CITY OF ANN ARBOR FIELD OPERATIONS TRAVER STREET STORM SEWER

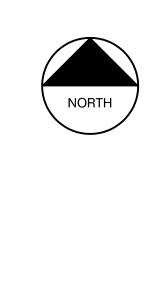
PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR THESE PERMIT FEES. PERMIT **ISSUING AUTHORITY** CITY OF ANN ARBOR LANE CLOSURE PERMIT PROJECT MANAGEMENT UNIT CITY OF ANN ARBOR **GRADING/SOIL EROSION &** PLANNING AND DEVELOPMENT SEDIMENTATION CONTROL PERMIT SERVICES UNIT **RIGHT-OF-WAY PERMIT** CITY OF ANN ARBOR PLANNING AND DEVELOPMENT SERVICES UNIT

PERMITS REQUIRED TO BE OBTAIN ARBOR PRIOR TO THE BEGINNING THE CITY IS RESPONSIBLE FOR TH	OF CONSTRUCTION.
PERMIT	ISSUING AUTHORITY
PIPE/WIRE OCCUPATIONS	ANN ARBOR RAILROAD

PUBLIC UTILITIES	OWNER	CONTACT
WATER SEWER STORM SIGNS SIGNALS	CITY OF ANN ARBOR FIELD OPERATIONS SERVICE UNIT W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	DAN WOODEN (734) 794-6350 MARK COZART (734) 794-6350 KEVIN ERNST (734) 794-6350
STREET LIGHTS		CHUCK FOJTIK (734) 794-6361
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 17150 ALLEN ROAD MELVINDALE, MI 48122	JAY WILLIAMS (313) 380-7303
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	CLAY COMBEE (734) 397-4112
CABLE	COMCAST 27800 FRANLKIN ROAD SOUTHFIELD, MI 48034	RON SUTHERLAND (313) 999-8300
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	BRIAN BERRY (734) 996-2135
	,	

FEBRUARY 2015 CITY ITB No. 4365 STANTEC FILE No. 2075090900 TASK 217

	SHEET INDEX				
SHEET	DRAWING No.	TITLE			
1	G-01	COVER SHEET			
2	G-02	GENERAL NOTES AND LEGEND			
3	G-03	STANDARD DETAILS SHEET			
4	C-01	STORM SEWER PLAN & PROFILE			



THE CONSTRUCTION COVERED BY THESE PLANS SHALL

CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS

THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES

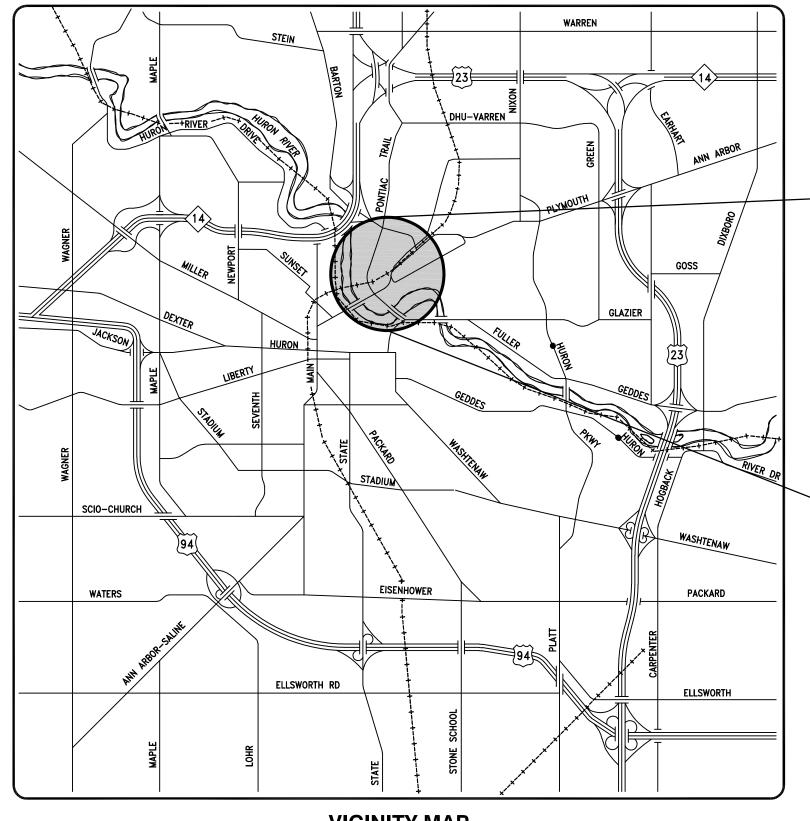
NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

THE WORK SHALL BE PERFORMED IN COMPLETE

CONFORMANCE WITH THE CURRENT PUBLIC SERVICES

AND IT'S DETAILS WHICH ARE INCLUDED BY REFERENCE.

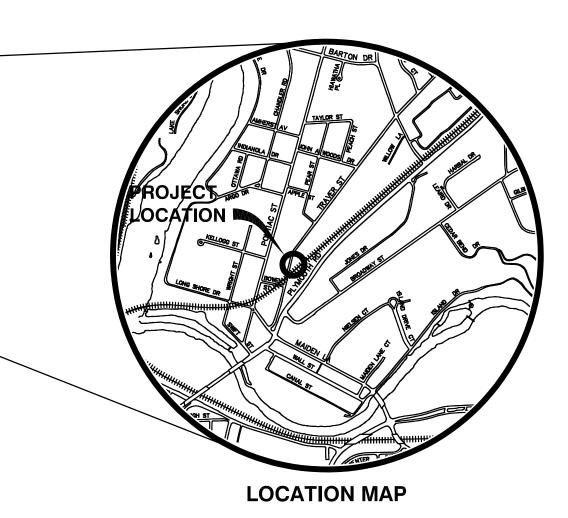
STANDARD SPECIFICATIONS AND DETAILS.



VICINITY MAP

MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO



PREPARED BY:



3959 Ranchero Drive Ann Arbor MI U.S.A. 48108-2771 Tel. 734.761.1010 Fax. 734.761.1200 www.stantec.com

Stantec Consulting Michigan Inc.

Know what's **Below.** CALL before you dig.

PREPARED UNDER THE SUPERVISION OF R. BRIAN SIMONS, P.E., - MI LICENSE No. 36890 STANTEC, PROJECT ENGINEER 02/05/2015 DATE

CITY DEPARTMENTAL REVIEW							
SURVEY	REVIEW ENGINEER	FIELD OPERATIONS	C.E.S. SUPERVISOR	TRAFFIC	SOIL EROSION	STORM WATER/ FLOODPLAIN	DRAWING No. 2075090900 - G-01
							SHEET No. OF 4

(?) UNKNOWN MANHOLE	WATER MAIN
	r STORM SEWER
p TELEPHONE MANHOLE	s ——— s SANITARY SEWER
T TELEPHONE RISER	g — GAS MAIN
TEEET HONE NOEN	MISC. LINETYPES
g GAS VALVE	
	BOUNDARY BUILDING
GAS VENT	CENTERLINE OF DITC
GAS BOX	CENTERLINE OF ROAL
E ELECTRICAL RISER	GRAVEL
	R.O.W.
TRANSFORMER	TREELINE WETLAND
	HATCHING
UTILITY POLE	
LAMP POLE	ASPHALT
<u>OLS</u>	BUILDING
GUY ANCHOR	CONCRETE
O OUNTROLE	
GUY POLE	GRAVEL
(MW) MONITORING WELL	V V V WETLAND
MAIL MAILBOX	
SOIL BORING	
S SURVEY SYMBOLS	
^	
TRAVERSE POINT	
BENCH MARK	
IDON PIDE	
IRON PIPE	
o MON BOX	
	GAS VALVE GAS VENT GAS BOX E ELECTRICAL RISER TRANSFORMER UTILITY POLE LAMP POLE GUY ANCHOR GUY POLE MWW MONITORING WELL MAIL MAILBOX SOIL BORING SURVEY SYMBOLS

EXISTING

UNKNOWN MANHOLE

MISC. SYMBOLS

EXISTING

UTILITY LINETYPES

PR	OPOSED	PROPOSED			
WATER	SYMBOLS	UTILITY LINETYPES			
1 16 3111	RANT DFILE)				
HYDI (PLA	RANT N)	—— — STORM SEWER			
⊗ wat	ER GATE L	——— SANITARY SEWER	ŧ		
l wa	TER GATE VALVE	MISC. LINETYPES			
	ER STOP BOX	BUILDING			
<u>₩</u> wat	ER VAULT		СН		
STORM S	SYMBOLS	CENTERLINE OF RO	AD		
	INLET	FENCE			
	DOUBLE	LOT/UNIT			
	INLET	PHASE LINE			
	INLET JUNCTION CHAMBER	——————————————————————————————————————	NG		
	ROUND CATCH BASIN	PERMIT WATER EASMENT	NG		
(R)	STORM MANHOLE	STORM EASEMENT			
	DRAIN ARROW FLARED END SECTION	SANITARY EASEMEI	۱T		
7	(PLAN) FLARED END SECTION				
	(PROFILE)	HATCHING			
SANITAR	Y SYMBOLS	ASPHALT			
S	SANITARY MANHOLE	[····			
CO	CLEAN-OUT	CONCRETE			
VEGETAT	TON SYMBOLS	SIDEWALK			
		GRAVEL			
$\left\{ \left\{ ullet ight. ight\}$	TREE (DECIDUOUS)	PAVEMENT/WALK REMO	VAL		
**************************************	TREE (CONIFEROUS)	-1-1-1-1-1-1-1-1-1 CURB REMOVAL			
TRAFFIC	C SYMBOLS				
_	BARREL				
-0	SIGN				
	PUSH BUTTON				
	DETECTABLE WARNING				

TRAFFIC CONTROL NOTES.

EXISTING

WATER SYMBOLS

+ + FIRE HYDRANT

- THE CONTRACTOR SHALL GIVE ADVANCE NOTICE OF CONSTRUCTION TO THE CITY OF ANN ARBOR AT LEAST SEVEN (7) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY TRAFFIC CONTROLS AND PROTECTION DURING THE ENTIRE PERIOD OF CONSTRUCTION IN ACCORDANCE WITH THE LATEST REVISION OF THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" AND ANY SUPPLEMENTAL SPECIFICATIONS SET FORTH HEREIN.
- ALL TRAFFIC CONTROL DEVICES INCLUDING SIGNS, BARRICADES, PLASTIC DRUMS, AND WARNING LIGHTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL RESTORE THE RIGHT-OF-WAY TO A CONDITION EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION.
- CONSTRUCTION EQUIPMENT AND EXCAVATING MATERIAL SHALL NOT BE STOCK PILED IN SUCH LOCATIONS THAT IT CREATES A TRAFFIC HAZARD OR INTERFERES WITH THE FLOW OF TRAFFIC.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING ROAD SIDE DRAINAGE DITCHES, DRAINS, CULVERTS AND DRAINAGE STRUCTURES DURING CONSTRUCTION. ANY ROADWAY DRAINAGE FACILITIES DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION INCLUDING GRADE, WIDTH, SIDE SLOPES, PIPE MATERIAL, ETC.
- CONTRACTOR SHALL MAINTAIN ACCESS ACROSS COMMERCIAL DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PLACE MAINTENANCE AGGREGATES AND/OR TEMPORARY BITUMINOUS PATCHING MIXTURE AS NECESSARY. THIS WORK IS INCIDENTAL TO CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE ACCESS FOR EMERGENCY VEHICLES (POLICE, FIRE, AMBULANCE, ETC.). MAIL CARRIERS AND SCHOOL BUSES TO PASS THROUGH WORK AREAS AT ALL TIMES. ANY COMPLETED WORK THAT IS DAMAGED BY SUCH VEHICLES SHALL BE REPAIRED OR REMOVED AND REPLACED BY THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
- TRAFFIC CONTROL AT THE MUD TRACKING MAT SHALL BE INSTALLED PER MMUTCD AND CITY OF ANN ARBOR STANDARDS. COST SHALL BE INCIDENTAL.

GENERAL NOTES:

- 1. TAKE ALL PRECAUTIONS TO SUPPORT EXISTING UTILITY POLES. COORDINATE WITH APPROPRIATE UTILITY COMPANIES TO MINIMIZE SCHEDULE DELAY.
- COMPLETE ALL WORK IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL CODES, RULES AND REGULATIONS. OBTAIN ALL NECESSARY LOCAL, STATE AND FEDERAL PERMITS AND PAY PERMIT FEES FOR THE WORK OR CONFIRM THAT THE REQUIRED PERMITS HAVE BEEN OBTAINED BY OTHERS PRIOR TO COMMENCING CONSTRUCTION.
- 3. ALL ITEMS INCIDENTAL TO AND/OR REQUIRED TO COMPLETE THE INSTALLATION SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- 4. RESTORE ALL DISTURBED AREAS NOT RECEIVING RIPRAP WITH 4-INCHES OF TOPSOIL, SEED, FERTILIZER AND MULCH BLANKET.
- 5. RESTORE ALL STREET SURFACES, DRIVEWAYS, STAGING AREAS, CULVERTS, ROADSIDE DRAINAGE DITCHES AND OTHER PUBLIC OR PRIVATE STRUCTURES THAT ARE DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES TO A CONDITION EQUAL OR BETTER
- ALL REMOVED MATERIALS ARE THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED IN THE DRAWINGS. CLEANUP AND DISPOSE OF ALL EXCESS MATERIALS OFF SITE IN ACCORDANCE WITH LOCAL REGULATIONS.
- 7. PROTECT TREES AND SHRUBS FROM DAMAGE DURING CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 8. PROTECT EXISTING SITE IMPROVEMENTS AND LANDSCAPING FROM DAMAGE. RESTORE/REPLACE ALL DAMAGED IMPROVEMENTS AND LANDSCAPING TO THEIR ORIGINAL
- 9. CONTRACTOR SHALL BE RESPONSIBLE FOR BYPASSING ALL STORMWATER FLOW DURING CONSTRUCTION.

SOIL EROSION CONTROL NOTES:

THAT PROMOTE EROSION.

- THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AT ALL TIMES DURING CONSTRUCTION ON THIS PROJECT. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE COMPLIED WITH AS REQUIRED OR DIRECTED BY THE OWNER, PROJECT ENGINEER, OR THE CITY OF ANN ARBOR. THE CONTRACTOR IS REQUIRED TO OBTAIN A SOIL EROSION CONTROL PERMIT ANYTIME THE DISTURBED AREA EXCEEDS 1 ACRE.
- 2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CHAPTER 63, AND THE LAWS OF THE STATE OF MICHIGAN.
- DAILY OR AFTER STORM EVENTS INSPECTIONS SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE OWNER/PROJECT ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY AND WITHOUT ADDITIONAL COST TO THE OWNER.
- EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR WATERWAYS.
- ALL MUD/DIRT TRACKED ONTO ROADS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROPERTY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL EMPLOY A MECHANICAL STREET SWEEPER AT NO ADDITIONAL COST TO THE OWNER.
- RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE DONE WITHIN 5 DAYS OF THE COMPLETION OF FINAL GRADE.
- CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY
- STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS. SPECIAL PRECAUTIONS WILL BE TAKEN IN USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS
- PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR CHLORIDE AS REQUIRED OR AS DIRECTED BY ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME UPON AUTHORIZED COMPLETION OF THE PROJECT. COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
- 11. THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THEM.
- 12. TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE
- CONTRACTOR SHALL EXERCISE CAUTION WHILE WORKING IN THE VICINITY OF THE PROPOSED STORM SEWER OUTLET SO AS TO AVOID CAUSING DAMAGE TO THE ADJACENT WETLAND AND POND AREA. ANY DAMAGE TO THE WETLAND OR POND SHALL BE RESTORED TO A CONDITION EQUAL OR BETTER THAN THE PRE-CONSTRUCTION CONDITION AT NO COST TO THE OWNER.

SEQUENCE OF EROSION CONTROL:

- INSTALL SILT FENCE, TREE PROTECTION FENCING AND INLET FILTERS ON EXISTING STORM INLETS PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.
- CONTRACTOR TO CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT.
- 3. STRIP AND CLEAR MAINTAIN EROSION CONTROL MEASURES AROUND TEMPORARY STOCK PILES.
- 4. ROUGH GRADE.
- 5. ENSURE ALL SOIL IS STABILIZED. REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES.

TEMPORARY SEEDING:

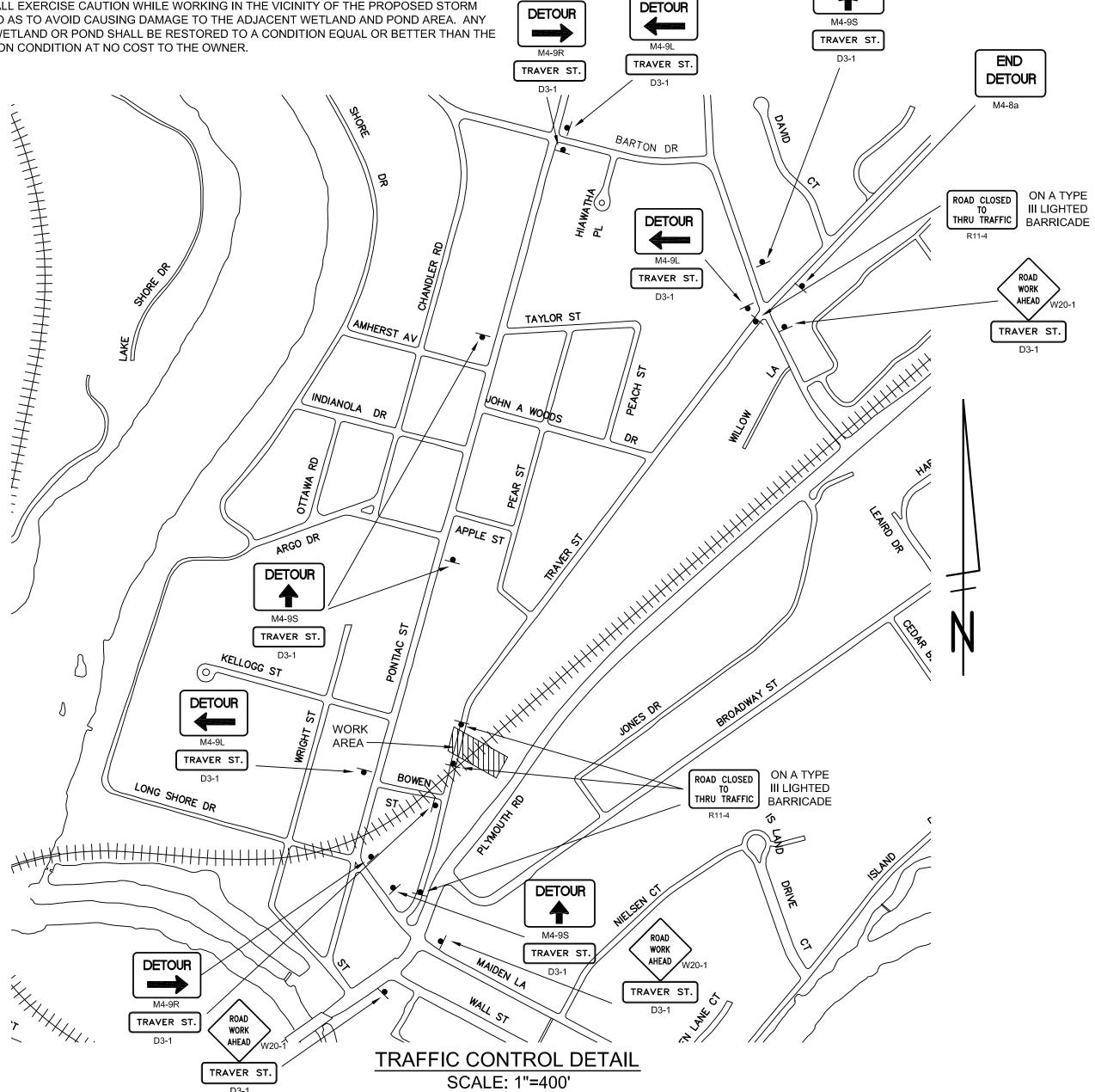
- SEED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.
- 2. ANY DISTURBED AREA NOT PAVED, SEEDED, MULCHED, SODDED OR BUILT UPON BY NOVEMBER 15TH OR JUNE 30TH IS TO BE TEMPORARILY STABILIZED PER SPECIFICATIONS.

- 1. DURING CONSTRUCTION, ALL ROADS SHALL BE PROTECTED FROM UNVEGETATED AREAS WASHING ONTO ROAD SURFACE BY PLACEMENT OF SILT FENCE BEHIND CURB OR A 10 FOOT WIDE STRAW MULCH BLANKET BEHIND CURB OR OTHER APPROVED METHOD AND/OR AS SHOWN ON THE PLANS.
- 2. DURING CONSTRUCTION OF ANY PORTION OF THE PROJECT, ADJOINING ROADS SHALL BE MAINTAINED FREE OF DIRT, SILT AND CONSTRUCTION DEBRIS, CONTRACTOR REQUIRED TO USE VACUUM SWEEPER EQUIPMENT FOR CLEANING CONSTRUCTION SITE AND ADJOINING ROADS. THE USE OF BROOM SWEEPER IS NOT PERMITTED.

DETOUR

CATCH BASIN/MANHOLE PROTECTION:

PROTECT STORM SEWER CATCH BASINS WITH APPROVED INLET FILTERS.





BY PREPARED



2 OF **4**

