City of Birmingham
A Walkable Community

MEMORANDUM

Engineering Dept.

DATE: **August 5, 2015**

TO: **Joseph Valentine, City Manager**

FROM: **Paul T. O'Meara, City Engineer**

SUBJECT: **Oakland Co. Water Resources Commissioner's Office**
Northeast Interceptor Sewer Improvements
Parking Lot #6 Easement

The Northeast Interceptor was built as a part of the Evergreen-Farmington Sewage Disposal District in 1958. This leg of sewer starts at Cranbrook Rd. and 14 Mile Rd. (at the site of the old Birmingham Sewage Treatment Plant), and follows the Rouge River valley northeast into Troy. It now serves parts of Troy, Bloomfield Hills, Bloomfield Twp., and Birmingham.

For several years, the MI Dept. of Environmental Quality (MDEQ) has requested the County to study and make needed upgrades to this sewer to reduce ongoing sanitary sewage overflows (SSOs) that occur during extreme rain events. After study, several projects have been identified, three of which will impact Birmingham, listed from north to south:

1. Manhole revisions in the area of Springdale Golf Course

Interior changes to the manholes will be made on site to help improve flow characteristics. We are working with the County staff to complete this work in late winter so it will not cause significant impact to golf course operations.

2. Sewer lining at the Woodward Ave Crossing

A flow analysis has revealed that the oversized pipe that was installed under Woodward Ave. is causing turbulence in this area. The pipe will be lined with a new, smaller pipe that will result in smoother, faster flows underneath Woodward Ave. (north of the Wimbleton Dr. intersection). Other than the one Birmingham homeowner in the immediate area, there should be little impact to Birmingham residents or the motoring public in general.

3. Parking Lot #6 Sewer Reconstruction

When the County sewer was constructed in 1958, the City had not yet purchased the land it now owns in this area. The sewer was constructed in the abandoned Park St. right-of-way that now acts as a part of the municipal parking lot. Due to the angle that the right-of-way was dedicated, the sewer makes two 135° turns that restrict flows as sewage must change directions twice in this area (see attached plan). The design engineer (Hubbell, Roth, & Clark) has determined that rebuilding this one section of sewer to contain 90° bends will greatly improve flow characteristics, and thereby reduce sanitary sewer overflows.

The Oakland Co. Water Resources Commissioner's right-of-way office does not feel that they have the authority to install this new sewer as proposed without the granting of an easement by the City. To better understand the request, the easement document, the construction plans, and the traffic control plans are attached for your review.

a. Construction Staging

Due to the extreme demand for parking in this area, as well as the use of this lot for weekly Farmer's Market activities, the Engineering Dept. put the County engineers on notice that this project could be potentially very disruptive to the City's business community if not handled properly. To that end, the design team has been responsive to our expressed concerns, and has included the following provisions into the design documents:

- The construction period will be sometime during the period of March 1 and May 15, 2016. Early season construction has the following advantages:
  - i) Shopping traffic is generally down this time of year, so the impact on the business community will be less.
  - ii) The Farmer's Market season will have a late start, but will not be in a position where it starts up and then has to stop for several weeks.
  - iii) Restoration of the pavement generally has to wait until after April 15 to be completed in appropriate weather conditions. If there is a gap between sewer construction and pavement replacement, the parking lot can be opened in the interim, with a partial gravel surface.

- Some of the work will occur in the parking lot, while the other part will be in the northbound lane of N. Old Woodward Ave. To keep impact on parking to a minimum, the traffic control plans include the following provisions:
  - i) Most of the work will occur in the central part of Parking Lot #6 (as shown on the plan). When this area is closed, 35 parking spaces will be closed, but traffic will be routed in and out past this area so that the remaining areas of the lot can be left open to the public.
  - ii) When work is occurring in the small N. Old Woodward Ave. right-of-way area, a part of the parking lot will be temporarily opened, reducing the number spaces lost in the lot to 20 spaces.
  - iii) Closing northbound N. Old Woodward Ave. as shown on the traffic control plans will require that a two-way traffic pattern be set up all on the west side of the street. About 60 angled parking spaces will have to be closed during these times, not only to maintain two-way through traffic, but to provide access points to the two off-street parking areas. We will work with the contractor to be cognizant of the issues that this will cause, and to keep these closures to a minimum.

- Knowing that there will likely be a time gap between when the sewer is finished and when the road restoration occurs, the plans call for minimal removal of the asphalt pavement areas, as shown. When it is time to repair the pavement, the entire parking lot area will be resurfaced to provide a clean, uniform repair.

b. Financing of the Project

Even though three work areas fall within the City of Birmingham, the flows that this sewer accommodates is primarily from jurisdictions to our north. Further, since the City pays for the operation of the three retention treatment basins that allow for storage of flows during extreme events (which helps the system downstream of them), Birmingham is not being asked to contribute any funds to the cost of this project.

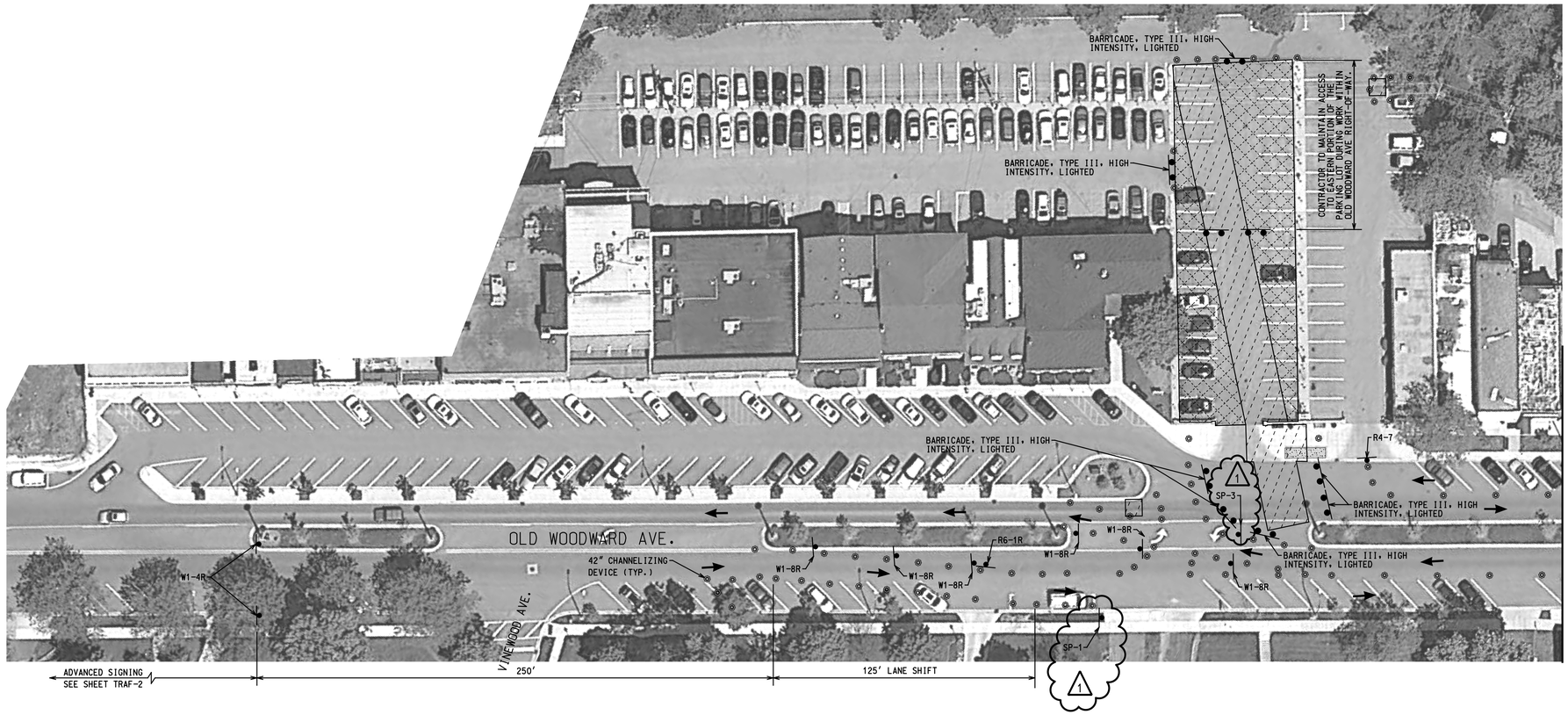
c. Easement Request

In the spirit of cooperation, and knowing that this property is a floodplain penetrated with several City and County sewers, it is our opinion that the easement being requested at this time should be granted to the County at this time. Both a permanent easement over the new sewer, and a larger temporary construction easement are spelled out in the same legal document. The terms of the easement have been reviewed and approved by both the City Attorney and the City Engineer.

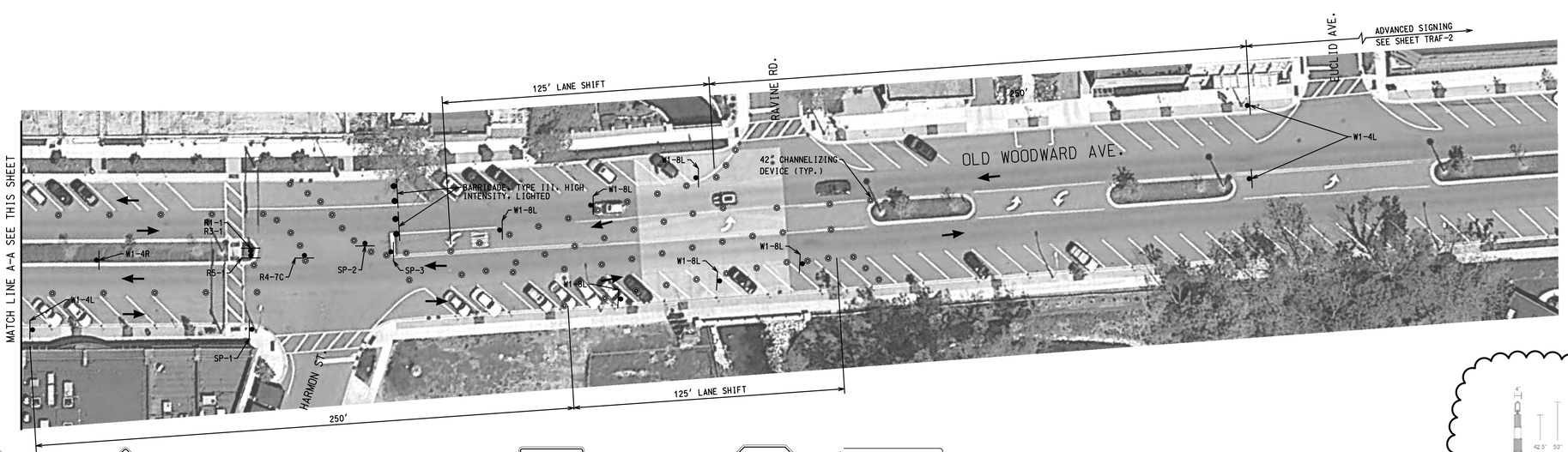
We are encouraged by the cooperation that the design team has displayed to date relative to granting our requests. It will be the responsibility of the Water Resources Commissioner's office to repair all damaged areas to the City's satisfaction prior to completion of the project. It is recommended that the City Commission authorize the Mayor and Clerk to sign the easement document at this time.

SUGGESTED RESOLUTION:

To approve the easement document presented by the Oakland County Water Resources Commissioner's office to allow the construction of a modification to the Northeast Interceptor, a part of the Evergreen-Farmington Sewage Disposal System, to be constructed between March and May, 2016.



MATCH LINE A-A SEE THIS SHEET



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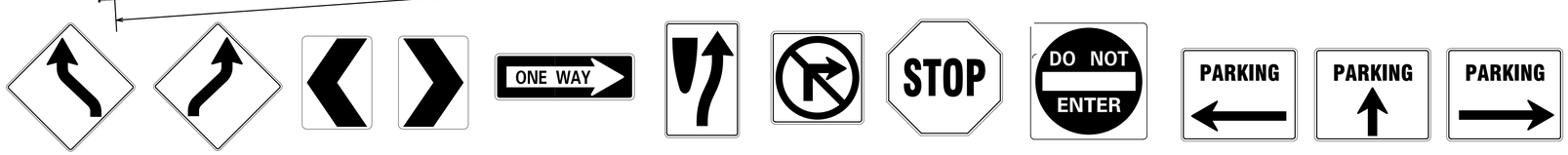

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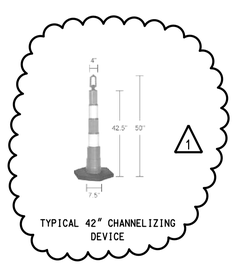

TYPICAL 42" CHANNELIZING DEVICE

NOTICE:

ALL EXISTING UTILITIES SHOWN ON THIS TOPOGRAPHIC SURVEY HAVE BEEN TAKEN FROM VISUAL OBSERVATION, AND RECORD MAPPING WHERE AVAILABLE. NO GUARANTEE IS MADE, OR SHOULD BE ASSUMED, AS TO THE COMPLETENESS OR ACCURACY OF THE UTILITIES SHOWN ON THIS DRAWING. PARTIES UTILIZING THIS INFORMATION SHALL FIELD VERIFY THE ACCURACY AND COMPLETENESS PRIOR TO CONSTRUCTION ACTIVITIES.

811 CALL MISS DIG 72 HOURS (3 WORKING DAYS) BEFORE YOU DIG 1-800-482-7171 or 811 CALL811.COM (TOLL FREE)

WRC WATER RESOURCES COMMISSIONER Jim Nash

HRC 100 YEARS CONSULTING ENGINEERS SINCE 1915

555 HULET DRIVE BLOOMFIELD HILLS, MICH. P.O. BOX 824 48303 - 0824

PHONE: (248) 454-6300
FAX (1st. Floor): (248) 454-6312
FAX (2nd. Floor): (248) 338-2592
WEB SITE: http://www.hrc-engr.com

X-X-00	ADDENDUM NO. 1
7-15-2015	ISSUED FOR BIDS
6-16-2015	ISSUED FOR OWNER'S REVIEW
DATE	ADDITIONS AND/OR REVISIONS

DESIGNED M.C.M.
DRAWN B.J.H./D.M.J
CHECKED M.C.M.
APPROVED D.W.M.
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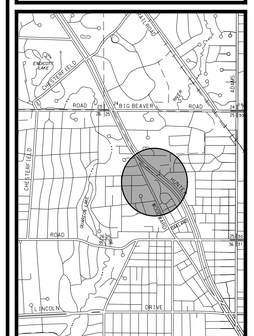

OAKLAND COUNTY
WATER RESOURCES COMMISIONER

NORTH EVERGREEN INTERCEPTOR HYDRAULIC IMPROVEMENTS

OAKLAND COUNTY MICHIGAN

MAINTAINING TRAFFIC PLAN

HRC JOB NO. 20140775	SCALE 1"= 30'
DATE MARCH 2015	SHEET NO. TRAF-1 OF

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OAKLAND COUNTY
WATER RESOURCES COMMISIONER
ONE PUBLIC WORKS DRIVE, WATERFORD, MI 48328–1907

NORTH EVERGREEN INTERCEPTOR HYDRAULIC IMPROVEMENTS

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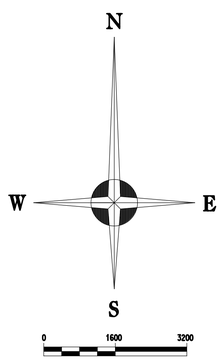

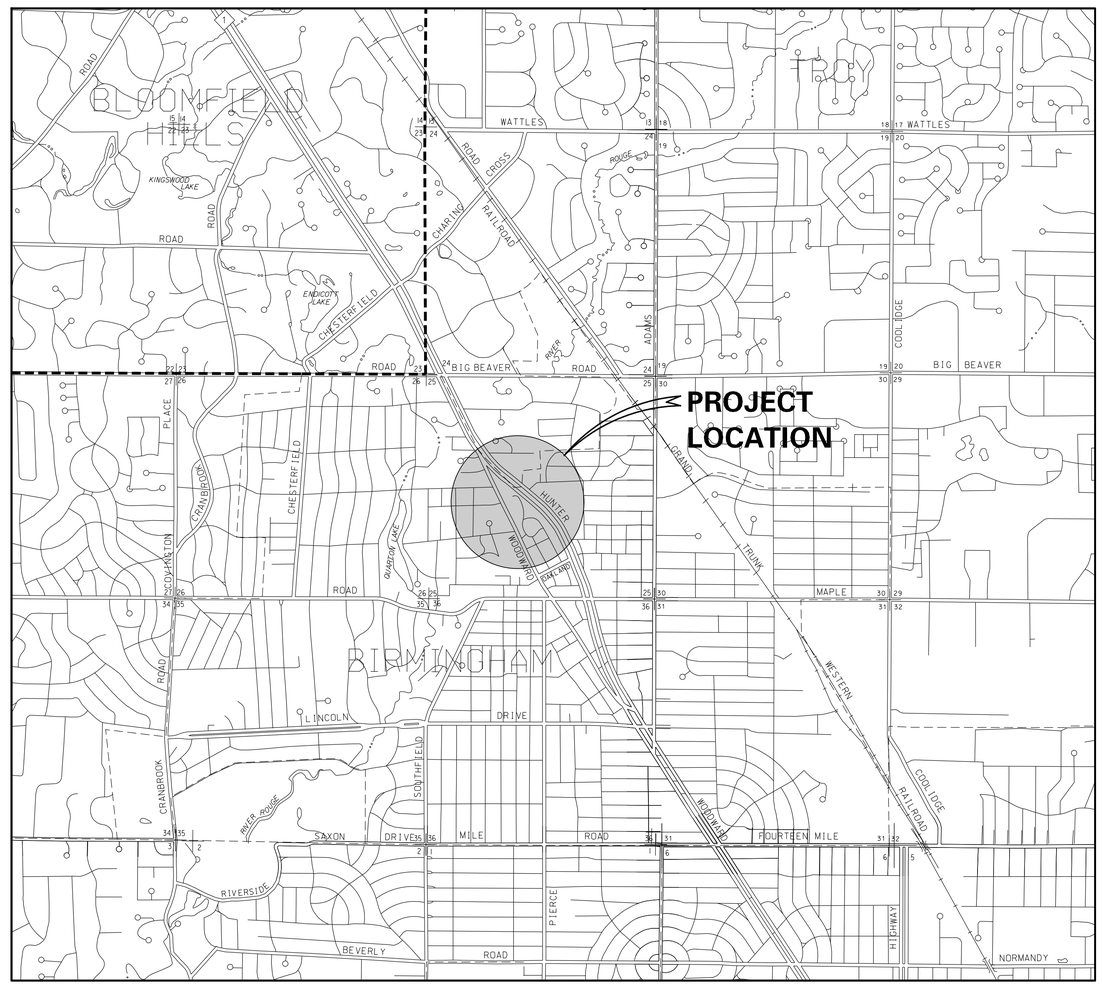

WRC
WATER RESOURCES COMMISSIONER
Jim Nash

Water Resources Commissioner	JIM NASH
Chief Deputy	PHILIP SANZICA, P.E.
Manager	STEVEN KORTH, P.E.
Manager	SUZANNE COFFEY, P.E.
Manager	TIM PRINCE, P.E.

HRC 100 YEARS
CONSULTING ENGINEERS SINCE 1915
555 HULET DRIVE
BLOOMFIELD HILLS, MICH.
P.O. BOX 824
48303 - 0824

Michael C. MacDonald	Daniel W. Mitchell	REVISION	DATE	ADDITIONS AND/OR REVISIONS

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USER NAME = bhunt
NORTH EVERGREEN INTERCEPTOR HYDRAULIC IMPROVEMENTS (HRC JOB #20140775)

GENERAL:

1. THE PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MDOT 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE OAKLAND COUNTY WATER RESOURCES COMMISSIONER SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED IN THE DETAILS OR SPECIAL PROVISIONS CONTAINED HEREIN.
2. COOPERATION BY THE CONTRACTOR: NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO MATERIAL SHORTAGES OR REASONABLE DELAYS DUE TO THE OPERATIONS OF SUCH OTHER PARTIES DOING WORK INDICATED OR SHOWN ON THE PLANS OR IN THE PROPOSAL OR FOR ANY REASONABLE DELAYS IN CONSTRUCTION DUE TO THE ENCOUNTERING OF EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.
3. LIMITATIONS ON PRIVATE WORK: DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH THE PROPERTY OWNERS ADJACENT TO THE PROJECT WITHOUT PRIOR OWNER CONSENT. WORK MAY BE ALLOWED WHEN REQUESTED BY THE PROPERTY OWNER, BUT ONLY WITH WRITTEN CONSENT OF OCWRC.
4. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES FOR NOISE LEVELS, VIBRATIONS, OR ANY OTHER RESTRICTIONS WHILE PERFORMING ANY CONSTRUCTION OPERATIONS WITHIN THIS CONTRACT, COSTS TO BE INCLUDED IN THE RESPECTIVE ITEM OF WORK.
5. THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE LOCAL FIRE & POLICE DEPARTMENTS, POST OFFICE, 24 HOURS IN ADVANCE OF PROPOSED ROAD CLOSURES.
6. THE CONTRACTOR SHALL, BEFORE EACH DAYS WORK, OR WHEN MOVING TO A NEW AREA OF WORK, DETERMINE AND EVALUATE THE LOCATION OF ALL UNDERGROUND FACILITIES IN THE AREA. IF LOCATION STAKES HAVE BEEN MOVED OR DO NOT APPEAR CORRECT, THE CONTRACTOR SHALL NOT EXCAVATE UNTIL ALL UTILITIES HAVE HAD AN OPPORTUNITY TO CHECK OR RESTAKE THEIR LOCATIONS. ANY DELAYS INCURRED, DUE TO THE CHECKING OR RESTAKING OF UTILITIES SHALL NOT BE A BASIS FOR ADDITIONAL COMPENSATION.
7. THERE WILL BE NO ADJUSTMENT IN THE CONTRACT UNIT PRICE REGARDLESS OF THE PERCENTAGE OF INCREASE OR DECREASE ABOVE OR BELOW THE CONTRACT QUANTITY FOR ANY ITEM OF WORK.
8. IT IS THE INTENT THAT ALL GOVERNMENT CORNERS ON THIS PROJECT BE PRESERVED AND THAT, WHERE NECESSARY, MONUMENT BOXES BE PLACED OR ADJUSTED, AT THE CONTRACTOR'S EXPENSE WHETHER SHOWN OR NOT.
9. PROPERTY OWNER'S NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY, AND THEIR ACCURACY IS NOT GUARANTEED.
10. THE LOCATION OF ALL PUBLIC UTILITIES SHOWN ON THESE PLANS IS TAKEN FROM THE BEST AVAILABLE DATA. THE OAKLAND COUNTY WATER RESOURCES COMMISSIONER'S OFFICE & HUBBELL, ROTH AND CLARK, INC. WILL NOT BE HELD RESPONSIBLE FOR ANY OMISSIONS OR VARIATIONS FROM THE LOCATIONS SHOWN. PURSUANT TO ACT 53 OF THE PA OF 1974 AS A CONDITION OF THIS CONTRACT NOTICE SHALL BE GIVEN TO MISS DIG PRIOR TO UNDERGROUND WORK TO BE PERFORMED IN ACCORDANCE WITH THIS CONTRACT. PHONE (800)-482-7171 OR 647-7344.
11. CONTRACTOR TO SUBMIT DETAILED CONSTRUCTION SEQUENCE AT THE PRECONSTRUCTION MEETING IN ACCORDANCE WITH SECTION 01010 OF THE CONTRACT SPECIFICATIONS NOTING ALL CHANGES TO PROPOSED SCHEDULE OF WORK OR WORK PROPOSED TO OCCUR CONCURRENTLY WITH OTHER ITEMS OF WORK.

CONTACTS:

THE FOLLOWING CONTACTS HAVE INTERESTS IN THIS PROJECT:

CONSUMERS ENERGY CO.
JOHN HILL
ROYAL OAK OFFICE
4600 COOLIDGE HWY.
ROYAL OAK, MICHIGAN 48073
(248) 433-5618
EMER: (800) 477-5050

DETROIT EDISON UNDERGROUND
DENNIS MERCER
37849 INTERCHANGE DR.
FARMINGTON HILLS, MICHIGAN 48335
(248) 427-2954

OAKLAND COUNTY WATER
RESOURCES COMMISSIONER
RON FENELEY (WATER)
22430 W. EIGHT MILE ROAD
SOUTHFIELD, MICHIGAN 48033
(248) 356-6299, (248) 356-6218
MARK DAVIS (SEWER)
ONE PUBLIC WORKS DRIVE
BLDG. 95 WEST
WATERFORD, MICHIGAN 48328-1907
(248) 452-2172
(248) 858-1127 (TESTING/INSPECTION)

SBC AMERITECH
JEFF HEATH
54 N. MILL ST., BOX 33
PONTIAC, MICHIGAN 48342
(248) 705-5506

WINDSTREAM
GREG SERICH
4074 S. LINDEN ROAD
FLINT, MICHIGAN 48507
(810) 244-3500

SOCWA
3910 WEBSTER ROAD
ROYAL OAK, MICHIGAN 48073
BOB JACKOVICH
(248) 229-9815

COMCAST
DARYL WOOD
25626 TELEGRAPH RD.
SOUTHFIELD, MICHIGAN 48034
(248) 809-2721

CITY OF BLOOMFIELD HILLS
45 E. LONG LAKE ROAD
BLOOMFIELD HILLS, MICHIGAN 48304
DEPARTMENT OF PUBLIC WORKS
JAMES SPIVY, FOREMAN
(810) 656-7531
DEPARTMENT OF PUBLIC SAFETY
DISPATCH
(248) 644-4200

HUBBELL, ROTH & CLARK, INC.
555 HULET DRIVE
BLOOMFIELD HILLS, MI 48303
MICHAEL MACDONALD, P.E., PROJECT ENGINEER
(248) 535-3337

BLOOMFIELD TOWNSHIP
4200 TELEGRAPH ROAD
BLOOMFIELD TWP., MICHIGAN 48303
DEPARTMENT OF PUBLIC WORKS
TOM TRICE, DIRECTOR
(248) 594-2800
BLOOMFIELD TWP. POLICE DEPT.
(248) 433-7755

CITY OF BIRMINGHAM
151 MARTIN STREET
BIRMINGHAM., MICHIGAN 48012
DEPARTMENT OF PUBLIC SERVICES
LAUREN WOOD, DIRECTOR
(248) 530-1700
BIRMINGHAM POLICE DEPT.
(248) 530-1870

UTILITIES:

1. ALL UTILITIES WITHIN THE ZONE OF INFLUENCE OF PROPOSED WORK ARE TO BE FIELD LOCATED AND HAND DUG INCLUDED IN THE UNIT BID PRICES FOR APPROPRIATE ITEMS.
2. ALL GAS FACILITIES SHALL BE PROTECTED AND SUPPORTED PER MICHCON OR CONSUMER ENERGY STANDARDS AS APPLICABLE.
3. PRIOR TO WORK ON FACILITIES BELONGING TO THE ABOVE AGENCIES, A MINIMUM OF 72 HOURS NOTICE MUST BE GIVEN IN ORDER TO INSURE PROPER INSPECTION BY THE RESPECTIVE AGENCIES.
4. CONCRETE, GRADE S3, SHALL BE USED TO ENCASE UTILITIES THAT ARE IN CLOSE PROXIMITY TO THE PROPOSED CONSTRUCTION ONLY AS DIRECTED BY THE ENGINEER.
5. ALL EXPLORATORY WORK REQUIRED FOR LOCATING EXISTING UTILITIES SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE CONSTRUCTION OF THE PROJECT.
6. THE EXISTING UTILITIES LISTED HEREIN AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED FROM SURVEYS AND FROM UTILITY RECORD MAPS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO SATISFY HIMSELF AS TO THEIR ACCURACY OR OF HIS RESPONSIBILITY IN CASE UTILITIES HAVE BEEN CONSTRUCTED, RELOCATED OR REMOVED.
7. OWNERS OF PUBLIC UTILITIES SHALL NOT BE REQUIRED TO MOVE ADDITIONAL POLES AND STRUCTURES THAT ARE NOT SPECIFICALLY INDICATED AS SUCH ON THE PLANS.
8. THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK, AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO INSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
9. FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL DIAL 800-482-7171 A MINIMUM OF 3 WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS, PRIOR TO EXCAVATING IN THE VICINITY OF UTILITY LINES. ALL "MISS DIG" PARTICIPATING WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

MISCELLANEOUS:

1. TRENCH 'A' BACKFILL WILL CONSIST OF COMPACTED SAND BACKFILL CLASS II OR BETTER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY BEYOND THE NORMAL LIMITS OF CONSTRUCTION,INCLUDING EXISTING FENCING, LAWN, TREES, SHRUBBERY AND ANY AREAS AFFECTED BY IMPACTS OF CONSTRUCTION SUCH AS INSUFFICIENT IRRIGATION DUE TO DAMAGE TO SPRINKLER SYSTEM, UNCONTROLLED DUST, DIRT AND DEBRIS COLLECTION, EXCESSIVE VIBRATORY IMPACTS, ETC.
3. THE CONTRACTOR'S USE OF THE RIGHT OF WAY IS LIMITED IN AREAS. CONTRACTOR TO SUBMIT PROPOSED PLAN OF PROPOSED STAGING AREAS IN ACCORDANCE WITH SECTION 01010 OF THE CONTRACT SPECIFICATIONS. THE PROJECT ENGINEER RESERVES THE RIGHT TO LIMIT AREAS OF STAGING OR CHOOSE ALTERNATE LOCATIONS.
4. CONTRACTOR TO RESTORE ALL DITCHES TO EXISTING CONDITIONS OR AS OTHERWISE INDICATED BY PROJECT ENGINEER.
5. ALL STEEL CULVERTS SHALL REQUIRE STEEL END SECTIONS UNLESS OTHERWISE SPECIFIED.
6. FOR PROPOSED WORK IN AREAS CLOSE TO UTILITY POLES, NO EXCAVATIONS WITHIN FIVE (5) FEET AND NO BORES WITHIN THREE (3) FEET FROM THE UTILITY POLES ARE ALLOWED.
7. ALL TREES AND SHRUBS REQUIRED TO BE TRIMMED/PRUNED SHALL BE DONE IN A MANNER TO MAINTAIN NATURAL APPEARANCE. ALL TREES INDICATED TO BE PROTECTED ON THE PLANS OR AS DIRECTED BY THE PROJECT ENGINEER SHALL HAVE TEMPORARY PROTECTIVE MEASURES INSTALLED PER DETAILS.
8. CONTRACTOR RESPONSIBLE TO REPAIR OR REPLACE ANY EXISTING TRAFFIC SIGNS DAMAGED BY HIS OPERATION DURING CONSTRUCTION. SIGNS TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MMUTCD OR CITY STANDARDS.
9. ACCESS TO AREAS OUTSIDE OF EASEMENT LIMITS TO BE APPROVED BY PROPERTY OWNERS PRIOR TO START OF CONSTRUCTION AND WRITTEN DOCUMENTATION OF SUCH APPROVAL FORWARDED TO THE PROJECT ENGINEER.
10. ALL PIPE TO BE AS SPECIFIED ON THE PLANS AND DETAIL SHEETS. ALL SANITARY SEWER TO HAVE PREMIUM JOINT MODIFIED GROOVE TONGUE W/RUBBER GASKET.
11. CONTRACTOR TO COORDINATE CONSTRUCTION ACTIVITIES WITH OTHER CONTRACTORS WORKING IN AREA.
12. CONTRACTOR IS TO REVIEW SOIL BORING DATA & RECOMMENDATIONS AS PREPARED BY THE GEOTECHNICAL FIRM.
13. ANY DEWATERING NECESSARY TO CONSTRUCT THIS PROJECT SHALL BE CONSIDERED INCIDENTAL, UNLESS OTHERWISE SPECIFIED AND ALL COSTS ASSOCIATED SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE AFFECTED UTILITY INSTALLATION.
14. ALL UTILITY CROSSINGS TO HAVE A MINIMUM OF 18 INCHES VERTICAL CLEARANCE TYPICAL.
15. ALL GRAVEL DRIVES AND SHOULDERS TO BE 23A AGGREGATE LIMESTONE.

REMOVAL NOTES:

1. ALL EXCAVATED MATERIAL TO BE REMOVED OFFSITE BECOMES THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROPER DISPOSAL IN ACCORDANCE WITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.
2. SAW CUTTING FOR PAVEMENT REMOVAL IS REQUIRED AND IT WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "PAVT, REM" UNLESS OTHERWISE INDICATED ON THE PLANS.
3. EXISTING PAVEMENT TO BE REMOVED PAID AS "PAVT, REM" TO INCLUDE PROPER DISPOSAL OF MATERIALS OFFSITE OR APPROVED REUSE AS SPECIFIED BY THE PROJECT ENGINEER.
4. CONTRACTOR TO NOTE GEOTECHNICAL REPORT REGARDING EXPOSED SUBGRADE.
5. ADDITIONAL COMPENSATION WILL NOT BE MADE FOR UNDERCUTS DUE TO CONTRACTOR'S FAILURE TO PROTECT OPEN GRADE.
6. TREES PERMITTED TO BE REMOVED HAVE BEEN MARKED ON THE DRAWINGS, HOWEVER ONLY THOSE TREES WHICH ARE NECESSARY TO CONSTRUCT THE PROPOSED SEWER SHALL BE REMOVED. NO ADD'L TREES SHALL BE REMOVED WITHOUT APPROVAL OF PROJECT ENGINEER. TREES WITHIN THE CONSTRUCTION INFLUENCE AREA WHICH DO NOT REQUIRE REMOVAL, REGARDLESS OF MARKING, SHALL BE PROTECTED. REFER TO SECTION 01001 FOR FURTHER DETAILS.

MISC. ITEMS OF WORK:

SEVERAL PAY ITEMS INCLUDED IN THE PROPOSAL ARE NOT SPECIFICALLY SHOWN ON THE PLANS. THESE ITEMS SHALL BE CONSTRUCTED AS DIRECTED BY THE PROJECT ENGINEER OR USED AS NEEDED ESTIMATED QUANTITIES OF THESE ITEMS ARE NOT GUARANTEED. SEE CONTRACT DOCUMENTS OR MDOT 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION FOR PAY ITEM SPECIFICS. THEY ARE:

MOBILIZATION ____ LSUM

COLOR AUDIO VISUAL ROUTE SURVEY ____ LSUM

4 FOOT HIGH PROPERTY PROTECTION FENCE ____ FT

LEGEND

NOTICE:

ALL EXISTING UTILITIES SHOWN ON THIS TOPOGRAPHIC SURVEY HAVE BEEN TAKEN FROM VISUAL OBSERVATION, AND RECORD MAPPING WHERE AVAILABLE. NO GUARANTEE IS MADE, OR SHOULD BE ASSUMED, AS TO THE COMPLETENESS OR ACCURACY OF THE UTILITIES SHOWN ON THIS DRAWING. PARTIES UTILIZING THIS INFORMATION SHALL FIELD VERIFY THE ACCURACY AND COMPLETENESS PRIOR TO CONSTRUCTION ACTIVITIES.

811
CALL MISS DIG
72 HOURS
(3 WORKING DAYS)
BEFORE YOU DIG
1-800-482-7171
or 811
(TOLL FREE)
CALL811.COM

WRC
WATER RESOURCES COMMISSIONER
Jim Nash

HRC
HUBBELL, ROTH & CLARK, INC
Consulting Engineers

555 HULET DRIVE
BLOOMFIELD HILLS, MICH.
P.O. BOX 824
48303 - 0824

PHONE: (248) 454-6300
FAX (1st. Floor): (248) 454-6312
FAX (2nd. Floor): (248) 338-2592
WEB SITE: http: / / www.hrc-engr.com

DATE	ADDITIONS AND/OR REVISIONS
6-16-2015	ISSUED FOR OWNER'S REVIEW

DESIGNED	M.C.M.
DRAWN	B.J.H./D.M.J
CHECKED	M.C.M.
APPROVED	D.W.M.

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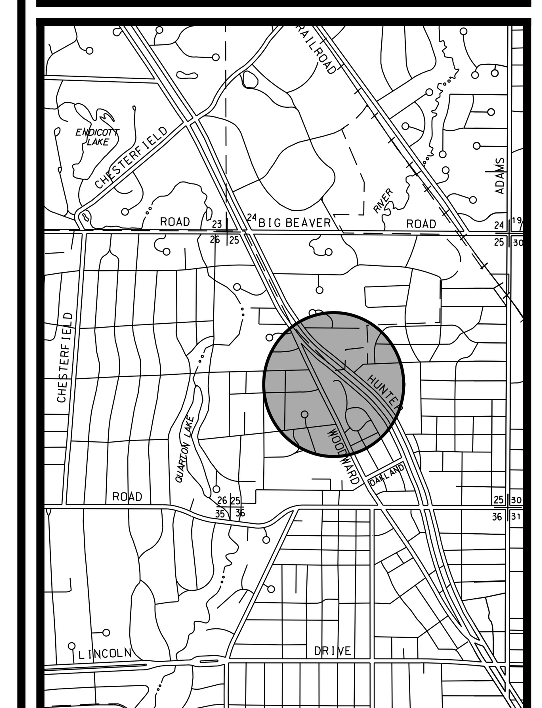

OAKLAND COUNTY
WATER RESOURCES COMMISIONER

NORTH EVERGREEN INTERCEPTOR HYDRAULIC IMPROVEMENTS

OAKLAND COUNTY MICHIGAN

GENERAL NOTES

HRC JOB NO.	SCALE
20140775	N.T.S.
DATE MARCH 2015	SHEET NO. 2 OF

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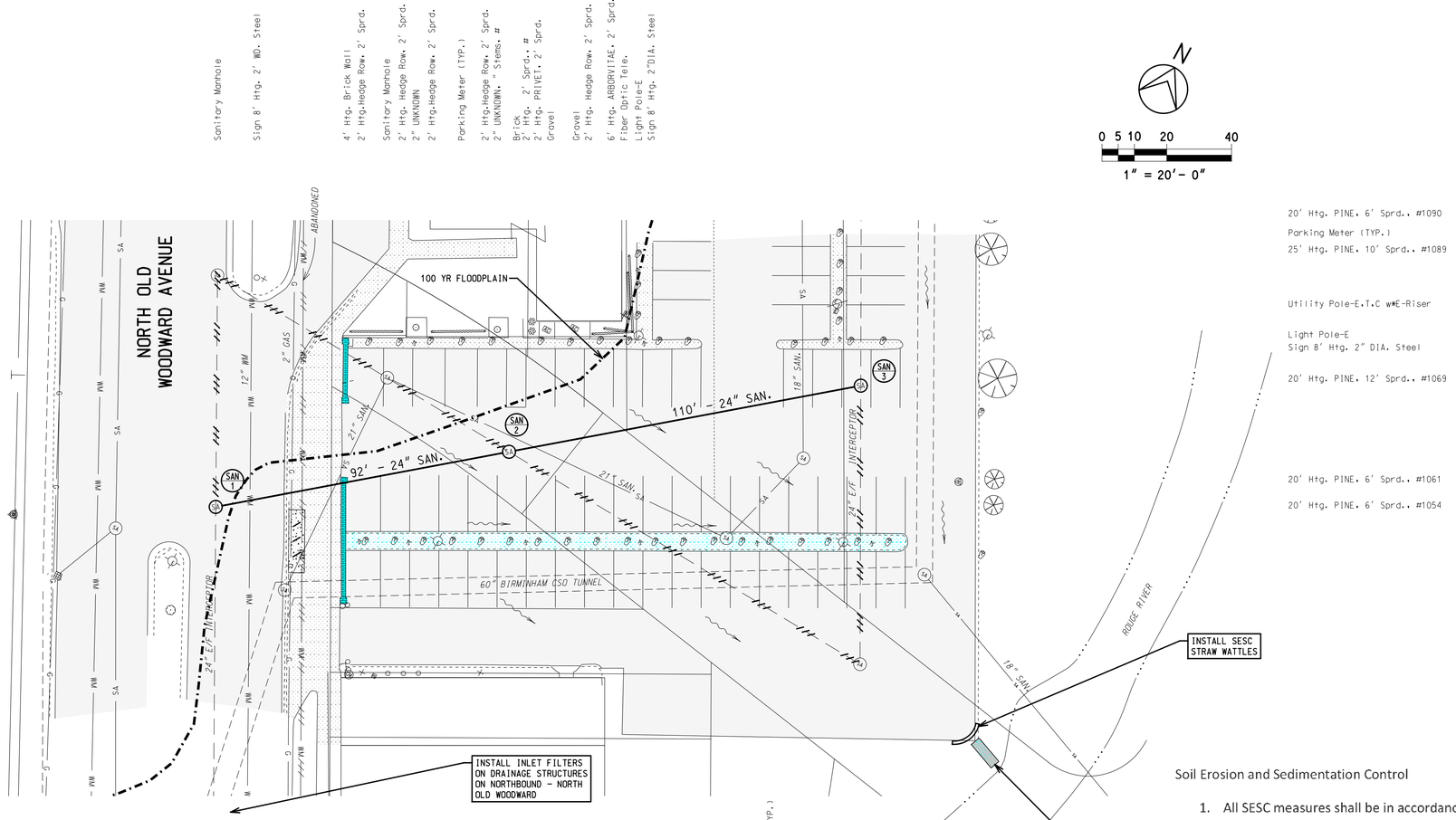

Soil Erosion and Sedimentation Control

1. All SESC measures shall be in accordance with the OCWRC Standards as included with the plans and specifications.
2. All storm water run-off from the parking lot sheet flows to the southeast corner of the parking lot to a concrete spillway and discharges to the river.
3. Prior to the start of construction the contractor will be required to place 9" diameter straw wattles across the opening of the concrete spillway to filter sediment from the construction area.
4. All storm water run-off from North Old Woodward sheet flows to the south through the construction area within the roadway.
5. Prior to the start of construction the contractor will be required to place inlet filters on the drainage structures immediately to the south of the construction area.
6. It will be the contractors responsibility to clean, maintain and replace these SESC measures as required during construction, until final surface restoration has been completed, to ensure that sediment is not passing into the drainage systems while also not causing drainage issues.

QUANTITIES THIS SHEET

NO.	DESCRIPTION	QTY.	UNIT
1	Soil Erosion Control Measures	1	Ls

NOTICE:

ALL EXISTING UTILITIES SHOWN ON THIS TOPOGRAPHIC SURVEY HAVE BEEN TAKEN FROM VISUAL OBSERVATION, AND RECORD MAPPING WHERE AVAILABLE. NO GUARANTEE IS MADE, OR SHOULD BE ASSUMED, AS TO THE COMPLETENESS OR ACCURACY OF THE UTILITIES SHOWN ON THIS DRAWING. PARTIES UTILIZING THIS INFORMATION SHALL FIELD VERIFY THE ACCURACY AND COMPLETENESS PRIOR TO CONSTRUCTION ACTIVITIES.

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DATE	ADDITIONS AND/OR REVISIONS
6-16-2015	ISSUED FOR OWNER'S REVIEW

DESIGNED M.C.M.
DRAWN B.J.H./D.M.J
CHECKED M.C.M.
APPROVED D.W.M.
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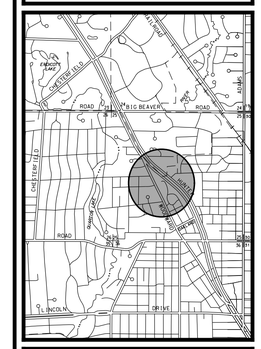

OAKLAND COUNTY
WATER RESOURCES COMMISSIONER

NORTH EVERGREEN INTERCEPTOR HYDRAULIC IMPROVEMENTS

OAKLAND COUNTY MICHIGAN

SESC CONTROL PLAN

HRC JOB NO. 20140775
SCALE HORIZ 1"= 20' VERT 1"= 4'
DATE MARCH 2015
SHEET NO. 3 OF

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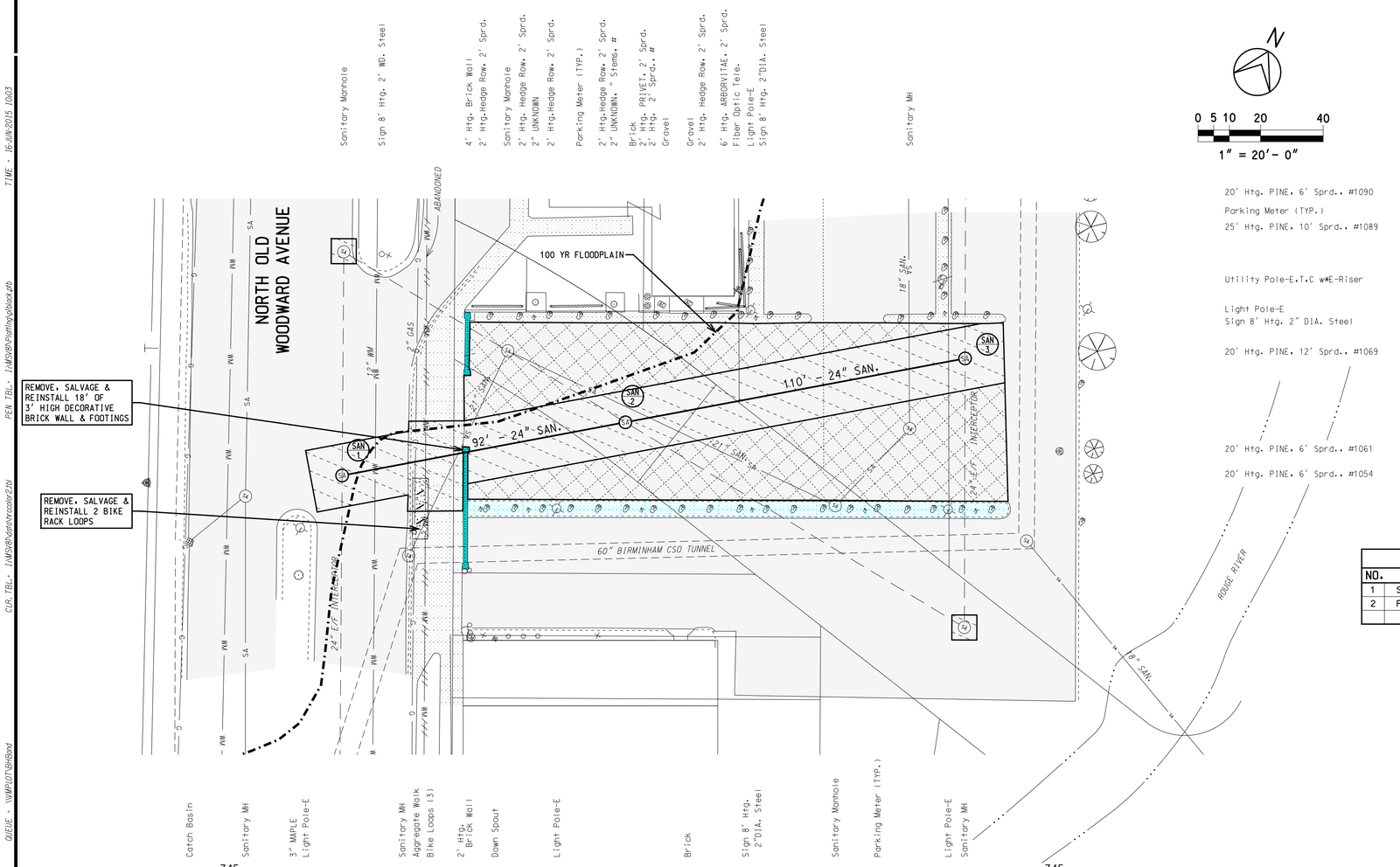

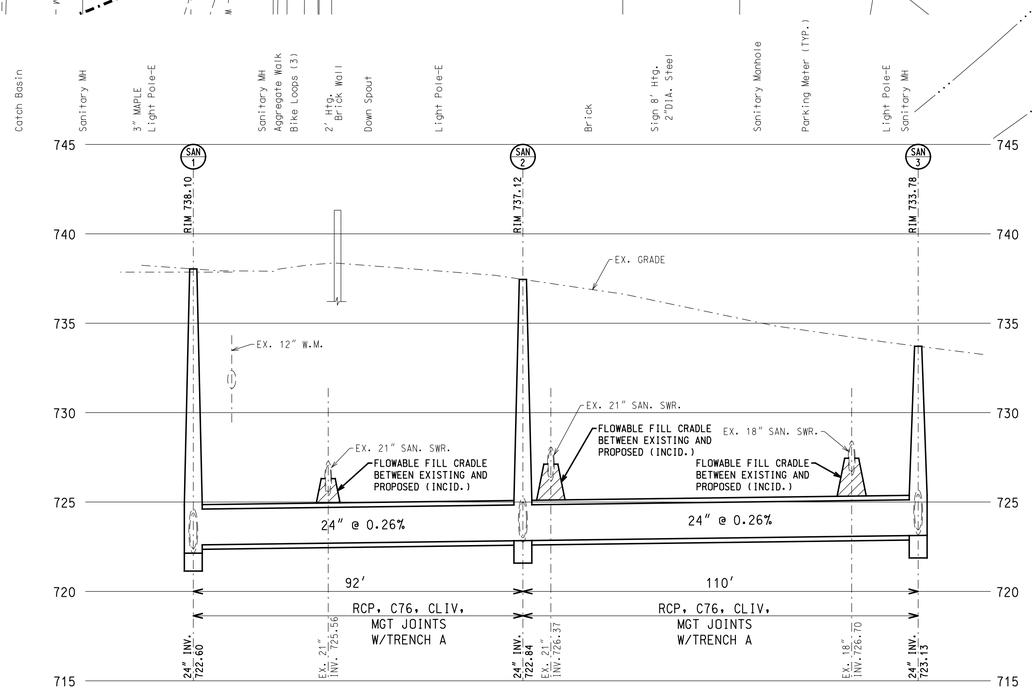

LEGEND

- PAVEMENT REMOVAL LIMITS FOR SEWER INSTALLATION
- PAVEMENT REMOVAL AND REPLACEMENT LIMITS DURING PARKING LOT REPAVING

NOTE:

ALL PAVEMENT REMOVAL LIMITS SHALL BE SAWCUT FULL DEPTH.

QUANTITIES THIS SHEET

NO.	DESCRIPTION	QTY.	UNIT
1	Sawcut Pavement	980	Lft
2	Pavement Removal	1235	Syd

NOTICE:

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APPROVED D.W.M.
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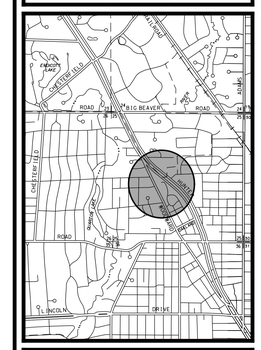

OAKLAND COUNTY
WATER RESOURCES COMMISIONER

NORTH EVERGREEN INTERCEPTOR HYDRAULIC IMPROVEMENTS

OAKLAND COUNTY MICHIGAN

REMOVAL PLAN

HRC JOB NO. 20140775
SCALE HORIZ 1"= 20' VERT 1"= 4'
DATE MARCH 2015
SHEET NO. 4 OF

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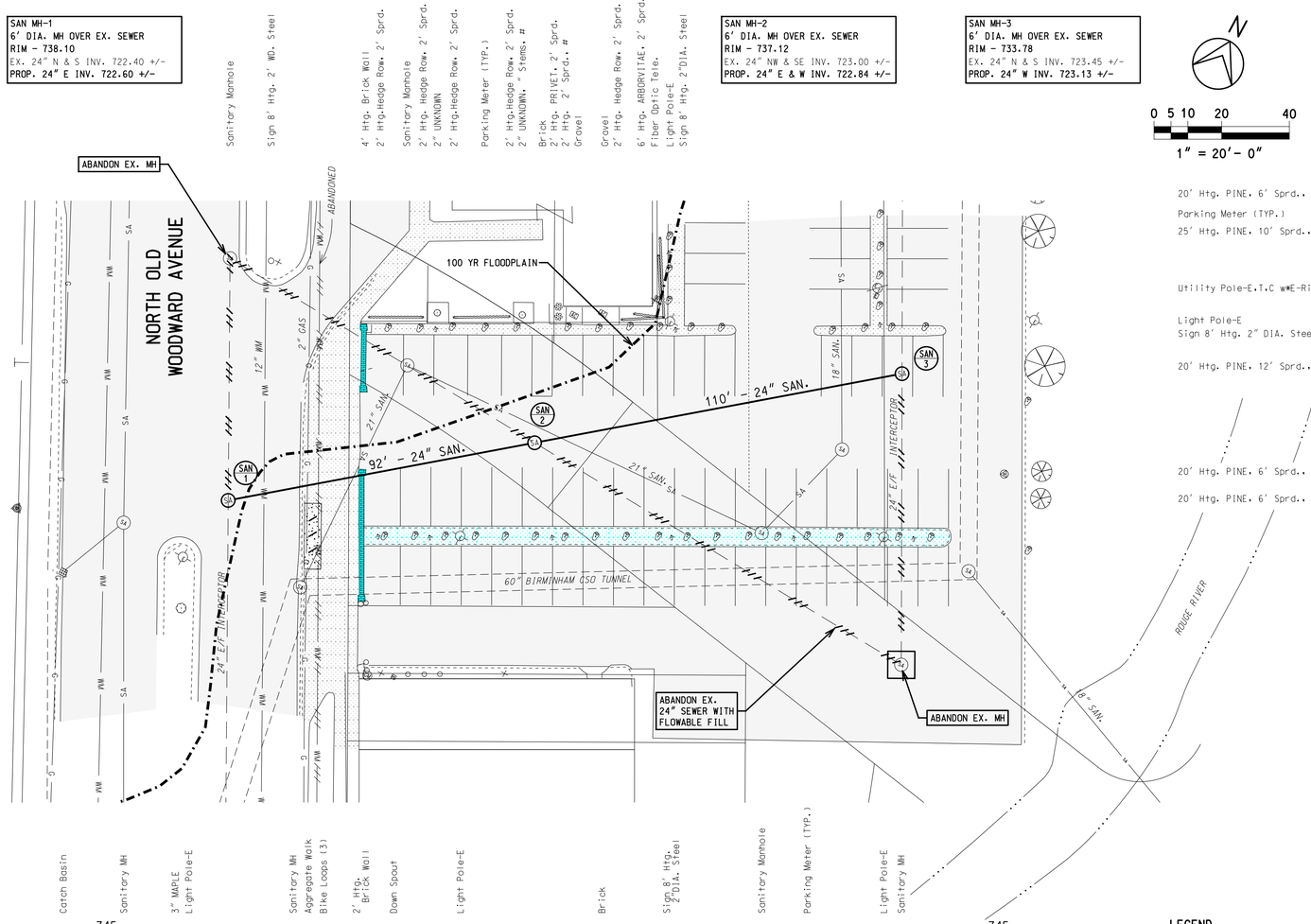

LEGEND

/// /// - ABANDON

Sewer Construction Notes

1. The Contractor will be required to maintain flow within the existing E/F interceptor as well as adjacent sanitary and storm sewers at all times during construction. It is anticipated that at times during the connections to the existing sewers that by-pass pumping to a downstream portion of the sewer will be required. Contractor to submit by-pass pumping plan to Engineer for approval by Owner prior to start of construction. The cost of any by-pass pumping is to be included in the sanitary sewer construction pay items and will not be paid for separately.
2. The E/F interceptor services a large upstream area and continually has a steady stream of flow to approximately 1/4 of the pipe diameter, approximately 3 cfs.
3. During peak usage conditions in the morning and evening hours the flow depth can increase to approximately 1/2 the pipe depth, approximately 6 cfs.
4. The system is wet and during rain events and the flow depth can exceed full pipe.
5. The sewer connections and diversion of flow to the new sewer should not be completed during or immediately following a rain event.
6. To minimize the by-pass pumping required during the connections and flow diversion to the new sewer this work should be completed during periods of low flow. At the discretion of the contractor this work may be completed overnight to minimize the need for by-pass pumping.
7. To maintain flow within the existing system during sewer construction a new manhole, San MH-2, is proposed over the existing sewer at their crossing. It is expected that each new sewer segment will be constructed prior to passing flow through the new sewer. The order of construction for the new sewer segments is at the discretion of the contractor. A construction sequence plan shall be submitted to the Engineer prior to start of construction.
8. The acceptance testing for the new sewer shall be completed prior to placement into service.
9. Flow diversion to the new sewer and placement of it into service shall be completed by installing water tight bulkheads in the existing downstream pipe openings and constructing a rounded full depth flow channel between the upstream pipe opening and the downstream pipe opening to smoothly transition flow through the manhole. All costs related to flow channel construction shall be included in the sanitary sewer manhole pay item.
10. Refer to the notes on the Removal Sheet for information pertaining to pavement removal limits prior to the sewer construction for parking lot maintenance requirements during construction.
11. Upon placing the new sewer into service the existing sewer shall be abandoned in place as described below.

Sewer Abandonment

1. Install water tight bulkheads in ends of pipe sections to be abandoned.
2. Abandon existing sewer in place by completely filling the existing 24" pipe diameter with Flowable Fill. The flowable fill shall be in accordance with the Earthwork Specifications.
3. As shown on the drawings two manholes along the existing interceptor shall be abandoned. The abandonment shall be accomplished by removing the cone section of the manhole and filling the structure with compacted Class II Granular Backfill to pavement subgrade.

QUANTITIES THIS SHEET

NO.	DESCRIPTION	QTY.	UNIT
1	24" RCP C-76, CL IV Sanitary Sewer, MGT Joints W/CL II Backfill	202	Lft
2	6' Dia Sanitary Sewer MH Over Existing Sewer	3	Ea
3	Connection to Existing Sewer	3	Ea
4	24" Water Tight Bulkhead	8	Ea
5	Abandon Existing 24" Sanitary Sewer	390	Lft
6	Abandon Existing Sanitary Sewer MH	2	Ea

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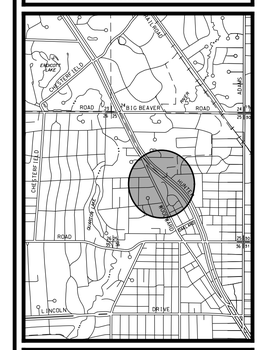

OAKLAND COUNTY
WATER RESOURCES COMMISIONER

NORTH EVERGREEN INTERCEPTOR HYDRAULIC IMPROVEMENTS

OAKLAND COUNTY MICHIGAN

SEWER CONSTRUCTION PLAN

HRC JOB NO. 20140775
SCALE HORIZ 1"= 20' VERT 1"= 4'
DATE MARCH 2015
SHEET NO. 5 OF

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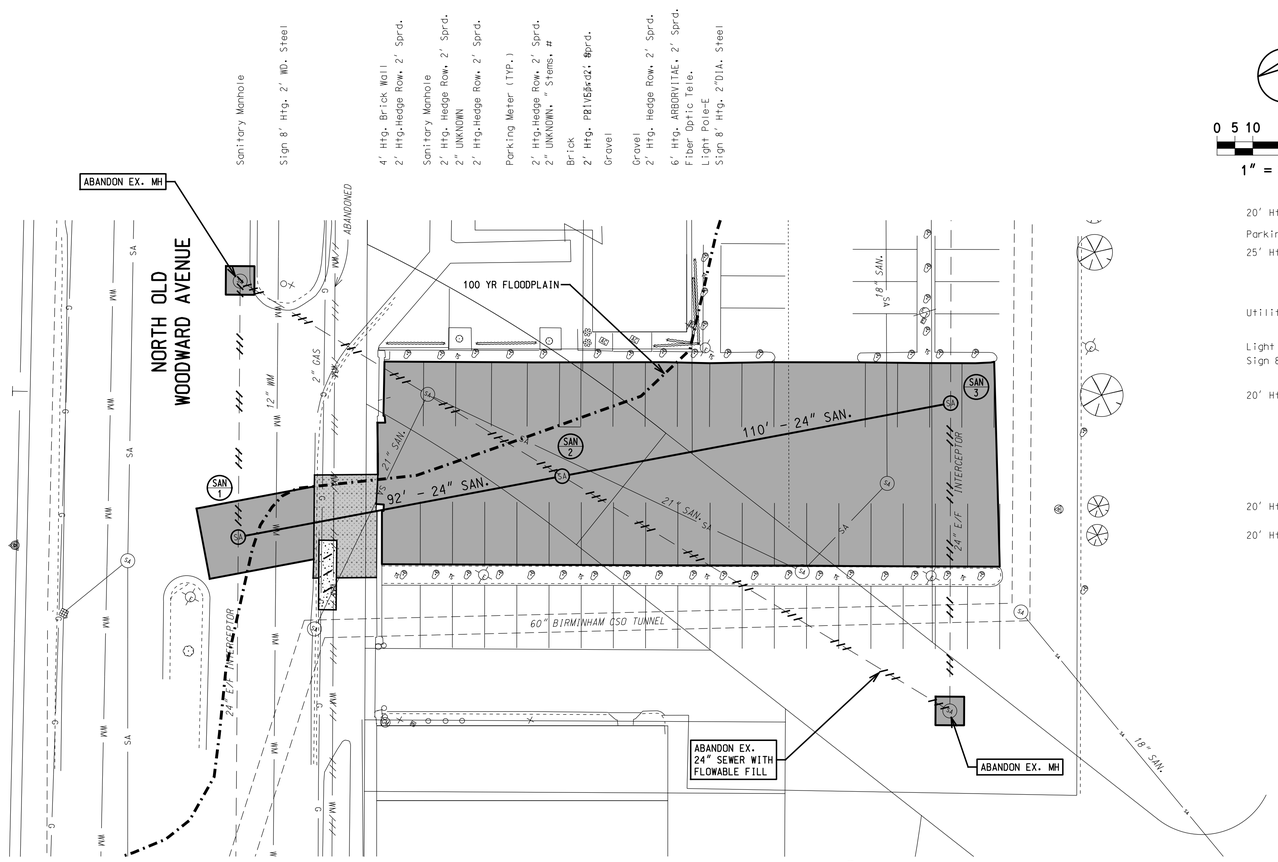
Pavement Restoration

1. Pavement removal limits within the North Old Woodward right of way as shown on the plans are approximate and will be adjusted in the field to match joint lines as directed by the engineer.
2. The restoration of the pavement is to be scheduled such that closure of this portion of the lot is minimized. The removal and paving of the lot shall be sequenced such that the work is completed over two consecutive days and is fully paved by the end of the second day and available for use.
3. The above requirement does not apply to the concrete approach and sidewalk in North Old Woodward but these items of work should be scheduled just prior to the HMA work to allow them to occur upon reaching the concrete strength requirements.
4. Along the drive aisles at the east and north ends of the parking lot a Butt Joint in accordance with the detail will be required.

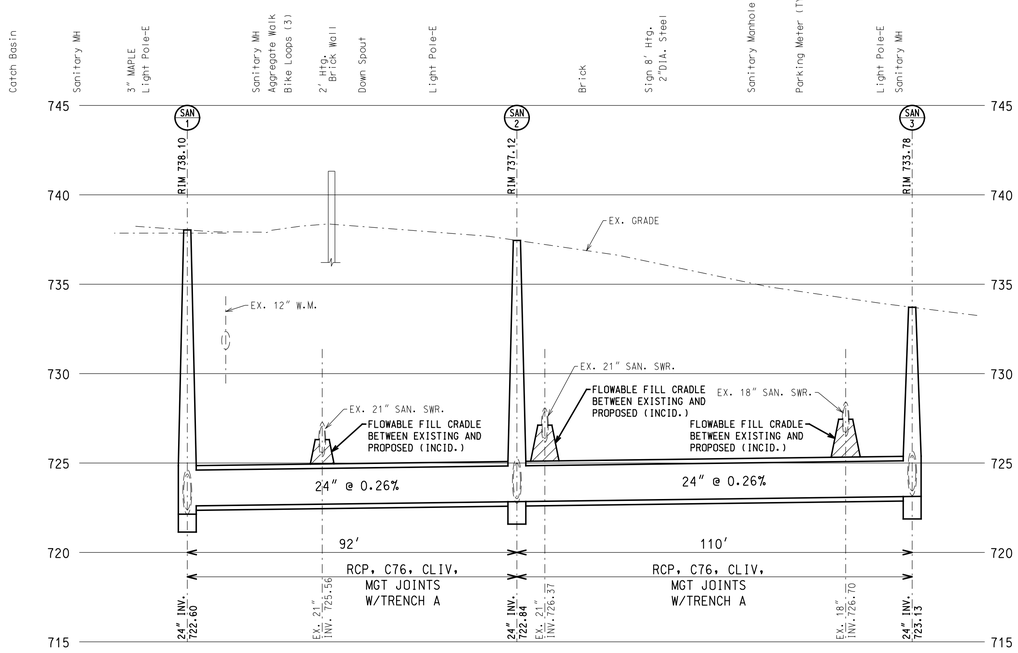


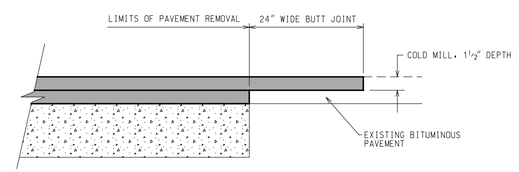
LEGEND

- PROPOSED CONCRETE
- PROPOSED HMA PAVEMENT
- DECORATIVE CONCRETE

QUANTITIES THIS SHEET

NO.	DESCRIPTION	QTY.	UNIT
1	21AA Aggregate Base, Limestone, CIP	290	Cyd
2	Conditioning of Existing aggregate Base in Parking Lot	1	Is
3	Driveway Opening, Conc, Detail M	25	Lft
4	Concrete Curb & Gutter	15	Lft
5	Driveway, nonreinforced Concrete, 6"	28	Syd
6	HMA, 2C	30	Ton
7	HMA, 3C	208	Ton
8	HMA, 13A	146	Ton
9	Butt Joint	160	Lft
10	4" Concrete Sidewalk	200	Sft
11	4" Decorative Concrete Sidwalk w/Exposed Aggregate	60	Sft
12	Remove, Salvage & Reinstall Bike Loops	2	Ea
13	Remove, Salvage & Reinstall 3' High Decorative Brick Wall	18	Ft
14	Pavement Markings	1	Ls
15			





BITUMINOUS DRIVEWAY BUTT JOINT

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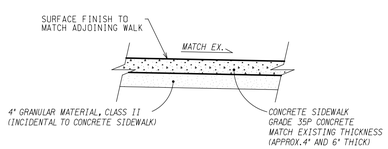

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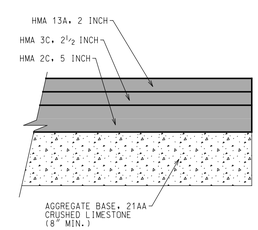

NORTH OLD WOODWARD AVE. PAVEMENT CROSS-SECTION

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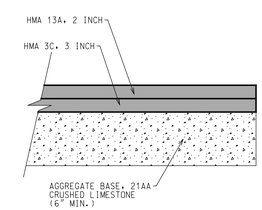

PROPOSED PARKING LOT TYPICAL CROSS-SECTION

NO SCALE

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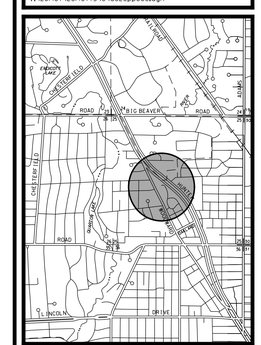

OAKLAND COUNTY
WATER RESOURCES COMMISIONER

NORTH EVERGREEN INTERCEPTOR HYDRAULIC IMPROVEMENTS

OAKLAND COUNTY MICHIGAN

PAVEMENT REPLACEMENT PLAN

HRC JOB NO. 20140775
SCALE HORIZ 1"= 20' VERT 1"= 4'
DATE MARCH 2015
SHEET NO. 6 OF

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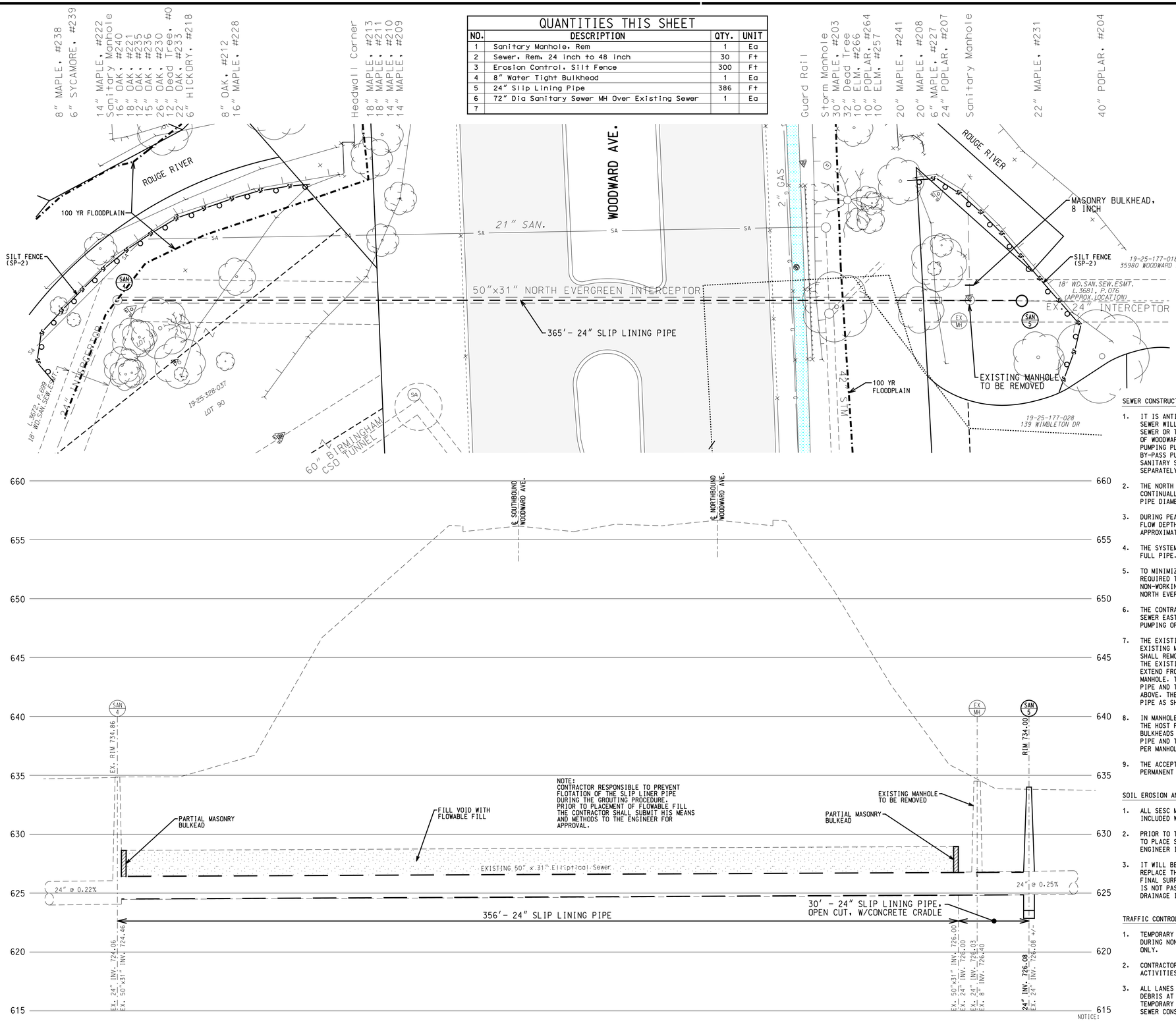
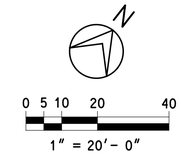
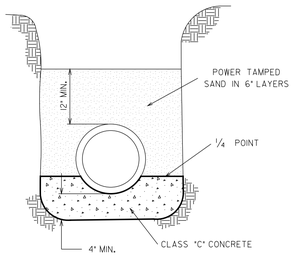
QUANTITIES THIS SHEET

NO.	DESCRIPTION	QTY.	UNIT
1	Sanitary Manhole, Rem	1	Ea
2	Sewer, Rem, 24 inch to 48 inch	30	Ft
3	Erosion Control, Silt Fence	300	Ft
4	8" Water Tight Bulkhead	1	Ea
5	24" Slip Lining Pipe	386	Ft
6	72" Dia Sanitary Sewer MH Over Existing Sewer	1	Ea
7			







CONCRETE CRADLE

NO SCALE

SEWER CONSTRUCTION NOTES

1. IT IS ANTICIPATED THAT DURING THE SLIP LINING PROCESS THE EXISTING SEWER WILL REQUIRE BY-PASS PUMPING TO A DOWNSTREAM PORTION OF THE SEWER OR THE BIRMINGHAM CSO SEWER MH LOCATED AT THE INTERSECTION OF WOODWARD AVE AND WIMBLETON DR. CONTRACTOR SHALL SUBMIT BY-PASS PUMPING PLAN PRIOR TO START OF CONSTRUCTION. THE COST OF ANY BY-PASS PUMPING OR TEMPORARY FLUMES IS TO BE INCLUDED IN THE SANITARY SEWER CONSTRUCTION PAY ITEMS AND WILL NOT BE PAID FOR SEPARATELY.
2. THE NORTH EVERGREEN INTERCEPTOR SERVICES A LARGE UPSTREAM AREA AND CONTINUALLY HAS A STEADY STREAM OF FLOW TO APPROXIMATELY 1/4 OF THE PIPE DIAMETER, APPROXIMATELY 3 CFS.
3. DURING PEAK USAGE CONDITIONS IN THE MORNING AND EVENING HOURS THE FLOW DEPTH CAN INCREASE TO APPROXIMATELY 1/2 THE PIPE DEPTH, APPROXIMATELY 6 CFS.
4. THE SYSTEM IS WET AND DURING RAIN EVENTS THE FLOW DEPTH WILL BE A FULL PIPE.
5. TO MINIMIZE THE BY-PASS PUMPING REQUIRED THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT A TEMPORARY FLUME THRU THE ACCESS PIT DURING NON-WORKING HOURS OR RAIN EVENTS TO MAINTAIN SUCH FLOW WITHIN THE NORTH EVERGREEN INTERCEPTOR SYSTEM.
6. THE CONTRACTOR SHALL CONSTRUCT MANHOLE SAN-5 OVER THE EXISTING SEWER EAST OF THE ACCESS AREA FIRST TO ACT AS A WET WELL FOR BY-PASS PUMPING OPERATIONS.
7. THE EXISTING 50"X31" ELLIPTICAL PIPE STARTS APPROX. 10' WEST OF THE EXISTING MANHOLE. AFTER COMPLETION OF MANHOLE SAN-5 THE CONTRACTOR SHALL REMOVE THE EXISTING MANHOLE AND 24" SEWER TO THE LIMITS OF THE EXISTING ELIPTICAL PIPE. THE PROPOSED 24" SLIP LINER SHALL EXTEND FROM THE LIMITS OF THE ELLIPTICAL PIPE TO THE NEW 60" DIA MANHOLE. THE PORTION OF THE SLIP LINER PIPE BETWEEN THE ELLIPTICAL PIPE AND THE NEW MANHOLE SHALL BE PLACED IN CONCRETE CRADLE PER DETAIL ABOVE. THE NEW FLOW CHANNEL SHALL EXTEND UP TO MATCH THE CROWN OF THE PIPE AS SHOWN IN THE MANHOLE BENCH REHABILITATION DETAILS.
8. IN MANHOLE SAN-4 THE SLIP LINER SHALL EXTEND 1" BEYOND THE LIMITS OF THE HOST PIPE INTO THE EXISTING MANHOLE. AFTER COMPLETION OF PARTIAL BULKHEADS AND GROUTING OF THE ANNULAR SPACE BETWEEN THE SLIP LINER PIPE AND THE HOST PIPE THE CONTRACTOR SHALL INSTALL NEW MANHOLE BENCH PER MANHOLE BENCH REHABILITATION DETAILS SHOWN ON SHEET NO. 8.
9. THE ACCEPTANCE TESTING FOR THE NEW SEWER SHALL BE COMPLETED PRIOR TO PERMANENT CONNECTION OF THE NEW SLIP-LINING PIPE TO MANHOLE SAN-5.

SOIL EROSION AND SEDIMENTATION CONTROL

1. ALL SESC MEASURES SHALL BE IN ACCORDANCE WITH THE OCWRC STANDARDS AS INCLUDED WITH THE PLANS AND SPECIFICATIONS.
2. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR WILL BE REQUIRED TO PLACE SILT FENCE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
3. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO CLEAN, MAINTAIN AND REPLACE THESE SESC MEASURES AS REQUIRED DURING CONSTRUCTION, UNTIL FINAL SURFACE RESTORATION HAS BEEN COMPLETED, TO ENSURE THAT SEDIMENT IS NOT PASSING INTO THE DRAINAGE SYSTEMS WHILE ALSO NOT CAUSING DRAINAGE ISSUES.

TRAFFIC CONTROL MEASURES

1. TEMPORARY LANE CLOSURES ON WOODWARD AVE. WILL BE PERMITTED ONLY DURING NON-PEAK HOURS FOR PURPOSE OF LOADING OR UNLOADING MATERIALS ONLY.
2. CONTRACTOR WILL NOT BE PERMITTED TO STAGE ANY OTHER CONSTRUCTION ACTIVITIES WITHIN THE TRAVELED LANES DURING CONSTRUCTION.
3. ALL LANES OF WOODWARD AVE SHALL BE KEPT FREE OF ALL CONSTRUCTION DEBRIS AT ALL TIMES. SWEEPING MAYBE REQUIRED PRIOR TO REMOVAL OF TEMPORARY LANE CLOSURES. ALL COSTS SHALL BE INCLUDED IN THE SANITARY SEWER CONSTRUCTION PAY ITEMS AND WILL NOT BE PAID FOR SEPARATELY.

NOTICE:

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811 CALL MISS DIG 72 HOURS (3 WORKING DAYS) BEFORE YOU DIG 1-800-482-7171 or 811

CALL811.COM (TOLL FREE)

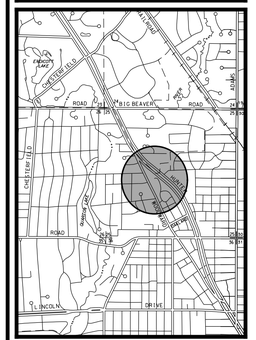
WRC
WATER RESOURCES COMMISSIONER
Jim Nash

HRC 100 YEARS
CONSULTING ENGINEERS SINCE 1915
555 HULET DRIVE
BLOOMFIELD HILLS, MICH.
P.O. BOX 824
48303 - 0824
PHONE: (248) 454-6300
FAX (1st. Floor): (248) 454-6312
FAX (2nd. Floor): (248) 338-2592
WEB SITE: http://www.hrc-engr.com

DATE	ADDITIONS AND/OR REVISIONS
6-16-2015	ISSUED FOR OWNER'S REVIEW

DESIGNED	M.C.M.
DRAWN	B.J.H./D.M.J
CHECKED	M.C.M.
APPROVED	D.W.M.

V:\20140775\C\c020pp007.dgn



OAKLAND COUNTY
WATER RESOURCES COMMISIONER

NORTH EVERGREEN INTERCEPTOR HYDRAULIC IMPROVEMENTS

OAKLAND COUNTY — MICHIGAN

CONSTRUCTION PLAN

HRC JOB NO. 20140775	SCALE HORIZ 1"= 20' VERT 1"= 5'
DATE MARCH 2015	SHEET NO. 7 OF

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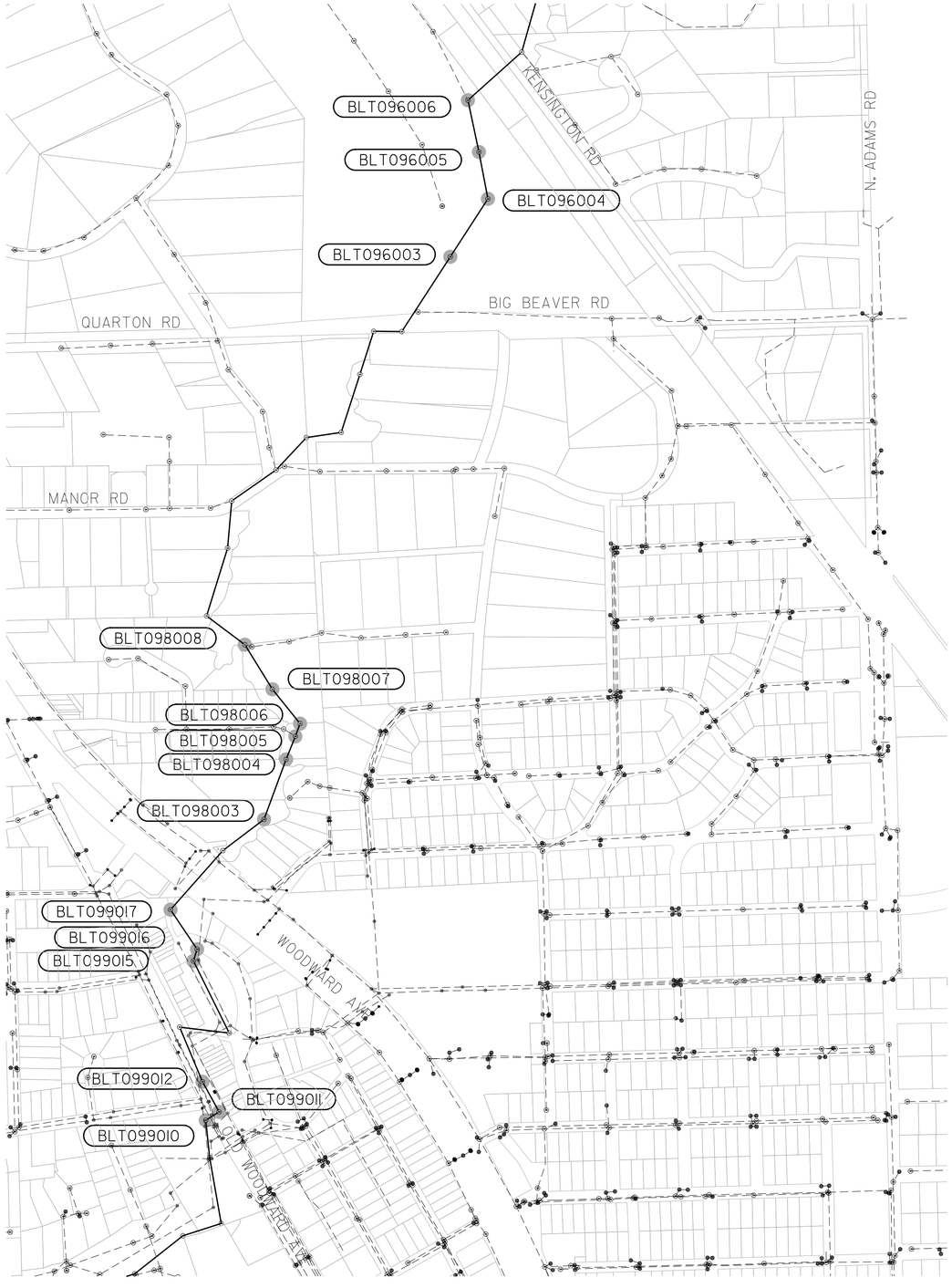
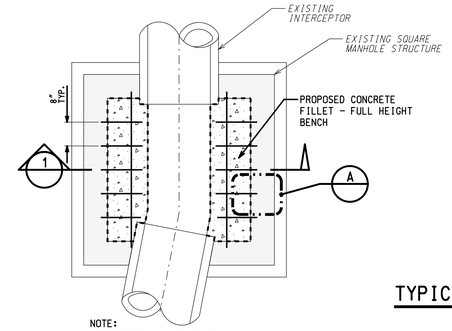


STRUCTURE TO BE REHABILITATED (16 TOTAL)

BENCH REHABILITATION LOCATION MAP

SCALE: 1" = 300'

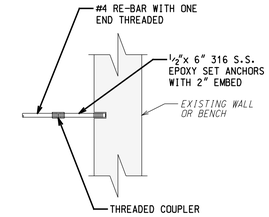
N



NOTE:
ADJUST REINFORCING BAR LENGTH TO MATCH INTERCEPTOR ALIGNMENT THROUGH MANHOLE

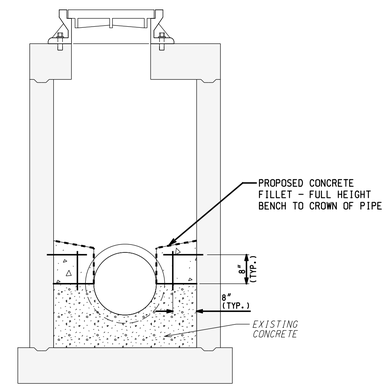
TYPICAL PLAN

SCALE: 1/2" = 1'-0"



TYPICAL REINFORCING DETAIL (A)

SCALE: 1" = 1'-0"



TYPICAL SECTION (1)

SCALE: 1/2" = 1'-0"

SEWER CONSTRUCTION NOTES

1. THE NORTH EVERGREEN INTERCEPTOR SERVICES A LARGE UPSTREAM AREA AND CONTINUALLY HAS A STEADY STREAM OF FLOW TO APPROXIMATELY 1/4 OF THE PIPE DIAMETER, APPROXIMATELY 3 CFS.
2. DURING PEAK USAGE CONDITIONS IN THE MORNING AND EVENING HOURS THE FLOW DEPTH CAN INCREASE TO APPROXIMATELY 1/2 THE PIPE DEPTH, APPROXIMATELY 6 CFS.
3. THE SYSTEM IS WET AND DURING RAIN EVENTS THE FLOW DEPTH WILL BE A FULL PIPE.
4. THE CONTRACTOR SHALL PERFORM THE MANHOLE BENCH REHABILITATION WORK AT EACH MANHOLE STRUCTURE WITH THE INTERCEPTOR REMAINING IN SERVICE THROUGH EACH STRUCTURE.
5. THE CONTRACTOR SHALL SCHEDULE HIS ACTIVITIES FOR MANHOLE REHABILITATION DURING LOW FLOW PERIODS AND MUST MAINTAIN SUCH FLOW WITHIN THE NORTH EVERGREEN INTERCEPTOR AT ALL TIMES, FLOW MUST NOT BE IMPEDED IN ANY MANNER DURING THE MANHOLE BENCH REHABILITATION WORK. AT THE DISCRETION OF THE CONTRACTOR, THIS WORK MAY BE COMPLETED OVERNIGHT.
6. THE MANHOLE BENCH REHABILITATION WORK SHOULD NOT BE COMPLETED DURING OR IMMEDIATELY FOLLOWING A RAIN EVENT.
7. THE ORDER OF CONSTRUCTION OF MANHOLE BENCH REANIMATION WORK IS AT THE DISCRETION OF THE CONTRACTOR.
8. THE NEW FLOW CHANNEL SHALL EXTEND UP TO MATCH THE CROWN OF THE PIPE AS SHOWN IN THE MANHOLE BENCH REHABILITATION DETAILS.
9. ANY DEBRIS THAT COLLECTIONS ON REINFORCING STEEL AND THE EXISTING BENCH AND WALLS LEFT EXPOSED DURING HIGH FLOW PERIODS SHALL BE CLEANED PRIOR TO PLACEMENT OF CONCRETE.

SOIL EROSION AND SEDIMENTATION CONTROL

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3. ALL STREETS & SIDEWALKS SHALL BE KEPT FREE OF ALL CONSTRUCTION DEBRIS AT ALL TIMES. SWEEPING MAY BE REQUIRED PRIOR TO REMOVAL OF TEMPORARY LANE CLOSURES. ALL COSTS SHALL BE INCLUDED IN THE MANHOLE BENCH REHABILITATION PAY ITEMS AND WILL NOT BE PAID FOR SEPARATELY.

QUANTITIES THIS SHEET

NO.	DESCRIPTION	QTY.	UNIT
1	Manhole Bench Rehabilitation	16	Ea
2			

1/2" = 1'- 0" 0 1 2 4

NOTICE:

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DATE	ADDITIONS AND/OR REVISIONS
6-16-2015	ISSUED FOR OWNER'S REVIEW

DESIGNED A.A.U.
DRAWN E.J.P.
CHECKED A.A.U.
APPROVED D.W.M.
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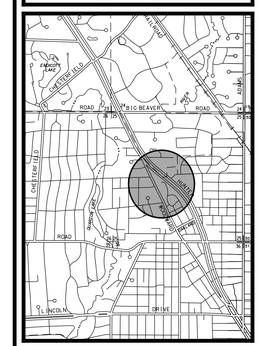

OAKLAND COUNTY
WATER RESOURCES COMMISIONER

NORTH EVERGREEN INTERCEPTOR HYDRAULIC IMPROVEMENTS

OAKLAND COUNTY MICHIGAN

MANHOLE BENCH REHABILITATION

HRC JOB NO. 20140775
SCALE AS SHOWN
DATE MARCH 2015
SHEET NO. 8 OF

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EASEMENT

Parcel No. 9
Project: Evergreen Farmington SDS - 2015 Hydraulic Improvements Project

KNOW ALL MEN BY THESE PRESENTS, that **CITY OF BIRMINGHAM,** GRANTOR(S), whose address is **151 Martin Street, P.O. Box 3001, Birmingham, Michigan 48009,** for and in consideration of the sum of **ONE DOLLAR ($1.00)** receipt of which is hereby acknowledged, paid to them by the **County of Oakland, a Michigan Constitutional Corporation**, by and through the Oakland County Water Resources Commissioner, in his capacity as "**County Agency**" for the **EVERGREEN-FARMINGTON SEWAGE DISPOSAL SYSTEM**, pursuant to 1939 P.A. 342, as amended and 1957 P.A. 185, as amended, GRANTEE whose address is the Office of the Oakland County Water Resources Commissioner ("WRC"), One Public Works Drive, Bldg. 95 West, Waterford, Michigan 48328-1907, GRANTOR does hereby grant to the said GRANTEE the right to construct, operate, maintain, repair or replace a sanitary sewer system, in accordance with the terms and conditions set forth herein:

RECITALS:

A. The GRANTOR is the owner of certain real property described as follows (the "Premises"):

DESCRIPTION OF PROPERTY (TAKEN FROM RECORD 19-25-328-002)

The West 23 feet of Lots 5 to 11 inclusive, the West 23 feet of the North 17 feet Lot 12, the West 20 feet of the South 3 feet of Lot 12, the West 20 feet of Lots 13 to 18 inclusive, the East 6 feet of the South 20 feet of Lot 9, the East 6 feet of the North 20 feet of Lot 10, the North 20 feet of Lot 20, the East 27 feet of the South 30 feet of Lot 10, the East 27 feet of Lots 11 to 17 inclusive, Part of Lots 18 and 19, described as: Beginning at southeast corner of Lot 19; thence N. 27°23'20"W., 120 feet; thence S. 62°34'30"W., 27.00 feet; thence S. 27°23'20"E., 69.42 feet; thence S. 62°36'40"W., 40.46 feet; thence Southeasterly 84.34 feet along the northerly line of vacated Park Avenue to the Point of Beginning, also vacated Island View Drive adjacent to said lots, also ½ of vacated Park Avenue adjacent to said Lot 19, all part of "**Assessor's Plat No. 29**", a replat of: Residence Park Subdivision; a Resubdivision of Lots 25 to 27

inclusive, Lots 57 to 64 inclusive, and parts of Ravine Road and Court included therein of Residence Park Subdivision: C.E. Jones Sub., part of Lot 88 and all of Lots 13, 14, 15, 16, 53, 54, 55, 56, 57, 87 and 89 of Oak Grove Add., City of Birmingham, Oakland County, Michigan as recorded in Liber 6 of Plats, Page 45, Oakland County Records.

Subject to reservation, restrictions and easements of record, if any.

Also known as Sidwell No. 19-25-328-002.

DESCRIPTION OF PROPERTY (TAKEN FROM RECORD 19-25-328-021)

Lot 20, except the North 20.00 feet, All of Lot 21, the East 38 feet of Lot 22 and part of vacated Park Avenue adjacent to same, All part of "**Assessor's Plat No. 29**", a replat of: residence Park Subdivision; a Resubdivision of Lots 25 to 27 inclusive, Lots 57 to 64 inclusive, and parts of Ravine Road and court included therein of Residence Park Subdivision; C.E. Jones Sub., and part of Lot 88 and all of Lots 13, 14, 15, 16, 53, 54, 55, 56, 57, 87 and 89 of Oak Grove Add., City of Birmingham, Oakland County, Michigan, as recorded in Liber 6 of Plats, Page 45, Oakland County Records.

Subject to reservation, restrictions and easements of record, if any.

Also known as Sidwell No. 19-25-328-021.

and,

B. The GRANTEE desires to acquire from the GRANTOR certain rights to the Premises in order to construct, operate, maintain, repair or replace the sanitary sewer system.

IT IS THEREFORE AGREED:

1. Grant of Temporary Easement. Grantor hereby grants to Grantee a temporary easement for the construction and or repair of the sanitary sewer system, described as follows, and which shall terminate upon completion of construction of the system:

A Temporary Construction easement being a part of Lots 19 and 20, vacated Park Avenue and vacated Island View Drive, All part of "**Assessor's Plat No. 29**", a replat of: Residence Park Subdivision; a Resubdivision of Lots 25 to 27 inclusive, Lots 57 to 64 inclusive, and parts of Ravine Road and Court included therein of Residence Park Subdivision; C.E. Jones Sub., and part of Lot 88 and all of Lots 13, 14, 15, 16, 53, 54, 55, 56, 57, 87 and 89 of Oak Grove Add., City of Birmingham, Oakland County, Michigan, as recorded in Liber 6 of Plats, Page 45, Oakland County Records, described as: Beginning at a point distant N. 27°05'40"W., 23.54 feet along the west line of said Lot 20 and N. 62°50'08"E., 4.56 feet from the southwest corner of said Lot 20; thence N. 27°05'40"W., 56.65 feet; thence N. 62°45'59"E.,

157.79 feet to a point on the easterly right of way line of said Island View Drive; thence along said right of way line S. 27°23'20"E., 56.85 feet; thence S. 62°50'08"W., 158.08 feet to the Point of Beginning, Except for that part that falls with the following described 20 foot wide Sanitary Sewer Easement whose centerline is described as: Beginning at a point distant N. 27°05'40"W., 37.82 feet along the west line of said Lot 20 from the southwest corner of said Lot 20 to the Point of Beginning; thence N. 51°57'16"E., 160.78 feet to the Point of Ending on the easterly right of way line of said vacated Island View Drive. Said easement contains 5,615 square feet, or 0.123 acres, more or less.

2. **Grant of a Permanent Easement**. Grantor hereby grants to Grantee a perpetual easement described as follows:

A 20 foot wide Sanitary Sewer Easement being a part of Lots 19 and 20, vacated Park Avenue and vacated Island View Drive, All of part of "**Assessor's Plat No. 29**", a replat of: Residence Park Subdivision; a Resubdivision of Lots 25 to 27 inclusive, Lots 57 to 64 inclusive, and parts of Ravine Road and Court included therein of Residence Park Subdivision; C.E. Jones Sub., and part of Lot 88 and all of Lots 13, 14, 15, 16, 53, 54, 55, 56, 57, 87 and 89 of Oak Drove Add., City of Birmingham, Oakland County, Michigan, as recorded in Liber 6 of Plats, Page 45, Oakland County Records, whose centerline is described as: Beginning at a point distance N. 27°05'40"W., 37.82 feet along the west line of said Lot 20 from the southwest corner of said Lot 20 to the Point of Beginning; thence N. 51°57'16"E., 160.78 feet to the Point of Ending on the easterly right of way line of said vacated Island View Drive. Said easement contains 3,215.51 square feet, or 0.027 acres, more or less.

3. **Purpose of the Easements**. The temporary easement granted herein shall be used only for the initial construction of the system in accordance with the plans and specifications approved by the GRANTEE. The temporary easement may be used to move men and equipment and to store materials and equipment. The permanent easement granted here in shall be used for the purpose of the operation, maintenance, repair or replacement of the system constructed in accordance with the plans and specifications approved by the GRANTEE.

4. **General Conditions**.

a. GRANTOR agrees not to build or convey to others permission to build any permanent structures on the above-described permanent easement. Permanent structures, include but are not limited to; fixtures, structures with footings, culverts, dams, bridges and structures of a similar nature.

b. Except as otherwise agreed in writing between the GRANTOR and GRANTEE, GRANTEE will preserve and protect all trees and shrubbery within the temporary easement during the initial construction of the system and may remove all trees and shrubbery within the permanent easement and shall not be required to replace trees and shrubbery that are removed.

c. Except as otherwise provided herein, if the Premises shall be disturbed by reason of the exercise of any of the foregoing powers, then the Premises shall be restored to substantially the condition that existed prior to entering upon said Premises by the GRANTEE, its contractors, agents or assigns.

d. GRANTOR retains, reserves, and shall continue to enjoy the use of the permanent easement for any and all purposes which do not interfere with, obstruct the use of or prevent the use by GRANTEE. Any unauthorized use or obstruction may be removed by GRANTEE.

e. It is understood that the easement, rights, and privileges granted herein are nonexclusive, and GRANTOR reserves and retains the right to convey similar easements and rights to such other persons as GRANTOR may deem proper provided such similar easements do not affect GRANTEE'S Easement.

f. This Easement shall be binding upon and inure to the benefit of the Parties hereto, their heirs, representatives, successors and assigns. If the GRANTOR or any of GRANTOR'S heirs, representatives, successors or assigns shall dedicate all or any part of the Premises affected by this Easement, then prior to such dedication, GRANTOR or GRANTOR'S heirs, representatives, successors and assigns shall submit such dedication for review and approval from the GRANTEE, its heirs, successors or assigns.

g. A map of the above-described Easement is attached hereto and made a part thereof.

h. This instrument contains the entire agreement between the Parties relating to the rights herein granted and the obligations herein assumed. Any oral representations or modifications concerning this instrument shall be of no force and effect. Any modification of this Easement must be in writing and must be signed by the party to be charged.

i. This Easement is made and entered into in the State of Michigan and shall in all respects be interpreted, enforced and governed under the laws of the State of Michigan. The language of all parts of this Easement is intended to and, in all cases, shall be construed as a whole according to its fair meaning, and not construed strictly for or against any party.

j. It is further understood and agreed between the Parties that the terms and conditions herein are contractual and are not a mere recital and that there are no other agreements, understandings, contracts, or representations between GRANTOR and GRANTEE in any way related to the subject matter hereof, except as expressly stated herein.

k. If any provision of this Easement or its application to any person or circumstance shall to any extent be invalid or unenforceable, the remainder of this Easement shall not be affected and shall remain valid and enforceable to the fullest extent permitted by law.

l. It is understood and agreed between the Parties that a failure by either Party to fulfill a condition or term set forth in this Easement shall not result of extinguishment of the easement rights granted herein or constitute a waiver of such term or condition.

IN WITNESS WHEREOF, the GRANTOR have hereunto affixed their signatures this _____ day of _____, **A.D., 2015.**

WITNESSES:

CITY OF BIRMINGHAM,
a Michigan Municipal Corporation

_____ By:_____(L.S.)

Its:_____

_____ By: _____(L.S.)

Its:_____

ACKNOWLEDGEMENT

STATE OF MICHIGAN)
)SS.
COUNTY OF OAKLAND)

On this _____ day of _____, A.D., **2015**, before me, a Notary Public in and for said County, personally appeared _____ and _____ to me personally known, who being by me severally duly sworn did say that they are the _____ and _____ of the **CITY OF BIRMINGHAM, a Michigan Municipal Corporation**, a corporation created and existing under the laws of the **State of** _____, and that the said Easement Grant was signed and sealed in behalf of said corporation by authority of its Board of Directors, and the said_____ and_____ acknowledged the said instrument to be the free act and deed of the said Corporation.

_____
Notary Public

_____ County,_____

My Commission Expires:_____

This instrument drafted by:

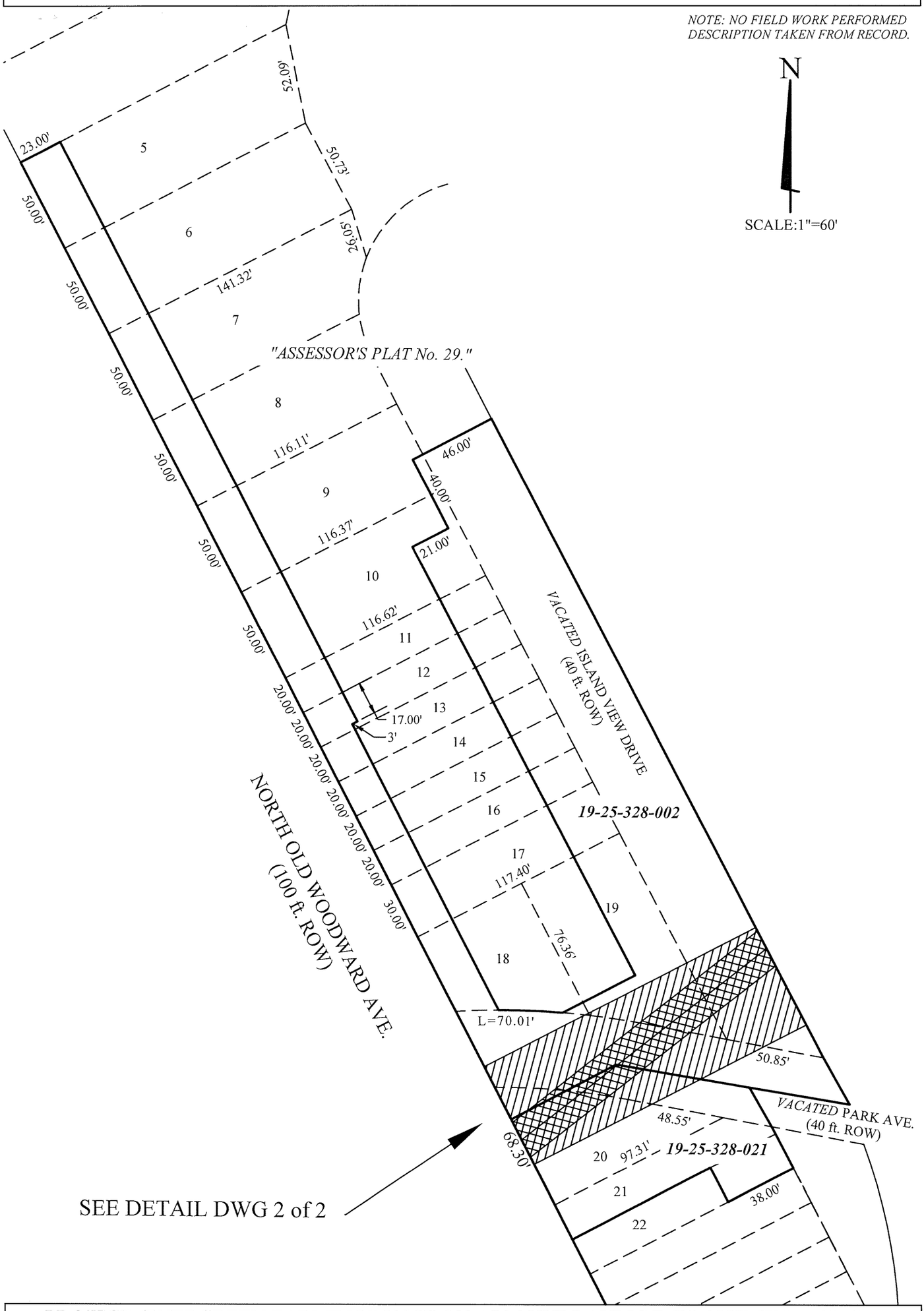
Jeffrey S. Parrott, Office of the
Oakland County Water Resources Commissioner
Building 95 West
One Public Works Drive
Waterford, Michigan 48328-1907

CER/kmb
Kimberly Brown's files\DESKTOP\EFSDS - 2015 HYDRAULIC IMPROVE EAS/CITY OF BIRMINGHAM.P9 (6/26/2015)

Form-DC-175

EASEMENT SKETCH

NOTE: NO FIELD WORK PERFORMED
DESCRIPTION TAKEN FROM RECORD.



PROJECT: EVERGREEN FARMINGTON TROY ARM HYDRAULIC IMPROVEMENT 6/24/2015

PERMANENT EASEMENT ▨ EASEMENT PARCEL NO. 9 DWG. 1 OF 2

TEMPORARY EASEMENT ▨ SIDWELL NO. 19-25-328-002 &19-25-328-021

Part of Assessor's Plat No 29, part of SW 1/4 Section 25, City of Birmingham, Oakland County, Michigan

JIM NASH
OAKLAND COUNTY WATER RESOURCE COMMISSIONER

Rev.:07/30/13

Form-DC-175

EASEMENT SKETCH

NOTE: NO FIELD WORK PERFORMED
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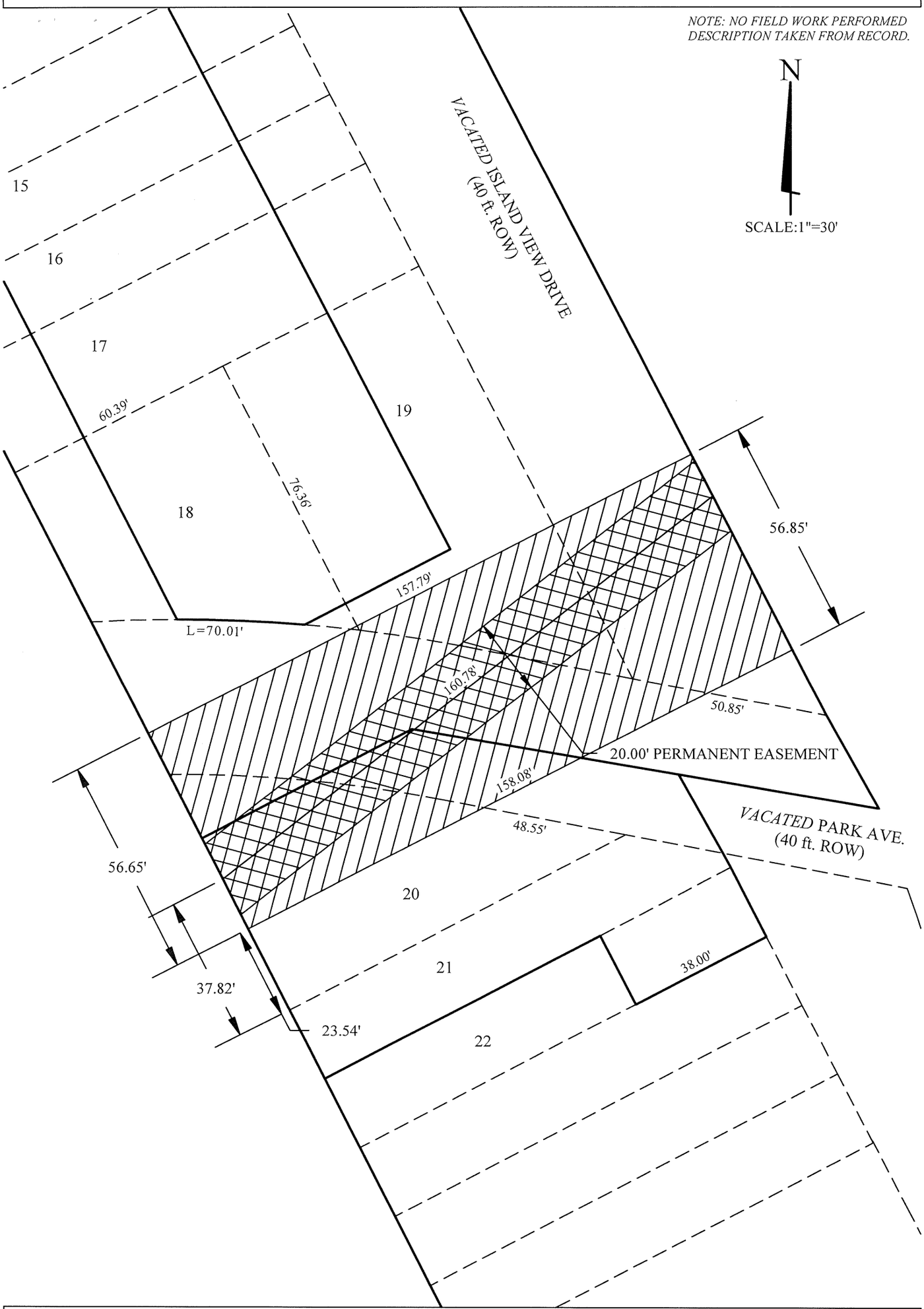

PROJECT: EVERGREEN FARMINGTON TROY ARM HYDRAULIC IMPROVEMENT 6/24/2015

PERMANENT EASEMENT ▨ EASEMENT PARCEL NO. 9 DWG. 2 OF 2

TEMPORARY EASEMENT ▨ SIDWELL NO. 19-25-328-002 &19-25-328-021

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JIM NASH
OAKLAND COUNTY WATER RESOURCE COMMISSIONER

Rev.:07/30/13