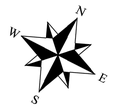
ALTA/NSPS LAND TITLE SURVEY



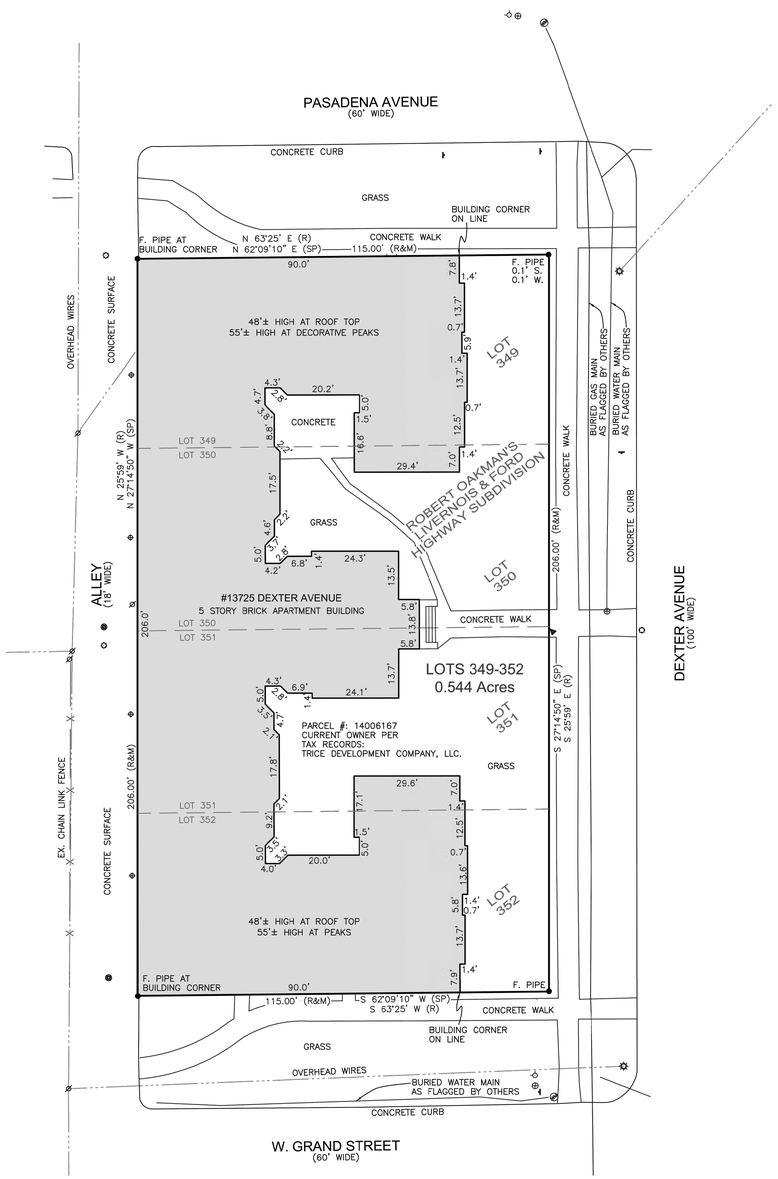
SCALE: 1" = 20'

0 20 40

LEGEND

These standard symbols will be found in the drawing.

- GAS STOP
- WATER VALVE
- HYDRANT
- WATER MANHOLE
- SEWER MANHOLE
- FOUND IRON PIPE
- LIGHT POLE
- SIGN
- CATCH BASIN
- DOWN SPOUT
- POWER POLE



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

CONTRACTOR NOTE:
The locations of existing underground utilities are shown in an approximate way only. The contractor shall determine the exact location of all existing utilities before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by his failure to exactly locate and preserve any and all underground utilities.

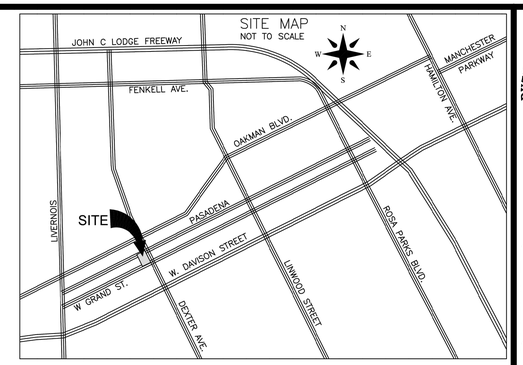
PROJECT COORDINATE SYSTEM

MICHIGAN STATE PLANE COORDINATE SYSTEM, NAD83 (MI GEOID 18) (GRS80), SOUTH ZONE, INTERNATIONAL FEET, GRID.

SURVEY NOTES

1. THE SURVEYED PROPERTY IS IN A FEDERALLY DESIGNATED FLOOD ZONE X, FIRM MAP NUMBER: 26163C0100E, EFFECTIVE DATE: FEBRUARY 2, 2012. THE ABOVE FLOOD PLAIN DESIGNATION IS FOR INFORMATION ONLY AND IS BASED ON THE FIRM MAP LISTED ABOVE AVAILABLE ELECTRONICALLY FROM FEMA ON THE DATE OF THIS SURVEY. THIS SURVEYOR ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP(S). IN ADDITION, THE ABOVE STATEMENT DOES NOT REPRESENT THIS SURVEYOR'S OPINION OF THE PROBABILITY OF FLOODING.
2. LOTS 349–352 CONTAINS = 0.544 ACRES GROSS LAND AREA.
3. AT TIME OF INSPECTION THERE WAS NO OBSERVED EVIDENCE OF CEMETERIES LOCATED ON SUBJECT PROPERTY.
4. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.
5. THE SITE IS ZONED (R–5), MEDIUM DENSITY RESIDENTIAL DISTRICT.
   SETBACKS: FRONT = 20', SIDE = FORMULA A', REAR = 30'.

   SETBACKS ARE LISTED ACCORDING TO THE ZONING ORDINANCE. SETBACKS ARE SUBJECT TO INTERPRETATION OF FRONT, SIDE AND REAR, VARIANCES AND VARIOUS PLANNING AND SITE PLAN APPROVALS. ONLY THE APPROPRIATE MUNICIPAL AUTHORITY CAN DETERMINE IF THE SURVEYED PROPERTY CONFORMS TO SETBACK REQUIREMENTS. THE SURVEYOR CAN SHOW THE SETBACK LINES ON THE DRAWING ONLY IF A ZONING REPORT IS PROVIDED THAT ILLUSTRATES THE SETBACK LINES. NO ZONING REPORT WAS PROVIDED.
6. THERE ARE NO CHANGES IN STREET RIGHT–OF–WAY KNOWN TO THIS SURVEYOR.
7. THERE WAS NO OBSERVED EVIDENCE OF EARTHWORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS IN RECENT MONTHS ON DATE OF FIELD SURVEY.
8. 'BLANKET' IS USED TO MEAN THAT AN EASEMENT IS GRANTED FOR THE UTILITY IN A LOCATION NOT SPECIFIED ON THE SURVEYED PROPERTY.
9. THE PROPERTY HAS DIRECT ACCESS TO PASADENA AVE., W. GRAND STREET AND DEXTER AVE., DEDICATED PUBLIC ROADS UNDER THE JURISDICTION OF THE CITY OF DETROIT.
10. THE LEGAL DESCRIPTION DESCRIBES THE SAME PROPERTY AS INSURED IN THE TITLE COMMITMENT OR ANY EXCEPTIONS HAVE BEEN NOTED HEREIN.
11. THE BEARINGS ARE BASED ON MICHIGAN STATE PLANE, SOUTH ZONE.



ALTA Commitment **SCHEDULE B-II (EXCEPTIONS)** **Commitment No. 703557**

Schedule B of the policy or policies to be issued will contain exceptions to the following matters unless the same are disposed of to the satisfaction of the Company.

1. Any policy we issue will have the following exceptions unless they are taken care of to our satisfaction:

(A). Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met

(B). Any facts, right, interests, or claims which are not shown by the Public Records but that could be ascertained by an inspection of the Land or by making inquiry of persons in the possession of the Land.

(C). Easements, liens, or encumbrances, or claims thereof not shown by the Public Record.

(D). Any encroachment, encumbrance, violation, variation, or adverse circumstances affecting the Title including discrepancies, conflicts in boundary lines, shortage in area, or any other facts that would be disclosed by an accurate and complete land survey of the Land, and that are not shown in the Public Records.

(E). Any liens or right to lien for services, labor, or material imposed by law and not shown by the Public Records.

(F). Rights and claims of parties in possession, and anyone claiming by, through or under them.

(G). Homestead rights, if any, of the spouse of any individual insured or of any individual shown herein to be a party in interest.

(H). Taxes and assessments that become a lien against the property after date of closing. The Company assumes no liability for the tax increases occasioned by the retroactive revaluation or changes in the Land usage or loss of any homestead exemption status for the insured premises.

2. Terms and conditions of Grant of Easement in favor of Comcast Cablevision of Detroit, dated June 8, 1998 and recorded on July 29, 1998 in Liber 29916, Page 4041, Wayne County Records.
(BLANKET – SEE NOTE 8)

3. Terms and conditions of Notice of Administrative Action, dated October 22, 2018 and recorded on November 20, 2018 in Liber 54742, Page 360, Wayne County Records.
(COVERS ENTIRE PARCEL)

4. Tax Information
14006167.
2024 Delinquent Winter Tax - DUE in the amount of $2,163.68
2024 Summer Tax - PAID in the amount of $14,345.63

This commitment is invalid unless the insuring Provisions and Schedules A and B-I are attached.
SCHEDULE B-II of this commitment--Page 1

PRELIMINARY

CERTIFICATION

TO CABOT APARTMENTS LIMITED DIVIDEND HOUSING ASSOCIATION LIMITED PARTNERSHIP; TRICE DEVELOPMENT COMPANY, LLC; OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY :

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1–4, 6(B), 7(A), 7(C), 8, 9, 13, 14, 16 AND 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON APRIL 14, 2025.

AARON JOSEPH HOFFMAN DATE
PROFESSIONAL SURVEYOR No. 70295

C.100

OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER: 703557, EFFECTIVE: MARCH 25, 2025

DUTHLER LAND SURVEYOR
810.724.6532 IMLAY CITY, MI
DUTHLERLANDSURVEYOR.COM

R.A. DUTHLER
LAND SURVEYOR
158 E. THIRD STREET
IMLAY CITY, MICHIGAN 48444
PH. (810) 724-6532
FAX. (810) 724-1551

AARON JOSEPH HOFFMAN
No. 70295

ALTA/NSPS LAND TITLE SURVEY

LEGAL DESCRIPTION:
LAND IN THE CITY OF DETROIT, COUNTY OF WAYNE, STATE OF MICHIGAN:
LOTS 349, 350, 351 AND 352, ROBERT OAKMAN'S LIVERNOIS & FORD HIGHWAY SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 36, PAGE 2 OF PLATS, WAYNE COUNTY RECORDS.

SITE ADDRESS:
13725 DEXTER AVE.
DETROIT, MI 48238

CLIENT:
CABOT APARTMENTS

PREPARED FOR:
ZEIMET WOZNIAK & ASSOC.
55800 GRAND RIVER AVE.
SUITE 100
NEW HUDSON, MI 48165

JOB No. 250412_ALTA

DRAWN BY: AARON HOFFMAN/ R.D.
DATE: APRIL 16, 2025
SCALE: 1" = 20'
SHEET 1 OF 1
REVISION DATES:
1.

UTILITY CONTACTS
(PER MISS DIG DESIGN TICKET #2025040904418) DATED 4-23-25:

IN COMPLIANCE WITH PUBLIC ACT 53 OF THE STATE OF MICHIGAN (EFFECTIVE AUGUST 1, 1974), THE CONTRACTOR SHALL NOTIFY IN ADVANCE OF CONSTRUCTION ALL PUBLIC AND PRIVATE OWNERS HAVING EXISTING FACILITIES IN OR NEAR THE IMMEDIATE WORKING AREA. FOR CONVENIENCE, THE KNOWN UTILITY OWNERS ARE LISTED ON THIS DRAWING. THIS LISTING DOES NOT, HOWEVER, RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF VERIFYING UTILITY LOCATIONS AND NOTIFYING ALL UTILITY OWNERS AND MISS-DIG (PHONE 1-800-482-7171).

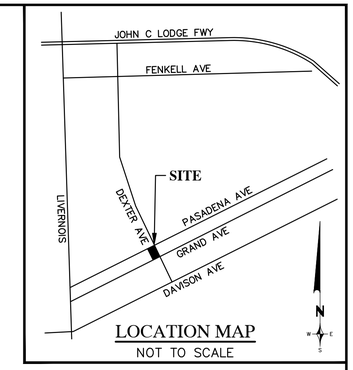
123.NET FIBER	248-431-4584
ATT TELEPHONE	616-881-2268
CITY OF DETROIT POTABLE WATER	313-663-0354
CITY OF DETROIT SAN/STM	313-663-0354
DETROIT LIGHTING ELECTRIC	313-367-5130
DTE ENERGY ELECTRIC	313-407-5364
DTE ENERGY GAS	248-318-7839
WAYNE CO. DPS LAND USE	734-595-6504

NOTE:

THE ABOVE LISTING IS PROVIDED FOR CONVENIENCE ONLY. IT DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF VERIFYING UTILITY LOCATIONS AND NOTIFYING ALL UTILITY OWNERS AND MISSDIG.

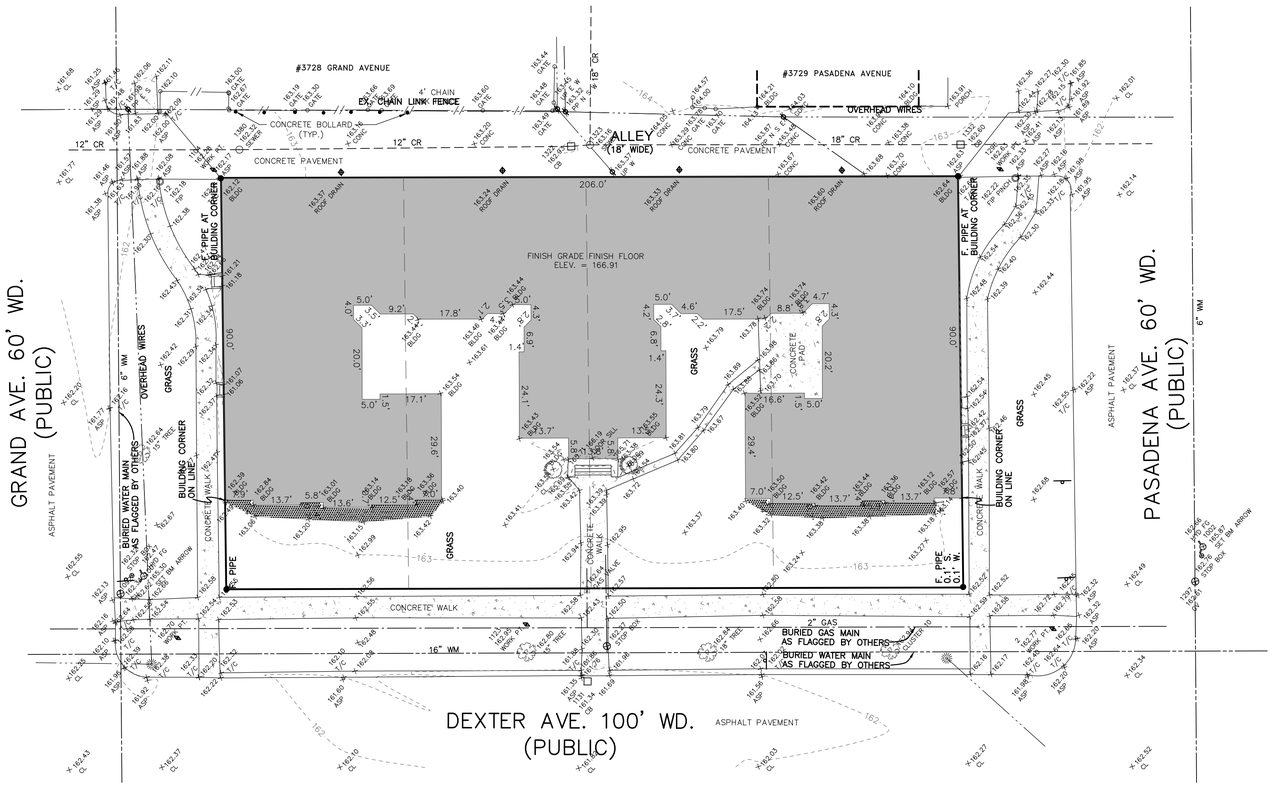
LEGEND

	BOUNDARY LINE	R.O.W.	RIGHT OF WAY
	PARCEL LINE	◯	MANHOLE
	EASEMENTS	□	CATCH BASIN
//——//	FENCE LINE	◊	ROOF DRAIN
	SANITARY SEWER	⊗	GATE VALVE
	STORM SEWER		HYDRANT
	WATER MAIN		WATER SHUT-OFF
	GAS MAIN		UTILITY POLE
	ELECTRIC CABLE		LIGHT POLE
000	CONTOUR MAJOR		SIGN
000	CONTOUR MINOR		TREE
○	FIP, SCI	ASP	TOP OF ASPHALT
◈	WORK POINT	T/C	TOP OF CURB
SCI	SET CAPPED IRON	CL	CENTERLINE
FIP	FOUND IRON PIPE	+100.00	SPOT ELEVATION
M.	MEASURED		
R.	RECORDED		



LOCATION MAP
NOT TO SCALE

SCALE: 1" = 20'
0 10 20 40



CONTROL POINTS:

NO.	NORTHING	EASTING	ELEV.	DESC.
1	327291.1290	13456841.1020	162.70	WP SCI
2	327507.8000	13456727.3510	162.77	WP SCI
1104	327240.4600	13456720.0290	162.28	WP PK
1123	327376.2260	13456793.3140	162.95	WP HUB
1296	327436.0790	13456619.6920	162.63	WP X IN ASPH

BENCHMARKS: (CITY OF DETROIT DATUM)

NO.	NORTHING	EASTING	ELEV.	DESC.
1001	327275.0360	13456829.9840	165.30	ARROW ON HYDRANT
1002	327534.6710	13456687.6330	165.87	ARROW ON HYDRANT

STRUCTURE TABLE:

POINT	DESCRIPTION	RIM	PIPE SIZE	DIRECTION	INVERT
1092	GATE VALVE	162.34	FULL OF WATER		
1131	CATCH BASIN	161.34	T/WATER		157.86
1297	GATE VALVE	162.61	FULL OF WATER		
1322	CATCH BASIN	162.93	T/WATER		159.27
1323	SEWER MH	163.16	12"	S	159.96
			18"	W	151.44
			12"	S	151.53
			18"	N	151.29
1332	CATCH BASIN	162.60	T/WATER		159.07
1380	SEWER MH	162.32	12"	S	153.57
			12"	N	152.12
			12"	S	157.73

NOTE:

DWSD HAS NO AVAILABLE RECORDS FOR THE SEWER IN THE ALLEY WEST OF DEXTER AVE. BETWEEN GRAND AVE. AND PASADENA AVE.

UTILITY NOTES:

1. SOME EXISTING CATCH BASINS (SHOWN WITHOUT CONNECTIONS TO EXISTING SEWERS) ARE OLD STRUCTURES WITH TRAPS – THE LOCATIONS OF WHERE THEY ARE CONNECTING TO THE EXISTING SEWERS ARE NOT KNOWN.

NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENT OF ALL STRUCTURES, KNOWN OR UNKNOWN, SHOWN OR UNSHOWN, LOCATED WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE IF ANY SUCH STRUCTURES ARE IDENTIFIED. ALL COSTS ASSOCIATED WITH LOCATING AND ADJUSTING THESE STRUCTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. DESIGN PROFESSIONAL AND CLIENT WARRANT THAT IN TRANSMITTING INSTRUMENTS OF SERVICE, OR ANY OTHER INFORMATION, THE TRANSMITTING PARTY IS THE COPYRIGHT OWNER OF SUCH INFORMATION OR HAS PERMISSION FROM THE COPYRIGHT OWNER TO TRANSIT SUCH INFORMATION FOR ITS USE OF THE PROJECT. IF THE CLIENT AND DESIGN PROFESSIONAL INTEND TO TRANSMIT INSTRUMENTS OF SERVICE OR ANY OTHER INFORMATION OR DOCUMENTATION IN DIGITAL FORM, THEY SHALL ENDEAVOR TO ESTABLISH NECESSARY PROTOCOLS GOVERNING SUCH TRANSMISSIONS.

STATE OF MICHIGAN
JULIAN JAY WARGO, JR.
ENGINEER
No. 6201039177
LICENSED PROFESSIONAL ENGINEER

Julian J. Wargo, Jr.

ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE
PERMIT	5-9-25								
BIDS	6-24-25								
OWNER REVISIONS	9-15-26								

ZEIMET WOZNIAK & ASSOCIATES
Consulting Civil Engineers
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
TRICE DEVELOPMENT CO., LLC
4714 E. OUTER DRIVE
DETROIT, MI 48234

TOPOGRAPHIC SURVEY
CABOT APARTMENTS
DETROIT WAYNE COUNTY MICHIGAN

FIELD BOOK 1297
DATE 5-9-25
DESIGNED BY JJW
DRAWN BY PTG
SCALE HOR: 1" = 20' VER: 1" = N/A
JOB NO. 25114
SHEET C.101

© COPYRIGHT 2025

WATER MAIN QUANTITIES:

3" DIP CL52 DOMESTIC WATER SERVICE	52 LF
CONNECT TO EX. 4" WATER SERVICE	1 EA
ABANDON EX. 4" WATER SERVICE	52 LF
8" DIP CL52 FIRE SUPPRESSION SERVICE	41 LF
16"x16"x8" TAPPING SLEEVE VALVE IN WELL	1 EA

SANITARY SEWER QUANTITIES:

8" PVC SDR 23.5/PVC SCH 40 PIPE SAN. SERVICE	9 LF
8" CLEANOUT	1 EA
CONNECT TO EX. 12" SEWER (DROP CONNECTION)	1 EA

NOTE:
QUANTITIES SHOWN ABOVE ARE FOR PERMIT PURPOSES ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING THE ACTUAL SCOPE OF WORK IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS.

UTILITY NOTES:

1. REFER TO ARCHITECTURAL PLANS TO COORDINATE ALL BUILDING LEADS
2. ALL TRENCHES WITHIN A ONE ON ONE SLOPE OF PAVEMENT SHALL BE BACKFILLED WITH SAND (MDOT CLASS II MINIMUM) AND MECHANICALLY COMPACTED IN NOT MORE THAN 9" LAYER TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTER COMPACTION TEST ASTM D-1557. COMPACTED SAND BACKFILL SHALL ALSO BE PROVIDED FOR ALL SEWER TRENCHES LOCATED UNDER, OR WITHIN, THREE FEET OF PAVEMENT.
3. A MINIMUM VERTICAL CLEARANCE OF 18 INCHES IS REQUIRED AT UTILITY CROSSINGS (MEASURED FROM THE OUTSIDE OF PIPE TO THE OUTSIDE OF PIPE). POSITIVE PROVISIONS SHALL BE MADE TO ENSURE THAT ALL UTILITY TRENCHES ARE FREE DRAINING DURING ALL PHASES OF CONSTRUCTION.
4. ROADWAY, DRIVEWAY AND PARKING AREA CROSSINGS SHALL BE TEMPORARILY CONDITIONED IMMEDIATELY AFTER CROSSING BY PLACING 8" OF MDOT 22A GRAVEL OR SLAG AGGREGATE, AND SHALL BE MAINTAINED IN GOOD, DUST-FREE CONDITION UNTIL PAVEMENT RESTORATION IS MADE.
5. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL UTILITY LINES AND STRUCTURES. AS OUTLINED ON THE SITE PREPARATION PLAN, WITH THE INSTALLATION OF UTILITY IMPROVEMENTS.
6. NO CONNECTION MAY BE MADE TO ANY EXISTING WATER MAIN UNTIL THE NEW MAIN HAS PASSED ALL PRESSURE AND BACTERIOLOGICAL TESTING.
7. WATERMAIN SHALL HAVE A MINIMUM OF 5.5 FEET OF COVER.
8. ALL SANITARY AND STORM DRAINAGE AND WATER SERVICES WITHIN PRIVATE PROPERTY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MICHIGAN PLUMBING CODE (2015).
9. ALL SANITARY AND STORM DRAINAGE AND WATER INSTALLED WITHIN THE ROW SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETROIT WATER AND SEWERAGE DEPARTMENT (DWSD) STANDARDS AND SPECIFICATIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING PUBLIC OR PRIVATE UTILITIES. ANY DAMAGE SHALL BE REPAIRED AT NO COST TO THE OWNER OR THE CITY OF DETROIT.
11. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY THE CITY OF DETROIT PRIOR TO CONSTRUCTION.
12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PAY ALL FEES ASSOCIATED WITH THE WORK TO BE PERFORMED FOR STORM SEWER, SANITARY SEWER, WATER AND GAS CONNECTIONS, STREET CUT PERMIT, ETC AS REQUIRED BY GOVERNING AGENCIES.
13. THE CONTRACTOR SHALL INSPECT AND CLEAN ALL NEW MANHOLES, CATCH BASINS, DRAIN INLETS. DRAIN LINES AND CLEANOUTS SHALL BE INSPECTED AND CLEANED IMMEDIATELY PRIOR TO THE SUBSTANTIAL COMPLETION OF THE PROJECT.
14. ELECTRIC, GAS, CABLE AND TELEPHONE SERVICES TO THE BUILDINGS WILL BE COORDINATED WITH UTILITY OWNERS.
15. PROPOSED TAP OF EXISTING WATERMAIN FOR NEW CONNECTION WILL BE PER DWSD STANDARDS AND SPECIFICATIONS.
16. PROPOSED CONNECTION TO DWSD PUBLIC SEWER MANHOLE WITH EXTERIOR DROP CONNECTION PER DWSD STANDARDS AND SPECIFICATIONS.
17. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT DWSD STANDARD SPECIFICATIONS AND DETAILS.
18. PROPOSED CONNECTION TO DWSD PUBLIC SEWER MANHOLE FOR STORM OUTLET PER DWSD STANDARDS AND SPECIFICATIONS.
19. WATER LEAD CROSSING PER DWSD STANDARDS AND SPECIFICATIONS.
20. REFER TO ARCHITECT'S PLANS FOR EXACT LOCATION OF ALL BUILDING SERVICES (SANITARY, WATER, GAS, ELECTRICAL, CTV, FIBER) AND ROOF DOWNSPOUTS.
21. NEW ROOF DOWNSPOUTS SHALL EXTEND A MIN. OF 4-FEET AWAY FROM THE BUILDING TO DISCHARGE ONTO GRADE AND SHALL NOT BE CONNECTED TO THE SEWER. PLACE A SPLASH BLOCK AT THE BOTTOM OF THE DOWNSPOUT/ELBOW FOR EROSION CONTROL.
22. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION OR BETTER CONDITION.

CONNECTION NOTE:

CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT ALL PROPOSED CONNECTIONS AND CROSSINGS AND SUPPLY ELEVATIONS AND LOCATIONS TO THE DESIGN ENGINEER TO CONFIRM OR ADJUST DESIGN.

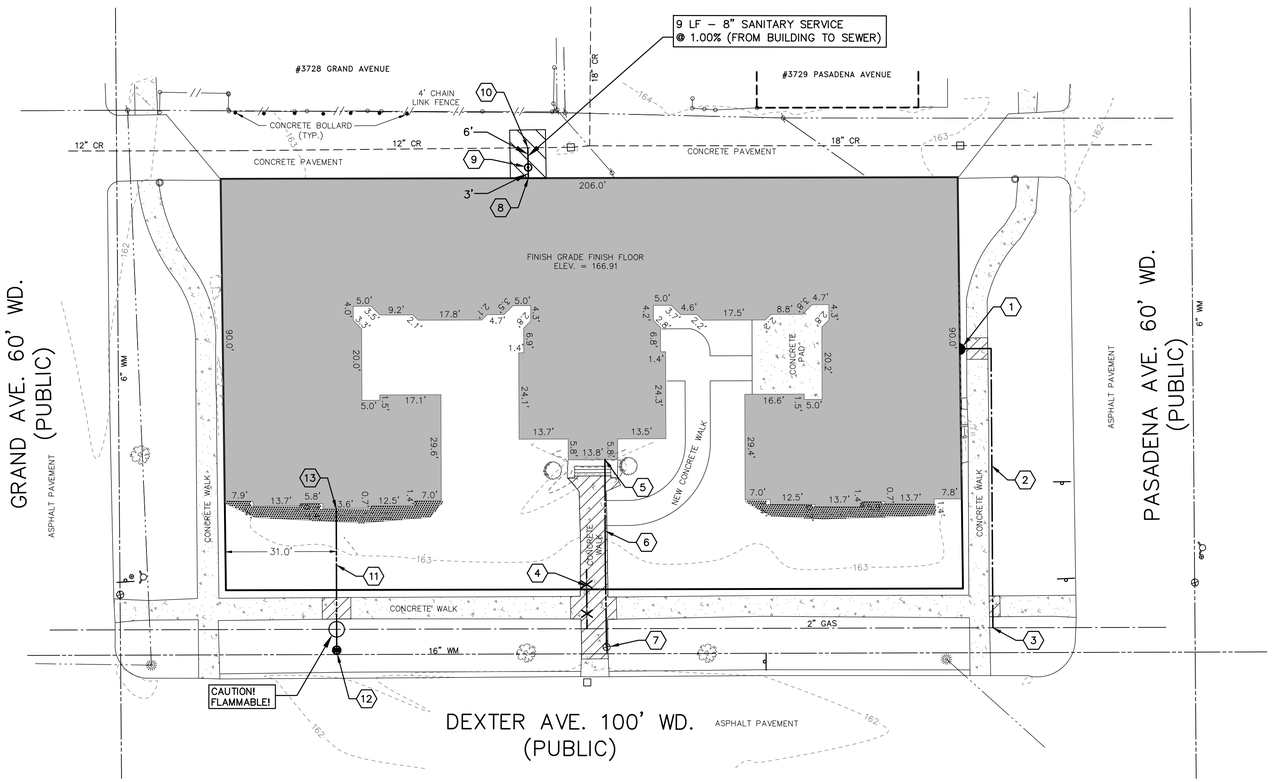
DWSD NOTE:

BEFORE TAPPING ANY DWSD-OWNED ASSET, THE CONTRACTOR SHALL OBTAIN A TAP PERMIT FROM DWSD.

CAUTIONARY NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENT OF ALL STRUCTURES, KNOWN OR UNKNOWN, SHOWN OR UNSHOWN, LOCATED WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE IF ANY SUCH STRUCTURES ARE IDENTIFIED. ALL COSTS ASSOCIATED WITH LOCATING AND ADJUSTING THESE STRUCTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. DESIGN PROFESSIONAL AND CLIENT WARRANT THAT IN TRANSMITTING INSTRUMENTS OF SERVICE, OR ANY OTHER INFORMATION, THE TRANSMITTING PARTY IS THE COPYRIGHT OWNER OF SUCH INFORMATION OR HAS PERMISSION FROM THE COPYRIGHT OWNER TO TRANSIT SUCH INFORMATION FOR ITS USE OF THE PROJECT. IF THE CLIENT AND DESIGN PROFESSIONAL INTEND TO TRANSMIT INSTRUMENTS OF SERVICE OR ANY OTHER INFORMATION OR DOCUMENTATION IN DIGITAL FORM, THEY SHALL ENDEAVOR TO ESTABLISH NECESSARY PROTOCOLS GOVERNING SUCH TRANSMISSIONS.

SCALE: 1" = 20'
0 10 20 40



UTILITY LEGEND

EXISTING	PROPOSED
MANHOLE	MANHOLE
CATCH BASIN	CATCH BASIN
CLEANOUT	CLEANOUT
ROOF DRAIN	TREE REMOVAL
GATE VALVE	SANITARY SEWER
HYDRANT	GAS MAIN
WATER SHUT-OFF	WATER MAIN
UTILITY POLE	
GUY ANCHOR	
LIGHT POLE	
SIGN	
TREE	
SANITARY SEWER	
STORM SEWER	
WATER MAIN	
GAS MAIN	
ELECTRIC CABLE	

NOTES:

1. REFER TO MEP PLANS FOR EXACT LOCATION AND SIZES OF ALL BUILDING SERVICES.
2. ALL PROPOSED STORM SEWER AND SANITARY SEWER WILL BE PRIVATE.
3. ALL PROPOSED DOMESTIC WATER AND FIRE SUPPRESSION WILL BE PRIVATE LINES.
4. REFER TO ARCHITECTURAL SITE PLAN SHEET A.S.101 FOR ALL DIMENSIONS.

STANDARD DETAIL NOTE:

THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT DWSD STANDARD SPECIFICATIONS AND DETAILS.

UTILITY PIPE MATERIALS:

- SANITARY LEAD – 8" PVC SDR 23.5 OR PVC SCH 40 OR APPROVED EQUAL.
- WATER LEAD (3" AND LARGER) – DIP, CL52, POLYETHYLENE WRAPPED.

REPAIRS LEGEND:

- REMOVE AND REPLACE CONCRETE WALK JOINT-TO-JOINT FOR INSTALLATION OF NEW UTILITY – EXACT LIMITS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
- –X–X–X– ABANDON EXISTING UTILITY LINE.
- REMOVE AND REPLACE CONCRETE PAVEMENT FOR INSTALLATION OF NEW UTILITY – EXACT LIMITS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR – SEE C.E.D DETAIL.

REPAIRS KEY:

1. GAS METER – SEE SHEET M.101 FOR DETAIL.
2. APPROXIMATE ROUTE OF NEW GAS SERVICE (EXACT ROUTE TO BE DETERMINED BY UTILITY PROVIDER).
3. CONNECT TO EXISTING 2" GAS MAIN – COORDINATE WITH UTILITY PROVIDER.
4. ABANDON EXISTING GAS SERVICE – COORDINATE WITH UTILITY PROVIDER.
5. 3" DOMESTIC WATER SERVICE IE = 160.91 – SEE SHEET P.100 FOR DETAIL.
6. REMOVE EXISTING 4" WATER SERVICE AND REPLACE WITH 52 LF – 3" DI CL52 WATER MAIN PIPE WITH POLYETHYLENE WRAP FROM BUILDING TO VALVE. (PRIVATE DOMESTIC SERVICE).
7. EXISTING 4" GATE VALVE AND BOX TO REMAIN. CONNECT TO EXISTING 4" WATER SERVICE WITH 4"x3" REDUCER.
8. 8" SANITARY SEWER SERVICE IE = 158.33 – SEE SHEET P.100 FOR DETAIL.
9. 8" CEANOUT RIM = 163.10 (MATCH EXISTING GROUND), IE = 158.30.
10. CONNECT TO EXISTING 12" SEWER, 8" IE = 158.24, 12" IE = 151.55± (V.F.) – DROP CONNECTION REQUIRED.
11. INSTALL 41 LF – 8" DI CL52 WATERMAIN PIPE WITH POLYETHYLENE WRAP FROM BUILDING TO EXISTING 16" WATERMAIN (PRIVATE PIPE SUPPRESSION SERVICE).
12. CONNECT TO EXISTING WATERMAIN WITH 16"x16"x8" TAPPING SLEEVE VALVE IN WELL. SET RIM AT ELEV. 162.25 (MATCH EXISTING GROUND).
13. 8" FIRE SUPPRESSION SERVICE – SEE MEP FOR DETAIL.

STATE OF MICHIGAN
JULIAN JAY WARGO, JR.
ENGINEER
No. 6201036177
LICENSED PROFESSIONAL ENGINEER

Julian J. Wargo, Jr.

ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE
PERMIT	5-9-25								
BIDS	6-24-25								
OWNER REVISIONS	9-15-26								

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4714 E. OUTER DRIVE
DETROIT, MI 48234

UTILITY PLAN
CABOT APARTMENTS
DETROIT WAYNE COUNTY MICHIGAN

FIELD BOOK 1297

DATE 5-9-25	SCALE HOR: 1" = 20' VER: 1" = N/A
DESIGNED BY JJW	JOB NO. 25114
DRAWN BY PTG	SHEET C.200

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GENERAL UTILITY NOTES:

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

CONTRACTOR'S RESPONSIBILITIES:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SURVEY INFORMATION INCLUDING UTILITY SYSTEMS BEFORE ANY DEMOLITION OR CONSTRUCTION WORK OCCURS. ANY DISCREPANCIES WITH THE SURVEY INFORMATION SHALL BE REPORTED TO THE CITY'S REPRESENTATIVE IMMEDIATELY.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR COST INCURRED DUE TO DAMAGE AND REPLACEMENT OF SAID UTILITIES.
3. ALL EXISTING CONDITIONS DESIGNATED TO REMAIN WITHIN THE NEW CONSTRUCTION AREA (INCLUDING MAILBOXES) SHALL BE PROPERLY AND ADEQUATELY PROTECTED FROM DAMAGE DURING DEMOLITION OPERATIONS AND THROUGHOUT CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESTORE TO THE ORIGINAL CONDITION ANY OF THESE EXISTING ITEMS THAT ARE DAMAGED OR DISTURBED IN ANY WAY.
4. CONTRACTOR SHALL LIMIT ALL WORK AND DISTURBANCE TO WITHIN DESIGNATED PROJECT AREAS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESTORE TO THE ORIGINAL CONDITION ANY DAMAGE OR DISTURBANCE OUTSIDE THESE LIMITS.
5. STREETS, SIDEWALKS AND ADJACENT PROPERTY SHALL BE PROTECTED THROUGHOUT THE WORK AS REQUIRED BY LOCAL CODES AND REGULATIONS AND APPROVED BY THE CITY.
6. ALL MATERIAL SPECIFIED TO BE REMOVED BECOMES THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF-SITE PER APPLICABLE CODES AND REGULATIONS EXCEPT THAT PRIOR TO DISPOSAL OF ANY CASTINGS, SIGNS, OR POSTS THEY SHALL BE MADE AVAILABLE TO THE CITY OF DEARBORN FOR THE CITY'S SALVAGE YARD.
7. DURING DEMOLITION OPERATIONS EVERY EFFORT SHALL BE MADE TO CONTROL DUST, PER CITY REQUIREMENTS.
8. DURING CONSTRUCTION THE CONTRACTOR SHALL PROVIDE WATCHMEN AND FLAGMEN AS MAY BE REQUIRED FOR THE SAFETY AND CONVENIENCE OF THE PUBLIC AND SHALL FURNISH ALL BARRICADES, SIGNS, AND LIGHTS NECESSARY TO PROTECT THE PUBLIC. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE AUTHORIZED BY THE CITY OF DEARBORN. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MICHIGAN MANUAL OF TRAFFIC CONTROL DEVICES, CURRENT EDITION BY THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

DAMAGE TO PRIVATE PROPERTY:

ALL SIDEWALKS, DRIVEWAYS, LAWNS, FENCING, TREES, SHRUBS, SPRINKLERS, LANDSCAPING, ETC., THAT ARE DAMAGED DURING CONSTRUCTION MUST BE REPAIRED OR REPLACED, IN KIND OR BETTER, BY THE CONTRACTOR. ALL STREET SIGNS, MAIL BOXES, ETC., REMOVED SHALL BE REPLACED IN KIND OR BETTER, BY THE CONTRACTOR. ALL THE REPAIRS OR REPLACEMENTS DUE TO THE CONTRACTOR'S WORK ARE TO BE INCLUDED IN THE CONTRACT PRICE(S) AND SHALL NOT BE AN EXTRA TO THE CONTRACT.

THE CONTRACTOR SHALL SECURE PERMISSION IN WRITING FROM ADJACENT PROPERTY OWNERS PRIOR TO ENTERING UPON ANY ADJOINING PROPERTIES, UNLESS OFFSITE PERMITS HAVE ALREADY BEEN OBTAINED BY THE OWNER AND ARE PART OF THE CONTRACT DOCUMENTS.

DEWATERING OF TRENCH AND EXCAVATIONS:

IF NOT SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION DESIGN DOCUMENTS, THE DESIGN OR QUALITATIVE ANALYSIS OF GROUND WATER DEWATERING SYSTEMS IS BEYOND THE SCOPE OF DESIGN FOR THESE DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING AND PROVIDING APPROPRIATE EXCAVATION DEWATERING SYSTEMS FOR USE DURING CONSTRUCTION.

THE DEWATERING METHOD SELECTED BY THE CONTRACTOR WILL NOT ADVERSELY AFFECT ADJACENT PAVEMENTS OR STRUCTURES PRIOR TO BEGINNING DEWATERING CONDITIONS. MEANS AND METHODS OF DEWATERING ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF DEWATERING WILL BE CONSIDERED INCLUDED IN THE WORK OF CONSTRUCTING THE UNDERGROUND UTILITIES UNLESS SPECIFICALLY INDICATED OTHERWISE.

BY-PASS PUMPING:

FROM TIME TO TIME IT MAY BE NECESSARY FOR THE CONTRACTOR TO BY-PASS PUMP TO COMPLETE THE WORK INDICATED ON THE PLANS. THE COST OF BY-PASS PUMPING, THE METHODS, EQUIPMENT AND MEANS OF PROVIDING THAT WORK ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONSIDERED PART OF THE WORK WHETHER SPECIFICALLY CALLED OUT ON THE PLANS OR NOT.

PAVEMENT REMOVAL:

THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE THICKNESS OF THE PAVEMENT REMOVAL. PAVEMENT CORE SAMPLES ARE FOR INFORMATIONAL PURPOSES ONLY AS TO THE THICKNESS OF THE PAVEMENT AT THE LOCATION OF THE SAMPLE. THE OWNER AND ENGINEER MAKE NO REPRESENTATION, WARRANTY OR GUARANTY THAT THE SAMPLES ACCURATELY REFLECT THE PAVEMENT THICKNESS ON THE PROJECT.

STRUCTURE BACKFILL:

STRUCTURAL BACKFILL SHALL BE PLACED IN CONFORMANCE WITH THE PROJECT PLANS, SPECIFICATIONS OR AS REQUIRED BY THE COMMUNITY, GOVERNMENT AGENCY OR UTILITY THAT HAS JURISDICTION OVER THE WORK.

PUBLIC SIDEWALK REPAIR NOTES:

1. ANY SIDEWALK THAT IS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED PER ADA GUIDELINES.
2. SIDEWALK REMOVAL ADJACENT TO CURB RAMPS WILL NECESSITATE REPLACEMENT OF THE CURB RAMPS IF EXISTING RAMPS DO NOT MEET ADA GUIDELINES.
3. ALL SIDEWALKS ARE TO BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING THE SAME.
4. PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY FOR THIS SITE, ALL EXISTING SIDEWALKS MUST BE REPAIRED TO CONFORM WITH CITY STANDARDS.
5. ALL AREAS AND DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTORS ARE RESPONSIBLE FOR THEIR OWN MEASUREMENTS AND VERIFICATION OF ALL CONDITIONS.
6. CONTRACTOR SHALL CHECK FIELD LAYOUT AND VERIFY ALL GRADES PRIOR TO INSTALLING SIDEWALKS. IF ANY ADJUSTMENT IS REQUIRED DUE TO DIFFERENT EXISTING GRADES FOUND IN THE FIELD, THE CONTRACTOR SHALL NOTIFY AND OBTAIN THE APPROVAL OF THE ENGINEER PRIOR TO PERFORMING THE WORK.
7. THE AREAS ADJACENT TO THE SIDEWALK (BUFFER ZONE) SHALL BE BACKFILLED AND GRADED TO A MAXIMUM SLOPE OF 1V:4H (25%) TO BLEND TO EXISTING GROUND. WHERE GRADING IS NOT FEASIBLE DUE TO LIMITED R-O-W OR PHYSICAL CONSTRAINT, A BACK CURB SHALL BE INSTALLED. THE BUFFER ZONE SHALL BE RESTORED WITH 4" TOPSOIL, SEED, AND MULCH TO REPAIR ANY DAMAGE TO THE GROUND CAUSED BY THE CONTRACTOR'S OPERATIONS.
8. WHERE EXISTING ROADWAYS ARE SAWCUT TO INSTALL CURBING AND/OR SIDEWALK, THE ROADWAY SHOULD BE SAWCUT AT LEAST 2'-0" FROM THE PROPOSED CURB LINE TO ALLOW FOR ADEQUATE COMPACTION OF ASPHALT. IF SAWCUT IS LESS THAN2'-0" FROM PROPOSED CURB LINE, THEN THE ROADWAY SHALL BE REBUILT USING 4000 PSI CONCRETE.
9. CONTRACTOR SHALL PROVIDE NECESSARY TRAFFIC CONTROL, BARRICADES, AND SIGNAGE TO MAINTAIN ACCESS TO AND WITHIN THE PROPERTY AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE BARRICADES AROUND WORK AREAS FOR PEDESTRIAN SAFETY AND SHALL COORDINATE A SIDEWALK CLOSURE PLAN WITH THE CITY.

STANDARD CONSTRUCTION NOTES:

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS AND STANDARD DETAILS OF THE CITY OF DETROIT.
2. CALL MISS DIG (1-800-647-7344 / 1-800-MISS DIG) A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING UNDERGROUND UTILITIES CAUSED BY HIS OPERATIONS.
4. TRENCHES UNDER OR WITHIN 3 FT. OF EXISTING OR PROPOSED PAVEMENTS, DRIVEWAYS, AND/OR SIDEWALKS SHALL BE BACKFILLED AND COMPACTED WITH MDOT CLASS II SAND.
5. WHERE UTILITIES CROSS, PROVIDE POROUS BACKFILL TAMPED IN 12" LAYERS TO THE UNDERSIDE OF THE HIGHER UTILITY. A 6" MIN. SAND CUSHION SHALL BE PROVIDED BETWEEN UTILITIES.
6. ALL SEWER CONSTRUCTION SHALL HAVE MDOT CLASS II BEDDING UNLESS OTHERWISE SPECIFIED ON THE PROFILES.
7. ALL ELEVATIONS SHOWN ARE BASED ON CITY OF DETROIT DATUM.
8. ALL DISTURBED AREAS BE PROMPTLY RESTORED BY THE CONTRACTOR.
9. ALL DRIVEWAYS, DRAIN TILE, CULVERTS AND OTHER FACILITIES REMOVED, DESTROYED, DAMAGED OR OTHERWISE DISTURBED BY THE WORK SHALL BE REPLACED AND/OR RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR.
10. ALL SOIL EROSION AND SILT MUST BE CONTROLLED AND CONTAINED ON SITE.
11. THE CONSTRUCTION MUST MAINTAIN ALL TRAFFIC AT ALL TIMES AS REQUIRED BY THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTC), OAKLAND COUNTY, AND/OR MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT).
12. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE EMERGENCY ACCESS TO PROPERTY FOR THE POLICE, FIRE DEPARTMENT, AMBULANCES OR OTHER EMERGENCY VEHICLES TO PROTECT LIFE, HEALTH AND PROPERTY.
13. PAVED STREET AND DRIVEWAYS MUST BE MAINTAINED IN A REASONABLE STATE OF CLEANLINESS AND THE CONTRACTOR SHALL REMOVE ACCUMULATIONS OF DEBRIS CAUSED BY CONSTRUCTION OPERATIONS.
14. THE CONTRACTOR SHALL HAVE AN OPERATING SWEEPER BROOM AND CLEAN THE EXISTING PAVEMENT AT THE CLOSE OF EACH DAYS OPERATION AND AS OFTEN AS NECESSARY. FAILURE TO COMPLY SHALL CAUSE TO STOP CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH THE STATE AIR POLLUTION CONTROL REGULATIONS AND OAKLAND COUNTY SOIL EROSION AND SEDIMENTATION CONTROL (SESC).
15. CONTRACTOR MUST PROVIDE ALL NECESSARY SHEETING, SHORING, DEWATERING, BRACING, TRENCH BOXES, ETC. TO PERFORM WORK SAFELY AND PROTECT EXISTING UTILITIES AND IMPROVEMENTS IN ACCORDANCE TO MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (MIOSHA).

RESTORATION REQUIREMENTS:

ALL DISTURBED LAWN AREAS SHALL BE RESTORED AS FOLLOWS IF NOT LANDSCAPED WITHIN 10 DAYS OF FINAL GRADING:

1. FINISH SUBGRADE.
2. PLACE 3" THICKNESS CLEAN TOPSOIL TO ATTAIN THE FINISHED GRADE. TOPSOIL MUST NOT BE CONTAMINATED AND MAY NOT BE A MIXTURE OF NATURAL UNDERLYING SOILS, SUBBASE MATERIALS, OR OTHER MANDFILL. IT MUST CONSIST OF NATURAL LOAM, SANDY LOAM, SILTY LOAM, OR CLAY LOAM HUMUS-BEARING SOIL ADAPTED TO THE SUSTENANCE OF PLANT LIFE. TOPSOIL MUST NEITHER BE EXCESSIVELY ACIDIC OR EXCESSIVELY ALKALINE. IT MUST BE OF MINERAL ORIGIN, EXCLUSIVE OF ANY PEAT OR MUCK.
3. APPLY SEED AND FERTILIZER. FERTILIZER TO CONFORM TO M.DOT REQUIREMENTS FOR SEEDING AND SODDING FERTILIZERS, CLASS A AND SHALL BE APPLIED PER THE MANUFACTURER'S RECOMMENDATIONS.
4. APPLY FRESH STRAW OR MARSH HAY MULCH IN AN AIR-DRY CONDITION TO ALL SEEDED AREAS OVER THE SURFACE TO A UNIFORM THICKNESS AT 2 TONS PER ACRE.
5. MULCH SHALL BE ANCHORED IN PLACE WITH A BIO-DEGRADABLE NETTING NOT LARGER THAN 1.5" BY 2" OR SMALLER THAN 0.5" BY 0.5".
6. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THE GROWTH OF ALL SEEDED AREAS - INCLUDING WATERING - AND SHALL RE-SEED AS NECESSARY TO ACCOMPLISH THIS.

TRAFFIC CONTROL AND BARRICADING NOTES:

CONTRACTOR TO INSTALL AND MAINTAIN ALL TEMPORARY ROAD AND SIDEWALK CLOSURE, TRAFFIC CONTROL, AND PEDESTRIAN ACCESS SIGNAGE AND BARRICADES IN ACCORDANCE WITH CURRENT M.M.U.T.C.D. STANDARDS.

MAINTENANCE OF TRAFFIC:

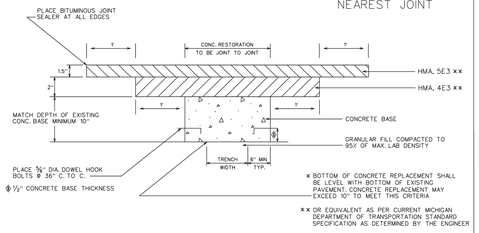
DURING THE PROGRESS OF THE WORK THE CONTRACTOR SHALL ACCOMMODATE BOTH VEHICULAR AND PEDESTRIAN TRAFFIC IN THE ROAD RIGHTS OF WAY. THE CONTRACT'S EQUIPMENT AND OPERATIONS ON PUBLIC STREETS SHALL BE GOVERNED BY ALL APPLICABLE LOCAL, COUNTY AND STATE ORDINANCES, REGULATIONS AND LAWS. THE CONTRACTOR SHALL OBTAIN AND SATISFY ANY AND ALL PERMIT REQUIREMENTS BY THE LOCAL, COUNTY AND STATE GOVERNMENTAL AGENCIES.

IN ADDITION, WHERE THE WORK REQUIRES THE CLOSURE OF ONE OR MORE LANES OR IS WITHIN THE INFLUENCE OF THE ROAD OR PEDESTRIAN RIGHT OF WAY, THE CONTRACTOR SHALL PROVIDE ALL SIGNS, BARRICADES, FLAG PERSONS AND OTHER TRAFFIC CONTROL MEASURES AS REQUIRED BY MDOT, THE COUNTY, OR THE COMMUNITY HAVING JURISDICTION OF THE ROAD AND IN CONFORMANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

COMPENSATION FOR TRAFFIC CONTROL SHALL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE(S) UNLESS SPECIFIC TRAFFIC CONTROL ITEMS ARE INCLUDED IN THE ACCEPTED BID PROPOSAL.

MAJOR STREETS:

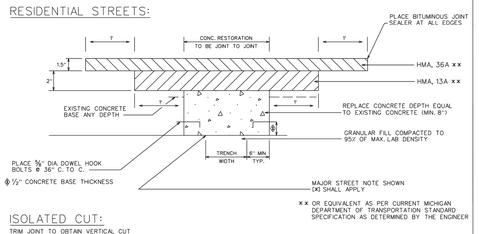
NOTE: PAVEMENT CUTS MUST EXTEND TO NEAREST JOINT



EXCEPTION:

TO ABOVE 3" HMA REPLACEMENT, WHEN PAVEMENT REPLACEMENT IS 100 FEET FROM EITHER SIDE OF UNDERPASS REPLACE 10" MIN CONCRETE BASE WITH TOP OF CONCRETE LEVEL WITH TOP OF EXISTING CONCRETE AND REPLACE HMA SECTION AS EXISTING

RESIDENTIAL STREETS:



ISOLATED CUT:

TRIM JOINT TO OBTAIN VERTICAL CUT

B						
A						
DESCRIPTION	REVISIONS	BRVW	CHKD	APPD	DATE	
DRAWN BY	WLW	CHECKED	KSM			
DATE	08/29/18	APPROVED	SRB			

HMA SURFACE ON CONCRETE BASE UTILITY TRENCH CONSTRUCTION PAVEMENT RESTORATION

CITY OF DETROIT
CITY ENGINEERING DIVISION
SURVEY BUREAU
JOB NO.
DRWG NO. 1 OF 2

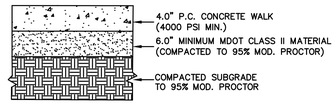
CITY OF DETROIT NOTES

1. MILL (REMOVE) HMA PAVEMENT WITHIN AND BEYOND THE AREA OF TRENCH PAVEMENT REMOVAL IN ORDER TO DETERMINE LOCATION OF UNDERLYING CONCRETE BASE PAVEMENT JOINTS. MILL MINIMUM TO 1' BEYOND NEAREST CONCRETE JOINTS.
2. EXTEND UTILITY TRENCH CONCRETE PAVEMENT REMOVAL TO ALL CONCRETE PAVEMENT JOINTS AND / OR CURBS ADJACENT TO THE TRENCH AREA. REMOVAL SHALL BE "JOINT TO JOINT".
3. CONCRETE PAVEMENT CUTS SHALL BE MINIMUM 3' WIDE.
4. ALL PAVEMENT CUTS SHALL BE MINIMUM 1' WIDER THAN TRENCH WIDTH.
5. ALL REMOVALS SHALL BE SAWCUT STRAIGHT AND SQUARE (90 DEGREES).
6. CONCRETE RESTORATION PAVEMENT SHALL BE MDOT P1 MIX (3,500 PSI).
7. RESTORED CONCRETE PAVEMENT SHALL MATCH THICKNESS OF EXISTING CONCRETE PAVEMENT IN CONFORMANCE WITH MDOT STANDARDS DETAIL R-44-F.
8. RESTORED CONCRETE SHALL BE ANCHORED TO EXISTING CONCRETE PAVEMENT IN CONFORMANCE WITH MDOT STANDARD DETAIL R-44-F
9. APPLY HMA TACK COAT PER MDOT STANDARD SPECIFICATIONS SECTION 904.
10. RESTORE HMA PAVEMENT 3½" TO MATCH EXISTING, IN 2 LIFTS:
    1ST LIFT - 2" MDOT HMA 4E3 (13A RESIDENTIAL), COMPACTED, EXTENDED 1' BEYOND BASE CONCRETE REPAIR.
    2ND LIFT - 1½" MDOT HMA 5E3 (36A RESIDENTIAL), COMPACTED, EXTENDED 1' BEYOND 1ST LIFT..
11. BITUMINOUS JOINT SEALER SHALL BE PLACED AT ALL FINISHED HMA JOINTS.
12. ALL DISTRUBED PAVEMENT MARKINGS AND OTHER ASSETS, INCLUDING BIKE LANE DELINEATORS, WILL HAVE TO BE REPLACED AT THE COST OF THE PERMIT HOLDER, AND SHALL CONFORM TO THE LATEST CED / TED STANDARDS.
13. FOR OTHER RELATED SPECIFICATIONS (BACKFILL COMPACTION, MATERIALS, ETC...), REFER TO DIVISION 15 OF THE STANDARD SPECIFICATIONS FOR PAVING AND RELATED CONSTRUCTION.
14. NOTIFY THE CITY OF DETROIT ENGINEERING DEPARTMENT 24 HOURS PRIOR TO STARTING CONSTRUCTION.
15. ANY OPEN EXCAVATIONS ARE TO BE STEEL PLATED. IF EXCAVATIONS ARE IN THE PAVEMENT, THE PLATES ARE TO BE SPIKED AND RAMPED WITH COLD PATCH. CONTACT THE CITY WITH LOCATION OF THE STEEL PLATE.
16. THE CITY OF DETROIT REQUIRES ALL CONCRETE WORK TO BE STAMPED WITH A CONTRACTORS IDENTIFICATION STAMP.

B						
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DESCRIPTION	REVISIONS	BRVW	CHKD	APPD	DATE	
DRAWN BY	WLW	CHECKED	KSM			
DATE	08/29/18	APPROVED	SRB			

HMA SURFACE ON CONCRETE BASE UTILITY TRENCH CONSTRUCTION PAVEMENT RESTORATION

CITY OF DETROIT
CITY ENGINEERING DIVISION
SURVEY BUREAU
JOB NO.
DRWG NO. 2 OF 2



ONSITE SIDEWALK DETAIL /CROSS-SECTION
NOT TO SCALE

SIDEWALK NOTES:

1. IF ANY OF THE EXISTING BASE CANNOT BE UTILIZED, IT SHALL BE REMOVED AND REPLACED WITH MDOT CLASS II MATERIAL.
2. BROOM FINISH SURFACE.
3. IF NOT INDICATED ON THE PLAN THE CONTRACTOR SHALL SUBMIT A JOINTING PLAN PRIOR TO PLACEMENT OF CONCRETE PAVEMENT.
4. JOINTS SHALL BE SAWCUT AS SOON AS PAVEMENT CAN SUPPORT MACHINE.
5. AN EXPANSION JOINT SHALL BE PLACED BETWEEN NEW WALKS AND EXISTING PAVEMENT AND/OR BUILDINGS.
6. APPLY SILENCURE SRT (OR APPROVED EQUIVALENT) ACRYLIC CURING COMPOUND AND SILOXANE SEALER ON ALL CONCRETE PAVING, CURBS, AND WALKS (APPLY PER MANUFACTURER RECOMMENDATIONS).
7. CONTRACTOR SHALL REFER TO LANDSCAPE PLANS FOR ALL SIDEWALK SCORING AND JOINTING.

STRUCTURE COVER NOTES:

STRUCTURE COVERS FOR PRIVATE UTILITIES SHALL NOT CONTAIN THE CITY OF DETROIT LOGO OR NAME; ONLY PUBLIC UTILITY STRUCTURE COVERS SHALL.

DETROIT WATER & SEWERAGE DEPARTMENT (DWSD) NOTES:

1. DWSD RECORDS INDICATE THAT THERE ARE WATER MAINS AND SEWERS WHICH ARE LOCATED IN THE VICINITY OF THE PROPOSED PROJECT LIMITS, THE LOCATIONS MUST BE FIELD VERIFIED TO MAINTAIN OUR REQUIRED CLEARANCES.
2. USUALLY WATER MAINS HAVE 5' TO 6' COVER AND SEWERS HAVE 8' TO 30' COVER AS APPROVED BY DWSD, DEPENDING ON THE LOCATION.
3. NO UTILITIES ARE ALLOWED TO BE INSTALLED ALONG THE LENGTH OF THE WATER MAIN OR SEWER.
4. IT IS DWSD'S REQUIREMENT THAT ANY PROPOSED UTILITY CROSSING DWSD WATER MAINS OR SEWERS PERPENDICULARLY MUST MAINTAIN A MINIMUM OF 1.5 FEET VERTICAL CLEARANCE BELOW DWSD ASSETS. ALSO, ANY PROPOSED UTILITY RUNNING ADJACENT TO DWSD WATER MAINS AND SEWERS MUST MAINTAIN A MINIMUM OF 3.5 FEET HORIZONTAL CLEARANCE FROM ANY CONDUIT AND/OR MANHOLE OUTSIDE WALL. NO UTILITY IS ALLOWED TO RUN ALONG THE TOP OF THE WATER MAIN OR SEWER.
5. THERE ARE POSSIBILITIES OF SEVERAL WATER AND SEWER SERVICE LINES CROSSING IN THE VICINITY OF PROPOSED WORK, FIELD VERIFY THEIR LOCATION AND DEPTH TO MAINTAIN OUR REQUIRED CLEARANCE.
6. DETROIT WATER AND SEWERAGE DEPARTMENT (DWSD) PROHIBITS THE USE OF HEAVY CONSTRUCTION EQUIPMENT (BULLDOZERS, BACKHOES, EXTREMELY LARGE ROLLERS, ETC.) AND OR STORAGE OF BUILDING MATERIAL DIRECTLY OVER OR NEAR OUR MAINS OR SEWERS. DWSD ALSO PROHIBITS THE USE OF CRANES AND BALLS OR HYDRAULIC RAMS FOR PAVEMENT REMOVAL WHERE THE DWSD FACILITIES ARE INVOLVED. IF THE WATER MAIN OR SEWER FACILITIES ARE BROKEN OR DAMAGED AS A RESULT OF ANY ACTION ON THE PART OF THE CONTRACTOR, THEN THE CONTRACTOR SHALL BE LIABLE FOR ALL COSTS INCIDENTAL TO THE REPAIR OF SUCH BROKEN OR DAMAGED WATER MAIN/SEWER FACILITIES AND APPURTENANCES. THE CONTRACTOR SHALL WAIVE ALL CLAIMS FOR DAMAGES UNDER SUCH CIRCUMSTANCES.
7. FOR ANY PROPOSED WORK THAT INVOLVES DWSD UTILITY ASSETS (WATER MAINS AND/OR SEWERS), AN APPROVAL AND A PERMIT IS REQUIRED FROM DWSD BEFORE THE COMMENCEMENT OF WORK.
8. ONLY DWSD PERSONNEL/CONTRACTORS ARE ALLOWED TO OPERATE DWSD GATE VALVES UNLESS PERMISSION IS GRANTED.
9. ONLY DWSD PERSONNEL/CONTRACTORS ARE ALLOWED TO OPERATE HYDRANTS UNLESS A PERMIT IS OBTAINED.
10. PRESSURE TESTING OF THE PIPING SYSTEM IS REQUIRED BEFORE CONSTRUCTING TO THE DWSD SYSTEM.
11. BACTERIALOGING TESTING BY DWSD IS REQUIRED BEFORE INSTALLING A METER AND CONNECTING THE PIPE TO THE DWSD SYSTEM.
12. WINTER WORK ON WATER MAINS/SERVICES DEPENDS ON PROVIDING PROPER CONDITIONS SUCH AS WARM GASKETS, HEATED WATER, HEATED SAND/CONCRETE MATERIAL, ETC AND IS SUBJECT TO DWSD'S REPRESENTATIVE'S APPROVAL.

STATE OF MICHIGAN
JULIAN JAY WARGO, JR.
ENGINEER
No. 6201039177
LICENSED PROFESSIONAL ENGINEER

Julian J. Wargo, Jr.

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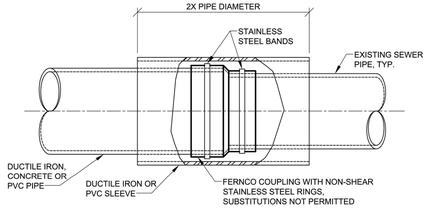
CONSTRUCTION NOTES AND DETAILS
CABOT APARTMENTS

DETROIT WAYNE COUNTY MICHIGAN

FIELD BOOK 1297

DATE 5-9-25 | SCALE HOR: 1" = 20' VER: 1" = N/A
DESIGNED BY JJW | JOB NO. 25114
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DISSIMILAR SEWER PIPE JOINT DETAIL

1. DUCTILE IRON OR CAST IRON PIPE
   PLAIN END PIPES CAN BE CONNECTED USING M.J. SLEEVE, M.J. TRANSITION SLEEVE OR M.J. SPLIT SLEEVE. BELL AND SPIGOT PIPES CAN BE CONNECTED IN A NORMAL WAY USING PUSH ON JOINT, METHOD. IF EXISTING BELL OR SPIGOT IS COMPATIBLE WITH NEW BELL OR SPIGOT, OTHERWISE M.J. SPLIT BELL SLEEVE MAY BE USED.
2. PVC PIPE
   PLAIN END PVC PIPES CAN BE CONNECTED USING ELASTOMERIC-GASKET PVC COUPLINGS. WHERE PVC COUPLINGS ARE NOT SUITABLE DUCTILE IRON M.J. SLEEVES MAY BE USED. IF MISSION BAND SEAL COUPLING IS USED UNDER AN ABNORMAL SITUATION, A DUCTILE IRON OR PVC SLEEVE PROTECTION MUST BE USED.
3. CONCRETE PIPE
   WHERE NORMAL BELL AND SPIGOT GASKETED JOINT IS NOT PRACTICABLE, MISSION BAND SEAL COUPLING WITH DUCTILE IRON OR PVC SLEEVE PROTECTION SHALL BE USED TO COMPLETE THE JOINT.

SIMILAR SEWER PIPE JOINT DETAIL NOTES

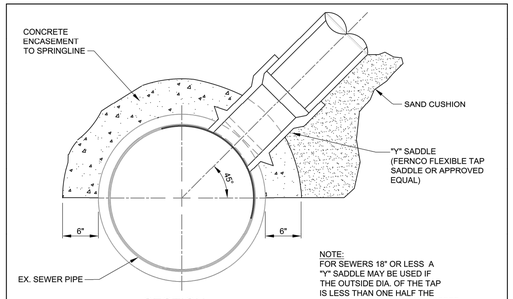
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REVISIONS

SEWER PIPE JOINT DETAIL

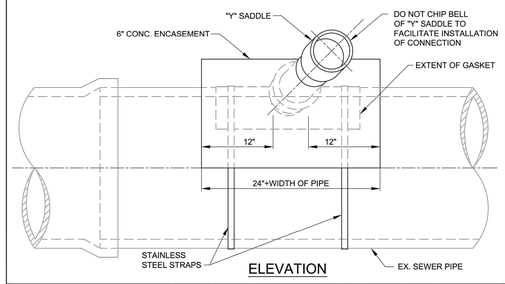
CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 1
DATE 9/2018	DWG. No. 333111-06



NOTE:
FOR SEWERS 18" OR LESS A "Y" SADDLE MAY BE USED IF THE OUTSIDE DIA. OF THE TAP IS LESS THAN ONE HALF THE DIA. OF THE SEWER BEING TAPPED.

SECTION



ELEVATION

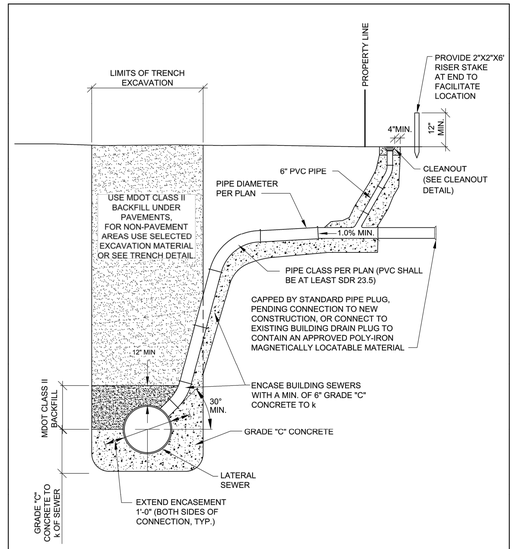
REV	DESCRIPTION	DATE

REVISIONS

CONNECTION, SADDLE TO LATERAL SEWER

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 1
DATE 09/2018	DWG. No. 333111-01



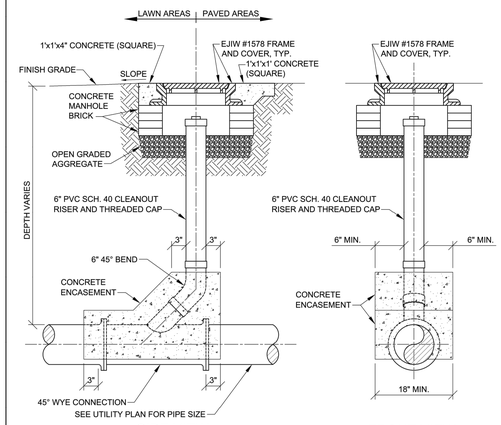
REV	DESCRIPTION	DATE

REVISIONS

WYE, CONNECTION AND EXTENSION

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 1
DATE 09/2018	DWG. No. 333111-02



SIDE VIEW

FRONT VIEW

REV	DESCRIPTION	DATE
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-	-	-
-	-	-
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REVISIONS

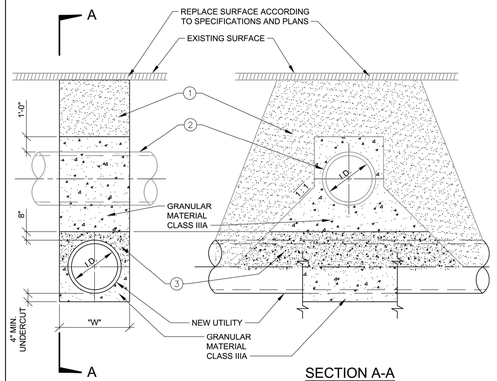
CLEANOUT

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 1
DATE 9/2018	DWG. No. 333111-03

NOTES:

1. BACKFILL ACCORDING TO SPECIFICATIONS AND TYPICAL TRENCH SECTION.
2. EXISTING CATCH BASIN DRAIN. SEWER OR OTHER UNDERGROUND UTILITY CROSSING NEW OPEN CUT CONSTRUCTION.
3. BACKFILL WITH A DRY MIX OF ONE BAG CEMENT PER ONE BAG OF GRANULAR MATERIAL CLASS II.



SECTION A-A

NOTES:

1. ALL GRANULAR BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF MAXIMUM UNIT WEIGHT.
2. WATERMAINS CROSSING UNDER SEWERS - WHEN IT IS IMPOSSIBLE TO OBTAIN THE MINIMUM 18-INCH CLEARANCE. REPLACE THE SEWER PIPE (MINIMUM OF 10 FT. ON BOTH SIDES OF WATERMAIN) WITH WATER WORKS GRADE 150PSI PRESSURE TESTED TO ENSURE WATER TIGHTNESS.
3. "W" - SEE TRENCH DETAILS FOR TRENCH WIDTH.

TYPICAL DETAIL AT CROSSING UNDER EXISTING UTILITIES

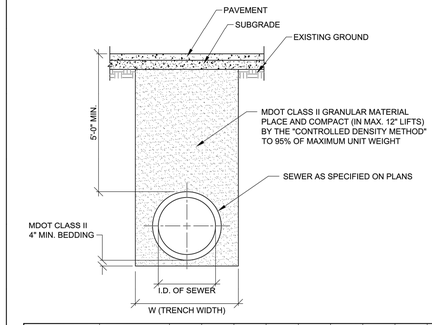
REV	DESCRIPTION	DATE

REVISIONS

UTILITY CROSSING

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 1
DATE 09/2018	DWG. No. 312333-07



I.D. PIPE SIZE (INCHES)	LESS THAN 18	21	21	30	36	42	48	54	60	66	72
MINIMUM TRENCH WIDTH (FEET)	3.00	3.50	4.00	5.00	6.00	7.00	8.00	9.50	10.00	10.50	11.00

STANDARD TRENCH DETAIL FOR SEWER UNDER ROAD BED, PARKING LOTS, SIDEWALKS, DRIVEWAYS, CURBS, GRAVEL ROADS AND ALLEYS

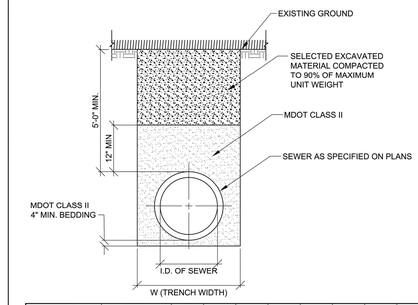
REV	DESCRIPTION	DATE

REVISIONS

SANITARY SEWER TRENCH DETAIL

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 3
DATE 09/2018	DWG. No. 312333-01



I.D. PIPE SIZE (INCHES)	LESS THAN 18	21	21	30	36	42	48	54	60	66	72
MINIMUM TRENCH WIDTH (FEET)	3.00	3.50	4.00	5.00	6.00	7.00	8.00	9.50	10.00	10.50	11.00

STANDARD TRENCH DETAIL FOR SEWER UNDER BERMS, LAWNS, GRASSY AREAS, (OUTSIDE PAVEMENT INFLUENCE)

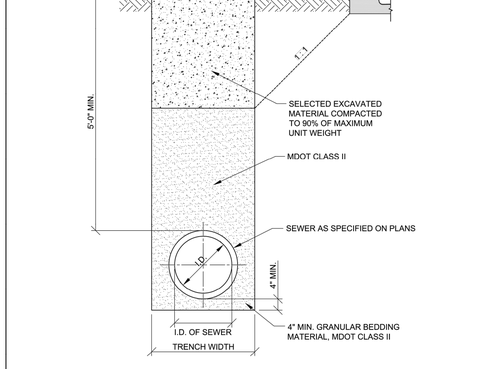
REV	DESCRIPTION	DATE

REVISIONS

SANITARY SEWER TRENCH DETAIL

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 2 OF 3
DATE 09/2018	DWG. No. 312333-02



I.D. PIPE SIZE (INCHES)	LESS THAN 18	21	24	30	36	42	48	54	60	66	72
MINIMUM TRENCH WIDTH (FEET)	3.0	3.5	4.0	5.0	6.0	7.0	8.0	9.5	10.0	10.5	11.0

TRENCH WIDTH FROM MDOT

STANDARD TRENCH DETAIL FOR SEWER WITHIN INFLUENCE OF ROAD BED

REV	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

REVISIONS

TRENCH DETAIL, SANITARY SEWER

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 3 OF 3
DATE 9/2018	DWG. No. 312333-03

STATE OF MICHIGAN
JULIAN JAY WARGO, JR.
ENGINEER
No. 6201039177
LICENSED PROFESSIONAL ENGINEER

Julian J. Wargo, Jr.

ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE
PERMIT	5-9-25								
BIDS	6-24-25								
OWNER REVISIONS	9-15-26								

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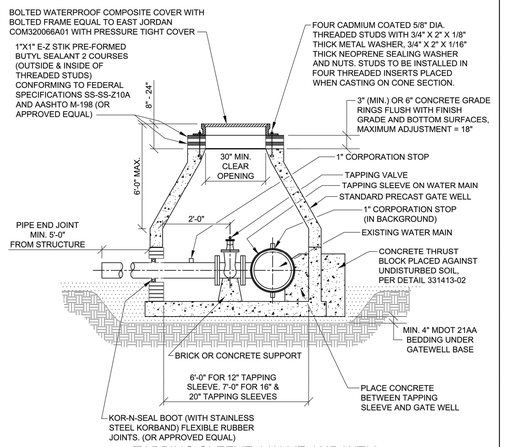
DWSD SANITARY SEWER DETAILS
CABOT APARTMENTS

DETROIT WAYNE COUNTY MICHIGAN

FIELD BOOK 1297

DATE 5-9-25	SCALE HOR: 1" = 20' VER: 1" = N/A
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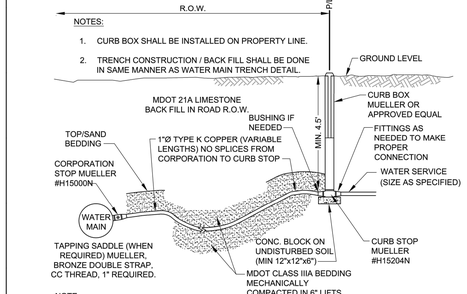
TAPPING SLEEVE, VALVE AND WELL

REV	DESCRIPTION	DATE
	REVISIONS	

CONNECTION, NEW MAIN TO EXISTING MAIN USING TAPPING VALVE AND WELL

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 1
DATE 09/2018	DWG. No. 333111-04



NOTE:

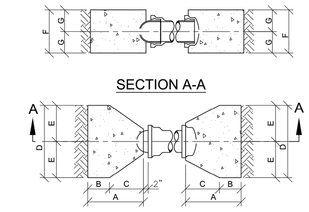
IF EXISTING SERVICE RUN IS LEAD PIPE (Pb), THEN REPLACE PER SPECIFICATIONS SECTION 331417-81.

REV	DESCRIPTION	DATE
	REVISIONS	

CONNECTION, RESIDENTIAL SERVICE

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 1
DATE 09/2018	DWG. No. 333111-05



SIZE OF PIPE (IN)	A MIN. (FT)	B MIN. (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)
6	1.92	0.75	1.17	2.50	1.25	1.50	0.75
8	1.92	0.75	1.17	3.00	1.50	2.00	1.00
12	2.08	0.75	1.33	4.00	2.00	3.00	1.50
16	2.67	1.00	1.67	5.00	2.50	4.00	2.00

NOTE:

1. THE THRUST BLOCK FACE SHALL BE POURED AGAINST UNDISTURBED EARTH.

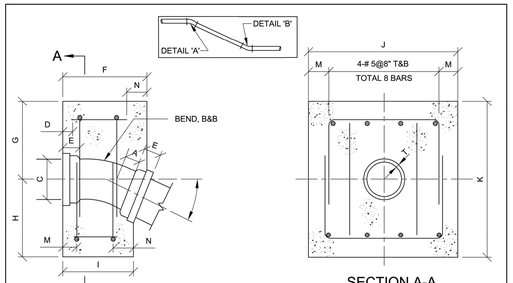
CONCRETE THRUST BLOCK FOR PLUGS AND CAPS

REV	DESCRIPTION	DATE
	REVISIONS	

THRUST BLOCK, PLUGS AND CAPS (TRADITIONAL DWSD SIZING)

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 1
DATE 9/2018	DWG. No. 331413-03



SCHEDULE OF THRUST BLOCK DIMENSIONS												DIMENSIONS - INCHES					
SIZE OF PIPE (IN)	BEND IN DEGREE	F (FT)	G (FT)	H (FT)	I (FT)	J (FT)	K (FT)	L (FT)	M (FT)	N (FT)	**	A	C	E	R	D	T
6	22i	1.583	1.33	1.67	1.33	2.67	3.00	0.00	0.33	0.25	3@8"	5.0	10.6	4.0	15.06	1.50	0.55
6	45	1.583	1.33	1.67	1.00	2.67	3.00	0.00	0.33	0.25	3@8"	5.0	10.6	4.0	07.25	1.50	0.55
8	22i	1.583	1.33	1.67	1.33	2.67	3.00	0.33	0.33	0.25	4@8"	5.5	13.0	4.0	17.62	1.50	0.60
8	45	1.67	1.50	2.50	1.00	4.00	4.00	0.50	0.50	0.25	4@12"	5.5	13.0	4.0	08.44	1.50	0.60
10	22i	1.83	1.50	2.50	1.42	3.50	4.00	0.50	0.50	0.25	4@10"	6.5	15.3	4.0	22.62	1.50	0.68
10	45	1.92	1.67	2.83	1.00	4.00	4.50	0.67	0.67	0.25	4@12"	6.5	15.3	4.0	10.88	1.50	0.68
12	22i	2.00	1.50	2.50	1.583	4.00	4.00	0.67	0.50	0.33	4@12"	7.5	17.6	4.0	27.62	1.50	0.75
12	45	2.08	1.50	3.00	1.17	5.00	4.50	0.92	0.75	0.25	4@14"	7.5	17.6	4.0	13.25	1.50	0.75
16	22i	2.17	1.67	2.83	1.583	5.00	4.50	0.83	0.75	0.33	4@14"	8.0	22.2	4.0	27.62	1.75	0.89

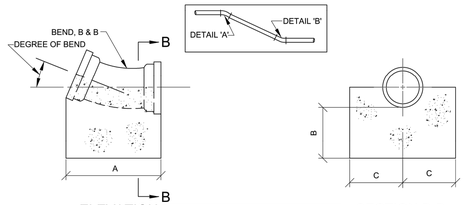
DETAIL "A"

REV	DESCRIPTION	DATE
	REVISIONS	

THRUST BLOCK, VERTICAL BEND (TRADITIONAL DWSD SIZING)

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 2
DATE 9/2018	DWG. No. 331413-04



SIZE OF PIPE (IN)	BEND IN DEGREE	A (FT)	B (FT)	C (FT)
6	22.5	1.67	1.00	1.00
6	45	1.67	1.00	1.00
8	22.5	1.75	1.00	1.00
8	45	1.75	1.00	1.00
10	22.5	1.92	1.00	1.00
10	45	1.92	1.00	1.00
12	22.5	2.17	1.00	1.00
12	45	2.17	1.00	1.00
16	22.5	2.25	1.00	1.25
16	45	2.25	1.00	1.25

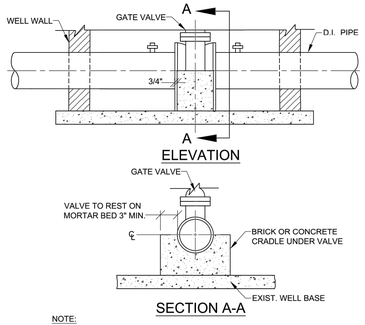
DETAIL "B"

REV	DESCRIPTION	DATE
	REVISIONS	

THRUST BLOCK, VERTICAL BEND (TRADITIONAL DWSD SIZING)

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 2 OF 2
DATE 9/2018	DWG. No. 331413-05



NOTE:

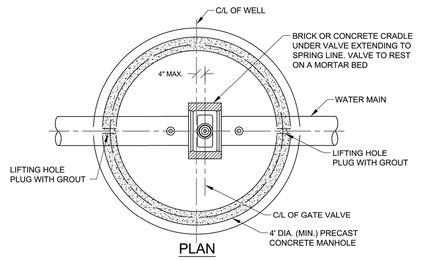
DESIGNER SHALL DETERMINE SIZE AND REINFORCEMENT REQUIREMENTS.

REV	DESCRIPTION	DATE
	REVISIONS	

VALVE, GATE, CRADLE SUPPORT, CONCRETE

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 1
DATE 9/2018	DWG. No. 331419-01



NOTES:

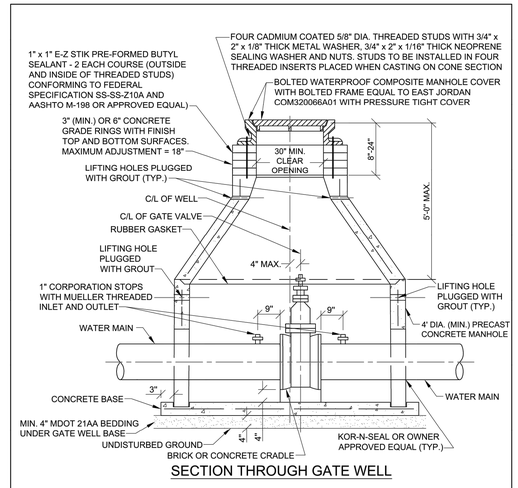
1. MANHOLE STEPS SHALL BE INSTALLED IN WELL WALL WHERE HEIGHT FROM TOP OF PIPE TO TOP OF WELL EXCEEDS 5'-0".
2. PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ALL THE REQUIREMENTS OF "SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE RISERS AND TOPS" ASTM C-478 WITH SINGLE OFF-SET JOINT CONFORMS TO ASTM C-443.
3. EACH SECTION SHALL HAVE NOT MORE THAN TWO HOLES FOR HANDLING PURPOSES. THESE HOLES SHALL BE SATISFACTORILY PLUGGED WITH GROUT AFTER INSTALLATION.

REV	DESCRIPTION	DATE
	REVISIONS	

GATE WELL, PRECAST

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 2
DATE 9/2018	DWG. No. 330561-09



NOTES:

1. MANHOLE STEPS SHALL BE INSTALLED IN WELL WALL WHERE HEIGHT FROM TOP OF PIPE TO TOP OF WELL EXCEEDS 5'- 0".
2. STEPS TO BE INSTALLED DURING MANHOLE MANUFACTURE. PLACE 16" CEN. ON CEN. 45° FROM CENTERLINE OF WATER MAIN.

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

REV	DESCRIPTION	DATE
	REVISIONS	

GATE WELL, PRECAST

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 2 OF 2
DATE 9/2018	DWG. No. 330561-10

STATE OF MICHIGAN
JULIAN JAY WARGO, JR.
ENGINEER
No. 6201036177
LICENSED PROFESSIONAL ENGINEER

Julian J. Wargo, Jr.

ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE
PERMIT	5-9-25								
BIDS	6-24-25								
OWNER REVISIONS	9-15-26								

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Consulting Civil Engineers
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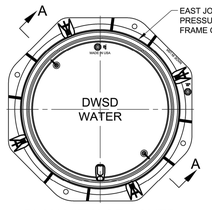
DWSD WATER MAIN DETAILS
CABOT APARTMENTS

DETROIT WAYNE COUNTY MICHIGAN

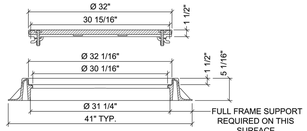
FIELD BOOK 1297

DATE 5-9-25	SCALE HOR: 1" = 20' VER: 1" = N/A
DESIGNED BY JJW	JOB NO. 25114
DRAWN BY PTG	SHEET C.301

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PLAN VIEW OF COVER



SECTION A-A

NOTES:
1. FIBER REINFORCED POLYMER (FRP) COMPOSITE MANHOLE FRAME AND COVER, AS NOTED IN SECTION 7.1.1 AND 7.1.3 OF AASHTO M306 HIGHWAY LOADING.

   THE SEATING FACE OF THE COVER & SEAT FOR SAME ON THE FRAME SHALL BE MACHINE FINISHED, OR THE EQUIVALENT THERE OF, SO THAT THE COVER SHALL HAVE AN EVEN BEARING ON ITS SEAT AT ALL POINTS WITHOUT ROCKING OR TILTING.

2. EAST JORDAN COM320066A01 PRESSURE TIGHT COVER AND FRAME OR APPROVED EQUAL.

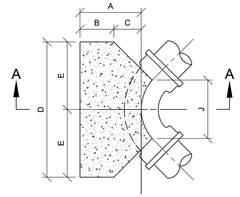
REV	DESCRIPTION	DATE
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-	-	-
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-	-	-

REVISIONS

GATE WELL FRAME AND COVER WITH LOGO - WATERMAIN

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 1
DATE 9/2018	DWG. No. 330561-11



PLAN SECTION A-A

HORIZONTAL BENDS, 22.5, 45 & 90 DEGREE TURNS										
SIZE OF PIPE (IN)	DEGREE OF BEND	A (FT)	B MIN. (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H MIN. (FT)	J (FT)
6	45	1.75	0.75	1.00	2.00	1.00	1.50	0.75	1.92	1.33
6	90	1.75	0.75	1.00	2.50	1.25	1.50	0.75	1.92	1.17
8	45	1.75	0.75	1.00	2.33	1.17	2.00	1.00	1.92	1.33
8	90	1.75	0.75	1.00	3.33	1.67	2.50	1.25	1.92	1.08
12	22½	1.75	0.75	1.00	2.50	1.25	2.00	1.00	2.00	1.33
12	45	2.08	0.75	1.33	3.50	1.75	2.50	1.25	2.33	1.33
12	90	2.08	0.75	1.33	5.50	2.75	3.00	1.50	2.33	1.67
16	22½	2.67	1.00	1.67	3.33	1.67	2.50	1.25	3.00	1.17
16	45	2.67	1.00	1.67	5.33	2.67	3.00	1.50	3.00	2.50
16	90	2.67	1.00	1.67	6.00	3.00	5.00	2.50	3.00	2.67

NOTE:
1. THE THRUST BLOCK FACE SHALL BE POURED AGAINST UNDISTURBED EARTH.

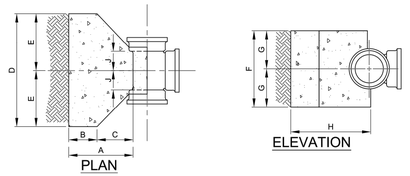
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REVISIONS

THRUST BLOCK, HORIZONTAL BEND (TRADITIONAL DWSD SIZING)

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 2
DATE 9/2018	DWG. No. 331413-01



PLAN ELEVATION

SIZE OF PIPE (IN)	A (FT)	B MIN. (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H MIN. (FT)	J (FT)
6X6	1.75	0.75	1.00	2.50	1.25	1.50	0.75	2.25	0.50
8X8	1.75	0.75	1.00	3.00	1.50	2.00	1.00	2.25	0.50
12X8	1.75	0.75	1.00	3.00	1.50	2.00	1.00	2.42	0.50
12X12	2.08	0.75	1.33	4.00	2.00	3.00	1.50	2.75	0.67
16X8	1.75	0.75	1.00	3.00	1.50	2.00	1.00	2.75	0.50
16X12	2.08	0.75	1.33	4.00	2.00	3.00	1.50	3.08	0.67
16X16	2.67	1.00	1.67	5.00	2.50	4.00	2.00	3.67	0.92

NOTE:
1. THE THRUST BLOCK FACE SHALL BE POURED AGAINST UNDISTURBED EARTH.

REV	DESCRIPTION	DATE
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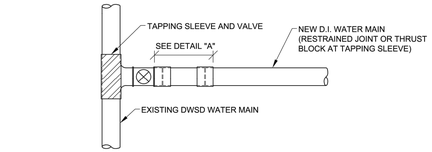
REVISIONS

CONCRETE THRUST BLOCK FOR TEES

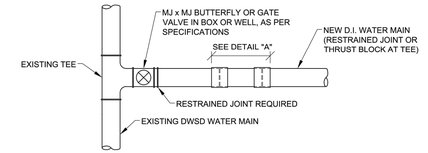
THRUST BLOCK, TEES (TRADITIONAL DWSD SIZING)

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

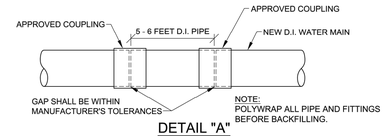
SCALE NONE	SHEET 2 OF 2
DATE 9/2018	DWG. No. 331413-02



CONNECTION WITH EXISTING DWSD MAIN WITH TAPPING SLEEVE AND VALVE



CONNECTION AT EXISTING DWSD MAIN WITH TEE / VALVE



DETAIL "A"

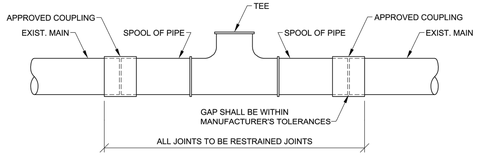
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REVISIONS

CONNECTION WITH EXISTING WATERMAIN

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 2
DATE 10/2018	DWG. No. 331413-08



NOTE:
POLYWRAP ALL PIPE AND FITTINGS BEFORE BACKFILLING.

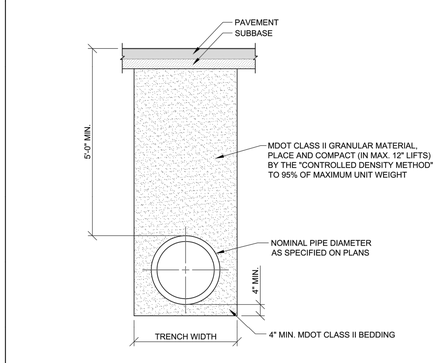
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REVISIONS

CONNECTION WITH EXISTING WATERMAIN

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 2 OF 2
DATE 10/2018	DWG. No. 331413-09



NOTE:
REFER TO RESTORATION DETAILS FOR PAVEMENT WIDTH.

NOMINAL PIPE DIAMETER	MAXIMUM TRENCH WIDTH UP TO 12" ABOVE CROWN OF PIPE
LESS THAN 18"	30"
18" TO 24"	PIPE DIAMETER PLUS 18"
GREATER THAN 24"	PIPE DIAMETER PLUS 24"

STANDARD TRENCH DETAIL FOR WATERMAIN UNDER ROAD BED, PARKING LOTS, SIDEWALKS, DRIVEWAYS, CURBS, GRAVEL ROADS AND ALLEYS

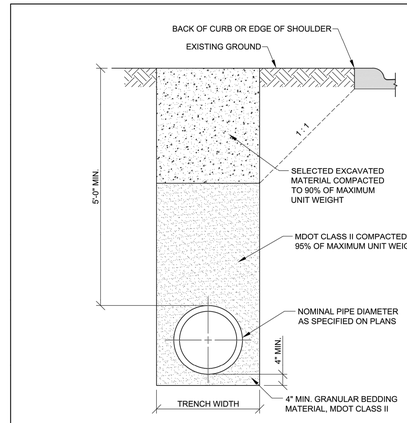
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REVISIONS

UTILITY TRENCH, WATERMAIN

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 1 OF 3
DATE 9/2018	DWG. No. 312333-04



NOMINAL PIPE DIAMETER	MAXIMUM TRENCH WIDTH UP TO 12" ABOVE CROWN OF PIPE
LESS THAN 18"	30"
18" TO 24"	PIPE DIAMETER PLUS 18"
GREATER THAN 24"	PIPE DIAMETER PLUS 24"

STANDARD TRENCH DETAIL FOR WATERMAIN WITHIN INFLUENCE OF ROAD BED

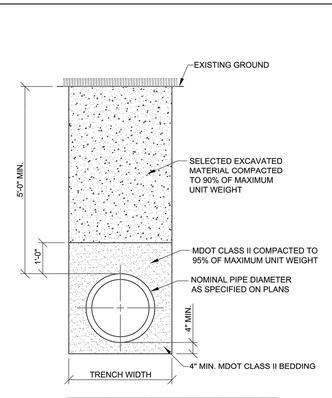
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REVISIONS

UTILITY TRENCH, WATERMAIN

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 2 OF 3
DATE 9/2018	DWG. No. 312333-05



NOMINAL PIPE DIAMETER	MAXIMUM TRENCH WIDTH UP TO 12" ABOVE CROWN OF PIPE
LESS THAN 18"	30"
18" TO 24"	PIPE DIAMETER PLUS 18"
GREATER THAN 24"	PIPE DIAMETER PLUS 24"

STANDARD TRENCH DETAIL FOR WATERMAIN UNDER BERMS, LAWNS, GRASSY AREAS, (OUTSIDE PAVEMENT INFLUENCE)

REV	DESCRIPTION	DATE
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REVISIONS

UTILITY TRENCH, WATERMAIN

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

SCALE NONE	SHEET 3 OF 3
DATE 9/2018	DWG. No. 312333-06

STATE OF MICHIGAN
JULIAN JAY WARGO, JR.
ENGINEER
No. 6201036177
LICENSED PROFESSIONAL ENGINEER

Julian J. Wargo, Jr.

ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE	ISSUED FOR	DATE
PERMIT	5-9-25								
BIDS	6-24-25								
OWNER REVISIONS	9-15-26								

ZEIMET WOZNIAK & ASSOCIATES
Consulting Civil Engineers
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DWSD WATER MAIN DETAILS
CABOT APARTMENTS

DETROIT WAYNE COUNTY MICHIGAN

FIELD BOOK 1297	
DATE 5-9-25	SCALE HOR: 1" = 20' VER: 1" = N/A
DESIGNED BY JJW	JOB NO. 25114
DRAWN BY PTG	SHEET C.302

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