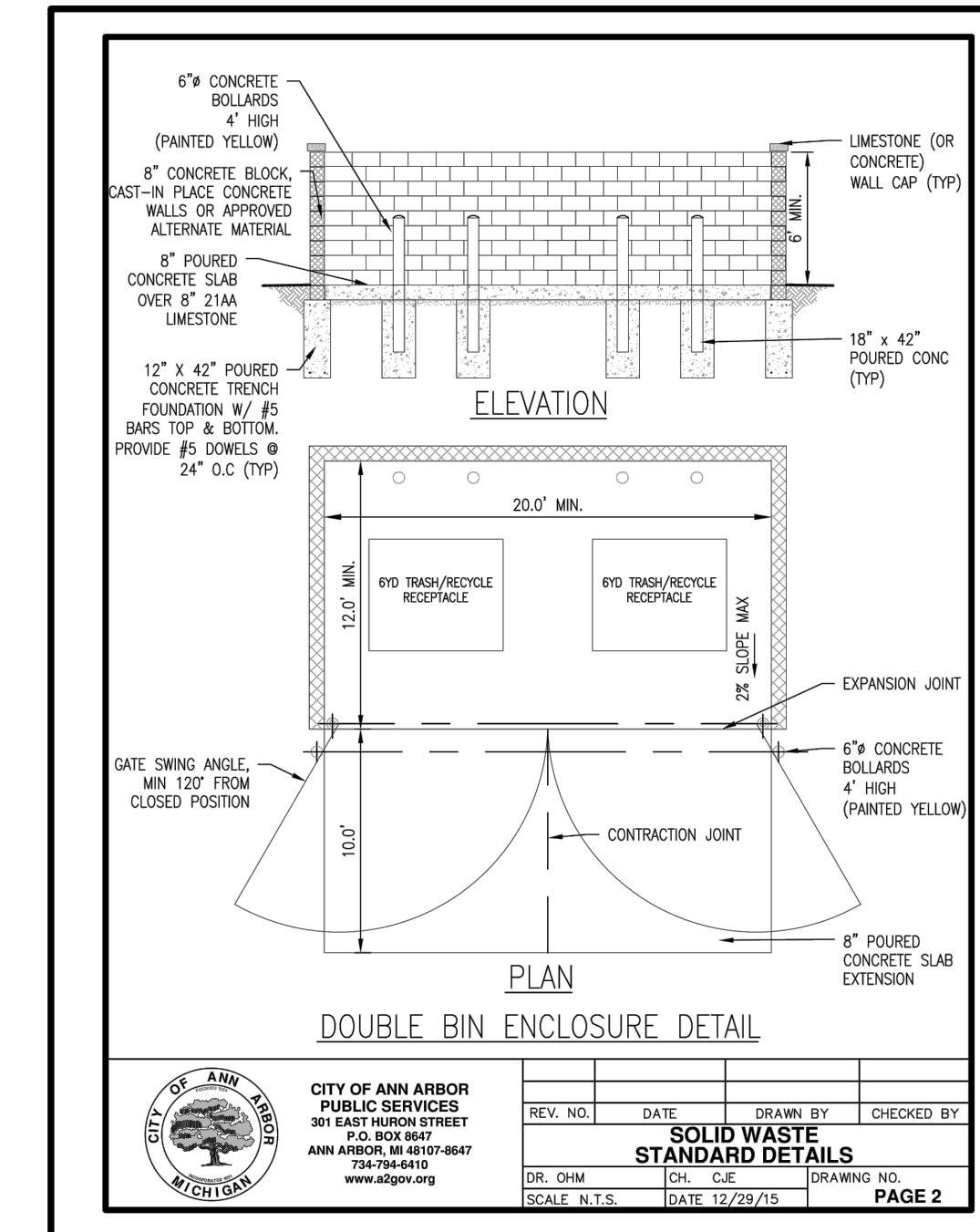
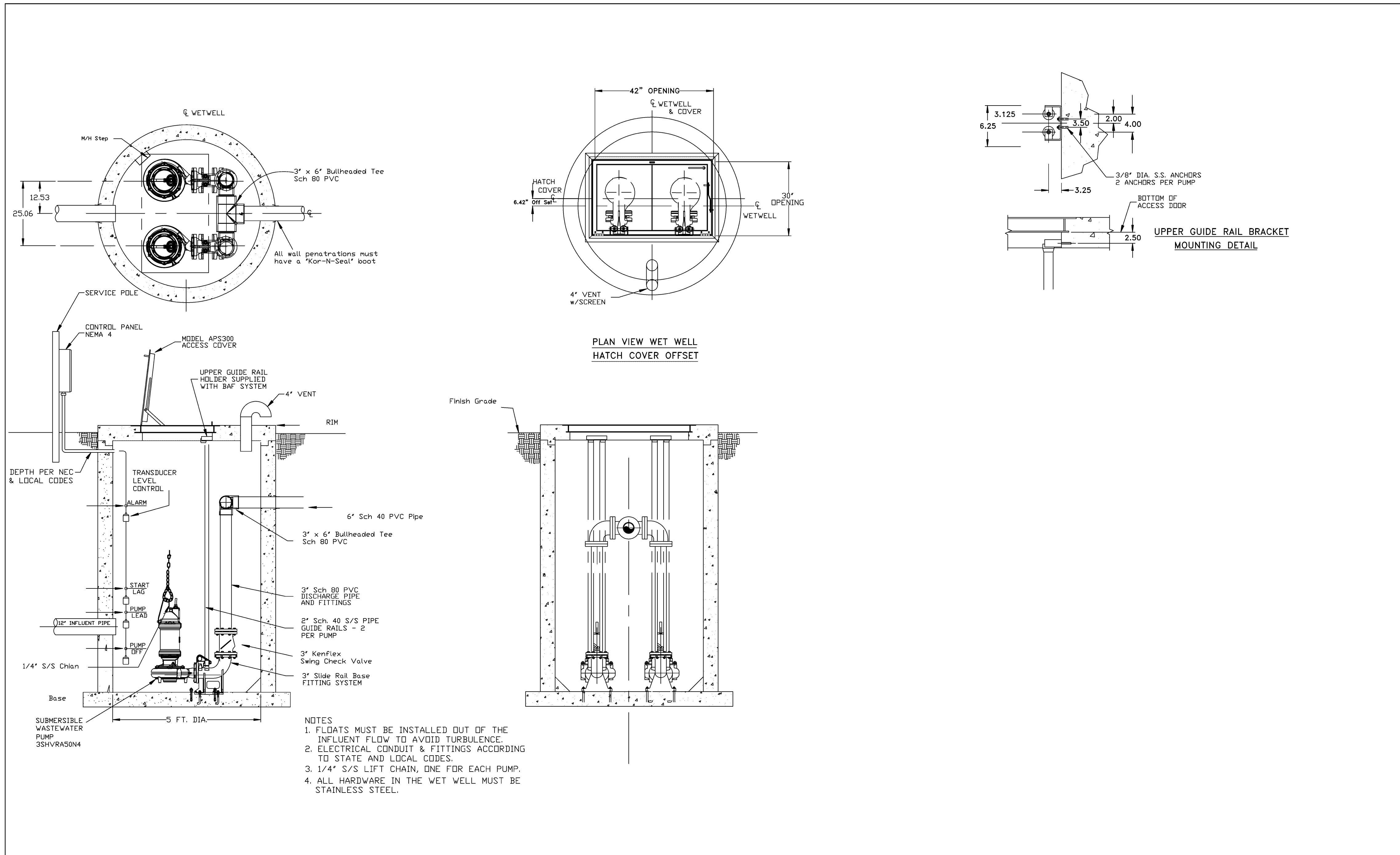
ORIGINAL ISSUE DATE:  
JANUARY 31, 2019

PEA JOB NO. 2017-435

SCALE: N.T.S.

DRAWING NUMBER:  
**C-8.0**

PROJECTS\2017\2017435\DWG\17435-TOPOBASE.DWG  
PROJECTS\2017\2017435\DWG\SITE PLANS\V-BASE-17435.DWG  
PROJECTS\2017\2017435\DWG\SITE PLANS\VL-TLB-17435.DWG

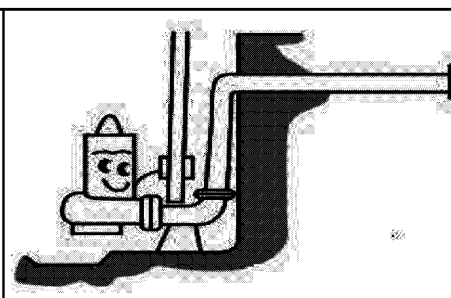


REV	DESCRIPTION	DATE	APPROVED
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PROJECT NAME: \_\_\_\_\_

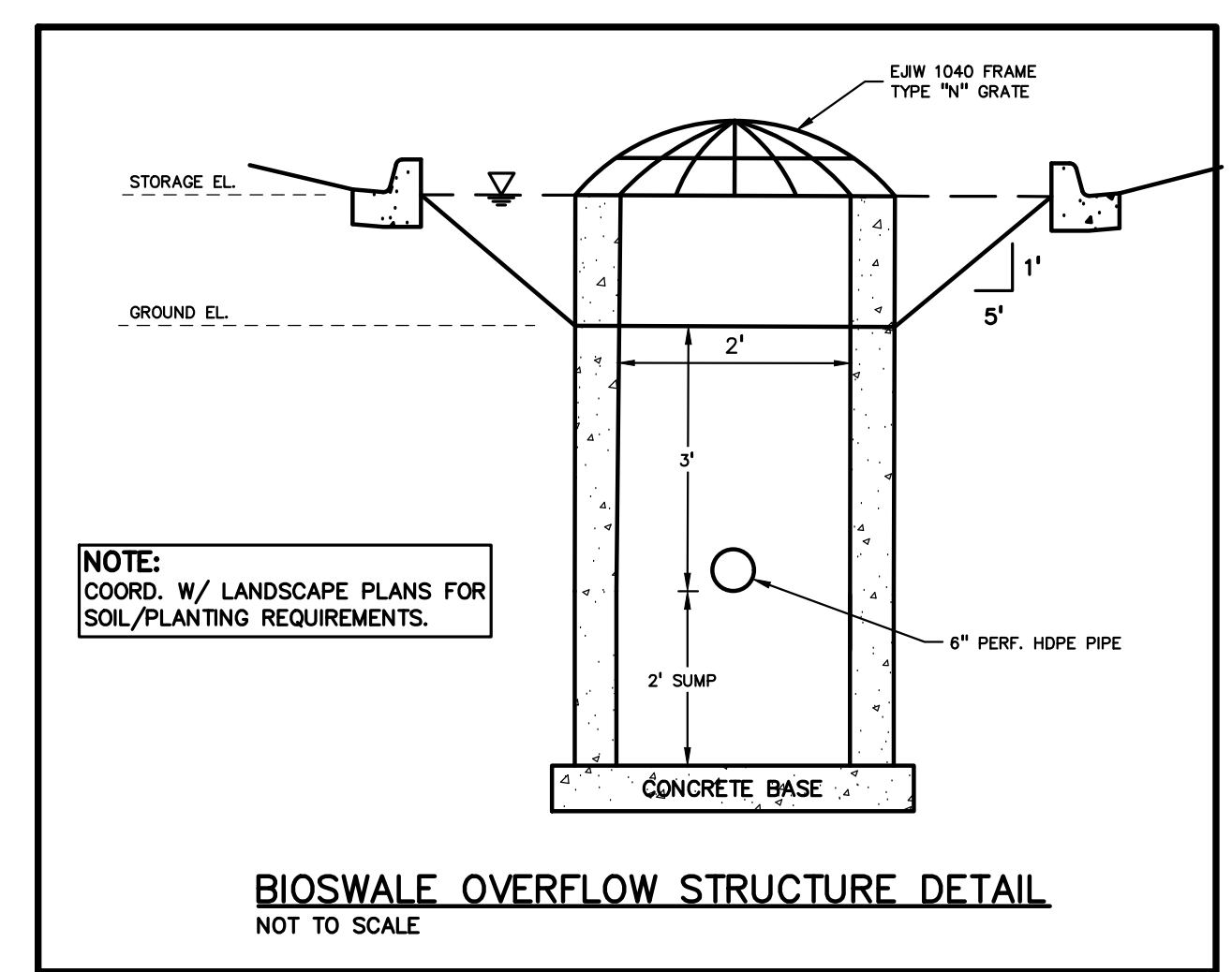
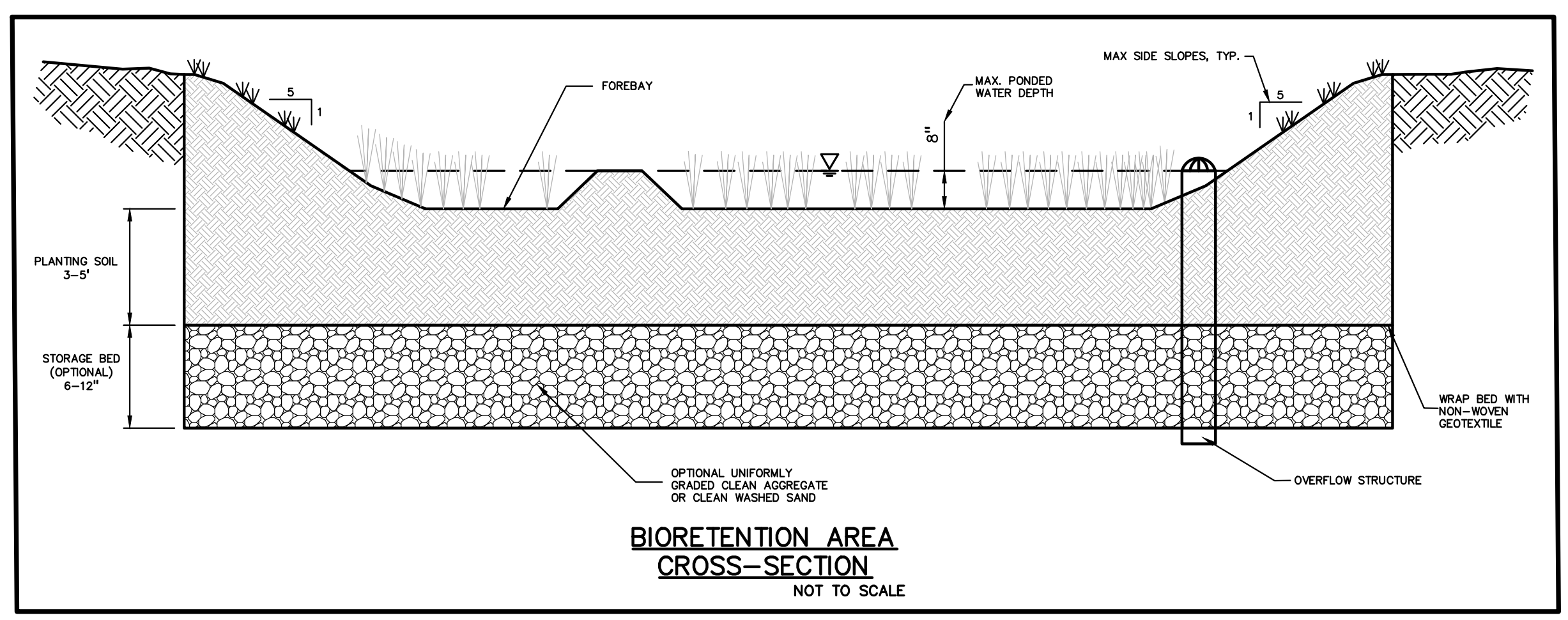
Drawing Title: \_\_\_\_\_

**STORM LIFT STATION**  
**Wet Well/Pump DETAILS**  
 (OULET STRUCTURE)



SUPPLIER/INSTALLER:  
**JETT Pump & Valve, L.L.C.**  
 4770 Pontiac Lk Rd  
 Waterford, MI 48328 Phone: 248-673-2530

DRAWN BY: JMB  
 CHECK BY: \_\_\_\_\_  
 APPROVED BY: \_\_\_\_\_  
 SCALE: NONE  
 SHEET: STPS1  
 DWG NO: JETT P&V STPS 1



**NOT FOR CONSTRUCTION**

NO.	DATE	DESCRIPTION
1	02/01/18	ISSUE FOR PERMITS
2	02/01/18	ISSUE FOR PERMITS
3	02/01/18	ISSUE FOR PERMITS
4	02/01/18	ISSUE FOR PERMITS
5	02/01/18	ISSUE FOR PERMITS
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50	02/01/18	ISSUE FOR PERMITS



**CAUTION!**  
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 t: 248.689.9090  
 f: 248.689.1044  
 www.peainc.com

**MARKUS MANAGEMENT GROUP, LLC**  
 2211 E. MERRILL STREET  
 BIRMINGHAM, MICHIGAN 48009

**NOTES AND DETAILS**  
**MMG-PLYMOUTH MIXED USE DEVELOPMENT**  
 PART OF THE SE 1/4 OF SECTION 14, T. 2S. R. 6E.  
 CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

DES. GMB DN. GMB SUR. GWC P.M. JPB

PROJECT: 2017-001-430-301 PLMOUTH ROAD-T25(W)W/SITE PLANS(VC-10) DETAILS-17435.dwg

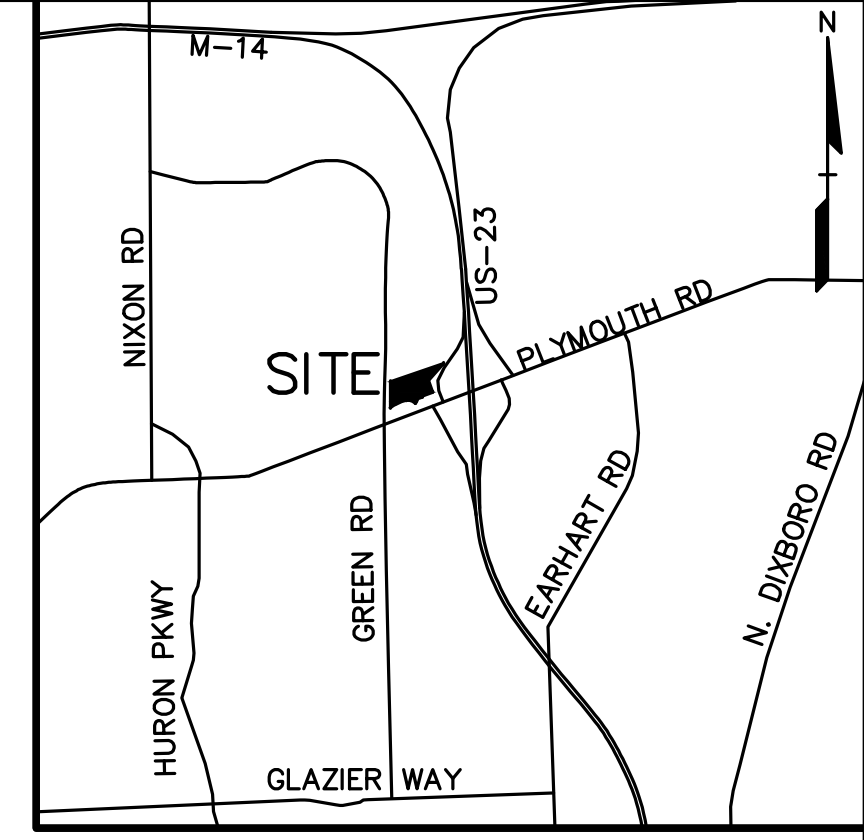
ORIGINAL ISSUE DATE:  
 JANUARY 31, 2019

PEA JOB NO. 2017-435

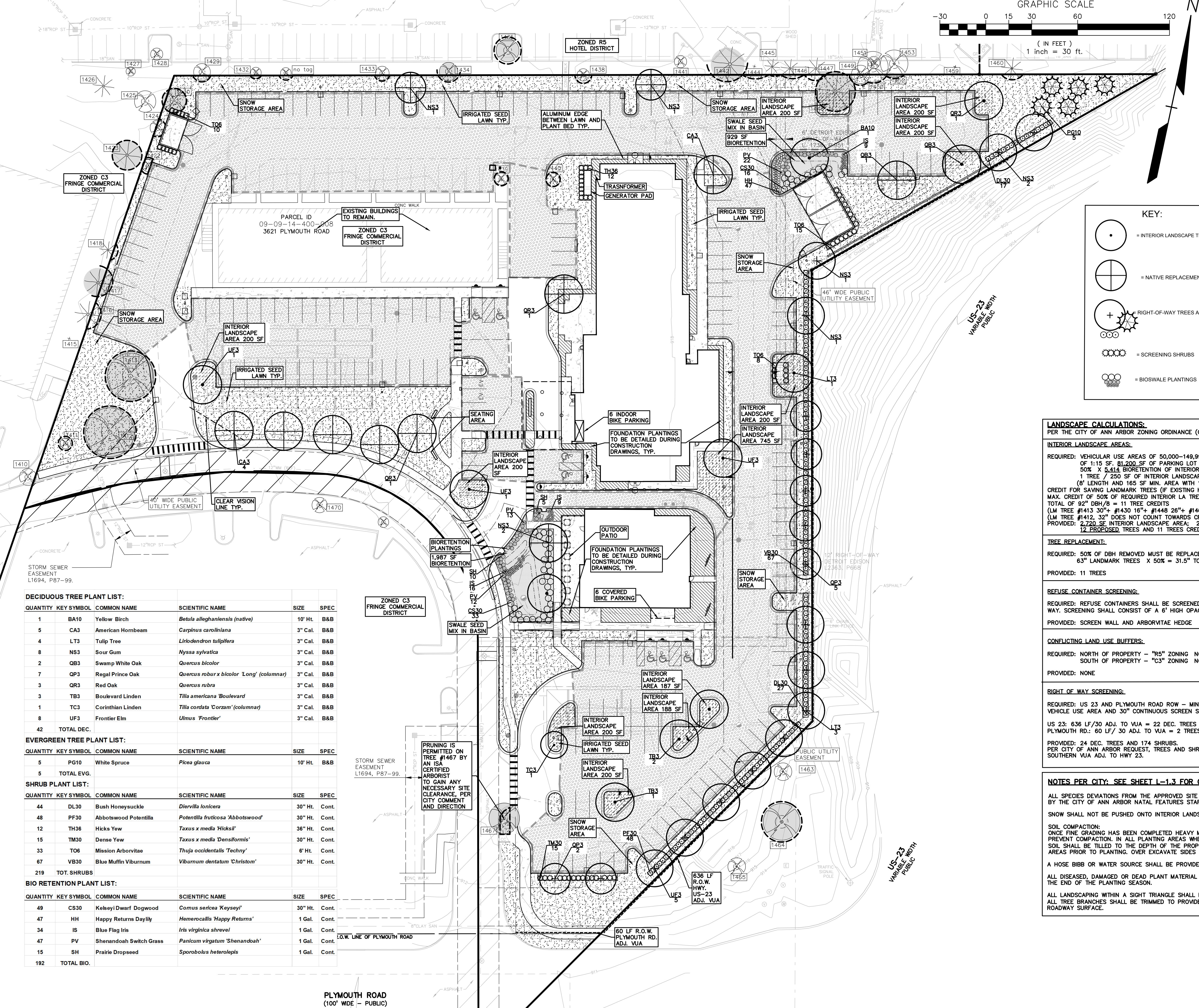
SCALE: N.T.S.

DRAWING NUMBER:  
**C-8.1**

NOT FOR CONSTRUCTION



NO.	DATE	DESCRIPTION
1	12/02/20	PRELIMINARY PER CITY COMMENTS
2	12/02/20	REVISIONS
3	11/22/21	REVISED PER CITY COMMENTS
4	11/22/21	REVISED PER CITY COMMENTS
5	11/22/21	REVISED PER CITY COMMENTS
6	11/22/21	REVISED PER CITY COMMENTS
7	10/22/18	REVISED PER CITY COMMENTS
8	09/02/18	REVISED PER CITY COMMENTS
9	08/02/18	REVISED PER CITY COMMENTS
10	07/10/18	REVISED PER CITY COMMENTS
11	06/02/18	REVISED PER CITY COMMENTS
12	05/02/18	REVISED PER CITY COMMENTS
13	04/02/18	REVISED PER CITY COMMENTS
14	03/02/18	REVISED PER CITY COMMENTS
15	02/02/18	REVISED PER CITY COMMENTS



**KEY:**

- = INTERIOR LANDSCAPE TREES
- = NATIVE REPLACEMENT TREES
- = RIGHT-OF-WAY TREES AND SHRUBS
- = SCREENING SHRUBS
- = BIOWALE PLANTINGS
- = FOUNDATION PLANTINGS (NOT SITE PLAN REQUIRED) TO BE DETAILED DURING CONSTRUCTION DRAWINGS
- = IRRIGATED SEED LAWN
- = INTERIOR LANDSCAPE AREA 165 SF AND 8' WIDE MIN.
- = PERENNIALS/BIOWALE PLANTS SWALE SEED MIX IN BIO RETENTION BASIN WITH MAT BY CARDNO NATIVE PLANT NURSE
- = LANDMARK TREE TO BE SAVED WITH TREE PROTECTION SHOWN OUTSIDE OF THE CRITICAL ROOT ZONE. FENCE PLACED OUTSIDE DIA. OF TREE, AT 1' FOR EVERY 1" OF TREE DBH
- = EXISTING TREES TO REMAIN WITH TREE PROTECTION FENCE
- = VEHICULAR USE AREA

**LANDSCAPE CALCULATIONS:**  
PER THE CITY OF ANN ARBOR ZONING ORDINANCE (C3, FRINGE COMMERCIAL DISTRICT)

**INTERIOR LANDSCAPE AREAS:**  
REQUIRED: VEHICULAR USE AREAS OF 50,000-149,999 SF SHALL PROVIDE INTERIOR LANDSCAPE AREA AT THE RATE OF 1:15 SF. 81,200 SF OF PARKING LOT / 15 = 5,414 SF REQUIRED.  
50% X 5,414 BIORETENTION OF INTERIOR LANDSCAPE = 2,707 SF REQUIRED.  
1 TREE / 250 SF OF INTERIOR LANDSCAPE AREA; 5,414 / 250 = 22 TREES  
(8' LENGTH AND 165 SF MIN. AREA WITH 1 TREE; 200 SF MAX. CORNER WITH 1 TREE FOR VJA)  
CREDIT FOR SAVING LANDMARK TREES (IF EXISTING HEALTHY TREE IS WITHIN 15' OF VJA, 1 CREDIT PER 8" MAX. CREDIT OF 50% OF REQUIRED INTERIOR LANDSCAPE)  
TOTAL OF 92" DBH/8 = 11 TREE CREDITS  
(LM TREE #1413 30"+ #1430 16"+ #1448 26"+ #1467 20" = 92" DBH CREDIT POSSIBLE)  
(LM TREE #1412 32" DOES NOT COUNT TOWARDS CREDIT SINCE FARTHER THAN 15' FROM VJA)  
PROVIDED: 2,720 SF INTERIOR LANDSCAPE AREA; 2,916 SF BIO RETENTION = TOTAL OF 5,636 SF  
12 EXPOSED TREES AND 11 TREES CREDITED TOWARD INTERIOR TREES.

**TREE REPLACEMENT:**  
REQUIRED: 50% OF DBH REMOVED MUST BE REPLACED  
50% X 5,414 BIORETENTION OF INTERIOR LANDSCAPE = 2,707 SF REQUIRED.  
63" LANDMARK TREES X 50% = 31.5" TO BE REPLACED. 31.5" / 3" = 11 TREES  
PROVIDED: 11 TREES

**REFUSE CONTAINER SCREENING:**  
REQUIRED: REFUSE CONTAINERS SHALL BE SCREENED FROM VIEW FROM ANY RESIDENTIAL USE OR PUBLIC RIGHT OF WAY. SCREENING SHALL CONSIST OF A 6' HIGH OPAQUE WALL OR FENCE.  
PROVIDED: SCREEN WALL AND ARBORVITAE HEDGE.

**CONFLICTING LAND USE BUFFERS:**  
REQUIRED: NORTH OF PROPERTY - "R5" ZONING NONE EAST OF PROPERTY - "C3" ZONING NONE  
SOUTH OF PROPERTY - "C3" ZONING NONE EAST OF PROPERTY - US 23 NONE  
PROVIDED: NONE

**RIGHT OF WAY SCREENING:**  
REQUIRED: US 23 AND PLYMOUTH ROAD ROW - MINIMUM 10 BUFFER STRIP WITH 1 DEC TREE/ 30LF OF FRONTAGE OF VEHICLE USE AREA AND 30" CONTINUOUS SCREEN SHRUB/ 4 LF.  
US 23: 636 LF/30 ADJ. TO VJA = 22 DEC. TREES AND 159 SHRUBS.  
PLYMOUTH RD.: 60 LF/ 30 ADJ. TO VJA = 2 TREES AND 15 SHRUBS.  
PROVIDED: 24 DEC. TREES AND 174 SHRUBS.  
PER CITY OF ANN ARBOR REQUEST, TREES AND SHRUBS MAY BE LOCATED WITHIN THE UTILITY EASEMENT AT THE SOUTHERN VJA ADJ. TO HWY 23.

**NOTES PER CITY: SEE SHEET L-1.3 FOR GENERAL NOTES**

ALL SPECIES DEVIATIONS FROM THE APPROVED SITE PLAN MUST BE APPROVED IN WRITING PRIOR TO INSTALLATION BY THE CITY OF ANN ARBOR NATAL FEATURES STAFF.

SNOW SHALL NOT BE PUSHED ONTO INTERIOR LANDSCAPE ISLANDS UNLESS DESIGNATED FOR SNOW STORAGE.

**SOIL COMPACTION:**  
ONCE FINE GRADING HAS BEEN COMPLETED HEAVY MACHINERY SHALL NOT BE USED WITHIN PLANTING AREAS TO PREVENT COMPACTION. IN ALL PLANTING AREAS WHERE SOIL COMPACTION HAS OCCURRED DURING CONSTRUCTION, SOIL SHALL BE TILLED TO THE DEPTH OF THE PROPOSED ROOT BALL OF THE PLANTINGS OR 4" DEPTH FOR SEEDED AREAS PRIOR TO PLANTING. OVER EXCAVATE SIDES OF PLANTING PITS IN COMPACTED SOIL AREAS.

A HOSE BIBB OR WATER SOURCE SHALL BE PROVIDED WITHIN 150 FEET OF ALL PLANT MATERIAL.

ALL DISEASED, DAMAGED OR DEAD PLANT MATERIAL SHALL BE REPLACED BY THE END OF THE PLANTING SEASON.

ALL LANDSCAPING WITHIN A SIGHT TRIANGLE SHALL BE NO GREATER THAN 30 INCHES IN HEIGHT. ALL TREE BRANCHES SHALL BE TRIMMED TO PROVIDE CLEAR VISION FOR A VERTICAL HEIGHT OF 8' ABOVE THE ROADWAY SURFACE.

**DECIDUOUS TREE PLANT LIST:**

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
1	BA10	Yellow Birch	<i>Betula alleghaniensis</i> (native)	10' HT.	B&B
5	CA3	American Hornbeam	<i>Carpinus caroliniana</i>	3" Cal.	B&B
4	LT3	Tulip Tree	<i>Liriodendron tulipifera</i>	3" Cal.	B&B
8	NS3	Sour Gum	<i>Nyssa sylvatica</i>	3" Cal.	B&B
2	QB3	Swamp White Oak	<i>Quercus bicolor</i>	3" Cal.	B&B
7	QP3	Regal Prince Oak	<i>Quercus robur x bicolor 'Long' (columnar)</i>	3" Cal.	B&B
3	QR3	Red Oak	<i>Quercus rubra</i>	3" Cal.	B&B
3	TB3	Boulevard Linden	<i>Tilia americana 'Boulevard'</i>	3" Cal.	B&B
1	TC3	Corinthian Linden	<i>Tilia cordata 'Corzam' (columnar)</i>	3" Cal.	B&B
8	UF3	Frontier Elm	<i>Ulmus 'Frontier'</i>	3" Cal.	B&B
42	TOTAL DEC.				

**EVERGREEN TREE PLANT LIST:**

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
5	PG10	White Spruce	<i>Picea glauca</i>	10' HT.	B&B
5	TOTAL EVG.				

**SHRUB PLANT LIST:**

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
44	DL30	Bush Honeysuckle	<i>Dierilla lonicera</i>	30" Ht.	Cont.
48	PF30	Abbotswood Potentilla	<i>Potentilla fruticosa 'Abbotswood'</i>	30" Ht.	Cont.
12	TH36	Hicks Yew	<i>Taxus x media 'Hicksii'</i>	36" Ht.	Cont.
15	TM30	Dense Yew	<i>Taxus x media 'Densifolmis'</i>	30" Ht.	Cont.
33	TO6	Mission Arborvitae	<i>Thuja occidentalis 'Techny'</i>	6' Ht.	Cont.
67	VB30	Blue Muffin Viburnum	<i>Viburnum dentatum 'Christom'</i>	30" Ht.	Cont.
219	TOT. SHRUBS				

**BIO RETENTION PLANT LIST:**

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
49	CS30	Kelsey Dwarf Dogwood	<i>Cornus sericea 'Kelsey'</i>	30" Ht.	Cont.
48	HH	Happy Returns Daylily	<i>Hemerocallis 'Happy Returns'</i>	1 Gal.	Cont.
34	IS	Blue Flag Iris	<i>Iris virginica shrevei</i>	1 Gal.	Cont.
47	PV	Shenandoah Switch Grass	<i>Panicum virgatum 'Shenandoah'</i>	1 Gal.	Cont.
15	SH	Prairie Dropseed	<i>Sporobolus heterolepis</i>	1 Gal.	Cont.
192	TOTAL BIO.				

**PRUNING IS PERMITTED ON TREE #1467 BY AN ISA CERTIFIED ARBORIST TO GAIN ANY NECESSARY SITE CLEARANCE. PER CITY COMMENT AND DIRECTION**

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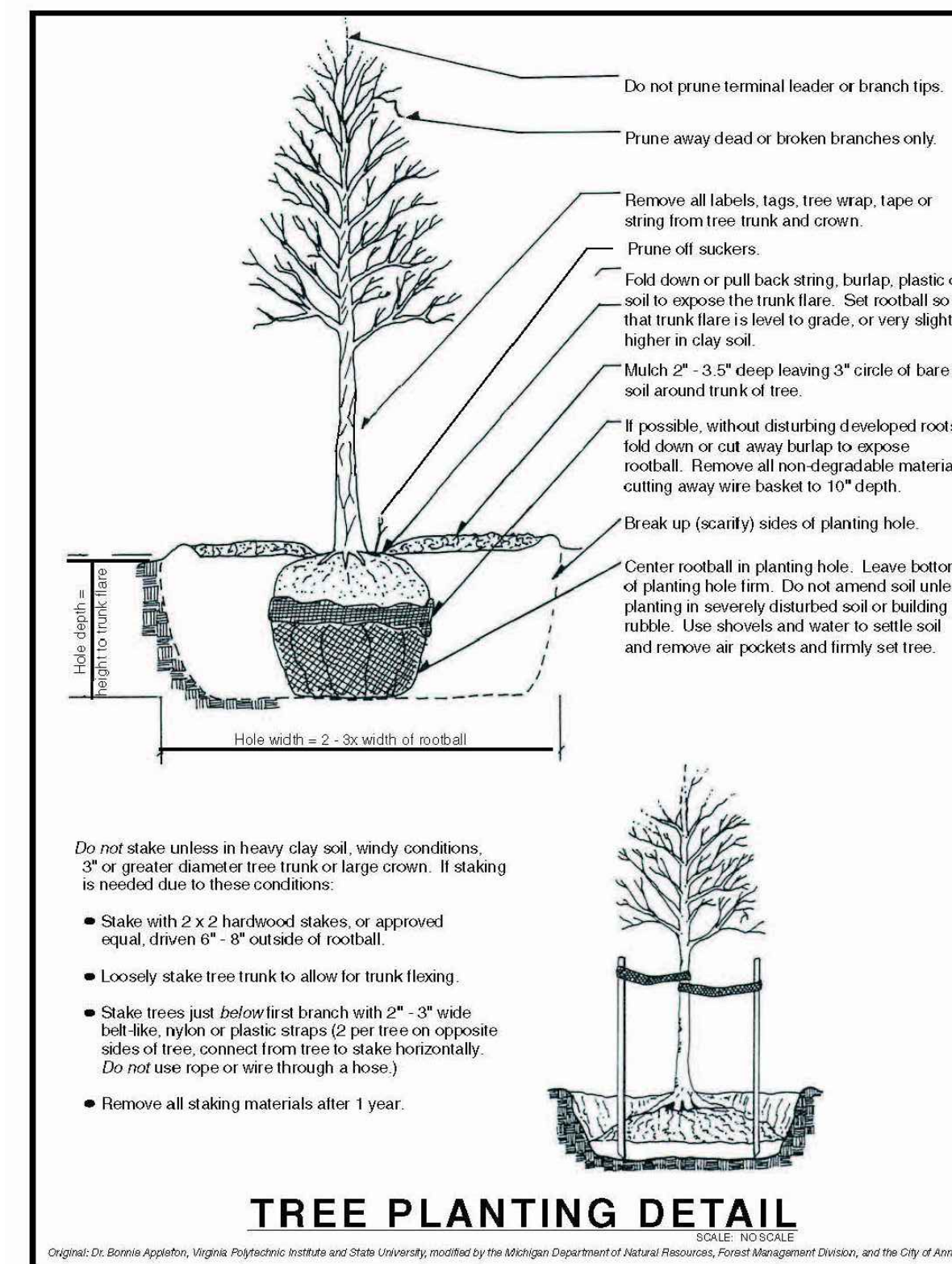
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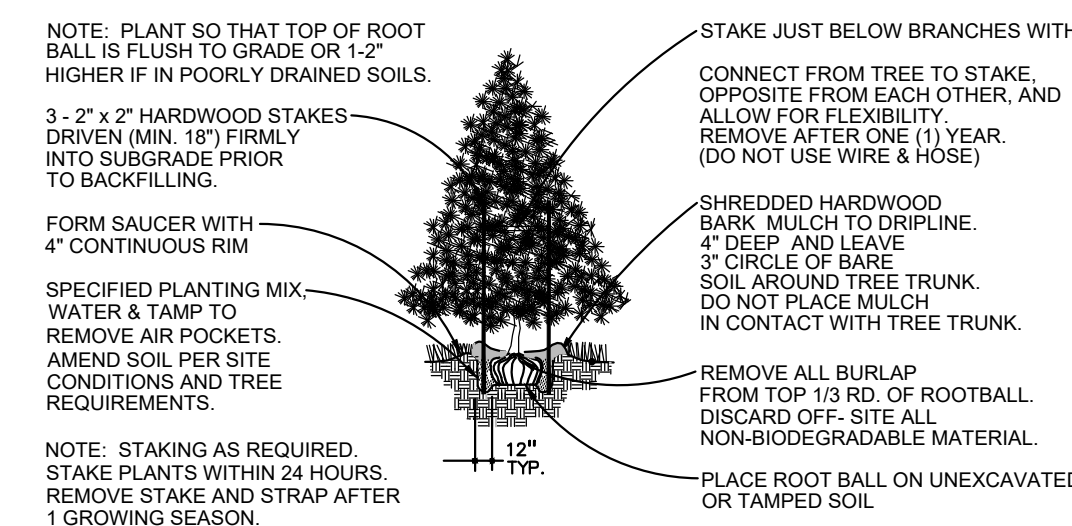
**PRELIMINARY LANDSCAPE PLAN**  
**MMG-PLYMOUTH MIXED USE DEVELOPMENT**  
PART OF THE SE 1/4 OF SECTION 14, T. 25, R. 6E,  
CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

DES. JLE DN. SUR. GWC P.M. JPB  
JLE DN. SUR. GWC P.M. JPB

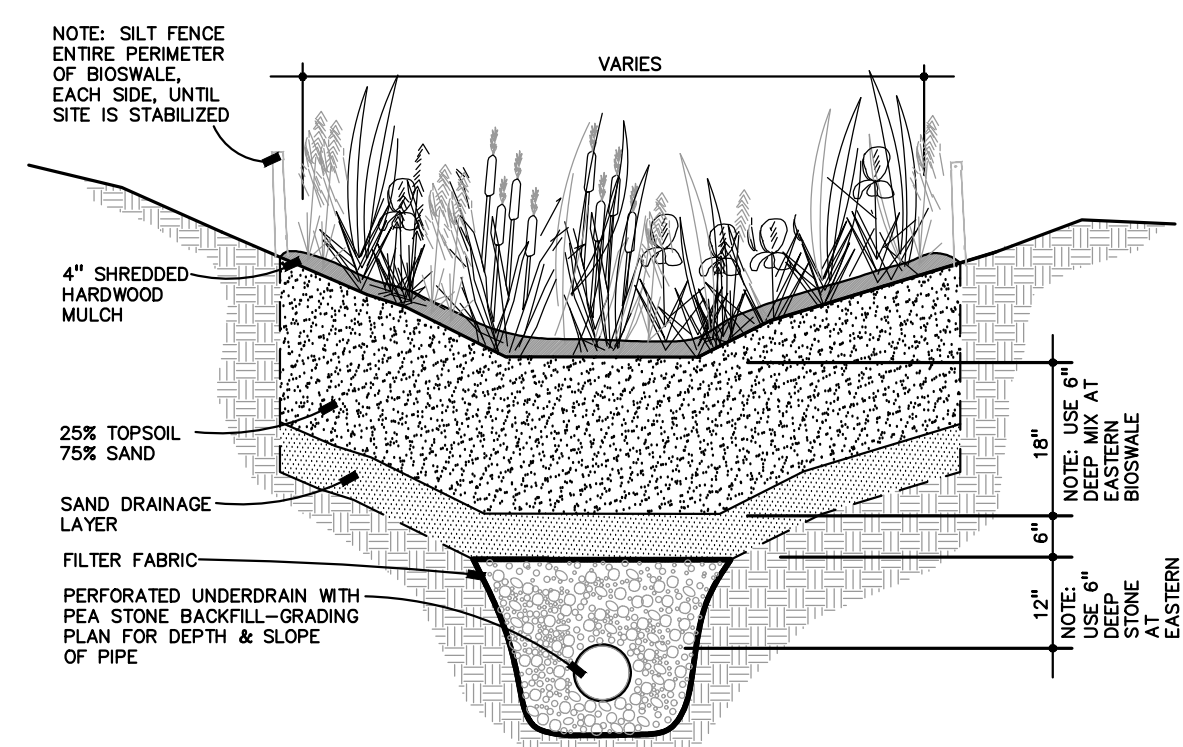
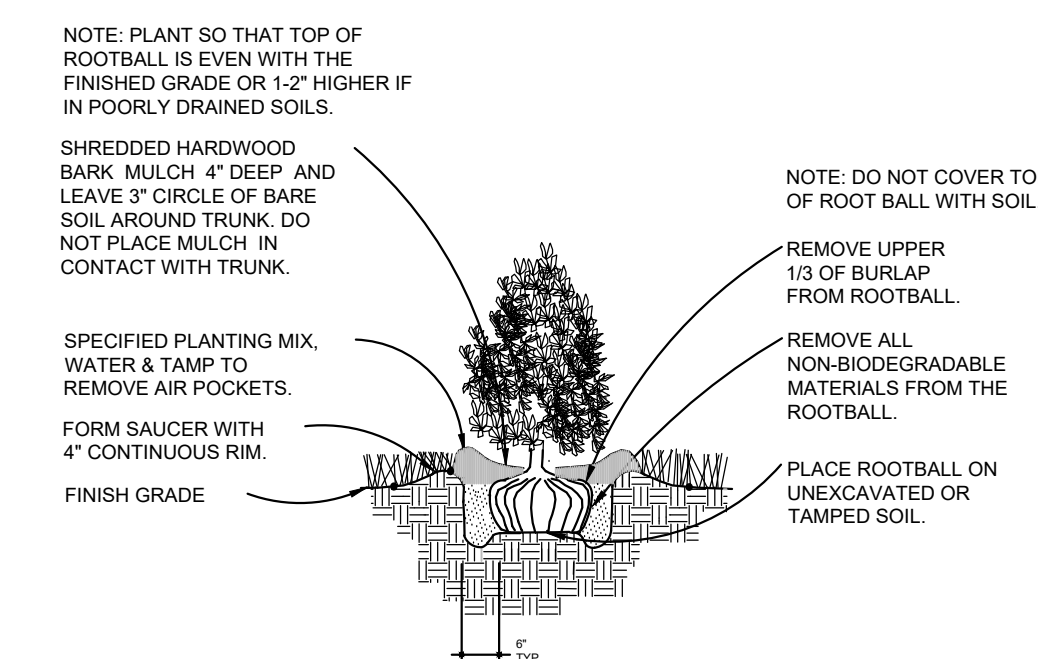
ORIGINAL ISSUE DATE: JANUARY 31, 2019  
PEA JOB NO. 2017-435  
SCALE: 1" = 30'  
DRAWING NUMBER: **L-1.0**



**DECIDUOUS TREE PLANTING DETAIL**  
 NOT TO SCALE



**EVERGREEN TREE PLANTING DETAIL**  
 NOT TO SCALE



**GENERAL PLANTING NOTES:**

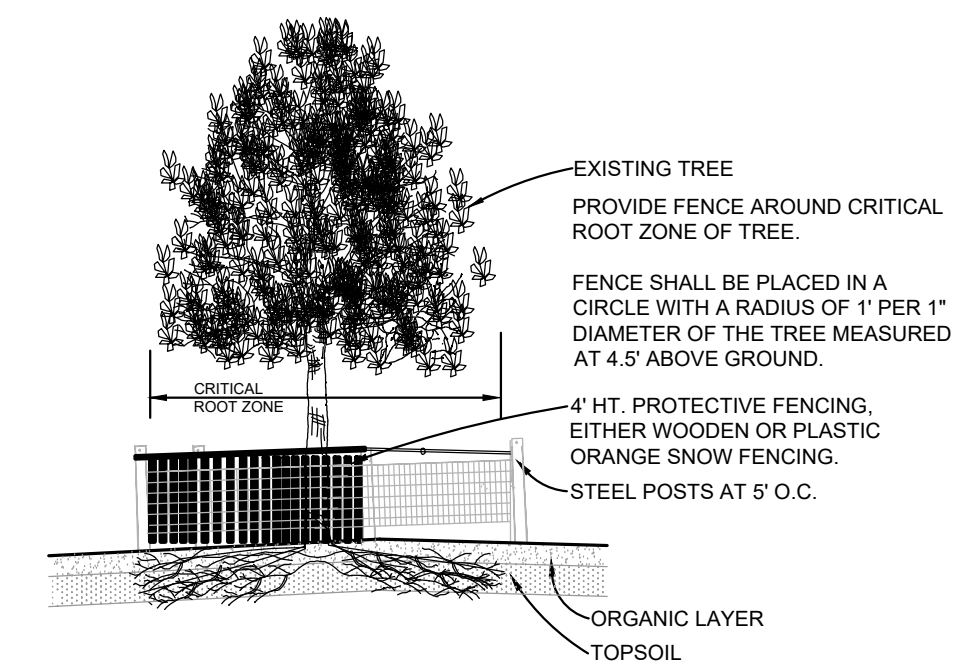
- Landscape contractor shall visit site, inspect existing site conditions and review proposed planting and related work. In case of discrepancy between plan and plant list, plan shall govern quantities. Contact Landscape Architect with any concerns.
- Contractor shall verify locations of all on site utilities prior to beginning construction on his/her phase of work. Electric, gas, telephone, cable television may be located by calling MISS DIG 1-800-482-7171. Any damage or interruption of services shall be the responsibility of Contractor. Contractor shall coordinate all related activities with other trades on the job and shall report any unacceptable job conditions to Owner's Representative prior to commencing.
- All plant material to be premium grade nursery stock and shall satisfy American Association of Nurserymen standard for Nursery Stock. All landscape material shall be Northern Grown, No. 1. Grade.
- Contractor is responsible for verifying all quantities shown on landscape plan prior to pricing the work.
- The owner's representative reserves the right to reject any plant material not meeting specifications.
- All single stem shade trees to have straight trunks and symmetrical crowns.
- All single trunk shade trees to have a central leader; trees with forked or irregular trunks will not be accepted.
- All multi stem trees shall be heavily branched and have symmetrical crowns. One sided trees or those with thin or open crowns shall not be accepted.
- All evergreen trees shall be heavily branched and full to the ground, symmetrical in shape and not sheared for the last five growing seasons.
- All trees to have clay or clay loam balls, trees with sand balls Will Be Rejected.
- No machinery is to be used within the drip line of existing trees; Hand grade all lawn areas within the drip line of existing trees.
- All tree locations shall be staked by Landscape Contractor and are subject to the approval of the landscape Architect prior to installation of the plant material.
- It is mandatory that positive drainage is provided away from all buildings.
- All planting beds shall receive 4" shredded hardwood bark mulch, see specifications. Shredded peatite and dyed mulch will not be accepted.
- All landscaped areas shall receive 3" compacted topsoil.
- Applications of fertilizer beyond the initial topsoil and seeding shall be a fertilizer with NO phosphorus.
- Maintenance: All plant material shall be maintained in good condition by mowing, watering, mulch, etc., so as to present a healthy neat and orderly appearance free from refuse and debris. All diseased, damaged or dead material shown on the site plan shall be replaced by the end of the following growing season Per City of Ann Arbor city code, as a continuing obligation for the duration of the site plan.

Planting mixture Type A - trees: standard planting backfill shall be a mixture of 1/2 native soil (excavated from plant pits), 1/4 topsoil, and 1/4 sand. Add fertilizer Type "A" and "B" to planting mixture per manufacturer's requirements. Follow planting details.

Planting mixture Type B for perennial flowers, groundcover beds, and ericaceous plants: planting backfill shall be a mixture of 1/3 screened topsoil, 1/3 sand and 1/3 peat. All existing soil shall be excavated and removed. Adding fertilizer types "A" and "B" to mixture per manufacturer's requirements. Follow planting details. Planting mixture Type C for annual flower beds: same as Type "B". Submit a sample to the Landscape Architect for approval prior to installation.

**TREE PROTECTION NOTES:**

- TREE PROTECTION WILL BE ERECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
- NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING, BUT NOT LIMITED TO PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS WITHIN DRIP LINES.
- GRADE CHANGE MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES.
- DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREES.
- ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING.
- TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED.
- TREES TO BE PRESERVED SHALL BE IDENTIFIED WITH FLAGGING PRIOR TO THE TREE CLEARING OPERATIONS.



**NOT FOR CONSTRUCTION**

REF: S:\PROJECTS\2017\2017435\DWG\17435- TOP0BASE.DWG  
 REF: S:\PROJECTS\2017\2017435\DWG\SITE PLANS\V-L-BASE-17435.DWG  
 REF: S:\PROJECTS\2017\2017435\DWG\SITE PLANS\V-L-TLBK-17435.DWG

Botanical Name	Common Name
<b>Swale Seed Mix</b> CARDNO 574-586-2412 cardnativelandnursery.com	
<b>Permanent Grasses/Sedges:</b>	
<i>Andropogon gerardii</i>	Big Bluestem
<i>Carex comosa</i>	Bristly Sedge
<i>Carex cristatella</i>	Crested Oval Sedge
<i>Carex lurida</i>	Bottlebrush Sedge
<i>Carex spp.</i>	Prairie Sedge Mix
<i>Carex vulpinoidea</i>	Brown Fox Sedge
<i>Elymus virginicus</i>	Virginia Wild Rye
<i>Glyceria striata</i>	Fowl Manna Grass
<i>Panicum virgatum</i>	Switch Grass
<i>Scirpus atrovirens</i>	Dark Green Rush
<i>Scirpus cyperinus</i>	Wool Grass
<i>Spartina pectinata</i>	Prairie Cord Grass
<b>Temporary Cover:</b>	
<i>Avena sativa</i>	Common Oat
<i>Lolium multiflorum</i>	Annual Rye
	<b>Total</b>
<b>Forbs:</b>	
<i>Alisma spp.</i>	Water Plantain (Various)
<i>Asclepias incarnata</i>	Swamp Milkweed
<i>Coreopsis tripteris</i>	Tall Coreopsis
<i>Eutrochium maculatum</i>	Spotted Joe-Pye Weed
<i>Iris virginica</i>	Blue Flag
<i>Liatris spicata</i>	Marsh Blazing Star
<i>Lobelia cardinalis</i>	Cardinal Flower
<i>Lobelia siphilitica</i>	Great Blue Lobelia
<i>Lycopus americanus</i>	Common Water Horehound
<i>Pycnanthemum virginianum</i>	Common Mountain Mint
<i>Rudbeckia triloba</i>	Brown-Eyed Susan
<i>Sagittaria latifolia</i>	Common Arrowhead
<i>Senna hebecarpa</i>	Wild Senna
<i>Silphium terebinthinaceum</i>	Prairie Dock
<i>Symphoricarpon novae-angliae</i>	New England Aster
<i>Verbena hastata</i>	Blue Vervain
<i>Zizia aurea</i>	Golden Alexanders

NO.	DATE	DESCRIPTION
1	02/01/19	ISSUED FOR PERMITS
2	02/01/19	ISSUED FOR PERMITS
3	02/01/19	ISSUED FOR PERMITS
4	02/01/19	ISSUED FOR PERMITS
5	02/01/19	ISSUED FOR PERMITS
6	02/01/19	ISSUED FOR PERMITS
7	02/01/19	ISSUED FOR PERMITS
8	02/01/19	ISSUED FOR PERMITS
9	02/01/19	ISSUED FOR PERMITS
10	02/01/19	ISSUED FOR PERMITS
11	02/01/19	ISSUED FOR PERMITS
12	02/01/19	ISSUED FOR PERMITS
13	02/01/19	ISSUED FOR PERMITS
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20	02/01/19	ISSUED FOR PERMITS
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22	02/01/19	ISSUED FOR PERMITS
23	02/01/19	ISSUED FOR PERMITS
24	02/01/19	ISSUED FOR PERMITS
25	02/01/19	ISSUED FOR PERMITS
26	02/01/19	ISSUED FOR PERMITS
27	02/01/19	ISSUED FOR PERMITS
28	02/01/19	ISSUED FOR PERMITS
29	02/01/19	ISSUED FOR PERMITS
30	02/01/19	ISSUED FOR PERMITS



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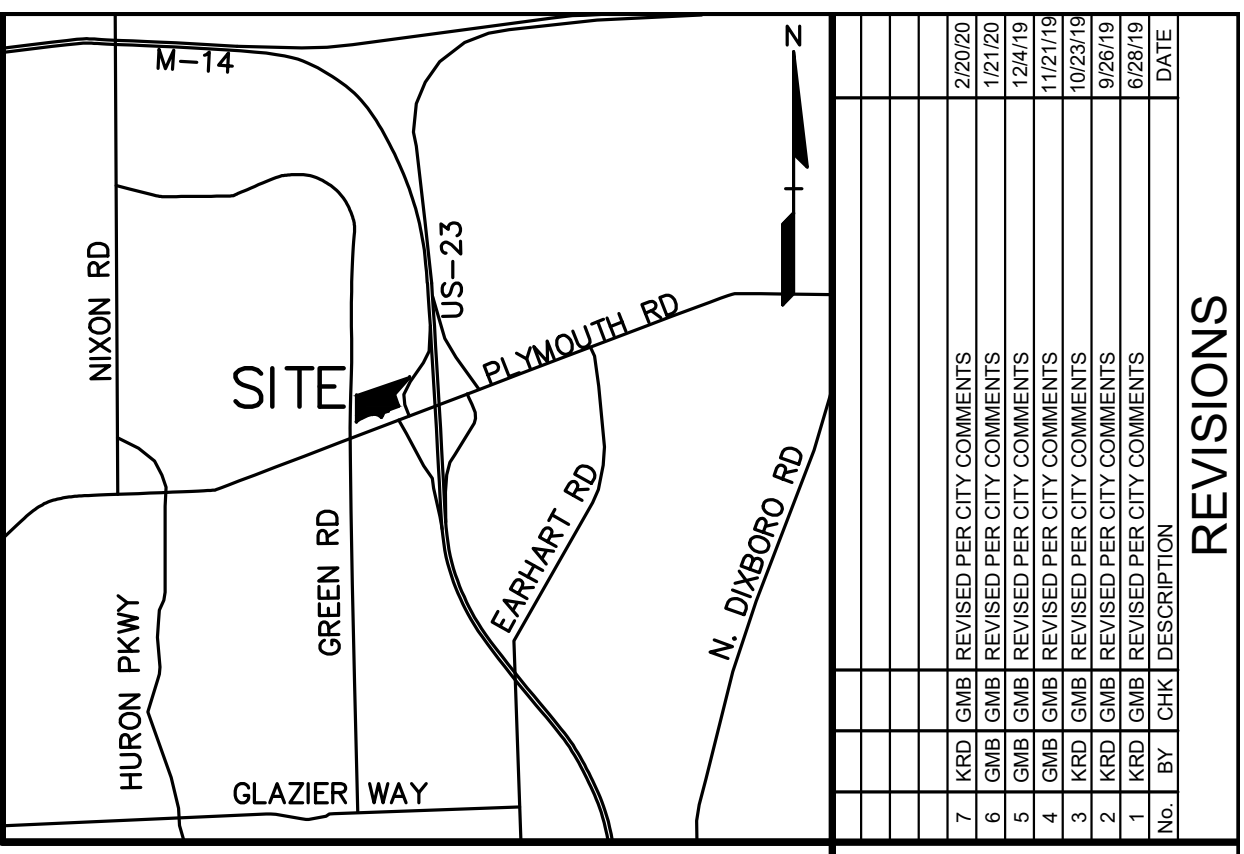
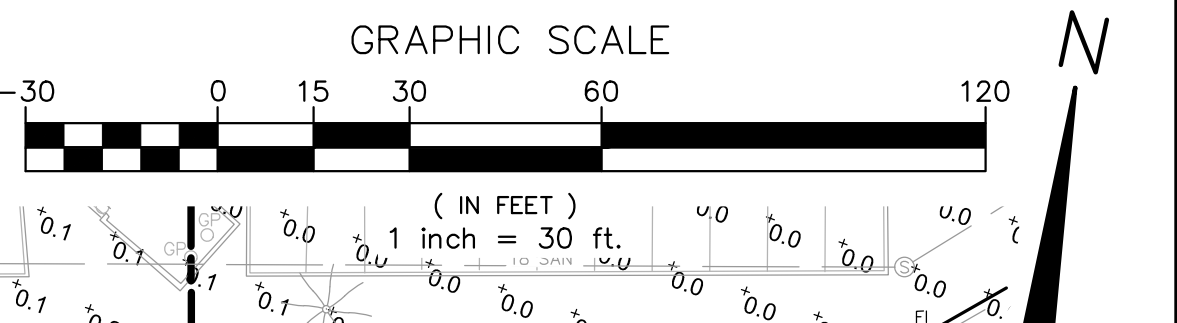
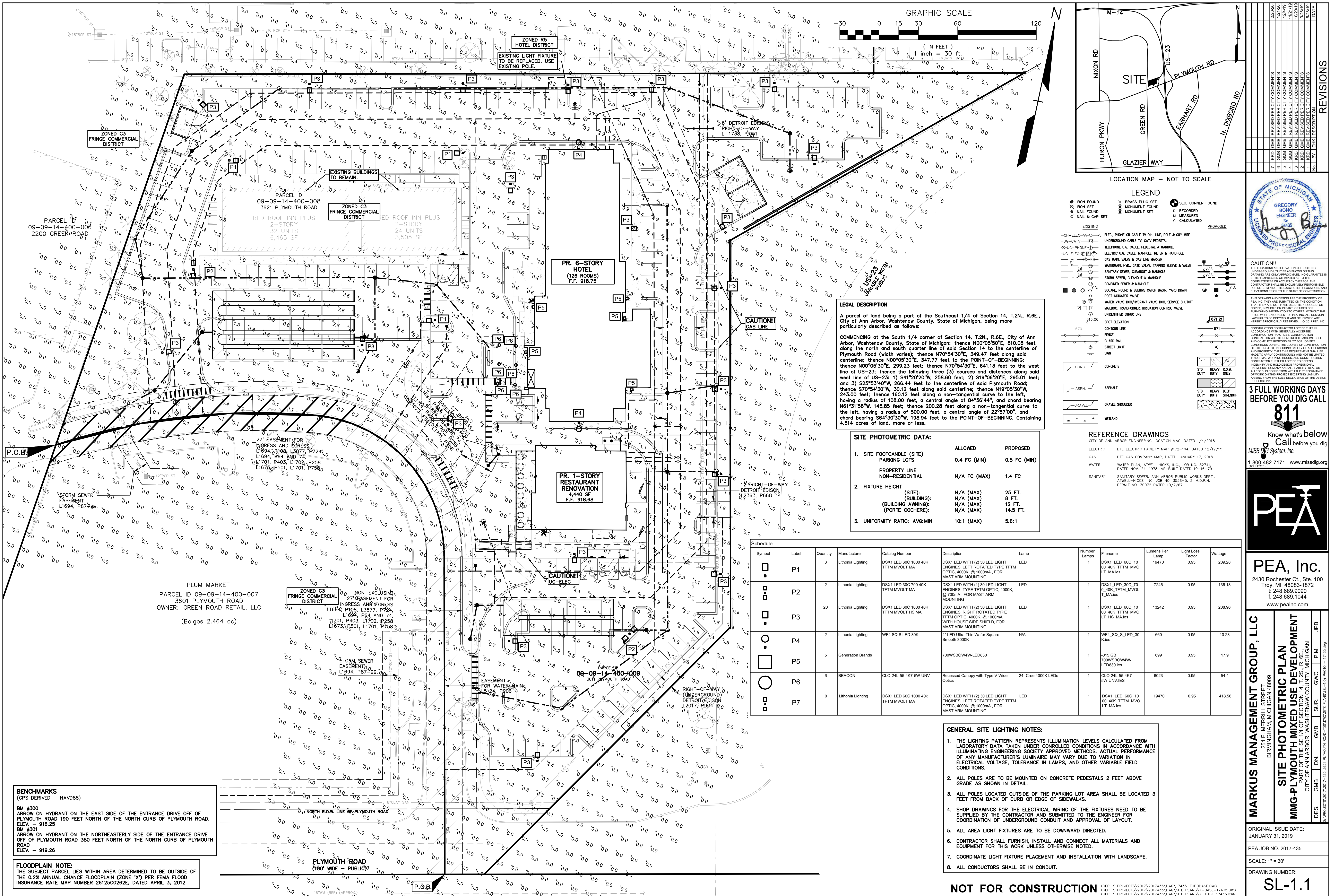
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<b>MARKUS MANAGEMENT GROUP, LLC</b> 221 E. MERRILL STREET BIRMINGHAM, MICHIGAN 48009	DES.	JLE	DN.	JLE	SUR.	GWC	P.M.	JPB
	<b>PRELIMINARY LANDSCAPE DETAILS</b> MMG-PLYMOUTH MIXED USE DEVELOPMENT PART OF THE SE 1/4 OF SECTION 14, T. 2S., R. 6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN							
ORIGINAL ISSUE DATE: JANUARY 31, 2019								
PEA JOB NO. 2017-435								
SCALE: N.T.S.								
DRAWING NUMBER: <b>L-1.1</b>								





NO.	DATE	DESCRIPTION
1	12/15/14	ISSUED
2	1/20/15	REVISED PER CITY COMMENTS
3	1/20/15	REVISED PER CITY COMMENTS
4	1/20/15	REVISED PER CITY COMMENTS
5	1/20/15	REVISED PER CITY COMMENTS
6	1/20/15	REVISED PER CITY COMMENTS
7	1/20/15	REVISED PER CITY COMMENTS
8	1/20/15	REVISED PER CITY COMMENTS

EXISTING	PROPOSED
IRON FOUND	BRASS PLUG SET
IRON SET	MONUMENT FOUND
NAIL FOUND	MONUMENT SET
SEWAGE	RECORDED
	MEASURED
	CALCULATED

**LEGAL DESCRIPTION**

A parcel of land being a part of the Southeast 1/4 of Section 14, T.2N., R.6E., City of Ann Arbor, Washtenaw County, State of Michigan, being more particularly described as follows:

COMMENCING at the South 1/4 corner of Section 14, T.2N., R.6E., City of Ann Arbor, Washtenaw County, State of Michigan; thence N00°05'50"E, 810.08 feet along the north and south quarter line of said Section 14 to the centerline of Plymouth Road (width varies); thence N70°54'30"E, 349.47 feet along said centerline; thence N00°05'30"E, 347.77 feet to the POINT-OF-BEGINNING; thence N00°05'30"E, 299.23 feet; thence N70°54'30"E, 641.13 feet to the west line of US-23; thence the following three (3) courses and distances along said west line of US-23: 1) S41°20'20"W, 258.60 feet; 2) S19°06'20"E, 295.01 feet; and 3) S25°33'40"W, 266.44 feet to the centerline of said Plymouth Road; thence S70°54'30"W, 30.12 feet along said centerline; thence N19°05'30"W, 243.00 feet; thence 160.12 feet along a non-tangential curve to the left, having a radius of 108.00 feet, a central angle of 84°56'44", and chord bearing N61°31'58"W, 145.85 feet; thence 200.28 feet along a non-tangential curve to the left, having a radius of 500.00 feet, a central angle of 22°57'00", and chord bearing S64°30'30"W, 198.94 feet to the POINT-OF-BEGINNING. Containing 4.514 acres of land, more or less.

	ALLOWED	PROPOSED
1. SITE FOOTCANDLE (SITE) PARKING LOTS	0.4 FC (MIN)	0.5 FC (MIN)
PROPERTY LINE NON-RESIDENTIAL	N/A FC (MAX)	1.4 FC
2. FIXTURE HEIGHT (SITE) (BUILDING) (BUILDING AWNING) (PORTE COCHERE)	N/A (MAX)	25 FT. 8 FT. 12 FT. 14.5 FT.
3. UNIFORMITY RATIO: AVG:MIN	10:1 (MAX)	5.6:1

ELECTRIC	DTE ELECTRIC FACILITY MAP, DATED 1/4/2018
GAS	DTE GAS COMPANY MAP, DATED JANUARY 17, 2015
WATER	WATER PLAN, ATWELL HOOKS, INC., JOB NO. 332745, DATED NOV. 24, 1978, AS-BUILT DATED 10-16-79
SANITARY	SANITARY SEWER, ANN ARBOR PUBLIC WORKS DEPT., ATWELL-HOOKS, INC., JOB NO. 3555-5, 2, M.D.P.H., PERMIT NO. 35072 DATED 10/2/87

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	File Name	Lumens Per Lamp	Light Loss Factor	Wattage
[Symbol]	P1	3	Lithonia Lighting	DSX1 LED 60C 1000 40K TFTM MVOLV MA	DSX1 LED WITH (2) 30 LED LIGHT ENGINES, LEFT ROTATED TYPE TFTM OPTIC, 4000K, @ 1000MA, FOR MAST ARM MOUNTING	LED	1	DSX1_LED_60C_10_00_40K_TFTM_MVO LT_MA.ies	19470	0.95	209.28
[Symbol]	P2	2	Lithonia Lighting	DSX1 LED 30C 700 40K TFTM MVOLV MA	DSX1 LED WITH (1) 30 LED LIGHT ENGINES, TYPE TFTM OPTIC, 4000K, @ 700MA, FOR MAST ARM MOUNTING	LED	1	DSX1_LED_30C_70_0_40K_TFTM_MVO LT_MA.ies	7246	0.95	136.18
[Symbol]	P3	20	Lithonia Lighting	DSX1 LED 60C 1000 40K TFTM MVOLV HS MA	DSX1 LED WITH (2) 30 LED LIGHT ENGINES, RIGHT ROTATED TYPE TFTM OPTIC, 4000K, @ 1000MA, WITH HOUSE SIDE SHIELD, FOR MAST ARM MOUNTING	LED	1	DSX1_LED_60C_10_00_40K_TFTM_MVO LT_HS_MA.ies	13242	0.95	208.96
[Symbol]	P4	2	Lithonia Lighting	WF4 S O LED 30K	4" LED Ultra Thin Wafer Square Smooth 3000K	N/A	1	WF4_SQ_S_LED_30 K.ies	660	0.95	10.23
[Symbol]	P5	5	Generation Brands	700WSB04W-LED830	700WSB04W-LED830		1	415 GB 700WSB04W-LED830.ies	699	0.95	17.9
[Symbol]	P6	6	BEACON	CLO-24L-55-4K7-5W-LNV	Recessed Canopy with Type V-Wide Optics	24-Cre-4000K LEDs	1	CLO-24L-55-4K7-5W-LNV.ies	6023	0.95	54.4
[Symbol]	P7	0	Lithonia Lighting	DSX1 LED 60C 1000 40k TFTM MVOLV MA	DSX1 LED WITH (2) 30 LED LIGHT ENGINES, LEFT ROTATED TYPE TFTM OPTIC, 4000K, @ 1000MA, FOR MAST ARM MOUNTING	LED	1	DSX1_LED_60C_10_00_40K_TFTM_MVO LT_MA.ies	19470	0.95	418.56

- GENERAL SITE LIGHTING NOTES:**
1. THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINARE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
  2. ALL POLES ARE TO BE MOUNTED ON CONCRETE PEDESTALS 2 FEET ABOVE GRADE AS SHOWN IN DETAIL.
  3. ALL POLES LOCATED OUTSIDE OF THE PARKING LOT AREA SHALL BE LOCATED 3 FEET FROM BACK OF CURB OR EDGE OF SIDEWALKS.
  4. SHOP DRAWINGS FOR THE ELECTRICAL WIRING OF THE FIXTURES NEED TO BE SUPPLIED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR COORDINATION OF UNDERGROUND CONDUIT AND APPROVAL OF LAYOUT.
  5. ALL AREA LIGHT FIXTURES ARE TO BE DOWNWARD DIRECTED.
  6. CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT ALL MATERIALS AND EQUIPMENT FOR THIS WORK UNLESS OTHERWISE NOTED.
  7. COORDINATE LIGHT FIXTURE PLACEMENT AND INSTALLATION WITH LANDSCAPE.
  8. ALL CONDUCTORS SHALL BE IN CONDUIT.

**BENCHMARKS**  
(GPS DERIVED - NAVD88)

BM #300  
ARROW ON HYDRANT ON THE EAST SIDE OF THE ENTRANCE DRIVE OFF OF PLYMOUTH ROAD 190 FEET NORTH OF THE NORTH CURB OF PLYMOUTH ROAD.  
ELEV. - 916.25

BM #301  
ARROW ON HYDRANT ON THE NORTHEASTERLY SIDE OF THE ENTRANCE DRIVE OFF OF PLYMOUTH ROAD 380 FEET NORTH OF THE NORTH CURB OF PLYMOUTH ROAD.  
ELEV. - 919.26

**FLOODPLAIN NOTE:**  
THE SUBJECT PARCEL LIES WITHIN AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN (ZONE 'X') PER FEMA FLOOD INSURANCE RATE MAP NUMBER 26125C0262E, DATED APRIL 3, 2012



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**MARKUS MANAGEMENT GROUP, LLC**  
231 E. MERRILL STREET  
BIRMINGHAM, MICHIGAN 48009

**SITE PHOTOMETRIC PLAN**  
**MMG-PLYMOUTH MIXED USE DEVELOPMENT**  
PART OF THE SE 1/4 OF SECTION 14, T.2S., R.6E., CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

DES	GMB	DN	GMB	SUR	GWC	PM	JPB
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ORIGINAL ISSUE DATE:  
JANUARY 31, 2019


PEA JOB NO. 2017-435

SCALE: 1" = 30'

DRAWING NUMBER:  
**SL-1.1**

### LUMEN P1, P2, P3, & P7

## D-Series Size 1 Mast Arm Mount LED Area Luminaire



Capable of being indicated by this color background.

**Specifications**

EPA: 0.9 ft<sup>2</sup> (0.08 m<sup>2</sup>)  
27"

Length: (68.6 cm)

Width: 13" (33.0 cm)

Height: 5" (12.7 cm)

Weight (max): 26 lbs (11.8 kg)

**Ordering Information**

EXAMPLE: DSX1 LED 60C 1000 40K T3M MVOLT MA DDBX

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting	Options	Finish
DSX1 LED	Forward optics 30K 30 LEDs (line engine) 40K 40 LEDs (two engine) 60C 60 LEDs (two engine)	530 530 mA 700 300 mA 1000 1000 mA (1 A)	300K (80 CRI min.) 400K (70 CRI min.) 500K (80 CRI)	T15 Type II short T25 Type II short T2M Type II medium T35 Type II short T3M Type II medium T4M Type II medium T5M Type II medium T5W Type V wide	MVOLT <sup>1</sup> 120 <sup>1</sup> 208 <sup>1</sup> 240 <sup>1</sup> 277 <sup>1</sup> 347 <sup>1</sup> 480 <sup>1</sup>	MA Mast arm ready	Shipped installed (black) No NEMA hub-to-hub lock receptacle (decorative cover), wide fit shield, top/bottom, and body-fits 0-10V dimming driver (no control) PER NEMA hub-to-hub lock receptacle only (no control) OCR Dimmable and controllable via ROAM <sup>2</sup> (no control) HS House-side shield <sup>3</sup> WTB Utility terminal block DS Dual switching <sup>4</sup> BUBBLV External bubble level LSO Left-rotated optics <sup>5</sup> ROO Right-rotated optics <sup>5</sup>	DOBX Dark bronze DLBX Black DNAX Natural aluminum DWBX White DOB2 Textured dark bronze DNW2 Textured natural aluminum DWHGD Textured white

**Ordering Information**

EXAMPLE: DSX1 LED 60C 1000 40K T3M MVOLT MA DDBX

DSX1-MA-LED

### LUMEN P4

## Wafer LED Recessed Downlight WF4 4" LED Module

IC/Non-IC New Construction/Remodel

**FEATURES & SPECIFICATIONS**

**INTENDED USE** — The 4" Wafer Thin LED square recessed downlight with remote driver box combines high quality light output and efficiency while eliminating the hot light housing for competitive affordability. This innovative wafer-thin Type 4 design allows easy installation for new construction or remodel from below the ceiling without the requirement of a pot light housing. The LED module maintains at least 70% light output for 30,000 hours. These LED Wafer downlights are intended for closets, attics, hallways, bathrooms, kitchens, basements, soffits, entryways, porches, garages, stairwells, corridors, nursing/homes, condos, elevators, apartments, and any other small areas.

**CONSTRUCTION** — IC rated driver and fixture — approved for direct contact with insulation. Aluminum die cast outer frame. Durable, powder coat paint to prevent rust. Square feature with integral edge-ill LED's. Premium rated cable connector to connect from module to remote driver box. Isolated driver integrated inside steel remote box with four 7/8" knockouts with slots for prying. Suitable for pulling wires with the 12 cubic inch wiring compartment to accommodate up to (8) 14 gauge insulated conductors, or (6) 12 gauge insulated conductors, making the Wafer LED Downlights much easier to wire in 2in/2out (plus ground) daisy-chain applications and contractor friendly.

**PATENT PENDING.**

**INSTALLATION** — Ideal for shallow ceiling plenum; no housing required. Steel spring clip for easy installation. 4" cut out template is provided to ensure a correct sized hole is cut into ceiling for proper installation of the trim. Size of hole should not exceed 4 1/4 inches for this product. Suitable for installation in X-grid and drop ceiling applications. 3" plenum space required for installation of the remote driver box.

**OPTICS** — Wafer Thin downlight edge-ill LED technology uses light guided plate to distribute light. Polycarbonate lens provides even illumination throughout the space. Utilized 2700K, 3000K, 3500K, 4000K, and 5000K color temperature LEDs.

**ELECTRICAL** — Connect directly to 120V power supply via provided UL recognized driver. High efficient driver with power factor > 0.9. Ambient operating temperature: -40°F (-40°C) to 104°F (+40°C). Dimming down to 10% (See page 4 for recommended dimmers). Standard input wattage is 10.3W, 60 lumens per watt. Requires SMI Incandescent.

**LISTINGS** — CSA certified US and Canadian safety standards. ENERGY STAR<sup>®</sup> certified. Wet location. Air Tight certified in accordance with ASTM E383-2004 NOMI Certified.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at: [www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx)

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25°C. Specifications subject to change without notice.

**Specifications**

Aperture: 3.2 (8.1)  
Ceiling opening: 4.2 (10.7)  
Overlap trim: 4.7 (12.0)  
Height: 1.1 (2.8)

**Ordering Information**

For shortest lead times, configure product using standard options (shown in bold).

Example: WF4 SQ 8 LED 30K MW

Series	Lamp	CCT/CR/W/Lumens <sup>1</sup>	Finish
WF4 SQ B	4" wafer-thin square LED downlight, baffle trim	27K 2700K/80CRI/10.6W/630L	MW Matte White
WF4 SQ S	4" wafer-thin square LED downlight, smooth trim	30K 3000K/80CRI/10.3W/630L	MB Matte Black
		35K <sup>2</sup> 3500K/80CRI/10.2W/630L	BN Brushed Nickel
		40K 4000K/80CRI/10.28W/630L	ORB Oil-Rubbed Bronze
		50K <sup>2</sup> 5000K/80CRI/10.2W/630L	

**Accessories:** Order as separate catalog number.

WF4 PAN R12 4" new construction pan, retail pack of 12  
WF4B U Remodel joist bar  
WF4E X3 6" F14 cable  
WF4E X10 10' F14 cable  
WF4E X20 20' F14 cable

WF4 Pan  
Remodel Joist Bar  
Extension Cable

Notes  
1 Total system delivered lumens.  
2 Only stocked in Matte White finish, enter non-stock order for other color finishes.

DOWNLIGHTING WF4 SQ

### LUMEN P5

## BOWMAN 4 WALL SCONCE

TECH LIGHTING

The classic silhouette of this sleek LED wall sconce makes it suitable for both indoor and outdoor applications. The Bowman's die-cast aluminum body houses a powerful, long-lasting LED light source tightly controlled for down light only, yet supplying significant illumination for even the darkest nights.

**High quality LM80-tested LEDs** for consistent long-life performance and color

**Outstanding protection against the elements:**

- Marine-grade powder coat finishes
- Stainless Steel mounting hardware
- Impact-resistant, UV stabilized frosted acrylic lensing

**SPECIFICATIONS**

DELIVERED LUMENS	699
WATTS	17.8
VOLTAGE	120V, 277V
DIMMING	ELV
LIGHT DISTRIBUTION	Symmetric
MOUNTING OPTIONS	Downlight
CCT	2700K*, 3000K
CRI	80+
COLOR BINNING	3 Step
BUG RATING	B1-U0-G0
DARK SKY	Compliant
WET LISTED	IP65
GENERAL LISTING	ETL
CALIFORNIA TITLE 24	Can be used to comply with CEC 2016 Title 24 Part 6 for outdoor use. Registration with CEC Appliance Database not required.
START TEMP	-30°C
FIELD SERVICEABLE LED	No
CONSTRUCTION	Aluminum
HARDWARE	Stainless Steel
FINISH	Marine Grade Powder Coat
LED LIFETIME	L70: 70,000 Hours
WARRANTY**	5 Years

**ORDERING INFORMATION**

700WSBOW	LENGTH	FINISH	LAMP
4	4"	B BLACK	LED807 LED 80 CR/ 2700K 120V*
		Z BRONZE	LED807Z77 LED 80 CR/ 2700K 277V*
		H CHROMICAL	LED809 LED 80 CR/ 3000K 120V
		S SILVER	LED809Z77 LED 80 CR/ 3000K 277V
		W WHITE	

\* Visit [techlighting.com](http://techlighting.com) for specific warranty limitations and details.  
\*\* Available in Black and Bronze finish only.

techlighting.com

### LUMEN P6

## CLO Ceileo

BEACON

**FEATURES**

- Ceileo is a commercial grade LED recessed canopy light that utilizes high powered LEDs with precise efficient optical control and on board wastage and lumen choices. Ceileo consumes only 55 watts and is designed to replace up to 250 Watt HID systems, and at the same time reduce maintenance by delivery of over 200,000 hours of projected life.
- The Beacon Ceileo luminaire has a cast aluminum external housing. The cast aluminum housing provides direct-heat exchange between the LED light engine and the cool outdoor air; LED drivers are thermally isolated from the main housing.
- A thermal circuit, LIFESHIELD<sup>™</sup>, shall protect the LED array from excessive temperature by interfacing with the 0-10V dimmable drivers to reduce drive current as necessary.
- The Ceileo Luminaire is UL listed and suitable for wet locations.

**ORDERING INFORMATION**

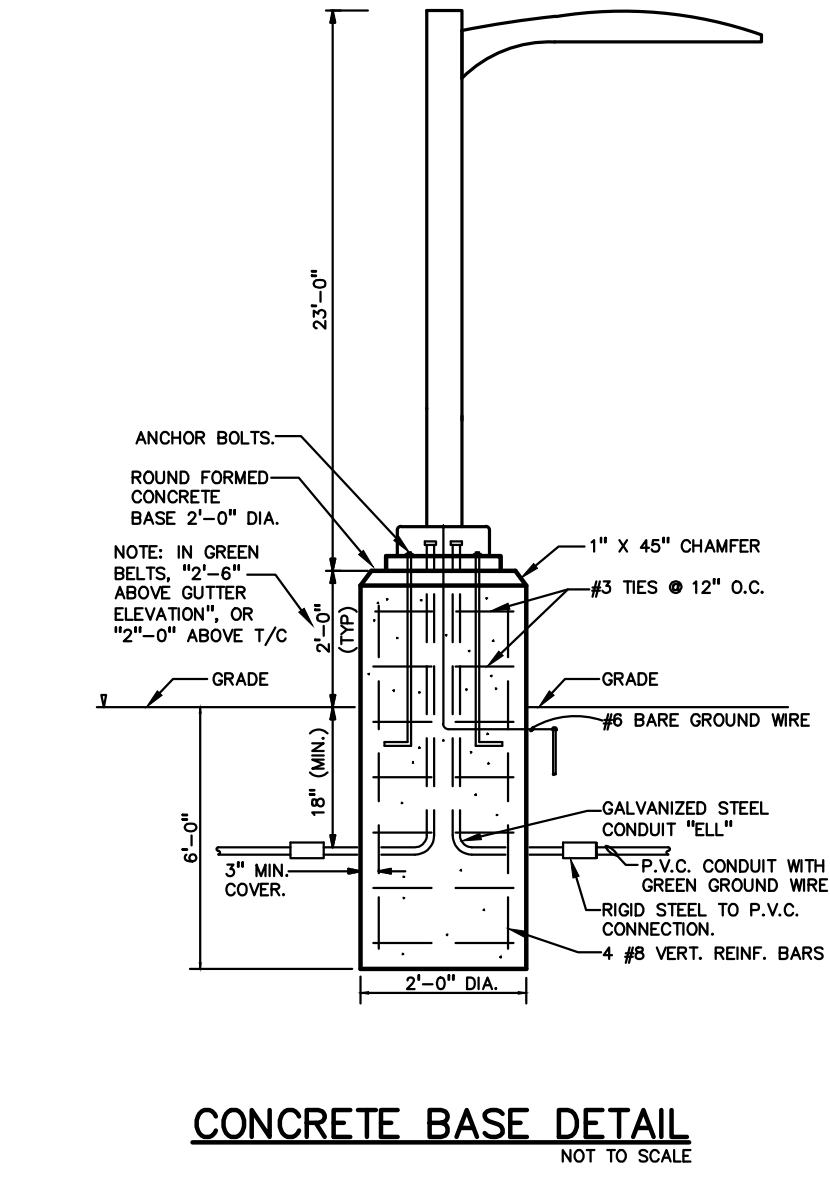
MODEL	ENGINE-WATTS	CCT-COLOR TEMP.	OPTICS	VOLTAGE	STYLE OPTIONS	COLOR
CLO Ceileo	24W-55 55 Watts	5K 5100° K (std.) 4K 4200° K 3K 3000° K	5x5 Aisle Lighter TSR Type V, Rectangular TS0N Type V, Sq. Medium TS0N Type V, Sq. Narrow TSW Type V, Round Wide 3x5 Vertical Flood DF Diffused Lens	UNV 120-277V	RD Round SQ Square	BBT Basic Black Textured BMT Black Matte Textured WHT White Textured MBT Metallic Bronze Textured BZT Bronze Textured DBT Dark Bronze Textured GYS Gray Smooth DPS Dark Platinum Smooth GNT Green Textured MST Metallic Silver Textured MTT Metallic Titanium Textured OWI Old World Iron RAL

**ROUND DIMENSIONS**

**SQUARE DIMENSIONS**

Visit [www.beaconproducts.com](http://www.beaconproducts.com) for up-to-date availability information

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2/20/20  
7/27/20  
11/24/16  
5/26/19  
6/26/19  
1/24/18

REVISIONS

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ORIGINAL ISSUE DATE:  
JANUARY 31, 2019

PEA JOB NO. 2017-435

SCALE: 1" = 30'

DRAWING NUMBER:  
**SL-1.2**

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