

City of Detroit,
Wayne County, Michigan
CONSTRUCTION DOCUMENTS

Prepared For
Ferry Street Ventures, LLC

PART OF THE NE 1/4 OF SECTION 31,
CITY OF DETROIT,
WAYNE COUNTY, MICHIGAN

Owner

FERRY STREET VENTURES, LLC
1520 NORTH JOHNSON STREET
ARLINGTON, VA 22201
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EMAIL: FISH.EDMUNDJ@GMAIL.COM

Architect

DS ARCHITECTS, INC
7300 DIXIE HIGHWAY
SUITE 600
CLARKSTON, MI 48346
CONTACT:
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EMAIL: DEREK@DSARCHITECTS.COM

Civil Engineer

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVENUE
PONTIAC, MICHIGAN 48342
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Landscape Architect

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVENUE
PONTIAC, MICHIGAN 48342
CONTACT:
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SHEET INDEX

C0	Cover Sheet
C1	Boundary and Topographic Survey
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C3	Engineering Plan
C4	Storm Profile
C5	Soil Erosion Control and Drainage Area Plan
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L1	Landscape Plan

LEGAL DESCRIPTION

PARCEL 1
03001776
603 E MILWAUKEE AVE

LOTS 1 AND 2, SUB OF LOTS 88-95, FRISBIE AND FOXEN'S SUB, CITY OF DETROIT, WAYNE COUNTY, MICHIGAN, AS RECORDED IN LIBER 8, PAGE 78 OF PLATS, WAYNE COUNTY RECORDS.

PARCEL 2
03001777
609 E MILWAUKEE AVE

LOT 3, ALSO THE WEST 10' OF LOT 4, SUB OF LOTS 88-95, FRISBIE AND FOXEN'S SUB, CITY OF DETROIT, WAYNE COUNTY, MICHIGAN, AS RECORDED IN LIBER 8, PAGE 78 OF PLATS, WAYNE COUNTY RECORDS.

REVISIONS:

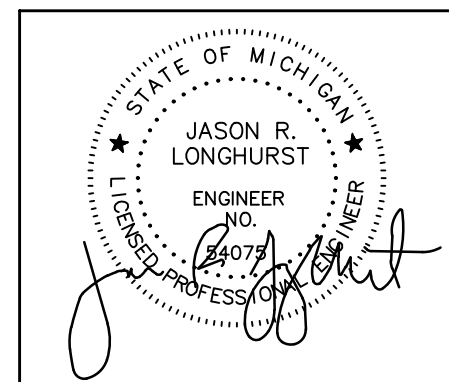
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2023-08-07	REVISED PER OWNER
2023-09-14	REVISED PER OWNER
2023-09-28	REVISED PER OWNER

Project Name

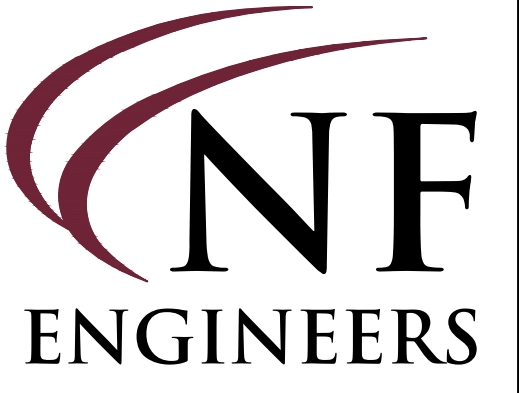
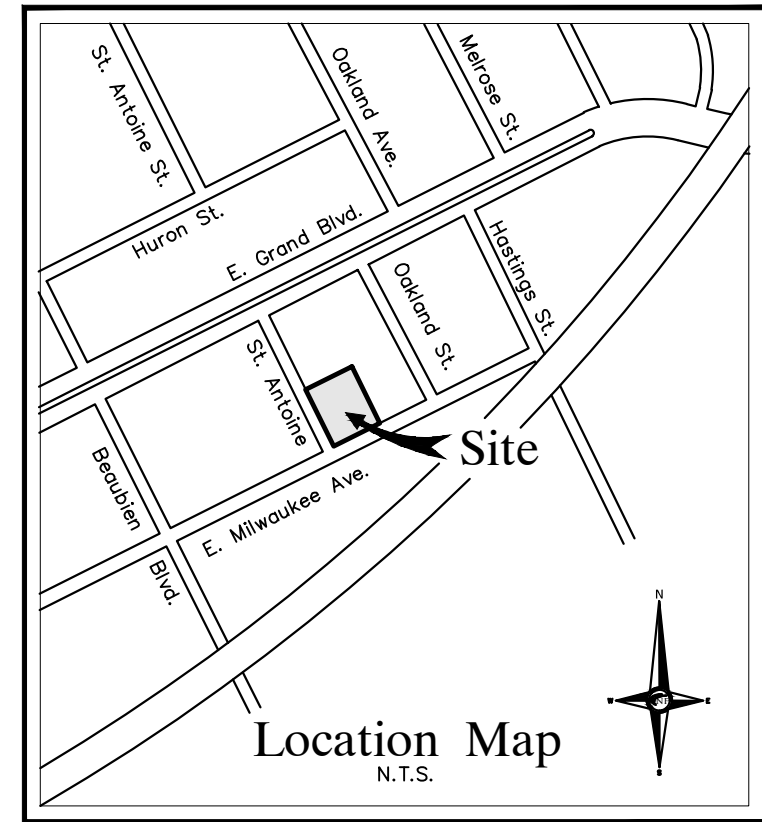
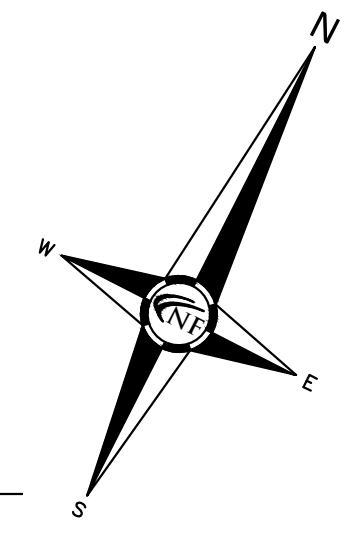
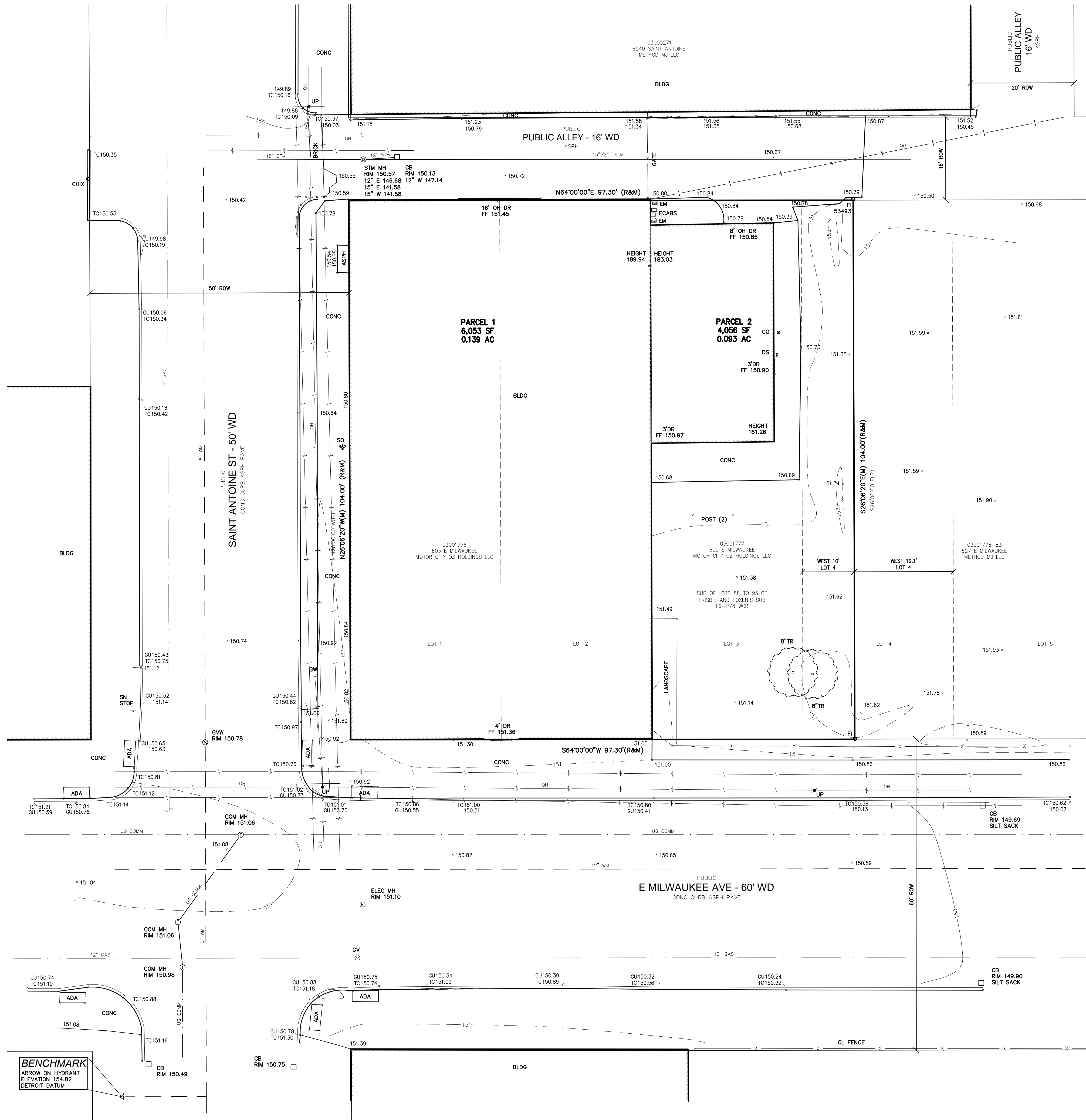
**603 E MILWAUKEE AVE
DETROIT MI.**



N & F JOB #M262



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LAND SURVEYORS
LAND PLANNERS
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SURVEY NOTES

ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.
UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.

COVID-19 PANDEMIC CONDITION

DUE TO THE UNPRECEDENTED COVID-19 PANDEMIC CONDITION AND RESTRICTIONS THE STANDARD DATA WHICH IS OBTAINED FROM MISS DIG / CALL 811 HAS BEEN RESTRICTED TO CRITICAL INFRASTRUCTURE ONLY. NFE WILL MAKE EVERY EFFORT TO OBTAIN CURRENT REFERENCE DATA FROM THE GOVERNING AGENCIES; HOWEVER, THIS DATA MAY BE PARTIAL OR INCOMPLETE. NFE WILL ISSUE THIS SURVEY WITH THE BEST AVAILABLE INFORMATION FROM OUR FIELD SURVEY AND OTHER AVAILABLE REFERENCE DATA. NFE WILL NOT BE RESPONSIBLE FOR INCOMPLETE OR PARTIAL DATA PROVIDED BY THIRD PARTY FACILITY OWNERS.

ALL SURVEYS BEING UTILIZED FOR DESIGN PURPOSES BY OTHERS; IT WILL BE THE CLIENT'S OBLIGATION TO UPDATE THE UTILITY INFORMATION AS IT BECOMES AVAILABLE. NFE IS NOT RESPONSIBLE FOR BURIED UTILITIES FOR WHICH PLANS WERE NOT FURNISHED OR CANNOT BE OBSERVED IN THE FIELD.

MISS DIG / UTILITY DISCLAIMER NOTE

A MISS DIG TICKET NUMBER A093430171, PURSUANT TO MICHIGAN PUBLIC ACT 174 WAS ENTERED FOR THE SURVEYED PROPERTY, DUE TO THE EXTENDED REPORTING PERIOD FOR UNDERGROUND FACILITY OWNERS TO PROVIDE THEIR RECORDS, THE SURVEY MAY NOT REFLECT ALL THE UTILITIES AT THE TIME THE SURVEY WAS ISSUED ON 2-24-21. THE SURVEY ONLY REFLECTS THOSE UTILITIES WHICH COULD BE OBSERVED BY THE SURVEYOR IN THE FIELD OR AS DEPICTED BY THE UTILITY COMPANY RECORDS FURNISH PRIOR TO THE DATE THIS SURVEY WAS ISSUED. THE CLIENT AND/OR THEIR AUTHORIZED AGENT SHALL VERIFY WITH THE FACILITY OWNERS AND/OR THEIR AUTHORIZED AGENTS, THE COMPLETENESS AND EXACTNESS OF THE UTILITIES LOCATION.

DTE DISCLAIMER NOTE

PLEASE NOTE THAT DTE HAS NEW REGULATIONS THAT MAY IMPACT DEVELOPMENT OUTSIDE THEIR EASEMENT OR THE PUBLIC RIGHT OF WAY. CLIENT SHALL CONTACT DTE TO DETERMINE THE "NEW" STRUCTURES AND POWER LINE REQUIREMENTS AS THEY MAY APPLY TO ANY FUTURE BUILDING OR RENOVATION OF A STRUCTURE. DTE ENERGY CAN BE CONTACTED AT 800-477-4747.

LEGEND	
	MANHOLE
	HYDRANT
	MANHOLE
	UTILITY POLE
	GUY WIRE
	GUY WIRE
	SIGN
	EXISTING GAS MAIN
	EXISTING SANITARY SEWER
	EXISTING SAN. CLEAN OUT
	EXISTING WATER MAIN
	EXISTING STORM SEWER
	EX. R.Y. CATCH BASIN
	EXISTING BURIED CABLES
	OVERHEAD LINES
	LIGHT POLE
	SIGN
	EXISTING GAS MAIN

PROJECT LOCATION
Part of the Northeast 1/4 of Section 31
Town 1 South, Range 12 East
City of Detroit, Wayne County, Michigan

SHEET
Boundary and Topographic Survey



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DRAWN BY:
J. Nelson

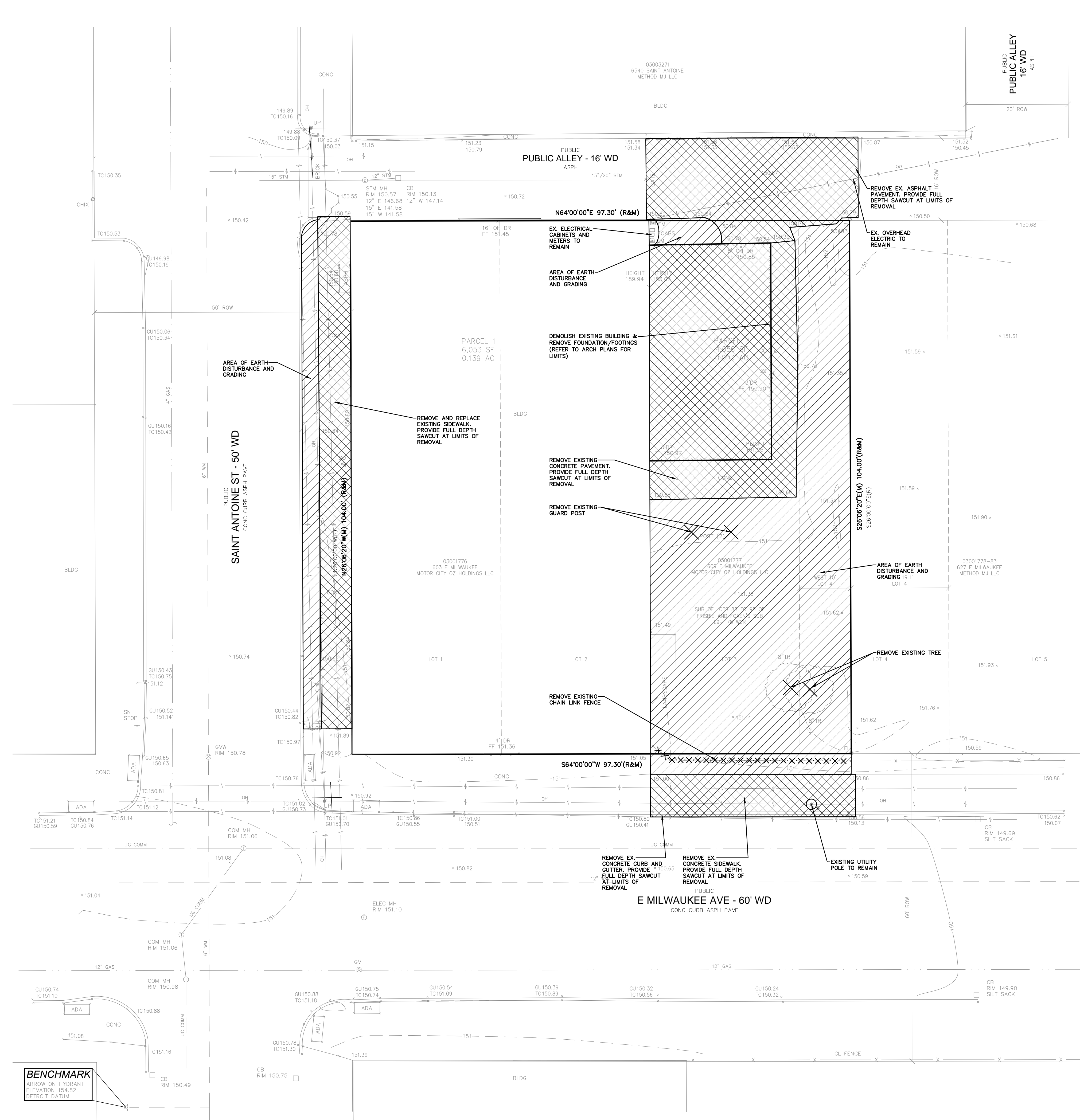
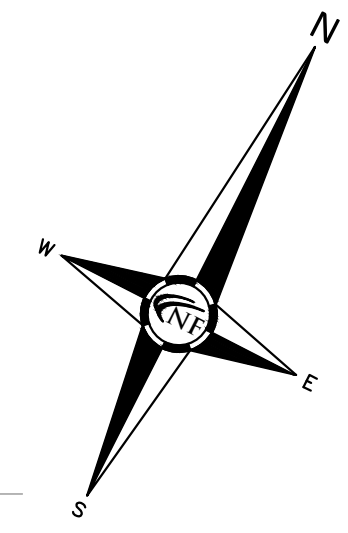
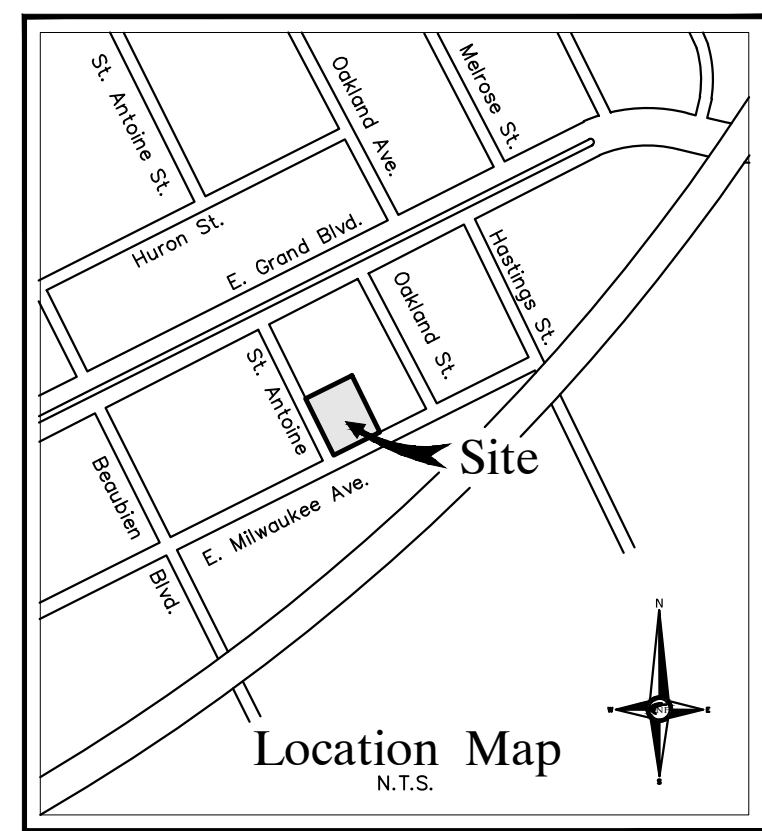
DESIGNED BY:
J. Nelson

APPROVED BY:
J. Longhurst

DATE:
December 1, 2021

SCALE: 1" = 10'

NFE JOB NO. **M262** SHEET NO. **C1**



DEMOLITION NOTES

DEMOLITION OF SITE IMPROVEMENTS SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE PUBLIC AGENCY HAVING JURISDICTION OVER SAID DEMOLITION.

FOR ANY DEMOLITION WITHIN PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR, AND SECURE, ALL NECESSARY PERMITS AND LIKEWISE SHALL ARRANGE FOR ALL SITE INSPECTIONS.

SITE DEMOLITION INCLUDES THE COMPLETE REMOVAL OF SITE IMPROVEMENTS AND OFF-SITE DISPOSAL. DEBRIS SHALL BE TRANSPORTED TO AN APPROPRIATE DISPOSAL FACILITY THAT IS LICENSED FOR THAT TYPE OF DEBRIS.

THE CONTRACTOR SHALL COORDINATE TRUCK ROUTES WITH THE MUNICIPALITY PRIOR TO COMMENCEMENT OF SITE DEMOLITION. ALL TRUCKS SHALL BE TARPED OR PROPERLY SECURED TO CONTAIN DEMOLITION DEBRIS PRIOR TO LEAVING SITE.

EXISTING ON-SITE UNDERGROUND UTILITIES AND BUILDING SERVICES HAVE BEEN INDICATED BASED UPON THE BEST AVAILABLE UTILITY RECORDS AND/OR ON-SITE INSPECTION. NO GUARANTEE IS MADE BY THE DESIGN ENGINEER, AS TO THE COMPLETENESS OR ACCURACY OF UTILITY DATA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF UTILITY INFORMATION (THE DESIGN ENGINEER MAKES NO GUARANTEE NOR ASSUMES ANY LIABILITY AS TO THE COMPLETENESS AND/OR ACCURACY OF UTILITY DATA).

PRIOR TO THE REMOVAL OR ABANDONMENT OF ANY EXISTING UNDERGROUND UTILITY OR BUILDING SERVICE LINES CALLED FOR IN THE PLANS OR DISCOVERED DURING EXCAVATION, THE CONTRACTOR MUST DETERMINE IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE. IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE/ACTIVE, THE CONTRACTOR MUST TAKE ALL THE NECESSARY STEPS TO GUARANTEE THAT THE UTILITY LINE OR BUILDING SERVICE IS RECONNECTED WITHOUT AN INTERRUPTION IN SERVICE. THE RECONNECTION OF THE UTILITY LINE OR BUILDING SERVICE MUST BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE APPROPRIATE GOVERNMENTAL AGENCY OR PRIVATE UTILITY COMPANY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO SITE DEMOLITION.

* THE CONTRACTOR SHALL NOTIFY MISS DIG (1-800-482-7171) A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF THE SITE DEMOLITION.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH UTILITY COMPANY. REMOVAL OF THE UTILITY COMPANY GAS SERVICES SHALL BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE UTILITY COMPANY.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE UTILITY COMPANY. REMOVAL OF THE UTILITY COMPANIES COMMUNICATION SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF THE UTILITY COMPANY.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE APPROPRIATE CABLE MEDIA COMPANY. REMOVAL OF CABLE SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF THE CABLE COMPANY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF PRIVATE UTILITY COMPANIES AND COORDINATE UTILITY SERVICE SHUT-OFF/DISCONNECT, PRIOR TO DEMOLITION OF EXISTING STRUCTURES OR PROPERTIES.

ALL UTILITY METERS SHALL BE REMOVED BY THE APPROPRIATE UTILITY COMPANY.

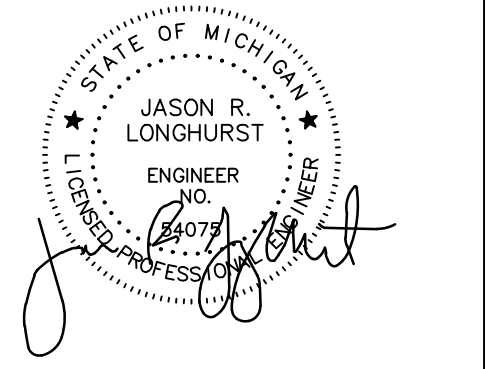
ANY ON-SITE STORM SEWER FACILITIES LOCATED DURING DEMOLITION SHALL BE REMOVED AND BULK HEADED AT THE PROPERTY LINE IF INDICATED FOR REMOVAL ON THE PLANS.

PRIOR TO BUILDING DEMOLITION, ALL HAZARDOUS MATERIAL SHALL BE REMOVED BY OTHERS. THE DEMOLITION CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD ANY SUSPICIOUS MATERIAL BE FOUND.

WATER SERVICES AND/OR STOP-BOX SHALL BE PRESERVED AND BULK HEADED AT THE PROPERTY LINE OR AS DIRECTED BY THE OWNER'S REPRESENTATION.

WHERE EXISTING BUILDINGS PLANNED FOR DEMOLITION FALL WITHIN PROPOSED BUILDING FOOTPRINTS, BASEMENT FLOOR SLABS, FOUNDATION WALLS AND FOOTINGS SHALL BE COMPLETELY REMOVED AND BACK FILLED WITH DOT CLASS II GRANULAR MATERIAL AND BE MACHINE COMPACTED TO A MINIMUM OF 98% OF MATERIALS MAXIMUM DENSITY.

SEAL



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Detroit, Michigan

CLIENT
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Town 1 South, Range 12
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SHEET
Demolition Plan



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DRAWN BY:
L. Gross

DESIGNED BY:
T. Wood

APPROVED BY:
J. Longhurst

DATE:
December 1, 2021

SCALE: 1" = 10'

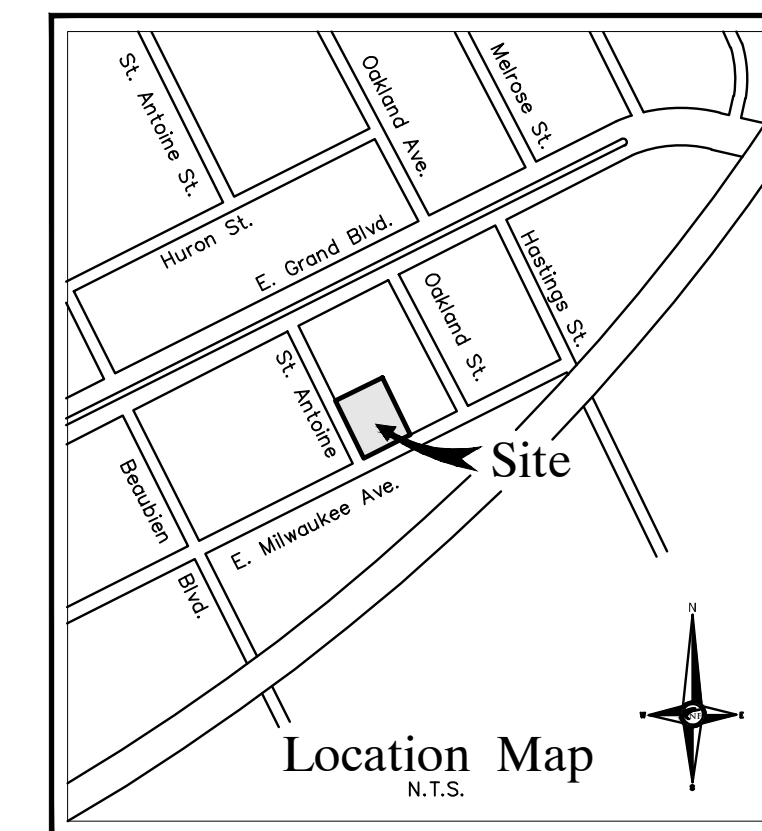
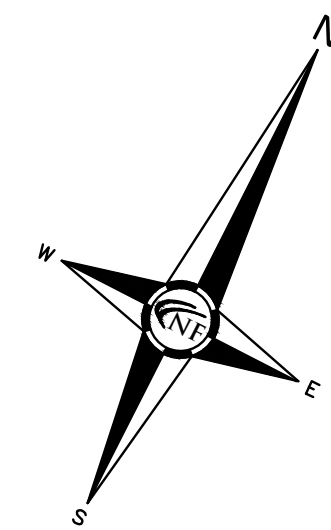
NFE JOB NO. **M262** SHEET NO. **C2**

LEGEND

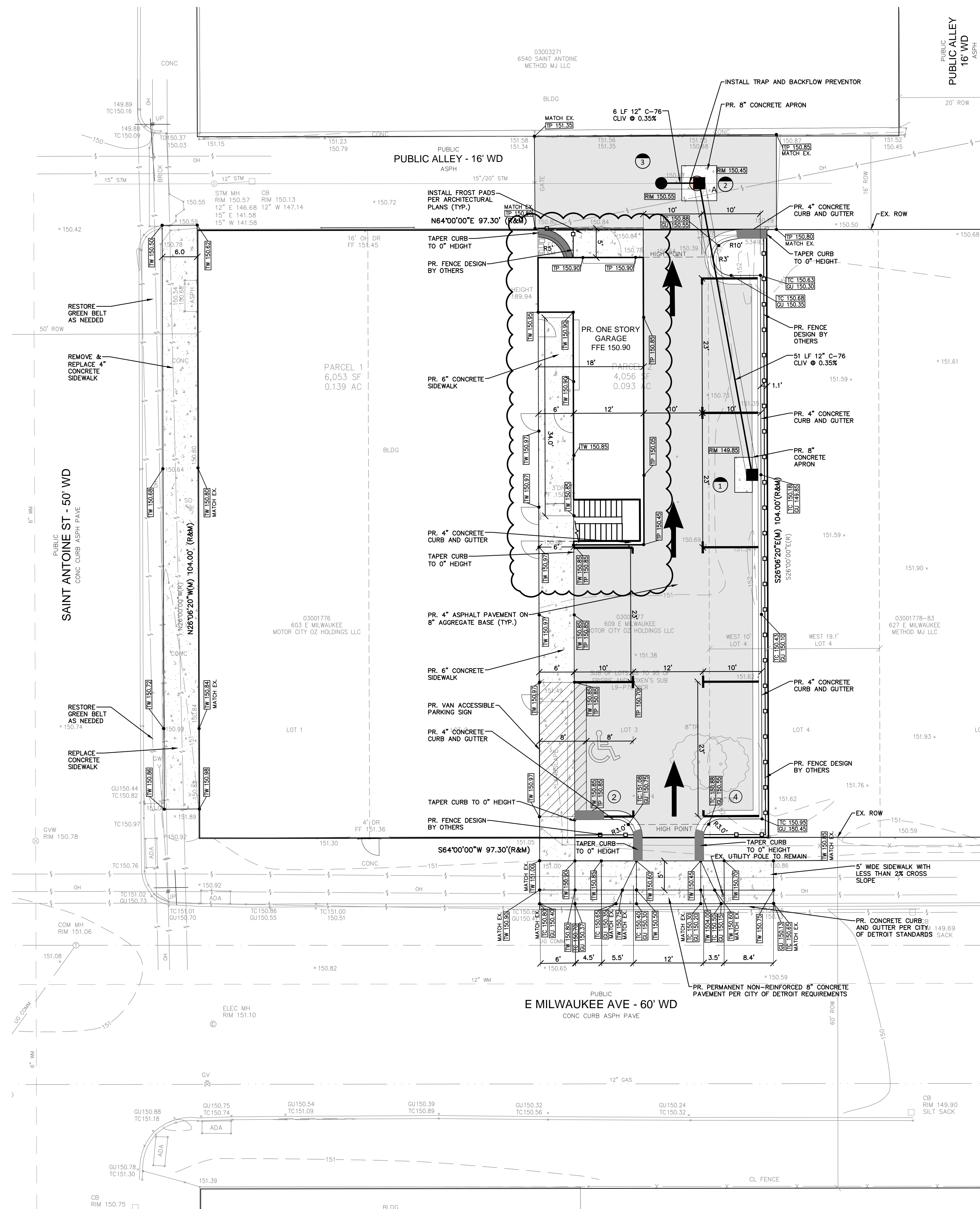
	MANHOLE		EXISTING SANITARY SEWER
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	MANHOLE CATCH BASIN		EXISTING WATER MAIN
	UTILITY POLE		EXISTING STORM SEWER
	GUY POLE		EX. R. Y. CATCH BASIN
	GUY WIRE		EXISTING BURIED CABLES
	LIGHT POLE		OVERHEAD LINES
	SIGN		EXISTING GAS MAIN
	EXISTING GAS MAIN		EXISTING UTILITY TO BE REMOVED
	EXISTING UTILITY TO BE ABANDONED		12" MAPLE
	INDICATES EXISTING TREE TO BE REMOVED		INDICATES AREAS OF PAVEMENT, BUILDINGS, ETC. TO BE REMOVED
	INDICATES AREAS OF EARTH DISTURBANCE AND GRADING		

UTILITY CROSSING SCHEDULE

A PR. 12" STORM B/P 145.40
 EX. 15" STORM T/P 143.39 V.I.F.
 VERTICAL CLEARANCE 2.11'



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FENCING AND LANDSCAPING

FENCING AND LANDSCAPING WILL BE PART OF A DEFERRED SUBMITTAL.

ROW SIDEWALK REPLACEMENT NOTE

RESTORE DAMAGED PUBLIC SIDEWALKS ADJACENT TO THE PROPERTY PER DETAIL C-4462 AS DIRECTED BY THE CITY INSPECTOR.

UTILITY CROSSING NOTE

AT LOCATIONS WHERE THERE ARE CROSSING WITH EXISTING UTILITIES AND THEIR DEPTHS ARE UNKNOWN, 18" VERTICAL SEPARATION WILL BE MAINTAINED WHENEVER POSSIBLE. IF THE 18" SEPARATION IS NOT OBTAINABLE, A CONCRETE ENCASEMENT WILL BE INSTALLED AT THE CROSSING.

CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" VERTICAL CLEARANCE AND A MINIMUM OF 10" HORIZONTAL SEPARATION BETWEEN UTILITIES WHERE 10" SEPARATION CANNOT BE MAINTAINED, 18" VERTICAL CLEARANCE SHALL BE PROVIDED AND UTILITIES SHALL BE CONSTRUCTED IN SEPARATE TRENCHES.

CONTRACTOR SHALL FIELD VERIFY EXACT DEPTH OF EXISTING PIPE WHERE EXISTING CROSSES PROPOSED. CONTACT ENGINEER IF CONFLICT OCCURS.

NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF DETROIT.

THE DESIGN WORKMANSHIP AND CONSTRUCTION MATERIALS SHALL BE IN GENERAL CONFORMANCE WITH THE CITY OF DETROIT WATER AND SEWAGE DEPARTMENT STORMWATER MANAGEMENT DESIGN MANUAL, LATEST EDITION.

GENERAL PAVING NOTES

PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS AND AS FOLLOWS:

CONCRETE: PORTLAND CEMENT TYPE IA (AIR-ENTRAINED) WITH A MINIMUM CEMENT CONTENT OF SIX SACKS PER CUBIC YARD, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI AND A SLUMP OF 1 1/2 TO 3 INCHES.

ASPHALT: BASE COURSE - MDT HMA 4E1, 20A; SURFACE COURSE - MDT HMA 5E1, 20A; ASPHALT CEMENT PENETRATION GRADE 58-22, BOND COAT - MDT SS-1H EMULSION AT 0.10 GALLON PER SQUARE YARD;

PAVEMENT BASE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. EXISTING SUB-BASE SHALL BE PROOF-ROLLED IN THE PRESENCE OF THE ENGINEER TO DETERMINE STABILITY.

ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.

ALL CONCRETE PAVEMENT JOINTS SHALL BE FILLED WITH HOT POURED RUBBERIZED ASPHALT JOINT SEALING COMPOUND IMMEDIATELY AFTER SAWCUT OPERATION. FEDERAL SPECIFICATION SS-S164.

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, CURRENT EDITION.

ALL TOP OF CURB ELEVATIONS, AS SHOWN ON THE PLANS, ARE CALCULATED FOR A 6" CONCRETE CURB UNLESS OTHERWISE NOTED.

ALL SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1993, SHALL BE INSTALLED AS INDICATED ON THE PLANS.

CONSTRUCTION OF A NEW OR RECONSTRUCTED DRIVE APPROACH CONNECTING TO AN EXISTING STATE OR COUNTY ROADWAY SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE AGENCY HAVING JURISDICTION OVER SAID ROADWAY.

FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LIKewise ARRANGE FOR ALL INSPECTION.

EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS.

EXPANSION JOINTS SHOULD BE INSTALLED AT THE END OF ALL INTERSECTION RADI.

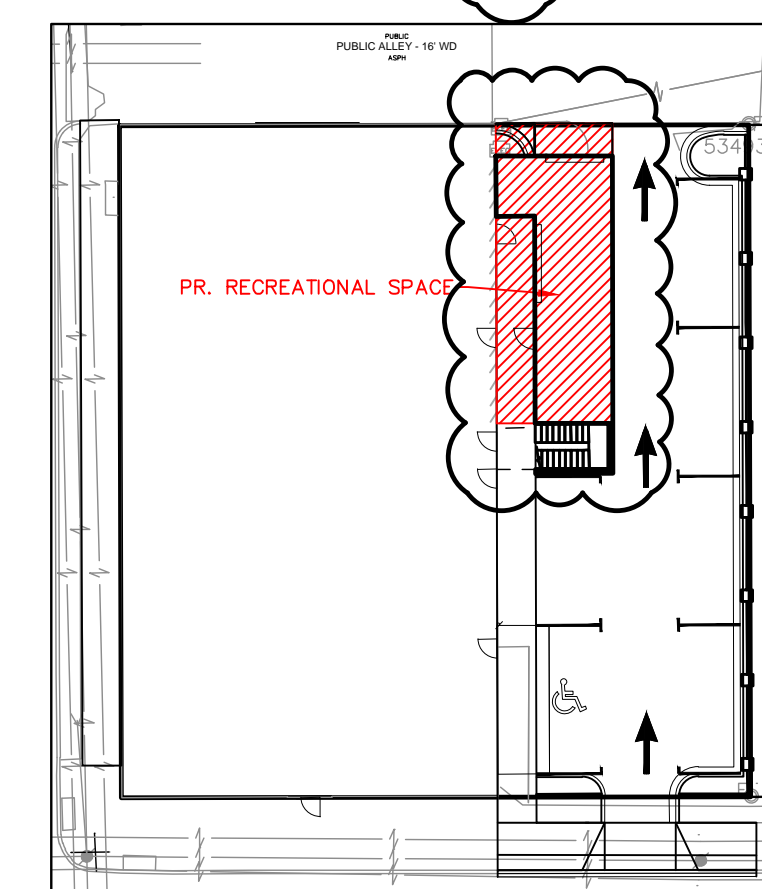
SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1973, SHALL BE INSTALLED AS SHOWN AT ALL STREET INTERSECTIONS AND AT ALL BARRIER FREE PARKING AREAS AS INDICATED ON THE PLANS.

ALL PAVEMENT AREAS SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF BASE MATERIALS AND PAVING MATERIALS.

FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES THICK TO 95% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT.

RECREATIONAL SPACE

FIRST FLOOR IS A 6,023 S.F. MULTIFAMILY RESIDENTIAL
 SECOND FLOOR IS A 5,732 S.F. SINGLE FAMILY RESIDENTIAL
 TOTAL SQUARE FOOTAGE IS 6,023 + 5,732 = 11,755 S.F.
 REQUIRED RECREATIONAL SPACE AREA IS 0.07 * 11,755 S.F. = 823 S.F.
 PROVIDED RECREATIONAL SPACE AREA IS 835 SF



RECREATIONAL SPACE RATIO EXHIBIT

SCALE 1"=30'

ESTIMATED QUANTITIES

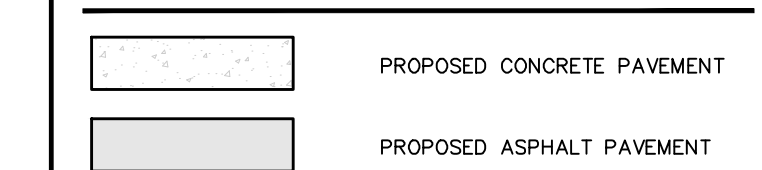
PAVING

DESCRIPTION	QUANTITY	UNITS
4" ASPHALT ON 8" 21AA BASE	335	S.Y.
4" CONCRETE SIDEWALK	600	S.F.
6" CONCRETE SIDEWALK	760	S.F.
8" NON-REINFORCED CONCRETE ROW PAVEMENT	12	S.Y.
4" CONCRETE CURB & GUTTER	205	S.F.
8" CONCRETE APRON	10	S.Y.

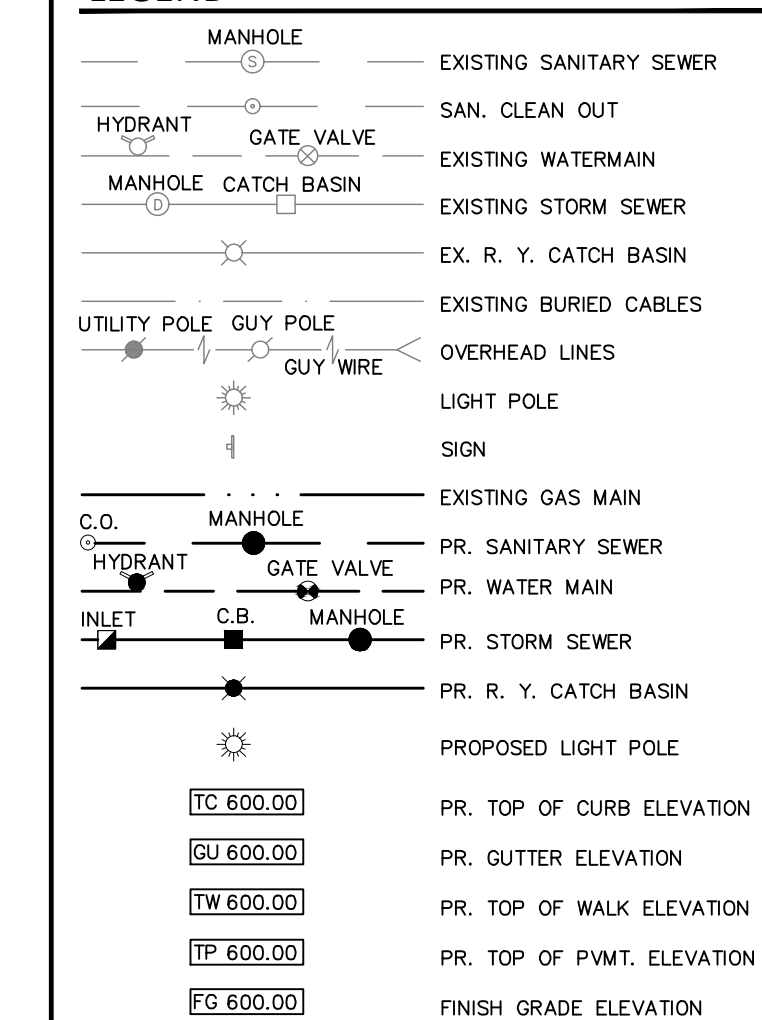
STORM

DESCRIPTION	QUANTITY	UNITS
12" DIA. CLIV C-76 STORM SEWER PIPE	60	L.F.
2' DIA. CATCH BASIN (CATCH BASIN A)	1	EA.
4' DIA. CATCH BASIN WITH TRAP AND 2' SUMP (CATCH BASIN B)	1	EA.
BUILD 4' DIA. MANHOLE OVER EX. PIPE	1	EA.

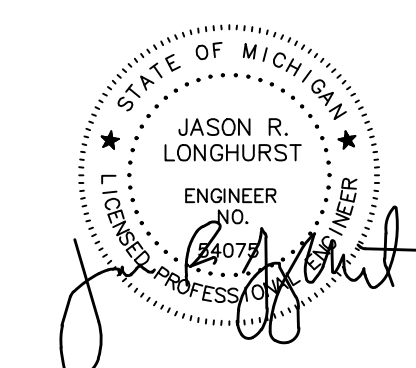
PAVING LEGEND



LEGEND



SEAL



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DRAWN BY:

L. GROSS

DESIGNED BY:

T. Wood

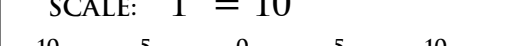
APPROVED BY:

J. Longhurst

DATE:

December 1, 2021

SCALE: 1" = 10'



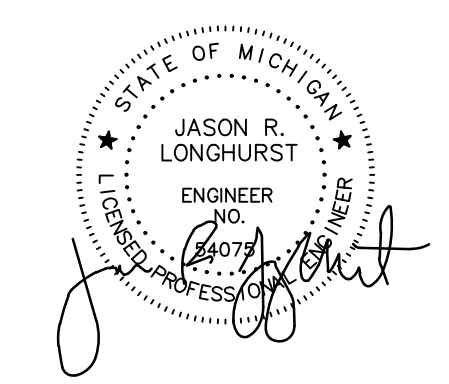
NFE JOB NO.

M262

SHEET NO.

C3

SEAL



PROJECT
603 E Milwaukee Ave
Detroit, Michigan

CLIENT
Ferry Street Ventures, LLC
1520 North Johnson Street
Arlington, VA 22201

PROJECT LOCATION
Part of the Northeast 1/4
of Section 31
Town 1 South, Range 12
East
City of Detroit,
Wayne County, Michigan

SHEET
Storm Profile



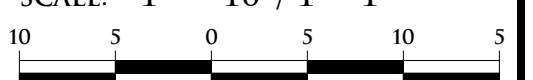
Know what's below
Call before you dig.

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2023-09-28	REVISED PER OWNER

DRAWN BY:
A. Panley
DESIGNED BY:
A. Panley
APPROVED BY:
J. Longhurst

DATE:
December 1, 2021

SCALE: 1" = 10' / 1" = 1'



NFE JOB NO. SHEET NO.

M262 C4

Storm Drainage Structure Schedule	
Structure Name	Structure Details
#1 PR. 2' DIA. CATCH BASIN A PER CITY OF DETROIT DETAILS	PR. RIM 149.85 PR. 12" NW. INV. 145.68
#2 PR. 4' DIA CATCH BASIN B PER CITY OF DETROIT DETAILS INSTALL TIDEFLEX BACKFLOW PREVENTOR AND TRAP ON SW LINE	PR. RIM 150.45 PR. 12" SE. INV. 145.50 PR. 12" SW. INV. 145.40
#3 4' DIA. MANHOLE BUILD OVER EX. 15" STORM SEWER PIPE V.I.F. EX. STORM INV.	PR. RIM 150.55 PR. 12" NE. INV. 145.38 EX. 15" NE. INV. 141.85 EX. 15" SW. INV. 141.85

ITEM	QTY.	DESCRIPTION	MAT'L
1	1	ULTRAFLEX CHECKMATE CHECK VALVE	MUST BE SUPPLIED
2	1	CLAMP	MUST BE SUPPLIED

NOTES:
1. PIPE INSIDE DIAMETER - MUST BE SUPPLIED (MINIMUM ALLOWABLE PIPE DIAMETER - 9.50 INCHES)
2. CLAMP INSTALLED IN UPSTREAM OR DOWNSTREAM CUFF DEPENDING ON INSTALLATION ORIENTATION
3. MAXIMUM ALLOWABLE BACK PRESSURE - 71.0 FEET
4. IT IS RECOMMENDED TO BOLT OR PIN CHECKMATE TO PIPE AS SHOWN, 4 PLACES 90° APART

PRELIMINARY DRAWING
NOT FOR APPROVAL PURPOSES

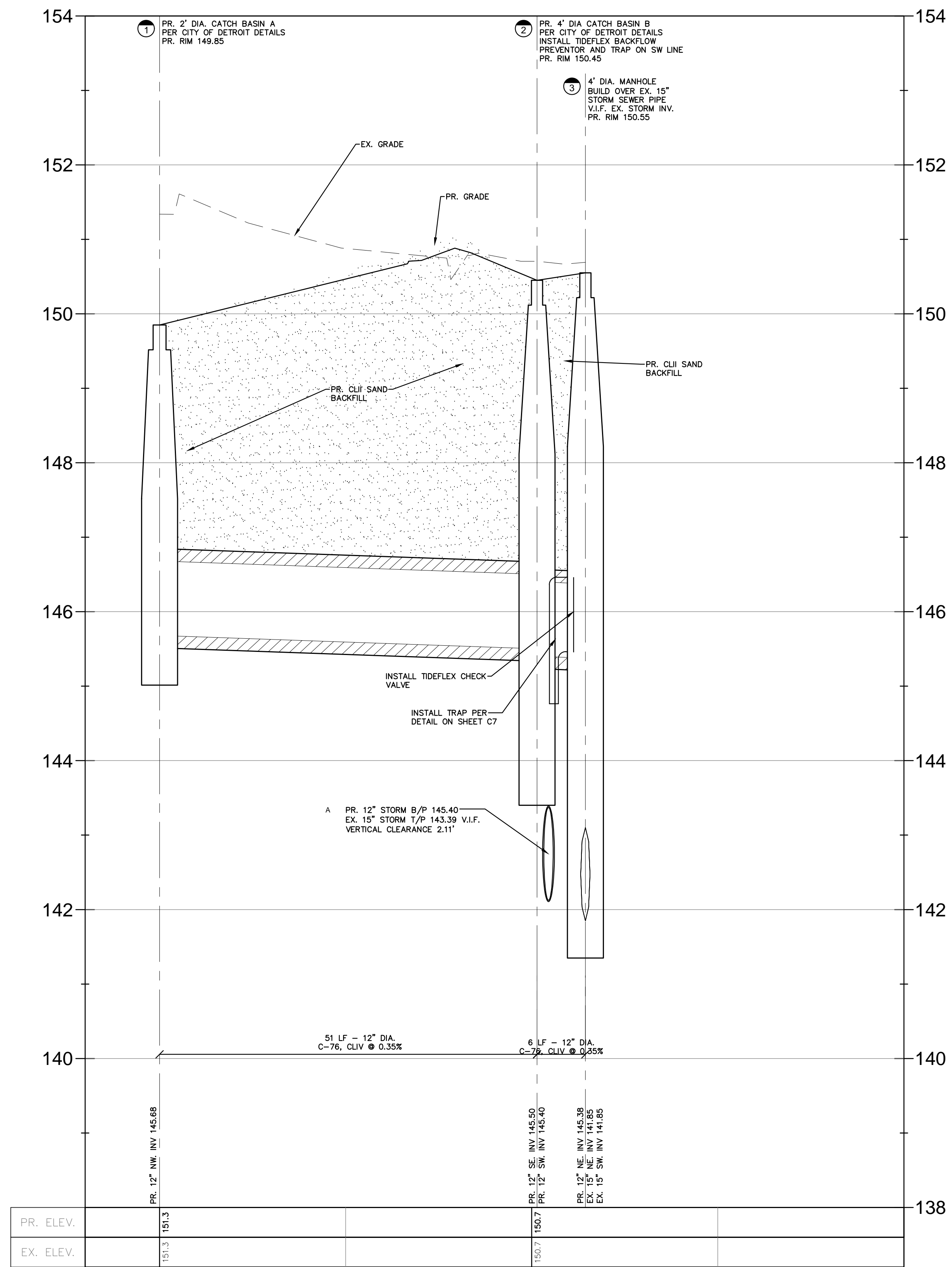
OPPORTUNITY No: XXXXX SALES ORDER No: TXX-XXXX
600 N. BELL AVE. CARNEGIE, PA. 15106
info@tideflex.com 412.779.0044
fax 412.779.5410
A Division of Red Valve Company, Inc.

TT PRODUCT: 10" ULTRAFLEX CHECKMATE CHECK VALVE
TT PART No: CMCBUF-100-APPROVAL
DR. BY: TLM DATE: 1-31-17 CHKD. BY: DATE:
CAD SCALE: FULL REV
PLOT SCALE: 1 = 1 DWG No: TTS-XXXX

* PATENT PENDING *

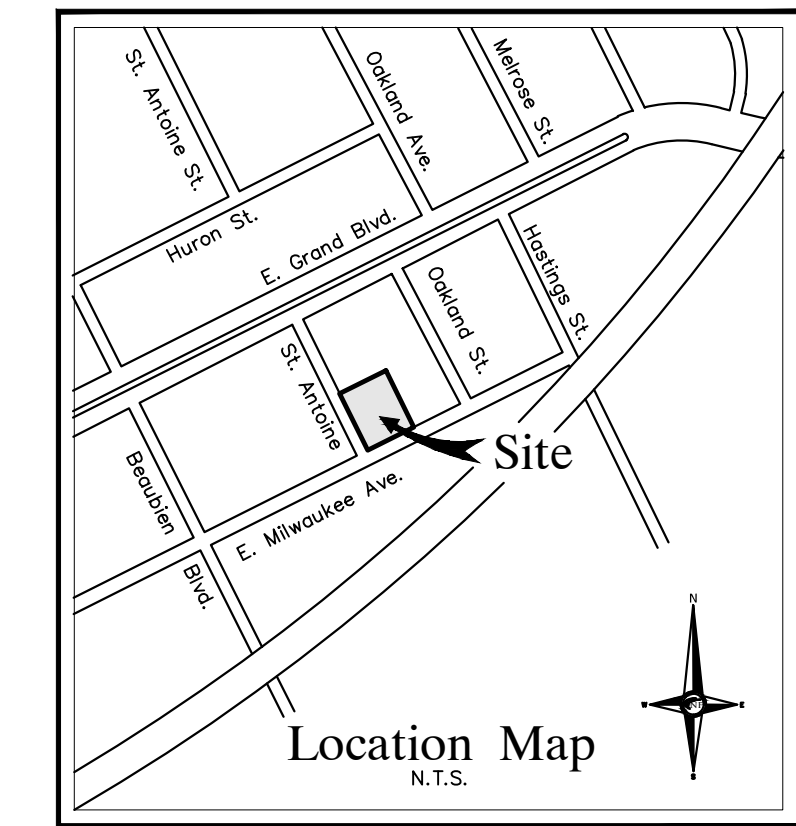
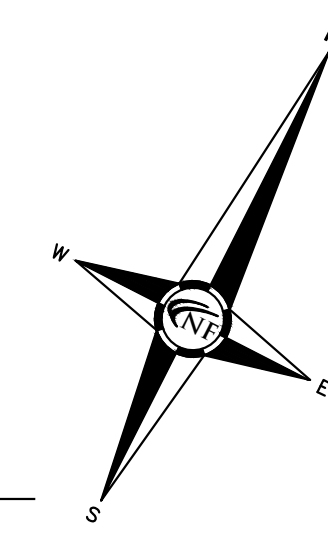
PROPRIETARY NOTICE
THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF TIDEFLEX TECHNOLOGIES. IT IS LOANED BY TIDEFLEX TECHNOLOGIES, SUBJECT TO THE CONDITIONS THAT IT AND THE INFORMATION EMBODIED THEREIN SHALL BE USED ONLY FOR RECORD AND REFERENCE PURPOSES. IT SHALL NOT BE USED OR CAUSED TO BE USED IN ANY WAY PREJUDICIAL TO THE INTERESTS OF TIDEFLEX TECHNOLOGIES. IT SHALL NOT BE REPRODUCED OR COPIED IN WHOLE OR PART, OR DISCLOSED TO ANYONE WITHOUT THE DIRECT WRITTEN PERMISSION OF TIDEFLEX TECHNOLOGIES AND SHALL BE RETURNED UPON REQUEST.

CUSTOMER: XXX
ORDER No: XXX

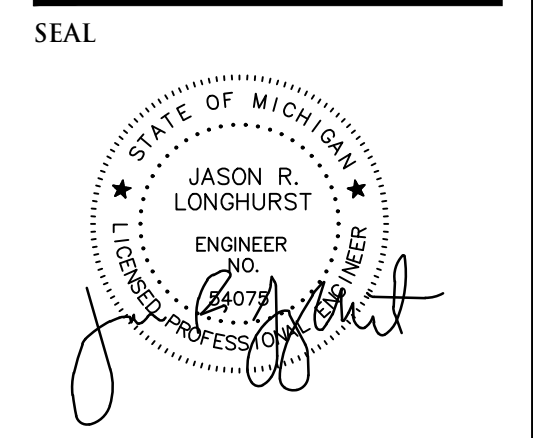


Detroit, Wayne County Storm Sewer Calculations															Project No:	M262												
															Project Name:	603 E Milwaukee Avenue												
															Location:	Detroit												
															Dated:	12/1/2021												
															Revised:	11/30/2022												
T min=	5 Minutes														Time of Concentration													
I =	38.4164*(10^0.2082)/((12.3258 + D)^0.8405)														10 Year Storm Event Intensity													
n (Conc.)	0.013														Manning's Roughness Coefficient													
n (Pvc)	0.012														Manning's Roughness Coefficient													
Head Loss Friction	Hf=L(Qn/(0.46D^2.67))^2																											
Head Loss Structure	Hm=Km(V^2 / 2g)																											
Drainage Area	From Structure	To Structure	Drainage Area (Acres)	Runoff Coefficient (C)	Equivalent Area (C * A)	Total Area (Sum C * A)	Time of Concentration (Minutes)	Rainfall Intensity (Inches/Hr.)	Actual Discharge (CFS)	Pipe Size (Inches)	Pipe Slope (% Slope)	Pipe Length (Feet)	Flow Velocity (Ft / Sec)	Time of Flow (Minutes)	Full Pipe Capacity (CFS)	H. G. Elev. Upper End (Feet)	H. G. Elev. Lower End (Feet)	H. G. Slope (% Slope)	Km	Head Loss at Str (Feet)	Head Loss Friction (Feet)	Theoretical Velocity (Ft / Sec)	Rim Elevation (Upper) (Feet)	Change in Elevation (Feet)	Invert Elev. Upper End (Feet)	Invert Elev. Lower End (Feet)	COVER (Feet)	RIM TO HG (Feet)
A	1	2	0.09	0.95	0.086	0.086	5.00	5.64	0.48	12	0.35	51	2.91	0.29	2.28	146.21	146.20	0.02	0.50	0.00	0.01	0.61	149.85	0.18	145.68	145.50	3.00	3.64
		3				0.086	5.29	5.57	0.48	12	0.35	6	2.91	0.03	2.28	146.19	146.18	0.02	1.50	0.01	0.00	0.61	150.45	0.02	145.40	145.38	3.88	4.26

CONSTRUCTION SEQUENCE / TIMING SCHEDULE		
1. INSTALL PERIMETER FILTER FABRIC FENCING AND STONE FILTER WHERE REQUIRED.	SEPTEMBER 2023	
2. MASS GRADE SITE.	OCTOBER 2023	
3. COMMENCE UNDERGROUND UTILITY WORK.	NOVEMBER 2023	
4. INSTALL INLET FILTERS ON PROPOSED DRAINAGE STRUCTURES.	DECEMBER 2023	
5. FILL IN SEDIMENTATION TRAPS AND PAVE SITE.	JANUARY 2024	
6. COMPLETE ALL BUILDINGS AND LANDSCAPE ACTIVITY.	MARCH 2024	
7. JET VAC NEW STORM SEWER SYSTEM AS REQUIRED.	APRIL 2024	
8. REMOVE ALL TEMPORARY SOIL EROSION MEASURES.	MAY 2024	



NOWAK & FRAUS ENGINEERS
4677 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM



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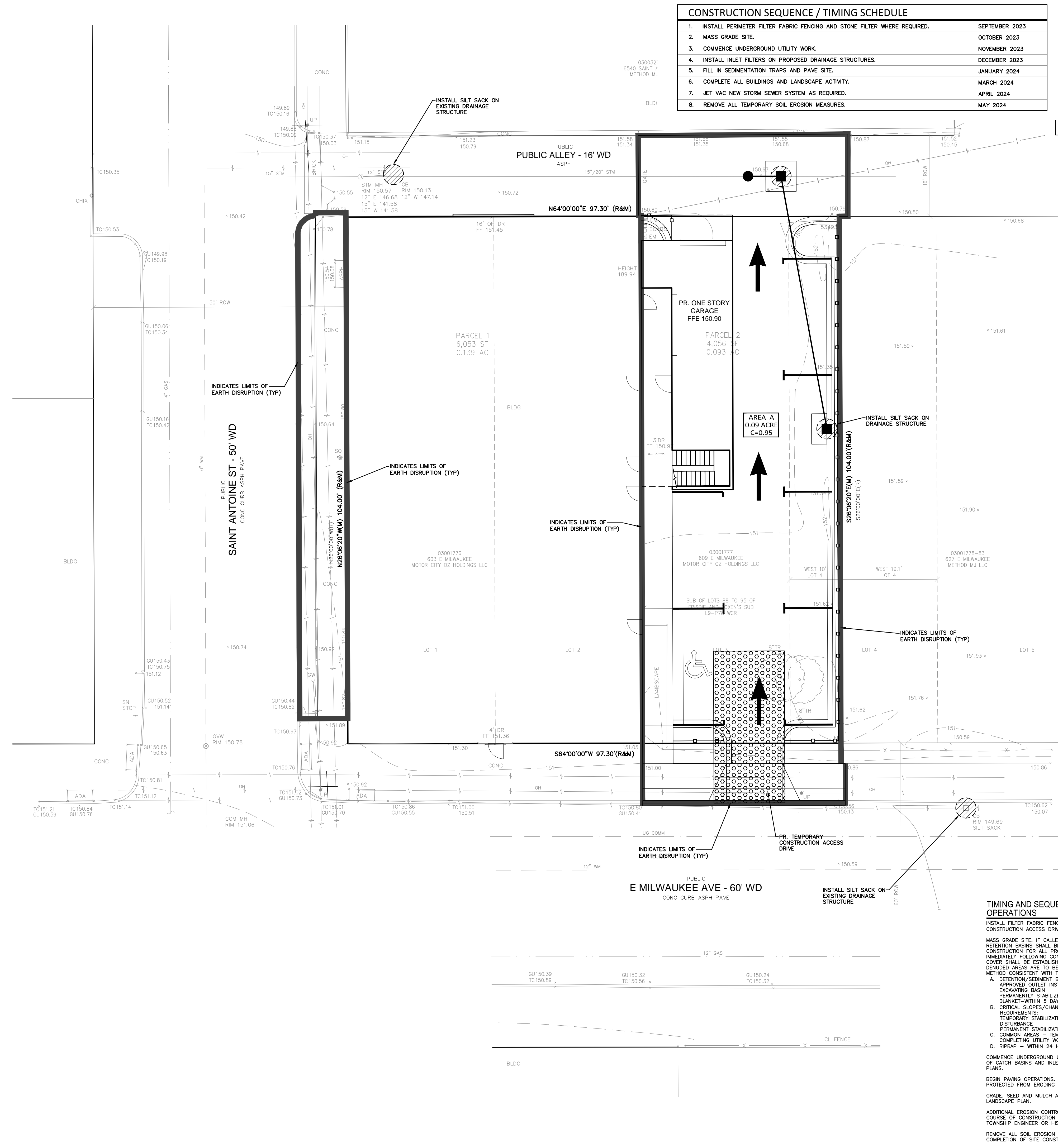
PROJECT LOCATION
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of Section 31
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East
City of Detroit,
Wayne County, Michigan

SHEET
Soil Erosion Control and
Drainage Area Plan



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NFE JOB NO. M262 SHEET NO. C5



TIMING AND SEQUENCE OF CONSTRUCTION OPERATIONS
INSTALL FILTER FABRIC FENCE AS SHOWN ON THE PLANS. INSTALL CONSTRUCTION ACCESS DRIVE AS SHOWN ON THE PLANS. (DAY 1)
MASS GRADE SITE. IF CALLED FOR ON THE PLANS, DETENTION OR RETENTION BASINS SHALL BE CONSTRUCTED PRIOR TO ANY OTHER CONSTRUCTION FOR ALL PROJECTS LOCATED WITHIN THE MUNICIPALITY. IMMEDIATELY FOLLOWING CONSTRUCTION OF THE BASIN, SUITABLE GROUND COVER SHALL BE ESTABLISHED, WEATHER CONDITIONS PREVAILING. ALL DENuded AREAS ARE TO BE PROTECTED FROM EROSION BY AN APPROVED METHOD CONSISTENT WITH THE GROWING SEASON.
A. DETENTION/SEDIMENT BASIN TIMING REQUIREMENTS:
APPROVED OUTLET INSTALLED - WITHIN 5 DAYS OF EXCAVATING BASIN
PERMANENTLY STABILIZED WITH SEED AND MULCH BLANKET-WITHIN 5 DAYS OF FINAL GRADE
B. CRITICAL SLOPES/CHANNELS/SWALES TIMING REQUIREMENTS:
TEMPORARY STABILIZATION - WITHIN 15 DAYS OF EARTH DISTURBANCE
PERMANENT STABILIZATION - WITHIN 5 DAYS OF FINAL GRADE
C. COMMON AREAS - TEMPORARY STABILIZATION WITHIN 5 DAYS OF COMPLETING UTILITY WORK
D. RIPRAP - WITHIN 24 HOURS OF PLACING OUTLET/CULVERT
COMMENCE UNDERGROUND UTILITY WORK. PROMPTLY UPON BACKFILLING OF CATCH BASINS AND INLETS, INSTALL INLET FILTERS AS SHOWN ON THE PLANS.
BEGIN PAVING OPERATIONS. INLETS, CATCH BASINS, ETC. ARE TO BE PROTECTED FROM ERODING EARTH AND SEDIMENT AT ALL TIMES.
GRADE, SEED AND MULCH ALL DISTURBED AREAS OR LANDSCAPE PER LANDSCAPE PLAN.
ADDITIONAL EROSION CONTROL MEASURES WILL BE PROVIDED DURING THE COURSE OF CONSTRUCTION WHERE DETERMINED NECESSARY BY THE TOWNSHIP ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
REMOVE ALL SOIL EROSION AND SEDIMENTATION MEASURES AFTER COMPLETION OF SITE CONSTRUCTION.

NOTES AND PERFORMANCE REQUIREMENTS
ALL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CANTON TOWNSHIP AND THE WAYNE COUNTY EROSION CONTROL MANUAL.
DAILY INSPECTION SHALL BE MADE BY THE SUBCONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN CONSTRUCTION. SEDIMENTATION CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
SUBCONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED AND AS DIRECTED ON THESE PLANS. HE SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED.
PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGES HAVE BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASED, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED. ALL PERMANENT SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.
ALL MUD/DIRT TRACKED ONTO EXISTING CITY/COUNTY ROADS FROM THIS SITE, DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE SUBCONTRACTOR/BUILDER.
MAINTENANCE REQUIREMENTS SHALL BE AS FOLLOWS:
STREET SCRAPING - DAILY
STREET SWEEPING - WEEKLY MINIMUM
STRUCTURAL SEDIMENT CONTROLS - 48 HOURS AFTER STORM EVENT (WEEKLY MINIMUM) SEDIMENT BASIN CLEANOUT - ANNUALLY MINIMUM
RESTORATION REQUIREMENTS AND FINAL INSPECTION REQUIREMENTS SHALL BE AS FOLLOWS:
DISTURBED EARTH MUST BE PERMANENTLY STABILIZED WITH VEGETATION OR HARD SURFACE
ACCUMULATED SEDIMENT MUST BE REMOVED FROM STORM SEWER SYSTEM
REMOVE ALL THE TEMPORARY CONTROLS AFTER GETTING APPROVAL BY THE WAYNE COUNTY SOIL EROSION INSPECTOR.
NOTIFY WAYNE COUNTY SOIL EROSION OFFICE 48 HOURS BEFORE WORK IS TO BEGIN. (734) 326-3936.

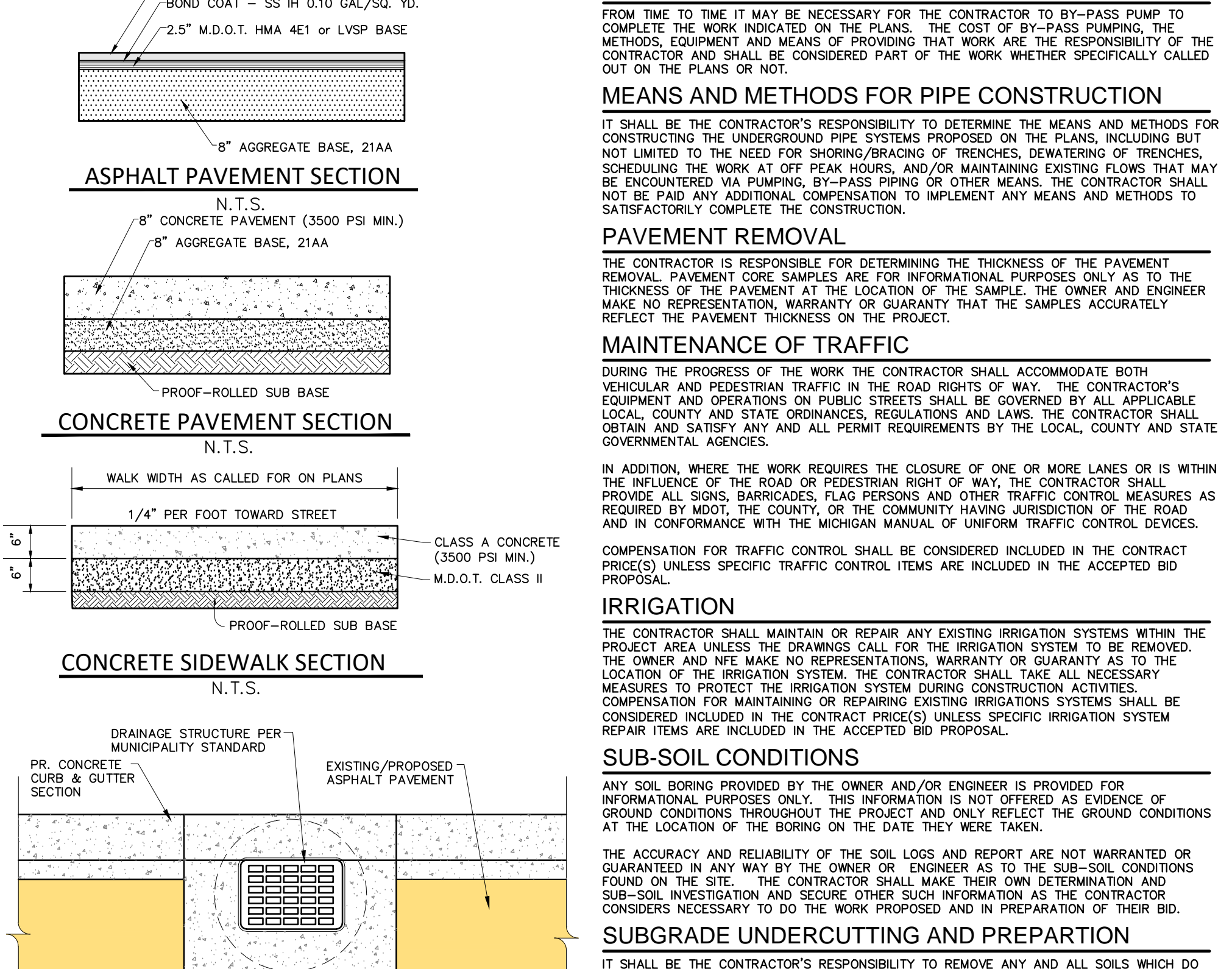
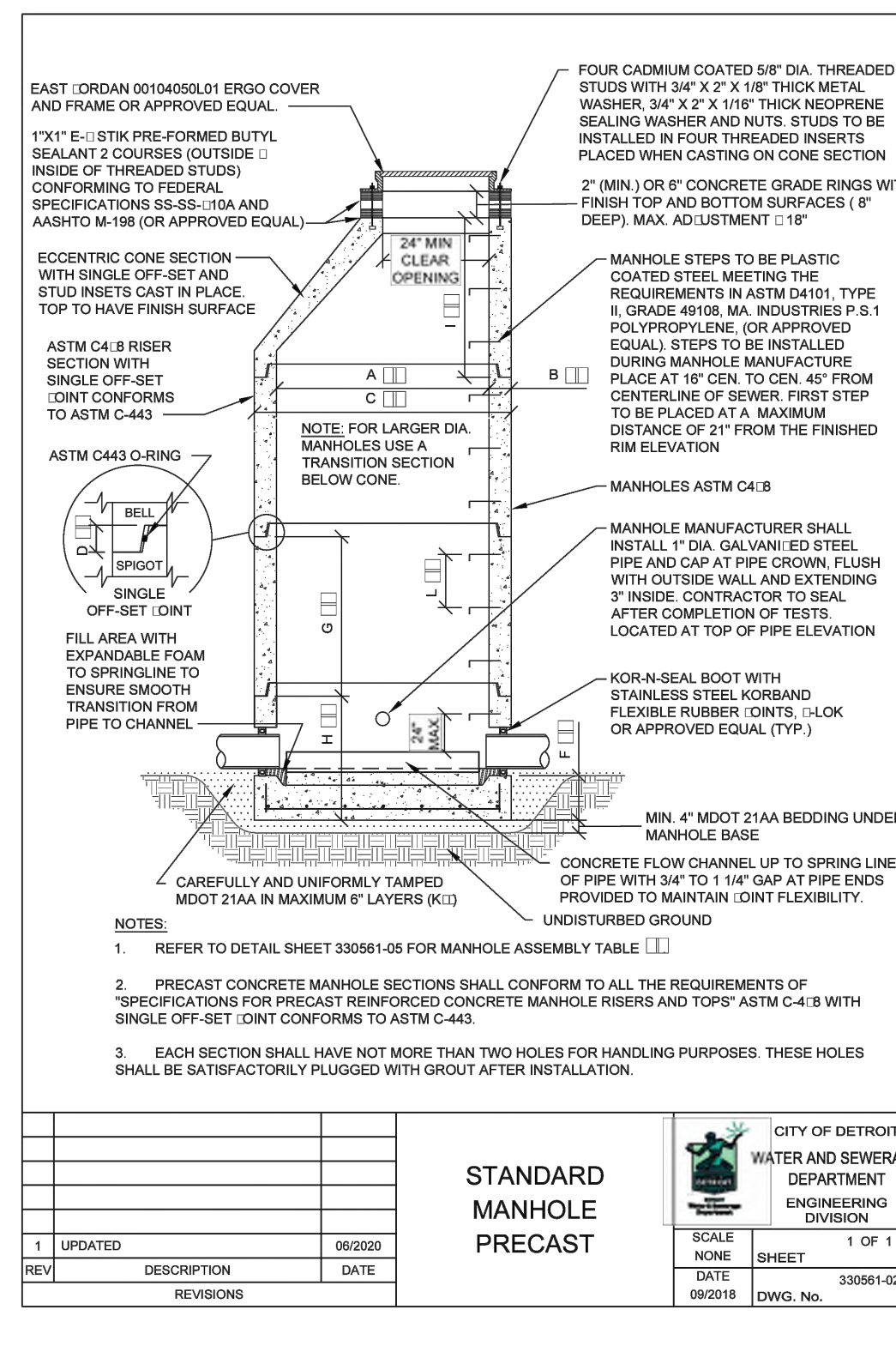
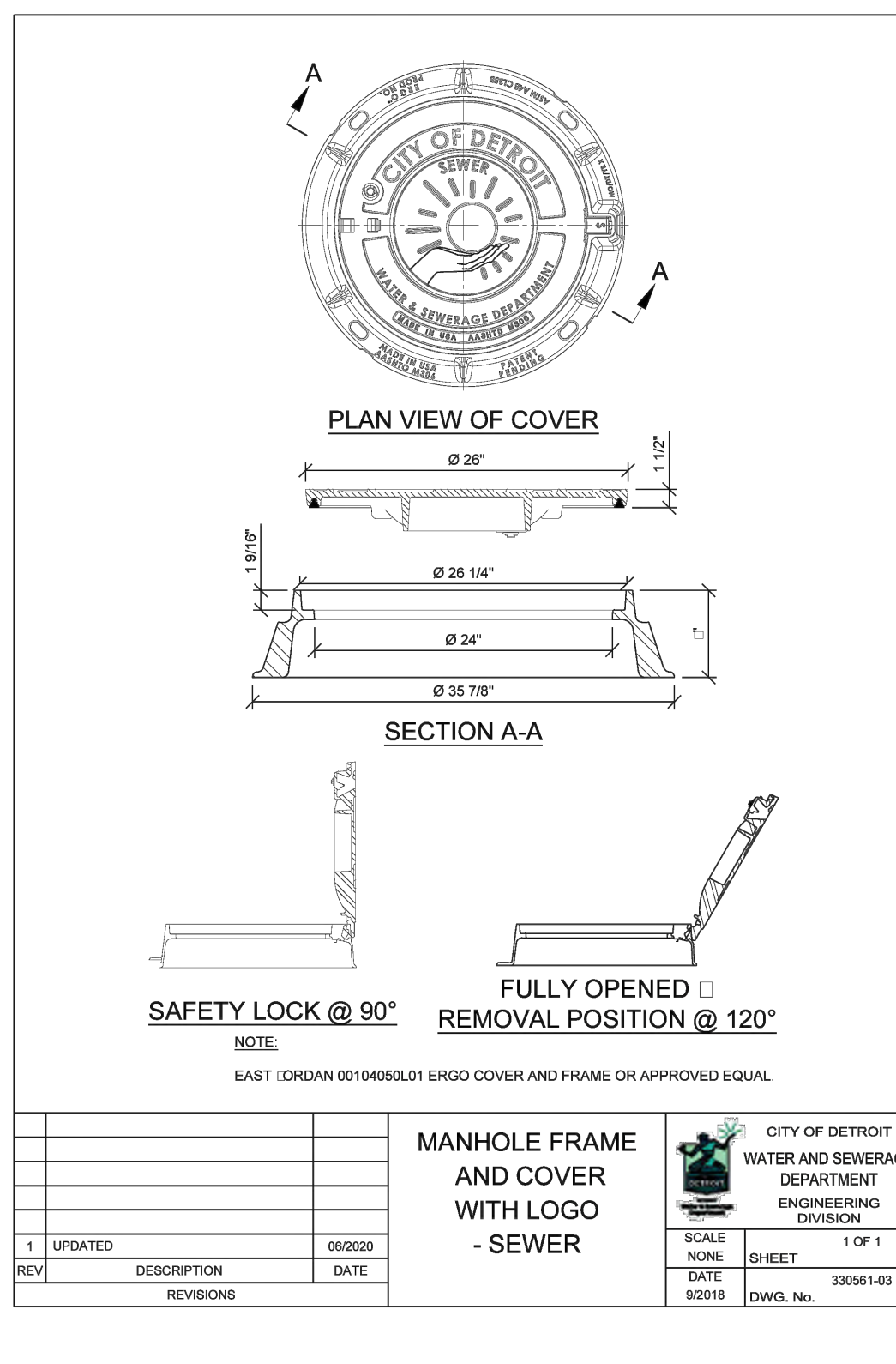
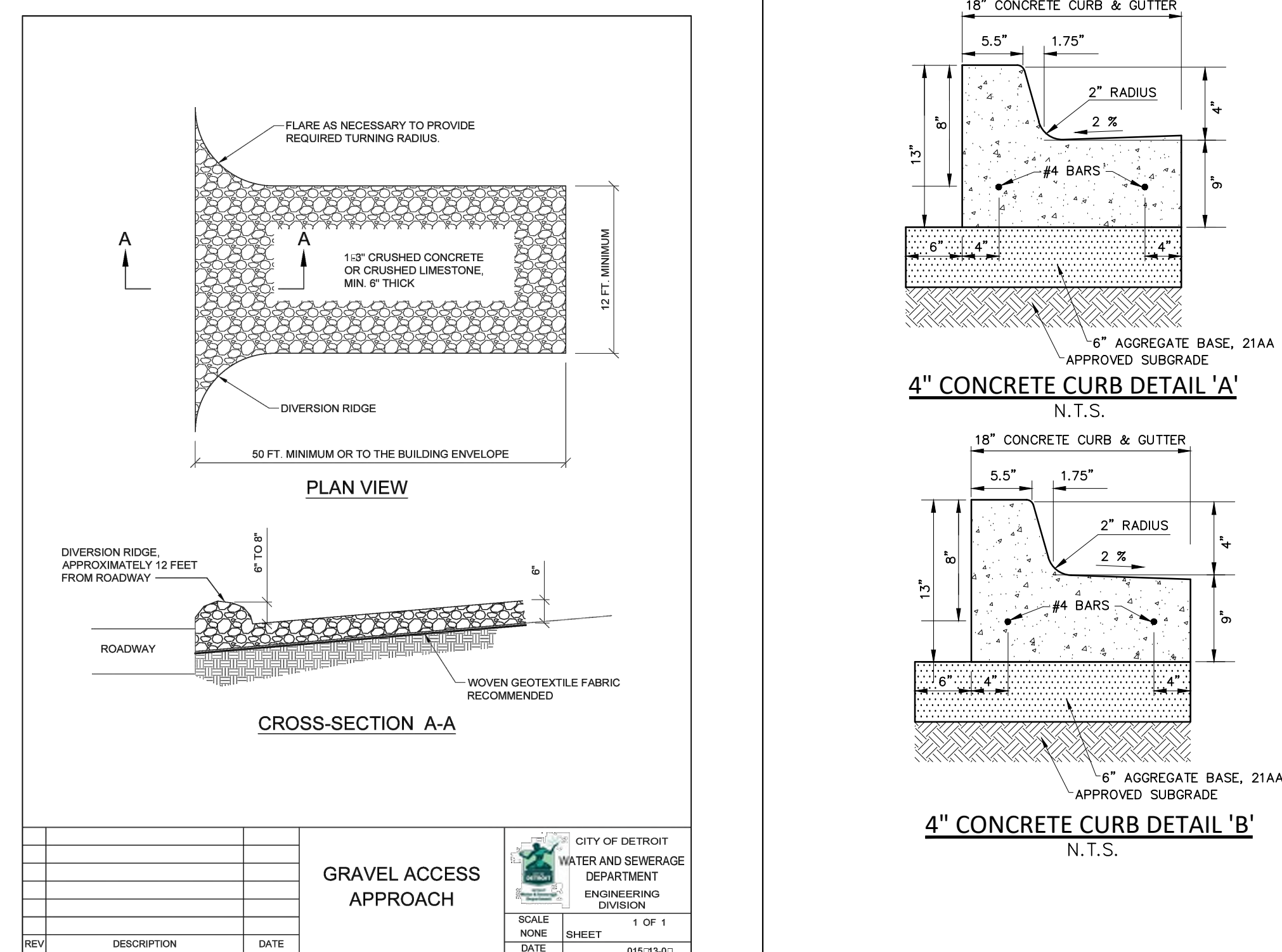
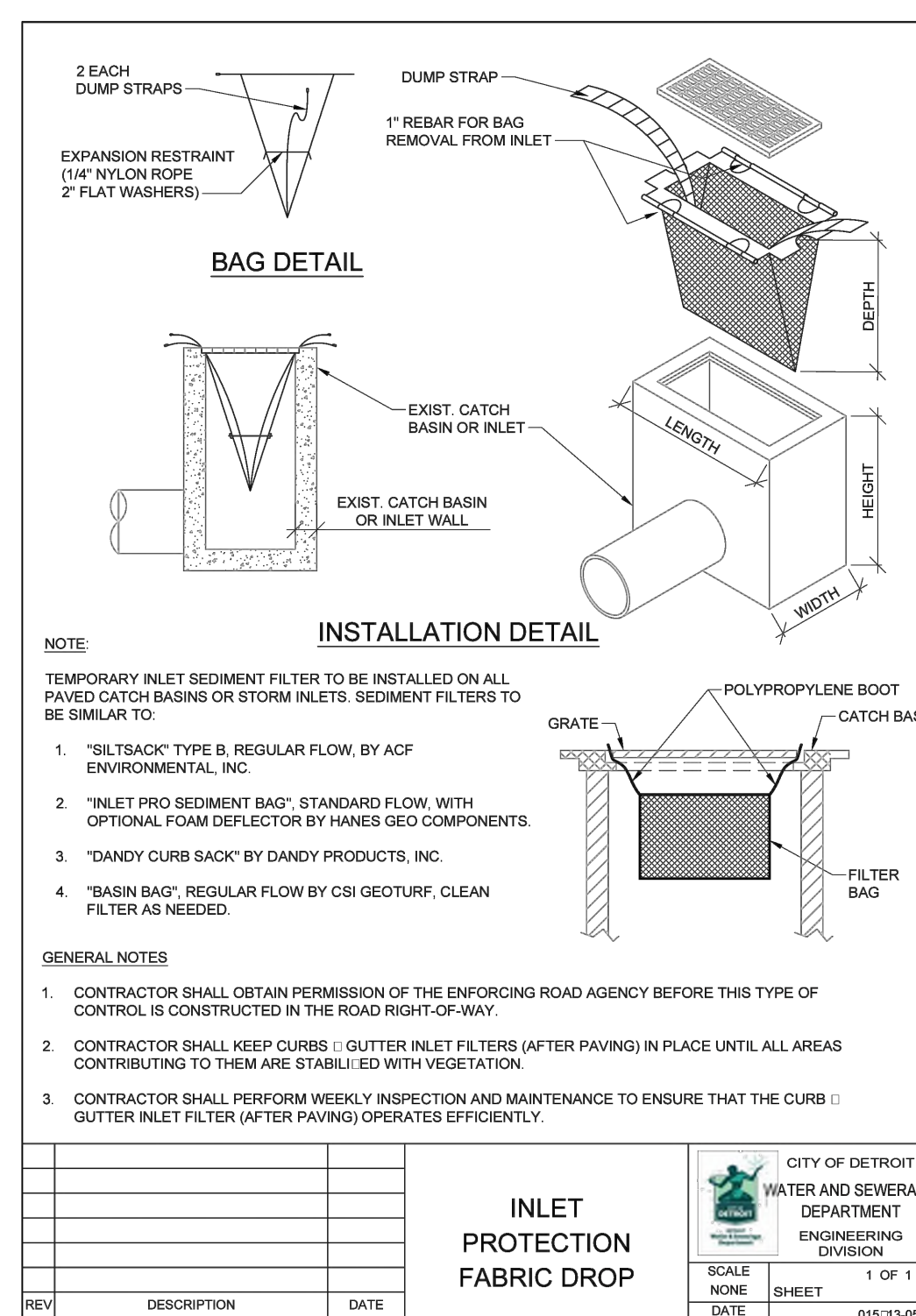
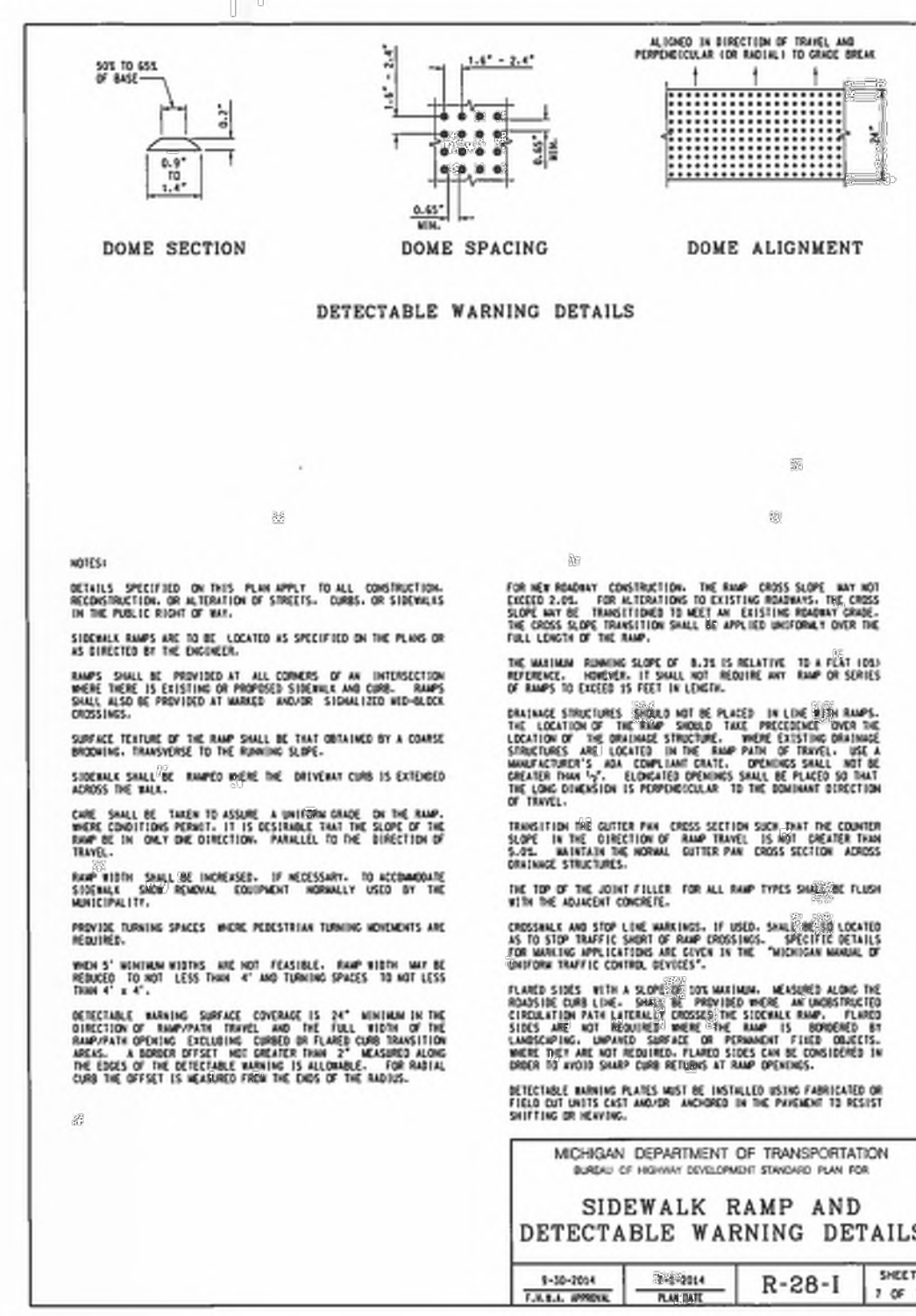
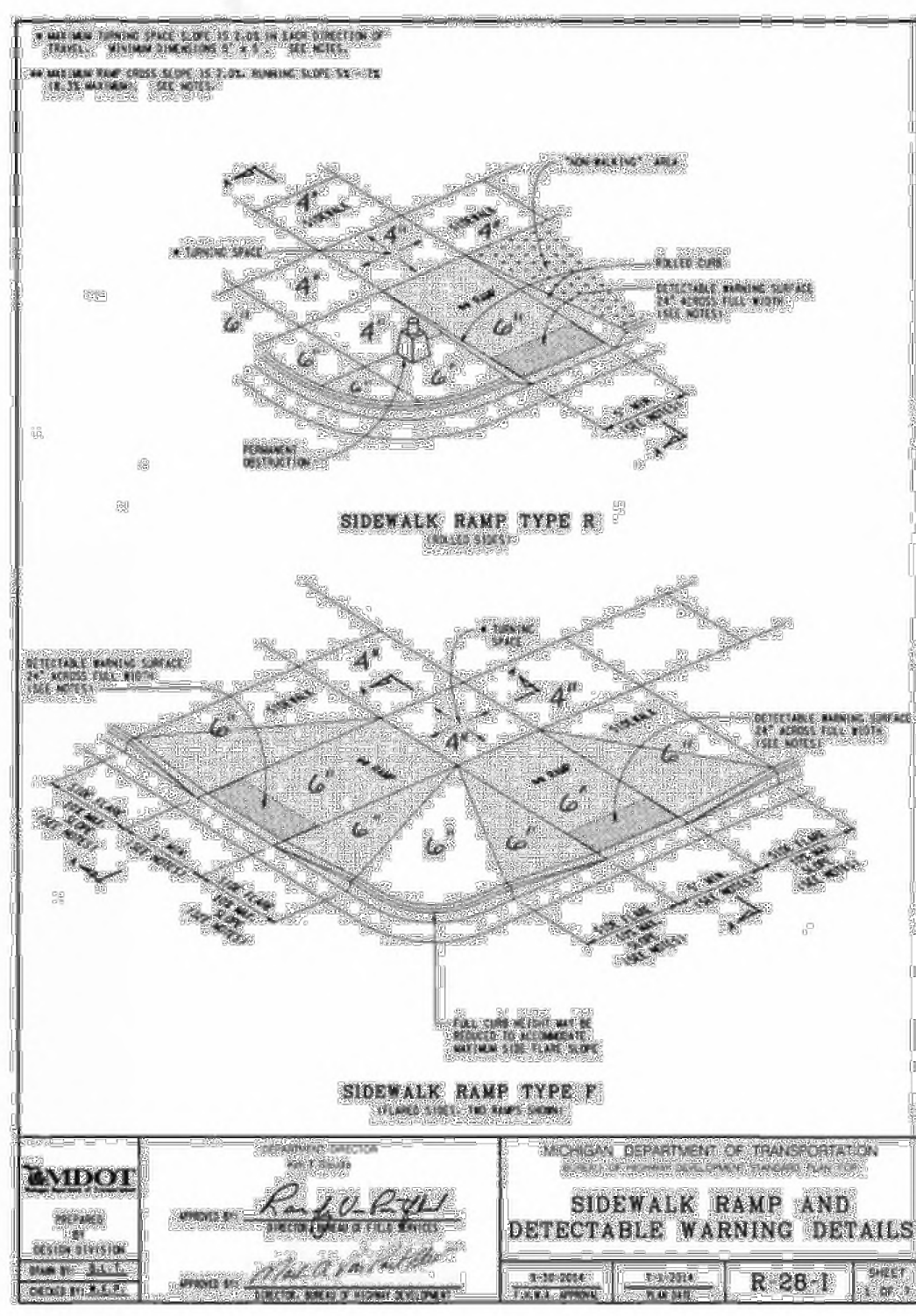
NOTES
A WAYNE COUNTY SOIL EROSION PERMIT IS REQUIRED FOR THIS PROJECT.
NO WETLANDS OR FLOODPLAINS ARE ON THE SITE.
STORAGE OF TOPSOIL MUST BE INSIDE PROJECT LIMITS.
FOR PAVED INLET PROTECTION, USE WOVEN MONOFILAMENT GEOTEXTILE/ 100 gpm PER SQUARE FT. OR APPROVED EQUAL.
NO SILT FENCE, BURLAP, OR STONE TO BE USED AS FILTERS.
SITE IS APPROXIMATELY ±3.38 MILES FROM THE DETROIT RIVER.
AREA OF DISTURBANCE IS 0.14 ACRES.

SOIL DATA
THIS SITE CONSISTS OF URBAN LAND-RIVERFRONT COMPLEX, DENSE SUBSTRATUM, 0 TO 4 PERCENT SLOPES, BASED ON DATA PROVIDED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE.

ESTIMATED QUANTITIES		
DESCRIPTION	QUANTITY	UNITS
TEMPORARY CONSTRUCTION ACCESS DRIVE	50	EA.
SILT SACK OR EQUAL	4	EA.

LEGEND

	INDICATES LIMITS OF SILT FABRIC FENCE/ EARTH DISRUPTION
	INDICATES LIMITS OF DRAINAGE DISTRICT AREA
	INDICATES SILT SACK OR EQUAL ON EXISTING DRAINAGE STRUCTURE
	INDICATES DRAINAGE DISTRICT AREA



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.

UTILITIES
 AT LEAST 72 HOURS (3 WORKING DAYS) PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY MISS DIG AND THE LOCAL COMMUNITY (WHERE APPLICABLE) TO STAKE LOCATIONS OF EXISTING UTILITIES.

THE CONTRACTOR SHALL EXPOSE AND VERIFY EXISTING UTILITIES FOR LOCATION, SIZE, DEPTH, MATERIAL, AND CONFIGURATION PRIOR TO CONSTRUCTION. COSTS FOR EXPLORATORY EXCAVATION IS AN INCIDENTAL COST AND SHALL NOT BE CONSIDERED AN EXTRA TO THE CONTRACT.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY EXISTING UTILITIES WHICH DO NOT MATCH THE PLANS AND SPECIFICATIONS PRIOR TO COMMENCING WORK. ANY FIELD CHANGES OF THE PROPOSED UTILITIES SHALL BE APPROVED BY THE OWNER AND ENGINEER BEFORE THE WORK IS DONE.

THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES FROM DAMAGE. ANY SERVICE OR UTILITY DAMAGED OR REMOVED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE CONTRACTOR, IN CONFORMANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY PROVIDER.

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.

TRENCH BACKFILL
 TRENCH BACKFILL SHALL BE PLACED IN CONFORMANCE WITH THE PLANS AND/OR SPECIFICATIONS. TRENCH BACKFILL SHALL ALSO BE INSTALLED IN CONFORMANCE WITH THE COMMUNITY REQUIREMENTS OR AGENCY/UTILITY GOVERNING SAID TRENCH CONSTRUCTION. IN THE CASE OF CONFLICTING REQUIREMENTS, THE MORE STRINGENT SHALL APPLY.

EARTH BALANCE / GRADING
 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHETHER THE SITE EARTHWORK BALANCES OR NOT. ANY EXCESS CUT MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR. IN A LIKE MANNER, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IMPORT APPROVED FILL MATERIAL AND PLACE IT AS REQUIRED TO ATTAIN THE SITE GRADE AND CONFORMANCE WITH THE ENGINEER'S PLAN AND ALL APPLICABLE GOVERNMENTAL STANDARDS. THE ENGINEER AND OWNER MAKE NO REPRESENTATION AS TO THE QUANTITIES THAT MAY BE NEEDED TO CREATE A BALANCED EARTHWORK CONDITION OR THAT THE SITE EARTHWORK IS BALANCED.

SOIL EROSION / SEDIMENTATION CONTROL
 THE CONTRACTOR SHALL OBTAIN THE REQUIRED SOIL EROSION PERMIT AND SATISFY ALL REGULATORY REQUIREMENTS FOR CONTROLLING SOIL EROSION AND SEDIMENT TRANSPORT. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS. THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR INSPECTION OR APPROVAL OF THE CONTRACTOR'S WORK IN CONFORMANCE WITH SATISFYING THE SOIL PROTECTION PERMIT REQUIREMENTS UNLESS SPECIFICALLY STATED IN THE CONTRACT DOCUMENTS.

NF ENGINEERS
 CIVIL ENGINEERS
 LAND SURVEYORS
 LAND PLANNERS

NOWAK & FRAUS ENGINEERS
 4677 WOODWARD AVE.
 PONTIAC, MI 48342-5032
 TEL (248) 332-7931
 FAX (248) 332-8257
 WWW.NOWAKFRAUS.COM

STATE OF MICHIGAN
 JASON LONGHURST
 ENGINEER
 NO. 04071
 LICENSED PROFESSIONAL ENGINEER

PROJECT
 603 E Milwaukee Ave
 Detroit, Michigan

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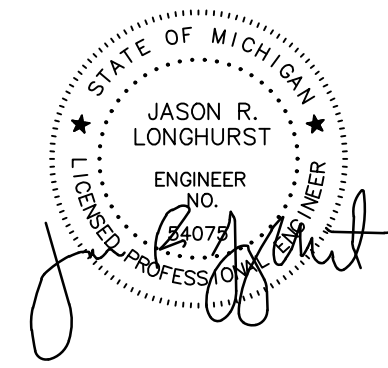
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 Notes and Details

811
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DRAWN BY:
 L. Gross
 DESIGNED BY:
 T. Wood
 APPROVED BY:
 J. Longhurst
 DATE:
 December 1, 2021
 SCALE: N.T.S.

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DESIGNED BY:
T. Wood
APPROVED BY:
J. Longhurst

DATE:
December 1, 2021

SCALE: N.T.S.

ALUMINUM MANHOLE STEP STANDARD DETAILS
NO SCALE

PLAN VIEW (USE WITH BRICK OR BLOCK M.H.)
PLAN VIEW (USE WITH PRECAST M.H. UNITS)
PLAN VIEW (USE WITH WET CAST M.H. UNITS)
CROSS-SECTION

NOTES:
1. MANHOLE STEPS SHALL CONFORM TO THE REQUIREMENTS FOR "ALUMINUM ALLOY EXTRUDED BARS, RODS, SHAPES AND TUBES", A.S. I.M. B201 (CURRENT), ALLOY 6061, TEMPER T-6, OR APPROVED EQUAL.
2. EITHER THE FLANGED LEG OR PARALLEL LEG STEP MAY BE USED FOR POURED IN PLACE CONCRETE CONSTRUCTION OR IN WET CAST MANHOLE UNITS.
3. THE PARALLEL LEG STEP SHALL BE USED IN EXISTING STRUCTURES BY PLACING IN DRILLED HOLES AND GROUTING WITH NON-SHRINK GROUT.

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DETAIL OF TRAP FOR CATCH BASIN "B"
DETAIL OF SUMP FOR CATCH BASIN "B"

NOTES:
SEWER TRAP TO BE OF THE SAME MAT'L. & STRENGTH AS THE OUTLET SEWER PIPE.
TRAP SHALL BE SUPPORTED BY BLOCKING ON ANY OTHER MEMB. UNTIL CATCH BASIN IS COMPLETED AND CONCRETE OR MORTAR AROUND BRICK IS SET. ANY JOINTS BETWEEN THE TRAP AND GROUND UNDERNEATH SHALL BE FILLED WITH GRADE "A" CONCRETE.

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CATCH BASIN "B"

PLAN VIEW
SECTION C-C
SECTION B-B

NOTE "A":
WALL THICKNESS SHALL BE 8" FROM THE TOP OF STRUCTURE TO A DEPTH OF 15". BELOW 15" THE THICKNESS OF THE WALL SHALL BE 12"

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CATCH BASIN "A"

PLAN VIEW
SECTION A-A

NOTE:
CATCH BASIN "A" WILL BE USED ONLY WHEN OUTLETTING TO A CATCH BASIN "B".

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TYPICAL DETAIL AT CROSSING UNDER EXISTING UTILITIES

CODED 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.

NOTES:
1. ALL MDOT CLASS II GRANULAR MATERIAL, PLACE AND COMPACT (IN MAX. 12" LIFTS) BY "CONTROLLED DENSITY METHOD" TO 98% PER SPECIFICATION 31 23.33.3.10 B OF MAXIMUM UNIT WEIGHT.
2. WATERMANS 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 WATERMAN) WITH WATER WORKS GRADE 150PSI PRESSURE TESTED TO ENSURE WATER TIGHTNESS.
3. "W" - SEE TRENCH DETAILS FOR TRENCH WIDTH.
4. TRENCHING SHALL BE PER OSHA 29 CFR, SUBPART P.

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GENERAL NOTES

- CENTER OF CATCH BASIN SHALL BE 20 INCHES FROM BACK OF CURB.
- ALL SIZES AND FLOW LINES OF PIPES, AND ELEVATIONS FOR TOP AND BOTTOM OF STRUCTURES SHALL BE DETERMINED FROM THE PLANS OR CONSTRUCTION REQUIREMENTS. THE BELL SHALL BE REMOVED FROM THE FIRST LENGTH OF OUTLET PIPE PROJECTING THROUGH THE WALL OF THE STRUCTURE WHEN ANY STRUCTURE IS CONSTRUCTED OF PRECAST CONCRETE OR CONCRETE BLOCK. THE TOP OF THE MASONRY SHALL BE LEFT SUFFICIENTLY LOW TO PERMIT PROPER ADJUSTMENT OF THE COVER TO GRADE BY THE USE OF MORTAR OR BRICKS AS DIRECTED BY THE ENGINEER.
- A TRAP, AS DETAILLED ON SHEET 3 OF 7, SHALL BE PLACED WHERE CALLED FOR IN THE OUTLET SEWER LINE OF CATCH BASINS "B". THIS TRAP SHALL BE SET INTO THE MASONRY WALL AS SHOWN ON THE DETAILS.
- THE MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PAVING AND RELATED CONSTRUCTION EXCEPT AS NOTED ON THIS SHEET AND ON THE PLANS.
- A PLASTER COAT OF MORTAR 1/2" IN THICKNESS SHALL BE APPLIED TO THE OUTER SURFACE OF THE STRUCTURE AS SHOWN. A 1/2" CEMENT PLASTER COAT SHALL BE PLACED ON THE INSIDE OF ALL SUMPS.
- CONTRACTOR SHALL VERIFY ELEVATIONS OF EXISTING UTILITIES TO ENABLE CONSTRUCTION TO INDICATED ELEVATIONS SHOWN ON DRAWINGS. IF NECESSARY, INVERT ELEVATIONS SHOWN ON THE DRAWINGS MAY BE ALTERED IN THE FIELD TO CLEAR EXISTING UTILITIES. SUCH ALTERATIONS, UPWARD OR DOWNWARD, SHALL BE AT NO CHANGE IN CONTRACT PRICE.
- WHEN PRECAST CONCRETE PIPE SECTIONS ARE USED FOR CATCH BASINS, EITHER A SECTION OF THE INLET AND OUTLET PIPES OR AN OPENING OR EYE FOR THE INLET AND OUTLET PIPES SHALL BE CAST INTO THE WALL OF THE CATCH BASIN PIPE WHEN IT IS BEING MANUFACTURED. EYES IN PRECAST PIPE SECTIONS SHALL BE FINISHED TO ACCOMMODATE A FLEXIBLE JOINT CONNECTION SUCH AS PRESS-MODE BY PRESS SEAL GASKET CORP. OR RES-SEAL BY SCALES WFG. CORP.
- PAY LIMIT FOR SENSERS SHALL BE INSIDE FACES OF STRUCTURES UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE IN (INCHES) UNLESS OTHERWISE NOTED.

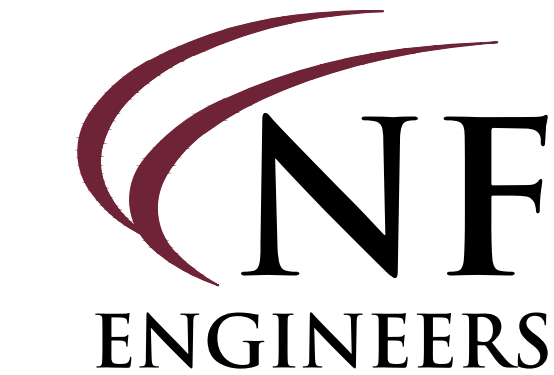
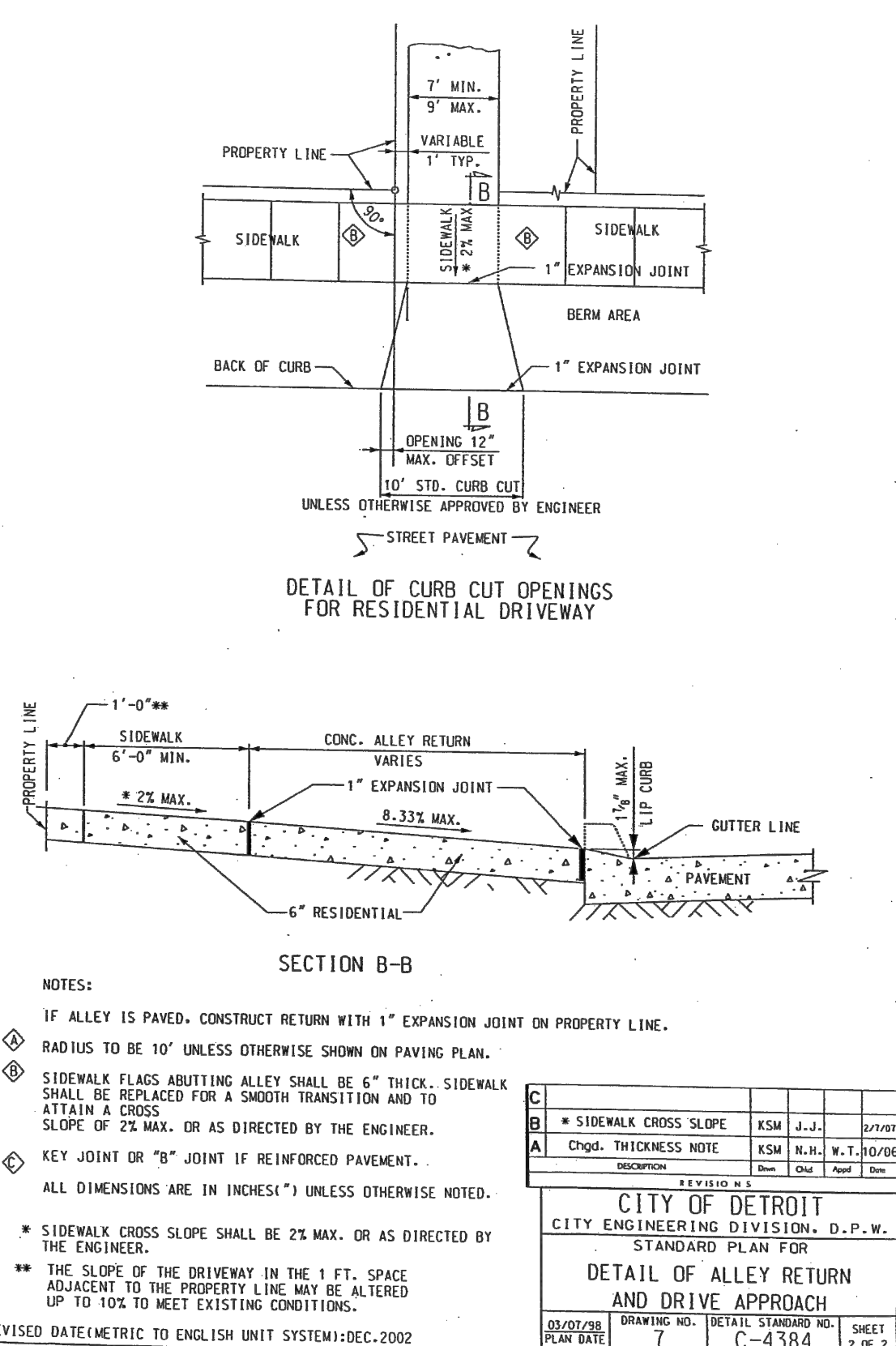
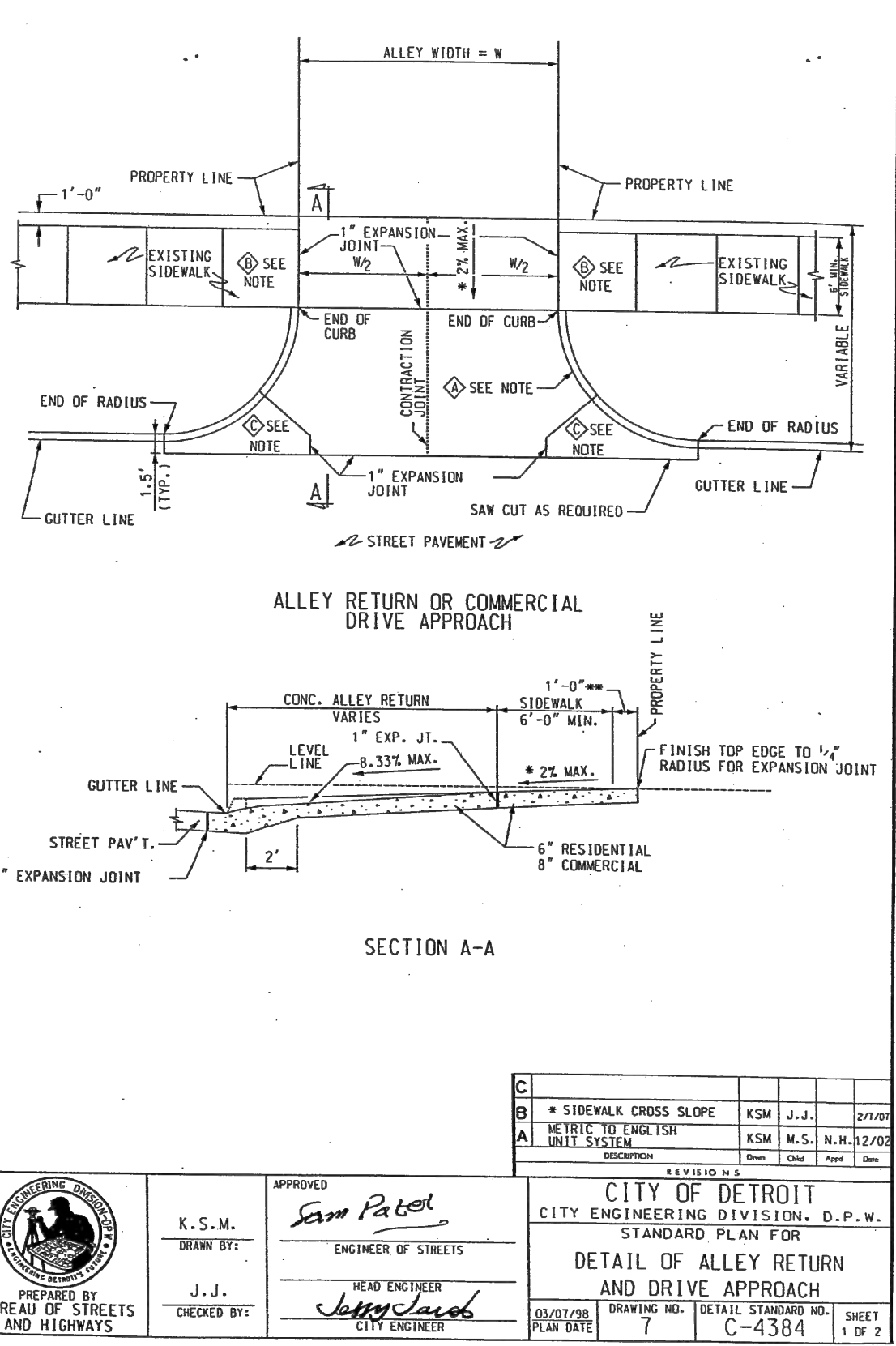
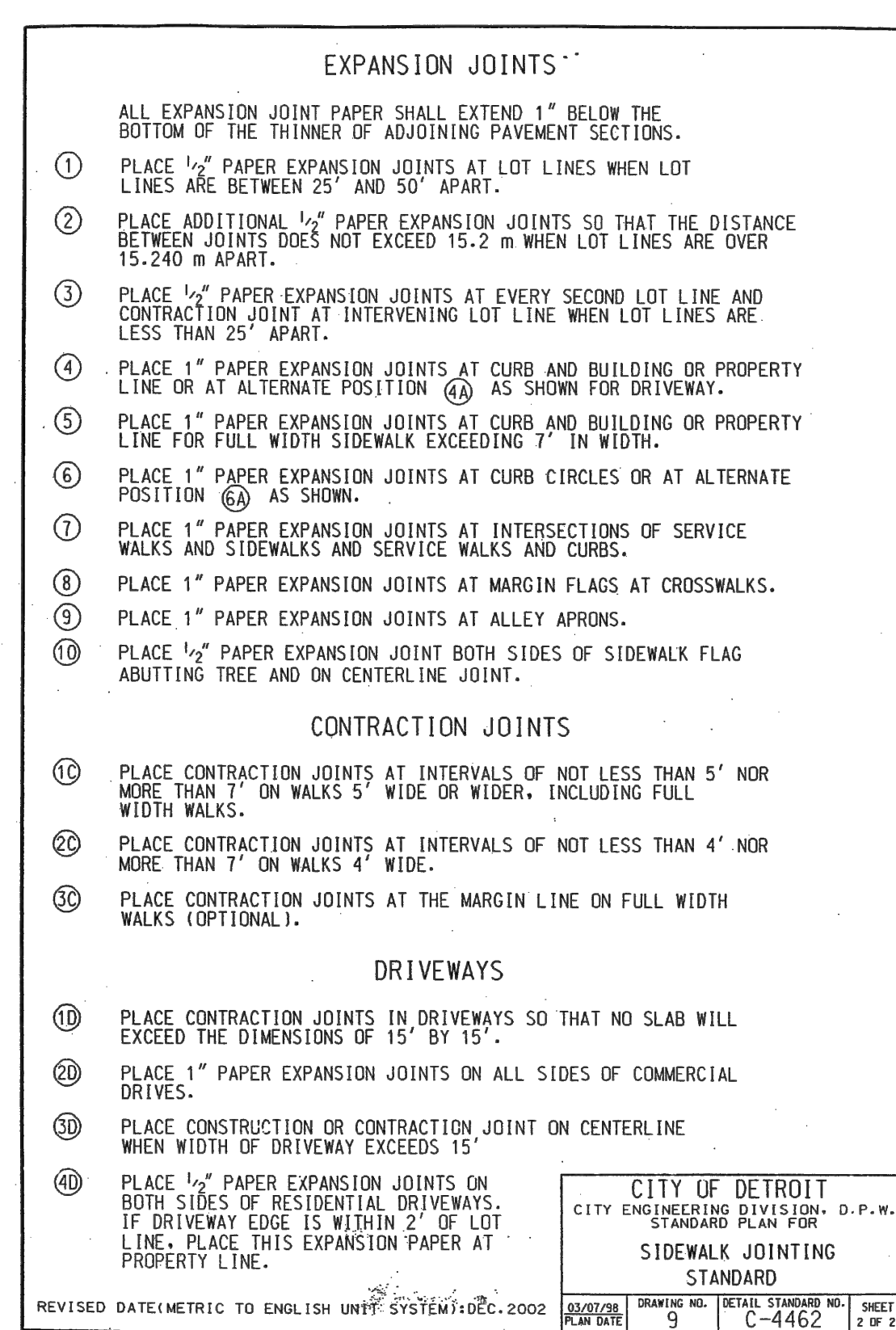
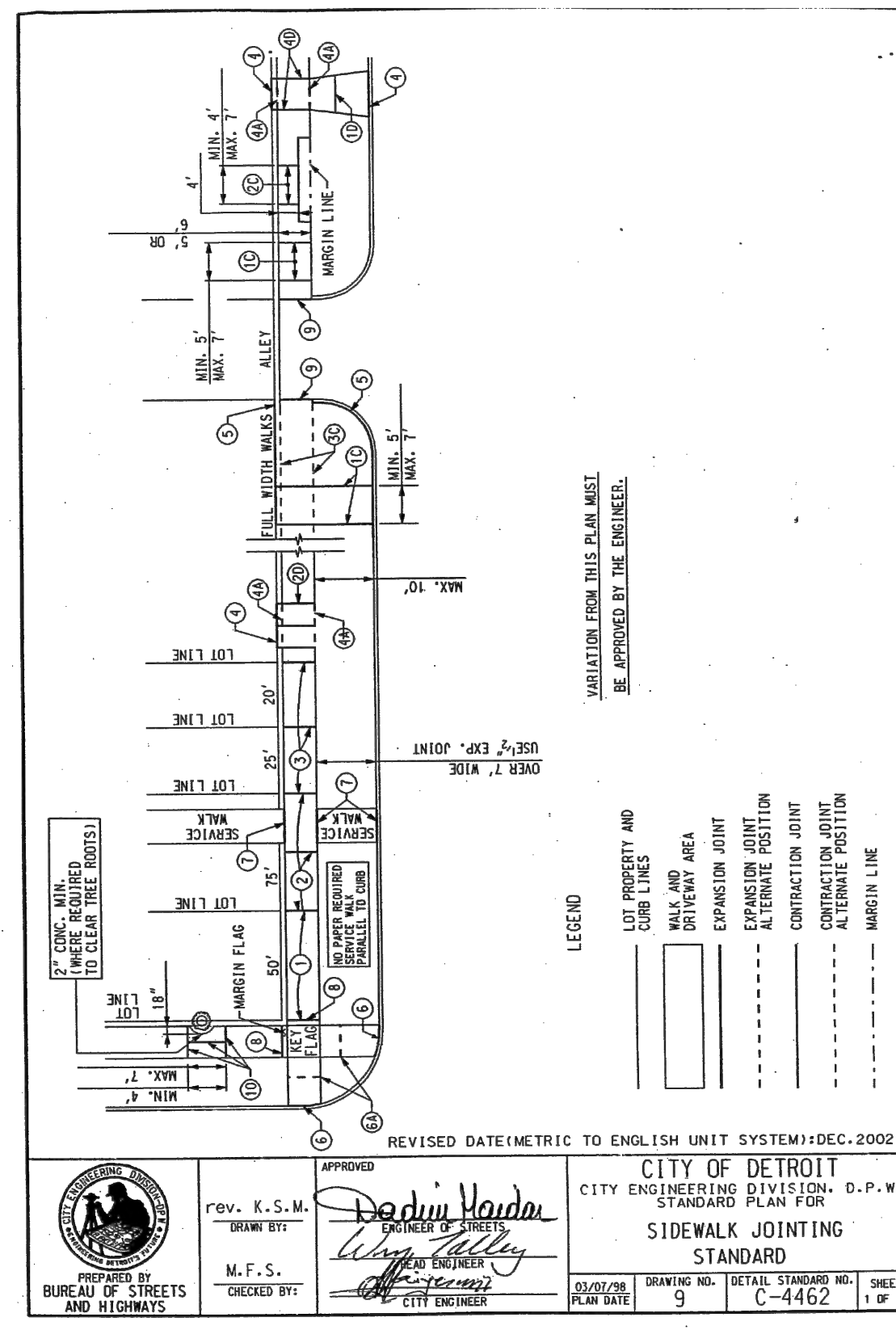
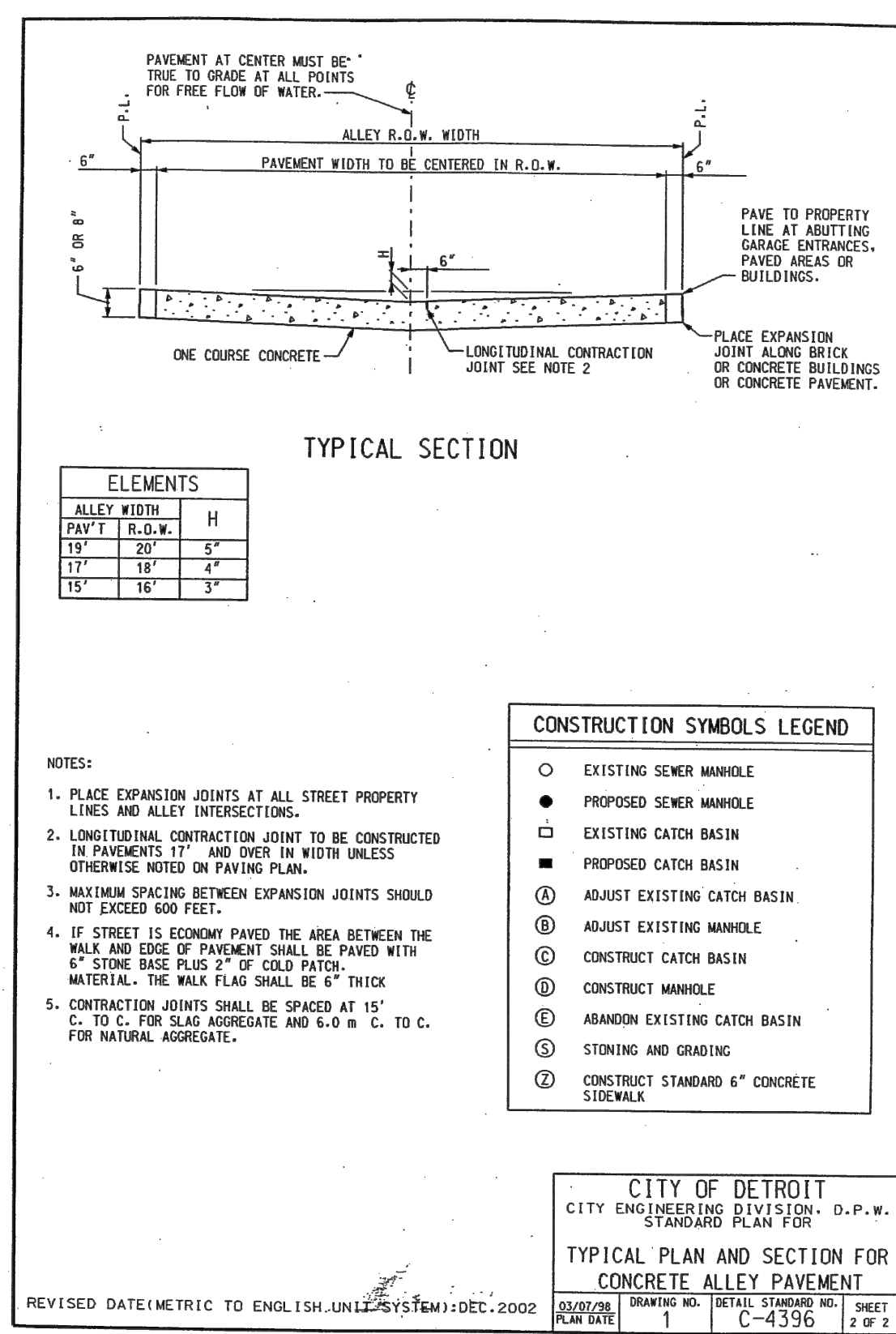
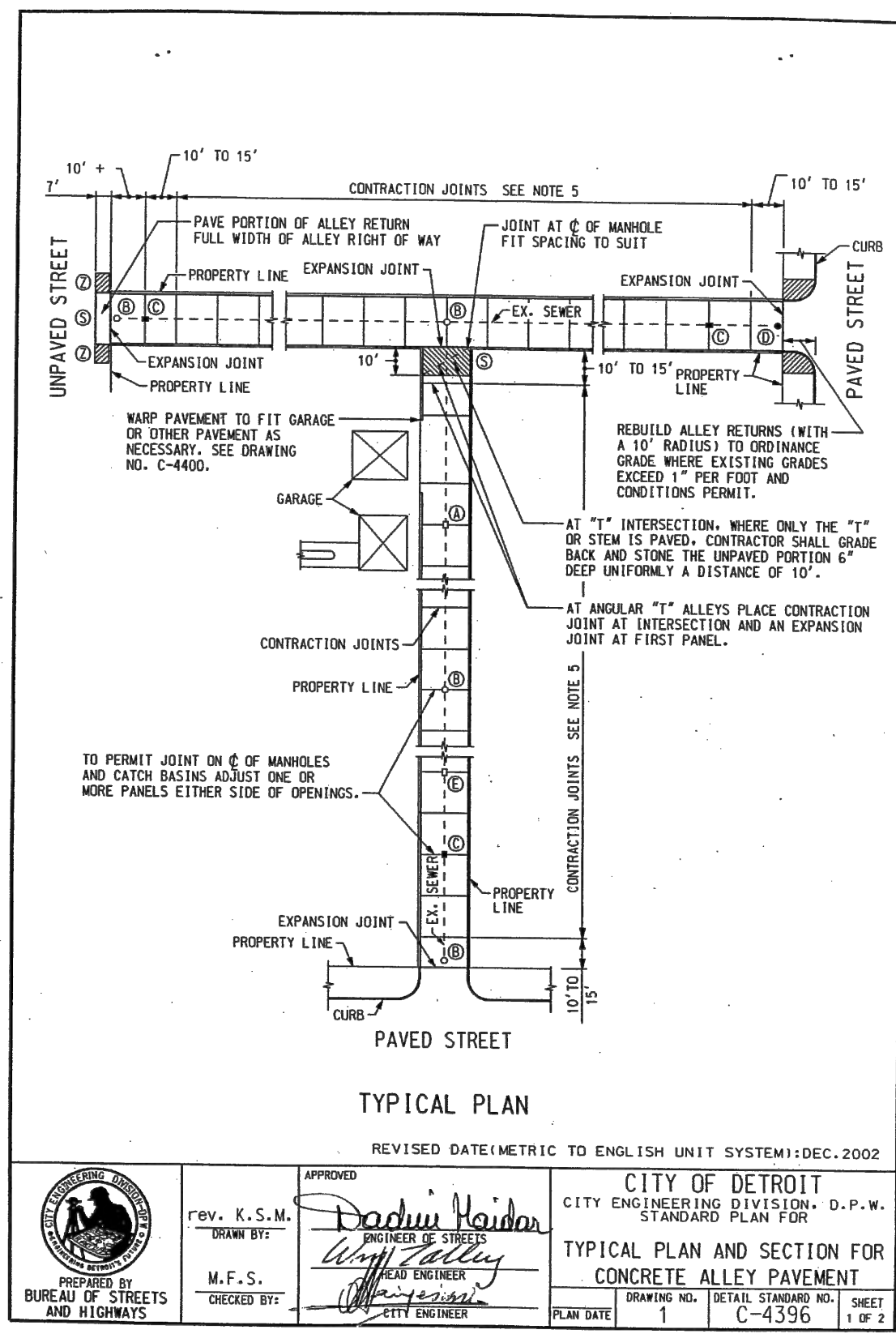
REVISED DATE (METRIC TO ENGLISH UNIT SYSTEM): DEC. 2002
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PLAN VIEW OF GRATE
SECTION G-G
SECTION F-F

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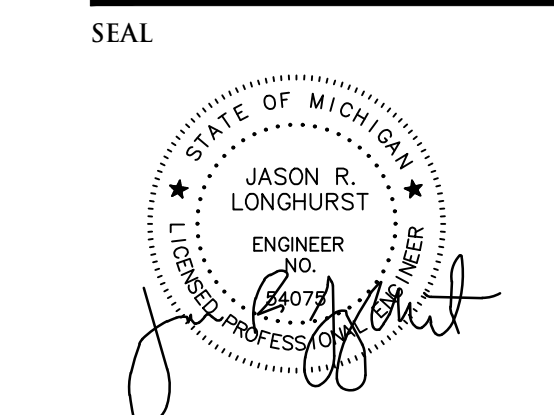
PLAN VIEW OF FRAME
SECTION E-E
SECTION D-D
COVER BOLT DETAIL

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**CIVIL ENGINEERS
 LAND SURVEYORS
 LAND PLANNERS**

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PROJECT
 603 E Milwaukee Ave
 Detroit, Michigan

CLIENT
 Ferry Street Ventures, LLC
 1520 North Johnson Street
 Arlington, VA 22201

PROJECT LOCATION
 Part of the Northeast 1/4
 of Section 31
 Town 1 South, Range 12
 East
 City of Detroit,
 Wayne County, Michigan

SHEET
 Notes and Details



DATE	ISSUED/REVISED
2021-12-03	ISSUED FOR OWNER REVIEW
2022-05-11	REVISED PER OWNER
2022-08-18	REVISED PER ROW REVIEW
2022-08-25	REVISED PER ROW REVIEW
2022-09-27	REVISED PER ROW REVIEW
2022-10-25	REVISED PER CITY REVIEW
2022-10-26	REVISED PER OWNER
2022-11-08	REVISED PER CITY REVIEW
2022-11-30	REVISED PER CITY REVIEW
2023-08-07	REVISED PER OWNER
2023-09-11	REVISED PER OWNER
2023-09-28	REVISED PER OWNER

DRAWN BY:
 L. Gross
 DESIGNED BY:
 T. Wood
 APPROVED BY:
 J. Longhurst

DATE:
 December 1, 2021

SCALE: N.T.S.