

Site Plan Review

Reviewed for compliance to the City Ordinance, Building and Fire Codes

Department	Reviewer	Approved
Planning	Chris McLeod 248-841-2572 mcleodc@RochesterHills.org	Yes
Building	Mark Artinian 248-841-2446 ArtinianM@RochesterHills.org	Yes
Engineering	Jason Boughton 248-841-2490 BoughtonJ@RochesterHills.org	Yes
Traffic	Keith Depp 248-841-2503 DeppK@RochesterHills.org	No
Nat. Resources	Matt Einheuser 248-841-2551 EinheuserM@RochesterHills.org	No
Fire	Capt. Ann Echols 248-841-2701 EcholsA@RochesterHills.org	Yes

City of Rochester Hills
Planning & Economic Development

Conditions and mark-ups noted throughout the plan set must be addressed prior to final approval.

Conditioned on the providing of landscaped islands within the parking lot, adjacent to pedestrian connection to S. Rochester Road and all other noted comments being addressed.

This approval is in part due to responses to the Building Department items noted on the "Comment Response Letter". Architectural sheets are referenced in the response letter but they were not resubmitted. Please include all Architectural sheets with the next full submittal including responses to all building code analysis items.

For all conditional uses, a "Conditional Use Proposed Sign" shall be placed onsite no less than fifteen (15) days prior to the public hearing date. Such sign shall be compliant with Section 138-1.203 of City Ordinances.

FINAL ENGINEERING PLANS

BANK OF AMERICA

3035 S ROCHESTER ROAD

ROCHESTER HILLS, MI 48307

UTILITY AND GOVERNING AGENCY CONTACTS

BUILDING DEPARTMENT
CITY OF ROCHESTER HILLS
1000 ROCHESTER HILLS DRIVE
ROCHESTER HILLS, MI 48309
TEL: (248) 656-4615
EMAIL: BUILDING@ROCHESTERHILLS.ORG
CONTACT: MIKE VIAZANKO

ROADWAY AUTHORITY
MICHIGAN DEPARTMENT OF TRANSPORTATION
18101 W. NINE MILE ROAD
SOUTHFIELD, MI 48075
TEL: (248) 752-0336
CONTACT: DIANE CROSS, P.E.

PLANNING AND ZONING DEPARTMENT
CITY OF ROCHESTER HILLS
1000 ROCHESTER HILLS DRIVE
ROCHESTER HILLS, MI 48309
TEL: (248) 656-4660
EMAIL: PLANNING@ROCHESTERHILLS.ORG
CONTACT CHRIS MCLEOD

POWER COMPANY
DTE ENERGY - NORTHWEST REGION
37849 INTERCHANGE DRIVE
FARMINGTON HILLS, MI 48335
TEL: (248) 427-2200

STORM SEWER SERVICE
CITY OF ROCHESTER HILLS
1000 ROCHESTER HILLS DRIVE
ROCHESTER HILLS, MI 48309
TEL: (248) 656-4685
CONTACT: BILL FRITZ

NATURAL GAS COMPANY
CONSUMERS ENERGY
11801 FARMINGTON ROAD
LIVONIA, MI 48150
TEL: (800) 477-5050

SANITARY/WATER SERVICE
NORTH OAKLAND COUNTY WATER AUTHORITY
1 PUBLIC WORKS DRIVE, BUILDING 95W
WATERFORD, MI 48328
TEL: (248) 452-2172
CONTACT: MARK DAVIS

PROJECT TEAM

OWNER'S REPRESENTATIVE
CBRE
TEL: (303) 476-8469
CONTACT: KRIS KUIZENGA

CIVIL ENGINEER
KIMLEY-HORN OF MICHIGAN, INC.
39111 SIX MILE ROAD
LIVONIA, MI 48152
TEL: (248) 825-8245
EMAIL: JUSTIN.MULLER@KIMLEY-HORN.COM
CONTACT: JUSTIN MULLER, P.E.
EMAIL: JOHN.GROSS@KIMLEY-HORN.COM
CONTACT: JOHN GROSS, P.E. (IL)

SURVEYOR
MERIDIAN LAND SURVEYING
601 S. GRAND TRAVERSE STREET
FLINT, MI 48502
TEL: (801) 339-6605
CONTACT: GREG MCARDLE, P.L.S.

LANDSCAPE ARCHITECT
KIMLEY-HORN OF MICHIGAN, INC.
39111 SIX MILE ROAD
LIVONIA, MI 48152
TEL: (248) 825-8245
EMAIL: JOE.COGSWELL@KIMLEY-HORN.COM
CONTACT: JOE COGSWELL

GEOTECH
TERRACON
800 MORRISON ROAD
GAHANNA, OH 43230
TEL: (470) 452-9752
EMAIL: MZAJID@TERRACON.COM
CONTACT: MOHAMMAD ZAID

LEGAL DESCRIPTION

PART OF THE NORTHWEST QUARTER OF SECTION 35, T3N, R11E, CITY OF ROCHESTER HILLS, IN OAKLAND COUNTY, MICHIGAN.

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 35, THENCE ALONG THE NORTH LINE OF SAID SECTION 35 N87°47'36"E 347.42 FEET. THENCE S02°36'48"E 346.48 FEET; THENCE S87°47'31"W, 118.16 FEET TO THE POINT OF BEGINNING; THENCE S02°00'59"E 30.34 FEET TO A NON-TANGENT POINT OF CURVE ALSO BEING THE BACK OF THE CURB LINE; THENCE FOLLOWING SAID BACK OF CURB LINE THE FOLLOWING SIX (6) COURSES; THENCE ALONG A CURVE TO THE LEFT 40.29 FEET, HAVING A RADIUS OF 79.74 FEET, DELTA OF 28°56'59", AND A CHORD BEARING OF S57°18'58"W 39.86 FEET. THENCE S42°50'28"W 13.79 FEET. THENCE S27°53'28"W 44.28 FEET. THENCE ALONG A CURVE TO THE RIGHT 26.24 FEET, HAVING A RADIUS OF 21.93 FEET, A DELTA OF 69°35'21", AND A CHORD BEARING OF S62°41'08"W 25.03 FEET, THENCE N82°31'11"W 47.86 FEET, THENCE ALONG A CURVE TO THE RIGHT 48.95 FEET, HAVING A RADIUS OF 65.74 FEET, DELTA OF 42°39'28", AND A CHORD BEARING OF N61°11'28"W 47.82 FEET TO A NON-TANGENT POINT ALSO BEING A POINT ON THE EAST LINE OF ROCHESTER ROAD (VARIABLE WIDTH); THENCE ALONG THE SAID EAST LINE OF ROCHESTER ROAD N02°00'59"W, 76.53 FEET; THENCE S87°47'31"W 15.00 FEET; THENCE N02°00'59"W 197.45 FEET; THENCE N87°47'31"E 192.00 FEET; THENCE S02°00'59"E 197.45 FEET TO THE POINT OF BEGINNING. CONTAINING 1.21 ACRES AND SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD, IF ANY.

Verify distance

Verify distance

Written legal description and survey description are different. Also, both descriptions do not match the point of commencement on record.

BENCHMARKS

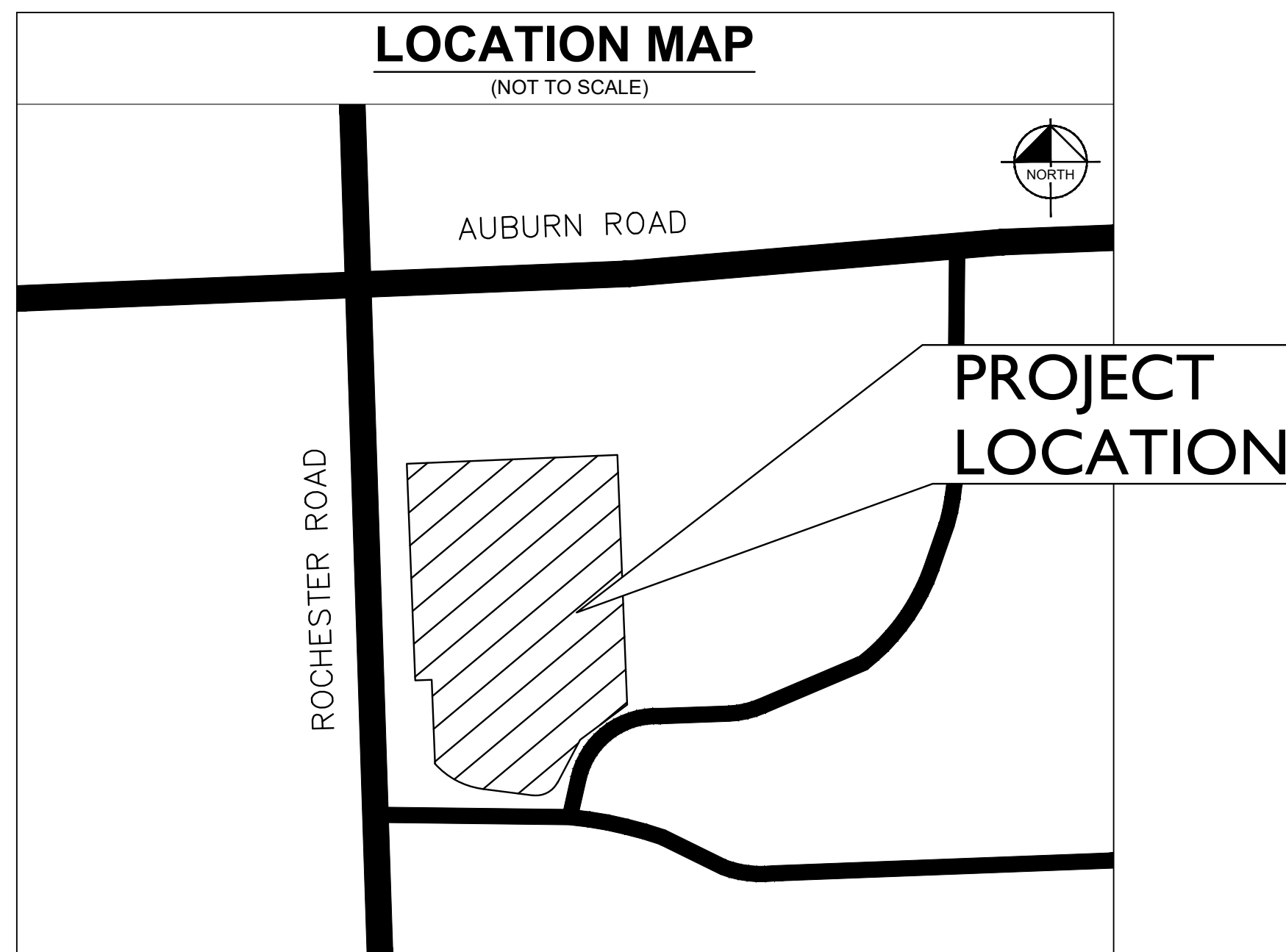
SITE BENCHMARKS:
(LOCATIONS SHOWN ON SURVEY)

SBM #1 RAILROAD SPIKE IN POWER POLE AT NORTHWEST CORNER OF PROPERTY.
ELEVATION= 756.67' (NAVD88)

SBM #2 RIM OF DRAINAGE MANHOLE SOUTHEAST CORNER OF PROPERTY
ELEVATION= 751.28' (NAVD88)

LOCATION MAP

(NOT TO SCALE)



PROJECT LOCATION

Sheet List Table	
Sheet Number	Sheet Title
C0.0	TITLE SHEET
C1.0	GENERAL NOTES
C2.0	EXISTING CONDITIONS & DEMO PLAN
C3.0	SITE PLAN
C4.0	EROSION CONTROL PLAN
C4.1	EROSION CONTROL DETAILS
C5.0	GRADING PLAN
C6.0	UTILITY PLAN
C7.0	CONSTRUCTION DETAILS
C7.1	ROCHESTER HILLS WATER DETAILS
C7.2	ROCHESTER HILLS WATER DETAILS
C7.3	ROCHESTER HILLS WATER DETAILS
C7.4	CONSTRUCTION DETAILS
C7.5	CONSTRUCTION DETAILS
L1.0	LANDSCAPE PLAN
L1.1	LANDSCAPE NOTES & DETAILS

IR1.0 IRRIGATION PLAN
IR1.1 IRRIGATION DETAILS

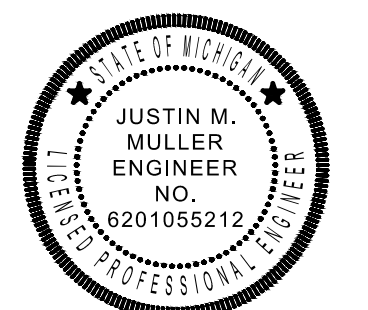
PROFESSIONAL ENGINEER'S CERTIFICATION

I, JUSTIN MULLER, A LICENSED PROFESSIONAL ENGINEER OF MICHIGAN, HEREBY CERTIFY THAT THIS SUBMISSION, PERTAINING ONLY TO THE "C" SERIES CIVIL SHEETS LISTED ABOVE BUT EXCLUDING DETAILS PREPARED BY OTHERS, WAS PREPARED ON BEHALF OF ARCHITECTURAL DESIGN COLLABORATIVE BY KIMLEY-HORN AND ASSOCIATES, INC. UNDER MY PERSONAL DIRECTION. THIS TECHNICAL SUBMISSION IS INTENDED TO BE USED AS AN INTEGRAL PART OF AND IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS.

DATED THIS 6TH DAY OF FEBRUARY, A.D., 2023.

Justin Muller

MICHIGAN LICENSED PROFESSIONAL ENGINEER 6201055212
MY LICENSE EXPIRES ON 3/7/23.
DESIGN FIRM REGISTRATION NUMBER: 184002012-0006



The applicant needs to submit a Land Improvement Permit (LIP) application with engineer's estimate, fee and construction plans to proceed with the construction plan review process.

CITY FILE #22-039 SECTION #35

DESIGNED BY: EC	DESIGNED BY: EC	DESIGNED BY: EC	DESIGNED BY: EC
DRAWN BY: EC	DRAWN BY: EC	DRAWN BY: EC	DRAWN BY: EC
CHECKED BY: JWG	CHECKED BY: JWG	CHECKED BY: JWG	CHECKED BY: JWG
CITY FILE #22-039 SECTION #35	CITY FILE #22-039 SECTION #35	CITY FILE #22-039 SECTION #35	CITY FILE #22-039 SECTION #35
TITLE SHEET	TITLE SHEET	TITLE SHEET	TITLE SHEET
BANK OF AMERICA	BANK OF AMERICA	BANK OF AMERICA	BANK OF AMERICA
3035 S ROCHESTER RD ROCHESTER HILLS, MI 48307	3035 S ROCHESTER RD ROCHESTER HILLS, MI 48307	3035 S ROCHESTER RD ROCHESTER HILLS, MI 48307	3035 S ROCHESTER RD ROCHESTER HILLS, MI 48307
ORIGINAL ISSUE: 11/18/2022	ORIGINAL ISSUE: 11/18/2022	ORIGINAL ISSUE: 11/18/2022	ORIGINAL ISSUE: 11/18/2022
KHA PROJECT NO. 268266000	KHA PROJECT NO. 268266000	KHA PROJECT NO. 268266000	KHA PROJECT NO. 268266000
SHEET NUMBER	SHEET NUMBER	SHEET NUMBER	SHEET NUMBER
C0.0	C0.0	C0.0	C0.0

Drawing name: K:\CHS_LIVE\268266000_AOC_Rochester_Hills_MV2 Design\AOC\PlanSheets\C0.0 - TITLE SHEET.dwg 03.0 Feb 06, 2023 6:30pm by John Gross
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GENERAL NOTES

- 1. EXISTING SITE TOPOGRAPHY, UTILITIES, RIGHT-OF-WAY AND HORIZONTAL CONTROL SHOWN ON THE DRAWINGS WERE OBTAINED FROM A SURVEY PREPARED BY:
MERIDIAN LAND SURVEYING
801 S GRAND TRUNKS STREET
FLINT, MI 48902
TEL: (810) 359-8600
CONTACT: GREG MARDLE, P.L.S.

- MADE BY THE SEWER AND WATER CONTRACTOR, AND THE COST IS TO BE CONSIDERED INCIDENTAL.
ADJUSTMENTS TO FINISH ELEVATIONS OF THE CONTRACTOR WILL NOT ALLEVATE THE CONTRACTOR FROM ANY ADDITIONAL ADJUSTMENTS AS REQUIRED BY THE CITY OF ROCHESTER HILLS UPON FINAL INSPECTION OF THE PROJECT.
30. HYDRANTS SHALL NOT BE FLUSHED DIRECTLY ONTO THE ROAD SURGRADES. WHENEVER POSSIBLE, HOSES SHALL BE USED TO DIRECT THE WATER INTO LOT AREAS OR THE STORM SEWER SYSTEM, IF AVAILABLE.

PAVING NOTES

- 1. GENERAL
1.1. PAVING WORK INCLUDES FINAL SURGRADE PREPARATION, AND COMPACTON; PLACEMENT OF SUBGRADE OR BASE COURSE MATERIALS; BITUMINOUS BINDER AND/OR SURFACE COURSES; FORMING, FINISHING AND CURING CONCRETE PAVEMENT, CURBS, AND WALKS; AND FINAL CLEAN-UP AND ALL RELATED WORK.
1.2. COMPACTON REQUIREMENTS [REFERENCE ASTM D-1557 (MODIFIED PROCTOR)] SUBGRADE = 93% SUBGRADE = 93% AGGREGATE BASE COURSE = 95% BITUMINOUS COURSE = 95% OF MAXIMUM DENSITY, PER MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) HIGHWAY STANDARDS.

- 6. CONNECTIONS TO EXISTING SANITARY SEWER SYSTEM SHALL NOT BE DONE UNTIL AUTHORIZED BY THE CITY OF ROCHESTER HILLS.
7. WATERMANS SHALL BE SEPARATED FROM SANITARY SEWERS AND STORM SEWERS IN ACCORDANCE WITH FINISHING AND CURING CONCRETE PAVEMENT, CURBS, AND WALKS; AND FINAL CLEAN-UP AND ALL RELATED WORK.
8. NO WATER LINE SHALL BE PLACED IN THE SAME TRENCH AS A SEWER LINE, EXCEPT UNDER SPECIAL CIRCUMSTANCES AND THEN ONLY UNDER THE FOLLOWING RULES:
A. IF NECESSARY PERMISSION SHALL BE OBTAINED FROM THE CITY OF ROCHESTER HILLS IN WRITING PRIOR TO BEGINNING CONSTRUCTION.

- 16.1.2. WATERMANS MAY BE LAID CLOSER THAN TEN (10) FEET TO A SEWER LINE WHEN:
16.1.2.1. LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF TEN (10) FEET;
16.1.2.2. THE WATERMAIN INVERT IS AT LEAST EIGHTEEN (18) INCHES ABOVE THE CROWN OF THE SEWER;
16.1.2.3. THE WATERMAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER.

Table with columns: REVISIONS, DATE, COMMENTS. Includes entries for 'REVISED PER CITY COMMENTS', 'ISSUED FOR PERMIT', '100% CONSTRUCTION DOCUMENTS', and 'DATE'.

EARTHWORK NOTES

- 1. GENERAL
1.1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE.
1.2. ANY QUANTITIES IN THE BID PROPOSAL ARE INTENDED AS A GUIDE FOR THE CONTRACTOR'S USE IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL THERMAL QUANTITIES AND BE KNOWLEDGEABLE OF ALL SITE CONDITIONS.
1.3. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARE FINISHED GRADE AND THAT PAVEMENT THICKNESS, TOPSOIL AND FILL ARE ACCOUNTED FOR.

STORM SEWER NOTES

- 1. GENERAL
1.1. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION AND PREVENT STORMWATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS. THE FAILURE TO PROVIDE PROPER DRAINAGE WILL NEGATE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS USED AS A RESULT THEREOF. FINAL LOCAL AND LAYOUT OF ALL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION, AND TRAFFIC.
1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC., TO PROTECT ADJACENT PROPERTY, WETLANDS, ETC., SHALL OCCUR BEFORE GRADING BEGINS.

SANITARY SEWER NOTES

- 1. SANITARY SEWER PIPE: ALL SANITARY SEWER PIPE MATERIAL, SIZE AND TYPE SHALL BE INSTALLED AS INDICATED ON THE UTILITY PLAN, UNLESS OTHERWISE NOTED ON THE PLANS. ALL SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE (PVC SDR-35), CONFORMING TO ASTM D3034 AND D2241 WITH ELASTOMER GASKET JOINTS CONFORMING TO ASTM D3158 AND D3212. ANY CHANGES TO THE PIPE MATERIAL, SIZE AND TYPE MUST BE APPROVED BY THE OWNER, ENGINEER AND CITY OF ROCHESTER HILLS PRIOR TO ORDERING MATERIALS OR INSTALLING THE PIPE. ALL SANITARY SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING:
PIPE SIZE CODE PIPE MATERIAL
4" - 12" PVC POLYVINYL CHLORIDE PLASTIC PIPE (ASTM C76); SEE IDOT SPECS FOR PIPE CLASS 4" - 48" DIP DUCTILE IRON PIPE, CLASS 52 (ANSI 21.51 AND AWWA C151)

ADA GENERAL NOTES

- 1. CURB RAMP ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS OF THE AUTHORITY HAVING JURISDICTION.
2. ALL ACCESSIBLE ROUTES, GENERAL SITE AND BUILDING ELEMENTS, RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA STANDARDS FOR ACCESSIBLE DESIGN, LATEST EDITION.
3. ANY COMPONENTS OF THE PROJECT SERVING MULTI-FAMILY DWELLINGS THAT HAVE (4) OR MORE UNITS PER DWELLING SHALL ALSO CONFORM TO THE FAIR HOUSING ACT (FHA), AND COMPLY WITH THE FAIR HOUSING ACT DESIGN MANUAL BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.

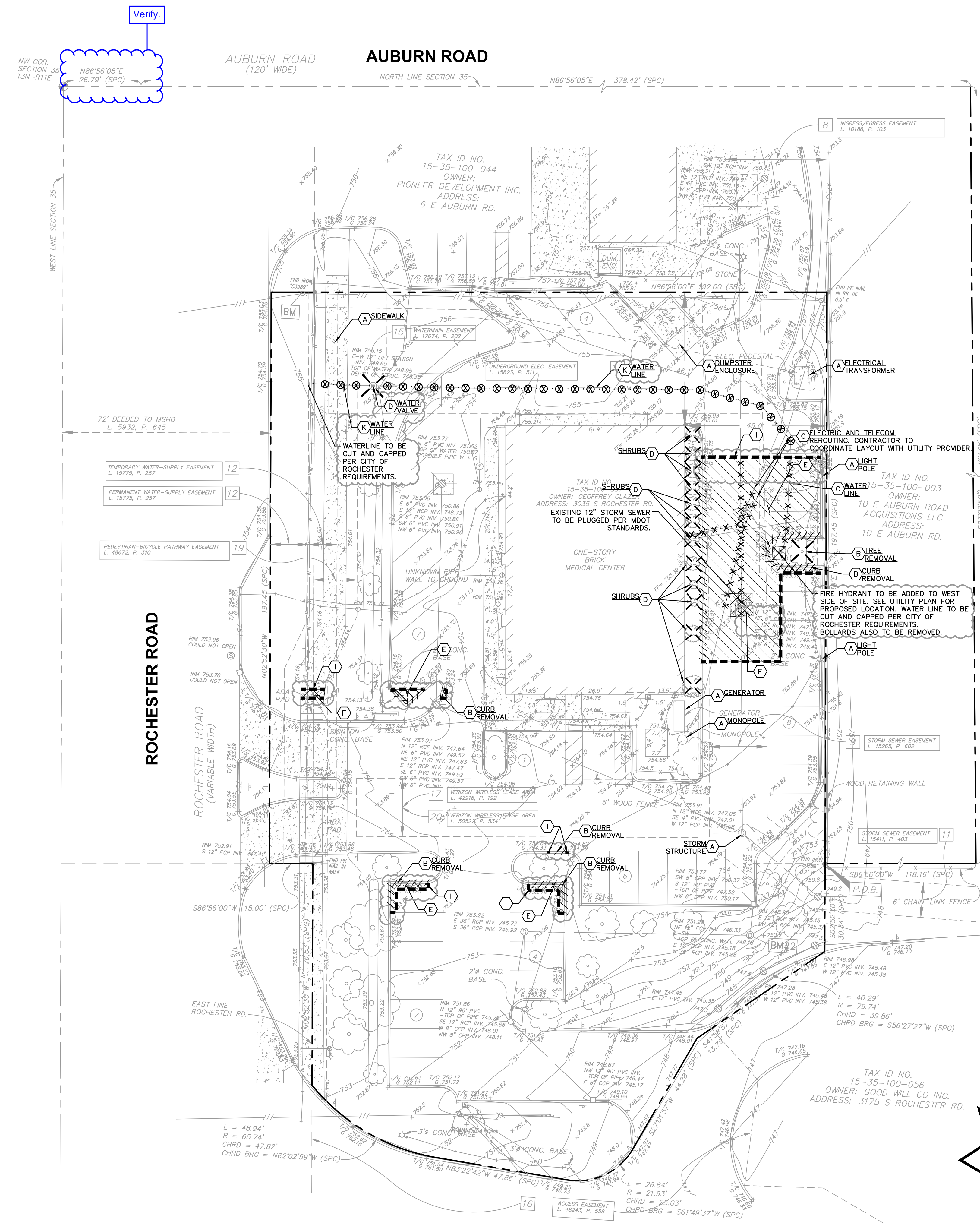
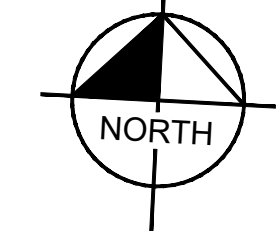
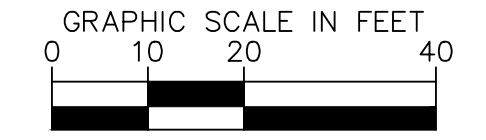
WARNING: CONTRACTOR TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

Warning box with starburst border containing the text: 'WARNING: CONTRACTOR TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.'

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Project information block including: SCALE: AS NOTED, DESIGNED BY: EC, DRAWN BY: EC, CHECKED BY: JWG, CITY FILE #22-039, SECTION #35, BANK OF AMERICA, GENERAL NOTES, 3035 S ROCHESTER RD, ROCHESTER HILLS, MI 48307, ORIGINAL ISSUE: 11/18/2022, KHA PROJECT NO. 26826000, SHEET NUMBER C10.

Drawing name: K:\GIS\DEV\268266000_ADC_Rochester_Hills_MV2 Design\CAD\PlanSheets\C2.0 - EXISTING CONDITIONS & DEMO PLAN.dwg C2.0 Feb. 06, 2023 6:31pm By: John.Oreas
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Surveyed description does not match legal description on cover and both description differ from recorded description on file.

WARNING: CONTRACTOR TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

DEMOLITION NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED.
- CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR SHALL NOT DEMOLISH ANYTHING OUTSIDE THE OWNERS LEASE/PROPERTY LINE UNLESS SPECIFICALLY MENTIONED ON THIS SHEET.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- IF DEMOLITION OR CONSTRUCTION ON SITE WILL INTERFERE WITH THE ADJACENT PROPERTY OWNER'S TRAFFIC FLOW, THE CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER, TO MINIMIZE THE IMPACT ON TRAFFIC FLOW. TEMPORARY RE-ROUTING OF TRAFFIC IS TO BE ACCOMPLISHED BY USING MDOT APPROVED TRAFFIC BARRICADES, BARRELS, AND/OR CONES. TEMPORARY SIGNAGE AND FLAGMEN MAY BE ALSO NECESSARY.
- QUANTITIES DEPICTED ON THIS SHEET SHALL SERVE AS A GUIDE ONLY. CONTRACTOR TO VERIFY ALL DEMOLITION QUANTITIES.
- REFER TO GEOTECHNICAL REPORT PROVIDED BY OTHERS FOR ALL SUBSURFACE INFORMATION.
- CONTRACTOR SHALL BEGIN CONSTRUCTION OF ANY LIGHT POLE BASES FOR RELOCATED LIGHT FIXTURES AND RELOCATION OF ELECTRICAL SYSTEM AS SOON AS DEMOLITION BEGINS. CONTRACTOR SHALL BE AWARE THAT INTERRUPTION OF POWER TO ANY LIGHT POLES OR SIGNS SHALL NOT EXCEED 24 HOURS.
- EROSION CONTROL MUST BE ESTABLISHED PRIOR TO ANY WORK ON SITE INCLUDING DEMOLITION.
- THE EXTENT OF SITE DEMOLITION WORK IS AS SHOWN ON THE CONTRACT DOCUMENTS AND AS SPECIFIED HEREIN.
- CONTRACTOR MUST RECEIVE APPROVAL FROM CIVIL ENGINEER AND GEOTECHNICAL ENGINEER FOR THE MATERIAL TYPE AND USE IF CONTRACTOR DESIRES TO REUSE DEMOLISHED SITE PAVEMENT AS STRUCTURAL FILL.
- EXISTING UTILITIES, WHICH DO NOT SERVICE STRUCTURES BEING DEMOLISHED, ARE TO BE KEPT IN SERVICE AND PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS. CONTRACTOR FOR SHUT-OFF OF UTILITIES SERVING STRUCTURES TO BE DEMOLISHED, CONTRACTOR IS RESPONSIBLE FOR TURNING OFF, DISCONNECTING, AND SEALING INDICATED UTILITIES BEFORE STARTING DEMOLITION OPERATIONS. EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS AND FILLED WITH #1 OR APPROVED EQUAL. ALL UNDERGROUND UTILITIES TO BE REMOVED ARE TO BE BACKFILLED WITH ENGINEERED FILL OR SELECT EXCAVATED MATERIAL, AS APPROVED BY THE GEOTECHNICAL ENGINEER, TO 95% OF MODIFIED PROCTOR DENSITY WITHIN PAVED AREAS AND TO 90% OF MODIFIED PROCTOR DENSITY FOR GREEN SPACE AREAS, IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS. ALL PRIVATE UTILITIES (ELECTRIC, CABLE, TELEPHONE, FIBER OPTIC, GAS) SHALL BE REMOVED AND RELOCATED PER THE UTILITY OWNER AND THE LOCAL MUNICIPALITY'S REQUIREMENTS.
- UNDERGROUND UTILITIES SHOWN ARE BASED ON ATLASSES AND AVAILABLE INFORMATION PRESENTED AT THE TIME OF SURVEY. CONTRACTOR SHOULD CALL "MISS DIG SYSTEM, INC." (1-800-482-7171) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UNDERGROUND AND OVERHEAD UTILITIES DURING CONSTRUCTION. UTILITY PROTECTION SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY OWNER AND AS DIRECTED BY THE GOVERNING MUNICIPALITY. DAMAGED CABLES/CONDUITS SHALL BE REPLACED IMMEDIATELY. ALL EXISTING STRUCTURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS. ALL DAMAGED STRUCTURES SHALL BE REPLACED IN-KIND AND THEIR REPLACEMENT COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. PROPER NOTIFICATION TO THE OWNERS OF THE EXISTING UTILITIES SHALL BE MADE AT LEAST 48 HOURS BEFORE CONSTRUCTION COMMENCES.
- USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN THE AIR TO THE LOWEST LEVEL. COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. SEE EROSION CONTROL SHEETS FOR FURTHER EROSION CONTROL REQUIREMENTS.
- COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF STRUCTURES TO THE FINAL LINES AND GRADES SHOWN ON THE CONTRACT DOCUMENTS. BACKFILL MATERIAL SHALL BE MDOT APPROVED CRUSHED LIMESTONE OR APPROVED EQUAL. USE SATISFACTORY SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. PRIOR TO PLACEMENT OF FILL MATERIALS, ENSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH AND DEBRIS. PLACE FILL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 9" IN LOOSE DEPTH. COMPACT EACH LAYER AT OPTIMUM MOISTURE CONTENT OF FILL MATERIAL TO 95% OF MODIFIED PROCTOR DENSITY UNLESS SUBSEQUENT EXCAVATION FOR NEW WORK IS REQUIRED.

DEMOLITION LEGEND

- (A) ITEM TO REMAIN, PROTECT DURING CONSTRUCTION
- (B) - - - - CURB REMOVAL
- (C) · X · X · UTILITY REMOVAL
- (D) X X X X ITEM TO BE REMOVED
- (E) [Hatched Box] FULL-DEPTH ASPHALT PAVEMENT REMOVAL
- (F) [Cross-hatched Box] CONCRETE REMOVAL
- (G) [Diagonal Lines] BUILDING REMOVAL
- (H) [Horizontal Lines] ASPHALT 1.5" MILL
- (I) [Dashed Line] SAWCUT LINE
- (J) [Dashed Line] FENCE REMOVAL
- (K) · ⊗ · UTILITY ABANDONMENT

NO.	REVISIONS	DATE	BY
1	ISSUED FOR PERMIT	12/19/22	JWG
2	100% CONSTRUCTION DOCUMENTS	12/16/22	JWG
3			
4			
5			

Kimley-Horn
 of Michigan, Inc.
 3911 5th Mile Road
 Lansing, MI 48906-7208
 WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
 DESIGNED BY: EC
 DRAWN BY: EC
 CHECKED BY: JWG

CITY FILE #22-039
 SECTION #35

EXISTING CONDITIONS & DEMO PLAN

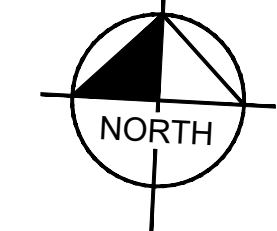
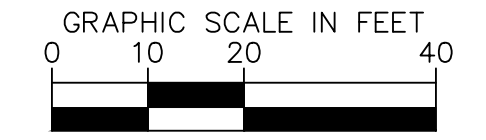
BANK OF AMERICA
 3035 S ROCHESTER RD
 ROCHESTER HILLS, MI 48307

ORIGINAL ISSUE: 11/18/2022
 KHA PROJECT NO. 268266000
 SHEET NUMBER

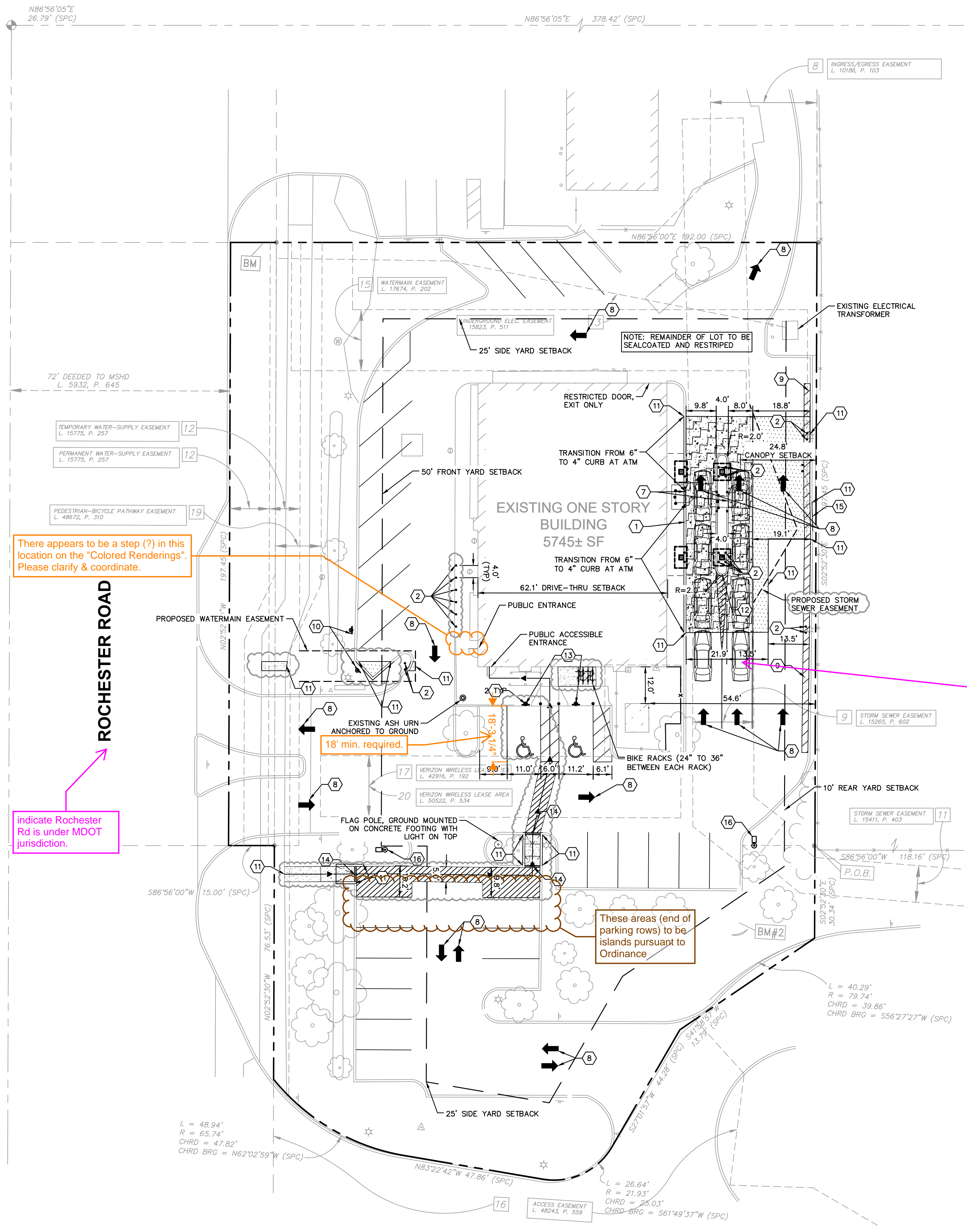
CITY FILE #22-039 SECTION #35

C2.0

Drawing name: K:\GIS\DEV\268266000_ADC_Rochester_Hills_MV2 Design\CAD\PlanSheets\C3.0 - SITE PLAN.dwg C3.0 Feb 06, 2023 6:32am by: John Gross
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AUBURN ROAD



There appears to be a step (?) in this location on the "Colored Renderings". Please clarify & coordinate.

Provide the MDOT for review and copy the City on MDOT's response.

Indicate Rochester Rd is under MDOT jurisdiction.

EXISTING ASH URN ANCHORED TO GROUND
18' min. required.

These areas (end of parking rows) to be islands pursuant to Ordinance

show stacking space size as 16 foot long per City Ordinance or per MDOT's permit requirements, if included with their permit conditions.

GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. RADI ADJACENT TO PARKING STALL AND NOT DIMENSIONED ON THIS PLAN SHALL BE 3'-FEET, TYPICAL.
5. REFER TO ARCHITECTURAL PLANS FOR MONUMENT SIGN DETAILS. SEE MEP PLANS FOR SITE ELECTRICAL DRAWINGS.
6. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.

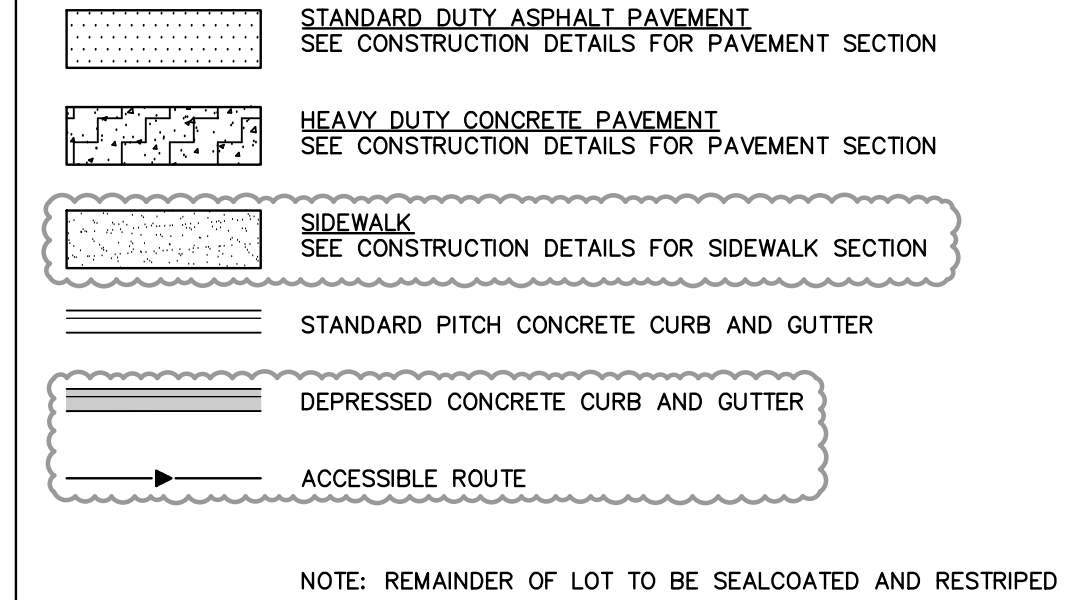
SITE DATA TABLE

PARCEL NUMBER: 15-35-100-051	
SITE ADDRESS: 3035 S. ROCHESTER DRIVE, ROCHESTER HILLS, MI 48307	
PARCEL AREA: 1.21 ACRES	
DISTURBANCE AREA:	
ZONING: B-2 GENERAL BUSINESS	
PROPOSED USE: BANK	
EXISTING BUILDING AREA: 5745 SF	
EXISTING PARKING:	42 SPACES
EXISTING ADA PARKING:	2 SPACES
EXISTING TOTAL PARKING:	44 SPACES
REQUIRED PARKING (1 STALL/ 350 SF):	17 SPACES
MAX PARKING (125% OF REQUIRED):	22 SPACES
PROPOSED PARKING:	27 SPACES
PROPOSED ADA PARKING:	2 SPACES
PROPOSED TOTAL PARKING:	29 SPACES

KEY NOTES

- 1 CONCRETE BARRIER CURB (SEE DETAILS)
- 2 BOLLARD, TYP. (SEE DETAILS).
- 3 THROUGH LANE ARROW (SEE DETAILS)
- 4 LOW EMISSION VEHICLE PARKING SIGN (SEE DETAILS FOR SIGN BASE)
- 5 FLAG POLE, GROUND MOUNTED ON CONCRETE FOOTING WITH LIGHT ON TOP (SEE ARCHITECTURAL PLANS FOR DETAILS)
- 6 BIKE RACKS - 34" TO 36" BETWEEN EACH RACK (SEE ARCHITECTURAL PLANS FOR DETAILS)
- 7 ATM (SEE ARCHITECTURAL PLANS FOR DETAILS)
- 8 DIRECTIONAL ARROWS (SEE DETAILS)
- 9 9 - 4" YELLOW STRIPING AT 45 DEGREES
- 10 LOW EMISSION VEHICLE SIGNAGE
- 11 CONNECT TO EXISTING PAVEMENT, SIDEWALK, CURB, TYP.
- 12 4" RAISED PLATFORM (SEE ARCHITECTURAL PLANS FOR DETAIL)
- 13 ADA SIGNAGE (SEE DETAILS)
- 14 DEPRESSED CURB (SEE DETAILS)
- 15 ASPHALT CURB (SEE DETAILS)
- 16 PROPOSED LIGHT POLE (SEE PHOTOMETRIC PLAN)

PAVING AND CURB LEGEND



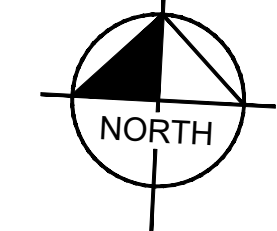
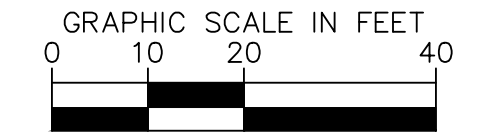
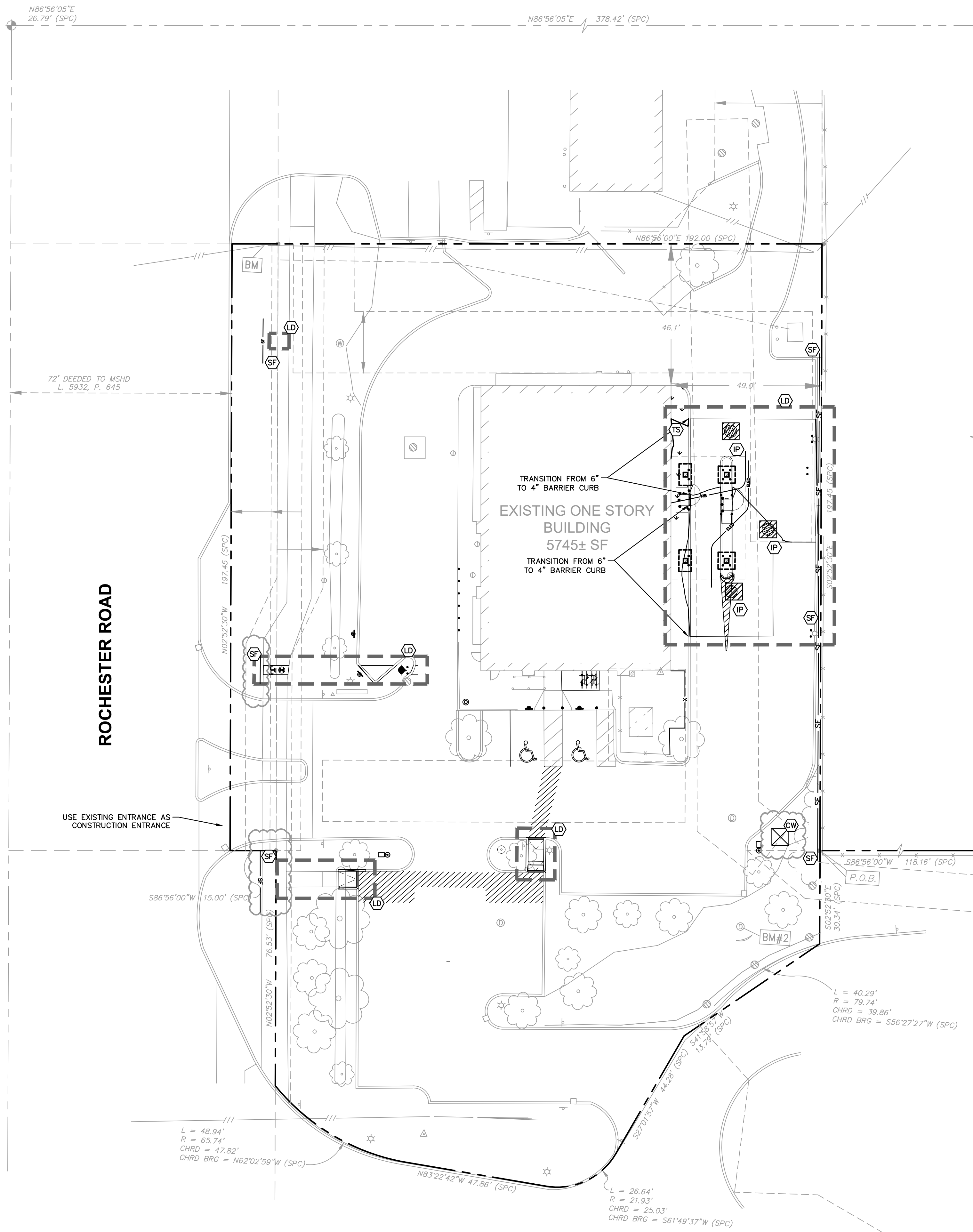
FEMA NOTE

PER FLOOD INSURANCE RATE MAP PANEL NO. 26125C0394F, THE SITE IS LOCATED IN ZONE X. OUTSIDE THE 500-YEAR FLOOD AND PROTECTED BY LEEVEE FROM 100-YEAR FLOOD.

			SITE PLAN	BANK OF AMERICA 3035 S ROCHESTER RD ROCHESTER HILLS, MI 48307
SCALE: AS NOTED DESIGNED BY: EC DRAWN BY: EC CHECKED BY: JWG	CITY FILE #22-039 SECTION #35	ORIGINAL ISSUE: 11/18/2022 KHA PROJECT NO. 268266000 SHEET NUMBER	REVISIONS NO. DATE BY 02/06/23 JWG 12/19/22 JWG 12/16/22 JWG	C3.0

Drawing name: K:\GIS\DEV\26826000_ADC_Rochester_Hills_MV2 Design\CAD\PlanSheets\C4.0 - EROSION CONTROL PLAN.dwg C4.0 Feb 06, 2023 6:35pm by: John Gross
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AUBURN ROAD



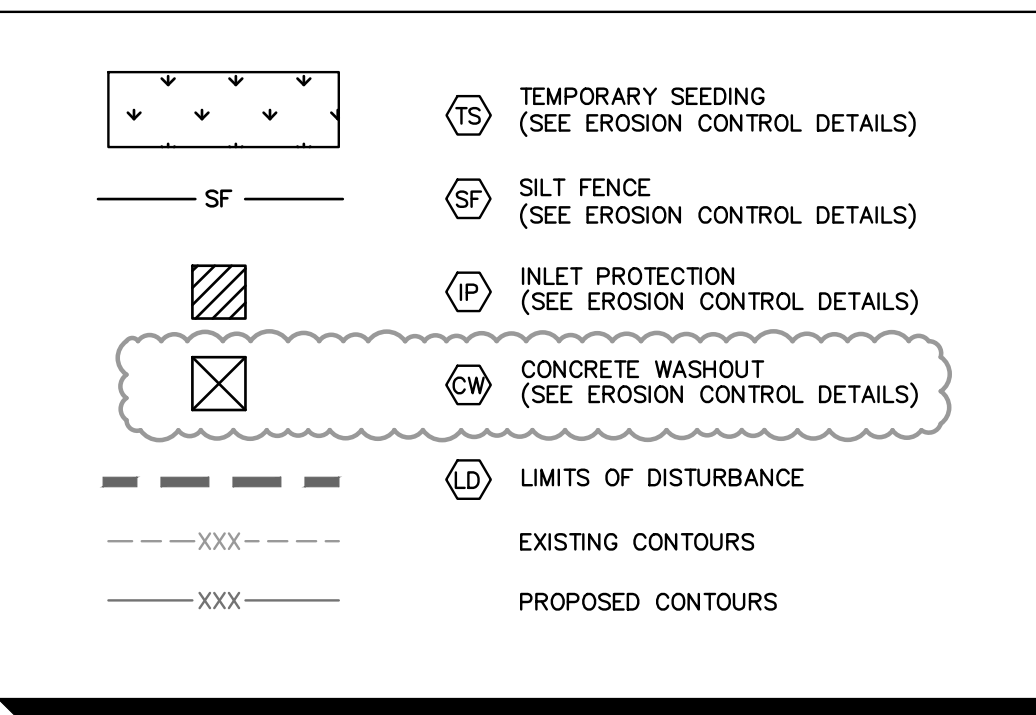
EROSION CONTROL NOTES

- CONSTRUCTION ENTRANCE SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, CONSTRUCTION ENTRANCE SHALL BE LOCATED TO COINCIDE WITH THE PHASING OF THE PAVEMENT STRUCTURE, OR LANDSCAPING.
- POST CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES INCLUDE STABILIZATION BY PERMANENT PAVING, DRAINAGE SYSTEM STRUCTURE, OR LANDSCAPING.
- TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.
- BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.
- THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
- ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST OR ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT AND THE DRAINAGE UTILITY DEPARTMENT. MINOR CHANGES OR ADDITIONAL CONTROL MEASURES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL PLACE EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S150BN OR APPROVED EQUAL) ON ALL SITE AREAS WITH SLOPES GREATER THAN 4:1, AND IN THE BOTTOM AND SIDE SLOPES OF ALL SWALES.
- PRIOR TO FINAL ACCEPTANCE, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
- PERMANENT, FINAL PLANT COVERING OR STRUCTURES SHALL BE INSTALLED PRIOR TO FINAL ACCEPTANCE.
- ALL CONTROL DEVICES THAT FUNCTION SIMILARLY TO SILT FENCE OR FIBER ROLLS MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WITH EFFECTIVE CONTROLS WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ONE-THIRD THE HEIGHT OF THE DEVICE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF THE RAINFALL EVENT OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
- ALL SEDIMENT DELTAS AND DEPOSITS MUST BE REMOVED FROM SURFACE WATERS, DRAINAGE WAYS, CATCH BASINS AND OTHER DRAINAGE SYSTEMS. ALL AREAS WHERE SEDIMENT REMOVAL RESULTED IN EXPOSED SOIL MUST BE RESTABILIZED. THE REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS AFTER THE RAINFALL EVENT UNLESS PRECLUDED BY LEGAL, REGULATORY OR PHYSICAL ACCESS CONSTRAINTS. ALL REASONABLE EFFORTS MUST BE USED TO OBTAIN ACCESS. ONCE ACCESS IS OBTAINED, REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS LATER. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL APPROPRIATE AUTHORITIES AND RECEIVING THE APPLICABLE PERMITS PRIOR TO CONDUCTING ANY WORK.
- ACCUMULATIONS OF TRACKED AND DEPOSITED SEDIMENT MUST BE REMOVED FROM OFF-SITE PAVED SURFACES WITHIN 24 HOURS OR SOONER IF REQUIRED. SEDIMENT TRACKING MUST BE MINIMIZED BY THE APPROPRIATE MANAGEMENT PRACTICE, LIKE A DEDICATED SITE EXIT WITH AN AGGREGATE SURFACE OR DESIGNATED OFFSITE PARKING AREA. CONTRACTOR IS RESPONSIBLE FOR STREET SWEEPING AND/OR SCRAPING IF YOUR PRACTICES ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED FROM THE SITE.
- SURFACE WATERS, DRAINAGE DITCHES AND CONVEYANCE SYSTEMS MUST BE INSPECTED FOR SEDIMENT DEPOSITS.
- PUMPING SEDIMENT LADEN WATER INTO ANY STORMWATER FACILITY THAT IS NOT DESIGNATED TO BE A SEDIMENT TRAP, DRAINAGEWAY, OR OFFSITE AREA EITHER DIRECTLY OR INDIRECTLY WITHOUT FILTRATION IS PROHIBITED.
- SOIL STOCKPILES SHALL NOT BE LOCATED IN A DRAINAGEWAY, FLOOD PLAIN AREA OR A DESIGNATED BUFFER, UNLESS OTHERWISE APPROVED, UNDER SPECIFIC CONDITIONS TO BE ESTABLISHED BY THE DIRECTOR OR ADMINISTRATOR.
- STOCKPILES TO REMAIN IN PLACE FOR MORE THAN THREE DAYS SHALL BE PROVIDED WITH SESC MEASURES. MATERIAL IS TO BE HAULED OFF IMMEDIATELY AND LEGALLY IF NO STOCKPILE IS TO REMAIN IN PLACE.
- ALL TEMPORARY SESC MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED. TRAPPED SEDIMENT AND OTHER DISTURBED SOILS RESULTING FROM TEMPORARY MEASURES SHALL BE PROPERLY DISPOSED OF PRIOR TO PERMANENT STABILIZATION.
- WATER REMOVED FROM TRAPS, BASINS, AND OTHER WATER HOLDING DEPRESSIONS OR EXCAVATIONS MUST FIRST PASS THROUGH A SEDIMENT CONTROL AND/OR FILTRATION DEVICE. WHEN DEWATERING DEVICES ARE USED, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION.
- SITE STABILIZATION REQUIREMENTS ARE AS FOLLOWS:
 - WHERE THE INITIATION OF STABILIZATION MEASURE BY THE 7TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES ON A PORTION OF THE SITE IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURE SHALL BE INITIATED AS SOON AS PRACTICABLE.
 - WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 14 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 14 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE 7TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.

EROSION CONTROL SCHEDULE AND SEQUENCING:

- SITE PREP**
CONSTRUCTION ENTRANCE/EXIT, SILT FENCE PROTECTION, AND TREE PROTECTION SHALL BE INSTALLED PRIOR TO THE INITIATION OF SITE PREP PHASE, AS NEEDED. TEMPORARY EROSION CONTROL MEASURES TO BE INSTALLED UPON COMPLETION OF ROUGH GRADING AND AS NECESSARY THROUGHOUT CONSTRUCTION.
- UTILITY INSTALLATION**
ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING UTILITY INSTALLATION. STORM STRUCTURE INLET PROTECTION SHALL BE INSTALLED AS STORM DRAINAGE SYSTEM IS CONSTRUCTED.
- PAVING**
ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING PAVING AND THROUGHOUT THE REMAINDER OF THE PROJECT.
- FINAL GRADING/SOIL STABILIZATION/LANDSCAPING**
ALL TEMPORARY EROSION CONTROL MEASURES TO BE REMOVED AT THE CONCLUSION OF THE PROJECT AS DIRECTED BY THE LOCAL MUNICIPALITY.

EROSION CONTROL LEGEND



REVISIONS	DATE	BY
100% CONSTRUCTION DOCUMENTS	12/16/22	JWG
ISSUED FOR PERMIT	12/19/22	JWG
REVISED PER CITY COMMENTS	02/06/23	JWG

Kimley-Horn
 of Michigan, Inc.
 3911 5th Mile Road
 Lansing, MI 48906-7208
 WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
 DESIGNED BY: EC
 DRAWN BY: EC
 CHECKED BY: JWG

CITY FILE #22-039
 SECTION #35

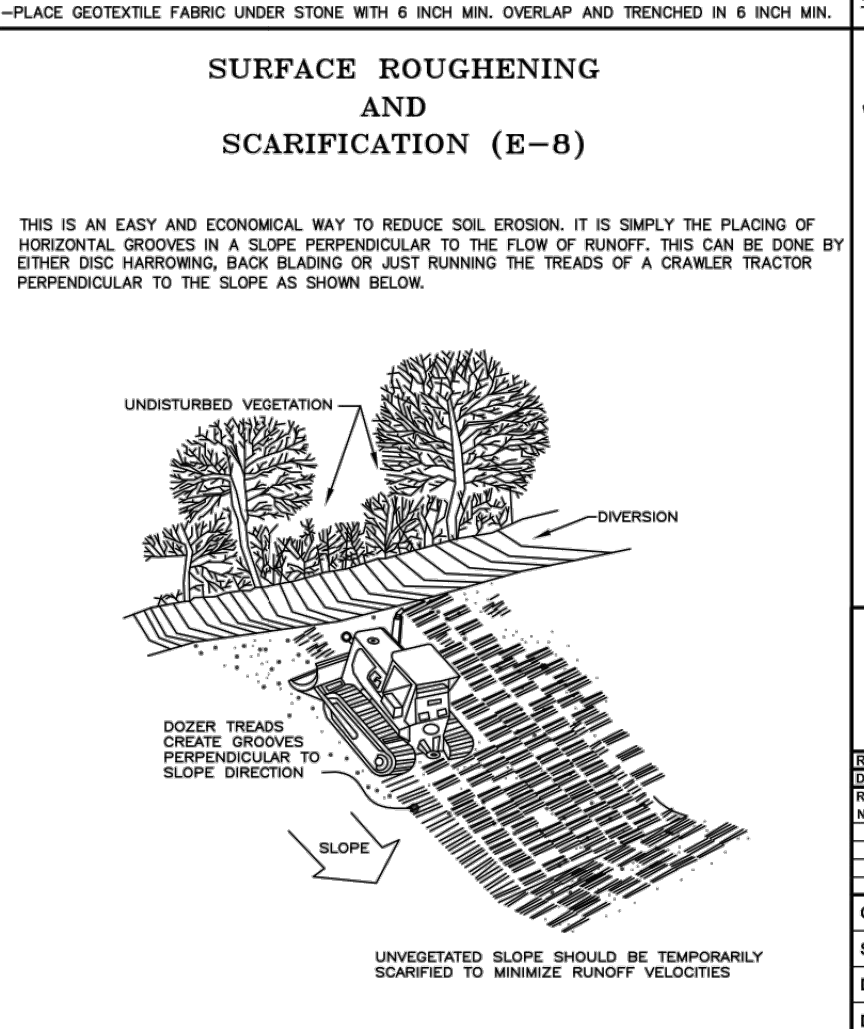
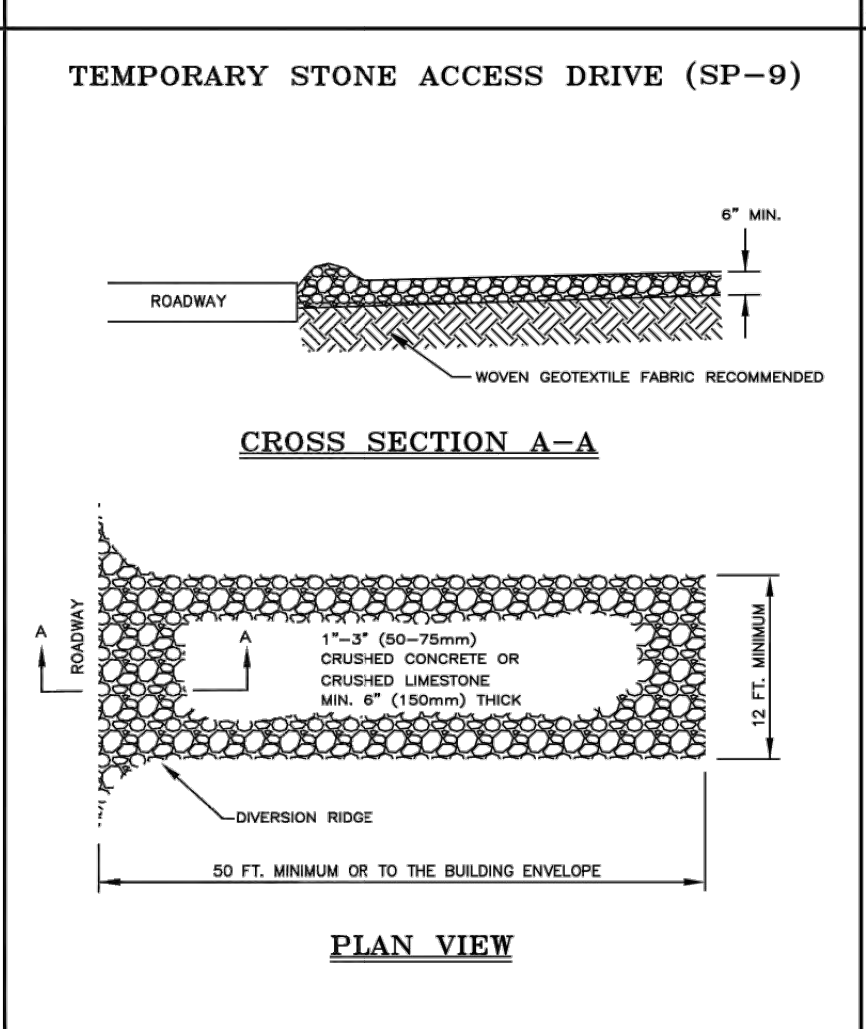
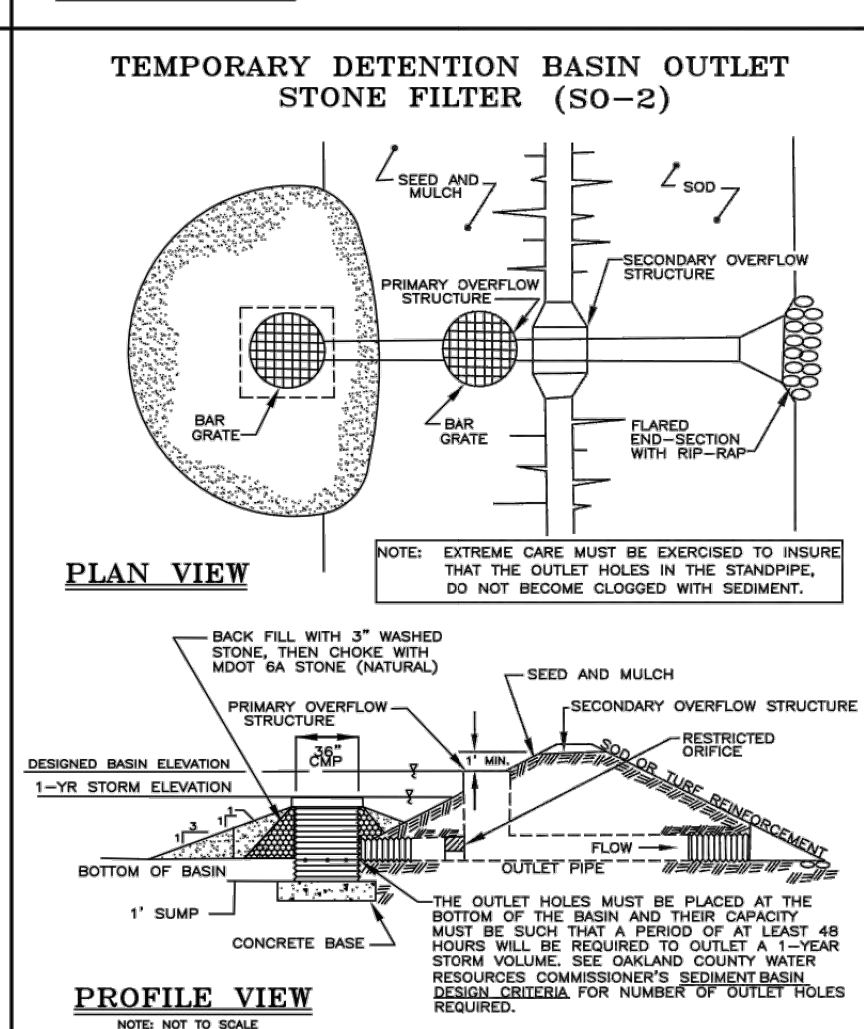
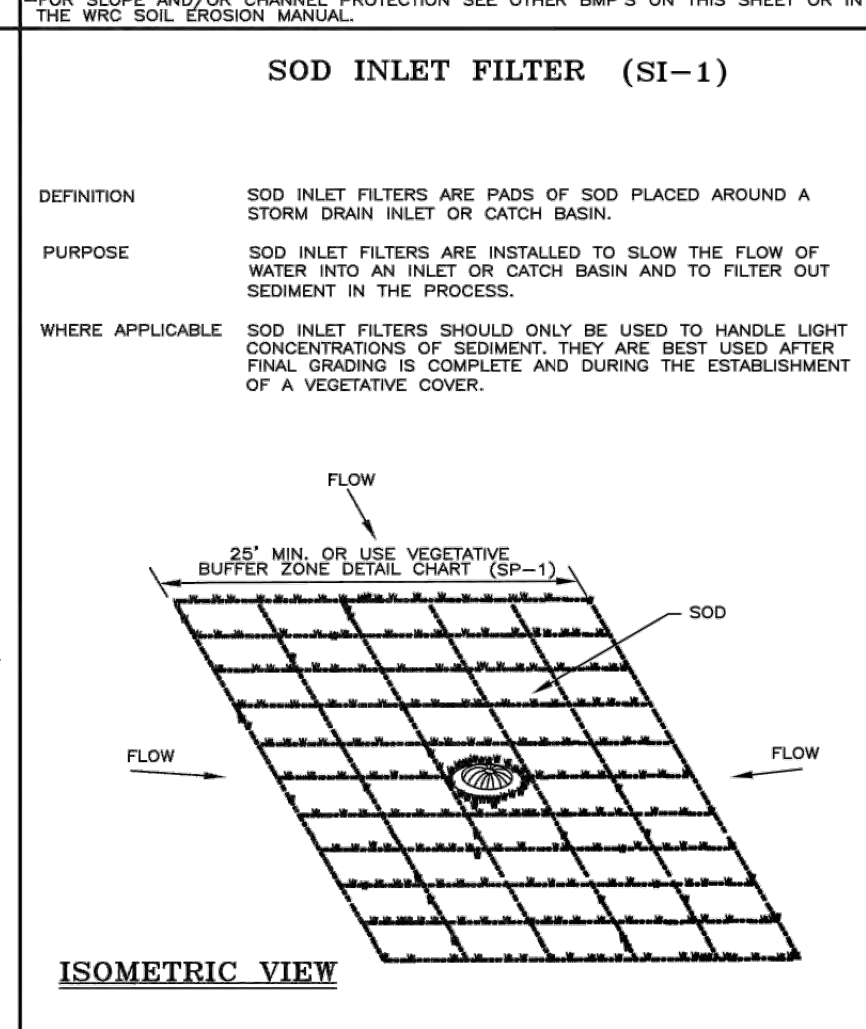
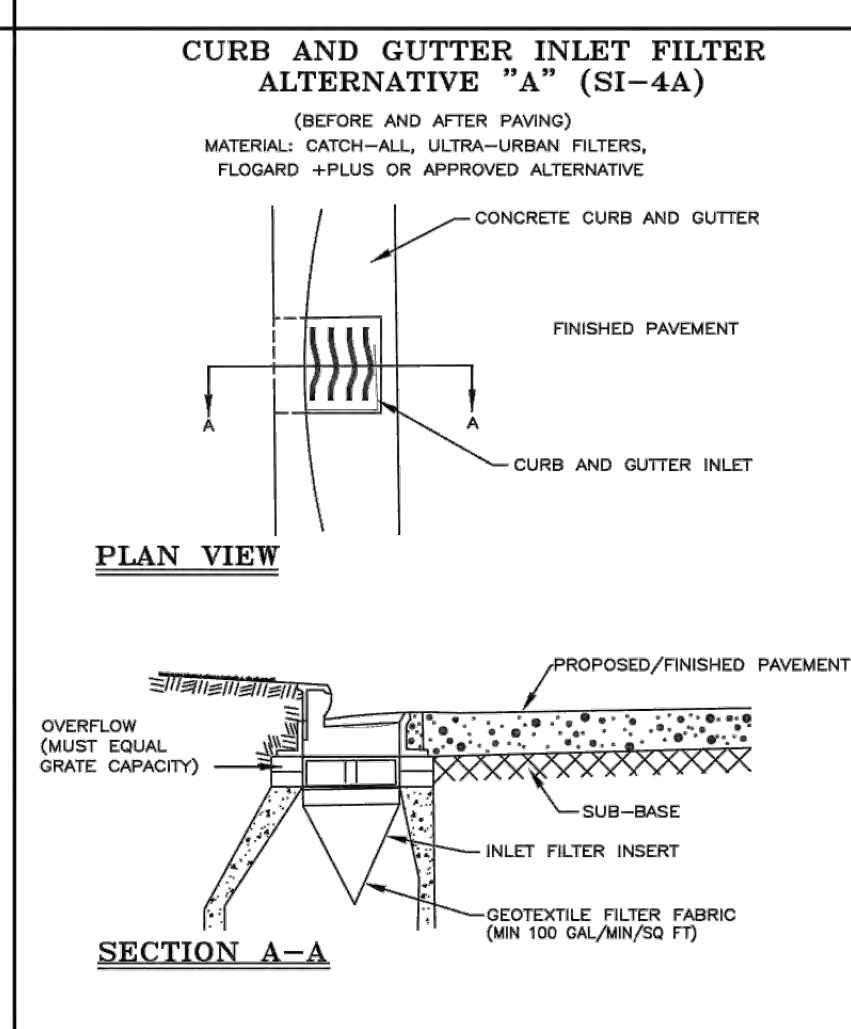
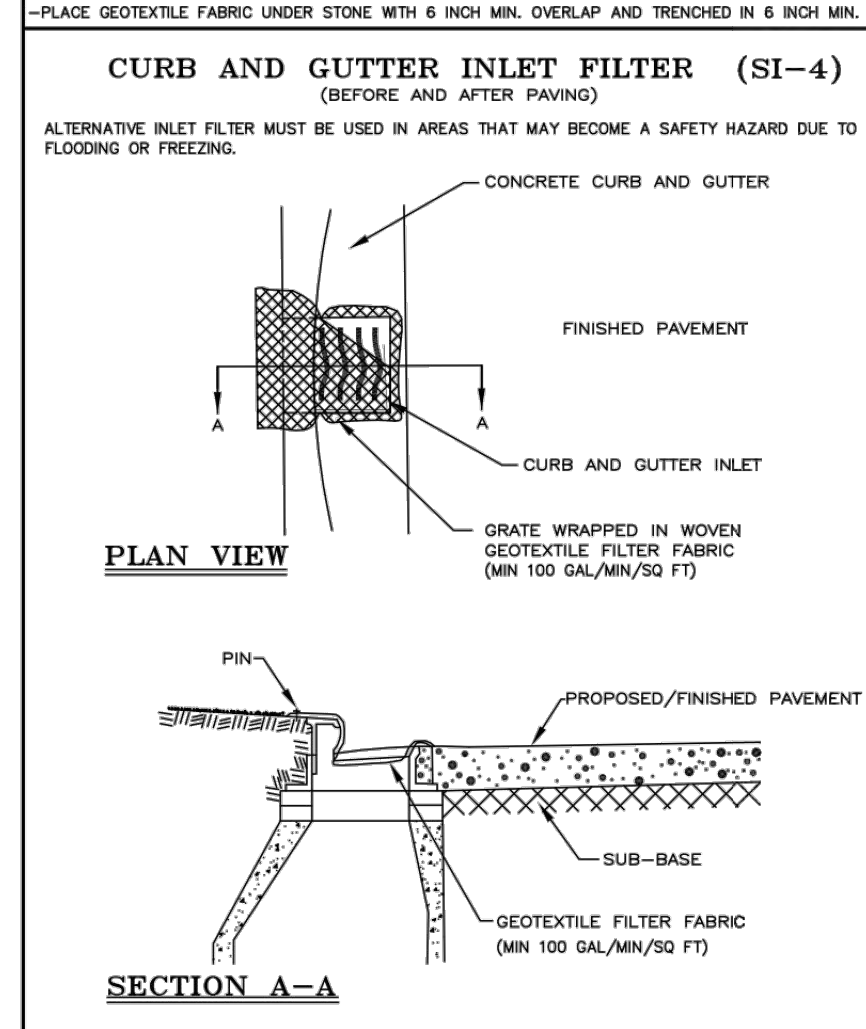
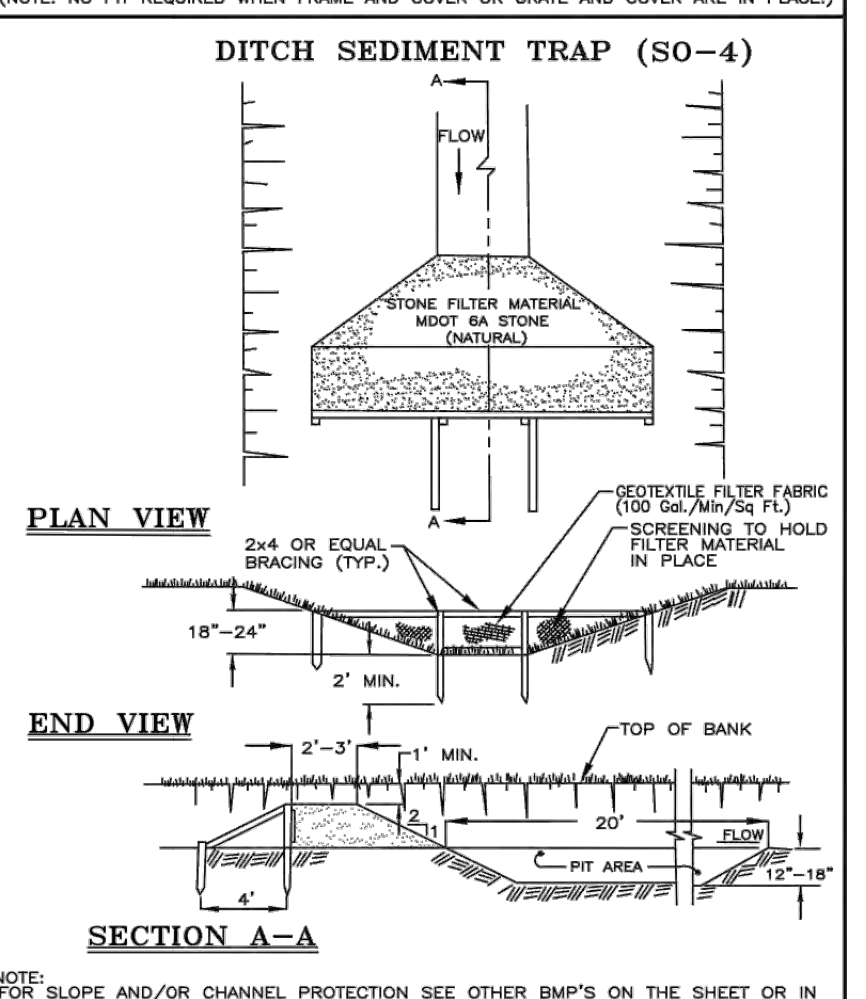
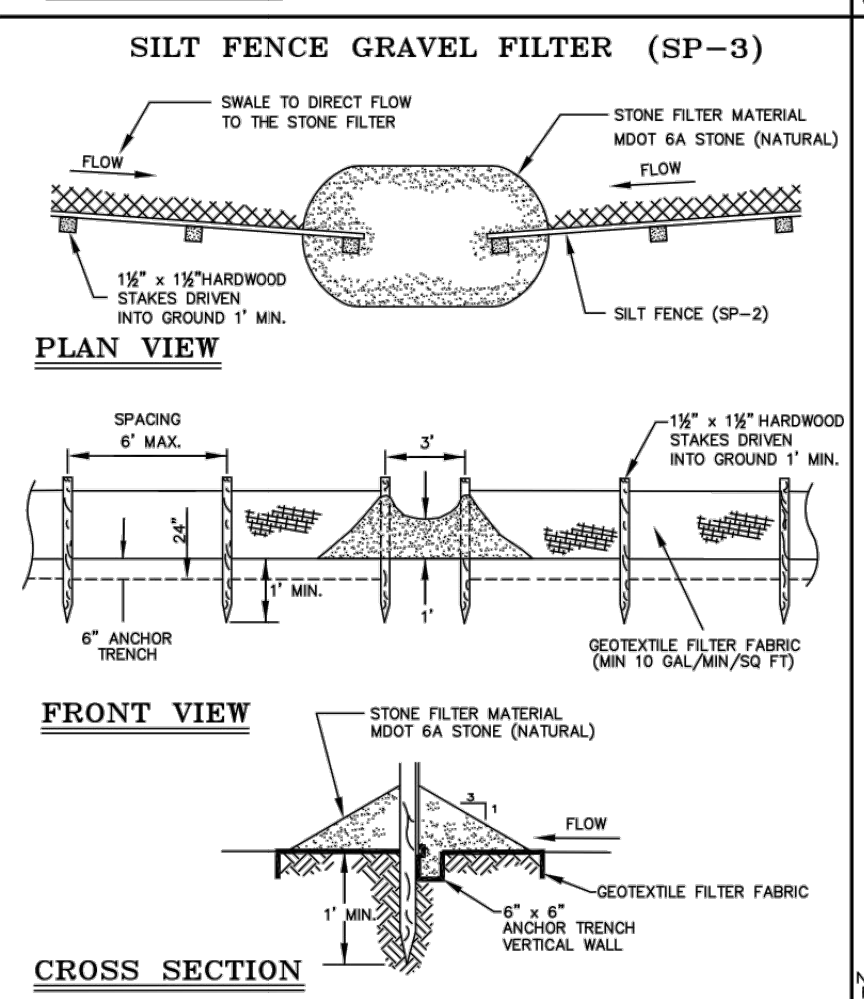
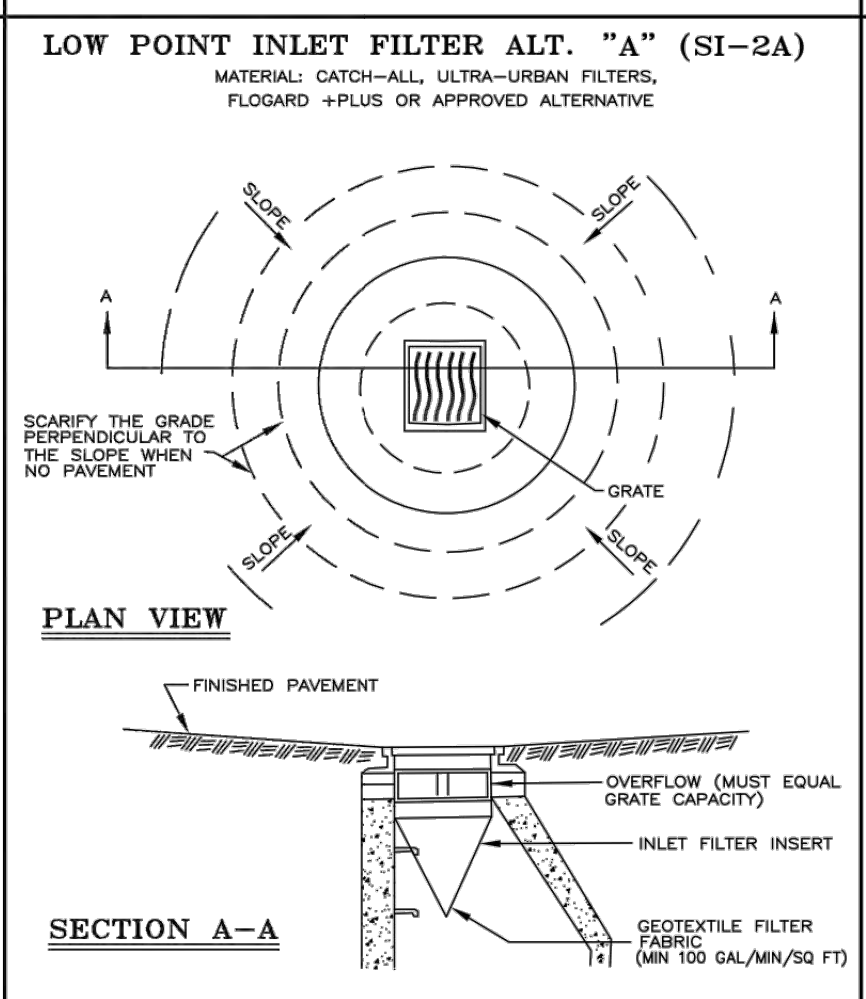
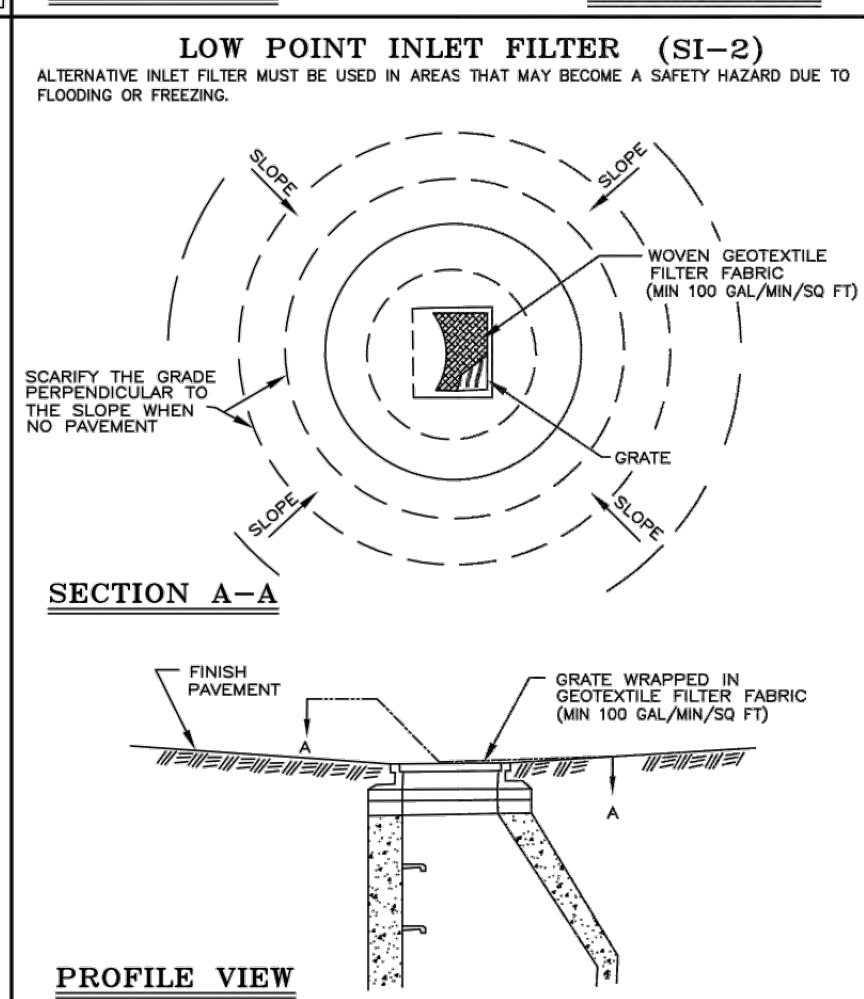
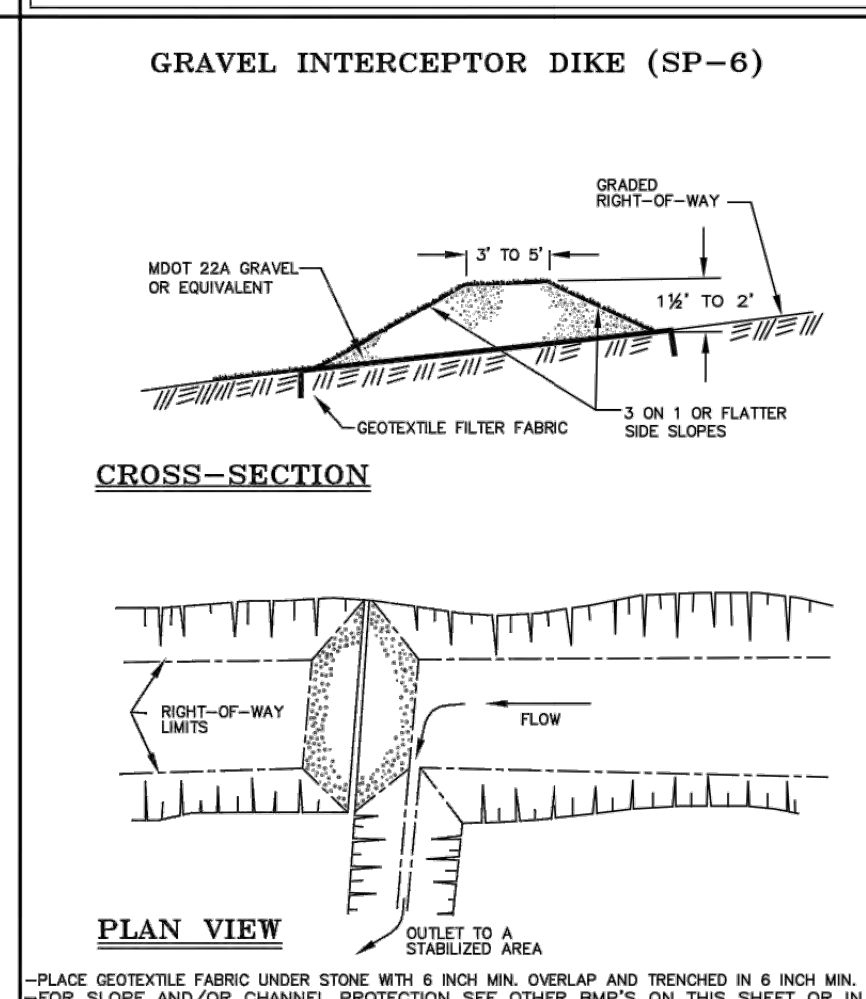
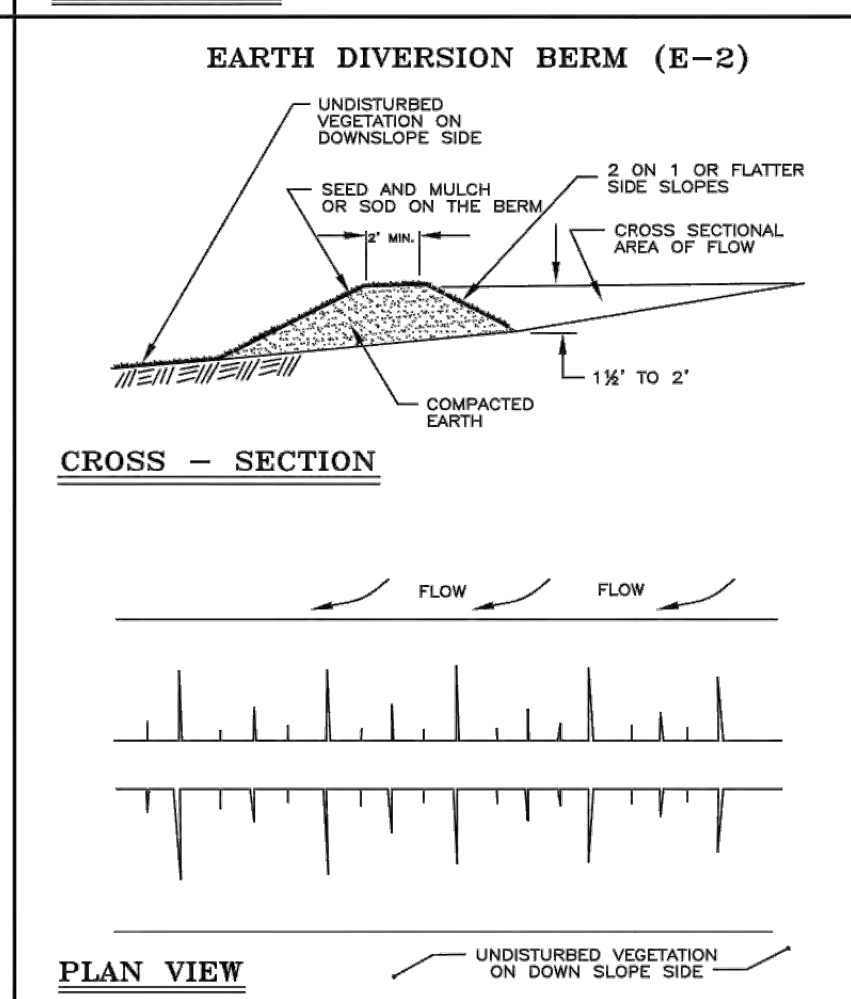
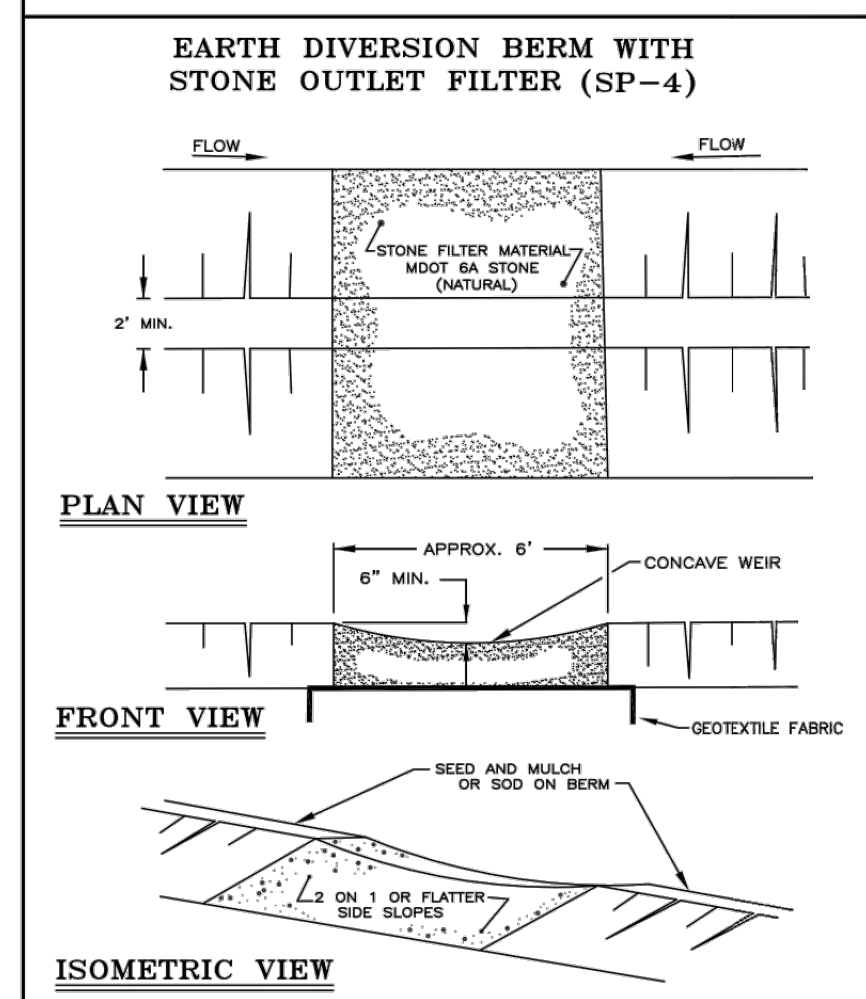
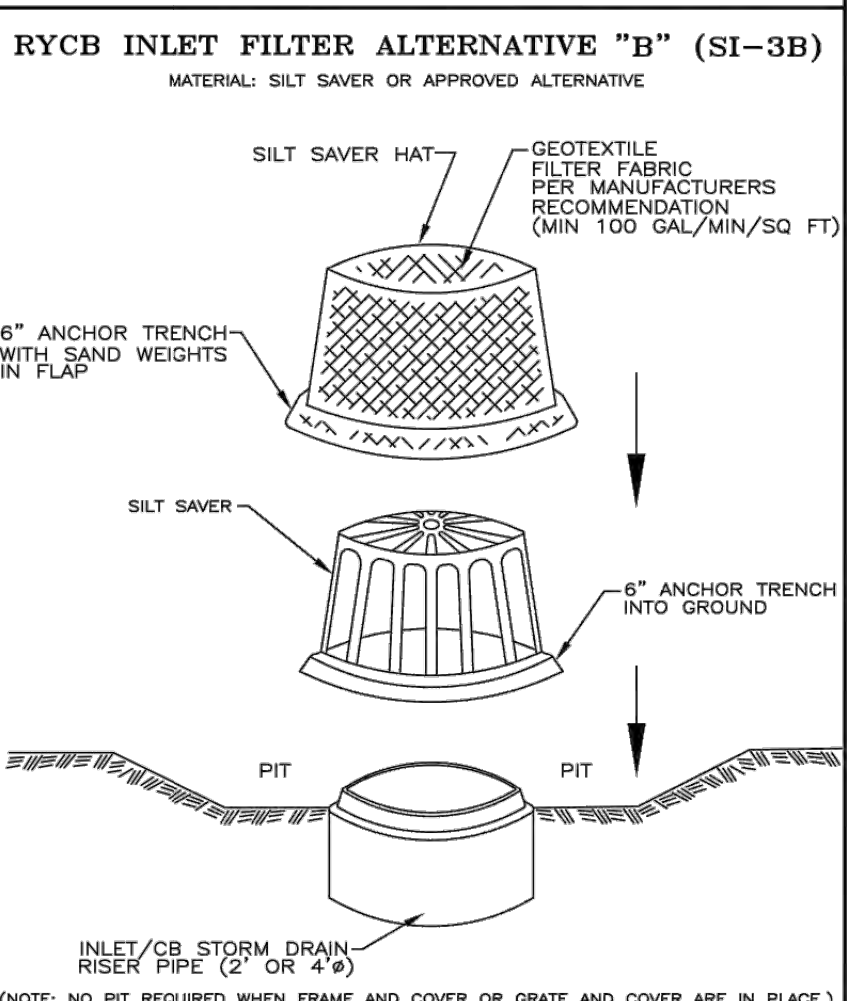
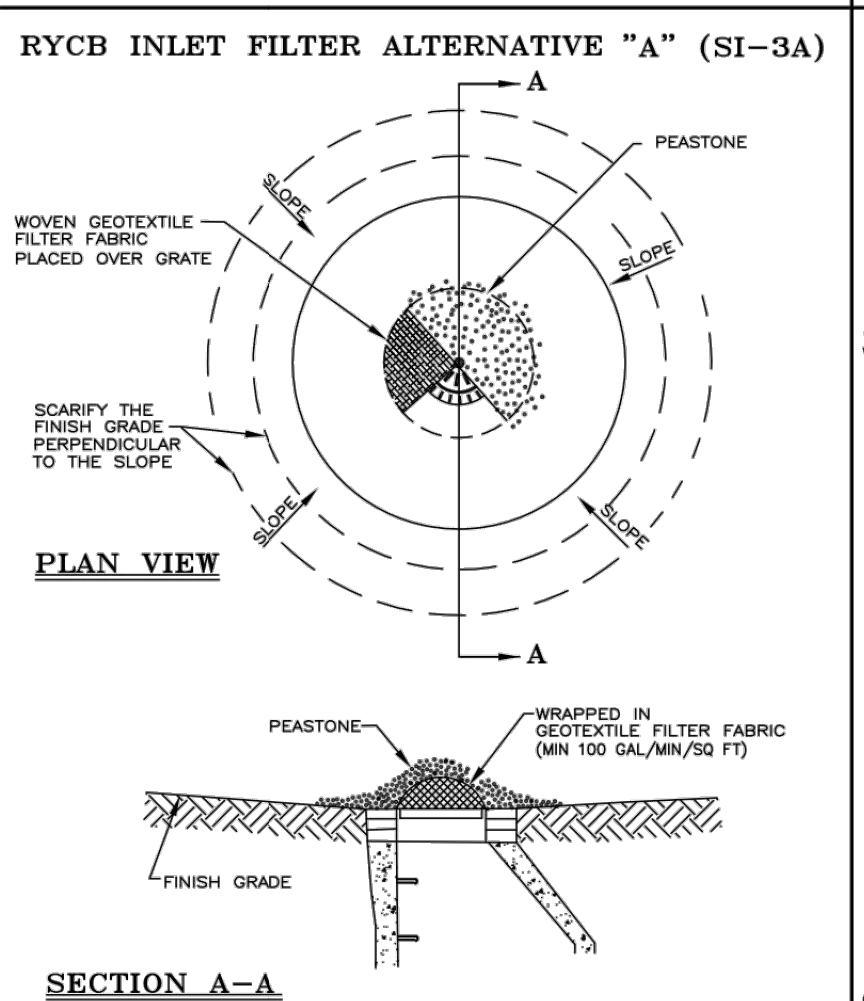
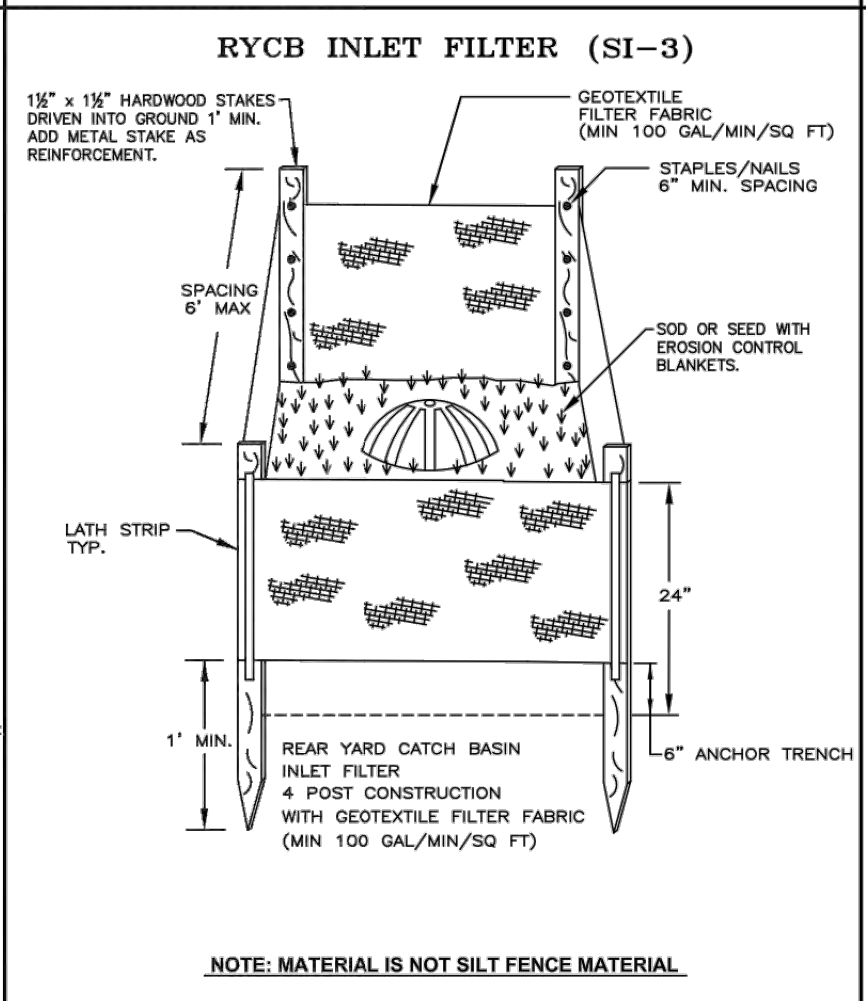
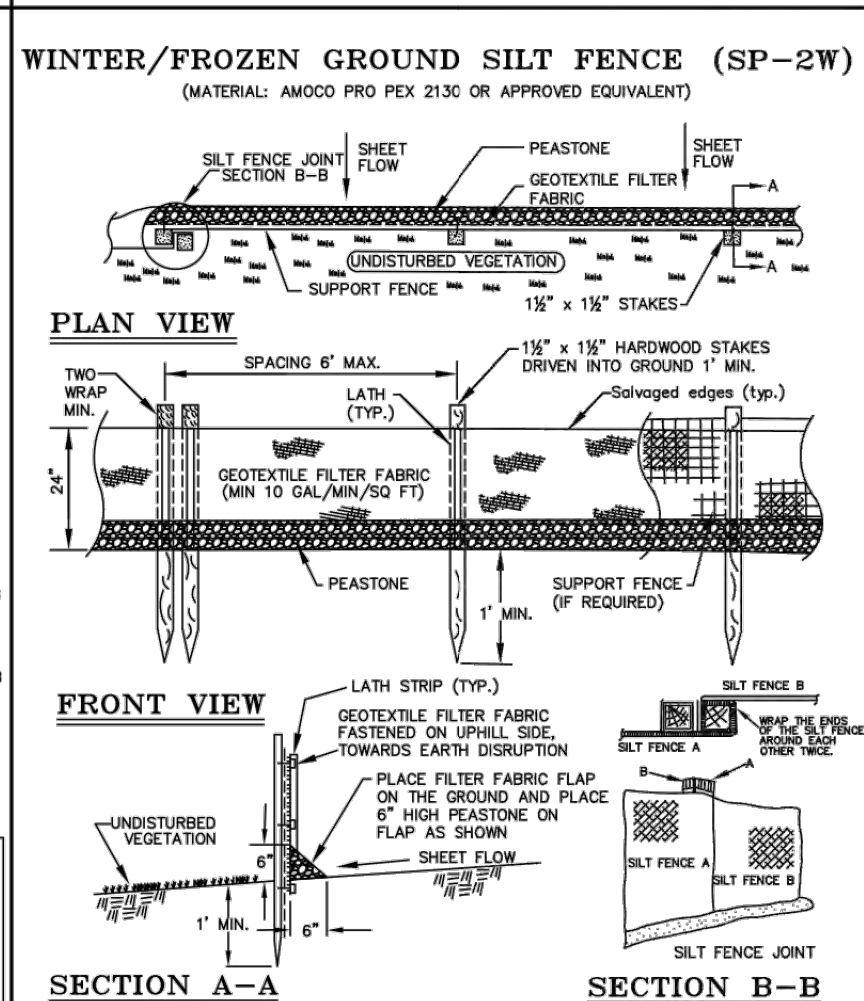
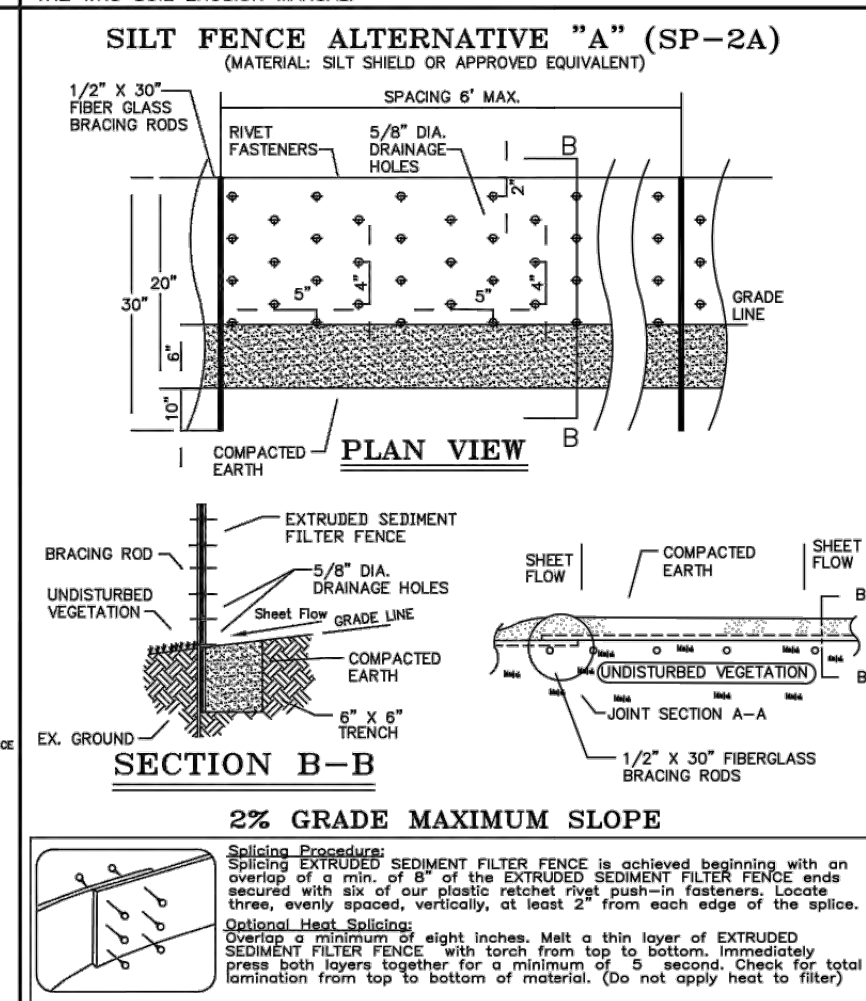
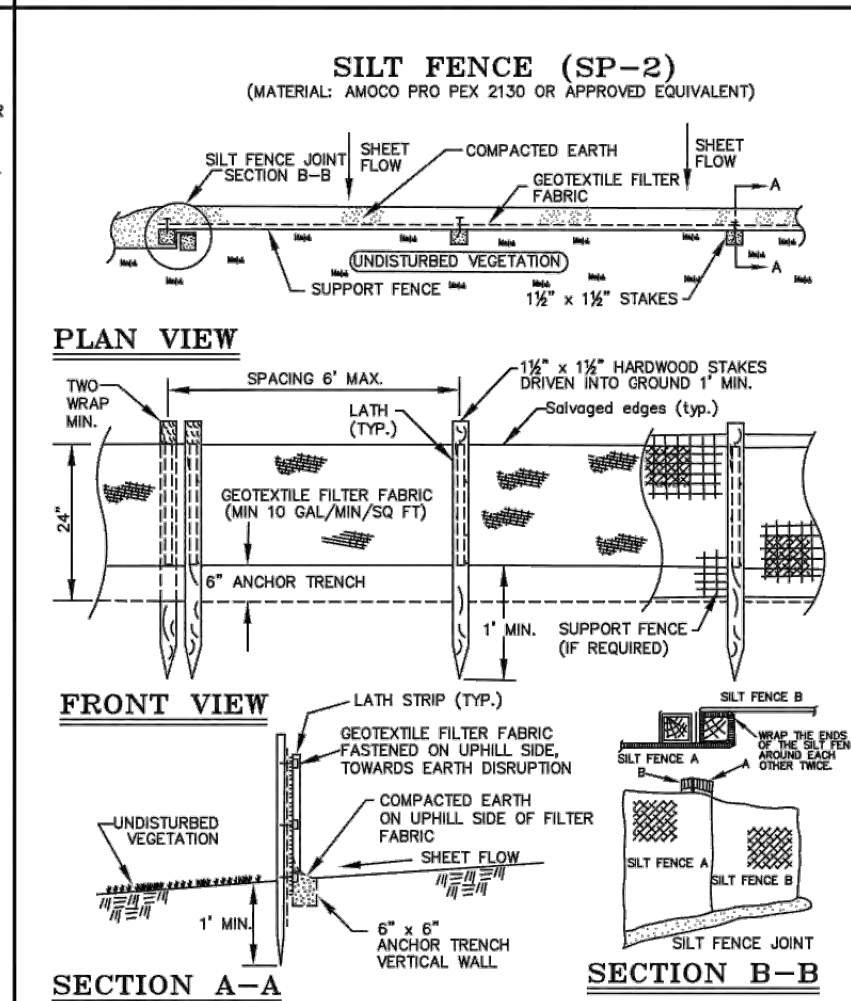
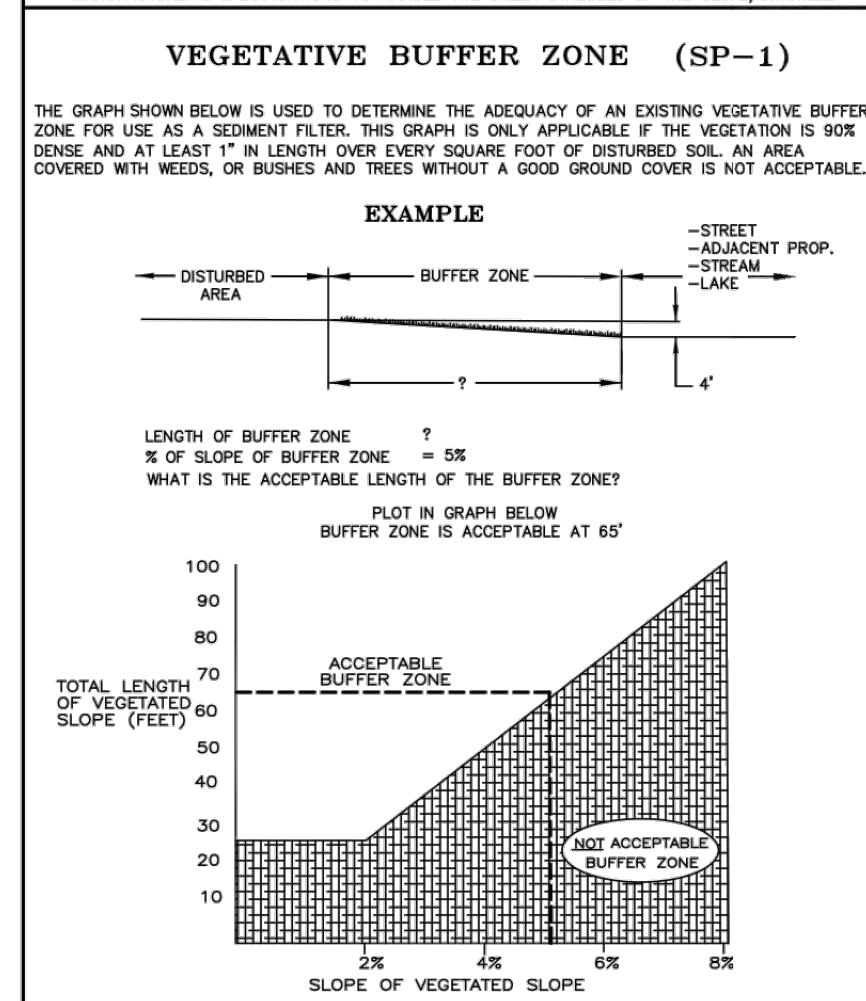
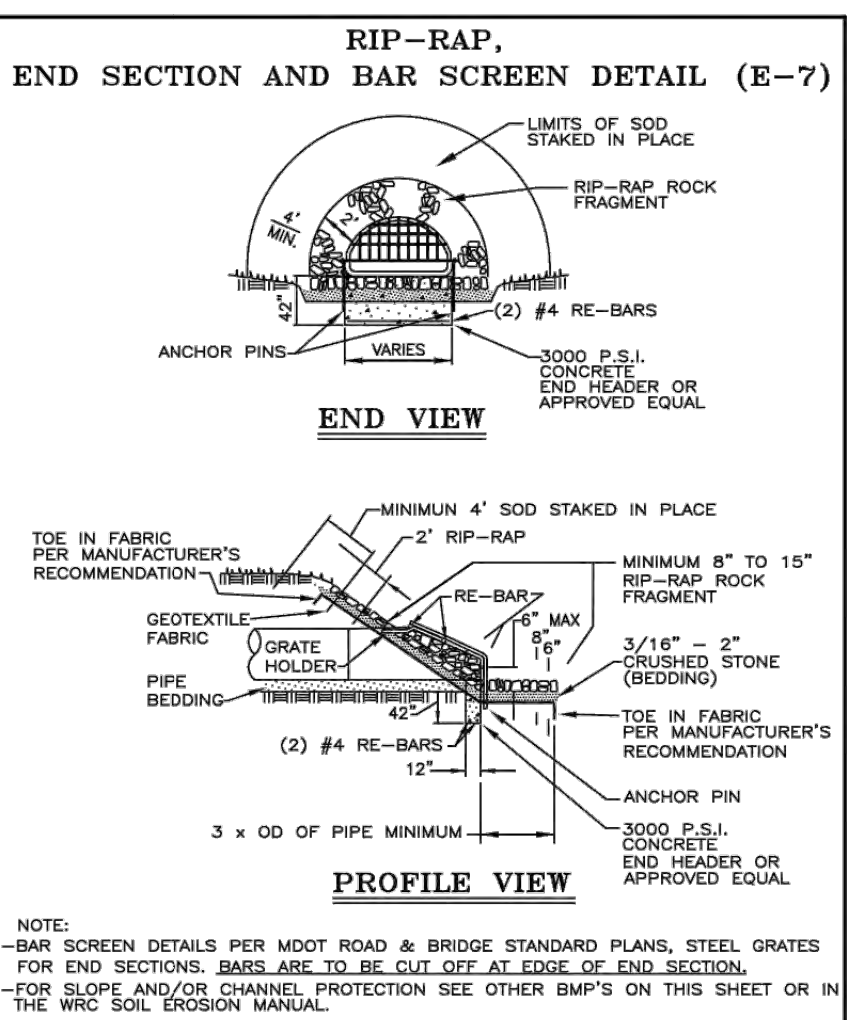
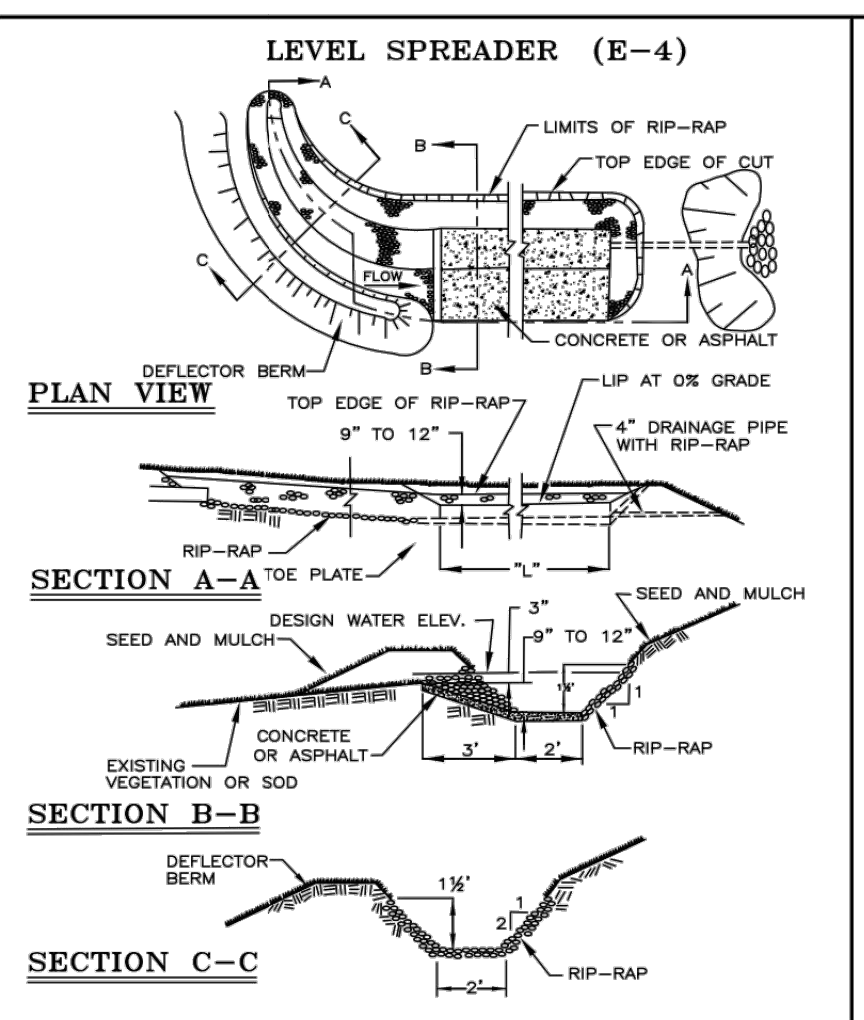
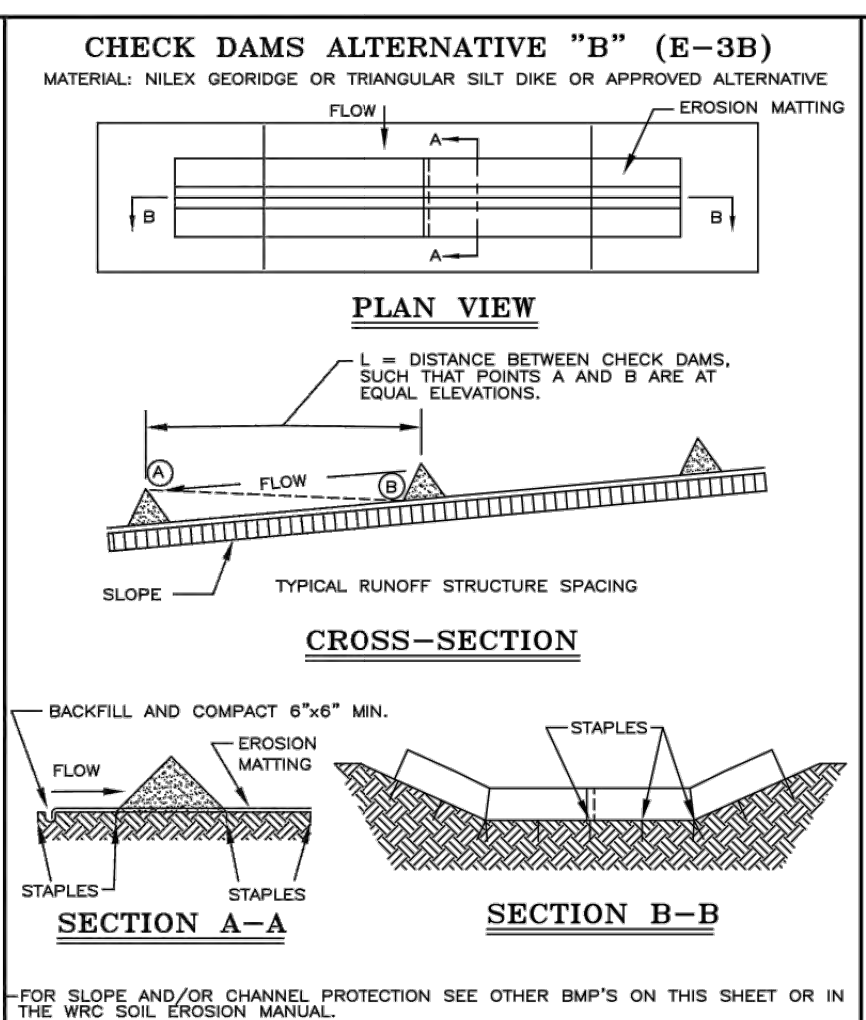
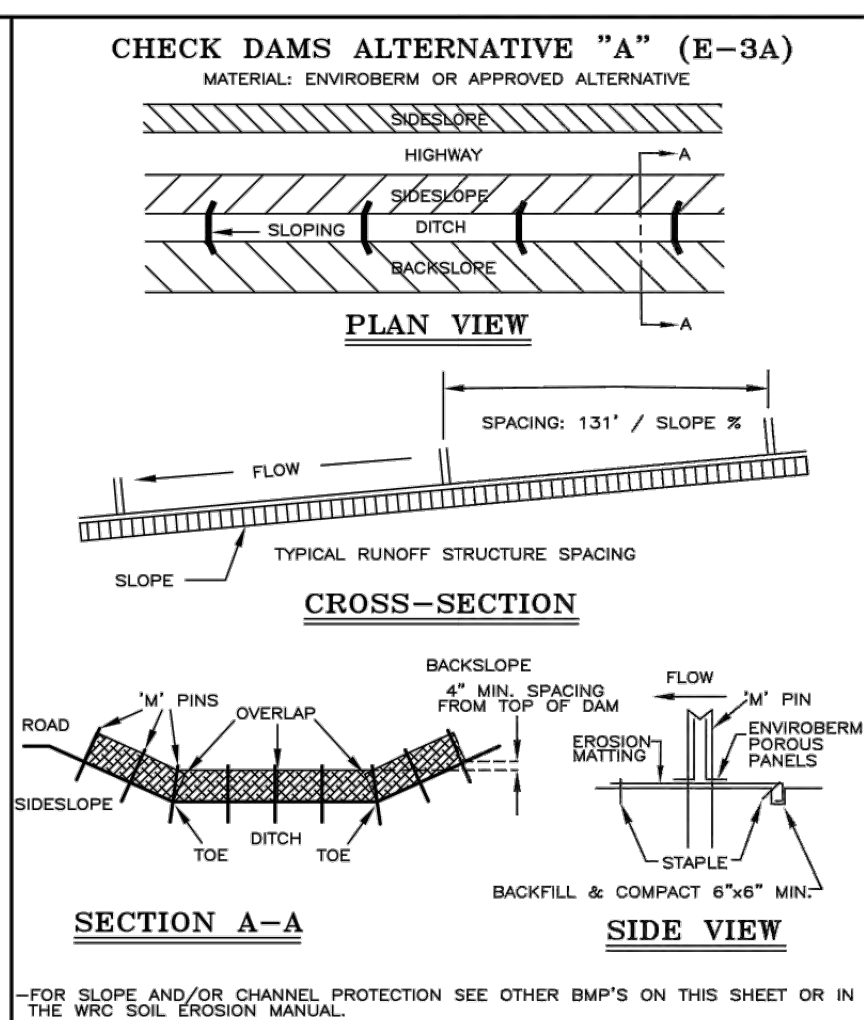
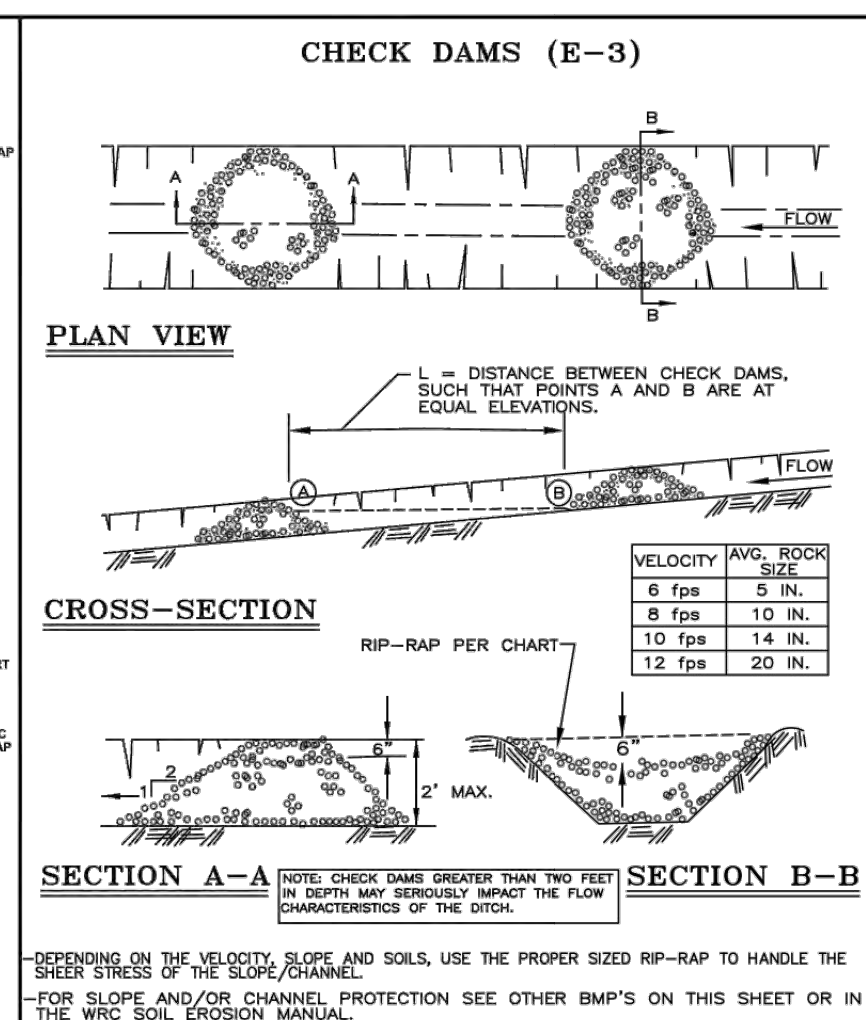
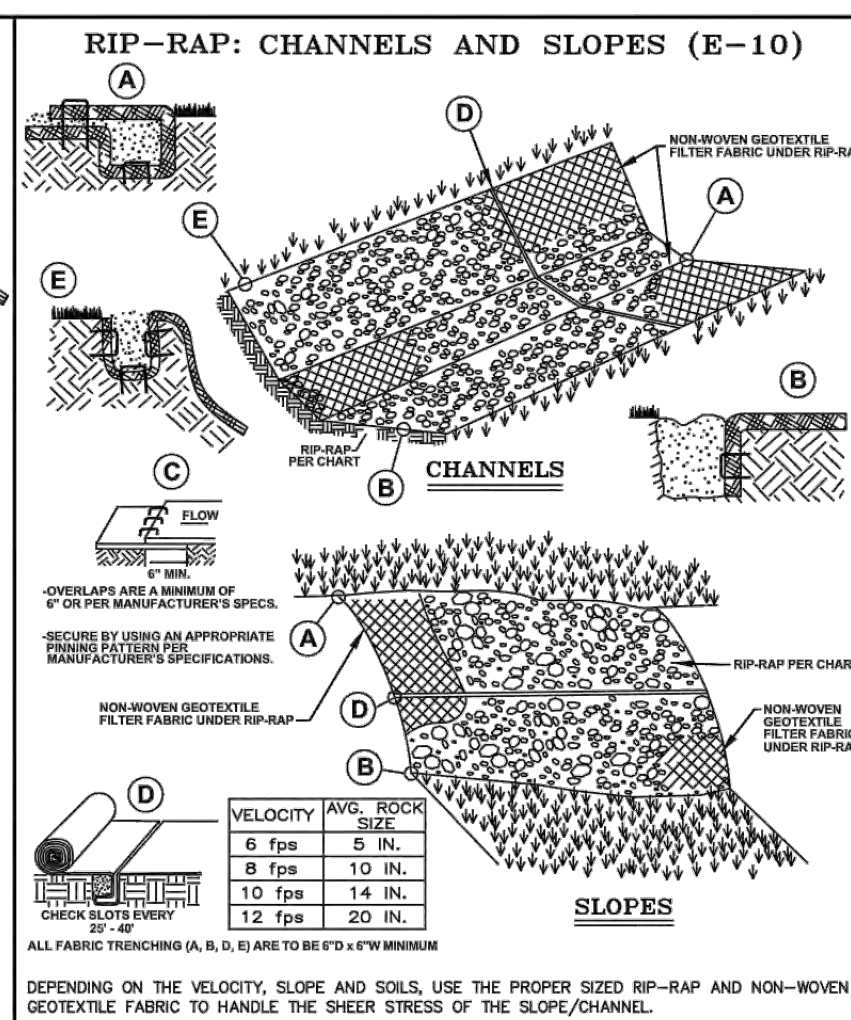
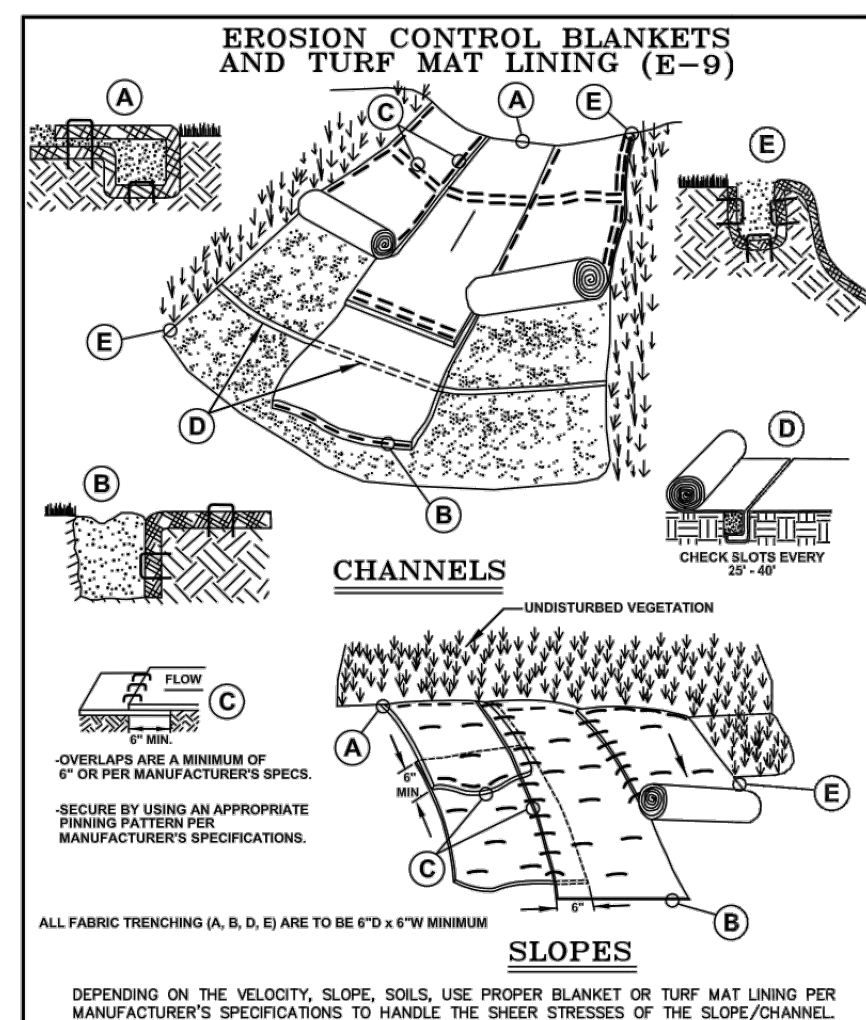
ADC
 Architectural Design Collaborative

EROSION CONTROL PLAN

BANK OF AMERICA
 3035 S ROCHESTER RD
 ROCHESTER HILLS, MI 48307

ORIGINAL ISSUE: 11/18/2022
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Drawing name: K:\ONS\DEV\26262000_AOC_Rochester_Hills_MI_V2_Design\CAD\PlanSheets\C4-0 - EROSION CONTROL PLAN.dwg CA:1 Feb 06, 2023 6:35pm by: John Gross
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NOTE:
WHILE PERFORMING WORK INVOLVING GROUNDS MAINTENANCE AND/OR THE CONSTRUCTION/MAINTENANCE OF ANY INFRASTRUCTURE, INCLUDING ROADS, WATER MAINS, SANITARY SEWERS, STORM DRAINS AND STORM WATER BEST MANAGEMENT PRACTICES (BMPs), CONTRACTORS SHALL MINIMIZE POLLUTION FROM STORM WATER RUNOFF THAT CAN AFFECT WATER QUALITY RELATED TO WORK ACTIVITIES. POLLUTANTS THAT COULD IMPAIR WATER QUALITY MAY INCLUDE FUEL, GREASE AND OIL, NUTRIENTS, BACTERIA AND PATHOGENS, LITTER AND DEBRIS, AND SOIL EROSION AND SEDIMENTATION. APPLICABLE BMP'S SHALL BE IMPLEMENTED BY THE CONTRACTOR TO THE MAXIMUM EXTENT PRACTICABLE TO PROTECT WATER QUALITY AND WILDLIFE HABITAT.

SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

REVISION BLOCK
No. | Rev. | Date | Description

No.	Rev.	Date	Description
1	0	09/10/11	ISSUED FOR PERMIT
2	1	12/19/22	ISSUED FOR PERMIT
3	2	12/19/22	ISSUED FOR PERMIT
4	3	12/19/22	ISSUED FOR PERMIT
5	4	12/19/22	ISSUED FOR PERMIT

DATE: 09/10/11
SCALE: NONE
DESIGNED BY: WRC
DRAWN BY: Mapping

ONE PUBLIC WOODS DRIVE, BLDG 05 WEST WATKINS, MICHIGAN 48308-1907
SHEET NO.: 1 of 1

Kimley-Horn & Associates, Inc.
3911 5th Mile Road
Farmington Hills, MI 48334
WWW.KIMLEY-HORN.COM

Bank of America
3035 S ROCHESTER RD
ROCHESTER HILLS, MI 48307

ADDC Collaborative
Architectural Design Collaborative

EROSION CONTROL DETAILS

BANK OF AMERICA

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SCALE: AS NOTED
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DRAWN BY: EC
CHECKED BY: JWG

CITY FILE #22-039 SECTION #35

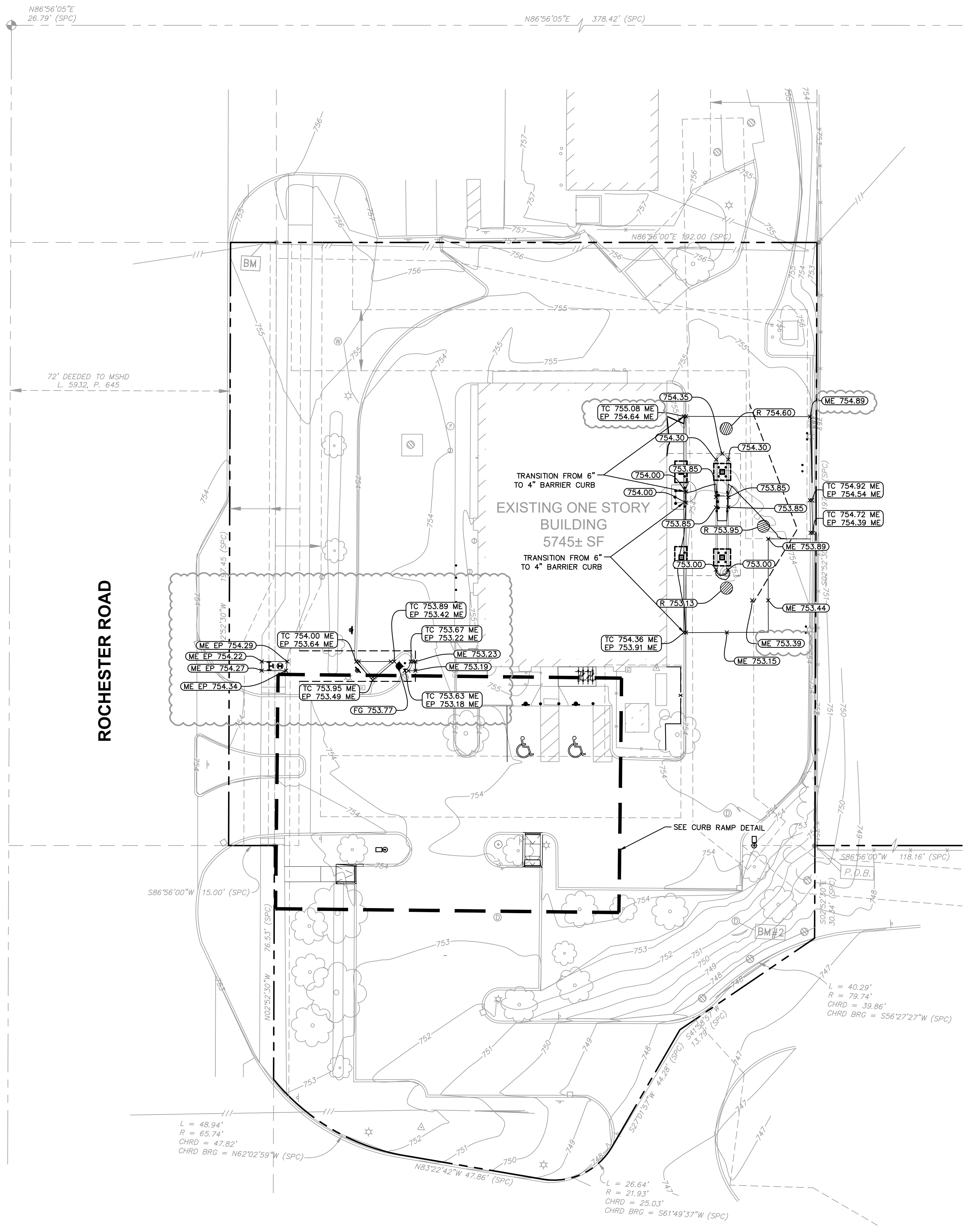
REVISED PER CITY COMMENTS 02/07/23 JWG
ISSUED FOR PERMIT 12/19/22 JWG
100% CONSTRUCTION DOCUMENTS 12/16/22 JWG
REVISIONS DATE BY

CITY FILE #22-039 SECTION #35

CITY FILE #22-039 SECTION #35

Drawing name: K:\GIS_LDEV\268266000_ADC_Rochester_Hills_MV2 Design\CAD\PlanSheets\C5.0 - GRADING PLAN.dwg C5.0 Feb 06, 2023 6:37pm By: John.Gross
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AUBURN ROAD



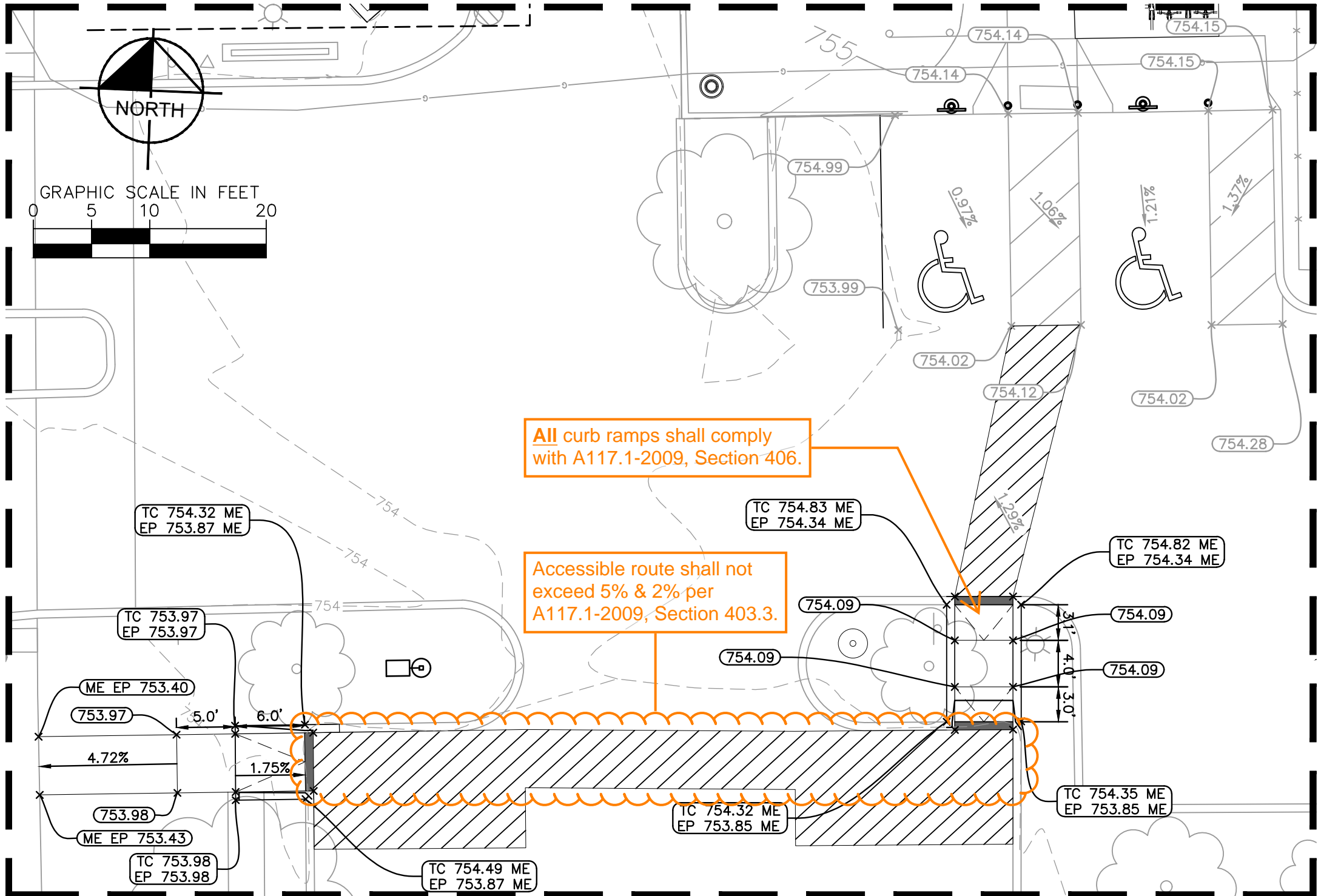
ROCHESTER ROAD

GRADING NOTES

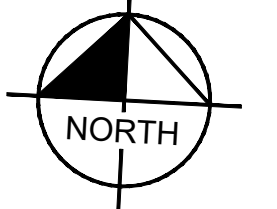
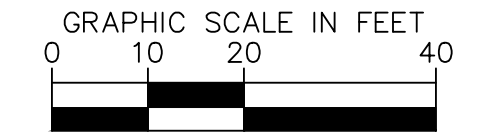
1. CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON THE SITE AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
2. ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO FLOW LINE ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
4. NO EARTHEN SLOPE SHALL BE GREATER THAN 3:1, UNLESS OTHERWISE NOTED.
5. MAXIMUM SLOPE IN ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL NOT EXCEED 2.0% IN ALL DIRECTIONS.
6. MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% AND CROSS SLOPE SHALL NOT EXCEED 2% ON ALL SIDEWALKS AND ACCESSIBLE ROUTES.
7. WHEN NATURAL FLOW OF DRAINAGE IS AWAY FROM CURB, CONTRACTOR TO INSTALL REVERSE GUTTER PITCH.
8. MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS.

GRADING LEGEND

- | | |
|-----|------------------------------------------------------------|
| XXX | TP = TOP OF PAVEMENT |
| --- | EP = EDGE OF PAVEMENT |
| --- | FL = FLOW LINE |
| --- | TC = TOP OF CURB |
| --- | ME = MATCH ELEVATION |
| --- | TF = TOP OF FOUNDATION |
| --- | R = RIM ELEVATION |
| --- | TW = TOP OF WALL |
| --- | FG = FINISHED GRADE |
| --- | TS = TOP OF STAIRS |
| --- | BS = BOTTOM OF STAIRS |
| --- | PROPOSED CONTOUR |
| --- | EXISTING CONTOUR |
| --- | RIDGE LINE |
| --- | SLOPE AND FLOW DIRECTION |
| --- | 100-YEAR OVERLAND OVERFLOW ROUTE |
| --- | DETENTION BASIN 100-YEAR EMERGENCY OVERLAND OVERFLOW ROUTE |
| --- | PROPOSED SWALE |
| --- | PROPOSED RETAINING WALL |
| --- | REVERSED PITCH CURB AND GUTTER |
| --- | ACCESSIBLE ROUTE |
| --- | RIP RAP (SEE DETAILS) |



ADA CURB RAMP DETAIL
1"=10'
CITY FILE #22-039 SECTION #35



NO.	REVISIONS	DATE	BY
1	ISSUED FOR PERMIT	12/19/22	JWG
2	REVISIONS	12/16/22	JWG
3	100% CONSTRUCTION DOCUMENTS	12/16/22	JWG

SCALE:	AS NOTED
DESIGNED BY:	EC
DRAWN BY:	EC
CHECKED BY:	JWG

ADCC
Architectural Design Collaborative

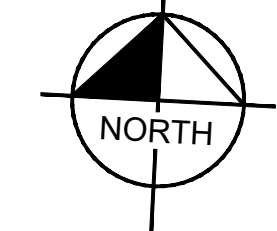
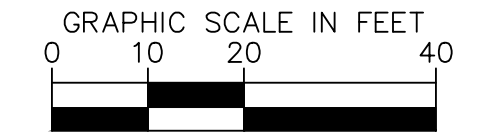
GRADING PLAN

BANK OF AMERICA
3035 S ROCHESTER RD
ROCHESTER HILLS, MI 48307

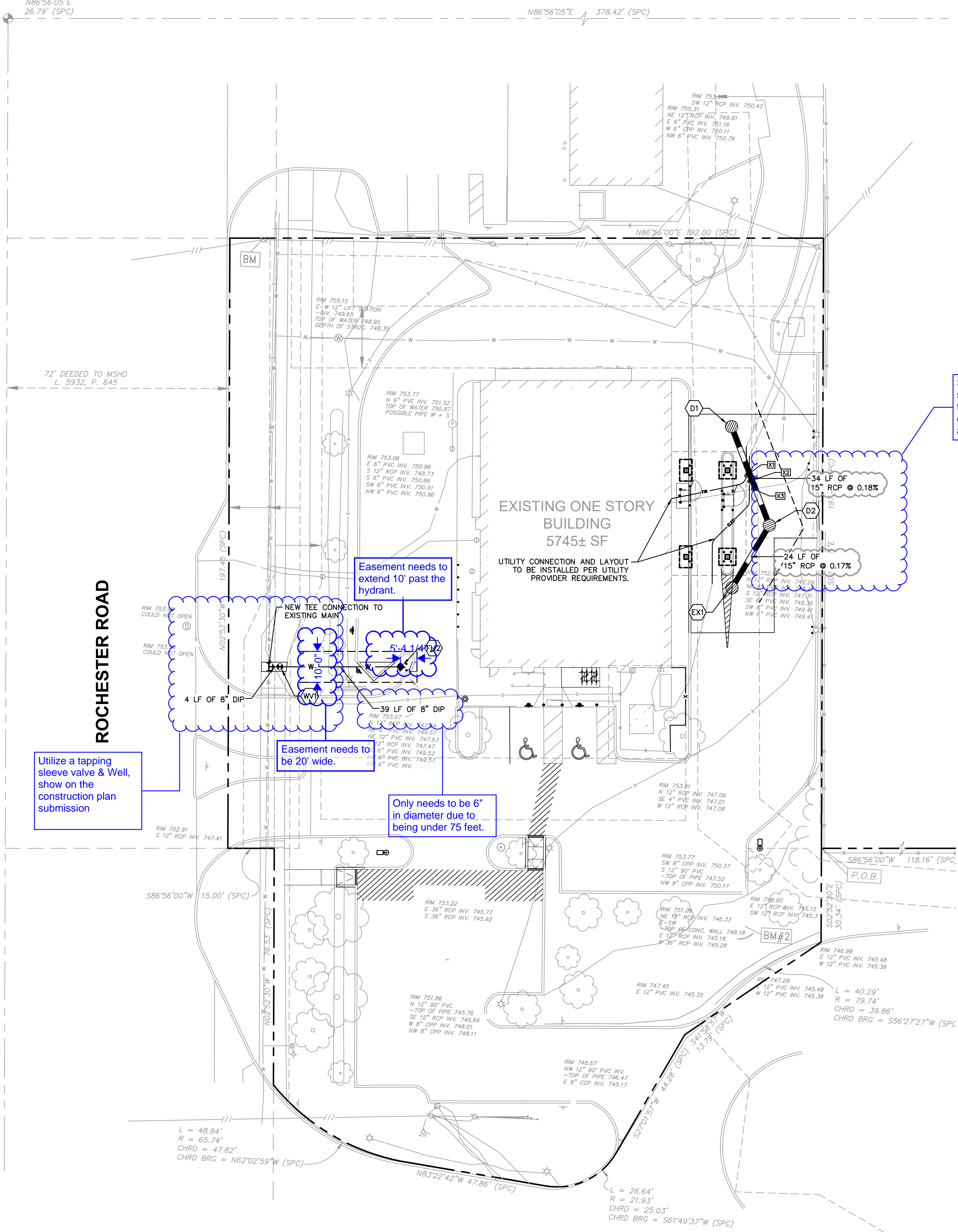
ORIGINAL ISSUE:
11/18/2022
KHA PROJECT NO.
268266000

SHEET NUMBER
C5.0

Drawing name: K:\GIS\DEV\268266000_ADC_Rochester_Hills_MV2 Design\CAD\PlanSheets\C6.0 - UTILITY PLAN.dwg CR:0 Feb 06, 2023 6:39pm by: John.Gress
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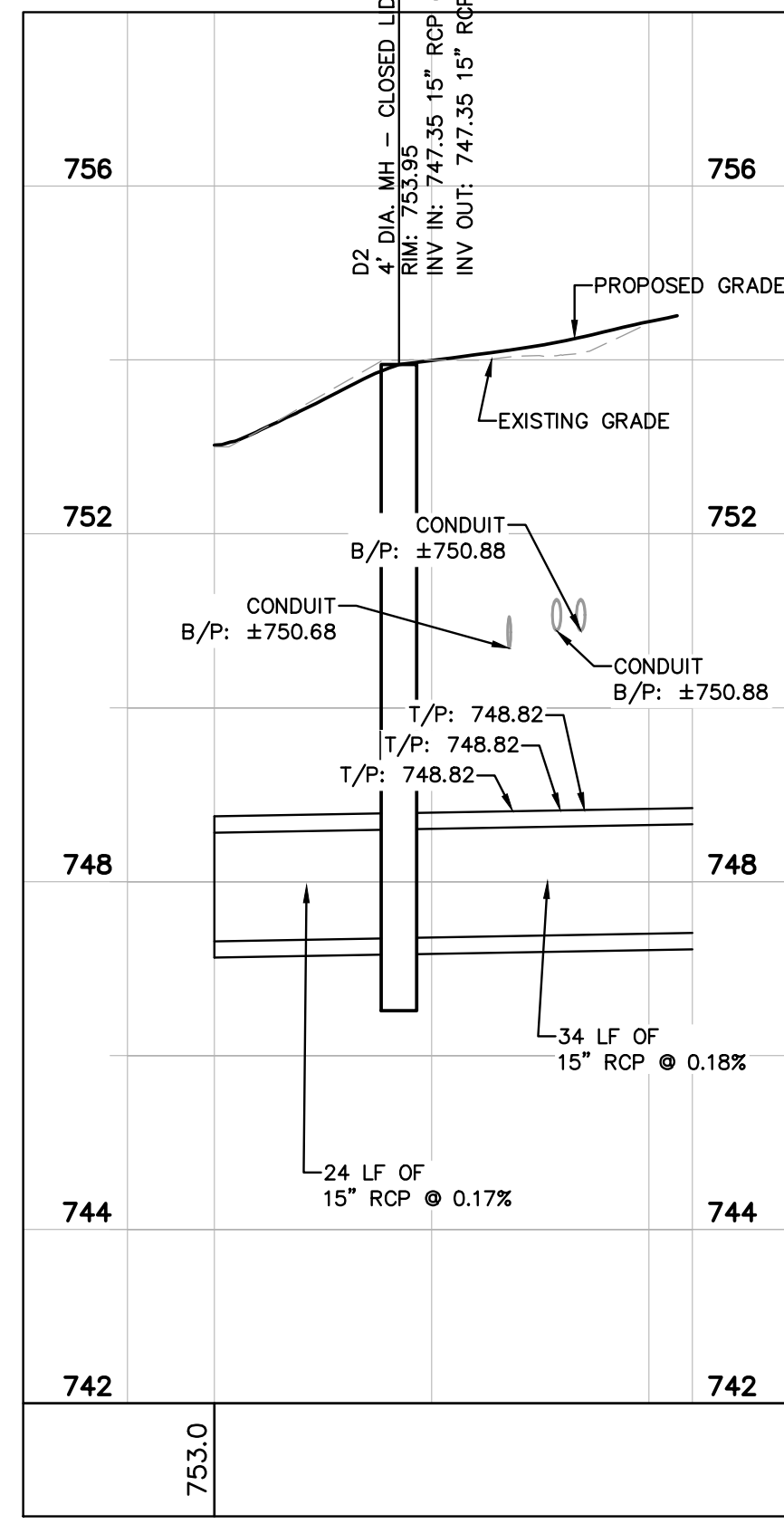


AUBURN ROAD



WATER STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
FH2	FH2 FG ELEV: 753.77
WV1	VALVE FG ELEV: 754.30

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D1	4' DIA. MH - CLOSED LID RIM: 754.60 INV IN: 747.41 (N, 12") INV OUT: 747.41 (SE, 15")
D2	4' DIA. MH - CLOSED LID RIM: 753.95 INV IN: 747.35 (NW, 15") INV OUT: 747.35 (SW, 15")
EX1	4' DIA. MH - OPEN LID RIM: 753.13 INV IN: 747.31 (NE, 15") INV OUT: 747.31 (S, 12")



UTILITY CROSSING LEGEND	
X1	15" STORM (SEE PROFILE) X TELECOM
X2	15" STORM (SEE PROFILE) X ELECTRIC
X3	15" STORM (SEE PROFILE) X ELECTRIC
X4	8" WATER T/P 748.59 X ELECTRIC

NOTE: WHERE THERE IS LESS THAN 10 FT HORIZONTAL OR 18-IN VERTICAL SEPARATION BETWEEN A SEWER AND WATER MAIN, OR IF WATER MAIN CROSSES UNDER A SEWER, WATER MAIN QUALITY PIPE IS TO BE USED TO CONSTRUCT THE SEWER OR EITHER PIPE IS TO BE ENCASED. THE PROTECTION MUST EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE DISTANCE BETWEEN THE WATER MAIN AND SEWER IS AT LEAST 10 FT. ACCEPTABLE WATER MAIN QUALITY PIPE INCLUDES PVC SDR/WMQ MEETING ASTM D2241 WITH JOINTS MEETING ASTM D3139 OR DUCTILE IRON PIPE, RCP STORM SEWER WITH FLEXIBLE GASKET JOINTS MEETING ASTM C361 OR ASTM C443 IS ALSO ACCEPTABLE AT CROSSINGS.

UTILITY NOTES

- ALL WATER LINES ≥ 3" SHALL BE DUCTILE IRON PIPE, CLASS 54.
- ALL SANITARY SEWER LINES SHALL BE PVC MEETING, ASTM D-3034 SDR 26 EXCEPT FOR SANITARY SEWER THAT CROSSES ABOVE WATER MAIN, THIS PIPE SHALL BE ANNA C900 (UNLESS WATER MAIN CASING IS UTILIZED). PROVIDE 42" MINIMUM COVER.
- CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.
- ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
- CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.
- CONTRACTOR TO CALL "MISS DIG SYSTEM, INC." (1-800-482-7171) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
- PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION. THE MUNICIPALITY SHALL BE NOTIFIED OF ANY AND ALL CHANGES TO THE DESIGN PLANS.
- CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED TO ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.
- CONTRACTOR TO AVOID DISRUPTION OF ANY ADJACENT TENANT'S TRAFFIC OPERATIONS DURING INSTALLATION OF UTILITIES.
- ALL DIMENSIONS ARE TO CENTERLINE OF PIPE OR CENTER OF MANHOLE UNLESS NOTED OTHERWISE.
- SEE ARCHITECTURAL AND MEP PLANS FOR EXACT UTILITY CONNECTION LOCATIONS AT BUILDING.
- LIGHT POLES SHOWN FOR COORDINATION PURPOSES ONLY AND DO NOT REPRESENT ACTUAL SIZE. SEE SITE LIGHTING PLANS BY OTHERS FOR MORE INFORMATION.
- SEE DETAILS FOR LOCATING STORM STRUCTURES WITHIN THE CURB LINE.
- STORMWATER FACILITIES MUST BE FUNCTIONAL BEFORE BUILDING CONSTRUCTION BEGINS IF REQUIRED BY AUTHORITY HAVING JURISDICTION.

UTILITY LEGEND

- EX. WATER LINE
- EX. HYDRANT
- EX. SANITARY SEWER LINE
- EX. STORM DRAIN LINE
- EX. STORM MANHOLE
- EX. GAS LINE
- EX. UNDERGROUND ELECTRIC LINE
- EX. LIGHT POLE
- PROPOSED UNDERGROUND ELECTRIC LINE
- GAS LINE (BY GAS COMPANY)
- PROPOSED PHONE LINE
- PROPOSED STORM SEWER LINE
- PROPOSED OPEN LID STORM STRUCTURE (PAVEMENT USE NEENAH R-2540) (GRASS USE NEENAH R-4340-B BEEHIVE)
- PROPOSED CLOSED LID STORM STRUCTURE (PAVEMENT USE NEENAH R-1713) (GRASS USE NEENAH R-1766)
- PROPOSED COMBINATION CURB INLET (86.12 C&G USE NEENAH R-3281-A)
- PROPOSED FLARED END SECTION
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM/SANITARY CLEANOUT
- PROPOSED WATER LINE
- PROPOSED VALVE VAULT
- PROPOSED VALVE BOX
- PROPOSED FIRE HYDRANT
- PROPOSED LIGHT POLE
- PROPOSED TRANSFORMER PAD (FOR REFERENCE ONLY)
- RIP RAP (SEE DETAILS)

Kimley-Horn & Associates, Inc.
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SCALE: AS NOTED
 DESIGNED BY: EC
 DRAWN BY: EC
 CHECKED BY: JWG

CITY FILE #22-039 SECTION #35

ADDC
 Architectural Design Collaborative

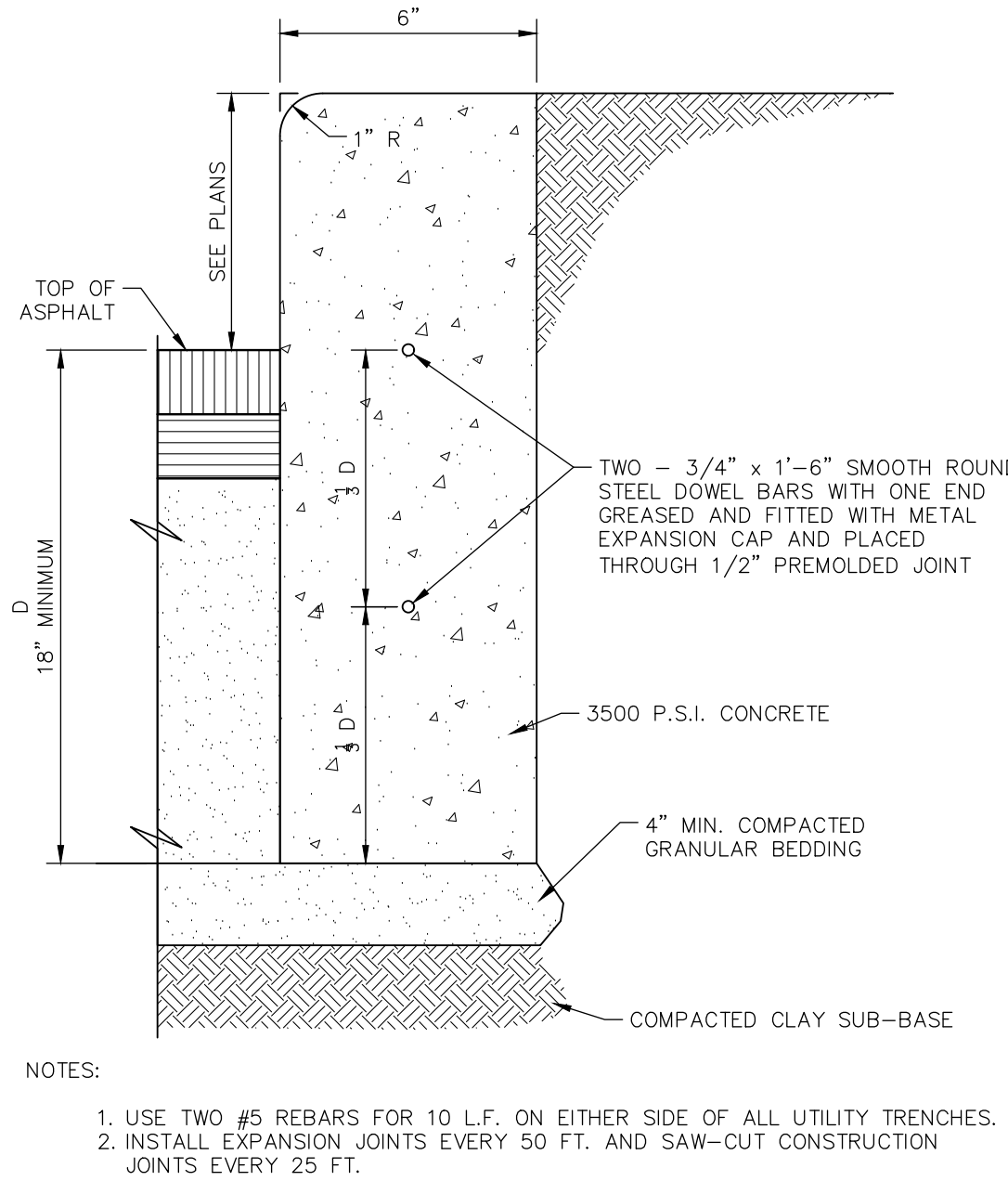
UTILITY PLAN

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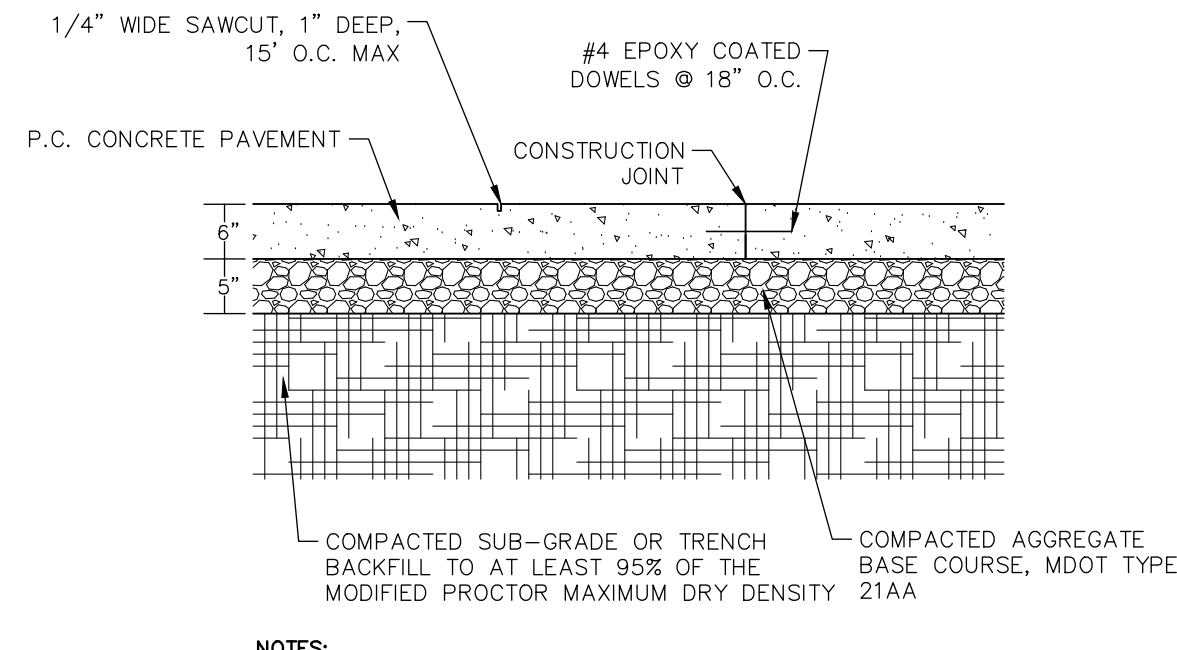
ORIGINAL ISSUE: 11/18/2022
 KHA PROJECT NO. 268266000
 SHEET NUMBER

REVISIONS:

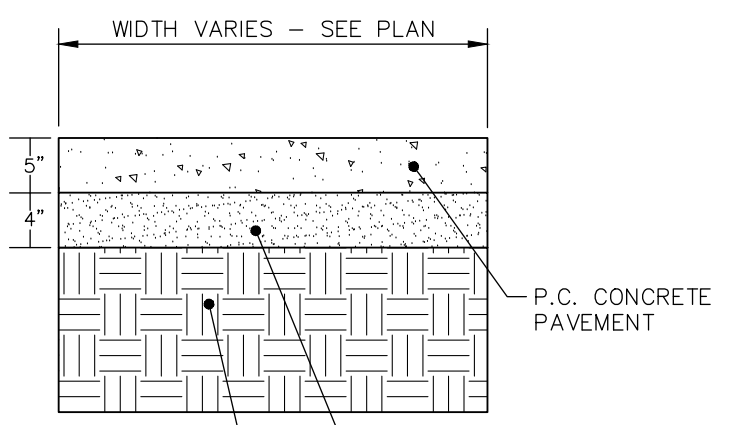
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2	12/19/22	JWG	100% CONSTRUCTION DOCUMENTS
3	12/16/22	JWG	REVISED PER CITY COMMENTS



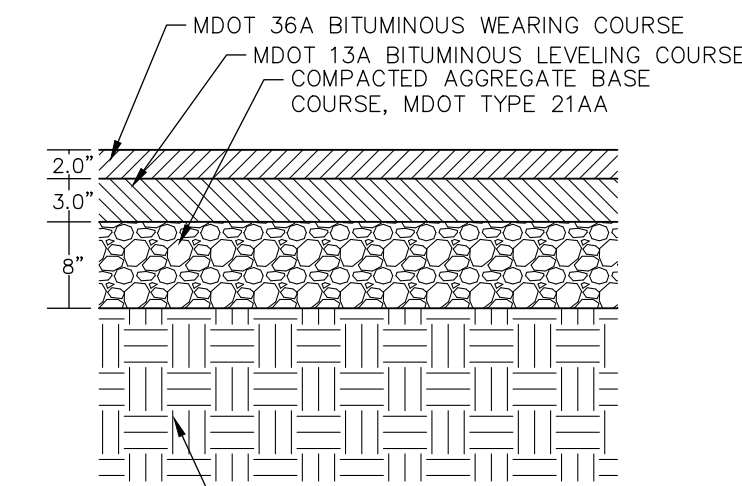
BARRIER CURB
N.T.S.



HEAVY DUTY CONCRETE PAVEMENT SECTION
N.T.S.



CONCRETE SIDEWALK
N.T.S.



STANDARD DUTY ASPHALT PAVEMENT SECTION
N.T.S.

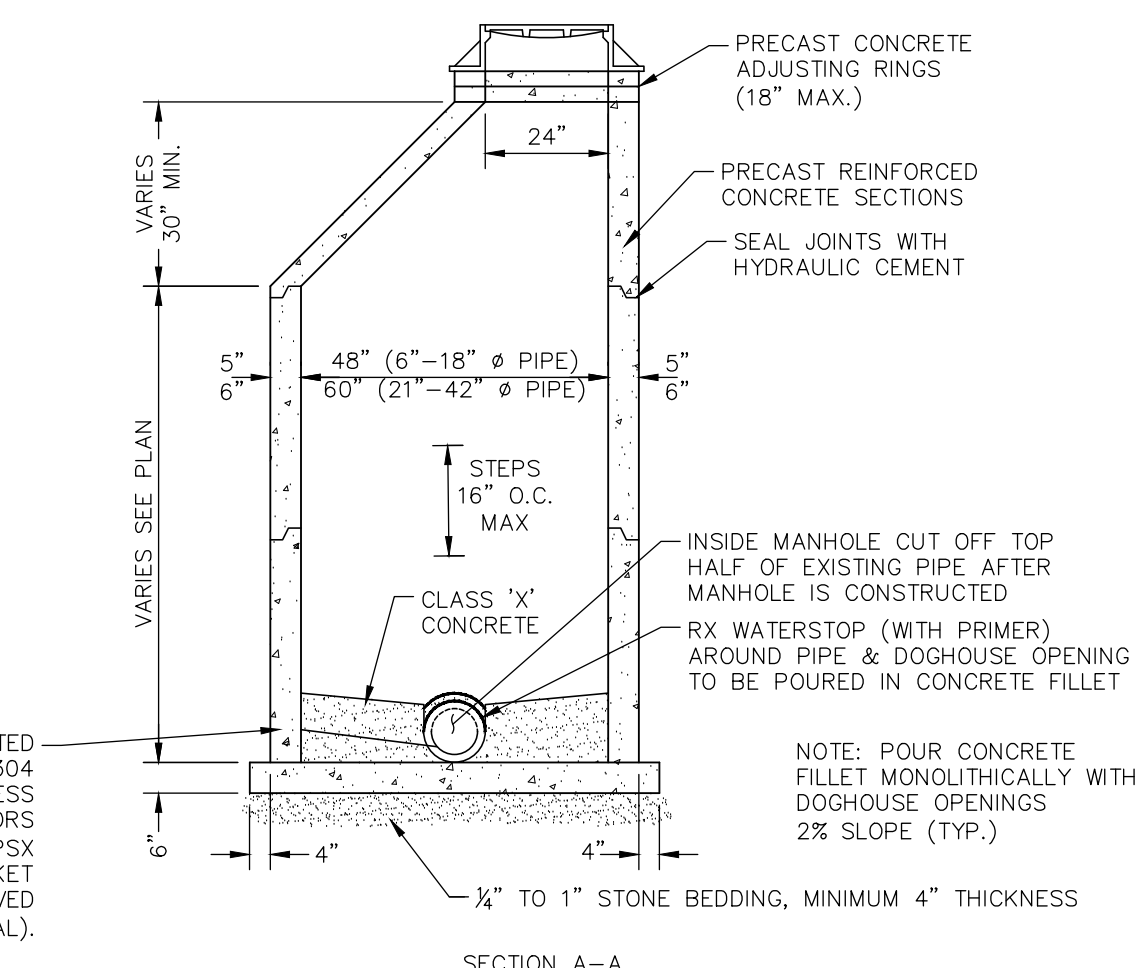
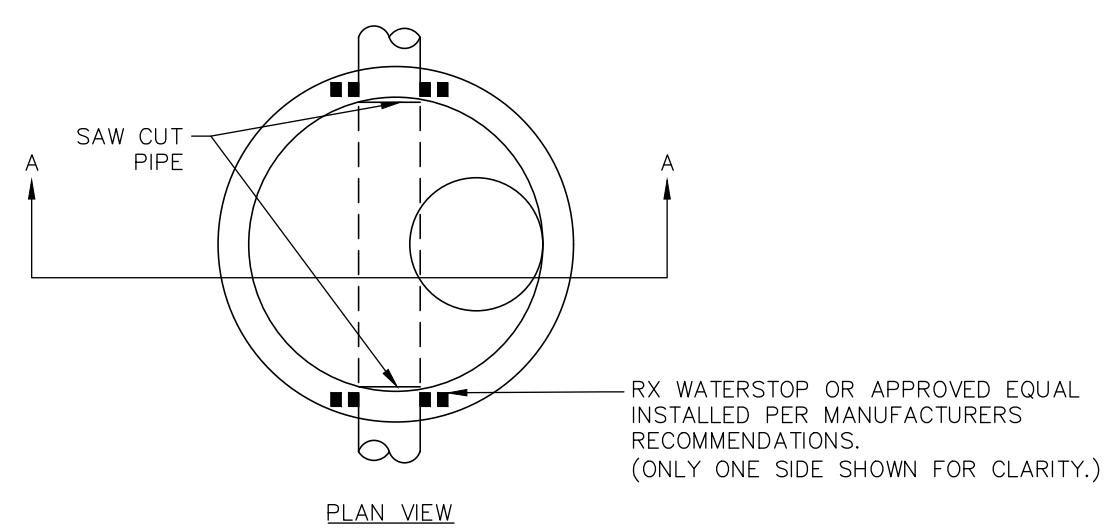
NOTES:
1. USE TWO #5 REBARS FOR 10 L.F. ON EITHER SIDE OF ALL UTILITY TRENCHES.
2. INSTALL EXPANSION JOINTS EVERY 50 FT. AND SAW-CUT CONSTRUCTION JOINTS EVERY 25 FT.

NOTES:
PAVEMENT THICKNESS, SUBGRADE PREP, ETC. DETERMINED FROM GEOTECHNICAL REPORT PERFORMED BY TERRACON DATED 11/23/22. REFER TO REPORT FOR ALL INFORMATION RELATED TO PAVING.

CONCRETE COMPRESSIVE STRENGTH SHALL COMPLY WITH ASTM DESIGNATION C31. MINIMUM 28-DAY STRENGTH = 4000 PSI

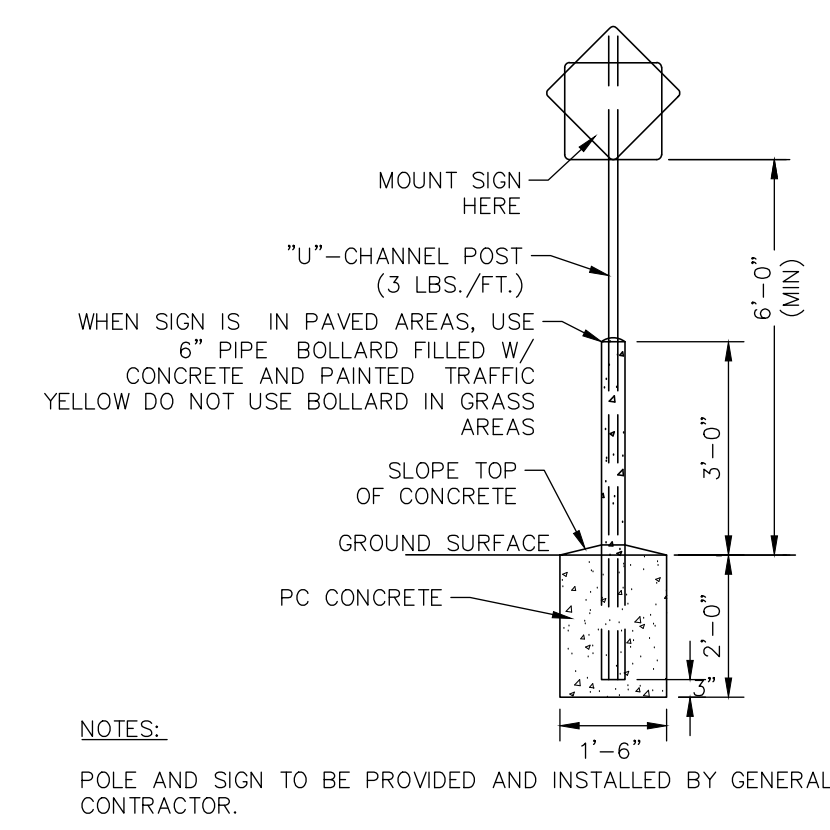
NOTES:
1. PROVIDE 1/2" EXPANSION JOINTS AT 20', MAXIMUM SPACING AND FILLED WITH PREMOLDED BITUMINOUS EXPANSION JOINT FILLER MATERIAL OR REDWOOD. EXPANSION JOINTS SHALL HAVE #4 DOWELS, LUBRICATED, 18" LONG, AT 12" CENTERS, 6" FROM EDGE.
2. PROVIDE 3/8" GROOVED CONTROL JOINTS AT 5' CENTERS.
3. WELDED WIRE FABRIC (6X6-6X6) SHALL BE INSTALLED THROUGH DRIVEWAYS AT 2" ABOVE SLAB BOTTOM.
4. PROVIDE 1/2" BITUMINOUS EXPANSION JOINT FILLER MATERIAL WHERE WALK ABUTS EXISTING IMPROVEMENTS AND AT ALL CHANGES IN GRADE.
5. USE 2-#4 REINFORCING BARS, 10' LONG OVER ALL UTILITY TRENCHES FOR NEW SIDEWALK AND CONNECTIONS TO EXISTING SIDEWALK.
6. AT DRIVE APPROACHES, SIDEWALK PCC AND BASE THICKNESS SHALL MATCH THAT OF THE DRIVE.

NOTE:
1. PAVEMENT THICKNESS, SUBGRADE PREP, ETC. DETERMINED FROM GEOTECHNICAL REPORT PERFORMED BY TERRACON DATED 11/23/22. REFER TO REPORT FOR ALL INFORMATION RELATED TO PAVING.
2. SEE PAVING NOTES ON THE GENERAL NOTES SHEET FOR PRIME COAT AND TACK-COAT REQUIREMENTS.
3. ASSUMED 50,000 EQUIVALENT SINGLE-AXLE LOAD (ESAL).



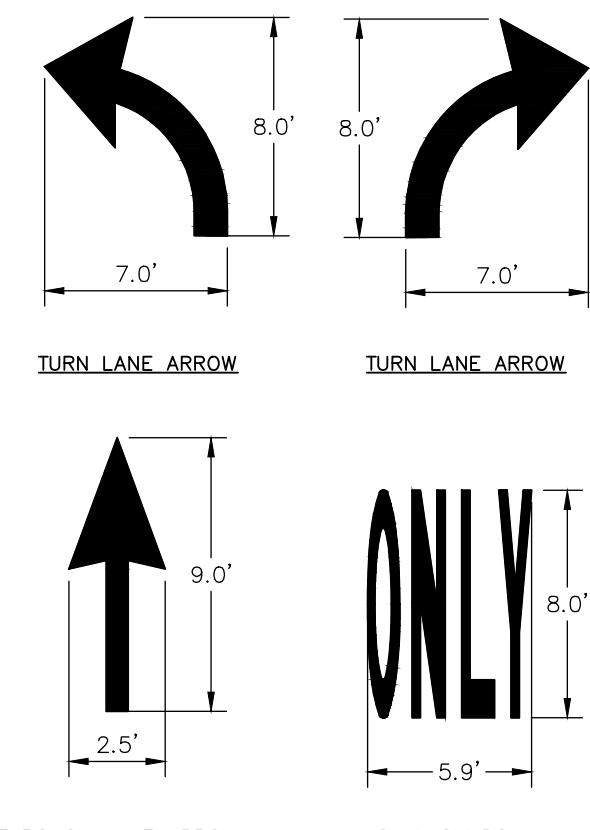
DOGHOUSE MANHOLE
N.T.S.

NOTES:
1. UNLESS OTHERWISE NOTED, USE THE FOLLOWING FRAMES & GRATES OR EQUALS:
1.1. IN PAVED AREAS: NEENAH R-1713 OR APPROVED EQUAL W/TYPE B COVER (CLOSED)
1.2. IN GRASS: NEENAH R-1711 W/TYPE B COVER (CLOSED)
2. EAST JORDAN EQUIVALENTS ALSO MAY BE USED.
3. WATER PROOF WRAP REQUIRED ON ALL JOINTS.
4. DOGHOUSE OPENING IN PRECAST UNIT ARE TO BE 4" MIN. TO 8" MAX. LARGER THAN THE OUTSIDE DIAMETER OF THE EXISTING PIPE.

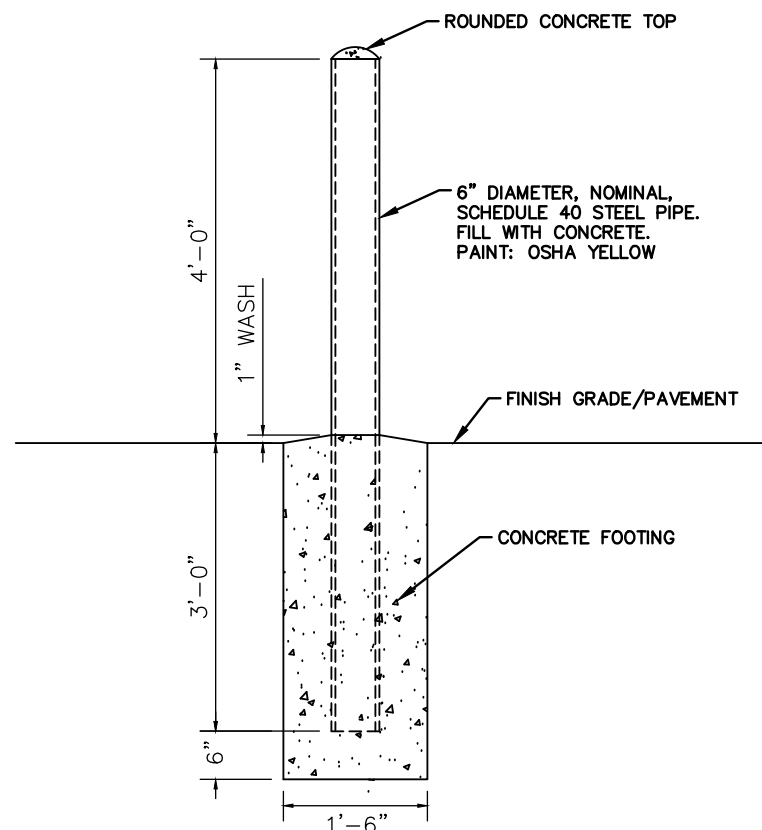


STANDARD SIGN BASE
N.T.S.

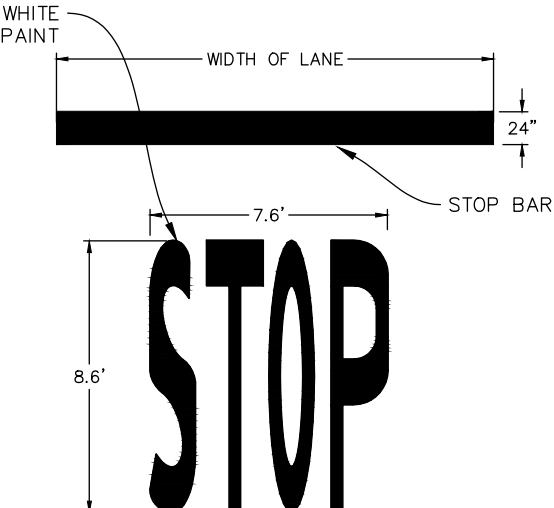
NOTES:
POLE AND SIGN TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES, AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.



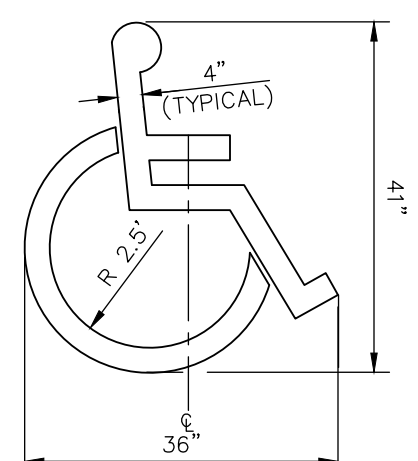
TRAFFIC FLOW ARROW
N.T.S.



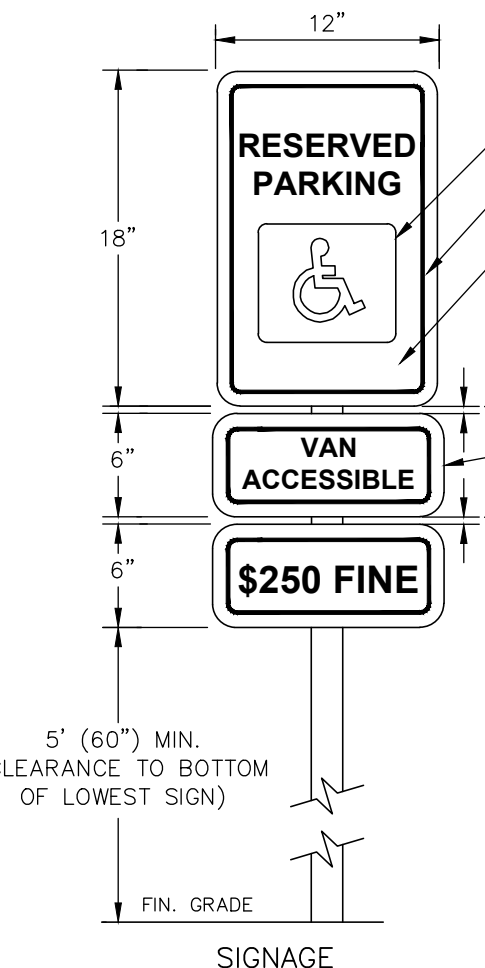
6" BOLLARD DETAIL
N.T.S.



STOP BAR
N.T.S.



ACCESSIBLE PARKING SYMBOL
N.T.S.



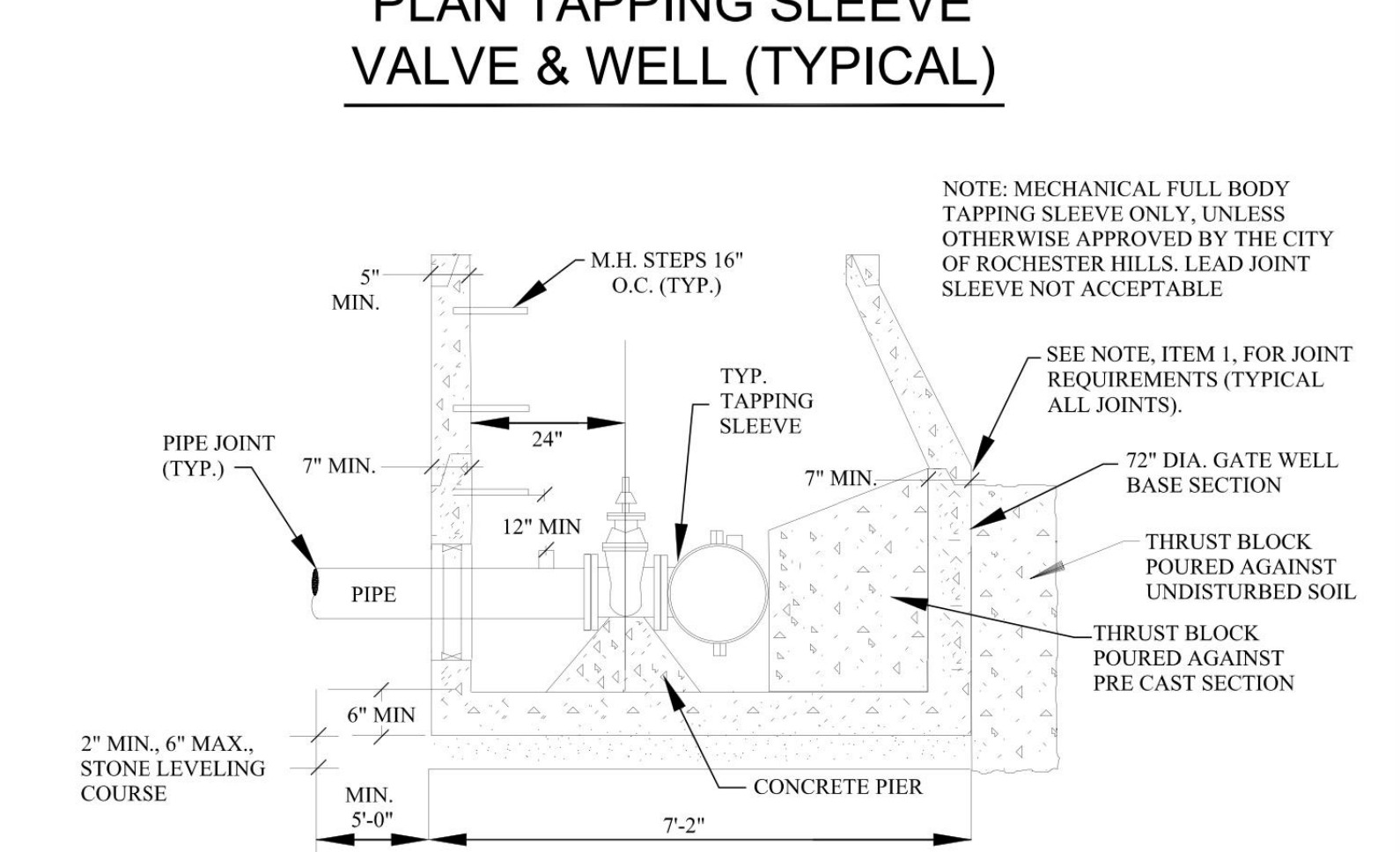
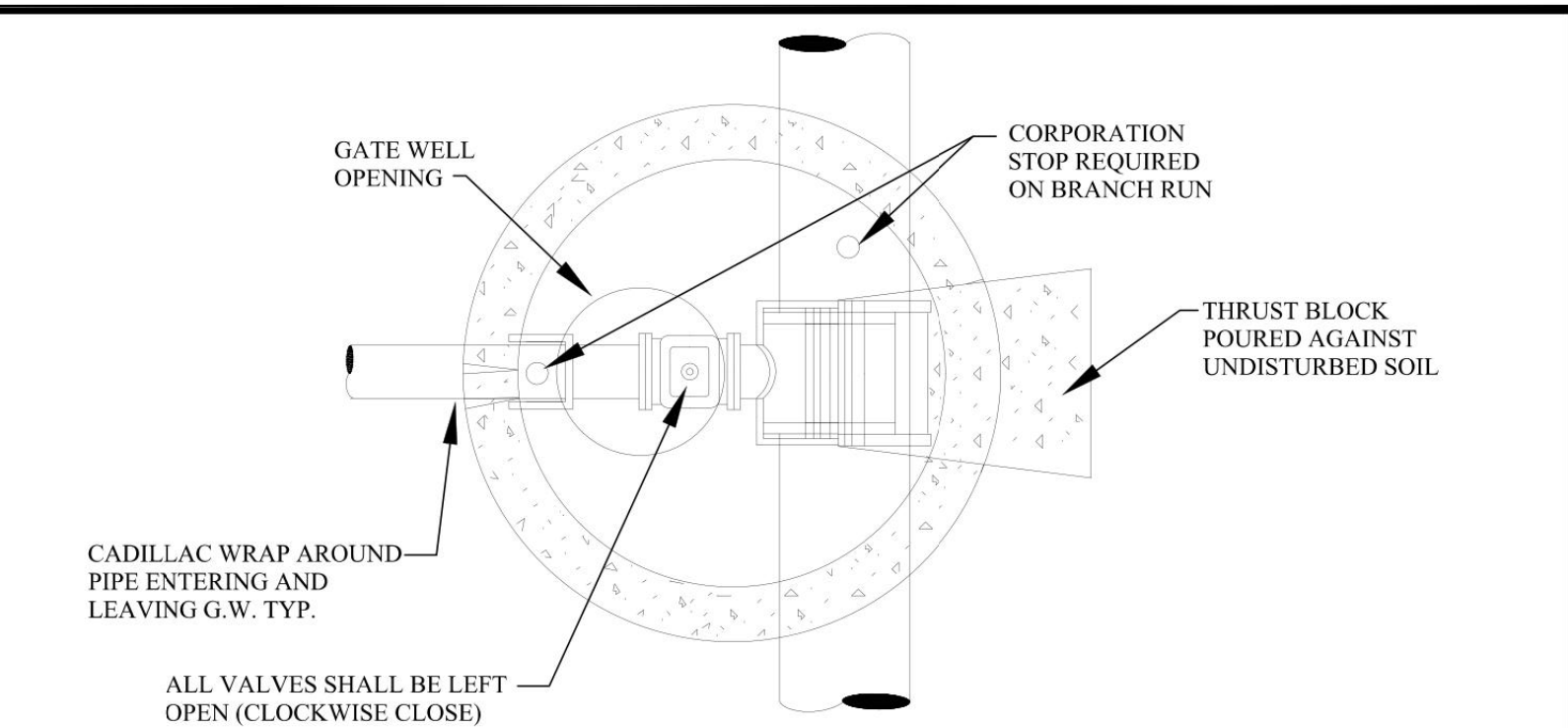
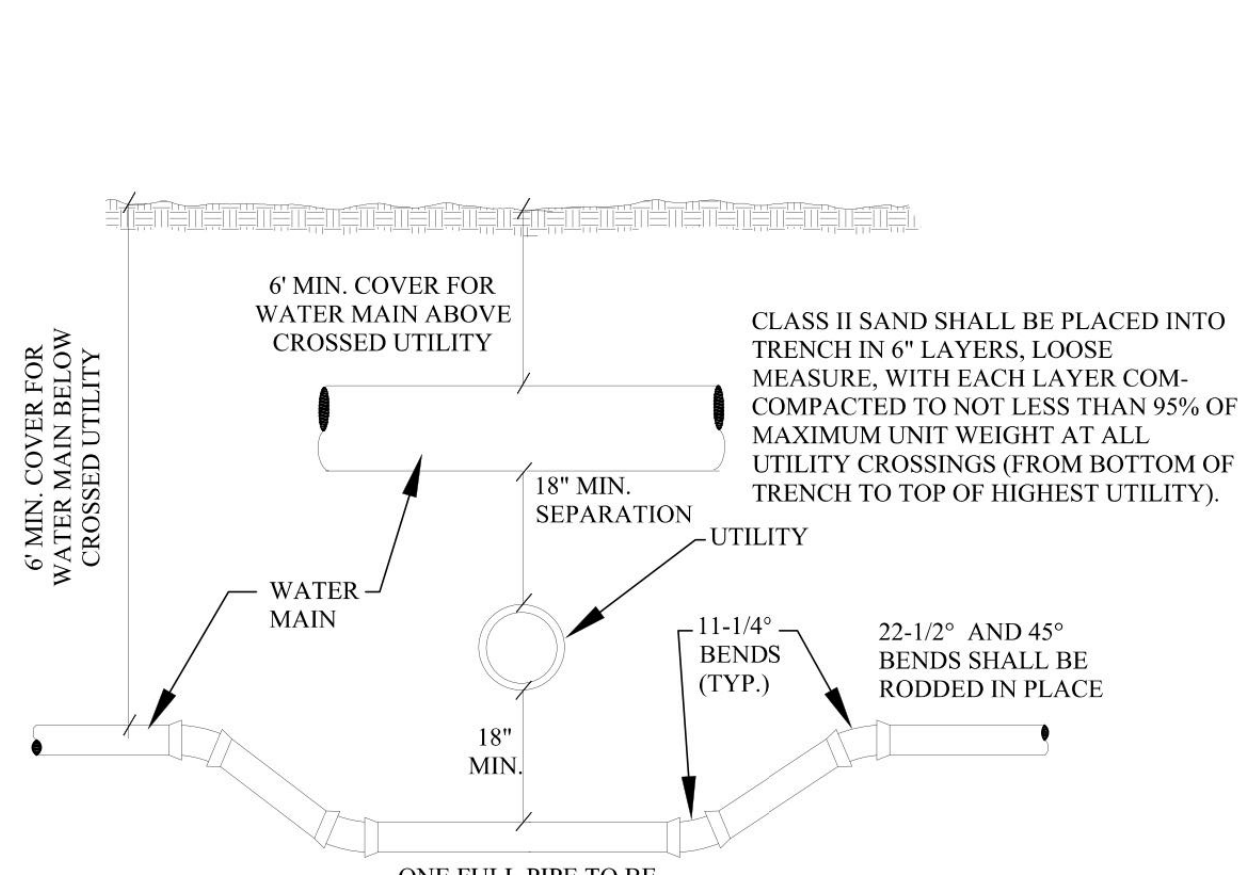
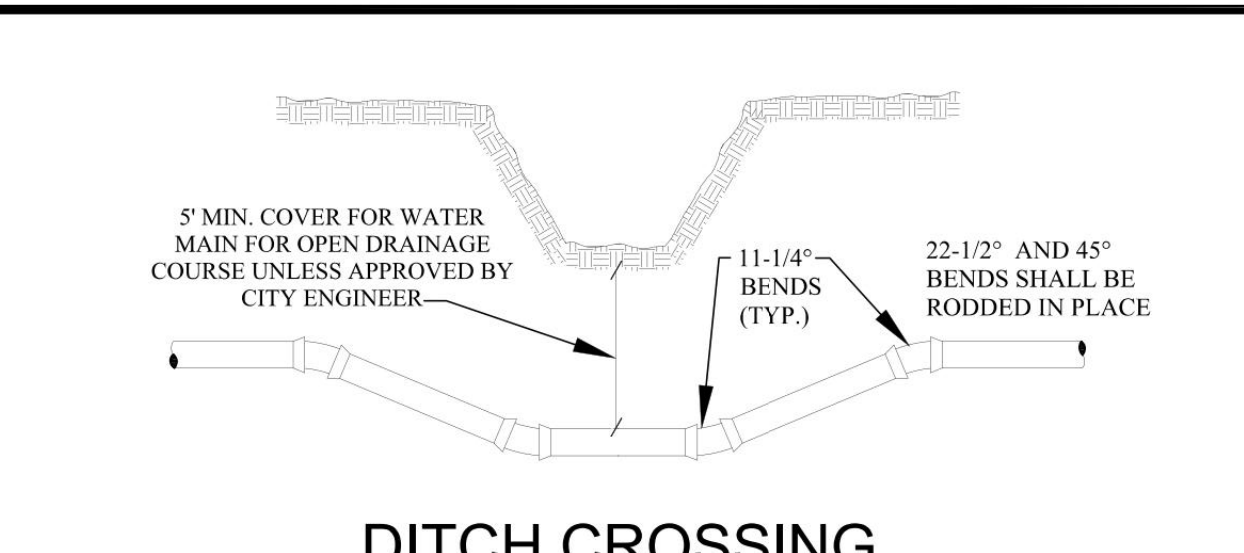
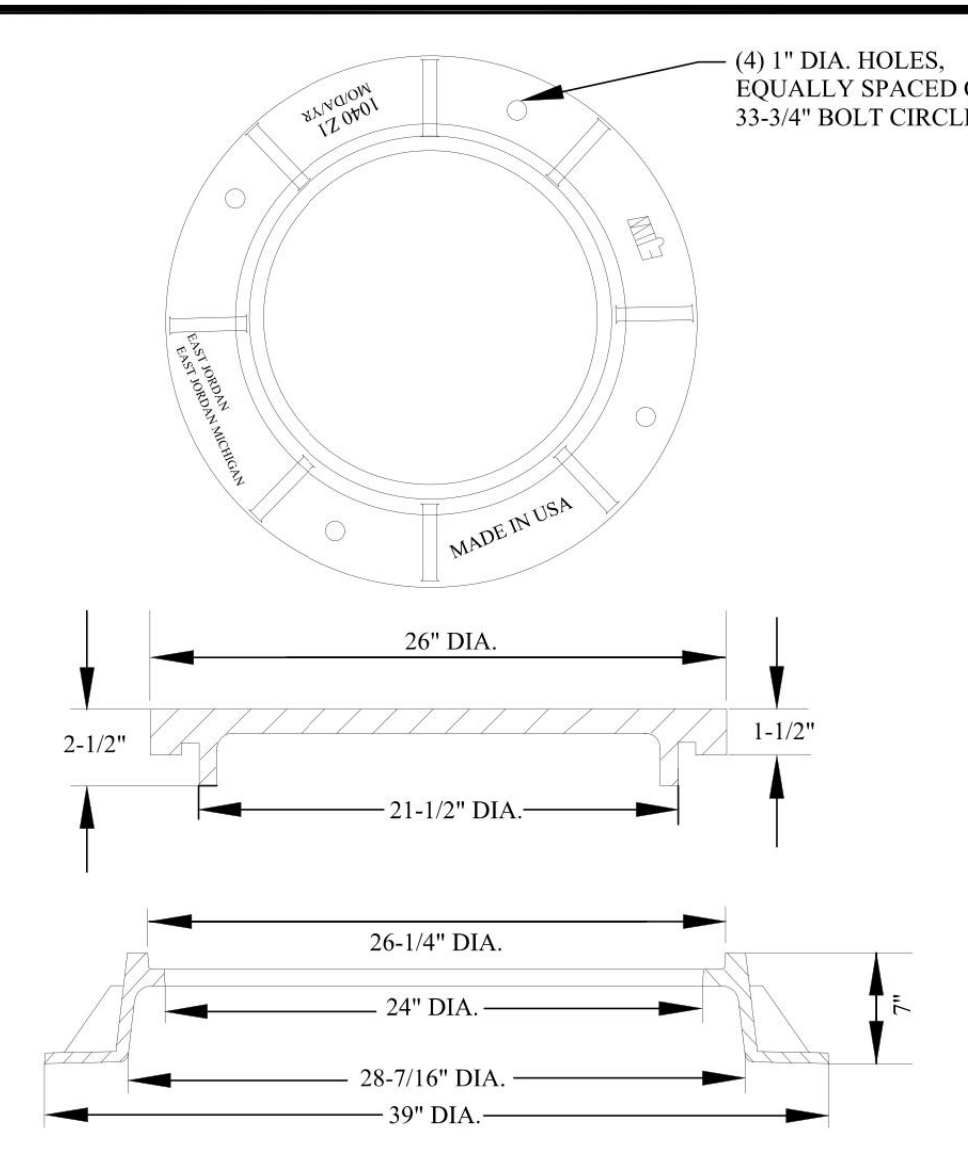
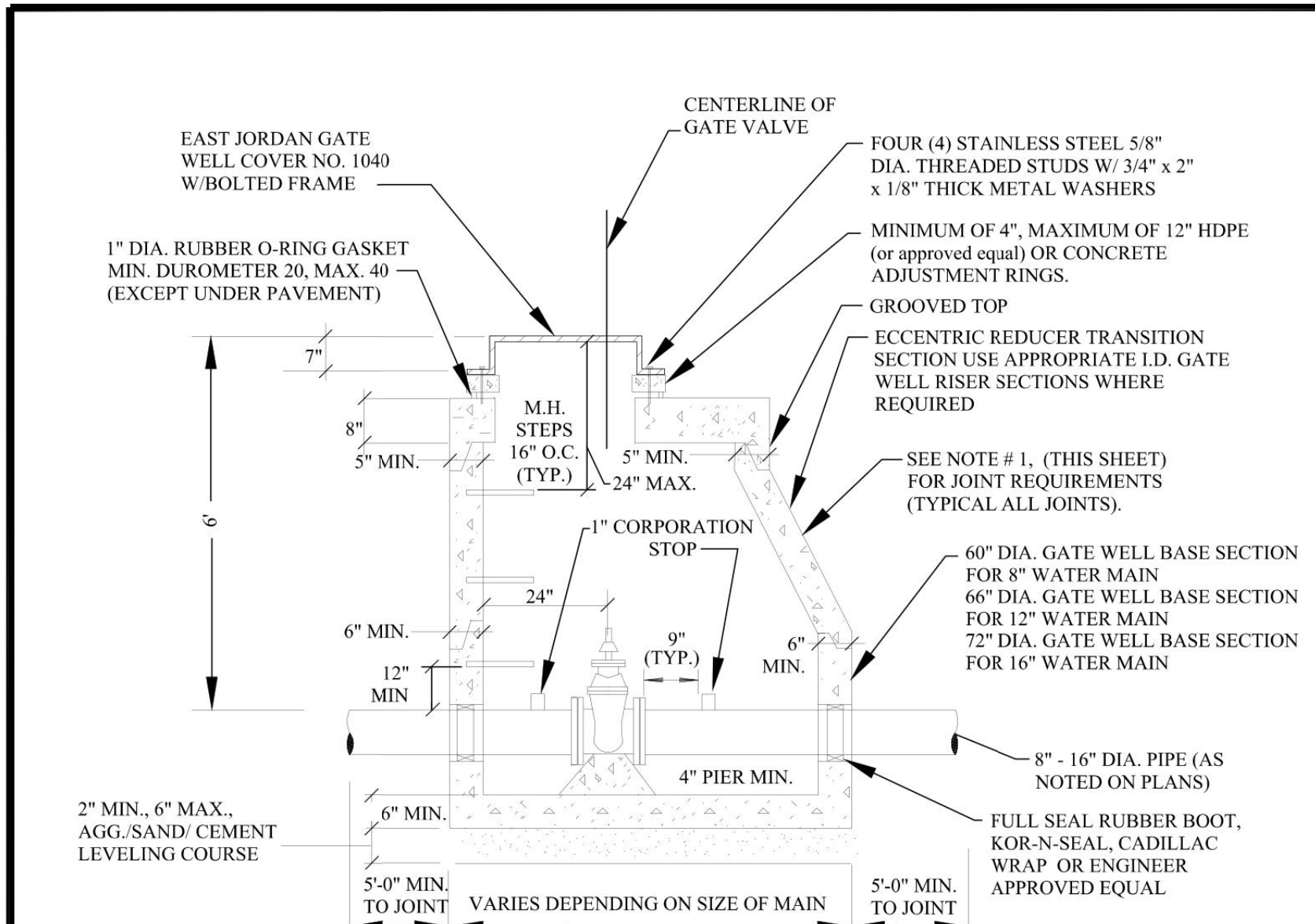
ACCESSIBLE PARKING SIGNAGE
N.T.S.

NOTES:
1. ALL LETTERS ARE 1" SERIES "C" PER MUTCD.
2. SIGN SHALL HAVE A REFLECTIVE (ENGINEERING GRADE) WHITE BACKGROUND WITH GREEN REFLECTIVE LEGEND AND BORDER.
3. FINE NOTIFICATION SIGN SHALL HAVE A REFLECTIVE (ENGINEERING GRADE) WHITE BACKGROUND WITH GREEN LEGEND AND BORDER.
4. CONTRACTOR SHALL VERIFY FINE AMOUNT.
5. ONE (1) SIGN REQUIRED FOR EACH PARKING SPACE.
6. INSTALLED HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND LOCAL ADA CODE.
7. ALL ACCESSIBLE FEATURES TO BE IN STRICT ACCORDANCE WITH ADA STANDARDS AND LOCAL LAWS.
8. AT LEAST ONE (1) FOR EVERY SIX (6) ACCESSIBLE SPACES MUST BE VAN ACCESSIBLE, WITH A MINIMUM OF ONE (1) VAN ACCESSIBLE SPACE PER SITE.

Drawing name: K:\CHS_LDEV\268266000_Rochester_Hills_MV2 design\CAD\PlanSheets\C7.0 - CONSTRUCTION DETAILS.dwg C7.0 Feb 06, 2023 6:39pm by: John Gross
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DESIGNED BY: EC	REVISIONS	DATE
DRAWN BY: EC	02/06/23 JWG	
CHECKED BY: JWG	12/19/22 JWG	
SCALE: AS NOTED	100% CONSTRUCTION DOCUMENTS	12/16/22 JWG
CITY FILE #22-039 SECTION #35		
ADCO Architectural Design Collaborative		
BANK OF AMERICA CONSTRUCTION DETAILS		
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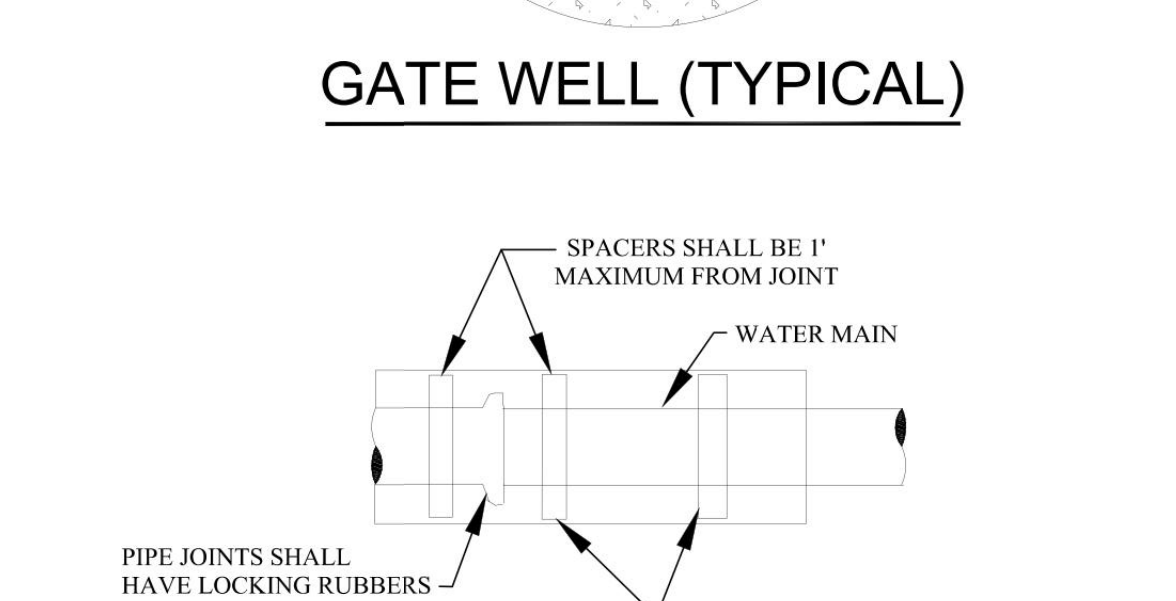
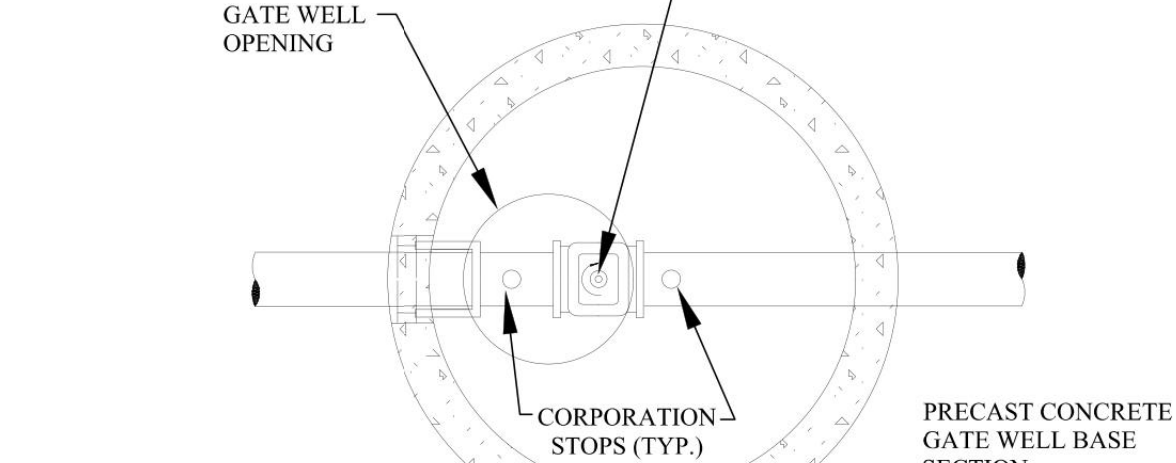
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NOTES:

- ALL PRECAST CONCRETE GATE WELL SECTIONS SHALL BE MANUFACTURED TO CONFORM WITH A.S.T.M. C478, STANDARD SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS, EXCEPT WALL THICKNESS SHALL BE AS SHOWN ON THESE DETAILS. ALL JOINTS FOR PRECAST CONCRETE GATE WELL SECTIONS SHALL BE "MODIFIED GROOVE TONGUE" WITH GASKET MANUFACTURED TO CONFORM WITH A.S.T.M. C443, STANDARD SPECIFICATION FOR JOINTS FOR CIRCULAR CONCRETE SEWER AND CULVERT PIPE USING RUBBER GASKETS.
- CONTRACTOR SHALL INSTALL VALVES, TAPPING SLEEVES AND GATE WELL STRUCTURES IN STRICT COMPLIANCE WITH MEASUREMENTS PROVIDED ON SHEET 16.c. 2'-0" BETWEEN GATE WELL WALL & CENTERLINE OF OPERATING NUT) TO ALLOW PROPER OPERATION OF VALVE THROUGH GATE WELL OPENING. FAILURE TO DO SO WILL REQUIRE CONTRACTOR TO CORRECT AT HIS EXPENSE.
- TAPPING SLEEVES SHALL BE MANUFACTURED BY ROMAC INDUSTRIES; MUELLER; EAST JORDAN; SMITH-BLAIR OR APPROVED EQUAL AND APPROVED BY THE CITY OF ROCHESTER HILLS. FULL BODY SLEEVES MUST BE USED EXCEPT FOR REINFORCED CONCRETE PRESSURE PIPE OR A.C. PIPE.
- FOR ALL PIPE USE A 1" CORPORATION STOP. NO CORPS SHALL BE USED IN CONCRETE PRESSURE PIPE.
- RUBBER O-RINGS SHALL NOT BE USED IN PAVEMENT.

MANHOLE STEPS TO BE PLASTIC COATED STEEL MEETING THE REQUIREMENTS IN ASTM D 2146, TYPE II, GRADE 49108, MA. INDUSTRIES P.S.I. POLYPROPYLENE OR APPROVED EQUAL. STEPS TO BE INSTALLED DURING MANHOLE MANUFACTURE, PLACED AT 16" C. TO C.



UNLESS OTHERWISE SPECIFIED, MINIMUM CASING PIPE SHALL BE ASTM A-139 GRADE B, WALL THICKNESS AS FOLLOWS:

NOMINAL SIZE	MINIMUM WALL THICKNESS
8" - 42"	0.375
48" - 60"	0.500

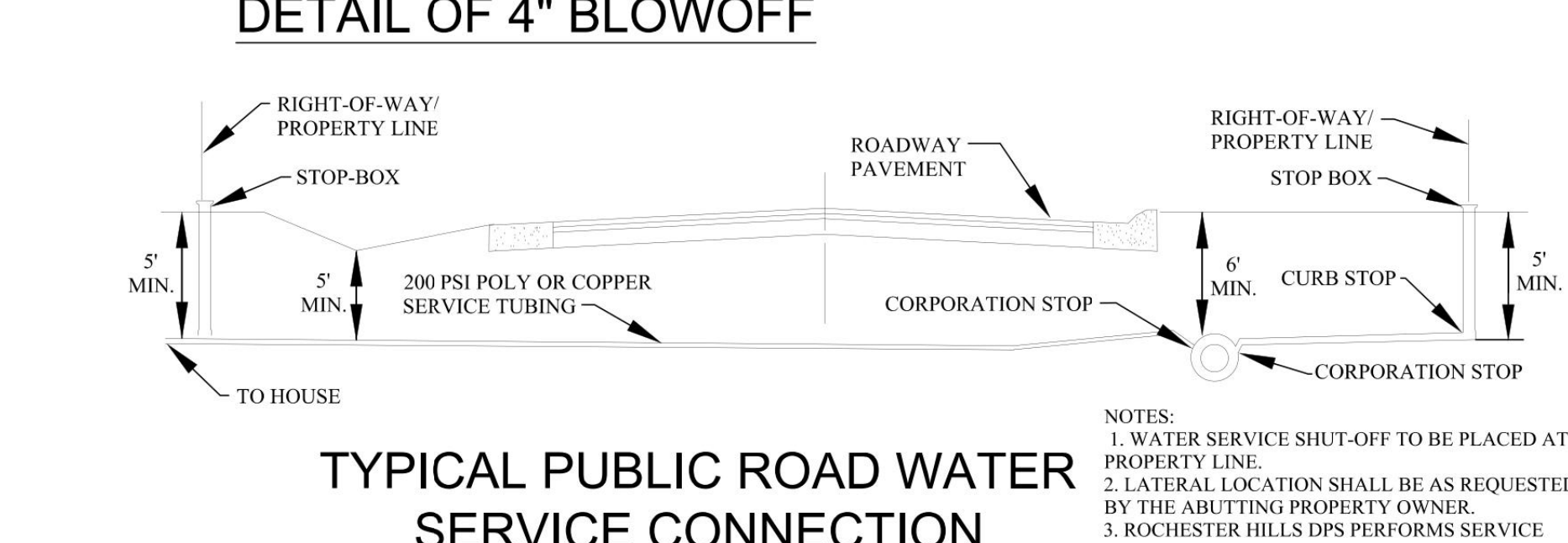
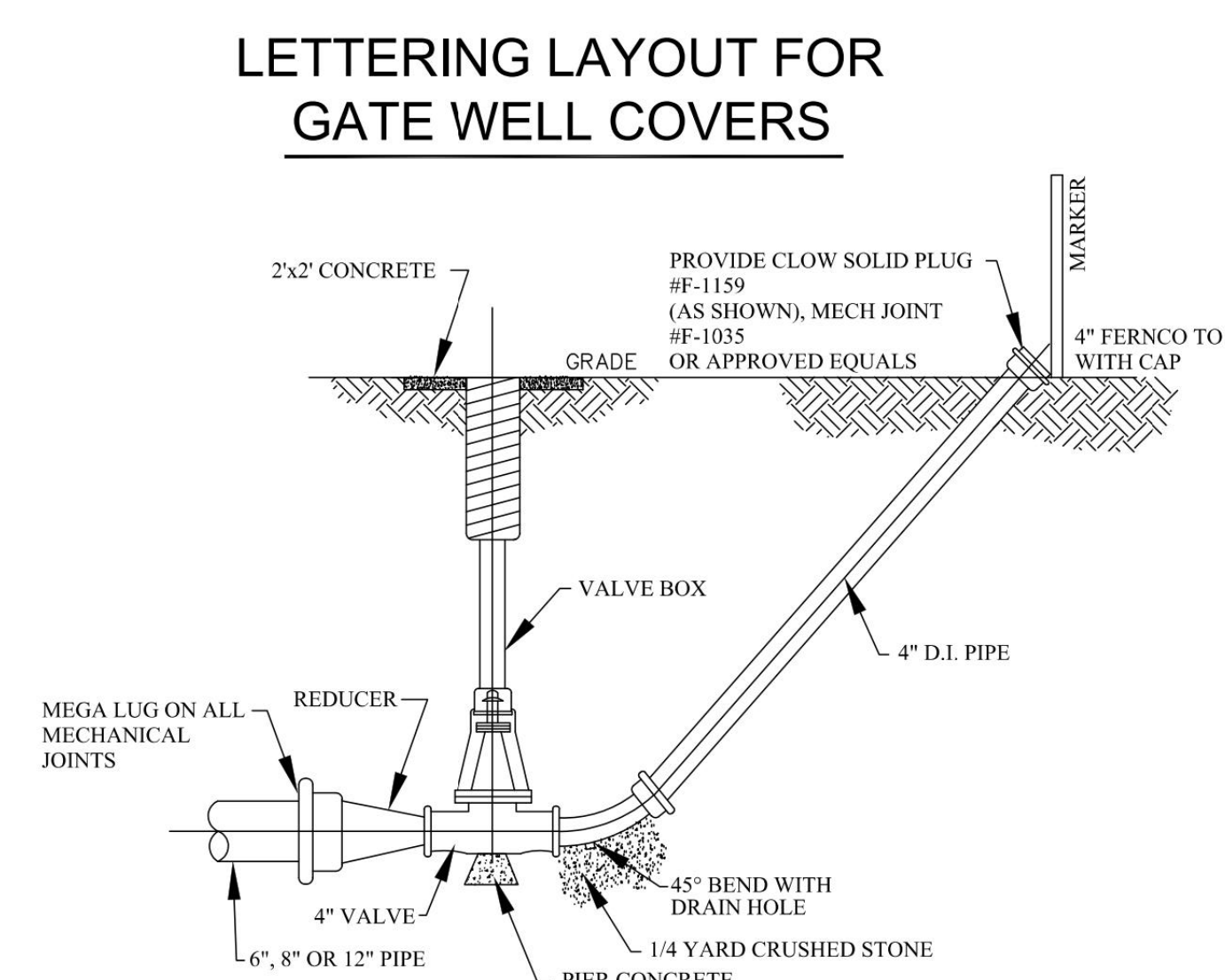
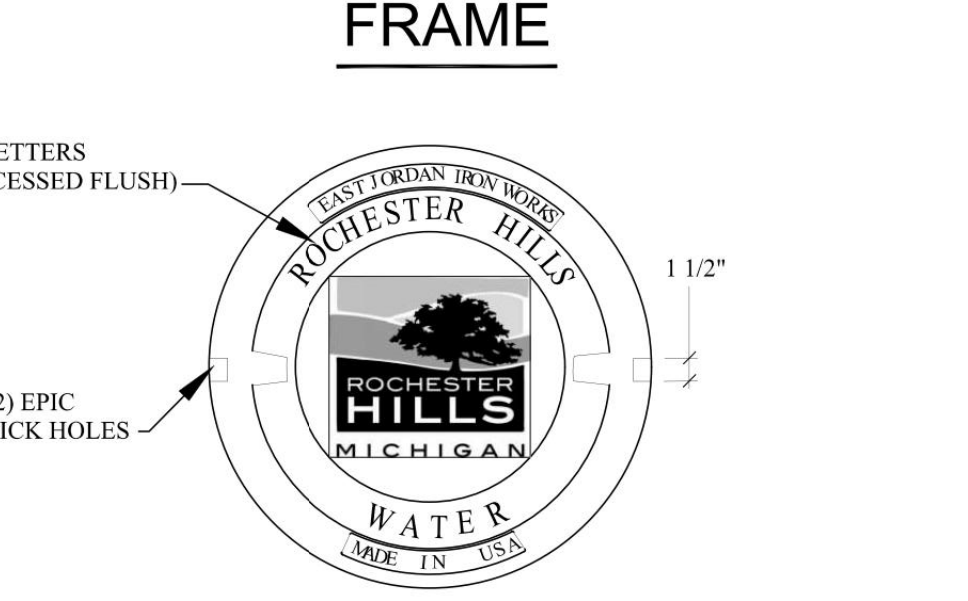
CASING SHOULD BE A MINIMUM OF 1 1/2 TIMES THE PIPE SIZE.

REQUIRED QUANTITY OF RUNNERS IN ACCORDANCE WITH SIZE:

TO 14" DIA.	3 RUNNERS
16" TO 36" DIA.	6 RUNNERS
38" TO 48" DIA.	8 RUNNERS

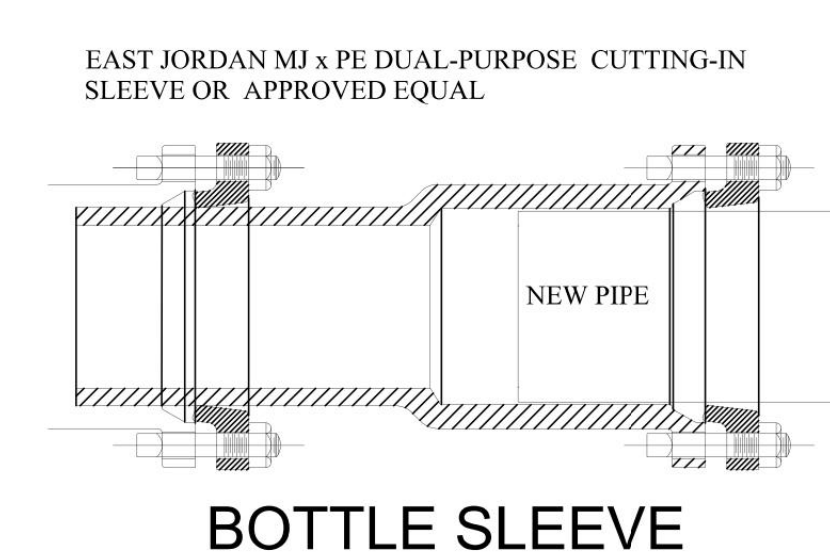
SUPPORT FOR WATER MAIN CONSTRUCTED IN CASING PIPE

Labels include: TREATED WOOD OR POLYETHYLENE RUNNER (TYP.), TO BE BULKHEADED AT THE ENDS, PRE-MANUFACTURED SPACER OR MANUFACTURED WOOD SPACER.



NOTES:

- WATER SERVICE SHUT-OFF TO BE PLACED AT PROPERTY LINE.
- LATERAL LOCATION SHALL BE AS REQUESTED BY THE ABUTTING PROPERTY OWNER.
- ROCHESTER HILLS DPS PERFORMS SERVICE LEAD TAPS UP TO 2" DIAMETER.



THRUST BLOCK DETAILS

NOTE: 3000 PSI CONCRETE TO BE USED. THRUST BLOCK TO ABUT & REST AGAINST UNDISTURBED SOIL OR EARTH COMPACTED TO 95% MODIFIED PROCTOR.

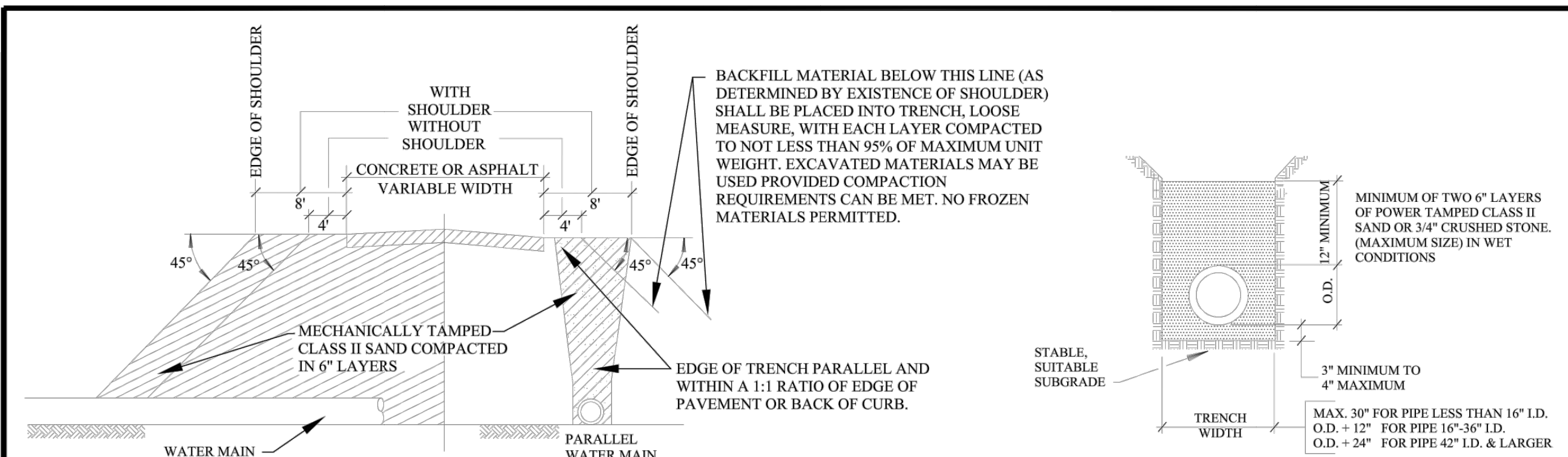
FOR 90° BENDS OR SMALLER					FOR PLUGS				FOR TEES				
D	A	B	C	E MIN.	D	A	B	C MIN.	D	A	B	C	E MIN.
20"	8"	6.5"	3.5"	2.5"	20"	7"	5"	2.5"	20"	6.5"	4.5"	3.5"	3"
16"	6"	4"	2.5"	2"	16"	4-10"	4-10"	2"	16"	4-8"	4-8"	2.5"	2.75"
12"	4"	3"	2"	1.75"	12"	4-4"	3"	1'-9"	12"	4"	3"	2.5"	2.5"
10"	3"	3"	2"	1.75"	10"	3"	2"	1'-6"	10"	3"	2"	2"	2.25"
8"	3"	2"	2"	1.5"	8"	2'-10"	2'-6"	1'-6"	8"	2'-6"	2"	2"	2.25"
6"	2"	1.5"	2"	1.25"	6"	1'-6"	1'-6"	3"	6"	2"	2"	2"	2.25"



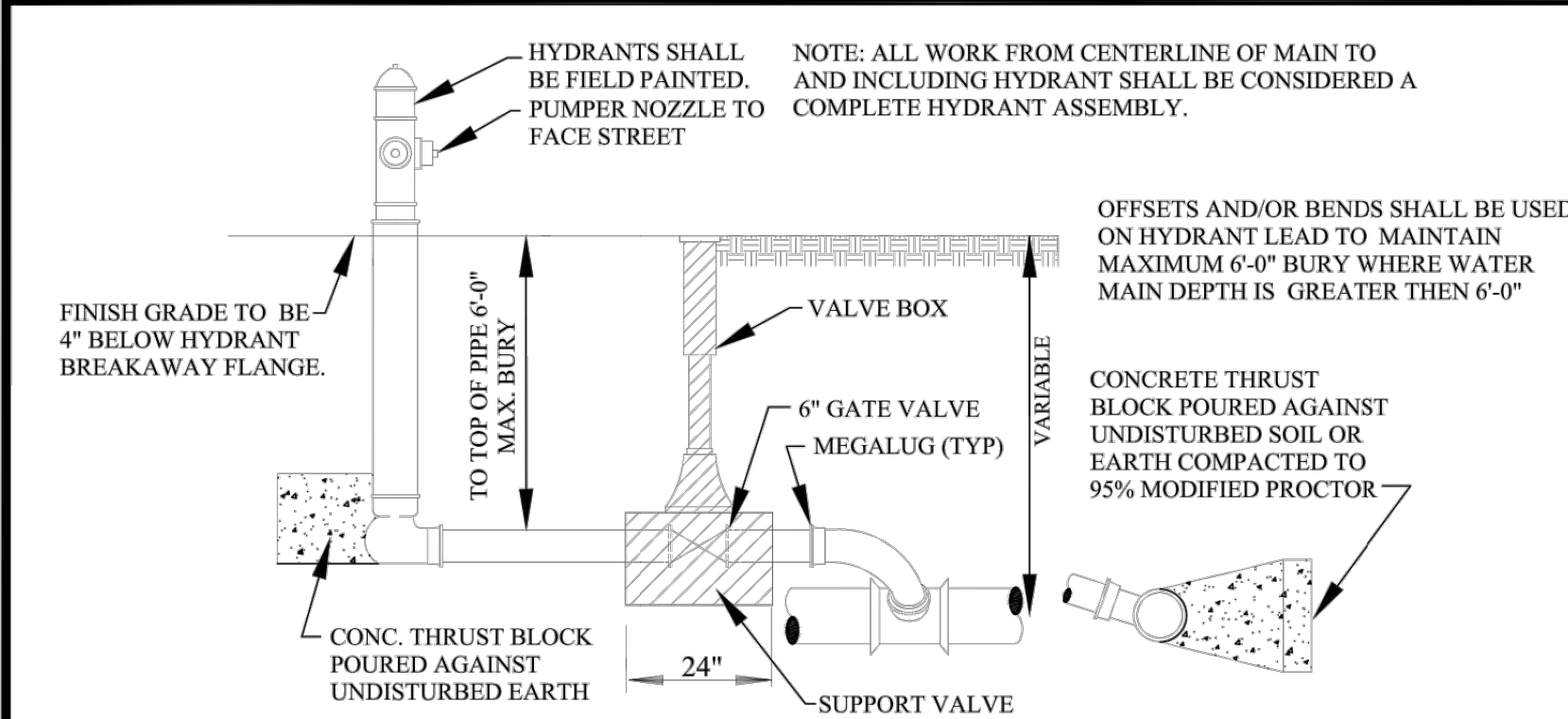
REVISIONS	DATE	APPROVED BY CITY COUNCIL, DATE: SEPTEMBER 23, 2019	NOTIFY ROCHESTER HILLS ENGINEERING DIVISION @ 248-841-2510 48 HRS. PRIOR TO START OF CONSTRUCTION	City of Rochester Hills 1000 Rochester Hills Drive, Rochester Hills, Michigan 48307	WATER MAIN STANDARD DETAILS	NOT TO SCALE DATE: 1/10/2018
		PREPARED BY ENGINEERING DIVISION DEPARTMENT OF PUBLIC SERVICES				SHEET 1 OF 2 REV 04/22/2022

DESIGNED BY: EC	DRAWN BY: EC	CHECKED BY: JWG	SCALE: AS NOTED	CITY FILE #22-039 SECTION #35	ROCHESTER HILLS WATER DETAILS	BANK OF AMERICA 3035 S ROCHESTER RD ROCHESTER HILLS, MI 48307
REVISED PER CITY COMMENTS	ISSUED FOR PERMIT	100% CONSTRUCTION DOCUMENTS	DATE	02/06/23	12/19/22	12/16/22
CITY FILE #22-039 SECTION #35 CITY OF ROCHESTER HILLS MICHIGAN						
ORIGINAL ISSUE: 11/18/2022 KHA PROJECT NO. 268266000 SHEET NUMBER						
CITY FILE #22-039 SECTION #35 C7.1						

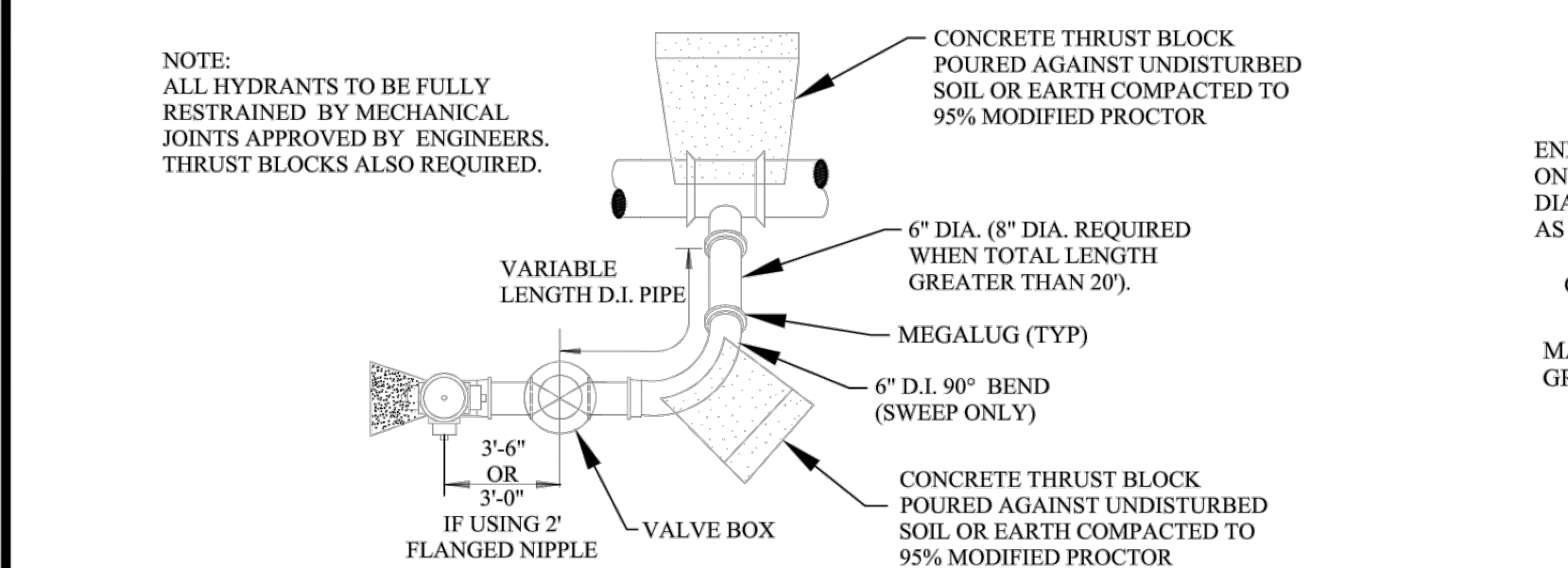
Drawing name: K:\CHS\LDV\268266000_AOC_Rochester_Hills_MV2 Design\CAD\PlanSheets\CHS7.0 - CONSTRUCTION DETAILS.dwg C7.2 Feb 06, 2023 6:40pm by: John.Dress
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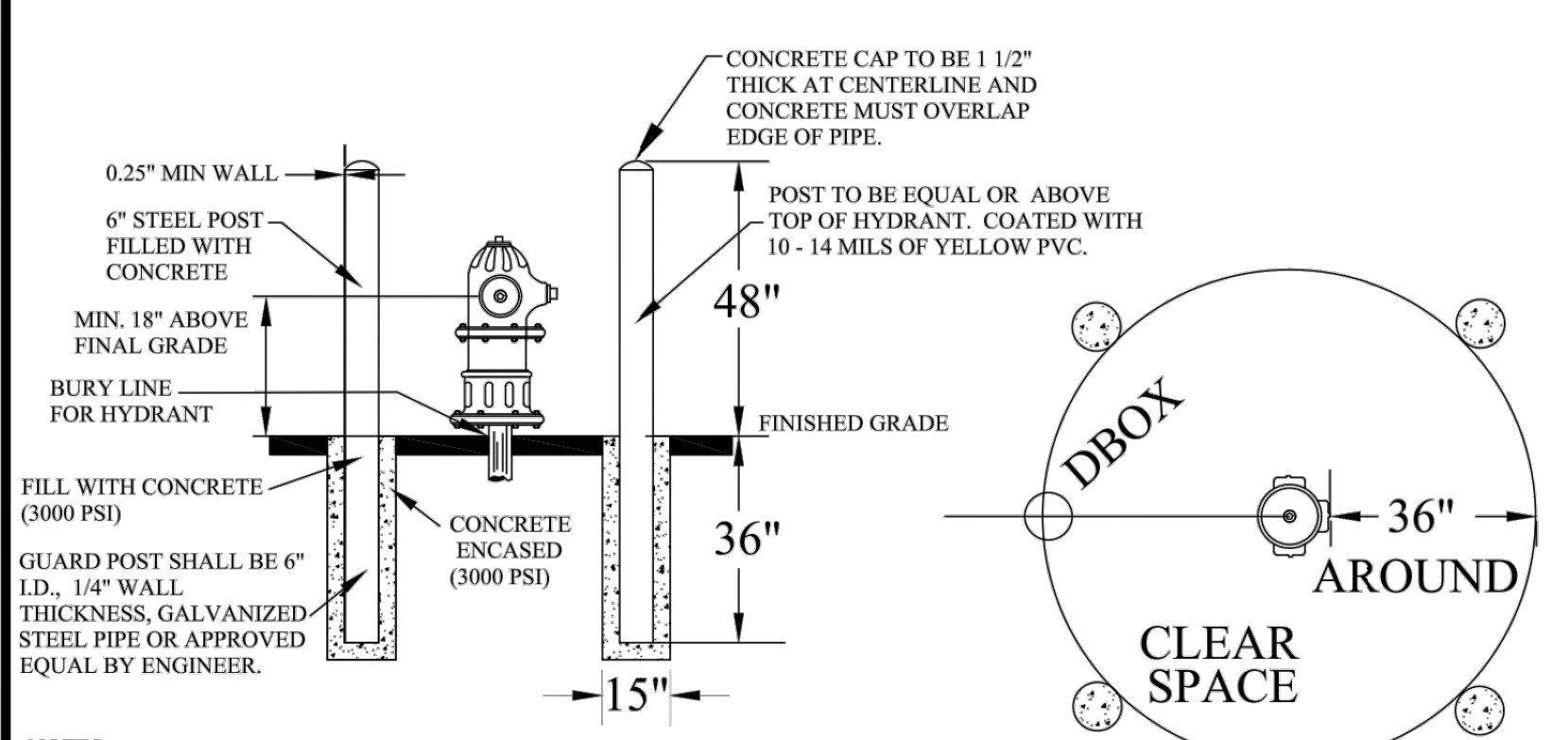
MINIMUM BACKFILL UNDER OR WITHIN PAVEMENT INFLUENCE



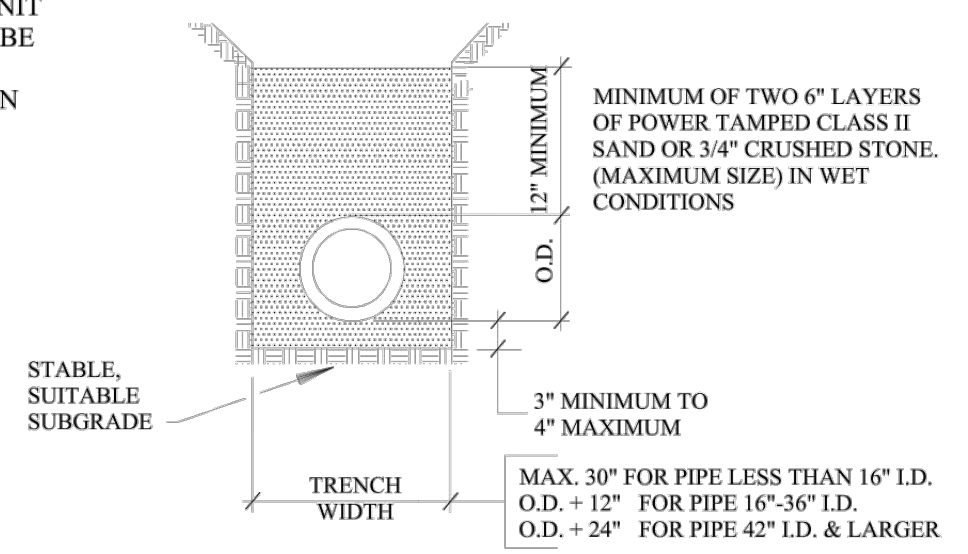
HYDRANT SIDE OUTLET OPTION



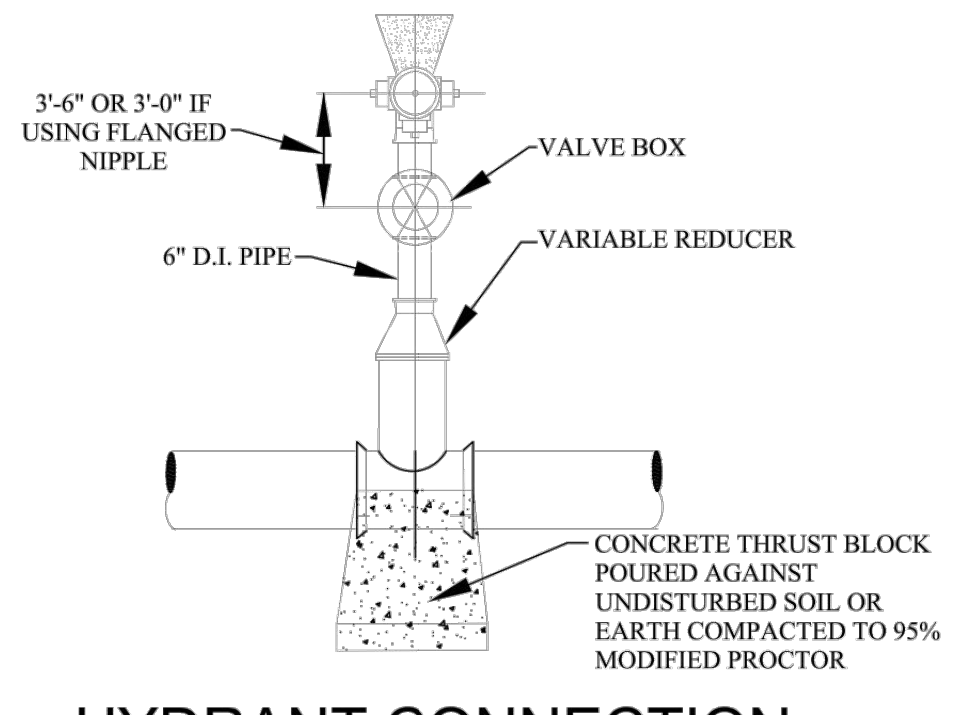
HYDRANT SIDE OUTLET OPTION



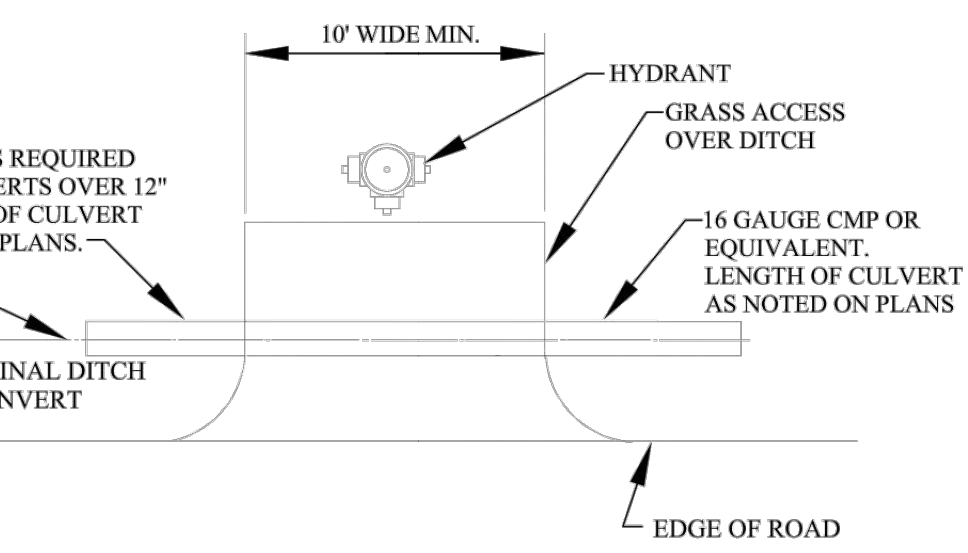
GUARD POST



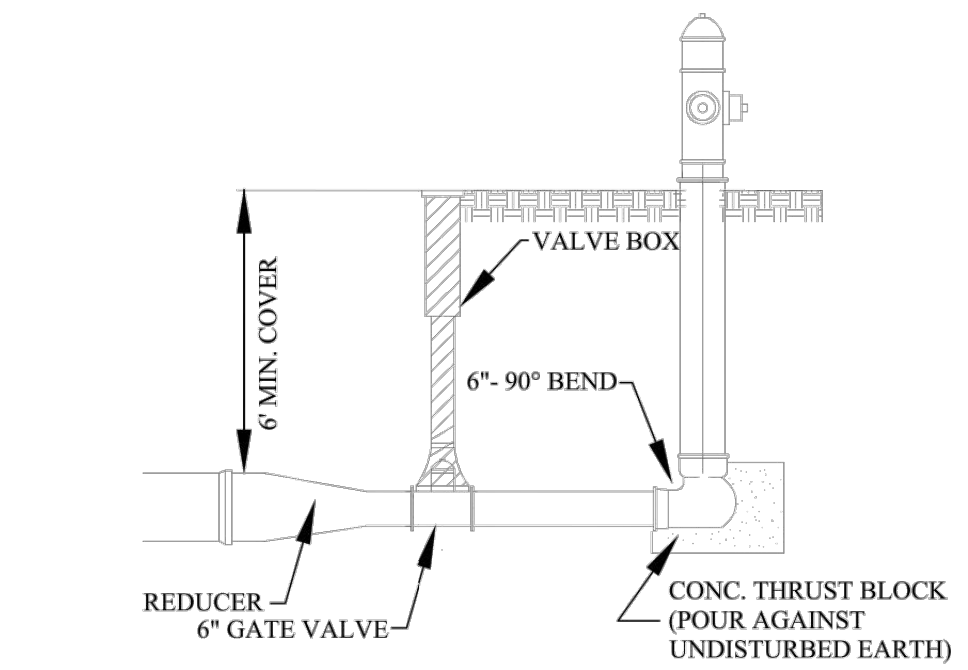
STANDARD BEDDING FOR WATER MAIN



HYDRANT CONNECTION (TYPICAL)



DITCH ENCLOSURE AT HYDRANT/ GATE WELL



DEAD END BLOWOFF CONNECTION

HYDRANT & BLOWOFF DETAILS

GENERAL NOTES

1. ALL CONSTRUCTION PROCEDURES AND MATERIALS SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ROCHESTER HILLS.
2. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED BY THE CITY OF ROCHESTER HILLS AND HELD PRIOR TO THE START OF CONSTRUCTION.
3. CONTRACTOR MUST CONTACT MISS DIG (811) AT LEAST THREE WORKING DAYS PRIOR TO THE START OF CONSTRUCTION FOR UNDERGROUND UTILITY LOCATIONS. ALL UTILITIES SHALL BE STAKED BEFORE CONSTRUCTION BEGINS.
4. ALL WATER MAIN EASEMENTS SHALL BE PROVIDED PRIOR TO CONSTRUCTION AND ACCEPTANCE OF THE WATER DISTRIBUTION SYSTEM.
5. WATER MAINS SHALL BE CONSTRUCTED WITH A MINIMUM COVER OF 6 FEET BELOW FINISHED GRADES, INCLUDING OPEN DRAINAGE COURSES.
6. ALL TRENCHES UNDER OR WITHIN A 1:1 RATIO OF EXISTING OR PROPOSED PAVEMENT OR DRIVEWAYS, SHALL BE BACKFILLED WITH COMPACTED CLASS II SAND TO GRADE (95% MAXIMUM UNIT DENSITY).
7. WHERE TWO UTILITIES CROSS, PROVIDE CLASS II BACKFILL MATERIAL IN SIX (6) INCH COMPACTED LAYERS TO TOP OF HIGHEST UTILITY.
8. WHERE WATER MAINS DIP UNDER OTHER UTILITIES, THE SECTIONS WHICH ARE DEEPER THAN NORMAL SHALL BE CONSTRUCTED WITH 11-1/4\"/>

WATER MAIN MATERIALS NOTES

1. TEMPORARY CONNECTIONS, WHICH MAY BE MADE FOR CHLORINATING AND FLUSHING PURPOSES, SHALL INCLUDE A TESTABLE DOUBLE CHECK VALVE BACKFLOW PREVENTER WITH CURRENT CERTIFICATION.
2. CORPORATION STOPS USED FOR INSERTION INTO MAINS SHALL BE FORD TYPE B-44. ALL STOPS SHALL HAVE BRONZE CAST BODIES, KEYS, STEM WASHERS AND NUTS. INLET THREADS SHALL CONFORM TO THE LATEST VERSION OF AWWA C800.
3. ALL DUCTILE IRON PIPE (D.I.P.) WATER MAIN SHALL BE DESIGNED FOR 150 PSI MINIMUM WORKING PRESSURE. A ZINC COATING WITH CLASS 52 MAY BE PROPOSED AND IS SUBJECT TO FINAL DECISION FOR APPROVAL BY THE CITY ENGINEER.
4. THE DUCTILE IRON PIPE TO BE FURNISHED AND DELIVERED UNDER THIS SPECIFICATION SHALL MEET ALL THE REQUIREMENTS OF THE CURRENT AWWA C151 (ANSI A21.5), EXCEPT AS OTHERWISE SPECIFIED HEREIN. PIPE SHALL BE DOUBLE CEMENT-LINED AND SEAL COATED WITH AN APPROVED BITUMINOUS SEAL COAT IN ACCORDANCE WITH AWWA C104 (ANSI A21.4).
5. DUCTILE IRON PIPE SHALL BE CLASS 54 FOR SIZES THREE (3) INCH THROUGH TWENTY (20) INCH SIZE. TWENTY-FOUR (24) INCH AND LARGER SHALL BE CLASS 55 DUCTILE IRON PIPE.
6. PIPES TWENTY-FOUR (24) INCHES AND LARGER IN NOMINAL DIAMETER SHALL MEET ALL THE REQUIREMENTS OF THE CURRENT AWWA C100 FOR DUCTILE IRON WATER PIPE.
7. MECHANICAL JOINTS FOR DUCTILE IRON WATER MAIN SHALL BE IN ACCORDANCE WITH AWWA C111 (ANSI A21.11).
8. FLANGE JOINTS FOR DUCTILE IRON WATER MAIN SHALL BE IN ACCORDANCE WITH AWWA C110 (ANSI A21.10).
9. FITTINGS FOR DUCTILE IRON PIPE SHALL BE DUCTILE IRON AND SHALL MEET REQUIREMENTS OF AWWA C110 (ANSI A21.10) OR AWWA C153 (ANSI A21.53). DUCTILE IRON FITTINGS SHALL BE RATED FOR 350 PSI, PIPE SIZES TWENTY-FOUR (24) INCH DIAMETER AND LESS, AND 250 PSI FOR PIPE SIZES OVER TWENTY-FOUR (24) INCH DIAMETER. DUCTILE IRON FLANGE FITTINGS SHALL BE RATED FOR 250 PSI FOR ALL PIPE DIAMETERS.
10. ALL DUCTILE IRON PIPE, FITTINGS AND HYDRANTS SHALL BE ENCASED WITH POLYETHYLENE ENCASEMENT IN ACCORDANCE WITH THE REQUIREMENTS OF A.N.S.I./A.W.A. STANDARD SPECIFICATION D1248 AND AWWA C105. POLYETHYLENE TUBE MATERIAL SHALL HAVE A THICKNESS OF .008\"/>

VALVE AND SLEEVE NOTES

1. GATE VALVES, SIZES THREE (3) INCH THROUGH SIXTEEN (16) INCH AND TAPPING VALVES SHALL MEET THE CITY OF ROCHESTER HILLS STANDARD AS DETAILED WITH NON-RISEING STEM. (EAST JORDAN, AMERICAN FLOW CONTROL, MUELLER)
2. ALL IN LINE GATE VALVES EIGHT (8) INCH AND LARGER SHALL BE IN WELLS. SPECIFICATIONS SHALL INCLUDE THE DIRECTION OF OPERATION OF ALL VALVES (CLOCKWISE CLOSURE). VALVE BOX USE TO BE APPROVED BY ENGINEERING DIVISION.
3. ALL GATE WELL COVERS SHALL BE CITY OF ROCHESTER HILLS STANDARD AS DETAILED.
4. ALL GATE VALVES WITH OPERATING NUTS AT A DISTANCE GREATER THAN FIVE (5) FEET BELOW GROUND SURFACE SHALL BE PROVIDED WITH AN EXTENSION STEM. THE LENGTH OF THE EXTENSION STEM SHALL REACH WITHIN FIVE (5) FEET FROM THE GROUND SURFACE. WHEN AN EXTENSION STEM IS USED, IT SHALL BE HELD IN PLACE BY AN EXTENSION STEM GUIDE SUITABLY FASTENED TO THE WALL OF THE GATE WELL. THE EXTENSION STEM SHALL BE MECHANICALLY ATTACHED TO THE OPERATING NUT. DETAILS OF THE EXTENSION SYSTEM AND THE METHOD OF INSTALLATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
5. BUTTERFLY VALVES SHALL BE USED FOR VALVES GREATER THAN 16-INCH DIAMETER AND SHALL BE MODEL 2F11 AS MANUFACTURED BY HENRY PRATT COMPANY OR APPROVED EQUAL.
6. TAPPING VALVES SHALL BE SERIES \"A\" AS MANUFACTURED BY EAST JORDAN OR RESILIENT SEATED GATE VALVES AS APPROVED BY THE CITY OF ROCHESTER HILLS ENGINEERING SERVICES.
7. TAPPING SLEEVES SHALL BE MANUFACTURED BY ROMAC INDUSTRIES, MUELLER, EAST JORDAN, SMITH-BLAIR OR APPROVED EQUAL AND APPROVED BY THE CITY OF ROCHESTER HILLS. FULL BODY SLEEVES MUST BE USED EXCEPT FOR REINFORCED CONCRETE PRESSURE PIPE OR A.C. PIPE.

HYDRANT REQUIREMENTS

1. ALL HYDRANTS SHALL BE CONSTRUCTED WITH A SIX (6) INCH COMPANION GATE VALVE IN A THREE (3) PIECE, ADJUSTABLE DUCTILE IRON VALVE BOX, WHICH SHALL INCLUDE A FIVE AND ONE-QUARTER (5-1/4) INCH SCREW SHAFT. VALVE BOXES SHALL BE SERIES 6860 AS MANUFACTURED BY TYLER PIPE OR APPROVED EQUAL.
2. ALL HYDRANTS SHALL BE EAST JORDAN NO. 5-BR-250 TRAFFIC MODEL, OR CITY APPROVED EQUAL. SELF-DRAINING HYDRANTS SHALL NOT BE USED. HYDRANTS SHALL HAVE BREAKAWAY FLANGE.
3. ALL HYDRANTS SHALL BE PAINTED RED ABOVE GROUND WITH A FINISH COAT OF RUST-OLEUM SAFETY RED OR APPROVED EQUAL. HYDRANT CAPS SHALL BE PAINTED SAME COLOR AS THE HYDRANT.
4. ALL FIRE HYDRANT JOINTS SHALL BE TOTALLY RESTRAINED BY THE USE OF RESTRAINED JOINT. THRUST BLOCKS ARE ALSO REQUIRED.

ACCEPTANCE OF NEW WATER MAINS

1. PRIOR TO WATER MAIN ACCEPTANCE THE FOLLOWING CONDITIONS MUST BE MET: 1) PRESSURE TESTING AND BACTERIA TESTING MUST BE COMPLETED IN ACCORDANCE WITH THE CITY OF ROCHESTER HILLS 2) ALL EASEMENT AND RIGHT-OF-WAY ACQUISITION MUST BE ACCEPTED BY THE CITY OF ROCHESTER HILLS ENGINEERING SERVICES 3) THE CITY OF ROCHESTER HILLS MUST BE PROVIDED WITH THE BILL OF SALE AND 4) ALL M.Y.L.A.R \"AS-BUILT DRAWINGS\" MUST BE ACCEPTED AND APPROVED BY THE CITY OF ROCHESTER HILLS, ENGINEERING SERVICES. THE CITY OF ROCHESTER HILLS INSPECTION DIVISION MUST WITNESS THE CONNECTION OF THE WATER MAIN TO THE EXISTING WATER MAIN, AFTER WHICH RESIDENTIAL AND COMMERCIAL TAPS WILL BE ALLOWED.
2. THE CONTRACTOR SHALL NOTIFY THE CITY OF ROCHESTER HILLS, INSPECTION DEPARTMENT (248.841.2510) FOR PRESSURE TESTING, BACTERIOLOGICAL SAMPLING, CONNECTIONS TO EXISTING WATER MAIN AND FINAL FIELD REVIEW. A FORTY-EIGHT (48) HOUR ADVANCE NOTICE IS REQUIRED.
3. THE CONTRACTOR SHALL DISINFECT AND PRESSURE TEST ALL NEW WATER MAIN IN ACCORDANCE WITH ROCHESTER HILLS STANDARDS. THE WATER MAIN SHALL PASS A 150 PSI PRESSURE TEST FOR A TWO (2) HOUR PERIOD. WATER LOSS SHALL NOT EXCEED A RATE OF 11.65 U.S. GALLONS PER INCH DIAMETER PER MILE OF WATER MAIN IN TWENTY-FOUR (24) HOURS.
4. WHERE CONTRACTOR SUPPLIED GAUGES ARE REQUIRED, MINIMUM SIZE SHALL BE 1/2\"/>

CITY OF ROCHESTER HILLS WATER SYSTEMS AS-BUILT DRAWING SPECIFICATIONS

IN AREAS WHERE WATER SYSTEMS ARE OPERATED AND MAINTAINED BY THE CITY OF ROCHESTER HILLS DEPARTMENT OF PUBLIC SERVICES, FINAL ACCEPTANCE OF THE WATER SYSTEM MUST BE RENDERED BY THE DEPARTMENT OF PUBLIC SERVICES, BEFORE THE SYSTEM CAN BE USED FOR THE SERVICE INTENDED.

ONE ITEM REQUIRED FOR FINAL ACCEPTANCE SHALL BE THE SUBMISSION OF AS-BUILT DRAWINGS TO THE CITY OF ROCHESTER HILLS, D.P.S. BY THE DESIGN ENGINEER. AS-BUILT DRAWINGS SHALL BE DEFINED AS AND CONTAIN THE FOLLOWING INFORMATION:

1. FINAL AS-BUILT DRAWINGS SHALL BE PROVIDED IN REPRODUCIBLE PDF FORMAT VIA DIGITAL STORAGE MEDIA. XEROX OR ANY HEAT PROCESS REPRODUCTIONS WILL NOT BE ACCEPTED.
2. ALONG WITH THE PDF PLAN SET PROVIDED TWO (2) SETS OF BLACK-LINED DRAWINGS AND THE PLANS ON ELECTRONIC MEDIA IN AUTOCAD FORMAT (LATEST VERSION).
3. EACH AND EVERY SHEET SHALL BE SEALED BY THE DESIGN ENGINEER, ALONG WITH THE FOLLOWING CERTIFICATION STATEMENT ON THE COVER SHEET:

I HEREBY CERTIFY THAT OUR FIRM HAS PREPARED THESE AS-BUILT DRAWINGS OF THE IMPROVEMENTS AS CONSTRUCTED, AND THAT TO THE BEST OF MY KNOWLEDGE THOSE IMPROVEMENTS NOTED AS \"AS BUILT\" WERE CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS, AND ALSO THAT THE WATER MAIN AND STRUCTURES, AS CONSTRUCTED, LIE WITHIN THE EASEMENT DESCRIPTIONS REQUIRED BY THE CITY OF ROCHESTER HILLS.

(COMPANY NAME)

(ENGINEER'S SIGNATURE)

PROFESSIONAL ENGINEER NO. _____

ENGINEER SEAL

4. THE MAXIMUM SCALE SHALL BE ONE (1) INCH EQUALS FIFTY (50) FEET.
5. THE SIZE, LENGTH, CLASS AND MANUFACTURER OF PIPE INSTALLED SHALL BE INDICATED.
6. THE SIZE, BRAND AND MODEL NUMBERS OF ALL VALVES AND HYDRANTS INSTALLED SHALL BE INDICATED.
7. A TOTAL AS-BUILT DRAWING QUANTITY LIST SHALL BE INCLUDED, AS WELL AS AN AS-BUILT DRAWING QUANTITY LIST ON EACH INDIVIDUAL SHEET.
8. THE LOCATIONS SHALL BE SHOWN ON THE PLANS WITH AN ACCURACY OF ONE (1) FOOT.
9. THE OFFSET OF THE WATER MAIN FROM PROPERTY LINES SHALL BE INDICATED.
10. ALL GATE VALVE WELLS, HYDRANTS AND ALL WATER SYSTEM APPURTENANCES SHALL BE LOCATED FROM TWO FIXED OBJECTS (MANHOLES, BUILDING CORNERS ETC.).
11. ALL UNDERGROUND APPURTENANCES, SUCH AS GATE VALVE WELLS, METER PITS, PRESSURE REDUCING VALVE PITS, ETC. SHALL BE LOCATED FROM THE NEAREST HYDRANT THAT IS CONNECTED TO THE SAME WATER MAIN AS THE APPURTENANCE.
12. THE LOCATION AND SIZE OF EVERY RESTRAINED JOINT SHALL BE NOTED.
13. THE ACCURATE LOCATION OF ALL UTILITY CROSSINGS WHERE THE VERTICAL SEPARATION, IS LESS THAN 18\"/>



REVISIONS	DATE	APPROVED BY	DATE

APPROVED BY: _____ DATE: SEPTEMBER 23, 2019

PREPARED BY: ENGINEERING DIVISION DEPARTMENT OF PUBLIC SERVICES

NOTIFY ROCHESTER HILLS ENGINEERING DIVISION @ 248-841-2510 48 HRS. PRIOR TO START OF CONSTRUCTION

City of Rochester Hills
1000 Rochester Hills Drive, Rochester Hills, Michigan 48309

WATER MAIN STANDARD DETAILS

NOT TO SCALE DATE: 1/10/2019
SHEET 2 OF 2

CITY FILE #22-039 SECTION #35

REVISED PER CITY COMMENTS	02/06/23	JWG
ISSUED FOR PERMIT	12/19/22	JWG
100% CONSTRUCTION DOCUMENTS	12/16/22	JWG
REVISIONS	DATE	BY

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ANN ARBOR, MI 48106-7208
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: EC
DRAWN BY: EC
CHECKED BY: JWG

CITY FILE #22-039 SECTION #35

ADDC
Architectural Design Collaborative

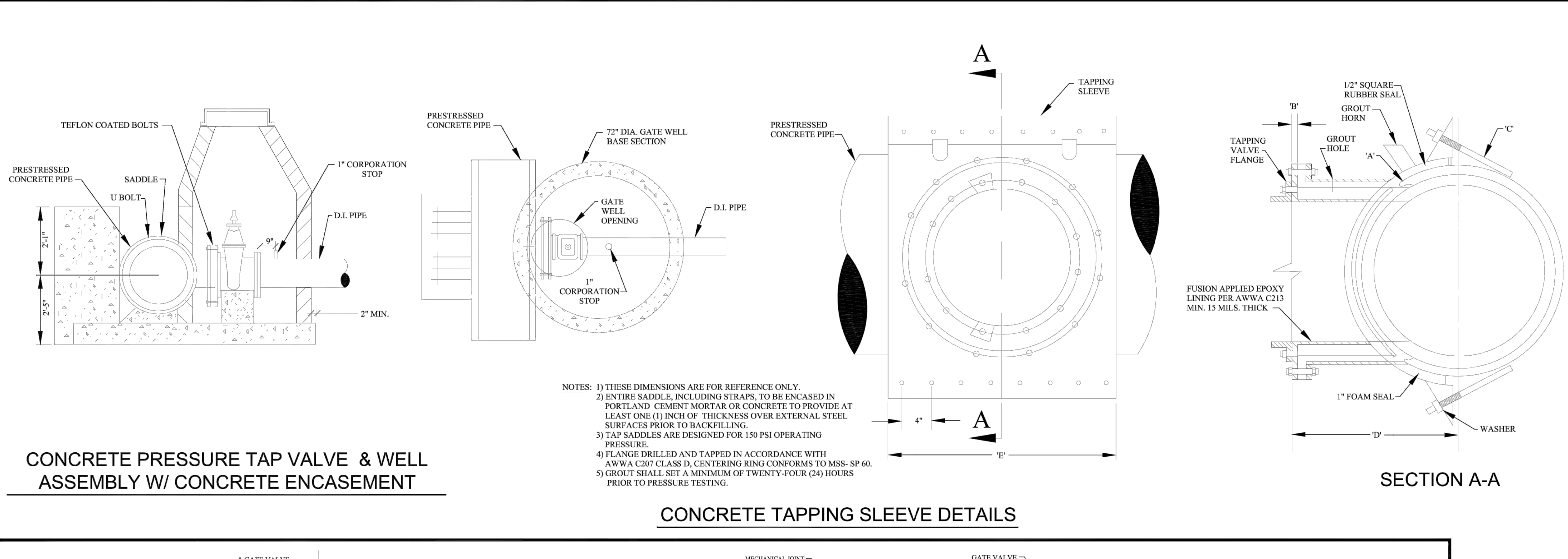
ROCHESTER HILLS WATER DETAILS

BANK OF AMERICA
3035 S ROCHESTER RD
ROCHESTER HILLS, MI 48307

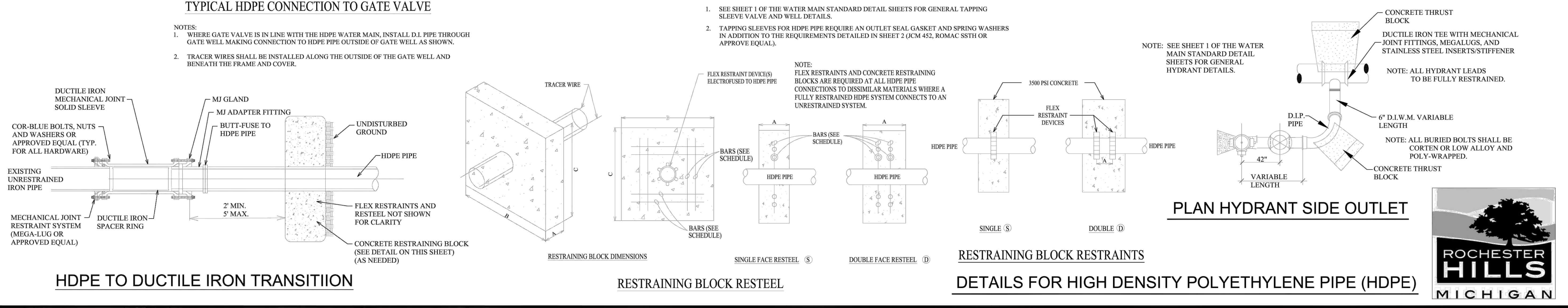
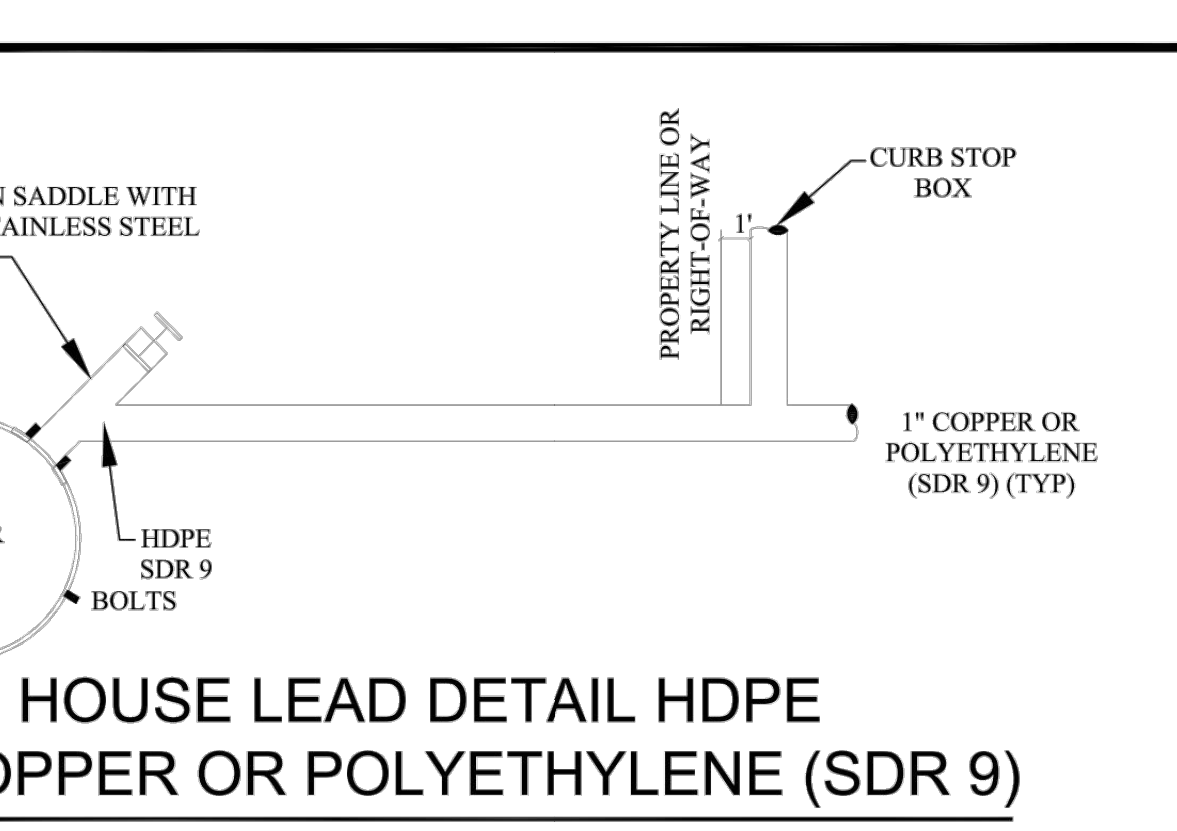
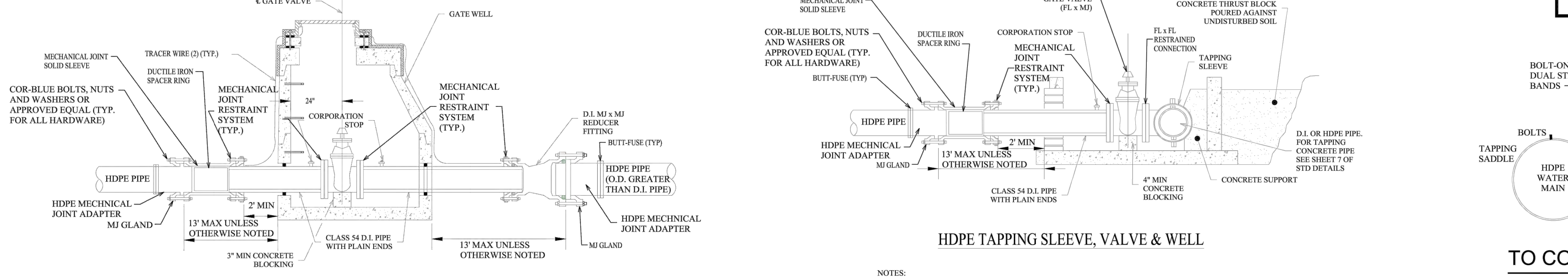
ORIGINAL ISSUE: 11/18/2022
KHA PROJECT NO. 268266000
SHEET NUMBER

C7.2

Drawing name: K:\GIS\DEV\268266000\002\CONSTRUCTION\DETAILS\DWG_C7.3 Feb 06, 2023 6:40pm by: John.Dress This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



PIPE SIZE X TAP SIZE	A	B	C	D	E
16" X 4"	1/4"	7/8"	6	14-1/16"	24"
16" X 6"	1/4"	1-1/8"	6	14-5/16"	24"
16" X 8"	1/4"	1-1/8"	6	14-5/16"	24"
16" X 10"	1/4"	1-3/8"	7	14-9/16"	28"
16" X 12"	1/4"	1-3/8"	8	14-9/16"	32"
20" X 4"	1/4"	7/8"	6	16-1/2"	24"
20" X 6"	1/4"	1-1/8"	6	16-1/2"	24"
20" X 8"	1/4"	1-1/8"	6	16-1/2"	24"
20" X 10"	1/4"	1-3/8"	7	17"	28"
20" X 12"	1/4"	1-3/8"	8	17"	32"
24" X 4"	1/4"	7/8"	6	18-3/4"	24"
24" X 6"	1/4"	1-1/8"	6	19"	24"
24" X 8"	1/4"	1-1/8"	6	19"	24"
24" X 10"	1/4"	1-3/8"	7	19-1/4"	28"
24" X 12"	1/4"	1-3/8"	8	19-1/4"	32"
30" X 4"	1/4"	7/8"	6	22-1/8"	24"
30" X 6"	1/4"	1-1/8"	6	22-3/8"	24"
30" X 8"	1/4"	1-1/8"	6	22-3/8"	24"
30" X 10"	1/4"	1-3/8"	7	22-5/8"	28"
30" X 12"	1/4"	1-3/8"	8	22-5/8"	32"
36" X 4"	1/4"	7/8"	6	25-1/2"	24"
36" X 6"	1/4"	1-1/8"	6	25-3/4"	24"
36" X 8"	1/4"	1-1/8"	7	25-3/4"	28"
36" X 10"	1/4"	1-3/8"	8	26"	32"
36" X 12"	1/4"	1-3/8"	9	26"	36"
42" X 4"	1/4"	7/8"	6	28-7/8"	24"
42" X 6"	1/4"	1-1/8"	7	29-1/8"	28"
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42" X 10"	3/8"	1-3/8"	9	29-3/8"	36"
42" X 12"	3/8"	1-3/8"	10	29-3/8"	40"
48" X 4"	3/8"	7/8"	7	32-1/4"	28"
48" X 6"	3/8"	1-1/8"	7	32-1/2"	28"
48" X 8"	3/8"	1-1/8"	7	32-1/2"	28"
48" X 10"	3/8"	1-3/8"	7	32-3/4"	28"
48" X 12"	3/8"	1-3/8"	9	32-3/4"	36"



REVISIONS	DATE	APPROVED BY	DATE
			SEPTEMBER 23, 2019

NOTIFY ROCHESTER HILLS ENGINEERING DIVISION @ 248-841-2510 48 HRS. PRIOR TO START OF CONSTRUCTION

City of Rochester Hills
1000 Rochester Hills Drive, Rochester Hills, Michigan 48309

WATER MAIN SPECIAL DETAILS

NOT TO SCALE	DATE: 1/10/2019
SHEET 1 OF 1	REV 12/10/2021

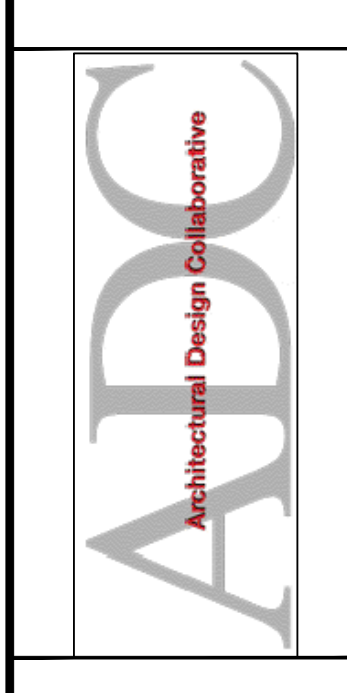
CITY FILE #22-039 SECTION #35

DATE	BY	REVISIONS
02/06/23	JWG	REVISED PER CITY COMMENTS
12/19/22	JWG	ISSUED FOR PERMIT
12/16/22	JWG	100% CONSTRUCTION DOCUMENTS

SCALE: AS NOTED
DESIGNED BY: EC
DRAWN BY: EC
CHECKED BY: JWG

CITY FILE #22-039 SECTION #35

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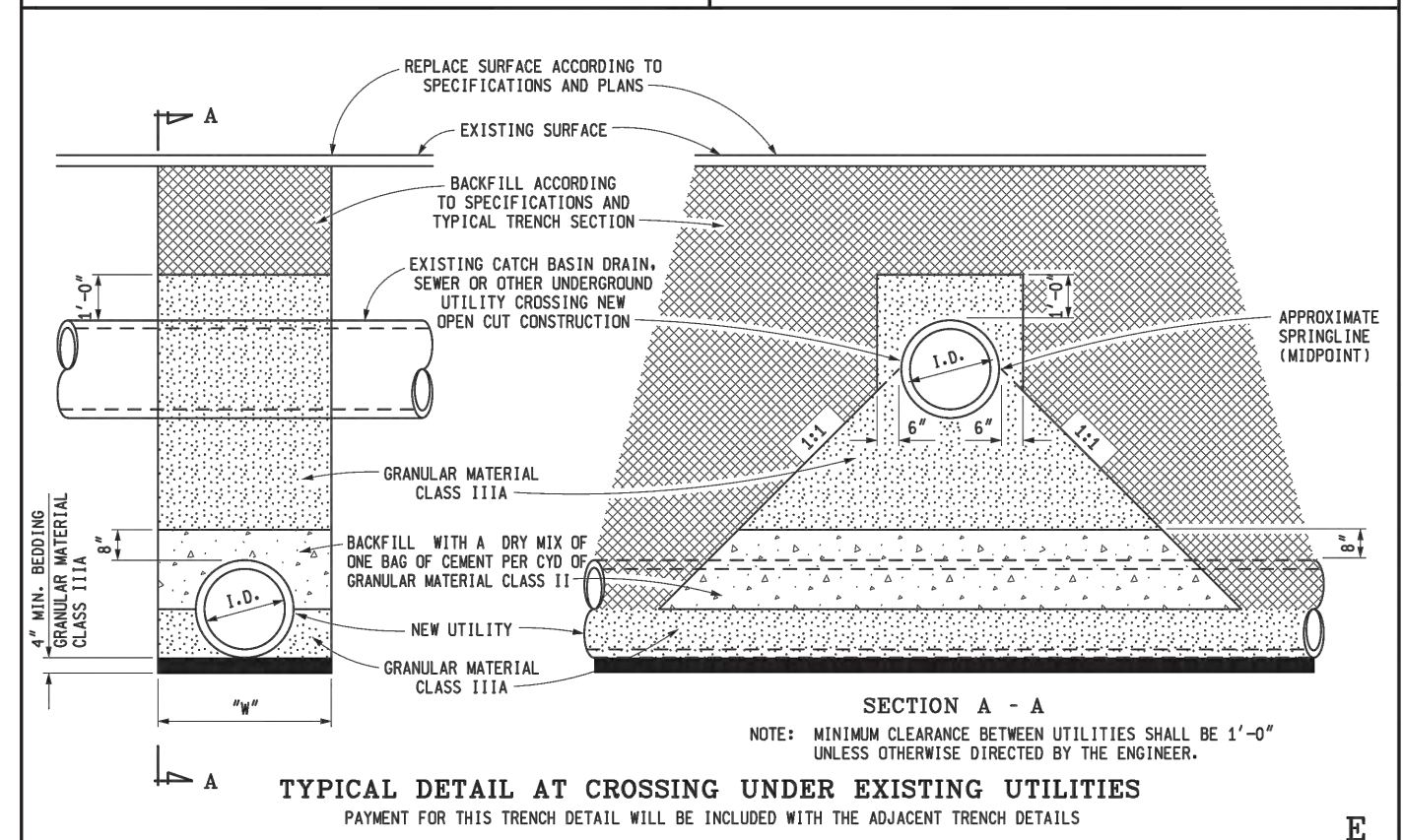
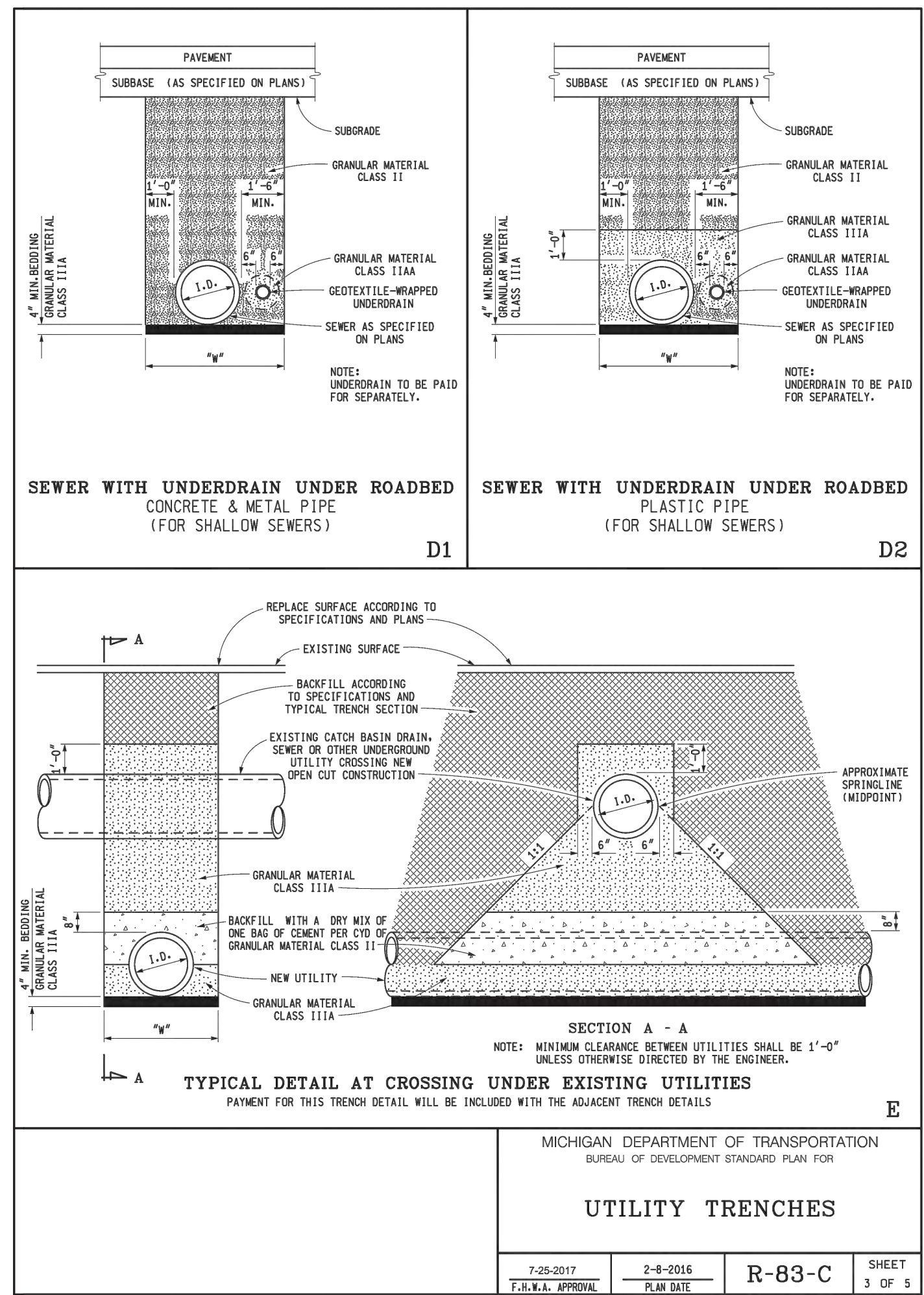
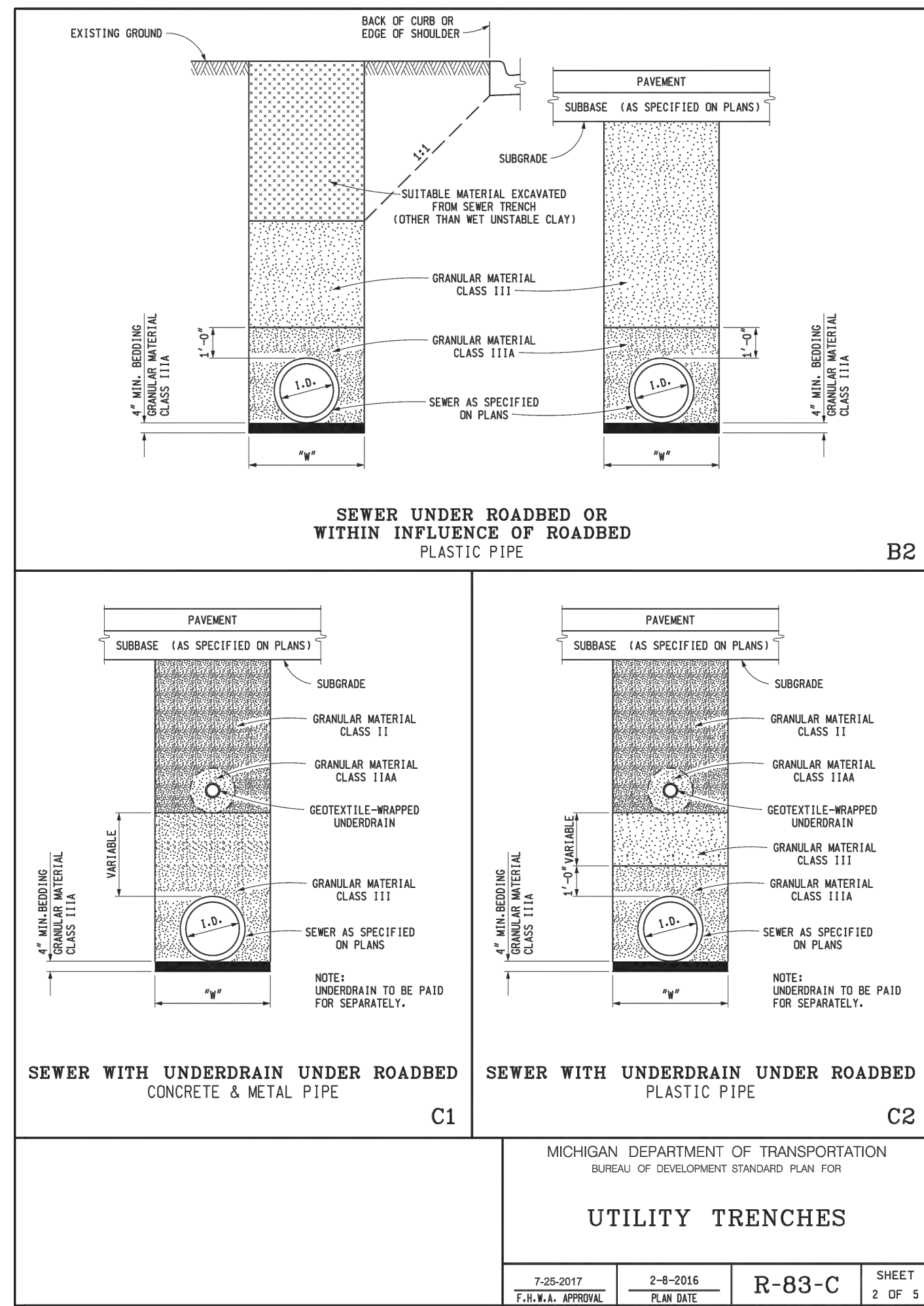
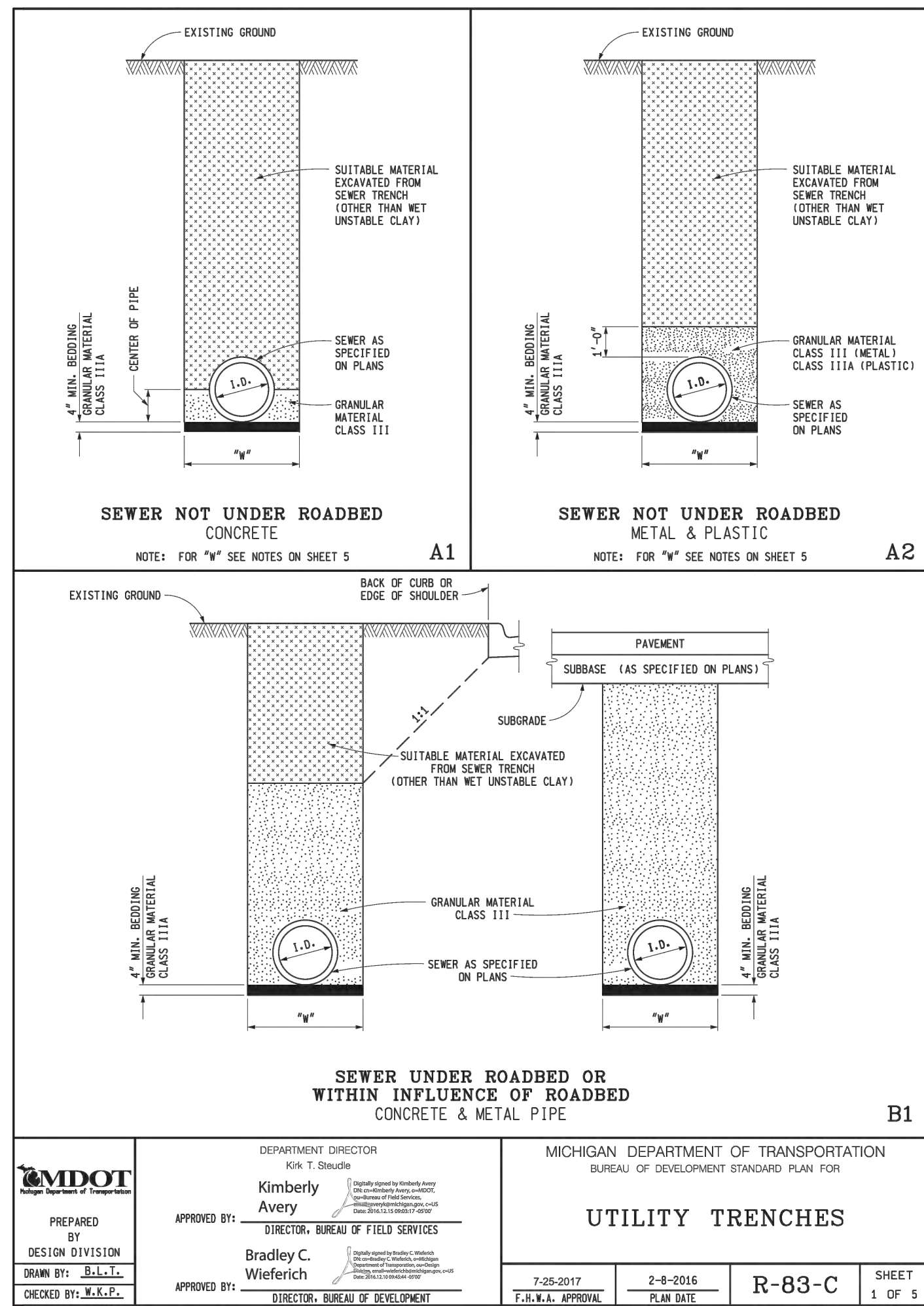
ROCHESTER HILLS WATER DETAILS

BANK OF AMERICA
3035 S ROCHESTER RD
ROCHESTER HILLS, MI 48307

ORIGINAL ISSUE: 11/18/2022
KHA PROJECT NO. 268266000
SHEET NUMBER

C7.3

Drawing name: K:\GIS\DEV\26826000_AOC_Rochester_Hills_MV2 design\CAD\PlanSheets\C7.4 - CONSTRUCTION DETAILS.dwg C7.4 Feb 06, 2023 6:40pm by: John Gross
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MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
UTILITY TRENCHES

7-25-2017 2-8-2016 R-83-C SHEET 1 OF 5

DEPARTMENT DIRECTOR
Kim T. Struble
APPROVED BY: Kimberly Avery
DIRECTION, BUREAU OF FIELD SERVICES

DESIGN DIVISION
DRAWN BY: B.L.T.C.
CHECKED BY: W.A.L.P.

APPROVED BY: Bradley C. Wiefelich
DIRECTION, BUREAU OF DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
UTILITY TRENCHES

7-25-2017 2-8-2016 R-83-C SHEET 2 OF 5

DEPARTMENT DIRECTOR
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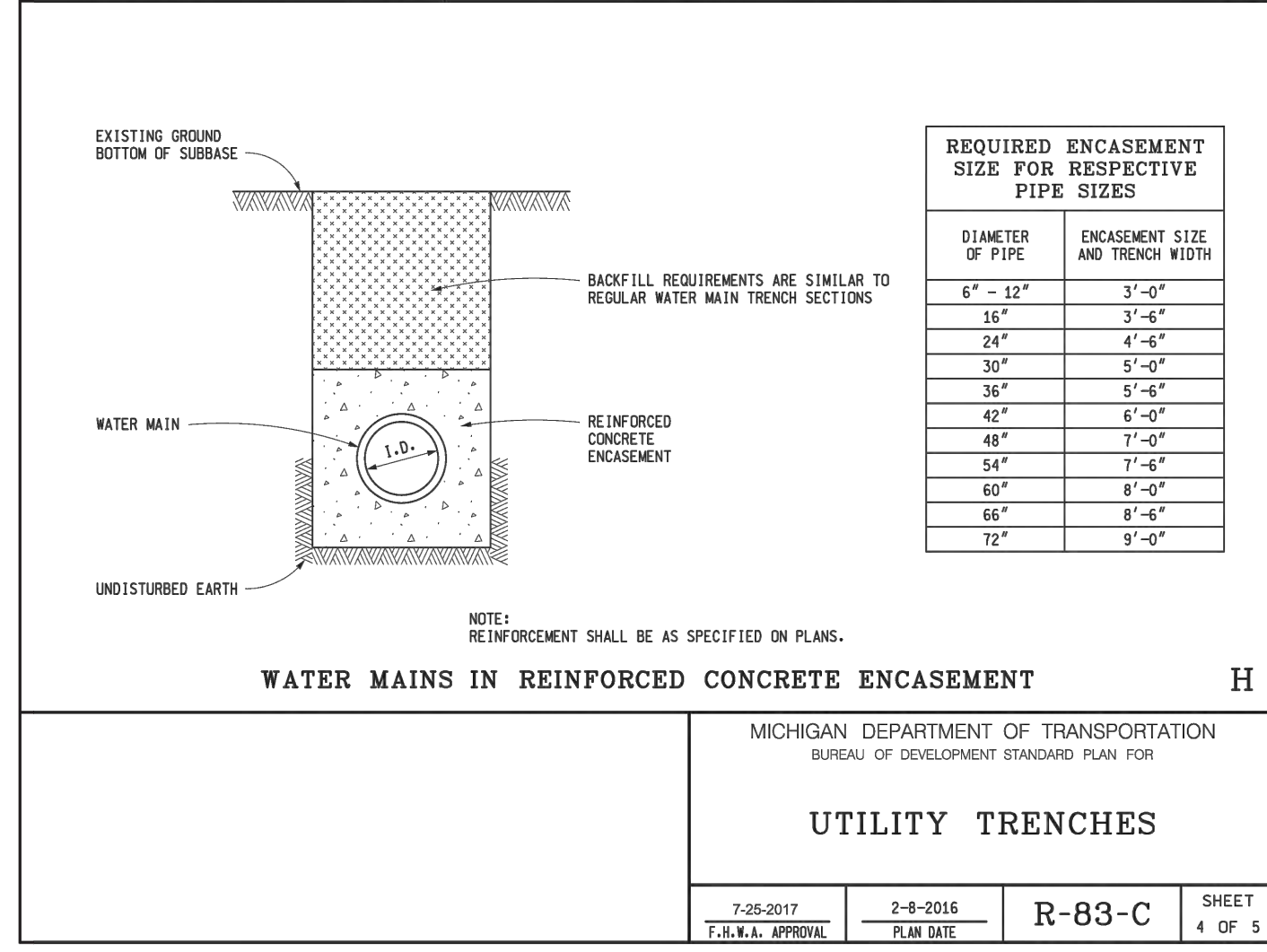
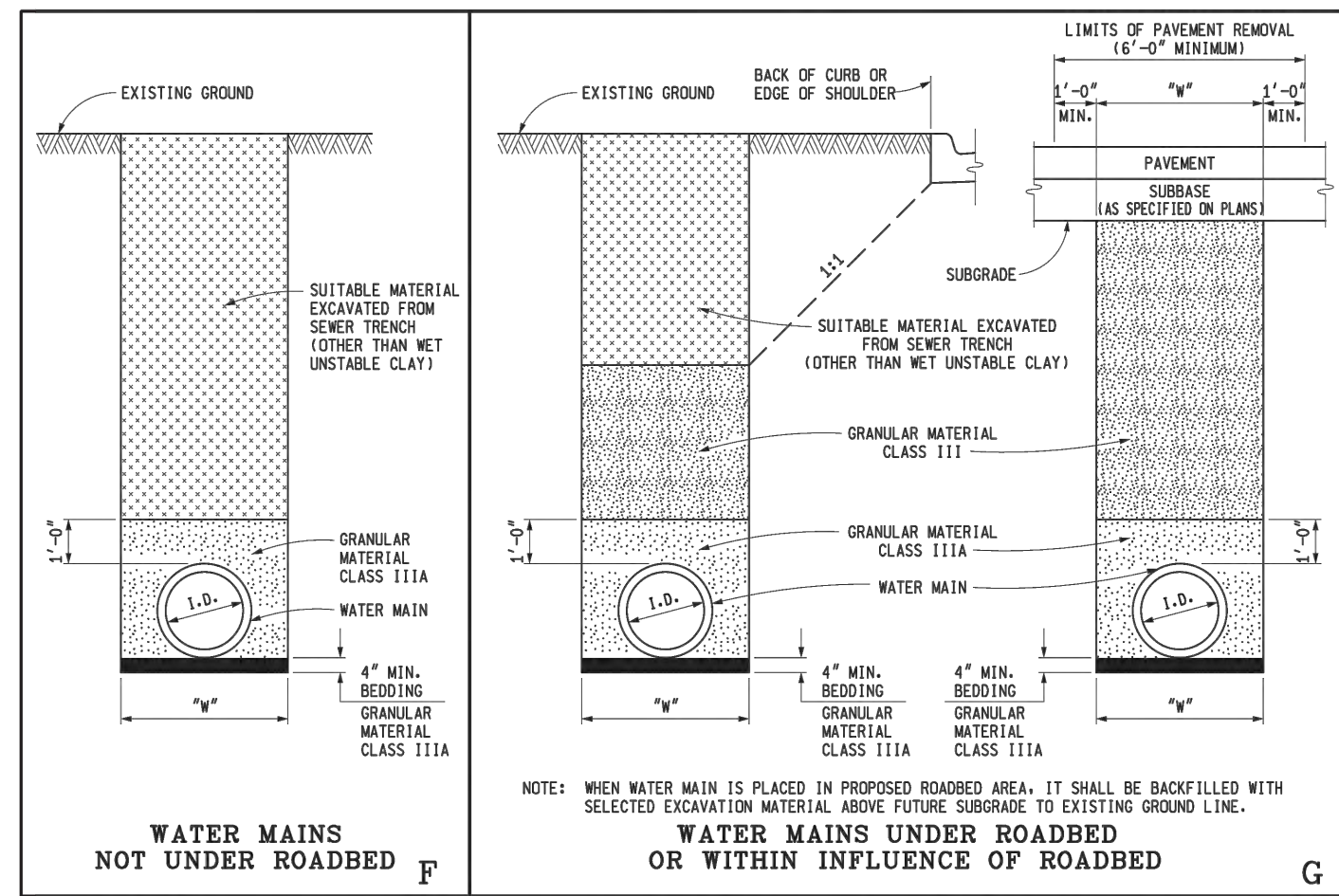
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
UTILITY TRENCHES

7-25-2017 2-8-2016 R-83-C SHEET 3 OF 5

DEPARTMENT DIRECTOR
Kim T. Struble
APPROVED BY: Kimberly Avery
DIRECTION, BUREAU OF FIELD SERVICES

DESIGN DIVISION
DRAWN BY: B.L.T.C.
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DIRECTION, BUREAU OF DEVELOPMENT



REQUIRED ENCASMENT SIZE FOR RESPECTIVE PIPE SIZES

DIAMETER OF PIPE	ENCASMENT SIZE AND TRENCH WIDTH
6" - 12"	3'-0"
16"	3'-6"
24"	4'-6"
30"	5'-0"
36"	5'-6"
42"	6'-0"
48"	7'-0"
54"	7'-6"
60"	8'-0"
66"	8'-6"
72"	9'-0"

NOTES:
BACKFILLING SHALL BE ACCORDING TO THE STANDARD SPECIFICATION.
SUFFICIENT TRENCH WIDTH SHALL BE PROVIDED TO ALLOW FREE WORKING SPACE AND TO PERMIT COMPACTING THE BACKFILL AROUND THE PIPE.

THE FOLLOWING ARE MINIMUM TRENCH WIDTHS:

PIPE SIZE (INCHES)	LESS THAN 18'	21'	24'	30'	36'
1.0' TRENCH WIDTH (FEET)	3.0	3.5	4.0	5.0	6.0

PIPE SIZE (INCHES)	42'	48'	54'	60'	66'	72'
1.0' TRENCH WIDTH (FEET)	7.0	8.0	9.5	10.0	10.5	11.0

PIPE SIZE (INCHES)	78'	84'	90'	96'	102'	108'
1.0' TRENCH WIDTH (FEET)	11.5	12.0	12.5	13.0	13.5	14.0

ESTIMATED PAVEMENT REMOVAL WIDTH IS TO BE TRENCH WIDTH "W" PLUS 1'-0" EACH SIDE OF THE TRENCH (6'-0" MINIMUM).

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
UTILITY TRENCHES

7-25-2017 2-8-2016 R-83-C SHEET 4 OF 5

DEPARTMENT DIRECTOR
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MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
UTILITY TRENCHES

7-25-2017 2-8-2016 R-83-C SHEET 5 OF 5

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REVISIONS	DATE	BY
100% CONSTRUCTION DOCUMENTS	12/16/22	JWG
ISSUED FOR PERMIT	12/19/22	JWG
REVISED PER CITY COMMENTS	02/06/23	JWG

SCALE: AS NOTED
DESIGNED BY: EC
DRAWN BY: EC
CHECKED BY: JWG

CITY FILE #22-039 SECTION #35

CONSTRUCTION DETAILS

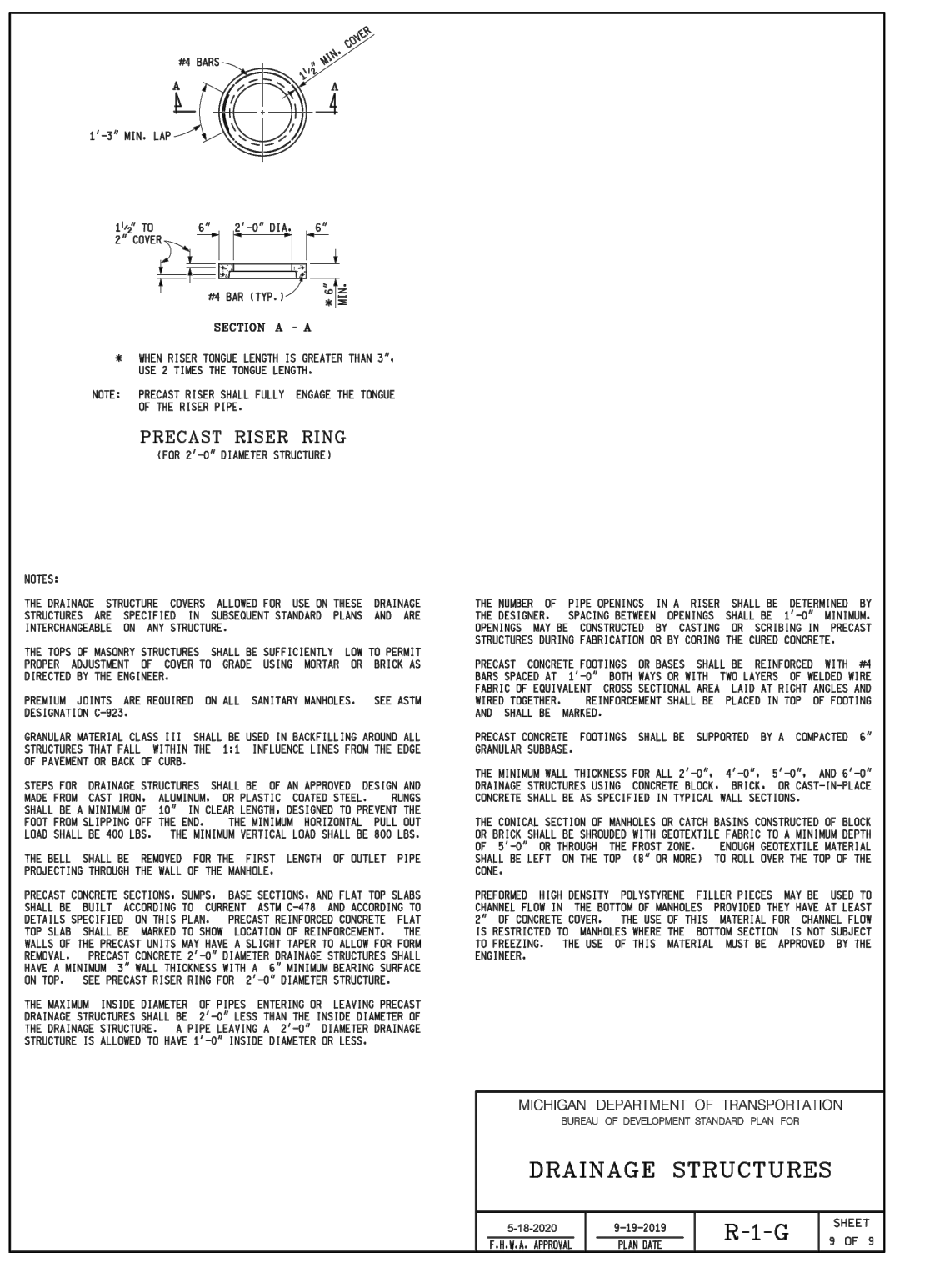
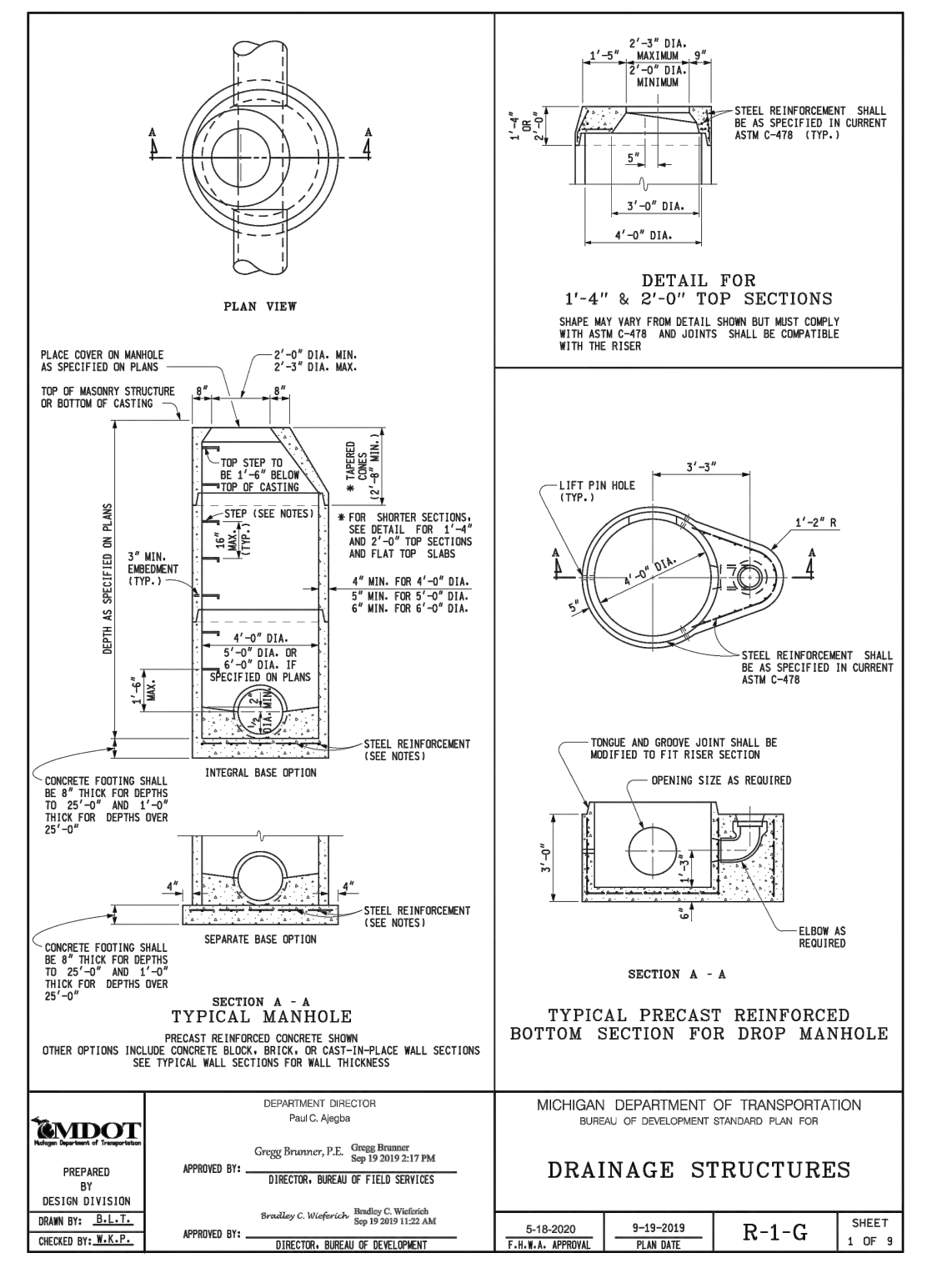
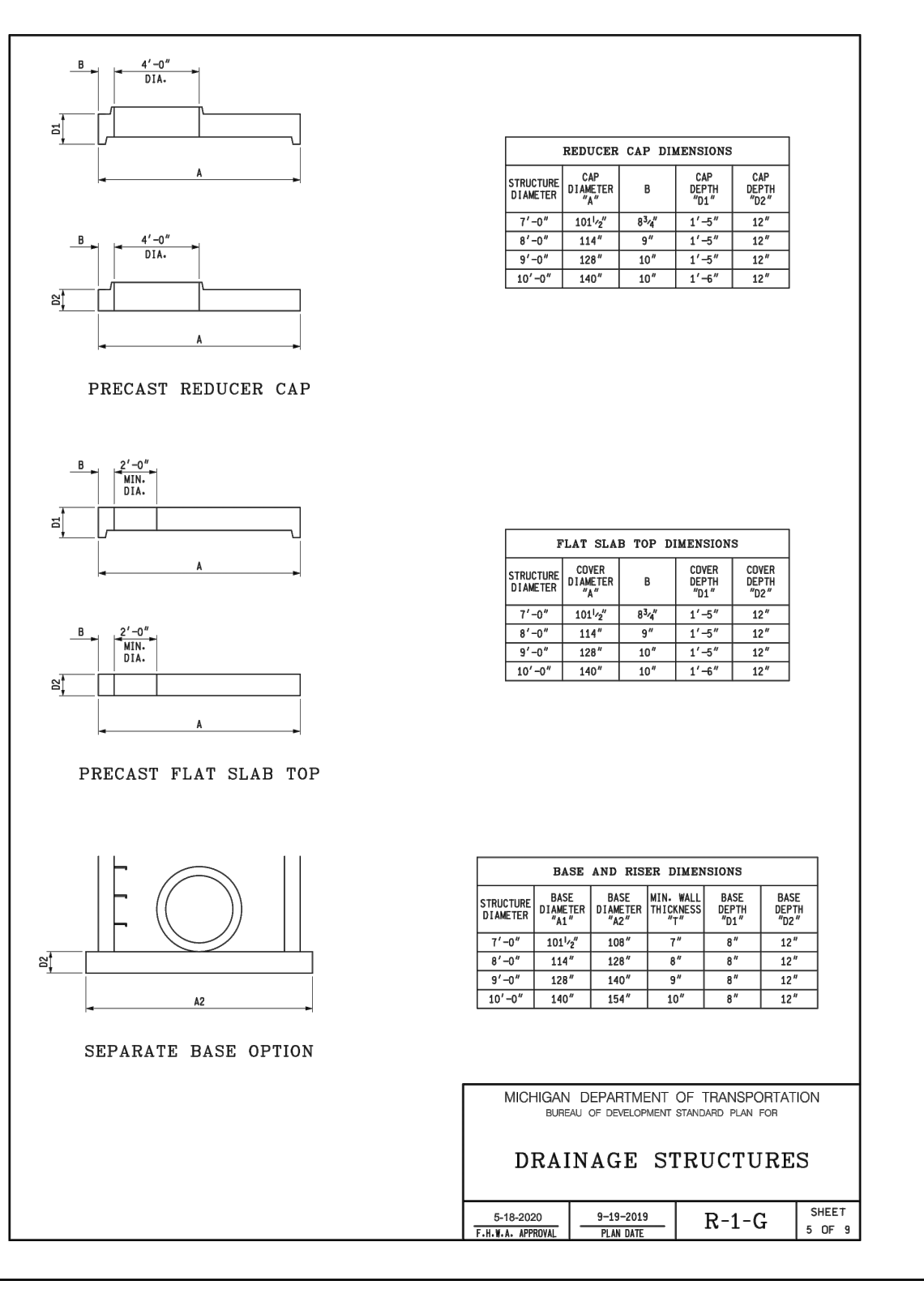
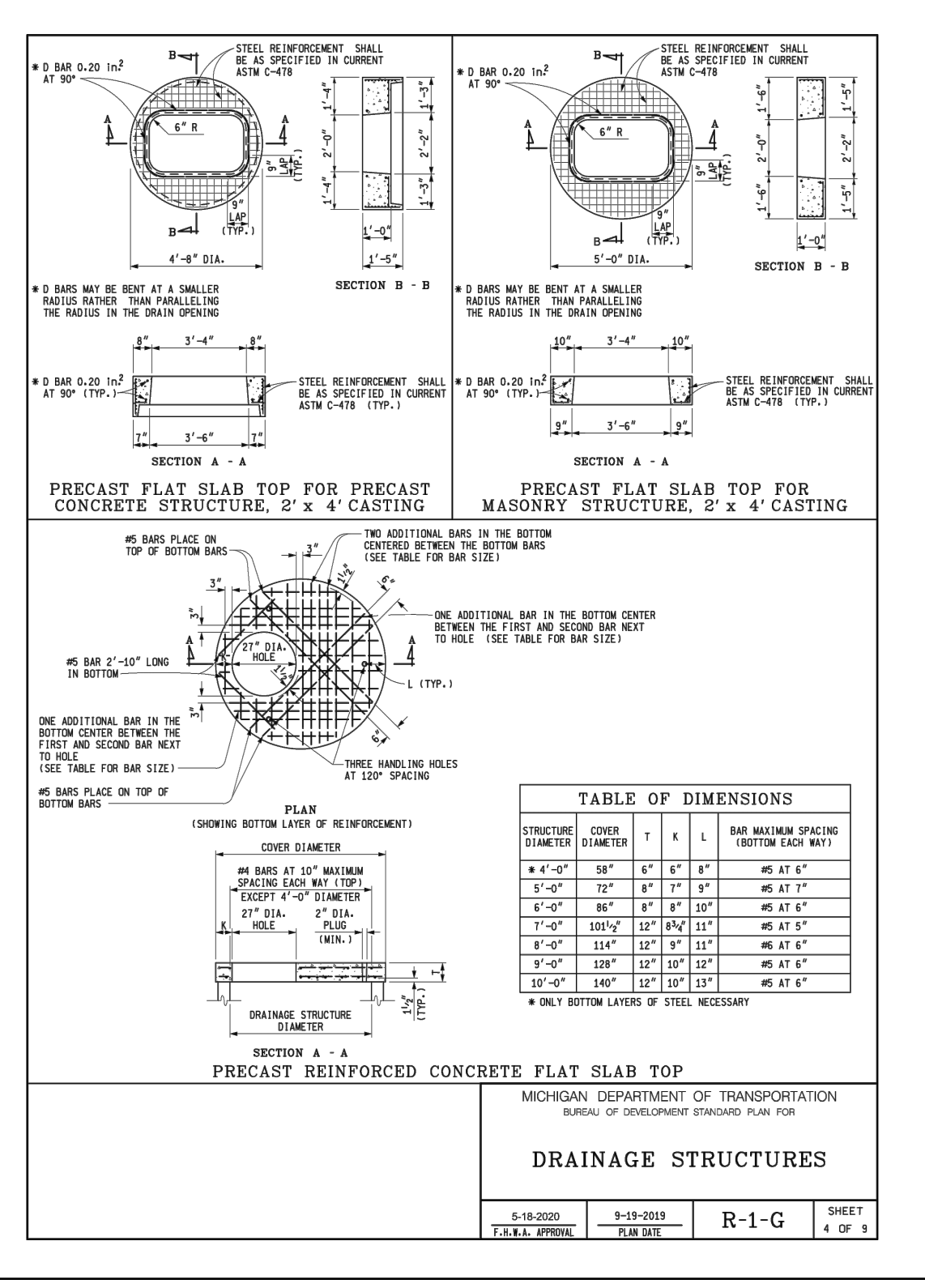
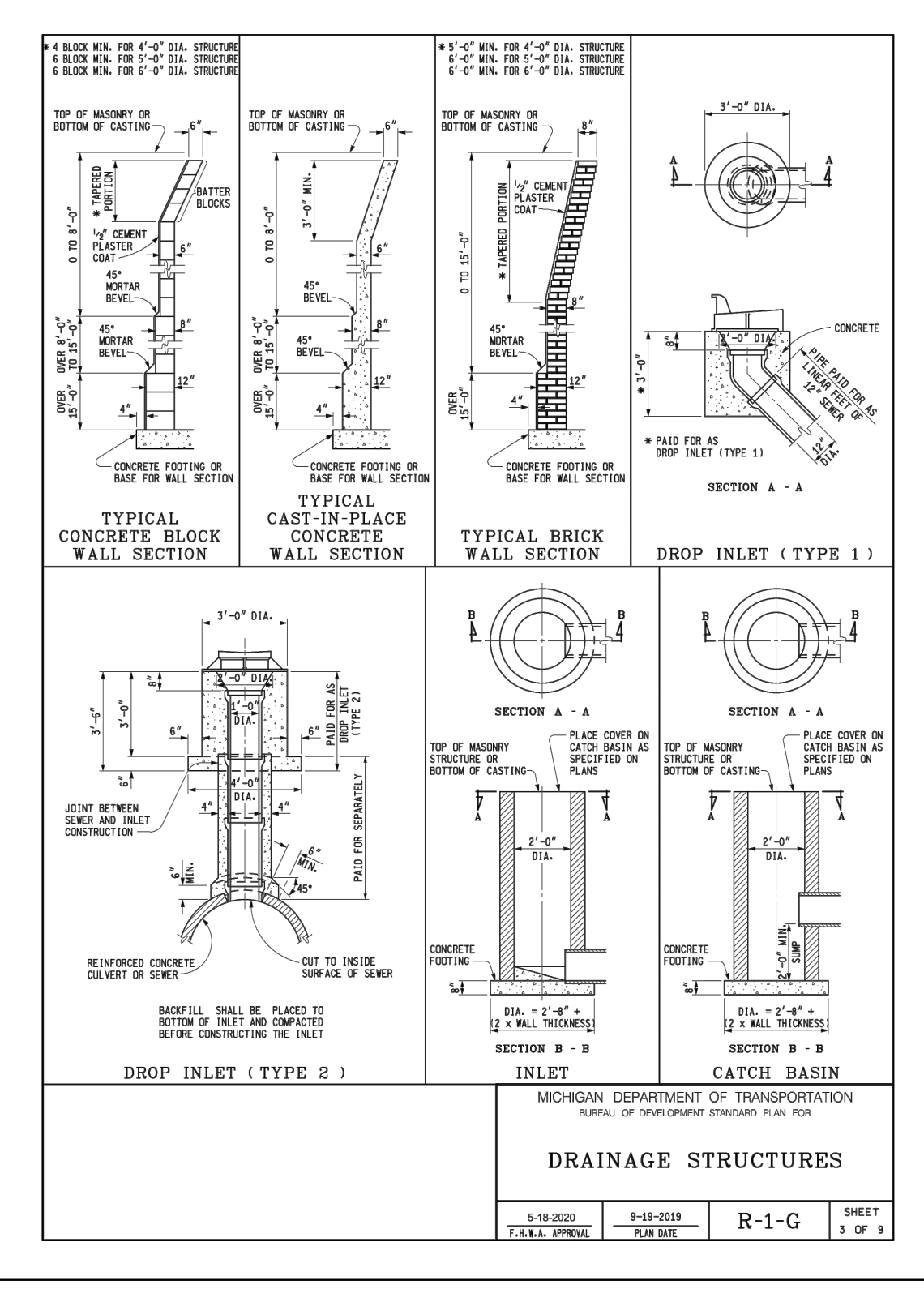
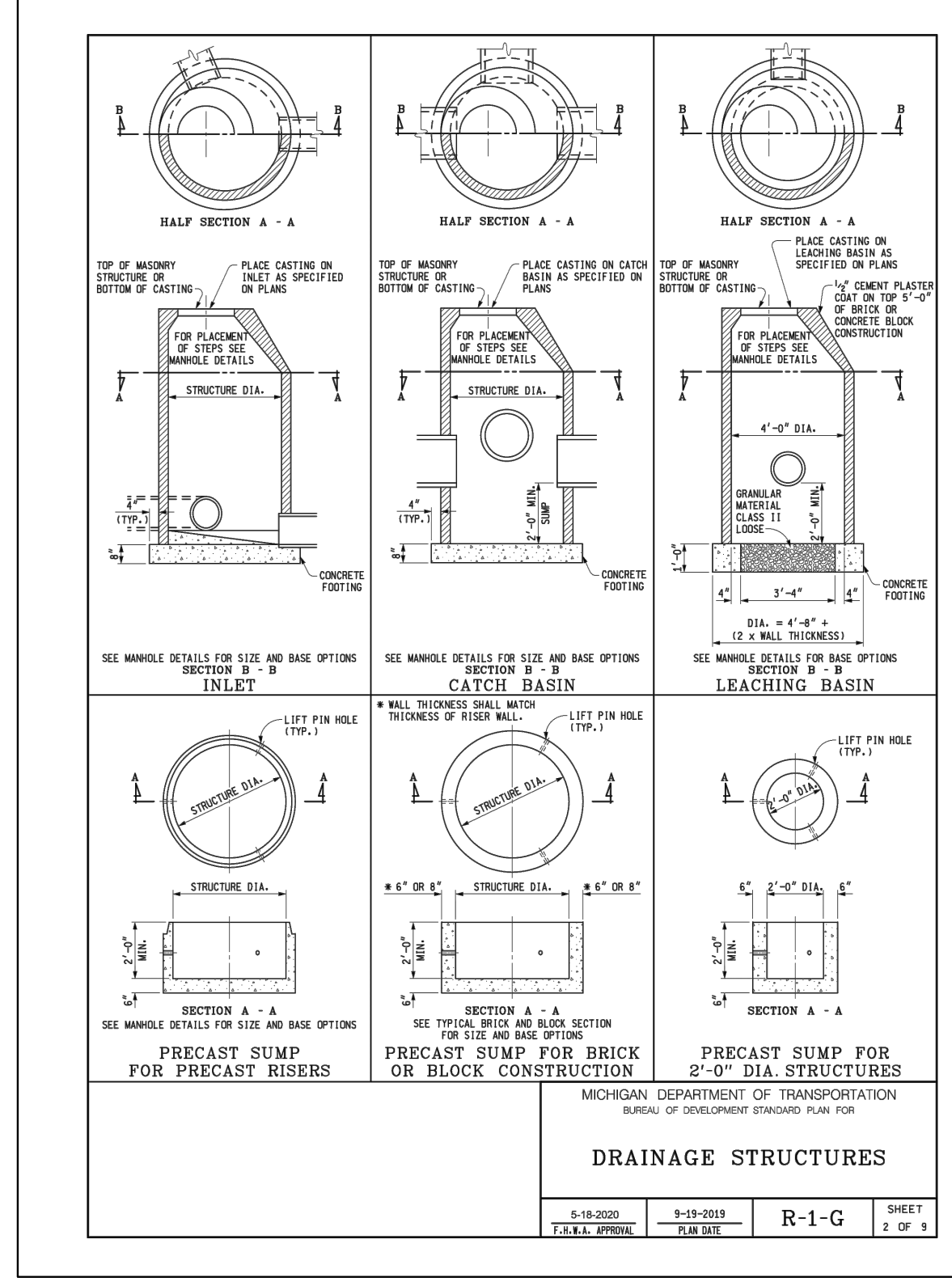
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3035 S ROCHESTER RD
ROCHESTER HILLS, MI 48307

ORIGINAL ISSUE: 11/18/2022
KHA PROJECT NO. 26826000
SHEET NUMBER

CITY FILE #22-039 SECTION #35

C7.4

Drawing name: K:\GIS\DEV\268266000_ADC_Rochester_Hills_MV2 design\CAD\PlanSheets\C7.5 - CONSTRUCTION DETAILS.dwg C7.5 Feb 06, 2023 6:40pm by: John Gross
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BANK OF AMERICA CONSTRUCTION DETAILS

3035 S ROCHESTER RD
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ORIGINAL ISSUE: 11/18/2022
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SHEET NUMBER C7.5

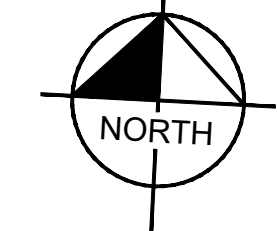
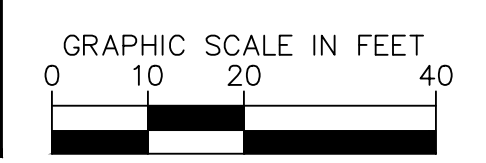
Kimley-Horn & Associates, Inc.
10228 KIMLEY-HORN OF MICHIGAN, INC.
39111 SIX MILE ROAD
BIRMINGHAM, MI 48412-7208
WWW.KIMLEY-HORN.COM

Provide landscape and planting notes/statements including the following:

"Prior approval is required to plant any tree or shrub on the public right-of-way. All trees and shrubs must be planted at least 10' from the edge of the public road. (Trees must be planted at least 15' away from curb or road edge where the speed limit is more than 35 mph.) Shade trees and shrubs must be planted at least 5' from the edge of the public roadway. Evergreen and ornamental trees must be planted at least 10' from the edge of the public walkway. No trees or shrubs may be planted within the triangular area formed at the intersection of any street right-of-way lines at a distance along each line of 25' from their point of intersection. No trees or shrubs may be planted in the triangular area formed at the intersection of any driveway with a public walkway at a distance along each line of 15' from their point of intersection. All trees and shrubs must be planted at least 10' from any fire hydrant. Shade and evergreen trees must be at least 15' away from the nearest overhead wire. Trees must be planted a minimum of 5' from an underground utility, unless the city's Landscape Architect requires a greater distance. Prior to the release of the performance bond, the City of Rochester Hills Forestry Unit needs to inspect all trees, existing or planted, to identify any that pose a hazard to the safe use of the public right-of-way. Forestry may require the developer to remove, and possibly replace, any such trees. The above requirements are incorporated into the plan."

Provide cost estimate of all landscape improvements including irrigation as part of next submittal.

NOTE
PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS MUST INSPECT ALL LANDSCAPING PLANTINGS.



AUBURN ROAD

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	OTHER
	CJ	2	CERCIDIPHYLLUM JAPONICUM / KATSURA TREE	B & B	3" CAL. MIN	
	GP	2	GINKGO BILOBA 'PRINCETON SENTRY' / PRINCETON SENTRY MAIDENHAIR TREE	B & B	3" CAL. MIN	
	GS	2	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE' / SKYLINE HONEY LOCUST	B & B	3" CAL. MIN	
	QA	3	QUERCUS ALBA / WHITE OAK	B & B	3" CAL. MIN	
ORNAMENTAL TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	OTHER
	AA	7	AMELANCHIER ARBOREA / DOWNY SERVICEBERRY	B & B	6' HT MIN	
	CC2	6	CERCIS CANADENSIS / EASTERN REDBUD	B & B	2" CAL. MIN	
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING	SIZE
	AL	13	ALLIUM LUSITANICUM 'SUMMER BEAUTY' / SUMMER BEAUTY ORNAMENTAL ONION	3 GAL	SEE PLAN	12" HT. MIN.
	AT	17	ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED	3 GAL	SEE PLAN	12" HT. MIN.
	CA	17	CEANOTHUS AMERICANUS / NEW JERSEY TEA	3 GAL	SEE PLAN	18" HT. MIN.
	CK	21	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / KARL FOERSTER FEATHER REED GRASS	3 GAL	SEE PLAN	18" HT. MIN.
	CS	29	CORNUS SANGUINEA 'CATO' / ARCTIC SUN® BLOODTWIG DOGWOOD	3 GAL	SEE PLAN	18" HT. MIN.
	EP	23	ECHINACEA PURPUREA / PURPLE CONEFLOWER	3 GAL	SEE PLAN	12" HT. MIN.
	HH	12	HEMEROCALLIS X 'HAPPY RETURNS' / HAPPY RETURNS DAYLILY	3 GAL	SEE PLAN	12" HT. MIN.
	NR	56	NEPETA RACEMOSA 'WALKER'S LOW' / WALKER'S LOW CATMINT	3 GAL	SEE PLAN	24" HT. MIN.
	PN	3	PHYSOCARPUS OPULIFOLIUS / NINEBARK	3 GAL	SEE PLAN	18" HT. MIN.
	PS	22	PANICUM VIRGATUM 'SHENANDOAH' / SHENANDOAH SWITCH GRASS	3 GAL	SEE PLAN	18" HT. MIN.
	RH	20	RUDBECKIA HIRTA / BLACK-EYED SUSAN	3 GAL	SEE PLAN	12" HT. MIN.

SCALE: AS NOTED
DESIGNED BY: EC
DRAWN BY: EC
CHECKED BY: JWG

CITY FILE #22-039
SECTION #35

BANK OF AMERICA
LANDSCAPE PLAN
3035 S ROCHESTER RD
ROCHESTER HILLS, MI 48307

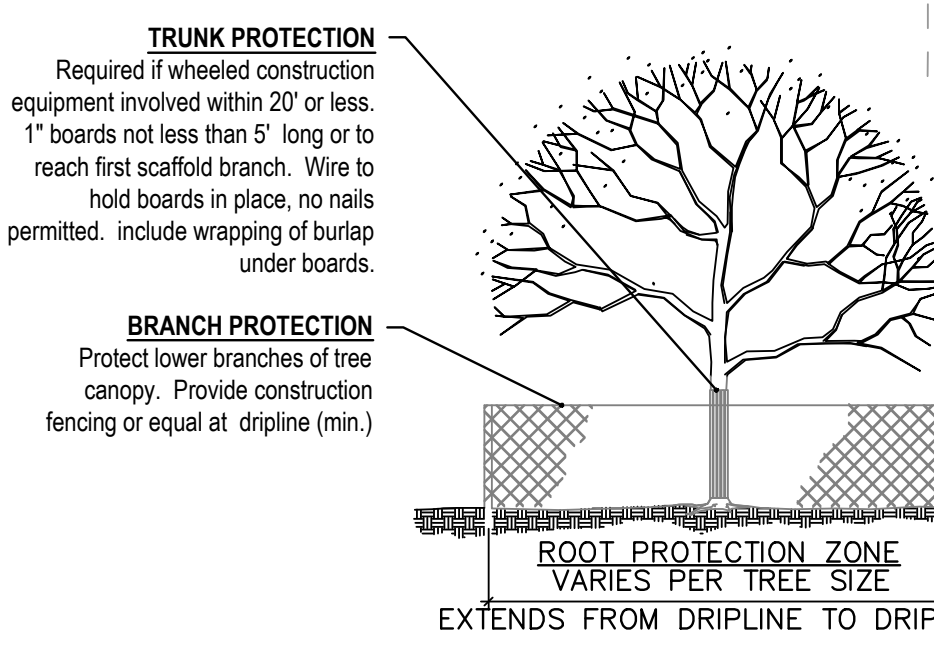
ORIGINAL ISSUE: 11/18/2022
KHA PROJECT NO. 268266000
SHEET NUMBER

LEGEND

EXISTING TREE, PROTECT IN PLACE

TREE TO BE REMOVED

15' CORNER SIGHT TRIANGLE (LANDSCAPE PLANTS ARE TO NOT EXCEED 30" IN HT.)



TREE PROTECTION NOTES

- ALL TREES ARE TO BE PROTECTED AND PRESERVED UNLESS OTHERWISE BE PER DETAIL. GROUPING OF MORE THAN ONE TREE MAY OCCUR.
- TREE(S) TO BE REMOVED SHALL BE IDENTIFIED ON THE TRUNK WITH FLUO OR BY FLAGGING RED TAPE PRIOR TO FIELD INSPECTION BY THE DEPART
- TO PREVENT ROOT SMOTHERING, SOIL STOCKPILES, SUPPLIES, EQUIPMENT NOT BE PLACED OR STORED WITHIN THE DRIP LINE OR WITHIN 15 FEET OF GREATER.
- TREE ROOTS SHALL NOT BE CUT UNLESS CUTTING IS UNAVOIDABLE.
- WHEN ROOT CUTTING IS UNAVOIDABLE, A CLEAN SHARP CUT SHALL BE MADE TO AVOID SHREDDING OR SMASHING. ROOT CUTS SHOULD BE MADE BACK TO A LATERAL ROOT. WHENEVER POSSIBLE, ROOTS SHOULD BE CUT BETWEEN LATE FALL AND BUD OPENING, WHEN ROOT ENERGY SUPPLIES ARE HIGH AND CONDITIONS ARE LEAST FAVORABLE FOR DISEASE CAUSING AGENTS. EXPOSED ROOTS SHALL BE COVERED IMMEDIATELY TO PREVENT DEHYDRATION. ROOTS SHALL BE COVERED WITH SOIL OR BURLAP AND KEPT MOIST.
- WATERING OF PROTECTED TREES IN WHICH ROOTS WERE CUT SHALL BE PROVIDED BY THE CONTRACTOR.
- AUGER TUNNELING RATHER THAN TRENCHING SHOULD BE USED FOR UTILITY PLACEMENT WITHIN DRIP LINE.
- FENCING MATERIAL SHALL ENCIRCLE ANY TREE OR SHRUB WHOSE OUTER DRIP LINE EDGE IS WITHIN 20 FEET OF ANY CONSTRUCTION ACTIVITIES.
- FENCING MATERIAL SHALL BE OF WOOD FENCING OR SIMILAR STURDY STOCK MATERIAL STAKED WITH METAL STAKES TEN FEET ON CENTER AND A MINIMUM OF FOUR FEET IN HEIGHT.
- FENCING MATERIAL SHALL BE SET AT THE DRIP LINE OR NO CLOSER THAN 6' FROM THE TRUNK, WHICHEVER IS GREATER, AND MAINTAINED IN AN UPRIGHT POSITION THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.
- ANY GRADE CHANGES (SUCH AS THE REMOVAL OF TOPSOIL OR ADDITION OF FILL MATERIAL) WITHIN THE DRIP LINE SHOULD BE AVOIDED FOR EXISTING TREES TO REMAIN. RETAINING WALLS AND TREE WELLS ARE ACCEPTABLE ONLY WHEN CONSTRUCTED PRIOR TO GRADE CHANGE.
- REFER TO PLANS FOR FENCE STAKING LOCATIONS.

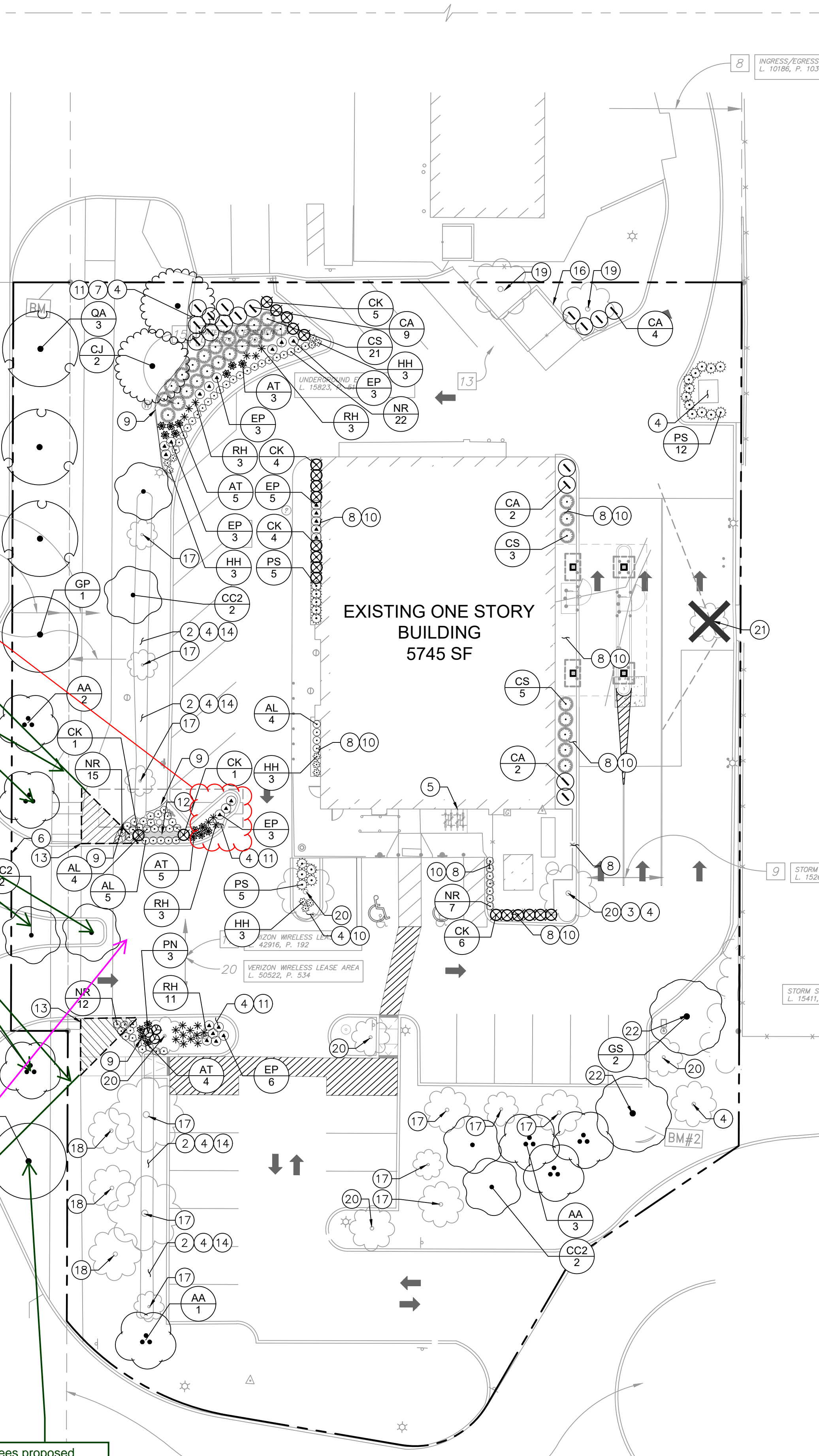
extend Corner Clearance (CC) lines to road edge - remove proposed trees from with CC

This area would also be considered within the corner clearance and should not have any trees planted here. Remove proposed trees.

extend Corner Clearance (CC) lines to road edge - remove proposed trees from with CC

Show Road and Pathway Sight Lines per the attached detail. Trees closest to the curb along Rochester Rd will likely need to be removed once sight lines are shown.

Trees proposed within the Rochester Rd ROW will need a permit to plant from MDOT



LANDSCAPE KEYNOTES

- EXISTING LANDSCAPE TO REMAIN, PROTECT IN PLACE
- LIMB EXISTING TREE UP TO AVOID CONFLICTS WITH PROPOSED FENCE, SEE ARCHITECTURE PLANS
- FURNISH AND INSTALL TRIPLE SHREDDED HARDWOOD MULCH AT 3" DEPTH MIN. PROVIDE A MIN. 4" DIA. MULCH RING AROUND EXISTING TREES, TYP.
- BIKE RACKS, SEE SITE PLAN
- PROPERTY LINE, TYP.
- REMOVE AND SALVAGE EXISTING ROCK MULCH
- REINSTALL EXISTING SALVAGED ROCK MULCH AS NECESSARY TO PROVIDE FOR 100% COMPLETE COVERAGE AROUND THE FOUNDATION LANDSCAPE OF THE BUILDING. CONTRACTOR TO WASH AND ENSURE ROCK MULCH IS FREE OF ANY DEBRIS. CONTRACTOR TO INSTALL ROCK MULCH AT A MIN. DEPTH OF 3". CONTRACTOR TO FURNISH AND INSTALL MIRAFI 140N WEED BARRI (OR APPROVED EQUAL) BELOW ROCK MULCH, WHERE APPLICABLE. CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF ANY EXCESS ROCK MULCH NOT USED IN THE LANDSCAPE AREAS ON SITE.
- SHOVEL CUT BED EDGE, TYP.
- CONTRACTOR TO REMOVE ANY EXISTING WEEDS, OVERGROWN PLANT MATERIAL, OR EXISTING LANDSCAPE AS NECESSARY TO ACCOMMODATE SHOWN LANDSCAPE IMPROVEMENTS.
- CONTRACTOR TO REMOVE ANY EXISTING TURF GRASS IMPACTED BY SHOWN LANDSCAPE IMPROVEMENTS
- MONUMENT SIGN, SEE ARCHITECTURE PLANS
- 15' CORNER CLEARANCE SIGHT TRIANGLES. LANDSCAPE PLANTS ARE TO NOT EXCEED 30" HT. WITHIN THE CORNER SIGHT TRIANGLES, TYP.
- HEDGEROW IS REQUIRED. CONTRACTOR TO MAINTAIN EXISTING HEDGEROW AND INFILL EXISTING HEDGEROW WITH NECESSARY PLANT MATERIAL TO ENSURE A SOLID HEDGEROW PLANTING IS PROVIDED.
- EXISTING TRASH ENCLOSURE, PROTECT IN PLACE
- EXISTING PERIMETER LANDSCAPE SHADE TREE, PROTECT IN PLACE
- EXISTING RIGHT-OF-WAY SHADE TREE, PROTECT IN PLACE
- EXISTING BUFFER YARD TREE, PROTECT IN PLACE
- EXISTING PARKING LOT TREE, PROTECT IN PLACE
- EXISTING 6" DBH GLEDITSIA TRIACANTHOS IS TO BE REMOVED.
- NEW TREE REPLACEMENT(S) FOR THE TREE TO BE REMOVED.

LANDSCAPE NOTES:

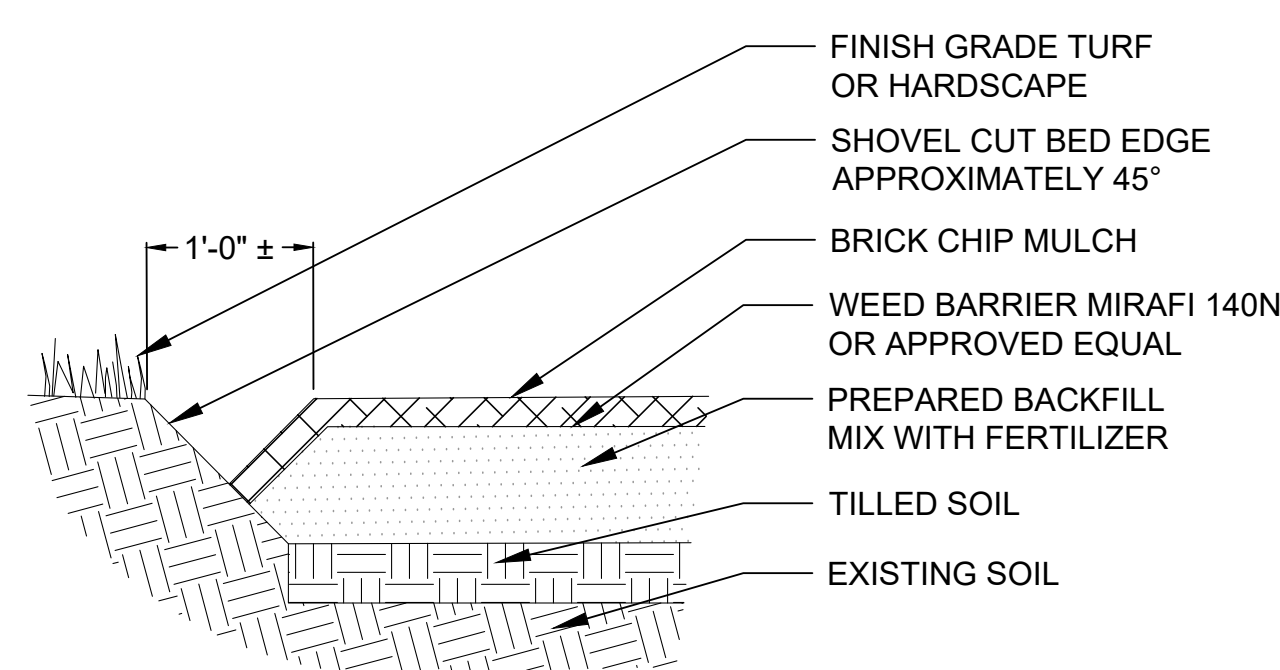
- ANY PLANT MATERIAL THAT IS DESIGNATED TO BE MAINTAINED THAT DIES OR IS DAMAGED DURING OR AS A RESULT OF CONSTRUCTION SHALL BE REPLACED IN KIND WITH LIKE SPECIES AND SIZES.
 - ALL LANDSCAPING REQUIRED PURSUANT TO CITY OF ROCHESTER CODES AND ORDINANCES SHALL BE MAINTAINED IN PERPETUITY.
 - ALL GROUND MOUNTED UTILITIES SHALL BE FULLY SCREENED FROM VIEW.
 - REFER TO SHEET L1.1 FOR DETAILS AND LANDSCAPE GENERAL NOTES.
- IRRIGATION NOTES:**
- ALL LANDSCAPE AREAS MUST BE IRRIGATED.
 - WATERING WILL ONLY OCCUR BETWEEN THE HOURS OF 12:00 A.M. AND 5:00 A.M. SHOULD BE INCLUDED ON THE PLANS.
 - CONTRACTOR TO FIELD VERIFY IF AN EXISTING IRRIGATION SYSTEM IS IN PLACE. IF SO, CONTRACTOR TO FIELD VERIFY LIMITS AND CONDITION OF THE EXISTING IRRIGATION SYSTEM PRIOR TO CONSTRUCTION. CONTRACTOR TO PROVIDE TO THE OWNER IN WRITING ANY DEFICIENCIES OR PROBLEMS WITH THE EXISTING IRRIGATION SYSTEM. CONTRACTOR TO PROVIDE TO OWNER A PROPOSED IRRIGATION DESIGN BUILD/SHOP DRAWING WITH AN ESTIMATE THAT OUTLINES STEPS, EQUIPMENT NECESSARY TO ADJUST THE EXISTING IRRIGATION SYSTEM, EQUIPMENT NECESSARY TO REPAIR THE EXISTING IRRIGATION SYSTEM, AND EQUIPMENT NECESSARY TO INSTALL NEW IRRIGATION TO ACCOMMODATE THE SHOWN LANDSCAPE IMPROVEMENTS. CLIENT TO REVIEW AND APPROVE ANY IRRIGATION WORK BEFORE COMMENCEMENT. CONTRACTOR TO ADJUST, REPAIR, EXTEND, CUT, CAP, FURNISH, AND INSTALL NEW IRRIGATION IMPACTED BY SHOWN IMPROVEMENTS.
- LANDSCAPE MAINTENANCE NOTES:**
- THE OWNER OF THE PROPERTY SHALL ABIDE BY THE ZONING ORDINANCE CODE FOR LANDSCAPE MAINTENANCE UNDER SECTION 138-12.109 AND BE RESPONSIBLE FOR ALL MAINTENANCE OF SITE LANDSCAPING, AS FOLLOWS:
- LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING CONDITION, FREE FROM DEBRIS AND REFUSE.
 - PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION, ONLY TO REMOVE DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE.
 - ALL DEAD, DAMAGED, OR DISEASED PLANT MATERIAL SHALL BE REMOVED IMMEDIATELY AND REPLACED WITHIN SIX (6) MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER OCCURS FIRST. FOR PURPOSES OF THIS SECTION, THE PLANTING SEASON FOR DECIDUOUS PLANTS SHALL BE BETWEEN MARCH 1 AND JUNE 1 AND FROM OCTOBER 1 UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREEN PLANTS SHALL BE BETWEEN MARCH 1 AND JUNE 1. PLANT MATERIAL INSTALLED TO REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE. THE CITY MAY NOTIFY PROPERTY OWNERS OF THE NEED TO REPLACE DEAD, DAMAGED, OR DISEASED MATERIAL.
 - THE APPROVED LANDSCAPE PLAN SHALL BE CONSIDERED A PERMANENT RECORD AND INTEGRAL PART OF THE SITE PLAN APPROVAL. UNLESS OTHERWISE APPROVED IN ACCORDANCE WITH THE FOREMENTIONED PROCEDURES, ANY REVISIONS TO OR REMOVAL OF PLANT MATERIALS, OR NON-COMPLIANCE WITH THE MAINTENANCE REQUIREMENTS OF THIS SECTION 138-12.109 WILL PLACE THE PARCEL IN NON-COMPLIANCE WITH THE APPROVED LANDSCAPE PLAN AND BE A VIOLATION OF THIS ORDINANCE.
 - IF PROTECTED TREES ARE DAMAGED, A FINE SHALL BE ISSUED ON AN INCH-BY-INCH BASIS AT A MONETARY RATE AS DEFINED BY THE FORESTRY DEPARTMENT.

CITY FILE #22-039 SECTION #35

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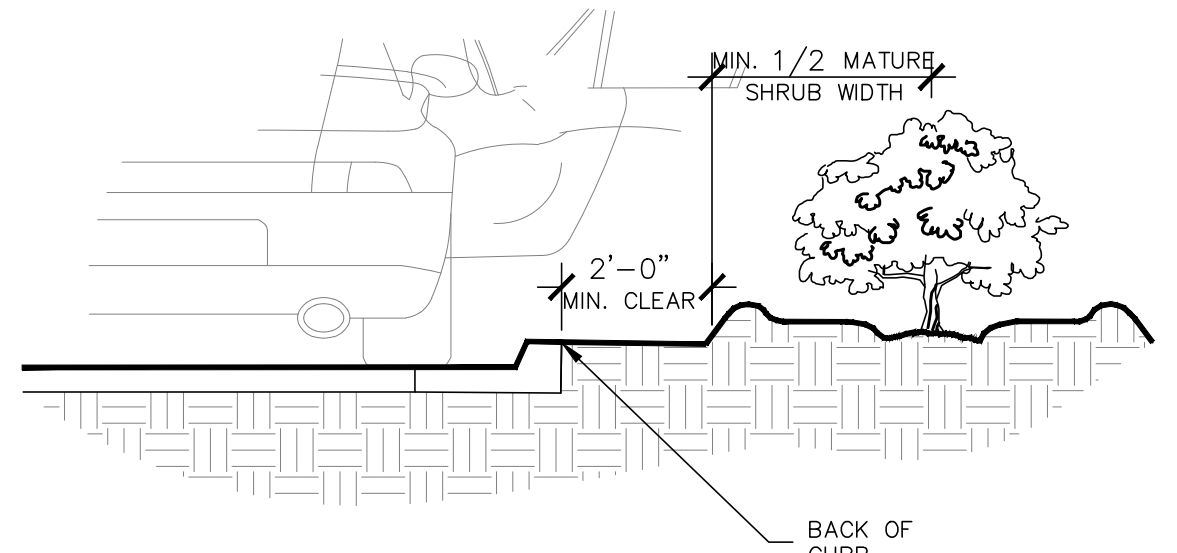
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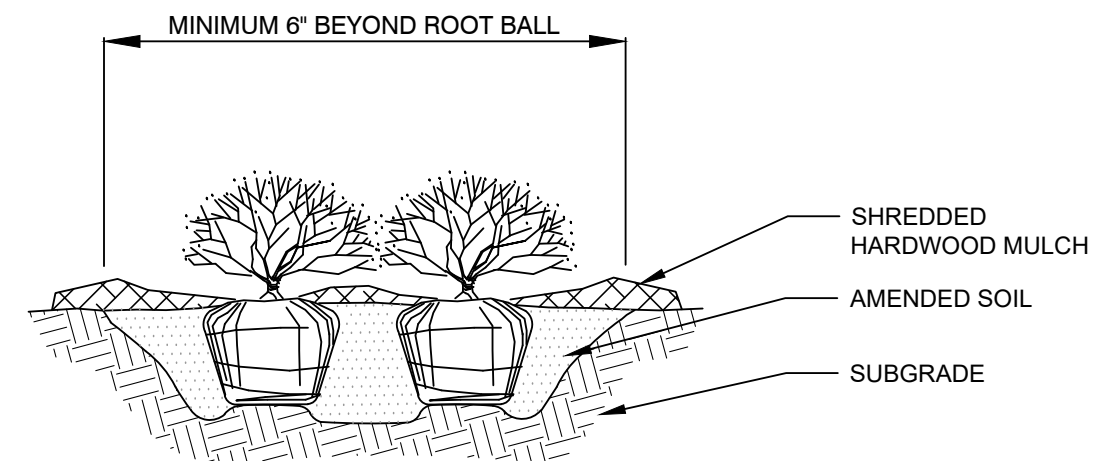
1 LANDSCAPE BED EDGE

NTS



2 SHRUB PLANTING AT CURB

NTS

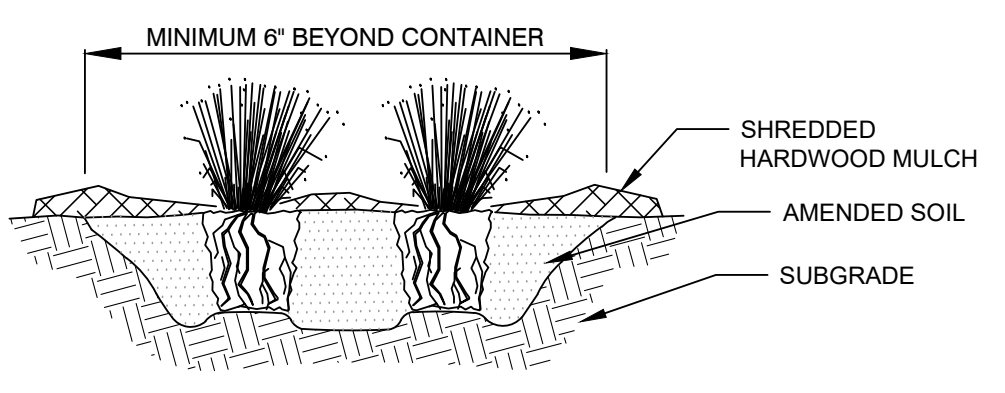


NOTES:

1. APPLY CORRECTIVE PRUNING.
2. SET ROOT BALL OR CONTAINER ON UNEXCAVATED OR TAMPED SOIL. TOP OF ROOTBALL (CONTAINER) SHALL BE ONE INCH ABOVE SURROUNDING GRADE. FOR LARGER SHRUBS WITHIN PLANTING BED DIG A DEEPER PIT ONLY FOR THOSE SHRUBS.
3. REMOVE BURLAP FROM TOP HALF THE LENGTH OF ROOTBALL. TWINE AND (IF USED) SYNTHETIC MATERIAL SHALL BE REMOVED FROM PLANTING BED. FOR CONTAINER GROWN SHRUBS, REMOVE CONTAINER AND LOOSEN ROOTS PRIOR TO INSTALLATION.
4. REMOVE OR CORRECT GIRDLING ROOTS.
5. PLUMB AND BACKFILL WITH AMENDED SOIL PER LANDSCAPE NOTES. WATER THOROUGHLY WITHIN TWO HOURS.
6. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE. MULCH LIMITS FOR SHRUBS EXTEND TO ALL LIMITS OF PLANTING BED, SEE PLANS FOR BED LAYOUTS.

3 SHRUB PLANTING

NTS



NOTES:

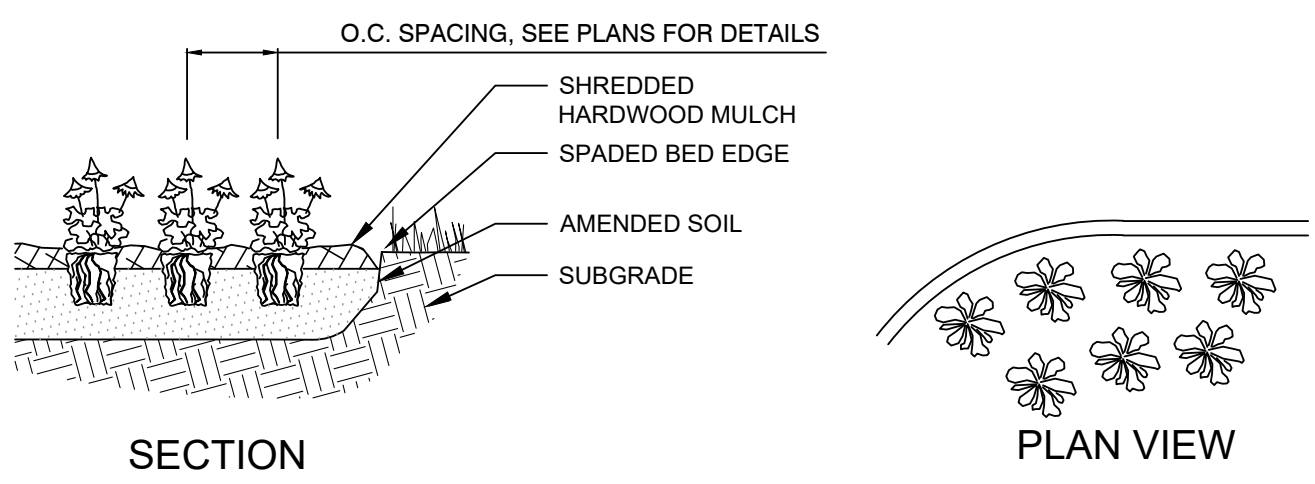
1. APPLY CORRECTIVE PRUNING.
2. SET ROOT BALL OR CONTAINER ON UNEXCAVATED OR TAMPED SOIL. TOP OF CONTAINER SHALL BE ONE INCH ABOVE SURROUNDING GRADE.
3. SYNTHETIC MATERIAL SHALL BE REMOVED FROM PLANTING BED. FOR CONTAINER GROWN GRASSES, REMOVE CONTAINER AND LOOSEN ROOTS PRIOR TO INSTALLATION.
4. REMOVE OR CORRECT GIRDLING ROOTS.
5. PLUMB AND BACKFILL WITH AMENDED SOIL PER LANDSCAPE NOTES. WATER THOROUGHLY WITHIN TWO HOURS.
6. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE. MULCH LIMITS FOR GRASS EXTEND TO ALL LIMITS OF PLANTING BED, SEE PLANS FOR BED LAYOUTS.

4 ORNAMENTAL GRASS PLANTING

NTS

NOTES:

1. EXCAVATE PLANTING BED.
2. BED HEIGHT IS TO BE 2" ABOVE FINISH GRADE AND WELL DRAINED.
3. REMOVE CONTAINER, SCORE SOIL MASS TO REDIRECT AND PREVENT CIRCLING ROOTS. CORRECT GIRDLING ROOTS.
4. PLANT MATERIAL SHALL BE LAID OUT BY FOLLOWING THE BED EDGE, WORKING TOWARDS THE CENTER OF THE BED USING TRIANGULAR (STAGGERED) SPACING AS PLAUSIBLE.
5. PLUMB AND BACKFILL WITH PLANTING MIX AS SPECIFIED IN LANDSCAPE NOTES.
6. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE. MULCH LIMITS FOR PERENNIALS/GROUNDCOVER EXTEND TO ALL LIMITS OF PLANTING BED, SEE PLANS FOR BED LAYOUTS.
7. SPACING TO BE AS SPECIFIED IN THE PLANT LIST. PERENNIALS SHALL BE PLACED WITH THEIR CENTER 24" FROM EDGE OF BED.



5 PERENNIAL PLANTING

NTS

LANDSCAPE NOTES

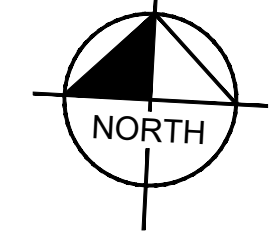
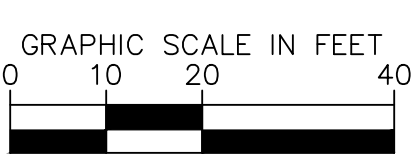
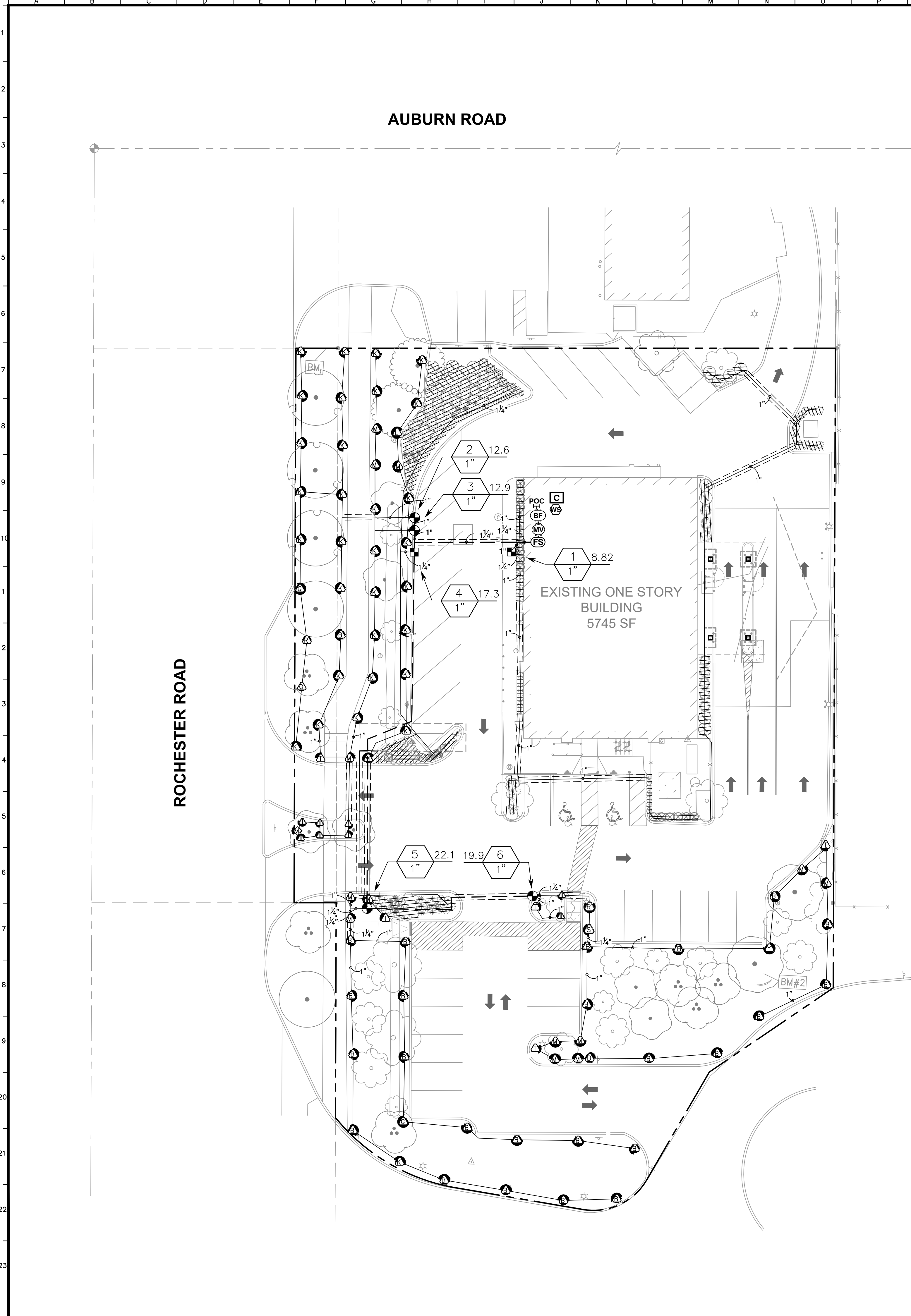
1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING MATERIALS AND PLANTS SHOWN ON THE LANDSCAPE PLAN. THE CONTRACTOR IS RESPONSIBLE FOR THE COST TO REPAIR UTILITIES, ADJACENT LANDSCAPE, PUBLIC AND PRIVATE PROPERTY THAT IS DAMAGED BY THE CONTRACTOR OR THEIR SUBCONTRACTOR'S OPERATIONS DURING INSTALLATION OR DURING THE SPECIFIED MAINTENANCE PERIOD. CALL FOR UTILITY LOCATIONS PRIOR TO ANY EXCAVATION.
2. THE CONTRACTOR SHALL REPORT ANY DISCREPANCY IN PLAN VS. FIELD CONDITIONS IMMEDIATELY TO THE LANDSCAPE ARCHITECT, PRIOR TO CONTINUING WITH THAT PORTION OF WORK.
3. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY OF THEIR TRENCHES OR EXCAVATIONS THAT SETTLE.
5. ALL PLANTS TO BE SPECIMEN GRADE, WELL BRANCHED, HEALTHY, FULL, PRE-INOCULATED AND FERTILIZED. PLANTS SHALL BE FREE FROM DISEASE, PESTS, WOUNDS, AND SCARS. PLANTS SHALL BE FREE FROM NOTICEABLE GAPS, HOLES, OR DEFORMITIES. PLANTS SHALL BE FREE FROM BROKEN OR DEAD BRANCHES. TRUNKS WILL BE WRAPPED IF NECESSARY TO PREVENT SUN SCALD AND INSECT DAMAGE. THE LANDSCAPE CONTRACTOR SHALL REMOVE THE WRAP AT THE PROPER TIME AS PART OF THIS CONTRACT.
6. THE OWNER'S REPRESENTATIVE MAY REJECT ANY PLANT MATERIALS THAT ARE DISEASED, DEFORMED, OR OTHERWISE NOT EXHIBITING SUPERIOR QUALITY.
7. ALL NURSERY STOCK SHALL BE GUARANTEED, BY THE CONTRACTOR, FOR ONE YEAR FROM DATE OF FINAL INSPECTION. THE GUARANTEE BEGINS ON THE DATE OF THE LANDSCAPE ARCHITECT'S OR OWNERS WRITTEN ACCEPTANCE OF THE INITIAL PLANTING. REPLACEMENT PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE COMMENCING UPON PLANTING.
8. PLANTS TO MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2014 OR MOST CURRENT VERSION) REQUIREMENTS FOR SIZE AND TYPE SPECIFIED.
9. PRUNE PLANTS AS NECESSARY- PER STANDARD NURSERY PRACTICE AND TO CORRECT POOR BRANCHING OF EXISTING AND PROPOSED TREES.
10. TOPSOIL SHALL BE PROVIDED AND GRADED BY THE GENERAL CONTRACTOR UP TO 6 INCHES BELOW FINISHED GRADE IN TURF AREAS AND 18 INCHES IN PLANTING AREAS.
11. PLANTING AREA TOPSOIL SHALL BE AMENDED WITH 25% SPHAGNUM PEATMOSS, 5% HUMUS AND 70% PULVERIZED SOIL FOR ALL NON TURF SEED MIX AREAS, SHRUB, ORNAMENTAL GRASS, PERENNIAL AND ANNUAL BEDS.
12. SEED/SOD LIMIT LINES ARE APPROXIMATE. CONTRACTOR SHALL SEED/SOD ALL AREAS WHICH ARE DISTURBED BY GRADING WITH THE SPECIFIED SEED/SOD MIXES.
13. EDGING TO BE A SPADED EDGE UNLESS INDICATED OTHERWISE ON THE PLANS. SPADED EDGE TO PROVIDE V-SHAPED DEPTH AND WIDTH TO CREATE SEPARATION BETWEEN MULCH AND GRASS. A SPADED BED EDGE SHALL SEPARATE MULCH BEDS FROM TURF OR SEEDED AREAS. A SPADED EDGE IS NOT REQUIRED ALONG CURBED EDGES.
14. CONTRACTOR SHALL INSTALL SHREDDED HARDWOOD MULCH AT A 3" DEPTH TO ALL TREES, SHRUB, PERENNIAL, AND GROUNDCOVER AREAS. TREES PLACED IN AREA COVERED BY TURF SHALL RECEIVE A 4 FT WIDE MAXIMUM TREE RING WITH 3" DEPTH SHREDDED HARDWOOD MULCH.
15. INSTALLATION OF TREES WITHIN PARKWAYS SHALL BE COORDINATED IN THE FIELD WITH LOCATIONS OF UNDERGROUND UTILITIES. TREES SHALL NOT BE LOCATED CLOSER THAN 5' FROM UNDERGROUND UTILITY LINES AND NO CLOSER THAN 10' FROM UTILITY STRUCTURES.
16. DO NOT DISTURB THE EXISTING PAVING, LIGHTING, OR LANDSCAPING THAT EXISTS ADJACENT TO THE SITE UNLESS OTHERWISE NOTED ON PLAN.
17. ALL DISTURBED AREAS TO BE SODDED OR SEEDED, UNLESS OTHERWISE NOTED. SOD/SEED SHALL BE LOCAL HARDY TURF GRASS MIX UNLESS, OTHERWISE NOTED.
18. PLANT QUANTITIES SHOWN ARE FOR THE CONVENIENCE OF THE OWNER AND JURISDICTIONAL REVIEW AGENCIES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES AS DRAWN.
19. THE CONTINUED MAINTENANCE OF ALL REQUIRED LANDSCAPING SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY ON WHICH SAID MATERIALS ARE REQUIRED. ALL PLANT MATERIALS REQUIRED BY THIS SECTION SHALL BE MAINTAINED AS LIVING VEGETATION AND SHALL BE PROMPTLY REPLACED IF THE PLANT MATERIAL HAS DIED PRIOR TO FINAL ACCEPTANCE. PLANTING AREAS SHALL BE KEPT FREE OF TRASH, LITTER, AND WEEDS AT ALL TIMES.

NOTE
 PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS MUST INSPECT ALL LANDSCAPING PLANTINGS.

CITY FILE #22-039 SECTION #35

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LANDSCAPE NOTES & DETAILS	
BANK OF AMERICA 3035 S ROCHESTER RD ROCHESTER HILLS, MI 48307	
ORIGINAL ISSUE: 11/18/2022 KHA PROJECT NO. 268266000 SHEET NUMBER	
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IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
[Symbol]	HUNTER MP CORNER PROS-04-PRS30-CV TURF ROTATOR, 4IN. POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE. T=TURQUOISE ADJ ARC 45-105 ON PRS30 BODY.	5	30
[Symbol]	HUNTER MP STRIP PROS-04-PRS30-CV TURF ROTATOR, 4IN. POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. LST=IVORY LEFT STRIP, SST=BROWN SIDE STRIP, RST=COPPER RIGHT STRIP.	2	30
[Symbol]	HUNTER MP1000 PROS-04-PRS30-CV TURF ROTATOR, 4IN. POP-UP WITH CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. M=MAROON ADJ ARC 90 TO 210, L=LIGHT BLUE 210 TO 270 ARC, O=OLIVE 360 ARC.	16	30
[Symbol]	HUNTER MP2000 PROS-04-PRS30-CV TURF ROTATOR, 4IN. POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. K=BLACK ADJ ARC 90-210, G=GREEN ADJ ARC 210-270, R=RED 360 ARC.	34	30
[Symbol]	HUNTER MP3000 PROS-04-PRS30-CV TURF ROTATOR, 4IN. POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. B=BLUE ADJ ARC 90-210, Y=YELLOW ADJ ARC 210-270, A=GRAY 360 ARC.	25	30
[Symbol]	HUNTER MP3500 PROS-04-PRS30-CV TURF ROTATOR, 4IN. POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. LB=LIGHT BROWN ADJUSTABLE ARC, 90-210.	2	30
[Symbol]	HUNTER MP800SR PROS-04-PRS30-CV TURF ROTATOR, 4IN. POP-UP WITH CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. ADJ=ORANGE AND GRAY (ARC 90-210), 360=LIME GREEN AND GRAY (ARC 360)	8	30
[Symbol]	HUNTER MP815 PROS-04-PRS30-CV TURF ROTATOR, 4IN. POP-UP WITH CHECK VALVE, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. M=MAROON AND GRAY ADJ ARC 90 TO 210, L=LIGHT BLUE AND GRAY 210 TO 270 ARC, O=OLIVE AND GRAY 360 ARC.	1	30
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
[Symbol]	HUNTER ICZ-101-25 DRIP CONTROL ZONE KIT. 1IN. ICV GLOBE VALVE WITH 1IN. HY100 FILTER SYSTEM. PRESSURE REGULATION: 25PSI. FLOW RANGE: 2 GPM TO 20 GPM. 150 MESH STAINLESS STEEL SCREEN.	2	
[Symbol]	AREA TO RECEIVE DRIPLINE HUNTER HDL-09-12-CV HDL-09-12-CV: HUNTER DRIPLINE W/ 0.9 GPH EMITTERS AT 12" O.C. CHECK VALVE, DARK BROWN TUBING W/ BLACK STRIPING. DRIPLINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. INSTALL WITH HUNTER PLD BARBED OR PLD-LOC FITTINGS.	1,772 L.F.	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
[Symbol]	HUNTER PGV-101G 1IN. PLASTIC ELECTRIC REMOTE CONTROL VALVE, FOR RESIDENTIAL/LIGHT COMMERCIAL USE. FEMALE NPT INLET/OUTLET. GLOBE CONFIGURATION, WITH FLOW CONTROL.	4	
[Symbol]	HUNTER ICV-G 1" 1IN., 1-1/2IN., 2IN., AND 3IN. PLASTIC ELECTRIC MASTER VALVE. GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE.	1	
[Symbol]	FEBCO 825Y 1" REDUCED PRESSURE BACKFLOW PREVENTER	1	
[Symbol]	HUNTER PCC-1200 LIGHT COMMERCIAL & RESIDENTIAL CONTROLLER, 12-STATION FIXED CONTROLLER, 120 VAC, OUTDOOR MODEL	1	
[Symbol]	HUNTER SOLAR-SYNC SOLAR, RAIN FREEZE SENSOR WITH OUTDOOR INTERFACE, CONNECTS TO HUNTER PCC, PRO-C, AND I-CORE CONTROLLERS, INSTALL AS NOTED. INCLUDES 10 YEAR LITHIUM BATTERY AND RUBBER MODULE COVER, AND GUTTER MOUNT BRACKET. WIRED.	1	
[Symbol]	HUNTER HFS-100 FLOW SENSOR FOR USE WITH ACC CONTROLLER, 1IN. SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP.	1	
[Symbol]	IRRIGATION LATERAL LINE: PVC SCHEDULE 40	2,174 L.F.	
[Symbol]	IRRIGATION MAINLINE: PVC SCHEDULE 40	274.4 L.F.	
[Symbol]	PIPE SLEEVE: PVC SCHEDULE 40	351.0 L.F.	

- GENERAL IRRIGATION NOTES**
- IRRIGATION CONTRACTOR SHALL TEST EXISTING STATIC PRESSURE ON SITE PRIOR TO CONSTRUCTION. SHOULD EXISTING SITE PRESSURE BE BELOW 65 PSI, CONTRACTOR SHALL CONTACT THE IRRIGATION DESIGNER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - COORDINATE IRRIGATION INSTALLATION WITH PLANTING PLAN AND SITE CONDITIONS TO PROVIDE COMPLETE 100% COVERAGE WITH MINIMUM OVERSPRAY. THE IRRIGATION CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER.
 - ALL CONSTRUCTION SHALL CONFORM TO CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THAT ALL IRRIGATION EQUIPMENT MEETS GOVERNMENT REGULATIONS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS OR APPROVALS PRIOR TO COMMENCEMENT OF OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR.
 - LATERAL PIPE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 12 INCHES. MAINLINE PIPE AND WIRES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 18 INCHES.
 - ELECTRICAL POWER SHALL BE PROVIDED WITHIN 5 FEET OF CONTROLLER LOCATION BY GENERAL CONTRACTOR. LICENSED IRRIGATION CONTRACTOR TO PROVIDE FINAL HARD WIRE TO CONTROLLER.
 - 24 VOLT VALVE WIRE SHALL BE A MINIMUM OF 14 GAUGE, UL APPROVED FOR DIRECT BURIAL, SINGLE CONDUCTOR "IRRIGATION WIRE". CONTRACTOR TO CONFIRM WIRE SIZE PRIOR TO INSTALLATION. WIRE SPLICES SHALL BE ENCASED IN A WATERPROOF WIRE CONNECTOR UL APPROVED AND FILLED WITH SILICONE.
 - IRRIGATION VALVES AND VALVE BOXES SHALL BE LOCATED IN LANDSCAPE BEDS OR GROUND COVER AREAS WHENEVER POSSIBLE. ALL REMOTE BOXES SHALL BE SET FLUSH WITH FINISHED GRADE AND CONTAIN ONE CUBIC FOOT OF CLEAN GRAVEL BENEATH VALVE. LABEL REMOTE BOXES WITH ONE-INCH ALPHA NUMERIC NOTATION CORRESPONDING TO THE APPLICABLE ALPHA CONTROLLER AND NUMERIC STATION. USE 1" ROUND VALVE BOXES FOR ELECTRIC VALVES AND QUICK COUPLING VALVES. USE 15" X 9.5" RECTANGULAR BOX FOR DRIP VALVES UNLESS NOTED OTHERWISE. DOUBLE CHECK ASSEMBLY SHALL BE BOXED ACCORDING TO LOCAL CODES.
 - USE PVC SWING JOINT ASSEMBLIES TO CONNECT ALL SPRAY AND ROTOR HEADS.
 - CONTRACTOR IS TO CONTACT APPROPRIATE AUTHORITIES AND LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, EQUIPMENT QUANTITIES, AND UTILITY LOCATIONS PRIOR TO BEGINNING WORK.
 - SLEEVES SHALL BE INSTALLED BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED. SLEEVE MATERIAL SHALL BE PVC, SCHD. 40. CONTRACTOR SHALL EXTEND SLEEVES 18 INCHES BEYOND EDGE OF ALL PAVEMENT. ELECTRICAL WIRES FOR IRRIGATION VALVES AND IRRIGATION LINES ARE TO BE PLACED IN SEPARATE SLEEVES. SEE SLEEVING DETAIL. ALL PRESSURE MAINLINES UNDER ASPHALT PAVEMENT SHALL BE PLACED WITHIN SLEEVES AS NOTED.
 - DRIP LINE SHALL BE PLACED A MINIMUM OF 2" UNDER MULCH.
 - LICENSED IRRIGATION CONTRACTOR SHALL ADJUST SPRAY NOZZLES FOR "HEAD-TO-HEAD" COVERAGE AND ADJUST FOR MINIMUM OVERSPRAY ONTO PAVEMENT. NO OVERSPRAY IS PERMITTED ONTO STREETS OR SIDEWALKS.
 - IRRIGATION CONTRACTOR SHALL SUPPLY AND CONSTRUCT IRRIGATION SYSTEM WITH ALL MATERIALS AND PER MANUFACTURER SPECIFICATIONS SHOWN ON THIS PLAN. IF CONTRACTOR PREFERENCES MATERIALS THAT DIFFER FROM THIS PLAN, THEY SHALL BE APPROVED BY THE IRRIGATION DESIGNER PRIOR TO CONSTRUCTION.
 - VERIFY CONTROLLER AND RAIN SENSOR LOCATION AND MAINLINE POINT OF CONNECTION AT PROJECT SITE WITH OWNER.
 - EXISTING TREES TO REMAIN ARE TO BE PROTECTED FROM DAMAGE. DO NOT TRENCH OR EXCAVATE WITHIN THE CRITICAL ROOT ZONE OF ANY TREE.
 - IRRIGATION LATERAL LINES, MAIN LINES AND EQUIPMENT MAY BE SHOWN OUTSIDE PROPERTY LINES ON THIS PLAN. ALL IRRIGATION LINES AND EQUIPMENT ARE TO BE WITHIN AND INSTALLED WITHIN THE LIMITS OF THE PROPERTY LINE.
 - BACKFLOW PREVENTER TO BE PROVIDED BY IRRIGATION CONTRACTOR. IRRIGATION CONTRACTOR'S POINT OF CONNECTION TO BEGIN AFTER THE IRRIGATION BACKFLOW.
 - IRRIGATION CONTRACTOR SHALL REVIEW WINTERIZATION PROCEDURES FOR IRRIGATION SYSTEM WITH OWNERS REPRESENTATIVE.
 - ALL PLANT MATERIAL IN TREE HOLDING AREAS SHALL BE MANUALLY WATERED/IRRIGATED TO KEEP MOIST UNTIL PLANTED.
 - MAINLINE, VALVES, AND WIRING ARE SHOWN ON DRAWINGS FOR CLARITY. SHOULD BE LOCATED IN ACCESSIBLE GREEN SPACE. CONTRACTOR TO COORDINATE WITH ALL DISCIPLINES TO AVOID CONFLICTS WITH UTILITIES/ STRUCTURES, ETC.
 - INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON THE SITE.
 - SET SPRAY HEADS 4" FROM BACK OF CURB OR 24" IF PAVEMENT HAS NO CURB.
 - CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT. "AS-BUILT" DRAWINGS TO BE COLOR CODED BY ZONE ON 8.5" X 11", LAMINATED, AND PLACED IN CONTROLLER.
 - ALL DRIPLINE ZONES SHALL BE INSTALLED WITH A SELF-FLUSHING DISC FILTER, OR APPROVED EQUAL.
 - INSTALL ALL IRRIGATION COMPONENTS AS PER MANUFACTURERS REQUIREMENTS.
 - IRRIGATION HEADS AND COMPONENTS SHALL BE LOCATED A MINIMUM OF 24" FROM ALL BUILDINGS TO AVOID ADVERSE PERFORMANCE OF FOUNDATIONS AND SLABS.
 - NO LATERALS LESS THAN 3/4" DIAMETER.

NOTE: SEE SHEET IR1.1 FOR IRRIGATION DETAILS.

SURGE PROTECTION AND WIRE NOTES

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO GROUND ALL ELECTRICAL EQUIPMENT INSTALLED IN RELATION TO THE IRRIGATION CONTROL SYSTEM. USE GROUNDING ELECTRODES THAT ARE UL LISTED OR MANUFACTURED TO MEET THE MINIMUM REQUIREMENTS OF THE US NATIONAL ELECTRICAL CODE (NEC).
- THE IRRIGATION SYSTEM SHALL USE A CONVENTIONAL WIRING FOR ACTIVATION OF ALL VALVES AND SENSORS. CONNECTIONS SHALL BE BELOW GRADE AND IN VALVE BOXES SHALL BE WATERPROOF. THE IRRIGATION CABLE SHALL BE DIRECT BURIAL.
- CONTRACTOR TO PROVIDE A MINIMUM OF TWO (2) SPARE IRRIGATION CONTROL WIRES FROM THE CONTROLLER THROUGH ALL IRRIGATION ZONES FOR FUTURE USE (COLOR ORANGE).
- CONTROLLER TO BE GROUND PER MANUFACTURER RECOMMENDATIONS.

ALL CONNECTIONS BELOW GRADE AND IN VALVE BOXES SHALL BE WATERPROOF. THE IRRIGATION CABLE SHALL BE DIRECT BURIAL.

THIS IRRIGATION PLAN IS DESIGNED TO THE FOLLOWING STATS: 65 PSI AND 23 GPM. CONTRACTOR TO DETERMINE IN THE FIELD IF A BOOSTER PUMP WILL BE REQUIRED AT COST OF CONTRACTOR. CONTACT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION IF SYSTEM HAS +/- 5 PSI THAN DESIGN PRESSURE.

ABOVE QUANTITIES PROVIDED FOR CONVENIENCE ONLY. CONTRACTOR TO CONFIRM ALL QUANTITIES PRIOR TO BIDDING.

REFERENCE MAXIMUM LATERAL DRIPLINE CHART TO DETERMINE MINIMUM NUMBER OF POINTS OF CONNECTION PER DRIP LINE ZONE.

WHERE LAYOUT FLEXIBILITY EXISTS CENTER FEED LAYOUTS MUST BE USED. THIS ALLOWS FOR EVEN FLOW OF WATER THROUGH THE ZONE.

RAINBIRD - DRIP INDICATOR TO BE PLACED IN ALL DRIP AREAS AT THE FURTHEST POINT OF EACH DRIP RUN.

ZONES LOWER THAN THE CAPACITY OF THE FLOW SENSOR ARE TO BE WIRED IN THE CONTROLLER WITH ANOTHER ZONE SO THAT THE FLOW SENSOR READS BOTH ZONES AS ONE ZONE IN ORDER TO MEET THE FLOW SENSOR'S LOWEST GPM REQUIREMENT. DRIP ZONES REQUIRED TO REMAIN PIPED AS SEPARATE ZONES.

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BANK OF AMERICA
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IRRIGATION PLAN

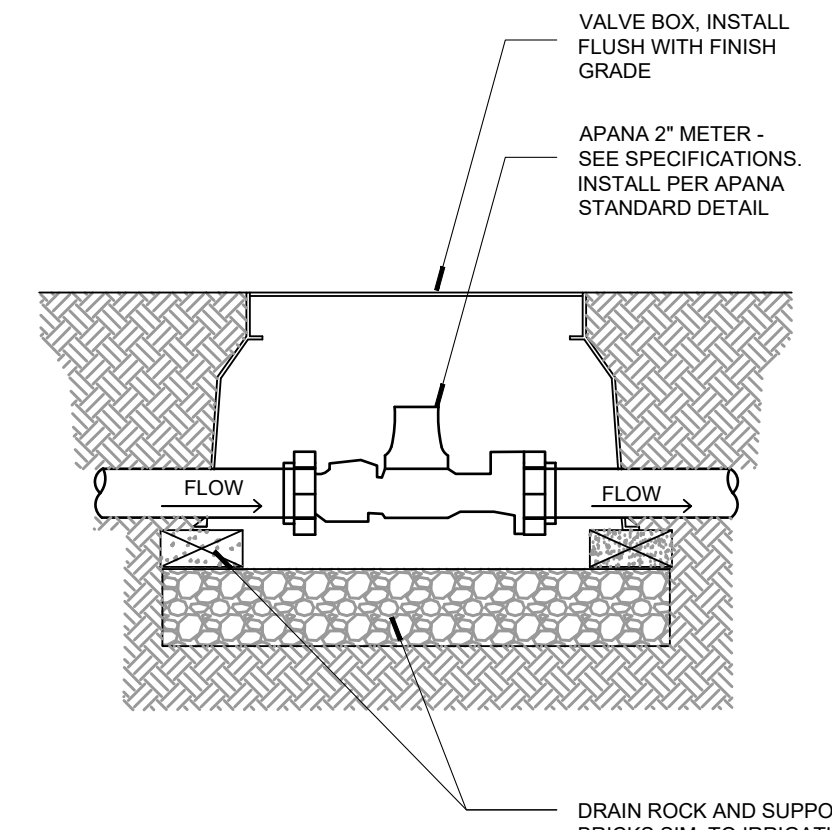
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 KHA PROJECT NO. 268266000
 SHEET NUMBER **IR1.0**

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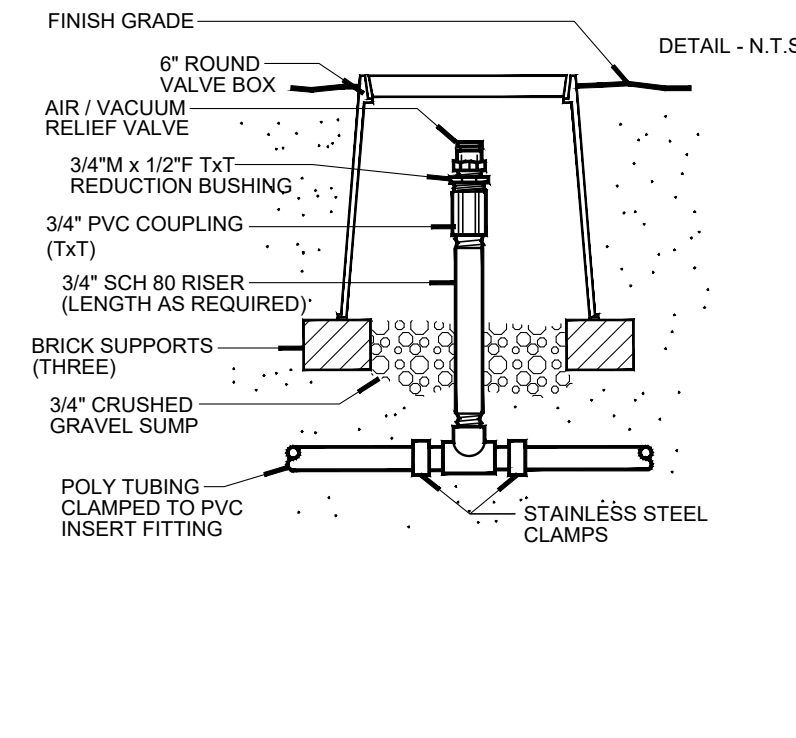
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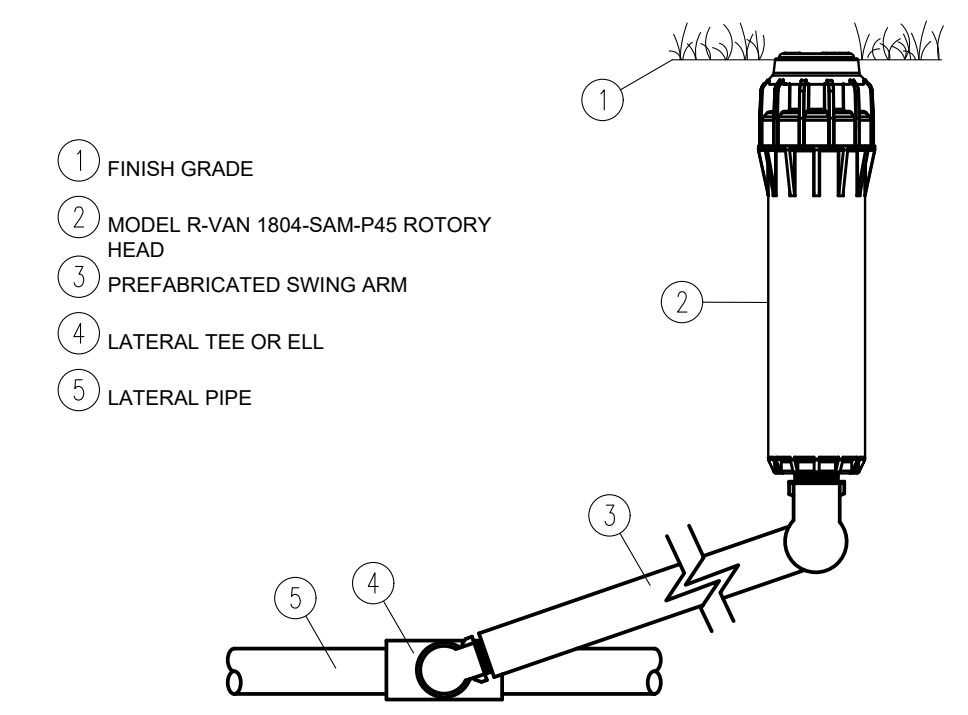
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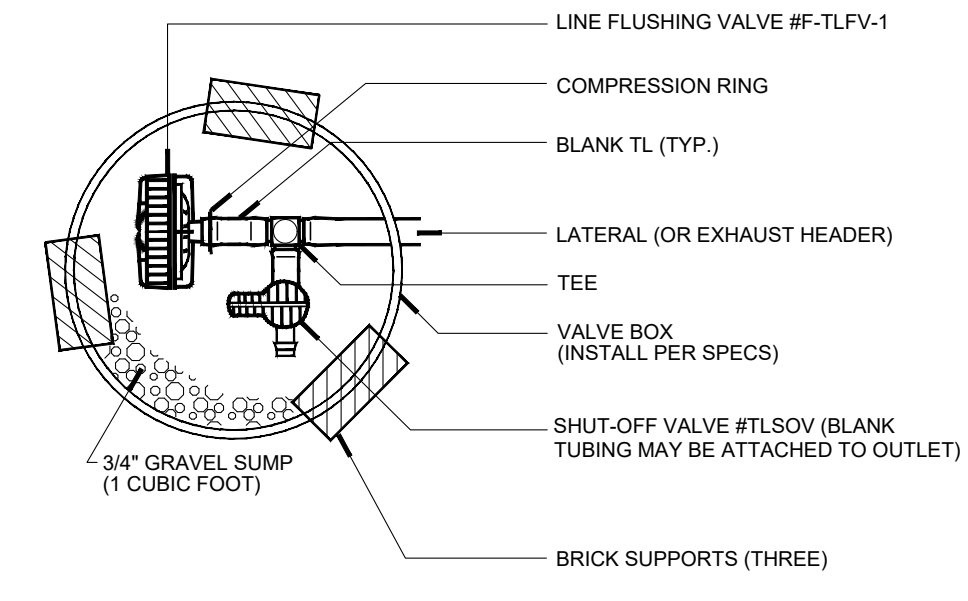
ENFLEX WATER METER
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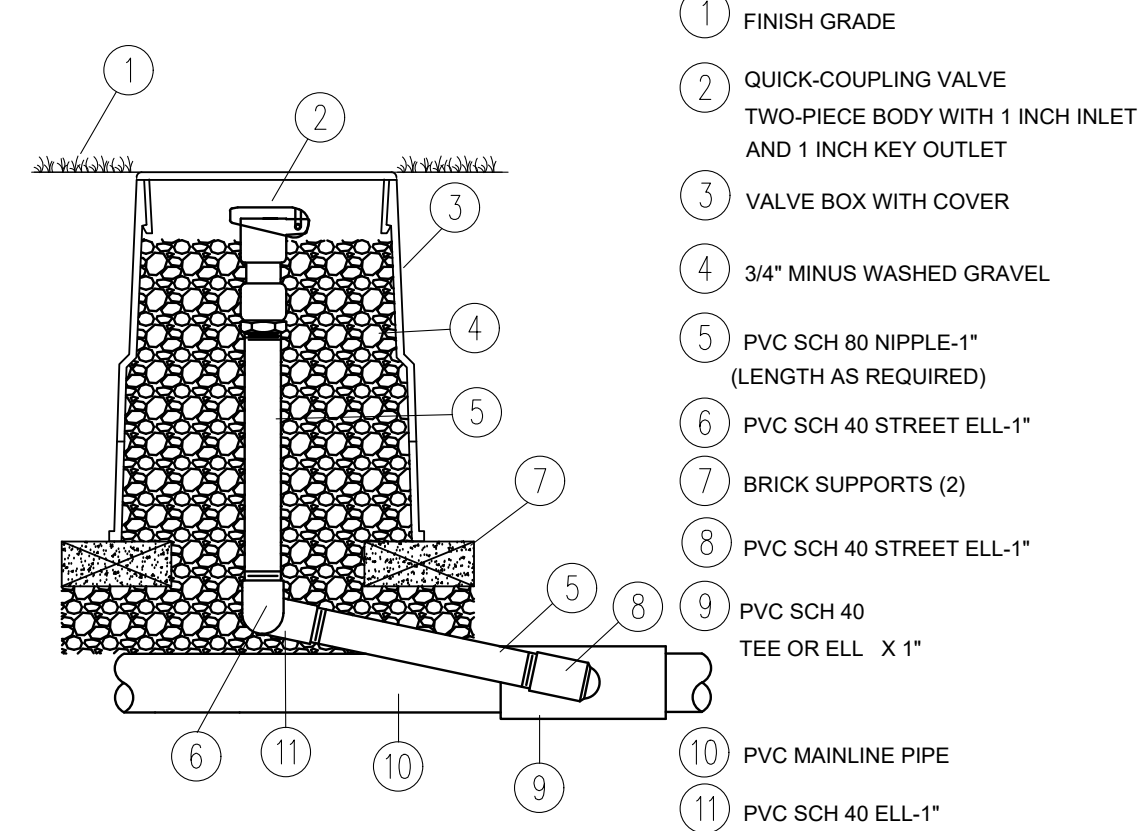
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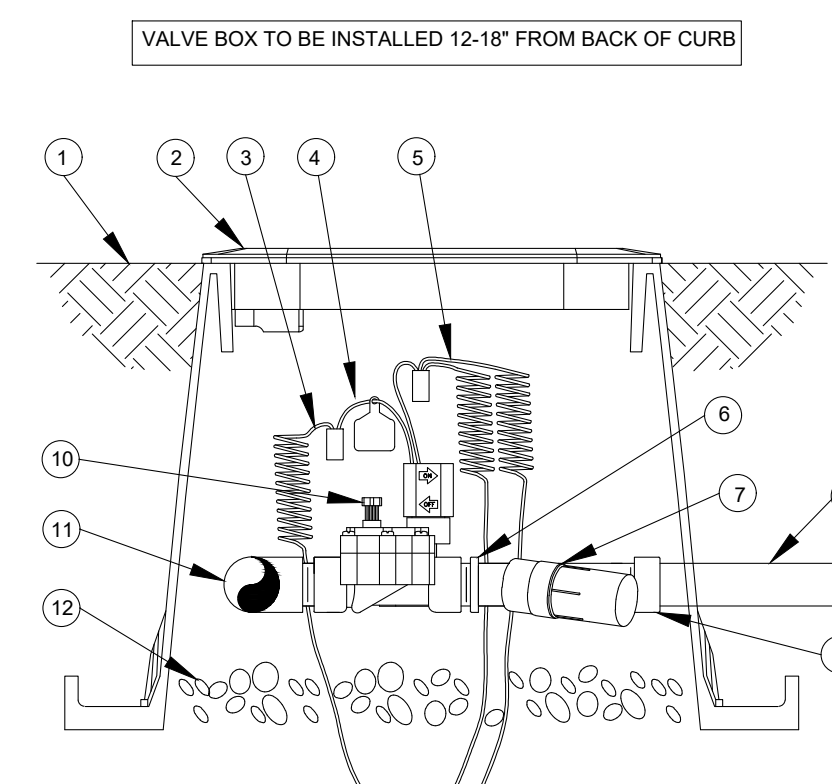
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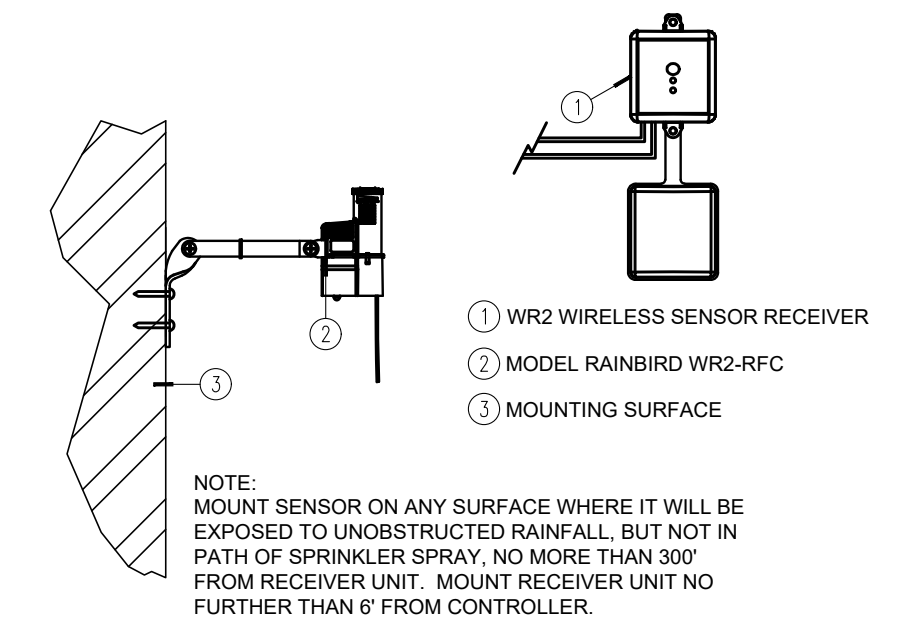
Line Flushing Valve (W/ Shut-off Valve)
Scale: N.T.S.



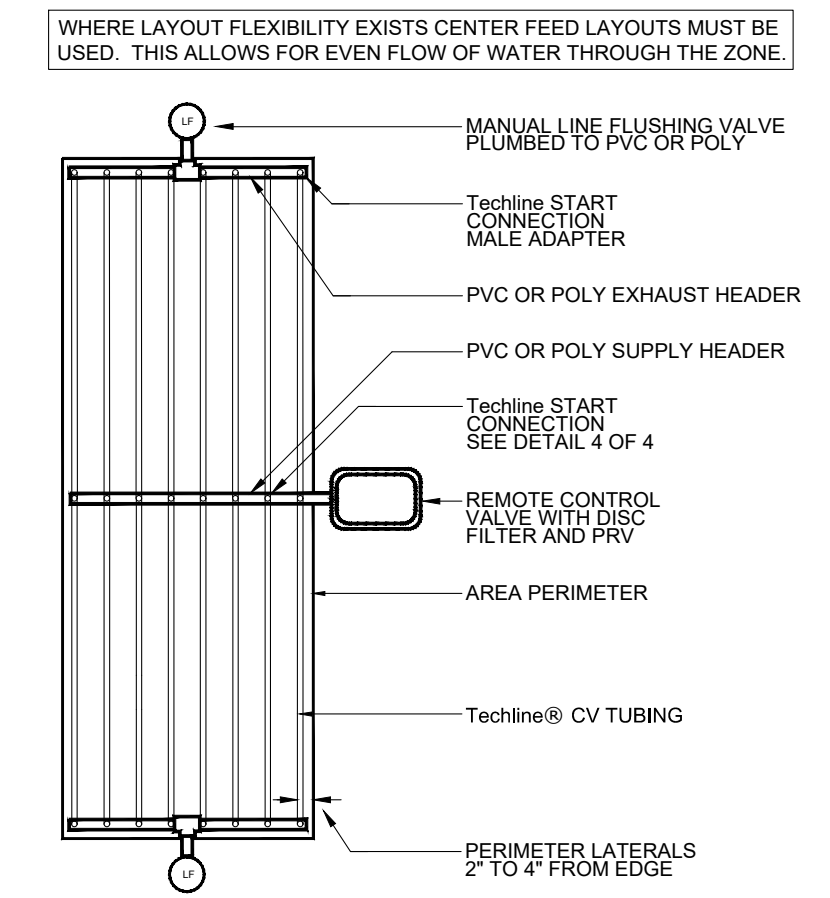
QUICK COUPLING VALVE
Scale: N.T.S.



Drip Control Zone Kit
Scale: N.T.S.



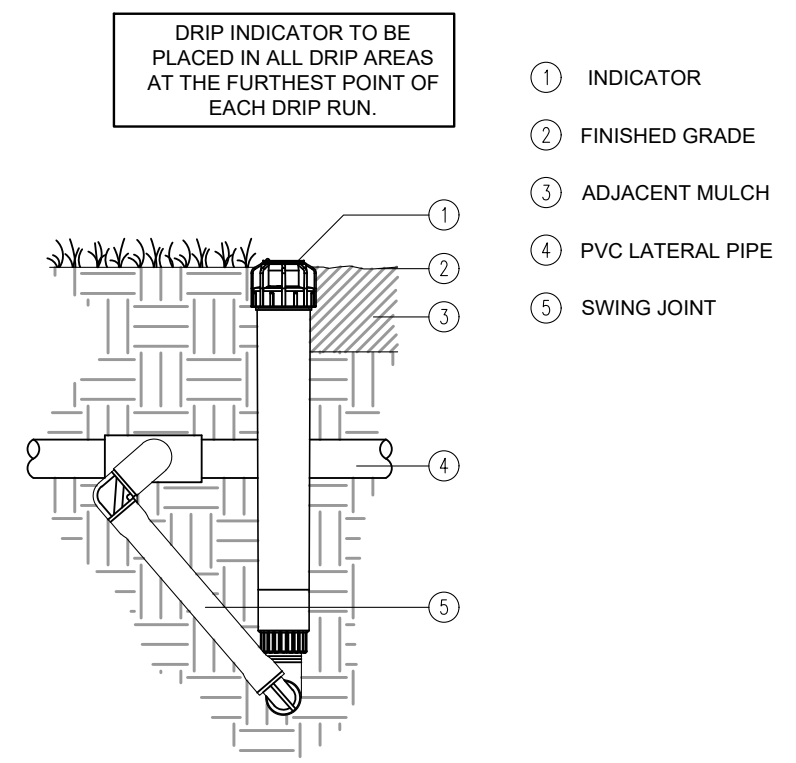
Wireless Rain/Freeze Sensor
Scale: N.T.S.



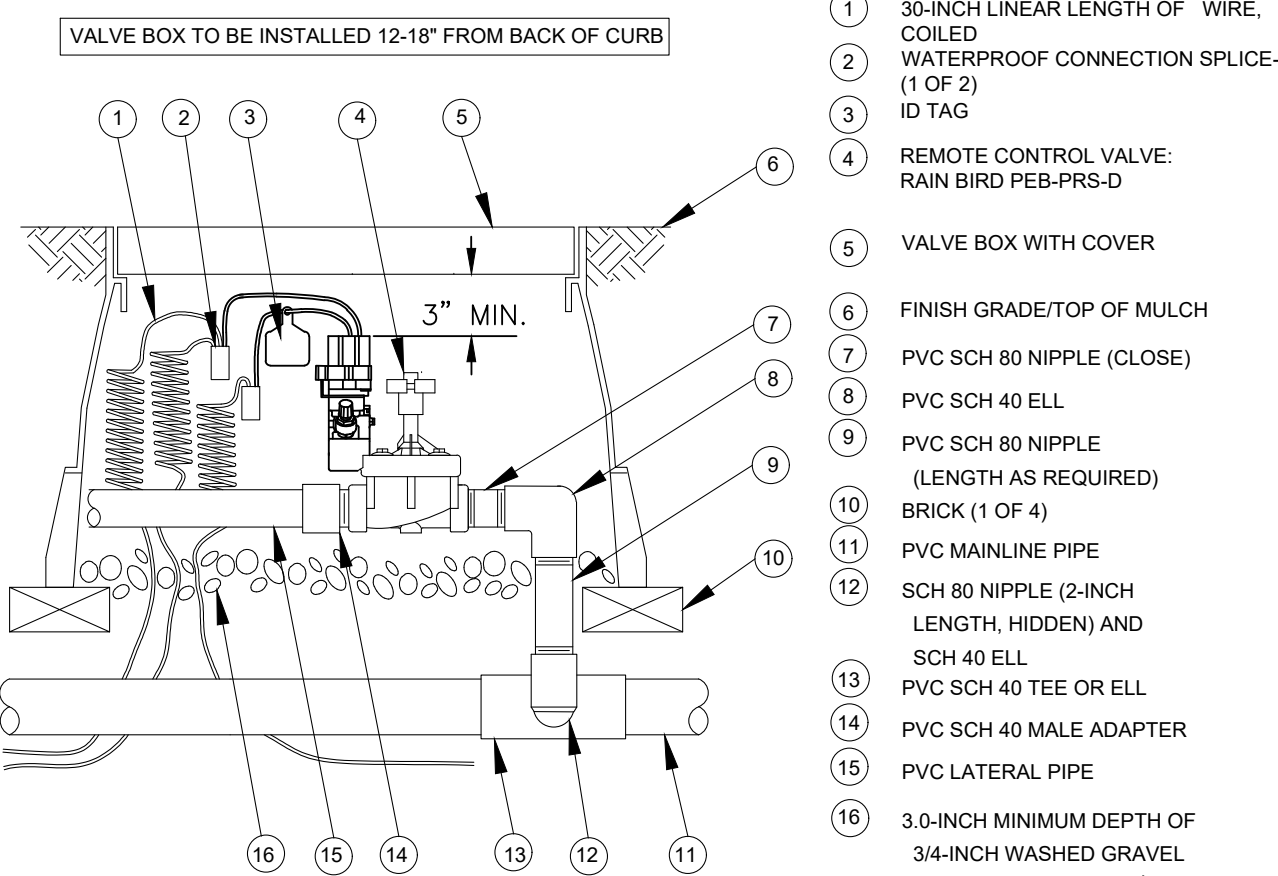
ALL BARBED FITTINGS TO UTILIZE EITHER STAINLESS STEEL HOSE CLAMPS, STEEL CRIMP, OR COMPRESSION RING.

TECHLINE DRIPPER SPACING	12"			18"			24"			
	0.26	0.4	0.6	0.9	0.26	0.4	0.6	0.9	0.6	0.9
20	331	242	190	144	468	344	270	204	342	260
25	413	302	238	180	584	429	338	257	430	326
35	518	380	299	227	737	540	426	323	542	412
45	594	436	343	260	845	620	489	371	622	472
55	655	480	378	287	932	684	539	410	686	522
60	681	580	393	298	969	713	561	426	716	544

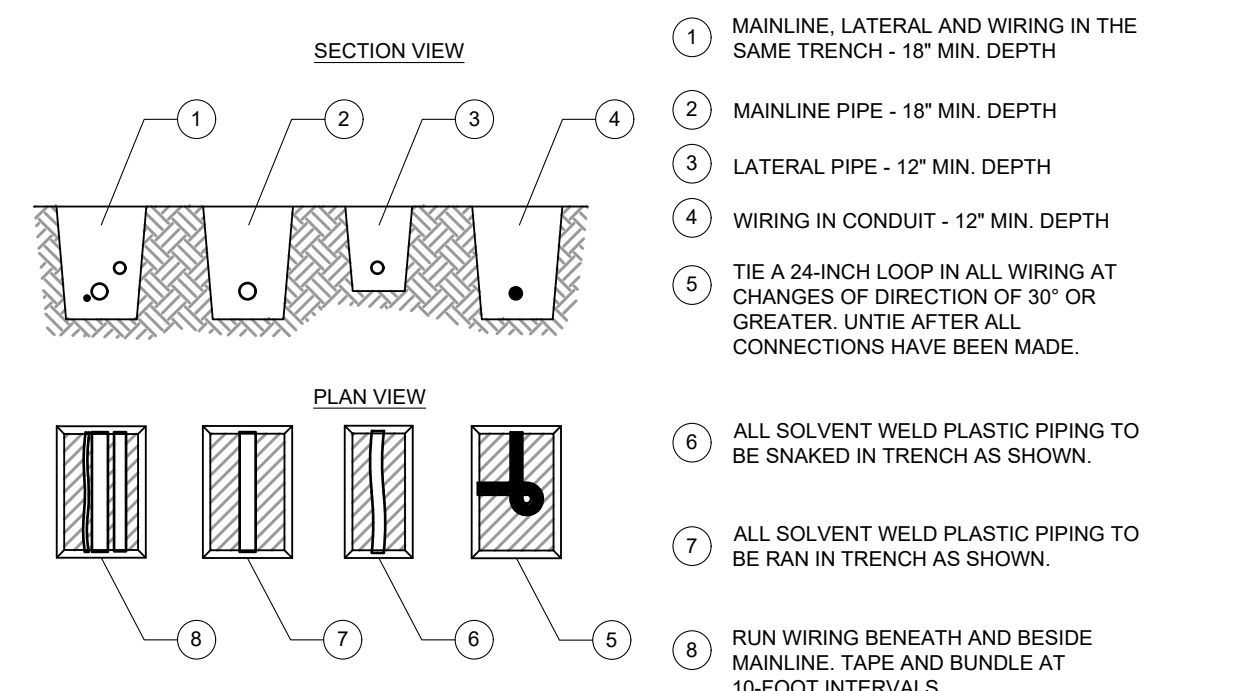
Techline CV Center Feed Layout
Scale: N.T.S.



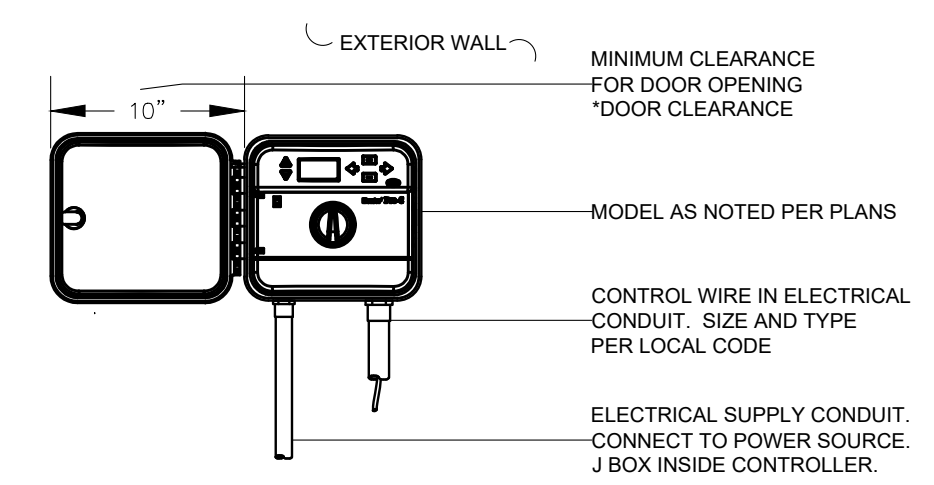
INDICATOR - SWING JOINT
Scale: N.T.S.



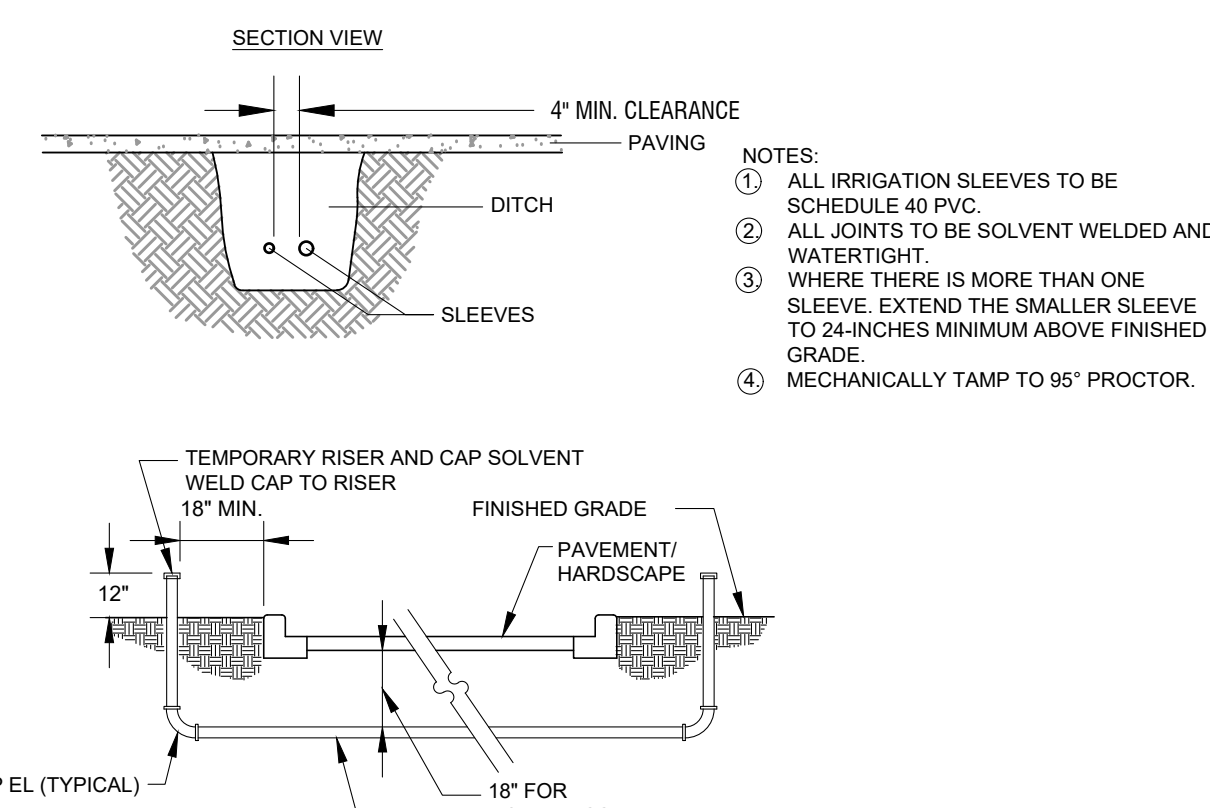
Electric Remote Control Valve
Scale: N.T.S.



Pipe and Wire Trenching
Scale: N.T.S.



Controller
Scale: N.T.S.



Sleeve Detail
Scale: N.T.S.

PVC PIPE SIZE	SOLVENT WELD SCH. 40 FITTINGS	BELL AND GASKET FITTINGS	SOCKETED PIPE
1/2"	2"	--	2"
3/4"	2"	--	2"
1"	2 1/2"	--	2 1/2"
1 1/4"	3"	--	3"
1 1/2"	3"	3"	3"
2"	4"	4"	4"
2 1/2"	6"	6"	6"
3"	6"	6"	6"
4"	8"	8"	8"

Sleeve Schedule
Scale: N.T.S.

Kimley-Horn of Michigan, Inc.

© 2022 KIMLEY-HORN OF MICHIGAN, INC.
 3911 5th MILE ROAD
 ANN ARBOR, MI 48106-7208
 WWW.KIMLEY-HORN.COM

REVISIONS
 NO. DATE BY
 1 02/06/23 JWG
 2 12/19/22 JWG
 3 12/16/22 JWG
 4 100% CONSTRUCTION DOCUMENTS
 5 100% CONSTRUCTION DOCUMENTS

SCALE: AS NOTED
 DESIGNED BY: EC
 DRAWN BY: EC
 CHECKED BY: JWG

CITY FILE #22-039
 SECTION #35

ADDC

Architectural Design Collaborative

IRRIGATION DETAILS

BANK OF AMERICA
 3035 S ROCHESTER RD
 ROCHESTER HILLS, MI 48067

ORIGINAL ISSUE: 11/18/2022
 KHA PROJECT NO. 26826000
 SHEET NUMBER IR1.1

CITY FILE #22-039 SECTION #35

SITE PLAN.pdf Markup Summary

Building Department (12)



Subject: Building Department
Author: Mark Artinian
Date: 2/22/2023 10:28:42 AM
Status:

IR1.0



Subject: Building Department
Author: Mark Artinian
Date: 2/22/2023 10:29:14 AM
Status:

IRRIGATION PLAN



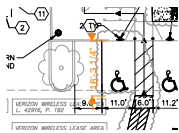
Subject: Building Department
Author: Mark Artinian
Date: 2/22/2023 10:30:29 AM
Status:

IR1.1



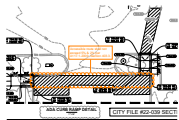
Subject: Building Department
Author: Mark Artinian
Date: 2/22/2023 10:30:29 AM
Status:

IRRIGATION DETAILS



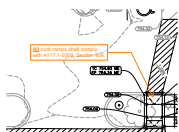
Subject: Building Department
Author: Mark Artinian
Date: 2/22/2023 10:33:49 AM
Status:

18'-3 1/4"



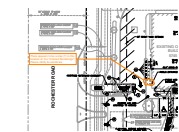
Subject: Building Department
Author: Mark Artinian
Date: 2/22/2023 10:55:32 AM
Status:

Accessible route shall not exceed 5% & 2% per A117.1-2009, Section 403.3.



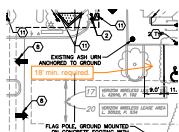
Subject: Building Department
Author: Mark Artinian
Date: 2/22/2023 11:00:32 AM
Status:

All curb ramps shall comply with A117.1-2009, Section 406.



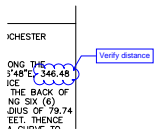
Subject: Building Department
Author: Mark Artinian
Date: 2/22/2023 11:49:43 AM
Status:

There appears to be a step (?) in this location on the "Colored Renderings". Please clarify & coordinate.



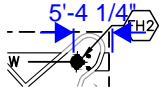
Subject: Building Department
Author: Mark Artinian
Date: 2/22/2023 11:54:35 AM
Status:

18' min. required.



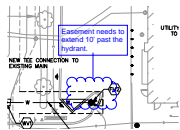
Subject: Engineering Department
Author: Jenny McGuckin
Date: 2/17/2023 3:58:34 PM
Status:

Verify distance



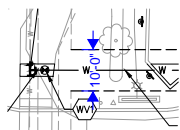
Subject: Engineering Department
Author: Jenny McGuckin
Date: 2/21/2023 1:07:02 PM
Status:

5'-4 1/4"



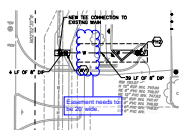
Subject: Engineering Department
Author: Jenny McGuckin
Date: 2/21/2023 7:27:57 AM
Status:

Easement needs to extend 10' past the hydrant.



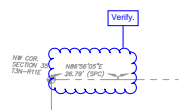
Subject: Engineering Department
Author: Jenny McGuckin
Date: 2/21/2023 1:07:05 PM
Status:

10'-0"



Subject: Engineering Department
Author: Jenny McGuckin
Date: 2/21/2023 7:30:07 AM
Status:

Easement needs to be 20' wide.



Subject: Engineering Department
Author: Jenny McGuckin
Date: 2/21/2023 8:42:51 AM
Status:

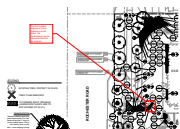
Verify.

Surveyed description does not match legal description on cover and both description differ from recorded description on file.

Subject: Engineering Department
Author: Jenny McGuckin
Date: 2/21/2023 8:45:18 AM
Status:

Surveyed description does not match legal description on cover and both description differ from recorded description on file.

Fire Department (2)



Subject: Fire Department
Author: Ann Echols
Date: 2/9/2023 7:18:17 AM
Status:

The fire hydrant requires a 3 foot clearance on all sides. No landscaping can be placed around the fire hydrant.

Cap: Ann Echols 248-841-0701 Yes
EcholsA@RichmondMA.org

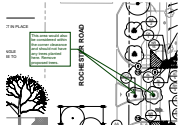
Subject: Fire Department
Author: Ann Echols
Date: 2/9/2023 7:19:49 AM
Status:

Natural Resources (1)

Mat Einheuser 248-841-0551 No
EinheuserM@RichmondMA.org

Subject: Natural Resources
Author: Matt Einheuser
Date: 2/16/2023 9:50:45 AM
Status:

Natural Resources (7)



Subject: Natural Resources
Author: Matt Einheuser
Date: 2/16/2023 9:48:44 AM
Status:

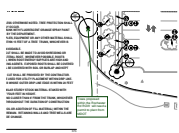
This area would also be considered within the corner clearance and should not have any trees planted here. Remove proposed trees.



Subject: Natural Resources
Author: Matt Einheuser
Date: 2/16/2023 9:49:39 AM
Status:

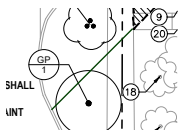
Provide landscape and planting notes/statements including the following:

“Prior approval is required to plant any tree or shrub on the public right-of-way. All trees and shrubs must be planted at least 10’ from the edge of the public road. (Trees must be planted at least 15’ away from curb or road edge where the speed limit is more than 35 mph.) Shade trees and shrubs must be planted at least 5’ from the edge of the public walkway. Evergreen and ornamental trees must be planted at least 10’ from the edge of the public walkway. No trees or shrubs may be planted within the triangular area formed at the intersection of any street right-of-way lines at a distance along each line of 25’ from their point of intersection. No trees or shrubs may be planted in the triangular area formed at the intersection of any driveway with a public walkway at a distance along each line of 15’ from their point of intersection. All trees and shrubs must be planted at least 10’ from any fire hydrant. Shade and evergreen trees must be at least 15’ away from the nearest overhead wire. Trees must be planted a minimum of 5’ from an underground utility, unless the city’s Landscape Architect requires a greater distance. Prior to the release of the performance bond, the City of Rochester Hills Forestry Unit needs to inspect all trees, existing or planted, to identify any that pose a hazard to the safe use of the public right-of-way. Forestry may require the developer to remove, and possibly replace, any such trees.
The above requirements are incorporated into the plan.”

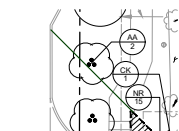


Subject: Natural Resources
Author: Matt Einheuser
Date: 2/16/2023 9:49:22 AM
Status:

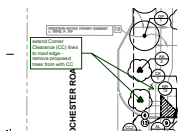
Trees proposed within the Rochester Rd ROW will need a permit to plant from MDOT



Subject: Natural Resources
Author: Matt Einheuser
Date: 2/16/2023 9:46:48 AM
Status:

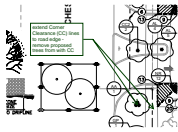


Subject: Natural Resources
Author: Matt Einheuser
Date: 2/16/2023 9:47:00 AM
Status:



Subject: Natural Resources
Author: Matt Einheuser
Date: 2/16/2023 9:48:09 AM
Status:

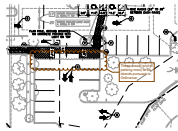
extend Corner Clearance (CC) lines to road edge - remove proposed trees from within CC



Subject: Natural Resources
Author: Matt Einheuser
Date: 2/16/2023 9:48:32 AM
Status:

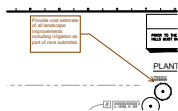
extend Corner Clearance (CC) lines to road edge - remove proposed trees from within CC

Planning Department (5)



Subject: Planning Department
Author: C.McLeod
Date: 2/16/2023 4:28:06 PM
Status:

These areas (end of parking rows) to be islands pursuant to Ordinance

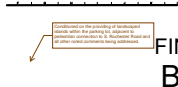


Subject: Planning Department
Author: C.McLeod
Date: 2/16/2023 4:32:09 PM
Status:

Provide cost estimate of all landscape improvements including irrigation as part of next submittal.

Chris McLeod 248.941.0273
macleod@rochesterhills.org

Subject: Planning Department
Author: C.McLeod
Date: 2/24/2023 11:57:46 AM
Status:



Subject: Planning Department
Author: C.McLeod
Date: 2/24/2023 11:59:39 AM
Status:

Conditioned on the providing of landscaped islands within the parking lot, adjacent to pedestrian connection to S. Rochester Road and all other noted comments being addressed.

For all conditional uses, a "Conditional Use Proposed Sign" shall be placed onsite no less than fifteen (15) days prior to the public hearing date. Such sign shall be compliant with Section 138-1.203 of City Ordinances.

Subject: Planning Department
Author: C.McLeod
Date: 2/24/2023 12:13:44 PM
Status:

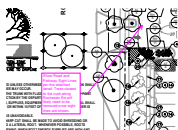
For all conditional uses, a "Conditional Use Proposed Sign" shall be placed onsite no less than fifteen (15) days prior to the public hearing date. Such sign shall be compliant with Section 138-1.203 of City Ordinances.

Site Plan Review (1)



Subject: Site Plan Review
Author: macdonaldj
Date: 2/7/2023 1:20:12 PM
Status:

Traffic (5)



Subject: Traffic
Author: Keith
Date: 2/16/2023 10:05:06 AM
Status:

Show Road and Pathway Sight Lines per the attached detail. Trees closest to the curb along Rochester Rd will likely need to be removed once sight lines are shown.



Subject: Traffic
Author: Keith
Date: 2/17/2023 1:59:35 PM
Status:

show stacking space size as 16 foot long per City Ordinance or per MDOT's permit requirements, if included with their permit conditions.

Subject: Traffic
Author: Keith
Date: 2/16/2023 10:14:16 AM
Status:

Provide the MDOT for review and copy the City on MDOTs response.

Subject: Traffic
Author: Keith
Date: 2/17/2023 1:54:50 PM
Status:

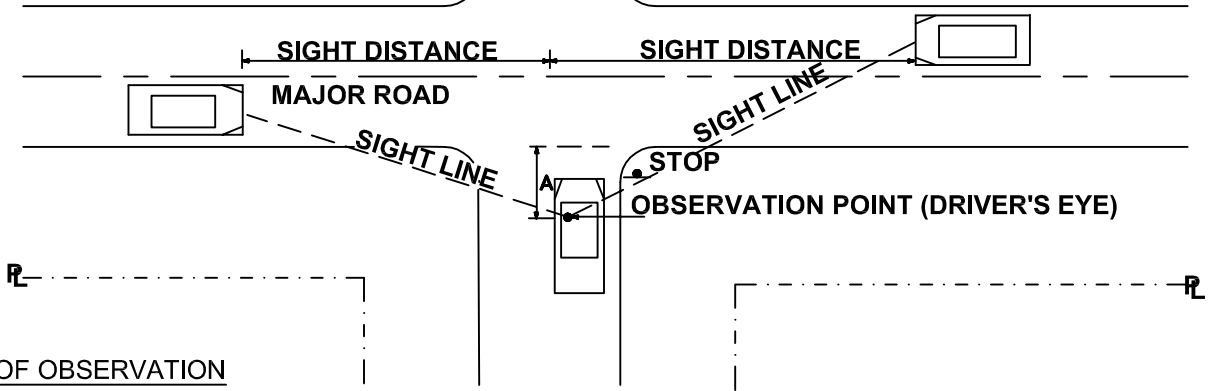
Provide the MDOT for review and copy the City on MDOTs response.

indicate Rochester Rd is under MDOT jurisdiction.

Subject: Traffic
Author: Keith
Date: 2/17/2023 1:56:05 PM
Status:

indicate Rochester Rd is under MDOT jurisdiction.

Different sight distances are required for yield or signal controlled intersections. Contact road agency's (City, R.C.O.C., or M.D.O.T.) design division for determining corner sight distance at yield or signalized approaches.



POINT OF OBSERVATION

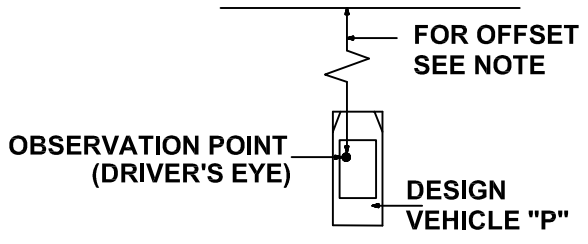
Paved Surface:

(A) Eighteen (18) feet from edge of pavement of through lane.

Gravel Surface:

(A) Eighteen (18) feet from edge of gravel road.

* For residential driveways approaching gravel or paved roads (A) is 10' from the edge of gravel/pavement.



The point of vision shall be from the height of eye, 3.5 feet above the proposed intersecting elevation to a height of object 3.5 feet above the existing or proposed road centerline and shall be continuously visible within the specified limits.

MINIMUM CORNER SIGHT DISTANCE FOR DRIVEWAYS AND STREETS AT MAJOR ROAD INTERSECTIONS FOR PASSENGER VEHICLES

MAJOR ROAD POSTED OR 85% SPEED IN MPH	MINIMUM SIGHT DISTANCE IN FEET, BOTH DIRECTIONS	
	2 OR 3 LANE THRU ROAD IN FEET	4 OR 5 LANE THRU ROAD IN FEET
25	280	295
30	335	355
35	390	415
40	445	470
45	500	530
50	555	590
55	610	650

The basic prima facia speed shall be used for gravel roads, unless otherwise approved by the Engineer.

NOTES

1. Any deviation from given data requires an engineering study approved by the road agency (City, R.C.O.C., or M.D.O.T.) in accordance with the latest edition AASHTO policy on geometric design.
2. This design guide also applies to new Permit and Plat construction projects.
3. The above data is based on a left turn maneuver into the intersecting roadway as described in AASHTO. Due to the higher potential accident severity, the left turning sight distance was used to determine the corner sight distance required. Right turn onto major roads shall have the same sight distances.
4. Existing site conditions may require an engineering study to determine sight distance.

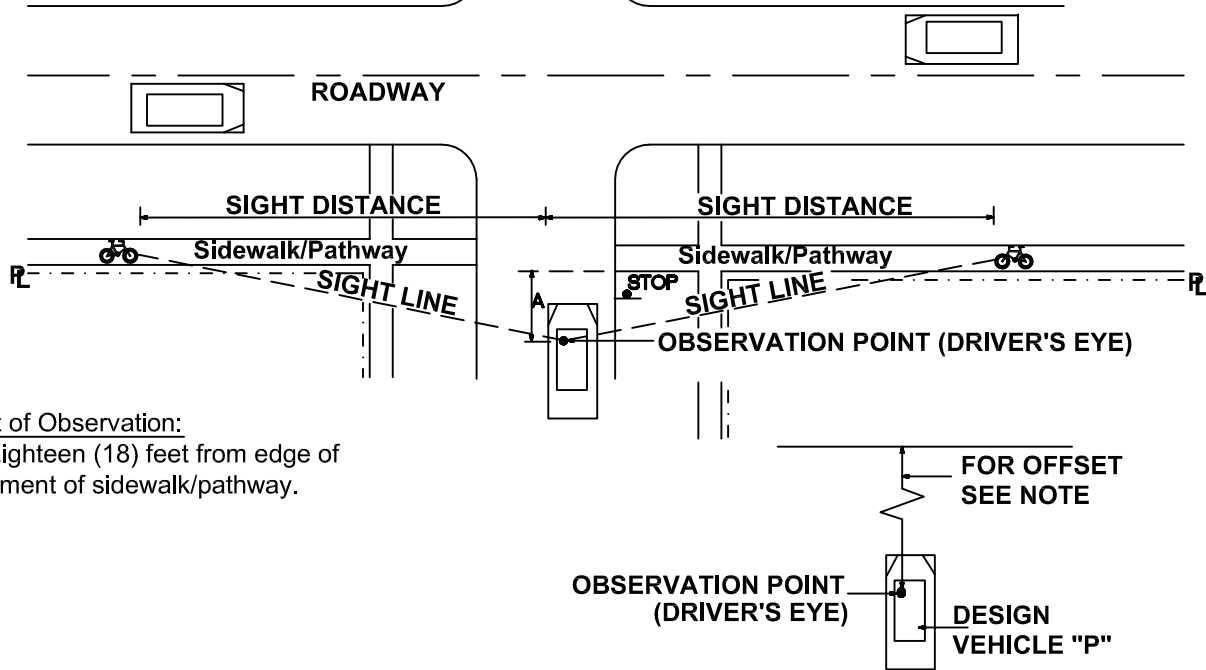
CITY OF ROCHESTER HILLS
STANDARD DETAIL FOR:

Sight Distance Roadways



DRAWN BY: B. SMITH	FILE NAME: CIRC DRV	PLAN DATE: 8/28/1996	REV. 4/12/2012	REV. 3/15/2014	REV.
APPROVED BY: PAUL SHUMEJKO, P.E., PTOE CITY TRANSPORTATION ENGINEER			NOT TO SCALE		SHEET 1 OF 2

Different sight distances are required for yield or signal controlled intersections. Contact road agency's (City, R.C.O.C., or M.D.O.T.) design division for determining corner sight distance at yield or signalized approaches.



Point of Observation:


(A) Eighteen (18) feet from edge of pavement of sidewalk/pathway.

The point of vision shall be from the height of eye, 3.5 feet above the proposed intersecting elevation to a height of object 3.5 feet above the existing or proposed road centerline and shall be continuously visible within the specified limits.

MINIMUM CORNER SIGHT DISTANCE FOR STREETS AT INTERSECTIONS	
PATHWAY GRADE APPROACHING INTERSECTION (%)	MINIMUM SIGHT DISTANCE IN FEET, BOTH DIRECTIONS
0	135
-1	140
-2	145
-3	150
-4	160
-5	165
-6	175
-7	190
-8	205

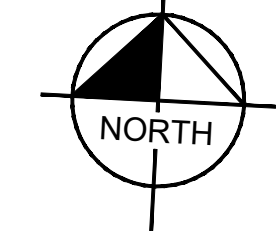
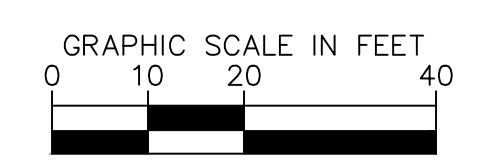
NOTES

1. Any deviation from given data requires an engineering study approved by the road agency (City, R.C.O.C., or M.D.O.T.) in accordance with the latest edition AASHTO Guide for the Development of Bicycle Facilities.
2. This design guide also applies to new Permit and Plat construction projects.
3. The bicycle design speed used in the chart is 18 MPH.
4. Approach pathway slope greater than 8% is not allowed due to ADA compliance.
5. Existing site conditions may require an engineering study to determine sight distance.

CITY OF ROCHESTER HILLS STANDARD DETAIL FOR: Sight Distance Pathways					
DRAWN BY: B. SMITH	FILE NAME: CIRC DRV	PLAN DATE: 8/28/1996	REV. 4/12/2012	REV. 3/15/2014	REV.
APPROVED BY: PAUL SHUMEJKO, P.E., PTOE CITY TRANSPORTATION ENGINEER			NOT TO SCALE		SHEET 2 OF 2

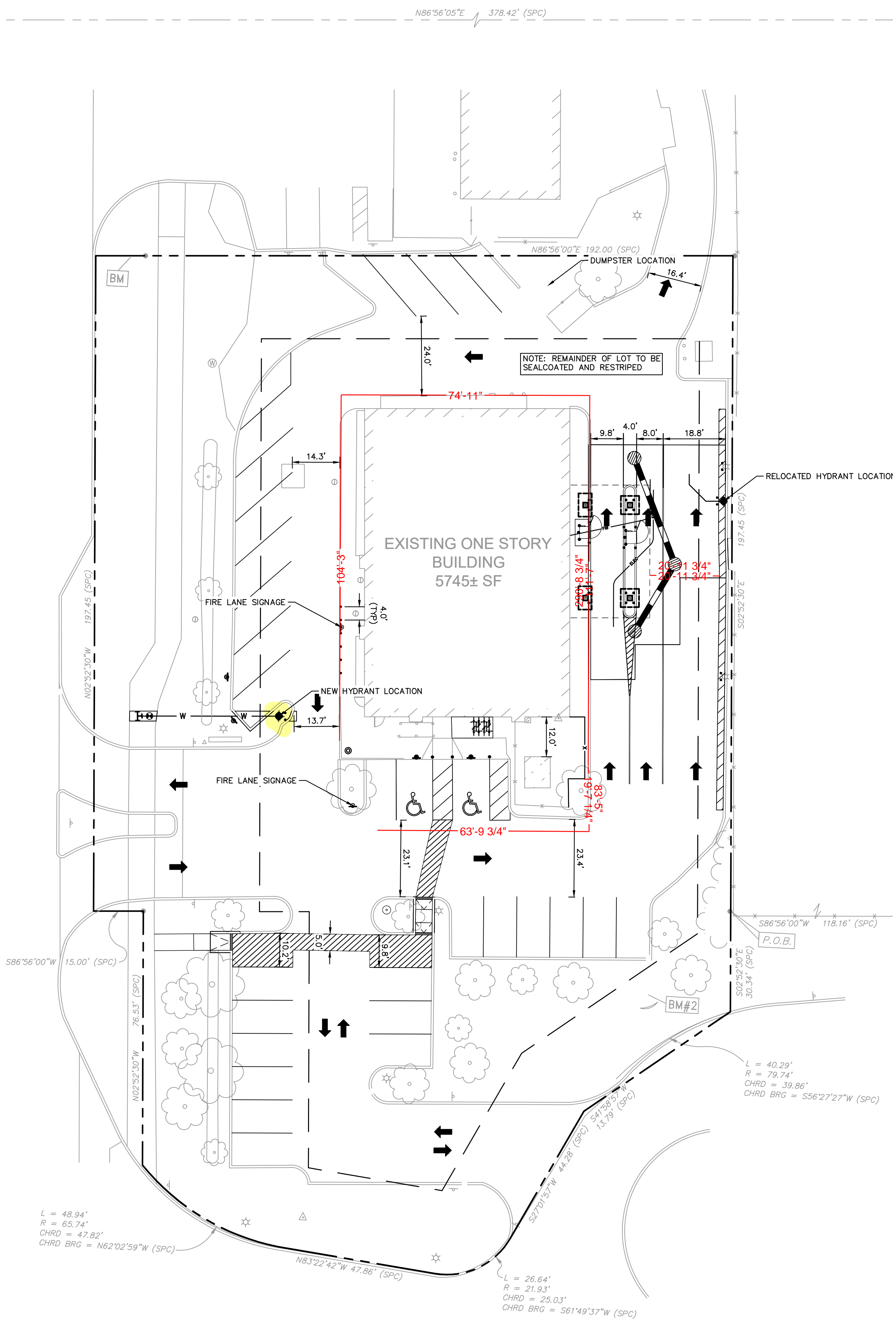
Drawing name: K:\GIS_DEVELOPMENT\26826000_ADC_Rochester_Hills_MV2 Design\CAD\Exhibits\Fire Plan.dwg C3.0 Feb 02, 2023 3:44pm by: John.Gross
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Capt. Ann Echols 248-841-2701 Yes
 EcholsA@RochesterHills.org



AUBURN ROAD

ROCHESTER ROAD



FIRE DEPARTMENT NOTES

1. A KNOX KEY SYSTEM SHALL BE INSTALLED IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE THROUGH THE KNOX COMPANY AT WWW.KNOXBOX.COM (FC 2006 SEC.1028.2)
2. FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE" AND SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (FIRE PREVENTION ORDINANCE CHAPTER 58, SEC 503)
3. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2006 CHAPTER 14.
4. OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING.
5. OPEN BURNING FOR WARMING OF SAND AND / OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES FIRE PREVENTION ORDINANCE CHAPTER 58, SEC 307.6.2 & 307.6.2.3. MORTAR PERMIT CAN BE APPLIED FOR ONLINE AT WWW.ROCHESTERHILLS.ORG/FIRE IN THE "FOR YOUR BUSINESS" SECTION.

SITE DATA TABLE

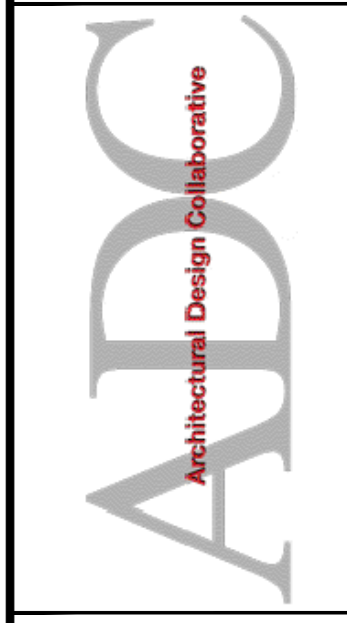
PARCEL NUMBER:	15-35-100-051
SITE ADDRESS:	3035 S. ROCHESTER DRIVE, ROCHESTER HILLS, MI 48307
PARCEL AREA:	1.21 ACRES
DISTURBANCE AREA:	
ZONING:	B-2 GENERAL BUSINESS
PROPOSED USE:	BANK (CONDITIONAL)
EXISTING BUILDING AREA:	5745 SF
DRIVE WIDTH:	VARIES, SEE PLANS
EXISTING PARKING:	42 SPACES
EXISTING ADA PARKING:	2 SPACES
EXISTING TOTAL PARKING:	44 SPACES
PROPOSED PARKING:	27 SPACES
PROPOSED ADA PARKING:	2 SPACES

NO.	REVISIONS	DATE	BY
1	ISSUED FOR PERMIT	12/19/22	JWG
2	100% CONSTRUCTION DOCUMENTS	12/16/22	JWG
3		02/03/23	JWG

Kimley-Horn
 of Michigan, Inc.
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 3911 5th MILE ROAD
 BIRMINGHAM, MI 48226-7208
 WWW.KIMLEY-HORN.COM

SCALE:	AS NOTED
DESIGNED BY:	EC
DRAWN BY:	EC
CHECKED BY:	JWG

CITY FILE #22-039
 SECTION #35



FIRE PROTECTION PLAN

BANK OF AMERICA
 3035 S ROCHESTER RD
 ROCHESTER HILLS, MI 48307

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